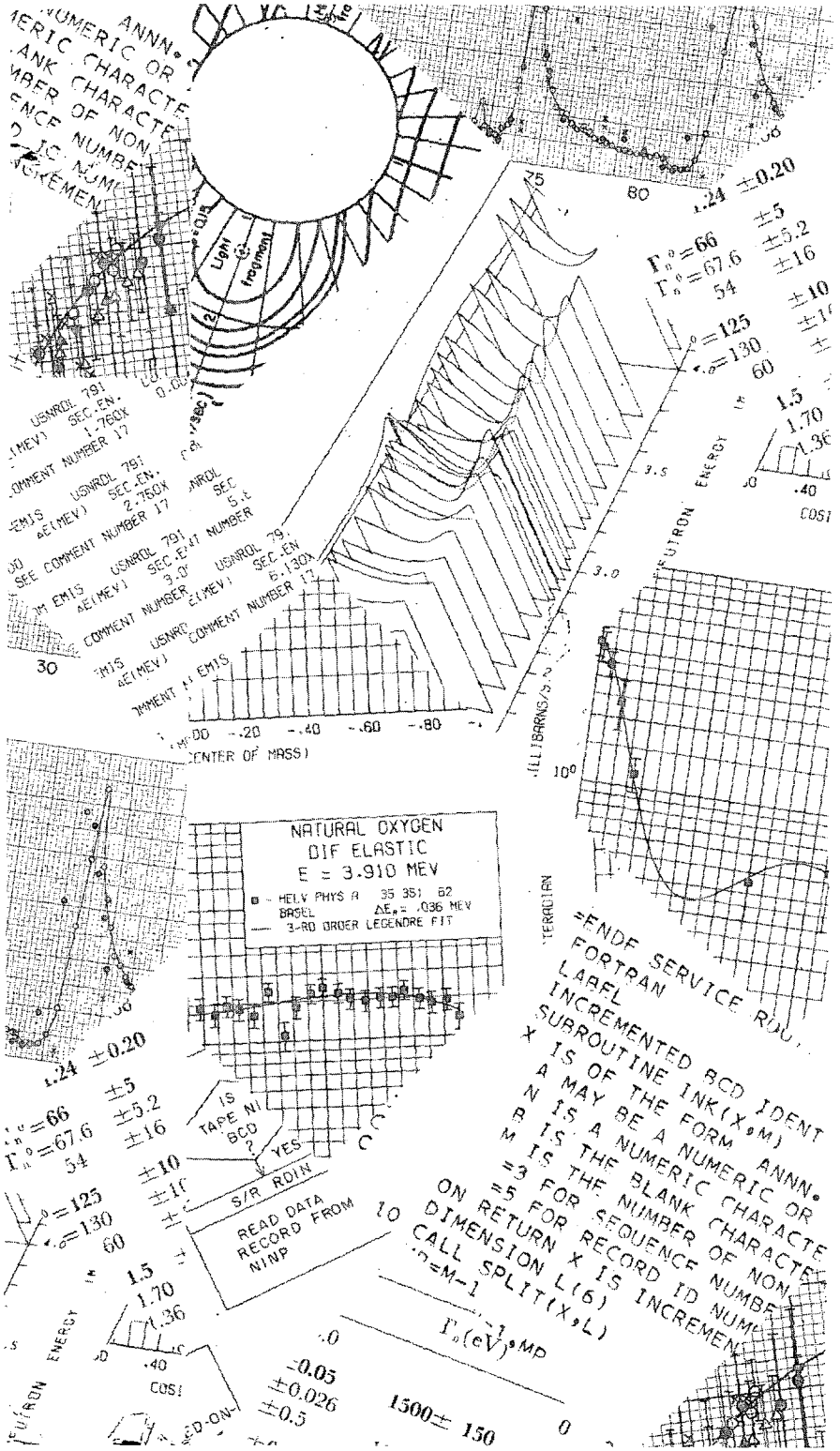

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Third Edition, Volume II
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[INDC(USA)-58]

NEUTRON CROSS SECTIONS
VOLUME II, CURVES

D.I. GARBER AND R.R. KINSEY

January 1976

INFORMATION ANALYSIS CENTER REPORT

NATIONAL NEUTRON CROSS SECTION CENTER
BROOKHAVEN NATIONAL LABORATORY
UPTON, NEW YORK 11973

National
Neutron
Cross
Section
Center

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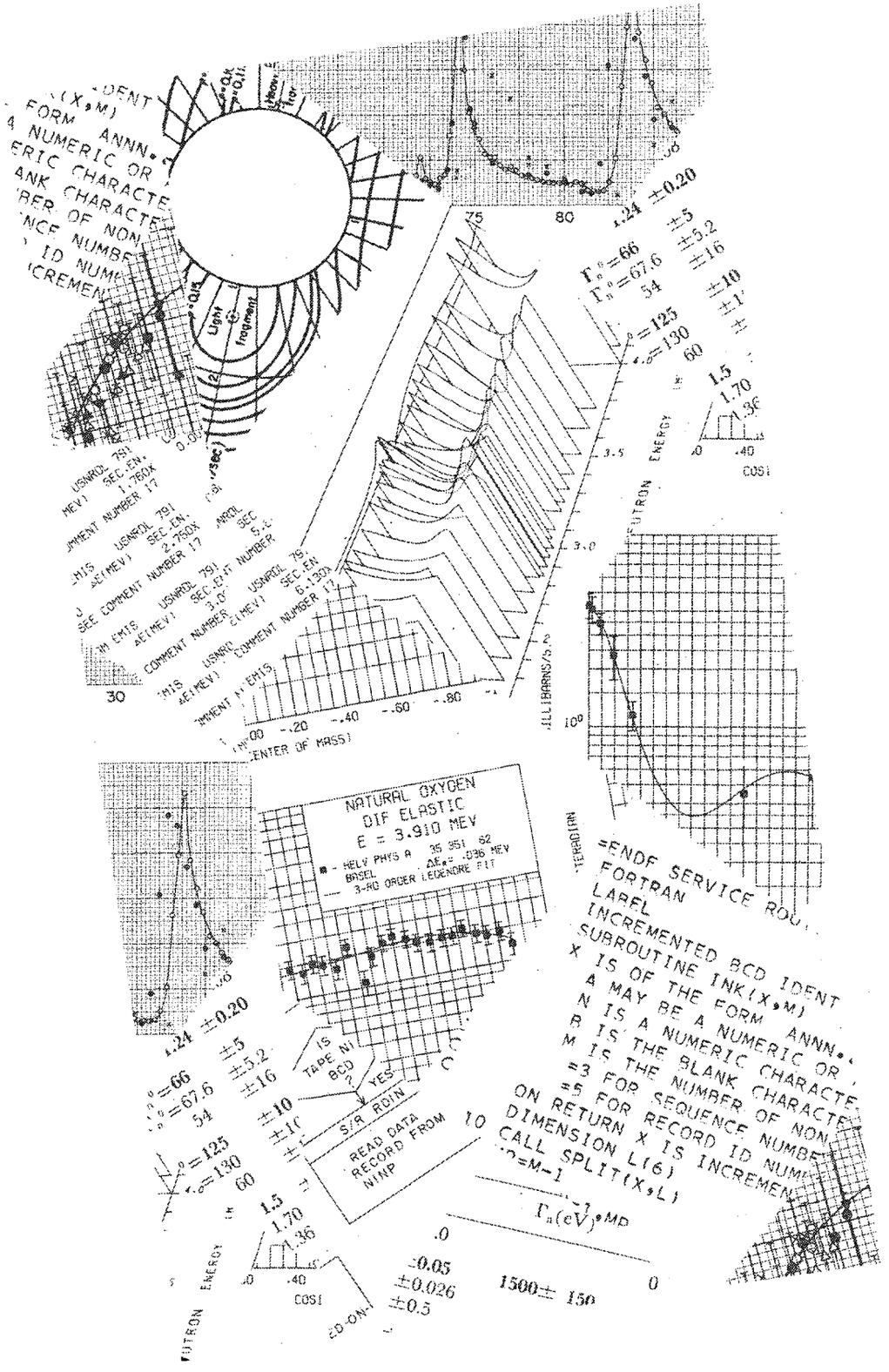

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NATIONAL NEUTRON CROSS SECTION CENTER
BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.
UNDER CONTRACT NO. E(30-1)-16 WITH THE
UNITED STATES ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

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ACKNOWLEDGMENTS

A project of this magnitude is not the work of two individuals. The authors wish to express their gratitude to the following people for their help in making this volume possible.

The scope of the project involved

1. Preparation of the CSISRS and ENDF data for plotting.
2. Page layout and "eye-guide" generation.
3. Production and checking.

1. The preparation of the working library began with the retrieval of data from the CSISRS library for checking purposes. This was later followed by a re-retrieval of the corrected and augmented CSISRS library. For the 193 retrievals involving 27,330 data sets and 2,481,824 data points, we thank F. Scheffel, T. Fuoco, M. Blennau, and J. Jensen.

The above data were processed into what were called kits. These kits included plots of interleaved data sets and were used for laying out the pages and checking the data and bibliographic information. This work was ably done by C. Brewster.

Thanks go to S. Santos for her diligent checking of the coverage of the CSISRS library by comparing it with numerous other sources (e.g., older versions of BNL 325).

The authors wish to thank C. Dunford and S. Mughabghab for their assistance in examining the kits for content errors in the library. For their task of implementing the corrections and augmenting the library we specially thank V. May, A. Daly, and G. Thompson.

2. For the preparation of the final CSISRS interleaved data and ENDF pointwise data files we acknowledge the contributions of C. Brewster and M. Blennau. We also thank the other users of the NNCSC PDP-10 computer for their forbearance while we ran the interactive graphics programs to generate the eyeguides.

3. The final page production was done with the assistance of M. Blennau and T. Fuoco. The bibliographic pages were generated and edited by M. Blennau and ably checked by S. Santos.

The final pages with eyeguide evaluations were reviewed by other NNCSC staff members. We wish to thank T. Burrows, A. Prince, S. Mughabghab, M. Divadeenam, and S. Pearlstein for their time and comments.

Finally, the authors wish to express their appreciation to the members of Brookhaven's Graphics Arts Division who assisted in producing this publication.

FOREWORD

This edition of BNL 325, *Neutron Cross Sections*, takes on a new identity. Previous editions presented in compact form a summary of the complete store of neutron data files. The increase in the volume and detail of neutron data since the second edition of BNL 325 was published in 1958 and its supplements were published from 1960 to 1966 makes impractical a wide distribution of a compendium of all neutron data in ready reference form. Furthermore, those wishing current knowledge of available data clearly must supplement published compendia. This new edition of BNL 325 aims at providing those portions of neutron data that are considered to be of prime importance and best suited for inclusion in ready reference form.

However, many users have need for an up-to-date, complete, and detailed compendium of all data on resonance parameters or cross sections such as was contained in former editions. This kind of information is available, on request, from NNCSC (or your regional data center — see map on last page). On the following pages are examples of requests such as

1. Interleaved and grouped resonance parameter data and recommended quantities. Quantities are in the form cited by the author.
2. Interleaved and grouped resonance parameter data and recommended quantities. Quantities are converted whenever possible to a standard representation, such as $g\Gamma_n$, to facilitate intercomparison.

(The above are based on a library of 150,000 resonance parameters.)

3. Listings of CSISRS library entries that include bibliographic abstracts in addition to the data.
4. Detailed graphical representation of cross section data with all data shown in reasonable detail.

In addition, other types of requests are filled for both human and computer-readable representations of neutron cross section data.

(These are based on a library of over 1,500,000 cross section points.)

This edition, significantly aided by computer techniques, consists of two volumes: Volume 1, thermal cross sections, resonance properties, resonance parameters, and bibliography; and Volume 2, curves and bibliography. As in previous editions, recommended values for thermal cross sections and resonance parameters, eyeguide curves, and references to all data are included.

Editions of BNL 325 have been widely used and are frequently referenced. It is hoped that this new edition will continue to be a prime source book and that, together with new and varied material obtainable from data centers, it will satisfy the needs of both the casual and serious user of neutron cross sections.

Interleaved and grouped resonance parameter data and recommended quantities.

Quantities are converted to a standard representation, such as $g\Gamma_n$ whenever possible to facilitate intercomparison.

ISOTOPE = 25-MANGANESE - 55 SPIN= 2.5 ABUNDANCE= 1.0000 PAGE (1)

E_0(keV)	Γ (eV)	$2g\Gamma_n$ (eV)	J	ℓ	Γ_γ(eV)	$2g\Gamma^0_n$(eV)	Misc	AUTHOR	YR
-4.700			3			8.05000		Stephenso	68
-3.300			2			3.94167		Stephenso	68
-2.830			2		0.45 calc	4.21		RECMO-SM	72
-2.830			2			4.20833		Cote	64
-0.078			3		0.45 calc	0.019		RECMO-SM	72
-0.078			3			0.01867		Cote	64
0.335±0.001		18.6667±0.017	2			1.01667±1.7-3		Garg	66
0.3355±4.0-4		calc 18.6220	2			1.01667		Cote	64
0.337±0.001		calc 18.67 ±0.017	2	0	0.5± 0.1calc	1.017±0.002		RECMO-SM	72
0.337±0.001	22.5± 1.0	18.3333±0.833	2			1.01667±0.042		RECMO-SM	66
0.337			2					Alves	69
0.337		18.6667	2			1.01667		Morgenste	65
0.337								Garg	64
0.337±0.003	21.5± 0.8	calc 17.4397±0.771	2			0.95000±0.042	$\sigma_0\Gamma^2$ = 144. ±10.0	Bollinger	55
0.345		25.2000	3		0.6 calc	1.35672		Harris	50
0.346±0.011		36.1667±3.500	3		0.5± 0.1calc	1.94433±0.188	$\sigma_0\Gamma^2$ = 3.0+6±6.0+5	Seidl	54
0.346±0.011		21.6667±2.500	2		calc	1.16481±0.134		Seidl	54
0.349							$\sigma_0\Gamma^2$ = 1.2+6	Gaerttner	54
1.040								Gaerttner	54
1.040								Seidl	54
1.080			3					Alves	69
1.080±0.020	14.5± 1.5	calc 16.1030±1.906	3			0.49000±0.058	$\sigma_0\Gamma^2$ = 2.8 ±0.70	Bollinger	55
1.098±0.002		calc 17.01 ±0.82	3	0	calc	0.513±0.025		RECMO-SM	72
1.098±0.002		17.0333±0.817	3			0.51333±0.023		RECMO-SM	66
1.098		17.0333	3			0.51333		Morgenste	65
1.098±0.002		25.6667±0.525	3			0.57167±0.012		Garg	66
1.098±0.002			3					Garg	64
1.0980±2.3-3		calc 17.0097	3			0.51333		Cote	64

Interleaved and grouped resonance parameter data and recommended quantities.

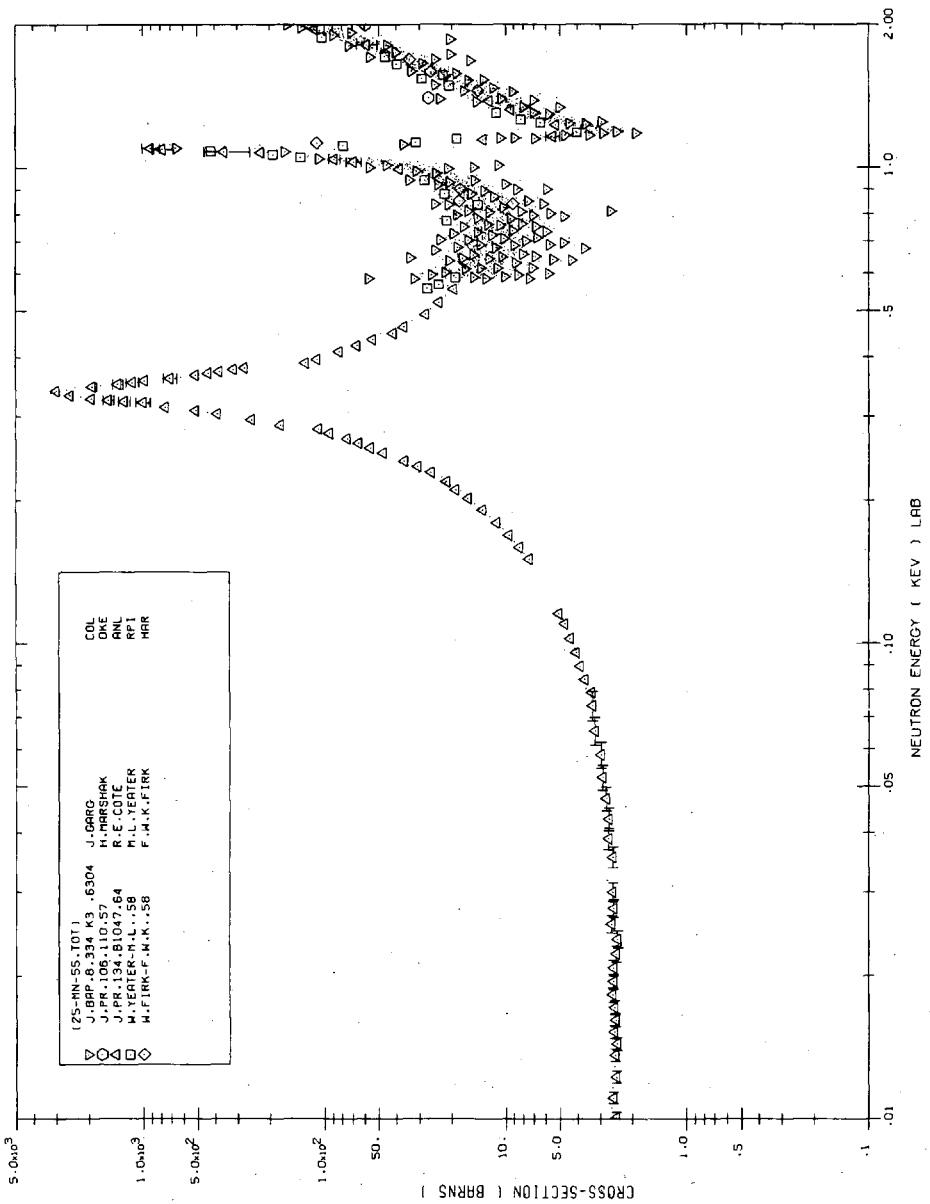
Quantities quoted are those exactly as cited by the author.

ISOTOPE = 25-MANGANESE - 55 SPIN= 2.5 ABUNDANCE= 1.0000 PAGE (1)

E_0(keV)	Γ (eV)	$2g\Gamma_n$ (eV)	J	ℓ	Γ_γ(eV)	$2g\Gamma^0_n$(eV)	Misc	AUTHOR	YR
-4.700			3		Γ^0_n =	6.9		Stephenso	68
-3.300			2		Γ^0_n =	4.73		Stephenso	68
-2.830			2		0.45 calc	4.21		RECMO-SM	72
-2.830			2		Γ^0_n =	5.05		Cote	64
-0.078			3		0.45 calc	0.019		RECMO-SM	72
-0.078			3		Γ^0_n =	0.016		Cote	64
0.335±0.001		Γ_n= 22.40 ±0.020	2		Γ^0_n =	1.220 ±2.0-3		Garg	66
0.3355±4.0-4		calc 22.3463	2		Γ^0_n =	1.22		Cote	64
0.337±0.001		calc 18.67 ±0.017	2	0	0.5± 0.1calc	1.017 ±0.002		RECMO-SM	72
0.337±0.001	22.5± 1.0	Γ_n= 22. ±1.000	2		Γ^0_n =	1.22 ±0.050		RECMO-SM	66
0.337			2					Alves	69
0.337		Γ_n= 22.4	2		Γ^0_n =	1.22		Morgenste	65
0.337								Garg	64
0.337±0.003	21.5± 0.8	calc 20.9276±0.918	2		Γ^0_n =	1.14 ±0.050	$\sigma_0\Gamma^2$= 144. ±10.0	Bollinger	55
0.345		Γ_n= 21.6	3		0.6 calc	1.16290		Harris	50
0.346±0.011		Γ_n= 31. ±3.000	3		0.5± 0.1calc	1.66657±0.161	$\sigma_0\Gamma^2$= 3.0+6±6.0+5	Seidl	54
0.346±0.011		Γ_n= 26. ±3.000	2		calc	1.39777±0.161		Seidl	54
0.349							$\sigma_0\Gamma^2$= 1.2+6	Gaerttner	54
1.040								Gaerttner	54
1.040								Seidl	54
1.080			3					Alves	69
1.080±0.020	14.5± 1.5	calc 13.8026±1.643	3		Γ^0_n =	0.42 ±0.050	$\sigma_0\Gamma^2$= 2.8 ±0.70	Bollinger	55
1.098±0.002		calc 17.01 ±0.82	3	0	calc	0.513 ±0.025		RECMO-SM	72
1.098±0.002		Γ_n= 14.6 ±0.700	3		Γ^0_n =	0.44 ±0.020		RECMO-SM	66
1.098		Γ_n= 14.6	3		Γ^0_n =	0.44		Morgenste	65
1.098±0.002		Γ_n= 22.00 ±0.450	3		Γ^0_n =	0.49 ±0.010		Garg	66
1.098±0.002			3					Garg	64
1.0980±2.3-3		calc 14.5799	3		Γ^0_n =	0.44		Cote	64

```
ENTRY          20011       2003                                  20011  0    1
SUBENT       20011001      2003                                  20011  1    1
BIB                15         42                                 20011  1    2
REFERENCE  ((R,KFK-1000,(SUPP.2),6902)=(R,EUR-3963,(SUPP.2),6902)=20011  1    3
            (R,EANDC(E)-111,(SUPP.2),6902))   GRAPHS ONLY.       20011  1    4
           ((R,KFK-1000,6806)=(R,EUR-3963E,6806)=                 20011  1    5
            (R,EANDC(E)-111,6806))   ABOVE 0.9 MEV SODIUM IS TAKEN20011  1    6
            FROM THIS REFERENCE.                                  20011  1    7
           (W,NEBE,7012) DATA ON TAPE.                            20011  1    8
TITLE      -HIGH RESOLUTION TOTAL NEUTRON CROSS SECTIONS FOR NA,  20011  1    9
            CL, K, V, MN AND CO BETWEEN 0.5 AND 30 MEV.-          20011  1   10
AUTHOR     (S.CIERJACKS, P.FORTI, D.KOPSCH, L.KROPP, J.NEBE,      20011  1   11
            H.UNSELD)                                             20011  1   12
INSTITUTE  (2GERKFK)                                              20011  1   13
FACILITY   (CYCLI)    45 MEV KARLSRUHE ISOCHRONOUS CYCLOTRON (KIC)20011  1   14
            DESCRIBED BY S.CIERJACKS ET AL., REV.SCI.INSTR.       20011  1   15
            39(1968)1279.                                         20011  1   16
           .DEUTERON BURST WIDTH 1 NS, REPETITION RATE 20 KC/S.   20011  1   17
N-SOURCE   (D-U  )    U(D,NX)-REACTION.                          20011  1   18
INC-SPECT   BROAD NEUTRON SPECTRUM IN THE ENERGY REGION FROM      20011  1   19
            0.3 TO 30 MEV.                                        20011  1   20
METHOD     (TOF  )    FLIGHT PATH LENGTH = ABOUT 57.5 M,         20011  1   21
            MORE PRECISE VALUES ARE GIVEN UNDER COMMENT FOR EACH  20011  1   22
            ELEMENT.                                              20011  1   23
           (TRNSM)    TRANSMISSION MEASUREMENT.                   20011  1   24
STANDARD   (ABSOL)    ABSOLUTE MEASUREMENT.                       20011  1   25
DETECTOR   (LSCIN,RECC)          LIQUID SCINTILLATOR (NE-213),    20011  1   26
            9 CM DIAM. 1 CM THICK VIEWED BY AN XP-1040 PHOTO TUBE.20011  1   27
CORRECTION .CORRECTED FOR BACKGROUND AND                          20011  1   28
           .FOR THE DEAD TIME OF THE TIME RECORDING SYSTEM.       20011  1   29
           .MULTIPLE SCATTERING EFFECTS ARE ESTIMATED TO BE       20011  1   30
            NEGLIGIBLE.                                           20011  1   31
ERR-ANALYS .TOTAL ERROR GIVEN IS AN UPPER LIMIT,                  20011  1   32
           .THE STATISTICAL ERROR RUNS FROM BETTER THAN 1 PER CENT20011  1   33
            TO ABOUT 3 PER CENT IN MOST OF THE CHANNELS, EXCEPT   20011  1   34
            FOR THE LOW ENERGY REGION OF SODIUM, SEE SUBCOMMENT.  20011  1   35
COMMENT     OVERALL ENERGY RESOLUTION GIVEN IS AN UPPER LIMIT =   20011  1   36
             (FWHM OF THE GAMMA PEAK)/(FLIGHT PATH) = DT/L,       20011  1   37
            VALUES OF DT AND L ARE GIVEN UNDER COMMENT FOR EACH   20011  1   38
            NUCLIDE.                                              20011  1   39
STATUS     (PRIV )    NEBE, 701211, ON TAPE.                      20011  1   40
           (APRVD)    NEBE. TELEPHONE CALLS AND LETTERS, 02/71.   20011  1   41
HISTORY    (701211R)  DATA RECEIVED ON TAPE.                      20011  1   42
           (710115C)                                              20011  1   43
           (710326E)                                              20011  1   44
ENDBIB              42          0                                 20011  1   45
NOCOMMON             0          0                                 20011  1   46
ENDSUBENT           45          0                                 20011  199999
SUBENT       20011006       2003                                  20011  6    1
BIB                  5         10                                 20011  6    2
ISO-QUANT  (25-MN-55,TOT)                                         20011  6    3
PART-DET   (N) NEUTRONS.                                          20011  6    4
SAMPLE     (COMC=)    CHEMICAL PURITY 99.5 PER CENT.              20011  6    5
           .THICKNESS, N = 0.2464 ATOMS/BARN.                     20011  6    6
COMMENT    .TOTAL TIME UNCERTAINTY OF THE SPECTROMETER = DT,      20011  6    7
             DT = (FWHM OF THE GAMMAPEAK) = 3.3 NANOSEC,          20011  6    8
             L = (FLIGHT PATH LENGTH) = 57.540 M.                 20011  6    9
HISTORY    (701211R)  DATA RECEIVED ON TAPE.                      20011  6   10
           (710115C)                                              20011  6   11
           (710326E)                                              20011  6   12
ENDBIB              10          0                                 20011  6   13
NOCOMMON             0          0                                 20011  6   14
DATA                 4       5129                                 20011  6   15
EN         EN-RSL     DATA        DATA-ERR                        20011  6   16
MEV        NSEC/M     B           PER-CENT                        20011  6   17
 5.0000E-01 5.7000E-02 3.4600E+00 3.0000E+00                      20011  6   18
 5.0017E-01 5.7000E-02 3.5400E+00 3.0000E+00                      20011  6   19
 5.0034E-01 5.7000E-02 3.3400E+00 3.0000E+00                      20011  6   20
 5.0051E-01 5.7000E-02 3.6500E+00 3.0000E+00                      20011  6   21
 5.0068E-01 5.7000E-02 3.3900E+00 3.0000E+00                      20011  6   22
```

Listings of CSISRS Library entries which include bibliographic abstracts in addition to the data.

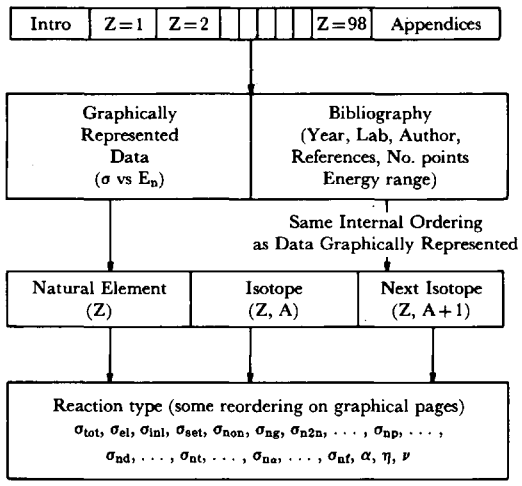


Detailed graphical representation of cross section data with all data shown in reasonable detail.

INTRODUCTION

Organization

In this volume, following the introductory remarks, the data have been grouped into sections of graphical and bibliographic information corresponding to the element of the target nucleus in a neutron-induced reaction. These sections are ordered by increasing atomic number, *Z*. The following figure is a schematic representation of the organization of this volume.



At the end of the volume, following the last element section, are appendices giving the laboratory codes, reference codes, and other information.

Element Section

Within each element section the data are given in graphical representation, followed by bibliographic information. The data and bibliographic information in this book were obtained by retrievals from the Cross Section Information Storage and Retrieval System(CSISRS). This system is maintained by the National Neutron Cross Section Center (NNCSC) at Brookhaven National Laboratory.

Graphical Data

Data pertaining to the naturally occurring element are usually presented first, and those pertaining to the various isotopes follow in order of increasing mass number, *A*.

The reader is warned that occasionally certain arbitrary, but reasonable, choices of data placement have been made in the interest of reducing ambiquity. For example, elements that are approximately monoisotopic have had the data for the naturally occurring element plotted on the same plot with the most abundant isotope (examples: hydrogen, helium, carbon, nitrogen, oxygen).

Within these rough guidelines the graphical layout is an attempt to optimize the information which can be represented within a one-volume desk-top compilation.

If the data for a given reaction do not have enough "shape" (i.e., only single-point values at the same energy) to warrant a graphical entry, they were omitted from the graphical section, but values can be found on the bibliographic pages.

The symbols cited in the graphical pages are tagged by a mnemonic of Year-Lab-Author's last name (first two letters). This tagging can be coupled to the appropriate citation on the bibliographic pages following. Symbol assignment is preserved where appropriate if a given reference is found on more than one graphical display.

Bibliographic Information.

At the end of each element section can be found the bibliographic information. The organization of this section is similiar to that of the graphical section. References to the data for the naturally occurring element are given first, followed by the references to the isotopic data in order of increasing mass number, *A*.

The bibliographic line consists of the following:

1. Year of reference.
2. Laboratory mnemonic (see Appendix A).
3. Last name of first author. If there is more than one author, either et al. or + follows.
4. Reference (see Appendix B). *A*+ following the reference means augmented by private communication. *A*– means cited by reference (i.e., hearsay).
5. Number of points quoted.
6. Energy range. NOTE: In the case of one-point data sets the value at the given energy is cited, rather than the range.
7. Standard. The reaction or element cited as the standard when it exists in the CSISRS file.

The bibliographic information is ordered by reaction type within a given element or isotope, and within a reaction type by year from most recent to oldest. If the author gives data for more than one measurement of the same reaction type, such as data for thick and thin samples, the number of points and the energy range given are for the total number of points plotted and the entire energy range covered.

Appendix C gives the bibliographic information for references that became known or were received too late for inclusion.

Reaction Types

The experimental data considered to be part of the scope of this book are the following reaction types:

Code	Reaction type in the CSISRS library
TOT	Total
EL	Elastic
SCT	Total scattering (elastic + inelastic)
INL	Inelastic
NG	Capture
ING	Inelastic gamma
GEM	Gamma-ray emission
NON	Nonelastic (total-elastic)
NF	Fission
ALF	Alpha (capture to fission ratio)
ETA	Eta (neutrons emitted per neutron absorbed)
NU	Nu (neutrons per fission)
N2N	$(n,2n)$ reaction
N3N	$(n,3n)$ reaction
N4N	$(n,4n)$ reaction
NEM	Neutron emission
NPR	Neutron production
NP	(n,p) reaction
N2P	$(n,2p)$ reaction
NNP	(n,np) reaction
ND	(n,d) reaction
NND	(n,nd) reaction
NA	(n,α) reaction for ^{6}Li-see NT
NNA	$(n,n\alpha)$ reaction
N2A	$(n,2\alpha)$ reaction
AEM	α particle emission
NT	$(n,$ triton$)$ reaction
NNT	$(n,n$ triton$)$ reaction
N3	$(n,^3\mathrm{He})$ reaction
NN3	$(n,n^3\mathrm{He})$ reaction
NX	$(n,$ any charged particle$)$ reaction

Of the above reactions only total (i.e., integral) reaction cross sections are represented in this volume. Angular distributions (i.e., differential data) can be found in BNL 400, *Angular Distributions in Neutron-Induced Reactions*, and are not included here. Partial reaction probabilities such as inelastic cross sections to specific levels, or cross sections to specific metastable states or ground states, are not included. Where values have been averaged over spectra such as Maxwellian, fission, etc., average quantities are omitted.

In a number of cases, experimentalists measure mixtures of reaction types or ratios of cross sections. These are not included in this publication. The CSISRS library contains all the above reactions. A retrieval can be requested of the CSISRS library for complete coverage of all reactions.

The graphical coverage of those of the above reactions that are within the scope of this volume has the following limitations:

1. Isolated single-point measurements such as found at thermal energies and at 14 MeV are not necessarily represented graphically. The values, however, are quoted in the bibliography pages at the end of each element section.

2. If every datum were assigned a symbol, a "glutting" or overwriting of symbols would occur where data are densely represented. To avoid this condition not every datum is assigned a symbol, although a dot (or small x) is usually retained for every datum. However, in especially dense data representations, where dots would overwrite each other, not every dot is shown. Care has been taken to assign symbols equitably among the contending references.

Page Annotation

Each graphical and bibliographic page is annotated on the outer edge with the chemical symbol of the element on that page. On the graphical pages, isotopic numbers are also given with the chemical symbol if isotopic data are plotted. On the graphical pages, below each chemical symbol is a list of the cross sections displayed on that page for that element or isotope. A number in brackets, [], in that list indicates that the curves displayed with the preceding cross sections of that element or isotope were derived by using that material number in the ENDF/B library. Refer to the eyeguide discussion below for more information about these curves.

Eyeguides

Solid-line curves appearing on the graphs are from two sources: the ENDF/B-IV library and eyeguides created with the use of interactive graphics. Summary documentation for the ENDF evaluations can be found in ENDF 201, ENDF/B Summary Documentation, BNL 17541 Revised, 1976.

The ENDF/B library (or Evaluated Nuclear Data File) consists of evaluations for a number of elements or isotopes.

Appendix D contains a list of the elements and isotopes, with the material number assigned to that element or isotope in the ENDF/B library, which were used to produce the ENDF curves in this publication. The evaluated curves were derived from the General Purpose ENDF files except for a limited number of cross section curves that exist only in the Dosimetry file. The Fission Product file was used only for the isotopic cross sections of neodymium. In this case, the curves are a reconstruction of the curve from the recommended resonance parameters of BNL 325, Vol. I.

The ENDF evaluations are defined for the principal neutron reaction cross sections of incident neutron energies between 0.00001 eV and 20 MeV. The evaluations are considered studies of available experimental data, augmented by nuclear model calculations where needed. Experimental data have been renormalized, energy shifted if necessary, and sometimes a new background subtracted at the evaluator's discretion. The constraints on cross sections found in ENDF are such that totals are sums of partials. ENDF in many instances contains resonance parameters instead of cross sections. These have been converted to point-wise representation in cross section. The entire file was then linearized (i.e., converted to chord segments approximating the evaluated curve to within 1%). The evaluated curve was then Doppler-broadened to room temperature (300 degrees Kelvin). No resolution-broadening was applied to the ENDF curves. In a number of cases the ENDF evaluation implied cross sections that were not explicitly present in the evaluation, such as nonelastic, total $n2n$, etc. In these few cases the implied ENDF cross section was derived and displayed. Any apparent discrepancies between the ENDF curve and the displayed experimental data are attributable to the ENDF evaluator.

At low energy (<1 eV) caution must be used in interpreting the ENDF curves and the data displayed. The ENDF curve displayed is for a free gas model and does not contain any of the solid state, bound-atom scattering-kernel information found elsewhere in the ENDF evaluations.

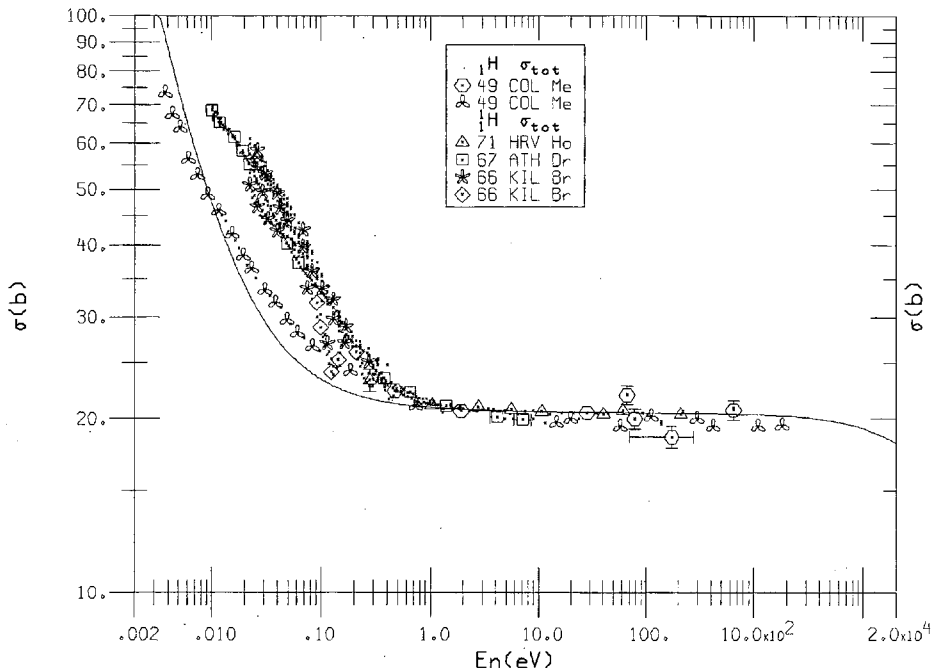
For the elements and isotopes for which ENDF evaluations do not exist, eyeguides have been created. It is difficult to define something as subjective as an eyeguide in an unambigious way. The eyeguides created for this publication are an attempt to show the main features of the data, subject to the following limitations:

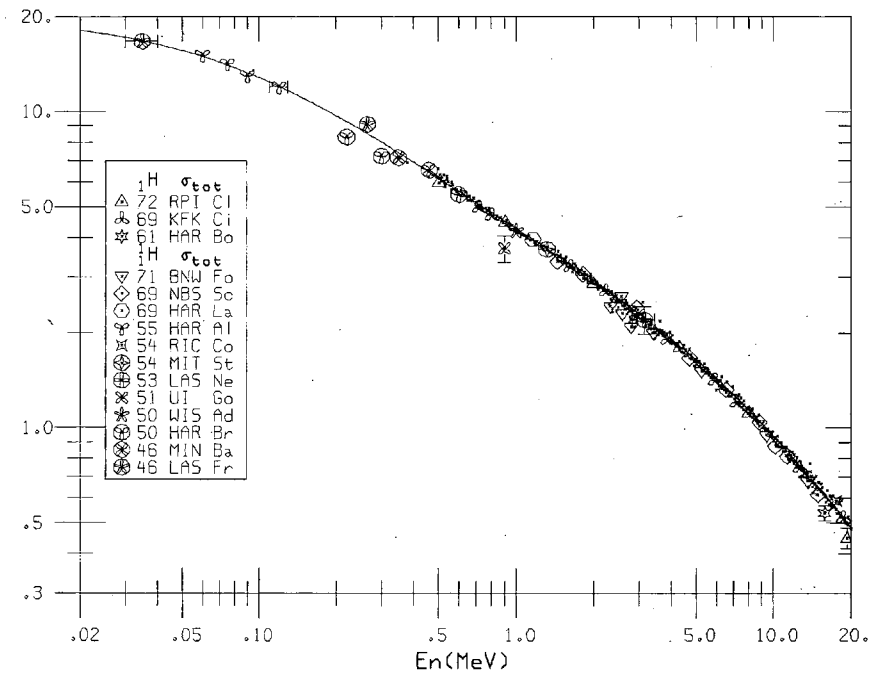
1. The curve is defined only in those regions where data exist.
2. No attempt has been made to renormalize discrepant data and reconcile differences between data sets.
3. Resolution effects have not been removed.
4. Constraints that the total cross section is the sum of the partials have not been considered.
5. Specific nuclear-model-code or Q-value information has not generally been used as input in the eyeguide construction.

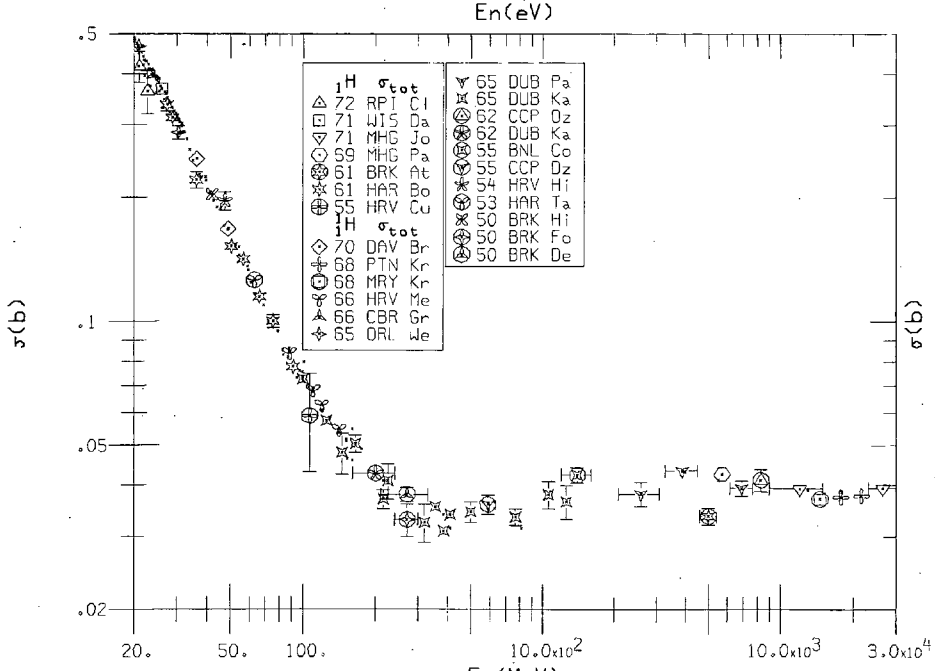
For the above reasons the eyeguides should not be viewed as considered evaluations. No detailed documentation exists for their production.

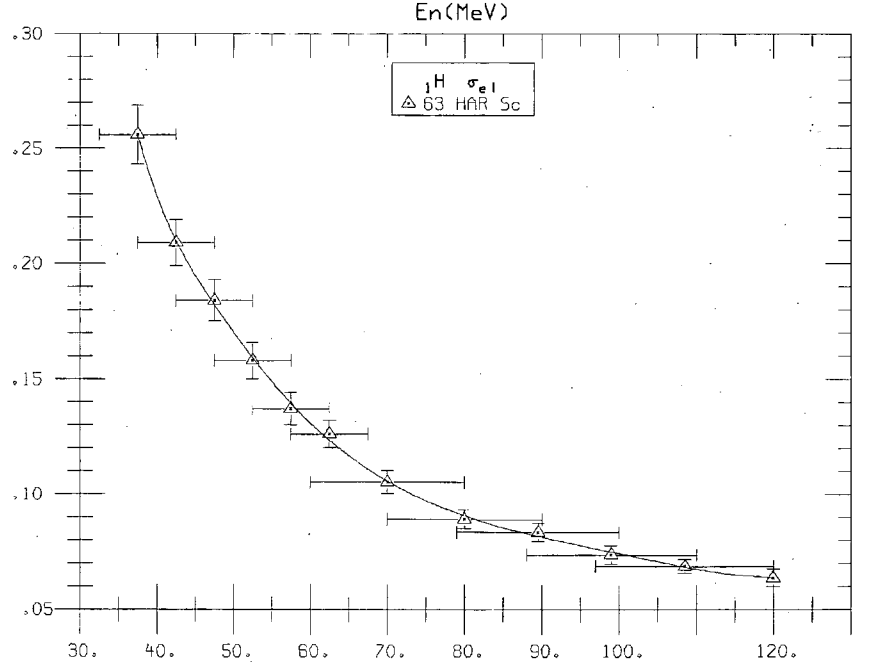
The eyeguides were produced by fitting a continuous curve with continuous first and second derivatives to the experimental data. In regions of data conflict, usually the most recent and/or highest resolution data were selected. The data and the eyeguide candidates were then viewed on a CRT screen using interactive graphics, and decisions were made on the credibility of the curves. The most common problem was to smooth the curve from the automatic fitting program. In other cases, the automatic fitting program did not have enough data to define a reasonably smooth curve, and a cubic spline curve was constructed, based on what seemed a reasonable physical shape, supplemented by resonance parameter information from BNL 325, Vol. I. These constructed curves are available in the ENDF format from NNCSC.

$_1H$
σ_{tot}
σ_{el}
$_1H$
σ_{tot}
[1269]









$^{2}_{1}H$

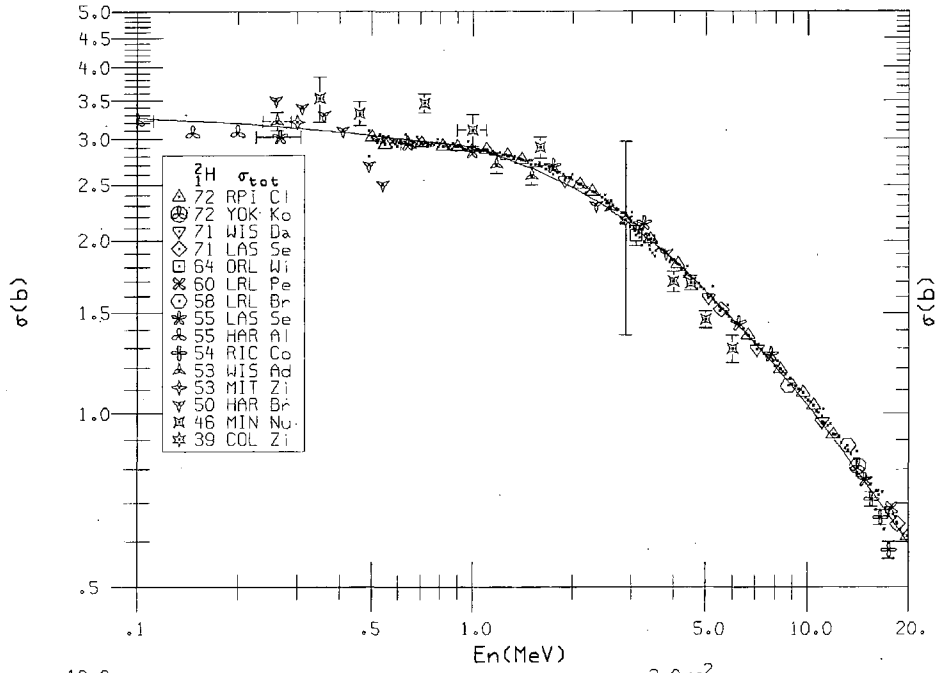
σ_{tot}

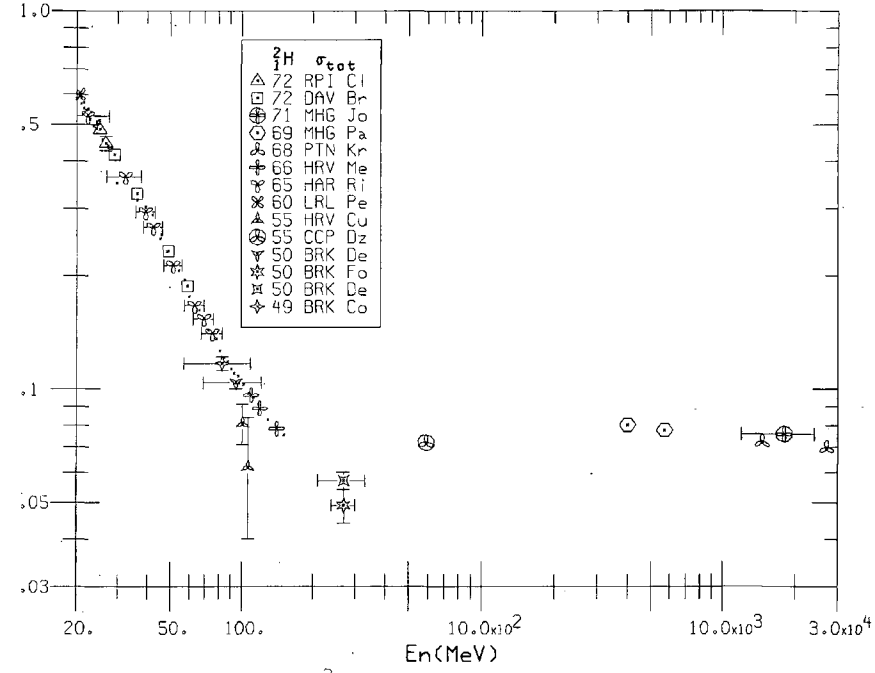
σ_{el}

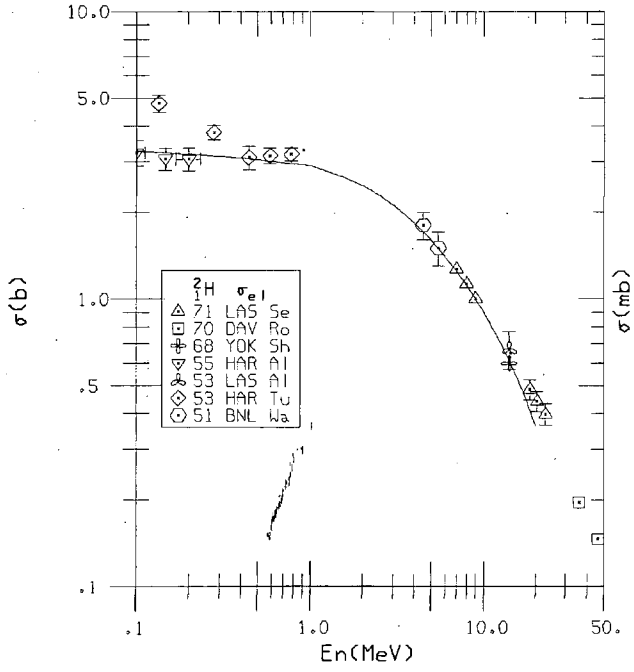
σ_{non}

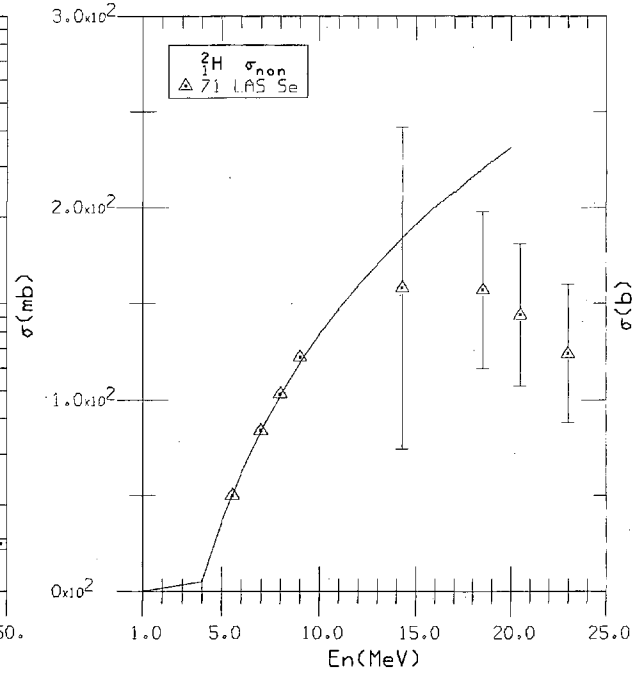
σ_{n2n}

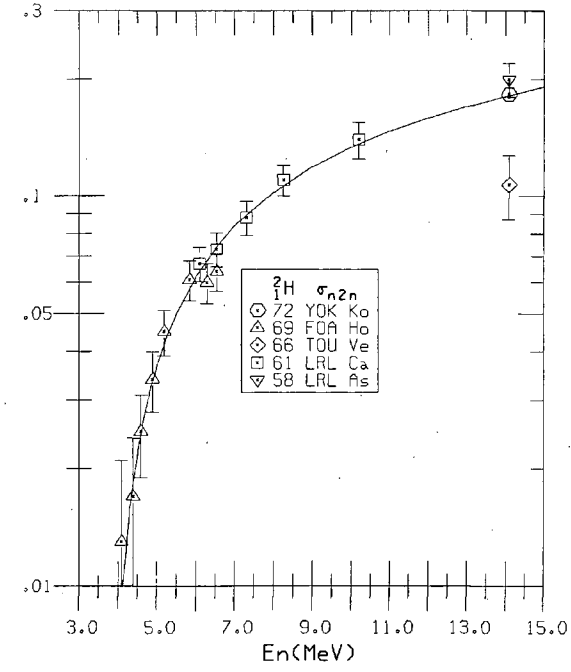
[1120]











$^{3}_{1}H$

σ_{tot}

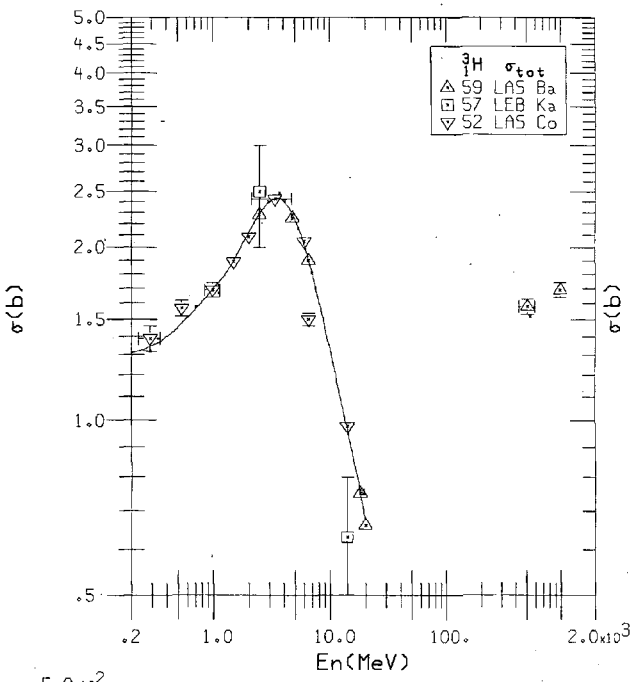
σ_{el}

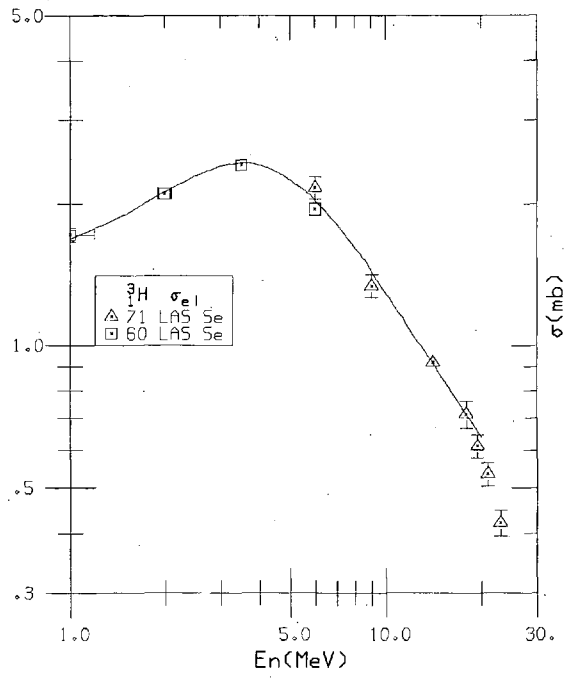
σ_{non}

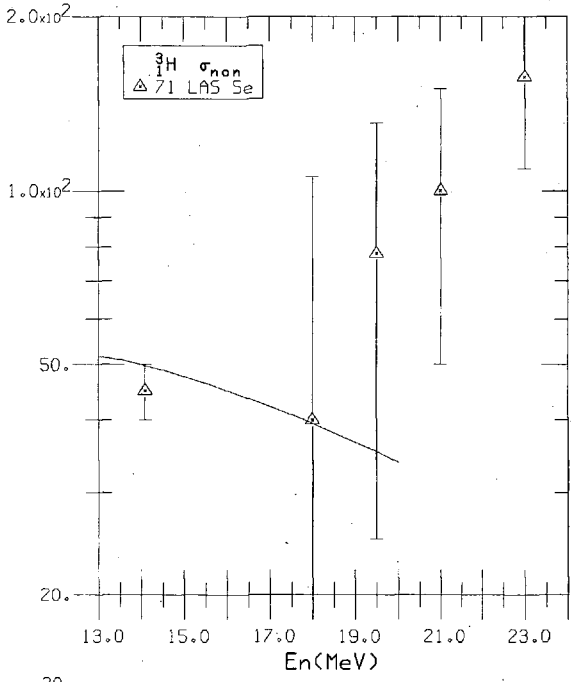
[1169]

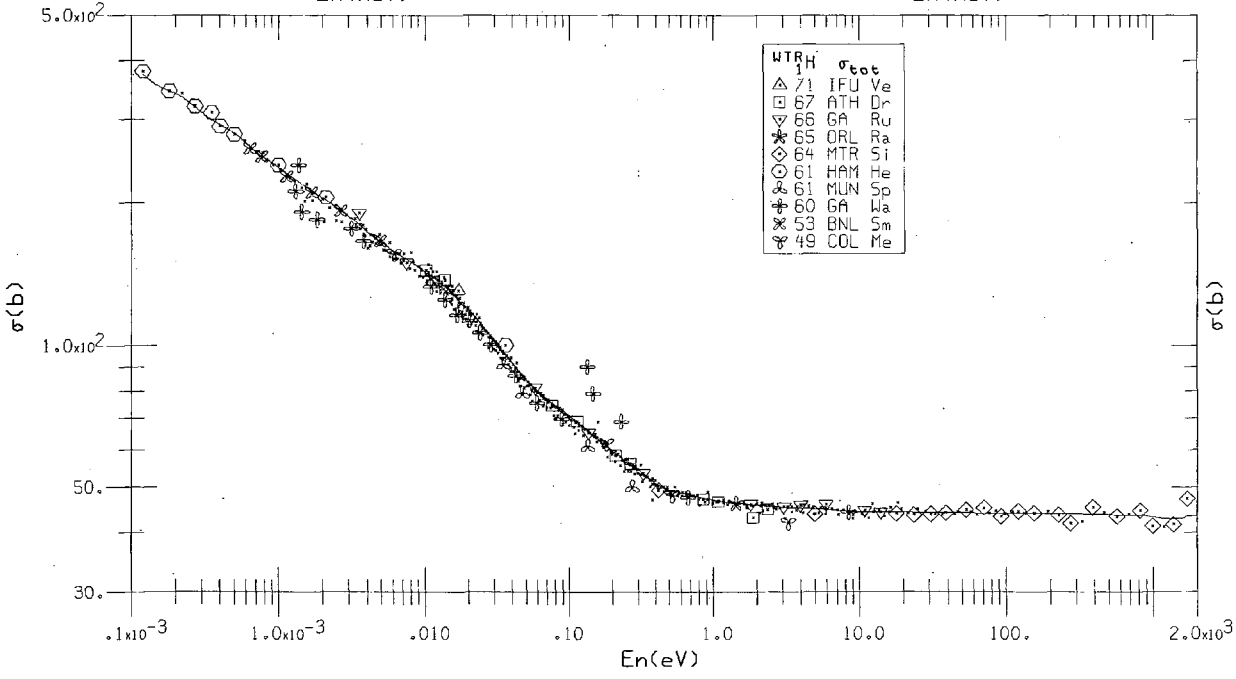
$^{WTR}_{1}H$

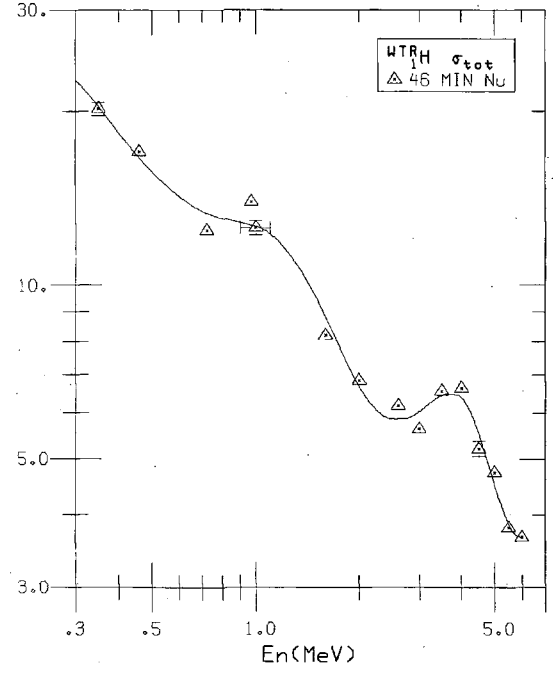
σ_{tot}





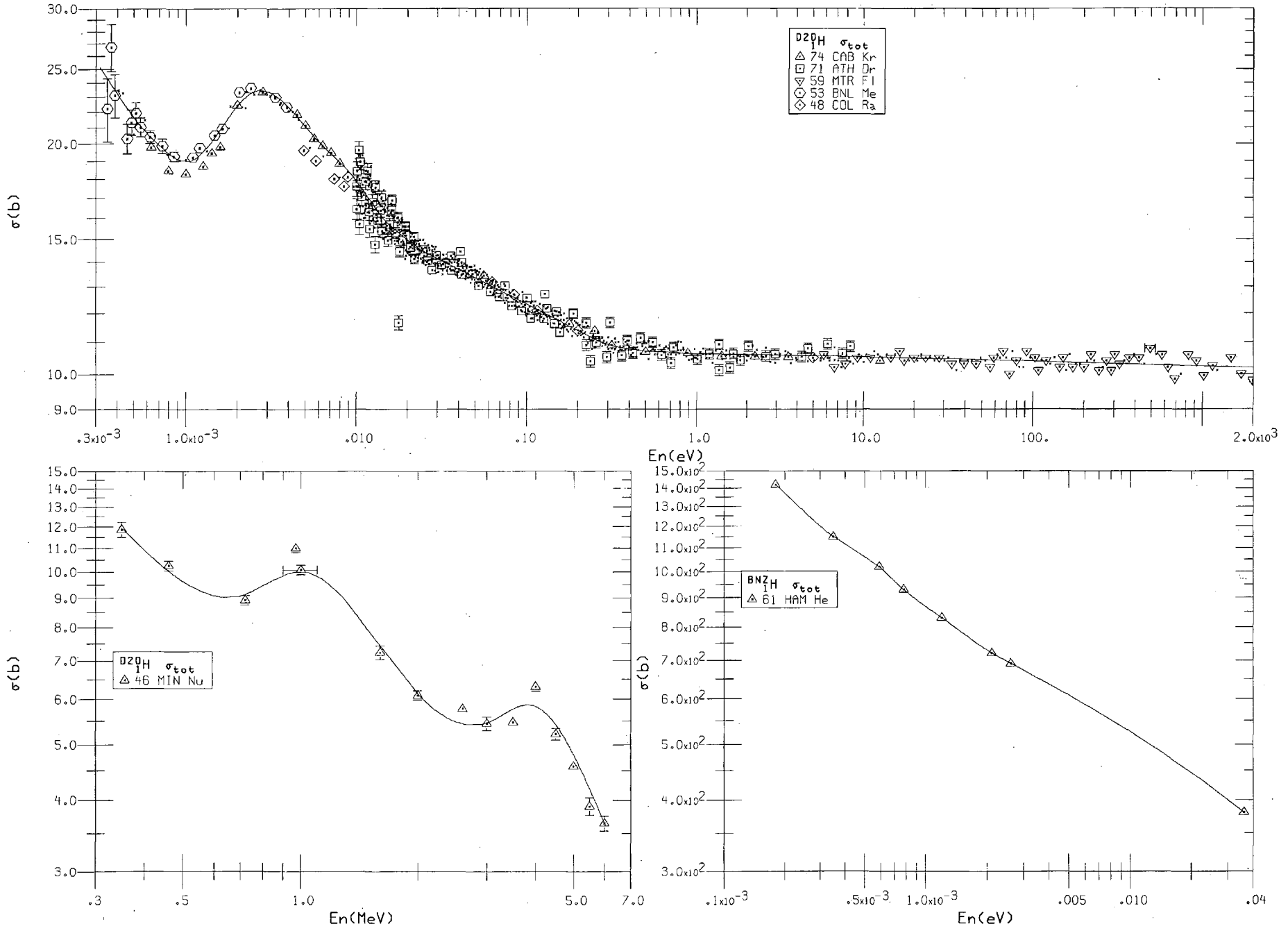






D_2O ^1H σ_{tot}

BNZ ^1H σ_{tot}



Yr	Lab	Author	Reference	Points	Range	Standard
			$_1H$ σ_{tot}			
72	RPI	Clement,et.al.	NP/A,183,51,72	425	.501 MeV to 24.6 MeV	abs
71	WIS	Davis,et.al.	PR/C,3,1798,71	27	1.500 MeV to 27.5 MeV	
71	WIS	Davis,et.al.	PR/C,4,1061,71	1	2.536 b at 2.533 MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	4	12.0 GeV to 27.00 GeV	
71	VIR	Simmons,et.al.	71KNOX,2,543,71	1	5.956 b at .526 MeV	
70	YOK	Tanaka,et.al.	JPJ,28,11,70	1	.671 b at 14.1 MeV	
69	MHG	Parker,et.al.	UNIV-MI-03028-3T,69	2	4000. MeV to 5700. MeV	
69	KFK	Cierjacks,et.al.	PRL,23,866,69	1066	.701 MeV to 32.0 MeV	abs
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	33.6 mb at 5000. MeV	
61	HAR	Bowen,et.al.	NP,22,640,61	63	15.8 MeV to 111.5 MeV	C
60	LRL	Peterson,et.al.	PR,120,521,60	5	17.8 MeV to 29.0 MeV	abs
55	HRV	Culler,et.al.	PR,99,740,55	4	93.4 MeV to 106.8 MeV	
51	CAR	Lasday	PR,81,139,51	1	.770 b at 13.9 MeV	
49	COL	Melkonian	PR,76,1744,49	29	.475 eV to 1.830 keV	abs
49	COL	Melkonian	PR,76,1750,49	62	.0033 eV to 1.830 keV	
			$_1H$ σ_{el}			
63	HAR	Scanlon,et.al.	NP,41,401,63	12	37.5 MeV to 120.0 MeV	abs
			$_1H$ $\sigma_{n\gamma}$			
61	ANL	Meadows,et.al.	NSE,9,132,61	1	.335 b at thermal	
			^1_1H σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	238	2.302 MeV to 14.7 MeV	
71	HRV	Houk	PR/C,3,1886,71	64	.280 eV to .705 keV	
70	DAV	Brady,et.al.	PRL,25,1628,70	8	24.6 MeV to 59.3 MeV	
69	NBS	Schwartz,et.al. +	PL/B,30,36,69	1652	1.447 MeV to 15.0 MeV	abs
69	HAR	Langsford,et.al.	AERE-PR/NP-16,39,69	10	.841 MeV to 5.858 MeV	
68	PTN	Kreisler,et.al.	PRL,20,468,68	3	18.00 GeV to 27.00 GeV	
68	MRY	Kreisler,et.al.	PRL,20,468,68	1	37.1 mb at 15.00 GeV	
67	ATH	Dritsa,et.al.	EANDC(OR)-63,67	243	.0101 eV to 15.4 eV	abs
66	HRV	Measday,et.al.	NP,85,142,66	7	88.2 MeV to 150.9 MeV	C
66	HRV	Measday,et.al.	NP,85,142,66	7	88.2 MeV to 150.9 MeV	
66	HRV	Measday,et.al.	NP,85,142,66	7	88.2 MeV to 150.9 MeV	abs
66	KIL	Broecker	EANDC(E)-66,52,66	393	.0226 eV to .540 eV	
66	CBR	Groce,et.al.	NP,83,199,66	3	19.6 MeV to 28.0 MeV	
65	ORL	West II,et.al.	ORNL-3778,94,65	5	19.6 MeV to 30.5 MeV	abs
65	DUB	Pantuev,et.al.	YF,1,134,65	5	2600. MeV to 8300. MeV	
65	DUB	Kazarimov+	YF,1,271,65	31	100.0 MeV to 1260. MeV	
64	SAC	Ambrosino,et.al.	CEA-2399,64	1	2.370 b at 2.768 MeV	
63	COL	Engelke,et.al.	PR,129,324,63	1	2.206 b at 3.205 MeV	
63	COL	Engelke,et.al.	PR,129,324,63	1	6.202 b at .493 MeV	
62	CCP	Ozhdyani,et.al.	ZET,42,395,62	1	41.2 mb at 8300. MeV	
62	DUB	Kazarinov+	ZET,43,35,62	1	42.7 mb at 200.0 MeV	abs
59	LAS	Battat,et.al.	NP,12,291,59	1	.687 b at 14.1 MeV	
59	LAS	Day,et.al.	PR,114,209,59	1	.494 b at 19.7 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	6	7.170 MeV to 14.0 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	42.4 mb at 1400. MeV	
55	BNL	Coor,et.al.	PR,98,1369,55	1	42.2 mb at 1400. MeV	
55	HAR	Allen,et.al.	PPS/A,68,1077,55	5	60.0 keV to .550 MeV	
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	36.0 mb at 590.0 MeV	
54	WIS	Fields,et.al.	PR,94,389,54	2	1.005 MeV to 2.540 MeV	
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	
54	MIT	Storrs,et.al.	PR,95,1252,54	1	3.675 b at 1.315 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	84.5 mb at 88.0 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
54	HRV	Hillman,et.al.	PR,96,115,54	1	.196 b at 47.5 MeV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	86.1 mb at 88.0 MeV	abs
53	BNL	Hafner,et.al.	PR,89,204,53	1	1.690 b at 4.749 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	38	2.950 MeV to 13.2 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	.504 b at 19.9 MeV	abs
53	HAR	Taylor,et.al.	PM,44,95,53	5	38.0 MeV to 153.0 MeV	
52	BNL	Poss,et.al.	PR,87,11,52	1	.689 b at 14.1 MeV	abs
52	ANL	Goodman	PR,88,686,52	1	.690 b at 14.0 MeV	
51	BRK	De Juren,et.al.	PR,81,919,51	2	160.0 MeV to 220.0 MeV	
51	UI	Good,et.al.	PR,59,917(19),51	1	3.700 b at .900 MeV	
50	WIS	Adair	PR,77,748(H9),50	1	4.200 b at 1.000 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	.203 b at 42.0 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	73.0 mb at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	33.0 mb at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	38.0 mb at 270.0 MeV	
50	HAR	Bretscher,et.al.	HPA/A,23,15,50	10	.220 MeV to 4.050 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	83.0 mb at 83.0 MeV	
46	MIN	Bailey,et.al.	PR,70,583,46	15	.350 MeV to 6.000 MeV	
46	LAS	Frisch	PR,70,589,46	4	35.0 keV to .490 MeV	
45	HRV	Scherr	PR,68,240,45	1	.390 b at 25.0 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	1	2.320 b at 2.880 MeV	abs
39	JAP	Aoki	PPM,21,232,39	5	2.130 MeV to 2.750 MeV	
			^1_1H σ_{el}			
70	YOK	Tanaka,et.al.	JPJ,28,11,70	1	.671 b at 14.1 MeV	
53	LAS	Allred,et.al.	PR,91,90,53	1	.660 b at 14.1 MeV	
			^1_1H σ_{inl}			
62	KFI	Bozoki,et.al.	NP,33,236,62	1	35.0 mb at 30.00 GeV	abs
			^1_1H $\sigma_{n\gamma}$			
69	UJV	Bayer,et.al.	CZJ/B,19,911,69	1	.336 b at thermal	
67	RBZ	Tudoric-Ghemo	NP/A,92,233,67	1	30.6 muB at 14.4 MeV	abs
65	KFI	Pal,et.al.	65KRLSRH,1,165,65	1	.333 b at thermal	abs
64	RBZ	Slaus,et.al.	64PARIS,2,244,64	1	33.8 muB at 14.4 MeV	
61	UJV	Bayer,et.al.	CZJ/A,11,480,61	1	.335 b at thermal	
61	RBZ	Cerineo,et.al.	PR,124,(6),1947,61	1	31.6 muB at 14.4 MeV	^1H σ_{el}
61	IST	Barford,et.al.	PPS,78,912,61	1	.110 mb at 50.0 MeV	^1H σ_{tot}
			^2_1H σ_{tot}			
72	RPI	Clement,et.al.	NP/A,183,51,72	432	.501 MeV to 29.9 MeV	abs
72	DAV	Brady,et.al.	PR/C,6,1150,72	8	24.6 MeV to 59.3 MeV	
72	YOK	Koori	JPJ,32,306,72	1	.809 b at 14.1 MeV	abs
72	YOK	Shirato,et.al.	72LOSANG,,472,72	1	.806 b at 14.1 MeV	^1H σ_{el}
71	WIS	Davis,et.al.	PR/C,3,1798,71	27	1.500 MeV to 27.5 MeV	
71	LAS	Seagrave,et.al.	LA-DC-12954,71	8	5.550 MeV to 23.0 MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	1	75.8 mb at 18.00 GeV	
69	MHG	Parker,et.al.	UNIV-MI-03028-3T,69	2	4000. MeV to 5700. MeV	
68	YOK	Shirato,et.al.	NP/A,120,387,68	1	.778 b at 14.1 MeV	
68	PTN	Kreisler,et.al.	PRL,20,468,68	2	15.00 GeV to 27.00 GeV	
66	HRV	Measday,et.al.	NP,85,142,66	7	88.2 MeV to 150.9 MeV	H
65	HAR	Riddle	NP,61,457,65	28	17.5 MeV to 112.5 MeV	
64	ORL	Willard,et.al.	PL,9,339,64	31	2.790 MeV to 3.570 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.8 MeV to 29.0 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.160 MeV to 14.0 MeV	abs
55	LAS	Seagrave,et.al.	PR,98,666,55	29	.267 MeV to 21.9 MeV	abs
55	HRV	Culler,et.al.	PR,99,740,55	4	93.4 MeV to 106.8 MeV	
55	HAR	Allen,et.al.	PPS/A,68,650,55	5	.100 MeV to .200 MeV	
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	72.0 mb at 590.0 MeV	
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	
53	WIS	Adair,et.al.	PR,89,1165,53	9	.262 MeV to 2.962 MeV	
53	MIT	Zimmerman,et.al.	PR,90,339(C5),53	4	.100 MeV to 1.320 MeV	
52	BNL	Poss,et.al.	PR,87,11,52	1	.803 b at 14.1 MeV	abs
52	ANL	Goodman	PR,88,686,52	1	.820 b at 14.0 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	.289 b at 42.0 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	.104 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	49.0 mb at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	57.0 mb at 270.0 MeV	
50	HAR	Bretscher,et.al.	HPA/A,23,15,50	14	.260 MeV to 3.800 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	.117 b at 83.0 MeV	
46	MIN	Nuckolls,et.al.	PR,70,805,46	15	.350 MeV to 6.000 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	1	2.170 b at 2.880 MeV	abs
			$^2_1$H σ_{el}			
72	YOK	Koori	JPJ,32,306,72	1	.626 b at 14.1 MeV	abs
72	YOK	Shirato,et.al.	72LOSANG,,472,72	1	.623 b at 14.1 MeV	^{1}H σ_{el}
71	LAS	Seagrave,et.al.	LA-DC-12954,71	8	5.550 MeV to 23.0 MeV	
70	DAV	Romero,et.al.	PR/C,2,2134,70	2	36.0 MeV to 46.3 MeV	^{1}H σ_{el}
68	YOK	Shirato,et.al.	NP/A,120,387,68	1	.598 b at 14.1 MeV	
68	CLA	Berick,et.al.	PR,174,1105,68	1	.650 b at 14.3 MeV	H
66	TOU	Vedrenne	VEDRENNE,66	1	.607 b at 14.1 MeV	
55	LAS	Seagrave	PR,97,757,55	1	.610 b at 14.1 MeV	
55	HAR	Allen,et.al.	PPS/A,68,650,55	2	.100 MeV to .147 MeV	H
55	HAR	Allen,et.al.	PPS/A,68,650,55	1	3.060 b at .200 MeV	H
53	LAS	Allred,et.al.	PR,91,90,53	1	.670 b at 14.1 MeV	
53	HAR	Tunnicliffe	PR,89,1247,53	6	.135 MeV to .914 MeV	
51	BNL	Wantuch	PR,84,169,51	2	4.500 MeV to 5.500 MeV	
			$^2_1$H σ_{non}			
71	LAS	Seagrave,et.al.	LA-DC-12954,71	8	5.550 MeV to 23.0 MeV	
			$^2_1$H $\sigma_{n\gamma}$			
68	CRC	Merritt,et.al.	NSE,34,195,68	1	.521 mb at thermal	^{59}Co $\sigma_{n\gamma}$
61	RBZ	Cerineo,et.al.	PR,124,(6),1947,61	1	29.4 muB at 14.4 MeV	^{1}H σ_{el}
			$^2_1$H σ_{n2n}			
72	YOK	Koori	JPJ,32,306,72	1	.183 b at 14.1 MeV	abs
69	FOA	Holmberg	NP/A,129,327,69	8	4.100 MeV to 6.550 MeV	
68	YOK	Shirato,et.al.	NP/A,120,387,68	1	.180 b at 14.1 MeV	
66	TOU	Vedrenne	VEDRENNE,66	1	.196 b at 14.1 MeV	
66	TOU	Vedrenne	VEDRENNE,66	1	.107 b at 14.1 MeV	H
61	LRL	Catron,et.al.	PR,123,218,61	6	6.110 MeV to 14.1 MeV	
58	LRL	Ashby,et.al.	PR,111,616,58	1	.200 b at 14.1 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^3_1$H σ_{tot}			
59	LAS	Battat,et.al.	NP,12,291,59	23	.290 MeV to 990.0 MeV	abs
57	LEB	Katsaurov,et.al.	AE/5,5,71,57	2	2.500 MeV to 14.0 MeV	
52	LAS	Coon,et.al.	AECD-4284,52	23	.290 MeV to 20.0 MeV	
			$^3_1$H σ_{el}			
71	LAS	Seagrave,et.al.	LA-DC-12954,71	7	6.000 MeV to 23.0 MeV	
60	LAS	Seagrave,et.al.	PR,119,1981,60	4	1.000 MeV to 6.000 MeV	H
			$^3_1$H σ_{non}			
71	LAS	Seagrave,et.al.	LA-DC-12954,71	5	14.1 MeV to 23.0 MeV	
			$^3_1$H $\sigma_{n\gamma}$			
64	LOK	Imhof,et.al.	NP,59,81,64	1	1.000 muB at .615 MeV	^{197}Au
			$^3_1$H σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	46.8 mb at 14.1 MeV	^{238}U σ_{nf}
67	ALD	Mather,et.al.	AWRE-CNR/PR-8,14,67	1	45.0 mb at 14.0 MeV	
			$^3_1$H σ_{n3n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	.200 mb at 14.1 MeV	^{238}U σ_{nf}
67	ALD	Mather,et.al.	AWRE-CNR/PR-8,14,67	1	1.000 mb at 14.0 MeV	
			$^{WTR}_1$H σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-12,74,71	28	.0130 eV to 1.000 eV	
67	ATH	Dritsa,et.al.	EANDC(OR)-63,67	486	.0101 eV to 15.4 eV	abs
66	GA	Russell Jr+	GA-7581,66	134	.0035 eV to 16.0 eV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	46.1 b at 1.440 eV	
64	MTR	Simpson,et.al.	NIM,30,293,64	68	.422 eV to 1.715 keV	
61	HAM	Heinloth	ZP,163,218,61	15	.0001 eV to .0360 eV	abs
61	MUN	Springer	NUK,3,110,61	29	.0120 eV to .530 eV	abs
60	GA	Walton	WALTON,60	111	.0013 eV to 18.3 eV	
53	BNL	Smith	SMITH,53	29	.0006 eV to .0091 eV	abs
50	BRK	De Juren,et.al.	PR,77,606,50	1	.811 b at 95.0 MeV	
49	COL	Melkonian	PR,76,1750,49	40	.0033 eV to 5.300 eV	
46	MIN	Nuckolls,et.al.	PR,70,805,46	15	.350 MeV to 6.000 MeV	
			$^{D2O}_1$H σ_{tot}			
74	CAB	Kropff	KROPFF MORENO,74	80	.0005 eV to 12.6 eV	
71	ATH	Dritsa	DRITSA,71	984	.0101 eV to 9.405 eV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	10.6 b at 1.440 eV	
59	MTR	Fluharty	FLUHARTY,59	96	5.550 eV to 1.980 keV	abs
53	BNL	Meyers	MEYERS,53	36	.0003 eV to .0046 eV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	.868 b at 95.0 MeV	
48	COL	Rainwater,et.al.	PR,73,733,48	46	.0049 eV to 8.000 eV	
46	MIN	Nuckolls,et.al.	PR,70,805,46	15	.350 MeV to 6.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{BNZ}_{1}H$ σ_{tot}			
61	HAM	Heinloth	ZP,163,218,61	8	.0002 eV to .0350 eV	abs

$^{3}_{2}$He

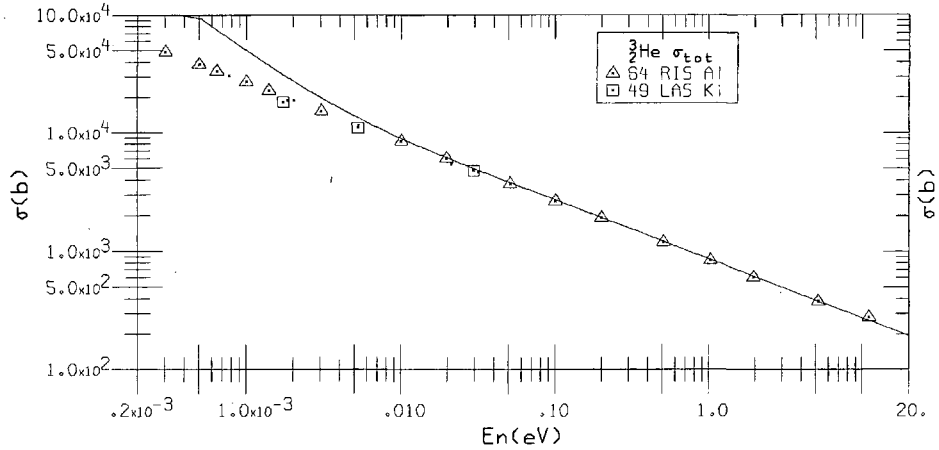
σ_{tot}

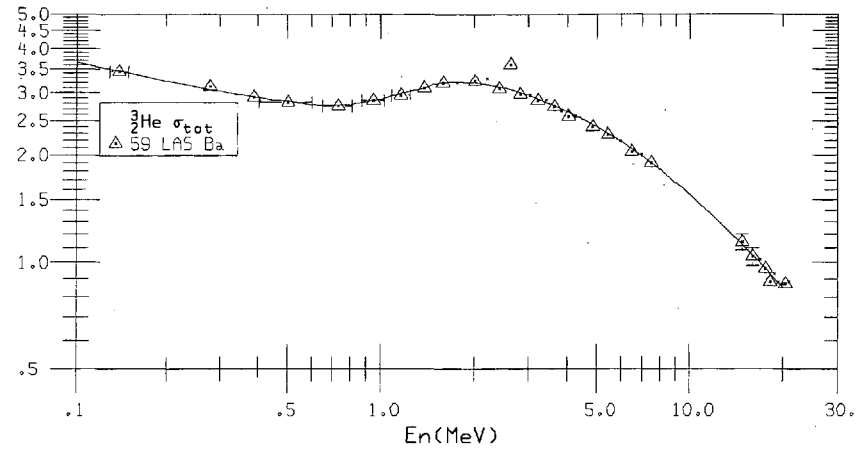
σ_{el}

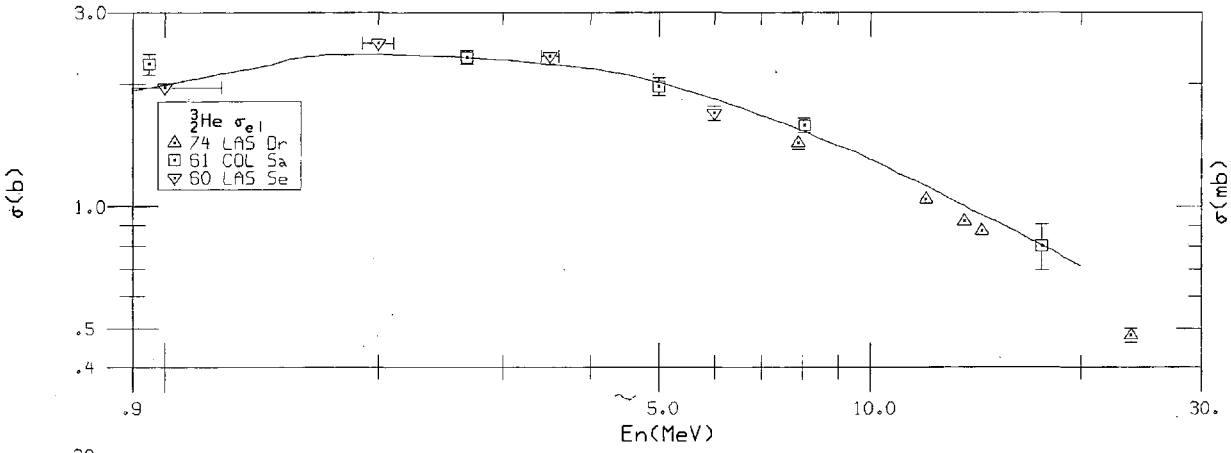
σ_{nd}

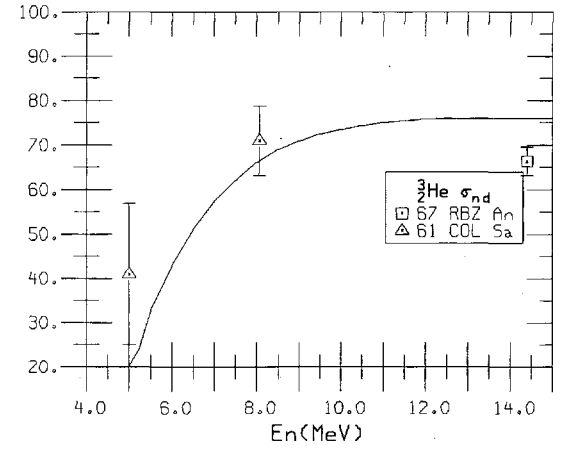
σ_{np}

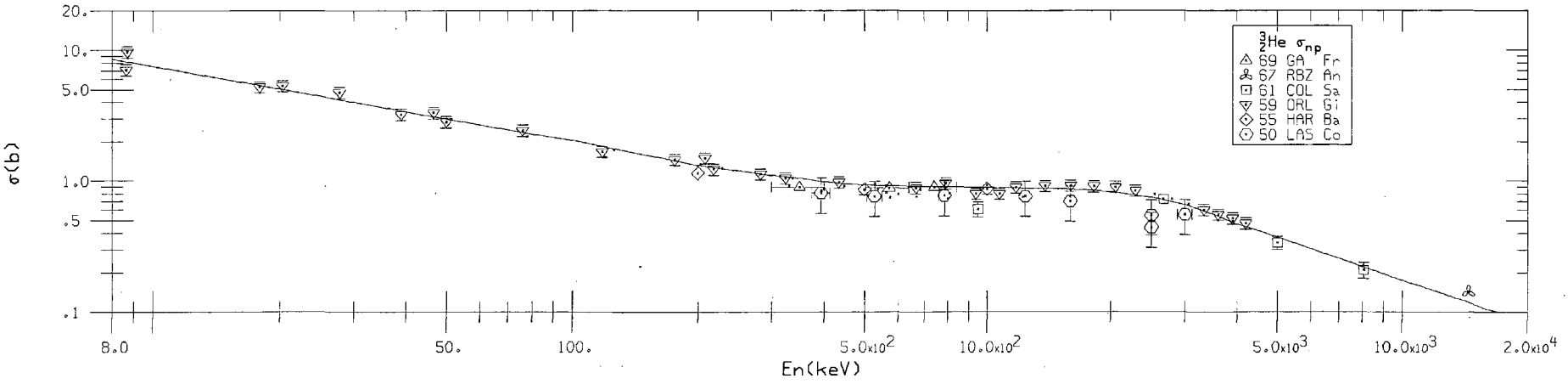
[1146]



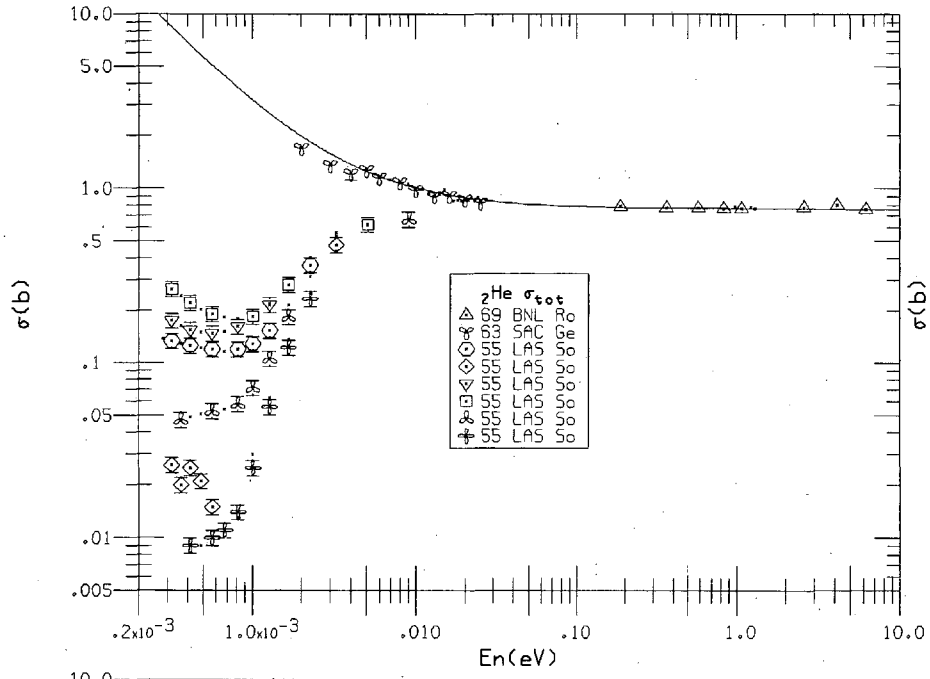


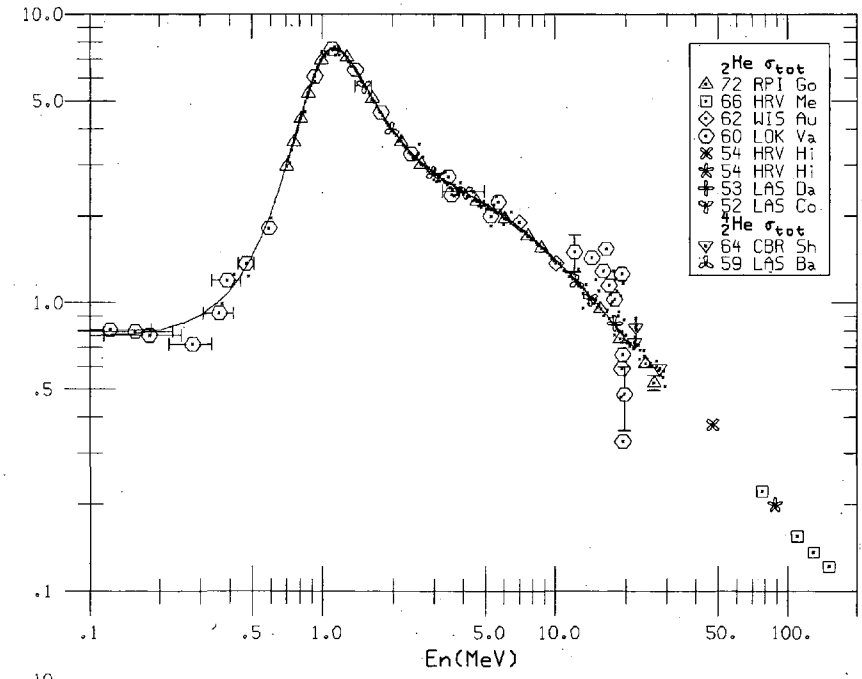


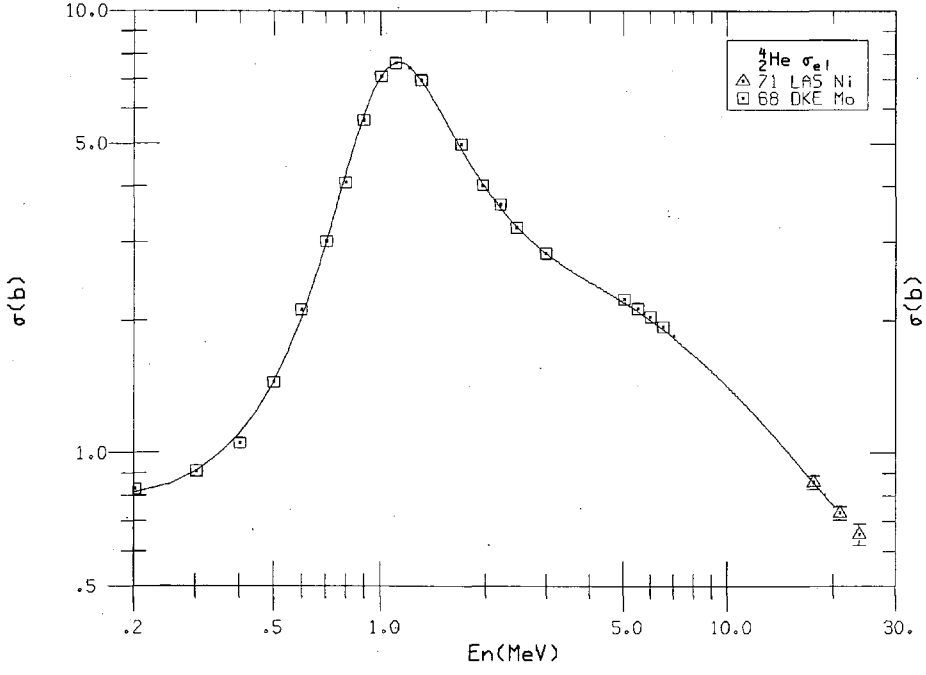


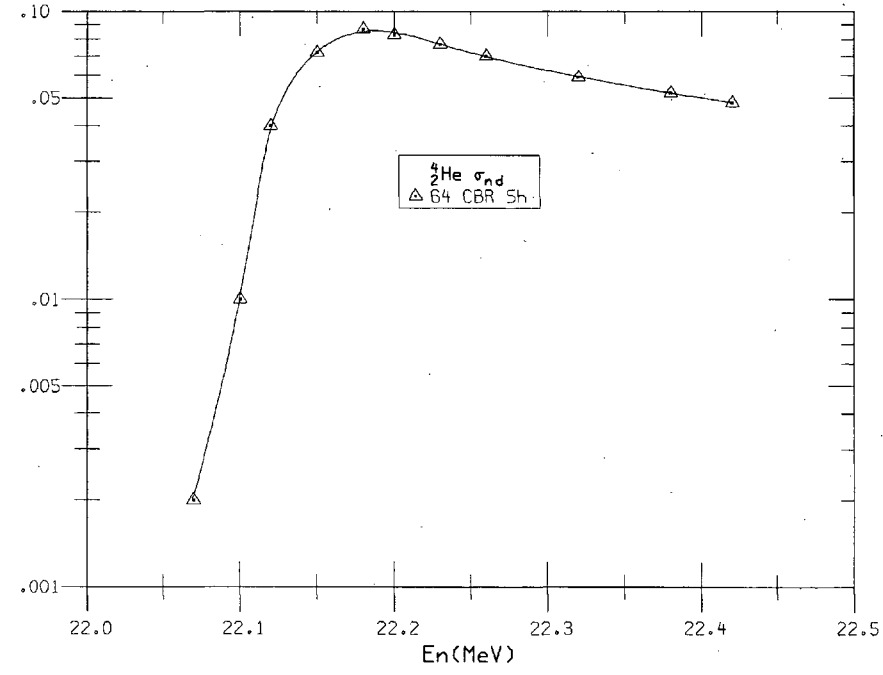


$_2$He
σ_{tot}
$^4_2$He
σ_{tot}
σ_{el}
[1270]
σ_{nd}





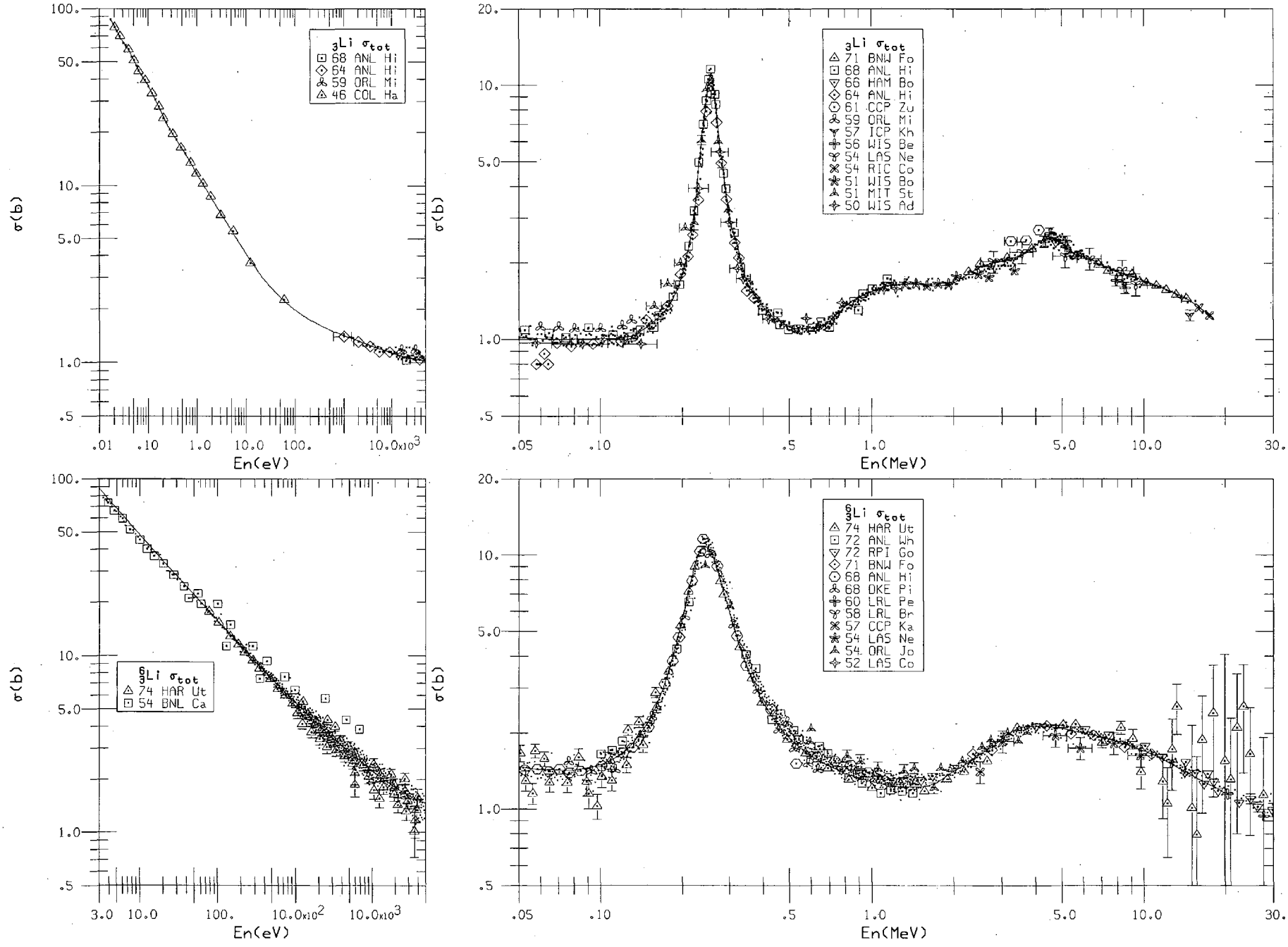




Yr	Lab	Author	Reference	Points	Range	Standard
			$_2$He σ_{tot}			
72	RPI	Goulding	GOULDING,72	482	.702 MeV to 29.6 MeV	
69	BNL	Rorer,et.al.	NP/A,133,410,69	11	.187 eV to 6.195 eV	abs
69	MHG	Parker,et.al.	UNIV-MI-3028-T,69	1	.142 b at 5700. MeV	
66	HRV	Measday,et.al.	NP,85,129,66	5	77.2 MeV to 150.9 MeV	
63	SAC	Genin,et.al.	JPR,24,21,63	24	.0020 eV to .0250 eV	abs
62	WIS	Austin,et.al.	PR,126,1532,62	4	6.990 MeV to 12.0 MeV	abs
60	LOK	Vaughn,et.al.	PR,118,683,60	139	.122 MeV to 19.8 MeV	abs
55	LAS	Sommers Jr+	PR,97,855,55	73	.0003 eV to .0091 eV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	.377 b at 47.5 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	.199 b at 88.0 MeV	
53	LAS	Day,et.al.	PR,92,358,53	3	18.0 MeV to 20.1 MeV	abs
52	LAS	Coon,et.al.	AECD-4284,52	9	.940 MeV to 14.1 MeV	
			$_2$He σ_{el}			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	.773 b at thermal	abs
63	SAC	Genin,et.al.	JPR,24,21,63	1	.720 b at thermal	abs
60	HAR	Arnold,et.al.	NP,19,500,60	1	64.0 mb at 104.0 MeV	abs
60	HAR	Arnold,et.al.	NP,19,500,60	1	25.0 mb at 138.0 MeV	abs
60	HAR	Arnold,et.al.	NP,19,500,60	1	.230 b at 60.0 MeV	abs
			$_2$He $\sigma_{n\gamma}$			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	50.0 mb at thermal	abs
			$^3_2$He σ_{tot}			
64	RIS	Als Nielsen	PR/B,133,925,64	22	.0003 eV to 11.0 eV	abs
59	LAS	Battat,et.al.	NP,12,291,59	39	.140 MeV to 21.4 MeV	abs
49	LAS	King,et.al.	PR,75,1366,49	7	.0014 eV to .0319 eV	
			$^3_2$He σ_{el}			
74	LAS	Drosg,et.al.	PR/C,9,179,74	5	7.900 MeV to 23.7 MeV	
61	COL	Sayres,et.al.	PR,122,1853,61	5	.950 MeV to 17.5 MeV	^{3}He σ_{tot}
60	LAS	Seagrave,et.al.	PR,119,1981,60	4	1.000 MeV to 6.000 MeV	H
			$^3_2$He $\sigma_{n\gamma}$			
63	PEN	Zirmuhle,et.al.	PR,132,751,63	1	42.0 muB at 4.000 MeV	
			$^3_2$He σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	1.000 mb at 14.1 MeV	^{238}U σ_{nf}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^3_2$He σ_{np}			
69	GA	Fricke,et.al.	GA-9275,69	5	.350 MeV to 1.000 MeV	
67	RBZ	Antolkovic,et.al	PR,159,777,67	1	.142 b at 14.4 MeV	^{1}H σ_{el}
61	COL	Sayres,et.al.	PR,122,1853,61	4	.950 MeV to 8.070 MeV	^{3}He σ_{tot}
59	ORL	Gibbons,et.al.	PR,114,71,59	50	8.650 keV to 4.197 MeV	
55	HAR	Batchelor,et.al.	RSI,26,1037,55	10	.120 MeV to 1.200 MeV	
50	LAS	Coon	PR,80,488,50	19	.394 MeV to 3.000 MeV	
			$^3_2$He σ_{nd}			
67	RBZ	Antolkovic,et.al	PR,159,777,67	1	66.4 mb at 14.4 MeV	^{1}H σ_{el}
61	COL	Sayres,et.al.	PR,122,1853,61	2	5.000 MeV to 8.070 MeV	^{3}He σ_{tot}
			$^4_2$He σ_{tot}			
64	CBR	Shaw,et.al.	PR/B,135,99,64	26	20.0 MeV to 29.0 MeV	abs
59	LAS	Battat,et.al.	NP,12,291,59	20	.940 MeV to 20.1 MeV	
			$^4_2$He σ_{el}			
71	LAS	Nilier,et.al.	PR/C,4,36,71	3	17.6 MeV to 23.7 MeV	^{1}H σ_{el}
68	DKE	Morgan,et.al.	PR,168,1114,68	22	.202 MeV to 7.013 MeV	
			$^4_2$He σ_{nd}			
64	CBR	Shaw,et.al.	PR/B,135,99,64	11	22.1 MeV to 22.4 MeV	^{4}He σ_{nd}

$_3$Li σ_{tot}
$^6_3$Li σ_{tot}
[1271]



$^{6}_{3}Li$

σ_{el}

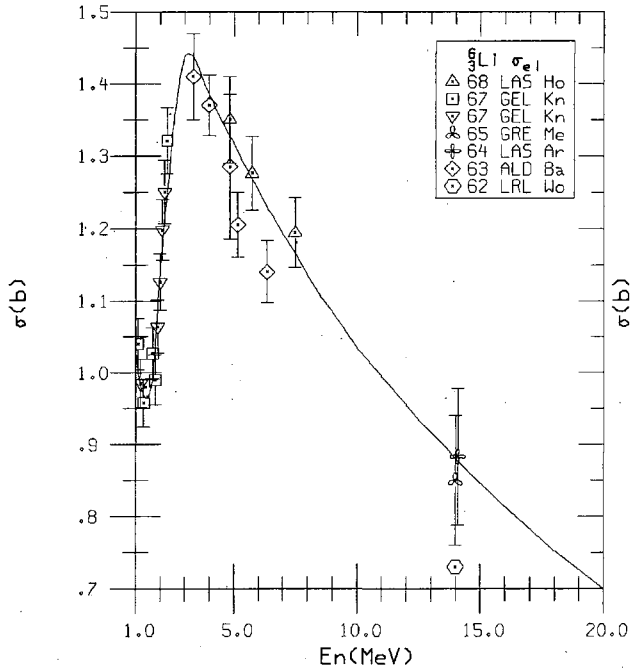
σ_{non}

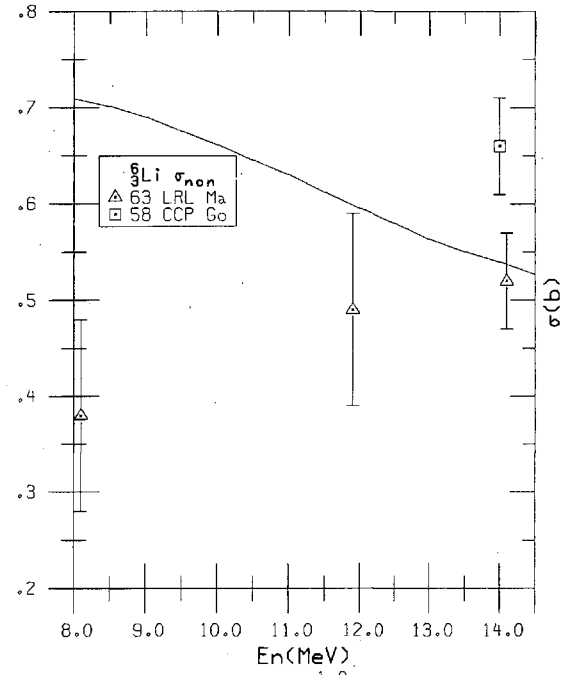
σ_{np}

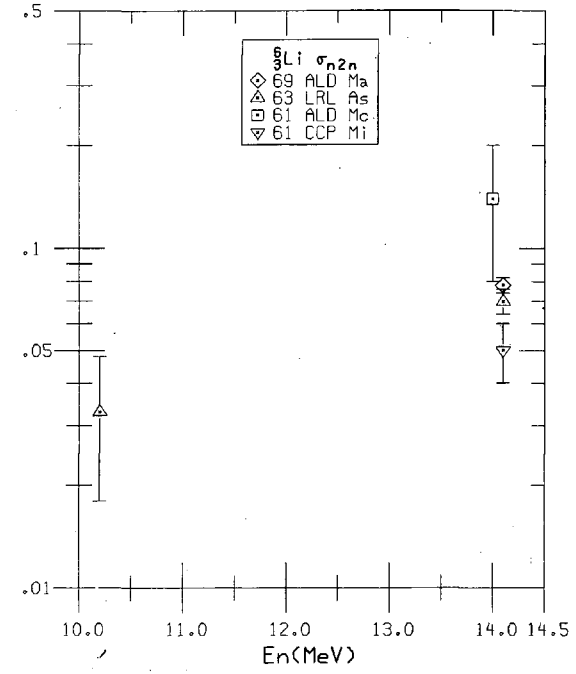
[1271]

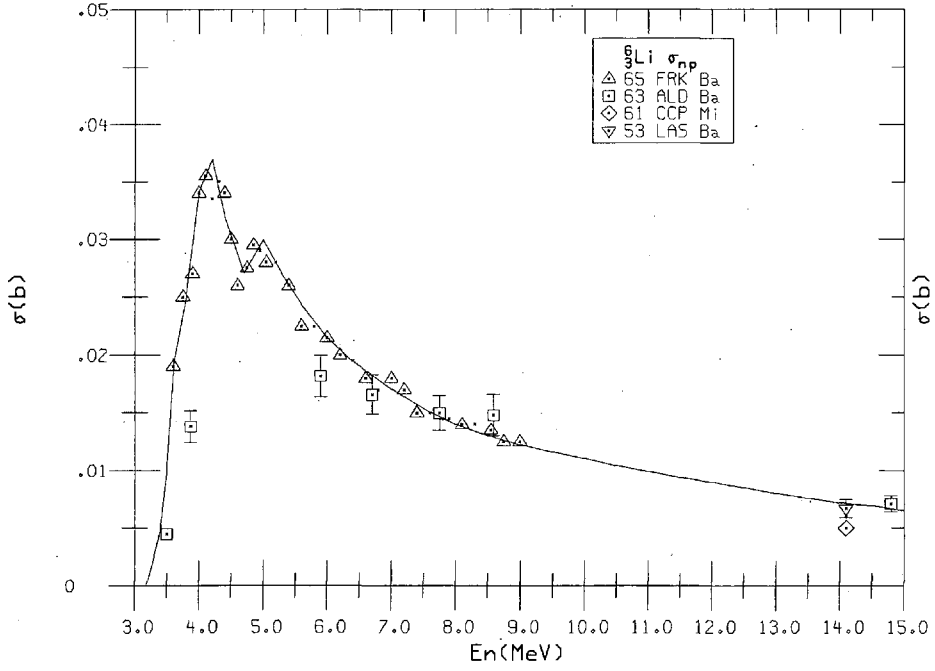
σ_{n2n}

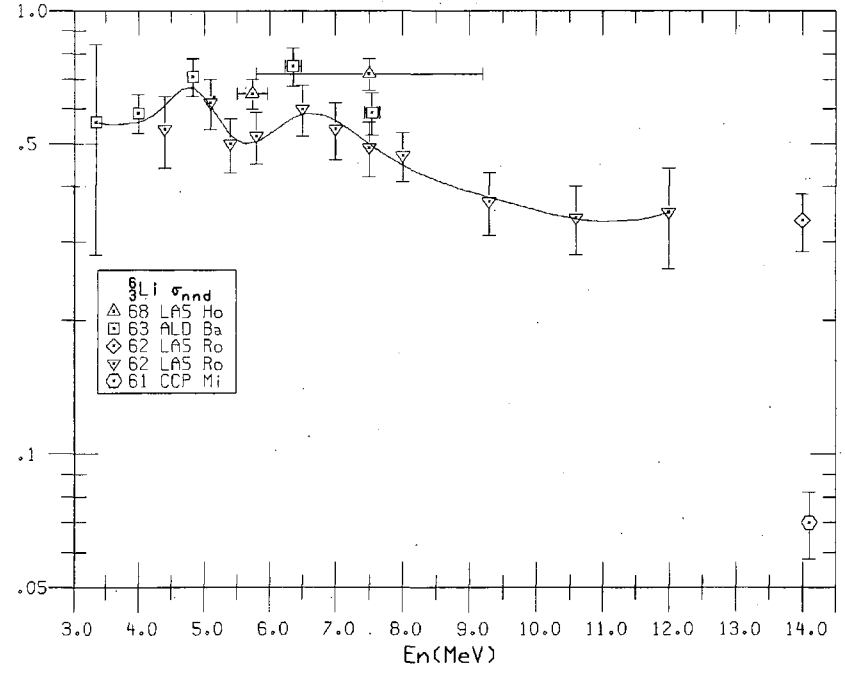
σ_{nnd}











$^{6}_{3}Li$

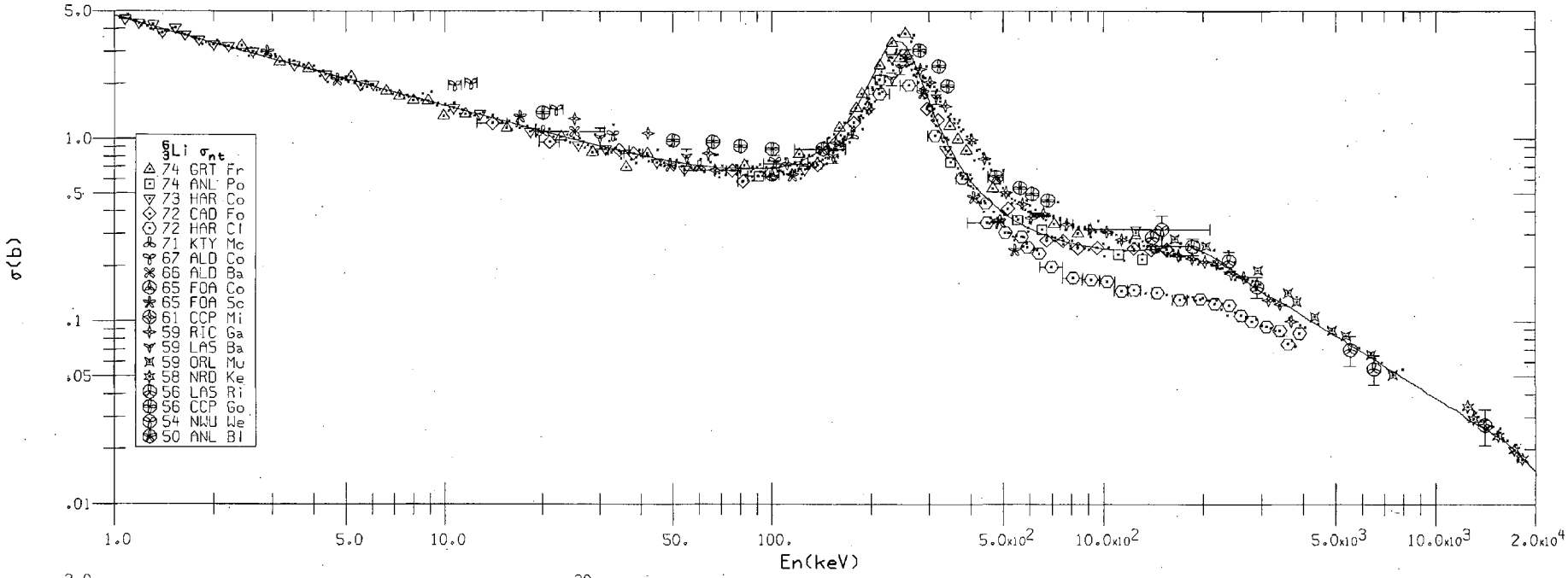
σ_{nt}

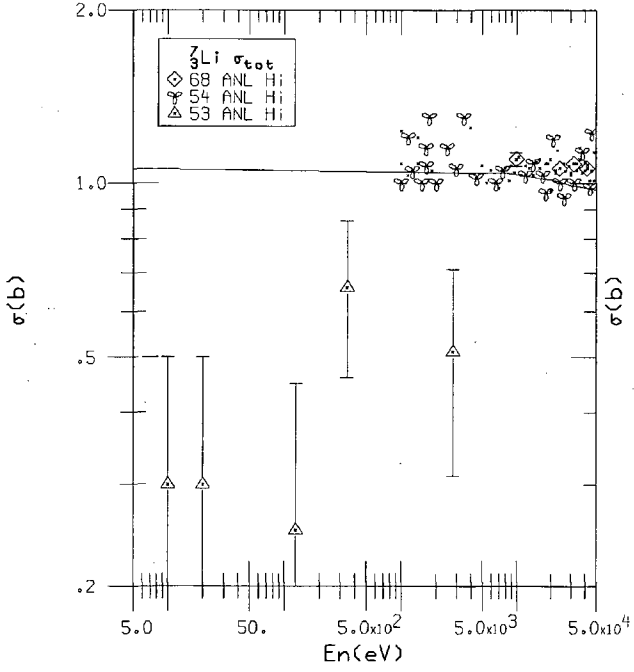
[1271]

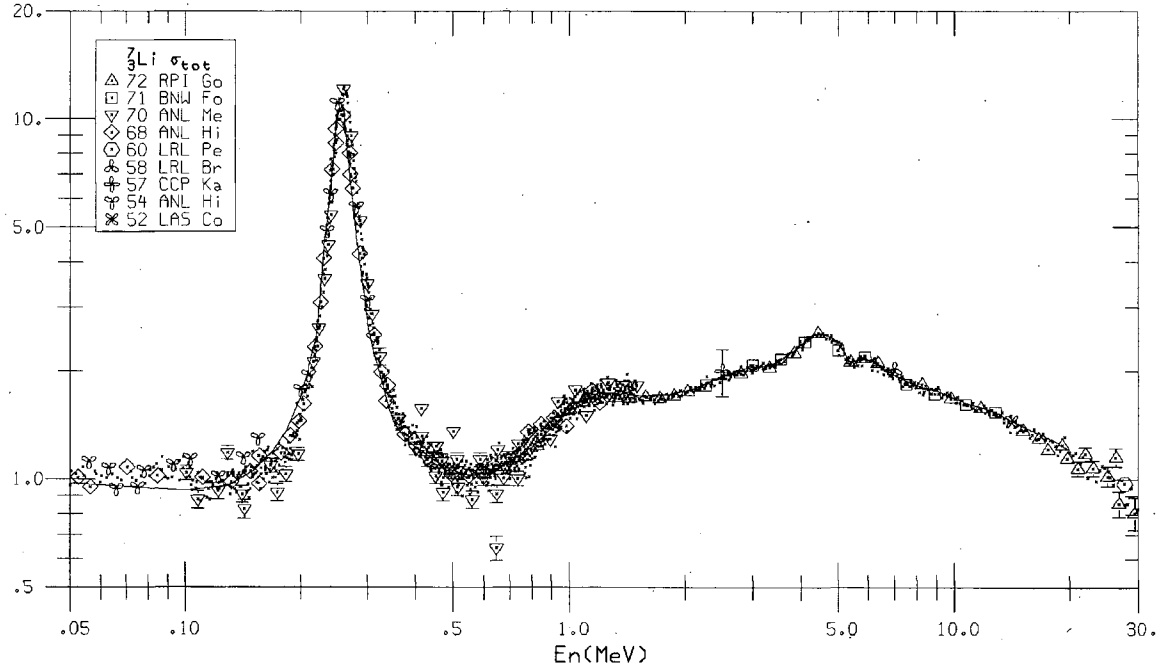
$^{7}_{3}Li$

σ_{tot}

[1272]







$^{7}_{3}$Li

σ_{el}

σ_{sct}

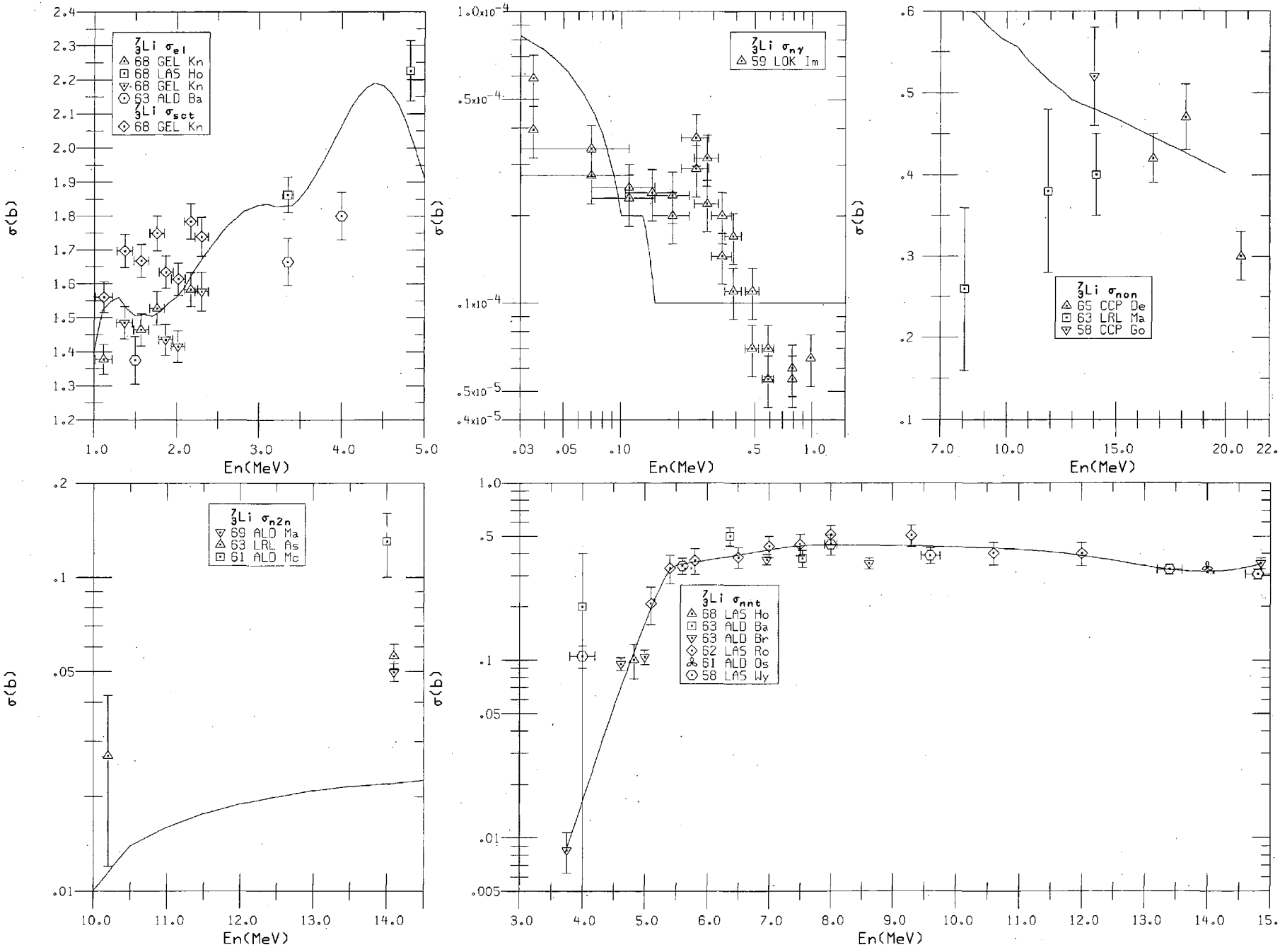
$\sigma_{n\gamma}$

σ_{non}

σ_{n2n}

[1272]

σ_{nnt}



Yr	Lab	Author	Reference	Points	Range	Standard
			$_3$Li σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.272 MeV to 15.0 MeV	
68	ANL	Hibdon,et.al.	68WASH,1,159,68	700	10.0 keV to 1.236 MeV	abs
66	HAM	Bormann,et.al.	EANDC(E)-66,48,66	40	4.170 MeV to 6.060 MeV	abs
64	ANL	Hibdon	PR/B,133,353,64	423	1.000 keV to .392 MeV	
61	CCP	Zubov,et.al.	SPN,,219,61	4	3.250 MeV to 4.520 MeV	abs
59	ORL	Miller,et.al.	BAP,4,42(R1),59	24	12.0 keV to .150 MeV	abs
57	ICP	Khaletskii	DOK,113,305,57	1	1.240 b at 14.8 MeV	
56	WIS	Becker,et.al.	PR,102,1384,56	76	4.320 MeV to 8.730 MeV	abs
54	LAS	Nereson	LA-1655,54	26	2.800 MeV to 9.700 MeV	abs
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	abs
51	WIS	Bockelman,et.al.	PR,84,69,51	99	1.330 MeV to 3.370 MeV	
51	MIT	Stelson,et.al.	PR,84,162,51	40	.149 MeV to .378 MeV	
50	WIS	Adair	PR,79,1018,50	87	18.0 keV to 1.391 MeV	abs
50	BRK	Fox,et.al.	PR,80,23,50	1	.164 b at 270.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	.314 b at 83.0 MeV	
46	COL	Havens,et.al.	PR,70,154,46	35	.0169 eV to 60.5 eV	
			$_3$Li σ_{el}			
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	1.400 b at 1.450 MeV	C
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	2.300 b at 4.210 MeV	H
			$_3$Li $\sigma_{n\gamma}$			
61	ANL	Meadows,et.al.	NSE,9,132,61	1	70.4 b at thermal	
			$^6_3$Li σ_{tot}			
74	HAR	Uttley	UTTLEY,74	3261	71.9 eV to 60.9 MeV	
72	ANL	Whalen,et.al.	NSE,48,219,72	987	.100 MeV to 1.499 MeV	
72	RPI	Goulding	GOULDING,72	507	.700 MeV to 29.8 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	237	2.258 MeV to 14.9 MeV	
68	ANL	Hibdon,et.al.	68WASH,1,159,68	778	10.0 keV to 1.360 MeV	abs
68	DKE	Pineo,et.al.	68WASH,1,153,68	125	43.8 keV to .646 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	18.1 MeV to 27.7 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.010 MeV to 14.0 MeV	abs
57	CCP	Katsaurov,et.al.	AE,1,(SUP.5),71,57	2	2.500 MeV to 14.0 MeV	abs
54	LAS	Nereson	LA-1655,54	26	2.820 MeV to 9.700 MeV	abs
54	ORL	Johnson,et.al.	PR,96,985,54	200	33.0 keV to 4.155 MeV	abs
54	ORL	Johnson,et.al.	PR,96,985,54	32	.391 MeV to .991 MeV	
54	BNL	Carter	CARTER,54	80	3.350 eV to 6.800 keV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.390 b at 14.1 MeV	abs
			$^6_3$Li σ_{el}			
68	LAS	Hopkins,et.al.	NP/A,107,139,68	3	4.830 MeV to 7.500 MeV	H
67	GEL	Knitter,et.al.	EUR-3454E,67	14	1.000 MeV to 2.300 MeV	^{1}H σ_{el}
65	GRE	Merchez,et.al.	CR,260,3922,65	1	.850 b at 14.0 MeV	
64	LAS	Armstrong,et.al.	NP,52,505,64	1	.883 b at 14.1 MeV	
63	ALD	Batchelor,et.al.	NP,47,385,63	6	3.350 MeV to 7.540 MeV	H
62	LRL	Wong,et.al.	NP,33,680,62	1	.730 b at 14.0 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^6_3$Li σ_{non}			
63	LRL	Mac Gregor+	PR,130,1471,63	3	8.100 MeV to 14.1 MeV	abs
58	CCP	Gorbachev,et.al.	AE,4,191,58	1	.660 b at 14.0 MeV	
			$^6_3$Li σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	78.1 mb at 14.1 MeV	^{238}U σ_{nf}
63	LRL	Ashby,et.al.	PR,129,1771,63	2	10.2 MeV to 14.1 MeV	^{252}Cf σ_{sf}
61	ALD	Mc Taggart+	AKO/UK/1337,61	1	.140 b at 14.0 MeV	abs
61	CCP	Mikailina,et.al.	SPN,,185,61	1	50.0 mb at 14.1 MeV	
			$^6_3$Li σ_{nem}			
64	LAS	Armstrong,et.al.	NP,52,505,64	1	1.440 b at 14.1 MeV	
			$^6_3$Li σ_{np}			
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	34	3.600 MeV to 9.000 MeV	
63	ALD	Barry	JNE,17,273,63	7	3.500 MeV to 14.8 MeV	
61	CCP	Mikailina,et.al.	SPN,,185,61	1	5.000 mb at 14.1 MeV	
54	LAS	Frye Jr	PR,93,1086,54	1	6.000 mb at 14.1 MeV	
53	LAS	Battat,et.al.	PR,89,80,53	1	6.700 mb at 14.1 MeV	^{63}Cu
			$^6_3$Li σ_{nd}			
63	ALD	Barry	JNE,17,273,63	1	14.0 mb at 14.8 MeV	
			$^6_3$Li σ_{nnd}			
68	LAS	Hopkins,et.al.	NP/A,107,139,68	3	4.830 MeV to 7.500 MeV	H
63	ALD	Batchelor,et.al.	NP,47,385,63	6	3.350 MeV to 7.540 MeV	H
62	LAS	Rosen,et.al.	PR,126,1150,62	12	4.400 MeV to 14.0 MeV	
61	CCP	Mikailina,et.al.	SPN,,185,61	1	70.0 mb at 14.1 MeV	
			$^6_3$Li σ_{nt}			
75	MHG	Stephany,et.al.	BAP,20,144(DB2),75	1	.356 b at .964 MeV	
74	GRT	Friesenhahn+	INTEL-RT-7011,74	152	2.433 keV to 1.711 MeV	^{1}H σ_{el}
74	ANL	Poenitz	POENITZ,74	67	91.0 keV to 1.500 MeV	
73	HAR	Coates	COATES,73	204	1.039 keV to .400 MeV	
72	CAD	Fort,et.al.	EANDC(E)-148,72	118	14.0 keV to 1.700 MeV	
72	HAR	Clements,et.al.	AERE-R-7075,72	68	.156 MeV to 3.900 MeV	^{6}Li σ_{nt}
71	KTY	Mc Pherson+	71KNOX,2,611,71	31	10.0 keV to .287 MeV	^{6}Li σ_{nt}
67	RBZ	Rendic,et.al.	ZFK-130,143,67	2	2.700 MeV to 14.4 MeV	
67	ALD	Cox,et.al.	JNE,21,271,67	7	10.7 keV to .102 MeV	abs
66	ALD	Barry	66WASH,2,763,66	3	25.0 keV to .100 MeV	
65	FDA	Conde,et.al.	AF,29,45,65	1	.640 b at .100 MeV	abs
65	FDA	Schwarz,et.al.	NP,63,593,65	83	2.900 keV to .588 MeV	^{6}Li σ_{nt}
61	CCP	Mikailina,et.al.	SPN,,185,61	1	27.0 mb at 14.1 MeV	
60	HAM	Bormann,et.al.	ZN/A,15,200,60	2	2.500 MeV to 14.1 MeV	
60	CCP	Perelygin,et.al.	AE,9,488,60	1	.215 b at 2.150 MeV	
59	NWU	Pardo,et.al.	BAP,4,218(ABB),59	1	3.700 b at .270 MeV	
59	RIC	Gabbard,et.al.	PR,114,201,59	123	25.0 keV to 4.066 MeV	
59	RIC	Gabbard,et.al.	PR,114,201,59	4	.255 MeV to .600 MeV	abs
59	RIC	Gabbard,et.al.	PR,114,201,59	136	19.0 keV to 4.066 MeV	
59	LAS	Bame Jr,et.al.	PR,114,1580,59	29	9.000 keV to .342 MeV	^{235}U σ_{nf}
59	ORL	Murray,et.al.	PR,115,1707,59	24	1.200 MeV to 7.960 MeV	
58	NRD	Kern,et.al.	PR,112,926,58	35	12.5 MeV to 18.3 MeV	
57	CCP	Elpidinskii+	AE,S5,75,57	1	.170 b at 2.500 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
56	LAS	Ribe	PR,103,741,56	10	.880 MeV to 6.520 MeV	
56	LAS	Ribe	PR,103,741,56	1	26.0 mb at 14.1 MeV	
56	CCP	Gorlov,et.al.	DOK,111,791,56	24	9.100 keV to .730 MeV	
54	LAS	Frye Jr	PR,93,1086,54	1	26.0 mb at 14.1 MeV	
54	NWU	Weddell,et.al.	PR,95,117,54	2	1.500 MeV to 2.000 MeV	^{6}Li σ_{nt}
54	NWU	Weddell,et.al.	PR,95,117,54	2	1.500 MeV to 2.000 MeV	^{6}Li σ_{nt}
52	LAS	Ribe	PR,87,205(LS),52	2	2.490 MeV to 14.2 MeV	
50	ANL	Blair,et.al.	ANL-4515,7,50	13	.142 MeV to .624 MeV	^{235}U σ_{nf}
			$^7_3$Li σ_{tot}			
72	RPI	Goulding	GOULDING,72	601	.701 MeV to 29.9 MeV	abs
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	236	2.266 MeV to 14.9 MeV	
70	ANL	Meadows,et.al.	NSE,41,351,70	940	.101 MeV to 1.498 MeV	abs
68	ANL	Hibdon,et.al.	68WASH,1,159,68	698	10.0 keV to 1.226 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	18.1 MeV to 27.7 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.010 MeV to 14.0 MeV	abs
57	CCP	Katsaurov,et.al.	AE,1,(SUP.5),71,57	2	2.500 MeV to 14.0 MeV	abs
54	ANL	Hibdon	ANL-5174,43,54	117	1.000 keV to .340 MeV	
53	ANL	Hibdon	ANL-4963,53	5	10.0 eV to 2.800 keV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.450 b at 14.1 MeV	abs
			$^7_3$Li σ_{el}			
68	LAS	Hopkins,et.al.	NP/A,107,139,68	2	3.350 MeV to 4.830 MeV	H
68	GEL	Knitter,et.al.	68WASH,2,827,68	8	1.120 MeV to 2.300 MeV	H
66	GRE	Regis,et.al.	JPR,27,C1-84,66	1	1.055 b at 14.0 MeV	
64	LAS	Armstrong,et.al.	NP,52,505,64	1	.969 b at 14.1 MeV	
63	ALD	Batchelor,et.al.	NP,47,385,63	3	1.500 MeV to 4.000 MeV	H
56	LAS	Thomas,et.al.	PR,101,759,56	1	1.800 b at .210 MeV	
			$^7_3$Li σ_{inl}			
61	CCP	Mikailina,et.al.	SPN,,185,61	1	50.0 mb at 14.1 MeV	
			$^7_3$Li σ_{sct}			
68	GEL	Knitter,et.al.	AWRE-NR/C-1/61,61	8	1.120 MeV to 2.300 MeV	H
			$^7_3$Li σ_{non}			
65	CCP	Degtyarev	AE,19,456,65	3	16.7 MeV to 20.7 MeV	
63	LRL	Mac Gregor+	PR,130,1471,63	3	8.100 MeV to 14.1 MeV	abs
58	CCP	Gorbachev,et.al.	AE,4,191,58	1	.520 b at 14.0 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^7_3$Li $\sigma_{n\gamma}$			
59	LOK	Imhof,et.al.	PR,114,1037,59	12	35.0 keV to .790 MeV	^{127}I $\sigma_{n\gamma}$
59	LOK	Imhof,et.al.	PR,114,1037,59	13	35.0 keV to .990 MeV	^{6}Li σ_{nt}
59	LOK	Imhof,et.al.	PR,114,1037,59	1	40.0 mb at thermal	^{6}Li σ_{nt}
47	ANL	Hughes,et.al.	PR,72,646,47	1	33.0 mb at thermal	^{19}F $\sigma_{n\gamma}$
			$^7_3$Li σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	49.7 mb at 14.1 MeV	^{238}U σ_{nf}
63	LRL	Ashby,et.al.	PR,129,1771,63	2	10.2 MeV to 14.1 MeV	^{252}Cf σ_{sf}
61	ALD	Mc Taggart+	AKO-UK-1337,61	1	.130 b at 14.0 MeV	abs
			$^7_3$Li σ_{n3n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	.200 mb at 14.1 MeV	^{238}U σ_{nf}
			$^7_3$Li σ_{nem}			
64	LAS	Armstrong,et.al.	NP,52,505,64	1	1.610 b at 14.1 MeV	
			$^7_3$Li σ_{nd}			
61	CCP	Mikailina,et.al.	SPN,,185,61	1	5.000 mb at 14.1 MeV	
53	LAS	Battat,et.al.	PR,89,80,53	1	9.800 mb at 14.1 MeV	^{63}Cu
			$^7_3$Li σ_{nt}			
61	CCP	Mikailina,et.al.	SPN,,185,61	1	58.0 mb at 14.1 MeV	
54	LAS	Frye Jr	PR,93,1086,54	1	55.0 mb at 14.1 MeV	
			$^7_3$Li σ_{nnt}			
68	LAS	Hopkins,et.al.	NP/A,107,139,68	3	4.830 MeV to 7.500 MeV	H
63	ALD	Batchelor,et.al.	NP,47,385,63	4	4.000 MeV to 7.540 MeV	H
63	ALD	Brown,et.al.	JNE,17,137,63	7	3.750 MeV to 14.9 MeV	^{235}U
62	LAS	Rosen,et.al.	PR,126,1150,62	11	5.100 MeV to 14.0 MeV	
61	ALD	Osborn,et.al.	AWRE-NR/C-1/61,61	1	.335 b at 14.0 MeV	
58	LAS	Wyman	LA-2235,58	7	4.000 MeV to 14.8 MeV	
			$^7_3$Li $\sigma_{n\alpha}$			
66	DEB	Csikai,et.al.	AK,8,3,66	1	2.200 mb at 14.7 MeV	

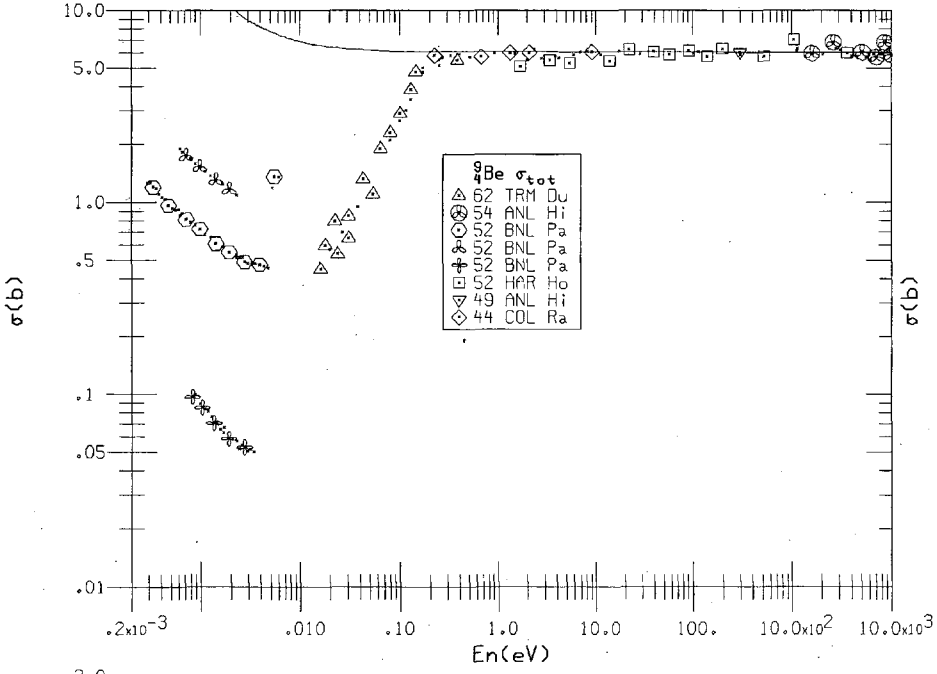
$^{9}_{4}$Be

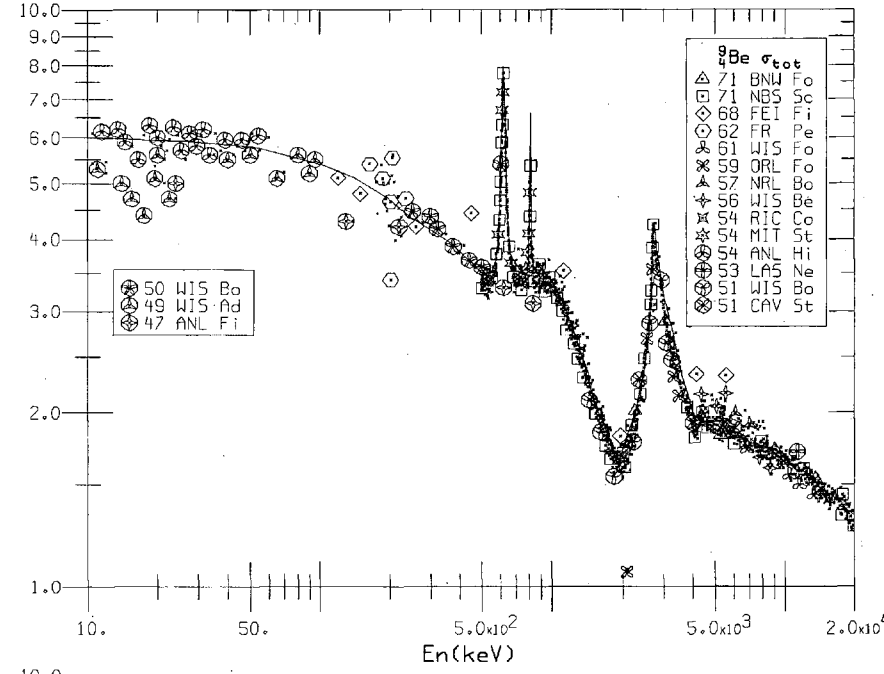
σ_{tot}

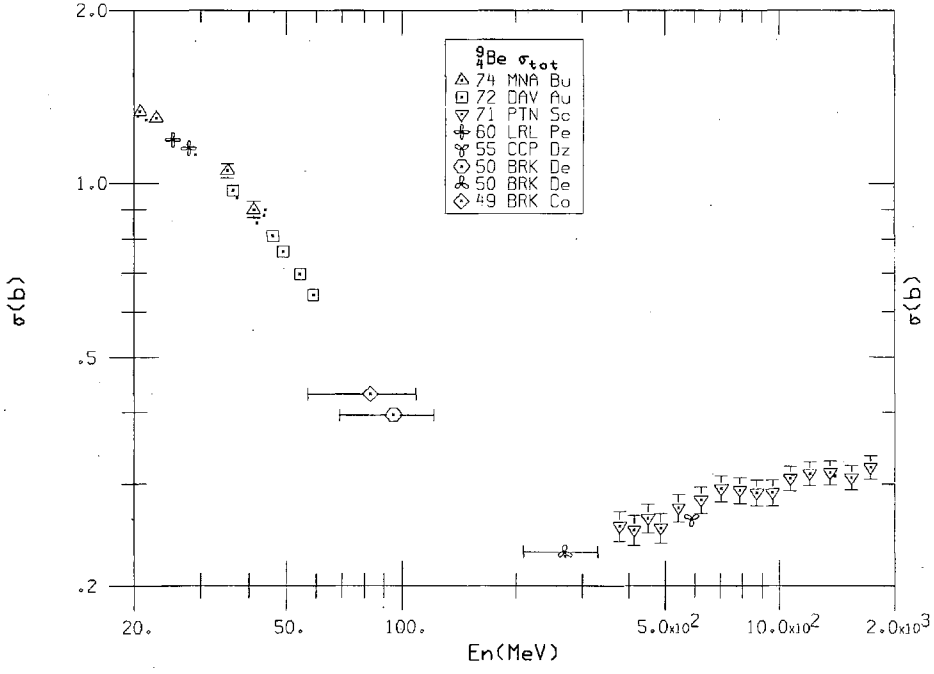
σ_{el}

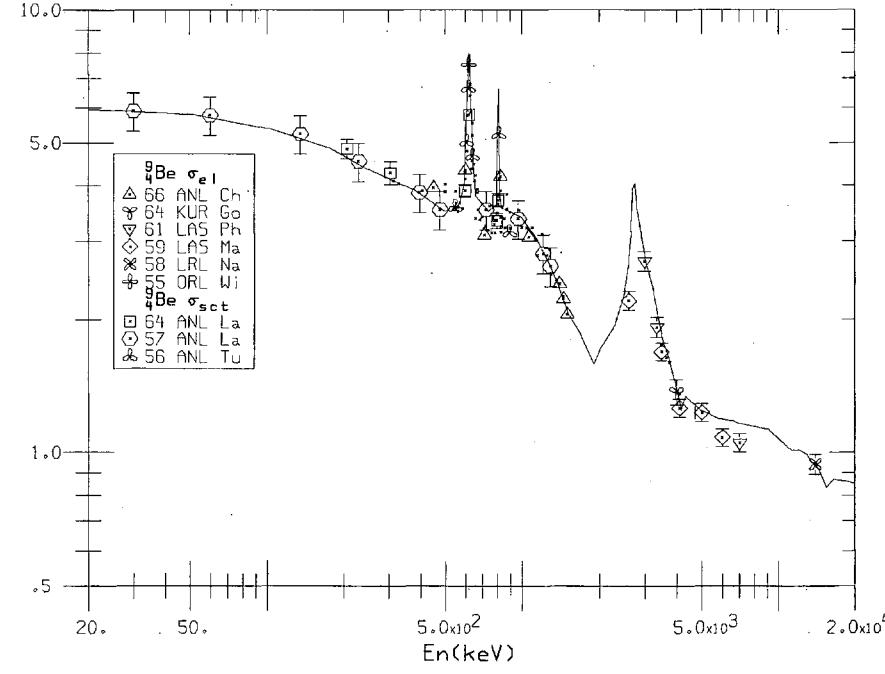
σ_{sct}

[1289]









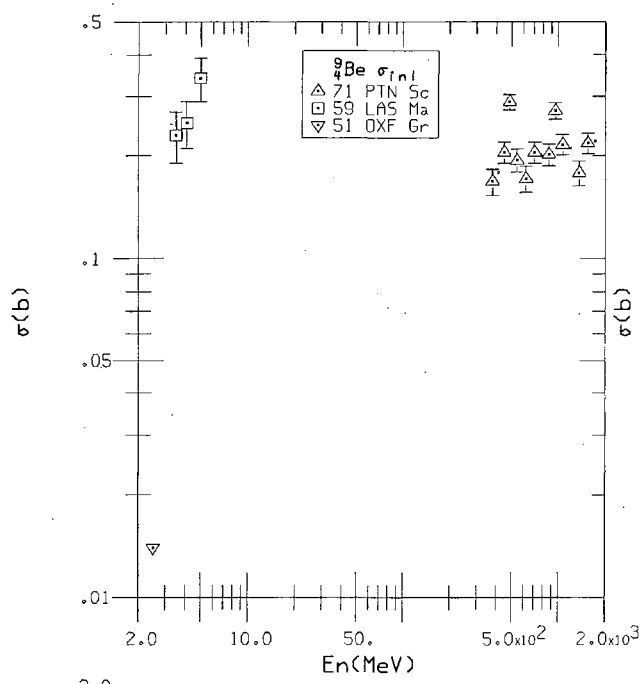
$^{9}_{4}$Be

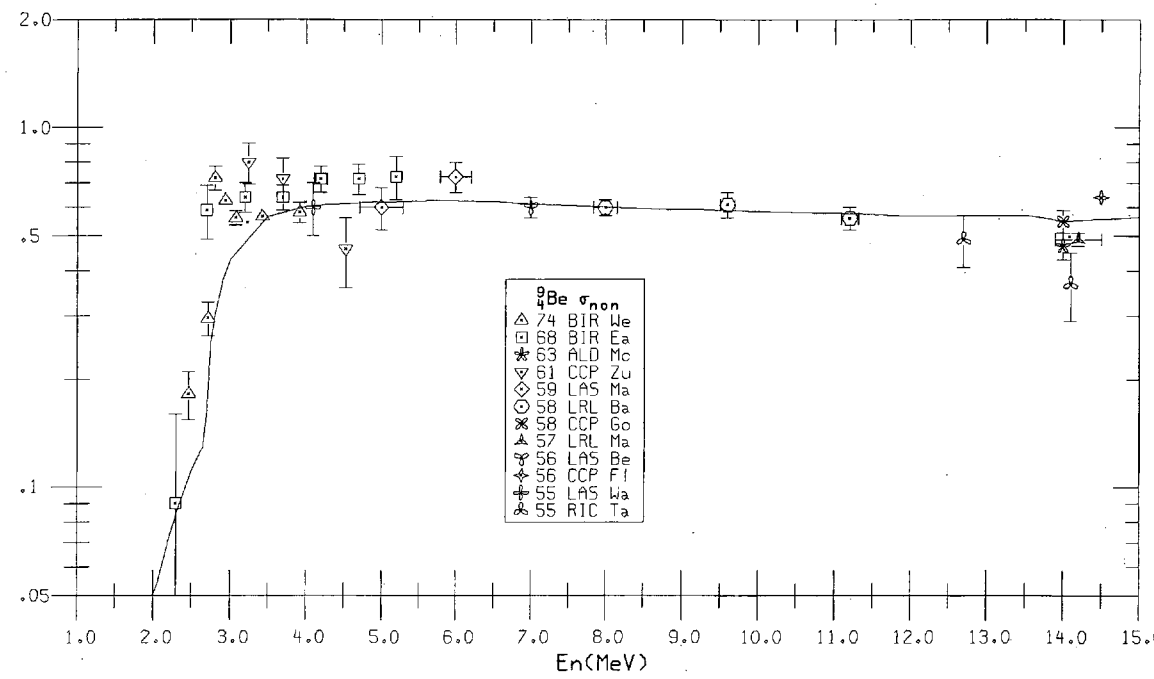
σ_{inl}

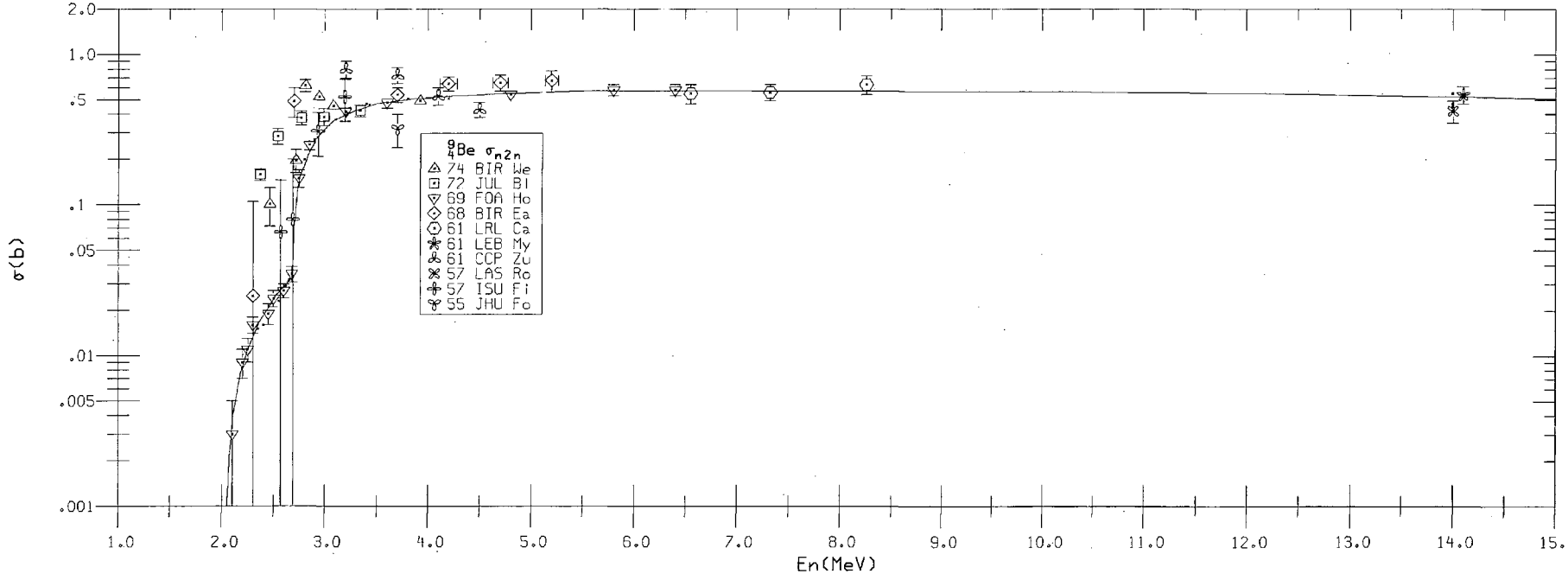
σ_{non}

σ_{n2n}

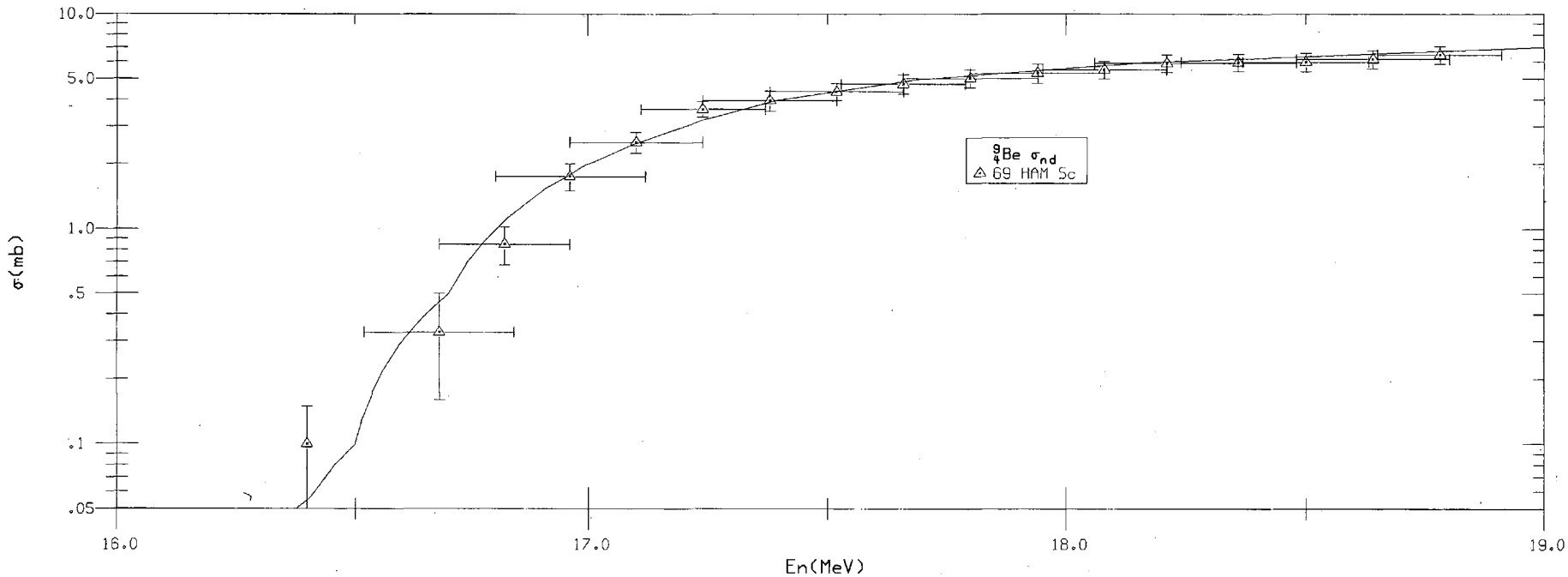
[1289]

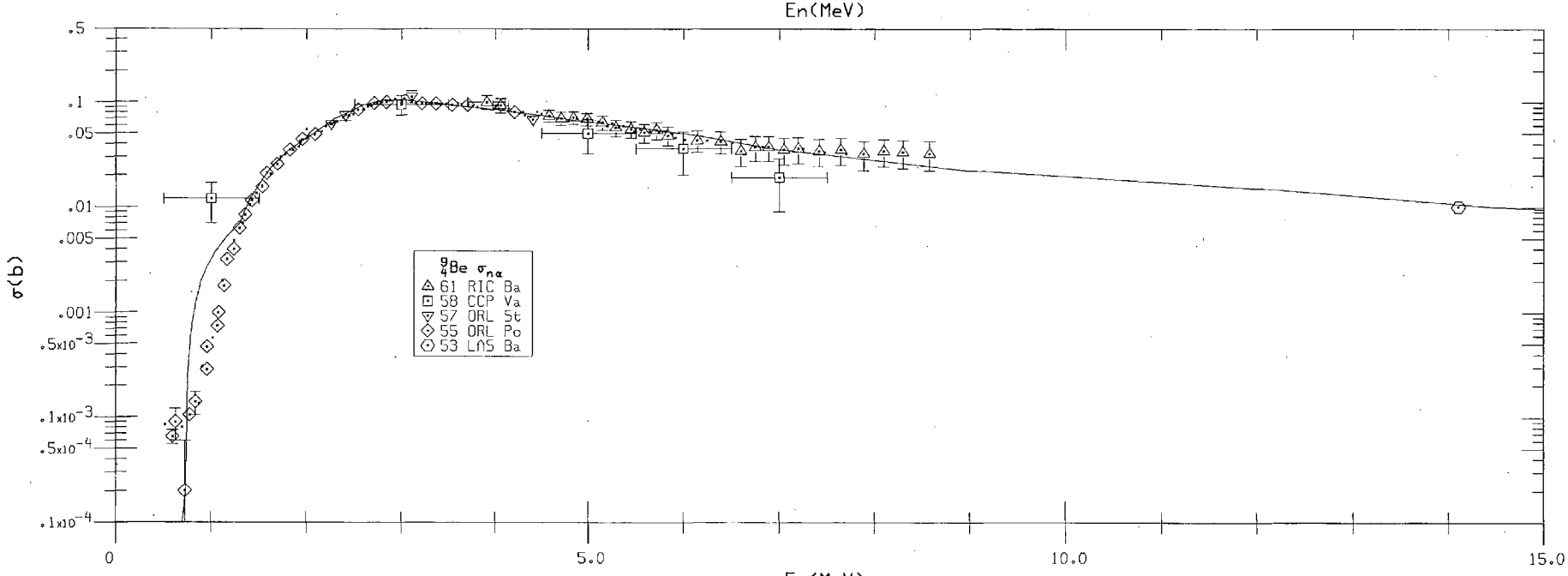






$^{9}_{4}Be$
σ_{nd}
$\sigma_{n\alpha}$
[1289]





Yr	Lab	Author	Reference	Points	Range	Standard
			$^9_4$Be σ_{tot}			
74	MNA	Bubb,et.al.	CJP,52,648,74	5	22.9 MeV to 44.2 MeV	
74	MNA	Bubb,et.al.	CJP,52,648,74	5	20.7 MeV to 43.9 MeV	
72	DAV	Auman,et.al.	PR/C,5,1,72	5	36.3 MeV to 58.9 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	254	2.259 MeV to 14.8 MeV	
71	NBS	Schwartz,et.al.	BAP,16,495(AH3),71	3450	.496 MeV to 19.9 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	1	.266 b at 27.0 GeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.440 b at 14.5 MeV	
69	MHG	Parker,et.al.	UNIV-MI-3028-3-T,69	1	.301 b at 5700. MeV	abs
68	DEB	Hunyadi,et.al.	NP/A,119,525,68	21	13.7 MeV to 14.6 MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,ACC-68/17	14	70.0 keV to 5.550 MeV	
68	MHG	Jones,et.al.	PL/B,27,328,68	1	.250 b at 27.0 GeV	
62	FR	Perrin,et.al.	CR,255,277,62	25	.165 MeV to .235 MeV	
62	TRM	Duggal,et.al.	RSI,33,49,62	25	.0160 eV to .380 eV	
61	WIS	Fossan,et.al.	PR,123,209,61	170	3.381 MeV to 16.0 MeV	abs
61	FR	Didier	JPR/A,22,149,61	1	1.480 b at 14.7 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 27.9 MeV	
59	LAS	Marion,et.al.	PR,114,1584,59	2	5.000 MeV to 6.000 MeV	abs
59	ORL	Fowler,et.al.	BAP,4,385(B5),59	185	1.911 MeV to 4.555 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	6.830 MeV to 14.1 MeV	
58	CCP	Flerov,et.al.	AE,5,657,58	1	1.420 b at 14.0 MeV	abs
57	NRL	Bondelid,et.al.	PR,105,193,57	41	3.780 MeV to 8.090 MeV	
57	ICP	Khaletskii	DOK,113,305,57	1	1.460 b at 14.8 MeV	abs
56	WIS	Becker,et.al.	PR,102,1384,56	97	4.350 MeV to 8.735 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.960 b at 4.100 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	.310 b at 1400. MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	2	12.7 MeV to 14.1 MeV	abs
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	.261 b at 590.0 MeV	
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	abs
54	MIT	Stelson	STELSON,54	59	.506 MeV to .850 MeV	abs
54	ANL	Hibdon,et.al.	ANL-5174,43,54	57	1.115 keV to 55.0 keV	
53	LAS	Nereson,et.al.	PR,89,775,53	33	2.600 MeV to 13.9 MeV	
52	BNL	Palevsky	PALEVSKY,52	82	.0003 eV to .0064 eV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	1.530 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	1.400 b at 14.0 MeV	
52	HAR	Hodgson,et.al.	PPS/A,65,992,52	28	1.500 eV to 3.650 keV	
51	CAR	Lasday	PR,81,139,51	1	1.410 b at 13.9 MeV	
51	WIS	Bockelman,et.al.	PR,84,69,51	117	1.370 MeV to 3.500 MeV	abs
51	UI	Good,et.al.	PR,59,917(19),51	1	2.820 b at 900.0 MeV	
67	PAR	Thibault	CEA-R-3124,67	1	3.000 b at 2.700 MeV	
51	CAV	Stafford	PPS,64,388,51	16	2.000 MeV to 5.960 MeV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	.853 b at 42.0 MeV	abs
50	WIS	Bockelman	PR,80,1011,50	89	.225 MeV to 1.443 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	.396 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	.225 b at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	.229 b at 270.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	.431 b at 83.0 MeV	
49	WIS	Adair,et.al.	PR,75,1124,49	20	10.5 keV to 95.0 keV	abs
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
44	COL	Rainwater,et.al.	CP-2269,44	11	.223 eV to 9.100 eV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^9_4$Be σ_{el}			
66	ANL	Chien,et.al.	NSE,26,500,66	33	.450 MeV to 1.500 MeV	C
66	GRE	Merchez,et.al.	66PARIS,1,393,66	1	.950 b at 14.0 MeV	
64	KUR	Gorlov,et.al.	DOK,158,574,64	1	1.370 b at 4.000 MeV	
61	LAS	Phillips	PHILLIPS,61	8	3.000 MeV to 7.000 MeV	H σ_{el}
59	LAS	Marion,et.al.	PR,114,1584,59	5	2.600 MeV to 6.000 MeV	
58	LRL	Nakada,et.al.	PR,110,1439,58	1	.940 b at 14.0 MeV	
55	ORL	Willard,et.al.	PR,98,669,55	3	.540 MeV to .700 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.360 b at 4.100 MeV	
			$^9_4$Be σ_{inl}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
59	LAS	Marion,et.al.	PR,114,1584,59	3	3.500 MeV to 5.000 MeV	
51	OXF	Grace,et.al.	PR,82,969,51	1	14.0 mb at 2.500 MeV	
			$^9_4$Be σ_{sct}			
64	ANL	Lane,et.al.	PR/B,133,409,64	31	.207 MeV to .905 MeV	C
57	ANL	Langsdorf Jr+	PR,107,1077,57	20	30.0 keV to 1.450 MeV	C
56	ANL	Turner	ANL-5554,56	38	.546 MeV to .895 MeV	
			$^9_4$Be σ_{non}			
74	BIR	Weaver,et.al.	JP/D,7,1122,74	9	2.464 MeV to 3.924 MeV	abs
68	BIR	Eaton,et.al.	68WASH,1,169,68	7	2.300 MeV to 5.200 MeV	
63	ALD	Mc Taggart+	JNE,17,437,63	1	.470 b at 14.0 MeV	
63	SAC	Didier,et.al.	JPR,24,805,63	1	.500 b at 14.2 MeV	abs
61	ALD	Cohen	JNE,14,180,61	1	.500 b at 14.1 MeV	abs
61	CCP	Zubov,et.al.	SOV.PR.NP.,,219,61	3	3.250 MeV to 4.530 MeV	
59	LAS	Marion,et.al.	PR,114,1584,59	2	5.000 MeV to 6.000 MeV	abs
58	LRL	Ball,et.al.	PR,110,1392,58	4	7.000 MeV to 11.2 MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	1	.380 b at 25.5 MeV	
58	CCP	Gorbachev,et.al.	AE,4,191,58	1	.550 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	.490 b at 14.2 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	1	.600 b at 7.000 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	.640 b at 14.5 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	.600 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	1	.620 b at 4.000 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	2	12.7 MeV to 14.1 MeV	abs
			$^9_4$Be σ_{n2n}			
74	BIR	Weaver,et.al.	JP/D,7,1122,74	9	2.464 MeV to 3.924 MeV	abs
72	JUL	Bloser	JUL-834-RG,72	6	2.370 MeV to 3.340 MeV	
69	FOA	Holmberg,et.al.	NP/A,129,305,69	27	2.000 MeV to 6.400 MeV	abs
68	BIR	Eaton,et.al.	68WASH,1,169,68	7	2.300 MeV to 5.200 MeV	
63	ALD	Mc Taggart+	JNE,17,437,63	1	.450 b at 14.0 MeV	
61	LRL	Catron,et.al.	PR,123,218,61	4	6.550 MeV to 14.1 MeV	^{252}Cf $\sigma_{sf/n}$
61	LEB	Myachkova,et.al.	ZET,40,1244,61	1	.540 b at 14.1 MeV	
61	CCP	Zubov,et.al.	SOV.PR.NP.,,219,61	4	3.200 MeV to 4.500 MeV	
59	KON	Sakisaka	JPJ,14,554,59	1	.540 b at 14.1 MeV	
59	PAR	Cao Xuan Chuan	JPR,20,621,59	1	.470 b at 14.0 MeV	
58	CCP	Flerov,et.al.	AE,5,657,58	1	.550 b at 14.0 MeV	
57	LAS	Rosen,et.al.	PR,107,824,57	1	.420 b at 14.0 MeV	
57	TSU	Fischer	PR,108,99,57	4	2.570 MeV to 3.190 MeV	
55	JHU	Fowler,et.al.	PR,98,249(X5),55	1	.320 b at 3.700 MeV	

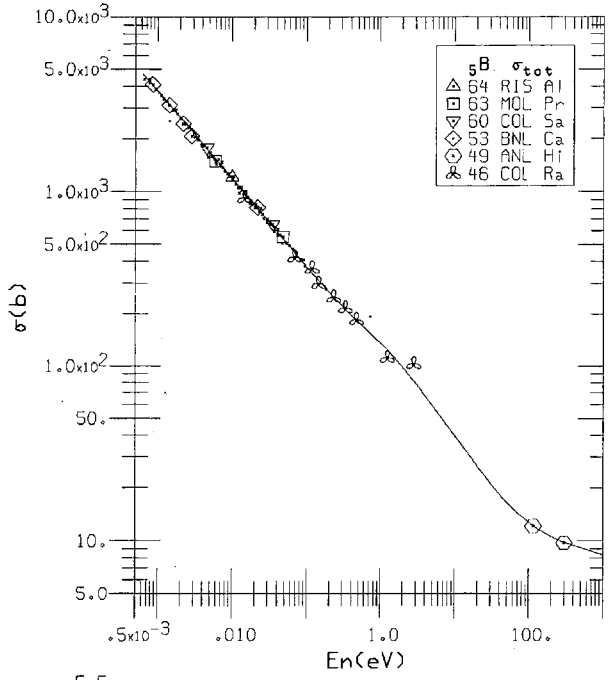
Yr	Lab	Author	Reference	Points	Range	Standard
			$^9_4$Be σ_{np}			
63	BNL	Alburger,et.al.	PR,132,334,63	1	.700 mb at 15.5 MeV	^{16}O σ_{np}
62	DEB	Bornemisza	KFI,4,79,62	1	4.110 mb at 14.8 MeV	^{9}Be $\sigma_{n\alpha}$
62	DEB	Bornemisza	KFI,4,79,62	1	45.0 muB at 14.8 MeV	^{9}Be $\sigma_{n\alpha}$
			$^9_4$Be σ_{nd}			
69	HAM	Scobel	ZN/A,21,289,69	17	16.4 MeV to 18.8 MeV	
			$^9_4$Be σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	20.0 mb at 14.7 MeV	^{65}Cu σ_{n2n}
58	LAS	Wyman,et.al.	PR,112,1264,58	1	18.0 mb at 14.1 MeV	
58	CCP	Vasil'ev,et.al.	DOK,119,914,58	3	14.0 MeV to 16.0 MeV	abs
			$^9_4$Be $\sigma_{n\alpha}$			
61	RIC	Bass,et.al.	NP,23,122,61	5	4.060 MeV to 5.820 MeV	abs
61	RIC	Bass,et.al.	NP,23,122,61	56	3.910 MeV to 8.580 MeV	^{9}Be $\sigma_{n\alpha}$
58	CCP	Vasil'ev,et.al.	DOK,119,914,58	7	1.000 MeV to 7.000 MeV	abs
57	ORL	Stelson,et.al.	PR,106,1252,57	5	2.260 MeV to 4.410 MeV	abs
57	ORL	Stelson,et.al.	PR,106,1252,57	1	.113 b at 3.110 MeV	abs
55	ORL	Pomerance	ORNL-1975,31,55	106	.520 MeV to 4.430 MeV	
53	LAS	Battat,et.al.	PR,89,80,53	1	10.0 mb at 14.1 MeV	^{63}Cu σ_{n2n}

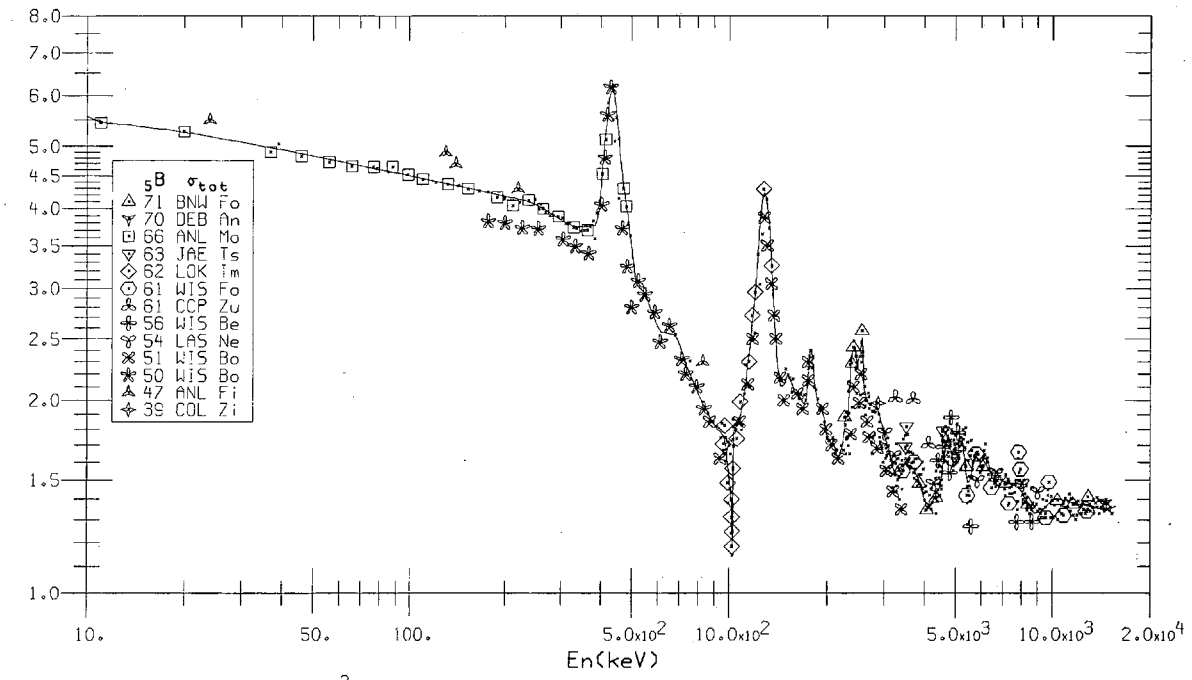
$_5B$

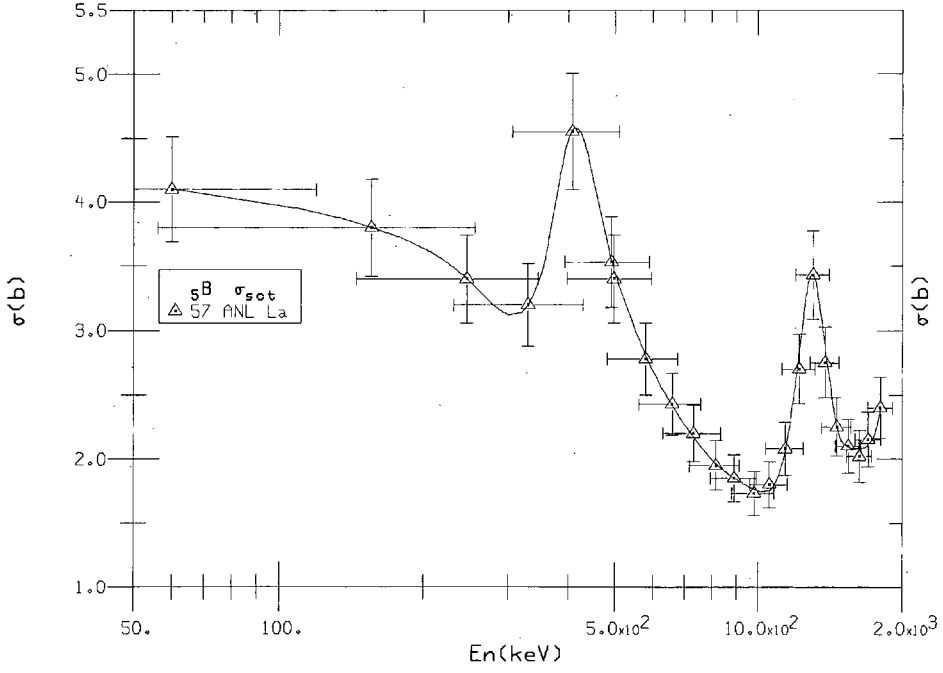
σ_{tot}

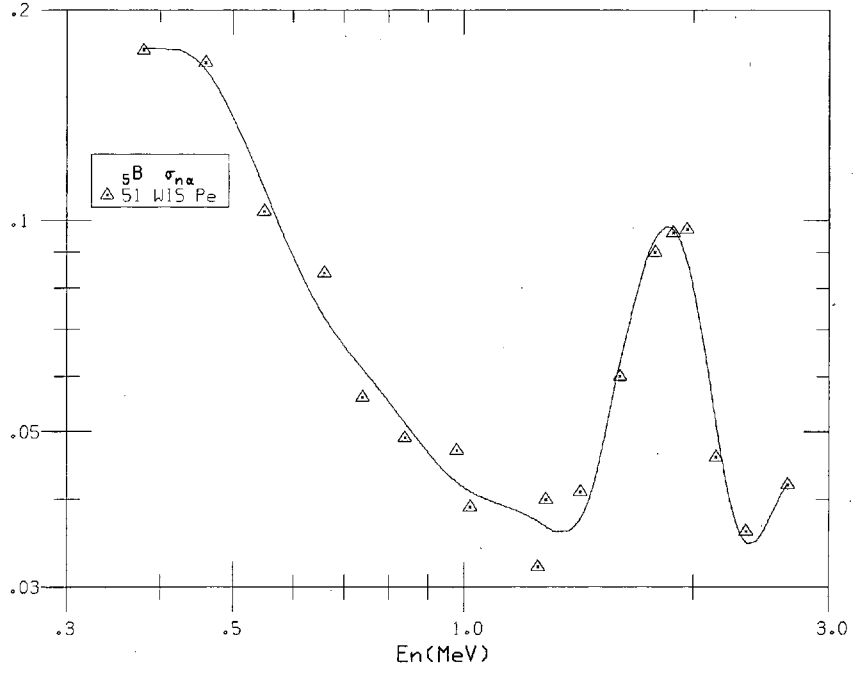
σ_{sct}

$\sigma_{n\alpha}$







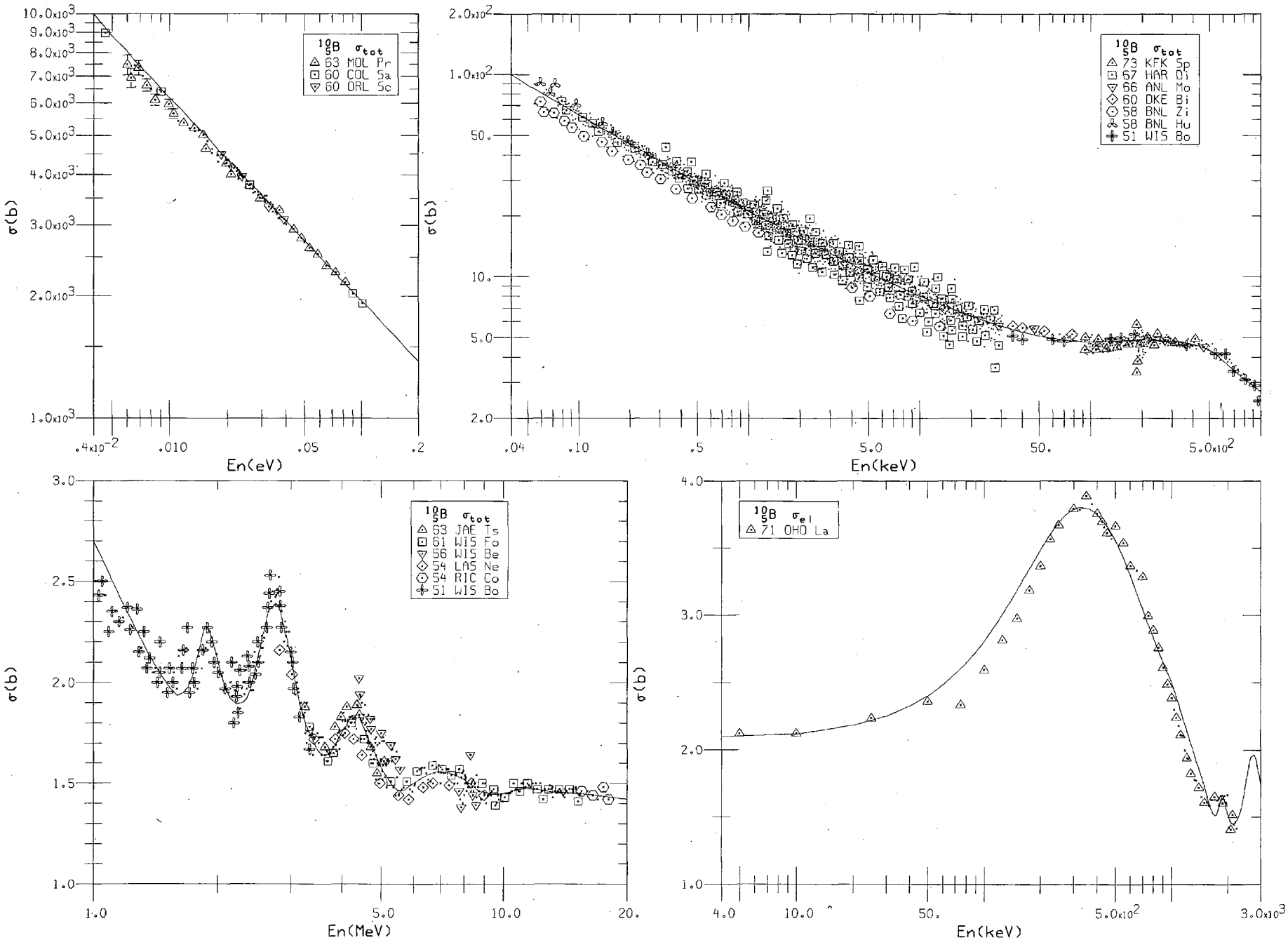


$^{10}_{5}B$

σ_{tot}

σ_{el}

[1273]



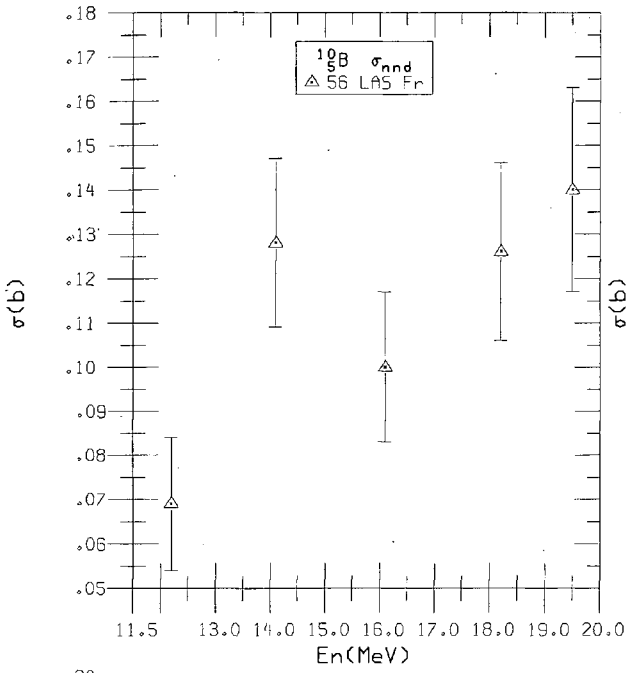
$^{10}_{5}B$

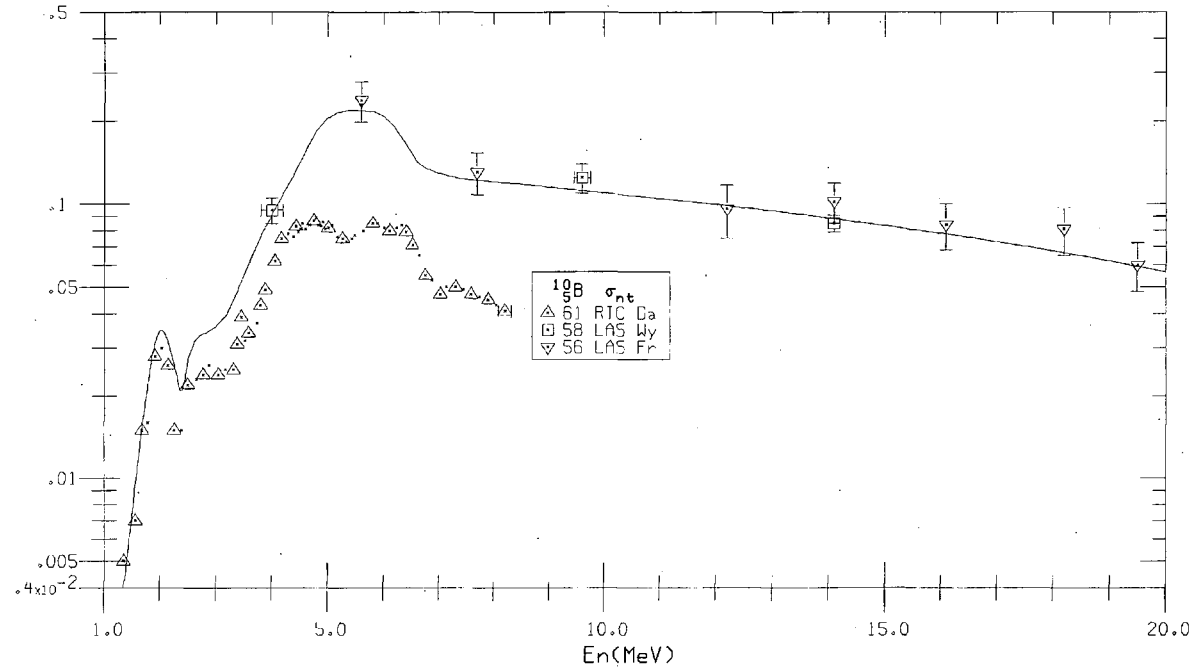
σ_{nt}

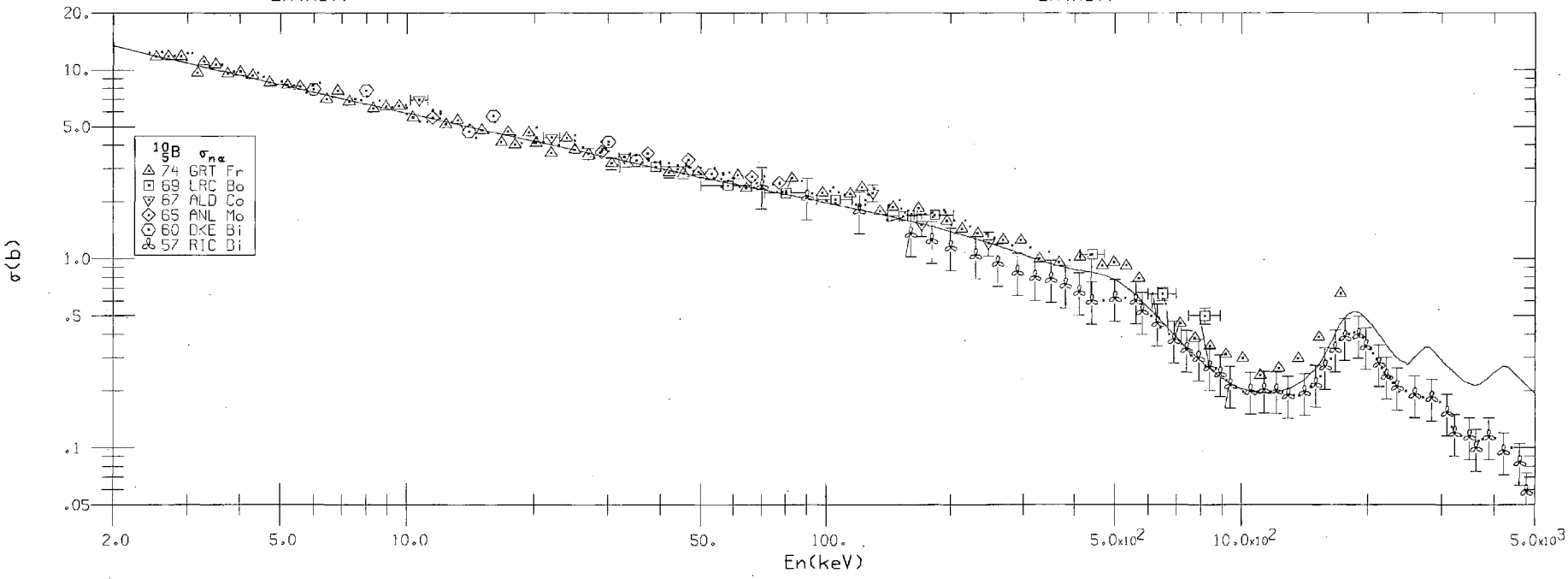
$\sigma_{n\alpha}$

[1273]

σ_{nnd}







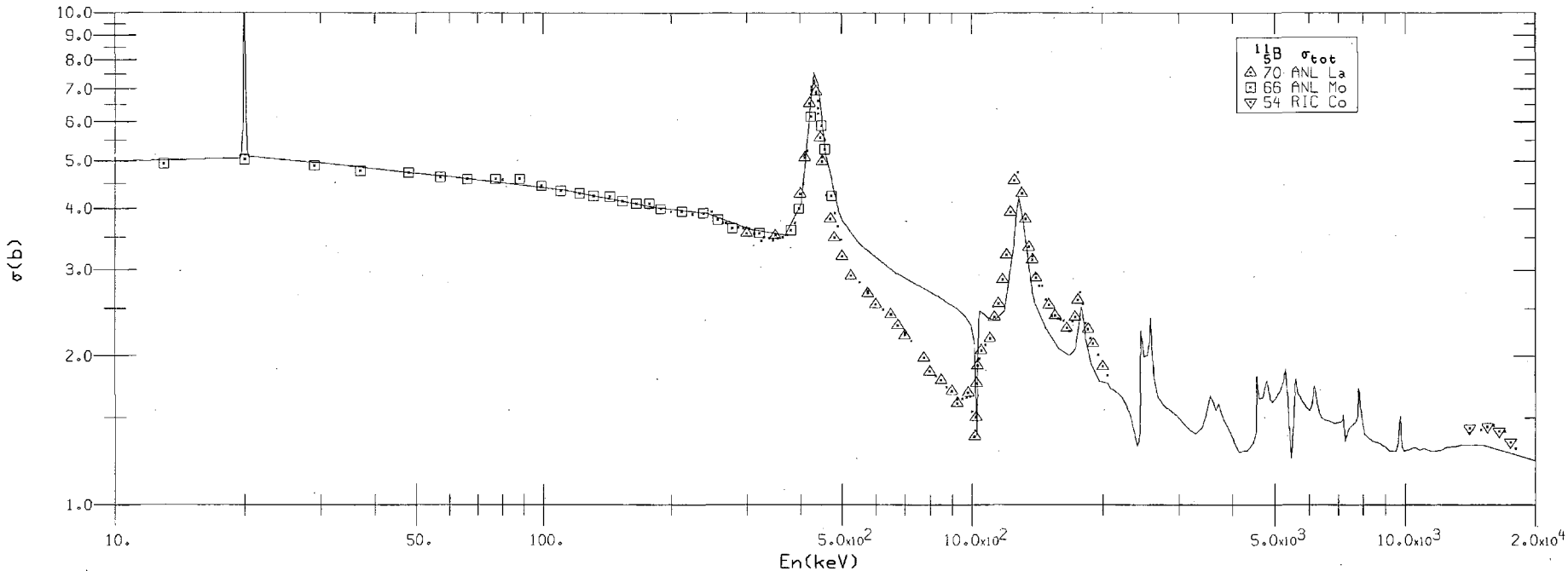
$^{11}_{5}B$

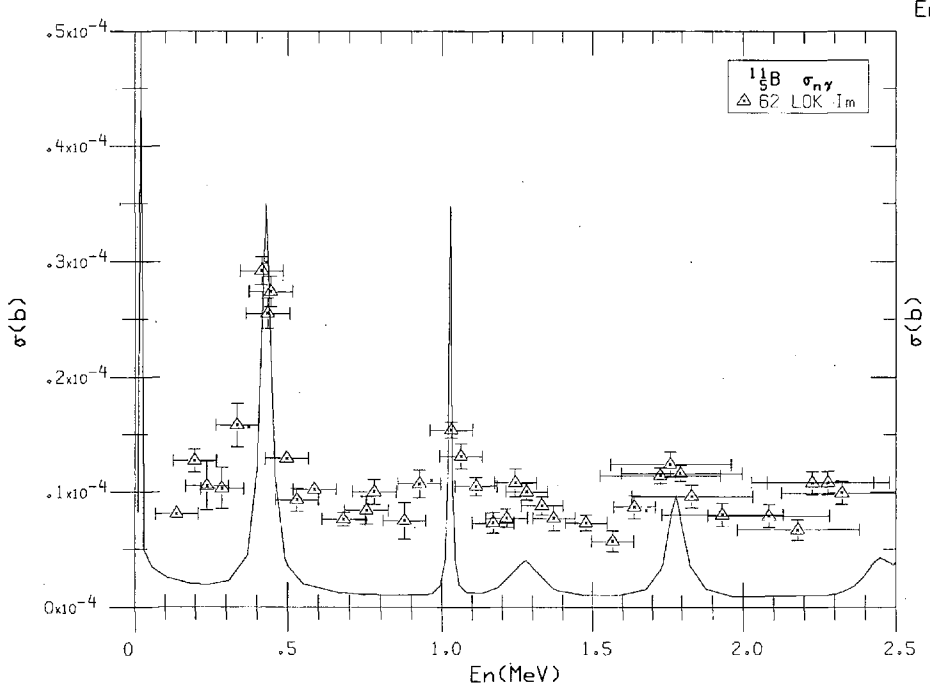
σ_{tot}

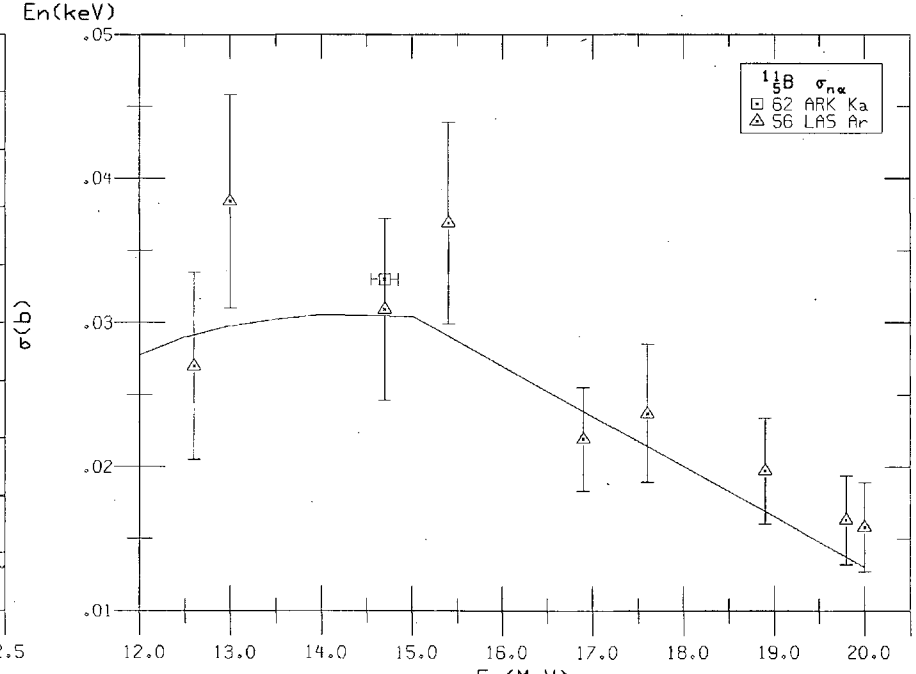
$\sigma_{n\gamma}$

$\sigma_{n\alpha}$

[1160]







Yr	Lab	Author	Reference	Points	Range	Standard
			$_5B$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.266 MeV to 15.0 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.378 b at 14.5 MeV	
66	ANL	Mooring,et.al.	NP,82,16,66	54	11.0 keV to .497 MeV	abs
64	RIS	Als Nielsen+	PR/B,133,925,64	5	.0053 eV to .100 eV	abs
63	MOL	Prosdocimi,et.al	JNE/AB,17,83,63	50	.0060 eV to .0820 eV	
63	JAE	Tsukada	TSUKADA,63	66	3.239 MeV to 5.110 MeV	abs
62	LOK	Imhof,et.al.	PR,125,1334,62	47	.950 MeV to 1.350 MeV	
61	WIS	Fossan,et.al.	PR,123,209,61	180	3.311 MeV to 15.4 MeV	abs
61	CCP	Zubov,et.al.	SOV.PR.NP.,,219,61	4	3.250 MeV to 4.520 MeV	abs
60	COL	Safford,et.al.	PR,119,1291,60	10	.0046 eV to .101 eV	abs
56	WIS	Becker,et.al.	PR,102,1384,56	68	4.350 MeV to 8.635 MeV	
54	ANL	Hibdon	C.T.HIBDON,54	112	.170 keV to .160 MeV	
54	LAS	Nereson	LA-1655,54	26	2.820 MeV to 9.700 MeV	
53	BNL	Carter,et.al.	PR,92,716,53	60	.0007 eV to .0293 eV	
51	WIS	Bockelman,et.al.	PR,84,69,51	140	.870 MeV to 3.407 MeV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	.985 b at 42.0 MeV	
50	WIS	Bockelman	PR,80,1011,50	30	.177 MeV to .837 MeV	abs
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	LAS	Sutton	PR,71,272,47	46	.0100 eV to 1.000 keV	
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
46	COL	Rainwater,et.al.	PR,70,136,46	30	.0120 eV to 2.820 eV	
39	COL	Zinn,et.al.	PR,56,260,39	1	1.980 b at 2.880 MeV	
			$_5B$ σ_{el}			
62	THA	Tesch	NP,37,412,62	1	.900 b at 14.1 MeV	
			$_5B$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	23	60.0 keV to 1.802 MeV	C
			$_5B$ σ_{non}			
58	CCP	Gorbachev,et.al.	AE,4,191,58	1	.740 b at 14.0 MeV	
58	CCP	Kukhtevich+	AE,5,565,58	1	1.380 b at 2.900 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	.640 b at 14.5 MeV	
52	LAS	Phillips,et.al.	PR,88,600,52	1	.690 b at 14.1 MeV	
			$_5B$ σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	37.0 mb at 14.7 MeV	^{65}Cu σ_{n2n}
			$_5B$ $\sigma_{n\alpha}$			
51	WIS	Petree,et.al.	PR,83,1148,51	18	.380 MeV to 2.650 MeV	

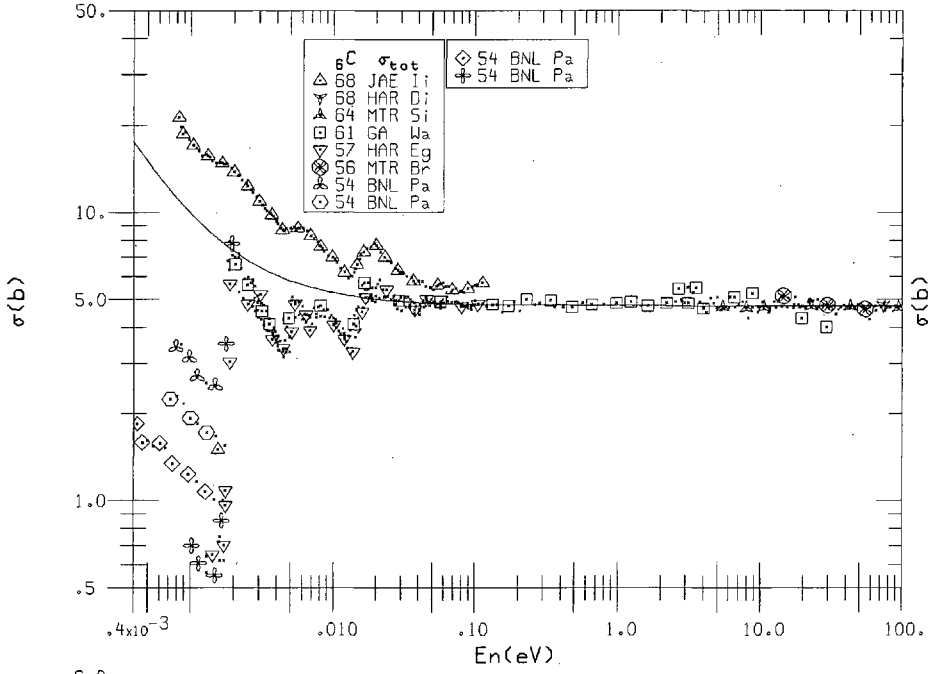
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{10}_5B$ σ_{tot}			
73	KFK	Spencer,et.al.	KFK-1518,73	538	92.3 keV to .419 MeV	
67	HAR	Diment	AERE-R-5224,67	2537	74.9 eV to 29.9 keV	abs
66	ANL	Mooring,et.al.	NP,82,16,66	55	11.0 keV to .498 MeV	abs
63	MOL	Prosdocimi,et.al	JNE/AB,17,83,63	50	.0060 eV to .0820 eV	
63	JAE	Tsukada	TSUKADA,63	59	3.239 MeV to 5.110 MeV	abs
61	WIS	Fossan,et.al.	PR,123,209,61	138	3.331 MeV to 15.4 MeV	abs
60	DKE	Bilpuch,et.al.	AP,10,455,60	41	3.000 keV to 82.1 keV	abs
60	COL	Safford,et.al.	PR,119,1291,60	10	.0046 eV to .101 eV	abs
60	ORL	Schmitt,et.al.	NP,17,109,60	83	.0185 eV to .0404 eV	abs
58	BNL	Zimmerman	ZIMMERMAN,58	49	54.4 eV to 13.0 keV	
58	BNL	Hughes,et.al.	WASH-745,9,58	49	54.5 eV to 9.100 keV	
56	WIS	Becker,et.al.	PR,102,1384,56	67	4.350 MeV to 8.640 MeV	
54	LAS	Nereson	LA-1655,54	26	2.820 MeV to 9.700 MeV	
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.470 b at 14.1 MeV	
51	WIS	Bockelman,et.al.	PR,84,69,51	197	20.0 keV to 3.390 MeV	abs
			$^{10}_5B$ σ_{el}			
71	OHO	Lane,et.al.	PR/C,4,380,71	67	5.000 keV to 2.240 MeV	
			$^{10}_5B$ σ_{non}			
57	LRL	Mac Gregor+	PR,108,726,57	1	.560 b at 14.2 MeV	abs
			$^{10}_5B$ σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	27.0 mb at .141 MeV	^{238}U σ_{nf}
			$^{10}_5B$ σ_{nnd}			
56	LAS	Frye Jr,et.al.	PR,103,328,56	5	12.2 MeV to 19.5 MeV	
			$^{10}_5B$ σ_{nt}			
61	RIC	Davis,et.al.	NP,27,448,61	69	1.350 MeV to 8.200 MeV	
58	LAS	Wyman,et.al.	PR,112,1264,58	4	4.000 MeV to 14.1 MeV	
56	LAS	Frye Jr,et.al.	PR,103,328,56	7	5.600 MeV to 19.5 MeV	
			$^{10}_5B$ $\sigma_{n\alpha}$			
74	GRT	Friesenhahn+	INTEL-RT7011-001,74	152	2.443 keV to 1.718 MeV	^1H σ_{el}
69	LRC	Bogart,et.al.	NP/A,125,463,69	27	29.0 keV to .817 MeV	^{10}B $\sigma_{n\alpha}$
67	ALD	Cox,et.al.	JNE,21,271,67	12	10.7 keV to .247 MeV	
65	ANL	Mooring,et.al.	ANL-6877,65	16	11.5 keV to 77.1 keV	
60	DKE	Bilpuch,et.al.	AP,10,455,60	32	3.000 keV to 68.0 keV	
57	RIC	Bichsel,et.al.	PR,108,1025,57	98	20.0 keV to 4.780 MeV	^{10}B $\sigma_{n\alpha}$

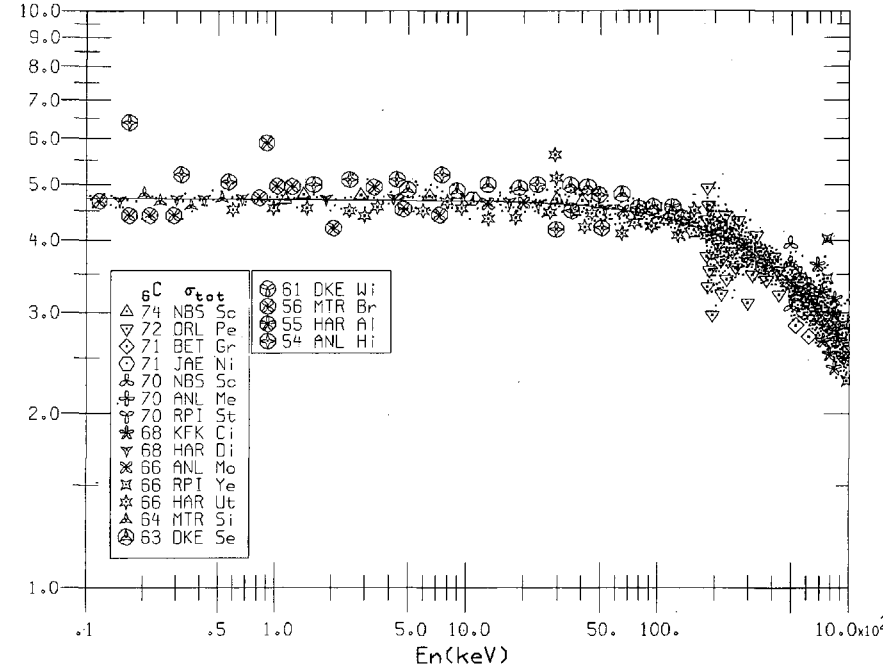
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{11}_{5}B$ σ_{tot}			
70	ANL	Lane,et.al.	PR/C,2,2097,70	95	.300 MeV to 2.050 MeV	
66	ANL	Mooring,et.al.	NP,82,16,66	52	13.0 keV to .497 MeV	abs
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.400 b at 14.1 MeV	
			$^{11}_{5}B$ σ_{el}			
69	LAS	Hopkins	HOPKINS,69	1	1.230 b at 7.550 MeV	
			$^{11}_{5}B$ $\sigma_{n\gamma}$			
62	LOK	Imhof,et.al.	PR,125,1334,62	42	.139 MeV to 2.325 MeV	^{127}I
			$^{11}_{5}B$ σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	19.0 mb at .141 MeV	^{238}U σ_{nf}
			$^{11}_{5}B$ σ_{np}			
67	IRK	Flesch,et.al.	OAW,176,45,67	1	5.100 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	STL	Naude,et.al.	JNE,21,893,67	1	7.100 mb at 14.5 MeV	abs
62	ARK	Kantele,et.al.	NP,35,353,62	1	3.300 mb at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{11}_{5}B$ σ_{nt}			
58	LAS	Wyman,et.al.	PR,112,1264,58	1	15.0 mb at 14.1 MeV	
			$^{11}_{5}B$ $\sigma_{n\alpha}$			
62	ARK	Kantele,et.al.	NP,35,353,62	1	33.0 mb at 14.7 MeV	^{11}B σ_{np}
56	LAS	Armstrong,et.al.	PR,103,335,56	9	12.6 MeV to 20.0 MeV	

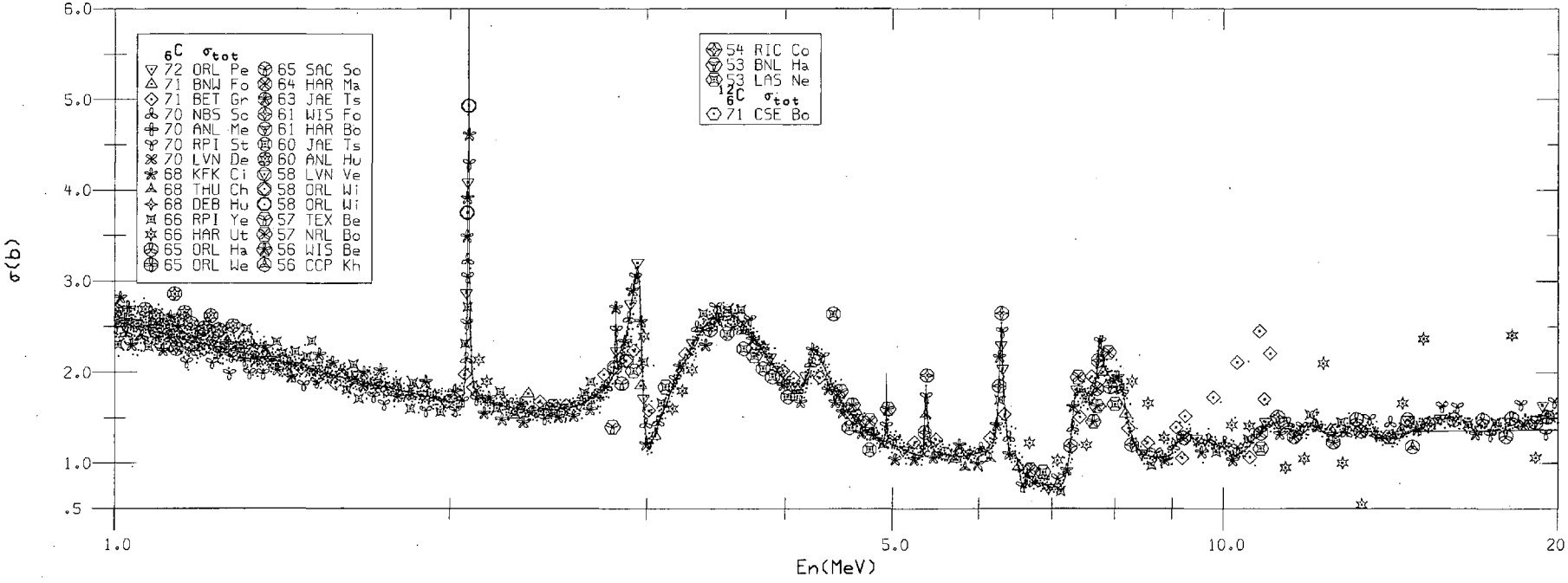
$_6C$ σ_{tot}

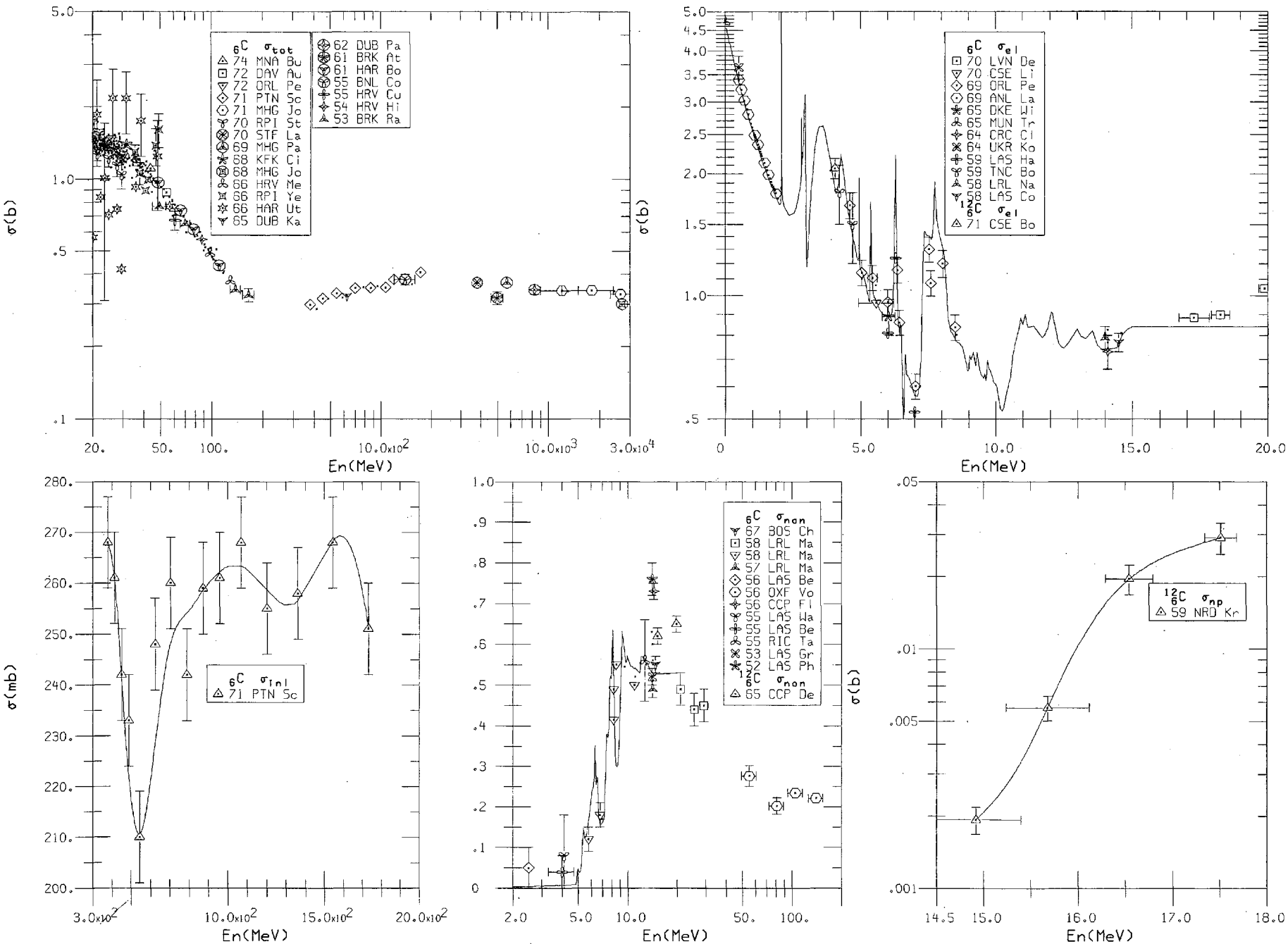
$^{12}_6C$ σ_{tot}

[1274]









$_6C$
σ_{tot}
σ_{el}
σ_{non}
σ_{inl}
$^{12}_6C$
σ_{el}
σ_{non}
[1274]
σ_{np}

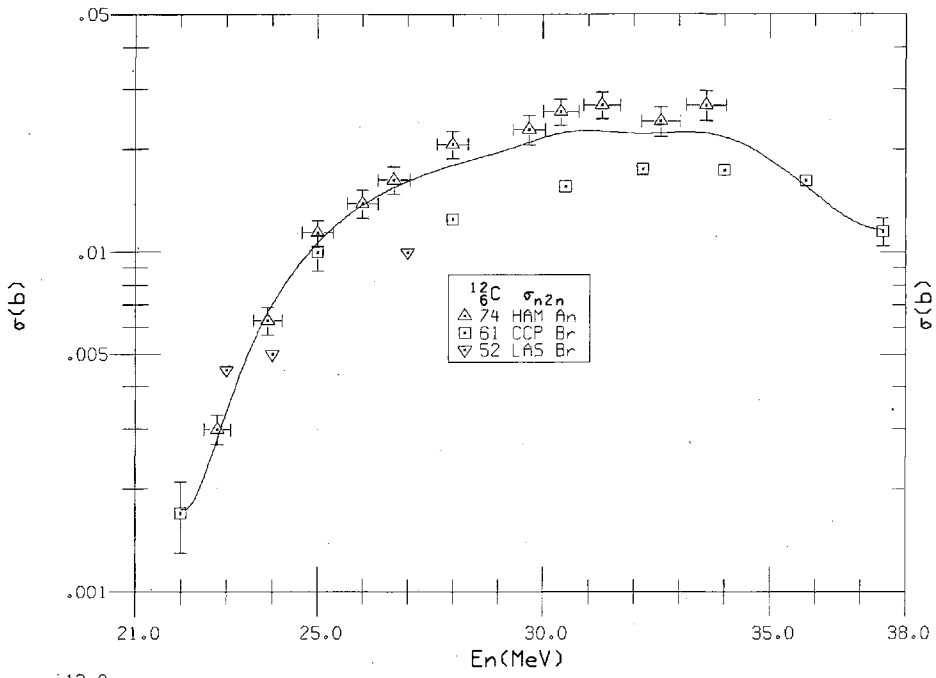
$^{12}_{6}C$

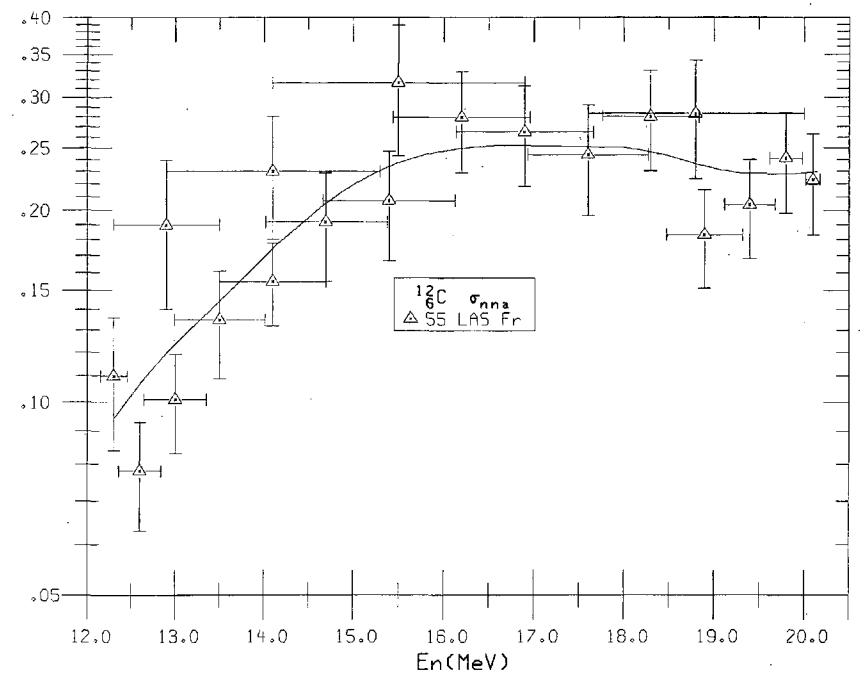
σ_{n2n}

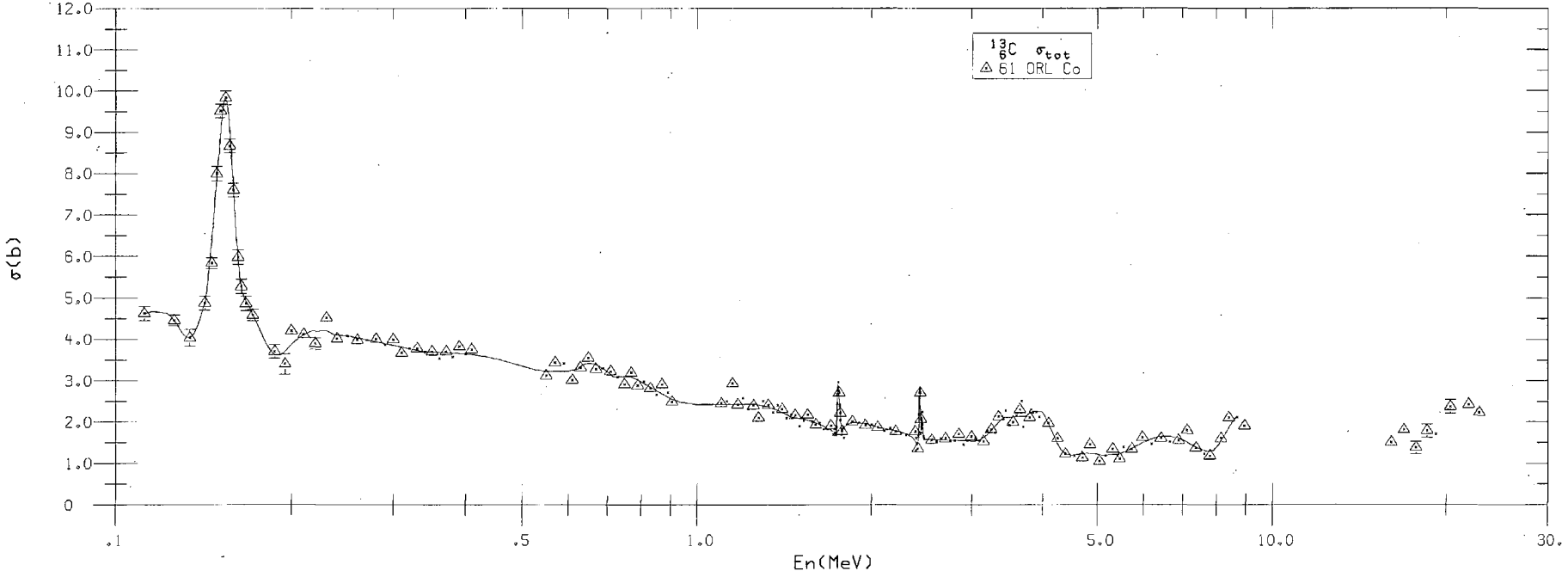
σ_{nna}

$^{13}_{6}C$

σ_{tot}







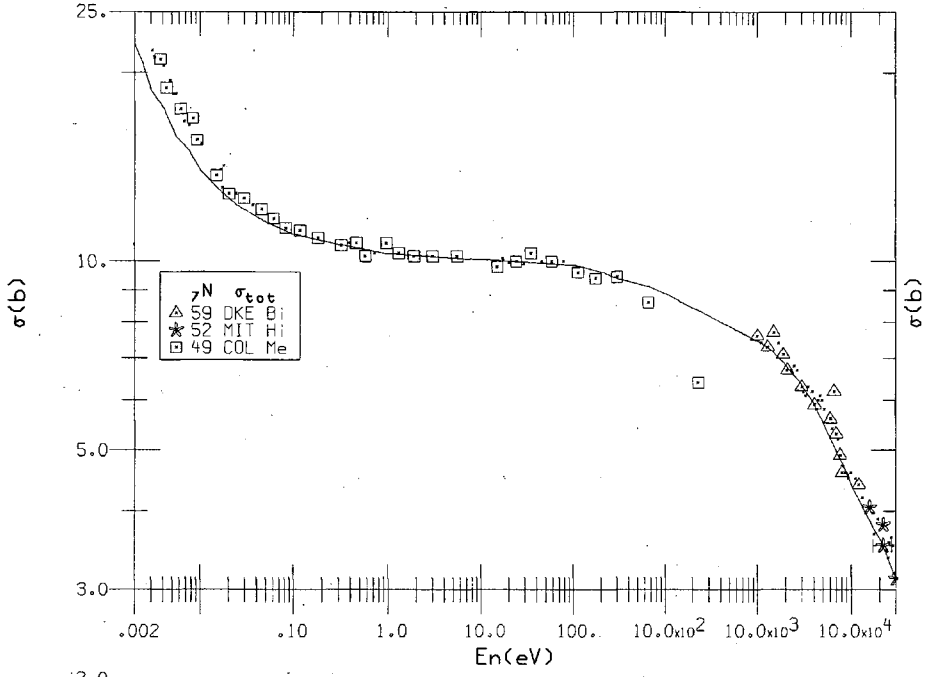
Yr	Lab	Author	Reference	Points	Range	Standard
			$_6C$ σ_{tot}			
74	MNA	Bubb,et.al.	CJP,52,648,74	5	22.9 MeV to 44.2 MeV	
74	MNA	Bubb,et.al.	CJP,52,648,74	12	21.0 MeV to 44.0 MeV	
74	NBS	Schrack,et.al.	BAP,19,573(JF1),74	115	1.030 keV to .595 MeV	
73	BET	Stooksberry+	NSE,51,235,73	18	.433 MeV to 2.370 MeV	
72	DAV	Auman,et.al.	PR/C,5,1,72	8	24.6 MeV to 58.9 MeV	abs
72	ORL	Perey,et.al.	ORNL-4823,72	3701	.181 MeV to 29.4 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.260 MeV to 14.8 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	4	12.0 GeV to 26.5 GeV	
71	BET	Green,et.al.	71KNOX,1,325,71	942	.500 MeV to 11.0 MeV	
71	JAE	Nishimura	NISHIMURA,71	24	10.8 keV to .249 MeV	
70	NBS	Schwartz,et.al.	BAP,15,567(GF5),70	3362	.494 MeV to 15.0 MeV	
70	ANL	Meadows,et.al.	NSE,41,351,70	456	.649 MeV to 1.555 MeV	
70	RPI	Stoler,et.al.	BAP,15,1668(C11),70	1800	.889 MeV to 30.0 MeV	
70	STF	Lakin,et.al.	PL/B,31,677,70	1	.369 b at 3800. MeV	
70	LVN	Deconninck,et.al	PR/C,1,1326,70	44	16.7 MeV to 20.4 MeV	abs
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.290 b at 14.5 MeV	
69	MHG	Parker,et.al.	UNIV-MI-3028-3-T,69	1	.370 b at 5700. MeV	abs
68	KFK	Cierjacks,et.al.	KFK-1000,68	4303	.674 MeV to 31.9 MeV	abs
68	JAE	Iizumi,et.al.	NST,5,649,68	163	.0008 eV to .117 eV	
68	THU	Chao Yie Yang+	CHP,6,74,68	28	5.200 MeV to 6.200 MeV	abs
68	DEB	Hunyadi,et.al.	NP/A,119,525,68	21	13.7 MeV to 14.6 MeV	
68	MHG	Jones,et.al.	PL/B,27,328,68	1	.300 b at 27.0 GeV	
68	HAR	Diment	EANDC(UK)-94-AL,68	87	74.0 eV to 1.504 MeV	abs
68	TRI	Guarrini,et.al.	NSE,31,341,68	1	1.390 b at 14.7 MeV	
66	ANL	Mooring,et.al.	NP,82,16,66	55	13.0 keV to .497 MeV	
66	HRV	Measday,et.al.	NP,85,129,66	7	88.2 MeV to 150.9 MeV	
66	RPI	Yergin,et.al.	66WASH,1,690,66	931	.748 MeV to 50.0 MeV	
66	HAR	Uttley	UTTLEY,66	685	.602 keV to 62.0 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	4.660 b at 1.440 eV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	4.740 b at 1.440 eV	
65	ORL	Harlow Jr,et.al.	NP,67,249,65	73	13.2 MeV to 21.0 MeV	abs
65	ORL	West Ii,et.al.	ORNL-3778,94,65	5	19.6 MeV to 30.5 MeV	
65	SAC	Sorriaux	CR,260,3045,65	9	2.606 MeV to 2.850 MeV	
65	DUB	Kazarimov+	YF,1,271,65	1	.324 b at 630.0 MeV	
64	MTR	Simpson,et.al.	NIM,30,293,64	56	4.951 eV to 1.033 keV	abs
64	SAC	Ambrosino,et.al.	CEA-2399,64	1	1.810 b at 2.768 MeV	
64	HAR	Manero,et.al.	NP,59,583,64	95	7.040 MeV to 14.3 MeV	abs
63	JAE	Tsukada	TSUKADA,63	27	12.5 MeV to 17.0 MeV	
63	DKE	Seth,et.al.	NP,47,137,63	821	3.000 keV to .660 MeV	
63	DKE	Seth,et.al.	AP,47,137,63	25	.155 MeV to .650 MeV	
63	BRC	Cabe,et.al.	EANDC(E)-49,69,63	76	.640 MeV to 1.000 MeV	abs
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	.345 b at 8300. MeV	
61	DKE	Wilenzick,et.al.	PR,121,1150,61	103	.185 MeV to .695 MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	.319 b at 5000. MeV	
61	WIS	Fossan,et.al.	PR,123,209,61	217	3.290 MeV to 16.0 MeV	
61	GA	Walton	WALTON,61	163	.0019 eV to 96.0 eV	abs
61	HAR	Bowen,et.al.	NP,22,640,61	64	15.8 MeV to 117.5 MeV	
61	FR	Didier	JPR/A,22,149,61	1	1.390 b at 14.7 MeV	
60	JAE	Tsukada,et.al.	JPJ,15,1994,60	83	3.370 MeV to 5.070 MeV	
60	ANL	Huddleston+	PR,117,1055,60	660	.504 MeV to 1.353 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	5	17.8 MeV to 29.1 MeV	
59	RIC	Hall,et.al.	NP,14,295,59	13	7.000 MeV to 8.060 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	19	13.8 MeV to 14.8 MeV	abs
58	ORL	Willard,et.al.	ORNL-2501,18,58	40	2.625 MeV to 2.907 MeV	
58	ORL	Wills Jr,et.al.	PR,109,891,58	23	2.041 MeV to 2.118 MeV	
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	7	7.120 MeV to 14.4 MeV	abs

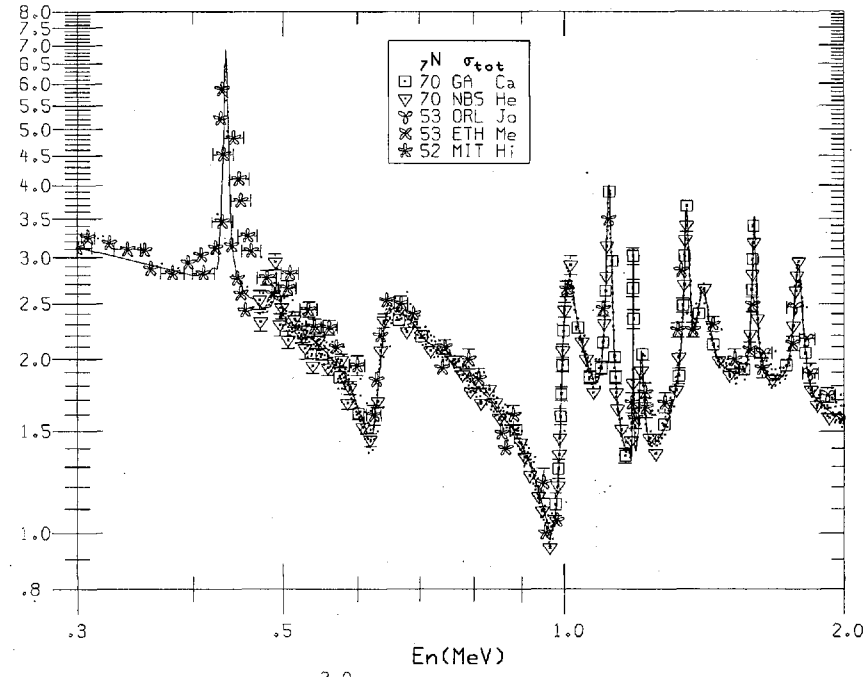
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	14	2.253 MeV to 2.797 MeV	abs
57	NRL	Bondelid,et.al.	PR,105,193,57	41	3.780 MeV to 8.090 MeV	
57	HAR	Egelstaff	JNE,5,203,57	187	.0013 eV to .120 eV	abs
56	WIS	Becker,et.al.	PR,102,1384,56	96	4.380 MeV to 8.595 MeV	
56	MTR	Brugger,et.al.	PR,104,1054,56	74	13.4 eV to 8.600 keV	
56	CCP	Khaletskii	DOK,113,305,56	1	1.180 b at 14.8 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	1.880 b at 4.100 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	.380 b at 1400. MeV	
55	HRV	Culler,et.al.	PR,99,740,55	12	61.0 MeV to 106.8 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	2	12.7 MeV to 14.1 MeV	abs
55	BNL	Sailor	SAILOR,55	1	4.740 b at 1.460 eV	
55	HAR	Allen,et.al.	PPS/A,68,1077,55	5	60.0 keV to .550 MeV	
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	.319 b at 590.0 MeV	
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	
54	MIT	Storrs,et.al.	PR,95,1252,54	1	2.192 b at 1.315 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	.984 b at 47.5 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	.560 b at 88.0 MeV	
54	ANL	Hibdon,et.al.	ANL-5174,43,54	109	.170 keV to .160 MeV	abs
54	BNL	Palevsky	PALEVSKY,54	38	.0004 eV to .0019 eV	abs
53	BNL	Hafner,et.al.	PR,89,204,53	39	3.910 MeV to 4.845 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	38	2.920 MeV to 13.6 MeV	
53	TEX	Dvorack,et.al.	PR,90,618,53	14	2.210 MeV to 2.770 MeV	
53	LAS	Day,et.al.	PR,92,358,53	3	17.2 MeV to 20.1 MeV	abs
53	BRK	Ragent	UCRL-2337,53	10	39.6 MeV to 165.2 MeV	C σ_{tot}
53	BRK	Ragent	UCRL-2337,53	27	39.1 MeV to 194.0 MeV	C σ_{tot}
53	LAS	Henkel	HENKEL,53	1	1.680 b at 4.590 MeV	
53	HAR	Taylor,et.al.	PM,44,95,53	11	37.0 MeV to 153.0 MeV	
52	LAS	Henkel	HENKEL,52	126	3.615 MeV to 7.300 MeV	
52	BNL	Poss,et.al.	PR,87,11,52	1	1.279 b at 14.1 MeV	
52	ORL	Rayburn,et.al.	PR,87,174(H3),52	1	4.700 b at 1.440 eV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.320 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	1.200 b at 14.0 MeV	
52	COL	Havens Jr	HAVENS,52	27	.0620 eV to 9.100 eV	
52	HAR	Egelstaff	EGELSTAFF,52	49	4.270 eV to .590 keV	
51	WIS	Bockelman,et.al.	PR,84,69,51	122	1.250 MeV to 3.350 MeV	
51	BRK	De Juren,et.al.	PR,81,919,51	3	160.0 MeV to 220.0 MeV	
51	UI	Good,et.al.	PR,59,917(19),51	1	2.660 b at .900 MeV	
50	MIN	Freier,et.al.	PR,78,508,50	74	.540 MeV to 4.840 MeV	abs
50	WIS	Miller	PR,78,806,50	1	2.400 b at 1.360 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	1.089 b at 42.0 MeV	
50	MIT	Willard,et.al.	MIT-REP-45,50	13	.800 MeV to 2.240 MeV	abs
50	BRK	De Juren,et.al.	PR,77,606,50	1	.498 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	.279 b at 270.0 MeV	
50	HAR	Bretscher,et.al.	HPA/A,23,15,50	12	.220 MeV to 4.050 MeV	abs
49	BRK	Cook,et.al.	PR,75,7,49	1	.550 b at 83.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
46	MIN	Bailey,et.al.	PR,70,583,46	20	.350 MeV to 6.000 MeV	
46	LAS	Frisch	PR,70,589,46	4	35.0 keV to .490 MeV	abs
45	HRV	Scherr	PR,68,240,45	1	1.070 b at 25.0 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	

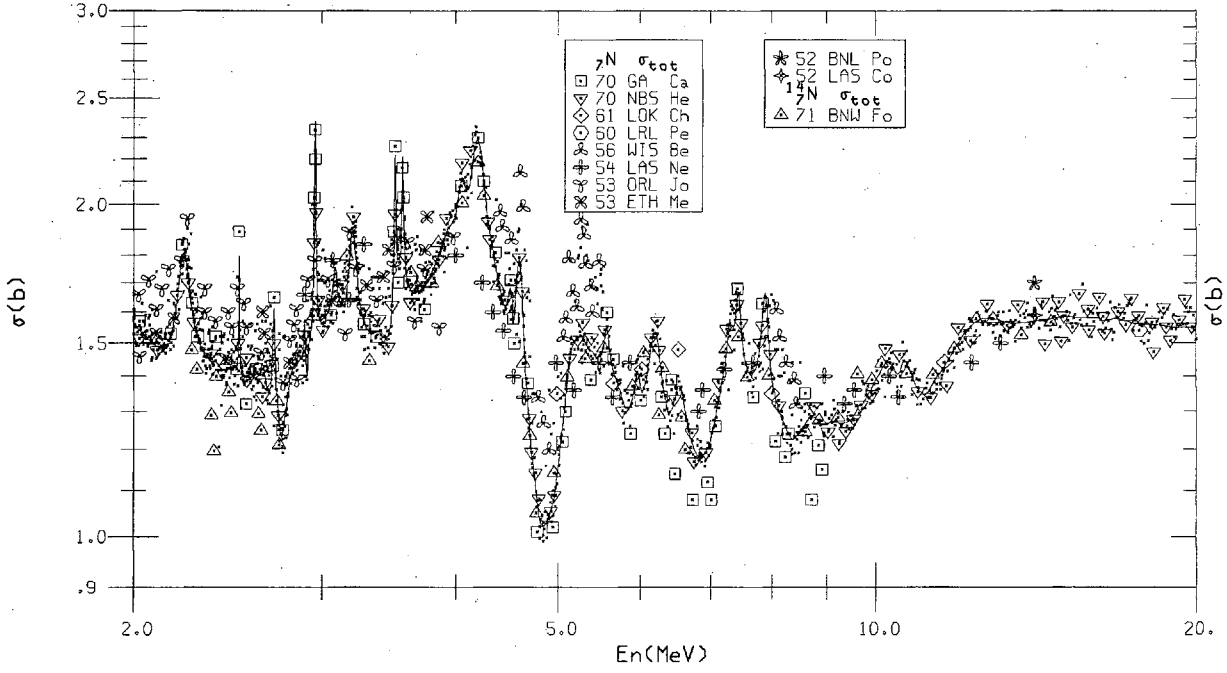
Yr	Lab	Author	Reference	Points	Range	Standard
			$_6C$ σ_{el}			
70	LVN	Deconninck,et.al	PR/C,1,1326,70	3	17.3 MeV to 19.9 MeV	^1H σ_{np}
70	CSE	Lindow,et.al.	BAP,15,86(GDG),70	2	5.050 MeV to 5.580 MeV	
69	ORL	Perey,et.al.	ORNL-4441,69	13	4.600 MeV to 8.560 MeV	^1H σ_{el}
69	ANL	Lane,et.al.	PR,188,1618,69	39	.500 MeV to 2.000 MeV	
66	GRE	Bouchez	BOUCHEZ,66	1	.810 b at 14.0 MeV	
65	OKE	Wilenzick,et.al.	NP,62,511,65	1	.890 b at 6.040 MeV	C σ_{tot}
65	MUN	Triftshauer+	EANDC(E)-57,21,65	2	33.9 eV to 61.1 eV	
65	KYU	Yoshmimura,et.al	INDSWG-90,24,65	1	.825 b at 14.1 MeV	
64	CRC	Clarke,et.al.	NP,53,177,64	1	.730 b at 14.1 MeV	abs
64	GRE	Szabo	CEA-2407,64	1	.800 b at 14.0 MeV	abs
64	UKR	Korzh,et.al.	AE,16,260,64	1	3.650 b at .500 MeV	
64	KUR	Gorlov,et.al.	DOK,158,574,64	1	1.980 b at 4.000 MeV	
63	GRE	Bouchez,et.al.	NP,43,628,63	1	.810 b at 14.6 MeV	
62	THA	Tesch	NP,37,412,62	1	.775 b at 14.1 MeV	
59	LAS	Haddad,et.al.	BAP,4,358(J2),59	3	6.000 MeV to 7.000 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	3	4.210 MeV to 7.580 MeV	H
58	LRL	Nakada,et.al.	PR,110,1439,58	1	.790 b at 14.0 MeV	
58	LAS	Coon,et.al.	PR,111,250,58	1	.770 b at 14.5 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.800 b at 4.100 MeV	
			$_6C$ σ_{inl}			
71	PIN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	.218 b at 8300. MeV	
			$_6C$ σ_{non}			
68	LRL	Hansen,et.al.	68WASH,1,225,,68	1	.554 b at 15.3 MeV	
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	.550 b at 14.8 MeV	abs
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	.235 b at 5000. MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	3	21.0 MeV to 29.2 MeV	
58	LRL	Mac Gregor+	PR,112,486,58	9	5.800 MeV to 12.9 MeV	abs
58	LRL	Ball,et.al.	PR,110,1392,58	1	.550 b at 14.2 MeV	
58	CCP	Gorbachev,et.al.	AE,4,191,58	1	.530 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	.560 b at 14.2 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	.490 b at 14.2 MeV	
57	CCP	Strizhak	AE,2,68,57	1	.630 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	2	2.500 MeV to 7.000 MeV	
56	OXF	Voss,et.al.	PRS/A,236,41,56	4	55.0 MeV to 140.0 MeV	
56	CCP	Fierov,et.al.	AE,1,155,56	1	.730 b at 14.5 MeV	
55	LAS	Graves,et.al.	PR,97,1205,55	1	.601 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	80.0 mb at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	1	40.0 mb at 4.000 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	2	12.7 MeV to 14.1 MeV	abs
53	LAS	Graves,et.al.	PR,89,343,53	1	.520 b at 14.1 MeV	
52	LAS	Phillips,et.al.	PR,88,600,52	1	.760 b at 14.1 MeV	abs

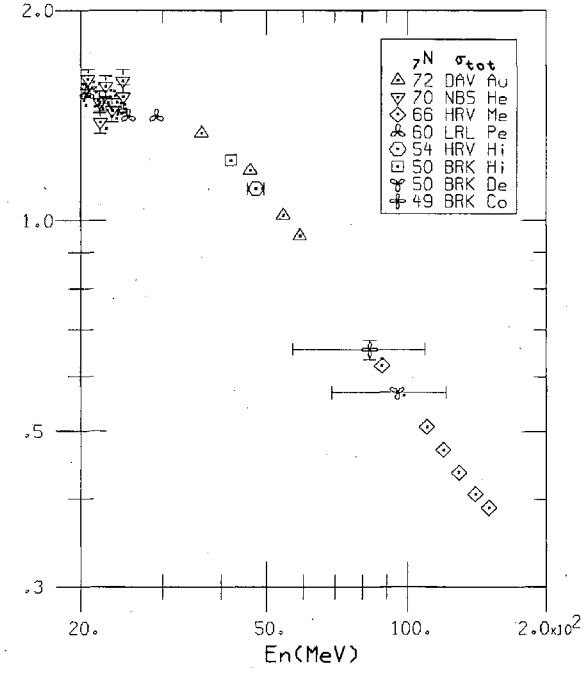
Yr	Lab	Author	Reference	Points	Range	Standard
			$_6C$ $\sigma_{n\gamma}$			
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
			$_6C$ σ_{ing}			
53	NRL	Scherrer,et.al.	PR,91,1476,53	1	.190 b at 14.2 MeV	
			$_6C$ σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	6.000 mb at 14.1 MeV	
			$^{12}_6C$ σ_{tot}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	3	4.040 MeV to 5.590 MeV	H σ_{el}
			$^{12}_6C$ σ_{el}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	3	4.040 MeV to 5.590 MeV	H σ_{el}
66	LAU	Grin,et.al.	HPA,39,214,66	1	.770 b at 14.1 MeV	H
65	KYU	Yoshimura,et.al.	EANDC(J)-1,24,65	1	.825 b at 14.1 MeV	^1H σ_{el}
			$^{12}_6C$ σ_{non}			
65	CCP	Degtyarev	AE,19,456,65	2	15.2 MeV to 19.8 MeV	
			$^{12}_6C$ σ_{n2n}			
74	HAM	Anders	BORMANN,74	11	22.8 MeV to 33.6 MeV	
61	CCP	Brill,et.al.	DOK,136,55,61	8	22.0 MeV to 37.5 MeV	
52	LAS	Brolley Jr+	PR,88,618,52	3	23.0 MeV to 27.0 MeV	
			$^{12}_6C$ σ_{np}			
59	NRD	Kreger,et.al.	PR,113,890,59	4	14.9 MeV to 17.5 MeV	
			$^{12}_6C$ $\sigma_{n\alpha}$			
64	SAH	Chatterjee+	NP,51,583,64	1	69.0 mb at 14.5 MeV	
			$^{12}_6C$ σ_{nna}			
55	LAS	Frye Jr,et.al.	PR,99,1375,55	4	12.9 MeV to 18.8 MeV	
55	LAS	Frye Jr,et.al.	PR,99,1375,55	15	12.3 MeV to 20.1 MeV	^{12}C σ_{nna}
			$^{13}_6C$ σ_{tot}			
61	ORL	Cohn,et.al.	PR,122,534,61	212	.112 MeV to 22.8 MeV	abs
			$^{13}_6C$ σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	6.100 mb at 14.7 MeV	^{197}Au σ_{n2n}

$_{7}N$ σ_{tot}
$^{14}_{7}N$ σ_{tot}
[1275]

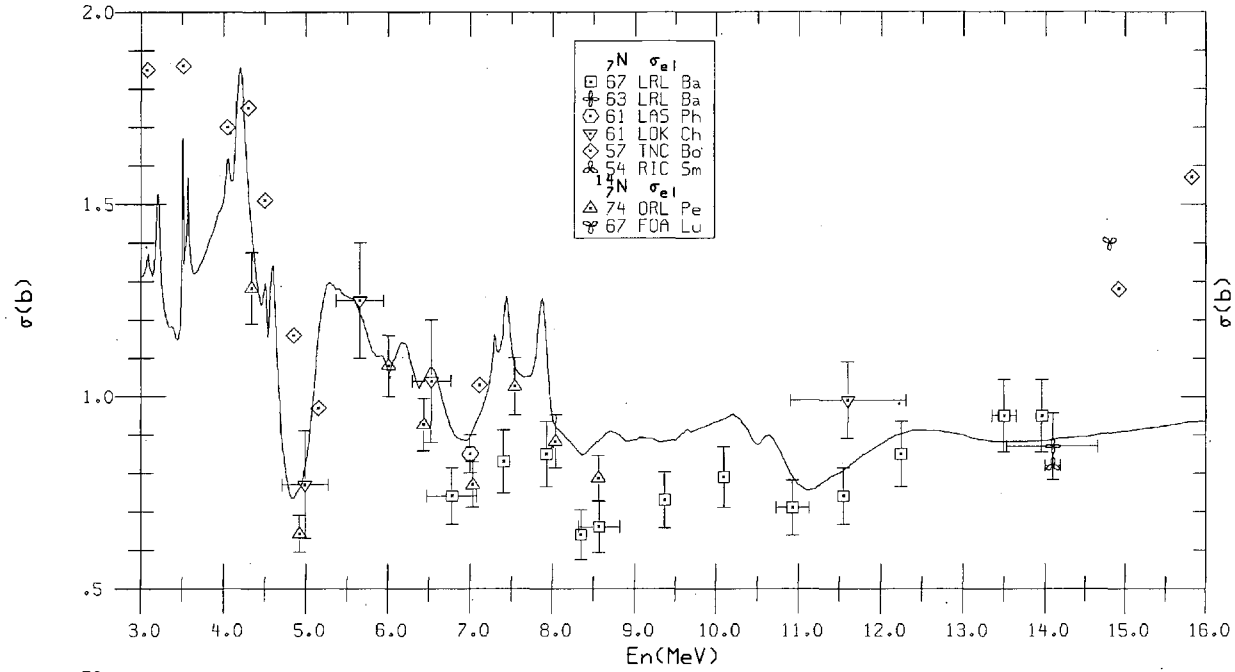


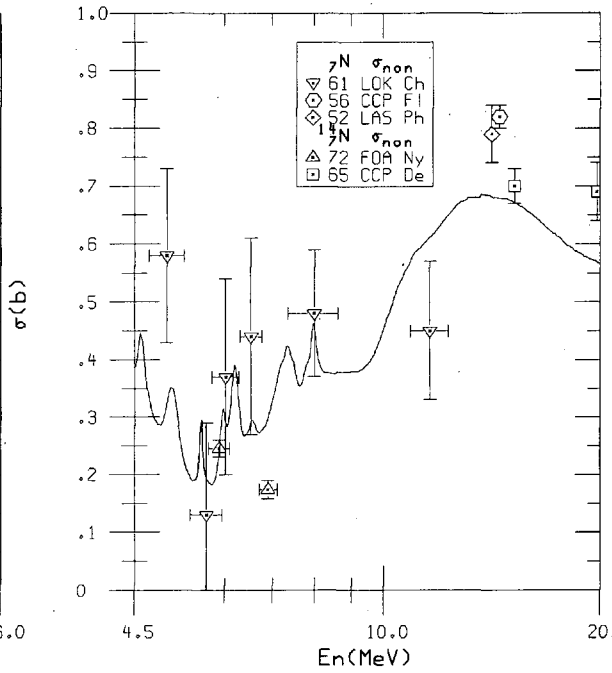


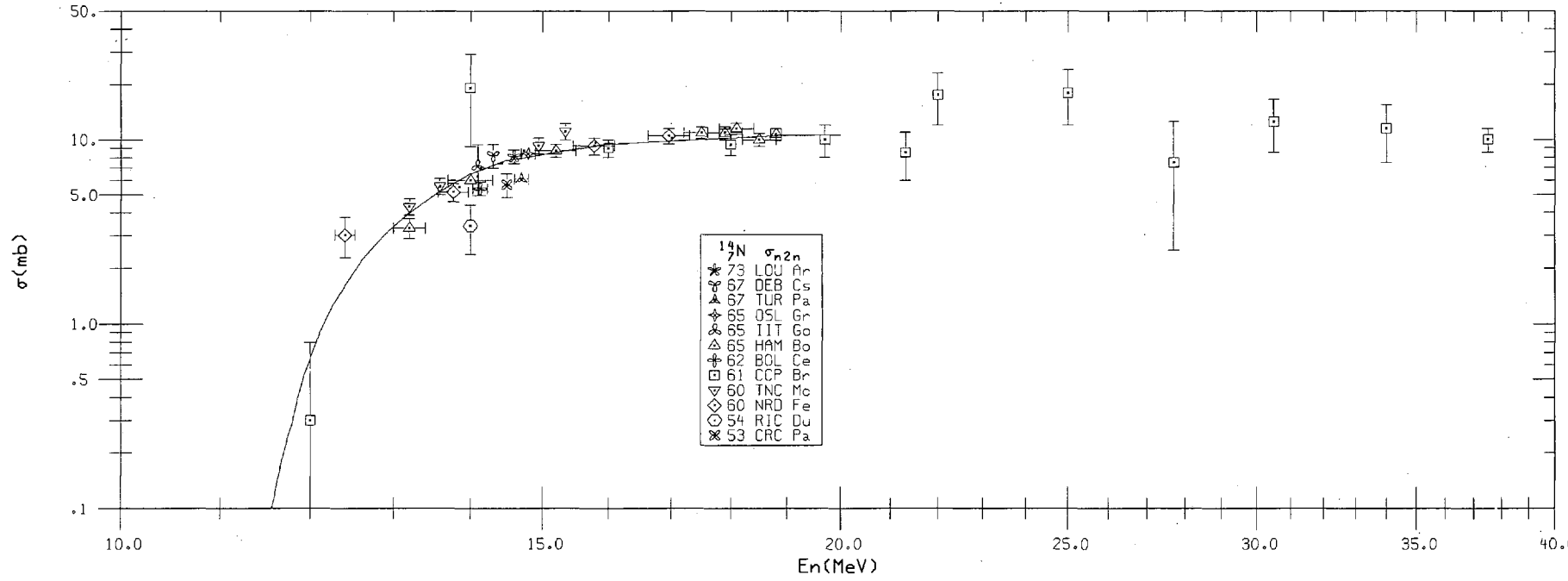




$_{7}N$
σ_{el}
σ_{non}
$^{14}_{7}N$
σ_{el}
σ_{non}
σ_{n2n}
[1275]





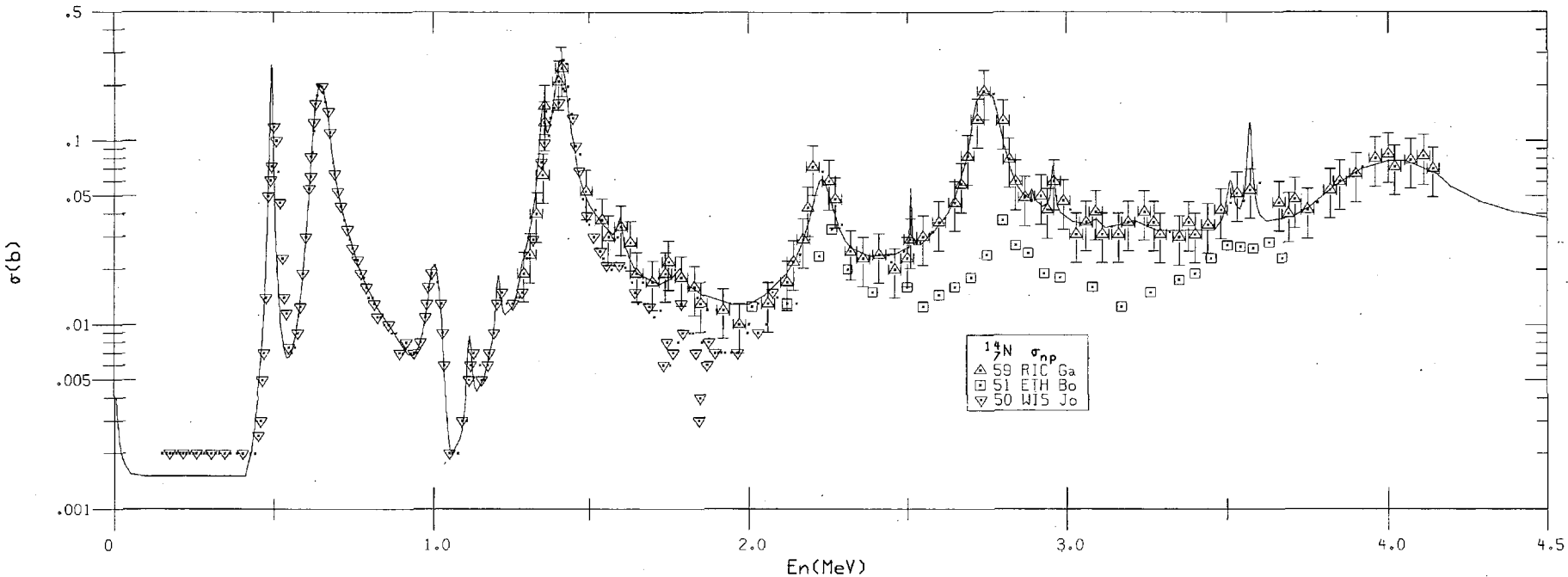


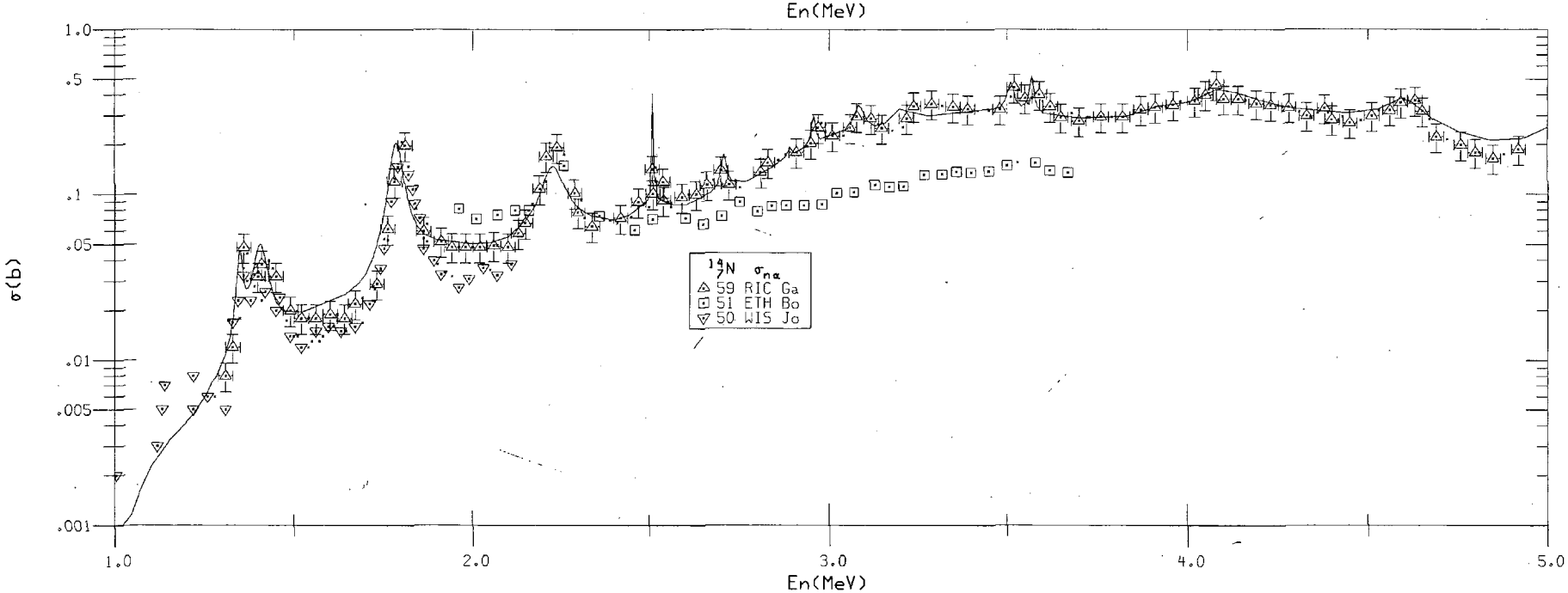
$^{14}_{7}N$

σ_{np}

$\sigma_{n\alpha}$

[1275]

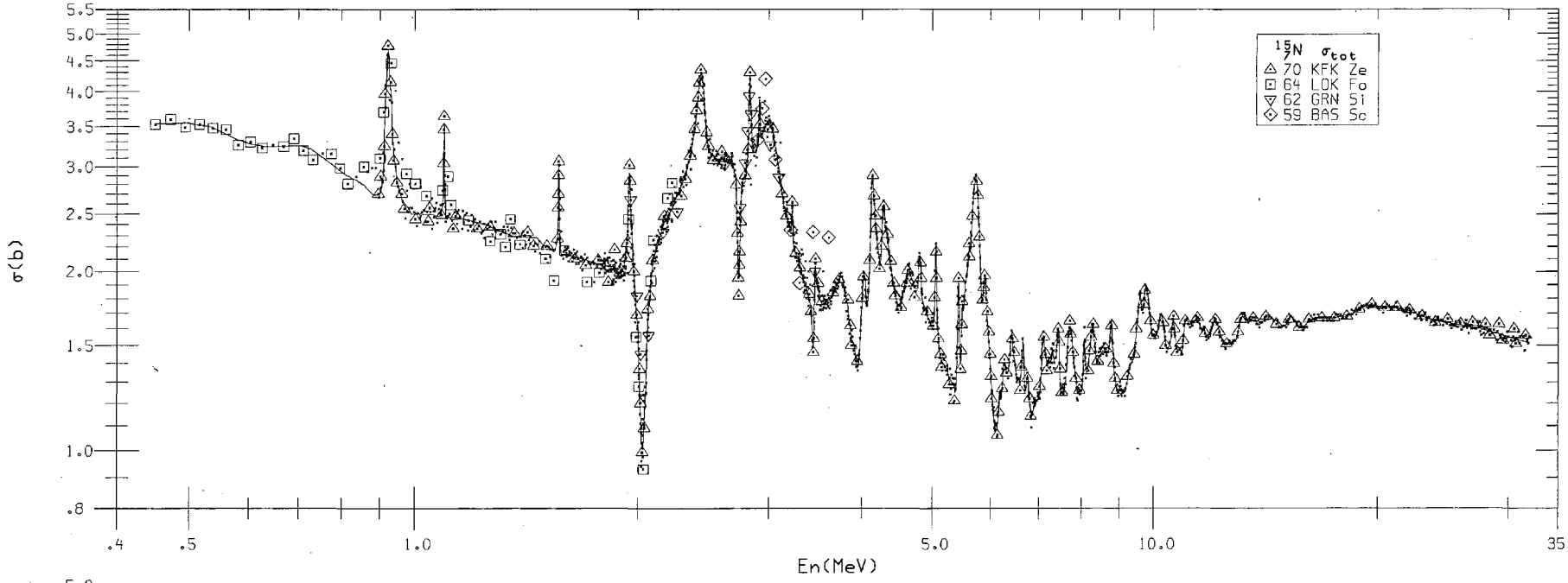


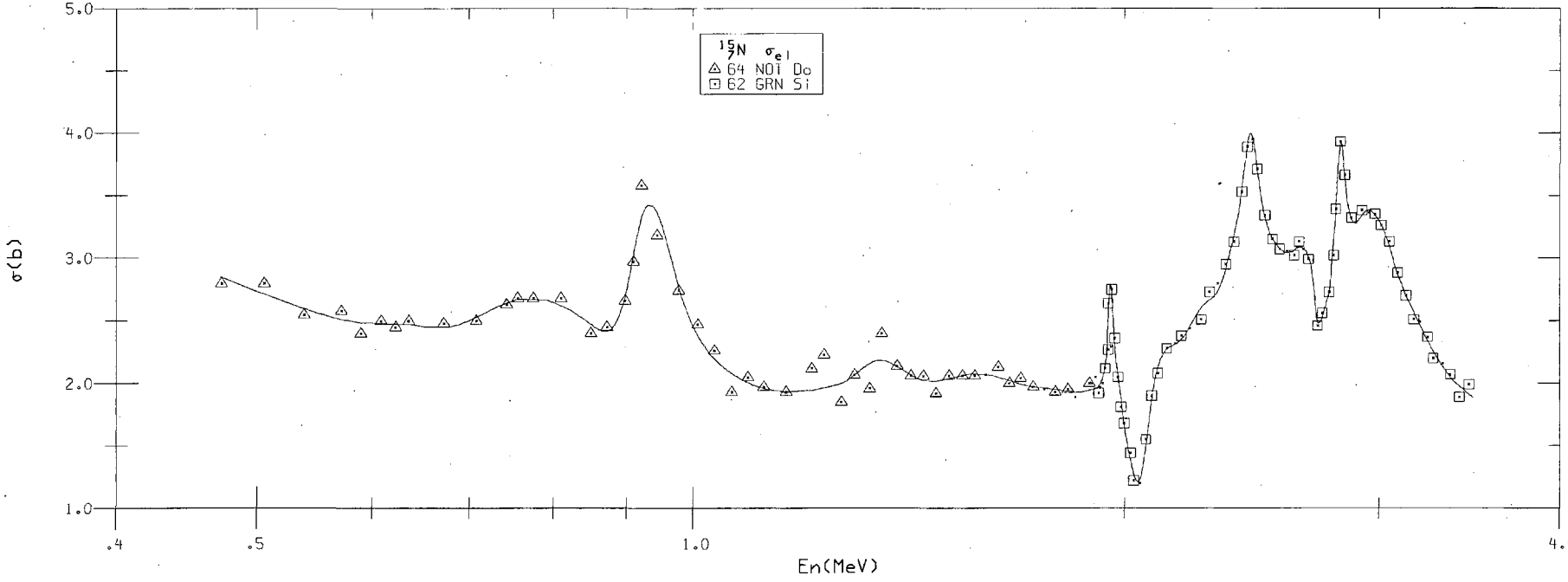


$^{15}_{7}N$

σ_{tot}

σ_{el}





Yr	Lab	Author	Reference	Points	Range	Standard
			$_7N$ σ_{tot}			
72	DAV	Auman,et.al.	PR/C,5,1,72	5	36.3 MeV to 58.9 MeV	
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.614 b at 14.1 MeV	
70	GA	Carlson,et.al.	NSE,42,28,70	689	.502 MeV to 8.974 MeV	abs
70	NBS	Heaton II,et.al.	BAP,15,568(GF7),70	3547	.470 MeV to 25.0 MeV	
66	HRV	Measday,et.al.	NP,85,129,66	7	88.2 MeV to 150.9 MeV	
61	LOK	Chase Jr,et.al.	AFSWC-TR-61-15,61	6	4.990 MeV to 11.6 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.7 MeV to 29.1 MeV	abs
59	OKE	Bilpuch,et.al.	BAP,4,42(R4),59	37	10.0 keV to .130 MeV	abs
56	WIS	Becker,et.al.	PR,102,1384,56	94	4.375 MeV to 8.585 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	61	2.700 MeV to 13.2 MeV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	1.110 b at 47.5 MeV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	.636 b at 88.0 MeV	abs
53	ORL	Johnson,et.al.	ORNL-1365,1,53	196	1.635 MeV to 3.980 MeV	
53	ETH	Meier,et.al.	HPA,26,451,53	91	1.910 MeV to 3.810 MeV	
52	MIT	Hinchey,et.al.	PR,86,483,52	284	.157 MeV to 1.790 MeV	
52	BNL	Poss,et.al.	PR,87,11,52	1	1.700 b at 14.1 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.590 b at 14.1 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	1.220 b at 42.0 MeV	abs
50	BRK	De Juren,et.al.	PR,77,606,50	1	.570 b at 95.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	.656 b at 83.0 MeV	
49	COL	Melkonian	PR,76,1750,49	52	.0031 eV to 2.330 keV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	abs
			$_7N$ σ_{el}			
67	LRL	Bauer,et.al.	NP/A,93,673,67	12	6.780 MeV to 14.0 MeV	
63	LRL	Bauer,et.al.	NP,47,241,63	1	.870 b at 14.1 MeV	
61	LAS	Phillips	PHILLIPS,61	1	.850 b at 7.000 MeV	H
61	LOK	Chase Jr,et.al.	AFSWC-TR-61-15,61	6	4.990 MeV to 11.6 MeV	
57	TNC	Bostrom,et.al.	WADC-TR-57-446,57	9	3.070 MeV to 15.8 MeV	
57	TNC	Bostrom,et.al.	WADC-TR-57-446,57	1	1.750 b at 4.300 MeV	
54	RIC	Smith	PR,95,730,54	1	.820 b at 14.1 MeV	N σ_{tot}
			$_7N$ σ_{inl}			
54	RIC	Smith	PR,95,730,54	1	.480 b at 14.1 MeV	N σ_{tot}
			$_7N$ σ_{non}			
61	LOK	Chase Jr,et.al.	AFSWC-TR-61-15,61	6	4.990 MeV to 11.6 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	.820 b at 14.5 MeV	
52	LAS	Phillips,et.al.	PR,88,600,52	1	.790 b at 14.1 MeV	abs
			$_7N$ σ_{ing}			
53	NRL	Scherrer,et.al.	PR,91,1476,53	1	.520 b at 14.2 MeV	

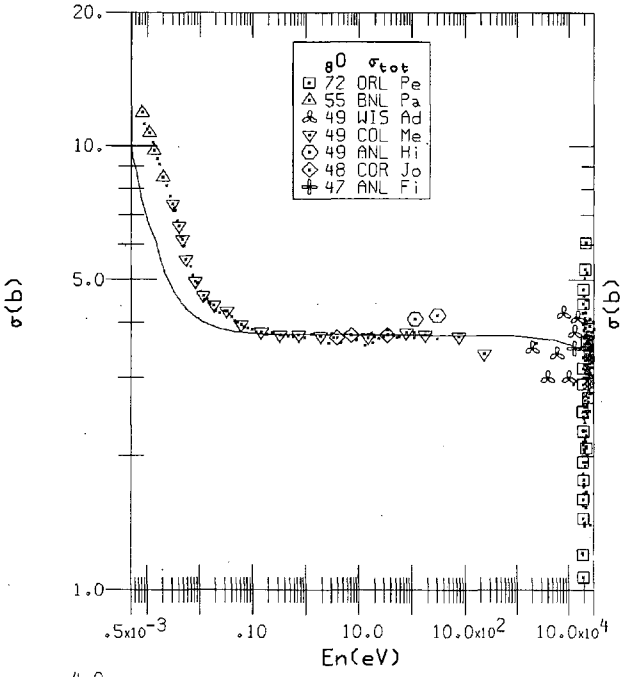
Yr	Lab	Author	Reference	Points	Range	Standard
			$_7N$ σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	18.0 mb at 14.1 MeV	
			$_7N$ σ_{np}			
39	ETH	Baldinger	HPA,12,330,39	1	40.0 b at 1.400 MeV	
			$_7N$ $\sigma_{n\alpha}$			
39	ETH	Baldinger	HPA,12,330,39	1	.160 kb at 1.400 MeV	
			$^{14}_7N$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	241	2.268 MeV to 15.0 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	1.560 b at 14.7 MeV	
			$^{14}_7N$ σ_{el}			
74	ORL	Perey,et.al.	ORNL-4805,74	8	4.340 MeV to 8.560 MeV	^1H σ_{el}
67	FOA	Lundberg,et.al.	AF,34,247,67	1	1.400 b at 14.8 MeV	abs
			$^{14}_7N$ σ_{non}			
72	FOA	Nystroem,et.al.	PS,5,175,72	2	5.900 MeV to 6.900 MeV	
65	CCP	Degtyarev	AE,19,456,65	2	15.2 MeV to 19.8 MeV	
			$^{14}_7N$ $\sigma_{n\gamma}$			
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	.200 mb at 65.0 keV	
			$^{14}_7N$ σ_{n2n}			
73	LOU	Araminowicz,et.a	INR-1464,14,73	1	8.100 mb at 14.6 MeV	^{63}Cu σ_{n2n}
70	JAE	Ishikawa	NST,7,534,70	1	8.200 mb at 14.7 MeV	^{27}Al σ_{np}
67	DEB	Csikai,et.al.	AHP,23,87,67	1	8.200 mb at 14.3 MeV	^{63}Cu σ_{n2n}
67	TUR	Pasquarelli	NP/A,93,218,67	1	6.100 mb at 14.7 MeV	
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	8.380 mb at 14.8 MeV	
65	DEB	Csikai	65ANTWERP,,537,65	1	8.000 mb at 14.6 MeV	
65	IIT	Golchert,et.al.	NP,73,349,65	1	7.190 mb at 14.1 MeV	abs
65	HAM	Bormann,et.al.	NP,63,438,65	12	13.2 MeV to 18.8 MeV	^{14}N σ_{n2n}
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	5.400 mb at 14.1 MeV	
61	ANL	Rayburn	PR,122,168,61	1	7.410 mb at 14.4 MeV	^{63}Cu σ_{n2n}
61	CCP	Brill,et.al.	DOK,136,55,61	12	12.0 MeV to 37.5 MeV	
60	TNC	Mc Crary,et.al.	BAP,5,246(HA5),60	8	13.2 MeV to 15.3 MeV	
60	NRD	Ferguson,et.al.	PR,118,228,60	6	12.4 MeV to 18.0 MeV	
54	RIC	Dudley,et.al.	PR,94,807(F8),54	1	3.400 mb at 14.0 MeV	^{23}Na
53	CRC	Paul,et.al.	CJP,31,267,53	1	5.670 mb at 14.5 MeV	abs

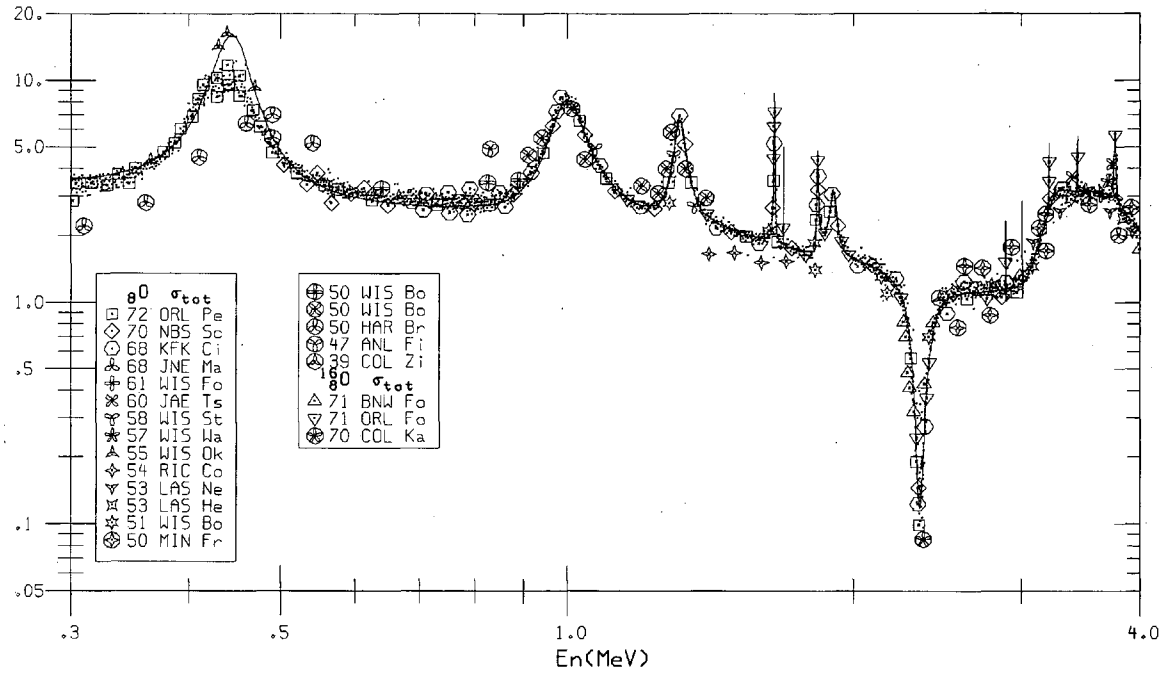
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{14}_{7}$N σ_{np}			
66	DEB	Csikai,et.al.	AHP,21,303,66	1	77.0 mb at 14.7 MeV	^{14}N $\sigma_{n\alpha}$
59	RIC	Gabbard,et.al.	NP,14,277,59	132	1.290 MeV to 4.140 MeV	
51	ETH	Bollmann,et.al.	HPA,24,517,51	28	2.010 MeV to 3.670 MeV	abs
50	WIS	Johnson,et.al.	PR,80,818,50	184	.148 MeV to 2.150 MeV	
			$^{14}_{7}$N σ_{nnp}			
66	DEB	Csikai,et.al.	AHP,21,303,66	1	46.0 mb at 14.7 MeV	^{14}N $\sigma_{n\alpha}$
			$^{14}_{7}$N σ_{nt}			
67	ROS	Schmidt,et.al.	NP/A,103,238,67	1	.800 mb at 15.7 MeV	abs
			$^{14}_{7}$N $\sigma_{n\alpha}$			
59	RIC	Gabbard,et.al.	NP,14,277,59	184	1.280 MeV to 4.920 MeV	
52	RIC	Lillie	PR,87,716,52	1	.100 b at 14.1 MeV	
51	ETH	Bollmann,et.al.	HPA,24,517,51	37	1.960 MeV to 3.670 MeV	abs
50	WIS	Johnson,et.al.	PR,80,818,50	70	1.005 MeV to 2.110 MeV	
			$^{14}_{7}$N $\sigma_{n2\alpha}$			
67	ROS	Schmidt,et.al.	NP/A,103,238,67	1	58.0 mb at 14.1 MeV	abs
67	ROS	Schmidt,et.al.	NP/A,103,238,67	1	70.0 mb at 15.7 MeV	abs
52	RIC	Lillie	PR,87,716,52	1	15.0 mb at 14.1 MeV	
			$^{14}_{7}$N σ_{nx}			
52	RIC	Lillie	PR,87,716,52	1	.100 b at 14.1 MeV	
			$^{15}_{7}$N σ_{tot}			
70	KFK	Zeitnitz,et.al.	NEBE,70	2572	.896 MeV to 32.0 MeV	abs
64	LOK	Fossan,et.al.	PR/B,135,1347,64	111	.450 MeV to 2.241 MeV	abs
62	GRN	Sikkema	NP,32,470,62	64	1.906 MeV to 3.460 MeV	^{1}H σ_{np}
59	BAS	Schellenberg+	HPA,32,357,59	28	2.800 MeV to 3.610 MeV	
			$^{15}_{7}$N σ_{el}			
64	NOT	Donoghue,et.al.	NP,54,49,64	53	.473 MeV to 1.959 MeV	^{15}N σ_{el}
62	GRN	Sikkema	NP,32,470,62	64	1.900 MeV to 3.460 MeV	
			$^{15}_{7}$N σ_{np}			
66	MUA	Prasad,et.al.	NP,85,476,66	1	16.0 mb at 14.8 MeV	^{56}Fe σ_{np}

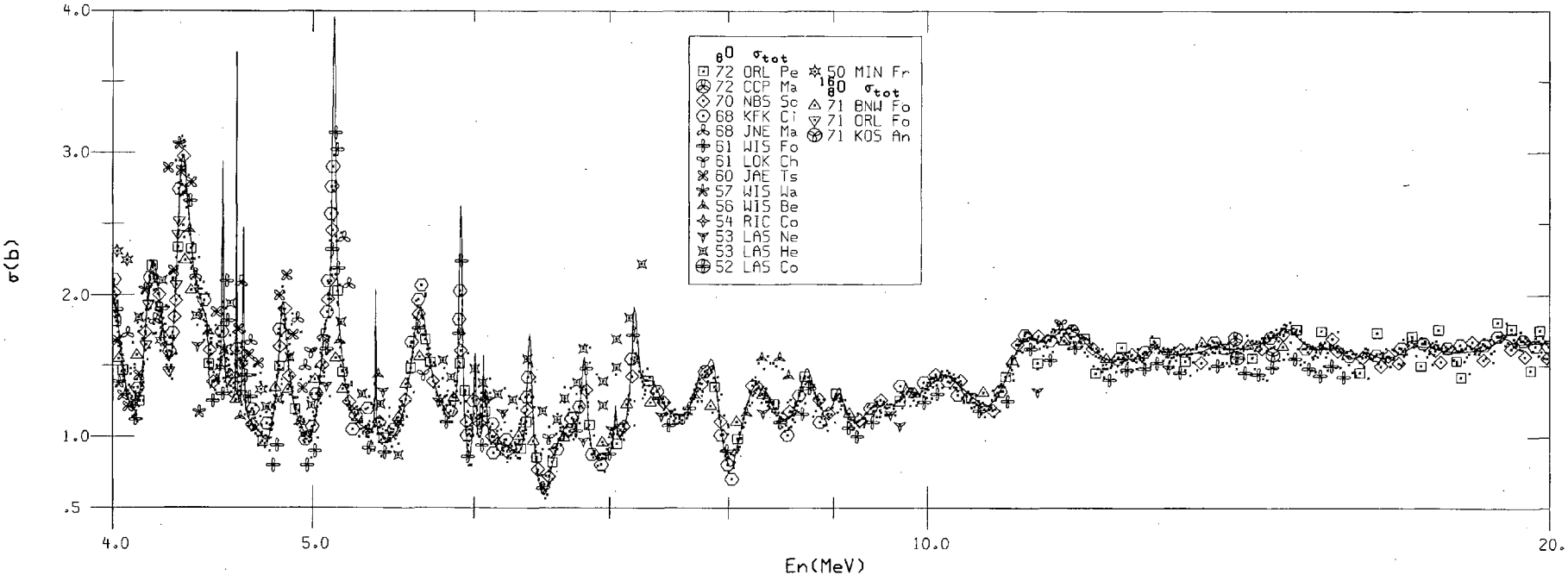
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{A1B}_{7}$N σ_{tot}			
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.638 b at 14.1 MeV	

$^{16}_{8}O$ σ_{tot}

[1276]







^{8}O

σ_{tot}

σ_{el}

σ_{non}

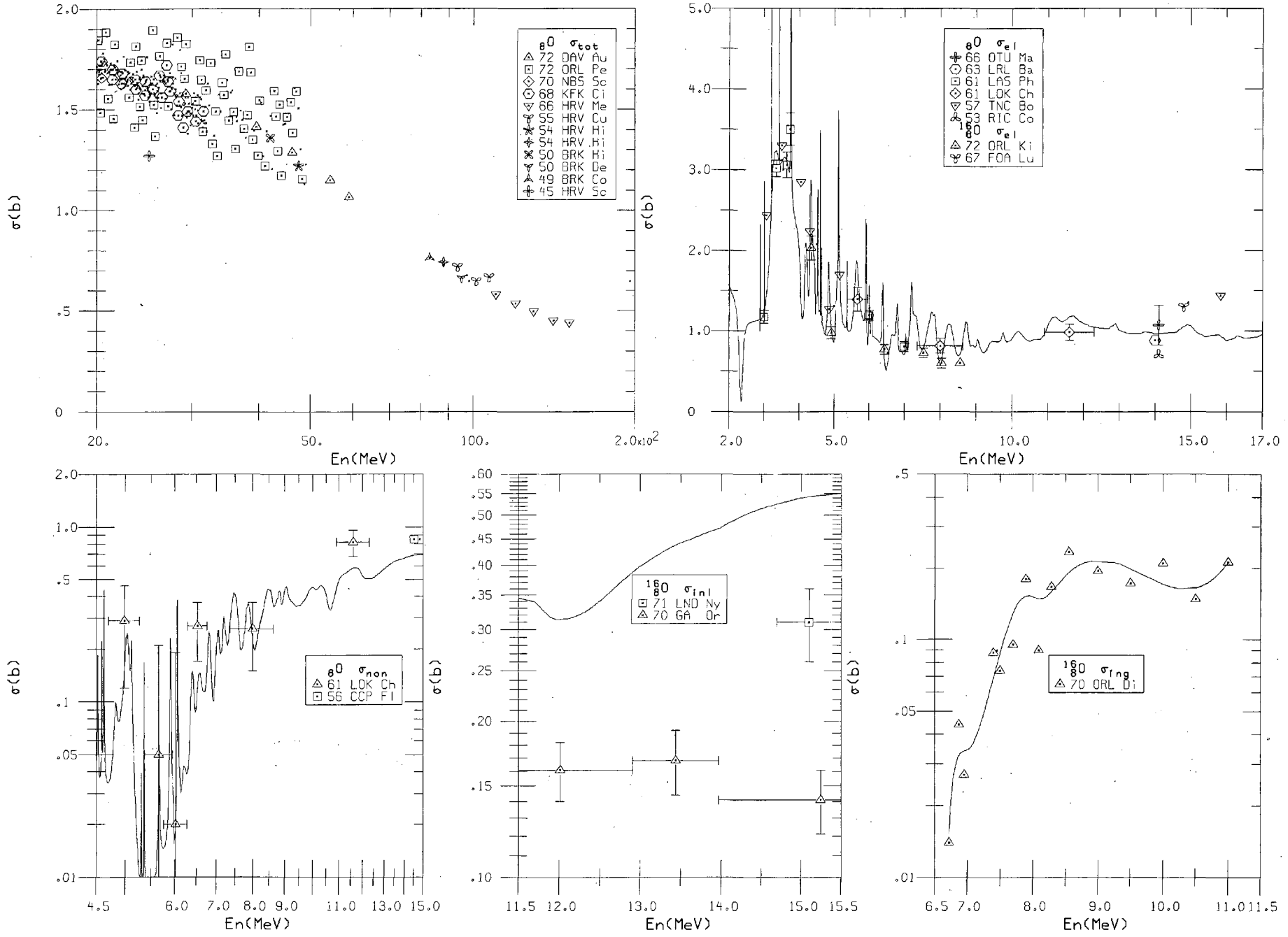
$^{16}_{8}O$

σ_{el}

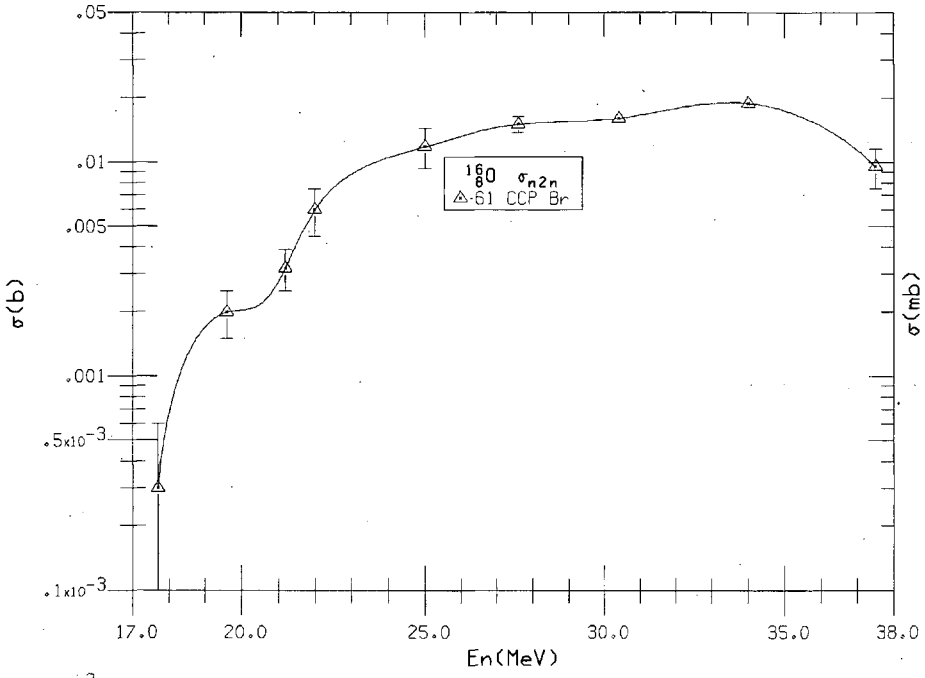
σ_{inl}

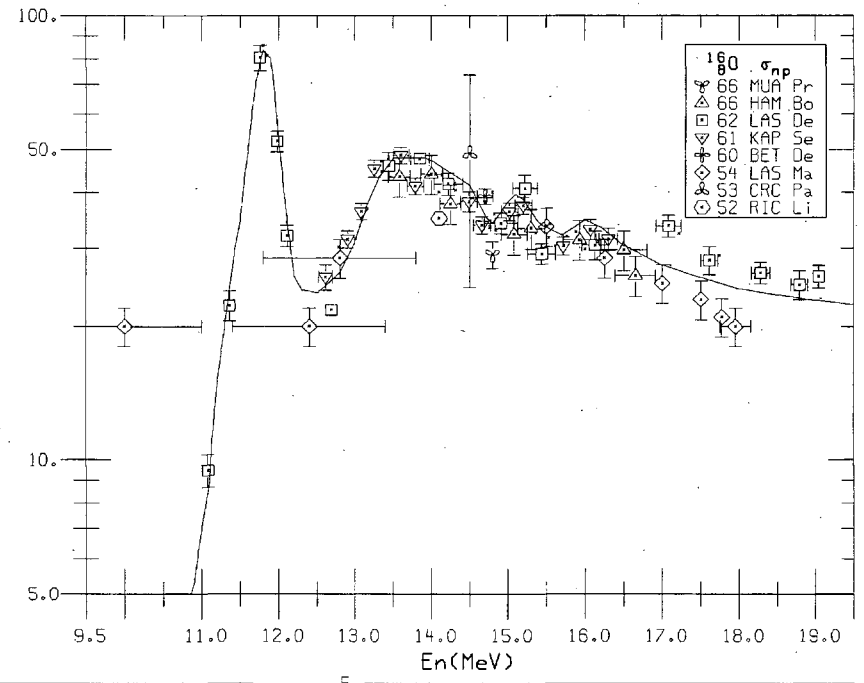
[1276]

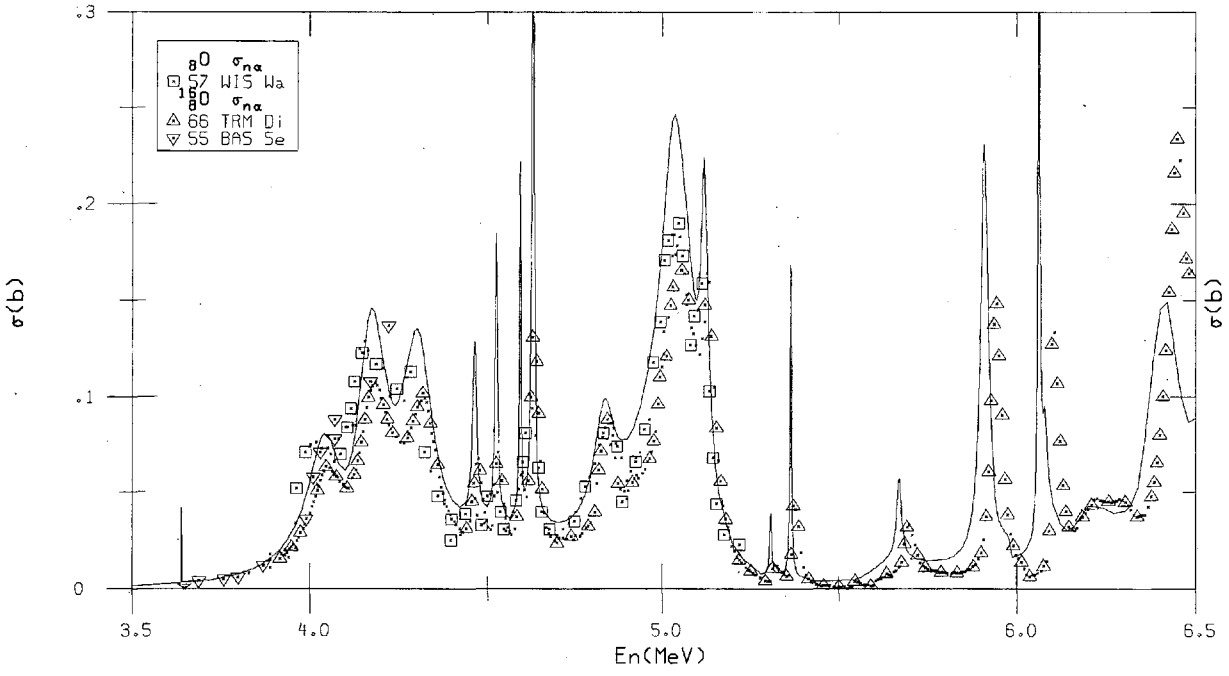
σ_{ing}

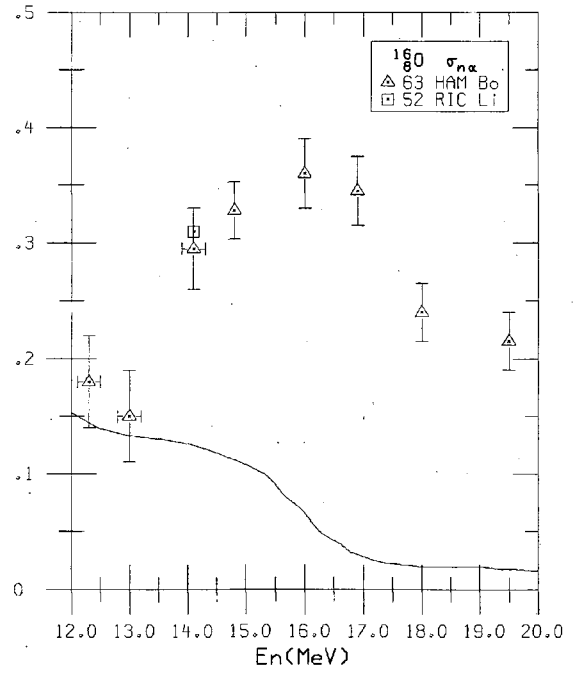


$^{16}_{8}O$ $\sigma_{n\alpha}$
$^{16}_{8}O$ σ_{np}
$\sigma_{n\alpha}$
[1276]
σ_{n2n}







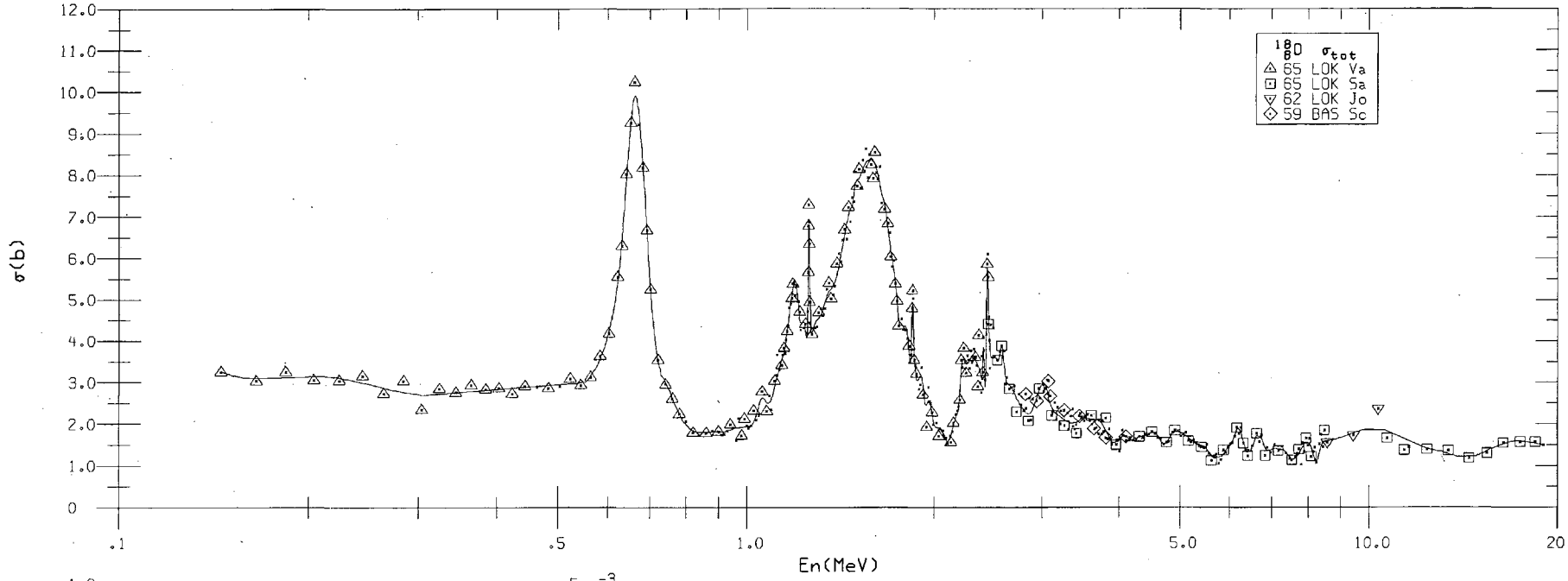


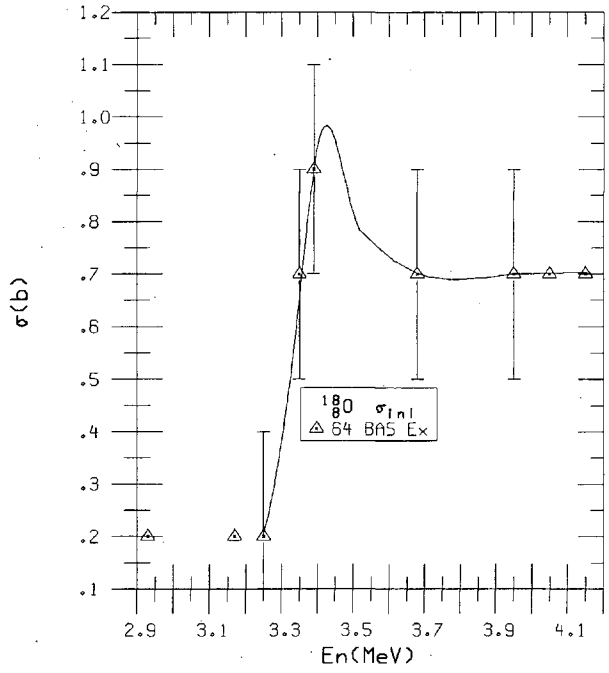
$^{18}_{8}O$

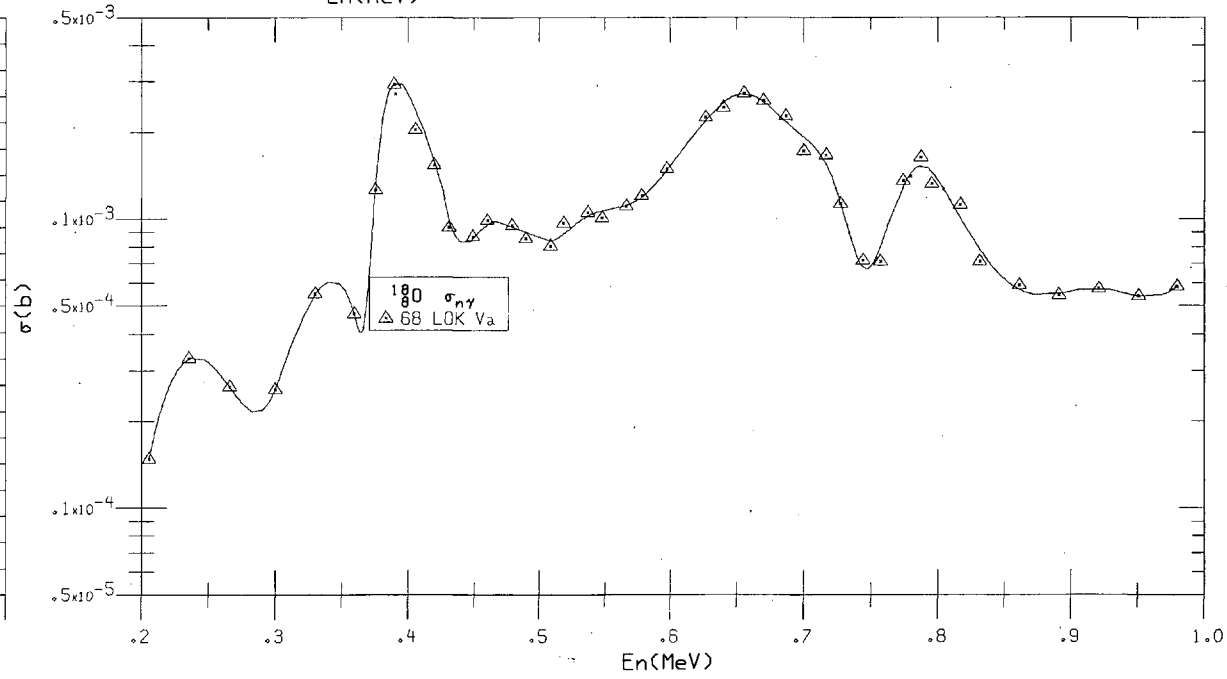
σ_{tot}

σ_{inl}

$\sigma_{n\gamma}$







Yr	Lab	Author	Reference	Points	Range	Standard
			$_8O$ σ_{tot}			
72	DAV	Auman,et.al.	PR/C,5,1,72	7	29.3 MeV to 58.9 MeV	
72	ORL	Perey,et.al.	ORNL-4823,72	3688	.187 MeV to 48.7 MeV	
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.696 b at 14.1 MeV	^{65}Cu σ_{n2n}
70	NBS	Schwartz	HEATON,70	3449	.499 MeV to 20.5 MeV	
70	COL	Kalyna,et.al.	NYO-73-340,70	1	96.7 mb at 2.370 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000,68	4305	.670 MeV to 32.0 MeV	abs
68	JNE	Manero	ARS,64,63,68	88	3.320 MeV to 5.210 MeV	
66	HRV	Measday,et.al.	NP,85,129,66	7	88.2 MeV to 150.9 MeV	
61	ANL	Huddleston	ANL-6376,13,61	182	1.000 keV to .500 MeV	
61	WIS	Fossan,et.al.	PR,123,209,61	373	3.371 MeV to 15.9 MeV	abs
61	LOK	Chase Jr,et.al.	AFSWC-TR-61-15,61	6	4.990 MeV to 11.6 MeV	abs
60	JAE	Tsukada,et.al.	JPJ,15,1994,60	101	3.370 MeV to 5.070 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	18.0 MeV to 27.6 MeV	
58	WIS	Striebel,et.al.	NP,6,188,58	73	.610 MeV to 1.430 MeV	
57	WIS	Walton,et.al.	PR,107,1065,57	47	3.410 MeV to 4.450 MeV	abs
56	WIS	Becker,et.al.	PR,102,1384,56	110	4.360 MeV to 8.585 MeV	abs
55	WIS	Okazaki	PR,99,55,55	34	.214 MeV to .686 MeV	
55	HRV	Culler,et.al.	PR,99,740,55	4	93.4 MeV to 106.8 MeV	
55	BNL	Palevsky	PALEVSKY,55	12	.0008 eV to .0032 eV	abs
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	.407 b at 590.0 MeV	
54	RIC	Cook,et.al.	PR,94,651,54	8	14.1 MeV to 18.0 MeV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	1.220 b at 47.5 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	.743 b at 88.0 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	54	2.900 MeV to 13.1 MeV	abs
53	LAS	Henkel	HENKEL,53	114	3.760 MeV to 7.260 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	1.560 b at 14.1 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	1.590 b at 14.1 MeV	abs
52	ANL	Goodman	PR,88,686,52	1	1.500 b at 14.0 MeV	
51	WIS	Bockelman,et.al.	PR,84,69,51	162	1.240 MeV to 3.470 MeV	
50	MIN	Freier,et.al.	PR,78,508,50	53	2.573 MeV to 4.808 MeV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	1.358 b at 42.0 MeV	
50	WIS	Bockelman	PR,80,1011,50	70	.615 MeV to 1.420 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	.663 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	.380 b at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	.372 b at 270.0 MeV	
50	HAR	Bretscher,et.al.	HPA/A,23,15,50	13	.260 MeV to 3.800 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	.765 b at 83.0 MeV	
49	WIS	Adair,et.al.	PR,75,1124,49	13	20.0 keV to .235 MeV	abs
49	COL	Melkonian	PR,76,1750,49	65	.0031 eV to 2.340 keV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
48	COR	Jones Jr	PR,74,364,48	12	2.700 eV to .110 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
45	HRV	Scherr	PR,68,240,45	1	1.270 b at 25.0 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$_8O$ σ_{el}			
66	OTU	Mac Donald+	NP,75,353,66	1	1.070 b at 14.1 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	4.000 b at 1.440 eV	
63	LRL	Bauer,et.al.	NP,47,241,63	1	.880 b at 14.1 MeV	
62	CCP	Lovchikova	AE,13,60,62	1	4.270 b at .900 MeV	
61	LAS	Phillips	PHILLIPS,61	8	3.000 MeV to 7.000 MeV	H
61	LOK	Chase Jr,et.al.	AFSWC-TR-61-15,61	6	4.990 MeV to 11.6 MeV	
57	TNC	Bostrom,et.al.	WADC-TR-57-446,57	9	3.070 MeV to 15.8 MeV	
57	TNC	Bostrom,et.al.	WADC-TR-57-446,57	1	2.080 b at 4.500 MeV	
53	RIC	Conner	PR,89,712,53	1	.700 b at 14.1 MeV	H σ_{tot}
			$_8O$ σ_{inl}			
53	RIC	Conner	PR,89,712,53	1	.500 b at 14.1 MeV	H σ_{tot}
			$_8O$ σ_{sct}			
53	RIC	Conner	PR,89,712,53	1	1.200 b at 14.1 MeV	H
			$_8O$ σ_{non}			
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	.850 b at 14.8 MeV	
61	LOK	Chase Jr,et.al.	AFSWC-TR-61-15,61	6	4.990 MeV to 11.6 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	.850 b at 14.5 MeV	
			$_8O$ $\sigma_{n\alpha}$			
57	WIS	Walton,et.al.	PR,107,1065,57	106	3.962 MeV to 5.219 MeV	D σ_{tot}
			$^{16}_8O$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.258 MeV to 14.9 MeV	
71	ORL	Fowler,et.al.	71KNOX,1,179,71	736	.598 MeV to 4.345 MeV	abs
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	1.580 b at 14.7 MeV	
70	COL	Kalyna,et.al.	NYO-73-340,70	1	85.3 mb at 2.370 MeV	
52	BNL	Poss,et.al.	PR,87,11,52	1	1.640 b at 14.1 MeV	
			$^{16}_8O$ σ_{el}			
72	ORL	Kinney,et.al.	ORNL-4780,72	8	4.340 MeV to 8.560 MeV	^1H σ_{el}
67	FOA	Lundberg,et.al.	AF,34,247,67	1	1.300 b at 14.8 MeV	abs
			$^{16}_8O$ σ_{inl}			
71	LND	Nyberg Ponnert+	PS,4,165,71	1	.310 b at 15.1 MeV	^{12}C σ_{ing}
70	GA	Orphan,et.al.	NSE,42,352,70	3	12.0 MeV to 15.2 MeV	

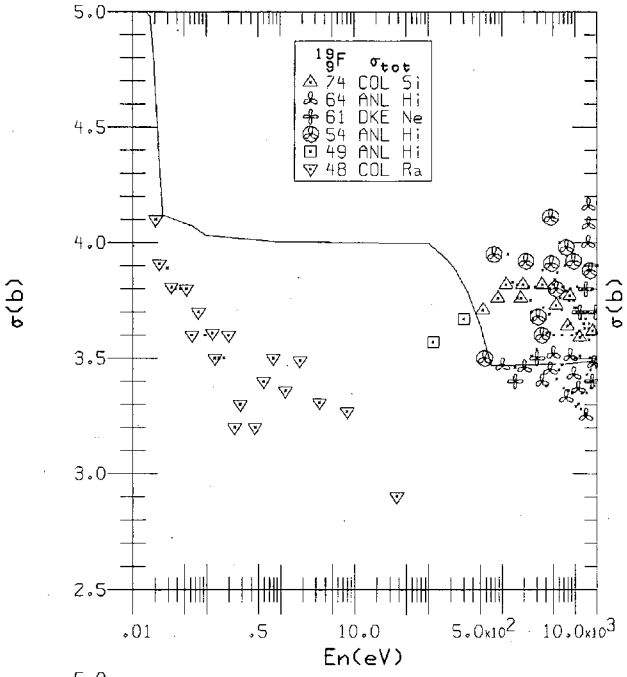
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{16}_{8}O$ σ_{ing}			
70	ORL	Dickens,et.al.	NSE,40,283,70	18	6.720 MeV to 11.0 MeV	
			$^{16}_{8}O$ σ_{n2n}			
61	CCP	Brill,et.al.	DOK,136,55,61	9	17.7 MeV to 37.5 MeV	
			$^{16}_{8}O$ σ_{np}			
66	MUA	Prasad,et.al.	NP,85,476,66	1	29.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	BOS	Mitra,et.al.	NP,83,157,66	1	40.1 mb at 14.8 MeV	^{63}Cu σ_{n2n}
66	HAM	Bormann,et.al.	66PARIS,1,225,66	15	13.4 MeV to 16.7 MeV	
62	ARK	Kantele,et.al.	NP,35,353,62	1	38.2 mb at 14.7 MeV	^{63}Cu σ_{n2n}
62	LAS	De Juren,et.al.	PR,127,1229,62	27	11.1 MeV to 19.0 MeV	
61	KAP	Seeman,et.al.	BAP,6,237(DA15),61	22	12.6 MeV to 16.3 MeV	
60	BET	De Jüren,et.al.	PR,120,901,60	1	39.2 mb at 14.7 MeV	
54	LAS	Martin	PR,93,498,54	12	10.0 MeV to 18.0 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	49.0 mb at 14.5 MeV	abs
52	RIC	Lillie	PR,87,716,52	1	35.0 mb at 14.1 MeV	
			$^{16}_{8}O$ σ_{nd}			
52	RIC	Lillie	PR,87,716,52	1	15.0 mb at 14.1 MeV	
			$^{16}_{8}O$ $\sigma_{n\alpha}$			
66	TRM	Divatia,et.al.	66PARIS,1,233,66	406	3.916 MeV to 6.489 MeV	
63	HAM	Bormann,et.al.	ZP,174,1,63	7	12.3 MeV to 19.5 MeV	^{16}O $\sigma_{n\alpha}$
63	HAM	Bormann,et.al.	ZP,174,1,63	1	.328 b at 14.8 MeV	abs
55	BAS	Seitz,et.al.	HPA,28,227,55	26	3.650 MeV to 4.220 MeV	
52	RIC	Lillie	PR,87,716,52	1	.310 b at 14.1 MeV	
			$^{18}_{8}O$ σ_{tot}			
65	LOK	Vaughn,et.al.	NP,64,336,65	231	.145 MeV to 2.466 MeV	abs
65	LOK	Salisbury,et.al.	NP,64,343,65	138	2.450 MeV to 19.0 MeV	
62	LOK	Johnson	JOHNSON,62	4	8.580 MeV to 11.6 MeV	
59	BAS	Schellenberg+	HPA,32,357,59	43	2.820 MeV to 4.170 MeV	abs
			$^{18}_{8}O$ σ_{inl}			
64	BAS	Extermann,et.al.	HPA,37,505,64	9	2.930 MeV to 4.150 MeV	
			$^{18}_{8}O$ $\sigma_{n\gamma}$			
68	LOK	Vaughn	VAUGHN,68	45	.206 MeV to .980 MeV	^{18}O $\sigma_{n\gamma}$

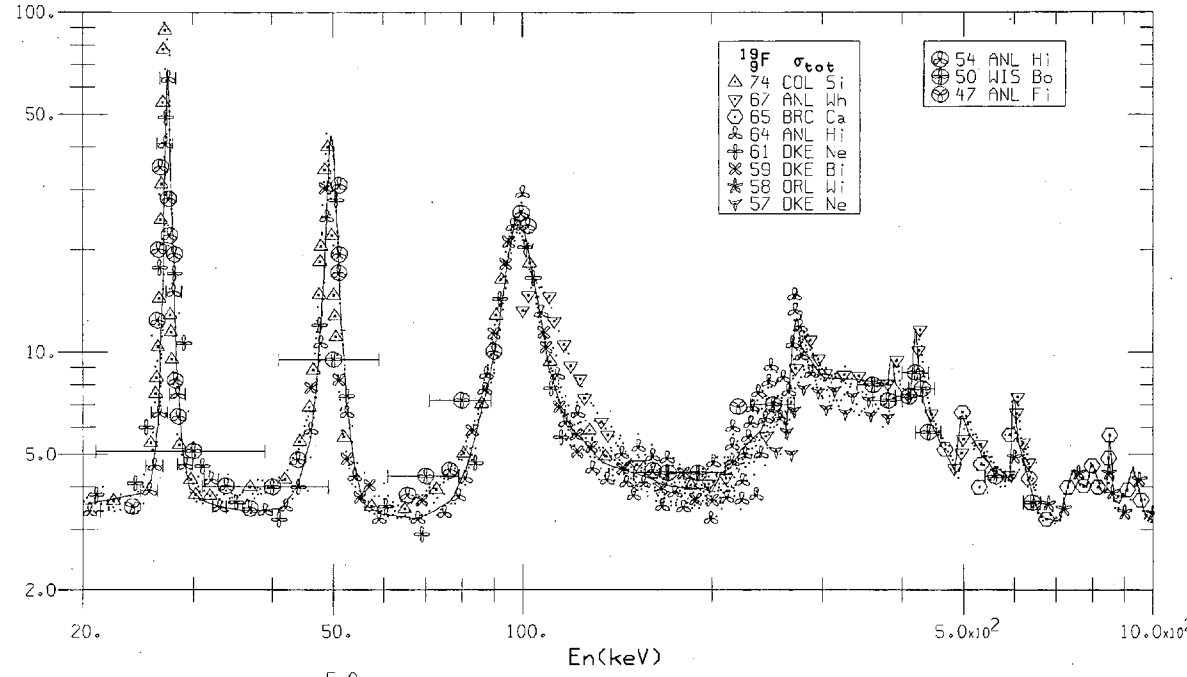
$^{19}_{9}F$

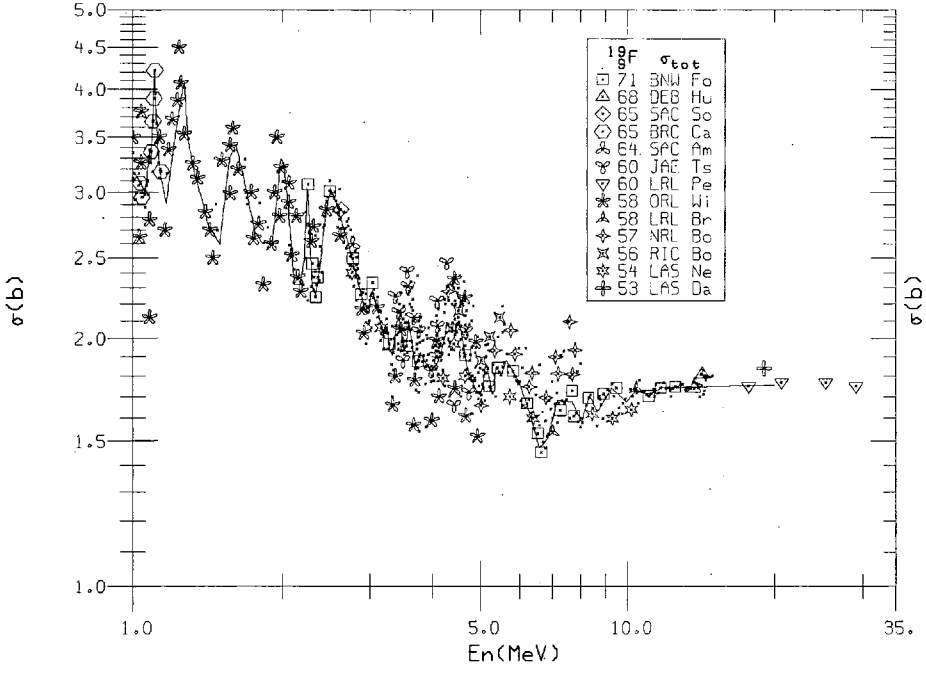
σ_{tot}

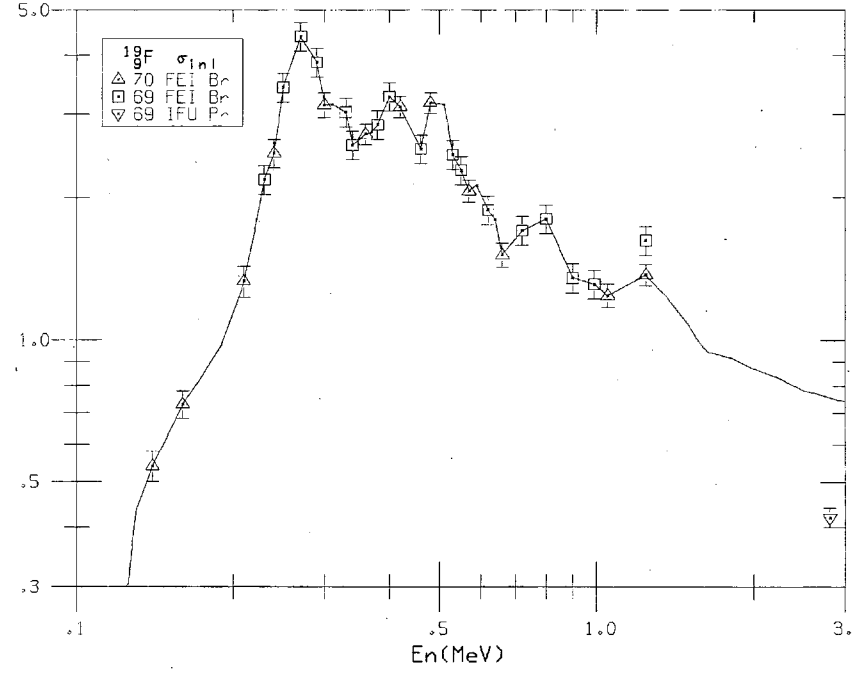
σ_{inl}

[1277]









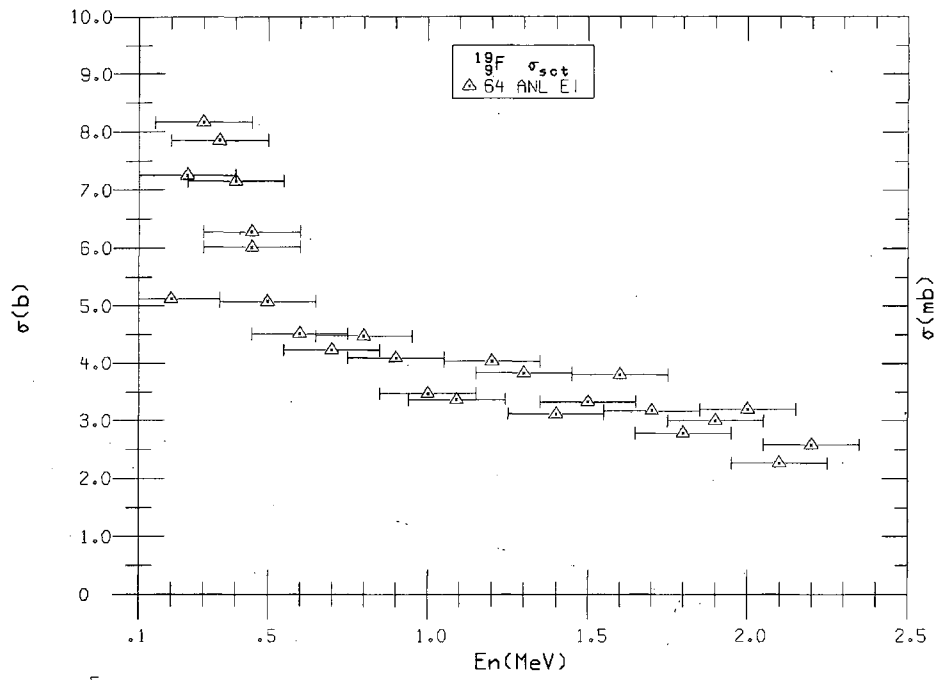
$^{19}_{9}F$

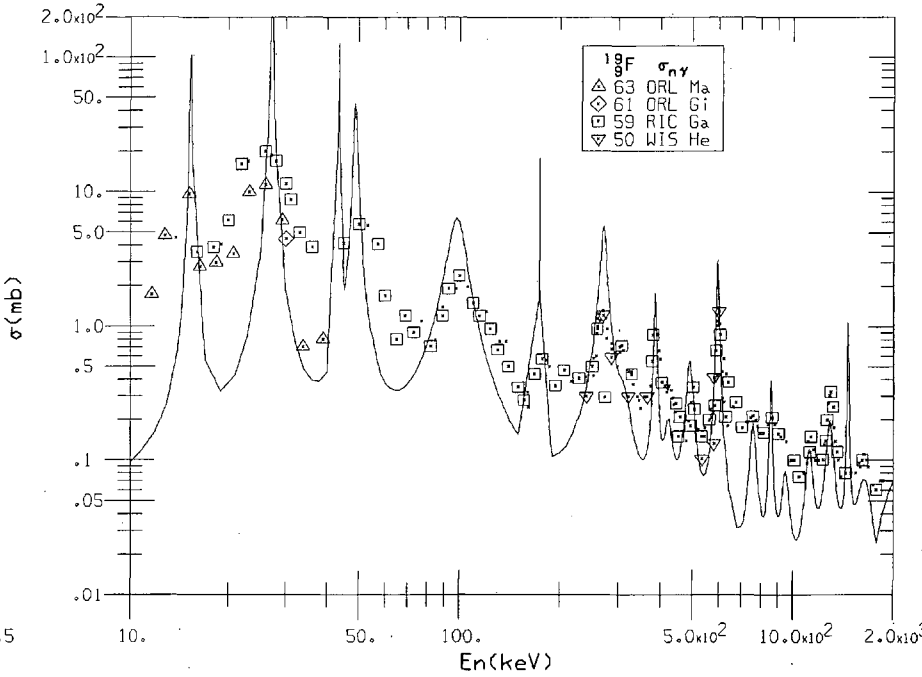
$\sigma_{n\gamma}$

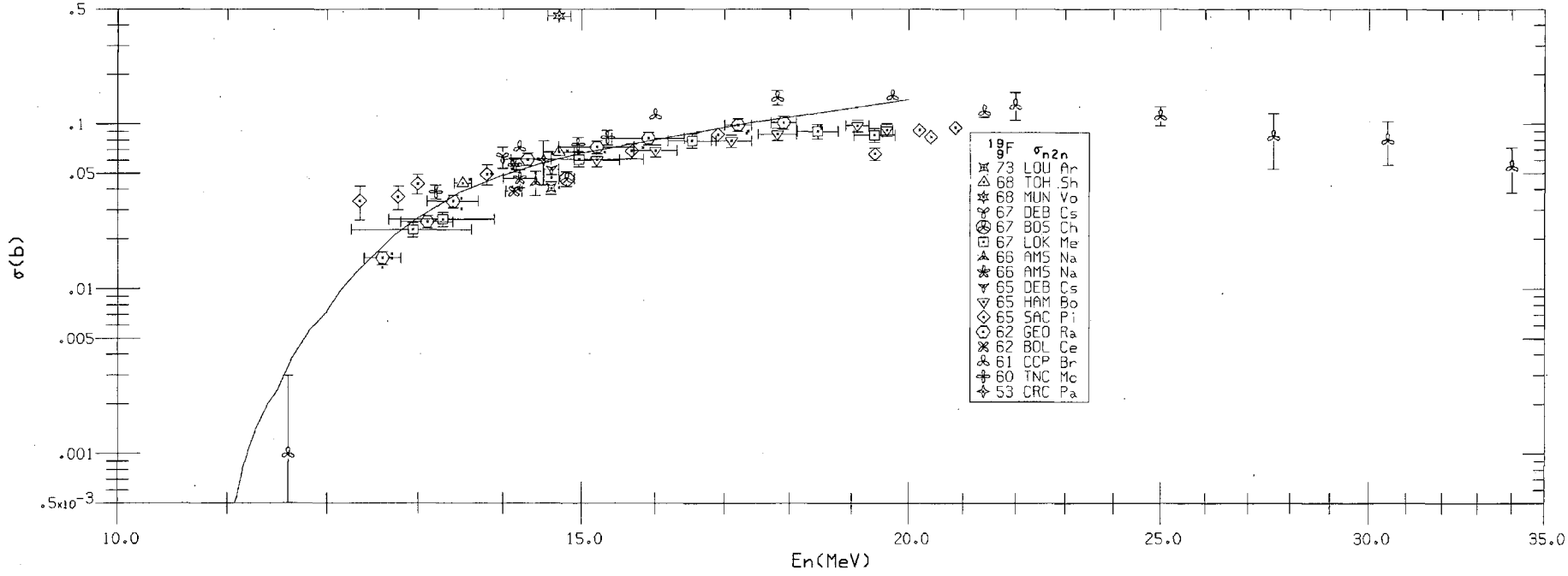
σ_{n2n}

[1277]

σ_{sct}





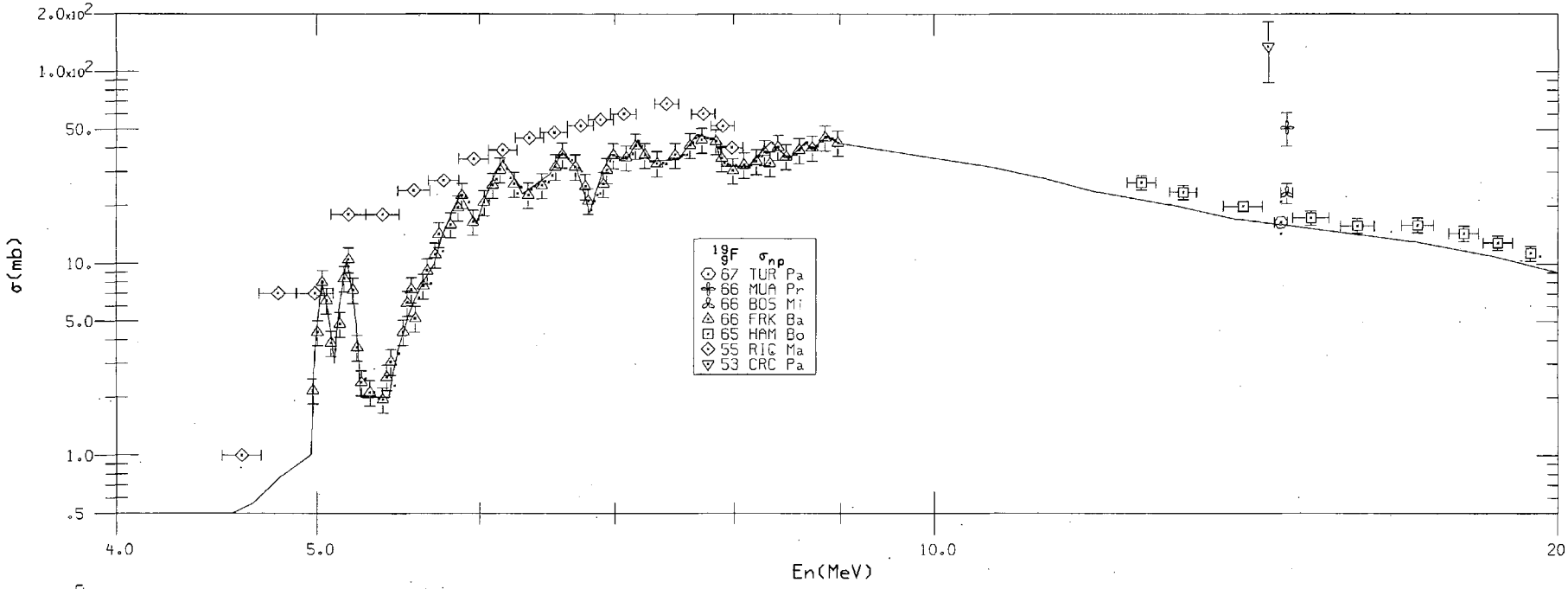


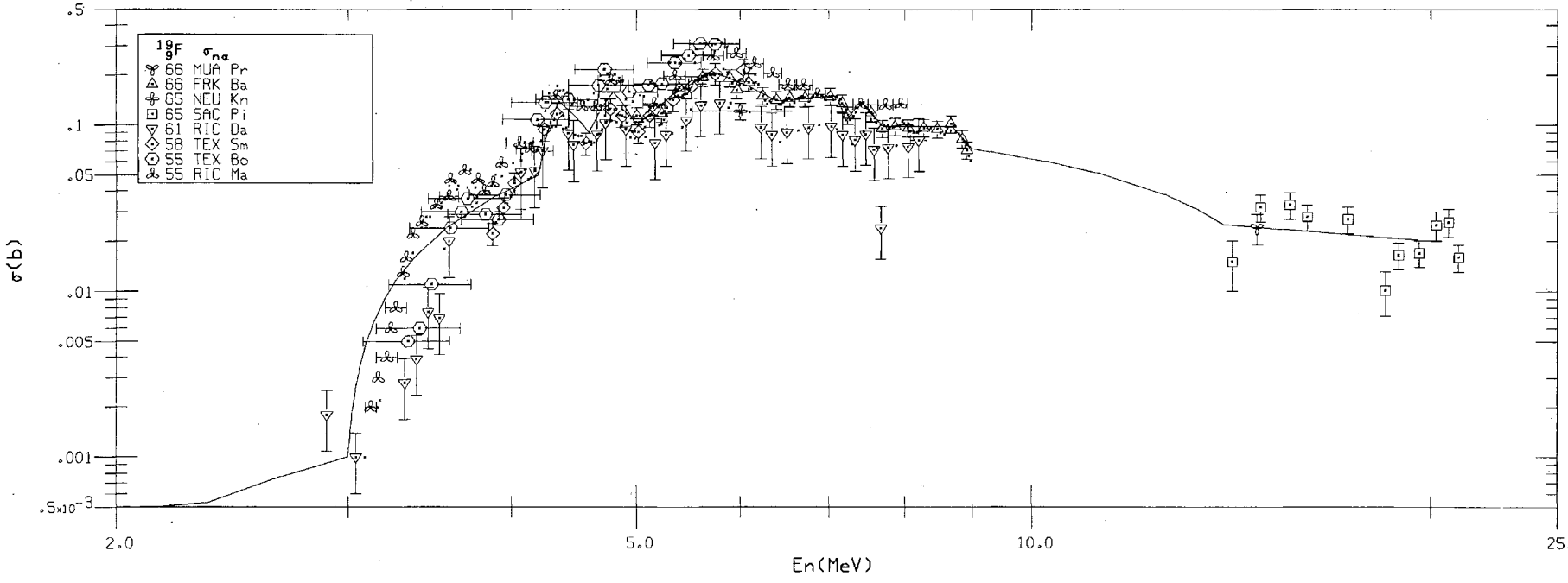
$^{19}_{9}F$

σ_{np}

$\sigma_{n\alpha}$

[1277]

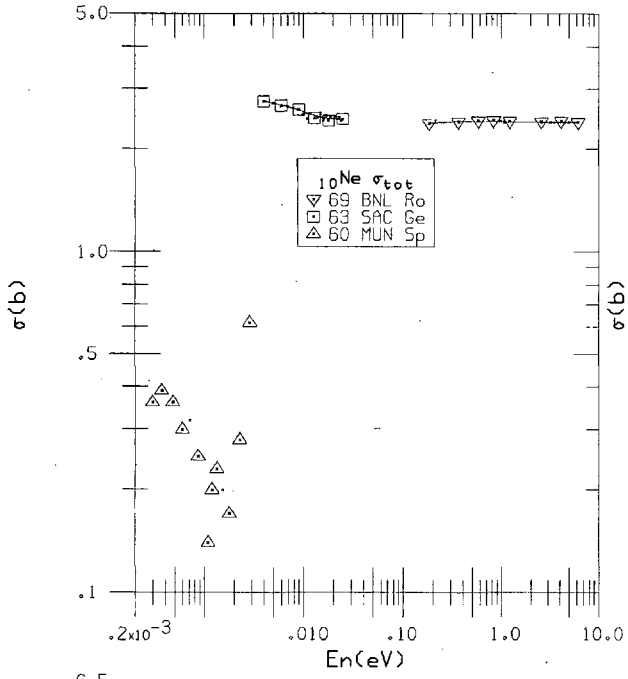


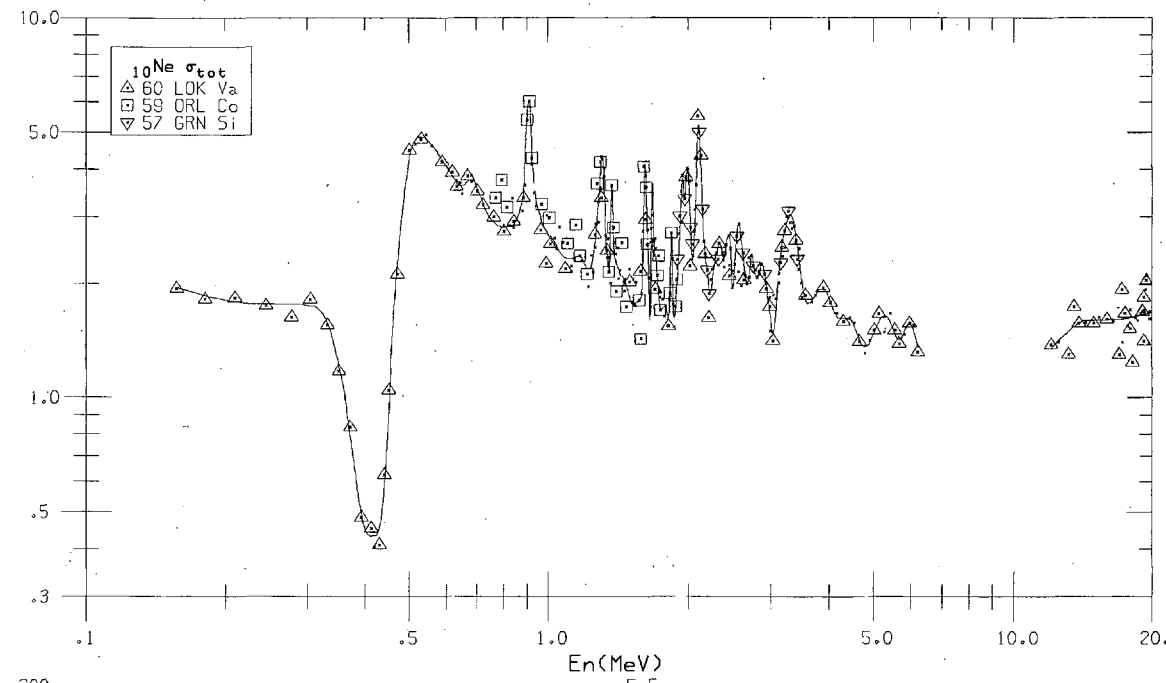


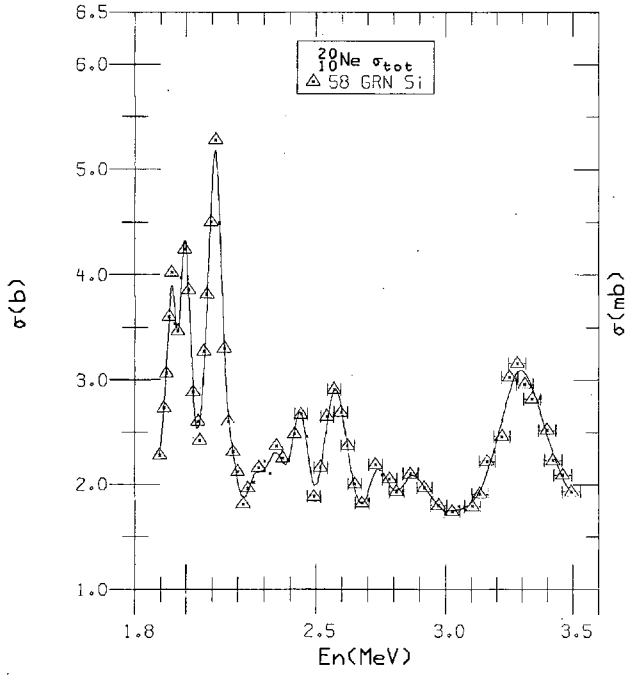
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{19}_{9}$F σ_{tot}			
74	COL	Singh,et.al.	PR/C,10,2147,74	324	.542 keV to .197 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.254 MeV to 14.9 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.780 b at 14.5 MeV	
68	DEB	Hunyadi,et.al.	NP/A,119,525,68	21	13.7 MeV to 14.6 MeV	abs
67	ANL	Whalen,et.al.	WHALEN,67	548	.100 MeV to .649 MeV	abs
65	SAC	Sorriaux	CR,260,3045,65	9	2.606 MeV to 2.850 MeV	
65	BRC	Cabe,et.al.	EANDC(E)-57,150,65	163	.467 MeV to 1.140 MeV	abs
64	ANL	Hibdon	PR/B,133,353,64	842	1.000 keV to .301 MeV	abs
64	SAC	Ambrosino,et.al.	CEA-2399,64	1	2.600 b at 2.768 MeV	
61	DKE	Newson,et.al.	AP,14,365,61	108	1.500 keV to .125 MeV	abs
60	JAE	Tsukada,et.al.	JPJ,15,1994,60	137	3.370 MeV to 5.070 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.7 MeV to 29.1 MeV	abs
59	DKE	Bilpuch	BILPUCH,59	201	46.0 keV to .200 MeV	
58	ORL	Wills Jr,et.al.	PR,109,891,58	220	.600 MeV to 4.930 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	7	7.010 MeV to 14.3 MeV	
57	NRL	Bondelid,et.al.	PR,105,193,57	41	3.780 MeV to 8.090 MeV	abs
57	DKE	Newson	NEWSON,57	72	.250 MeV to .393 MeV	
56	RIC	Bonner,et.al.	PR,102,1348,56	39	4.380 MeV to 5.595 MeV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	31	2.760 MeV to 14.1 MeV	
54	ANL	Hibdon,et.al.	ANL-5174,43,54	105	.570 keV to .161 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	1.840 b at 19.0 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.700 b at 14.1 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	1.603 b at 42.0 MeV	abs
50	WIS	Bockelman	PR,80,1011,50	48	10.0 keV to .690 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	.993 b at 95.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
48	COL	Rainwater,et.al.	PR,73,733,48	25	.0205 eV to 37.1 eV	
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
			$^{19}_{9}$F σ_{inl}			
70	FEI	Broder,et.al.	70HELSINKI,2,295,70	33	.140 MeV to 1.240 MeV	^{56}Fe σ_{ing}
69	FEI	Broder,et.al.	FEI-155,69	30	.230 MeV to 1.240 MeV	Fe σ_{ing}
69	IFU	Prokopesc,et.al.	UFZ,14,(2),330,69	1	.420 b at 2.800 MeV	
			$^{19}_{9}$F σ_{sct}			
64	ANL	Elwyn,et.al.	NP,59,113,64	27	.200 MeV to 2.200 MeV	C
			$^{19}_{9}$F σ_{non}			
57	LRL	Mac Gregor+	PR,108,726,57	1	.830 b at 14.2 MeV	
			$^{19}_{9}$F $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	NP,43,353,63	12	11.7 keV to 39.0 keV	^{197}Au $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	1	4.500 mb at 30.0 keV	In $\sigma_{n\gamma}$
59	RIC	Gabbard,et.al.	PR,114,201,59	201	16.0 keV to 1.870 MeV	
50	WIS	Henkel,et.al.	PR,80,145,50	21	.240 MeV to .660 MeV	^{19}F $\sigma_{n\gamma}$

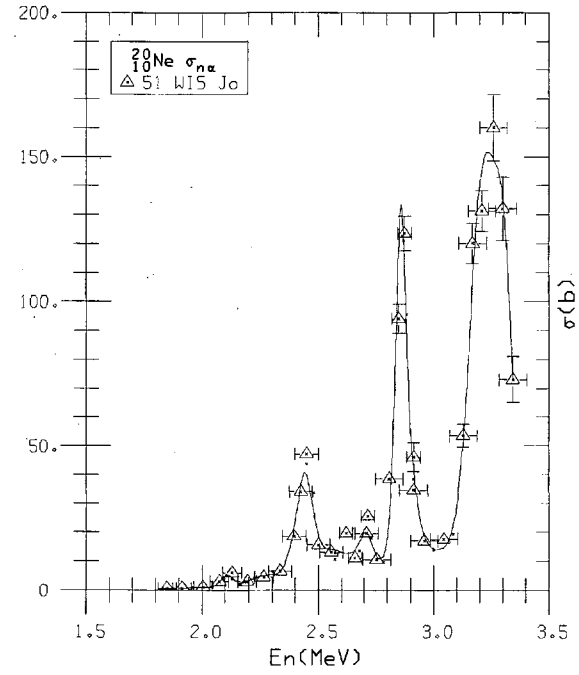
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{19}_{9}$F σ_{n2n}			
73	LOU	Araminowicz,et.a	INR-1464,14,73	1	40.7 mb at 14.6 MeV	^{63}Cu σ_{n2n}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	47.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
68	TOH	Shiokawa,et.al.	JIN,30,1,68	5	13.5 MeV to 14.8 MeV	^{63}Cu σ_{n2n}
68	MUN	Vonach,et.al.	68WASH,2,885,68	1	.454 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	AHP,23,87,67	1	63.0 mb at 14.0 MeV	
67	BOS	Chatterjee,et.al	BARC-305,30,67	1	46.3 mb at 14.8 MeV	abs
67	LOK	Menlove,et.al.	PR,163,1308,67	10	12.7 MeV to 19.4 MeV	^{235}U σ_{nf}
67	TUR	Pasquarelli	NP/A,93,218,67	1	41.0 mb at 14.7 MeV	
66	AMS	Nagel	NAGEL,66	1	50.0 mb at 14.4 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	44.0 mb at 14.4 MeV	^{56}Fe σ_{np}
66	AMS	Nagel	NAGEL,66	1	46.5 mb at 14.2 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	40.1 mb at 14.2 MeV	^{56}Fe σ_{np}
65	DEB	Csikai	65ANTWERP,,537,65	1	53.0 mb at 14.6 MeV	
65	HAM	Bormann,et.al.	NP,63,438,65	10	12.6 MeV to 19.6 MeV	^{19}F σ_{n2n}
65	SAC	Picard,et.al.	NP,63,673,65	15	12.4 MeV to 20.9 MeV	^{19}F σ_{n2n}
62	GEO	Rayburn	BAP,7,335(TA12),62	12	12.6 MeV to 17.9 MeV	
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	38.9 mb at 14.1 MeV	abs
61	CCP	Brill,et.al.	DOK,136,55,61	11	11.6 MeV to 34.0 MeV	
60	TNC	Mc Crary,et.al.	BAP,5,246(HA5),60	8	13.2 MeV to 15.3 MeV	
58	LRL	Ashby,et.al.	PR,111,616,58	1	60.0 mb at 14.1 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	60.6 mb at 14.5 MeV	abs
			$^{19}_{9}$F σ_{np}			
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	21.0 mb at 14.7 MeV	
67	TUR	Pasquarelli	NP/A,93,218,67	1	16.4 mb at 14.7 MeV	
66	MUA	Prasad,et.al.	NP,85,476,66	1	51.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	BOS	Mitra,et.al.	NP,83,157,66	1	23.3 mb at 14.8 MeV	^{63}Cu σ_{n2n}
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	159	4.980 MeV to 8.975 MeV	H
65	HAM	Bormann,et.al.	NP,63,438,65	10	12.6 MeV to 19.6 MeV	^{19}F σ_{np}
65	SAC	Picard,et.al.	NP,63,673,65	11	1.418 MeV to 2.100 MeV	
62	ARK	Kantele,et.al.	NP,35,353,62	1	14.3 mb at 14.7 MeV	^{27}Al σ_{np}
55	RIC	Marion,et.al.	PR,100,69,55	18	4.600 MeV to 7.980 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.135 b at 14.5 MeV	abs
			$^{19}_{9}$F $\sigma_{n\alpha}$			
66	MUA	Prasad,et.al.	NP,85,476,66	1	24.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	162	4.980 MeV to 8.975 MeV	H
65	NEU	Knellwolf,et.al.	HPA,38,665,65	1	.121 b at 6.000 MeV	
65	SAC	Picard,et.al.	NP,63,673,65	11	14.2 MeV to 21.0 MeV	
61	RIC	Davis,et.al.	NP,27,448,61	70	2.890 MeV to 8.200 MeV	
58	TEX	Smith,et.al.	PR,117,514,58	91	3.868 MeV to 6.156 MeV	
55	TEX	Bostrom,et.al.	PR,99,643(PA4),55	62	3.330 MeV to 5.860 MeV	
55	RIC	Marion,et.al.	PR,100,69,55	89	3.090 MeV to 7.940 MeV	

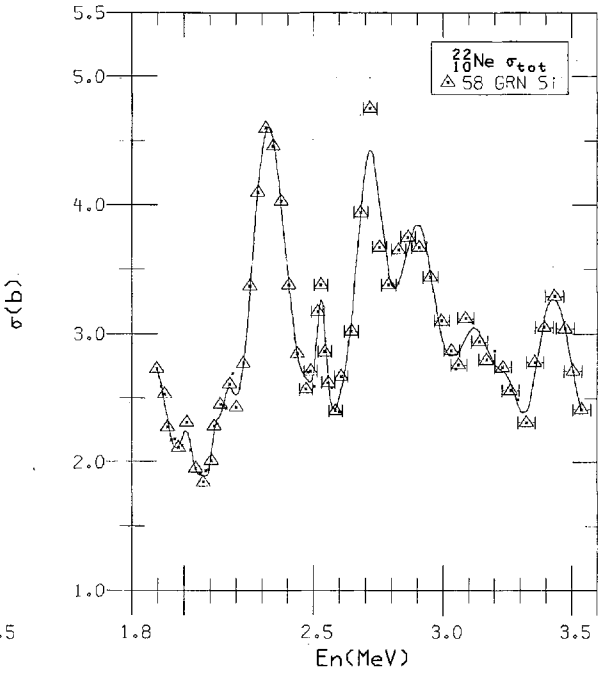
^{10}Ne σ_{tot}
$^{20}_{10}Ne$ σ_{tot}
$\sigma_{n\alpha}$
$^{22}_{10}Ne$ σ_{tot}



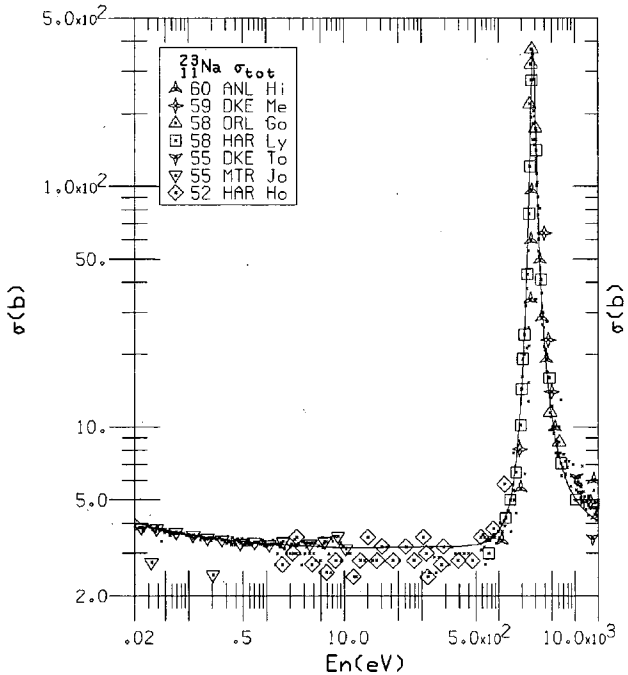


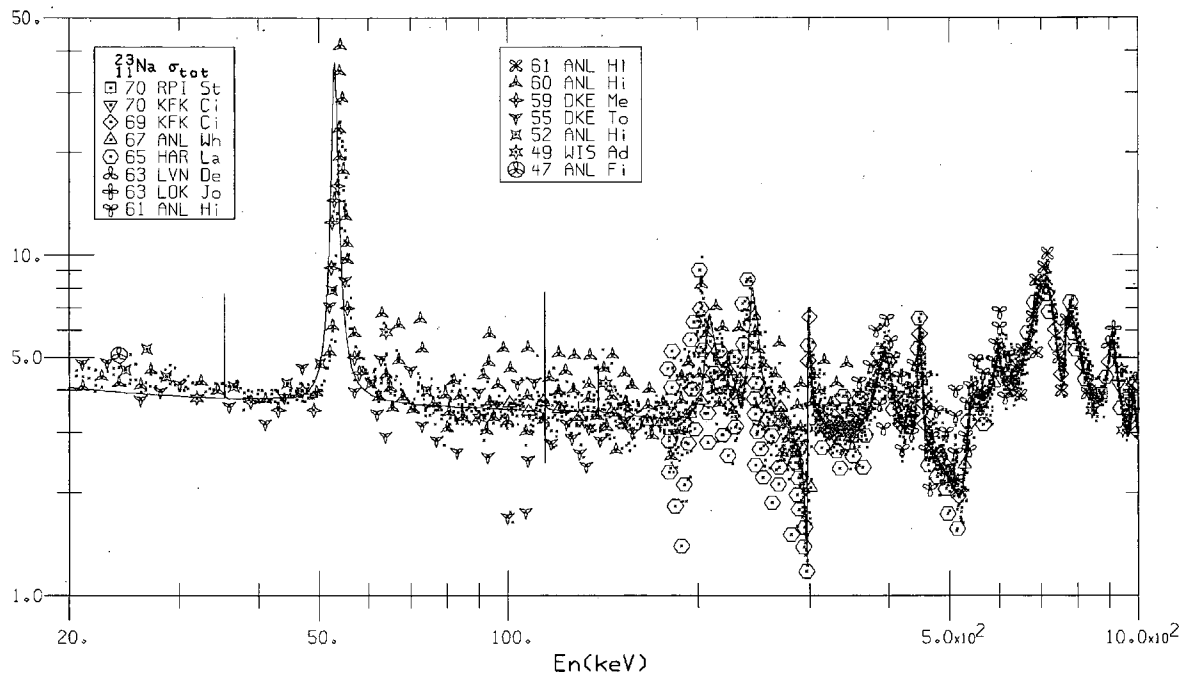


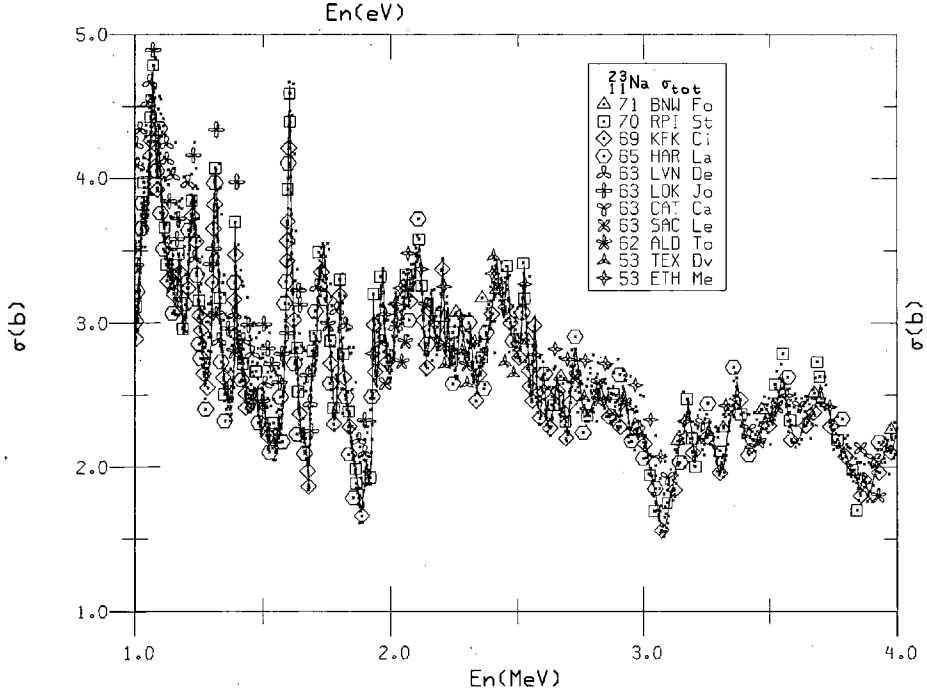


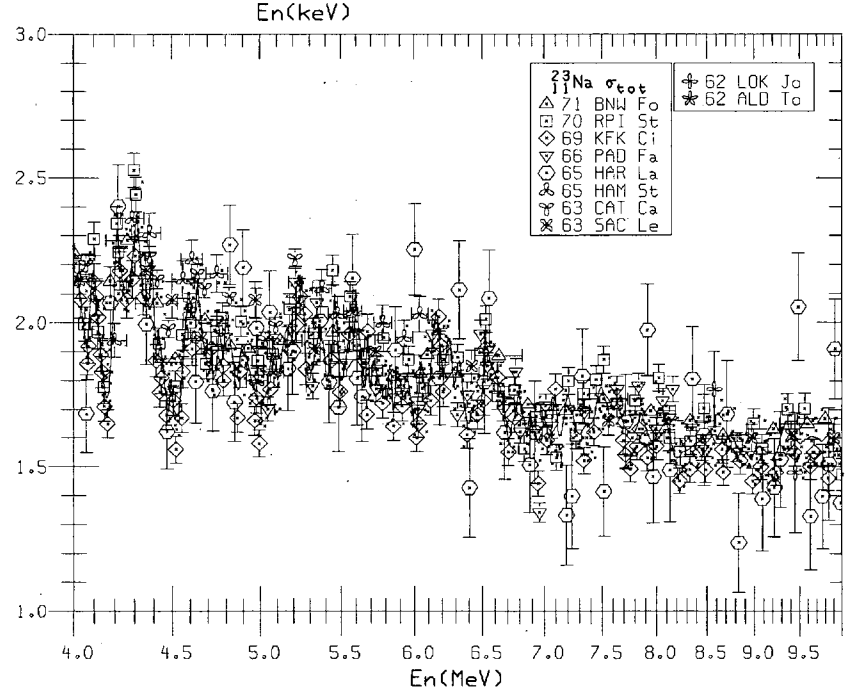


Yr	Lab	Author	Reference	Points	Range	Standard
			$_{10}$Ne σ_{tot}			
69	BNL	Rorer,et.al.	NP/A,133,410,69	13	.187 eV to 6.195 eV	abs
63	SAC	Genin,et.al.	JPR,24,21,63	22	.0040 eV to .0250 eV	
60	LOK	Vaughn,et.al.	PR,118,683,60	164	.157 MeV to 19.8 MeV	
60	MUN	Springer,et.al.	ZN/A,15,828,60	13	.0003 eV to .0029 eV	
59	ORL	Cohn,et.al.	PR,114,194,59	99	.770 MeV to 1.892 MeV	abs
57	GRN	Sikkema	NP,3,375,57	71	1.896 MeV to 3.494 MeV	^{1}H σ_{np}
			$_{10}$Ne σ_{el}			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	2.420 b at thermal	abs
63	SAC	Genin,et.al.	JPR,24,21,63	1	2.380 b at thermal	
			$_{10}$Ne $\sigma_{n\gamma}$			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	.100 b at thermal	abs
			$^{20}_{10}$Ne σ_{tot}			
58	GRN	Sikkema	58PARIS,541,58	71	1.896 MeV to 3.494 MeV	
57	GRN	Sikkema	NP,3,375,57	71	1.895 MeV to 3.495 MeV	
			$^{20}_{10}$Ne $\sigma_{n\alpha}$			
72	NTU	Song Yung Lin+	CHP,10,69,72	1	.274 b at 14.1 MeV	
51	WIS	Johnson,et.al.	PR,82,117,51	55	1.830 MeV to 3.345 MeV	
			$^{21}_{10}$Ne $\sigma_{n\alpha}$			
61	CCP	Abramov,et.al.	ZET,41,1023,61	1	96.0 b at thermal	^{3}He σ_{np}
			$^{22}_{10}$Ne σ_{tot}			
58	GRN	Sikkema,et.al.	NP,5,351,58	72	1.896 MeV to 3.539 MeV	
58	GRN	Sikkema,et.al.	NP,5,351,58	73	1.890 MeV to 3.540 MeV	


$^{23}_{11}$Na σ_{tot}
60 ANL Hi
59 DKE Me
58 ORL Go
58 HAR Ly
55 DKE To
55 MTR Jo
52 HAR Ho
σ(b)
En(eV)


$^{23}_{11}$Na σ_{tot}
70 RPI St
70 KFK Ci
69 KFK Ci
67 ANL Wh
65 HAR La
63 LVN De
63 LOK Jo
61 ANL Hi
61 ANL Hi
60 ANL Hi
59 DKE Me
55 DKE To
52 ANL Hi
49 WIS Ad
47 ANL Fi
En(keV)


$^{23}_{11}$Na σ_{tot}
71 BNW Fo
70 RPI St
69 KFK Ci
65 HAR La
63 LVN De
63 LOK Jo
63 CAT Ca
63 SAC Le
62 ALD To
53 TEX Dv
53 ETH Me
σ(b)
En(MeV)


$^{23}_{11}$Na σ_{tot}
71 BNW Fo
70 RPI St
69 KFK Ci
66 PAD Fa
65 HAR La
65 HAM St
63 CAT Ca
63 SAC Le
62 LOK Jo
62 ALD To
En(MeV)

$^{23}_{11}$Na

σ_{tot}

σ_{el}

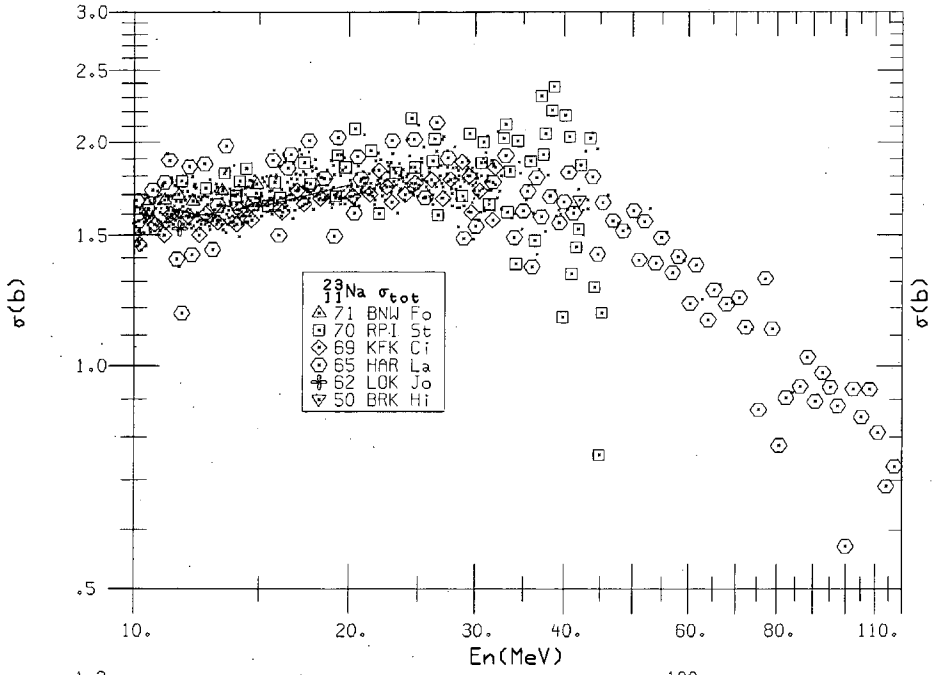
σ_{sct}

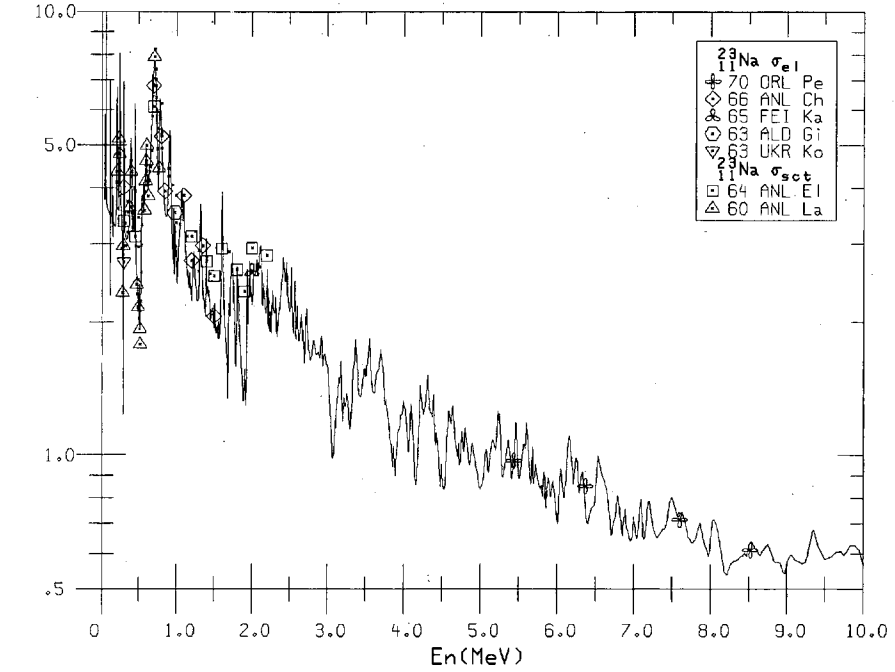
σ_{non}

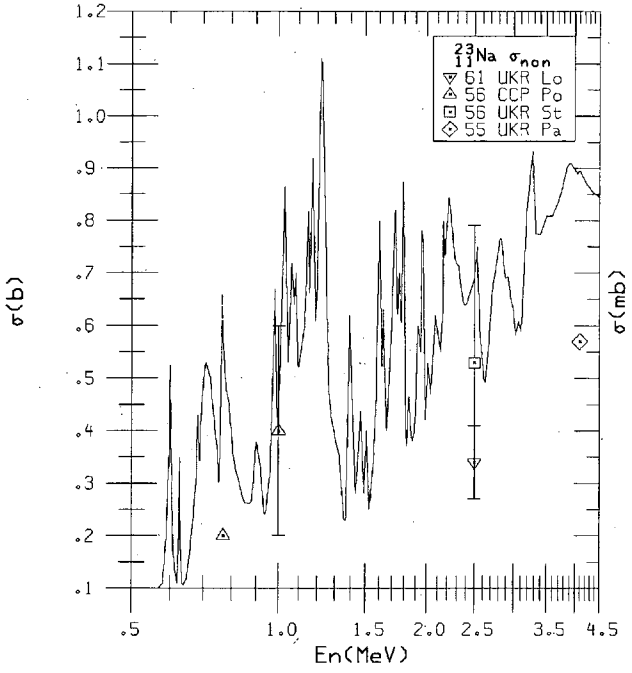
$\sigma_{n\gamma}$

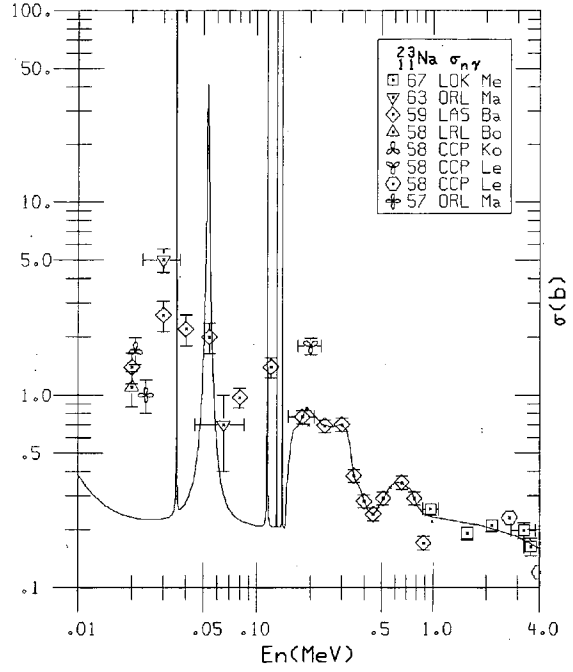
[1156]

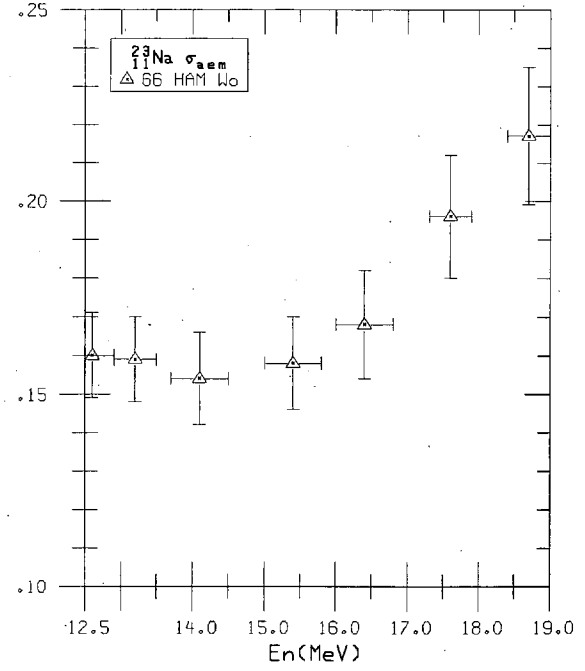
σ_{aem}











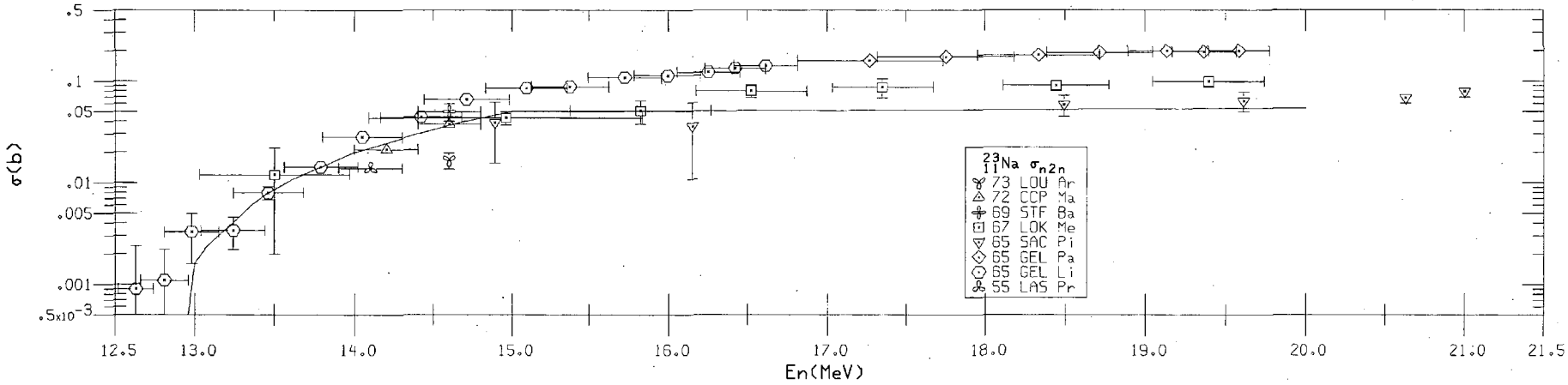
$^{23}_{11}Na$

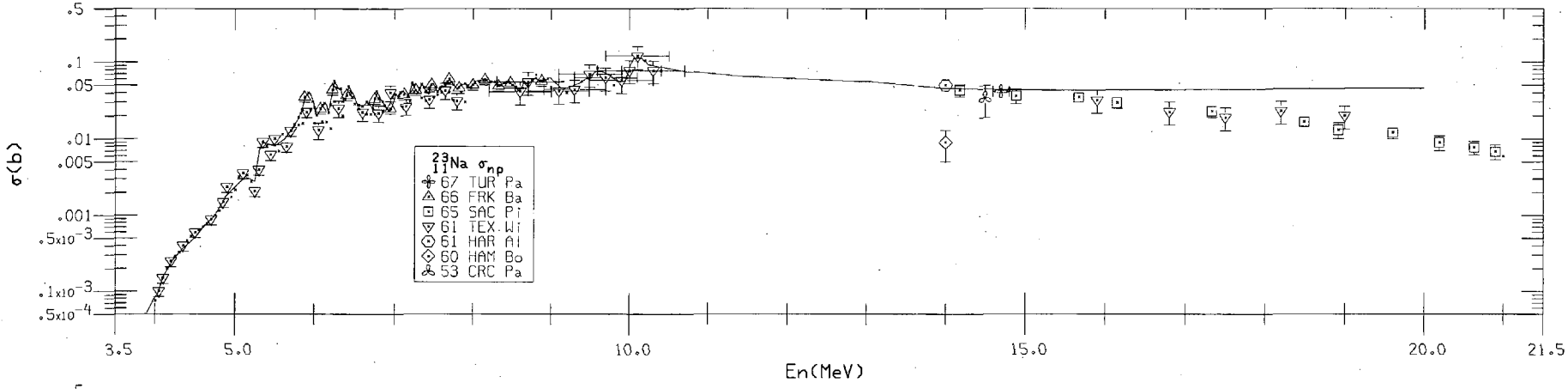
σ_{n2n}

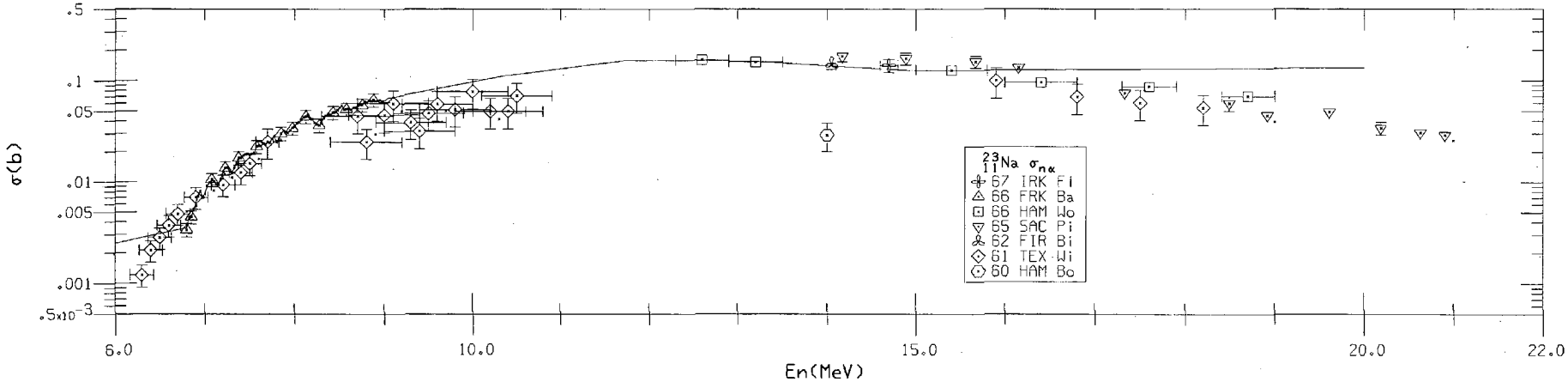
σ_{np}

$\sigma_{n\alpha}$

[1156]







Yr	Lab	Author	Reference	Points	Range	Standard
			$^{23}_{11}$Na σ_{tot}			
72	AMS	Kuijper,et.al.	NP/A,181,545,72	1	1.800 b at 14.8 MeV	^{1}H σ_{el}
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.257 MeV to 14.9 MeV	
70	RPI	Stoler,et.al.	BAP,15,1668(C11),70	1966	.650 MeV to 45.2 MeV	abs
70	KFK	Cierjacks	NEBE,70	334	.900 MeV to 1.055 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.680 b at 14.5 MeV	
69	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),69	6975	.288 MeV to 32.0 MeV	abs
68	TRI	Guarrini,et.al.	NSE,31,341,68	1	1.740 b at 14.7 MeV	
67	ANL	Whalen	WHALEN,67	557	.101 MeV to .649 MeV	
67	ANL	Whalen	WHALEN,67	8	.311 MeV to .315 MeV	abs
66	PAD	Fasoli,et.al.	NC,44,455,66	130	5.045 MeV to 8.553 MeV	
65	HAR	Langsford,et.al.	65ANTWERP,,529,65	1934	.179 MeV to 120.4 MeV	
65	HAM	Stuwer,et.al.	NP,62,165,65	42	4.080 MeV to 6.190 MeV	
63	LVN	Deconninck,et.al	EANDC(E)-49,42,63	188	.895 MeV to 2.020 MeV	
63	LOK	Johnson	NSE,17,325,63	189	.900 MeV to 2.100 MeV	
63	CAT	Calvi,et.al.	NP,48,408,63	114	2.750 MeV to 5.210 MeV	abs
63	SAC	Leroy,et.al.	JPR,24,826,63	58	1.870 MeV to 14.5 MeV	abs
62	LOK	Johnson	JOHNSON,62	4	8.580 MeV to 11.6 MeV	
62	ALD	Towle,et.al.	NP,32,610,62	103	.775 MeV to 4.070 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	1.830 b at 28.4 MeV	
61	ANL	Hibdon	PR,122,1235,61	804	.350 MeV to .630 MeV	abs
61	ANL	Hibdon	PR,124,500,61	573	.630 MeV to .860 MeV	
60	ANL	Hibdon	PR,118,514,60	1227	1.000 keV to .349 MeV	abs
59	DKE	Merzbacher,et.al	AP,8,194,59	47	1.600 keV to 60.0 keV	abs
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	1	1.690 b at 16.2 MeV	abs
58	ORL	Good,et.al.	PR,109,926,58	31	2.570 keV to 8.400 keV	abs
58	HAR	Lynn,et.al.	NP,5,603,58	64	.590 keV to 19.0 keV	
55	DKE	Toller,et.al.	PR,99,1625(11),55	147	10.5 keV to .159 MeV	abs
55	MTR	Joki,et.al.	PR,99,610,55	365	.0200 eV to 10.6 eV	abs
53	TEX	Dvorack,et.al.	PR,90,618,53	14	2.210 MeV to 2.765 MeV	
53	ETH	Meier,et.al.	HPA,26,451,53	93	1.910 MeV to 3.810 MeV	abs
52	ANL	Hibdon,et.al.	PR,85,595,52	28	24.6 keV to 78.2 keV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.710 b at 14.1 MeV	
52	HAR	Hodgson,et.al.	PPS/A,65,992,52	83	1.270 eV to 12.0 keV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	1.670 b at 42.0 MeV	abs
49	WIS	Adair,et.al.	PR,75,1124,49	120	25.0 keV to .990 MeV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	abs
			$^{23}_{11}$Na σ_{el}			
70	ORL	Perey,et.al.	ORNL-4518,70	4	5.440 MeV to 8.520 MeV	^{1}H σ_{el}
66	ANL	Chien,et.al.	NSE,26,500,66	25	.300 MeV to 1.500 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.600 b at 2.000 MeV	
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	3.520 b at .980 MeV	H
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	2.730 b at .300 MeV	

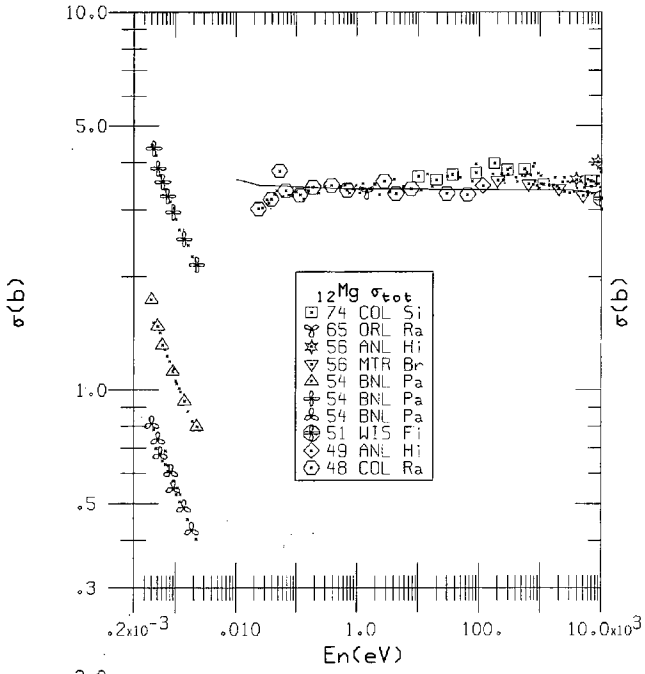
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{23}_{11}$Na σ_{inl}			
67	ALD	Towle,et.al.	NP/A,100,257,67	1	.786 b at 7.000 MeV	H
			$^{23}_{11}$Na σ_{sct}			
64	ANL	Elwyn,et.al.	NP,59,113,64	23	.200 MeV to 2.200 MeV	C
60	ANL	Lane,et.al.	PR,118,533,60	76	.209 MeV to .820 MeV	C
			$^{23}_{11}$Na σ_{non}			
61	UKR	Lovchikova+	SPN,,216,61	1	.340 b at 2.500 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	2	.770 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.530 b at 2.500 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,,55	1	.570 b at 4.100 MeV	abs
			$^{23}_{11}$Na $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	.250 mb at 14.4 MeV	^{56}Fe σ_{np}
70	RPI	Yamamuro,et.al.	NSE,41,445,70	1	.500 b at thermal	Cd $\sigma_{n\gamma}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.240 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	7	13.4 MeV to 15.0 MeV	
67	LOK	Menlove,et.al.	PR,163,1299,67	17	.970 MeV to 19.4 MeV	^{235}U σ_{nf}
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	.470 b at thermal	
59	LAS	Bame Jr,et.al.	PR,113,256,59	19	20.0 keV to .990 MeV	^{235}U σ_{nf}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.700 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	1.100 mb at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	.330 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	1.720 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	1.000 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
53	ORL	Reese Jr,et.al.	ORNL-CF-53-8-22,53	1	.260 mb at 300.3 MeV	
			$^{23}_{11}$Na σ_{n2n}			
73	LOU	Araminowicz,et.a	INR-1464,14,73	1	16.5 mb at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	2	14.2 MeV to 14.6 MeV	
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	49.5 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
67	LOK	Menlove,et.al.	PR,163,1308,67	7	13.5 MeV to 19.4 MeV	
65	SAC	Picard,et.al.	NP,63,673,65	6	14.9 MeV to 21.0 MeV	
65	GEL	Paulsen	PAULSEN,65	7	17.3 MeV to 19.6 MeV	
65	GEL	Liskien,et.al.	NP,63,393,65	16	12.6 MeV to 16.6 MeV	abs
55	LAS	Prestwood	PR,98,47,55	1	13.8 mb at 14.1 MeV	
			$^{23}_{11}$Na σ_{np}			
67	IRK	Flesch,et.al.	OAW,176,45,67	1	44.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	39.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	TUR	Pasquarelli	NP/A,93,218,67	1	41.0 mb at 14.7 MeV	
66	MUA	Prasad,et.al.	NP,85,476,66	1	45.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	BOS	Mitra,et.al.	NP,83,157,66	1	41.8 mb at 14.8 MeV	^{63}Cu σ_{n2n}
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	128	5.800 MeV to 8.975 MeV	H
65	SAC	P card,et.al.	NP,63,673,65	12	14.2 MeV to 21.0 MeV	
65	MUA	Khurana,et.al.	NP,69,153,65	1	45.0 mb at 14.8 MeV	Fe
61	TEX	Williamson	PR,122,1877,61	103	4.000 MeV to 19.0 MeV	
61	HAR	Allan	NP,24,274,61	1	50.0 mb at 14.0 MeV	^{54}Fe σ_{np}
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	9.000 mb at 14.0 MeV	^{127}I σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	33.9 mb at 14.5 MeV	

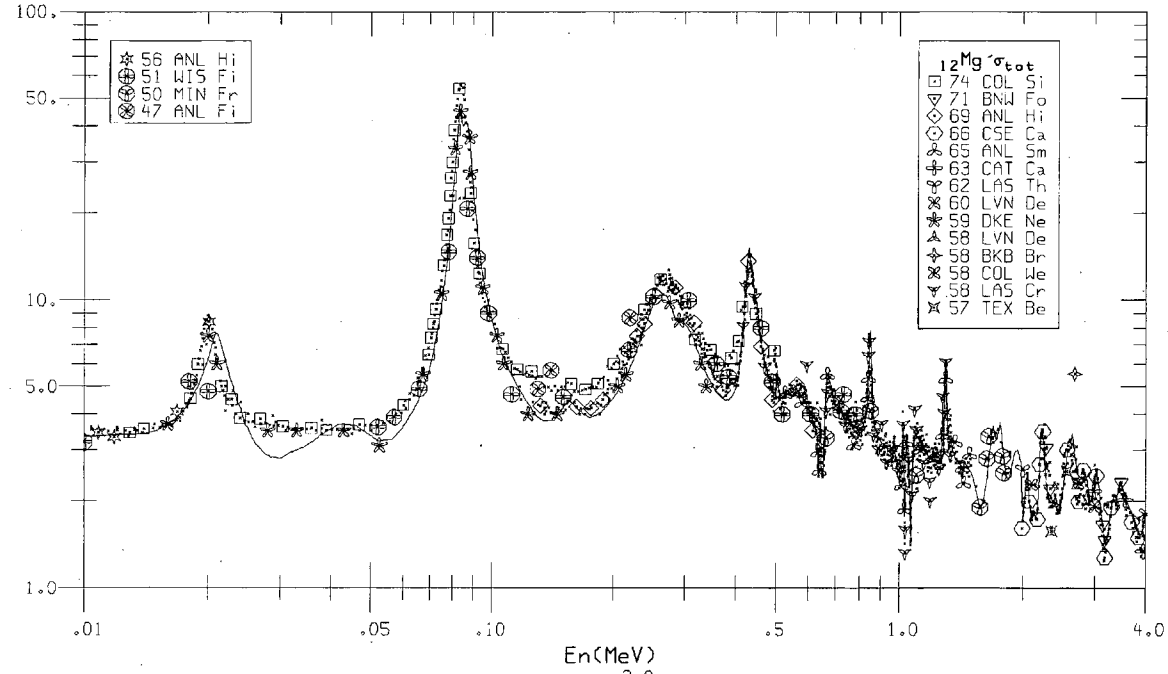
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{23}_{11}$Na $\sigma_{n\alpha}$			
67	IRK	Flesch,et.al.	OAW,176,45,67	1	.141 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	88	6.800 MeV to 8.975 MeV	H
66	HAM	Woelfer,et.al.	ZP,194,75,66	7	12.6 MeV to 18.7 MeV	H
65	SAC	Picard,et.al.	NP,63,673,65	12	14.2 MeV to 21.0 MeV	
62	FIR	Bizzeti,et.al.	NP,36,38,62	1	.147 b at 14.1 MeV	
61	TEX	Williamson	PR,122,1877,61	39	6.300 MeV to 19.0 MeV	
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	29.0 mb at 14.0 MeV	^{127}I σ_{n2n}
			$^{23}_{11}$Na σ_{aem}			
66	HAM	Woelfer,et.al.	ZP,194,75,66	7	12.6 MeV to 18.7 MeV	H

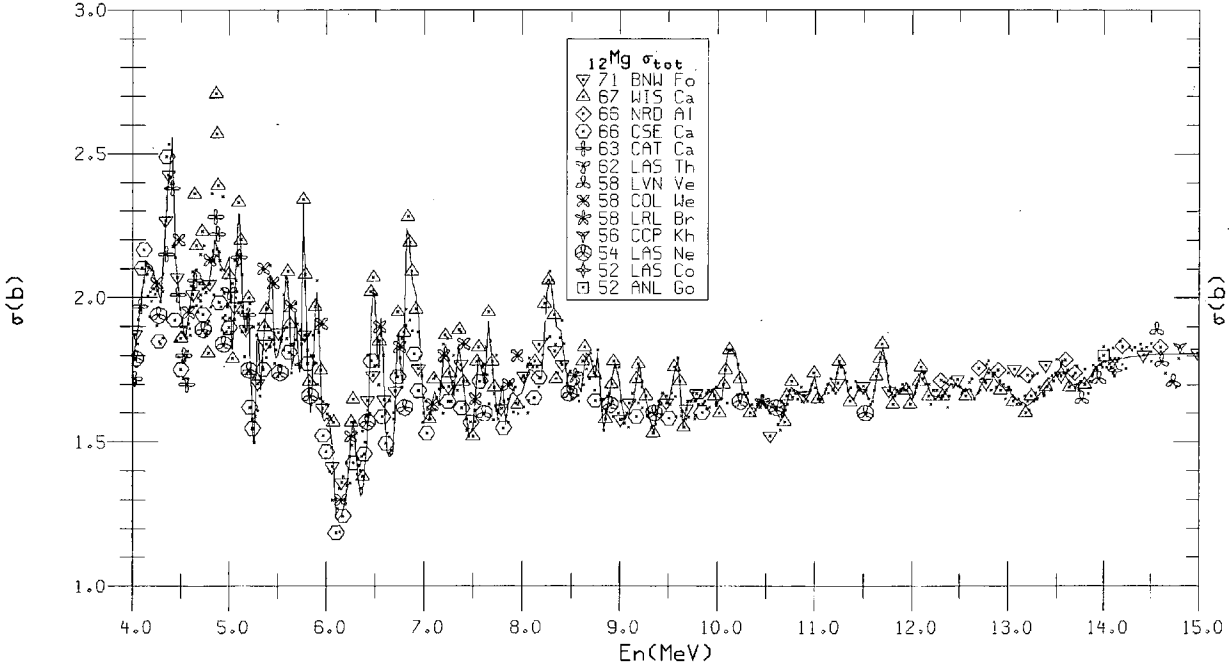
$_{12}Mg$

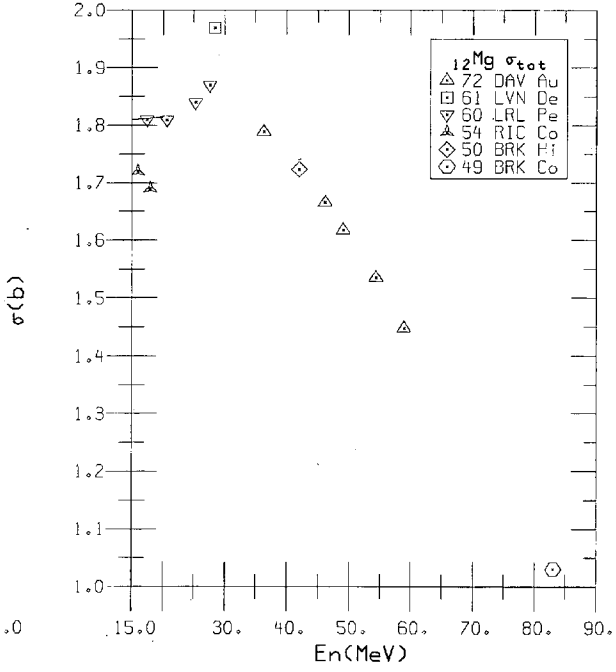
σ_{tot}

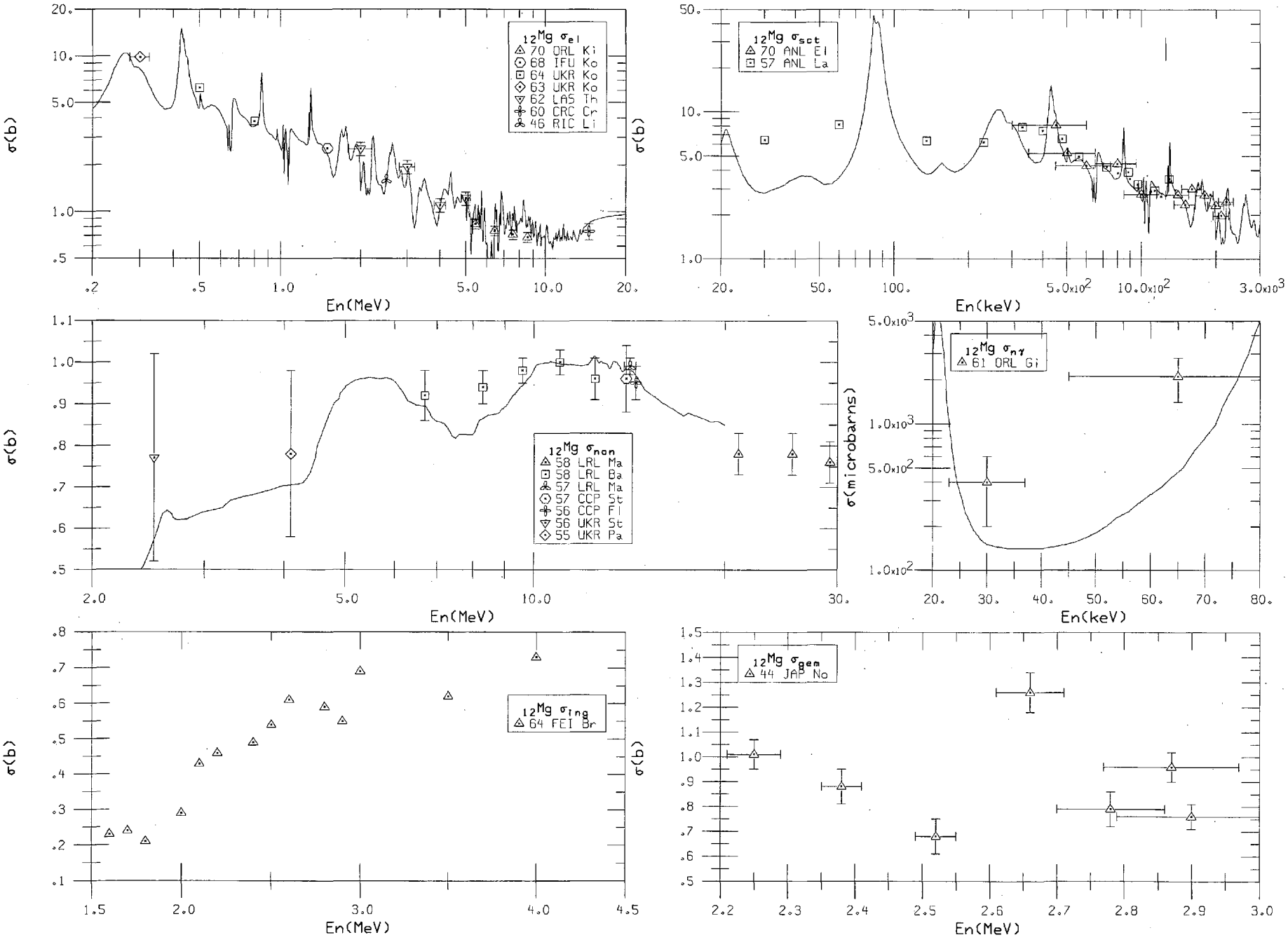
[1280]











^{12}Mg

σ_{el}

σ_{sct}

σ_{non}

$\sigma_{n\gamma}$

[1280]

σ_{ing}

σ_{gem}

$^{24}_{12}Mg$

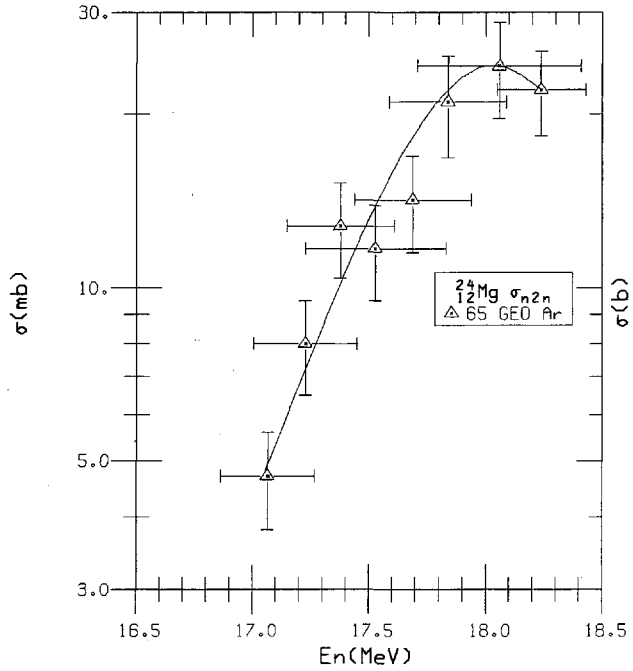
σ_{n2n}

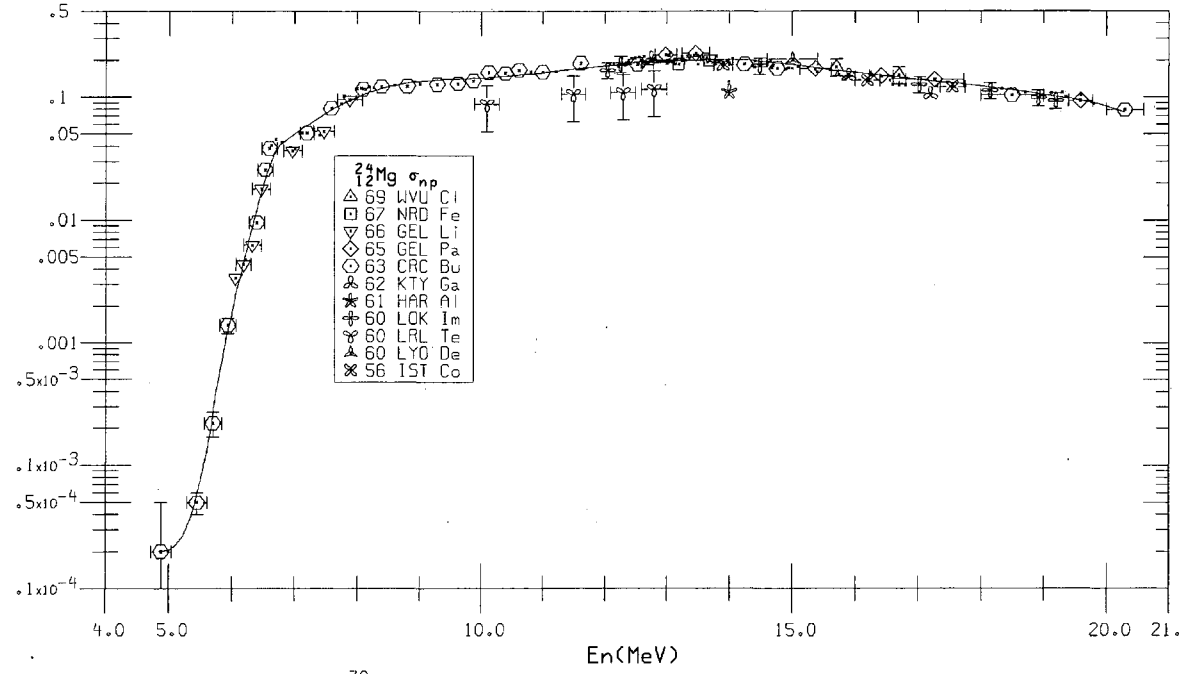
σ_{np}

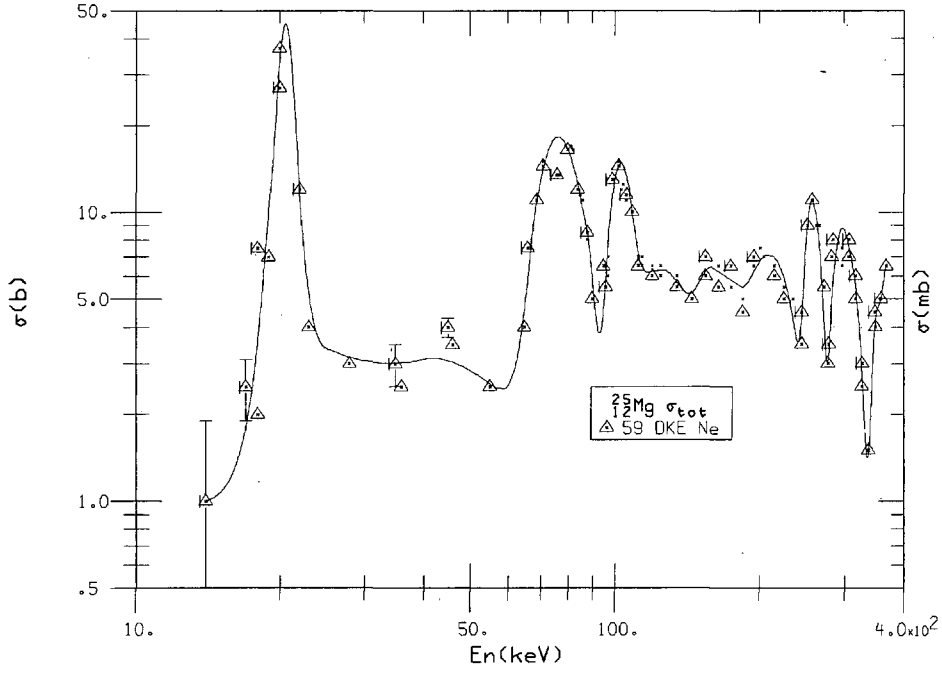
$^{25}_{12}Mg$

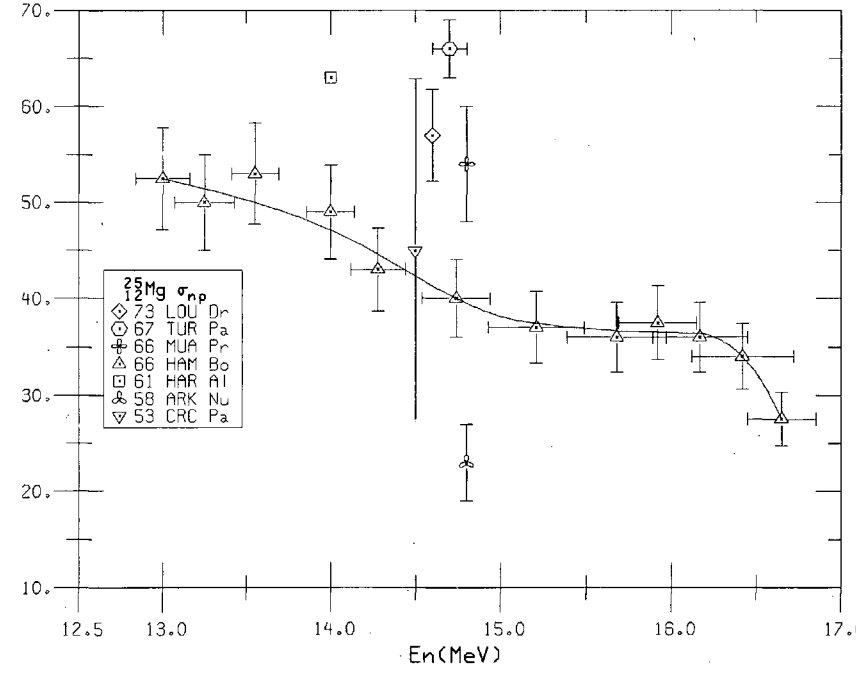
σ_{tot}

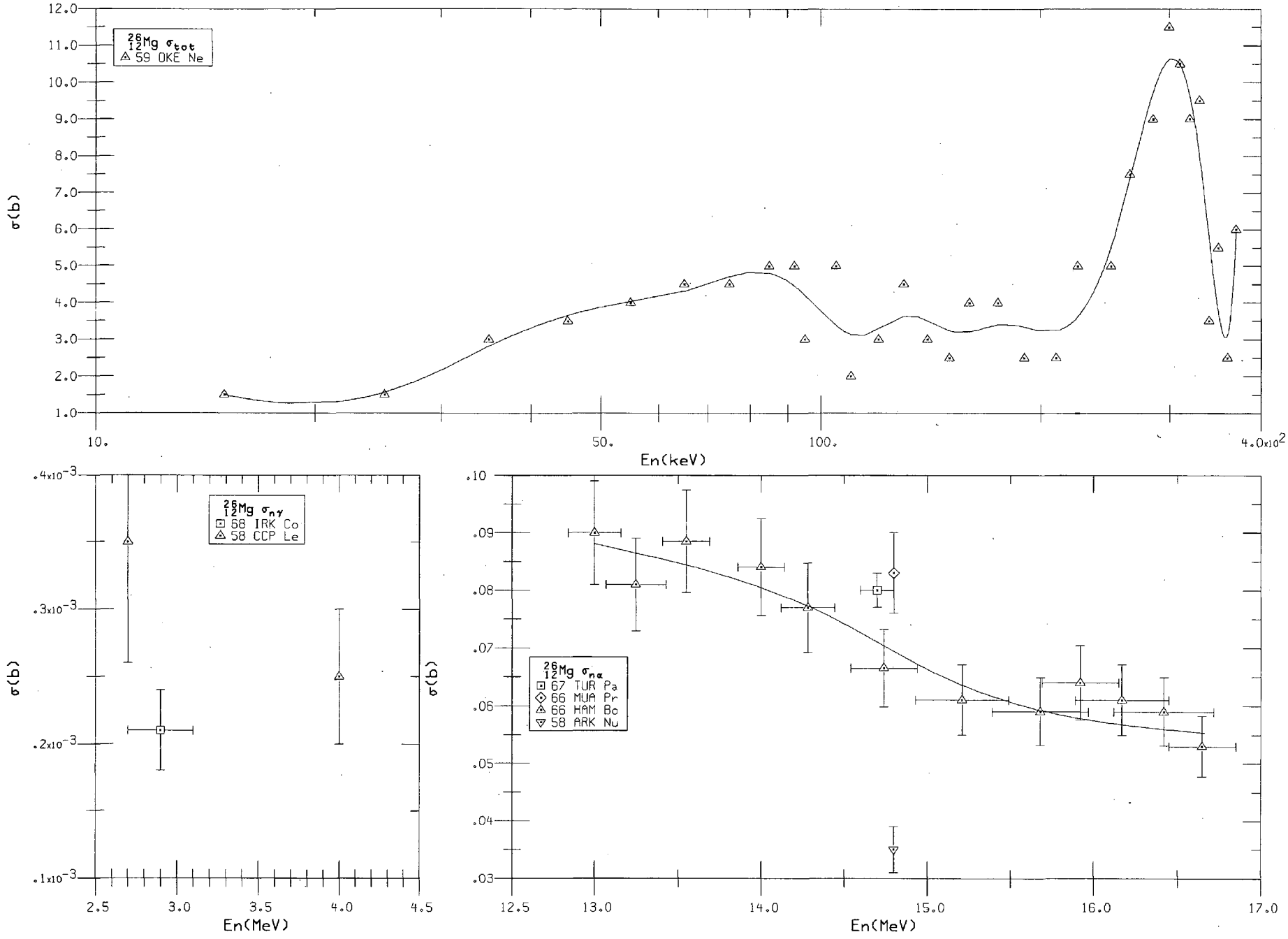
σ_{np}










$^{26}_{12}Mg$ σ_{tot}
59 OKE Ne
σ(b)
En(keV)
$^{26}_{12}Mg$ $\sigma_{n\gamma}$
68 IRK Co
58 CCP Le
σ(b)
En(MeV)
$^{26}_{12}Mg$ $\sigma_{n\alpha}$
67 TUR Pa
66 MUA Pr
66 HAM Bo
58 ARK Nu
σ(b)
En(MeV)

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{12}Mg$ σ_{tot}			
74	COL	Singh,et.al.	PR/C,10,2150,74	388	4.000 eV to .499 MeV	
72	DAV	Auman,et.al.	PR/C,5,1,72	5	36.3 MeV to 58.9 MeV	abs
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	246	2.256 MeV to 15.0 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.813 b at 14.5 MeV	
69	ANL	Hibdon	HIBDON,69	421	.130 MeV to .626 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	501	4.500 MeV to 14.2 MeV	abs
66	NRD	Albergotti+	NP,82,652,66	24	12.3 MeV to 14.6 MeV	abs
66	CSE	Galloway III+	COO-1573-6,66	346	1.995 MeV to 9.984 MeV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	3.350 b at 1.440 eV	
65	ANL	Smith	SMITH,65	522	.514 MeV to 1.496 MeV	
63	CAT	Calvi,et.al.	NP,48,408,63	92	2.780 MeV to 5.210 MeV	abs
62	LAS	Thomson,et.al.	PR,125,2049,62	3	2.000 MeV to 5.000 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	1.970 b at 28.4 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 27.6 MeV	abs
60	LVN	Deconninck	ASS,74,64,60	26	2.050 MeV to 3.225 MeV	abs
59	OKE	Newson,et.al.	AP,8,211,59	64	11.5 keV to .369 MeV	abs
58	LVN	Deconninck,et.al	BCS,44,851,58	16	2.050 MeV to 3.175 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	19	13.8 MeV to 14.8 MeV	
58	BKB	Brajovic,et.al.	IBK,8,(163),145,58	5	2.170 MeV to 2.830 MeV	abs
58	COL	Weil,et.al.	PR,110,466,58	38	4.000 MeV to 8.060 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.170 MeV to 14.1 MeV	abs
58	LAS	Cranberg	CRANBERG,58	1078	.404 MeV to 1.342 MeV	
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	14	2.251 MeV to 2.747 MeV	
56	ANL	Hibdon	HIBDON,56	23	1.850 keV to 20.8 keV	
56	MTR	Brugger,et.al.	IDO-16300,56	26	.200 keV to 9.650 keV	
56	CCP	Khaletskii	DOK,113,305,56	1	1.830 b at 14.8 MeV	abs
54	BNL	Palevsky	PALEVSKY,54	61	.0004 eV to .0023 eV	
54	RIC	Cook,et.al.	PR,94,651,54	3	14.1 MeV to 18.0 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.780 MeV to 13.3 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.750 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	1.800 b at 14.0 MeV	
51	WIS	Fields,et.al.	PR,83,479,51	138	10.0 keV to .796 MeV	
50	MIN	Freier,et.al.	PR,78,508,50	57	.535 MeV to 1.865 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	1.723 b at 42.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	1.030 b at 83.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
48	COL	Rainwater,et.al.	PR,73,733,48	43	.0236 eV to 64.5 eV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	1	2.250 b at 2.880 MeV	abs
			$_{12}Mg$ σ_{el}			
70	ORL	Kinney,et.al.	ORNL-4550,70	4	5.440 MeV to 8.560 MeV	^{1}H σ_{el}
68	IFU	Korzh,et.al.	UFZ,13,(11),1781,68	1	2.540 b at 1.500 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	3.340 b at 1.440 eV	
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	9.840 b at .300 MeV	
62	LAS	Thomson,et.al.	PR,125,2049,62	4	2.000 MeV to 5.000 MeV	
60	CRC	Cross,et.al.	NP,15,155,60	1	.750 b at 14.6 MeV	
46	RIC	Little,et.al.	PR,69,414,46	1	1.600 b at 2.500 MeV	

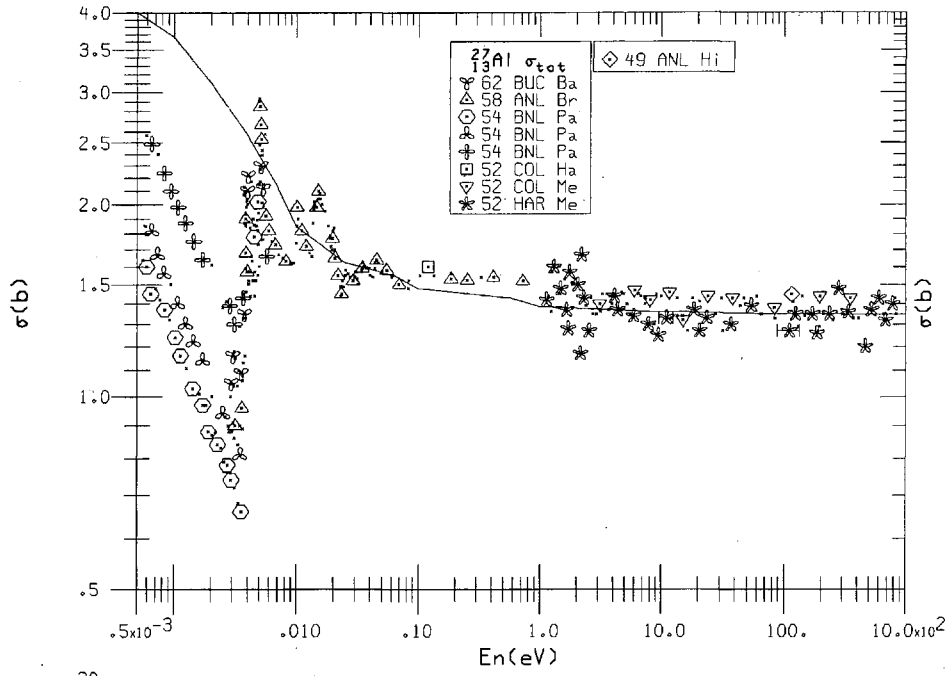
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{12}Mg$ σ_{inl}			
46	RIC	Little,et.al.	PR,69,414,46	1	.600 b at 2.500 MeV	
			$_{12}Mg$ σ_{sct}			
70	ANL	Elwyn	ELWYN,70	19	.450 MeV to 2.200 MeV	C
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.370 MeV	
			$_{12}Mg$ σ_{non}			
58	LRL	Mac Gregor+	PR,111,1155,58	3	21.0 MeV to 29.2 MeV	
58	LRL	Ball,et.al.	PR,110,1392,58	5	6.700 MeV to 12.5 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	.990 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	.960 b at 14.0 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	.950 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.770 b at 2.500 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,,55	1	.780 b at 4.100 MeV	
			$_{12}Mg$ $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.300 mb at 14.1 MeV	
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	65.0 mb at thermal	B $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
			$_{12}Mg$ σ_{ing}			
64	FEI	Broder,et.al.	AE,16,(2),103,64	14	1.600 MeV to 4.000 MeV	
			$_{12}Mg$ σ_{gem}			
44	JAP	Nonaka	JMJ,26,66,44	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
			$_{12}Mg$ σ_{np}			
62	BRN	Hassler,et.al.	PR,125,1011,62	1	88.0 mb at 14.4 MeV	H
			$^{24}_{12}Mg$ $\sigma_{n\gamma}$			
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,,58	1	8.200 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$^{24}_{12}Mg$ σ_{n2n}			
68	MUN	Vonach,et.al.	68WASH,2,885,68	1	.180 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
65	GEO	Arnold	ARNOLD,65	8	17.1 MeV to 18.2 MeV	^{65}Cu σ_{n2n}
			$^{24}_{12}Mg$ σ_{np}			
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.194 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	WVU	Clator	CLATOR,69	3	14.4 MeV to 16.7 MeV	
67	NRD	Ferguson,et.al.	NP/A,98,65,67	53	12.3 MeV to 13.9 MeV	^{24}Mg σ_{np}
67	TUR	Pasquarelli	NP/A,93,218,67	1	.182 b at 14.7 MeV	
66	GEL	Liskien,et.al.	NUK,8,315,66	17	6.060 MeV to 8.200 MeV	
65	GEL	Paulsen,et.al.	JNE/AB,19,907,65	23	12.6 MeV to 19.6 MeV	^{1}H σ_{el}
63	CRC	Butler,et.al.	CJP,41,372,63	47	4.880 MeV to 20.3 MeV	^{32}S σ_{np}
62	KTY	Gabbard,et.al.	PR,128,1276,62	14	12.6 MeV to 17.2 MeV	
61	HAR	Allan	NP,24,274,61	1	.110 b at 14.0 MeV	^{54}Fe σ_{np}
60	LOK	Imhof	IMHOF,60	24	12.1 MeV to 19.6 MeV	H
60	LRL	Tewes,et.al.	UCRL-6028-T,60	5	10.1 MeV to 14.0 MeV	
60	LYO	Depraz,et.al.	JPR,21,377,60	1	.203 b at 15.0 MeV	^{27}Al $\sigma_{n\alpha}$

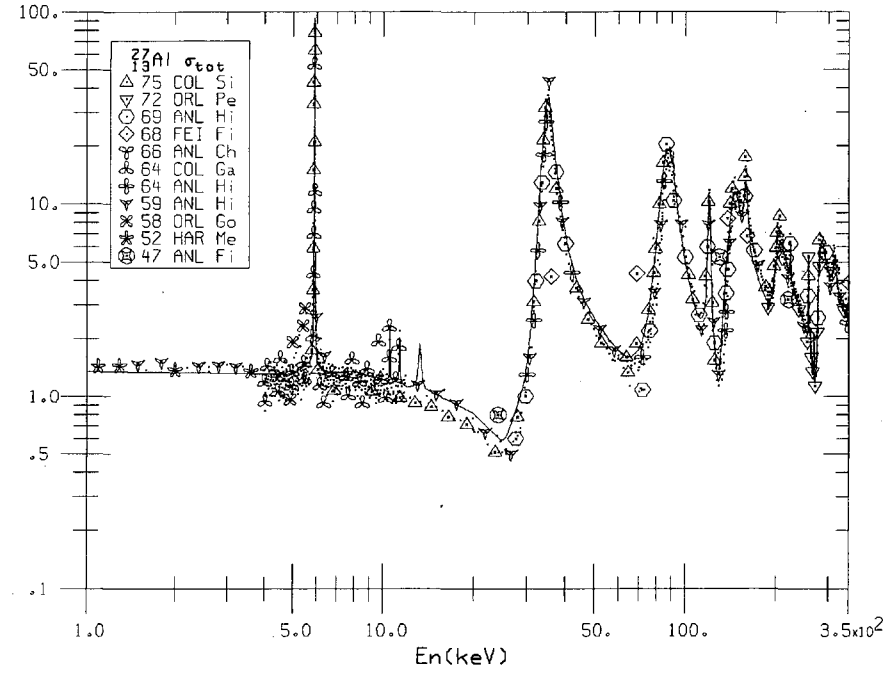
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
59	NRD	Kern,et.al.	NP,10,226,59	1	.219 b at 13.0 MeV	
56	IST	Cohen,et.al.	NP,1,73,56	12	12.6 MeV to 17.5 MeV	^{24}Mg σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.191 b at 14.5 MeV	
			$^{25}_{12}Mg$ σ_{tot}			
59	DKE	Newson,et.al.	AP,8,211,59	118	14.0 keV to .369 MeV	abs
			$^{25}_{12}Mg$ σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	57.0 mb at 14.6 MeV	^{56}Fe σ_{np}
67	TUR	Pasquarelli	NP/A,93,218,67	1	66.0 mb at 14.7 MeV	
66	MUA	Prasad,et.al.	NP,85,476,66	1	54.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	HAM	Bormann,et.al.	66PARIS,1,225,,66	12	13.0 MeV to 16.7 MeV	
61	HAR	Allan	NP,24,274,61	1	63.0 mb at 14.0 MeV	^{54}Fe σ_{np}
58	ARK	Nurmia,et.al.	NP,8,139,58	1	23.0 mb at 14.8 MeV	^{16}O σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	44.9 mb at 14.5 MeV	
			$^{26}_{12}Mg$ σ_{tot}			
59	DKE	Newson,et.al.	AP,8,211,59	32	15.0 keV to .370 MeV	abs
			$^{26}_{12}Mg$ $\sigma_{n\gamma}$			
68	IRK	Colditz,et.al.	OSA,105,236,68	1	.210 mb at 2.900 MeV	^{115}In σ_{inl}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	.200 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,,58	2	2.700 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	14.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{26}_{12}Mg$ σ_{np}			
61	HAR	Allan	NP,24,274,61	1	27.0 mb at 14.0 MeV	^{54}Fe σ_{np}
58	ARK	Nurmia,et.al.	NP,8,139,58	1	20.0 mb at 14.8 MeV	^{16}O σ_{np}
			$^{26}_{12}Mg$ σ_{n3}			
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	3.000 mb at 14.5 MeV	^{63}Cu σ_{n2n}
61	ARK	Poularikas,et.al	ARKANSAS,7,61	1	.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{26}_{12}Mg$ $\sigma_{n\alpha}$			
67	TUR	Pasquarelli	NP/A,93,218,67	1	80.0 mb at 14.7 MeV	
66	MUA	Prasad,et.al.	NP,85,476,66	1	83.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	HAM	Bormann,et.al.	66PARIS,1,225,,66	12	13.0 MeV to 16.7 MeV	H
58	ARK	Nurmia,et.al.	NP,8,139,58	1	35.0 mb at 14.8 MeV	^{16}O σ_{np}

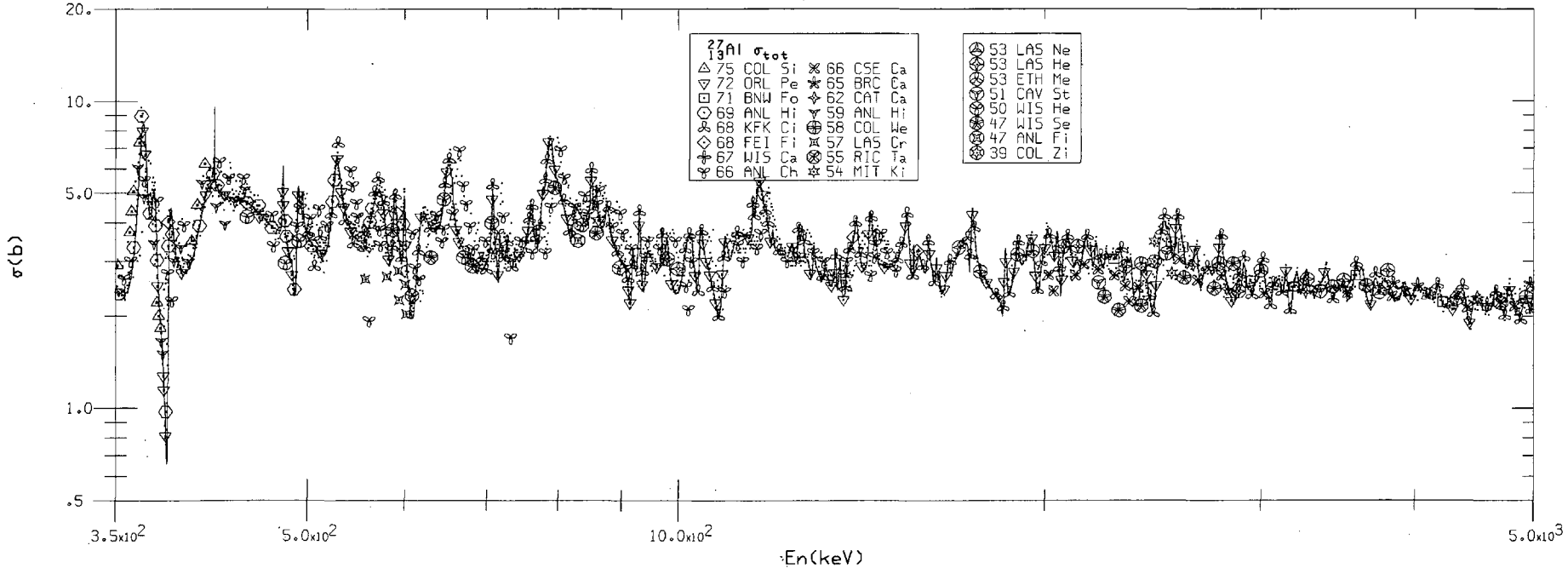
$^{27}_{13}Al$

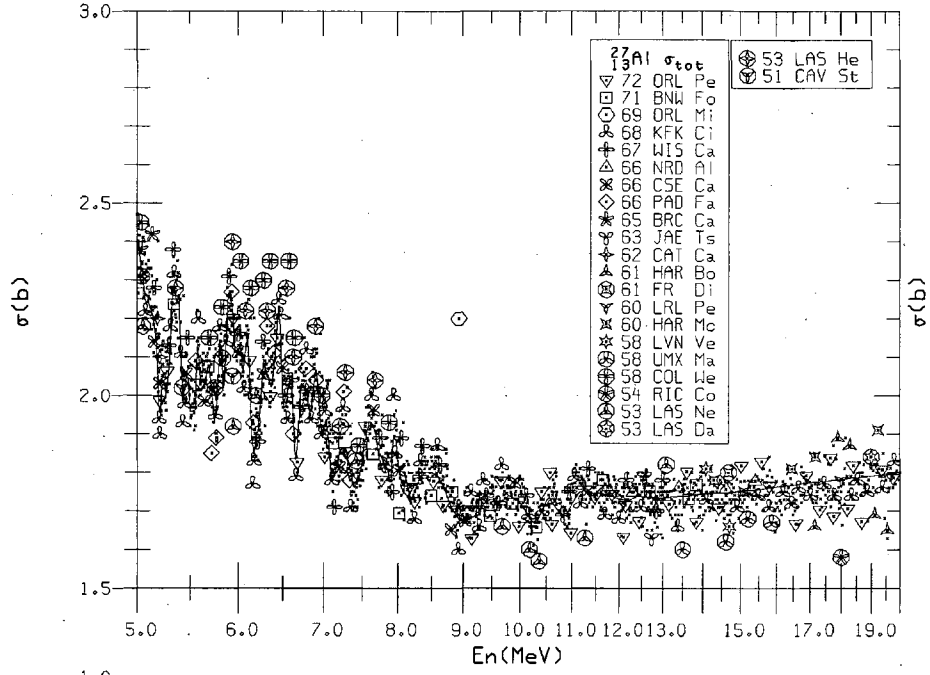
σ_{tot}

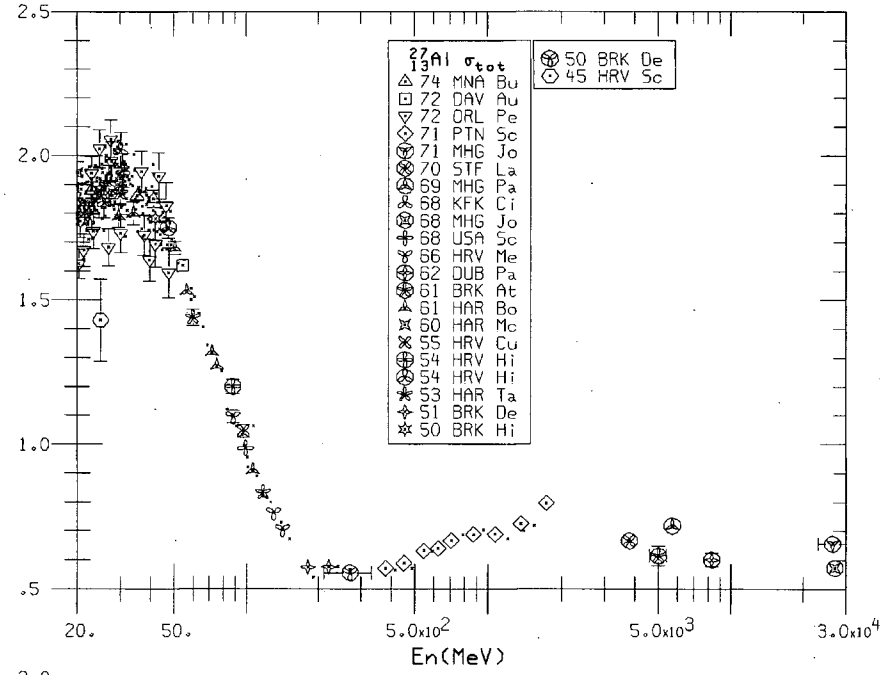
[1193]

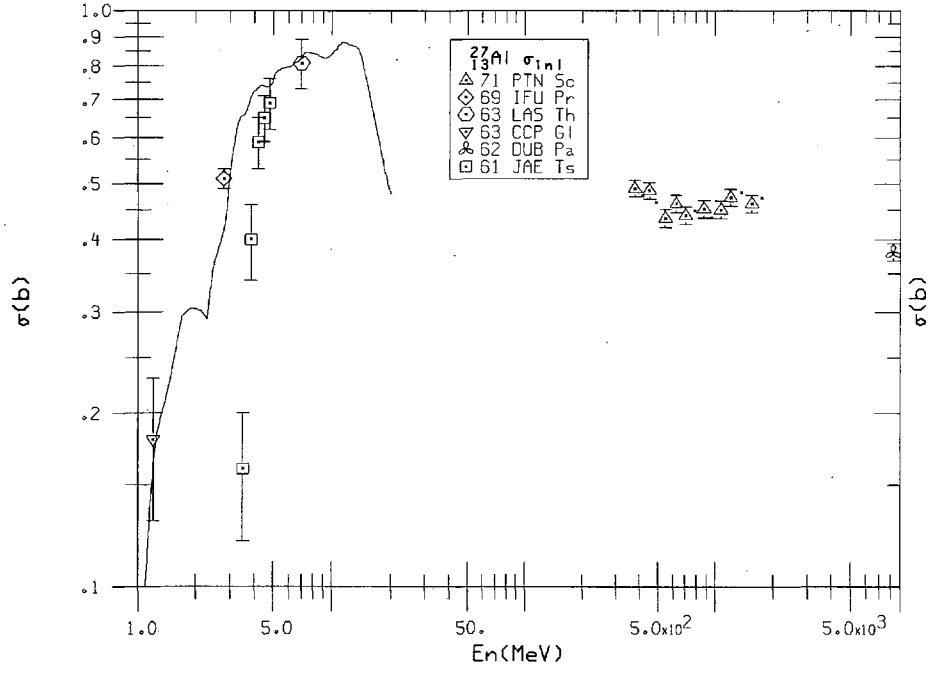


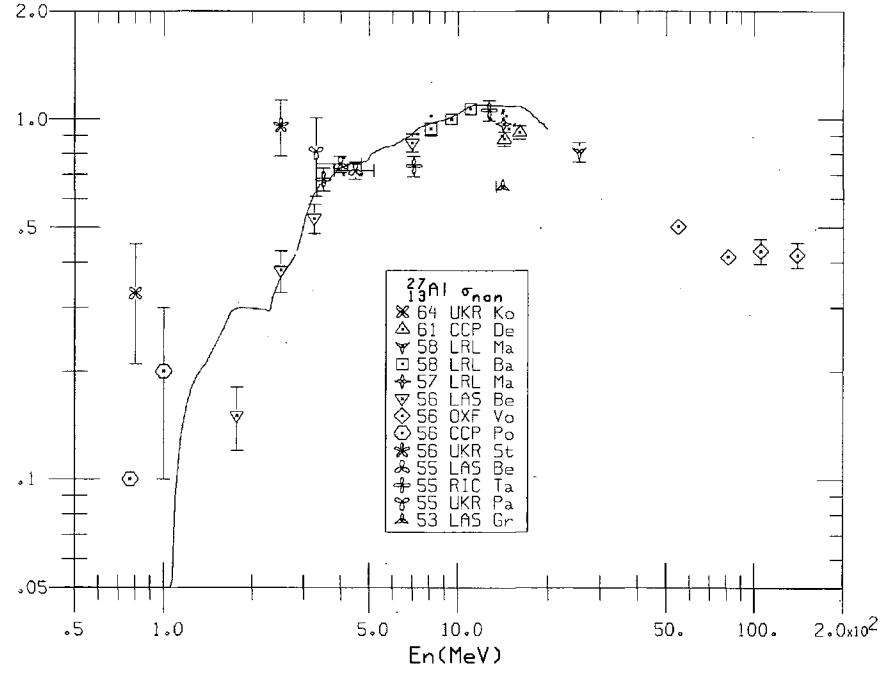





$^{27}_{13}Al$ σ_{tot}
72 ORL Pe
71 BNW Fo
69 ORL Mi
68 KFK Ci
67 WIS Ca
66 NRD Al
66 CSE Ca
66 PAD Fa
65 BRC Ca
63 JAE Ts
62 CAI Ca
61 HAR Bo
61 FR Di
60 LRL Pe
60 HAR Mc
58 LVN Ve
58 UMX Ma
58 COL We
54 RIC Co
53 LAS Ne
53 LAS Da
53 LAS He
51 CAV St
σ(b)
En(MeV)


$^{27}_{13}Al$ σ_{tot}
74 MNA Bu
72 DAV Au
72 ORL Pe
71 PTN Sc
71 MHG Jo
70 STF La
69 MHG Pa
68 KFK Ci
68 MHG Jo
68 USA Sc
66 HRV Me
62 DUB Pa
61 BRK At
61 HAR Bo
60 HAR Mc
55 HRV Cu
54 HRV Hi
54 HRV Hi
53 HAR Ta
51 BRK De
50 BRK Hi
50 BRK De
45 HRV Sc
En(MeV)


$^{27}_{13}Al$ σ_{inl}
71 PTN Sc
69 IFU Pr
63 LAS Th
63 CCP Gl
62 DUB Pa
61 JAE Ts
σ(b)
En(MeV)


$^{27}_{13}Al$ σ_{non}
64 UKR Ko
61 CCP De
58 LRL Ma
58 LRL Ba
57 LRL Ma
56 LAS Be
56 OXF Vo
56 CCP Po
56 UKR St
55 LAS Be
55 RIC Ta
55 UKR Pa
53 LAS Gr
En(MeV)

$^{27}_{13}Al$

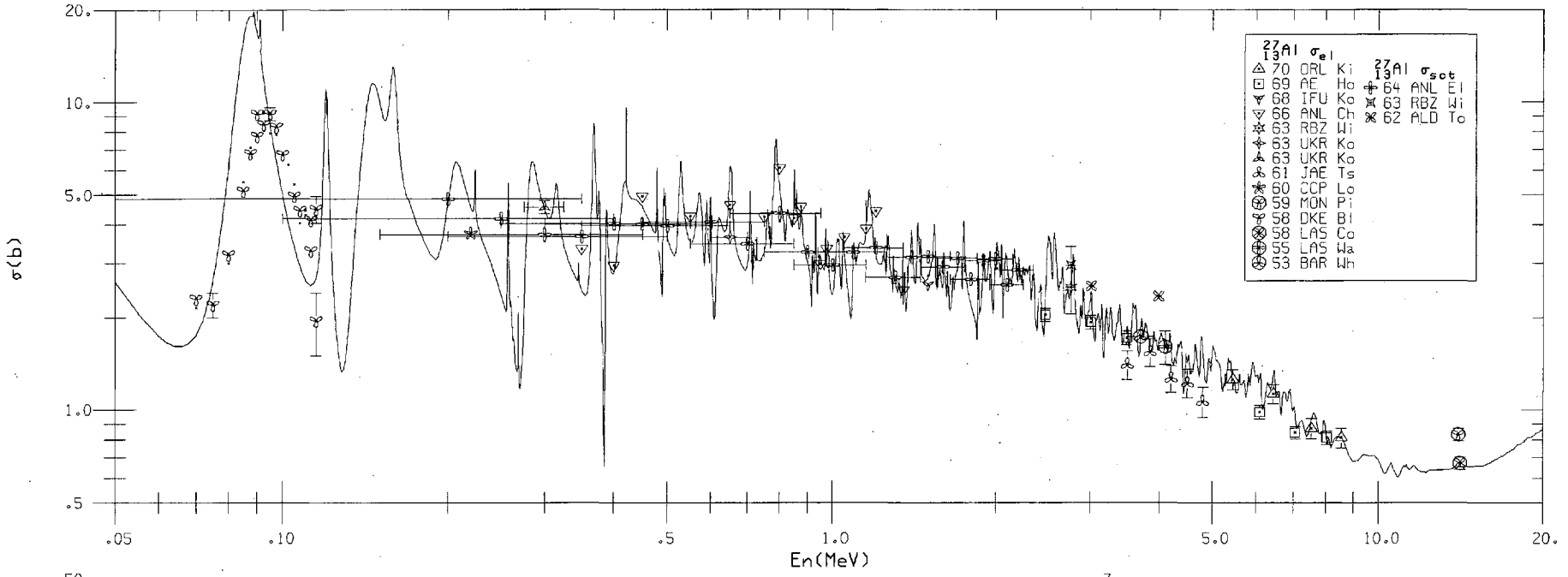
σ_{el}

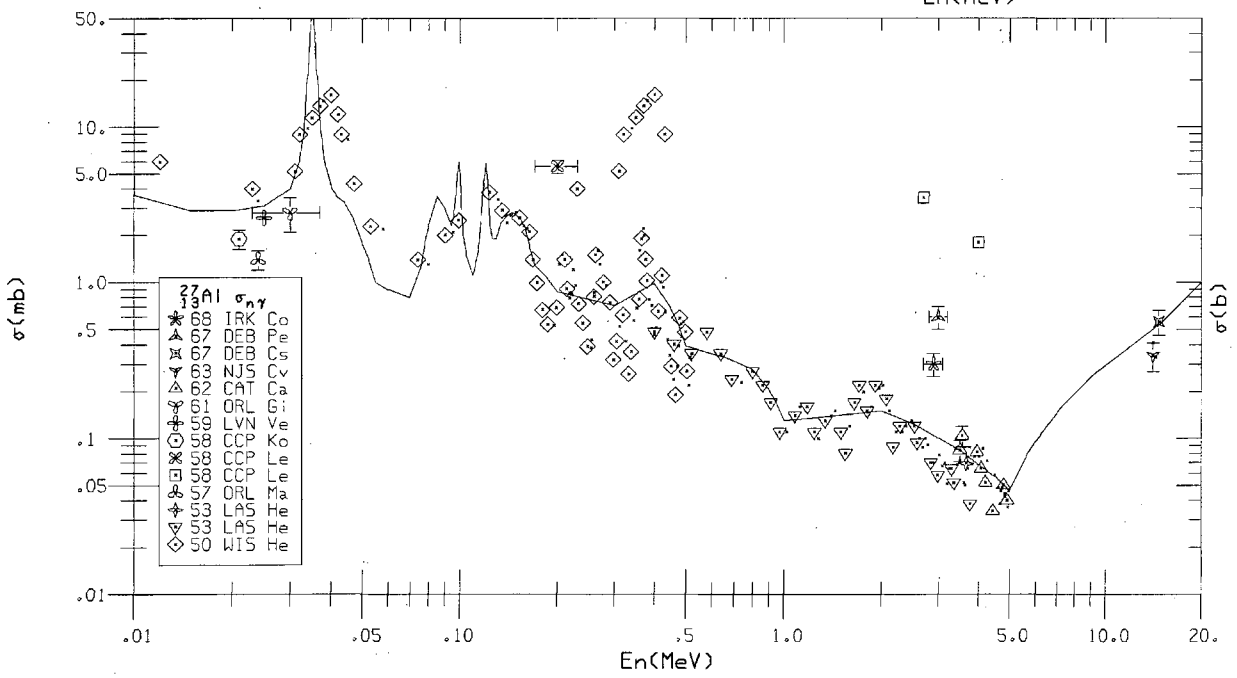
σ_{sct}

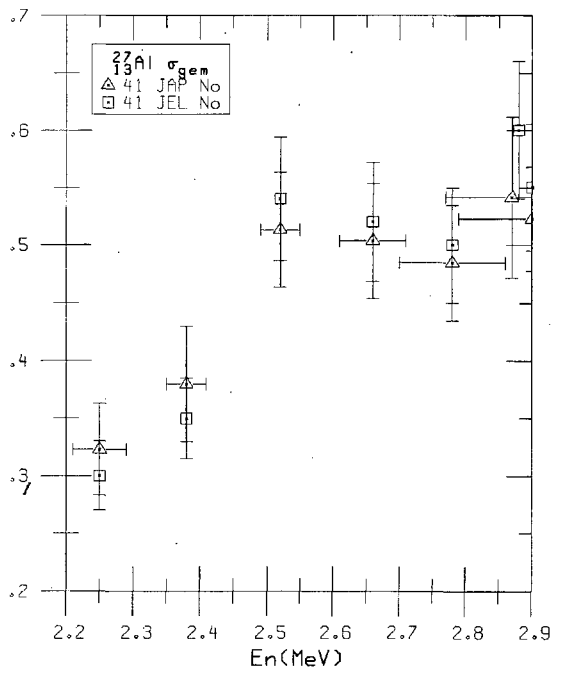
$\sigma_{n\gamma}$

[1193]

σ_{gem}







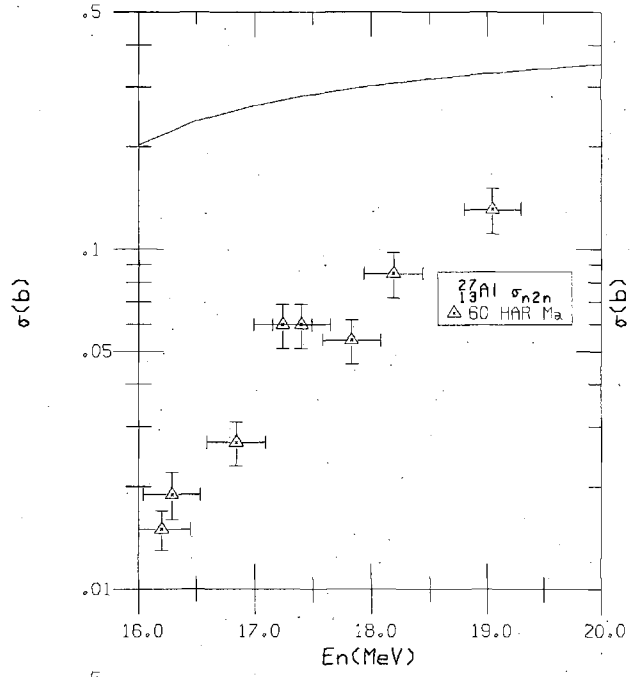
$^{27}_{13}Al$

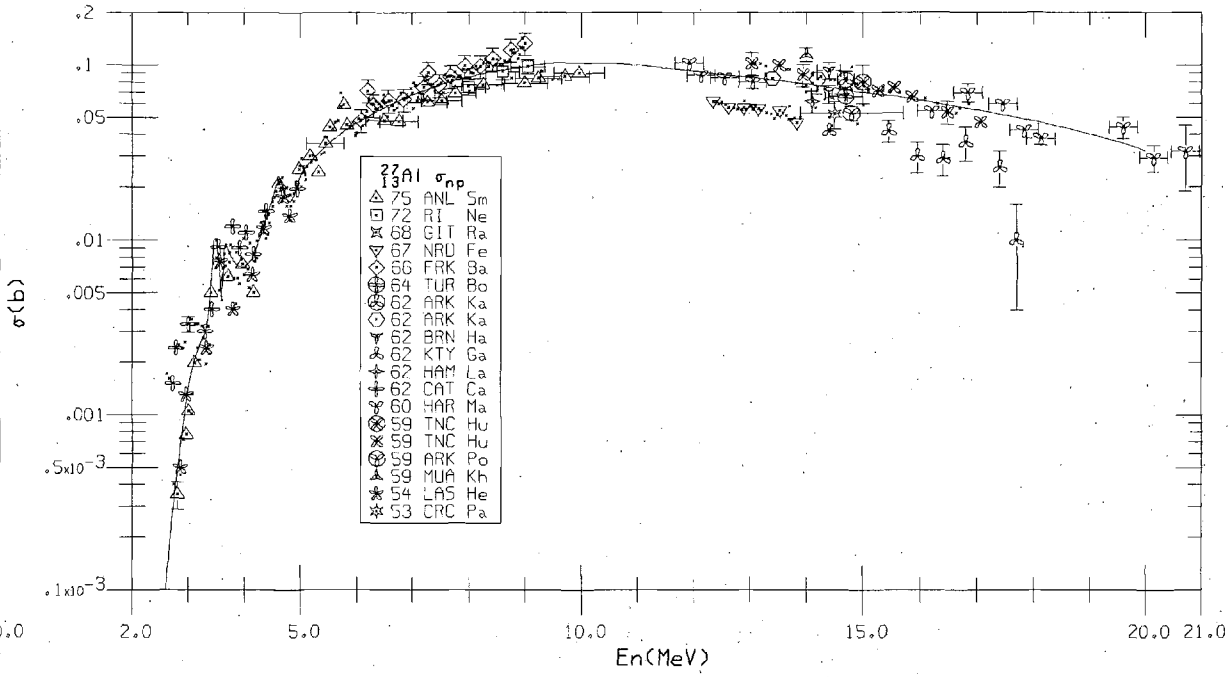
σ_{n2n}

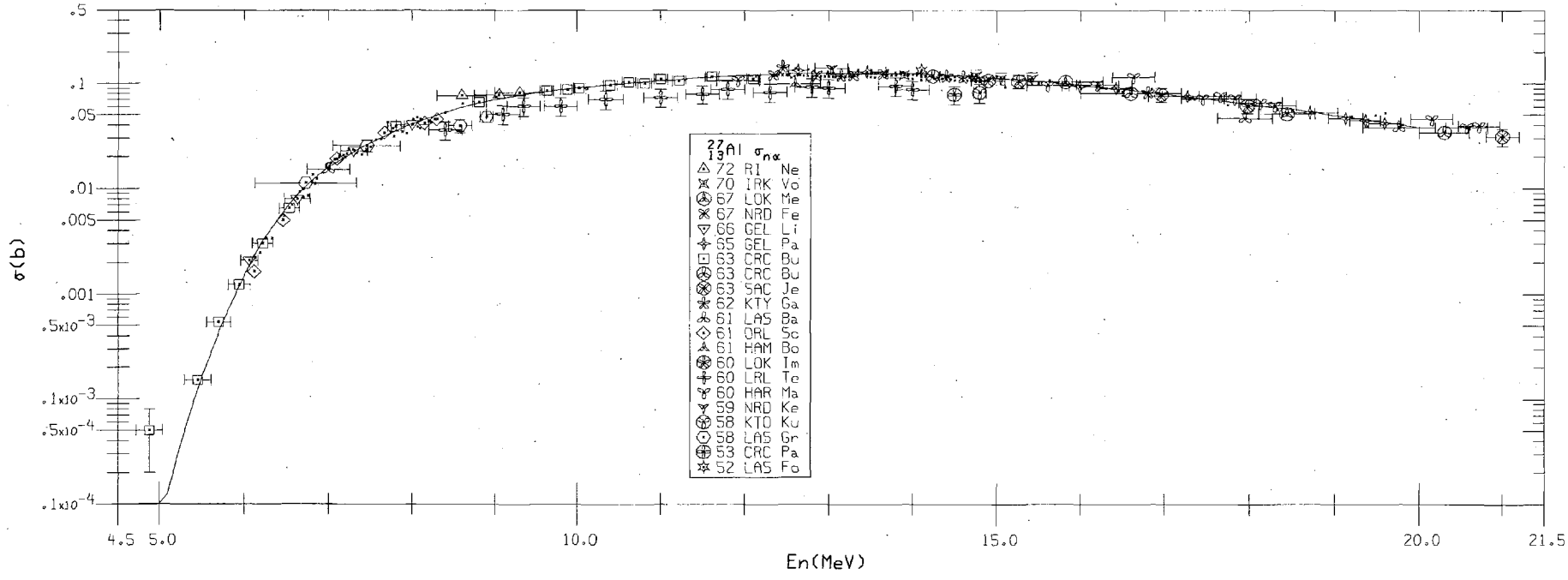
σ_{np}

$\sigma_{n\alpha}$

[1193]







$^{27}_{13}$Al σ_{tot}

Yr	Lab	Author	Reference	Points	Range	Standard
75	COL	Singh,et.al.	PR/C,11,1117,75	432	4.059 keV to .419 MeV	
74	MNA	Bubb,et.al.	CJP,52,648,74	5	22.9 MeV to 44.2 MeV	
74	MNA	Bubb,et.al.	CJP,52,648,74	4	21.4 MeV to 39.7 MeV	
72	DAV	Auman,et.al.	PR/C,5,1,72	7	29.3 MeV to 58.9 MeV	
72	ORL	Perey,et.al.	ORNL-4823,72	3701	.187 MeV to 48.6 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	245	2.270 MeV to 14.8 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	1	.656 b at 27.0 GeV	abs
70	STF	Lakin,et.al.	PL/B,31,677,70	1	.666 b at 3800. MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.715 b at 14.5 MeV	
69	OAU	Robinson,et.al.	AJP,37,482,69	1	1.750 b at 15.0 MeV	abs
69	MHG	Parker,et.al.	UNIV-MI-3028-3-T,69	1	.718 b at 5700. MeV	abs
69	ANL	Hibdon	HIBDON,69	922	27.5 keV to .626 MeV	
69	ORL	Minor,et.al.	AJP,37,649,69	1	2.200 b at 8.940 MeV	abs
68	KFK	Cierjacks,et.al.	KFK-1000,68	5101	.500 MeV to 32.0 MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	26	36.0 keV to 2.320 MeV	
68	MHG	Jones,et.al.	PL/B,27,328,68	1	.573 b at 27.0 GeV	
68	USA	Schneider,et.al.	NP/A,119,197,68	6	99.4 MeV to 151.9 MeV	abs
67	WIS	Carlson,et.al.	PR,158,1142,67	441	4.500 MeV to 13.1 MeV	abs
67	HAM	Bormann,et.al.	ZP,207,64,67	1	3.150 b at 2.700 MeV	
66	DAC	Ahmed,et.al.	AECD/EP-15,66	1	3.437 b at .756 MeV	abs
66	NRD	Albergotti+	NP,82,652,66	38	12.3 MeV to 16.0 MeV	abs
66	ANL	Chien,et.al.	NSE,26,500,66	873	.319 MeV to 1.515 MeV	abs
66	HRV	Measday,et.al.	NP,85,129,66	7	88.2 MeV to 150.9 MeV	
66	CSE	Calloway III+	COO-1573-6,66	347	1.995 MeV to 10.1 MeV	abs
66	PAD	Fasoli,et.al.	NC,44,455,66	74	5.482 MeV to 7.359 MeV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	1.450 b at 1.440 eV	
65	BRC	Cabe,et.al.	EANDC(E)-57,151,65	28	3.710 MeV to 5.240 MeV	abs
65	SAC	Ambrosino,et.al.	EANDC(E)-57,163,65	1	2.935 b at 2.770 MeV	
64	COL	Garg	GARG,64	1936	3.995 keV to 11.9 keV	
64	ANL	Hibdon	HIBDON,64	221	27.5 keV to .171 MeV	abs
63	JAE	Tsukada	TSUKADA,63	27	12.5 MeV to 17.0 MeV	
62	RBZ	Winterhalter	NP,39,535,62	1	2.800 b at 2.760 MeV	
62	BUC	Bally,et.al.	NSE,12,157,62	34	.0029 eV to .0055 eV	abs
62	ALD	Towle,et.al.	NP,39,300,62	4	.980 MeV to 3.990 MeV	
62	CAT	Calvi,et.al.	NP,39,621,62	100	2.485 MeV to 5.210 MeV	abs
62	BOS	Mitra	62MADRAS,,61,62	1	1.790 b at 14.0 MeV	abs
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	.600 b at 8300. MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	1.970 b at 28.4 MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	.614 b at 5000. MeV	
61	HAR	Bowen,et.al.	NP,22,640,61	64	15.8 MeV to 117.5 MeV	C
61	FR	Didier	JPR/A,22,149,61	1	1.800 b at 14.7 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	5	18.0 MeV to 27.7 MeV	abs
60	HAR	Mc Callum,et.al.	NP,16,313,60	11	12.8 MeV to 20.8 MeV	
59	ANL	Hibdon	PR,114,179,59	562	1.500 keV to .448 MeV	
59	MON	Pierre,et.al.	PR,115,999,59	1	1.730 b at 14.0 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	20	13.7 MeV to 14.8 MeV	
58	UMX	Mazani,et.al.	S8GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
58	ANL	Brown,et.al.	NSE,4,576,58	131	.0028 eV to .720 eV	
58	ORL	Good,et.al.	PR,109,926,58	18	4.880 keV to 6.350 keV	abs
58	COL	Weil,et.al.	PR,110,466,58	37	4.030 MeV to 8.080 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	6	7.010 MeV to 14.4 MeV	abs
57	LAS	Cranberg,et.al.	RSI,28,89,57	87	.556 MeV to .603 MeV	abs
56	CCP	Khaletskii	DOK,113,305,56	1	1.750 b at 14.8 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	2.300 b at 4.100 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	.700 b at 1400. MeV	
55	HRV	Culler,et.al.	PR,99,740,55	4	93.4 MeV to 106.8 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs

cont

Yr	Lab	Author	Reference	Points	Range	Standard
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	.631 b at 590.0 MeV	
54	BNL	Palevsky	PALEVSKY,54	79	.0006 eV to .0057 eV	
54	RIC	Cook,et.al.	PR,94,651,54	3	14.1 MeV to 18.0 MeV	
54	MIT	Kiehn,et.al.	PR,95,989,54	9	2.420 MeV to 2.580 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	1.200 b at 88.0 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	1.750 b at 47.5 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	35	2.920 MeV to 13.1 MeV	
53	BAR	Whitehead,et.al.	PR,92,114,53	1	2.550 b at 3.700 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	1.840 b at 19.0 MeV	abs
53	LAS	Henkel	HENKEL,53	198	.800 MeV to 7.760 MeV	abs
53	ETH	Meier,et.al.	HPA,26,451,53	96	1.880 MeV to 3.780 MeV	
53	HAR	Taylor,et.al.	PM,44,95,53	9	30.0 MeV to 153.0 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	1.730 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	1.800 b at 14.0 MeV	
52	COL	Havens Jr	HAVENS,52	5	.0830 eV to .740 eV	
52	COL	Melkonian,et.al.	CU-125,4,52	26	3.100 eV to .820 keV	
52	HAR	Merrison,et.al.	PRS/A,215,278,52	89	1.130 eV to 3.600 keV	abs
51	BRK	De Juren,et.al.	PR,81,919,51	4	180.0 MeV to 240.0 MeV	
51	UI	Good,et.al.	PR,59,917(19),51	1	3.390 b at .900 MeV	
51	CAV	Stafford	PPS,64,388,51	28	2.000 MeV to 5.941 MeV	abs
50	WIS	Henkel,et.al.	PR,80,145,50	58	.447 MeV to .896 MeV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	1.782 b at 42.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	.566 b at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	.555 b at 270.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	1.120 b at 83.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	WIS	Seagondollar+	PR,72,439,47	73	.581 MeV to 3.800 MeV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
45	HRV	Scherr	PR,68,240,45	1	1.430 b at 25.0 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	

$^{27}_{13}$Al σ_{el}

Yr	Lab	Author	Reference	Points	Range	Standard
70	ORL	Kinney,et.al.	ORNL-4516,70	4	5.440 MeV to 8.560 MeV	^{1}H σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	8	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
68	IFU	Korzh,et.al.	UFZ,13(11),1781,68	1	2.550 b at 1.500 MeV	
66	ANL	Chien,et.al.	NSE,26,500,66	27	.300 MeV to 1.500 MeV	C
65	ORL	Rayburn,et.al.	NP,61,381,65	1	1.420 b at 1.440 eV	
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	2.920 b at .980 MeV	H
63	RBZ	Winterhalter	NP,43,339,63	1	2.500 b at 2.760 MeV	abs
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	3.650 b at .650 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	4.560 b at .300 MeV	
62	ALD	Towle,et.al.	NP,39,300,62	4	.980 MeV to 3.990 MeV	H
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	5	3.500 MeV to 4.800 MeV	
60	CCP	Lovchikova	ZET,38,1434,60	1	3.750 b at .220 MeV	
59	MON	Pierre,et.al.	PR,115,999,59	1	.830 b at 14.0 MeV	
58	OKE	Block,et.al.	PR,109,1620,58	32	70.0 keV to .115 MeV	C
58	LAS	Coon,et.al.	PR,111,250,58	1	.670 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.600 b at 4.100 MeV	
53	BAR	Whitehead,et.al.	PR,92,114,53	1	1.730 b at 3.700 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{27}_{13}$Al σ_{inl}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
69	IFU	Prokopesc,et.al.	UFZ,14,(2),330,69	1	.510 b at 2.800 MeV	
67	ALD	Towle,et.al.	NP/A,100,257,67	1	.829 b at 7.000 MeV	H
63	LAS	Thomson	PR,129,1649,63	1	.810 b at 7.000 MeV	
63	CCP	Glazkov	AE,15,416,63	1	.180 b at 1.200 MeV	
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	.380 b at 8300. MeV	
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	5	3.500 MeV to 4.800 MeV	
			$^{27}_{13}$Al σ_{sct}			
64	ANL	Elwyn,et.al.	NP,59,113,64	24	.200 MeV to 2.200 MeV	C
63	RBZ	Winterhalter	NP,43,339,63	1	2.960 b at 2.760 MeV	abs
62	ALD	Towle,et.al.	NP,39,300,62	4	.980 MeV to 3.990 MeV	
			$^{27}_{13}$Al σ_{non}			
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	.940 b at 14.8 MeV	abs
65	CCP	Degtyarev	AE,19,456,65	1	1.020 b at 8.100 MeV	
64	UKR	Korzh,et.al.	AE,16,260,64	1	.330 b at .800 MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	.381 b at 5000. MeV	
61	CCP	Degtyarev+	AE,11,397,61	3	14.3 MeV to 16.1 MeV	abs
59	MON	Pierre,et.al.	PR,115,999,59	1	.900 b at 14.0 MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	1	.810 b at 25.5 MeV	abs
58	LRL	Ball,et.al.	PR,110,1392,58	5	7.300 MeV to 12.8 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	.970 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.040 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	4	1.770 MeV to 7.000 MeV	
56	OXF	Voss,et.al.	PRS/A,236,41,56	4	55.0 MeV to 140.0 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.020 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	2	.770 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.960 b at 2.500 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.000 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	.700 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	2	4.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,,55	2	3.300 MeV to 4.100 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	.650 b at 14.1 MeV	abs
52	LAS	Phillips,et.al.	PR,88,600,52	1	1.060 b at 14.1 MeV	abs
			$^{27}_{13}$Al $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	.330 mb at 14.4 MeV	^{56}Fe σ_{np}
68	IRK	Colditz,et.al.	OSA,105,236,68	1	.300 mb at 2.900 MeV	^{115}In σ_{inl}
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	3.360 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	.600 mb at 3.000 MeV	^{27}Al σ_{np}
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.560 mb at 14.7 MeV	^{27}Al σ_{np}
67	NJS	Cvelbar	NIJS-R-502,67	1	.410 mb at 14.1 MeV	
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.410 mb at 14.1 MeV	
63	NJS	Cvelbar,et.al.	PL,3,364,63	1	.340 mb at 14.1 MeV	
62	BNL	Sher	SHER,62	1	.246 b at thermal	^{197}Au $\sigma_{n\gamma}$
62	CAT	Calvi,et.al.	NP,39,621,62	30	3.440 MeV to 5.000 MeV	^{27}Al $\sigma_{n\gamma}$
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	.239 b at thermal	B $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	1	2.800 mb at 30.0 keV	in $\sigma_{n\gamma}$
59	LVN	Vervier	NP,9,569,59	1	2.600 mb at 25.0 keV	
58	ALD	Perkin,et.al.	PPS,72,505,58	1	.530 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	1.900 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	1.400 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
53	LAS	Henkel	HENKEL,53	1	69.0 muB at 3.660 MeV	B
53	LAS	Henkel	HENKEL,53	65	.400 MeV to 3.760 MeV	^{27}Al $\sigma_{n\gamma}$
50	WIS	Henkel,et.al.	PR,80,145,50	109	12.0 keV to .515 MeV	B $\sigma_{n\alpha}$
			$^{27}_{13}$Al σ_{ing}			
53	NRL	Scherrer,et.al.	PR,91,1476,53	1	1.700 b at 14.2 MeV	
			$^{27}_{13}$Al σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
41	JEL	Nonaka	PR,59,681,41	7	2.250 MeV to 2.900 MeV	
			$^{27}_{13}$Al σ_{n2n}			
60	HAR	Mani,et.al.	NP,19,535,60	9	16.2 MeV to 20.2 MeV	^{27}Al σ_{np}
			$^{27}_{13}$Al σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	82	2.805 MeV to 9.960 MeV	^{235}U σ_{nf}
73	LOU	Dresler,et.al.	INR-1464,12,73	1	74.5 mb at 14.6 MeV	^{56}Fe σ_{np}
72	RI	Nemilov,et.al.	YK-9,53,72	4	8.000 MeV to 9.300 MeV	^{238}U σ_{nf}
71	SMU	Salaita	NP/A,170,193,71	1	75.0 mb at 14.8 MeV	
70	ARK	Husain,et.al.	PR/C,1,1233,70	1	73.0 mb at 14.8 MeV	^{56}Fe σ_{np}
69	AUW	Rama Prasad,et.a	NP/A,138,85,69	1	74.0 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	SUHP-69-2,69	1	81.9 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	71.0 mb at 14.2 MeV	
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	68.0 mb at 14.4 MeV	^{56}Fe σ_{np}
67	NRD	Ferguson,et.al.	NP/A,98,65,67	40	12.4 MeV to 13.9 MeV	^{27}Al σ_{np}
66	BOS	Mitra,et.al.	NP,83,157,66	1	97.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	121	6.000 MeV to 9.000 MeV	H
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	66.0 mb at 14.7 MeV	
62	ARK	Kantele,et.al.	NP,35,353,62	4	13.4 MeV to 14.7 MeV	^{63}Cu σ_{n2n}
62	ARK	Kantele,et.al.	NP,35,353,62	1	83.4 mb at 14.7 MeV	^{63}Cu σ_{n2n}
62	BRN	Hassler,et.al.	PR,125,1011,62	1	93.0 mb at 14.4 MeV	H
62	KTY	Gabbard,et.al.	PR,128,1276,62	15	12.4 MeV to 17.7 MeV	
62	HAM	Langmann	LANGMANN,62	1	62.0 mb at 14.1 MeV	
62	CAT	Calvi,et.al.	NP,39,621,62	49	2.622 MeV to 5.100 MeV	^{27}Al σ_{np}
61	KON	Sakisaka,et.al.	JPJ,16,1869,61	1	85.0 mb at 14.1 MeV	
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	80.8 mb at 14.1 MeV	
61	HAR	Allan	NP,24,274,61	1	76.0 mb at 14.0 MeV	^{54}Fe σ_{np}
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	77.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
60	LYO	Depraz,et.al.	JPR,21,377,60	1	59.0 mb at 15.0 MeV	^{63}Cu σ_{n2n}
60	HAR	Mani,et.al.	NP,19,535,60	17	11.9 MeV to 20.7 MeV	^{27}Al σ_{np}
60	GLS	Storey,et.al.	PPS,75,526,60	1	90.0 mb at 14.1 MeV	
59	TNC	Hudson Jr,et.al.	BAP,4,97 G2 ,59	1	80.0 mb at 15.0 MeV	^{27}Al σ_{np}
59	TNC	Hudson Jr,et.al.	BAP,4,97 G2 ,59	28	13.0 MeV to 17.1 MeV	^{27}Al σ_{np}
59	TNC	Hudson Jr,et.al.	BAP,4,97 G2 ,59	4	13.3 MeV to 15.4 MeV	abs
59	ARK	Poularikas,et.al	PR,115,989,59	1	53.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	MUA	Khurana,et.al.	NP,13,88,59	1	.115 b at 14.0 MeV	^{56}Fe σ_{np}
57	KON	Yasumi	JPJ,12,443,57	1	87.2 mb at 14.1 MeV	
57	BRN	Haling,et.al.	PR,106,971,57	1	79.0 mb at 14.1 MeV	
57	GLS	Brown,et.al.	PM,2,785,57	1	55.0 mb at 13.2 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	70.0 mb at 14.0 MeV	
54	LAS	Henkel	HENKEL,54	38	2.630 MeV to 5.180 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	52.4 mb at 14.5 MeV	
52	LAS	Forbes	PR,88,1309,52	1	79.0 mb at 14.1 MeV	

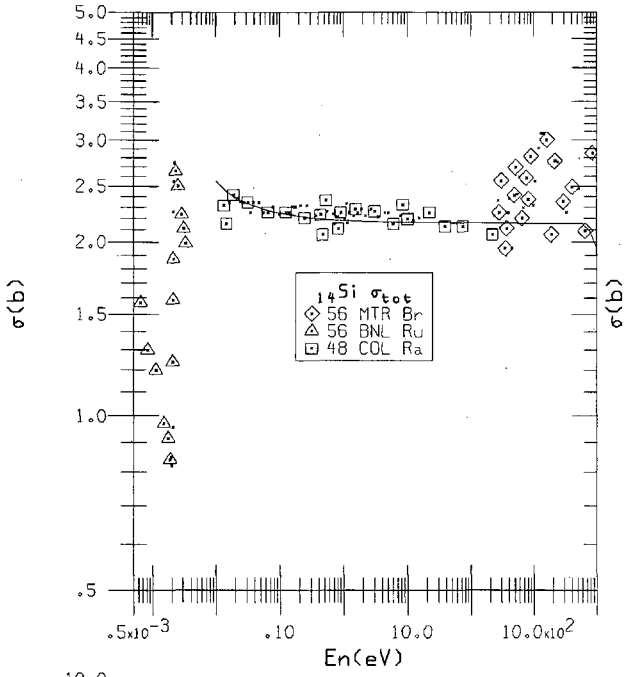
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{27}_{13}$Al σ_{nnp}			
62	BRN	Hassler,et.al.	PR,125,1011,62	1	17.0 mb at 14.4 MeV	H
61	HAR	Allan	NP,24,274,61	1	53.0 mb at 14.0 MeV	^{54}Fe σ_{np}
57	HAR	Allan	PPS/A,70,195,57	1	70.0 mb at 14.0 MeV	
			$^{27}_{13}$Al σ_{pem}			
57	GLS	Brown,et.al.	PM,2,785,57	1	.140 b at 13.2 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	.140 b at 14.0 MeV	
			$^{27}_{13}$Al σ_{nd}			
61	CBR	Glover,et.al.	NP,24,630,61	1	30.0 mb at 14.8 MeV	
			$^{27}_{13}$Al σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	1.730 mb at 14.7 MeV	^{197}Au σ_{n2n}
63	ARK	Poularikas,et.al	ARKANSAS,14,63	1	12.2 muB at 14.8 MeV	
			$^{27}_{13}$Al σ_{n3}			
60	ARK	Kumabe,et.al.	PR,117,1568,60	1	.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{27}_{13}$Al $\sigma_{n\alpha}$			
73	NPL	Robertson,et.al.	JNE,27,139,73	1	.115 b at 14.8 MeV	
72	RI	Nemilov,et.al.	YK-9,53,72	4	7.700 MeV to 9.300 MeV	^{238}U σ_{nf}
71	SMU	Salaita	NP/A,170,193,71	1	.111 b at 14.8 MeV	
70	BLN	Lebowitz,et.al.	NC/A,65,675,70	1	.110 b at 14.7 MeV	^{19}F σ_{n2n}
70	IRK	Vonach,et.al.	ZP,237,155,70	1	.117 b at 14.4 MeV	
70	IRK	Vonach,et.al.	ZP,237,155,70	13	13.6 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	.116 b at 14.8 MeV	^{1}H σ_{tot}
69	BIA	Crumpton,et.al.	JIN,31,1,69	1	.121 b at 14.7 MeV	abs
67	LOK	Menlove,et.al.	PR,163,1308,67	10	6.130 MeV to 19.4 MeV	^{235}U σ_{nf}
67	NRD	Ferguson,et.al.	NP/A,98,65,67	54	12.3 MeV to 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
67	BAS	Boschung,et.al.	EANDC(OR)-48-L,6,67	1	.120 b at 14.2 MeV	abs
67	TUR	Minetti,et.al.	ZP,199,275,67	1	.120 b at 14.7 MeV	^{63}Cu σ_{n2n}
66	GEL	Liskien,et.al.	NUK,8,315,66	17	6.060 MeV to 8.200 MeV	
65	GEL	Paulsen,et.al.	JNE/AB,19,907,65	23	12.6 MeV to 19.6 MeV	^{1}H σ_{el}
65	HAM	Seebeck,et.al.	NP,68,387,65	1	.119 b at 14.1 MeV	H
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	.112 b at 14.7 MeV	
64	CCP	Aron,et.al.	AE,16,370,64	1	.106 b at 14.6 MeV	
63	CRC	Butler,et.al.	CJP,41,372,63	46	4.880 MeV to 20.3 MeV	^{32}S σ_{np}
63	SAC	Jeronymo+	NP,47,157,63	8	12.6 MeV to 21.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.115 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
62	KTY	Gabbard,et.al.	PR,128,1276,62	23	12.5 MeV to 17.7 MeV	
62	HAM	Langmann	LANGMANN,62	1	.109 b at 14.1 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	15	7.000 MeV to 19.8 MeV	^{238}U
61	ORL	Schmitt,et.al.	PR,121,827,61	38	6.120 MeV to 8.300 MeV	^{238}U
61	ORL	Schmitt,et.al.	PR,121,827,61	1	.117 b at 14.8 MeV	^{238}U
61	HAM	Bormann,et.al.	JPR,22,602,61	5	12.6 MeV to 19.6 MeV	
60	LOK	Imhof	IMHOF,60	4	12.7 MeV to 18.0 MeV	H
60	LRL	Tewes,et.al.	UCRL-6028-T,60	15	8.400 MeV to 15.1 MeV	H
60	LYO	Depraz,et.al.	JPR,21,377,60	1	.116 b at 15.0 MeV	^{63}Cu σ_{n2n}
60	HAR	Mani,et.al.	NP,19,535,60	24	11.9 MeV to 20.7 MeV	^{27}Al $\sigma_{n\alpha}$
59	NRD	Kern,et.al.	NP,10,226,59	12	13.0 MeV to 15.6 MeV	
59	ARK	Poularikas,et.al	PR,115,989,59	1	.114 b at 14.8 MeV	^{63}Cu σ_{n2n}
59	MUA	Khurana,et.al.	NP,13,88,59	1	.111 b at 14.0 MeV	^{56}Fe σ_{np}
58	KTO	Kumabe	JPJ,13,325,58	1	82.0 mb at 14.8 MeV	

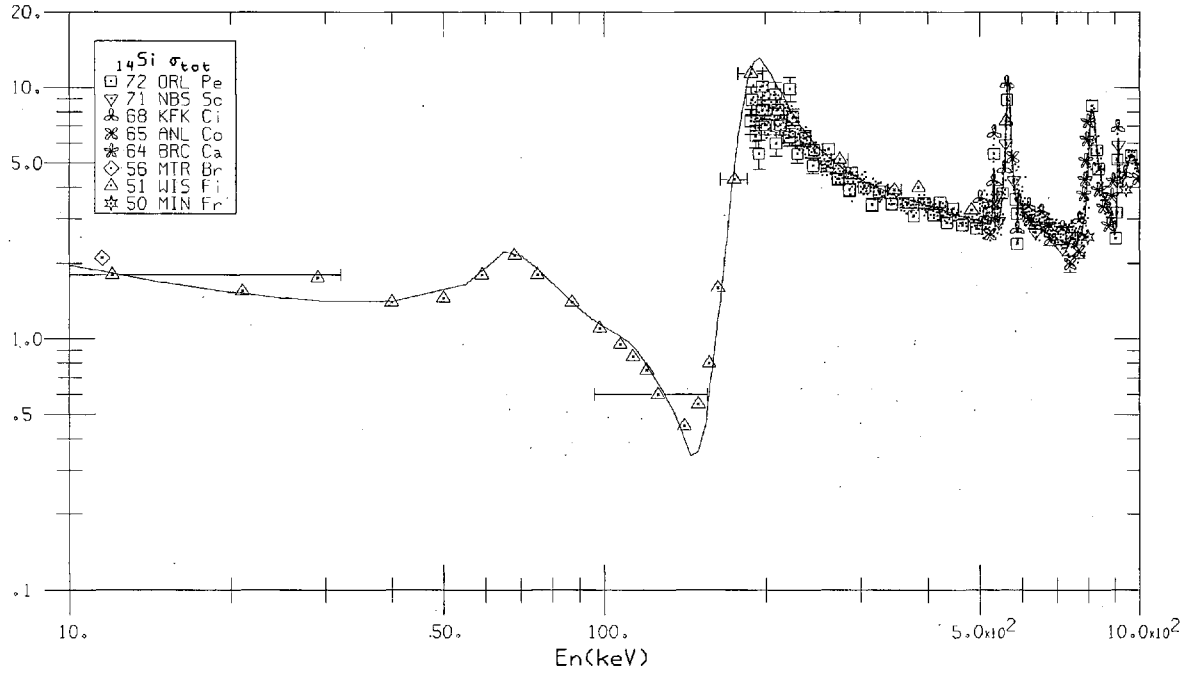
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
58	LAS	Grundl,et.al.	PR,109,425,58	7	6.730 MeV to 14.1 MeV	^{238}U σ_{nf}
53	CRC	Paul,et.al.	CJP,31,267,53	1	78.9 mb at 14.5 MeV	
52	LAS	Forbes	PR,88,1309,52	1	.135 b at 14.1 MeV	
			$^{27}_{13}$Al σ_{aem}			
57	KTO	Kumabe,et.al.	PR,106,155,57	1	92.0 mb at 14.8 MeV	abs

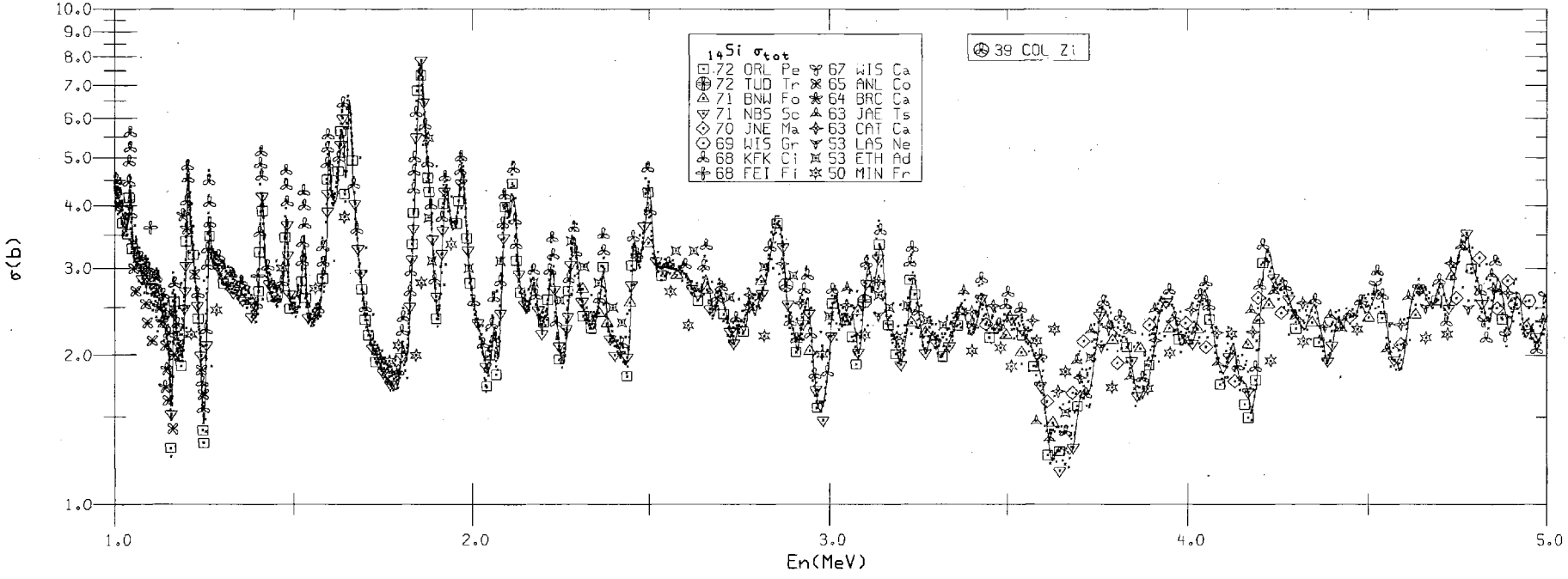
$_{14}Si$

σ_{tot}

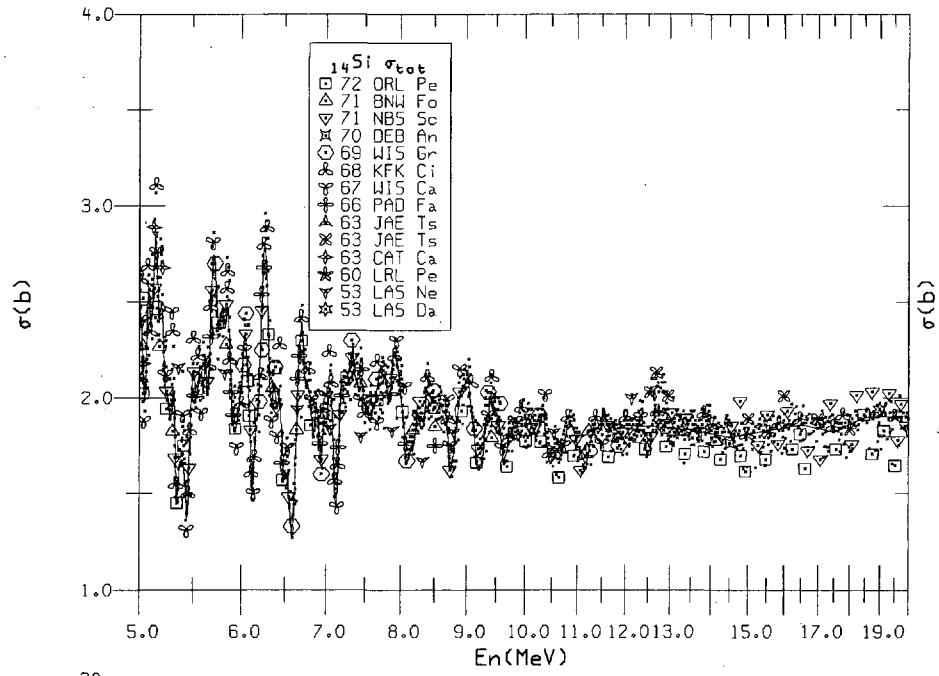
[1194]

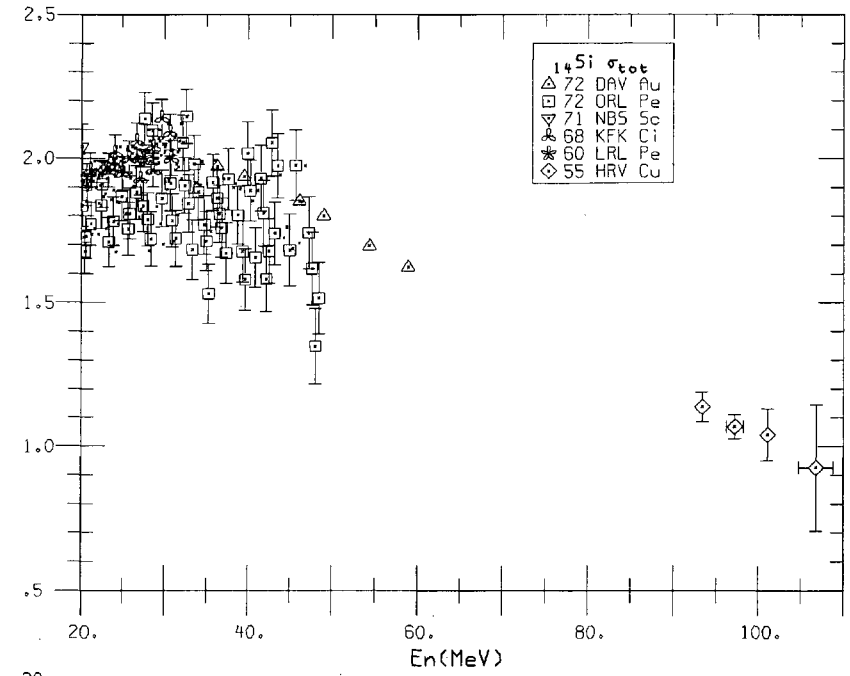


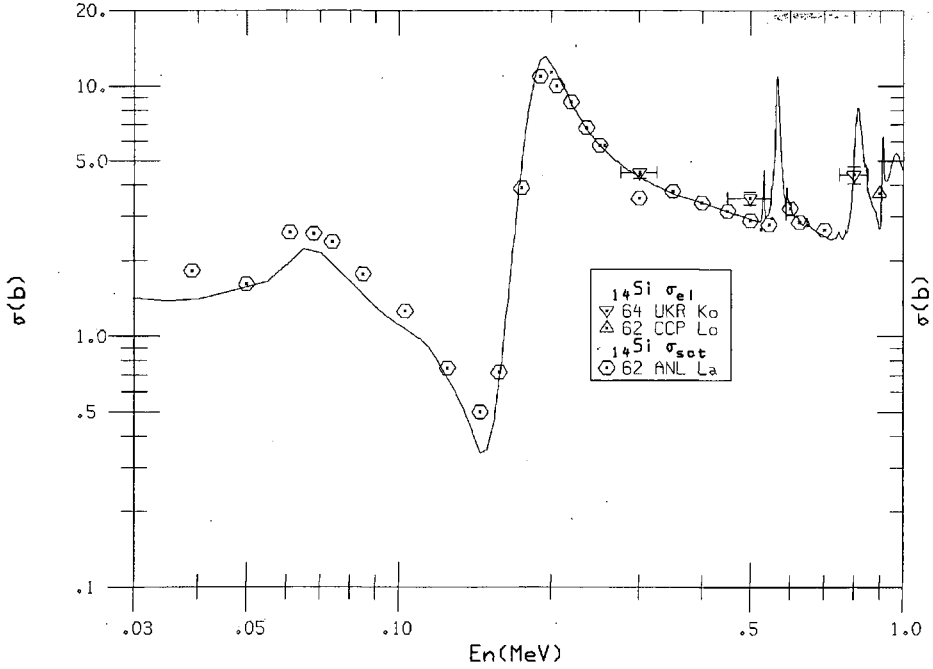


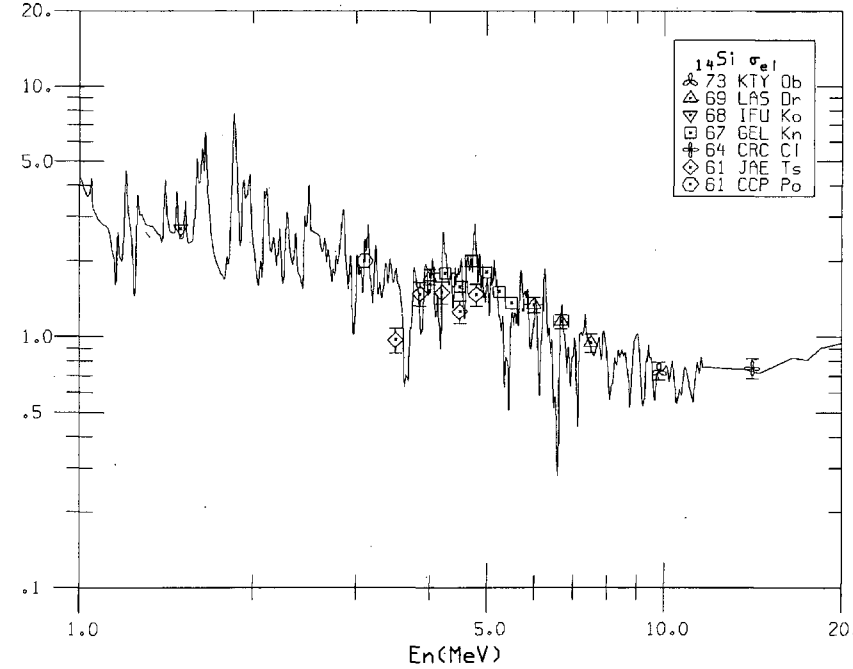


$_{14}Si$
σ_{tot}
σ_{el}
σ_{sct}
[1194]









$_{14}Si$

σ_{inl}

[1194]

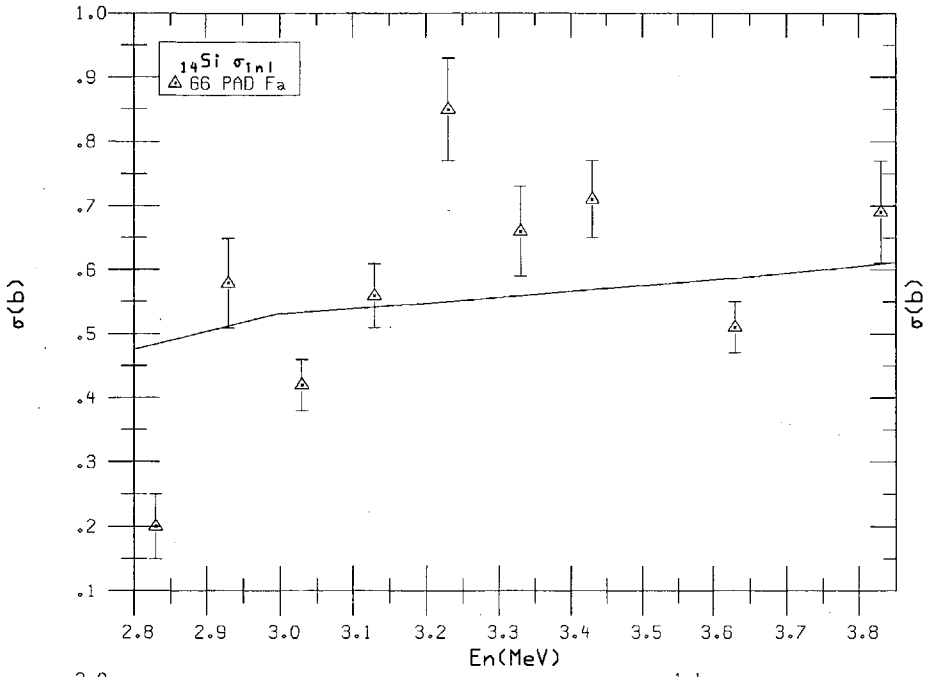
σ_{gem}

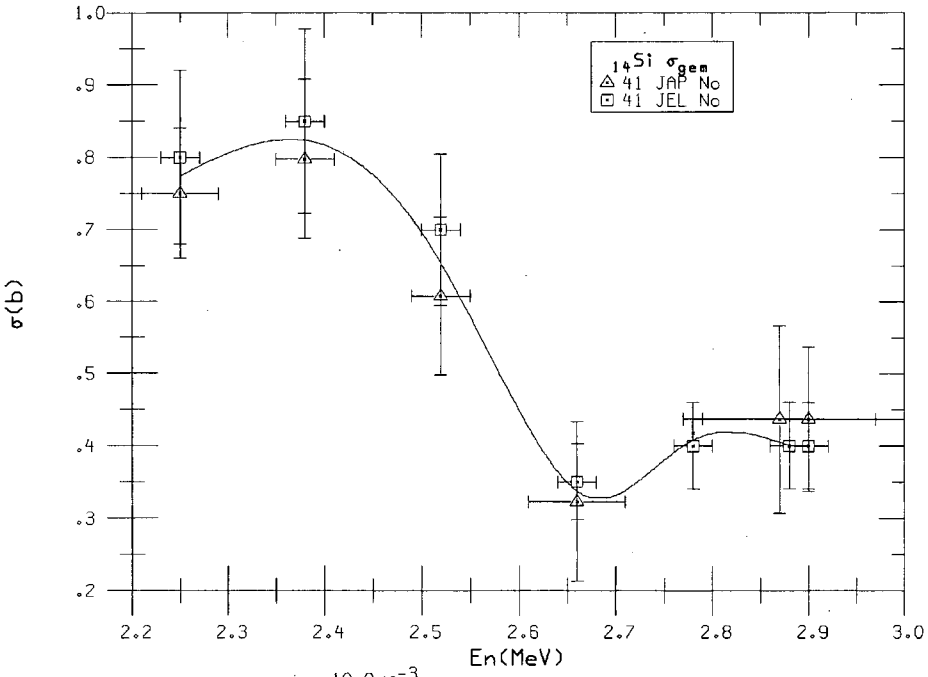
$^{28}_{14}Si$

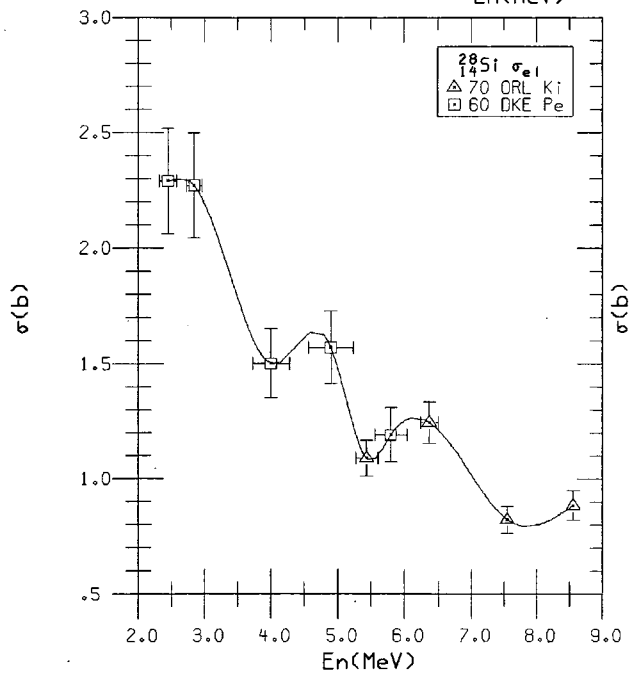
σ_{el}

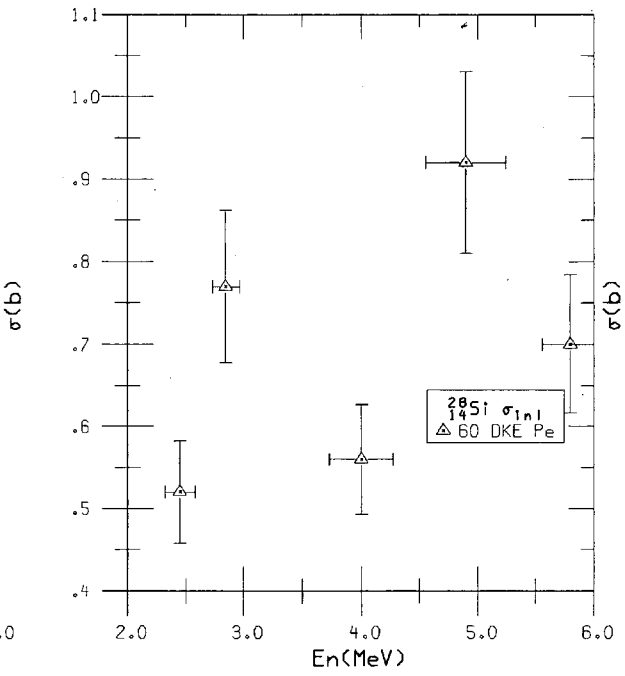
σ_{inl}

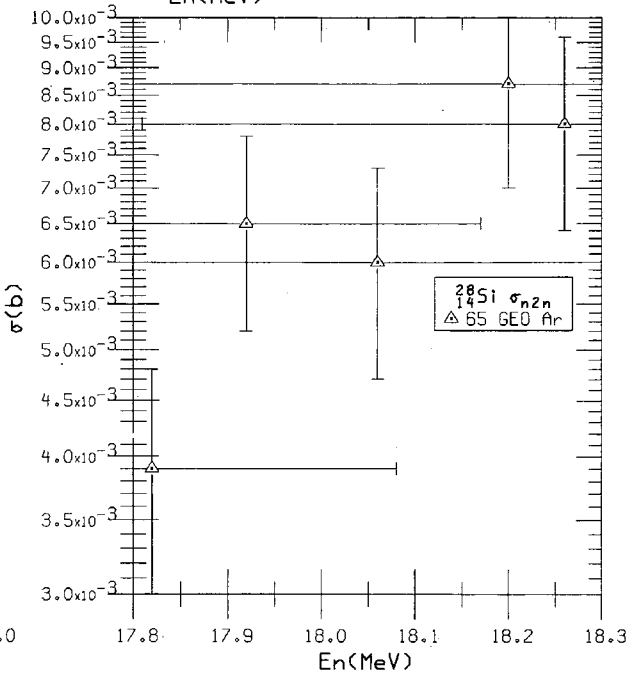
σ_{n2n}







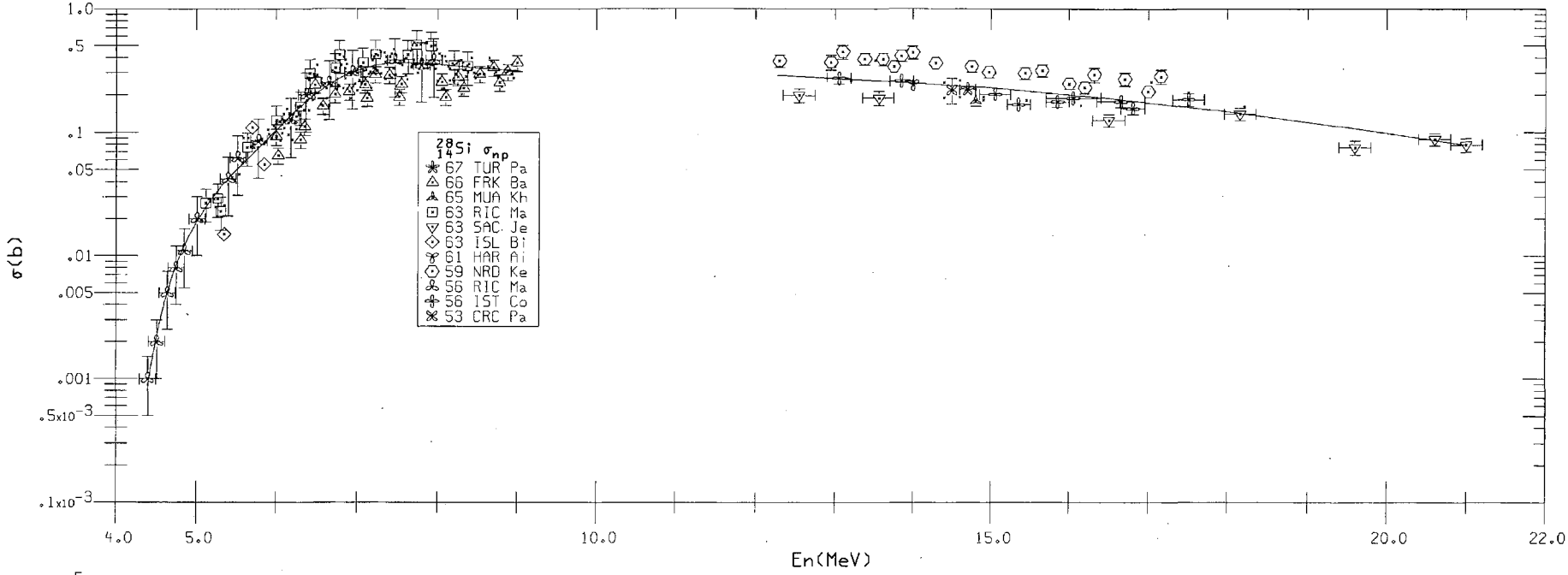


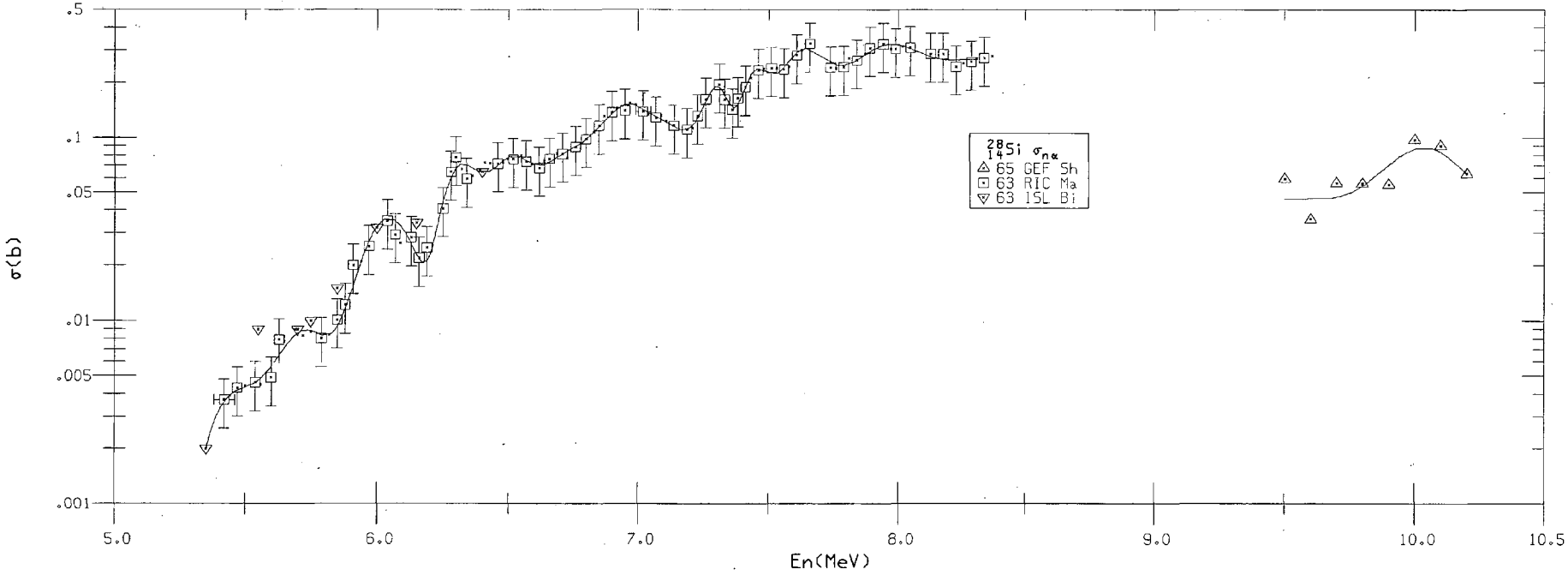


$^{28}_{14}Si$

σ_{np}

$\sigma_{n\alpha}$

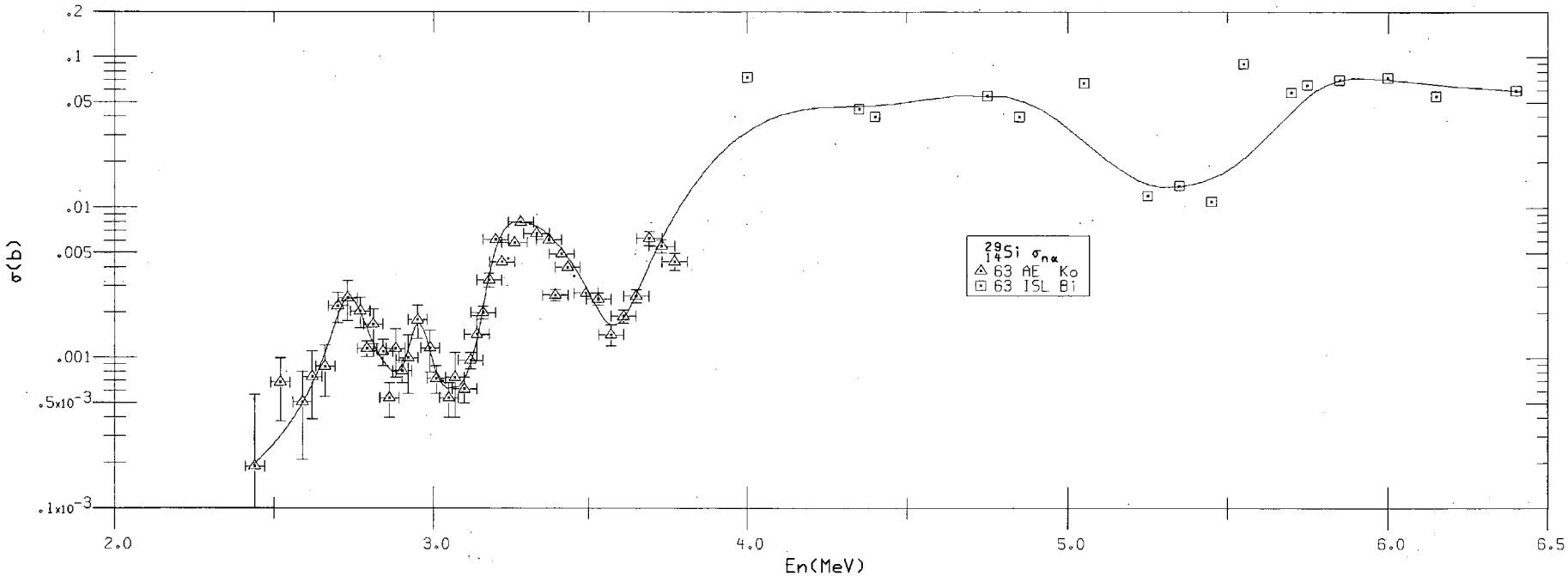


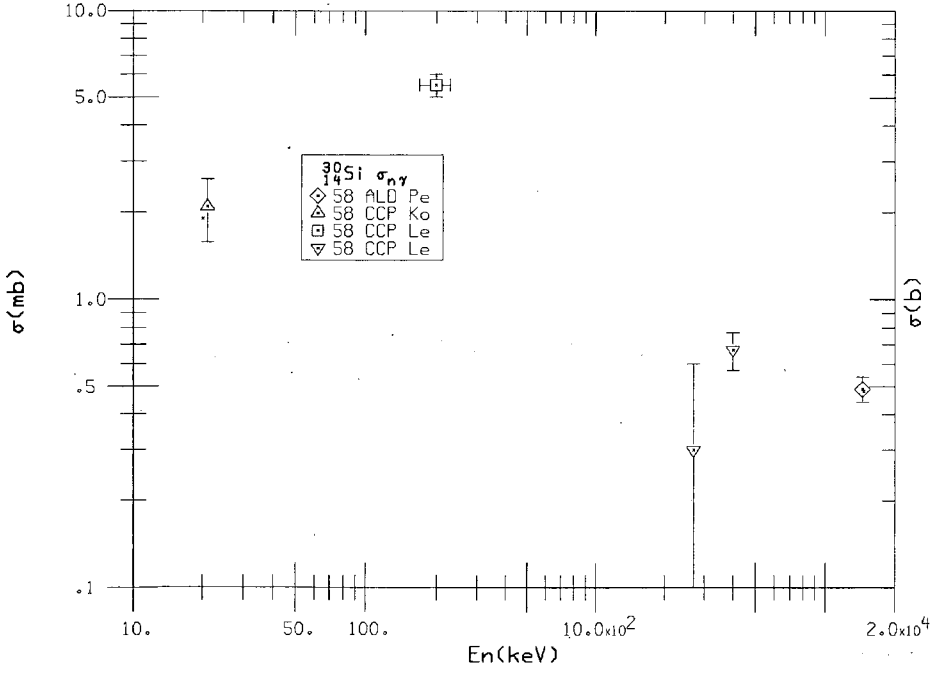


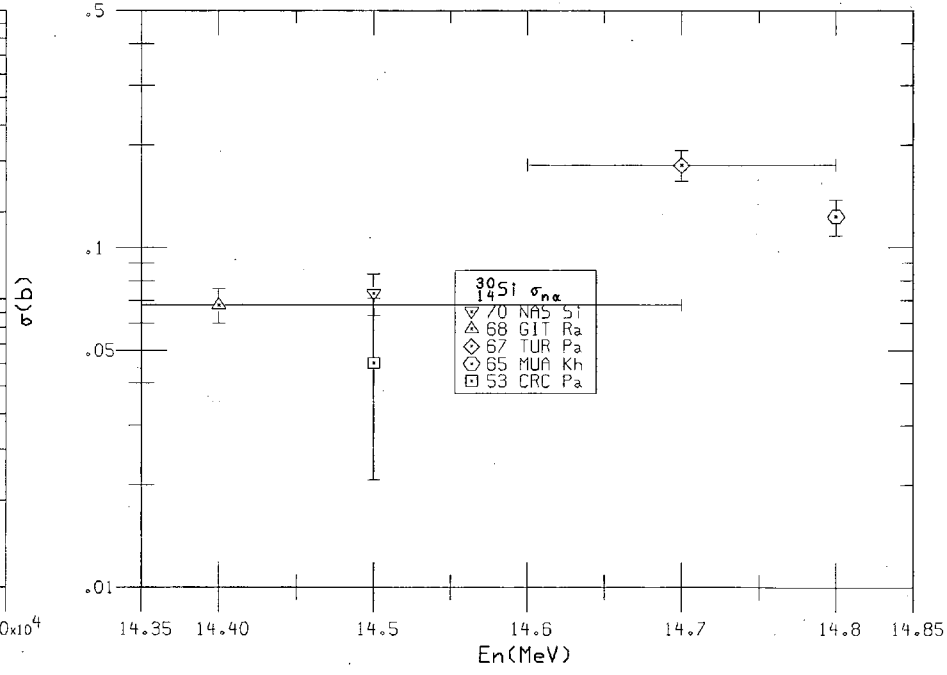
$^{29}_{14}Si$ $\sigma_{n\alpha}$

$^{30}_{14}Si$ $\sigma_{n\gamma}$

$\sigma_{n\alpha}$

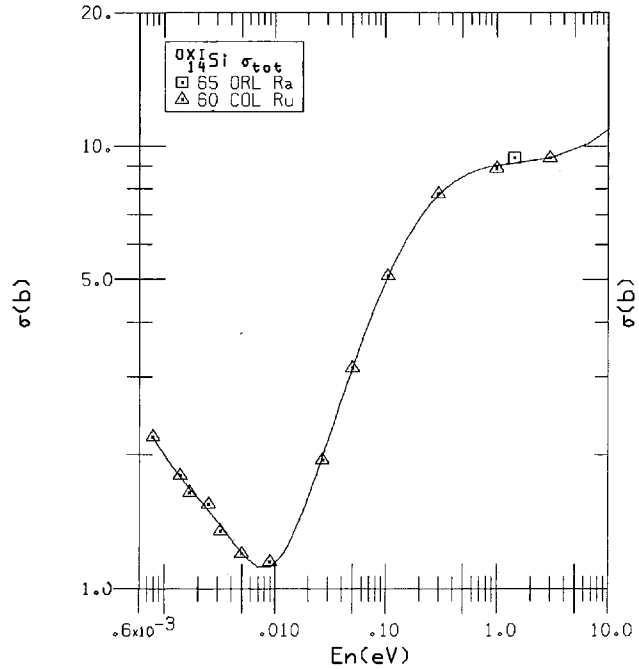


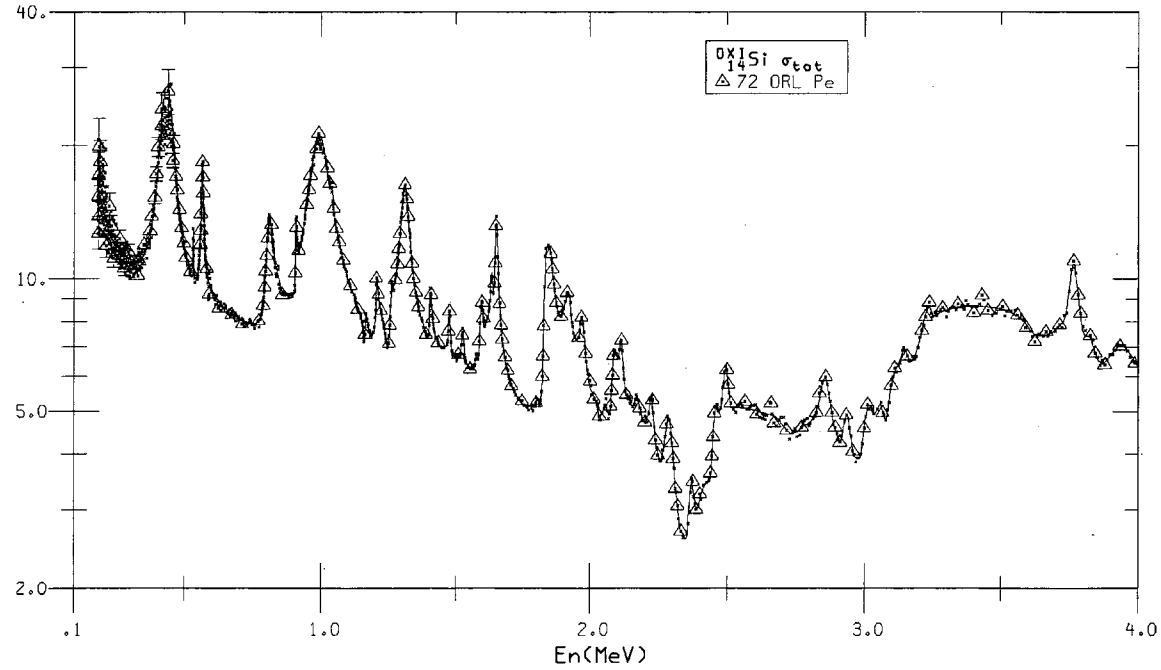


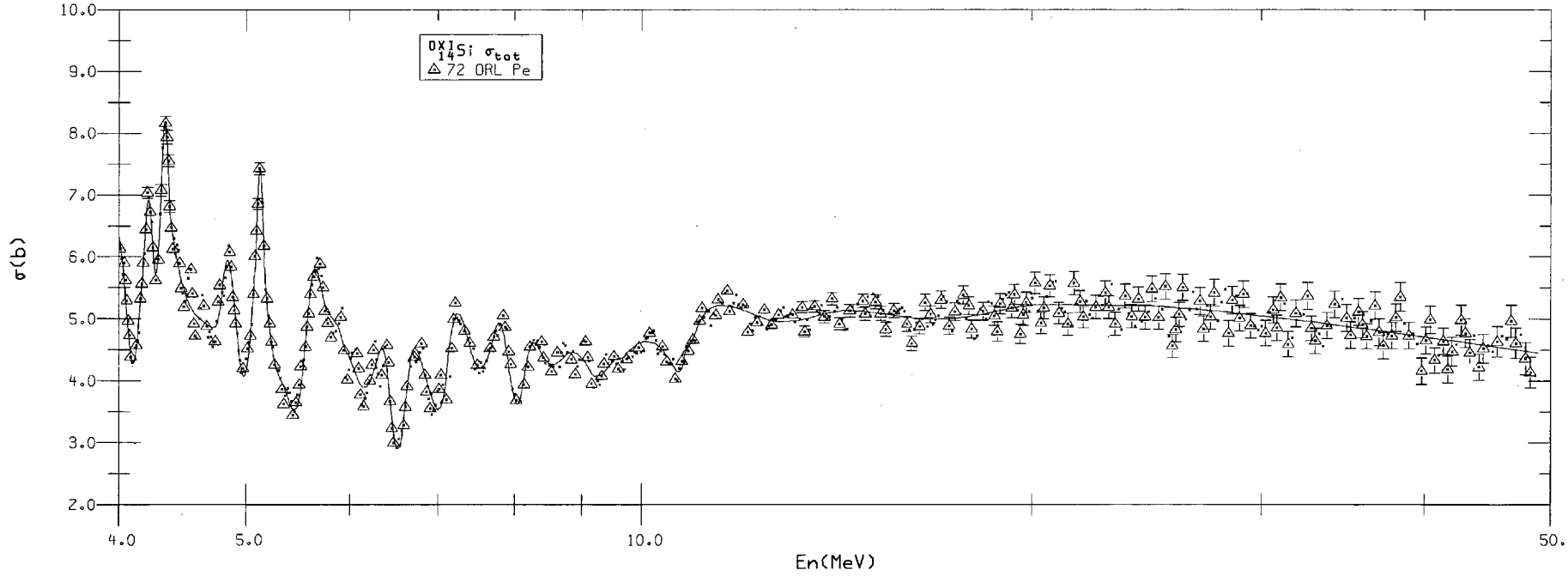


$^{0}_{14}Si$

σ_{tot}







Yr	Lab	Author	Reference	Points	Range	Standard
			$_{14}Si$ σ_{tot}			
72	DAV	Auman,et.al.	PR/C,5,1,72	7	29.3 MeV to 58.9 MeV	abs
72	ORL	Perey,et.al.	ORNL-4823,72	3693	.187 MeV to 48.5 MeV	
72	TUD	Tran Ung,et.al.	ZFK-243,30,72	1	2.580 b at 3.100 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.260 MeV to 14.9 MeV	
71	NBS	Schwartz,et.al.	BAP,16,495(AH3),71	3454	.496 MeV to 20.0 MeV	abs
70	JNE	Manero	ARS,66,27,70	63	3.340 MeV to 5.105 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.763 b at 14.5 MeV	
69	WIS	Grimes	NP/A,124,369,69	311	4.750 MeV to 14.0 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000(SUPP.1),68	5115	.500 MeV to 31.9 MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	5	.600 MeV to 1.700 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	506	4.500 MeV to 14.3 MeV	abs
66	ANL	Whalen	WASH-1068,9,66	0	.100 MeV to .650 MeV	
66	PAD	Fasoli,et.al.	NC,44,455,66	122	5.429 MeV to 8.530 MeV	
65	ANL	Cox	COX,65	438	.508 MeV to 1.254 MeV	
65	ANL	Cox	COX,65	1	1.399 b at 1.256 MeV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	2.220 b at 1.440 eV	
64	BRC	Cabe,et.al.	CR,259,4616,64	169	.505 MeV to 1.210 MeV	abs
63	JAE	Tsukada	JPJ,18,610,63	59	3.051 MeV to 5.048 MeV	
63	JAE	Tsukada	TSUKADA,63	27	12.5 MeV to 17.0 MeV	
63	CAT	Calvi,et.al.	NP,48,408,63	84	2.760 MeV to 5.210 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	18.0 MeV to 27.6 MeV	abs
56	MTR	Brugger,et.al.	IDO-16300,56	35	.235 keV to 11.5 keV	
56	BNL	Rustad	RUSTAD,56	20	.0006 eV to .0033 eV	
55	HRV	Culler,et.al.	PR,99,740,55	4	93.4 MeV to 106.8 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	41	2.940 MeV to 13.2 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	1.940 b at 19.0 MeV	
53	ETH	Adler,et.al.	HPA,26,451,53	98	1.850 MeV to 3.780 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	1.900 b at 14.1 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.830 b at 14.1 MeV	
51	WIS	Fields,et.al.	PR,83,479,51	81	12.0 keV to .796 MeV	
50	MIN	Freier,et.al.	PR,78,508,50	108	.530 MeV to 4.810 MeV	abs
48	COL	Rainwater,et.al.	PR,73,733,48	58	.0135 eV to .219 keV	
39	COL	Zinn,et.al.	PR,56,260,39	1	2.770 b at 2.880 MeV	abs
			$_{14}Si$ σ_{el}			
73	KTY	Obst,et.al.	PR/C,7,1076,73	1	.733 b at 9.800 MeV	^{1}H σ_{el}
69	LAS	Drake,et.al.	NP/A,128,209,69	4	4.000 MeV to 7.500 MeV	H
68	IFU	Korzh,et.al.	UFZ,13,(11),1781,68	1	2.680 b at 1.500 MeV	
67	GEL	Knitter,et.al.	ZP,207,56,67	8	4.000 MeV to 5.750 MeV	^{1}H σ_{el}
65	ORL	Rayburn,et.al.	NP,61,381,65	1	2.210 b at 1.440 eV	
64	CRC	Clarke,et.al.	NP,53,177,64	1	.750 b at 14.1 MeV	abs
64	UKR	Korzh,et.al.	UFZ,9,577,64	3	.300 MeV to .800 MeV	
62	CCP	Lovchikova	AE,13,60,62	1	3.700 b at .900 MeV	
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	5	3.500 MeV to 4.800 MeV	
61	CCP	Popov	SPN,,224,61	1	2.000 b at 3.100 MeV	

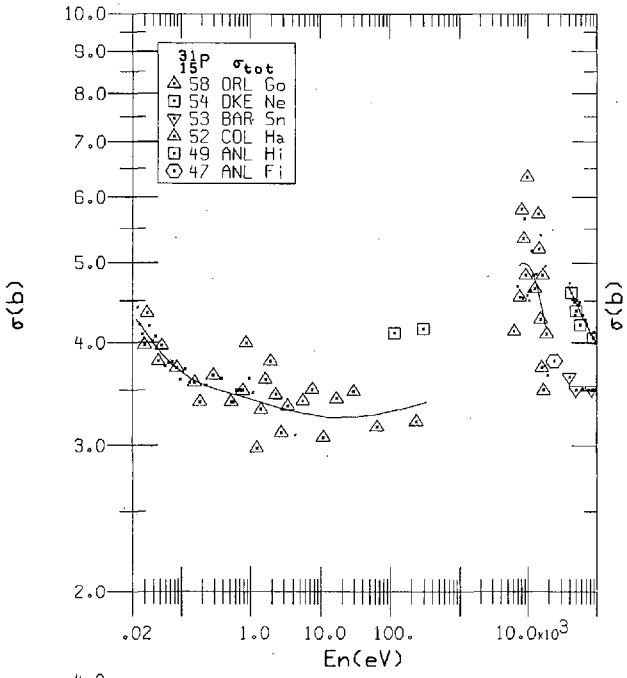
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{14}Si$ σ_{inl}			
66	PAD	Fasoli	EANDC(E)-66,114,66	9	2.830 MeV to 3.830 MeV	
			$_{14}Si$ σ_{sct}			
62	ANL	Lane,et.al.	PR,126,1105,62	31	39.0 keV to .700 MeV	
			$_{14}Si$ σ_{non}			
61	CCP	Popov	SPN,,224,61	1	.500 b at 3.100 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.020 b at 14.5 MeV	
			$_{14}Si$ $\sigma_{n\gamma}$			
67	NJS	Cvelbar,et.al.	NIJS-R-505,67	1	.440 mb at 14.1 MeV	
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.470 mb at 14.1 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	1	2.000 mb at 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	1	13.0 mb at 30.0 keV	In $\sigma_{n\gamma}$
			$_{14}Si$ σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
41	JEL	Nonaka	PR,59,681,41	7	2.250 MeV to 2.900 MeV	
			$^{28}_{14}Si$ σ_{el}			
70	ORL	Kinney,et.al.	ORNL-4517,70	4	5.440 MeV to 8.560 MeV	^{1}H σ_{el}
60	DKE	Petitt,et.al.	NP,79,231,60	5	2.450 MeV to 5.800 MeV	C σ_{el}
			$^{28}_{14}Si$ σ_{inl}			
60	DKE	Petitt,et.al.	NP,79,231,60	5	2.450 MeV to 5.800 MeV	C σ_{el}
			$^{28}_{14}Si$ $\sigma_{n\gamma}$			
68	NJS	Hudoklin Bozic	NIJS,P-213,68	1	.440 mb at 14.1 MeV	
			$^{28}_{14}Si$ σ_{n2n}			
65	GEO	Arnold	ARNOLD,65	5	17.8 MeV to 18.3 MeV	^{65}Cu σ_{n2n}
			$^{28}_{14}Si$ σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	.262 b at 14.6 MeV	^{56}Fe σ_{np}
70	NAS	Singh	NASA-TN-D-5946,70	1	.213 b at 14.5 MeV	
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	.252 b at 14.4 MeV	^{56}Fe σ_{np}
67	TUR	Pasquarelli	NP/A,93,218,67	1	.222 b at 14.7 MeV	
66	BOS	Mitra,et.al.	NP,83,157,66	1	.222 b at 14.8 MeV	^{63}Cu σ_{n2n}
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	121	6.000 MeV to 9.000 MeV	H
65	MUA	Khurana,et.al.	NP,69,153,65	1	.180 b at 14.8 MeV	Fe
63	RIC	Mainsbridge,et.al.	NP,48,83,63	120	5.060 MeV to 8.420 MeV	^{28}Si σ_{np}
63	SAC	Jeronymo+	NP,47,157,63	8	12.6 MeV to 21.0 MeV	abs
63	ISL	Birk,et.al.	NIM,21,197,63	8	5.350 MeV to 6.400 MeV	
61	HAR	Allan	NP,24,274,61	1	.246 b at 14.0 MeV	^{54}Fe σ_{np}
59	NRD	Kern,et.al.	NP,10,226,59	25	12.3 MeV to 18.2 MeV	
56	RIC	Marion,et.al.	PR,101,247,56	39	4.400 MeV to 8.090 MeV	^{28}Si σ_{np}
56	IST	Cohen,et.al.	NP,1,73,56	18	13.1 MeV to 17.5 MeV	^{28}Si σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.220 b at 14.5 MeV	abs

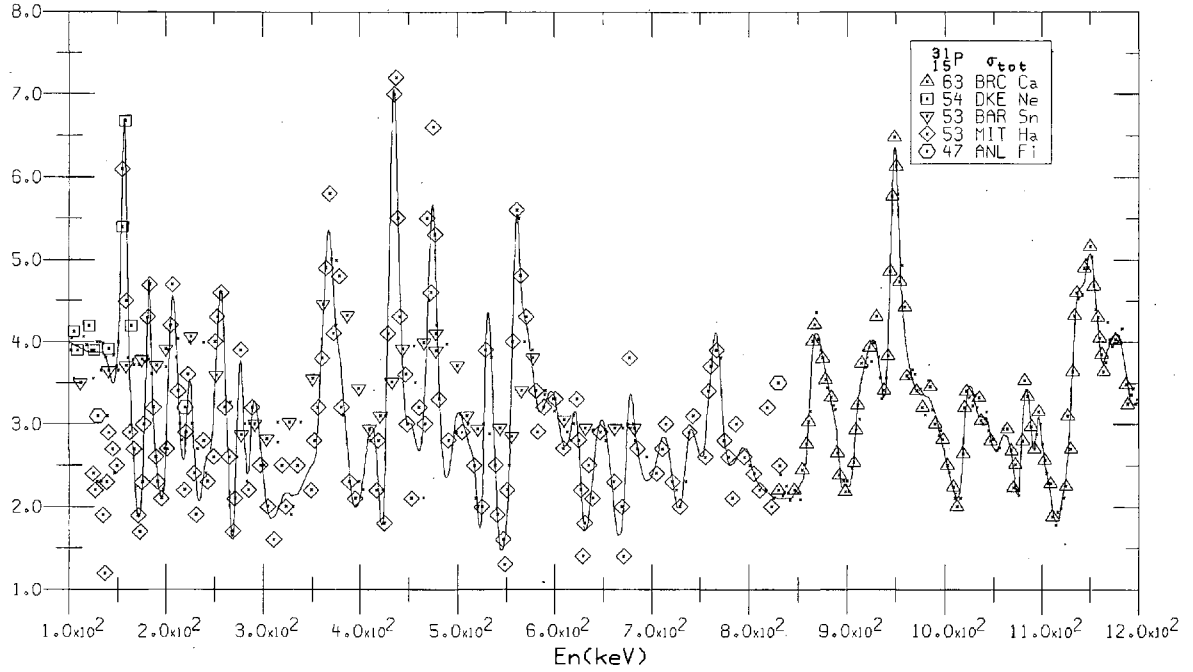
Yr	Lab.	Author	Reference	Points	Range	Standard
			$^{28}_{14}$Si σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	27.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{28}_{14}$Si $\sigma_{n\alpha}$			
65	GEF	Shannon	SHANNON,65	8	9.500 MeV to 10.2 MeV	^{28}Si $\sigma_{n\alpha}$
63	RIC	Mainsbridge+	NP,48,83,63	107	5.420 MeV to 8.370 MeV	^{28}Si $\sigma_{n\alpha}$
63	ISL	Birk,et.al.	NIM,21,197,63	8	5.350 MeV to 6.400 MeV	
			$^{29}_{14}$Si σ_{np}			
70	NAS	Singh	NASA-TN-D-5946,70	1	.112 b at 14.5 MeV	
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	.130 b at 14.4 MeV	^{56}Fe σ_{np}
67	TUR	Pasquarelli	NP/A,93,218,67	1	22.7 mb at 14.7 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.101 b at 14.5 MeV	abs
			$^{29}_{14}$Si σ_{n2p}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.500 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{29}_{14}$Si $\sigma_{n\alpha}$			
63	AE	Konijn,et.al.	NP,48,191,63	46	2.440 MeV to 3.770 MeV	^{1}H σ_{el}
63	ISL	Birk,et.al.	NIM,21,197,63	16	4.000 MeV to 6.400 MeV	
			$^{30}_{14}$Si $\sigma_{n\gamma}$			
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.480 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
58	LRL	Booth,et.al.	PR,112,226,58	1	1.900 mb at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	.490 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	2.090 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
			$^{30}_{14}$Si σ_{np}			
70	NAS	Singh	NASA-TN-D-5946,70	1	5.000 mb at 14.5 MeV	
			$^{30}_{14}$Si $\sigma_{n\alpha}$			
70	NAS	Singh	NASA-TN-D-5946,70	1	73.6 mb at 14.5 MeV	
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	68.0 mb at 14.4 MeV	^{28}Si σ_{np}
67	TUR	Pasquarelli	NP/A,93,218,67	1	.175 b at 14.7 MeV	
65	MUA	Khurana,et.al.	NP,69,153,65	1	.123 b at 14.8 MeV	Fe
53	CRC	Paul,et.al.	CJP,31,267,53	1	45.9 mb at 14.5 MeV	abs
			$^{0X1}_{14}$Si σ_{tot}			
72	ORL	Perey,et.al.	ORNL-4823,72	3692	.187 MeV to 48.7 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	9.400 b at 1.440 eV	
60	COL	Rustad,et.al.	RSI,36,887,60	13	.0008 eV to 3.000 eV	abs

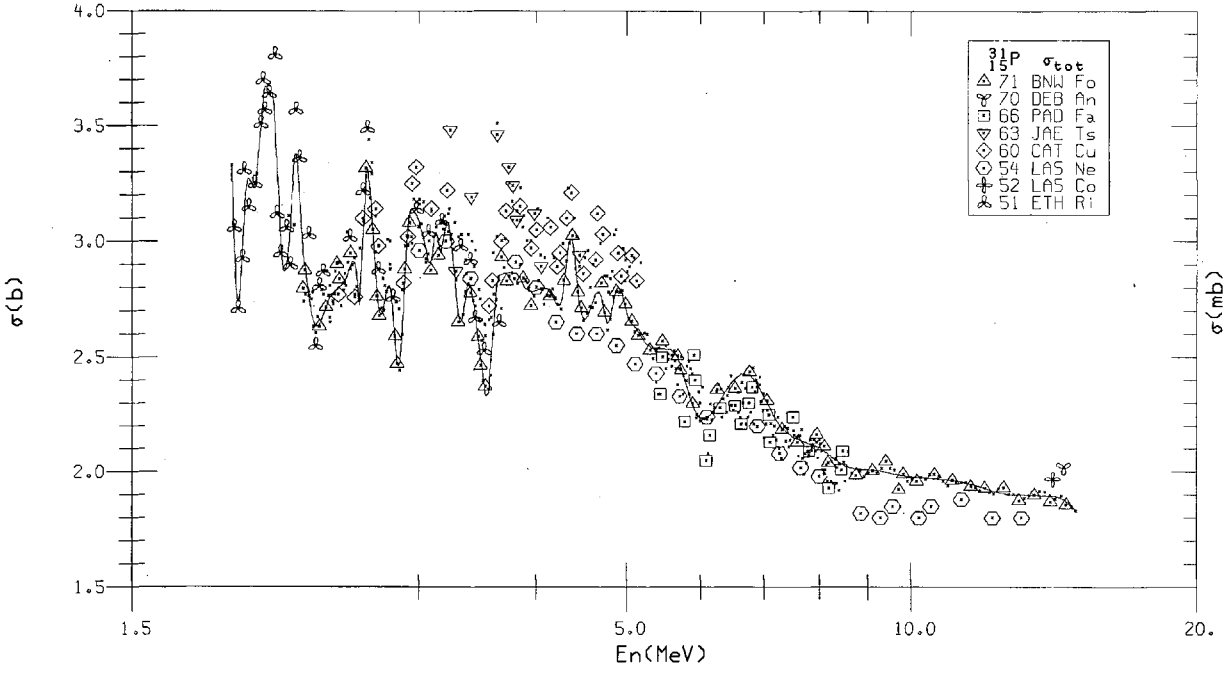
$^{31}_{15}P$

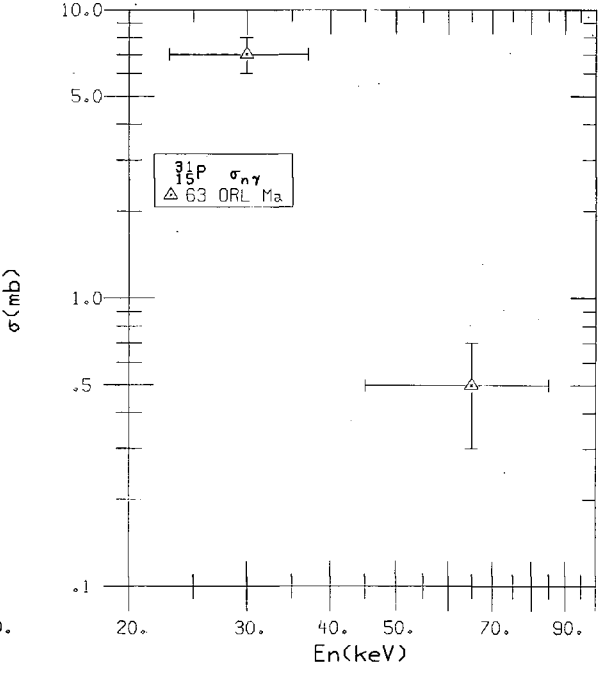
σ_{tot}

$\sigma_{n\gamma}$









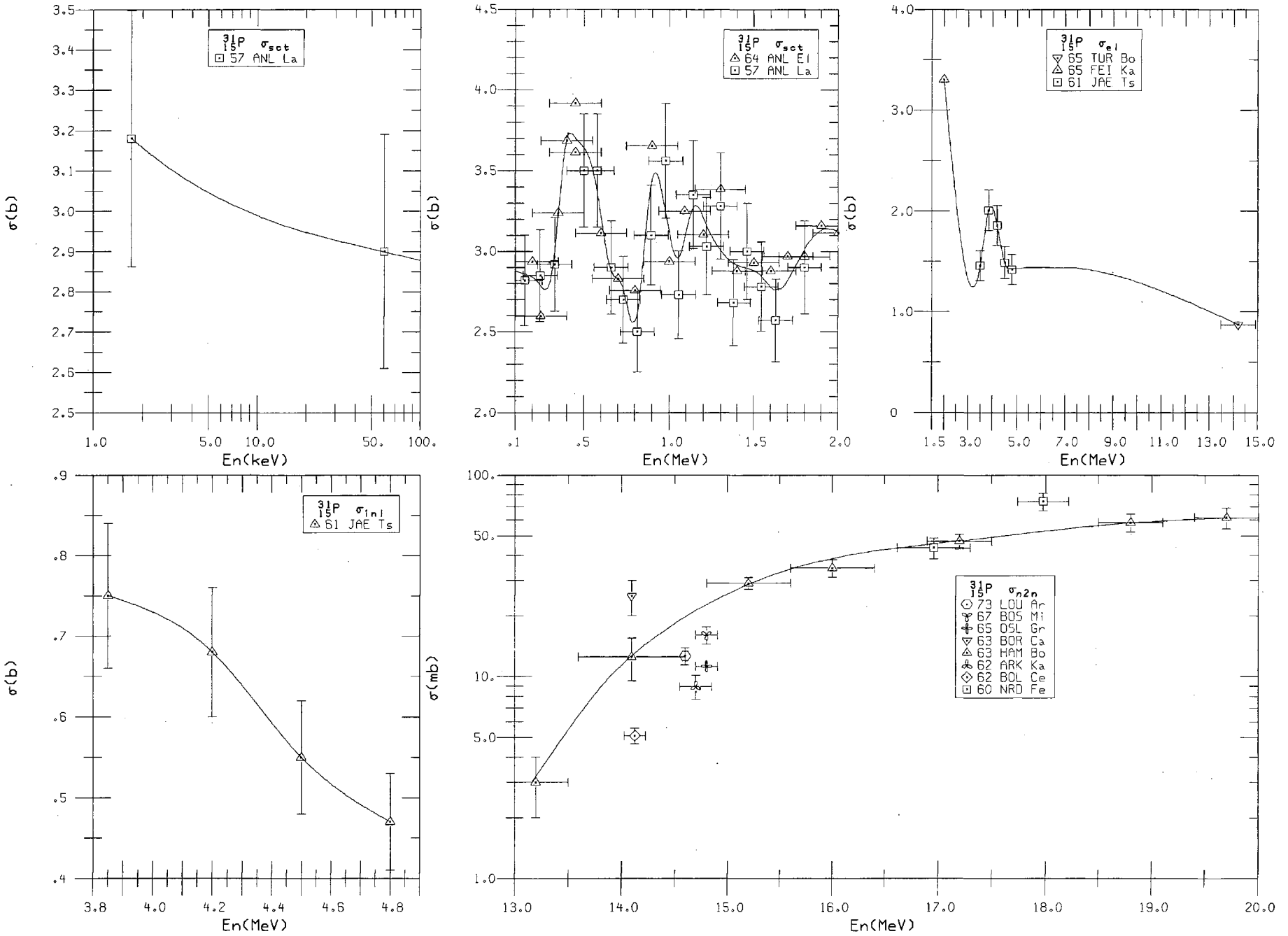
$^{31}_{15}P$

σ_{el}

σ_{inl}

σ_{sct}

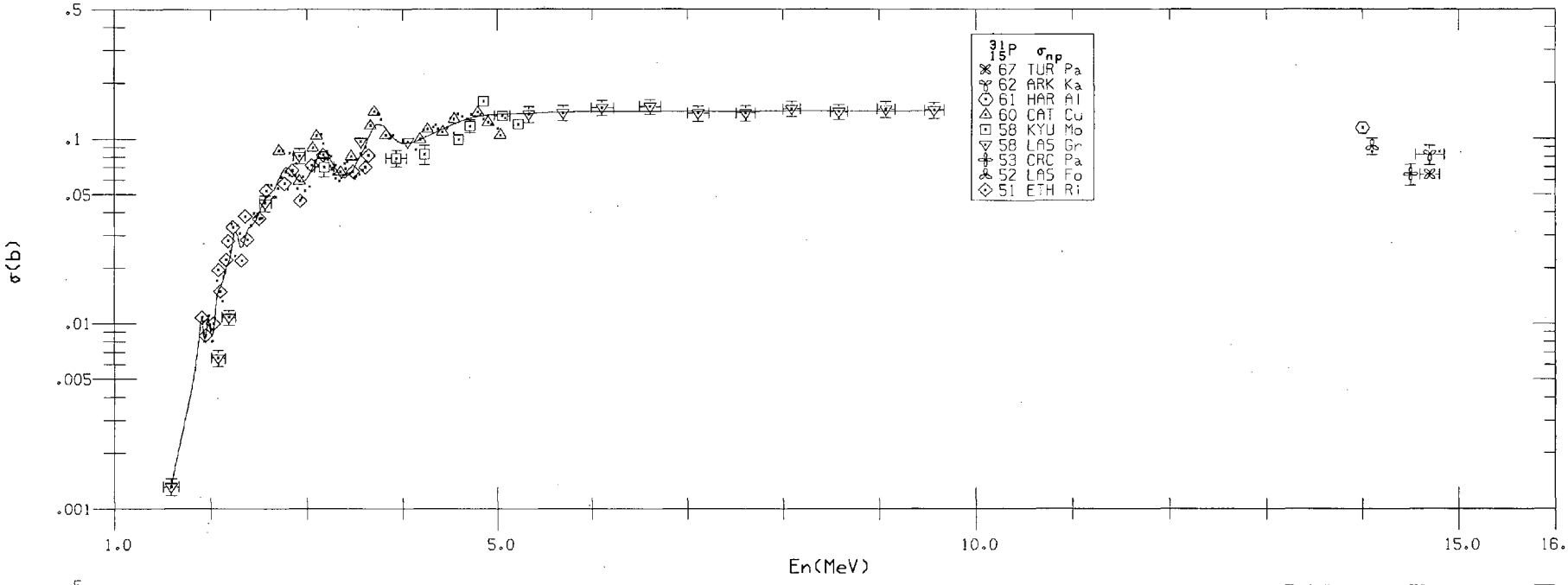
σ_{n2n}

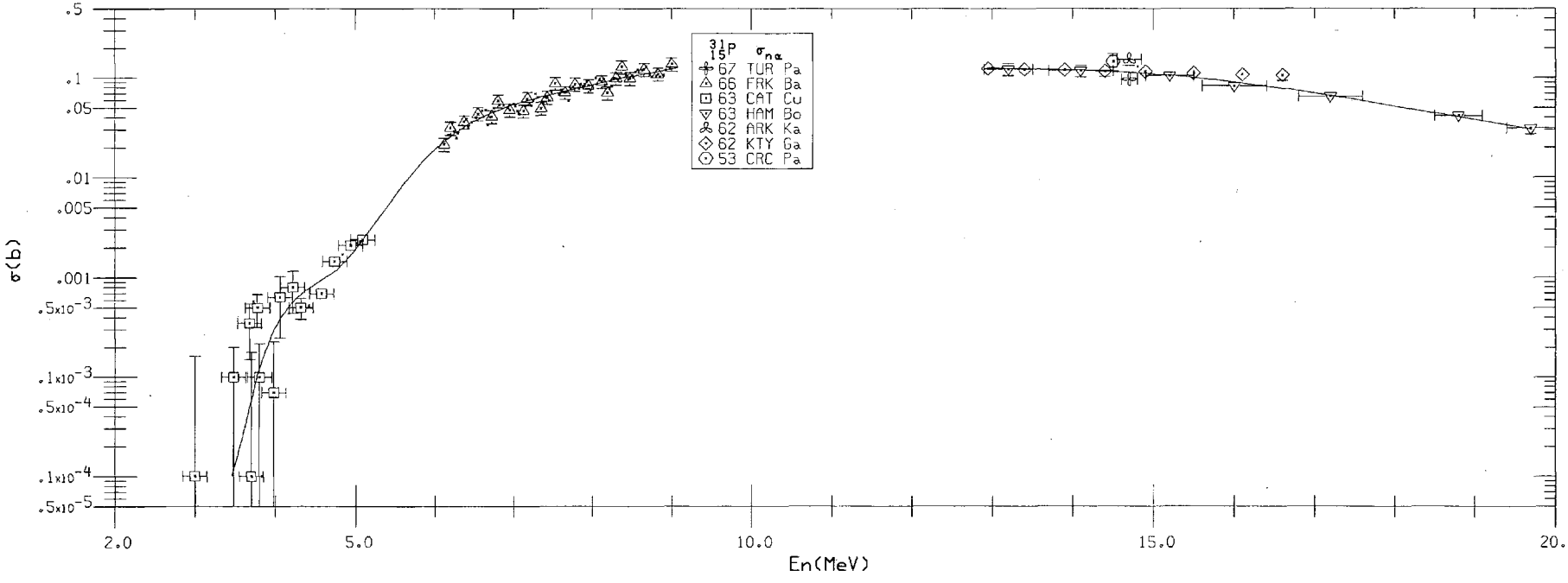


$^{31}_{15}P$

σ_{np}

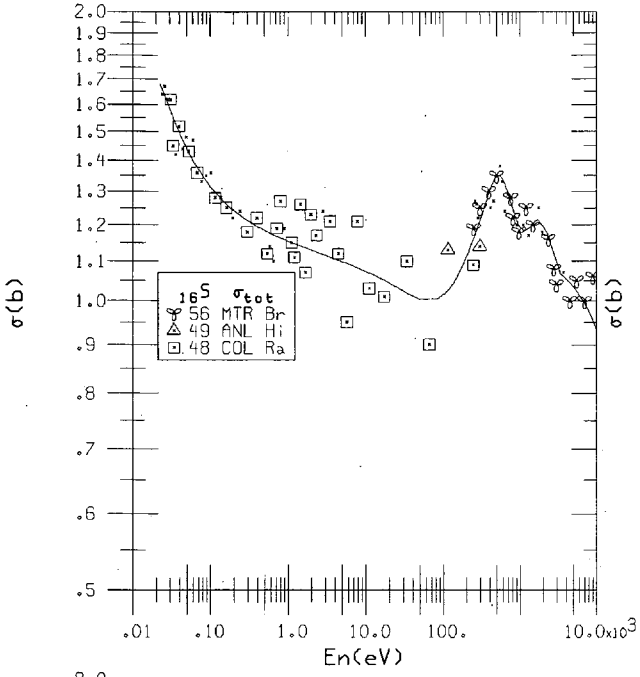
$\sigma_{n\alpha}$

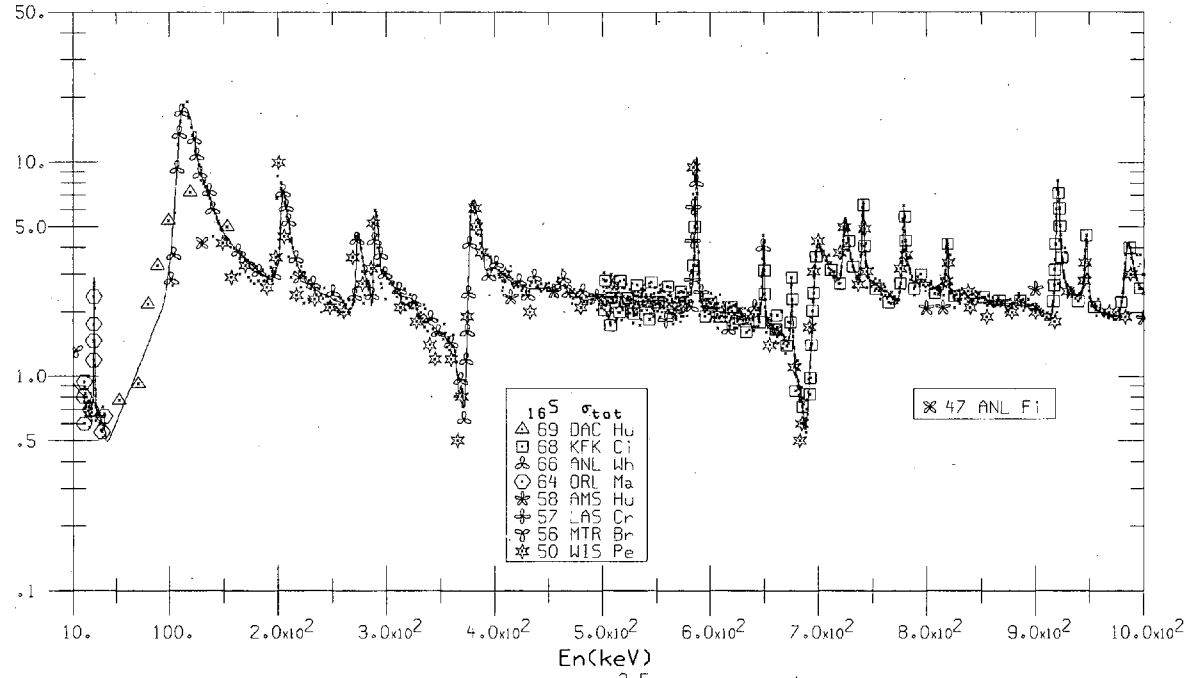


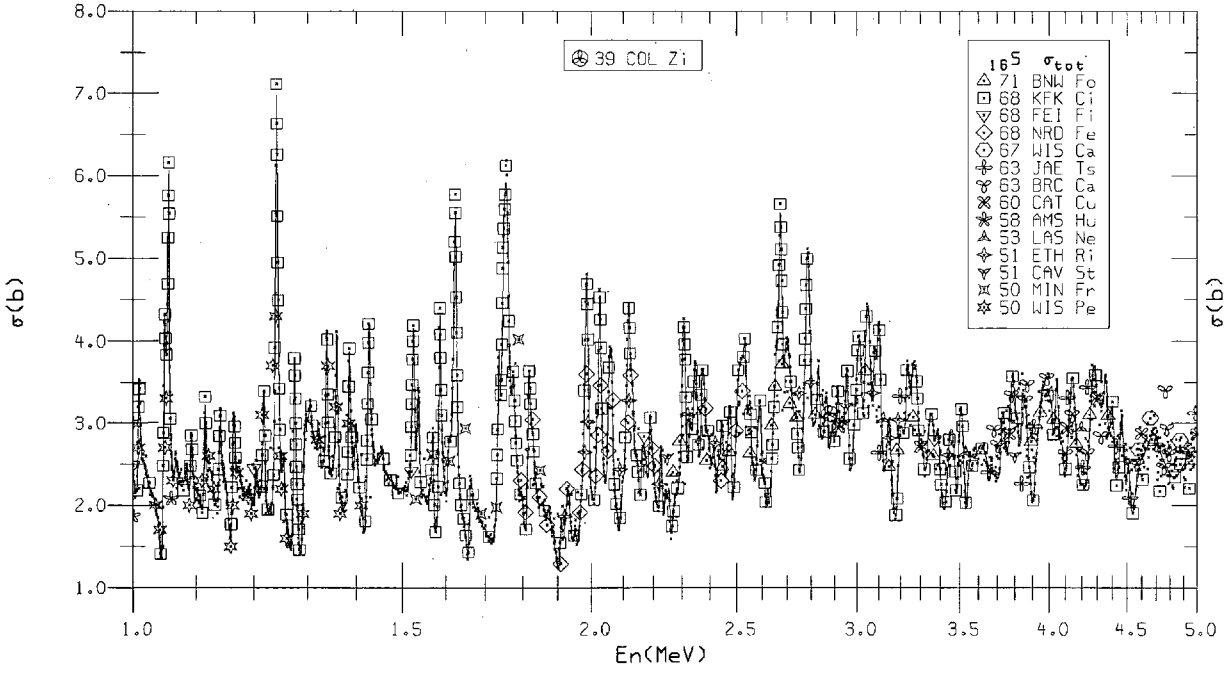


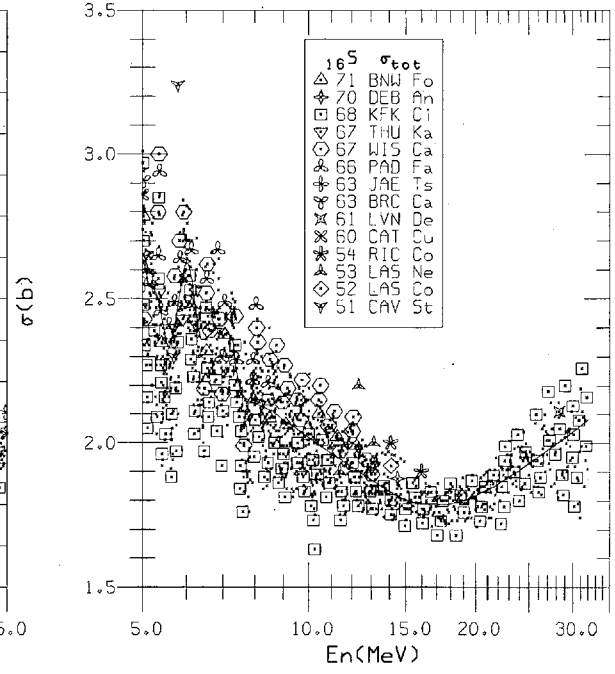
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{31}_{15}P$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.267 MeV to 14.9 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	2.020 b at 14.5 MeV	
66	PAD	Fasoli,et.al.	NC,44,455,66	125	5.373 MeV to 8.545 MeV	
63	JAE	Tsukada,et.al.	JPJ,18,610,63	27	3.239 MeV to 4.447 MeV	
63	BRC	Cabe,et.al.	CR,257,1073,63	167	.830 MeV to 1.199 MeV	abs
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.030 b at 28.4 MeV	
60	CAT	Cuzzocrea,et.al.	NC,18,671,60	97	2.420 MeV to 5.170 MeV	abs
58	ORL	Good,et.al.	PR,109,926,58	27	6.250 keV to 19.5 keV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	31	2.800 MeV to 13.1 MeV	
54	DKE	Newson	NEWSON,54	49	40.5 keV to .178 MeV	abs
53	BAR	Snowdon,et.al.	PR,90,615,53	65	40.0 keV to .682 MeV	abs
53	MIT	Hansen,et.al.	PR,92,652,53	196	.125 MeV to .831 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.970 b at 14.1 MeV	abs
52	COL	Havens Jr	HAVENS,52	45	.0236 eV to .237 keV	
51	ETH	Ricamo	NC,8,383,51	80	1.910 MeV to 3.670 MeV	abs
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$^{31}_{15}P$ σ_{el}			
65	TUR	Bonazzola,et.al.	NP,68,369,65	1	.870 b at 14.2 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,,65	1	3.300 b at 2.000 MeV	
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	5	3.500 MeV to 4.800 MeV	
			$^{31}_{15}P$ σ_{inl}			
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	4	3.850 MeV to 4.800 MeV	
			$^{31}_{15}P$ σ_{sct}			
64	ANL	Elwyn,et.al.	NP,59,113,64	23	.200 MeV to 2.000 MeV	C
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	1.700 keV to 1.800 MeV	C
			$^{31}_{15}P$ σ_{non}			
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.130 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.700 b at 2.500 MeV	abs
			$^{31}_{15}P$ $\sigma_{n\gamma}$			
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.340 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.360 mb at 14.1 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
			$^{31}_{15}P$ σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	12.6 mb at 14.6 MeV	^{63}Cu σ_{n2n}
67	TUR	Pasquarelli	NP/A,93,218,67	1	8.400 mb at 14.7 MeV	abs
67	BOS	Mitra	IJP,41,752,67	1	16.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
66	MUA	Prasad,et.al.	NP,88,349,66	1	11.0 mb at 14.8 MeV	^{56}Fe σ_{np}
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	11.7 mb at 14.8 MeV	
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	11.2 mb at 14.8 MeV	abs
63	BOR	Carles	CR,257,659,63	1	25.0 mb at 14.1 MeV	^{63}Cu σ_{n2n}
63	HAM	Bormann,et.al.	ZP,174,1,63	7	13.2 MeV to 19.7 MeV	^{63}Cu σ_{n2n}
62	ARK	Kantele,et.al.	NP,35,353,62	1	8.900 mb at 14.7 MeV	^{63}Cu σ_{n2n}
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	5.100 mb at 14.1 MeV	
60	NRD	Ferguson,et.al.	PR,118,228,60	3	14.7 MeV to 18.0 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{31}_{15}P$ σ_{np}			
67	TUR	Pasquarelli	NP/A,93,218,67	1	64.0 mb at 14.7 MeV	
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	85.0 mb at 14.8 MeV	abs
62	ARK	Kantele,et.al.	NP,35,353,62	1	82.0 mb at 14.7 MeV	^{63}Cu σ_{n2n}
61	HAR	Allan	NP,24,274,61	1	.114 b at 14.0 MeV	^{54}Fe σ_{np}
60	CAT	Cuzzocrea,et.al.	NC,16,450,60	53	2.710 MeV to 5.030 MeV	^{31}P σ_{np}
58	KYU	Morita	JPJ,13,431,58	10	3.180 MeV to 5.220 MeV	^{31}P σ_{np}
58	LAS	Grundl,et.al.	PR,109,425,58	21	1.590 MeV to 14.1 MeV	^{238}U σ_{nf}
53	CRC	Paul,et.al.	CJP,31,267,53	1	64.2 mb at 14.5 MeV	abs
52	LAS	Forbes	PR,88,1309,52	1	91.0 mb at 14.1 MeV	
51	ETH	Ricamo	NC,8,383,51	88	1.910 MeV to 3.640 MeV	^{31}P σ_{np}
			$^{31}_{15}P$ σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	.163 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{31}_{15}P$ σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.222 mb at 14.0 MeV	
60	ARK	Kumabe,et.al.	PR,117,1568,60	1	.700 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{31}_{15}P$ $\sigma_{n\alpha}$			
67	TUR	Pasquarelli	NP/A,93,218,67	1	96.8 mb at 14.7 MeV	abs
66	FRK	Bass,et.al.	EANDC(E)-66,64,66	116	6.125 MeV to 9.000 MeV	H
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	.129 b at 14.8 MeV	abs
65	BEH	Peil	NP,66,419,65	1	.142 b at 14.5 MeV	^{27}Al σ_{np}
63	CAT	Cuzzocrea,et.al.	NP,48,686,63	20	3.000 MeV to 5.090 MeV	^{31}P σ_{np}
63	HAM	Bormann,et.al.	ZP,174,1,63	7	13.2 MeV to 19.7 MeV	^{63}Cu σ_{n2n}
62	ARK	Kantele,et.al.	NP,35,353,62	1	.153 b at 14.7 MeV	^{63}Cu σ_{n2n}
62	KTY	Gabbard,et.al.	PR,128,1276,62	11	13.0 MeV to 16.6 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.146 b at 14.5 MeV	abs


σ(b)
En(eV)
16S σtot
56 MTR Br
49 ANL Hi
48 COL Ra


σ(b)
En(keV)
16S σtot
69 DAC Hu
68 KFK Ci
66 ANL Wh
64 ORL Ma
58 AMS Hu
57 LAS Cr
56 MTR Br
50 WIS Pe
47 ANL Fi


σ(b)
En(MeV)
39 COL Zi
16S σtot
71 BNW Fo
68 KFK Ci
68 FEI Fi
68 NRD Fe
67 WIS Ca
63 JAE Ts
63 BRC Ca
60 CAT Cu
58 AMS Hu
53 LAS Ne
51 ETH Ri
51 CAV St
50 MIN Fr
50 WIS Pe


σ(b)
En(MeV)
16S σtot
71 BNW Fo
70 DEB An
68 KFK Ci
67 THU Ka
67 WIS Ca
66 PAD Fa
63 JAE Ts
63 BRC Ca
61 LVN De
60 CAT Cu
54 RIC Co
53 LAS Ne
52 LAS Co
51 CAV St

^{16}S

σ_{el}

σ_{sct}

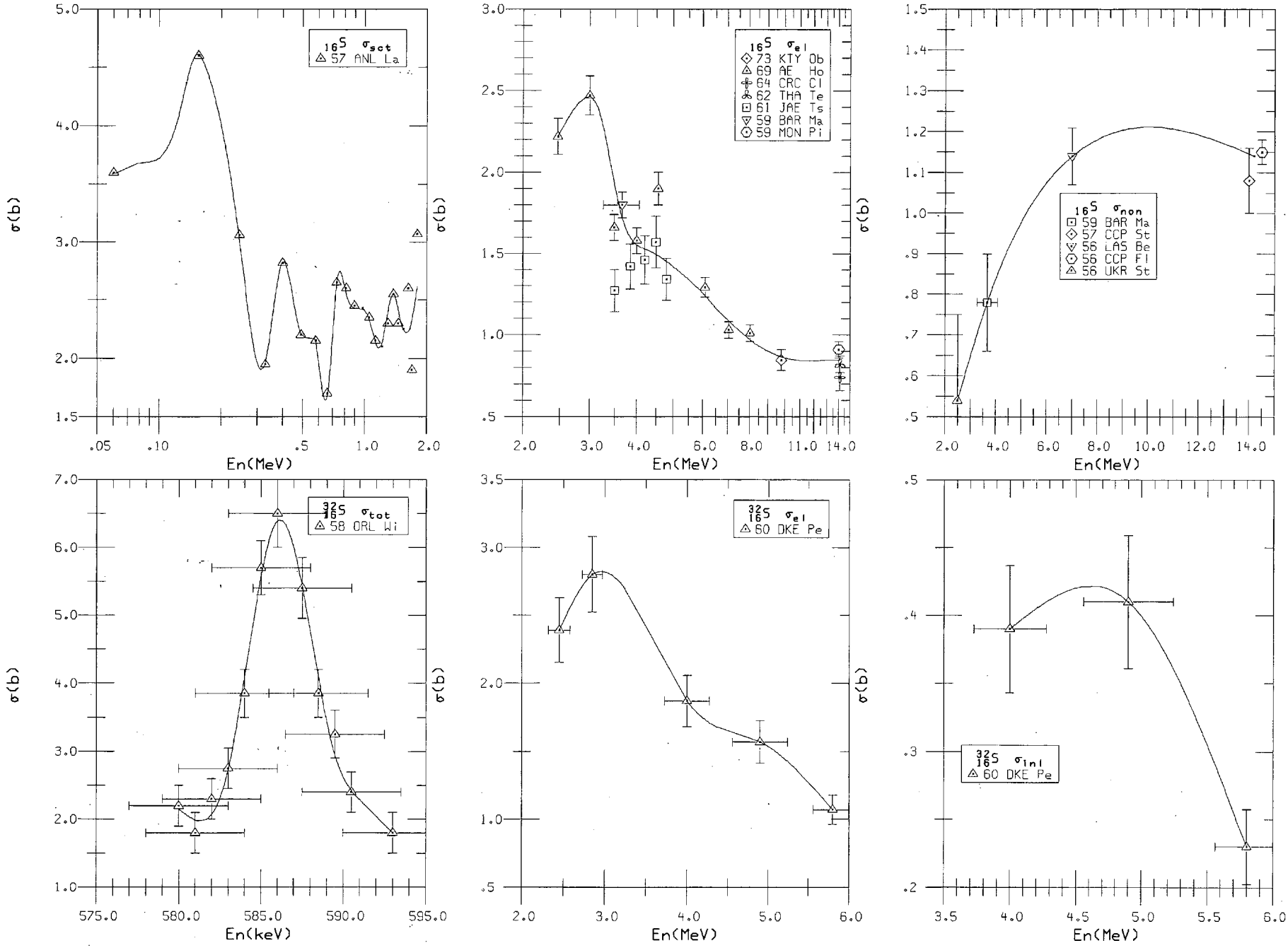
σ_{non}

$^{32}_{16}S$

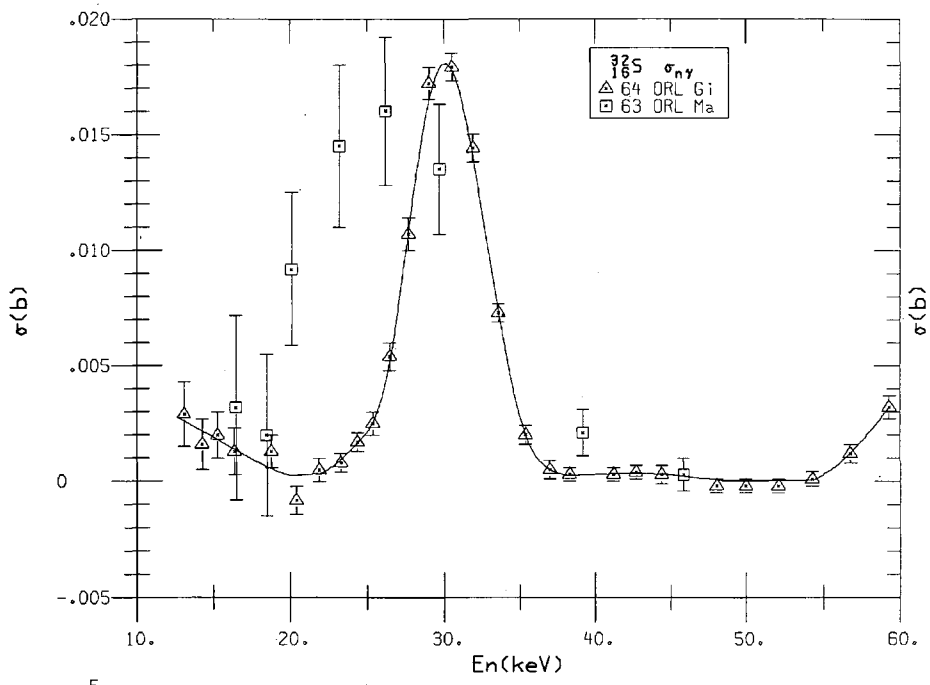
σ_{tot}

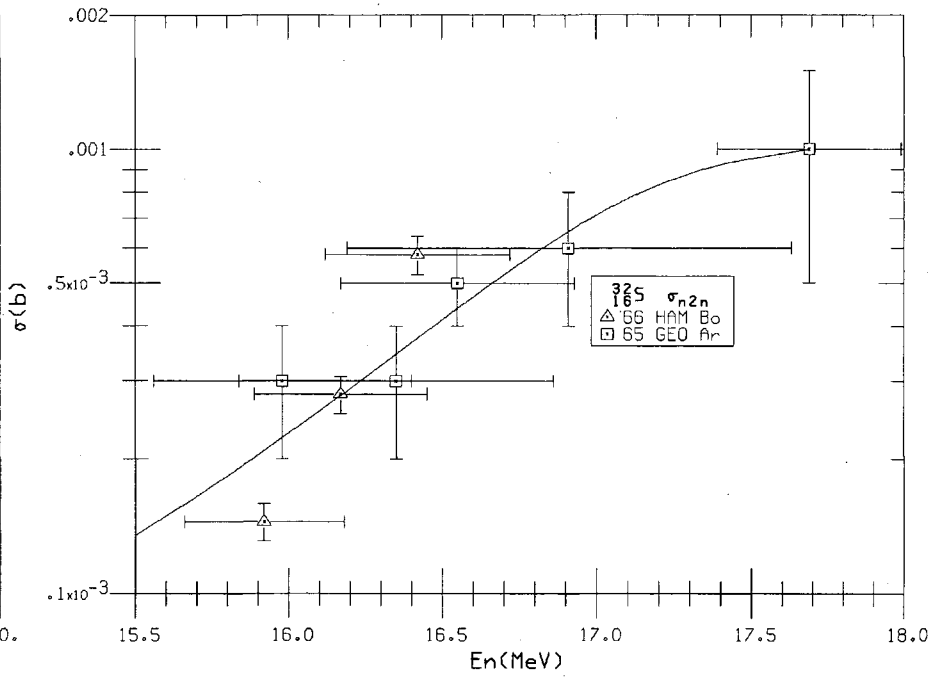
σ_{el}

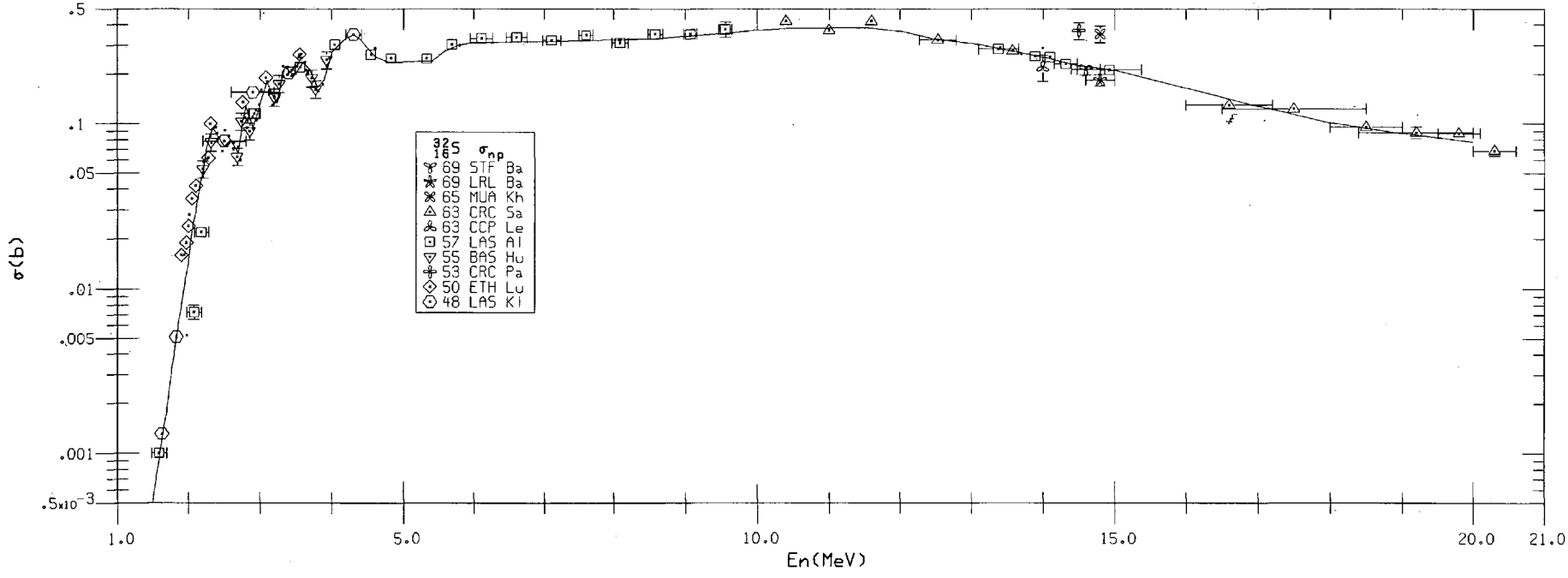
σ_{inl}



$^{32}_{16}S$
$\sigma_{n\gamma}$
σ_{n2n}
σ_{np}
[6407]





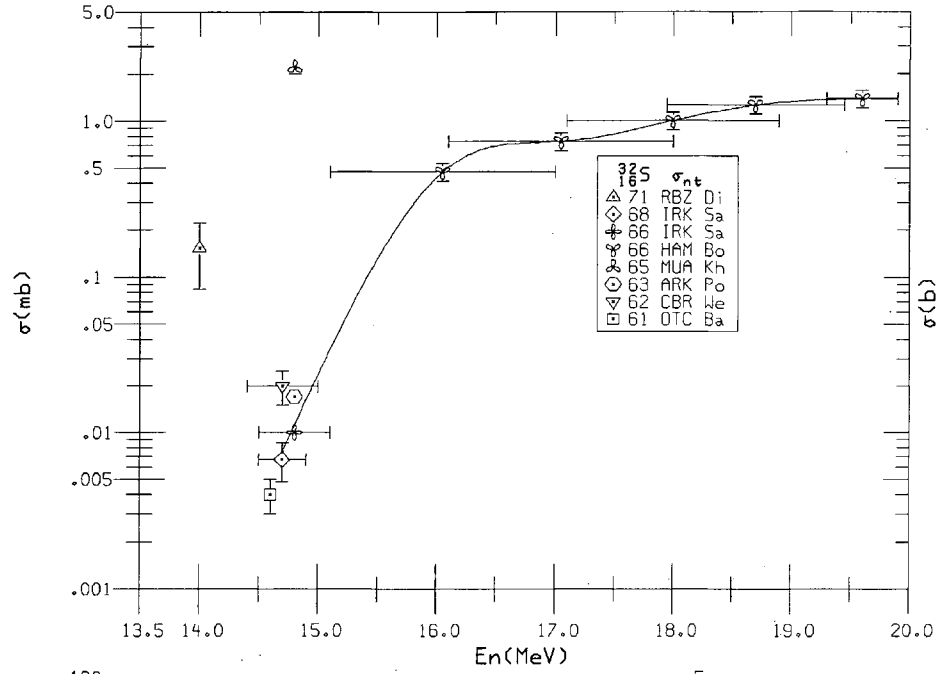


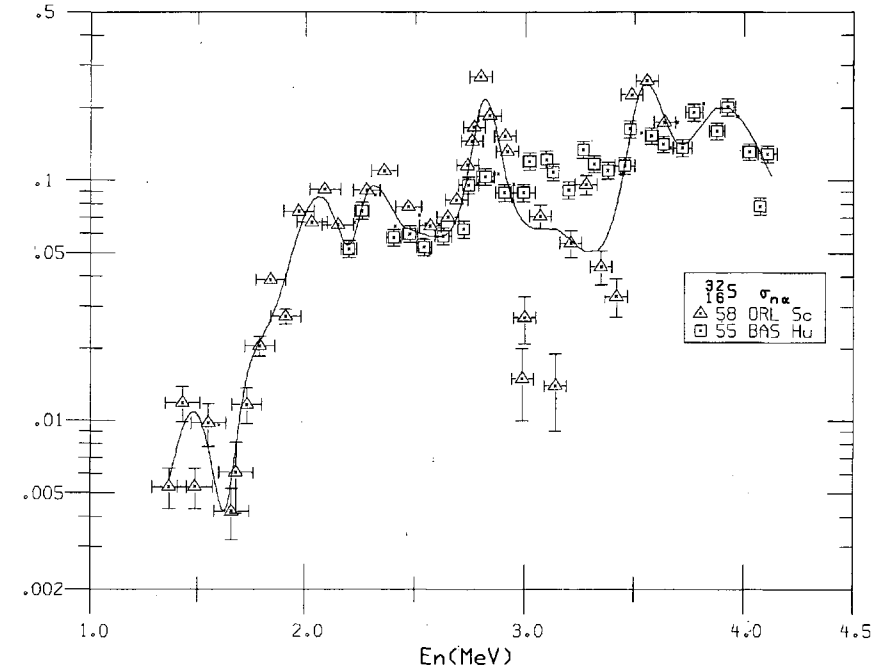
$^{32}_{16}S$ σ_{nt}

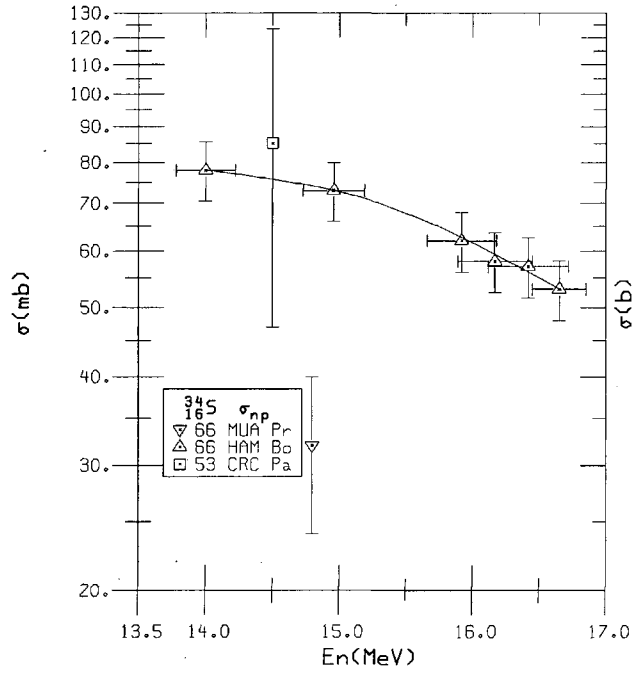
$\sigma_{n\alpha}$

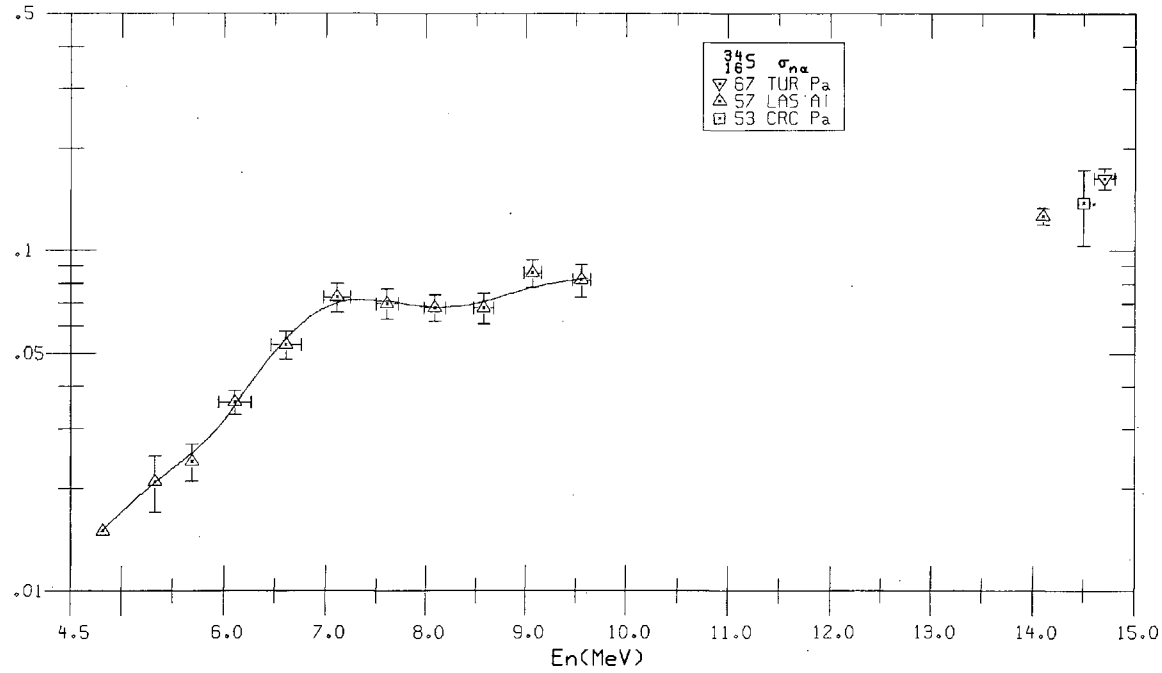
$^{34}_{16}S$ σ_{np}

$\sigma_{n\alpha}$







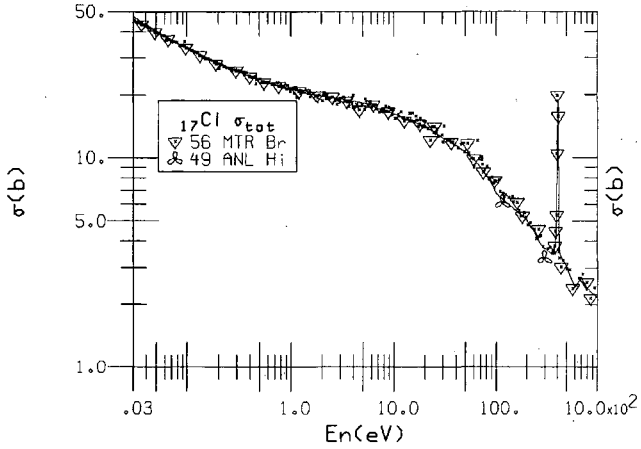


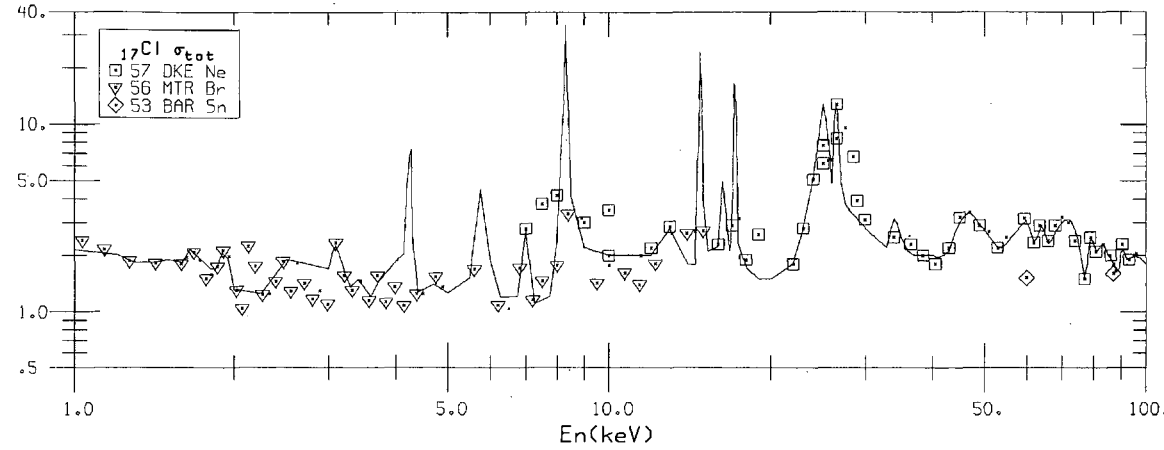
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{16}S$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.259 MeV to 14.9 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	1.875 b at 14.5 MeV	
69	DAC	Hussain,et.al.	NSP/B,5,44,69	7	53.0 keV to .153 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000,68	5115	.500 MeV to 31.9 MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	11	.820 MeV to 3.550 MeV	
68	NRD	Ferguson	NP/A,117,472,68	100	1.792 MeV to 2.607 MeV	abs
67	THU	Kao,et.al.	CHP,5,43,67	24	5.360 MeV to 6.280 MeV	abs
67	WIS	Carlson,et.al.	PR,158,1142,67	459	4.500 MeV to 13.4 MeV	abs
66	ANL	Whalen,et.al.	ANL-7210,16,66	540	.101 MeV to .649 MeV	abs
66	PAD	Fasoli,et.al.	NC,44,455,66	146	4.900 MeV to 8.645 MeV	
64	ORL	Macklin,et.al.	PR/B,136,695,64	128	20.0 keV to 40.0 keV	abs
63	JAE	Tsukada,et.al.	JPJ,18,610,63	59	3.051 MeV to 5.048 MeV	
63	BRC	Cabe,et.al.	EANDC(E)-49,66,63	136	3.684 MeV to 5.029 MeV	abs
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.110 b at 28.4 MeV	
60	CAT	Cuzzocrea,et.al.	NC,18,671,60	77	2.920 MeV to 5.170 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	2.580 b at 3.660 MeV	abs
58	AMS	Huijer,et.al.	PHY,24,331,58	16	.415 MeV to 1.180 MeV	abs
57	LAS	Cranberg,et.al.	RSI,28,89,57	36	.557 MeV to .602 MeV	
56	MTR	Brugger,et.al.	IDO-16300,56	32	.249 keV to 12.5 keV	
54	RIC	Cook,et.al.	PR,94,651,54	3	14.1 MeV to 18.0 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	39	2.920 MeV to 13.2 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	1.920 b at 14.1 MeV	
51	ETH	Ricamo	NC,8,383,51	58	1.900 MeV to 3.670 MeV	abs
51	CAV	Stafford	PPS,64,388,51	21	2.000 MeV to 5.800 MeV	abs
50	MIN	Freier,et.al.	PR,78,508,50	27	1.410 MeV to 1.920 MeV	
50	WIS	Peterson,et.al.	PR,79,593,50	320	.149 MeV to 142.0 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	1.974 b at 42.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
48	COL	Rainwater,et.al.	PR,73,733,48	44	.0243 eV to .246 keV	
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	
			$_{16}S$ σ_{el}			
73	KTY	Obst,et.al.	PR/C,7,1076,73	1	.846 b at 9.800 MeV	^{1}H σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	8	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
64	CRC	Clarke,et.al.	NP,53,177,64	1	.740 b at 14.1 MeV	abs
62	THA	Tesch	NP,37,412,62	1	.820 b at 14.1 MeV	
61	JAE	Tsukada,et.al.	61VIENNA,1,75,,61	5	3.500 MeV to 4.800 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.800 b at 3.660 MeV	
59	MON	Pierre,et.al.	PR,115,999,59	1	.910 b at 14.0 MeV	
			$_{16}S$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.800 MeV	C

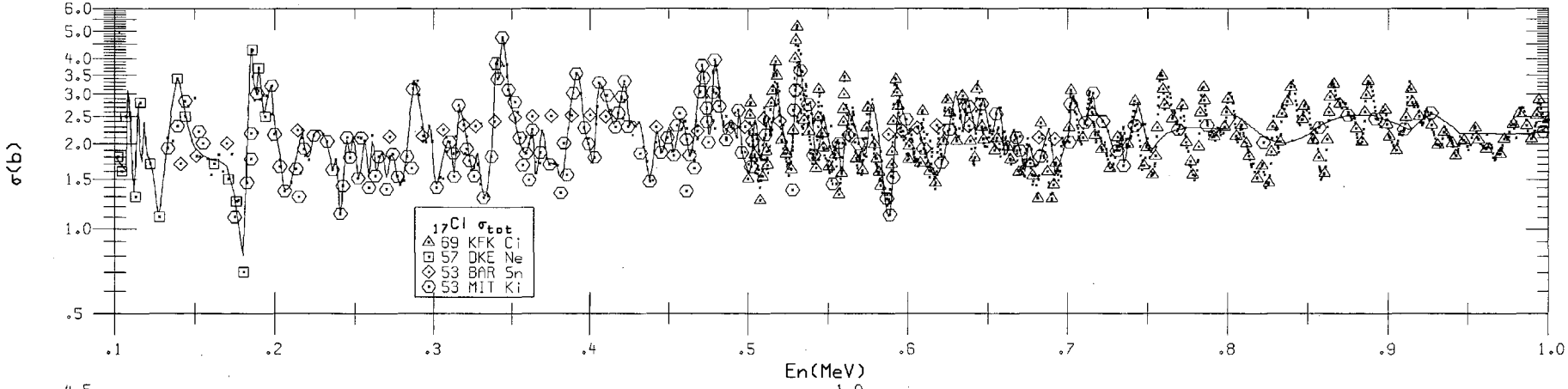
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{16}S$ σ_{non}			
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	.780 b at 3.660 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.140 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.080 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	1	1.140 b at 7.000 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.150 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.540 b at 2.500 MeV	abs
			$_{16}S$ $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.500 mb at 14.1 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	1	8.000 mb at 65.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	1	25.0 mb at 30.0 keV	In $\sigma_{n\gamma}$
			$^{32}_{16}S$ σ_{tot}			
58	ORL	Wills Jr,et.al.	PR,109,891,58	12	.580 MeV to .593 MeV	
			$^{32}_{16}S$ σ_{el}			
60	DKE	Petitt,et.al.	NP,79,231,60	5	2.450 MeV to 5.800 MeV	C σ_{el}
			$^{32}_{16}S$ σ_{inl}			
60	DKE	Petitt,et.al.	NP,79,231,60	3	4.000 MeV to 5.800 MeV	C σ_{el}
			$^{32}_{16}S$ $\sigma_{n\gamma}$			
64	ORL	Gibbons	GIBBONS,64	28	13.1 keV to 59.3 keV	Ta $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NP,43,353,63	9	16.5 keV to 45.9 keV	Ag $\sigma_{n\gamma}$
			$^{32}_{16}S$ σ_{n2n}			
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	3	15.9 MeV to 16.4 MeV	H
65	GEO	Arnold	ARNOLD,65	5	16.0 MeV to 17.7 MeV	^{65}Cu σ_{n2n}
			$^{32}_{16}S$ σ_{np}			
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.214 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	.184 b at 14.8 MeV	^{1}H σ_{tot}
67	TUR	Pasquarelli	NP/A,93,218,67	1	.215 b at 14.7 MeV	
65	MUA	Khurana,et.al.	NP,69,153,65	1	.352 b at 14.8 MeV	Fe
63	CRC	Santry,et.al.	CJC,41,123,63	16	10.4 MeV to 20.3 MeV	^{32}S σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	.220 b at 14.0 MeV	
61	HAR	Allan	NP,24,274,61	1	.289 b at 14.0 MeV	^{54}Fe σ_{np}
57	LAS	Allen Jr,et.al.	PR,107,1368,57	32	1.590 MeV to 15.0 MeV	^{32}S σ_{np}
57	LAS	Allen Jr,et.al.	PR,107,1368,57	5	2.920 MeV to 14.1 MeV	abs
55	BAS	Hurlimann,et.al.	HPA,28,33,55	38	2.200 MeV to 3.972 MeV	H
53	CRC	Paul,et.al.	CJP,31,267,53	1	.369 b at 14.5 MeV	abs
50	ETH	Luscher,et.al.	HPA,23,561,50	39	1.900 MeV to 3.660 MeV	^{32}S σ_{np}
48	LAS	Klema,et.al.	PR,73,106,48	8	1.630 MeV to 5.800 MeV	Ta

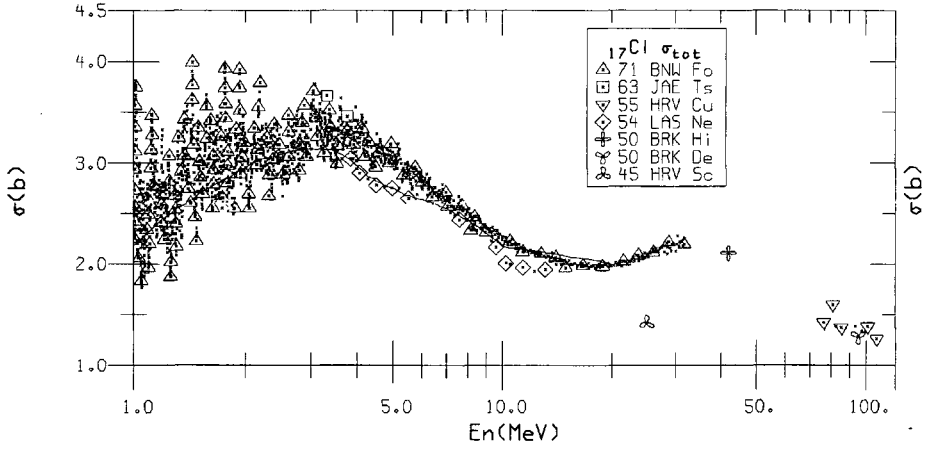
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{32}_{16}S$ σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	.105 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{32}_{16}S$ σ_{pem}			
63	RBZ	Antolkovic	NP,44,123,63	1	.380 b at 14.6 MeV	abs
			$^{32}_{16}S$ σ_{nt}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.154 mb at 14.0 MeV	
68	IRK	Sacher,et.al.	OAW,176,305,68	1	6.700 muB at 14.7 MeV	^{31}P σ_{n2n}
66	IRK	Sacher,et.al.	APA,23,101,66	1	10.0 muB at 14.8 MeV	^{31}P σ_{n2n}
66	HAM	Bormann,et.al.	66PARIS,1,225,,66	6	14.7 MeV to 19.6 MeV	H
65	MUA	Khurana,et.al.	NP,69,153,65	1	2.200 mb at 14.8 MeV	Fe
63	ARK	Poularikas,et.al	ARKANSAS,14,63	1	17.0 muB at 14.8 MeV	
62	CBR	Weigold,et.al.	NP,32,106,62	1	20.0 muB at 14.7 MeV	^{63}Cu σ_{n2n}
61	OTC	Baerg,et.al.	CJC,39,684,61	1	4.000 muB at 14.6 MeV	^{19}F σ_{n2n}
			$^{32}_{16}S$ $\sigma_{n\alpha}$			
58	KTO	Kumabe	JPJ,13,325,58	1	38.2 mb at 14.8 MeV	
58	ORL	Schmitt	BAP,3,37(N6),58	48	1.370 MeV to 3.700 MeV	^{238}U σ_{nf}
55	BAS	Hurlimann,et.al.	HPA,28,33,55	41	2.200 MeV to 4.109 MeV	H
			$^{32}_{16}S$ σ_{aem}			
58	KTO	Kumabe	JPJ,13,325,58	1	.109 b at 14.8 MeV	
			$^{34}_{16}S$ σ_{np}			
66	MUA	Prasad,et.al.	NP,85,476,66	1	32.0 mb at 14.8 MeV	^{56}Fe σ_{np}
66	HAM	Bormann,et.al.	66PARIS,1,225,,66	6	14.0 MeV to 16.7 MeV	H
53	CRC	Paul,et.al.	CJP,31,267,53	1	85.2 mb at 14.5 MeV	abs
			$^{34}_{16}S$ $\sigma_{n\alpha}$			
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.137 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
67	TUR	Pasquarelli	NP/A,93,218,67	1	.163 b at 14.7 MeV	
65	MUA	Khurana,et.al.	NP,69,153,65	1	.165 b at 14.8 MeV	Fe
57	LAS	Allen Jr,et.al.	PR,107,1368,57	12	4.820 MeV to 14.1 MeV	^{32}S σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.138 b at 14.5 MeV	abs

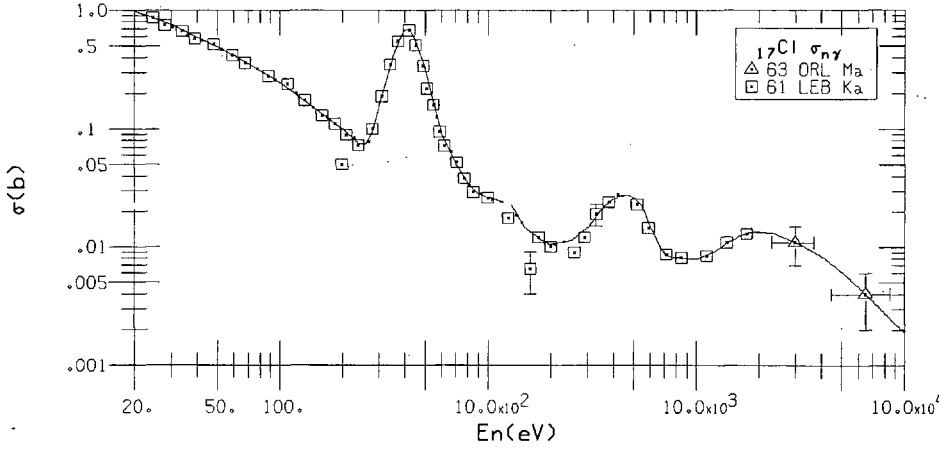
$_{17}$Cl
σ_{tot}
$\sigma_{n\gamma}$
[1149]











$^{35}_{17}Cl$

σ_{n2n}

σ_{np}

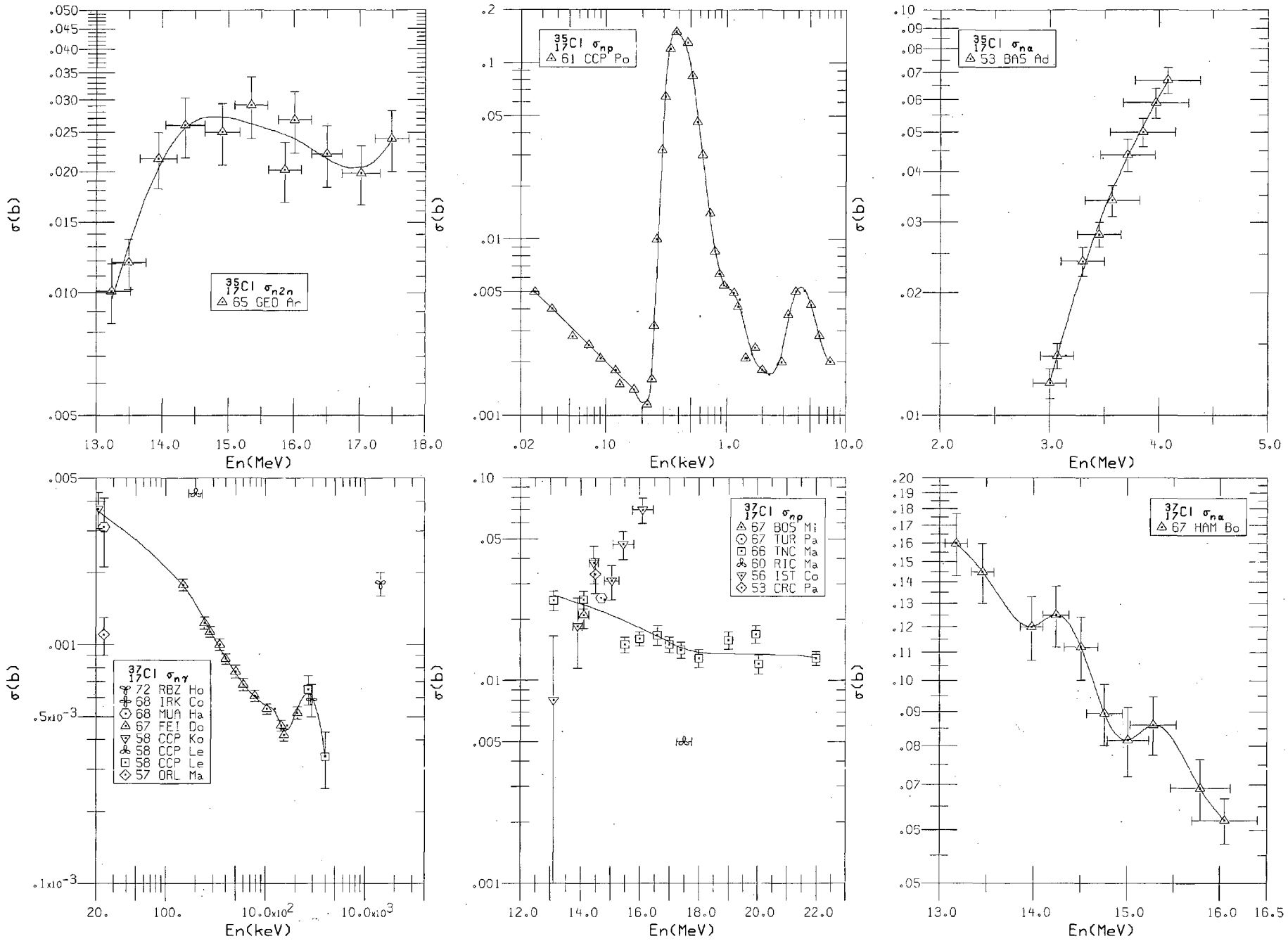
$\sigma_{n\alpha}$

$^{37}_{17}Cl$

$\sigma_{n\gamma}$

σ_{np}

$\sigma_{n\alpha}$



Yr	Lab	Author	Reference	Points	Range	Standard
			$_{17}$Cl σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	247	2.259 MeV to 15.0 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	2.000 b at 14.5 MeV	
69	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),69	5129	.500 MeV to 32.0 MeV	abs
65	COL	Garg	65ANTWERP.,526,65	53	.398 keV to .406 MeV	
63	JAE	Tsukada,et.al.	JPJ,18,610,63	30	3.239 MeV to 5.110 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.100 b at 28.4 MeV	
57	OKE	Newson,et.al.	PR,105,198,57	76	7.000 keV to .194 MeV	
56	MTR	Brugger,et.al.	PR,104,1054,56	632	.0307 eV to 15.0 keV	abs
55	HRV	Culler,et.al.	PR,99,740,55	8	76.7 MeV to 106.8 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.800 MeV to 13.1 MeV	
53	BAR	Snowdon,et.al.	PR,90,615,53	56	60.0 keV to .692 MeV	
53	TEX	Dvorack,et.al.	PR,90,618,53	14	2.210 MeV to 2.760 MeV	
53	MIT	Kiehn,et.al.	PR,91,66,53	438	.133 MeV to 1.084 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.000 b at 14.1 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.110 b at 42.0 MeV	abs
50	BRK	De Juren,et.al.	PR,77,606,50	1	1.280 b at 95.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	1.380 b at 83.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
45	HRV	Scherr	PR,68,240,45	1	1.420 b at 25.0 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	1	3.420 b at 2.880 MeV	abs
			$_{17}$Cl σ_{el}			
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	3.100 b at 2.000 MeV	
			$_{17}$Cl σ_{non}			
56	UKR	Strizhak	ZET,31,907,56	1	.600 b at 2.500 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	1	.900 b at 4.100 MeV	abs
			$_{17}$Cl $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	33.6 b at thermal	
61	LEB	Kashukeev,et.al.	JNE,14,76,61	69	22.0 eV to 17.5 keV	Cl $\sigma_{n\gamma}$
			$^{35}_{17}$Cl $\sigma_{n\gamma}$			
69	CAN	Sims,et.al.	JIN,31,3721,69	1	41.8 b at thermal	^{59}Co $\sigma_{n\gamma}$
			$^{35}_{17}$Cl σ_{n2n}			
67	TUR	Pasquarelli	NP/A,93,218,67	1	7.000 mb at 14.7 MeV	
65	GEO	Arnold	ARNOLD,65	11	13.2 MeV to 17.5 MeV	^{65}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	3.470 mb at 14.5 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{35}_{17}$Cl σ_{np}			
69	CAN	Sims,et.al.	JIN,31,3721,69	1	.489 b at thermal	^{59}Co $\sigma_{n\gamma}$
68	NBS	Schroder,et.al.	PR,165,1184,68	1	.466 b at thermal	^{40}K σ_{np}
66	AMS	Nagel	NAGEL,66	1	.117 b at 14.6 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	.131 b at 14.6 MeV	^{56}Fe σ_{np}
63	CCP	Levkovskij	ZET,45,305,63	1	.100 b at 14.0 MeV	
61	HAR	Allan	NP,24,274,61	1	.107 b at 14.0 MeV	^{54}Fe σ_{np}
61	CCP	Popov,et.al.	ZET,40,1610,61	43	26.0 eV to 7.400 keV	^{35}Cl σ_{np}
49	KLN	Maurer	ZN/A,4,150,49	1	.350 b at thermal	^{55}Mn $\sigma_{n\gamma}$
49	KLN	Maurer	ZN/A,4,150,49	1	.290 b at thermal	^{55}Mn $\sigma_{n\gamma}$
44	ETH	Gilbert,et.al.	HPA,17,97,44	1	.460 b at thermal	^{14}N σ_{np}
			$^{35}_{17}$Cl $\sigma_{n\alpha}$			
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.108 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
66	AMS	Nagel	NAGEL,66	1	.121 b at 14.6 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	.117 b at 14.6 MeV	^{56}Fe σ_{np}
58	ARK	Scalan,et.al.	NP,9,334,58	1	.122 b at 14.8 MeV	
56	HAN	Seppi	SEPPI,56	1	50.0 muB at thermal	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.191 b at 14.5 MeV	abs
53	BAS	Adler,et.al.	HPA,26,349,53	10	3.000 MeV to 4.080 MeV	^{238}U σ_{nf}
			$^{37}_{17}$Cl $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	1.800 mb at 14.4 MeV	^{56}Fe σ_{np}
68	IRK	Colditz,et.al.	OSA,105,236,68	1	.590 mb at 2.900 MeV	^{115}In σ_{inl}
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	3.120 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
67	FEI	Dovbenko,et.al.	AE,23,(2),151,67	15	.150 MeV to 2.100 MeV	^{235}U σ_{nf}
58	CCP	Kononov,et.al.	AE,5,564,58	1	3.710 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	1.100 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{37}_{17}$Cl σ_{np}			
67	BOS	Mitra	67KANPUR,,367,67	2	14.1 MeV to 14.8 MeV	^{63}Cu σ_{n2n}
67	TUR	Pasquarelli	NP/A,93,218,67	1	25.5 mb at 14.7 MeV	
66	TNC	Mathur,et.al.	NP,75,561,66	12	13.1 MeV to 22.0 MeV	^{37}Cl σ_{np}
60	RIC	Mani,et.al.	NP,21,344,60	1	5.000 mb at 17.5 MeV	^{27}Al σ_{np}
58	ARK	Scalan,et.al.	NP,9,334,58	1	25.4 mb at 14.8 MeV	
56	IST	Cohen,et.al.	NP,1,73,56	6	13.1 MeV to 16.1 MeV	^{37}Cl σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	33.4 mb at 14.5 MeV	abs
			$^{37}_{17}$Cl $\sigma_{n\alpha}$			
67	HAM	Bormann,et.al.	EANDC(E)-76,51,67	10	13.2 MeV to 16.0 MeV	H
66	MUA	Prasad,et.al.	NP,85,476,66	1	28.0 mb at 14.8 MeV	
58	ARK	Scalan,et.al.	NP,9,334,58	1	43.8 mb at 14.8 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	52.4 mb at 14.5 MeV	abs

^{18}Ar

σ_{tot}

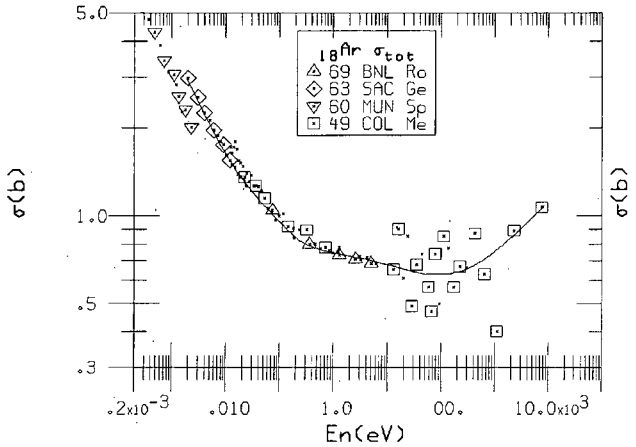
σ_{sct}

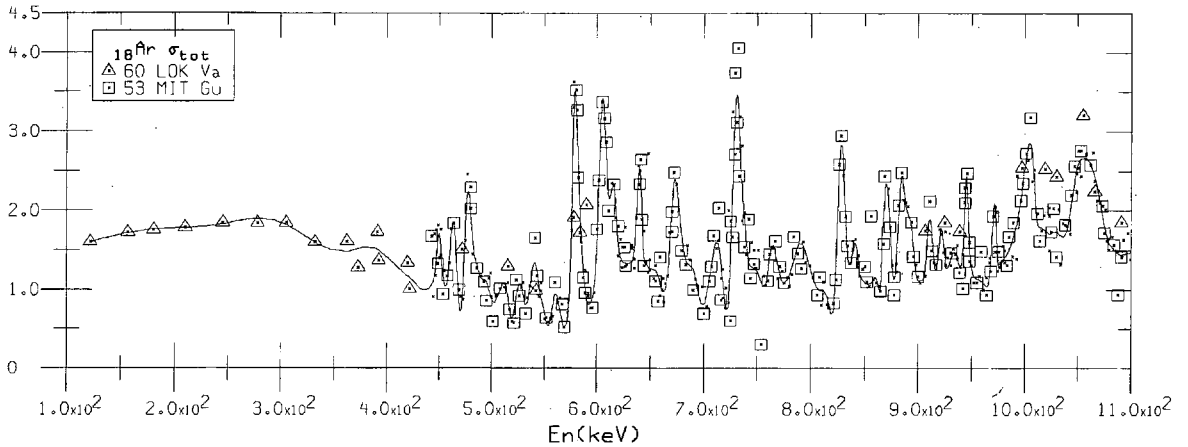
σ_{aem}

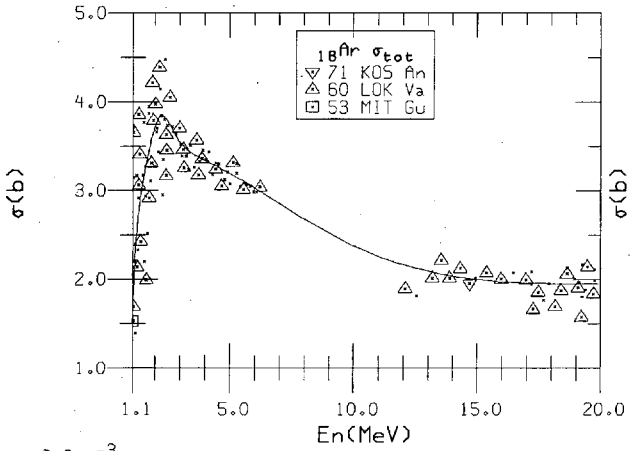
$^{40}_{18}Ar$

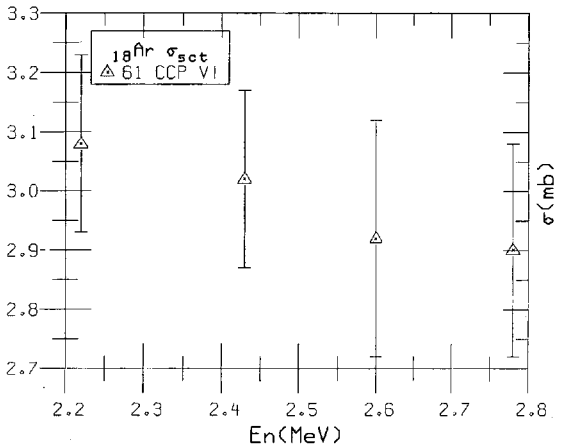
$\sigma_{n\gamma}$

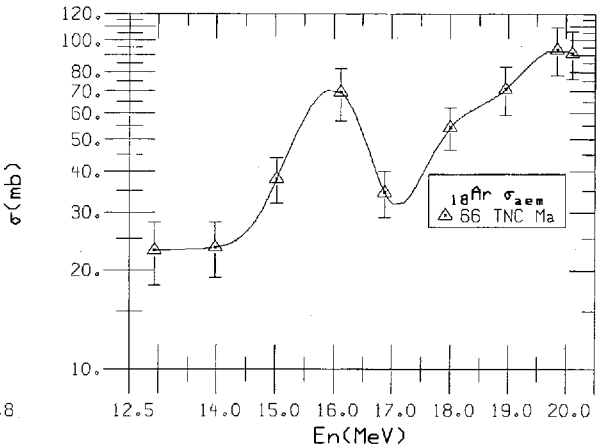
$\sigma_{n\alpha}$

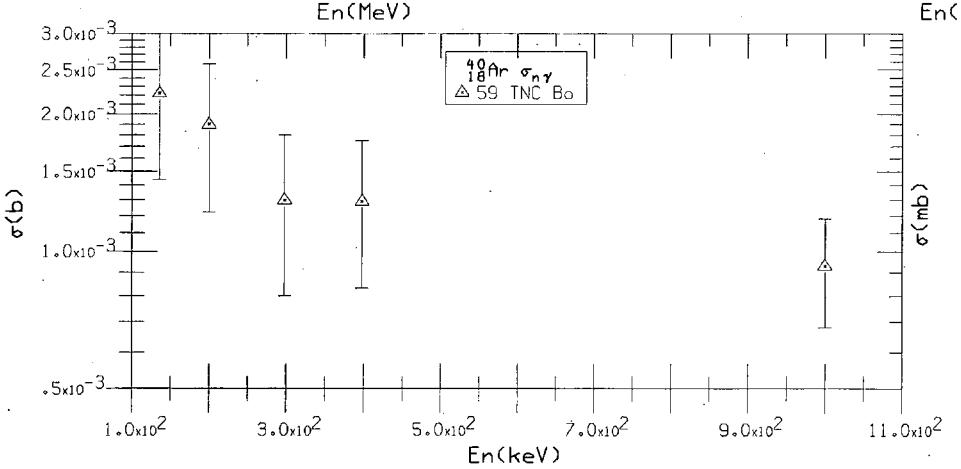


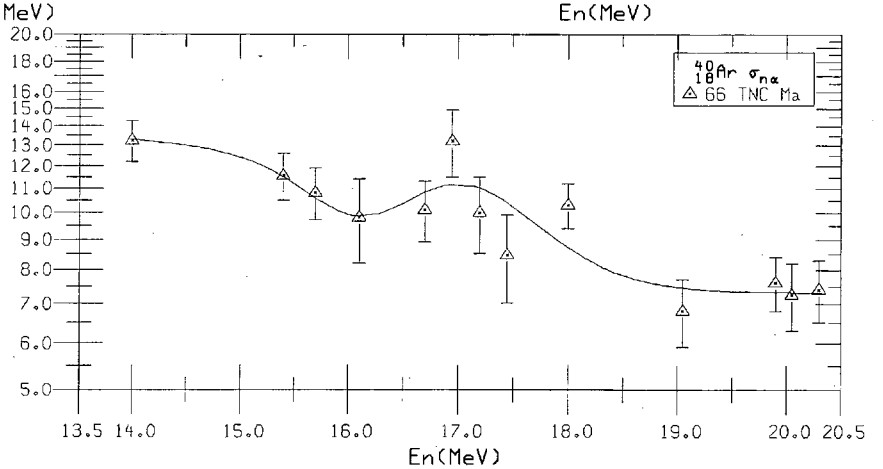








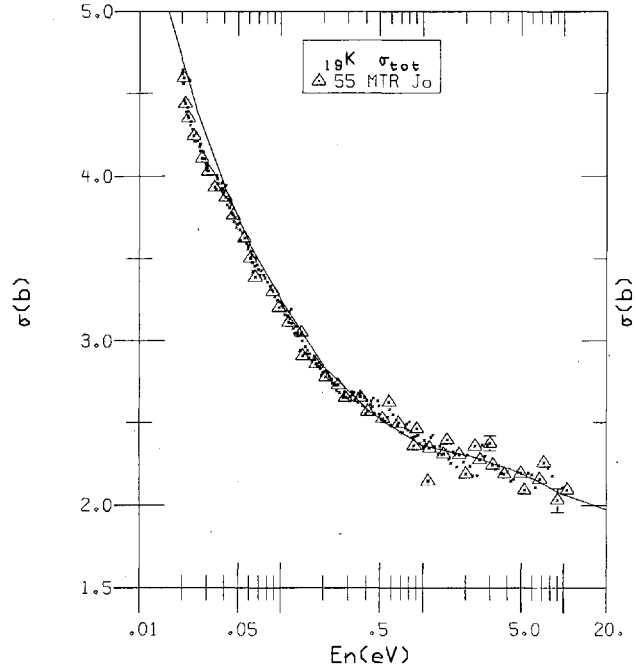


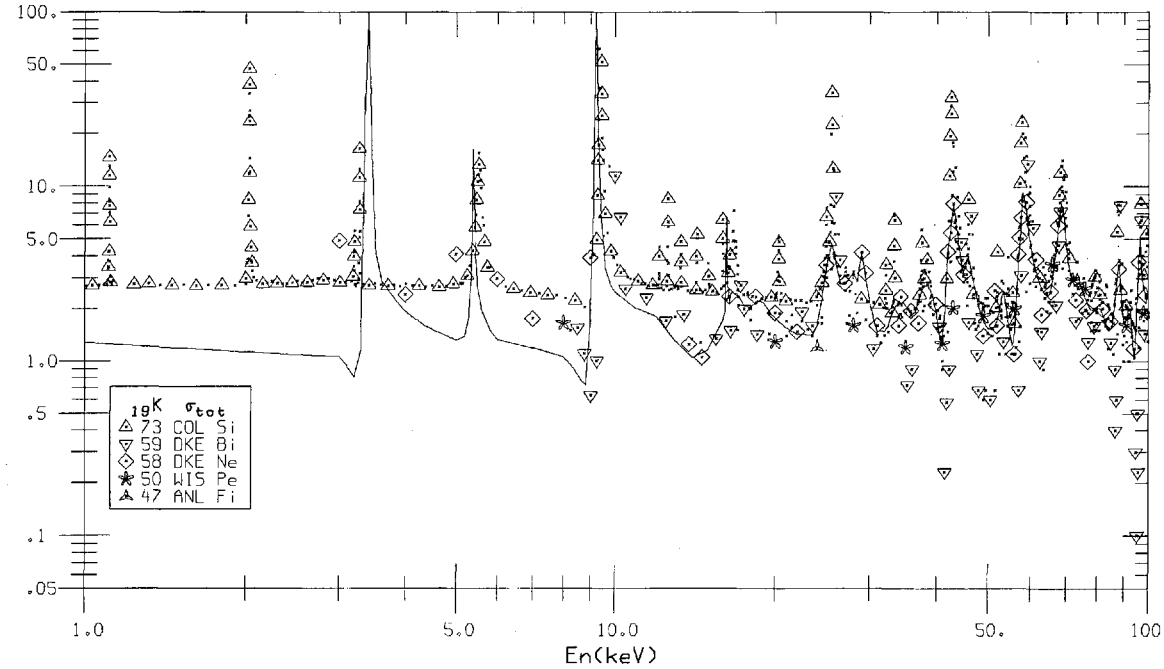


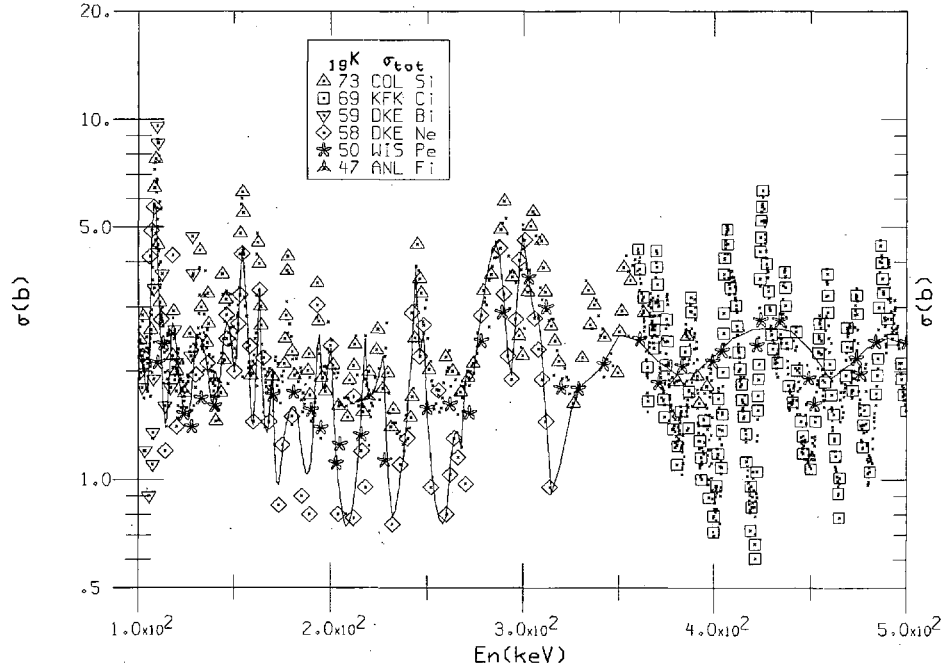
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{18}Ar$ σ_{tot}			
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	1.950 b at 14.7 MeV	
69	BNL	Rorer,et.al.	NP/A,133,410,69	14	.0747 eV to 6.195 eV	abs
63	SAC	Genin,et.al.	JPR,24,21,63	24	.0020 eV to .0250 eV	
60	LOK	Vaughn,et.al.	PR,118,683,60	159	.122 MeV to 19.8 MeV	abs
60	MUN	Springer,et.al.	ZN/A,15,828,60	11	.0004 eV to .0023 eV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	2.080 b at 47.5 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	1.480 b at 88.0 MeV	
53	MIT	Guernsey,et.al.	PR,92,323,53	376	.443 MeV to 1.101 MeV	abs
49	COL	Melkonian	PR,76,1750,49	52	.0123 eV to 7.600 keV	
			$_{18}Ar$ σ_{el}			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	.638 b at thermal	abs
63	SAC	Genin,et.al.	JPR,24,21,63	1	.620 b at thermal	
			$_{18}Ar$ σ_{sct}			
61	CCP	Vlasenko,et.al.	SPN,,209,61	5	2.220 MeV to 2.940 MeV	
			$_{18}Ar$ $\sigma_{n\gamma}$			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	.687 b at thermal	abs
			$_{18}Ar$ σ_{aem}			
66	TNC	Mathur,et.al.	NP,75,561,66	9	12.9 MeV to 20.1 MeV	H
			$^{36}_{18}Ar$ σ_{tot}			
57	CRC	Henshaw	PR,105,976,57	1	77.0 b at .0756 eV	abs
			$^{36}_{18}Ar$ σ_{el}			
57	CRC	Henshaw	PR,105,976,57	1	73.0 b at .0756 eV	
			$^{38}_{18}Ar$ σ_{np}			
69	GIT	Ranakumar,et.al.	NP/A,128,333,69	1	75.0 mb at 14.4 MeV	^{40}Ar σ_{nnp}
68	ARK	Husain,et.al.	JIN,30,355,68	1	.110 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{40}_{18}Ar$ σ_{el}			
57	CRC	Henshaw	PR,105,976,57	1	.360 b at .0702 eV	
			$^{40}_{18}Ar$ $\sigma_{n\gamma}$			
65	UKW	French,et.al.	NP,65,225,65	1	.723 b at thermal	
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	5	.136 MeV to 1.000 MeV	

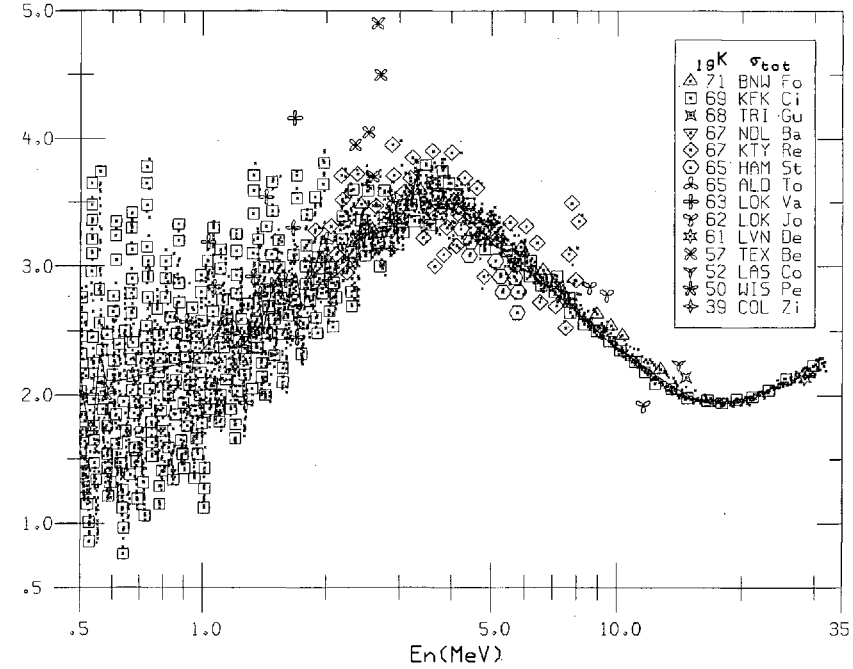
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{40}_{18}Ar$ σ_{np}			
69	GIT	Ranakumar,et.al.	NP/A,128,333,69	1	15.7 mb at 14.4 MeV	^{28}Si σ_{np}
68	ARK	Husain,et.al.	JIN,30,355,68	1	15.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
65	MTR	Gray,et.al.	NP,62,172,65	1	25.0 mb at 14.7 MeV	
			$^{40}_{18}Ar$ σ_{nnp}			
68	ARK	Husain,et.al.	JIN,30,355,68	1	1.700 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{40}_{18}Ar$ σ_{nd}			
65	MTR	Gray,et.al.	NP,62,172,65	1	2.900 mb at 14.7 MeV	
			$^{40}_{18}Ar$ $\sigma_{n\alpha}$			
71	BLN	Kardonsky,et.al.	PR/C,4,840,71	1	9.400 mb at 14.4 MeV	^{12}C $\sigma_{n\alpha}$
69	GIT	Ranakumar,et.al.	NP/A,128,333,69	1	10.5 mb at 14.4 MeV	^{28}Si σ_{np}
68	ARK	Husain,et.al.	JIN,30,355,68	1	10.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
67	IIT	Yu-Wen Yi,et.al.	NP/A,98,451,67	1	31.0 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
66	TNC	Mathur,et.al.	NP,75,561,66	13	14.0 MeV to 20.3 MeV	Cl
65	MTR	Gray,et.al.	NP,62,172,65	1	24.0 mb at 14.7 MeV	

^{19}K
σ_{tot}
[1150]

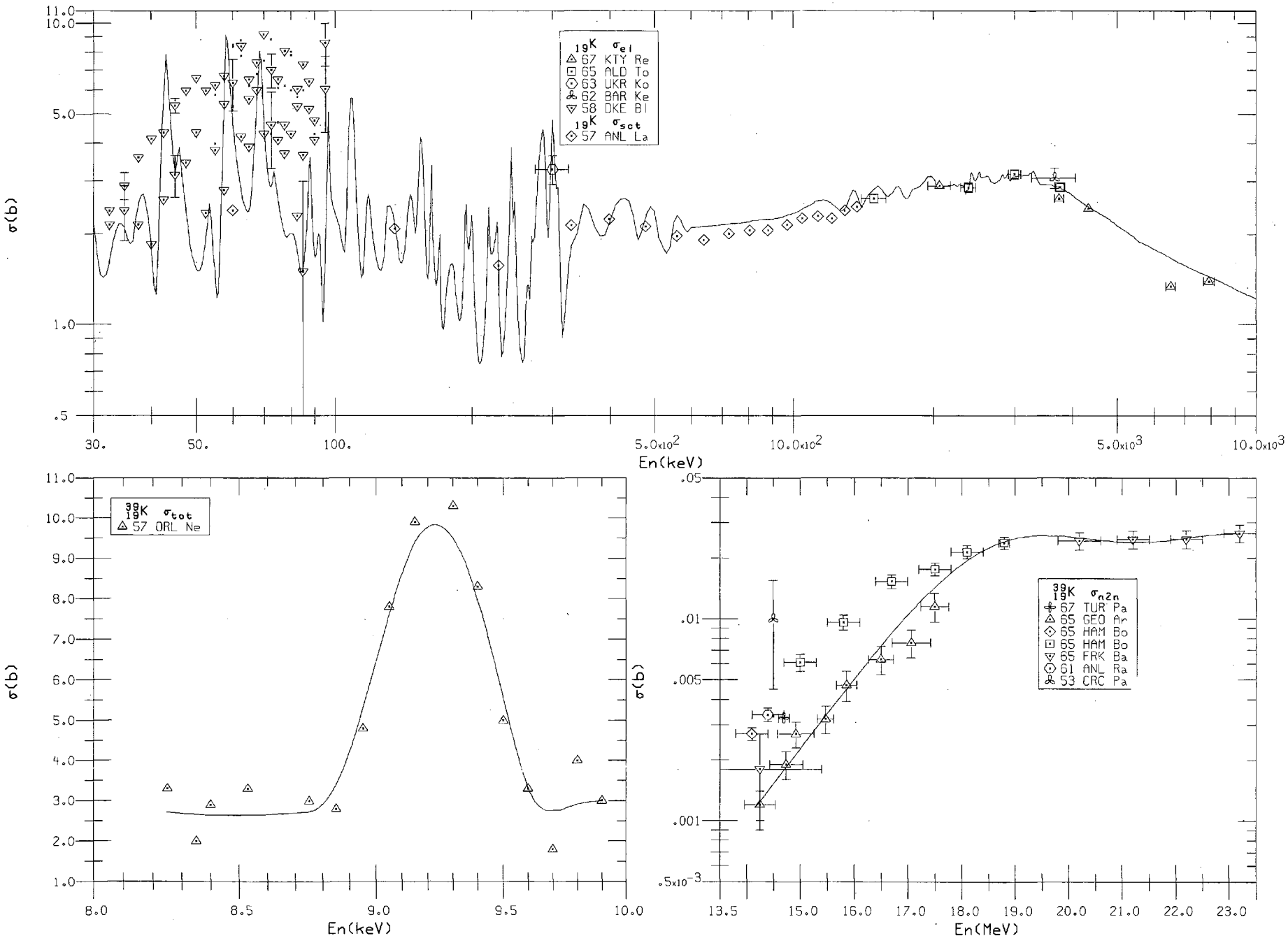








$_{19}K$
σ_{el}
σ_{sct}
[1150]
$^{39}_{19}K$
σ_{tot}
σ_{n2n}



$^{39}_{19}K$

σ_{pem}

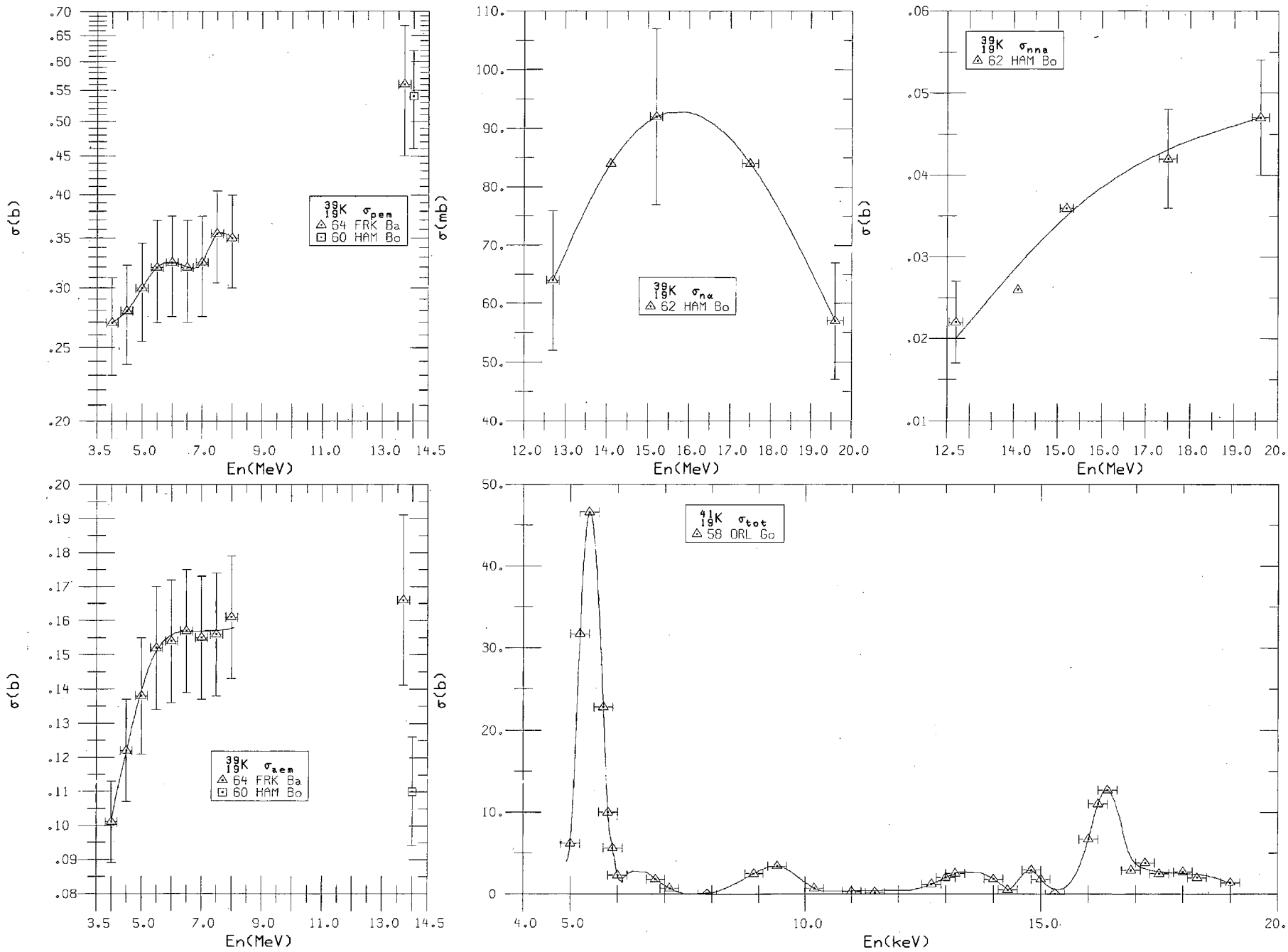
$\sigma_{n\alpha}$

σ_{nna}

σ_{aem}

$^{41}_{19}K$

σ_{tot}



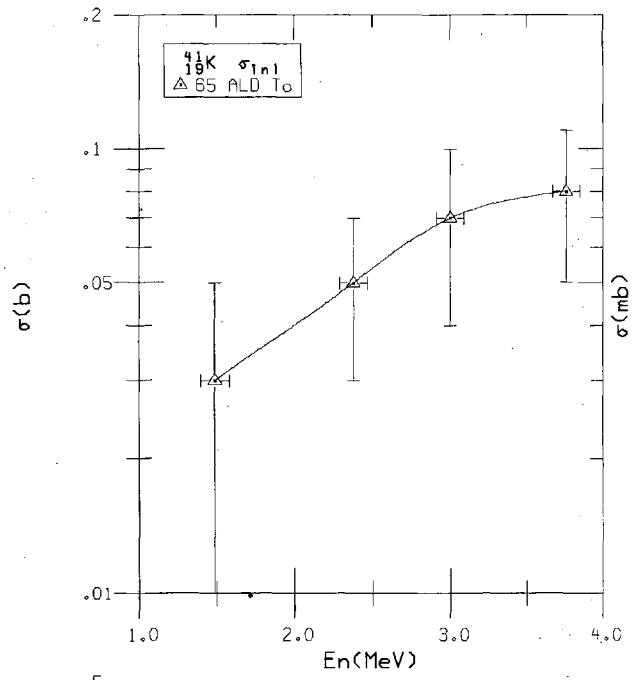
$^{41}_{19}K$

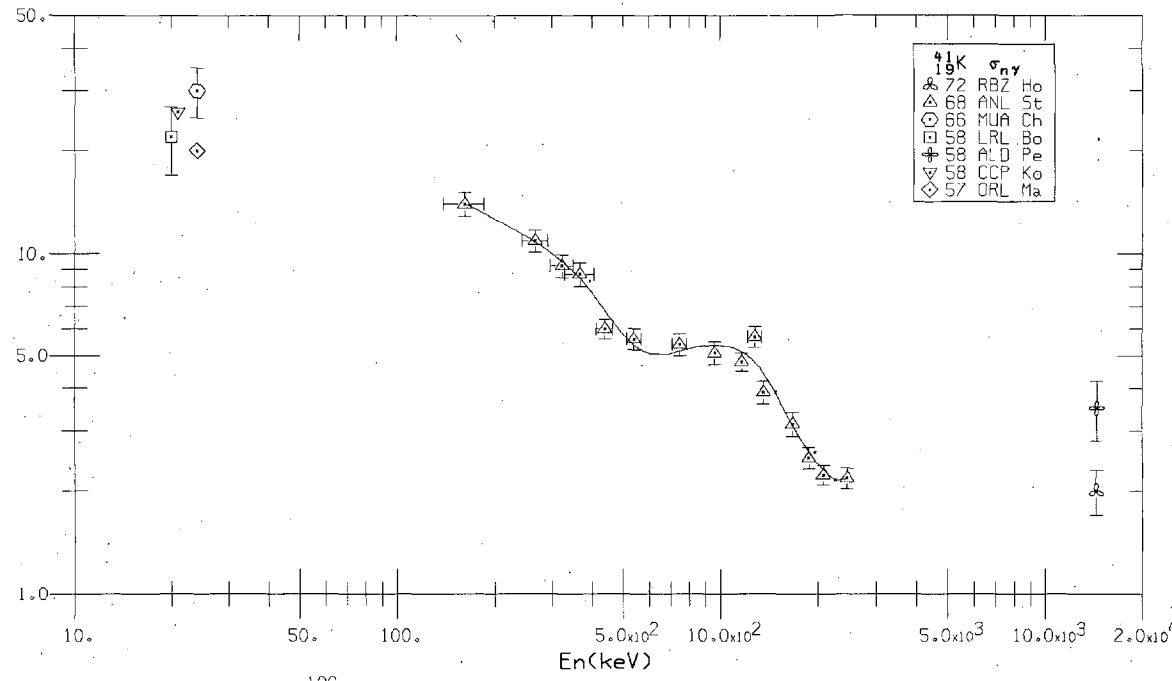
σ_{inl}

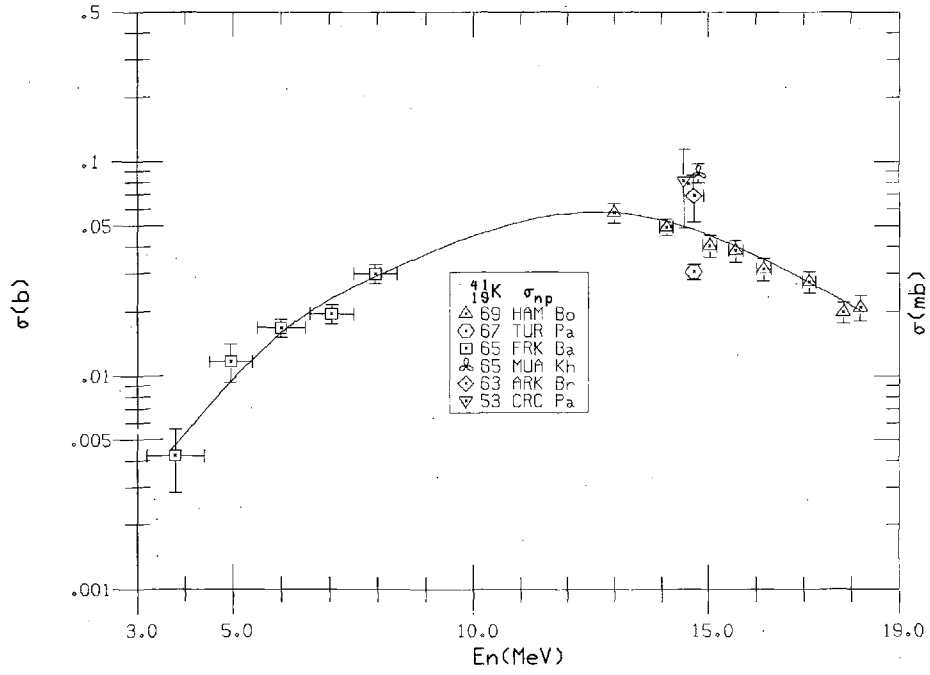
$\sigma_{n\gamma}$

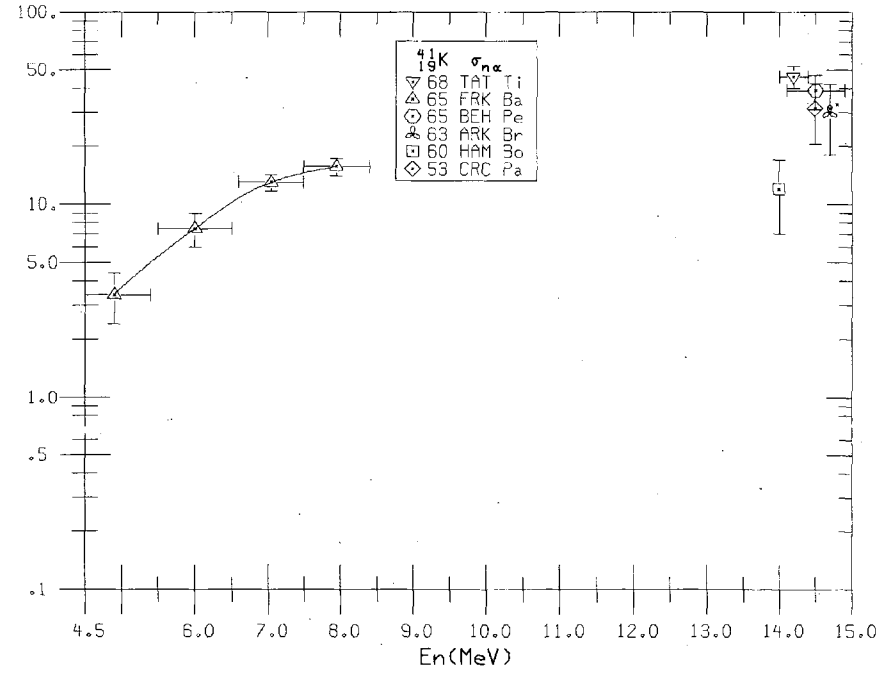
σ_{np}

$\sigma_{n\alpha}$









Yr	Lab	Author	Reference	Points	Range	Standard
			$_{19}K$ σ_{tot}			
73	COL	Singh,et.al.	PR/C,8,1833,73	1197	1.005 keV to .399 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	246	2.270 MeV to 14.9 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	2.060 b at 14.5 MeV	
69	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),69	6178	.360 MeV to 32.0 MeV	abs
68	TRI	Guarrini,et.al.	NSE,31,341,68	1	2.140 b at 14.7 MeV	
67	NDL	Bacon,et.al.	NSE,28,293,67	7	2.370 MeV to 15.5 MeV	
67	KTY	Reber,et.al.	PR,163,1077,67	196	1.818 MeV to 8.343 MeV	abs
65	HAM	Stuwer,et.al.	NP,62,165,65	65	4.180 MeV to 6.150 MeV	abs
65	ALD	Towle,et.al.	NP,72,515,65	14	2.004 MeV to 3.772 MeV	abs
63	LOK	Vaughn,et.al.	NSE,17,325,63	187	.900 MeV to 2.100 MeV	
62	LOK	Johnson	JOHNSON,62	4	8.580 MeV to 11.6 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.480 b at 3.660 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.130 b at 28.4 MeV	
59	DKE	Bilpuch	BILPUCH,59	248	8.000 keV to .132 MeV	
58	DKE	Newson	NEWSON,58	379	2.000 keV to .316 MeV	
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	12	2.350 MeV to 2.750 MeV	abs
55	MTR	Joki,et.al.	PR,99,610,55	356	.0200 eV to 10.6 eV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.240 b at 14.1 MeV	
50	WIS	Peterson	PR,77,747(H8),50	118	8.000 keV to .597 MeV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
39	COL	Zinn,et.al.	PR,56,260,39	2	2.460 MeV to 2.880 MeV	abs
			$_{19}K$ σ_{el}			
67	KTY	Reber,et.al.	PR,163,1077,67	5	2.060 MeV to 7.910 MeV	H
65	ALD	Towle,et.al.	NP,72,515,65	4	1.490 MeV to 3.760 MeV	H
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	3.280 b at .300 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.080 b at 3.660 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	76	32.5 keV to 95.0 keV	C
			$_{19}K$ σ_{inl}			
67	ALD	Towle,et.al.	NP/A,100,257,67	1	.592 b at 7.000 MeV	H
			$_{19}K$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.370 MeV	C
			$_{19}K$ σ_{non}			
62	BAR	Kent,et.al.	PR,125,331,62	1	.400 b at 3.660 MeV	
			$_{19}K$ $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{19}K$ σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	.220 mb at 14.7 MeV	^{197}Au σ_{n2n}
			$^{39}_{19}K$ σ_{tot}			
57	ORL	Neiler,et.al.	ORNL-2302,20,57	16	8.250 keV to 9.900 keV	
			$^{39}_{19}K$ σ_{inl}			
65	ALD	Towle,et.al.	NP,72,515,65	1	.292 b at 3.760 MeV	H
			$^{39}_{19}K$ σ_{n2n}			
67	TUR	Pasquarelli	NP/A,93,218,67	1	3.240 mb at 14.7 MeV	
65	GEO	Arnold	ARNOLD,65	8	14.3 MeV to 17.5 MeV	^{65}Cu σ_{n2n}
65	HAM	Bormann,et.al.	NP,63,438,65	1	2.700 mb at 14.1 MeV	
65	HAM	Bormann,et.al.	NP,63,438,65	6	15.0 MeV to 18.8 MeV	^{39}K σ_{n2n}
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	5	14.3 MeV to 23.2 MeV	abs
65	BEH	Peil	NP,66,419,65	1	3.300 mb at 14.5 MeV	^{56}Fe σ_{np}
61	ANL	Rayburn	PR,122,168,61	1	3.370 mb at 14.4 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	10.0 mb at 14.5 MeV	
			$^{39}_{19}K$ σ_{np}			
67	NZW	Johnson,et.al.	NP/A,94,617,67	1	95.0 mb at 2.460 MeV	abs
61	OTC	Dixon,et.al.	NP,24,456,61	1	96.0 mb at 2.460 MeV	
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	.354 b at 14.0 MeV	^{127}I σ_{n2n}
			$^{39}_{19}K$ σ_{pem}			
64	FRK	Bass,et.al.	NP,56,569,64	10	4.000 MeV to 13.7 MeV	
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	.540 b at 14.0 MeV	^{127}I σ_{n2n}
			$^{39}_{19}K$ σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	.184 mb at 14.7 MeV	^{197}Au σ_{n2n}
			$^{39}_{19}K$ $\sigma_{n\alpha}$			
67	NZW	Johnson,et.al.	NP/A,94,617,67	1	6.200 mb at 2.460 MeV	abs
52	HAM	Bormann	ZN/A,17,479,62	5	12.7 MeV to 19.6 MeV	^{6}Li $\sigma_{n\alpha}$
			$^{39}_{19}K$ σ_{nna}			
62	HAM	Bormann	ZN/A,17,479,62	5	12.7 MeV to 19.6 MeV	^{6}Li $\sigma_{n\alpha}$

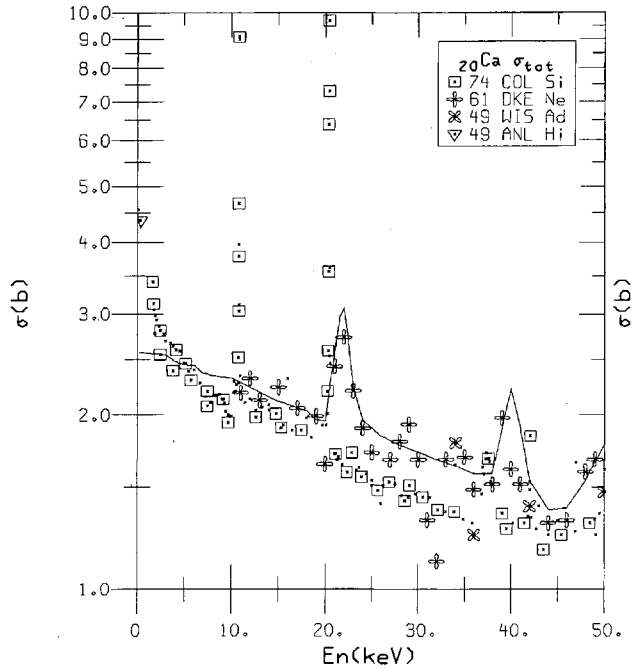
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{39}_{19}K$ σ_{n2a}			
66	IRK	Hille,et.al.	OAW,175,145,66	1	.127 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{39}_{19}K$ σ_{aem}			
64	FRK	Bass,et.al.	NP,56,569,64	10	4.000 MeV to 13.7 MeV	
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	.110 b at 14.0 MeV	^{127}I σ_{n2n}
			$^{39}_{19}K$ σ_{nx}			
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	.650 b at 14.0 MeV	
			$^{40}_{19}K$ $\sigma_{n\gamma}$			
71	LAS	Beckstrand+	PR/C,3,208,71	1	30.0 b at thermal	
			$^{41}_{19}K$ σ_{tot}			
58	ORL	Good,et.al.	PR,109,926,58	35	4.800 keV to 19.0 keV	abs
			$^{41}_{19}K$ σ_{inl}			
65	ALD	Towle,et.al.	NP,72,515,65	4	1.490 MeV to 3.760 MeV	H
			$^{41}_{19}K$ $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	2.000 mb at 14.4 MeV	^{56}Fe σ_{np}
68	ANL	Stupegia,et.al.	JNE,22,267,68	19	.162 MeV to 2.455 MeV	^{235}U
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	30.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	22.0 mb at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	3.500 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	26.0 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	20.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{41}_{19}K$ σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	78.4 mb at 14.6 MeV	
69	HAM	Bormann,et.al.	NP/A,130,195,69	8	13.0 MeV to 18.2 MeV	^{1}H σ_{el}
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	50.0 mb at 14.2 MeV	
67	TUR	Pasquarelli	NP/A,93,218,67	1	30.5 mb at 14.7 MeV	
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	5	3.800 MeV to 7.950 MeV	abs
65	MUA	Khurana,et.al.	NP,69,153,65	1	88.0 mb at 14.8 MeV	Fe
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	69.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
53	CRC	Paul,et.al.	CJP,31,267,53	1	81.2 mb at 14.5 MeV	
			$^{41}_{19}K$ σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	50.0 muB at 14.6 MeV	^{41}K $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.130 mb at 14.7 MeV	^{41}K $\sigma_{n\alpha}$

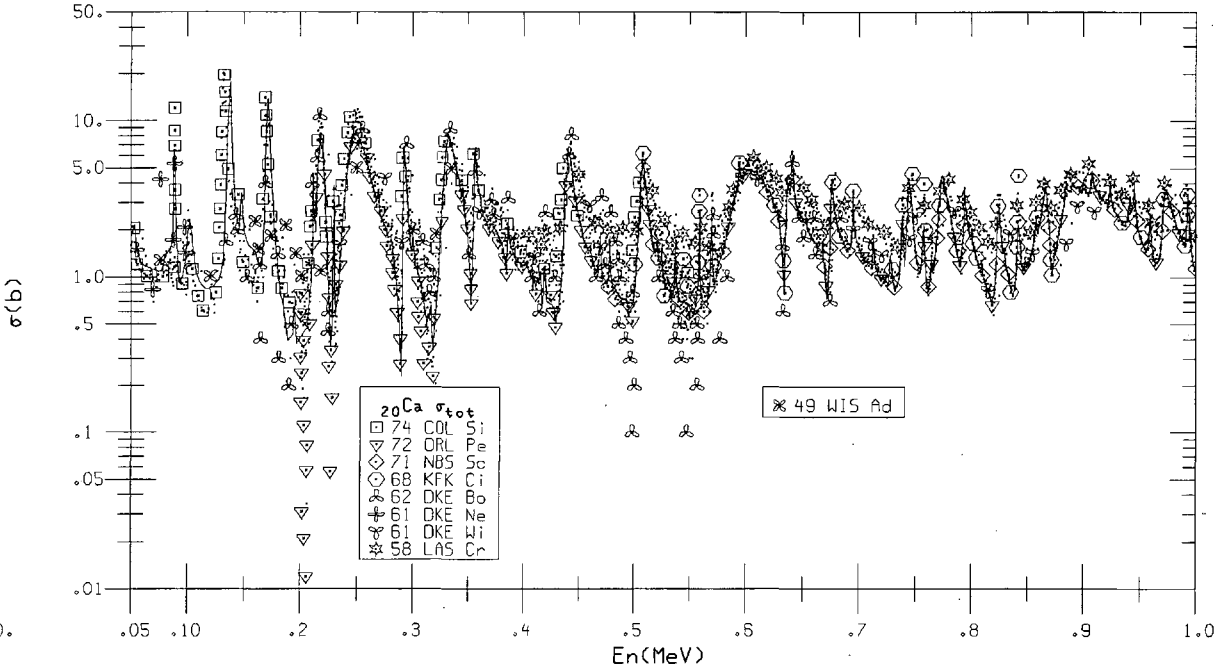
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{41}_{19}K$ σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.848 mb at 14.0 MeV	
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	2.500 mb at 14.5 MeV	^{41}K $\sigma_{n\alpha}$
61	ARK	Poularikas,et.al	ARKANSAS,7,61	1	.200 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{41}_{19}K$ $\sigma_{n\alpha}$			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	46.0 mb at 14.2 MeV	
67	TUR	Pasquarelli	NP/A,93,218,67	1	31.5 mb at 14.7 MeV	
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	4	4.900 MeV to 7.950 MeV	abs
65	MUA	Khurana,et.al.	NP,69,153,65	1	33.0 mb at 14.8 MeV	Fe
65	BEH	Peil	NP,66,419,65	1	39.0 mb at 14.5 MeV	^{56}Fe σ_{np}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	30.0 mb at 14.7 MeV	^{63}Cu σ_{n2n}
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	12.0 mb at 14.0 MeV	^{127}I σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	31.4 mb at 14.5 MeV	
			$^{42}_{19}K$ σ_{np}			
61	AUS	Hille	OAW,12,200,61	1	.140 b at 14.9 MeV	
			$^{44}_{19}K$ σ_{np}			
61	AUS	Hille	OAW,12,200,61	1	25.0 mb at 14.9 MeV	
			$^{44}_{19}K$ $\sigma_{n\alpha}$			
61	AUS	Hille	OAW,12,200,61	1	35.0 mb at 14.9 MeV	
			$^{48}_{19}K$ σ_{n2n}			
61	AUS	Hille	OAW,12,200,61	1	1.070 b at 14.9 MeV	

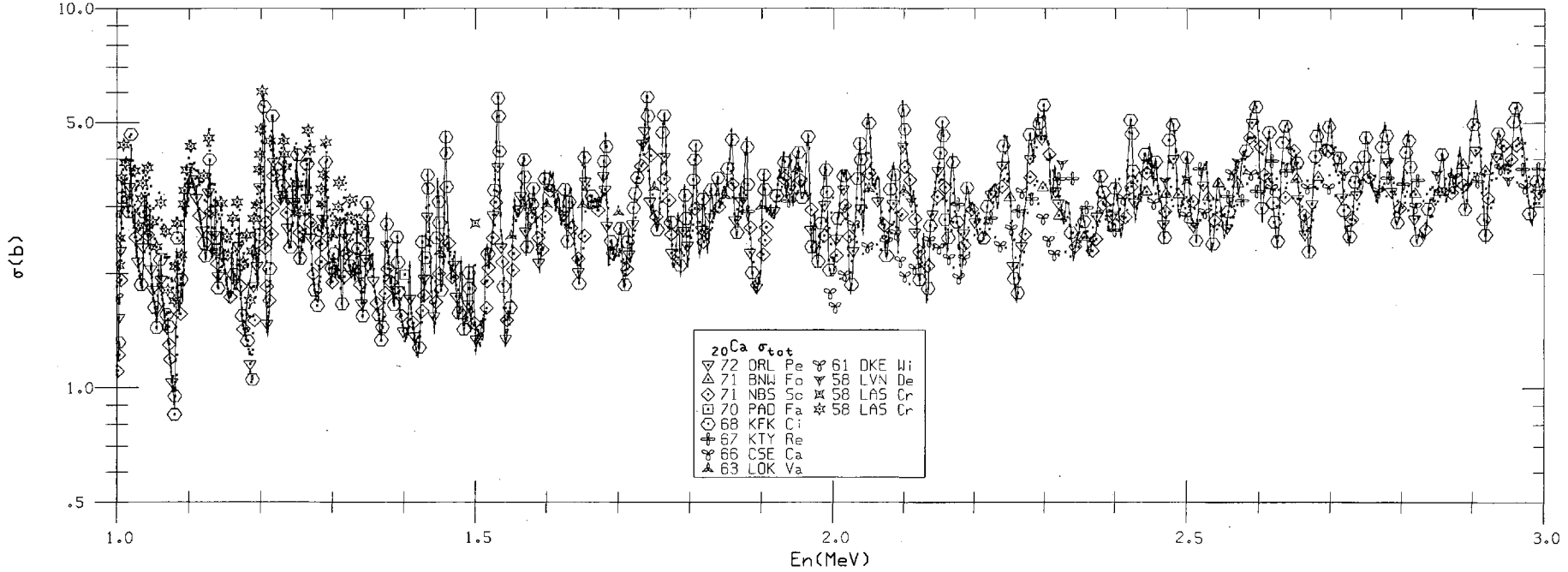
$_{20}Ca$

σ_{tot}

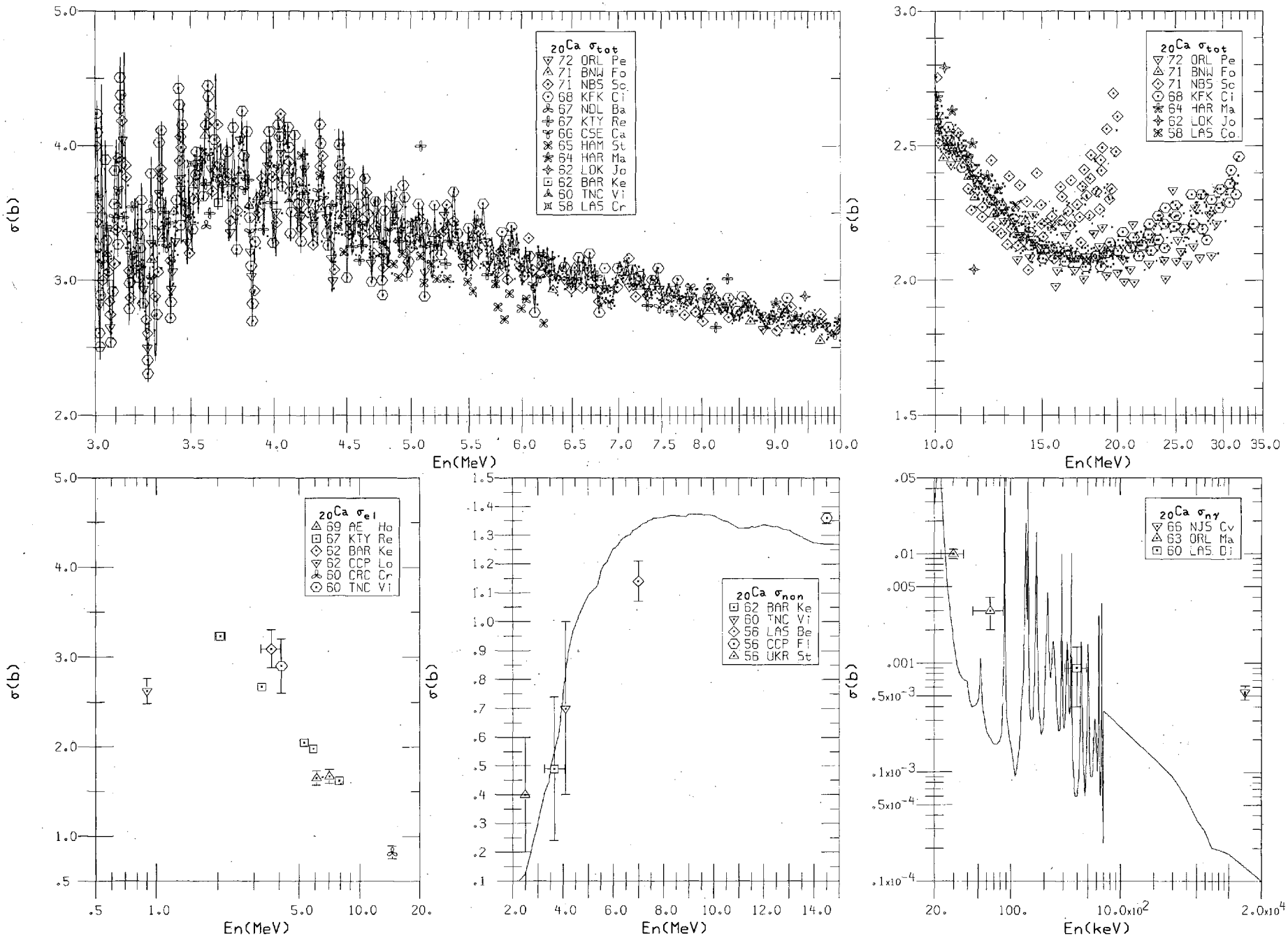
[1195]







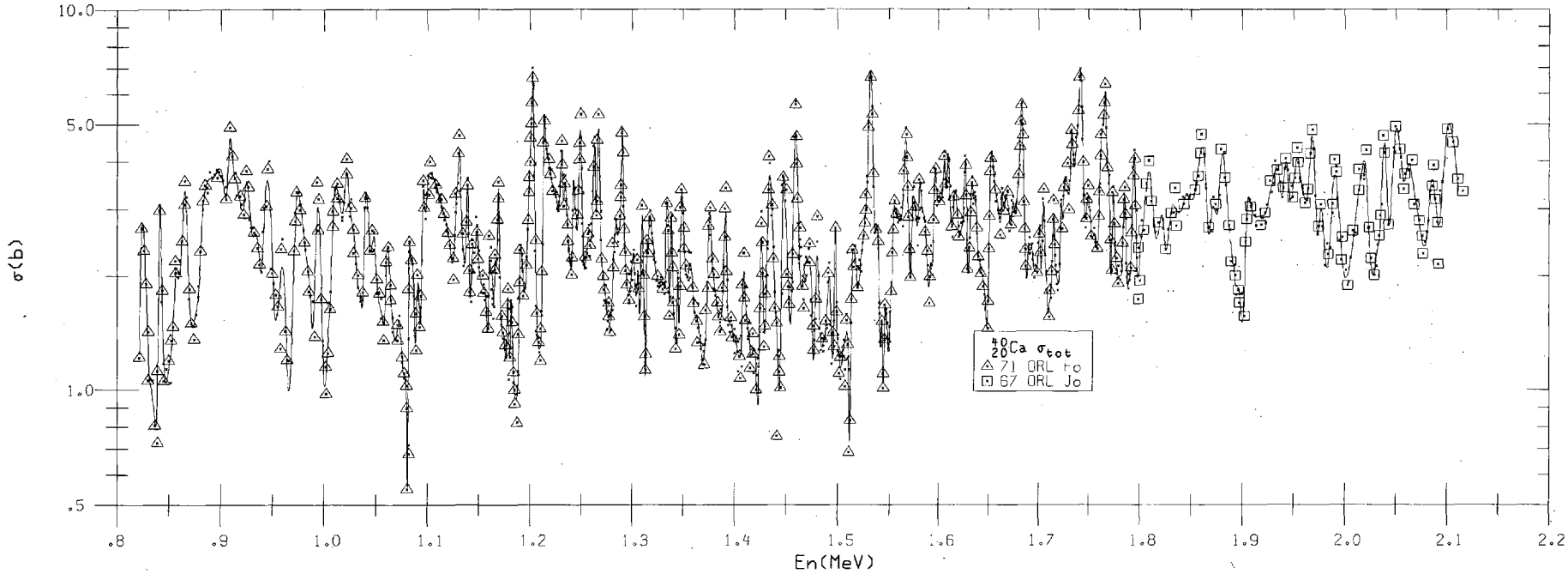
$_{20}$Ca
σ_{tot}
σ_{el}
σ_{non}
$\sigma_{n\gamma}$
[1195]

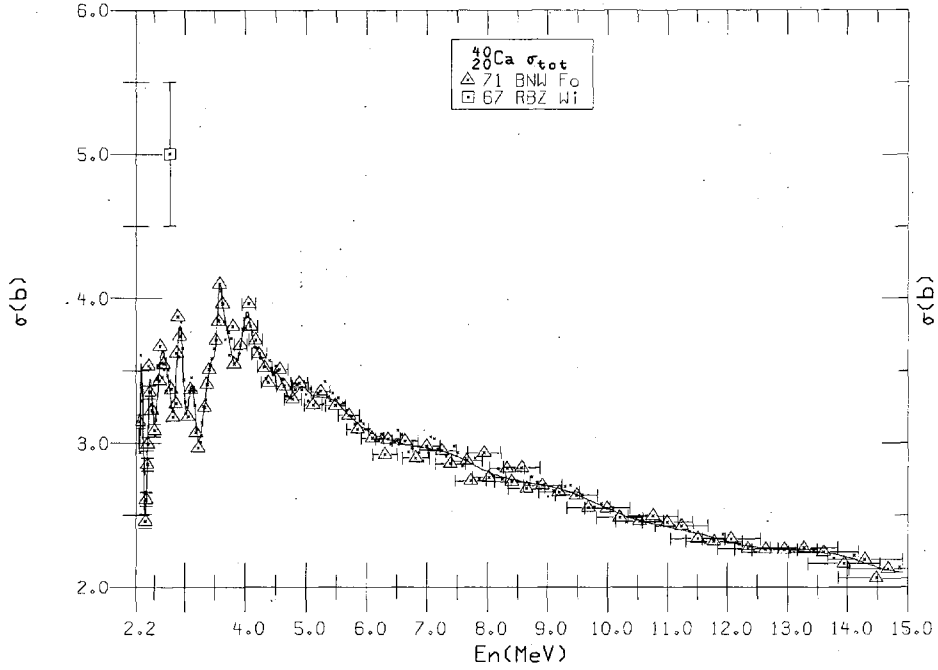


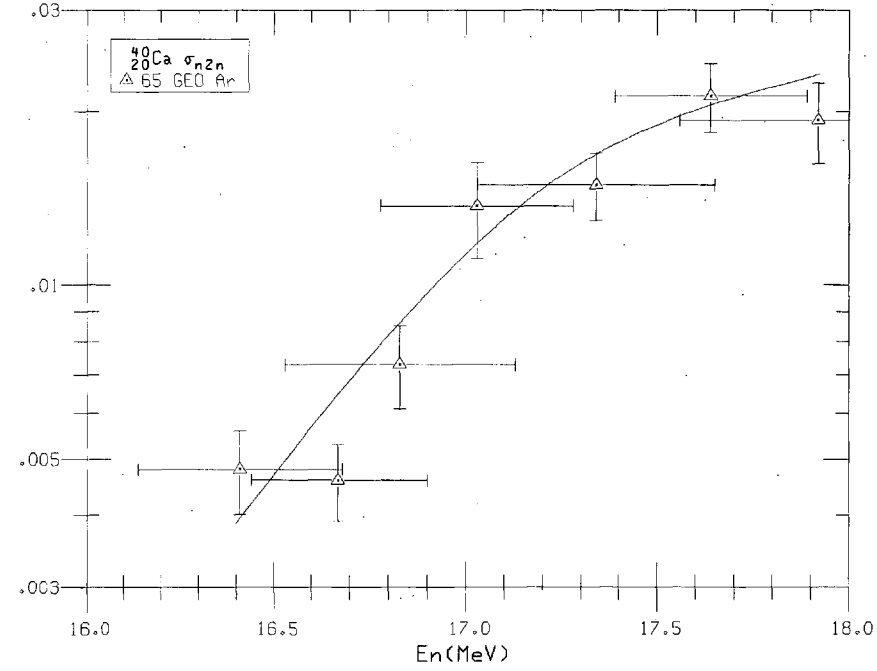
$^{40}_{20}Ca$

σ_{tot}

σ_{n2n}







$^{42}_{20}Ca$

σ_{tot}

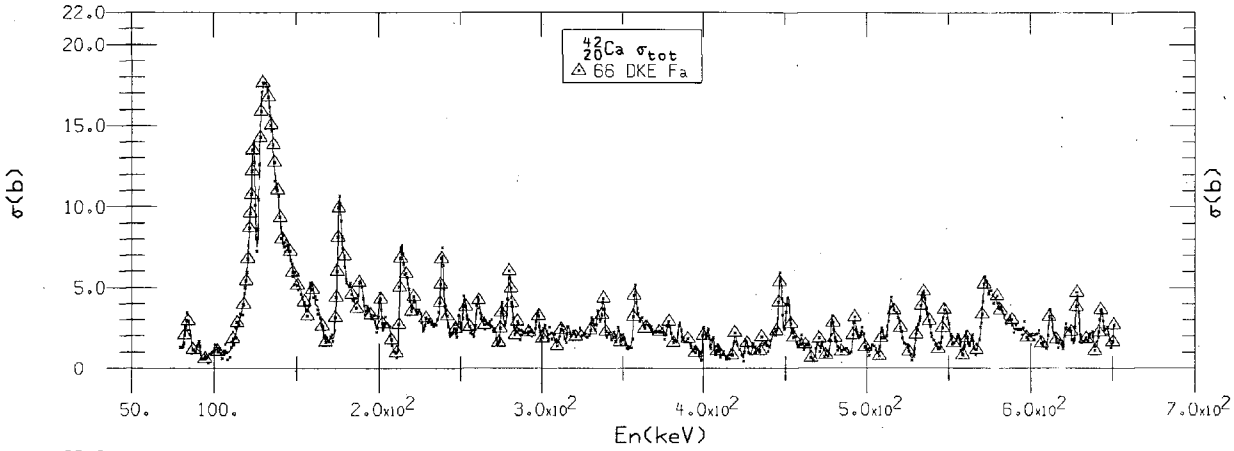
σ_{np}

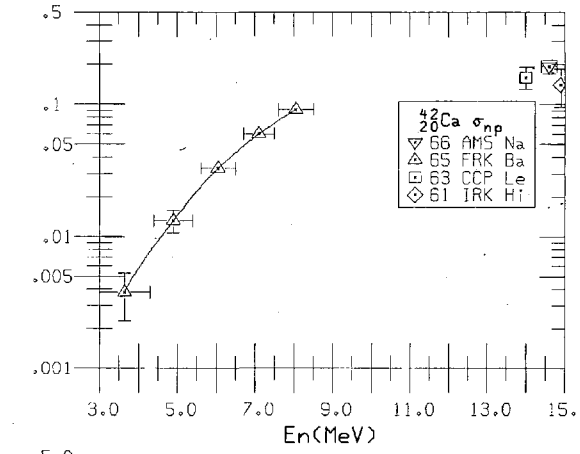
$^{44}_{20}Ca$

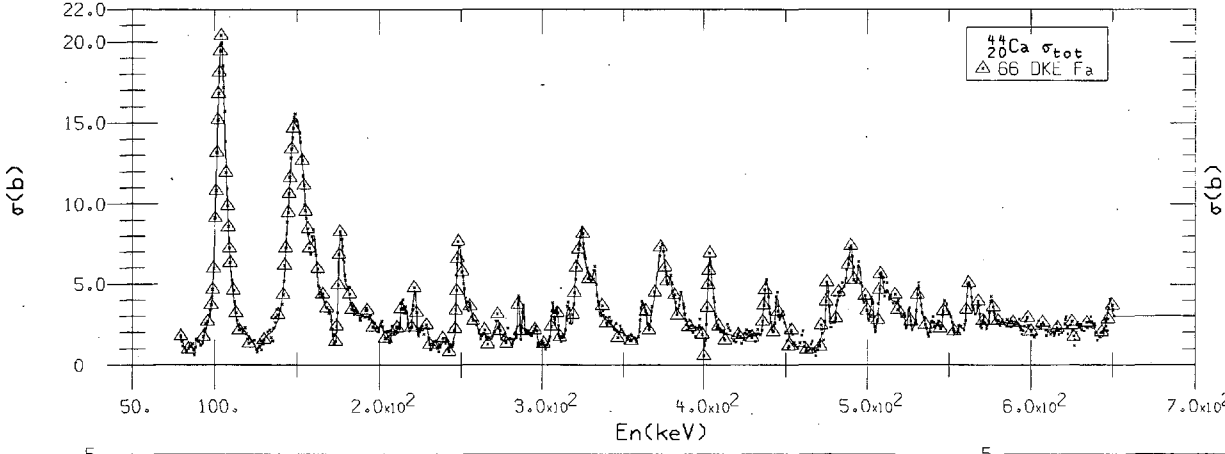
σ_{tot}

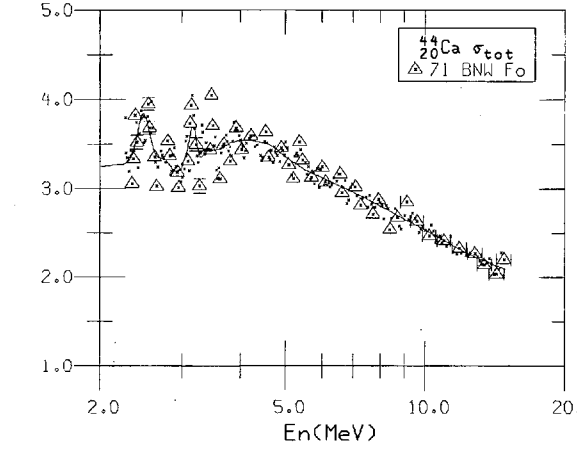
σ_{np}

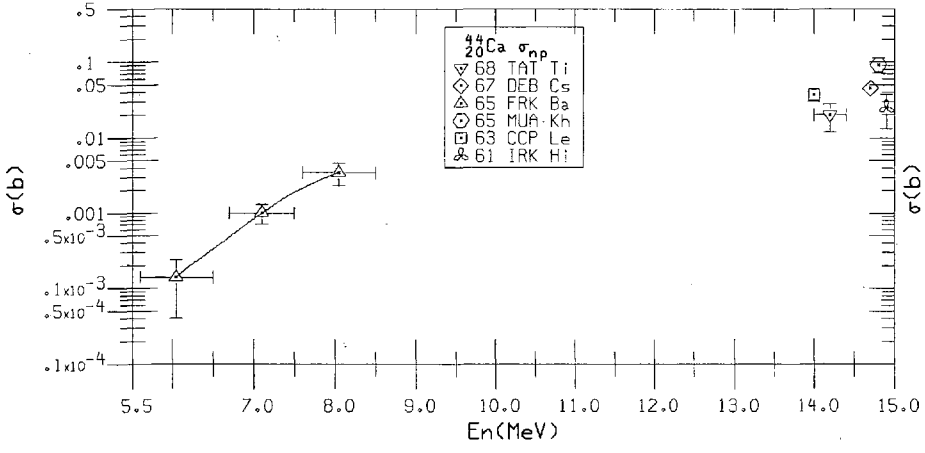
$\sigma_{n\alpha}$

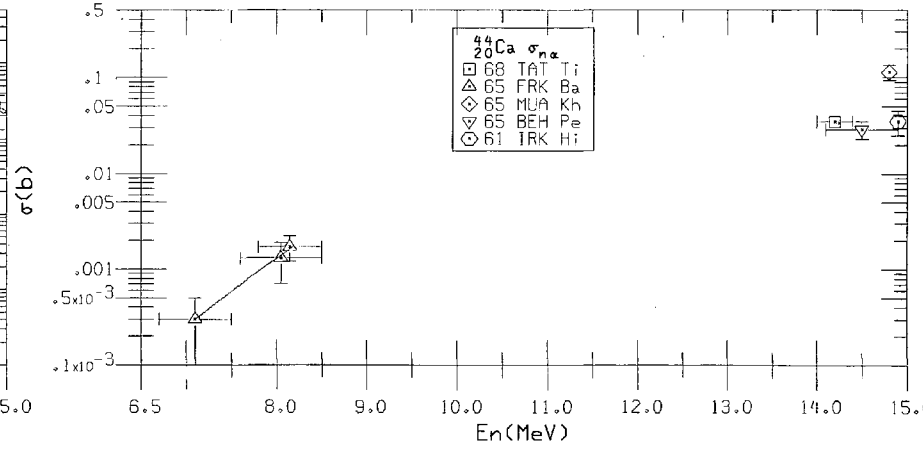












Yr	Lab	Author	Reference	Points	Range	Standard
			$_{20}$Ca σ_{tot}			
74	COL	Singh,et.al.	PR/C,10,2143,74	702	1.616 keV to .549 MeV	
72	ORL	Perey,et.al.	ORNL-4823,72	3501	.200 MeV to 29.4 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.251 MeV to 14.9 MeV	
71	NBS	Schwartz	HEATON,71	3536	.477 MeV to 20.0 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	2.120 b at 14.7 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	2.100 b at 14.5 MeV	
70	PAD	Fasoli,et.al.	NP/A,151,369,70	1	1.988 b at 1.401 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000,68	5113	.500 MeV to 31.9 MeV	abs
68	TRI	Guarrini,et.al.	NSE,31,341,68	1	2.170 b at 14.7 MeV	
67	NDL	Bacon,et.al.	NSE,28,293,67	7	2.370 MeV to 16.0 MeV	abs
67	KTY	Reber,et.al.	PR,163,1077,67	208	1.818 MeV to 8.343 MeV	abs
66	CSE	Galloway III+	COO-1573-6,66	347	1.996 MeV to 10.1 MeV	abs
65	HAM	Stuwer,et.al.	NP,62,165,65	65	4.180 MeV to 6.210 MeV	
64	HAR	Manero,et.al.	NP,59,583,64	61	8.520 MeV to 14.3 MeV	abs
63	LOK	Vaughn,et.al.	NSE,17,325,63	18	1.250 MeV to 2.100 MeV	abs
62	DKE	Bowman,et.al.	AP,17,319,62	1055	.130 MeV to .683 MeV	
62	LOK	Johnson	JOHNSON,62	4	8.580 MeV to 11.6 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.580 b at 3.660 MeV	
61	DKE	Newson,et.al.	AP,14,365,61	102	11.0 keV to .105 MeV	abs
61	DKE	Wilenzick,et.al.	PR,121,1150,61	154	.220 MeV to 1.000 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	18.1 MeV to 27.7 MeV	abs
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	3.600 b at 4.100 MeV	
58	LVN	Deconninck,et.al	BCS,44,851,58	17	2.110 MeV to 3.100 MeV	
58	LAS	Cranberg,et.al.	BAP,3,336(R2),58	10	1.000 MeV to 6.000 MeV	
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
58	LAS	Cranberg	CRANBERG,58	937	.405 MeV to 1.342 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.190 b at 14.1 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.210 b at 42.0 MeV	
49	WIS	Adair,et.al.	PR,75,1124,49	69	25.0 keV to .522 MeV	abs
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
			$_{20}$Ca σ_{el}			
69	AE	Holmqvist,et.al.	AE-366,69	3	6.090 MeV to 8.050 MeV	^{1}H σ_{el}
67	KTY	Reber,et.al.	PR,163,1077,67	6	2.060 MeV to 7.910 MeV	H
62	BAR	Kent,et.al.	PR,125,331,62	1	3.090 b at 3.660 MeV	
62	CCP	Lovchikova	AE,12,48,62	1	2.620 b at .900 MeV	
60	CRC	Cross,et.al.	NP,15,155,60	1	.820 b at 14.6 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.900 b at 4.100 MeV	
			$_{20}$Ca σ_{non}			
62	BAR	Kent,et.al.	PR,125,331,62	1	.490 b at 3.660 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	.700 b at 4.100 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	1	1.140 b at 7.000 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.360 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.400 b at 2.500 MeV	abs

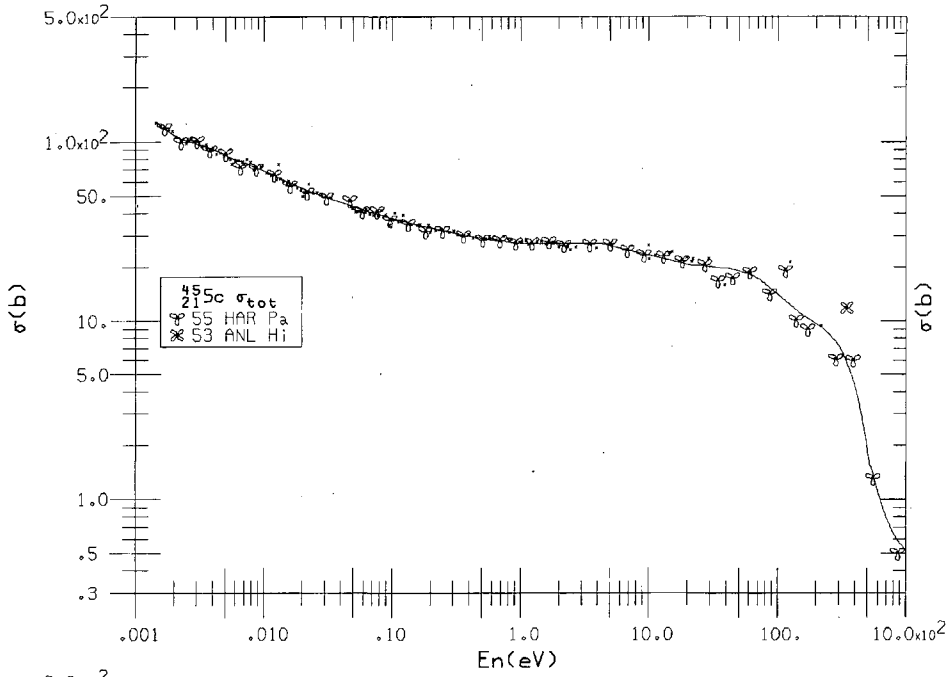
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{20}$Ca $\sigma_{n\gamma}$			
67	NJS	Cvelbar,et.al.	NIJS-R-505,67	1	.520 mb at 14.1 MeV	
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.540 mb at 14.1 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	1	.900 mb at .400 MeV	^{235}U σ_{abs}
			$^{40}_{20}$Ca σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.251 MeV to 14.9 MeV	
71	ORL	Fowler,et.al.	71KNOX,1,179,71	1393	.822 MeV to 1.797 MeV	
67	ORL	Johnson,et.al.	BAP,12,106(GD11),67	185	1.796 MeV to 2.116 MeV	abs
67	RBZ	Winterhalter	ZP,200,487,67	1	5.000 b at 2.760 MeV	
			$^{40}_{20}$Ca σ_{el}			
64	OTC	Mc Donald,et.al.	NP,59,321,64	1	.930 b at 14.1 MeV	
			$^{40}_{20}$Ca $\sigma_{n\gamma}$			
68	NJS	Hudoklin Bozic	NIJS,P-213,68	1	.500 mb at 14.1 MeV	
			$^{40}_{20}$Ca σ_{n2n}			
65	GEO	Arnold	ARNOLD,65	7	16.4 MeV to 17.9 MeV	^{65}Cu σ_{n2n}
			$^{40}_{20}$Ca σ_{np}			
62	NEU	Urech,et.al.	HPA,34,954,62	1	.520 b at 5.950 MeV	
			$^{40}_{20}$Ca σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	.205 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{40}_{20}$Ca σ_{nt}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.310 mb at 14.0 MeV	
68	IRK	Sacher,et.al.	OAW,176,305,68	1	7.500 muB at 14.7 MeV	^{39}K σ_{n2n}
66	IRK	Sacher,et.al.	APA,23,101,66	1	15.0 muB at 14.8 MeV	^{39}K σ_{n2n}
65	MUA	Khurana,et.al.	NP,69,153,65	1	20.0 mb at 14.8 MeV	Fe
62	CBR	Weigold,et.al.	NP,32,106,62	1	.100 mb at 14.7 MeV	^{63}Cu σ_{n2n}
61	OTC	Baerg,et.al.	CJC,39,684,61	1	20.0 muB at 14.6 MeV	^{19}F σ_{n2n}
			$^{40}_{20}$Ca $\sigma_{n\alpha}$			
62	NEU	Urech,et.al.	HPA,34,954,62	1	.430 b at 5.950 MeV	

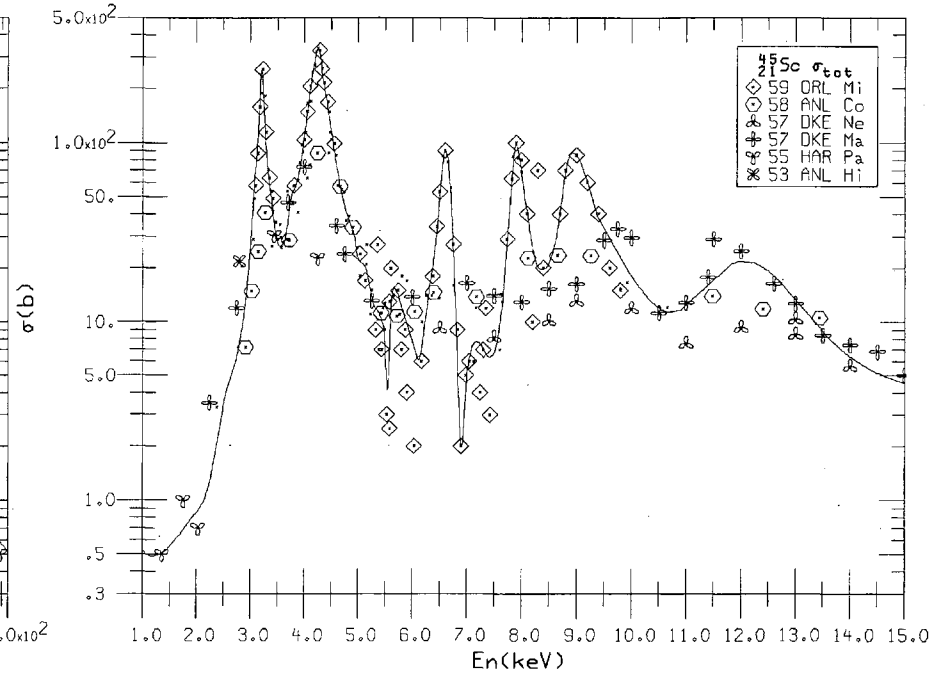
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{40}_{20}$Ca σ_{nna}			
66	HAM	Bormann,et.al.	ZN/A,21,988,66	1	23.0 mb at 14.1 MeV	H
			$^{42}_{20}$Ca σ_{tot}			
66	DKE	Farrell,et.al.	AP,37,367,66	1137	80.0 keV to .651 MeV	
			$^{42}_{20}$Ca σ_{np}			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	.190 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	.173 b at 14.7 MeV	
66	AMS	Nagel	NAGEL,66	1	.194 b at 14.6 MeV	^{65}Cu σ_{n2n}
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	5	3.650 MeV to 8.050 MeV	abs
63	CCP	Levkovskii	ZET,45,305,63	1	.160 b at 14.0 MeV	
61	IRK	Hille	OSA,98,200,61	1	.140 b at 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{43}_{20}$Ca σ_{np}			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	93.0 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	.101 b at 14.7 MeV	
66	AMS	Nagel	NAGEL,66	1	.137 b at 14.6 MeV	^{65}Cu σ_{n2n}
			$^{43}_{20}$Ca σ_{nd}			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	1.300 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{44}_{20}$Ca σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	252	2.267 MeV to 14.9 MeV	
66	DKE	Farrell,et.al.	AP,37,367,66	1128	80.0 keV to .651 MeV	
			$^{44}_{20}$Ca σ_{np}			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	20.0 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	45.0 mb at 14.7 MeV	
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	3	6.050 MeV to 8.050 MeV	abs
65	MUA	Khurana,et.al.	NP,69,153,65	1	91.0 mb at 14.8 MeV	Fe
63	CCP	Levkovskii	ZET,45,305,63	1	37.0 mb at 14.0 MeV	
61	IRK	Hille	OSA,98,200,61	1	25.0 mb at 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{44}_{20}$Ca σ_{nd}			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	2.600 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{44}_{20}$Ca $\sigma_{n\alpha}$			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	35.0 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	4	7.100 MeV to 14.3 MeV	abs
65	MUA	Khurana,et.al.	NP,69,153,65	1	.113 b at 14.8 MeV	Fe
65	BEH	Peil	NP,66,419,65	1	29.0 mb at 14.5 MeV	^{56}Fe σ_{np}
61	IRK	Hille	OSA,98,200,61	1	35.0 mb at 14.9 MeV	^{27}Al $\sigma_{n\alpha}$

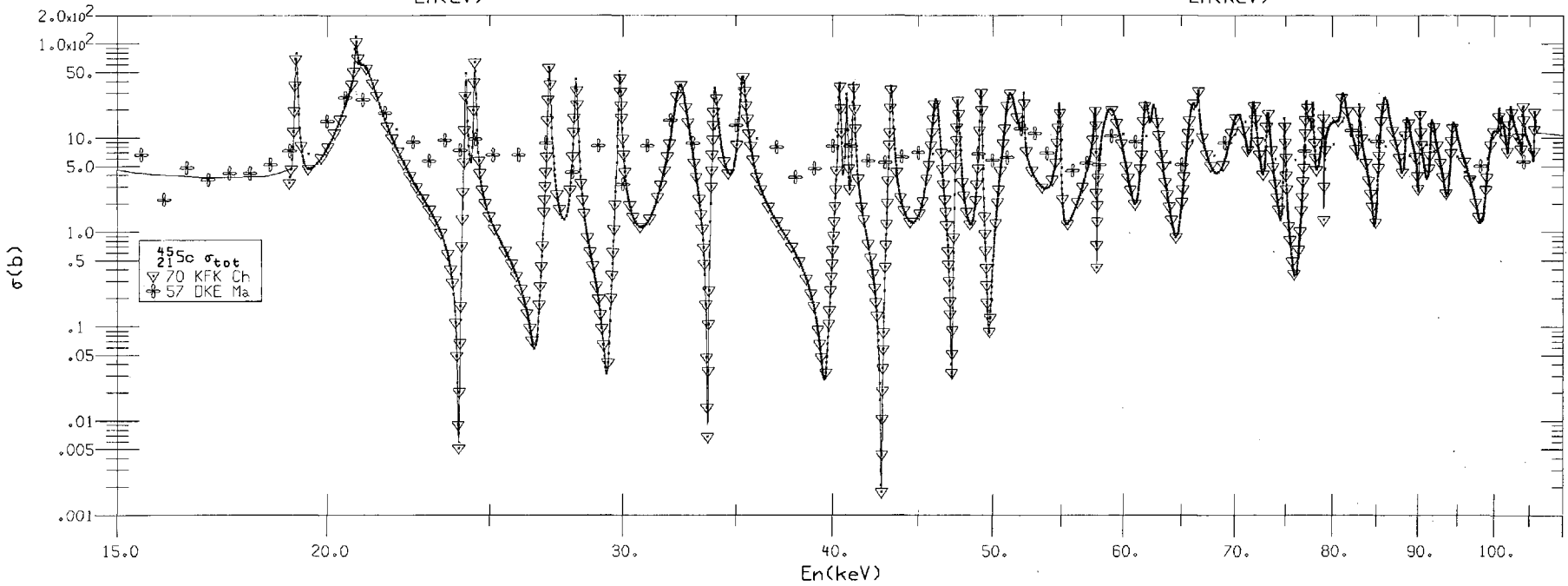
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{48}_{20}$Ca $\sigma_{n\gamma}$			
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.260 mb at 14.7 MeV	
			$^{48}_{20}$Ca σ_{n2n}			
68	TAT	Tiwari,et.al.	PR,167,1091,68	1	.900 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.860 b at 13.3 MeV	
62	BNL	Hillman	NP,37,78,62	1	.920 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
61	IRK	Hille	OSA,98,200,61	1	1.070 b at 14.9 MeV	^{27}Al $\sigma_{n\alpha}$

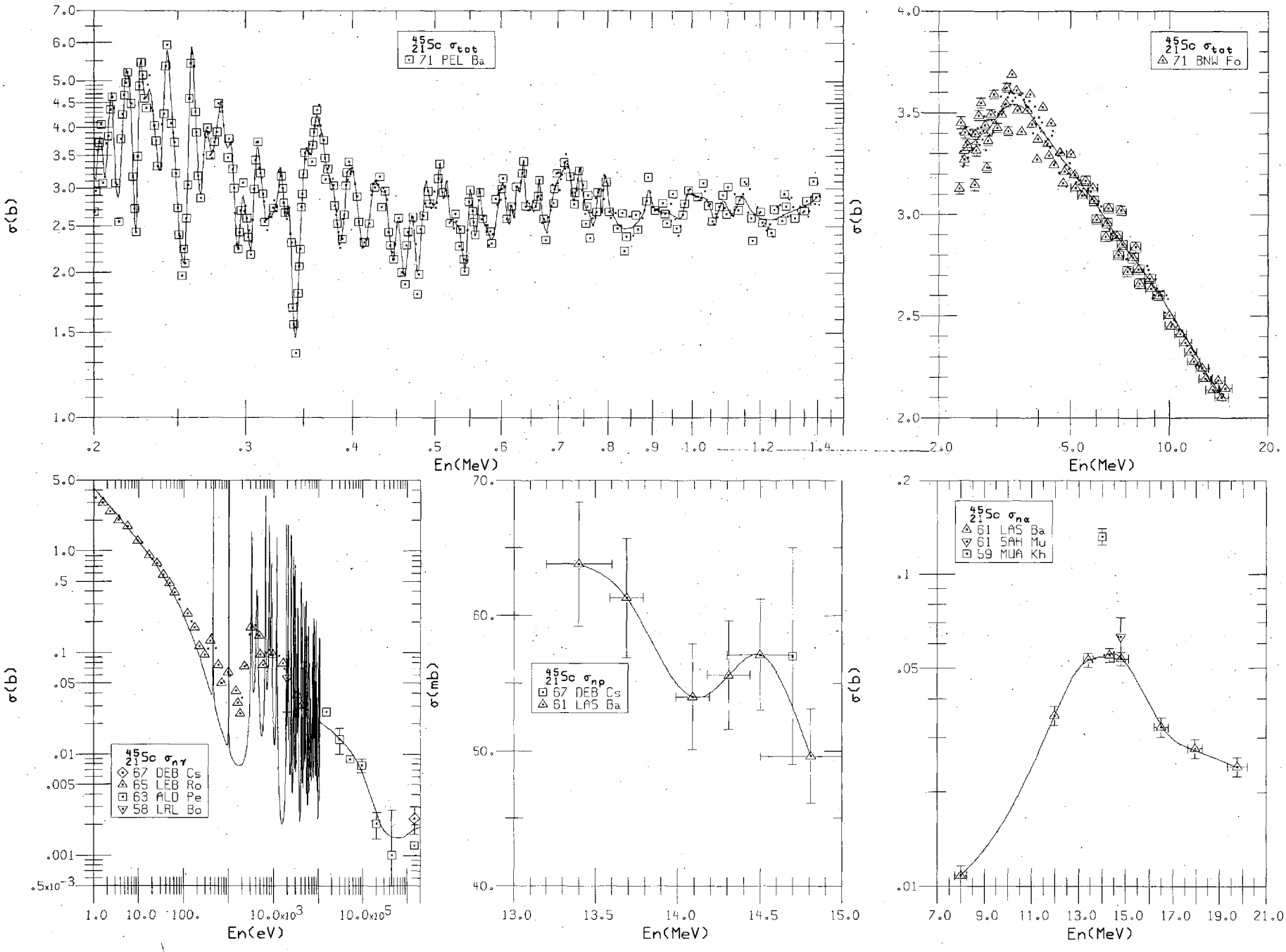
$^{45}_{21}Sc$

σ_{tot}

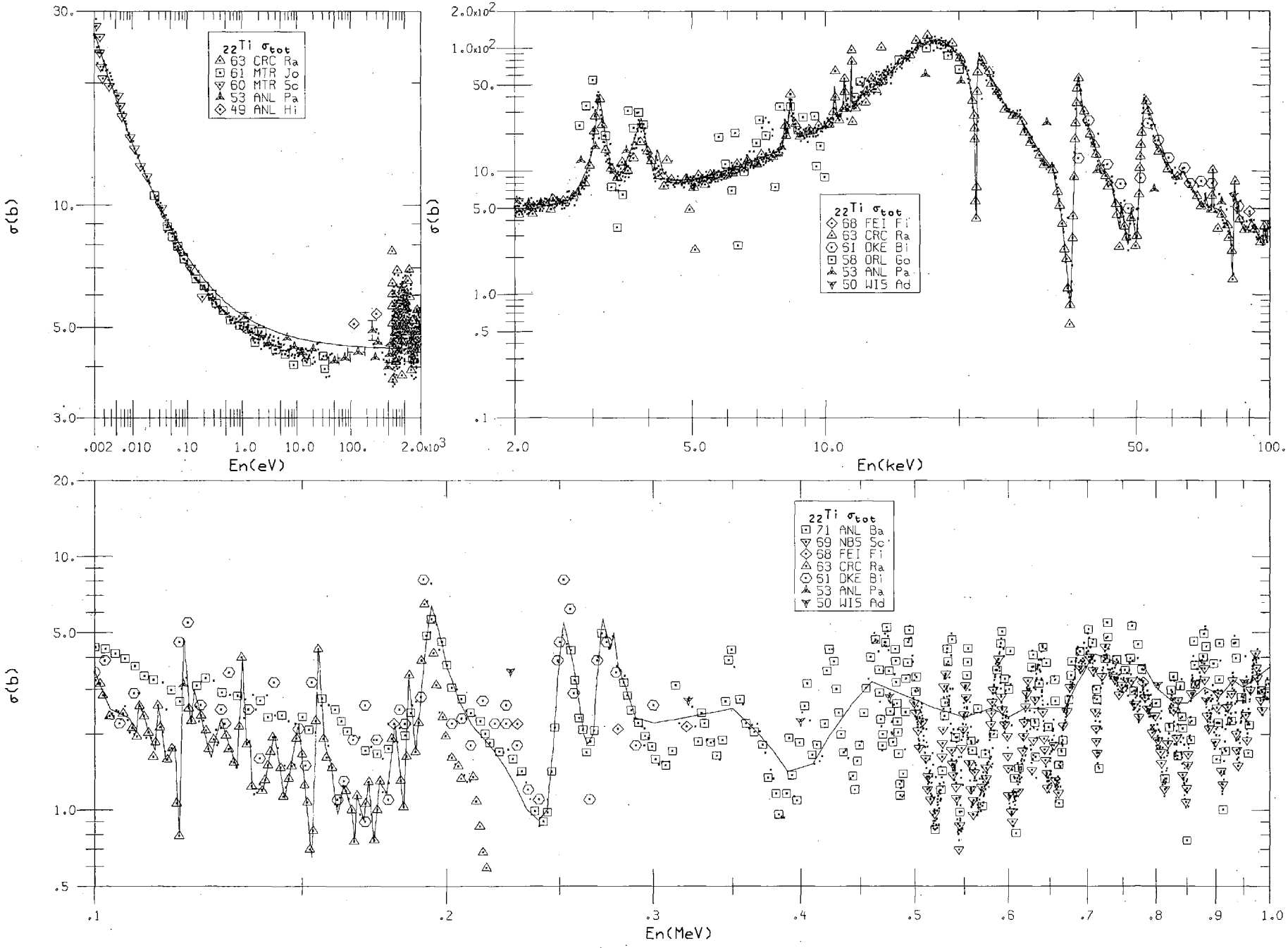




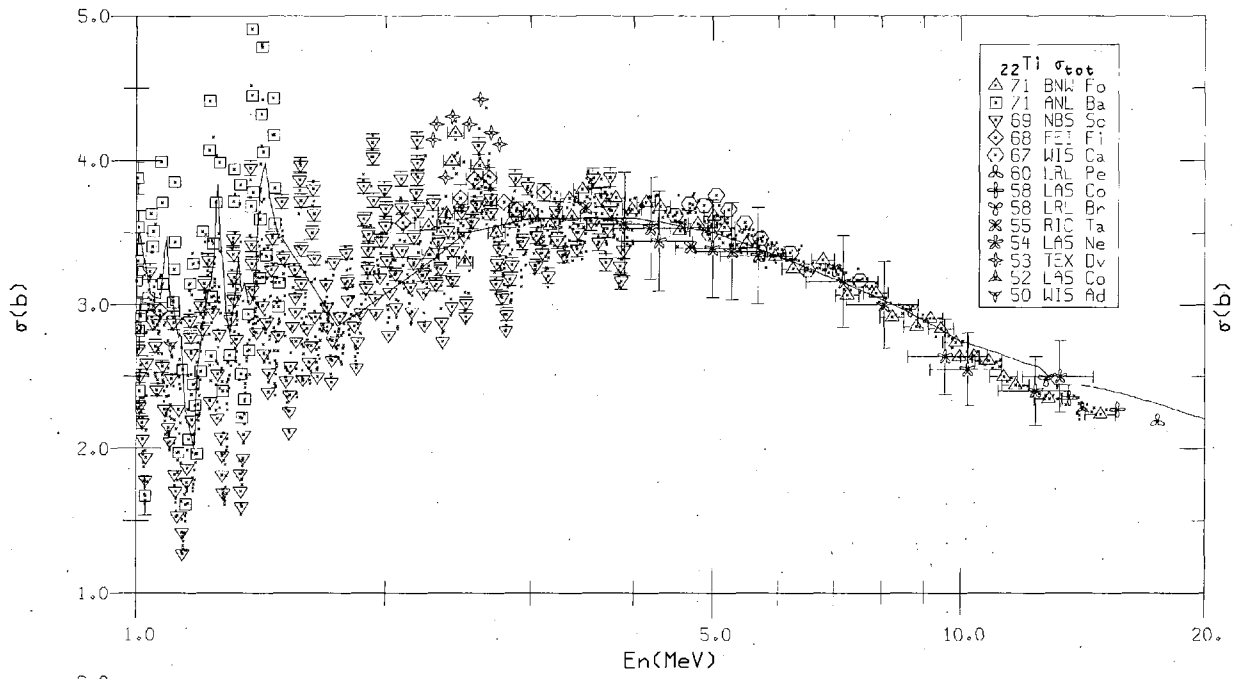


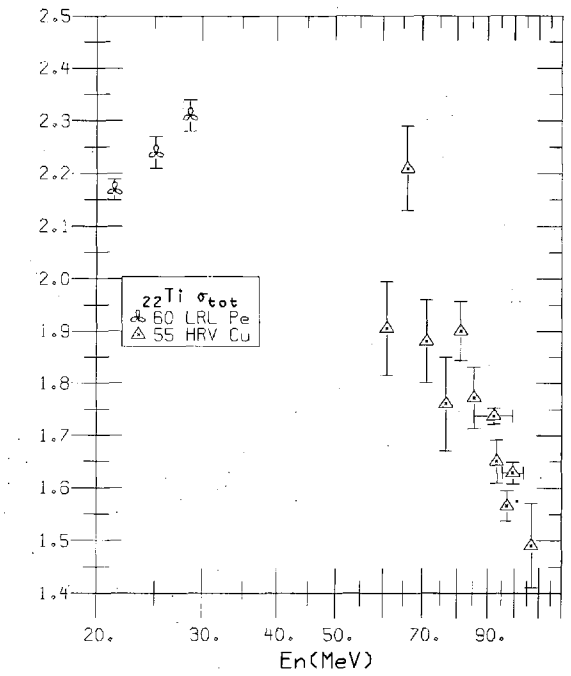

45 21 Sc σtot
71 PEL Ba
σ(b)
En(MeV)
45 21 Sc σtot
71 BNW Fo
σ(b)
En(MeV)
45 21 Sc σnγ
67 DEB Cs
65 LEB Ro
63 ALD Pe
58 LRL Bo
σ(b)
En(eV)
45 21 Sc σnp
67 DEB Cs
61 LAS Ba
σ(mb)
En(MeV)
45 21 Sc σnα
61 LAS Ba
61 SAH Mu
59 MUA Kh
σ(b)
En(MeV)

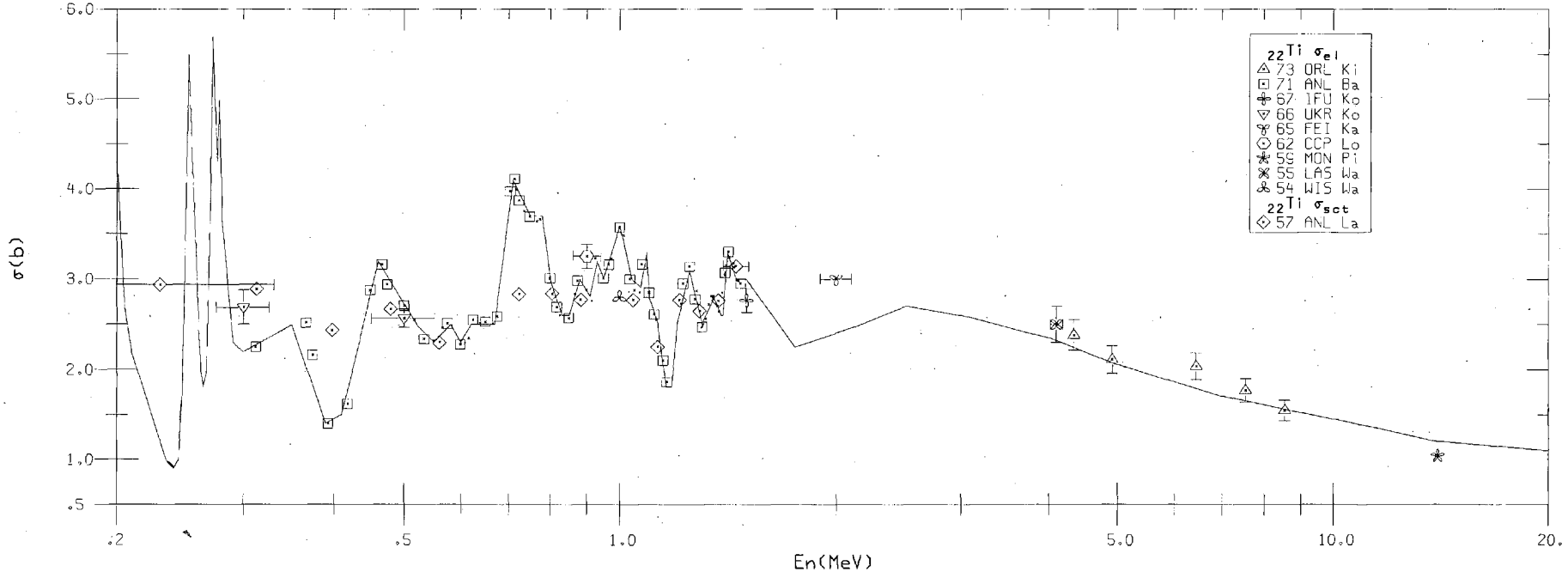
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{45}_{21}Sc$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	236	2.308 MeV to 14.8 MeV	
71	PEL	Barnard,et.al.	ZP,245,36,71	524	.200 MeV to 1.409 MeV	
70	KFK	Cho,et.al.	70HELSINKI,1,619,70	4351	19.0 keV to .106 MeV	abs
59	ORL	Miller,et.al.	BAP,4,42(R1),59	112	3.060 keV to 8.000 keV	
59	ORL	Miller,et.al.	BAP,4,42(R1),59	14	7.900 keV to 9.800 keV	abs
58	ANL	Cote,et.al.	PR,111,288,58	29	2.914 keV to 13.4 keV	
57	DKE	Newson,et.al.	PR,105,198,57	11	5.500 keV to 14.0 keV	abs
57	DKE	Marshak,et.al.	PR,106,110,57	130	2.250 keV to .105 MeV	
55	HAR	Pattenden	PPS/A,68,104,55	192	.0015 eV to 5.370 keV	abs
53	ANL	Hibdon	ANL-4963,53	5	10.0 eV to 2.800 keV	
			$^{45}_{21}Sc$ $\sigma_{n\gamma}$			
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	2.300 mb at 14.7 MeV	^{27}Al σ_{np}
66	UID	Wilson	WILSON,66	1	26.6 b at thermal	^{59}Co $\sigma_{n\gamma}$
65	LEB	Romanov,et.al.	YF,1,229,65	57	1.100 eV to 41.5 keV	^{45}Sc $\sigma_{n\gamma}$
63	ALO	Perkin	JNE,17,349,63	7	.150 MeV to 14.6 MeV	^{235}U σ_{nf}
58	LRL	Booth,et.al.	PR,112,226,58	1	56.0 mb at 20.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{45}_{21}Sc$ σ_{n2n}			
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.320 b at 14.6 MeV	^{65}Cu σ_{n2n}
			$^{45}_{21}Sc$ σ_{np}			
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	57.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
61	LA5	Bayhurst,et.al.	JIN,23,173,61	6	13.4 MeV to 14.8 MeV	^{238}U
			$^{45}_{21}Sc$ σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	25.0 muB at 14.6 MeV	^{45}Sc $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.210 mb at 14.7 MeV	^{45}Sc $\sigma_{n\alpha}$
			$^{45}_{21}Sc$ σ_{n3}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.300 mb at 14.7 MeV	^{45}Sc $\sigma_{n\alpha}$
			$^{45}_{21}Sc$ $\sigma_{n\alpha}$			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	63.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
61	LA5	Bayhurst,et.al.	JIN,23,173,61	11	8.000 MeV to 19.8 MeV	^{238}U
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	63.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	MUA	Khurana,et.al.	NP,13,88,59	1	.132 b at 14.0 MeV	^{56}Fe σ_{np}


22Ti σtot
63 CRC Ra
61 MTR Jo
60 MTR Sc
53 ANL Pa
49 ANL Hi
σ(b)
En(eV)
22Ti σtot
68 FEI Fi
63 CRC Ra
61 DKE Bi
58 ORL Go
53 ANL Pa
50 WIS Ad
En(keV)
22Ti σtot
71 ANL Ba
69 NBS Sc
68 FEI Fi
63 CRC Ra
61 DKE Bi
53 ANL Pa
50 WIS Ad
En(MeV)

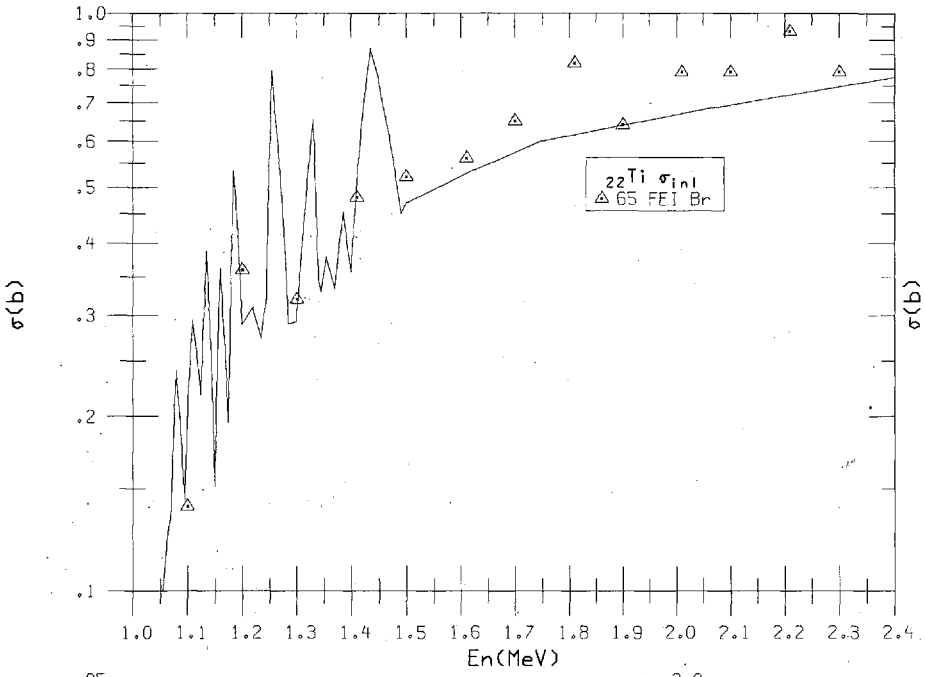
^{22}Ti
σ_{tot}
σ_{el}
σ_{sct}
[1286]

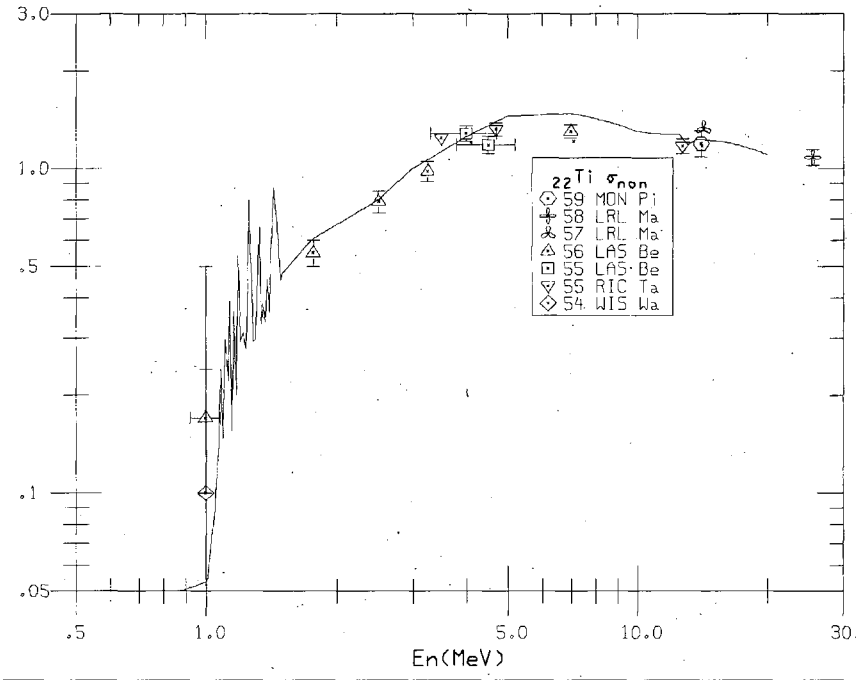


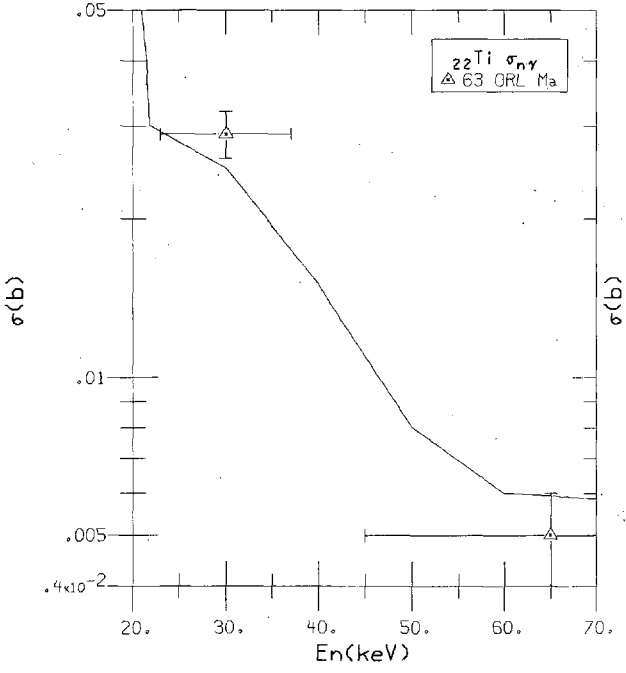


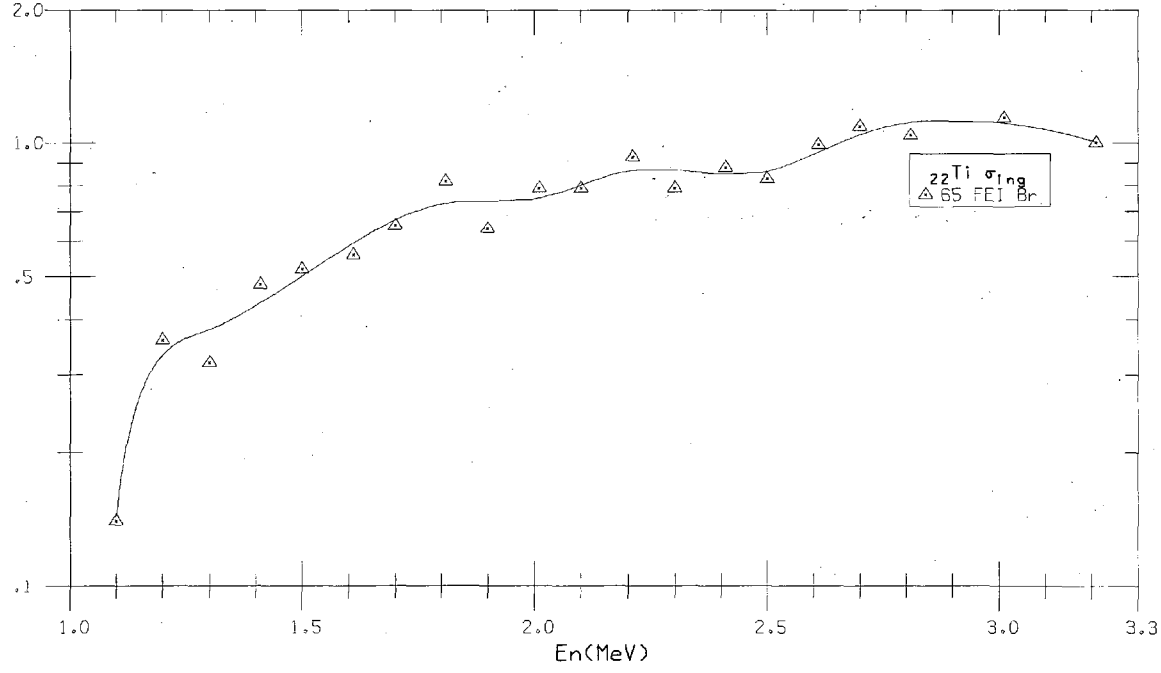


$_{22}$Ti
σ_{inl}
σ_{non}
$\sigma_{n\gamma}$
[1286]
σ_{ing}









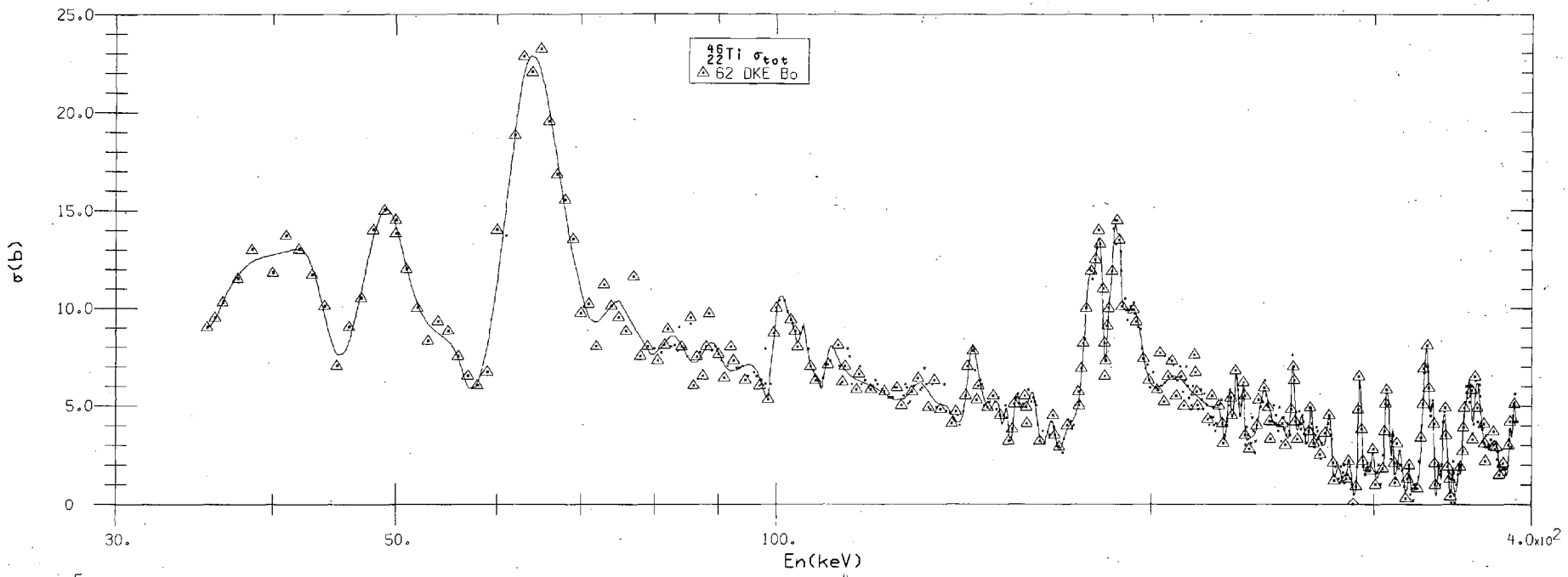
$^{46}_{22}Ti$

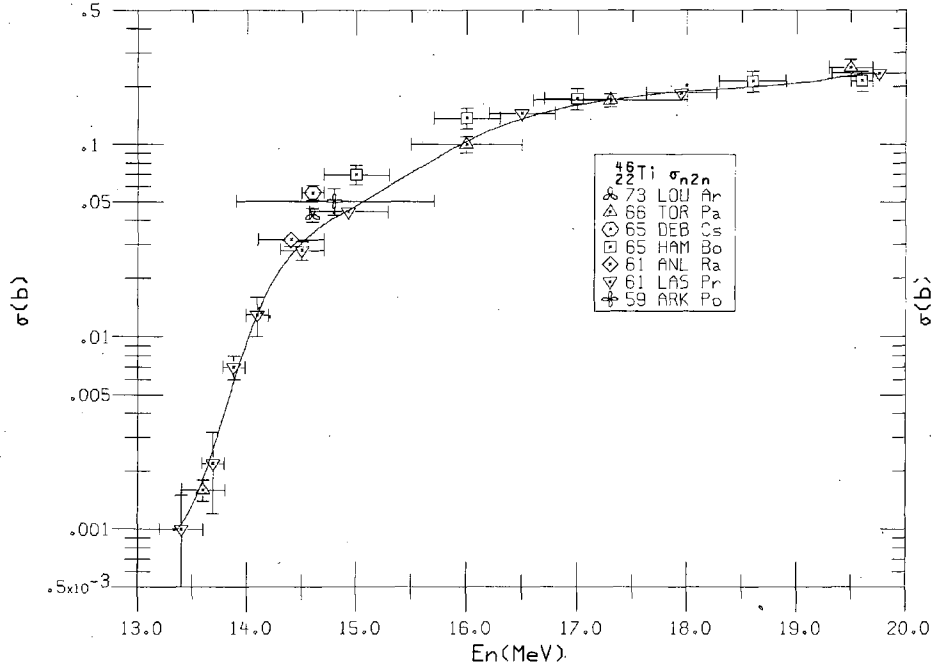
σ_{tot}

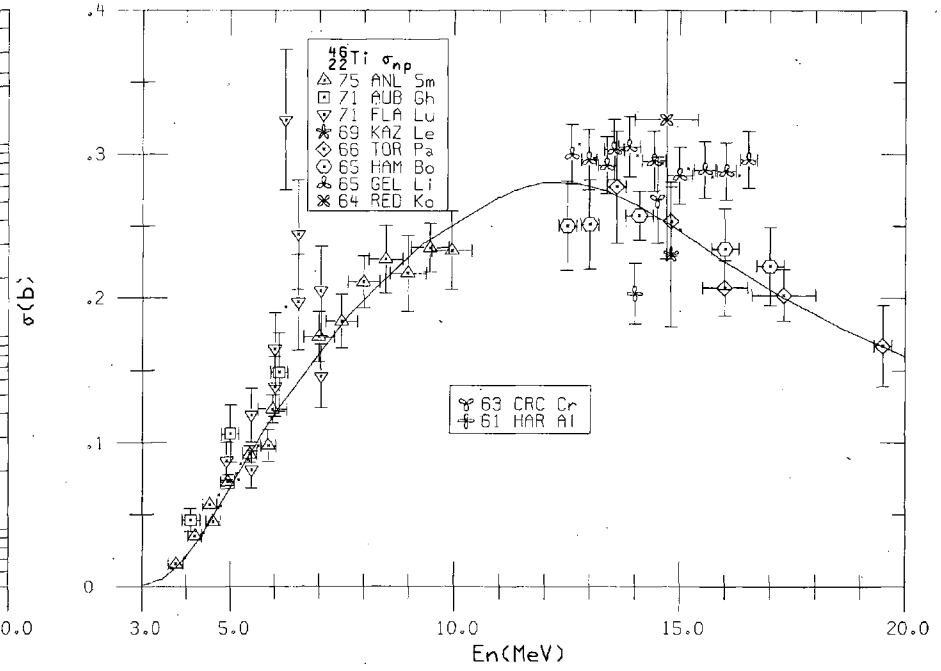
σ_{n2n}

σ_{np}

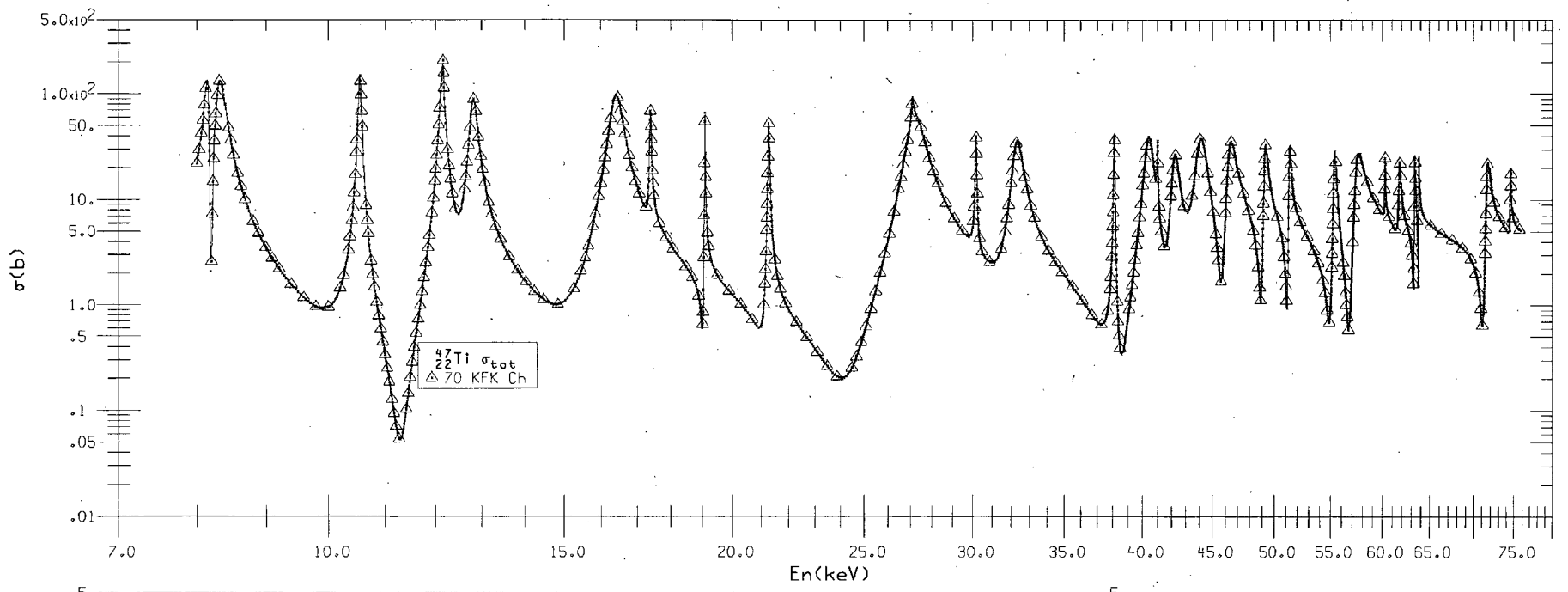
[6421]

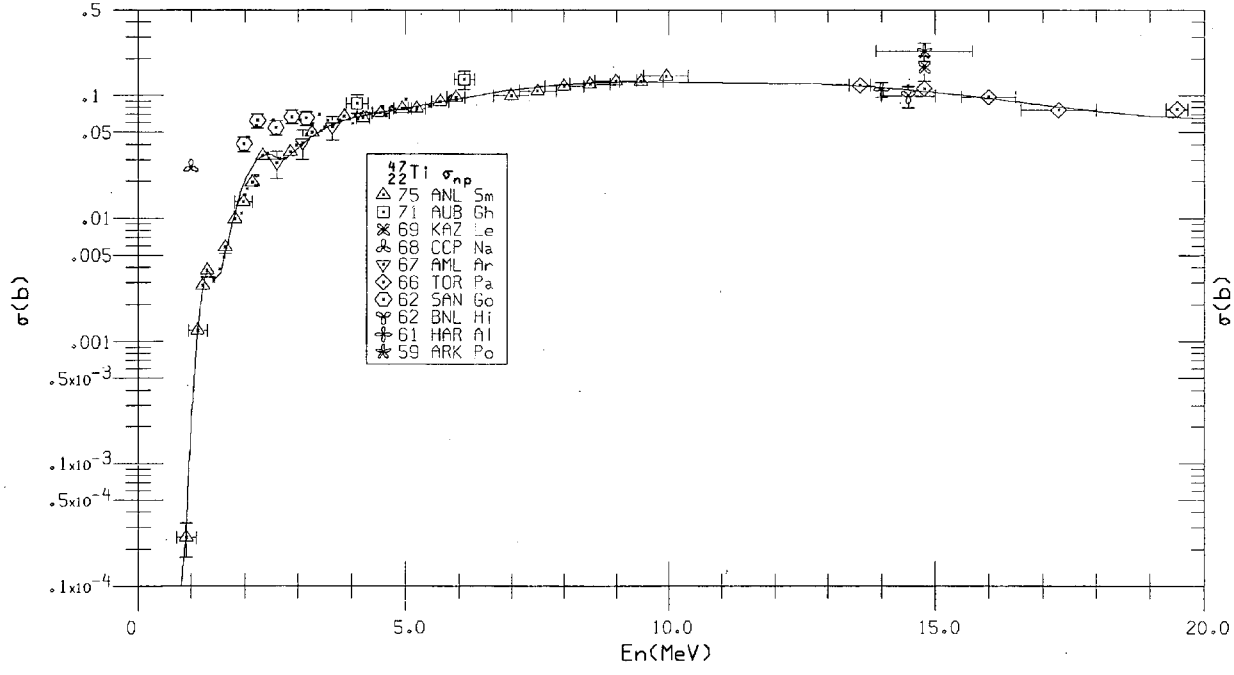


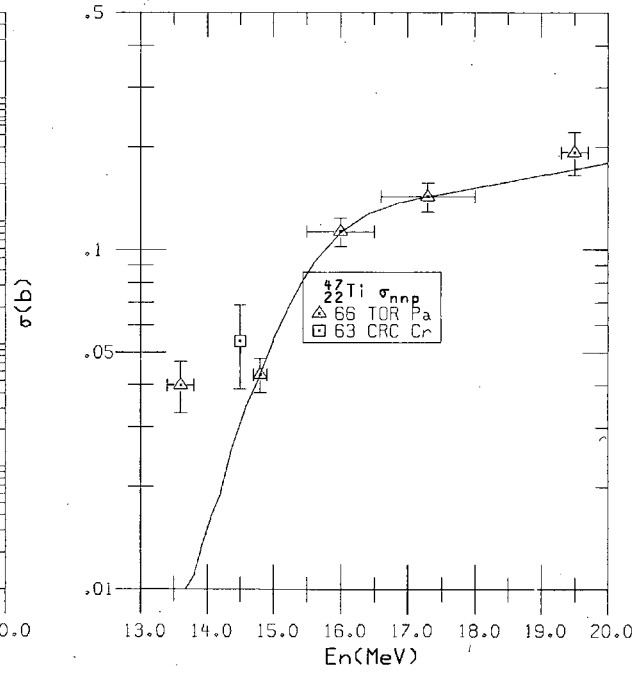




$^{47}_{22}$Ti
σ_{tot}
σ_{np}
σ_{nnp}
[6422]







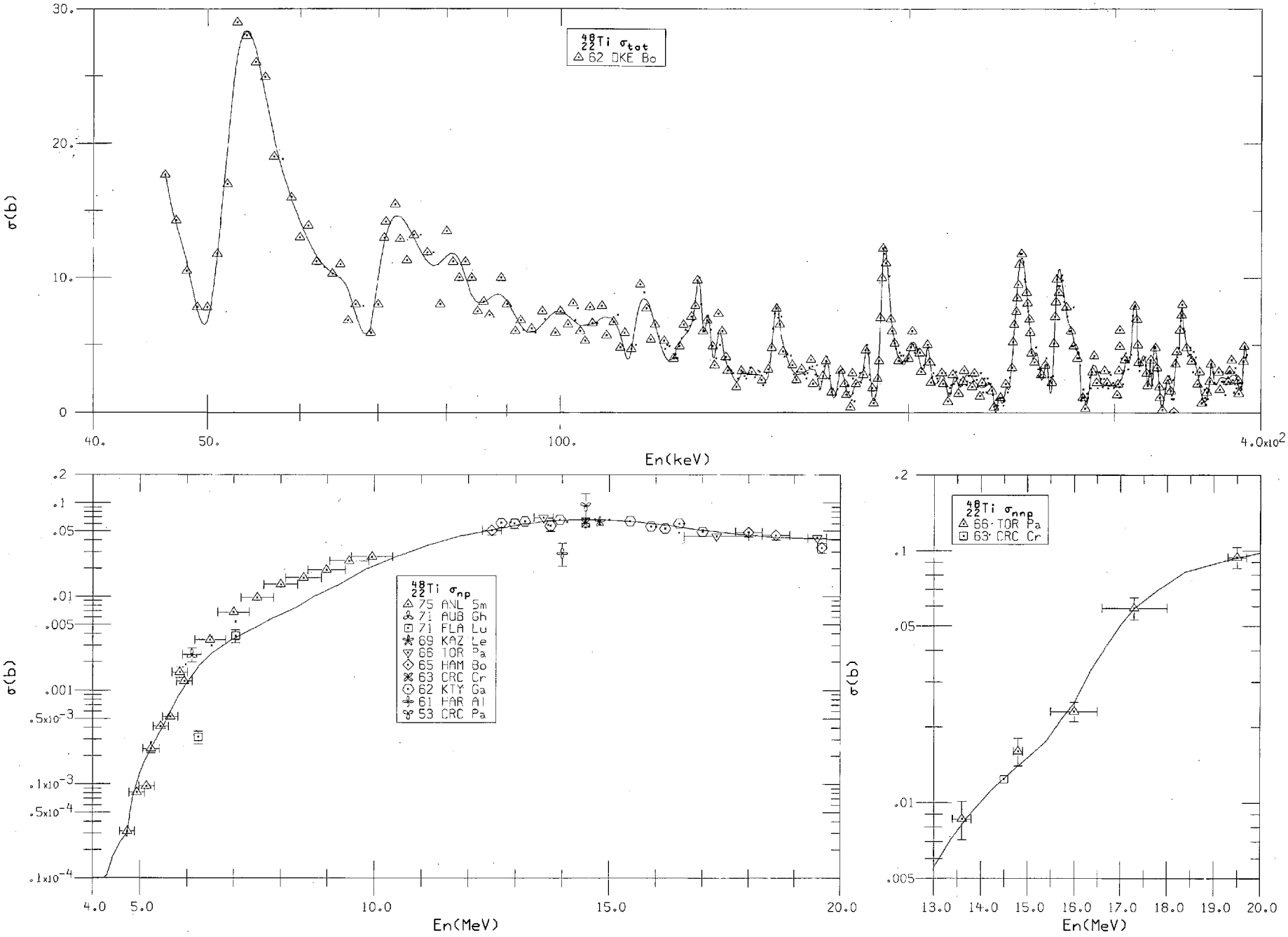
$^{48}_{22}Ti$

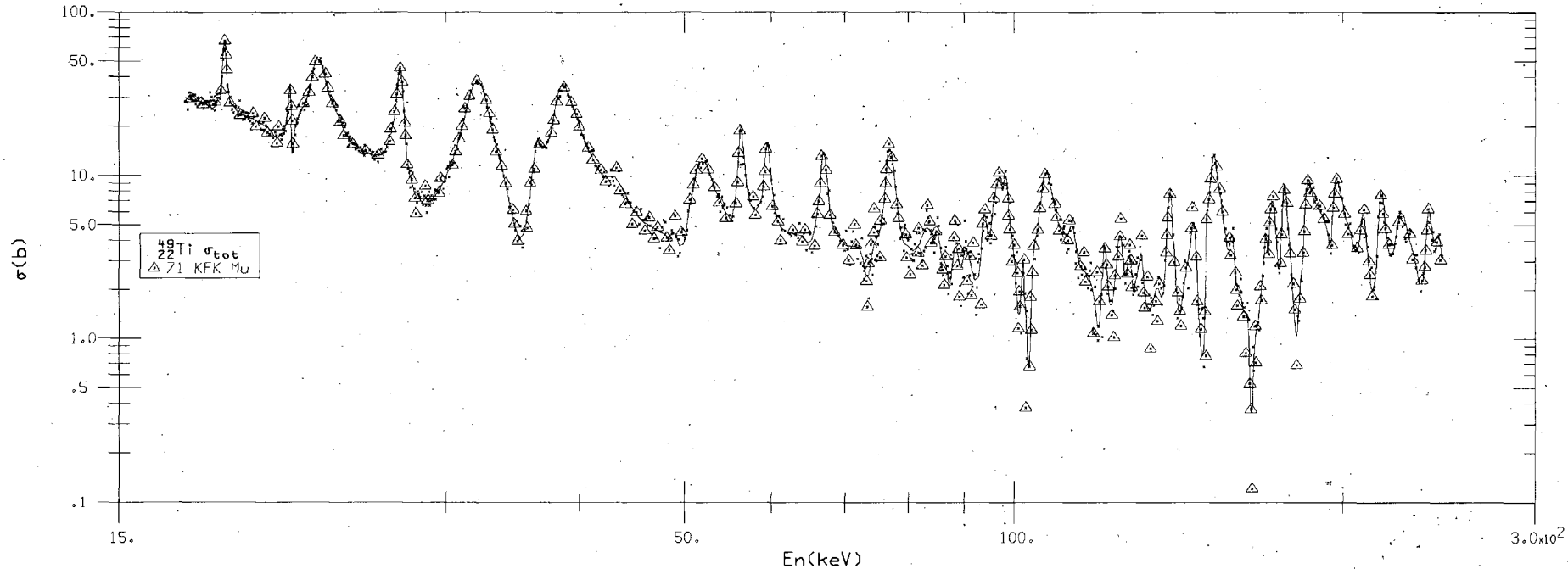
σ_{tot}

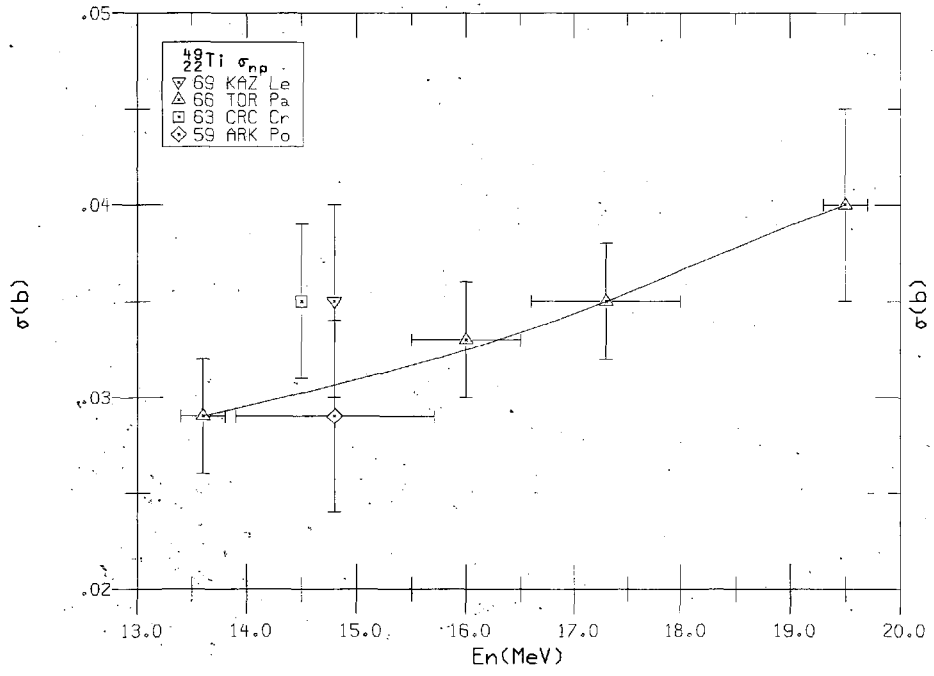
σ_{np}

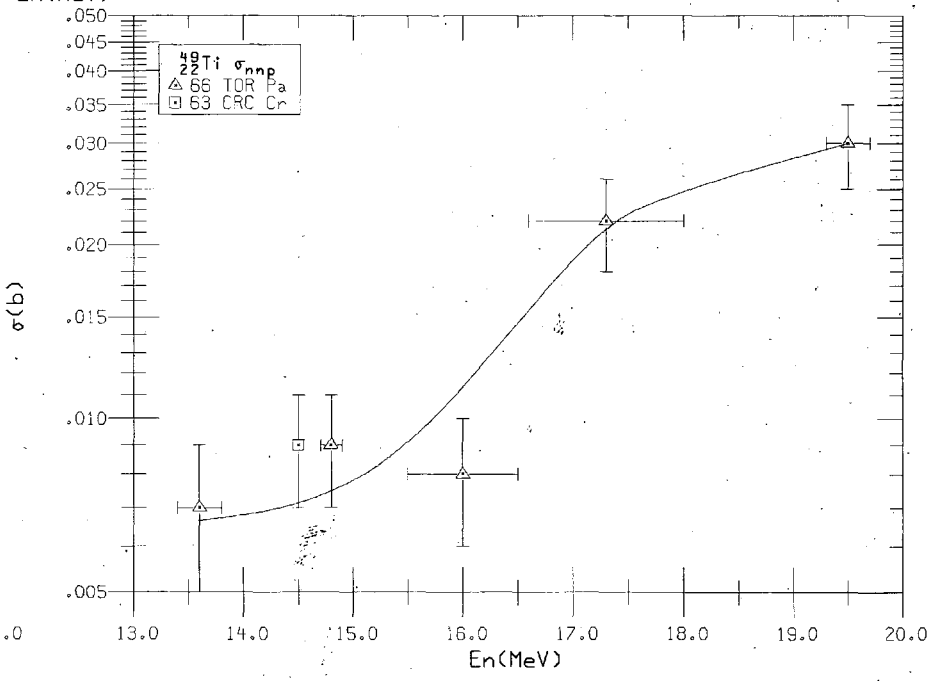
σ_{nnp}

[6423]




$^{49}_{22}Ti$ σ_{tot}
71 KFK Mu
σ(b)
En(keV)
100.
50.
10.
5.0
1.0
.5
.1
15.
50.
100.
3.0x10²


$^{49}_{22}Ti$ σ_{np}
69 KAZ Le
66 TOR Pa
63 CRC Cr
59 ARK Po
σ(b)
En(MeV)
.05
.04
.03
.02
13.0
14.0
15.0
16.0
17.0
18.0
19.0
20.0

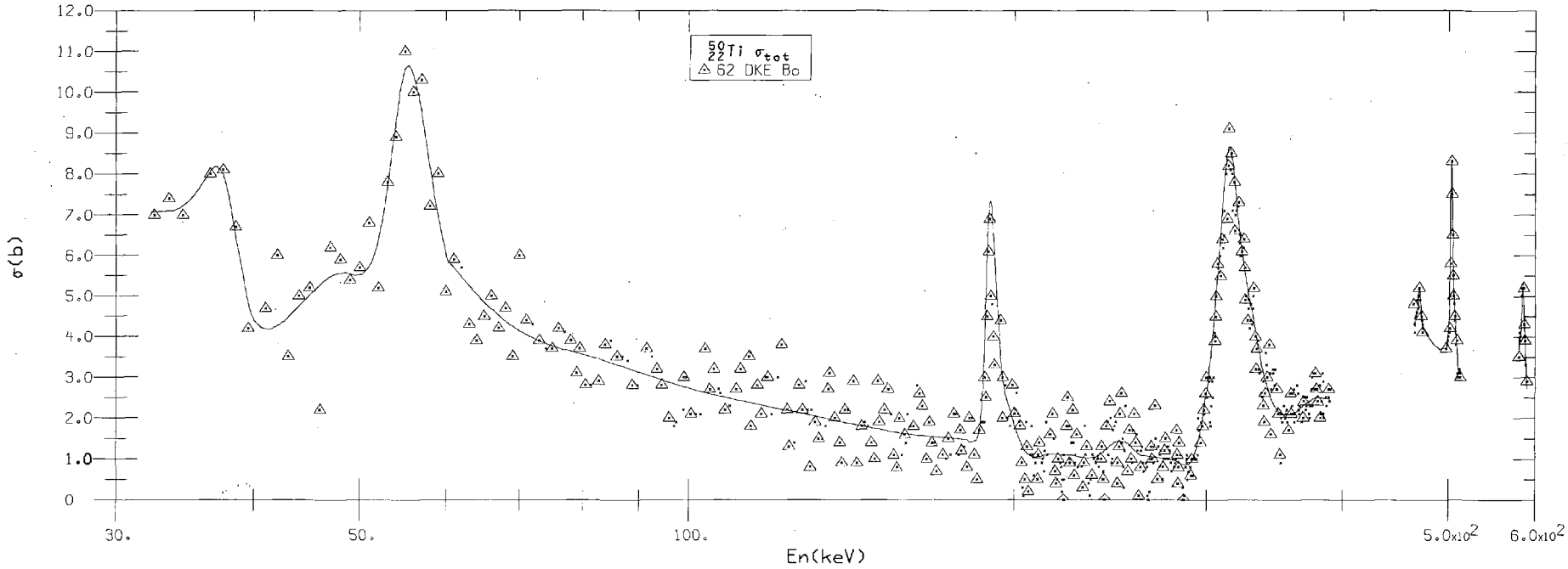

$^{49}_{22}Ti$ σ_{nnp}
66 TOR Pa
63 CRC Cr
σ(b)
En(MeV)
.050
.045
.040
.035
.030
.025
.020
.015
.010
.005
13.0
14.0
15.0
16.0
17.0
18.0
19.0
20.0

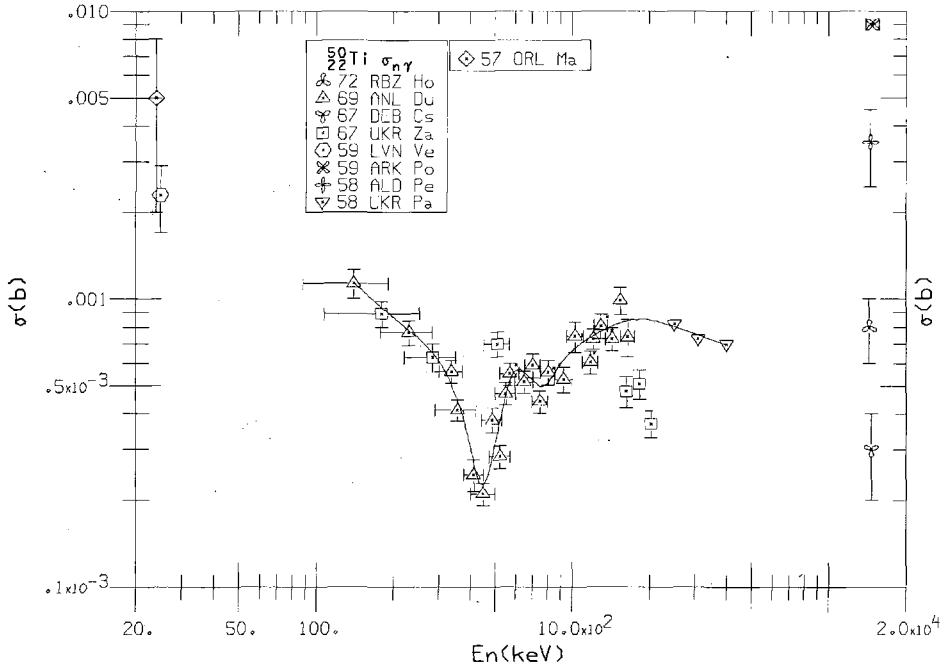
$^{50}_{22}Ti$

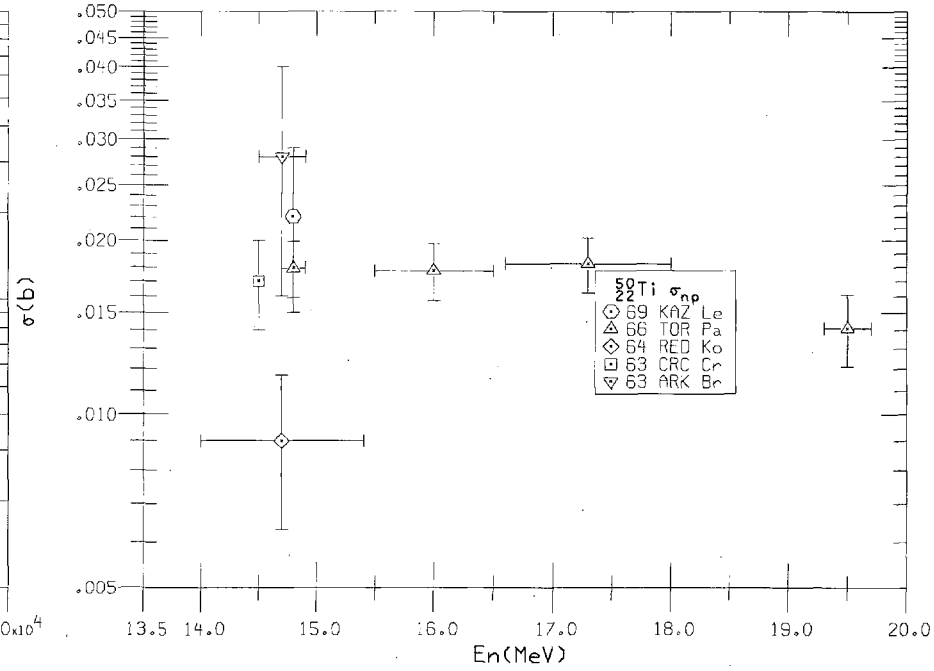
σ_{tot}

$\sigma_{n\gamma}$

σ_{np}







Yr	Lab	Author	Reference	Points	Range	Standard
			$_{22}$Ti σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	250	2.253 MeV to 14.9 MeV	
71	ANL	Barnard,et.al.	ANL-7710,7,71	1014	.100 MeV to 1.494 MeV	abs
69	NBS	Schwartz	SCHWARTZ,69	2648	.499 MeV to 4.000 MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	27	90.0 keV to 3.280 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	168	4.500 MeV to 7.889 MeV	abs
63	CRC	Rainwater,et.al.	BAP,8,334(KS),63	3731	.584 keV to .216 MeV	abs
62	BAR	Kent,et.al.	PR,125,331,62	1	3.630 b at 3.660 MeV	
61	DKE	Bilpuch,et.al.	AP,14,387,61	114	35.0 keV to .300 MeV	abs
61	MTR	Joki,et.al.	NSE,11,298,61	476	.0251 eV to 45.2 eV	abs
60	MTR	Schmunk,et.al.	NSE,7,193,60	93	.0020 eV to .288 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.6 MeV	abs
59	MON	Pierre,et.al.	PR,115,999,59	1	2.230 b at 14.0 MeV	
58	ORL	Good,et.al.	PR,109,926,58	88	2.800 keV to 24.0 keV	
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	6	7.010 MeV to 14.0 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	3.700 b at 4.100 MeV	abs
55	HRV	Culler,et.al.	PR,99,740,55	12	61.0 MeV to 106.8 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.690 MeV to 13.2 MeV	abs
53	ANL	Palmer	BOLLINGER,53	102	1.120 eV to .119 MeV	
53	TEX	Dvorack,et.al.	PR,90,618,53	13	2.210 MeV to 2.745 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.280 b at 14.1 MeV	abs
52	ANL	Goodman	PR,88,686,52	1	2.200 b at 14.0 MeV	
51	CAR	Lasday	PR,81,139,51	1	2.240 b at 13.9 MeV	
50	WIS	Adair	PR,77,748(H9),50	17	83.0 keV to 1.409 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
			$_{22}$Ti σ_{el}			
73	ORL	Kinney,et.al.	ORNL-4810,73	5	4.340 MeV to 8.560 MeV	^{1}H σ_{el}
71	ANL	Barnard,et.al.	ANL-7710,7,71	83	.312 MeV to 1.472 MeV	C σ_{el}
67	IFU	Korzh,et.al.	UFZ,12,(9),1571,67	1	2.755 b at 1.500 MeV	abs
66	UKR	Korzh,et.al.	UFZ,11,563,66	2	.300 MeV to .500 MeV	
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	3.000 b at 2.000 MeV	
62	CCP	Lovchikova	AE,12,48,62	1	3.250 b at .900 MeV	
59	MON	Pierre,et.al.	PR,115,999,59	1	1.040 b at 14.0 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.500 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.800 b at 1.000 MeV	
			$_{22}$Ti σ_{inl}			
65	FEI	Broder,et.al.	FEI-32,65	13	1.100 MeV to 2.300 MeV	Fe σ_{ing}
			$_{22}$Ti σ_{sct}			
60	ORL	Shull,et.al.	PR,118,797,60	1	4.000 b at thermal	
57	ANL	Langsdorf Jr+	PR,107,1077,57	16	.230 MeV to 1.450 MeV	C

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{22}$Ti σ_{non}			
59	MON	Pierre,et.al.	PR,115,999,59	1	1.190 b at 14.0 MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	1	1.080 b at 25.5 MeV	abs
57	LRL	Mac Gregor+	PR,108,726,57	1	1.330 b at 14.2 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	5	1.000 MeV to 7.000 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.200 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	2	4.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.100 b at 1.000 MeV	
			$_{22}$Ti $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	MTR	Joki,et.al.	NSE,11,298,61	1	6.090 b at thermal	
			$_{22}$Ti σ_{ing}			
65	FEI	Broder,et.al.	INDSWG-74,7,65	20	1.100 MeV to 3.210 MeV	
			$_{22}$Ti σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,,58	1	.520 b at 14.1 MeV	
			$_{22}$Ti σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	70.0 muB at 14.7 MeV	^{197}Au σ_{n2n}
			$^{46}_{22}$Ti σ_{tot}			
62	DKE	Bowman,et.al.	AP,17,319,62	657	35.5 keV to .390 MeV	
			$^{46}_{22}$Ti σ_{sct}			
60	ORL	Shull,et.al.	PR,118,797,60	1	2.100 b at thermal	
			$^{46}_{22}$Ti σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	42.8 mb at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	1	12.7 mb at 14.2 MeV	^{65}Cu σ_{n2n}
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
65	DEB	Csikai	65ANTWERP,,537,65	1	56.0 mb at 14.6 MeV	^{63}Cu σ_{n2n}
65	HAM	Bormann,et.al.	EANDC(E)-57,17,65	7	14.1 MeV to 19.6 MeV	
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	13.3 mb at 14.1 MeV	
61	ANL	Rayburn	PR,122,168,61	1	31.8 mb at 14.4 MeV	^{63}Cu σ_{n2n}
61	LAS	Prestwood,et.al.	PR,121,1438,61	10	13.3 MeV to 19.8 MeV	^{238}U
59	ARK	Poularikas,et.al	PR,115,989,59	1	50.4 mb at 14.8 MeV	^{63}Cu σ_{n2n}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{46}_{22}$Ti σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	30	3.668 MeV to 9.950 MeV	^{235}U σ_{nf}
71	AUB	Ghorai,et.al.	JNE,25,319,71	3	4.100 MeV to 6.100 MeV	^{27}Al σ_{np}
71	FLA	Lukic,et.al.	NSE,43,233,71	3	5.480 MeV to 6.530 MeV	^{56}Fe σ_{np}
71	FLA	Lukic,et.al.	NSE,43,233,71	3	6.010 MeV to 7.040 MeV	^{27}Al $\sigma_{n\alpha}$
71	FLA	Lukic,et.al.	NSE,43,233,71	5	4.910 MeV to 7.040 MeV	^{58}Ni σ_{np}
69	KAZ	Levkovskii+	YF,10,44,69	1	.230 b at 14.8 MeV	^{65}Cu σ_{n2n}
68	CCP	Nasyrov	AE,25,437,68	1	9.300 mb at 1.000 MeV	
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
65	HAM	Bormann,et.al.	EANDC(E)-57,17,65	6	12.5 MeV to 17.0 MeV	
65	GEL	Liskien,et.al.	NP,63,393,65	17	12.6 MeV to 16.5 MeV	abs
64	RED	Koehler,et.al.	JNE,18,81,64	1	.324 b at 14.7 MeV	^{48}Ti σ_{np}
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	.268 b at 14.5 MeV	
61	HAR	Allan	NP,24,274,61	1	.203 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{47}_{22}$Ti σ_{tot}			
70	KFK	Cho,et.al.	ZOHELSINKI,1,619,70	6801	8.000 keV to 76.0 keV	
			$^{47}_{22}$Ti σ_{sct}			
60	ORL	Shull,et.al.	PR,118,797,60	1	1.300 b at thermal	
			$^{47}_{22}$Ti σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	73	.914 MeV to 9.950 MeV	^{235}U σ_{nf}
71	AUB	Ghorai,et.al.	JNE,25,319,71	4	3.400 MeV to 6.100 MeV	^{27}Al σ_{np}
69	KAZ	Levkovskii+	YF,10,44,69	1	.170 b at 14.8 MeV	^{65}Cu σ_{n2n}
68	CCP	Nasyrov	AE,25,437,68	1	26.0 mb at 1.000 MeV	
67	AML	Armitage	SYMONDS,67	5	2.190 MeV to 3.640 MeV	abs
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	.120 b at 14.5 MeV	
62	SAN	Gonzalez,et.al.	PR,126,271,62	12	1.990 MeV to 3.550 MeV	^{31}P σ_{np}
62	BNL	Hillman	NP,37,78,62	1	99.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAR	Allan	NP,24,274,61	1	.112 b at 14.0 MeV	^{54}Fe σ_{np}
59	ARK	Poularikas,et.al	PR,115,989,59	1	.230 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{47}_{22}$Ti σ_{nnp}			
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	54.0 mb at 14.5 MeV	
			$^{48}_{22}$Ti σ_{tot}			
62	DKE	Bowman,et.al.	AP,17,319,62	607	46.0 keV to .389 MeV	

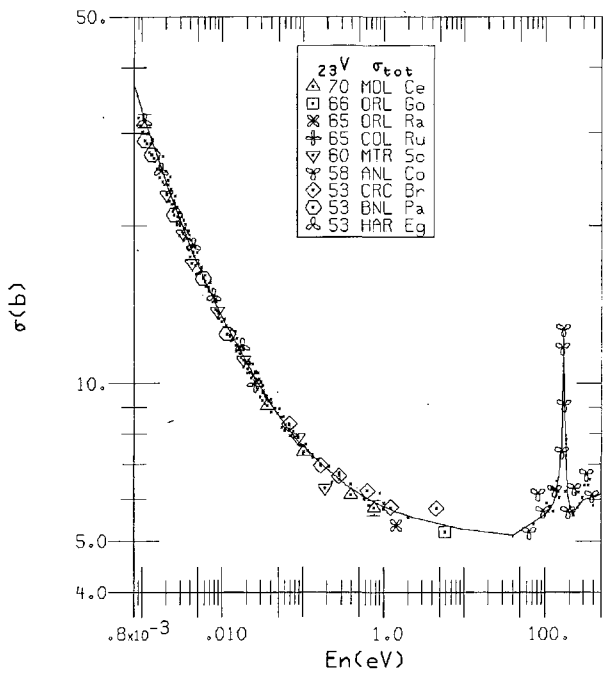
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{48}_{22}$Ti σ_{sct}			
60	ORL	Shull,et.al.	PR,118,797,60	1	3.700 b at thermal	
			$^{48}_{22}$Ti σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	19	4.724 MeV to 9.952 MeV	^{235}U σ_{nf}
71	AUB	Ghorai,et.al.	JNE,25,319,71	1	2.400 mb at 6.100 MeV	^{27}Al σ_{np}
71	FLA	Lukic,et.al.	NSE,43,233,71	1	3.700 mb at 6.530 MeV	^{56}Fe σ_{np}
71	FLA	Lukic,et.al.	NSE,43,233,71	2	6.530 MeV to 7.040 MeV	^{27}Al $\sigma_{n\alpha}$
71	FLA	Lukic,et.al.	NSE,43,233,71	2	6.240 MeV to 7.040 MeV	^{58}Ni σ_{np}
69	KAZ	Levkovskii+	YF,10,44,69	1	63.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
68	MUK	Vonach,et.al.	68WASH,2,885,68	1	66.5 mb at 14.7 MeV	
68	CCP	Nasyrov	AE,25,437,68	1	.240 mb at 1.000 MeV	
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
65	HAM	Bormann,et.al.	EANDC(E)-57,17,65	9	12.5 MeV to 19.6 MeV	
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	62.0 mb at 14.5 MeV	
62	BNL	Hillman	NP,37,78,62	1	55.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	KTY	Gabbard,et.al.	PR,128,1276,62	14	12.7 MeV to 17.0 MeV	^{48}Ti σ_{np}
62	KTY	Gabbard,et.al.	PR,128,1276,62	3	13.0 MeV to 16.6 MeV	abs
61	HAR	Allan	NP,24,274,61	1	29.0 mb at 14.0 MeV	^{54}Fe σ_{np}
59	ARK	Poularikas,et.al	PR,115,989,59	1	58.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	92.7 mb at 14.5 MeV	
			$^{48}_{22}$Ti σ_{nnp}			
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	12.4 mb at 14.5 MeV	
			$^{48}_{22}$Ti $\sigma_{n\alpha}$			
69	KAZ	Levkovskii+	YF,10,44,69	1	23.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
67	IIT	Yu Wen Yu,et.al.	NP/A,98,451,67	1	39.0 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	48.0 mb at 14.5 MeV	
			$^{49}_{22}$Ti σ_{tot}			
71	KFK	Mueller,et.al.	NP/A,164,97,71	1321	17.2 keV to .246 MeV	abs
			$^{49}_{22}$Ti σ_{sct}			
60	ORL	Shull,et.al.	PR,118,797,60	1	1.000 b at thermal	
			$^{49}_{22}$Ti σ_{np}			
69	KAZ	Levkovskii+	YF,10,44,69	1	35.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	35.0 mb at 14.5 MeV	
59	ARK	Poularikas,et.al	PR,115,989,59	1	29.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	MUA	Khurana,et.al.	NP,13,88,59	1	97.0 mb at 14.0 MeV	^{56}Fe σ_{np}

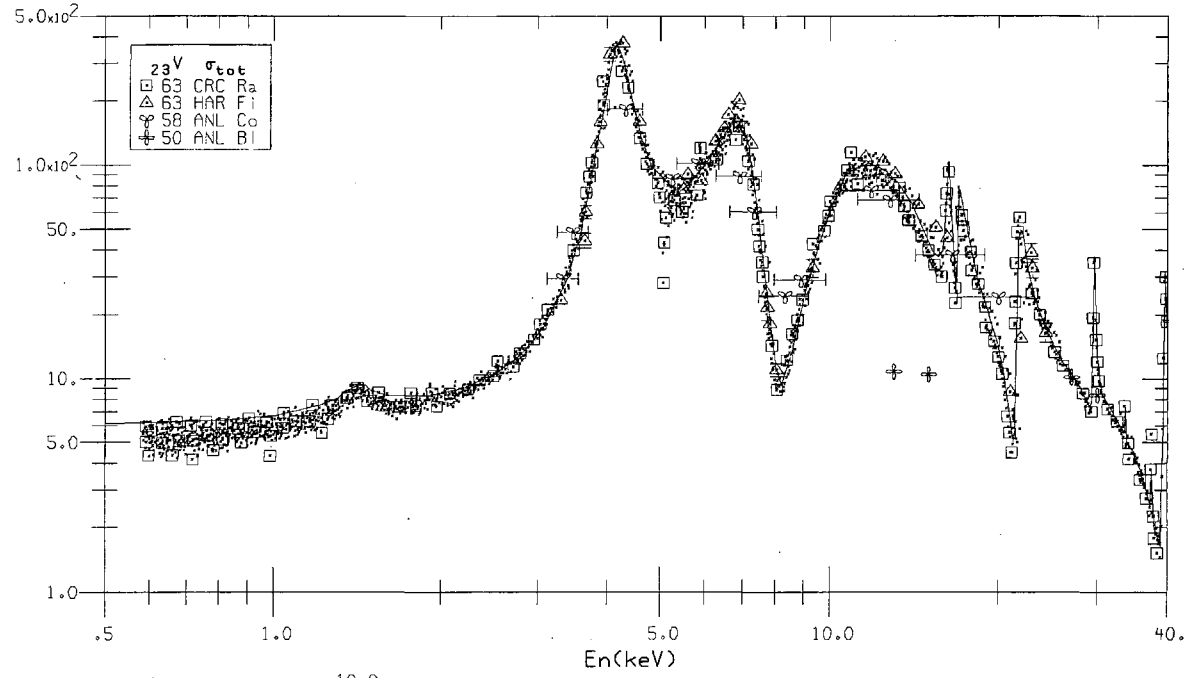
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{49}_{22}Ti$ σ_{nnp}			
66	TOR	Pai	CJP,44,2337,66	5	13.6 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	9.000 mb at 14.5 MeV	
			$^{50}_{22}Ti$ σ_{tot}			
62	DKE	Bowman,et.al.	AP,17,319,62	624	32.5 keV to .590 MeV	
			$^{50}_{22}Ti$ σ_{sct}			
60	ORL	Shull,et.al.	PR,118,797,60	1	3.500 b at thermal	
			$^{50}_{22}Ti$ $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	.800 mb at 14.4 MeV	^{56}Fe σ_{np}
69	ANL	Dudey,et.al.	JNE,23,443,69	27	.140 MeV to 1.645 MeV	^{235}U σ_{nf}
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.300 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	UKR	Zaikin,et.al.	AE,23,67,67	8	.180 MeV to 2.030 MeV	^{235}U σ_{nf}
59	LVN	Vervier	NP,9,569,59	1	2.300 mb at 25.0 keV	^{115}In $\sigma_{n\gamma}$
59	ARK	Poularikas,et.al	PR,115,989,59	1	9.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	3.500 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	3	2.500 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	5.000 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{50}_{22}Ti$ σ_{np}			
69	KAZ	Levkovskii+	YF,10,44,69	1	22.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	TOR	Pai	CJP,44,2337,66	4	14.8 MeV to 19.5 MeV	^{27}Al $\sigma_{n\alpha}$
64	RED	Koehler,et.al.	JNE,18,81,64	1	9.000 mb at 14.7 MeV	^{48}Ti σ_{np}
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	17.0 mb at 14.5 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	28.0 mb at 14.7 MeV	^{63}Cu σ_{n2n}
59	MUA	Khurana,et.al.	NP,13,88,59	1	.147 b at 14.0 MeV	^{56}Fe σ_{np}
			$^{50}_{22}Ti$ σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	.100 mb at 14.6 MeV	^{50}Ti σ_{np}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.280 mb at 14.7 MeV	^{50}Ti σ_{np}
			$^{50}_{22}Ti$ $\sigma_{n\alpha}$			
69	KAZ	Levkovskii+	YF,10,44,69	1	10.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
67	IIT	Yu Wen Yu,et.al.	NP/A,98,451,67	1	9.400 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)16,2,63	1	8.600 mb at 14.5 MeV	
62	BNL	Hillman	NP,37,78,62	1	10.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

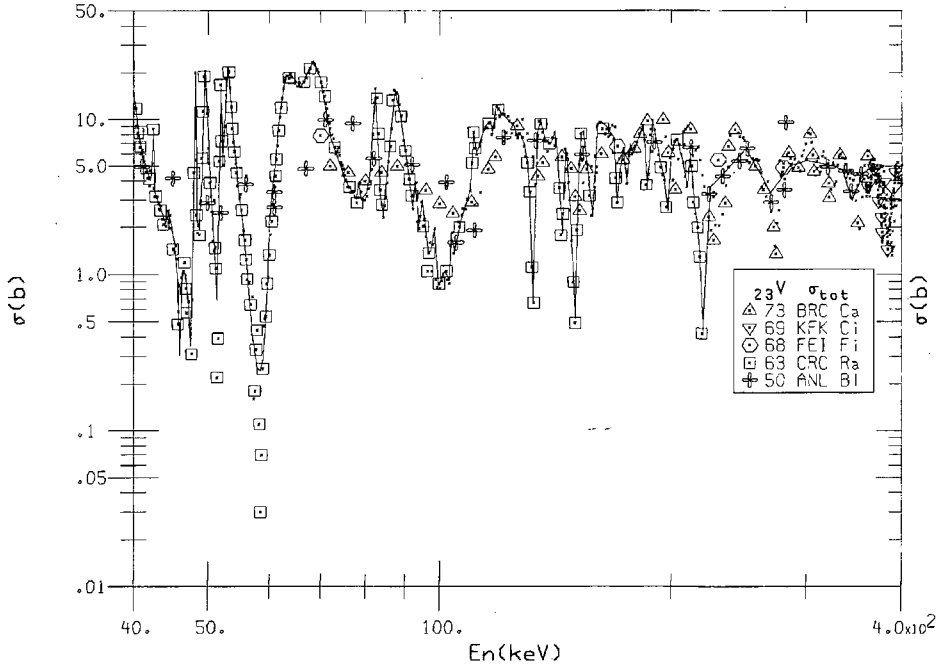
^{23}V

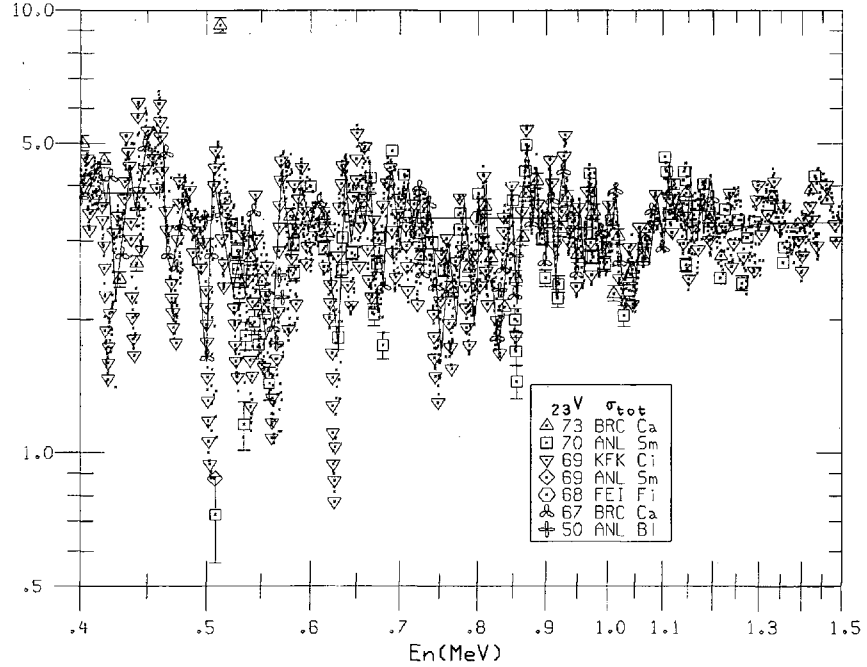
σ_{tot}

[1196]

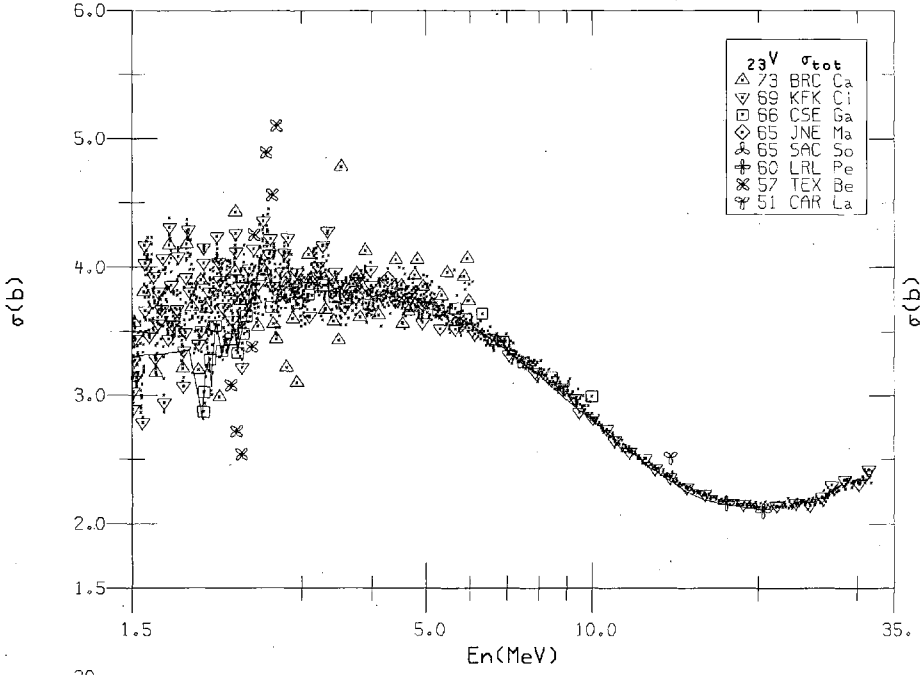


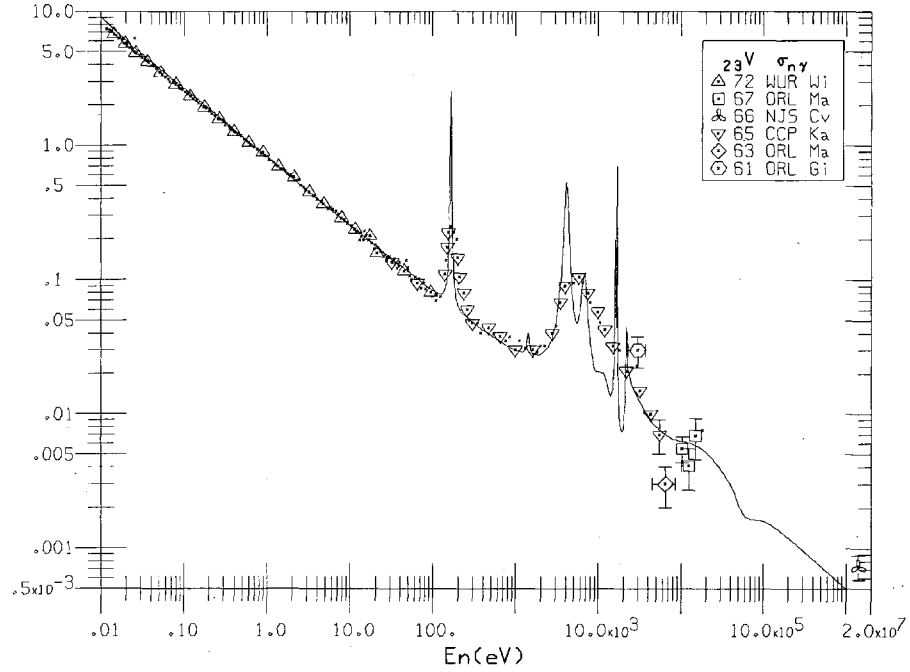


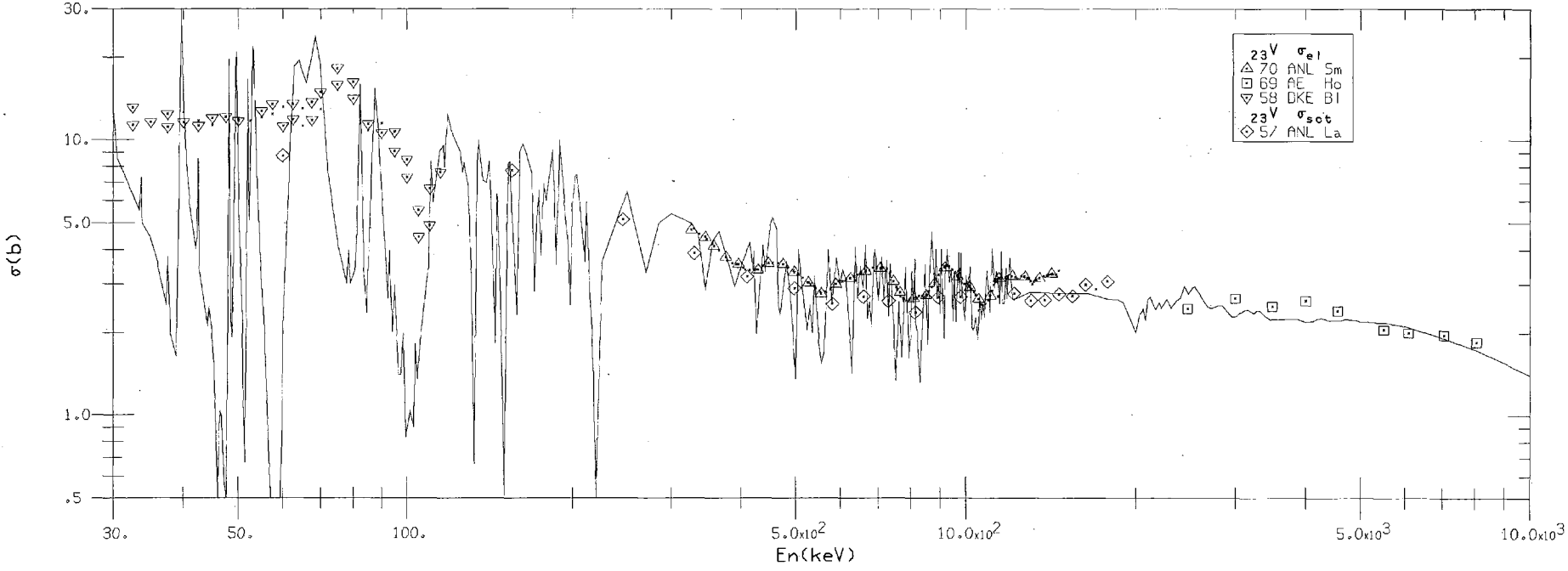




^{23}V
σ_{tot}
$\sigma_{n\gamma}$
σ_{el}
σ_{sct}
[1196]







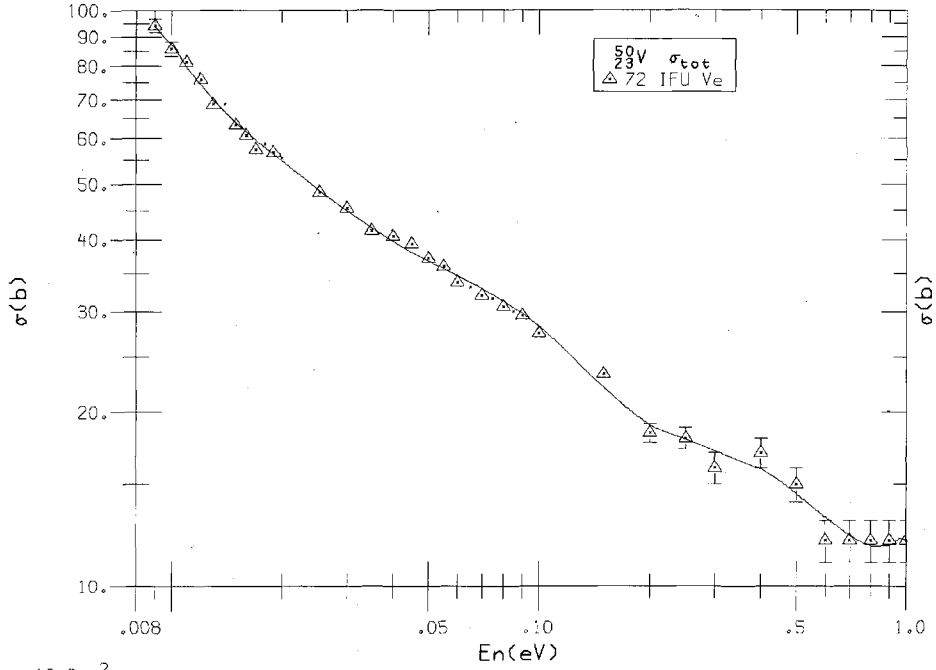
$^{50}_{23}V$

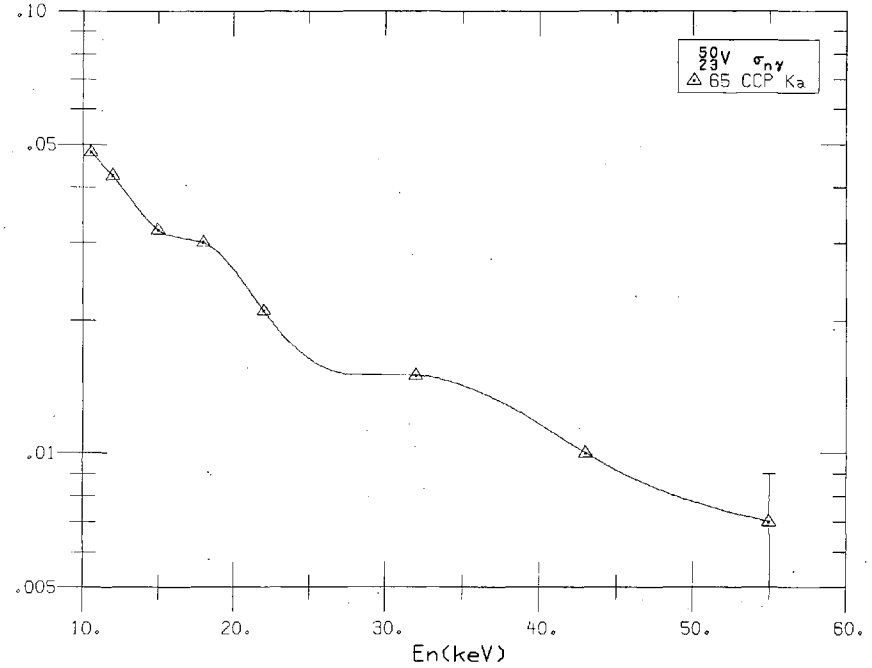
σ_{tot}

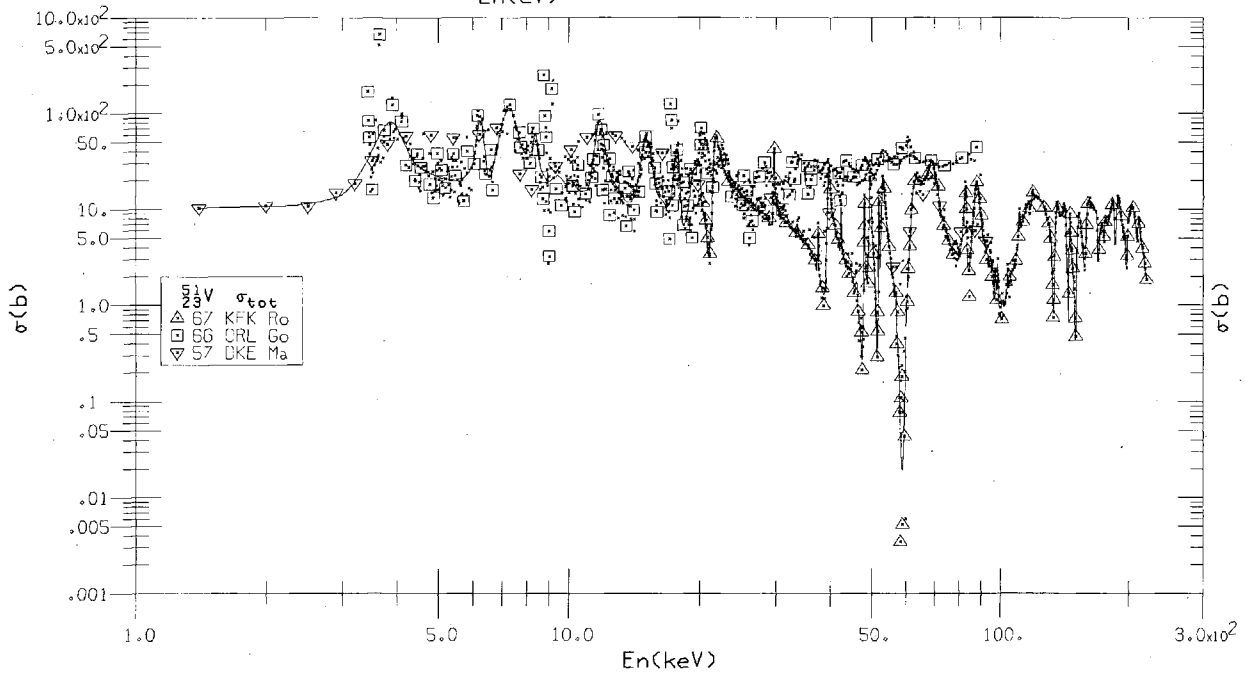
$\sigma_{n\gamma}$

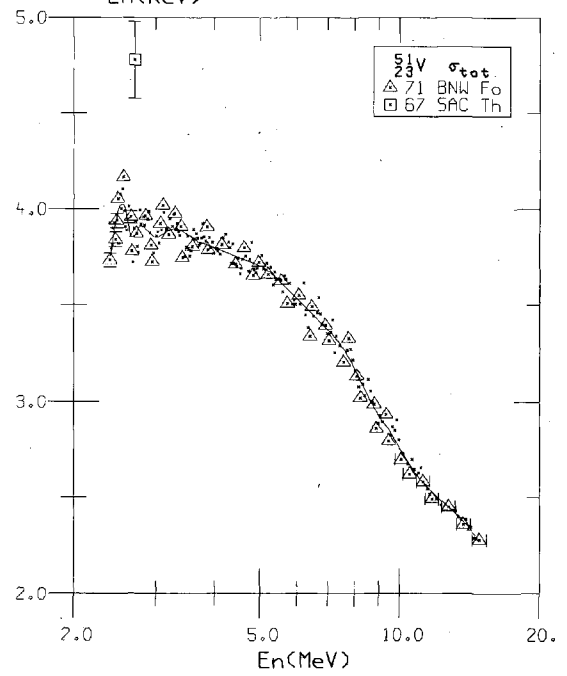
$^{51}_{23}V$

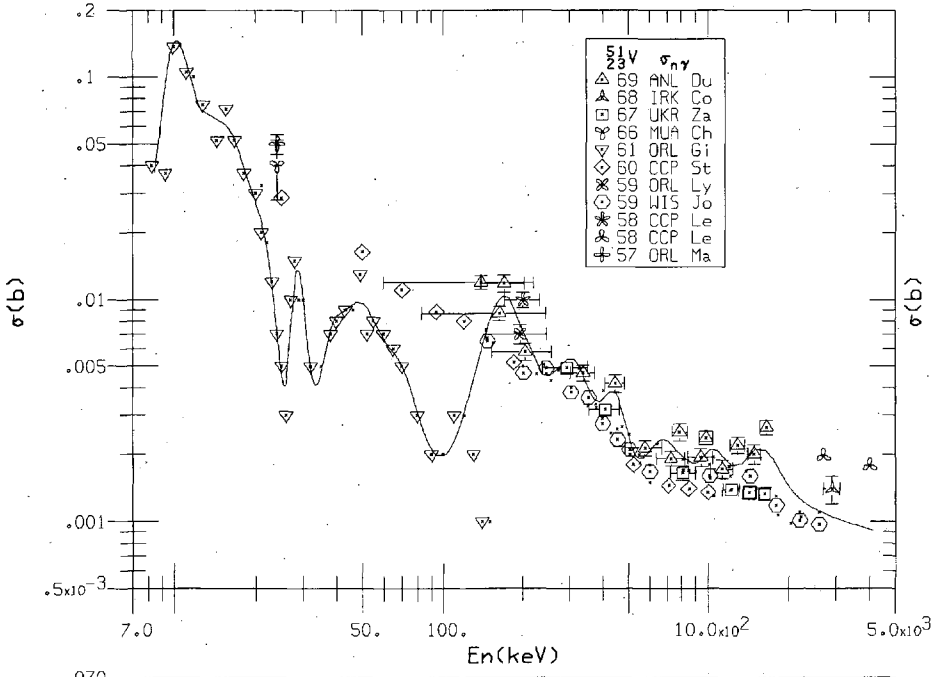
σ_{tot}

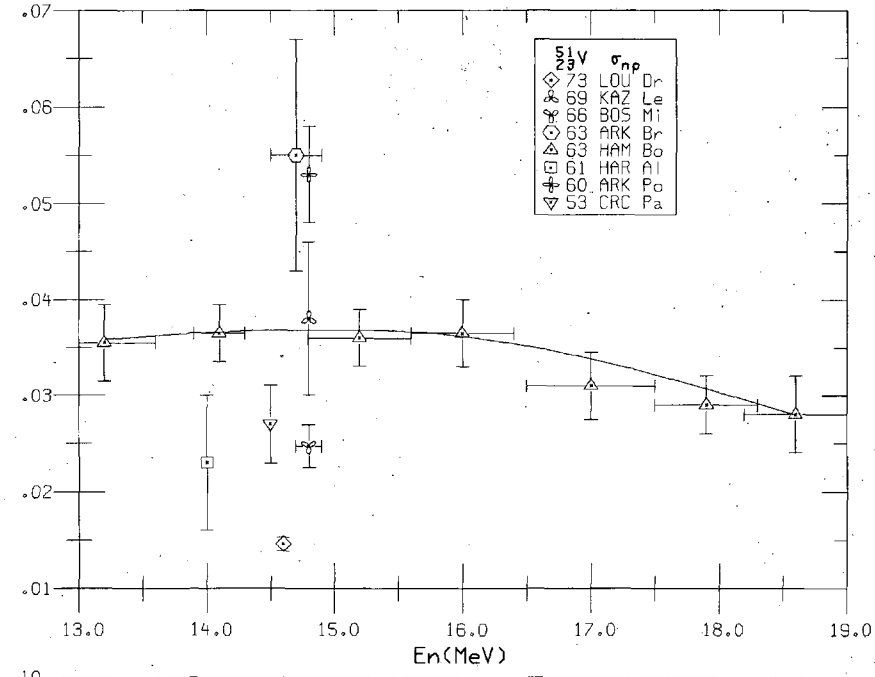


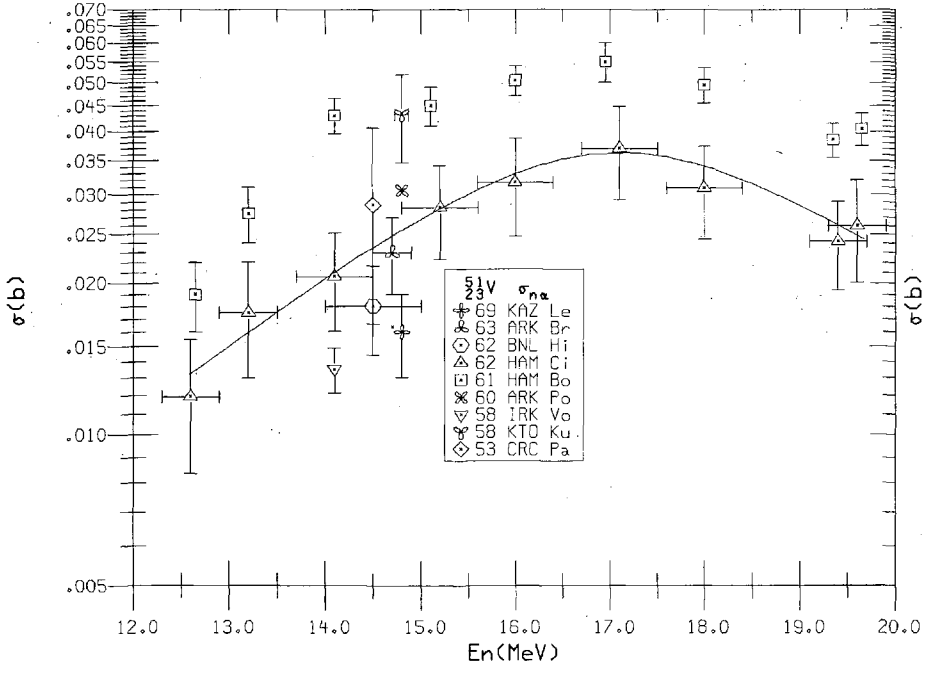


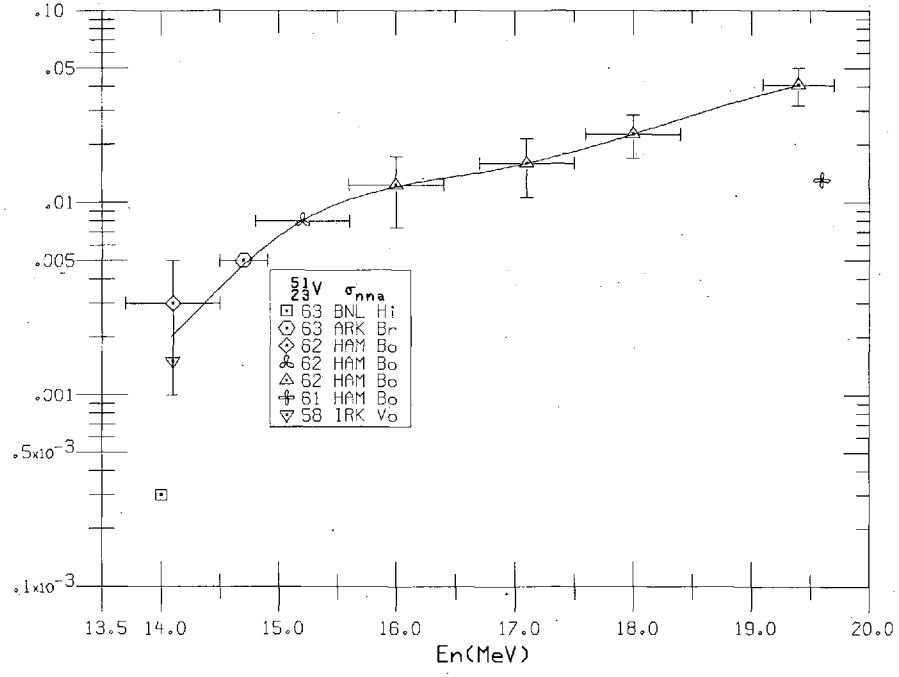





$^{51}_{23}V$ $\sigma_{n\gamma}$
69 ANL Du
68 IRK Co
67 UKR Za
66 MUA Ch
61 ORL Gi
60 CCP St
59 ORL Ly
59 WIS Jo
58 CCP Le
58 CCP Le
57 ORL Ma
σ(b)
En(keV)


$^{51}_{23}V$ σ_{np}
73 LOU Dr
69 KAZ Le
66 BOS Mi
63 ARK Br
63 HAM Bo
61 HAR Al
60 ARK Po
53 CRC Pa
σ(b)
En(MeV)


$^{51}_{23}V$ $\sigma_{n\alpha}$
69 KAZ Le
63 ARK Br
62 BNL Hi
62 HAM Ci
61 HAM Bo
60 ARK Po
58 IRK Vo
58 KTO Ku
53 CRC Pa
σ(b)
En(MeV)


$^{51}_{23}V$ σ_{nna}
63 BNL Hi
63 ARK Br
62 HAM Bo
62 HAM Bo
62 HAM Bo
61 HAM Bo
58 IRK Vo
σ(b)
En(MeV)

Yr	Lab	Author	Reference	Points	Range	Standard
			^{23}V σ_{tot}			
73	BRC	Cance	CABE,73	959	72.0 keV to 6.093 MeV	
70	ANL	Smith,et.al.	PR/C,1,581,70	798	.506 MeV to 1.441 MeV	
70	MOL	Ceulemans,et.al.	70HELSINKI,1,461,70	9	.0252 eV to 1.003 eV	
69	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),69	6178	.360 MeV to 32.0 MeV	abs
69	ANL	Smith,et.al.	ANL-7564,69	4	.506 MeV to .507 MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	13	70.0 keV to 2.050 MeV	
67	BRC	Cabe,et.al.	NP/A,102,92,67	188	.410 MeV to 1.207 MeV	abs
66	ORL	Go Bendt	BENDT,53	30	.0125 eV to 5.800 eV	
66	CSE	Galloway	COO-1573-6,66	347	1.996 MeV to 10.1 MeV	
65	JNE	Manero	NP,65,419,65	42	3.190 MeV to 5.220 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	5.360 b at 1.440 eV	
65	COL	Rustad,et.al.	RSI,36,887,65	1	9.930 b at thermal	
65	SAC	Sorriaux	CR,260,3045,65	7	2.623 MeV to 2.833 MeV	
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	3721	.585 keV to .219 MeV	abs
63	HAR	Firk,et.al.	PPS,82,477,63	310	.600 keV to 25.7 keV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.840 b at 3.660 MeV	
60	MTR	Schmunk,et.al.	NSE,7,193,60	93	.0020 eV to .286 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 27.7 MeV	abs
58	ANL	Cote,et.al.	PR,111,288,58	69	64.2 eV to 22.2 keV	abs
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	14	2.250 MeV to 2.749 MeV	abs
53	CRC	Brockhouse	CJP,31,432,53	14	.0210 eV to 4.530 eV	
53	BNL	Palevsky	PALEVSKY,53	48	.0009 eV to .0361 eV	
53	HAR	Egelstaff	AERE-N/R-1147,53	73	.0011 eV to .0724 eV	
52	ANL	Goodman	PR,88,686,52	1	2.400 b at 14.0 MeV	abs
51	CAR	Lasday	PR,81,139,51	1	2.520 b at 13.9 MeV	
50	ANL	Blair,et.al.	PR,79,28,50	137	13.0 keV to 1.000 MeV	
			^{23}V σ_{el}			
70	ANL	Smith,et.al.	PR/C,1,581,70	221	.326 MeV to 1.467 MeV	C σ_{el}
70	MOL	Ceulemans,et.al.	70HELSINKI,1,461,70	1	4.870 b at thermal	
69	AE	Holmqvist,et.al.	AE-366,69	9	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
65	ORL	Rayburn,et.al.	NP,61,381,65	1	4.740 b at 1.440 eV	
58	DKE	Block,et.al.	PR,109,1620,58	52	30.0 keV to .115 MeV	
			^{23}V σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	1.270 b at 7.000 MeV	
			^{23}V σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.781 MeV	C
			^{23}V $\sigma_{n\gamma}$			
72	WUR	Widder	EIR-217,72	290	.0118 eV to .110 keV	^{6}Li σ_{nt}
70	MOL	Ceulemans,et.al.	70HELSINKI,1,461,70	1	5.120 b at thermal	
67	ORL	Macklin,et.al.	PR,159,1007,67	4	.104 MeV to .182 MeV	Ta $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.730 mb at 14.1 MeV	
65	CCP	Kapchigashev	AE,19,294,65	58	25.0 eV to 55.0 keV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	6.290 b at thermal	B $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	1	30.0 mb at 30.0 keV	In $\sigma_{n\gamma}$

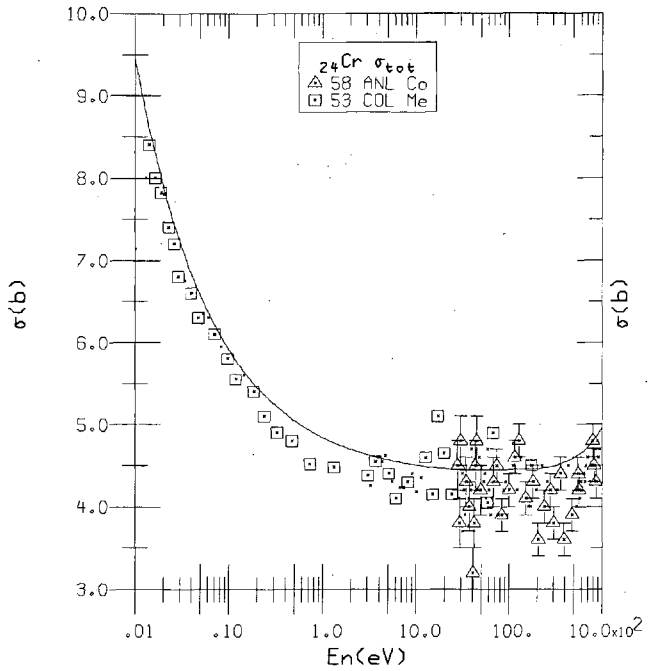
Yr	Lab	Author	Reference	Points	Range	Standard
			^{23}V σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	.640 b at 14.1 MeV	
			$^{50}_{23}V$ σ_{tot}			
72	IFU	Vertebnyj,et.al.	YFI-13,19,72	38	.0090 eV to 1.000 eV	
			$^{50}_{23}V$ $\sigma_{n\gamma}$			
65	CCP	Kapchigashev	AE,19,294,65	8	10.5 keV to 55.0 keV	
63	PSU	Glickstein,et.al	BAP,8,335,63	1	55.0 b at thermal	
53	CRC	Bartholomev+	PR,89,386,53	1	.220 kb at thermal	
			$^{51}_{23}V$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	234	2.384 MeV to 14.9 MeV	
67	KFK	Rohr,et.al.	NP/A,104,1.67	1378	20.0 keV to .221 MeV	abs
67	SAC	Thibault	CEA-R-3124,67	1	4.780 b at 2.700 MeV	
66	ORL	Good,et.al.	BAP,11,28(BB2),66	1298	3.428 keV to 90.3 keV	
57	DKE	Marshak,et.al.	PR,106,110,57	136	1.400 keV to .101 MeV	
			$^{51}_{23}V$ $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	1.400 mb at 14.4 MeV	^{56}Fe σ_{np}
69	ANL	Dudey,et.al.	JNE,23,443,69	30	.139 MeV to 1.659 MeV	^{235}U σ_{nf}
68	IRK	Colditz,et.al.	OSA,105,236,68	1	1.400 mb at 2.900 MeV	^{115}In σ_{inl}
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	.370 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	UKR	Zaikin,et.al.	AE,23,67,67	13	.187 MeV to 2.610 MeV	^{235}U σ_{nf}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	40.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
66	STF	Le Sage	SHER,66	1	5.500 b at thermal	
63	PSU	Glickstein,et.al	BAP,8,335,63	1	4.880 b at thermal	^{27}Al $\sigma_{n\gamma}$
61	ORL	Gibbons	GIBBONS,61	42	8.250 keV to .150 MeV	
60	CCP	Stavisskii+	AE,9,401,60	19	25.0 keV to 1.300 MeV	^{235}U σ_{nf}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	7.000 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	18	.147 MeV to 2.600 MeV	^{235}U σ_{nf}
59	WIS	Johnsrud,et.al.	PR,116,927,59	18	.147 MeV to 2.600 MeV	^{235}U σ_{nf}
58	CCP	Kononov,et.al.	AE,5,564,58	1	32.5 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	50.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{51}_{23}V$ σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	14.6 mb at 14.6 MeV	
69	KAZ	Levkovskii+	YF,10,44,69	1	38.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	BOS	Mitra,et.al.	NP,83,157,66	1	24.7 mb at 14.8 MeV	^{63}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	55.0 mb at 14.7 MeV	^{27}Al σ_{np}
63	HAM	Bormann,et.al.	ZP,174,1,63	7	13.2 MeV to 18.6 MeV	^{63}Cu σ_{n2n}
61	HAR	Allan	NP,24,274,61	1	23.0 mb at 14.0 MeV	^{54}Fe σ_{np}
60	ARK	Poularikas,et.al	ARKANSAS,3,60	1	53.0 mb at 14.8 MeV	abs
53	CRC	Paul,et.al.	CJP,31,267,53	1	27.0 mb at 14.5 MeV	abs

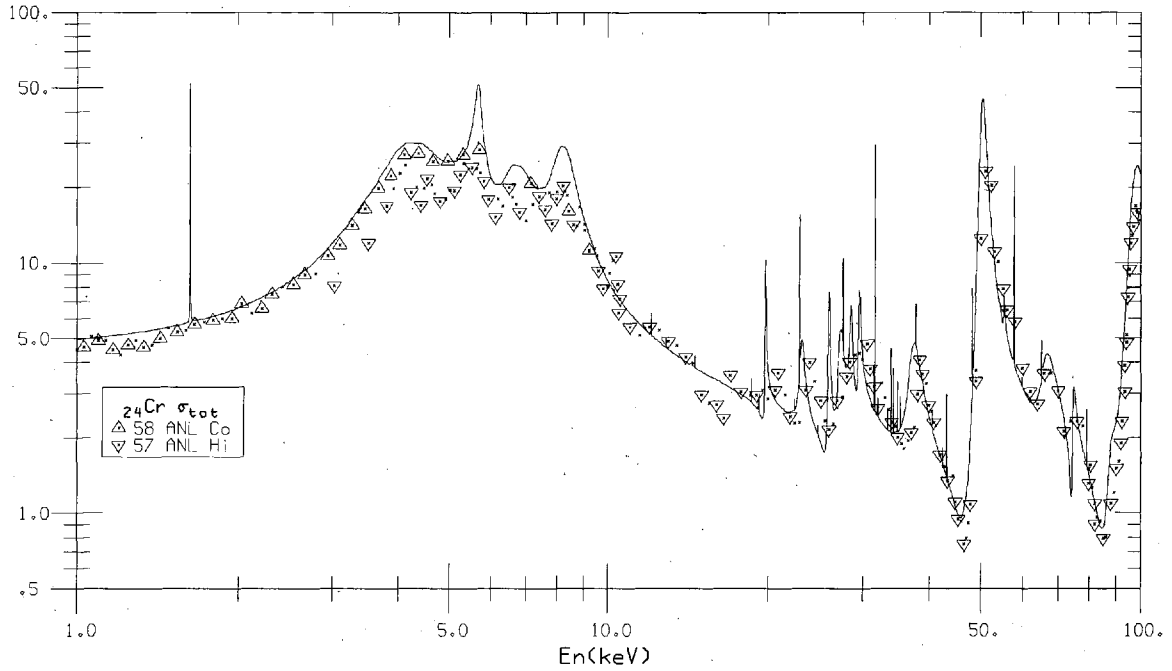
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{51}_{23}V$ σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	60.0 muB at 14.6 MeV	^{51}V σ_{np}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	30.0 muB at 14.7 MeV	^{51}V σ_{np}
			$^{51}_{23}V$ σ_{n3}			
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	.330 mb at 14.5 MeV	^{51}V σ_{np}
60	ARK	Kumabe,et.al.	PR,117,1568,60	1	.800 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{51}_{23}V$ $\sigma_{n\alpha}$			
69	KAZ	Levkovskii+	YF,10,44,69	1	16.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
68	MUN	Vonach,et.al.	68WASH,2,885,68	1	16.4 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	23.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	BNL	Hillman	NP,37,78,62	1	18.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	HAM	Cierjacks	CIERJACKS,62	9	12.6 MeV to 19.6 MeV	
61	HAM	Bormann,et.al.	JPR,22,602,61	9	12.6 MeV to 19.7 MeV	
60	ARK	Poularikas,et.al	ARKANSAS,3,60	1	30.5 mb at 14.8 MeV	abs
58	IRK	Vonach,et.al.	OSA,95,199,58	1	13.5 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
58	KTO	Kumabe	JPJ,13,325,58	1	43.2 mb at 14.8 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	28.6 mb at 14.5 MeV	abs
			$^{51}_{23}V$ σ_{nna}			
63	BNL	Hillman	PR,129,2227,63	1	.300 mb at 14.0 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	5.000 mb at 14.7 MeV	^{51}V $\sigma_{n\alpha}$
62	HAM	Bormann,et.al.	ZP,166,477,62	1	3.000 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
62	HAM	Bormann,et.al.	ZP,166,477,62	5	15.2 MeV to 19.4 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAM	Bormann,et.al.	JPR,22,602,61	1	13.0 mb at 19.6 MeV	
58	IRK	Vonach,et.al.	OSA,95,199,58	1	1.500 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{51}_{23}V$ σ_{aem}			
58	KTO	Kumabe	JPJ,13,325,58	1	.126 b at 14.8 MeV	

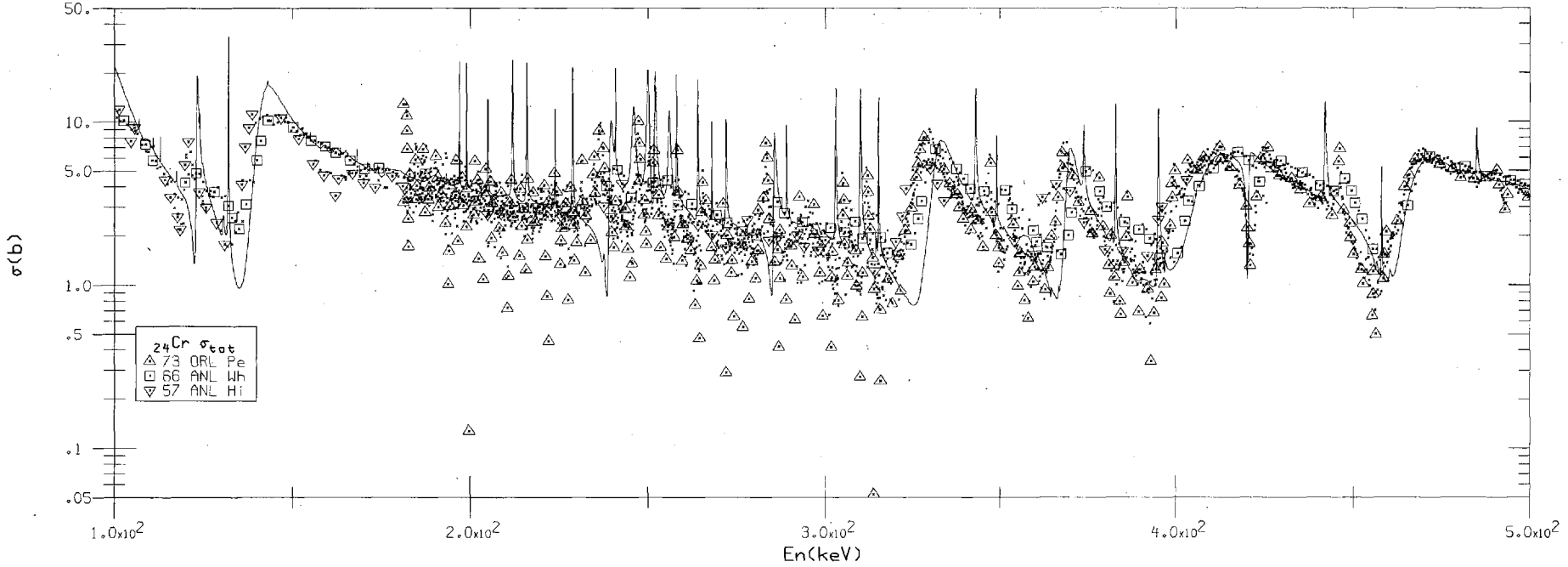
$_{24}Cr$

σ_{tot}

[1191]



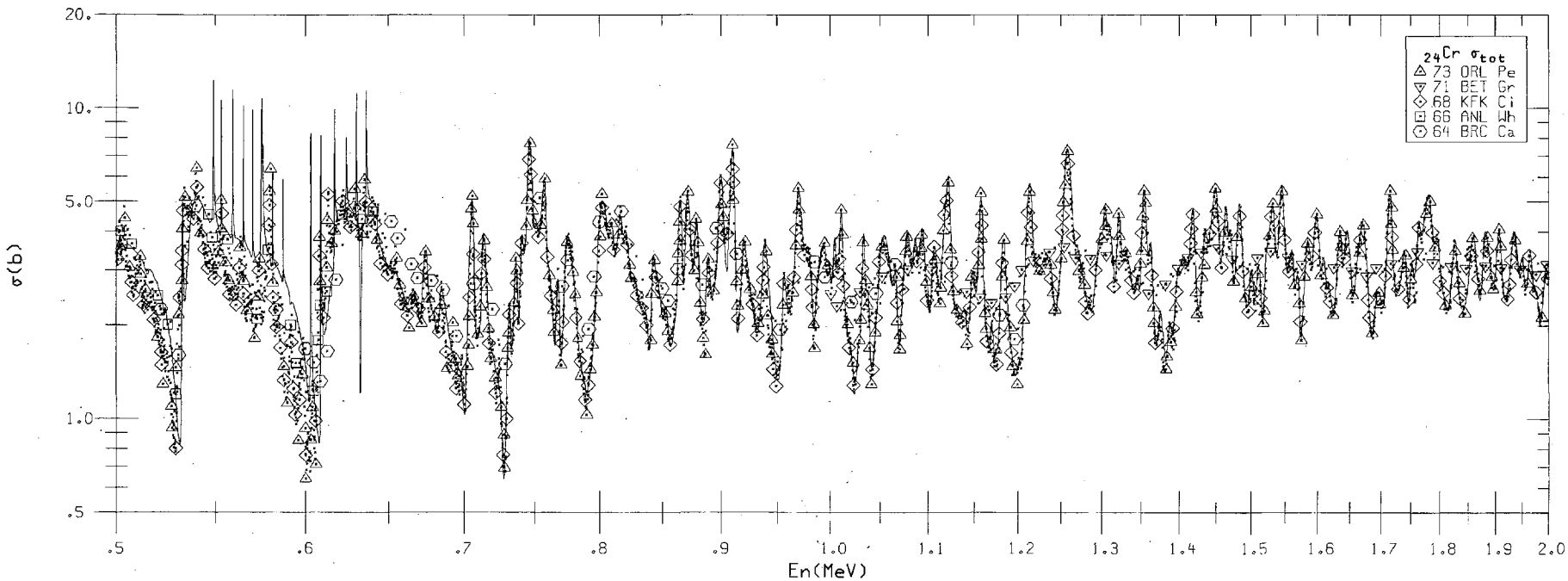


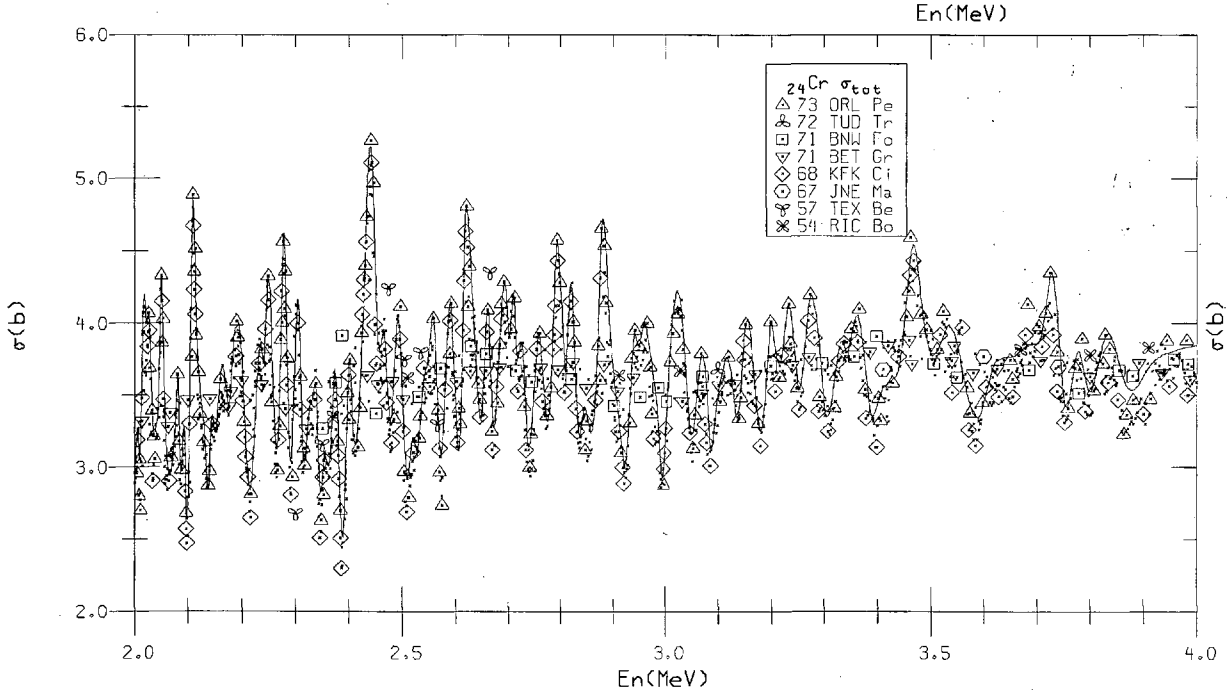


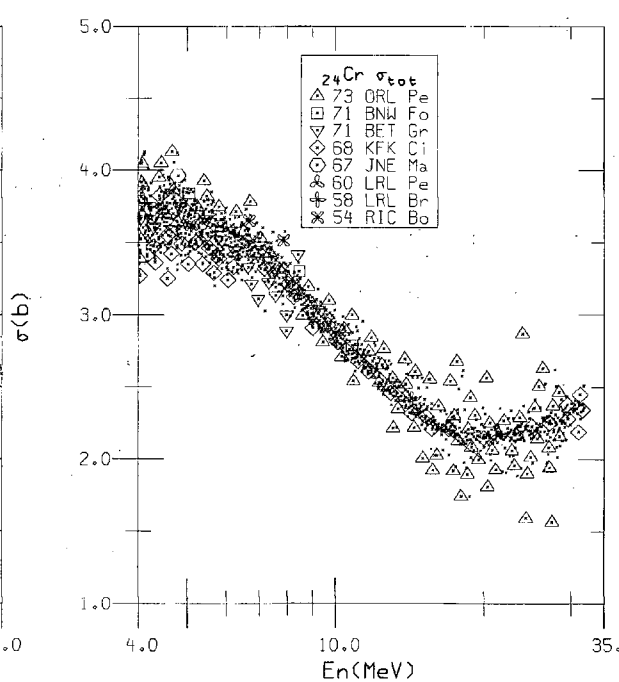
^{24}Cr

σ_{tot}

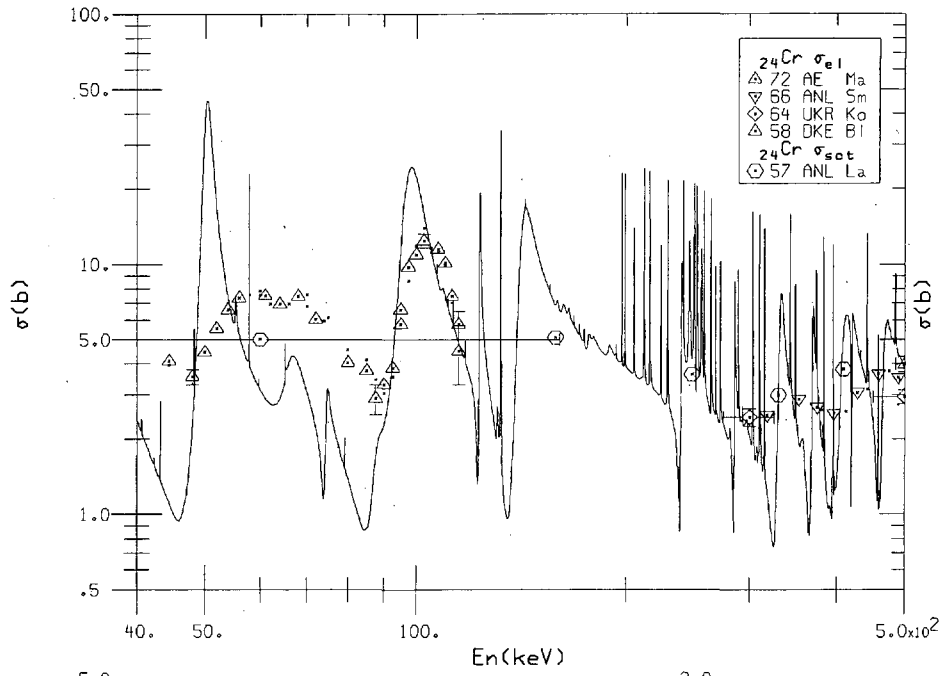
[1191]

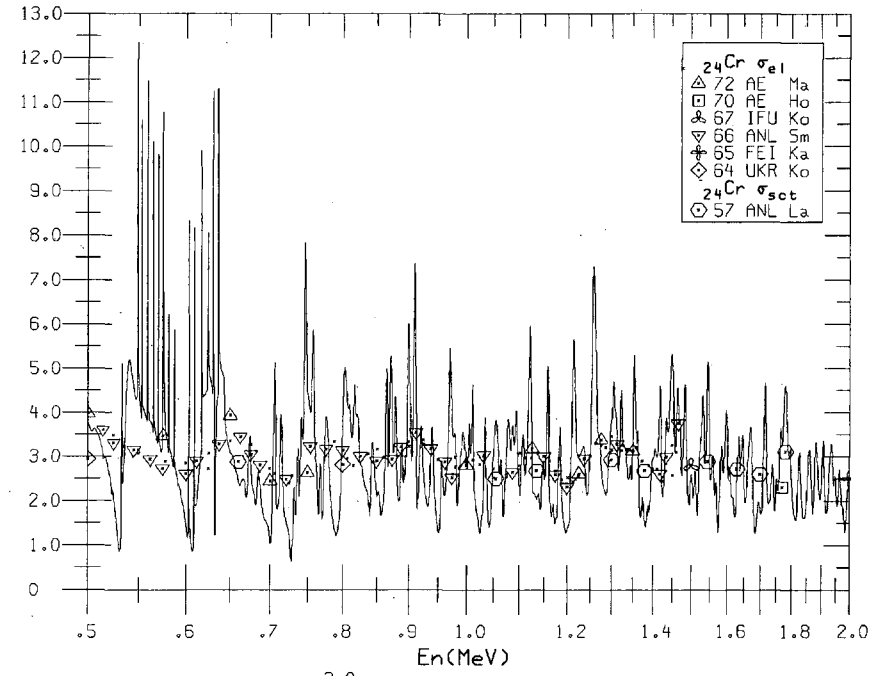


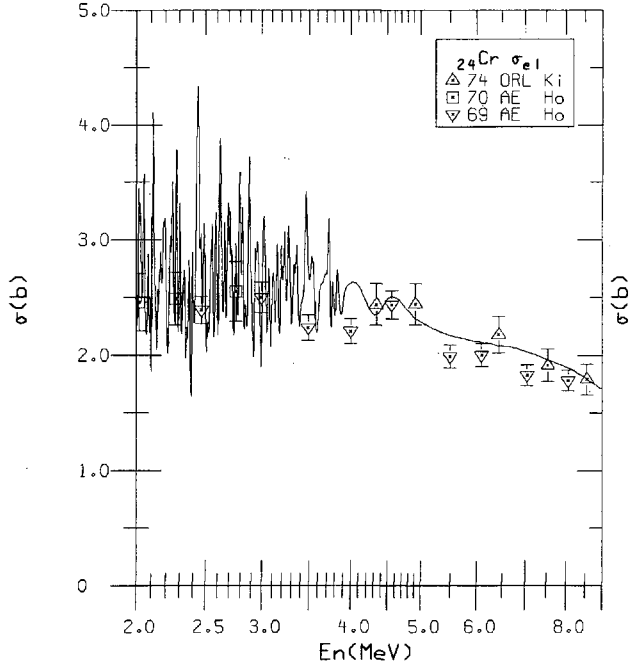


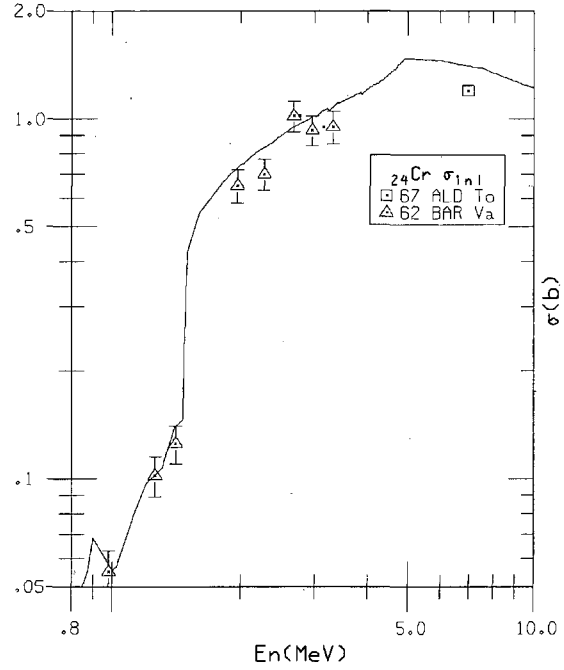


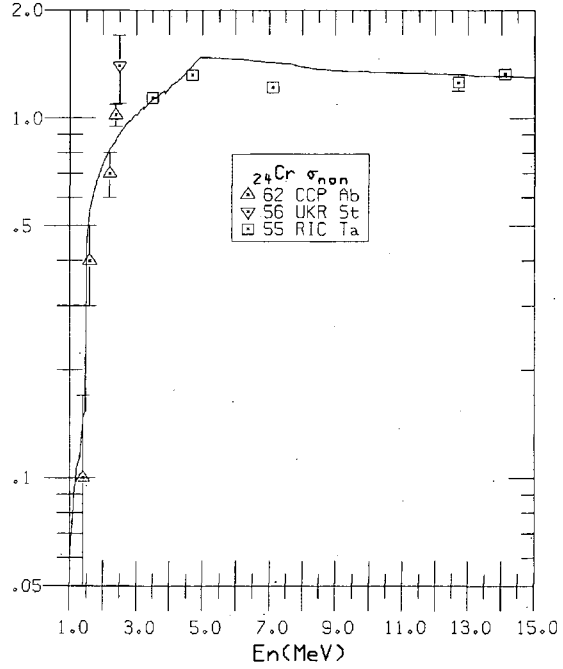
$_{24}$Cr
σ_{el}
σ_{sct}
σ_{inl}
σ_{non}
[1191]



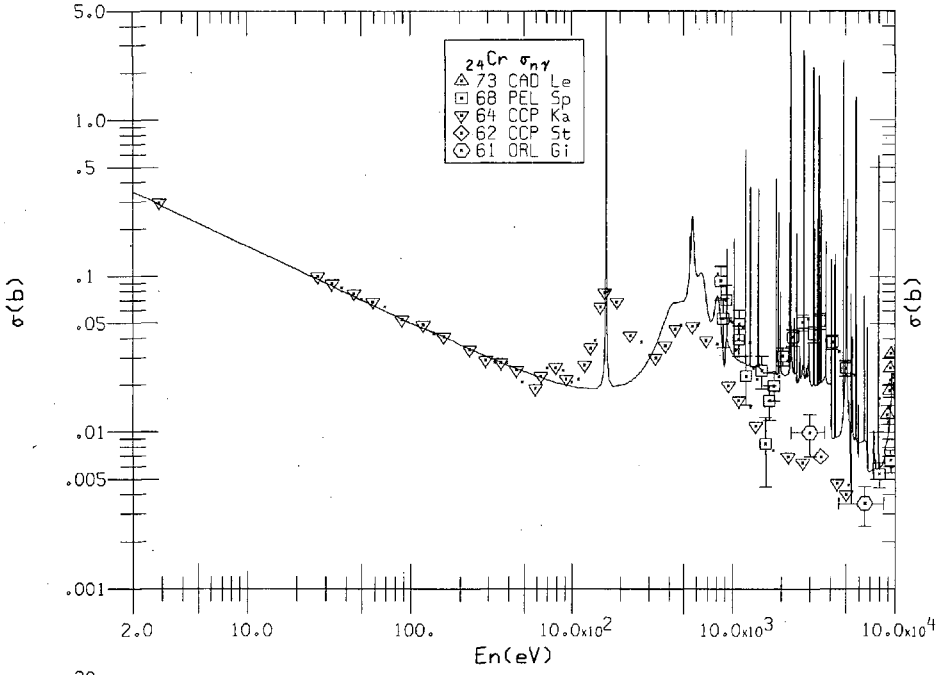


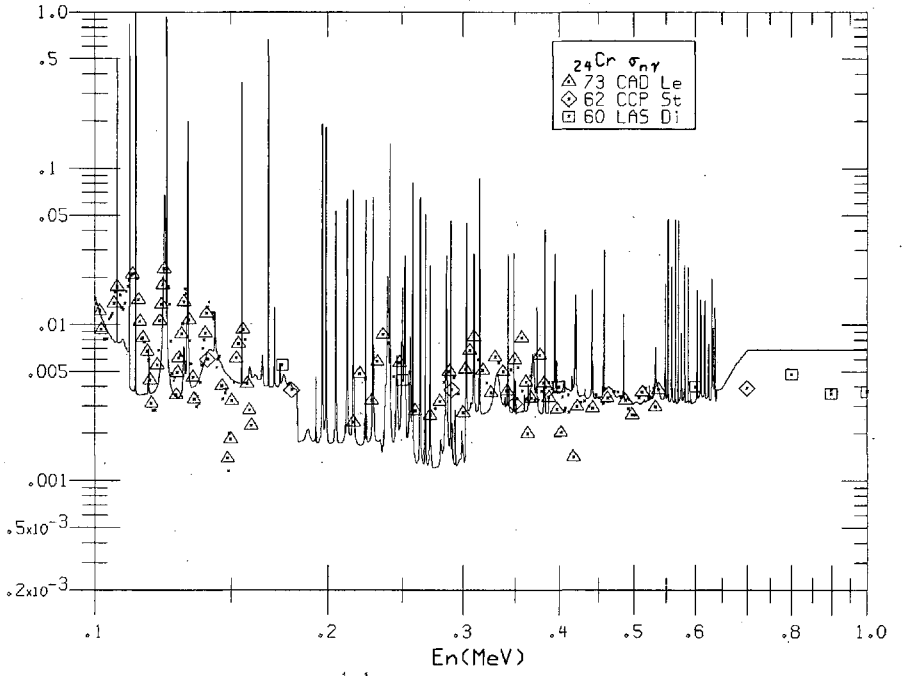


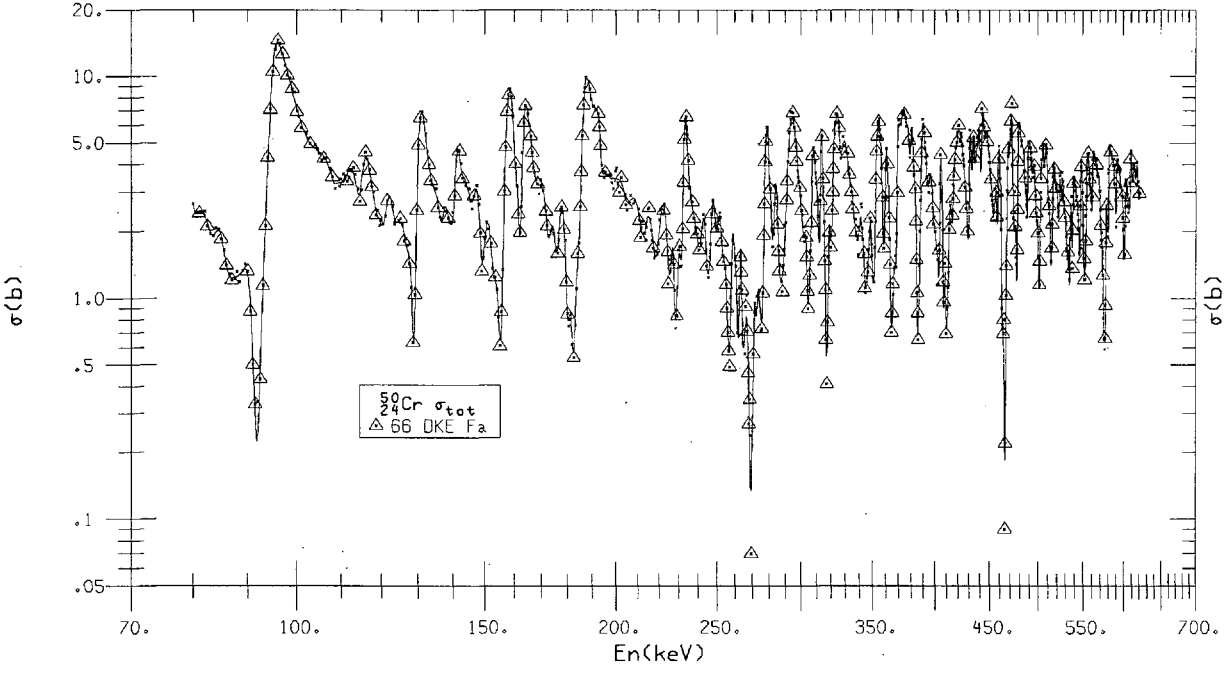


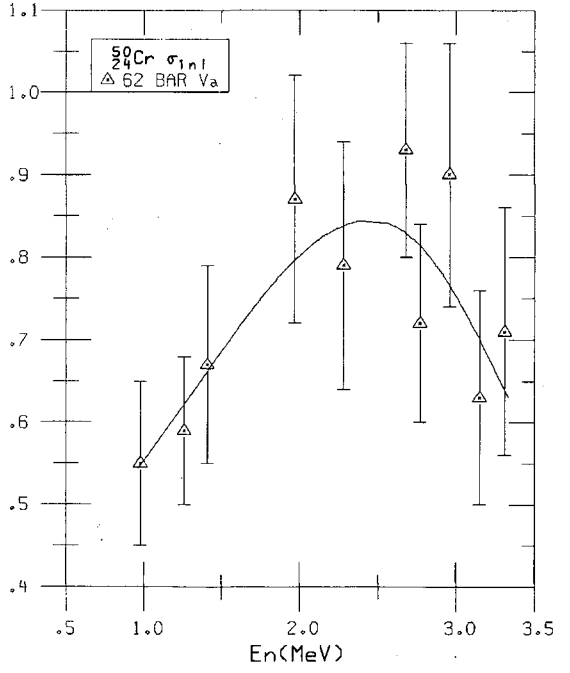


$_{24}Cr$
$\sigma_{n\gamma}$
[1191]
$^{50}_{24}Cr$
σ_{tot}
σ_{inl}









$^{50}_{24}Cr$

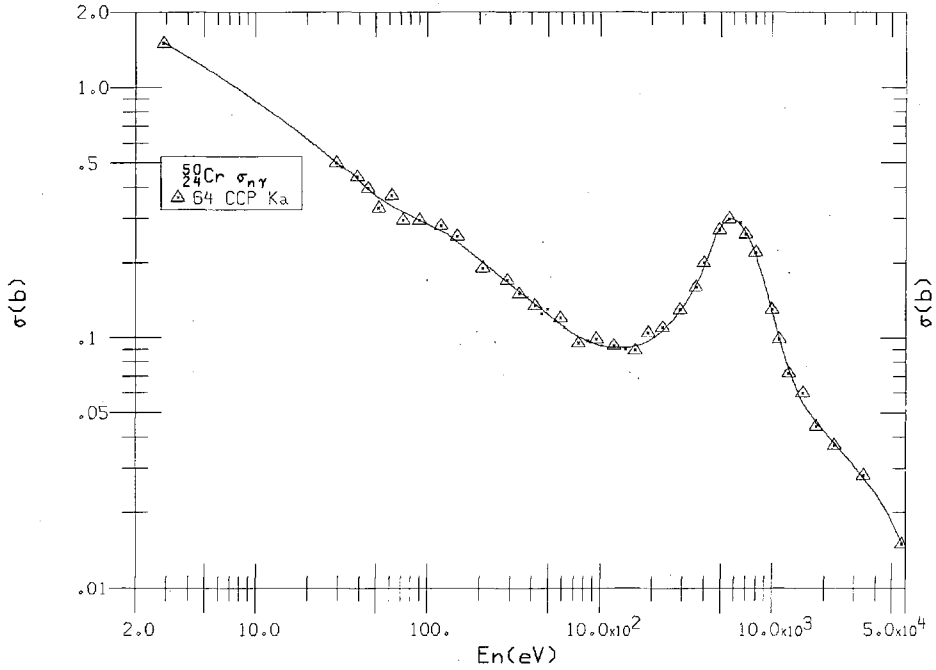
$\sigma_{n\gamma}$

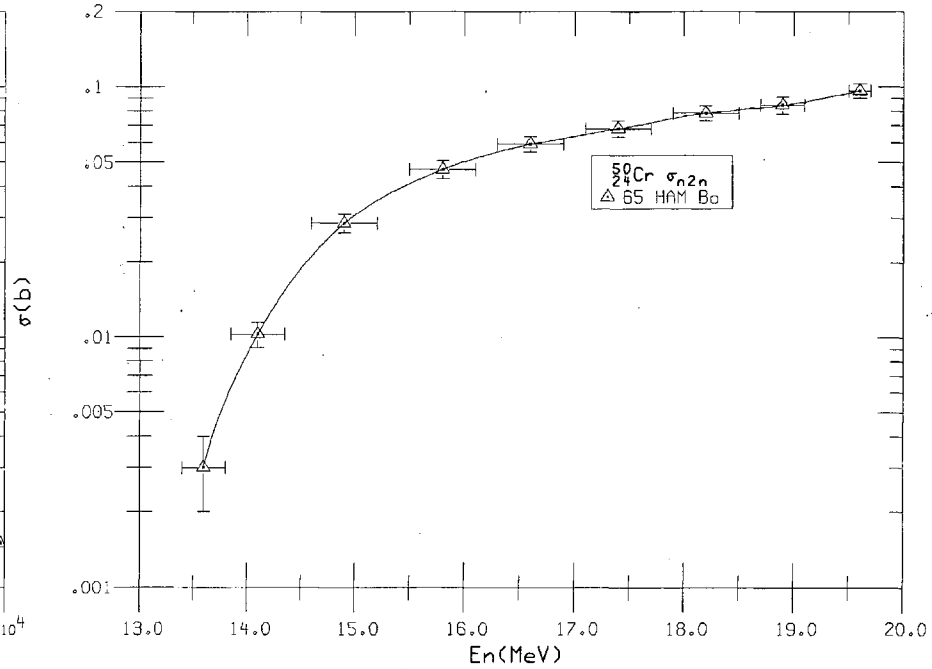
σ_{n2n}

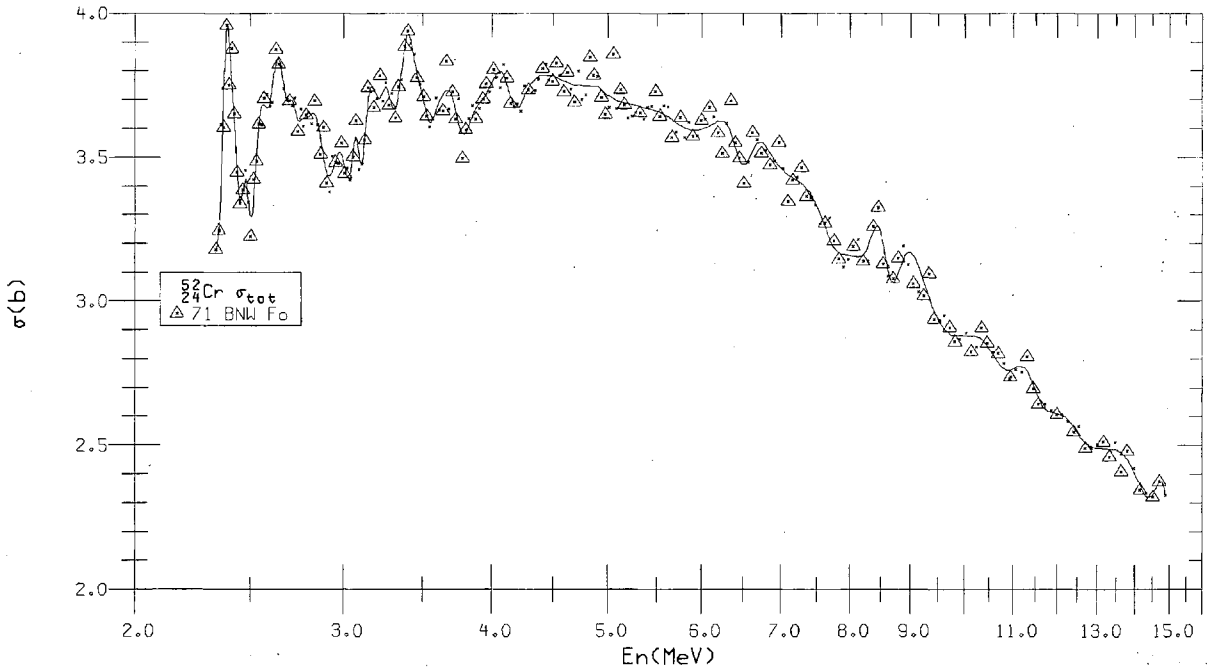
$^{52}_{24}Cr$

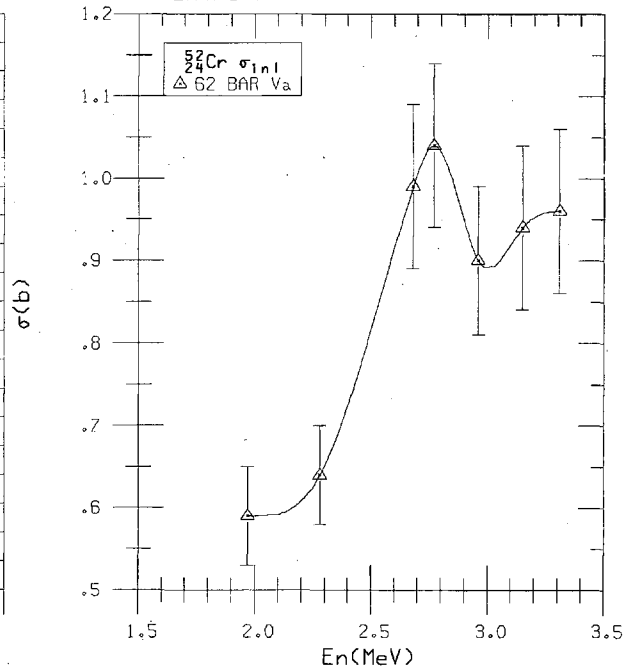
σ_{tot}

σ_{inl}









$^{52}_{24}Cr$

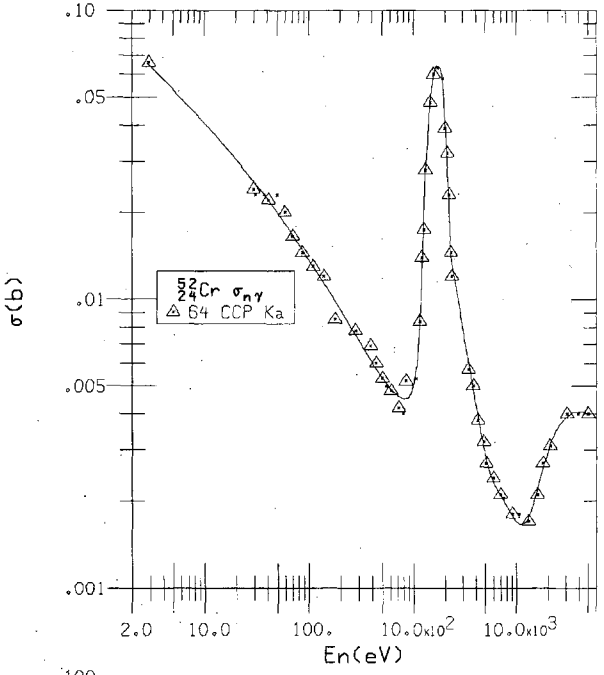
$\sigma_{n\gamma}$

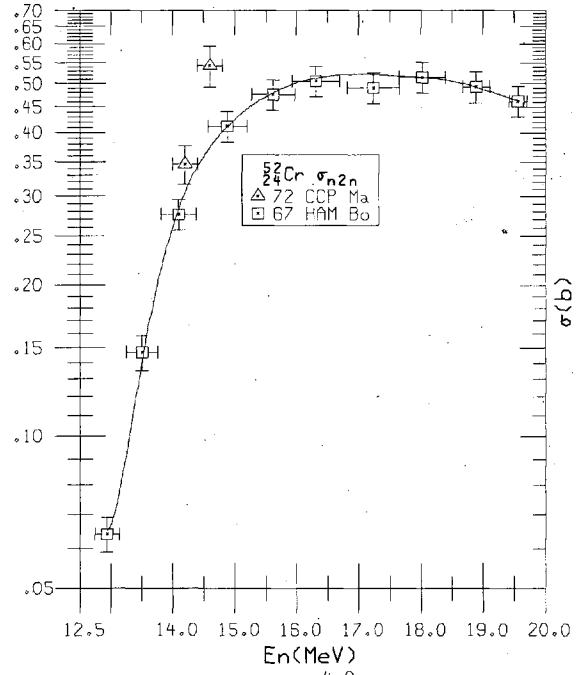
σ_{n2n}

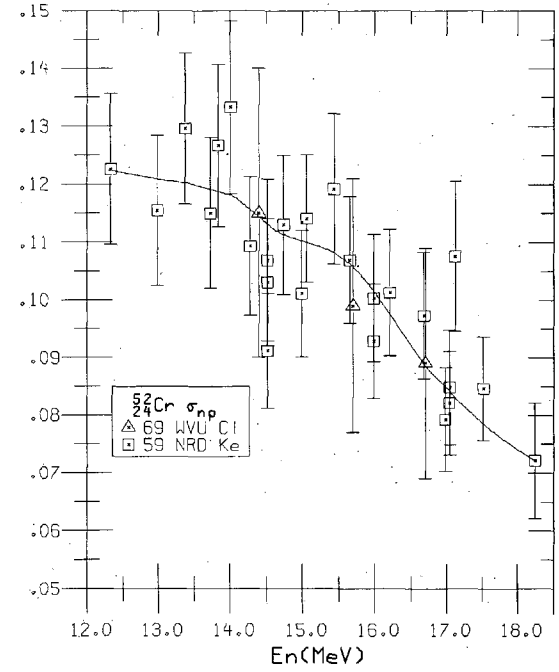
σ_{np}

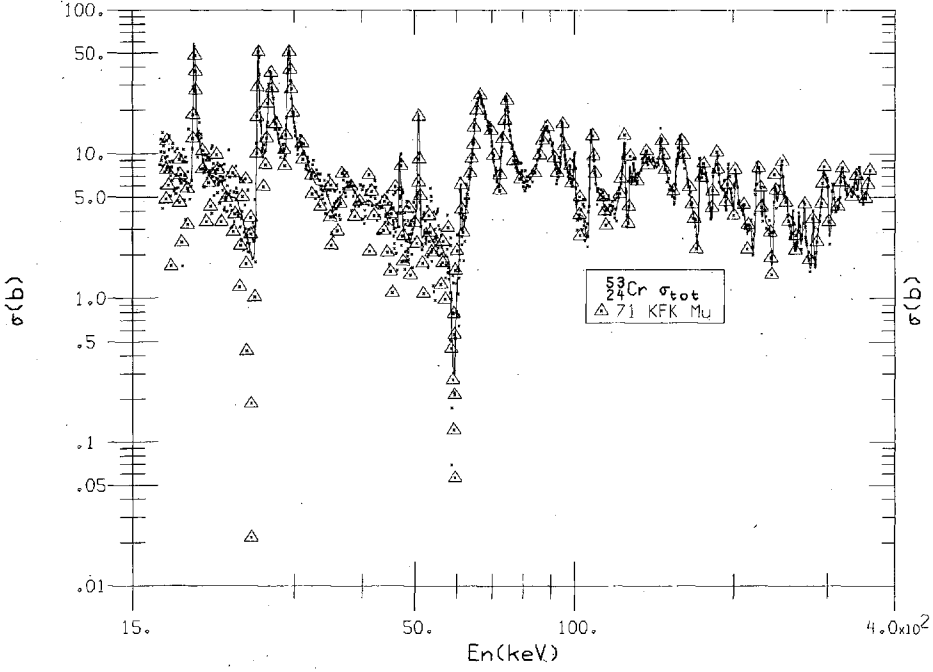
$^{53}_{24}Cr$

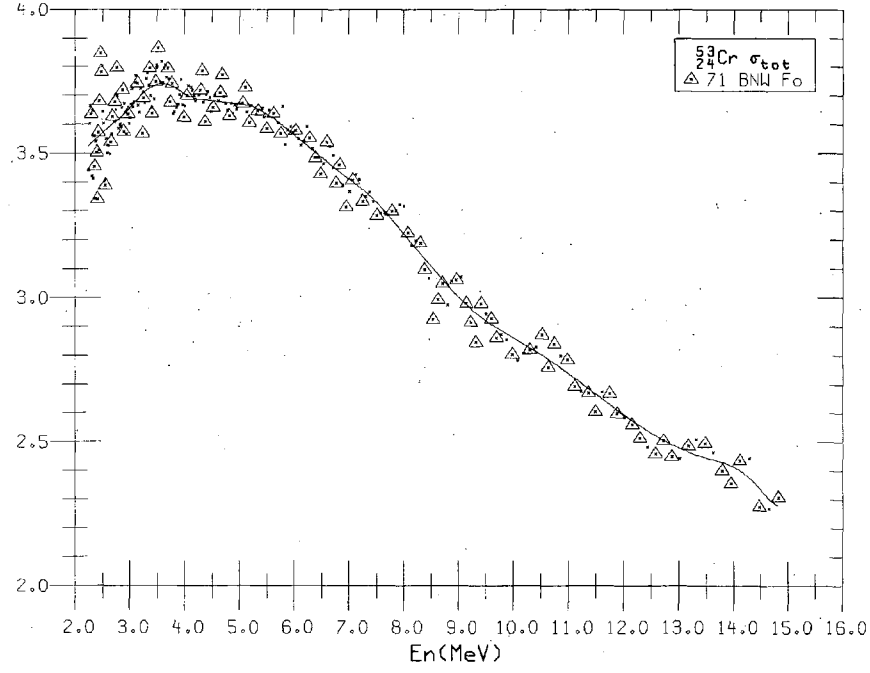
σ_{tot}











$^{53}_{24}Cr$

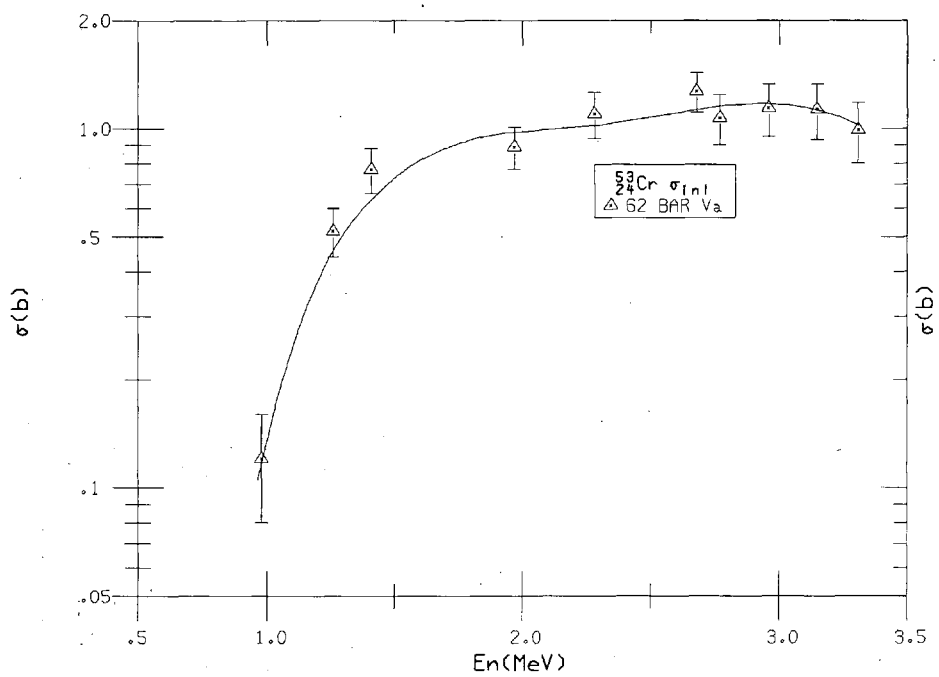
σ_{inl}

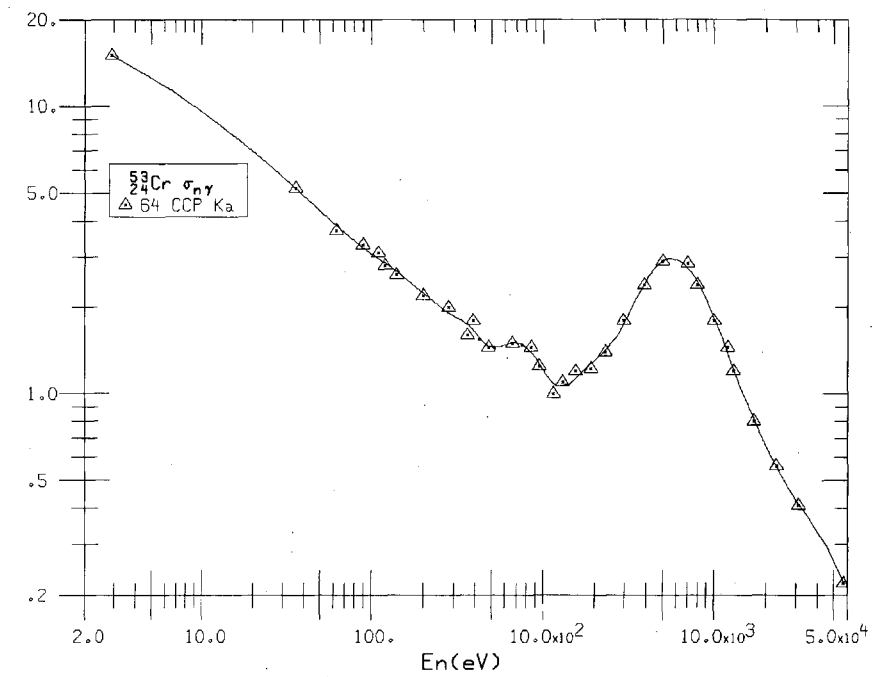
$\sigma_{n\gamma}$

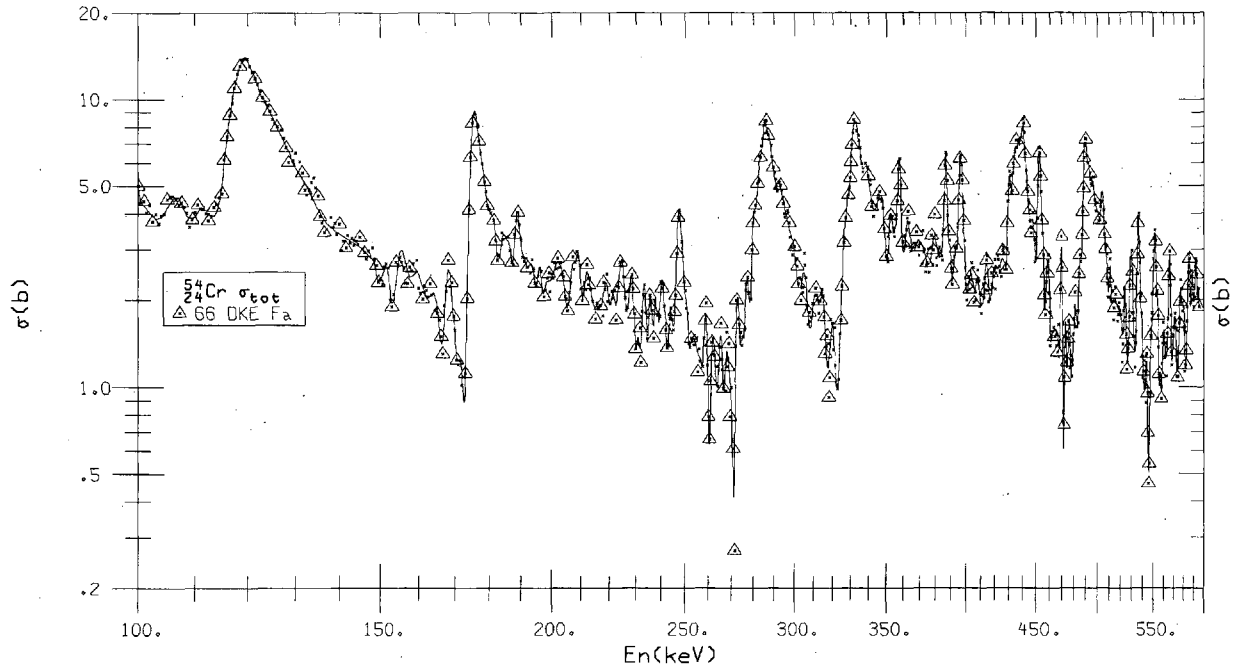
$^{54}_{24}Cr$

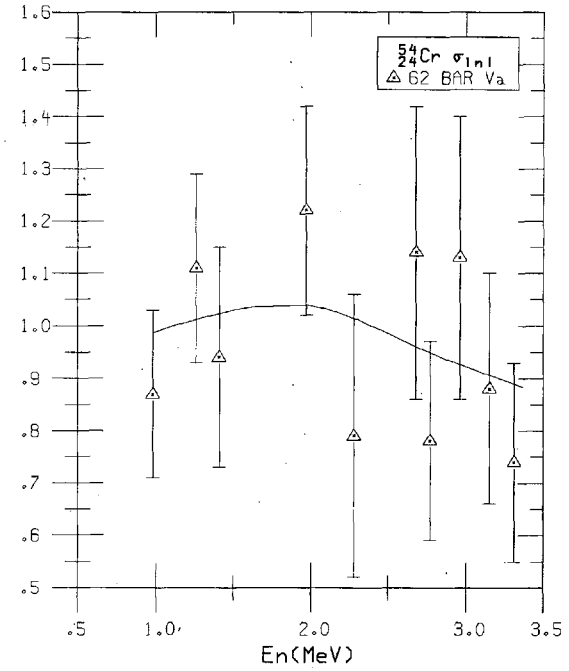
σ_{tot}

σ_{inl}









Yr	Lab	Author	Reference	Points	Range	Standard
			$_{24}Cr$ σ_{tot}			
73	ORL	Perey	PEREY,73	7402	.181 MeV to 29.5 MeV	
72	TUO	Tran Ung,et.al.	ZFK-243,30,72	1	3.680 b at 3.100 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	240	2.339 MeV to 14.9 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	432	1.001 MeV to 8.696 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),68	5114	.500 MeV to 31.9 MeV	abs
67	JNE	Manero	ARS,63,161,67	46	3.190 MeV to 5.210 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	545	.101 MeV to .649 MeV	abs
64	BRC	Cabe,et.al.	CR,258,1478,64	47	1.004 MeV to 1.206 MeV	
64	BRC	Cabe,et.al.	CR,258,1478,64	117	.500 MeV to .999 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.6 MeV	
58	ANL	Cote,et.al.	PR,111,288,58	132	27.8 eV to 9.216 keV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.3 MeV	abs
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	14	2.253 MeV to 2.750 MeV	
57	ANL	Hibdon	PR,108,414,57	472	3.030 keV to .409 MeV	abs
54	RIC	Bonner	BONNER,54	27	2.370 MeV to 7.840 MeV	
53	COL	Melkonian,et.al.	PR,92,702,53	50	.0130 eV to .175 keV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.450 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	2.300 b at 14.0 MeV	
			$_{24}Cr$ σ_{el}			
74	ORL	Kinney,et.al.	ORNL-4806,74	5	4.340 MeV to 8.560 MeV	^{1}H σ_{el}
72	AE	Malmskog	MALMSKOG,72	40	.500 MeV to 1.475 MeV	C σ_{el}
70	AE	Holmqvist,et.al.	AE-385,70	4	1.770 MeV to 2.760 MeV	
69	AE	Holmqvist,et.al.	AE-366,69	9	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
67	IFU	Korzh,et.al.	UFZ,12,(9),1571,67	1	2.803 b at 1.500 MeV	abs
66	ANL	Smith	SMITH,66	89	.318 MeV to 1.465 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.500 b at 2.000 MeV	
64	UKR	Korzh,et.al.	UFZ,9,577,64	3	.300 MeV to .800 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	2.990 b at .980 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	66	44.5 keV to .115 MeV	C
			$_{24}Cr$ σ_{inl}			
67	ALD	Towle,et.al.	NP/A,100,257,67	1	1.200 b at 7.000 MeV	H
62	BAR	Van Patter+	PR,128,1246,62	10	.980 MeV to 3.310 MeV	^{56}Fe σ_{ing}
			$_{24}Cr$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	C
			$_{24}Cr$ σ_{non}			
62	CCP	Abramov	AE,12,62,62	4	1.400 MeV to 2.380 MeV	abs
56	UKR	Strizhak	ZET,31,907,56	1	1.400 b at 2.500 MeV	abs
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{24}Cr$ $\sigma_{n\gamma}$			
73	CAD	Le Rigoleur,et.al.	73KARLSR,73	220	90.0 keV to .538 MeV	
68	PEL	Spitz,et.al.	NP/A,121,655,68	34	8.120 keV to 94.0 keV	In $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.920 mb at 14.1 MeV	
64	CCP	Kapchigashev+	AE,16,256,64	53	2.900 eV to 50.0 keV	Cr $\sigma_{n\gamma}$
62	CCP	Stavisskii+	AE,12,514,62	10	35.0 keV to .900 MeV	^{235}U σ_{nf}
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{nf}
			$^{50}_{24}Cr$ σ_{tot}			
66	DKE	Farrell,et.al.	AP,37,367,66	1082	80.0 keV to .620 MeV	
			$^{50}_{24}Cr$ σ_{inl}			
62	BAR	Van Patter+	PR,128,1246,62	10	.980 MeV to 3.310 MeV	^{56}Fe σ_{ing}
			$^{50}_{24}Cr$ $\sigma_{n\gamma}$			
64	CCP	Kapchigashev+	AE,16,256,64	44	2.900 eV to 57.0 keV	^{50}Cr $\sigma_{n\gamma}$
			$^{50}_{24}Cr$ σ_{n2n}			
73	LOU	Araminowicz,et.al.	INR-1464,14,73	1	31.4 mb at 14.6 MeV	^{63}Cu σ_{n2n}
65	HAM	Bormann	BORMANN,65	9	13.6 MeV to 19.6 MeV	
61	ANL	Rayburn	PR,122,168,61	1	26.4 mb at 14.4 MeV	^{63}Cu σ_{n2n}
61	ARK	Chittenden+	ARKANSAS,1,61	1	18.8 mb at 14.8 MeV	
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	32.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
61	MUA	Khurana,et.al.	NP,28,560,61	1	27.0 mb at 14.8 MeV	^{56}Fe σ_{np}
			$^{50}_{24}Cr$ σ_{np}			
61	HAR	Allan	NP,24,274,61	1	.277 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{50}_{24}Cr$ σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	.153 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{50}_{24}Cr$ σ_{nt}			
61	OTC	Baerg,et.al.	CJC,39,684,61	1	.200 mb at 14.6 MeV	^{19}F σ_{n2n}
			$^{52}_{24}Cr$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	240	2.339 MeV to 14.9 MeV	
67	SAC	Thibault	CEA-R3124,67	1	3.800 b at 2.700 MeV	

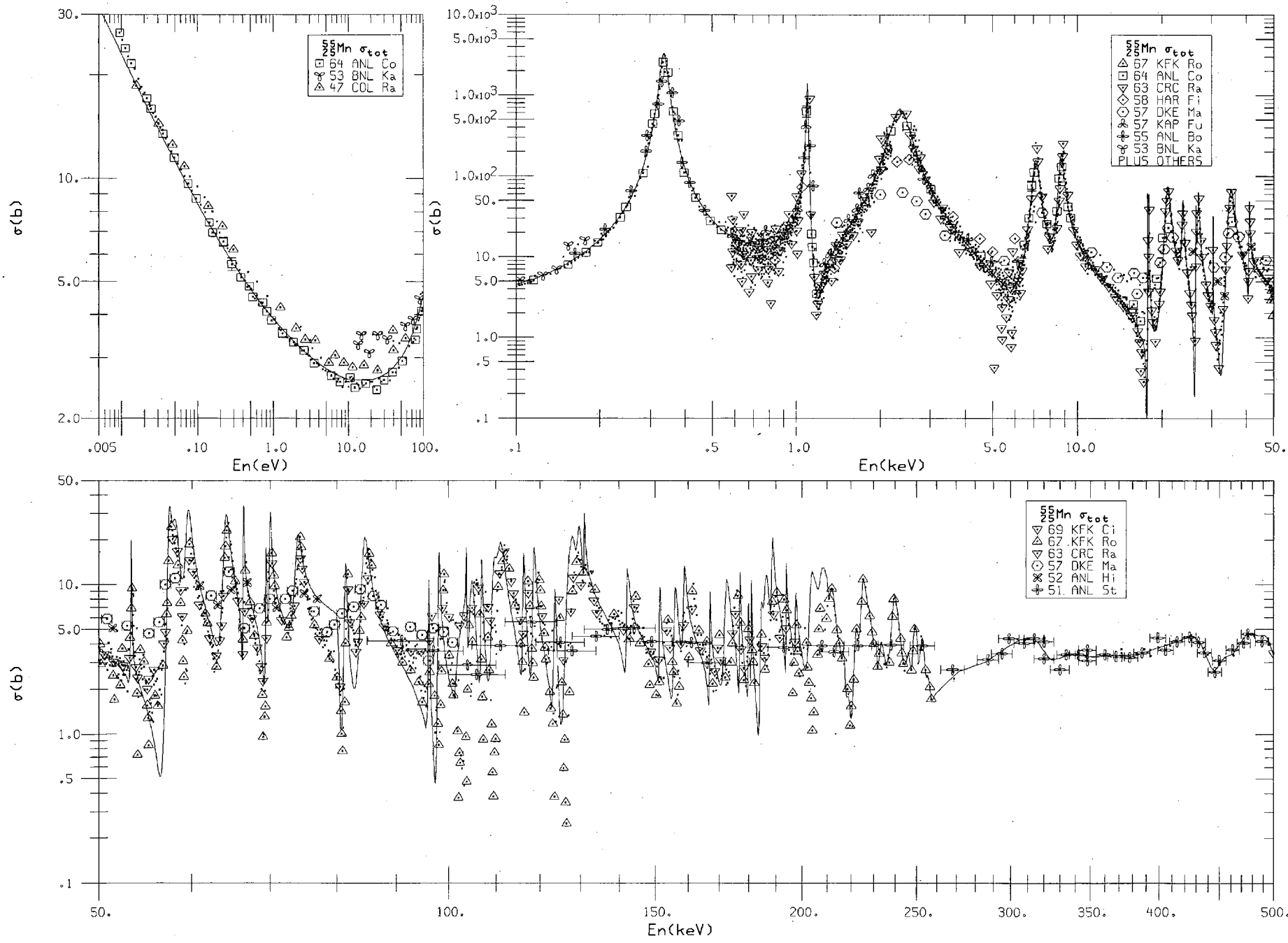
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{52}_{24}$Cr σ_{inl}			
66	IRK	Tagesen,et.al.	APA,23,31,66	1	.740 b at 14.0 MeV	abs
62	BAR	Van Patter+	PR,128,1246,62	7	1.970 MeV to 3.310 MeV	^{56}Fe σ_{ing}
			$^{52}_{24}$Cr $\sigma_{n\gamma}$			
64	CCP	Kapchigashev+	AE,16,256,64	52	2.900 eV to 50.0 keV	^{52}Cr $\sigma_{n\gamma}$
			$^{52}_{24}$Cr σ_{n2n}			
73	LOU	Araminowicz,et.al.	INR-1464,14,73	1	.143 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	2	14.2 MeV to 14.6 MeV	^{65}Cu σ_{n2n}
67	HAM	Bormann,et.al.	EANDC(E)-76,51,67	10	12.9 MeV to 19.6 MeV	H
62	IRK	Wenusch,et.al.	OSA,99,1,62	1	.280 b at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{52}_{24}$Cr σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	96.1 mb at 14.6 MeV	^{56}Fe σ_{np}
69	WVU	Clator	CLATOR,69	3	14.4 MeV to 16.7 MeV	
67	ARK	Husain,et.al.	JIN,29,2665,67	1	.115 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
66	BOS	Mitra,et.al.	NP,83,157,66	1	82.8 mb at 14.8 MeV	^{63}Cu σ_{n2n}
61	ARK	Chittenden+	ARKANSAS,1,61	1	82.7 mb at 14.8 MeV	
61	HAR	Allan	NP,24,274,61	1	67.0 mb at 14.0 MeV	^{54}Fe σ_{np}
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	.105 b at 14.8 MeV	^{63}Cu σ_{n2n}
59	NRD	Kern,et.al.	NP,10,226,59	28	12.3 MeV to 18.2 MeV	abs
53	CRC	Paul,et.al.	CJP,31,267,53	1	77.7 mb at 14.5 MeV	
			$^{53}_{24}$Cr σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	248	2.262 MeV to 14.8 MeV	
71	KFK	Mueller,et.al.	NP/A,164,97,71	1657	16.9 keV to .360 MeV	abs
			$^{53}_{24}$Cr σ_{inl}			
62	BAR	Van Patter+	PR,128,1246,62	10	.980 MeV to 3.310 MeV	^{56}Fe σ_{ing}
			$^{53}_{24}$Cr $\sigma_{n\gamma}$			
64	CCP	Kapchigashev+	AE,16,256,64	35	2.900 eV to 57.0 keV	^{53}Cr $\sigma_{n\gamma}$
			$^{53}_{24}$Cr σ_{np}			
67	ARK	Husain,et.al.	JIN,29,2665,67	1	44.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	ARK	Chittenden+	ARKANSAS,1,61	1	37.3 mb at 14.8 MeV	
61	HAR	Allan	NP,24,274,61	1	48.0 mb at 14.0 MeV	^{54}Fe σ_{np}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{53}_{24}$Cr σ_{nnp}			
68	OAU	Webber,et.al.	BAP,13,1663(DB6),68	1	7.300 mb at 14.7 MeV	
67	ARK	Husain,et.al.	JIN,29,2665,67	1	7.100 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{53}_{24}$Cr σ_{n3}			
68	OAU	Webber,et.al.	BAP,13,1663(DB6),68	1	.300 mb at 14.7 MeV	
			$^{54}_{24}$Cr σ_{tot}			
66	DKE	Farrell,et.al.	AP,37,367,66	992	.100 MeV to .595 MeV	
			$^{54}_{24}$Cr σ_{inl}			
62	BAR	Van Patter+	PR,128,1246,62	10	.980 MeV to 3.310 MeV	^{56}Fe σ_{ing}
			$^{54}_{24}$Cr σ_{np}			
67	ARK	Husain,et.al.	JIN,29,2665,67	1	13.5 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{54}_{24}$Cr $\sigma_{n\alpha}$			
67	ARK	Husain,et.al.	JIN,29,2665,67	1	12.5 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$

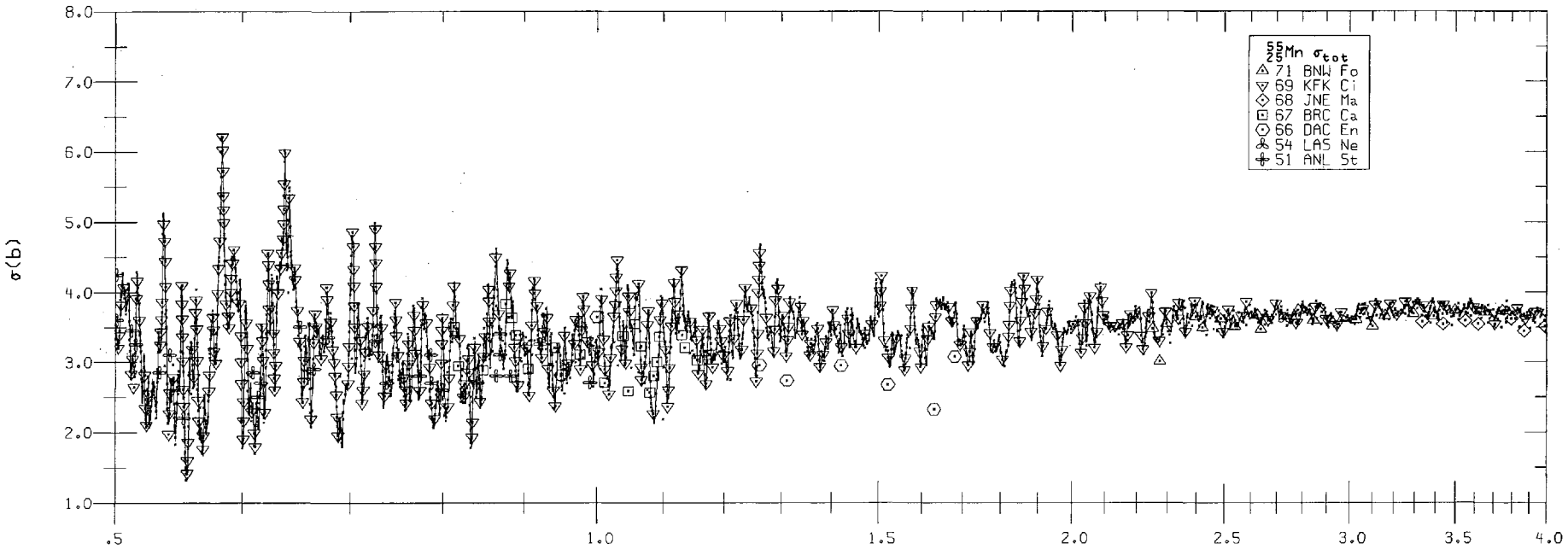
$^{55}_{25}$Mn

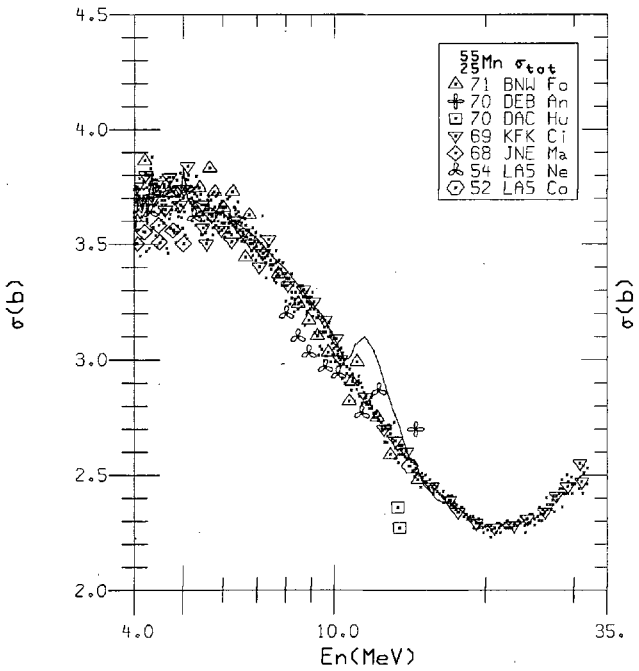
σ_{tot}

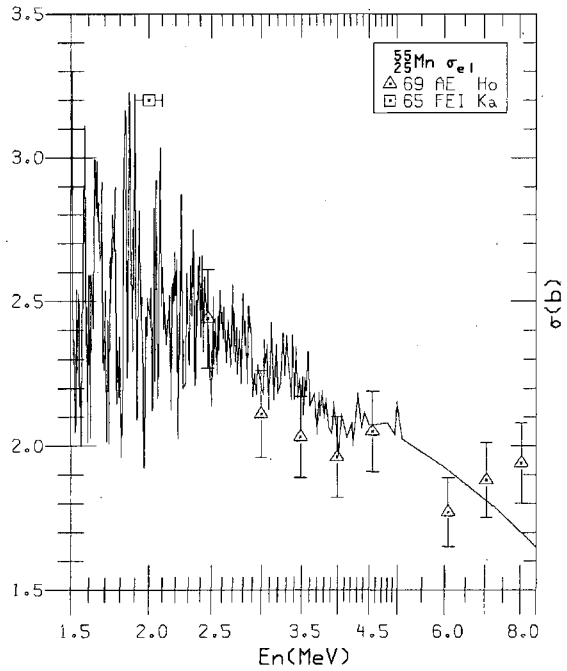
[1197]

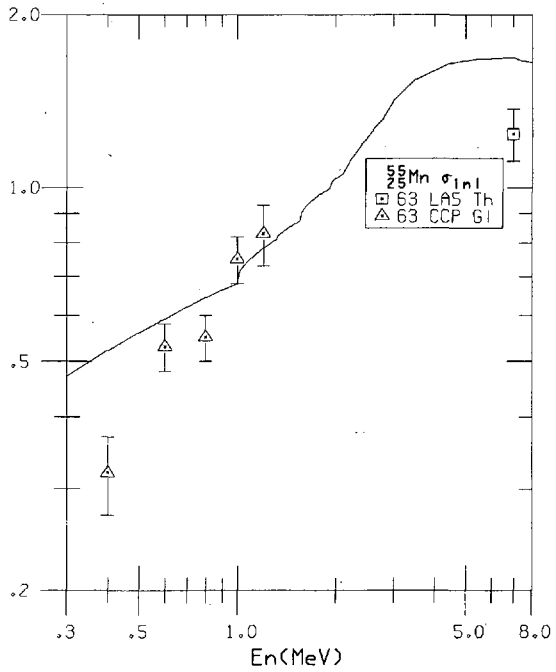


$^{55}_{25}$Mn
σ_{tot}
σ_{el}
σ_{inl}
[1197]

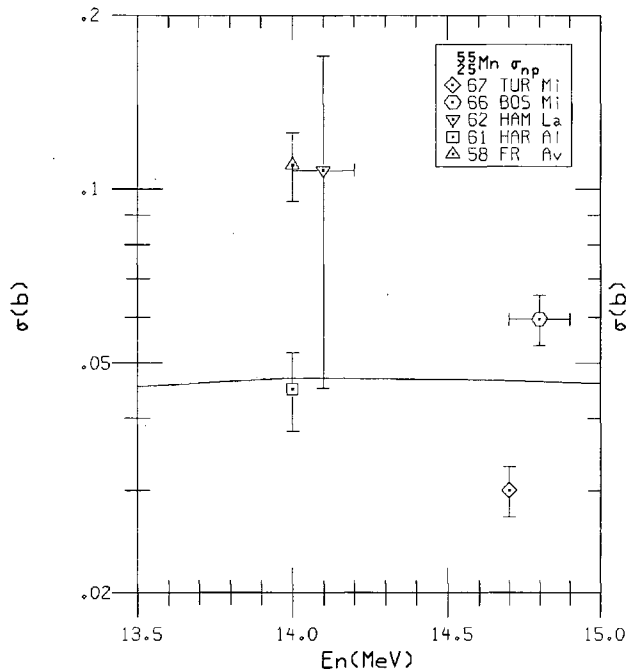


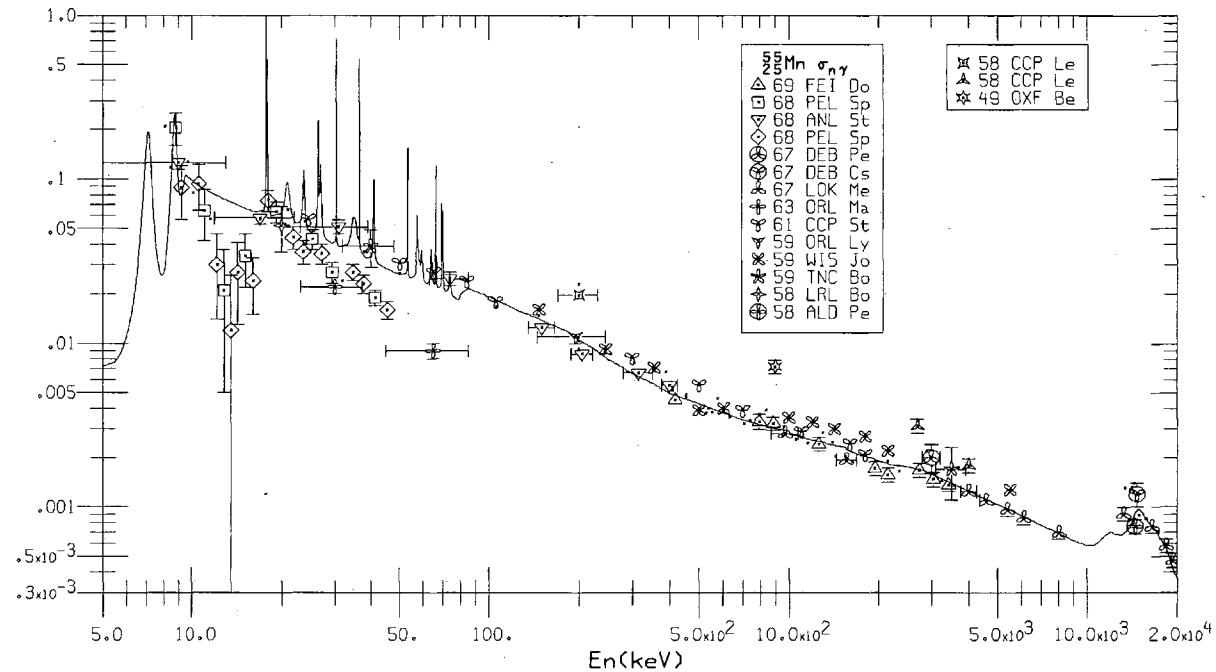


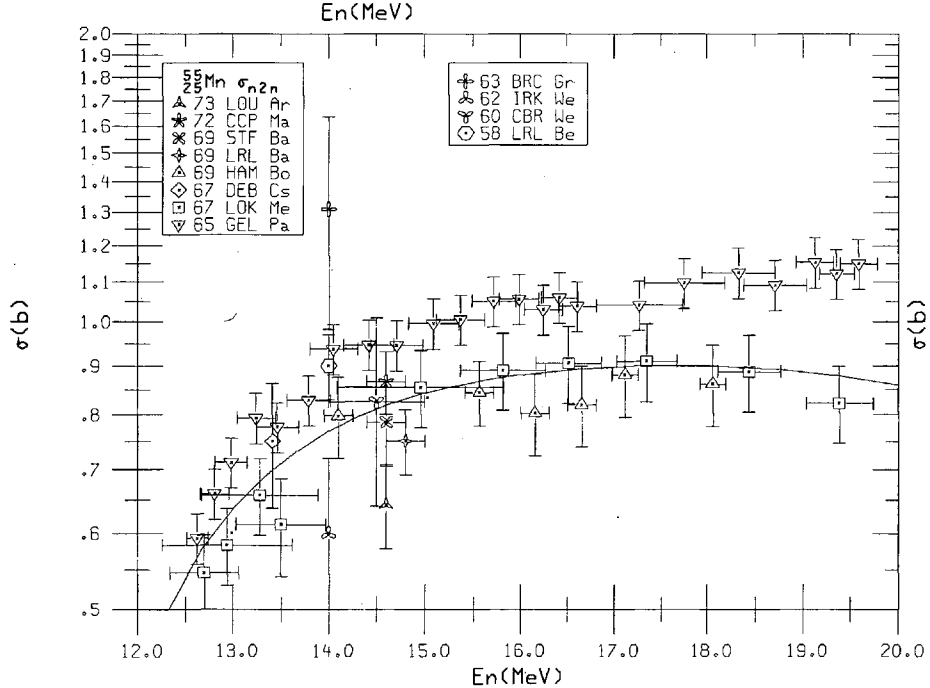


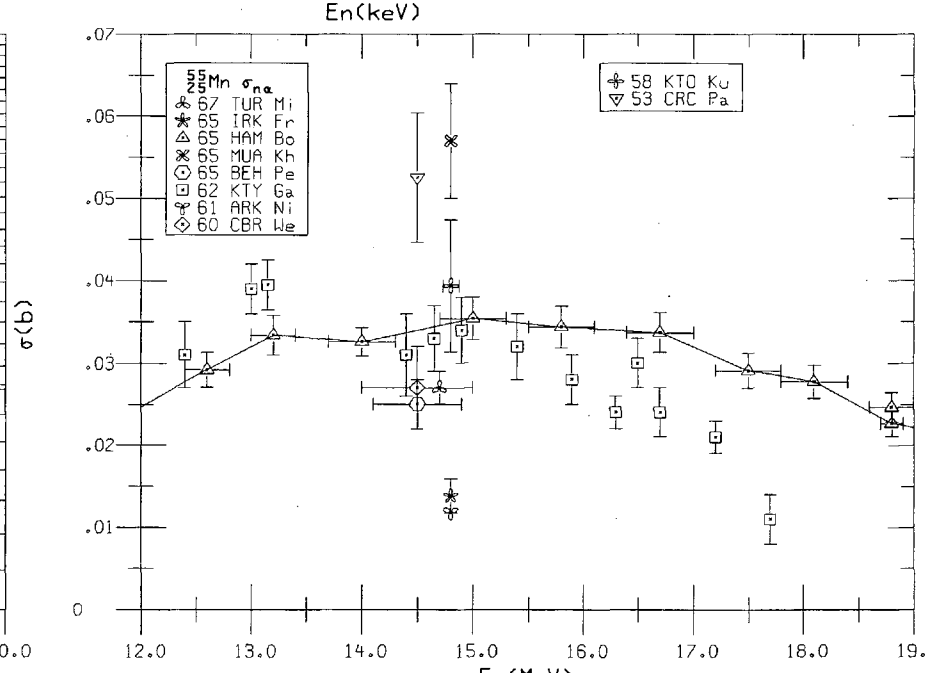


$^{55}_{25}$Mn
$\sigma_{n\gamma}$
σ_{n2n}
σ_{np}
$\sigma_{n\alpha}$
[1197]









Yr	Lab	Author	Reference	Points	Range	Standard
			$^{54}_{25}$Mn $\sigma_{n\alpha}$			
71	ORL	Jenkins	ANS,14,353,71	1	38.0 b at thermal	
			$^{55}_{25}$Mn σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	248	2.251 MeV to 14.8 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	2.700 b at 14.5 MeV	
70	DAC	Hussain,et.al.	JNE,24,385,70	2	13.4 MeV to 13.5 MeV	
69	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),69	5129	.500 MeV to 32.0 MeV	abs
68	JNE	Manero	ARS,64,373,68	62	3.336 MeV to 5.144 MeV	
67	KFK	Rohr,et.al.	NP/A,104,1,67	959	47.9 keV to .257 MeV	abs
67	BRC	Cabe,et.al.	NP/A,102,92,67	91	.800 MeV to 1.206 MeV	
66	DAC	Enayetullah+	PPA,3,84,66	16	.950 MeV to 1.730 MeV	
64	ANL	Cote,et.al.	PR/B,134,1047,64	420	.0095 eV to 20.1 keV	abs
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	3552	.584 keV to .200 MeV	abs
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.360 b at 28.4 MeV	
58	HAR	Firk	FIRK,58	96	.839 keV to 9.660 keV	abs
57	DKE	Marshak,et.al.	PR,106,110,57	136	1.400 keV to .101 MeV	
57	KAP	Fulwood,et.al.	KAPL-1770,65,57	93	.558 keV to 2.161 keV	abs
55	ANL	Bollinger,et.al.	PR,100,126,55	73	.164 keV to 6.750 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.730 MeV to 13.1 MeV	
53	BNL	Kato	KATO,53	27	13.5 eV to .193 keV	
52	ANL	Hibdon,et.al.	PR,85,595,52	26	25.7 keV to 79.7 keV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.540 b at 14.1 MeV	
51	ANL	Stubbins	PR,84,902,51	173	80.0 keV to .990 MeV	abs
47	COL	Rainwater,et.al.	PR,71,65,47	43	.0145 eV to 57.8 eV	
			$^{55}_{25}$Mn σ_{el}			
69	AE	Holmqvist,et.al.	AE-366,69	8	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
65	FEI	Kasakova,et.al.	65ANTWERP,576,65	1	3.200 b at 2.000 MeV	
			$^{55}_{25}$Mn σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	1.240 b at 7.000 MeV	
63	CCP	Glazkov	AE,15,416,63	5	.400 MeV to 1.200 MeV	
			$^{55}_{25}$Mn $\sigma_{n\gamma}$			
72	WUR	Widder	EIR-217,72	262	.0090 eV to .280 keV	
72	RBZ	Holub,et.al.	LNS-4-72,72	1	1.400 mb at 14.4 MeV	^{56}Fe σ_{np}
69	FEI	Dovbenko,et.al.	AE,26,(1),67,69	22	.418 MeV to 3.430 MeV	^{235}U σ_{nf}
68	IRK	Colditz,et.al.	OSA,105,236,68	1	2.200 mb at 2.900 MeV	^{115}In σ_{inl}
68	PEL	Spitz,et.al.	NP/A,121,655,68	29	8.120 keV to 45.5 keV	In $\sigma_{n\gamma}$
68	ANL	Stupegia,et.al.	JNE,22,267,68	11	9.000 keV to .539 MeV	^{235}U
67	DEB	Peto,et.al.	JNE,21,797,67	1	2.000 mb at 3.000 MeV	^{31}P σ_{np}
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	1.200 mb at 14.7 MeV	^{27}Al σ_{np}
67	DEB	Csikai,et.al.	NP/A,95,229,67	7	13.4 MeV to 15.0 MeV	
67	LOK	Menlove,et.al.	PR,163,1299,67	17	.970 MeV to 19.4 MeV	^{235}U σ_{nf}
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.780 mb at 14.1 MeV	
65	MUA	Chaubey,et.al.	NP,66,267,65	1	40.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	13.2 b at thermal	
61	CCP	Stavisskii+	AE,10,508,61	20	24.5 keV to 1.800 MeV	^{235}U σ_{nf}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	11.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	18	.147 MeV to 5.500 MeV	^{235}U σ_{nf}
59	WIS	Johnsrud,et.al.	PR,116,927,59	18	.147 MeV to 5.500 MeV	^{235}U σ_{nf}
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	2	40.0 keV to 3.500 MeV	
58	LRL	Booth,et.al.	PR,112,226,58	1	52.0 mb at 20.0 keV	I $\sigma_{n\gamma}$

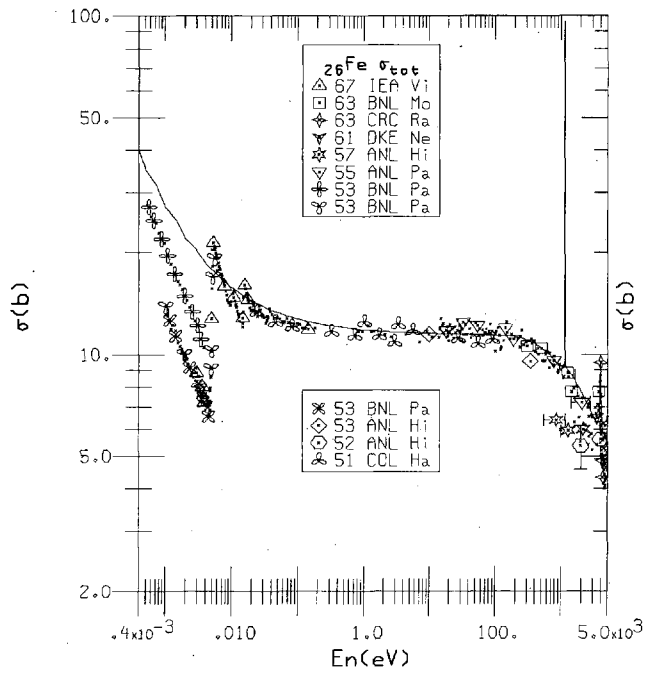
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
58	ALD	Perkin,et.al.	PPS,72,505,58	1	.760 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	65.0 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	23.0 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	55.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	7.200 mb at .900 MeV	
			$^{55}_{25}$Mn σ_{n2n}			
73	LOU	Araminovicz+	INR-1464,14,73	1	.643 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	1	.866 b at 14.6 MeV	^{65}Cu σ_{n2n}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.785 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	.750 b at 14.8 MeV	^{1}H σ_{tot}
69	HAM	Bormann,et.al.	NP/A,130,195,69	8	13.0 MeV to 18.1 MeV	^{1}H σ_{el}
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.750 b at 13.4 MeV	^{65}Cu σ_{n2n}
67	LOK	Menlove,et.al.	PR,163,1308,67	10	12.7 MeV to 19.4 MeV	
65	GEL	Paulsen,et.al.	JNE/AB,19,907,65	23	12.6 MeV to 19.6 MeV	^{1}H σ_{el}
63	BRC	Granger,et.al.	EANDC(E)-49,83,63	1	1.310 b at 14.0 MeV	
62	IRK	Wenusch,et.al.	OSA,99,1,62	1	.600 b at 14.0 MeV	
61	ARK	Nix,et.al.	ARKANSAS,6,61	1	1.000 mb at 14.8 MeV	
60	CBR	Weigold	AUJ,13,186,60	1	.825 b at 14.5 MeV	^{65}Cu σ_{n2n}
58	LRL	Benveniste	58GENEVA,15,3,58	1	.900 b at 14.0 MeV	^{252}Cf
			$^{55}_{25}$Mn σ_{np}			
67	TUR	Minetti,et.al.	ZP,199,275,67	1	30.0 mb at 14.7 MeV	^{63}Cu
66	BOS	Mitra,et.al.	NP,83,157,66	1	59.5 mb at 14.8 MeV	^{63}Cu σ_{n2n}
62	HAM	Langmann	LANGMANN,62	1	.107 b at 14.1 MeV	
61	HAR	Allan	NP,24,274,61	1	45.0 mb at 14.0 MeV	^{54}Fe σ_{np}
58	FR	Avignon,et.al.	CR,247,1849,58	1	.110 b at 14.0 MeV	^{58}Ni σ_{np}
			$^{55}_{25}$Mn σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	.110 mb at 14.6 MeV	^{55}Mn $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.300 mb at 14.7 MeV	^{55}Mn $\sigma_{n\alpha}$
			$^{55}_{25}$Mn σ_{pem}			
58	FR	Avignon,et.al.	CR,247,1849,58	1	.110 b at 14.0 MeV	^{58}Ni σ_{np}
			$^{55}_{25}$Mn σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.800 mb at 14.0 MeV	
65	IRK	Frevert	APA,20,304,65	1	50.0 muB at 14.8 MeV	^{55}Mn $\sigma_{n\alpha}$
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	.420 mb at 14.5 MeV	^{55}Mn $\sigma_{n\alpha}$
60	ARK	Kumabe,et.al.	PR,117,1568,60	1	4.000 mb at 14.8 MeV	^{55}Mn σ_{np}

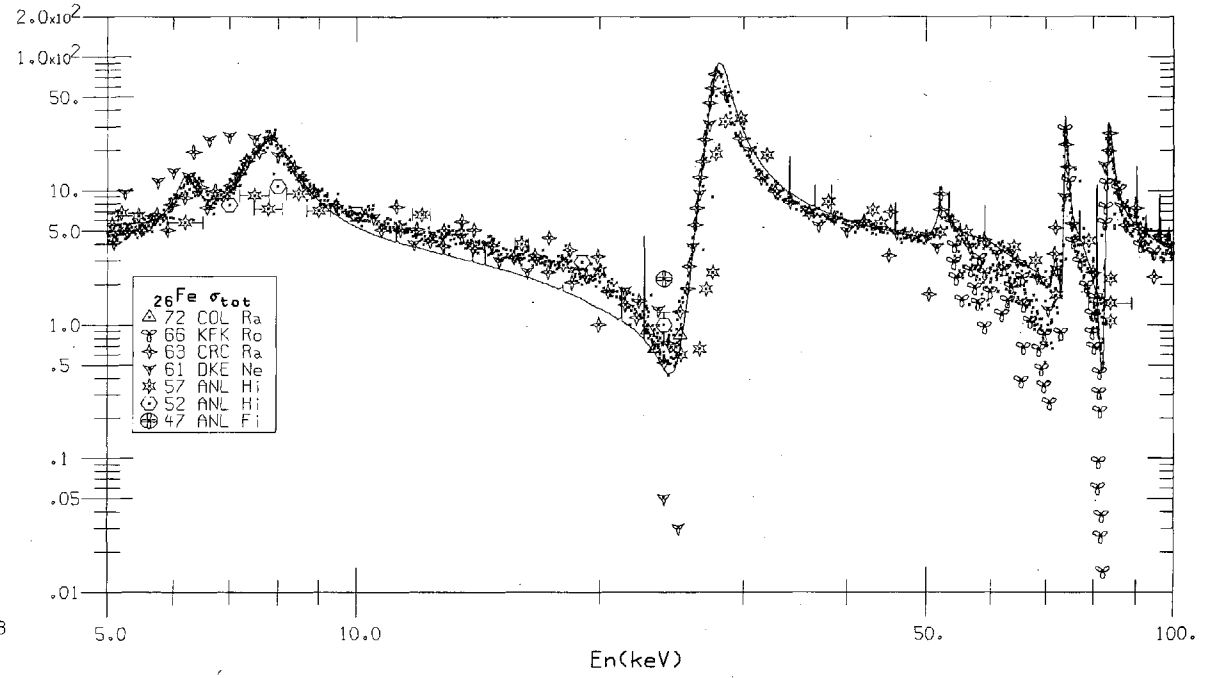
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{55}_{25}Mn$ $\sigma_{n\alpha}$			
67	TUR	Minetti,et.al.	ZP,199,275,67	1	27.0 mb at 14.7 MeV	^{63}Cu σ_{n2n}
65	IRK	Frevert	APA,20,304,65	1	13.8 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
65	HAM	Bormann,et.al.	NP,63,438,65	10	12.6 MeV to 18.8 MeV	abs
65	HAM	Bormann,et.al.	NP,63,438,65	1	29.2 mb at 12.6 MeV	^{55}Mn $\sigma_{n\alpha}$
65	MUA	Khurana,et.al.	NP,69,153,65	1	57.0 mb at 14.8 MeV	Fe
65	BEH	Peil	NP,66,419,65	1	25.0 mb at 14.5 MeV	^{27}Al σ_{np}
63	AUS	Frevert	FREVERT,63	1	13.8 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
62	KTY	Gabbard,et.al.	PR,128,1276,62	13	12.4 MeV to 17.7 MeV	^{52}Cr σ_{np}
61	ARK	Nix,et.al.	ARKANSAS,6,61	1	11.8 mb at 14.8 MeV	
60	CBR	Weigold	AUJ,13,186,60	1	27.0 mb at 14.5 MeV	^{63}Cu σ_{n2n}
58	KTO	Kumabe	JPJ,13,325,58	1	39.4 mb at 14.8 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	52.5 mb at 14.5 MeV	abs
			$^{55}_{25}Mn$ σ_{aem}			
62	SAH	Kaul	NP,39,325,62	1	89.0 mb at 14.0 MeV	
58	KTO	Kumabe,et.al.	JPJ,13,129,58	1	96.0 mb at 14.8 MeV	

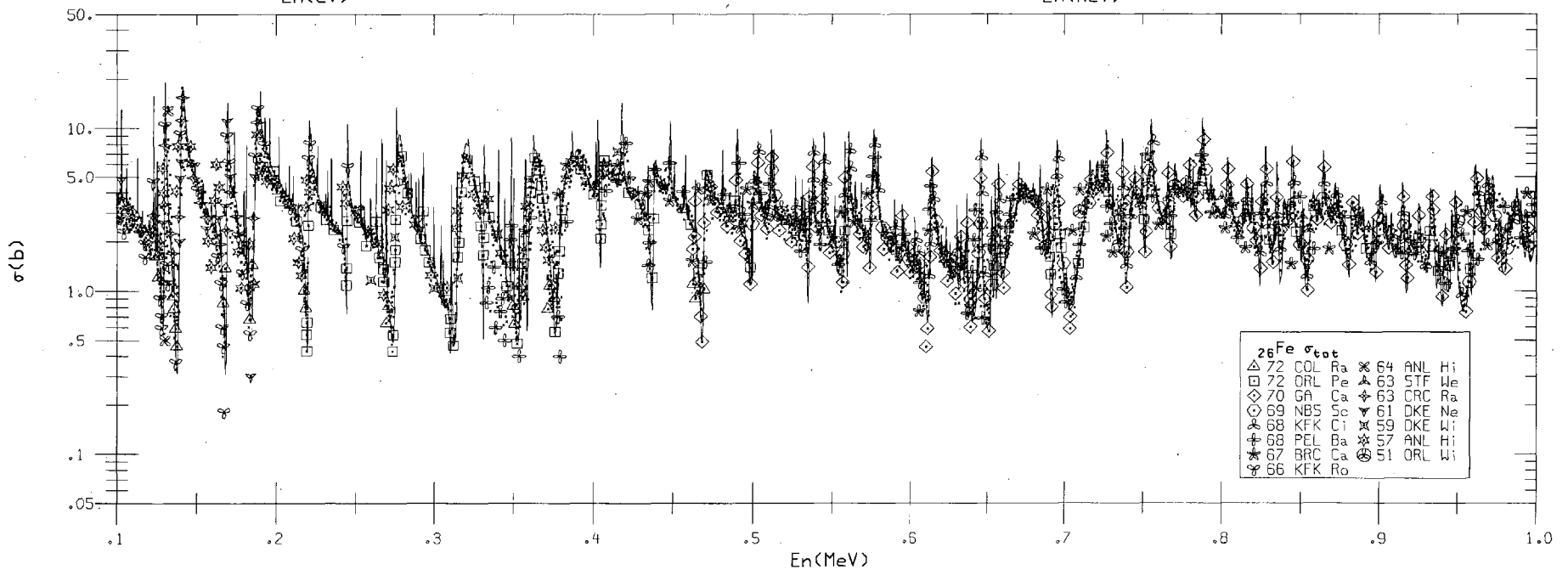
$_{26}$Fe

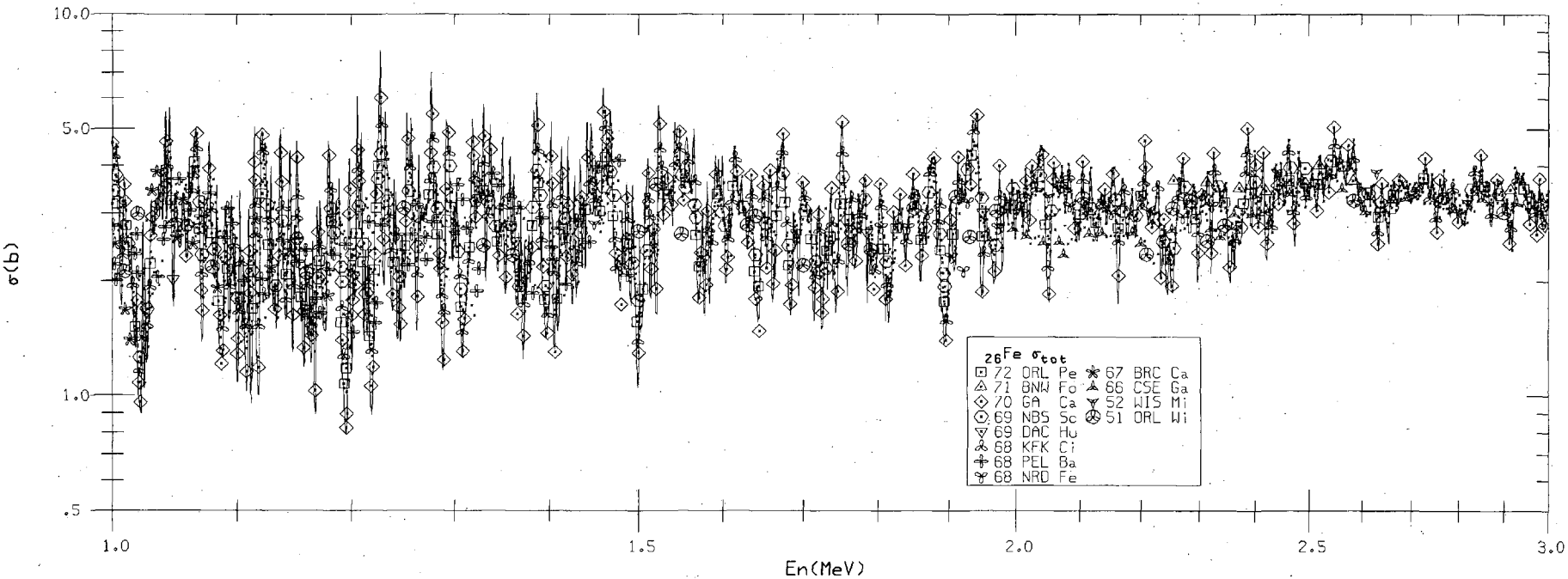
σ_{tot}

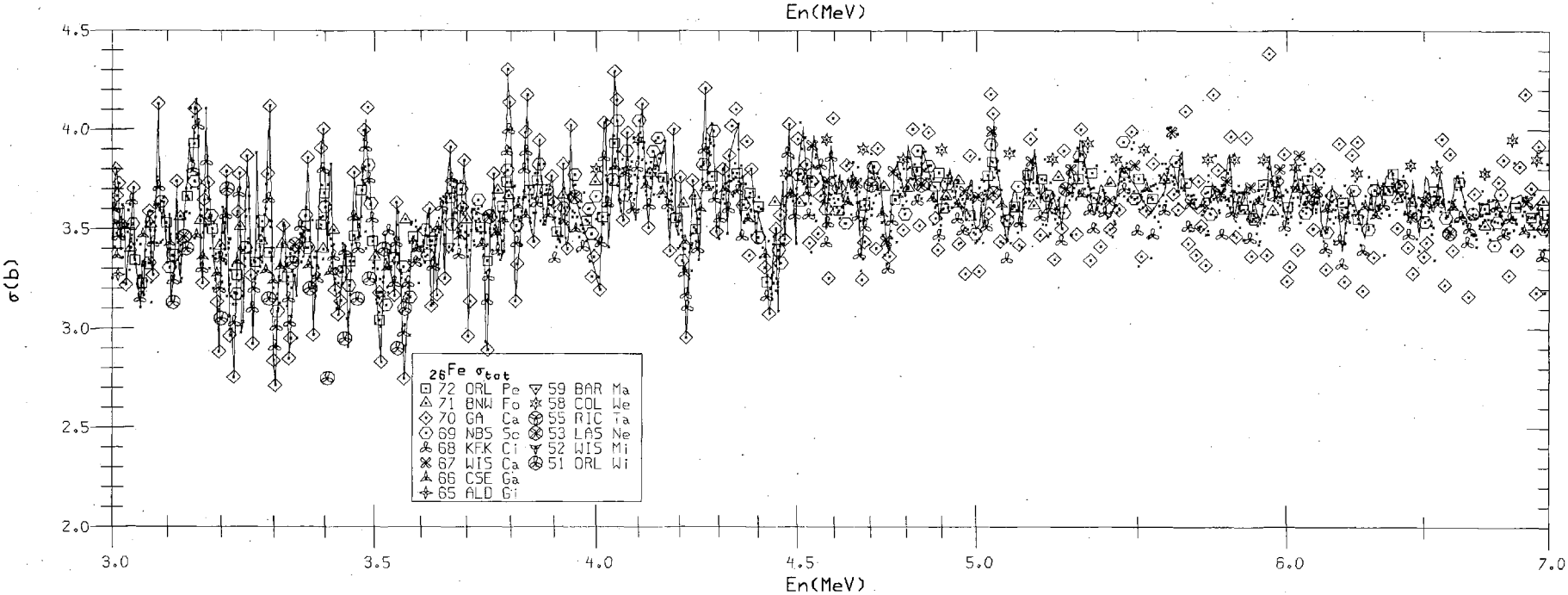
[1192]








10.0
5.0
1.0
.5
σ(b)
1.0
1.5
2.0
2.5
3.0
En(MeV)
26Fe σtot
72 ORL Pe
71 BNW Fo
70 GA Ca
69 NBS Sc
69 DAC Hu
68 KFK Ci
68 PEL Ba
68 NRD Fe
67 BRC Ca
66 CSE Ga
52 WIS Mi
51 ORL Wi

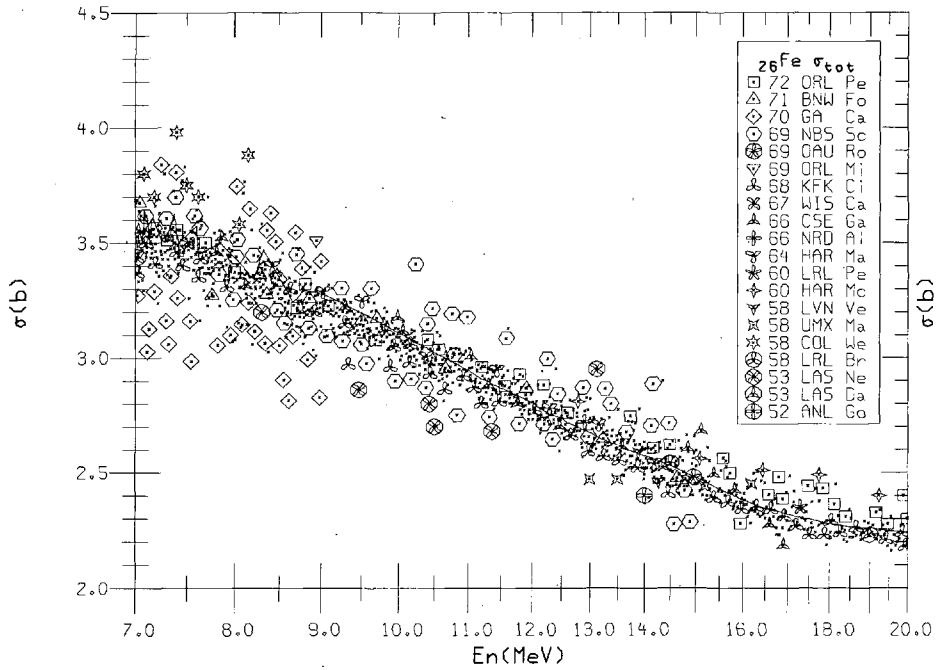

4.5
4.0
3.5
3.0
2.5
2.0
σ(b)
3.0
3.5
4.0
4.5
5.0
6.0
7.0
En(MeV)
26Fe σtot
72 ORL Pe
71 BNW Fo
70 GA Ca
69 NBS Sc
68 KFK Ci
67 WIS Ca
66 CSE Ga
65 ALD Gi
59 BAR Ma
58 COL We
55 RIC Ta
53 LAS Ne
52 WIS Mi
51 ORL Wi

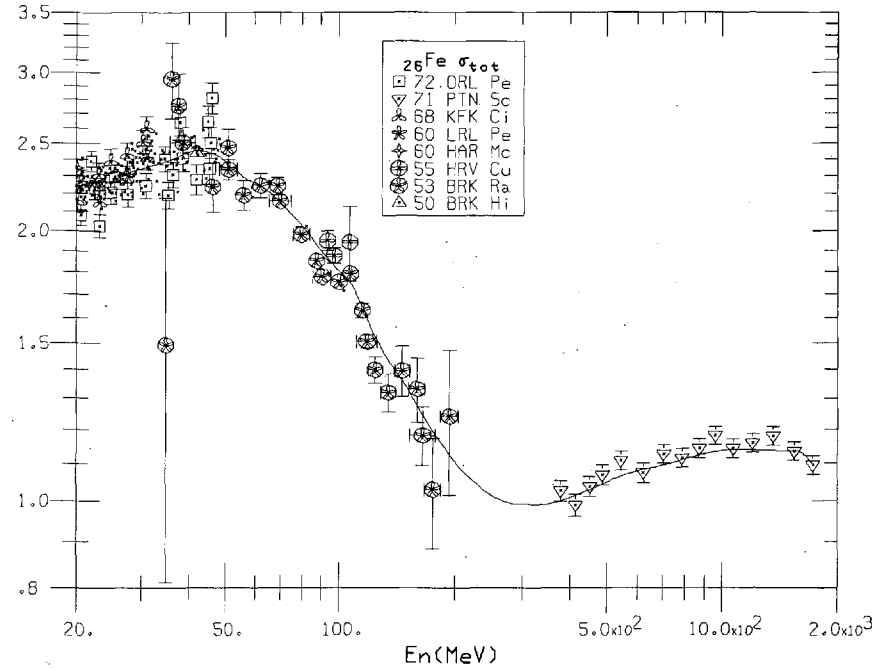
$_{26}Fe$

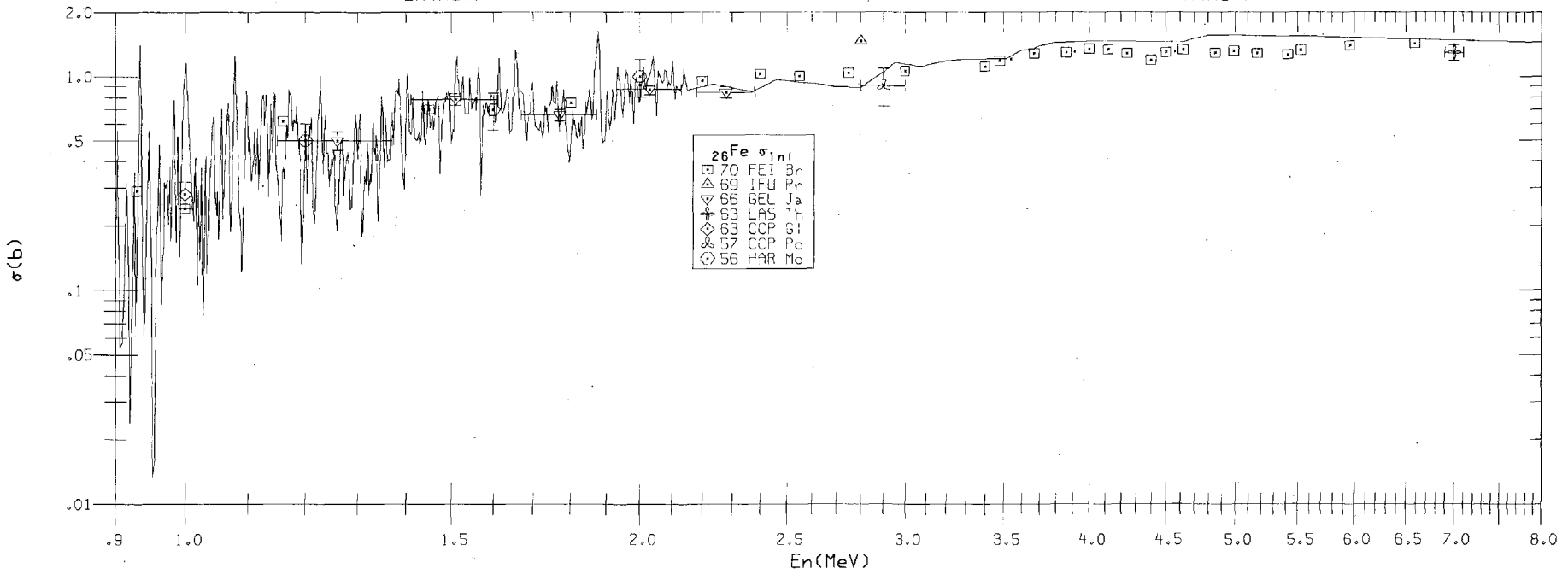
σ_{tot}

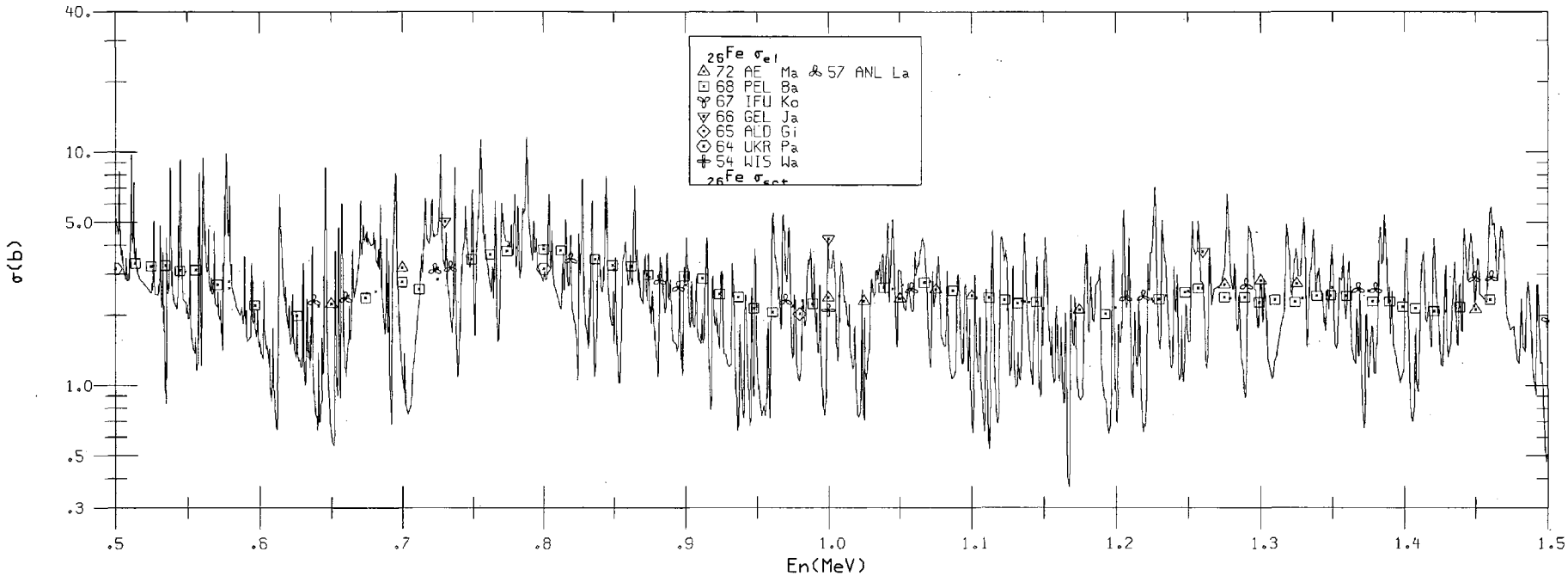
σ_{inl}

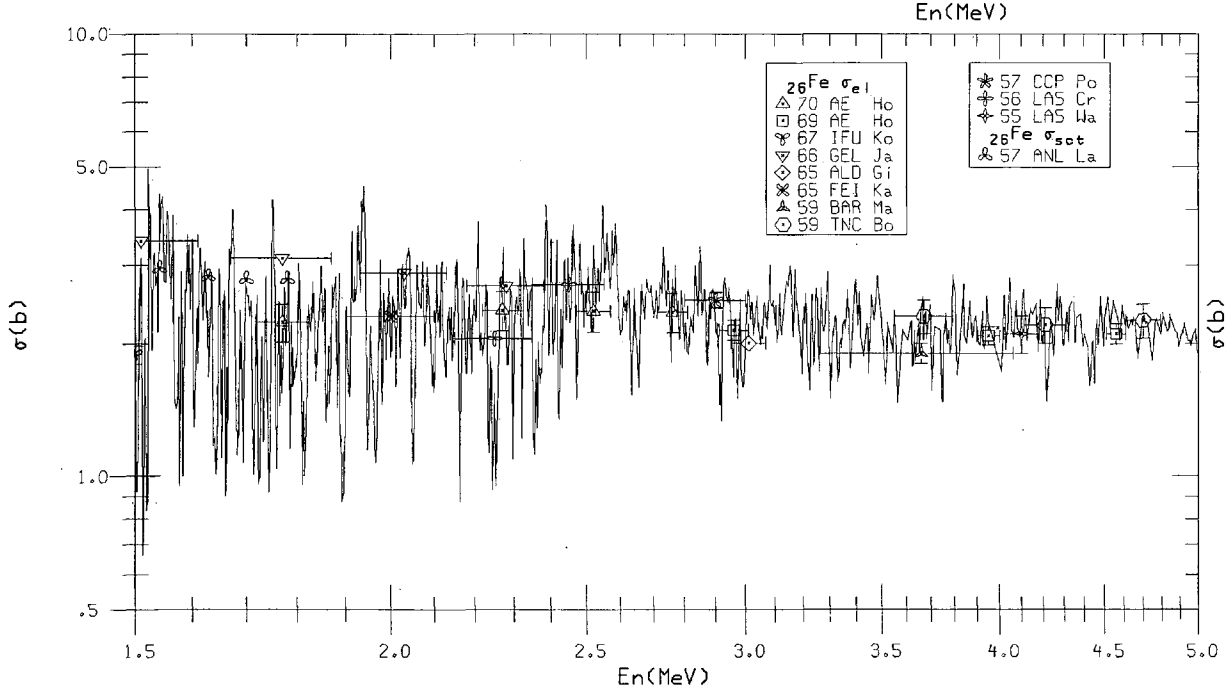
[1192]

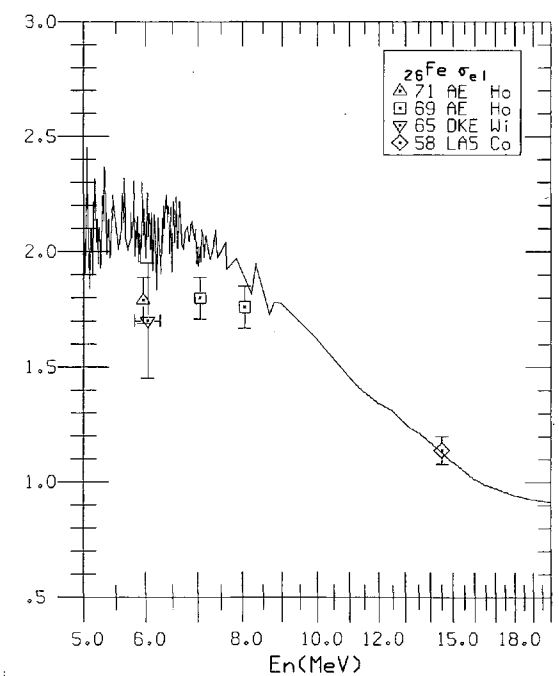




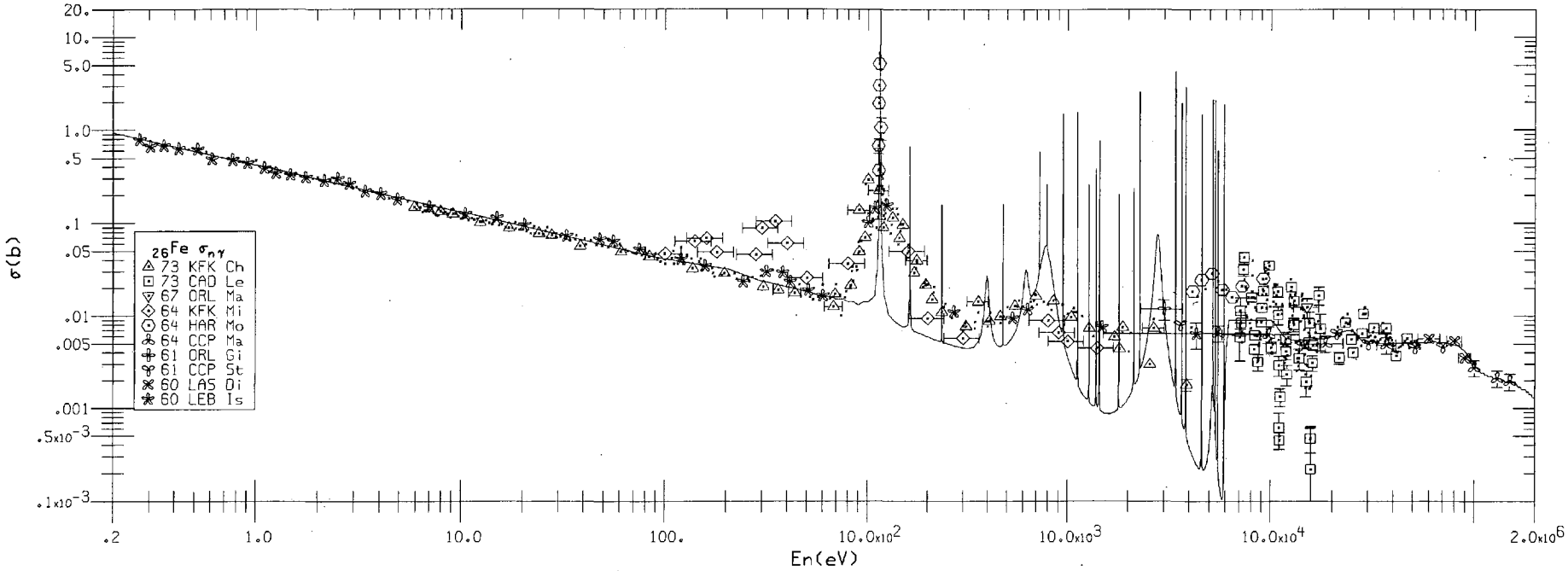


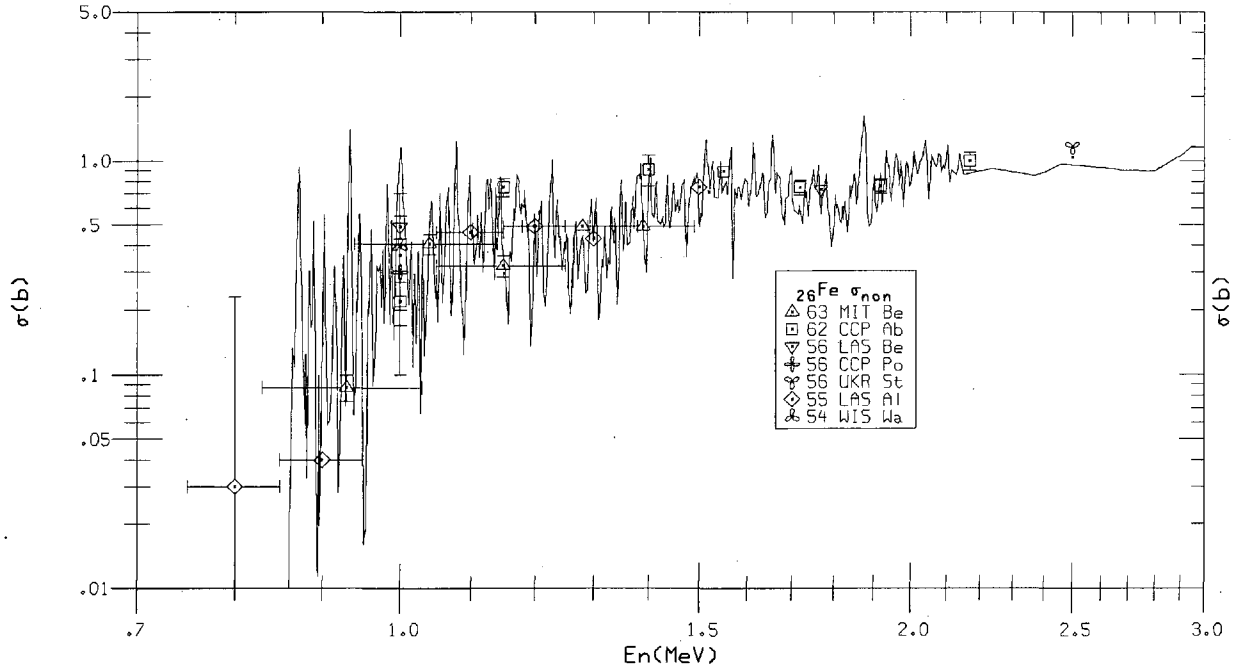

26Fe σel
72 AE Ma
57 ANL La
68 PEL Ba
67 IFU Ko
66 GEL Ja
65 ALD Gi
64 UKR Pa
54 WIS Wa
26Fe σsct
σ(b)
En(MeV)

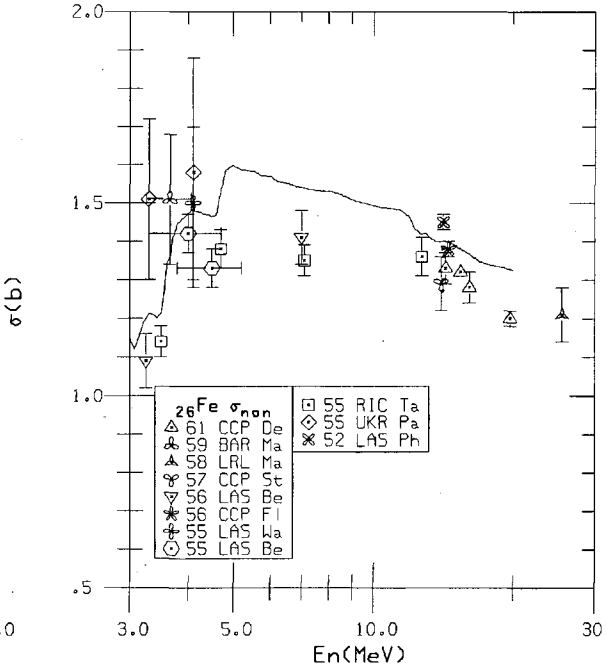

26Fe σel
70 AE Ho
69 AE Ho
67 IFU Ko
66 GEL Ja
65 ALD Gi
65 FEI Ka
59 BAR Ma
59 TNC Bo
57 CCP Po
56 LAS Cr
55 LAS Wa
26Fe σsct
57 ANL La
σ(b)
En(MeV)

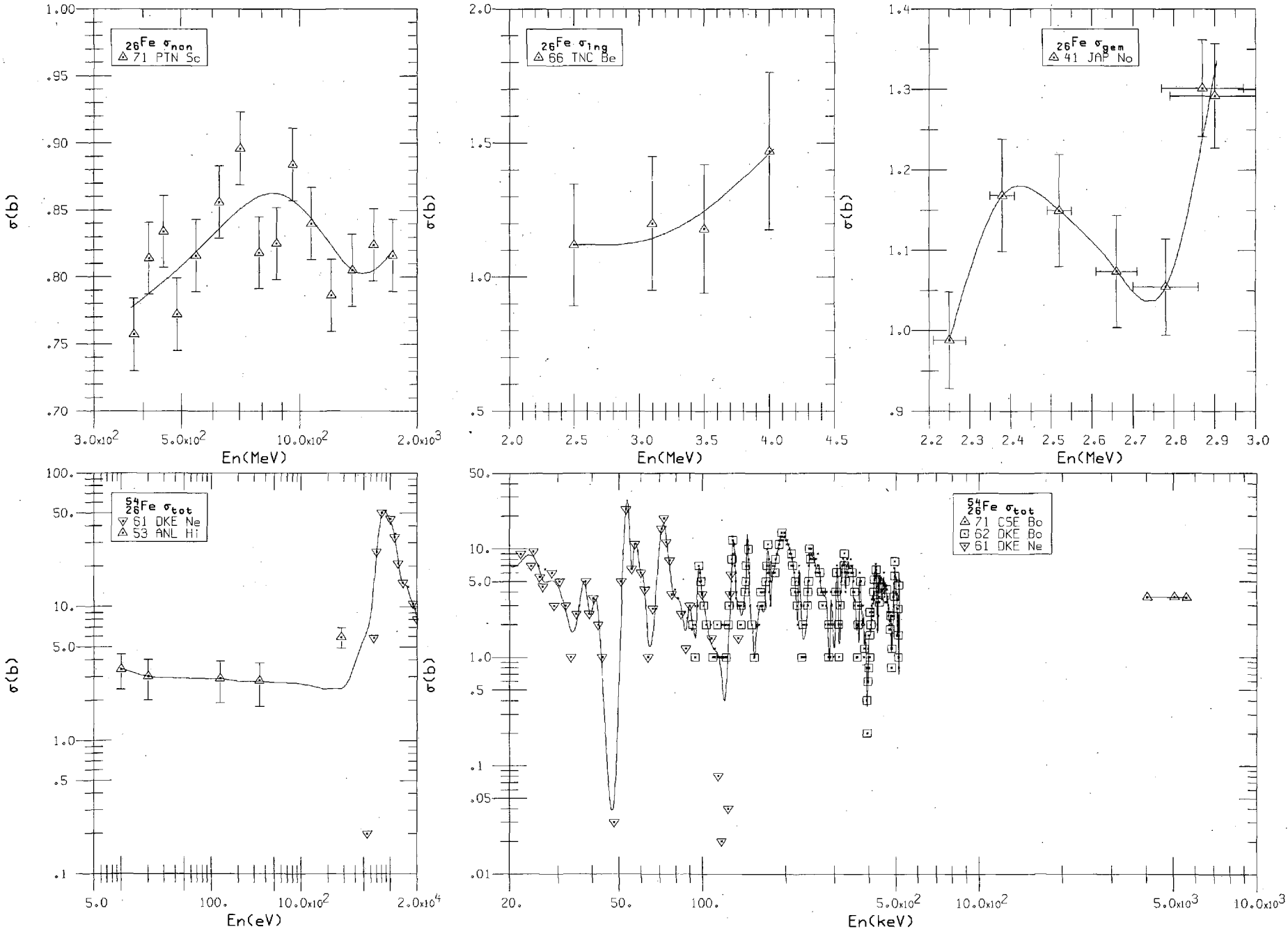

26Fe σel
71 AE Ho
69 AE Ho
65 DKE Wi
58 LAS Co
σ(b)
En(MeV)

$_{26}Fe$
σ_{non}
$\sigma_{n\gamma}$
[1192]









^{26}Fe
σ_{non}
σ_{ing}
σ_{gem}
$^{54}_{26}Fe$
σ_{tot}

$^{54}_{26}Fe$

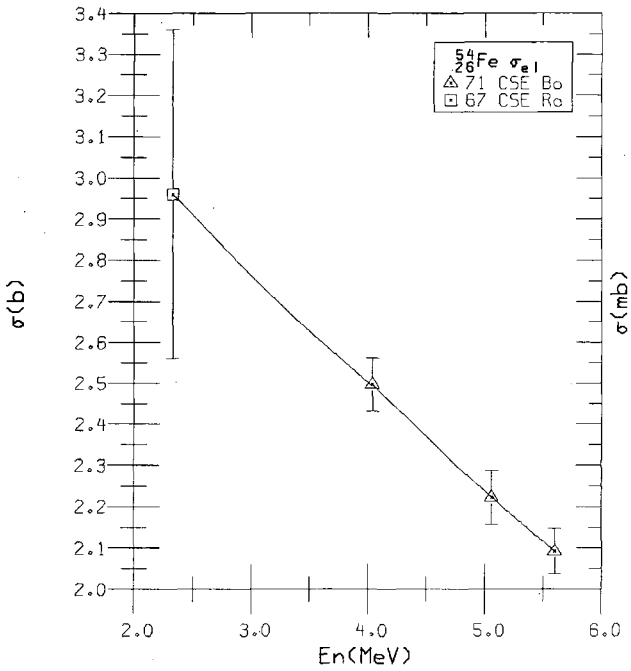
σ_{el}

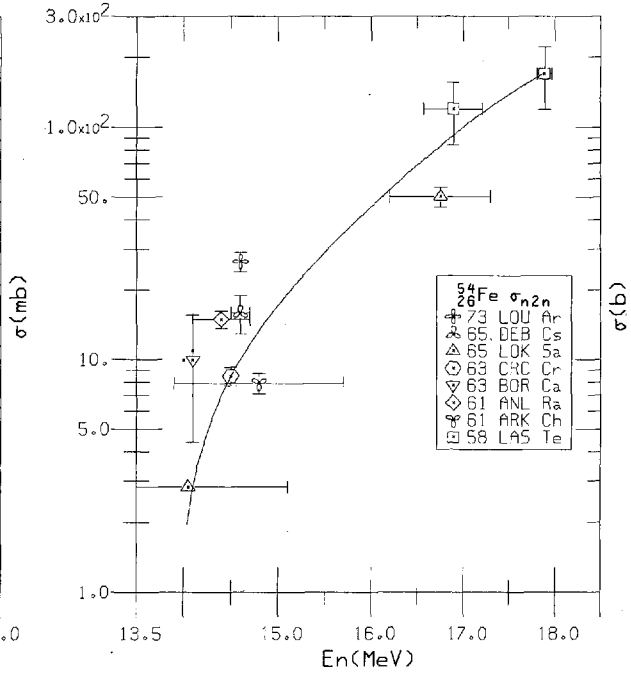
σ_{n2n}

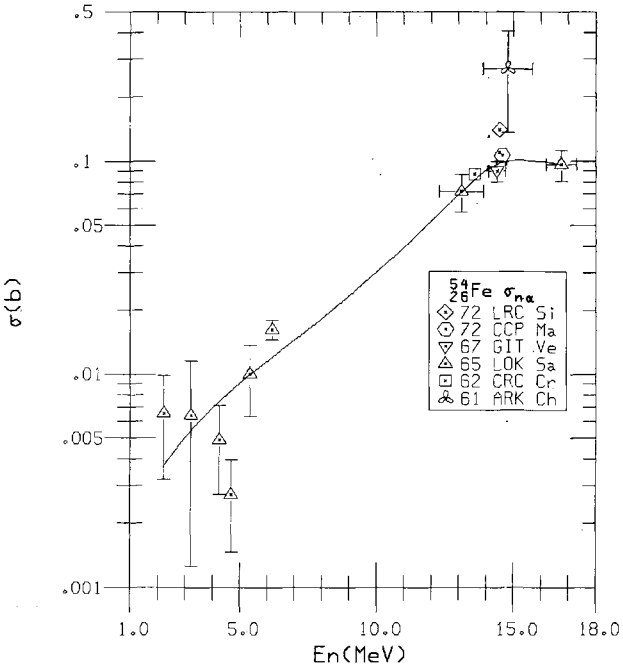
σ_{np}

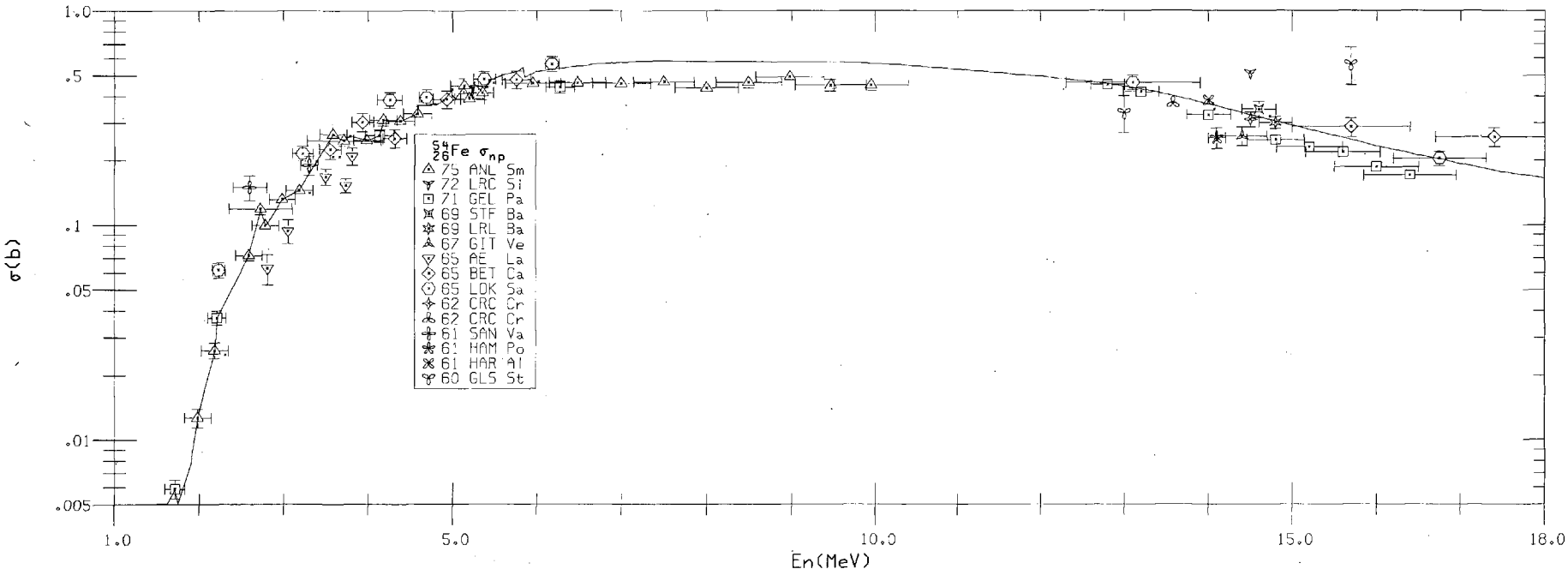
[6417]

$\sigma_{n\alpha}$









$^{56}_{26}Fe$

σ_{tot}

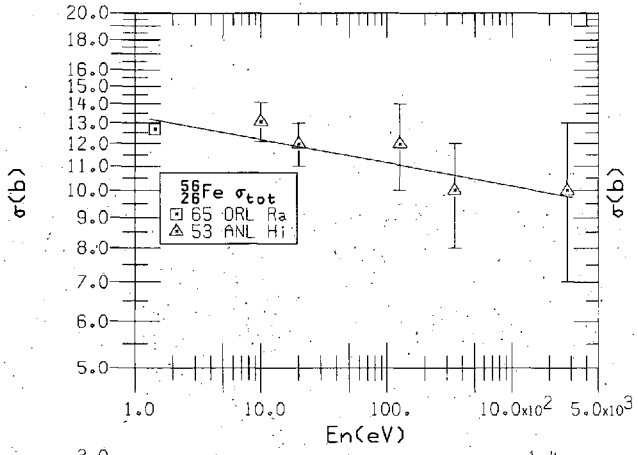
σ_{el}

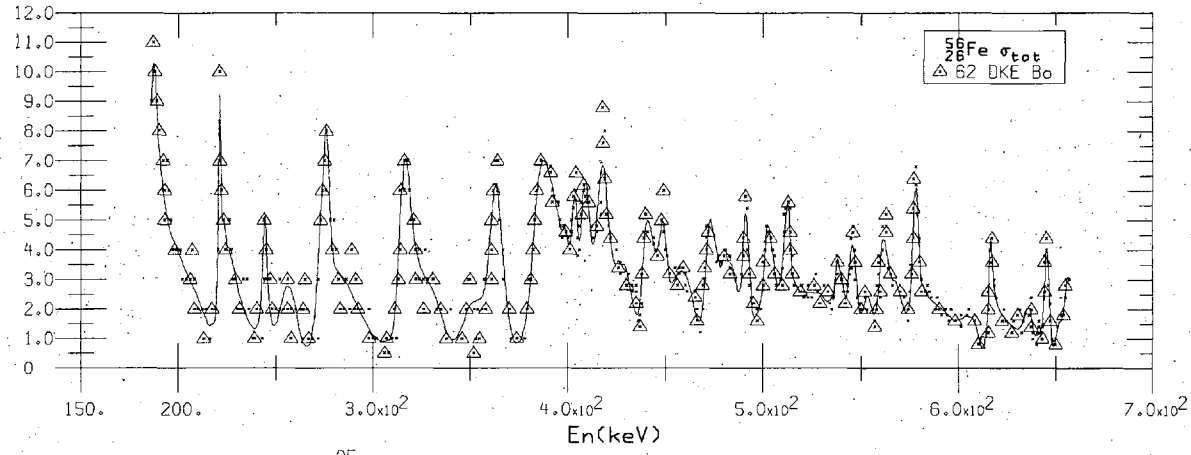
σ_{non}

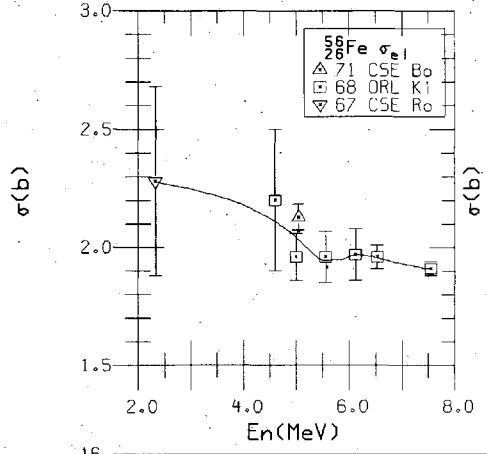
$\sigma_{n\gamma}$

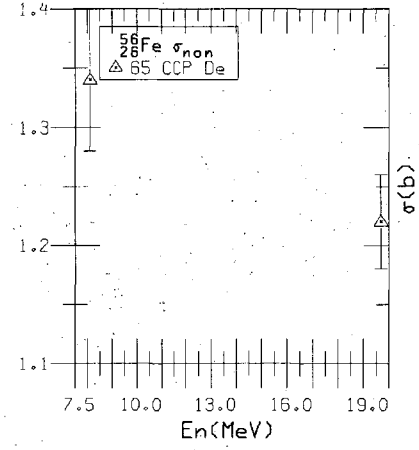
σ_{np}

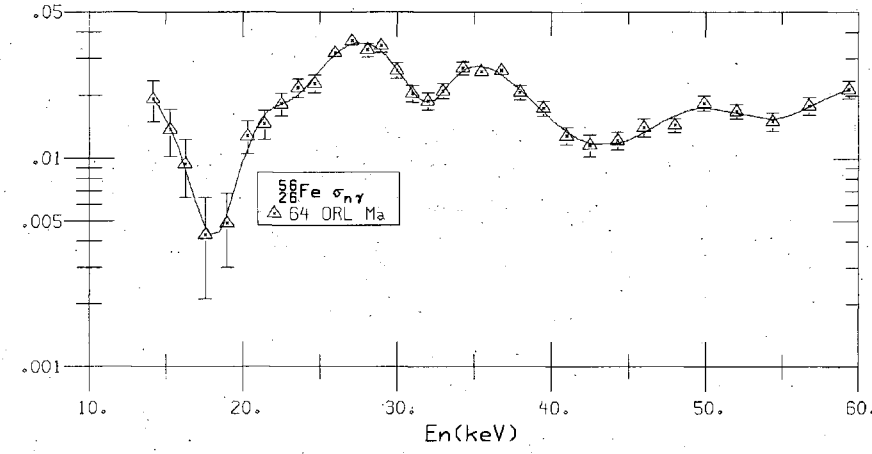
[6410]

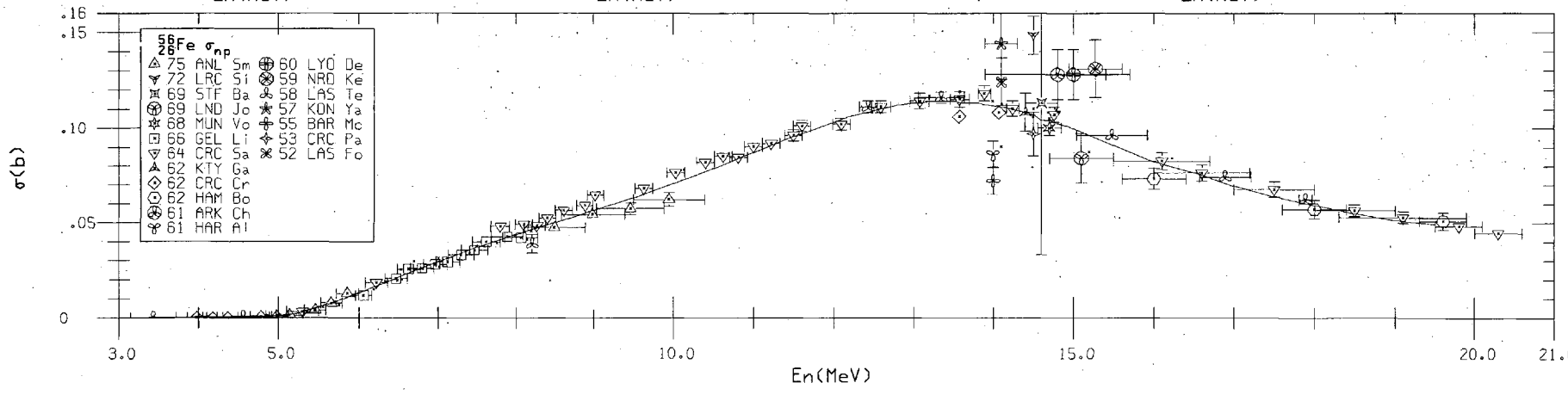








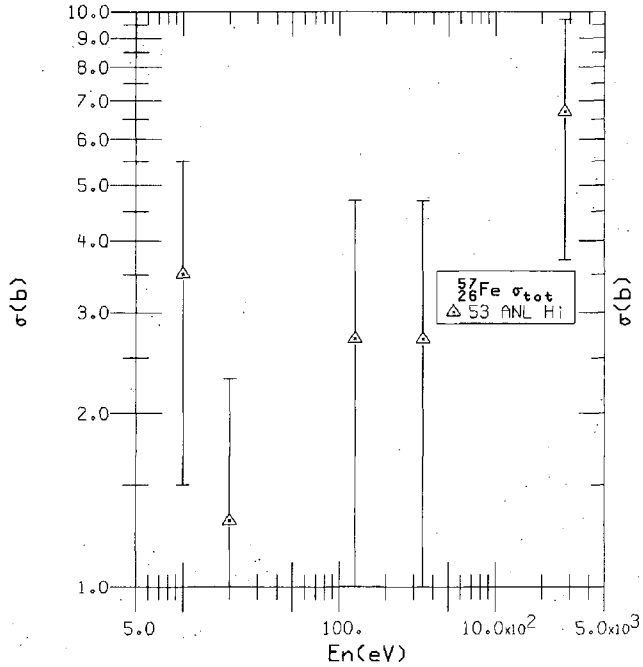


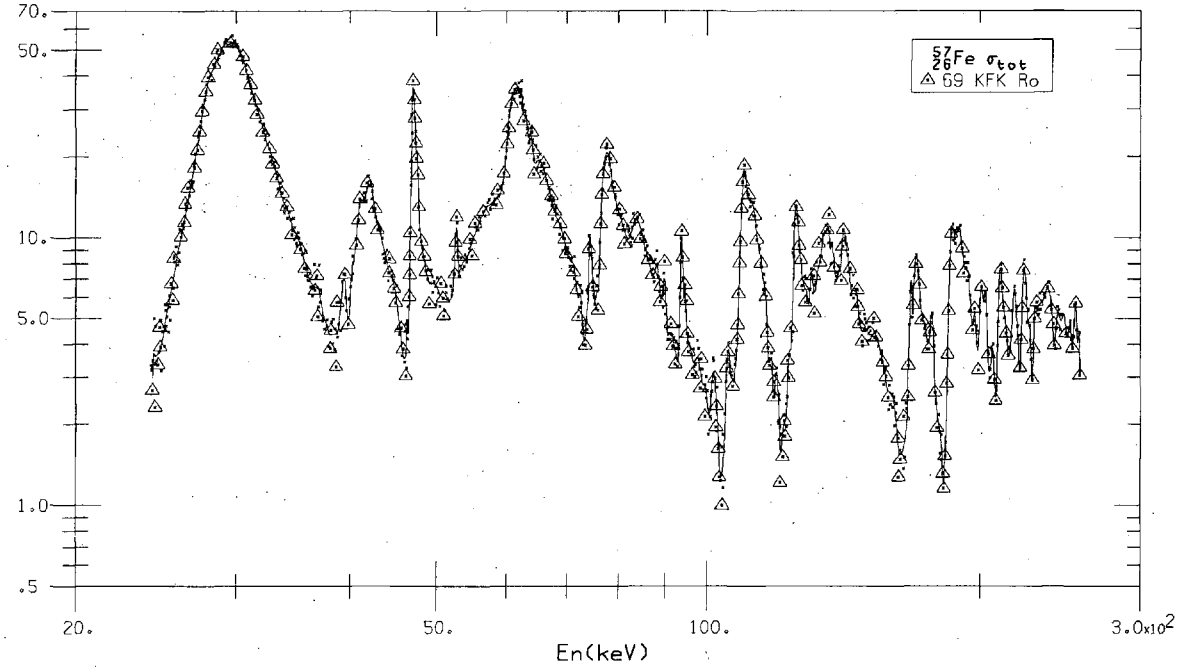


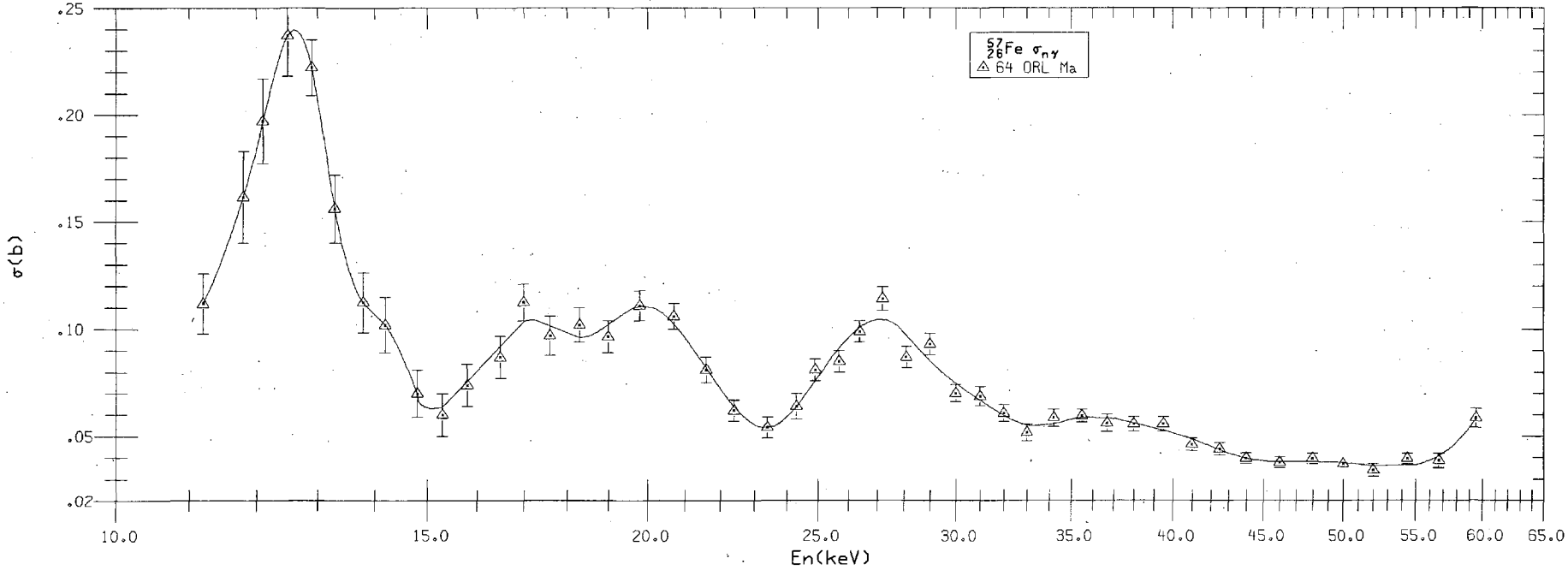
$^{57}_{26}Fe$

σ_{tot}

$\sigma_{n\gamma}$







Yr	Lab	Author	Reference	Points	Range	Standard
			$_{26}Fe$ σ_{tot}			
73	RPI	Alfieri,et.al.	NSE,51,25,73	1	.420 b at 24.3 keV	
72	ORL	Harvey	72KIAMESHA,2,1075,	25	24.5 keV to .955 MeV	
72	COL	Rahn,et.al.	NSE,47,372,72	446	22.8 keV to .470 MeV	
72	ORL	Perey,et.al.	ORNL-4823,72	3701	.187 MeV to 48.6 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	247	2.256 MeV to 14.6 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
70	GA	Carlson,et.al.	NSE,42,28,70	3726	.462 MeV to 9.016 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	2.510 b at 14.5 MeV	
69	NBS	Schwartz	SCHWARTZ,69	3350	.495 MeV to 15.0 MeV	abs
69	OAU	Robinson,et.al.	AJP,37,482,69	1	2.480 b at 15.0 MeV	
69	MHG	Parker,et.al.	UNIV-MI-3028-3-T,69	1	1.250 b at 5700. MeV	abs
69	DAC	Hussain,et.al.	NSP/B,5,23,69	39	1.001 MeV to 2.025 MeV	
69	ORL	Minor,et.al.	AJP,37,649,69	1	3.510 b at 8.940 MeV	abs
68	KFK	Cierjacks,et.al.	KFK-1000,68	5113	.500 MeV to 31.9 MeV	abs
68	PEL	Barnard,et.al.	NP/A,118,321,68	1473	.333 MeV to 1.488 MeV	abs
68	MHG	Jones,et.al.	PL/B,27,328,68	1	1.023 b at 27.00 GeV	
68	ANL	Smith	SMITH,68	2	.360 MeV to .564 MeV	
68	NRD	Ferguson	NP/A,117,472,68	75	1.792 MeV to 2.365 MeV	abs
67	IEA	Vinhas,et.al.	IEA-152,83,67	363	.0028 eV to .145 eV	
67	WIS	Carlson,et.al.	PR,158,1142,67	109	4.500 MeV to 7.514 MeV	abs
67	BRC	Cabe,et.al.	NP/A,102,92,67	205	.348 MeV to 1.199 MeV	
66	KFK	Rohr,et.al.	66PARIS,1,137,66	845	54.0 keV to .261 MeV	
66	CSE	Galloway III+	COO-1573-6,66	409	1.996 MeV to 17.1 MeV	abs
66	NRD	Albergotti+	NP,82,652,66	17	12.5 MeV to 14.3 MeV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	11.7 b at 1.440 eV	
65	ALD	Gilboy,et.al.	NP,64,130,65	3	2.010 MeV to 3.990 MeV	
64	ANL	Hibdon	HIBDON,64	32	.127 MeV to .134 MeV	
64	HAR	Manero,et.al.	NP,59,583,64	63	8.320 MeV to 14.3 MeV	
63	STF	Wells,et.al.	PR,131,1644,63	38	.773 MeV to .935 MeV	
63	BNL	Moore,et.al.	PR,132,801,63	47	9.280 eV to 4.914 keV	abs
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	1896	3.992 keV to .196 MeV	
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	75	7.762 keV to .189 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.390 b at 28.4 MeV	
61	OKE	Newson,et.al.	AP,14,365,61	233	1.000 keV to .214 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 27.8 MeV	
60	HAR	Mc Callum,et.al.	NP,16,313,60	11	12.8 MeV to 20.8 MeV	abs
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	3.410 b at 3.660 MeV	abs
59	OKE	Wilenzick	WILENZICK,59	72	.245 MeV to .425 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	19	13.8 MeV to 14.8 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
58	COL	Weil,et.al.	PR,110,466,58	39	4.000 MeV to 8.150 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.5 MeV	
57	ANL	Hibdon	PR,108,414,57	401	.860 keV to .409 MeV	abs
56	CCP	Khaletskii	DOK,113,305,56	1	2.510 b at 14.8 MeV	abs
55	ANL	Palmer	PALMER,55	84	14.6 eV to 3.753 keV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	3.600 b at 4.100 MeV	abs
55	HRV	Culler,et.al.	PR,99,740,55	4	93.4 MeV to 106.8 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
53	LAS	Nereson,et.al.	PR,89,775,53	31	2.930 MeV to 13.1 MeV	
53	BNL	Palevsky,et.al.	PR,92,202,53	74	.0005 eV to .0060 eV	abs
53	LAS	Day,et.al.	PR,92,358,53	1	2.230 b at 19.0 MeV	
53	BRK	Ragent	UCRL-2337,53	11	38.6 MeV to 165.2 MeV	C σ_{tot}
53	BRK	Ragent	UCRL-2337,53	30	34.8 MeV to 194.0 MeV	C
53	ANL	Hibdon	ANL-4963,53	5	10.0 eV to 2.800 keV	
52	ANL	Hibdon,et.al.	PR,85,595,52	12	2.000 keV to 24.0 keV	
52	WIS	Miller,et.al.	PR,88,83,52	14	1.005 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.600 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	2.400 b at 14.0 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
51	ORL	Willard	ORNL-1278,3,51	133	.690 MeV to 3.565 MeV	
51	COL	Havens Jr,et.al.	PR,83,1123,51	43	.0244 eV to .260 keV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.441 b at 42.0 MeV	abs
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
			$_{26}Fe$ σ_{el}			
72	AE	Malmskog	MALMSKOG,72	33	.650 MeV to 1.450 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	1.790 b at 5.960 MeV	^{1}H σ_{el}
70	AE	Holmqvist,et.al.	AE-385,70	5	1.770 MeV to 2.760 MeV	
69	AE	Holmqvist,et.al.	AE-366,69	5	2.960 MeV to 8.050 MeV	^{1}H σ_{el}
68	PEL	Barnard,et.al.	NP/A,118,321,68	95	.318 MeV to 1.460 MeV	C σ_{el}
67	IFU	Korzh,et.al.	UFZ,12,(9),1571,67	1	1.885 b at 1.500 MeV	abs
66	GEL	Jacquot,et.al.	NP,84,239,66	8	.450 MeV to 2.280 MeV	^{1}H σ_{el}
65	ORL	Rayburn,et.al.	NP,61,381,65	1	11.4 b at 1.440 eV	
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	1.700 b at 6.040 MeV	C
65	ALD	Gilboy,et.al.	NP,64,130,65	4	.980 MeV to 3.990 MeV	H
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.300 b at 2.000 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	2.660 b at .300 MeV	
60	CCP	Lovchikova	ZET,38,1434,60	1	3.490 b at .220 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.900 b at 3.660 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-31,59	3	3.670 MeV to 4.700 MeV	
58	LAS	Coon,et.al.	PR,111,250,58	1	1.140 b at 14.5 MeV	
57	CCP	Popov	AE,3,498,57	1	2.500 b at 2.900 MeV	
56	LAS	Cranberg,et.al.	PR,103,343,56	2	2.250 MeV to 2.450 MeV	H
55	LAS	Walt,et.al.	PR,98,677,55	1	2.100 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.100 b at 1.000 MeV	
51	CRC	Hurst,et.al.	CJP,29,36,51	1	12.6 b at .0724 eV	
			$_{26}Fe$ σ_{inl}			
70	FEI	Broder,et.al.	70HELSINKI,2,295,70	33	.930 MeV to 6.590 MeV	^{56}Fe σ_{ing}
69	IFU	Prokopesc,et.al.	UFZ,14,(2),330,69	1	1.460 b at 2.800 MeV	
67	ALD	Towle,et.al.	NP/A,100,257,67	1	1.400 b at 7.000 MeV	H
66	GEL	Jacquot,et.al.	NP,84,239,66	5	1.260 MeV to 2.280 MeV	^{1}H σ_{el}
63	LAS	Thomson	PR,129,1649,63	1	1.290 b at 7.000 MeV	
63	CCP	Glazkov	AE,14,400,63	2	1.000 MeV to 1.200 MeV	
57	CCP	Popov	AE,3,498,57	1	.900 b at 2.900 MeV	
56	HAR	Morrison	56AMSTERDM,1135,56	3	1.200 MeV to 2.000 MeV	
			$_{26}Fe$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	39	60.0 keV to 1.780 MeV	C

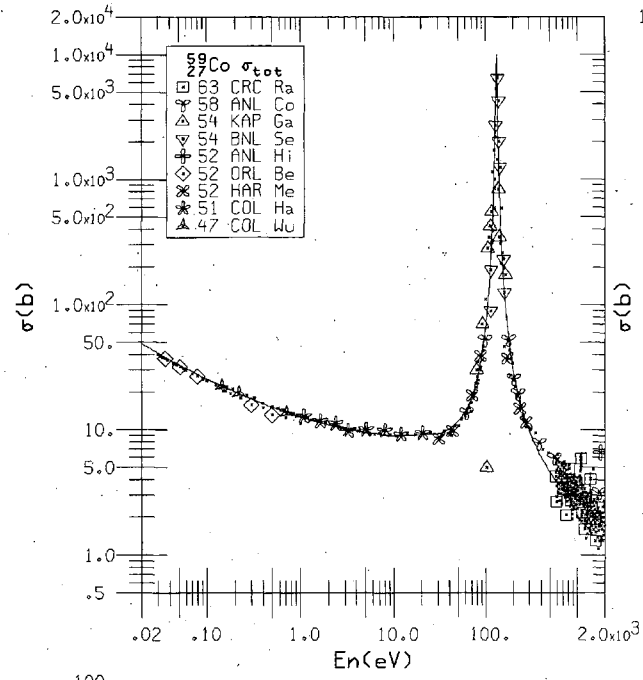
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{26}Fe$ σ_{non}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
63	MIT	Beghian,et.al.	NSE,17,82,63	6	.930 MeV to 1.520 MeV	
62	CCP	Abramov	AE,12,62,62	7	1.000 MeV to 2.170 MeV	
61	CCP	Degtyarev+	AE,11,397,61	4	14.3 MeV to 19.7 MeV	abs
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.510 b at 3.660 MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	1	1.210 b at 25.5 MeV	abs
58	CCP	Lebedev,et.al.	AE,5,522,58	1	1.440 b at 14.0 MeV	abs
57	LRL	Mac Gregor+	PR,108,726,57	1	1.360 b at 14.2 MeV	
57	CCP	Strizhak	AE,2,68,57	1	1.290 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	5	1.000 MeV to 7.000 MeV	abs
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.380 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	1	.300 b at 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	1.160 b at 2.500 MeV	abs
55	LAS	Allen	ALLEN,55	7	.800 MeV to 1.500 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.270 b at 14.1 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	1.500 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	2	3.300 MeV to 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	.400 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	1.300 b at 14.1 MeV	abs
52	LAS	Phillips,et.al.	PR,88,600,52	1	1.450 b at 14.1 MeV	
			$_{26}Fe$ $\sigma_{n\gamma}$			
73	KFK	Chou,et.al.	JNE,27,811,73	210	5.925 eV to 40.8 keV	^{10}B $\sigma_{n\alpha}$
73	CAD	Le Rigoleur+	73KARLSR,73	282	70.3 keV to .532 MeV	^{1}H σ_{el}
67	ORL	Macklin,et.al.	PR,159,1007,67	3	.125 MeV to .182 MeV	Ta $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.870 mb at 14.1 MeV	
64	KFK	Mitzel,et.al.	NUK,6,371,64	34	80.0 eV to 20.0 keV	
64	HAR	Moxon	MOXON,64	45	1.103 keV to 96.5 keV	
64	CCP	Malyshev,et.al.	AE,17,508,64	14	37.5 keV to 1.500 MeV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	CCP	Stavisskii+	AE,10,264,61	12	36.0 keV to .920 MeV	^{235}U σ_{nf}
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{nf}
60	LEB	Isakov,et.al.	ZET,38,989,60	127	.270 eV to 72.0 keV	
			$_{26}Fe$ σ_{ing}			
66	TNC	Benjamin,et.al.	NP,79,241,66	4	2.500 MeV to 4.000 MeV	
53	NRL	Scherrer,et.al.	PR,89,1268,53	1	4.600 b at 14.2 MeV	
			$_{26}Fe$ σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}

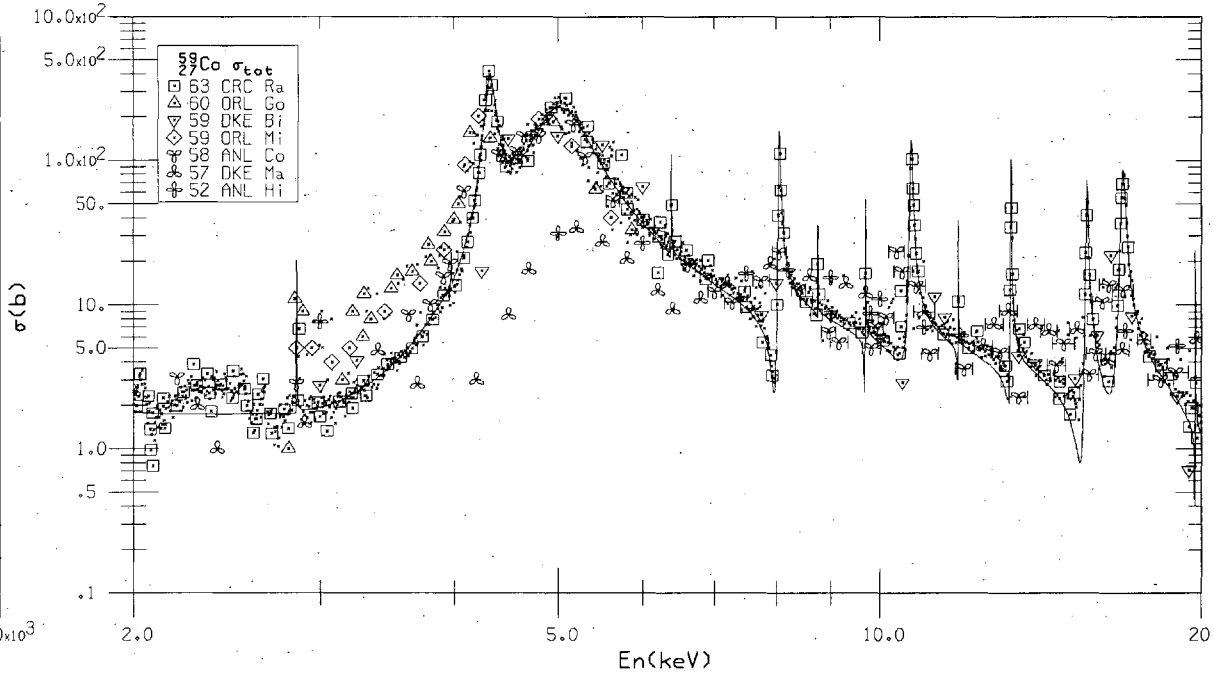
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{26}Fe$ σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	.480 b at 14.1 MeV	
58	LRL	Ashby,et.al.	PR,111,616,58	1	.500 b at 14.1 MeV	
			$_{26}Fe$ σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	34.0 muB at 14.7 MeV	^{66}Zn σ_{n2n}
			$^{54}_{26}Fe$ σ_{tot}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	3	4.040 MeV to 5.600 MeV	H σ_{el}
62	DKE	Bowman,et.al.	AP,17,319,62	490	92.0 keV to .516 MeV	
61	DKE	Newson,et.al.	AP,14,365,61	74	5.500 keV to .135 MeV	
53	ANL	Hibdon	ANL-4963,53	5	10.0 eV to 2.800 keV	
			$^{54}_{26}Fe$ σ_{el}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	3	4.040 MeV to 5.600 MeV	H σ_{el}
67	CSE	Rodgers,et.al.	COO-1573-33,2,67	1	2.960 b at 2.330 MeV	C
			$^{54}_{26}Fe$ σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.600 b at 15.1 MeV	^{12}C σ_{ing}
			$^{54}_{26}Fe$ σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	26.5 mb at 14.6 MeV	^{63}Cu σ_{n2n}
65	DEB	Csikai	65ANTWERP,,537,65	1	16.0 mb at 14.6 MeV	^{63}Cu σ_{n2n}
65	LOK	Salisbury,et.al.	PR/B,140,305,65	2	14.1 MeV to 16.8 MeV	abs
63	CRC	Cross,et.al.	EANDC(CAN)-16,1,63	1	8.500 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	BOR	Carles	CR,257,659,63	1	10.0 mb at 14.1 MeV	^{63}Cu σ_{n2n}
61	ANL	Rayburn	PR,122,168,61	1	15.0 mb at 14.4 MeV	^{63}Cu σ_{n2n}
61	ARK	Chittenden II+	PR,122,860,61	1	7.900 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	11.0 mb at 14.1 MeV	abs
58	LAS	Terrell,et.al.	PR,109,2031,58	2	16.9 MeV to 17.9 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	10.0 mb at 14.0 MeV	^{63}Cu
			$^{54}_{26}Fe$ σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	39	1.979 MeV to 9.948 MeV	^{235}U σ_{nf}
72	LRC	Singh	ANS,15,147,72	1	.511 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
71	GEL	Paulsen,et.al.	71CANT,,129,71	5	1.710 MeV to 6.270 MeV	^{58}Ni σ_{np}
71	GEL	Paulsen,et.al.	71CANT,,129,71	9	12.8 MeV to 16.4 MeV	abs
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.346 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	.300 b at 14.8 MeV	^{1}H σ_{tot}
67	GIT	Venugopala Rao+	PR,154,1023,67	1	.259 b at 14.4 MeV	^{56}Fe σ_{np}
65	AE	Lauber,et.al.	NP,73,234,65	9	2.310 MeV to 3.810 MeV	
65	BET	Carroll Jr+	NSE,22,411,65	11	3.550 MeV to 17.4 MeV	abs
65	LOK	Salisbury,et.al.	PR/B,140,305,65	9	2.230 MeV to 16.8 MeV	abs
62	CRC	Cross,et.al.	BAP,7,335,(TA14),62	1	.310 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	CRC	Cross,et.al.	PR-P-53,7,62	3	13.6 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
61	SAN	Van Loef	NP,24,340,61	3	2.600 MeV to 3.600 MeV	^{58}Ni σ_{np}
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	.254 b at 14.1 MeV	abs
61	HAR	Allan	NP,24,274,61	1	.382 b at 14.0 MeV	
60	GLS	Storey,et.al.	PPS,75,526,60	2	13.0 MeV to 15.7 MeV	

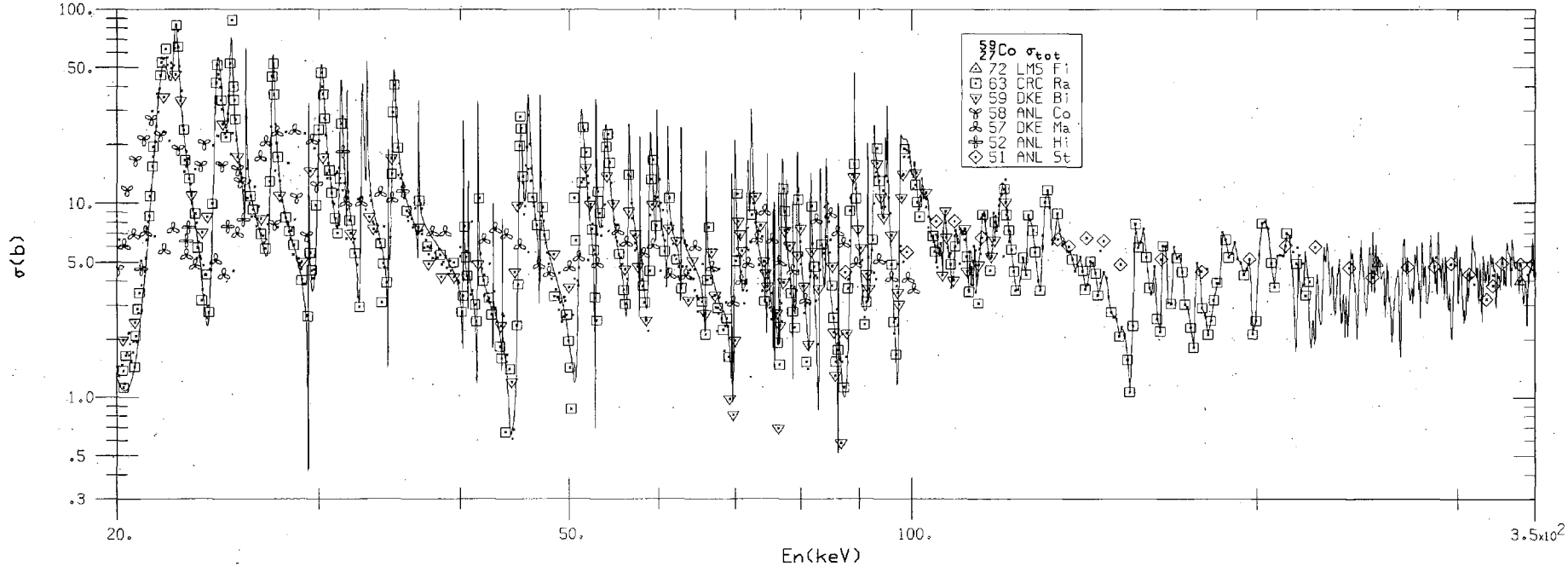
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{54}_{26}$Fe σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	.218 b at 14.0 MeV	
59	HAR	Allan	NP,10,348,59	1	.195 b at 14.0 MeV	
58	GLS	March,et.al.	PM,3,143,58	1	.224 b at 13.5 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	.220 b at 14.0 MeV	
			$^{54}_{26}$Fe σ_{pem}			
59	HAR	Allan	NP,10,348,59	1	.610 b at 14.0 MeV	
			$^{54}_{26}$Fe σ_{nt}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.351 mb at 14.0 MeV	
			$^{54}_{26}$Fe $\sigma_{n\alpha}$			
72	LRC	Singh	ANS,15,147,72	1	.139 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
72	CCP	Maslov,et.al.	YK-9,50,72	1	.106 b at 14.6 MeV	^{65}Cu σ_{n2n}
67	GIT	Venugopala Rao+	PR,154,1023,67	1	90.0 mb at 14.4 MeV	^{56}Fe σ_{np}
65	LOK	Salisbury,et.al.	PR/B,140,305,65	9	2.230 MeV to 16.8 MeV	abs
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	.109 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	CRC	Cross,et.al.	PR-P-53,7,62	3	13.6 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
61	ARK	Chittenden II+	PR,122,860,61	1	.270 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	.131 b at 14.1 MeV	abs
			$^{56}_{26}$Fe σ_{tot}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	1	3.607 b at 5.050 MeV	H σ_{el}
65	ORL	Rayburn,et.al.	NP,61,381,65	1	12.7 b at 1.440 eV	
62	DKE	Bowman,et.al.	AP,17,319,62	485	.186 MeV to .657 MeV	
53	ANL	Hibdon	ANL-4963,53	5	10.0 eV to 2.800 keV	
			$^{56}_{26}$Fe σ_{el}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	2	5.050 MeV to 5.580 MeV	H σ_{el}
68	ORL	Kinney	ORNL-TM-2052,68	7	4.600 MeV to 7.550 MeV	
67	CSE	Rodgers,et.al.	COO-1573-33,2,67	1	2.280 b at 2.330 MeV	C
65	ORL	Rayburn,et.al.	NP,61,381,65	1	12.4 b at 1.440 eV	
			$^{56}_{26}$Fe σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.950 b at 15.1 MeV	^{12}C σ_{ing}
			$^{56}_{26}$Fe σ_{nan}			
65	CCP	Degtyarev	AE,19,456,65	2	8.100 MeV to 19.7 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{56}_{26}$Fe $\sigma_{n\gamma}$			
64	ORL	Macklin,et.al.	PR/B,136,695,64	33	14.2 keV to 59.4 keV	Ta
			$^{56}_{26}$Fe σ_{n2n}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.190 b at 15.1 MeV	^{12}C σ_{ing}
62	IRK	Wenusch,et.al.	OSA,99,1,62	1	.440 b at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{56}_{26}$Fe σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	29	3.979 MeV to 9.945 MeV	^{235}U σ_{nf}
73	NPL	Robertson,et.al.	JNE,27,139,73	1	.110 b at 14.8 MeV	
72	VBT	Dyer,et.al.	JIN,34,1119,72	1	.109 b at 14.4 MeV	^{28}Si σ_{np}
72	LRC	Singh	ANS,15,147,72	1	.148 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.113 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	.109 b at 14.8 MeV	^{1}H σ_{tot}
69	LND	Joensson,et.al.	AF,39,295,69	1	84.0 mb at 15.1 MeV	^{12}C σ_{ing}
68	MUN	Vonach,et.al.	68WASH,2,885,68	1	100.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	GEL	Liskien,et.al.	NWK,8,315,66	17	6.050 MeV to 8.200 MeV	
64	CRC	Santry,et.al.	CJP,42,1030,64	47	4.570 MeV to 20.3 MeV	^{32}S σ_{np}
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	.105 b at 14.7 MeV	
63	HAM	Bormann,et.al.	EANDC(E)49,4,63	1	.108 b at 14.8 MeV	^{6}Li $\sigma_{n\alpha}$
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	.106 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	KTY	Gabbard,et.al.	PR,128,1276,62	1	.108 b at 14.4 MeV	abs
62	CRC	Cross,et.al.	PR-P-53,7,62	3	13.6 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	HAM	Bormann,et.al.	ZP,166,477,62	5	13.2 MeV to 19.6 MeV	^{56}Fe σ_{np}
61	ARK	Chittenden II+	PR,122,860,61	1	.128 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	.112 b at 14.1 MeV	abs
61	HAR	Allan	NP,24,274,61	1	86.0 mb at 14.0 MeV	^{54}Fe σ_{np}
60	LYO	Depraz,et.al.	JPR,21,377,60	1	.128 b at 15.0 MeV	^{63}Cu σ_{n2n}
60	GLS	Storey,et.al.	PPS,75,526,60	1	90.0 mb at 14.1 MeV	
59	NRD	Kern,et.al.	NP,10,226,59	1	.131 b at 15.3 MeV	abs
58	LAS	Terrell,et.al.	PR,109,2031,58	18	3.430 MeV to 17.9 MeV	^{56}Fe σ_{np}
57	KON	Yasumi	JPJ,12,443,57	1	.144 b at 14.1 MeV	
55	BAR	Mc Clure,et.al.	JFI,260,238,55	1	72.0 mb at 14.0 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	96.7 mb at 14.5 MeV	abs
52	LAS	Forbes	PR,88,1309,52	1	.124 b at 14.1 MeV	
			$^{56}_{26}$Fe σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	35.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{57}_{26}$Fe σ_{tot}			
69	KFK	Rohr,et.al.	ZP,227,1,69	1222	24.2 keV to .258 MeV	abs
53	ANL	Hibdon	ANL-4963,53	5	10.0 eV to 2.800 keV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{57}_{26}$Fe $\sigma_{n\gamma}$			
64	ORL	Macklin,et.al.	PR/B,136,695,64	47	11.2 keV to 59.5 keV	Ta
			$^{57}_{26}$Fe σ_{np}			
72	LRC	Singh	ANS,15,147,72	1	31.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	CRC	Cross,et.al.	EANDC(CAN)-16,1,63	1	75.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
61	ARK	Chittenden II+	PR,122,860,61	1	71.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	50.0 mb at 14.1 MeV	abs
			$^{57}_{26}$Fe σ_{nnp}			
61	ARK	Chittenden II+	PR,122,860,61	1	6.100 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{58}_{26}$Fe $\sigma_{n\gamma}$			
67	MOL	Fabry,et.al.	EANDC(E)-76,106,67	1	1.180 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{58}_{26}$Fe σ_{np}			
72	VBT	Dyer,et.al.	JIN,34,1119,72	1	10.8 mb at 14.4 MeV	^{56}Fe σ_{np}
72	LRC	Singh	ANS,15,147,72	1	35.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
61	ARK	Chittenden II+	PR,122,860,61	1	23.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{58}_{26}$Fe $\sigma_{n\alpha}$			
61	ARK	Chittenden II+	PR,122,860,61	1	21.5 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$


$^{59}_{27}$Co σ_{tot}
63 CRC Ra
58 ANL Co
54 KAP Ga
54 BNL Se
52 ANL Hi
52 ORL Be
52 HAR Me
51 COL Ha
47 COL Wu
σ(b)
En(eV)

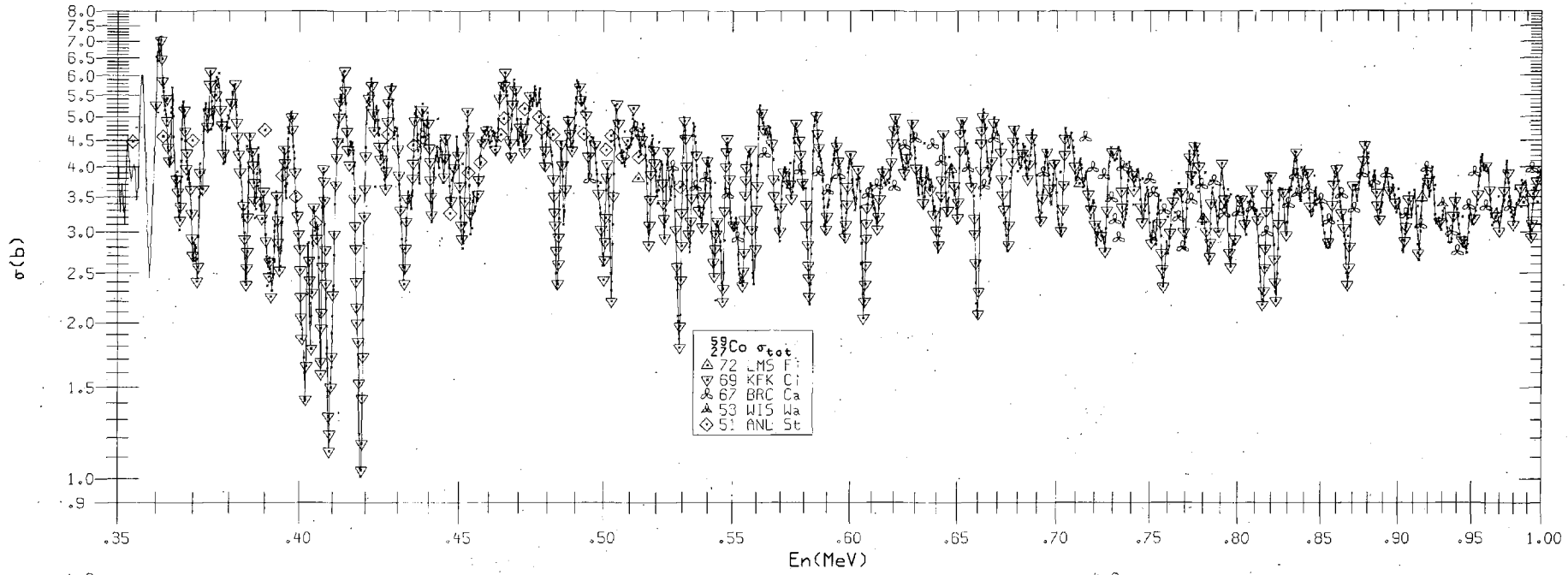

$^{59}_{27}$Co σ_{tot}
63 CRC Ra
60 ORL Go
59 DKE Bi
59 ORL Mi
58 ANL Co
57 DKE Ma
52 ANL Hi
σ(b)
En(keV)

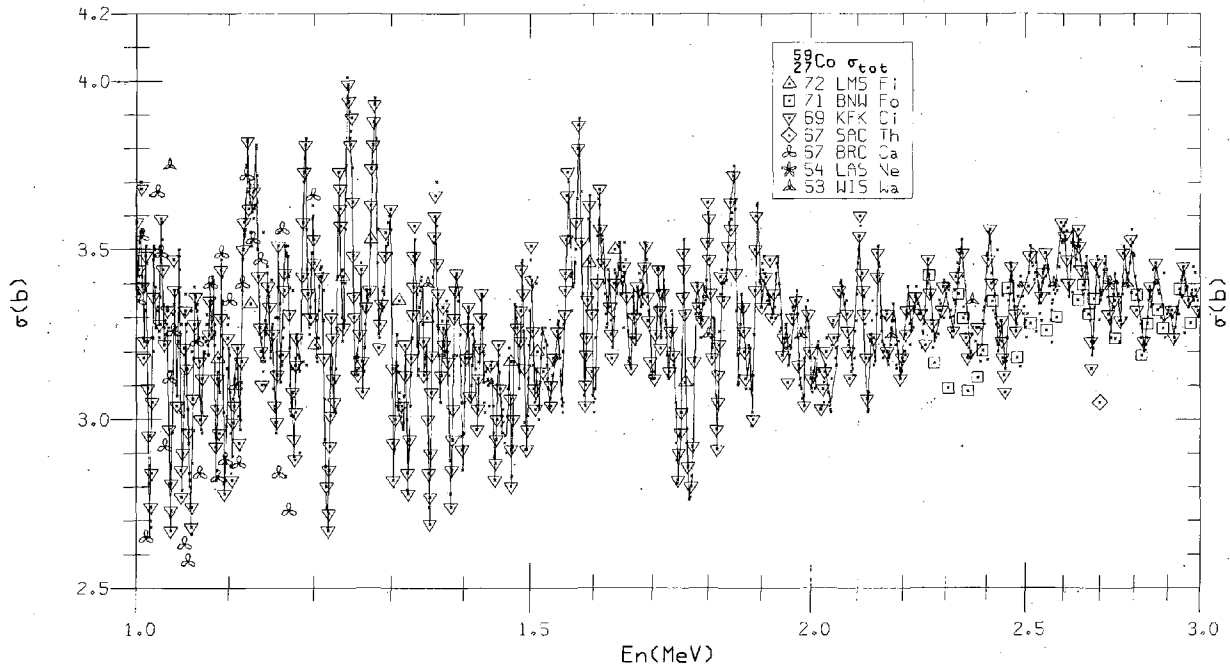

$^{59}_{27}$Co σ_{tot}
72 LMS Fi
63 CRC Ra
59 DKE Bi
58 ANL Co
57 DKE Ma
52 ANL Hi
51 ANL St
σ(b)
En(keV)

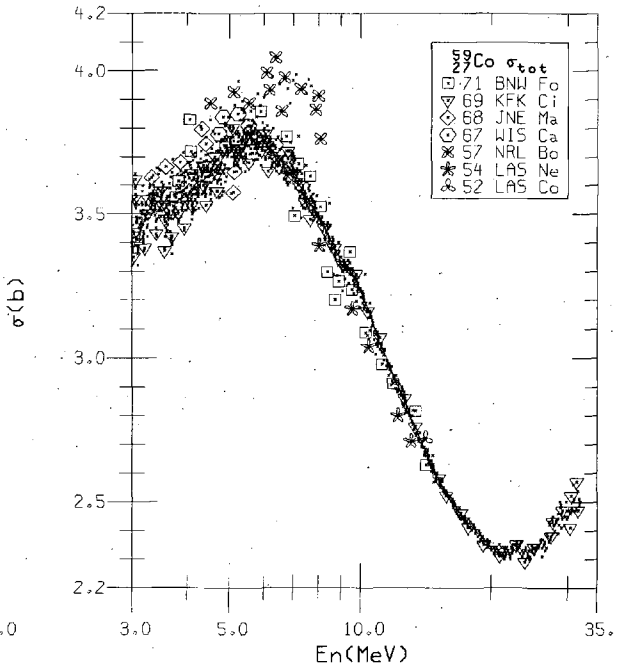
$^{59}_{27}$Co

σ_{tot}

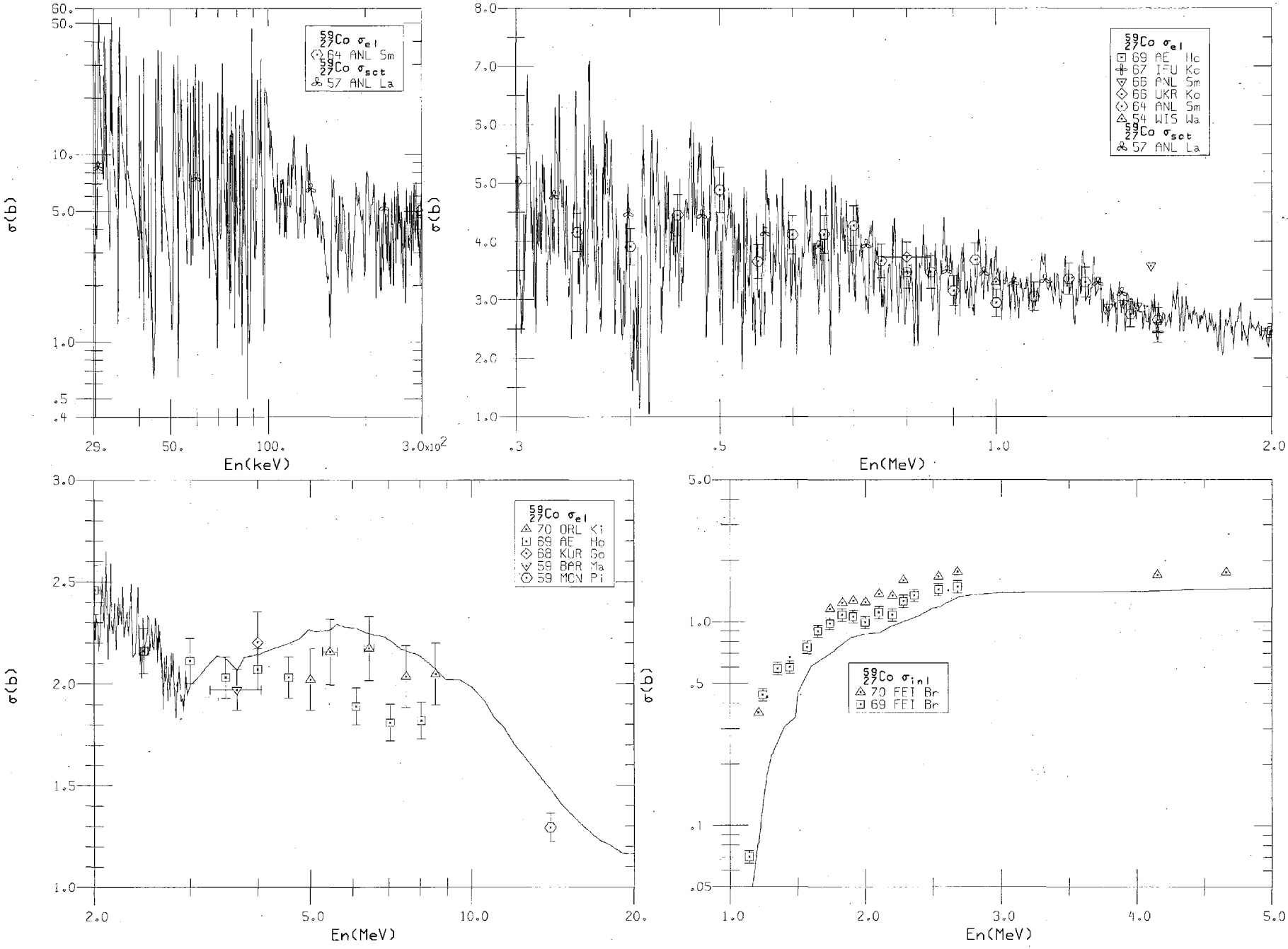
[1199]







$^{59}_{27}$Co
σ_{el}
σ_{sct}
σ_{inl}
[1199]



$^{59}_{27}Co$

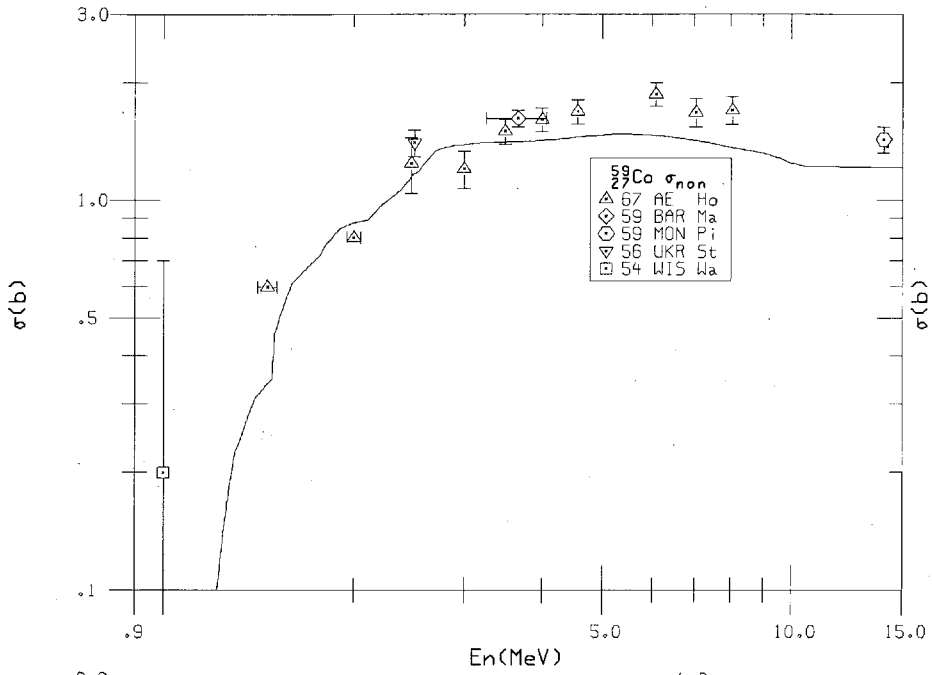
σ_{non}

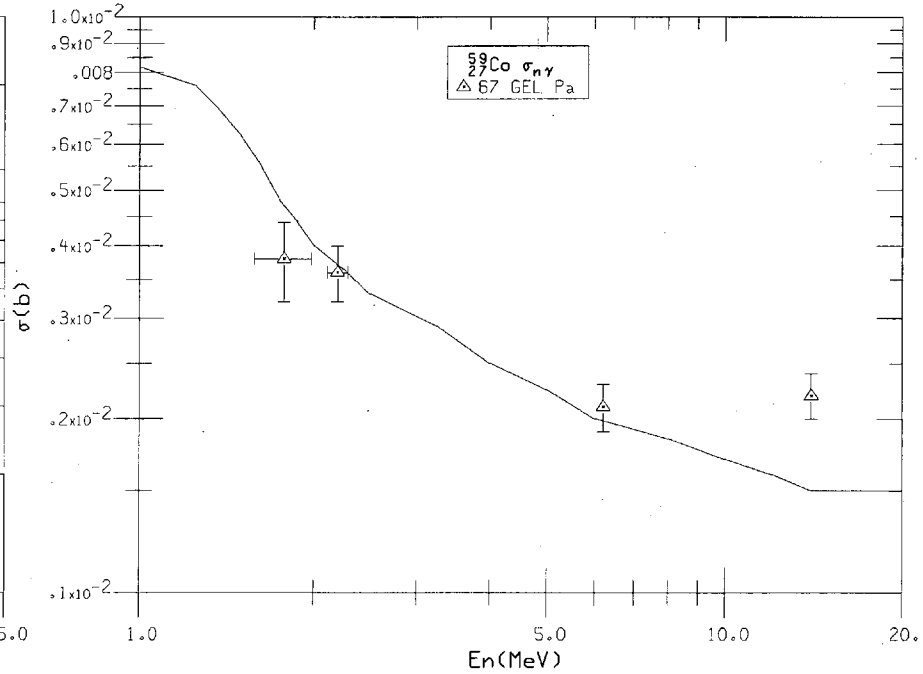
$\sigma_{n\gamma}$

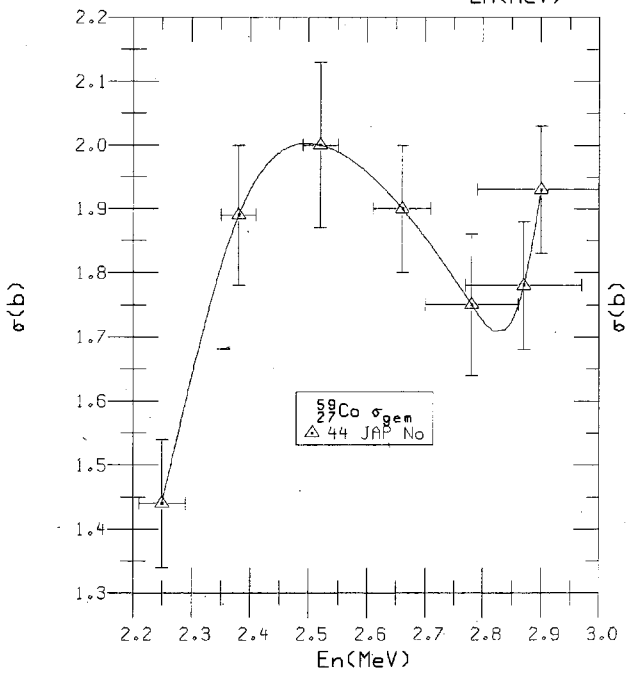
σ_{np}

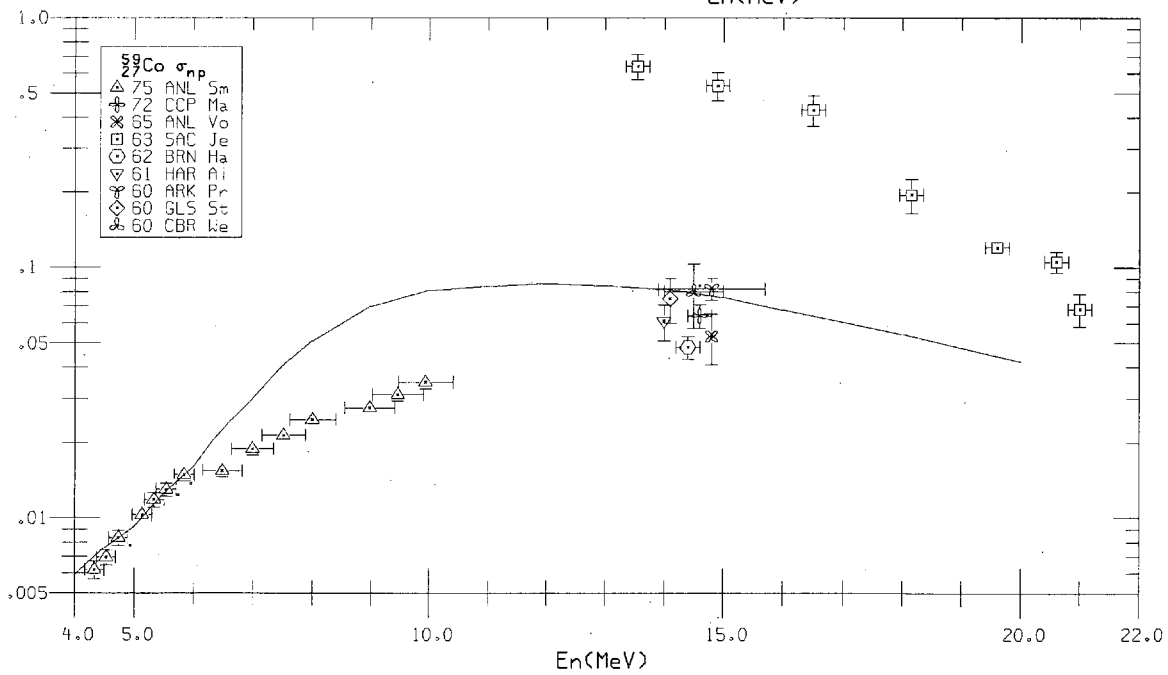
[1199]

σ_{gem}







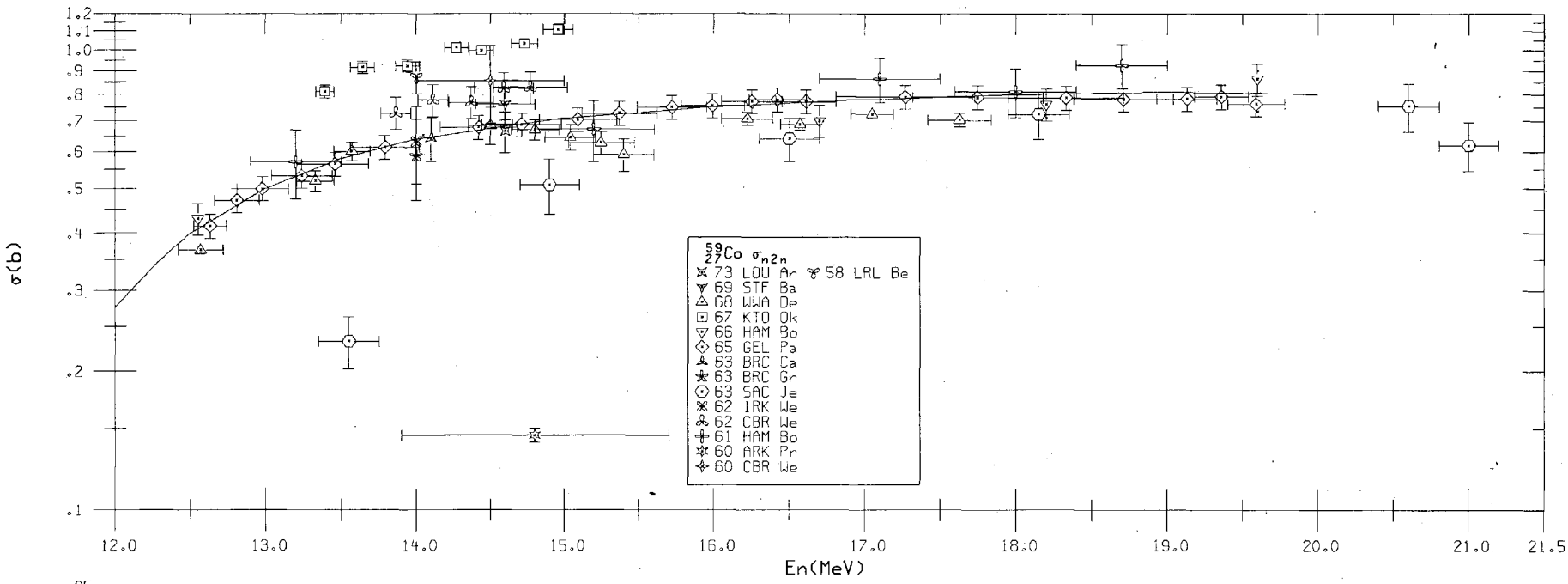


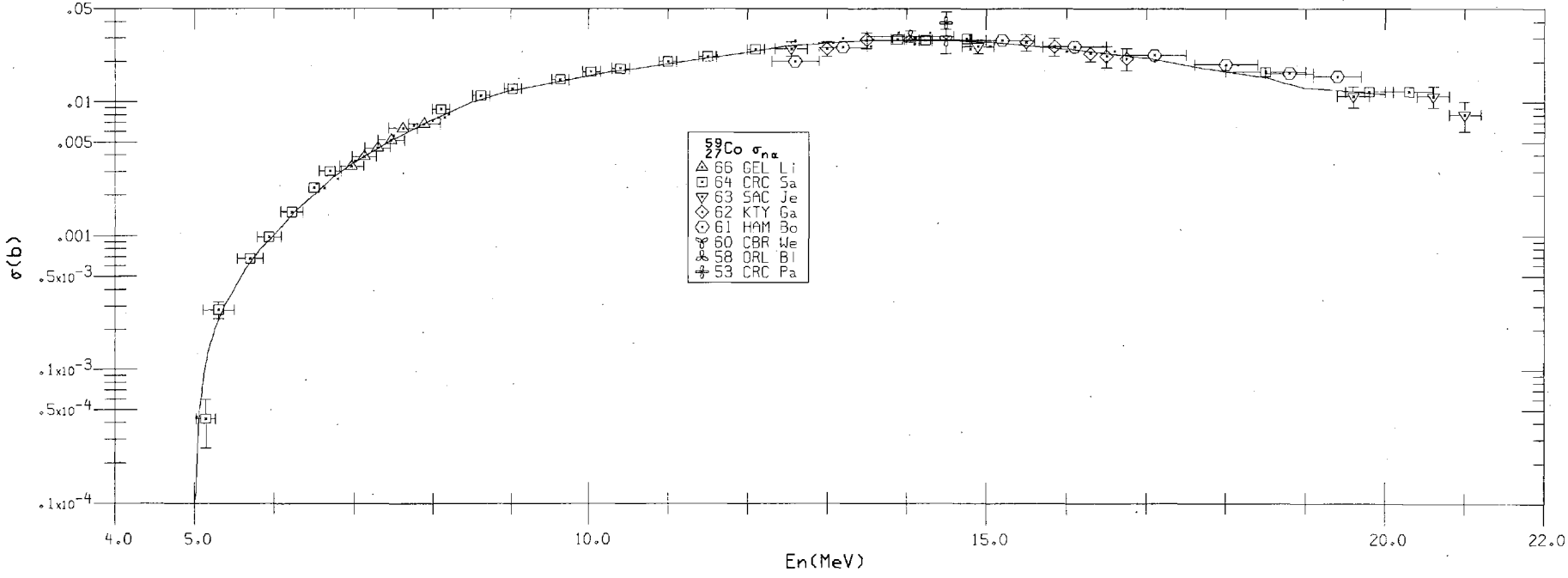
$^{59}_{27}Co$

σ_{n2n}

$\sigma_{n\alpha}$

[1199]





Yr	Lab	Author	Reference	Points	Range	Standard
			$^{59}_{27}$Co σ_{tot}			
72	LMS	Fisher,et.al.	NP/A,179,241,72	33	.255 MeV to 7.750 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.262 MeV to 14.7 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	2.660 b at 14.7 MeV	
69	KFK	Cierjacks,et.al.	KFK-1000(SUPP.2),69	6178	.360 MeV to 32.0 MeV	abs
68	JNE	Manero	ARS,64,373,68	65	3.319 MeV to 5.150 MeV	
68	KUR	Gorlov,et.al.	YF,6,663,68	1	3.640 b at 4.000 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	61	4.531 MeV to 7.564 MeV	abs
67	SAC	Thibault	CEA-R3124,67	1	3.050 b at 2.700 MeV	
67	BRC	Cabe,et.al.	NP/A,102,92,67	186	.490 MeV to 1.203 MeV	abs
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	3806	.588 keV to .222 MeV	abs
60	ORL	Good,et.al.	BAP,5,449(K2),60	77	2.800 keV to 6.000 keV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.4 MeV to 29.0 MeV	abs
59	DKE	Bilpuch,et.al.	BAP,4,42(R4),59	420	3.000 keV to .122 MeV	abs
59	ORL	Miller,et.al.	BAP,4,42(R1),59	34	2.850 keV to 5.900 keV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	3.590 b at 3.660 MeV	abs
59	MON	Pierre,et.al.	PR,115,999,59	1	2.720 b at 14.0 MeV	
58	ANL	Cote,et.al.	PR,111,288,58	221	61.5 eV to 31.7 keV	abs
57	NRL	Bondelid,et.al.	PR,105,193,57	41	3.780 MeV to 8.090 MeV	
57	DKE	Marshak,et.al.	PR,106,110,57	139	1.500 keV to .100 MeV	
54	KAP	Gaerttner,et.al.	KAPL-1084,47,54	21	79.8 eV to .165 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.730 MeV to 13.1 MeV	abs
54	BNL	Seidl	SEIDL,54	24	.114 keV to .161 keV	
53	WIS	Walt,et.al.	PR,89,1271,53	16	.835 MeV to 2.980 MeV	
52	ANL	Hibdon,et.al.	PR,85,595,52	29	1.800 keV to 35.6 keV	
52	ORL	Bernstein,et.al.	PR,87,487,52	28	.0300 eV to 1.000 eV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.720 b at 14.1 MeV	
52	HAR	Merrison,et.al.	PRS/A,215,278,52	26	30.7 eV to .275 keV	
51	ANL	Stubbins	PR,84,902,51	175	80.0 keV to .529 MeV	abs
51	COL	Havens Jr,et.al.	PR,83,1123,51	30	1.000 eV to 25.0 eV	
47	COL	Wu,et.al.	PR,71,174,47	17	.145 eV to 1.000 eV	
			$^{59}_{27}$Co σ_{el}			
70	ORL	Kinney,et.al.	ORNL-4549,70	5	5.000 MeV to 8.560 MeV	^{1}H σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	1	2.880 b at 1.460 MeV	C σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	9	2.000 MeV to 8.050 MeV	^{1}H σ_{el}
68	KUR	Gorlov,et.al.	YF,6,663,68	1	2.200 b at 4.000 MeV	
67	IFU	Korzh,et.al.	UFZ,12,(9),1571,67	1	2.438 b at 1.500 MeV	abs
66	ANL	Smith	SMITH,66	8	1.325 MeV to 1.499 MeV	C
66	UKR	Korzh,et.al.	UFZ,11,563,66	2	.500 MeV to .800 MeV	
64	ANL	Smith,et.al.	PR/B,135,76,64	25	.300 MeV to 1.500 MeV	C
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.970 b at 3.660 MeV	
59	MON	Pierre,et.al.	PR,115,999,59	1	1.290 b at 14.0 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	3.300 b at 1.000 MeV	

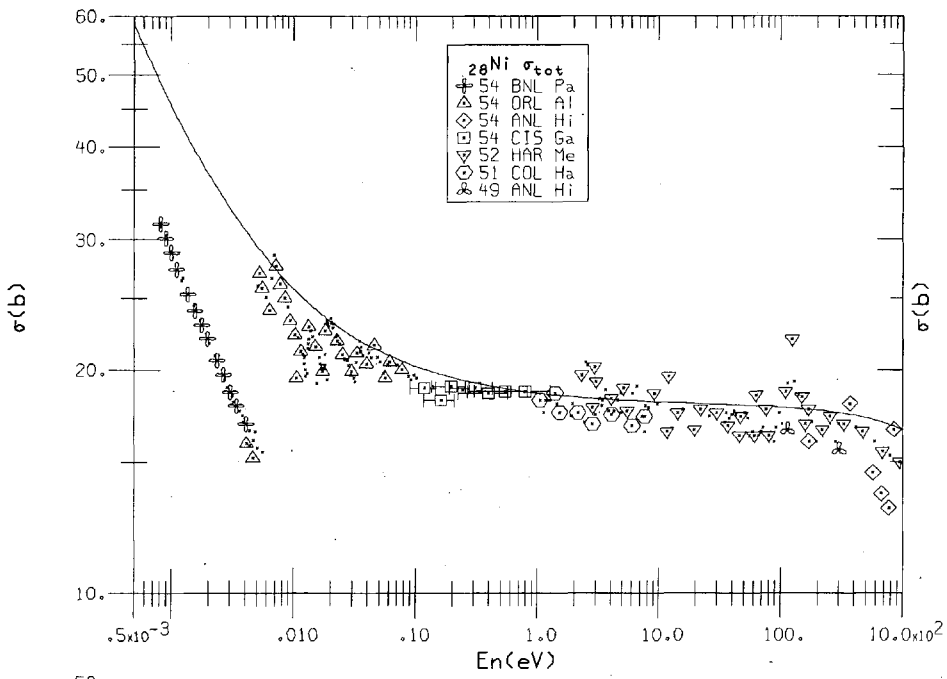
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{59}_{27}$Co σ_{inl}			
70	FEI	Broder,et.al.	70HELSINKI,2,295,70	19	1.140 MeV to 4.660 MeV	^{56}Fe σ_{ing}
69	FEI	Broder,et.al.	FEI-155,69	19	1.140 MeV to 2.680 MeV	fe σ_{ing}
			$^{59}_{27}$Co σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.370 MeV	C
			$^{59}_{27}$Co σ_{non}			
67	AE	Holmqvist,et.al.	AE-303,67	10	1.460 MeV to 8.050 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.620 b at 3.660 MeV	
59	MON	Pierre,et.al.	PR,115,999,59	1	1.430 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.370 b at 14.2 MeV	abs
56	UKR	Strizhak	ZET,31,907,56	1	1.400 b at 2.500 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	.200 b at 1.000 MeV	
			$^{59}_{27}$Co $\sigma_{n\gamma}$			
72	MOL	Deworm	DEWORM,72	1	37.7 b at thermal	^{197}Au $\sigma_{n\gamma}$
67	GEL	Paulsen	ZP,205,226,67	4	1.780 MeV to 14.0 MeV	
66	GEL	Vaninbroukx	NSE,24,87,66	1	35.5 b at thermal	
66	GEL	Vaninbroukx	NSE,24,87,66	1	34.9 b at thermal	
66	GEL	Vaninbroukx	NSE,24,87,66	1	37.4 b at thermal	^{197}Au
65	FAR	Carre	EANDC(E)-57,171,65	1	38.0 b at thermal	
63	ORL	Macklin,et.al.	PR,129,2695,63	1	18.0 mb at 65.0 keV	In $\sigma_{n\gamma}$
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	38.4 b at thermal	B $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	36.3 b at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	1	88.0 mb at 30.0 keV	In $\sigma_{n\gamma}$
60	MUN	Wolf	NUK,2,255,60	1	38.0 b at thermal	
52	FAR	Aiiloud,et.al.	JPR,13,171,52	1	35.4 b at thermal	B σ_{abs}
51	BNL	Deutsch,et.al.	PR,83,1059,51	1	21.6 b at thermal	
			$^{59}_{27}$Co σ_{gem}			
44	JAP	Nonaka	JMJ,26,66,44	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
			$^{59}_{27}$Co σ_{n2n}			
73	LOU	Pramanowicz+	INR-1464,14,73	1	.663 b at 14.6 MeV	^{63}Cu σ_{n2n}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.760 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
68	WWA	Decowski,et.al.	NP/A,112,513,68	14	12.6 MeV to 18.2 MeV	^{65}Cu σ_{n2n}
67	KTO	Okumura	NP/A,93,74,67	7	13.4 MeV to 15.0 MeV	
66	HAM	Bormann,et.al.	ZN/A,21,988,66	6	12.5 MeV to 19.6 MeV	
65	GEL	Paulsen,et.al.	JNE/AB,19,907,65	23	12.6 MeV to 19.6 MeV	^{1}H σ_{el}
63	BRC	Cabe,et.al.	EANDC(E)-49,82,63	1	.640 b at 14.1 MeV	Cu σ_{n2n}
63	BRC	Granger,et.al.	EANDC(E)-49,83,63	1	.587 b at 14.0 MeV	
63	SAC	Jeronymo+	NP,47,157,63	7	13.6 MeV to 21.0 MeV	
62	IRK	Wenusch,et.al.	OSA,99,1,62	1	.630 b at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
62	CBR	Weigold,et.al.	NP,32,106,62	5	13.9 MeV to 14.8 MeV	Cu
61	HAM	Bormann,et.al.	JPR,22,602,61	8	13.2 MeV to 19.6 MeV	
60	ARK	Preiss,et.al.	NP,15,326,60	1	.145 b at 14.8 MeV	^{58}Ni σ_{n2n}
60	CBR	Weigold	AUJ,13,186,60	1	.855 b at 14.5 MeV	^{65}Cu σ_{n2n}
58	LRL	Benveniste	58GENEVA,15,3,58	1	.870 b at 14.0 MeV	^{252}Cf

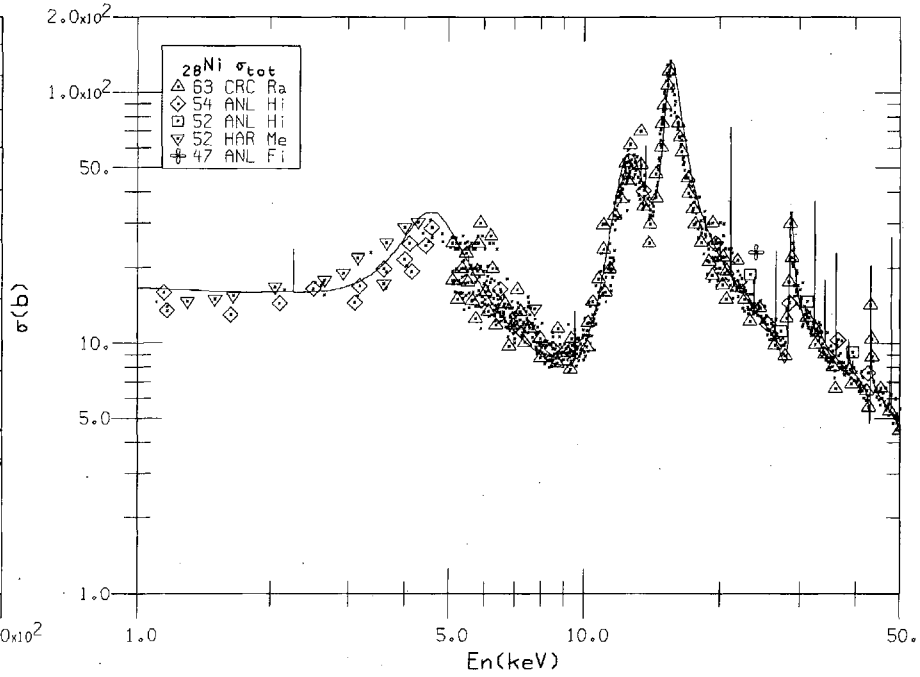
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{59}_{27}$Co σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	17	4.334 MeV to 9.944 MeV	^{235}U σ_{nf}
73	LOU	Dresler,et.al.	INR-1464,12,73	1	84.1 mb at 14.6 MeV	^{56}Fe σ_{np}
72	CCP	Maslov,et.al.	YK-9,50,72	1	64.0 mb at 14.6 MeV	^{65}Cu σ_{n2n}
65	ANL	Vonach,et.al.	NP,68,445,65	1	53.0 mb at 14.8 MeV	^{59}Co σ_{n2n}
63	SAC	Jeronymo+	NP,47,157,63	7	13.6 MeV to 21.0 MeV	
61	HAR	Allan	NP,24,274,61	1	61.0 mb at 14.0 MeV	^{54}Fe σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	82.0 mb at 14.8 MeV	^{58}Ni σ_{n2n}
60	GLS	Storey,et.al.	PPS,75,526,60	1	75.0 mb at 14.1 MeV	
60	CBR	Weigold	AUJ,13,186,60	1	80.0 mb at 14.5 MeV	^{65}Cu σ_{n2n}
			$^{59}_{27}$Co σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	.650 mb at 14.7 MeV	^{197}Au σ_{n2n}
65	MUA	Khurana,et.al.	NP,69,153,65	1	2.100 mb at 14.8 MeV	Fe
63	ARK	Poularikas,et.al	ARKANSAS,14,63	1	19.0 muB at 14.8 MeV	
			$^{59}_{27}$Co σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	62.0 muB at 14.0 MeV	
65	IRK	Frevert	APA,20,304,65	1	25.0 muB at 14.8 MeV	^{59}Co $\sigma_{n\alpha}$
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	.100 mb at 14.5 MeV	^{59}Co $\sigma_{n\alpha}$
			$^{59}_{27}$Co $\sigma_{n\alpha}$			
66	GEL	Liskien,et.al.	NUK,8,315,66	13	6.630 MeV to 8.200 MeV	
65	HAM	Bormann,et.al.	EANDC(E)-57,17,65	1	27.0 mb at 14.1 MeV	abs
65	MUA	Khurana,et.al.	NP,69,153,65	1	32.0 mb at 14.8 MeV	Fe
64	CRC	Santry,et.al.	CJP,42,1030,64	33	5.020 MeV to 20.3 MeV	^{32}S σ_{np}
63	SAC	Jeronymo+	NP,47,157,63	8	12.6 MeV to 21.0 MeV	
62	KTY	Gabbard,et.al.	PR,128,1276,62	14	12.6 MeV to 17.1 MeV	^{56}Fe σ_{np}
61	HAM	Bormann,et.al.	JPR,22,602,61	9	12.6 MeV to 19.4 MeV	
60	ARK	Preiss,et.al.	NP,15,326,60	1	30.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
60	CBR	Weigold	AUJ,13,186,60	1	29.0 mb at 14.5 MeV	^{65}Cu σ_{n2n}
58	KTO	Kumabe	JPJ,13,325,58	1	25.0 mb at 14.8 MeV	
58	ORL	Blosser,et.al.	PR,110,531,58	1	31.0 mb at 14.1 MeV	^{56}Fe σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	39.1 mb at 14.5 MeV	
			$^{59}_{27}$Co σ_{aem}			
58	KTO	Kumabe,et.al.	JPJ,13,129,58	1	84.0 mb at 14.8 MeV	

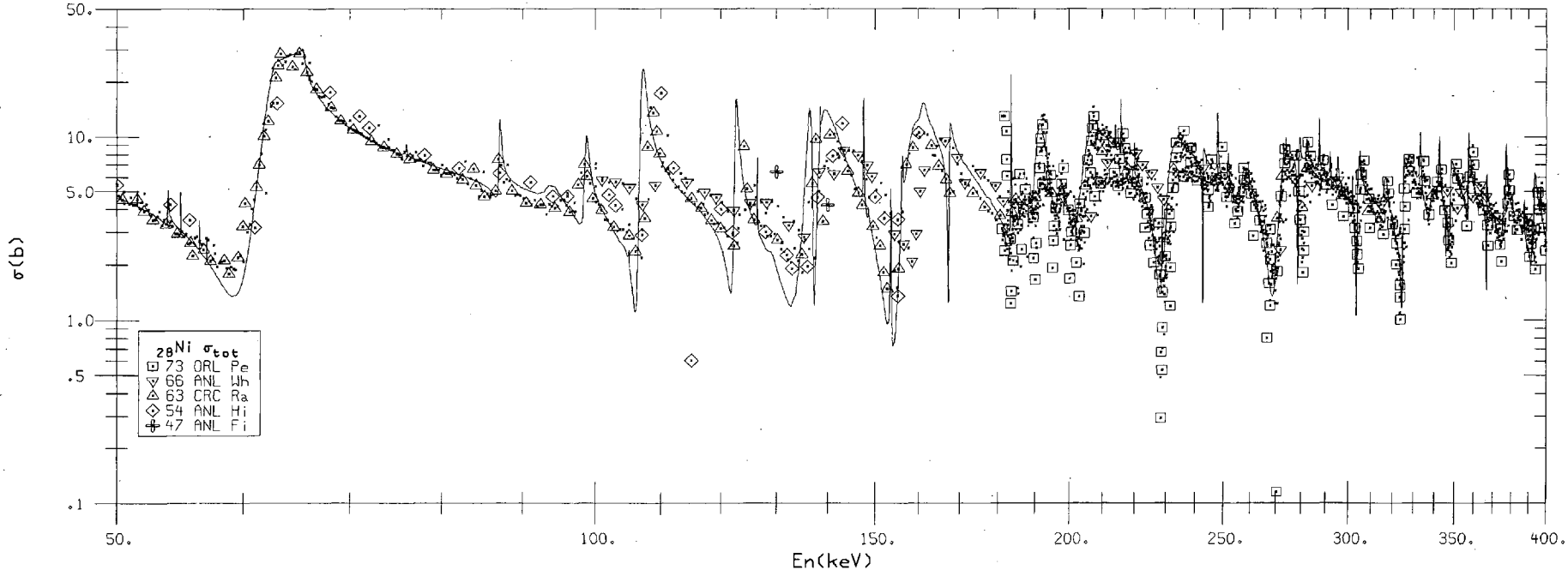
$_{28}$Ni

σ_{tot}

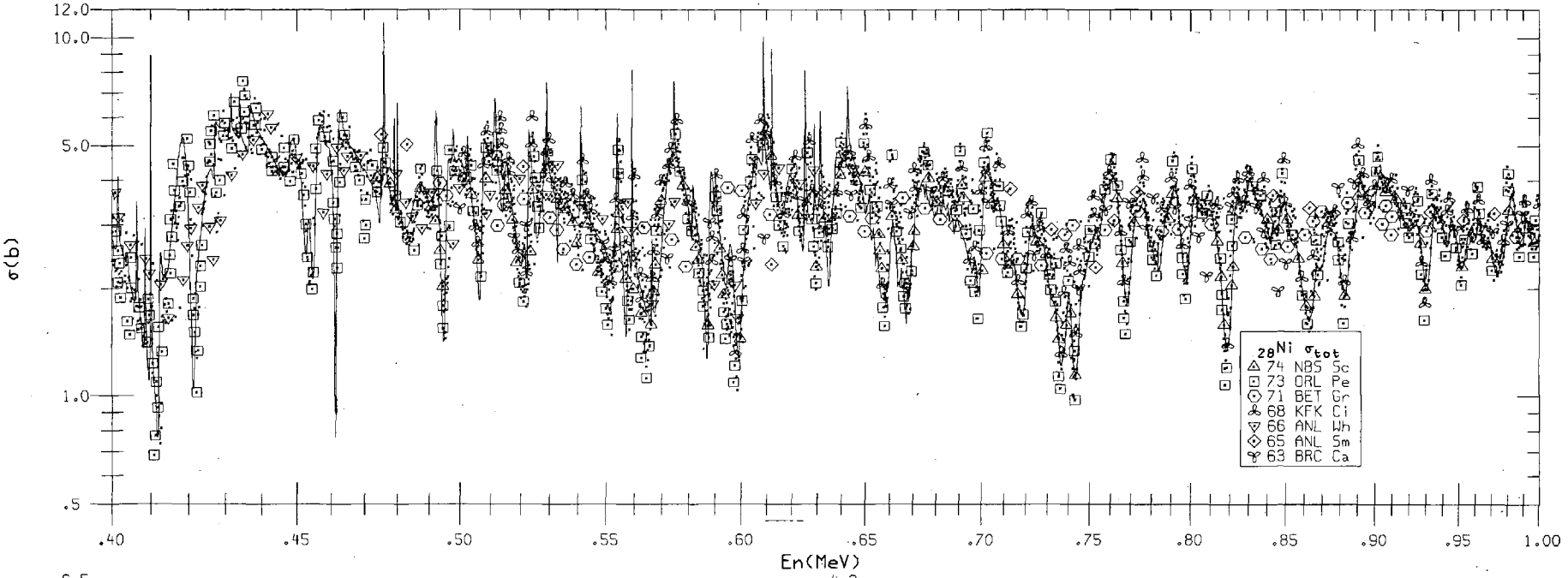
[1190]

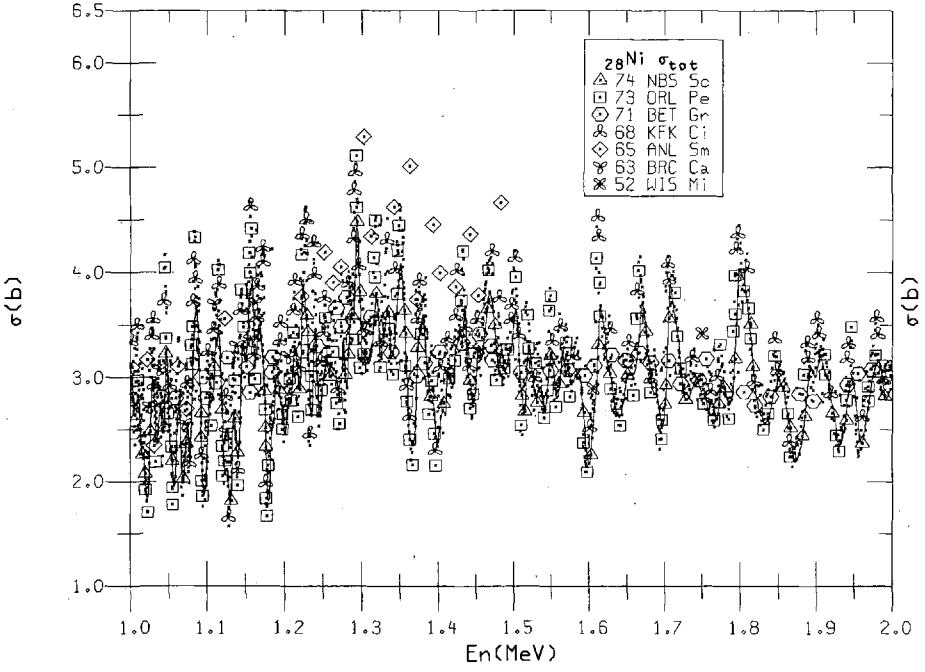


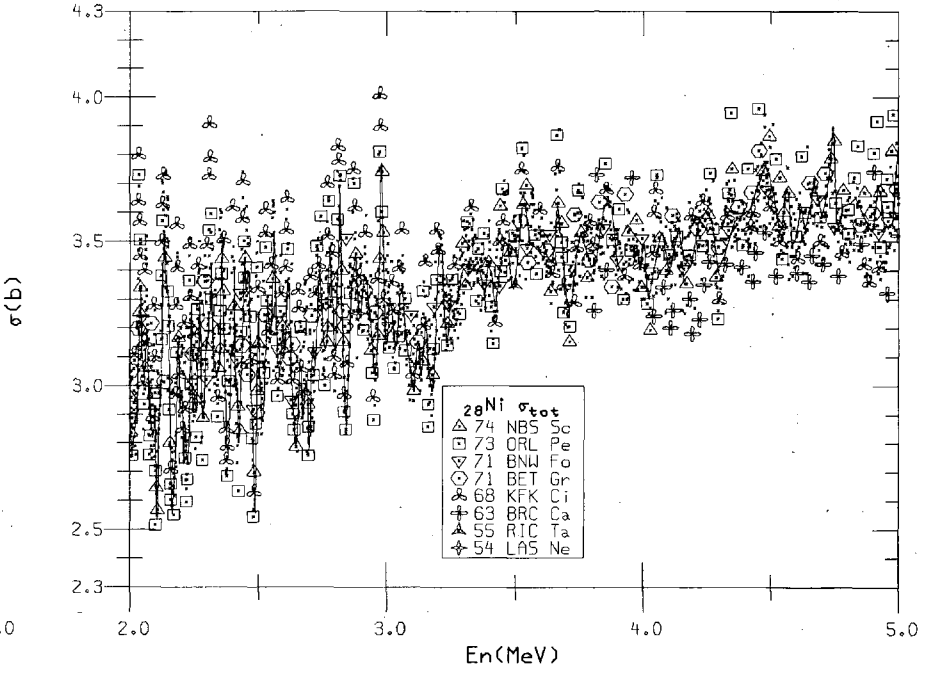




$_{28}$Ni σ_{tot} [1190]







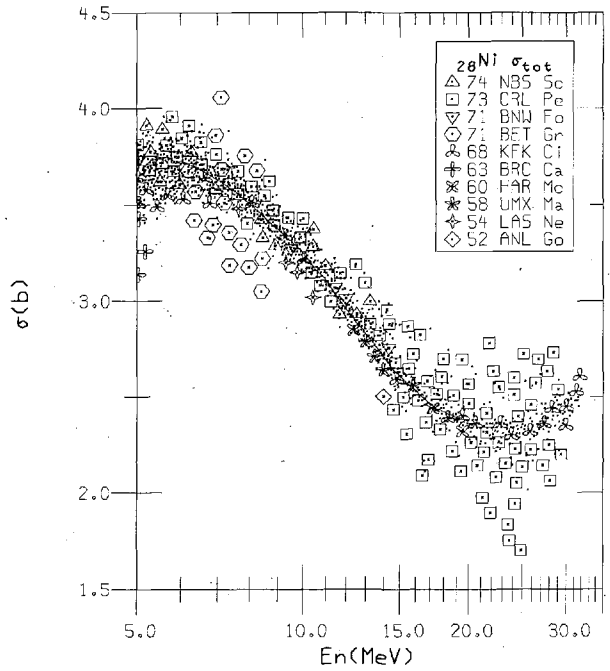
$_{28}$Ni

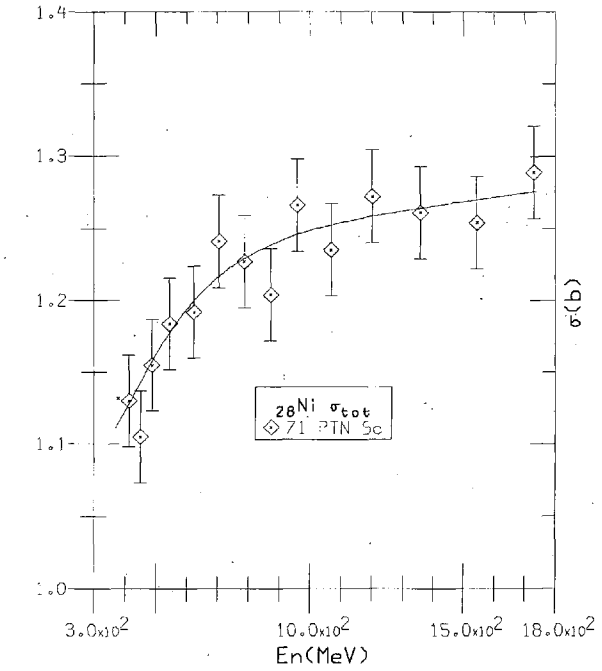
σ_{tot}

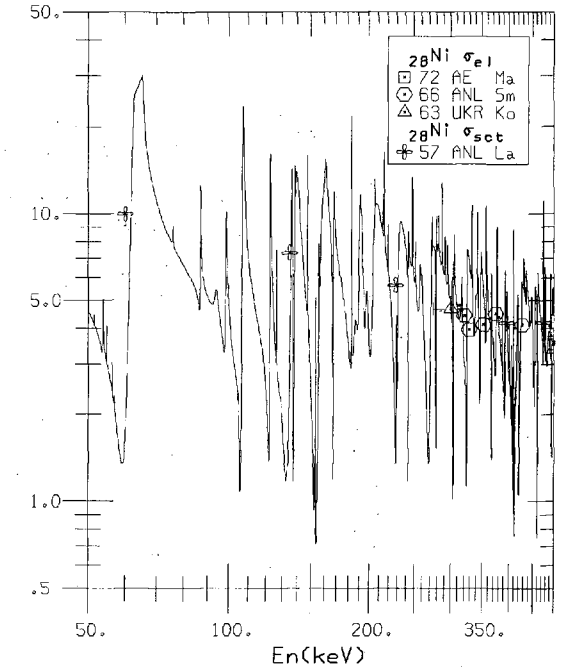
σ_{el}

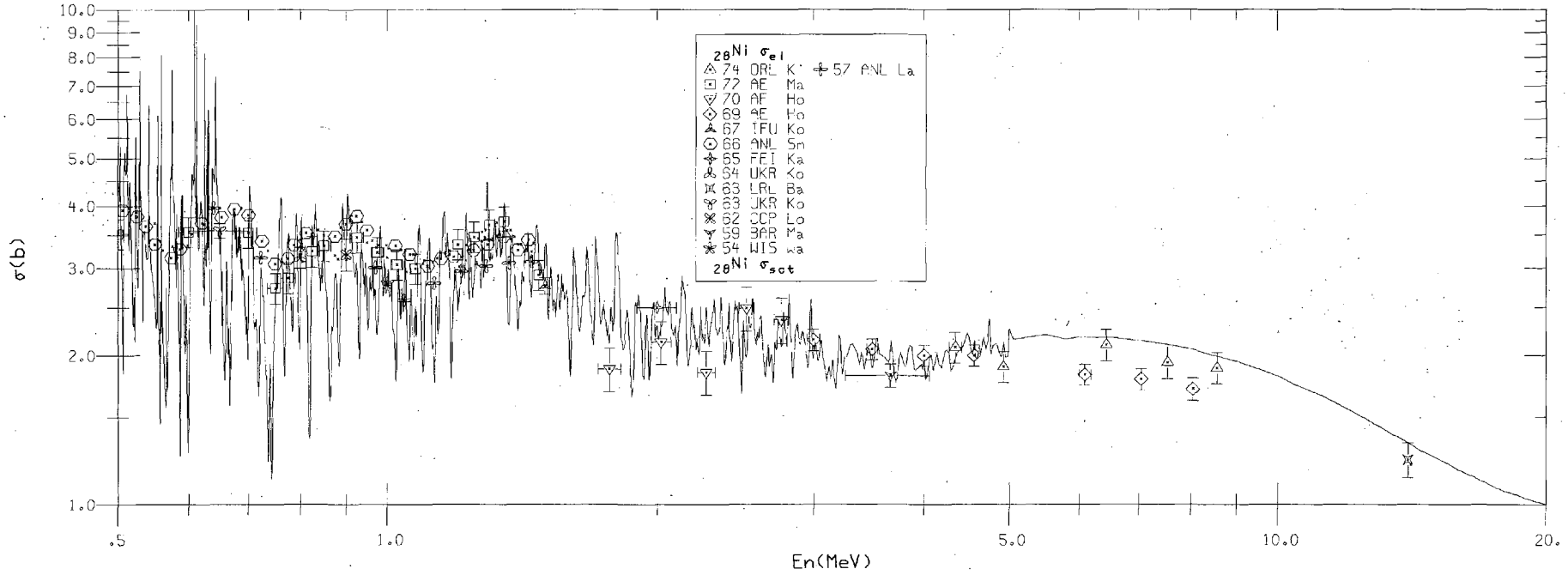
σ_{sct}

[1190]

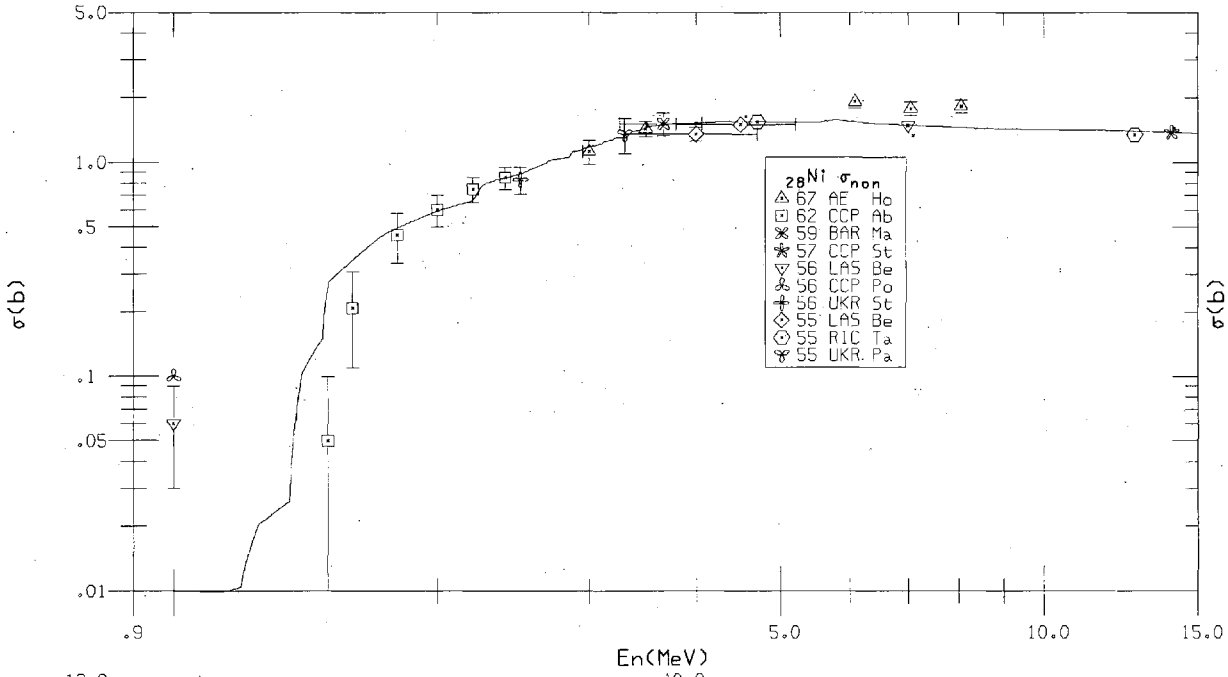


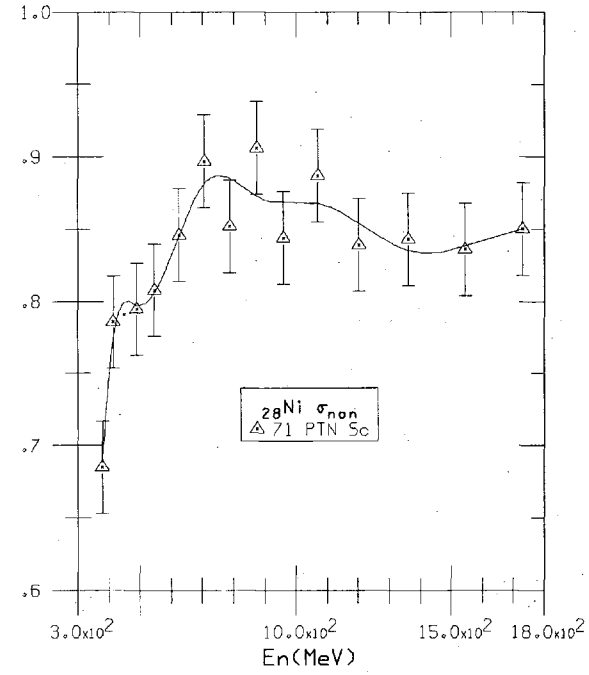


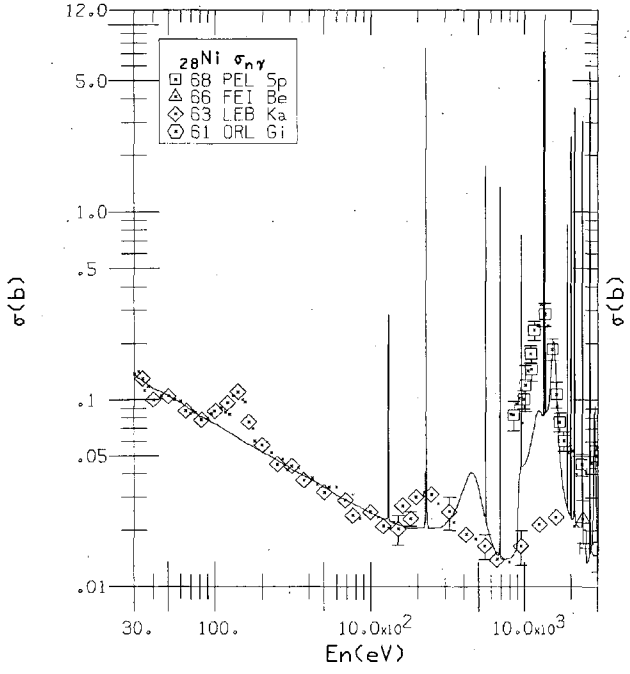


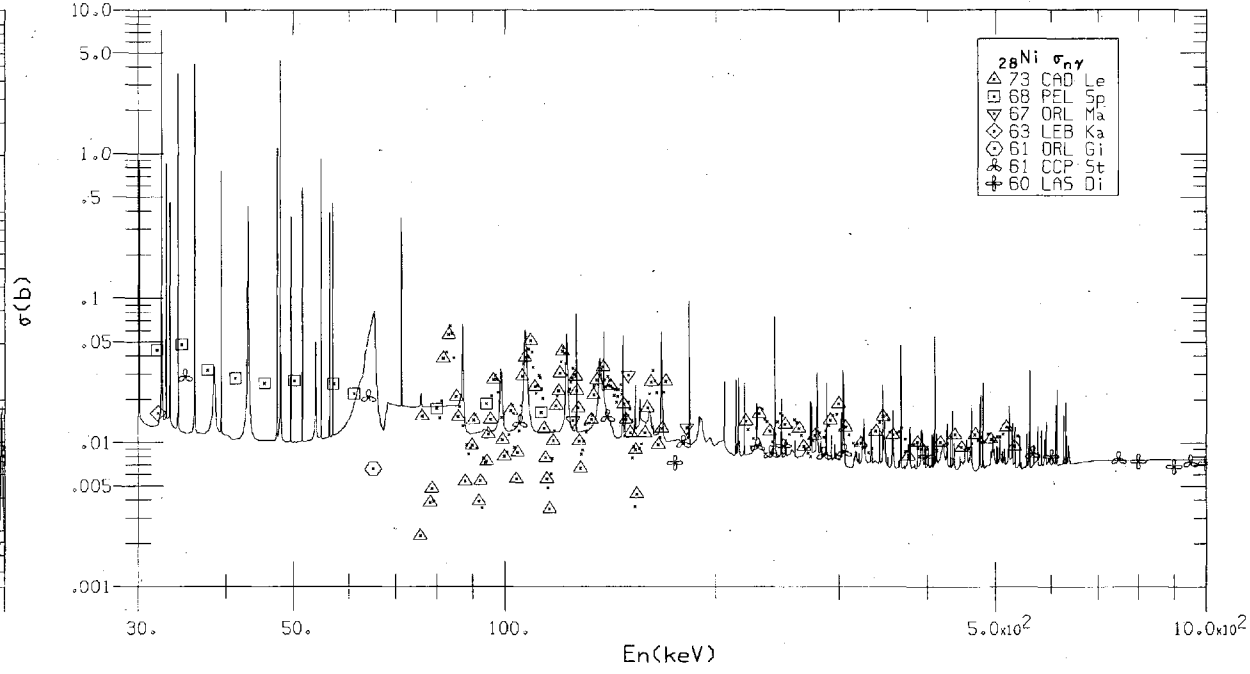


$_{28}$Ni
σ_{non}
$\sigma_{n\gamma}$
[1190]







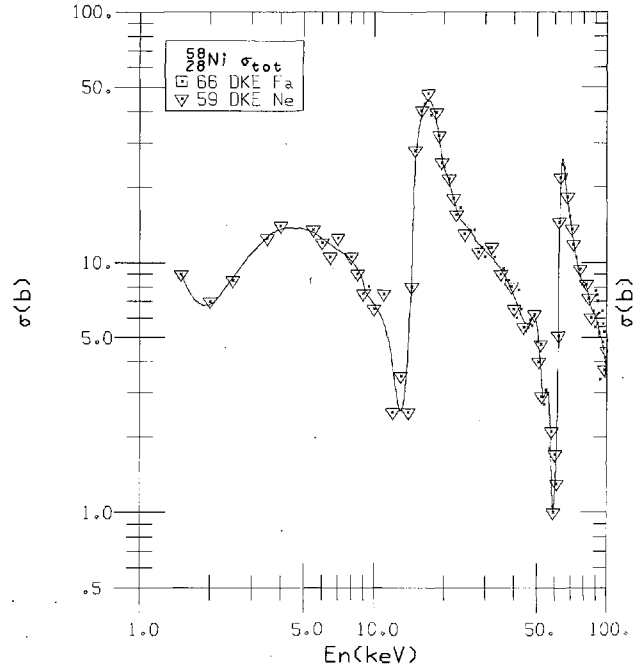


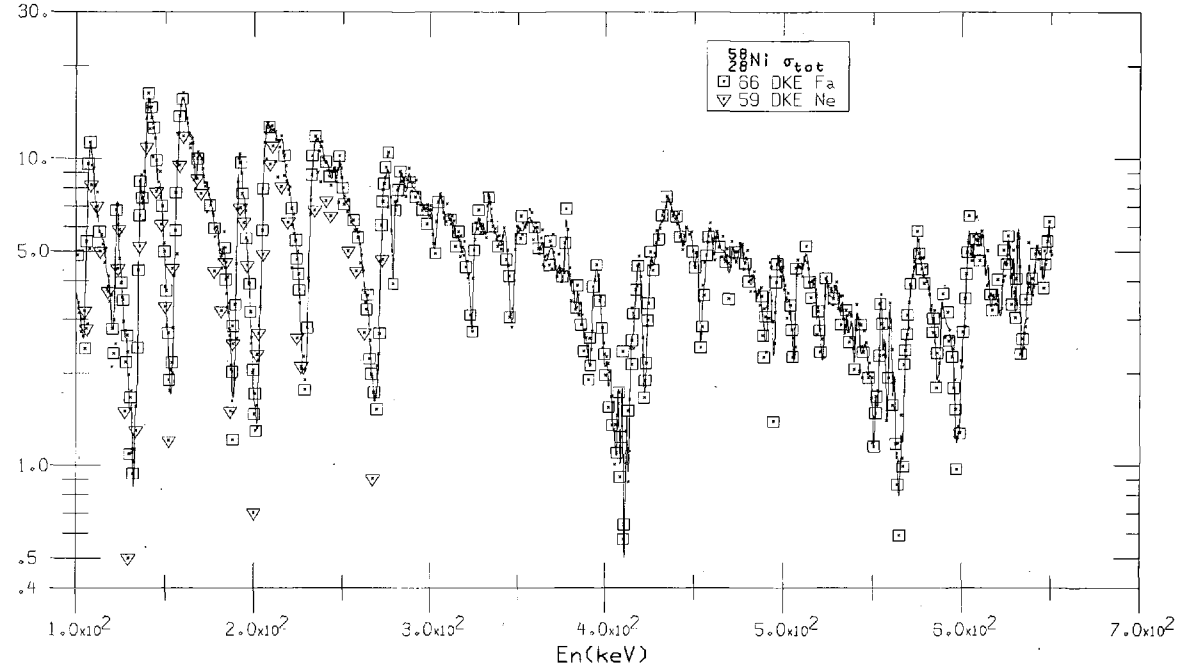
$^{58}_{28}$Ni

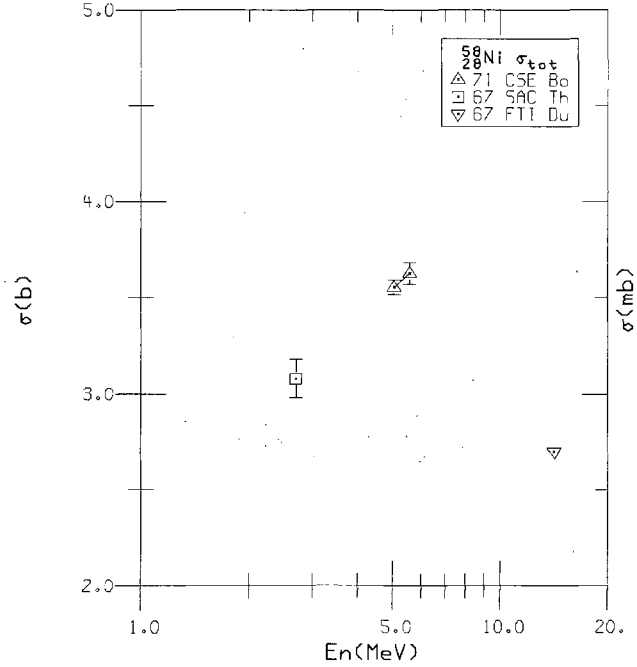
σ_{tot}

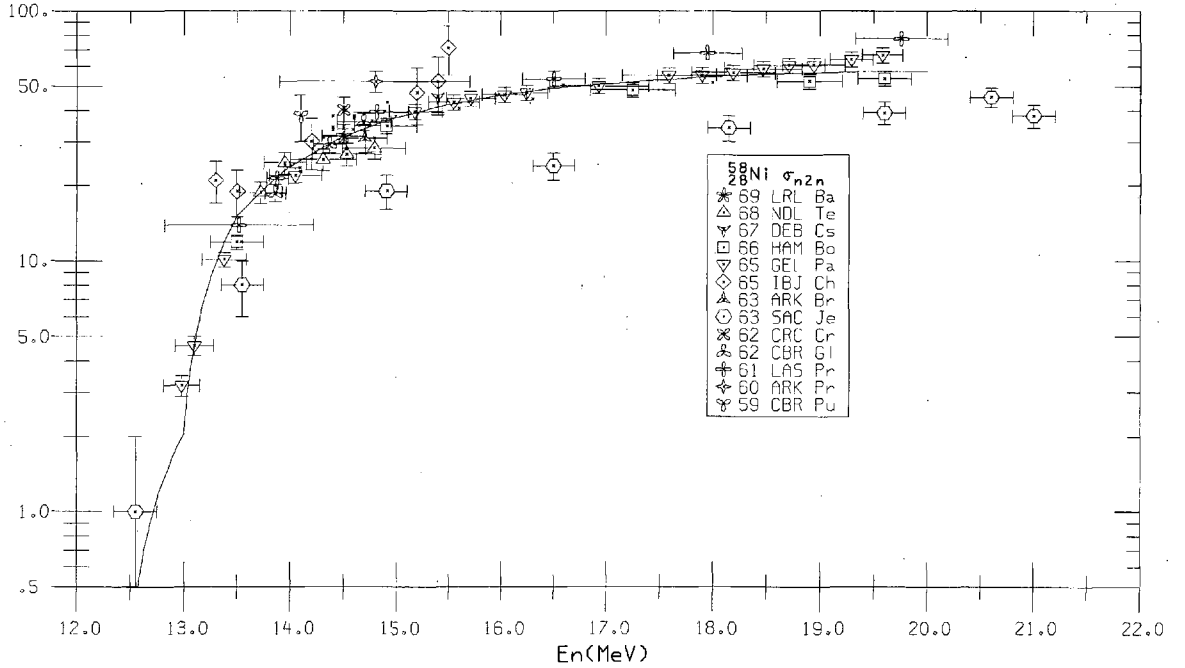
σ_{n2n}

[6419]

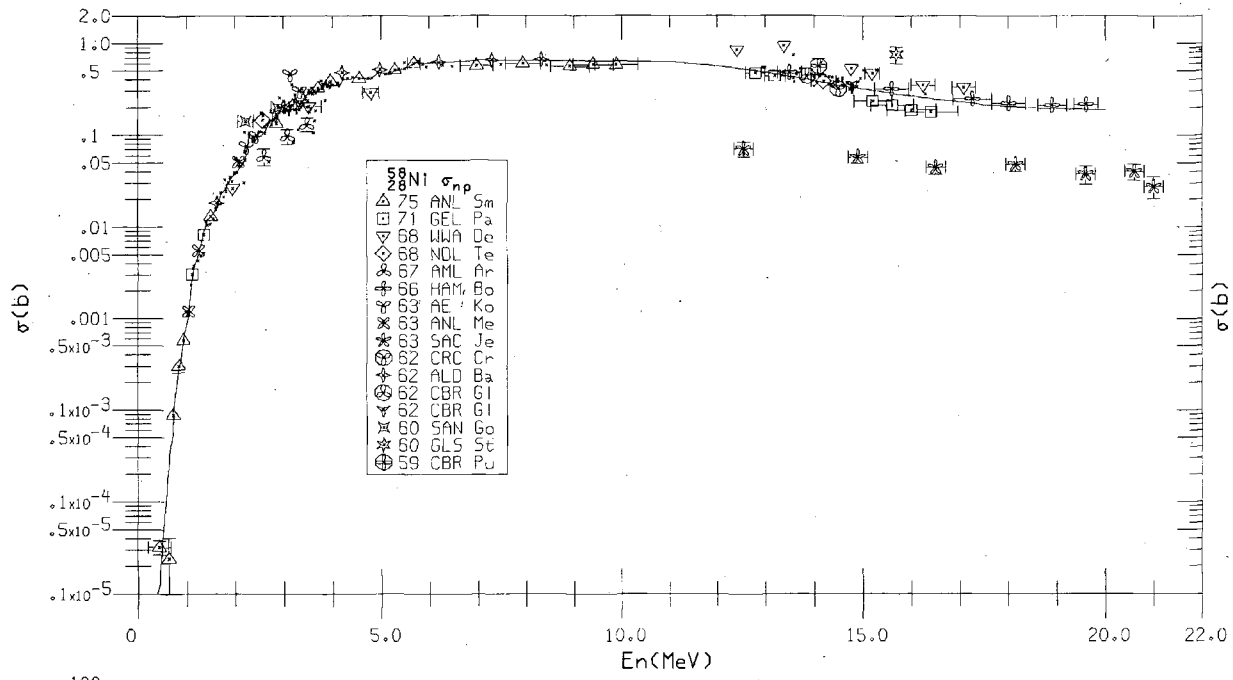


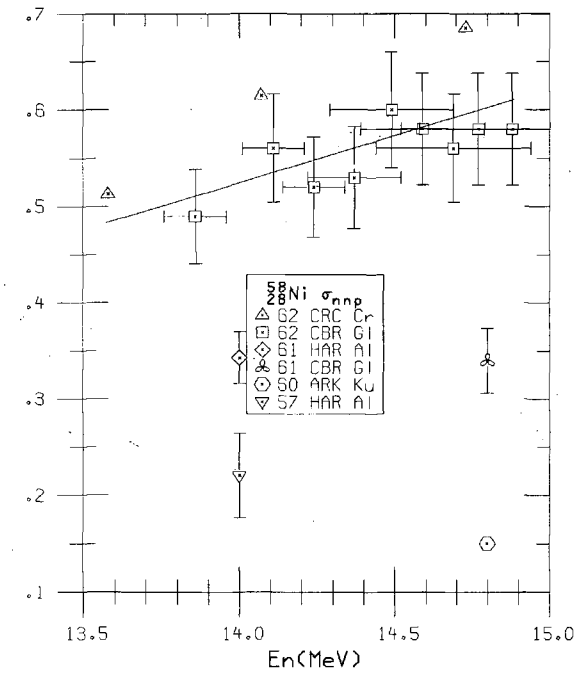


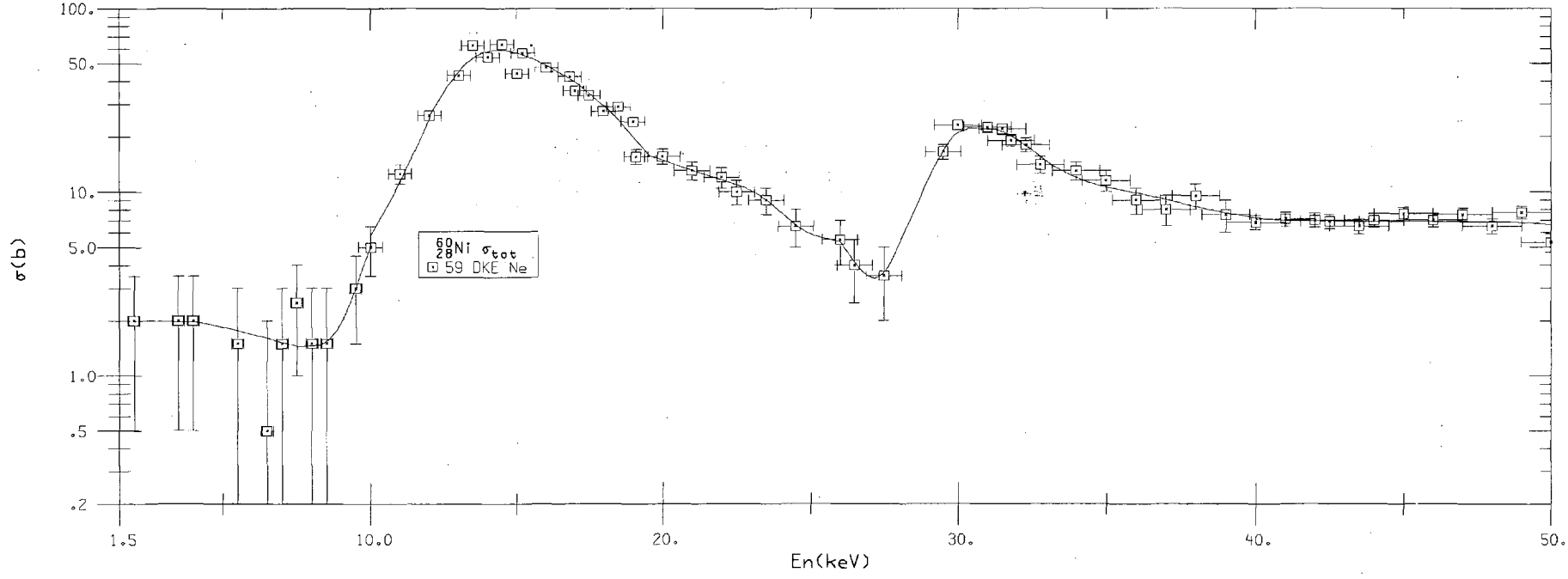




$^{58}_{28}$Ni
σ_{np}
[6419]
σ_{nnp}
$^{60}_{28}$Ni
σ_{tot}

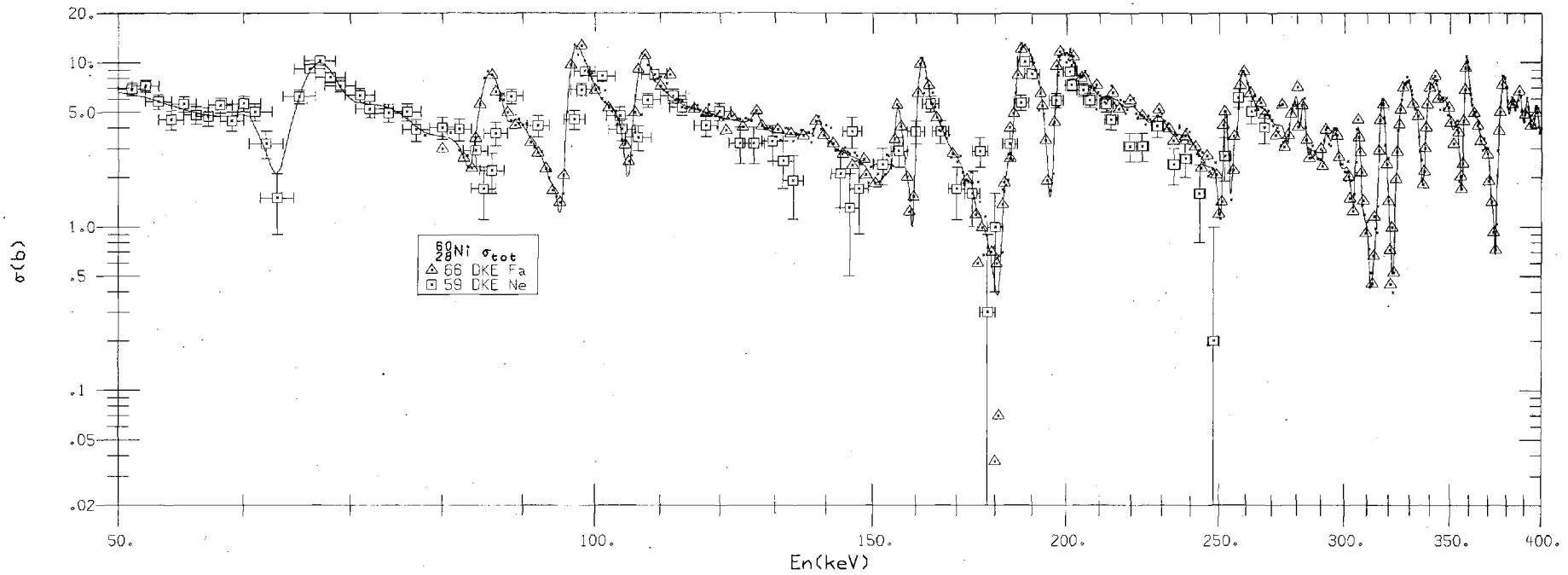


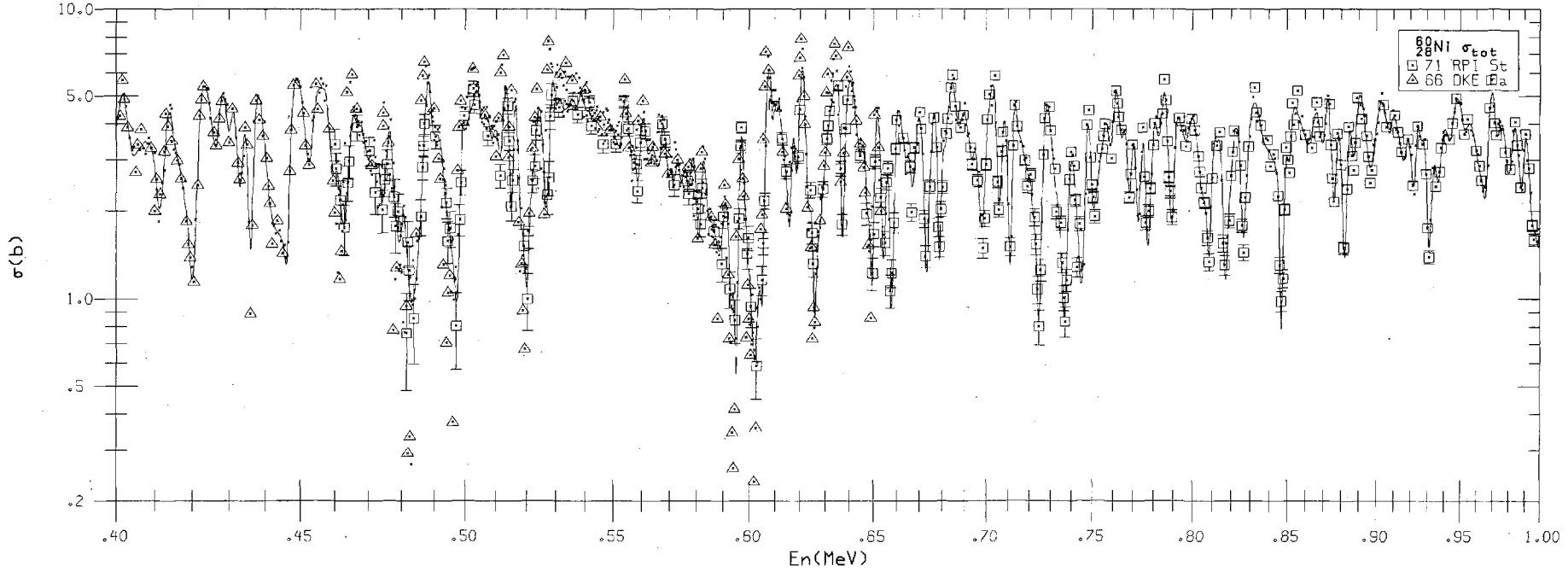




$^{60}_{28}Ni$

σ_{tot}





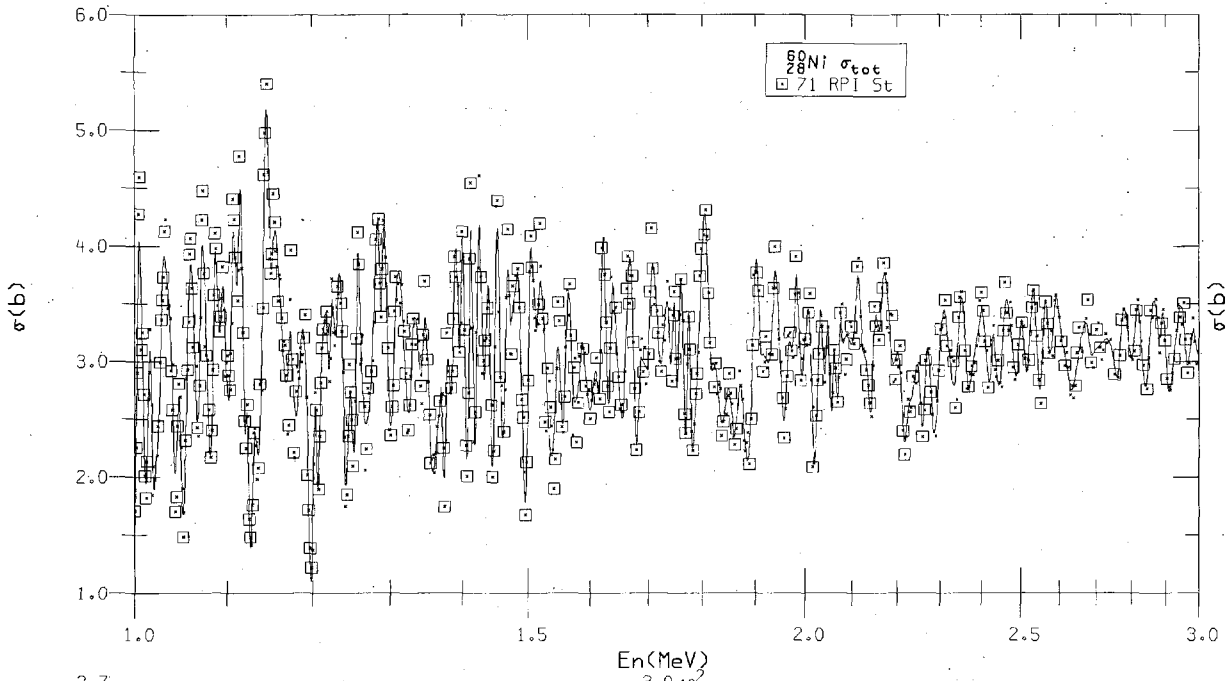
$^{60}_{28}Ni$

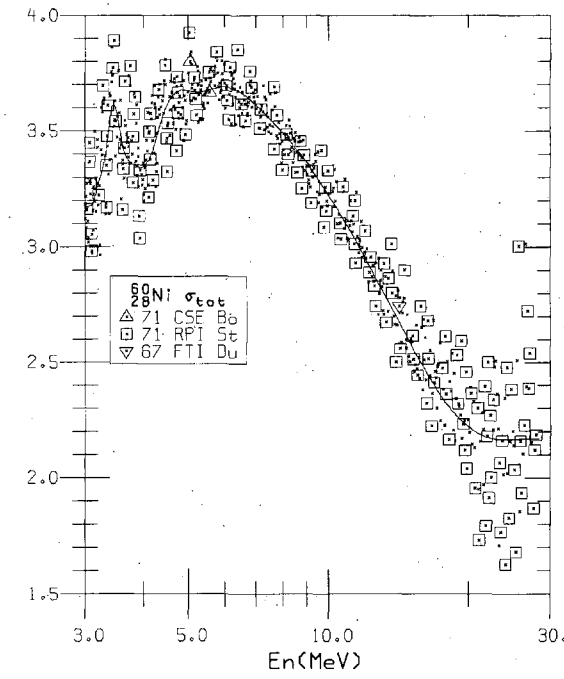
σ_{tot}

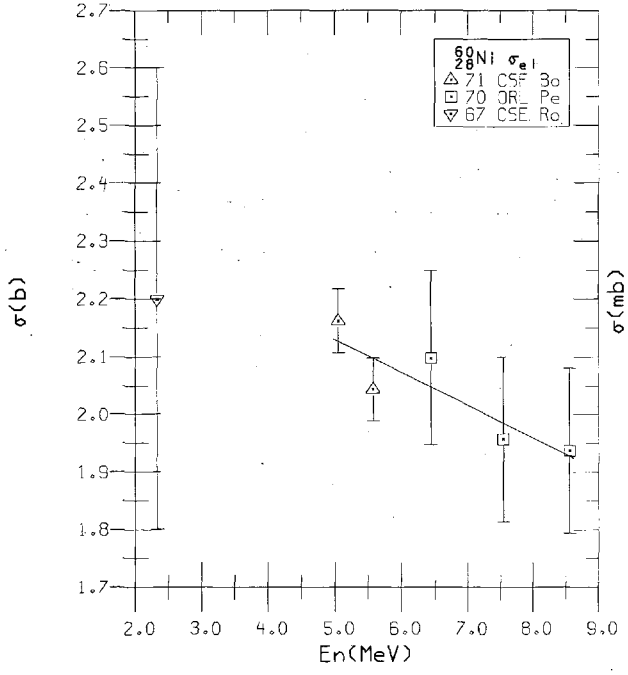
σ_{el}

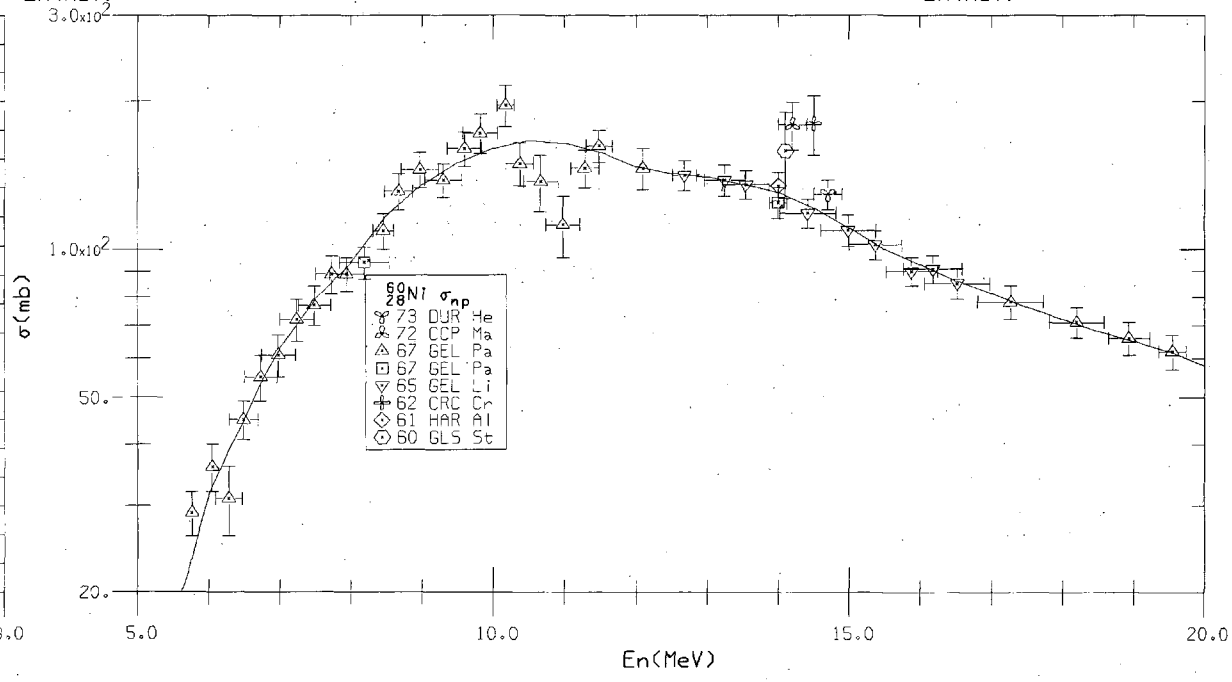
σ_{np}

[6420]



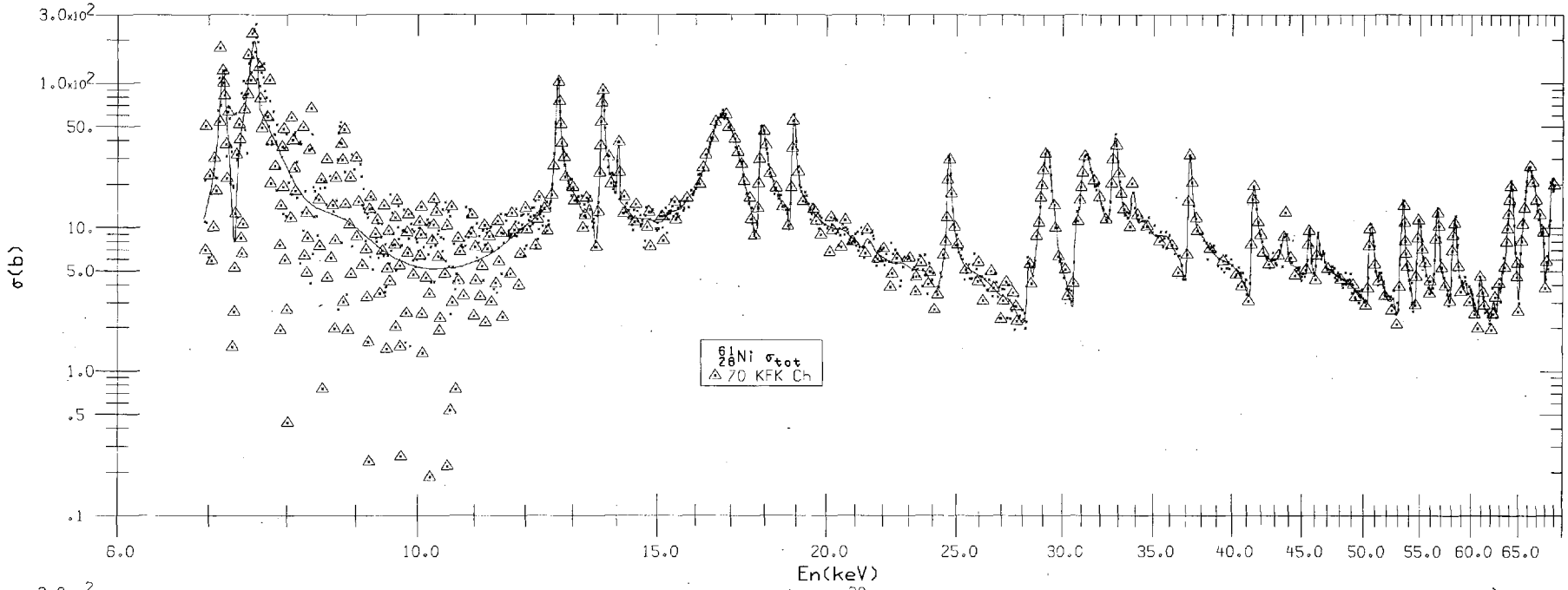


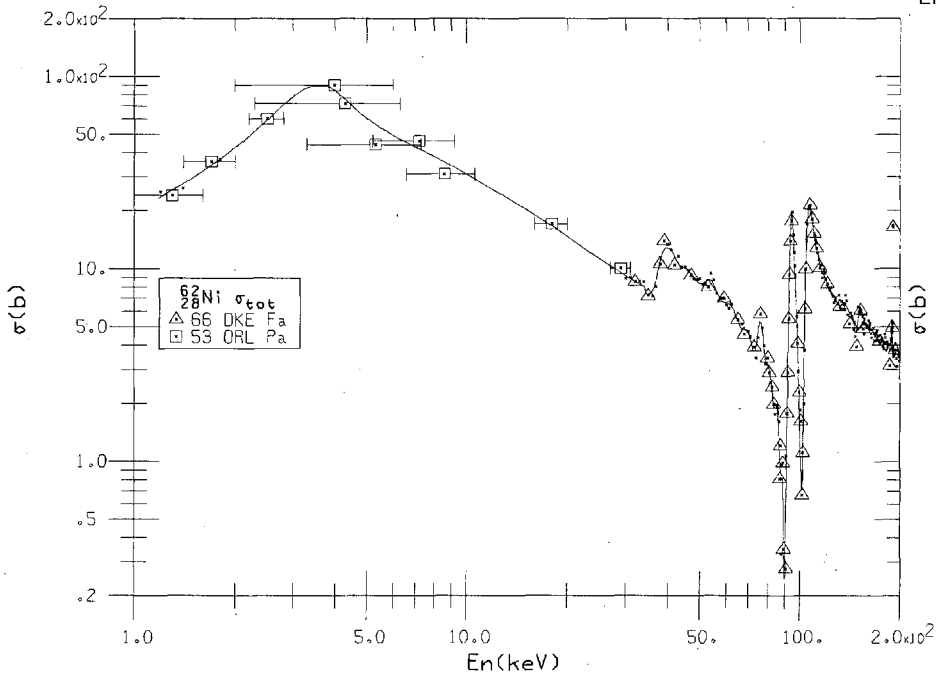


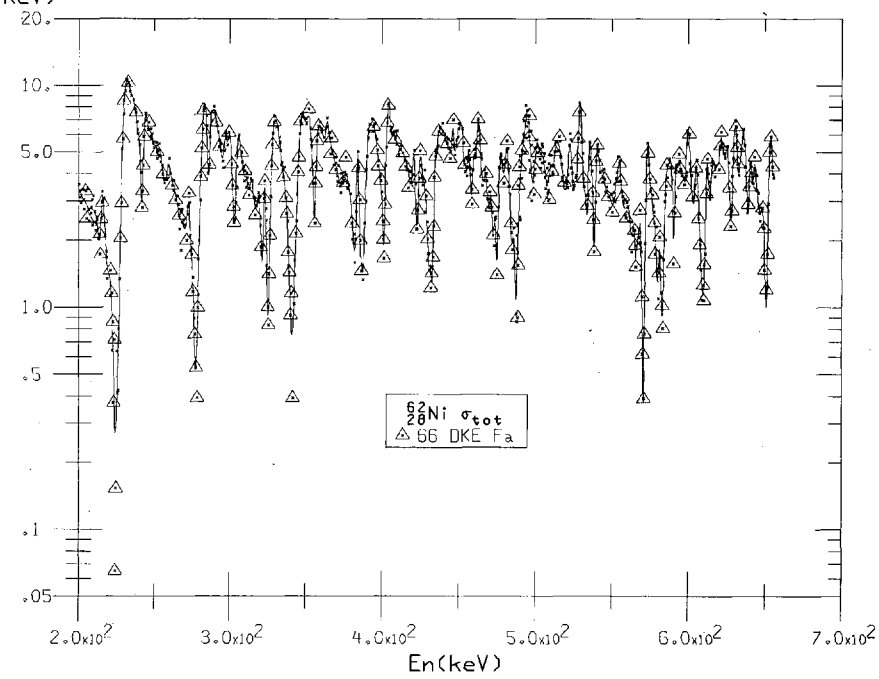


$^{61}_{28}Ni$ σ_{tot}

$^{62}_{28}Ni$ σ_{tot}



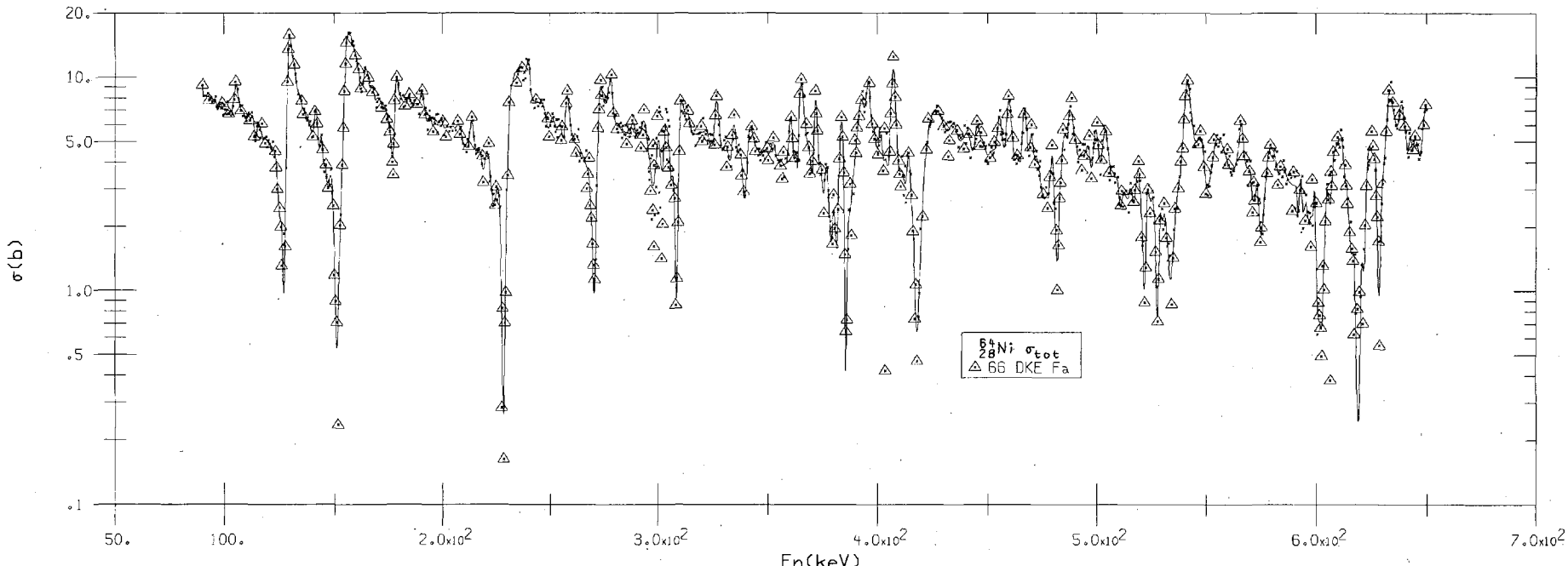


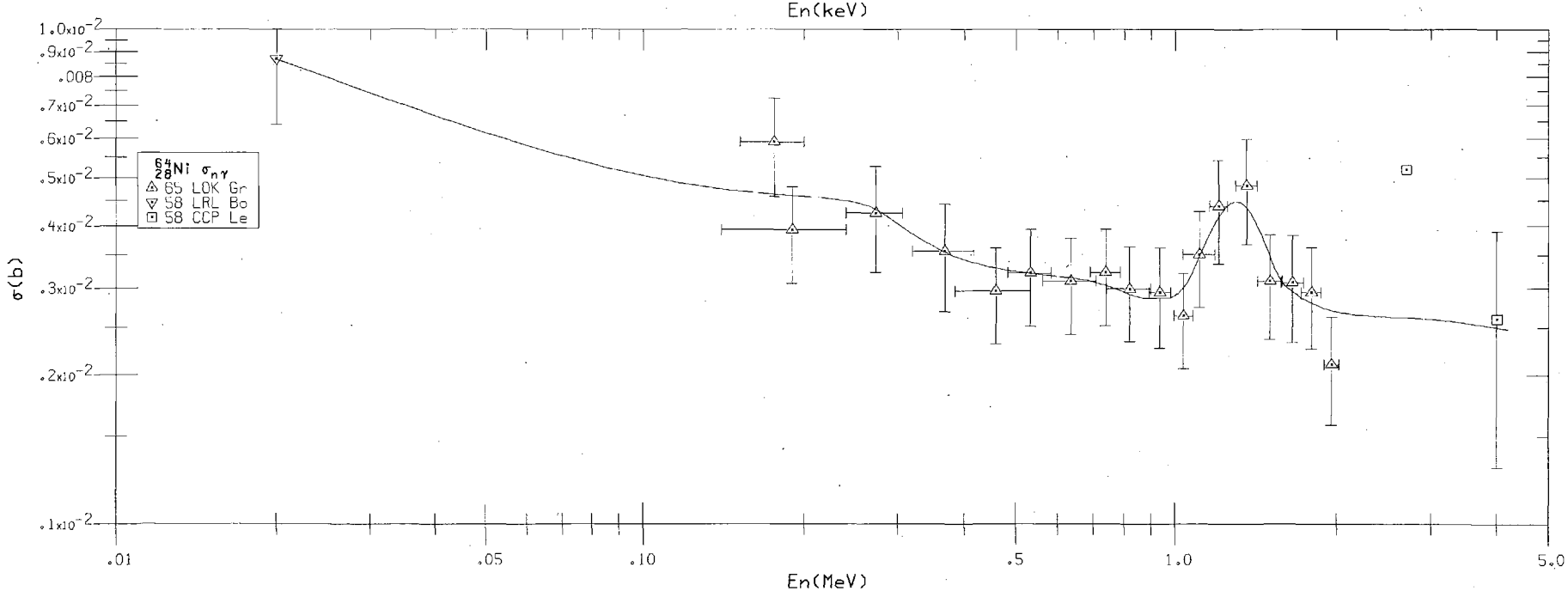


$^{64}_{28}Ni$

σ_{tot}

$\sigma_{n\gamma}$





Yr	Lab	Author	Reference	Points	Range	Standard
			$_{28}$Ni σ_{tot}			
74	NBS	Schwartz,et.al.	NBS-138,74	3458	.473 MeV to 15.1 MeV	
73	ORL	Perey,et.al.	PEREY,73	7402	.181 MeV to 29.4 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	248	2.252 MeV to 14.9 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	696	.487 MeV to 8.671 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	2.760 b at 14.7 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000(SUPP.1),68	5115	.500 MeV to 31.9 MeV	abs
66	ANL	Whalen,et.al.	ANL-7210,16,66	548	.100 MeV to .649 MeV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	17.9 b at 1.440 eV	
65	ANL	Smith	SMITH,65	102	.475 MeV to 1.483 MeV	
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	1801	5.098 keV to .347 MeV	abs
63	BRC	Cabe,et.al.	EANDC(E)-49,66,63	154	3.807 MeV to 5.195 MeV	
63	BRC	Cabe,et.al.	EANDC(E)-49,69,63	166	.500 MeV to 1.205 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	5	17.5 MeV to 28.6 MeV	
60	HAR	Mc Callum,et.al.	NP,16,313,60	13	12.4 MeV to 20.2 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	3.330 b at 3.660 MeV	abs
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	
54	BNL	Palevsky	PALEVSKY,54	36	.0008 eV to .0055 eV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.710 MeV to 13.1 MeV	abs
54	ORL	Allen,et.al.	PR,96,1297,54	102	.0039 eV to .0967 eV	
54	ANL	Hibdon,et.al.	ANL-5174,43,54	190	.170 keV to .160 MeV	abs
54	CIS	Gatti,et.al.	NC,11,262,54	10	.101 eV to .790 eV	abs
52	ANL	Hibdon,et.al.	PR,85,595,52	12	21.2 keV to 41.2 keV	
52	WIS	Miller,et.al.	PR,88,83,52	15	.850 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	2.670 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	2.500 b at 14.0 MeV	
52	HAR	Merrison,et.al.	PRS/A,215,278,52	100	2.300 eV to 9.200 keV	abs
51	ORL	Rayburn,et.al.	ORNL-1164,34,51	1	18.0 b at 1.440 eV	
51	COL	Havens Jr,et.al.	PR,83,1123,51	18	1.050 eV to 7.650 eV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.510 b at 42.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$_{28}$Ni σ_{el}			
74	ORL	Kinney,et.al.	ORNL-4807,74	5	4.340 MeV to 8.560 MeV	^{1}H σ_{el}
72	AE	Malmskog	MALMSKOG,72	40	.500 MeV to 1.475 MeV	C σ_{el}
70	AE	Holmqvist,et.al.	AE-385,70	5	1.770 MeV to 2.760 MeV	
69	AE	Holmqvist,et.al.	AE-366,69	7	3.000 MeV to 8.050 MeV	^{1}H σ_{el}
67	IFU	Korzh,et.al.	UFZ,12,(9),1571,67	1	2.765 b at 1.500 MeV	abs
67	CRC	Clarke,et.al.	NP/A,95,320,67	1	1.200 b at 14.1 MeV	Ni σ_{el}
66	ANL	Smith	SMITH,66	91	.317 MeV to 1.456 MeV	C
65	ORL	Rayburn,et.al.	NP,61,381,65	1	17.3 b at 1.440 eV	
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.500 b at 2.000 MeV	
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
63	LRL	Bauer,et.al.	NP,48,152,63	1	1.230 b at 14.0 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	3.570 b at .650 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	4.680 b at .300 MeV	
62	CCP	Lovchikova	AE,13,60,62	1	3.200 b at .900 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.820 b at 3.660 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.800 b at 1.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{28}$Ni σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	60.0 keV to 1.450 MeV	C
			$_{28}$Ni σ_{non}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
67	AE	Holmqvist,et.al.	AE-303,67	7	3.000 MeV to 8.050 MeV	
62	CCP	Abramov	AE,12,62,62	6	1.500 MeV to 2.400 MeV	abs
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.510 b at 3.660 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.380 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.380 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	3	1.000 MeV to 7.000 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	1	.100 b at 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.830 b at 2.500 MeV	abs
55	LAS	Beyster,et.al.	PR,98,1216,55	2	4.000 MeV to 4.500 MeV	abs
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,55	1	1.350 b at 3.300 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.100 b at 1.000 MeV	
			$_{28}$Ni $\sigma_{n\gamma}$			
73	CAD	Le Rigoleur+	73KARLSR,73	279	75.3 keV to .538 MeV	
68	PEL	Spitz,et.al.	NP/A,121,655,68	37	8.120 keV to .112 MeV	In $\sigma_{n\gamma}$
67	ORL	Macklin,et.al.	PR,159,1007,67	3	.125 MeV to .182 MeV	Ta $\sigma_{n\gamma}$
66	FEI	Belanova,et.al.	66PARIS,I,455,,66	1	23.0 mb at 24.0 keV	
63	LEB	Kapchigashev+	AE,15,120,63	69	30.0 eV to 32.0 keV	Ni $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	CCP	Stavisskii+	AE,10,284,61	13	35.0 keV to .950 MeV	^{235}U σ_{nf}
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
			$_{28}$Ni σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,,58	1	.200 b at 14.0 MeV	^{252}Cf
			$_{28}$Ni σ_{pem}			
63	NWU	Singletary+	PR,132,378,63	1	.810 b at 15.0 MeV	
			$_{28}$Ni σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	23.0 muB at 14.7 MeV	^{66}Zn σ_{n2n}
			$^{58}_{28}$Ni σ_{tot}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	2	5.050 MeV to 5.580 MeV	H σ_{el}
67	SAC	Thibault	CEA-R-3124,67	1	3.080 b at 2.700 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	2.701 b at 14.2 MeV	
66	DKE	Farrell,et.al.	AP,37,367,66	1119	90.0 keV to .650 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	24.2 b at 1.440 eV	
59	DKE	Newson,et.al.	AP,8,211,59	177	1.500 keV to .272 MeV	

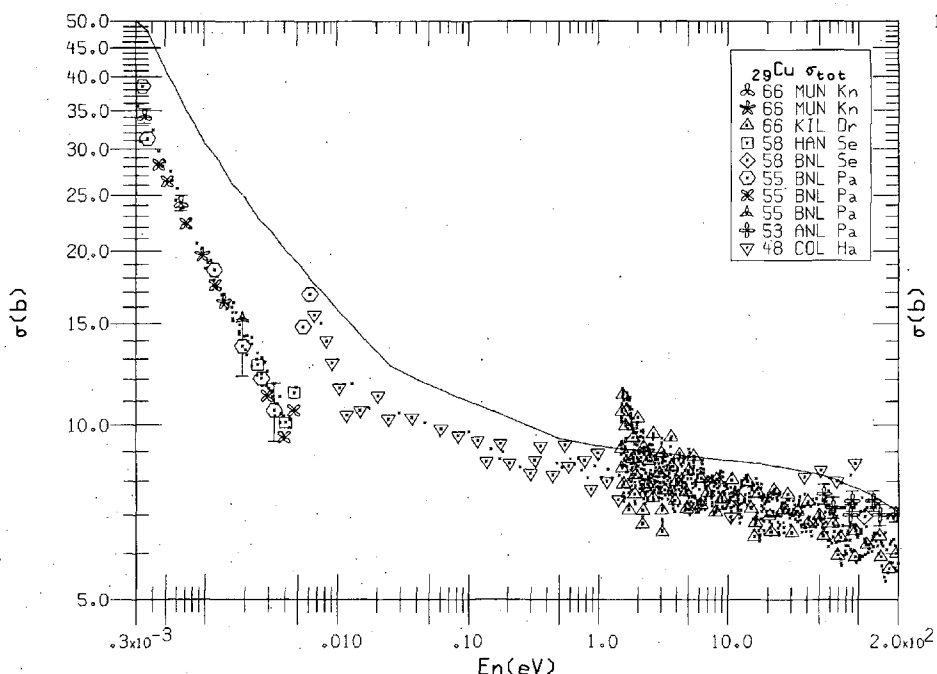
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{58}_{28}$Ni σ_{el}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	2	5.050 MeV to 5.580 MeV	H σ_{el}
67	CSE	Rodgers,et.al.	COO-1573-33,2,67	1	2.310 b at 2.330 MeV	C
65	ORL	Rayburn,et.al.	NP,61,381,65	1	23.6 b at 1.440 eV	
			$^{58}_{28}$Ni σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.360 b at 15.1 MeV	^{12}C σ_{ing}
67	ALD	Towle,et.al.	NP/A,100,257,67	1	.848 b at 7.000 MeV	H
			$^{58}_{28}$Ni σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	37.9 mb at 14.6 MeV	^{63}Cu σ_{n2n}
73	DUR	Hemingway	JNE,27,241,73	1	32.6 mb at 14.7 MeV	^{56}Fe σ_{np}
70	GIT	Fink,et.al.	BAP,15,1372(EH6),70	1	38.0 mb at 14.4 MeV	
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	33.4 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	36.0 mb at 14.8 MeV	^{1}H σ_{tot}
69	LRL	Barrall,et.al.	SUHP-69-2,69	1	31.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
68	NDL	Temperley	NSE,32,195,68	11	13.7 MeV to 14.8 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	45.0 mb at 15.4 MeV	^{63}Cu σ_{n2n}
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	9	13.5 MeV to 19.6 MeV	H
65	GEL	Paulsen,et.al.	NUK,7,117,65	25	13.0 MeV to 19.6 MeV	^{1}H σ_{el}
65	DEB	Csikai	65ANTWERP,,537,65	1	37.0 mb at 14.6 MeV	^{63}Cu σ_{n2n}
65	IBJ	Chojnacki,et.al.	INR-680,65	7	13.3 MeV to 15.5 MeV	^{65}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	31.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	SAC	Jeronymo+	NP,47,157,63	8	12.6 MeV to 21.0 MeV	
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	40.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	CBR	Glover,et.al.	NP,29,309,62	9	13.9 MeV to 14.9 MeV	^{65}Cu σ_{n2n}
61	ANL	Rayburn	PR,122,168,61	1	34.2 mb at 14.4 MeV	^{63}Cu σ_{n2n}
61	LAS	Prestwood,et.al.	PR,121,1438,61	9	13.5 MeV to 19.8 MeV	^{238}U
60	ARK	Preiss,et.al.	NP,15,326,60	1	52.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ANL	Rayburn	BAP,4,288(X15),59	1	33.4 mb at 14.4 MeV	
59	CBR	Purser,et.al.	AUJ,12,103,59	1	38.0 mb at 14.1 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	40.6 mb at 14.5 MeV	
			$^{58}_{28}$Ni σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	115	.441 MeV to 9.897 MeV	^{235}U σ_{nf}
73	LOU	Dresler,et.al.	INR-1464,12,73	1	.349 b at 14.6 MeV	^{56}Fe σ_{np}
73	DUR	Hemingway	JNE,27,241,73	1	.349 b at 14.7 MeV	^{56}Fe σ_{np}
72	CCP	Maslov,et.al.	YK-9,50,72	1	.382 b at 14.6 MeV	^{65}Cu σ_{n2n}
71	GEL	Paulsen,et.al.	71CANT,,129,71	39	.990 MeV to 16.4 MeV	abs
70	GIT	Fink,et.al.	BAP,15,1372(EH6),70	1	.331 b at 14.4 MeV	
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.341 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	.318 b at 14.8 MeV	^{1}H σ_{tot}
69	LRL	Barrall,et.al.	SUHP-69-2,69	1	.374 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
68	WWA	Decowski,et.al.	NP/A,112,513,68	10	12.4 MeV to 17.1 MeV	
68	WWA	Decowski,et.al.	NP/A,112,513,68	6	1.950 MeV to 4.790 MeV	^{64}Zn σ_{np}
68	NDL	Temperley	NSE,32,195,68	19	2.200 MeV to 14.8 MeV	
67	KTO	Okumura	NP/A,93,74,67	6	13.4 MeV to 15.0 MeV	
67	AML	Armitage	SYMONDS,67	6	2.190 MeV to 3.640 MeV	abs
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	1	.532 b at 14.1 MeV	H
66	HAM	Bormann,et.al.	66PARIS,1,225,,66	10	13.0 MeV to 19.6 MeV	^{63}Cu σ_{n2n}
65	HAM	Bormann,et.al.	EANDC(E)-57,17,65	1	.411 b at 14.1 MeV	abs
65	FRK	Debertin,et.al.	NP,70,89,65	1	.630 b at 8.400 MeV	
63	AE	Konijn,et.al.	NP,48,191,63	36	2.240 MeV to 3.770 MeV	
63	ANL	Meadows,et.al.	PR,130,2022,63	11	1.040 MeV to 2.670 MeV	^{235}U σ_{nf}
63	SAC	Jeronymo+	NP,47,157,63	8	12.6 MeV to 21.0 MeV	
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	.316 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

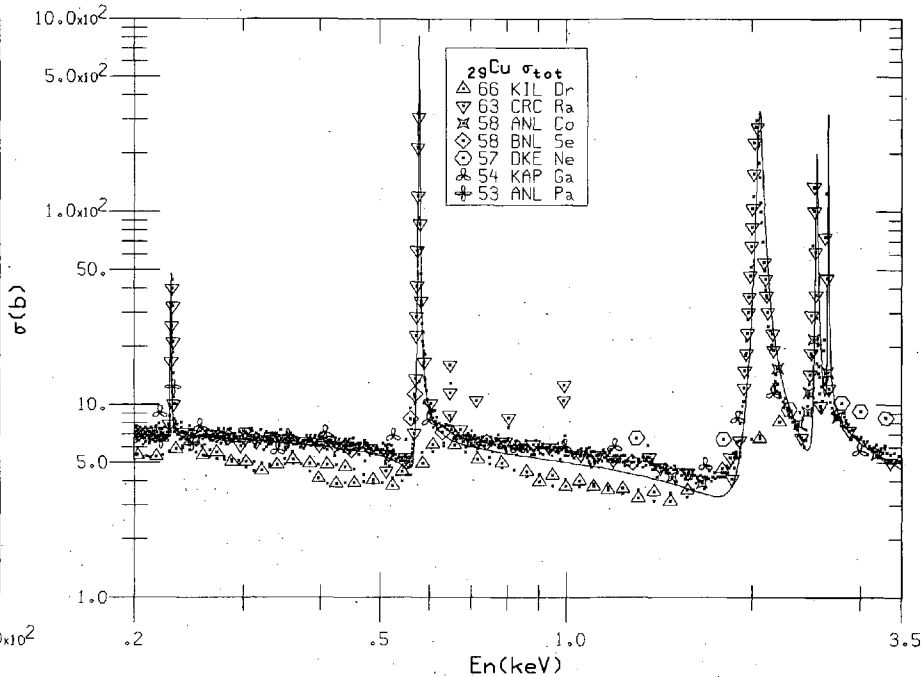
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
62	CRC	Cross,et.al.	PR-P-53,7,62	3	13.6 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	ALD	Barry	JNE,16,467,62	13	1.625 MeV to 14.8 MeV	^{235}U σ_{nf}
62	CBR	Glover,et.al.	NP,29,309,62	1	.436 b at 13.9 MeV	^{65}Cu σ_{n2n}
62	CBR	Glover,et.al.	NP,29,309,62	8	14.1 MeV to 14.8 MeV	^{65}Cu σ_{n2n}
62	CBR	Glover,et.al.	NP,29,309,62	1	.350 b at 14.8 MeV	^{65}Cu σ_{n2n}
62	CBR	Glover,et.al.	NP,29,309,62	1	.333 b at 14.9 MeV	^{65}Cu σ_{n2n}
61	SAN	Van Loef	NP,24,340,61	1	.170 b at 3.300 MeV	^{58}Ni σ_{np}
61	HAR	Allan	NP,24,274,61	1	.430 b at 14.0 MeV	^{54}Fe σ_{np}
60	SAN	Gonzalez,et.al.	PR,120,1319,60	10	2.220 MeV to 3.550 MeV	^{31}P σ_{np}
60	GLS	Storey,et.al.	PPS,75,526,60	2	13.0 MeV to 15.7 MeV	
59	CBR	Purser,et.al.	AUJ,12,103,59	1	.560 b at 14.1 MeV	
			$^{58}_{28}$Ni σ_{nnp}			
62	CRC	Cross,et.al.	PR-P-53,7,62	3	13.6 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	CBR	Glover,et.al.	NP,29,309,62	9	13.9 MeV to 14.9 MeV	^{65}Cu σ_{n2n}
61	HAR	Allan	NP,24,274,61	1	.343 b at 14.0 MeV	^{54}Fe σ_{np}
61	CBR	Glover,et.al.	NP,24,431,61	1	.340 b at 14.8 MeV	H
60	ARK	Kumabe,et.al.	NP,15,316,60	1	.150 b at 14.8 MeV	H
57	HAR	Allan	PPS/A,70,195,57	1	.220 b at 14.0 MeV	
			$^{58}_{28}$Ni σ_{pem}			
60	ARK	Kumabe,et.al.	NP,15,316,60	1	.440 b at 14.8 MeV	H
57	HAR	Allan	PPS/A,70,195,57	1	.530 b at 14.0 MeV	
			$^{58}_{28}$Ni σ_{nna}			
65	HAM	Seebeck,et.al.	NP,68,387,65	1	30.0 mb at 14.1 MeV	H
			$^{58}_{28}$Ni σ_{aem}			
73	LAH	Khan,et.al.	NP/A,202,123,73	1	.180 b at 14.7 MeV	
65	HAM	Seebeck,et.al.	NP,68,387,65	1	.155 b at 14.1 MeV	H
			$^{59}_{28}$Ni $\sigma_{n\alpha}$			
74	KAP	Eiland,et.al.	NSE,53,1,74	1	13.7 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{60}_{28}$Ni σ_{tot}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	2	5.050 MeV to 5.580 MeV	H σ_{el}
71	RPI	Stoler	CLEMENT,71	2316	.460 MeV to 28.0 MeV	abs
67	FTI	Dukarevich+	NP/A,92,433,67	1	2.744 b at 14.2 MeV	
66	DKE	Farrell,et.al.	AP,37,367,66	1197	80.0 keV to .653 MeV	
59	DKE	Newson,et.al.	AP,8,211,59	194	2.000 keV to .267 MeV	

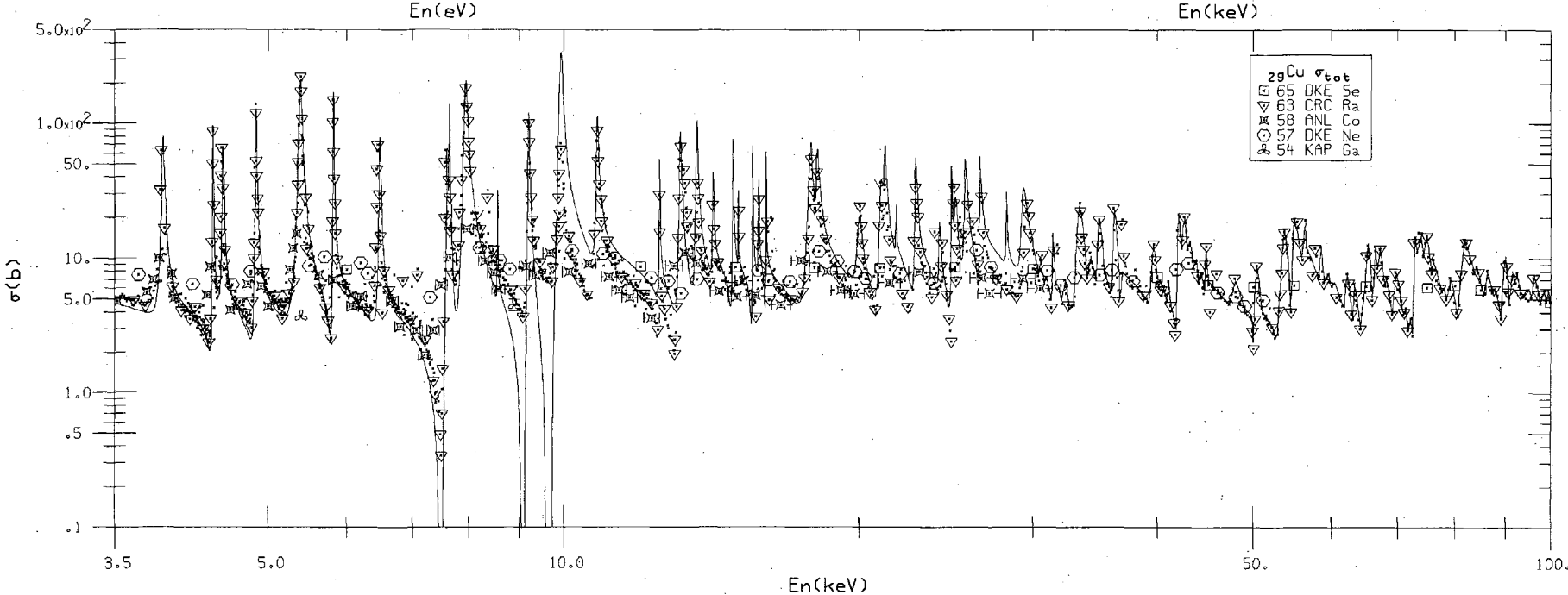
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{60}_{28}$Ni σ_{el}			
71	CSE	Boschung,et.al.	NP/A,161,593,71	2	5.050 MeV to 5.580 MeV	H σ_{el}
70	ORL	Perey,et.al.	ORNL-4523,70	3	6.440 MeV to 8.560 MeV	^{1}H σ_{el}
67	CSE	Rodgers,et.al.	COO-1573-33,2,67	1	2.200 b at 2.330 MeV	C
			$^{60}_{28}$Ni σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.880 b at 15.1 MeV	^{12}C σ_{ing}
67	ALD	Towle,et.al.	NP/A,100,257,67	1	1.400 b at 7.000 MeV	H
			$^{60}_{28}$Ni σ_{np}			
73	DUR	Hemingway	JNE,27,241,73	1	.129 b at 14.7 MeV	^{56}Fe σ_{np}
72	CCP	Maslov,et.al.	YK-9,50,72	1	.179 b at 14.2 MeV	^{65}Cu σ_{n2n}
69	KAZ	Levkovskii+	YF,10,44,69	1	.130 b at 14.8 MeV	^{65}Cu σ_{n2n}
67	GEL	Paulsen,et.al.	NUK,10,91,67	40	5.760 MeV to 19.5 MeV	
67	GEL	Paulsen	ZP,205,226,67	2	8.190 MeV to 14.0 MeV	
65	GEL	Liskien,et.al.	NP,63,393,65	11	12.7 MeV to 16.5 MeV	abs
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	.180 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAR	Allan	NP,24,274,61	1	.134 b at 14.0 MeV	^{54}Fe σ_{np}
60	GLS	Storey,et.al.	PPS,75,526,60	1	.158 b at 14.1 MeV	
			$^{60}_{28}$Ni σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	51.0 mb at 14.0 MeV	^{54}Fe σ_{np}
58	GLS	March,et.al.	PM,3,577,58	1	68.0 mb at 13.5 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	60.0 mb at 14.0 MeV	
			$^{60}_{28}$Ni σ_{pem}			
58	GLS	March,et.al.	PM,3,577,58	1	.233 b at 13.5 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	.300 b at 14.0 MeV	
			$^{61}_{28}$Ni σ_{tot}			
70	KFK	Cho,et.al.	70HELSINKI,1,619,70	1634	6.945 keV to 69.0 keV	abs
			$^{61}_{28}$Ni σ_{np}			
72	CCP	Maslov,et.al.	YK-9,50,72	1	.144 b at 14.6 MeV	^{65}Cu σ_{n2n}
69	KAZ	Levkovskii+	YF,10,44,69	1	98.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	.103 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	CCP	Valter,et.al.	IZV,26,1079,62	1	86.0 mb at 14.1 MeV	^{27}Al σ_{np}
61	SAN	Van Loef	NP,24,340,61	1	3.000 mb at 3.300 MeV	^{58}Ni σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	22.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.182 b at 14.5 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{62}_{28}$Ni σ_{tot}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	3.550 b at 4.000 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	2.796 b at 14.2 MeV	
66	DKE	Farrell,et.al.	AP,37,367,66	1265	30.0 keV to .656 MeV	
53	ORL	Pavlicki,et.al.	ORNL-1620,42,53	13	1.200 keV to 29.0 keV	
			$^{62}_{28}$Ni σ_{el}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	2.050 b at 4.000 MeV	
			$^{62}_{28}$Ni σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.940 b at 15.1 MeV	^{12}C σ_{ing}
			$^{62}_{28}$Ni σ_{np}			
72	CCP	Maslov,et.al.	YK-9,50,72	2	14.2 MeV to 14.6 MeV	^{65}Cu σ_{n2n}
62	CRC	Cross,et.al.	BAP,7,335(TA14),62	1	24.0 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	CCP	Valter,et.al.	IZV,26,1079,62	1	34.0 mb at 14.1 MeV	^{27}Al σ_{np}
62	CCP	Valter,et.al.	IZV,26,1079,62	1	22.0 mb at 14.1 MeV	^{27}Al σ_{np}
			$^{62}_{28}$Ni σ_{nnp}			
63	CRC	Cross,et.al.	EANDC(CAN)-16,1,63	1	4.400 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
62	CCP	Valter,et.al.	IZV,26,1079,62	1	4.000 mb at 14.1 MeV	^{27}Al σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	.650 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{62}_{28}$Ni $\sigma_{n\alpha}$			
67	IIT	Yu Wen Yu,et.al.	NP/A,98,451,67	1	22.0 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{64}_{28}$Ni σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	2.834 b at 14.2 MeV	
66	DKE	Farrell,et.al.	AP,37,367,66	1147	90.0 keV to .650 MeV	
			$^{64}_{28}$Ni $\sigma_{n\gamma}$			
65	LOK	Grench	PR/B,140,1277,65	18	.176 MeV to 1.958 MeV	^{197}Au
58	LRL	Booth,et.al.	PR,112,226,58	1	8.700 mb at 20.0 keV	^{64}Ni $\sigma_{n\gamma}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	37.0 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
			$^{64}_{28}$Ni σ_{np}			
62	CCP	Valter,et.al.	IZV,26,1079,62	1	5.000 mb at 14.1 MeV	^{27}Al σ_{np}
			$^{64}_{28}$Ni σ_{nnp}			
62	CCP	Valter,et.al.	IZV,26,1079,62	1	6.000 mb at 14.1 MeV	^{27}Al σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	.930 mb at 14.8 MeV	^{63}Cu σ_{n2n}

$_{29}$Cu
σ_{tot}
[1295]







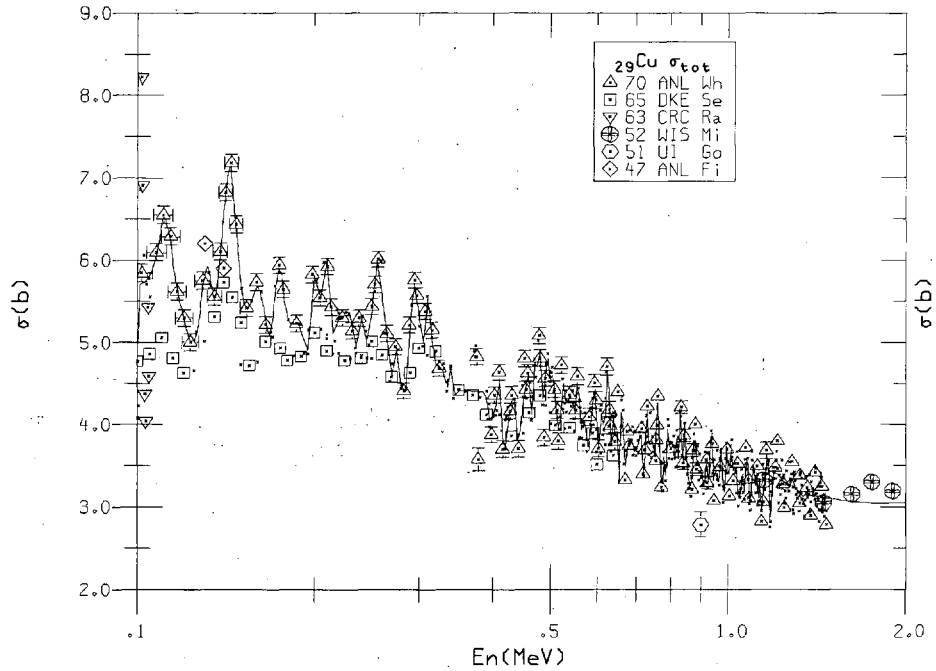
$_{29}$Cu

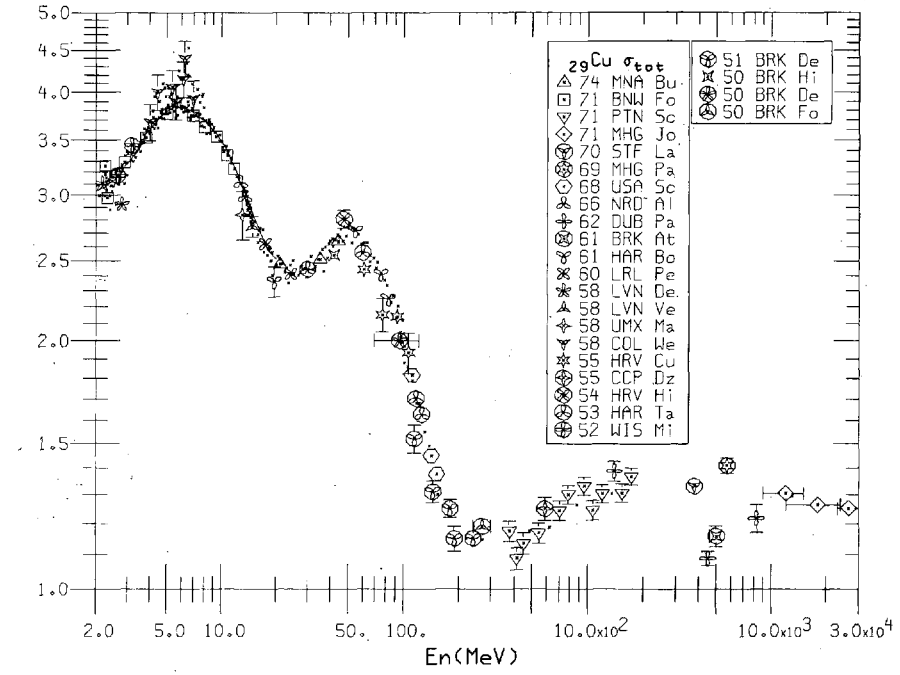
σ_{tot}

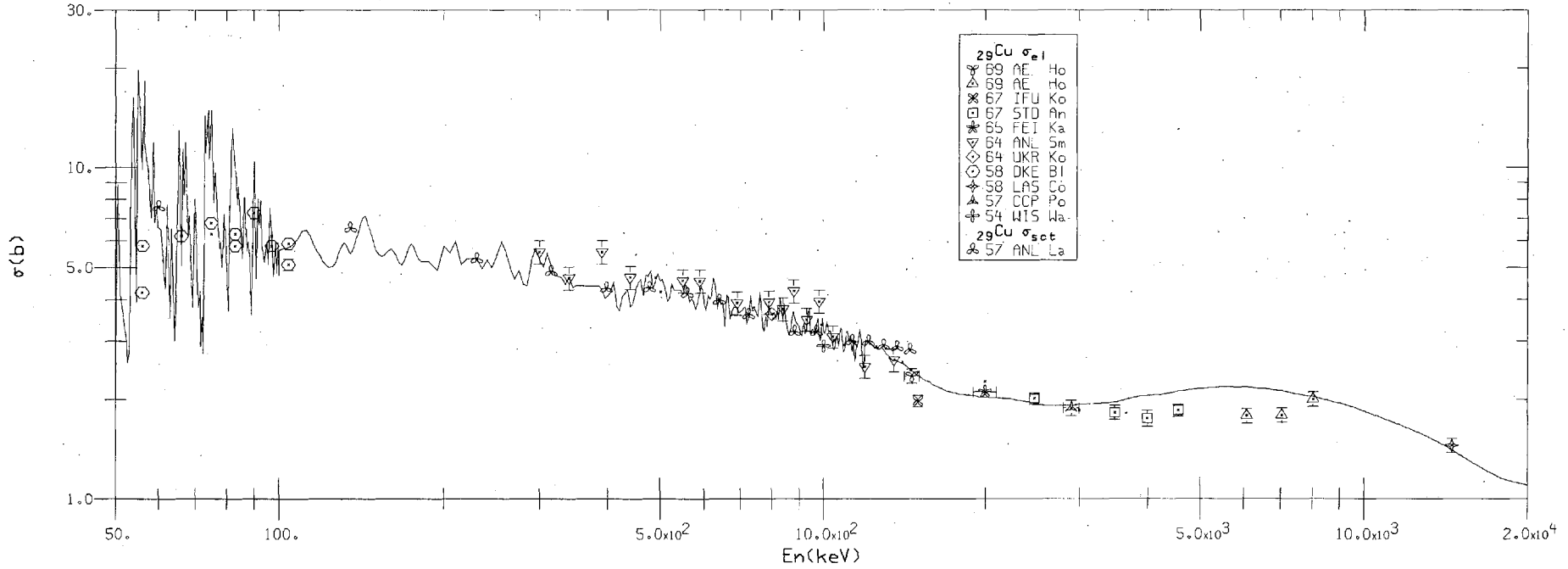
σ_{el}

σ_{sct}

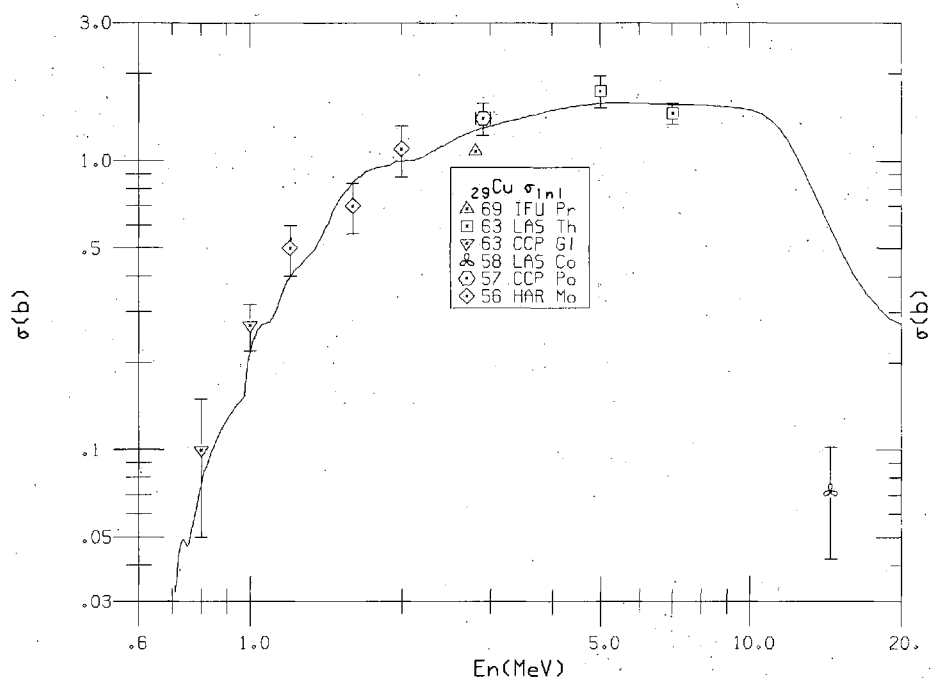
[1295]

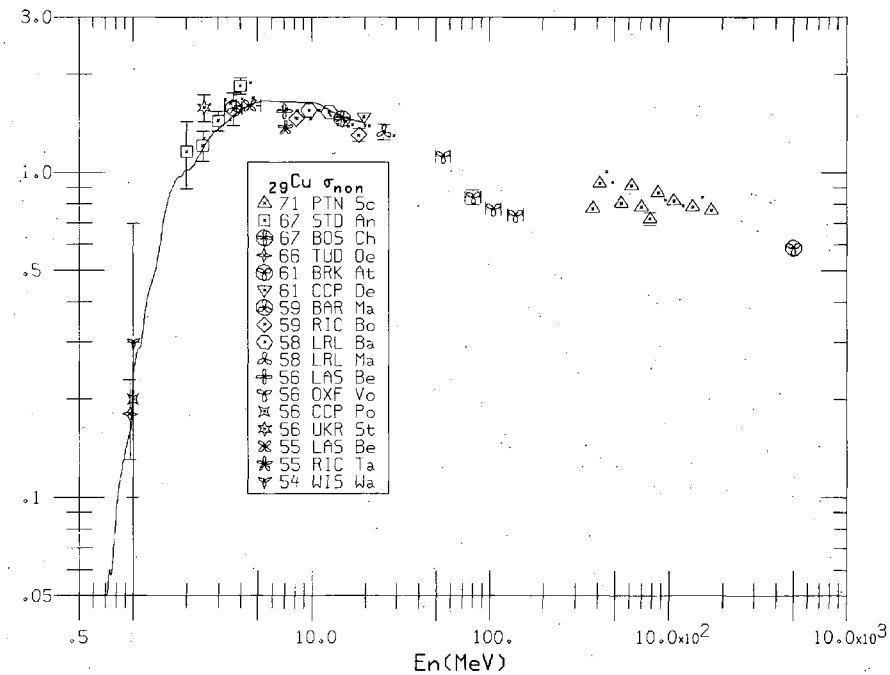


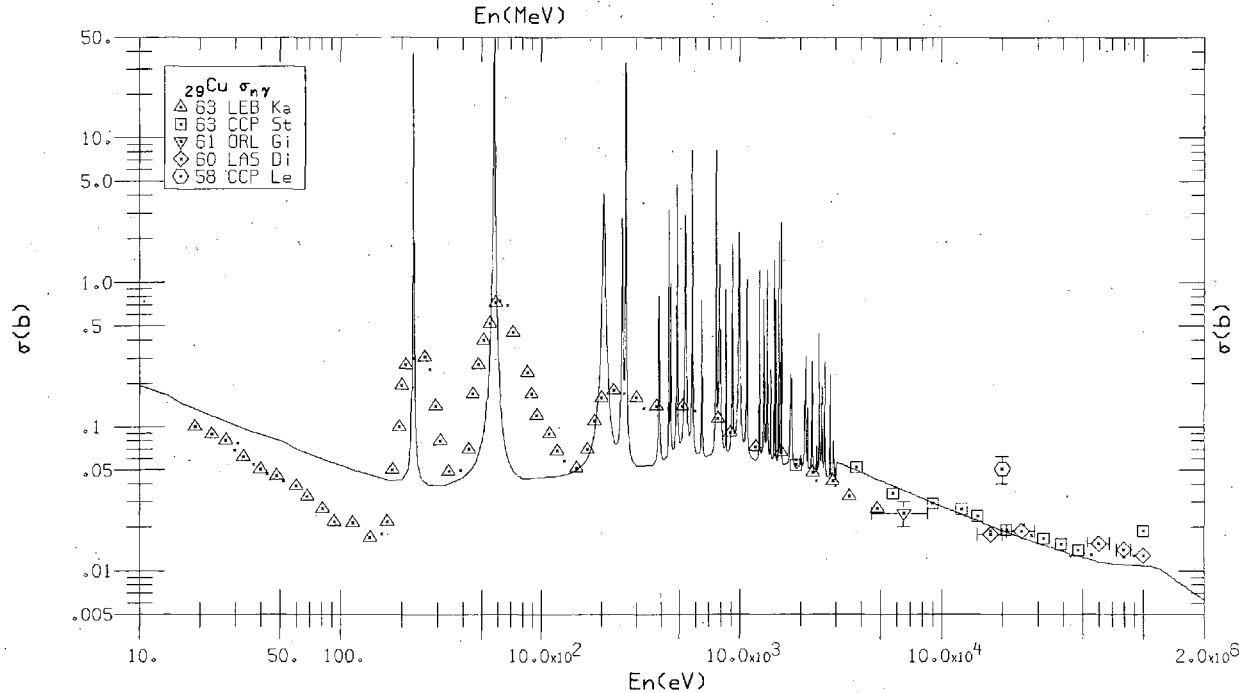


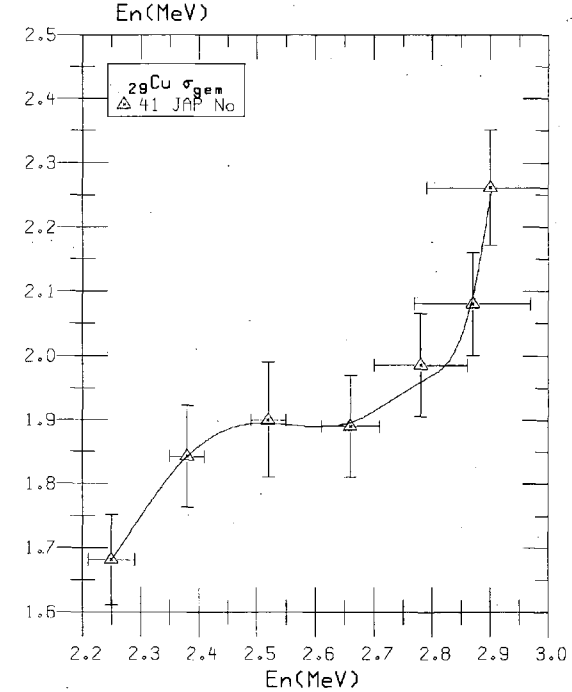


$_{29}$Cu
σ_{inl}
σ_{non}
$\sigma_{n\gamma}$
[1295]
σ_{gem}









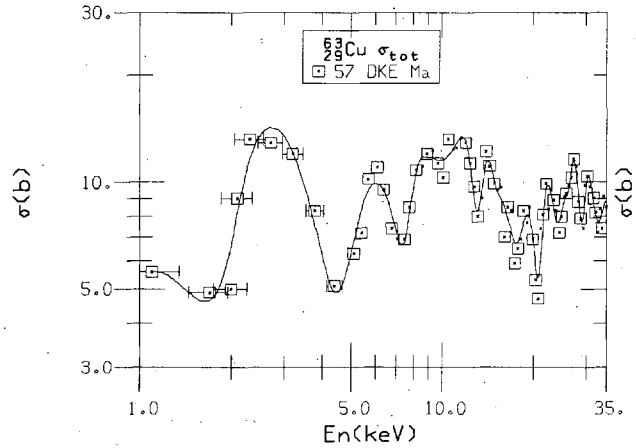
$^{63}_{29}Cu$

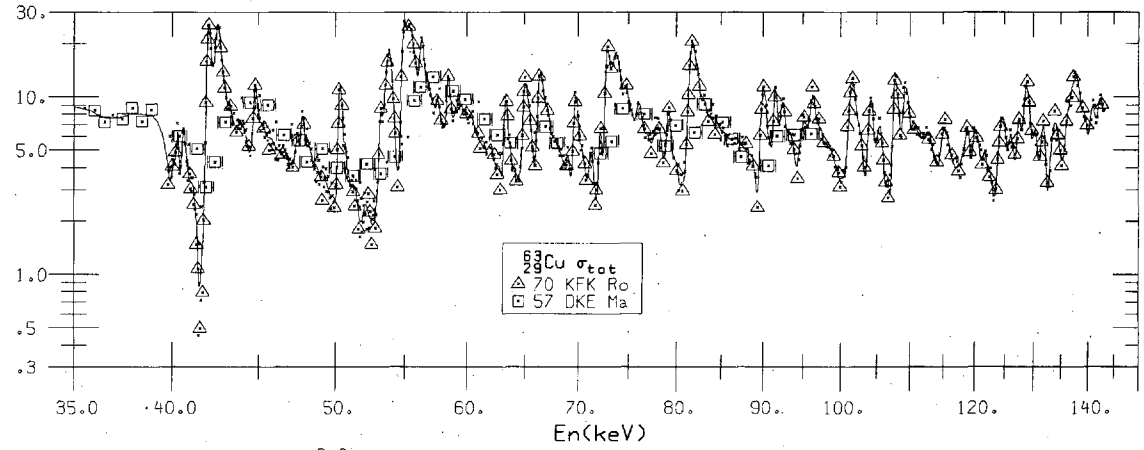
σ_{tot}

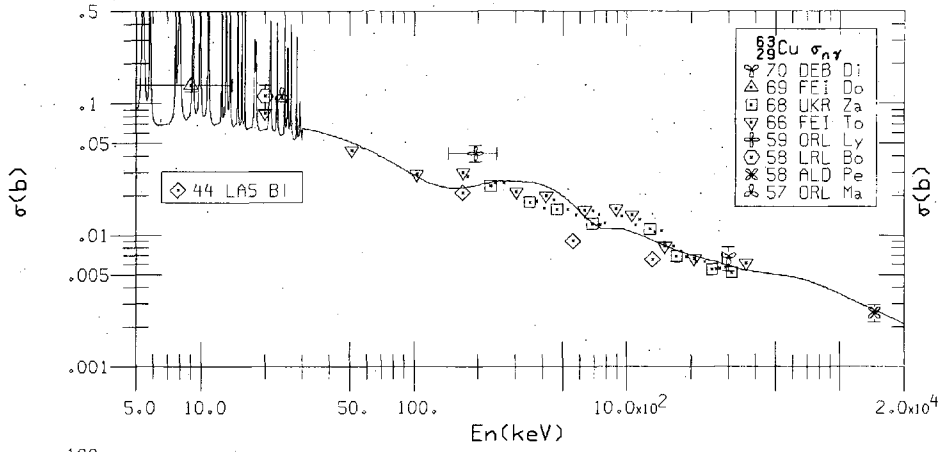
$\sigma_{n\gamma}$ [6411]

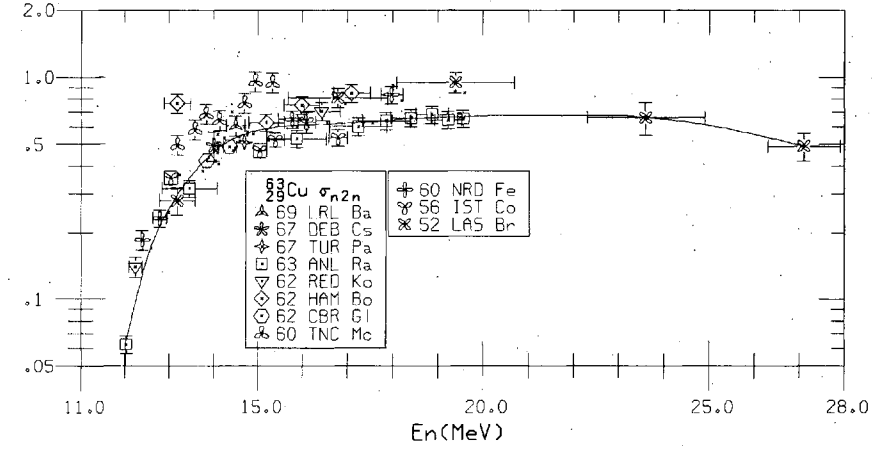
σ_{n2n}

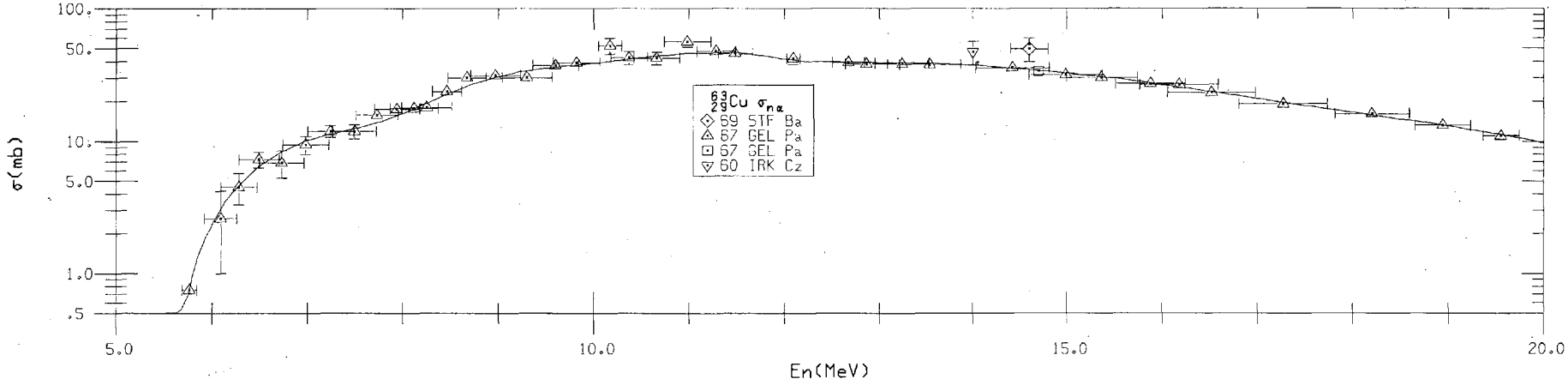
$\sigma_{n\alpha}$ [6411]



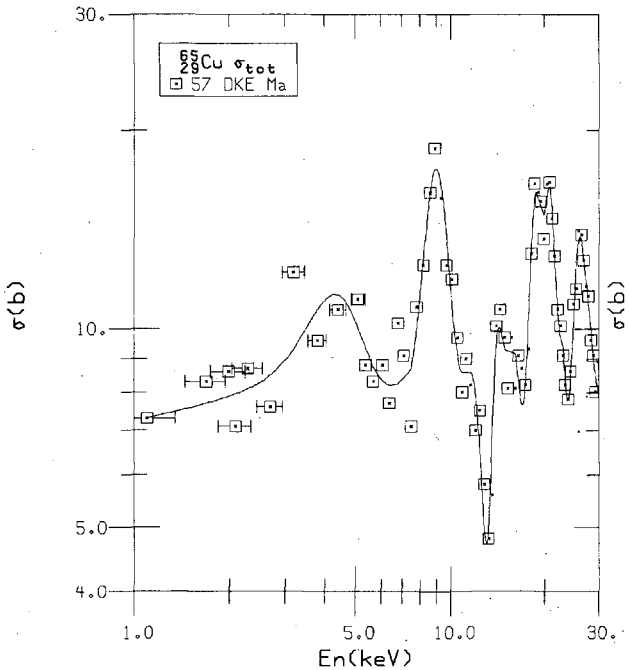


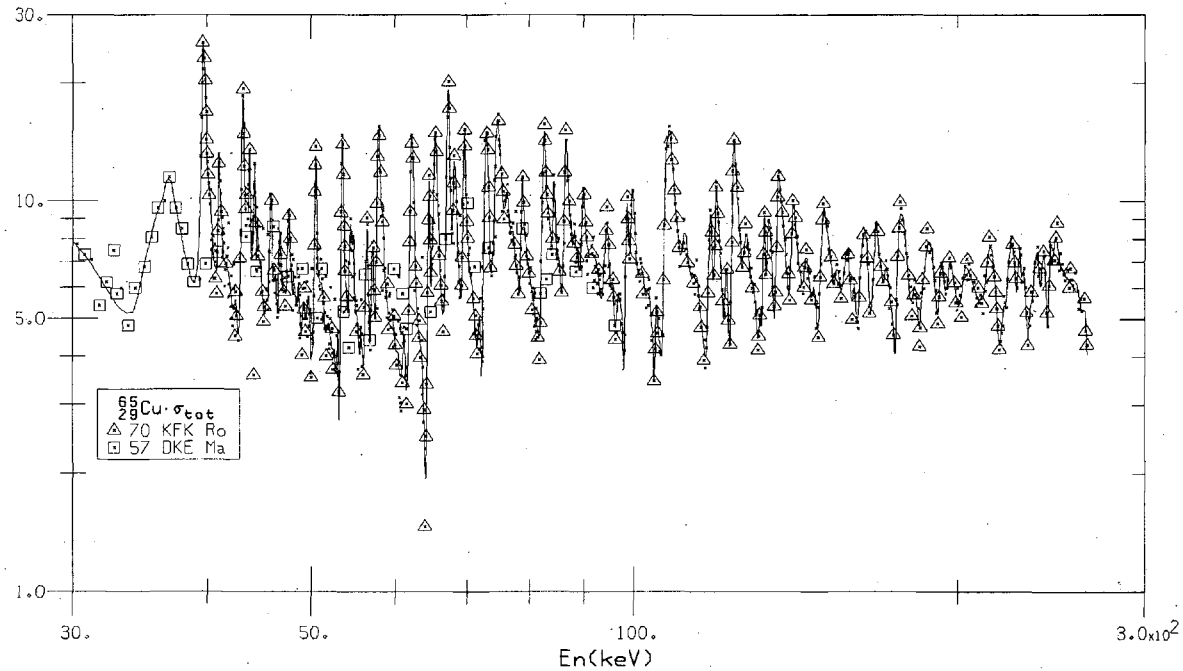


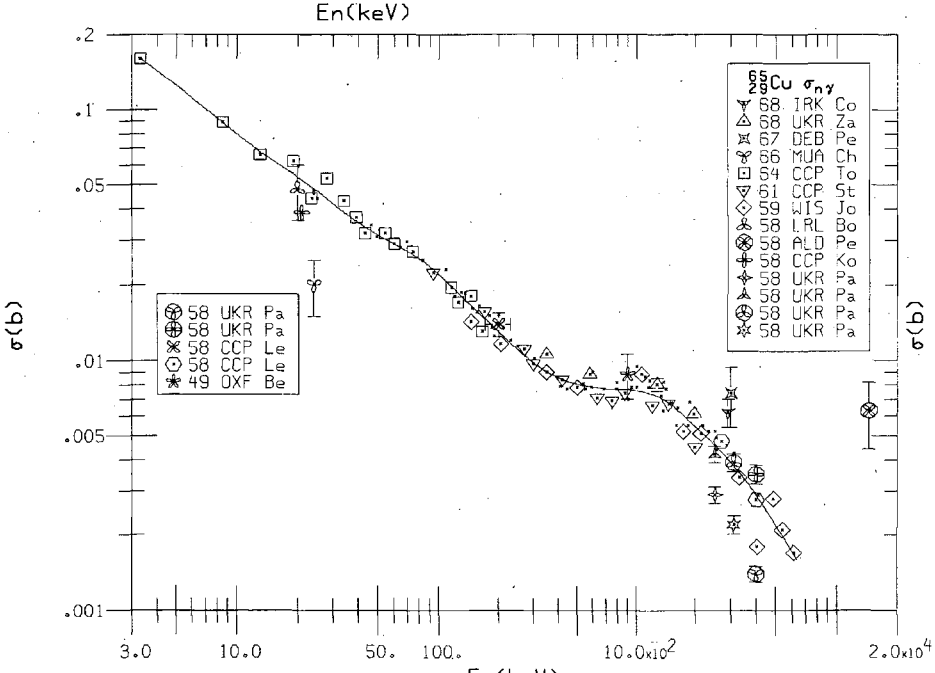


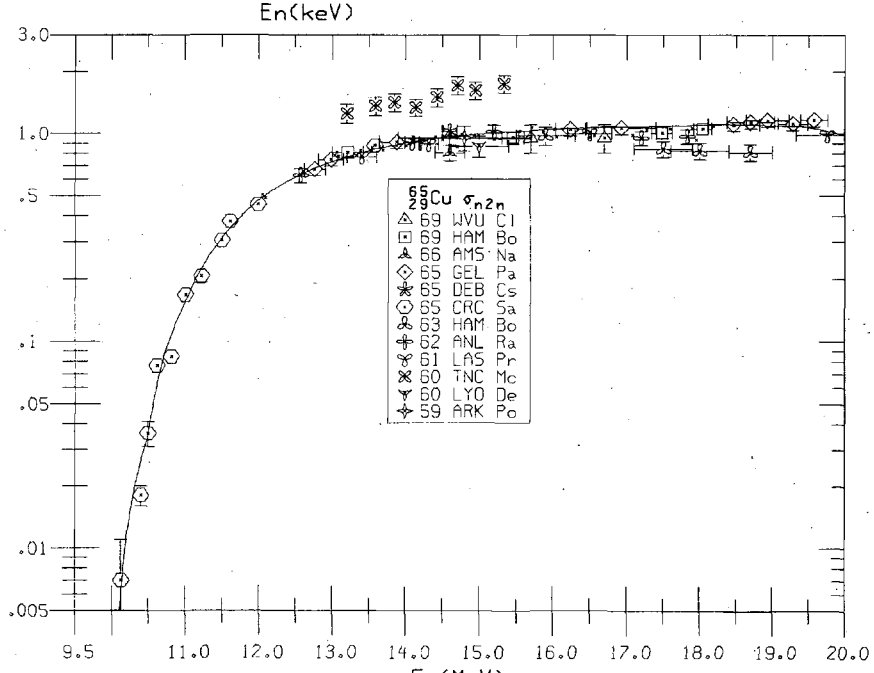


$^{65}_{29}$Cu
σ_{tot}
$\sigma_{n\gamma}$
σ_{n2n}
[6412]







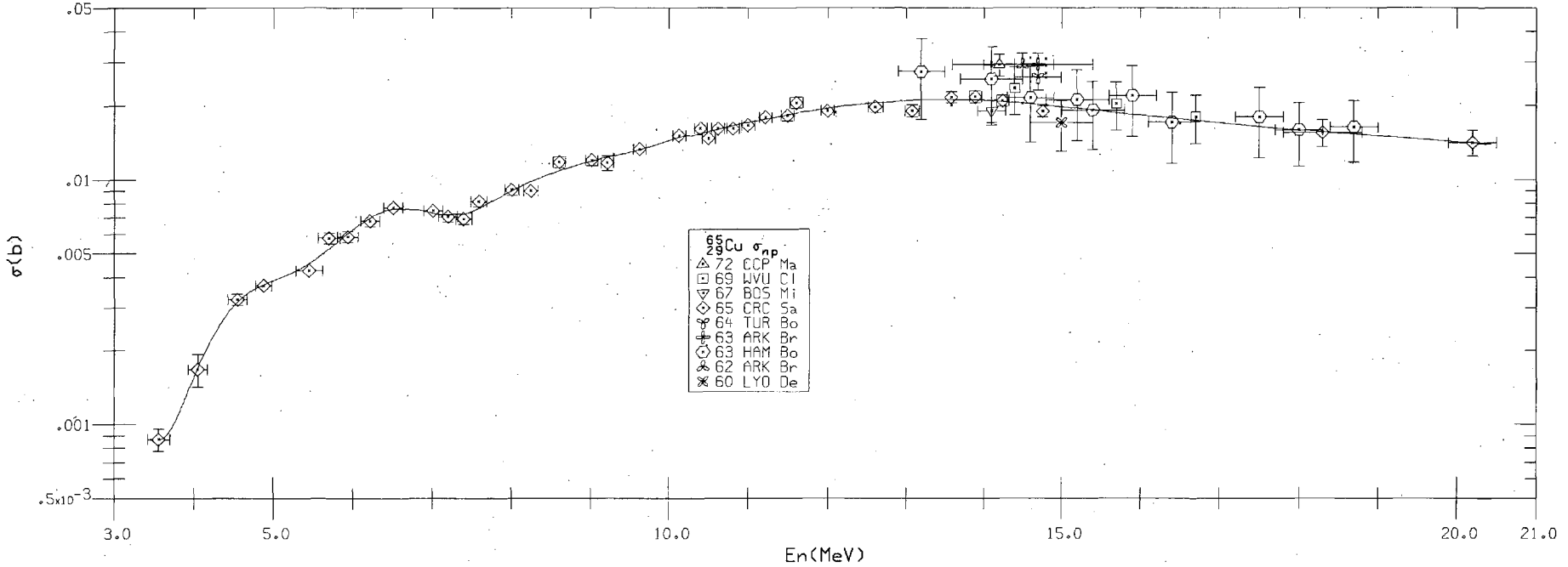


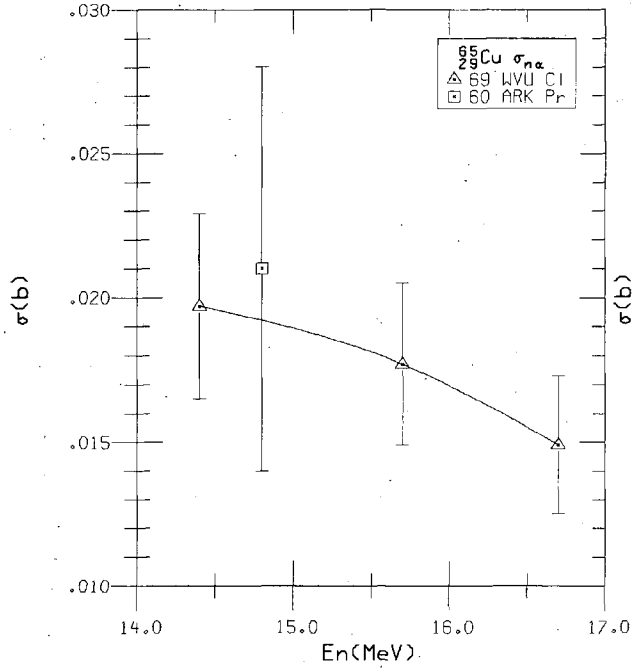
$^{65}_{29}Cu$

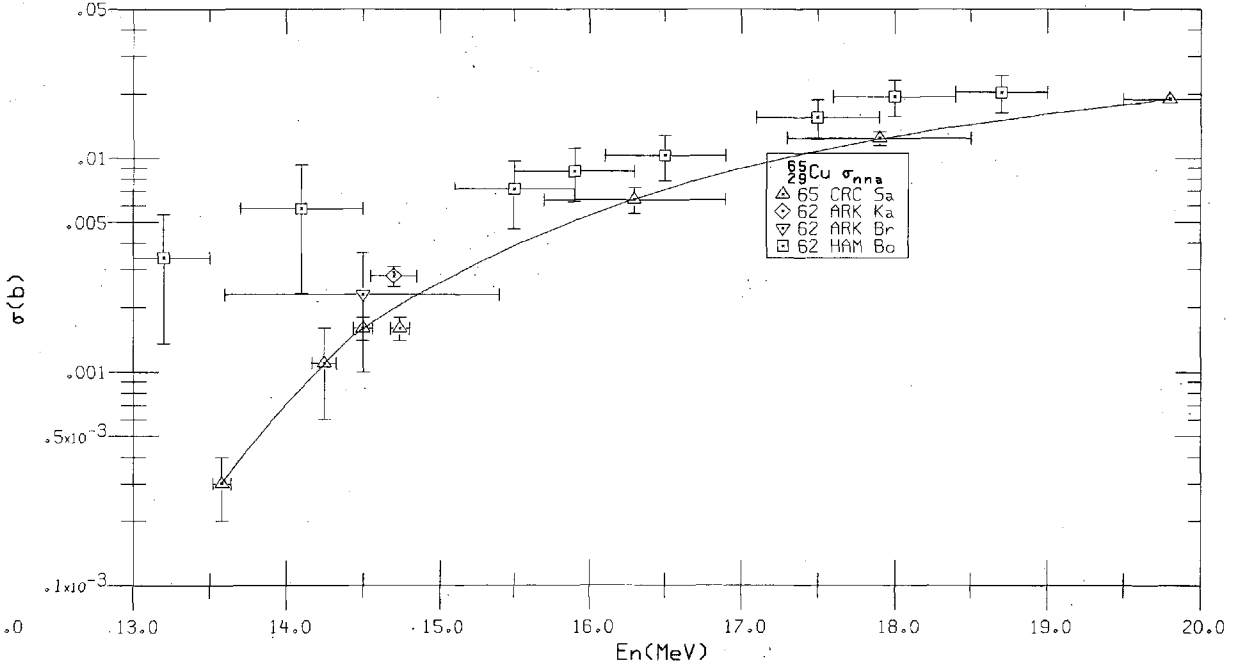
σ_{np}

$\sigma_{n\alpha}$

σ_{nna}







Yr	Lab	Author	Reference	Points	Range	Standard
			$_{29}Cu$ σ_{tot}			
74	MNA	Bubb,et.al.	CJP,52,648,74	5	22.9 MeV to 44.2 MeV	
74	MNA	Bubb,et.al.	CJP,52,648,74	5	21.0 MeV to 44.2 MeV	
73	EDG	Galloway,et.al.	NP/A,212,182,73	1	3.390 b at 3.000 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	242	2.262 MeV to 14.8 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	4	12.00 GeV to 27.00 GeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	2.830 b at 14.7 MeV	
70	ANL	Whalen,et.al.	WHALEN,70	621	.102 MeV to 1.469 MeV	
70	STF	Lakin,et.al.	PL/B,31,677,70	1	1.331 b at 3800. MeV	
69	OAU	Robinson,et.al.	AJP,37,482,69	1	2.850 b at 15.0 MeV	abs
69	MHG	Parker,et.al.	UNIV-MI-3028-3-T,69	1	1.410 b at 5700. MeV	abs
69	ORL	Minor,et.al.	AJP,37,649,69	1	3.670 b at 8.940 MeV	abs
68	USA	Schneider,et.al.	NP/A,119,197,68	6	99.4 MeV to 151.9 MeV	abs
66	NRD	Albergotti+	NP,82,652,66	18	12.5 MeV to 14.5 MeV	abs
66	MUN	Knorr	EANDC(E)-66,29,66	11	.0003 eV to .0021 eV	^{197}Au $\sigma_{n\gamma}$
66	KIL	Drittler	66PARIS,1,155,,66	1978	1.492 eV to 2.827 keV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	8.210 b at 1.440 eV	
65	DKE	Seth	PL,16,306,65	100	6.000 keV to .640 MeV	abs
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	3869	.200 keV to .105 MeV	abs
62	DUB	Pantuev,et.al.	ZET,42,909,62	3	1400. MeV to 8300. MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	1.158 b at 5000. MeV	
61	HAR	Bowen,et.al.	NP,22,640,61	64	15.8 MeV to 117.5 MeV	C
60	LRL	Peterson,et.al.	PR,120,521,60	9	17.4 MeV to 29.0 MeV	
58	LVN	Deconninck,et.al	BCS,44,851,58	8	2.100 MeV to 3.200 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	20	13.7 MeV to 14.8 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
58	COL	Weil,et.al.	PR,110,466,58	37	4.030 MeV to 8.080 MeV	
58	ANL	Cote,et.al.	PR,111,288,58	253	.652 keV to 30.5 keV	abs
58	HAN	Seppi,et.al.	HW-55879,3,58	11	.0025 eV to .100 eV	Cu σ_{tot}
58	BNL	Seth,et.al.	PR,110,692,58	42	8.470 eV to 1.456 keV	
57	DKE	Newson,et.al.	PR,105,198,57	112	1.300 keV to 52.0 keV	
55	BNL	Coor,et.al.	PR,98,1369,55	1	1.390 b at 1400. MeV	
55	BNL	Palevsky,et.al.	PR,99,611(B11),55	77	.0003 eV to .0062 eV	
55	HRV	Culler,et.al.	PR,99,740,55	12	61.0 MeV to 106.8 MeV	
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	1.250 b at 590.0 MeV	
54	KAP	Gaerttner,et.al.	KAPL-1084,47,54	40	.210 keV to 8.900 keV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	2.810 b at 47.5 MeV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	2.265 b at 88.0 MeV	abs
53	ANL	Palmer	BOLLINGER,53	143	52.8 eV to .361 keV	
53	LAS	Day,et.al.	PR,92,358,53	1	2.560 b at 19.0 MeV	
53	HAR	Taylor,et.al.	PM,44,95,53	10	30.0 MeV to 153.0 MeV	
52	WIS	Miller,et.al.	PR,88,83,52	14	1.000 MeV to 3.200 MeV	
51	BRK	De Juren,et.al.	PR,81,919,51	7	115.0 MeV to 240.0 MeV	
51	UI	Good,et.al.	PR,59,917(19),51	1	2.780 b at .900 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.540 b at 42.0 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	2.000 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	1.190 b at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	1.145 b at 270.0 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
48	COL	Havens Jr,et.al.	PR,73,963,48	72	.0067 eV to 94.0 eV	
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
45	HRV	Scherr	PR,68,240,45	1	2.500 b at 25.0 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{29}Cu$ σ_{el}			
69	AE	Holmqvist,et.al.	AE-366,69	1	2.350 b at 1.460 MeV	C σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	9	2.000 MeV to 8.050 MeV	^{1}H σ_{el}
67	IFU	Korzh,et.al.	UFZ,12,(9),1571,67	1	1.973 b at 1.500 MeV	abs
67	STD	Antolkovic,et.al	AF,33,297,67	1	2.350 b at 1.460 MeV	C
67	STD	Antolkovic,et.al	AF,33,297,67	6	2.000 MeV to 4.560 MeV	H
65	ORL	Rayburn,et.al.	NP,61,381,65	1	7.740 b at 1.440 eV	
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.100 b at 2.000 MeV	
64	ANL	Smith,et.al.	PR/B,135,76,64	26	.300 MeV to 1.500 MeV	C
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.810 b at 3.660 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	14	56.0 keV to .104 MeV	C
58	LAS	Coon,et.al.	PR,111,250,58	1	1.450 b at 14.5 MeV	
57	CCP	Popov	AE,3,498,57	1	1.880 b at 2.900 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.900 b at 1.000 MeV	
			$_{29}Cu$ σ_{inl}			
69	IFU	Prokopesc,et.al.	UFZ,14,(2),330,69	1	1.080 b at 2.800 MeV	
63	LAS	Thomson	PR,129,1649,63	2	5.000 MeV to 7.000 MeV	
63	CCP	Glazkov	AE,15,416,63	3	.800 MeV to 1.200 MeV	
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	.626 b at 8300. MeV	
58	LAS	Coon,et.al.	PR,111,250,58	1	72.0 mb at 14.5 MeV	
57	CCP	Popov	AE,3,498,57	1	1.400 b at 2.900 MeV	
56	HAR	Morrison	56AMSTERDM,,1135,56	3	1.200 MeV to 2.000 MeV	
			$_{29}Cu$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	60.0 keV to 1.450 MeV	C
			$_{29}Cu$ σ_{non}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
67	STD	Antolkovic,et.al	AF,33,297,67	6	2.000 MeV to 4.560 MeV	
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	1.460 b at 14.8 MeV	abs
66	TUD	Oehler,et.al.	KE,9,95,66	1	.180 b at .960 MeV	
66	CCP	Koroleva,et.al.	AE,20,431,66	1	59.0 mb at 24.0 keV	
65	CCP	Degtyarev	AE,19,456,65	1	1.470 b at 8.100 MeV	abs
63	CLA	Haas,et.al.	PR,132,1211,63	1	1.440 b at 14.0 MeV	
63	BRC	Didier,et.al.	EANDC(E)-49,85,63	1	1.480 b at 14.7 MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	.586 b at 5000. MeV	
61	CCP	Degtyarev+	AE,11,397,61	2	16.1 MeV to 19.7 MeV	abs
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.570 b at 3.660 MeV	
59	RIC	Bonner,et.al.	PR,113,1088,59	6	8.200 MeV to 20.0 MeV	abs
58	LRL	Ball,et.al.	PR,110,1392,58	6	7.200 MeV to 14.0 MeV	abs
58	LRL	Mac Gregor+	PR,111,1155,58	3	21.0 MeV to 29.2 MeV	abs
58	CCP	Lebedev,et.al.	AE,5,522,58	1	1.500 b at 14.0 MeV	abs
57	LRL	Mac Gregor+	PR,108,726,57	1	1.490 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.400 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	2	2.500 MeV to 7.000 MeV	
56	OXF	Voss,et.al.	PRS/A,236,41,56	4	55.0 MeV to 140.0 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.480 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	1	.200 b at 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	1.580 b at 2.500 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.420 b at 14.1 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	2	3.300 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.300 b at 1.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
52	LAS	Phillips,et.al.	PR,88,600,52	1	1.510 b at 14.1 MeV	
			$_{29}$Cu $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.770 mb at 14.1 MeV	
63	LEB	Kapchigashev+	AE,15,120,63	66	19.0 eV to 48.0 keV	Cu $\sigma_{n\gamma}$
63	CCP	Stavisskii+	AE,15,323,63	16	19.0 keV to 1.000 MeV	^{235}U σ_{nf}
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	4.140 b at thermal	B $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	ORL	Schmitt,et.al.	NP,20,202,60	1	42.0 mb at 24.0 keV	abs
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	51.0 mb at .200 MeV	
57	SRL	Wade	OP-207,57	1	3.790 b at thermal	Fe $\sigma_{n\gamma}$
			$_{29}$Cu σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
			$_{29}$Cu σ_{n2n}			
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	.556 b at .141 MeV	^{238}U σ_{nf}
58	LRL	Ashby,et.al.	PR,111,616,58	1	.740 b at 14.1 MeV	
			$_{29}$Cu σ_{np}			
59	CIS	Colli,et.al.	NC,13,730,59	1	46.0 mb at 14.0 MeV	
			$_{29}$Cu σ_{nnp}			
59	HAR	Allan	NP,10,348,59	1	.128 b at 14.0 MeV	
			$_{29}$Cu σ_{pem}			
59	HAR	Allan	NP,10,348,59	1	.246 b at 14.0 MeV	
			$_{29}$Cu σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	.320 mb at 14.7 MeV	^{66}Zn σ_{n2n}
			$^{63}_{29}$Cu σ_{tot}			
70	KFK	Rohr	MUELLER,70	880	39.8 keV to .143 MeV	abs
57	DKE	Marshak,et.al.	PR,106,110,57	165	1.100 keV to 39.4 MeV	
			$^{63}_{29}$Cu σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.650 b at 15.1 MeV	^{12}C σ_{ing}

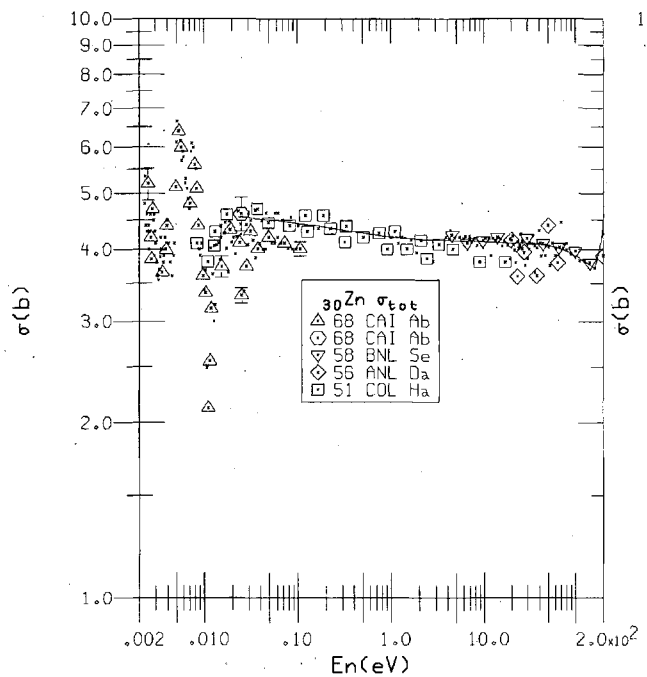
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{63}_{29}$Cu $\sigma_{n\gamma}$			
70	DEB	Diksic,et.al.	AHP,28,257,70	1	6.700 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
69	FEI	Dovbenko,et.al.	INDC-260,11,69	5	9.000 keV to .303 MeV	^{235}U
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	.110 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
68	UKR	Zaikin,et.al.	AE,25,526,68	18	.230 MeV to 3.110 MeV	^{63}Cu $\sigma_{n\gamma}$
67	MOL	Pinoncelli,et.al	EANDC(E)-76,107,67	1	4.030 b at thermal	^{197}Au $\sigma_{n\gamma}$
66	FEI	Tolstikov,et.al.	AE,21,(1),45,66	27	9.000 keV to 3.628 MeV	^{235}U σ_{nf}
59	LVN	Vervier	NP,9,569,59	1	.105 b at 25.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	42.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.114 b at 20.0 keV	
58	ALD	Perkin,et.al.	PPS,72,505,58	1	2.560 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.116 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
44	LAS	Blair,et.al.	LAMS-95,44	6	.170 MeV to 1.320 MeV	
			$^{63}_{29}$Cu σ_{n2n}			
69	BIA	Crumpton,et.al.	JIN,31,1,69	2	14.7 MeV to 14.8 MeV	abs
69	LRL	Barrall,et.al.	SUHP-69-2,69	1	.608 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.495 b at 14.0 MeV	^{63}Cu σ_{n2n}
67	BOS	Chatterjee,et.al	BARC-305,30,67	1	.509 b at 14.8 MeV	abs
67	TUR	Pasquarelli	NP/A,93,218,67	1	.511 b at 14.7 MeV	
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	.568 b at 14.8 MeV	
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	.548 b at 14.8 MeV	abs
65	DEB	Csikai	65ANTWERP,,537,65	1	.541 b at 14.6 MeV	^{63}Cu σ_{n2n}
64	BOR	Letessier,et.al.	CR,259,4620,64	1	.478 b at 14.1 MeV	abs
63	ANL	Rayburn	PR,130,731,63	18	12.1 MeV to 19.6 MeV	
62	RED	Koehler,et.al.	RR-TR-62-1,62	4	12.3 MeV to 18.2 MeV	^{63}Cu σ_{n2n}
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	.409 b at 14.1 MeV	abs
62	HAM	Bormann,et.al.	ZP,166,477,62	8	13.2 MeV to 19.6 MeV	^{56}Fe σ_{np}
62	CBR	Glover,et.al.	NP,29,309,62	5	13.9 MeV to 14.8 MeV	
62	CBR	Glover,et.al.	NP,29,309,62	1	.570 b at 14.8 MeV	
61	KON	Sakisaka,et.al.	JPJ,16,1869,61	1	.458 b at 14.1 MeV	
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	.490 b at 14.1 MeV	abs
60	TNC	Mc Crary,et.al.	BAP,5,246(HAS),60	8	13.2 MeV to 15.3 MeV	abs
60	BET	De Juren,et.al.	PR,120,901,60	1	.530 b at 14.6 MeV	
60	NRD	Ferguson,et.al.	PR,118,228,60	7	12.4 MeV to 18.0 MeV	abs
57	KON	Yasumi	JPJ,12,443,57	1	.556 b at 14.1 MeV	
56	IST	Cohen,et.al.	NP,1,73,56	12	13.1 MeV to 17.5 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.482 b at 14.5 MeV	
52	LAS	Brolley Jr+	PR,88,618,52	6	13.2 MeV to 27.1 MeV	^{65}Cu $\sigma_{n\gamma}$
52	LAS	Forbes	PR,88,1309,52	1	.510 b at 14.1 MeV	
			$^{63}_{29}$Cu σ_{np}			
61	HAR	Allan	NP,24,274,61	1	.105 b at 14.0 MeV	^{54}Fe σ_{np}
60	GLS	Storey,et.al.	PPS,75,526,60	1	.149 b at 14.1 MeV	

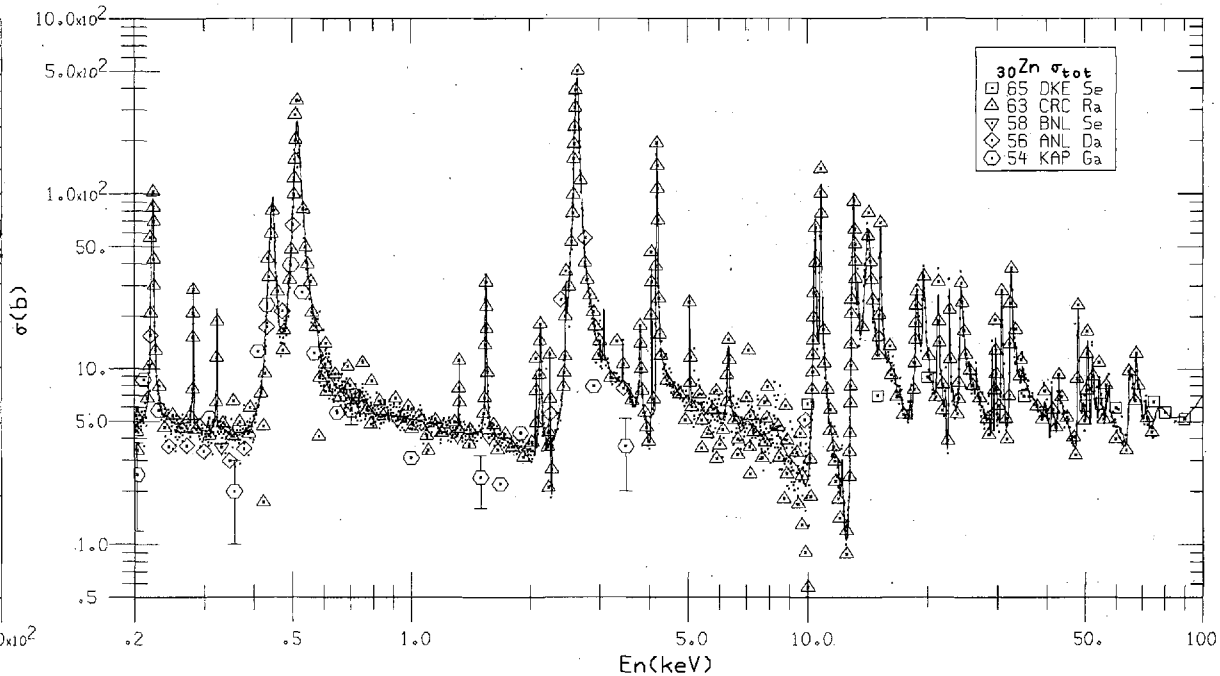
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{63}_{29}$Cu σ_{nnp}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.150 b at 15.1 MeV	^{12}C σ_{ing}
61	HAR	Allan	NP,24,274,61	1	.152 b at 14.0 MeV	^{54}Fe σ_{np}
59	CIS	Colli,et.al.	NC,13,730,59	1	.250 b at 14.0 MeV	
57	HAR	Allan	PPS/A,70,195,57	1	.130 b at 14.0 MeV	
			$^{63}_{29}$Cu σ_{pem}			
57	HAR	Allan	PPS/A,70,195,57	1	.250 b at 14.0 MeV	
			$^{63}_{29}$Cu σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.113 mb at 14.0 MeV	
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	80.0 muB at 14.5 MeV	^{65}Cu σ_{n2n}
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	3.200 mb at 14.1 MeV	abs
			$^{63}_{29}$Cu $\sigma_{n\alpha}$			
72	CCP	Maslov,et.al.	YK-9,50,72	1	53.5 mb at 14.6 MeV	^{65}Cu σ_{n2n}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	49.5 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
67	GEL	Paulsen,et.al.	NUK,10,91,67	40	5.760 MeV to 19.5 MeV	
67	GEL	Paulsen	ZP,205,226,67	2	8.190 MeV to 14.7 MeV	
60	IRK	Czapp,et.al.	OSA,97,13,60	1	47.0 mb at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{65}_{29}$Cu σ_{tot}			
70	KFK	Rohr	MUELLER,70	1152	39.5 keV to .265 MeV	abs
57	DKE	Marshak,et.al.	PR,106,110,57	165	1.100 keV to 97.2 keV	
			$^{65}_{29}$Cu σ_{el}			
67	CSE	Rodgers,et.al.	COO-1573-33,2,67	1	2.180 b at 2.330 MeV	C
			$^{65}_{29}$Cu σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.380 b at 15.1 MeV	^{12}C σ_{ing}
			$^{65}_{29}$Cu $\sigma_{n\gamma}$			
68	IRK	Colditz,et.al.	OSA,105,236,68	1	6.200 mb at 2.900 MeV	^{115}In σ_{inl}
68	UKR	Zaikin,et.al.	AE,25,526,68	21	.230 MeV to 3.110 MeV	^{65}Cu $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	7.400 mb at 3.000 MeV	^{27}Al σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	20.0 mb at 24.0 keV	
64	CCP	Tolstikov,et.al.	AE,17,505,64	29	3.300 keV to .210 MeV	^{65}Cu $\sigma_{n\gamma}$
61	CCP	Stavisskii+	AE,10,508,61	27	24.0 keV to 2.000 MeV	^{235}U σ_{nf}
59	LVN	Vervier	NP,9,569,59	1	44.0 mb at 25.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	14.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	26	.145 MeV to 6.150 MeV	
58	LRL	Booth,et.al.	PR,112,226,58	1	48.0 mb at 20.0 keV	
58	ALD	Perkin,et.al.	PPS,72,505,58	1	6.300 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	38.6 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18.58	1	2.900 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18.58	1	4.200 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18.58	1	3.900 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18.58	1	2.200 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18.58	1	1.400 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18.58	1	3.500 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50.58	3	.200 MeV to 4.000 MeV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	46.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$

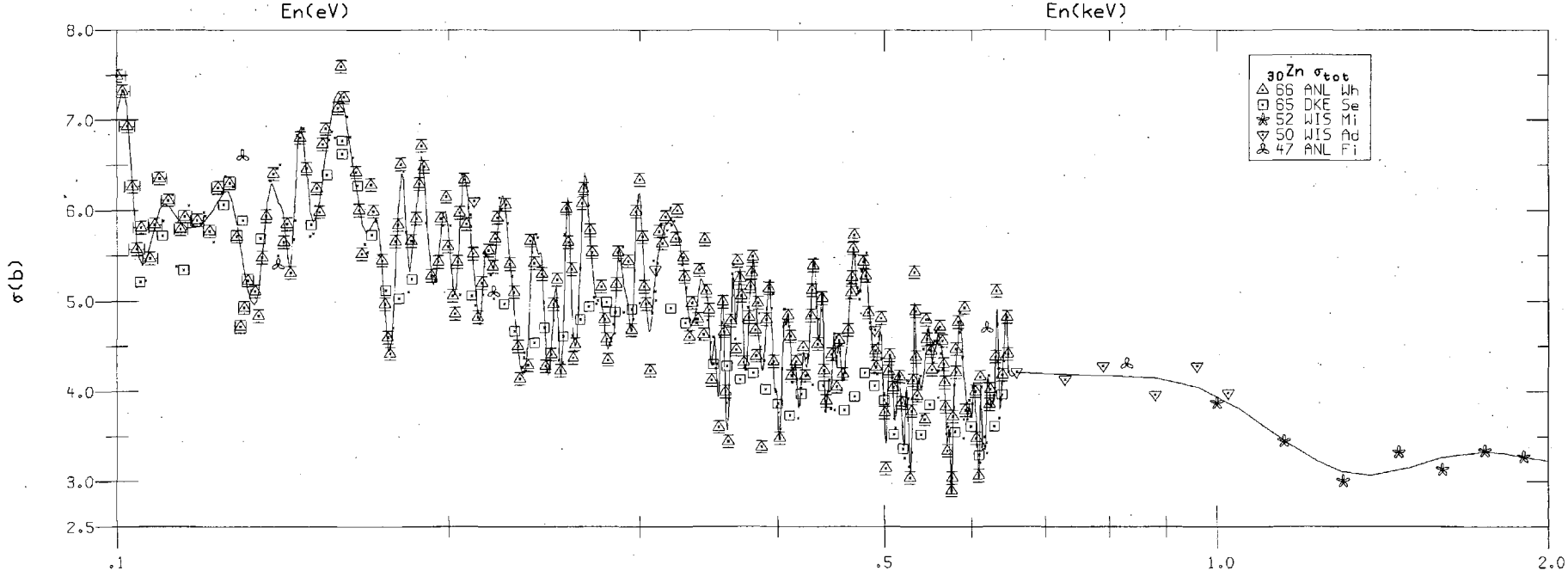
cont

Yr	Lab	Author	Reference	Points	Range	Standard
49	OXF	Beghian,et.al.	NAT,163,366,49	1	8.800 mb at .900 MeV	
			$^{65}_{29}$Cu σ_{n2n}			
73	LOU	Aramirowicz+	INR-1464,14,73	1	.975 b at 14.6 MeV	^{63}Cu σ_{n2n}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.897 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	BIA	Crumpton,et.al.	JIN,31,1,69	1	.953 b at 14.7 MeV	abs
69	WVU	Clator	CLATOR,69	3	14.4 MeV to 16.7 MeV	
69	HAM	Bormann,et.al.	NP/A,130,195,69	8	13.2 MeV to 18.0 MeV	^{1}H σ_{el}
68	MUN	Vonach,et.al.	68WASH,2,885,68	1	.866 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.810 b at 13.1 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel,et.al.	JNE/AB,20,475,66	1	.909 b at 14.2 MeV	^{56}Fe σ_{np}
66	AMS	Nagel	NAGEL,66	1	.808 b at 14.6 MeV	
66	AMS	Nagel	NAGEL,66	2	14.2 MeV to 14.2 MeV	
65	AMS	Nagel,et.al.	PHY,31,1091,65	1	.878 b at 14.6 MeV	^{56}Fe σ_{np}
65	AMS	Nagel,et.al.	PHY,31,1091,65	1	.937 b at 14.2 MeV	^{56}Fe σ_{np}
65	GEL	Paulsen,et.al.	NUK,7,117,65	27	12.6 MeV to 19.6 MeV	^{1}H σ_{el}
65	DEB	Csikai	65ANTWERP,,537,65	1	1.026 b at 14.6 MeV	^{63}Cu σ_{n2n}
65	CRC	Santry,et.al.	CJP,44,1183,65	19	10.1 MeV to 14.7 MeV	^{32}S
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	1.000 b at 14.7 MeV	
63	HAM	Bormann,et.al.	ZP,174,1,63	9	13.2 MeV to 18.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	ANL	Rayburn	62PADUA,,322,62	9	12.6 MeV to 17.8 MeV	
62	CBR	Glover,et.al.	NP,29,309,62	1	.995 b at 14.8 MeV	
61	ANL	Rayburn	PR,122,168,61	1	.959 b at 14.4 MeV	^{63}Cu σ_{n2n}
61	ANL	Rayburn	PR,122,168,61	1	.964 b at 14.4 MeV	^{63}Cu σ_{n2n}
61	LAS	Prestwood,et.al.	PR,121,1438,61	16	12.1 MeV to 19.8 MeV	^{238}U
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	.940 b at 14.1 MeV	abs
60	TNC	Mc Crary,et.al.	BAP,5,246(HA5),60	8	13.2 MeV to 15.3 MeV	abs
60	LYO	Depraz,et.al.	JPR,21,377,60	1	.869 b at 15.0 MeV	^{63}Cu σ_{n2n}
60	CBR	Weigold	AUJ,13,186,60	1	1.030 b at 14.5 MeV	^{63}Cu σ_{n2n}
59	ARK	Poularikas,et.al	PR,115,989,59	1	.954 b at 14.8 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.085 b at 14.5 MeV	
52	LAS	Forbes	PR,88,1309,52	1	.970 b at 14.1 MeV	
			$^{65}_{29}$Cu σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	24.9 mb at 14.6 MeV	^{56}Fe σ_{np}
72	CCP	Maslov,et.al.	YK-9,50,72	2	14.2 MeV to 14.6 MeV	^{65}Cu σ_{n2n}
69	WVU	Clator	CLATOR,69	3	14.4 MeV to 16.7 MeV	
67	BOS	Mitra	67KANPUR,,367,67	2	14.1 MeV to 14.8 MeV	^{63}Cu σ_{n2n}
67	KAZ	Vinitskaya+	YF,5,1175,67	1	20.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
65	CRC	Santry,et.al.	CJP,44,1183,65	43	3.560 MeV to 20.2 MeV	^{32}S
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	26.0 mb at 14.7 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	29.3 mb at 14.7 MeV	^{65}Cu σ_{n2n}
63	HAM	Bormann,et.al.	ZP,174,1,63	10	13.2 MeV to 18.7 MeV	
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	29.3 mb at 14.5 MeV	^{65}Cu σ_{n2n}
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	29.0 mb at 14.1 MeV	abs
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	29.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	27.0 mb at 14.8 MeV	
60	LYO	Depraz,et.al.	JPR,21,377,60	1	17.0 mb at 15.0 MeV	^{63}Cu σ_{n2n}
60	GLS	Storey,et.al.	PPS,75,526,60	1	30.0 mb at 14.1 MeV	
59	ARK	Poularikas,et.al	PR,115,989,59	1	27.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
58	ARK	Scalan,et.al.	NP,9,334,58	1	31.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
52	LAS	Forbes	PR,88,1309,52	1	19.0 mb at 14.1 MeV	^{65}Cu

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{65}_{29}$Cu σ_{nnp}			
69	LND	Joensson,et.al.	AF,39,295,69	1	22.0 mb at 15.1 MeV	^{12}C σ_{ing}
57	HAR	Allan	PPS/A,70,195,57	1	40.0 mb at 14.0 MeV	
			$^{65}_{29}$Cu σ_{pem}			
57	HAR	Allan	PPS/A,70,195,57	1	40.0 mb at 14.0 MeV	
			$^{65}_{29}$Cu σ_{n3}			
61	ARK	Poularikas,et.al	ARKANSAS,7,61	1	2.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	4.000 mb at 14.8 MeV	
			$^{65}_{29}$Cu $\sigma_{n\alpha}$			
69	WVU	Clator	CLATOR,69	3	14.4 MeV to 16.7 MeV	
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	21.0 mb at 14.8 MeV	
			$^{65}_{29}$Cu σ_{nna}			
65	CRC	Santry,et.al.	CJP,44,1183,65	7	13.6 MeV to 19.8 MeV	^{32}S
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	2.900 mb at 14.7 MeV	^{65}Cu σ_{n2n}
62	ARK	Kantele,et.al.	NP,35,353,62	1	2.800 mb at 14.7 MeV	^{63}Cu σ_{n2n}
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	2.300 mb at 14.5 MeV	^{65}Cu σ_{n2n}
62	HAM	Bormann,et.al.	ZP,166,477,62	8	13.2 MeV to 18.7 MeV	^{56}Fe σ_{np}


$_{30}Zn$ σ_{tot}
68 CAI Ab
68 CAI Ab
58 BNL Se
56 ANL Da
51 COL Ha
σ(b)
En(eV)


$_{30}Zn$ σ_{tot}
65 DKE Se
63 CRC Ra
58 BNL Se
56 ANL Da
54 KAP Ga
σ(b)
En(keV)


$_{30}Zn$ σ_{tot}
66 ANL Wh
65 DKE Se
52 WIS Mi
50 WIS Ad
47 ANL Fi
σ(b)
En(MeV)

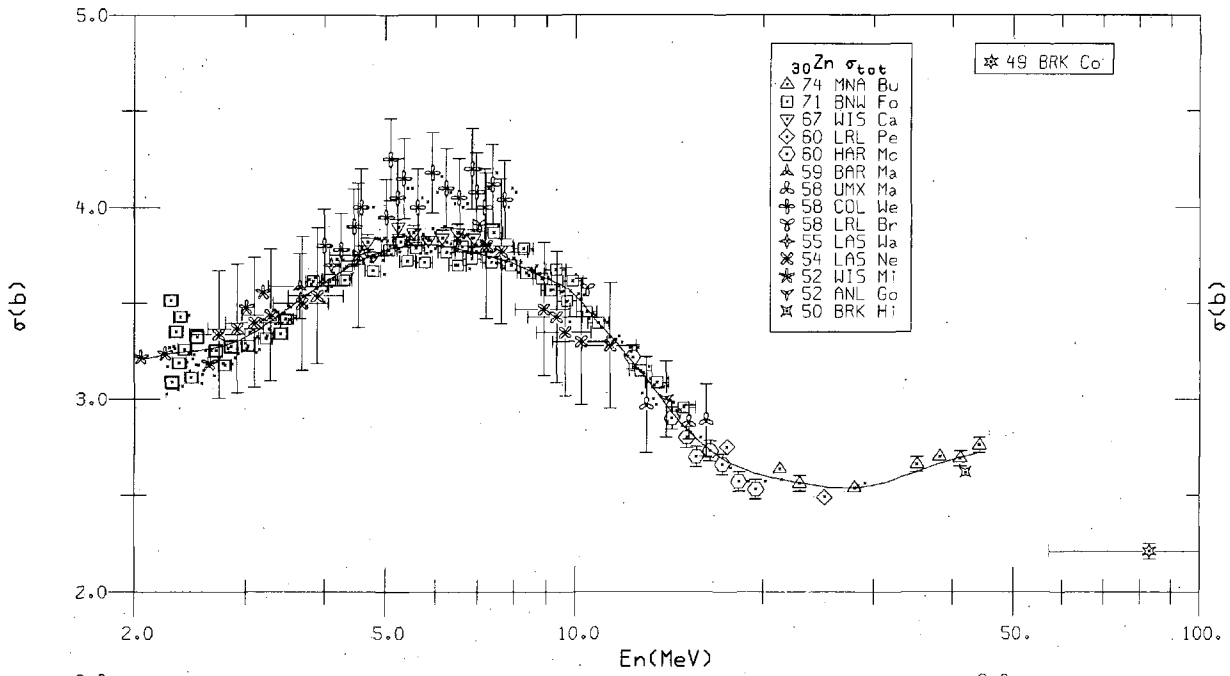
$_{30}Zn$

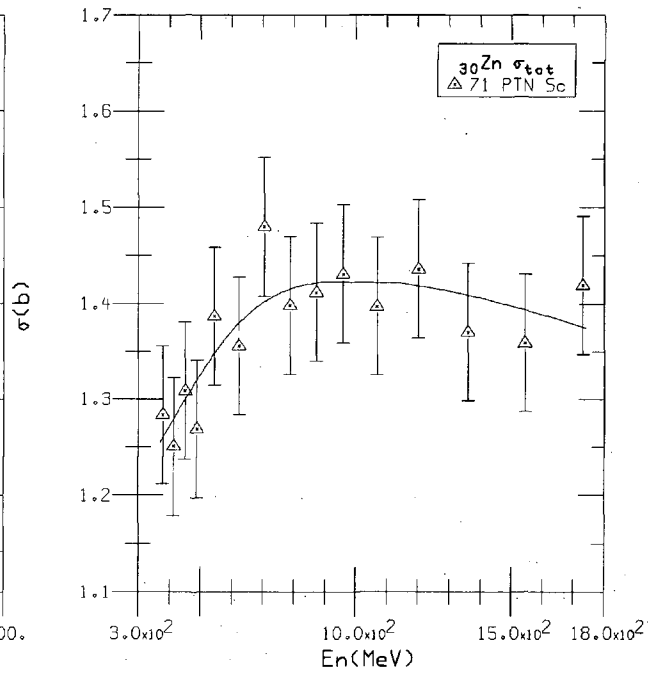
σ_{tot}

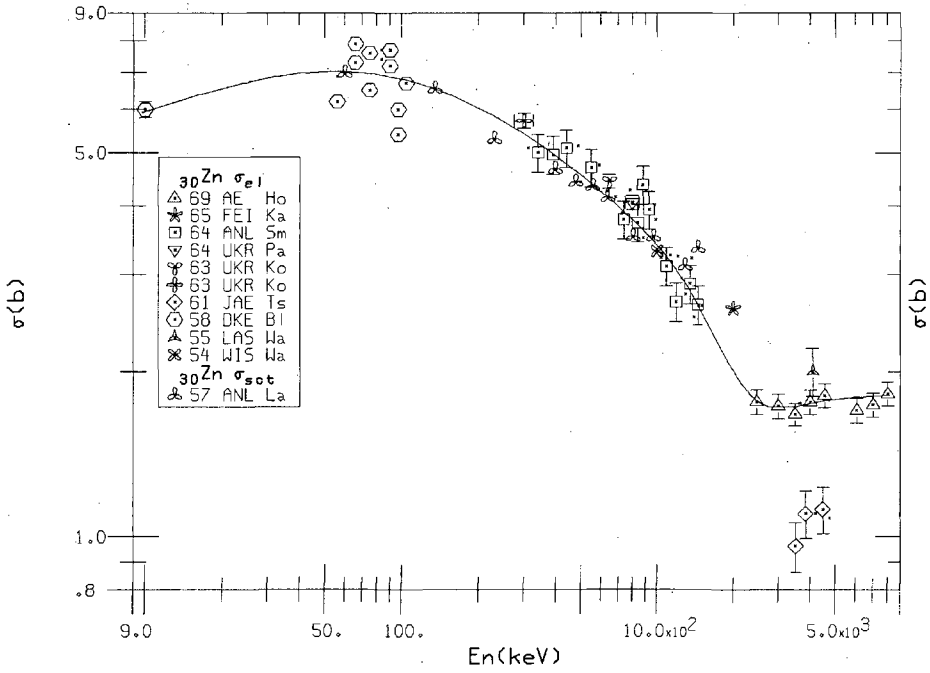
σ_{el}

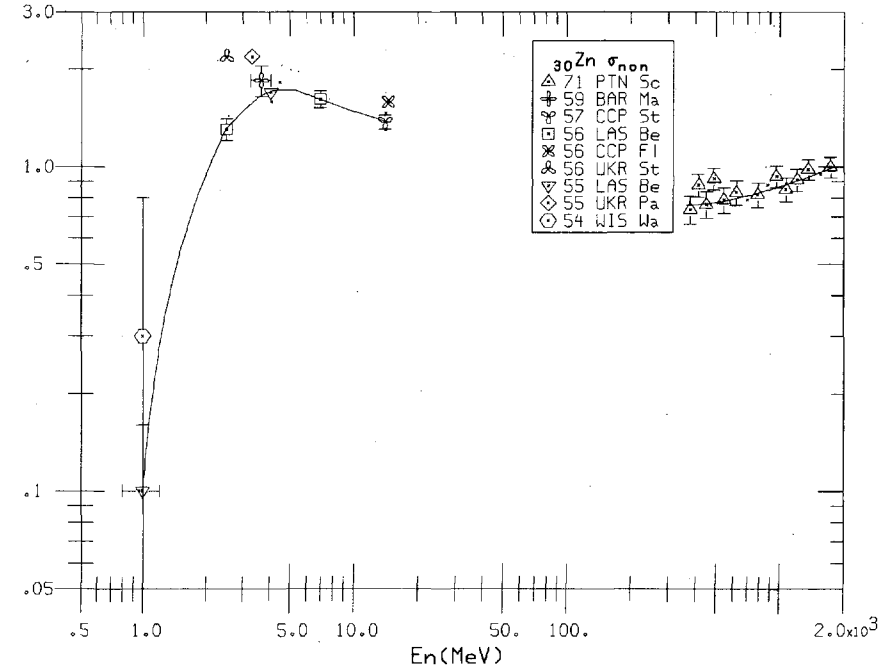
σ_{sct}

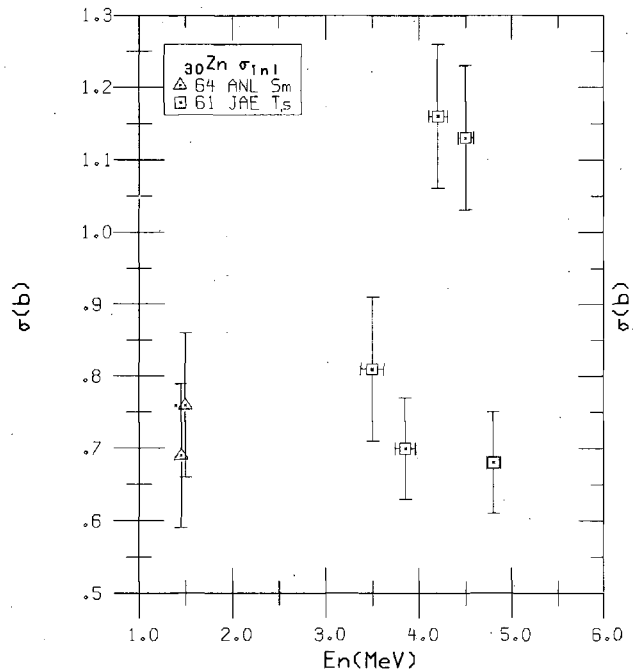
σ_{non}

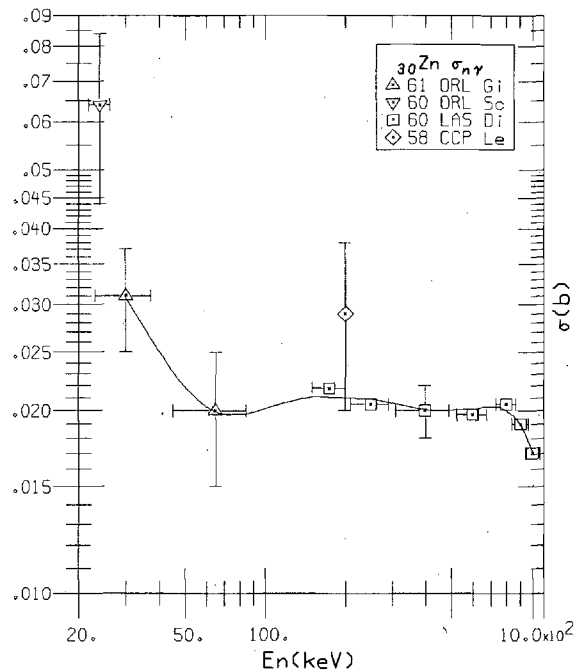


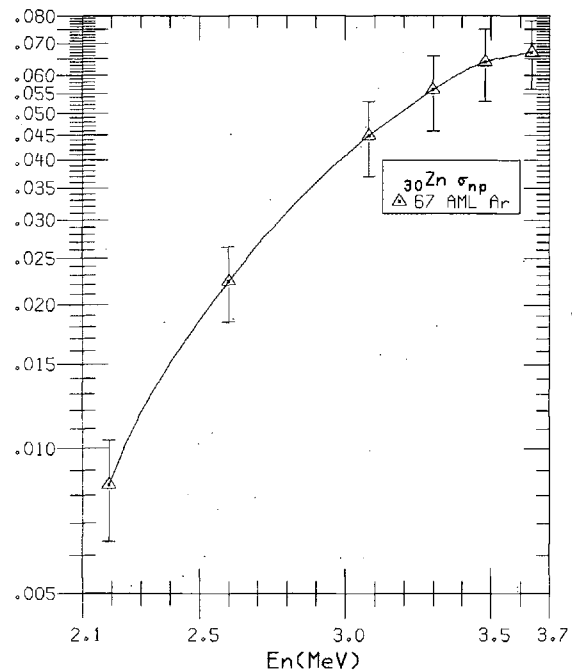


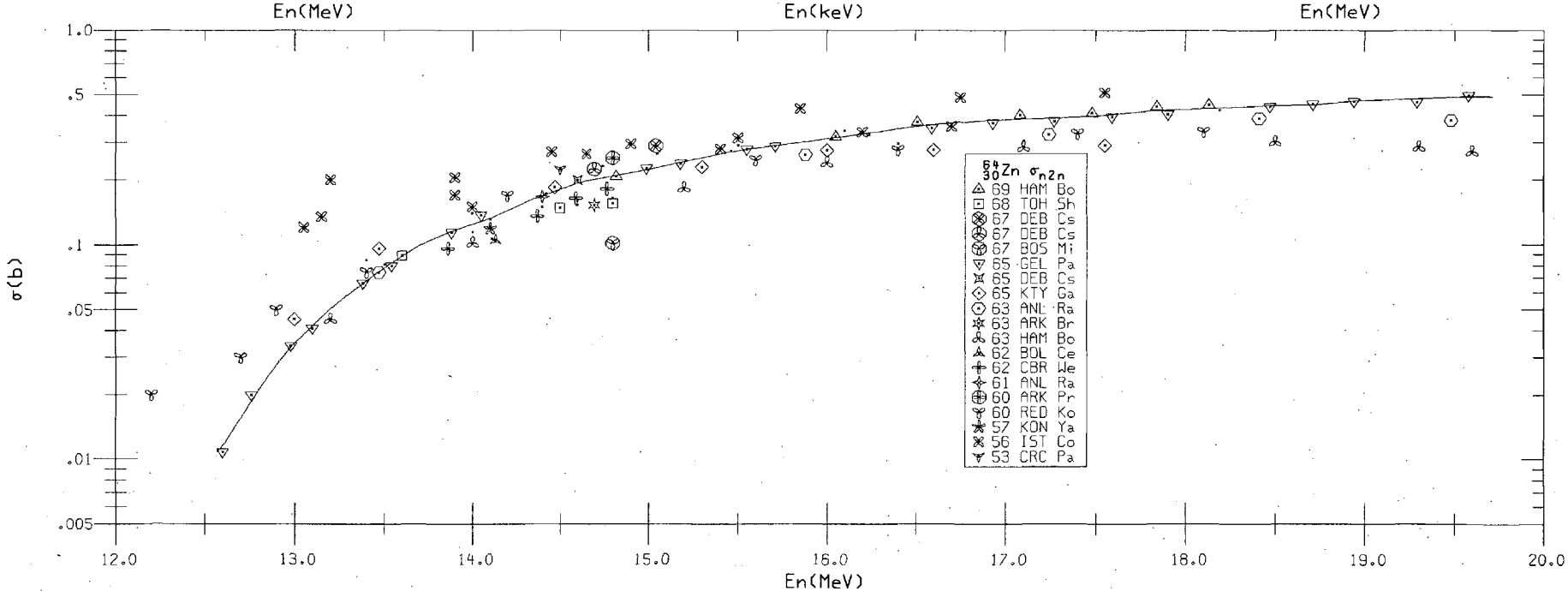





$_{30}Zn$ σ_{inl}
64 ANL Sm
61 JAE Ts
σ(b)
En(MeV)


$_{30}Zn$ $\sigma_{n\gamma}$
61 ORL Gi
60 ORL Sc
60 LAS Di
58 CCP Le
σ(b)
En(keV)

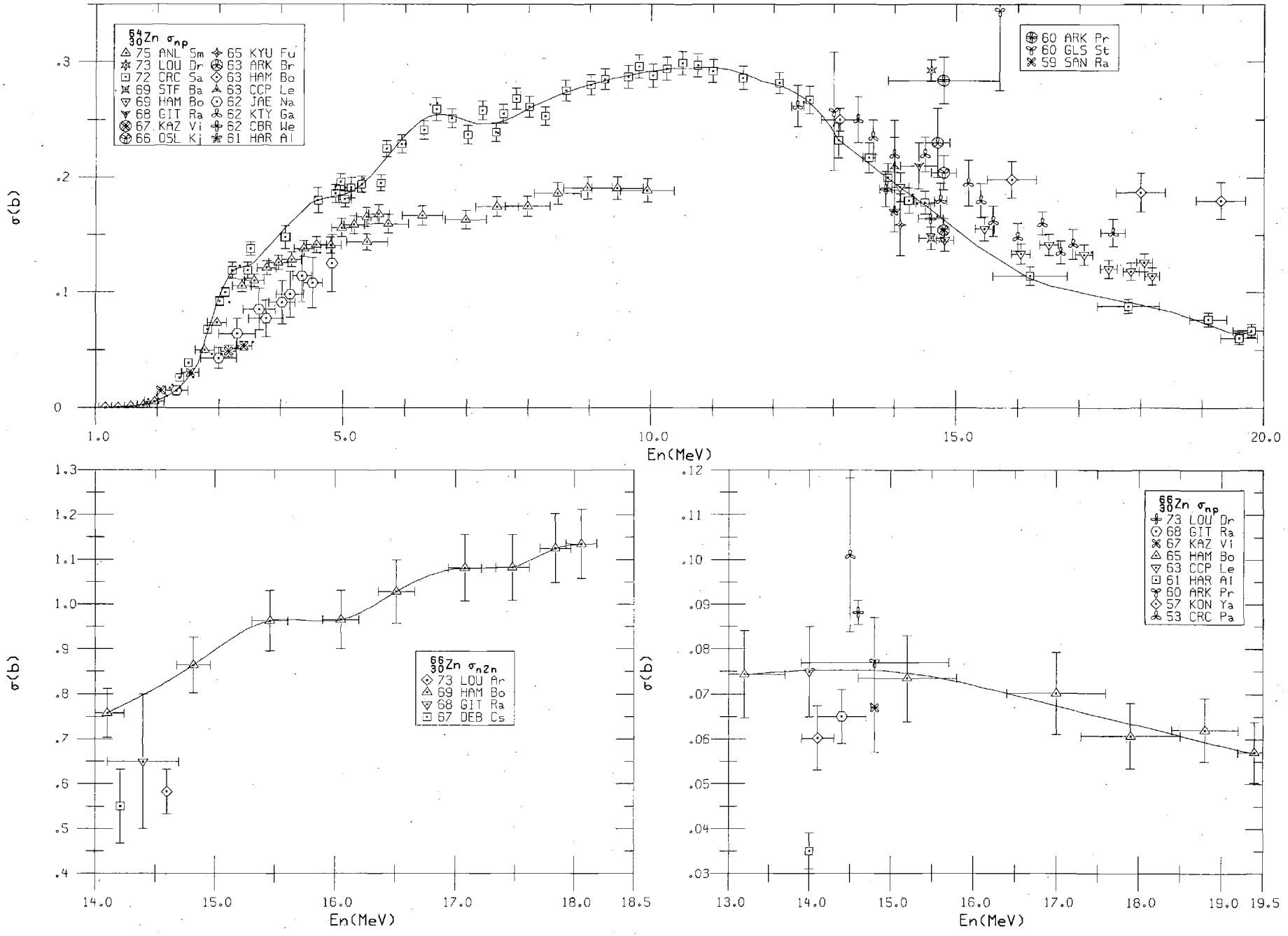

$_{30}Zn$ σ_{np}
67 AML Ar
σ(b)
En(MeV)


$^{64}_{30}Zn$ σ_{n2n}
69 HAM Bo
68 TOH Sh
67 DEB Cs
67 DEB Cs
67 BOS Mi
65 GEL Pa
65 DEB Cs
65 KTY Ga
63 ANL Ra
63 ARK Br
63 HAM Bo
62 BOL Ce
62 CBR We
61 ANL Ra
60 ARK Pr
60 RED Ko
57 KON Ya
56 IST Co
53 CRC Pa
σ(b)
En(MeV)

$^{64}_{30}Zn$ σ_{np}

$^{66}_{30}Zn$ σ_{n2n}

σ_{np}

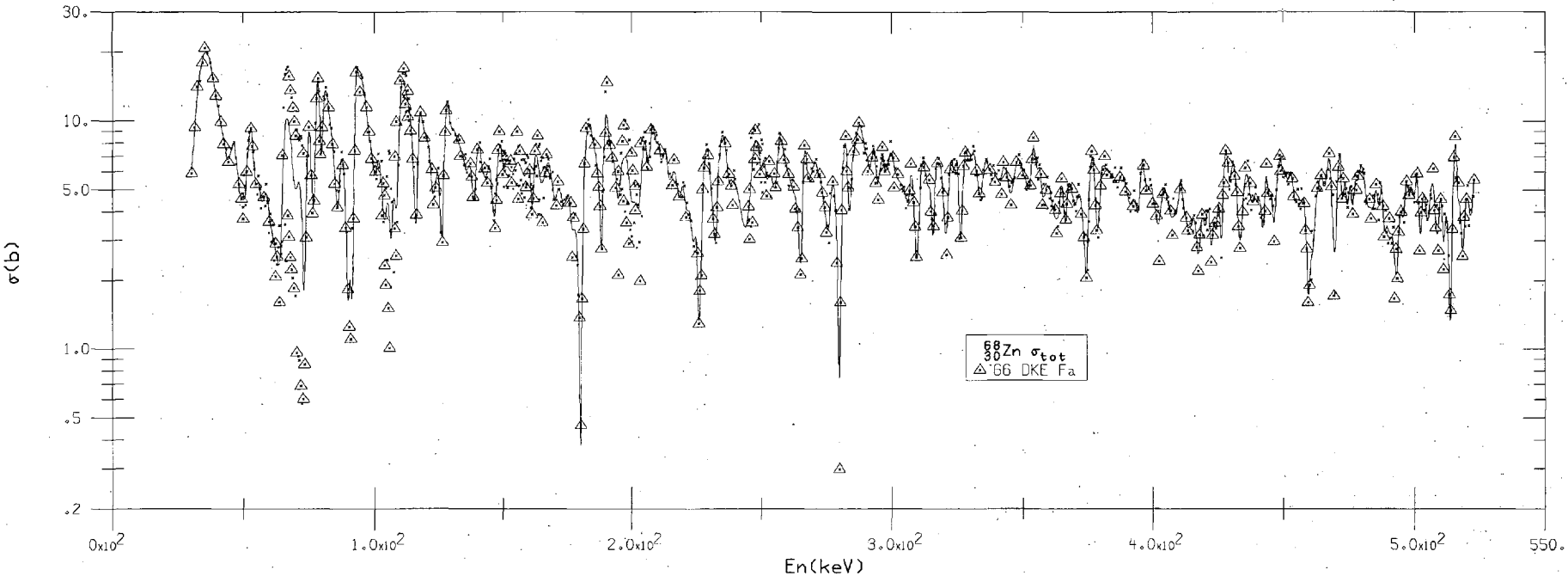


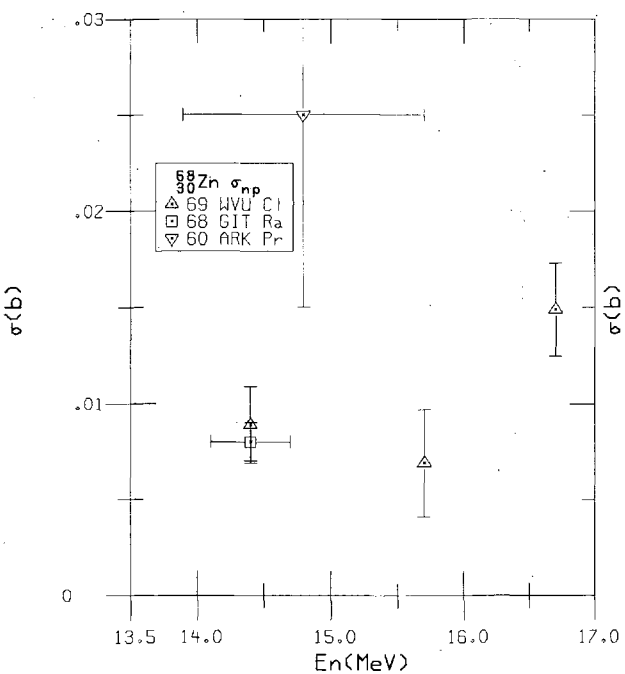
$^{68}_{30}Zn$

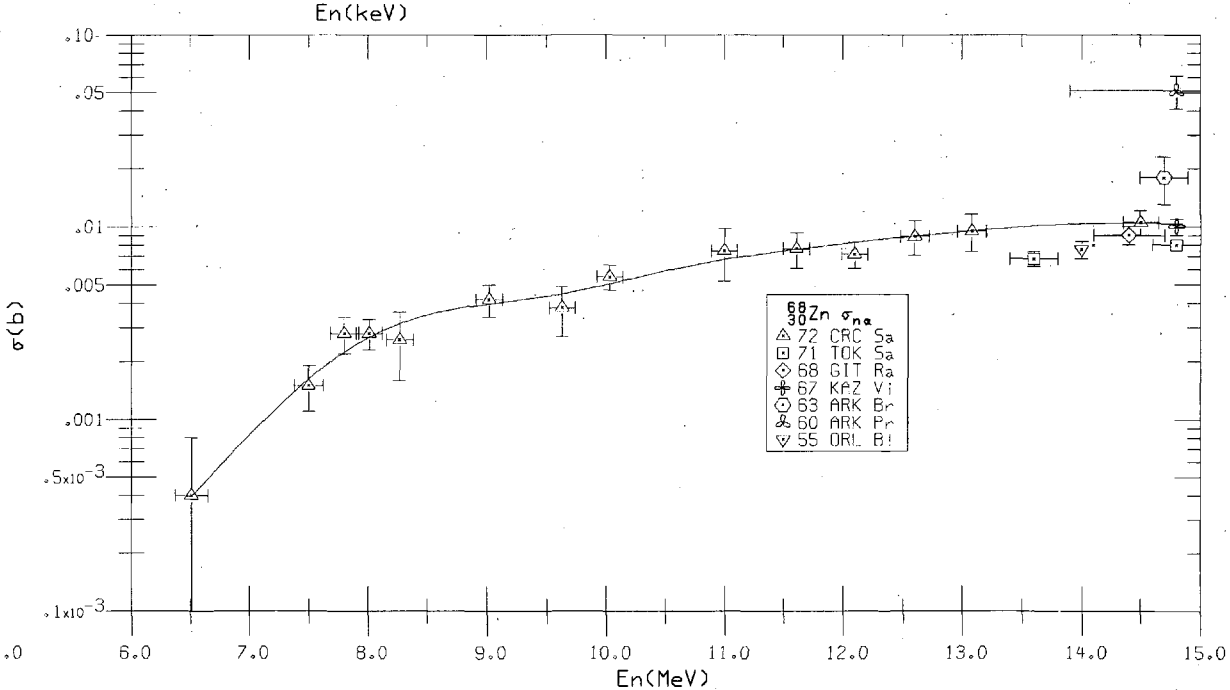
σ_{tot}

σ_{np}

$\sigma_{n\alpha}$







Yr	Lab	Author	Reference	Points	Range	Standard
			$_{30}Zn$ σ_{tot}			
74	MNA	Bubb,et.al.	CJP,52,648,74	5	22.9 MeV to 44.2 MeV	
74	MNA	Bubb,et.al.	CJP,52,648,74	3	21.3 MeV to 38.2 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	249	2.251 MeV to 14.9 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	2.910 b at 14.7 MeV	
68	CAI	Abu El Ela,et.al.	JNE,22,389,68	112	.0023 eV to .107 eV	abs
68	CAI	Abu El Ela,et.al	JNE,22,389,68	1	4.610 b at .0250 eV	abs
67	WIS	Carlson,et.al.	PR,158,1142,67	61	4.531 MeV to 7.564 MeV	abs
66	ANL	Whalen,et.al.	WASH-1068,9,66	535	.100 MeV to .649 MeV	
65	DKE	Seth	PL,16,306,65	89	10.0 keV to .640 MeV	
63	CRC	Rainwater,et.al.	BAP,8,334(K5),63	4552	.200 keV to 74.9 keV	abs
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.550 b at 28.4 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.6 MeV	abs
60	HAR	Mc Callum,et.al.	NP,16,313,60	13	12.4 MeV to 20.2 MeV	abs
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	3.590 b at 3.660 MeV	abs
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
58	COL	Weil,et.al.	PR,110,466,58	39	4.000 MeV to 8.050 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.1 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	91	4.200 eV to 2.062 keV	
56	ANL	Dahlberg,et.al.	PR,104,1006,56	118	19.2 eV to 9.850 keV	
55	LAS	Walt,et.al.	PR,98,677,55	1	3.700 b at 4.100 MeV	abs
54	KAP	Gaerttner,et.al.	KAPL-1084,47,54	37	.203 keV to 3.500 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.720 MeV to 13.1 MeV	abs
52	WIS	Miller,et.al.	PR,88,83,52	14	1.000 MeV to 3.200 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	3.060 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	3.000 b at 14.0 MeV	
51	COL	Havens Jr,et.al.	PR,83,1123,51	61	.0084 eV to 17.0 eV	
50	WIS	Adair	PR,77,748(H9),50	11	.211 MeV to 1.024 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.618 b at 42.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	2.210 b at 83.0 MeV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$_{30}Zn$ σ_{el}			
69	AE	Holmqvist,et.al.	AE-366,69	8	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.600 b at 2.000 MeV	
64	ANL	Smith,et.al.	PR/B,135,76,64	26	.300 MeV to 1.500 MeV	C
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	4.430 b at .650 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	5.720 b at .300 MeV	
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	5	3.500 MeV to 4.800 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.750 b at 3.660 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	14	10.0 keV to .104 MeV	C
55	LAS	Walt,et.al.	PR,98,677,55	1	2.000 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	3.300 b at 1.000 MeV	

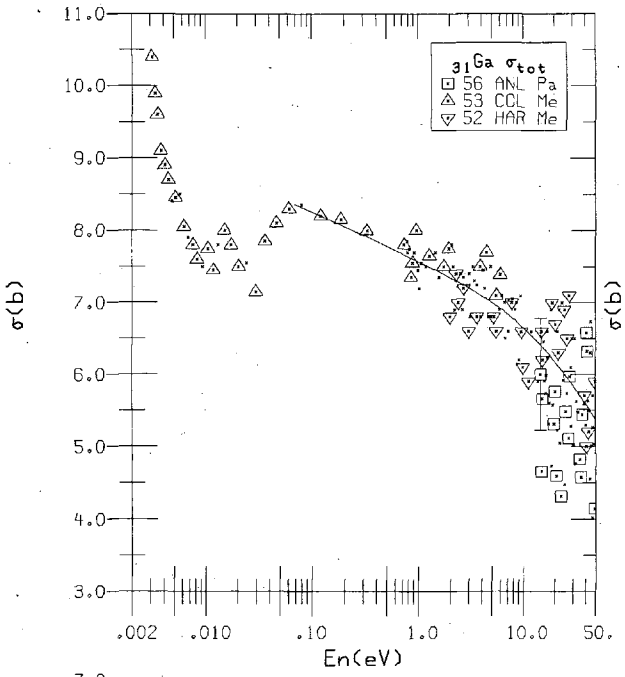
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{30}Zn$ σ_{inl}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
64	ANL	Smith,et.al.	PR/B,135,76,64	3	1.400 MeV to 1.500 MeV	C
61	JAE	Tsukada,et.al.	61VIENNA,1,75,61	5	3.500 MeV to 4.800 MeV	
			$_{30}Zn$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	60.0 keV to 1.450 MeV	C
			$_{30}Zn$ σ_{non}			
66	TUD	Oehler,et.al.	KE,9,95,66	1	.100 b at .960 MeV	
59	BAR	Mackwe,et.al.	PR,114,1563,59	1	1.840 b at 3.660 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.580 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.370 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	2	2.500 MeV to 7.000 MeV	abs
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.580 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	2.180 b at 2.500 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.460 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.700 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,55	2	3.300 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.300 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	1.300 b at 14.1 MeV	
			$_{30}Zn$ $\sigma_{n\gamma}$			
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	ORL	Schmitt,et.al.	NP,20,202,60	1	64.0 mb at 24.0 keV	abs
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	29.0 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{30}Zn$ σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	.550 b at 14.0 MeV	^{252}Cf σ_{sf}
			$_{30}Zn$ σ_{np}			
67	AML	Armitage	SYMONDS,67	6	2.190 MeV to 3.640 MeV	abs
			$_{30}Zn$ σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	41.0 muB at 14.7 MeV	^{66}Zn σ_{n2n}
			$^{64}_{30}Zn$ σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	2.965 b at 14.2 MeV	abs

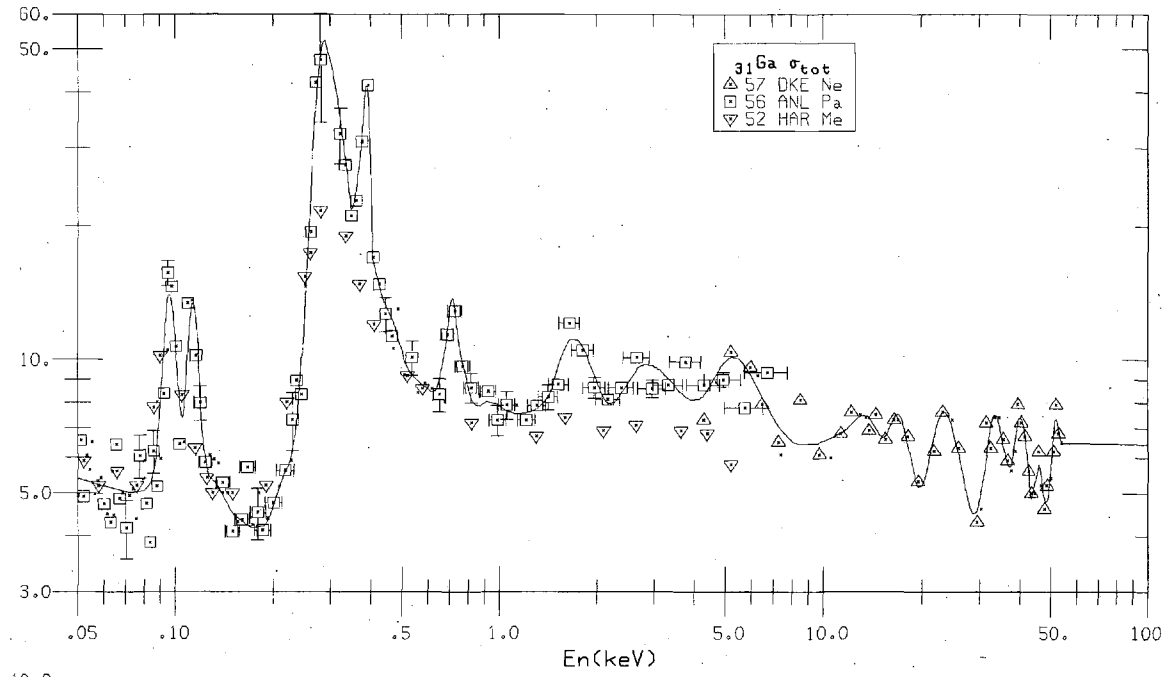
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{64}_{30}$Zn σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	.161 b at 14.6 MeV	^{63}Cu σ_{n2n}
69	HAM	Bormann,et.al.	NP/A,130,195,69	9	14.1 MeV to 18.1 MeV	^{1}H σ_{el}
68	TOH	Shiokawa,et.al.	JIN,30,1,68	7	13.5 MeV to 14.8 MeV	^{19}F σ_{n2n}
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	.150 b at 14.4 MeV	^{27}Al σ_{np}
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.288 b at 15.0 MeV	^{63}Cu σ_{n2n}
67	BOS	Chatterjee,et.al	BARC-305,30,67	1	.165 b at 14.8 MeV	abs
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.225 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	BOS	Mitra	IJP,41,752,67	1	.102 b at 14.8 MeV	^{63}Cu σ_{n2n}
65	GEL	Paulsen,et.al.	NUK,7,117,65	27	12.6 MeV to 19.6 MeV	^{1}H σ_{el}
65	DEB	Csikai	6SANTWERP,,537,65	1	.200 b at 14.6 MeV	^{63}Cu σ_{n2n}
65	KTY	Gabbard,et.al.	NUK,7,117,65	11	13.0 MeV to 17.5 MeV	
63	ANL	Rayburn	PR,130,731,63	5	13.5 MeV to 19.5 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.153 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	HAM	Bormann,et.al.	ZP,174,1,63	8	13.2 MeV to 19.6 MeV	^{63}Cu σ_{n2n}
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	.105 b at 14.1 MeV	abs
62	CBR	Weigold,et.al.	NP,32,106,62	5	13.9 MeV to 14.8 MeV	Cu
61	ANL	Rayburn	PR,122,168,61	1	.167 b at 14.4 MeV	^{63}Cu σ_{n2n}
60	ARK	Preiss,et.al.	NP,15,326,60	1	.254 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
60	RED	Koehler,et.al.	PR,119,311,60	12	12.2 MeV to 18.1 MeV	^{64}Zn σ_{n2n}
57	KON	Yasumi	JPJ,12,443,57	1	.119 b at 14.1 MeV	
56	IST	Cohen,et.al.	NP,1,73,56	18	13.1 MeV to 17.5 MeV	^{64}Zn σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.224 b at 14.5 MeV	abs
			$^{64}_{30}$Zn σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	33	1.159 MeV to 9.939 MeV	^{235}U σ_{nf}
73	LOU	Dresler,et.al.	INR-1464,12,73	1	.293 b at 14.6 MeV	^{56}Fe σ_{np}
72	CRC	Santry,et.al.	CJP,50,2536,72	22	1.500 MeV to 5.330 MeV	
72	CRC	Santry,et.al.	CJP,50,2536,72	8	4.860 MeV to 6.500 MeV	^{32}S σ_{np}
72	CRC	Santry,et.al.	CJP,50,2536,72	33	4.960 MeV to 13.6 MeV	^{32}S σ_{np}
72	CRC	Santry,et.al.	CJP,50,2536,72	11	12.5 MeV to 19.8 MeV	^{32}S σ_{np}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.147 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	HAM	Bormann,et.al.	NP/A,130,195,69	10	14.1 MeV to 18.2 MeV	^{1}H σ_{el}
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	.210 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,5,1175,67	1	.154 b at 14.8 MeV	^{65}Cu σ_{n2n}
66	OSL	Kjelberg,et.al.	RCA,5,28,66	1	.204 b at 14.8 MeV	^{31}P σ_{np}
65	KYU	Fujita	INDSWG-90,23,65	1	.159 b at 14.1 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.230 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	HAM	Bormann,et.al.	ZP,174,1,63	5	13.1 MeV to 19.3 MeV	^{65}Cu σ_{n2n}
63	CCP	Levkovskii	ZET,45,305,63	1	.210 b at 14.0 MeV	
62	JAE	Nakai,et.al.	JPJ,17,1215,62	13	1.850 MeV to 4.820 MeV	
62	KTY	Gabbard,et.al.	PR,128,1276,62	17	12.4 MeV to 17.5 MeV	^{65}Cu σ_{n2n}
62	CBR	Weigold,et.al.	NP,32,106,62	5	13.9 MeV to 14.8 MeV	Cu
61	SAN	Van Loef	NP,24,340,61	1	51.5 mb at 3.300 MeV	^{64}Zn σ_{np}
61	HAR	Allan	NP,24,274,61	1	.171 b at 14.0 MeV	^{54}Fe σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	.284 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
60	GLS	Storey,et.al.	PPS,75,526,60	2	13.0 MeV to 15.7 MeV	
59	SAN	Rapaport,et.al.	PR,114,565,59	12	1.990 MeV to 3.550 MeV	^{31}P σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.386 b at 14.5 MeV	abs

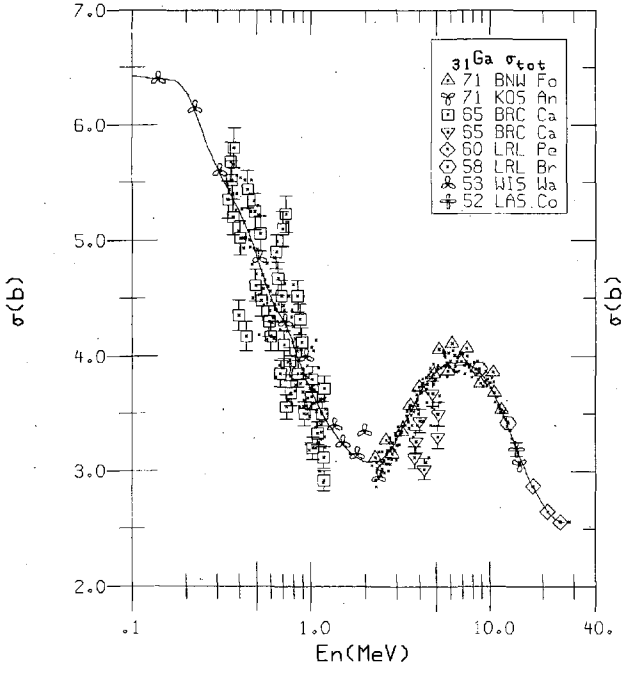
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{64}_{30}$Zn σ_{nnp}			
65	KYU	Fujita	INDSWG-90,23,65	1	.221 b at 14.1 MeV	
61	HAR	Allan	NP,24,274,61	1	.281 b at 14.0 MeV	^{54}Fe σ_{np}
			$^{64}_{30}$Zn σ_{nd}			
66	MIL	Fazio	FAZIO,66	1	2.570 mb at 14.1 MeV	
			$^{64}_{30}$Zn σ_{nt}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	33.7 muB at 14.0 MeV	
61	OTC	Baerg,et.al.	CJC,39,684,61	1	.100 mb at 14.6 MeV	^{19}F σ_{n2n}
			$^{64}_{30}$Zn $\sigma_{n\alpha}$			
66	HAM	Bormann,et.al.	ZN/A,21,988,66	1	73.0 mb at 14.1 MeV	H
			$^{66}_{30}$Zn σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	3.011 b at 14.2 MeV	abs
			$^{66}_{30}$Zn σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	.583 b at 14.6 MeV	^{63}Cu σ_{n2n}
69	HAM	Bormann,et.al.	NP/A,130,195,69	9	14.1 MeV to 18.1 MeV	^{1}H σ_{el}
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	.650 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.550 b at 14.2 MeV	^{65}Cu σ_{n2n}
			$^{66}_{30}$Zn σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	88.1 mb at 14.6 MeV	^{56}Fe σ_{np}
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	65.0 mb at 14.4 MeV	^{27}Al σ_{np}
67	KAZ	Vinitskaya+	YF,5,1175,67	1	67.0 mb at 14.8 MeV	^{64}Zn σ_{np}
65	HAM	Bormann,et.al.	NP,63,438,65	7	13.2 MeV to 19.4 MeV	^{6}Li $\sigma_{n\alpha}$
63	CCP	Levkovskii	ZET,45,305,63	1	75.0 mb at 14.0 MeV	
61	HAR	Allan	NP,24,274,61	1	35.0 mb at 14.0 MeV	^{54}Fe σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	77.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
57	KON	Yasumi	JPJ,12,443,57	1	60.2 mb at 14.1 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.101 b at 14.5 MeV	abs
			$^{66}_{30}$Zn σ_{nnp}			
61	HAR	Allan	NP,24,274,61	1	50.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{67}_{30}$Zn σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	2.990 b at 14.2 MeV	abs

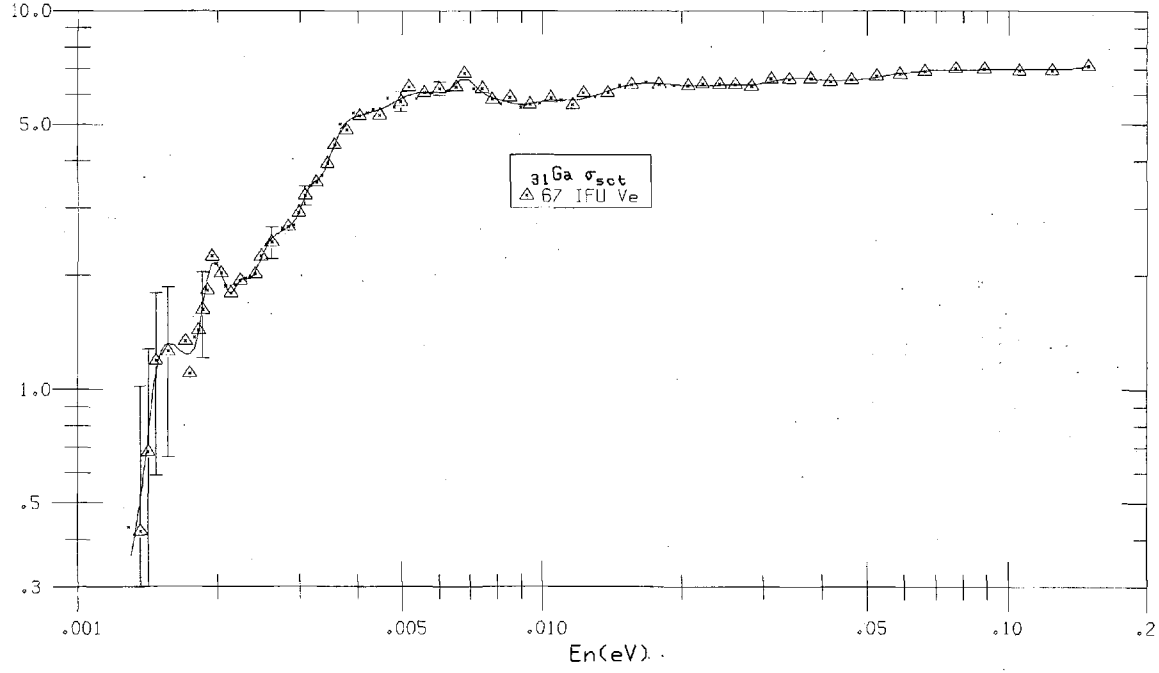
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{67}_{30}Zn$ σ_{np}			
67	KAZ	Vinitskaya+	YF,5,1175,67	1	43.0 mb at 14.8 MeV	^{64}Zn σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	48.0 mb at 14.0 MeV	
61	SAN	Van Loef	NP,24,340,61	1	5.000 mb at 3.300 MeV	^{64}Zn σ_{np}
61	HAR	Allan	NP,24,274,61	1	33.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{68}_{30}Zn$ σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	3.051 b at 14.2 MeV	abs
66	DKE	Farrell,et.al.	AP,37,367,66	1124	30.5 keV to .523 MeV	abs
			$^{68}_{30}Zn$ $\sigma_{n\gamma}$			
68	IRK	Colditz,et.al.	OSA,105,236,68	1	2.600 mb at 2.900 MeV	^{115}In σ_{inl}
58	CCP	Kononov,et.al.	AE,5,564,58	1	24.0 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
			$^{68}_{30}Zn$ σ_{n2n}			
62	IRK	Wenusch,et.al.	OSA,99,1,62	1	.530 b at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{68}_{30}Zn$ σ_{np}			
69	WVU	Clator	CLATOR,69	3	14.4 MeV to 16.7 MeV	
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	8.000 mb at 14.4 MeV	^{28}Si σ_{np}
60	ARK	Preiss,et.al.	NP,15,326,60	1	25.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{68}_{30}Zn$ $\sigma_{n\alpha}$			
72	CRC	Santry,et.al.	CJP,50,2536,72	14	6.510 MeV to 14.5 MeV	^{32}S σ_{np}
71	TOK	Sato,et.al.	RCA,16,71,71	3	13.6 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
68	GIT	Ranakumar,et.al.	NP/A,122,679,68	1	9.000 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,5,1175,67	1	10.0 mb at 14.8 MeV	^{64}Zn σ_{np}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	18.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Preiss,et.al.	NP,15,326,60	1	51.0 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
55	ORL	Blosser,et.al.	PR,100,429,55	1	7.600 mb at 14.0 MeV	^{56}Fe σ_{np}
			$^{70}_{30}Zn$ σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	3.116 b at 14.2 MeV	abs
			$^{70}_{30}Zn$ σ_{n2n}			
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.307 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	DEB	Csikai	AK,8,79,66	1	1.080 b at 12.4 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{70}_{30}Zn$ $\sigma_{n\alpha}$			
65	ARK	Meason,et.al.	PR/B,138,139,65	1	11.4 mb at 14.5 MeV	^{64}Zn σ_{n2n}
			$^{70}_{30}Zn$ σ_{nna}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.890 b at 14.7 MeV	^{68}Zn $\sigma_{n\alpha}$

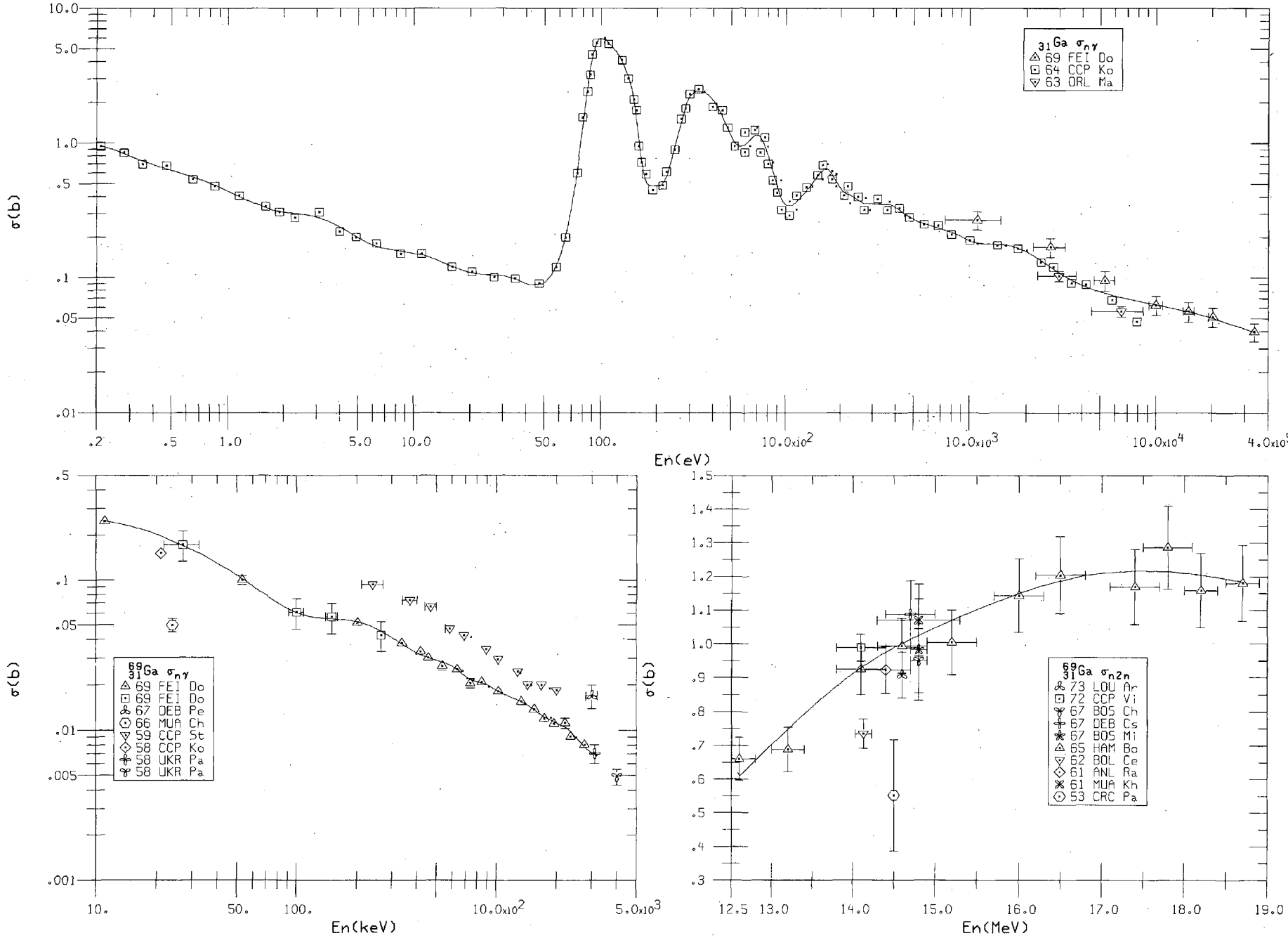

$_{31}$Ga σ_{tot}
56 ANL Pa
53 CCL Me
52 HAR Me
σ(b)
En(eV)


$_{31}$Ga σ_{tot}
57 DKE Ne
56 ANL Pa
52 HAR Me
σ(b)
En(keV)

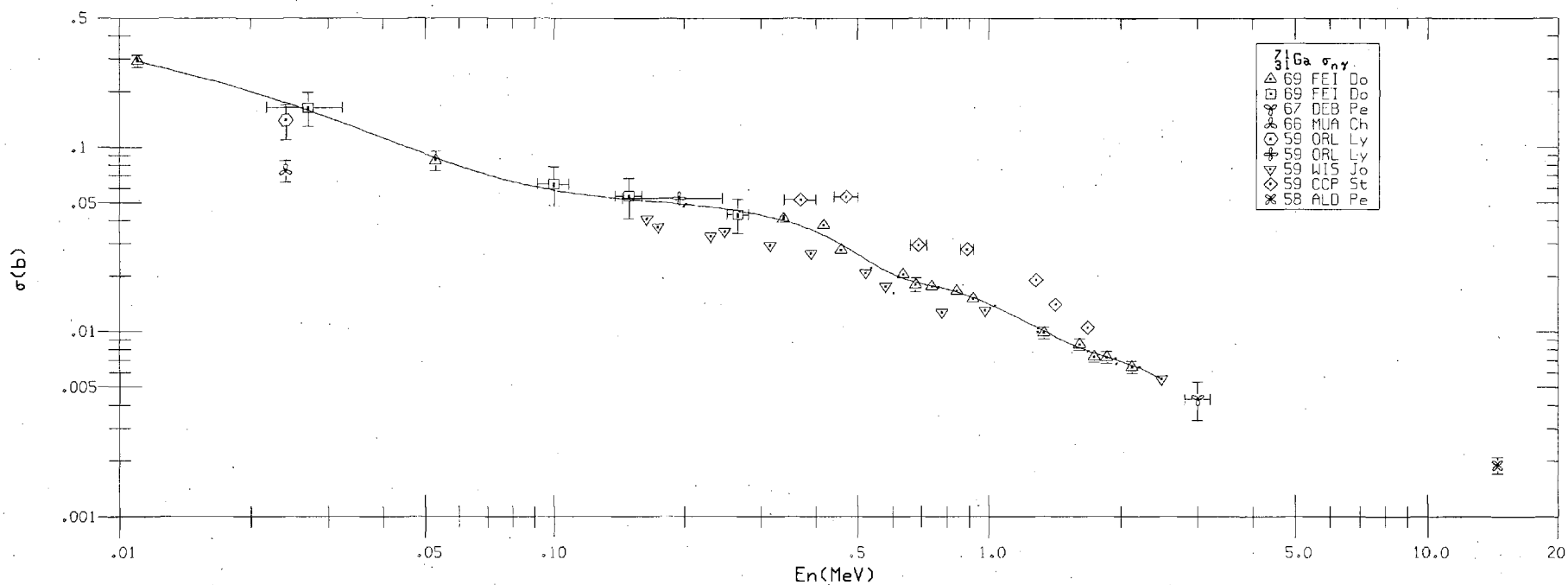

$_{31}$Ga σ_{tot}
71 BNW Fo
71 KOS An
65 BRC Ca
65 BRC Ca
60 LRL Pe
58 LRL Br
53 WIS Wa
52 LAS Co
σ(b)
En(MeV)

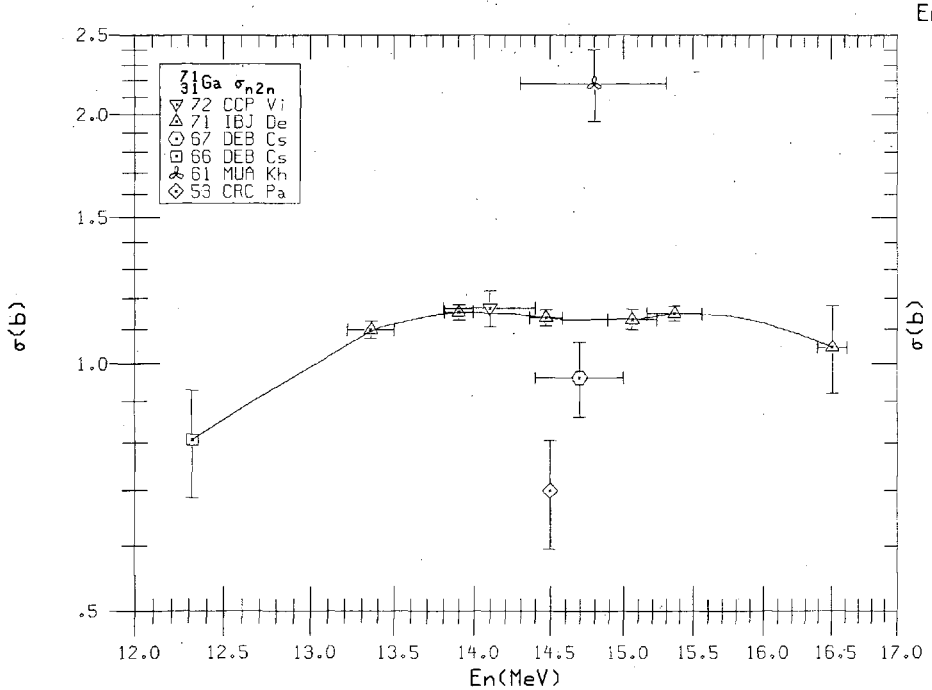

$_{31}$Ga σ_{sct}
67 IFU Ve
σ(b)
En(eV)

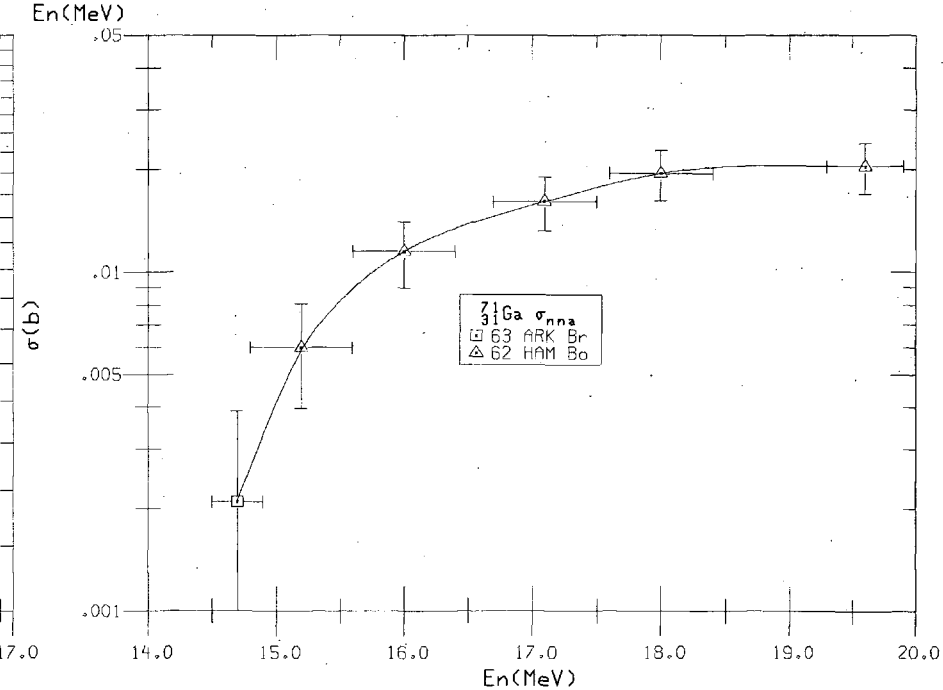
^{31}Ga
$\sigma_{n\gamma}$
$^{69}_{31}$Ga
$\sigma_{n\gamma}$
σ_{n2n}



$^{71}_{31}$Ga
$\sigma_{n\gamma}$
σ_{n2n}
σ_{nna}

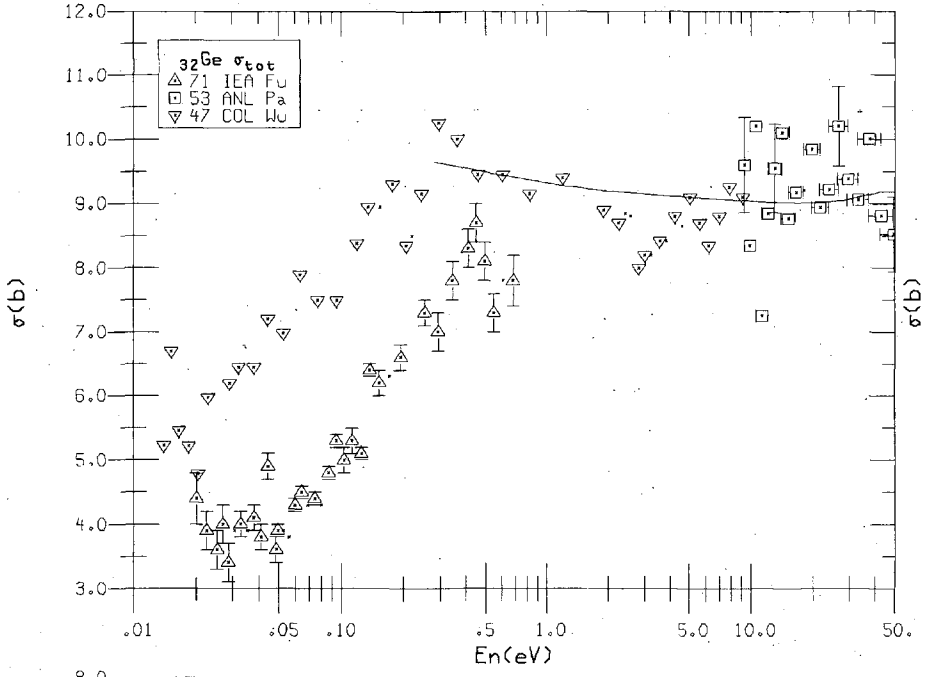


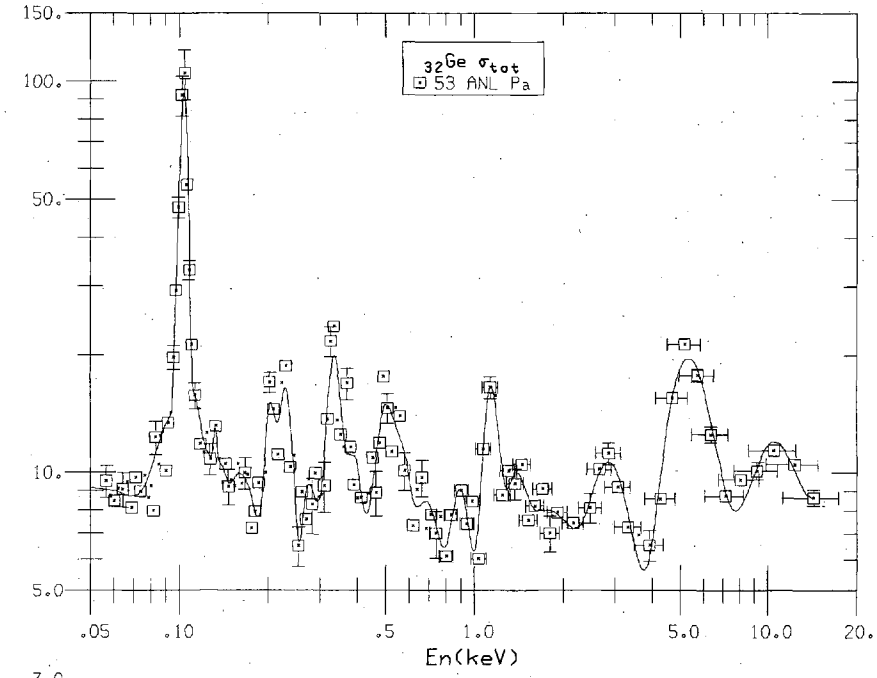


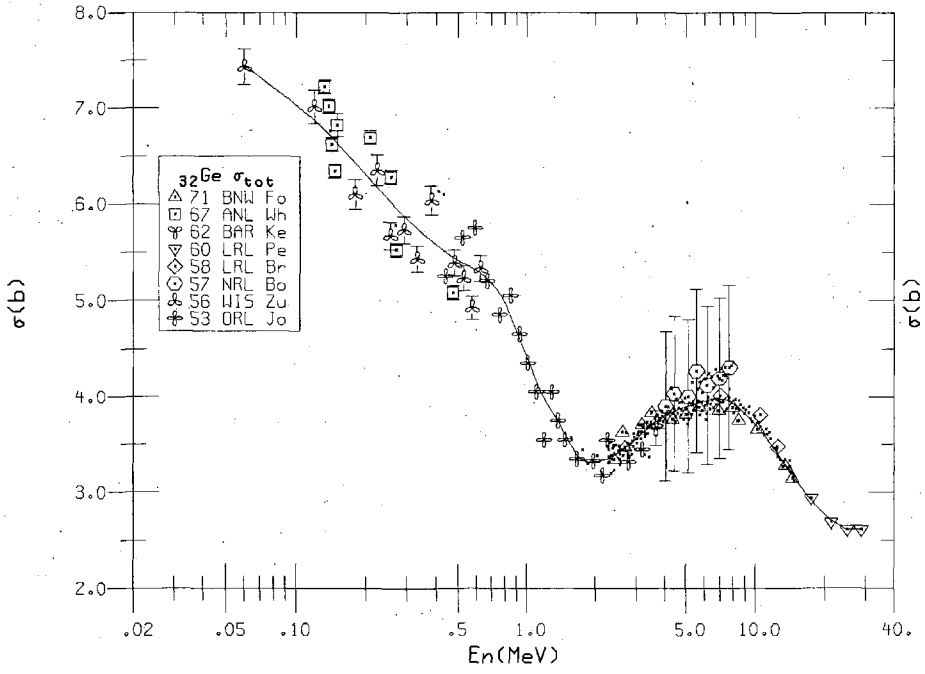


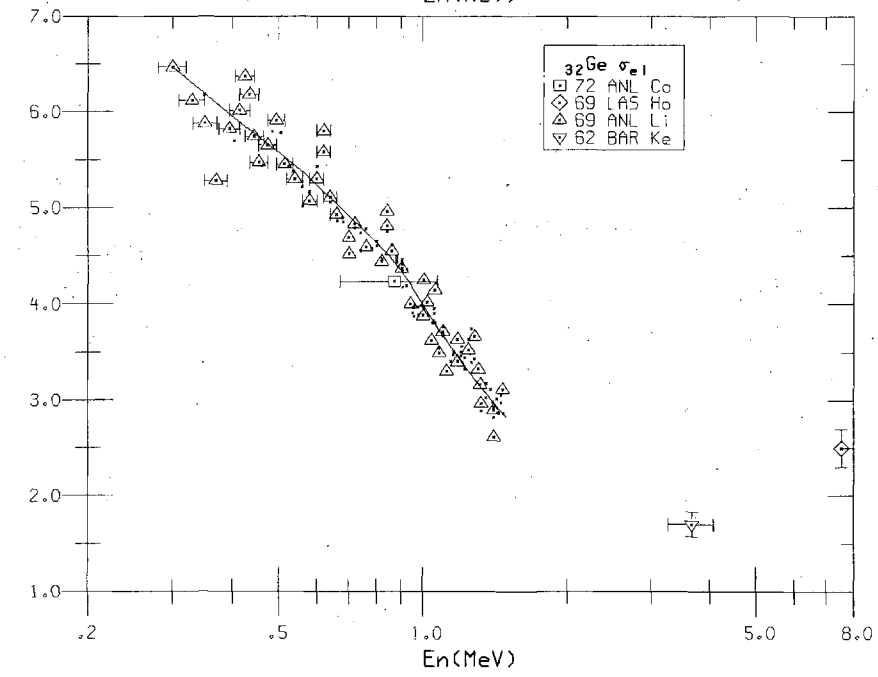
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{31}$Ga σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	241	2.265 MeV to 14.7 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	3.060 b at 14.7 MeV	
67	SAC	Thibault	CEA-R3124,67	1	3.000 b at 2.700 MeV	
65	BRC	Cabe,et.al.	EANDC(E)-57,150,65	206	.345 MeV to 1.207 MeV	abs
65	BRC	Cabe,et.al.	EANDC(E)-57,151,65	29	3.640 MeV to 5.240 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.6 MeV to 28.6 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	4	8.680 MeV to 14.5 MeV	abs
57	DKE	Newson,et.al.	PR,105,198,57	51	4.300 keV to 54.0 keV	
56	ANL	Palmer,et.al.	PR,102,228,56	154	14.8 eV to 6.760 keV	
53	WIS	Walt,et.al.	PR,89,1271,53	22	.140 MeV to 2.980 MeV	
53	COL	Melkonian,et.al.	PR,92,702,53	62	.0031 eV to 9.400 eV	
52	LAS	Coon,et.al.	PR,88,562,52	1	3.190 b at 14.1 MeV	
52	HAR	Merrison,et.al.	PRS/A,215,278,52	94	2.000 eV to 5.200 keV	
			$_{31}$Ga σ_{sct}			
67	IFU	Vertebnyj,et.al.	YFI-5,39,67	89	.0013 eV to .149 eV	
			$_{31}$Ga $\sigma_{n\gamma}$			
69	FEI	Dovbenko,et.al.	INDC-260,11,69	7	11.0 keV to .338 MeV	^{235}U σ_{nf}
64	CCP	Konks,et.al.	KONKS,64	108	.210 eV to 79.0 keV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
			$^{69}_{31}$Ga $\sigma_{n\gamma}$			
69	FEI	Dovbenko,et.al.	AE,26,(1),67,69	28	11.0 keV to 3.150 MeV	^{235}U σ_{nf}
69	FEI	Dovbenko,et.al.	INDC-260,11,69	8	11.0 keV to .338 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	16.9 mb at 3.000 MeV	^{31}P σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	50.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	CCP	Stavisskii+	AE,7,259,59	15	.240 MeV to 2.000 MeV	
58	CCP	Kononov,et.al.	AE,5,564,58	1	.151 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	S8GENEVA,15,18,58	1	7.000 mb at 3.100 MeV	
58	UKR	Pasechnik,et.al.	S8GENEVA,15,18,58	1	9.000 mb at 2.500 MeV	
58	UKR	Pasechnik,et.al.	S8GENEVA,15,18,58	1	4.900 mb at 4.000 MeV	
			$^{69}_{31}$Ga σ_{n2n}			
73	LOU	Araminowicz,et.al.	INR-1464,14,73	1	.908 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Viktorov,et.al.	YF,15,(6),1099,72	1	.989 b at 14.1 MeV	
67	BOS	Chatterjee,et.al	BARC-305,30,67	1	.950 b at 14.8 MeV	abs
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.088 b at 14.7 MeV	^{27}Al σ_{np}
67	BOS	Mitra	IJP,41,752,67	1	.983 b at 14.8 MeV	^{63}Cu σ_{n2n}
65	HAM	Bormann,et.al.	NP,63,438,65	12	12.6 MeV to 18.7 MeV	
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	.735 b at 14.1 MeV	
61	ANL	Rayburn	PR,122,168,61	1	.923 b at 14.4 MeV	^{63}Cu σ_{n2n}
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.070 b at 14.8 MeV	^{56}Fe σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.552 b at 14.5 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{69}_{31}$Ga $\sigma_{n\alpha}$			
67	KAZ	Vinitskaya+	YF,5,1175,67	1	18.0 mb at 14.8 MeV	^{69}Ga σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.105 b at 14.5 MeV	abs
			$^{71}_{31}$Ga $\sigma_{n\gamma}$			
69	FEI	Dovbenko,et.al.	AE,26,(1),67,69	27	11.0 keV to 2.210 MeV	^{235}U σ_{nf}
69	FEI	Dovbenko,et.al.	INDC-260,11,69	8	11.0 keV to .338 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	4.300 mb at 3.000 MeV	^{31}P σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	75.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.140 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	53.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	14	.165 MeV to 2.480 MeV	^{71}Ga $\sigma_{n\gamma}$
59	CCP	Stavisskii+	AE,7,259,59	7	.370 MeV to 1.680 MeV	
58	ALD	Perkin,et.al.	PPS,72,505,58	1	1.900 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{71}_{31}$Ga σ_{n2n}			
72	CCP	Viktorov,et.al.	YF,15,(6),1099,72	1	1.166 b at 14.1 MeV	
71	IBJ	Decowski,et.al.	INR-1318,8,71	6	13.4 MeV to 16.5 MeV	^{56}Fe σ_{np}
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.961 b at 14.7 MeV	^{27}Al σ_{np}
66	DEB	Csikai	AK,8,79,66	1	.806 b at 12.3 MeV	
61	MUA	Khurana,et.al.	NP,28,560,61	1	2.180 b at 14.8 MeV	^{56}Fe σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.700 b at 14.5 MeV	abs
			$^{71}_{31}$Ga σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	66.0 muB at 14.0 MeV	
			$^{71}_{31}$Ga $\sigma_{n\alpha}$			
66	MUA	Prasad,et.al.	NP,85,476,66	1	60.0 mb at 14.8 MeV	^{56}Fe σ_{np}
			$^{71}_{31}$Ga σ_{nna}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	2.100 mb at 14.7 MeV	^{69}Ga σ_{np}
62	HAM	Bormann,et.al.	ZP,166,477,62	5	15.2 MeV to 19.6 MeV	


^{32}Ge σ_{tot}
71 IEA Fu
53 ANL Pa
47 COL Wu
σ(b)
En(eV)


^{32}Ge σ_{tot}
53 ANL Pa
σ(b)
En(keV)

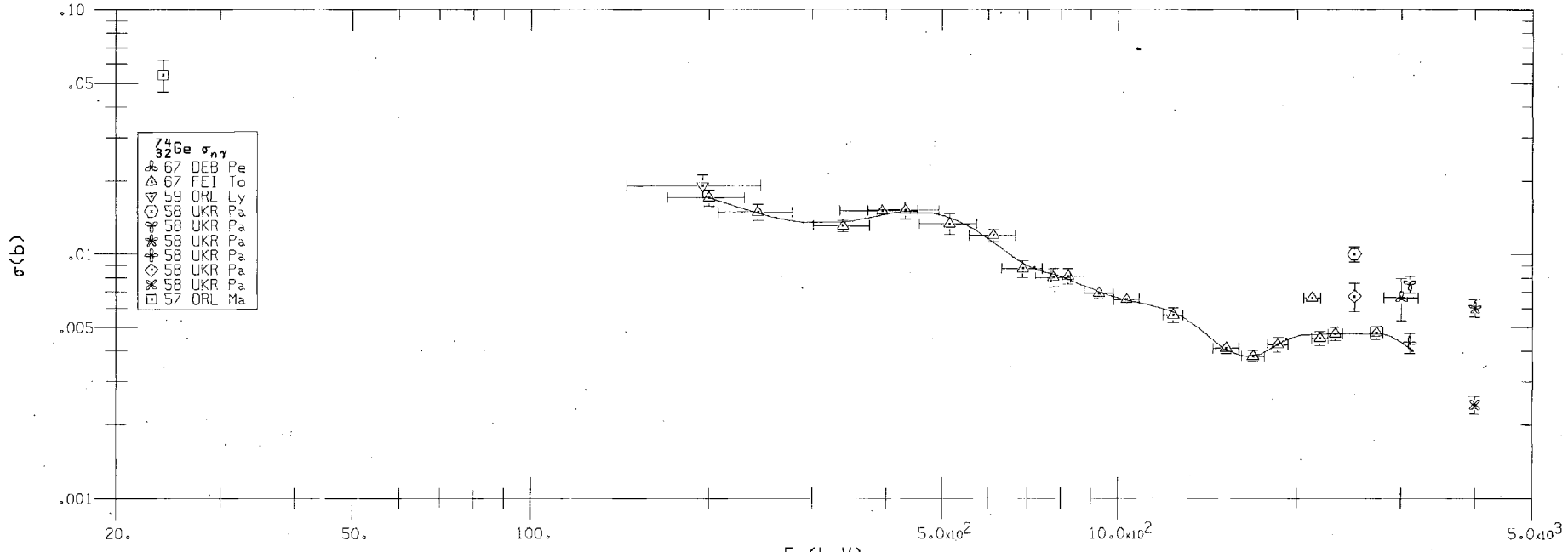

^{32}Ge σ_{tot}
71 BNW Fo
67 ANL Wh
62 BAR Ke
60 LRL Pe
58 LRL Br
57 NRL Bo
56 WIS Zu
53 ORL Jo
σ(b)
En(MeV)

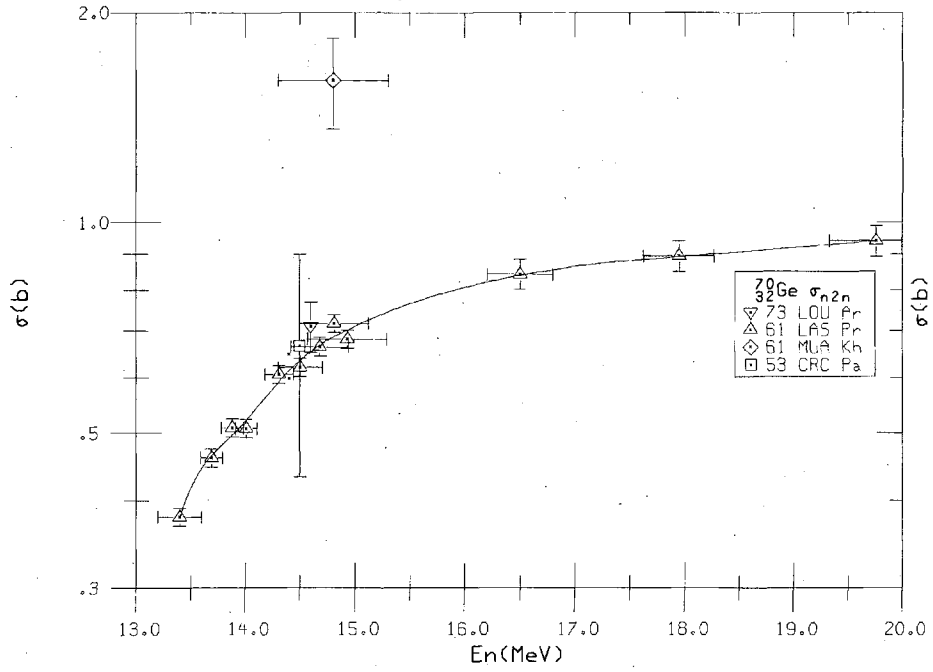

^{32}Ge σ_{el}
72 ANL Co
69 LAS Ho
69 ANL Li
62 BAR Ke
En(MeV)

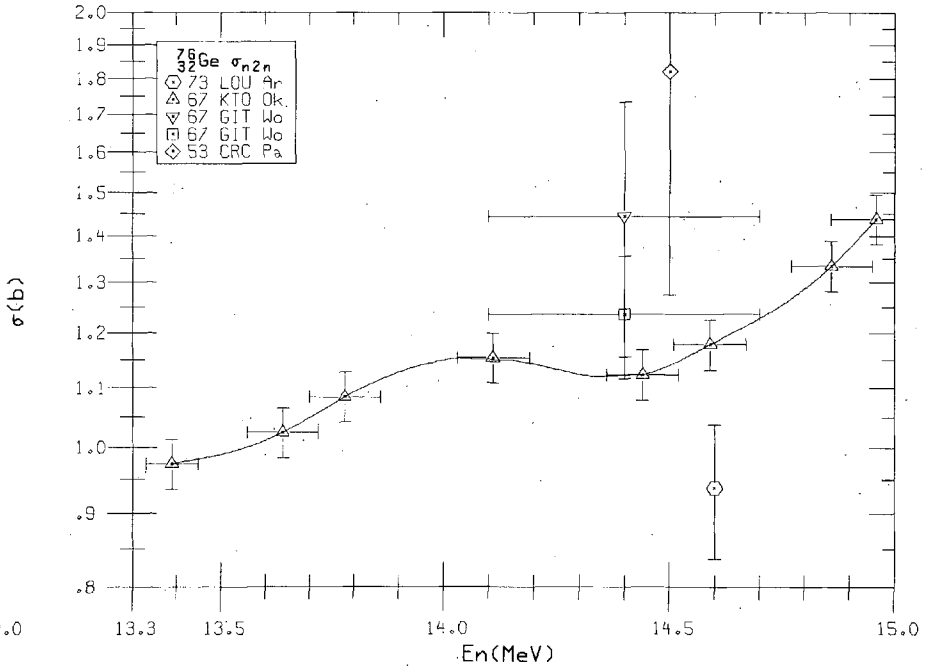
$^{70}_{32}Ge$ σ_{n2n}

$^{74}_{32}Ge$ $\sigma_{n\gamma}$

$^{76}_{32}Ge$ σ_{n2n}

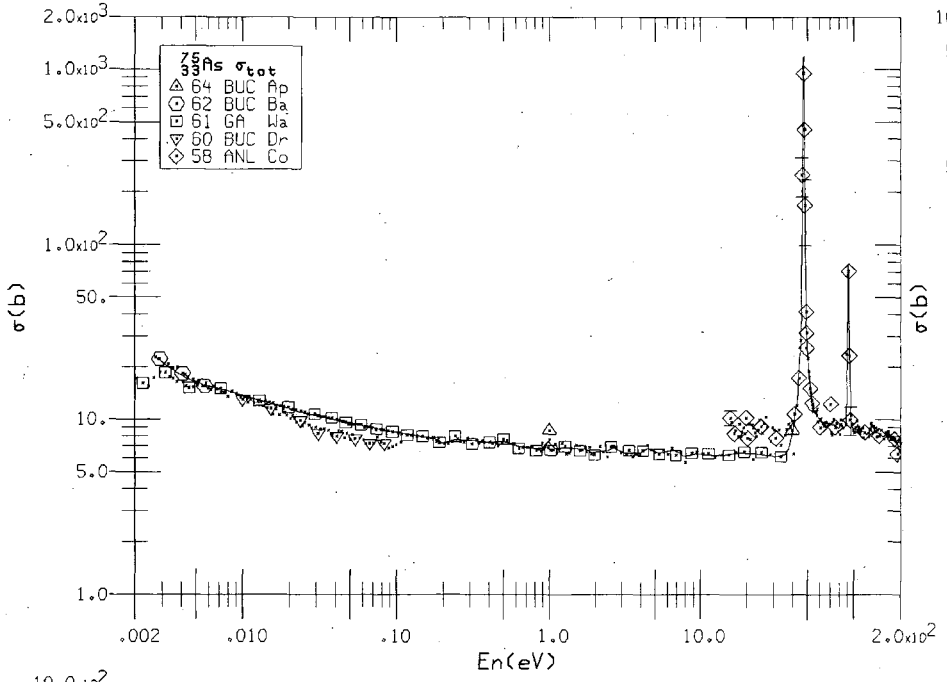


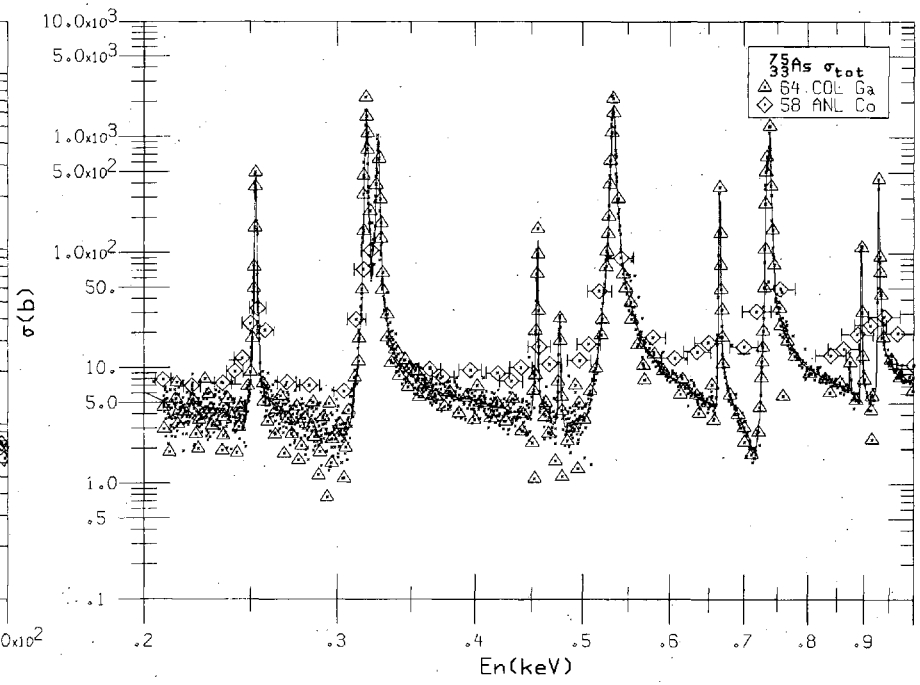


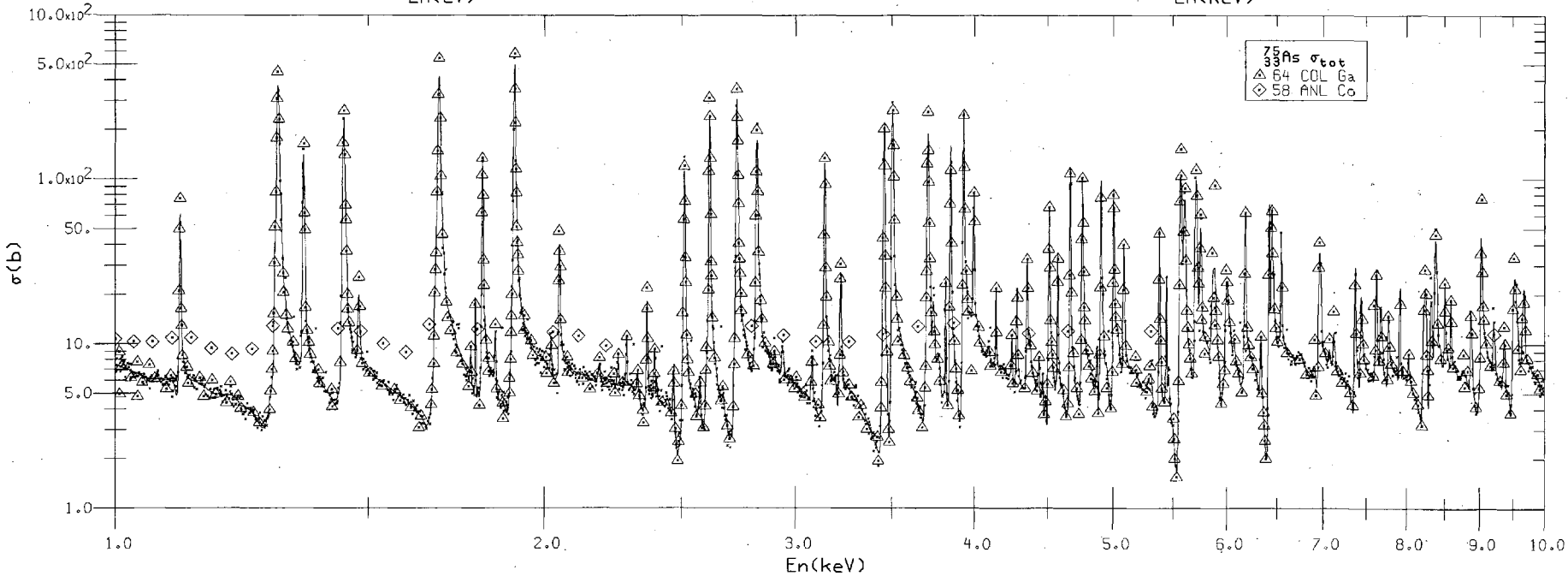


Yr	Lab	Author	Reference	Points	Range	Standard
			$_{32}$Ge σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.252 MeV to 14.8 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	3.120 b at 14.7 MeV	
71	IEA	Fulfaro	IEA-235,71	39	.0201 eV to .684 eV	
67	ANL	Whalen	WHALEN,67	12	.133 MeV to .475 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.670 b at 3.660 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.9 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.1 MeV	abs
57	NRL	Bondelid,et.al.	PR,105,193,57	41	3.780 MeV to 8.090 MeV	
56	WIS	Zucker	PR,104,1025,56	13	60.0 keV to .625 MeV	
53	ORL	Johnson,et.al.	ORNL-1365,1,53	32	.440 MeV to 3.420 MeV	abs
53	ANL	Palmer	PALMER,53	156	9.250 eV to 14.3 keV	abs
47	COL	Wu,et.al.	PR,71,174,47	43	.0140 eV to 9.100 eV	
			$_{32}$Ge σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	4.232 b at .870 MeV	C σ_{el}
69	LAS	Hopkins,et.al.	NSE,36,275,69	1	2.500 b at 7.550 MeV	
69	ANL	Lister,et.al.	PR,183,954,69	144	.300 MeV to 1.470 MeV	C
62	BAR	Kent,et.al.	PR,125,331,62	1	1.700 b at 3.660 MeV	
			$_{32}$Ge σ_{inl}			
69	LAS	Hopkins,et.al.	NSE,36,275,69	1	1.680 b at 7.550 MeV	
			$_{32}$Ge σ_{non}			
62	BAR	Kent,et.al.	PR,125,331,62	1	1.970 b at 3.660 MeV	
			$_{32}$Ge $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	1	74.0 mb at 30.0 keV	In $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	1	39.0 mb at 65.0 keV	In $\sigma_{n\gamma}$
			$^{70}_{32}$Ge σ_{n2n}			
73	LOU	Araminowicz,et.al.	INR-1464,14,73	1	.710 b at 14.6 MeV	^{63}Cu σ_{n2n}
67	GIT	Wood,et.al.	PR,154,1108,67	1	.648 b at 14.4 MeV	^{65}Cu σ_{n2n}
61	ANL	Rayburn	PR,122,168,61	1	.598 b at 14.4 MeV	^{63}Cu σ_{n2n}
61	LAS	Prestwood,et.al.	PR,121,1438,61	12	13.4 MeV to 19.8 MeV	^{238}U σ_{nf}
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.600 b at 14.8 MeV	^{56}Fe σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.666 b at 14.5 MeV	abs
			$^{70}_{32}$Ge σ_{np}			
67	KAZ	Vinitskaya+	YF,5,1175,67	1	77.0 mb at 14.8 MeV	^{72}Ge σ_{np}
65	MUA	Khurana,et.al.	NP,69,153,65	1	64.0 mb at 14.8 MeV	Fe
53	CRC	Paul,et.al.	CJP,31,267,53	1	.129 b at 14.5 MeV	abs
			$^{72}_{32}$Ge σ_{np}			
67	GIT	Wood,et.al.	PR,154,1108,67	1	47.4 mb at 14.4 MeV	^{70}Ge σ_{n2n}
67	KAZ	Vinitskaya+	YF,5,1175,67	1	31.0 mb at 14.8 MeV	^{72}Ge $\sigma_{n\alpha}$
53	CRC	Paul,et.al.	CJP,31,267,53	1	65.2 mb at 14.5 MeV	abs
			$^{72}_{32}$Ge $\sigma_{n\alpha}$			
67	GIT	Wood,et.al.	PR,154,1108,67	1	15.2 mb at 14.4 MeV	^{70}Ge σ_{n2n}
			$^{73}_{32}$Ge σ_{np}			
67	GIT	Wood,et.al.	PR,154,1108,67	1	26.4 mb at 14.4 MeV	^{70}Ge σ_{n2n}
67	KAZ	Vinitskaya+	YF,5,1175,67	1	20.0 mb at 14.8 MeV	^{72}Ge σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.137 b at 14.5 MeV	abs
			$^{74}_{32}$Ge $\sigma_{n\gamma}$			
67	DEB	Petc,et.al.	JNE,21,797,67	1	6.600 mb at 3.000 MeV	^{31}P σ_{np}
67	FEI	Tolstikov,et.al.	AE,23,566,67	23	.200 MeV to 3.128 MeV	^{74}Ge $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	19.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	10.0 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	7.500 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	6.000 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	4.300 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	6.700 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	2.400 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	54.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{74}_{32}$Ge σ_{np}			
67	GIT	Wood,et.al.	PR,154,1108,67	1	13.2 mb at 14.4 MeV	^{70}Ge σ_{n2n}
67	KAZ	Vinitskaya+	YF,5,1175,67	1	10.0 mb at 14.8 MeV	^{70}Ge σ_{np}
			$^{74}_{32}$Ge σ_{nnp}			
68	OAU	Webber,et.al.	BAP,13,1663(DB6),68	1	.670 mb at 14.7 MeV	
			$^{74}_{32}$Ge σ_{n3}			
68	OAU	Webber,et.al.	BAP,13,1663(DB6),68	1	.100 mb at 14.7 MeV	
			$^{74}_{32}$Ge $\sigma_{n\alpha}$			
67	GIT	Wood,et.al.	PR,154,1108,67	1	13.3 mb at 14.4 MeV	^{70}Ge σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	14.9 mb at 14.5 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{76}_{32}$Ge σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	.937 b at 14.6 MeV	^{63}Cu σ_{n2n}
67	KTO	Okumura	NP/A,93,74,67	8	13.4 MeV to 15.0 MeV	
67	GIT	Wood,et.al.	PR,154,1108,67	1	1.444 b at 14.4 MeV	^{70}Ge σ_{n2n}
67	GIT	Wood,et.al.	PR,154,1108,67	1	1.236 b at 14.4 MeV	^{70}Ge σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.820 b at 14.5 MeV	abs
			$^{76}_{32}$Ge σ_{nna}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	1.000 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$


$^{75}_{33}As$ σ_{tot}
64 BUC Ap
62 BUC Ba
61 GA Wa
60 BUC Dr
58 ANL Co
σ(b)
En(eV)


$^{75}_{33}As$ σ_{tot}
64 COL Ga
58 ANL Co
σ(b)
En(keV)

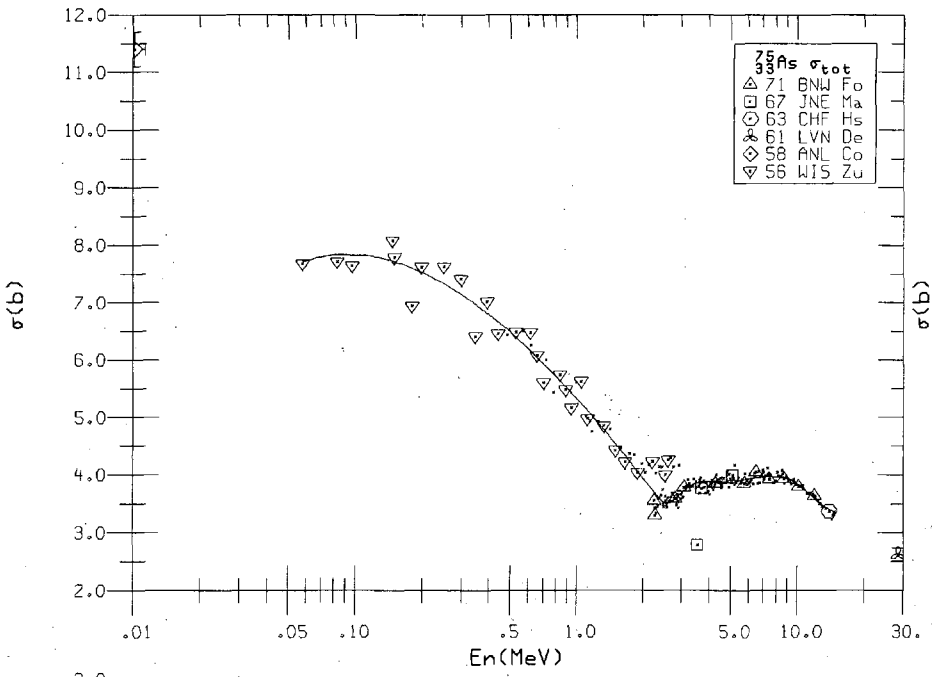

$^{75}_{33}As$ σ_{tot}
64 COL Ga
58 ANL Co
σ(b)
En(keV)

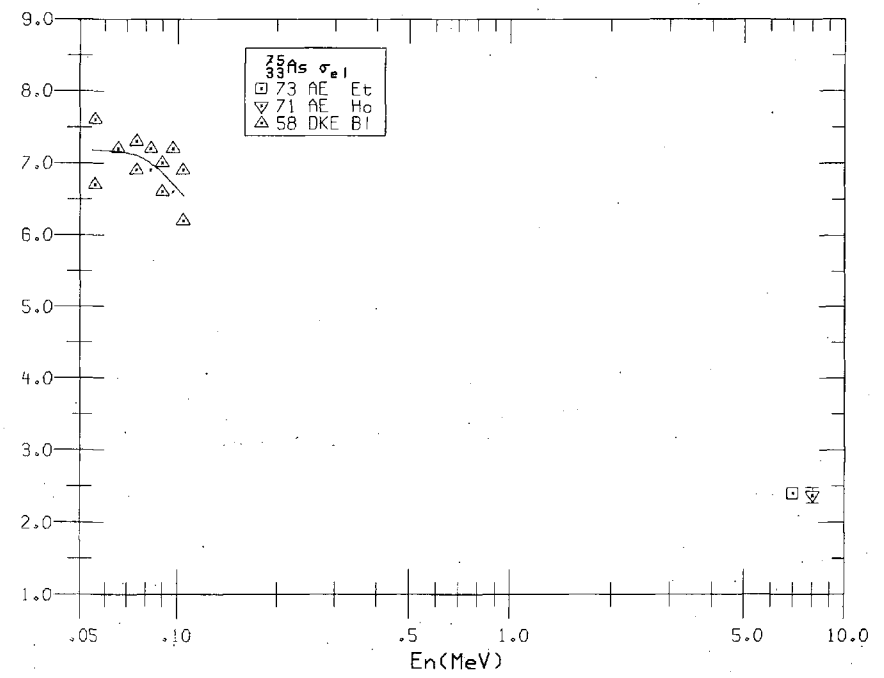
$^{75}_{33}As$

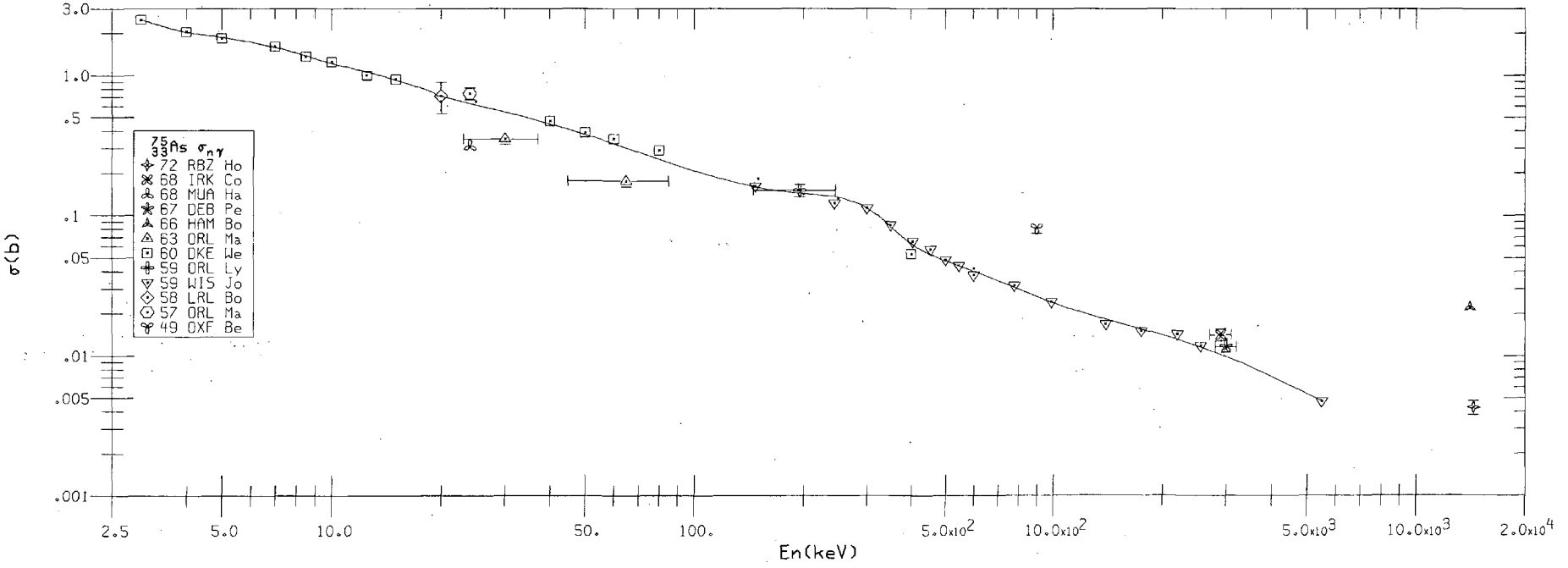
σ_{tot}

σ_{el}

$\sigma_{n\gamma}$





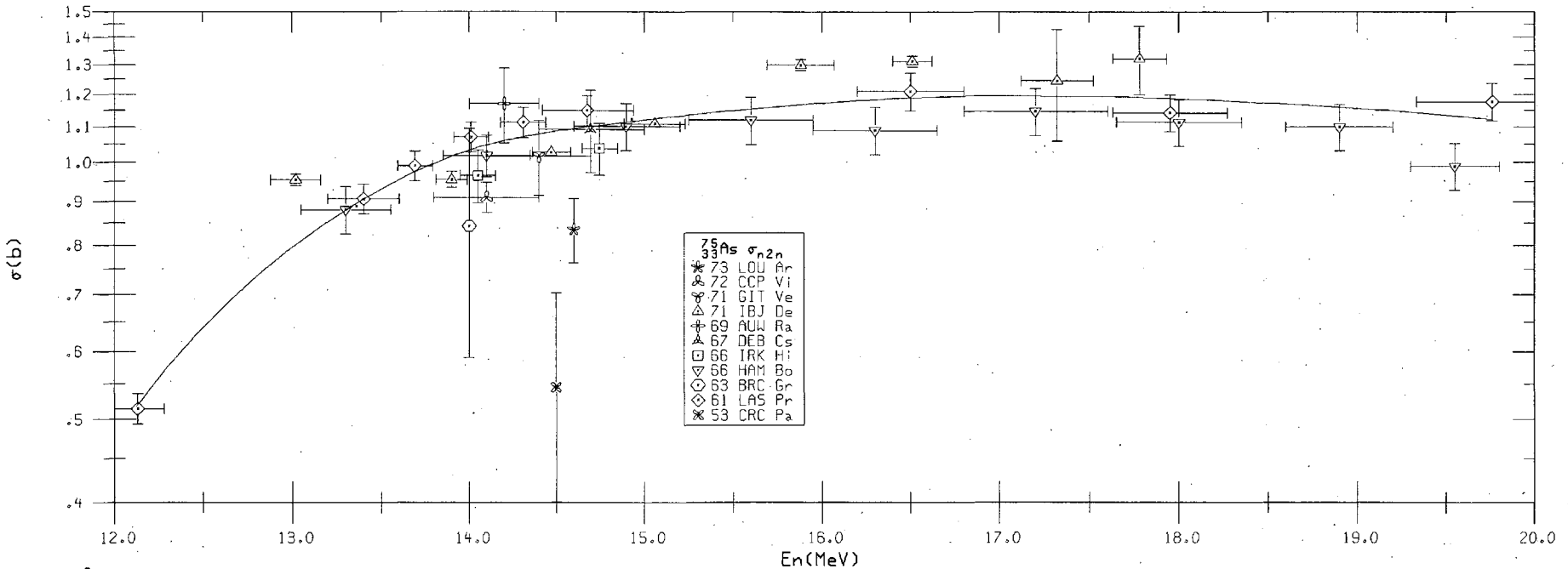


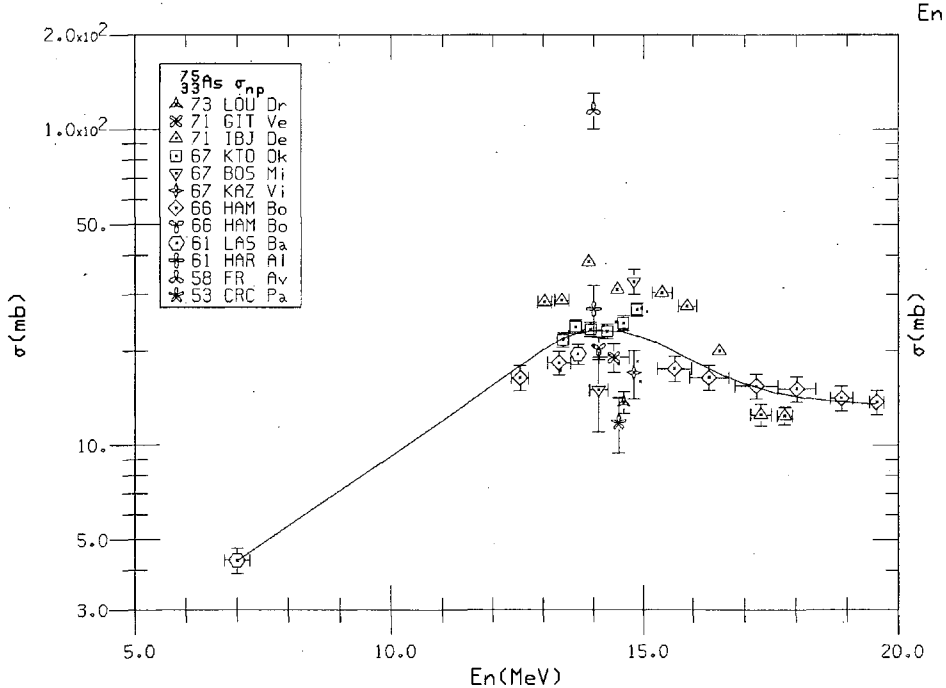
$^{75}_{33}As$

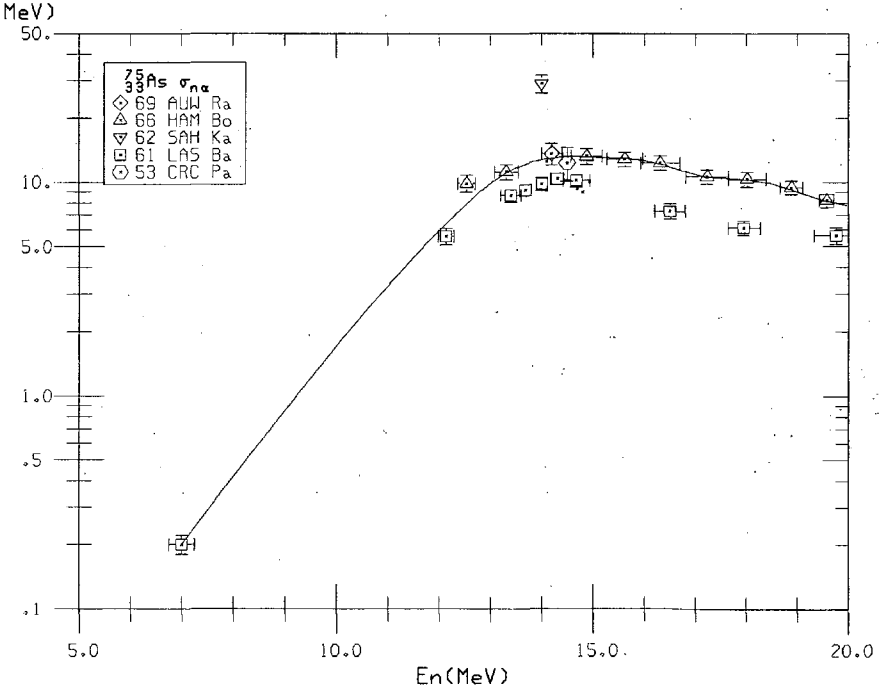
σ_{n2n}

σ_{np}

$\sigma_{n\alpha}$

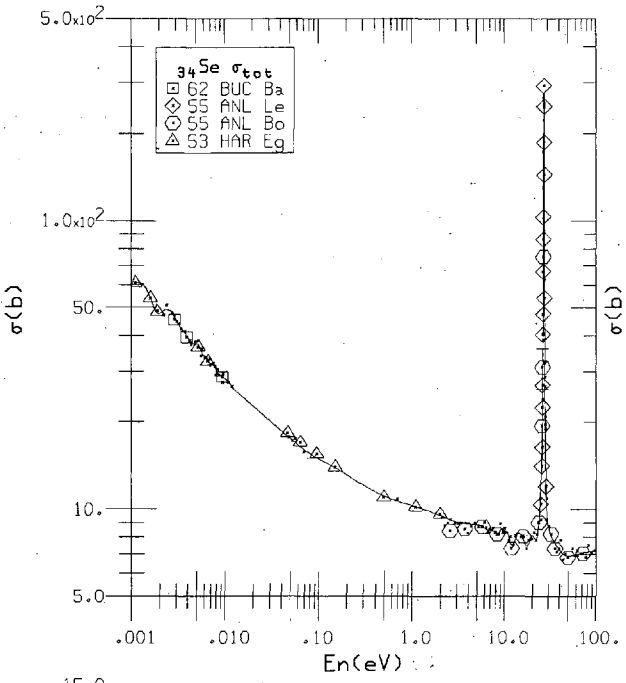






Yr	Lab	Author	Reference	Points	Range	Standard
			$^{75}_{33}$As σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	247	2.261 MeV to 14.9 MeV	
67	JNE	Manero	ARS,63,161,67	49	3.300 MeV to 5.211 MeV	
64	BUC	Apostolescu+	SCF,15,155,64	3	.0500 eV to 40.0 eV	
64	COL	Garg,et.al.	PR/B,136,177,64	5252	.208 keV to 9.994 keV	abs
63	CHF	Hsu,et.al.	CHP,1,1,63	1	3.370 b at 14.0 MeV	
62	BUC	Bally,et.al.	AE,12,514,62	20	.0027 eV to .0080 eV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.620 b at 28.4 MeV	
61	GA	Walton	WALTON,61	172	.0021 eV to 40.5 eV	abs
60	BUC	Dragomirescu+	SCF,11,77,60	70	.0100 eV to .107 eV	
58	ANL	Cote,et.al.	PR,111,288,58	270	15.7 eV to 10.1 keV	abs
56	WIS	Zucker	PR,104,1025,56	53	58.0 keV to 2.930 MeV	abs
			$^{75}_{33}$As σ_{el}			
73	AE	Etemad	AE-482,73	1	2.400 b at 7.000 MeV	^{1}H σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.370 b at 8.050 MeV	^{1}H σ_{el}
58	DKE	Block,et.al.	PR,109,1620,58	14	56.0 keV to .104 MeV	C
			$^{75}_{33}$As σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	1.700 b at 7.000 MeV	
			$^{75}_{33}$As $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	4.260 mb at 14.4 MeV	^{56}Fe σ_{np}
70	DEB	Diksic,et.al.	AHP,28,257,70	1	12.9 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
68	IRK	Colditz,et.al.	OSA,105,236,68	1	14.0 mb at 2.900 MeV	^{115}In σ_{inl}
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	.310 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	11.5 mb at 3.000 MeV	
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	1	22.2 mb at 14.1 MeV	H
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	DKE	Weston,et.al.	AP,10,477,60	3	.150 MeV to .400 MeV	^{75}As $\sigma_{n\gamma}$
60	DKE	Weston,et.al.	AP,10,477,60	13	3.000 keV to 80.0 keV	^{75}As $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.150 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	18	.147 MeV to 5.500 MeV	^{75}As $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.650 b at 20.0 keV	^{75}As $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.710 b at 20.0 keV	^{75}As $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.740 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	81.0 mb at .900 MeV	
			$^{75}_{33}$As σ_{n2n}			
73	BIA	Simpson,et.al.	JIN,35,2085,73	1	1.030 b at 14.1 MeV	^{63}Cu σ_{n2n}
73	LOU	Araminowicz+	INR-1464,14,73	1	.835 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Viktorov,et.al.	YF,15,(6),1099,72	1	.910 b at 14.1 MeV	
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	1.016 b at 14.4 MeV	^{56}Fe σ_{np}
71	IBJ	Decowski,et.al.	INR-1318,8,71	9	13.0 MeV to 17.8 MeV	
69	AUW	Rama Prasad+	NP/A,138,85,69	1	1.170 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.092 b at 14.7 MeV	^{65}Cu σ_{n2n}
66	IRK	Hille,et.al.	APA,23,44,66	2	14.1 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
66	HAM	Bormann,et.al.	EANDC(E)-66,42,66	9	13.3 MeV to 19.5 MeV	H
63	BRC	Granger,et.al.	EANDC(E)-49,83,63	1	.843 b at 14.0 MeV	
61	LAS	Prestwood,et.al.	PR,121,1438,61	10	12.1 MeV to 19.8 MeV	^{238}U σ_{nf}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.545 b at 14.5 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{75}_{33}$As σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	13.7 mb at 14.6 MeV	
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	19.0 mb at 14.4 MeV	^{56}Fe σ_{np}
71	IBJ	Decowski,et.al.	INR-1318,8,71	10	13.0 MeV to 17.8 MeV	
69	AUW	Rama Prasad+	NP/A,138,85,69	1	24.0 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	KTO	Okumura	NP/A,93,74,67	10	13.4 MeV to 15.0 MeV	
67	BOS	Mitra	67KANPUR,,367,67	2	14.1 MeV to 14.8 MeV	^{63}Cu σ_{n2n}
67	KAZ	Vinitskaya+	YF,6,240,67	1	17.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	HAM	Bormann,et.al.	66PARIS,1,225,66	10	12.5 MeV to 19.6 MeV	H σ_{tot}
66	HAM	Bormann,et.al.	ZN/A,21,988,66	1	20.3 mb at 14.1 MeV	H
61	LAS	Bayhurst,et.al.	JIN,23,173,61	7	7.000 MeV to 14.9 MeV	^{238}U σ_{nf}
61	HAR	Allan	NP,24,274,61	1	27.0 mb at 14.0 MeV	^{54}Fe σ_{np}
58	FR	Avignon,et.al.	CR,247,1849,58	1	.115 b at 14.0 MeV	Ni σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	11.8 mb at 14.5 MeV	abs
			$^{75}_{33}$As σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	52.0 muB at 14.6 MeV	^{75}As $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.500 mb at 14.7 MeV	^{75}As $\sigma_{n\alpha}$
			$^{75}_{33}$As σ_{pem}			
58	FR	Avignon,et.al.	CR,247,1849,58	1	.115 b at 14.0 MeV	Ni σ_{np}
			$^{75}_{33}$As σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.578 mb at 14.0 MeV	
65	IRK	Frevert	APA,20,304,65	1	.500 mb at 14.8 MeV	^{75}As $\sigma_{n\alpha}$
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	.510 mb at 14.5 MeV	
			$^{75}_{33}$As $\sigma_{n\alpha}$			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	13.5 mb at 14.4 MeV	^{56}Fe σ_{np}
69	AUW	Rama Prasad+	NP/A,138,85,69	1	13.6 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,6,240,67	1	9.000 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	HAM	Bormann,et.al.	66PARIS,1,225,66	10	12.5 MeV to 19.6 MeV	H σ_{tot}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	9.300 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	SAH	Kaul	NP,29,522,62	1	29.0 mb at 14.0 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	11	7.000 MeV to 19.8 MeV	^{238}U σ_{nf}
53	CRC	Paul,et.al.	CJP,31,267,53	1	12.3 mb at 14.5 MeV	abs
			$^{75}_{33}$As σ_{aem}			
62	SAH	Kaul	NP,39,325,62	1	29.0 mb at 14.0 MeV	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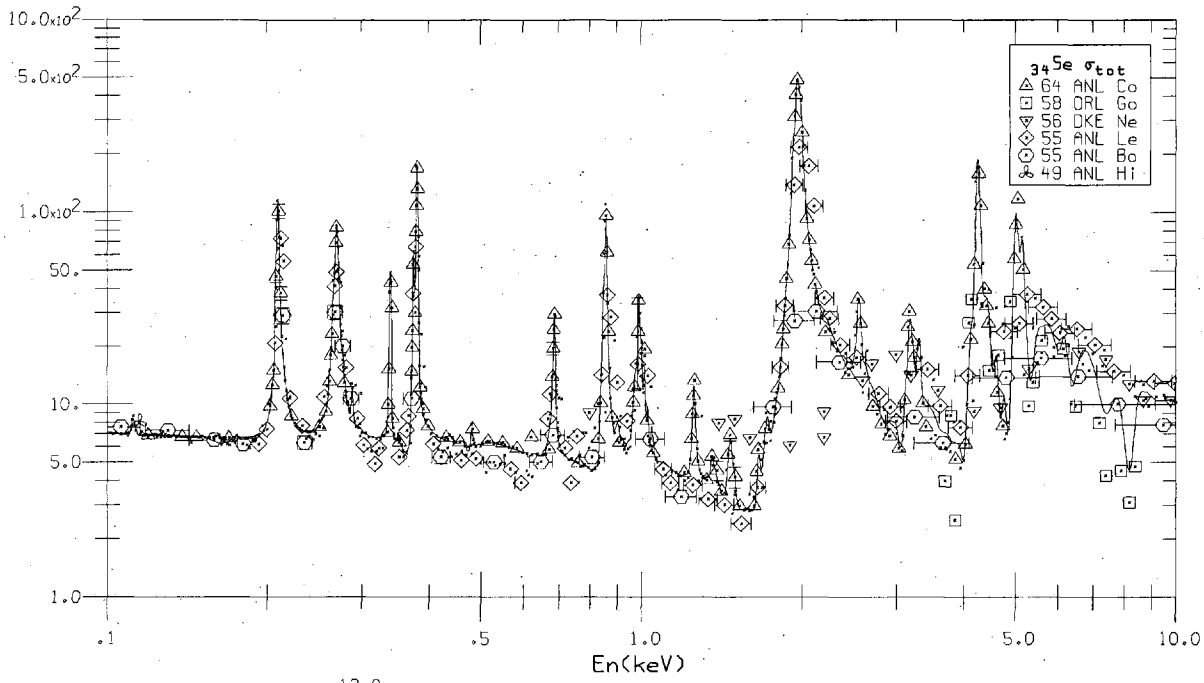
62 BUC Ba
55 ANL Le
55 ANL Bo
53 HAR Eg
σ(b)
En(eV)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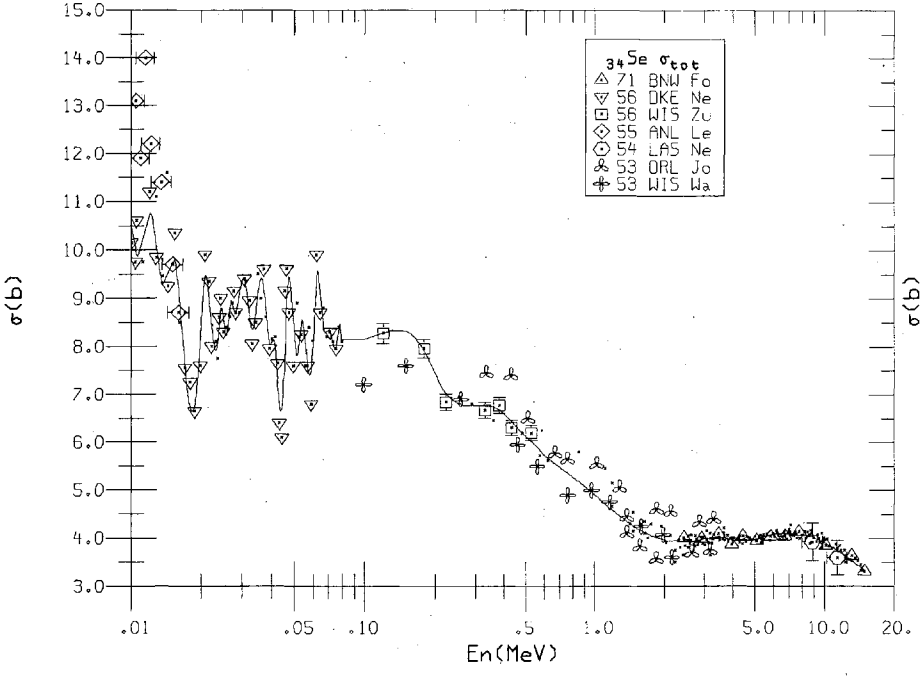
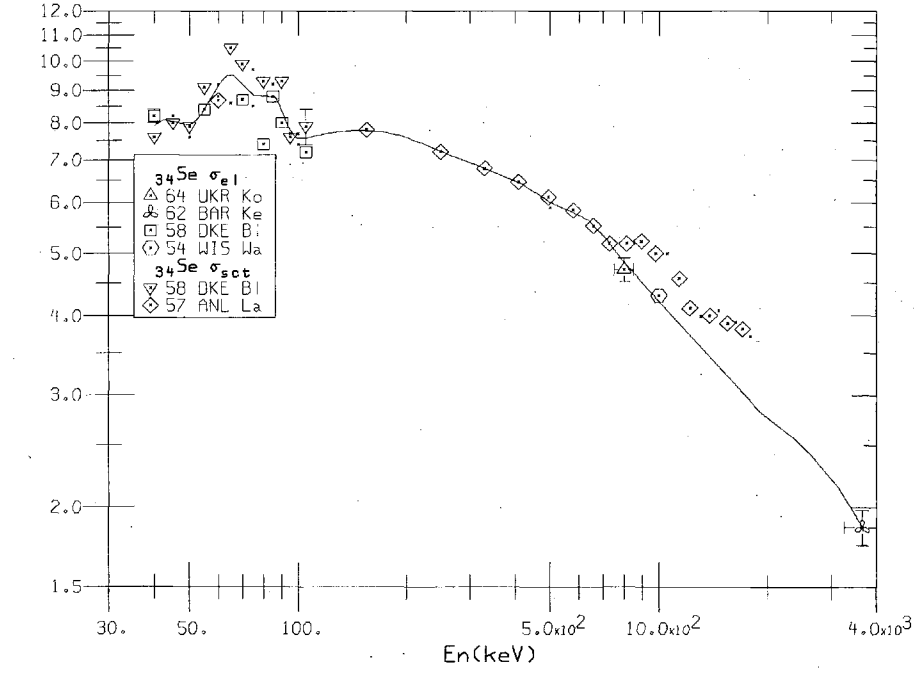
64 ANL Co
58 ORL Go
56 DKE Ne
55 ANL Le
55 ANL Bo
49 ANL Hi
σ(b)
En(keV)


34Se σtot
71 BNW Fo
56 DKE Ne
56 WIS Zu
55 ANL Le
54 LAS Ne
53 ORL Jo
53 WIS Wa
σ(b)
En(MeV)


34Se σel
64 UKR Ko
62 BAR Ke
58 DKE Bi
54 WIS Wa
34Se σsct
58 DKE Bi
57 ANL La
σ(b)
En(keV)

$_{34}$Se

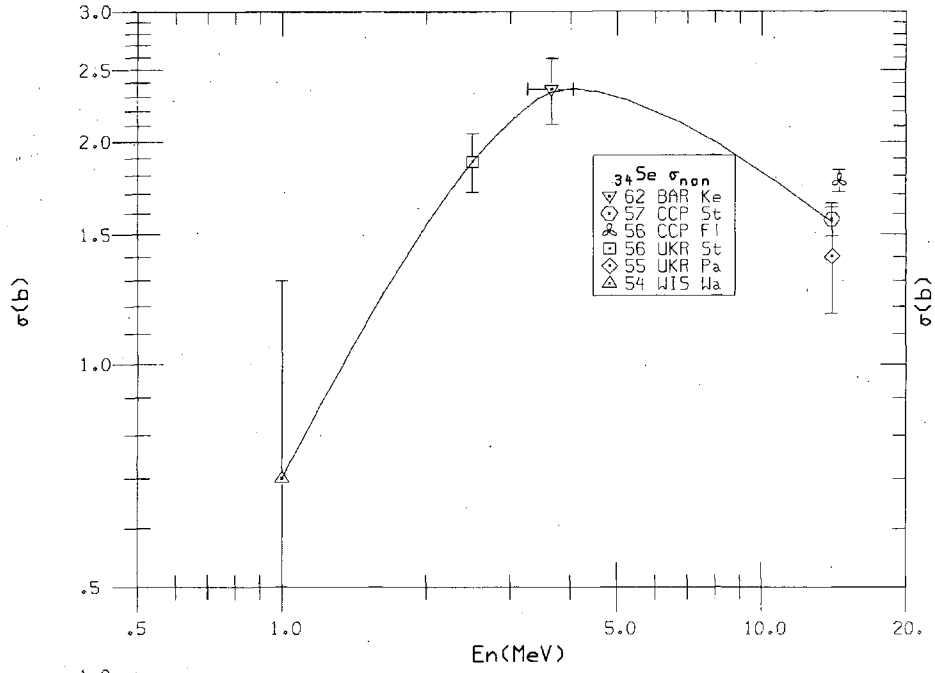
σ_{non}

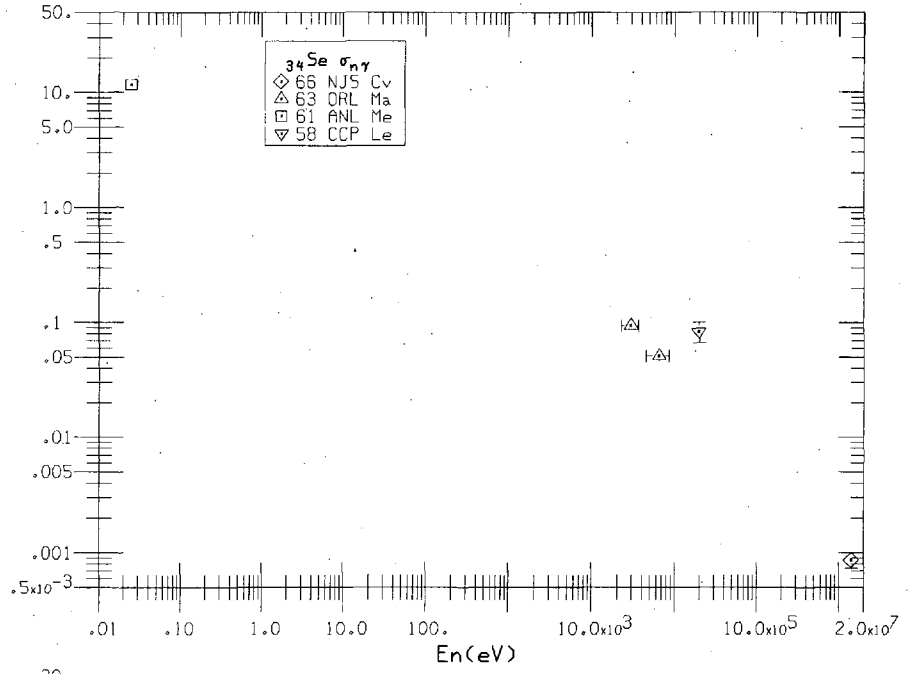
$\sigma_{n\gamma}$

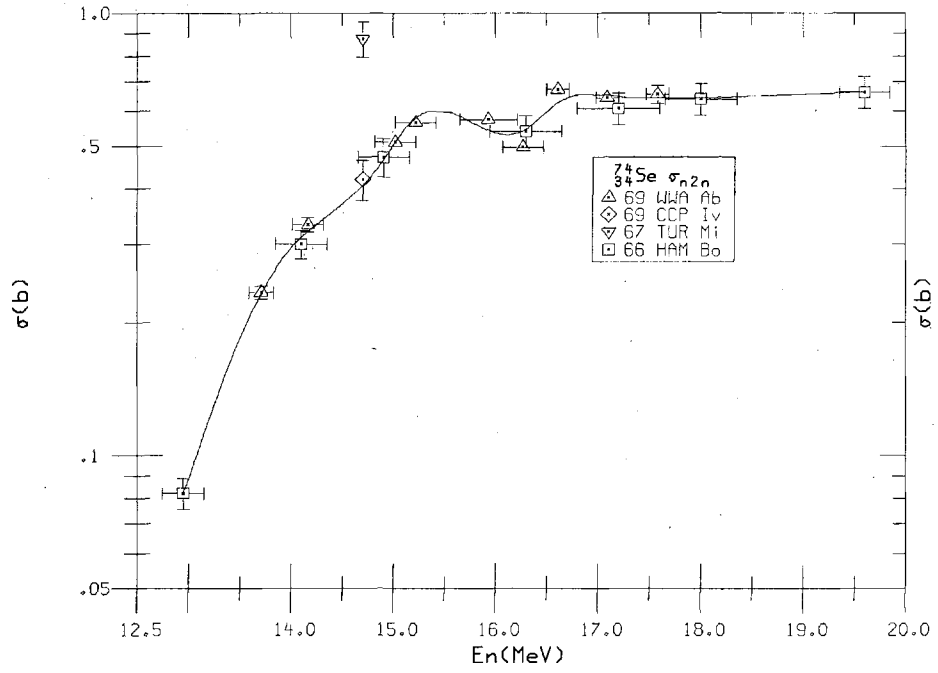
$^{74}_{34}$Se

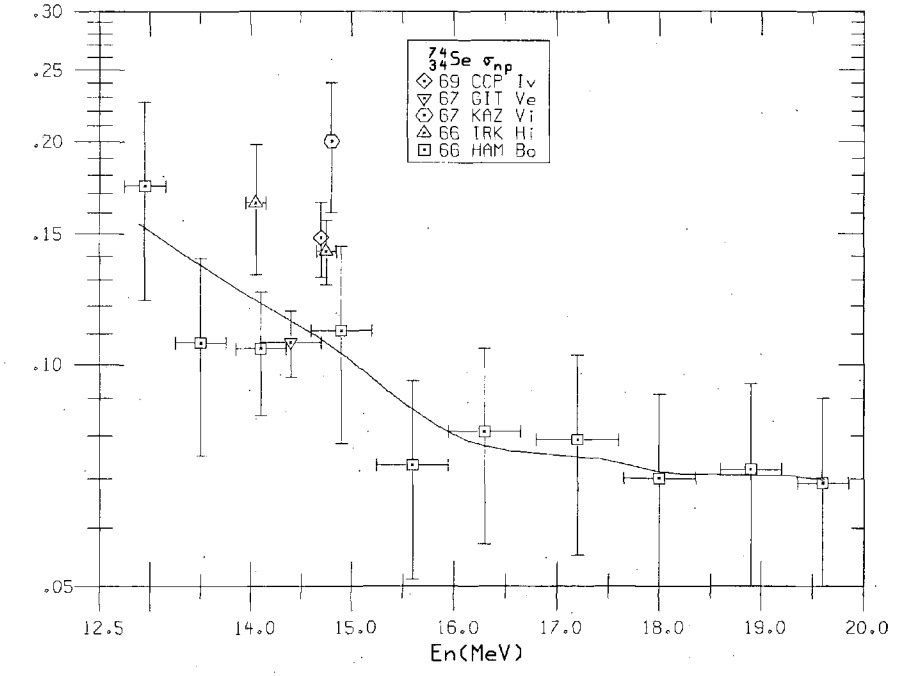
σ_{n2n}

σ_{np}









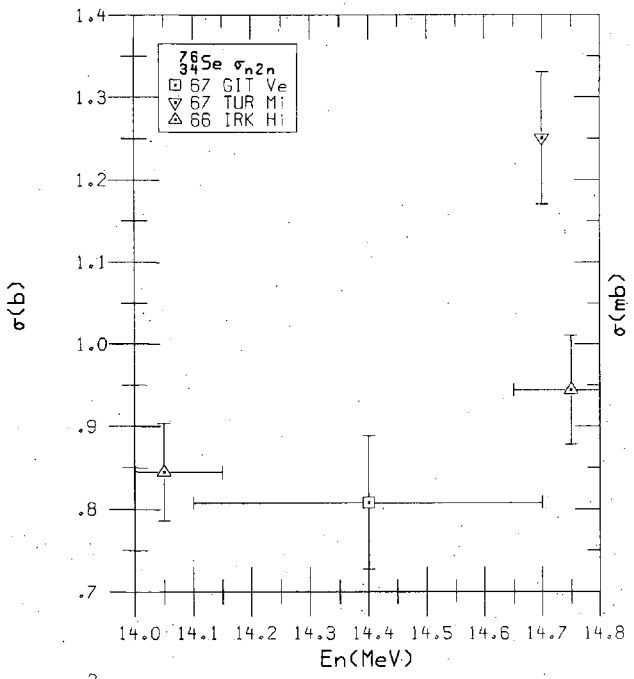
$^{76}_{34}Se$

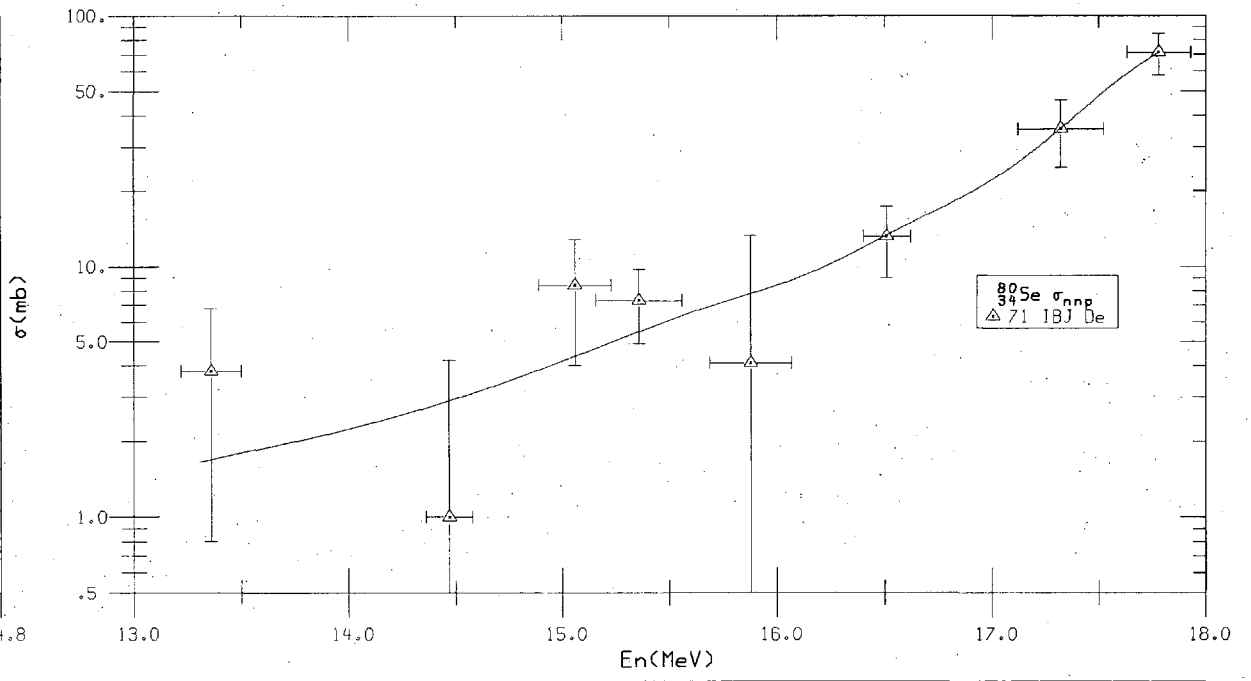
σ_{n2n}

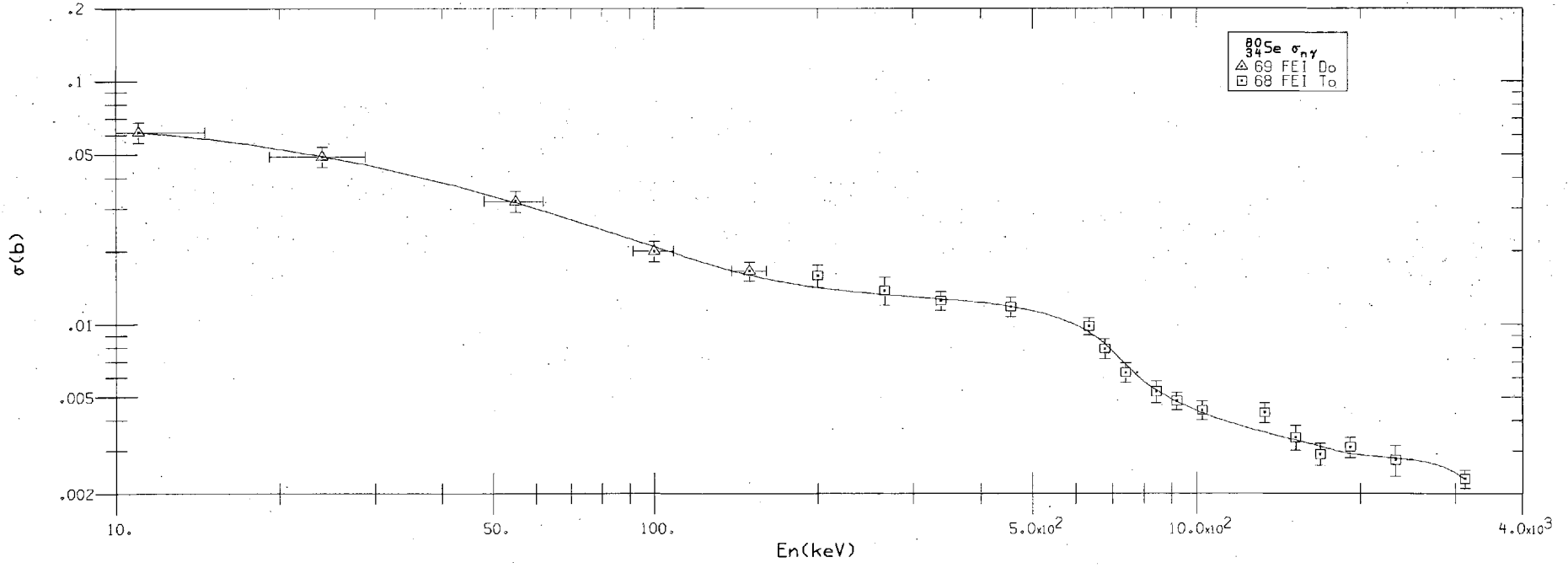
$^{80}_{34}Se$

$\sigma_{n\gamma}$

σ_{nnp}





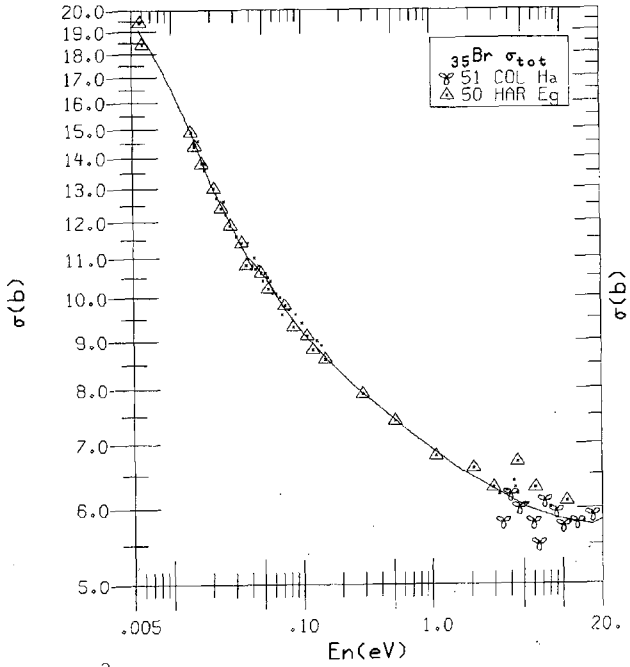


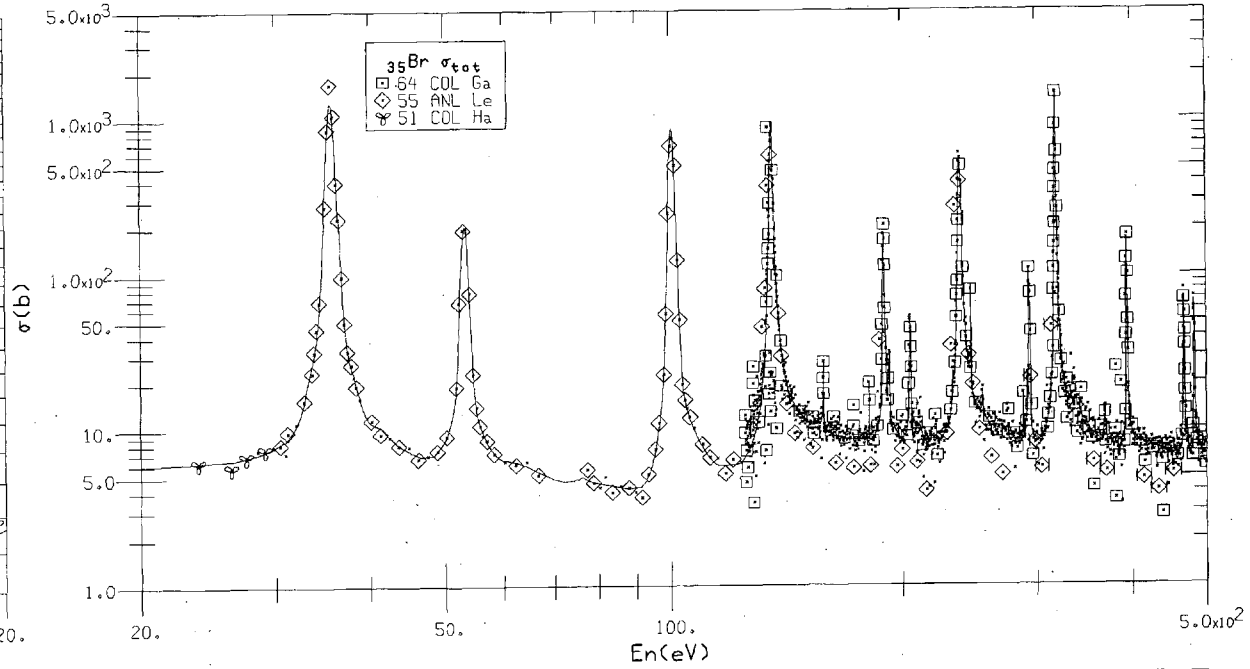
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{34}$Se σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	228	2.465 MeV to 14.9 MeV	
64	ANL	Cote,et.al.	PR/B,136,703,64	536	.102 keV to 5.186 keV	abs
62	BUC	Bally,et.al.	AE,12,514,62	21	.0027 eV to .0095 eV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.210 b at 3.660 MeV	
58	ORL	Good,et.al.	PR,109,926,58	36	3.700 keV to 8.900 keV	abs
56	DKE	Newson,et.al.	PR,102,1580,56	100	.800 keV to 79.8 keV	
56	WIS	Zucker	PR,104,1025,56	13	60.0 keV to .625 MeV	
55	ANL	Le Blanc,et.al.	PR,100,1248,55	264	25.2 eV to 17.0 keV	
55	ANL	Bollinger,et.al.	PR,100,126,55	155	2.120 eV to 9.480 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	29	2.810 MeV to 13.1 MeV	abs
53	ORL	Johnson,et.al.	ORNL-1365,1,53	41	.335 MeV to 3.310 MeV	abs
53	WIS	Walt,et.al.	PR,89,1271,53	18	99.0 keV to 2.980 MeV	
53	HAR	Egelstaff	AERE-N/R-1147,53	87	.0011 eV to 9.800 eV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	3.560 b at 14.1 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
			$_{34}$Se σ_{el}			
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	1.860 b at 3.660 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	14	40.0 keV to .105 MeV	C
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.300 b at 1.000 MeV	
			$_{34}$Se σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	1.780 b at 7.000 MeV	
			$_{34}$Se σ_{sct}			
58	DKE	Block,et.al.	PR,109,1620,58	14	40.0 keV to .105 MeV	C
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	C
			$_{34}$Se σ_{non}			
62	BAR	Kent,et.al.	PR,125,331,62	1	2.350 b at 3.660 MeV	
57	CCP	Strizhak	AE,2,68,57	1	1.570 b at 14.0 MeV	abs
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.770 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	1.880 b at 2.500 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	1	1.400 b at 14.0 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.700 b at 1.000 MeV	
			$_{34}$Se $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.860 mb at 14.1 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	11.7 b at thermal	
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	83.0 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$

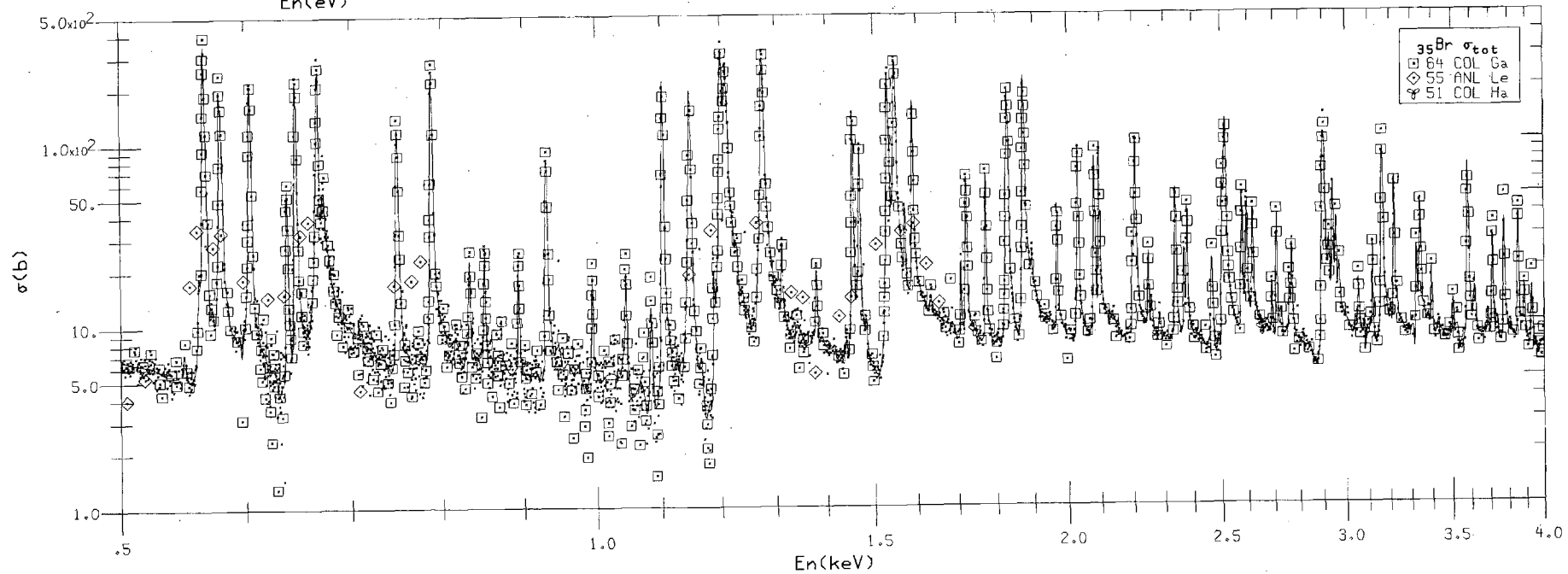
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{34}$Se σ_{np}			
61	HAR	Allan	NP,24,274,61	1	14.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{74}_{34}$Se $\sigma_{n\gamma}$			
70	AUW	Sriramachandra	70MADURAI,2,29,70	1	2.383 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{74}_{34}$Se σ_{n2n}			
69	WWA	Abboud,et.al.	NP/A,139,42,69	9	13.7 MeV to 17.6 MeV	^{65}Cu σ_{n2n}
69	CCP	Ivanenko,et.al.	YF,9,258,69	1	.420 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	.874 b at 14.7 MeV	abs
66	HAM	Bormann,et.al.	ZN/A,21,988,66	7	13.0 MeV to 19.6 MeV	H
			$^{74}_{34}$Se σ_{np}			
69	CCP	Ivanenko,et.al.	YF,9,258,69	1	.148 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	GIT	Venugopala Rao+	PR,154,1023,67	1	.107 b at 14.4 MeV	^{74}Se σ_{n2n}
67	KAZ	Vinitskaya+	YF,6,240,67	1	.200 b at 14.8 MeV	^{76}Se σ_{np}
66	IRK	Hille,et.al.	APA,23,44,66	2	14.1 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
66	HAM	Bormann,et.al.	66PARIS,1,225,66	10	13.0 MeV to 19.6 MeV	^{63}Cu σ_{n2n}
			$^{76}_{34}$Se σ_{n2n}			
67	GIT	Venugopala Rao+	PR,154,1023,67	1	.808 b at 14.4 MeV	^{74}Se σ_{n2n}
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	1.250 b at 14.7 MeV	abs
66	IRK	Hille,et.al.	APA,23,44,66	2	14.1 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{76}_{34}$Se σ_{np}			
67	GIT	Venugopala Rao+	PR,154,1023,67	1	56.0 mb at 14.4 MeV	^{74}Se σ_{n2n}
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	47.0 mb at 14.7 MeV	abs
67	CCP	Ivanenko,et.al.	YF,6,11,67	1	57.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,6,240,67	1	54.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
			$^{77}_{34}$Se σ_{np}			
67	KAZ	Vinitskaya+	YF,6,240,67	1	36.0 mb at 14.8 MeV	^{76}Se σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	45.2 mb at 14.5 MeV	abs
			$^{78}_{34}$Se σ_{np}			
69	CCP	Ivanenko,et.al.	YF,9,258,69	1	21.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	GIT	Venugopala Rao+	PR,154,1023,67	1	24.0 mb at 14.4 MeV	^{74}Se σ_{n2n}
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	22.0 mb at 14.7 MeV	abs
67	KAZ	Vinitskaya+	YF,6,240,67	1	14.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}

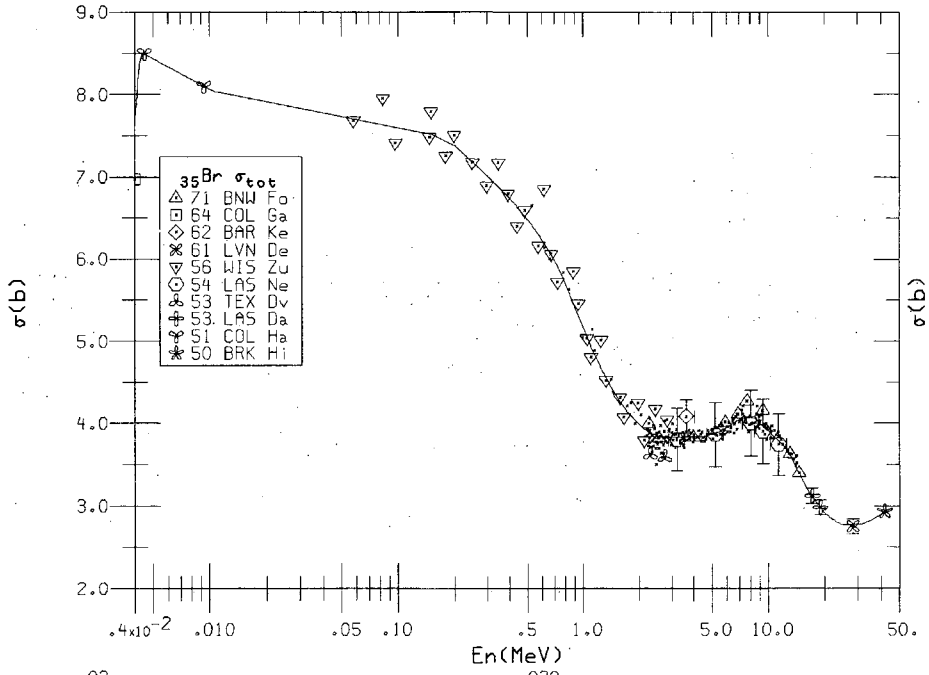
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{78}_{34}$Se $\sigma_{n\alpha}$			
69	CCP	Ivanenko,et.al.	YF,9,258,69	1	38.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	GIT	Venugopala Rao+	PR,154,1023,67	1	6.000 mb at 14.4 MeV	^{74}Se σ_{n2n}
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	27.0 mb at 14.7 MeV	abs
67	KAZ	Vinitskaya+	YF,6,240,67	1	7.000 mb at 14.8 MeV	^{78}Se σ_{np}
			$^{80}_{34}$Se σ_{tot}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	4.200 b at 4.000 MeV	
			$^{80}_{34}$Se σ_{el}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	2.150 b at 4.000 MeV	
			$^{80}_{34}$Se $\sigma_{n\gamma}$			
69	FEI	Dovbenko,et.al.	INDC-260,11,69	6	11.0 keV to .338 MeV	^{235}U
68	FEI	Tolstikov,et.al.	AE,24,187,68	17	.200 MeV to 3.128 MeV	^{235}U σ_{nf}
			$^{80}_{34}$Se σ_{np}			
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	16.0 mb at 14.7 MeV	abs
			$^{80}_{34}$Se σ_{nnp}			
71	IBJ	Decowski,et.al.	INR-1318,8,71	8	13.4 MeV to 17.8 MeV	^{56}Fe σ_{np}
			$^{80}_{34}$Se $\sigma_{n\alpha}$			
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	6.600 mb at 14.7 MeV	abs
67	CCP	Ivanenko,et.al.	YF,6,11,67	1	.134 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,6,240,67	1	2.600 mb at 14.8 MeV	^{78}Se $\sigma_{n\alpha}$
53	CRC	Paul,et.al.	CJP,31,267,53	1	37.7 mb at 14.5 MeV	abs
			$^{82}_{34}$Se $\sigma_{n\gamma}$			
58	ALD	Perkin,et.al.	PPS,72,505,58	1	.650 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{82}_{34}$Se σ_{n2n}			
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.490 b at 12.3 MeV	^{27}Al $\sigma_{n\alpha}$
67	TUR	Minetti,et.al.	NP/A,100,186,67	1	1.462 b at 14.7 MeV	abs

^{35}Br
σ_{tot}





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64 COL Ga
62 BAR Ke
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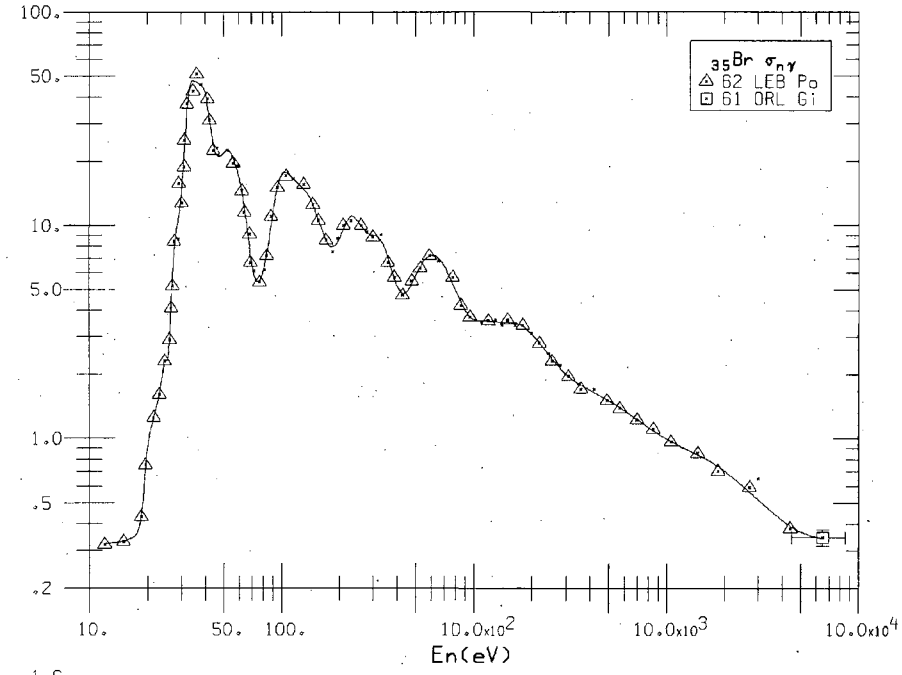
56 WIS Zu
54 LAS Ne
53 TEX Dv
53 LAS Da
51 COL Ha
50 BRK Hi
σ(b)
En(MeV)


35Br σnγ
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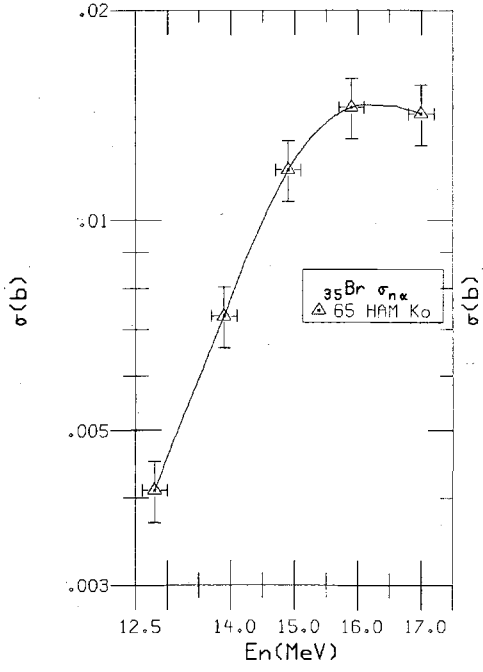
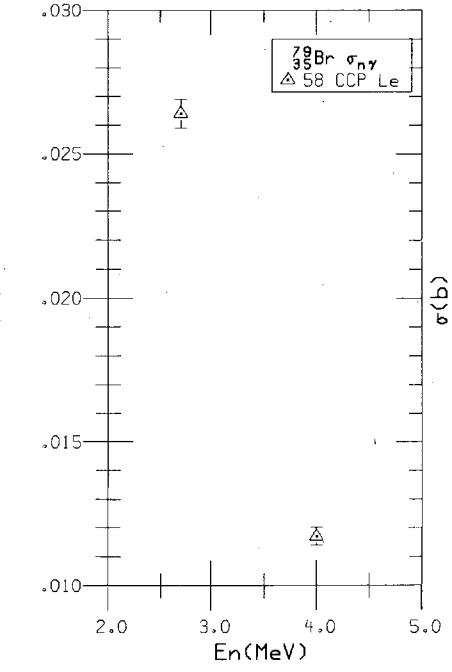
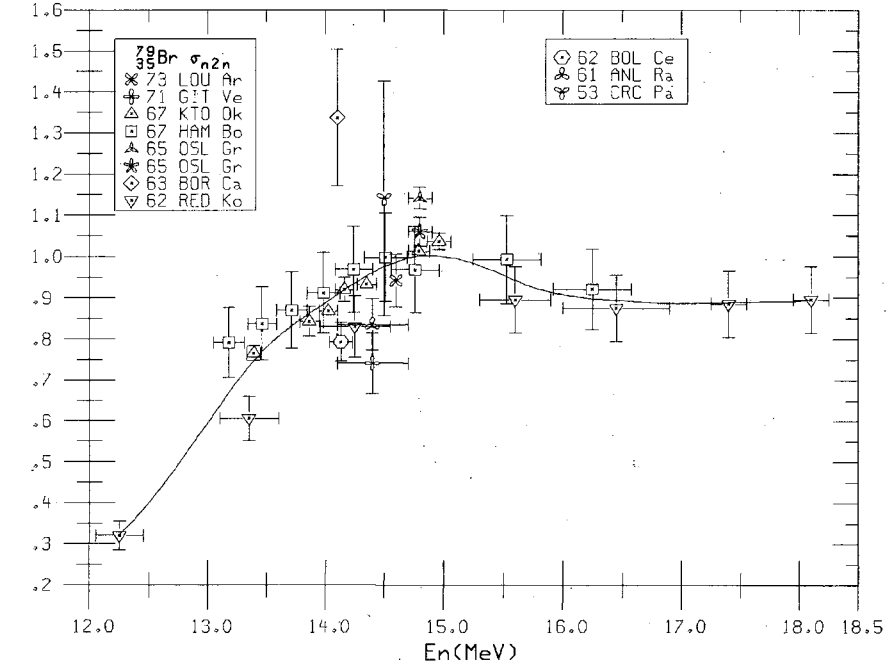
σ(b)
En(eV)


35Br σnα
65 HAM Ko
σ(b)
En(MeV)


79 35Br σnγ
58 CCP Le
σ(b)
En(MeV)


79 35Br σn2n
73 LOU Ar
71 GIT Ve
67 KTO Ok
67 HAM Bo
65 OSL Gr
65 OSL Gr
63 BOR Ca
62 RED Ko
62 BOL Ce
61 ANL Ra
53 CRC Pa
En(MeV)

$^{79}_{35}Br$

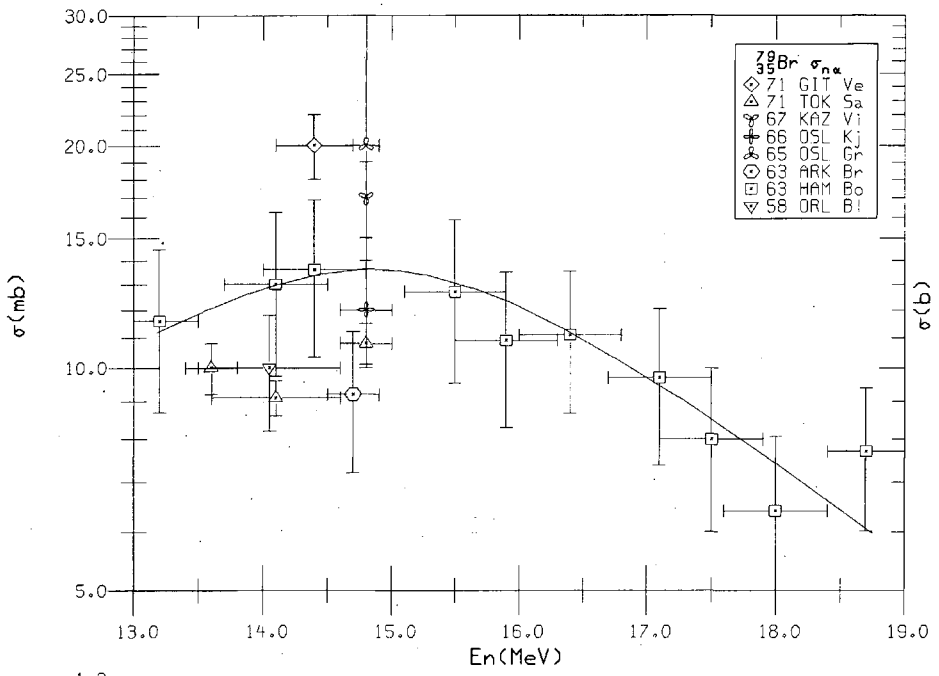
$\sigma_{n\alpha}$

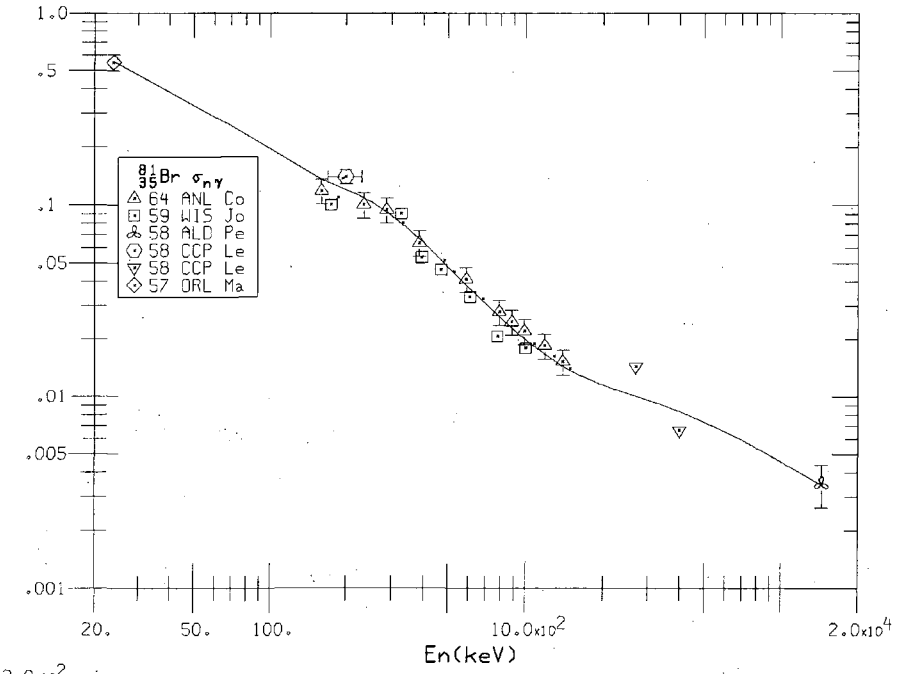
$^{81}_{35}Br$

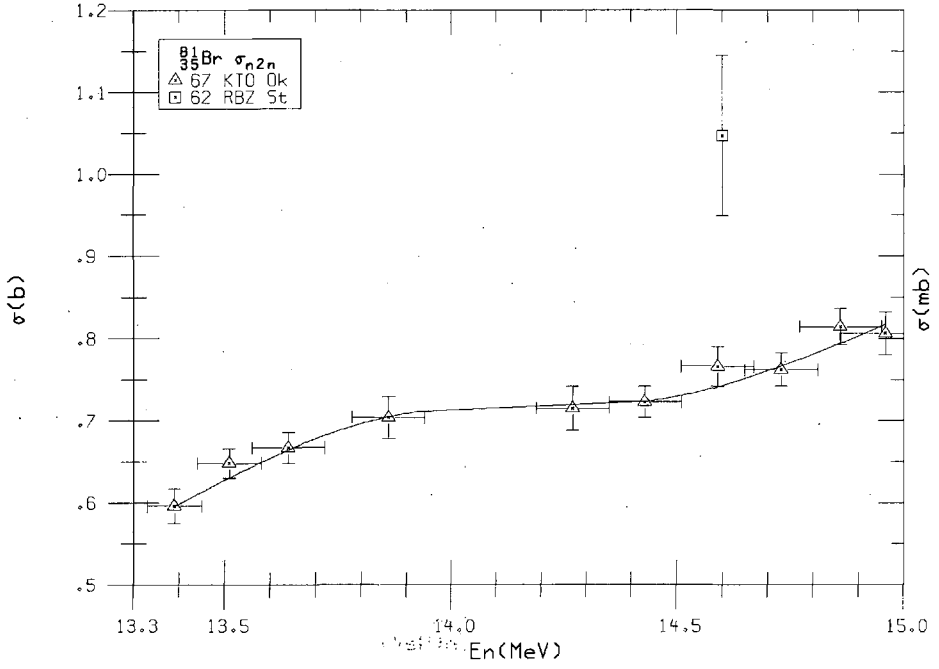
$\sigma_{n\gamma}$

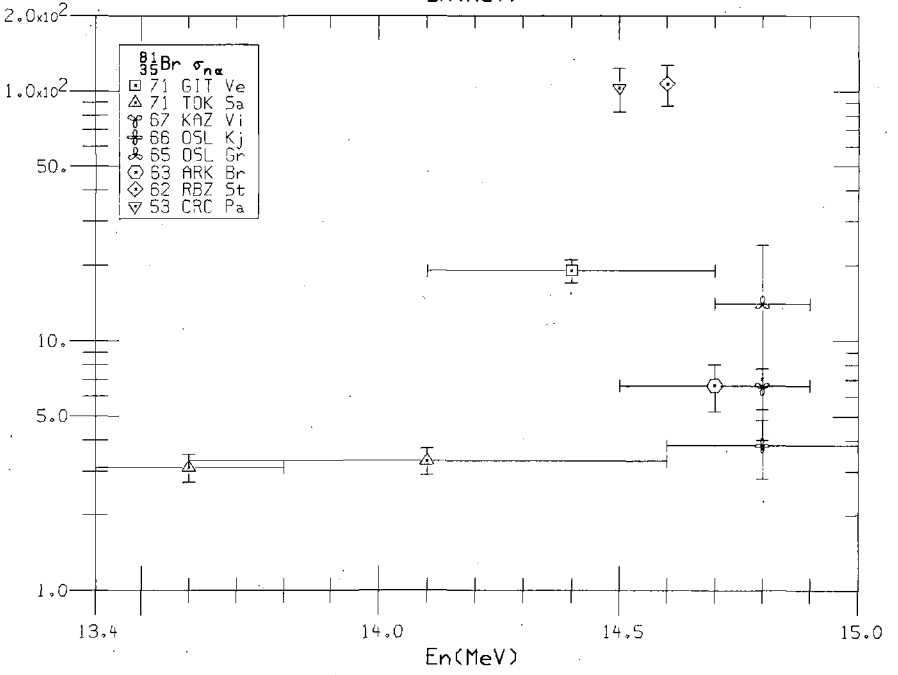
σ_{n2n}

$\sigma_{n\alpha}$









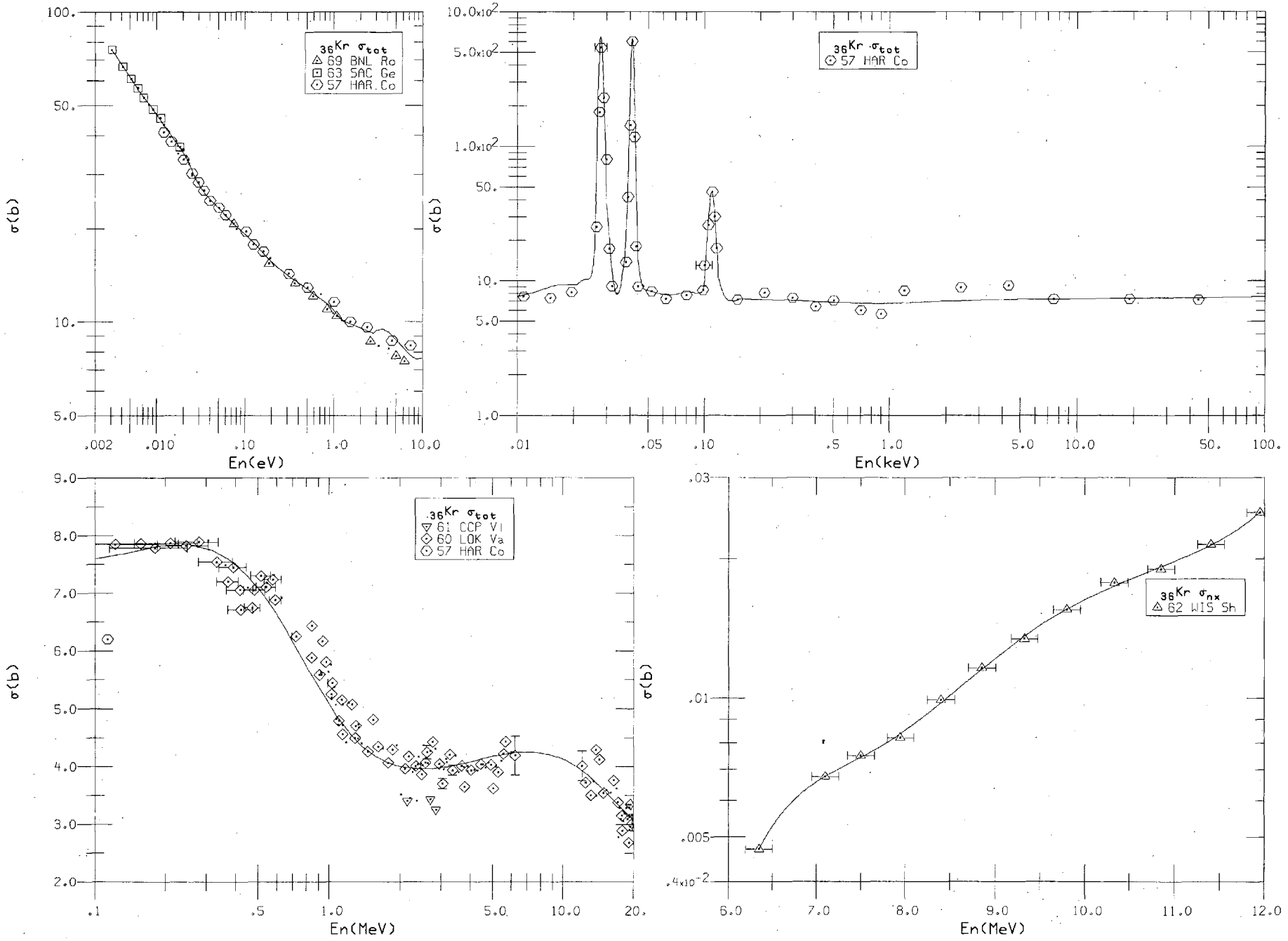
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{35}Br$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	245	2.262 MeV to 14.6 MeV	
64	COL	Garg,et.al.	PR/B,136,177,64	6716	81.9 eV to 4.003 keV	abs
62	BAR	Kent,et.al.	PR,125,331,62	1	4.080 b at 3.660 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.750 b at 28.4 MeV	
56	WIS	Zucker	PR,104,1025,56	53	58.0 keV to 3.030 MeV	
55	ANL	Le Blanc,et.al.	PR,100,1248,55	225	28.5 eV to 1.684 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.800 MeV to 13.1 MeV	
53	TEX	Dvorack,et.al.	PR,90,618,53	14	2.210 MeV to 2.765 MeV	
53	LAS	Day,et.al.	PR,92,358,53	3	17.2 MeV to 20.1 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	3.520 b at 14.1 MeV	
51	COL	Havens Jr,et.al.	PR,83,1123,51	27	3.300 eV to 9.400 keV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.930 b at 42.0 MeV	abs
50	HAR	Egelstaff,et.al.	NAT,166,825,50	54	.0058 eV to 10.8 eV	abs
			$_{35}Br$ σ_{el}			
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	2.100 b at 2.000 MeV	
			$_{35}Br$ $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.100 mb at 14.1 MeV	
62	LEB	Popov,et.al.	ZET,42,988,62	87	12.0 eV to 44.0 keV	
61	ANL	Meadows,et.al.	NSE,9,132,61	1	6.820 b at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.380 b at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{35}Br$ σ_{np}			
61	HAR	Allan	NP,24,274,61	1	14.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$_{35}Br$ $\sigma_{n\alpha}$			
65	HAM	Koenig	NP,71,497,65	5	12.8 MeV to 17.0 MeV	
			$^{79}_{35}Br$ $\sigma_{n\gamma}$			
58	CCP	Kononov,et.al.	AE,5,564,58	1	.710 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
			$^{79}_{35}Br$ σ_{n2n}			
73	LOU	Araminowicz,et.al.	INR-1464,14,73	1	.942 b at 14.6 MeV	^{63}Cu σ_{n2n}
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	.741 b at 14.4 MeV	^{56}Fe σ_{np}
67	KTO	Okumura	NP/A,93,74,67	9	13.4 MeV to 15.0 MeV	
67	HAM	Bormann,et.al.	EANDC(E)-76,51,67	9	13.2 MeV to 16.3 MeV	H
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	1.141 b at 14.8 MeV	
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	1.060 b at 14.8 MeV	abs
63	BOR	Carles	CR,257,659,63	1	1.337 b at 14.1 MeV	^{63}Cu σ_{n2n}
62	RED	Koehler,et.al.	RR-TR-62-1,62	8	12.3 MeV to 18.1 MeV	^{79}Br σ_{n2n}
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	.793 b at 14.1 MeV	
61	ANL	Rayburn	PR,122,168,61	1	.835 b at 14.4 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.141 b at 14.5 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{79}_{35}Br$ $\sigma_{n\alpha}$			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	20.0 mb at 14.4 MeV	^{56}Fe σ_{np}
71	TOK	Sato,et.al.	RCA,16,71,71	3	13.6 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,6,240,67	1	17.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	OSL	Kjelberg,et.al.	RCA,5,28,66	1	12.0 mb at 14.8 MeV	^{31}P σ_{np}
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	20.0 mb at 14.8 MeV	^{81}Br σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	9.200 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	HAM	Bormann,et.al.	ZP,174,1,63	10	13.2 MeV to 18.7 MeV	^{27}Al $\sigma_{n\alpha}$
58	ORL	Blosser,et.al.	PR,110,531,58	1	10.0 mb at 14.1 MeV	^{56}Fe σ_{np}
			$^{81}_{35}Br$ $\sigma_{n\gamma}$			
64	ANL	Cox	PR/B,133,378,64	17	.160 MeV to 1.485 MeV	^{235}U σ_{nf}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.137 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	8	.175 MeV to 1.000 MeV	^{235}U σ_{nf}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	3.500 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.550 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{81}_{35}Br$ σ_{n2n}			
67	KTO	Okumura	NP/A,93,74,67	10	13.4 MeV to 15.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	1.047 b at 14.6 MeV	
			$^{81}_{35}Br$ $\sigma_{n\alpha}$			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	19.0 mb at 14.4 MeV	^{56}Fe σ_{np}
71	TOK	Sato,et.al.	RCA,16,71,71	3	13.6 MeV to 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
67	KAZ	Vinitskaya+	YF,6,240,67	1	6.500 mb at 14.8 MeV	^{79}Br $\sigma_{n\alpha}$
66	OSL	Kjelberg,et.al.	RCA,5,28,66	1	3.800 mb at 14.8 MeV	^{31}P σ_{np}
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	7.000 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
65	OSL	Grimeland,et.al.	PR/B,137,878,65	1	14.0 mb at 14.8 MeV	^{81}Br σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	6.600 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.107 b at 14.6 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.103 b at 14.5 MeV	abs
			$^{81}_{35}Br$ $\sigma_{nn\alpha}$			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	6.500 mb at 14.7 MeV	^{79}Br $\sigma_{n\alpha}$

^{36}Kr

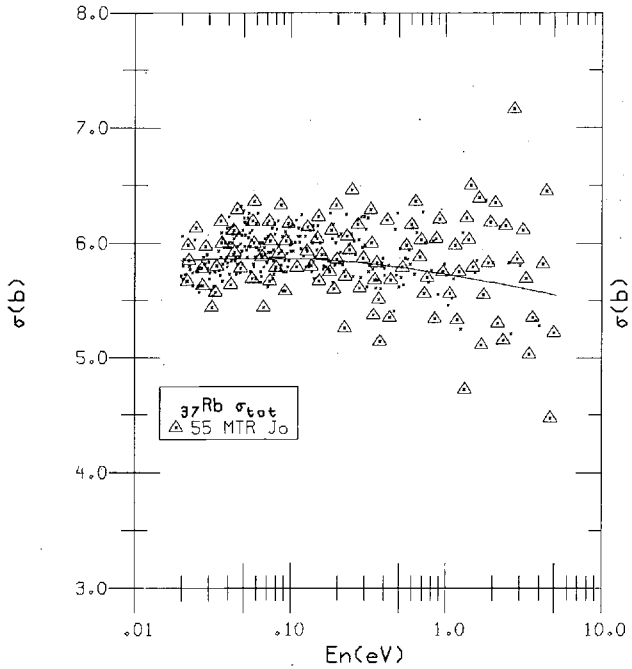
σ_{tot}

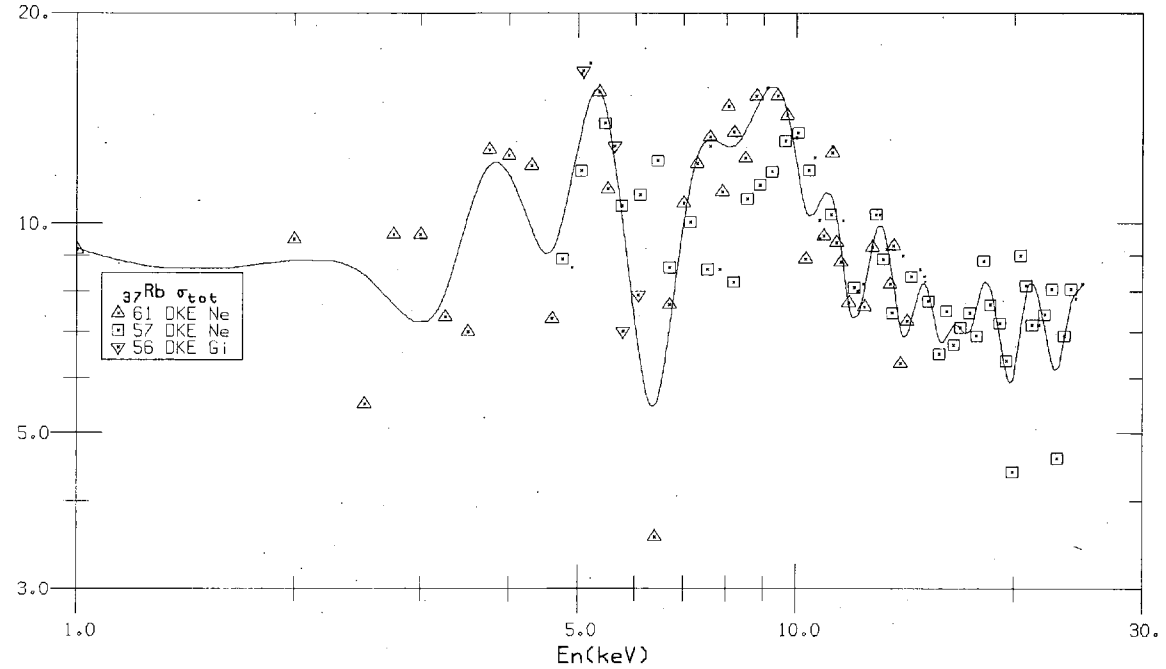
σ_{nx}

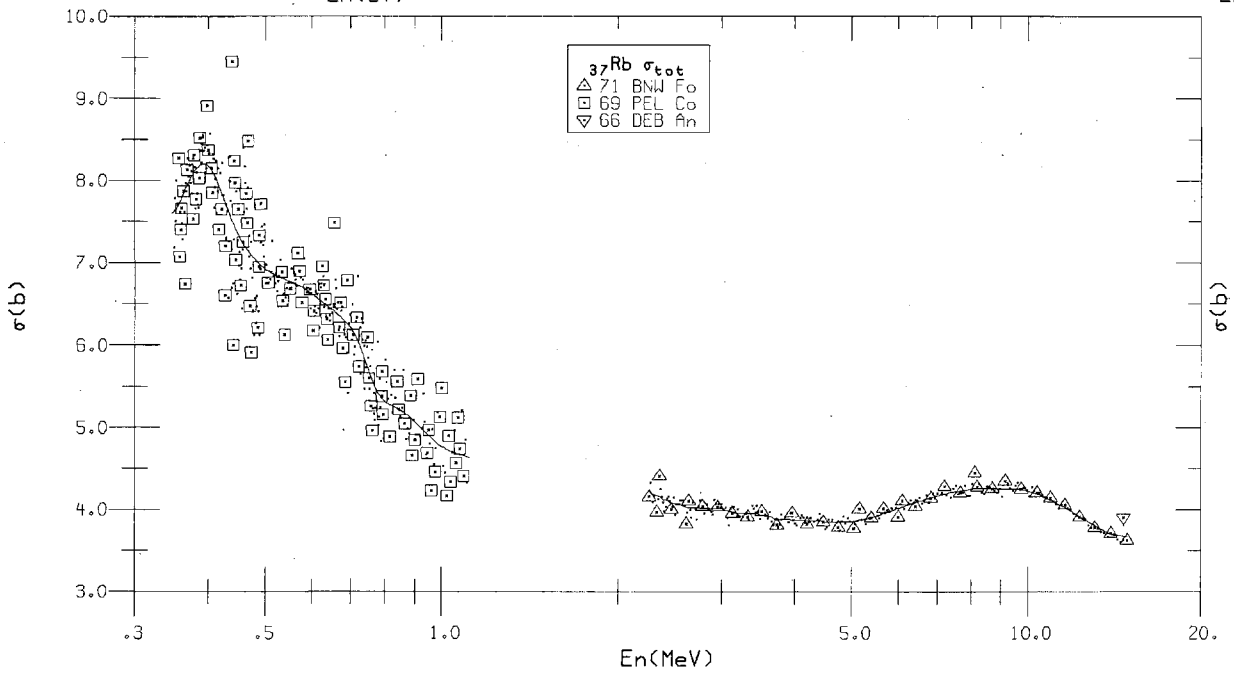


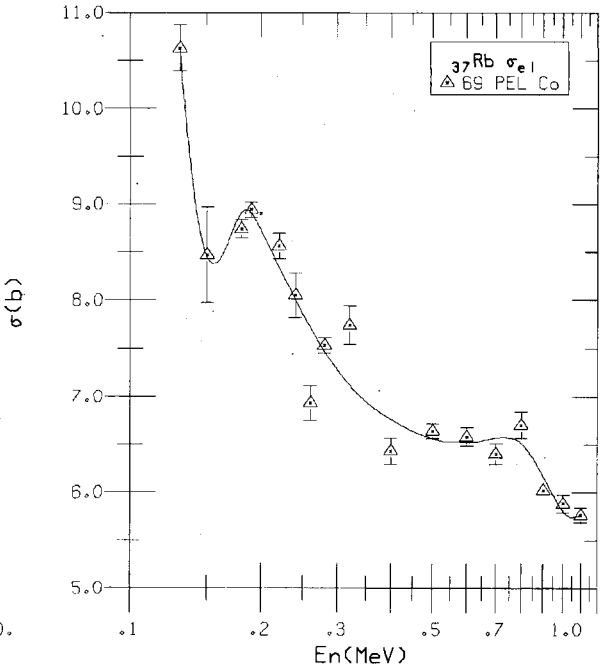
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{36}Kr$ σ_{tot}			
69	BNL	Rorer,et.al.	NP/A,133,410,69	14	.0747 eV to 6.195 eV	abs
63	SAC	Genin,et.al.	JPR,24,21,63	23	.0031 eV to .0251 eV	abs
61	CCP	Vlasenko,et.al.	SPN,,209,61	5	2.150 MeV to 2.850 MeV	
60	LOK	Vaughn,et.al.	PR,118,683,60	153	.122 MeV to 19.8 MeV	abs
57	HAR	Cocking	JNE,6,113,57	65	.0120 eV to .113 MeV	
			$_{36}Kr$ σ_{el}			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	6.200 b at thermal	abs
			$_{36}Kr$ σ_{sct}			
63	SAC	Genin,et.al.	JPR,24,21,63	1	8.300 b at thermal	abs
			$_{36}Kr$ $\sigma_{n\gamma}$			
69	BNL	Rorer,et.al.	NP/A,133,410,69	1	26.2 b at thermal	abs
			$_{36}Kr$ σ_{nx}			
62	WIS	Shamu	NP,31,166,62	12	6.350 MeV to 12.0 MeV	H
			$^{78}_{36}Kr$ σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	.245 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{80}_{36}Kr$ σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	.810 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{82}_{36}Kr$ σ_{np}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	23.0 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{84}_{36}Kr$ σ_{np}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	8.500 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{86}_{36}Kr$ $\sigma_{n\alpha}$			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	1.200 mb at 14.4 MeV	^{56}Fe σ_{np}

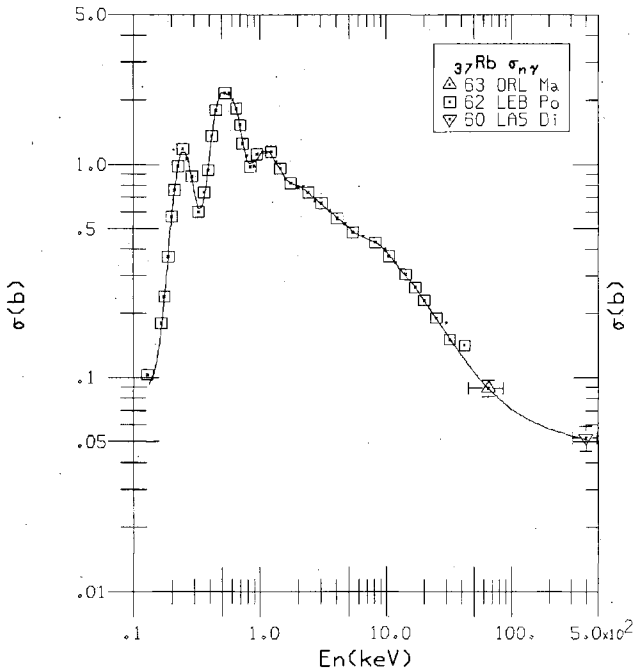
$_{37}$Rb
σ_{tot}
σ_{el}

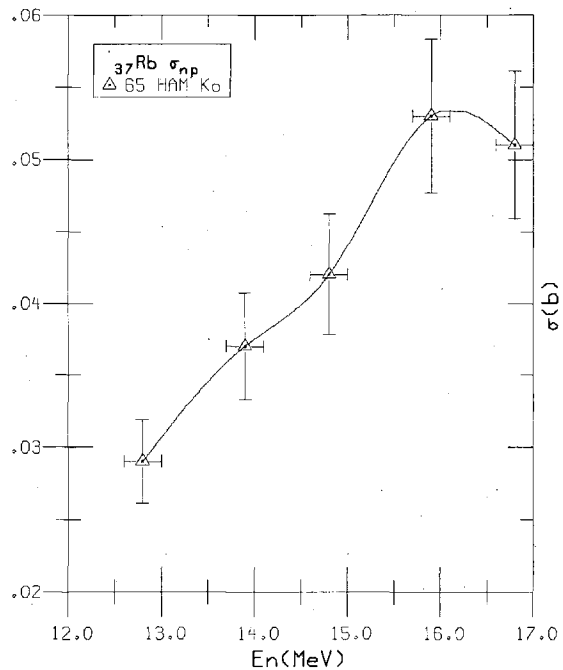


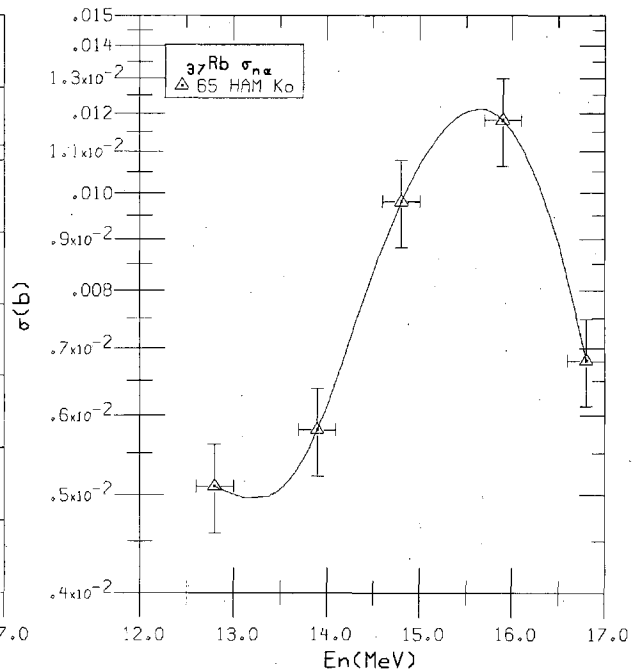


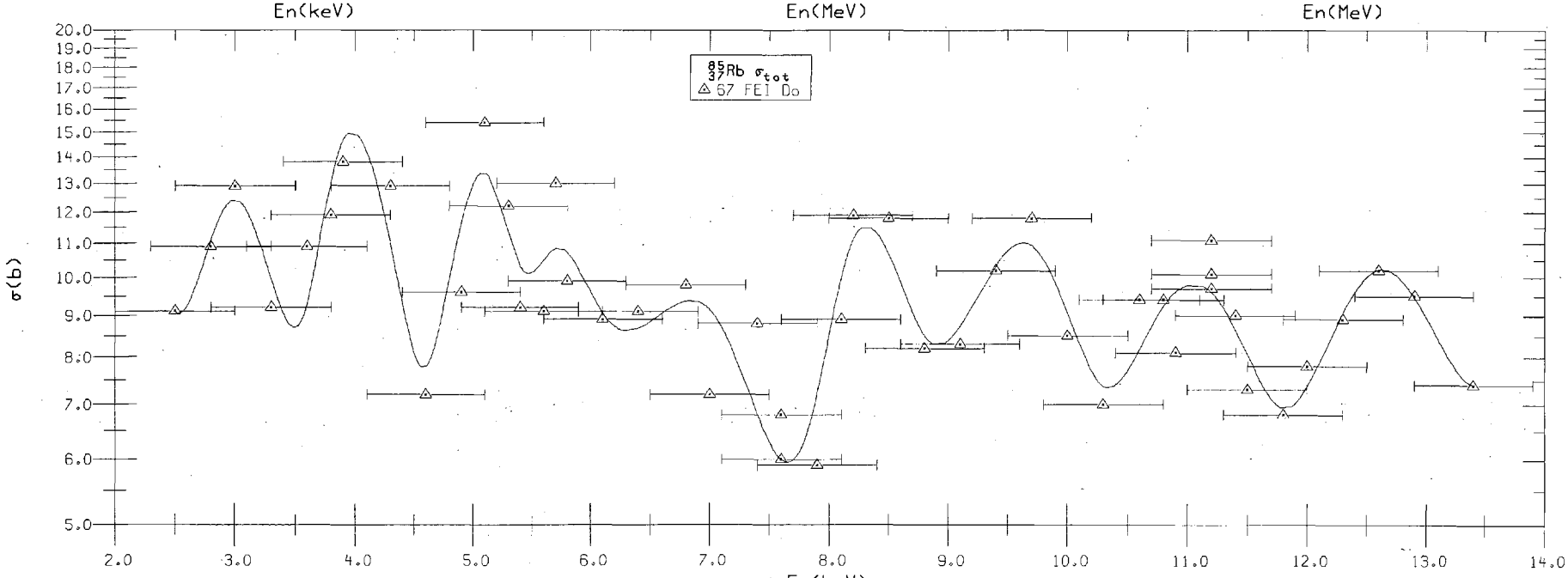





^{37}Rb $\sigma_{n\gamma}$
63 ORL Ma
62 LEB Po
60 LAS Di
σ(b)
En(keV)


^{37}Rb σ_{np}
65 HAM Ko
σ(b)
En(MeV)


^{37}Rb $\sigma_{n\alpha}$
65 HAM Ko
σ(b)
En(MeV)

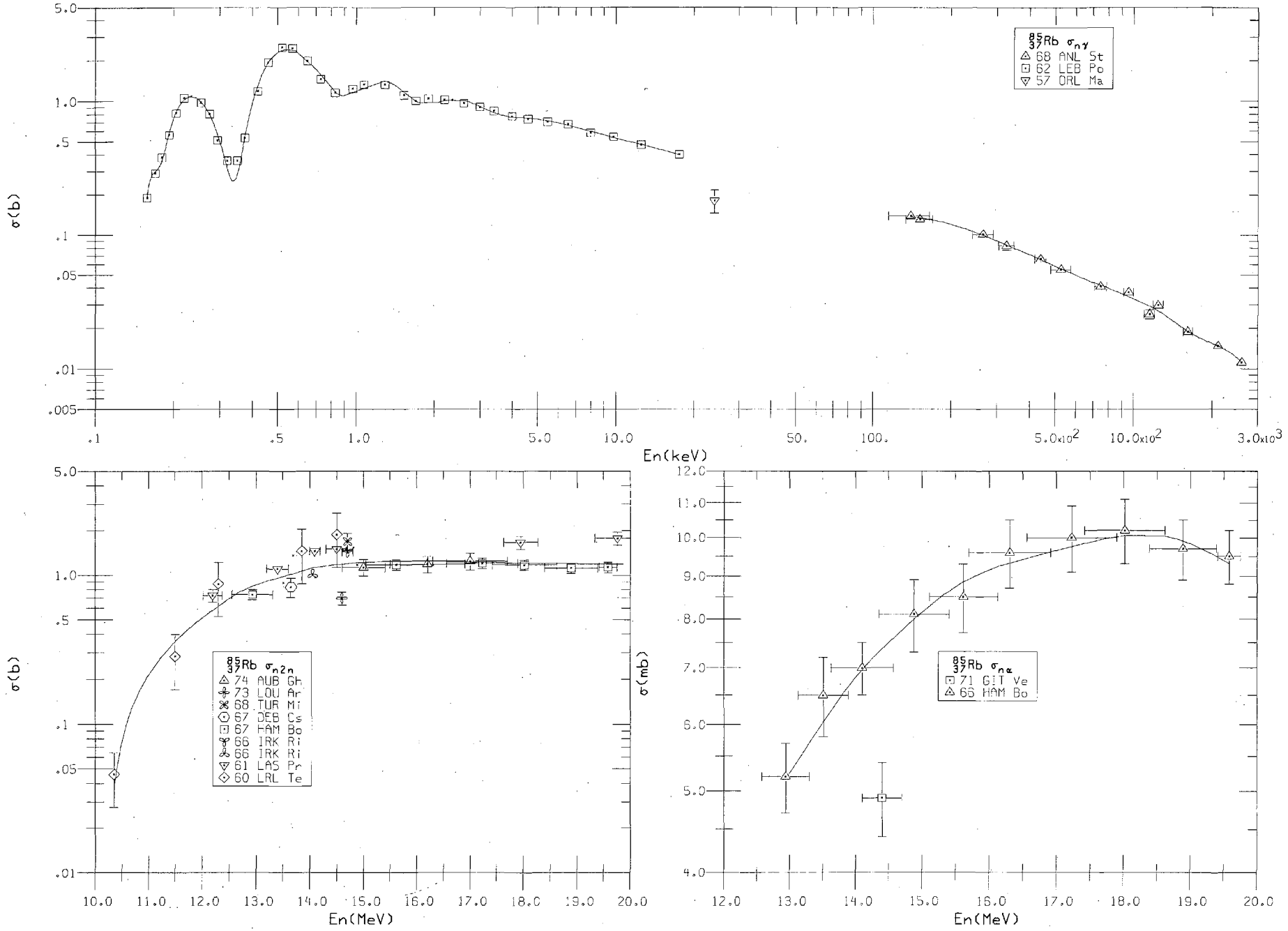

$^{85}_{37}$Rb σ_{tot}
67 FEI Do
σ(b)
En(keV)

$^{85}_{37}$Rb

$\sigma_{n\gamma}$

σ_{n2n}

$\sigma_{n\alpha}$

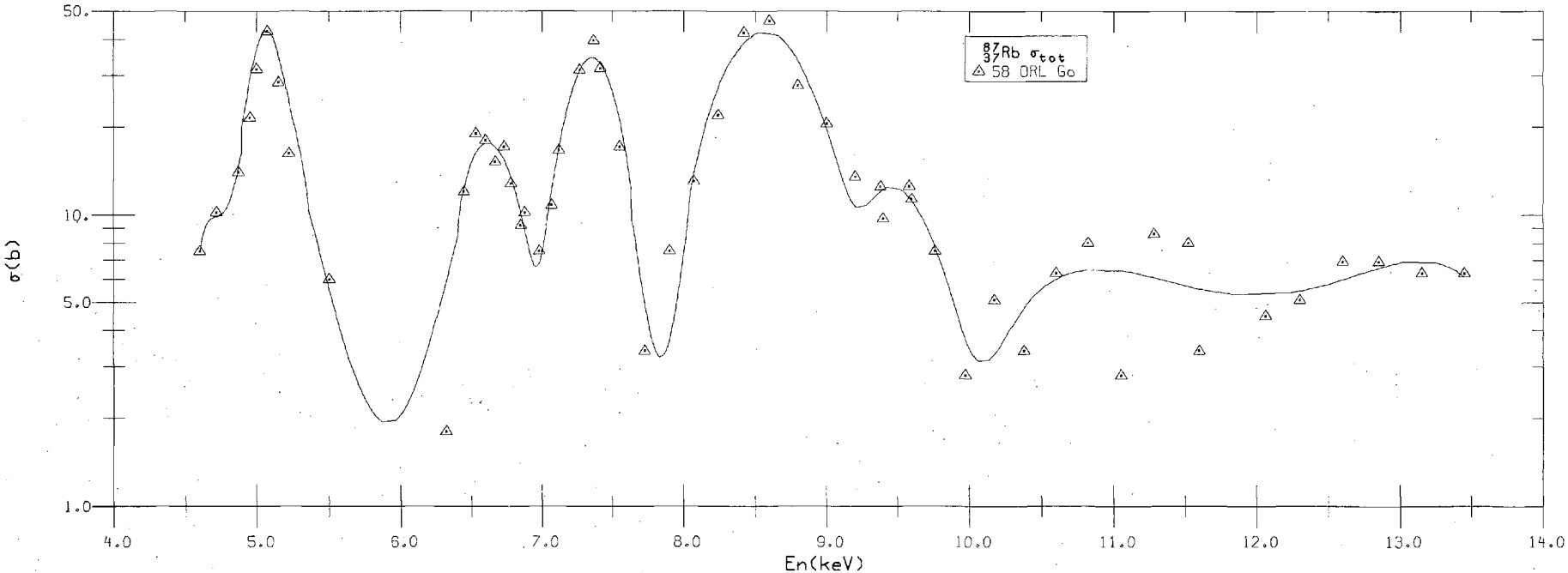


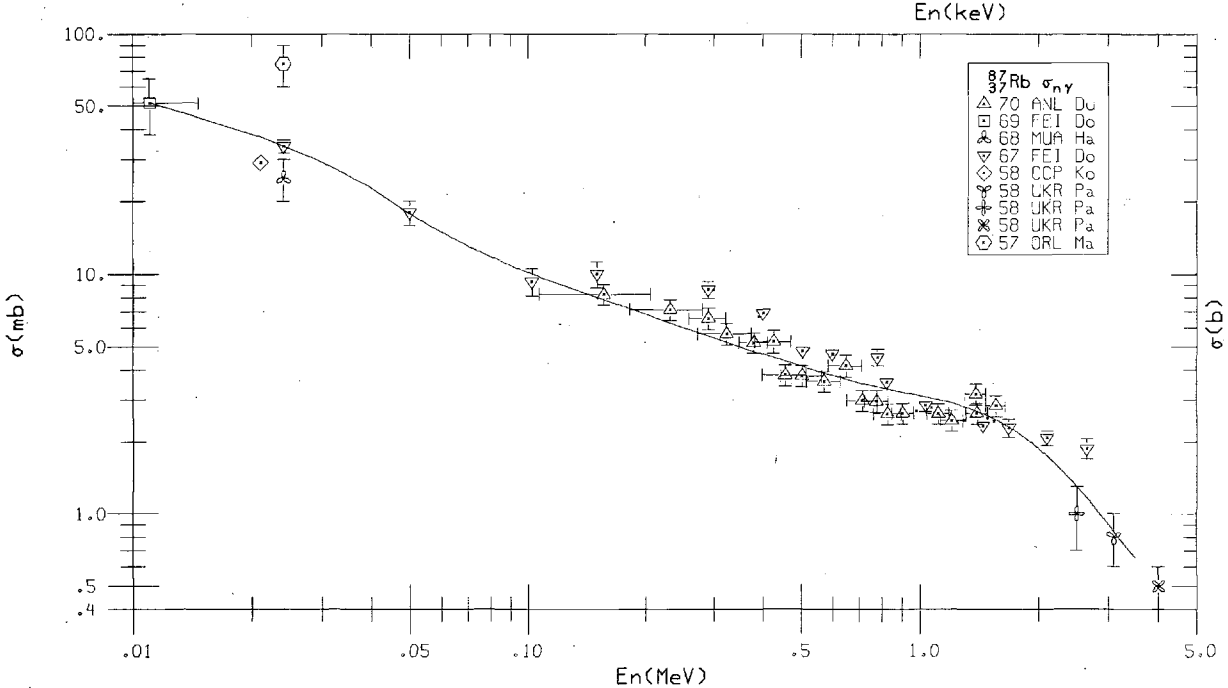
$^{87}_{37}Rb$

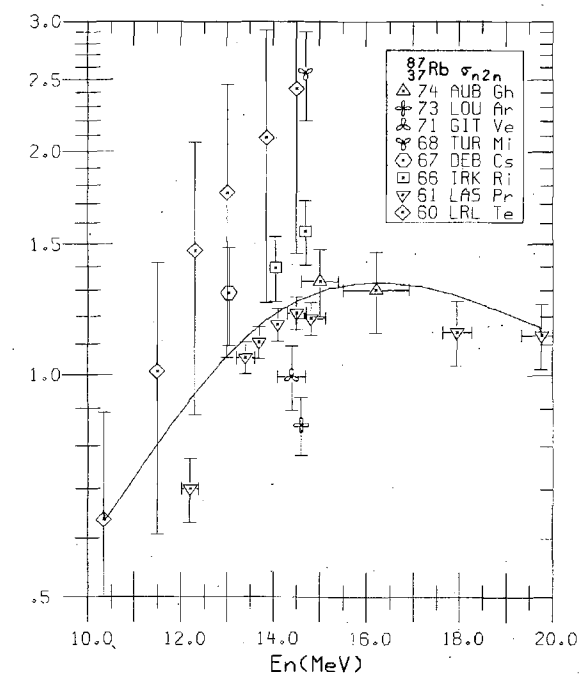
σ_{tot}

$\sigma_{n\gamma}$

σ_{n2n}

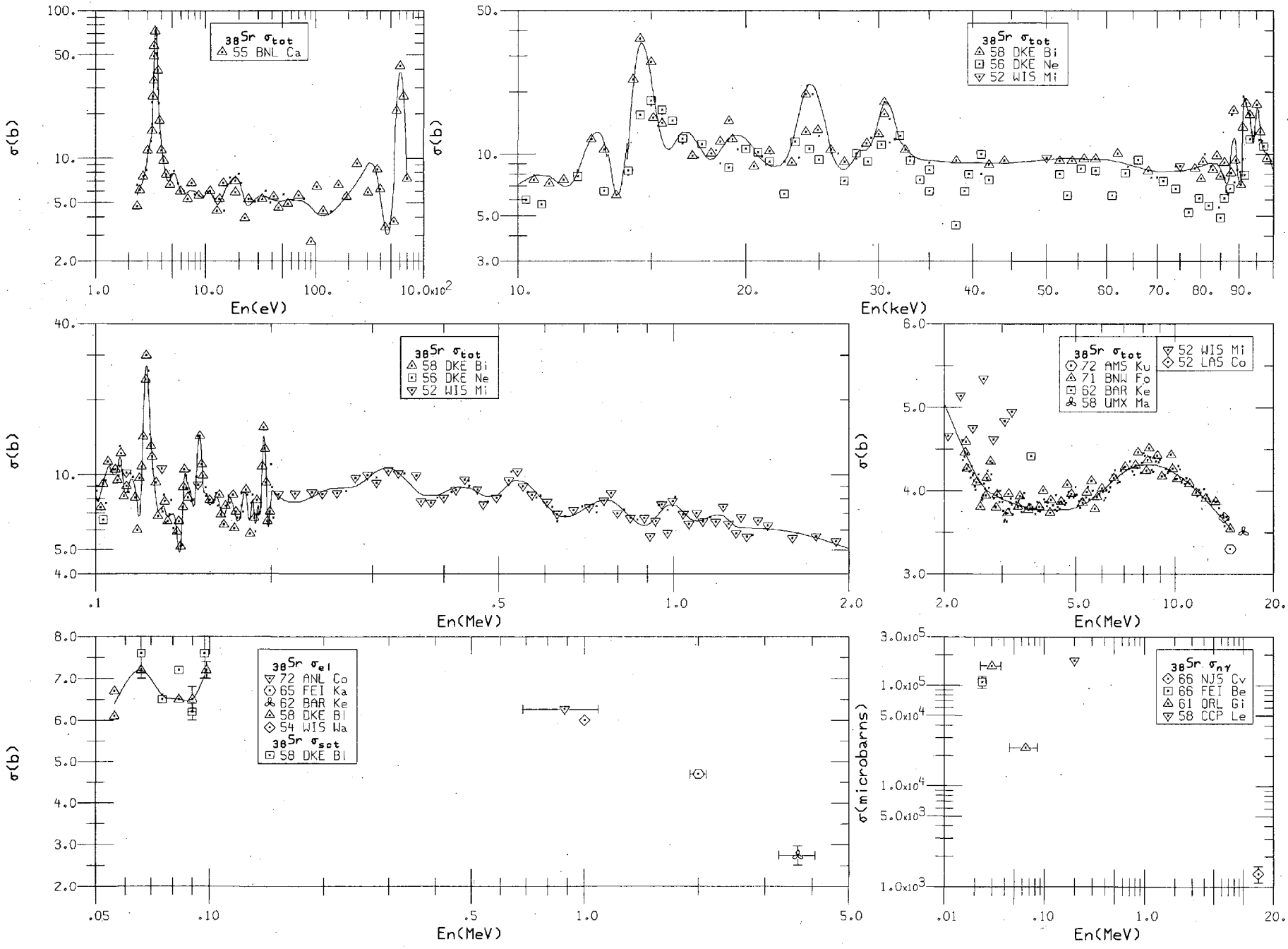






Yr	Lab	Author	Reference	Points	Range	Standard
			$_{37}$Rb σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	242	2.259 MeV to 14.9 MeV	
69	PEL	Coetzee,et.al.	PEL-191,43,69	353	.350 MeV to 1.107 MeV	
66	DEB	Angeli,et.al.	AHP,20,193,66	1	3.900 b at 14.7 MeV	
61	DKE	Newson,et.al.	AP,14,346,61	52	1.000 keV to 15.0 keV	
57	DKE	Newson,et.al.	PR,105,198,57	51	4.750 keV to 24.8 keV	
56	DKE	Gibbons	PR,102,1574,56	9	4.600 keV to 6.070 keV	
55	MTR	Joki,et.al.	PR,99,610,55	459	.0199 eV to 4.960 eV	abs
			$_{37}$Rb σ_{el}			
69	PEL	Coetzee,et.al.	PEL-191,43,69	18	.130 MeV to 1.100 MeV	^{12}C σ_{el}
			$_{37}$Rb $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
62	LEB	Popov,et.al.	ZET,42,988,62	53	.128 keV to 42.0 keV	
60	LAS	Diven,et.al.	PR,120,556,60	1	52.0 mb at .400 MeV	^{235}U σ_{abs}
			$_{37}$Rb σ_{np}			
65	HAM	Koenig	NP,71,497,65	5	12.8 MeV to 16.8 MeV	
			$_{37}$Rb $\sigma_{n\alpha}$			
65	HAM	Koenig	NP,71,497,65	5	12.8 MeV to 16.8 MeV	
			$^{85}_{37}$Rb σ_{tot}			
67	DKE	Newson,et.al.	AP,14,346,61	47	2.500 keV to 13.4 keV	
			$^{85}_{37}$Rb $\sigma_{n\gamma}$			
68	ANL	Stupegia,et.al.	JNE,22,267,68	13	.140 MeV to 2.602 MeV	^{235}U σ_{nf}
62	LEB	Popov,et.al.	ZET,42,988,62	39	.158 keV to 17.5 keV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	.181 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{85}_{37}$Rb σ_{n2n}			
74	AUB	Ghorai,et.al.	NP/A,223,118,74	3	15.0 MeV to 17.0 MeV	^{27}Al $\sigma_{n\alpha}$
73	LOU	Araminowicz,+	INR-1464,14,73	1	.698 b at 14.6 MeV	^{63}Cu σ_{n2n}
68	TUR	Minetti,et.al.	NP/A,118,449,68	1	1.682 b at 14.7 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.830 b at 13.6 MeV	
67	HAM	Bormann,et.al.	EANDC(E)76,51,67	10	12.9 MeV to 19.6 MeV	H
66	IRK	Rieder,et.al.	APA,23,42,66	1	1.430 b at 14.7 MeV	
66	IRK	Rieder,et.al.	APA,23,42,66	1	1.011 b at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.687 b at 14.6 MeV	
61	LAS	Prestwood,et.al.	PR,121,1438,61	9	12.2 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	5	10.4 MeV to 14.5 MeV	H

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{85}_{37}$Rb $\sigma_{n\alpha}$			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	4.900 mb at 14.4 MeV	
66	HAM	Bormann,et.al.	66PARIS,1,225,66	10	12.9 MeV to 19.6 MeV	H
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.142 b at 14.6 MeV	
			$^{87}_{37}$Rb σ_{tot}			
58	ORL	Good,et.al.	PR,109,926,58	56	4.600 keV to 13.5 keV	
			$^{87}_{37}$Rb $\sigma_{n\gamma}$			
70	ANL	Dudey,et.al.	JNE,24,181,70	24	.156 MeV to 1.561 MeV	^{235}U σ_{nf}
69	FEI	Dovbenko,et.al.	INDC-260,11,69	6	11.0 keV to .300 MeV	
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	25.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
67	FEI	Dovbenko,et.al.	AE,23,(2),151,67	19	11.0 keV to 2.646 MeV	^{235}U σ_{nf}
58	CCP	Kononov,et.al.	AE,5,564,58	1	29.0 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	.800 mb at 3.100 MeV	
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	1.000 mb at 2.500 MeV	
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	.500 mb at 4.000 MeV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	75.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{87}_{37}$Rb σ_{n2n}			
74	AUB	Ghorai,et.al.	NP/A,223,118,74	2	15.0 MeV to 16.2 MeV	^{27}Al $\sigma_{n\alpha}$
73	LOU	Araminowicz,+	INR-1464,14,73	1	.855 b at 14.6 MeV	^{63}Cu σ_{n2n}
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	.995 b at 14.4 MeV	
68	TUR	Minetti,et.al.	NP/A,118,449,68	1	2.551 b at 14.7 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.290 b at 13.0 MeV	
66	IRK	Rieder,et.al.	APA,23,42,66	2	14.1 MeV to 14.7 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.838 b at 14.6 MeV	
61	LAS	Prestwood,et.al.	PR,121,1438,61	9	12.2 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	6	10.4 MeV to 14.5 MeV	H
			$^{87}_{37}$Rb σ_{np}			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	4.900 mb at 14.4 MeV	
70	ARK	Husain,et.al.	PR/C,1,1233,70	1	7.000 mb at 14.8 MeV	^{56}Fe σ_{np}
			$^{87}_{37}$Rb σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	5.000 muB at 14.6 MeV	^{87}Rb $\sigma_{n\alpha}$
			$^{87}_{37}$Rb $\sigma_{n\alpha}$			
62	RBZ	Strohal,et.al.	NP,30,49,62	1	59.0 mb at 14.6 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	38.9 mb at 14.5 MeV	abs
			$^{87}_{37}$Rb σ_{nna}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	1.500 mb at 14.7 MeV	^{87}Rb $\sigma_{n\alpha}$

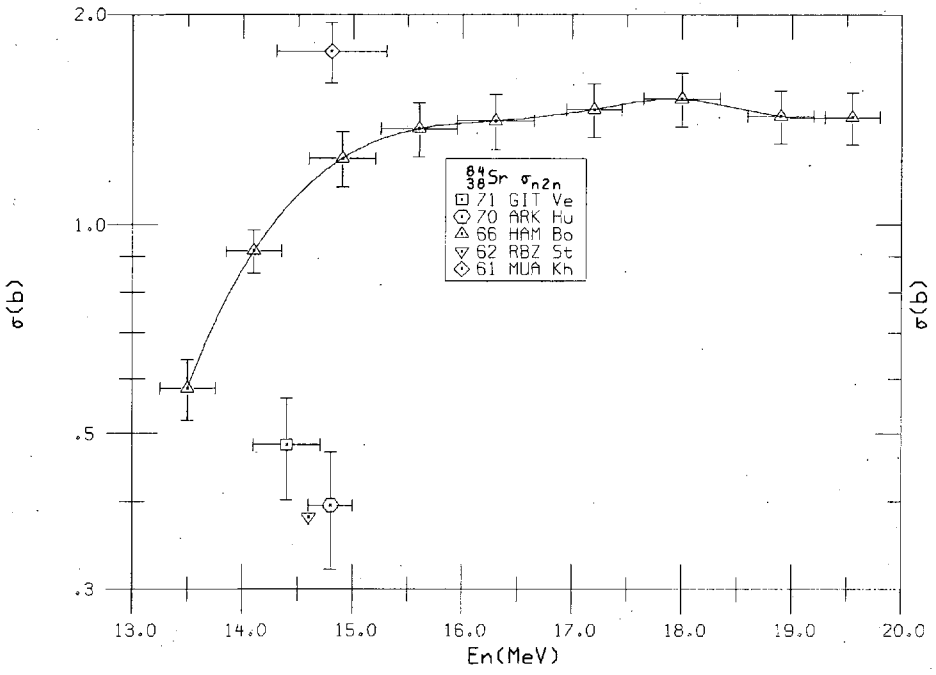

38Sr σtot
55 BNL Ca
σ(b)
En(eV)
38Sr σtot
58 DKE Bi
56 DKE Ne
52 WIS Mi
En(keV)
En(MeV)
38Sr σtot
72 AMS Ku
71 BNW Fo
62 BAR Ke
58 UMX Ma
52 WIS Mi
52 LAS Co
38Sr σel
72 ANL Co
65 FEI Ka
62 BAR Ke
58 DKE Bl
54 WIS Wa
38Sr σsct
58 DKE Bl
38Sr σnγ
66 NJS Cv
66 FEI Be
61 ORL Gi
58 CCP Le
σ(microbarns)

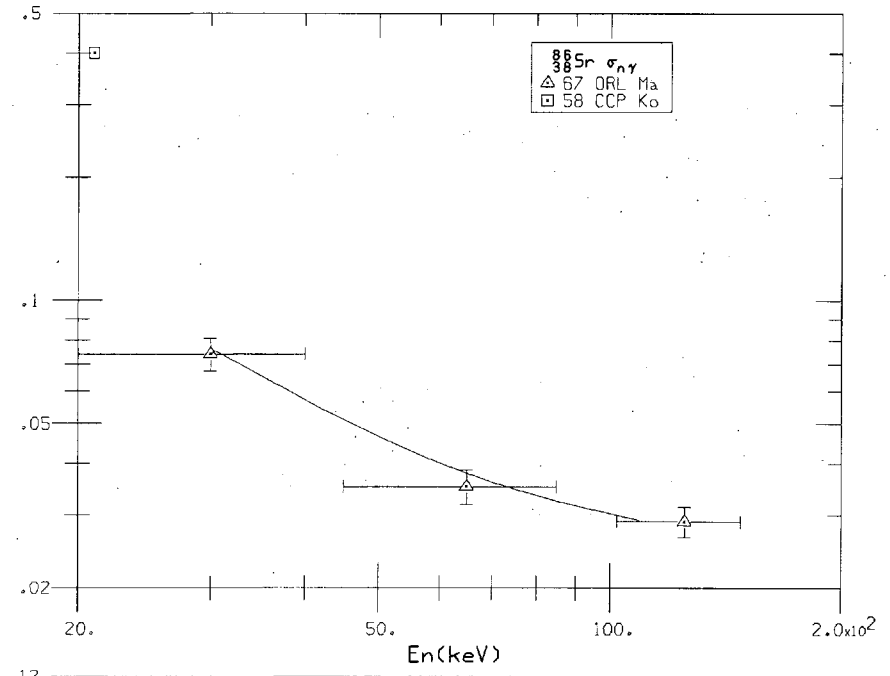
$^{84}_{38}Sr$ σ_{n2n}

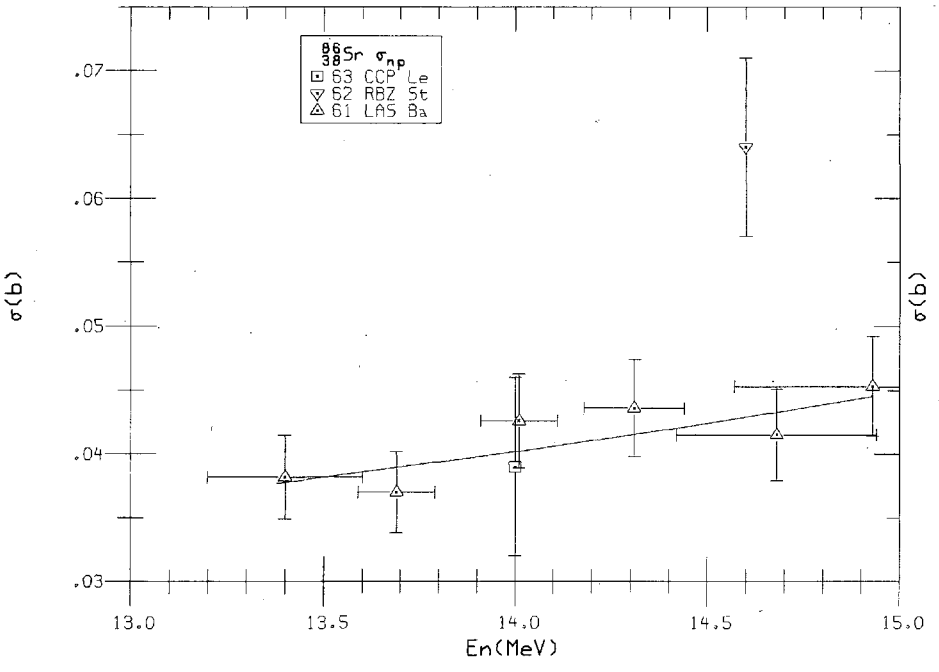
$^{86}_{38}Sr$ $\sigma_{n\gamma}$

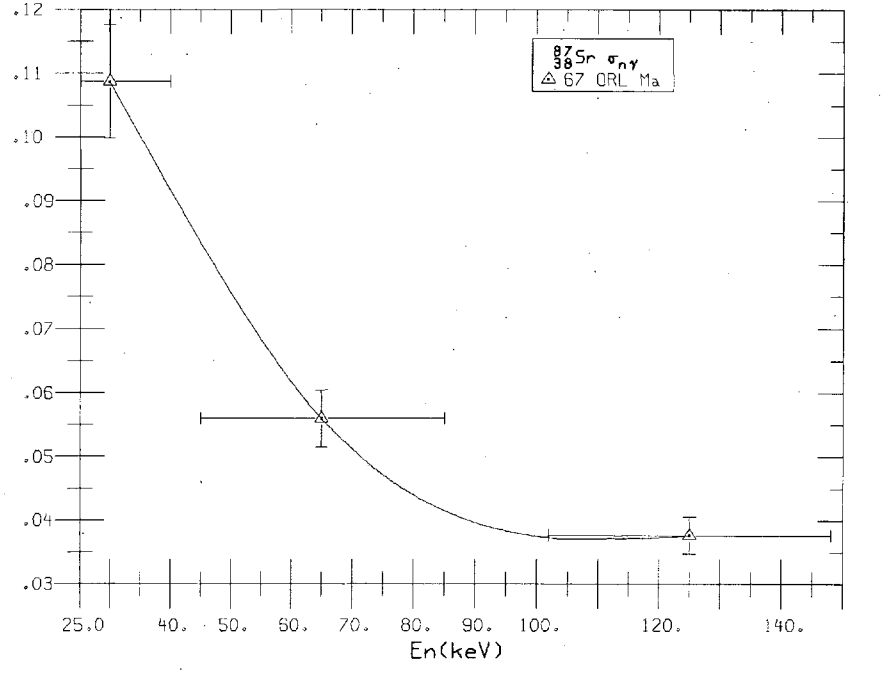
σ_{np}

$^{87}_{38}Sr$ $\sigma_{n\gamma}$







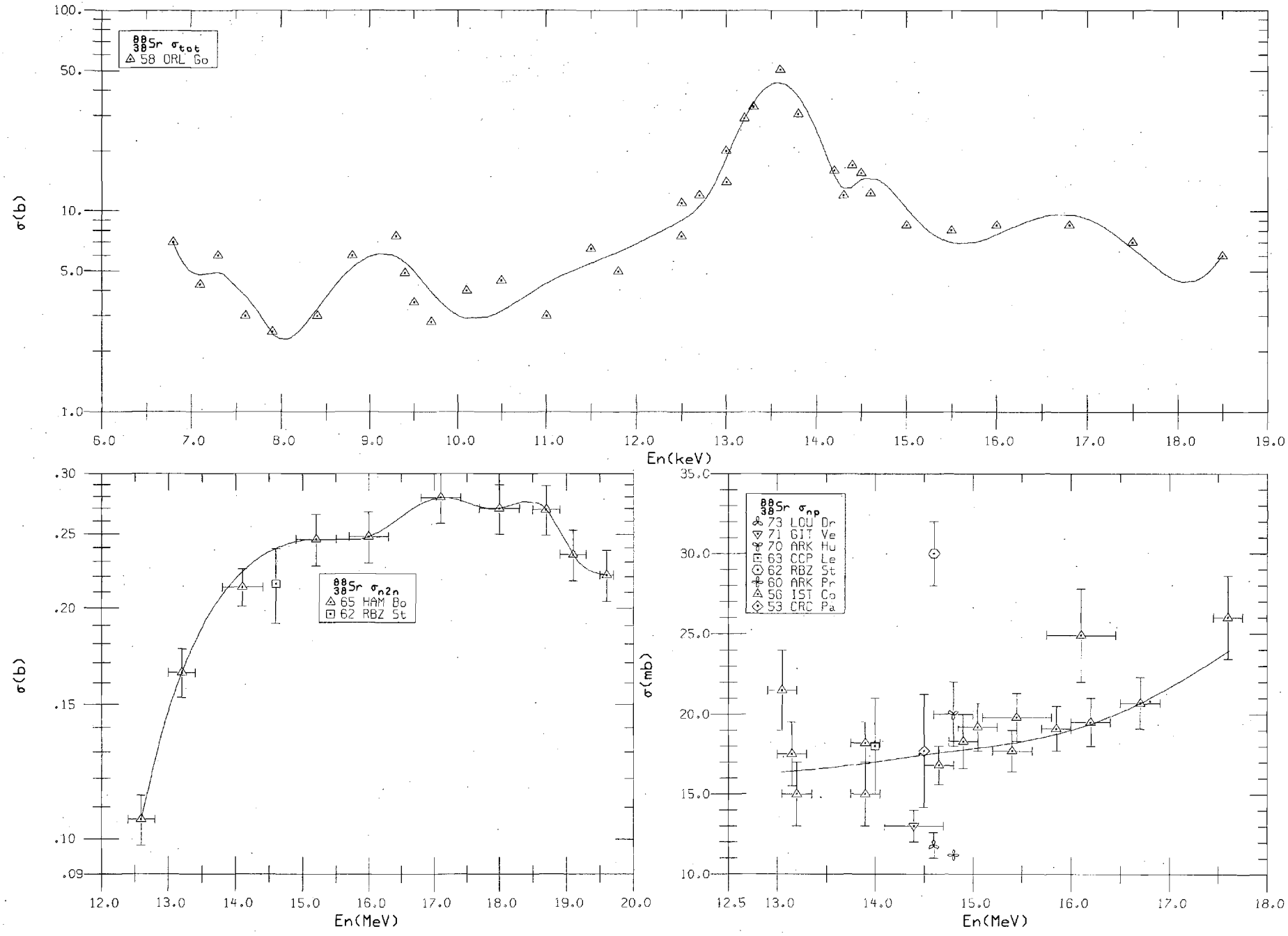


$^{88}_{38}Sr$

σ_{tot}

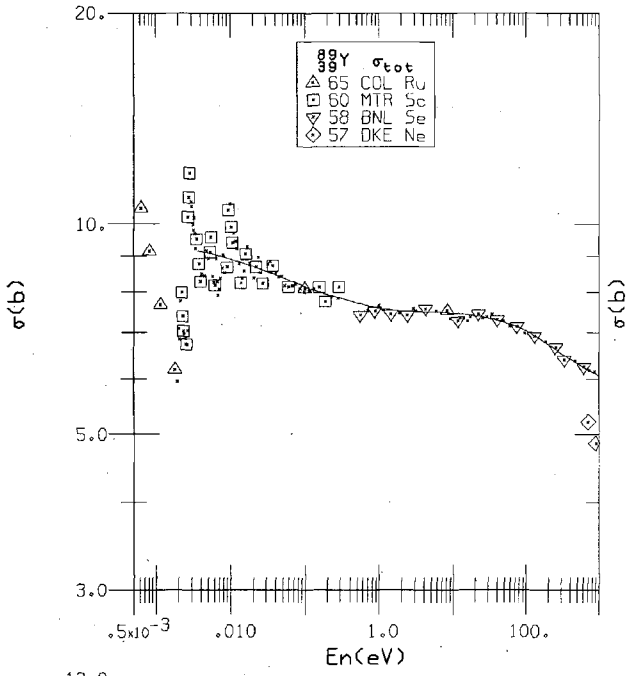
σ_{n2n}

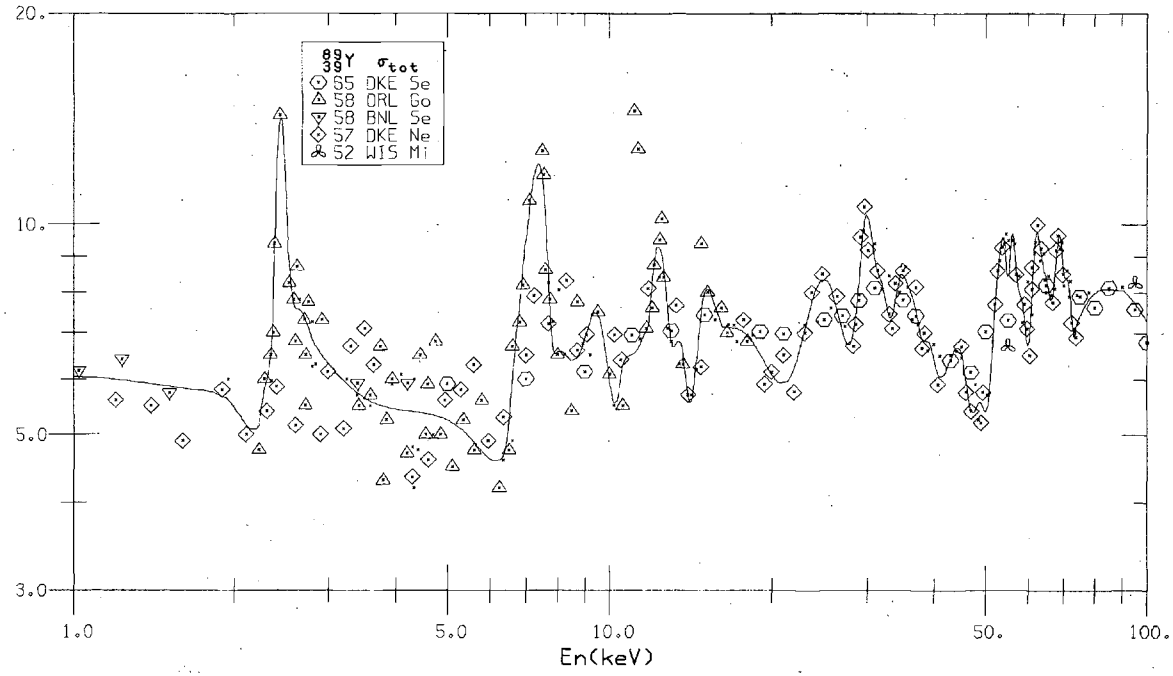
σ_{np}

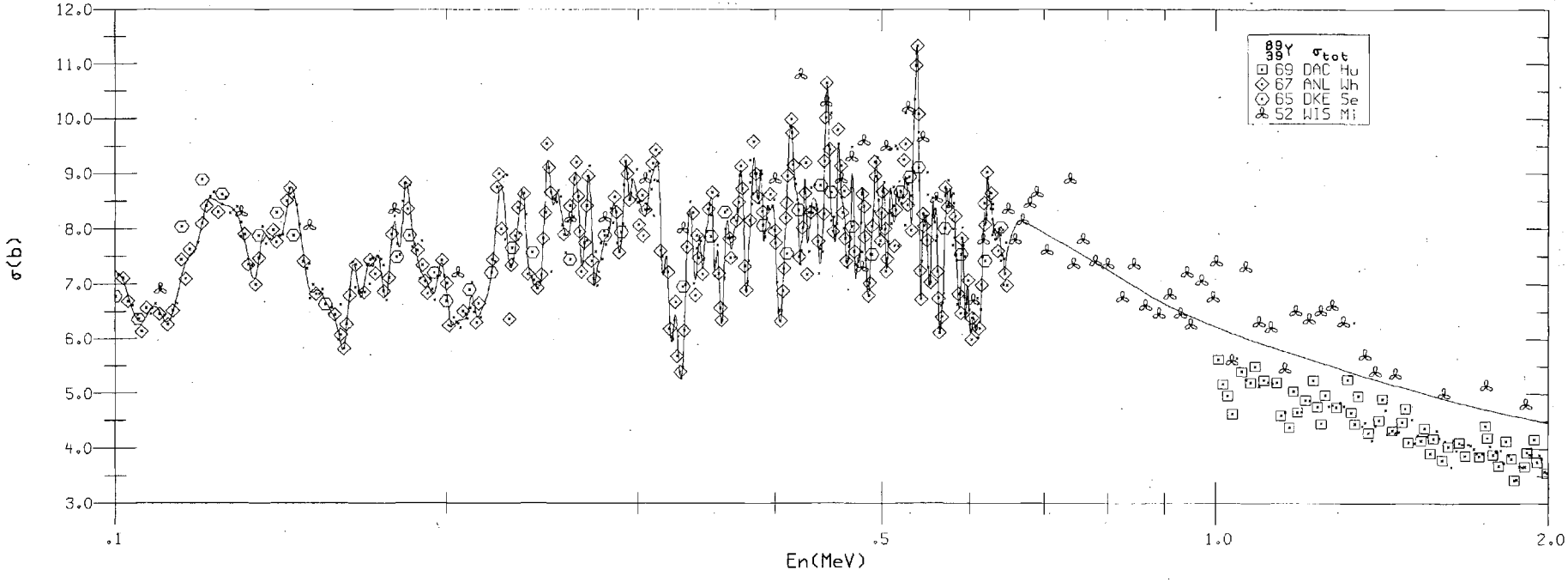


Yr	Lab	Author	Reference	Points	Range	Standard
			$_{38}$Sr σ_{tot}			
72	AMS	Kuijper,et.al.	NP/A,181,545,72	1	3.300 b at 14.8 MeV	^{1}H σ_{el}
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	241	2.267 MeV to 14.8 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.420 b at 3.660 MeV	
61	DKE	Bilpuch	AP,14,387,61	406	10.0 keV to .218 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	1	3.510 b at 16.2 MeV	abs
58	DKE	Bilpuch,et.al.	BAP,3,164(B3),58	209	10.0 keV to .203 MeV	abs
56	DKE	Newson,et.al.	PR,102,1580,56	73	7.250 keV to .104 MeV	abs
55	BNL	Carter	CARTER,55	85	2.400 eV to .700 keV	
52	WIS	Miller,et.al.	PR,88,83,52	95	50.0 keV to 3.205 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	3.880 b at 14.1 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	2.990 b at 42.0 MeV	abs
			$_{38}$Sr σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.261 b at .886 MeV	C σ_{el}
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	4.700 b at 2.000 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	2.740 b at 3.660 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	7	56.0 keV to 98.0 keV	C
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.000 b at 1.000 MeV	
			$_{38}$Sr σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	1.740 b at 7.000 MeV	
			$_{38}$Sr σ_{sot}			
58	DKE	Block,et.al.	PR,109,1620,58	5	66.0 keV to 97.0 keV	C
			$_{38}$Sr σ_{non}			
62	BAR	Kent,et.al.	PR,125,331,62	1	1.680 b at 3.660 MeV	
61	UKR	Lovchikova+	SPN,,216,61	1	1.100 b at 2.500 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	.700 b at 1.000 MeV	
			$_{38}$Sr $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.350 mb at 14.1 MeV	
66	FEI	Belanova,et.al.	66PARIS,1,455,66	1	.108 b at 24.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.175 b at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{38}$Sr σ_{np}			
61	HAR	Allan	NP,24,274,61	1	22.0 mb at 14.0 MeV	^{54}Fe σ_{np}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{84}_{38}$Sr σ_{n2n}			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	.482 b at 14.4 MeV	
70	ARK	Husain,et.al.	PR/C,1,1233,70	1	.395 b at 14.8 MeV	^{56}Fe σ_{np}
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	9	13.5 MeV to 19.5 MeV	H
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.380 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.770 b at 14.8 MeV	
			$^{86}_{38}$Sr $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	3	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
64	KFI	Gulyas,et.al.	64PARIS,2,703,64	1	.769 b at thermal	^{197}Au
58	CCP	Kononov,et.al.	AE,5,564,58	1	.400 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{86}_{38}$Sr σ_{n2n}			
73	LOU	Araminowicz,et.al.	INR-1464,14,73	1	.630 b at 14.6 MeV	^{63}Cu σ_{n2n}
68	TUR	Minetti,et.al.	NP/A,118,449,68	1	1.132 b at 14.7 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.570 b at 14.6 MeV	^{65}Cu σ_{n2n}
66	IRK	Rieder,et.al.	APA,23,42,66	1	.985 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.592 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
59	IRK	Vonach,et.al.	OSA,96,120,59	1	.700 b at 14.1 MeV	
			$^{86}_{38}$Sr σ_{np}			
63	CCP	Levkovskii	ZET,45,305,63	1	39.0 mb at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	64.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
61	LAS	Bayhurst,et.al.	JIN,23,173,61	6	13.4 MeV to 14.9 MeV	^{238}U σ_{nf}
			$^{87}_{38}$Sr $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	3	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
			$^{88}_{38}$Sr σ_{tot}			
58	ORL	Good,et.al.	PR,109,926,58	36	6.800 keV to 18.5 keV	
			$^{88}_{38}$Sr σ_{n2n}			
65	HAM	Bormann,et.al.	NP,63,438,65	9	12.6 MeV to 19.6 MeV	
65	HAM	Bormann,et.al.	NP,63,438,65	1	.213 b at 14.1 MeV	H
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.215 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{88}_{38}$Sr σ_{np}			
73	LOU	Dresler,et.al.	INR-1464,12,73	1	11.8 mb at 14.6 MeV	^{56}Fe σ_{np}
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	13.0 mb at 14.4 MeV	
70	ARK	Husain,et.al.	PR/C,1,1233,70	1	20.0 mb at 14.8 MeV	^{56}Fe σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	18.0 mb at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	30.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	11.2 mb at 14.8 MeV	
56	IST	Cohen,et.al.	NP,1,73,56	18	13.1 MeV to 17.6 MeV	^{88}Sr σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	17.7 mb at 14.5 MeV	


$^{89}_{39}Y$ σ_{tot}
65 COL Ru
60 MTR Sc
58 BNL Se
57 DKE Ne
σ(b)
En(eV)
20.
10.
5.0
3.0
.5x10^-3
.010
1.0
100.


$^{89}_{39}Y$ σ_{tot}
55 DKE Se
58 ORL Go
58 BNL Se
57 DKE Ne
52 WIS Mi
σ(b)
En(keV)
20.
10.
5.0
3.0
1.0
5.0
10.0
50.
100.


$^{89}_{39}Y$ σ_{tot}
69 DAC Hu
67 ANL Wh
65 DKE Se
52 WIS Mi
σ(b)
En(MeV)
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
.1
.5
1.0
2.0

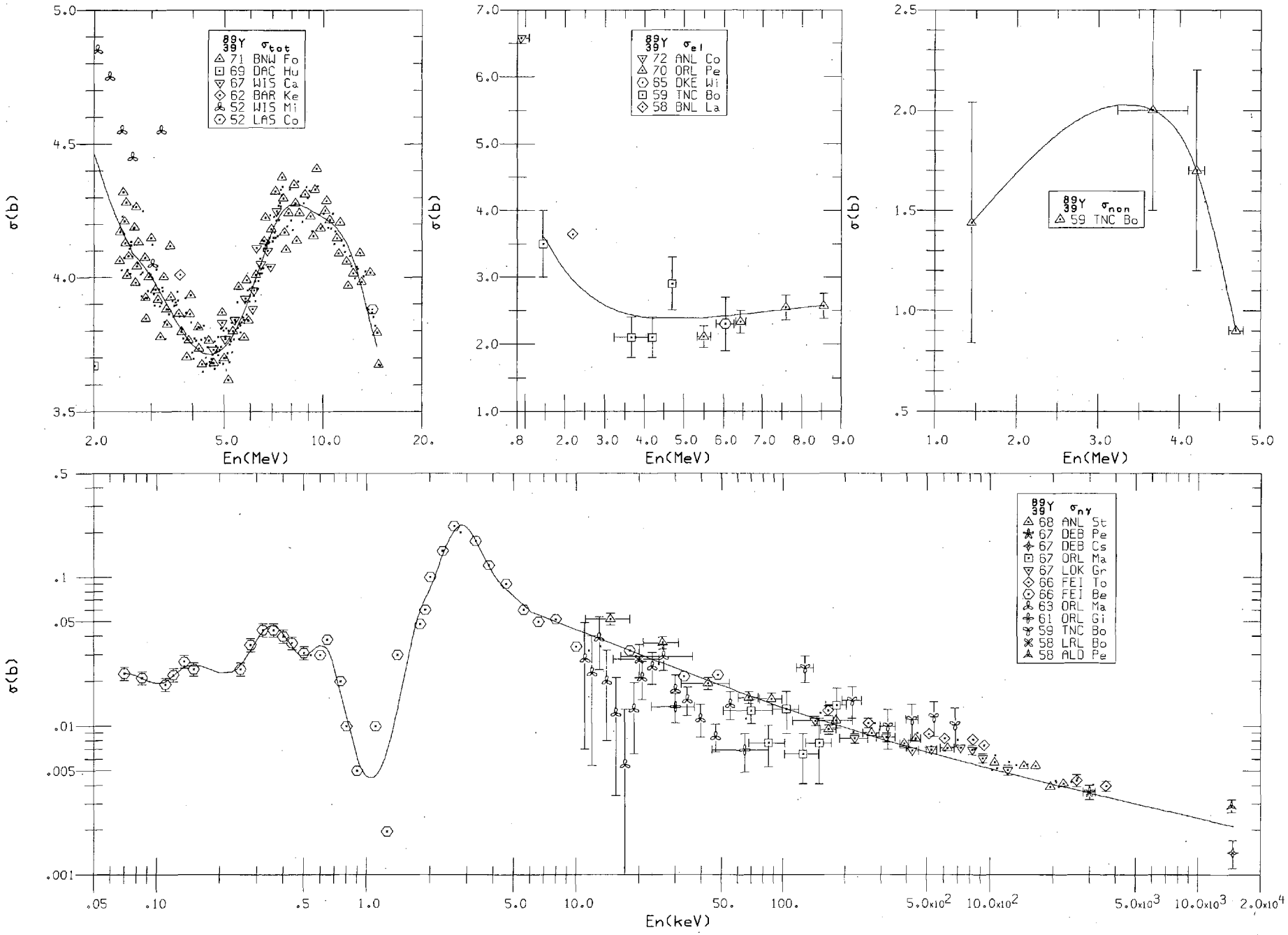
$^{89}_{39}Y$

σ_{tot}

σ_{el}

σ_{non}

$\sigma_{n\gamma}$



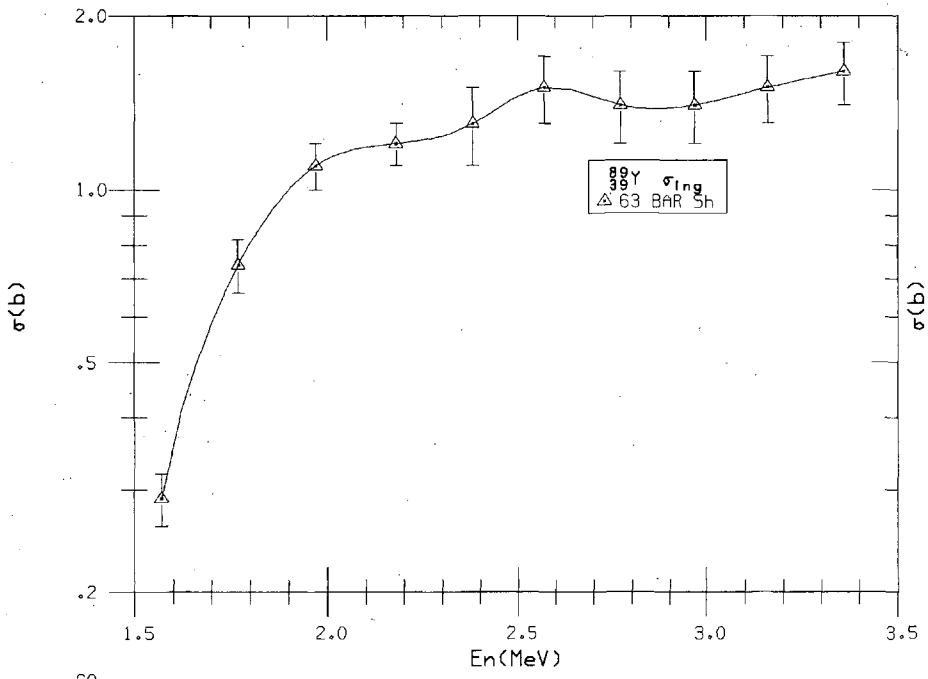
$^{89}_{39}Y$

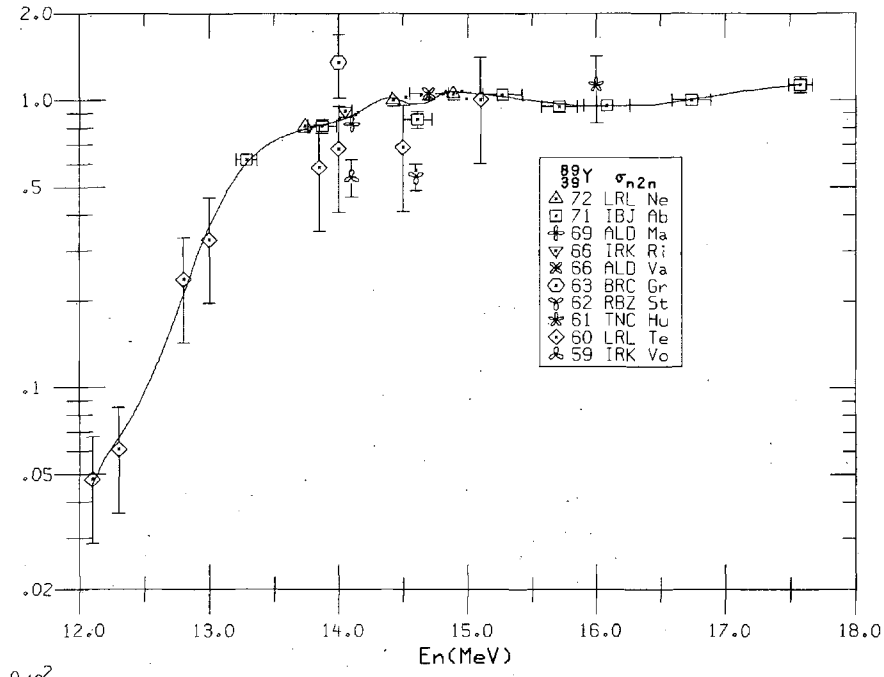
σ_{ing}

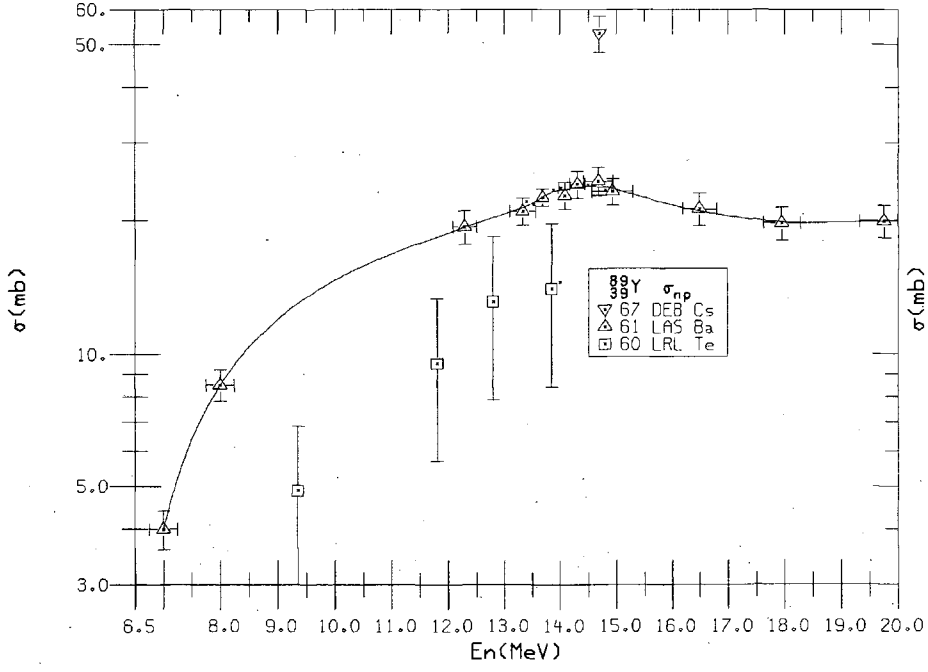
σ_{n2n}

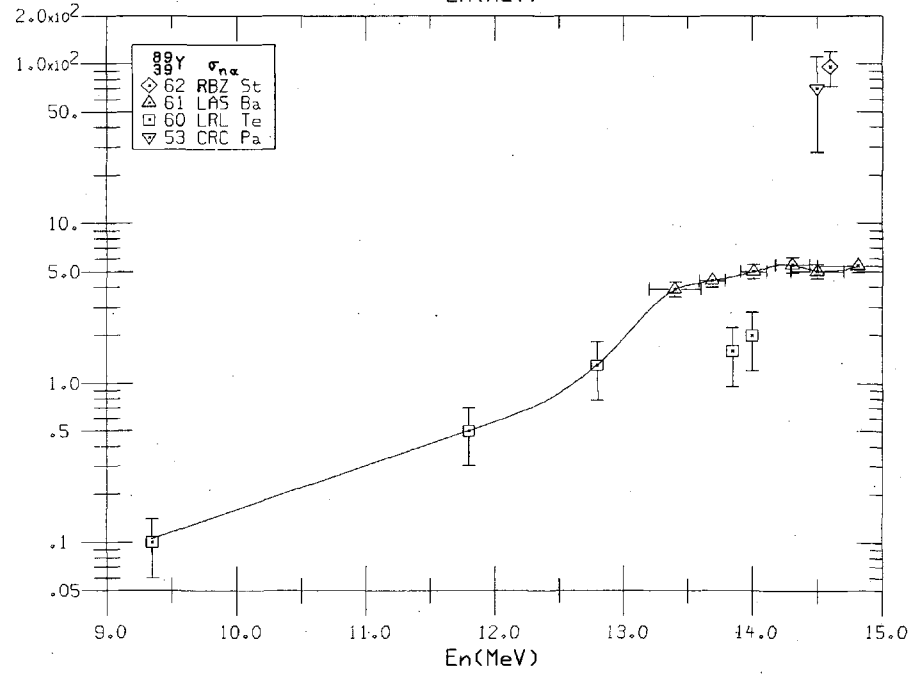
σ_{np}

$\sigma_{n\alpha}$



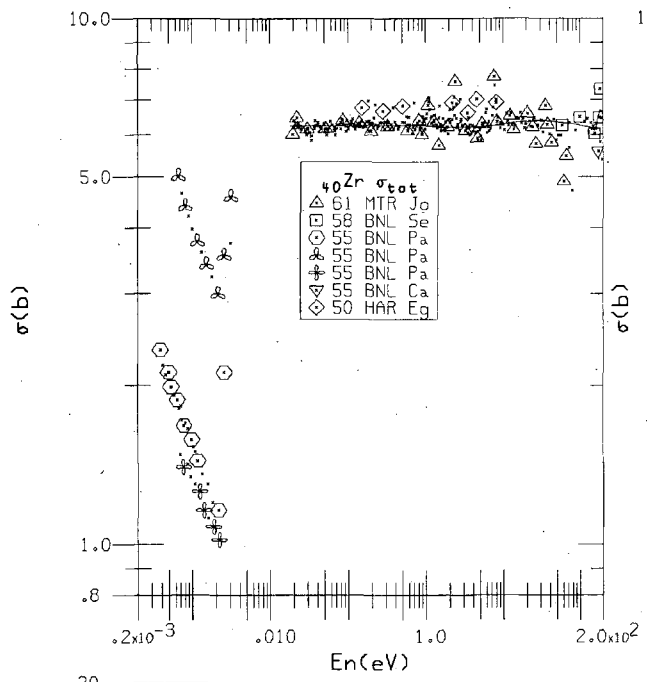


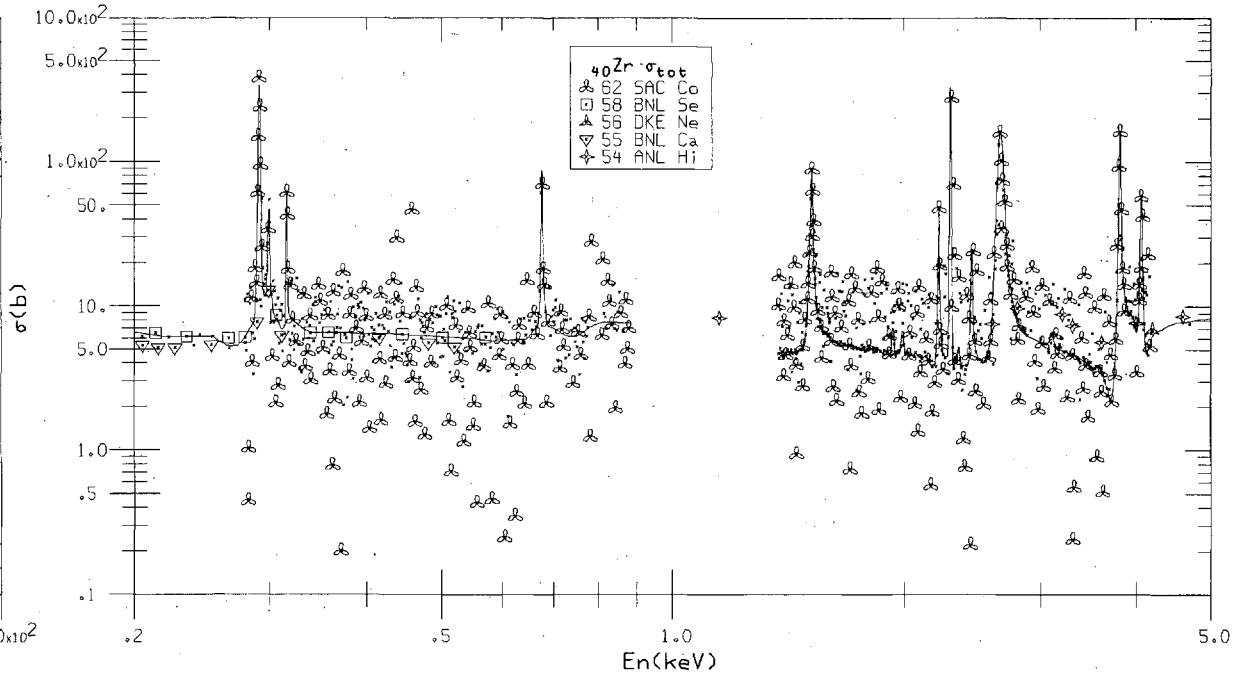


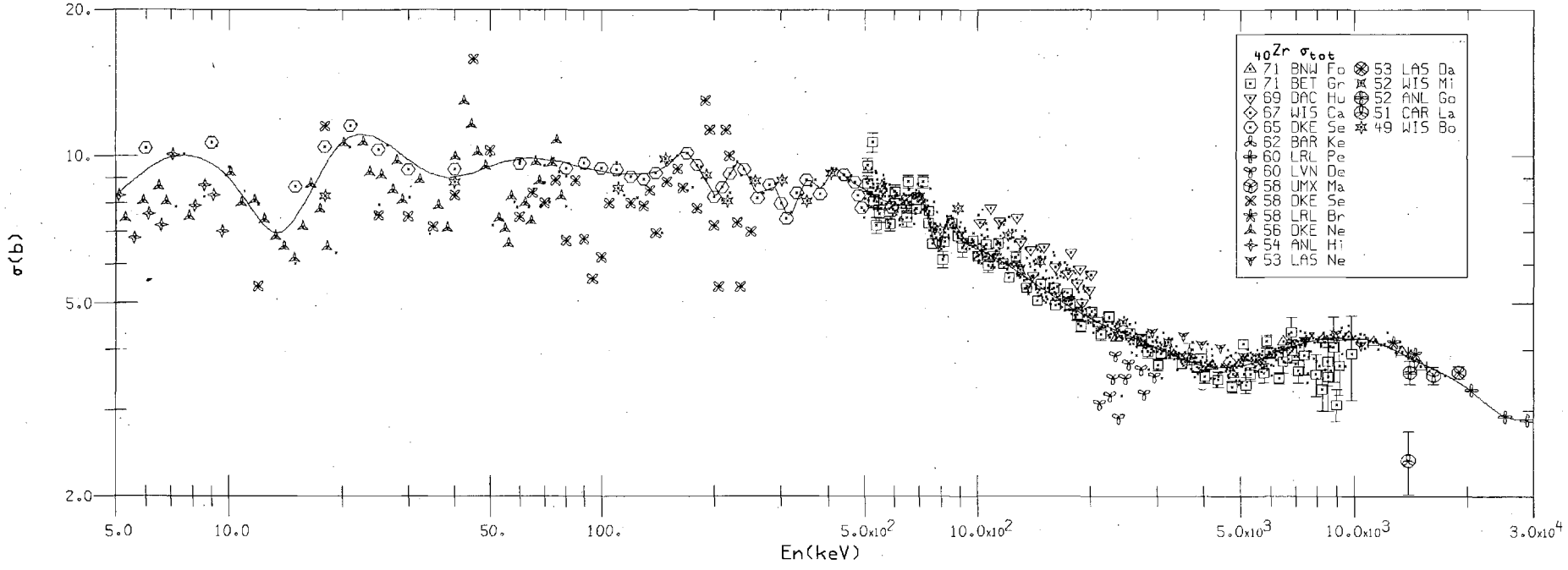


Yr	Lab	Author	Reference	Points	Range	Standard
			$^{89}_{39}Y$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	235	2.396 MeV to 15.0 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.006 MeV to 2.006 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	60	4.531 MeV to 7.514 MeV	abs
67	ANL	Whalen	WHALEN,67	542	.101 MeV to .649 MeV	abs
65	DKE	Seth	PL,16,306,65	97	5.000 keV to .640 MeV	
65	COL	Rustad,et.al.	NYO-GEN-72-28,65	10	.0006 eV to 8.240 eV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.010 b at 3.660 MeV	
60	MTR	Schmunk,et.al.	NSE,7,193,60	93	.0020 eV to .288 eV	abs
58	ORL	Good,et.al.	PR,109,926,58	85	2.220 keV to 18.0 keV	
58	BNL	Seth,et.al.	PR,110,692,58	41	.557 eV to 4.222 keV	
57	DKE	Newson,et.al.	PR,105,198,57	34	.700 keV to 9.050 keV	
57	DKE	Newson,et.al.	PR,105,198,57	107	10.2 keV to 74.2 keV	abs
52	WIS	Miller,et.al.	PR,88,83,52	86	55.0 keV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	3.880 b at 14.1 MeV	
			$^{89}_{39}Y$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.578 b at .889 MeV	C σ_{el}
70	ORL	Perey,et.al.	ORNL-4552,70	4	5.500 MeV to 8.560 MeV	
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	2.300 b at 6.040 MeV	C
65	ALD	Towle,et.al.	65ANTWERP,,509,65	1	2.100 b at 3.770 MeV	abs
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	3	3.670 MeV to 4.700 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	3.500 b at 1.450 MeV	C
58	BNL	Landon,et.al.	PR,112,1192,58	1	3.650 b at 2.200 MeV	Fe σ_{tot}
			$^{89}_{39}Y$ σ_{inl}			
58	BNL	Landon,et.al.	PR,112,1192,58	1	.430 b at 2.200 MeV	Fe σ_{tot}
			$^{89}_{39}Y$ σ_{nan}			
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	4	1.450 MeV to 4.700 MeV	
			$^{89}_{39}Y$ $\sigma_{n\gamma}$			
68	ANL	Stupegia,et.al.	JNE,22,267,68	22	14.6 keV to 2.450 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	3.600 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	1.400 mb at 14.7 MeV	
67	ORL	Macklin,et.al.	PR,159,1007,67	7	70.0 keV to .220 MeV	Ta $\sigma_{n\gamma}$
67	LOK	Grench,et.al.	NP/A,94,157,67	12	.143 MeV to 1.223 MeV	^{235}U σ_{nf}
66	FEI	Tolstikov,et.al.	AE,21,(6),506,66	21	.166 MeV to 3.620 MeV	^{235}U σ_{nf}
66	FEI	Bergman,et.al.	YFI-3,9,66	41	70.0 eV to 48.0 keV	
65	COL	Rustad,et.al.	NYO-GEN-72-28,65	1	1.280 b at thermal	
63	ORL	Macklin,et.al.	NP,43,353,63	16	11.0 keV to 65.9 keV	Ag $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	1	7.000 mb at .400 MeV	^{235}U σ_{abs}
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	6	.128 MeV to .680 MeV	In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	28.0 mb at 20.0 keV	^{89}Y $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	2.900 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{89}_{39}Y$ σ_{ing}			
63	BAR	Shafroth,et.al.	PR,129,704,63	10	1.570 MeV to 3.360 MeV	^{56}Fe σ_{ing}
			$^{89}_{39}Y$ σ_{n2n}			
73	LOU	Araminowicz,+	INR-1464,14,73	1	.572 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	LRL	Nethaway	NP/A,190,635,72	16	13.7 MeV to 15.0 MeV	^{27}Al $\sigma_{n\alpha}$
71	IBJ	Abboud,et.al.	APP/B,2,527,71	8	13.3 MeV to 17.6 MeV	^{56}Fe σ_{np}
59	ALD	Mather,et.al.	AWRE-O-47/69,69	1	.825 b at 14.1 MeV	^{238}U σ_{nf}
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.010 b at 15.0 MeV	^{27}Al $\sigma_{n\alpha}$
66	IRK	Rieder,et.al.	APA,23,42,66	2	14.1 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	ALD	Vallis	AWRE-O-76/66,66	1	1.052 b at 14.7 MeV	
63	BRC	Granger,et.al.	EANDC(E)49,83,63	1	1.350 b at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.542 b at 14.6 MeV	
61	TNC	Hudson Jr,et.al.	BAP,6,506(E9),61	1	1.125 b at 16.0 MeV	
60	LRL	Tewes,et.al.	UCRL-6028-T,60	8	12.1 MeV to 15.1 MeV	H
59	IRK	Vonach,et.al.	OSA,96,120,59	1	.540 b at 14.1 MeV	
			$^{89}_{39}Y$ σ_{np}			
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	53.0 mb at 14.7 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	18	7.000 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	5	9.350 MeV to 14.0 MeV	H
			$^{89}_{39}Y$ σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	50.0 muB at 14.6 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	30.0 muB at 14.7 MeV	^{27}Al σ_{np}
			$^{89}_{39}Y$ σ_{nt}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	15.4 muB at 14.0 MeV	
			$^{89}_{39}Y$ $\sigma_{n\alpha}$			
62	RBZ	Strohal,et.al.	NP,30,49,62	1	96.0 mb at 14.6 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	6	13.4 MeV to 14.8 MeV	^{238}U σ_{nf}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	5	9.350 MeV to 14.0 MeV	H
53	CRC	Paul,et.al.	CJP,31,267,53	1	69.7 mb at 14.5 MeV	abs
			$^{90}_{39}Y$ $\sigma_{n\gamma}$			
55	MTR	Smith,et.al.	JCP,23,2108,55	1	18.0 b at thermal	^{59}Co $\sigma_{n\gamma}$


^{40}Zr σ_{tot}
61 MTR Jo
58 BNL Se
55 BNL Pa
55 BNL Pa
55 BNL Pa
55 BNL Ca
50 HAR Eg
σ(b)
En(eV)


^{40}Zr σ_{tot}
62 SAC Co
58 BNL Se
56 DKE Ne
55 BNL Ca
54 ANL Hi
σ(b)
En(keV)


^{40}Zr σ_{tot}
71 BNW Fo
71 BET Gr
69 DAC Hu
67 WIS Ca
65 DKE Se
62 BAR Ke
60 LRL Pe
60 LVN De
58 UMX Ma
58 DKE Se
58 LRL Br
56 DKE Ne
54 ANL Hi
53 LAS Ne
53 LAS Da
52 WIS Mi
52 ANL Go
51 CAR La
49 WIS Bo
σ(b)
En(keV)

^{40}Zr

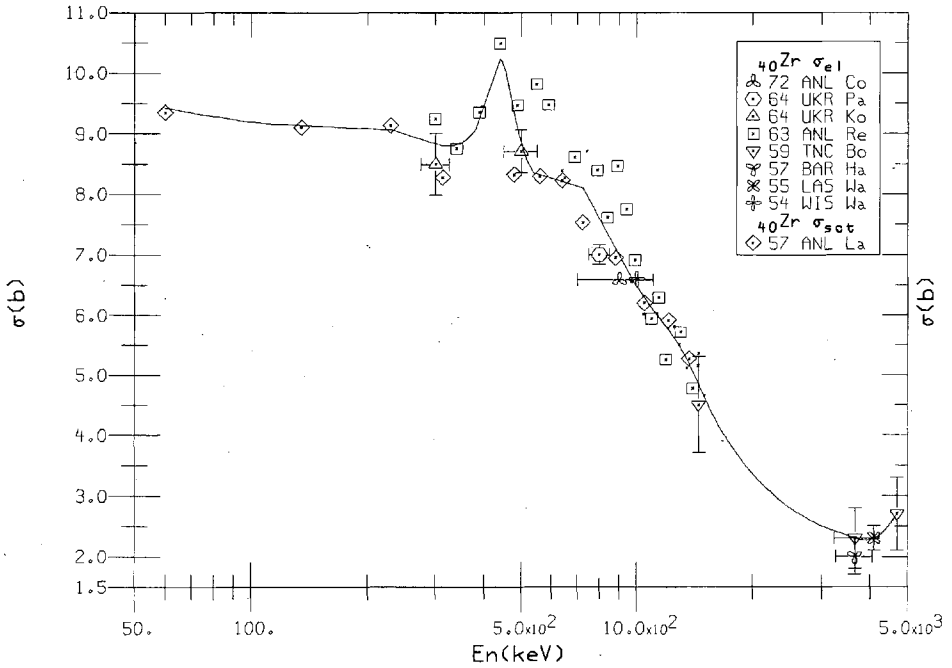
σ_{el}

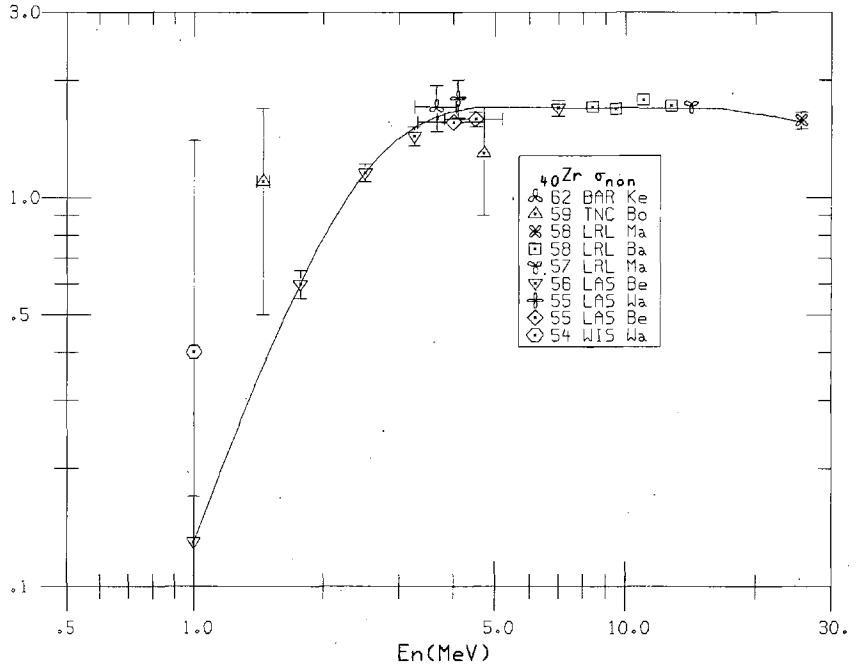
σ_{sct}

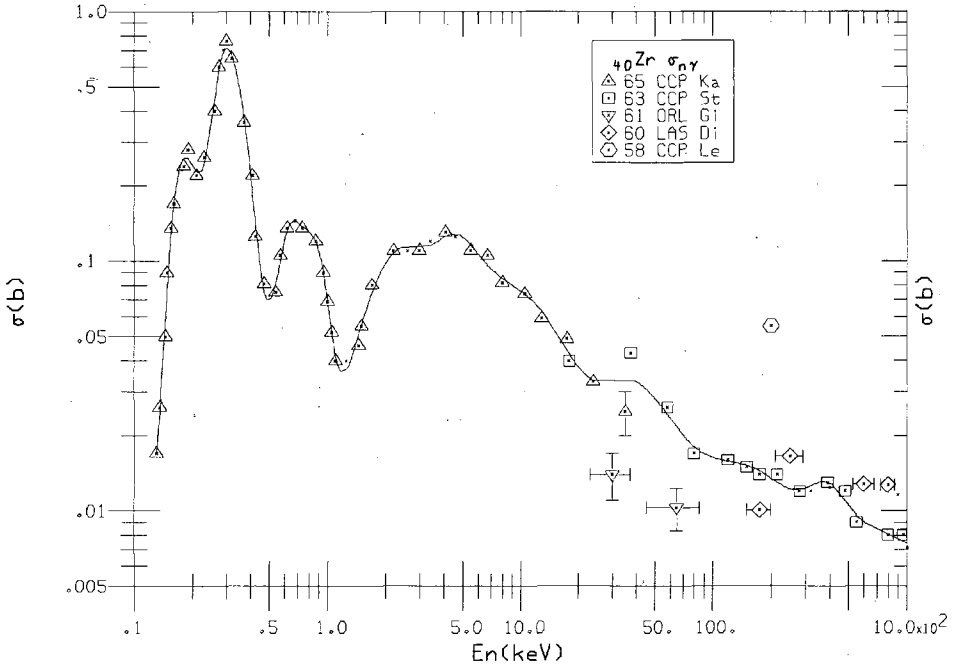
σ_{non}

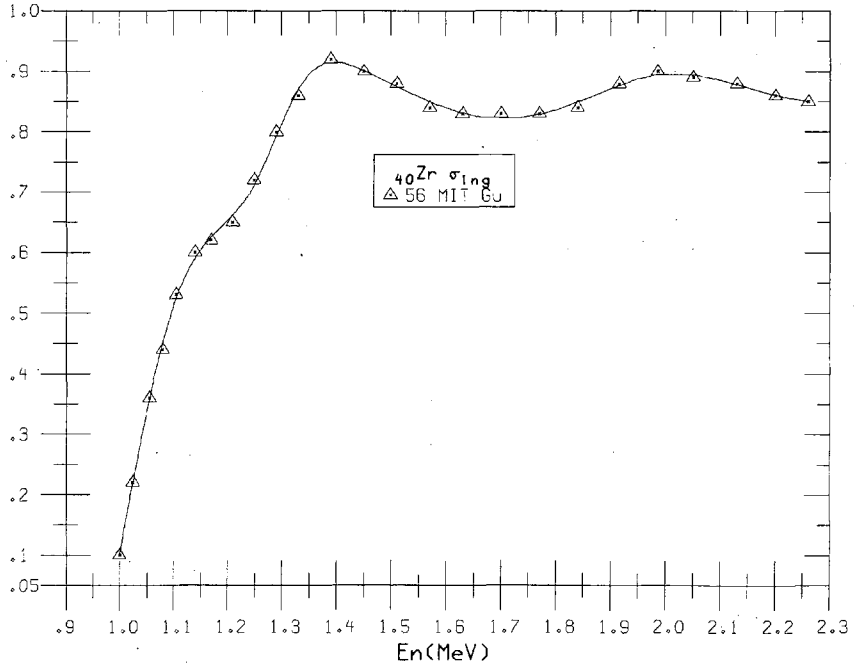
$\sigma_{n\gamma}$

σ_{ing}









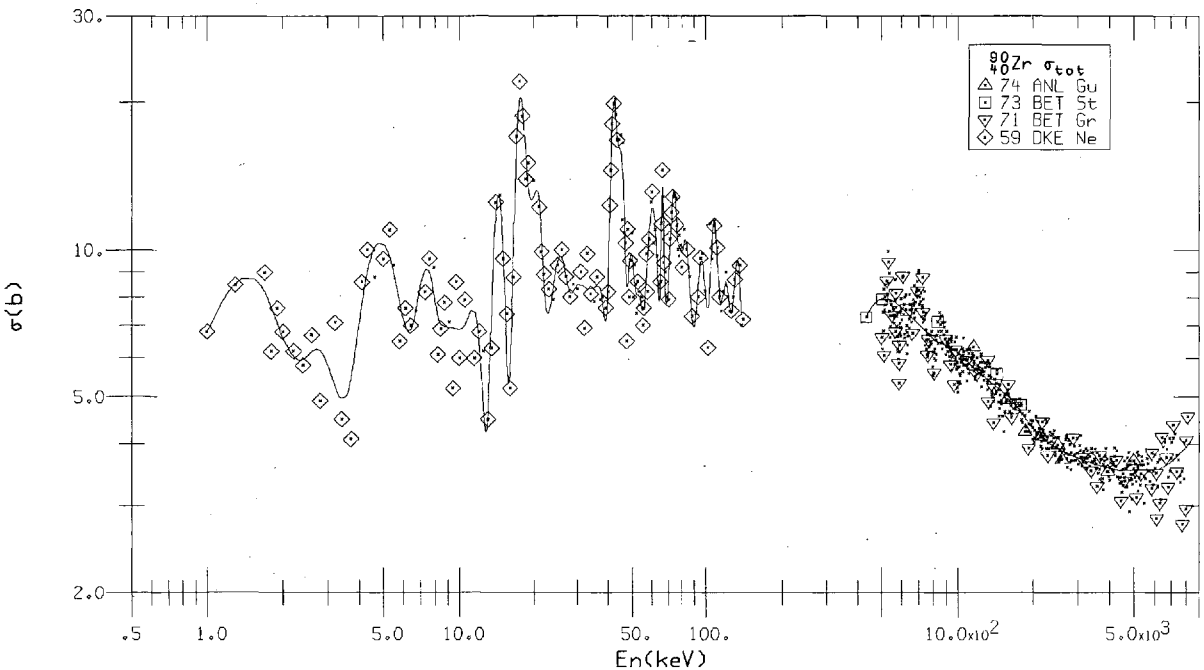
$^{90}_{40}Zr$

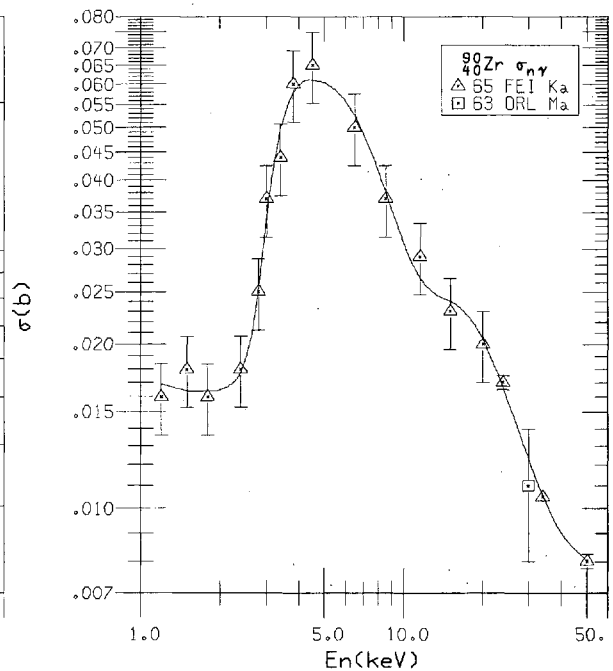
σ_{tot}

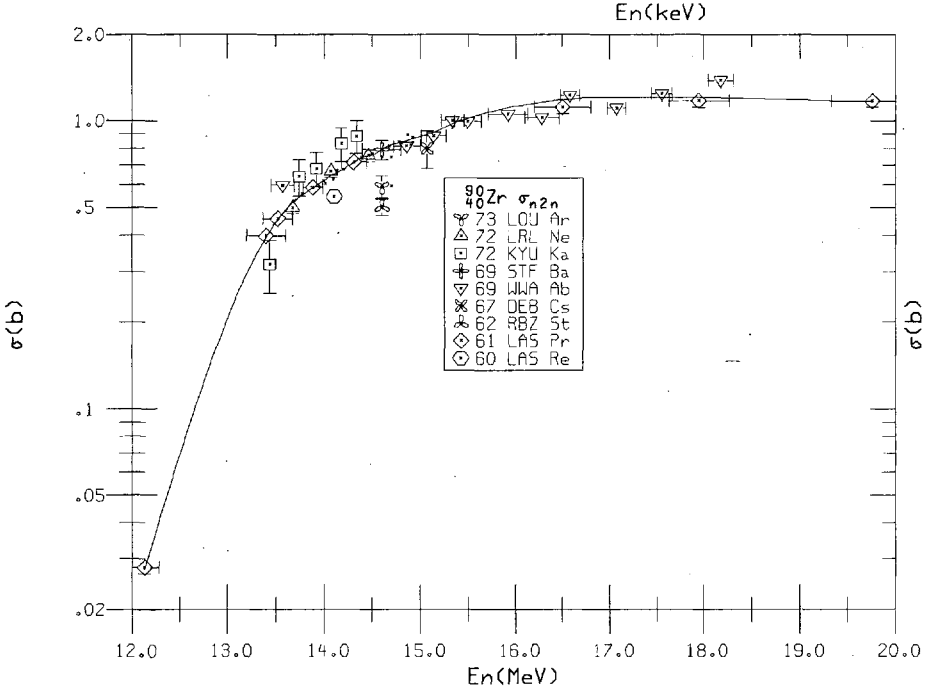
$\sigma_{n\gamma}$

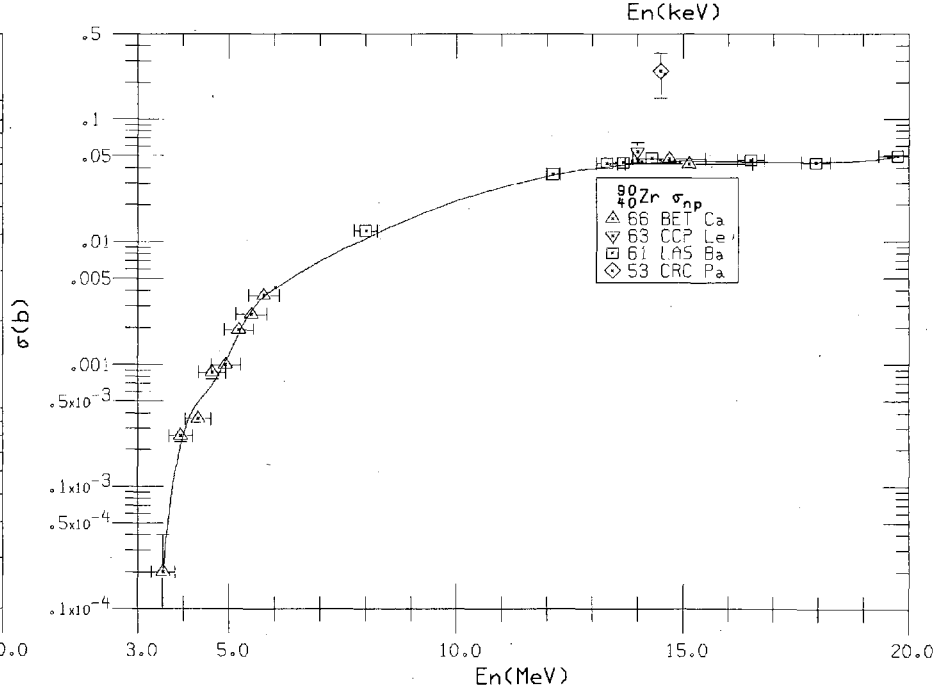
σ_{n2n}

σ_{np}







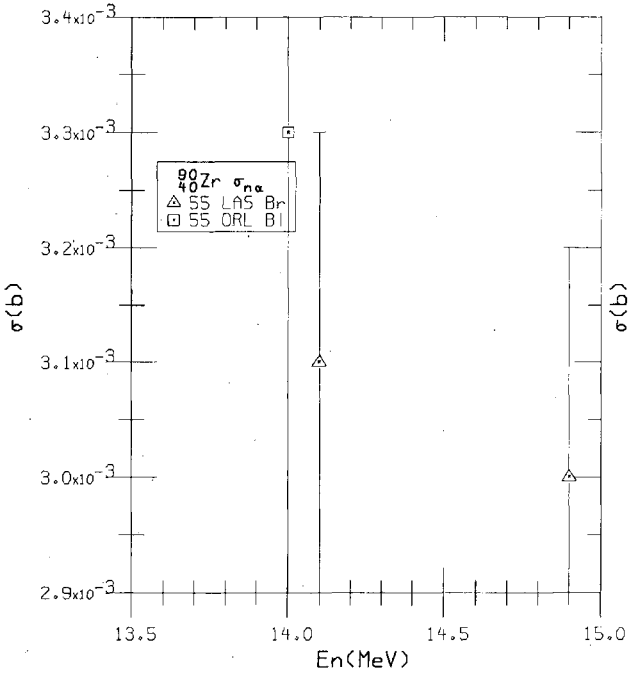


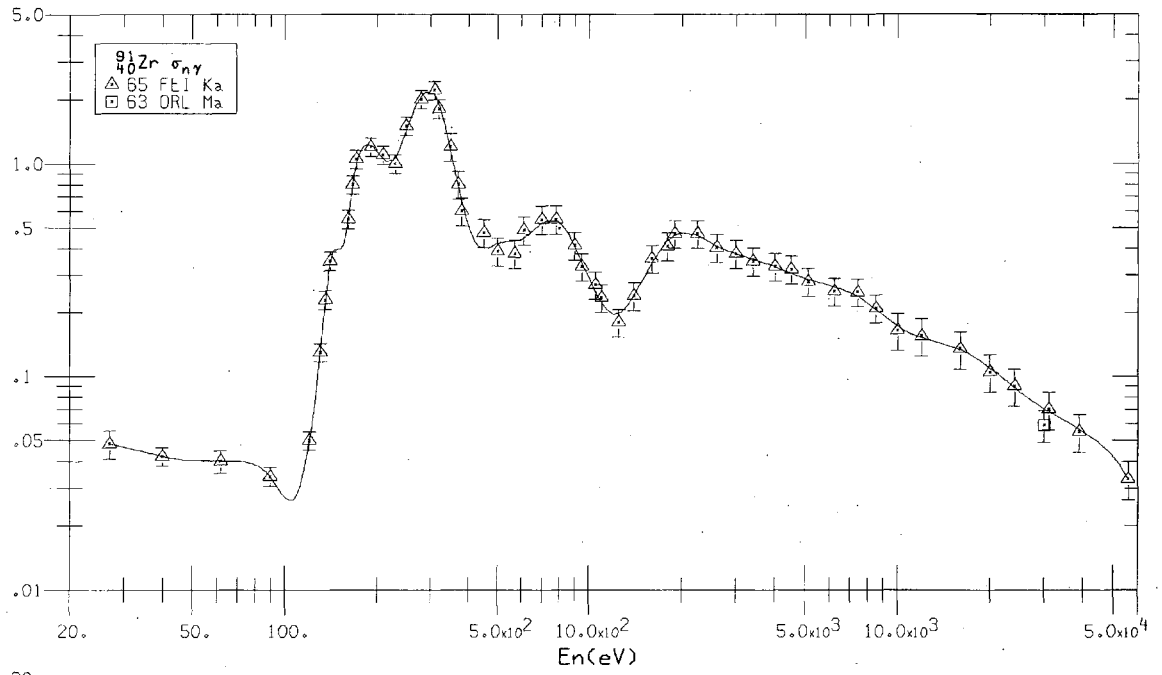
$^{90}_{40}Zr$ $\sigma_{n\alpha}$

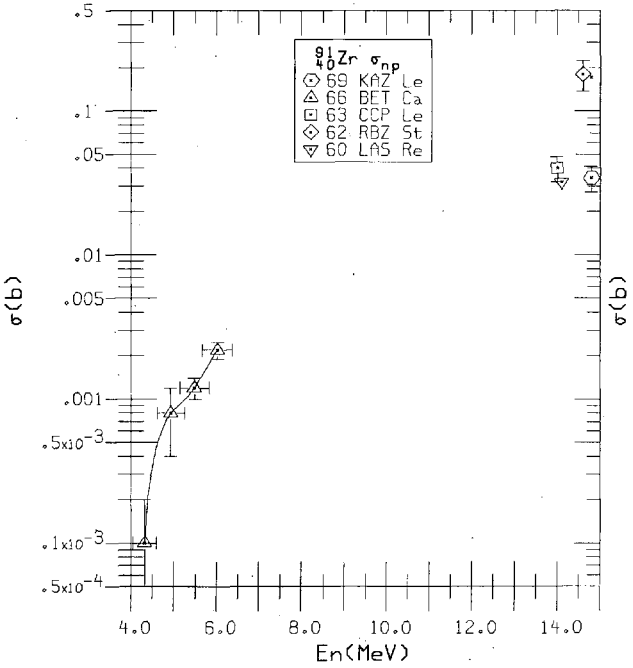
$^{91}_{40}Zr$ $\sigma_{n\gamma}$

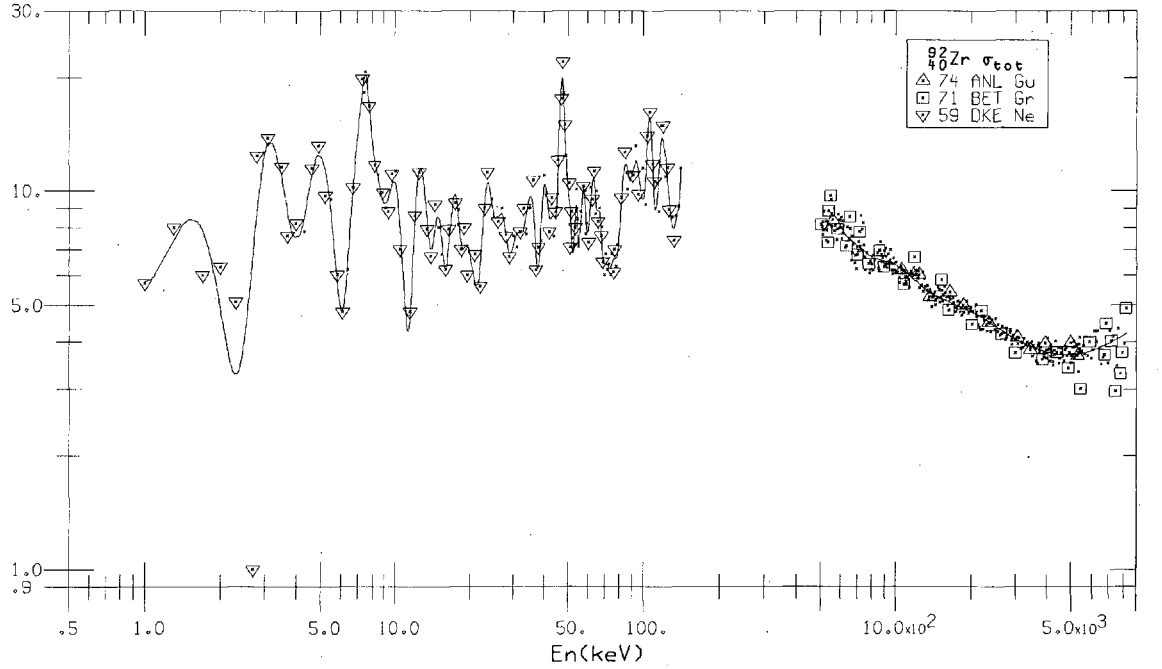
σ_{np}

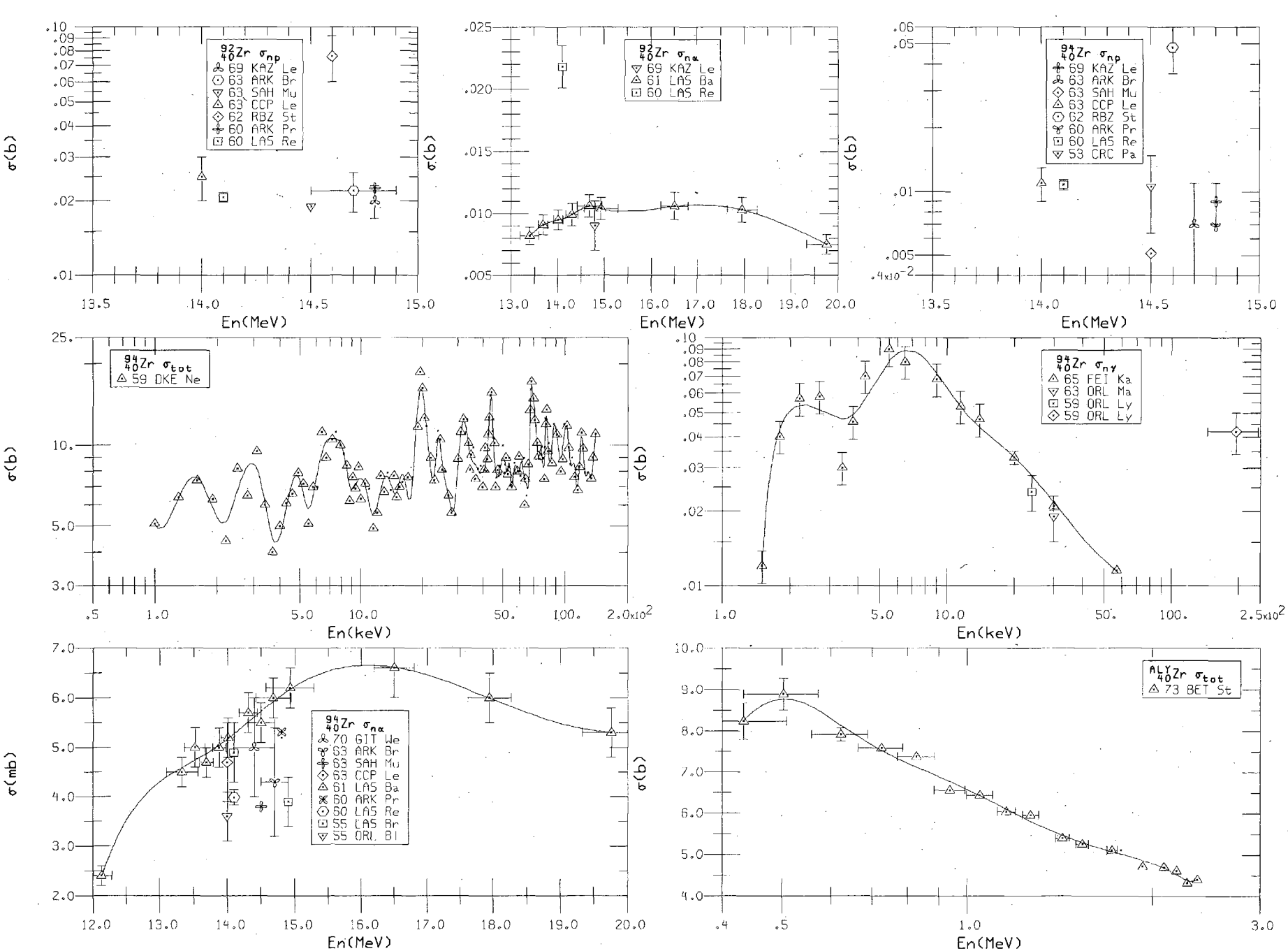
$^{92}_{40}Zr$ σ_{tot}











92 40 Zr
σnp
σnα
94 40 Zr
σtot
σnγ
σnp
σnα
ALY 40 Zr
σtot

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{40}Zr$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	239	2.340 MeV to 15.0 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	1010	.498 MeV to 9.842 MeV	
69	DAC	Hussain,et.al.	AECD/M15C-2,11,69	101	1.004 MeV to 2.004 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	62	4.531 MeV to 7.514 MeV	abs
65	DKE	Seth	PL,16,306,65	70	6.000 keV to .640 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.930 b at 3.660 MeV	
62	SAC	Corge	CORGE,62	999	.279 keV to 4.184 keV	
61	MTR	Joki,et.al.	NSE,11,298,61	529	.0196 eV to 78.5 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.4 MeV to 28.9 MeV	abs
60	LVN	De Conninck	ASS,74,64,60	17	2.110 MeV to 3.100 MeV	abs
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	1	3.550 b at 16.2 MeV	abs
58	DKE	Seth	SETH,58	49	12.0 keV to .250 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.5 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	39	57.7 eV to .571 keV	
56	DKE	Newson,et.al.	PR,102,1580,56	69	4.200 keV to 80.0 keV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	4.100 b at 4.100 MeV	abs
55	BNL	Palevsky,et.al.	PR,99,611(B11),55	45	.0004 eV to .0031 eV	abs
55	BNL	Carter	CARTER,55	27	.174 keV to .564 keV	abs
54	ANL	Hibdon,et.al.	ANL-5174,43,54	22	.850 keV to 9.600 keV	
53	LAS	Nereson,et.al.	PR,89,775,53	36	2.920 MeV to 13.2 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	3.600 b at 19.0 MeV	
52	WIS	Miller,et.al.	PR,88,83,52	14	1.010 MeV to 3.210 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	4.000 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	3.600 b at 14.0 MeV	
51	CAR	Lasday	PR,81,139,51	1	2.370 b at 13.9 MeV	
50	HAR	Egelstaff	EGELSTAFF,50	16	.150 eV to 8.000 eV	abs
49	WIS	Bockelman,et.al.	PR,76,277,49	43	18.0 keV to 1.567 MeV	abs
			$_{40}Zr$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.583 b at .902 MeV	C σ_{el}
64	UKR	Pasechnik,et.al.	AE,16,207,64	1	7.000 b at .800 MeV	
64	UKR	Korzh,et.al.	UFZ,9,577,64	2	.300 MeV to .500 MeV	
63	ANL	Reitmann,et.al.	NP,48,593,63	25	.300 MeV to 1.500 MeV	C
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.550 b at .980 MeV	H
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	8.270 b at .650 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	2.220 b at 3.660 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	3	3.670 MeV to 4.700 MeV	H
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	4.500 b at 1.450 MeV	C
57	BAR	Hans,et.al.	PR,108,1028,57	1	2.000 b at 3.660 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.300 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.600 b at 1.000 MeV	
			$_{40}Zr$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	60.0 keV to 1.447 MeV	C

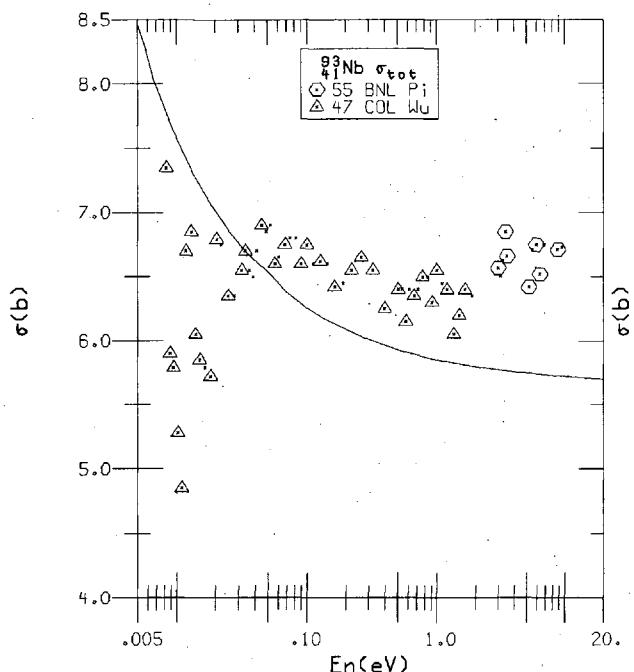
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{40}Zr$ σ_{non}			
62	BAR	Kent,et.al.	PR,125,331,62	1	1.710 b at 3.660 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	4	1.450 MeV to 4.700 MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	1	1.580 b at 25.5 MeV	abs
58	LRL	Ball,et.al.	PR,110,1392,58	4	8.400 MeV to 12.8 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.720 b at 14.2 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	5	1.000 MeV to 7.000 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.800 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	2	4.000 MeV to 4.500 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	.400 b at 1.000 MeV	
			$_{40}Zr$ $\sigma_{n\gamma}$			
68	GA	Lopez,et.al.	68WASH,2,857,68	1	.200 b at thermal	^{197}Au
65	CCP	Kapchigasnev	AE,19,294,65	47	.130 keV to 35.0 keV	
63	CCP	Stavisskii+	AE,15,323,63	15	18.0 keV to .960 MeV	^{235}U σ_{nf}
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,5,58	1	55.0 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{40}Zr$ σ_{inel}			
56	MIT	Guernsey,et.al.	PR,101,294,56	25	1.000 MeV to 2.260 MeV	
			$_{40}Zr$ σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	1.250 b at 14.0 MeV	^{252}Cf
			$_{40}Zr$ σ_{np}			
61	HAR	Allan	NP,24,274,61	1	62.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$_{40}Zr$ σ_{pem}			
60	NWU	Ahn,et.al.	PR,119,1667,60	1	87.0 mb at 14.0 MeV	
55	LAS	Armstrong,et.al.	PR,99,330,55	1	.180 b at 14.1 MeV	
			$^{90}_{40}Zr$ σ_{tot}			
74	ANL	Guenther,et.al.	ANL-NDM-4,74	129	.933 MeV to 5.513 MeV	
73	BET	Stooksberry+	NSE,51,235,73	18	.433 MeV to 2.370 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	714	.501 MeV to 8.121 MeV	
59	DKE	Newson,et.al.	AP,8,211,59	156	1.000 keV to .140 MeV	
			$^{90}_{40}Zr$ σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.979 b at 1.500 MeV	^{1}H σ_{el}

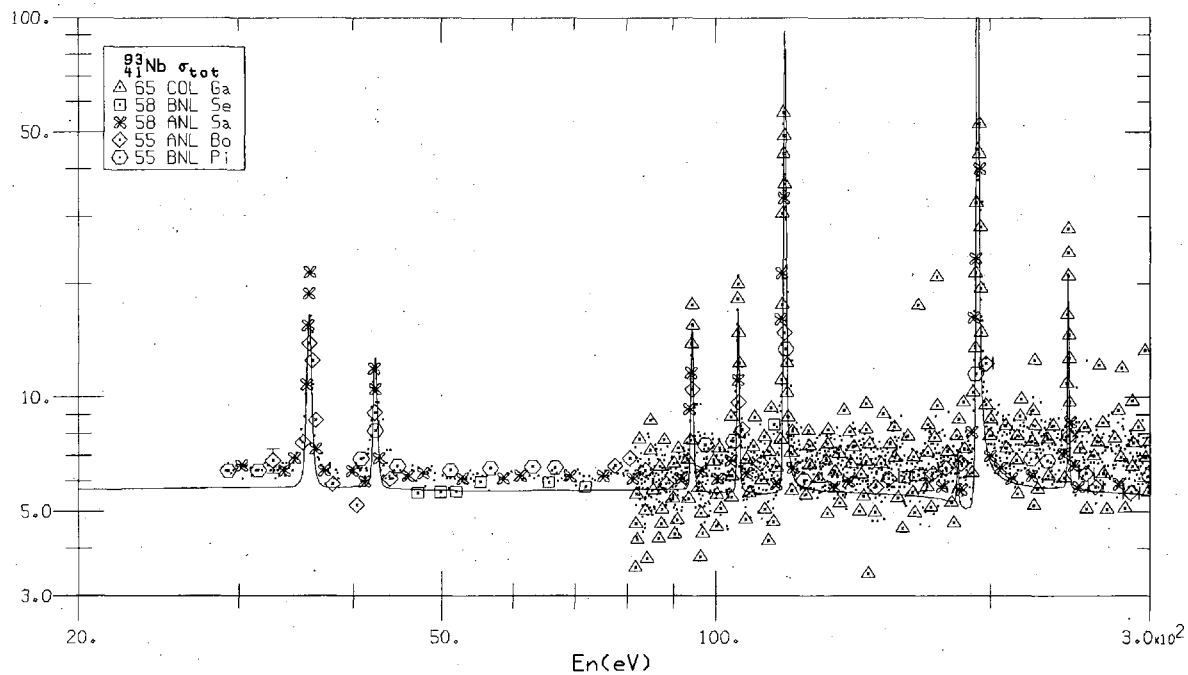
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{90}_{40}$Zr $\sigma_{n\gamma}$			
65	FEI	Kapchigashev	AE,19,(3),294,65	17	1.200 keV to 50.0 keV	
63	ORL	Macklin,et.al.	BAP,8,81(Y6),63	1	11.0 mb at 30.0 keV	
			$^{90}_{40}$Zr σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	.588 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	LRL	Nethaway	NP,A190,635,72	12	13.7 MeV to 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
72	KYU	Kanda	NP/A,185,177,72	6	13.4 MeV to 14.9 MeV	
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.793 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	WWA	Abboud,et.al.	NP/A,139,42,69	13	13.6 MeV to 18.2 MeV	^{65}Cu σ_{n2n}
68	TUR	Minetti,et.al.	NP/A,118,449,68	1	.593 b at 14.7 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.800 b at 15.1 MeV	
66	IRK	Rieder,et.al.	APA,23,42,66	1	.747 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.502 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
61	LAS	Prestwood,et.al.	PR,121,1438,61	15	12.1 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LAS	Reed	REED,60	1	.544 b at 14.1 MeV	
			$^{90}_{40}$Zr σ_{np}			
66	BET	Carroll,et.al.	NSE,25,285,66	11	3.550 MeV to 15.1 MeV	
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	45.0 mb at 14.5 MeV	^{27}Al σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	54.0 mb at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.233 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
61	LAS	Bayhurst,et.al.	JIN,23,173,61	17	8.000 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LAS	Reed	REED,60	1	43.1 mb at 14.1 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.247 b at 14.5 MeV	abs
			$^{90}_{40}$Zr $\sigma_{n\alpha}$			
55	LAS	Brolley Jr+	PR,99,330,55	2	14.1 MeV to 14.9 MeV	
55	ORL	Blosser,et.al.	PR,100,429,55	1	3.300 mb at 14.0 MeV	^{56}Fe σ_{np}
			$^{91}_{40}$Zr $\sigma_{n\gamma}$			
65	FEI	Kapchigashev	AE,19,(3),294,65	55	27.0 eV to 56.0 keV	
63	ORL	Macklin,et.al.	BAP,8,81 Y6 ,63	1	59.0 mb at 30.0 keV	
			$^{91}_{40}$Zr σ_{np}			
69	KAZ	Levkovskii+	YF,10,44,69	1	34.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	BET	Carroll,et.al.	NSE,25,285,66	4	4.320 MeV to 6.020 MeV	
63	CCP	Levkovskii	ZET,45,305,63	1	40.0 mb at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.180 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	.171 b at 14.8 MeV	
60	LAS	Reed	REED,60	1	31.7 mb at 14.1 MeV	

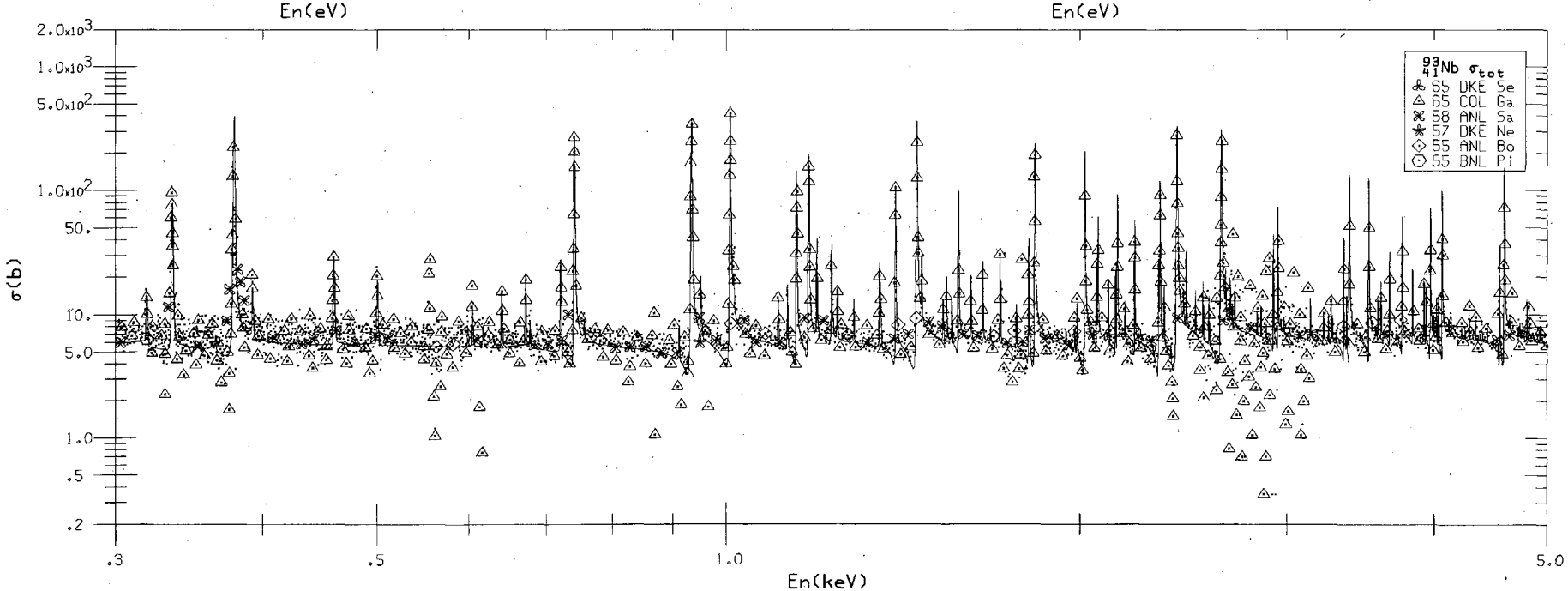
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{92}_{40}$Zr σ_{tot}			
74	ANL	Guenther,et.al.	ANL-NDM-4,74	129	.933 MeV to 5.513 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	358	.504 MeV to 8.202 MeV	
59	DKE	Newson,et.al.	AP,8,211,59	148	1.000 keV to .140 MeV	
			$^{92}_{40}$Zr σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.253 b at 1.500 MeV	^{1}H σ_{el}
			$^{92}_{40}$Zr $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	BAP,8,81(Y6),63	1	34.0 mb at 30.0 keV	
			$^{92}_{40}$Zr σ_{np}			
69	KAZ	Levkovskii+	YF,10,44,69	1	20.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	BET	Carroll,et.al.	NSE,25,285,66	1	.150 mb at 6.000 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	22.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	19.0 mb at 14.5 MeV	^{27}Al σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	25.0 mb at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	76.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	22.5 mb at 14.8 MeV	
60	LAS	Reed	REED,60	1	20.7 mb at 14.1 MeV	
			$^{92}_{40}$Zr $\sigma_{n\alpha}$			
69	KAZ	Levkovskii+	YF,10,44,69	1	9.000 mb at 14.8 MeV	^{65}Cu σ_{n2n}
61	LAS	Bayhurst,et.al.	JIN,23,173,61	9	13.4 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LAS	Reed	REED,60	1	21.8 mb at 14.1 MeV	
			$^{94}_{40}$Zr σ_{tot}			
59	DKE	Newson,et.al.	AP,8,211,59	162	1.000 keV to .140 MeV	
			$^{94}_{40}$Zr σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.269 b at 1.500 MeV	^{1}H σ_{el}
			$^{94}_{40}$Zr $\sigma_{n\gamma}$			
70	CNE	Ricabarra,et.al.	CJP,48,2362,70	1	63.0 mb at .600 eV	^{55}Mn $\sigma_{n\gamma}$
65	FEI	Kapchigashev	AE,19,(3),294,65	15	1.500 keV to 57.0 keV	
63	ORL	Macklin,et.al.	BAP,8,81(Y6),63	1	19.0 mb at 30.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	24.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	42.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{94}_{40}$Zr σ_{np}			
69	KAZ	Levkovskii+	YF,10,44,69	1	9.000 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	BET	Carroll,et.al.	NSE,25,285,66	1	.200 mb at 6.000 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	7.000 mb at 14.7 MeV	^{63}Cu σ_{n2n}
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	5.100 mb at 14.5 MeV	^{27}Al σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	11.0 mb at 14.0 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	48.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	6.880 mb at 14.8 MeV	
60	LAS	Reed	REED,60	1	10.8 mb at 14.1 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	10.6 mb at 14.5 MeV	abs
			$^{94}_{40}$Zr σ_{nd}			
60	LAS	Reed	REED,60	1	.900 mb at 14.1 MeV	
			$^{94}_{40}$Zr σ_{n3}			
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	.400 mb at 14.5 MeV	^{94}Zr $\sigma_{n\alpha}$
61	ARK	Poularikas,et.al	ARKANSAS,7,61	1	.950 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{94}_{40}$Zr $\sigma_{n\alpha}$			
70	GIT	Wen-Deh Lu+	PR/C,1,358,70	1	5.000 mb at 14.4 MeV	
69	KAZ	Levkovskii+	YF,10,44,69	1	5.200 mb at 14.8 MeV	^{65}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	4.300 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	3.800 mb at 14.5 MeV	^{27}Al σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	4.700 mb at 14.0 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	13	12.1 MeV to 19.8 MeV	^{238}U σ_{nf}
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	5.320 mb at 14.8 MeV	
60	LAS	Reed	REED,60	1	3.990 mb at 14.1 MeV	
55	LAS	Brolley Jr+	PR,99,330,55	2	14.1 MeV to 14.9 MeV	
55	ORL	Blosser,et.al.	PR,100,429,55	1	3.600 mb at 14.0 MeV	^{56}Fe σ_{np}
			$^{96}_{40}$Zr $\sigma_{n\gamma}$			
70	CNE	Ricabarra,et.al.	CJP,48,2362,70	1	5.700 mb at .600 eV	^{55}Mn $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	BAP,8,81(Y6),63	1	40.0 mb at 30.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	7.000 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	4.000 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	22.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{96}_{40}$Zr σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	1.297 b at 14.6 MeV	^{63}Cu σ_{n2n}
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.456 b at 14.4 MeV	^{56}Fe σ_{np}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{96}_{40}$Zr σ_{np}			
61	ALD	Vallis,et.al.	JIN,22,1,61	1	13.0 mb at 14.1 MeV	^{27}Al σ_{np}
			$^{96}_{40}$Zr σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	.136 mb at 14.0 MeV	
			$^{96}_{40}$Zr $\sigma_{n\alpha}$			
69	KAZ	Levkovskii+	YF,10,44,69	1	2.600 mb at 14.8 MeV	^{65}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	5.000 mb at 14.7 MeV	^{63}Cu σ_{n2n}
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	1.100 mb at 14.5 MeV	^{27}Al σ_{np}
63	CCP	Levkovskii	ZET,45,305,63	1	2.300 mb at 14.0 MeV	
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	9.600 mb at 14.8 MeV	
60	LAS	Reed	REED,60	1	4.800 mb at 14.1 MeV	
			$^{96}_{40}$Zr σ_{nna}			
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	2.600 mb at 14.5 MeV	^{94}Zr $\sigma_{n\alpha}$
			$^{NLY}_{40}$Zr σ_{tot}			
73	BET	Stooksberry+	NSE,51,235,73	18	.433 MeV to 2.370 MeV	


$^{93}_{41}$Nb σ_{tot}
55 BNL Pi
47 COL Wu
σ(b)
En(eV)


$^{93}_{41}$Nb σ_{tot}
65 COL Ga
58 BNL Se
58 ANL Sa
55 ANL Bo
55 BNL Pi
σ(b)
En(eV)


$^{93}_{41}$Nb σ_{tot}
65 DKE Se
65 COL Ga
58 ANL Sa
57 DKE Ne
55 ANL Bo
55 BNL Pi
σ(b)
En(keV)

$^{93}_{41}$Nb

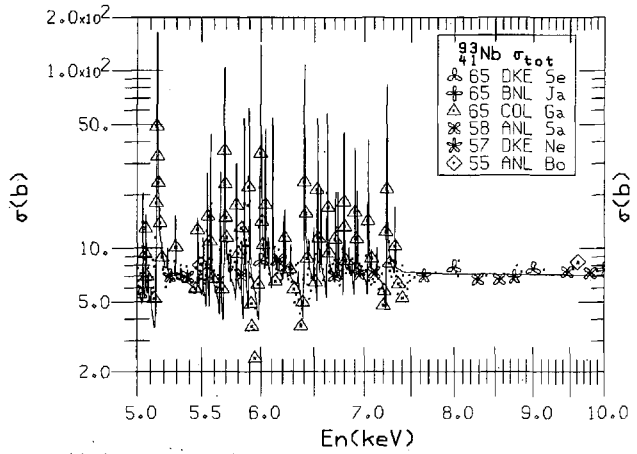
σ_{tot}

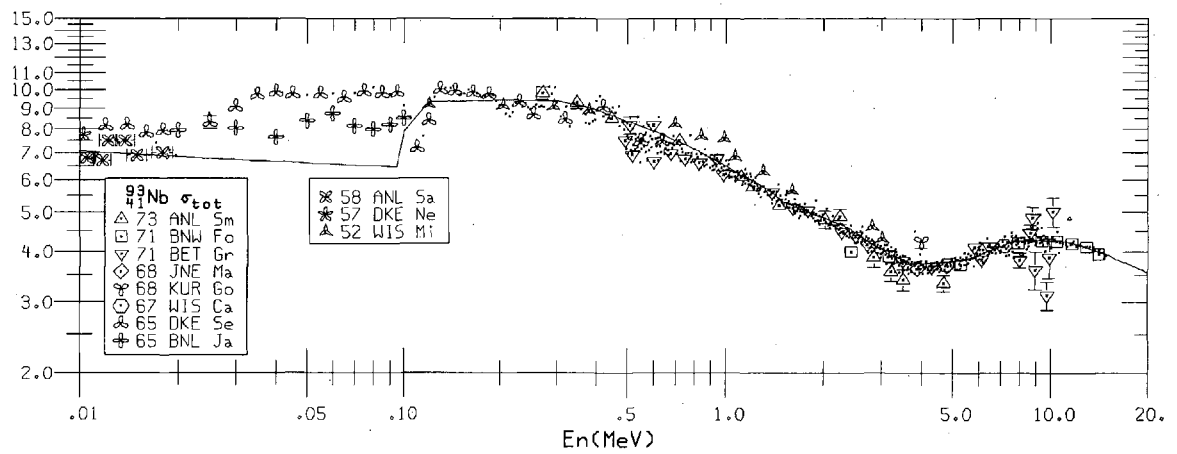
σ_{el}

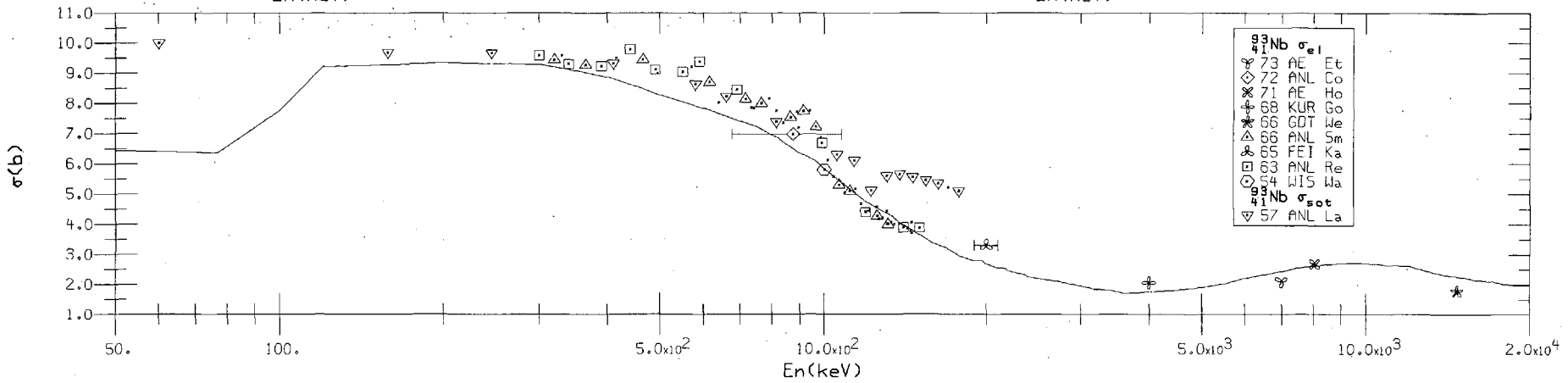
σ_{sct}

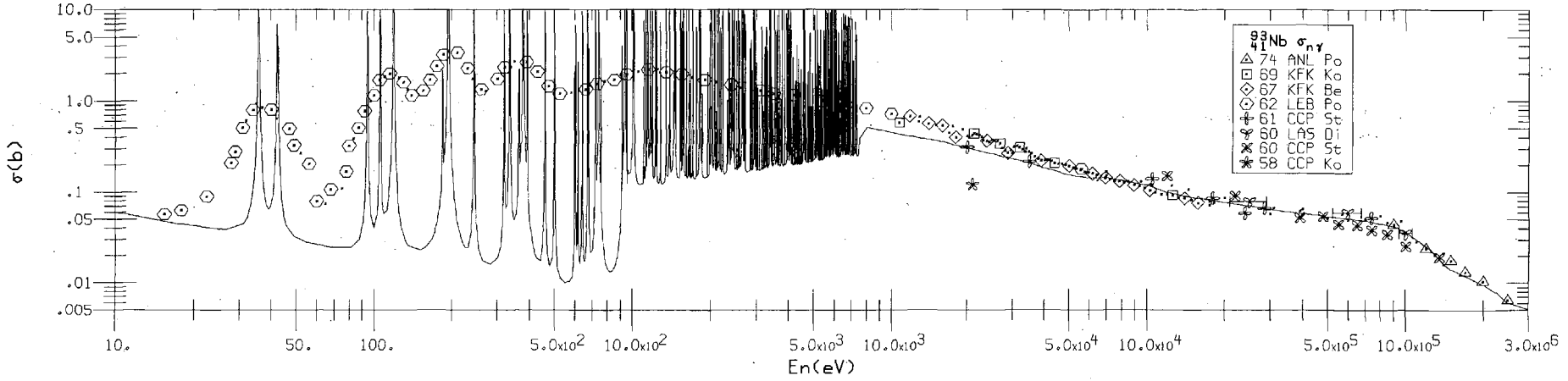
$\sigma_{n\gamma}$

[1189]

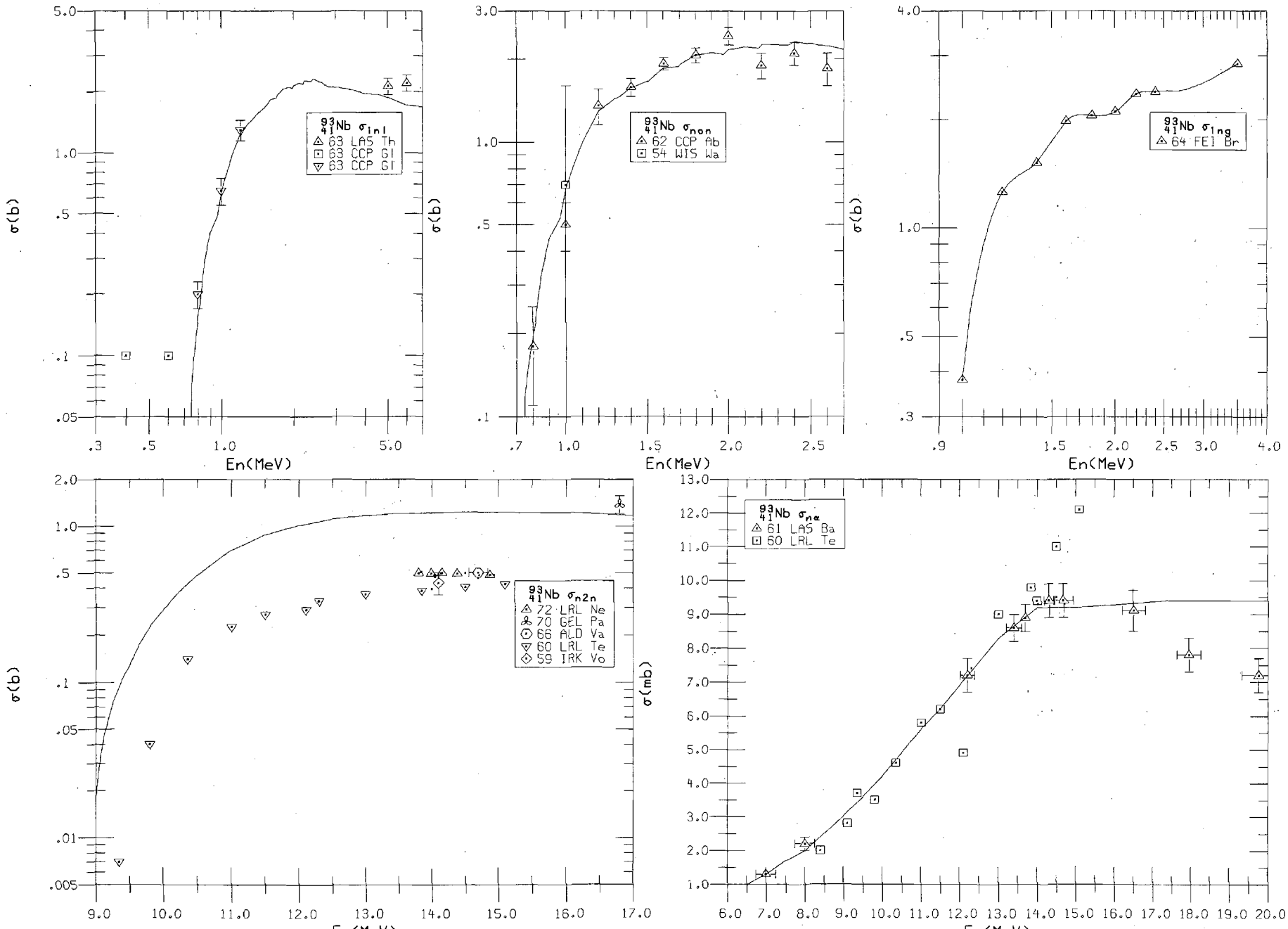






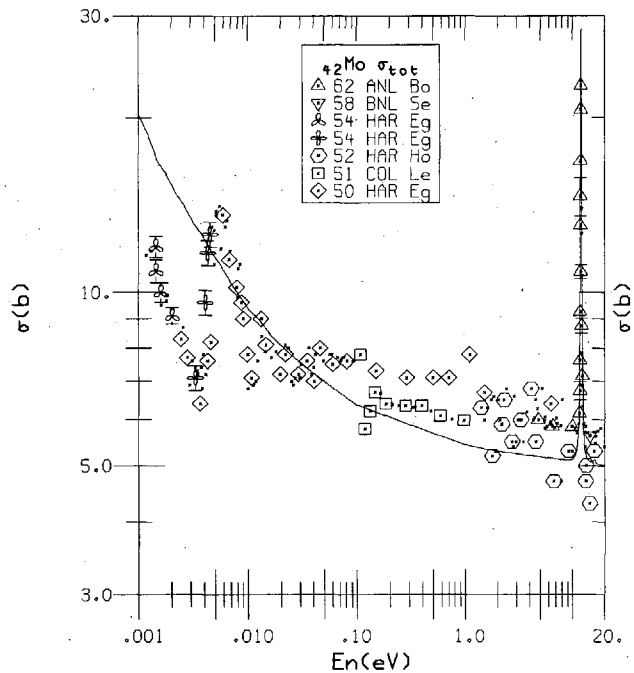


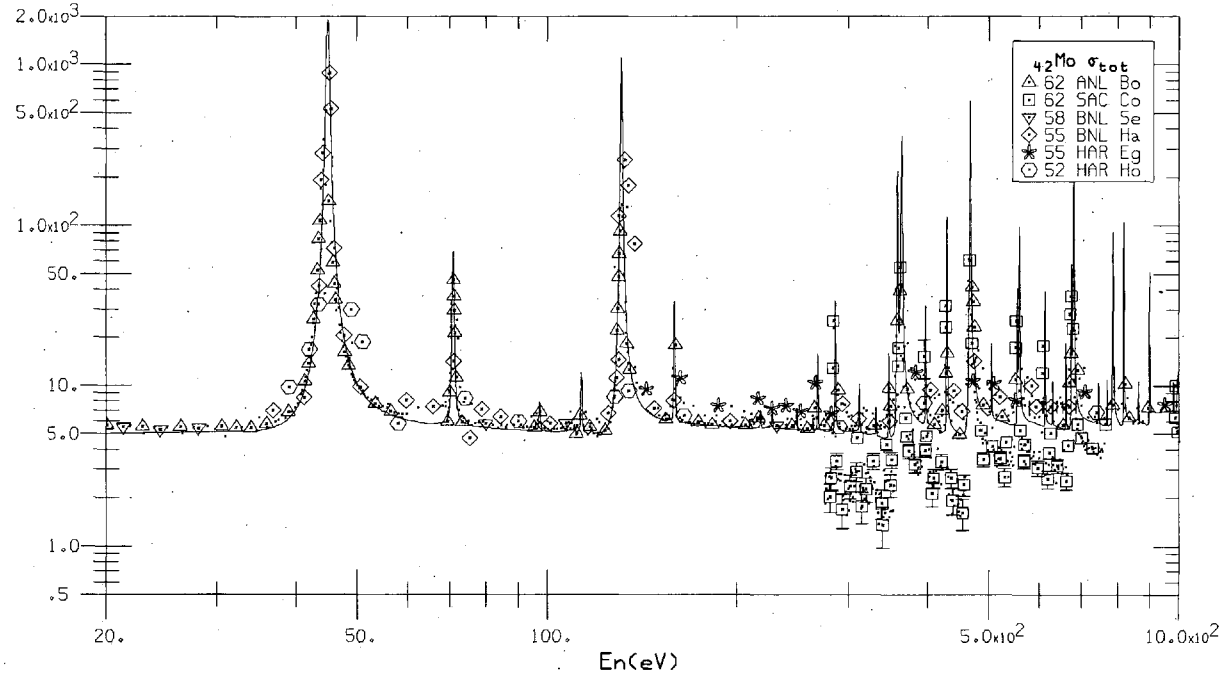
$^{93}_{41}$Nb
σ_{inl}
σ_{non}
σ_{n2n}
$\sigma_{n\alpha}$
[1189]
σ_{ing}

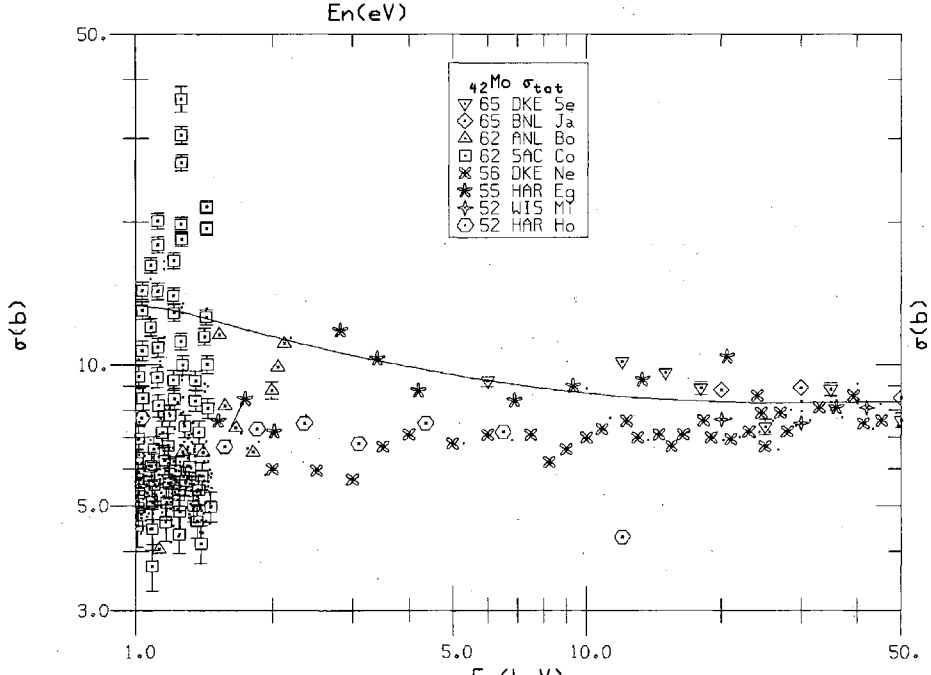


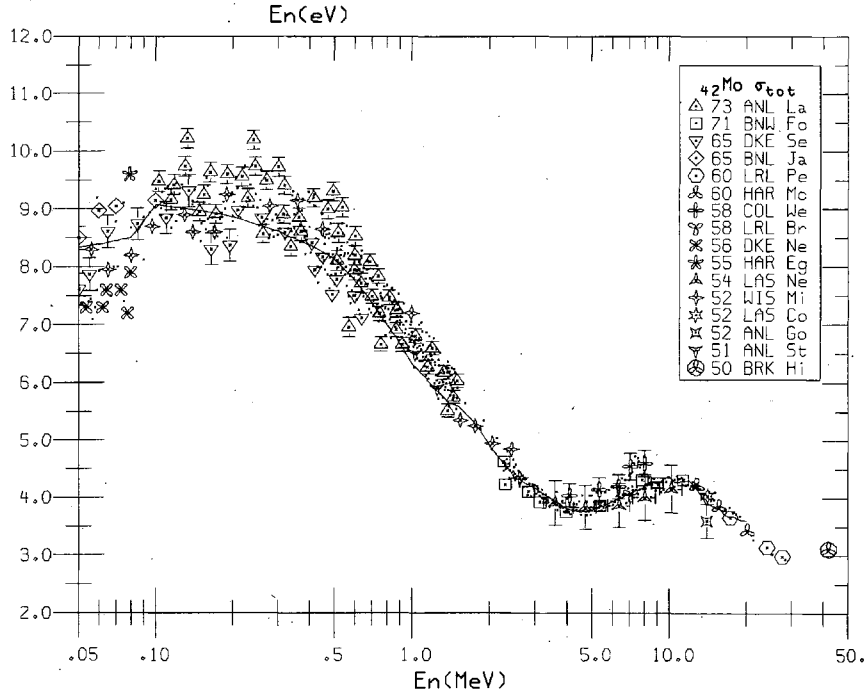
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{93}_{41}$Nb σ_{tot}			
73	ANL	Smith,et.al.	ANS,16,311,73	146	.272 MeV to 5.000 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	234	2.393 MeV to 14.8 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	712	.493 MeV to 10.6 MeV	
68	JNE	Manero	ARS,64,373,68	62	3.320 MeV to 5.100 MeV	
68	KUR	Gorlov,et.al.	YF,6,663,68	1	4.230 b at 4.000 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	60	4.531 MeV to 7.514 MeV	
66	HAR	Uttley	66PARIS,1,165,66	50	1.100 keV to .950 MeV	
66	GDT	Western,et.al.	66WASH,2,675,66	1	3.940 b at 14.7 MeV	
65	OKE	Seth	PL,16,306,65	102	4.000 keV to .640 MeV	abs
65	BNL	Jain,et.al.	PR/B,137,83,65	10	10.0 keV to .100 MeV	abs
65	COL	Garg,et.al.	PR/B,137,547,65	6306	81.7 eV to 7.497 keV	
62	BAR	Kent,et.al.	PR,125,331,62	1	3.750 b at 3.660 MeV	
58	BNL	Seth,et.al.	PR,110,692,58	50	47.1 eV to .167 keV	
58	ANL	Saplakoglu,et.al	PR,109,1258,58	634	29.0 eV to 19.8 keV	
57	OKE	Newson,et.al.	PR,105,198,57	30	.450 keV to 10.3 keV	abs
55	ANL	Bollinger	BOLLINGER,55	188	32.7 eV to 9.610 keV	abs
55	BNL	Pilcher	PILCHER,55	96	3.030 eV to .319 keV	
52	WIS	Miller,et.al.	PR,88,83,52	31	.120 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.020 b at 14.1 MeV	
47	COL	Wu,et.al.	PR,71,174,47	55	.0084 eV to 1.880 eV	
			$^{93}_{41}$Nb σ_{el}			
73	AE	Etemad	AE-482,73	1	2.100 b at 7.000 MeV	
72	ANL	Cox,et.al.	ANL-7935,72	1	6.980 b at .875 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.680 b at 8.050 MeV	^{1}H σ_{el}
68	KUR	Gorlov,et.al.	YF,6,663,68	1	2.050 b at 4.000 MeV	
66	GDT	Western,et.al.	66WASH,2,675,66	1	1.770 b at 14.7 MeV	
66	ANL	Smith	SMITH,66	33	.320 MeV to 1.450 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	3.300 b at 2.000 MeV	
63	ANL	Reitmann,et.al.	NP,48,593,63	25	.300 MeV to 1.500 MeV	C
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.800 b at 1.000 MeV	
			$^{93}_{41}$Nb σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	2	5.000 MeV to 6.000 MeV	
63	CCP	Glazkov	AE,14,400,63	2	.400 MeV to .600 MeV	
63	CCP	Glazkov	AE,15,416,63	3	.800 MeV to 1.200 MeV	
			$^{93}_{41}$Nb σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	C
			$^{93}_{41}$Nb σ_{non}			
62	CCP	Abramov	AE,12,62,62	10	.800 MeV to 2.600 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.700 b at 1.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{93}_{41}$Nb $\sigma_{n\gamma}$			
74	ANL	Poenitz	ANL-NDM-8,74	16	.300 MeV to 2.500 MeV	^{197}Au $\sigma_{n\gamma}$
69	KFK	Kompe	NP/A,133,513,69	71	10.8 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
67	ORL	Druschel,et.al.	ORNL-4164,2,67	1	1.100 b at thermal	
67	ORL	Macklin,et.al.	PR,159,1007,67	6	70.0 keV to .182 MeV	Ta $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	71	10.8 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
62	LEB	Popov,et.al.	ZET,42,988,62	83	15.5 eV to 56.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	CCP	Stavisskii+	AE,10,264,61	13	20.0 keV to .960 MeV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
60	CCP	Stavisskii+	AE,9,401,60	16	70.0 keV to 1.400 MeV	^{235}U σ_{nf}
58	CCP	Kononov,et.al.	AE,5,564,58	1	.120 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{93}_{41}$Nb σ_{ing}			
64	FEI	Broder,et.al.	AE,16,(2),103,64	9	1.000 MeV to 3.500 MeV	^{56}Fe σ_{inl}
			$^{93}_{41}$Nb σ_{n2n}			
72	LRL	Nethaway	NP,A190,635,72	11	13.8 MeV to 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
70	GEL	Paulsen,et.al.	ZP,238,23,70	1	1.380 b at 16.8 MeV	^{59}Co σ_{n2n}
66	IRK	Rieder,et.al.	APA,23,42,66	2	14.1 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	ALD	Vallis	AWRE-O-76/66,66	1	.502 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	ARK	Bramlitt,et.al.	JIN,24,1321,62	1	.499 b at 14.5 MeV	^{63}Cu σ_{n2n}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	12	9.350 MeV to 15.1 MeV	H
59	IRK	Vonach,et.al.	OSA,96,120,59	1	.430 b at 14.1 MeV	
			$^{93}_{41}$Nb σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	50.0 muB at 14.6 MeV	^{93}Nb $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.500 mb at 14.7 MeV	^{93}Nb $\sigma_{n\alpha}$
			$^{93}_{41}$Nb $\sigma_{n\alpha}$			
64	RBZ	Kulisic,et.al.	NP,54,17,64	1	9.300 mb at 14.7 MeV	abs
61	LAS	Bayhurst,et.al.	JIN,23,173,61	12	7.000 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	14	8.400 MeV to 15.1 MeV	H
			$^{93}_{41}$Nb σ_{nna}			
62	ARK	Bramlitt,et.al.	JIN,24,1321,62	1	2.500 mb at 14.5 MeV	^{63}Cu σ_{n2n}
			$^{94}_{41}$Nb $\sigma_{n\gamma}$			
67	ORL	Druschel,et.al.	ORNL-4164,2,67	1	11.0 b at thermal	

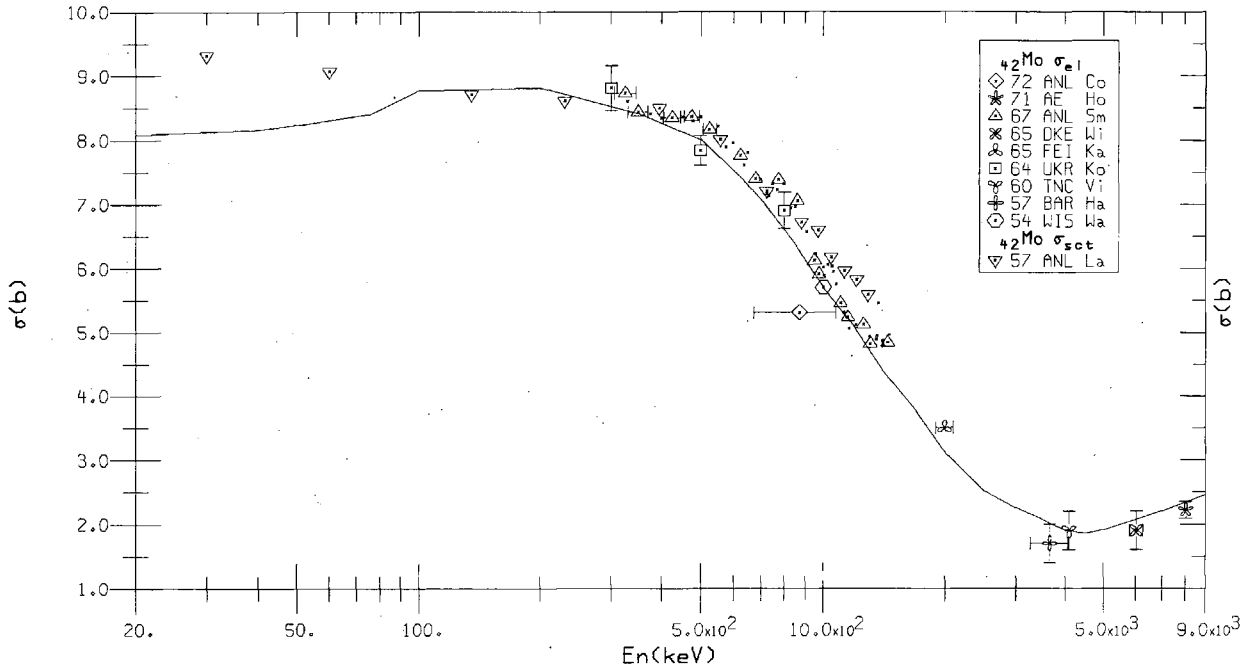

^{42}Mo σ_{tot}
62 ANL Bo
58 BNL Se
54 HAR Eg
54 HAR Eg
52 HAR Ho
51 COL Le
50 HAR Eg
σ(b)
En(eV)

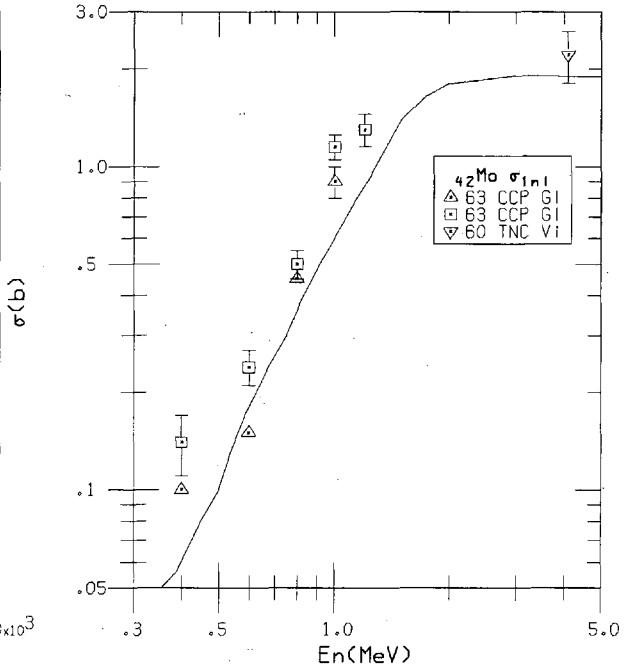

^{42}Mo σ_{tot}
62 ANL Bo
62 SAC Co
58 BNL Se
55 BNL Ha
55 HAR Eg
52 HAR Ho
σ(b)
En(eV)

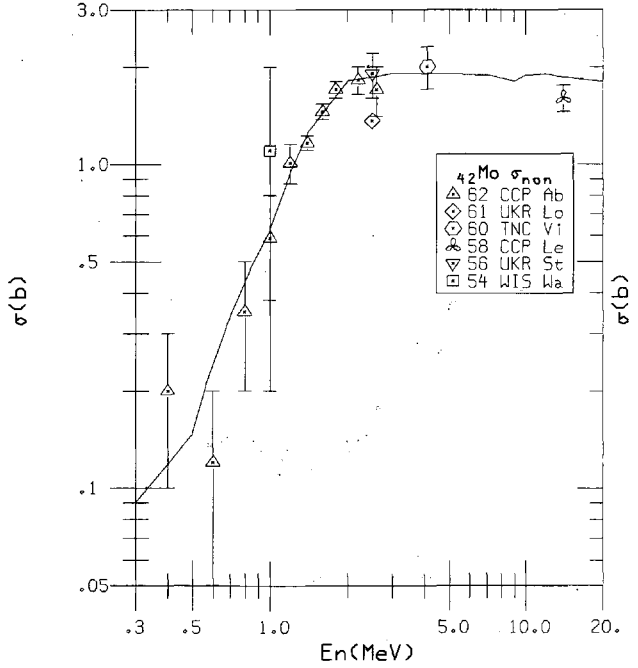

^{42}Mo σ_{tot}
65 DKE Se
65 BNL Ja
62 ANL Bo
62 SAC Co
56 DKE Ne
55 HAR Eg
52 WIS Mi
52 HAR Ho
σ(b)
En(keV)

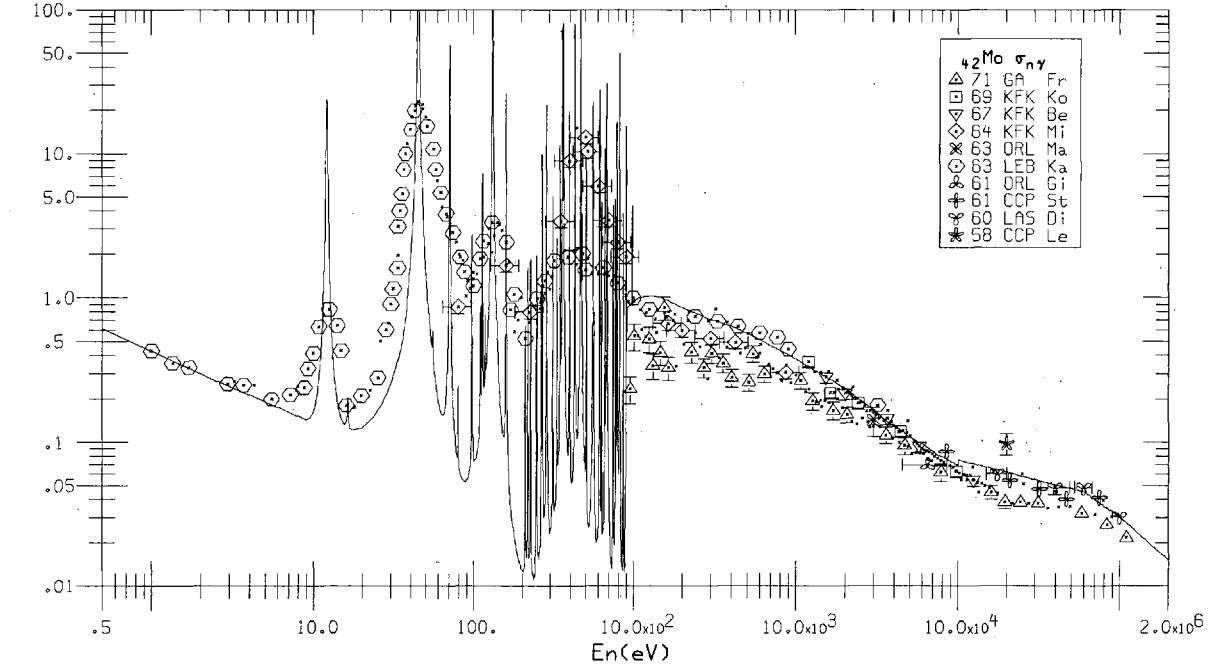

^{42}Mo σ_{tot}
73 ANL La
71 BNW Fo
65 DKE Se
65 BNL Ja
60 LRL Pe
60 HAR Mo
58 COL We
58 LRL Br
56 DKE Ne
55 HAR Eg
54 LAS Ne
52 WIS Mi
52 LAS Co
52 ANL Go
51 ANL St
50 BRK Hi
σ(b)
En(MeV)

$_{42}$Mo
σ_{el}
σ_{sct}
σ_{inl}
σ_{non}
$\sigma_{n\gamma}$
[1287]









$^{92}_{42}Mo$

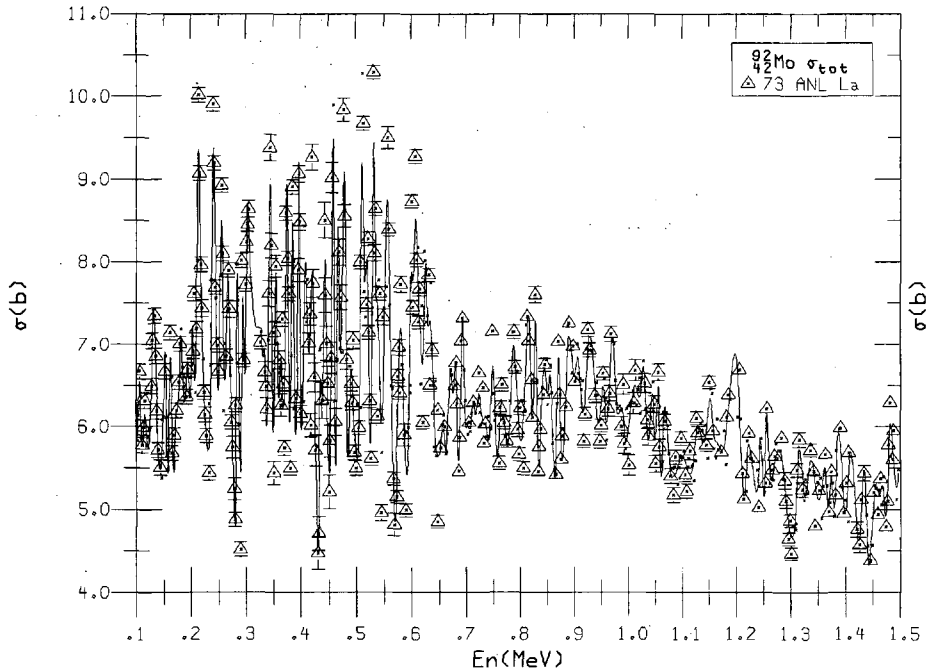
σ_{tot}

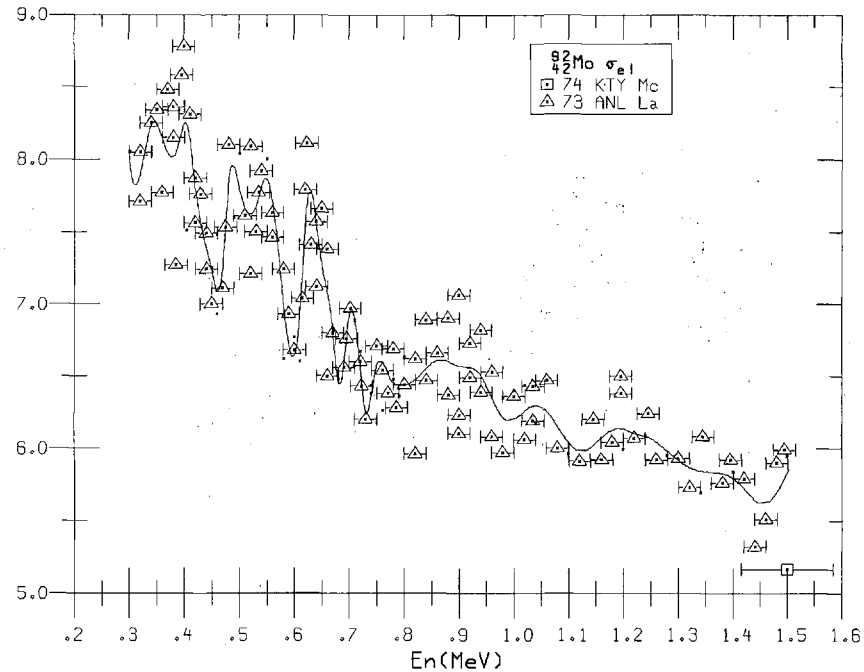
σ_{el}

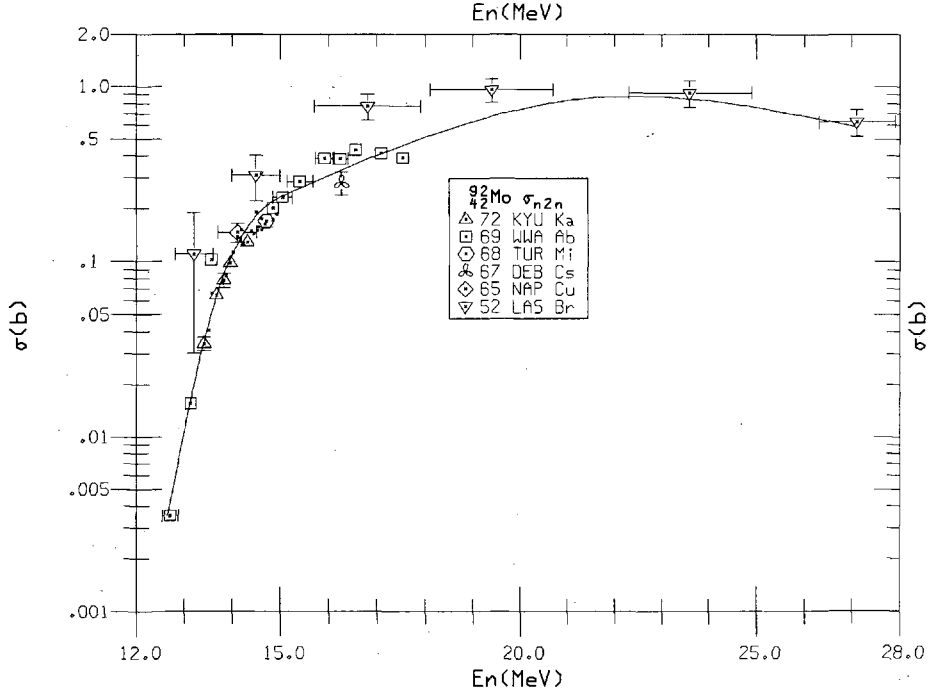
σ_{n2n}

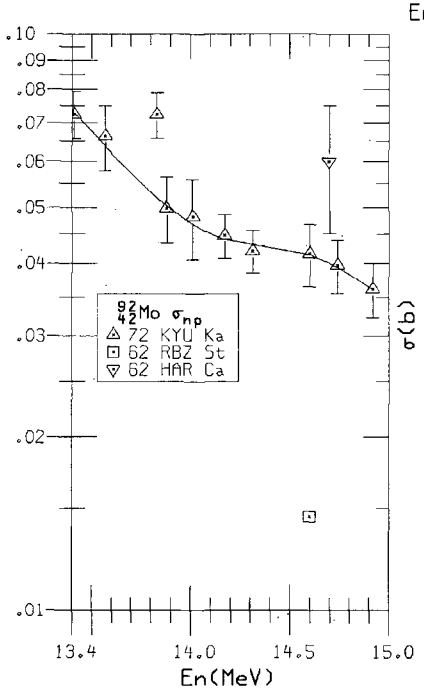
σ_{np}

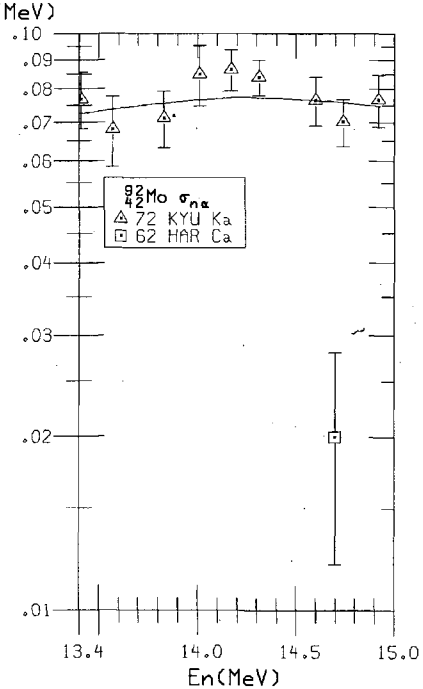
$\sigma_{n\alpha}$











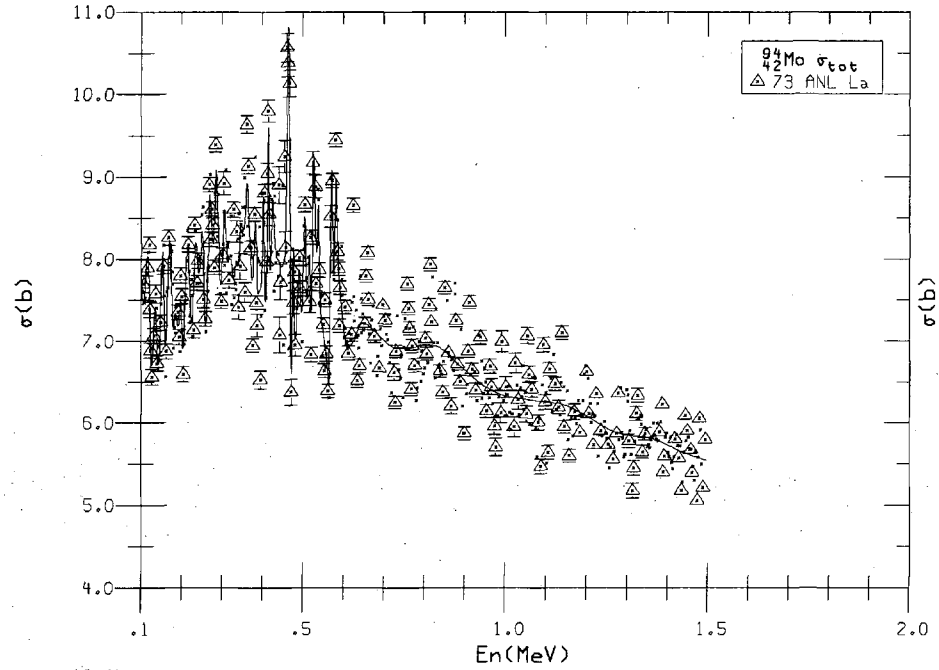
$^{94}_{42}Mo$

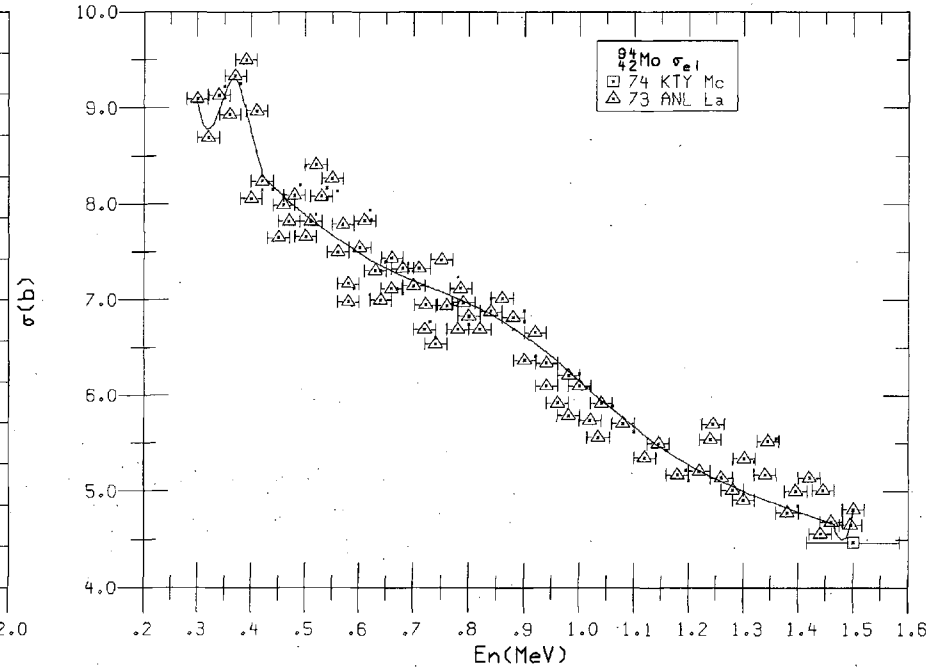
σ_{tot}

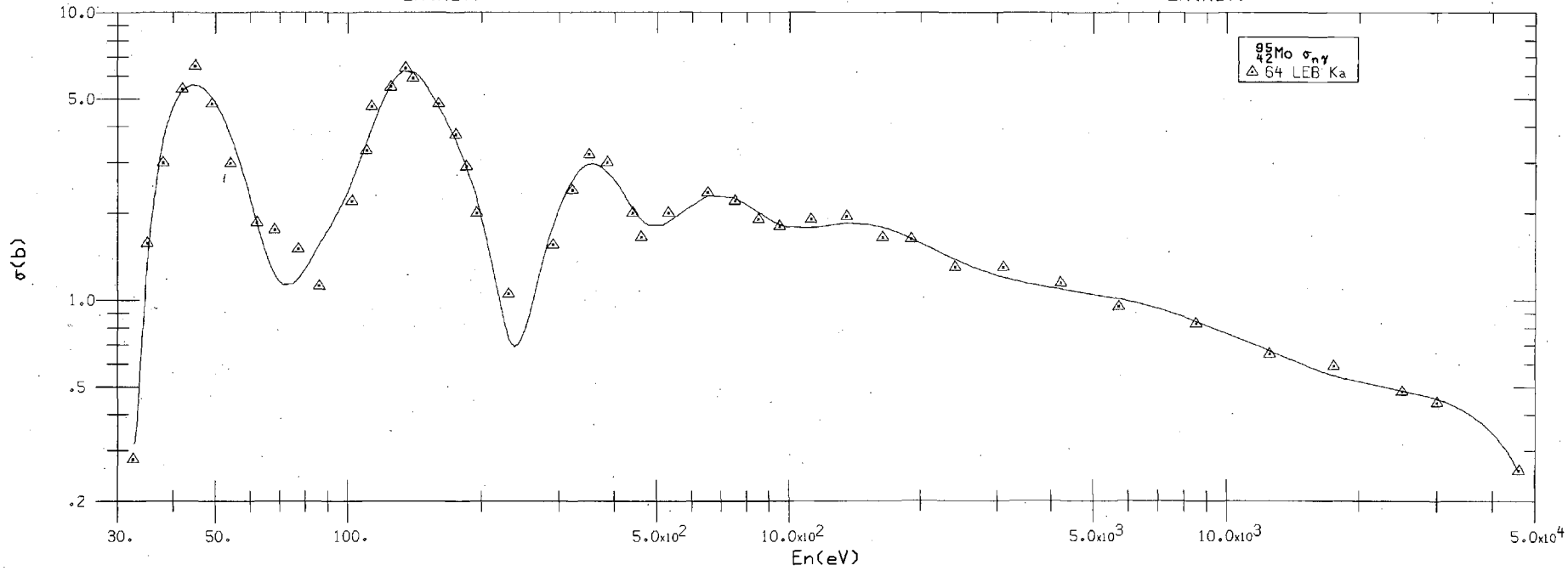
σ_{el}

$^{95}_{42}Mo$

$\sigma_{n\gamma}$







$^{96}_{42}Mo$

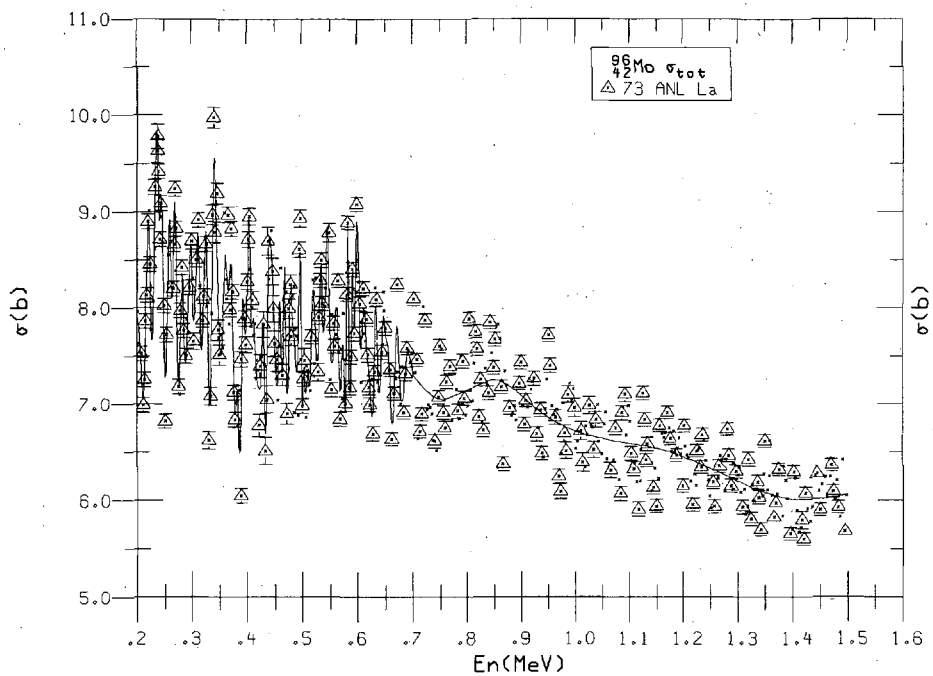
σ_{tot}

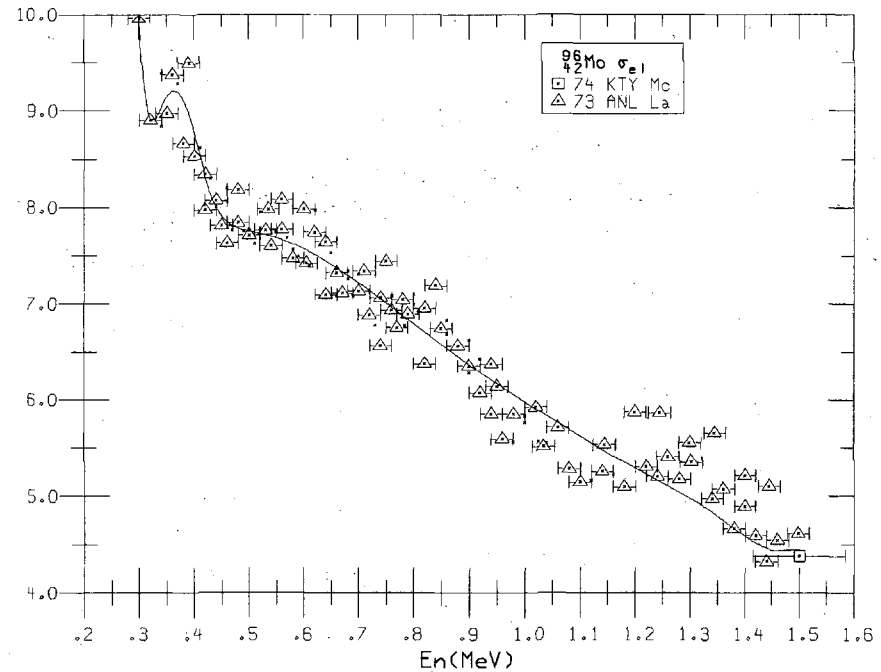
σ_{el}

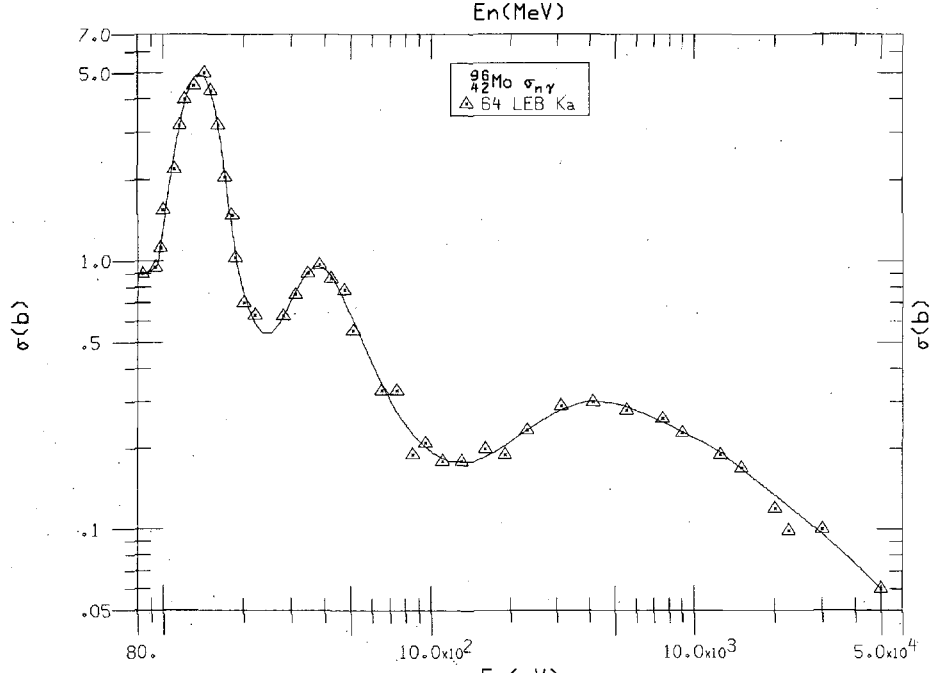
$\sigma_{n\gamma}$

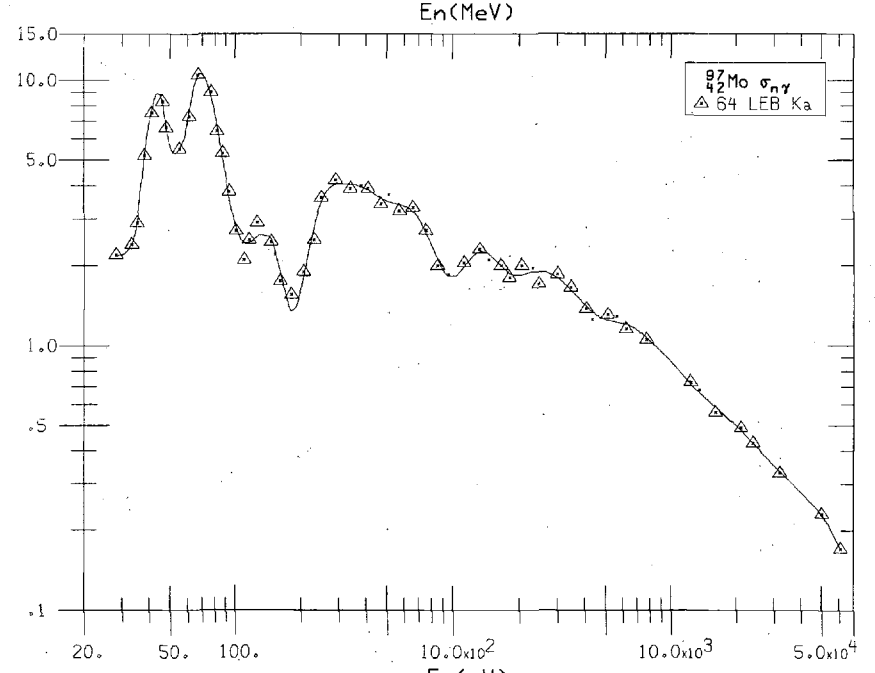
$^{97}_{42}Mo$

$\sigma_{n\gamma}$







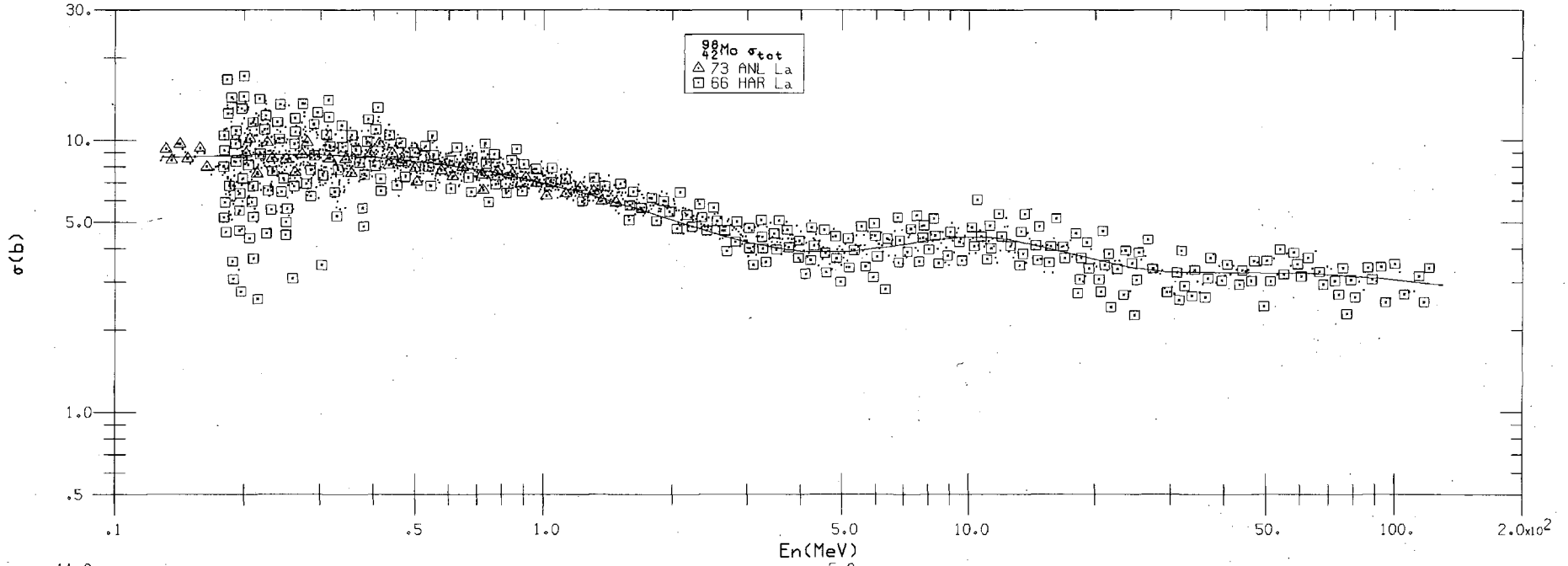


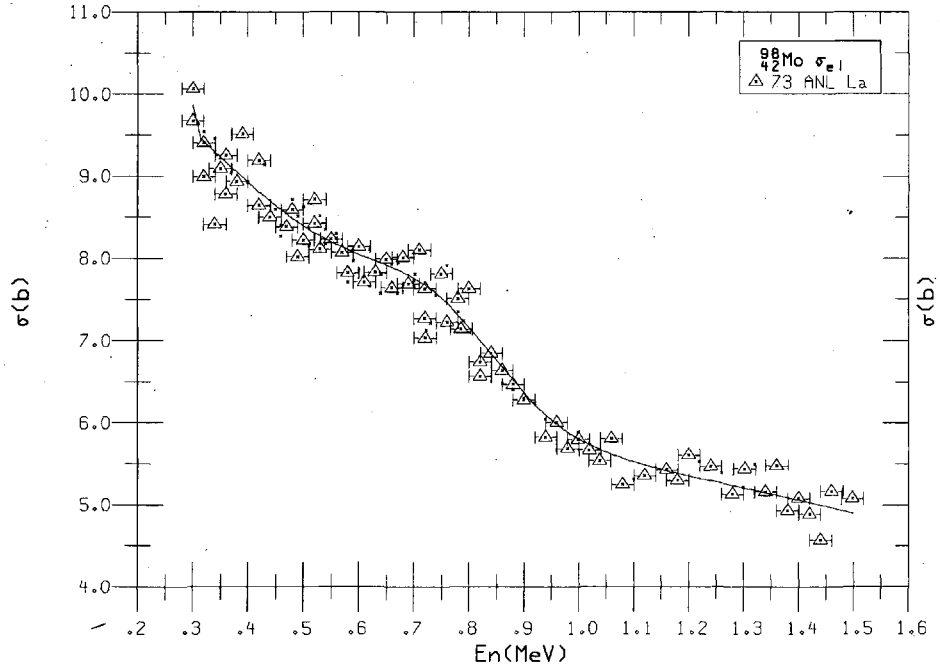
$^{98}_{42}$Mo

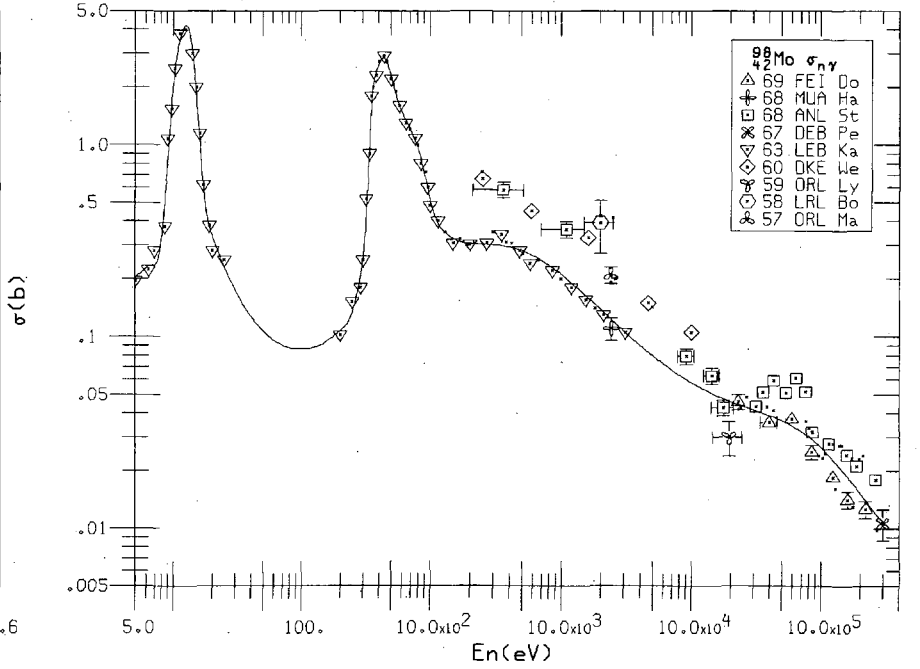
σ_{tot}

σ_{el}

$\sigma_{n\gamma}$





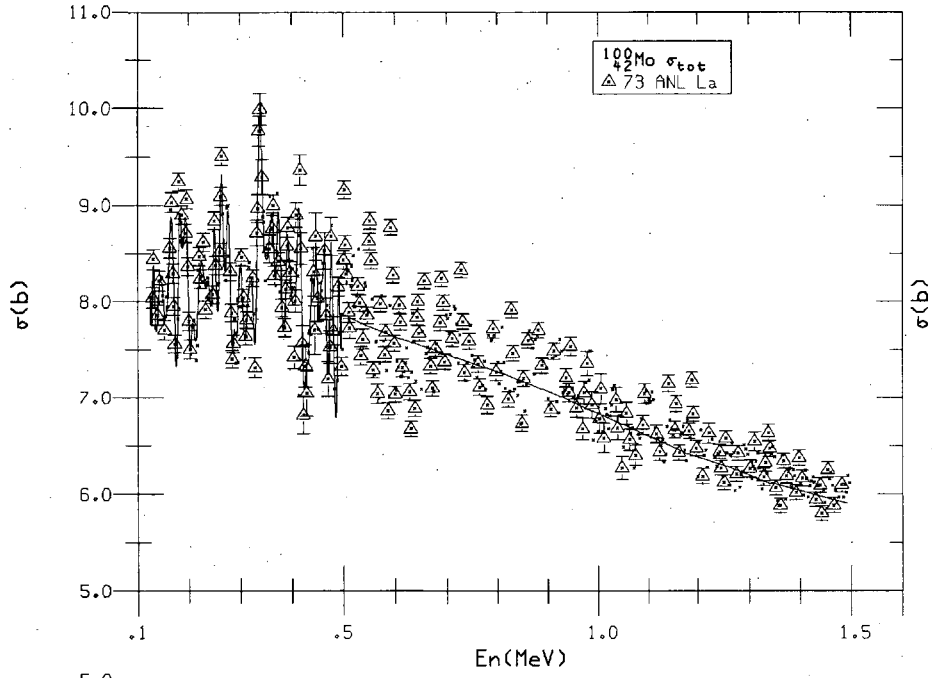


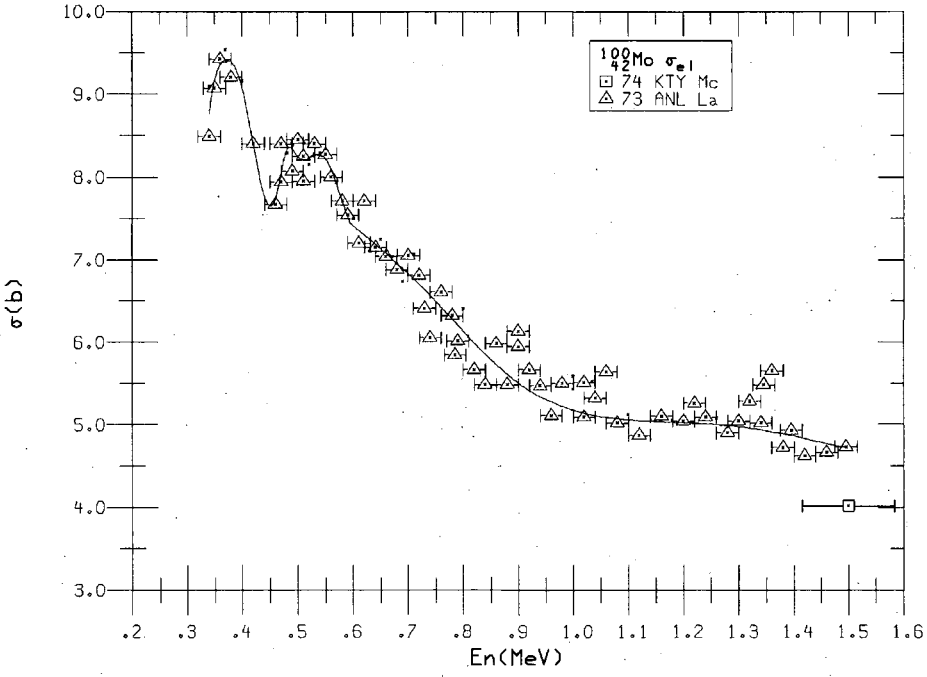
$^{100}_{42}Mo$

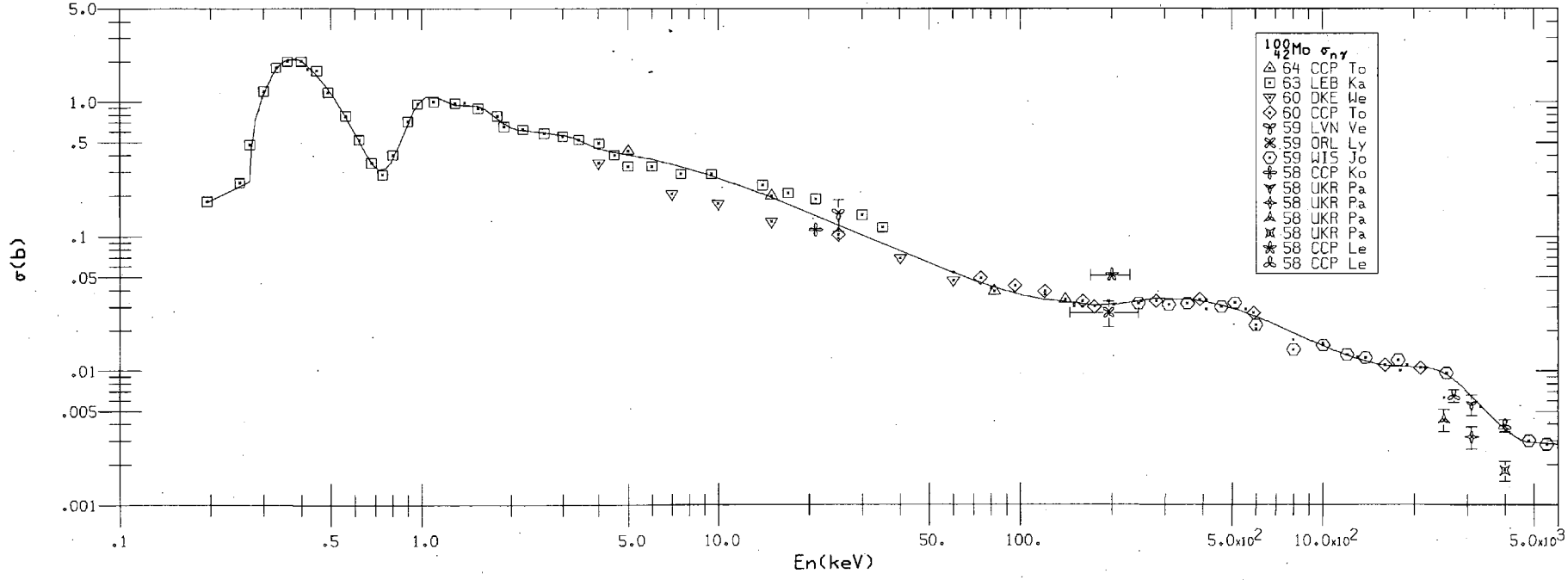
σ_{tot}

σ_{el}

$\sigma_{n\gamma}$







Yr	Lab	Author	Reference	Points	Range	Standard
			$_{42}$Mo σ_{tot}			
73	ANL	Lambropoulos+	NP/A,201,1,73	462	.103 MeV to 1.499 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	247	2.253 MeV to 14.9 MeV	
65	DKE	Seth	PL,16,306,65	87	6.000 keV to .640 MeV	
65	BNL	Jain,et.al.	PR/B,137,83,65	10	10.0 keV to .100 MeV	abs
62	ANL	Bollinger,et.al.	ANL-6534,7,62	472	4.410 eV to 2.193 keV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.110 b at 3.660 MeV	
62	SAC	Corge	CORGE,62	880	.276 keV to 1.474 keV	abs
61	LVN	Deconninck,et.al	JPR,22,652,61	1	2.930 b at 28.4 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	6	17.3 MeV to 28.8 MeV	abs
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	3.900 b at 4.100 MeV	
60	HAR	Mc Callum,et.al.	NP,16,313,60	13	12.4 MeV to 20.2 MeV	abs
58	COL	Weil,et.al.	PR,110,466,58	38	4.000 MeV to 8.050 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.090 MeV to 14.5 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	23	13.2 eV to .303 keV	
56	DKE	Newson,et.al.	PR,102,1580,56	68	2.000 keV to 79.5 keV	
55	BNL	Harvey,et.al.	PR,99,10,55	166	33.8 eV to .734 keV	
55	HAR	Egelstaff	EGEL5TAFF,55	49	.144 keV to .286 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.800 MeV to 13.1 MeV	abs
54	HAR	Egelstaff	EGEL5TAFF,54	21	.0012 eV to .0057 eV	abs
52	WIS	Miller,et.al.	PR,88,83,52	44	20.0 keV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.040 b at 14.1 MeV	abs
52	ANL	Goodman	PR,88,686,52	1	3.600 b at 14.0 MeV	
52	HAR	Hodgson,et.al.	PPS/A,65,992,52	80	1.400 eV to 12.0 keV	abs
51	ANL	Stubbins	PR,84,902,51	11	.495 MeV to 1.250 MeV	
51	COL	Levin,et.al.	CU-94,1,51	16	.108 eV to .970 eV	
50	BRK	Hildebrand+	PR,80,842,50	1	3.110 b at 42.0 MeV	abs
50	HAR	Egelstaff,et.al.	NAT,166,825,50	78	.0025 eV to 8.000 eV	
			$_{42}$Mo σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.310 b at .875 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.220 b at 8.050 MeV	^{1}H σ_{el}
67	ANL	Smith,et.al.	NP/A,93,609,67	58	.325 MeV to 1.450 MeV	C σ_{sct}
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	1.900 b at 6.040 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	3.500 b at 2.000 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	3	.300 MeV to .800 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	1.900 b at 4.100 MeV	
57	BAR	Hans,et.al.	PR,108,1028,57	1	1.700 b at 3.660 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.700 b at 1.000 MeV	
			$_{42}$Mo σ_{inl}			
63	CCP	Glazkov	AE,14,400,63	4	.400 MeV to 1.000 MeV	
63	CCP	Glazkov	AE,15,416,63	5	.400 MeV to 1.200 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.200 b at 4.100 MeV	H

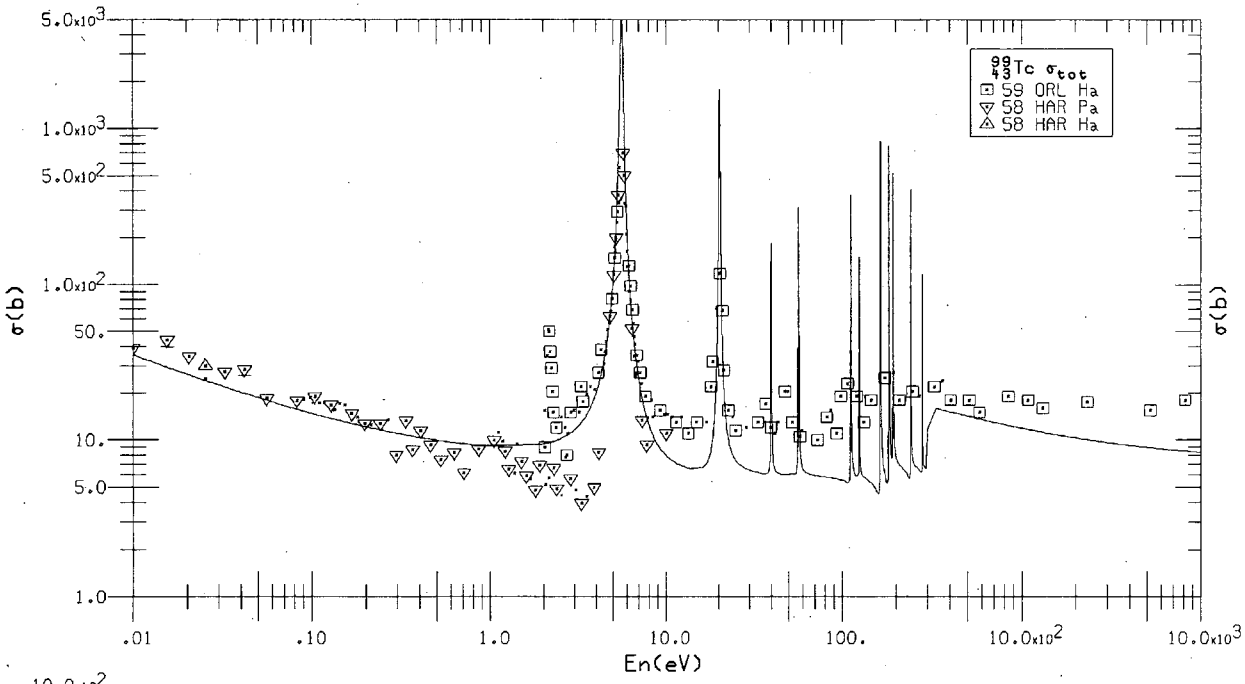
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{42}$Mo σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.370 MeV	C
			$_{42}$Mo σ_{non}			
64	UKR	Korzh,et.al.	UFZ,9,929,64	1	.350 b at .800 MeV	
62	CCP	Abramov	AE,12,62,62	11	.400 MeV to 2.600 MeV	abs
61	UKR	Lovchikova+	SPN,,216,61	1	1.360 b at 2.500 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.000 b at 4.100 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	1.600 b at 14.0 MeV	abs
56	UKR	Strizhak	ZET,31,907,56	1	1.900 b at 2.500 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	1.100 b at 1.000 MeV	
			$_{42}$Mo $\sigma_{n\gamma}$			
71	GA	Fricke,et.al.	71KNOX,1,252,71	95	.958 keV to 1.108 MeV	^{10}B $\sigma_{n\alpha}$
69	KFK	Kompe	NP/A,133,513,69	70	12.0 keV to .166 MeV	^{197}Au $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	70	12.0 keV to .166 MeV	^{197}Au $\sigma_{n\gamma}$
64	KFK	Mitzel,et.al.	NUK,6,371,64	41	80.0 eV to 28.6 keV	
63	ORL	Macklin,et.al.	NP,43,353,63	1	.141 b at 30.0 keV	Ag $\sigma_{n\gamma}$
63	LEB	Kapchigashev+	AE,15,120,63	136	1.000 eV to 49.0 keV	Mo $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	CCP	Stavisskii+	SPN,,227,61	11	50.0 keV to .960 MeV	^{127}I $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	97.0 mb at .200 MeV	
			$_{42}$Mo σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	1.590 b at 14.0 MeV	^{252}Cf
			$_{42}$Mo σ_{np}			
61	HAR	Allan	NP,24,274,61	1	.120 b at 14.0 MeV	^{54}Fe σ_{np}
59	CIS	Colli,et.al.	NC,13,730,59	1	31.0 mb at 14.0 MeV	
			$_{42}$Mo σ_{nnp}			
59	CIS	Colli,et.al.	NC,13,730,59	1	.112 b at 14.0 MeV	
			$^{92}_{42}$Mo σ_{tot}			
73	ANL	Lambropoulos+	NP/A,201,1,73	594	.101 MeV to 1.496 MeV	
			$^{92}_{42}$Mo σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	5.165 b at 1.500 MeV	^{1}H σ_{el}
73	ANL	Lambropoulos+	NP/A,201,1,73	129	.300 MeV to 1.500 MeV	C σ_{sct}

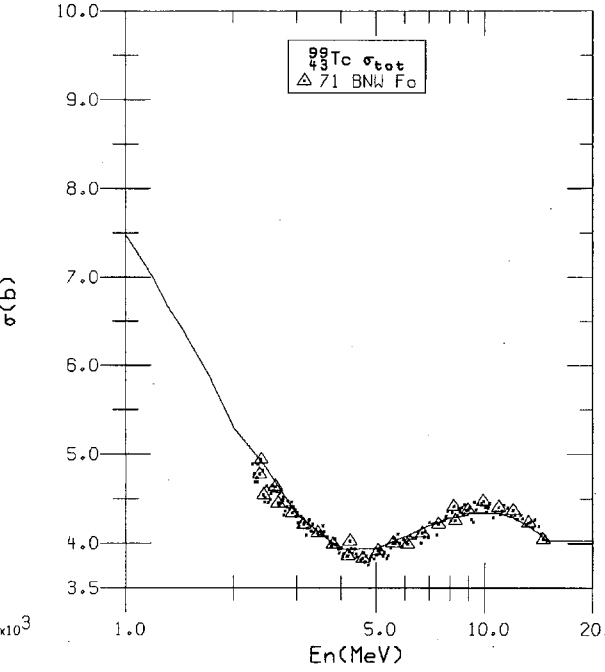
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{92}_{42}$Mo σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	.323 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	KYU	Kanda	NP/A,185,177,72	21	13.4 MeV to 14.9 MeV	
72	CCP	Maslov,et.al.	YK-9,50,72	1	.152 b at 14.2 MeV	
69	WWA	Abboud,et.al.	NP/A,139,42,69	13	12.7 MeV to 17.5 MeV	^{65}Cu σ_{n2n}
68	TUR	Minetti,et.al.	NP/A,118,449,68	1	.170 b at 14.7 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	.280 b at 16.3 MeV	^{63}Cu σ_{n2n}
65	DEB	Csikai	65ANTWERP,,537,65	1	.175 b at 14.6 MeV	
65	NAP	Cuzzocrea	CUZZOCREA,65	1	.146 b at 14.1 MeV	^{63}Cu σ_{n2n}
62	RBZ	Strohal,et.al.	NP,30,49,62	1	.315 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
53	CRC	Paul,et.al.	CJP,31,267,53	1	.190 b at 14.5 MeV	abs
52	LAS	Brolley Jr+	PR,88,618,52	6	13.2 MeV to 27.1 MeV	^{65}Cu $\sigma_{n\gamma}$
			$^{92}_{42}$Mo σ_{np}			
72	KYU	Kanda	NP/A,185,177,72	10	13.4 MeV to 14.9 MeV	
62	RBZ	Strohal,et.al.	NP,30,49,62	1	14.5 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
62	HAR	Cabell	JIN,24,1317,62	1	60.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{92}_{42}$Mo σ_{nnp}			
59	CIS	Colli,et.al.	NC,13,730,59	1	.744 b at 14.0 MeV	
			$^{92}_{42}$Mo $\sigma_{n\alpha}$			
72	KYU	Kanda	NP/A,185,177,72	10	13.4 MeV to 14.9 MeV	
62	HAR	Cabell	JIN,24,1317,62	1	20.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{94}_{42}$Mo σ_{tot}			
73	ANL	Lambropoulos+	NP/A,201,1,73	558	.101 MeV to 1.494 MeV	
			$^{94}_{42}$Mo σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.471 b at 1.500 MeV	^{1}H σ_{el}
73	ANL	Lambropoulos+	NP/A,201,1,73	117	.300 MeV to 1.500 MeV	C σ_{sct}
			$^{94}_{42}$Mo σ_{np}			
68	ANL	Stupegia,et.al.	JNE,22,267,68	1	6.000 mb at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{95}_{42}$Mo $\sigma_{n\gamma}$			
64	LEB	Kapchigashev+	64DUBNA,104,64	47	32.5 eV to 46.0 keV	
			$^{96}_{42}$Mo σ_{tot}			
73	ANL	Lambropoulos+	NP/A,201,1,73	544	.128 MeV to 1.498 MeV	
			$^{96}_{42}$Mo σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.378 b at 1.500 MeV	^{1}H σ_{el}
73	ANL	Lambropoulos+	NP/A,201,1,73	121	.300 MeV to 1.498 MeV	C σ_{sct}
			$^{96}_{42}$Mo $\sigma_{n\gamma}$			
64	LEB	Kapchigashev+	64DUBNA,104,64	43	83.0 eV to 50.0 keV	
			$^{96}_{42}$Mo σ_{np}			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	20.0 mb at 14.1 MeV	^{63}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	37.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	RBZ	Strohal,et.al.	NP,30,49,62	1	21.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{97}_{42}$Mo $\sigma_{n\gamma}$			
64	LEB	Kapchigashev+	64DUBNA,104,64	60	28.0 eV to 61.0 keV	
			$^{97}_{42}$Mo σ_{np}			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	18.0 mb at 14.1 MeV	^{63}Cu σ_{n2n}
62	RBZ	Strohal,et.al.	NP,30,49,62	1	68.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
53	CRC	Paul,et.al.	CJP,31,267,53	1	.108 b at 14.5 MeV	abs
			$^{98}_{42}$Mo σ_{tot}			
73	ANL	Lambropoulos+	NP/A,201,1,73	549	.128 MeV to 1.497 MeV	
66	HAR	Langsford	LANGSFORD,66	1934	.179 MeV to 120.8 MeV	abs
			$^{98}_{42}$Mo σ_{el}			
73	ANL	Lambropoulos+	NP/A,201,1,73	123	.300 MeV to 1.498 MeV	C σ_{sct}
			$^{98}_{42}$Mo $\sigma_{n\gamma}$			
69	MOL	Fabry,et.al.	EANDC(E)-115,195,69	1	.120 b at thermal	^{197}Au $\sigma_{n\gamma}$
69	FEI	Dovbenko,et.al.	AE,26,67,69	16	.230 MeV to 2.725 MeV	^{98}Mo $\sigma_{n\gamma}$
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	.110 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
68	ANL	Stupegia,et.al.	JNE,22,267,68	28	3.600 keV to 2.644 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	10.6 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
63	LEB	Kapchigashev+	AE,15,120,63	63	5.000 eV to 31.0 keV	
61	AE	Dahlberg,et.al.	JNE/AB,14,53,61	1	.180 b at thermal	^{197}Au $\sigma_{n\gamma}$
60	DKE	Weston,et.al.	AP,10,477,60	7	2.490 keV to .100 MeV	^{98}Mo $\sigma_{n\gamma}$
59	LVN	Vervier	NP,9,569,59	1	.415 b at 25.0 keV	^{115}In $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	30.0 mb at .195 MeV	^{115}In σ_{ing}
58	LRL	Booth,et.al.	PR,112,226,58	1	.422 b at 20.0 keV	^{98}Mo $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.390 b at 20.0 keV	^{98}Mo $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.209 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$

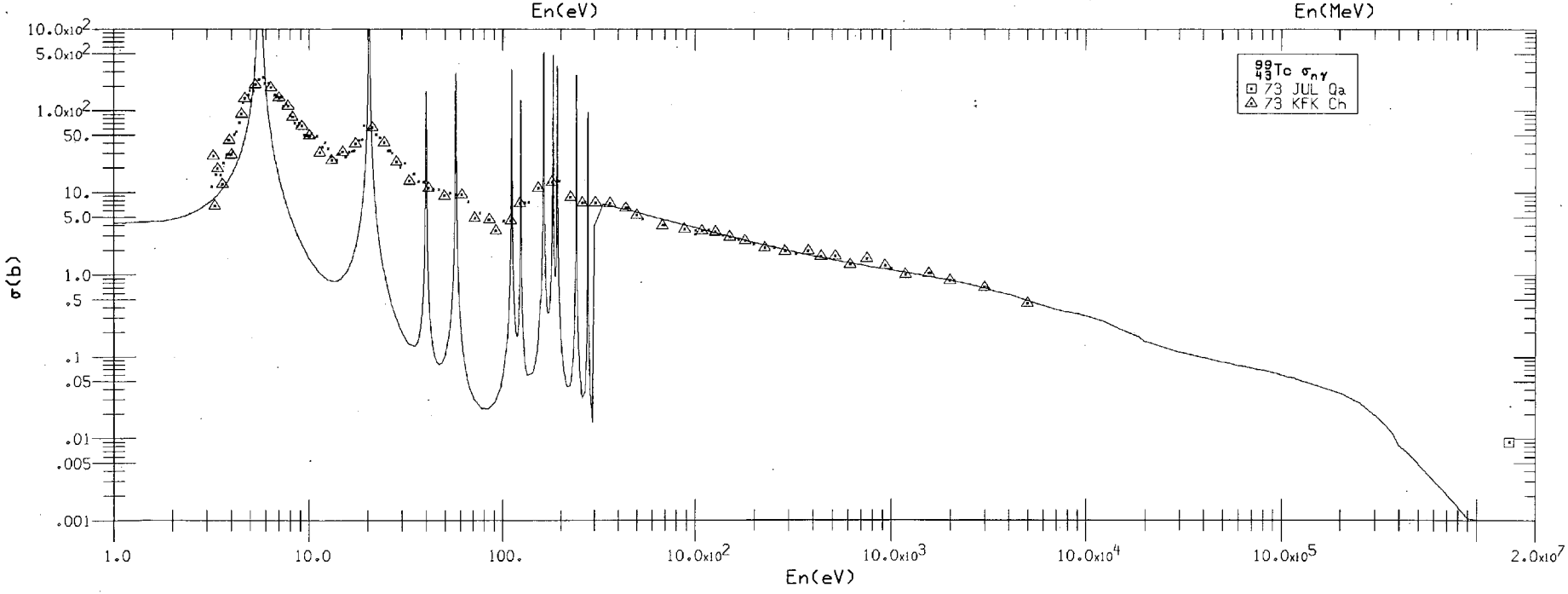
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{98}_{42}$Mo σ_{np}			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	6.200 mb at 14.1 MeV	^{63}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	9.000 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{98}_{42}$Mo $\sigma_{n\alpha}$			
70	GIT	Wen-Deh Lu+	PR/C,1,358,70	1	8.100 mb at 14.4 MeV	
			$^{100}_{42}$Mo σ_{tot}			
73	ANL	Lambropoulos+	NP/A,201,1,73	552	.124 MeV to 1.497 MeV	
			$^{100}_{42}$Mo σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.015 b at 1.500 MeV	^{1}H σ_{el}
73	ANL	Lambropoulos+	NP/A,201,1,73	83	.340 MeV to 1.495 MeV	C σ_{sct}
			$^{100}_{42}$Mo $\sigma_{n\gamma}$			
64	CCP	Tolstikov,et.al.	AE,17,505,64	8	5.000 keV to .160 MeV	^{100}Mo $\sigma_{n\gamma}$
63	LEB	Kapchigashev+	AE,15,120,63	39	.195 keV to 35.0 keV	
60	DKE	Weston,et.al.	AP,10,477,60	9	4.000 keV to .150 MeV	^{100}Mo $\sigma_{n\gamma}$
60	CCP	Tolstikov	TOLSTIKOV,60	18	25.0 keV to 2.100 MeV	^{235}U σ_{nf}
59	LVN	Vervier	NP,9,569,59	1	.148 b at 25.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	27.0 mb at .195 MeV	^{115}In σ_{ing}
59	WIS	Johnsrud,et.al.	PR,116,927,59	24	.150 MeV to 6.200 MeV	^{100}Mo $\sigma_{n\gamma}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	.112 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	6.300 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	5.600 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	3.200 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	4.300 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	1.800 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	
			$^{100}_{42}$Mo σ_{n2n}			
73	LOU	Araminovicz+	INR-1464,14,73	1	1.813 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.920 b at 14.2 MeV	
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.389 b at 14.4 MeV	^{56}Fe σ_{np}
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.762 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	RBZ	Strohal,et.al.	NP,30,49,62	1	2.039 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.910 b at 14.8 MeV	^{56}Fe σ_{np}
53	CRC	Paul,et.al.	CJP,31,267,53	1	3.790 b at 14.5 MeV	abs
			$^{100}_{42}$Mo σ_{np}			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	6.200 mb at 14.1 MeV	^{63}Cu σ_{n2n}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{100}_{42}$Mo $\sigma_{n\alpha}$			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	31.0 mb at 14.1 MeV	^{63}Cu σ_{n2n}
62	RBZ	Strohal,et.al.	NP,30,49,62	1	14.0 mb at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$

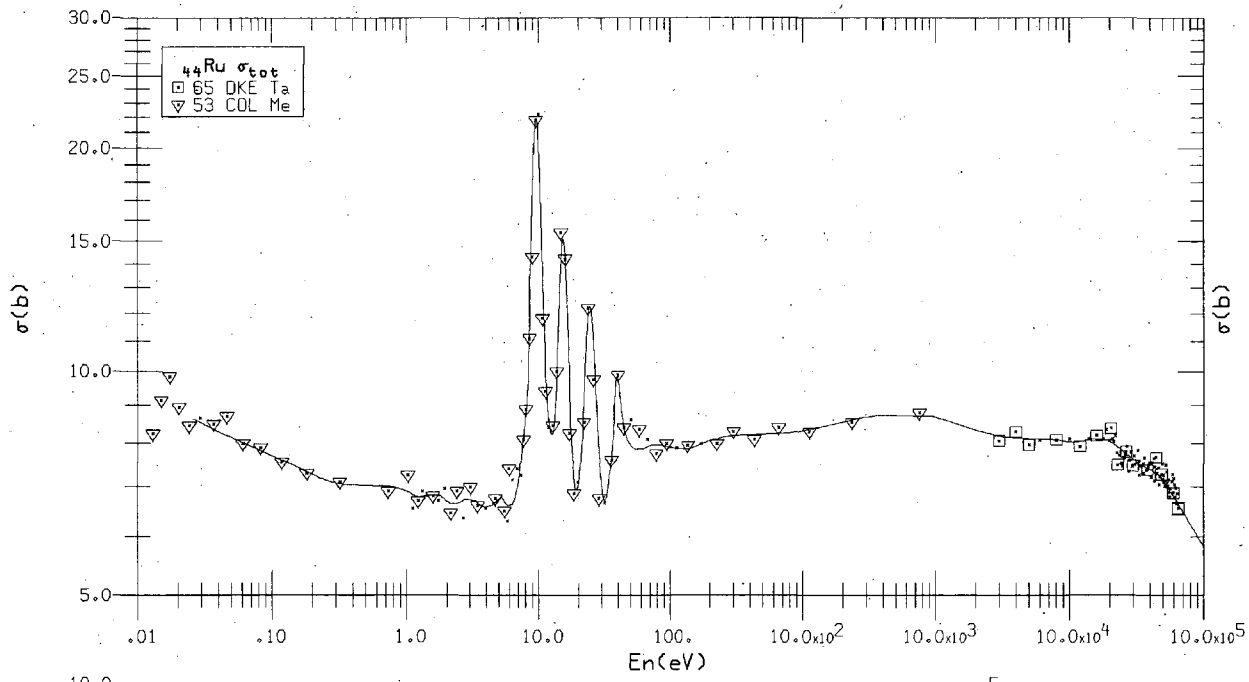
$^{99}_{43}$Tc
σ_{tot}
$\sigma_{n\gamma}$
[1137]

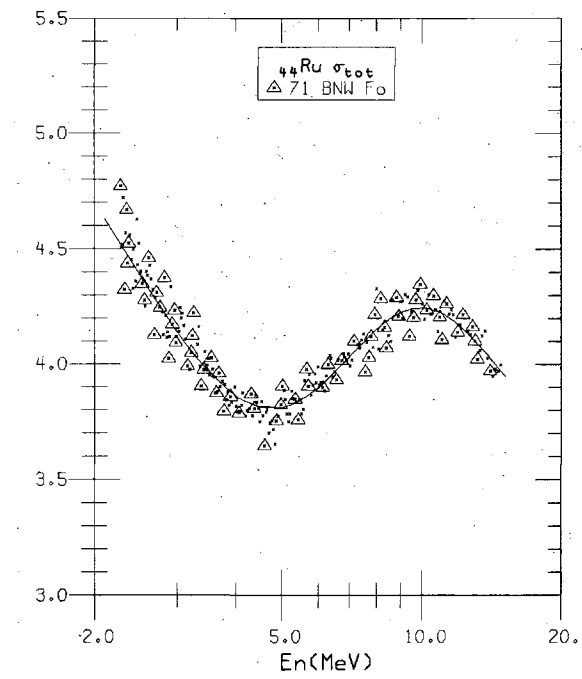


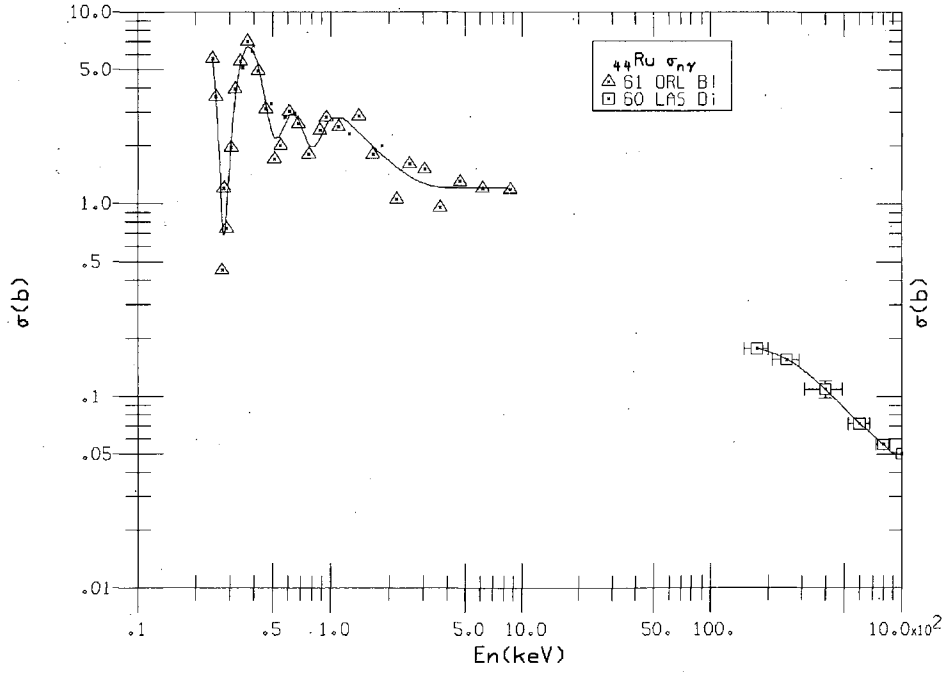


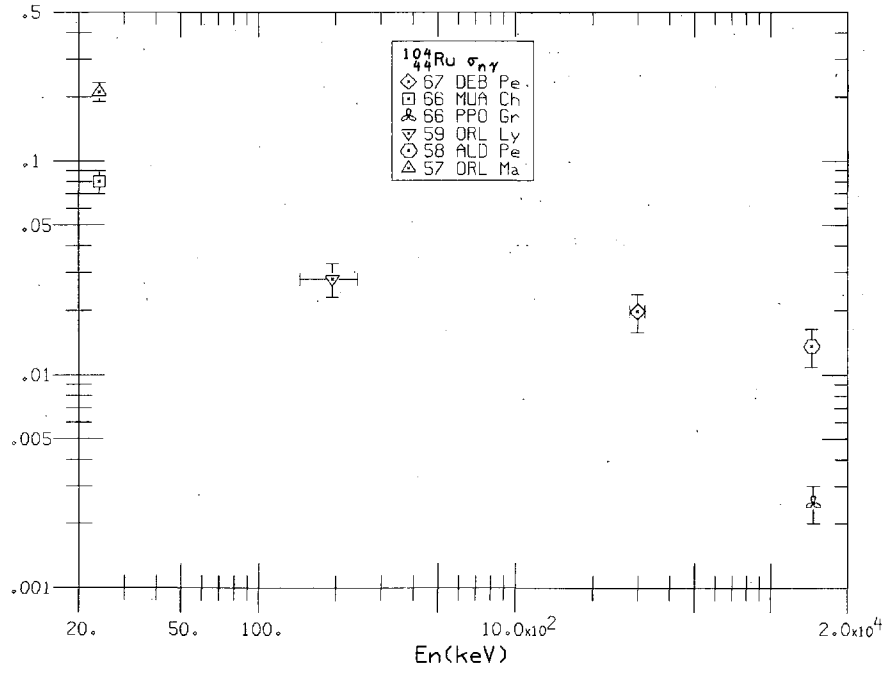


Yr	Lab	Author	Reference	Points	Range	Standard
			$^{99}_{43}$Tc σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	237	2.258 MeV to 15.0 MeV	
70	ANC	Watanabe,et.al.	NSE,41,188,70	1	24.7 b at thermal	
59	ORL	Harvey	HARVEY,59	110	2.040 eV to .131 MeV	
58	HAR	Pattenden	58GENEVA,16,44,58	85	.0100 eV to 10.0 eV	
58	HAR	Hay,et.al.	NRDC-103,58	1	30.0 b at thermal	
			$^{99}_{43}$Tc σ_{sct}			
58	HAR	Hay,et.al.	NRDC-103,58	1	5.000 b at thermal	
			$^{99}_{43}$Tc $\sigma_{n\gamma}$			
73	JUL	Qaim	JIN,35,3669,73	1	9.000 mb at 14.7 MeV	^{75}As σ_{n2n}
73	KFK	Chou,et.al.	JNE,27,811,73	213	3.172 eV to 50.0 keV	^{10}B $\sigma_{n\alpha}$
			$^{99}_{43}$Tc σ_{ing}			
73	JUL	Qaim	JIN,35,3669,73	1	.535 b at 14.7 MeV	^{75}As σ_{n2n}
			$^{99}_{43}$Tc σ_{n2n}			
73	JUL	Qaim	JIN,35,3669,73	1	1.227 b at 14.7 MeV	^{75}As σ_{n2n}
			$^{99}_{43}$Tc σ_{np}			
73	JUL	Qaim	JIN,35,3669,73	1	15.1 mb at 14.7 MeV	^{75}As σ_{n2n}
65	IIT	Golchert,et.al.	NP,73,349,65	1	6.970 mb at 14.1 MeV	abs
			$^{99}_{43}$Tc σ_{n2p}			
73	JUL	Qaim	JIN,35,3669,73	1	14.0 muB at 14.7 MeV	^{75}As σ_{n2n}
			$^{99}_{43}$Tc σ_{n3}			
73	JUL	Qaim	JIN,35,3669,73	1	7.000 muB at 14.7 MeV	^{75}As σ_{n2n}
			$^{99}_{43}$Tc $\sigma_{n\alpha}$			
73	JUL	Qaim	JIN,35,3669,73	1	7.120 mb at 14.7 MeV	^{75}As σ_{n2n}
65	IIT	Golchert,et.al.	NP,73,349,65	1	1.000 mb at 14.1 MeV	abs
65	IIT	Golchert,et.al.	NP,73,349,65	1	2.020 mb at 14.1 MeV	abs
			$^{99}_{43}$Tc σ_{nna}			
73	JUL	Qaim	JIN,35,3669,73	1	1.280 mb at 14.7 MeV	^{75}As σ_{n2n}
65	IIT	Golchert,et.al.	NP,73,349,65	1	1.000 mb at 14.1 MeV	abs

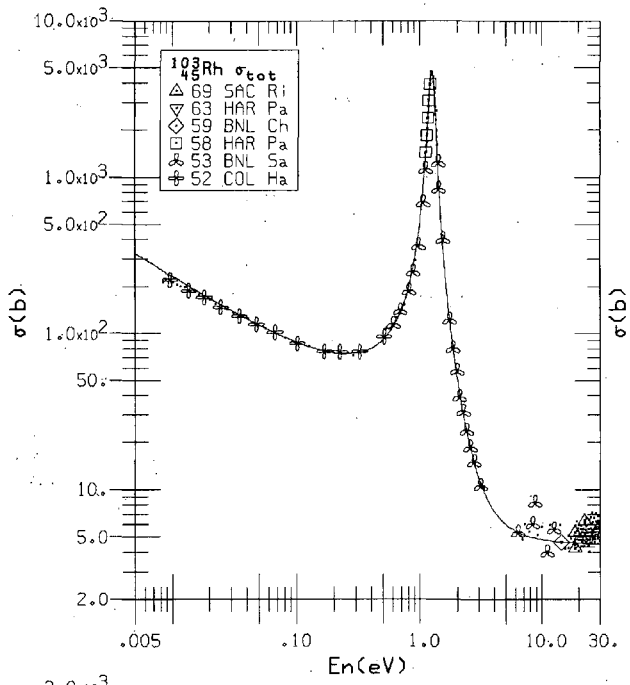

$_{44}$Ru σ_{tot}
65 DKE Ta
53 COL Me
σ(b)
En(eV)

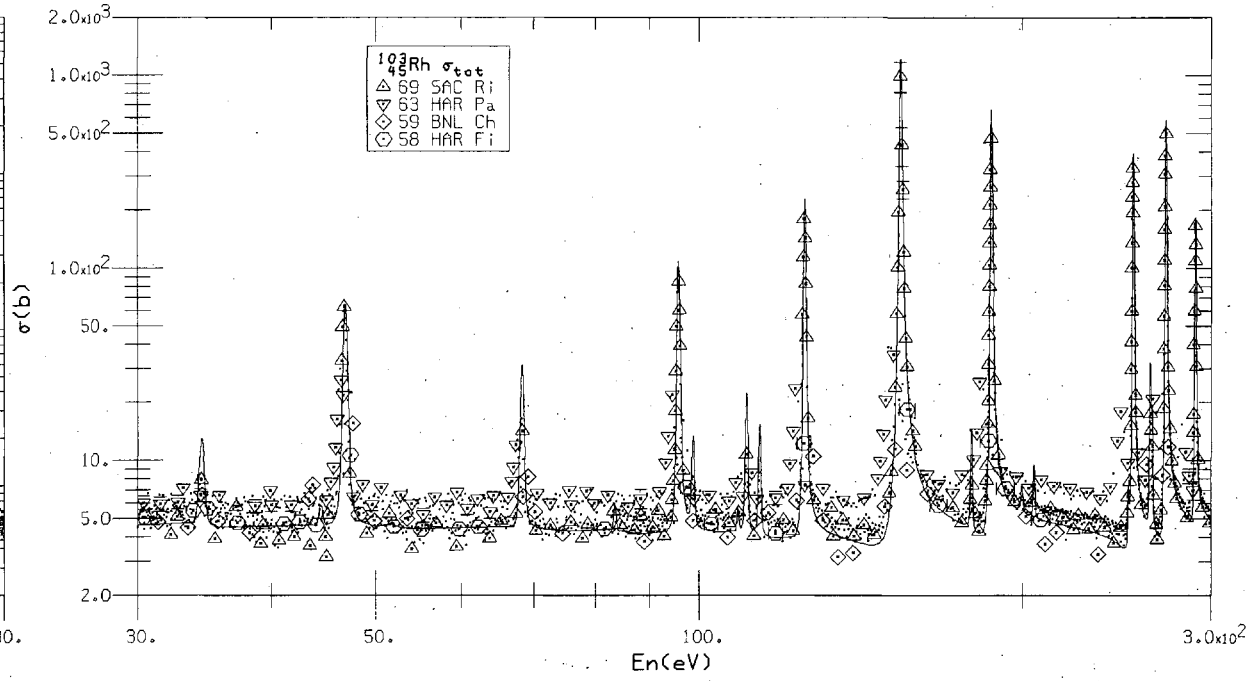

$_{44}$Ru σ_{tot}
71 BNW Fo
σ(b)
En(MeV)

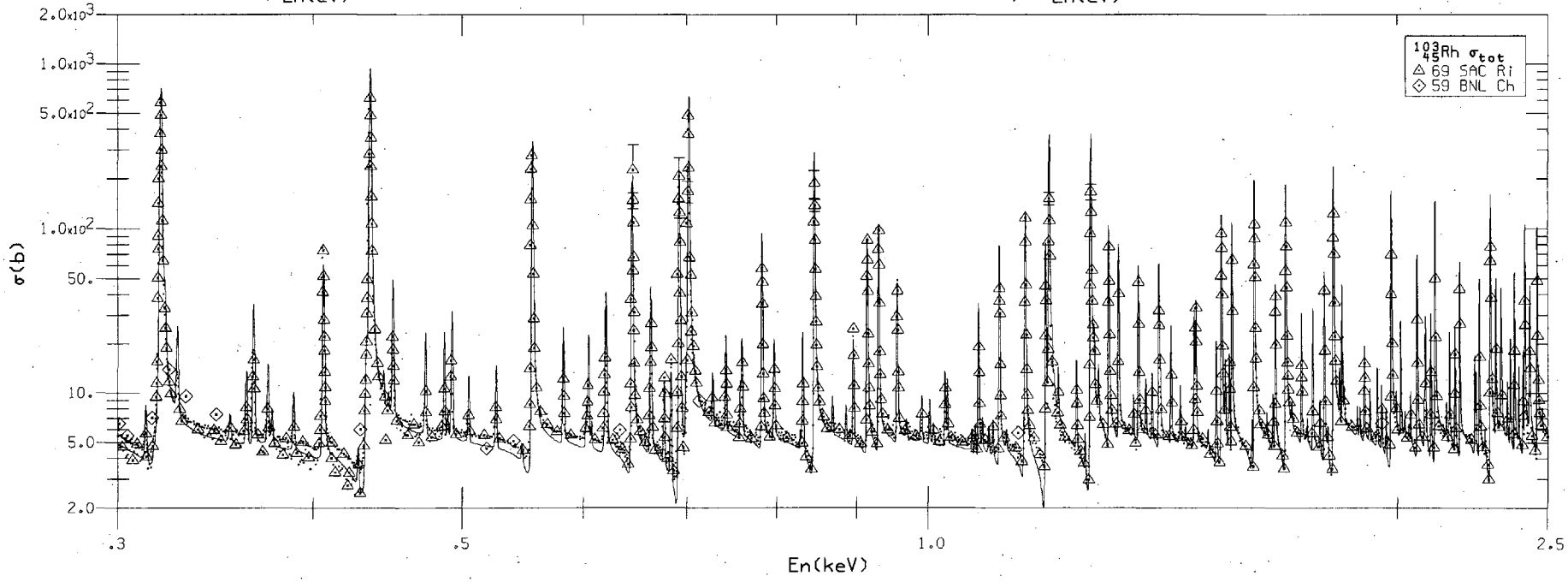

$_{44}$Ru $\sigma_{n\gamma}$
61 ORL Bi
60 LAS Di
σ(b)
En(keV)


$^{104}_{44}$Ru $\sigma_{n\gamma}$
67 DEB Pe
66 MUA Ch
66 PPO Gr
59 ORL Ly
58 ALD Pe
57 ORL Ma
En(keV)

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{44}$Ru σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	242	2.273 MeV to 14.8 MeV	
65	OKE	Tabony	SETH,65	102	30.0 keV to .650 MeV	
53	COL	Melkonian,et.al.	PR,92,702,53	75	.0130 eV to 7.500 keV	
			$_{44}$Ru $\sigma_{n\gamma}$			
61	ORL	Block,et.al.	61SACLAY,,203,61	36	.245 keV to 8.700 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
			$^{96}_{44}$Ru $\sigma_{n\gamma}$			
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.140 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.321 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{96}_{44}$Ru σ_{n2n}			
74	AUB	Alford,et.al.	BAP,19,1123(FB4),74	1	.666 b at 15.1 MeV	^{27}Al $\sigma_{n\alpha}$
70	ABD	Temperley,et.al.	BRL-1491,70	1	.600 b at 14.1 MeV	^{56}Fe σ_{np}
70	GIT	Lu,et.al.	PR/C,1,350,70	1	.569 b at 14.4 MeV	
66	IRK	Rieder,et.al.	APA,23,42,66	1	.860 b at 14.7 MeV	
66	PPO	Gray,et.al.	NP,75,215,66	1	2.600 b at 14.7 MeV	^{63}Cu σ_{n2n}
61	ANL	Rayburn	PR,122,168,61	1	.634 b at 14.4 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.478 b at 14.5 MeV	abs
			$^{96}_{44}$Ru σ_{np}			
66	PPO	Gray,et.al.	NP,75,215,66	1	.170 b at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{98}_{44}$Ru σ_{n2n}			
70	ABD	Temperley,et.al.	BRL-1491,70	1	.970 b at 14.1 MeV	^{56}Fe σ_{np}
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.169 b at 14.4 MeV	
			$^{99}_{44}$Ru σ_{np}			
66	PPO	Gray,et.al.	NP,75,215,66	1	20.0 mb at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{100}_{44}$Ru σ_{np}			
66	MUA	Prasad,et.al.	NP,85,476,66	1	15.0 mb at 14.8 MeV	^{56}Fe σ_{np}
			$^{101}_{44}$Ru σ_{np}			
66	PPO	Gray,et.al.	NP,75,215,66	1	36.0 mb at 14.7 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.990 mb at 14.5 MeV	abs
			$^{102}_{44}$Ru $\sigma_{n\gamma}$			
69	JAE	Ishikawa	NST,6,587,69	1	1.370 b at thermal	^{96}Ru $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.190 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.386 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{102}_{44}$Ru σ_{np}			
66	MUA	Prasad,et.al.	NP,85,476,66	1	2.000 mb at 14.8 MeV	^{56}Fe σ_{np}
			$^{102}_{44}$Ru $\sigma_{n\alpha}$			
70	ABD	Temperley,et.al.	BRL-1491,70	1	3.400 mb at 14.1 MeV	^{56}Fe σ_{np}
			$^{104}_{44}$Ru $\sigma_{n\gamma}$			
67	DEB	Peto,et.al.	JNE,21,797,67	1	19.8 mb at 3.000 MeV	^{31}P σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	80.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
66	PPO	Gray,et.al.	NP,75,215,66	1	2.500 mb at 14.7 MeV	^{63}Cu σ_{n2n}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	28.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	13.6 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.211 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{104}_{44}$Ru σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.440 b at 14.4 MeV	
66	PPO	Gray,et.al.	NP,75,215,66	1	2.500 b at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{104}_{44}$Ru σ_{np}			
66	PPO	Gray,et.al.	NP,75,215,66	1	7.200 mb at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{104}_{44}$Ru $\sigma_{n\alpha}$			
66	PPO	Gray,et.al.	NP,75,215,66	1	2.600 mb at 14.7 MeV	^{63}Cu σ_{n2n}


$^{103}_{45}$Rh σ_{tot}
69 SAC Ri
63 HAR Pa
59 BNL Ch
58 HAR Pa
53 BNL Sa
52 COL Ha
σ(b)
En(eV)


$^{103}_{45}$Rh σ_{tot}
69 SAC Ri
63 HAR Pa
59 BNL Ch
58 HAR Fi
σ(b)
En(eV)

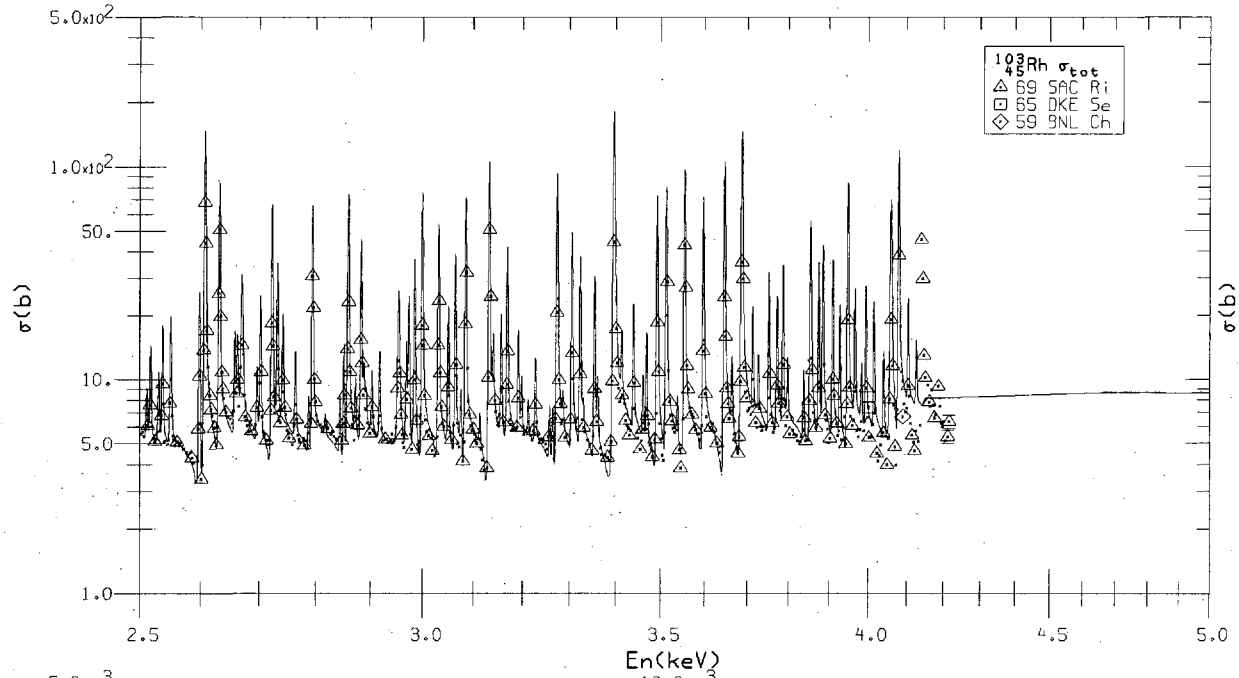

$^{103}_{45}$Rh σ_{tot}
69 SAC Ri
59 BNL Ch
σ(b)
En(keV)

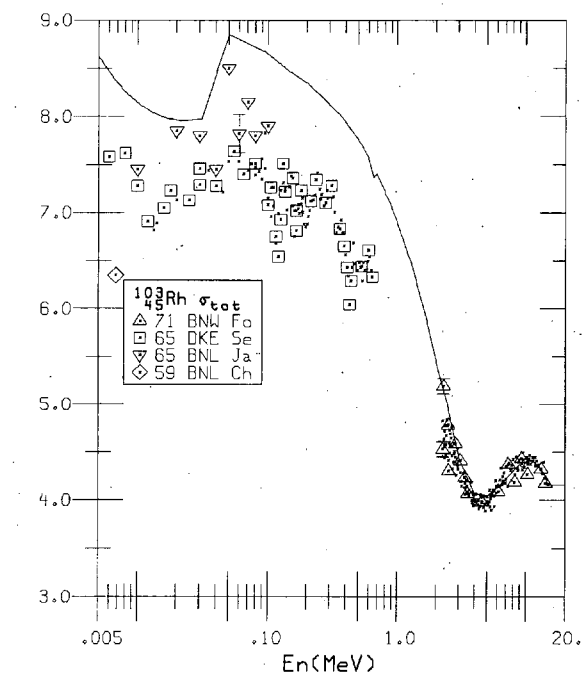
$^{103}_{45}$Rh

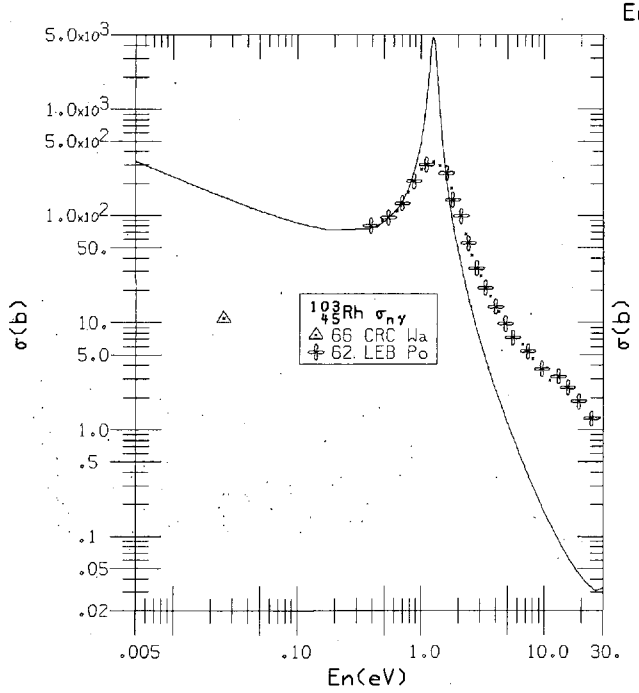
σ_{tot}

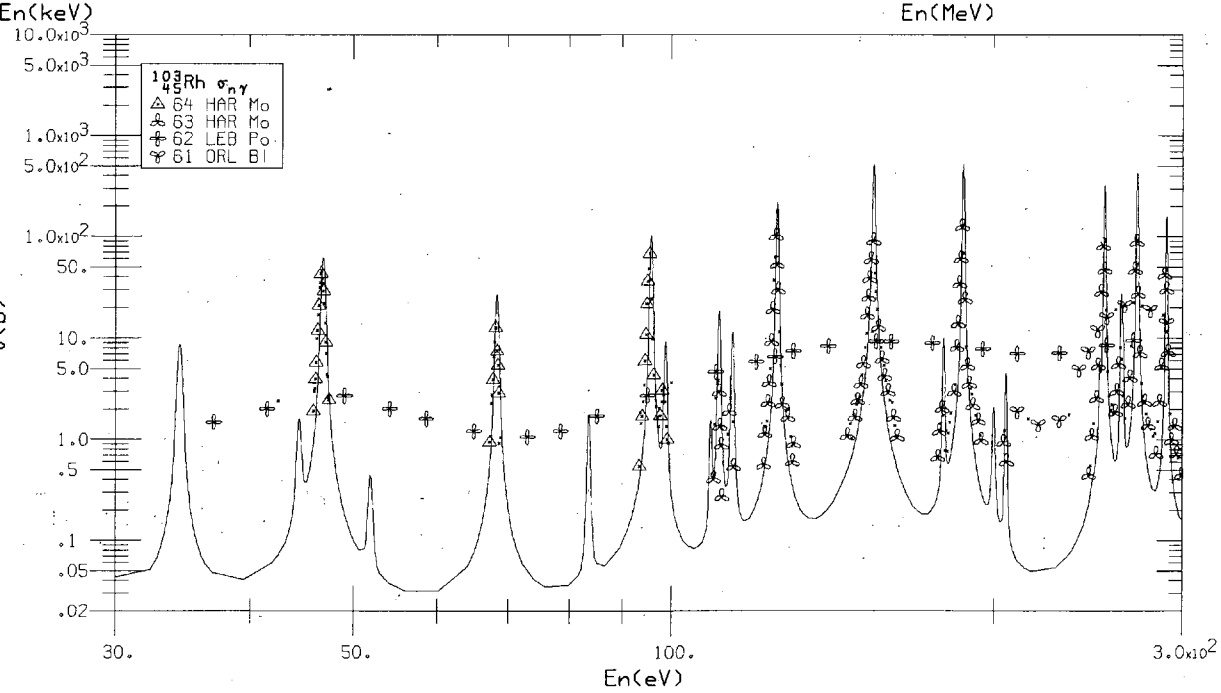
$\sigma_{n\gamma}$

[1125]

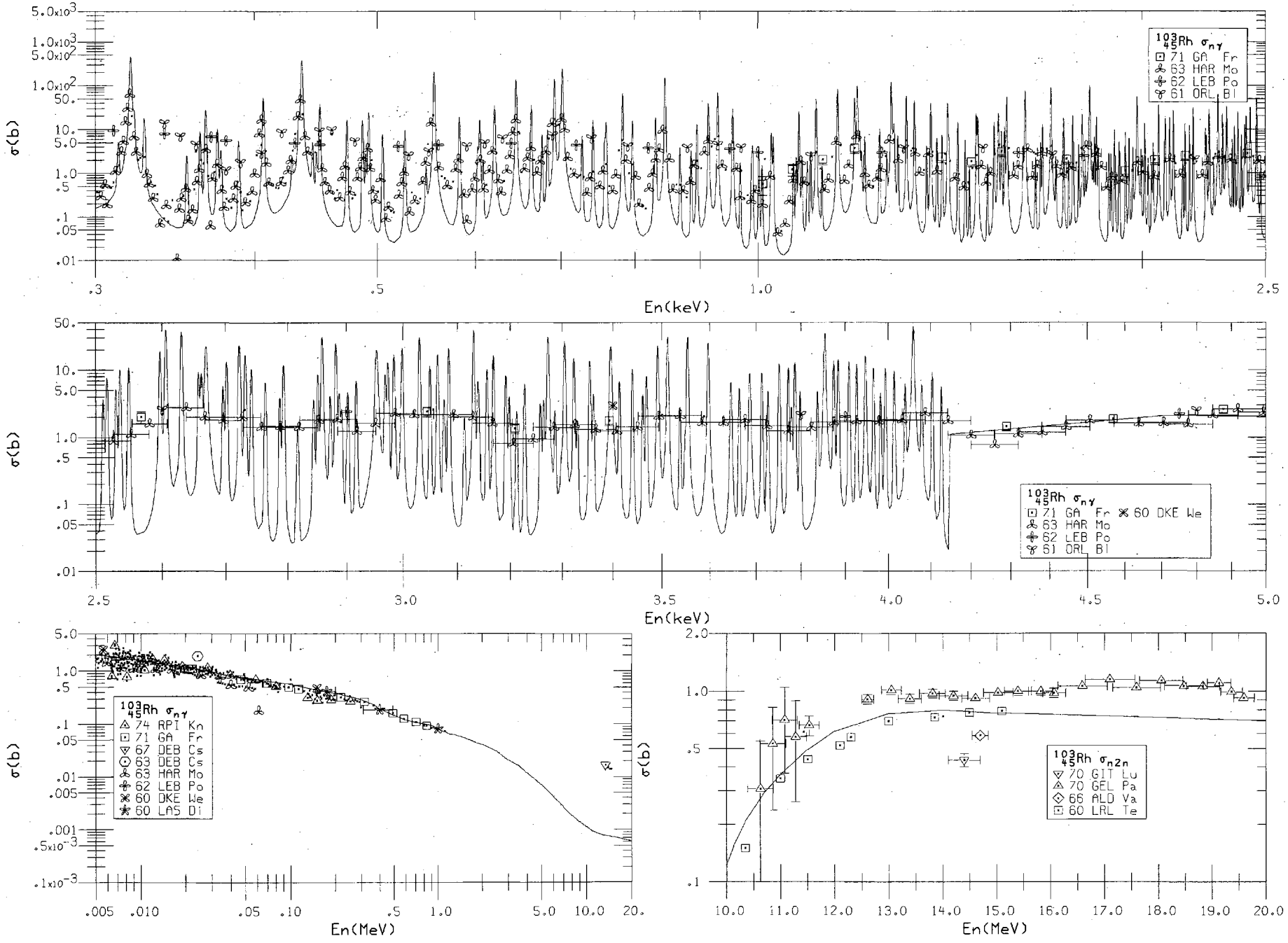






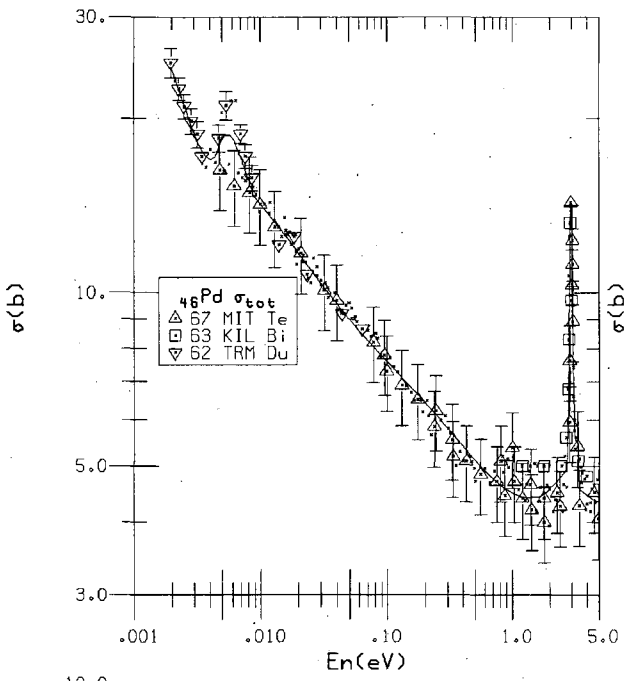


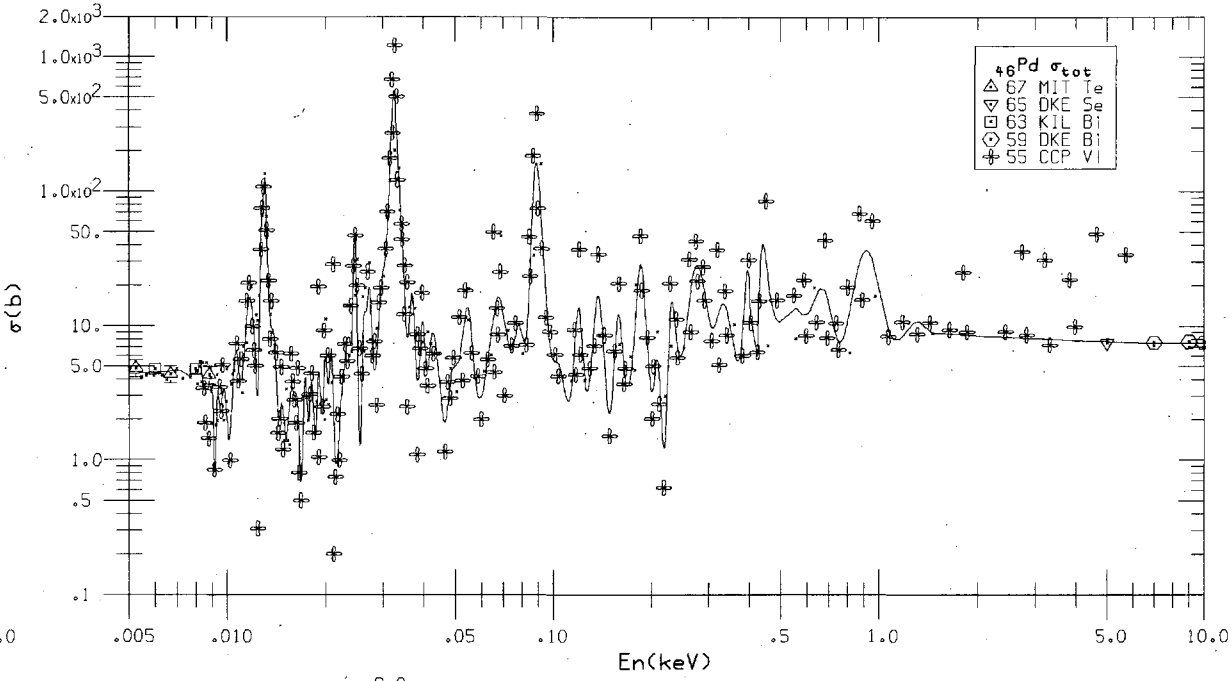
$^{103}_{45}$Rh
$\sigma_{n\gamma}$
σ_{n2n}
[1125]

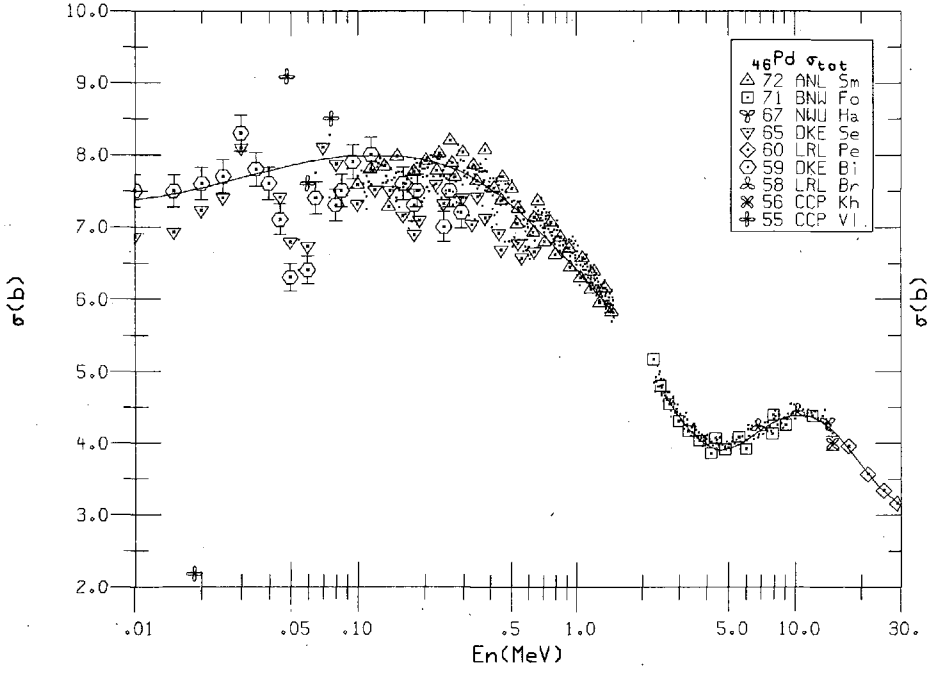


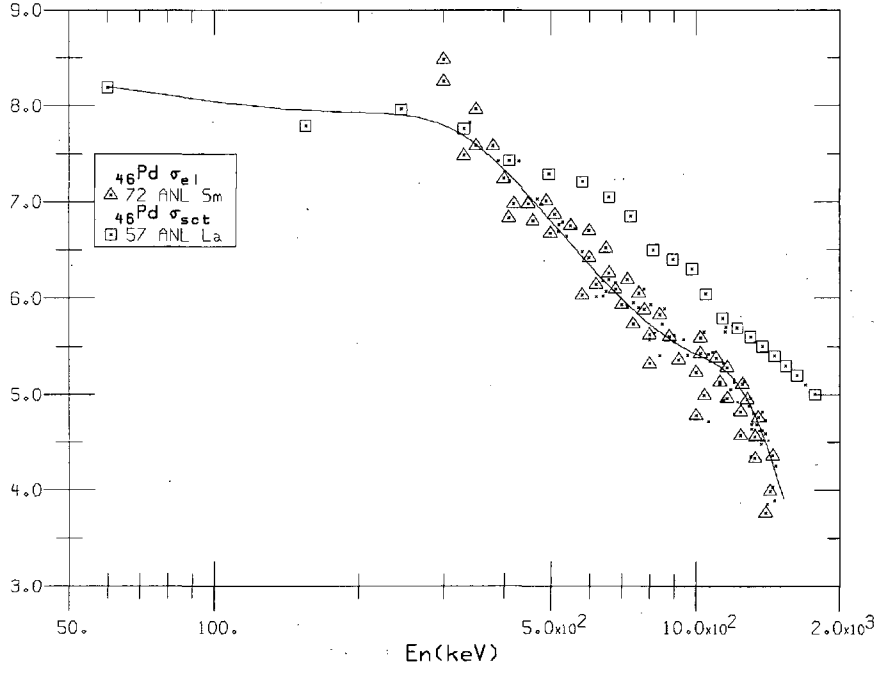
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{103}_{45}$Rh σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	242	2.258 MeV to 14.9 MeV	
69	SAC	Ribon	RIBON,69	8663	18.7 eV to 4.216 keV	abs
65	DKE	Seth	PL,16,306,65	122	4.000 keV to .640 MeV	abs
65	BNL	Jain,et.al.	PR/B,137,83,65	10	10.0 keV to .100 MeV	abs
65	SAC	Ribon	EANDC(E)-57,121,65	3	.190 keV to .233 keV	
63	HAR	Pattenden,et.al.	AERE-R-4131,63	634	23.1 eV to .296 keV	abs
59	BNL	Chrien	CHRIEN,59	157	14.5 eV to 13.3 keV	abs
58	HAR	Firk	FIRK,58	95	29.5 eV to .291 keV	abs
58	HAR	Pattenden,et.al.	AERE-NP/M-87,58	32	1.119 eV to 1.378 eV	
53	BNL	Sailor	PR,91,53,53	45	.610 eV to 47.5 eV	
52	COL	Havens Jr	HAVENS,52	33	.0085 eV to .585 eV	
			$^{103}_{45}$Rh σ_{el}			
67	KFK	Poenitz	67KARLSR,,9,67	1	4.100 b at .150 eV	
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	1.700 b at 6.040 MeV	C
			$^{103}_{45}$Rh $\sigma_{n\gamma}$			
74	RPI	Knox,et.al.	COO-3058-50,74	566	6.314 keV to .297 MeV	
71	GA	Fricke,et.al.	GULF-RT-A-10739,71	95	.958 keV to 1.108 MeV	^{10}B $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	13.8 mb at 14.7 MeV	^{27}Al σ_{np}
67	DEB	Csikai,et.al.	NP/A,95,229,67	7	13.4 MeV to 15.0 MeV	
67	ORL	Macklin,et.al.	PR,159,1007,67	4	70.0 keV to .182 MeV	Ta $\sigma_{n\gamma}$
66	CRC	Walker,et.al.	CJP,44,1985,66	1	11.0 b at thermal	In
64	HAR	Moxon	MOXON,64	69	45.9 eV to 99.3 eV	
63	DEB	Csikai,et.al.	NP,41,316,63	2	24.0 keV to 14.7 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	1	.850 b at 30.0 keV	In $\sigma_{n\gamma}$
63	HAR	Moxon,et.al.	NIM,24,445,63	683	.110 keV to 61.2 keV	
62	LEB	Popov,et.al.	ZET,42,988,62	96	.390 eV to 34.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	1	.540 b at 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	57	.210 keV to 8.600 keV	
60	DKE	Weston,et.al.	AP,10,477,60	15	3.400 keV to .250 MeV	^{103}Rh $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
			$^{103}_{45}$Rh σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	.435 b at 14.4 MeV	^{56}Fe σ_{np}
70	GEL	Paulsen,et.al.	ZP,238,23,70	26	10.6 MeV to 19.6 MeV	abs
66	ALD	Vallis	AWRE-O-76/66,66	1	.586 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
60	LRL	Tewes,et.al.	UCRL-6028-T,60	10	10.4 MeV to 15.1 MeV	H
			$^{103}_{45}$Rh σ_{np}			
57	GLS	Brown,et.al.	PM,2,785,57	1	11.0 mb at 13.2 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{103}_{45}$Rh σ_{n2p}			
66	PPO	Gray,et.al.	NP,75,215,66	1	3.000 muB at 14.7 MeV	^{63}Cu σ_{n2n}
			$^{103}_{45}$Rh σ_{pem}			
57	GLS	Brown,et.al.	PM,2,785,57	1	25.0 mb at 13.2 MeV	
			$^{103}_{45}$Rh σ_{nt}			
73	KOS	Biro,et.al.	73KIEV,3,85,73	1	.730 mb at 14.7 MeV	^{197}Au σ_{n2n}
			$^{103}_{45}$Rh σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	16.0 muB at 14.0 MeV	
68	ARK	Husain,et.al.	JIN,30,3145,68	1	2.000 muB at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
66	PPO	Gray,et.al.	NP,75,215,66	1	.400 muB at 14.7 MeV	^{63}Cu σ_{n2n}
65	IRK	Frevert	APA,20,304,65	1	19.0 muB at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	90.0 muB at 14.5 MeV	^{27}Al σ_{np}
60	ARK	Kumabe,et.al.	PR,117,1568,60	1	2.500 mb at 14.8 MeV	^{103}Rh σ_{np}
			$^{103}_{45}$Rh $\sigma_{n\alpha}$			
66	MUA	Prasad,et.al.	NP,85,476,66	1	80.0 mb at 14.8 MeV	^{56}Fe σ_{np}
63	DEB	Csikai,et.al.	NP,41,316,63	1	11.2 mb at 14.7 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	63.0 mb at 14.5 MeV	abs
			$^{105}_{45}$Rh $\sigma_{n\gamma}$			
62	ANL	Cuninghame,et.al	JIN,24,1009,62	1	18.0 kb at thermal	


$_{46}$Pd σ_{tot}
67 MIT Te
63 KIL Bi
62 TRM Du
σ(b)
En(eV)


$_{46}$Pd σ_{tot}
67 MIT Te
65 DKE Se
63 KIL Bi
59 DKE Bi
55 CCP Vi
σ(b)
En(keV)


$_{46}$Pd σ_{tot}
72 ANL Sm
71 BNW Fo
67 NWU Ha
65 DKE Se
60 LRL Pe
59 DKE Bi
58 LRL Br
56 CCP Kh
55 CCP Vi
σ(b)
En(MeV)

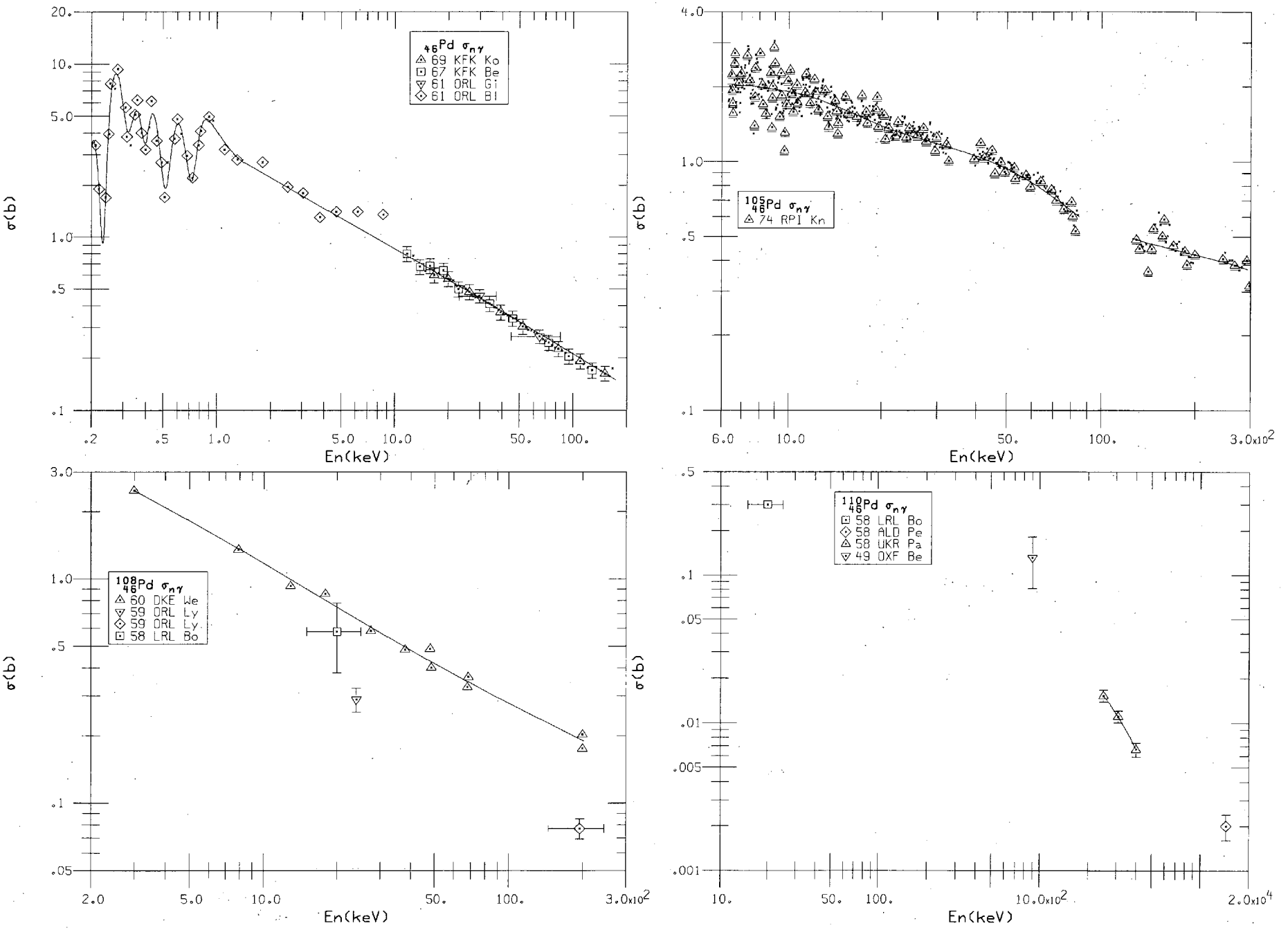

$_{46}$Pd σ_{el}
72 ANL Sm
$_{46}$Pd σ_{sct}
57 ANL La
σ(b)
En(keV)

$_{46}Pd$ $\sigma_{n\gamma}$

$^{105}_{46}Pd$ $\sigma_{n\gamma}$

$^{108}_{46}Pd$ $\sigma_{n\gamma}$

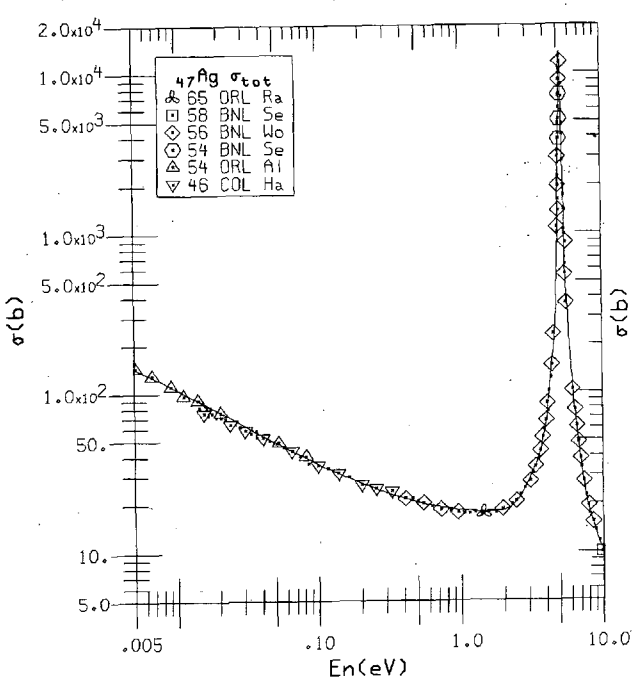
$^{110}_{46}Pd$ $\sigma_{n\gamma}$

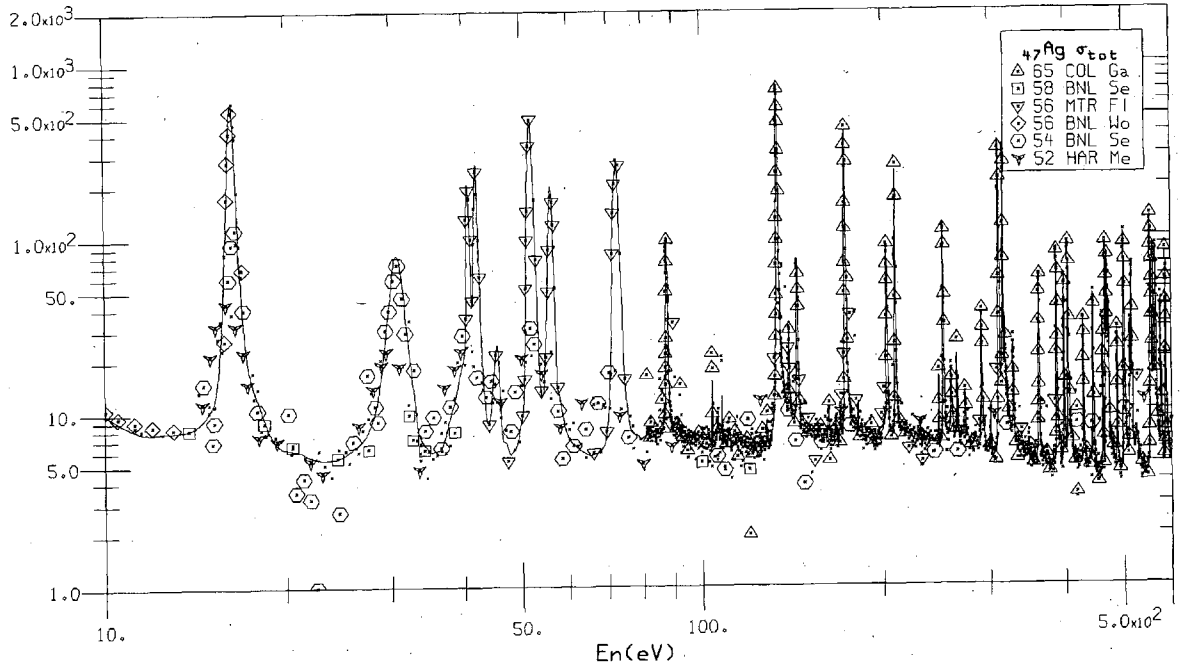


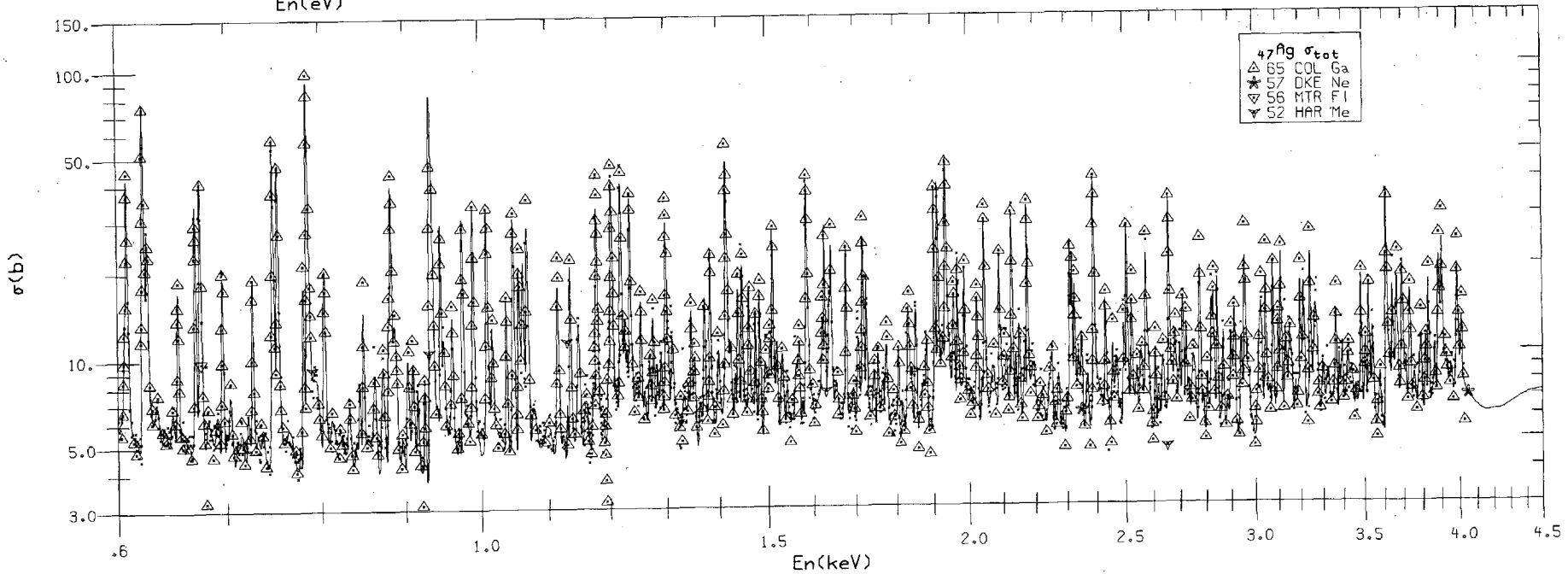
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{46}$Pd σ_{tot}			
72	ANL	Smith,et.al.	NSE,49,389,72	670	.100 MeV to 1.497 MeV	abs
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	252	2.265 MeV to 14.9 MeV	
67	MIT	Teich,et.al.	NSE,30,145,67	177	.0049 eV to 9.300 eV	
67	NWU	Haugsnes	HAUGSNES,67	1	4.290 b at 14.1 MeV	
65	DKE	Seth	PL,16,306,65	95	5.000 keV to .640 MeV	
63	KIL	Biel,et.al.	63KRLSRH,,112,63	25	1.200 eV to 10.0 eV	abs
62	TRM	Duggal,et.al.	62MADRAS,,369,62	47	.0020 eV to .0635 eV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.9 MeV	abs
59	DKE	Bilpuch	BILPUCH,59	61	5.000 keV to .295 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	6	6.830 MeV to 14.5 MeV	abs
56	ANL	Haugsnes	BAP,1,187(K2),56	1	4.320 b at 14.00 MeV	
56	CCP	Khaletskii	DOK,113,305,56	1	4.000 b at 14.8 MeV	
55	CCP	Vladimirski+	55GENEVA,4,22,55	382	8.190 eV to 76.1 keV	
			$_{46}$Pd σ_{el}			
72	ANL	Smith,et.al.	NSE,49,389,72	121	.300 MeV to 1.470 MeV	C σ_{el}
			$_{46}$Pd σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	C
			$_{46}$Pd $\sigma_{n\gamma}$			
69	KFK	Kompe	NP/A,133,513,69	71	11.7 keV to .161 MeV	^{197}Au $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	71	11.7 keV to .161 MeV	^{197}Au $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	40	.200 keV to 8.600 keV	
			$^{102}_{46}$Pd σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	.707 b at 14.6 MeV	^{63}Cu σ_{n2n}
70	ABD	Temperley,et.al.	BRL-1491,70	1	.600 b at 14.1 MeV	^{56}Fe σ_{np}
70	GIT	Lu,et.al.	PR/C,1,350,70	1	.637 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{104}_{46}$Pd σ_{np}			
53	CRC	Paul,et.al.	CJP,31,267,53	1	.132 b at 14.5 MeV	abs
			$^{105}_{46}$Pd $\sigma_{n\gamma}$			
74	RPI	Knox,et.al.	COO-3058-50,74	562	6.314 keV to .297 MeV	
			$^{105}_{46}$Pd σ_{np}			
53	CRC	Paul,et.al.	CJP,31,267,53	1	.743 b at 14.5 MeV	abs

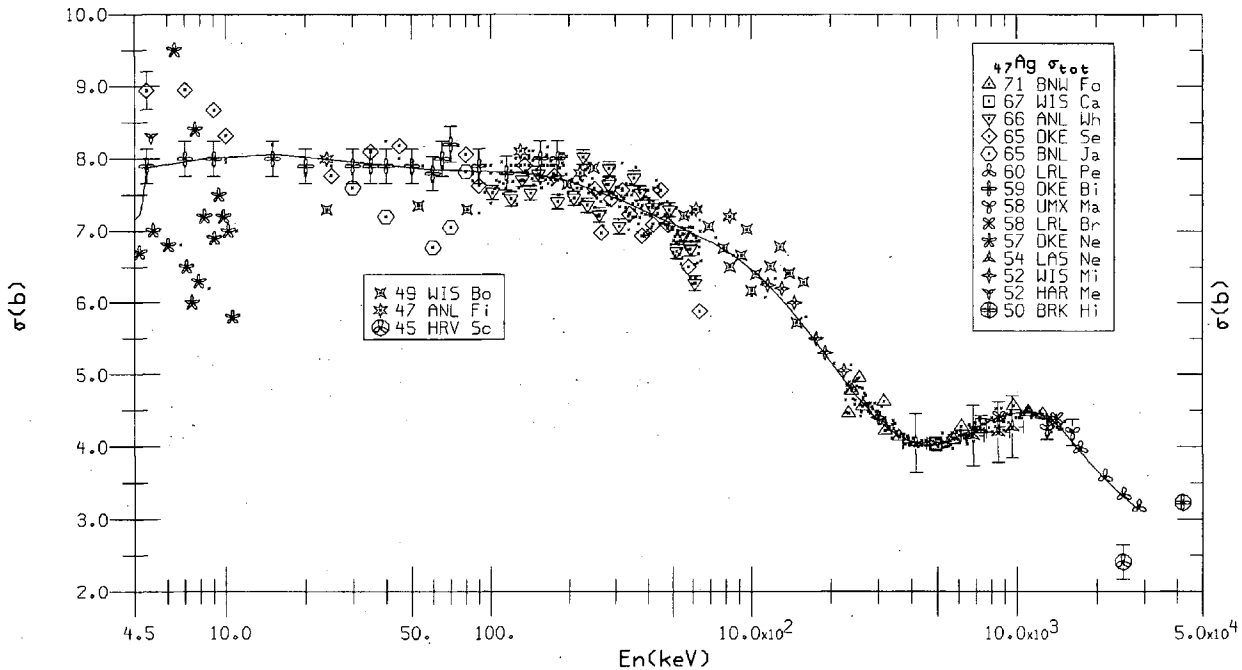
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{106}_{46}$Pd $\sigma_{n\alpha}$			
70	GIT	Wen-Deh Lu+	PR/C,1,358,70	1	5.600 mb at 14.4 MeV	
			$^{108}_{46}$Pd $\sigma_{n\gamma}$			
60	DKE	Weston,et.al.	AP,10,477,60	12	2.990 keV to .200 MeV	^{108}Pd $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.290 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	77.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.580 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{108}_{46}$Pd σ_{nnp}			
59	ALD	Barry,et.al.	PPS,74,632,59	1	4.000 mb at 14.5 MeV	
			$^{108}_{46}$Pd $\sigma_{n\alpha}$			
70	GIT	Wen-Deh Lu+	PR/C,1,358,70	1	2.700 mb at 14.4 MeV	
58	ORL	Blosser,et.al.	PR,110,531,58	1	2.300 mb at 14.1 MeV	^{56}Fe σ_{np}
			$^{110}_{46}$Pd $\sigma_{n\gamma}$			
58	LRL	Booth,et.al.	PR,112,226,58	1	.300 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	2.000 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	3	2.500 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	.131 b at .900 MeV	
			$^{110}_{46}$Pd σ_{n2n}			
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	2.570 b at 14.7 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.948 b at 14.5 MeV	abs
			$^{110}_{46}$Pd $\sigma_{n\alpha}$			
53	CRC	Paul,et.al.	CJP,31,267,53	1	13.8 mb at 14.5 MeV	abs

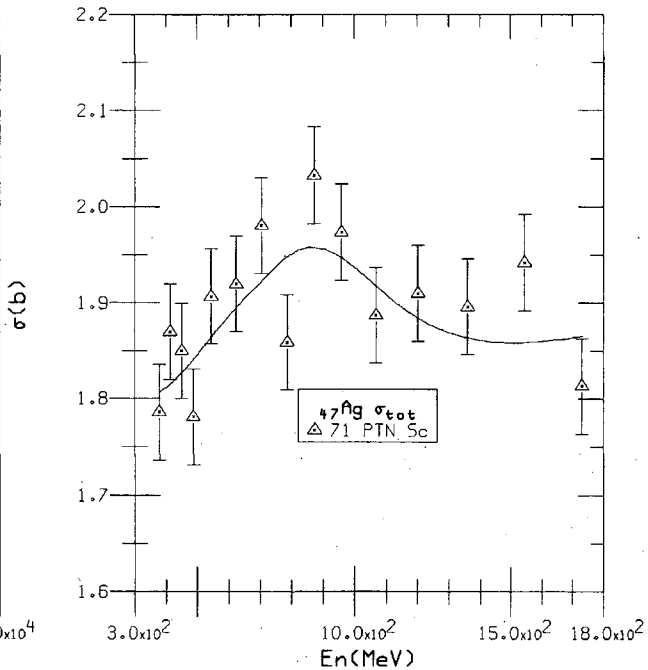
$_{47}$Ag
σ_{tot}

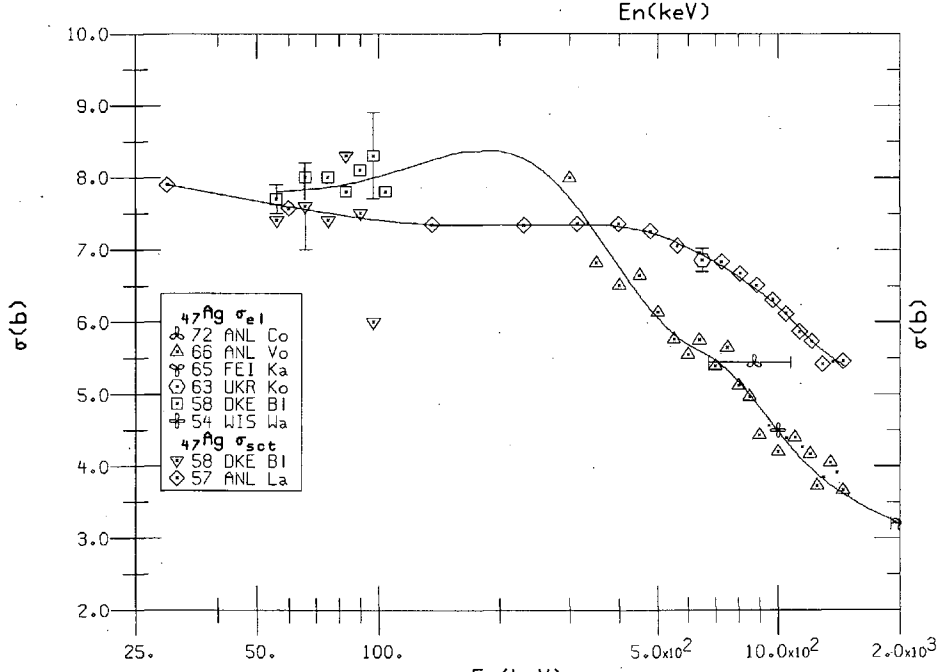


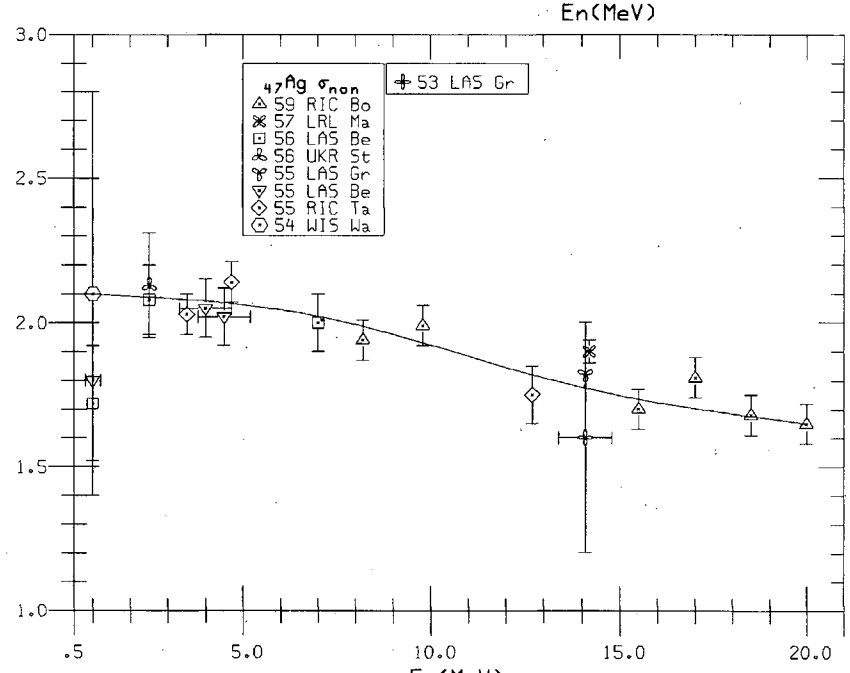




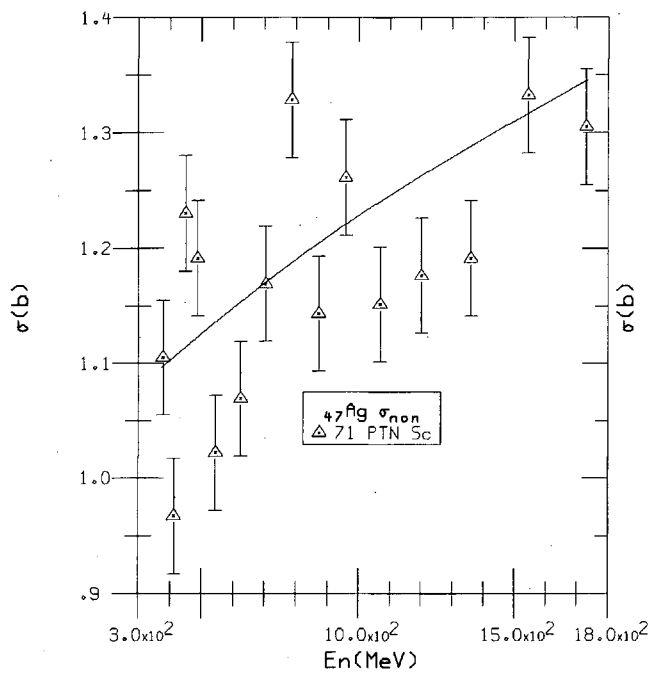

$_{47}$Ag σ_{tot}
71 BNW Fo
67 WIS Ca
66 ANL Wh
65 DKE Se
65 BNL Ja
60 LRL Pe
59 DKE Bi
58 UMX Ma
58 LRL Br
57 DKE Ne
54 LAS Ne
52 WIS Mi
52 HAR Me
50 BRK Hi
49 WIS Bo
47 ANL Fi
45 HRV Sc
σ(b)
En(keV)

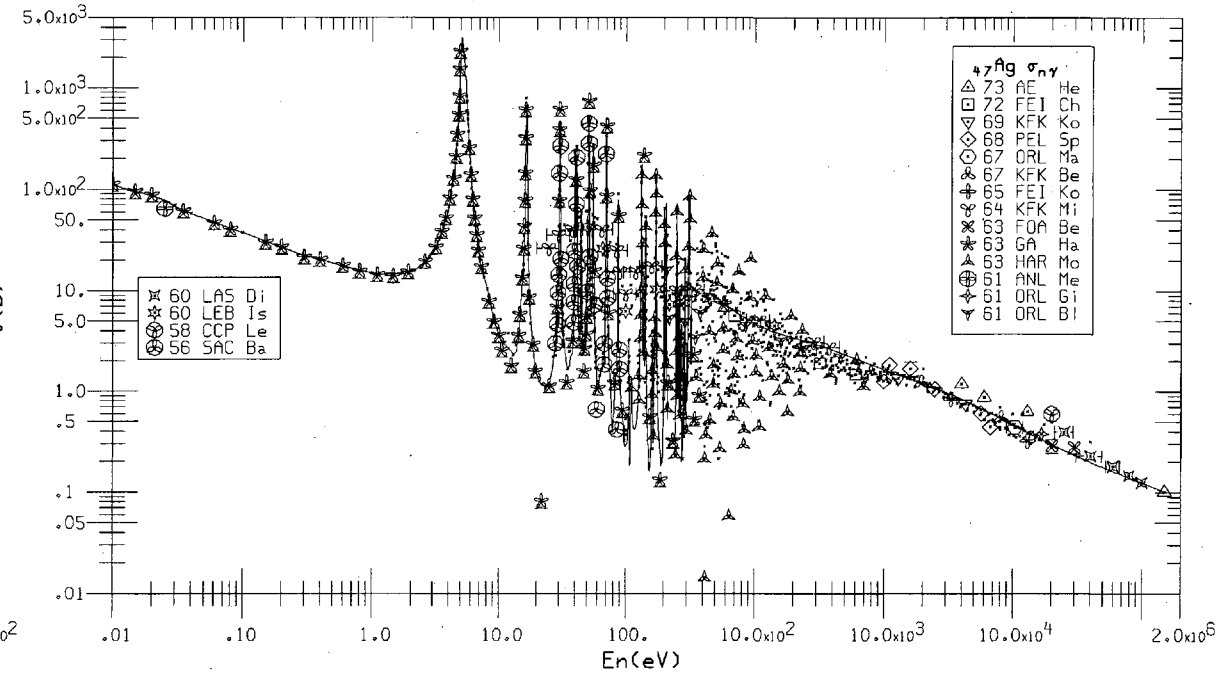

$_{47}$Ag σ_{tot}
71 PTN Sc
σ(b)
En(MeV)

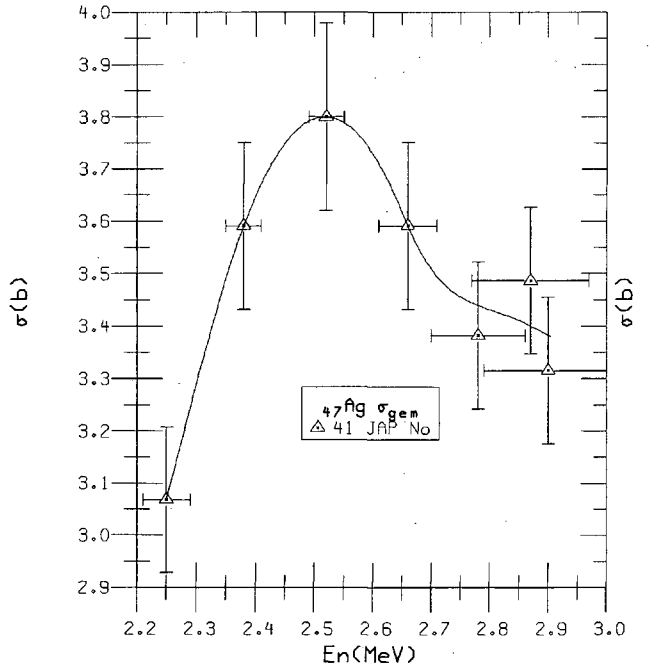

$_{47}$Ag σ_{el}
72 ANL Co
66 ANL Vo
65 FEI Ka
63 UKR Ko
58 DKE Bi
54 WIS Wa
$_{47}$Ag σ_{sct}
58 DKE Bi
57 ANL La
σ(b)
En(keV)

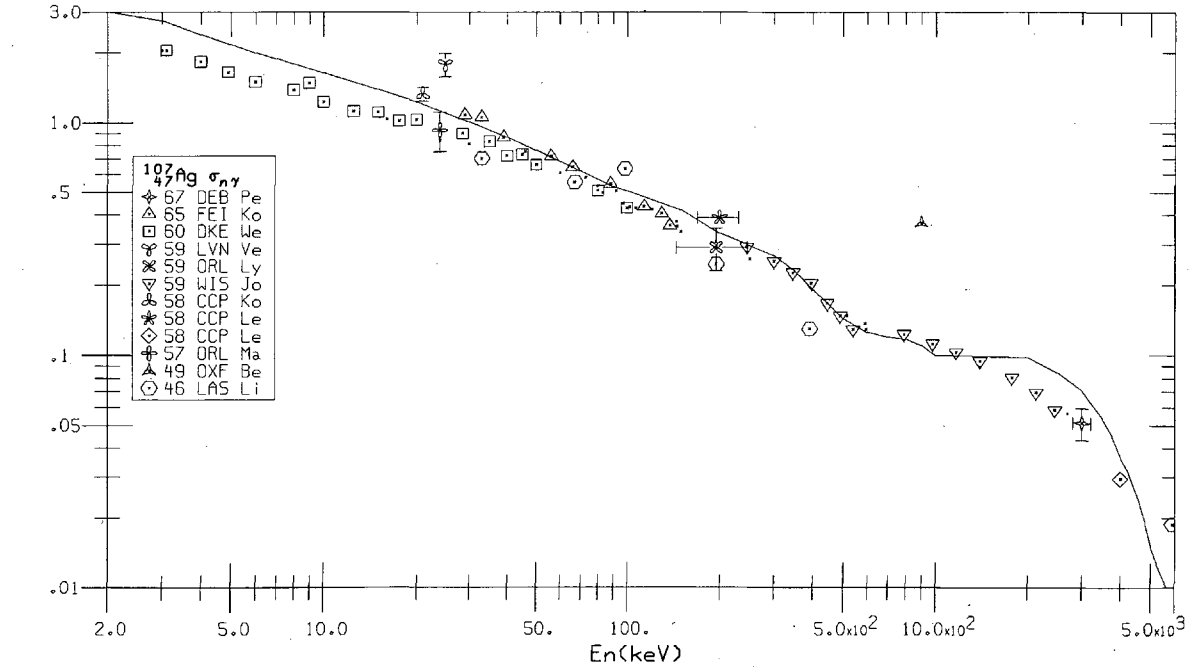

$_{47}$Ag σ_{non}
59 RIC Bo
57 LRL Ma
56 LAS Be
56 UKR St
55 LAS Gr
55 LAS Be
55 RIC Ta
54 WIS Wa
53 LAS Gr
En(MeV)

^{47}Ag
σ_{non}
$\sigma_{n\gamma}$
σ_{gem}
$^{107}_{47}$Ag
$\sigma_{n\gamma}$
[1138]









$^{107}_{47}Ag$

σ_{n3n}

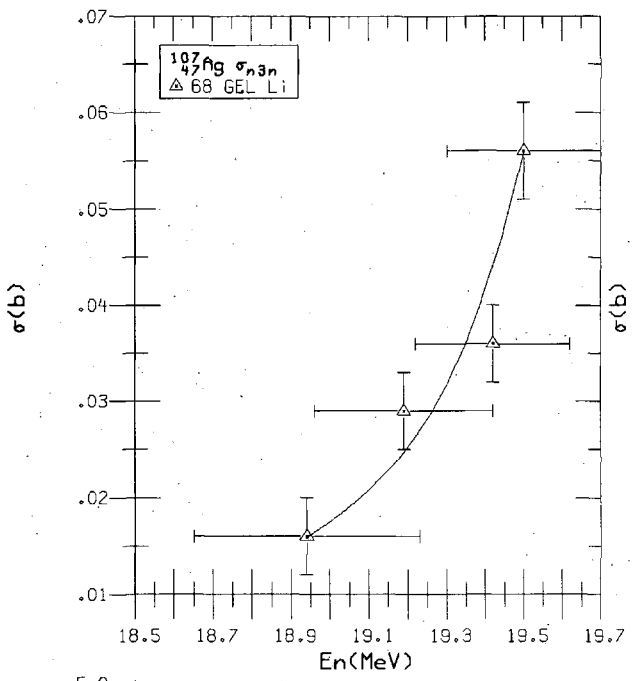
$^{109}_{47}Ag$

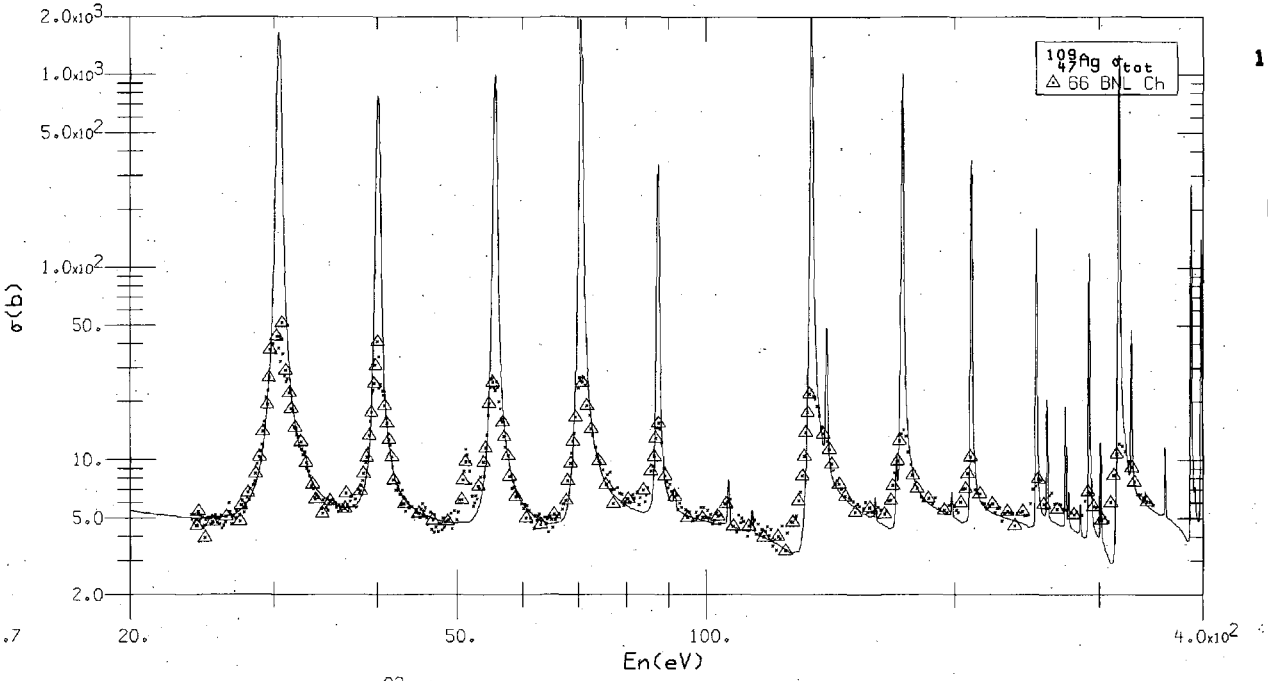
σ_{tot}

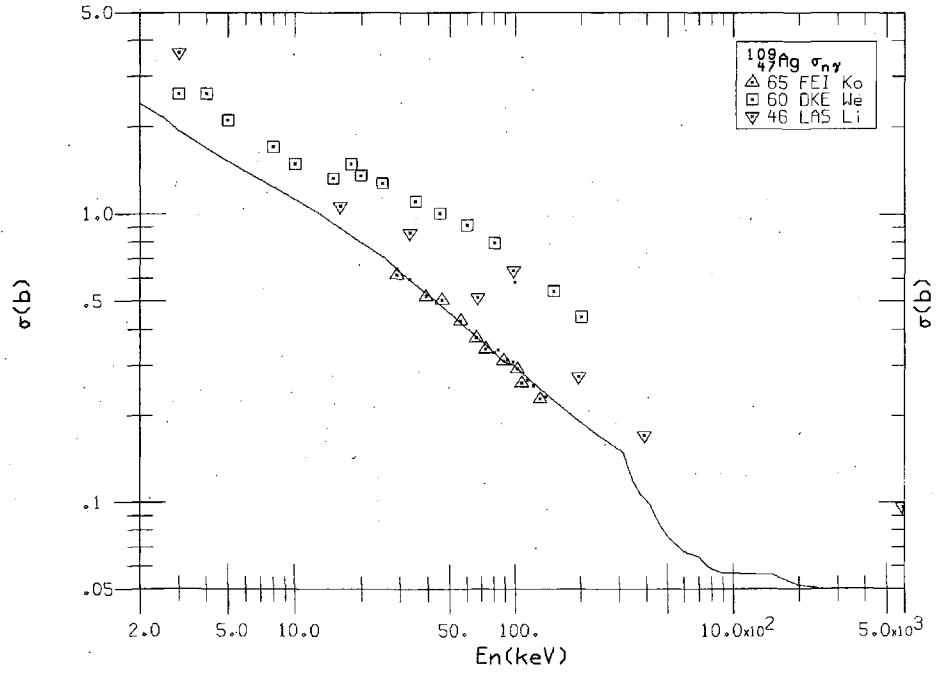
$\sigma_{n\gamma}$

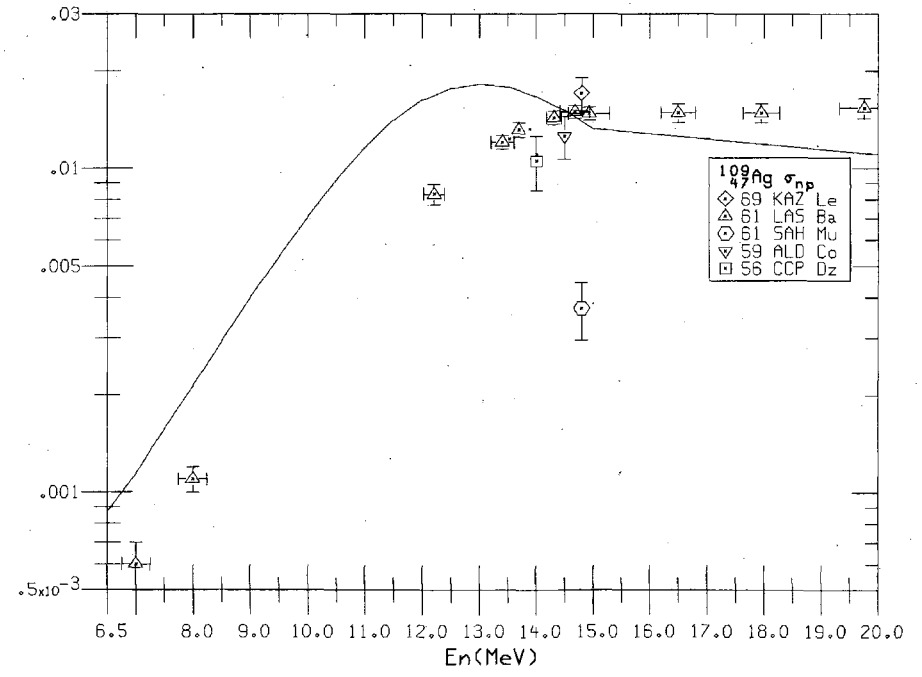
σ_{np}

[1139]









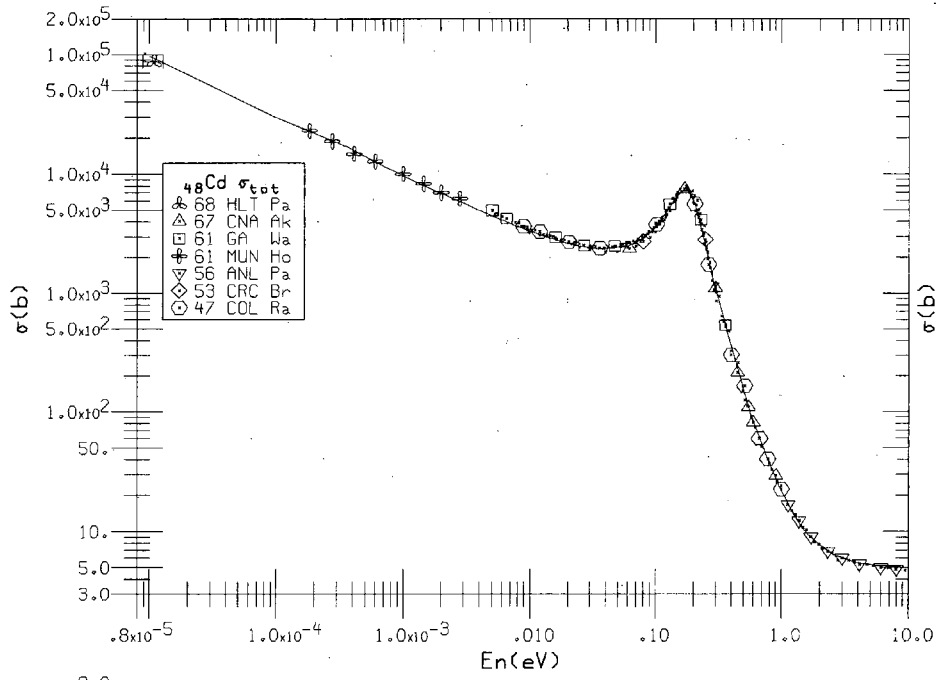
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{47}$Ag σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	245	2.256 MeV to 14.8 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	68	4.531 MeV to 7.889 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	266	.102 MeV to .649 MeV	abs
65	ORL	Rayburn,et.al.	NP,61,381,65	1	17.5 b at 1.440 eV	
65	DKE	Seth	PL,16,306,65	95	5.000 keV to .640 MeV	abs
65	BNL	Jain,et.al.	PR/B,137,83,65	10	10.0 keV to .100 MeV	
65	COL	Garg,et.al.	PR/B,137,547,65	5965	81.1 eV to 4.028 keV	
62	NRL	Malmberg,et.al.	PR,128,351,62	1	4.330 b at 6.700 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.4 MeV to 28.8 MeV	abs
59	DKE	Bilpuch	BILPUCH,59	39	5.000 keV to .195 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	10	13.0 MeV to 16.2 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	35	9.830 eV to .127 keV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	6.830 MeV to 14.1 MeV	
57	DKE	Newson,et.al.	PR,105,198,57	21	2.350 keV to 11.0 keV	
56	MTR	Fluharty,et.al.	PR,103,1778,56	123	40.2 eV to .675 keV	
56	BNL	Wood	PR,104,1425,56	97	.410 eV to 16.9 eV	
54	LAS	Nereson,et.al.	PR,94,1678,54	29	2.750 MeV to 13.1 MeV	abs
54	BNL	Seidl,et.al.	PR,95,476,54	154	5.078 eV to .500 keV	
54	ORL	Allen,et.al.	PR,96,1297,54	20	.0051 eV to .0818 eV	
52	WIS	Miller,et.al.	PR,88,83,52	14	1.000 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.340 b at 14.1 MeV	
52	HAR	Merrison,et.al.	PRS/A,215,278,52	85	14.5 eV to 5.200 keV	
50	BRK	Hildebrand+	PR,80,842,50	1	3.229 b at 42.0 MeV	
49	WIS	Bockelman,et.al.	PR,76,277,49	35	24.0 keV to 1.570 MeV	
47	COL	Rainwater	PR,71,65,47	38	34.0 eV to 15.0 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
46	COL	Havens,et.al.	PR,70,154,46	27	.0145 eV to .330 eV	
45	HRV	Scherr	PR,68,240,45	1	2.410 b at 25.0 MeV	abs
			$_{47}$Ag σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.445 b at .873 MeV	C σ_{el}
66	ANL	Vonach,et.al.	NP,78,389,66	24	.300 MeV to 1.450 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	3.200 b at 2.000 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	6.850 b at .650 MeV	
62	NRL	Malmberg,et.al.	PR,128,351,62	1	2.110 b at 6.700 MeV	
58	DKE	Block,et.al.	PR,109,1620,58	7	56.0 keV to .104 MeV	C
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.500 b at 1.000 MeV	
			$_{47}$Ag σ_{inl}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
			$_{47}$Ag σ_{sct}			
65	ORL	Rayburn,et.al.	NP,61,381,65	1	9.600 b at 1.440 eV	
58	DKE	Block,et.al.	PR,109,1620,58	7	56.0 keV to .104 MeV	C
57	ANL	Langsdorf Jr+	PR,107,1077,57	20	30.0 keV to 1.450 MeV	C

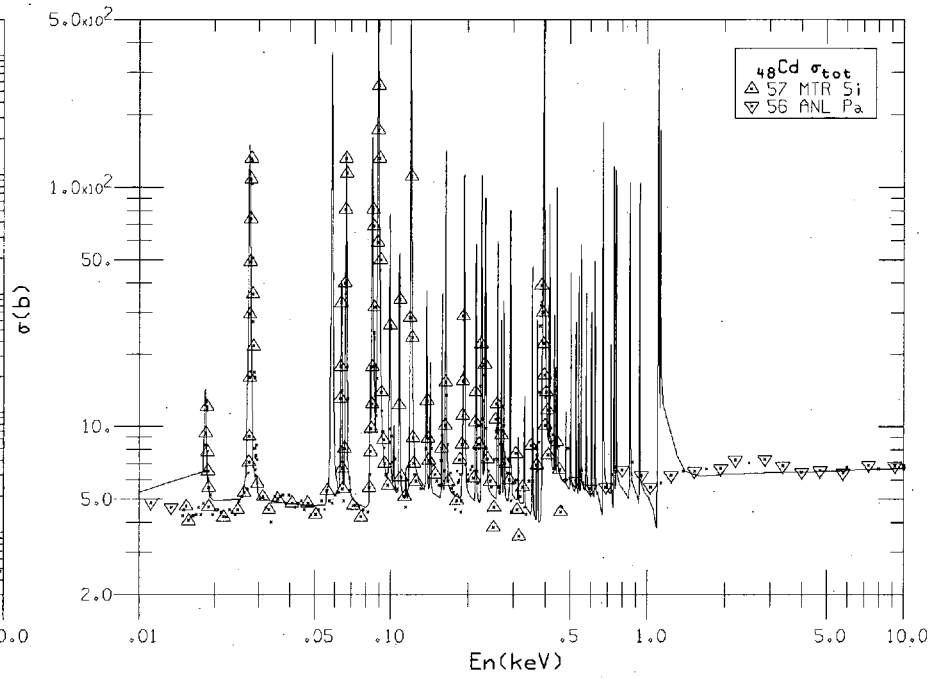
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{47}$Ag σ_{non}			
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	.340 b at .650 MeV	
59	RIC	Bonner,et.al.	PR,113,1088,59	6	8.200 MeV to 20.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.900 b at 14.2 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	3	1.000 MeV to 7.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	2.130 b at 2.500 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.820 b at 14.1 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.100 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	1.600 b at 14.1 MeV	abs
			$_{47}$Ag $\sigma_{n\gamma}$			
73	AE	Hellstroem	JNE,27,71,73	13	40.0 keV to 1.500 MeV	^{197}Au $\sigma_{n\gamma}$
72	FEI	Chelnokov,et.al.	YFI-13,6,72	26	.200 keV to 34.6 keV	Ag $\sigma_{n\gamma}$
69	KFK	Kompe	NP/A,133,513,69	65	12.9 keV to .152 MeV	^{197}Au $\sigma_{n\gamma}$
68	PEL	Spitz,et.al.	NP/A,121,655,68	47	9.900 keV to 94.0 keV	In $\sigma_{n\gamma}$
67	ORL	Macklin,et.al.	PR,159,1007,67	4	.104 MeV to .182 MeV	Ta $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	65	12.9 keV to .152 MeV	^{197}Au $\sigma_{n\gamma}$
65	FEI	Kononov,et.al.	AE,19,(5),457,65	18	29.0 keV to .138 MeV	
64	KFK	Mitzel,et.al.	NUK,6,371,64	54	25.0 eV to 20.0 keV	
63	FOA	Bergqvist	AF,23,425,63	8	18.0 keV to .300 MeV	Ag $\sigma_{n\gamma}$
63	GA	Haddad,et.al.	GA-3874,63	275	.0100 eV to 27.0 keV	
63	HAR	Moxon,et.al.	NIM,24,445,63	614	.106 keV to 12.5 keV	
61	ANL	Meadows,et.al.	NSE,9,132,61	1	64.8 b at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	42	.190 keV to 8.400 keV	
60	ORL	Schmitt,et.al.	NP,20,202,60	1	1.127 b at 24.0 keV	abs
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
60	LEB	Isakov,et.al.	ZET,38,989,60	37	37.0 eV to 9.800 keV	
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.590 b at .200 MeV	^{127}I $\sigma_{n\gamma}$
56	SAC	Ballini	NETTER,56	237	28.1 eV to 89.4 eV	B
			$_{47}$Ag σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
			$_{47}$Ag σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	1.670 b at 14.1 MeV	
			$_{47}$Ag σ_{np}			
61	HAR	Allan	NP,24,274,61	1	14.0 mb at 14.0 MeV	^{54}Fe σ_{np}
59	CIS	Colli,et.al.	NC,13,730,59	1	28.0 mb at 14.0 MeV	

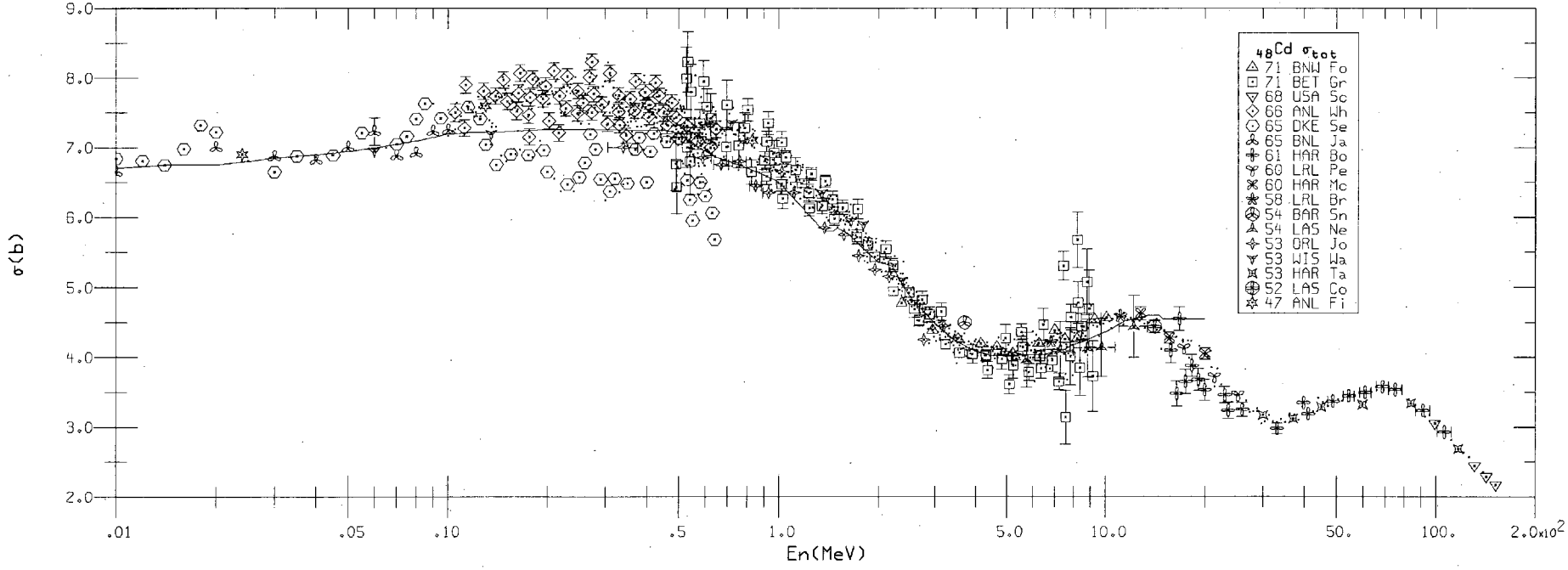
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{107}_{47}$Ag σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.340 b at 14.2 MeV	abs
			$^{107}_{47}$Ag $\sigma_{n\gamma}$			
67	DEB	Peto,et.al.	JNE,21,797,67	1	51.0 mb at 3.000 MeV	^{27}Al σ_{np}
65	MUA	Chaubey,et.al.	NP,66,267,65	1	.840 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
65	FEI	Kononov,et.al.	AE,19,(5),457,65	19	29.0 keV to .146 MeV	
60	DKE	Weston,et.al.	AP,10,477,60	22	3.100 keV to .250 MeV	^{107}Ag $\sigma_{n\gamma}$
59	LVN	Vervier	NP,9,569,59	1	1.788 b at 25.0 keV	^{115}In $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.290 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	20	.145 MeV to 2.450 MeV	^{107}Ag $\sigma_{n\gamma}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	1.330 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.930 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	.370 b at .900 MeV	
46	LAS	Linenberger+	LA-467,46	8	3.000 keV to 5.900 MeV	^{235}U σ_{nf}
			$^{107}_{47}$Ag σ_{n2n}			
68	TUR	Minetti,et.al.	NP/A,118,449,68	1	.152 b at 14.7 MeV	
67	BOS	Chatterjee,et.al	BARC-305,30,67	1	.530 b at 14.8 MeV	abs
67	BOS	Mitra	IJP,41,752,67	1	.601 b at 14.8 MeV	^{63}Cu σ_{n2n}
63	BOR	Carles	CR,257,659,63	1	.818 b at 14.1 MeV	^{63}Cu σ_{n2n}
62	HAM	Langmann	LANGMANN,62	1	.580 b at 14.1 MeV	
			$^{107}_{47}$Ag σ_{n3n}			
68	GEL	Liskien	NP/A,118,379,68	4	18.9 MeV to 19.5 MeV	^{65}Cu σ_{n2n}
			$^{109}_{47}$Ag σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.380 b at 14.2 MeV	abs
66	BNL	Chrien	PR,141,1129,66	648	23.7 eV to .348 keV	
52	COL	Rainwater	CU-100,3,52	24	41.0 eV to 66.0 eV	
			$^{109}_{47}$Ag $\sigma_{n\gamma}$			
65	FEI	Kononov,et.al.	AE,19,(5),457,65	18	29.0 keV to .138 MeV	
60	DKE	Weston,et.al.	AP,10,477,60	16	3.000 keV to .200 MeV	^{109}Ag $\sigma_{n\gamma}$
46	LAS	Linenberger+	LA-467,46	8	3.000 keV to 5.900 MeV	^{235}U σ_{nf}
			$^{109}_{47}$Ag σ_{n2n}			
62	HAM	Langmann	LANGMANN,62	1	1.080 b at 14.1 MeV	
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	.833 b at 14.8 MeV	
61	MUA	Khurana,et.al.	NP,28,560,61	1	.710 b at 14.8 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.311 b at 14.5 MeV	abs
52	LAS	Forbes	PR,88,1309,52	1	1.000 b at 14.1 MeV	

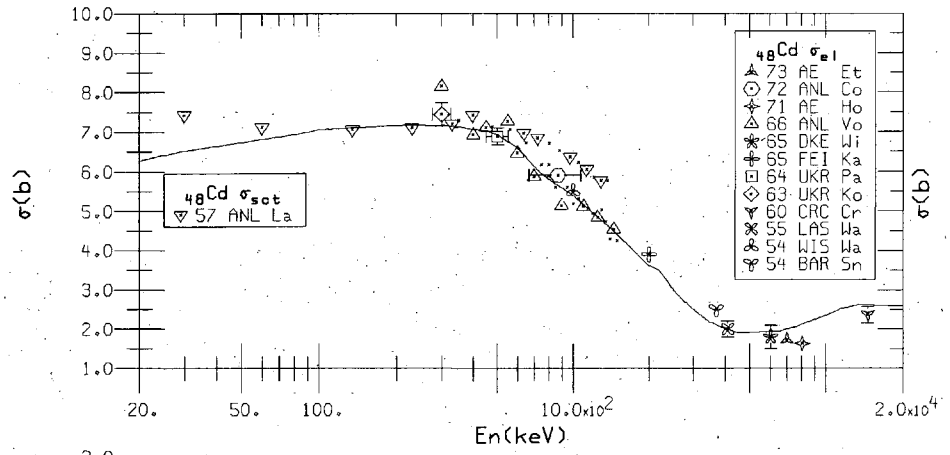
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{109}_{47}$Ag σ_{np}			
69	KAZ	Levkovskii+	YF,10,44,69	1	17.0 mb at 14.8 MeV	^{65}Cu σ_{n2n}
63	CCP	Levkovskii	ZET,45,305,63	1	11.0 mb at 14.0 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	15	7.000 MeV to 19.8 MeV	
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	3.700 mb at 14.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	12.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
56	CCP	Dzantiev,et.al.	DOK,113,537,56	1	10.5 mb at 14.0 MeV	^{63}Cu σ_{n2n}
			$^{109}_{47}$Ag σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	23.0 muB at 14.0 MeV	
			$^{109}_{47}$Ag $\sigma_{n\alpha}$			
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	12.0 mb at 14.8 MeV	
59	MUA	Khurana,et.al.	NP,13,88,59	1	38.0 mb at 14.0 MeV	^{56}Fe σ_{np}

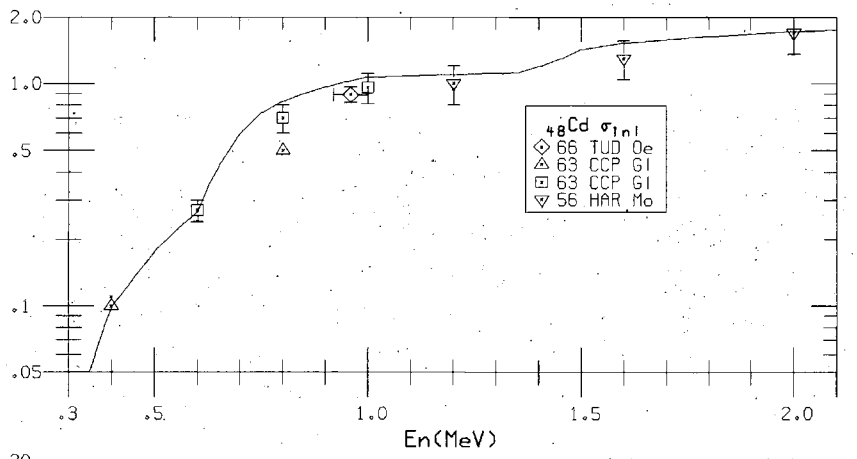
$_{48}$Cd
σ_{tot}
[1281]

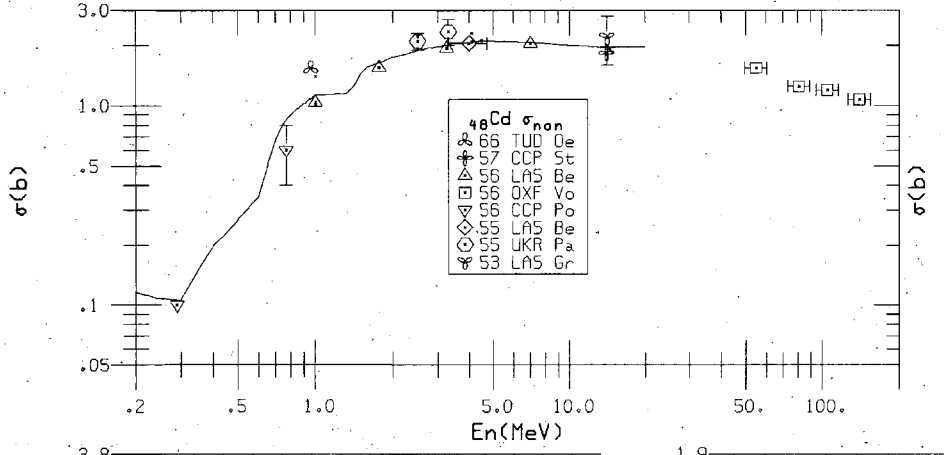


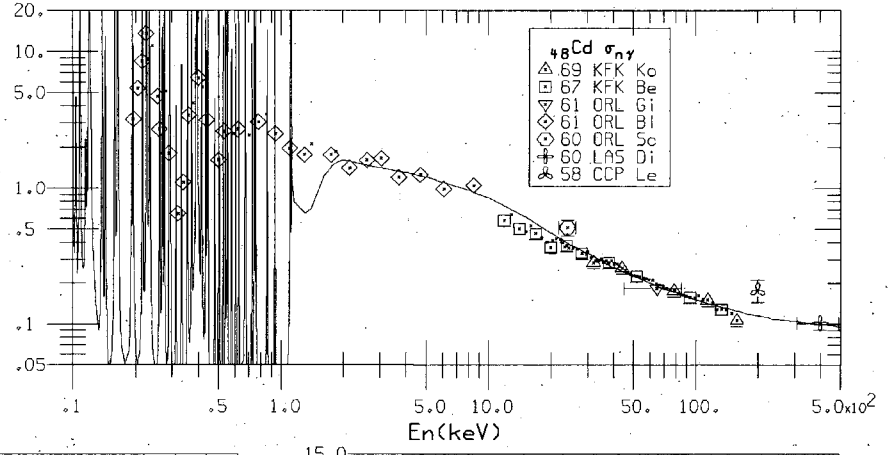


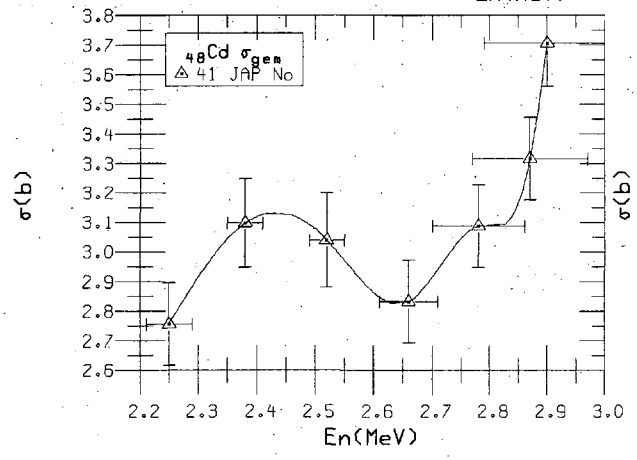


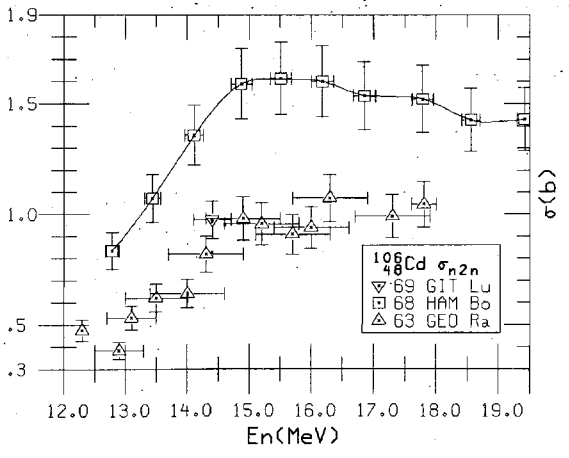


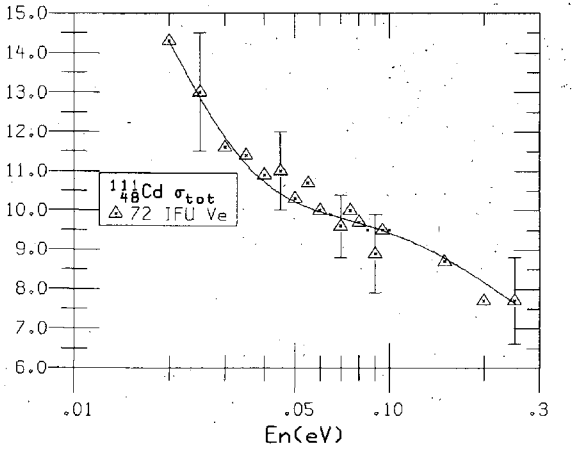












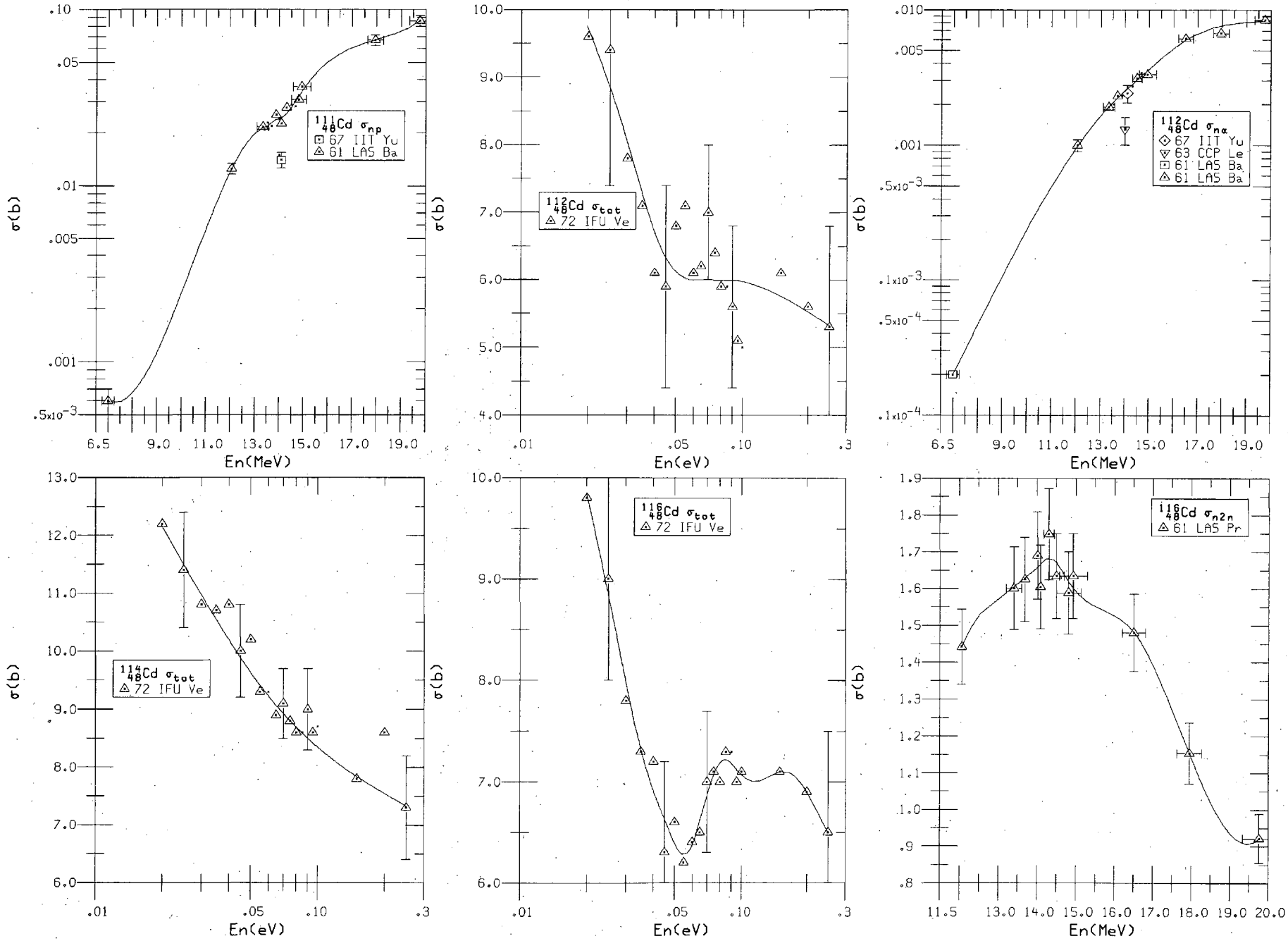
^{48}Cd
σ_{el}
σ_{sct}
σ_{inl}
σ_{non}
$\sigma_{n\gamma}$
[1281]
σ_{gem}
$^{106}_{48}$Cd
σ_{n2n}
$^{111}_{48}$Cd
σ_{tot}

$^{111}_{48}Cd$ σ_{np}

$^{112}_{48}Cd$ σ_{tot} $\sigma_{n\alpha}$

$^{114}_{48}Cd$ σ_{tot}

$^{116}_{48}Cd$ σ_{tot} σ_{n2n}



Yr	Lab	Author	Reference	Points	Range	Standard
			$_{48}$Cd σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	235	2.348 MeV to 15.0 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	700	.486 MeV to 9.175 MeV	
69	MHG	Parker,et.al.	UNIV-MI-03028-3,69	1	2.120 b at 5700. MeV	abs
68	HLT	Palmgren,et.al.	PL/B,27,554,68	3	7.6 ueV to 10.8 ueV	abs
68	USA	Schneider,et.al.	NP/A,119,197,68	6	99.4 MeV to 151.9 MeV	abs
67	CNA	Akyuez,et.al.	NSE,28,359,67	43	.0250 eV to 1.000 eV	
67	NWU	Haugsnes	HAUGSNES,67	1	4.420 b at 14.1 MeV	
67	WUR	Widder,et.al.	EANDC(OR)-64,67	1	2.455 kb at thermal	abs
66	ANL	Whalen,et.al.	ANL-7210,16,66	533	.100 MeV to .649 MeV	abs
65	DKE	Seth	PL,16,306,65	88	6.000 keV to .640 MeV	
65	BNL	Jain,et.al.	PR/B,137,83,65	10	10.0 keV to .100 MeV	abs
61	GA	Walton	WALTON,61	143	.0051 eV to .360 eV	
61	MUN	Hoehne	ADP,7,50,61	8	.0002 eV to .0028 eV	
61	HAR	Bowen,et.al.	NP,22,640,61	64	15.8 MeV to 117.5 MeV	C
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.8 MeV	abs
60	HAR	Mc Callum,et.al.	NP,16,313,60	11	12.8 MeV to 20.8 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	10	6.830 MeV to 14.5 MeV	abs
57	MTR	Simpson,et.al.	PR,105,616,57	321	15.1 eV to .499 keV	
56	ANL	Palmer,et.al.	PR,102,228,56	51	1.130 eV to 9.250 keV	
56	ANL	Haugsnes	BAP,1,187(K2),56	1	4.450 b at 14.00 MeV	
56	CCP	Khaletskii	DOK,113,305,56	1	4.120 b at 14.8 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	4.100 b at 4.100 MeV	abs
54	BAR	Snowdon,et.al.	PR,94,1267,54	1	4.500 b at 3.700 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	29	2.800 MeV to 13.2 MeV	abs
53	CRC	Brockhouse	CJP,31,432,53	11	.0600 eV to .350 eV	abs
53	ORL	Johnson,et.al.	ORNL-1365,1,53	32	.340 MeV to 3.310 MeV	abs
53	WIS	Walt,et.al.	PR,89,1271,53	23	60.0 keV to 2.975 MeV	
53	HAR	Taylor,et.al.	PM,44,95,53	11	30.0 MeV to 139.0 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.440 b at 14.1 MeV	
47	COL	Rainwater,et.al.	PR,71,65,47	67	.0083 eV to 1.000 eV	
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
			$_{48}$Cd σ_{el}			
73	AE	Etemad	AE-482,73	1	1.730 b at 7.000 MeV	^{1}H σ_{el}
72	ANL	Cox,et.al.	ANL-7935,72	1	5.899 b at .870 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	1.630 b at 8.050 MeV	^{1}H σ_{el}
66	ANL	Vonach,et.al.	NP,78,389,66	25	.300 MeV to 1.500 MeV	C
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	1.800 b at 6.040 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	3.900 b at 2.000 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	7.440 b at .300 MeV	
60	CRC	Cross,et.al.	NP,15,155,60	1	2.370 b at 14.6 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.000 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.500 b at 1.000 MeV	
54	BAR	Snowdon,et.al.	PR,94,1267,54	1	2.500 b at 3.700 MeV	
53	CRC	Brockhouse	CJP,31,432,53	19	.0200 eV to .400 eV	

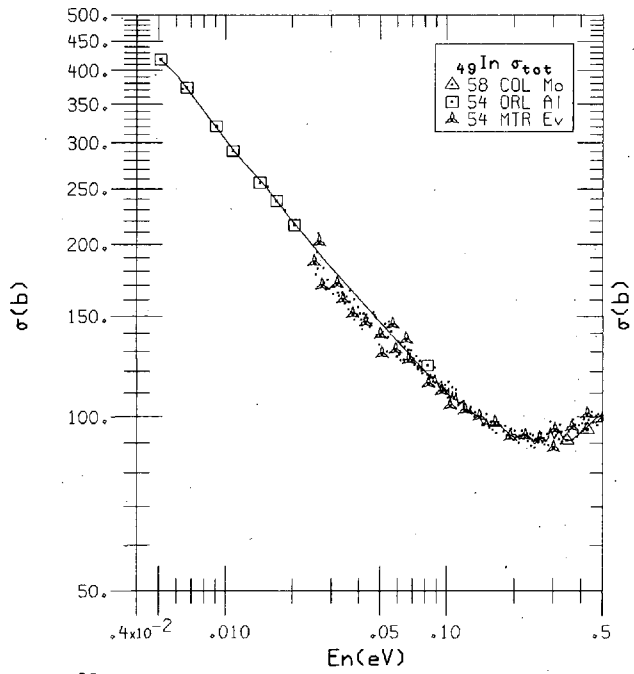
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{48}$Cd σ_{inl}			
66	TUD	Oehler,et.al.	KE,9,95,66	1	.890 b at .960 MeV	
63	CCP	Glazkov	AE,14,400,63	4	.400 MeV to 1.000 MeV	
63	CCP	Glazkov	AE,15,416,63	5	.400 MeV to 1.200 MeV	
57	AR	Morrison	AERE-NP/R-2076,57	13	.500 MeV to 2.100 MeV	
56	HAR	Morrison	56AMSTERDM,,1135,56	3	1.200 MeV to 2.000 MeV	
			$_{48}$Cd σ_{sct}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1).38,72	1	5.600 b at 4.650 eV	
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.369 MeV	C
			$_{48}$Cd σ_{non}			
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	1.850 b at 14.8 MeV	
66	TUD	Oehler,et.al.	KE,9,95,66	1	1.540 b at .960 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	1.870 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.910 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.840 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	5	1.000 MeV to 7.000 MeV	
56	OXF	Voss,et.al.	PRS/A,236,41,56	4	55.0 MeV to 140.0 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.920 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	3	.290 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	2.210 b at 2.500 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.950 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.100 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,55	3	2.500 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	1.400 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	2.200 b at 14.1 MeV	
52	LAS	Phillips,et.al.	PR,88,600,52	1	1.890 b at 14.1 MeV	abs
			$_{48}$Cd $\sigma_{n\gamma}$			
69	KFK	Kompe	NP/A,133,513,69	70	11.9 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	70	11.9 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
64	AE	Sokolowski,et.al	NUK,6,245,64	1	2.392 kb at thermal	B σ_{abs}
64	AE	Sokolowski,et.al	NUK,6,245,64	1	2.445 kb at thermal	B σ_{abs}
64	AE	Sokolowski,et.al	NUK,6,245,64	1	2.444 kb at thermal	B σ_{abs}
63	ORL	Macklin,et.al.	NP,43,353,63	1	.343 b at 30.0 keV	Ag $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	37	.195 keV to 8.500 keV	
60	ORL	Schmitt,et.al.	NP,20,202,60	1	.515 b at 24.0 keV	abs
60	LAS	Diven,et.al.	PR,120,556,60	1	.101 b at .400 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.177 b at .200 MeV	^{127}I $\sigma_{n\gamma}$

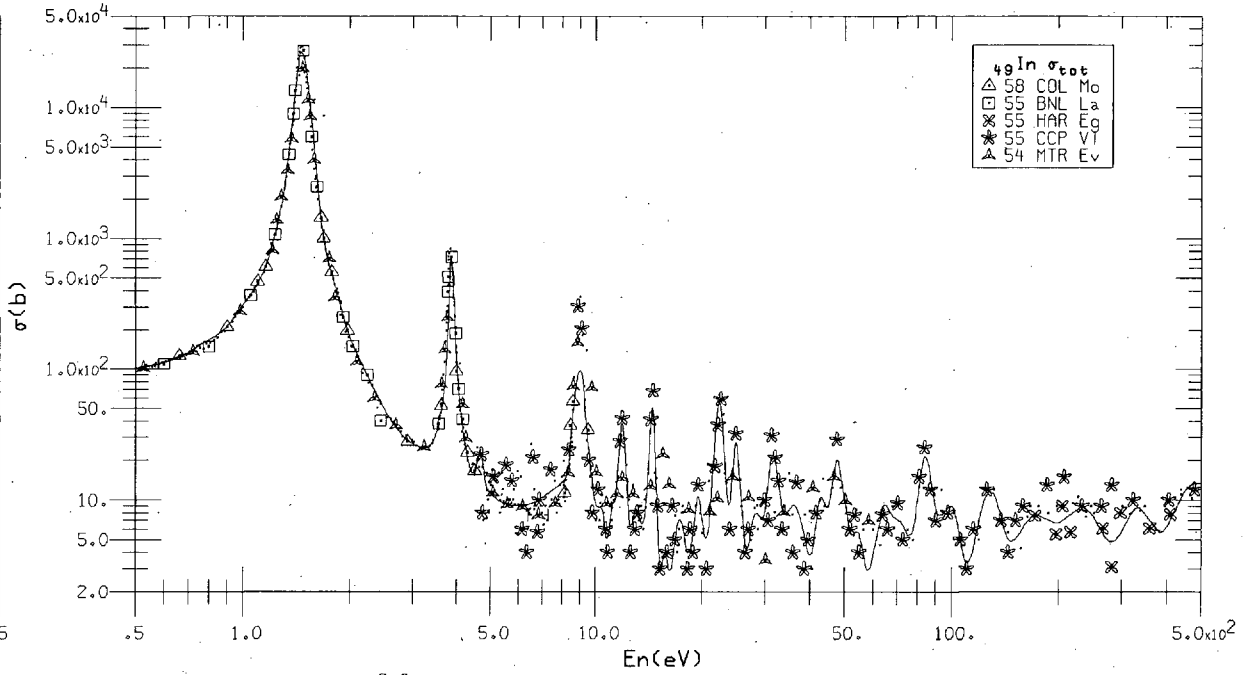
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{48}$Cd σ_{ing}			
52	NRD	Scherrer,et.al.	PR,91,1476,52	1	12.8 b at 14.2 MeV	
			$_{48}$Cd σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
			$_{48}$Cd σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	1.860 b at 14.1 MeV	
			$_{48}$Cd σ_{np}			
61	HAR	Allan	NP,24,274,61	1	14.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{106}_{48}$Cd σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.290 b at 14.2 MeV	abs
			$^{106}_{48}$Cd σ_{n2n}			
69	GIT	Lu,et.al.	RCA,12,61,69	1	.975 b at 14.4 MeV	^{112}Cd σ_{np}
69	GIT	Lu,et.al.	RCA,12,61,69	1	.966 b at 14.4 MeV	^{116}Cd σ_{n2n}
68	HAM	Bormann,et.al.	EANDC(E)-89,59,68	10	12.8 MeV to 19.4 MeV	H
63	GEO	Rayburn	BAP,8,60(R7),63	14	12.3 MeV to 17.8 MeV	
61	ANL	Rayburn	PR,122,168,61	1	.827 b at 14.4 MeV	^{63}Cu σ_{n2n}
			$^{106}_{48}$Cd σ_{np}			
63	CCP	Levkovskii	ZET,45,305,63	1	76.0 mb at 14.0 MeV	
			$^{106}_{48}$Cd $\sigma_{n\alpha}$			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	.100 b at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{108}_{48}$Cd σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.330 b at 14.2 MeV	abs
			$^{108}_{48}$Cd $\sigma_{n\gamma}$			
64	VBI	Boyd,et.al.	PHY,30,124,64	1	24.0 b at thermal	
			$^{108}_{48}$Cd σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	.865 b at 14.4 MeV	^{56}Fe σ_{np}
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	.504 b at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$

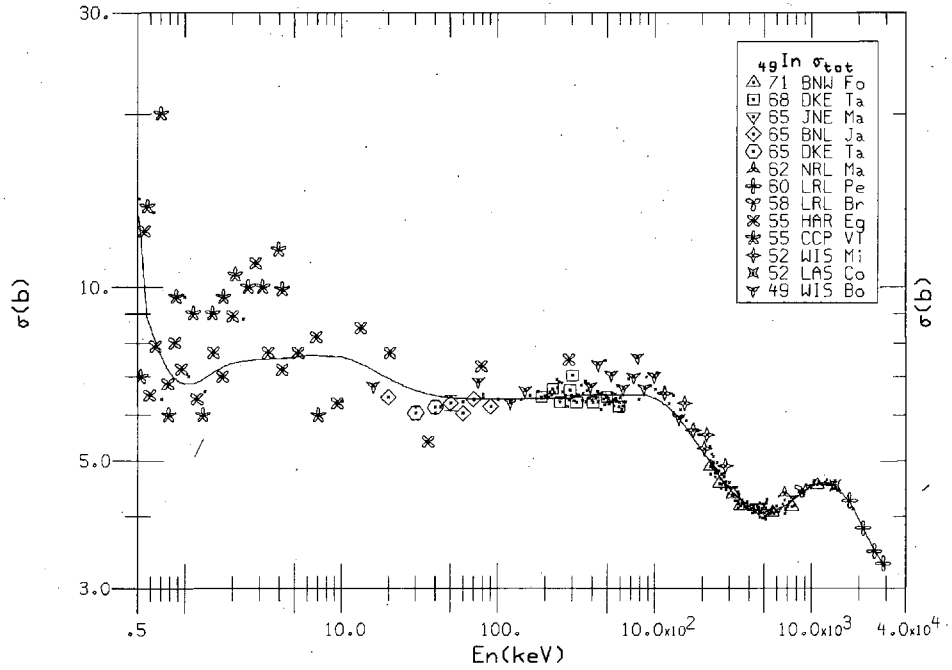
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{110}_{48}$Cd σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.340 b at 14.2 MeV	abs
			$^{110}_{48}$Cd σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.221 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{110}_{48}$Cd σ_{np}			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	27.0 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{111}_{48}$Cd σ_{tot}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	20	.0200 eV to .250 eV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.440 b at 14.2 MeV	abs
			$^{111}_{48}$Cd σ_{sct}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	5.200 b at 4.650 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	5.500 b at .135 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	5.100 b at thermal	
			$^{111}_{48}$Cd $\sigma_{n\gamma}$			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	7.700 b at thermal	
			$^{111}_{48}$Cd σ_{np}			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	14.0 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CCP	Levkovskii	ZET,45,305,63	1	15.0 mb at 14.0 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	16	7.000 MeV to 19.8 MeV	^{238}U σ_{nf}
			$^{112}_{48}$Cd σ_{tot}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	20	.0200 eV to .250 eV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.530 b at 14.2 MeV	abs
			$^{112}_{48}$Cd σ_{sct}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	6.900 b at 4.650 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	5.500 b at .110 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	7.500 b at thermal	

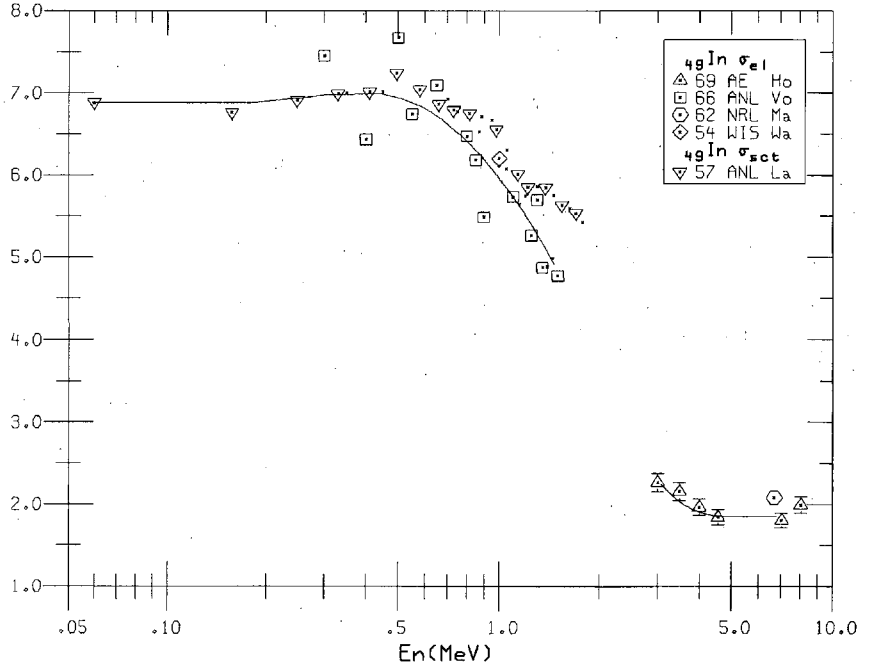
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{112}_{48}$Cd $\sigma_{n\gamma}$			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	.500 b at thermal	
			$^{112}_{48}$Cd σ_{np}			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	11.0 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CCP	Levkovskii	ZET,45,305,63	1	11.0 mb at 14.0 MeV	
			$^{112}_{48}$Cd $\sigma_{n\alpha}$			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	2.400 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CCP	Levkovskii	ZET,45,305,63	1	1.300 mb at 14.0 MeV	
61	LAS	Bayhurst,et.al.	JIN,23,173,61	16	7.000 MeV to 19.8 MeV	^{238}U σ_{nf}
56	CCP	Dzantiev,et.al.	DOK,113,537,56	1	1.350 mb at 14.0 MeV	^{63}Cu σ_{n2n}
			$^{113}_{48}$Cd σ_{tot}			
67	CNA	Akyuz,et.al.	NSE,28,359,67	43	.0250 eV to 1.000 eV	abs
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.500 b at 14.2 MeV	abs
			$^{113}_{48}$Cd σ_{np}			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	7.900 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CCP	Levkovskii	ZET,45,305,63	1	8.000 mb at 14.0 MeV	
			$^{114}_{48}$Cd σ_{tot}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	20	.0200 eV to .250 eV	
68	KUR	Gorlov,et.al.	YF,6,663,68	1	4.210 b at 4.000 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.540 b at 14.2 MeV	abs
			$^{114}_{48}$Cd σ_{el}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	2.000 b at 4.000 MeV	
			$^{114}_{48}$Cd σ_{sct}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	5.200 b at 4.650 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	6.000 b at .135 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	6.000 b at thermal	
			$^{114}_{48}$Cd $\sigma_{n\gamma}$			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	6.900 b at thermal	
			$^{114}_{48}$Cd $\sigma_{n\alpha}$			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	.700 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
63	CCP	Levkovskii	ZET,45,305,63	1	.600 mb at 14.0 MeV	
			$^{116}_{48}$Cd σ_{tot}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	20	.0200 eV to .250 eV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.560 b at 14.2 MeV	abs
			$^{116}_{48}$Cd σ_{sct}			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	6.400 b at 4.650 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	6.000 b at .135 eV	
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	7.500 b at thermal	
			$^{116}_{48}$Cd $\sigma_{n\gamma}$			
72	IFU	Vertebnyj,et.al.	UFZ,17,(1),38,72	1	2.500 b at thermal	
			$^{116}_{48}$Cd σ_{n2n}			
61	LAS	Prestwood,et.al.	PR,121,1438,61	13	12.1 MeV to 19.8 MeV	^{238}U σ_{nf}
			$^{116}_{48}$Cd σ_{np}			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	.200 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{116}_{48}$Cd $\sigma_{n\alpha}$			
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	.500 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$

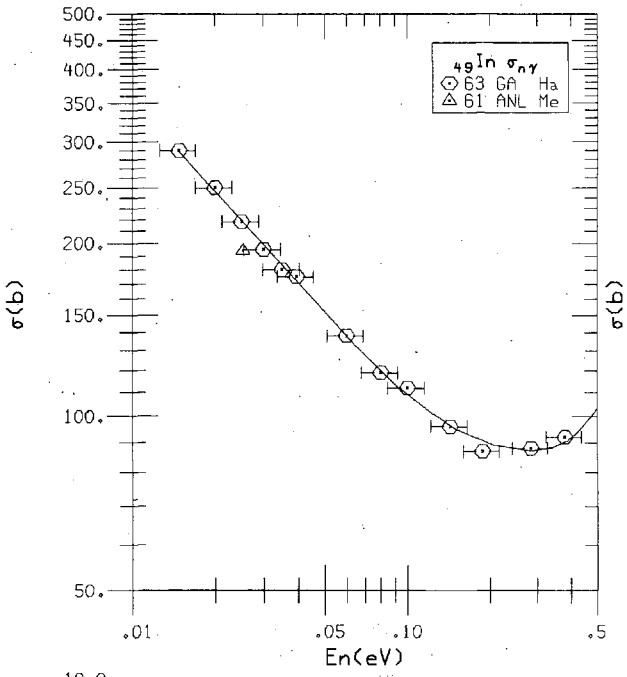
$_{49}$In
σ_{tot}
σ_{el}
σ_{sct}

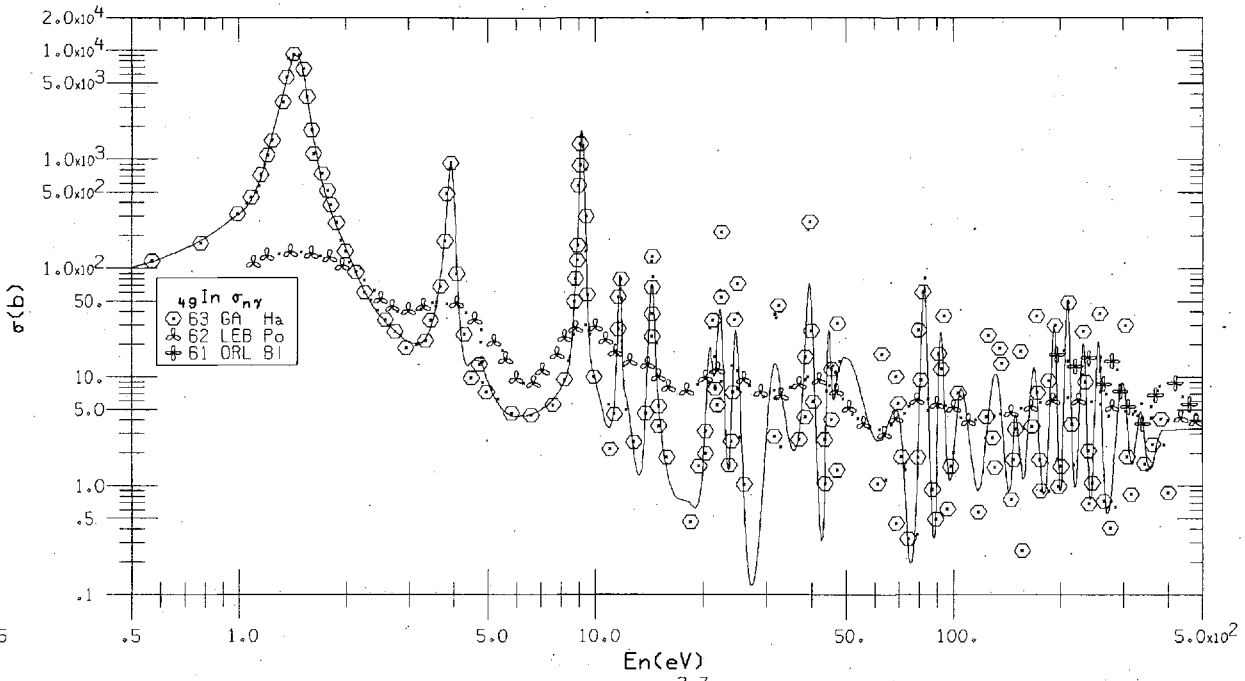


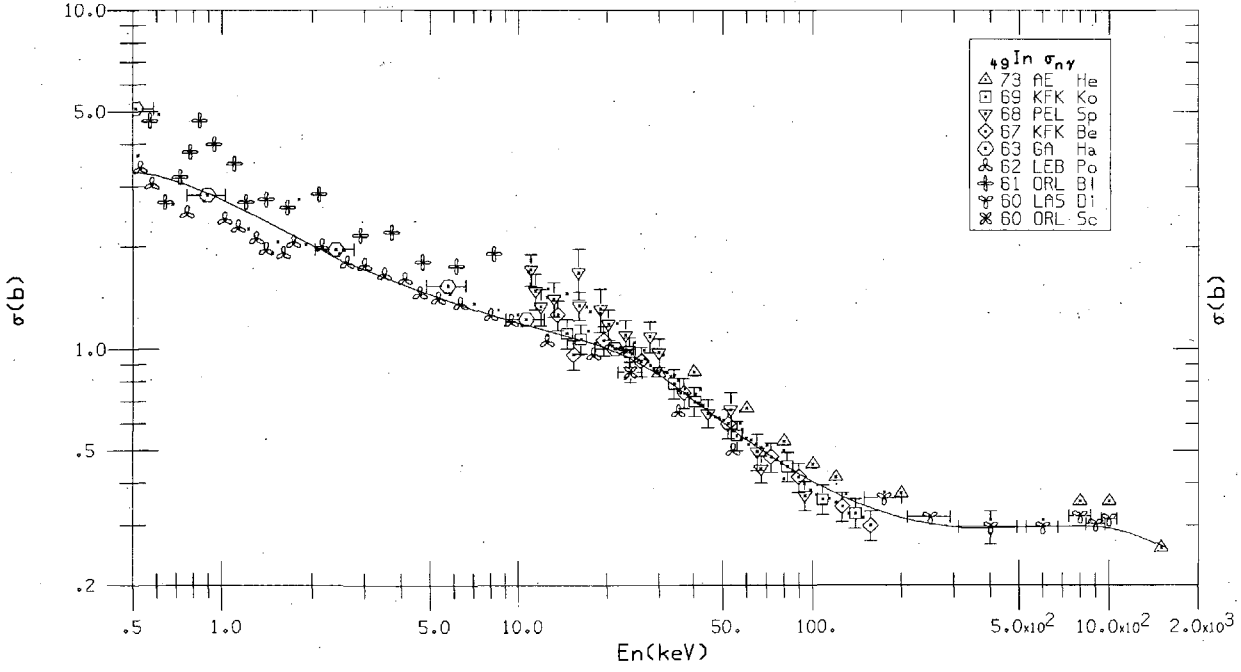


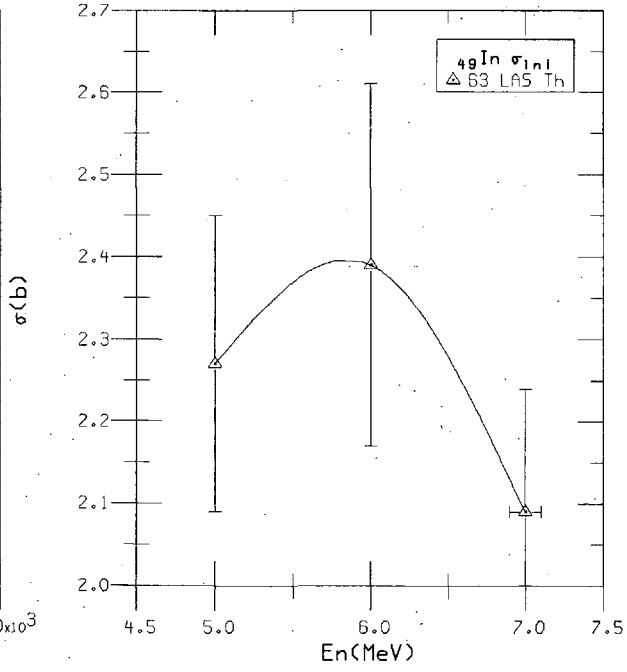





$_{49}$In $\sigma_{n\gamma}$
63 GA Ha
61 ANL Me
σ(b)
En(eV)


$_{49}$In $\sigma_{n\gamma}$
63 GA Ha
62 LEB Po
61 ORL Bl
σ(b)
En(eV)


$_{49}$In $\sigma_{n\gamma}$
73 AE He
69 KFK Ko
68 PEL Sp
67 KFK Be
63 GA Ha
62 LEB Po
61 ORL Bl
60 LAS Di
60 ORL Sc
σ(b)
En(keV)


$_{49}$In σ_{inl}
63 LAS Th
σ(b)
En(MeV)

$^{113}_{49}In$

σ_{n2n}

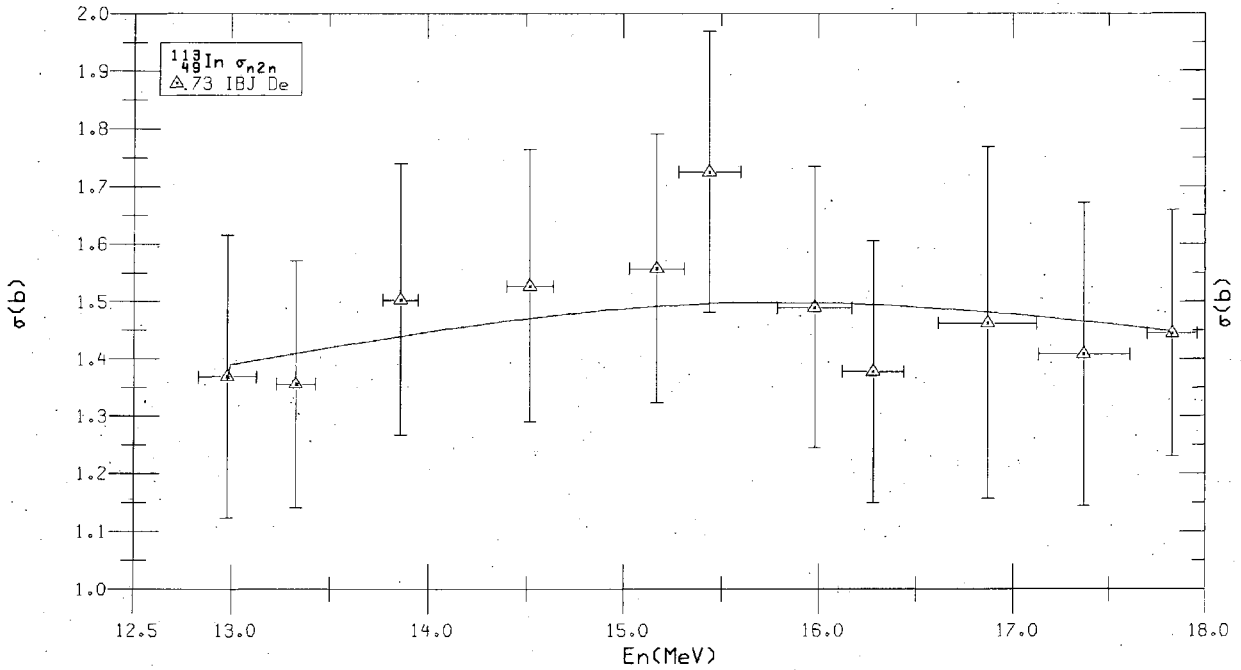
σ_{n3n}

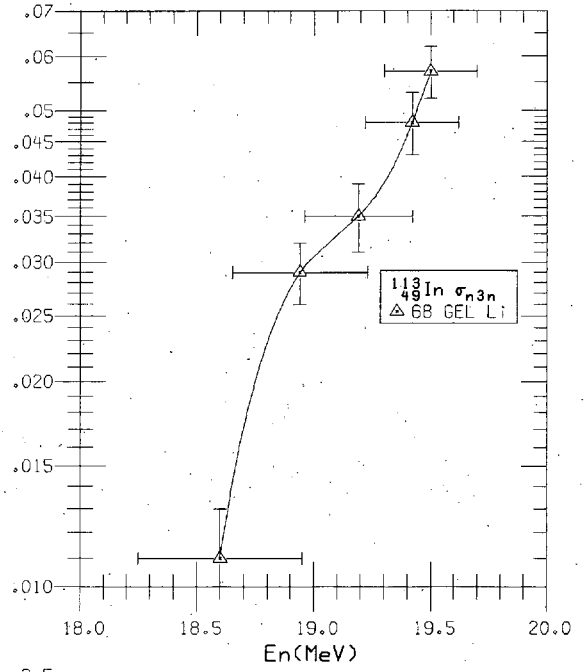
$^{115}_{49}In$

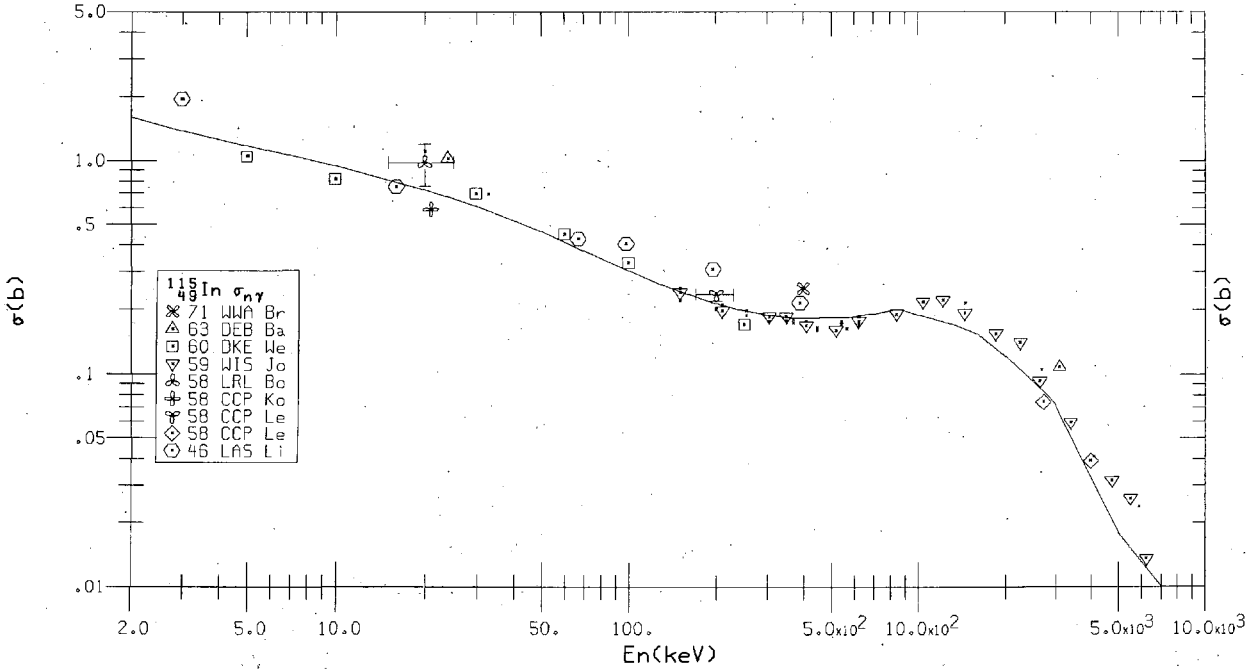
$\sigma_{n\gamma}$

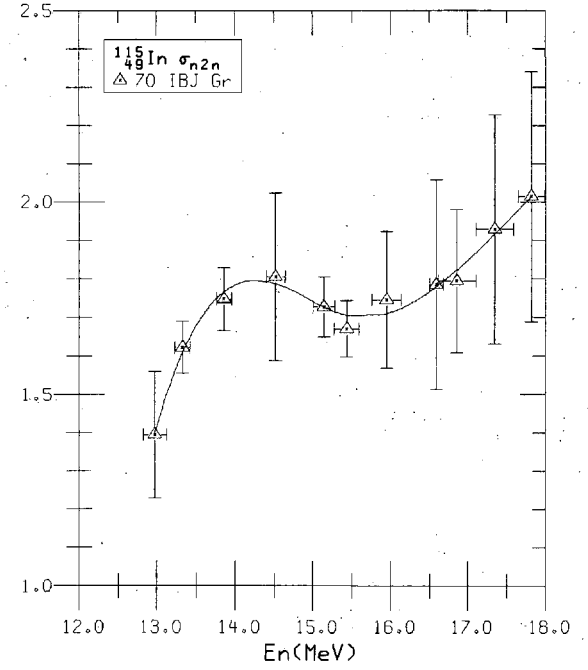
[6416]

σ_{n2n}





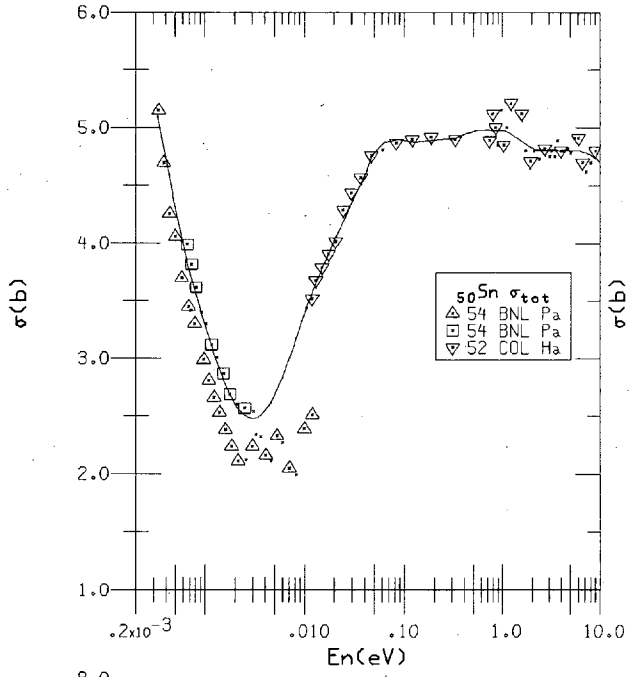


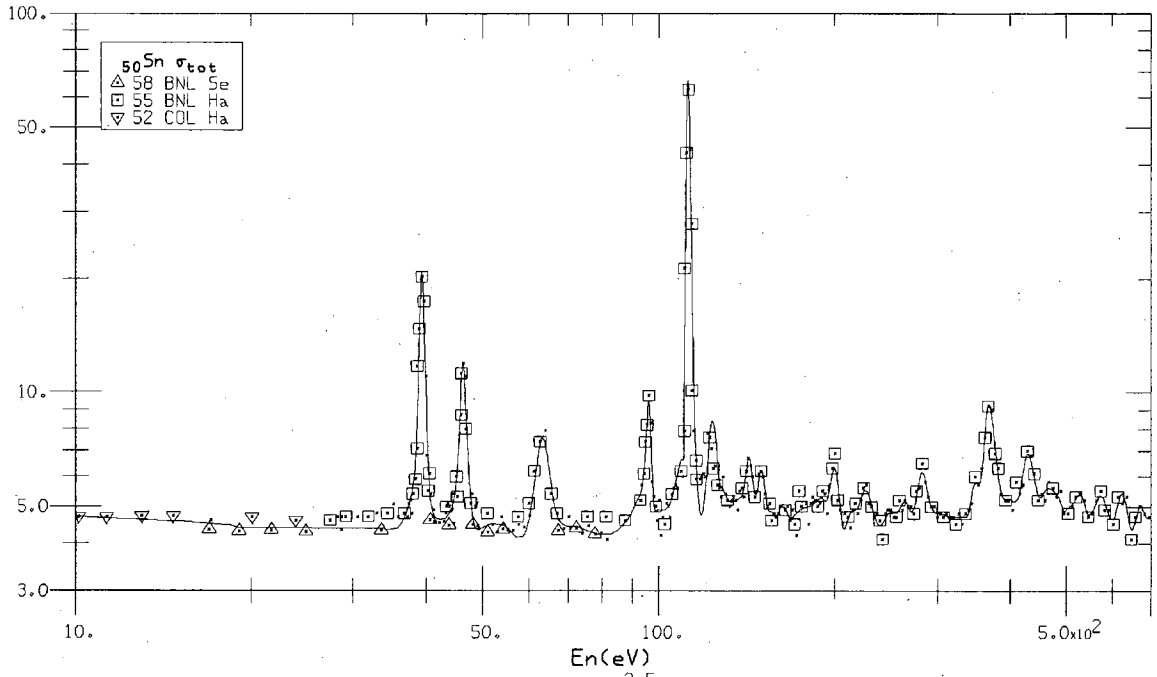


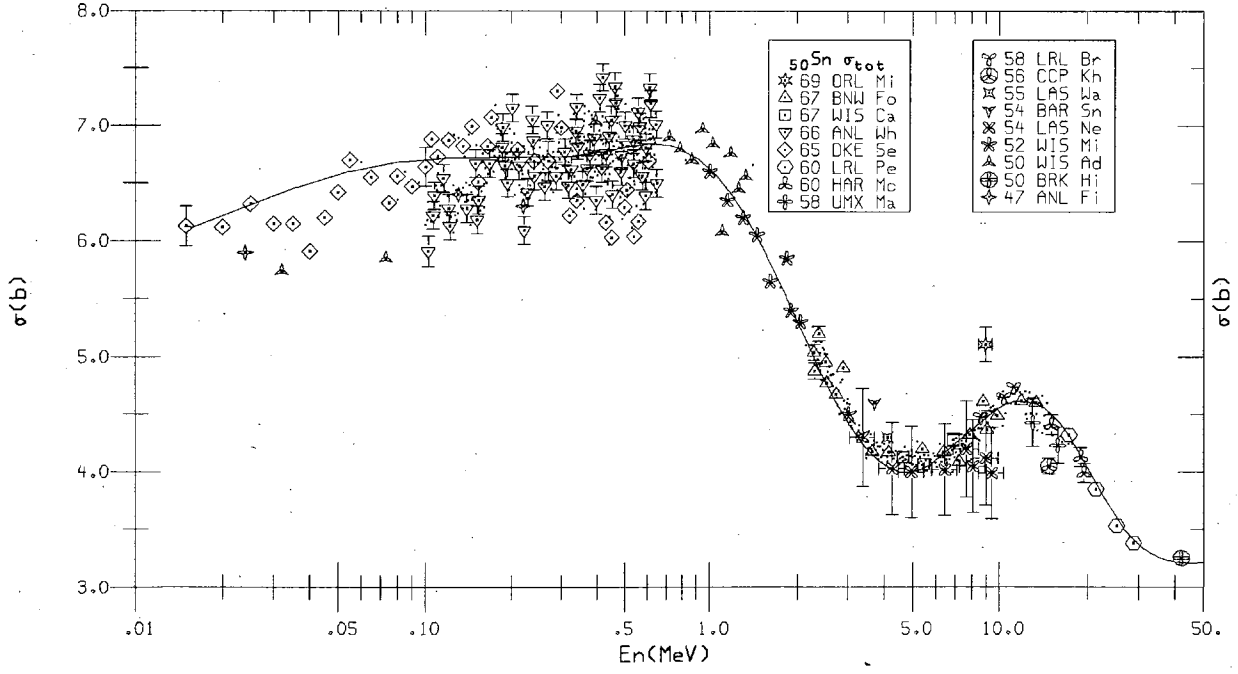
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{49}$In σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.251 MeV to 15.0 MeV	
68	DKE	Tabony,et.al.	AP,46,401,68	95	.100 MeV to .650 MeV	
65	JNE	Manero	NP,65,419,65	33	3.350 MeV to 5.210 MeV	
65	BNL	Jain,et.al.	PR/B,137,83,65	10	10.0 keV to .100 MeV	abs
65	DKE	Tabony	SETH,65	4	30.0 keV to 80.0 keV	
65	DKE	Seth	SETH,65	2	.120 MeV to .140 MeV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.280 b at 3.660 MeV	
62	NRL	Malmberg,et.al.	PR,128,351,62	1	4.390 b at 6.700 MeV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	5	17.5 MeV to 28.9 MeV	abs
58	COL	Moore	PR,109,417,58	138	.330 eV to 9.800 eV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	6	6.830 MeV to 14.5 MeV	abs
55	BNL	Landon,et.al.	PR,98,1267,55	119	.600 eV to 4.170 eV	
55	HAR	Egelstaff	EGELSTAFF,55	49	.144 keV to .286 MeV	abs
55	CCP	Vladimirski+	55GENEVA,4,22,55	231	4.550 eV to 7.042 keV	
54	ORL	Allen,et.al.	PR,96,1297,54	11	.0051 eV to .0818 eV	
54	MTR	Evans	EVANS,54	441	.0251 eV to 68.8 eV	abs
52	WIS	Miller,et.al.	PR,88,83,52	17	1.005 MeV to 3.210 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	4.530 b at 14.1 MeV	
49	WIS	Bockelman,et.al.	PR,76,277,49	30	16.0 keV to 1.570 MeV	
			$_{49}$In σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.524 b at .870 MeV	C σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	6	3.000 MeV to 8.050 MeV	^{1}H σ_{el}
66	ANL	Vonach,et.al.	NP,78,389,66	24	.300 MeV to 1.500 MeV	C
62	NRL	Malmberg,et.al.	PR,128,351,62	1	2.080 b at 6.700 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.200 b at 1.000 MeV	
			$_{49}$In σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	3	5.000 MeV to 7.000 MeV	
			$_{49}$In σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	C
			$_{49}$In σ_{non}			
54	WIS	Walt,et.al.	PR,93,1062,54	1	.400 b at 1.000 MeV	
			$_{49}$In $\sigma_{n\gamma}$			
73	AE	Hellstroem	JNE,27,71,73	14	30.0 keV to 1.500 MeV	^{197}Au $\sigma_{n\gamma}$
69	KFK	Kompe	NP/A,133,513,69	69	12.5 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
68	PEL	Spitz,et.al.	NP/A,121,655,68	47	9.900 keV to 94.0 keV	In $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	69	12.5 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.102 mb at 14.1 MeV	
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.200 mb at 14.1 MeV	
63	GA	Haddad,et.al.	GA-3874,63	258	.0148 eV to 21.3 keV	
62	LEB	Popov,et.al.	ZET,42,988,62	137	1.100 eV to 54.0 keV	
61	ANL	Meadows,et.al.	NSE,9,132,61	1	.194 kb at thermal	
61	ORL	Block,et.al.	61SACLAY,,203,61	44	.195 keV to 8.200 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
60	ORL	Schmitt,et.al.	NP,20,202,60	1	.854 b at 24.0 keV	

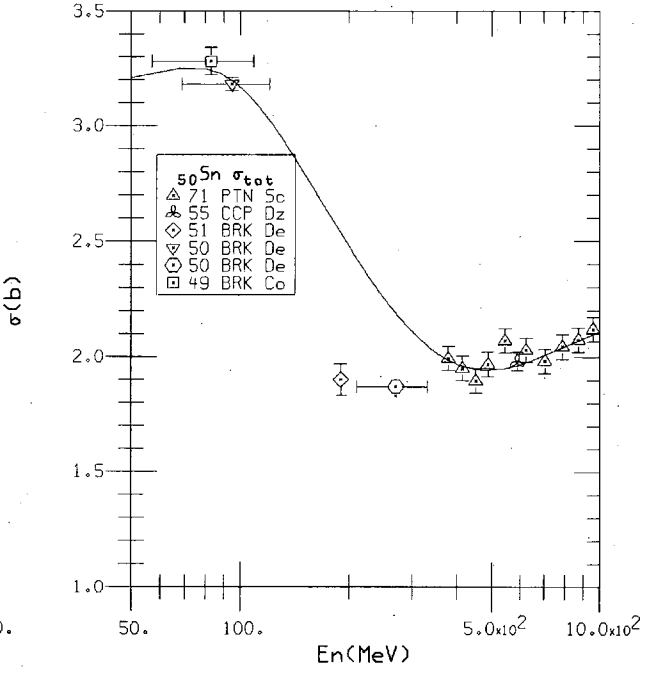
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{49}$In σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	1.920 b at 14.0 MeV	^{252}Cf
			$_{49}$In σ_{np}			
61	HAR	Allan	NP,24,274,61	1	14.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$_{49}$In $\sigma_{n\alpha}$			
62	SAH	Sen	NP,38,601,62	1	7.140 mb at 14.0 MeV	
			$^{113}_{49}$In $\sigma_{n\gamma}$			
58	LRL	Booth,et.al.	PR,112,226,58	1	8.500 b at 20.0 keV	^{113}In $\sigma_{n\gamma}$
			$^{113}_{49}$In σ_{n2n}			
73	IBJ	Decowski,et.al.	NP/A,204,121,73	11	13.0 MeV to 17.8 MeV	^{64}Zn σ_{n2n}
			$^{113}_{49}$In σ_{n3n}			
68	GEL	Liskien	NP/A,118,379,68	5	18.6 MeV to 19.5 MeV	^{65}Cu σ_{n2n}
			$^{115}_{49}$In σ_{tot}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	3.940 b at 4.000 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.540 b at 14.2 MeV	abs
			$^{115}_{49}$In σ_{el}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	1.840 b at 4.000 MeV	
			$^{115}_{49}$In $\sigma_{n\gamma}$			
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.250 b at .400 MeV	abs
63	DEB	Bacso,et.al.	AKS,5,(3-4),63	2	24.0 keV to 3.100 MeV	
60	DKE	Weston,et.al.	AP,10,477,60	8	5.000 keV to .250 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	43	.150 MeV to 6.250 MeV	^{115}In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	1.110 b at 20.0 keV	^{115}In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.980 b at 20.0 keV	^{115}In $\sigma_{n\gamma}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	.590 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
46	LAS	Linenberger+	LA-467,46	8	3.000 keV to 5.900 MeV	^{235}U σ_{nf}
			$^{115}_{49}$In σ_{n2n}			
70	IBJ	Grochulski,et.al	INR-1172,70	11	13.0 MeV to 17.8 MeV	^{204}Pb σ_{n2n}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{115}_{49}$In σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	15.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{115}_{49}$In σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	33.0 muB at 14.0 MeV	
			$^{115}_{49}$In $\sigma_{n\alpha}$			
70	ABD	Temperley,et.al.	BRL-1491,70	1	2.500 mb at 14.1 MeV	^{56}Fe σ_{np}
69	KAZ	Levkovskii+	YF,10,44,69	1	2.400 mb at 14.8 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	3.000 mb at 14.6 MeV	^{56}Fe σ_{np}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.890 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
55	ORL	Blosser,et.al.	PR,100,429,55	1	2.500 mb at 14.0 MeV	^{56}Fe σ_{np}


$_{50}Sn$ σ_{tot}
54 BNL Pa
54 BNL Pa
52 COL Ha
σ(b)
En(eV)


$_{50}Sn$ σ_{tot}
58 BNL Se
55 BNL Ha
52 COL Ha
σ(b)
En(eV)


$_{50}Sn$ σ_{tot}
69 ORL Mi
67 BNW Fo
67 WIS Ca
66 ANL Wh
65 DKE Se
60 LRL Pe
60 HAR Mc
58 UMX Ma
58 LRL Br
56 CCP Kh
55 LAS Wa
54 BAR Sn
54 LAS Ne
52 WIS Mi
50 WIS Ad
50 BRK Hi
47 ANL Fi
σ(b)
En(MeV)


$_{50}Sn$ σ_{tot}
71 PTN Sc
55 CCP Dz
51 BRK De
50 BRK De
50 BRK De
49 BRK Co
σ(b)
En(MeV)

$_{50}Sn$

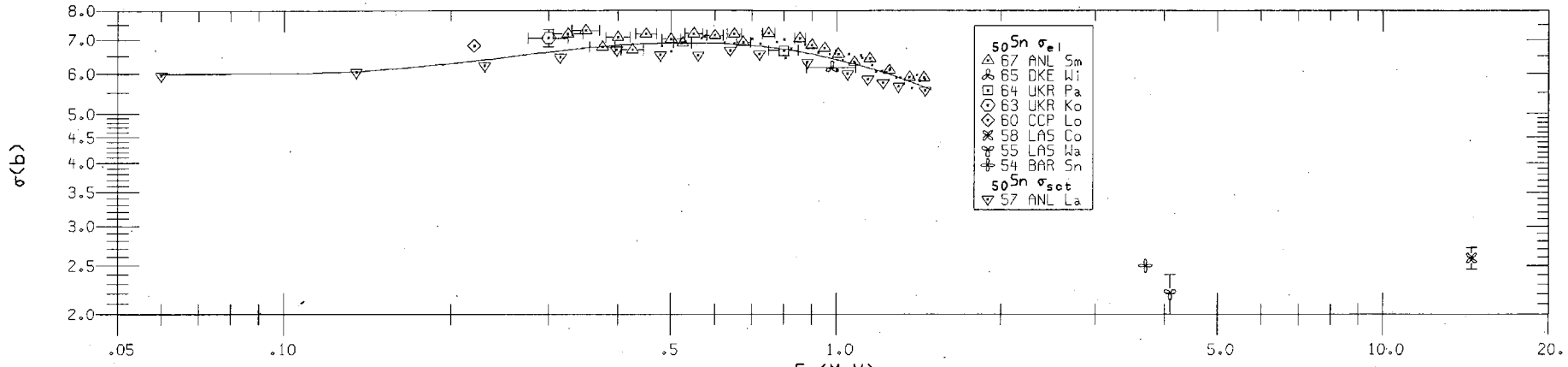
σ_{el}

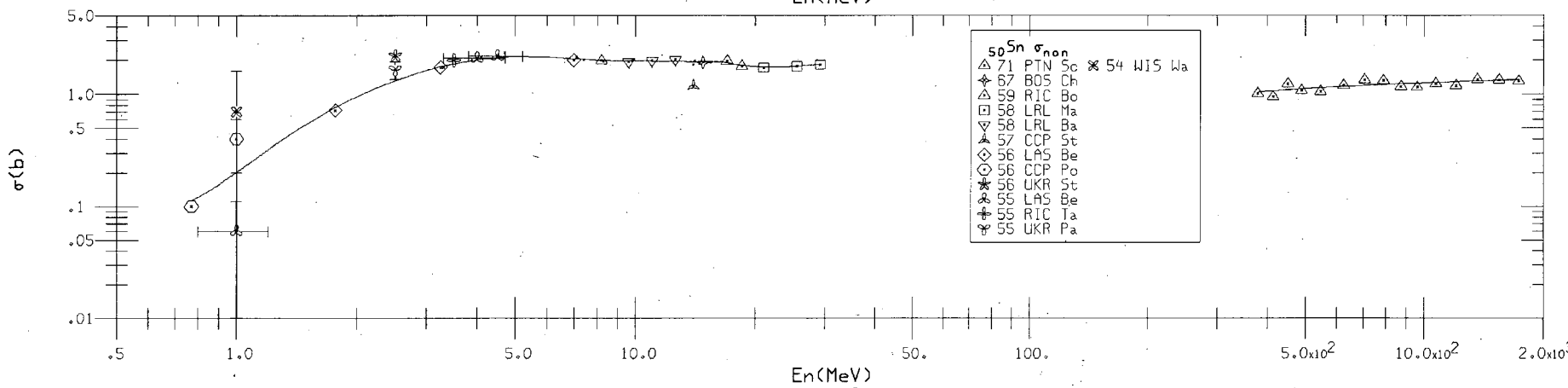
σ_{sct}

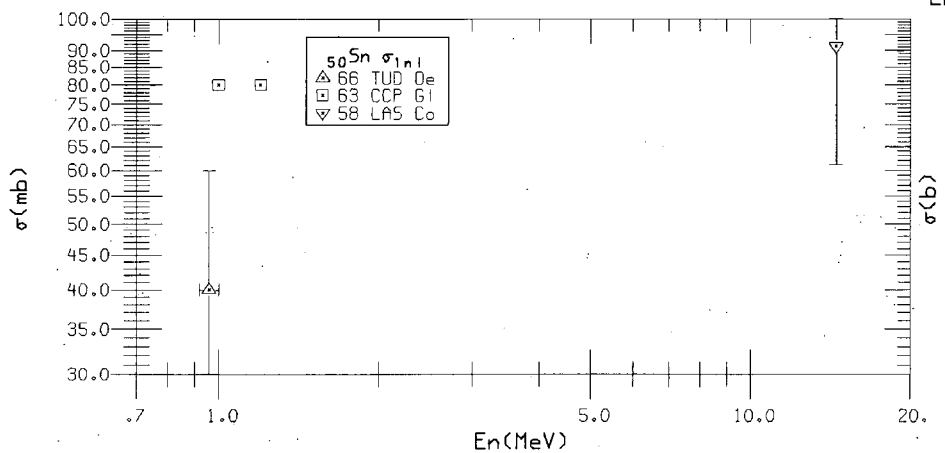
σ_{non}

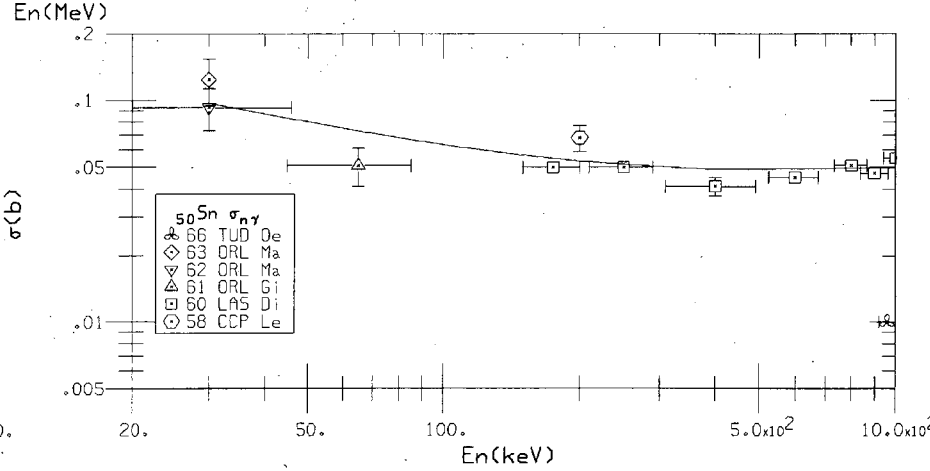
σ_{inl}

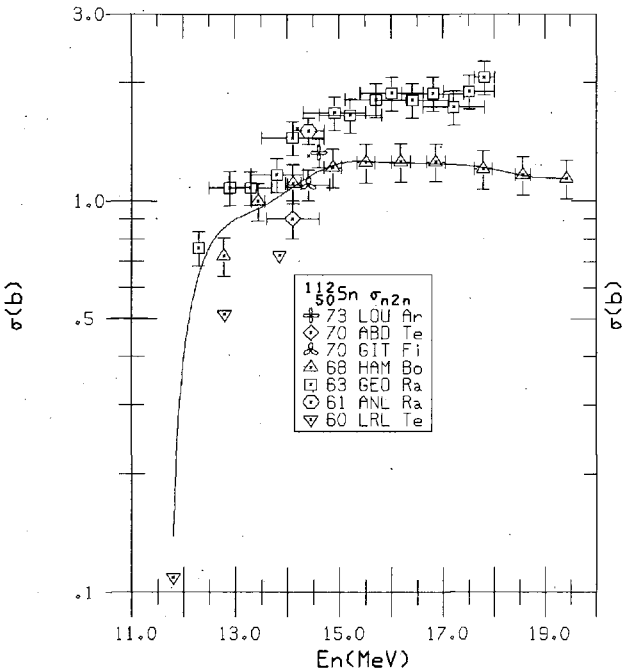
$\sigma_{n\gamma}$

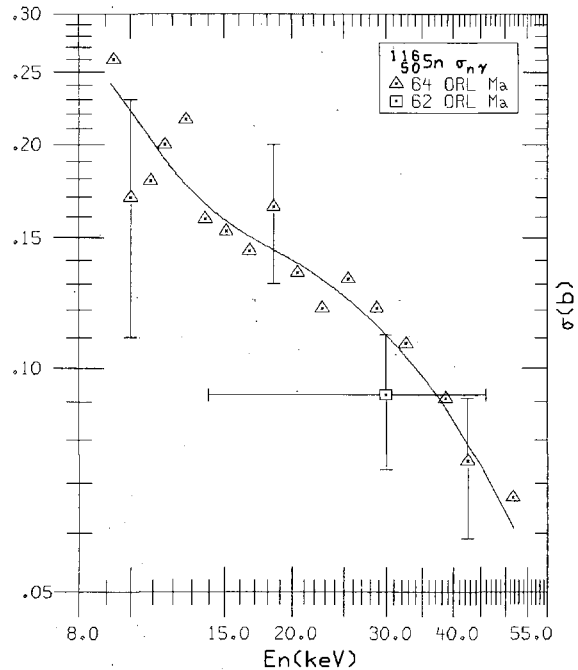


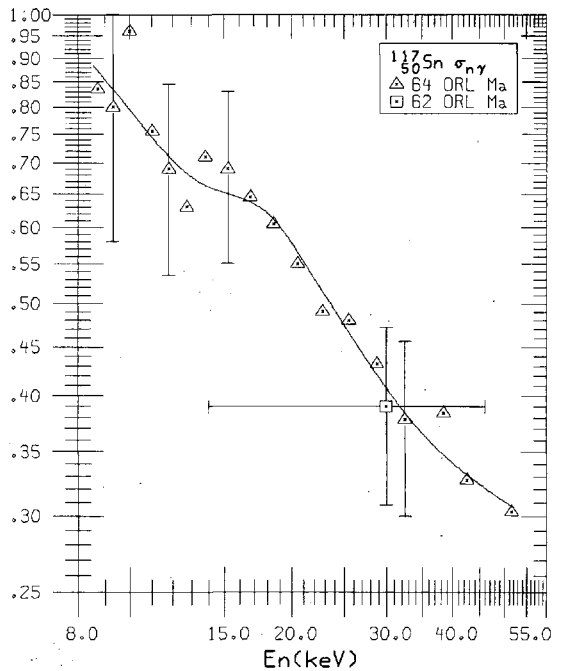


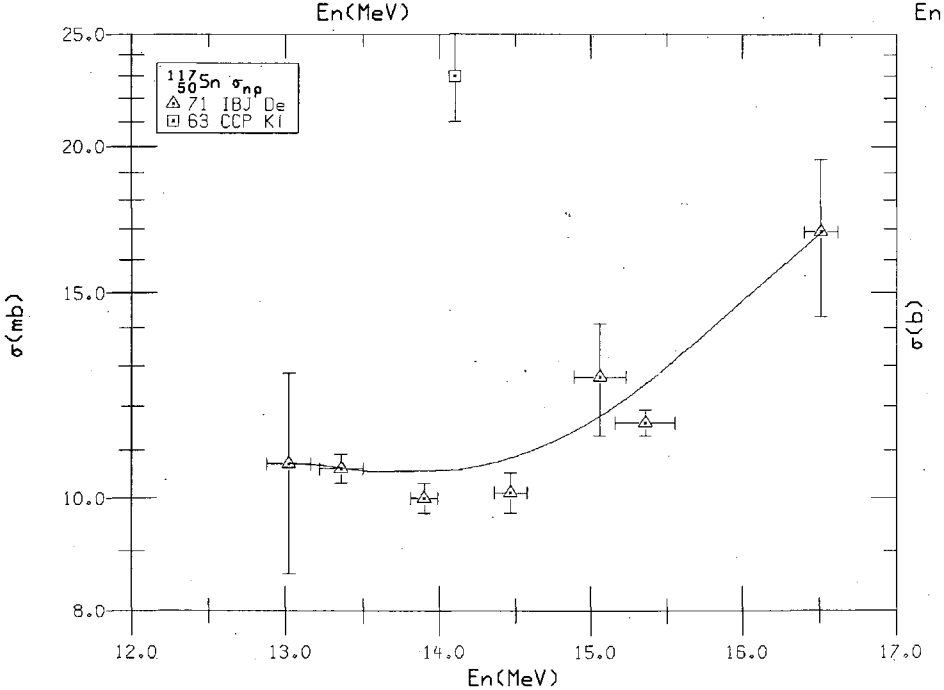


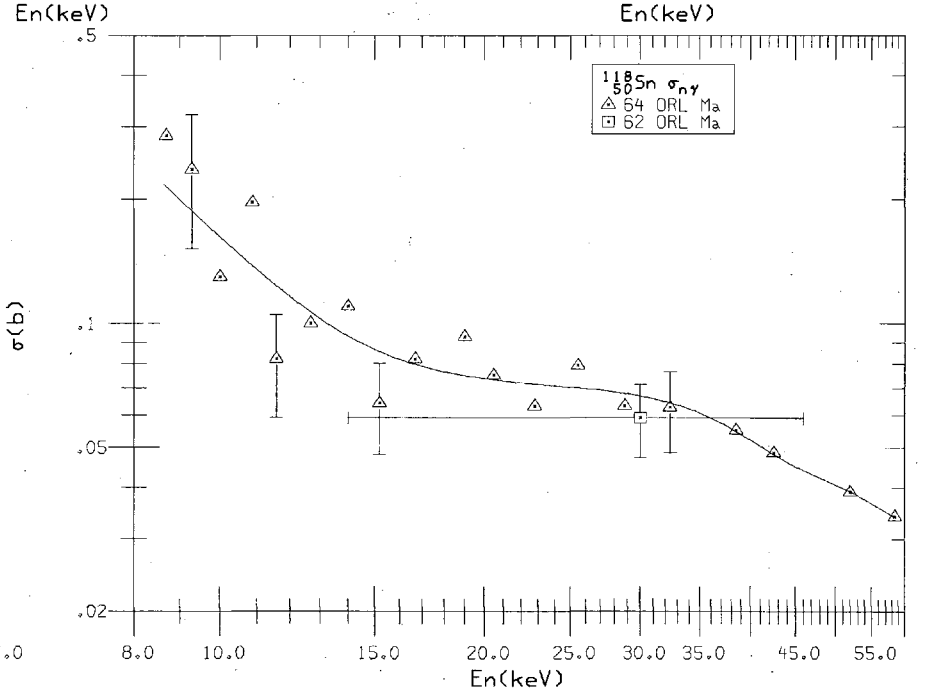



$^{112}_{50}Sn$ σ_{n2n}
73 LOU Ar
70 ABD Te
70 GIT Fi
68 HAM Bo
63 GEO Ra
61 ANL Ra
60 LRL Te
σ(b)
En(MeV)


$^{116}_{50}Sn$ $\sigma_{n\gamma}$
64 ORL Ma
62 ORL Ma
σ(b)
En(keV)


$^{117}_{50}Sn$ $\sigma_{n\gamma}$
64 ORL Ma
62 ORL Ma
σ(b)
En(keV)


$^{117}_{50}Sn$ σ_{np}
71 IBJ De
63 CCP Ki
σ(mb)
En(MeV)

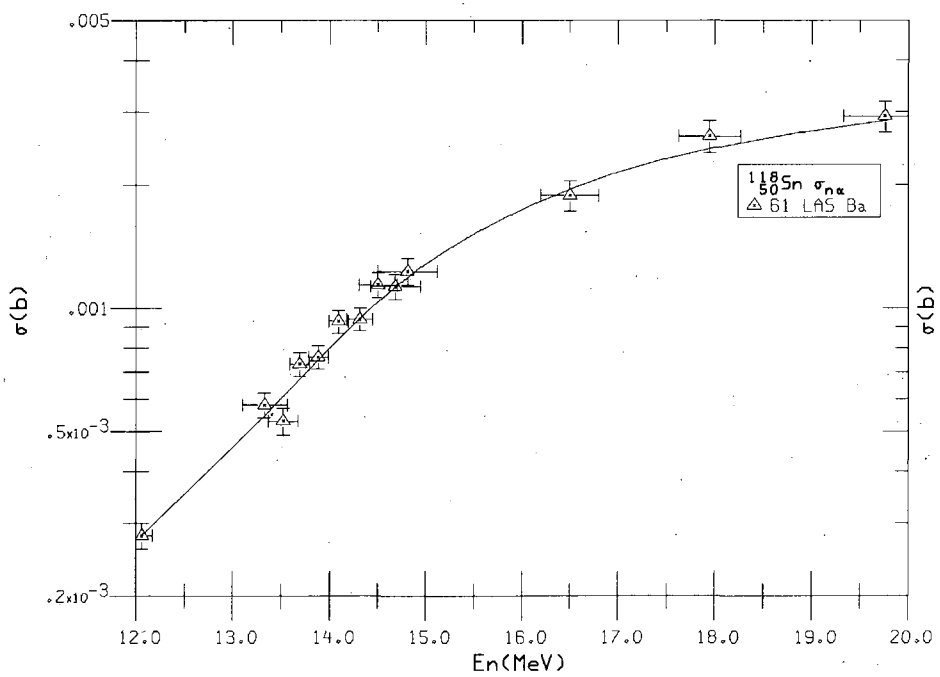

$^{118}_{50}Sn$ $\sigma_{n\gamma}$
64 ORL Ma
62 ORL Ma
σ(b)
En(keV)

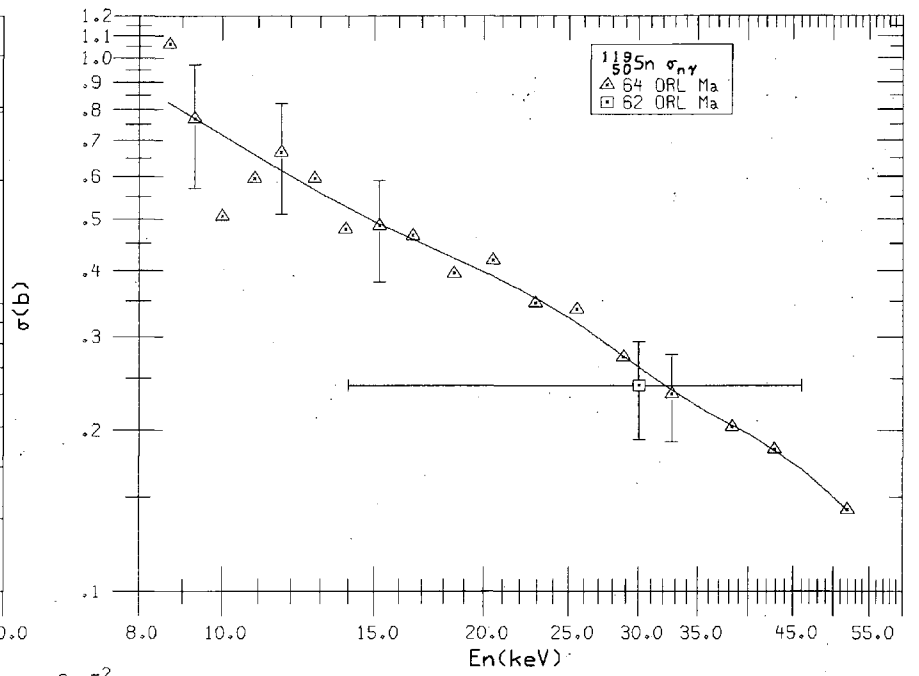
$^{118}_{50}Sn$ $\sigma_{n\alpha}$

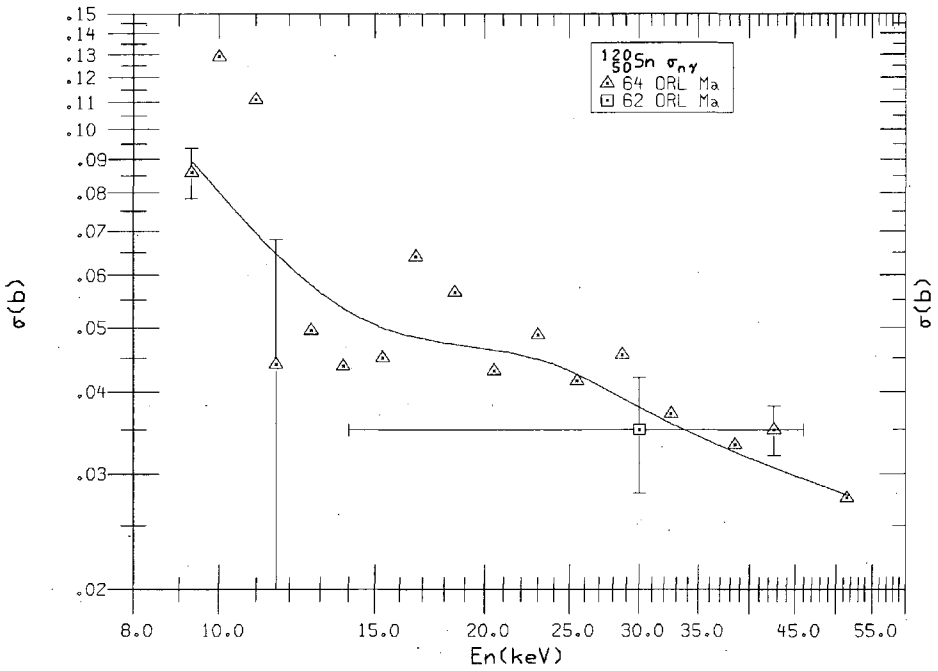
$^{119}_{50}Sn$ $\sigma_{n\gamma}$

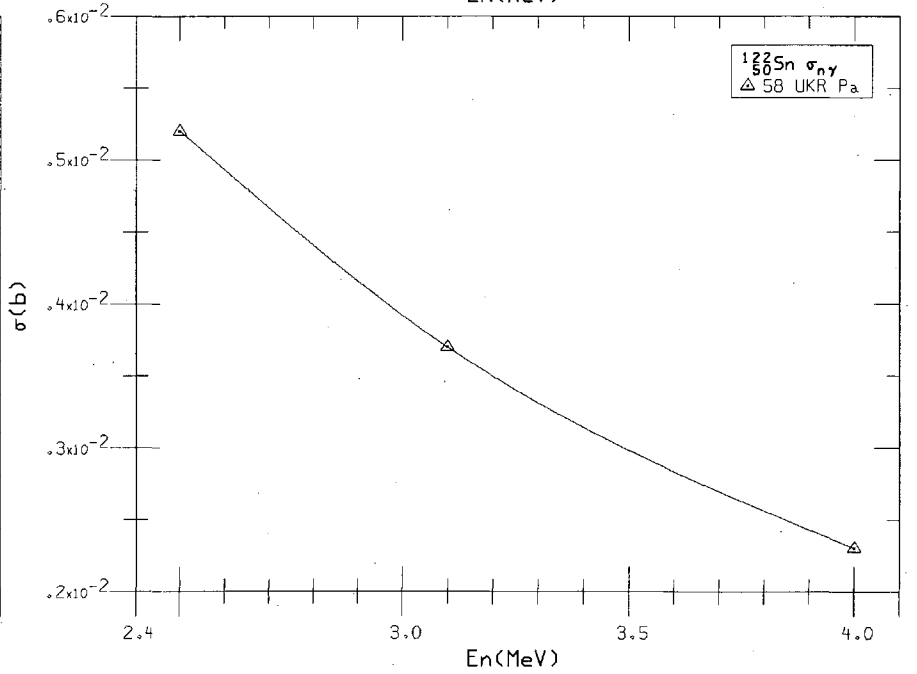
$^{120}_{50}Sn$ $\sigma_{n\gamma}$

$^{122}_{50}Sn$ $\sigma_{n\gamma}$









Yr	Lab	Author	Reference	Points	Range	Standard
			$_{50}$Sn σ_{tot}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
69	ORL	Minor,et.al.	AJP,37,649,69	1	5.110 b at 8.940 MeV	abs
67	BNW	Foster Jr	FOSTER,67	241	2.273 MeV to 14.8 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	61	4.531 MeV to 7.564 MeV	abs
66	ANL	Whalen,et.al.	ANL-7210,16,66	541	.100 MeV to .649 MeV	abs
65	DKE	Seth	PL,16,306,65	79	15.0 keV to .640 MeV	abs
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	1.850 b at 8300. MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	1.986 b at 5000. MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.8 MeV	
60	HAR	Mc Callum,et.al.	NP,16,313,60	13	12.4 MeV to 20.2 MeV	abs
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	33	17.0 eV to 81.6 eV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	7	6.830 MeV to 14.0 MeV	abs
56	CCP	Khaletskii	DOK,113,305,56	1	4.050 b at 14.8 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	4.300 b at 4.100 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	2.202 b at 1400. MeV	
55	BNL	Harvey,et.al.	PR,99,10,55	250	27.4 eV to .695 keV	abs
55	CCP	Ozhelepov,et.al.	ZET,29,369,55	1	1.980 b at 590.0 MeV	
54	BAR	Snowdon,et.al.	PR,94,1267,54	1	4.600 b at 3.700 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.790 MeV to 13.1 MeV	abs
54	BNL	Palevsky	PALEVSKY,54	39	.0003 eV to .0120 eV	
52	WIS	Miller,et.al.	PR,88,83,52	16	1.002 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.680 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	4.000 b at 14.0 MeV	
52	COL	Havens Jr	HAVENS,52	52	.0105 eV to 35.2 eV	
51	BRK	De Juren,et.al.	PR,81,919,51	1	1.900 b at 190.0 MeV	
50	WIS	Adair	PR,77,748(H9),50	18	32.0 keV to 1.401 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	3.251 b at 42.0 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	3.180 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	1.830 b at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	1.870 b at 270.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	3.280 b at 83.0 MeV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$_{50}$Sn σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.880 b at .882 MeV	C σ_{el}
67	ANL	Smith,et.al.	NP/A,93,609,67	62	.325 MeV to 1.450 MeV	C σ_{sct}
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	6.160 b at .980 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.160 b at .980 MeV	H
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	6.870 b at .650 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	7.050 b at .300 MeV	
60	CCP	Lovchikova	ZET,38,1434,60	1	6.800 b at .220 MeV	
58	LAS	Coon,et.al.	PR,111,250,58	1	2.590 b at 14.5 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.200 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.100 b at 1.000 MeV	
54	BAR	Snowdon,et.al.	PR,94,1267,54	1	2.500 b at 3.700 MeV	

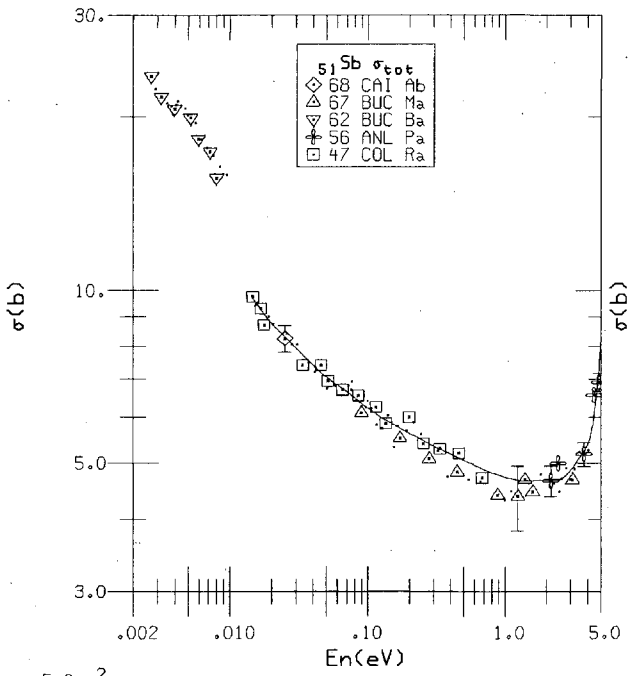
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{50}$Sn σ_{inl}			
66	TUD	Oehler,et.al.	KE,9,95,66	1	40.0 mb at .960 MeV	
63	CCP	Glazkov	AE,15,416,63	2	1.000 MeV to 1.200 MeV	
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	1.218 b at 8300. MeV	
58	LAS	Coon,et.al.	PR,111,250,58	1	91.0 mb at 14.5 MeV	
			$_{50}$Sn σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	60.0 keV to 1.450 MeV	C
			$_{50}$Sn σ_{non}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	1.910 b at 14.8 MeV	abs
59	RIC	Bonner,et.al.	PR,113,1088,59	5	8.200 MeV to 18.5 MeV	abs
58	LRL	Mac Gregor+	PR,111,1155,58	3	21.0 MeV to 29.2 MeV	abs
58	LRL	Ball,et.al.	PR,110,1392,58	6	7.400 MeV to 14.5 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	1.830 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.900 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.180 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	4	1.770 MeV to 7.000 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	1.850 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	2	.770 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	2.200 b at 2.500 MeV	
55	LAS	Graves,et.al.	PR,97,1205,55	1	1.960 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.100 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,55	3	2.500 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.700 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	1.800 b at 14.1 MeV	
			$_{50}$Sn $\sigma_{n\gamma}$			
66	TUD	Oehler,et.al.	KE,9,95,66	1	10.0 mb at .960 MeV	
63	ORL	Macklin,et.al.	NP,43,353,63	1	.124 b at 30.0 keV	Ag $\sigma_{n\gamma}$
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	93.0 mb at 30.0 keV	
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	.605 b at thermal	B $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	68.0 mb at .200 MeV	
			$_{50}$Sn σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	1.920 b at 14.0 MeV	^{252}Cf

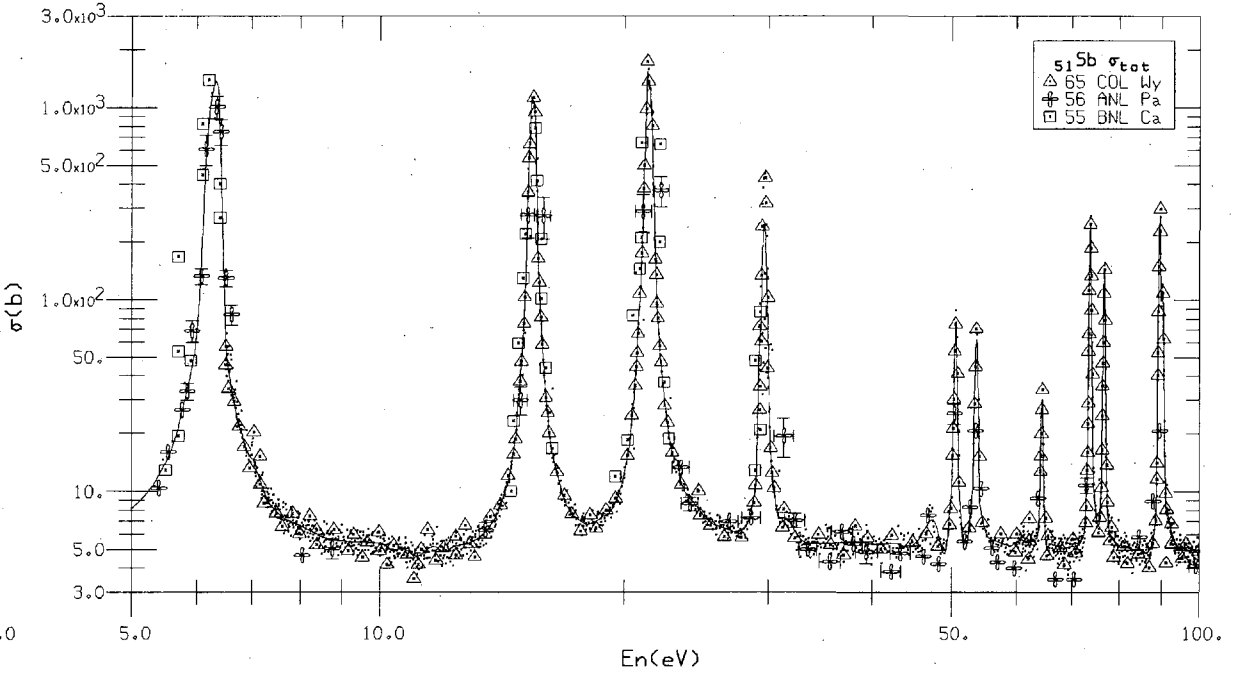
Yr	Lab	Author	Reference	Points	Range	Standard
			^{50}Sn σ_{np}			
61	HAR	Allan	NP,24,274,61	1	15.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{112}_{50}$Sn σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.410 b at 14.2 MeV	abs
			$^{112}_{50}$Sn σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	1.326 b at 14.6 MeV	^{63}Cu σ_{n2n}
70	ABD	Temperley,et.al.	BRL-1491,70	1	.900 b at 14.1 MeV	^{56}Fe σ_{np}
70	GIT	Fink,et.al.	BAP,15,1372(EH6),70	1	1.100 b at 14.4 MeV	
68	RBZ	Lulic,et.al.	NP/A,119,517,68	1	1.300 b at 14.4 MeV	Cu σ_{n2n}
68	HAM	Bormann,et.al.	EANDC(E)89,59,68	10	12.8 MeV to 19.4 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.530 b at 14.2 MeV	^{63}Cu σ_{n2n}
63	GEO	Rayburn	BAP,8,121(M13),63	15	12.3 MeV to 17.8 MeV	
63	CCP	Klyucharev+	ZET,46,1483,63	1	1.610 b at 14.1 MeV	
61	ANL	Rayburn	PR,122,168,61	1	1.508 b at 14.4 MeV	^{63}Cu σ_{n2n}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	3	11.8 MeV to 13.9 MeV	H
			$^{112}_{50}$Sn σ_{np}			
63	UFT	Chursin,et.al.	ZET,44,472,63	1	10.0 mb at 14.5 MeV	^{63}Cu σ_{n2n}
63	CCP	Klyucharev+	ZET,46,1483,63	1	.145 b at 14.1 MeV	
			$^{112}_{50}$Sn σ_{nd}			
70	ABD	Temperley,et.al.	BRL-1491,70	1	.190 b at 14.1 MeV	^{56}Fe σ_{np}
			$^{114}_{50}$Sn σ_{n2n}			
70	ABD	Temperley,et.al.	BRL-1491,70	1	1.090 b at 14.1 MeV	^{56}Fe σ_{np}
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.239 b at 14.4 MeV	^{56}Fe σ_{np}
68	RBZ	Lulic,et.al.	NP/A,119,517,68	1	1.800 b at 14.4 MeV	Cu σ_{n2n}
			$^{116}_{50}$Sn σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.430 b at 14.2 MeV	abs
			$^{116}_{50}$Sn $\sigma_{n\gamma}$			
64	ORL	Macklin	GIBBONS,64	17	9.300 keV to 51.7 keV	
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	92.0 mb at 30.0 keV	
			$^{116}_{50}$Sn σ_{np}			
63	UFT	Chursin,et.al.	ZET,44,472,63	1	5.400 mb at 14.5 MeV	^{63}Cu σ_{n2n}

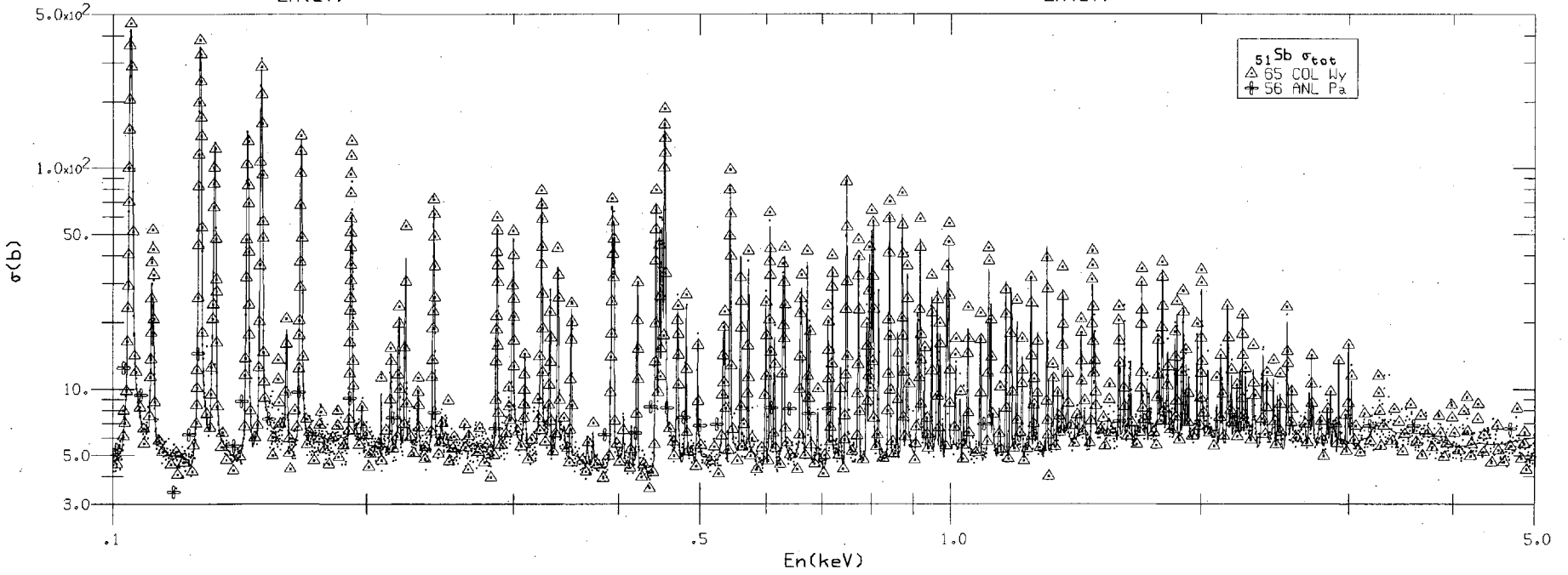
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{117}_{50}$Sn σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.640 b at 14.2 MeV	abs
			$^{117}_{50}$Sn σ_{sct}			
68	KUR	Adamchuk,et.al.	YFI-6,51,68	1	4.750 b at 100.0 eV	
			$^{117}_{50}$Sn $\sigma_{n\gamma}$			
64	ORL	Macklin	GIBBONS,64	18	8.700 keV to 51.5 keV	
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	.390 b at 30.0 keV	
			$^{117}_{50}$Sn σ_{np}			
71	IBJ	Decowski,et.al.	INR-1318,8,71	7	13.0 MeV to 16.5 MeV	
63	CCP	Klyucharev+	ZET,46,1483,63	1	23.0 mb at 14.1 MeV	
			$^{118}_{50}$Sn σ_{tot}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	4.210 b at 4.000 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.750 b at 14.2 MeV	abs
			$^{118}_{50}$Sn σ_{el}			
68	KUR	Gorlov,et.al.	YF,6,663,68	1	1.940 b at 4.000 MeV	
			$^{118}_{50}$Sn $\sigma_{n\gamma}$			
64	ORL	Macklin	GIBBONS,64	19	8.700 keV to 58.5 keV	
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	59.0 mb at 30.0 keV	
			$^{118}_{50}$Sn σ_{np}			
65	IBJ	Brzosko,et.al.	NP,74,438,65	1	6.200 mb at 14.9 MeV	^{56}Fe σ_{np}
63	UFT	Chursin,et.al.	ZET,44,472,63	1	11.7 mb at 14.5 MeV	^{63}Cu σ_{n2n}
			$^{118}_{50}$Sn $\sigma_{n\alpha}$			
61	LAS	Bayhurst,et.al.	JIN,23,173,61	14	12.1 MeV to 19.8 MeV	^{238}U σ_{nf}
			$^{119}_{50}$Sn σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.460 b at 14.2 MeV	abs
			$^{119}_{50}$Sn $\sigma_{n\gamma}$			
64	ORL	Macklin	GIBBONS,64	18	8.700 keV to 51.9 keV	
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	.243 b at 30.0 keV	

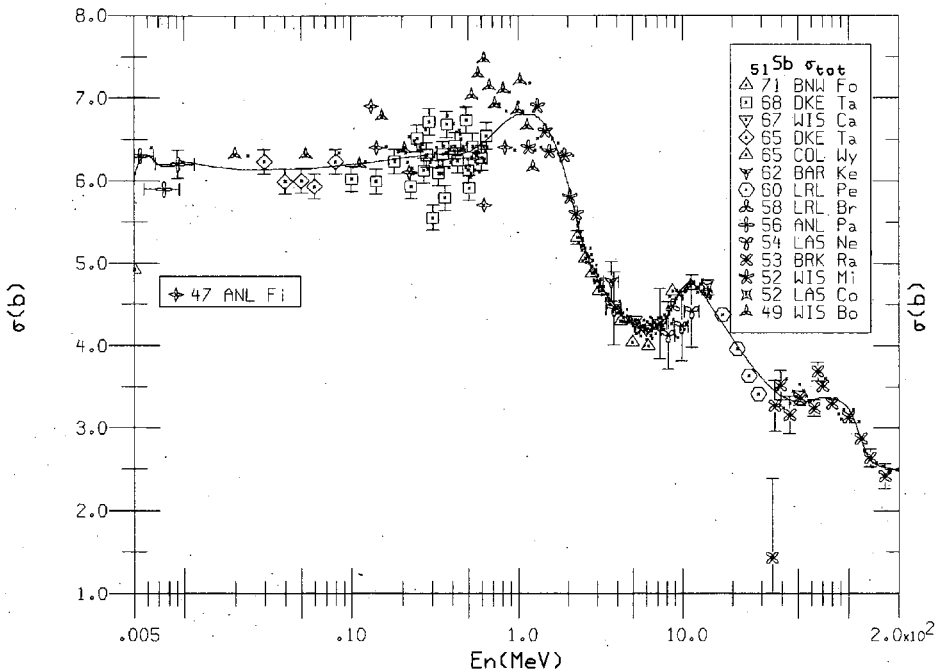
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{120}_{50}Sn$ σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.660 b at 14.2 MeV	abs
			$^{120}_{50}Sn$ $\sigma_{n\gamma}$			
64	ORL	Macklin	GIBBONS,64	17	9.300 keV to 51.5 keV	
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	35.0 mb at 30.0 keV	
			$^{120}_{50}Sn$ σ_{n2n}			
68	RBZ	Lulic,et.al.	NP/A,119,517,68	1	1.444 b at 14.4 MeV	Cu σ_{n2n}
			$^{120}_{50}Sn$ σ_{np}			
63	UFT	Chursin,et.al.	ZET,44,472,63	1	4.600 mb at 14.5 MeV	^{63}Cu σ_{n2n}
			$^{122}_{50}Sn$ σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.690 b at 14.2 MeV	abs
			$^{122}_{50}Sn$ $\sigma_{n\gamma}$			
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	23.0 mb at 30.0 keV	
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	3	2.500 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
			$^{124}_{50}Sn$ σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.710 b at 14.2 MeV	abs
			$^{124}_{50}Sn$ $\sigma_{n\gamma}$			
62	ORL	Macklin,et.al.	NAT,194,1272,62	1	23.0 mb at 30.0 keV	

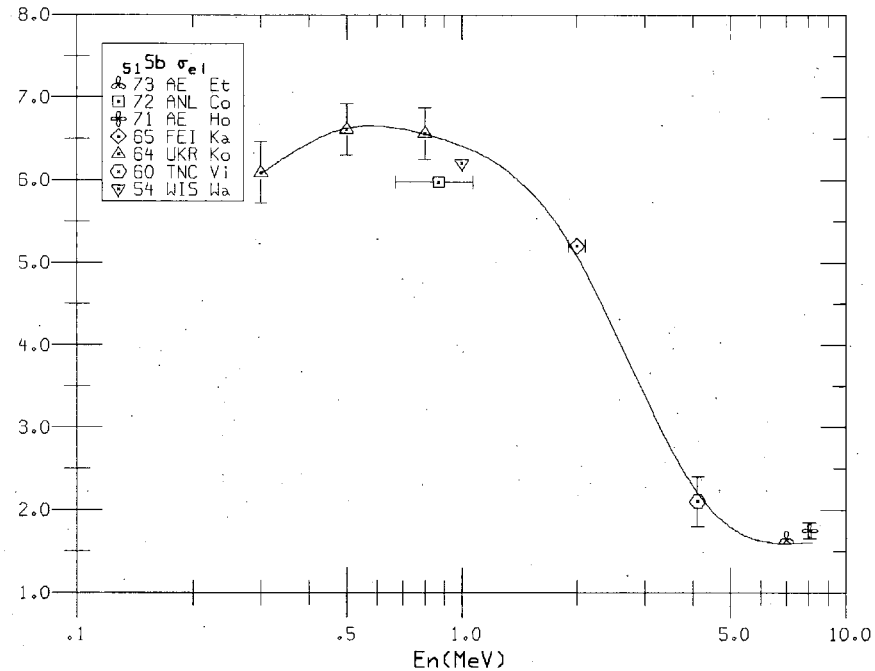
$_{51}$Sb
σ_{tot}

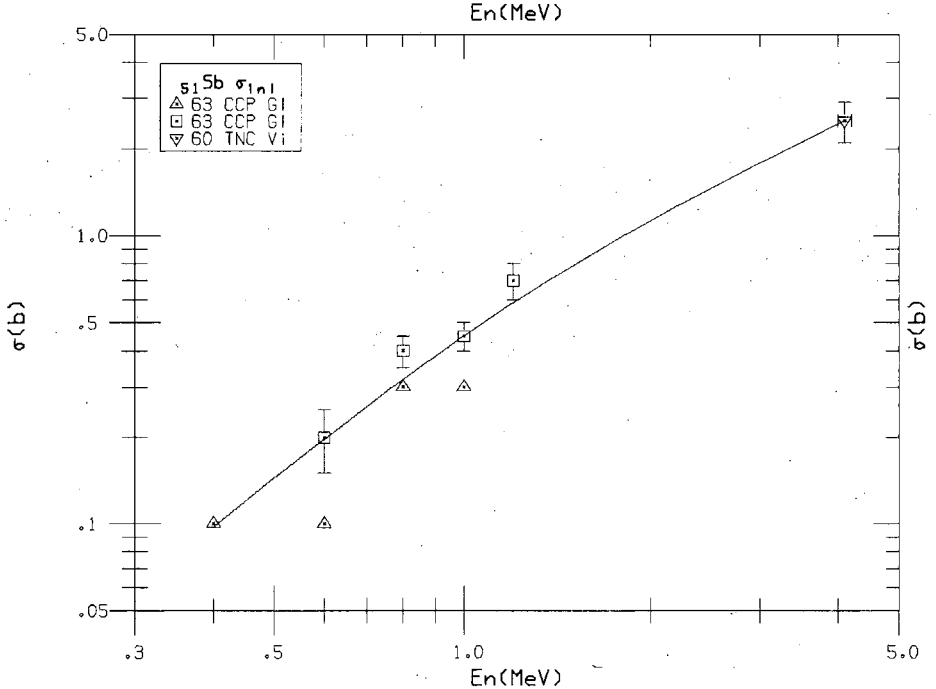


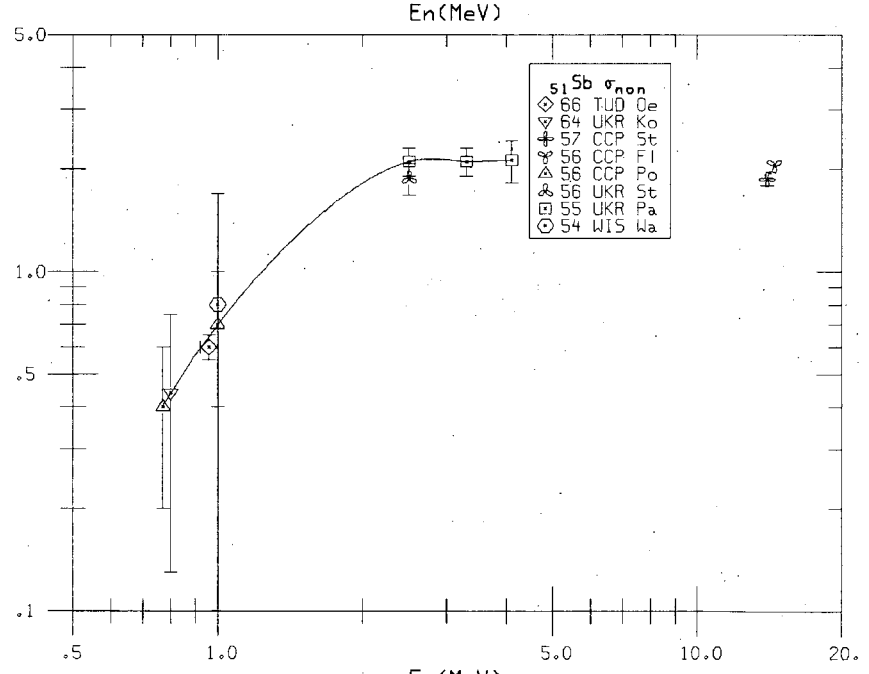





$_{51}$Sb σ_{tot}
71 BNW Fo
68 DKE Ta
67 WIS Ca
65 DKE Ta
65 COL Wy
62 BAR Ke
60 LRL Pe
58 LRL Br
56 ANL Pa
54 LAS Ne
53 BRK Ra
52 WIS Mi
52 LAS Co
49 WIS Bo
47 ANL Fi
σ(b)
En(MeV)


$_{51}$Sb σ_{el}
73 AE Et
72 ANL Co
71 AE Ho
65 FEI Ka
64 UKR Ko
60 TNC Vi
54 WIS Wa
σ(b)
En(MeV)


$_{51}$Sb σ_{inl}
63 CCP Gl
63 CCP Gl
60 TNC Vi
σ(b)
En(MeV)

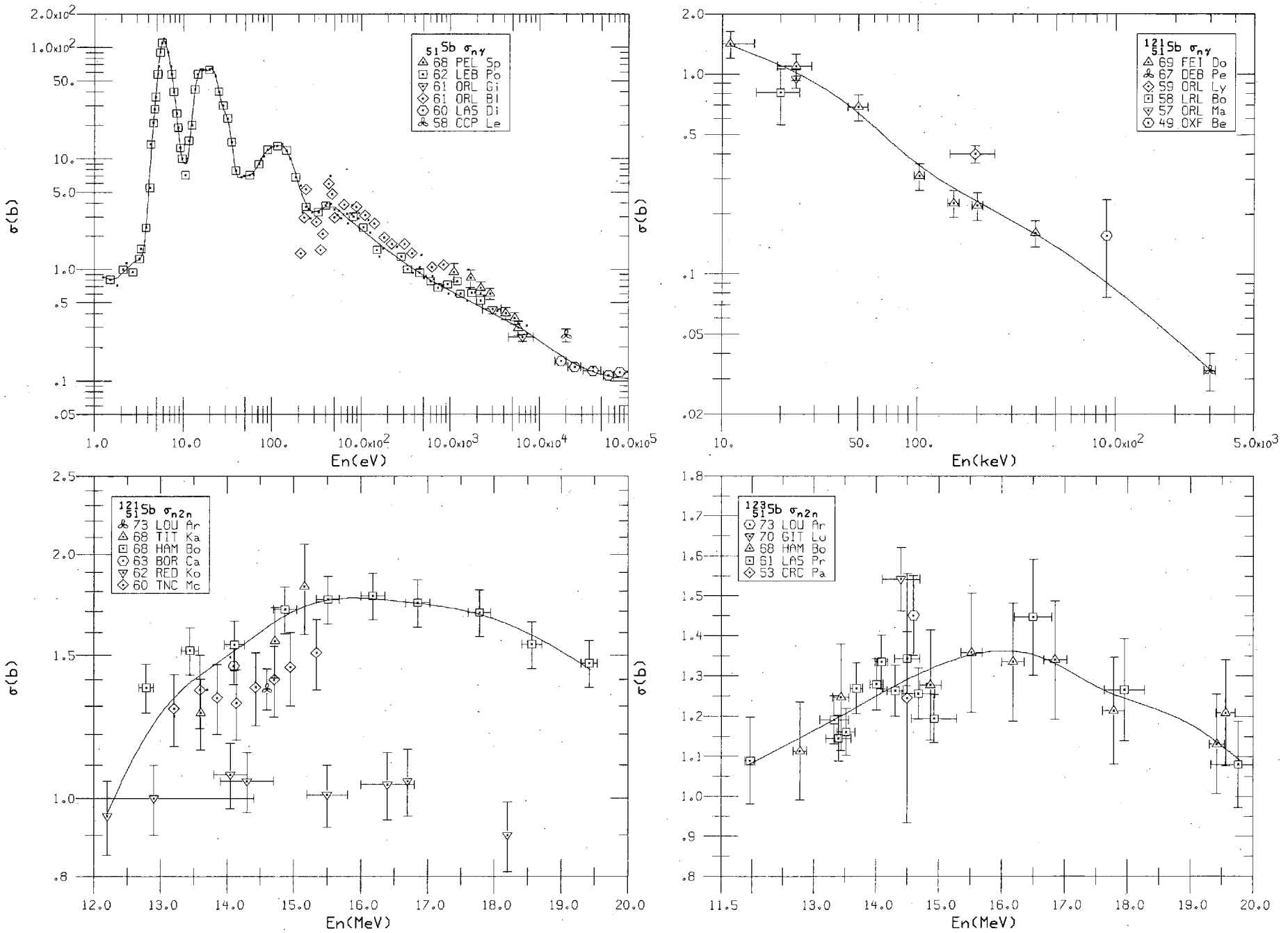

$_{51}$Sb σ_{non}
66 TUD Oe
64 UKR Ko
57 CCP St
56 CCP Fl
56 CCP Po
56 UKR St
55 UKR Pa
54 WIS Wa
σ(b)
En(MeV)

^{51}Sb $\sigma_{n\gamma}$

$^{121}_{51}$Sb $\sigma_{n\gamma}$

σ_{n2n}

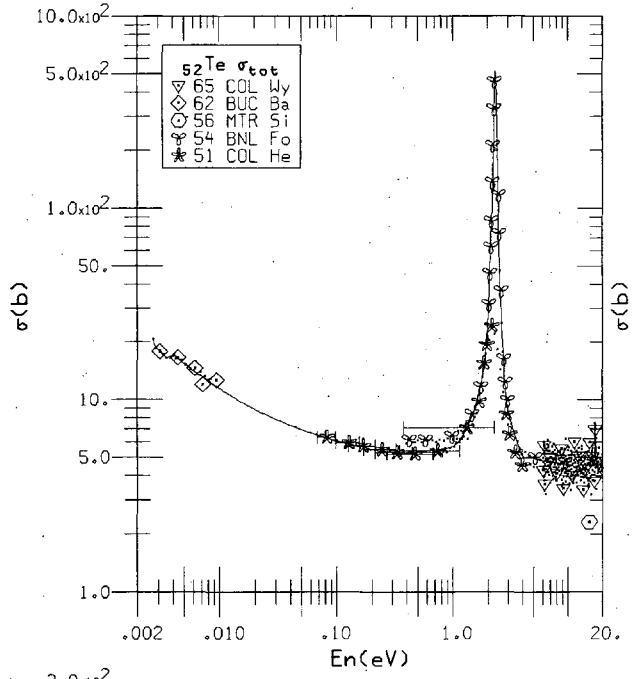
$^{123}_{51}$Sb σ_{n2n}

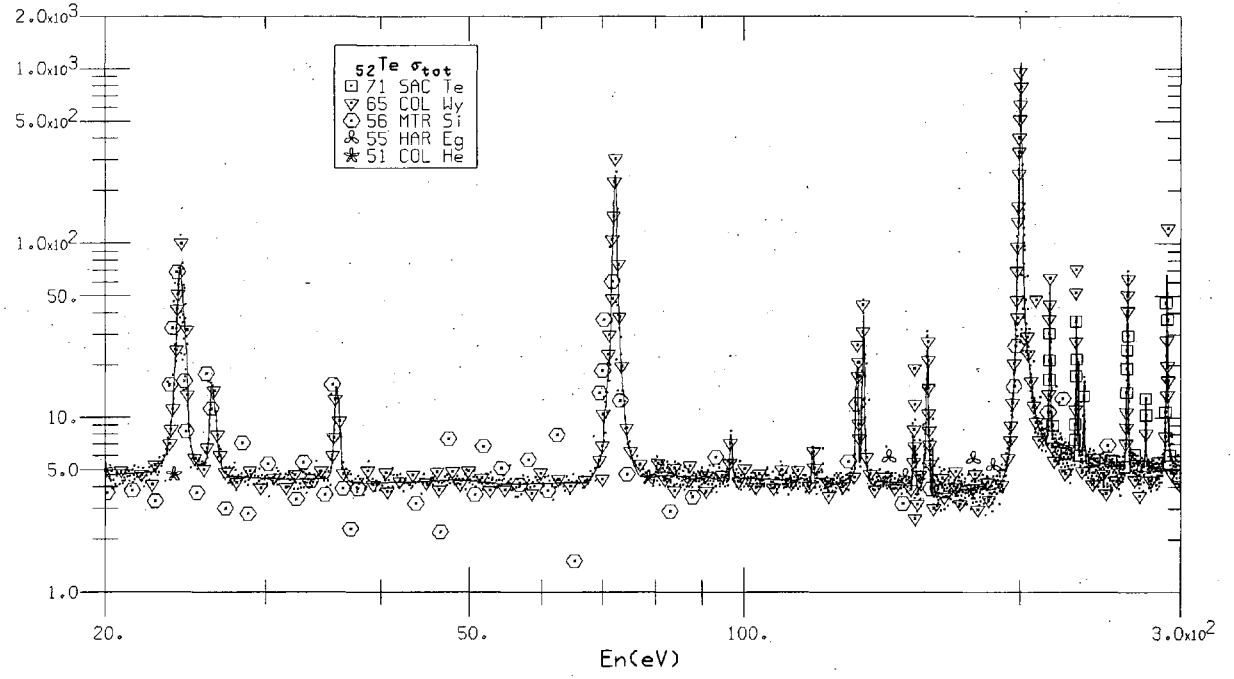


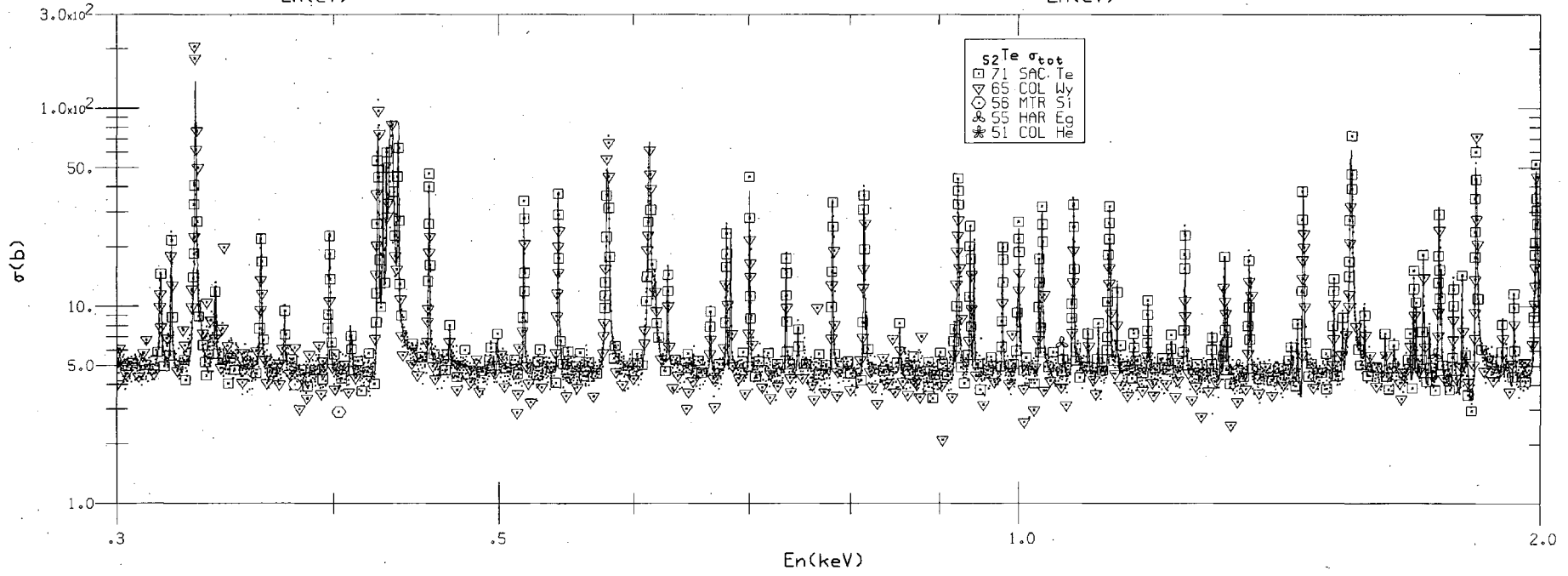
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{51}$Sb σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	242	2.271 MeV to 14.8 MeV	
68	CAI	Abu El-Ela,et.al	JNE,22,389,68	113	.599 eV to 5.757 eV	abs
68	CAI	Abu El-Ela,et.al	JNE,22,389,68	1	8.240 b at .0250 eV	abs
68	DKE	Tabony,et.al.	AP,46,401,68	97	.100 MeV to .650 MeV	
67	BUC	Mateiciuc,et.al.	RRP,12(10),907,67	32	.0501 eV to 3.096 eV	abs
67	WIS	Carlson,et.al.	PR,158,1142,67	61	4.531 MeV to 7.564 MeV	abs
65	DKE	Tabony	SETH,65	5	30.0 keV to 80.0 keV	
65	COL	Wynchank+	BAP,10,514,65	9388	6.500 eV to 5.000 keV	
62	BUC	Bally,et.al.	AE,12,514,62	23	.0027 eV to .0095 eV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.780 b at 3.660 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.8 MeV	abs
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	4.400 b at 4.100 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.010 MeV to 14.4 MeV	abs
56	ANL	Palmer,et.al.	PR,102,228,56	257	2.150 eV to 9.103 keV	
55	BNL	Carter	CARTER,55	62	5.500 eV to 30.9 eV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.770 MeV to 13.2 MeV	abs
53	BRK	Ragent	UCRL-2337,53	41	34.8 MeV to 194.0 MeV	C σ_{tot}
52	WIS	Miller,et.al.	PR,88,83,52	17	1.000 MeV to 3.210 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	4.710 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	4.600 b at 14.0 MeV	
49	WIS	Bockelman,et.al.	PR,76,277,49	31	20.0 keV to 1.371 MeV	abs
47	COL	Rainwater,et.al.	PR,71,65,47	28	.0146 eV to .680 eV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$_{51}$Sb σ_{el}			
73	AE	Etemad	AE-482,73	1	1.650 b at 7.000 MeV	^{1}H σ_{el}
72	ANL	Cox,et.al.	ANL-7935,72	1	5.975 b at .870 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	1.750 b at 8.050 MeV	^{1}H σ_{el}
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	5.200 b at 2.000 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	3	.300 MeV to .800 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.100 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.200 b at 1.000 MeV	
			$_{51}$Sb σ_{inl}			
63	CCP	Glazkov	AE,14,400,63	4	.400 MeV to 1.000 MeV	
63	CCP	Glazkov	AE,15,416,63	5	.400 MeV to 1.200 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.500 b at 4.100 MeV	H
			$_{51}$Sb σ_{non}			
66	TUD	Oehler,et.al.	KE,9,95,66	1	.600 b at .960 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	1	.440 b at .800 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.300 b at 4.100 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	1.850 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	1.960 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	1.870 b at 14.0 MeV	abs
56	CCP	Flerov,et.al.	AE,1,155,56	1	2.060 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	2	.770 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	1.880 b at 2.500 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	3	2.500 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.800 b at 1.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{51}$Sb $\sigma_{n\gamma}$			
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.130 b at .400 MeV	abs
68	PEL	Spitz,et.al.	NP/A,121,655,68	12	11.0 keV to 73.0 keV	In $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.070 mb at 14.1 MeV	
66	TUD	Oehler,et.al.	KE,9,95,66	1	.120 b at .960 MeV	
62	LEB	Popov,et.al.	ZET,42,988,62	101	1.250 eV to 34.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	36	.210 keV to 8.400 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
60	ORL	Schmitt,et.al.	NP,20,202,60	1	.578 b at 24.0 keV	
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.255 b at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{51}$Sb σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	1.960 b at 14.0 MeV	^{252}Cf
			$_{51}$Sb σ_{np}			
61	HAR	Allan	NP,24,274,61	1	11.0 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{121}_{51}$Sb σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.660 b at 14.2 MeV	abs
			$^{121}_{51}$Sb $\sigma_{n\gamma}$			
69	FEI	Dovbenko,et.al.	INDC-260,11,69	7	11.0 keV to .394 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	33.0 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.400 b at .195 MeV	In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.810 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.950 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	.156 b at .900 MeV	^{55}Mn $\sigma_{n\gamma}$
			$^{121}_{51}$Sb σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	1.364 b at 14.6 MeV	^{63}Cu σ_{n2n}
68	TIT	Kanda	JPJ,24,17,68	6	13.2 MeV to 15.2 MeV	
68	HAM	Bormann,et.al.	EANDC(E)-89,59,68	10	12.8 MeV to 19.4 MeV	H
63	BOR	Carles	CR,257,659,63	1	1.455 b at 14.1 MeV	^{63}Cu σ_{n2n}
62	REG	Koehler,et.al.	RR-TR-62-1,62	8	12.2 MeV to 18.2 MeV	^{121}Sb σ_{n2n}
60	TNC	Mc Crary,et.al.	BAP,5,246(HA5),60	8	13.2 MeV to 15.3 MeV	abs
			$^{123}_{51}$Sb σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.680 b at 14.2 MeV	abs

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{123}_{51}$Sb $\sigma_{n\gamma}$			
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	15.4 mb at 14.7 MeV	^{63}Cu σ_{n2n}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.280 b at .195 MeV	In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.230 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.456 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{123}_{51}$Sb σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	1.451 b at 14.6 MeV	^{63}Cu σ_{n2n}
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.542 b at 14.4 MeV	^{56}Fe σ_{np}
68	HAM	Bormann,et.al.	EANDC(E)-89,59,68	10	12.8 MeV to 19.6 MeV	H
61	LAS	Prestwood,et.al.	PR,121,1438,61	15	12.0 MeV to 19.8 MeV	^{238}U σ_{nf}
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.245 b at 14.5 MeV	

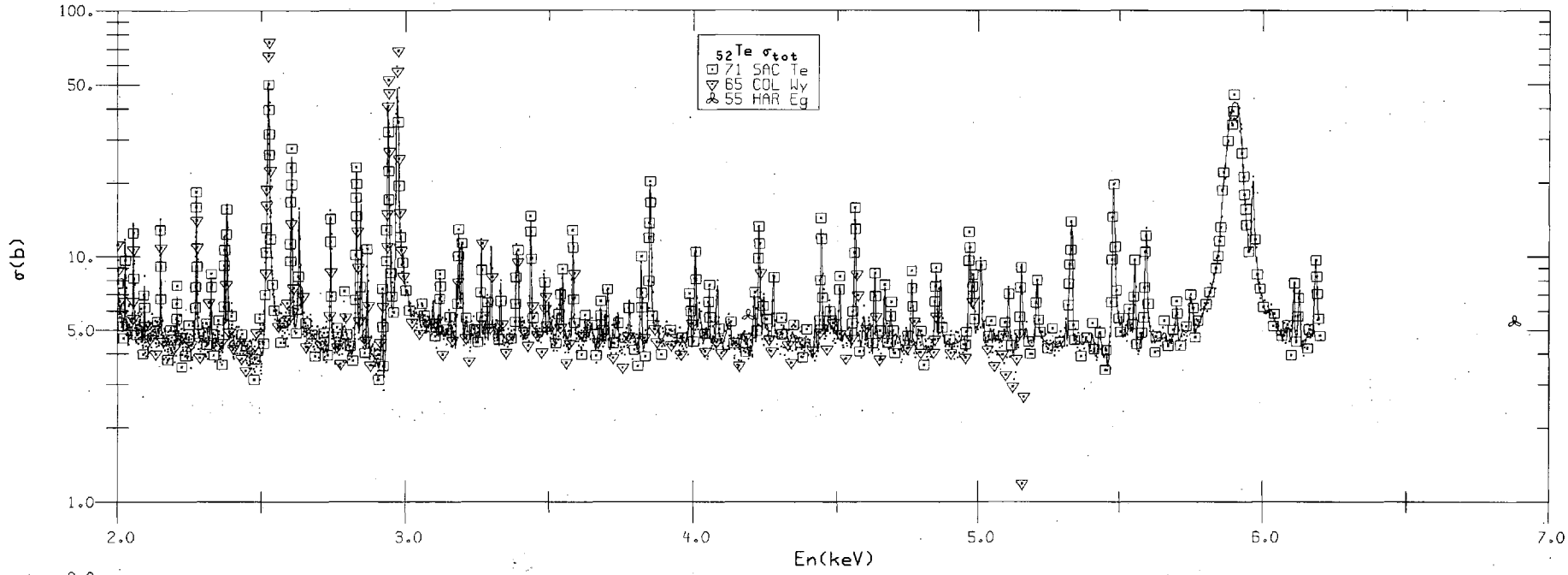

52Te σtot
65 COL Wy
62 BUC Ba
56 MTR Si
54 BNL Fo
51 COL He
σ(b)
En(eV)

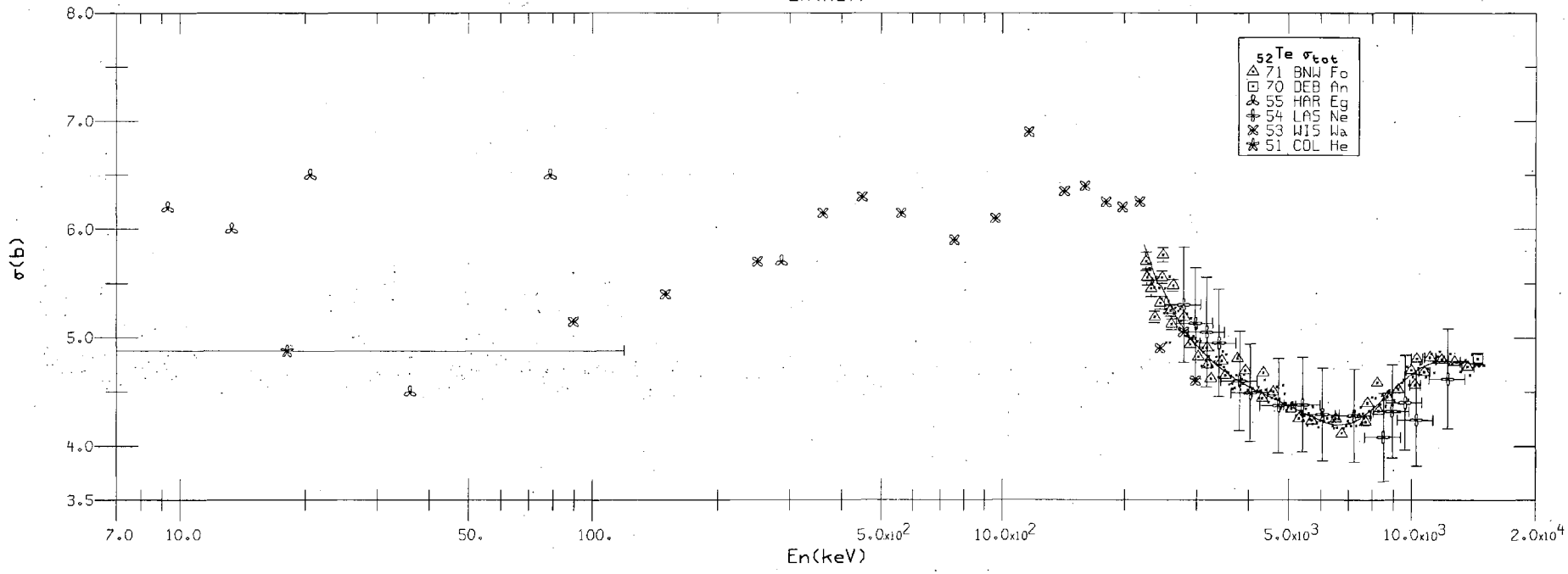

52Te σtot
71 SAC Te
65 COL Wy
56 MTR Si
55 HAR Eg
51 COL He
σ(b)
En(eV)

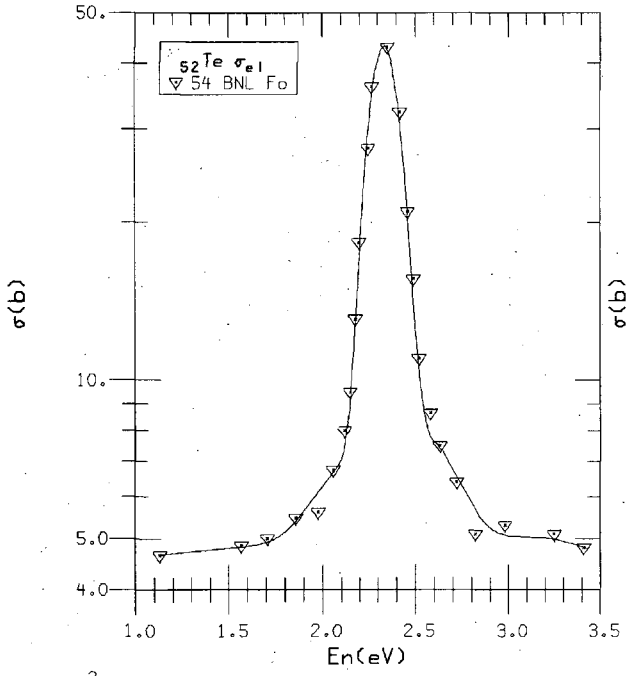

52Te σtot
71 SAC Te
65 COL Wy
56 MTR Si
55 HAR Eg
51 COL He
σ(b)
En(keV)

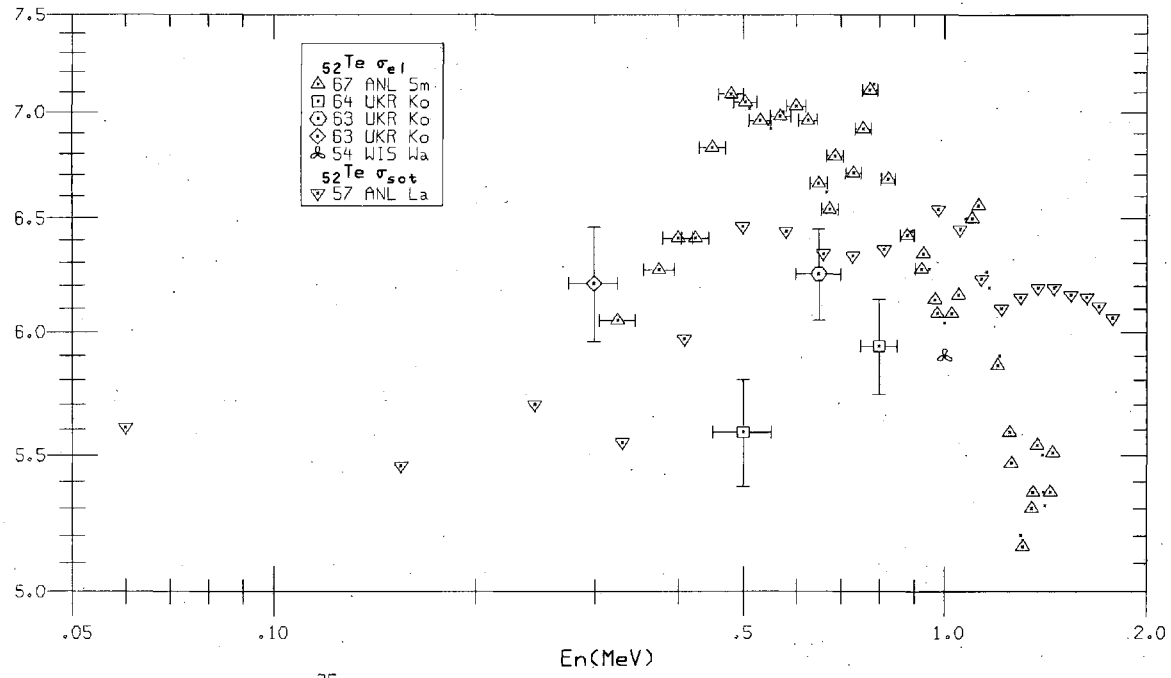
^{52}Te

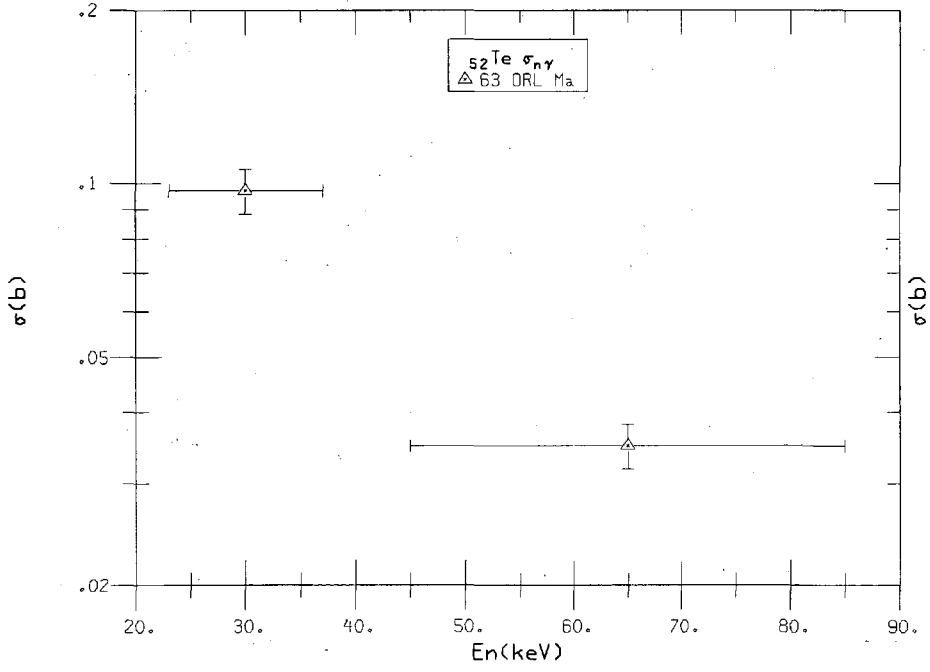
σ_{tot}

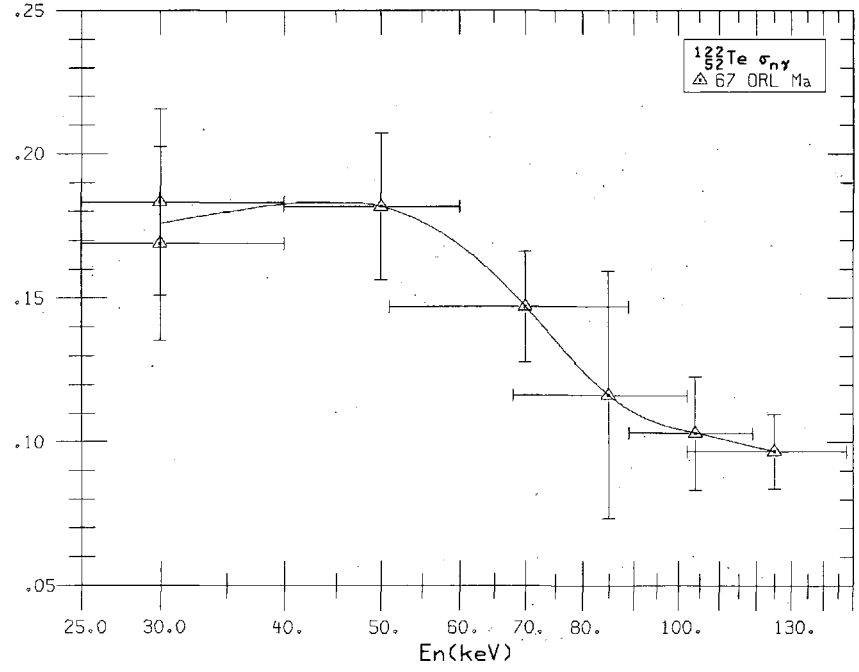





$_{52}$Te σ_{el}
54 BNL Fo
σ(b)
En(eV)


$_{52}$Te σ_{el}
67 ANL Sm
64 UKR Ko
63 UKR Ko
63 UKR Ko
54 WIS Wa
$_{52}$Te σ_{sct}
57 ANL La
En(MeV)


$_{52}$Te $\sigma_{n\gamma}$
63 ORL Ma
σ(b)
En(keV)


$^{122}_{52}$Te $\sigma_{n\gamma}$
67 ORL Ma
σ(b)
En(keV)

$^{123}_{52}Te$ $\sigma_{n\gamma}$

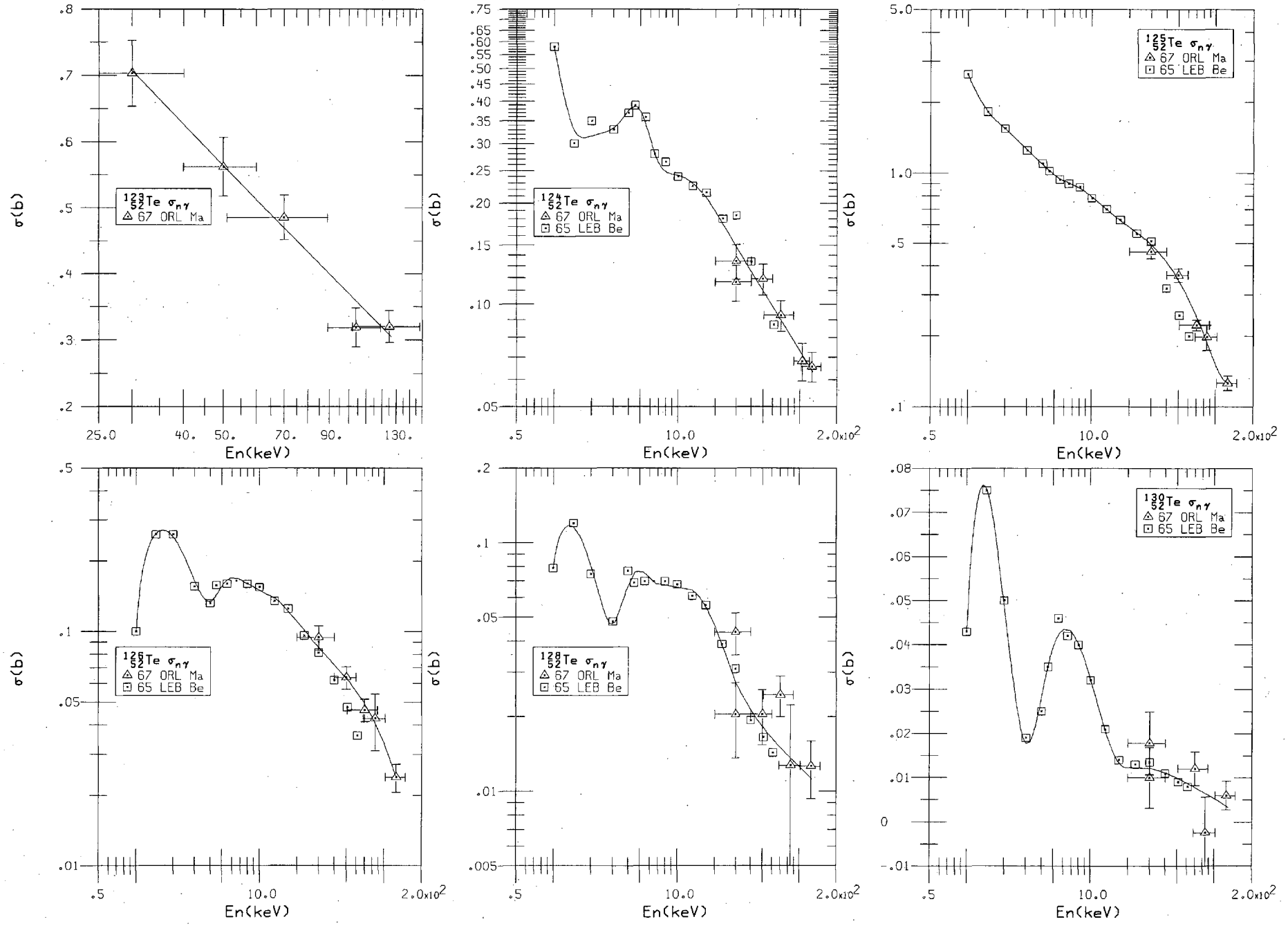
$^{124}_{52}Te$ $\sigma_{n\gamma}$

$^{125}_{52}Te$ $\sigma_{n\gamma}$

$^{126}_{52}Te$ $\sigma_{n\gamma}$

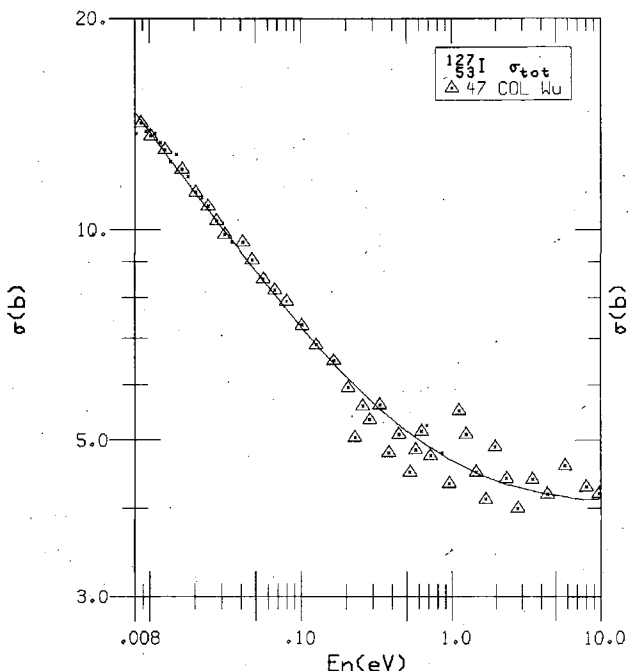
$^{128}_{52}Te$ $\sigma_{n\gamma}$

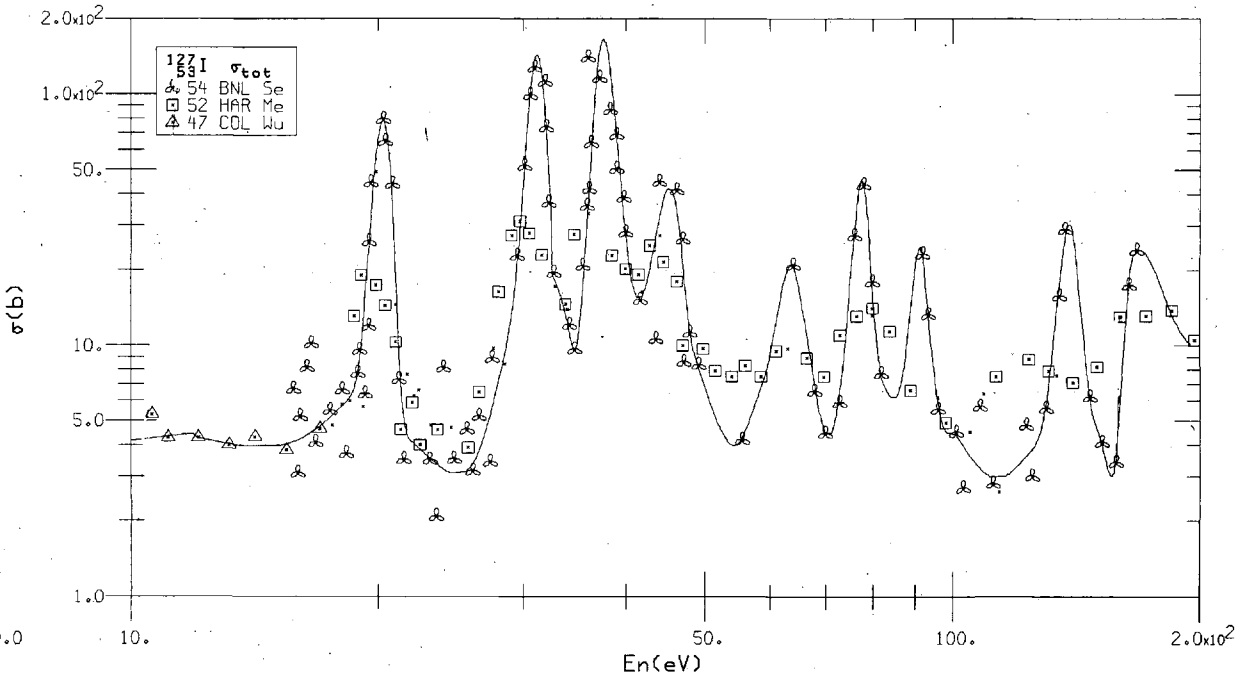
$^{130}_{52}Te$ $\sigma_{n\gamma}$

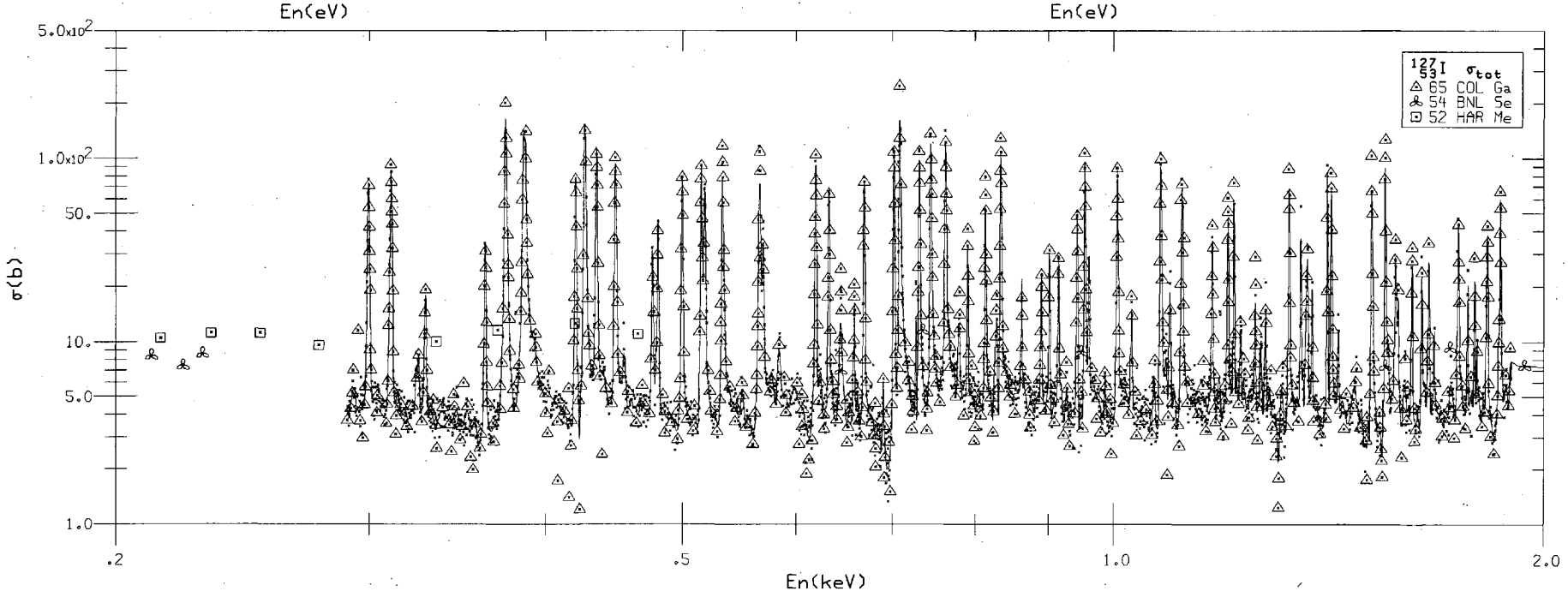


Yr	Lab	Author	Reference	Points	Range	Standard
			$_{52}$Te σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	248	2.259 MeV to 15.0 MeV	
71	SAC	Tellier	TELLIER,71	13105	.215 keV to 6.204 keV	abs
70	DEB	Angeli,et.al.	AHP,28,87,70	1	4.810 b at 14.5 MeV	
65	COL	Wynchank+	BAP,10,514,65	9442	6.070 eV to 5.163 keV	abs
62	BUC	Bally,et.al.	AE,12,514,62	19	.0027 eV to .0095 eV	
62	BAR	Kent,et.al.	PR,125,331,62	1	4.580 b at 3.660 MeV	
56	MTR	Simpson	SIMPSON,56	191	10.6 eV to .403 keV	abs
55	HAR	Egelstaff	EGELSTAFF,55	49	.144 keV to .286 MeV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.790 MeV to 13.1 MeV	abs
54	BNL	Foote	PR,94,790,54	68	.400 eV to 10.0 eV	
53	WIS	Walt,et.al.	PR,89,1271,53	20	90.0 keV to 2.975 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.850 b at 14.1 MeV	
51	COL	Heindl,et.al.	PR,83,660,51	72	.0832 eV to 18.1 keV	
			$_{52}$Te σ_{el}			
67	ANL	Smith,et.al.	NP/A,93,609,67	53	.325 MeV to 1.450 MeV	C σ_{sct}
64	UKR	Korzh,et.al.	AE,16,260,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	6.250 b at .650 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	6.210 b at .300 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.900 b at 1.000 MeV	
54	BNL	Foote	PR,94,790,54	24	1.130 eV to 3.410 eV	
			$_{52}$Te σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	C
			$_{52}$Te σ_{non}			
57	CCP	Strizhak	AE,2,68,57	1	2.000 b at 14.0 MeV	abs
56	UKR	Strizhak	ZET,31,907,56	1	2.000 b at 2.500 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.600 b at 1.000 MeV	
			$_{52}$Te $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
51	COL	Heindl,et.al.	PR,83,660,51	1	4.430 b at thermal	
			$_{52}$Te σ_{np}			
61	HAR	Allan	NP,24,274,61	1	5.000 mb at 14.0 MeV	^{54}Fe σ_{np}
			$^{120}_{52}$Te σ_{n2n}			
68	ARK	Husain,et.al.	NP/A,114,663,68	1	1.220 b at 14.8 MeV	
			$^{122}_{52}$Te σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.650 b at 14.2 MeV	
			$^{122}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	7	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
			$^{122}_{52}$Te σ_{n2n}			
68	ARK	Husain,et.al.	NP/A,114,663,68	1	1.280 b at 14.8 MeV	
			$^{123}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	6	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
			$^{124}_{52}$Te σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.600 b at 14.2 MeV	
			$^{124}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	6	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
65	LEB	Bergman,et.al.	65ANTWERP,,570,65	34	1.000 keV to 61.0 keV	
			$^{125}_{52}$Te σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.690 b at 14.2 MeV	
			$^{125}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	6	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
65	LEB	Bergman,et.al.	65ANTWERP,,570,65	34	1.000 keV to 61.0 keV	
			$^{126}_{52}$Te σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.730 b at 14.2 MeV	
			$^{126}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	6	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
65	LEB	Bergman,et.al.	65ANTWERP,,570,65	34	1.000 keV to 61.0 keV	
			$^{128}_{52}$Te σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.760 b at 14.2 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{128}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	6	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
65	LEB	Bergman,et.al.	65ANTWERP,,570,65	33	1.000 keV to 61.0 keV	
			$^{128}_{52}$Te σ_{n2n}			
68	ARK	Husain,et.al.	NP/A,114,663,68	1	1.390 b at 14.8 MeV	
			$^{128}_{52}$Te σ_{np}			
68	ARK	Husain,et.al.	NP/A,114,663,68	1	2.300 mb at 14.8 MeV	
			$^{128}_{52}$Te σ_{nnp}			
59	ALD	Barry,et.al.	PPS,74,632,59	1	.330 mb at 14.5 MeV	
			$^{130}_{52}$Te σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	4.810 b at 14.2 MeV	
			$^{130}_{52}$Te σ_{tot}			
38	DKE	Bilpuch	AP,14,387 61	380	1.000 keV to .120 MeV	
			$^{130}_{52}$Te $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	5	30.0 keV to .125 MeV	Ta $\sigma_{n\gamma}$
65	LEB	Bergman,et.al.	65ANTWERP,,570,65	34	1.000 keV to 61.0 keV	
49	OXF	Beghian,et.al.	NAT,163,366,49	1	26.5 mb at .900 MeV	^{55}Mn $\sigma_{n\gamma}$
			$^{130}_{52}$Te σ_{n2n}			
68	ARK	Husain,et.al.	NP/A,114,663,68	1	.676 b at 14.8 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	.599 b at 14.5 MeV	abs
			$^{130}_{52}$Te σ_{nnp}			
59	ALD	Barry,et.al.	PPS,74,632,59	1	.170 mb at 14.5 MeV	
			$^{130}_{52}$Te σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	15.0 muB at 14.0 MeV	
			$^{130}_{52}$Te $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.370 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$


$^{127}_{53}I$ σ_{tot}
47 COL Wu
σ(b)
En(eV)


$^{127}_{53}I$ σ_{tot}
54 BNL Se
52 HAR Me
47 COL Wu
σ(b)
En(eV)

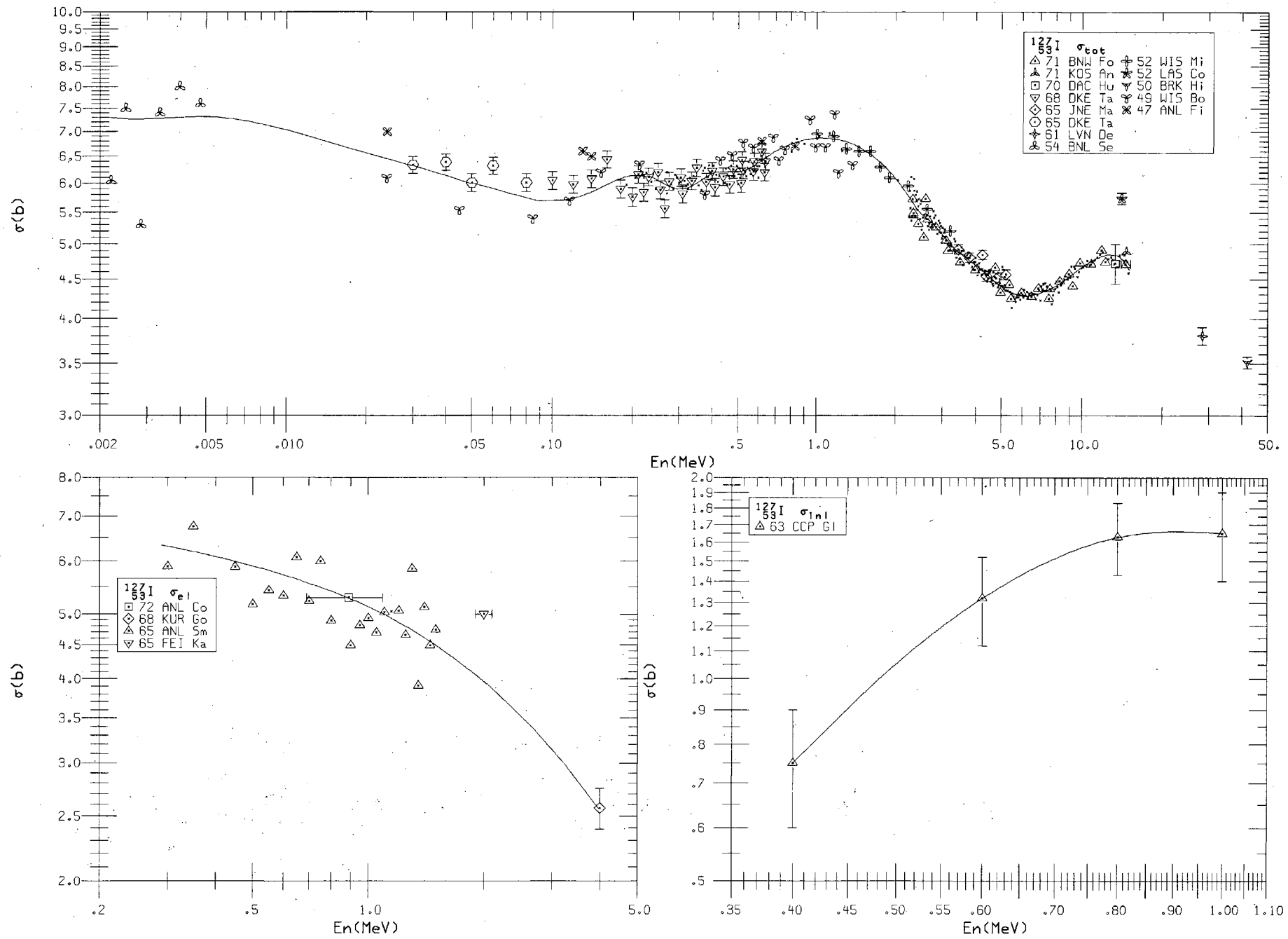

$^{127}_{53}I$ σ_{tot}
65 COL Ga
54 BNL Se
52 HAR Me
σ(b)
En(keV)

$^{127}_{53}I$

σ_{tot}

σ_{el}

σ_{inl}



$^{127}_{53}I$

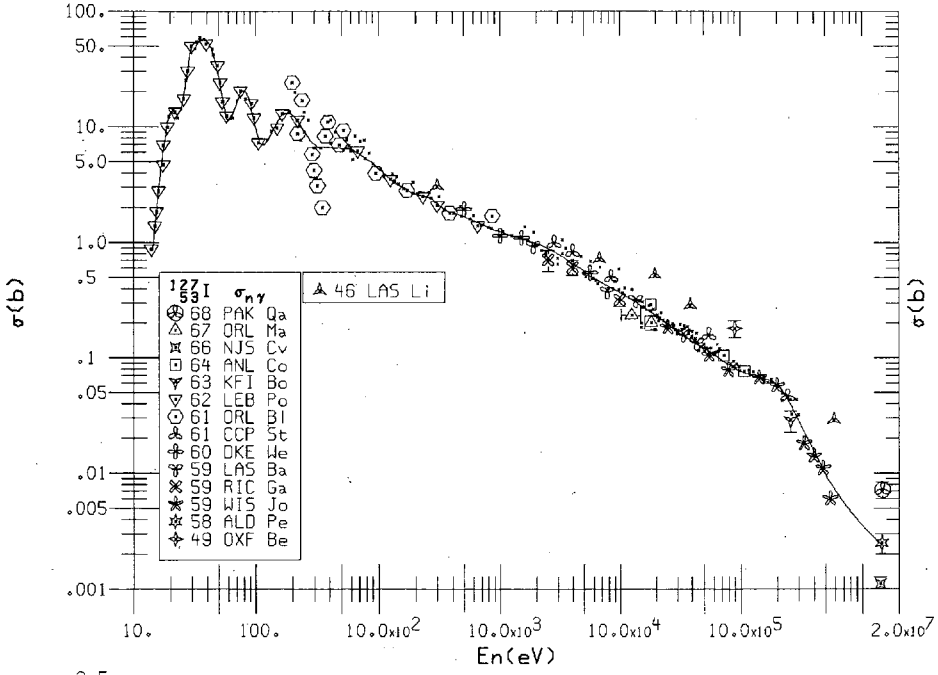
$\sigma_{n\gamma}$

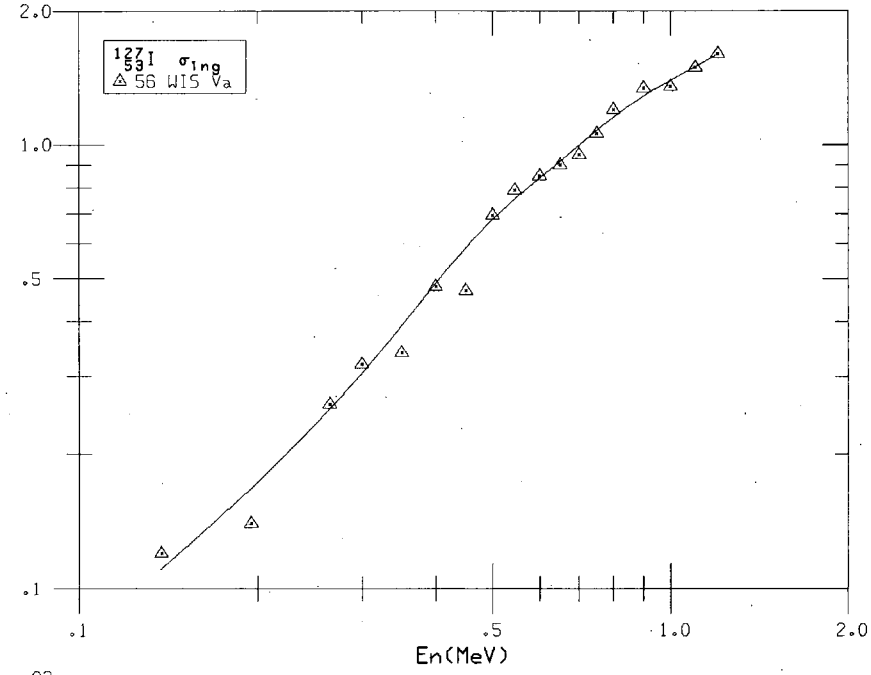
σ_{ing}

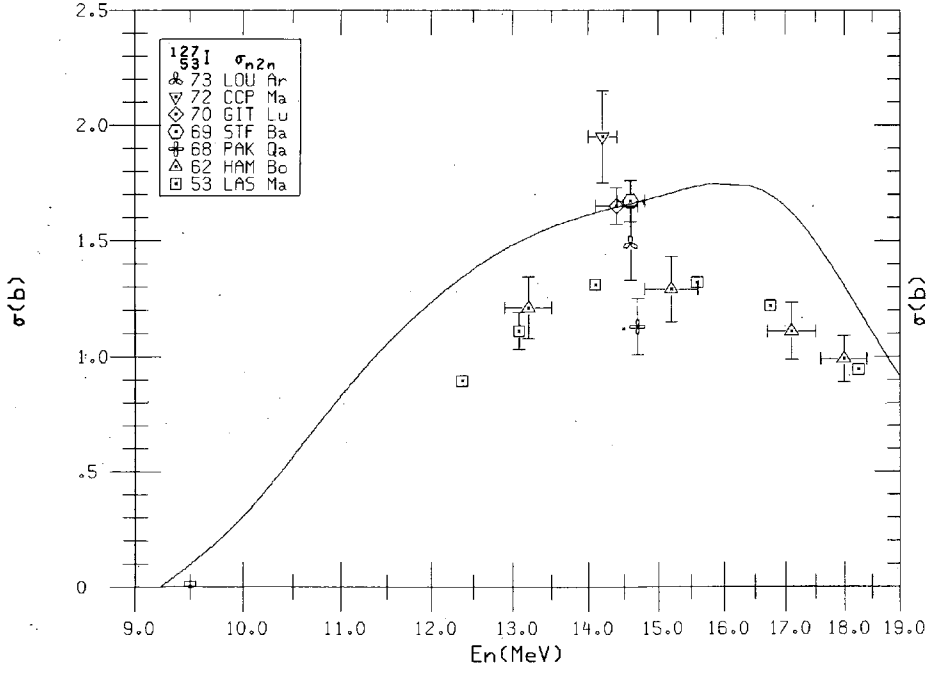
σ_{n2n}

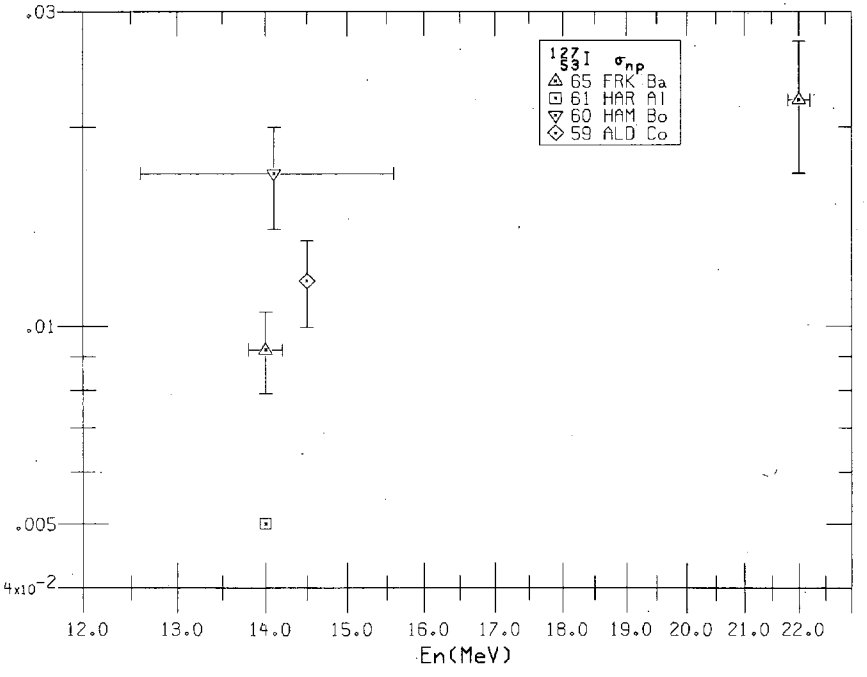
[6414]

σ_{np}









$^{127}_{53}I$

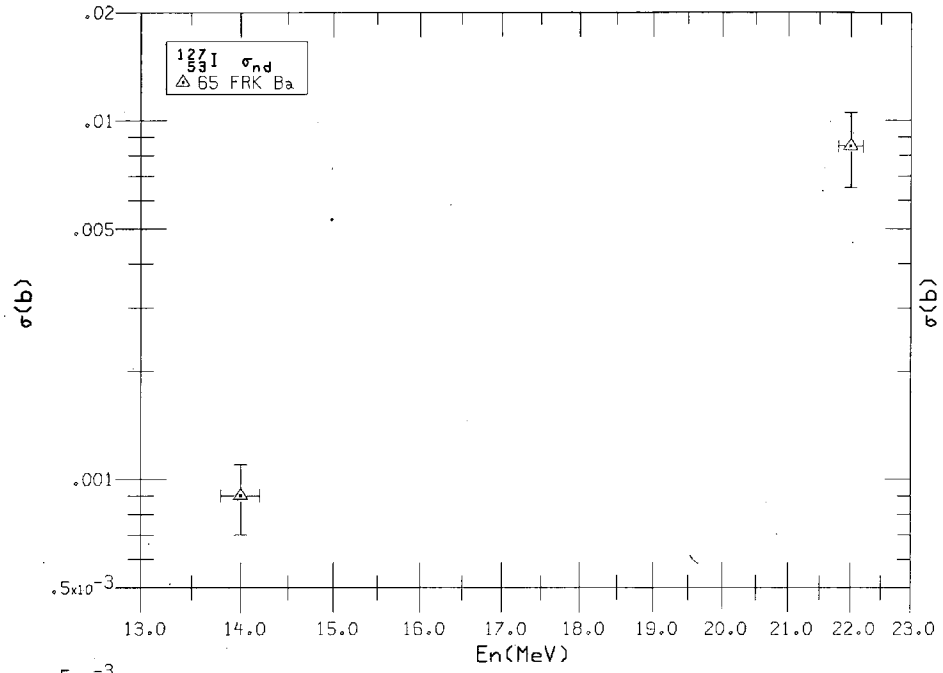
σ_{nd}

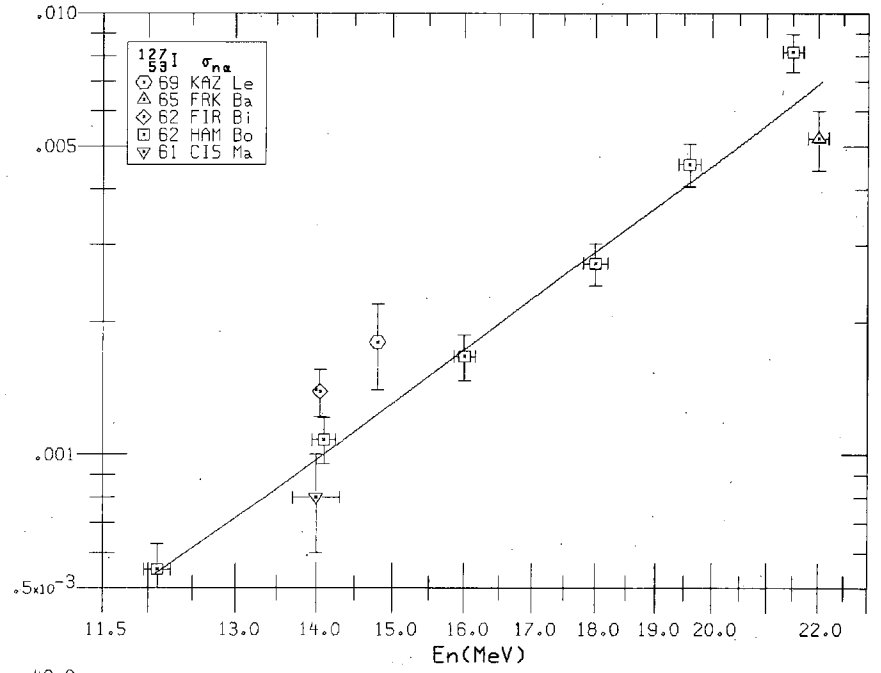
$\sigma_{n\alpha}$

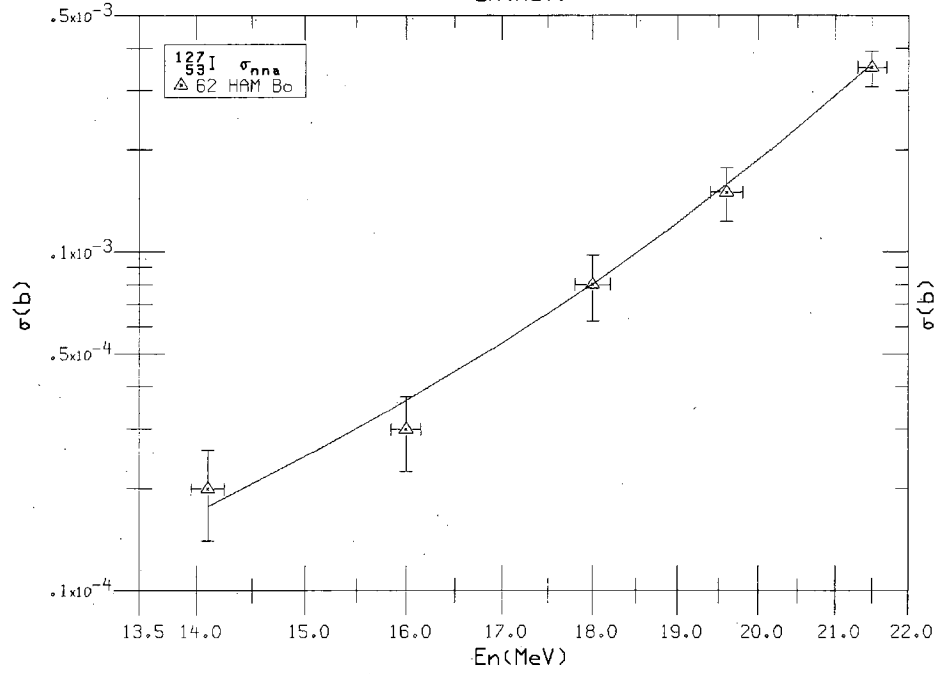
σ_{nna}

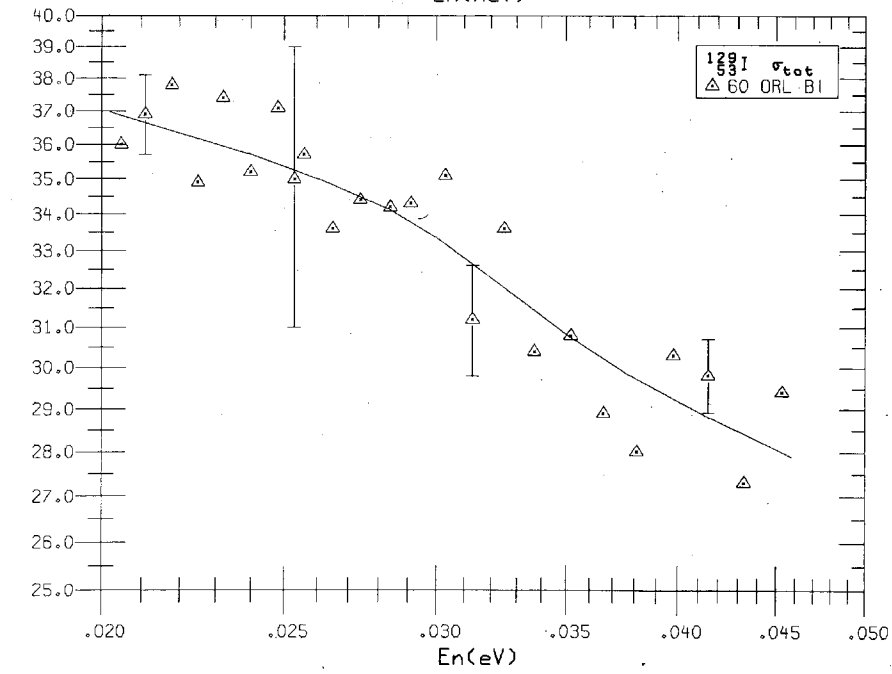
$^{129}_{53}I$

σ_{tot}





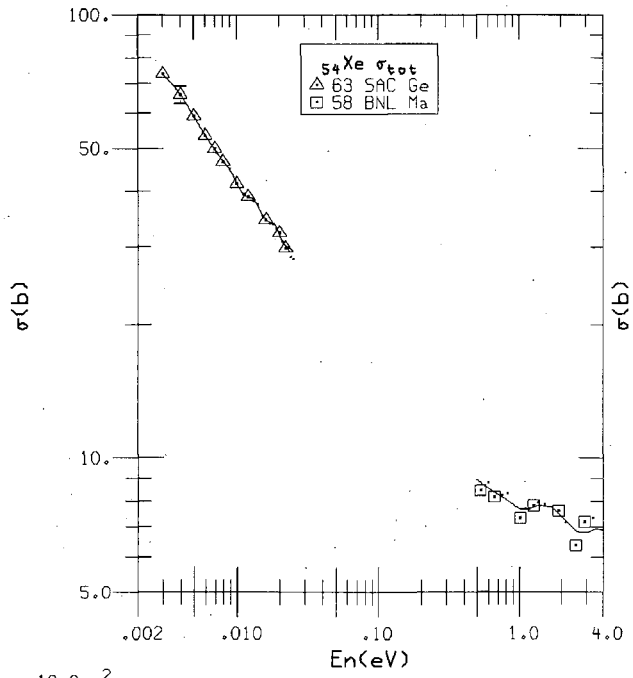


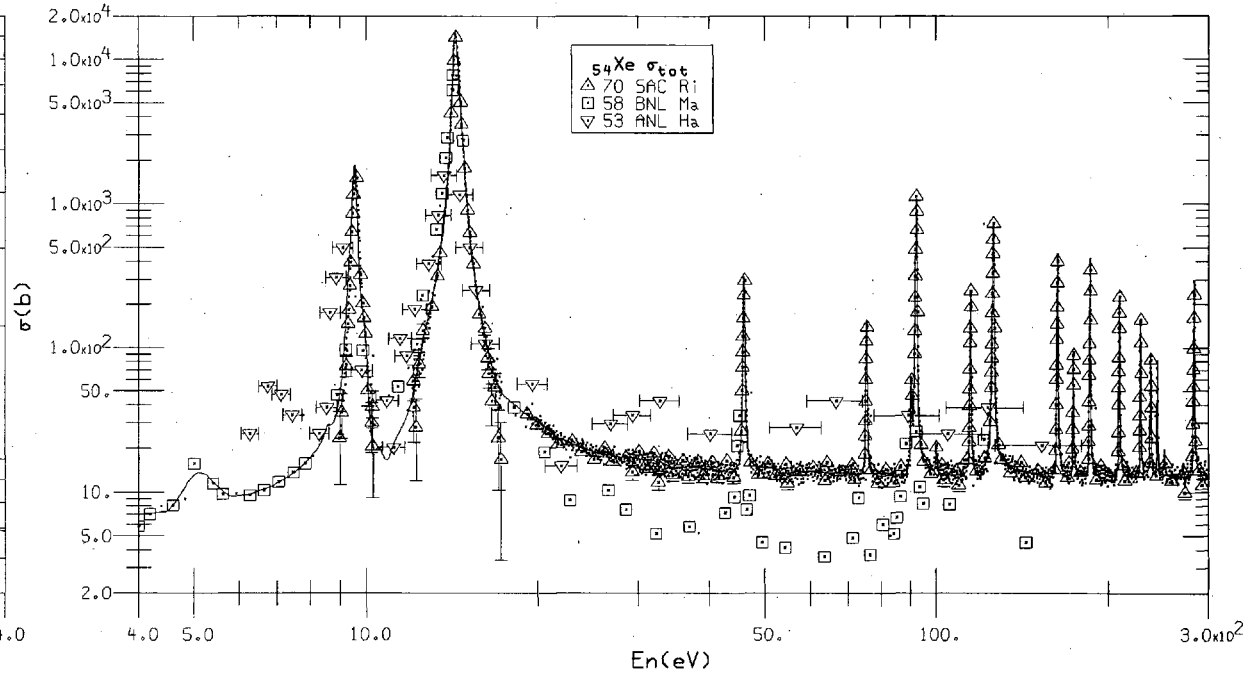


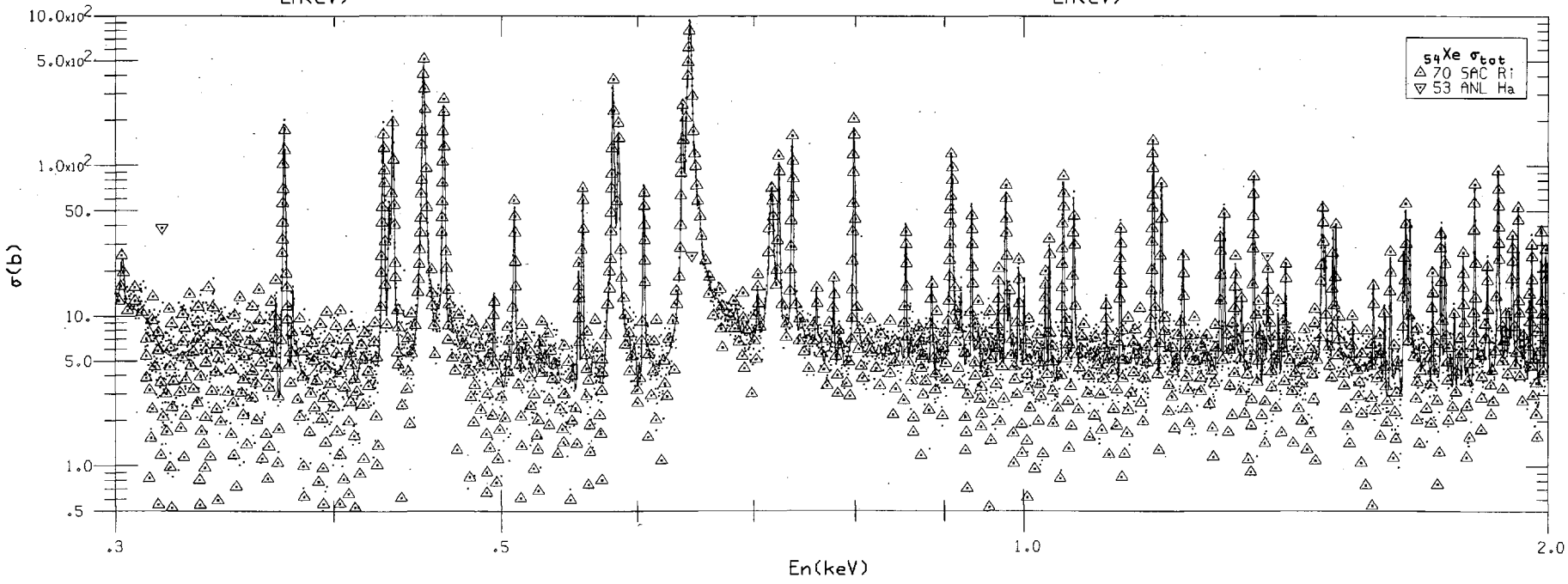
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{127}_{53}$I σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.262 MeV to 15.0 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	4.890 b at 14.7 MeV	
70	DEB	Angeli,et.al.	AHP,28,87,70	1	4.840 b at 14.5 MeV	
70	DAC	Hussain,et.al.	JNE,24,385,70	2	13.4 MeV to 13.5 MeV	
68	DKE	Tabony,et.al.	AP,46,401,68	97	.100 MeV to .650 MeV	
68	KUR	Gorlov,et.al.	YF,6,663,68	1	4.800 b at 4.000 MeV	
65	JNE	Manero	NP,65,419,65	36	3.350 MeV to 5.210 MeV	
65	COL	Garg,et.al.	PR/B,137,547,65	4036	.290 keV to 1.898 keV	abs
65	DKE	Tabony	SETH,65	5	30.0 keV to 80.0 keV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	3.800 b at 28.4 MeV	
54	BNL	Seidl,et.al.	PR,95,476,54	122	15.8 eV to 4.750 keV	
52	WIS	Miller,et.al.	PR,88,83,52	14	1.005 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.740 b at 14.1 MeV	
52	HAR	Merrison,et.al.	PRS/A,215,278,52	70	17.6 eV to .590 keV	
50	BRK	Hildebrand+	PR,80,842,50	1	3.510 b at 42.0 MeV	
49	WIS	Bockelman,et.al.	PR,76,277,49	31	23.9 keV to 1.370 MeV	abs
47	COL	Wu,et.al.	PR,71,174,47	58	.0082 eV to 17.0 eV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$^{127}_{53}$I σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.291 b at .889 MeV	C σ_{el}
68	KUR	Gorlov,et.al.	YF,6,663,68	1	2.570 b at 4.000 MeV	
65	ANL	Smith,et.al.	EANDC(US)62,65	23	.300 MeV to 1.500 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	5.000 b at 2.000 MeV	
			$^{127}_{53}$I σ_{inl}			
63	CCP	Glazkov	AE,15,416,63	4	.400 MeV to 1.000 MeV	
			$^{127}_{53}$I σ_{non}			
57	CCP	Strizhak	AE,2,68,57	1	1.880 b at 14.0 MeV	abs
56	CCP	Flerov,et.al.	AE,1,155,56	1	2.110 b at 14.5 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	1.960 b at 2.500 MeV	abs
			$^{127}_{53}$I $\sigma_{n\gamma}$			
75	BNL	Rimawi,et.al.	BAP,20,173(IBB),75	1	.767 b at 24.3 keV	^{10}B $\sigma_{n\alpha}$
72	RBZ	Holub,et.al.	LNS-4-72,72	1	7.000 mb at 14.4 MeV	^{56}Fe σ_{np}
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.150 b at .400 MeV	abs
68	IRK	Colditz,et.al.	OSA,105,236,68	1	42.8 mb at 2.900 MeV	^{115}In σ_{inl}
68	PAK	Qaim,et.al.	JIN,30,2577,68	1	7.200 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	31.8 mb at 3.000 MeV	^{31}P σ_{np}
67	ORL	Macklin,et.al.	PR,159,1007,67	3	.125 MeV to .182 MeV	Ta $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.100 mb at 14.1 MeV	
65	NPL	Robertson	NP,71,417,65	1	.832 b at 24.0 keV	
64	ANL	Cox	PR/B,133,378,64	30	.180 MeV to 1.880 MeV	^{235}U σ_{nf}
63	KFI	Borbely,et.al.	KFKI-1467/F,63	1	28.3 mb at 2.500 MeV	
63	OAU	Schmitt	EANDC-33,41,63	1	.768 b at 24.0 keV	abs
62	LEB	Popov,et.al.	ZET,42,988,62	73	14.0 eV to 50.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	39	.199 keV to 8.500 keV	^{127}I $\sigma_{n\gamma}$
61	CCP	Stavisskii+	AE,10,158,61	55	19.0 keV to 2.550 MeV	^{235}U σ_{nf}
60	DKE	Weston,et.al.	AP,10,477,60	14	5.000 keV to .150 MeV	^{127}I $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	1	.176 b at .400 MeV	
59	LAS	Bame Jr,et.al.	PR,113,256,59	31	18.8 keV to .660 MeV	^{235}U σ_{nf}
59	RIC	Gabbard,et.al.	PR,114,201,59	9	25.0 keV to .506 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.175 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	28	.150 MeV to 5.500 MeV	^{235}U σ_{nf}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	2.500 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.820 b at 24.0 keV	abs
49	OXF	Beghian,et.al.	NAT,163,366,49	1	.180 b at .900 MeV	^{55}Mn $\sigma_{n\gamma}$
46	LAS	Linenberger+	LA-467,46	8	3.000 keV to 5.900 MeV	^{235}U σ_{nf}
			$^{127}_{53}$I σ_{ing}			
56	WIS	Van Loef,et.al.	PR,101,103,56	18	.138 MeV to 1.200 MeV	
			$^{127}_{53}$I σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	1.487 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.950 b at 14.2 MeV	
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.649 b at 14.4 MeV	^{56}Fe σ_{np}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	1.670 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	LRL	Barrall,et.al.	NP/A,138,387,69	1	1.660 b at 14.8 MeV	^{1}H σ_{tot}
68	PAK	Qaim,et.al.	JIN,30,2577,68	1	1.128 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	HAM	Bormann,et.al.	ZP,166,477,62	5	13.2 MeV to 18.0 MeV	^{27}Al $\sigma_{n\alpha}$
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.120 b at 14.5 MeV	abs
53	LAS	Martin,et.al.	PR,89,1302,53	7	9.500 MeV to 18.3 MeV	
			$^{127}_{53}$I σ_{n3n}			
68	GEL	Liskien	NP/A,118,379,68	1	.310 b at 19.5 MeV	
68	PAK	Qaim,et.al.	JIN,30,2577,68	1	40.0 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{127}_{53}$I σ_{np}			
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	2	14.0 MeV to 22.0 MeV	
61	HAR	Allan	NP,24,274,61	1	5.000 mb at 14.0 MeV	^{54}Fe σ_{np}
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	17.0 mb at 14.1 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	11.7 mb at 14.5 MeV	
			$^{127}_{53}$I σ_{nnp}			
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	3.000 mb at 14.1 MeV	
			$^{127}_{53}$I σ_{nd}			
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	2	14.0 MeV to 22.0 MeV	
			$^{127}_{53}$I $\sigma_{n\alpha}$			
69	KAZ	Levkovskii+	YF,10,44,69	1	1.800 mb at 14.8 MeV	^{65}Cu σ_{n2n}
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	2	14.0 MeV to 22.0 MeV	
62	FIR	Bizzeti,et.al.	NP,36,38,62	1	1.390 mb at 14.1 MeV	abs
62	HAM	Bormann	ZN/A,17,479,62	6	12.1 MeV to 21.5 MeV	
61	CIS	Marcazzan,et.al.	NC,20,903,61	1	.800 mb at 14.0 MeV	H

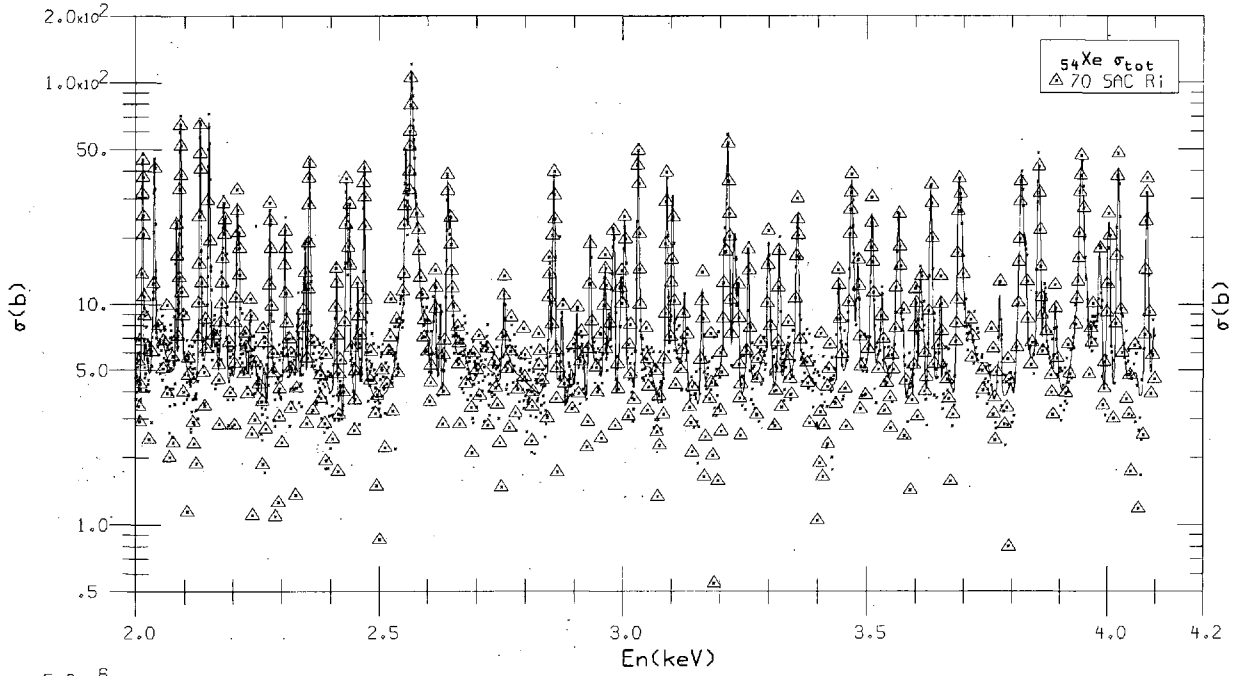
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{127}_{53}I$ σ_{nna}			
62	HAM	Bormann	ZN/A,17,479,62	5	14.1 MeV to 21.5 MeV	
			$^{129}_{53}I$ σ_{tot}			
60	ORL	Block,et.al.	NSE,8,112,60	24	.0205 eV to .0453 eV	abs
			$^{129}_{53}I$ σ_{n2n}			
73	STR	Kuhry,et.al.	RRL,15,29,73	1	1.490 b at 14.5 MeV	^{63}Cu σ_{n2n}

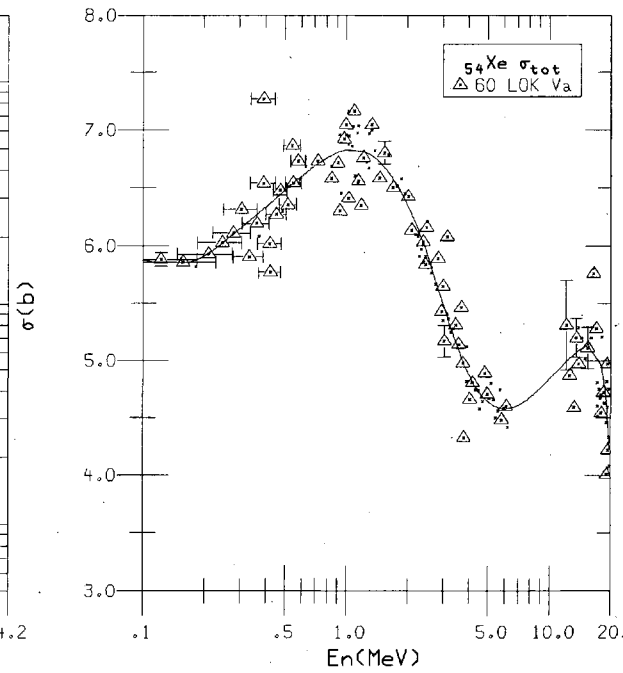

$_{54}$Xe σ_{tot}
△ 63 SAC Ge
⊡ 58 BNL Ma
σ(b)
En(eV)

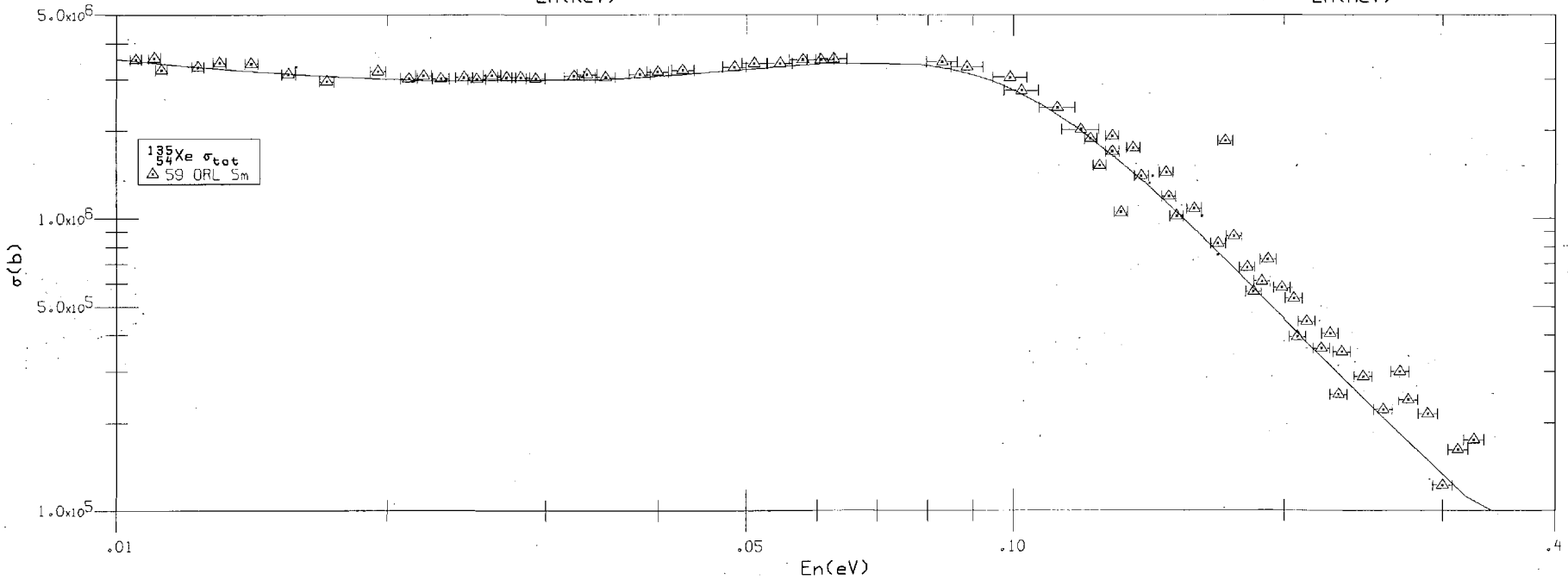

$_{54}$Xe σ_{tot}
△ 70 SAC Ri
⊡ 58 BNL Ma
▽ 53 ANL Ha
σ(b)
En(eV)


$_{54}$Xe σ_{tot}
△ 70 SAC Ri
▽ 53 ANL Ha
σ(b)
En(keV)

^{54}Xe
σ_{tot}
$^{135}_{54}$Xe
σ_{tot}
[1294]





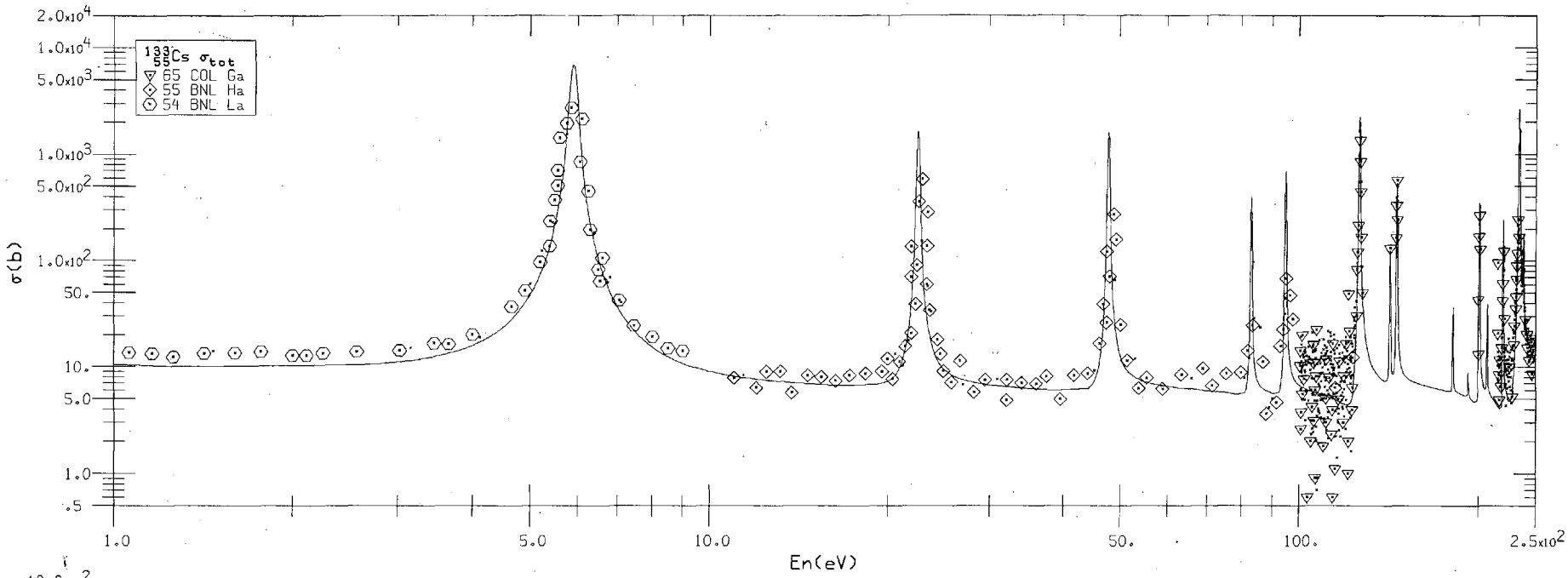


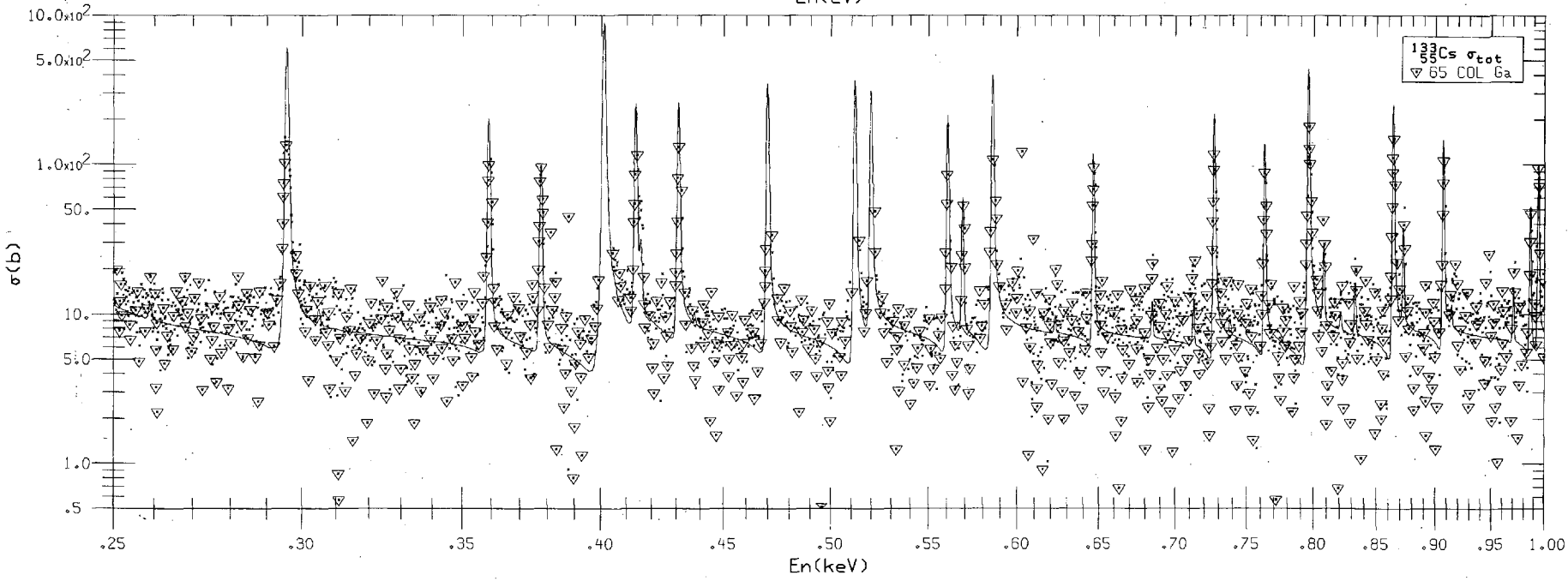
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{54}$Xe σ_{tot}			
70	SAC	Ribon	RIBON,70	19409	9.001 eV to 4.099 keV	abs
63	SAC	Genin,et.al.	JPR,24,21,63	23	.0030 eV to .0250 eV	abs
60	LOK	Vaughn,et.al.	PR,118,683,60	152	.122 MeV to 19.8 MeV	
58	BNL	Mann	MANN,58	121	.524 eV to .144 keV	
53	ANL	Harris	PR,89,904,53	55	6.280 eV to 9.300 keV	abs
			$_{54}$Xe σ_{sct}			
63	SAC	Genin,et.al.	JPR,24,21,63	1	4.600 b at thermal	abs
			$^{124}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	1.130 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{126}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	1.355 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{128}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	1.530 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{130}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	6.700 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{130}_{54}$Xe σ_{np}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	6.700 mb at 14.4 MeV	^{136}Xe σ_{n2n}
			$^{131}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	5.300 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{131}_{54}$Xe σ_{np}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	5.300 mb at 14.4 MeV	^{128}Xe σ_{n2n}
			$^{132}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	2.500 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{132}_{54}$Xe σ_{np}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	2.500 mb at 14.4 MeV	^{136}Xe σ_{n2n}
			$^{134}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	2.360 b at 14.4 MeV	^{28}Si σ_{np}
			$^{134}_{54}$Xe σ_{np}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	2.200 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{135}_{54}$Xe σ_{tot}			
59	ORL	Smith,et.al.	PR,115,1693,59	77	.0105 eV to .325 eV	
			$^{136}_{54}$Xe σ_{n2n}			
68	GIT	Kondaiah,et.al.	NP/A,120,337,68	1	1.700 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$

$^{133}_{55}Cs$

σ_{tot}

[1141]

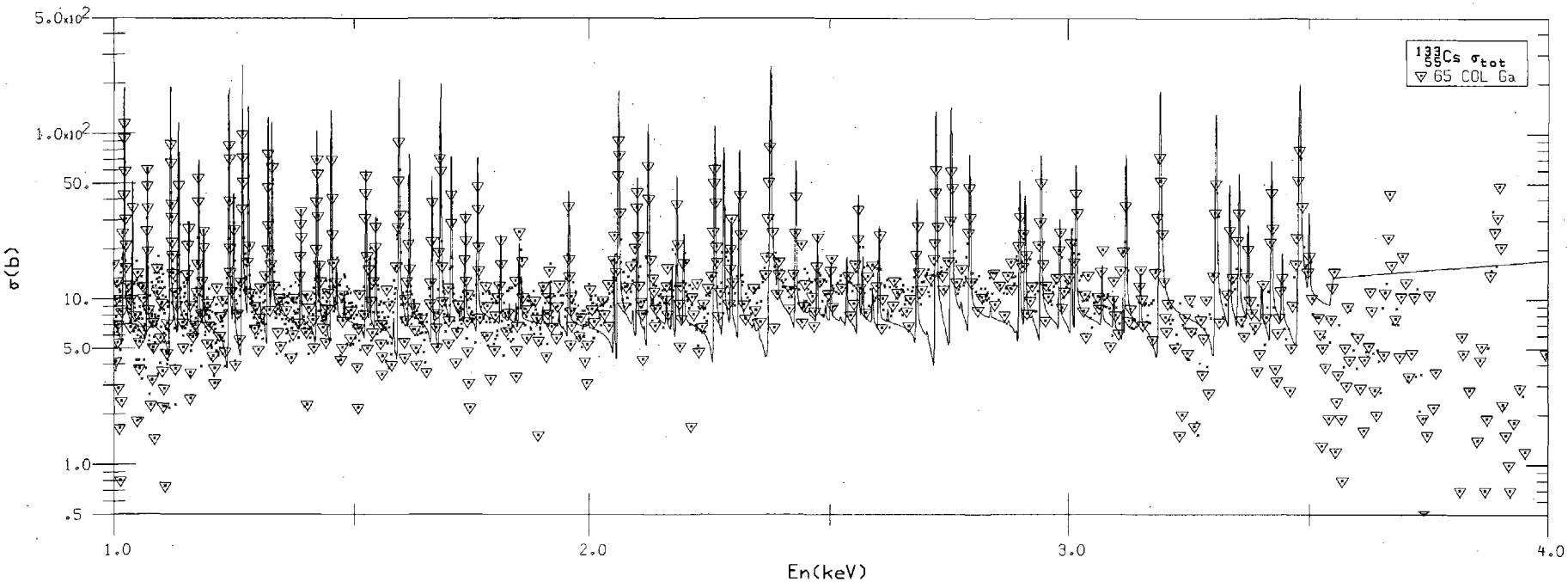


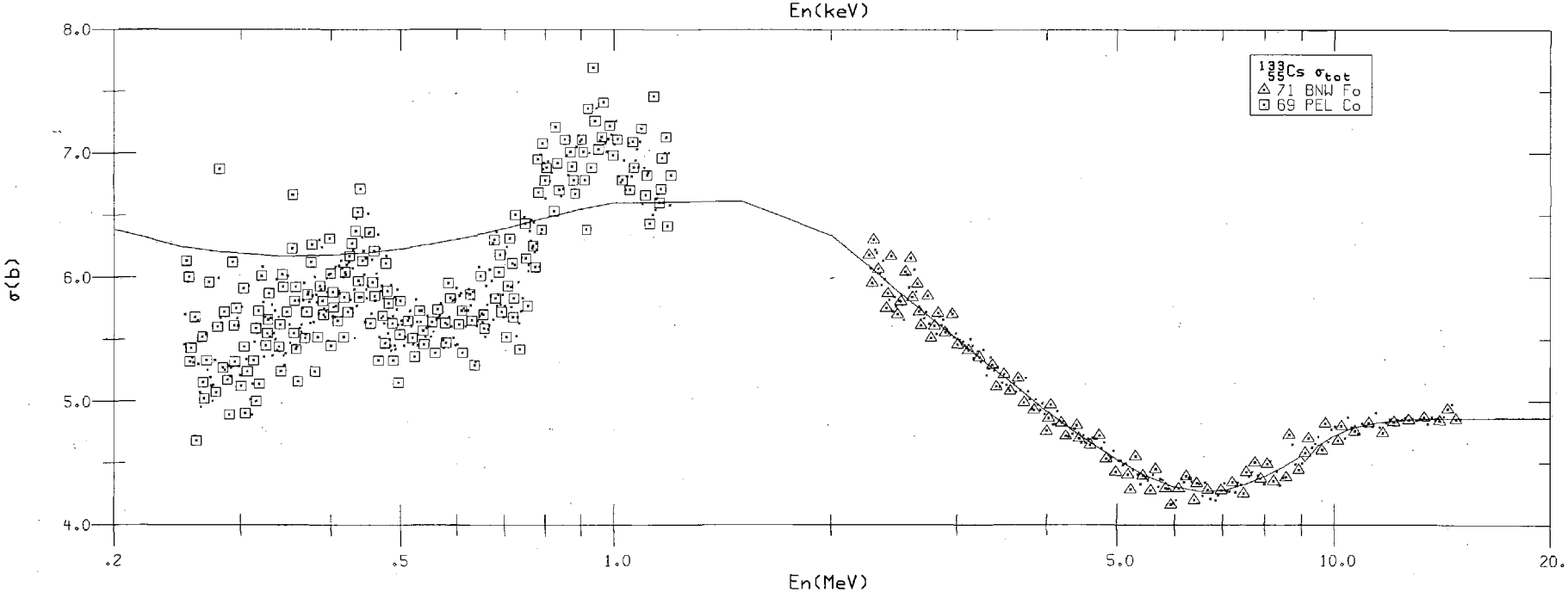


$^{133}_{55}Cs$

σ_{tot}

[1141]





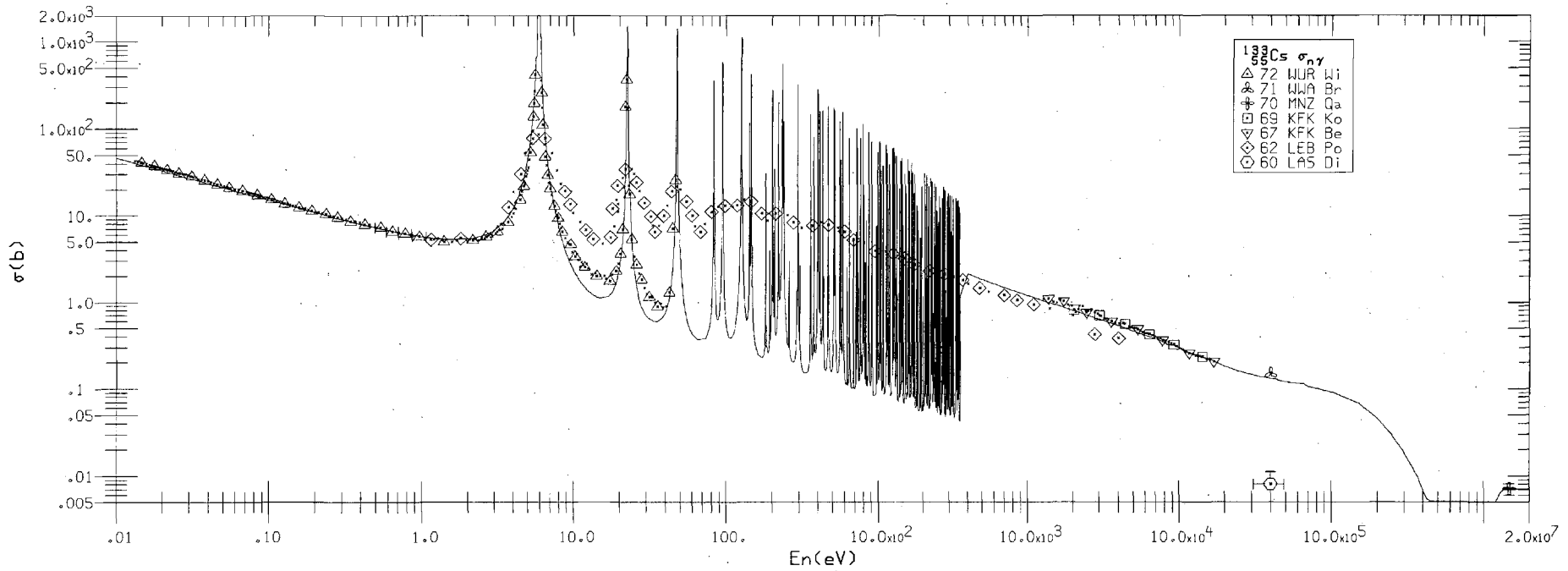
$^{133}_{55}Cs$

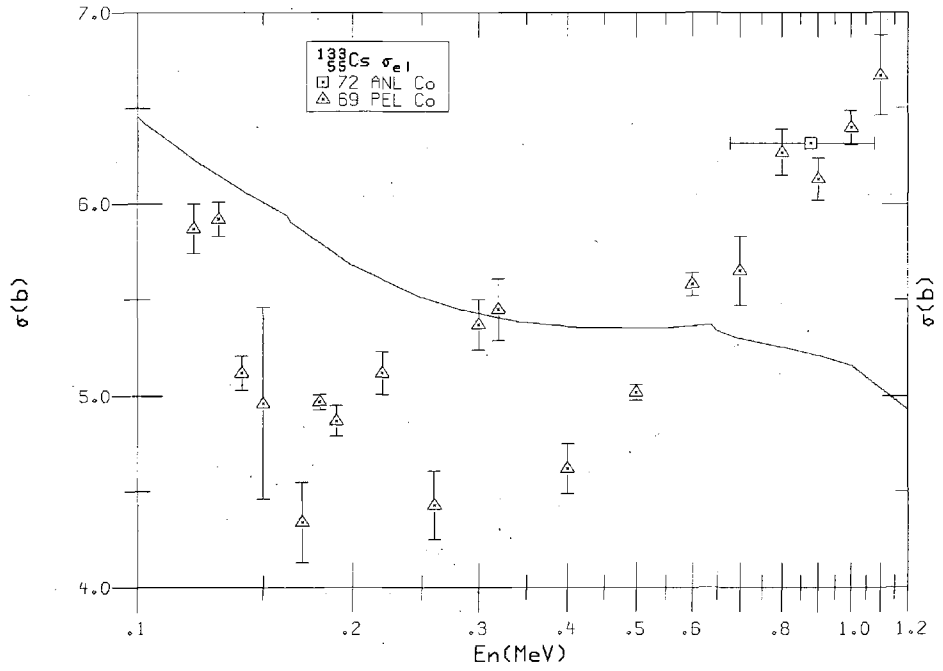
σ_{el}

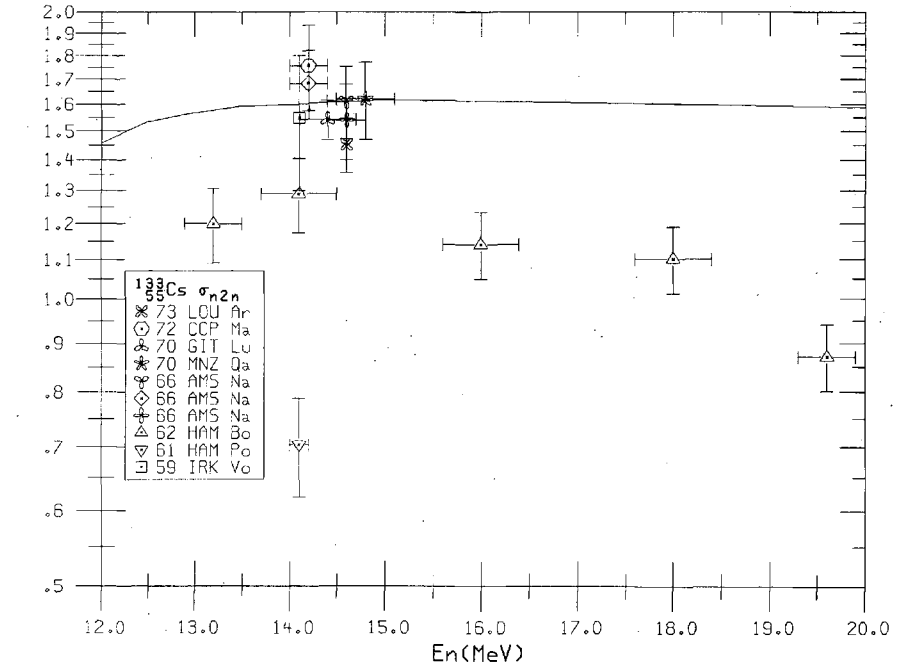
$\sigma_{n\gamma}$

σ_{n2n}

[1141]







$^{133}_{55}Cs$

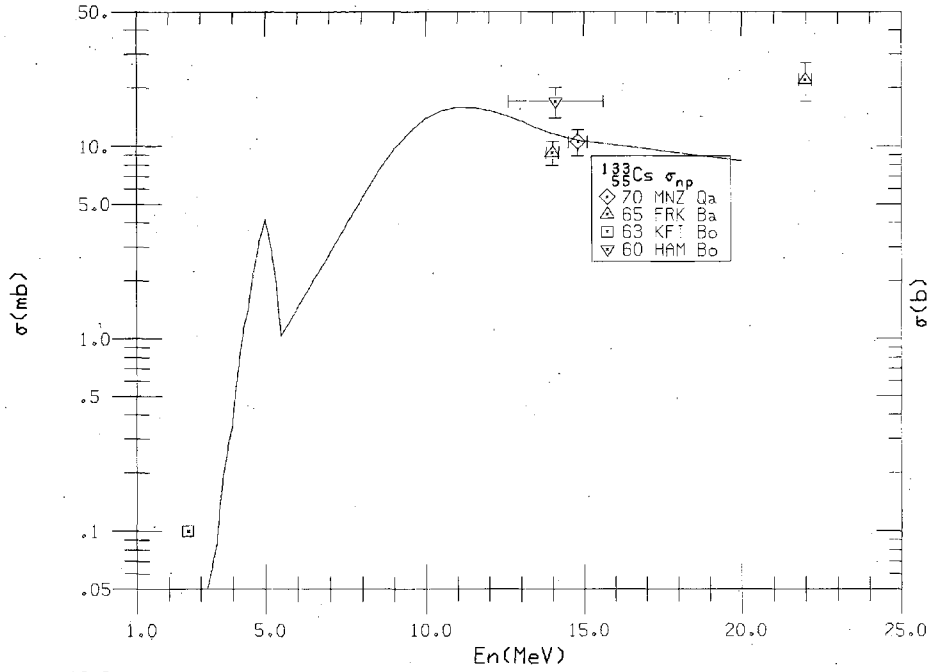
σ_{np}

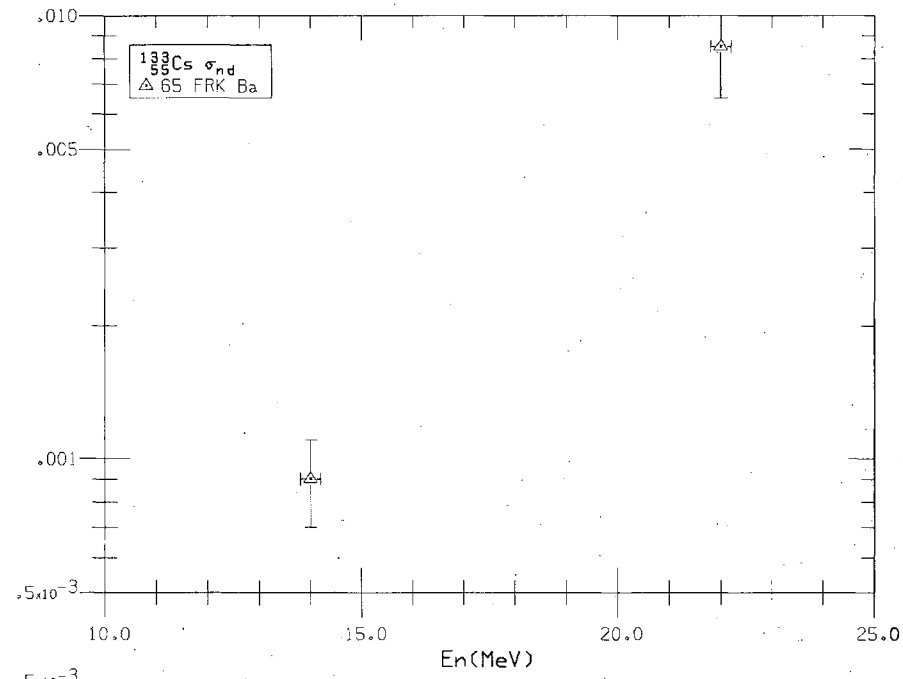
$\sigma_{n\alpha}$

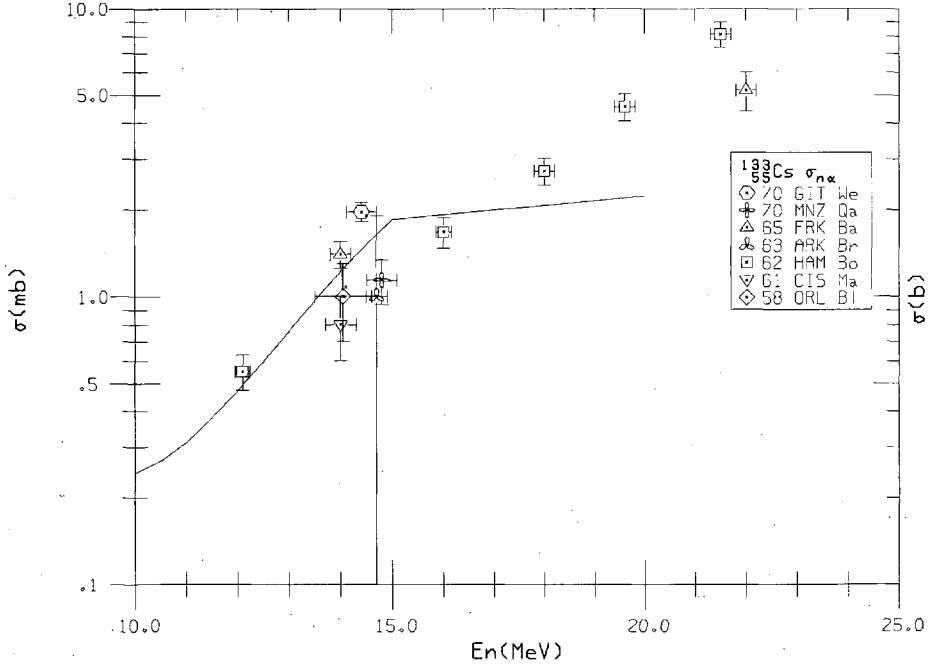
[1141]

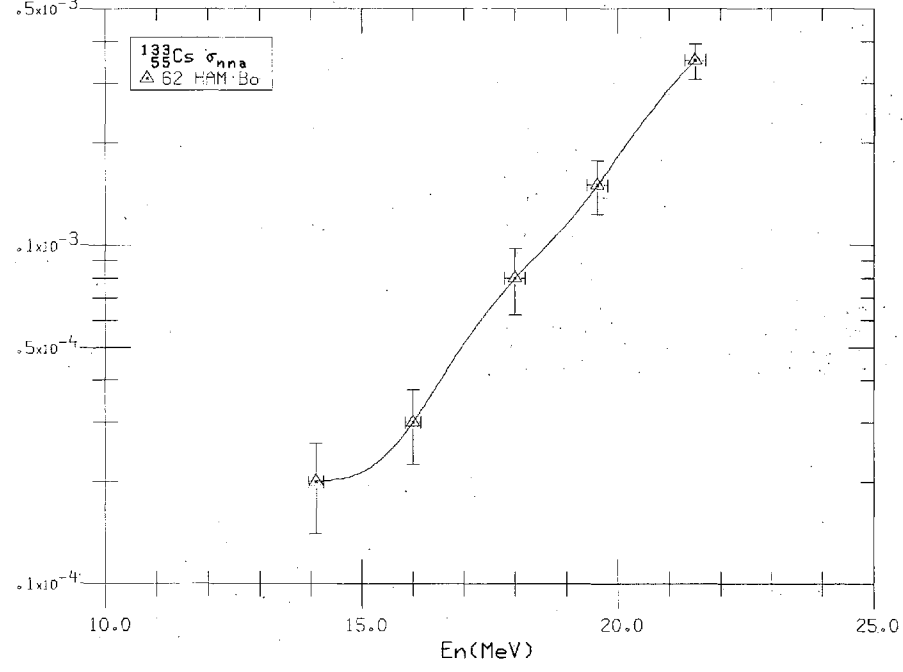
σ_{nd}

σ_{nna}



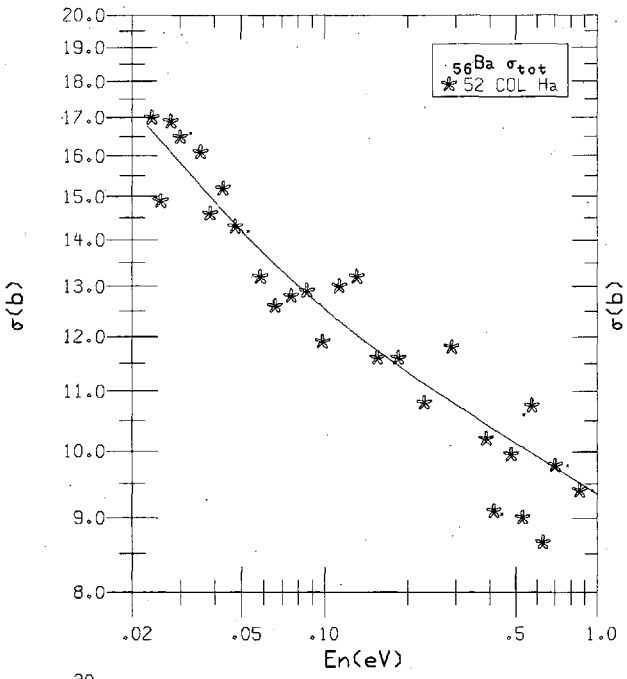


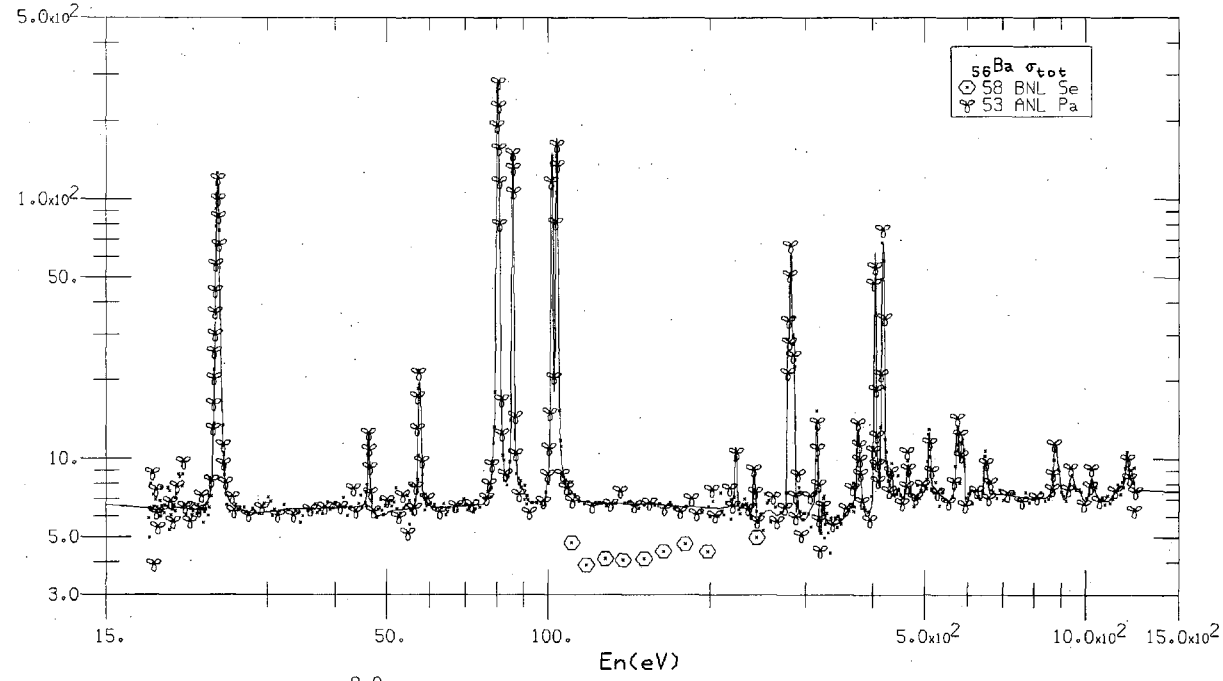


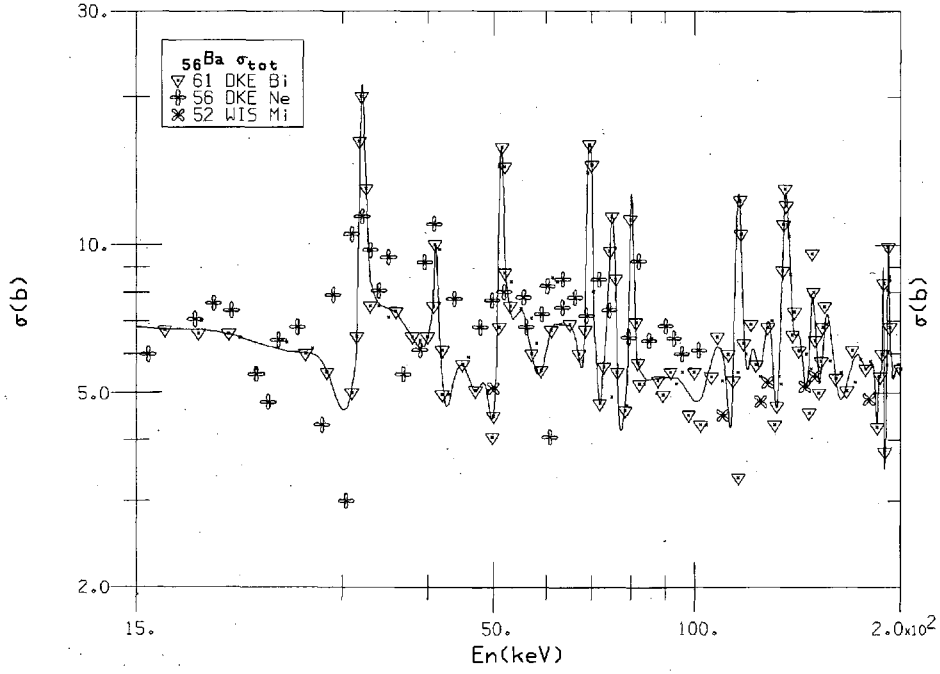


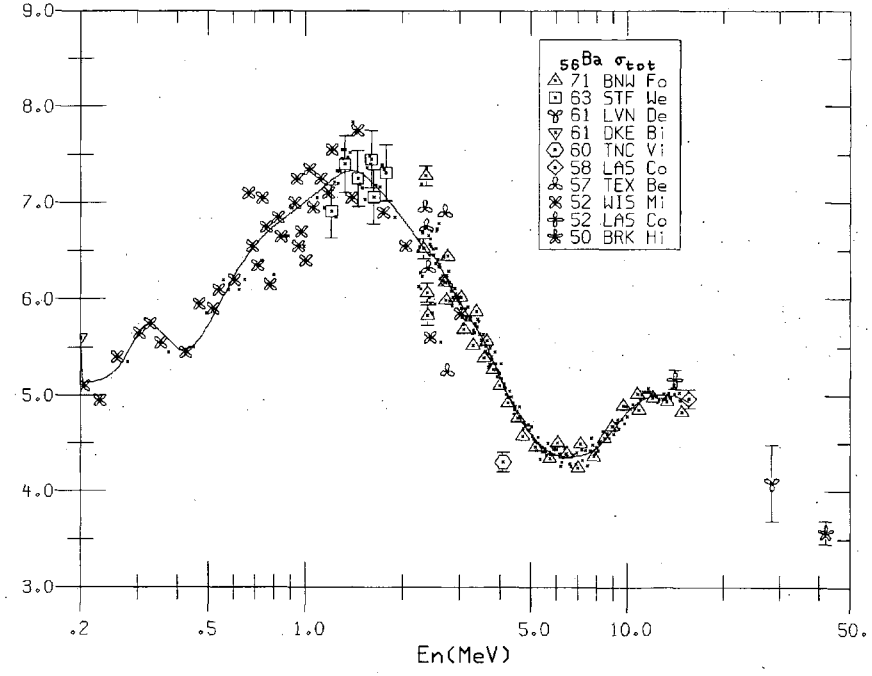
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{133}_{55}$Cs σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.260 MeV to 15.0 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	5.010 b at 14.7 MeV	
69	PEL	Coetzee,et.al.	PEL-191,43,69	482	.250 MeV to 1.199 MeV	
66	DEB	Angeli,et.al.	AHP,20,193,66	1	4.960 b at 14.1 MeV	
65	COL	Garg,et.al.	PR/B,137,547,65	7551	.100 keV to 4.028 keV	abs
55	BNL	Harvey,et.al.	PR,99,10,55	188	11.0 eV to .570 keV	
54	BNL	Landon,et.al.	PR,93,1030,54	48	1.060 eV to 9.000 eV	
			$^{133}_{55}$Cs σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.318 b at .877 MeV	C σ_{el}
69	PEL	Coetzee,et.al.	PEL-191,43,69	19	.120 MeV to 1.100 MeV	^{12}C σ_{el}
			$^{133}_{55}$Cs $\sigma_{n\gamma}$			
72	WUR	Widder	EIR-217,72	270	.0134 eV to 46.9 eV	^{6}Li σ_{nt}
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.150 b at .400 MeV	abs
70	MNZ	Qaim	JIN,32,1799,70	1	7.100 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
69	KFK	Kompe	NP/A,133,513,69	72	12.7 keV to .169 MeV	^{197}Au $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	72	12.7 keV to .169 MeV	^{197}Au $\sigma_{n\gamma}$
62	LEB	Popov,et.al.	ZET,42,988,62	92	.875 eV to 40.0 keV	
60	LAS	Diven,et.al.	PR,120,556,60	1	8.000 mb at .400 MeV	^{235}U σ_{abs}
			$^{133}_{55}$Cs σ_{n2n}			
73	LOU	Araminowicz+	INR-1464,14,73	1	1.452 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.755 b at 14.2 MeV	
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.542 b at 14.4 MeV	^{56}Fe σ_{np}
70	MNZ	Qaim	JIN,32,1799,70	1	1.620 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
66	AMS	Nagel	NAGEL,66	1	1.612 b at 14.6 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	1.577 b at 14.2 MeV	^{56}Fe σ_{np}
66	AMS	Nagel	NAGEL,66	1	1.682 b at 14.2 MeV	^{65}Cu σ_{n2n}
66	AMS	Nagel	NAGEL,66	1	1.540 b at 14.6 MeV	^{56}Fe σ_{np}
62	HAM	Bormann,et.al.	ZP,166,477,62	5	13.2 MeV to 19.6 MeV	^{27}Al $\sigma_{n\alpha}$
61	HAM	Pollehn,et.al.	ZN/A,16,227,61	1	.704 b at 14.1 MeV	abs
59	IRK	Vonach,et.al.	OSA,96,120,59	1	1.550 b at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{133}_{55}$Cs σ_{n3n}			
68	GEL	Liskien	NP/A,118,379,68	1	.660 b at 19.5 MeV	^{65}Cu σ_{n2n}
			$^{133}_{55}$Cs σ_{np}			
70	MNZ	Qaim	JIN,32,1799,70	1	10.5 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	2	14.0 MeV to 22.0 MeV	
63	KFI	Borbely,et.al.	KFKI-1467/F,63	1	100.0 muB at 2.600 MeV	
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	17.0 mb at 14.1 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{133}_{55}$Cs σ_{nnp}			
60	HAM	Bormann,et.al.	ZN/A,15,200,60	1	3.000 mb at 14.1 MeV	
			$^{133}_{55}$Cs σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	25.0 muB at 14.6 MeV	^{133}Cs $\sigma_{n\alpha}$
70	MNZ	Qaim	JIN,32,1799,70	1	12.0 muB at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	5.000 muB at 14.7 MeV	^{133}Cs $\sigma_{n\alpha}$
			$^{133}_{55}$Cs σ_{nd}			
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	2	14.0 MeV to 22.0 MeV	
			$^{133}_{55}$Cs σ_{n3}			
70	MNZ	Qaim	JIN,32,1799,70	1	3.200 muB at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
65	DEB	Csikai,et.al.	NP,68,546,65	1	5.000 muB at 14.7 MeV	^{133}Cs $\sigma_{n\alpha}$
62	ARK	Bramlitt,et.al.	PR,125,297,62	1	.150 mb at 14.5 MeV	^{133}Cs $\sigma_{n\alpha}$
			$^{133}_{55}$Cs $\sigma_{n\alpha}$			
70	GIT	Wen-Deh Lu+	PR/C,1,358,70	1	1.960 mb at 14.4 MeV	
70	MNZ	Qaim	JIN,32,1799,70	1	1.140 mb at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
65	FRK	Bass,et.al.	EANDC(E)-57,1,65	2	14.0 MeV to 22.0 MeV	
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	1.000 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
62	HAM	Bormann	ZN/A,17,479,62	6	12.1 MeV to 21.5 MeV	
61	CIS	Marcazzan,et.al.	NC,20,903,61	1	.800 mb at 14.0 MeV	H
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.900 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	ORL	Blosser,et.al.	PR,110,531,58	1	1.000 mb at 14.1 MeV	^{56}Fe σ_{np}
			$^{133}_{55}$Cs σ_{nna}			
62	HAM	Bormann	ZN/A,17,479,62	5	14.1 MeV to 21.5 MeV	

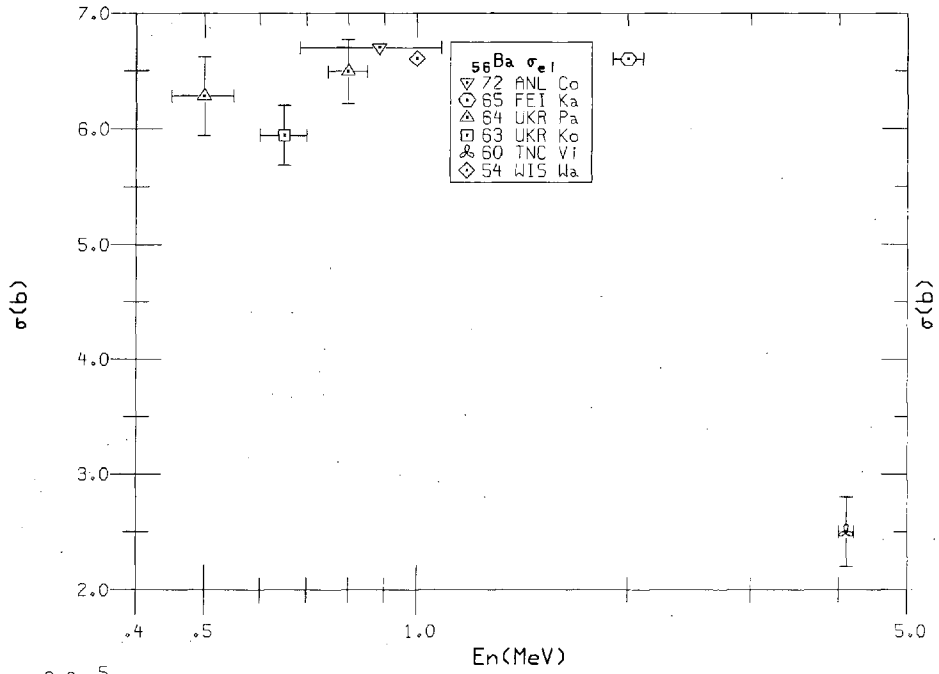

56Ba σtot
52 COL Ha
σ(b)
En(eV)

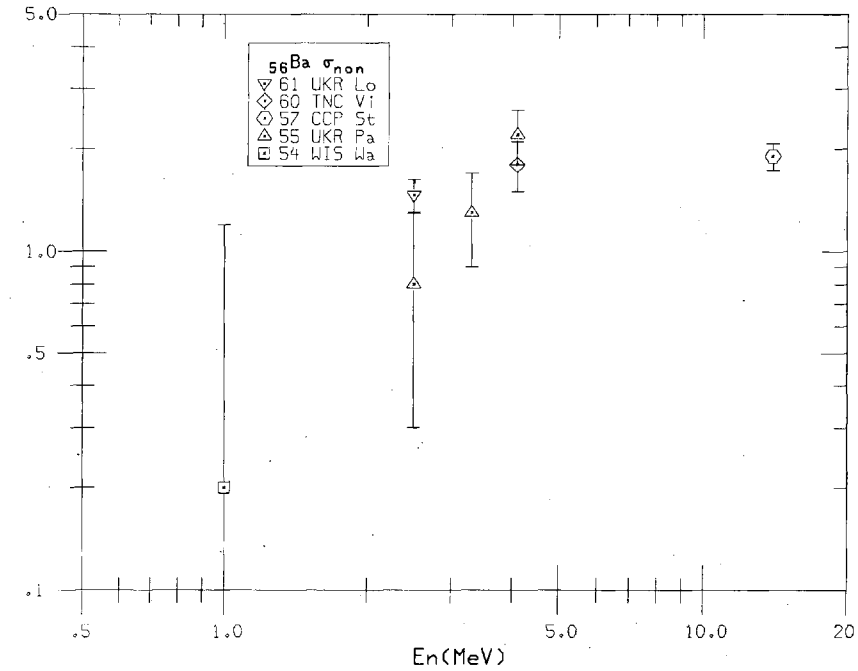

56Ba σtot
58 BNL Se
53 ANL Pa
σ(b)
En(eV)

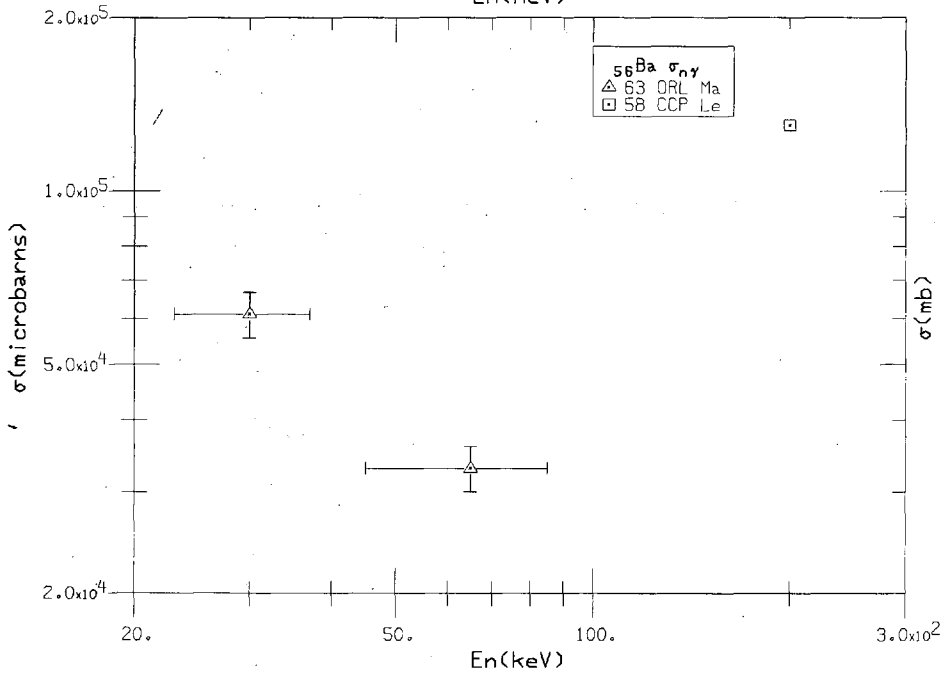

56Ba σtot
61 DKE Bi
56 DKE Ne
52 WIS Mi
σ(b)
En(keV)

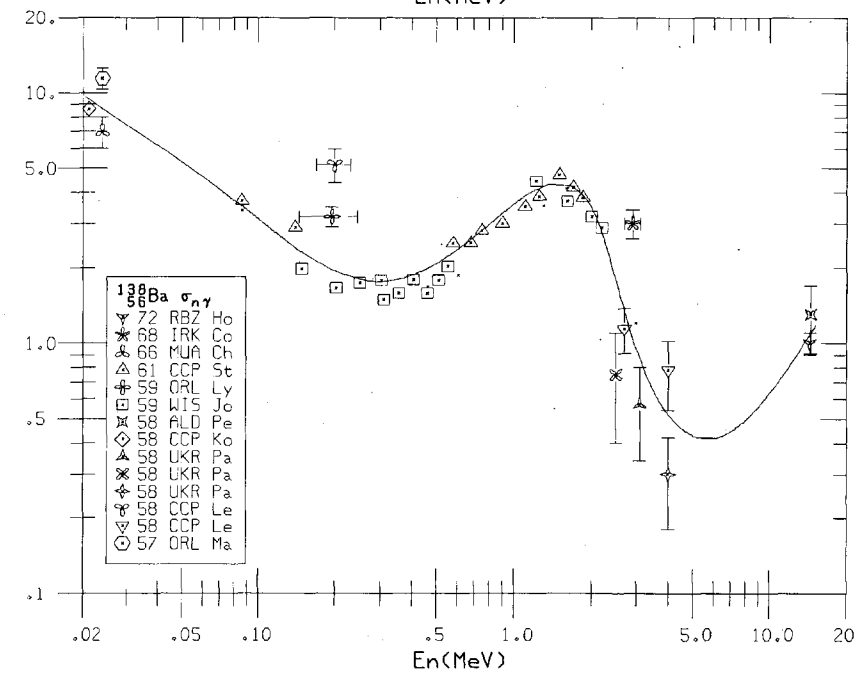

56Ba σtot
71 BNW Fo
63 STF We
61 LVN De
61 DKE Bi
60 TNC Vi
58 LAS Co
57 TEX Be
52 WIS Mi
52 LAS Co
50 BRK Hi
σ(b)
En(MeV)

$_{56}$Ba
σ_{el}
σ_{non}
$\sigma_{n\gamma}$
$^{138}_{56}$Ba
$\sigma_{n\gamma}$





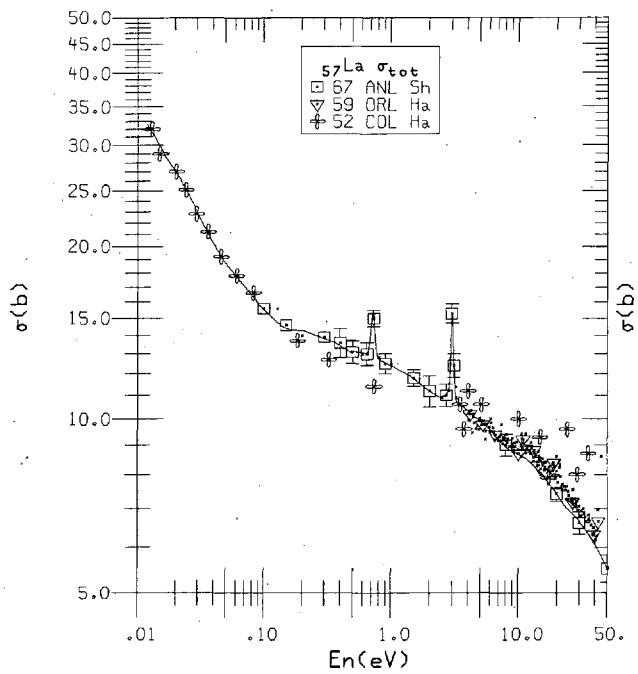


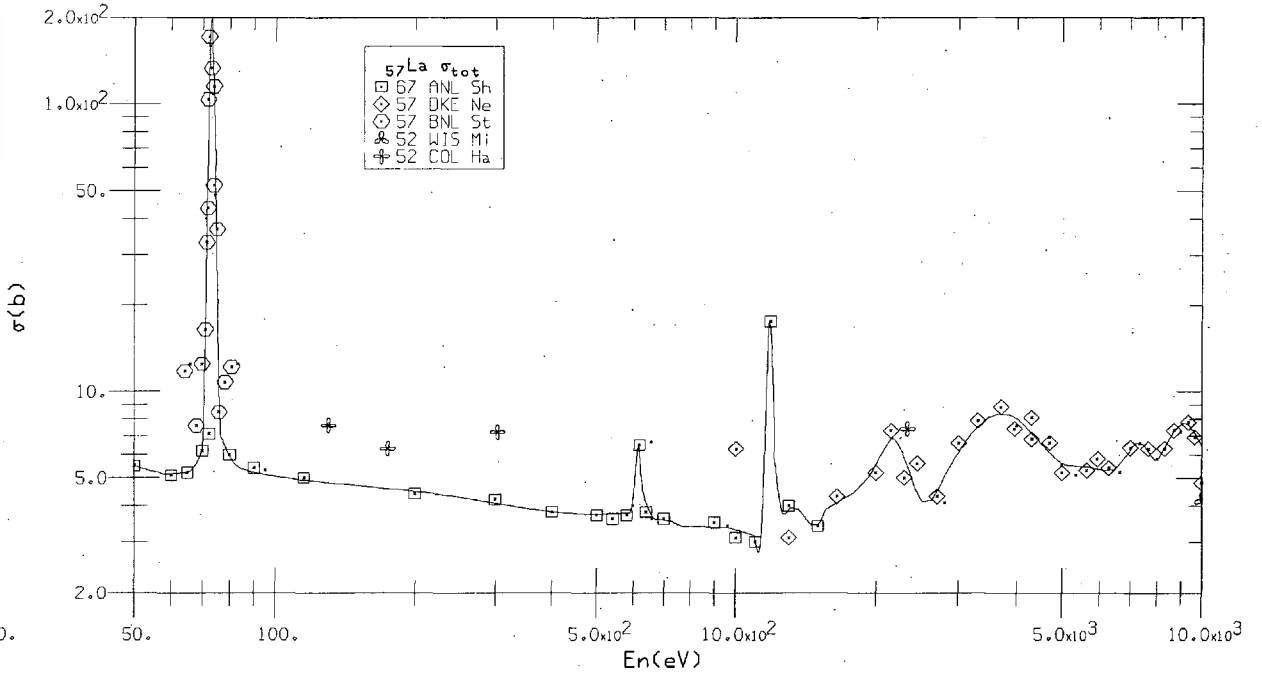


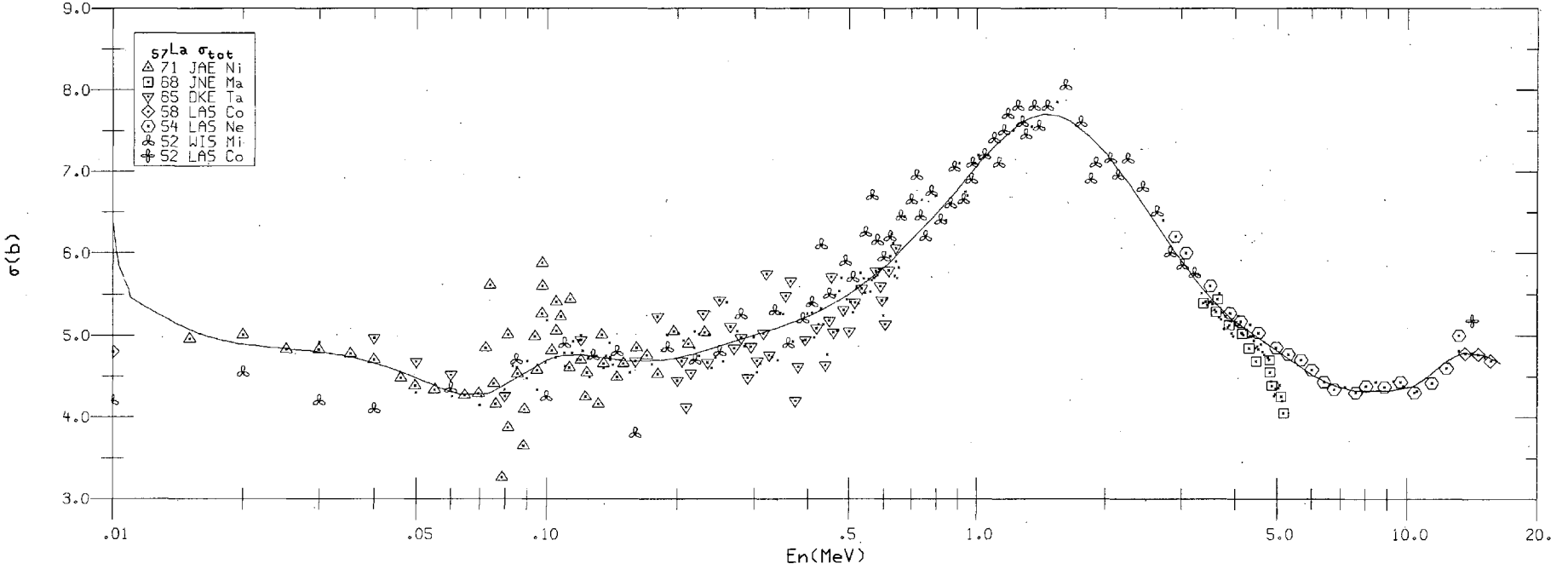
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{56}$Ba σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	253	2.254 MeV to 14.8 MeV	
63	STF	Wells,et.al.	PR,131,1644,63	24	1.208 MeV to 1.787 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	4.090 b at 28.4 MeV	
61	DKE	Bilpuch,et.al.	AP,14,387,61	140	16.5 keV to .200 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	4.300 b at 4.100 MeV	
58	LAS	Conner	PR,109,1268,58	3	13.1 MeV to 15.6 MeV	
58	BNL	Seth,et.al.	PR,110,692,58	10	.111 keV to .244 keV	
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	14	2.250 MeV to 2.748 MeV	abs
56	DKE	Newson,et.al.	PR,102,1580,56	57	15.6 keV to .101 MeV	abs
53	ANL	Palmer	BOLLINGER,53	723	18.0 eV to 1.247 keV	
52	WIS	Miller,et.al.	PR,88,83,52	71	50.0 keV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.170 b at 14.1 MeV	
52	COL	Havens Jr	HAVENS,52	33	.0236 eV to .960 eV	
50	BRK	Hildebrand+	PR,80,842,50	1	3.570 b at 42.0 MeV	
			$_{56}$Ba σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.698 b at .884 MeV	C σ_{el}
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	6.600 b at 2.000 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	5.940 b at .650 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.500 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.600 b at 1.000 MeV	
			$_{56}$Ba σ_{inl}			
63	CCP	Glazkov	AE,15,416,63	3	.600 MeV to 1.000 MeV	
			$_{56}$Ba σ_{non}			
61	UKR	Lovchikova+	SPN,,216,61	1	1.470 b at 2.500 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	1.800 b at 4.100 MeV	
57	CCP	Strizhak	AE,2,68,57	1	1.900 b at 14.0 MeV	abs
56	UKR	Strizhak	ZET,31,907,56	1	1.600 b at 2.500 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,55	3	2.500 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.200 b at 1.000 MeV	
			$_{56}$Ba $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.600 mb at 14.1 MeV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.130 b at .200 MeV	
			$^{130}_{56}$Ba $\sigma_{n\gamma}$			
49	OXF	Beghian,et.al.	NAT,163,366,49	1	4.300 mb at .900 MeV	^{55}Mn $\sigma_{n\gamma}$

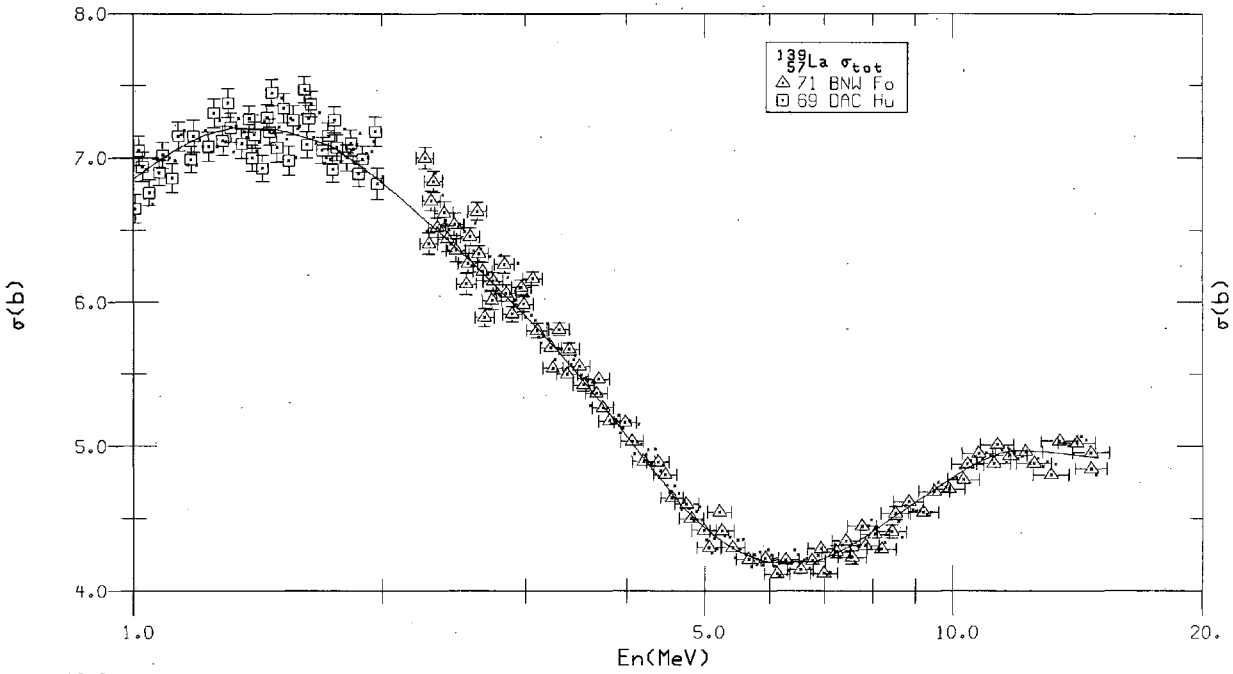
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{132}_{56}$Ba σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.574 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{136}_{56}$Ba σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	49.0 b at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	38.3 mb at 14.5 MeV	
			$^{138}_{56}$Ba $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	1.000 mb at 14.4 MeV	^{56}Fe σ_{np}
68	IRK	Colditz,et.al.	OSA,105,236,68	1	3.000 mb at 2.900 MeV	^{115}In σ_{inl}
67	DEB	Peto,et.al.	JNE,21,797,67	1	1.200 mb at 3.000 MeV	^{31}P σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	7.000 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
61	CCP	Stavisskii+	AE,10,508,61	6	86.0 keV to .900 MeV	^{235}U σ_{nf}
61	CCP	Stavisskii+	AE,10,508,61	11	86.0 keV to 1.850 MeV	^{235}U σ_{nf}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	3.200 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	17	.149 MeV to 2.200 MeV	^{235}U σ_{nf}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	1.300 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	8.600 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	.570 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	.750 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	.300 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	11.4 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{138}_{56}$Ba σ_{np}			
63	CCP	Levkovskii	ZET,45,305,63	1	1.900 mb at 14.0 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	2.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.200 mb at 14.5 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	6.300 mb at 14.5 MeV	
			$^{140}_{56}$Ba $\sigma_{n\gamma}$			
67	ORL	Halperin,et.al.	ORNL-4164,1,67	1	1.570 b at thermal	^{59}Co $\sigma_{n\gamma}$

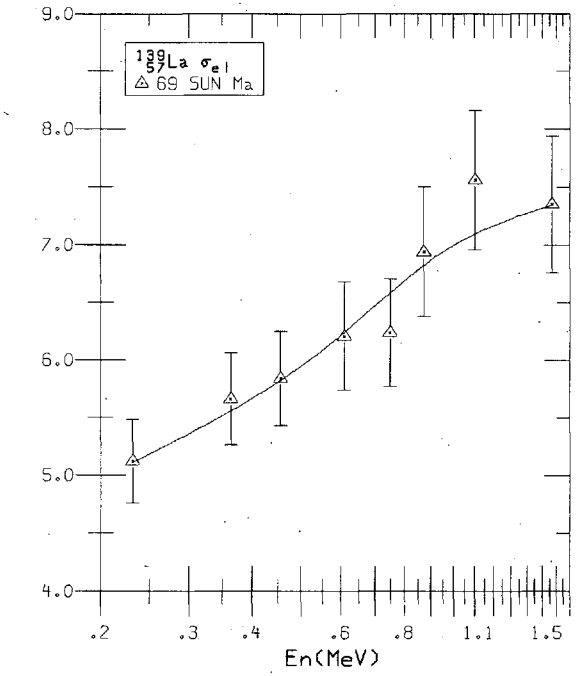
^{57}La
σ_{tot}

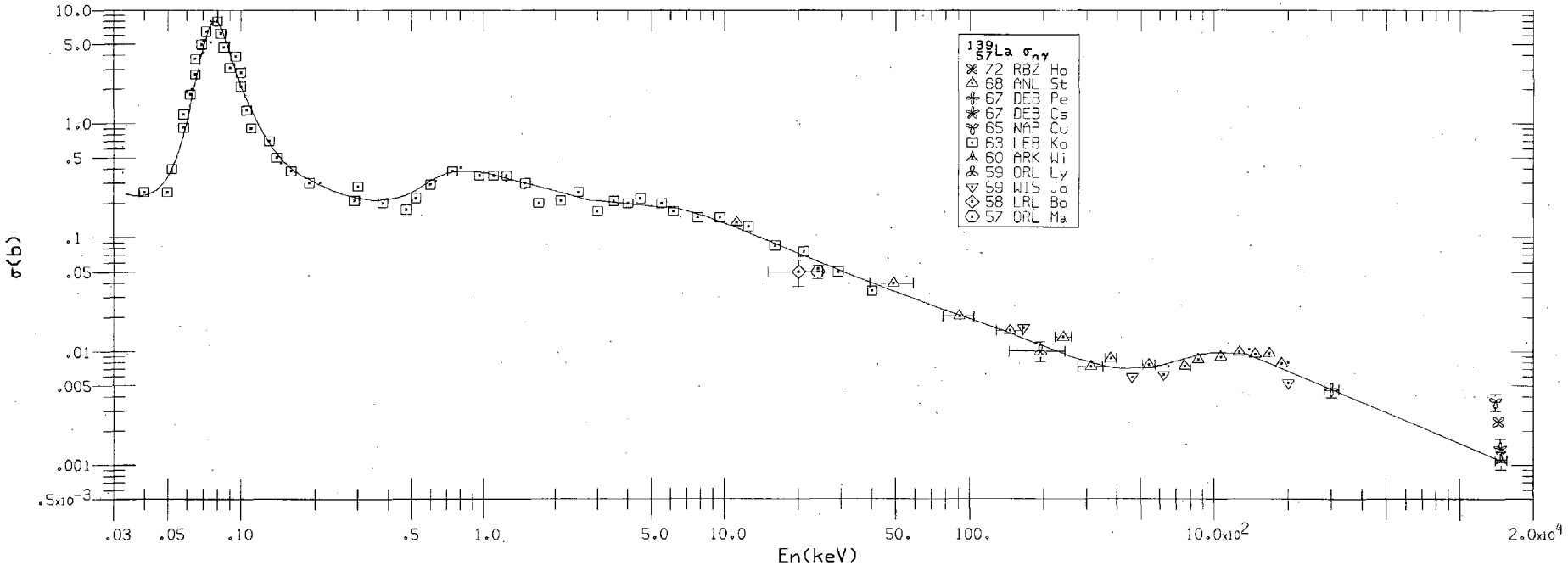






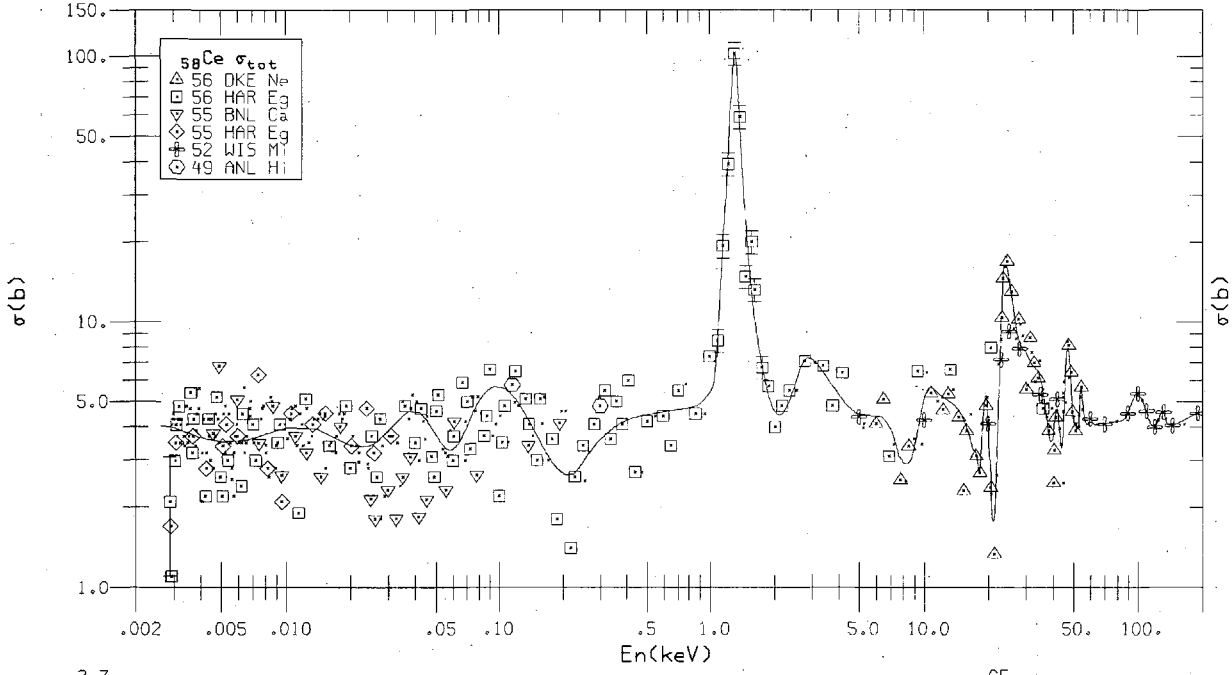

$^{139}_{57}$La σ_{tot}
△ 71 BNW Fo
⊡ 69 DAC Hu
σ(b)
En(MeV)
8.0
7.0
6.0
5.0
4.0
1.0
5.0
10.0
20.

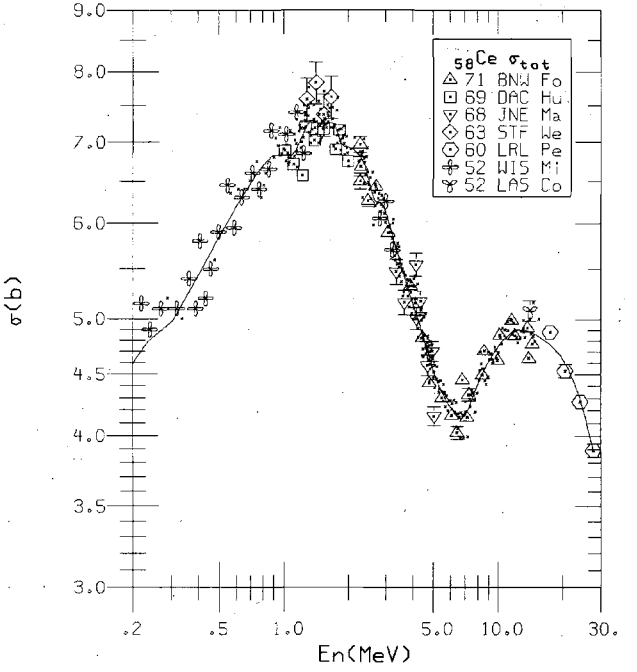

$^{139}_{57}$La σ_{el}
△ 69 SUN Ma
σ(b)
En(MeV)
9.0
8.0
7.0
6.0
5.0
4.0
.2
.3
.4
.6
.8
1.1
1.5

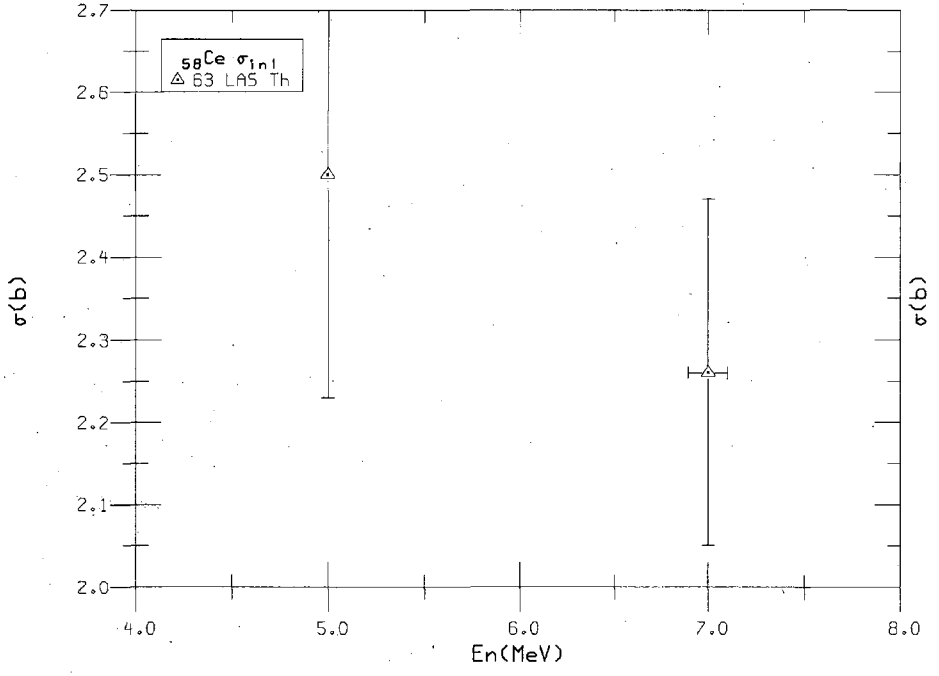

$^{139}_{57}$La $\sigma_{n\gamma}$
72 RBZ Ho
68 ANL St
67 DEB Pe
67 DEB Cs
65 NAP Cu
63 LEB Ko
60 ARK Wi
59 ORL Ly
59 WIS Jo
58 LRL Bo
57 ORL Ma
σ(b)
En(keV)
10.0
5.0
1.0
.5
.1
.05
.01
.005
.001
.5x10^{-3}
.03
.05
.10
.5
1.0
5.0
10.0
50.
100.
10.0x10^{2}
2.0x10^{4}

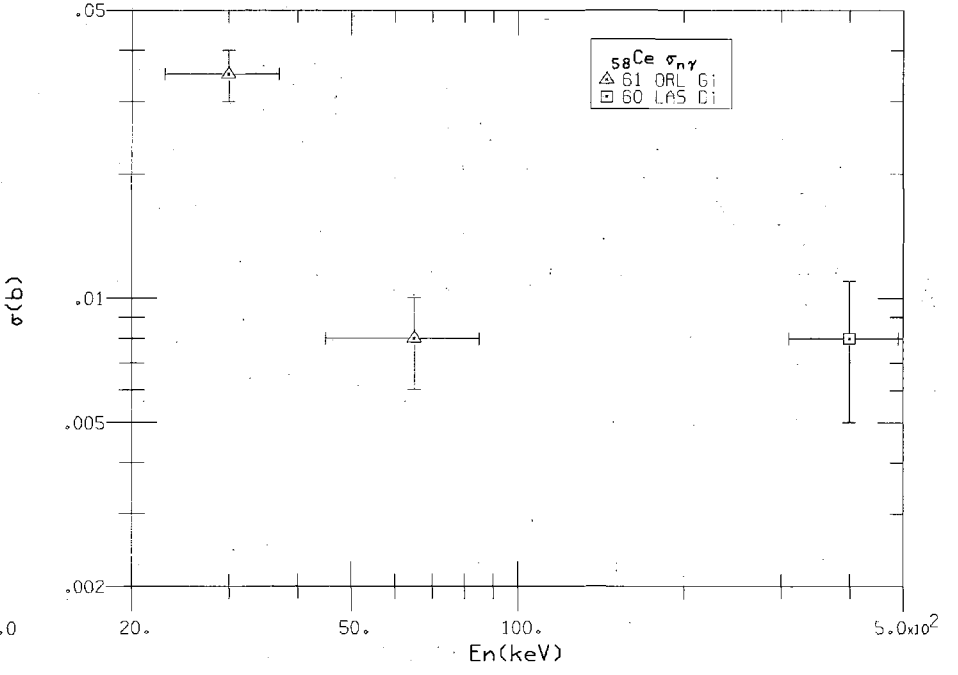
Yr	Lab	Author	Reference	Points	Range	Standard
			^{57}La σ_{tot}			
71	JAE	Nishimura	NISHIMURA,71	84	15.1 keV to .237 MeV	
68	JNE	Manero	ARS,64,63,68	65	3.340 MeV to 5.180 MeV	
67	ANL	Shwe,et.al.	PR,159,1050,67	115	.100 eV to 1.500 keV	abs
65	DKE	Tabony	SETH,65	100	30.0 keV to .650 MeV	
59	ORL	Harvey,et.al.	BAP,4,385(B2),59	335	3.939 eV to 42.4 eV	abs
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
57	DKE	Newson,et.al.	PR,105,198,57	35	1.000 keV to 10.0 keV	
57	BNL	Stolovy,et.al.	PR,108,353,57	21	64.1 eV to 83.2 eV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.720 MeV to 13.1 MeV	abs
52	WIS	Miller,et.al.	PR,88,83,52	85	10.0 keV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.180 b at 14.1 MeV	
52	COL	Havens Jr	HAVENS,52	42	.0130 eV to 2.330 keV	
			^{57}La σ_{el}			
63	ALD	Gilboy,et.al.	NP,42,86,63	1	7.200 b at .980 MeV	H
			^{57}La σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	2.190 b at 5.000 MeV	
			^{57}La σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	9.300 b at thermal	
			^{57}La $\sigma_{n\gamma}$			
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
			$^{139}_{57}$La σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	254	2.255 MeV to 14.9 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.005 MeV to 2.005 MeV	
57	DKE	Newson	PR,105,198,57	35	1.000 keV to 10.0 keV	
			$^{139}_{57}$La σ_{el}			
69	SUN	Malan,et.al.	NP/A,124,111,69	8	.232 MeV to 1.571 MeV	
			$^{139}_{57}$La $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	2.400 mb at 14.4 MeV	^{56}Fe σ_{np}
68	ANL	Stupegia,et.al.	JNE,22,267,68	19	11.2 keV to 1.997 MeV	^{235}U σ_{nf}
67	ORL	O'Brien Jr+	JIN,29,584,67	1	9.500 b at thermal	^{59}Co $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	4.600 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	1.400 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	50.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
65	NAP	Cuzzocrea	CUZZOCREA,65	1	3.600 mb at 14.0 MeV	^{63}Cu
63	LEB	Konks,et.al.	ZET,46,80,63	66	40.0 eV to 40.0 keV	
60	ARK	Wille,et.al.	PR,118,242,60	1	1.100 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	10.0 mb at .195 MeV	In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	4	.166 MeV to 2.000 MeV	^{235}U σ_{nf}
58	LRL	Booth,et.al.	PR,112,226,58	1	50.0 mb at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	1.480 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	50.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{139}_{57}$La σ_{np}			
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	4.500 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
65	NAP	Cuzzocrea	CUZZOCREA,65	1	4.400 mb at 14.0 MeV	^{63}Cu
60	ARK	Wille,et.al.	PR,118,242,60	1	5.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.330 mb at 14.5 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	5.700 mb at 14.5 MeV	
			$^{139}_{57}$La σ_{n2p}			
70	RBZ	Lulic,et.al.	NP/A,154,273,70	1	30.0 muB at 14.6 MeV	^{139}La $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	46.0 muB at 14.7 MeV	^{139}La $\sigma_{n\alpha}$
			$^{139}_{57}$La $\sigma_{n\alpha}$			
65	RBZ	Kulisic,et.al.	NP,73,548,65	1	3.000 mb at 14.6 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	1.300 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.870 mb at 14.5 MeV	


58Ce σtot
56 DKE Ne
56 HAR Eg
55 BNL Ca
55 HAR Eg
52 WIS Mi
49 ANL Hi
σ(b)
En(keV)


58Ce σtot
71 BNW Fo
69 DAC Hu
68 JNE Ma
63 STF We
60 LRL Pe
52 WIS Mi
52 LAS Co
σ(b)
En(MeV)


58Ce σinl
63 LAS Th
σ(b)
En(MeV)


58Ce σnγ
61 ORL Gi
60 LAS Ci
σ(b)
En(keV)

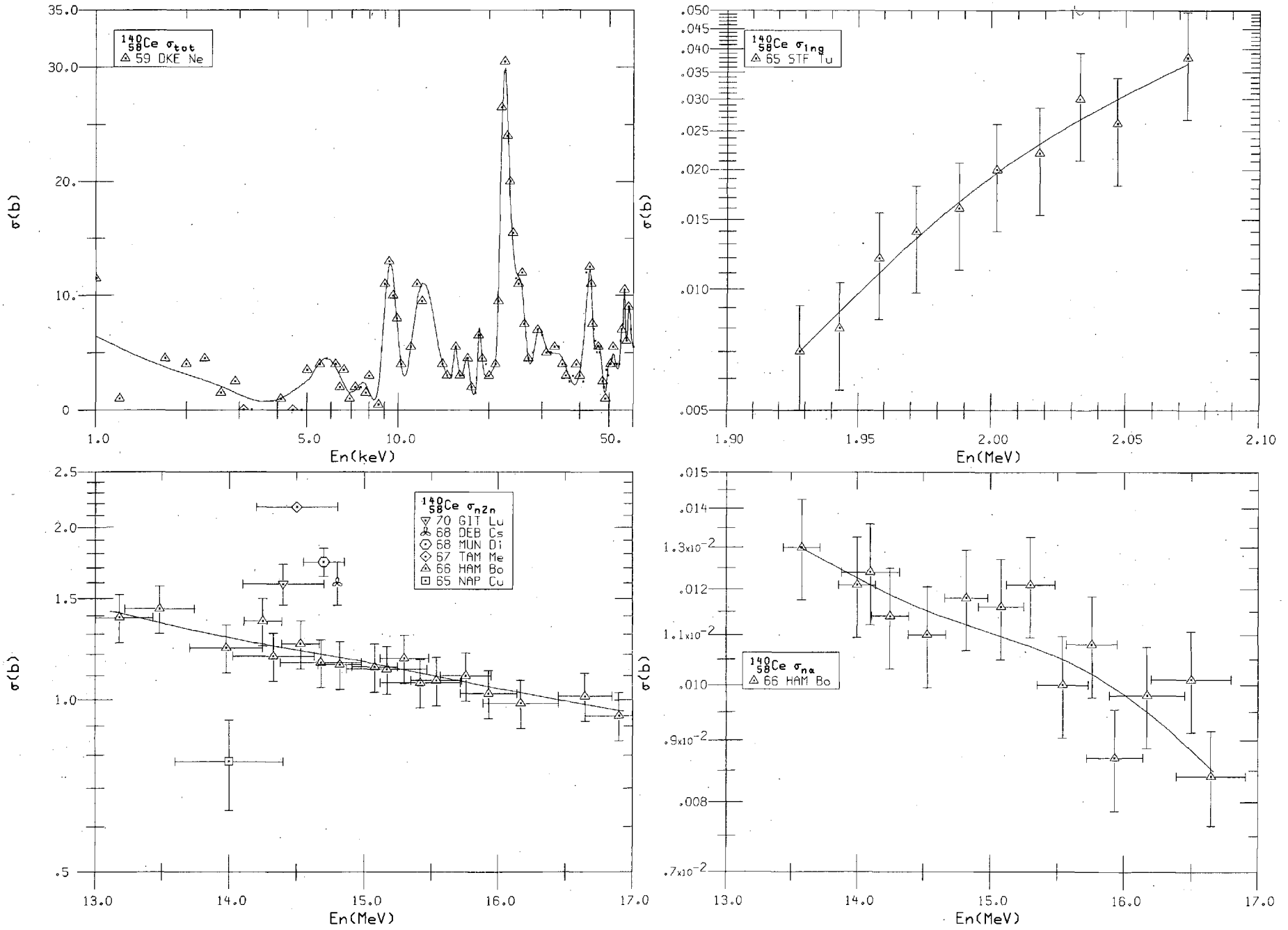
$^{140}_{58}Ce$

σ_{tot}

σ_{ing}

σ_{n2n}

$\sigma_{n\alpha}$

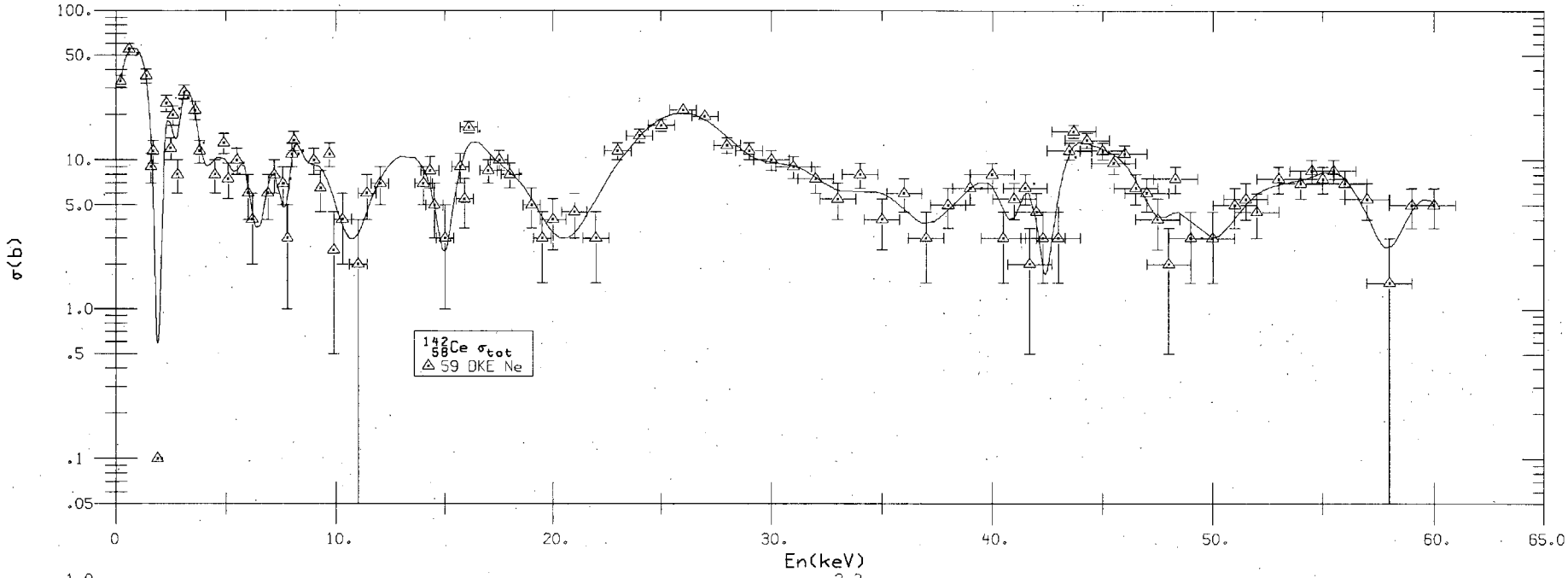


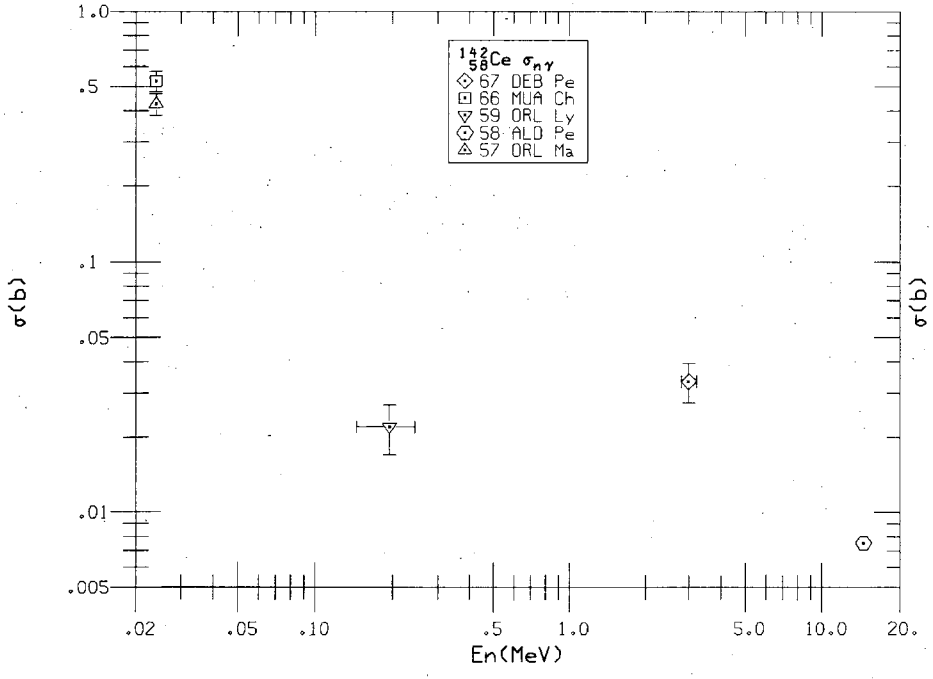
$^{142}_{58}Ce$

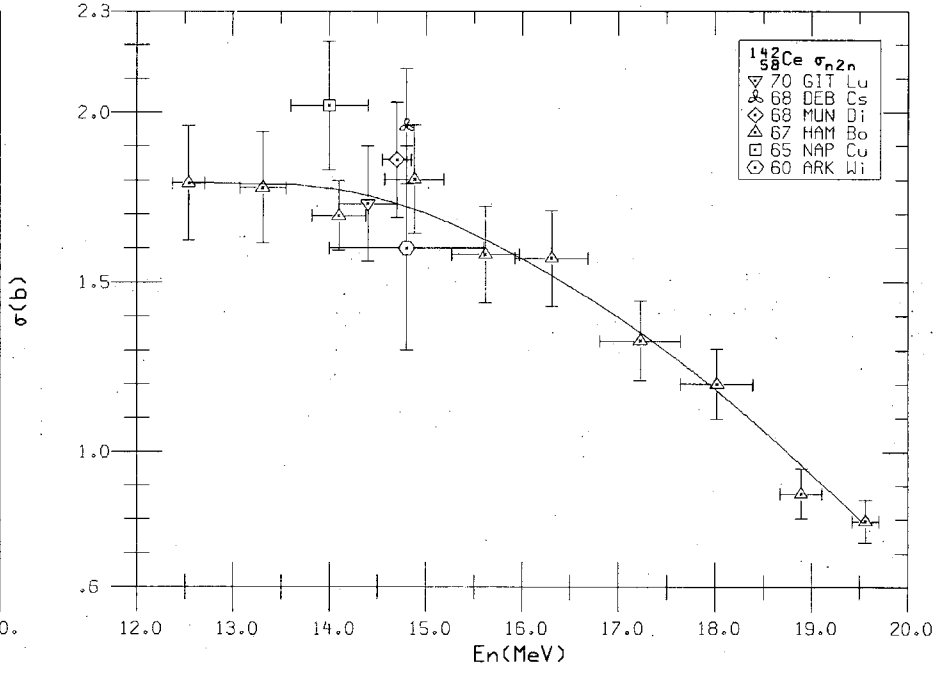
σ_{tot}

$\sigma_{n\gamma}$

σ_{n2n}





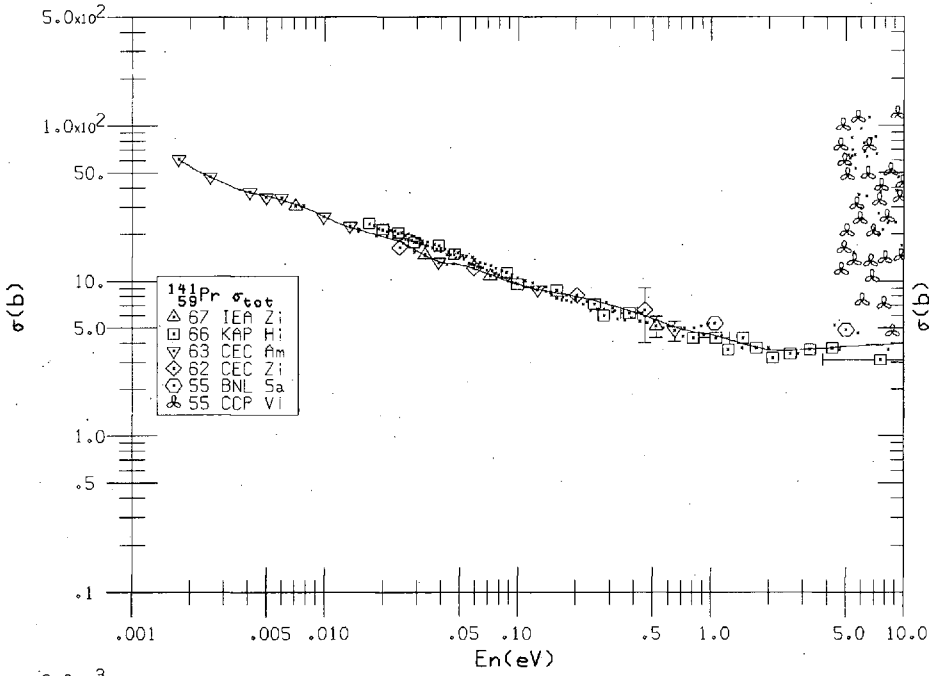


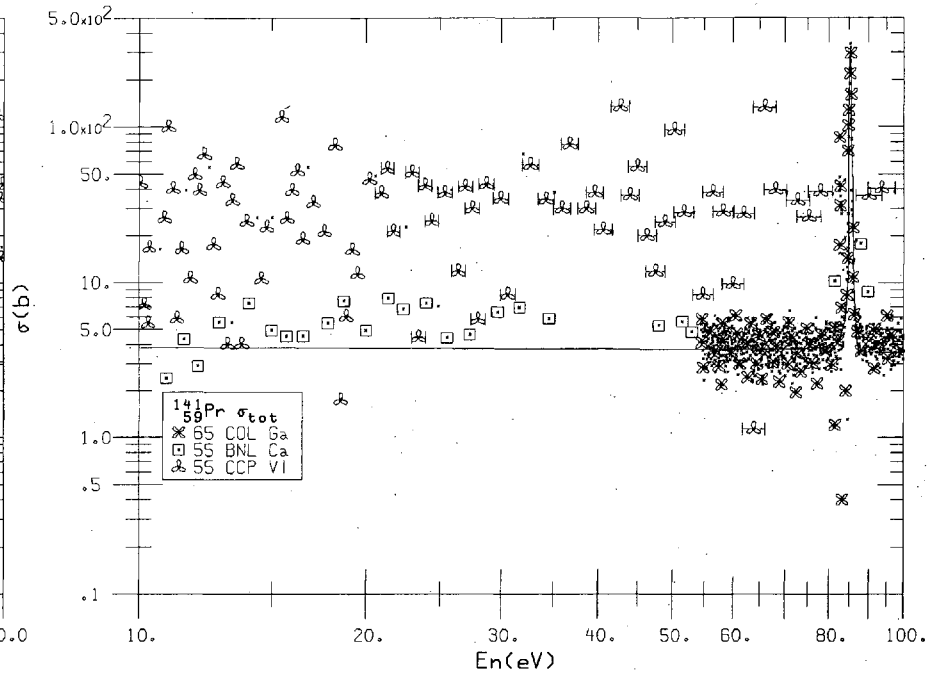
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{58}$Ce σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	254	2.260 MeV to 14.9 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	5.160 b at 14.7 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.013 MeV to 2.013 MeV	
68	JNE	Manero	ARS,64,63,68	67	3.290 MeV to 5.180 MeV	
63	STF	Wells,et.al.	PR,131,1644,63	24	1.208 MeV to 1.787 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 27.8 MeV	abs
58	LAS	Conner	PR,109,1268,58	3	13.1 MeV to 15.6 MeV	
56	DKE	Newson,et.al.	PR,102,1580,56	86	5.250 keV to 55.7 keV	abs
56	HAR	Egelstaff	EGELSTAFF,56	192	2.880 eV to 36.0 keV	abs
55	BNL	Carter	CARTER,55	38	4.600 eV to .193 keV	
55	HAR	Egelstaff	EGELSTAFF,55	50	2.900 eV to 34.1 eV	
52	WIS	Miller,et.al.	PR,88,83,52	90	5.000 keV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.080 b at 14.1 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
			$_{58}$Ce σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.590 b at .880 MeV	C σ_{el}
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.850 b at .980 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	6.700 b at 1.000 MeV	
			$_{58}$Ce σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	2	5.000 MeV to 7.000 MeV	
			$_{58}$Ce σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	2.700 b at thermal	
			$_{58}$Ce σ_{non}			
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	2.030 b at 14.8 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	100.0 mb at 1.000 MeV	
			$_{58}$Ce $\sigma_{n\gamma}$			
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	1	8.000 mb at .400 MeV	^{235}U $\sigma_{n\gamma}$
			$^{136}_{58}$Ce σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.318 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{140}_{58}$Ce σ_{tot}			
59	DKE	Newson,et.al.	AP,8,211,59	101	1.000 keV to 60.0 keV	abs
			$^{140}_{58}$Ce σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	2.800 b at thermal	
			$^{140}_{58}$Ce $\sigma_{n\gamma}$			
57	ORL	Macklin,et.al.	PR,107,504,57	1	31.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{140}_{58}$Ce σ_{ing}			
65	STF	Tucker,et.al.	PR/B,137,1181,65	10	1.928 MeV to 2.073 MeV	
			$^{140}_{58}$Ce σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.593 b at 14.4 MeV	^{56}Fe σ_{np}
68	DEB	Csikai,et.al.	AHP,24,233,68	1	1.600 b at 14.8 MeV	^{141}Pr σ_{np}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	1.740 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	TAM	Menon,et.al.	PR,156,1340,67	1	2.170 b at 14.5 MeV	^{63}Cu
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	18	13.2 MeV to 16.9 MeV	H
65	NAP	Cuzzocrea	CUZZOCREA,65	1	.780 b at 14.0 MeV	
			$^{140}_{58}$Ce σ_{np}			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	6.750 mb at 14.0 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	10.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PP5,73,215,59	1	12.1 mb at 14.5 MeV	
			$^{140}_{58}$Ce $\sigma_{n\alpha}$			
66	HAM	Bormann,et.al.	EANDC(E)66,42,66	14	13.6 MeV to 16.7 MeV	H
			$^{142}_{58}$Ce σ_{tot}			
59	DKE	Newson,et.al.	AP,8,211,59	118	.200 keV to 60.0 keV	abs
			$^{142}_{58}$Ce σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	2.600 b at thermal	
			$^{142}_{58}$Ce $\sigma_{n\gamma}$			
67	DEB	Peto,et.al.	JNE,21,797,67	1	33.4 mb at 3.000 MeV	^{32}S σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.525 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	22.0 mb at .195 MeV	In $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PP5,72,505,58	1	7.500 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.425 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$

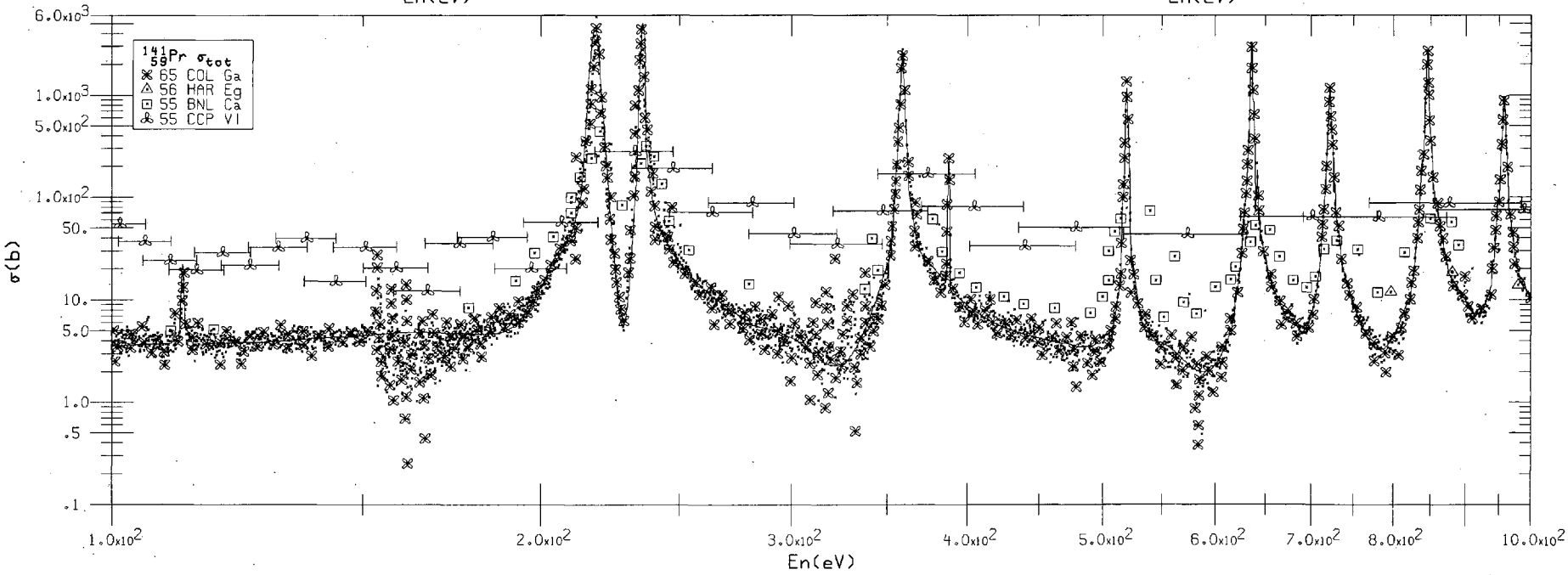
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{142}_{58}$Ce σ_{n2n}			
70	GIT	Lu,et.al.	PR/C,1,350,70	1	1.730 b at 14.4 MeV	^{56}Fe σ_{np}
68	DEB	Csikai,et.al.	AHP,24,233,68	1	1.960 b at 14.8 MeV	^{141}Pr σ_{np}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	1.860 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	HAM	Bormann,et.al.	EANDC(E)76,51,67	10	12.5 MeV to 19.6 MeV	
65	NAP	Cuzzocrea	CUZZOCREA,65	1	2.020 b at 14.0 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	1.600 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{142}_{58}$Ce σ_{np}			
65	NAP	Cuzzocrea	CUZZOCREA,65	1	2.580 mb at 14.0 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	5.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	9.400 mb at 14.5 MeV	
			$^{142}_{58}$Ce σ_{nnp}			
59	ALD	Barry,et.al.	PPS,74,632,59	1	1.000 mb at 14.5 MeV	
			$^{142}_{58}$Ce $\sigma_{n\alpha}$			
70	GIT	Wen-Deh Lu,et.al	PR/C,1,358,70	1	6.000 mb at 14.4 MeV	
65	NAP	Cuzzocrea	CUZZOCREA,65	1	5.200 mb at 14.0 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	8.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	7.040 mb at 14.5 MeV	

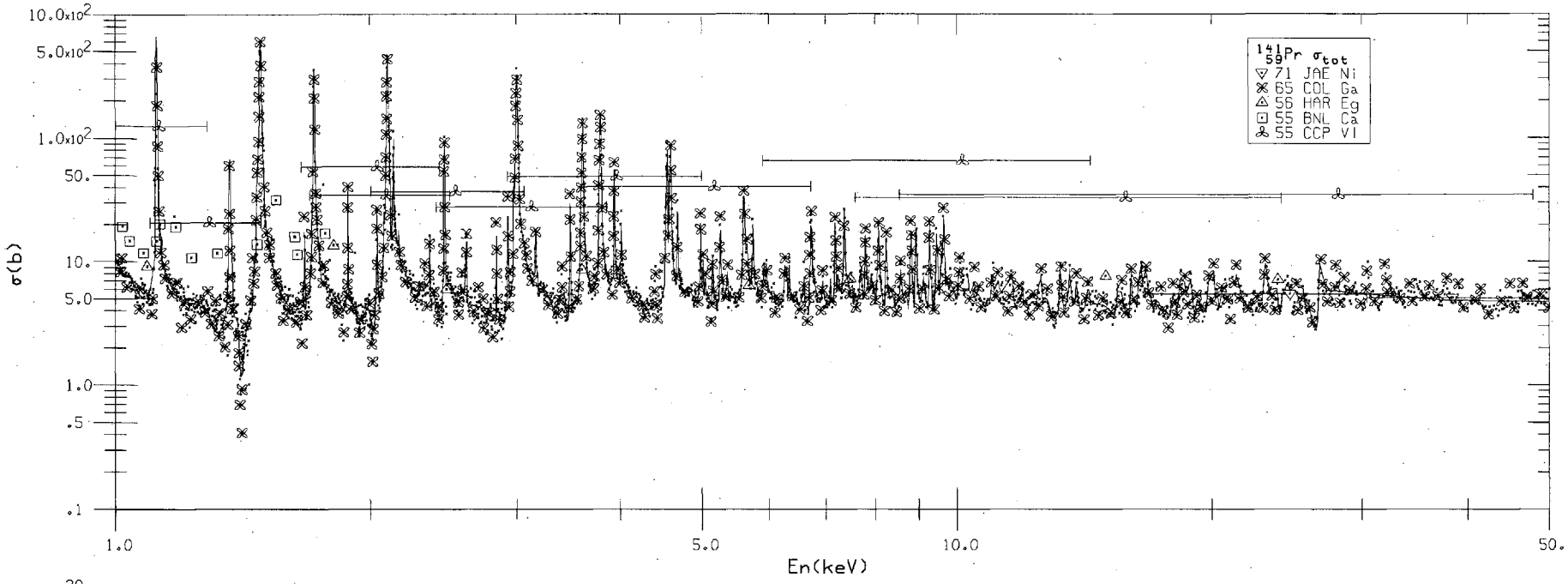
$^{141}_{59}Pr$

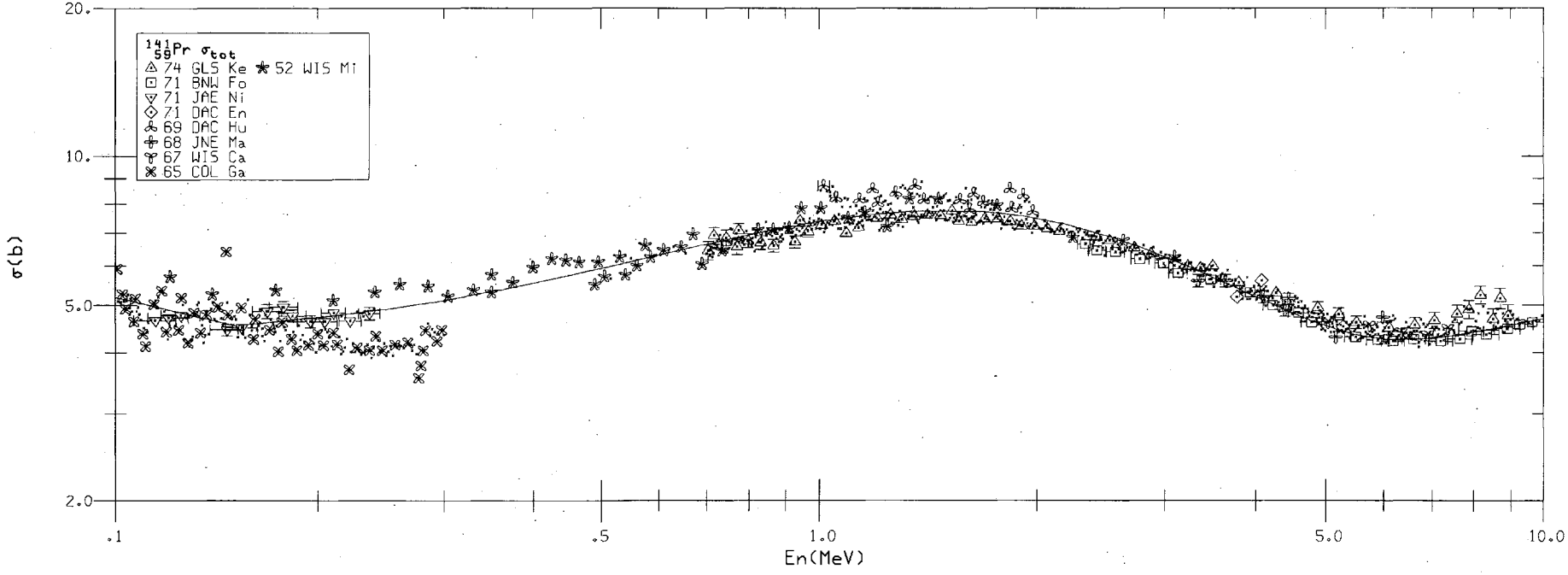
σ_{tot}








$^{141}_{59}Pr$ σ_{tot}
71 JAE Ni
65 COL Ga
56 HAR Eg
55 BNL Ca
55 CCP Vl
σ(b)
En(keV)
10.0x10²
5.0x10²
1.0x10²
50.
10.
5.0
1.0
.5
.1
1.0
5.0
10.
50.


$^{141}_{59}Pr$ σ_{tot}
74 GLS Ke
52 WIS Mi
71 BNW Fo
71 JAE Ni
71 DAC En
69 DAC Hu
68 JNE Ma
67 WIS Ca
65 COL Ga
σ(b)
En(MeV)
20.
10.
5.0
2.0
.1
.5
1.0
5.0
10.0

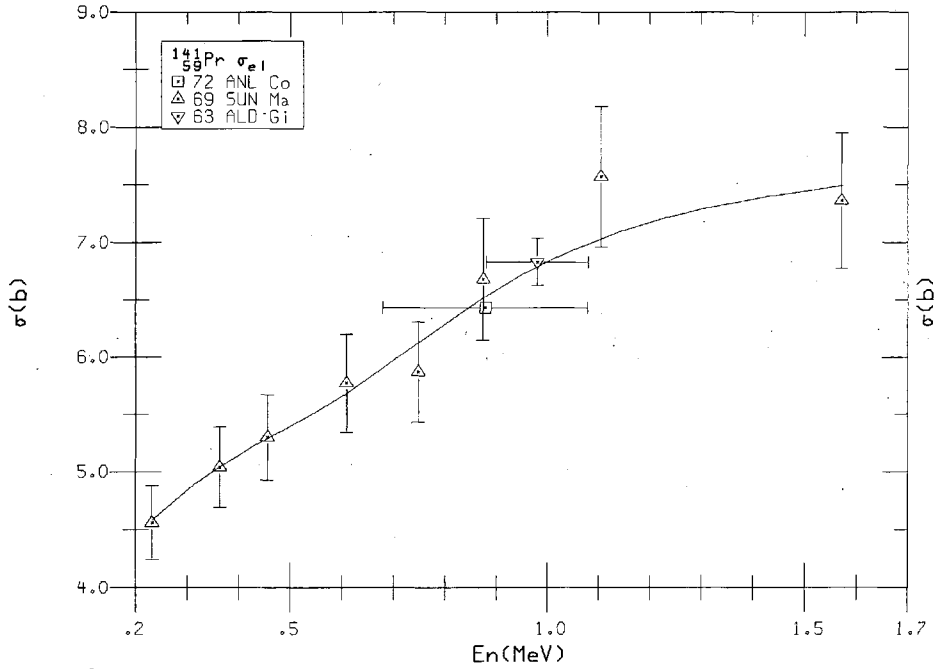
$^{141}_{59}Pr$

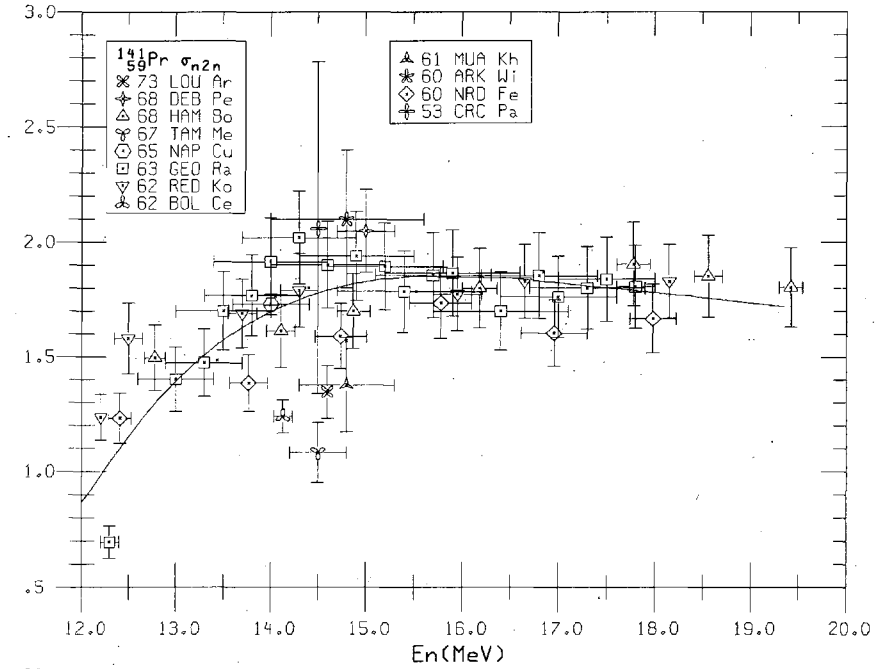
σ_{el}

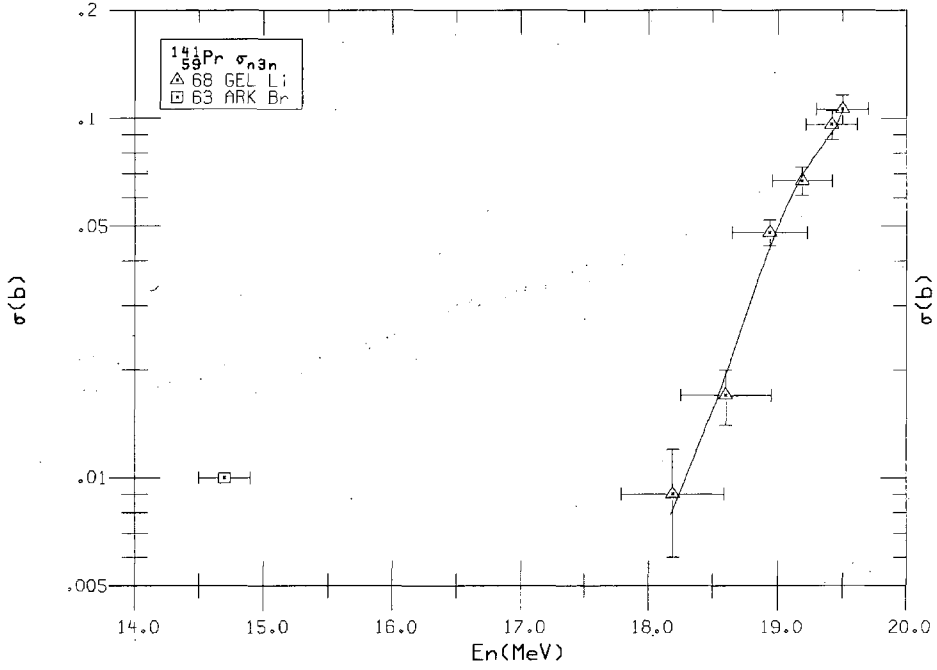
$\sigma_{n\gamma}$

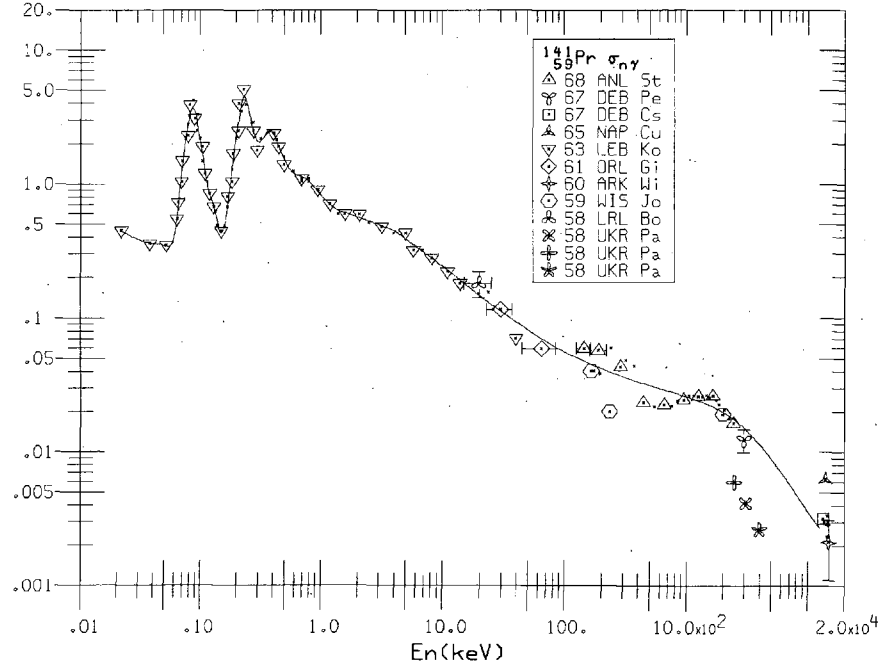
σ_{n2n}

σ_{n3n}





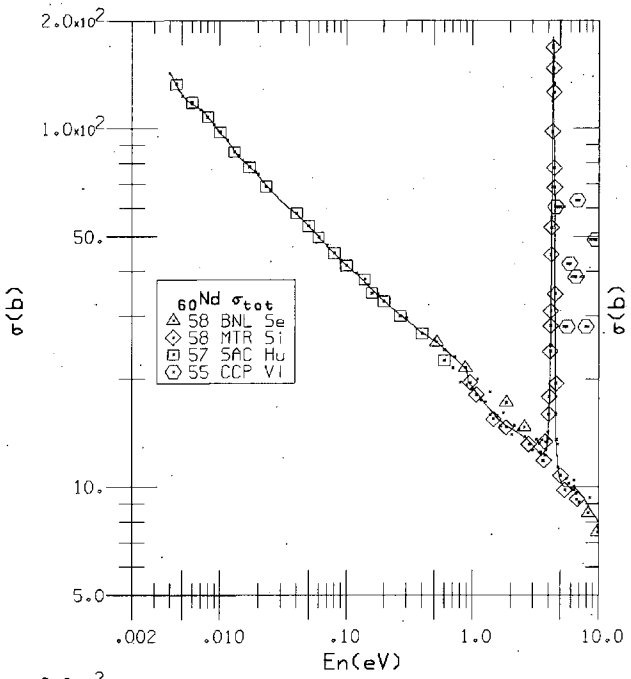


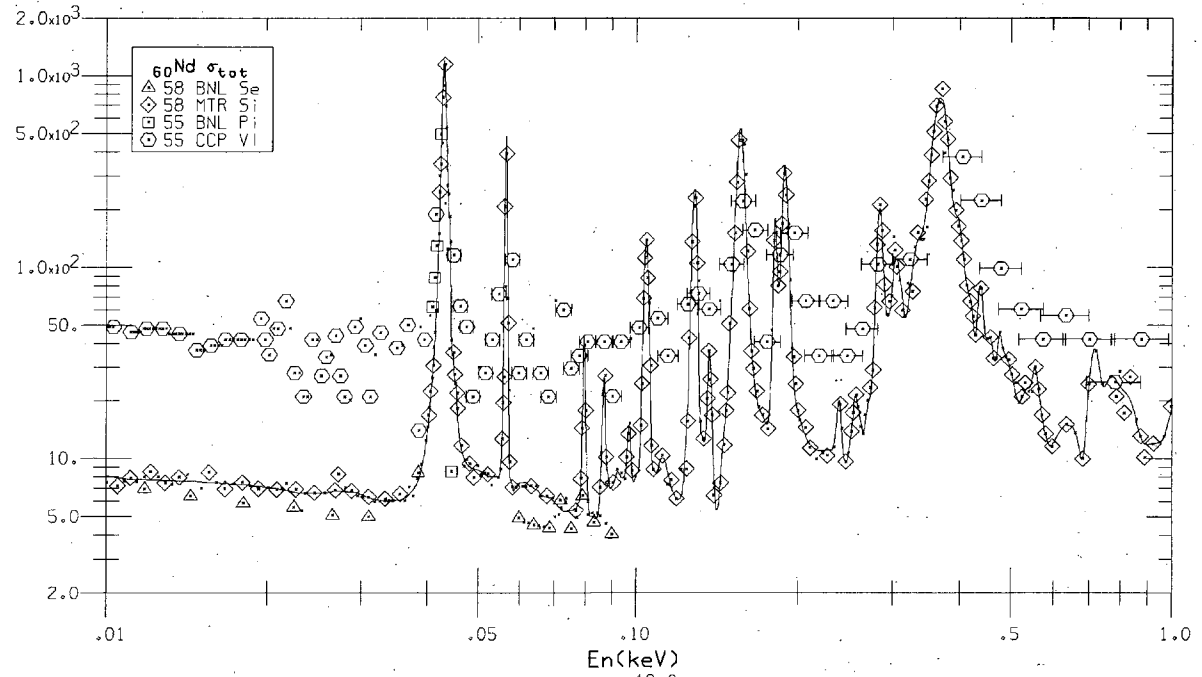


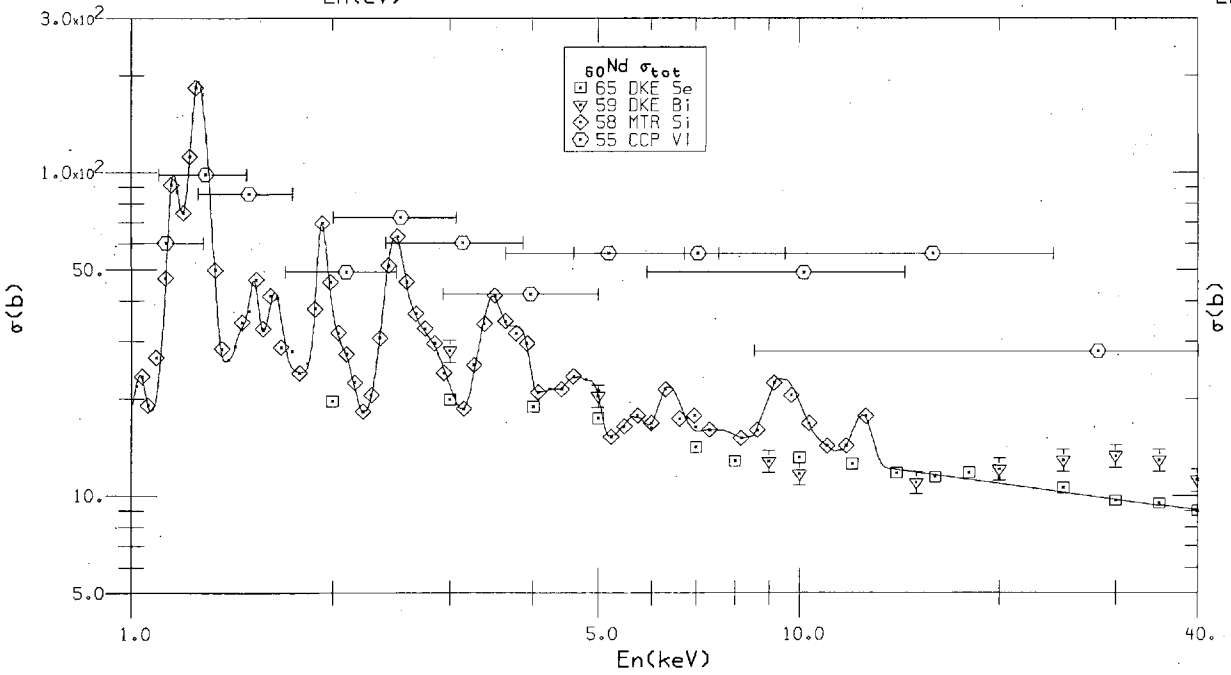
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{141}_{59}$Pr σ_{tot}			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	646	.700 MeV to 9.065 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	246	2.335 MeV to 14.9 MeV	
71	JAE	Nishimura	NISHIMURA,71	47	12.4 keV to .240 MeV	
71	DAC	Enayetullah,et.al	NSE,46,148,71	20	3.775 MeV to 18.0 MeV	
70	DAC	Hussain,et.al.	JNE,24,385,70	2	13.4 MeV to 13.5 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.004 MeV to 2.004 MeV	
68	JNE	Manero	ARS,64,63,68	68	3.320 MeV to 5.990 MeV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	32	.0026 eV to .970 eV	abs
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	17.6 b at thermal	abs
67	WIS	Carlson,et.al.	PR,158,1142,67	60	4.531 MeV to 7.514 MeV	
66	KAP	Hickman	HICKMAN,66	156	.0170 eV to 8.340 eV	abs
65	COL	Garg,et.al.	PR/B,137,547,65	9660	54.5 eV to .300 MeV	abs
63	CEC	Amaral,et.al.	IEA-86,63	33	.0018 eV to .970 eV	
62	CEC	Zimmerman,et.al.	IEA-75,62	19	.0150 eV to .456 eV	
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
55	BNL	Carter	CARTER,55	143	10.9 eV to 2.080 keV	
55	BNL	Sailor	SAILOR,55	2	1.047 eV to 5.020 eV	
55	CCP	Vladimirski+	55GENEVA,4,22,55	223	4.630 eV to 28.2 keV	abs
52	WIS	Miller,et.al.	PR,88,83,52	79	50.0 keV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	4.930 b at 14.1 MeV	
			$^{141}_{59}$Pr σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.432 b at .879 MeV	C σ_{el}
69	SUN	Malan,et.al.	NP/A,124,111,69	8	.232 MeV to 1.571 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.830 b at .980 MeV	H
			$^{141}_{59}$Pr σ_{sct}			
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	3.000 b at thermal	abs
53	ORL	Koehler,et.al.	PR,91,597,53	1	4.000 b at thermal	
			$^{141}_{59}$Pr $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	2.300 mb at 14.4 MeV	^{56}Fe σ_{np}
68	ANL	Stupegia,et.al.	JNE,22,267,68	24	.145 MeV to 2.457 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	12.2 mb at 3.000 MeV	^{31}P σ_{np}
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	3.000 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	7	13.4 MeV to 15.0 MeV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	11.5 b at thermal	abs
65	NAP	Cuzzocrea	CUZZOCREA,65	1	6.250 mb at 14.0 MeV	^{63}Cu
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	2.300 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
63	LEB	Konks,et.al.	ZET,46,80,63	73	22.0 eV to 40.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	ARK	Wille,et.al.	PR,118,242,60	1	2.100 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.155 b at 24.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	38.0 mb at .195 MeV	In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	4	.165 MeV to 2.000 MeV	^{235}U σ_{nf}
58	LRL	Booth,et.al.	PR,112,226,58	1	.180 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	3.330 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	4.100 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	5.900 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	2.600 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.155 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$

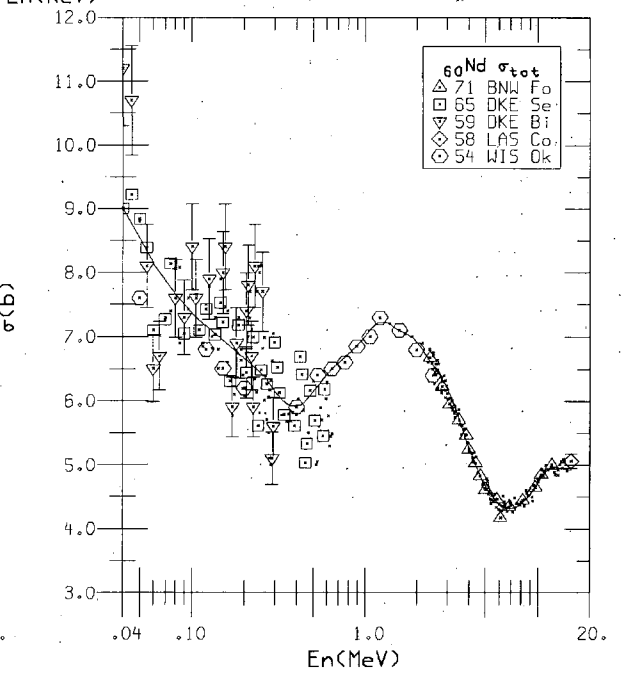
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{141}_{59}$Pr σ_{n2n}			
75	ARK	Sigg,et.al.	JIN,37,631,75	1	1.570 b at 14.8 MeV	
73	LOU	Araminowicz+	INR-1464,14,73	1	1.347 b at 14.6 MeV	^{63}Cu σ_{n2n}
68	DEB	Peto,et.al.	AHP,24,93,68	1	2.050 b at 15.0 MeV	^{141}Pr σ_{n2n}
68	HAM	Bormann,et.al.	EANDC(E)89,59,68	10	12.8 MeV to 19.4 MeV	H
67	TAM	Menon,et.al.	PR,156,1340,67	1	1.082 b at 14.5 MeV	^{63}Cu σ_{n2n}
65	NAP	Cuzzocrea	CUZZOCREA,65	1	1.730 b at 14.0 MeV	^{63}Cu
63	GEO	Rayburn	BAP,8,60(R7),63	20	12.3 MeV to 17.8 MeV	
62	RED	Koehler,et.al.	RR-TR-62-1,62	8	12.2 MeV to 18.2 MeV	^{141}Pr σ_{n2n}
62	BOL	Cevolani,et.al.	NC,26,1328,62	1	1.240 b at 14.1 MeV	abs
61	ANL	Rayburn	PR,122,168,61	1	1.801 b at 14.4 MeV	
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.378 b at 14.8 MeV	^{56}Fe σ_{np}
60	ARK	Wille,et.al.	PR,118,242,60	1	2.100 b at 14.8 MeV	^{63}Cu σ_{n2n}
60	NRD	Ferguson,et.al.	PR,118,228,60	6	12.4 MeV to 18.0 MeV	abs
53	CRC	Paul,et.al.	CJP,31,267,53	1	2.060 b at 14.5 MeV	abs
			$^{141}_{59}$Pr σ_{n3n}			
68	GEL	Liskien	NP/A,118,379,68	6	18.2 MeV to 19.5 MeV	^{65}Cu σ_{n2n}
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	10.0 mb at 14.7 MeV	^{141}Pr $\sigma_{n\gamma}$
			$^{141}_{59}$Pr σ_{np}			
68	DEB	Csikai,et.al.	AHP,24,233,68	1	11.4 mb at 14.8 MeV	abs
60	ARK	Wille,et.al.	PR,118,242,60	1	4.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{141}_{59}$Pr σ_{n2p}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.840 mb at 14.7 MeV	^{141}Pr $\sigma_{n\gamma}$
			$^{141}_{59}$Pr σ_{nt}			
68	DEB	Csikai,et.al.	AHP,24,233,68	1	.210 mb at 14.8 MeV	^{141}Pr σ_{np}
			$^{141}_{59}$Pr $\sigma_{n\alpha}$			
64	RBZ	Kulisic,et.al.	NP,54,17,64	1	3.000 mb at 14.7 MeV	abs

$_{60}$Nd
σ_{tot}



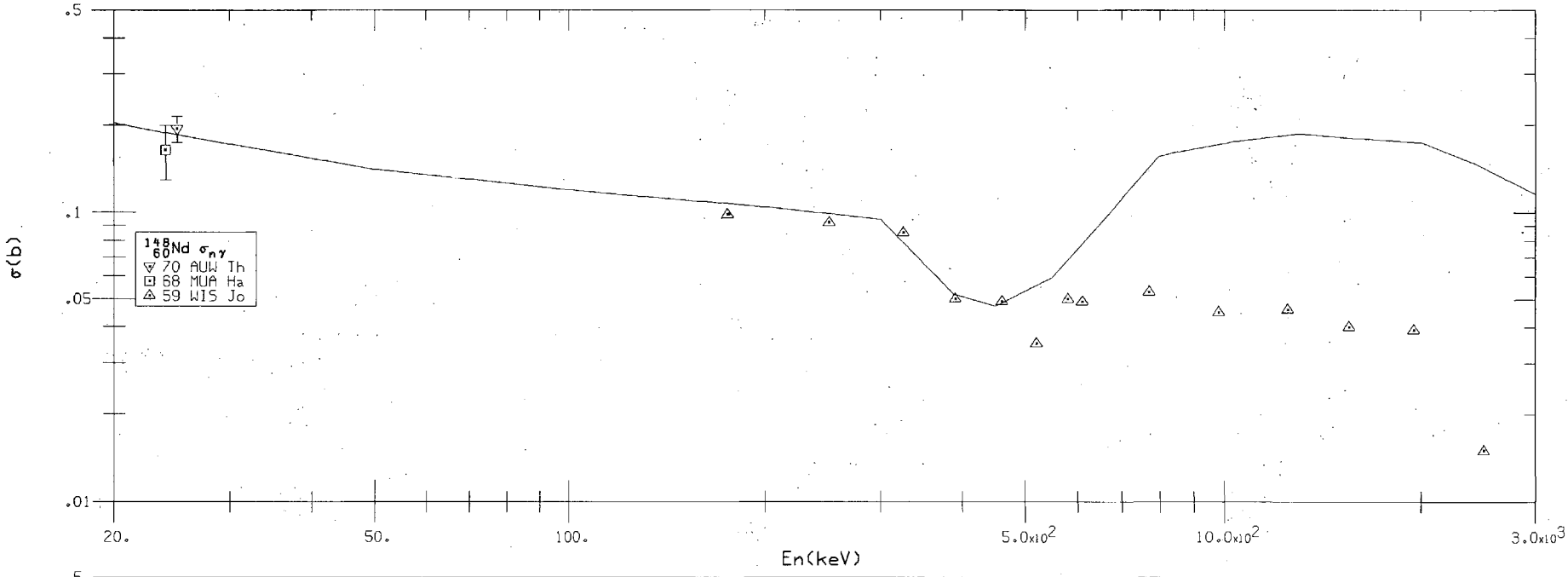


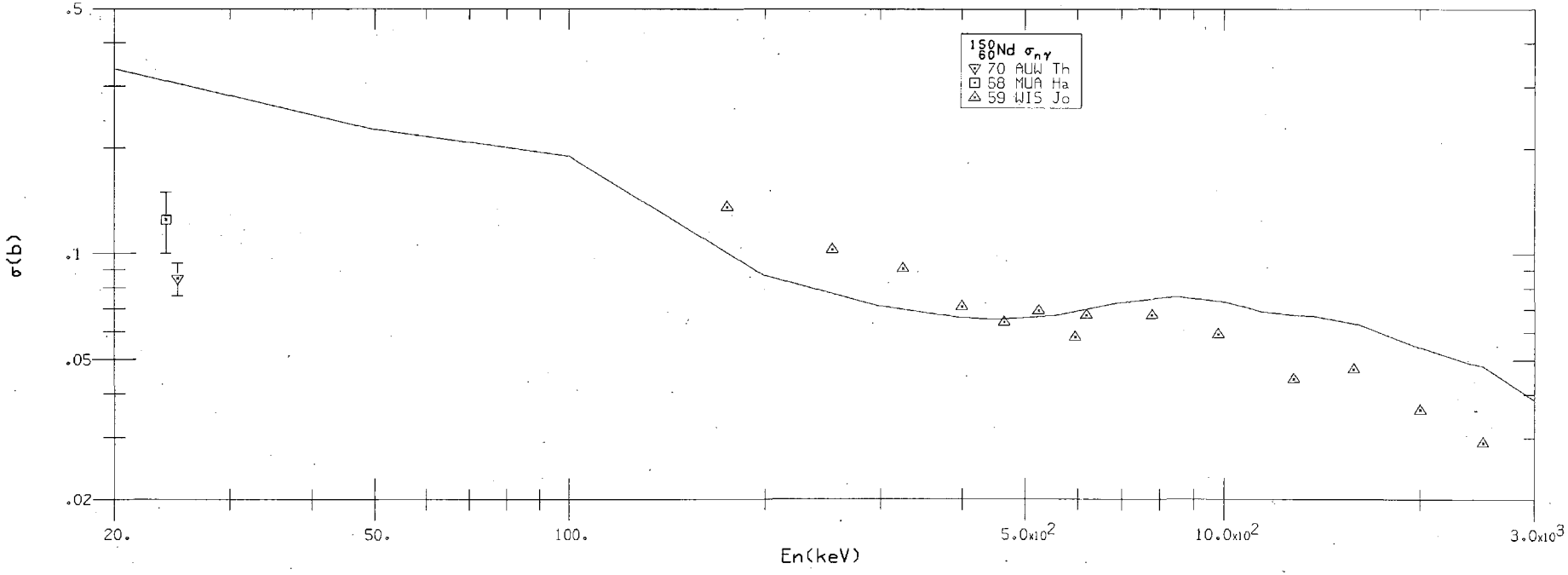


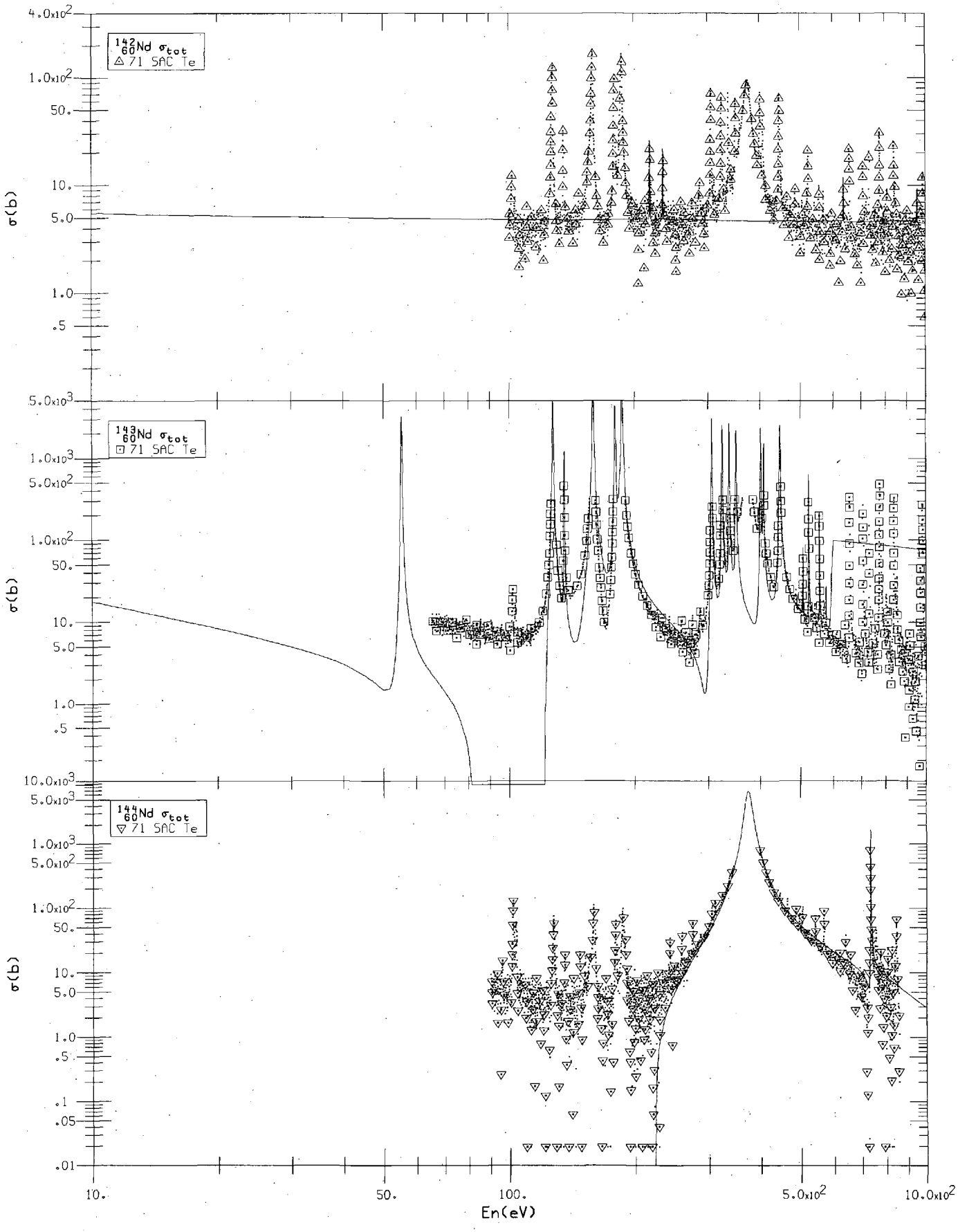


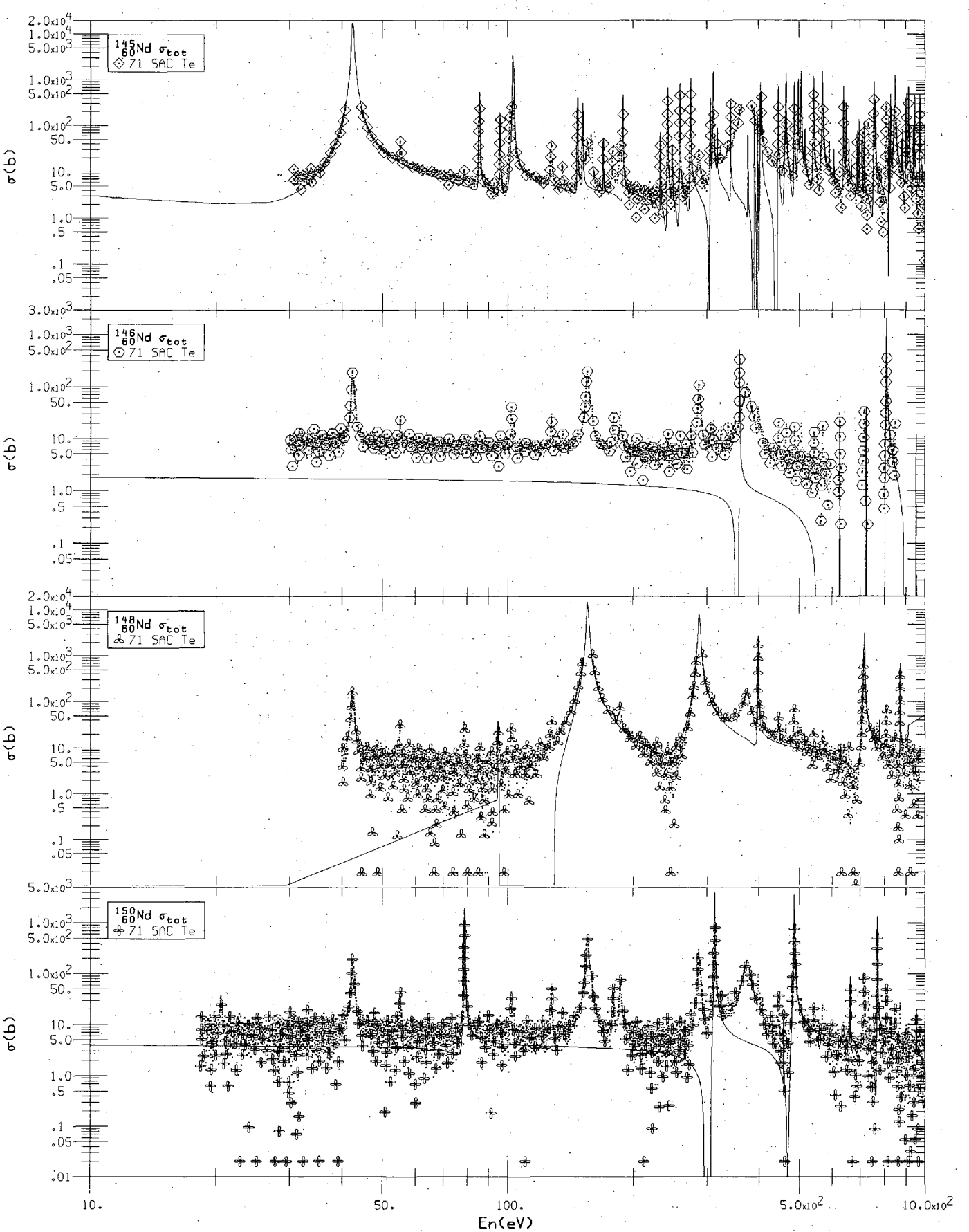
$^{148}_{60}Nd$ $\sigma_{n\gamma}$

$^{150}_{60}Nd$ $\sigma_{n\gamma}$






142 60 Nd σtot
143 60 Nd σtot
144 60 Nd σtot
σ(b)
En(eV)
10.
50.
100.
5.0x10^2
10.0x10^2

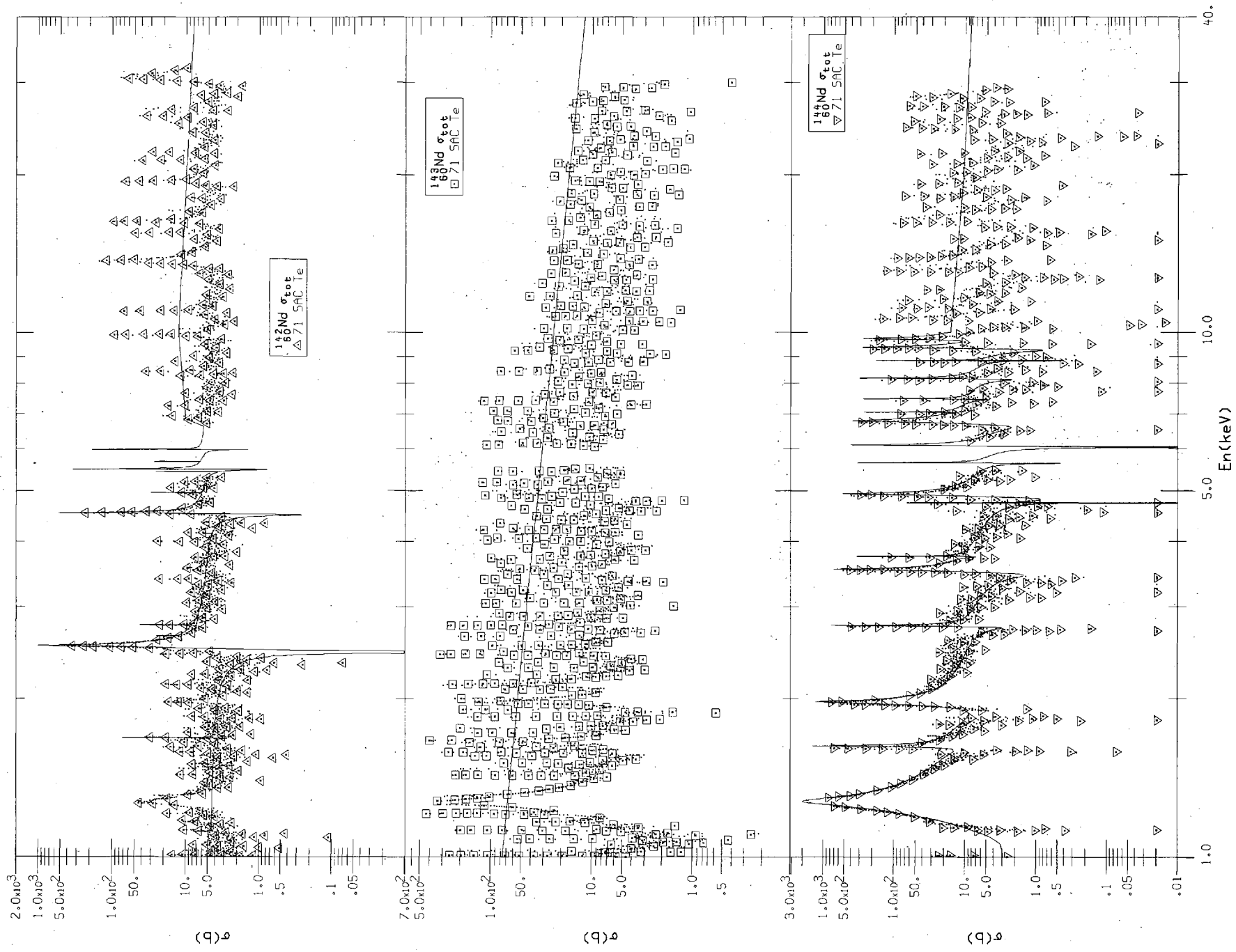


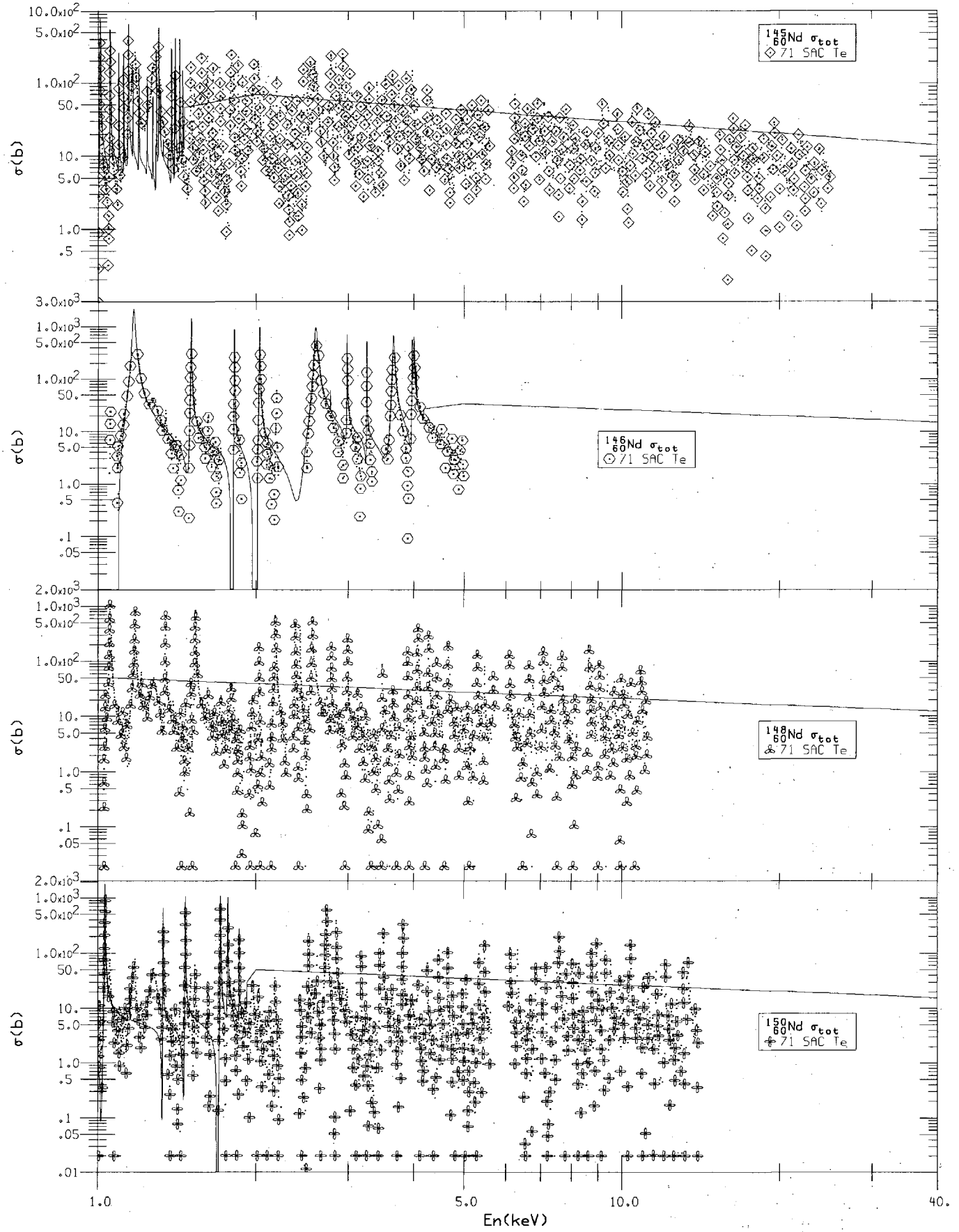
145 60 Nd σtot
146 60 Nd σtot
148 60 Nd σtot
150 60 Nd σtot

$^{142}_{60}Nd$ σ_{tot}

$^{143}_{60}Nd$ σ_{tot}

$^{144}_{60}Nd$ σ_{tot}





σtot PNd 150 60

σtot PNd 148 60

σtot PNd 146 60

σtot PNd 145 60

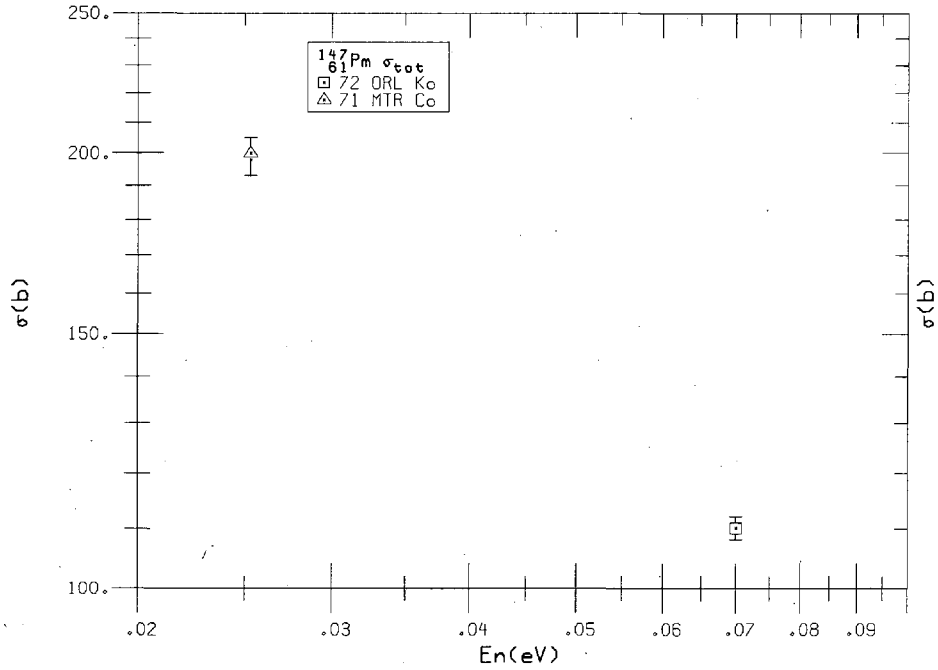
Yr	Lab	Author	Reference	Points	Range	Standard
			^{60}Nd σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.369 MeV to 15.0 MeV	
67	NWU	Haugsnes	HAUGSNES,67	1	5.060 b at 14.1 MeV	
65	DKE	Seth	PL,16,306,65	103	2.000 keV to .640 MeV	abs
59	DKE	Bilpuch	BILPUCH,59	62	3.000 keV to .295 MeV	
58	LAS	Conner	PR,109,1268,58	3	13.1 MeV to 15.6 MeV	
58	BNL	Seth,et.al.	PR,110,692,58	40	.521 eV to 90.0 eV	
58	MTR	Simpson	SIMPSON,58	448	.960 eV to 12.6 keV	
57	SAC	Hubert,et.al.	57COLUMBIA,,39,57	39	.0040 eV to 1.000 eV	
55	BNL	Pilcher	PILCHER,55	10	41.1 eV to 44.6 eV	abs
55	CCP	Vladimirski+	55GENEVA,4,22,55	223	4.590 eV to 28.2 keV	abs
54	WIS	Okazaki,et.al.	PR,93,461,54	23	50.0 keV to 2.920 MeV	abs
52	ANL	Haugsnes,et.al.	ANL-5609,52	1	5.060 b at 14.0 MeV	
			^{60}Nd σ_{el}			
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.080 b at .980 MeV	H
			^{60}Nd σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	16.0 b at thermal	
			^{60}Nd $\sigma_{n\gamma}$			
61	ANL	Meadows,et.al.	NSE,9,132,61	1	49.0 b at thermal	
			$^{142}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	10461	.100 keV to 32.0 keV	abs
			$^{142}_{60}$Nd σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	7.500 b at thermal	
			$^{142}_{60}$Nd σ_{n2n}			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	2.075 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	1.640 b at 14.7 MeV	
67	TAM	Menon,et.al.	PR,156,1340,67	1	1.648 b at 14.5 MeV	
66	RED	Grissom,et.al.	PR,142,725,66	1	1.650 b at 14.7 MeV	
61	ANL	Rayburn	PR,122,168,61	1	2.411 b at 14.4 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	2.060 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{142}_{60}$Nd σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	13.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

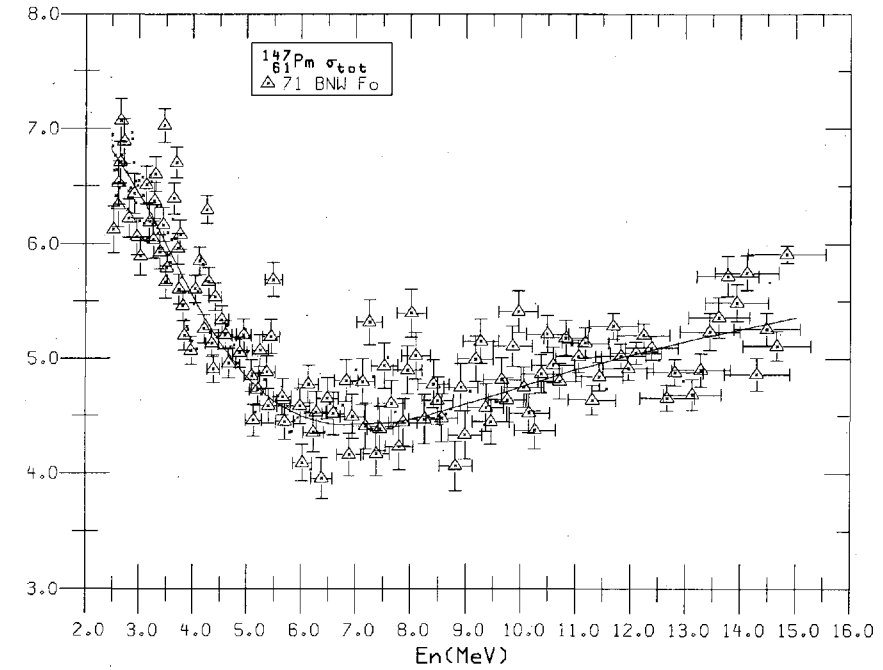
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{142}_{60}$Nd $\sigma_{n\alpha}$			
66	RED	Grissom,et.al.	PR,142,725,66	1	2.500 mb at 14.7 MeV	
			$^{143}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	11200	65.2 eV to 30.0 keV	abs
			$^{143}_{60}$Nd σ_{el}			
58	HAR	Hay	JNE,7,199,58	1	75.0 b at thermal	
			$^{143}_{60}$Nd σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	11.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{144}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	9498	90.0 eV to 29.4 keV	abs
			$^{144}_{60}$Nd σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	1.000 b at thermal	
			$^{144}_{60}$Nd $\sigma_{n\alpha}$			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	9.000 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{145}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	13815	30.6 eV to 25.0 keV	abs
58	HAR	Hay,et.al.	NRDC-103,58	1	65.0 b at thermal	
			$^{146}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	10994	30.0 eV to 4.983 keV	abs
			$^{146}_{60}$Nd σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	9.500 b at thermal	
			$^{146}_{60}$Nd $\sigma_{n\gamma}$			
70	AUW	Thirumala Rao+	70MADURAI,2,25,70	1	89.0 mb at 25.0 keV	
			$^{146}_{60}$Nd $\sigma_{n\alpha}$			
60	ARK	Wille,et.al.	PR,118,242,60	1	8.300 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.600 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{148}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	12077	40.0 eV to 11.2 keV	abs
			$^{148}_{60}$Nd $\sigma_{n\gamma}$			
70	AUW	Thirumala Rao+	70MADURAI,2,25,70	1	.195 b at 25.0 keV	
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	.165 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	14	.175 MeV to 2.500 MeV	^{235}U σ_{nf}
			$^{148}_{60}$Nd σ_{n2n}			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	1.626 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Wille,et.al.	PR,118,242,60	1	2.160 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{148}_{60}$Nd σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	3.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{148}_{60}$Nd σ_{n3}			
61	ARK	Poularikas,et.al	ARKANSAS,7,61	1	.700 mb at 14.8 MeV	
			$^{148}_{60}$Nd $\sigma_{n\alpha}$			
60	ARK	Wille,et.al.	PR,118,242,60	1	5.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{150}_{60}$Nd σ_{tot}			
71	SAC	Tellier	TELLIER,71	15109	18.4 eV to 14.0 keV	abs
			$^{150}_{60}$Nd $\sigma_{n\gamma}$			
70	AUW	Thirumala Rao+	70MADURAI,2,25,70	1	85.0 mb at 25.0 keV	
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	.125 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	14	.175 MeV to 2.500 MeV	^{235}U σ_{nf}
			$^{150}_{60}$Nd σ_{n2n}			
67	TAM	Menon,et.al.	PR,156,1340,67	1	1.728 b at 14.5 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	2.200 b at 14.8 MeV	^{63}Cu σ_{n2n}

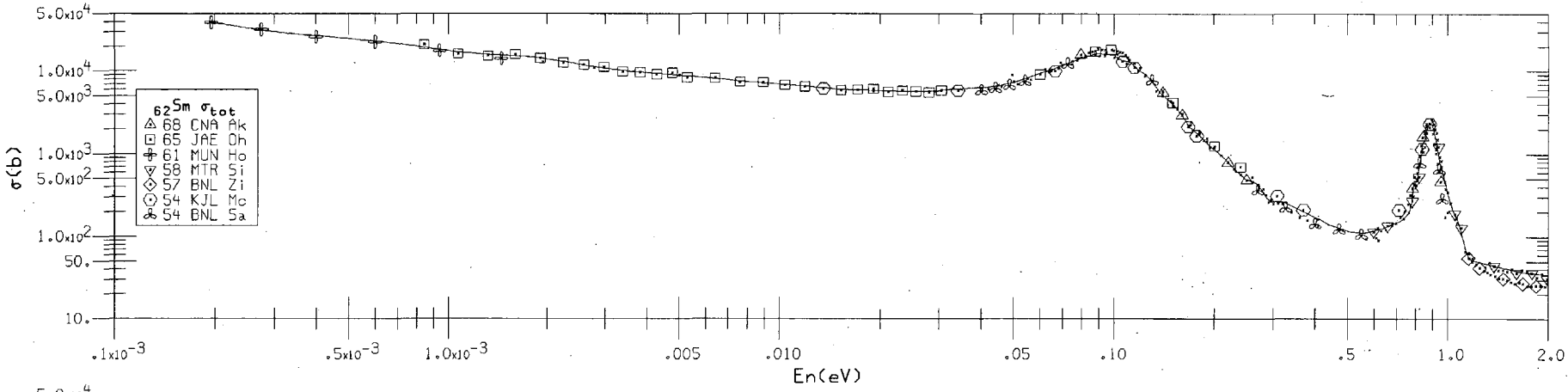
$^{147}_{61}Pm$

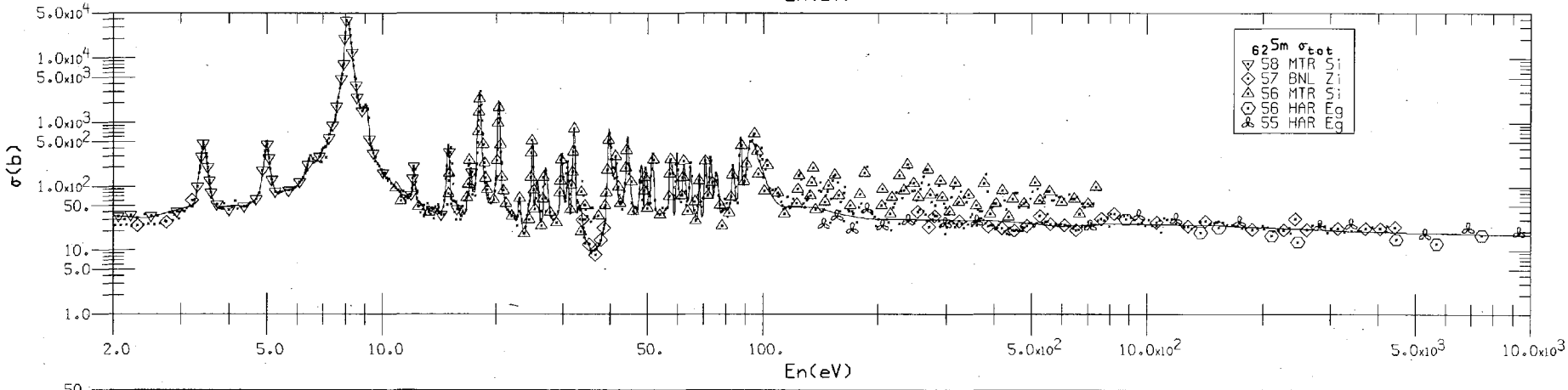
σ_{tot}

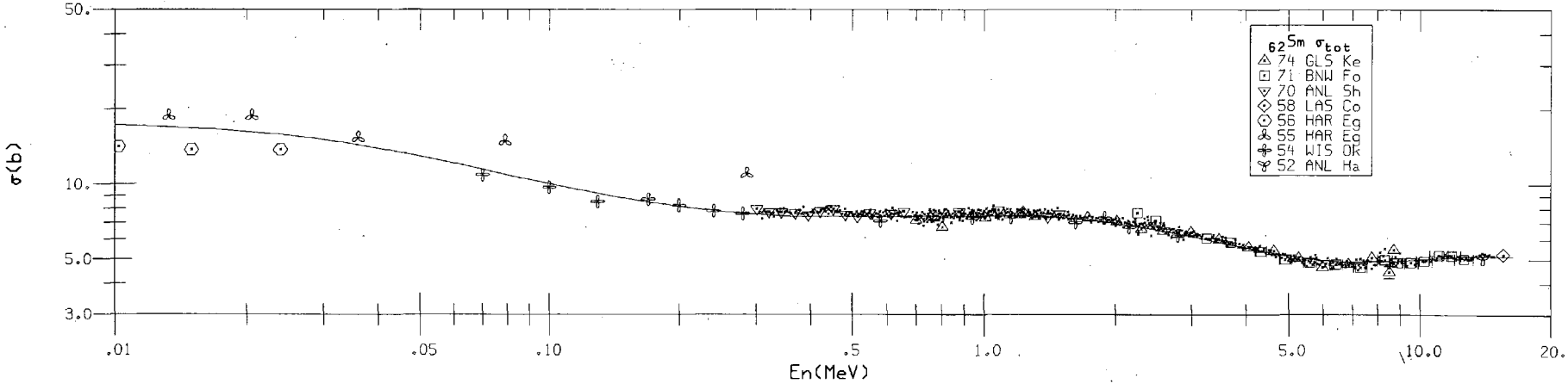




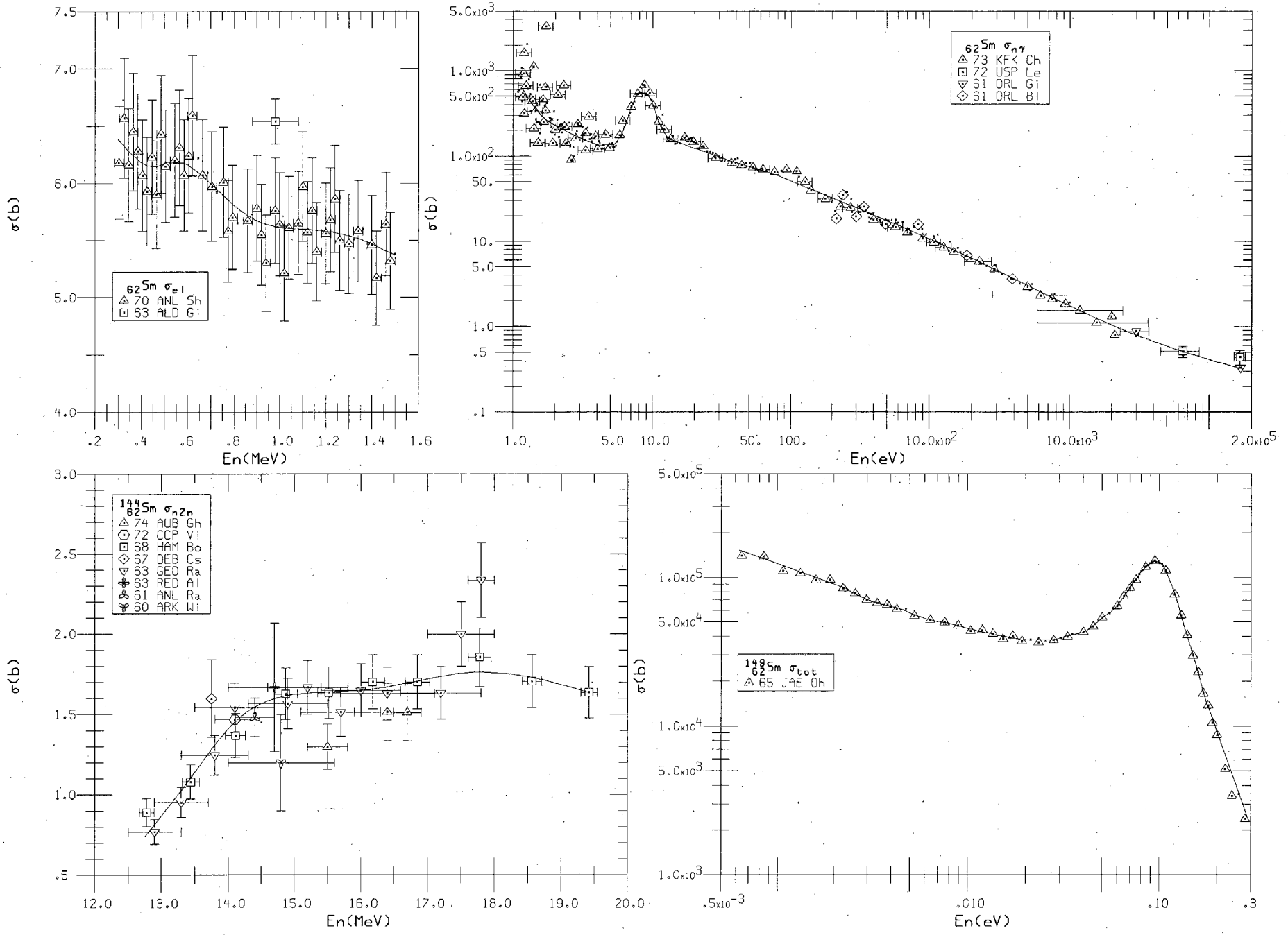
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{147}_{61}Pm$ σ_{tot}			
72	ORL	Koehler,et.al.	CONF-721114-4,72	1	.110 kb at .0700 eV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	229	2.495 MeV to 14.8 MeV	
71	MTR	Codding Jr.+	NSE,43,58,71	1	.199 kb at thermal	abs
71	KAP	Kirouac,et.al.	KAPL-3974,71	1	.198 kb at thermal	
58	ORL	Harvey	58GENEVA,16,150,58	222	.0200 eV to 90.0 eV	
			$^{148}_{61}Pm$ σ_{tot}			
69	KAP	Kirouac,et.al.	RPI-328-160,69	2	.0250 eV to .0250 eV	
			$^{148-G}_{61}Pm$ $\sigma_{n\gamma}$			
62	MTR	Schuman,et.al.	NSE,12,519,62	1	3.000 kb at thermal	
			$^{148-M1}_{61}Pm$ $\sigma_{n\gamma}$			
69	TOK	Miyano,et.al.	JPJ,26,576,69	1	27.0 kb at thermal	In $\sigma_{n\gamma}$
66	ALD	Fenner,et.al.	EANDC(UK)75S,66	1	35.0 kb at 10.0 eV	
62	MTR	Schuman,et.al.	NSE,12,519,62	1	29.0 kb at thermal	

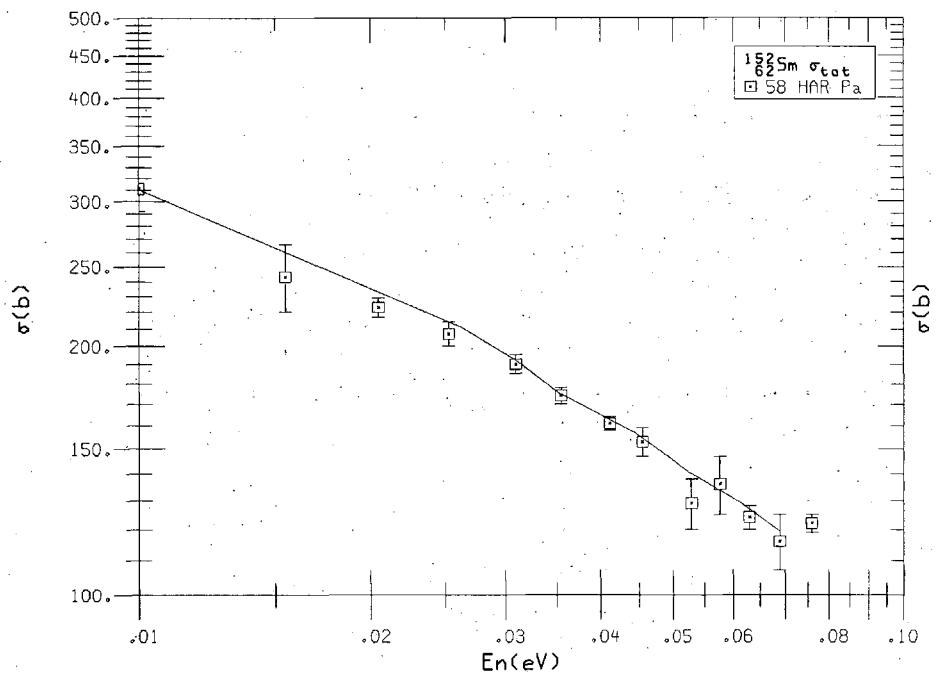

$_{62}Sm$ σ_{tot}
68 CNA Ak
65 JAE Oh
61 MUN Ho
58 MTR Si
57 BNL Zi
54 KJL Mc
54 BNL Sa
σ(b)
En(eV)

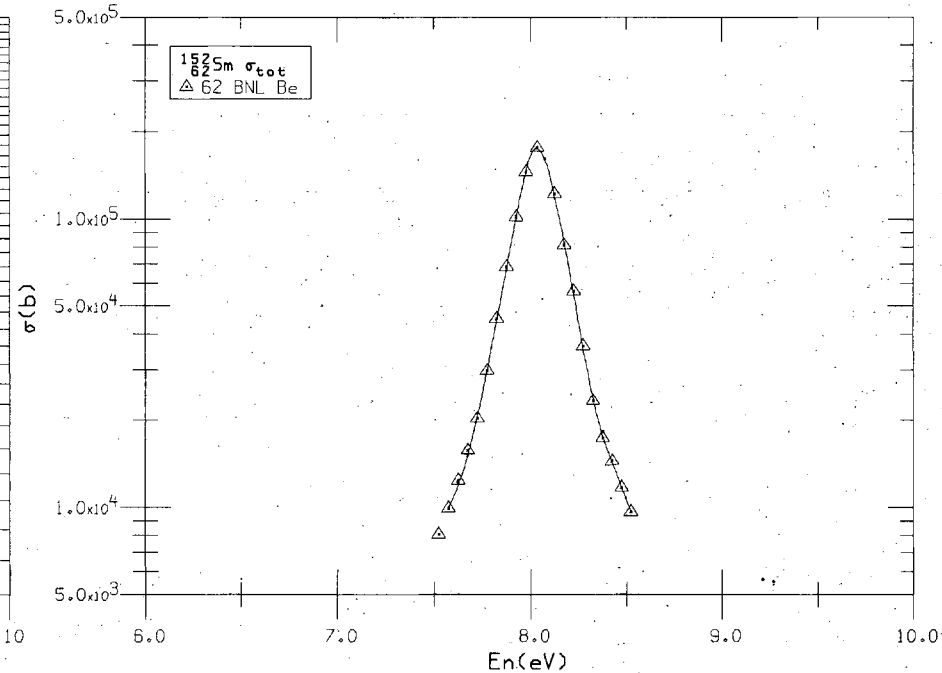

$_{62}Sm$ σ_{tot}
58 MTR Si
57 BNL Zi
56 MTR Si
56 HAR Eg
55 HAR Eg
σ(b)
En(eV)

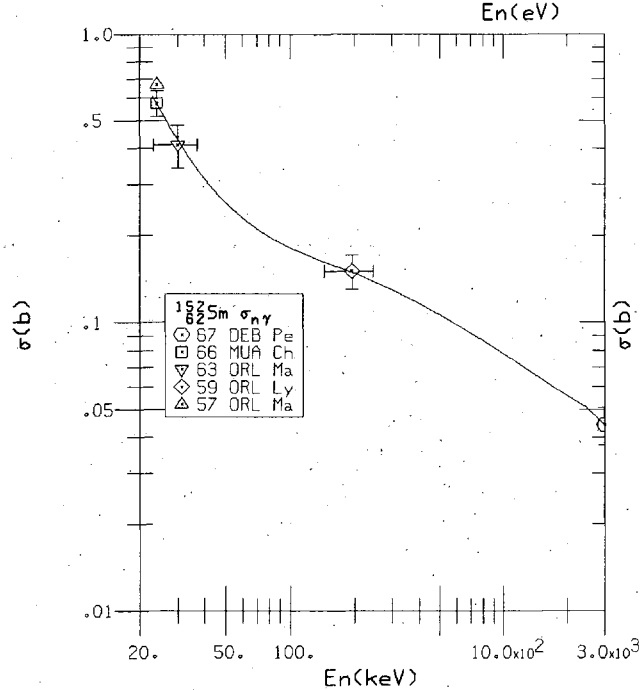

$_{62}Sm$ σ_{tot}
74 GLS Ke
71 BNW Fo
70 ANL Sh
58 LAS Co
56 HAR Eg
55 HAR Eg
54 WIS Ok
52 ANL Ha
σ(b)
En(MeV)

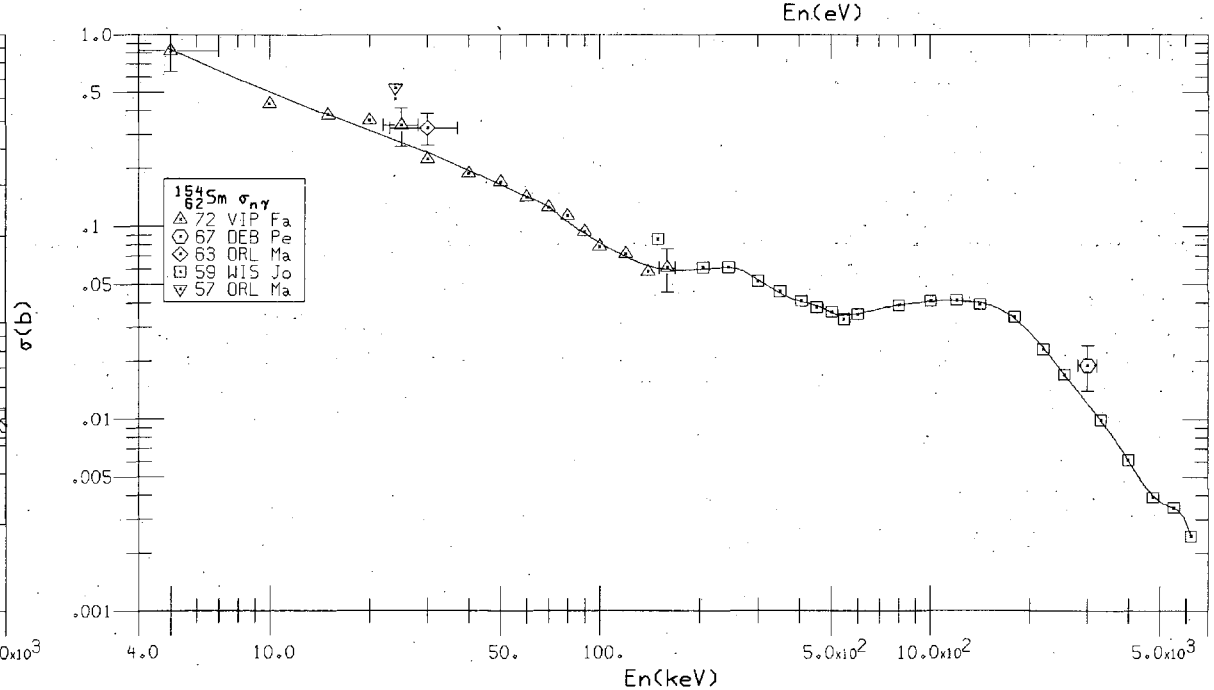
^{62}Sm
σ_{el}
$\sigma_{n\gamma}$
$^{144}_{62}$Sm
σ_{n2n}
$^{149}_{62}$Sm
σ_{tot}




$^{152}_{62}Sm$ σ_{tot}
58 HAR Pa
σ(b)
En(eV)


$^{152}_{62}Sm$ σ_{tot}
62 BNL Be
σ(b)
En(eV)


$^{152}_{62}Sm$ $\sigma_{n\gamma}$
67 DEB Pe
66 MUA Ch
63 ORL Ma
59 ORL Ly
57 ORL Ma
σ(b)
En(keV)


$^{154}_{62}Sm$ $\sigma_{n\gamma}$
72 VIP Fa
67 DEB Pe
63 ORL Ma
59 WIS Jo
57 ORL Ma
σ(b)
En(keV)

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{62}$Sm σ_{tot}			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	646	.700 MeV to 9.065 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	254	2.223 MeV to 14.9 MeV	
70	ANL	Sherwood,et.al.	NSE,39,67,70	347	.301 MeV to 1.498 MeV	
68	CNA	Akyuez,et.al.	CNAEM-52,68	45	.0621 eV to .951 eV	abs
67	NWU	Haugsnes	HAUGSNES,67	1	5.010 b at 14.1 MeV	
65	JAE	Ohno,et.al.	EANDC(J)-1,2,65	67	.0008 eV to .280 eV	
61	MUN	Hoehne	ADP,7,50,61	8	.0002 eV to .0028 eV	
58	LAS	Conner	PR,109,1268,58	3	13.1 MeV to 15.6 MeV	
58	MTR	Simpson	SIMPSON,58	373	.599 eV to 17.9 eV	abs
57	BNL	Zimmerman	ZIMMERMAN,57	207	1.160 eV to 4.420 keV	
56	MTR	Simpson	SIMPSON,56	616	10.7 eV to .735 keV	abs
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
55	HAR	Egelstaff	EGELSTAFF,55	48	.144 keV to .286 MeV	
54	KJL	Moreynolds+	PR,93,195,54	40	.0050 eV to .955 eV	abs
54	WIS	Okazaki,et.al.	PR,93,461,54	46	70.0 keV to 2.950 MeV	abs
54	BNL	Sailor,et.al.	PR,96,1014,54	58	.0400 eV to 1.000 eV	
52	ANL	Haugsnes,et.al.	ANL-5809,52	1	5.050 b at 14.0 MeV	
			$_{62}$Sm σ_{el}			
70	ANL	Sherwood,et.al.	NSE,39,67,70	55	.303 MeV to 1.500 MeV	C σ_{el}
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.540 b at .980 MeV	H
			$_{62}$Sm $\sigma_{n\gamma}$			
73	KFK	Chou,et.al.	JNE,27,811,73	314	1.084 eV to 31.3 keV	^{10}B $\sigma_{n\alpha}$
72	USP	Lepine,et.al.	NP/A,196,83,72	3	30.0 keV to .165 MeV	In $\sigma_{n\gamma}$
64	AE	Sokolowski,et.al	NUK,6,245,64	1	5.880 kb at thermal	B σ_{abs}
64	AE	Sokolowski,et.al	NUK,6,245,64	1	5.740 kb at thermal	B σ_{abs}
64	AE	Sokolowski,et.al	NUK,6,245,64	1	5.775 kb at thermal	B σ_{abs}
61	ANL	Meadows,et.al.	NSE,9,132,61	1	5.828 kb at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	43	.210 keV to 7.800 keV	
			$^{144}_{62}$Sm $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	NAT,197,369,63	1	.119 b at 30.0 keV	
			$^{144}_{62}$Sm σ_{n2n}			
74	AUB	Ghorai,et.al.	NP/A,223,118,74	4	14.9 MeV to 16.7 MeV	^{27}Al $\sigma_{n\alpha}$
72	CCP	Viktorov,et.al.	YF15,(6),1099,72	1	1.470 b at 14.1 MeV	
68	HAM	Bormann,et.al.	EANDC(E)-89,59,68	10	12.8 MeV to 19.4 MeV	H
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.600 b at 13.8 MeV	^{63}Cu σ_{n2n}
67	TAM	Menon,et.al.	PR,156,1340,67	1	1.452 b at 14.5 MeV	^{63}Cu σ_{n2n}
63	GEO	Rayburn	BAP,8,121(M13),63	13	12.9 MeV to 17.8 MeV	
63	RED	Alford,et.al.	PR,129,703,63	1	1.670 b at 14.7 MeV	^{63}Cu σ_{n2n}
61	ANL	Rayburn	PR,122,168,61	1	1.484 b at 14.4 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	1.200 b at 14.8 MeV	^{63}Cu σ_{n2n}

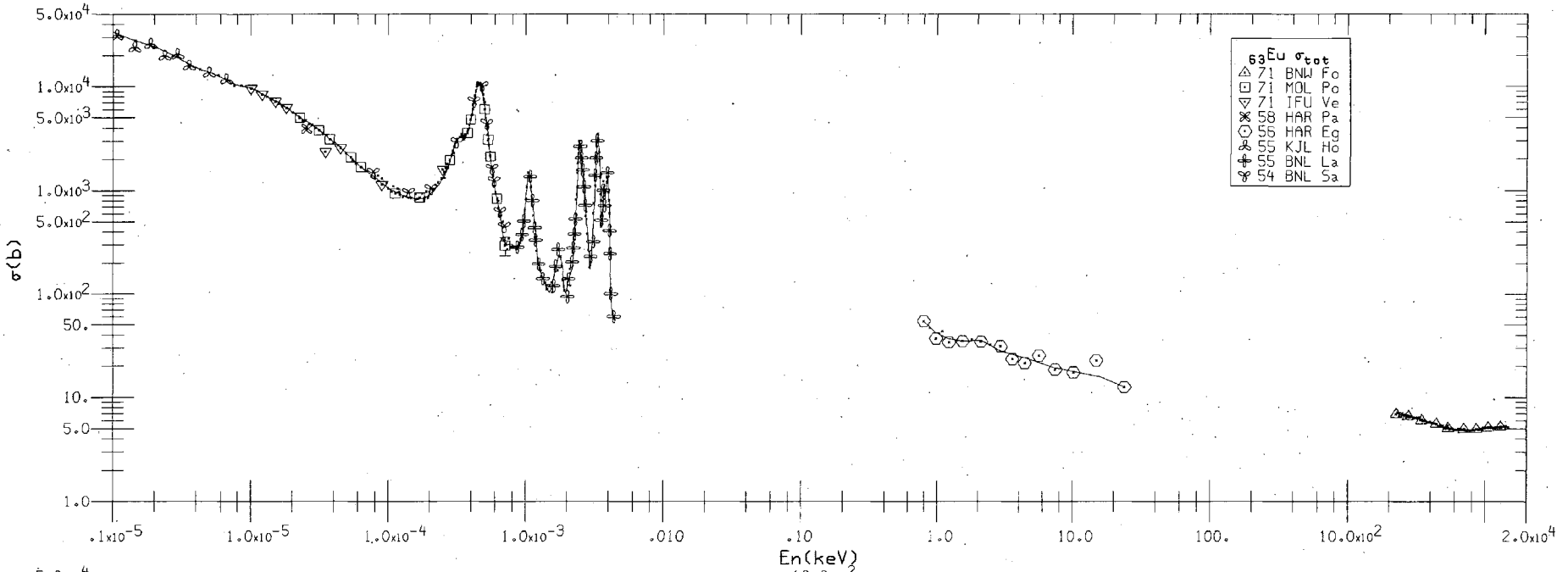
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{147}_{62}$Sm σ_{tot}			
71	KAP	Eiland,et.al.	71KNOX,2,673,71	1	77.0 b at thermal	
			$^{147}_{62}$Sm $\sigma_{n\gamma}$			
66	ALD	Fenner,et.al.	EANDC(UK)75*,66	1	.960 kb at 10.0 eV	
63	ORL	Macklin,et.al.	NAT,197,369,63	1	1.173 b at 30.0 keV	
			$^{148}_{62}$Sm $\sigma_{n\gamma}$			
68	AUA	Whittem	AAEC/TM-443,68	1	4.730 b at thermal	^{59}Co $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NAT,197,369,63	1	.258 b at 30.0 keV	
			$^{149}_{62}$Sm σ_{tot}			
69	JAE	Asami,et.al.	JPJ,26,225,69	1	37.0 kb at thermal	
68	JAE	Ohno,et.al.	EANDC(J)-10,1,68	1	37.5 kb at thermal	
65	JAE	Ohno,et.al.	EANDC(J)-1,2,65	80	.0006 eV to .280 eV	
			$^{149}_{62}$Sm $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	NAT,197,369,63	1	1.622 b at 30.0 keV	
58	CCP	Anikina,et.al.	58GENEVA,15,446,58	1	49.0 kb at thermal	
			$^{150}_{62}$Sm σ_{tot}			
71	KAP	Eiland,et.al.	71KNOX,2,673,71	1	.135 kb at thermal	
			$^{150}_{62}$Sm $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	NAT,197,369,63	1	.370 b at 30.0 keV	
			$^{151}_{62}$Sm σ_{tot}			
63	ORL	Pattenden	NSE,17,371,63	1	15.0 kb at thermal	
			$^{152}_{62}$Sm σ_{tot}			
62	BNL	Bernabei,et.al.	NSE,12,63,62	24	7.525 eV to 8.525 eV	abs
58	HAR	Pattenden	58GENEVA,16,44,58	1	.206 kb at thermal	
58	HAR	Pattenden	NROC-104,58	13	.0100 eV to .0760 eV	
			$^{152}_{62}$Sm $\sigma_{n\gamma}$			
67	DEB	Peto,et.al.	JNE,21,797,67	1	44.2 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.575 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NAT,197,369,63	1	.411 b at 30.0 keV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.150 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.668 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$

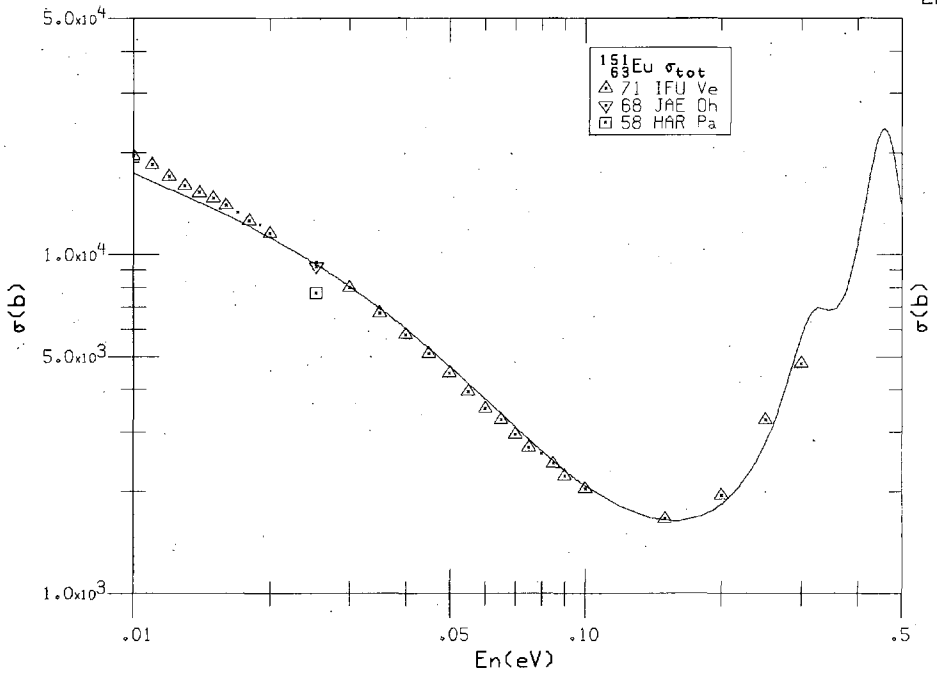
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{152}_{62}$Sm σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	3.700 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{152}_{62}$Sm $\sigma_{n\alpha}$			
60	ARK	Wille,et.al.	PR,118,242,60	1	10.0 mb at 14.8 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	8.900 mb at 14.5 MeV	abs
			$^{154}_{62}$Sm $\sigma_{n\gamma}$			
72	VIP	Fawcett,et.al.	NSE,49,317,72	16	5.000 keV to .160 MeV	^{127}I $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	19.0 mb at 3.000 MeV	^{31}P σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.460 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NAT,197,369,63	1	.325 b at 30.0 keV	
59	WIS	Johnsrud,et.al.	PR,116,927,59	23	.150 MeV to 6.200 MeV	^{235}U σ_{nf}
57	ORL	Macklin,et.al.	PR,107,504,57	1	.527 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{154}_{62}$Sm σ_{n2n}			
72	CCP	Viktorov,et.al.	YF,15,(6),1099,72	1	2.020 b at 14.1 MeV	
60	ARK	Wille,et.al.	PR,118,242,60	1	1.500 b at 14.8 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.225 b at 14.5 MeV	abs
			$^{154}_{62}$Sm σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	3.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{154}_{62}$Sm $\sigma_{n\alpha}$			
60	ARK	Wille,et.al.	PR,118,242,60	1	9.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}

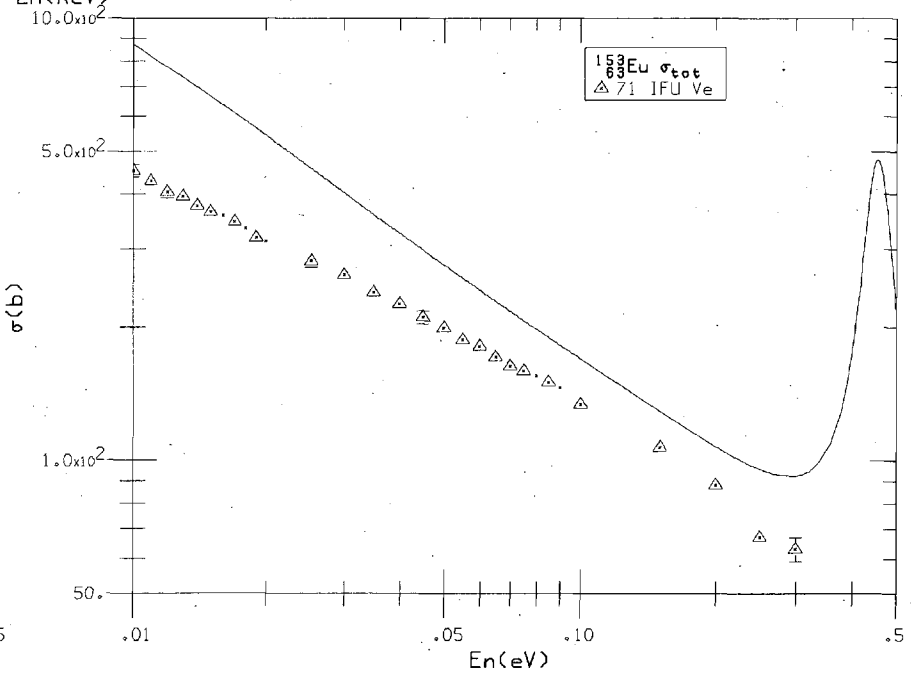
^{63}Eu σ_{tot}

$^{151}_{63}$Eu σ_{tot} [1290]

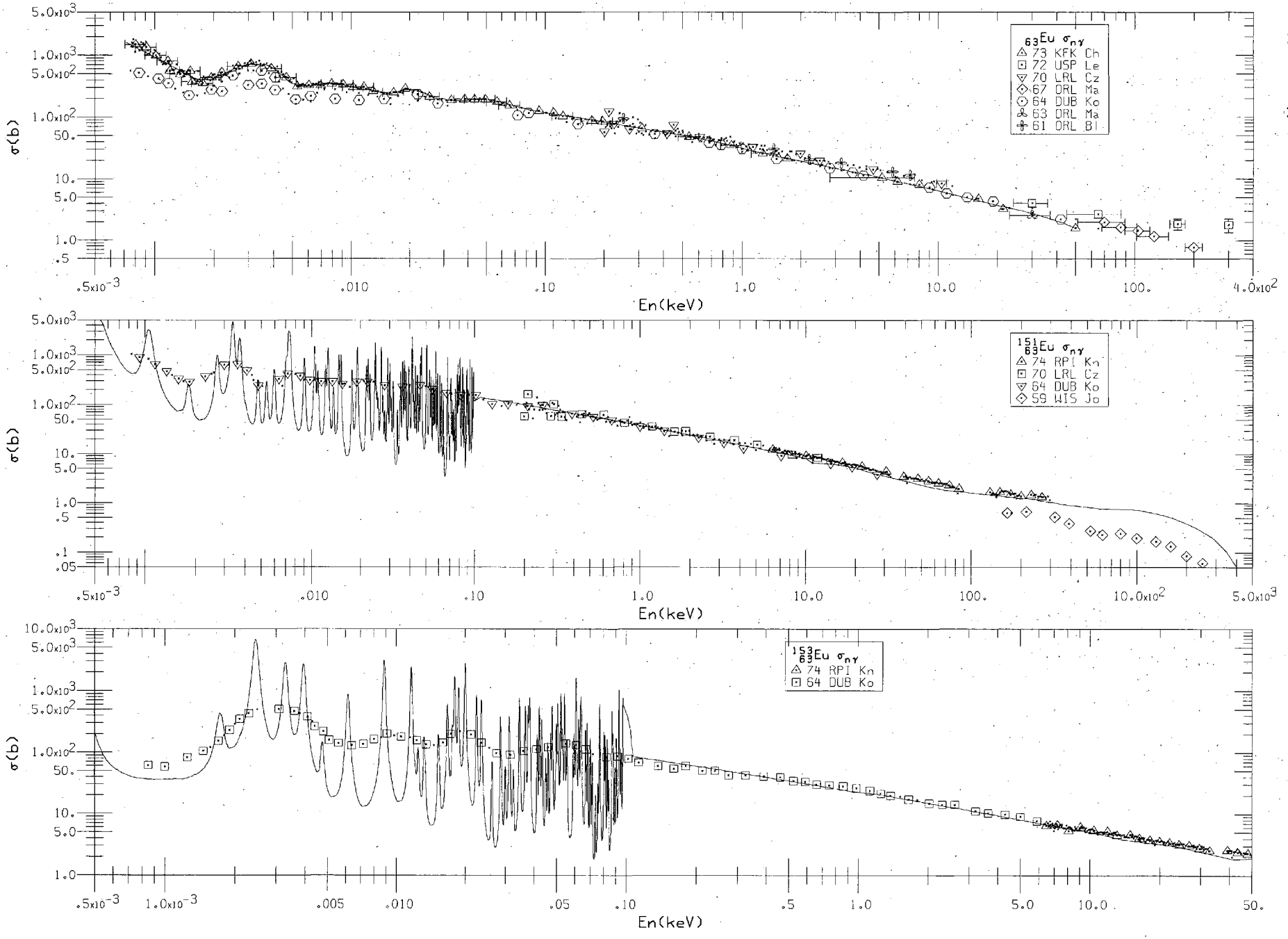
$^{153}_{63}$Eu σ_{tot} [1291]





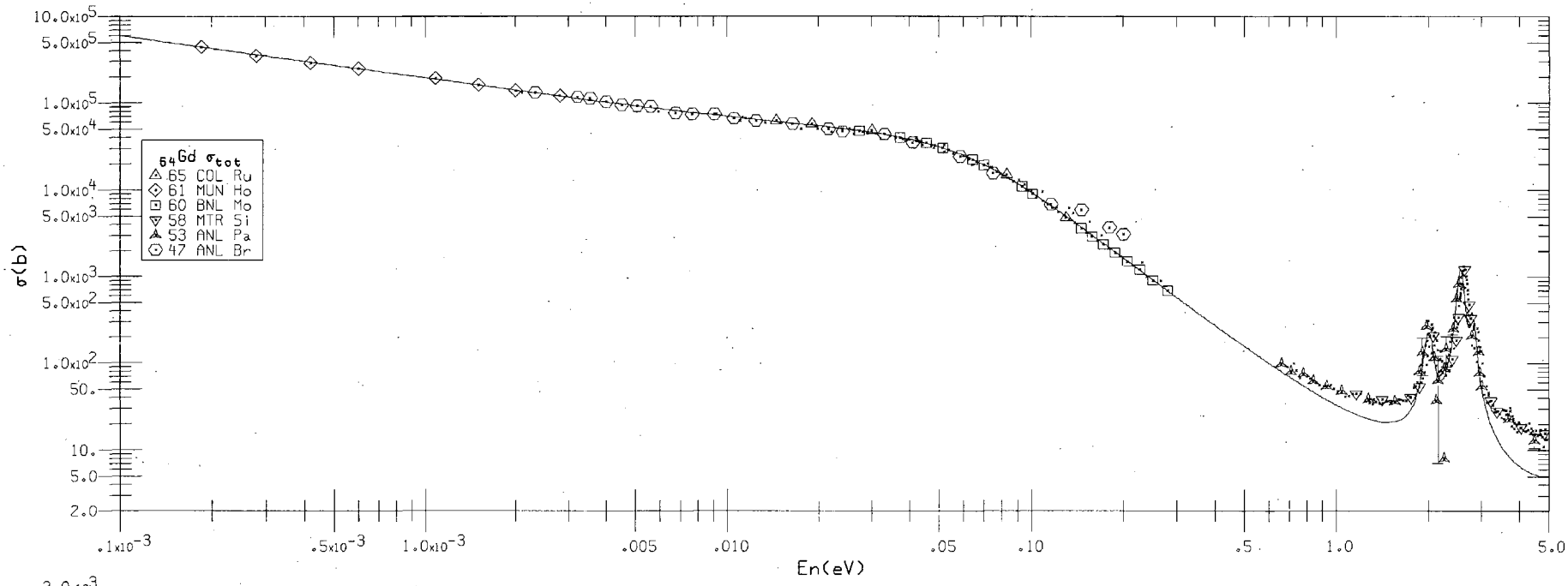


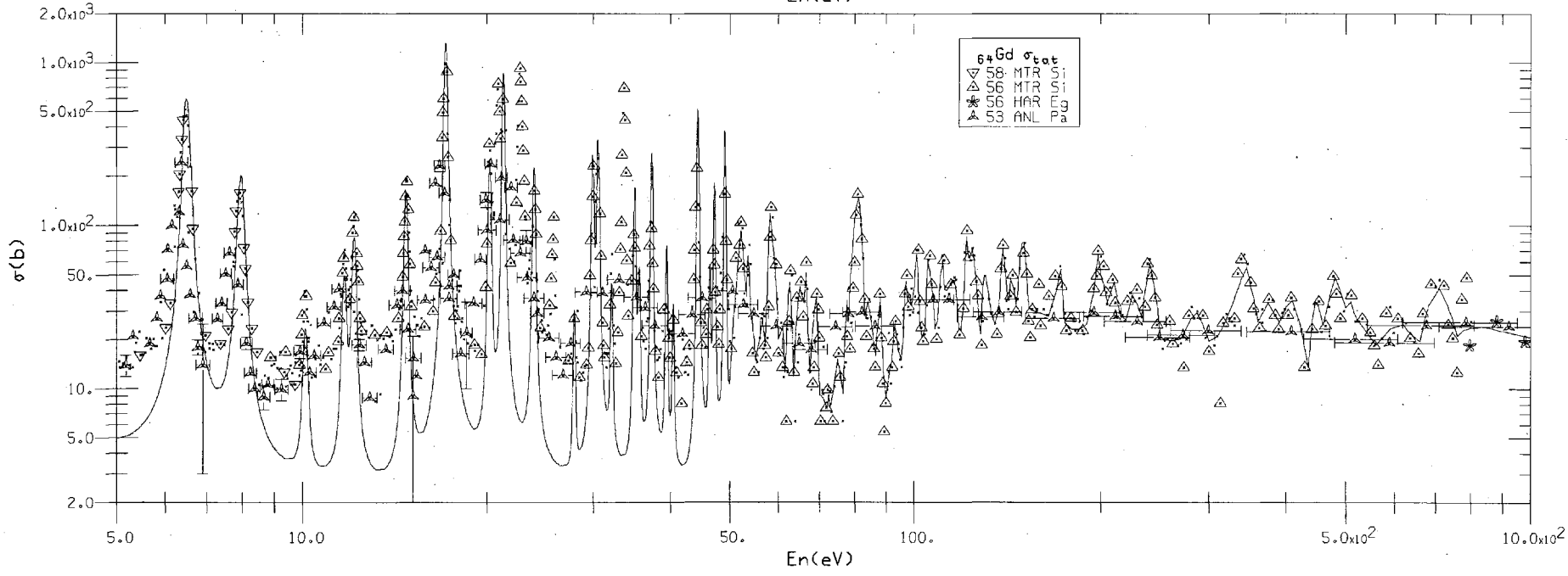
^{63}Eu
$\sigma_{n\gamma}$
$^{151}_{63}$Eu
$\sigma_{n\gamma}$
[1290]
$^{153}_{63}$Eu
$\sigma_{n\gamma}$
[1291]



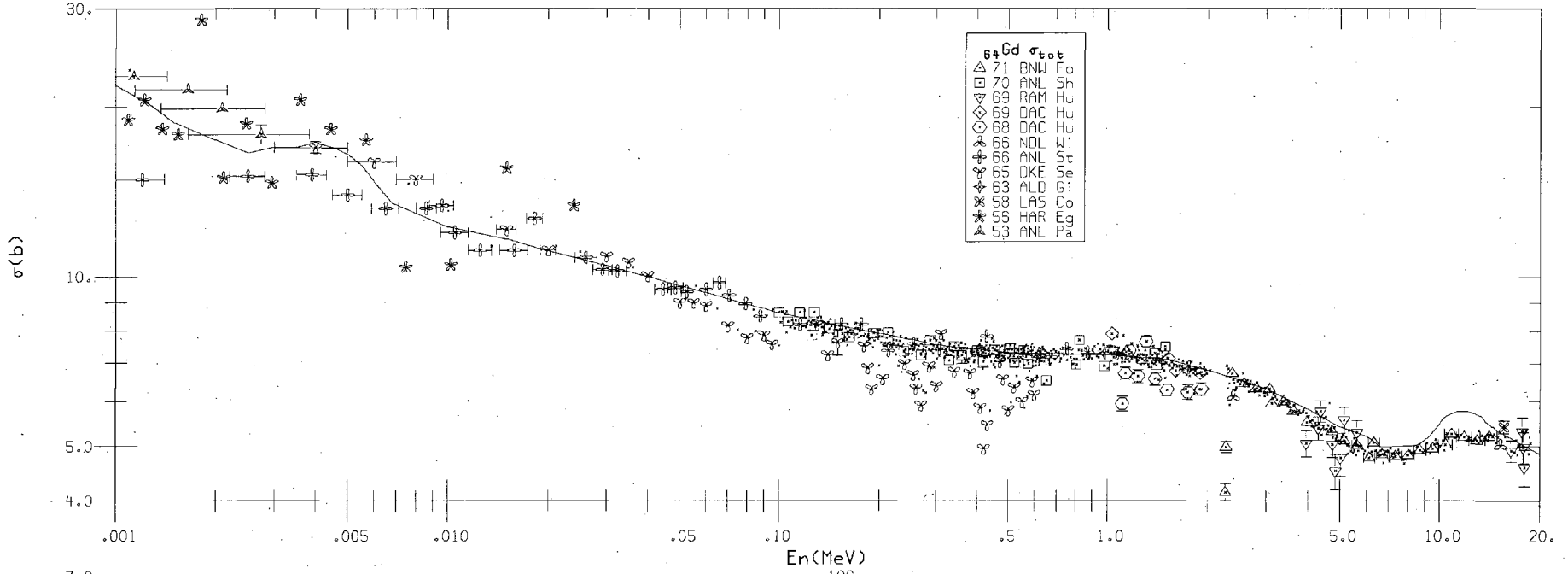
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{63}$Eu σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	241	2.260 MeV to 14.9 MeV	
71	MOL	Poortmans,et.al.	NP/A,172,489,71	126	.0226 eV to .754 eV	
71	MOL	Poortmans,et.al.	NP/A,172,489,71	1	4.590 kb at thermal	
71	IFU	Vertebnyj,et.al.	YFI-12,74,71	30	.0100 eV to .300 eV	
61	MUN	Hoehne	ADP,7,50,61	11	.0002 eV to .0028 eV	
58	HAR	Pattenden	58GENEVA,16,44,58	1	3.920 kb at thermal	
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
55	KJL	Holt	PR,98,1162(HA11),55	12	.0011 eV to .0085 eV	abs
55	BNL	Landon,et.al.	PR,98,1267,55	119	.818 eV to 4.400 eV	abs
54	BNL	Sailor,et.al.	PR,93,1292,54	52	.0780 eV to .790 eV	
			$_{63}$Eu $\sigma_{n\gamma}$			
73	KFK	Chou,et.al.	JNE,27,811,73	352	.774 eV to 49.9 keV	^{10}B $\sigma_{n\alpha}$
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
70	LRL	Czirr	UCRL-50804,70	98	.201 keV to 11.8 keV	^{151}Eu $\sigma_{n\gamma}$
67	ORL	Macklin,et.al.	PR,159,1007,67	7	30.0 keV to .200 MeV	Ta $\sigma_{n\gamma}$
64	DUB	Konks,et.al.	64DUBNA,,100,64	107	.760 eV to 42.0 keV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	4.406 kb at thermal	
61	ORL	Block,et.al.	61SACLAY,,203,61	49	.208 keV to 9.500 keV	
			$^{151}_{63}$Eu σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-12,74,71	30	.0100 eV to .300 eV	
70	COL	Rahn	NYO-72-281,70	4419	.263 keV to 3.000 keV	
68	JAE	Ohno,et.al.	EANDC(J)-10,1,68	1	9.230 kb at thermal	
61	BNN	Tassan	NSE,10,169,61	80	.200 eV to .680 eV	
58	HAR	Pattenden	58GENEVA,16,44,58	1	7.700 kb at thermal	
			$^{151}_{63}$Eu $\sigma_{n\gamma}$			
74	RPI	Knox,et.al.	COO-3058-50,74	566	6.314 keV to .297 MeV	
71	MOL	Poortmans,et.al.	NP/A,172,489,71	1	9.184 kb at thermal	abs
70	LRL	Czirr	UCRL-50804,70	98	.201 keV to 11.8 keV	^{151}Eu $\sigma_{n\gamma}$
64	DUB	Konks,et.al.	64DUBNA,,100,64	91	.830 eV to 41.0 keV	
59	WIS	Johnsrud,et.al.	PR,116,927,59	14	.165 MeV to 2.500 MeV	^{235}U σ_{nf}
			$^{151}_{63}$Eu σ_{n2n}			
72	LRL	Nethaway	NP/A,190,635,72	1	1.180 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
72	ARK	Bari	BARI,72	1	.497 b at 14.8 MeV	
64	IRK	Spenke	NP,51,329,64	1	.480 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	MUA	Khurana,et.al.	NP,28,560,61	1	.640 b at 14.8 MeV	^{56}Fe σ_{np}
60	ARK	Wille,et.al.	PR,118,242,60	1	.500 b at 14.8 MeV	^{63}Cu σ_{n2n}

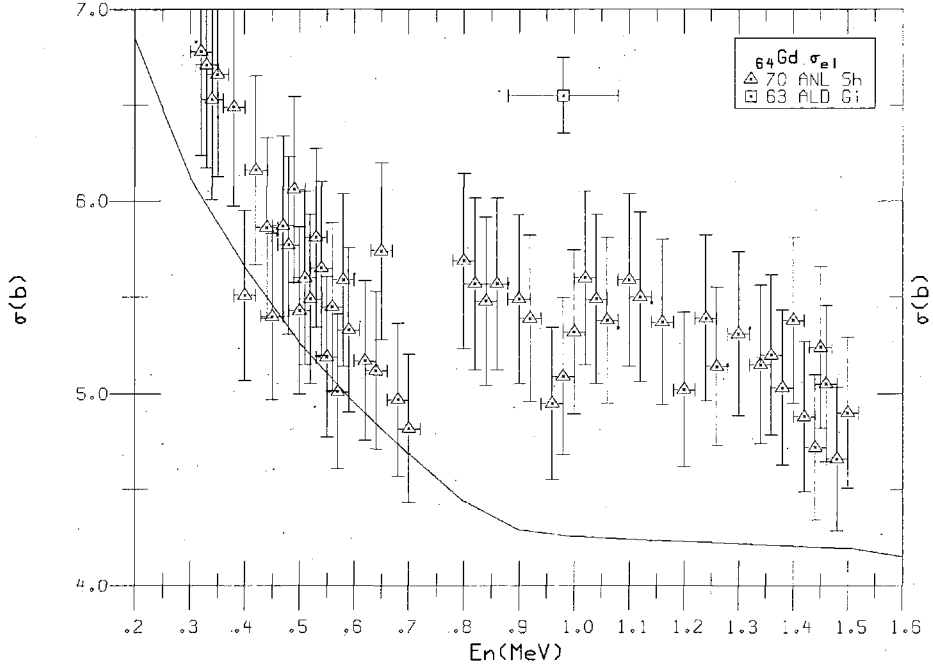
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{153}_{63}$Eu σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-12,74,71	30	.0100 eV to .300 eV	
			$^{153}_{63}$Eu $\sigma_{n\gamma}$			
74	RPI	Knox,et.al.	COO-3058-50,74	566	6.314 keV to .297 MeV	
64	DUB	Konks,et.al.	64DUBNA,,100,64	88	.850 eV to 41.0 keV	
			$^{153}_{63}$Eu σ_{np}			
72	ARK	Bari	BARI,72	1	4.400 mb at 14.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	7.400 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{153}_{63}$Eu $\sigma_{n\alpha}$			
65	MUA	Khurana,et.al.	NP,69,153,65	1	9.000 mb at 14.8 MeV	Fe

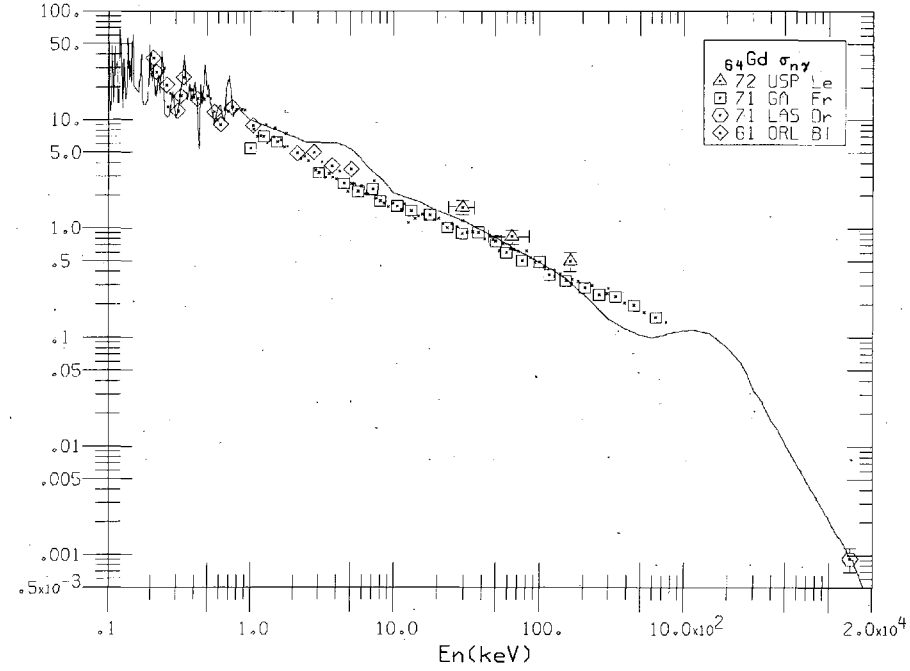

$_{64}$Gd σ_{tot}
65 COL Ru
61 MUN Ho
60 BNL Mo
58 MTR Si
53 ANL Pa
47 ANL Br
σ(b)
En(eV)

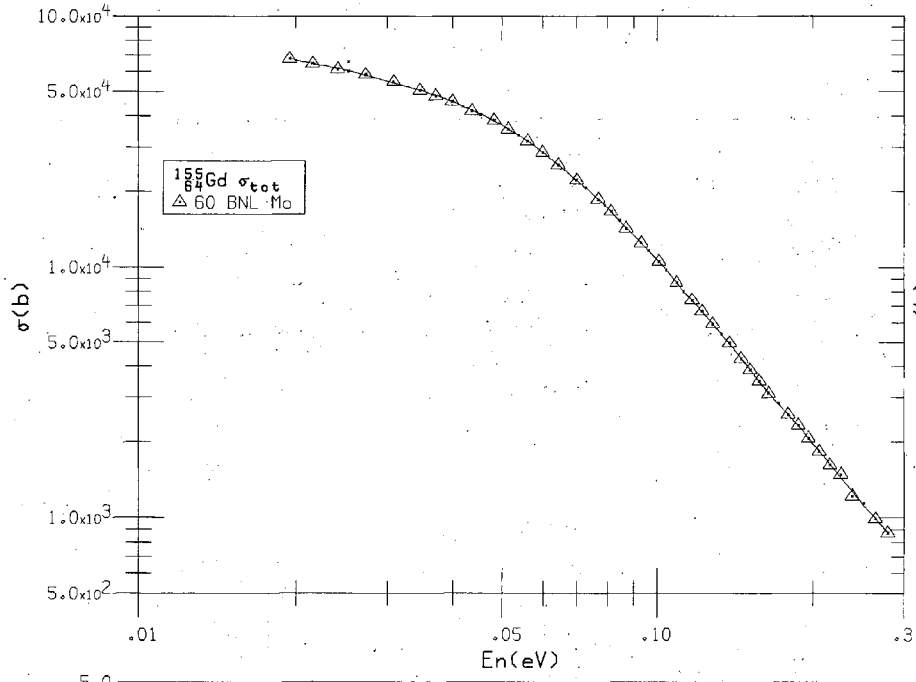

$_{64}$Gd σ_{tot}
58 MTR Si
56 MTR Si
56 HAR Eg
53 ANL Pa
σ(b)
En(eV)

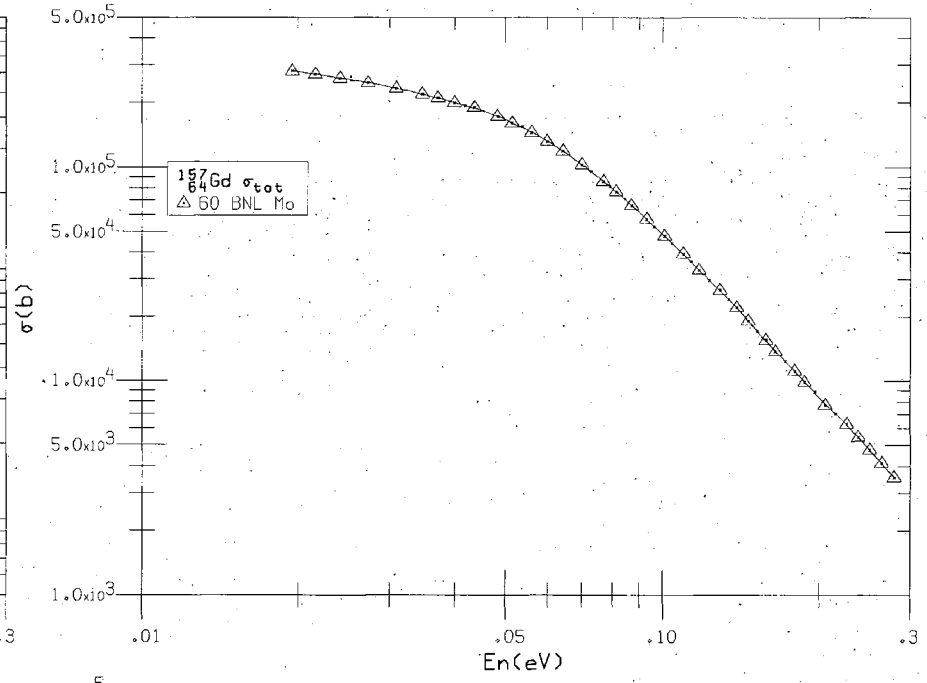
$_{64}$Gd
σ_{tot}
σ_{el}
$\sigma_{n\gamma}$
[1030]

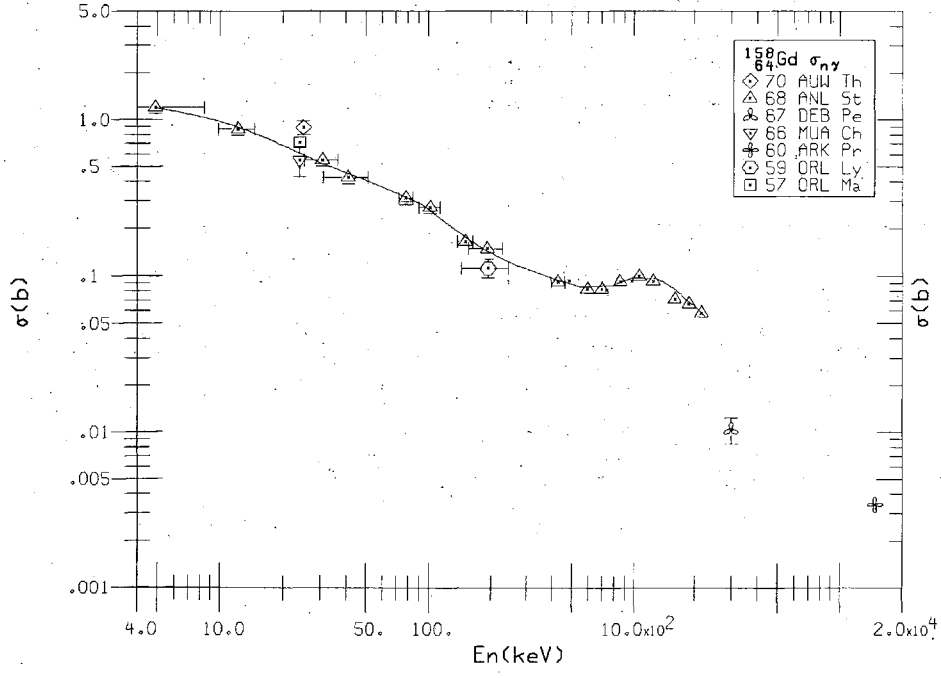


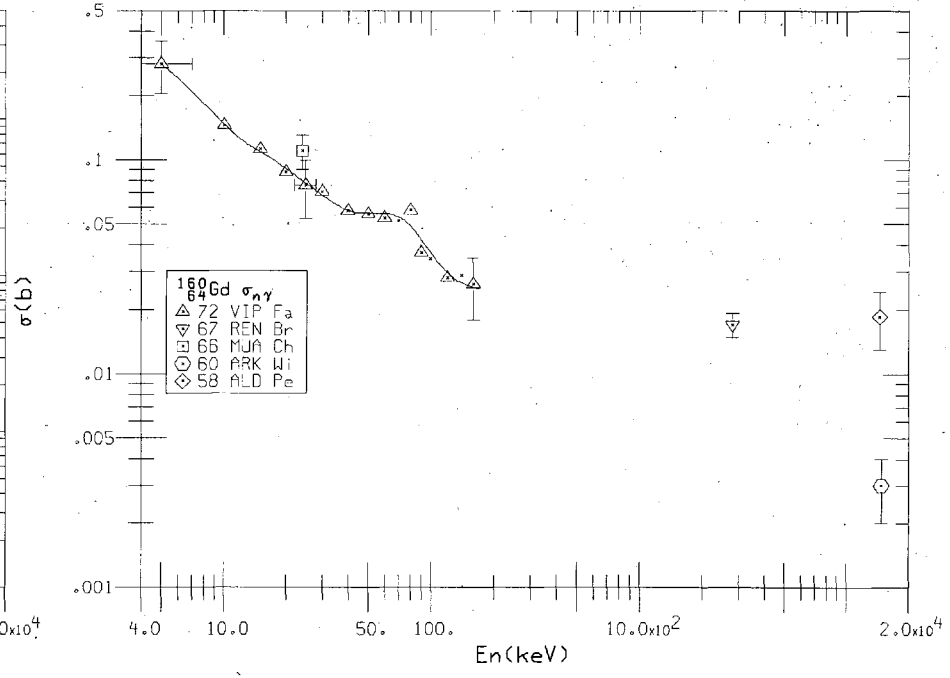












$^{155}_{64}Gd$ σ_{tot}
$^{157}_{64}Gd$ σ_{tot}
$^{158}_{64}Gd$ $\sigma_{n\gamma}$
$^{160}_{64}Gd$ $\sigma_{n\gamma}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{64}$Gd σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	256	2.260 MeV to 15.0 MeV	
70	ANL	Sherwood,et.al.	NSE,39,67,70	709	100.0 keV to 1.498 MeV	
69	RAM	Hussain,et.al.	JNE,23,113,69	45	3.889 MeV to 18.8 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.004 MeV to 2.004 MeV	
68	DAC	Hussain,et.al.	NSP,4,3,68	34	1.001 MeV to 2.001 MeV	
66	NDL	Wickstrom,et.al.	NSE,25,291,66	7	2.390 MeV to 15.7 MeV	
66	ANL	Stupegia	STUPEGIA,66	99	1.200 keV to 2.037 MeV	
65	DKE	Seth	PL,16,306,65	95	4.000 keV to .640 MeV	
65	COL	Rustad,et.al.	RSI,36,887,65	15	.0092 eV to .230 eV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	7.300 b at .980 MeV	
61	MUN	Hoehne	ADP,7,50,61	8	.0002 eV to .0028 eV	
60	BNL	Moller,et.al.	NSE,8,183,60	26	.0195 eV to .0960 eV	abs
60	BNL	Moller,et.al.	NSE,8,183,60	50	.0195 eV to .279 eV	
60	BNL	Moller,et.al.	NSE,8,183,60	22	.101 eV to .250 eV	abs
58	LAS	Conner	PR,109,1268,58	3	13.1 MeV to 15.6 MeV	
58	MTR	Simpson	SIMPSON,58	203	1.160 eV to 9.990 eV	abs
58	HAR	Pattenden	58GENEVA,16,44,58	1	51.0 kb at thermal	
56	MTR	Simpson	SIMPSON,56	725	8.870 eV to .800 keV	abs
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
53	ANL	Palmer	PALMER,53	341	.660 eV to 2.740 keV	abs
47	ANL	Brill,et.al.	PR,72,585,47	64	.0021 eV to .200 eV	abs
			$_{64}$Gd σ_{el}			
70	ANL	Sherwood,et.al.	NSE,39,67,70	65	.300 MeV to 1.500 MeV	C σ_{el}
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.550 b at .980 MeV	H
			$_{64}$Gd $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
71	GA	Fricke,et.al.	71KNOX,1,252,71	89	1.005 keV to .752 MeV	^{10}B $\sigma_{n\alpha}$
71	LAS	Drake,et.al.	PL/B,36,557,71	1	.921 mb at 14.0 MeV	H σ_{tot}
64	AE	Sokolowski,et.al	NUK,6,245,64	1	46.5 kb at thermal	B σ_{abs}
64	AE	Sokolowski,et.al	NUK,6,245,64	1	47.9 kb at thermal	B σ_{abs}
61	ANL	Meadows,et.al.	NSE,9,132,61	1	46.6 kb at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	41	.200 keV to 7.300 keV	
			$^{152}_{64}$Gd $\sigma_{n\gamma}$			
72	KJL	Steinnes	JIN,34,2699,72	1	1.100 kb at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{154}_{64}$Gd σ_{n2n}			
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	1.855 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$

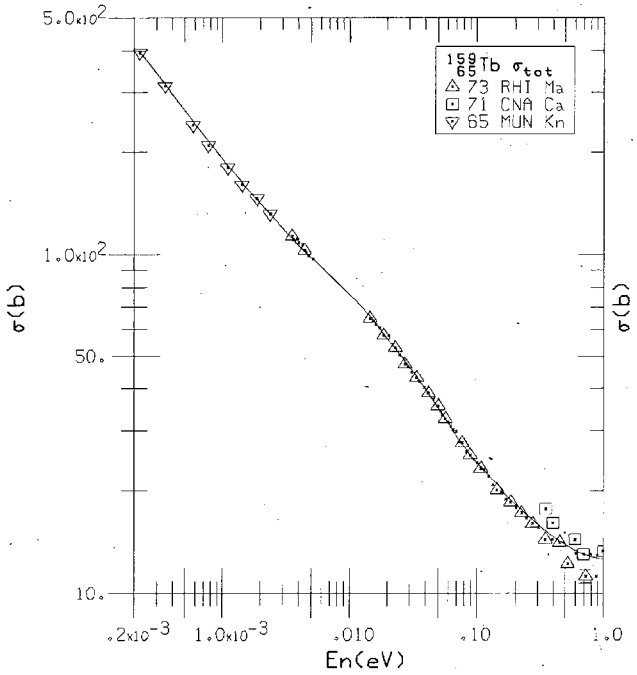
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{155}_{64}$Gd σ_{tot}			
68	JAE	Ohno,et.al.	EANDC(J)-10,1,68	1	61.9 kb at thermal	abs
60	BNL	Moller,et.al.	NSE,8,183,60	50	.0195 eV to .279 eV	
60	BNL	Moller,et.al.	NSE,8,183,60	1	60.6 kb at thermal	
58	HAR	Pattenden	58GENEVA,16,44,58	1	66.0 kb at thermal	
			$^{155}_{64}$Gd $\sigma_{n\gamma}$			
62	CCP	Groshev,et.al.	IZV,26,1182,62	1	61.0 kb at thermal	
			$^{156}_{64}$Gd $\sigma_{n\alpha}$			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	8.500 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
59	ALD	Coleman,et.al.	PPS,73,215,59	1	3.220 mb at 14.5 MeV	
			$^{157}_{64}$Gd σ_{tot}			
68	JAE	Ohno,et.al.	EANDC(J)-10,1,68	1	248.0 kb at thermal	abs
60	BNL	Moller,et.al.	NSE,8,183,60	50	.0195 eV to .279 eV	
60	BNL	Moller,et.al.	NSE,8,183,60	1	254.0 kb at thermal	
58	HAR	Pattenden	58GENEVA,16,44,58	1	264.0 kb at thermal	
			$^{157}_{64}$Gd $\sigma_{n\gamma}$			
62	CCP	Groshev,et.al.	IZV,26,1182,62	1	240.0 kb at thermal	
			$^{157}_{64}$Gd σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	11.3 mb at 14.5 MeV	
			$^{158}_{64}$Gd $\sigma_{n\gamma}$			
70	AUW	Thirumala Rao+	70MADURAI,2,25,70	1	.890 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
68	ANL	Stupegia,et.al.	JNE,22,267,68	21	4.900 keV to 2.148 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	10.4 mb at 3.000 MeV	^{31}P σ_{np}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.545 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
60	ARK	Preiss,et.al.	ARKANSAS,2,60	1	3.410 mb at 14.8 MeV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.111 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.710 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{158}_{64}$Gd $\sigma_{n\alpha}$			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	2.400 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{160}_{64}$Gd $\sigma_{n\gamma}$			
72	VIP	Fawcett,et.al.	NSE,49,317,72	16	5.000 keV to .160 MeV	^{127}I $\sigma_{n\gamma}$
67	REN	Broadhead,et.al.	ARI,18,279,67	1	17.0 mb at 2.800 MeV	^{115}In σ_{inl}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.110 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
60	ARK	Wille,et.al.	PR,118,242,60	1	3.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	18.5 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

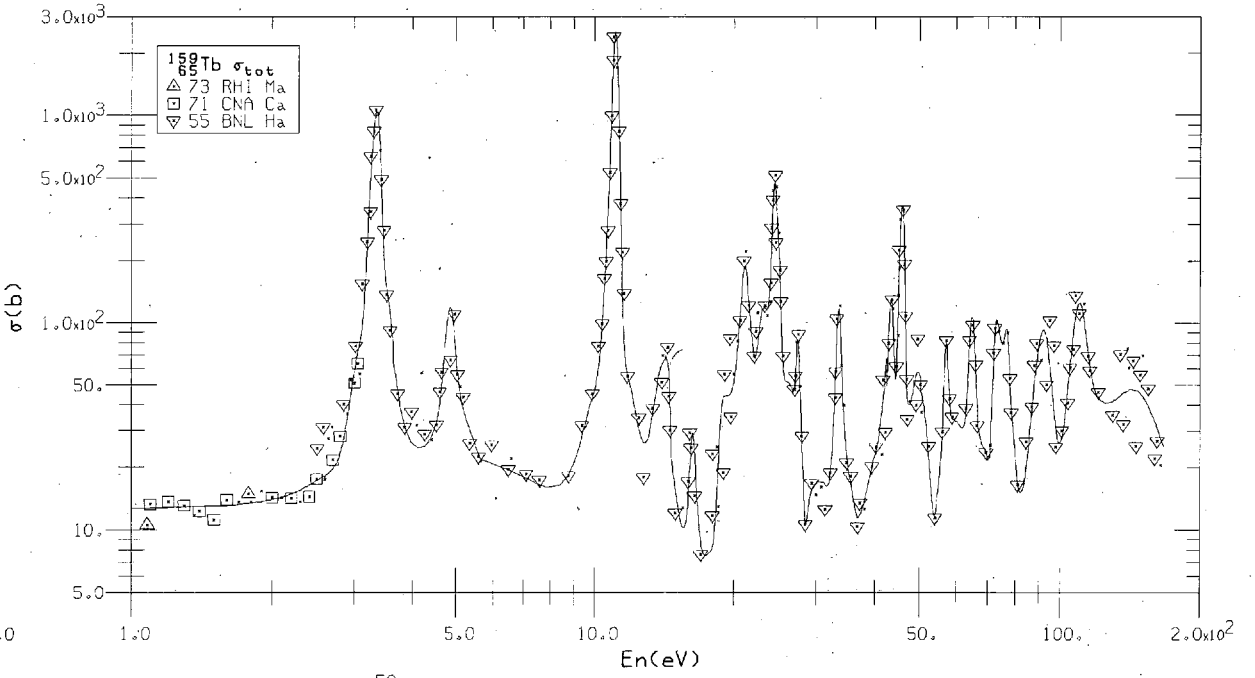
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{160}_{64}$Gd σ_{n2n}			
72	CCP	Viktorov,et.al.	YF,15,(6),1099,72	1	1.964 b at 14.1 MeV	
69	AUW	Rama Prasad+	NP/A,125.57,69	1	1.675 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.725 b at 14.8 MeV	^{56}Fe σ_{np}
60	ARK	Wille,et.al.	PR,118,242,60	1	1.450 b at 14.8 MeV	^{63}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.470 b at 14.5 MeV	abs
			$^{160}_{64}$Gd $\sigma_{n\alpha}$			
60	ARK	Wille,et.al.	PR,118,242,60	1	2.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}

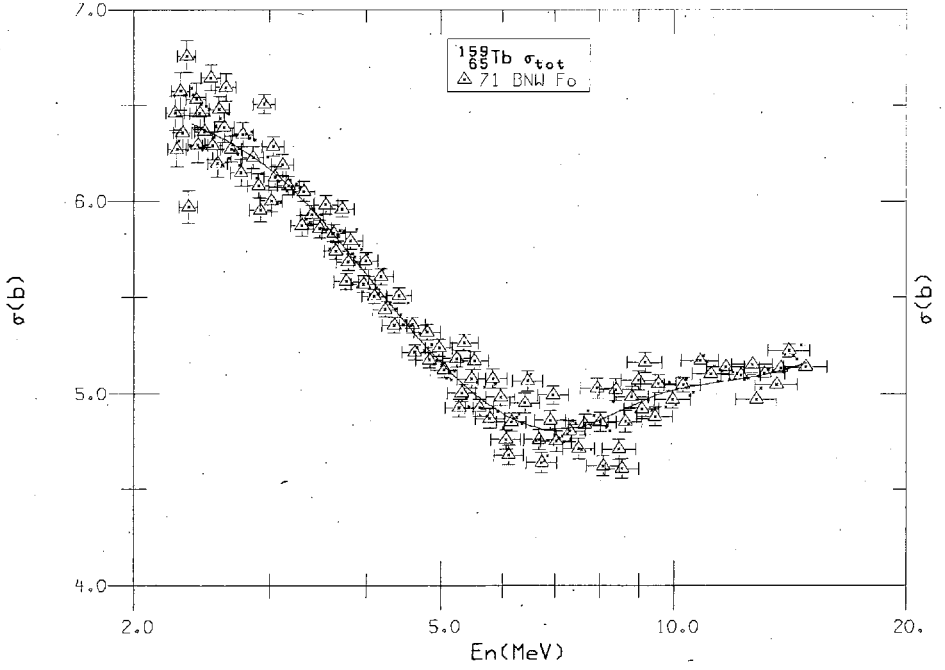
$^{159}_{65}$Tb

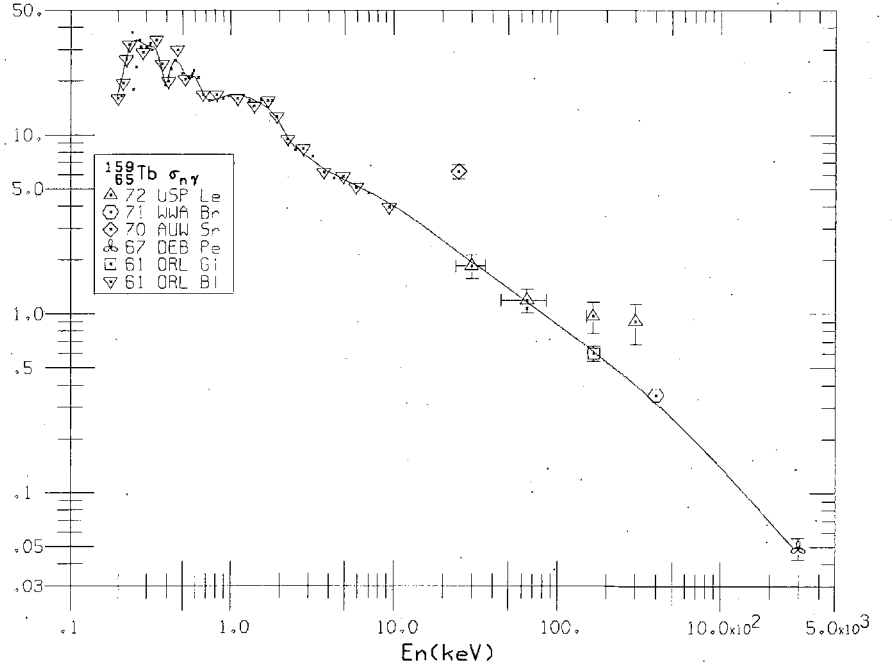
σ_{tot}

$\sigma_{n\gamma}$







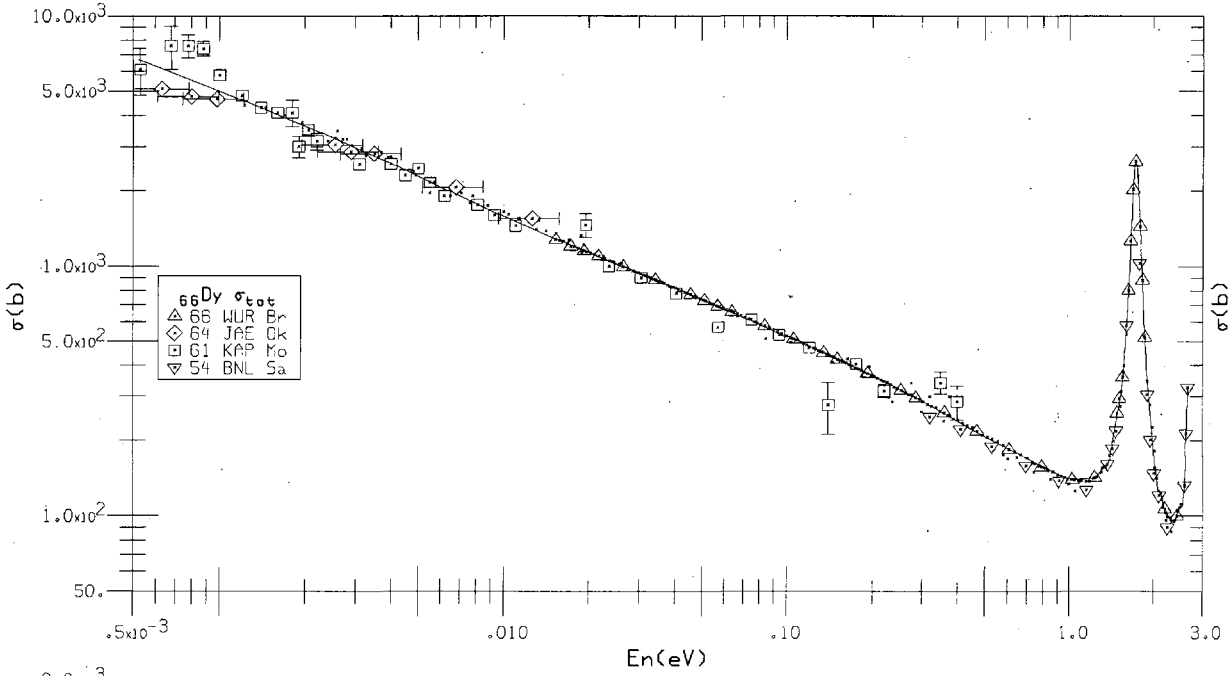


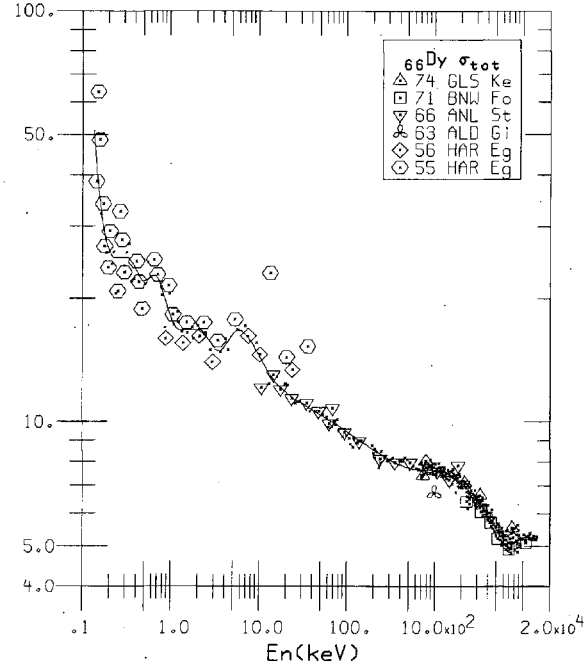
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{159}_{65}$Tb σ_{tot}			
73	RHI	Malik,et.al.	PR/B,8,2595,73	67	.0035 eV to 1.780 eV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	252	2.262 MeV to 14.8 MeV	
71	CNA	Cansoy	CNAEM-79,71	29	.350 eV to 3.053 eV	
65	MUN	Knorr	EANDC(E)-57,22,65	8	.0002 eV to .0024 eV	^{197}Au
55	BNL	Harvey,et.al.	PR,99,10,55	207	2.500 eV to .165 keV	
			$^{159}_{65}$Tb $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.350 b at .400 MeV	abs
70	AUW	Sriramachandra	70MADURAI,2,29,70	1	6.243 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	49.2 mb at 3.000 MeV	^{32}S σ_{np}
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .157 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	52	.200 keV to 9.400 keV	
			$^{159}_{65}$Tb σ_{np}			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	15.8 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	2.200 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{159}_{65}$Tb σ_{n2p}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	80.0 muB at 14.7 MeV	^{159}Tb σ_{np}
			$^{159}_{65}$Tb $\sigma_{n\alpha}$			
65	RBZ	Kulisic,et.al.	NP,73,548,65	1	2.200 mb at 14.6 MeV	

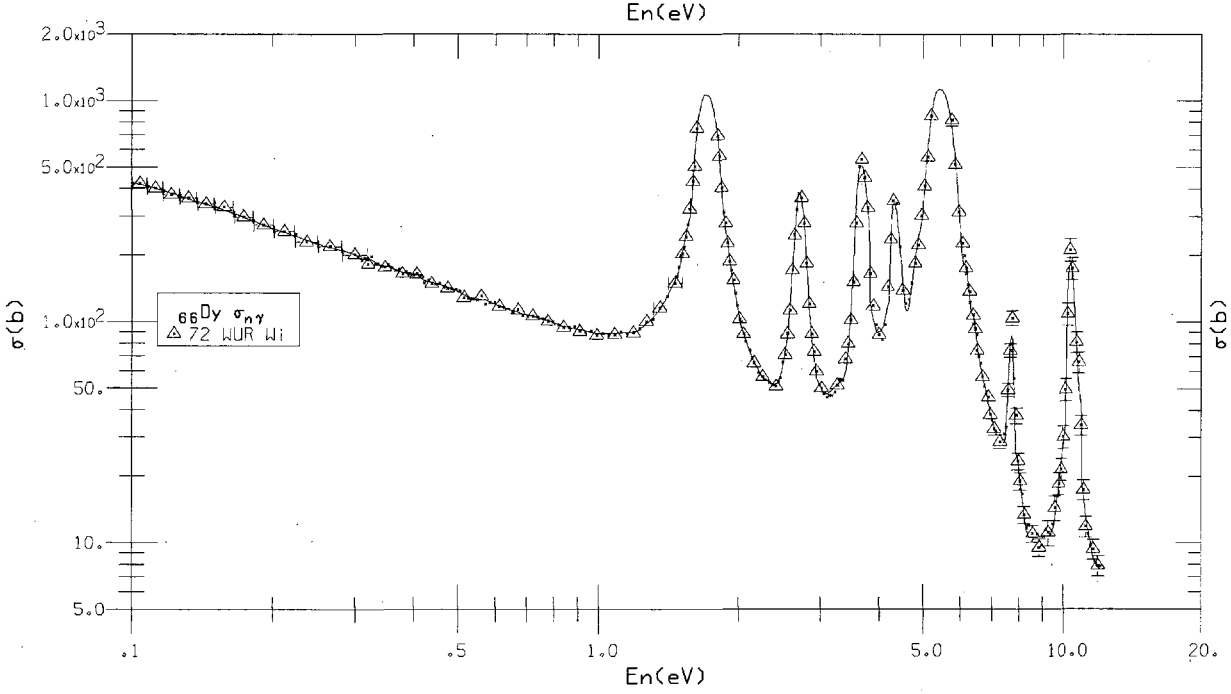
$_{66}$Dy

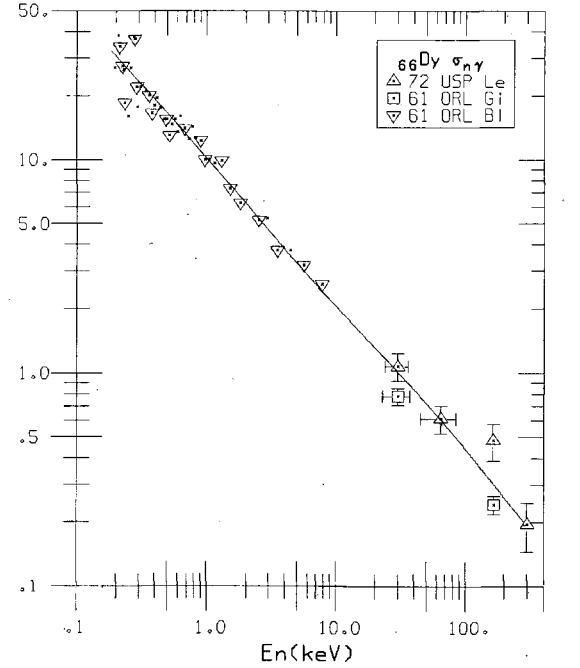
σ_{tot}

$\sigma_{n\gamma}$





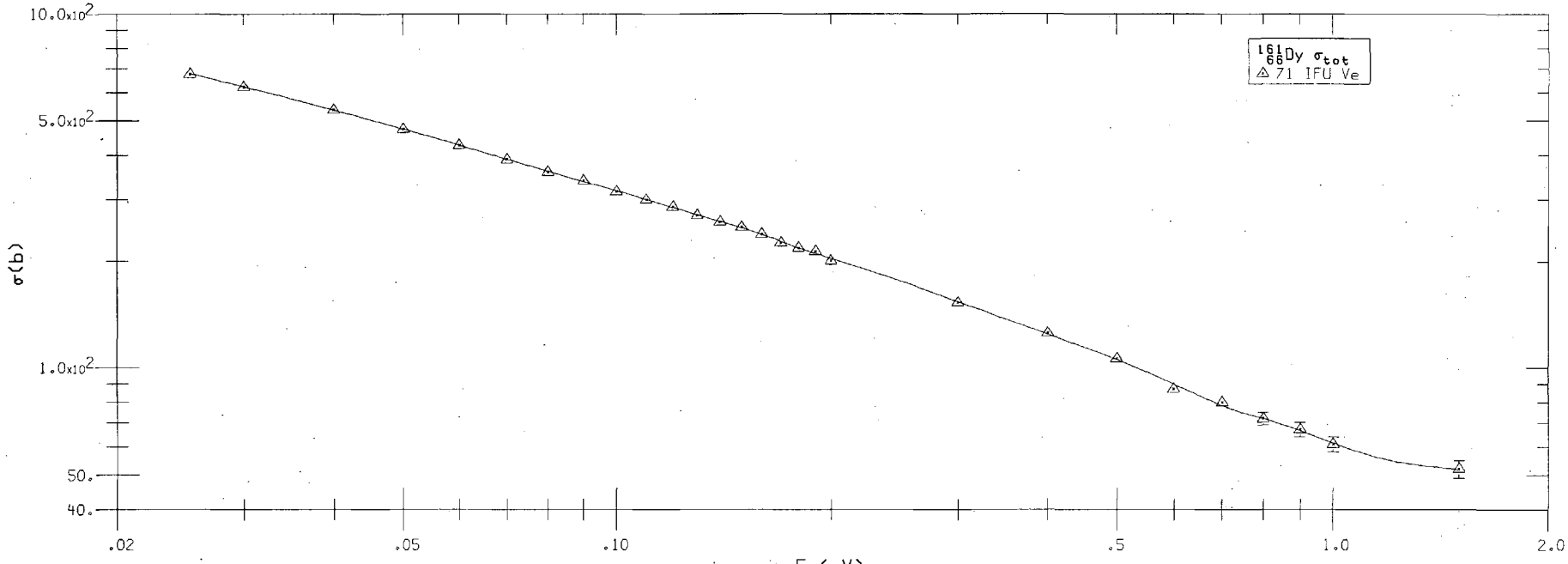


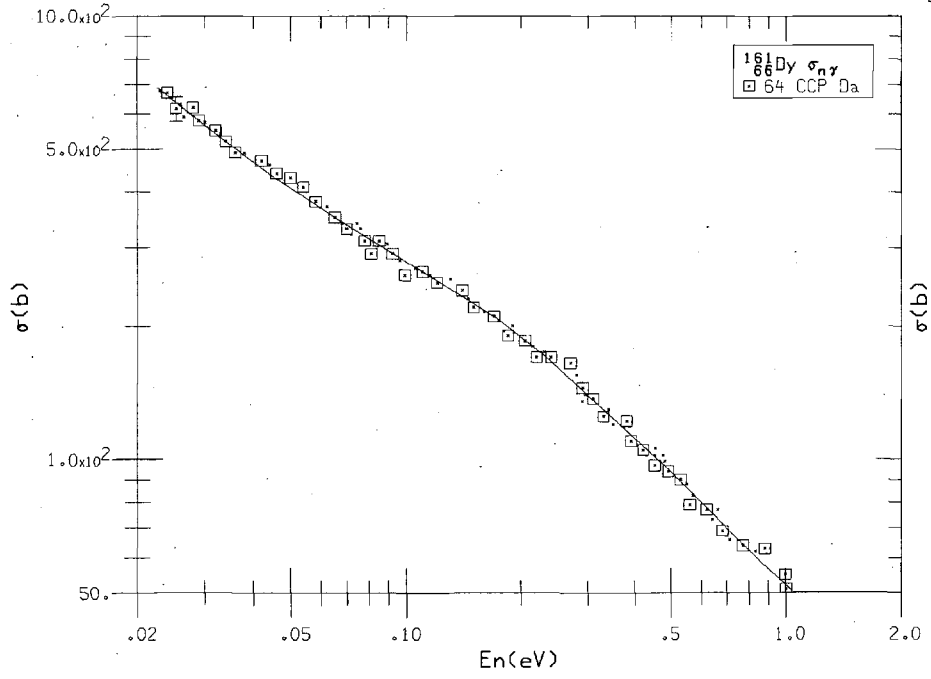


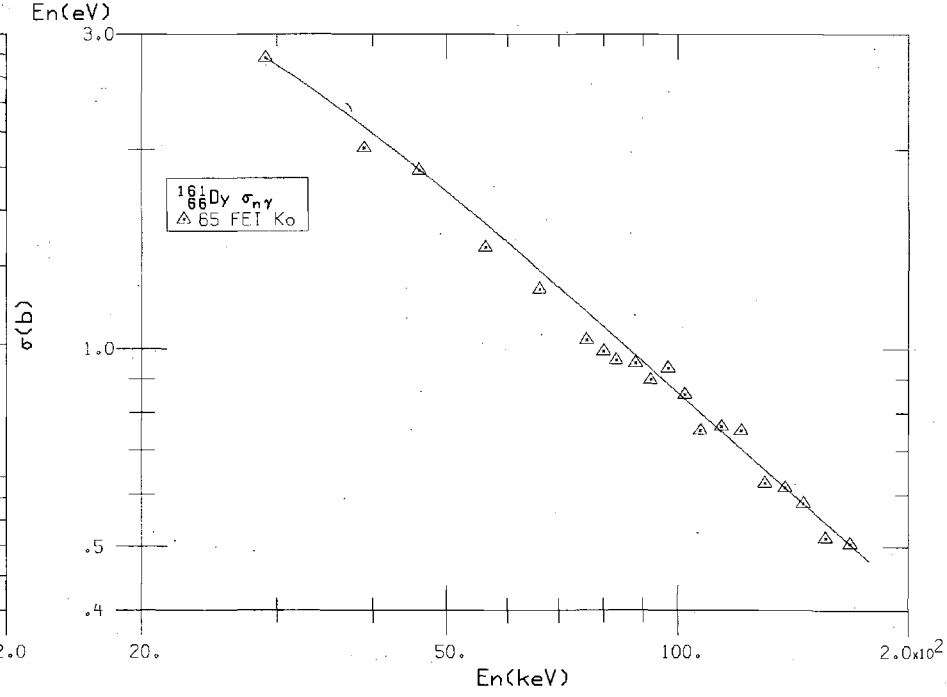
$^{161}_{66}Dy$

σ_{tot}

$\sigma_{n\gamma}$



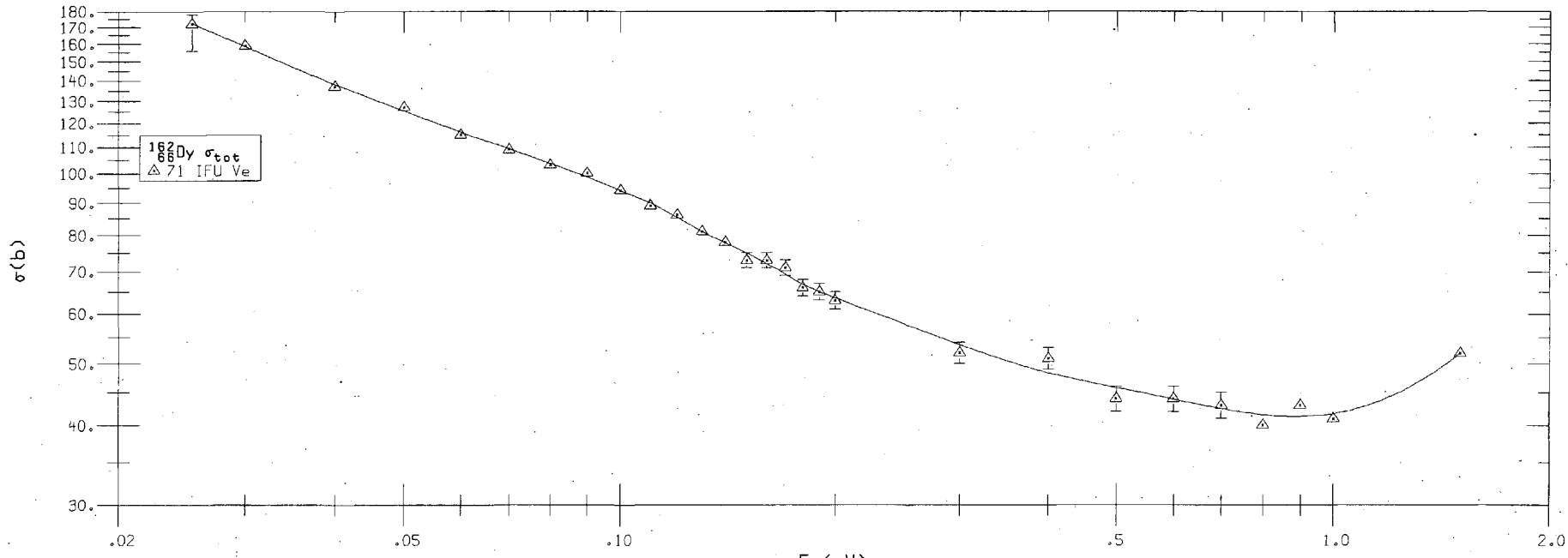


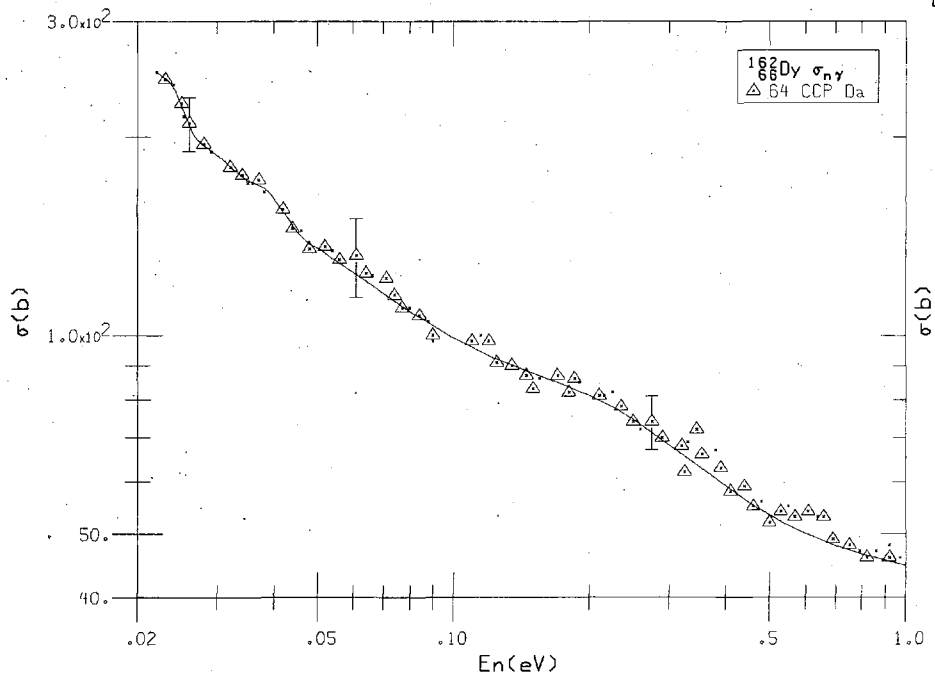


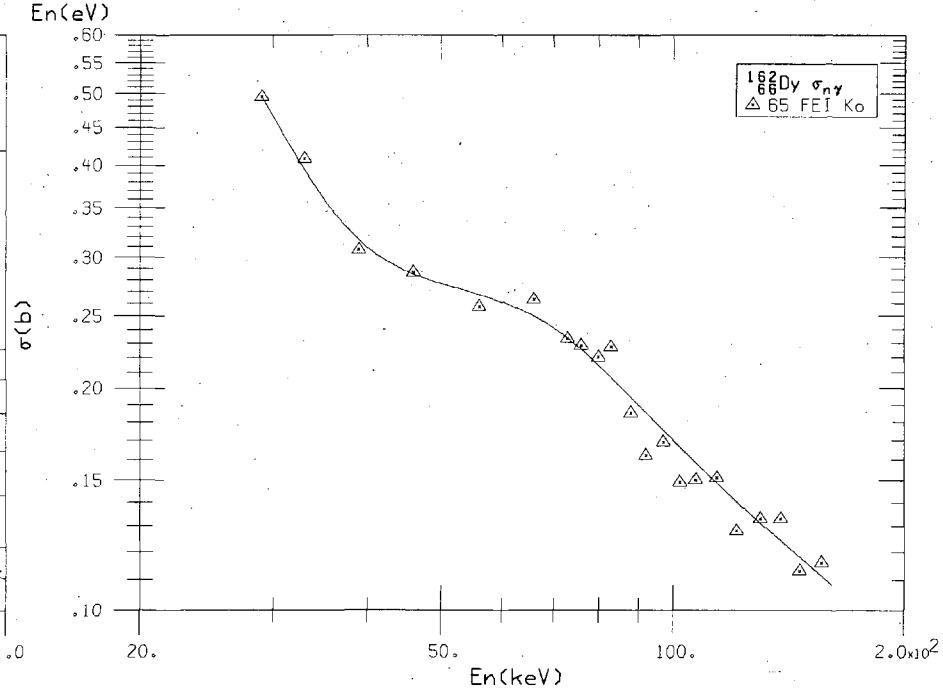
$^{162}_{66}Dy$

σ_{tot}

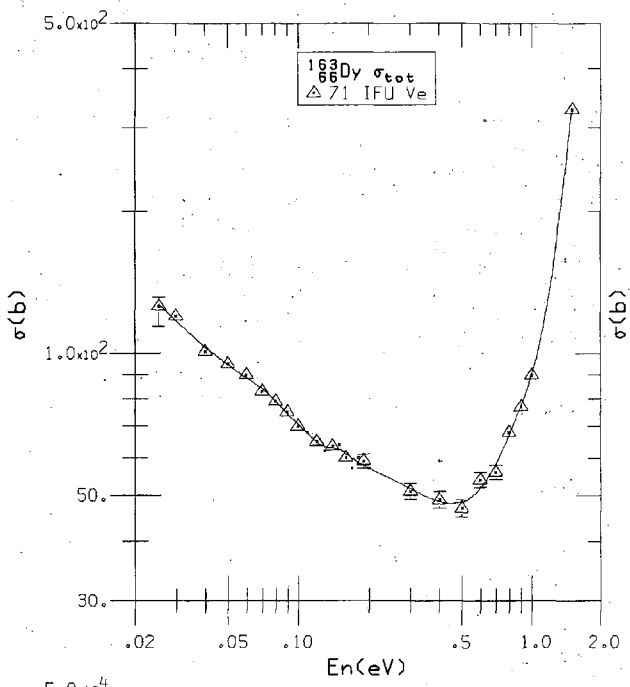
$\sigma_{n\gamma}$

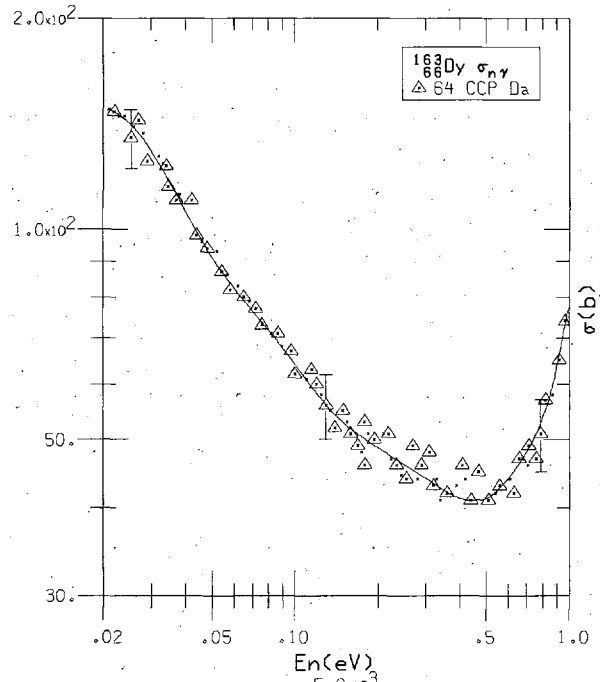


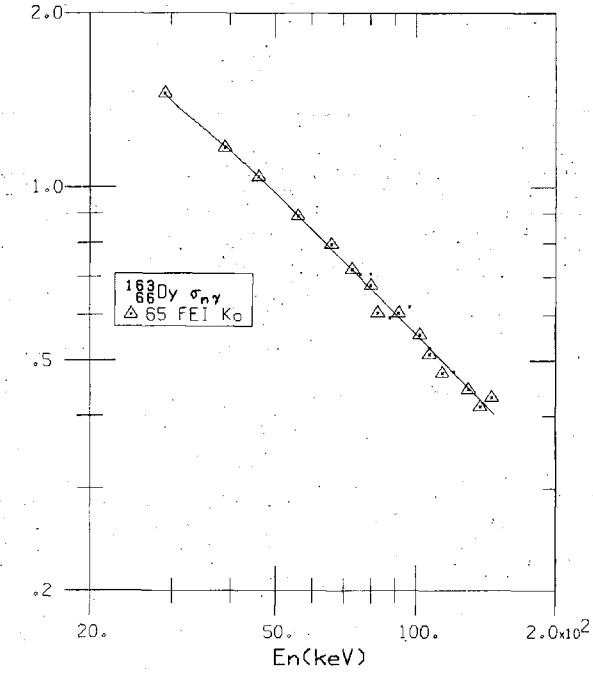


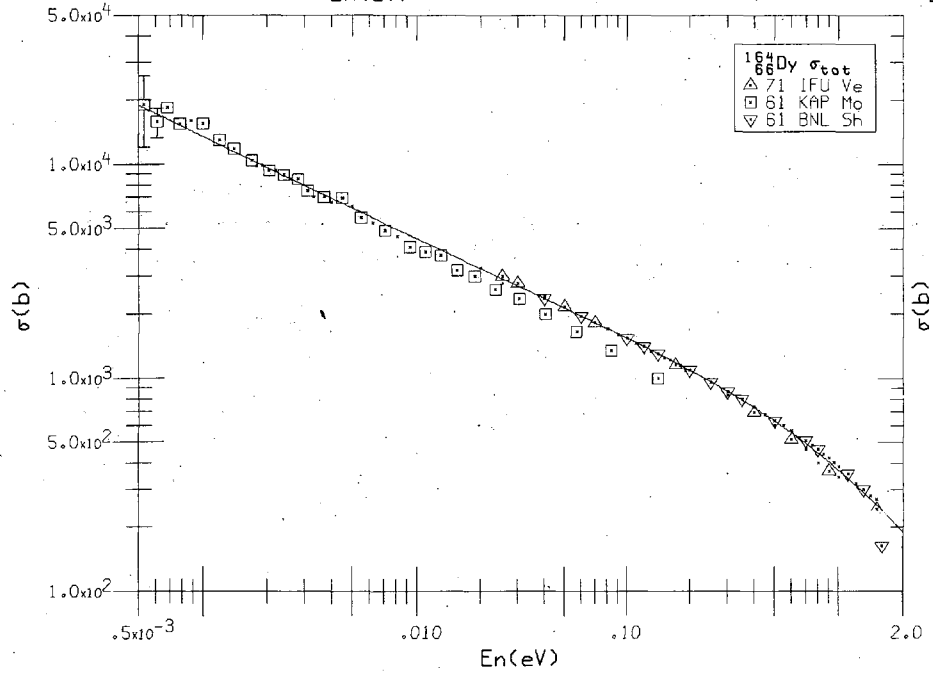


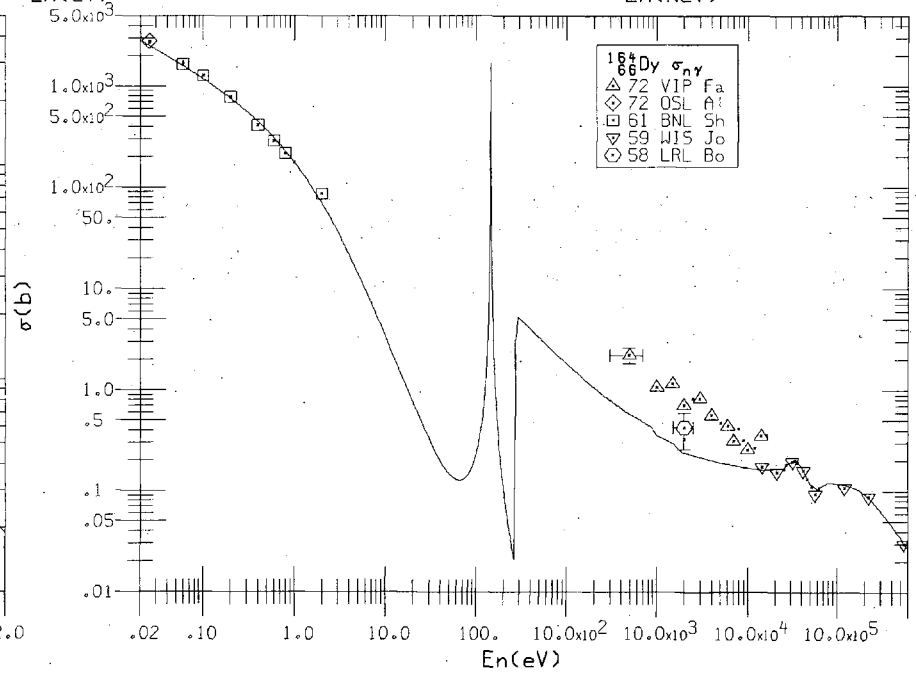
$^{163}_{66}Dy$
σ_{tot}
$\sigma_{n\gamma}$
$^{164}_{66}Dy$
σ_{tot}
$\sigma_{n\gamma}$
[1031]











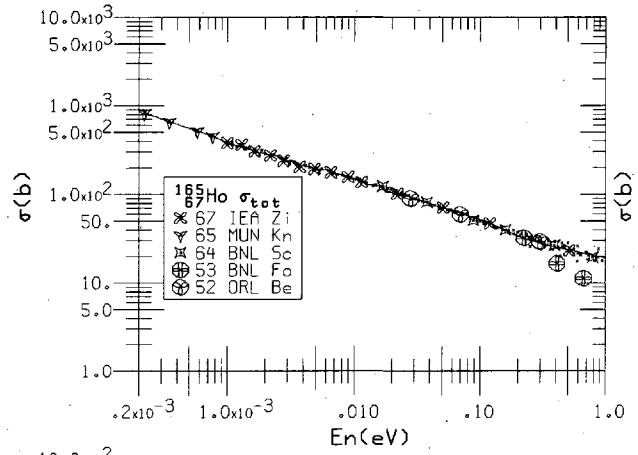
Yr	Lab	Author	Reference	Points	Range	Standard
			^{66}Dy σ_{tot}			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	646	.700 MeV to 9.065 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	249	2.291 MeV to 14.8 MeV	
66	ANL	Stupegia	STUPEGIA,66	101	10.6 keV to 2.037 MeV	
66	WUR	Brunner,et.al.	66PARIS,1,61,66	347	.0153 eV to 2.512 eV	abs
65	ANL	Smith	SMITH,65	1	.950 b at .608 MeV	abs
64	JAE	Okamoto	JAERI-1069,64	35	.0006 eV to .0222 eV	abs
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.730 b at .980 MeV	
61	KAP	Moore	BAP,6,70(X11),61	75	.0005 eV to .400 eV	abs
56	HAR	Egelstaff	EGELSTAFF,56	17	.797 keV to 23.9 keV	abs
55	HAR	Egelstaff	EGELSTAFF,55	47	.144 keV to 36.0 keV	
54	BNL	Sailor,et.al.	PR,96,1014,54	40	.321 eV to 2.650 eV	
			^{66}Dy σ_{el}			
63	ALD	Gilboy,et.al.	NP,42,86,63	1	5.870 b at .980 MeV	H
			^{66}Dy $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
72	WUR	Widder	EIR-217,72	367	.0127 eV to 12.1 eV	^{6}Li σ_{nt}
63	ORL	Macklin,et.al.	PR,129,2695,63	1	.570 b at 65.0 keV	
61	ANL	Meadows,et.al.	NSE,9,132,61	1	.936 kb at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	43	.195 keV to 7.800 keV	
			$^{156}_{66}$Dy $\sigma_{n\gamma}$			
72	OSL	Alstad,et.al.	INDC(NOR)-1,2,72	1	33.0 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{156}_{66}$Dy σ_{n2n}			
68	GIT	Oms,et.al.	BAP,13,1699(CA9),68	1	1.943 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{158}_{66}$Dy $\sigma_{n\gamma}$			
72	OSL	Alstad,et.al.	INDC(NOR)-1,2,72	1	43.0 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{158}_{66}$Dy σ_{n2n}			
68	GIT	Oms,et.al.	BAP,13,1699(CA9),68	1	2.047 b at 14.4 MeV	^{56}Fe σ_{np}
			$^{160}_{66}$Dy σ_{n2n}			
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.015 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$

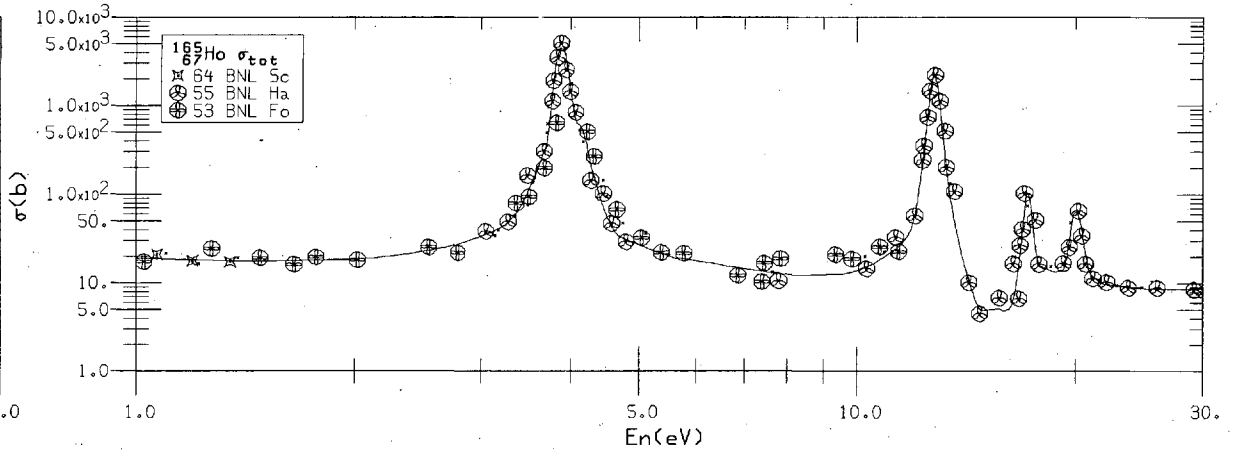
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{161}_{66}$Dy σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	28	thermal to 1.500 eV	
			$^{161}_{66}$Dy σ_{sct}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	1	22.0 b at thermal	
			$^{161}_{66}$Dy $\sigma_{n\gamma}$			
65	FEI	Kononov,et.al.	AE,19,(5),457,65	20	29.0 keV to .168 MeV	
64	CCP	Danelyan,et.al.	AE,16,56,64	85	.0230 eV to 1.001 eV	^{161}Dy σ_{tot}
			$^{162}_{66}$Dy σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	28	thermal to 1.500 eV	
			$^{162}_{66}$Dy σ_{sct}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	1	2.500 b at thermal	
			$^{162}_{66}$Dy $\sigma_{n\gamma}$			
65	FEI	Kononov,et.al.	AE,19,(5),457,65	21	29.0 keV to .156 MeV	
64	CCP	Danelyan,et.al.	AE,16,56,64	78	.0220 eV to 1.001 eV	^{161}Dy σ_{abs}
			$^{162}_{66}$Dy σ_{np}			
68	GIT	Oms,et.al.	BAP,13,1699(CA9),68	1	5.200 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{162}_{66}$Dy $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PP5,73,215,59	1	3.560 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{163}_{66}$Dy σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	28	thermal to 1.500 eV	
			$^{163}_{66}$Dy σ_{sct}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	1	9.700 b at thermal	
			$^{163}_{66}$Dy $\sigma_{n\gamma}$			
65	FEI	Kononov,et.al.	AE,19,(5),457,65	19	29.0 keV to .146 MeV	
64	CCP	Danelyan,et.al.	AE,16,56,64	84	.0210 eV to 1.001 eV	^{161}Dy σ_{abs}

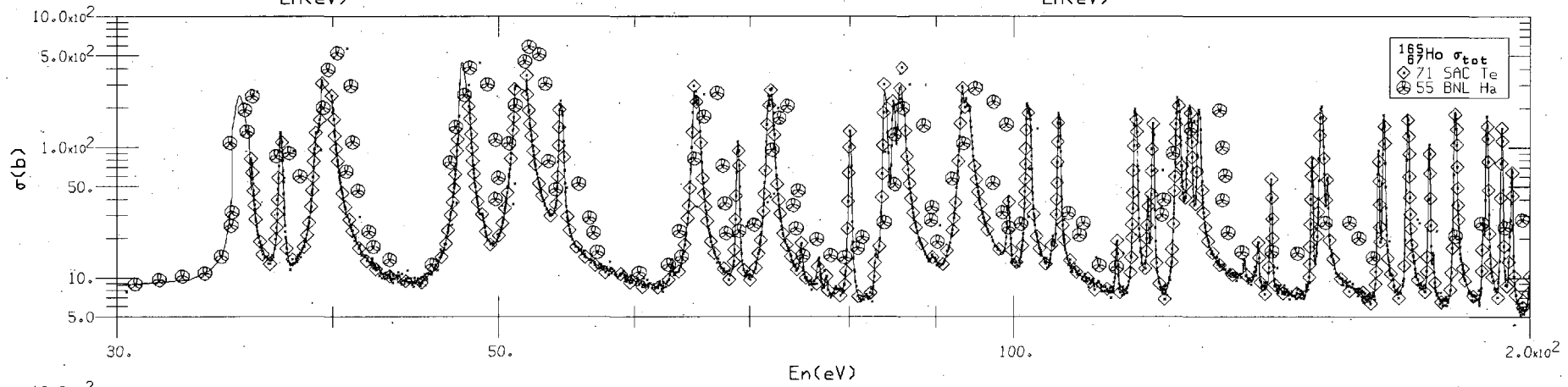
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{163}_{66}$Dy σ_{np}			
68	GIT	Oms,et.al.	BAP,13,1699(CA9),68	1	2.700 mb at 14.4 MeV	^{56}Fe σ_{np}
60	ARK	Wille,et.al.	PR,118,242,60	1	3.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{164}_{66}$Dy σ_{tot}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	28	thermal to 1.500 eV	
68	JAE	Ohno,et.al.	EANDC(J)-10,1,68	1	2.780 kb at thermal	
61	KAP	Moore	BAP,6,70(X11),61	37	.0005 eV to .140 eV	abs
61	BNL	Sher,et.al.	NSE,11,369,61	32	.0200 eV to 1.600 eV	
			$^{164}_{66}$Dy σ_{sct}			
71	IFU	Vertebnyj,et.al.	YFI-11,59,71	1	.262 kb at thermal	
			$^{164}_{66}$Dy $\sigma_{n\gamma}$			
72	VIP	Fawcett,et.al.	NSE,49,317,72	16	5.000 keV to .160 MeV	^{127}I $\sigma_{n\gamma}$
72	OSL	Alstad,et.al.	INDC(NOR)-1,2,72	1	2.800 kb at thermal	^{197}Au $\sigma_{n\gamma}$
61	BNL	Sher,et.al.	NSE,11,369,61	1	1.750 kb at .0600 eV	^{197}Au $\sigma_{n\gamma}$
61	BNL	Sher,et.al.	NSE,11,369,61	1	2.700 kb at thermal	^{197}Au $\sigma_{n\gamma}$
61	BNL	Sher,et.al.	NSE,11,369,61	8	.0600 eV to 2.000 eV	^{197}Au $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	17	.145 MeV to 5.500 MeV	^{235}U σ_{nf}
58	LRL	Booth,et.al.	PR,112,226,58	1	.430 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.330 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{164}_{66}$Dy $\sigma_{n\alpha}$			
68	GIT	Oms,et.al.	BAP,13,1699(CA9),68	1	.900 mb at 14.4 MeV	^{56}Fe σ_{np}
65	MUA	Khurana,et.al.	NP,69,153,65	1	4.000 mb at 14.8 MeV	Fe
60	ARK	Wille,et.al.	PR,118,242,60	1	4.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{165}_{66}$Dy $\sigma_{n\gamma}$			
72	OSL	Alstad,et.al.	INDC(NOR)-1,2,72	1	3.900 kb at thermal	^{197}Au $\sigma_{n\gamma}$

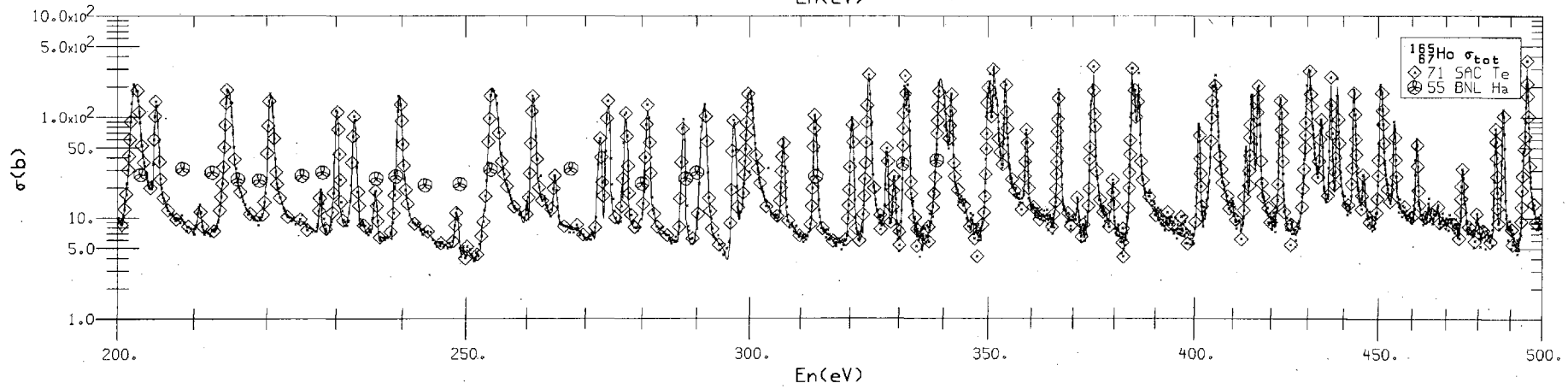
$^{165}_{67}$Ho

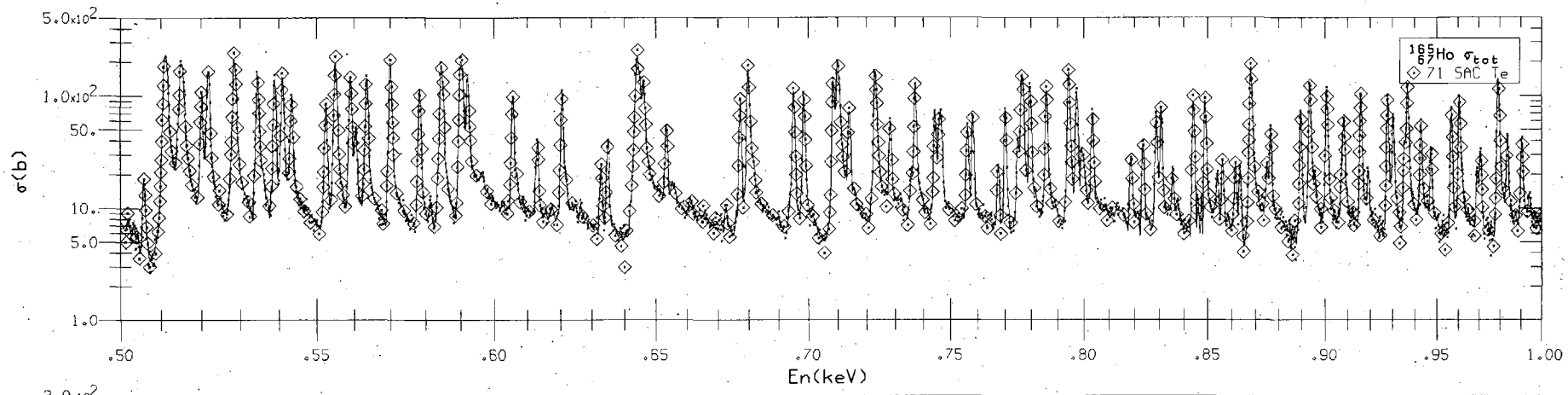
σ_{tot}

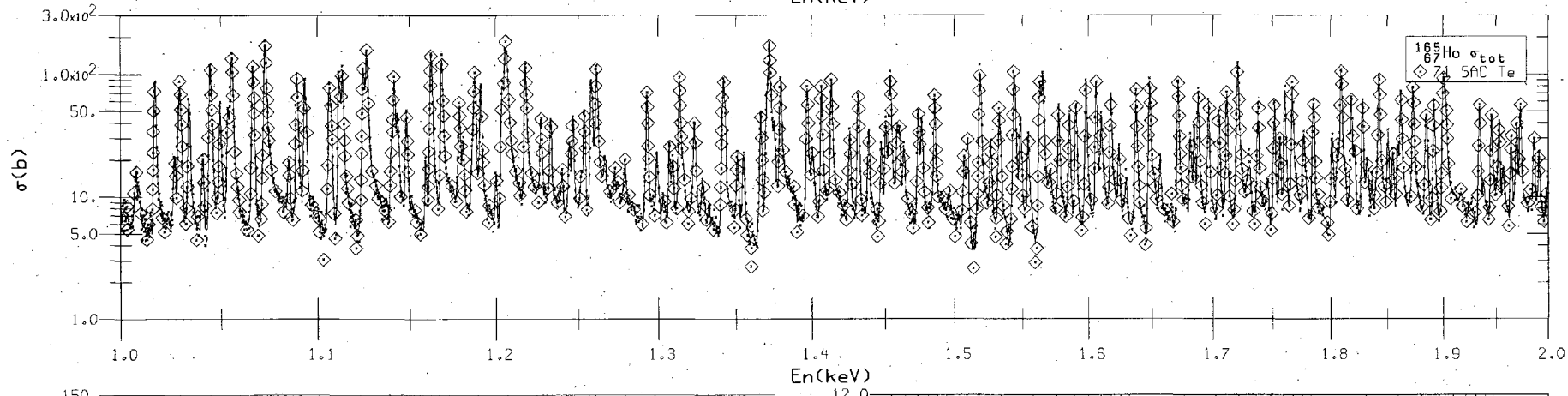


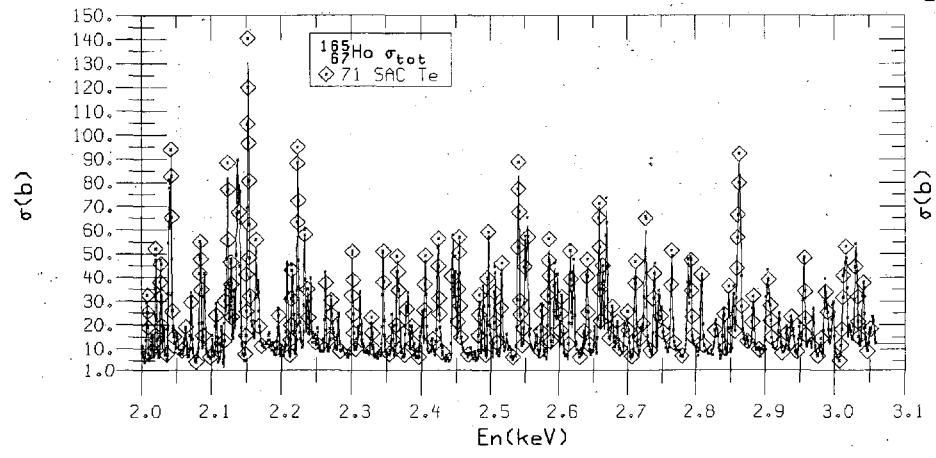


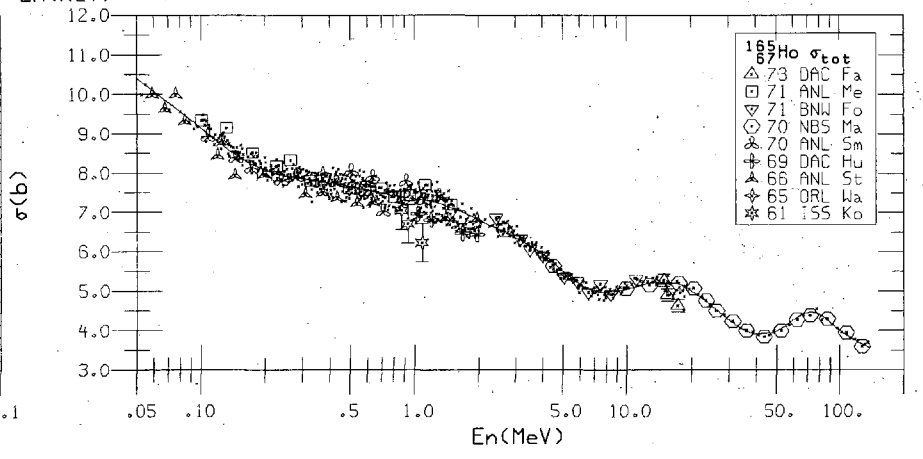




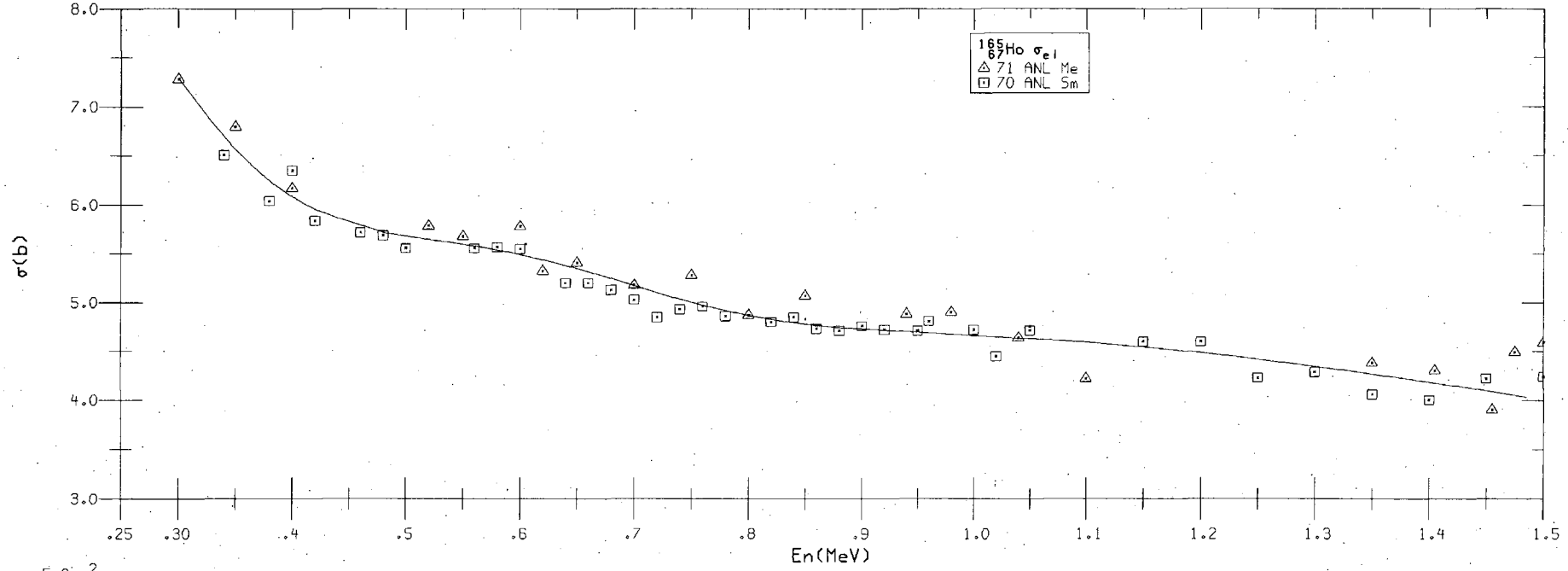

$^{165}_{67}$Ho σ_{tot}
71 SAC Te
σ(b)
En(keV)

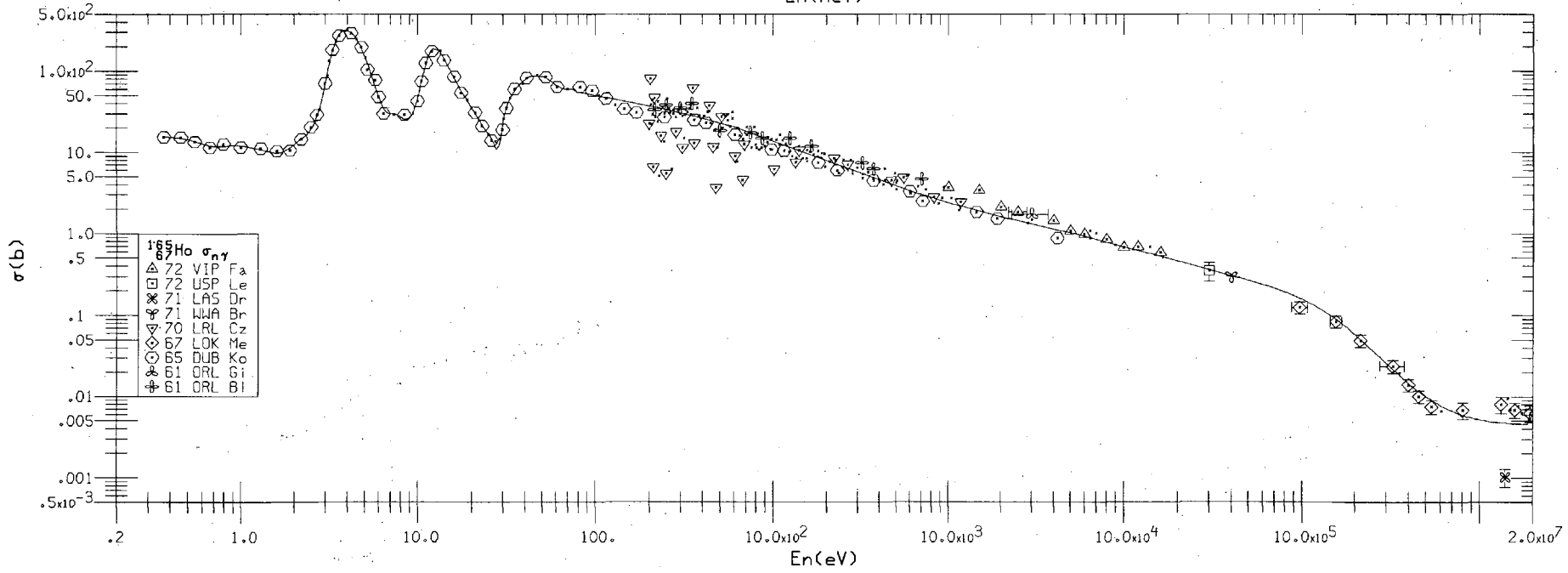

$^{165}_{67}$Ho σ_{tot}
71 SAC Te
σ(b)
En(keV)


$^{165}_{67}$Ho σ_{tot}
71 SAC Te
σ(b)
En(keV)


$^{165}_{67}$Ho σ_{tot}
73 DAC Fa
71 ANL Me
71 BNW Fo
70 NBS Ma
70 ANL Sm
69 DAC Hu
66 ANL St
65 ORL Wa
61 ISS Ko
σ(b)
En(MeV)

$^{165}_{67}$Ho
σ_{el}
$\sigma_{n\gamma}$





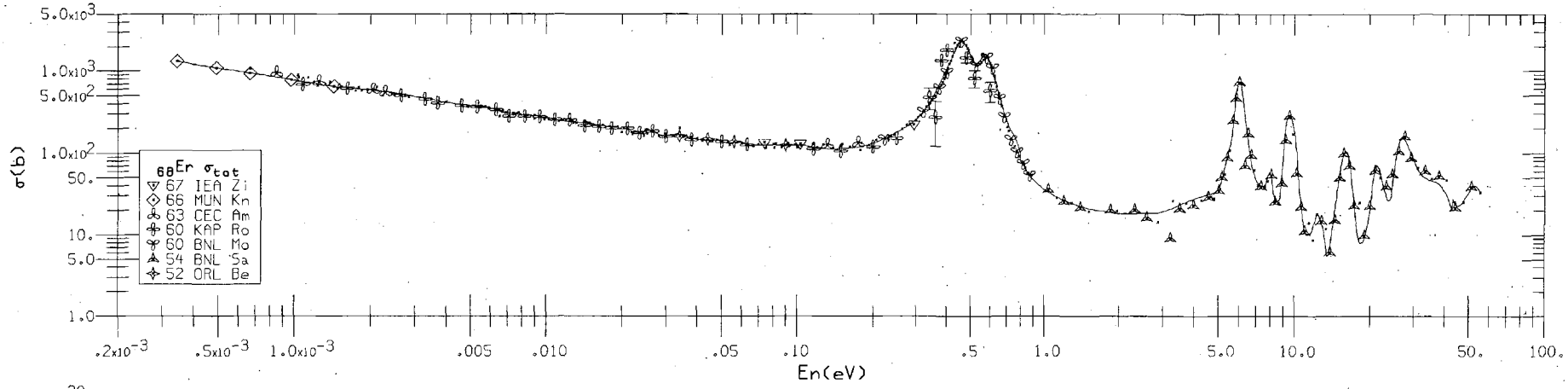
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{165}_{67}$Ho σ_{tot}			
73	DAC	Farooque,et.al.	JNE,27,43,73	31	14.8 MeV to 18.9 MeV	
71	ANL	Meadows,et.al.	ZP,243,171,71	752	.101 MeV to 1.493 MeV	abs
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	233	2.427 MeV to 15.0 MeV	
71	SAC	Tellier	TELLIER,71	13787	35.9 eV to 3.058 keV	abs
70	NBS	Marshak,et.al.	PR/C,2,1862,70	103	1.063 MeV to 135.7 MeV	
70	ANL	Smith	SMITH,70	752	.101 MeV to 1.493 MeV	abs
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.002 MeV to 2.002 MeV	
68	STF	Mc Carthy,et.al.	PRL,20,502,68	5	.330 MeV to 5.600 MeV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	110	.0010 eV to .940 eV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	98.0 b at thermal	
67	STF	Fisher,et.al.	PR,157,1149,67	2	8.000 MeV to 15.0 MeV	abs
66	ANL	Stupegia	STUPEGIA,66	96	2.500 keV to 2.038 MeV	
66	NBS	Marshak,et.al.	PR,150,996,66	1	5.290 b at 14.0 MeV	
66	NBS	Marshak,et.al.	PRL,16,194,66	1	5.260 b at 14.0 MeV	Cu
65	ORL	Wagner,et.al.	PR/B,139,29,65	11	.301 MeV to .405 MeV	abs
65	MUN	Knorr	EANDC(E)-57,22,65	8	.0002 eV to .0024 eV	^{197}Au
64	BNL	Schermer	SCHERMER,64	63	.0169 eV to 1.347 eV	
61	ISS	Kobayashi,et.al.	JPJ,22,368,61	6	.831 MeV to 1.090 MeV	
55	BNL	Harvey,et.al.	PR,99,10,55	258	3.050 eV to .339 keV	
53	BNL	Foote Jr,et.al.	PR,92,656,53	54	.224 eV to 11.4 eV	
52	ORL	Bernstein,et.al.	PR,87,487,52	20	.0259 eV to .500 eV	abs
			$^{165}_{67}$Ho σ_{el}			
71	ANL	Meadows,et.al.	ZP,243,171,71	62	.300 MeV to 1.500 MeV	C σ_{el}
70	ANL	Smith	SMITH,70	62	.300 MeV to 1.500 MeV	C
63	ALD	Gilboy,et.al.	NP,42,86,63	1	4.910 b at .980 MeV	H
			$^{165}_{67}$Ho σ_{sct}			
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	10.0 b at thermal	
65	USP	Mattos	IEA-99,65	1	9.000 b at thermal	
			$^{165}_{67}$Ho $\sigma_{n\gamma}$			
72	VIP	Fawcett,et.al.	NSE,49,317,72	16	5.000 keV to .160 MeV	^{127}I $\sigma_{n\gamma}$
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
71	LAS	Drake,et.al.	PL/B,36,557,71	1	1.018 mb at 14.0 MeV	H σ_{tot}
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.300 b at .400 MeV	abs
70	LRL	Czirr	UCRL-50804,70	98	.201 keV to 11.8 keV	^{165}Ho $\sigma_{n\gamma}$
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	60.0 b at thermal	
67	LOK	Menlove,et.al.	PR,163,1299,67	17	.970 MeV to 19.4 MeV	^{235}U σ_{nf}
65	DUB	Konks,et.al.	65ANTWERP,,576,65	94	.370 eV to 42.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	50	.205 keV to 9.400 keV	
58	ALD	Perkin,et.al.	PPS,72,505,58	1	9.450 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

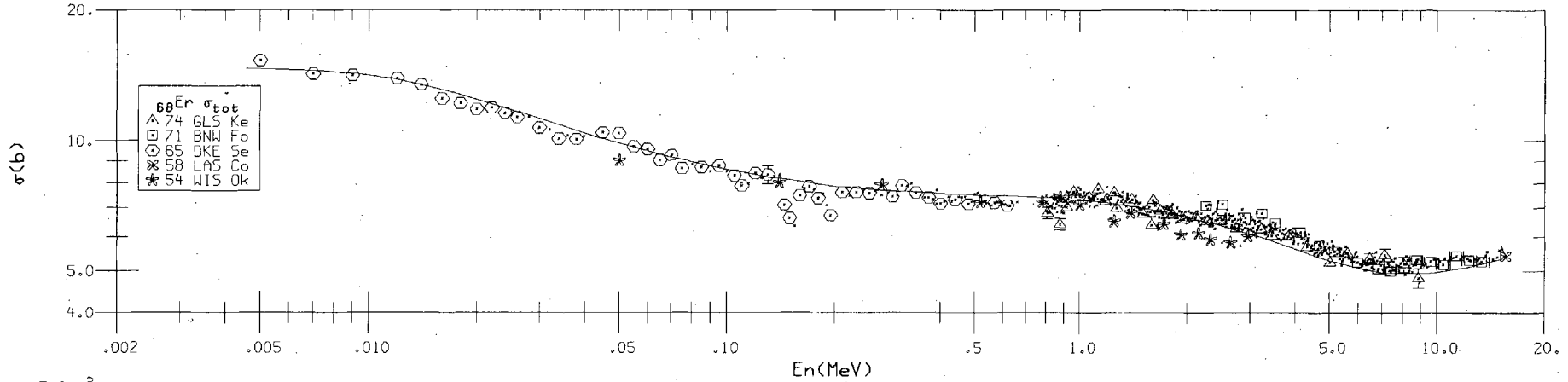
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{165}_{67}$Ho σ_{n2n}			
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.110 b at 14.7 MeV	
66	SAH	Sethi,et.al.	NP,85,227,66	1	1.080 b at 14.0 MeV	
64	TUR	Bonazzola,et.al.	NP,51,337,64	1	2.760 b at 14.7 MeV	
61	MUA	Khurana,et.al.	NP,28,560,61	1	2.100 b at 14.8 MeV	^{56}Fe σ_{np}
			$^{165}_{67}$Ho $\sigma_{n\alpha}$			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	1.200 mb at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{167}_{67}$Ho σ_{tot}			
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.340 b at .980 MeV	

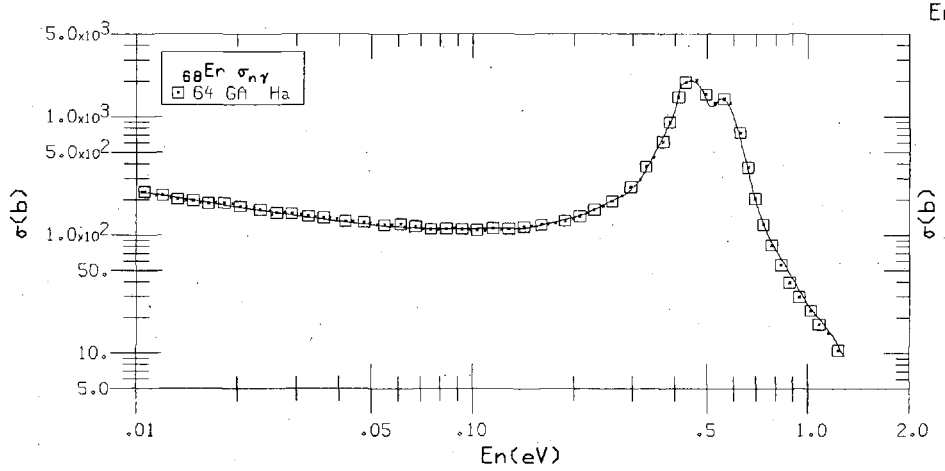
$_{68}Er$

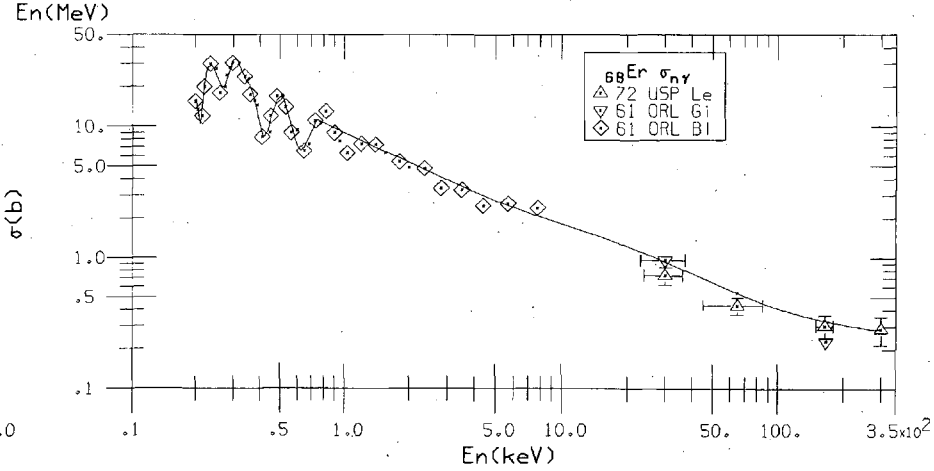
σ_{tot}

$\sigma_{n\gamma}$







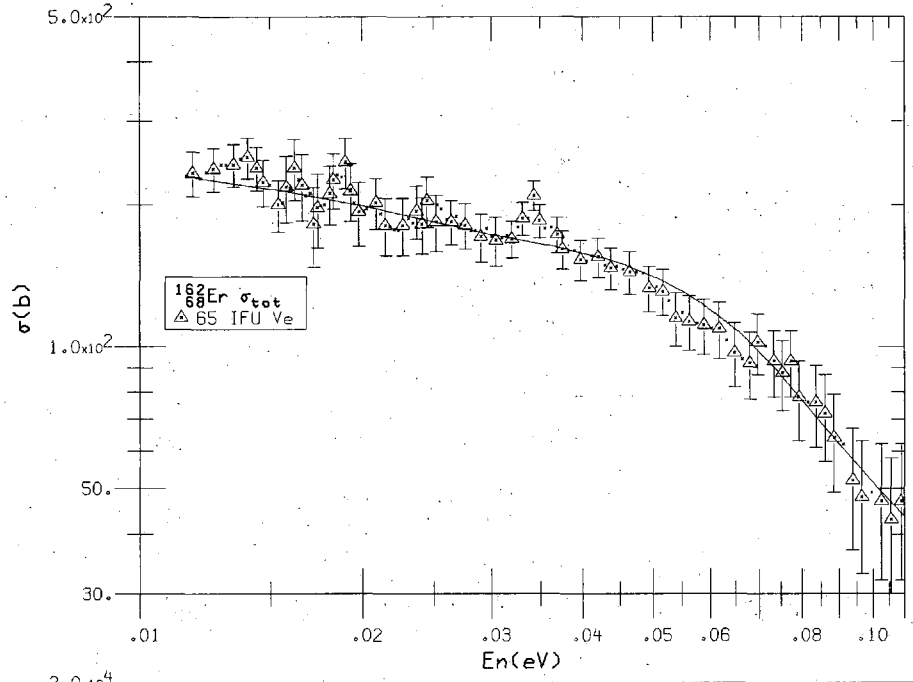


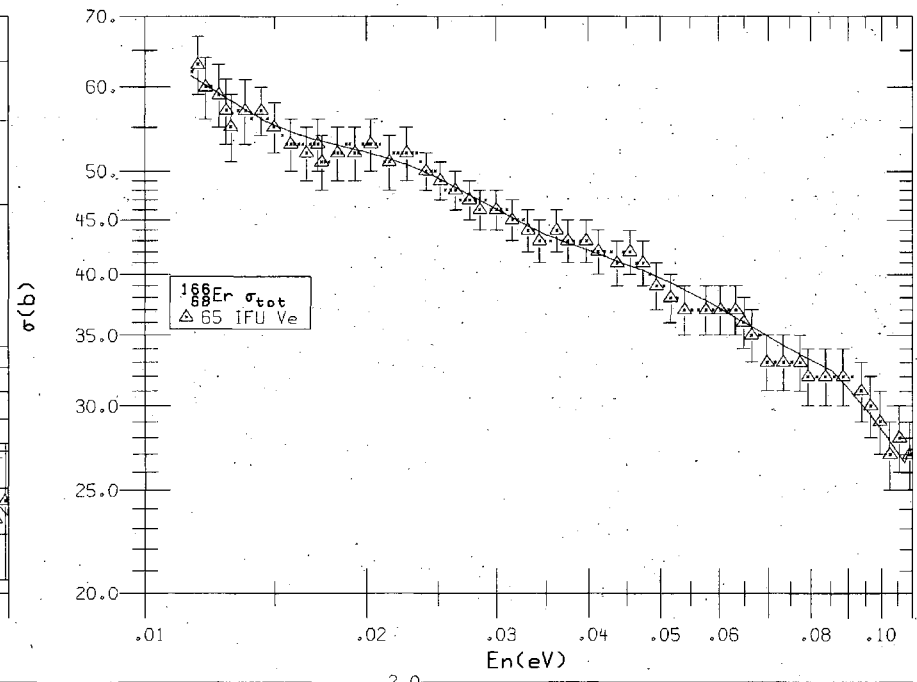
$^{162}_{68}Er$ σ_{tot}

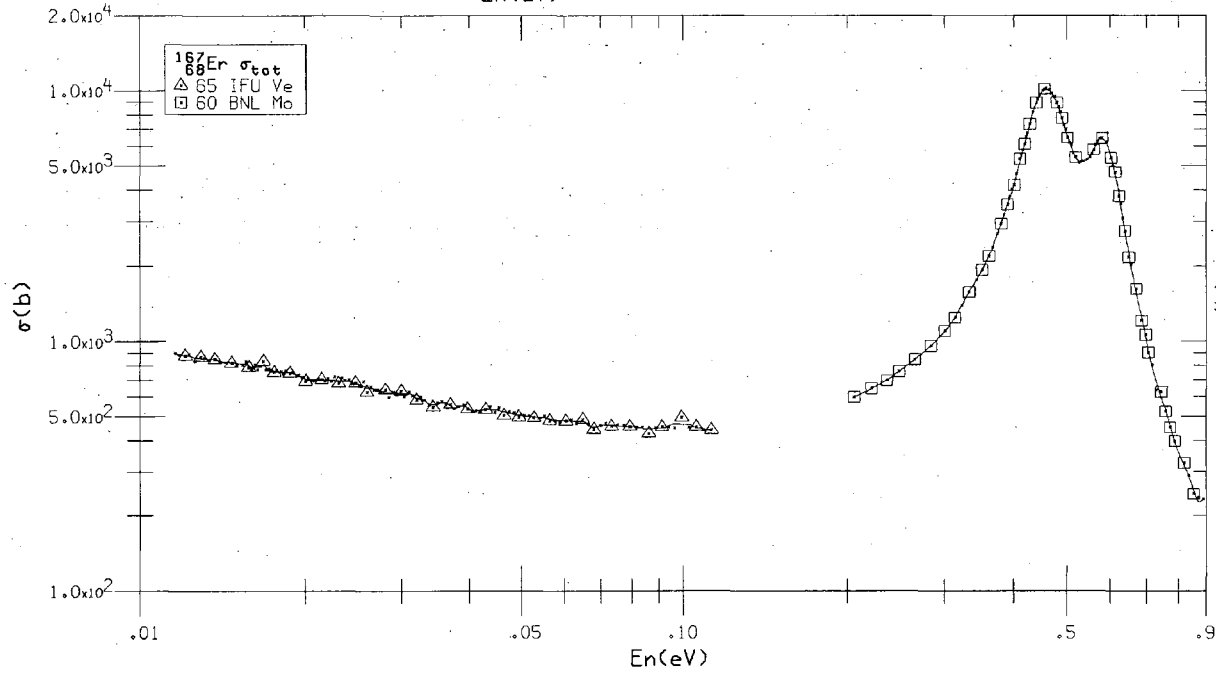
$^{166}_{68}Er$ σ_{tot}

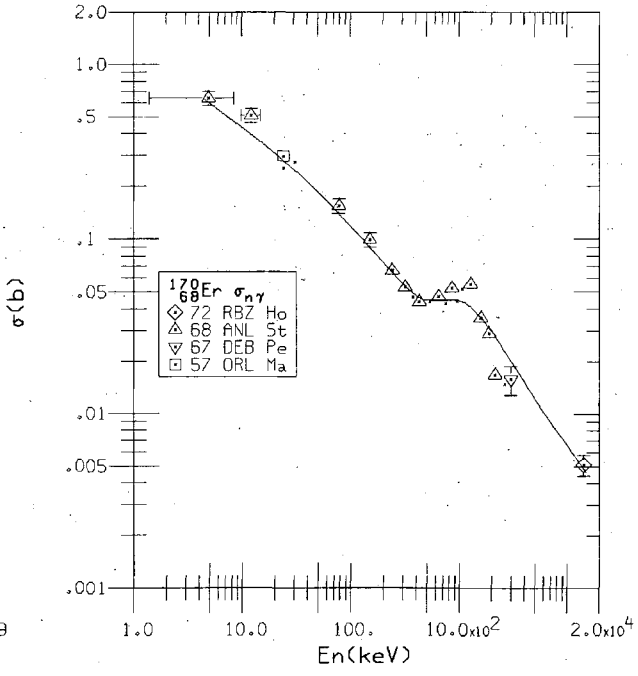
$^{167}_{68}Er$ σ_{tot}

$^{170}_{68}Er$ $\sigma_{n\gamma}$







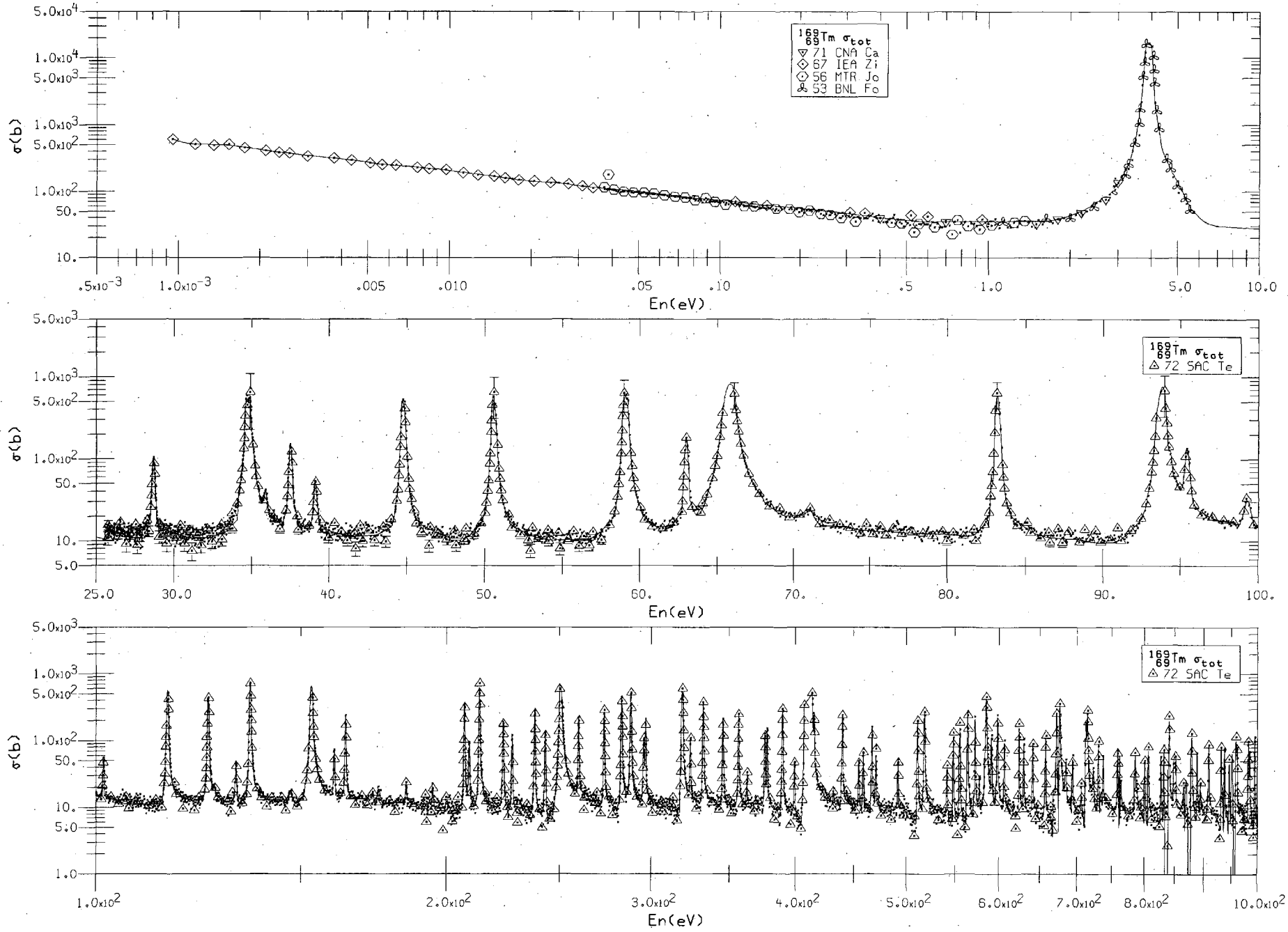


Yr	Lab	Author	Reference	Points	Range	Standard
			$_{68}$Er σ_{tot}			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	588	.800 MeV to 9.023 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	234	2.257 MeV to 14.9 MeV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	23	.0055 eV to .295 eV	abs
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	.192 kb at thermal	abs
67	NWU	Haugsnes	HAUGSNES,67	1	5.320 b at 14.1 MeV	
66	MUN	Knorr	EANDC(E)-66,29,66	7	.0003 eV to .0025 eV	^{197}Au
65	OKE	Seth	PL,16,306,65	93	5.000 keV to .640 MeV	abs
63	CEC	Amaral,et.al.	IEA-86,63	32	.0007 eV to .295 eV	
60	KAP	Roesser,et.al.	ANS,3,462,60	126	.0010 eV to .650 eV	abs
60	BNL	Moller,et.al.	NSE,8,183,60	86	.206 eV to .889 eV	abs
58	LAS	Conner	PR,109,1268,58	3	13.1 MeV to 15.6 MeV	
54	WIS	Okazaki,et.al.	PR,93,461,54	27	50.0 keV to 2.950 MeV	
54	BNL	Sailor,et.al.	PR,96,1014,54	77	1.040 eV to 55.6 eV	abs
52	ORL	Bernstein,et.al.	PR,87,487,52	20	thermal to .230 eV	
			$_{68}$Er σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.054 b at .953 MeV	C σ_{el}
65	IFU	Vertebnii,et.al.	65ANTWERP,,576,65	1	11.0 b at thermal	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.250 b at .980 MeV	H
			$_{68}$Er σ_{sct}			
53	ORL	Koehler,et.al.	PR,91,597,53	1	15.0 b at thermal	
			$_{68}$Er $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	.150 kb at thermal	abs
64	GA	Haddad	HADDAD,64	88	.0104 eV to 1.230 eV	
63	ORL	Macklin,et.al.	PR,129,2695,63	1	.540 b at 65.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	45	.200 keV to 7.800 keV	
			$^{162}_{68}$Er σ_{tot}			
66	UKR	Vlasov,et.al.	UFZ,11,240,66	1	.200 kb at thermal	
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	121	.0116 eV to .113 eV	
			$^{162}_{68}$Er σ_{el}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	3.800 b at thermal	
			$^{162}_{68}$Er $\sigma_{n\gamma}$			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	.197 kb at thermal	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{162}_{68}$Er σ_{n2n}			
69	AUW	Rama Prasad+	NP/A,125,57,69	1	1.870 b at 14.2 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{164}_{68}$Er σ_{tot}			
67	BNL	Mughabghab+	PR,162,1130,67	1	50.0 b at thermal	abs
65	UKR	Vertebnii,et.al.	65ANTWERP,,572,65	1	50.0 b at thermal	
			$^{164}_{68}$Er σ_{el}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	12.7 b at thermal	
			$^{166}_{68}$Er σ_{tot}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	121	.0116 eV to .113 eV	
			$^{166}_{68}$Er σ_{el}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	19.1 b at thermal	
			$^{166}_{68}$Er $\sigma_{n\gamma}$			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	29.0 b at thermal	
			$^{166}_{68}$Er σ_{n2n}			
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	1.965 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Wille,et.al.	PR,118,242,60	1	1.000 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{167}_{68}$Er σ_{tot}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	121	.0116 eV to .113 eV	
60	BNL	Moller,et.al.	NSE,8,183,60	86	.206 eV to .889 eV	
			$^{167}_{68}$Er σ_{el}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	7.900 b at thermal	
			$^{167}_{68}$Er $\sigma_{n\gamma}$			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	.658 kb at thermal	
			$^{167}_{68}$Er σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	3.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{168}_{68}$Er σ_{tot}			
67	BNL	Mughabghab+	PR,162,1130,67	1	33.6 b at thermal	abs
65	UKR	Vertebnii,et.al.	65ANTWERP,,572,65	1	35.0 b at thermal	
			$^{168}_{68}$Er σ_{el}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	13.1 b at thermal	
			$^{168}_{68}$Er $\sigma_{n\gamma}$			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	6.000 b at thermal	
			$^{168}_{68}$Er σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	2.500 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{170}_{68}$Er σ_{tot}			
65	UKR	Vertebnii,et.al.	65ANTWERP,,572,65	1	45.0 b at thermal	
			$^{170}_{68}$Er σ_{el}			
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	15.9 b at thermal	
			$^{170}_{68}$Er $\sigma_{n\gamma}$			
72	RBZ	Holub,et.al.	LNS-4-72,72	1	5.100 mb at 14.4 MeV	^{56}Fe σ_{np}
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	.255 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
68	ANL	Stupegia,et.al.	JNE,22,267,68	20	4.900 keV to 2.644 MeV	^{235}U σ_{nf}
67	DEB	Peto,et.al.	JNE,21,797,67	1	15.8 mb at 3.000 MeV	^{31}P σ_{np}
65	IFU	Vertebnii,et.al.	65ANTWERP,,572,65	1	12.0 b at thermal	
57	ORL	Macklin,et.al.	PR,107,504,57	1	.298 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{170}_{68}$Er σ_{n2n}			
64	IRK	Spenke	NP,51,329,64	1	1.895 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
60	ARK	Wille,et.al.	PR,118,242,60	1	1.200 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{170}_{68}$Er σ_{np}			
60	ARK	Wille,et.al.	PR,118,242,60	1	1.800 mb at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{170}_{68}$Er $\sigma_{n\alpha}$			
60	ARK	Wille,et.al.	PR,118,242,60	1	1.000 mb at 14.8 MeV	^{63}Cu σ_{n2n}

$^{169}_{69}Tm$ σ_{tot}

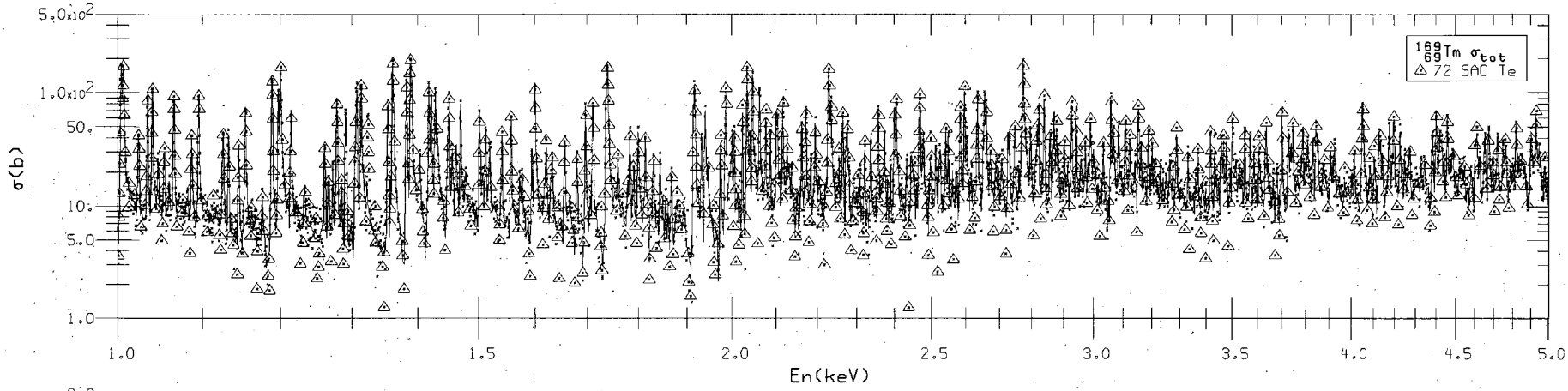


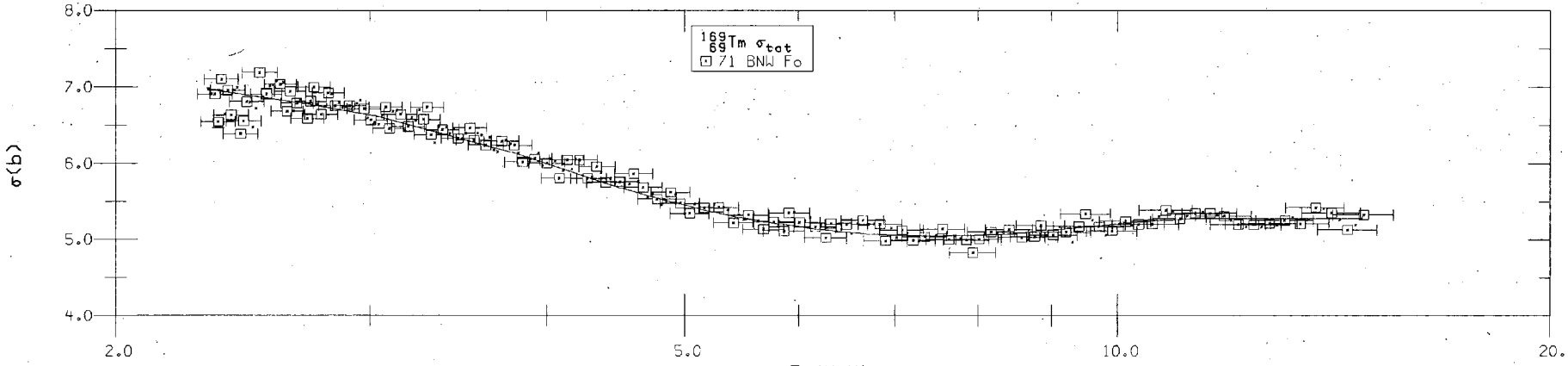
$^{169}_{69}$Tm

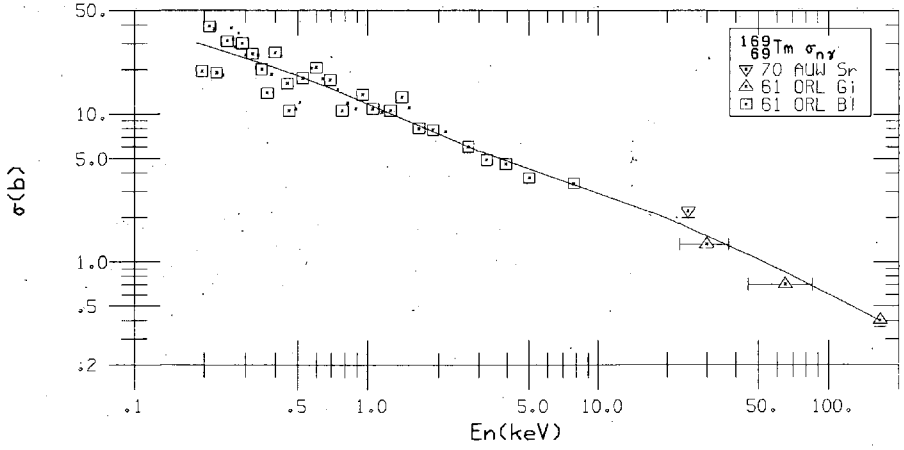
σ_{tot}

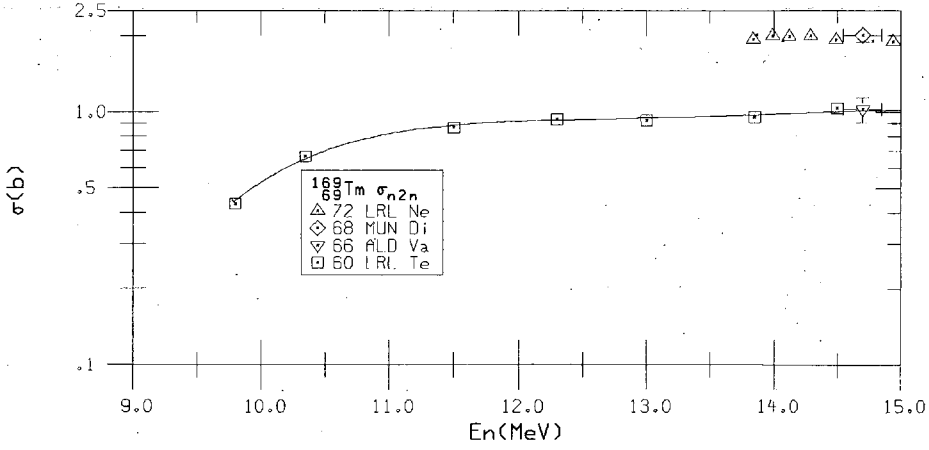
$\sigma_{n\gamma}$

σ_{n2n}



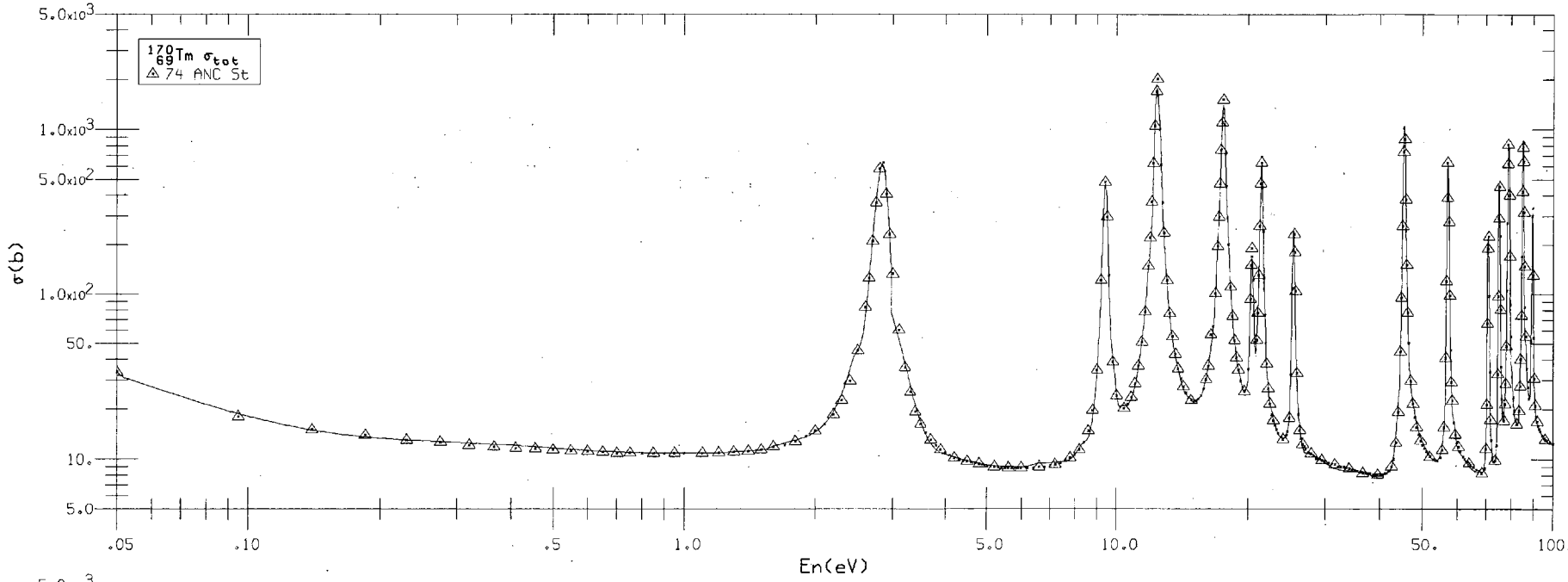


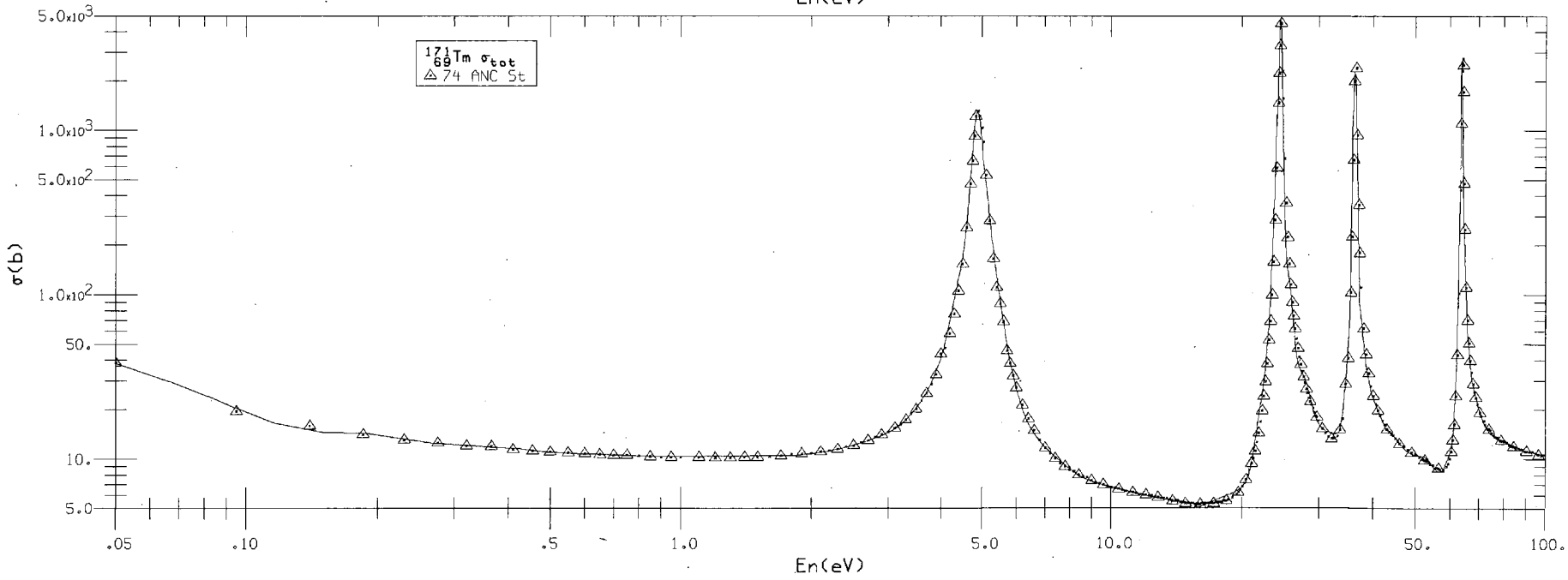




$^{170}_{69}Tm$ σ_{tot}

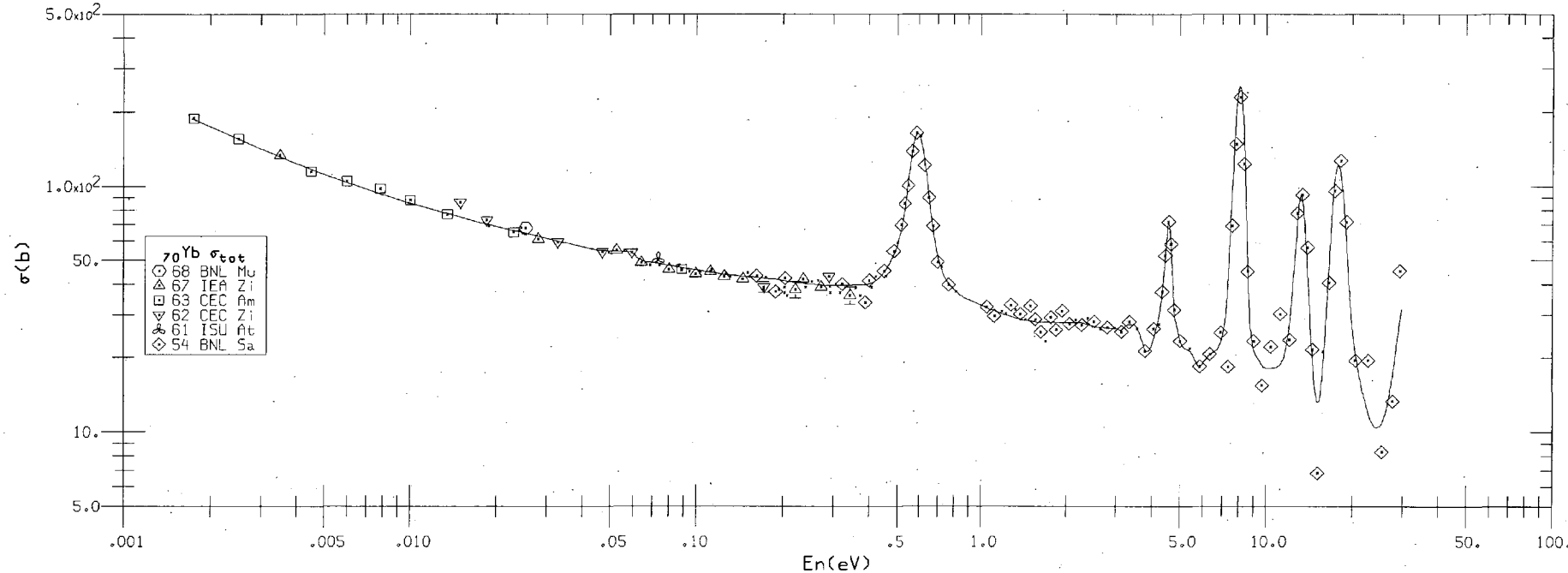
$^{171}_{69}Tm$ σ_{tot}

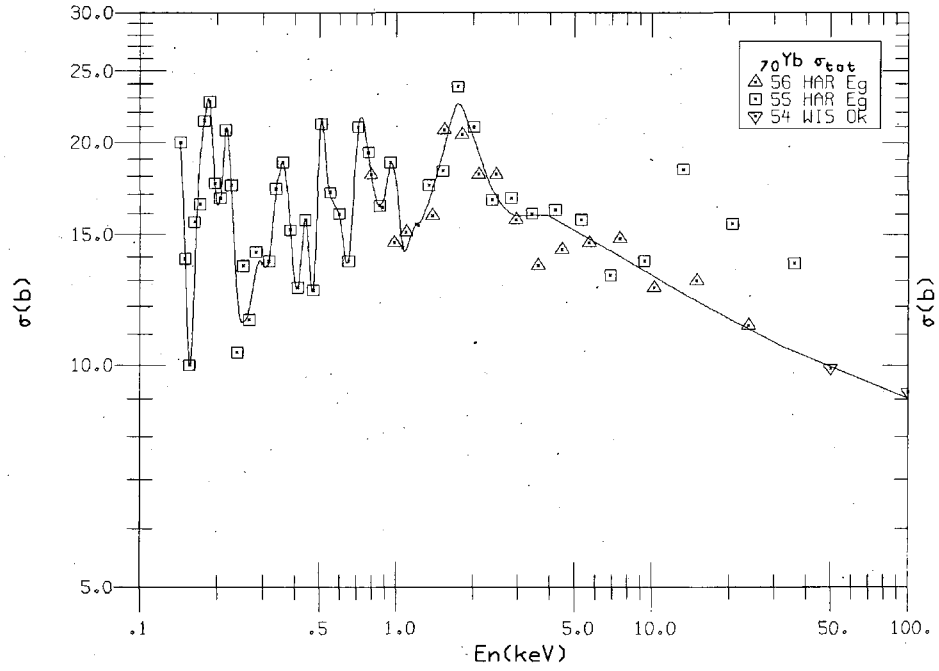


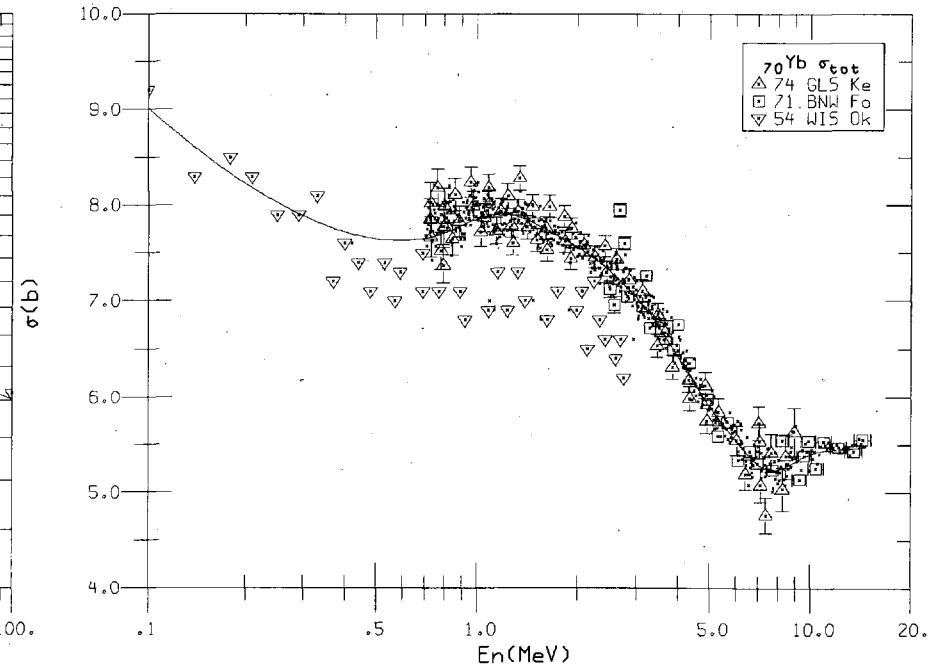


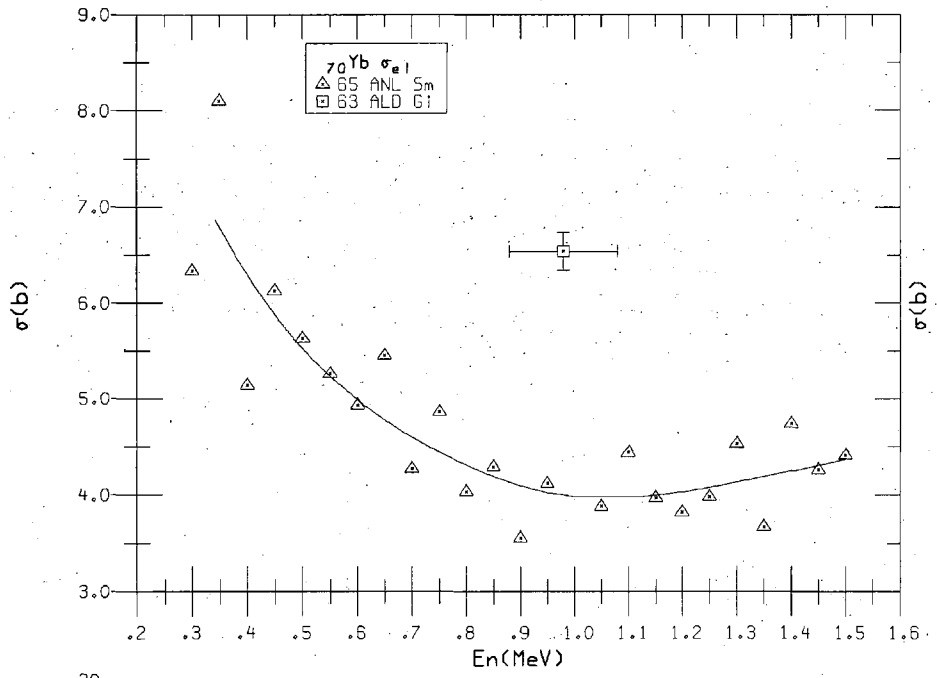
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{169}_{69}$Tm σ_{tot}			
72	SAC	Tellier	TELLIER,72	12406	25.6 eV to 5.000 keV	abs
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	235	2.319 MeV to 14.8 MeV	
71	CNA	Cansoy	CNAEM-79,71	30	.350 eV to 3.200 eV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	62	.0010 eV to .950 eV	abs
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	.134 kb at thermal	abs
56	MTR	Joki,et.al.	PR,103,1326,56	362	.0374 eV to 1.585 eV	abs
53	BNL	Foote Jr,et.al.	PR,92,656,53	56	1.060 eV to 5.750 eV	
			$^{169}_{69}$Tm σ_{sct}			
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	12.0 b at thermal	abs
			$^{169}_{69}$Tm $\sigma_{n\gamma}$			
70	AUW	Sriramachandra	ZOMADURAI,2,29,70	1	2.202 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	.106 kb at .253 eV	abs
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	46	.195 keV to 7.800 keV	
			$^{169}_{69}$Tm σ_{n2n}			
72	LRL	Nethaway	NP/A,190,635,72	9	13.8 MeV to 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.000 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	ALD	Vallis	AWRE-O-76/66,66	1	1.022 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
60	LRL	Tewes,et.al.	UCRL-6028-T,60	7	9.800 MeV to 14.5 MeV	H
			$^{170}_{69}$Tm σ_{tot}			
74	ANC	Stokes	SIMPSON,74	394	.0500 eV to 100.0 eV	
			$^{171}_{69}$Tm σ_{tot}			
74	ANC	Stokes	SIMPSON,74	347	.0500 eV to 100.0 eV	

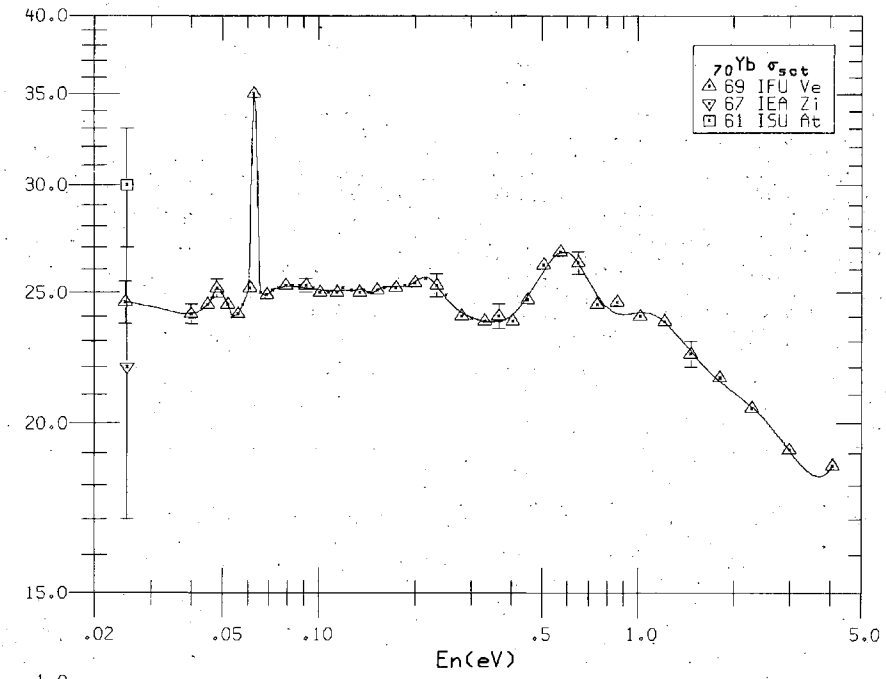
^{70}Yb
σ_{tot}

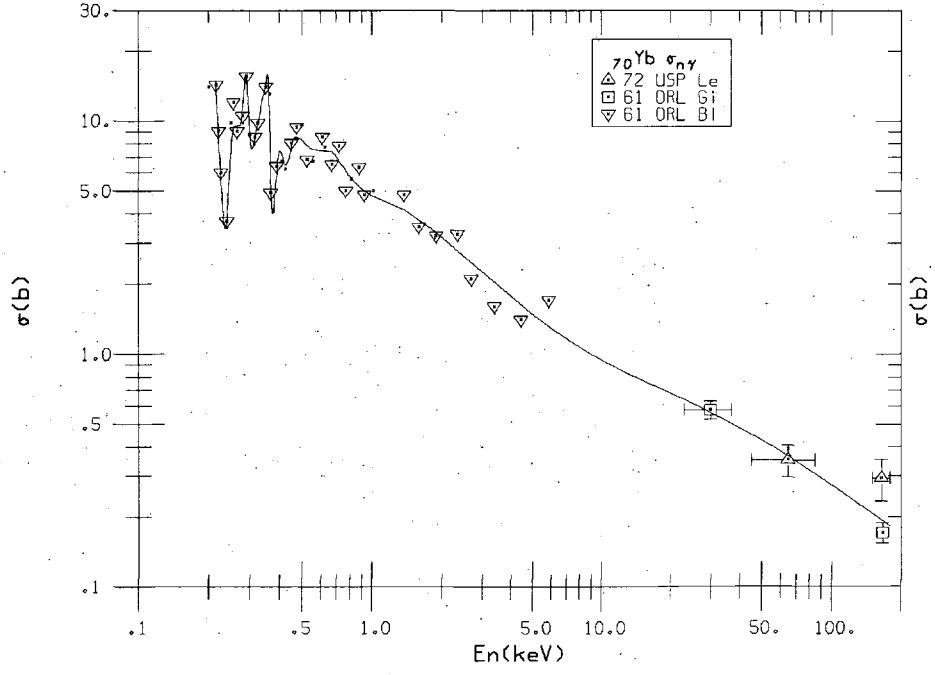


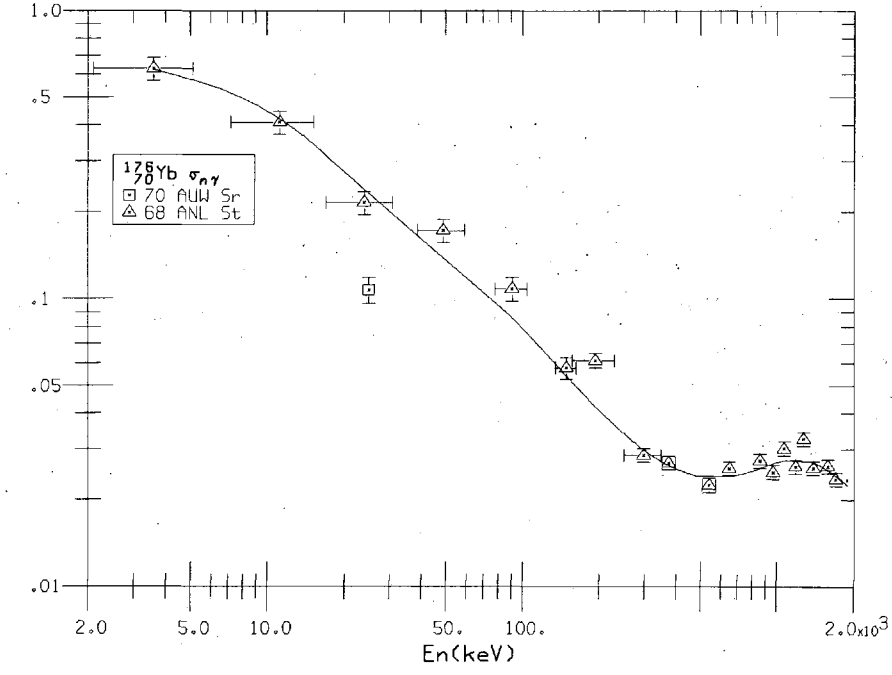




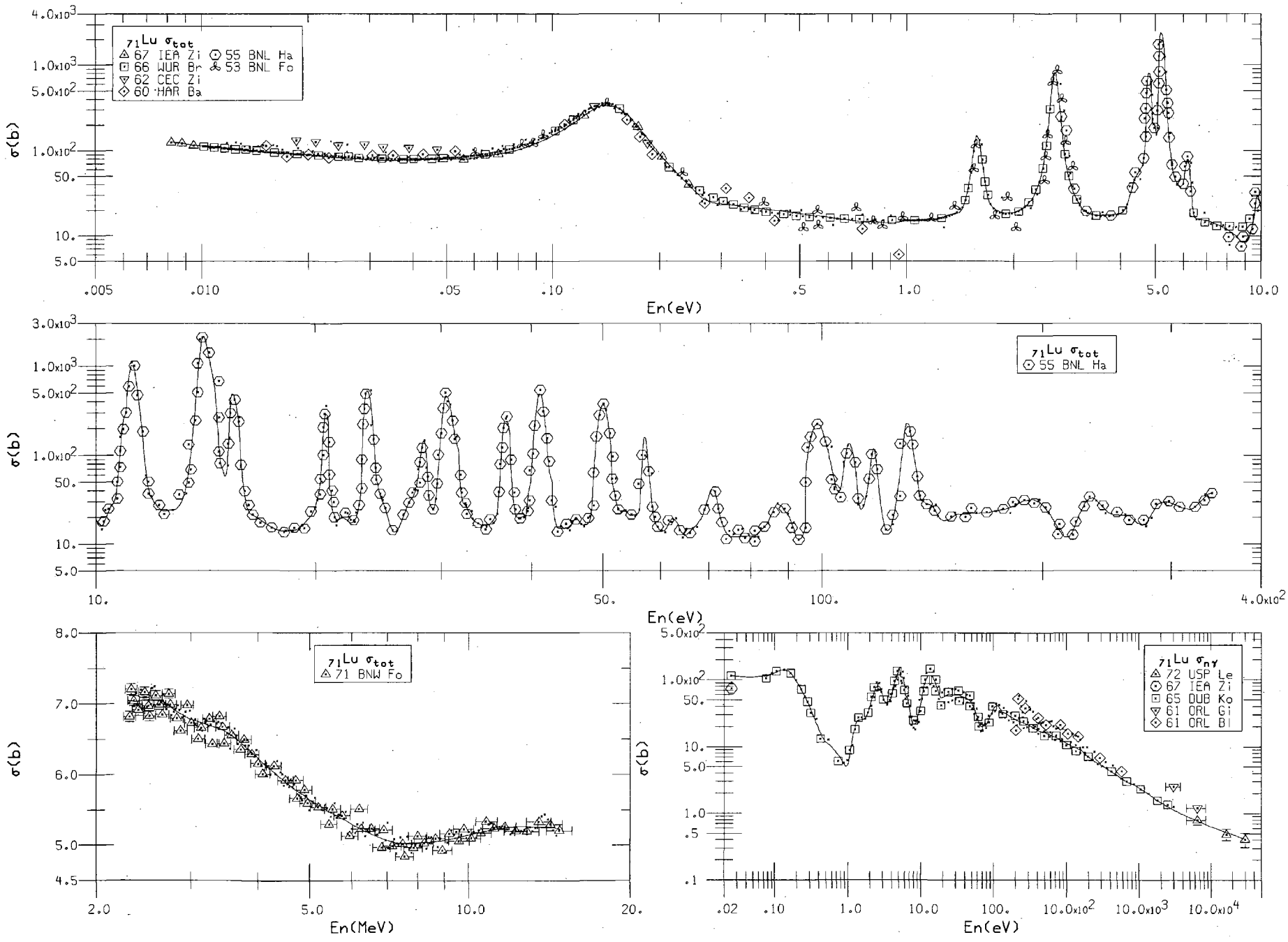

70Yb σel
65 ANL Sm
63 ALD Gi
σ(b)
En(MeV)


70Yb σsct
69 IFU Ve
67 IEA Zi
61 ISU At
σ(b)
En(eV)

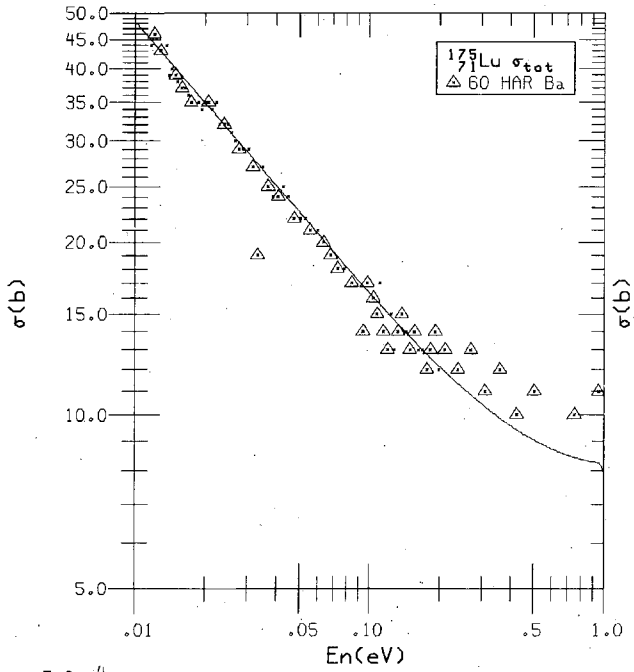

70Yb σnγ
72 USP Le
61 ORL Gi
61 ORL Bl
σ(b)
En(keV)

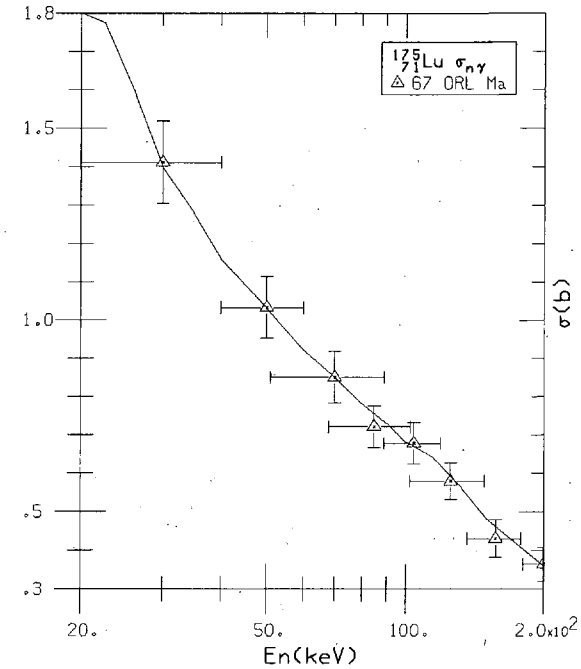

176 70Yb σnγ
70 AUW Sr
68 ANL St
σ(b)
En(keV)

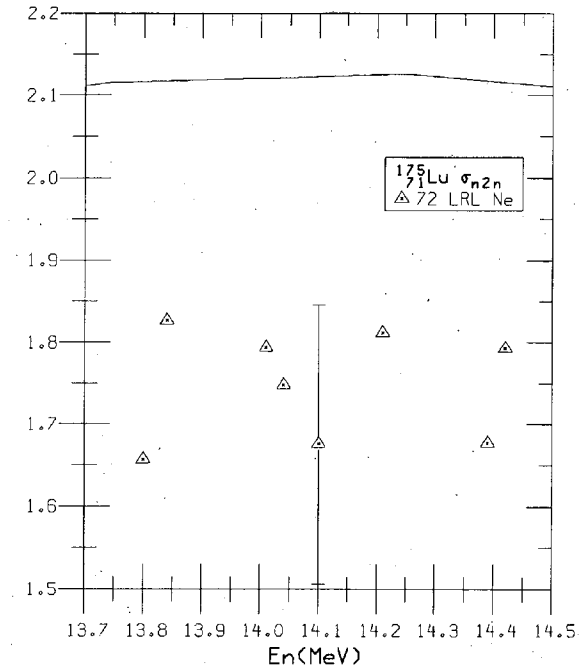
Yr	Lab	Author	Reference	Points	Range	Standard
			^{70}Yb σ_{tot}			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	642	.700 MeV to 9.034 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	231	2.487 MeV to 14.7 MeV	
68	BNL	Mughabghab+	PR,174,1400,68	1	67.6 b at thermal	abs
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	50	.0018 eV to .409 eV	abs
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	64.0 b at thermal	abs
63	CEC	Amaral,et.al.	IEA-86,63	22	.0018 eV to .240 eV	
62	CEC	Zimmerman,et.al.	IEA-75,62	15	.0150 eV to .290 eV	abs
61	ISU	Atoji	PR,121,610,61	1	50.7 b at .0735 eV	
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
55	HAR	Egelstaff	EGELSTAFF,55	47	.144 keV to 36.0 keV	
54	WIS	Okazaki,et.al.	PR,93,461,54	43	50.0 keV to 2.940 MeV	abs
54	BNL	Sailor,et.al.	PR,96,1014,54	96	.151 eV to 29.4 eV	
			^{70}Yb σ_{el}			
65	ANL	Smith,et.al.	EANDC(US)62,65	24	.300 MeV to 1.500 MeV	C
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.540 b at .980 MeV	H
			^{70}Yb σ_{sct}			
69	IFU	Vertebnii,et.al.	YFI-7,41,69	54	.0250 eV to 4.060 eV	V σ_{sct}
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	22.0 b at thermal	abs
61	ISU	Atoji	PR,121,610,61	1	30.0 b at thermal	
			^{70}Yb $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	3	30.0 keV to .165 MeV	In $\sigma_{n\gamma}$
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	37.0 b at thermal	abs
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	41	.200 keV to 5.900 keV	
			$^{168}_{70}$Yb $\sigma_{n\gamma}$			
70	AUW	Sriramachandra	70MADURAI,2,29,70	1	49.0 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{170}_{70}$Yb σ_{tot}			
68	BNL	Mughabghab+	PR,174,1400,68	1	17.0 b at thermal	abs
			$^{170}_{70}$Yb σ_{n2n}			
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.080 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{171}_{70}$Yb σ_{tot}			
68	BNL	Mughabghab+	PR,174,1400,68	1	57.0 b at thermal	abs
			$^{172}_{70}$Yb σ_{tot}			
68	BNL	Mughabghab+	PR,174,1400,68	1	10.2 b at thermal	abs
			$^{173}_{70}$Yb σ_{tot}			
68	BNL	Mughabghab+	PR,174,1400,68	1	28.0 b at thermal	abs
			$^{174}_{70}$Yb σ_{tot}			
68	BNL	Mughabghab+	PR,174,1400,68	1	.142 kb at thermal	abs
			$^{174}_{70}$Yb $\sigma_{n\gamma}$			
70	AUW	Sriramachandra	70MADURAI,2,29,70	1	2.403 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{174}_{70}$Yb σ_{np}			
67	SAH	Gujrathi,et.al.	IJP,41,667,67	1	3.500 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{176}_{70}$Yb σ_{tot}			
68	BNL	Mughabghab+	PR,174,1400,68	1	14.9 b at thermal	abs
			$^{176}_{70}$Yb $\sigma_{n\gamma}$			
70	AUW	Sriramachandra	70MADURAI,2,29,70	1	.107 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
68	ANL	Stupegia,et.al.	JNE,22,267,68	20	3.600 keV to 1.877 MeV	^{235}U σ_{nf}
			$^{176}_{70}$Yb σ_{n2n}			
64	IRK	Spenke	NP,51,329,64	1	1.810 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
61	MUA	Khurana,et.al.	NP,28,560,61	1	.786 b at 14.8 MeV	^{56}Fe σ_{np}
60	ARK	Wille,et.al.	PR,118,242,60	1	.430 b at 14.8 MeV	^{63}Cu σ_{n2n}
			$^{176}_{70}$Yb $\sigma_{n\alpha}$			
68	ARK	Ihochi,et.al.	PR,166,1173,68	1	.200 mb at 14.8 MeV	^{176}Yb σ_{n2n}

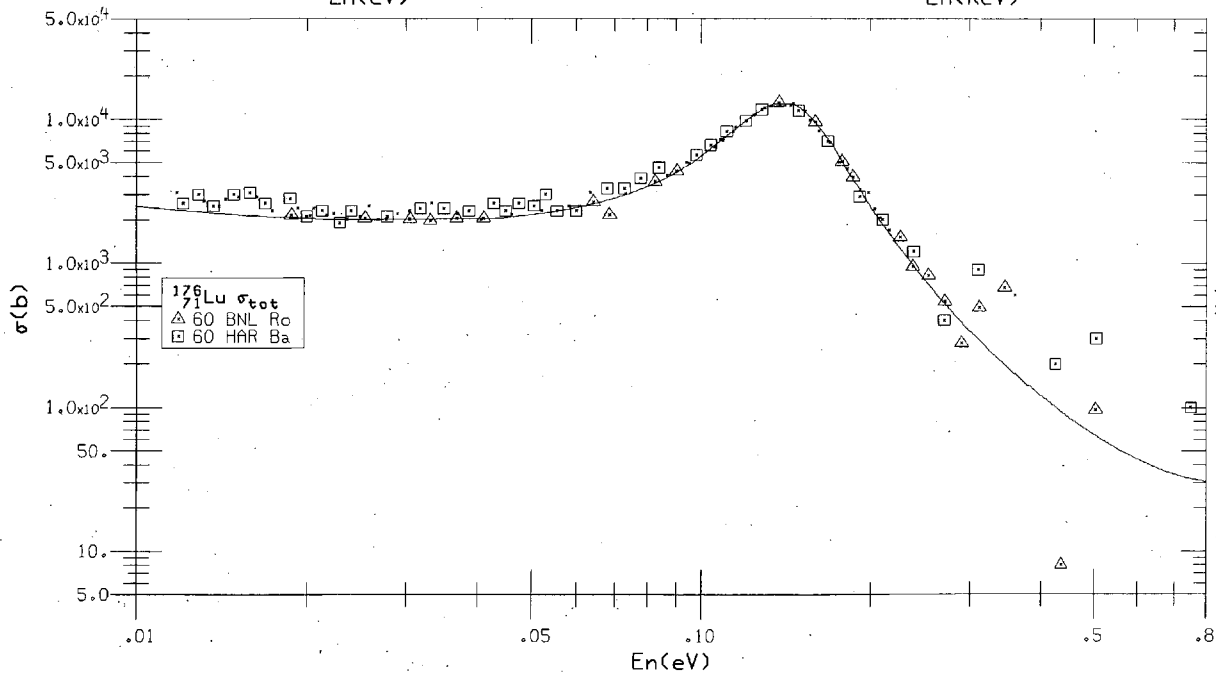

$_{71}$Lu σ_{tot}
67 IEA Zi
55 BNL Ha
66 WUR Br
53 BNL Fo
62 CEC Zi
60 HAR Ba
σ(b)
En(eV)
$_{71}$Lu σ_{tot}
55 BNL Ha
σ(b)
En(eV)
$_{71}$Lu σ_{tot}
71 BNW Fo
σ(b)
En(MeV)
$_{71}$Lu $\sigma_{n\gamma}$
72 USP Le
67 IEA Zi
65 DUB Ko
61 ORL Gi
61 ORL Bi
σ(b)
En(eV)

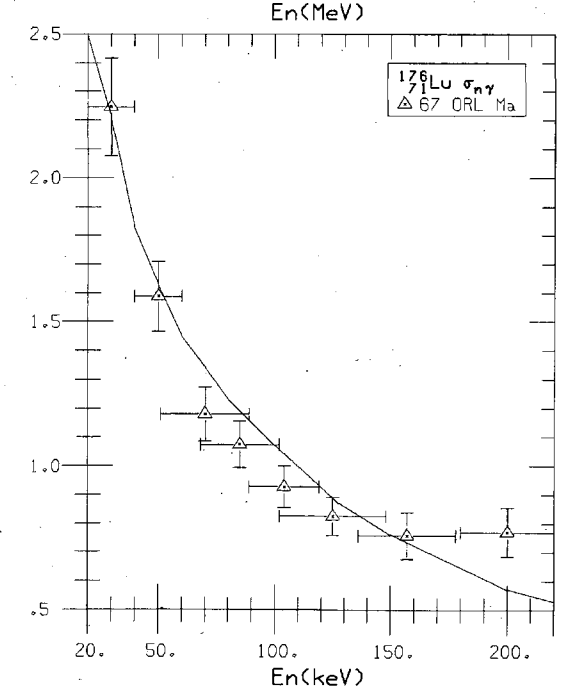
$^{175}_{71}$Lu
σ_{tot}
$\sigma_{n\gamma}$
σ_{n2n}
[1032]
$^{176}_{71}$Lu
σ_{tot}
$\sigma_{n\gamma}$
[1033]







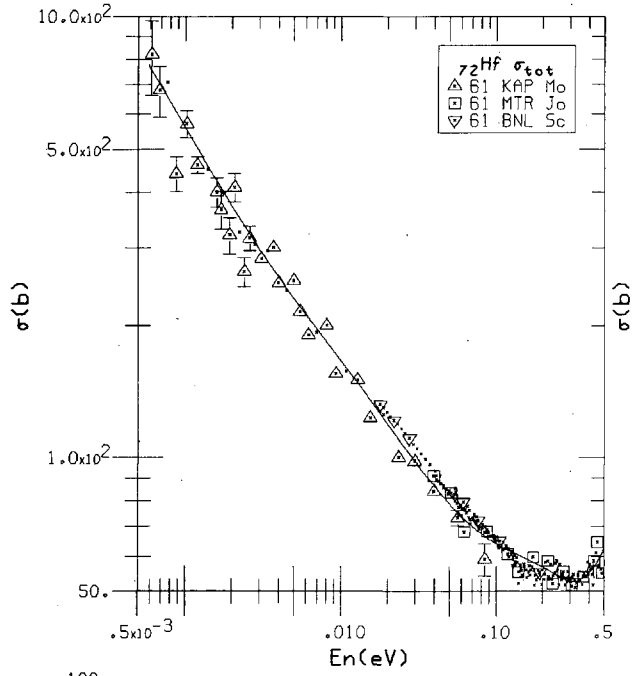


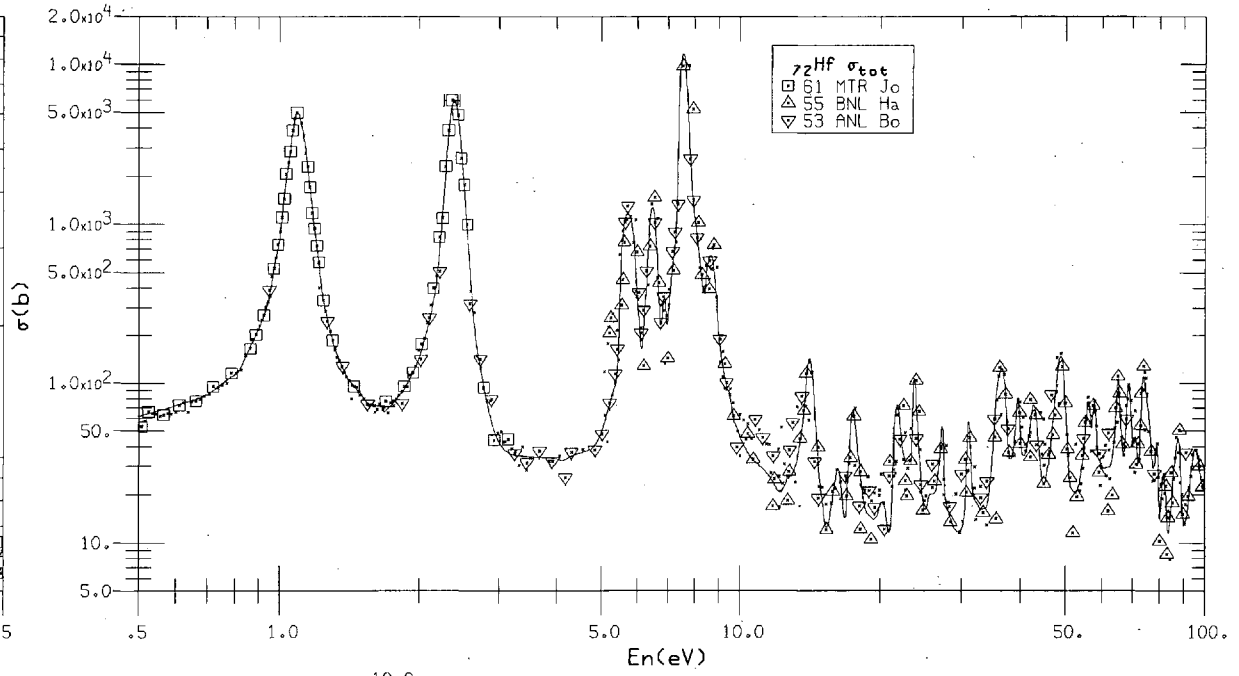


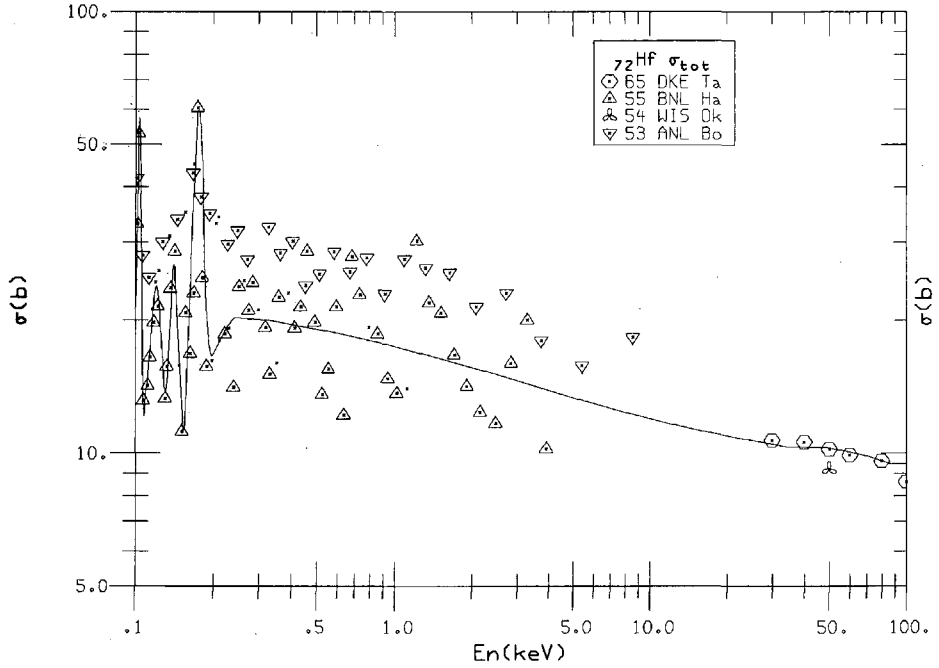
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{71}$Lu σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	236	2.299 MeV to 14.8 MeV	
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	57	.0082 eV to .293 eV	abs
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	82.0 b at thermal	abs
66	WUR	Brunner,et.al.	66PARIS,1,61,66	387	.0101 eV to 9.265 eV	
62	CEC	Zimmerman,et.al.	IEA-75,62	25	.0185 eV to .203 eV	abs
60	ARK	Wille,et.al.	PR,118,242,60	1	2.000 b at 14.8 MeV	^{63}Cu σ_{n2n}
60	HAR	Baston,et.al.	JNE,13,35,60	75	.0118 eV to .950 eV	abs
55	BNL	Harvey,et.al.	PR,99,10,55	401	2.710 eV to .342 keV	
53	BNL	Foote Jr,et.al.	PR,92,656,53	64	.0545 eV to 3.050 eV	
			$_{71}$Lu σ_{sct}			
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	8.000 b at thermal	abs
61	ISU	Atoji	PR,121,610,61	1	13.0 b at thermal	
			$_{71}$Lu $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
67	IEA	Zimmerman,et.al.	NP/A,95,683,67	1	74.0 b at thermal	abs
65	DUB	Konks,et.al.	65ANTWERP,,576,65	174	.0250 eV to 25.0 keV	
64	AE	Sokolowski,et.al	NUK,6,245,64	1	89.8 b at thermal	B σ_{abs}
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	44	.205 keV to 5.800 keV	
			$^{175}_{71}$Lu σ_{tot}			
60	HAR	Baston,et.al.	JNE,13,35,60	74	.0118 eV to .950 eV	abs
			$^{175}_{71}$Lu $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	8	30.0 keV to .200 MeV	Ta $\sigma_{n\gamma}$
			$^{175}_{71}$Lu σ_{n2n}			
72	LRL	Nethaway	NP/A,190,635,72	8	13.8 MeV to 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
68	MUN	Dilg, et.al.	NP/A,118,9,68	1	1.285 b at 14.7 MeV	
68	MUN	Dilg, et.al.	NP/A,118,9,68	1	.655 b at 14.7 MeV	
			$^{175}_{71}$Lu σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	3.420 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{176}_{71}$Lu σ_{tot}			
60	BNL	Roberge,et.al.	NSE,7,502,60	46	.0188 eV to .503 eV	abs
60	HAR	Baston,et.al.	JNE,13,35,60	73	.0118 eV to .750 eV	abs

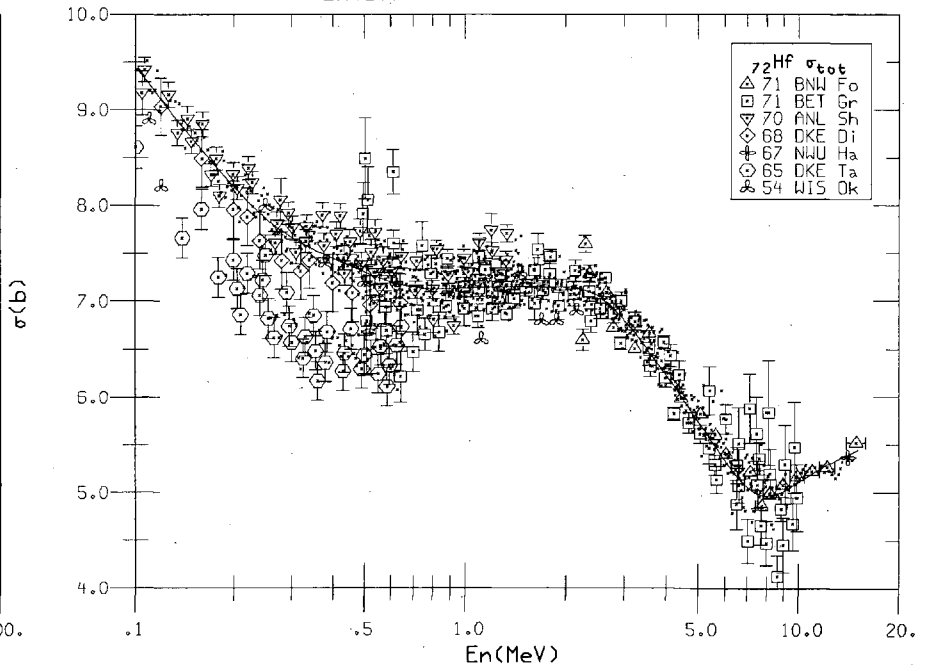
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{176}_{71}$Lu $\sigma_{n\gamma}$			
67	ORL	Macklin,et.al.	PR,159,1007,67	8	30.0 keV to .200 MeV	Ta $\sigma_{n\gamma}$

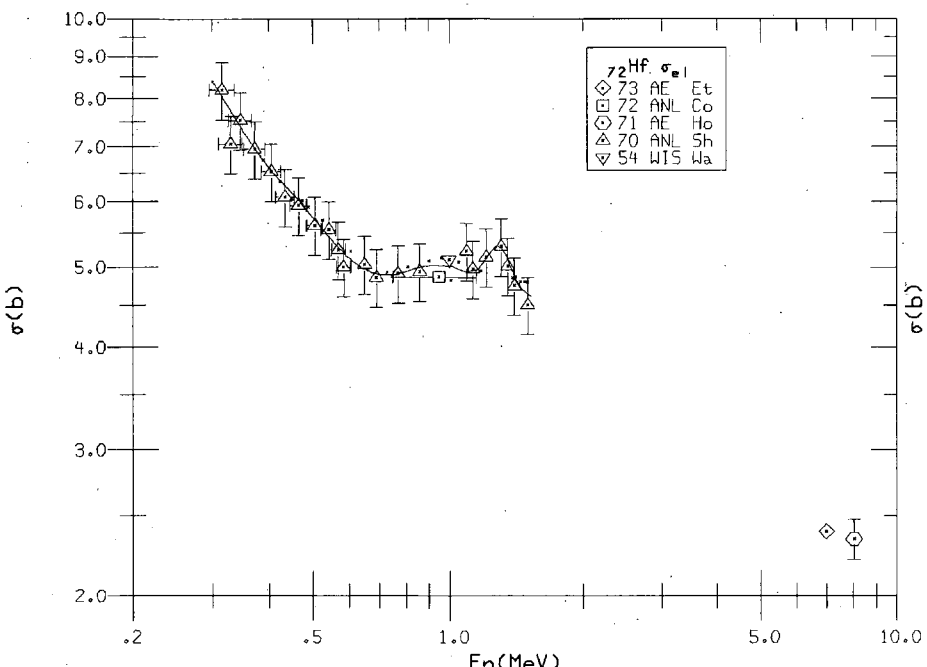
$_{72}Hf$ σ_{tot}

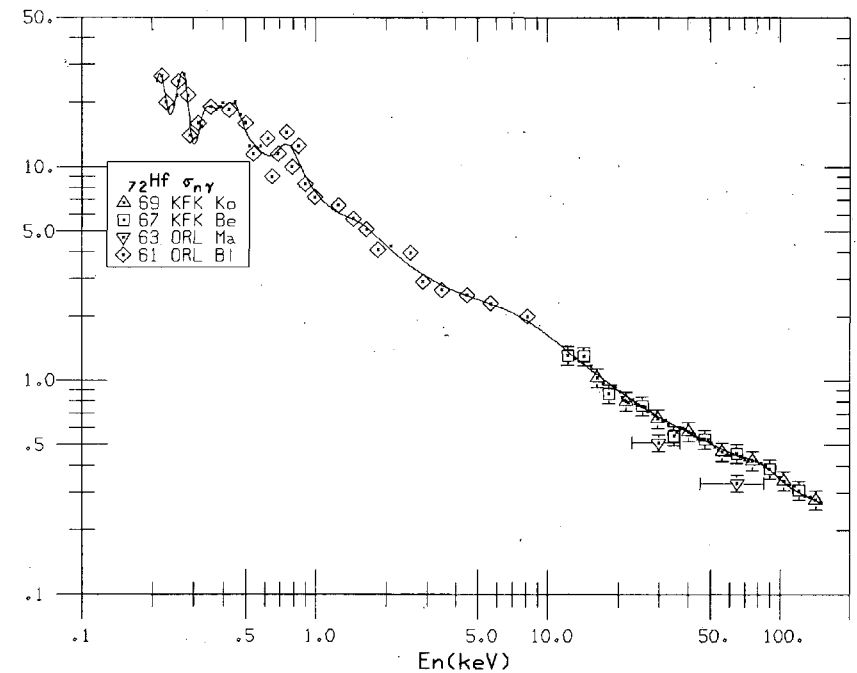


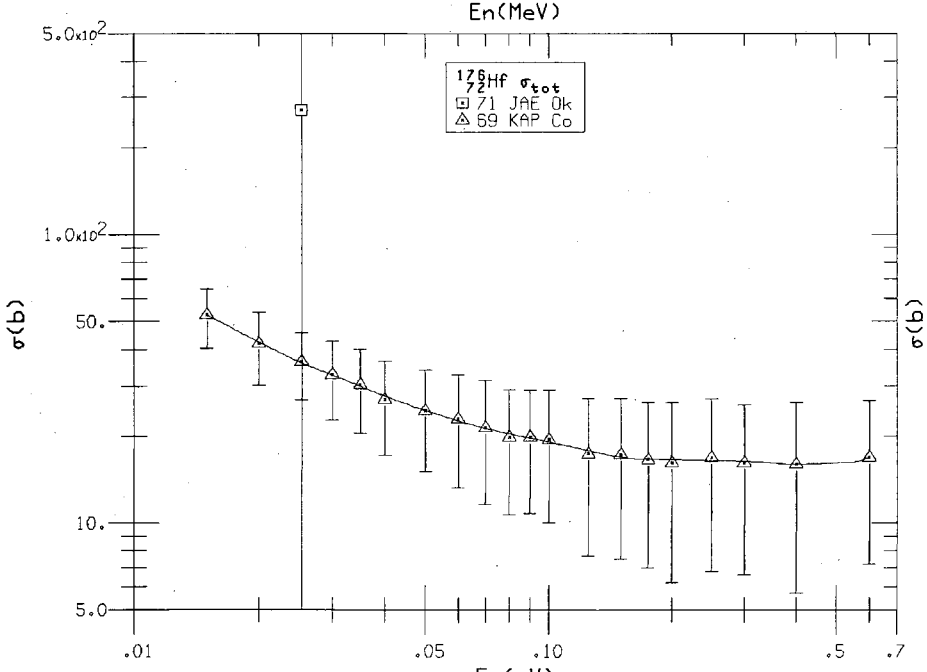


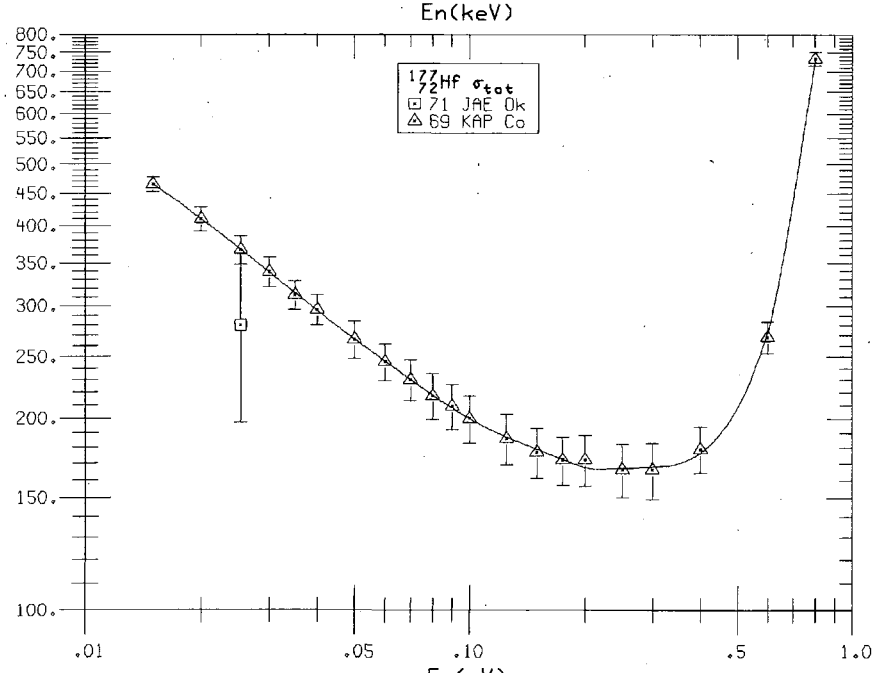





$_{72}$Hf σ_{el}
73 AE Et
72 ANL Co
71 AE Ho
70 ANL Sh
54 WIS Wa
σ(b)
En(MeV)


$_{72}$Hf $\sigma_{n\gamma}$
69 KFK Ko
67 KFK Be
63 ORL Ma
61 ORL Bl
σ(b)
En(keV)


$^{176}_{72}$Hf σ_{tot}
71 JAE Ok
69 KAP Co
σ(b)
En(eV)

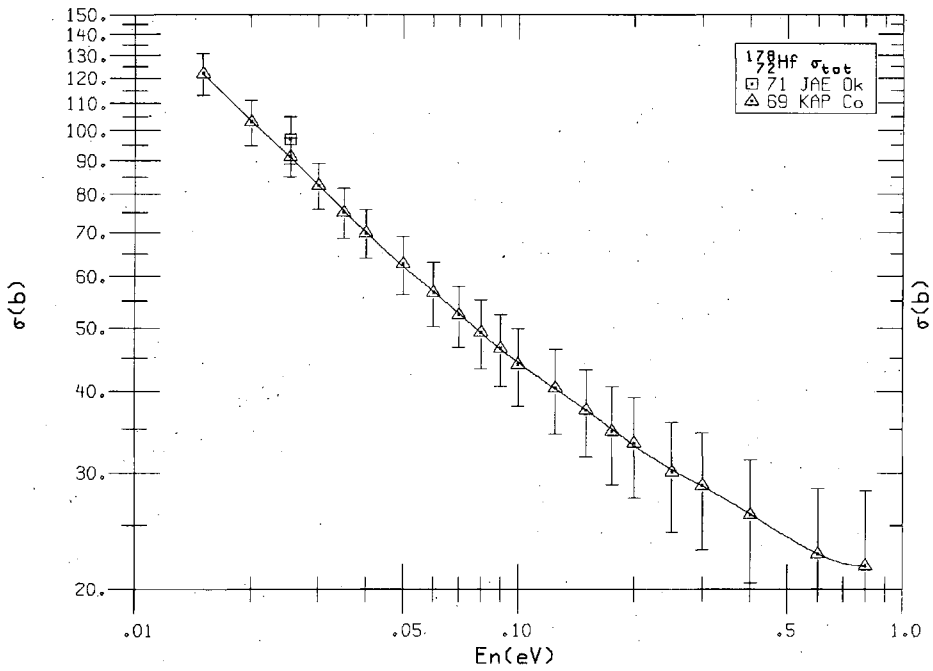

$^{177}_{72}$Hf σ_{tot}
71 JAE Ok
69 KAP Co
σ(b)
En(eV)

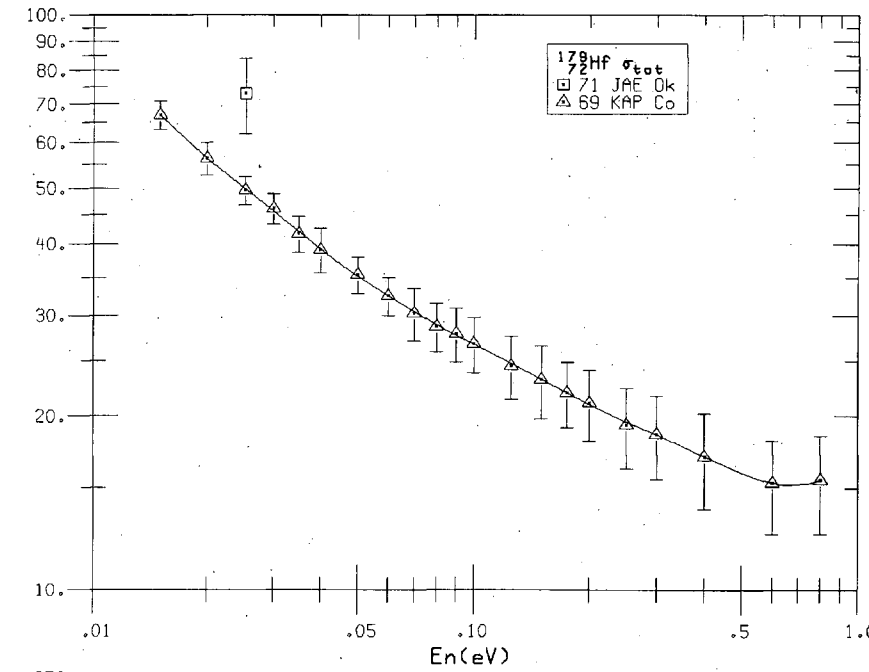
$^{178}_{72}Hf$ σ_{tot}

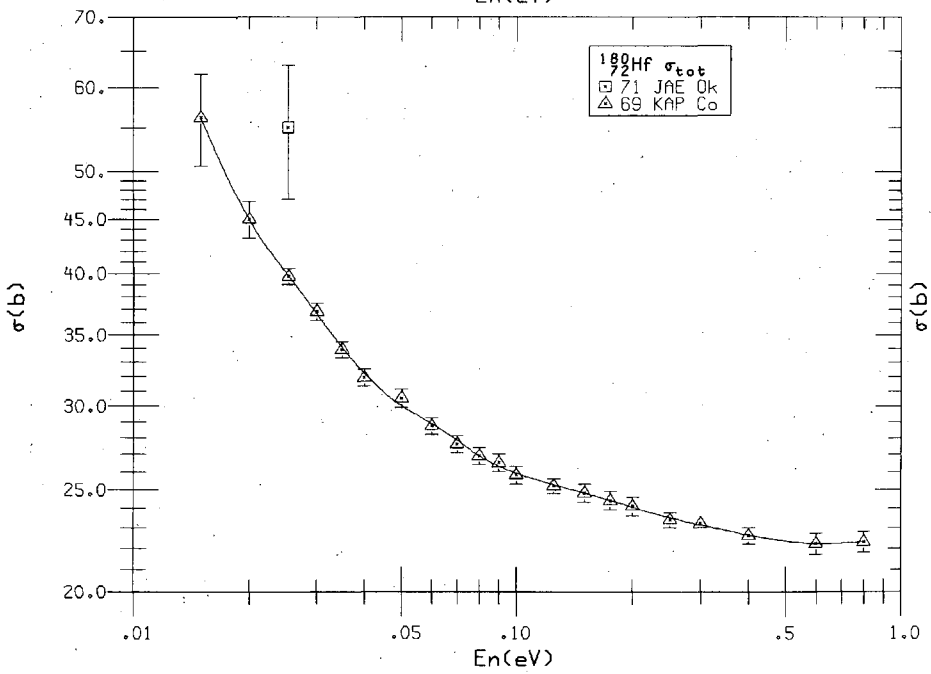
$^{179}_{72}Hf$ σ_{tot}

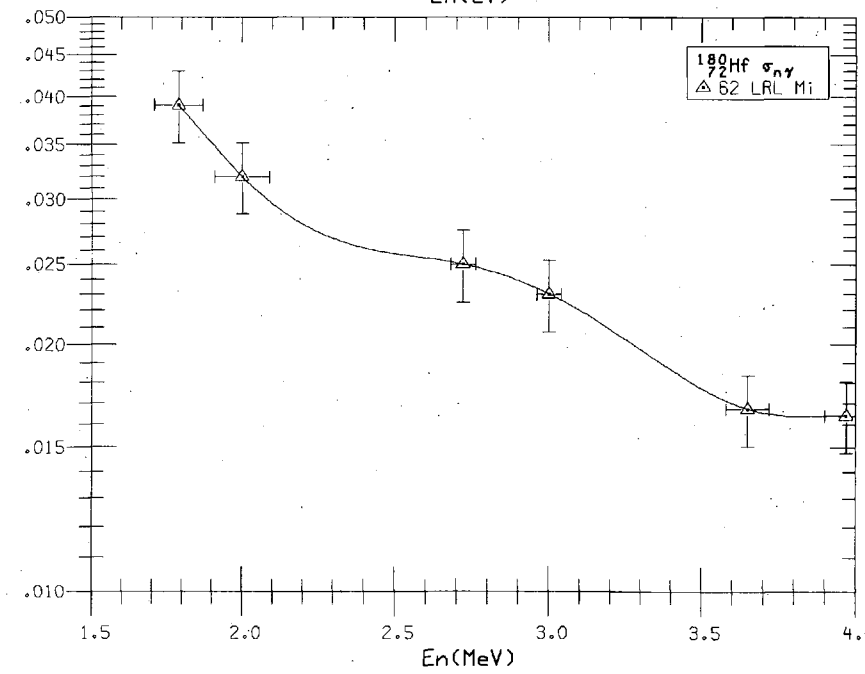
$^{180}_{72}Hf$ σ_{tot}

$\sigma_{n\gamma}$



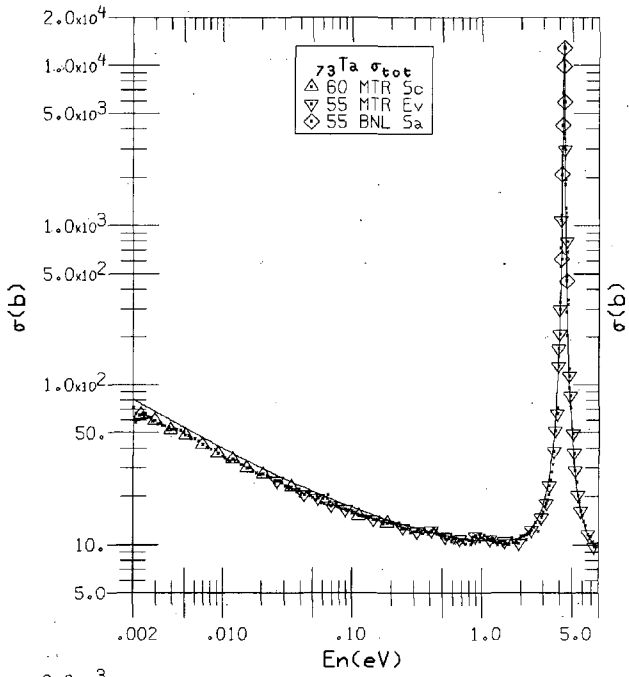


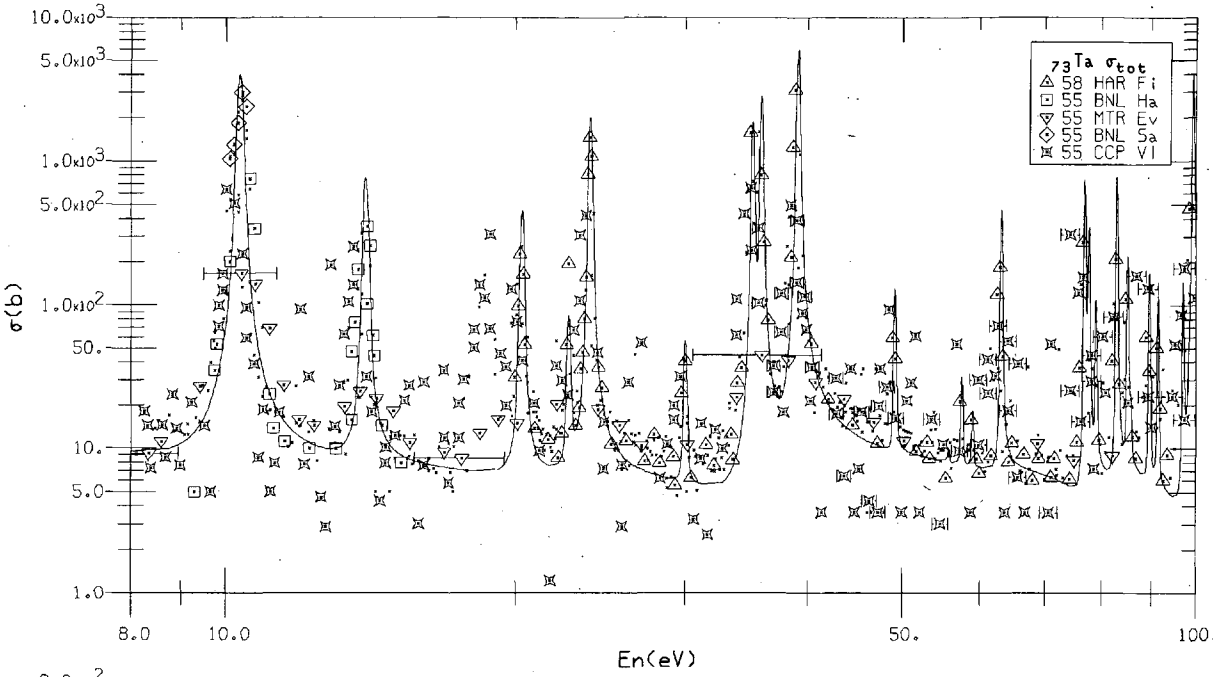


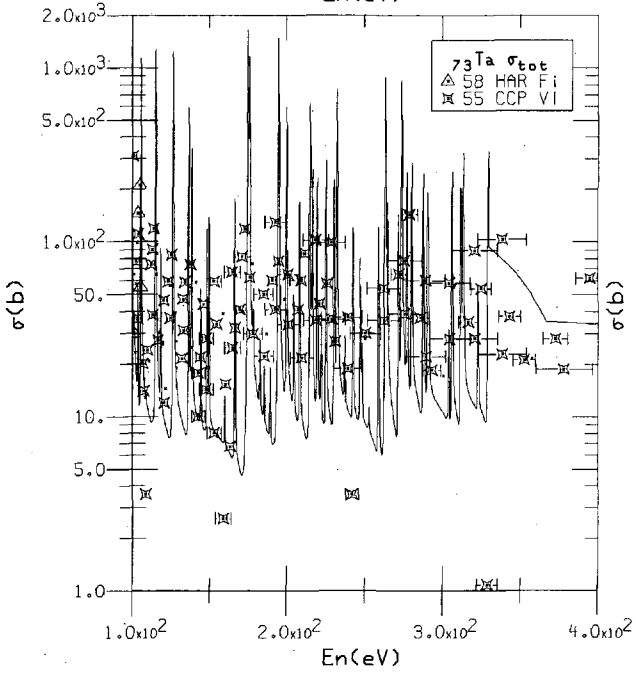


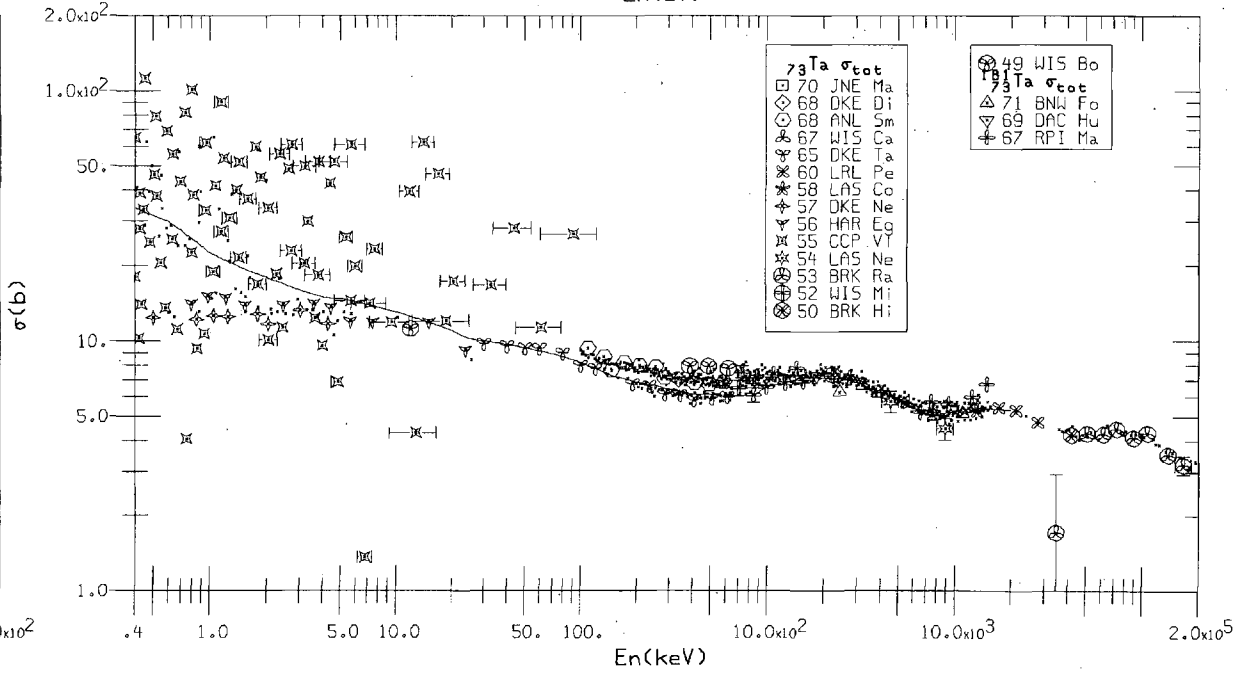
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{72}$Hf σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	258	2.255 MeV to 14.9 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	697	.496 MeV to 9.878 MeV	
70	ANL	Sherwood,et.al.	NSE,39,67,70	444	.104 MeV to 1.498 MeV	
68	DKE	Divadeenam	DA/B,28,3834,68	27	.120 MeV to .640 MeV	
67	NWU	Haugsnes	HAUGSNES,67	1	5.370 b at 14.1 MeV	
65	DKE	Tabony	SETH,65	102	30.0 keV to .650 MeV	
61	KAP	Moore	BAP,6,70(X11),61	37	.0006 eV to .140 eV	abs
61	MTR	Joki,et.al.	NSE,11,298,61	438	.0399 eV to 3.515 eV	abs
61	BNL	Schermer	SCHERMER,61	34	.0179 eV to .328 eV	abs
55	BNL	Harvey,et.al.	PR,99,10,55	338	5.090 eV to 3.930 keV	
54	WIS	Okazaki,et.al.	PR,93,461,54	23	50.0 keV to 2.960 MeV	
53	ANL	Bollinger,et.al.	PR,92,1527,53	190	.951 eV to 8.593 keV	abs
52	ANL	Haugsnes,et.al.	ANL-5609,52	1	5.380 b at 14.0 MeV	
			$_{72}$Hf σ_{el}			
73	AE	Etemad	AE-482,73	1	2.390 b at 7.000 MeV	^{1}H σ_{el}
72	ANL	Cox,et.al.	ANL-7935,72	1	4.863 b at .950 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.340 b at 8.050 MeV	^{1}H σ_{el}
70	ANL	Sherwood,et.al.	NSE,39,67,70	42	.300 MeV to 1.501 MeV	C σ_{el}
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.100 b at 1.000 MeV	
			$_{72}$Hf σ_{non}			
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.100 b at 1.000 MeV	
			$_{72}$Hf $\sigma_{n\gamma}$			
69	KFK	Kompe	NP/A,133,513,69	68	12.2 keV to .151 MeV	^{197}Au $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	68	12.2 keV to .151 MeV	^{197}Au $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	.101 kb at thermal	
61	ORL	Block,et.al.	61SACLAY,,203,61	43	.210 keV to 8.200 keV	
			$^{174}_{72}$Hf σ_{tot}			
71	JAE	Okamoto	OKAMOTO,71	1	.611 kb at thermal	abs
			$^{174}_{72}$Hf σ_{n2n}			
69	BNL	Hillman,et.al.	JIN,31,909,69	1	.860 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{176}_{72}$Hf σ_{tot}			
71	JAE	Okamoto	OKAMOTO,71	1	.270 kb at thermal	abs
69	KAP	Conrad,et.al.	BAP,14,496(AH16),69	20	.0150 eV to .600 eV	
			$^{176}_{72}$Hf σ_{n2n}			
69	BNL	Hillman,et.al.	JIN,31,909,69	1	2.000 b at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{176}_{72}$Hf σ_{n2n}			
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.220 b at 14.7 MeV	
			$^{177}_{72}$Hf σ_{tot}			
71	JAE	Okamoto	OKAMOTO,71	1	.280 kb at thermal	abs
69	KAP	Conrad,et.al.	BAP,14,496(AH16),69	21	.0150 eV to .800 eV	
			$^{178}_{72}$Hf σ_{tot}			
71	JAE	Okamoto	OKAMOTO,71	1	97.0 b at thermal	abs
69	KAP	Conrad,et.al.	BAP,14,496(AH16),69	21	.0150 eV to .800 eV	
			$^{178}_{72}$Hf $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.000 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{179}_{72}$Hf σ_{tot}			
71	JAE	Okamoto	OKAMOTO,71	1	73.0 b at thermal	abs
69	KAP	Conrad,et.al.	BAP,14,496(AH16),69	21	.0150 eV to .800 eV	
			$^{180}_{72}$Hf σ_{tot}			
71	JAE	Okamoto	OKAMOTO,71	1	55.0 b at thermal	abs
69	KAP	Conrad,et.al.	BAP,14,496(AH16),69	21	.0150 eV to .800 eV	
			$^{180}_{72}$Hf $\sigma_{n\gamma}$			
62	LRL	Miskel,et.al.	PR,128,2717,62	6	1.790 MeV to 3.970 MeV	^{235}U σ_{nf}
57	ORL	Macklin,et.al.	PR,107,504,57	1	.441 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{180}_{72}$Hf $\sigma_{n\alpha}$			
69	BNL	Hillman,et.al.	JIN,31,909,69	1	2.200 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

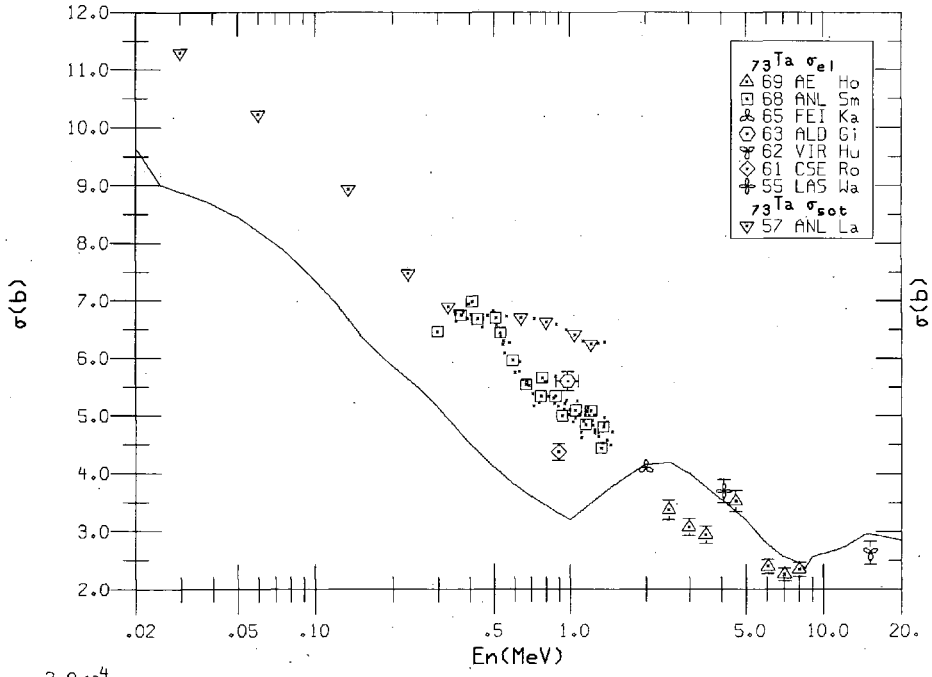
^{73}Ta
σ_{tot}
$^{181}_{73}$Ta
σ_{tot}
[1285]

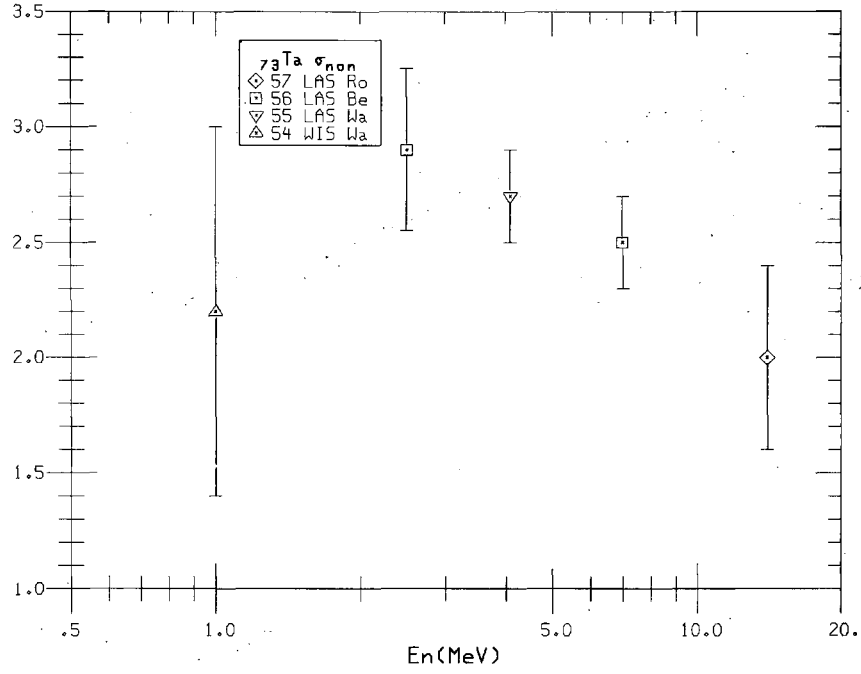


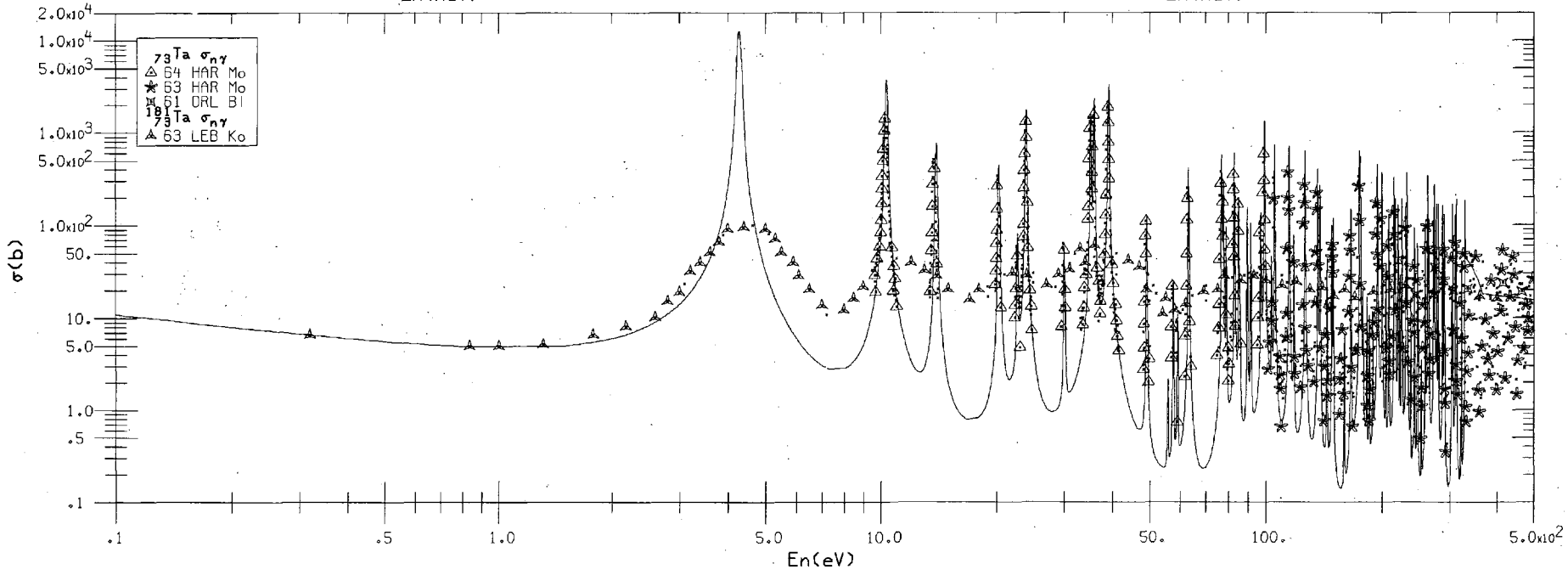












^{73}Ta
σ_{el}
σ_{sct}
[1285]
σ_{non}
$\sigma_{n\gamma}$
$^{181}_{73}$Ta
$\sigma_{n\gamma}$
[1285]

^{73}Ta

$\sigma_{n\gamma}$

$^{181}_{73}$Ta

$\sigma_{n\gamma}$

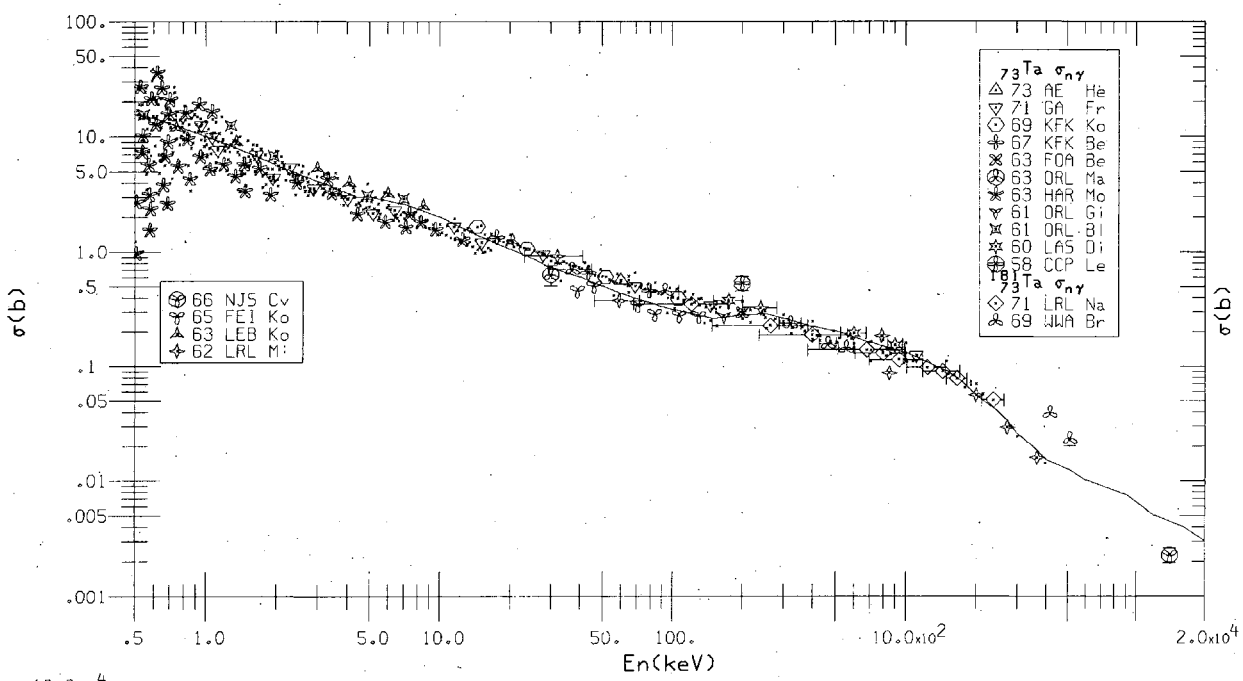
σ_{np}

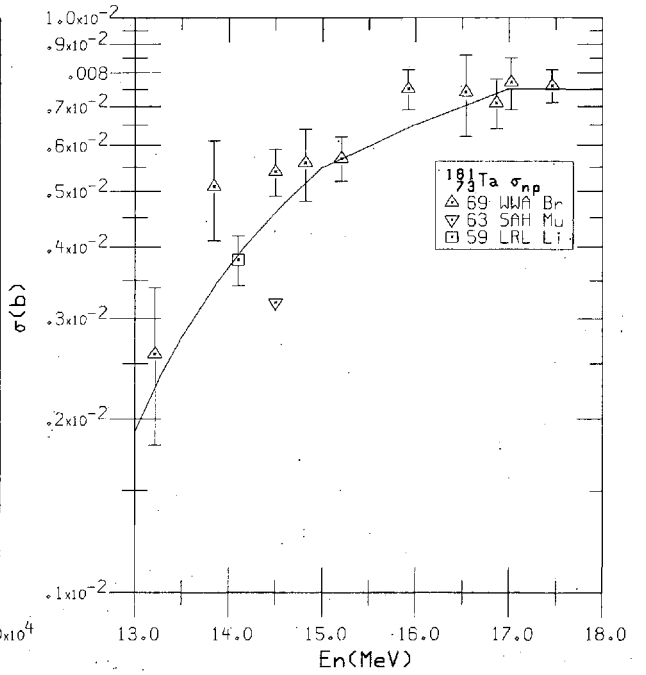
[1285]

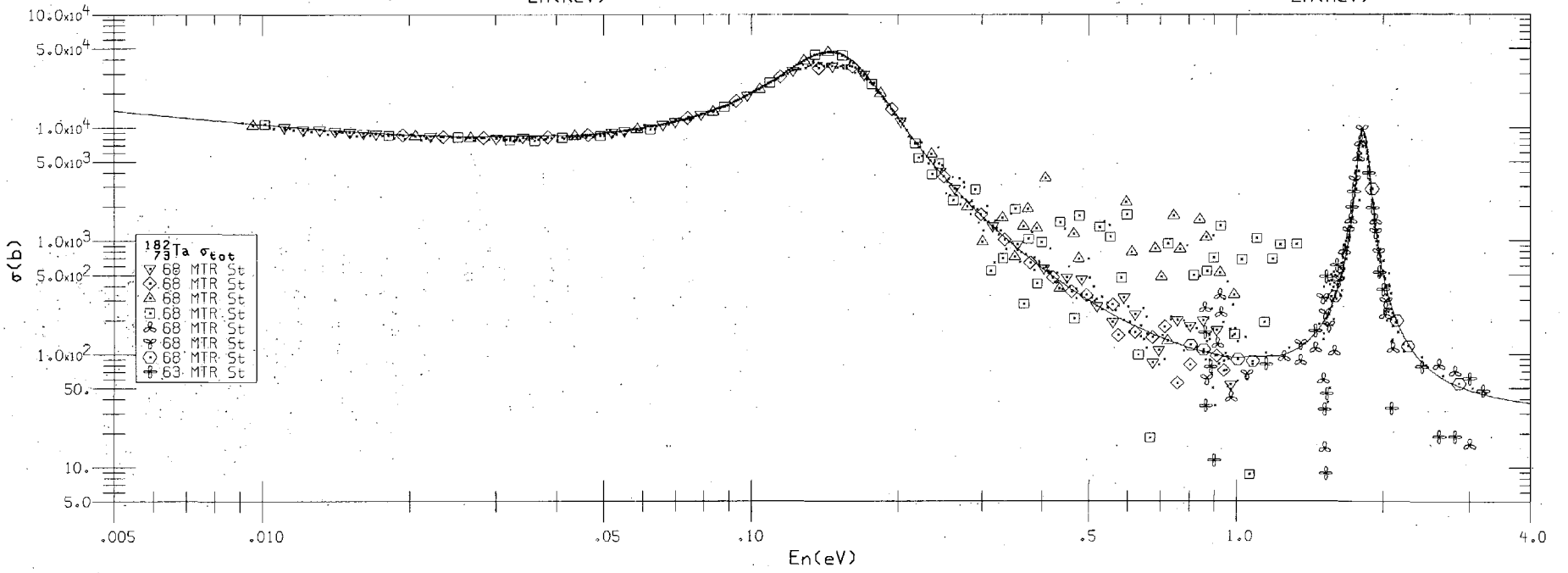
$^{182}_{73}$Ta

σ_{tot}

[1127]



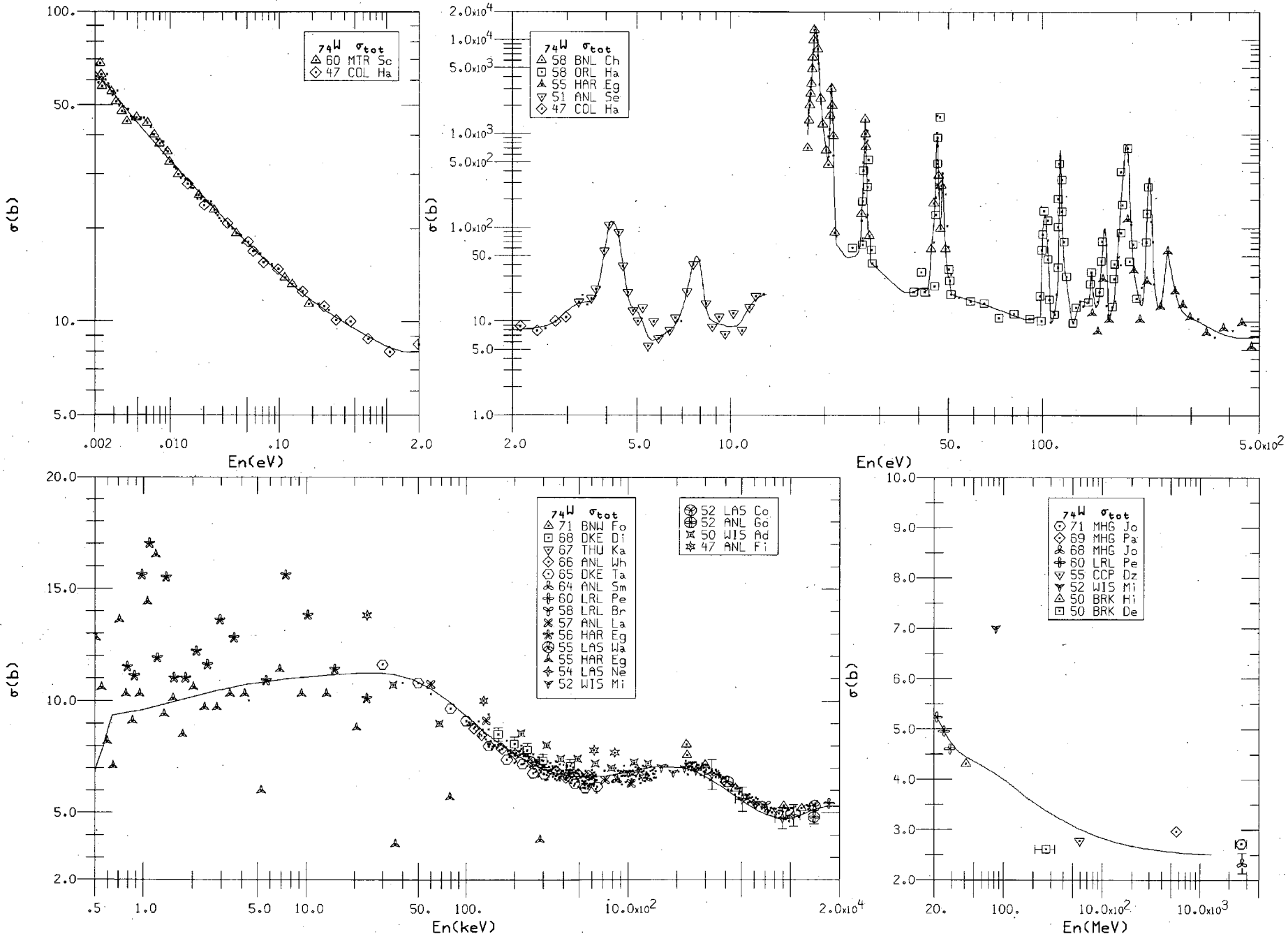




Yr	Lab	Author	Reference	Points	Range	Standard
			$_{73}$Ta σ_{tot}			
70	JNE	Manero	ARS,66,27,70	67	3.340 MeV to 5.105 MeV	
68	DKE	Divadeenam	DA/B,28,3834,68	27	.120 MeV to .640 MeV	
68	ANL	Smith,et.al.	PR,168,1344,68	538	.100 MeV to .648 MeV	abs
67	WIS	Carlson,et.al.	PR,158,1142,67	64	4.531 MeV to 7.715 MeV	abs
67	NWU	Haugsnes	HAUGSNES,67	1	5.020 b at 14.1 MeV	
65	DKE	Tabony	SETH,65	102	30.0 keV to .650 MeV	
60	MTR	Schmunk,et.al.	NSE,7,193,60	93	.0020 eV to .284 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 27.8 MeV	abs
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.5 MeV	abs
58	HAR	Firk	NP,9,198,58	297	19.8 eV to .108 keV	abs
57	DKE	Newson,et.al.	PR,105,198,57	20	.500 keV to 5.750 keV	
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	6.400 b at 4.100 MeV	abs
55	BNL	Harvey,et.al.	PR,99,10,55	41	9.300 eV to 17.8 eV	
55	MTR	Evans,et.al.	PR,97,565,55	503	thermal to 82.2 eV	
55	BNL	Sailor	SAILOR,55	32	3.990 eV to 10.5 eV	
55	CCP	Vladimirski+	55GENEVA,4,22,55	642	8.250 eV to 91.5 keV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	29	2.740 MeV to 13.1 MeV	abs
53	BRK	Ragent	UCRL-2337,53	11	38.6 MeV to 166.2 MeV	C σ_{tot}
53	BRK	Ragent	UCRL-2337,53	30	34.8 MeV to 194.0 MeV	C σ_{tot}
52	WIS	Miller,et.al.	PR,88,83,52	14	1.002 MeV to 3.210 MeV	
52	ANL	Haugsnes,et.al.	ANL-5609,52	1	4.990 b at 14.0 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	4.200 b at 42.0 MeV	
49	WIS	Bockelman,et.al.	PR,76,277,49	33	12.0 keV to 1.470 MeV	abs
			$_{73}$Ta σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.691 b at .873 MeV	C σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	7	2.470 MeV to 8.050 MeV	^{1}H σ_{el}
68	ANL	Smith,et.al.	PR,168,1344,68	96	.300 MeV to 1.475 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	4.100 b at 2.000 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	5.600 b at .980 MeV	H
62	VIR	Hudson Jr,et.al.	PR,128,1271,62	1	2.630 b at 15.2 MeV	
61	CSE	Rogers,et.al.	BAP,6,61(TA7),61	1	4.370 b at .901 MeV	C
55	LAS	Walt,et.al.	PR,98,677,55	1	3.700 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.100 b at 1.000 MeV	
			$_{73}$Ta σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	2.670 b at 7.000 MeV	
63	CCP	Glazkov	AE,15,416,63	5	.400 MeV to 1.200 MeV	
57	LAS	Rosen,et.al.	PR,107,824,57	1	.170 b at 14.0 MeV	
			$_{73}$Ta σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.370 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{73}$Ta σ_{non}			
57	LAS	Rosen,et.al.	PR,107,824,57	1	2.000 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	2	2.500 MeV to 7.000 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.700 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.200 b at 1.000 MeV	
			$_{73}$Ta $\sigma_{n\gamma}$			
73	AE	Hellstroem	JNE,27,71,73	14	30.0 keV to 1.500 MeV	^{197}Au $\sigma_{n\gamma}$
71	GA	Fricke,et.al.	71KNOX,1,252,71	95	.958 keV to 1.108 MeV	^{10}B $\sigma_{n\alpha}$
71	LAS	Drake,et.al.	PL/B,36,557,71	1	.947 mb at 14.0 MeV	H σ_{tot}
69	KFK	Kompe	NP/A,133,513,69	66	13.2 keV to .157 MeV	
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	66	13.2 keV to .157 MeV	^{197}Au $\sigma_{n\gamma}$
64	HAR	Moxon	MOXON,64	797	9.659 eV to 99.9 eV	
63	FOA	Bergqvist	AF,23,425,63	5	34.5 keV to .300 MeV	Ag $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NP,43,353,63	1	.630 b at 30.0 keV	Ag $\sigma_{n\gamma}$
63	HAR	Moxon,et.al.	NIM,24,445,63	829	.100 keV to 16.6 keV	B
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	49	.205 keV to 7.000 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.530 b at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{73}$Ta σ_{n2n}			
58	LRL	Ashby,et.al.	PR,111,616,58	1	2.560 b at 14.1 MeV	
58	LRL	Ashby,et.al.	PR,111,616,58	1	2.640 b at 14.1 MeV	
57	LAS	Rosen,et.al.	PR,107,824,57	1	1.800 b at 14.0 MeV	
			$^{181}_{73}$Ta σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.261 MeV to 15.0 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.002 MeV to 2.001 MeV	
67	RPI	Martin,et.al.	BAP,12,106(GD12),67	565	.700 MeV to 15.0 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	5.240 b at 14.1 MeV	
			$^{181}_{73}$Ta σ_{inl}			
70	FEI	Broder,et.al.	70HELSINKI,2,295,70	27	.170 MeV to 1.270 MeV	^{56}Fe σ_{ing}
			$^{181}_{73}$Ta $\sigma_{n\gamma}$			
72	USP	Lepine,et.al.	NP/A,196,83,72	4	30.0 keV to .300 MeV	In $\sigma_{n\gamma}$
71	LRL	Nagle,et.al.	71KNOX,2,259,71	31	.121 MeV to 2.820 MeV	^{235}U σ_{nf}
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.205 b at .400 MeV	abs
69	WWA	Brzosko,et.al.	APP,35,417,69	38	35.0 keV to 5.110 MeV	^{197}Au $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	2.260 mb at 14.1 MeV	
65	FEI	Kononov,et.al.	AE,19,(5),457,65	15	33.0 keV to .156 MeV	
63	LEB	Konks,et.al.	ZET,46,80,63	148	.320 eV to 45.0 keV	^{181}Ta $\sigma_{n\gamma}$
62	LRL	Miskel,et.al.	PR,128,2717,62	26	32.0 keV to 3.970 MeV	^{235}U σ_{nf}
58	LRL	Booth,et.al.	PR,112,226,58	1	1.400 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.370 b at .200 MeV	^{235}U σ_{nf}

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{181}_{73}$Ta σ_{n2n}			
53	CRC	Paul,et.al.	CJP,31,267,53	1	.867 b at 14.5 MeV	
			$^{181}_{73}$Ta σ_{np}			
69	WWA	Brzosko,et.al.	APP,35,413,69	10	13.2 MeV to 17.5 MeV	^{27}Al $\sigma_{n\alpha}$
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	3.200 mb at 14.5 MeV	^{63}Cu σ_{n2n}
59	LRL	Lindner,et.al.	WASH-1018,63,59	1	3.800 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{181}_{73}$Ta $\sigma_{n\alpha}$			
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	1.200 mb at 14.5 MeV	^{63}Cu σ_{n2n}
			$^{182}_{73}$Ta σ_{tot}			
68	MTR	Stokes,et.al.	NSE,33,16,68	1266	.0091 eV to 3.246 eV	
63	MTR	Stokes,et.al.	ANS,6,41,63	139	.863 eV to 3.204 eV	

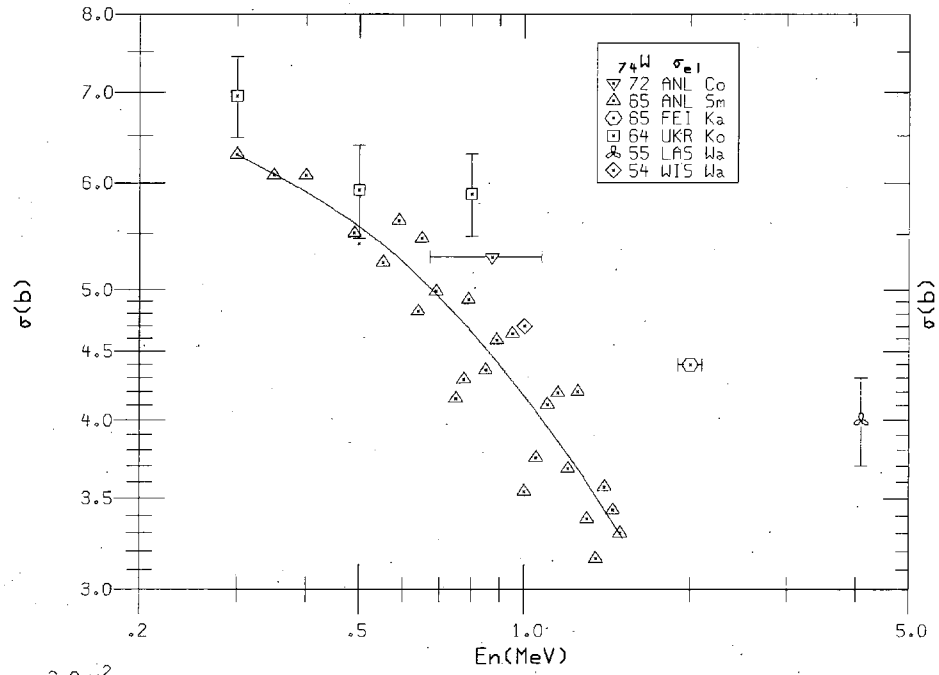

74W σtot
60 MTR Sc
47 COL Ha
σ(b)
En(eV)
74W σtot
58 BNL Ch
58 ORL Ha
55 HAR Eg
51 ANL Se
47 COL Ha
σ(b)
En(eV)
74W σtot
71 BNW Fo
68 DKE Di
67 THU Ka
66 ANL Wh
65 DKE Ta
64 ANL Sm
60 LRL Pe
58 LRL Br
57 ANL La
56 HAR Eg
55 LAS Wa
55 HAR Eg
54 LAS Ne
52 WIS Mi
52 LAS Co
52 ANL Go
50 WIS Ad
47 ANL Fi
σ(b)
En(keV)
74W σtot
71 MHG Jo
69 MHG Pa
68 MHG Jo
60 LRL Pe
55 CCP Dz
52 WIS Mi
50 BRK Hi
50 BRK De
σ(b)
En(MeV)

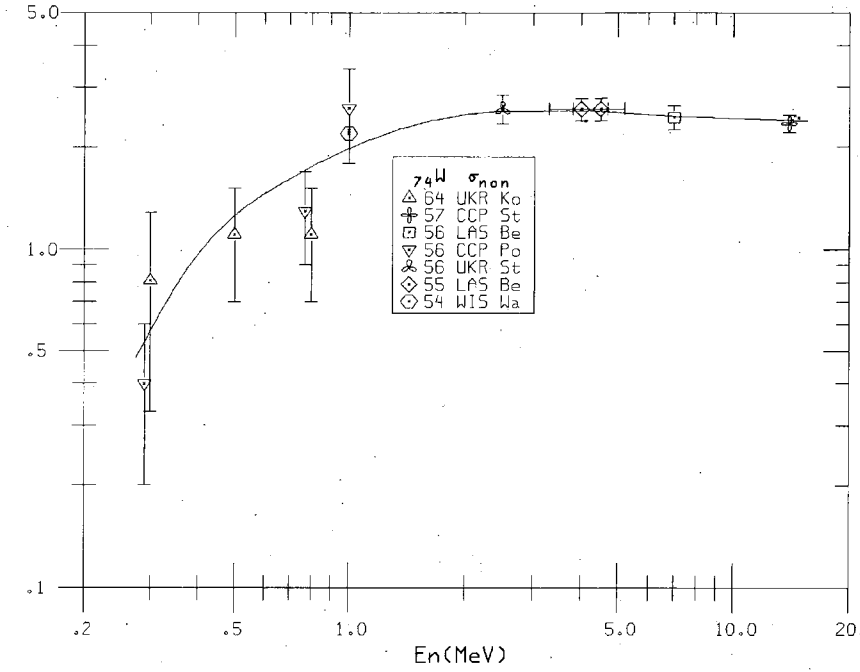
^{74}W

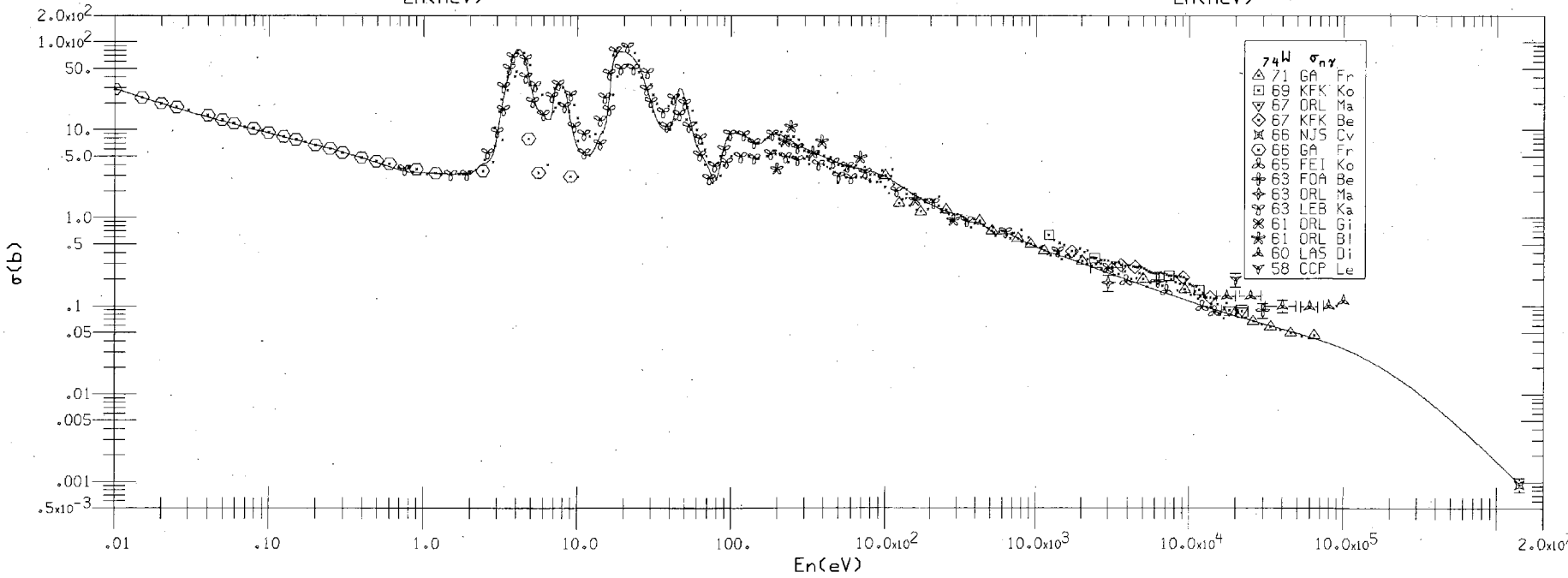
σ_{el}

σ_{non}

$\sigma_{n\gamma}$







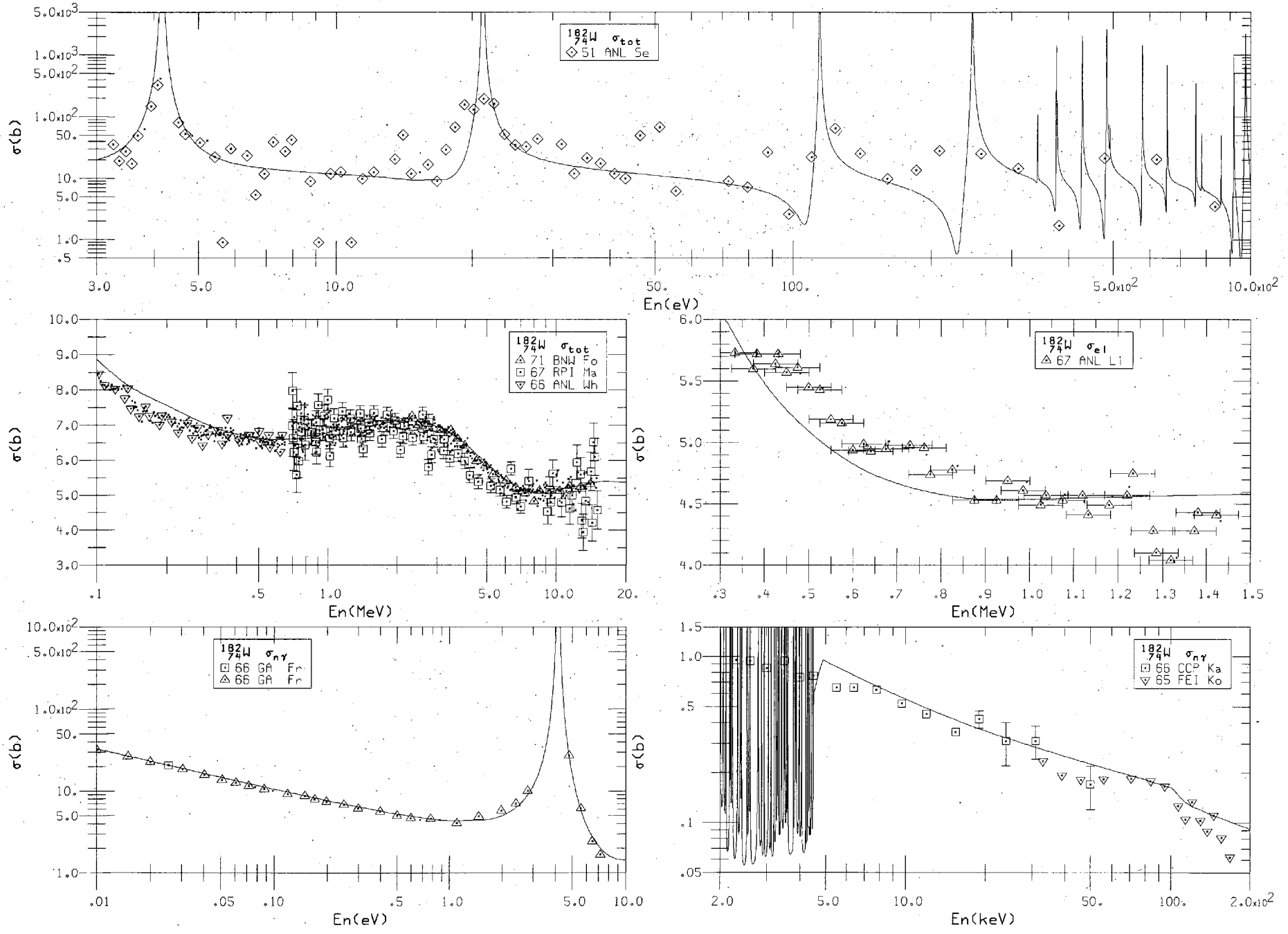
$^{182}_{74}W$

σ_{tot}

σ_{el}

$\sigma_{n\gamma}$

[1128]

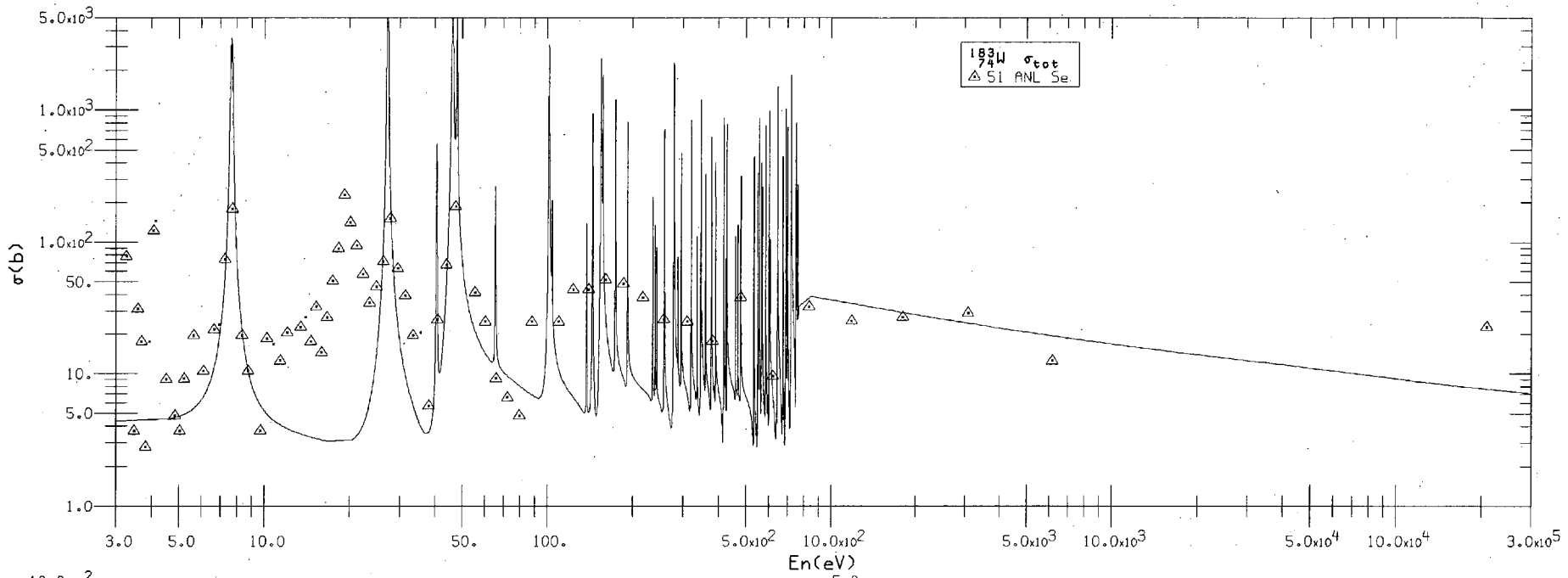


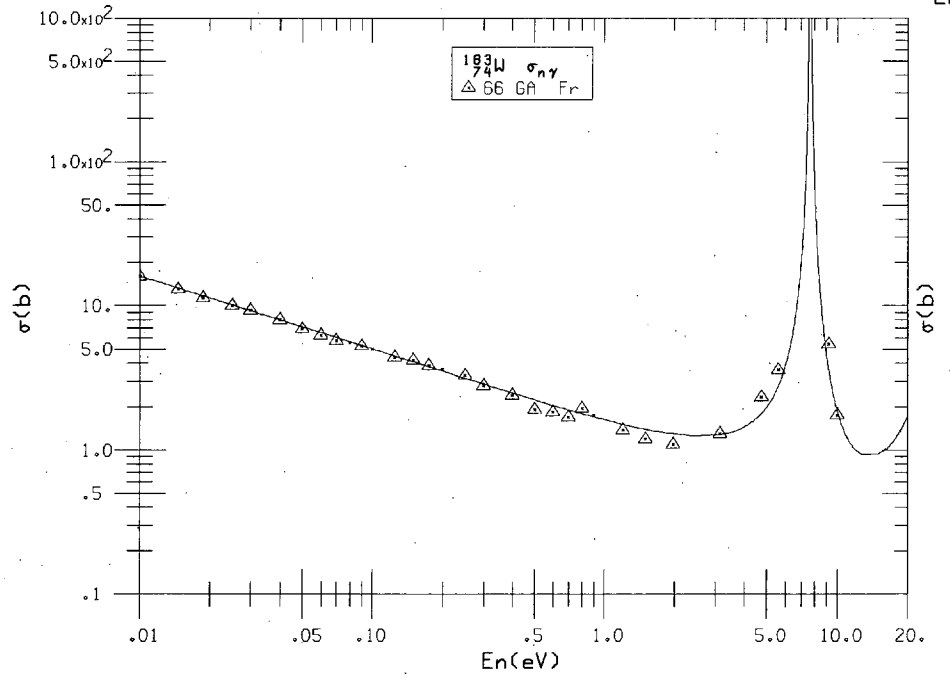
$^{183}_{74}W$

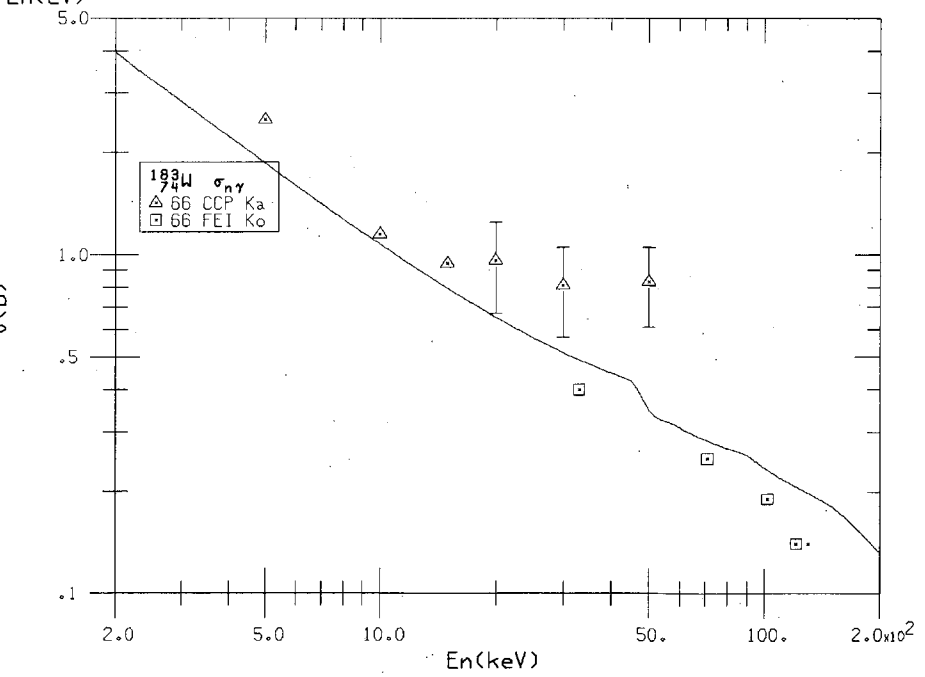
σ_{tot}

$\sigma_{n\gamma}$

[1129]







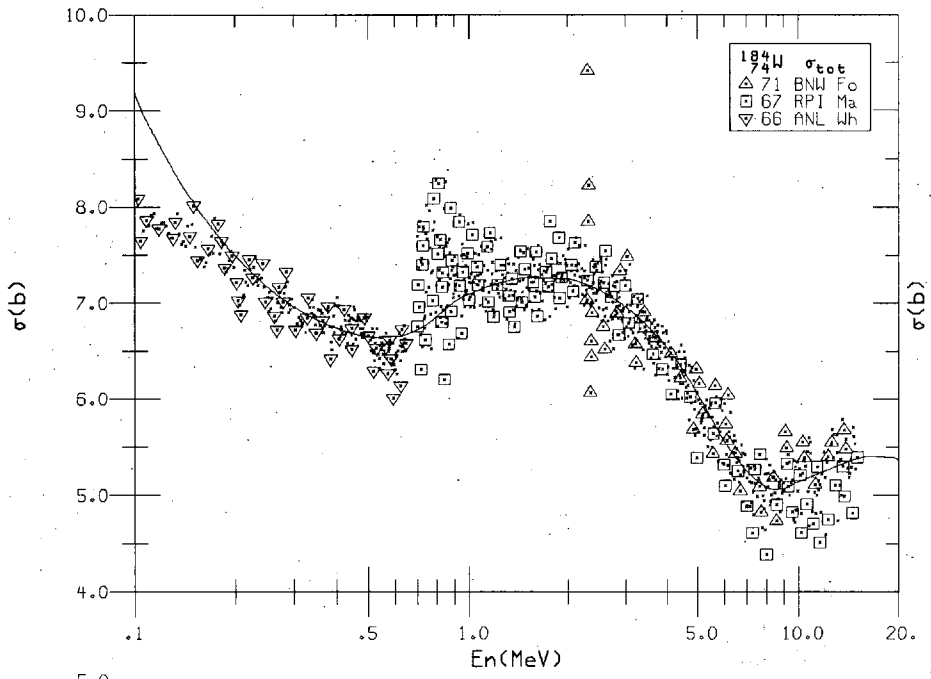
$^{184}_{74}W$

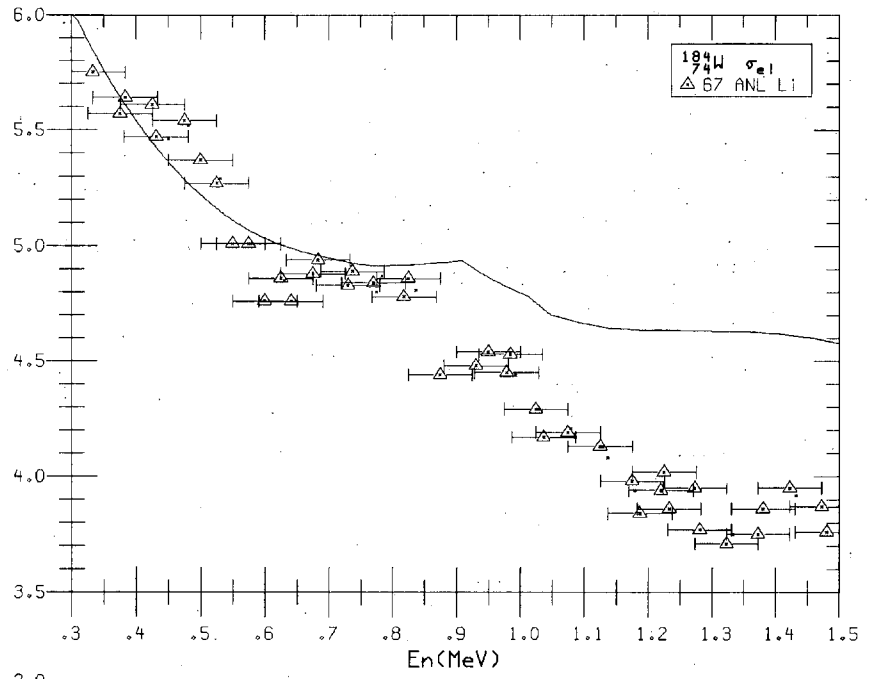
σ_{tot}

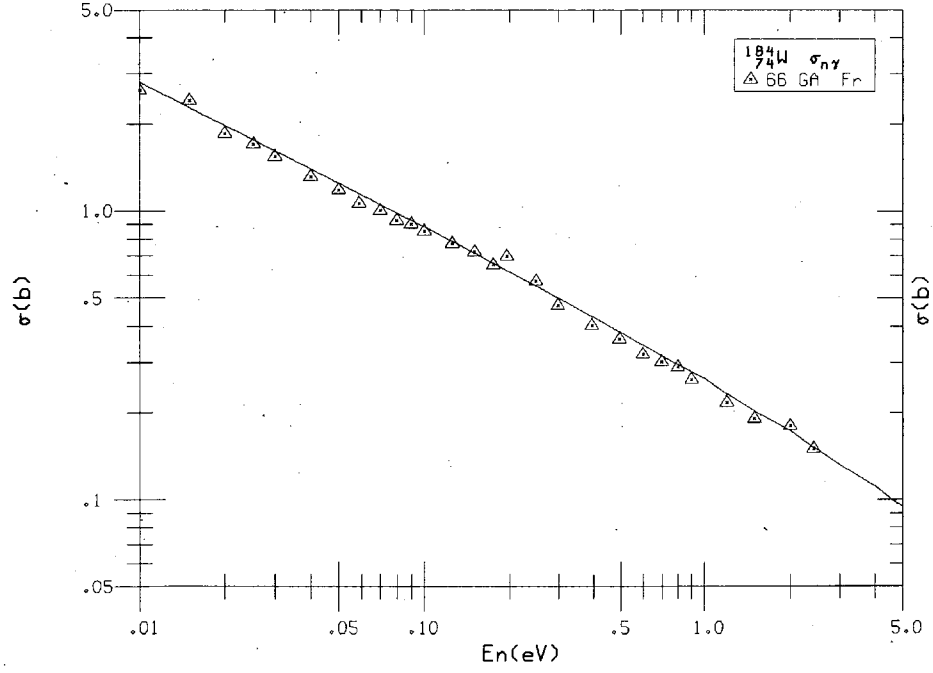
σ_{el}

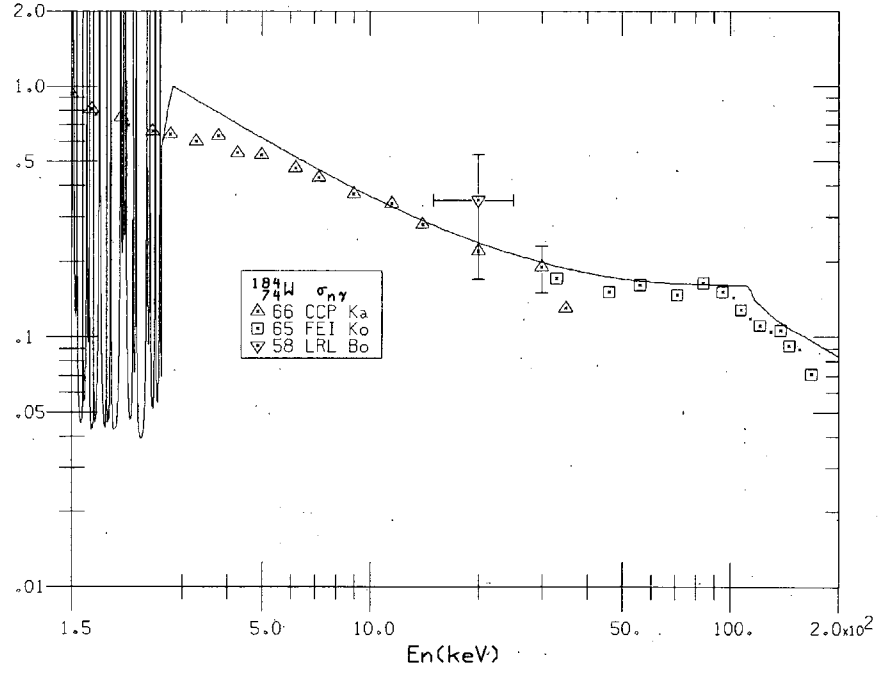
$\sigma_{n\gamma}$

[1130]









$^{186}_{74}W$

σ_{tot}

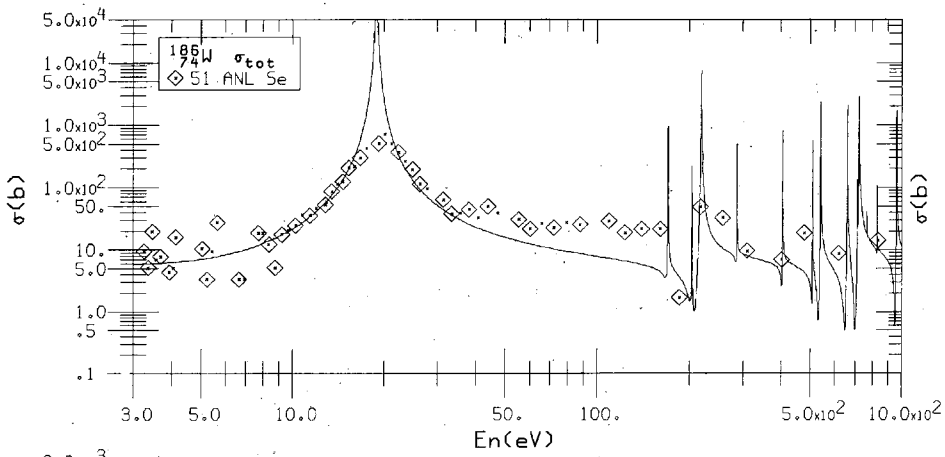
σ_{el}

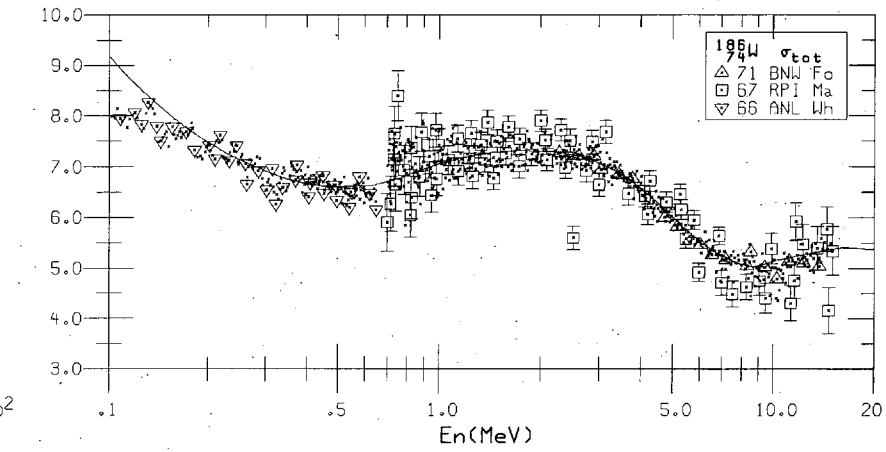
$\sigma_{n\gamma}$

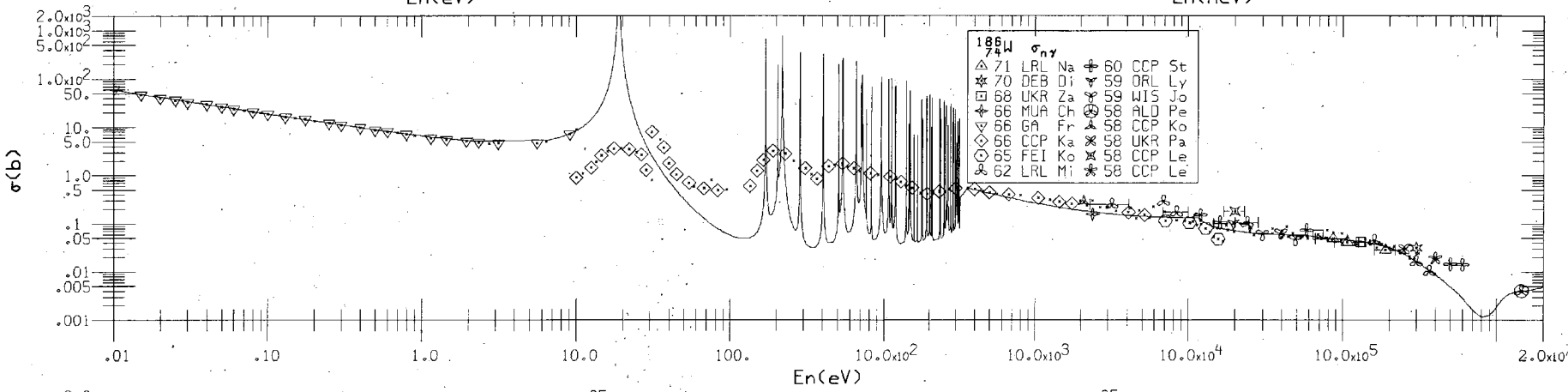
σ_{np}

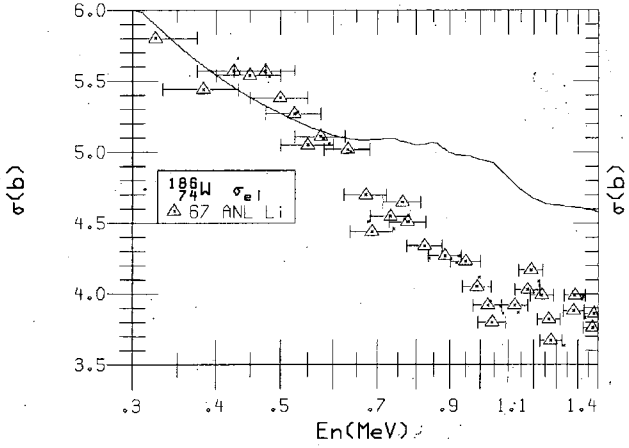
[1131]

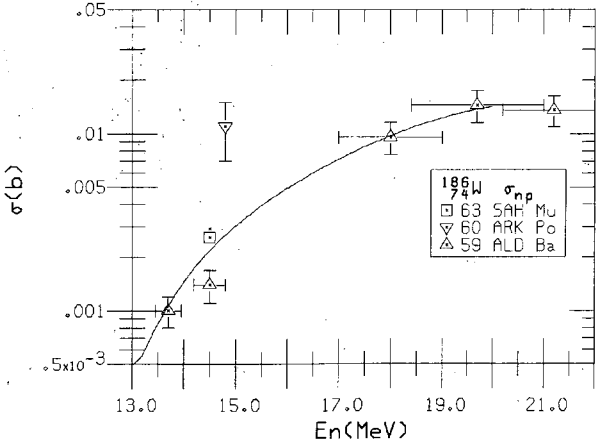
σ_{nnp}

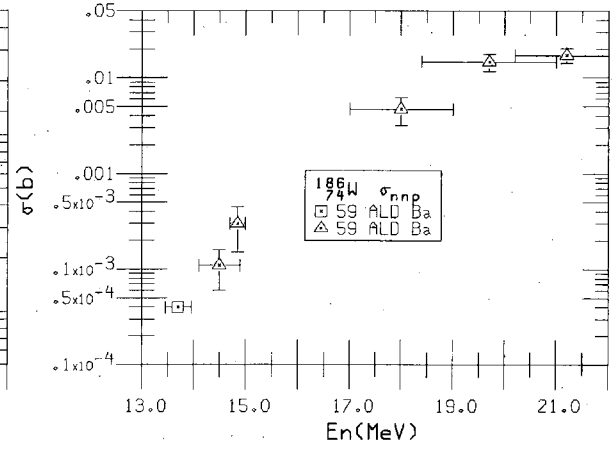










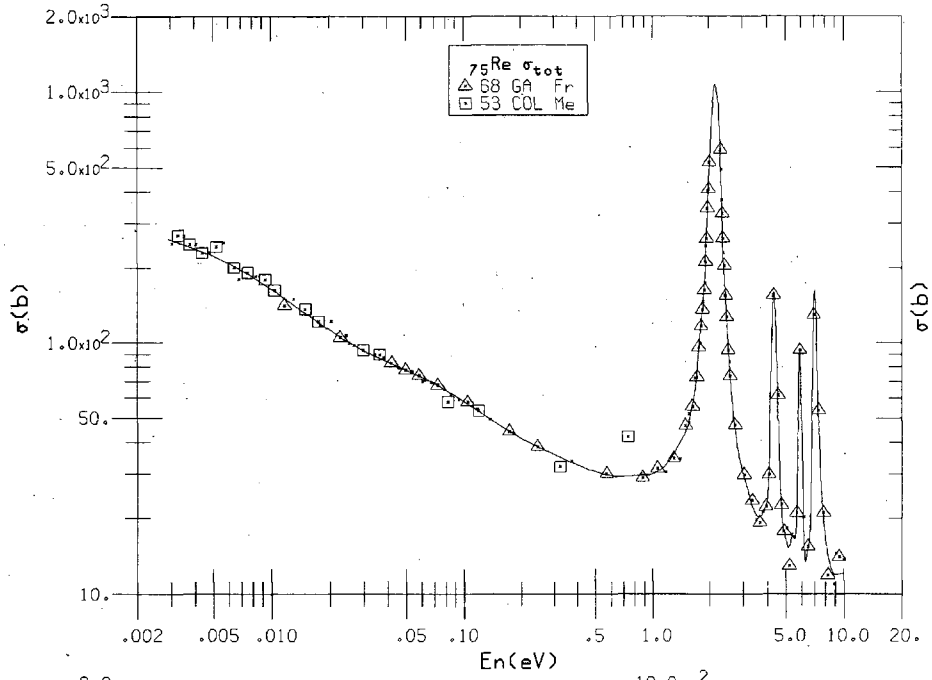


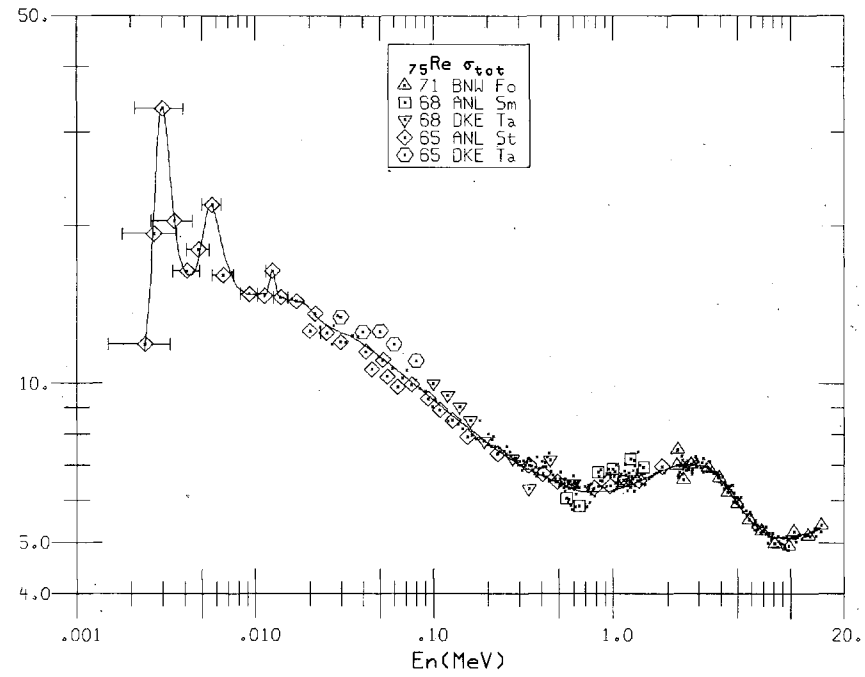
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{74}W$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	246	2.255 MeV to 14.8 MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	1	2.720 b at 27.00 GeV	abs
69	MHG	Parker,et.al.	UNIV-MI-03028-3T,69	1	2.970 b at 5700. MeV	abs
68	DKE	Divadeenam	DA/B,28,3834,68	27	.120 MeV to .640 MeV	
68	MHG	Jones,et.al.	PL/B,27,328,68	1	2.330 b at 27.00 GeV	
67	THU	Kao,et.al.	CHP,5,43,67	24	5.360 MeV to 6.280 MeV	abs
66	ANL	Whalen,et.al.	ANL-7210,16,66	270	.102 MeV to .649 MeV	abs
65	DKE	Tabony	SETH,65	101	30.0 keV to .650 MeV	
64	ANL	Smith	SMITH,64	70	.810 MeV to 1.497 MeV	abs
60	MTR	Schmunk,et.al.	NSE,7,193,60	93	.0020 eV to .288 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.8 MeV	abs
58	BNL	Chrien,et.al.	BAP,3,19(F8),58	75	17.7 eV to 48.9 eV	
58	ORL	Harvey,et.al.	BAP,3,177(F11),58	114	24.6 eV to .226 keV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.3 MeV	abs
57	ANL	Langsdorf Jr+	PR,107,1077,57	13	60.0 keV to 1.045 MeV	
56	HAR	Egelstaff	EGELSTAFF,56	18	.797 keV to 23.9 keV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	6.400 b at 4.100 MeV	abs
55	HAR	Egelstaff	EGELSTAFF,55	49	.144 keV to .286 MeV	
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	2.780 b at 590.0 MeV	
54	LAS	Nereson,et.al.	PR,94,1678,54	29	2.740 MeV to 12.9 MeV	abs
52	WIS	Miller,et.al.	PR,88,83,52	16	.840 MeV to 3.20 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.300 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	4.800 b at 14.0 MeV	
51	ANL	Selove	PR,84,869,51+	34	3.270 eV to 12.8 eV	
50	WIS	Adair	PR,77,748(H9),50	17	35.0 keV to 1.330 MeV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	4.310 b at 42.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	2.610 b at 270.0 MeV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
47	COL	Havens Jr,et.al.	PR,71,165,47	33	.0145 eV to 2.970 eV	
			$_{74}W$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.289 b at .872 MeV	C σ_{el}
65	ANL	Smith,et.al.	EANDC(US)62,65	27	.300 MeV to 1.495 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	4.400 b at 2.000 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	3	.300 MeV to .800 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	4.000 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.700 b at 1.000 MeV	
			$_{74}W$ σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	2.530 b at 7.000 MeV	
			$_{74}W$ σ_{non}			
67	BOS	Chatterjee,et.al	PR,161,1181,67	1	2.440 b at 14.8 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	3	.300 MeV to .800 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	2.400 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	2.350 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	3	1.000 MeV to 7.000 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	2.480 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	3	.290 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	2.600 b at 2.500 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.400 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	2	4.000 MeV to 4.500 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	2.200 b at 1.000 MeV	

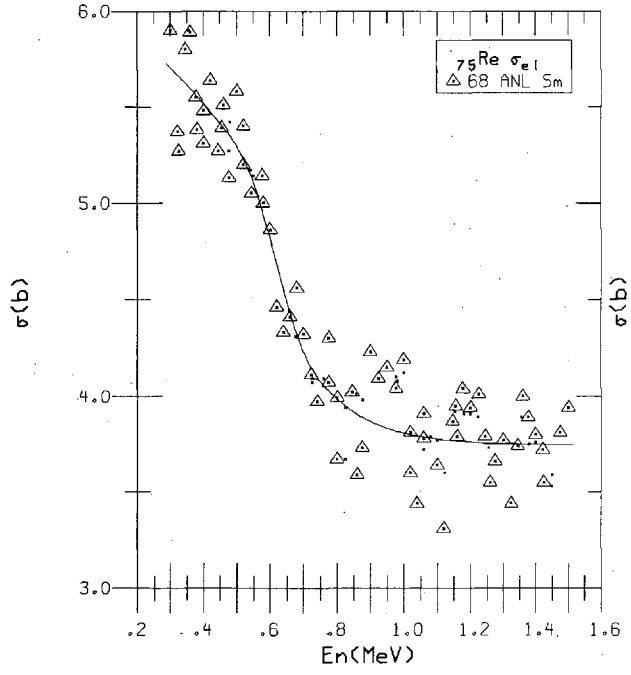
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{74}W$ $\sigma_{n\gamma}$			
71	GA	Fricke,et.al.	71KNOX,1,252,71	92	1.005 keV to .642 MeV	^{10}B $\sigma_{n\alpha}$
69	KFK	Kompe	NP/A,133,513,69	68	12.2 keV to .153 MeV	^{197}Au $\sigma_{n\gamma}$
67	ORL	Macklin,et.al.	PR,159,1007,67	4	.125 MeV to .220 MeV	Ta $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	68	12.2 keV to .153 MeV	^{197}Au $\sigma_{n\gamma}$
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	.930 mb at 14.1 MeV	
66	GA	Friesenhahn+	NSE,26,487,66	1	18.3 b at thermal	^{197}Au
66	GA	Friesenhahn+	NSE,26,487,66	35	.0100 eV to 10.0 eV	^{197}Au
65	FEI	Kononov,et.al.	AE,19,(5),457,65	16	33.0 keV to .168 MeV	In $\sigma_{n\gamma}$
63	FOA	Bergqvist	AF,23,425,63	8	18.5 keV to .300 MeV	Ag $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NP,43,353,63	1	.184 b at 30.0 keV	Ag $\sigma_{n\gamma}$
63	LEB	Kapchigashev+	AE,15,120,63	220	.690 eV to 50.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	42	.198 keV to 8.000 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.200 b at .200 MeV	
			$_{74}W$ σ_{n2n}			
58	LRL	Benveniste	58GENEVA,15,3,58	1	2.800 b at 14.0 MeV	^{252}Cf
			$_{74}W$ σ_{nf}			
55	CCP	Goldanskii+	DOK,101,1027,55	1	3.800 mb at 380.0 MeV	
			$^{182}_{74}W$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	252	2.272 MeV to 14.9 MeV	
67	RPI	Martin,et.al.	BAP,12,106(GD12),67	547	.700 MeV to 15.1 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	266	.102 MeV to .649 MeV	abs
51	ANL	Selove	PR,84,869,51+	76	3.260 eV to .209 MeV	
			$^{182}_{74}W$ σ_{el}			
67	ANL	Lister,et.al.	PR,162,1077,67	55	.333 MeV to 1.433 MeV	C
			$^{182}_{74}W$ $\sigma_{n\gamma}$			
66	GA	Friesenhahn+	NSE,26,487,66	1	20.7 b at thermal	^{197}Au
66	GA	Friesenhahn+	NSE,26,487,66	34	.0100 eV to 10.0 eV	^{197}Au
66	CCP	Kapchigashev	KAPCHIGASHEV,66	16	2.300 keV to 50.0 keV	
65	FEI	Kononov,et.al.	AE,19,(5),457,65	15	33.0 keV to .168 MeV	In $\sigma_{n\gamma}$
			$^{182}_{74}W$ σ_{n2n}			
72	CCP	Maslov,et.al.	YK-9,50,72	1	2.050 b at 14.2 MeV	^{65}Cu σ_{n2n}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.160 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	CCP	Druzhinin,et.al.	YF,4,515,66	1	2.300 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$

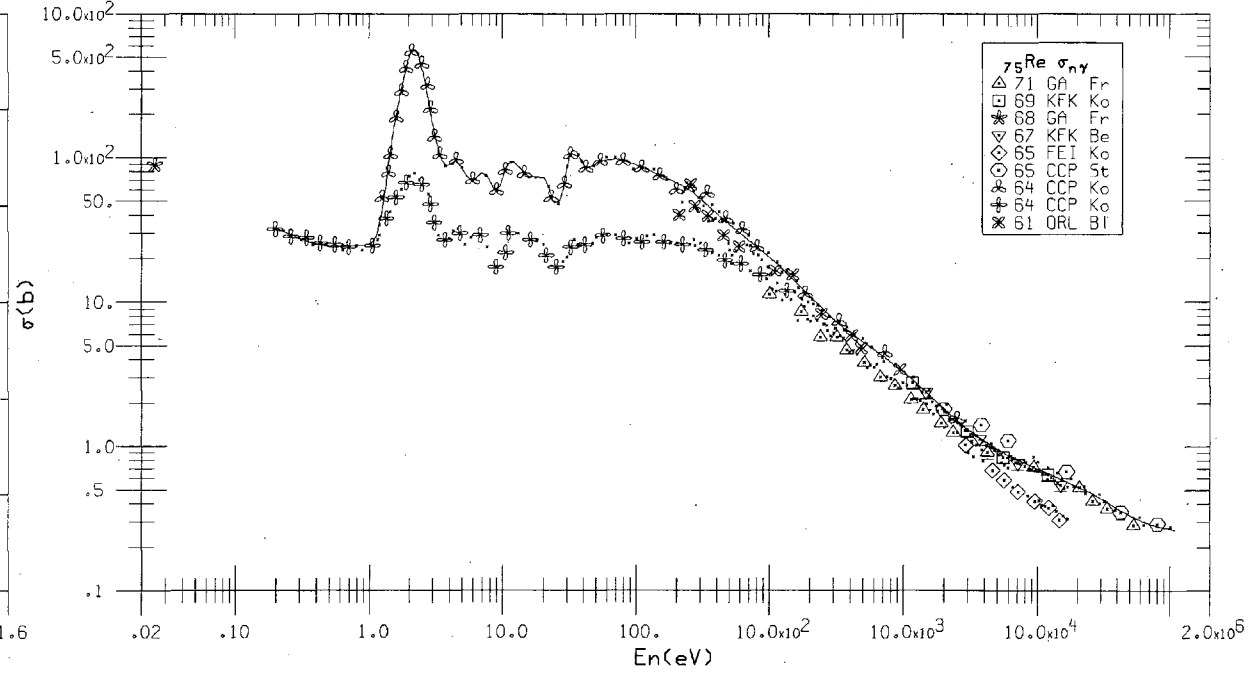
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{182}_{74}W$ σ_{np}			
59	LRL	Lindner,et.al.	WASH-1018,63,59	1	3.500 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{183}_{74}W$ σ_{tot}			
51	ANL	Selove	PR,84,869,51+	75	3.260 eV to .209 MeV	
			$^{183}_{74}W$ $\sigma_{n\gamma}$			
66	GA	Friesenhahn+	NSE,26,487,66	32	.0100 eV to 10.0 eV	^{197}Au
66	GA	Friesenhahn+	NSE,26,487,66	1	10.0 b at thermal	^{197}Au
66	CCP	Kapchigashev	KAPCHIGASHEV,66	6	5.000 keV to 50.0 keV	
66	FEI	Kononov,et.al.	YF,4,282,66	5	33.0 keV to .130 MeV	
			$^{183}_{74}W$ σ_{np}			
59	LRL	Lindner,et.al.	WASH-1018,63,59	1	4.200 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{184}_{74}W$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	246	2.255 MeV to 14.8 MeV	
67	RPI	Martin,et.al.	BAP,12,106(GD12),67	558	.700 MeV to 15.0 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	268	.100 MeV to .649 MeV	abs
			$^{184}_{74}W$ σ_{el}			
67	ANL	Lister,et.al.	PR,162,1077,67	59	.333 MeV to 1.481 MeV	C
			$^{184}_{74}W$ $\sigma_{n\gamma}$			
66	GA	Friesenhahn+	NSE,26,487,66	28	.0100 eV to 2.420 eV	^{197}Au
66	GA	Friesenhahn+	NSE,26,487,66	1	1.700 b at thermal	^{197}Au
66	CCP	Kapchigashev	KAPCHIGASHEV,66	19	1.500 keV to 35.0 keV	
65	FEI	Kononov,et.al.	AE,19,(5),457,65	15	33.0 keV to .168 MeV	In $\sigma_{n\gamma}$
58	LRL	Booth,et.al.	PR,112,226,58	1	.350 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{184}_{74}W$ σ_{np}			
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	4.900 mb at 14.5 MeV	^{63}Cu σ_{n2n}
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	14.0 mb at 14.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	4.750 mb at 14.5 MeV	
			$^{186}_{74}W$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	250	2.278 MeV to 14.8 MeV	
67	RPI	Martin,et.al.	BAP,12,106(GD12),67	547	.700 MeV to 15.1 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	272	.102 MeV to .649 MeV	abs
51	ANL	Selove	PR,84,869,51+	72	3.260 eV to .522 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{186}_{74}W$ σ_{el}			
67	ANL	Lister,et.al.	PR,162,1077,67	59	.325 MeV to 1.481 MeV	C
			$^{186}_{74}W$ $\sigma_{n\gamma}$			
71	LRL	Nagle,et.al.	71KNOX,2,259,71	23	.121 MeV to 2.730 MeV	^{235}U σ_{nf}
70	DEB	Diksic,et.al.	AHP,28,257,70	1	31.1 mb at 3.000 MeV	
68	UKR	Zaikin,et.al.	AE,25,526,68	17	.230 MeV to 3.110 MeV	^{235}U σ_{nf}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.155 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
66	GA	Friesenhahn+	NSE,26,487,66	34	.0100 eV to 10.0 eV	^{197}Au
66	GA	Friesenhahn+	NSE,26,487,66	1	37.8 b at thermal	^{197}Au
66	CCP	Kapchigashev	KAPCHIGASHEV,66	69	10.0 eV to 52.0 keV	
65	FEI	Kononov,et.al.	AE,19,(5),457,65	14	46.0 keV to .168 MeV	In $\sigma_{n\gamma}$
62	LRL	Miskel,et.al.	PR,128,2717,62	7	32.0 keV to .247 MeV	^{235}U σ_{nf}
62	LRL	Miskel,et.al.	PR,128,2717,62	19	69.0 keV to 3.970 MeV	
60	CCP	Stavisskii+	AE,9,401,60	16	30.0 keV to 6.000 MeV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.100 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	22	.146 MeV to 2.550 MeV	^{235}U σ_{nf}
59	WIS	Johnsrud,et.al.	PR,116,927,59	22	.146 MeV to 2.550 MeV	^{235}U σ_{nf}
58	LRL	Booth,et.al.	PR,112,226,58	1	.300 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	4.000 mb at 14.5 MeV	
58	CCP	Kononov,et.al.	AE,5,564,58	1	.285 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	3	2.500 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	.296 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	42.0 mb at .900 MeV	^{55}Mn $\sigma_{n\gamma}$
			$^{186}_{74}W$ σ_{n2n}			
66	CCP	Druzhinin,et.al.	YF,4,515,66	1	2.290 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{186}_{74}W$ σ_{np}			
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	2.600 mb at 14.5 MeV	^{63}Cu σ_{n2n}
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	11.0 mb at 14.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.900 mb at 14.5 MeV	
59	ALD	Barry,et.al.	PPS,74,632,59	5	13.7 MeV to 21.2 MeV	
			$^{186}_{74}W$ σ_{nnp}			
59	ALD	Barry,et.al.	PPS,74,632,59	6	13.7 MeV to 21.2 MeV	
			$^{186}_{74}W$ $\sigma_{n\alpha}$			
63	SAH	Mukherjee,et.al.	63BOMBAY,,244,63	1	.850 mb at 14.5 MeV	^{63}Cu σ_{n2n}
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	2.500 mb at 14.8 MeV	

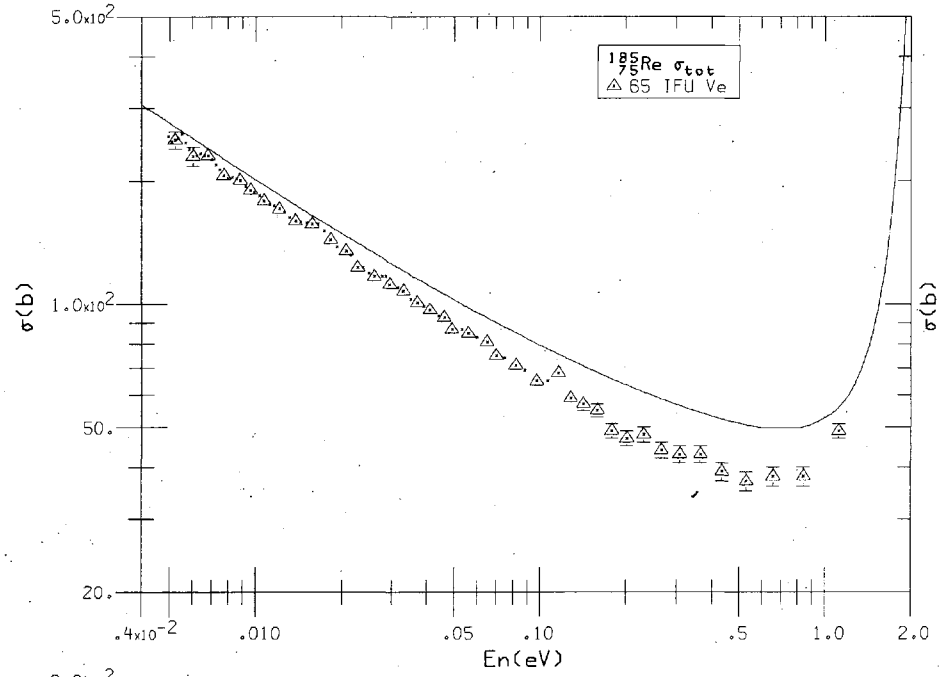

^{75}Re σ_{tot}
68 GA Fr
53 COL Me
σ(b)
En(eV)

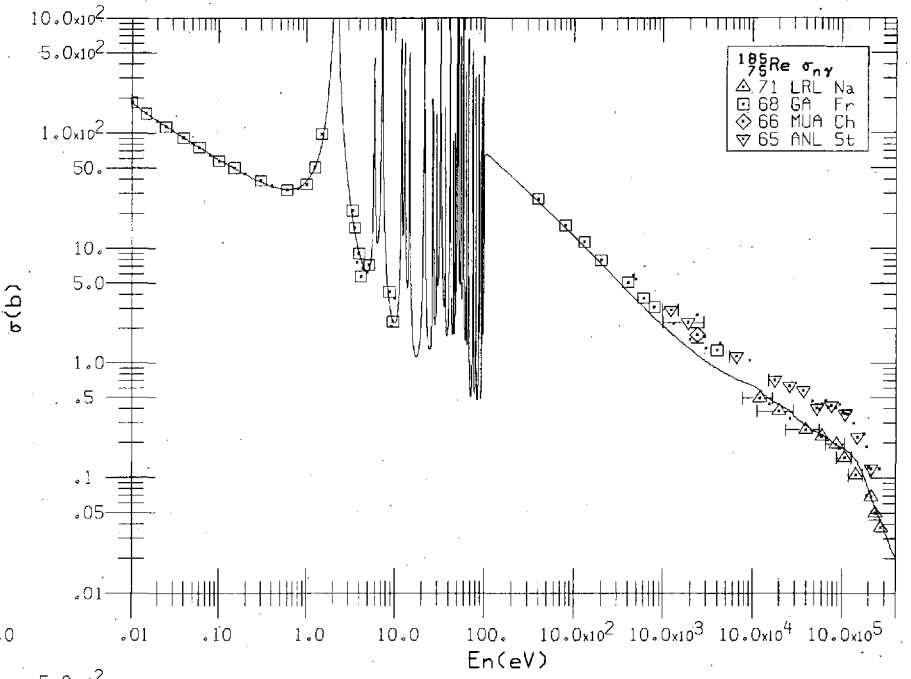

^{75}Re σ_{tot}
71 BNW Fo
68 ANL Sm
68 DKE Ta
65 ANL St
65 DKE Ta
σ(b)
En(MeV)

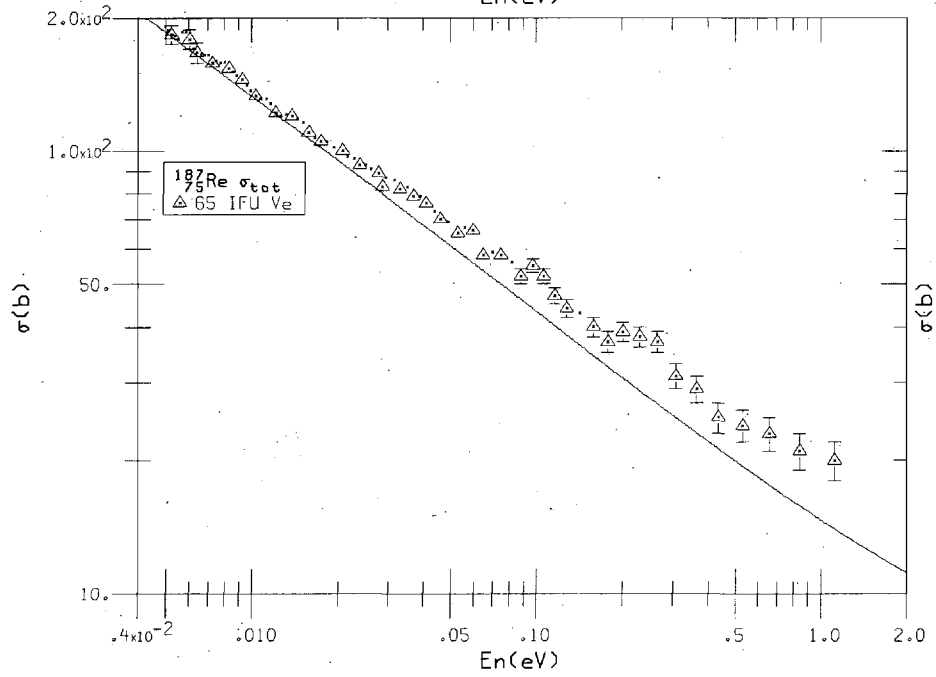

^{75}Re σ_{el}
68 ANL Sm
σ(b)
En(MeV)

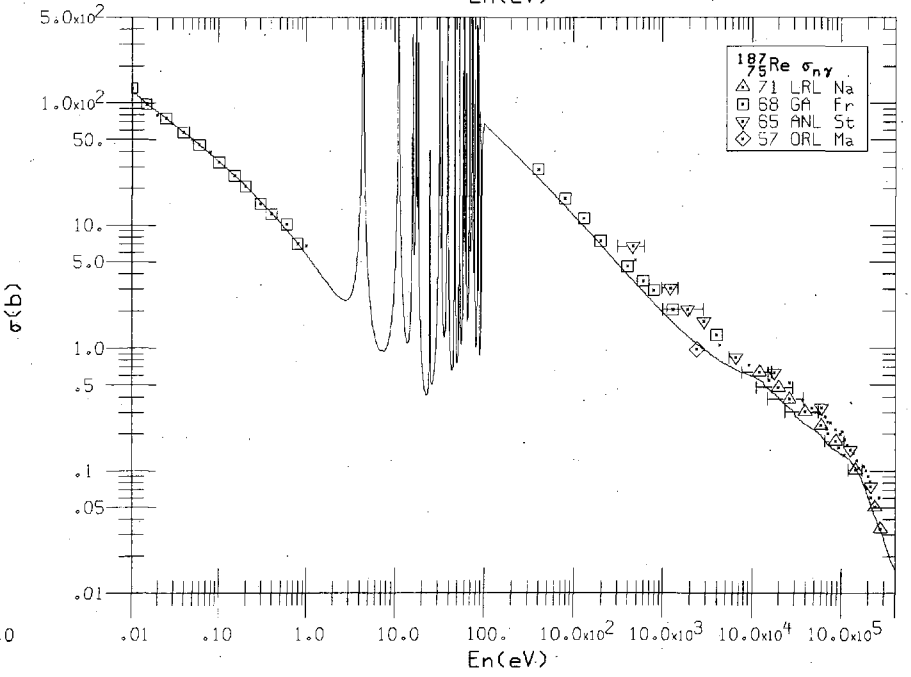

^{75}Re $\sigma_{n\gamma}$
71 GA Fr
69 KFK Ko
68 GA Fr
67 KFK Be
65 FEI Ko
65 CCP St
64 CCP Ko
64 CCP Ko
61 ORL Bl
σ(b)
En(eV)

$^{185}_{75}$Re
σ_{tot}
$\sigma_{n\gamma}$
[1083]
$^{187}_{75}$Re
σ_{tot}
$\sigma_{n\gamma}$
[1084]





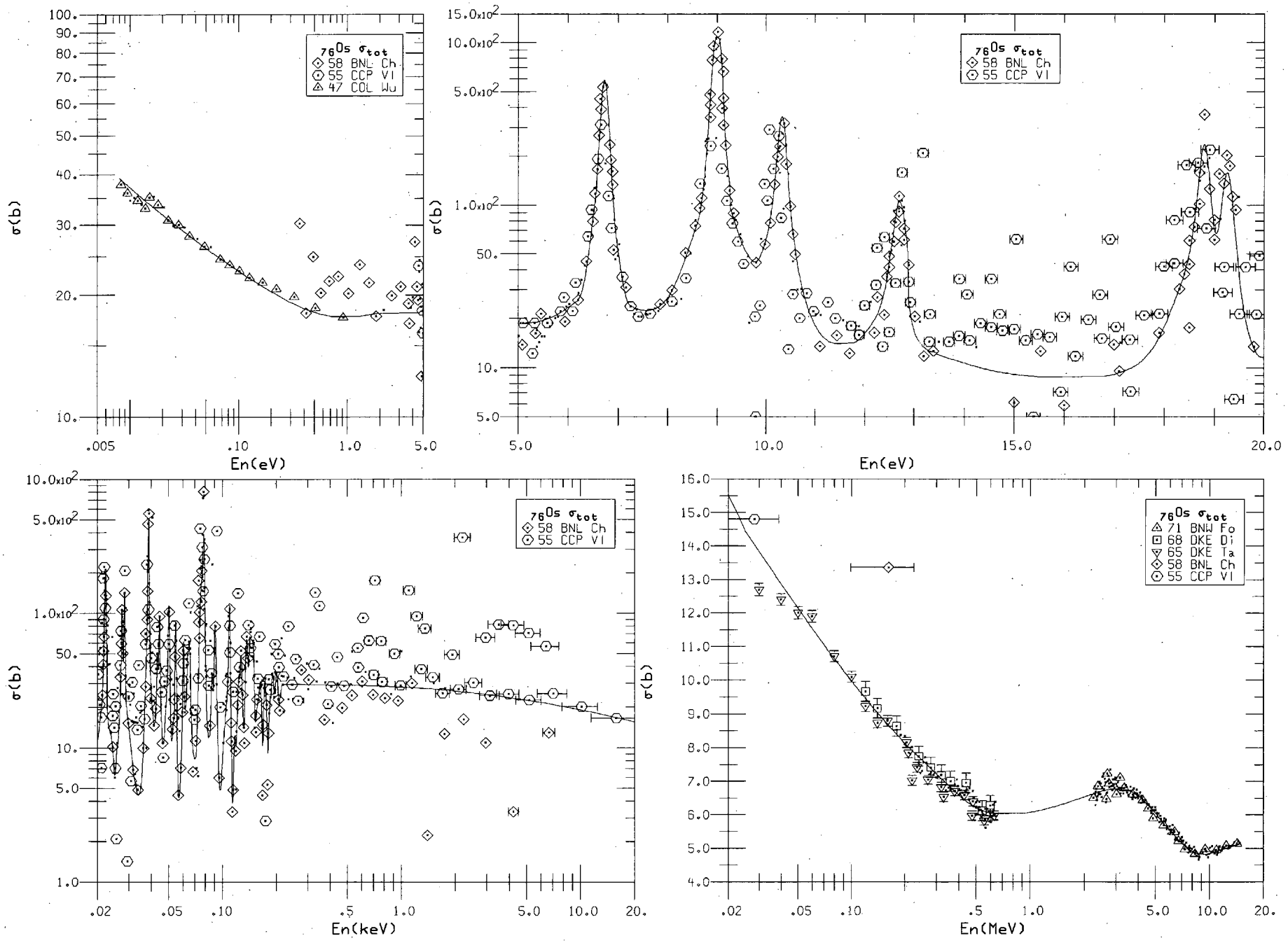




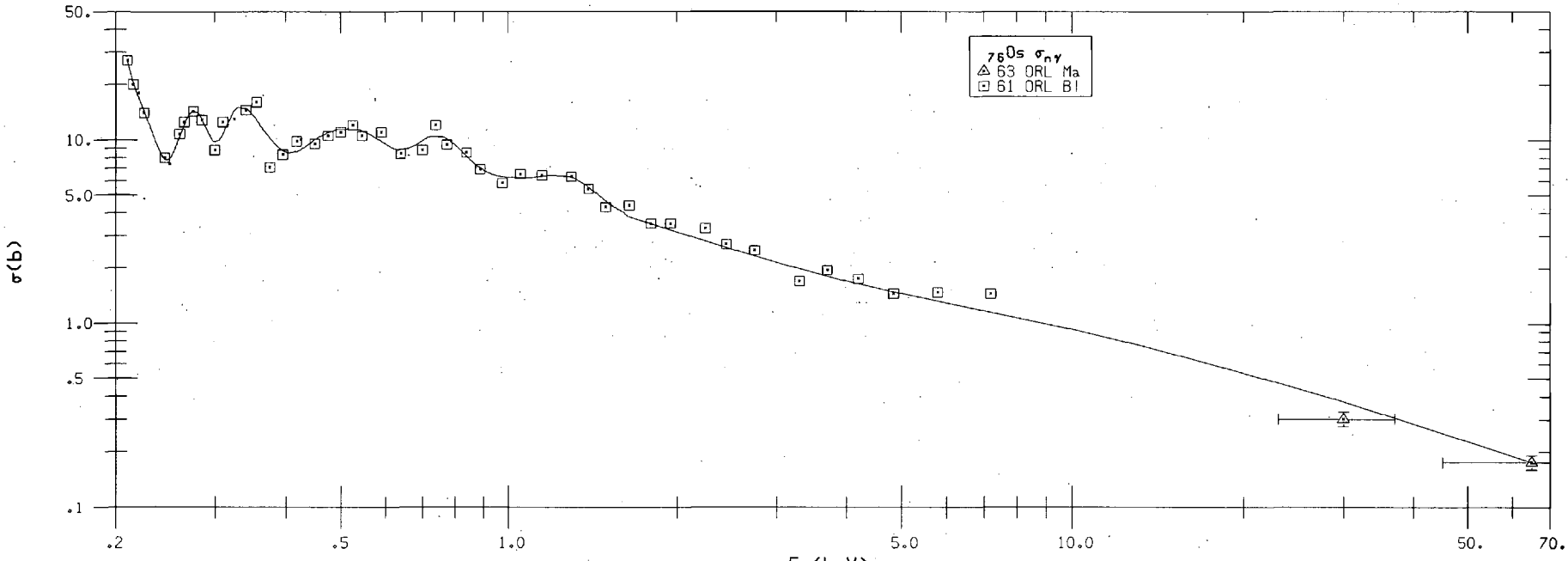
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{75}$Re σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	245	2.260 MeV to 14.9 MeV	
68	ANL	Smith,et.al.	PR,168,1344,68	111	.540 MeV to 1.500 MeV	
68	DKE	Tabony,et.al.	AP,46,401,68	97	.100 MeV to .650 MeV	
68	GA	Friesenhahn+	JNE,22,191,68	1	100.0 b at thermal	
68	GA	Friesenhahn+	JNE,22,191,68	91	.0117 eV to 9.986 eV	abs
65	ANL	Stupegia,et.al.	JNE,19,767,65	110	2.400 keV to 1.922 MeV	
65	DKE	Tabony	SETH,65	5	30.0 keV to 80.0 keV	
53	COL	Melkonian,et.al.	PR,92,702,53	30	.0031 eV to .740 eV	
			$_{75}$Re σ_{el}			
68	ANL	Smith,et.al.	PR,168,1344,68	103	.300 MeV to 1.500 MeV	C
			$_{75}$Re $\sigma_{n\gamma}$			
71	GA	Fricke,et.al.	71KNOX,1,252,71	92	1.005 keV to .642 MeV	^{10}B $\sigma_{n\alpha}$
69	KFK	Kompe	NP/A,133,513,69	72	11.7 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
68	GA	Friesenhahn+	JNE,22,191,68	1	89.0 b at thermal	
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	72	11.7 keV to .158 MeV	^{197}Au $\sigma_{n\gamma}$
65	FEI	Kononov,et.al.	AE,19,(5),457,65	17	29.0 keV to .168 MeV	In $\sigma_{n\gamma}$
65	CCP	Stavisskii+	AE,19,42,65	14	20.0 keV to 1.010 MeV	
64	CCP	Konks	KONKS,64	161	.200 eV to 45.0 keV	
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	51	.210 keV to 9.450 keV	
			$^{185}_{75}$Re σ_{tot}			
65	IFU	Vertebny,et.al.	AE,19,(3),250,65	81	.0050 eV to 1.116 eV	abs
			$^{185}_{75}$Re $\sigma_{n\gamma}$			
71	LRL	Nagle,et.al.	71KNOX,2,259,71	16	.121 MeV to 2.730 MeV	^{235}U σ_{nf}
68	GA	Friesenhahn+	JNE,22,191,68	41	.0100 eV to 40.0 keV	
68	GA	Friesenhahn+	JNE,22,191,68	1	.114 kb at thermal	^{185}Re σ_{tot}
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	1.765 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
65	ANL	Stupegia,et.al.	JNE,19,767,65	8	4.600 keV to 93.0 keV	^{185}Re $\sigma_{n\gamma}$
65	ANL	Stupegia,et.al.	JNE,19,767,65	25	.178 MeV to 2.644 MeV	abs
63	FLA	Karam	AD-402668,63	1	96.0 b at 48.0 eV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	2.650 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{185}_{75}$Re σ_{n2n}			
67	CCP	Druzhinin,et.al.	YF,5,18,67	1	1.430 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{187}_{75}$Re σ_{tot}			
65	IFU	Vertebny,et.al.	AE,19,(3),250,65	81	.0050 eV to 1.116 eV	abs
			$^{187}_{75}$Re $\sigma_{n\gamma}$			
71	LRL	Nagle,et.al.	71KNOX,2,259,71	16	.121 MeV to 2.730 MeV	^{235}U σ_{nf}
68	GA	Friesenhahn+	JNE,22,191,68	27	.0100 eV to 40.0 keV	
68	GA	Friesenhahn+	JNE,22,191,68	1	75.0 b at thermal	^{187}Re σ_{tot}
65	ANL	Stupegia,et.al.	JNE,19,767,65	8	4.600 keV to 93.0 keV	^{187}Re $\sigma_{n\gamma}$
65	ANL	Stupegia,et.al.	JNE,19,767,65	25	.178 MeV to 2.644 MeV	abs
63	FLA	Karam	AD-402668,63	1	88.0 b at 44.0 eV	
57	ORL	Macklin,et.al.	PR,107,504,57	1	.970 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{187}_{75}$Re σ_{n2n}			
67	CCP	Druzhinin,et.al.	YF,5,18,67	1	1.490 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
62	FLA	Karam,et.al.	NP-12336,62	1	1.440 b at 14.1 MeV	^{197}Au σ_{n2n}
61	MUA	Khurana,et.al.	NP,28,560,61	1	1.675 b at 14.8 MeV	^{56}Fe σ_{np}
			$^{187}_{75}$Re σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	3.930 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{187}_{75}$Re σ_{n3}			
71	RBZ	Diksic,et.al.	INDC(SEC)-18,193,71	1	4.000 muB at 14.0 MeV	
			$^{187}_{75}$Re $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.940 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

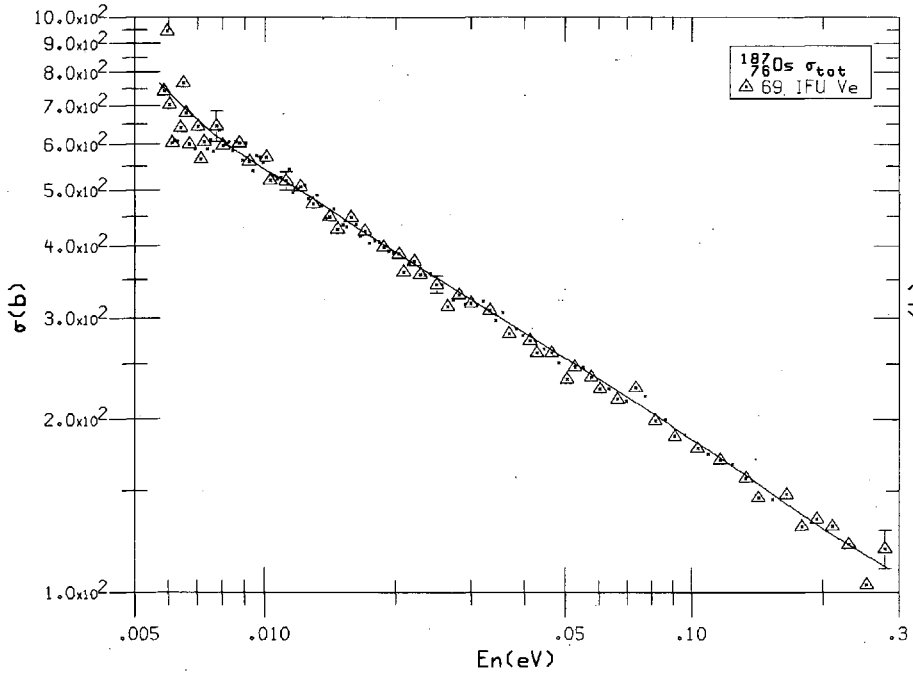
$_{76}$Os

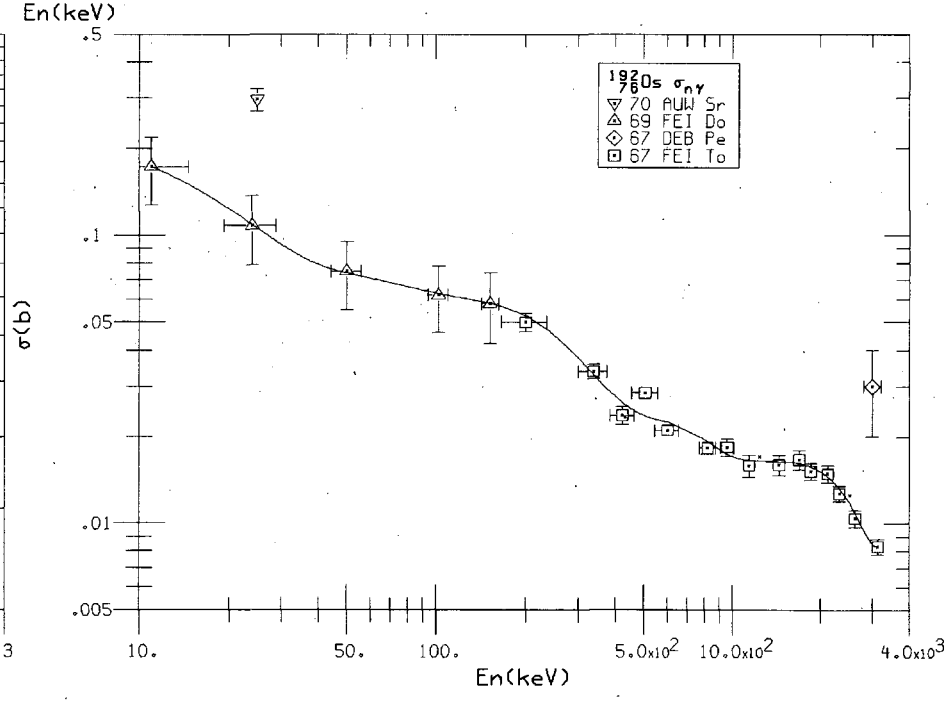
σ_{tot}



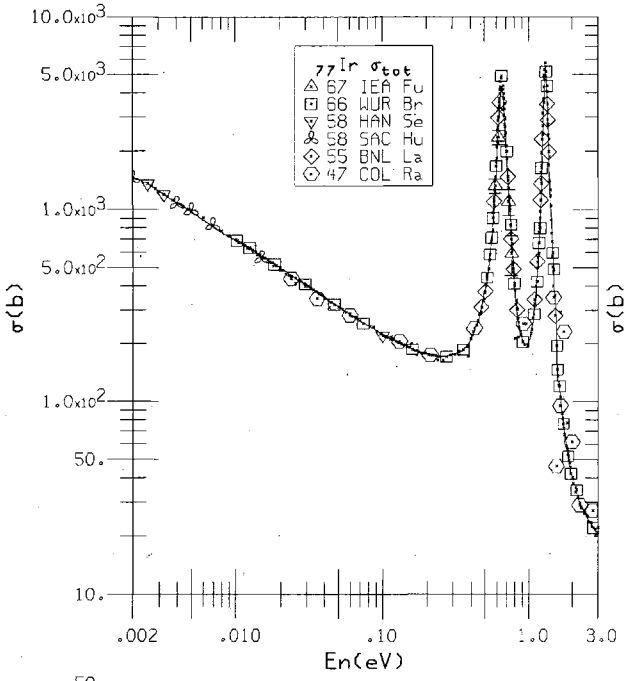
^{76}Os $\sigma_{n\gamma}$
$^{187}_{76}$Os σ_{tot}
$^{192}_{76}$Os $\sigma_{n\gamma}$

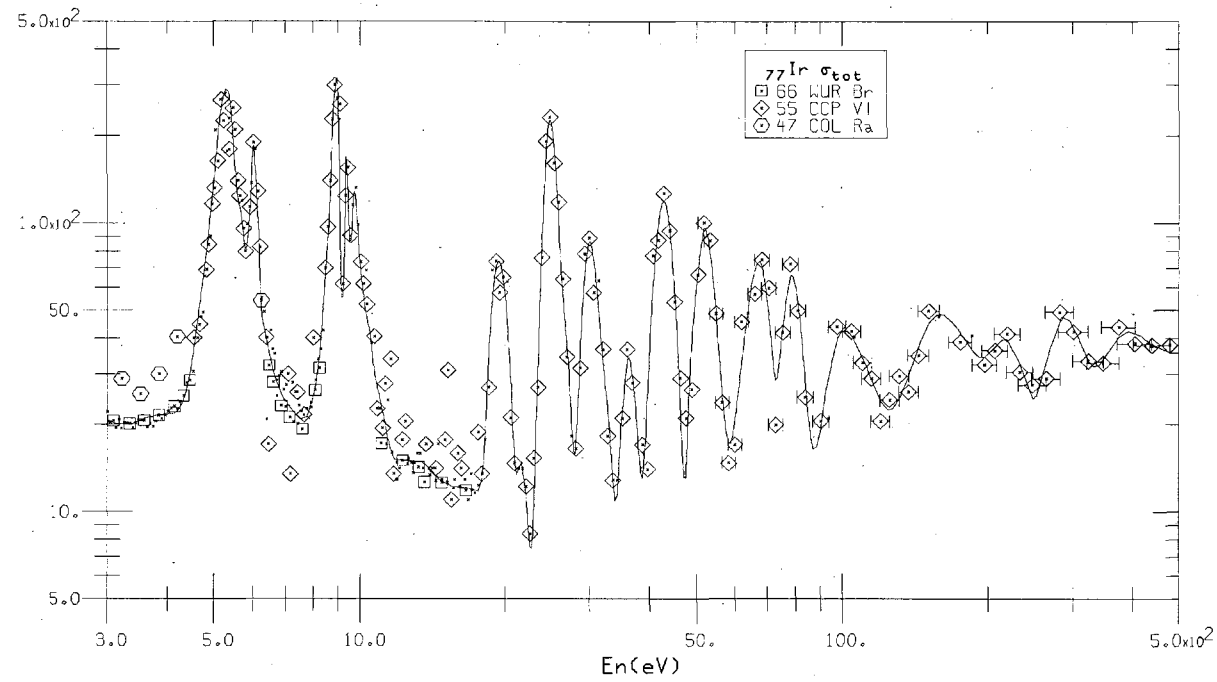


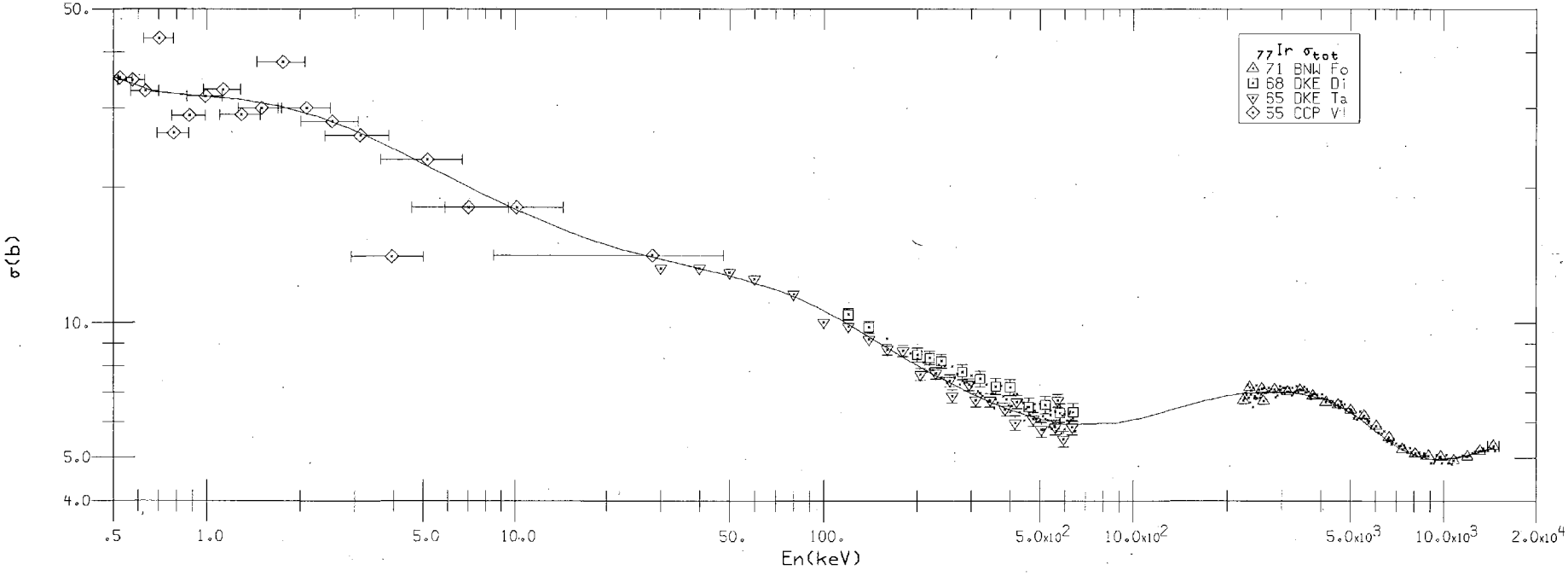




Yr	Lab	Author	Reference	Points	Range	Standard
			$_{76}$Os σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.253 MeV to 14.8 MeV	
68	DKE	Divadeenam	DA/B,28,3834,68	27	.120 MeV to .640 MeV	
65	DKE	Tabony	SETH,65	92	30.0 keV to .650 MeV	
58	BNL	Chrien	CHRIEN,58	489	.365 eV to .162 MeV	abs
55	CCP	Vladimirski+	55GENEVA,4,22,55	419	4.550 eV to 28.2 keV	abs
47	COL	Wu,et.al.	PR,71,174,47	29	.0083 eV to .920 eV	
			$_{76}$Os $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	49	.210 keV to 7.200 keV	
			$^{187}_{76}$Os σ_{tot}			
69	IFU	Vertebnyj,et.al.	IF-69-4,69	120	.0058 eV to .279 eV	
			$^{188}_{76}$Os σ_{np}			
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	7.100 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
66	AMS	Nagel	NAGEL,66	1	8.000 mb at 14.6 MeV	^{56}Fe σ_{np}
			$^{190}_{76}$Os $\sigma_{n\gamma}$			
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.200 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.886 b at 24.0 keV	
			$^{190}_{76}$Os σ_{np}			
67	DEB	Csikai,et.al.	NP/A,91,222,67	1	2.000 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{190}_{76}$Os $\sigma_{n\alpha}$			
66	AMS	Nagel	NAGEL,66	1	.430 mb at 14.6 MeV	^{56}Fe σ_{np}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.570 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{192}_{76}$Os $\sigma_{n\gamma}$			
70	AUW	Sriramachandra	70MADURAI,2,29,70	1	.296 b at 25.0 keV	^{127}I $\sigma_{n\gamma}$
69	FEI	Dovbenko,et.al.	INDC-260,11,69	8	11.0 keV to .350 MeV	
67	DEB	Peto,et.al.	JNE,21,797,67	1	30.0 mb at 3.000 MeV	^{197}Au $\sigma_{n\gamma}$
67	FEI	Tolstikov,et.al.	AE,23,566,67	19	.200 MeV to 3.130 MeV	^{235}U σ_{nf}
			$^{192}_{76}$Os σ_{n2n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	1.993 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
70	IRK	Winiwarter	NP/A,158,77,70	1	2.121 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$


$_{77}$Ir σ_{tot}
67 IEA Fu
66 WUR Br
58 HAN Se
58 SAC Hu
55 BNL La
47 COL Ra
σ(b)
En(eV)

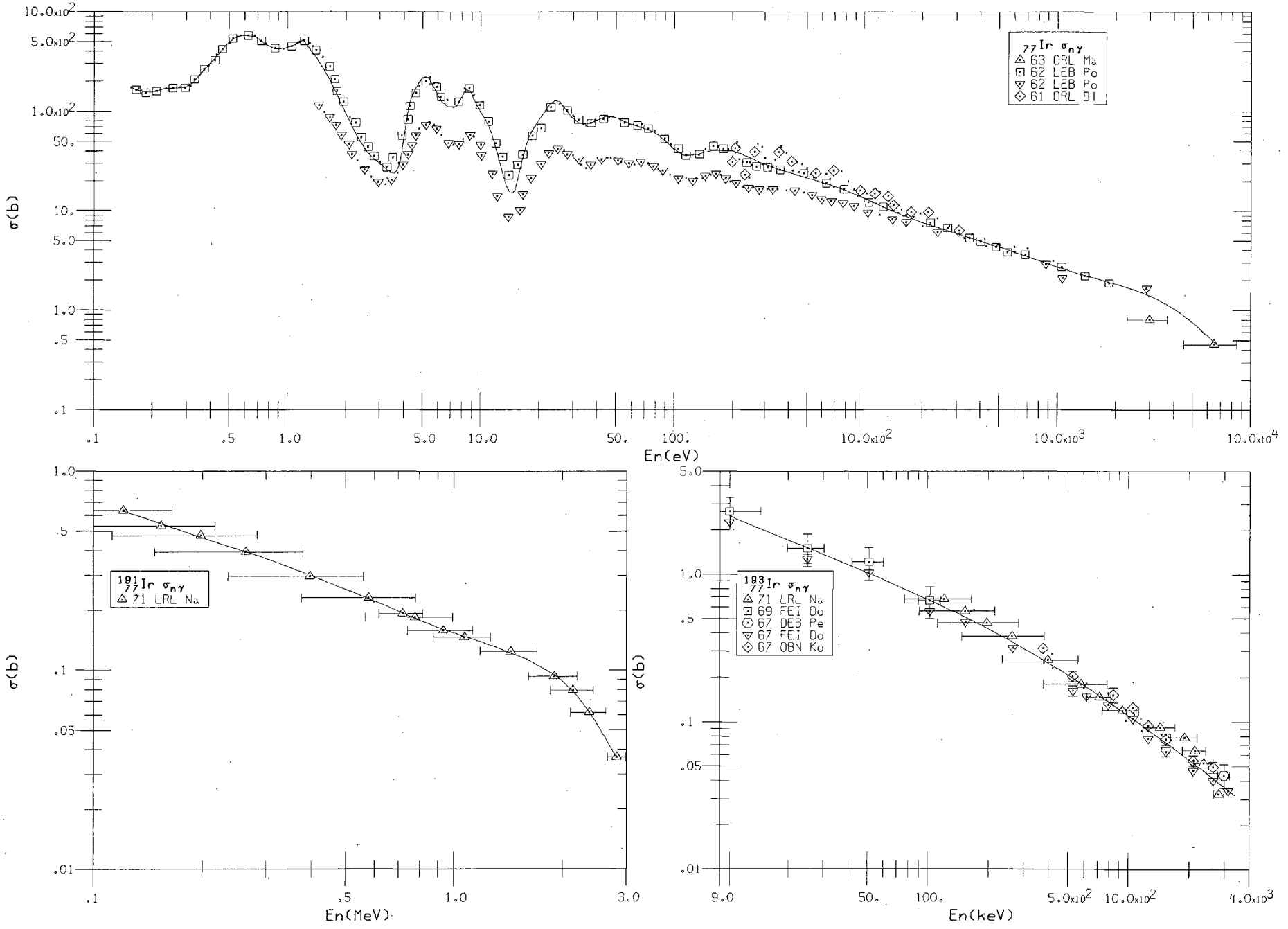

$_{77}$Ir σ_{tot}
66 WUR Br
55 CCP Vi
47 COL Ra
σ(b)
En(eV)


$_{77}$Ir σ_{tot}
71 BNW Fo
68 DKE Di
65 DKE Ta
55 CCP Vi
σ(b)
En(keV)

^{77}Ir $\sigma_{n\gamma}$

$^{191}_{77}$Ir $\sigma_{n\gamma}$

$^{193}_{77}$Ir $\sigma_{n\gamma}$



Yr	Lab	Author	Reference	Points	Range	Standard
			$_{77}$Ir σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.254 MeV to 14.7 MeV	
68	DKE	Divadeenam	DA/B,28,3834,68	27	.120 MeV to .640 MeV	
67	IEA	Fulfaro,et.al.	IEA-150,67	20	.571 eV to .761 eV	
66	WUR	Brunner,et.al.	66PARIS,1,61,66	354	.0102 eV to 17.6 eV	abs
65	DKE	Tabony	SETH,65	102	30.0 keV to .650 MeV	
58	HAN	Seppi,et.al.	HW-55879,3,58	11	.0025 eV to .100 eV	
58	SAC	Hubert	HUBERT,58	23	.0020 eV to .0240 eV	abs
55	BNL	Landon	LANDON,55	127	.460 eV to 1.515 eV	abs
55	CCP	Vladimirski+	55GENEVA,4,22,55	232	4.550 eV to 28.2 keV	
47	COL	Rainwater,et.al.	PR,71,65,47	52	.0240 eV to 6.250 eV	
			$_{77}$Ir $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	PR,129,2695,63	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
62	LEB	Popov,et.al.	ZET,42,988,62	234	.155 eV to 29.0 keV	
61	ORL	Block,et.al.	61SACLAY,,203,61	50	.200 keV to 9.500 keV	
			$^{191}_{77}$Ir σ_{tot}			
59	BNL	Bolotin,et.al.	BAP,4,271(SAB),59	1	.924 kb at thermal	
			$^{191}_{77}$Ir $\sigma_{n\gamma}$			
71	LRL	Nagle,et.al.	71KNOX,2,259,71	16	.121 MeV to 2.820 MeV	^{235}U σ_{nf}
			$^{191}_{77}$Ir σ_{n2n}			
70	ABD	Temperley,et.al.	BRL-1491,70	1	1.830 b at 14.1 MeV	^{56}Fe σ_{np}
68	MUN	Dilg	NP/A,118,9,68	1	1.730 b at 14.7 MeV	
			$^{191}_{77}$Ir $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.430 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{193}_{77}$Ir σ_{tot}			
59	BNL	Bolotin,et.al.	BAP,4,271(SAB),59	1	.112 kb at thermal	
			$^{193}_{77}$Ir $\sigma_{n\gamma}$			
71	LRL	Nagle,et.al.	71KNOX,2,259,71	16	.121 MeV to 2.820 MeV	^{235}U σ_{nf}
69	FEI	Dovbenko,et.al.	INDC-260,11,69	6	10.0 keV to .377 MeV	
67	DEB	Peto,et.al.	JNE,21,797,67	1	43.5 mb at 3.000 MeV	^{31}P σ_{np}
67	FEI	Dovbenko,et.al.	AE,23,(2),151,67	21	10.0 keV to 3.148 MeV	^{235}U σ_{nf}
67	OBN	Koroleva,et.al.	66PARIS,1,473,67	17	.171 MeV to 3.148 MeV	^{235}U
			$^{193}_{77}$Ir σ_{n2n}			
70	ABD	Temperley,et.al.	BRL-1491,70	1	1.920 b at 14.1 MeV	^{56}Fe σ_{np}
			$^{193}_{77}$Ir σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.700 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

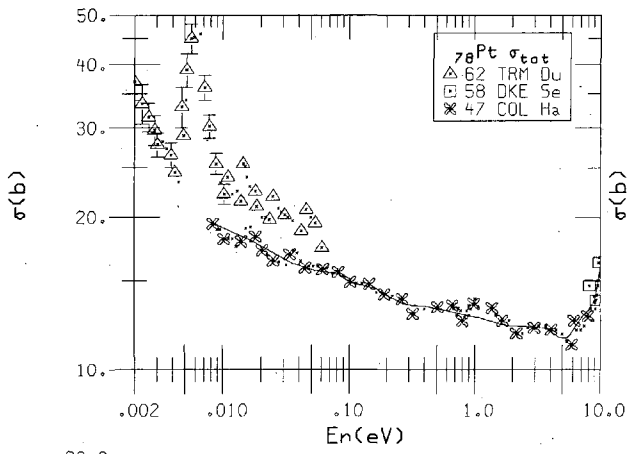
$_{78}$Pt

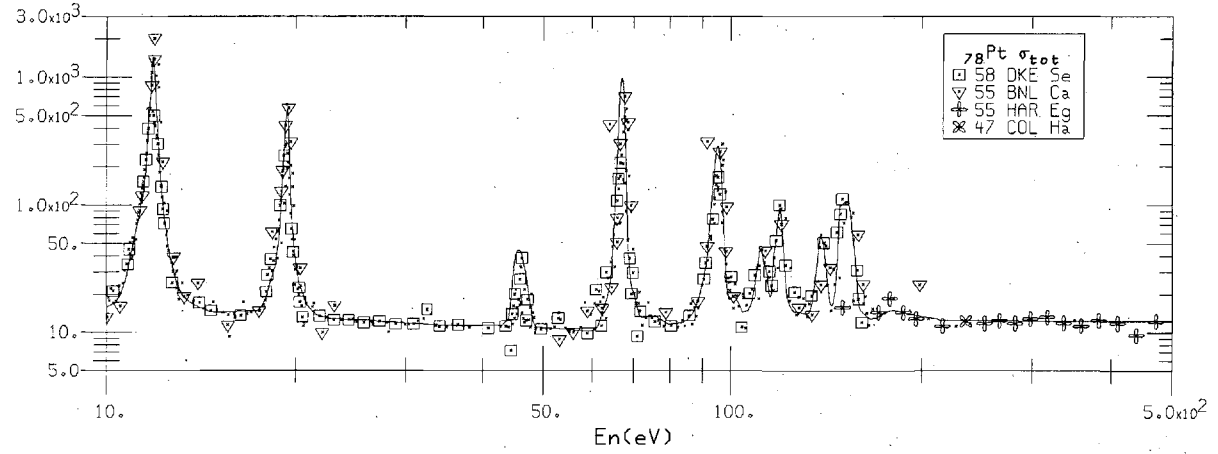
σ_{tot}

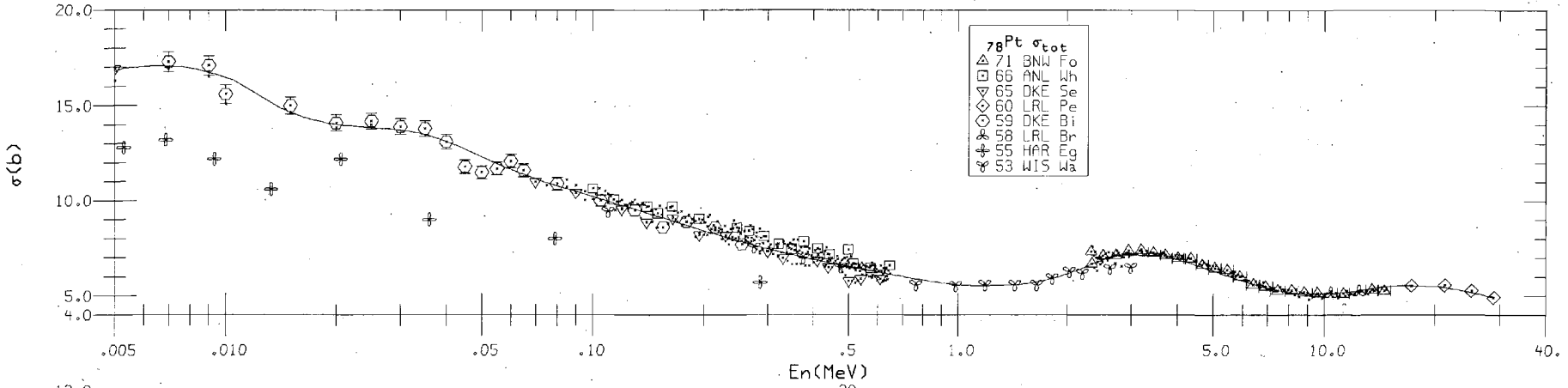
σ_{el}

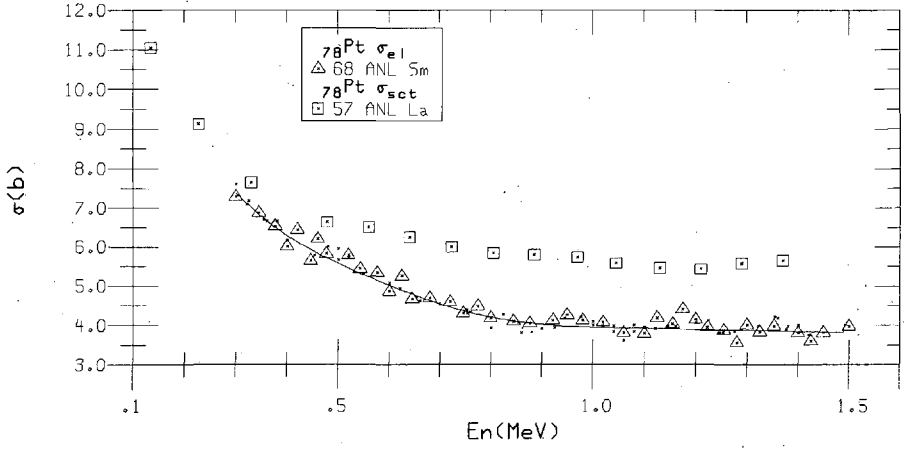
σ_{sct}

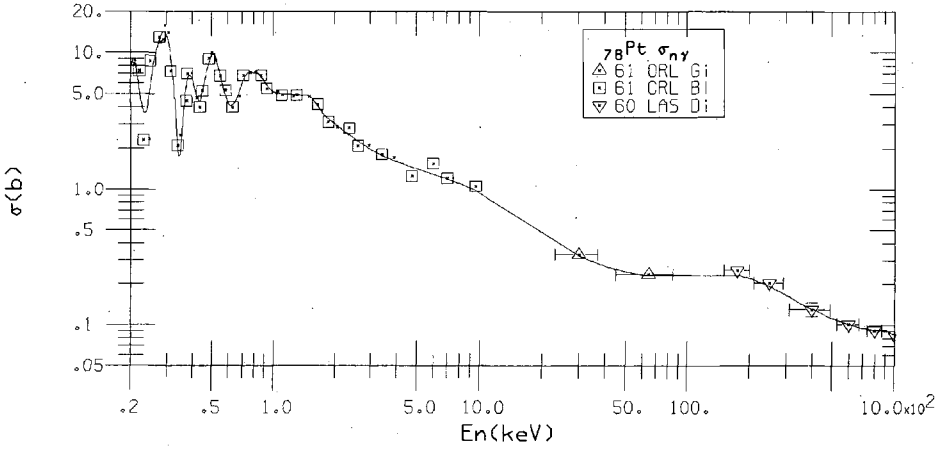
$\sigma_{n\gamma}$









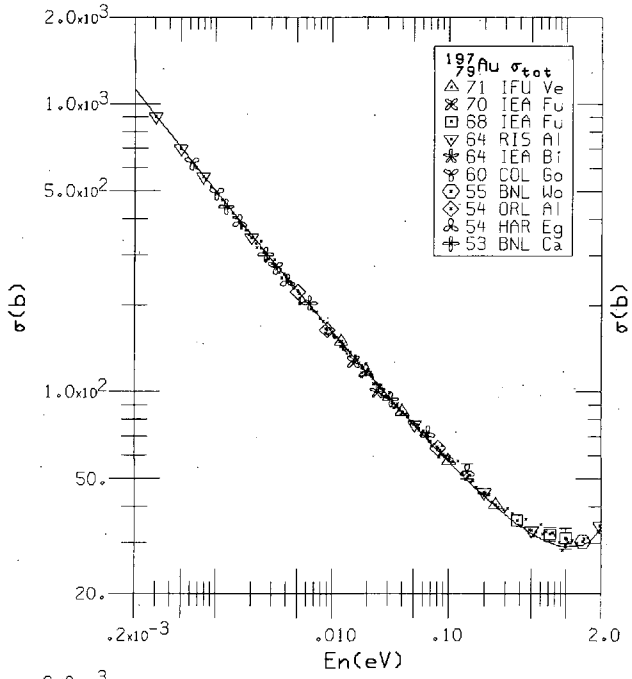


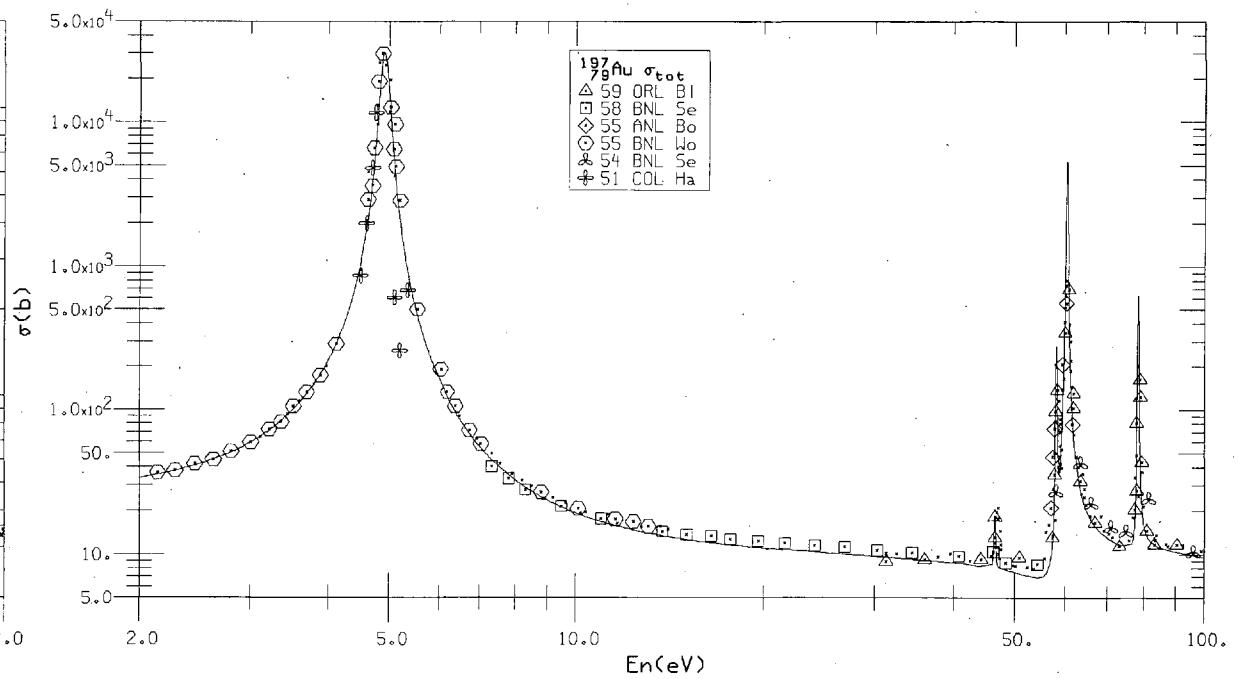
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{78}$Pt σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	272	2.330 MeV to 14.8 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	265	.100 MeV to .649 MeV	abs
65	DKE	Seth	PL,16,306,65	95	5.000 keV to .640 MeV	abs
62	TRM	Duggal,et.al.	62MADRAS,,369,62	46	.0020 eV to .0610 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.9 MeV	
59	DKE	Bilpuch	BILPUCH,59	59	5.000 keV to .285 MeV	
58	DKE	Seth	SETH,58	378	8.260 eV to .165 keV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	6.830 MeV to 14.1 MeV	abs
55	BNL	Carter	CARTER,55	147	9.210 eV to .199 keV	
55	HAR	Egelstaff	EGELSTAFF,55	49	.144 keV to .286 MeV	abs
53	WIS	Walt,et.al.	PR,89,1271,53	18	.110 MeV to 2.990 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.360 b at 14.1 MeV	
47	COL	Havens Jr,et.al.	PR,71,165,47	80	.0084 eV to 1.000 keV	
			$_{78}$Pt σ_{el}			
68	ANL	Smith,et.al.	PR,168,1344,68	109	.300 MeV to 1.500 MeV	C
			$_{78}$Pt σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	15	.135 MeV to 1.370 MeV	
			$_{78}$Pt $\sigma_{n\gamma}$			
63	ORL	Macklin,et.al.	NP,43,353,63	1	.321 b at 30.0 keV	Ag $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
61	ORL	Block,et.al.	61SACLAY,,203,61	51	.200 keV to 9.600 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
			$_{78}$Pt σ_{nf}			
55	CCP	Goldanskii+	DOK,101,1027,55	1	12.0 mb at 380.0 MeV	
			$^{192}_{78}$Pt σ_{n2n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	2.035 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{194}_{78}$Pt σ_{np}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	4.300 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
59	ALD	Coleman,et.al.	PPS,73,215,59	1	3.920 mb at 14.5 MeV	
			$^{194}_{78}$Pt $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.260 mb at 14.5 MeV	
			$^{195}_{78}$Pt σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.910 mb at 14.5 MeV	
			$^{196}_{78}$Pt σ_{np}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	1.100 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{196}_{78}$Pt $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.550 mb at 14.5 MeV	
			$^{198}_{78}$Pt $\sigma_{n\gamma}$			
60	DKE	Bilpuch	AP,10,455,60	14	1.500 keV to .300 MeV	
58	LRL	Booth,et.al.	PR,112,226,58	1	.240 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	1.700 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
49	OXF	Beghian,et.al.	NAT,163,366,49	1	.480 b at .900 MeV	^{55}Mn $\sigma_{n\gamma}$
			$^{198}_{78}$Pt σ_{n2n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	1.716 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
70	IRK	Winiwarter	NP/A,158,77,70	1	1.976 b at 14.7 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	2.770 b at 14.5 MeV	abs

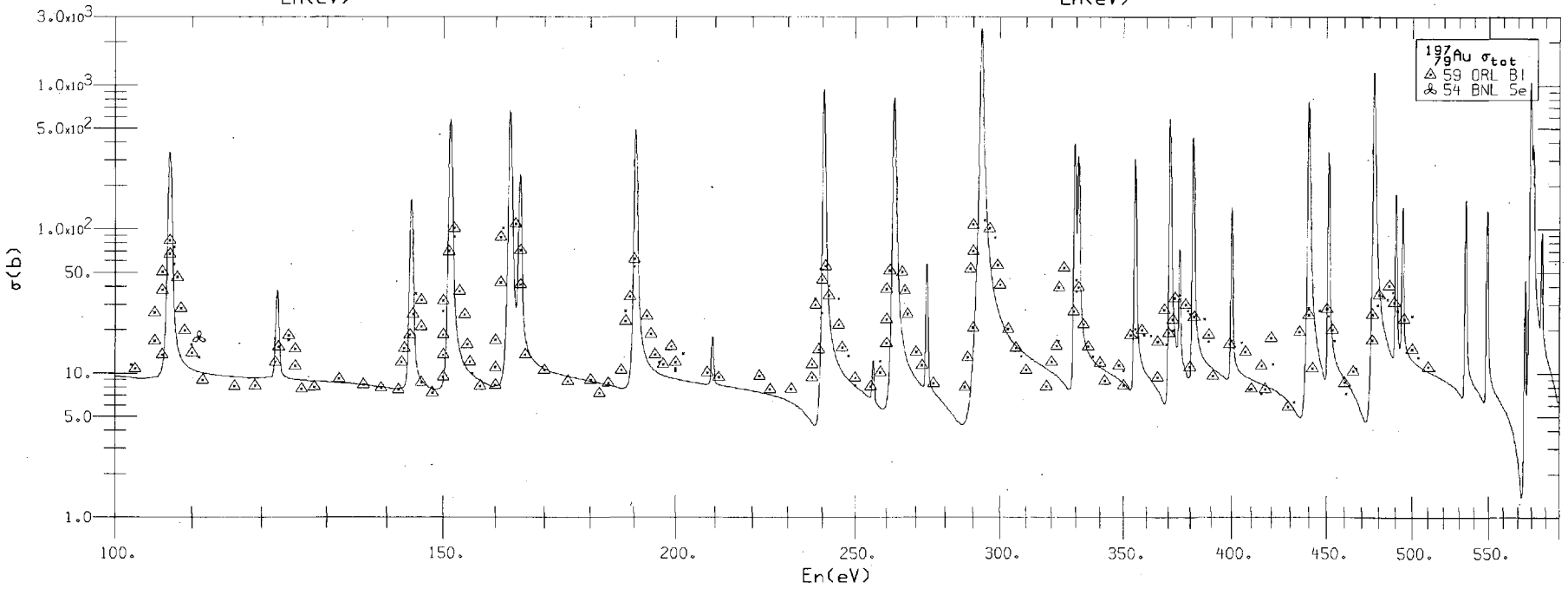
$^{197}_{79}Au$

σ_{tot}

[1283]

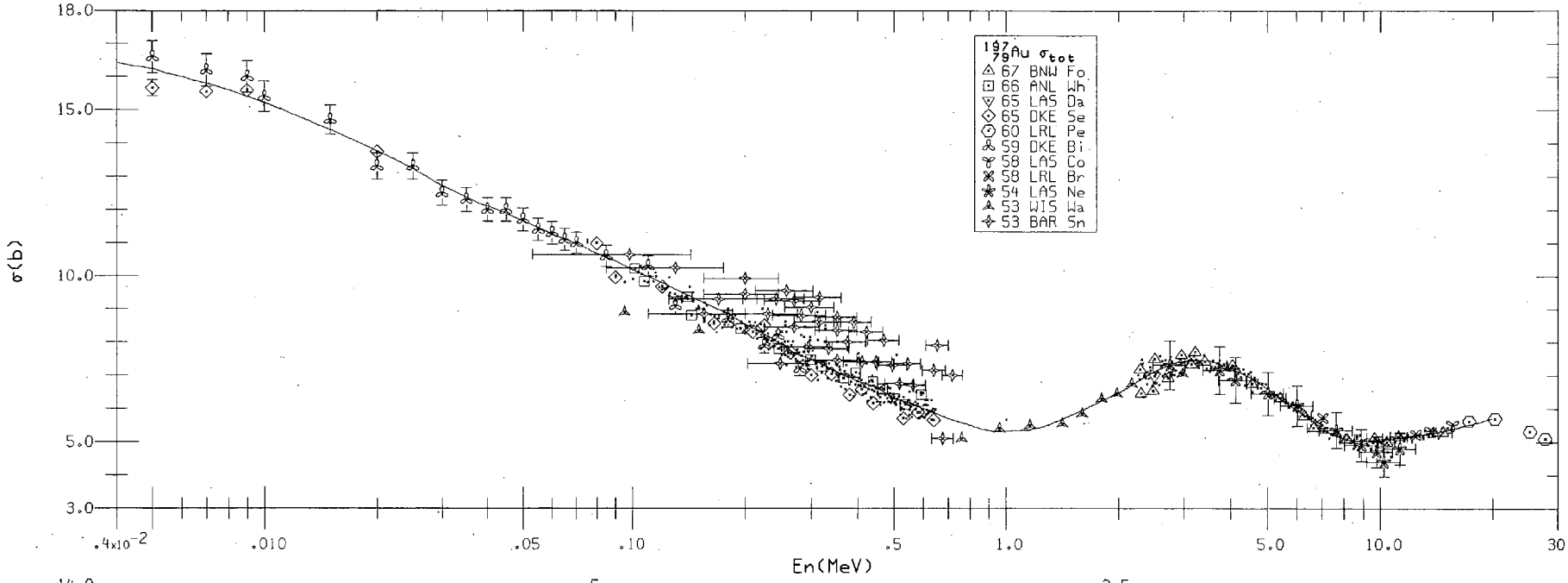


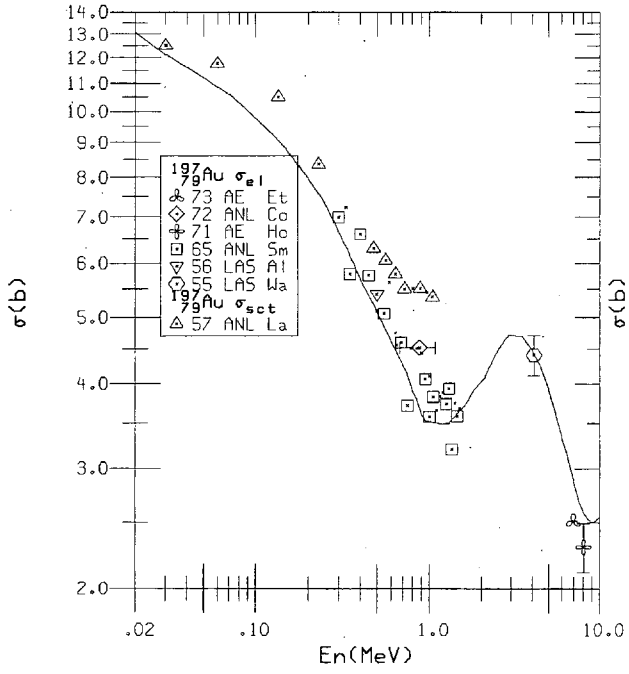


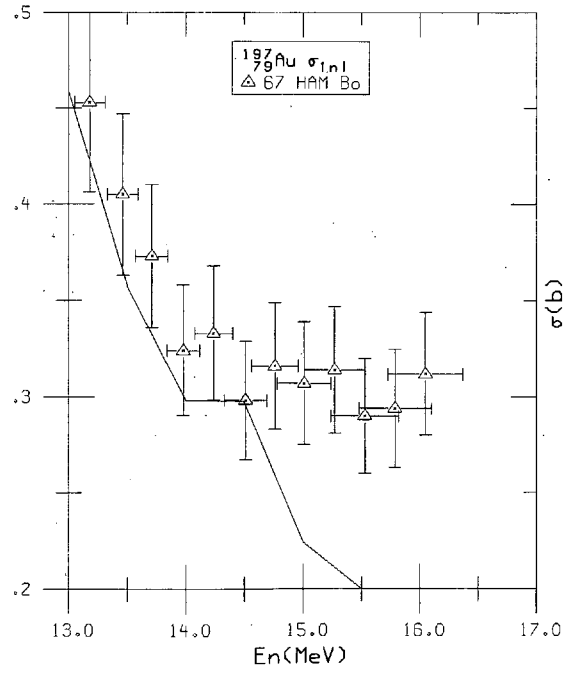


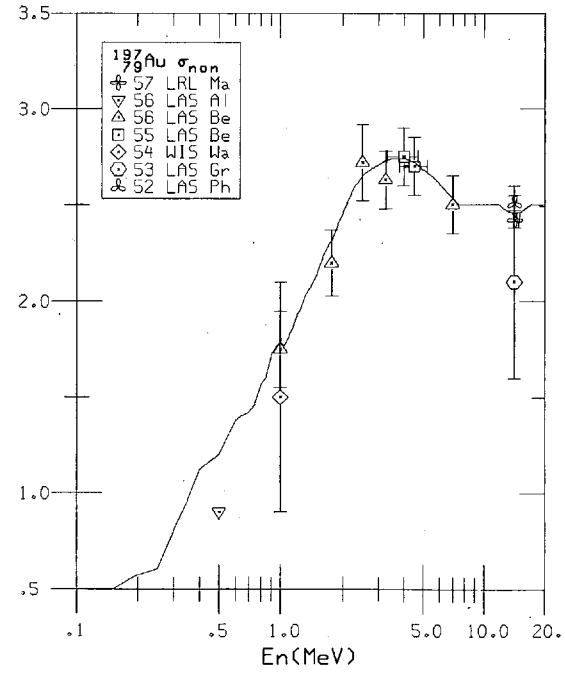
$^{197}_{79}Au$

σ_{tot}
σ_{el}
σ_{sct}
σ_{inl}
σ_{non}
[1283]





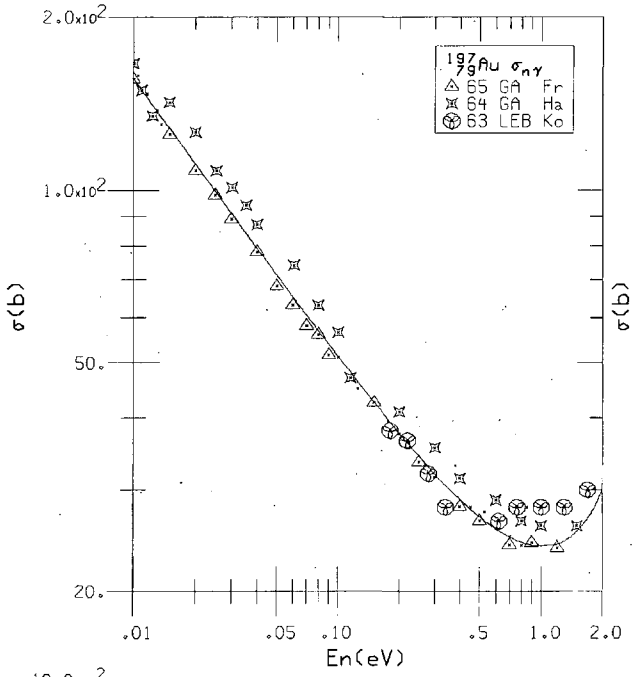


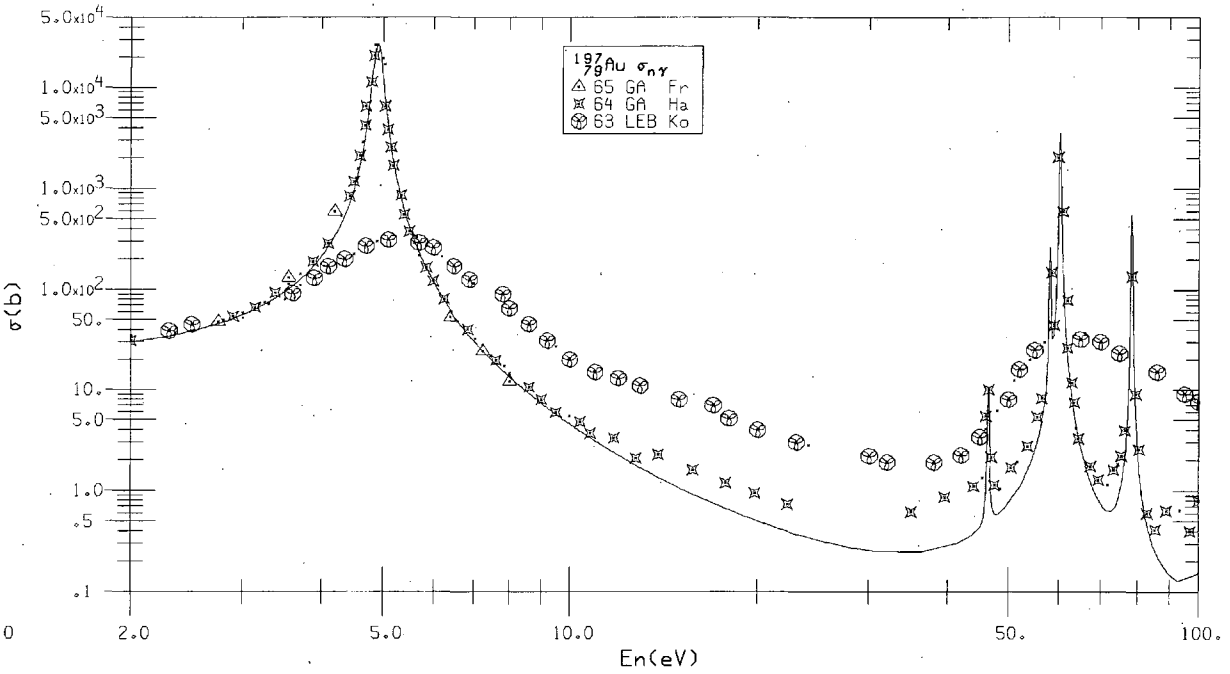


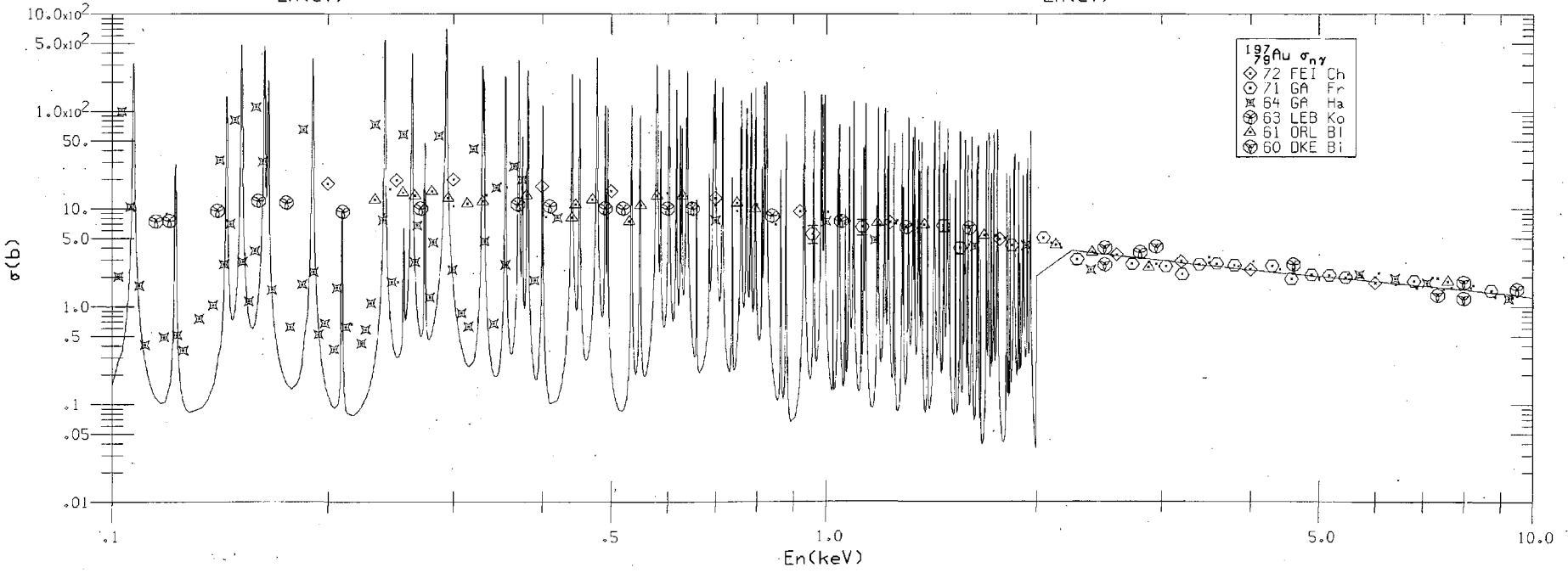
$^{197}_{79}Au$

$\sigma_{n\gamma}$

[1283]







$^{197}_{79}$Au

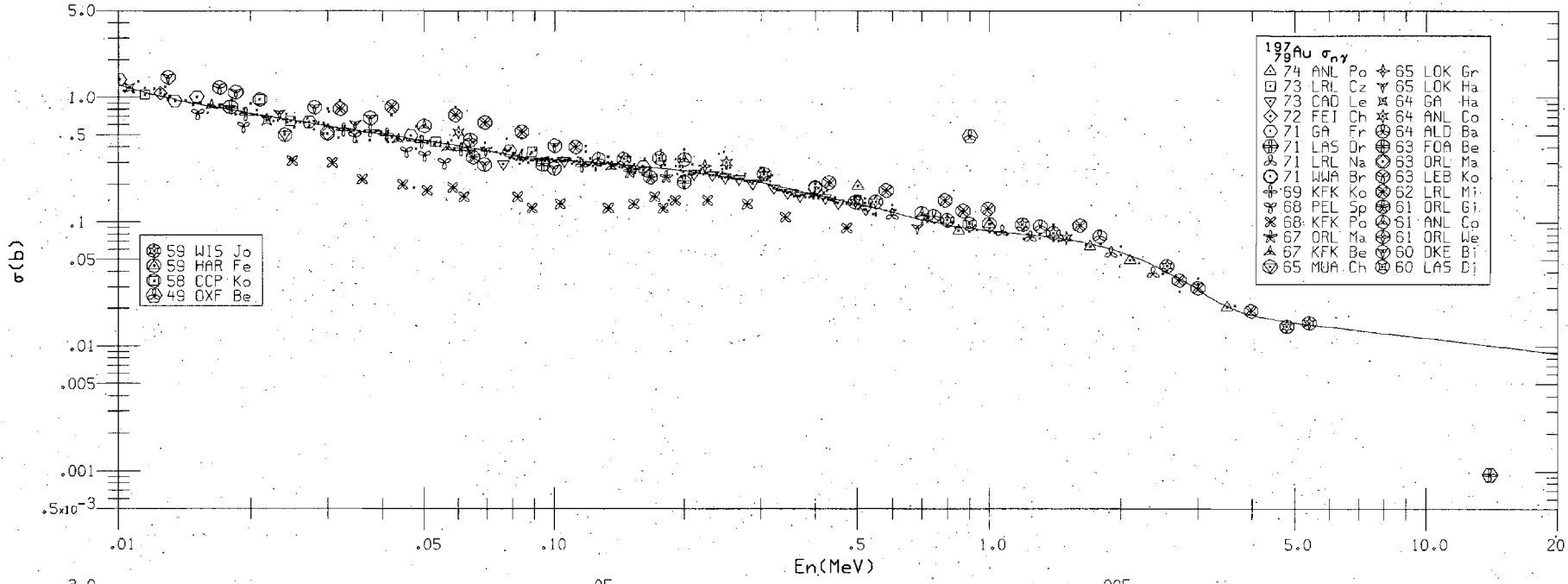
$\sigma_{n\gamma}$

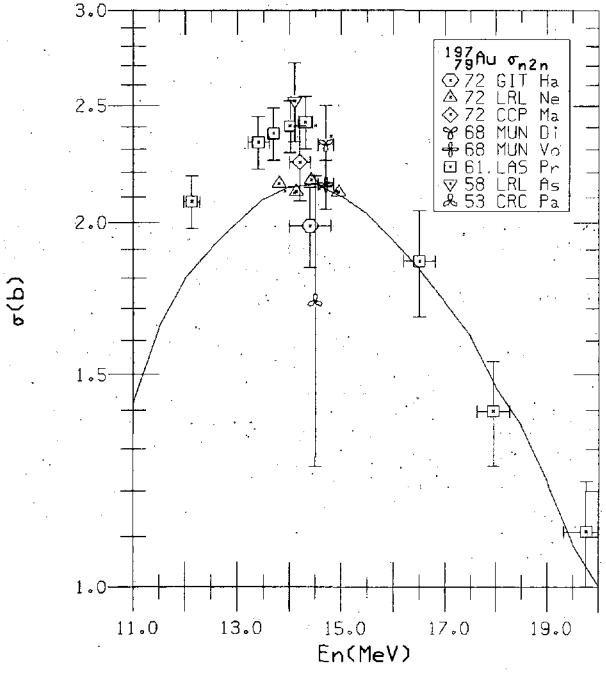
σ_{n2n}

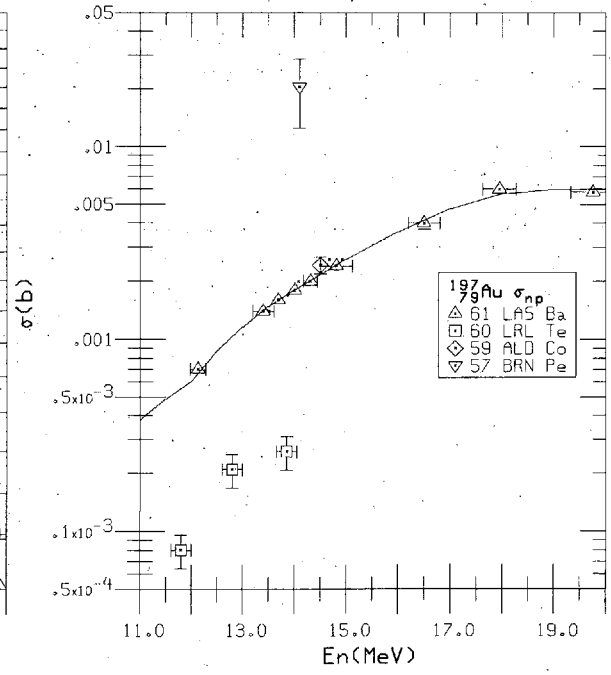
σ_{np}

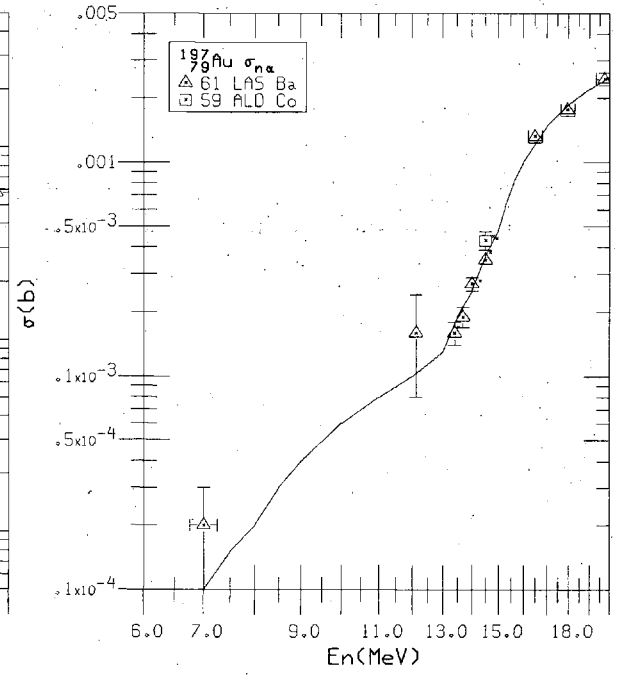
$\sigma_{n\alpha}$

[1283]









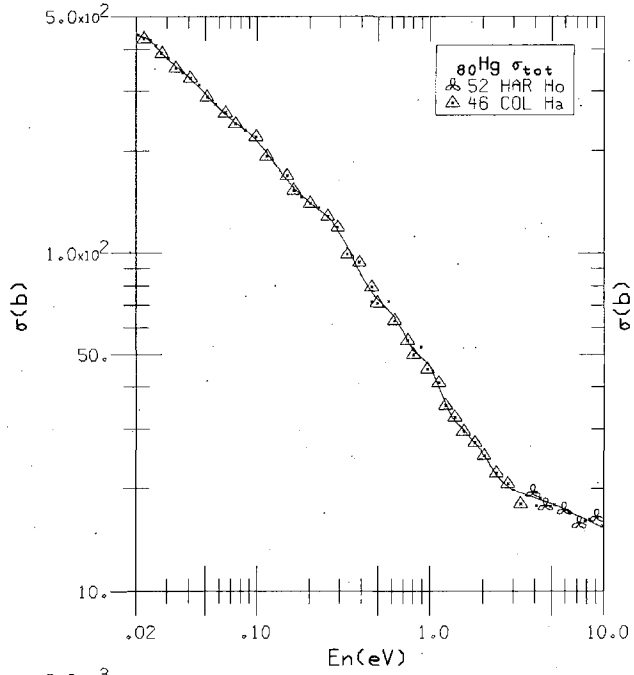
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{197}_{79}$Au σ_{tot}			
71	KAP	Eiland,et.al.	71KNOX,2,673,71	1	.104 kb at thermal	
71	IFU	Vertebnyj,et.al.	YFI-12,74,71	31	.0100 eV to 1.000 eV	
70	IEA	Fulfaro	INDC-6,15,70	8	.0093 eV to .0231 eV	
68	IEA	Fulfaro,et.al.	CEC,20,130,68	71	thermal to 1.000 eV	
67	BNW	Foster Jr	FOSTER,67	251	2.255 MeV to 14.9 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	272	.101 MeV to .649 MeV	abs
65	LAS	Day	DAY,65	4	.500 MeV to 4.100 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	30.9 b at 1.440 eV	
65	DKE	Seth	PL,16,306,65	94	5.000 keV to .640 MeV	abs
64	RIS	Als-Nielsen	PR/B,133,925,64	18	.0003 eV to 11.0 eV	abs
64	IEA	Bianchini,et.al.	IEA-78,64	18	.0053 eV to .0245 eV	
60	COL	Gould,et.al.	NSE,8,453,60	13	.0006 eV to .0033 eV	
60	LRL	Peterson,et.al.	PR,120,521,60	5	17.3 MeV to 28.8 MeV	abs
59	ORL	Block	BLOCK,59	310	31.3 eV to .514 keV	abs
59	DKE	Bilpuch	BILPUCH,59	61	5.000 keV to .295 MeV	abs
58	ORL	Slaughter	BAP,3,177,58	211	7.400 eV to .720 keV	
58	ORL	Harvey,et.al.	BAP,3,177(F11),58	292	31.0 MeV to 515.0 MeV	
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
58	BNL	Seth,et.al.	PR,110,692,58	31	7.330 eV to 54.3 eV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.0 MeV	abs
55	BNL	Wood	PR,98,639,55	89	.0750 eV to 15.0 eV	
55	LAS	Walt,et.al.	PR,98,677,55	1	7.100 b at 4.100 MeV	abs
55	ANL	Bollinger	BOLLINGER,55	15	56.6 eV to 62.6 eV	
55	BNL	Wood,et.al.	PR,98,639,55	67	1.040 eV to 15.2 eV	
54	HAR	Egelstaff	JNE,1,57,54	1	.105 kb at thermal	
54	BNL	Seidl	PR,95,476,54	83	14.0 eV to .250 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	31	2.750 MeV to 13.0 MeV	abs
54	BNL	Seidl,et.al.	PR,95,476,54	22	56.0 eV to .111 keV	
54	ORL	Allen,et.al.	PR,96,1297,54	16	.0051 eV to .0818 eV	abs
54	HAR	Egelstaff	JNE,1,57,54	76	.0014 eV to .143 eV	
53	WIS	Walt,et.al.	PR,89,1271,53	18	95.0 keV to 2.980 MeV	
53	BAR	Snowdon,et.al.	PR,90,615,53	84	98.0 keV to .718 MeV	
53	BNL	Carter,et.al.	PR,92,716,53	70	.0012 eV to .0392 eV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.310 b at 14.1 MeV	
51	COL	Havens Jr,et.al.	PR,83,1123,51	8	4.500 eV to 5.350 eV	
			$^{197}_{79}$Au σ_{el}			
73	AE	Etemad	AE-482,73	1	2.510 b at 7.000 MeV	
72	ANL	Cox,et.al.	ANL-7935,72	1	4.514 b at .878 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.300 b at 8.050 MeV	^{1}H σ_{el}
65	ANL	Smith,et.al.	EANDC(US)62,65	26	.300 MeV to 1.500 MeV	C
56	LAS	Allen,et.al.	PR,104,731,56	1	5.400 b at .500 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	4.400 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.100 b at 1.000 MeV	

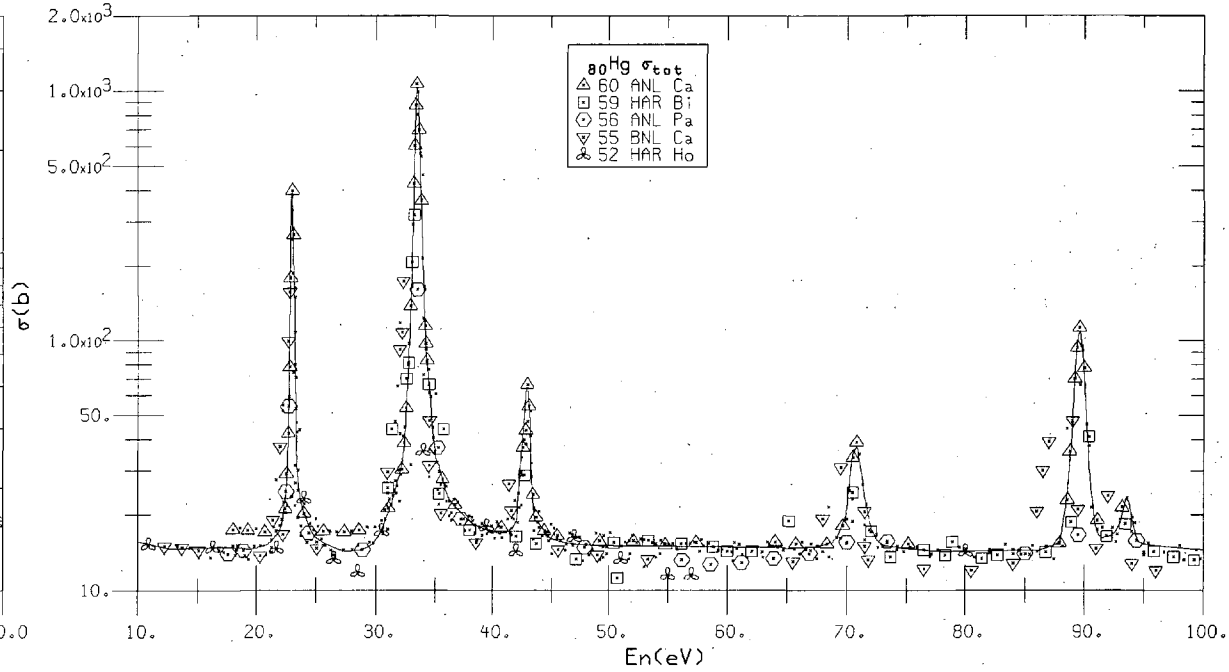
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{197}_{79}$Au σ_{inl}			
67	HAM	Bormann,et.al.	EANDC(E)-76,51,67	12	13.2 MeV to 16.0 MeV	H
			$^{197}_{79}$Au σ_{sct}			
65	ORL	Rayburn,et.al.	NP,61,381,65	1	18.4 b at 1.440 eV	
57	ANL	Langsdorf Jr+	PR,107,1077,57	13	30.0 keV to 1.045 MeV	
			$^{197}_{79}$Au σ_{non}			
57	LRL	Mac Gregor+	PR,108,726,57	1	2.420 b at 14.2 MeV	abs
56	LAS	Allen,et.al.	PR,104,731,56	1	.900 b at .500 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	5	1.000 MeV to 7.000 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	2.440 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	2.700 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	1.500 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	2.100 b at 14.1 MeV	
52	LAS	Phillips,et.al.	PR,88,600,52	1	2.510 b at 14.1 MeV	abs
			$^{197}_{79}$Au $\sigma_{n\gamma}$			
75	BNL	Rimawi,et.al.	BAP,20,173(IB8),75	1	.630 b at 24.3 keV	^{10}B $\sigma_{n\alpha}$
74	ANL	Poenitz	POENITZ,74	18	.400 MeV to 3.500 MeV	
73	CAD	Le Rigoleur	CEA-N-1662,73	285	75.3 keV to .543 MeV	
73	LRL	Czirr,et.al.	NSE,52,299,73	15	6.870 keV to .247 MeV	^{235}U σ_{nf}
73	CAD	Le Rigoleur+	73KFK,,,73	285	75.3 keV to .542 MeV	
72	FEI	Chelnokov,et.al.	YFI-13,6,72	26	.200 keV to 34.6 keV	^{197}Au $\sigma_{n\gamma}$
71	GA	Fricke,et.al.	71KNOX,1,252,71	95	.958 keV to 1.108 MeV	^{10}B $\sigma_{n\alpha}$
71	LAS	Drake,et.al.	PL/B,36,557,71	1	.938 mb at 14.0 MeV	H σ_{tot}
71	LRL	Nagle,et.al.	71KNOX,2,259,71	23	.121 MeV to 2.730 MeV	^{235}U σ_{nf}
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.190 b at .400 MeV	abs
69	KFK	Kompe	NP/A,133,513,69	72	10.3 keV to .161 MeV	^{6}Li σ_{nt}
68	PEL	Spitz,et.al.	NP/A,121,655,68	18	15.2 keV to 55.8 keV	In $\sigma_{n\gamma}$
68	GA	Friesenhahn+	JNE,22,191,68	1	98.5 b at thermal	
68	KFK	Poenitz,et.al.	JNE,22,505,68	22	24.7 keV to .473 MeV	^{197}Au $\sigma_{n\gamma}$
67	DEB	Peto,et.al.	JNE,21,797,67	1	35.2 mb at 3.000 MeV	^{31}P σ_{np}
67	ORL	Macklin,et.al.	PR,159,1007,67	3	.125 MeV to .182 MeV	Ta $\sigma_{n\gamma}$
67	KFK	Beckurts,et.al.	67KARLSR,1,67,67	72	10.3 keV to .161 MeV	^{197}Au $\sigma_{n\gamma}$
66	KFK	Poenitz	JNE,20,825,66	1	.357 b at 64.0 keV	
66	KFK	Poenitz	66PARIS,1,295,66	1	.598 b at 30.0 keV	
65	MUA	Chaubey,et.al.	NP,66,267,65	1	.500 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
65	LOK	Grench,et.al.	EANDC(US)79,72,65	12	.143 MeV to 1.223 MeV	^{235}U σ_{nf}
65	GA	Friesenhahn+	GA-6832,65	34	.0100 eV to 8.000 eV	^{197}Au
65	LOK	Harris,et.al.	NP,69,37,65	15	12.8 keV to .683 MeV	abs
64	GA	Haddad,et.al.	NIM,31,125,64	420	.0100 eV to 35.0 keV	
64	ANL	Cox	PR/B,133,378,64	21	30.0 keV to 1.500 MeV	
64	ALD	Barry	JNE,18,491,64	11	.127 MeV to 1.789 MeV	
63	FOA	Bergqvist	AF,23,425,63	8	18.0 keV to .300 MeV	Ag $\sigma_{n\gamma}$
63	ORL	Macklin,et.al.	NP,43,353,63	1	.513 b at 30.0 keV	Ag $\sigma_{n\gamma}$
63	LEB	Konks,et.al.	ZET,46,80,63	99	.180 eV to 41.0 keV	^{197}Au $\sigma_{n\gamma}$
62	LRL	Miskel,et.al.	PR,128,2717,62	20	69.0 keV to 3.970 MeV	
62	LRL	Miskel,et.al.	PR,128,2717,62	6	32.0 keV to .176 MeV	^{235}U σ_{nf}
62	LRL	Miskel,et.al.	PR,128,2717,62	6	32.0 keV to .176 MeV	^{235}U σ_{nf}
61	ANL	Meadows,et.al.	NSE,9,132,61	1	98.2 b at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	3	30.0 keV to .167 MeV	In $\sigma_{n\gamma}$
61	ANL	Cox	PR,122,1280,61	5	30.0 keV to .150 MeV	^{10}B $\sigma_{n\alpha}$
61	ANL	Cox	PR,122,1280,61	15	.200 MeV to 1.500 MeV	^{235}U σ_{nf}

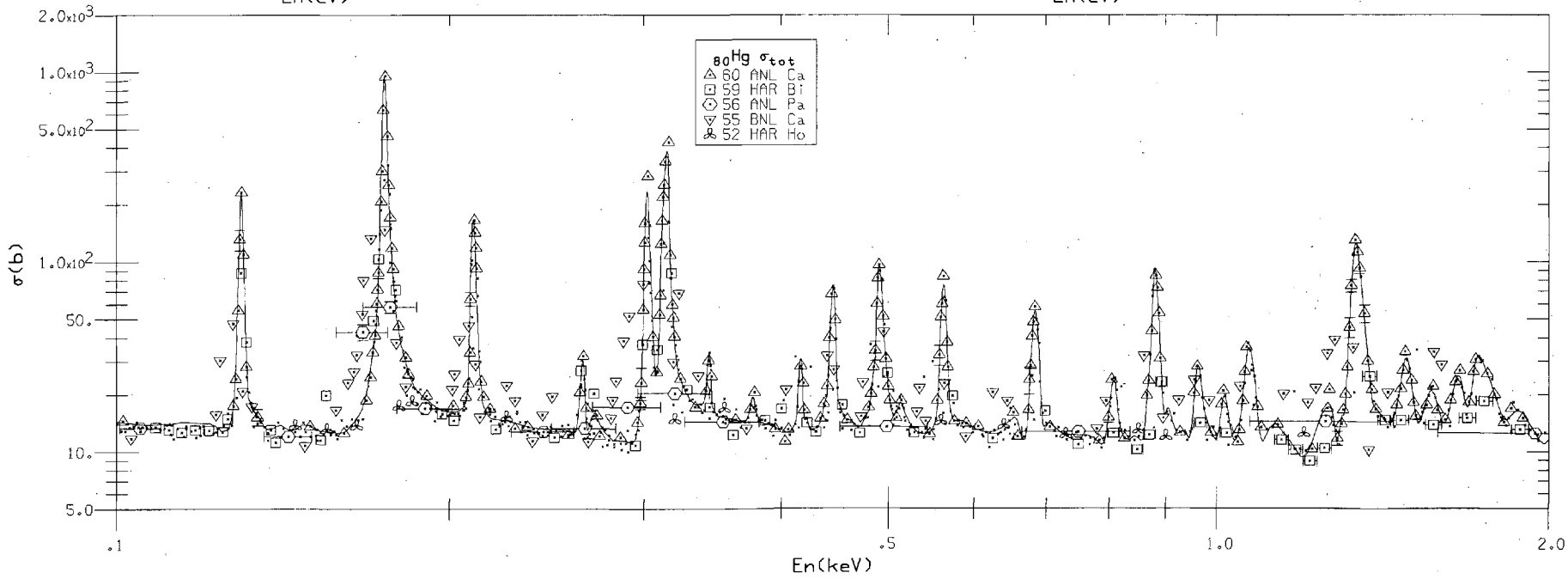
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
61	ORL	Weston,et.al.	PR,123,948,61	2	30.2 keV to 63.9 keV	
61	ORL	Block,et.al.	61SACLAY,,203,61	42	.233 keV to 7.600 keV	
60	DKE	Bilpuch,et.al.	AP,10,455,60	13	1.600 keV to .200 MeV	^{197}Au $\sigma_{n\gamma}$
60	DKE	Bilpuch,et.al.	AP,10,455,60	13	1.600 keV to .200 MeV	^{197}Au $\sigma_{n\gamma}$
60	ORL	Schmitt,et.al.	NP,20,202,60	1	.532 b at 24.0 keV	abs
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
59	LAS	Bame Jr,et.al.	PR,113,256,59	1	.288 b at .180 MeV	^{235}U σ_{nf}
59	LAS	Bame Jr,et.al.	PR,113,256,59	1	.310 b at .180 MeV	^{235}U σ_{nf}
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.320 b at .195 MeV	^{115}In $\sigma_{n\gamma}$
59	WIS	Johnsrud,et.al.	PR,116,927,59	12	.145 MeV to 1.000 MeV	^{235}U σ_{nf}
59	WIS	Johnsrud,et.al.	PR,116,927,59	21	.145 MeV to 5.400 MeV	^{235}U σ_{nf}
59	HAR	Ferguson+	JNE,10,19,59	3	.150 MeV to 1.000 MeV	H
58	LRL	Booth,et.al.	PR,112,226,58	1	.890 b at 20.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	.960 b at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.380 b at .200 MeV	^{235}U σ_{nf}
49	OXF	Beghian,et.al.	NAT,163,366,49	1	.490 b at .900 MeV	^{55}Mn $\sigma_{n\gamma}$
			$^{197}_{79}$Au σ_{n2n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	1.986 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
72	LRL	Nethaway	NP/A,190,635,72	10	13.8 MeV to 15.0 MeV	^{27}Al $\sigma_{n\alpha}$
72	CCP	Maslov,et.al.	YK-9,50,72	1	2.243 b at 14.2 MeV	^{65}Cu σ_{n2n}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.320 b at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
68	MUN	Vonach,et.al.	68WASH,2,885,68	1	2.150 b at 14.7 MeV	
61	LAS	Prestwood,et.al.	PR,121,1438,61	10	12.1 MeV to 19.8 MeV	^{238}U σ_{nf}
58	LRL	Ashby,et.al.	PR,111,616,58	1	2.520 b at 14.1 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.722 b at 14.5 MeV	abs
			$^{197}_{79}$Au σ_{n3n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	61.0 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	.100 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{197}_{79}$Au σ_{np}			
61	LAS	Bayhurst,et.al.	JIN,23,173,61	15	12.1 MeV to 19.8 MeV	
60	LRL	Tewes,et.al.	UCRL-6028-T,60	3	11.8 MeV to 13.9 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.420 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
57	BRN	Peck Jr	PR,106,965,57	1	20.5 mb at 14.1 MeV	
			$^{197}_{79}$Au σ_{n3}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	20.0 muB at 14.7 MeV	^{197}Au $\sigma_{n\alpha}$
			$^{197}_{79}$Au $\sigma_{n\alpha}$			
61	LAS	Bayhurst,et.al.	JIN,23,173,61	15	7.000 MeV to 19.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.430 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{197}_{79}$Au σ_{nna}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	40.0 muB at 14.7 MeV	^{197}Au $\sigma_{n\alpha}$
			$^{197}_{79}$Au σ_{nf}			
55	CCP	Goldanskii+	DOK,101,1027,55	1	20.0 mb at 380.0 MeV	
			$^{198}_{79}$Au σ_{tot}			
63	MTR	Simpson,et.al.	ANS,6,43,63	1	25.6 kb at thermal	
			$^{198}_{79}$Au $\sigma_{n\gamma}$			
51	UI	Sherk,et.al.	PR,83,1097,51	1	38.0 kb at thermal	

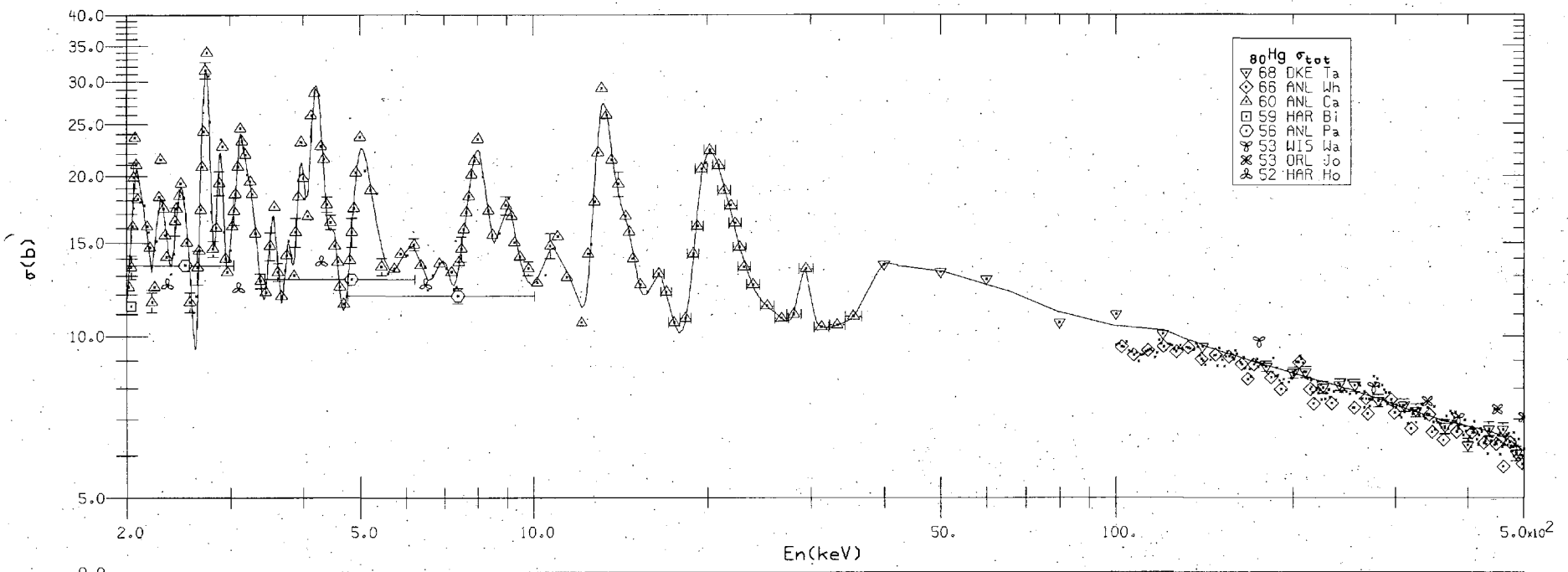
$_{80}Hg$

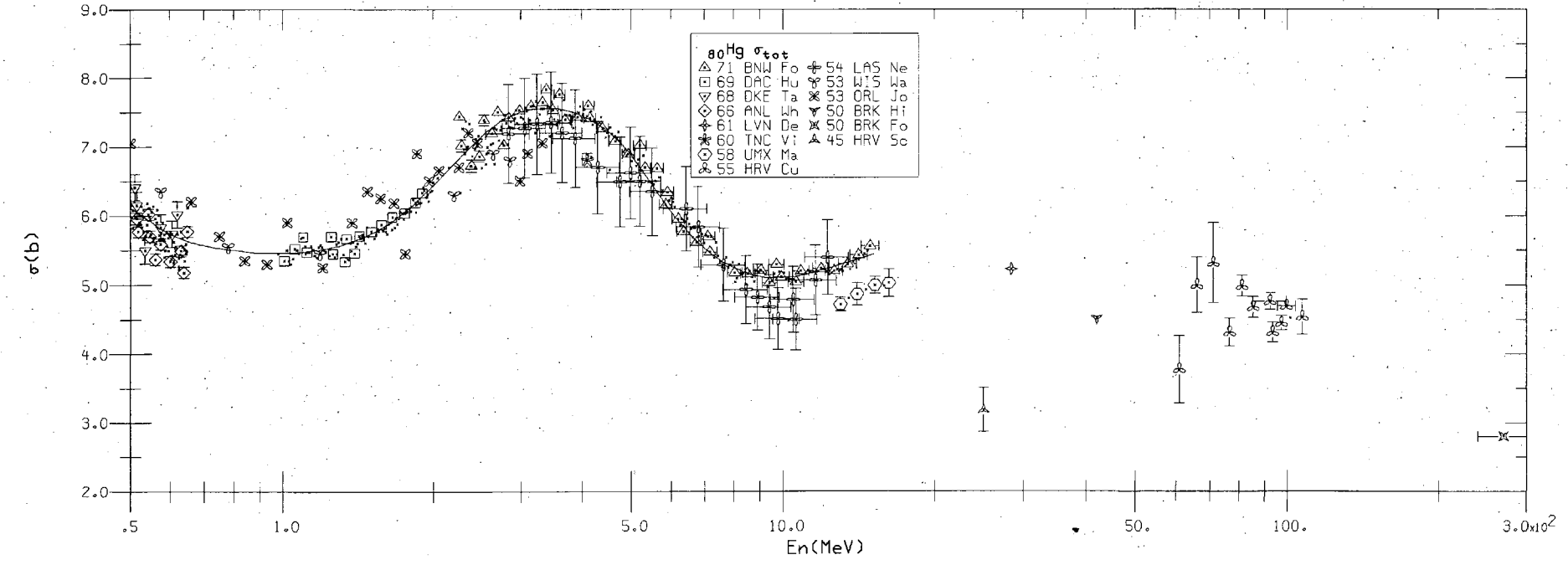
σ_{tot}








$_{80}$Hg σ_{tot}
68 DKE Ta
66 ANL Wh
60 ANL Ca
59 HAR Bi
56 ANL Pa
53 WIS Wa
53 ORL Jo
52 HAR Ho
σ(b)
En(keV)
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
2.0
5.0
10.0
50.
100.
5.0x10^2


$_{80}$Hg σ_{tot}
71 BNW Fo
69 DAC Hu
68 DKE Ta
66 ANL Wh
61 LVN De
60 TNC Vi
58 UMX Ma
55 HRV Cu
54 LAS Ne
53 WIS Wa
53 ORL Jo
50 BRK Hi
50 BRK Fo
45 HRV Sc
σ(b)
En(MeV)
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
.5
1.0
5.0
10.0
50.
100.
3.0x10^2

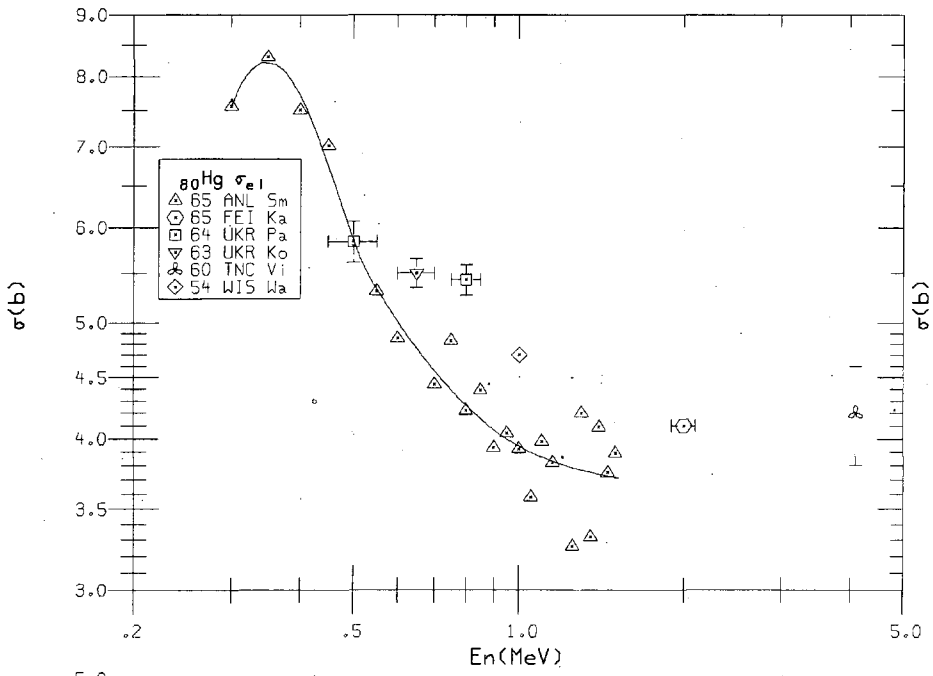
$_{80}$Hg

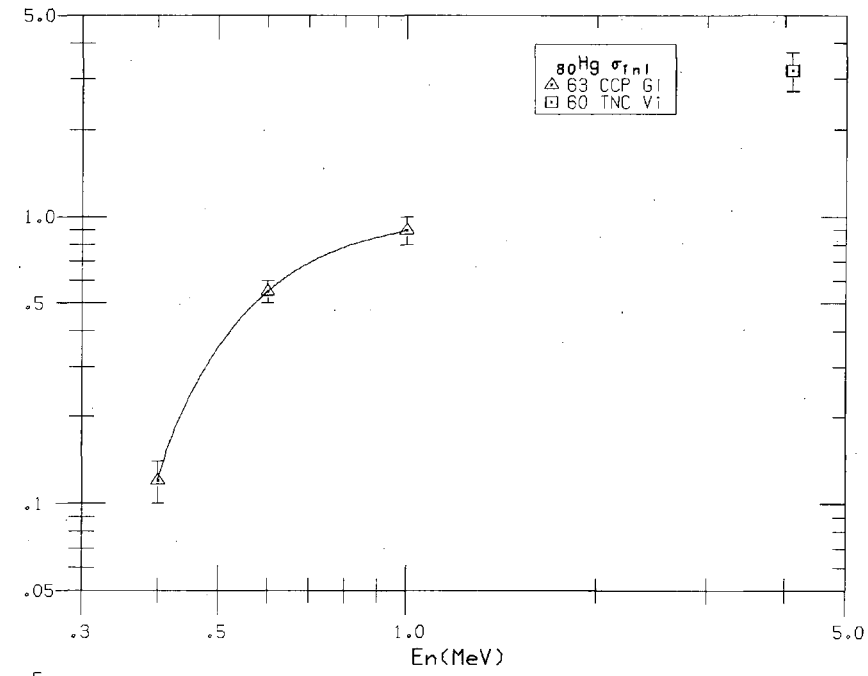
σ_{el}

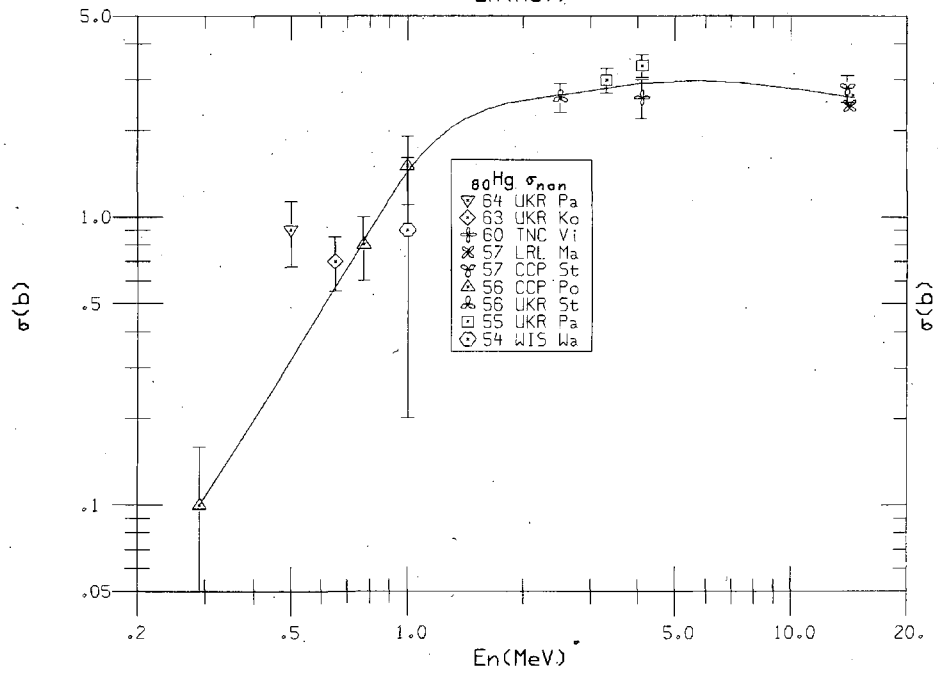
σ_{inl}

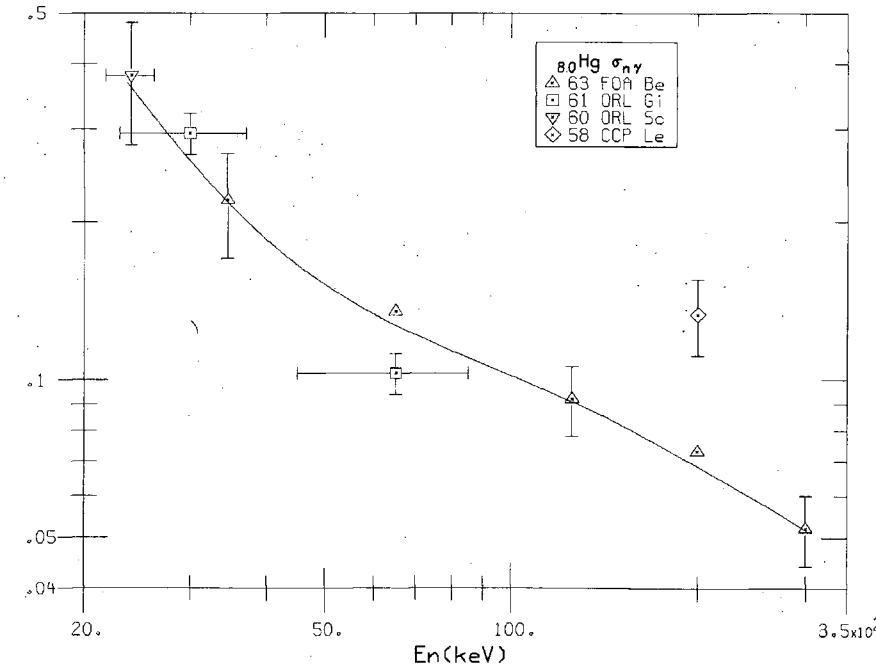
σ_{non}

$\sigma_{n\gamma}$





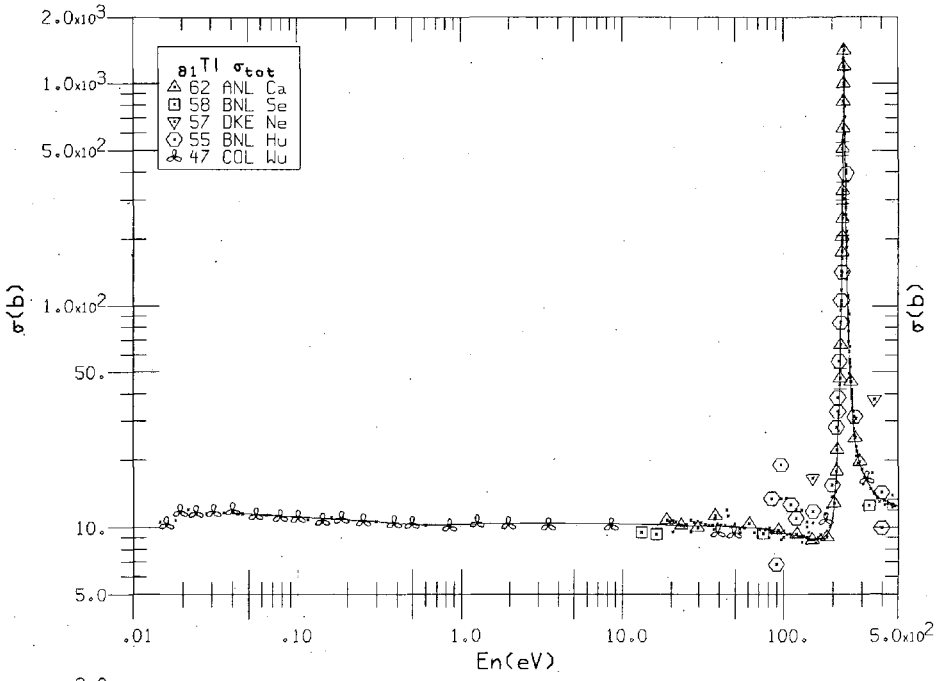


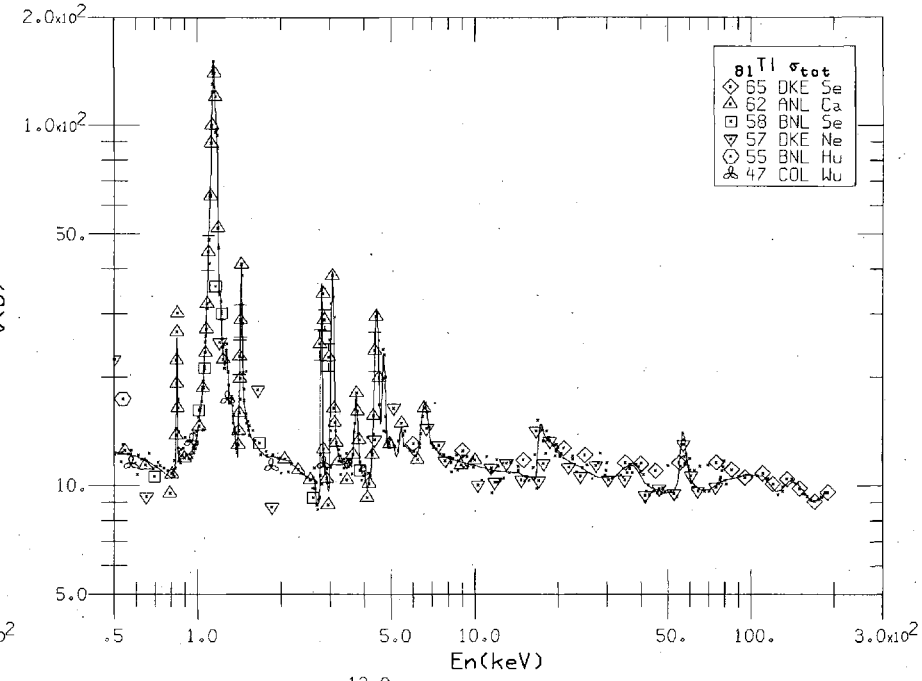


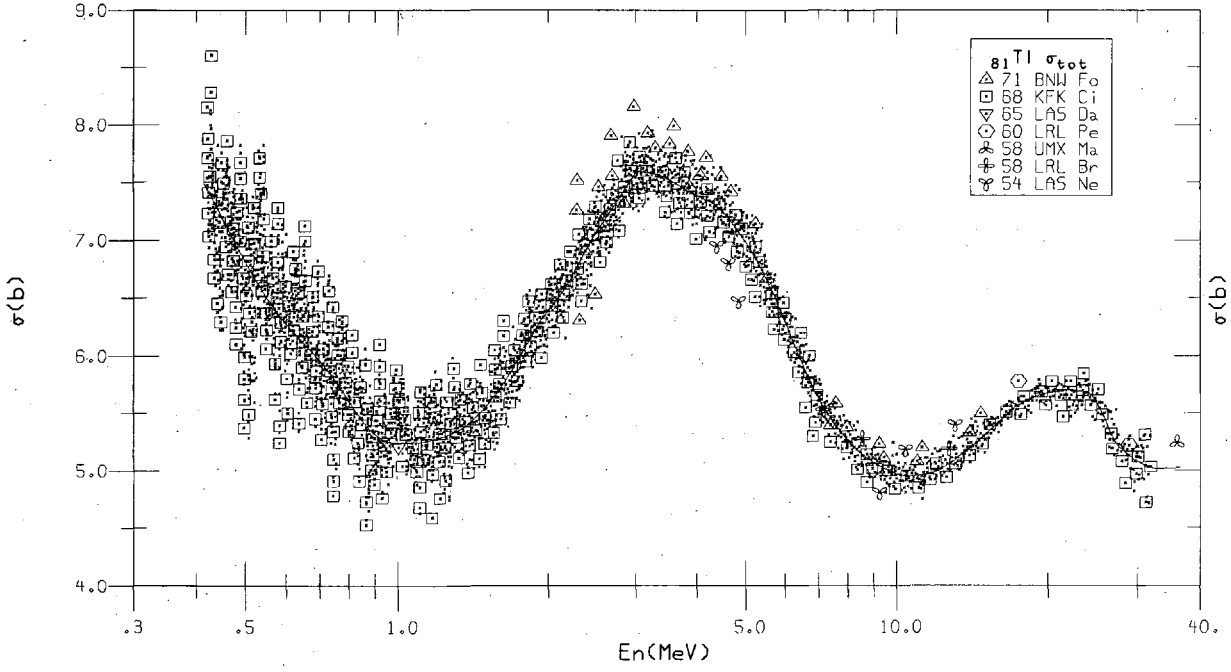
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{80}$Hg σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.255 MeV to 14.9 MeV	
69	DAC	Hussain,et.al.	AECD/MISC-2,11,69	101	1.007 MeV to 2.007 MeV	
68	DKE	Tabony,et.al.	AP,46,401,68	101	40.0 keV to .650 MeV	
66	ANL	Whalen,et.al.	ANL-7210,16,66	336	.100 MeV to .649 MeV	abs
61	LVN	Deconninck,et.al	JPR,22,652,61	1	5.230 b at 28.4 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	6.800 b at 4.100 MeV	
60	ANL	Carpenter,et.al.	NP,21,66,60	932	18.0 eV to 35.5 keV	abs
59	HAR	Bird,et.al.	NP,13,525,59	366	30.6 eV to 2.035 keV	abs
			$_{80}$Hg σ_{tot}			
58	BNL	Zimmerman	B.A.MAGURNO,58	230	12.0 eV to 1.600 keV	
			$_{80}$Hg σ_{tot}			
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
56	ANL	Palmer,et.al.	PR,102,228,56	91	16.1 eV to 7.400 keV	abs
55	HRV	Culler,et.al.	PR,99,740,55	12	61.0 MeV to 106.8 MeV	
55	BNL	Carter	CARTER,55	231	12.3 eV to 1.600 keV	
54	LAS	Nereson,et.al.	PR,94,1678,54	30	2.830 MeV to 13.1 MeV	abs
53	WIS	Walt,et.al.	PR,89,1271,53	17	.175 MeV to 2.845 MeV	
53	ORL	Johnson,et.al.	ORNL-1365,53	33	.340 MeV to 3.420 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.360 b at 14.1 MeV	
52	HAR	Hodgson,et.al.	PPS/A,65,992,52	84	3.900 eV to 6.500 keV	
50	BRK	Hildebrand+	PR,80,842,50	1	4.510 b at 42.0 MeV	abs
50	BRK	Fox,et.al.	PR,80,23,50	1	2.800 b at 270.0 MeV	
46	COL	Havens,et.al.	PR,70,154,46	46	.0204 eV to 4.100 eV	
45	HRV	Scherr	PR,68,240,45	1	3.180 b at 25.0 MeV	abs
			$_{80}$Hg σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	4.441 b at .882 MeV	C σ_{el}
65	ANL	Smith,et.al.	EANDC(US)62,65	25	.300 MeV to 1.500 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	4.100 b at 2.000 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	5.500 b at .650 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1389,63	1	7.630 b at .300 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	4.200 b at 4.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.700 b at 1.000 MeV	
			$_{80}$Hg σ_{inl}			
63	CCP	Glazkov	AE,14,400,63	3	.400 MeV to 1.000 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	3.200 b at 4.100 MeV	H

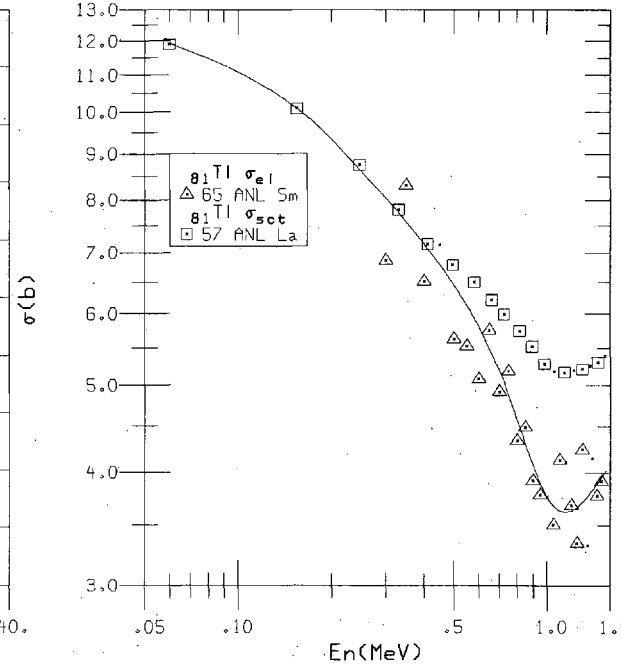
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{80}$Hg σ_{non}			
64	UKR	Pasechnik,et.al.	AE,16,207,64	1	.900 b at .500 MeV	
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	.700 b at .650 MeV	
60	TNC	Vincent,et.al.	WADD-TR-60-217,60	1	2.600 b at 4.100 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	2.460 b at 14.0 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	2.430 b at 14.2 MeV	abs
57	CCP	Strizhak	AE,2,68,57	1	2.800 b at 14.0 MeV	abs
56	CCP	Flerov,et.al.	AE,1,155,56	1	2.650 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	3	.290 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	2.600 b at 2.500 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	2	3.300 MeV to 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.900 b at 1.000 MeV	
			$_{80}$Hg $\sigma_{n\gamma}$			
63	FOA	Bergqvist	AF,23,425,63	5	34.5 keV to .300 MeV	Ag $\sigma_{n\gamma}$
61	ANL	Meadows,et.al.	NSE,9,132,61	1	.374 kb at thermal	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	ORL	Schmitt,et.al.	NP,20,202,60	1	.380 b at 24.0 keV	abs
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.133 b at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$^{198}_{80}$Hg σ_{n2n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	2.010 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.340 b at 14.7 MeV	
			$^{198}_{80}$Hg σ_{np}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	4.500 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
69	NDL	Temperley	PR,178,1904,69	1	4.700 mb at 14.1 MeV	^{56}Fe σ_{np}
			$^{199}_{80}$Hg σ_{np}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	2.300 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
69	NDL	Temperley	PR,178,1904,69	1	4.600 mb at 14.1 MeV	^{56}Fe σ_{np}
			$^{200}_{80}$Hg σ_{np}			
69	NDL	Temperley	PR,178,1904,69	1	12.0 mb at 14.1 MeV	^{56}Fe σ_{np}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	3.630 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{200}_{80}$Hg $\sigma_{n\alpha}$			
69	NDL	Temperley	PR,178,1904,69	1	.200 mb at 14.1 MeV	^{56}Fe σ_{np}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.770 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{201}_{80}$Hg σ_{np}			
69	NDL	Temperley	PR,178,1904,69	1	1.500 mb at 14.1 MeV	^{56}Fe σ_{np}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	2.120 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{202}_{80}$Hg $\sigma_{n\gamma}$			
67	GHT	Kim,et.al.	RCA,8,165,67	1	5.040 b at thermal	^{197}Au $\sigma_{n\gamma}$
59	ORL	Lyon,et.al.	PR,114,1619,59	1	32.0 mb at .195 MeV	^{115}In $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	57.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
			$^{202}_{80}$Hg $\sigma_{n\alpha}$			
69	NDL	Temperley	PR,178,1904,69	1	1.000 mb at 14.1 MeV	^{56}Fe σ_{np}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.010 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{204}_{80}$Hg $\sigma_{n\gamma}$			
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	.190 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
			$^{204}_{80}$Hg σ_{n2n}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	2.077 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
69	NDL	Temperley	PR,178,1904,69	1	2.060 b at 14.1 MeV	^{56}Fe σ_{np}
68	IRK	Winkler	NP/A,118,9,68	1	2.300 b at 14.7 MeV	
68	DEB	Peto,et.al.	AHP,25,91,68	1	2.230 b at 15.0 MeV	^{89}Y σ_{n2n}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.300 b at 14.7 MeV	

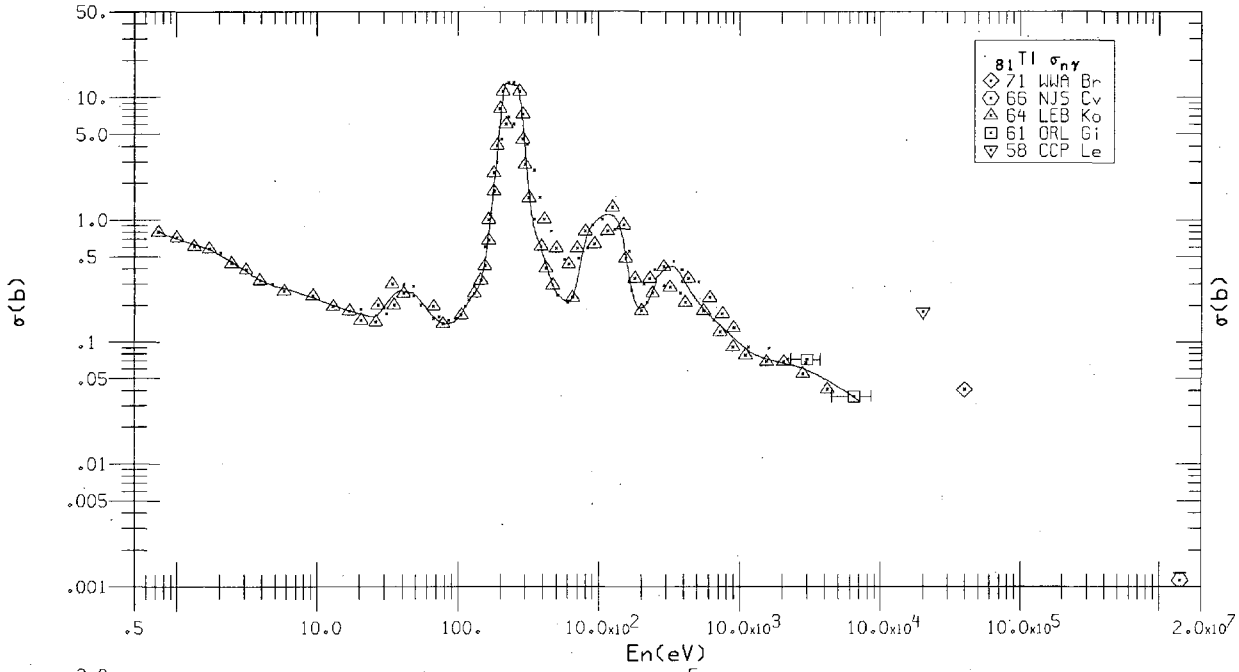

$_{81}$Tl σ_{tot}
62 ANL Ca
58 BNL Se
57 DKE Ne
55 BNL Hu
47 COL Wu
σ(b)
En(eV)

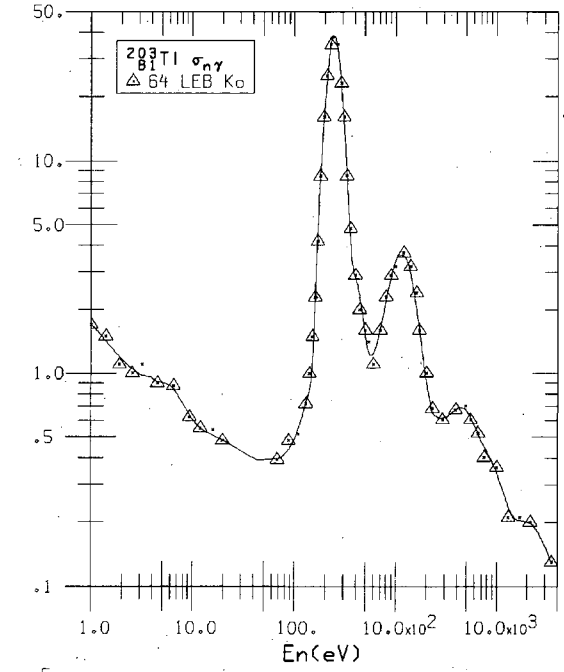

$_{81}$Tl σ_{tot}
65 DKE Se
62 ANL Ca
58 BNL Se
57 DKE Ne
55 BNL Hu
47 COL Wu
σ(b)
En(keV)

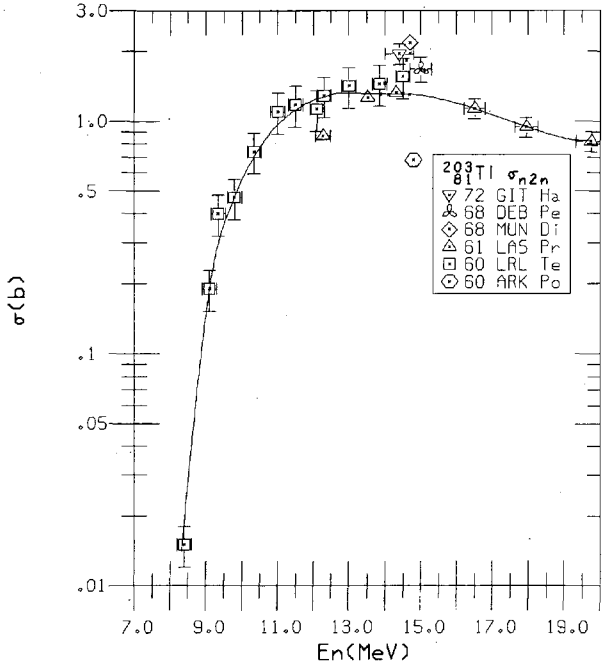

$_{81}$Tl σ_{tot}
71 BNW Fo
68 KFK Ci
65 LAS Da
60 LRL Pe
58 UMX Ma
58 LRL Br
54 LAS Ne
σ(b)
En(MeV)

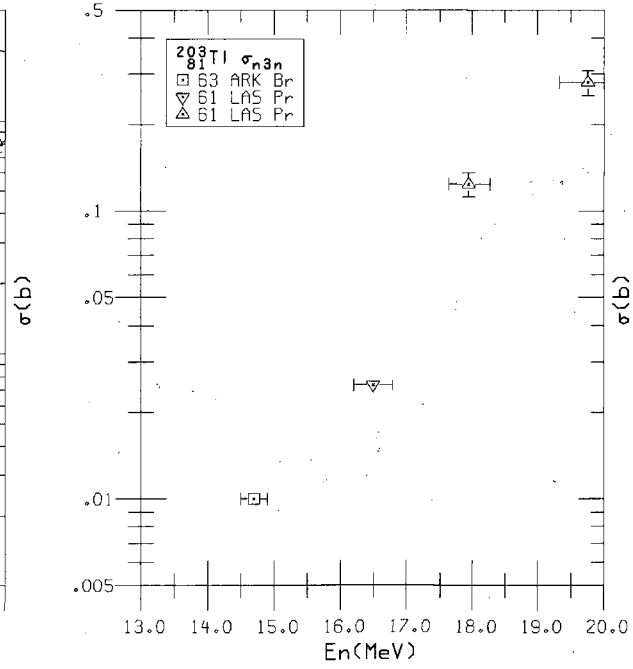

$_{81}$Tl σ_{el}
65 ANL Sm
$_{81}$Tl σ_{sct}
57 ANL La
σ(b)
En(MeV)

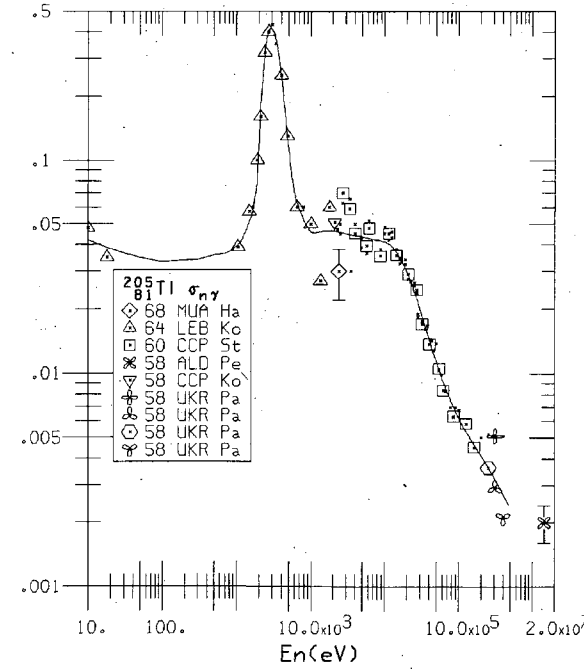
^{81}Tl
$\sigma_{n\gamma}$
$^{203}_{81}$Tl
$\sigma_{n\gamma}$
σ_{n2n}
σ_{n3n}
$^{205}_{81}$Tl
$\sigma_{n\gamma}$







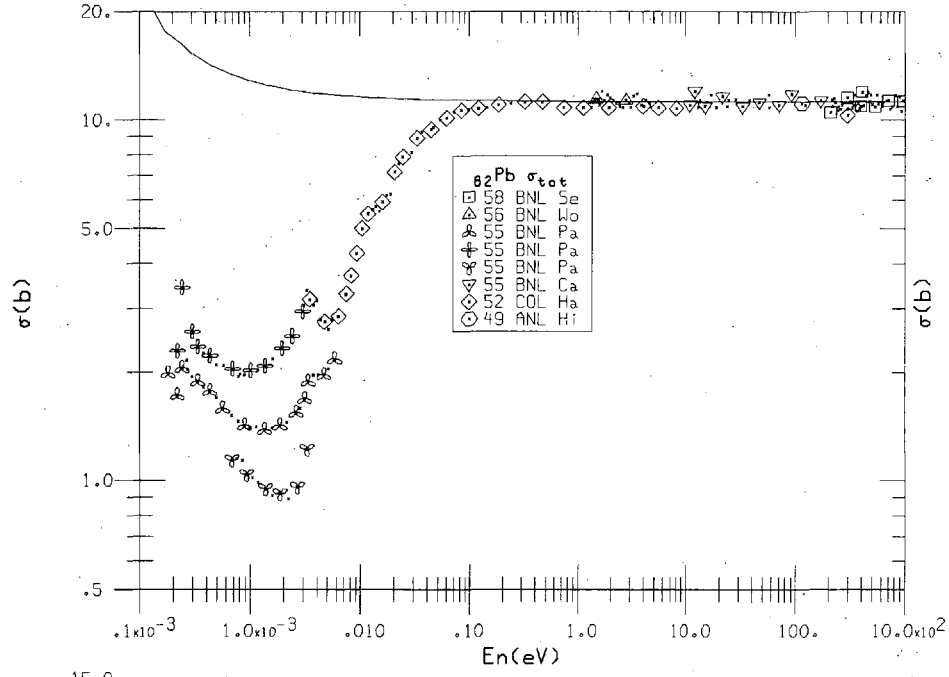


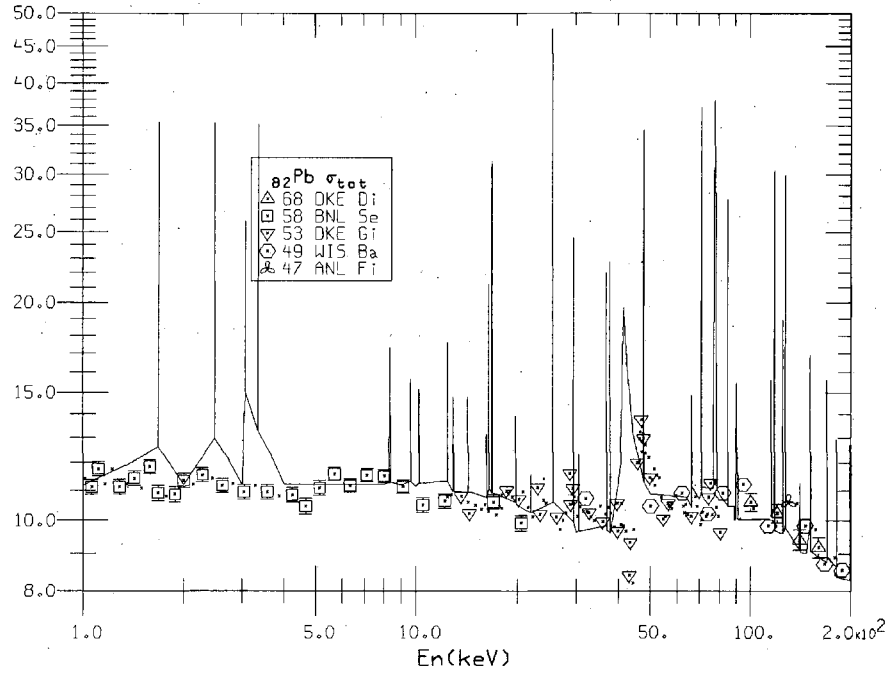


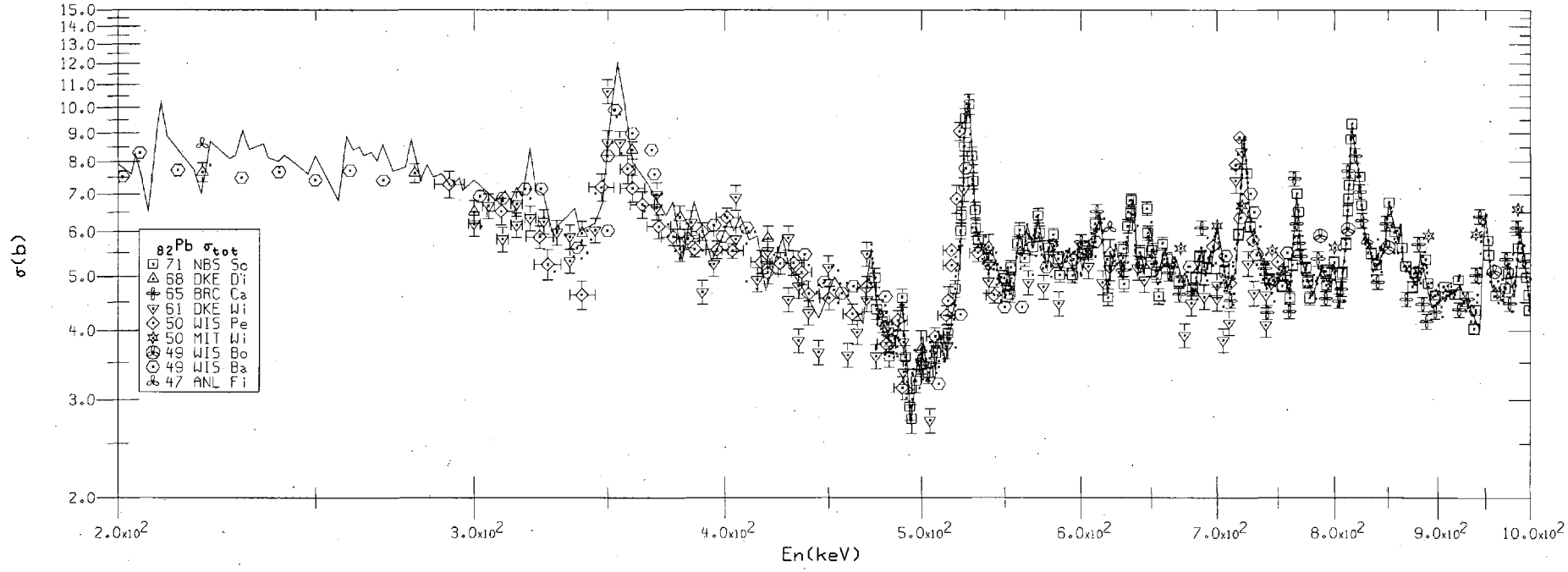
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{81}$Tl σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.254 MeV to 14.9 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000,68	5633	.420 MeV to 32.0 MeV	abs
65	LAS	Day	DAY,65	4	.500 MeV to 4.100 MeV	
65	DKE	Seth	PL,16,306,65	44	6.000 keV to .190 MeV	
62	ANL	Carpenter	CARPENTER,62	523	18.8 eV to 9.976 keV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.5 MeV to 28.9 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	2	27.0 MeV to 36.0 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.150 MeV to 14.1 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	42	13.1 eV to 3.850 keV	
57	DKE	Newson,et.al.	PR,105,198,57	163	.150 keV to 81.0 keV	
55	BNL	Hughes	HUGHES,55	65	83.8 eV to .537 keV	abs
54	LAS	Nereson,et.al.	PR,94,1678,54	31	2.750 MeV to 13.0 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.360 b at 14.1 MeV	
47	COL	Wu,et.al.	PR,71,174,47	46	.0145 eV to 2.850 keV	
			$_{81}$Tl σ_{el}			
65	ANL	Smith,et.al.	EANDC(US)62,65	25	.300 MeV to 1.500 MeV	C
			$_{81}$Tl σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	2	5.000 MeV to 6.000 MeV	
			$_{81}$Tl σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	22	60.0 keV to 1.780 MeV	
			$_{81}$Tl $\sigma_{n\gamma}$			
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	40.0 mb at .400 MeV	abs
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.120 mb at 14.1 MeV	
64	LEB	Konks,et.al.	ZET,47,795,64	120	.740 eV to 42.0 keV	
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.175 b at .200 MeV	
			$_{81}$Tl σ_{nf}			
55	CCP	Goldanskii+	DOK,101,1027,55	1	19.0 mb at 380.0 MeV	
			$^{203}_{81}$Tl σ_{tot}			
61	DKE	Newson	AP,14,346,61	126	4.000 keV to 60.0 keV	
			$^{203}_{81}$Tl $\sigma_{n\gamma}$			
64	LEB	Konks,et.al.	ZET,47,795,64	110	1.000 eV to 35.0 keV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{203}_{81}$Tl σ_{n2n}			
73	LOU	J,araminowicz+	INR-1464,14,73	1	1.834 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	1.950 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
68	DEB	Peto,et.al.	AHP,25,91,68	1	1.680 b at 15.0 MeV	^{89}Y σ_{n2n}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.185 b at 14.7 MeV	
66	ALD	Vallis	AWRE-O-76/66,66	1	1.967 b at 14.7 MeV	
61	LAS	Prestwood,et.al.	PR,121,1438,61	10	12.3 MeV to 19.8 MeV	^{238}U σ_{nf}
60	LRL	Tewes,et.al.	UCRL-6028-T,60	14	8.400 MeV to 15.1 MeV	
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	.680 b at 14.8 MeV	
			$^{203}_{81}$Tl σ_{n3n}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	10.0 mb at 14.7 MeV	^{203}Tl σ_{n2n}
61	LAS	Prestwood,et.al.	PR,121,1438,61	3	16.5 MeV to 19.8 MeV	^{238}U σ_{nf}
			$^{203}_{81}$Tl σ_{np}			
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	30.0 mb at 14.8 MeV	
			$^{203}_{81}$Tl $\sigma_{n\alpha}$			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	2.200 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.370 mb at 14.5 MeV	
			$^{203}_{81}$Tl σ_{nna}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	12.0 muB at 14.7 MeV	^{203}Tl $\sigma_{n\alpha}$
			$^{205}_{81}$Tl σ_{tot}			
61	DKE	Newson	AP,14,346,61	86	4.000 keV to 60.0 keV	
			$^{205}_{81}$Tl $\sigma_{n\gamma}$			
68	MUA	Hasan,et.al.	NC/B,58,402,68	1	30.0 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
64	LEB	Konks,et.al.	ZET,47,795,64	40	10.0 eV to 35.0 keV	
60	CCP	Stavisskii+	AE,9,401,60	42	25.0 keV to 2.800 MeV	^{235}U σ_{nf}
60	CCP	Stavisskii+	AE,9,401,60	42	25.0 keV to 2.800 MeV	^{235}U σ_{nf}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	2.000 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Kononov,et.al.	AE,5,564,58	1	51.0 mb at 21.0 keV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	5.200 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	5.070 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	5.100 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	2.900 mb at 3.100 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	3.600 mb at 2.500 MeV	^{127}I $\sigma_{n\gamma}$
58	UKR	Pasechnik,et.al.	58GENEVA,15,18,58	1	2.100 mb at 4.000 MeV	^{127}I $\sigma_{n\gamma}$

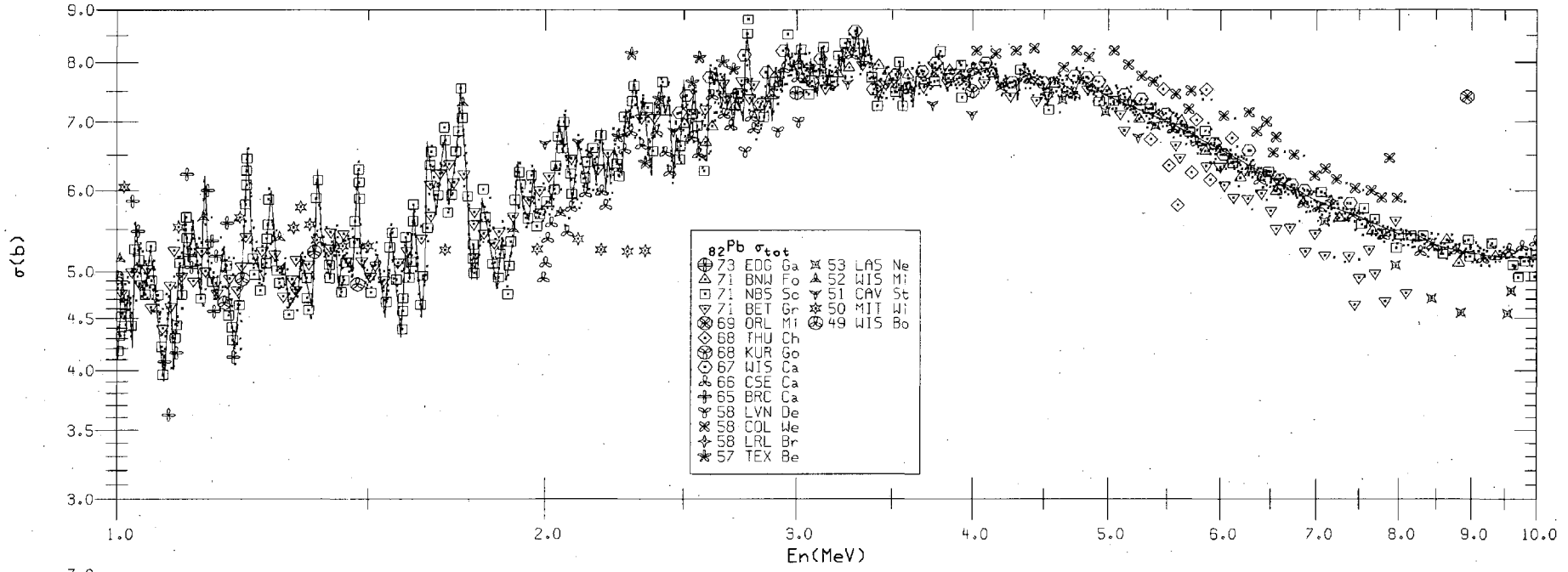
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{205}_{81}$Tl σ_{n2n}			
66	ALD	Vallis	AWRE-O-76/66,66	1	2.307 b at 14.7 MeV	
64	IRK	Spenke	NP,51,329,64	1	1.990 b at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{205}_{81}$Tl σ_{np}			
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	2.970 mb at 14.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	6.800 mb at 14.5 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	3.050 mb at 14.5 MeV	
			$^{205}_{81}$Tl σ_{n3}			
63	ARK	Bramlitt,et.al.	PR,131,2649,63	1	70.0 muB at 14.7 MeV	^{205}Tl $\sigma_{n\alpha}$
			$^{205}_{81}$Tl $\sigma_{n\alpha}$			
60	ARK	Poularikas,et.al	ARKANSAS,4,60	1	.750 mb at 14.8 MeV	

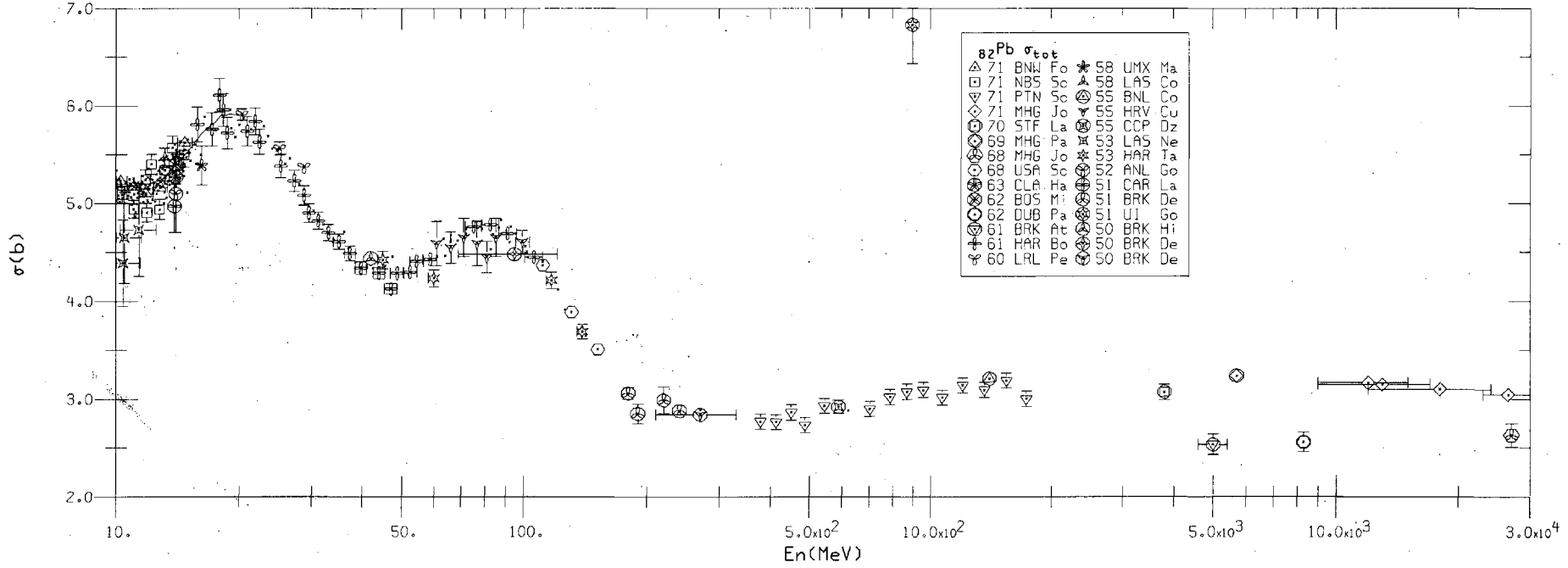

$_{82}$Pb σ_{tot}
58 BNL Se
56 BNL Wo
55 BNL Pa
55 BNL Pa
55 BNL Pa
55 BNL Ca
52 COL Ha
49 ANL Hi
σ(b)
En(eV)


$_{82}$Pb σ_{tot}
68 DKE Di
58 BNL Se
53 DKE Gi
49 WIS Ba
47 ANL Fi
σ(b)
En(keV)

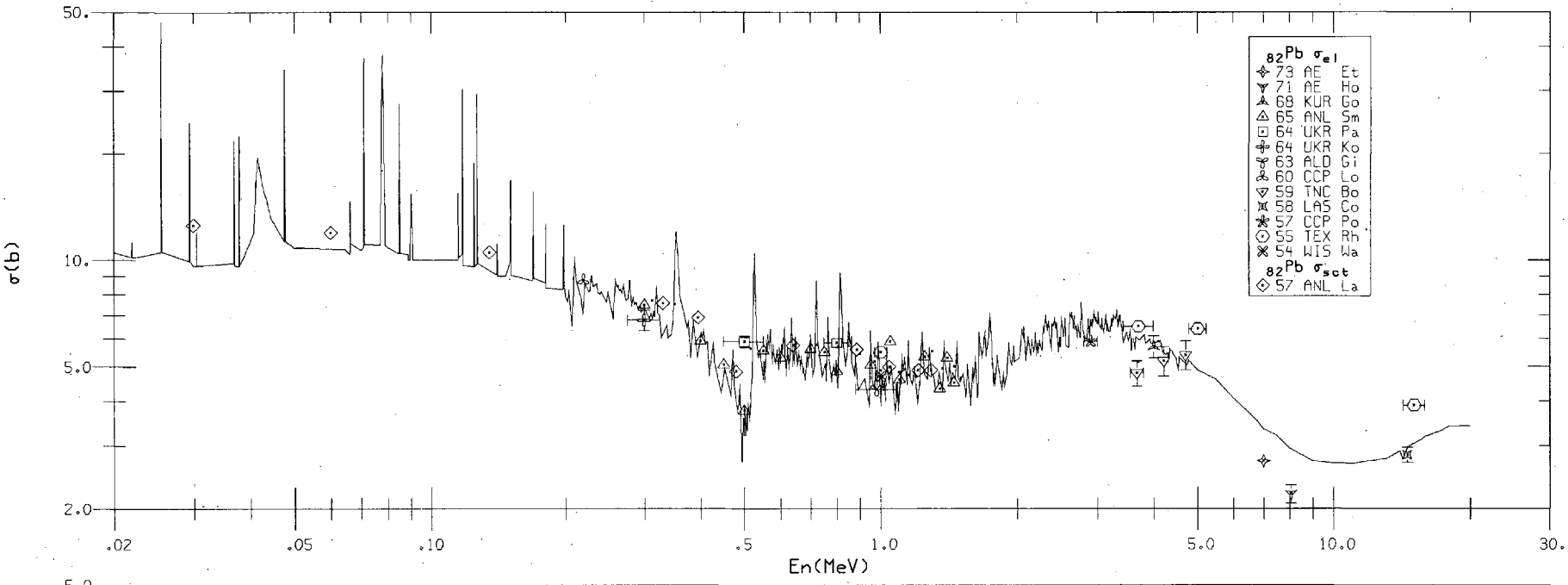

$_{82}$Pb σ_{tot}
71 NBS Sc
68 DKE Di
65 BRC Ca
61 DKE Wi
50 WIS Pe
50 MIT Wi
49 WIS Bo
49 WIS Ba
47 ANL Fi
σ(b)
En(keV)

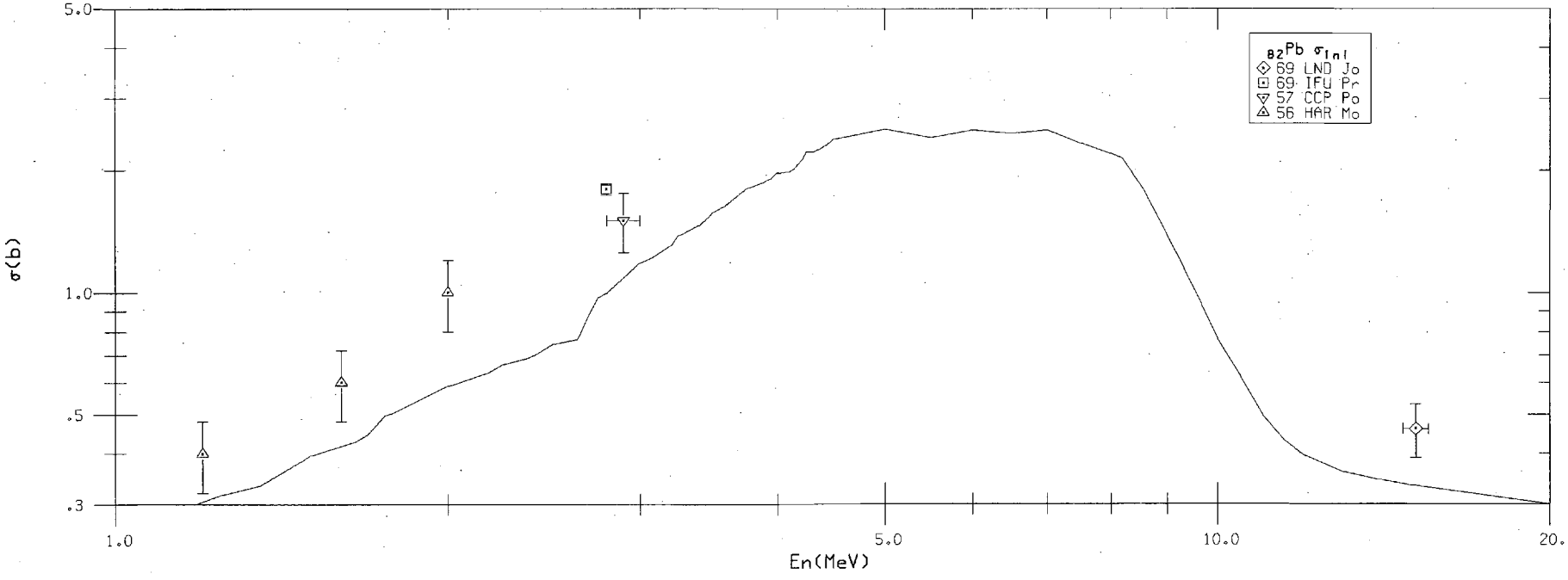
$_{82}$Pb
σ_{tot}
[1288]





$_{82}Pb$
σ_{el}
σ_{sct}
σ_{inl}
[1288]





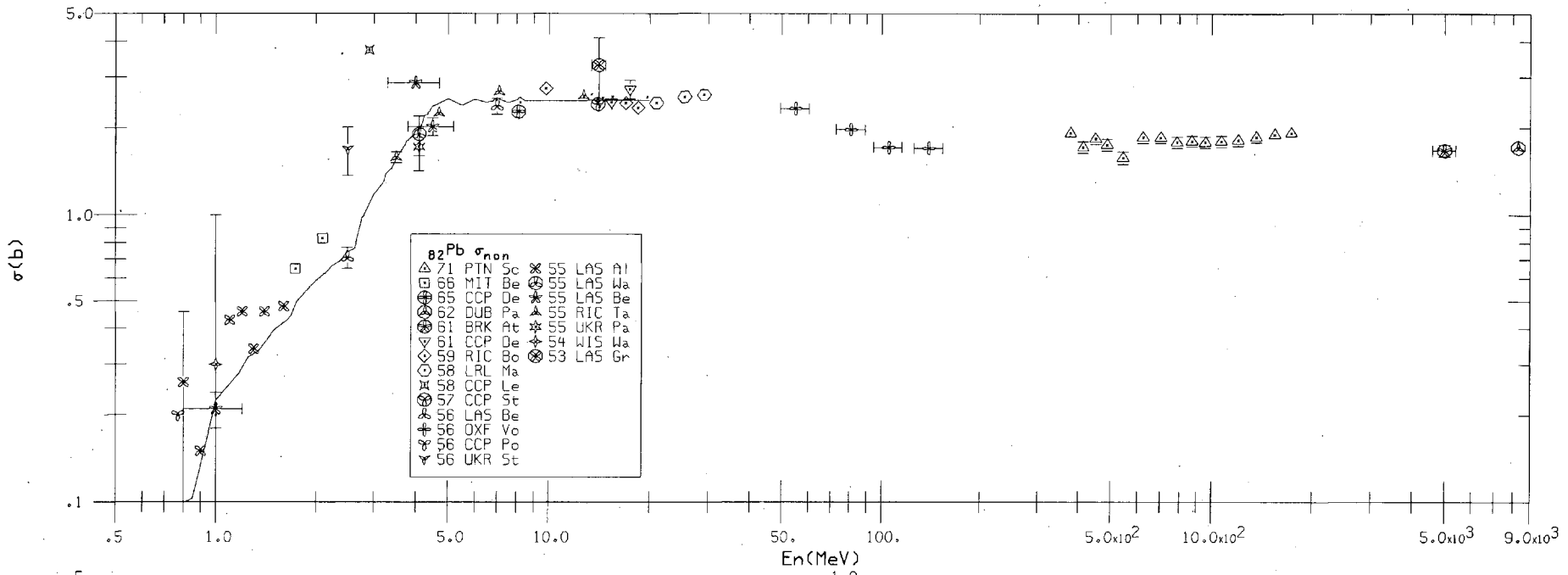
$_{82}Pb$

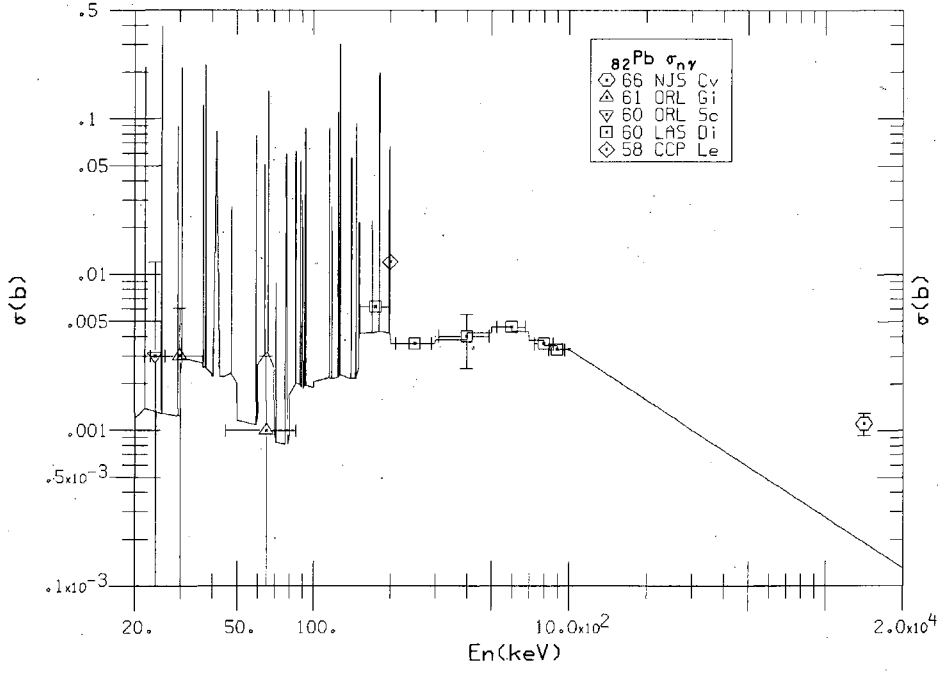
σ_{non}

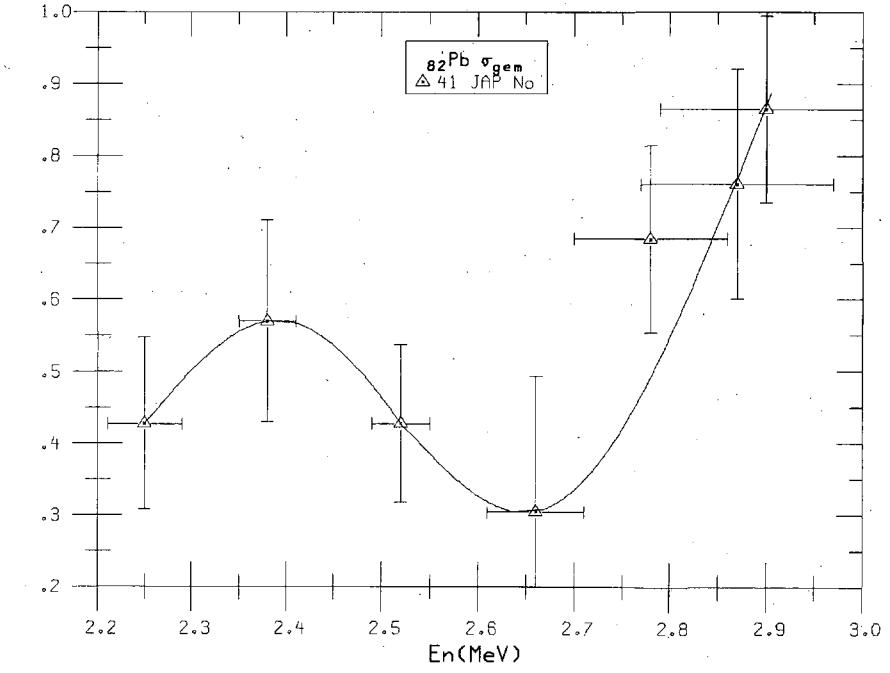
$\sigma_{n\gamma}$

[1288]

σ_{gem}







$^{204}_{82}Pb$

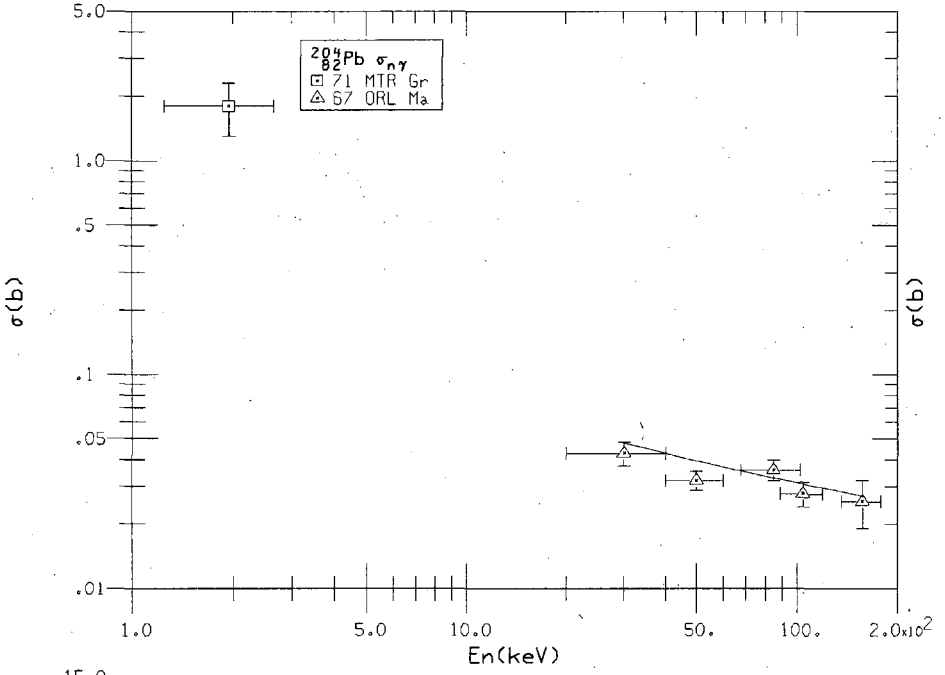
$\sigma_{n\gamma}$

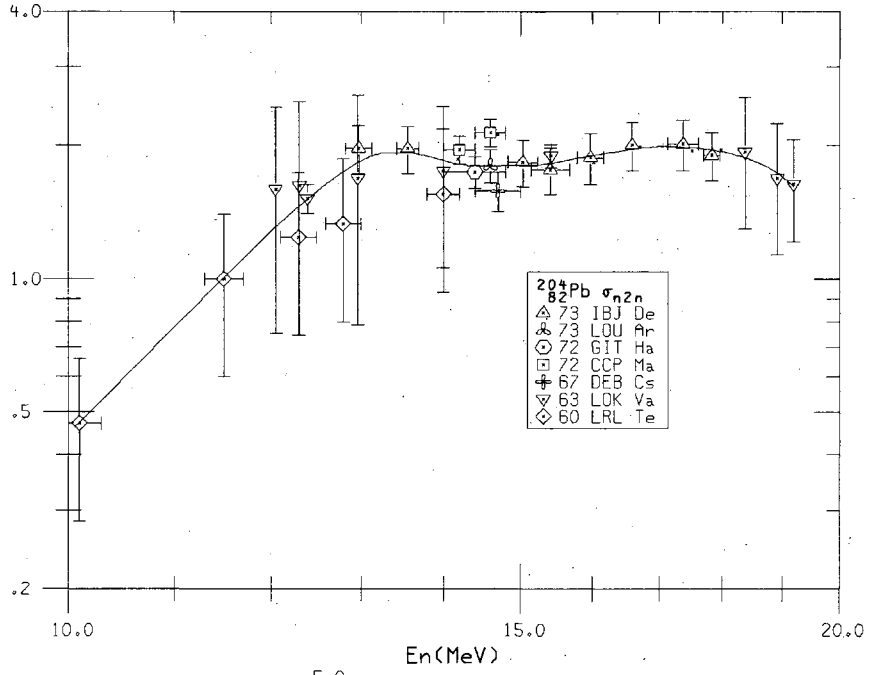
σ_{n2n}

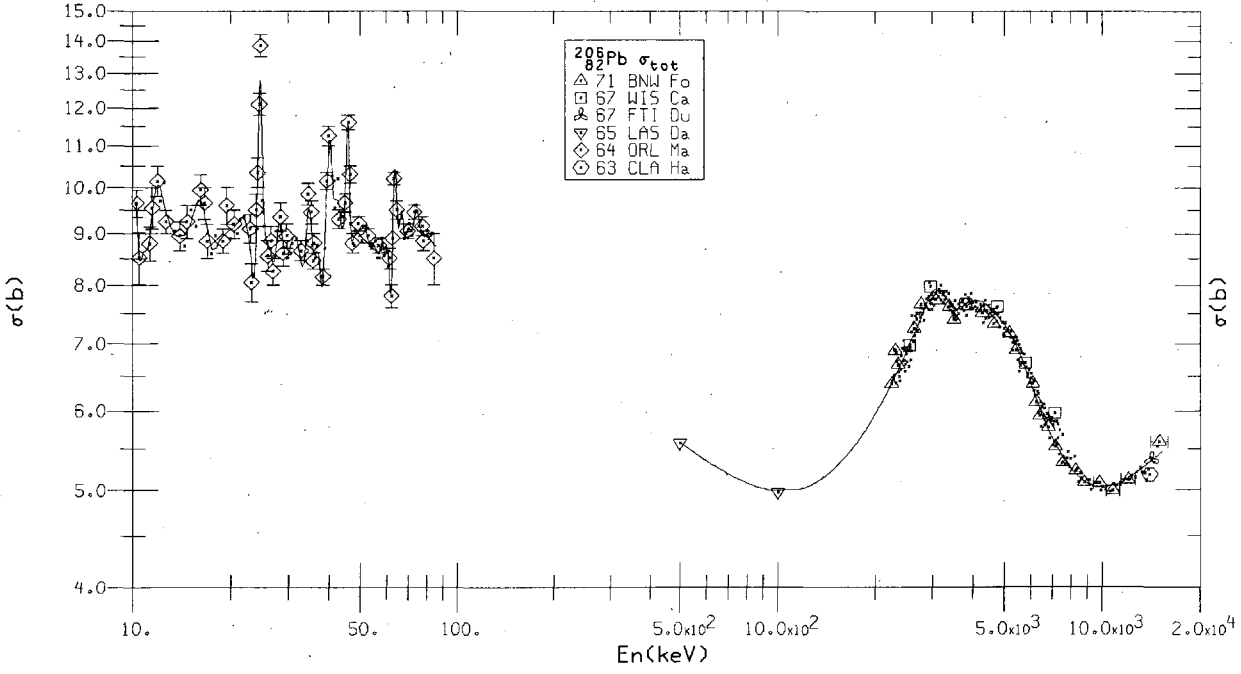
$^{206}_{82}Pb$

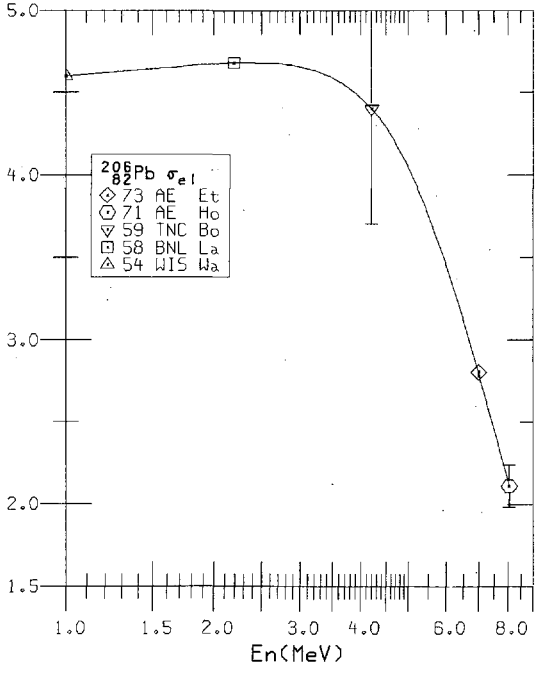
σ_{tot}

σ_{el}



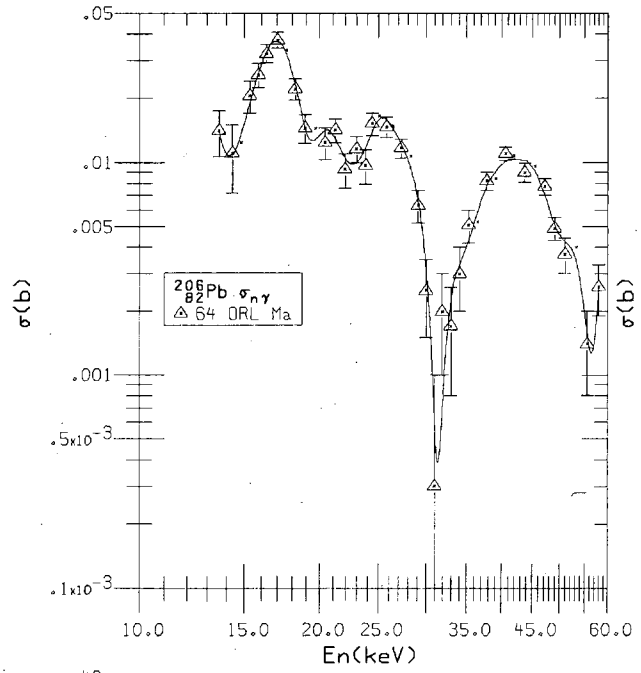


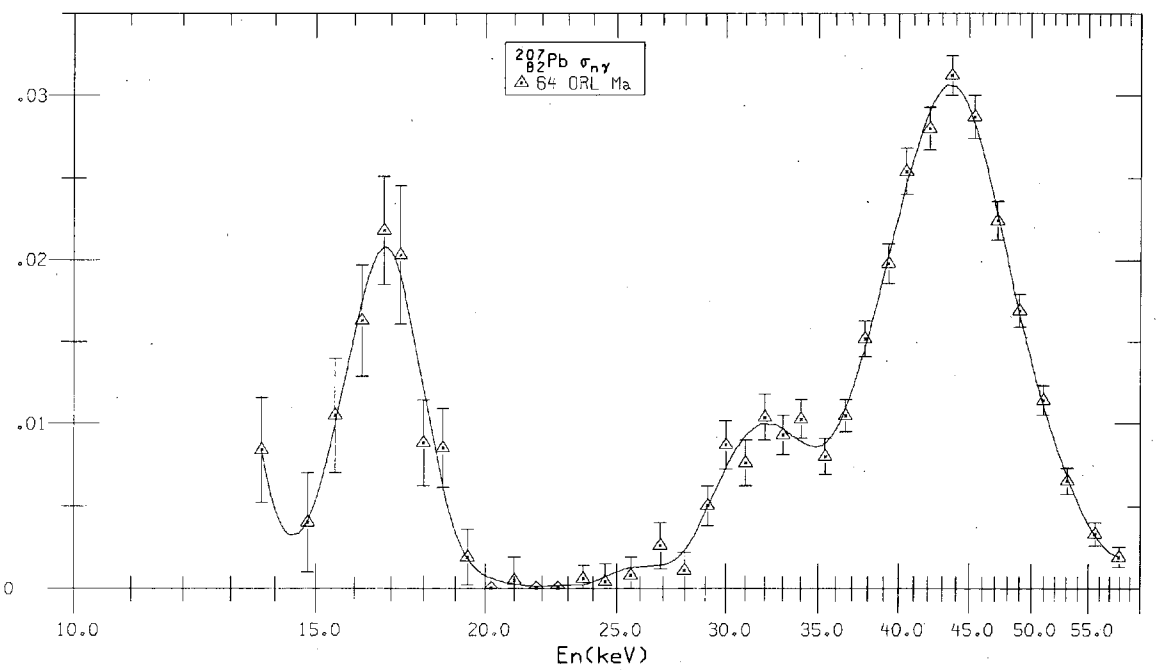


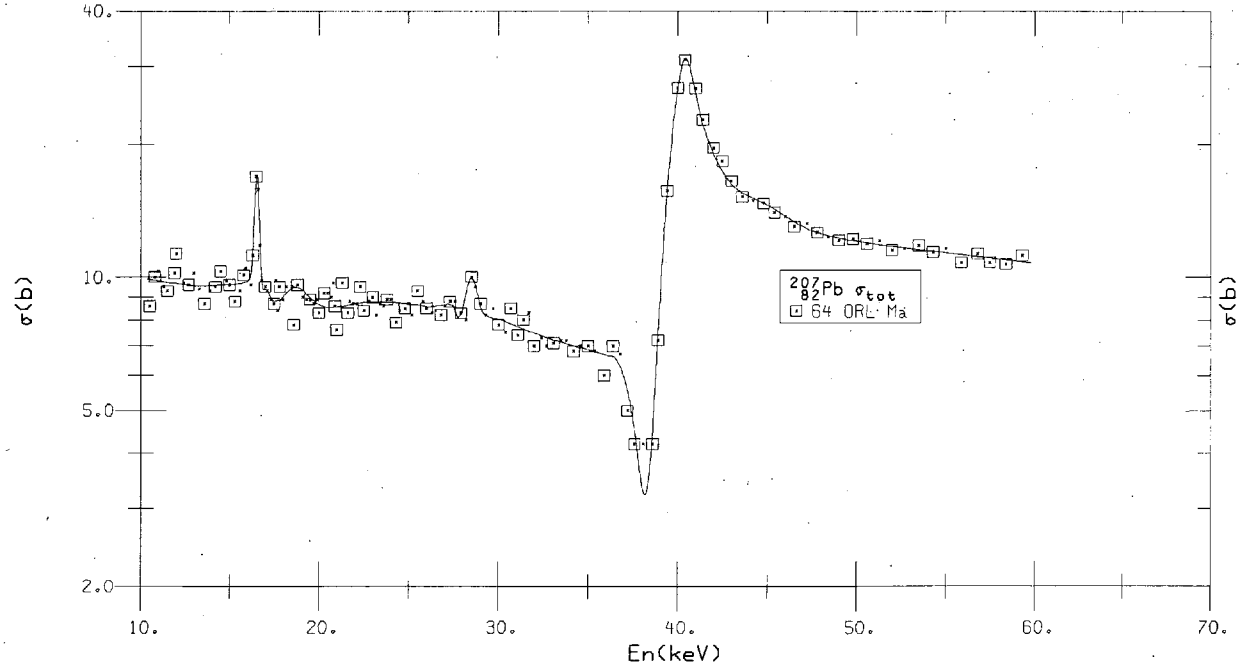


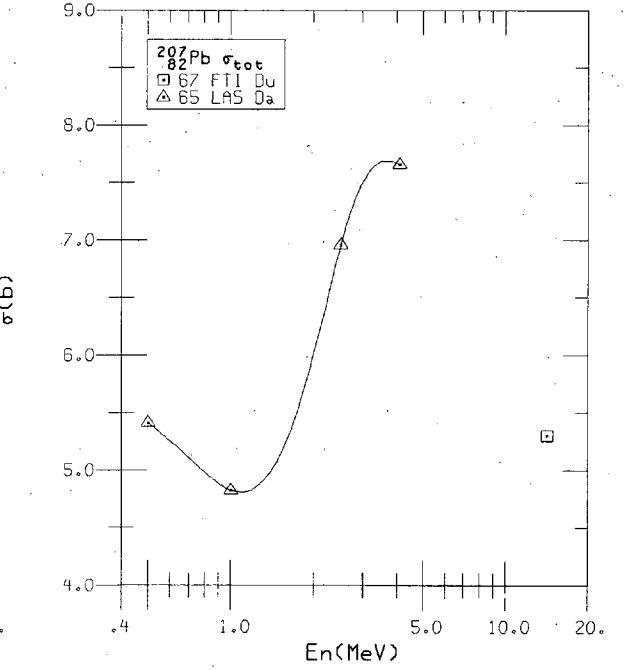
$^{206}_{82}Pb$ $\sigma_{n\gamma}$

$^{207}_{82}Pb$ σ_{tot} $\sigma_{n\gamma}$

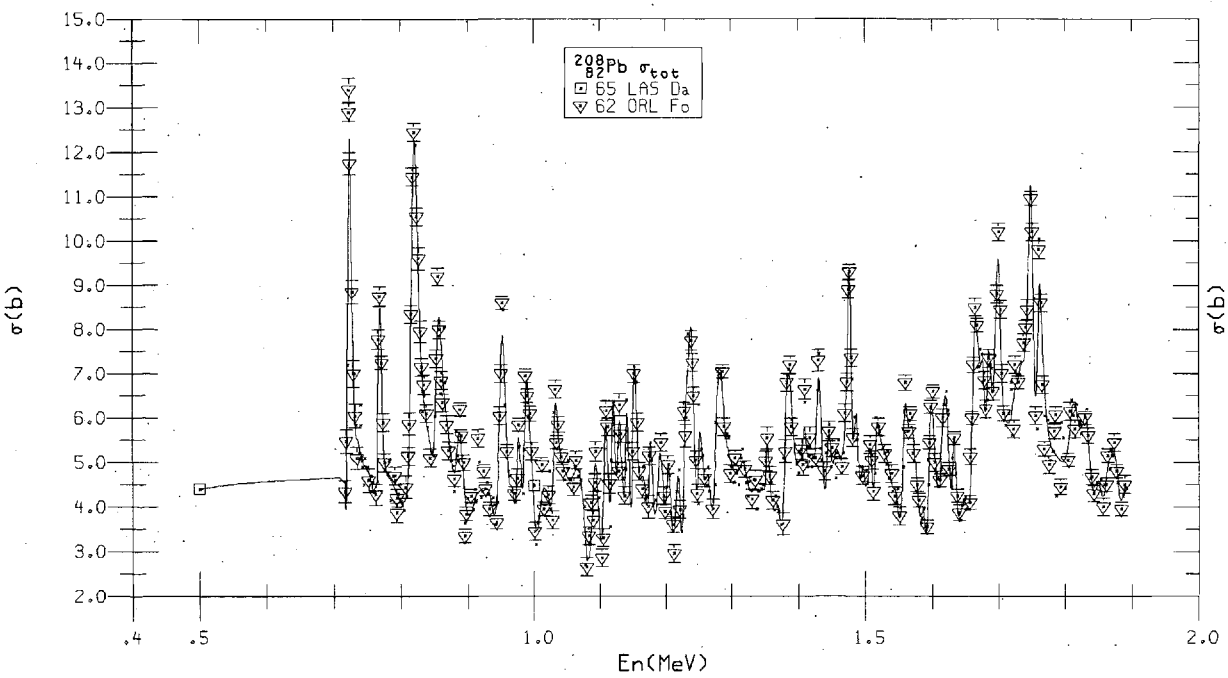


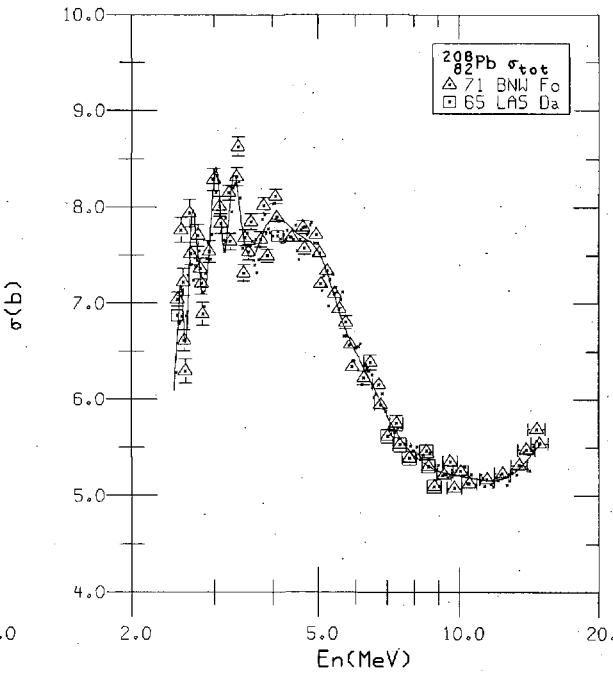


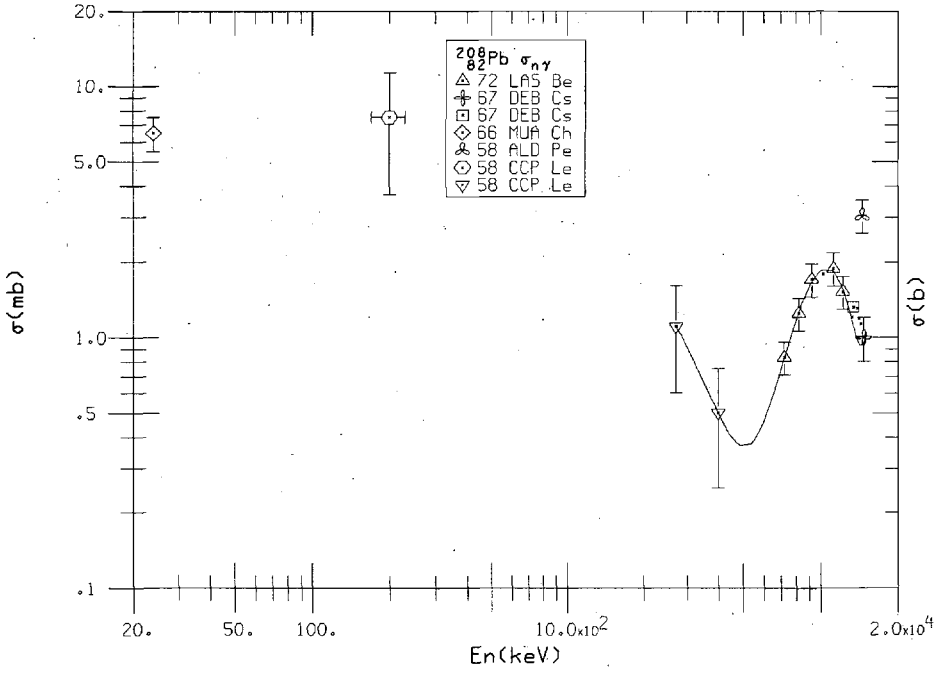


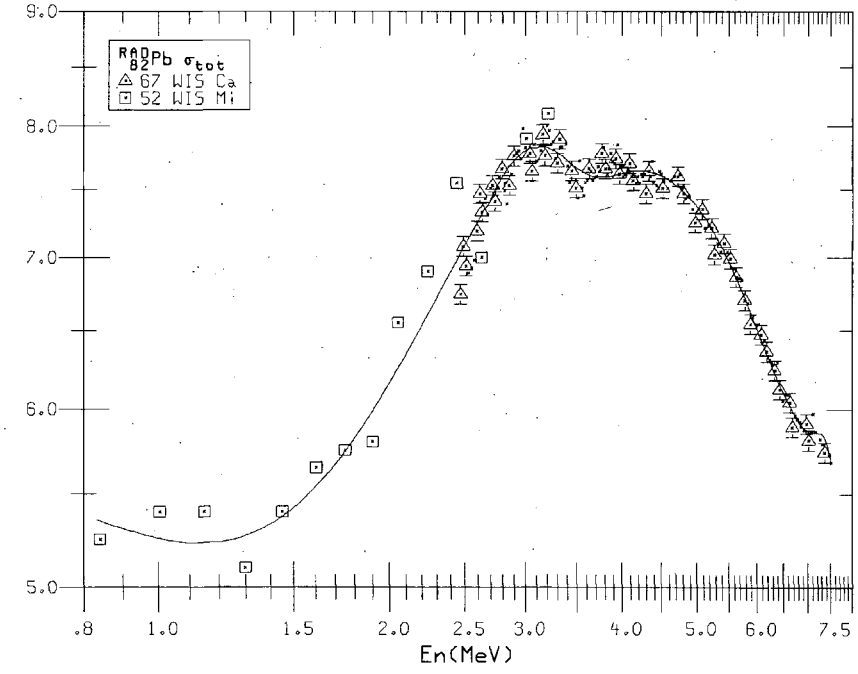


$^{208}_{82}Pb$ σ_{tot} $\sigma_{n\gamma}$ $^{RAD}_{82}Pb$ σ_{tot}









Yr	Lab	Author	Reference	Points	Range	Standard
			$_{82}$Pb σ_{tot}			
73	EDG	Galloway,et.al.	NP/A,212,182,73	1	7.460 b at 3.000 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	231	2.491 MeV to 14.9 MeV	
71	NBS	Schwartz	HEATON,71	3454	.473 MeV to 15.0 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	MHG	Jones,et.al.	PL/B,36,509,71	4	12.00 GeV to 27.00 GeV	abs
71	BET	Green,et.al.	71KNOX,1,325,71	434	1.001 MeV to 8.096 MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	5.340 b at 14.7 MeV	
70	STF	Lakin,et.al.	PL/B,31,677,70	1	3.071 b at 3800. MeV	
69	OAU	Robinson,et.al.	AJP,37,482,69	1	5.110 b at 15.0 MeV	abs
69	MHG	Parker,et.al.	UNIV-MI-03028-3T,69	1	3.240 b at 5700. MeV	
69	ORL	Minor,et.al.	AJP,37,649,69	1	7.390 b at 8.940 MeV	abs
68	DKE	Divadeenam	DA/B,28,3834,68	30	.100 MeV to .660 MeV	
68	THU	Chao-Yie Yang+	CHP,6,74,68	21	5.360 MeV to 6.200 MeV	
68	MHG	Jones,et.al.	PL/B,27,328,68	1	2.630 b at 27.00 GeV	
68	USA	Schneider,et.al.	NP/A,119,197,68	6	99.4 MeV to 151.9 MeV	abs
68	KUR	Gorlov,et.al.	YF,6,663,68	1	7.490 b at 4.000 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	334	2.463 MeV to 7.543 MeV	
67	NWU	Haugsnes	HAUGSNES,67	1	5.400 b at 14.1 MeV	
66	CSE	Calloway III+	COO-1573-6,66	347	1.995 MeV to 10.1 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	11.3 b at 1.440 eV	
65	BRC	Cabe,et.al.	EANDC(E)-57,150,65	174	.600 MeV to 1.207 MeV	abs
63	CLA	Haas,et.al.	PR,132,1211,63	1	5.270 b at 14.0 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	4.330 b at .980 MeV	abs
62	BOS	Mitra	62MADRAS,,61,62	1	5.400 b at 14.0 MeV	
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	2.556 b at 8300. MeV	
61	DKE	Wilenzick,et.al.	PR,121,1150,61	308	.300 MeV to .745 MeV	abs
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	2.534 b at 5000. MeV	
61	HAR	Bowen,et.al.	NP,22,640,61	64	15.8 MeV to 117.5 MeV	C
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.8 MeV	abs
58	LVN	Deconninck,et.al	BC5,44,851,58	9	2.100 MeV to 3.010 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	19	13.8 MeV to 14.8 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	10	13.0 MeV to 16.2 MeV	abs
58	LAS	Conner	PR,109,1268,58	6	13.1 MeV to 15.6 MeV	
58	COL	Weil,et.al.	PR,110,466,58	40	4.030 MeV to 8.080 MeV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.170 MeV to 14.3 MeV	abs
58	BNL	Seth,et.al.	PR,110,692,58	89	.210 keV to 20.6 keV	
57	TEX	Bennett,et.al.	BAP,2,232(X1),57	14	2.250 MeV to 2.745 MeV	
56	BNL	Wood	PR,104,1425,56	20	1.264 eV to 4.554 eV	
56	CCP	Khaletskii	DOK,113,305,56	1	5.280 b at 14.8 MeV	abs
55	LAS	Walt,et.al.	PR,98,677,55	1	7.800 b at 4.100 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	3.209 b at 1400. MeV	
55	HRV	Culler,et.al.	PR,99,740,55	12	61.0 MeV to 106.8 MeV	
55	BNL	Palevsky	PALEVSKY,55	60	.0002 eV to .0059 eV	
55	BNL	Carter	CARTER,55	17	11.0 eV to .171 keV	
55	CCP	Dzhelepov,et.al.	ZET,29,369,55	1	2.920 b at 590.0 MeV	
54	HRV	Hillman,et.al.	PR,96,115,54	1	4.830 b at 88.0 MeV	abs
54	HRV	Hillman,et.al.	PR,96,115,54	1	4.460 b at 47.5 MeV	abs
53	DKE	Gibbons	GIBBONS,53	104	12.4 keV to 80.7 keV	
53	LAS	Nereson,et.al.	PR,89,775,53	33	2.930 MeV to 13.1 MeV	
53	BAR	Whitehead,et.al.	PR,92,114,53	1	7.600 b at 3.700 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	5.960 b at 19.0 MeV	abs
53	HAR	Taylor,et.al.	PM,44,95,53	14	37.0 MeV to 153.0 MeV	
52	WIS	Miller,et.al.	PR,88,83,52	16	1.005 MeV to 3.210 MeV	abs
52	LAS	Coon,et.al.	PR,88,562,52	1	5.480 b at 14.1 MeV	
52	ANL	Goodman	PR,88,686,52	1	5.100 b at 14.0 MeV	
52	COL	Havens Jr	HAVENS,52	55	.0031 eV to .302 keV	
51	CAR	Lasday	PR,81,139,51	1	4.970 b at 13.9 MeV	
51	BRK	De Juren,et.al.	PR,81,919,51	4	180.0 MeV to 240.0 MeV	

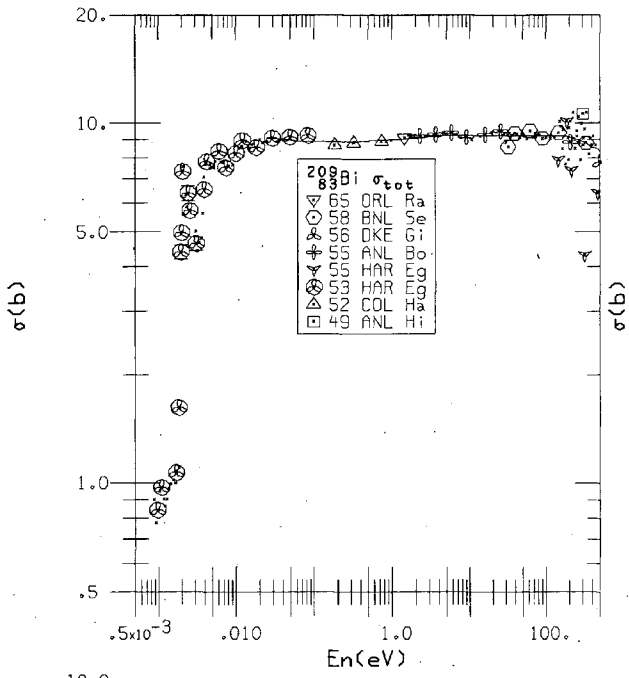
Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
51	UI	Good,et.al.	PR,59,917(19),51	1	6.830 b at 900.0 MeV	
51	CAV	Stafford	PPS/A,64,388,51	15	2.000 MeV to 5.880 MeV	
50	WIS	Peterson,et.al.	PR,79,935,50	112	.291 MeV to .750 MeV	abs
50	BRK	Hildebrand+	PR,80,842,50	1	4.440 b at 42.0 MeV	
50	MIT	Willard	WILLARD,50	31	.610 MeV to 2.350 MeV	abs
50	BRK	De Juren,et.al.	PR,77,606,50	1	4.480 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	2.890 b at 270.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	2.840 b at 270.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	4.530 b at 83.0 MeV	
49	WIS	Bockelman,et.al.	PR,76,277,49	15	.787 MeV to 1.475 MeV	abs
49	WIS	Barschall,et.al.	PR,76,1146,49	105	18.0 keV to .761 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	ANL	Fields,et.al.	PR,71,508,47	6	24.0 keV to .830 MeV	
			$_{82}$Pb σ_{el}			
73	AE	Etemad	AE-482,73	1	2.720 b at 7.000 MeV	^{1}H σ_{el}
72	ANL	Cox,et.al.	ANL-7935,72	1	4.831 b at 1.098 MeV	C σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.200 b at 8.050 MeV	^{1}H σ_{el}
68	KUR	Gorlov,et.al.	YF,6,663,68	1	5.700 b at 4.000 MeV	
65	ANL	Smith,et.al.	EANDC(US)62,65	25	.300 MeV to 1.500 MeV	C
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
64	UKR	Korzh,et.al.	UFZ,9,577,64	1	6.780 b at .300 MeV	
63	ALD	Gilboy,et.al.	NP,42,86,63	1	4.320 b at .980 MeV	H
63	UKR	Korzh,et.al.	UFZ,8,1323,63	1	5.850 b at .650 MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	.864 b at 5000. MeV	
60	CCP	Lovchikova	ZET,38,1434,60	1	8.790 b at .220 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-31,59	3	3.670 MeV to 4.700 MeV	
58	LAS	Coon,et.al.	PR,111,250,58	1	2.830 b at 14.5 MeV	
57	CCP	Popov	AE,3,498,57	1	5.900 b at 2.900 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	5.900 b at 4.100 MeV	
55	TEX	Rhein	PR,98,1300,55	4	1.000 MeV to 15.0 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.700 b at 1.000 MeV	
53	BAR	Whitehead,et.al.	PR,92,114,53	1	5.170 b at 3.700 MeV	
			$_{82}$Pb σ_{inl}			
69	LND	Joensson,et.al.	AF,39,295,69	1	.460 b at 15.1 MeV	^{12}C σ_{ing}
69	IFU	Prokopesc,et.al.	UFZ,14,(2),330,69	1	1.790 b at 2.800 MeV	
57	CCP	Popov	AE,3,498,57	1	1.500 b at 2.900 MeV	
56	HAR	Morrison	56AMSTERDM,,1135,56	3	1.200 MeV to 2.000 MeV	
			$_{82}$Pb σ_{sct}			
65	ORL	Rayburn,et.al.	NP,61,381,65	1	11.3 b at 1.440 eV	
57	ANL	Langsdorf Jr+	PR,107,1077,57	20	30.0 keV to 1.450 MeV	

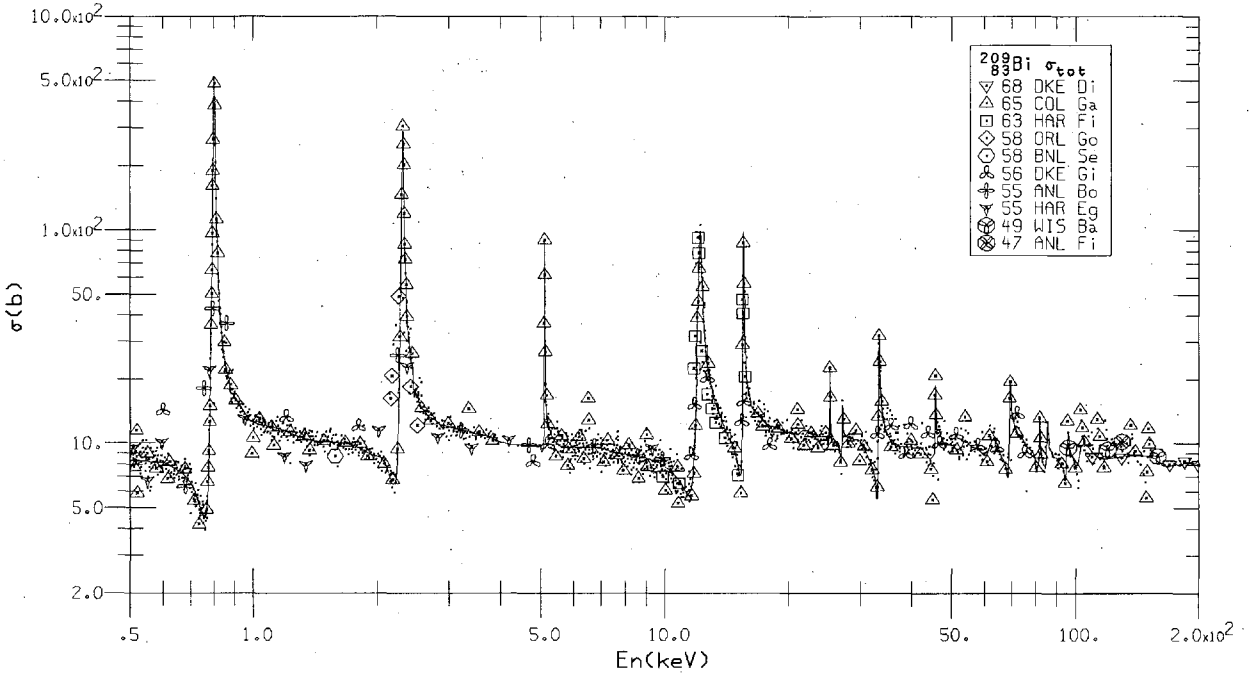
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{82}$Pb σ_{non}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
67	BDS	Chatterjee,et.al.	PR,161,1181,67	1	2.500 b at 14.8 MeV	abs
66	MIT	Beghian,et.al.	66WASH,2,726,66	2	1.740 MeV to 2.100 MeV	
65	CCP	Degtyarev	AE,19,456,65	1	2.280 b at 8.100 MeV	
63	CLA	Haas,et.al.	PR,132,1211,63	1	2.530 b at 14.0 MeV	
62	DUB	Pantuev,et.al.	ZET,42,909,62	1	1.713 b at 8300. MeV	
61	BRK	Atkinson,et.al.	PR,123,1850,61	1	1.670 b at 5000. MeV	
61	CCP	Degtyarev+	AE,11,397,61	4	13.4 MeV to 19.7 MeV	abs
59	RIC	Bonner,et.al.	PR,113,1088,59	5	8.200 MeV to 18.5 MeV	abs
58	LRL	Mac Gregor+	PR,111,1155,58	3	21.0 MeV to 29.2 MeV	abs
58	CCP	Lebedev,et.al.	AE,5,522,58	1	2.460 b at 14.0 MeV	abs
58	CCP	Lebedev,et.al.	AE,5,522,58	1	3.720 b at 2.900 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	2.560 b at 14.2 MeV	
57	LRL	Mac Gregor+	PR,108,726,57	1	2.380 b at 14.2 MeV	
57	CCP	Strizhak	AE,2,68,57	1	2.420 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	2	2.500 MeV to 7.000 MeV	
56	OXF	Voss,et.al.	PRS/A,236,41,56	4	55.0 MeV to 140.0 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	2.540 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	2	.770 MeV to 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	1.690 b at 2.500 MeV	abs
55	LAS	Allen	ALLEN,55	8	.800 MeV to 1.600 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	2.490 b at 14.1 MeV	
55	LAS	Walt,et.al.	PR,98,677,55	1	1.900 b at 4.100 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	RIC	Taylor,et.al.	PR,100,174,55	5	3.500 MeV to 14.1 MeV	abs
55	UKR	Pasechnik	55GENEVA,2,3,55	1	1.720 b at 4.100 MeV	abs
54	WIS	Walt,et.al.	PR,93,1062,54	1	.300 b at 1.000 MeV	
53	LAS	Graves,et.al.	PR,89,343,53	1	3.300 b at 14.1 MeV	
52	LAS	Phillips,et.al.	PR,88,600,52	1	2.560 b at 14.1 MeV	
			$_{82}$Pb $\sigma_{n\gamma}$			
66	NJS	Cvelbar,et.al.	NIM,44,292,66	1	1.110 mb at 14.1 MeV	
61	BUC	Stefanescu,et.al	61BUCHAR,,553,61	1	.172 b at thermal	B $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	ORL	Schmitt,et.al.	NP,20,202,60	1	3.000 mb at 24.0 keV	
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U σ_{abs}
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	12.0 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$_{82}$Pb σ_{ing}			
52	NRD	Scherrer,et.al.	PR,91,1476,52	1	4.200 b at 14.2 MeV	
			$_{82}$Pb σ_{gem}			
41	JAP	Nonaka	JMJ,23,925,41	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}

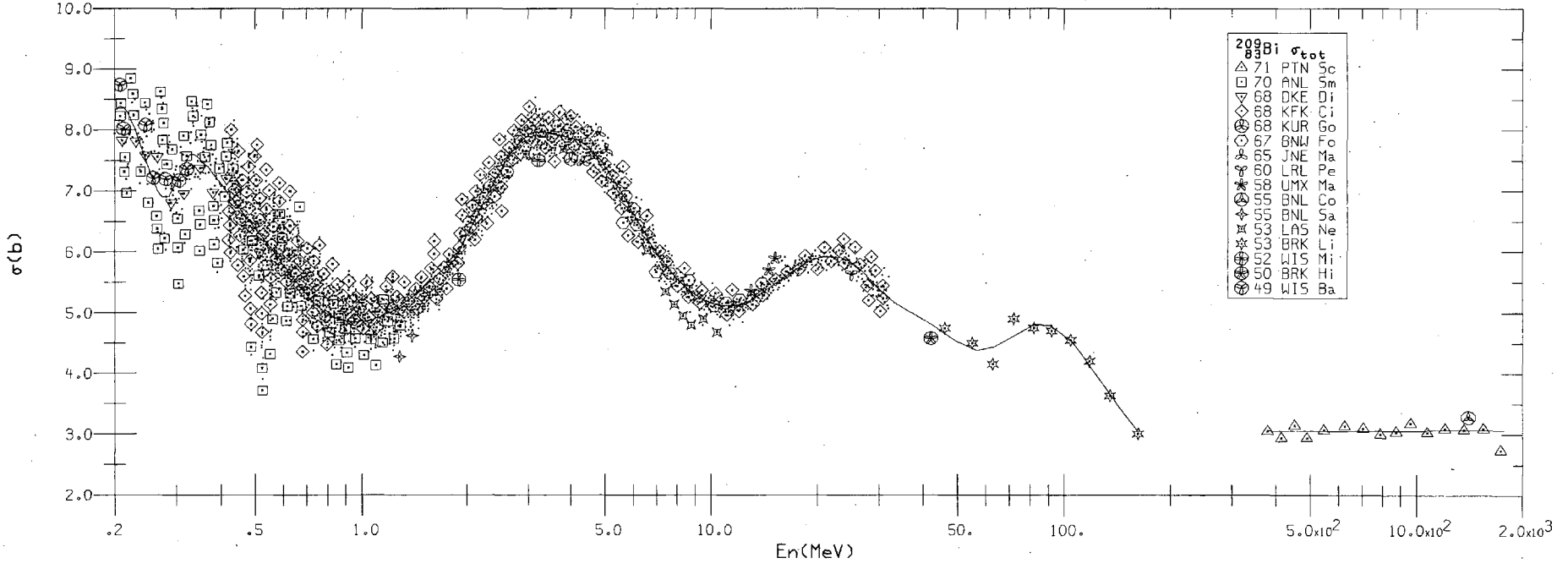
Yr	Lab	Author	Reference	Points	Range	Standard
			$_{82}$Pb σ_{n2n}			
72	CCP	Maslov,et.al.	YK-9,50,72	1	2.240 b at 14.2 MeV	^{65}Cu σ_{n2n}
69	LND	Joensson,et.al.	AF,39,295,69	1	2.000 b at 15.1 MeV	^{12}C σ_{ing}
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	1.936 b at 14.1 MeV	^{238}U σ_{nf}
58	LRL	Ashby,et.al.	PR,111,616,58	1	2.650 b at 14.1 MeV	
58	CCP	Flerov,et.al.	AE,5,657,58	1	2.300 b at 14.0 MeV	
			$_{82}$Pb σ_{nf}			
55	CCP	Goldanskii+	DOK,101,1027,55	1	33.0 mb at 380.0 MeV	
			$^{204}_{82}$Pb σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	5.430 b at 14.2 MeV	abs
			$^{204}_{82}$Pb σ_{inl}			
67	DEB	Csikai,et.al.	AHP,23,87,67	1	76.5 mb at 14.7 MeV	^{65}Cu σ_{n2n}
			$^{204}_{82}$Pb $\sigma_{n\gamma}$			
71	MTR	Greenwood,et.al.	PR/C,4,2249,71	1	1.800 b at 1.950 keV	abs
67	ORL	Macklin,et.al.	PR,159,1007,67	5	30.0 keV to .157 MeV	Ta $\sigma_{n\gamma}$
			$^{204}_{82}$Pb σ_{n2n}			
73	IBJ	Decowski,et.al.	NP/A,204,121,73	9	13.0 MeV to 17.8 MeV	^{56}Fe σ_{np}
73	LOU	Araminowicz+	INR-1464,14,73	1	1.796 b at 14.6 MeV	^{63}Cu σ_{n2n}
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	1.737 b at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
72	CCP	Maslov,et.al.	YK-9,50,72	2	14.2 MeV to 14.6 MeV	^{65}Cu σ_{n2n}
68	MUN	Dilg,et.al.	NP/A,118,9,68	1	2.110 b at 14.7 MeV	
67	DEB	Csikai,et.al.	AHP,23,87,67	1	1.575 b at 14.7 MeV	^{65}Cu σ_{n2n}
63	LOK	Vaughn	VAUGHN,63	13	12.1 MeV to 19.2 MeV	
60	LRL	Tewes,et.al.	UCRL-6028-T,60	5	10.1 MeV to 14.0 MeV	
			$^{206}_{82}$Pb σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	502	2.252 MeV to 15.0 MeV	
67	WIS	Carlson,et.al.	PR,158,1142,67	164	2.463 MeV to 7.543 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	5.370 b at 14.2 MeV	abs
65	LAS	Day	DAY,65	4	.500 MeV to 4.100 MeV	
64	ORL	Macklin,et.al.	PR/B,136,695,64	274	10.3 keV to 84.5 keV	abs
63	CLA	Haas,et.al.	PR,132,1211,63	1	5.180 b at 14.0 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.400 b at 14.1 MeV	
			$^{206}_{82}$Pb σ_{el}			
73	AE	Etemad	AE-482,73	1	2.778 b at 7.000 MeV	^{1}H σ_{el}
73	AE	Etemad	AE-482,73	1	2.804 b at 7.000 MeV	^{1}H σ_{el}
71	AE	Holmqvist,et.al.	AE-430,71	1	2.110 b at 8.050 MeV	^{1}H σ_{el}
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	4.400 b at 4.210 MeV	H
58	BNL	Landon,et.al.	PR,112,1192,58	1	4.680 b at 2.200 MeV	Fe σ_{el}
54	WIS	Walt,et.al.	PR,93,1062,54	1	4.600 b at 1.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{206}_{82}$Pb σ_{inl}			
63	LAS	Thomson	PR,129,1649,63	1	2.390 b at 7.000 MeV	
58	BNL	Landon,et.al.	PR,112,1192,58	1	.860 b at 2.200 MeV	Fe σ_{inl}
			$^{206}_{82}$Pb σ_{non}			
63	CLA	Haas,et.al.	PR,132,1211,63	1	2.500 b at 14.0 MeV	
59	TNC	Bostrom,et.al.	WADC-TR-59-107,59	1	4.200 b at 4.210 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	.200 b at 1.000 MeV	
			$^{206}_{82}$Pb $\sigma_{n\gamma}$			
64	ORL	Macklin,et.al.	PR/B,136,695,64	42	13.6 keV to 58.0 keV	Ta $\sigma_{n\gamma}$
			$^{206}_{82}$Pb σ_{n2n}			
73	SMU	Salaita,et.al.	JIN,35,2139,73	1	.866 b at 14.8 MeV	
			$^{206}_{82}$Pb $\sigma_{n\alpha}$			
72	CCP	Maslov,et.al.	YK-9,50,72	2	14.2 MeV to 14.6 MeV	^{65}Cu σ_{n2n}
67	IIT	Yu-Wen Yu,et.al.	NP/A,98,451,67	1	2.700 mb at 14.1 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{207}_{82}$Pb σ_{tot}			
67	FTI	Dukarevich+	NP/A,92,433,67	1	5.300 b at 14.2 MeV	abs
65	LAS	Day	DAY,65	4	.500 MeV to 4.100 MeV	
64	ORL	Macklin,et.al.	PR/B,136,695,64	286	10.5 keV to 59.3 keV	abs
			$^{207}_{82}$Pb $\sigma_{n\gamma}$			
64	ORL	Macklin,et.al.	PR/B,136,695,64	38	13.7 keV to 57.9 keV	Ta $\sigma_{n\gamma}$
			$^{208}_{82}$Pb σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	231	2.491 MeV to 14.9 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	5.260 b at 14.2 MeV	abs
65	LAS	Day	DAY,65	4	.500 MeV to 4.100 MeV	
62	ORL	Fowler,et.al.	PR,127,2192,62	536	.717 MeV to 1.892 MeV	abs
			$^{208}_{82}$Pb σ_{non}			
63	CLA	Haas,et.al.	PR,132,1211,63	1	2.580 b at 14.0 MeV	
			$^{208}_{82}$Pb $\sigma_{n\gamma}$			
72	LAS	Bergqvist,et.al.	NP/A,191,641,72	8	7.200 MeV to 14.7 MeV	
71	LAS	Drake,et.al.	PL/B,36,557,71	1	.994 mb at 14.0 MeV	H σ_{tot}
67	DEB	Csikai,et.al.	NP/A,95,229,67	1	1.000 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
67	DEB	Csikai,et.al.	NP/A,95,229,67	7	13.4 MeV to 15.0 MeV	
66	MUA	Chaubey,et.al.	PR,152,1055,66	1	6.500 mb at 24.0 keV	^{127}I $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	3.050 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{208}_{82}$Pb σ_{np}			
72	GIT	Hankla,et.al.	NP/A,180,157,72	1	.460 mb at 14.4 MeV	^{27}Al $\sigma_{n\alpha}$
72	CCP	Maslov,et.al.	YK-9,50,72	1	1.260 mb at 14.6 MeV	^{65}Cu σ_{n2n}
53	CRC	Paul,et.al.	CJP,31,267,53	1	.960 mb at 14.5 MeV	
			$^{208}_{82}$Pb $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.580 mb at 14.5 MeV	
			$^{RAD}_{82}$Pb σ_{tot}			
67	WIS	Carlson,et.al.	PR,158,1142,67	164	2.471 MeV to 7.507 MeV	
52	WIS	Miller,et.al.	PR,88,83,52	15	.840 MeV to 3.210 MeV	abs


$^{209}_{83}$Bi σ_{tot}
65 ORL Ra
58 BNL Se
56 DKE Gi
55 ANL Bo
55 HAR Eg
53 HAR Eg
52 COL Ha
49 ANL Hi
σ(b)
En(eV)


$^{209}_{83}$Bi σ_{tot}
68 DKE Di
65 COL Ga
63 HAR Fi
58 ORL Go
58 BNL Se
56 DKE Gi
55 ANL Bo
55 HAR Eg
49 WIS Ba
47 ANL Fi
σ(b)
En(keV)


$^{209}_{83}$Bi σ_{tot}
71 PTN Sc
70 ANL Sm
68 DKE Di
68 KFK Ci
68 KUR Go
67 BNW Fo
65 JNE Ma
60 LRL Pe
58 UMX Ma
55 BNL Co
55 BNL Sa
53 LAS Ne
53 BRK Li
52 WIS Mi
50 BRK Hi
49 WIS Ba
σ(b)
En(MeV)

$^{209}_{83}$Bi

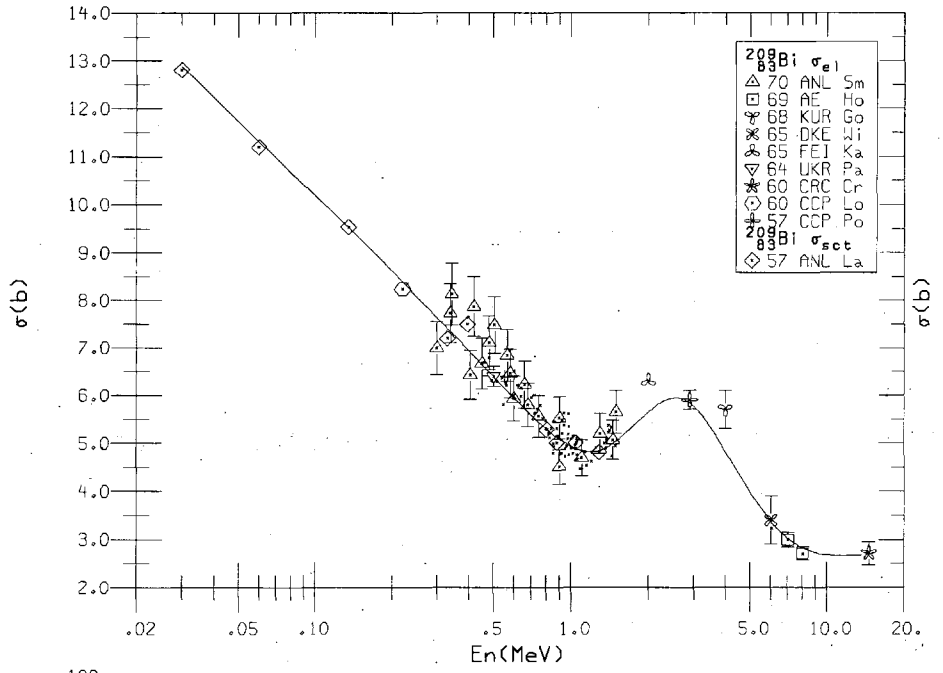
σ_{el}

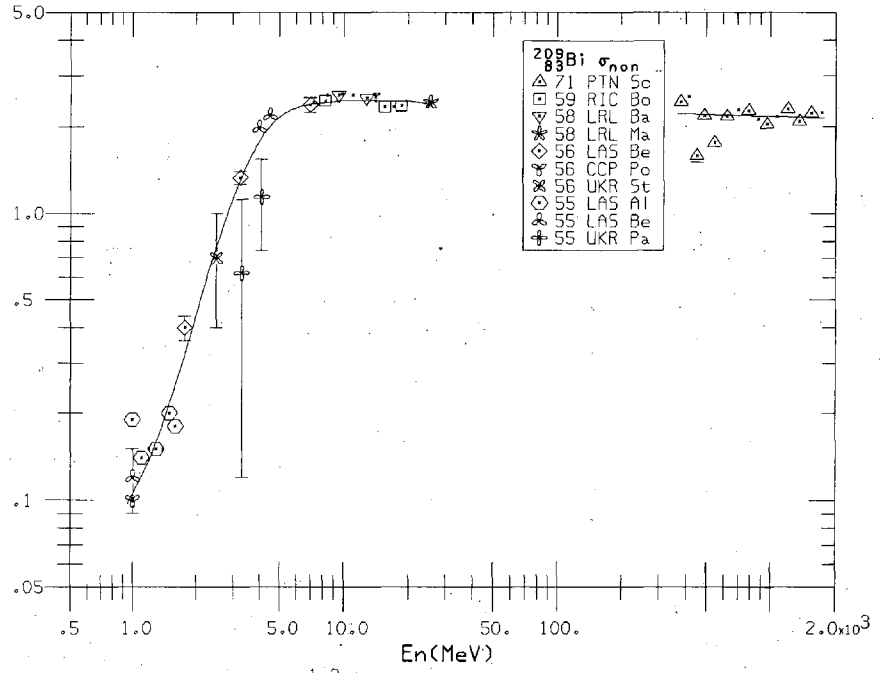
σ_{sct}

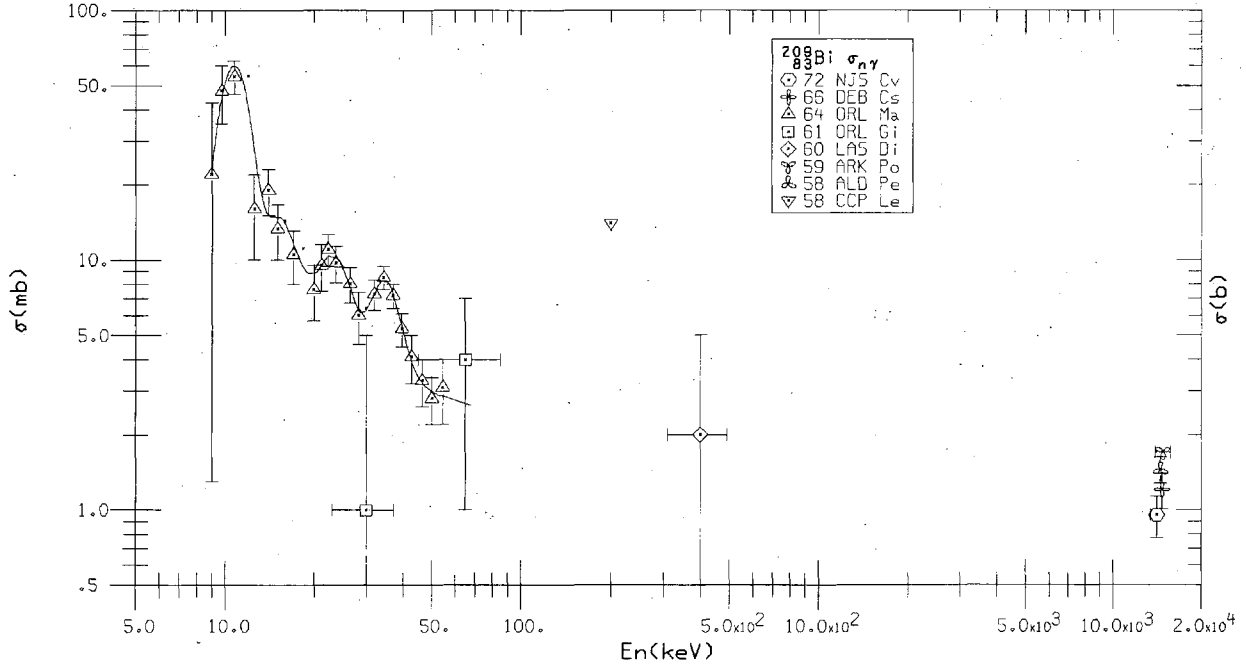
σ_{non}

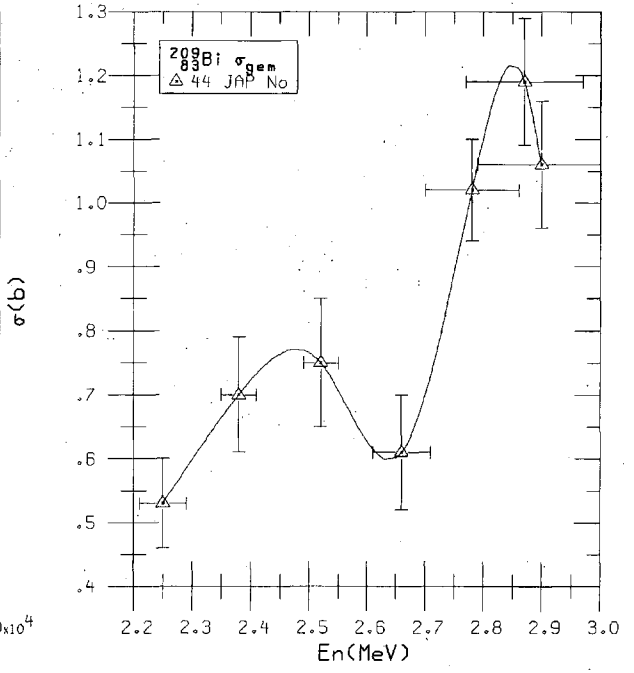
$\sigma_{n\gamma}$

σ_{gem}





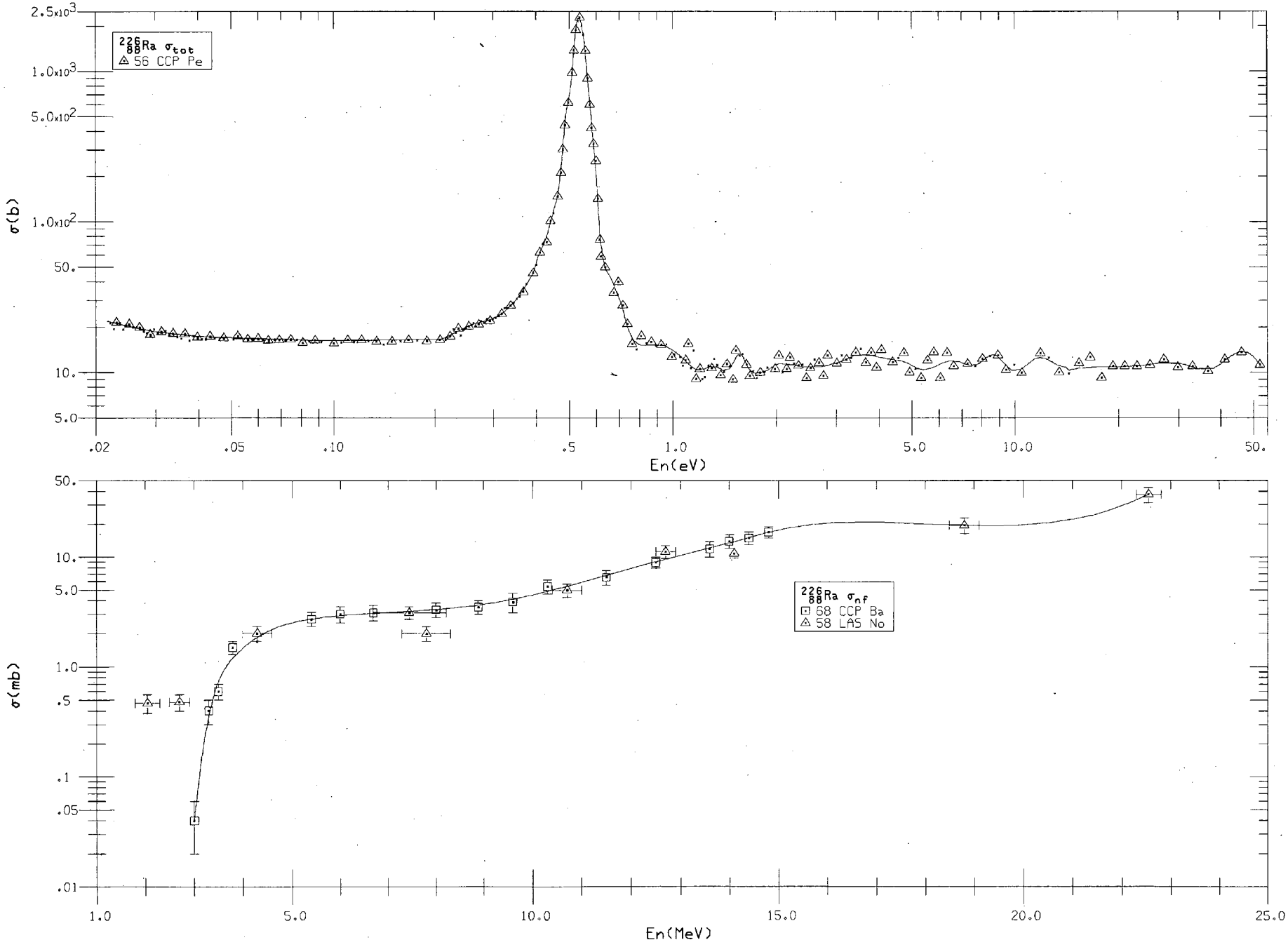




Yr	Lab	Author	Reference	Points	Range	Standard
			$^{209}_{83}$Bi σ_{tot}			
72	AMS	Kuijper,et.al.	NP/A,181,545,72	1	5.400 b at 14.8 MeV	^{1}H σ_{el}
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
71	KOS	Angeli,et.al.	AHP,30,(2),115,71	1	5.330 b at 14.7 MeV	
70	ANL	Smith,et.al.	NSE,41,63,70	1062	.206 MeV to 1.404 MeV	
68	DKE	Divadeenam	DA/B,28,3834,68	109	.110 MeV to .650 MeV	
68	KFK	Cierjacks,et.al.	KFK-1000,68	5632	.420 MeV to 32.0 MeV	abs
68	KUR	Gorlov,et.al.	YF,6,663,68	1	7.520 b at 4.000 MeV	
67	BNW	Foster Jr,et.al.	FOSTER,67	236	2.376 MeV to 14.9 MeV	
67	FTI	Dukarevich+	NP/A,92,433,67	1	5.330 b at 14.2 MeV	abs
65	JNE	Manero	NP,65,419,65	37	3.190 MeV to 5.150 MeV	
65	LAS	Day	DAY,65	4	.500 MeV to 4.100 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	9.100 b at 1.440 eV	
65	COL	Garg	GARG,65	2728	.501 keV to .154 MeV	abs
63	HAR	Firk,et.al.	NP,44,431,63	97	9.350 keV to 18.7 keV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.9 MeV	
58	LVN	Deconninck,et.al	BCS,44,851,58	5	2.160 MeV to 3.100 MeV	
58	UMX	Mazari,et.al.	58GENEVA,15,28,58	7	13.0 MeV to 16.2 MeV	abs
58	ORL	Good,et.al.	PR,109,926,58	18	2.150 keV to 2.570 keV	
58	BNL	Seth,et.al.	PR,110,692,58	36	26.4 eV to 1.670 keV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.010 MeV to 14.4 MeV	
57	ANL	Kimball,et.al.	WASH-745,57	1	7.920 b at .220 MeV	
56	DKE	Gibbons	PR,102,1574,56	120	.200 keV to 76.4 keV	
56	CCP	Khaletskii	DOK,113,305,56	1	5.330 b at 14.8 MeV	abs
55	BNL	Coor,et.al.	PR,98,1369,55	1	3.280 b at 1400. MeV	
55	BNL	Sailor	SAILOR,55	12	4.897 eV to 1.387 MeV	
55	ANL	Bollinger,et.al.	PR,100,126,55	67	1.520 eV to 9.850 keV	
55	HAR	Egelstaff	EGELSTAFF,55	49	.144 keV to .286 MeV	abs
53	LAS	Nereson,et.al.	PR,89,775,53	34	2.960 MeV to 13.2 MeV	
53	LAS	Day,et.al.	PR,92,358,53	1	5.690 b at 19.0 MeV	
53	BRK	Linlor,et.al.	PR,92,835,53	10	46.0 MeV to 162.0 MeV	
53	BNL	Hughes,et.al.	PR,92,1206,53	105	.0002 eV to .0041 eV	
53	HAR	Egelstaff	AERE-N/R-1147,53	26	.0009 eV to .0054 eV	abs
53	HAR	Egelstaff	AERE-N/R-1147,53	43	.0017 eV to .0835 eV	abs
52	WIS	Miller,et.al.	PR,88,83,52	14	1.000 MeV to 3.210 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.460 b at 14.1 MeV	
52	COL	Havens Jr	HAVENS,52	5	.184 eV to .970 eV	
50	BRK	Hildebrand+	PR,80,842,50	1	4.580 b at 42.0 MeV	
49	WIS	Barschall,et.al.	PR,76,1146,49	43	85.0 keV to .530 MeV	
49	ANL	Hibdon,et.al.	PR,76,100,49	2	.115 keV to .300 keV	
47	ANL	Fields,et.al.	PR,71,508,47	5	24.0 keV to .830 MeV	
			$^{209}_{83}$Bi σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.148 b at .888 MeV	C σ_{el}
70	ANL	Smith,et.al.	NSE,41,63,70	96	.300 MeV to 1.500 MeV	C σ_{el}
69	AE	Holmqvist,et.al.	AE-366,69	3	6.090 MeV to 8.050 MeV	^{1}H σ_{el}
68	KUR	Gorlov,et.al.	YF,6,663,68	1	5.700 b at 4.000 MeV	
65	DKE	Wilenzick,et.al.	NP,62,511,65	1	3.400 b at 6.040 MeV	C
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	6.300 b at 2.000 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	2	.500 MeV to .800 MeV	
60	CRC	Cross,et.al.	NP,15,155,60	1	2.710 b at 14.6 MeV	
60	CCP	Lovchikova	ZET,38,1434,60	1	8.230 b at .220 MeV	
57	CCP	Popov	AE,3,498,57	1	5.900 b at 2.900 MeV	
56	LAS	Allen,et.al.	PR,104,731,56	1	6.300 b at .500 MeV	

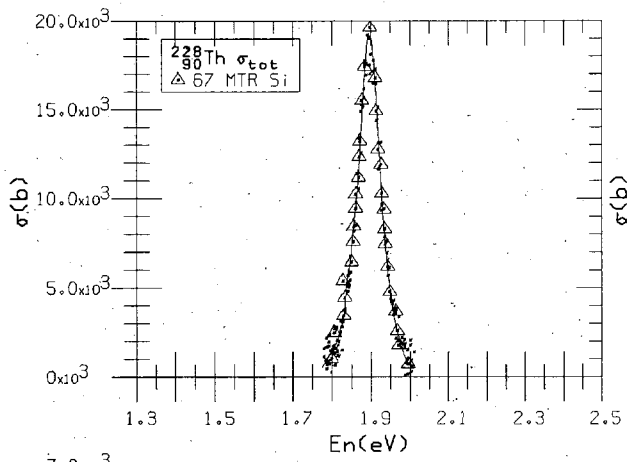
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{209}_{83}$Bi σ_{inl}			
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
69	LND	Joensson,et.al.	AF,39,295,69	1	.370 b at 15.1 MeV	^{12}C σ_{ing}
63	LAS	Thomson	PR,129,1649,63	1	2.410 b at 7.000 MeV	
57	LAS	Rosen,et.al.	PR,107,824,57	1	.170 b at 14.0 MeV	
57	CCP	Popov	AE,3,498,57	1	1.600 b at 2.900 MeV	
			$^{209}_{83}$Bi σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	18	30.0 keV to 1.370 MeV	
			$^{209}_{83}$Bi σ_{non}			
63	CLA	Haas,et.al.	PR,132,1211,63	1	2.530 b at 14.0 MeV	
59	RIC	Bonner,et.al.	PR,113,1088,59	5	8.200 MeV to 18.5 MeV	
58	LRL	Ball,et.al.	PR,110,1392,58	7	7.200 MeV to 14.2 MeV	
58	LRL	Mac Gregor+	PR,111,1155,58	1	2.430 b at 25.5 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	2.580 b at 14.0 MeV	abs
57	LAS	Rosen,et.al.	PR,107,824,57	1	2.400 b at 14.0 MeV	
57	CCP	Strizhak	AE,2,68,57	1	2.400 b at 14.0 MeV	abs
56	LAS	Beyster,et.al.	PR,104,1319,56	4	1.770 MeV to 7.000 MeV	
56	CCP	Flerov,et.al.	AE,1,155,56	1	2.590 b at 14.5 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	1	.100 b at 1.000 MeV	
56	UKR	Strizhak	ZET,31,907,56	1	.700 b at 2.500 MeV	
55	RIC	Taylor	PR,100,174,55	5	3.500 MeV to 14.1 MeV	
55	LAS	Allen	ALLEN,55	11	.600 MeV to 1.600 MeV	abs
55	LAS	Graves,et.al.	PR,97,1205,55	1	2.530 b at 14.1 MeV	
55	LAS	Beyster,et.al.	PR,98,1216,55	3	1.000 MeV to 4.500 MeV	
55	UKR	Pasechnik	55GENEVA,2,3,55	3	3.300 MeV to 14.0 MeV	abs
			$^{209}_{83}$Bi $\sigma_{n\gamma}$			
72	NJS	Cvelbar,et.al.	FIZ/S,4,55,72	1	.950 mb at 14.1 MeV	
66	DEB	Csikai,et.al.	AK,8,79,66	1	1.200 mb at 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
64	ORL	Macklin	MACKLIN,64	26	9.000 keV to 54.5 keV	Ta
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	1	2.000 mb at .400 MeV	^{235}U σ_{abs}
59	ARK	Poularikas,et.al	PR,115,989,59	1	1.700 mb at 14.8 MeV	^{63}Cu σ_{n2n}
58	ALD	Perkin,et.al.	PPS,72,505,58	1	1.450 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	14.0 mb at .200 MeV	^{127}I $\sigma_{n\gamma}$
			$^{209}_{83}$Bi σ_{gem}			
44	JAP	Nonaka	JMJ,26,66,44	7	2.250 MeV to 2.900 MeV	Cu σ_{gem}
			$^{209}_{83}$Bi σ_{n2n}			
66	GRE	Monnand,et.al.	CR,265,712,66	1	.290 b at 14.3 MeV	Cu
58	LRL	Ashby,et.al.	PR,111,616,58	1	2.600 b at 14.1 MeV	
58	CCP	Flerov,et.al.	AE,5,657,58	1	2.420 b at 14.0 MeV	
57	LAS	Rosen,et.al.	PR,107,824,57	1	2.300 b at 14.0 MeV	

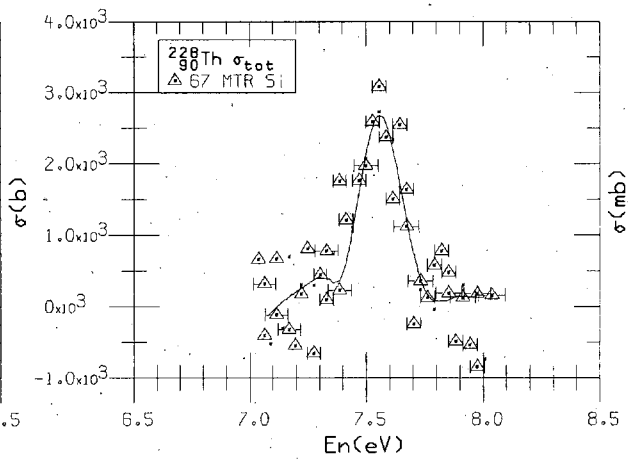
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{209}_{83}$Bi σ_{np}			
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	.700 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ARK	Poularikas,et.al	PR,115,989,59	1	.830 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.330 mb at 14.5 MeV	
			$^{209}_{83}$Bi $\sigma_{n\alpha}$			
67	RBZ	Kulisic	KULISIC,67	1	1.000 mb at 14.0 MeV	
65	RBZ	Kulisic,et.al.	NP,73,548,65	1	1.000 mb at 14.6 MeV	
61	SAH	Mukherjee,et.al.	PPS,77,508,61	1	.600 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ARK	Poularikas,et.al	PR,115,989,59	1	1.100 mb at 14.8 MeV	^{63}Cu σ_{n2n}
59	ALD	Coleman,et.al.	PPS,73,215,59	1	.520 mb at 14.5 MeV	
53	CRC	Paul,et.al.	CJP,31,267,53	1	1.200 mb at 14.5 MeV	
			$^{209}_{83}$Bi σ_{nf}			
63	LAS	Thomson	PR,129,1649,63	1	.0350 muB at 14.8 MeV	^{27}Al $\sigma_{n\alpha}$
55	CCP	Goldanskii+	DOK,101,1027,55	1	74.0 mb at 380.0 MeV	

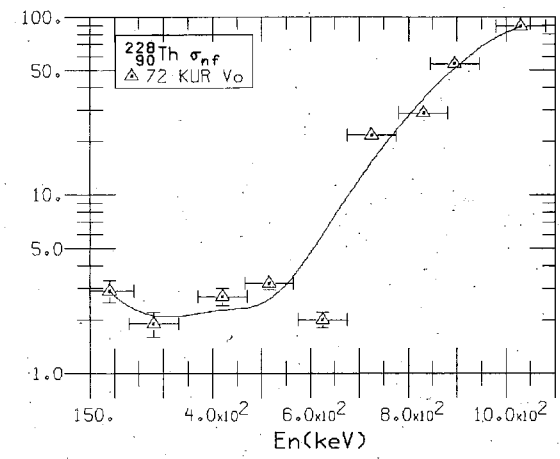

$^{226}_{88}Ra$ σ_{tot}
△ 56 CCP Pe
σ(b)
2.5x10^3
1.0x10^3
5.0x10^2
1.0x10^2
50.
10.
5.0
.02
.05
.10
.5
1.0
5.0
10.0
50.
En(eV)
$^{226}_{88}Ra$ σ_{nf}
⊡ 68 CCP Ba
△ 58 LAS No
σ(mb)
50.
10.
5.0
1.0
.5
.1
.05
.01
1.0
5.0
10.0
15.0
20.0
25.0
En(MeV)

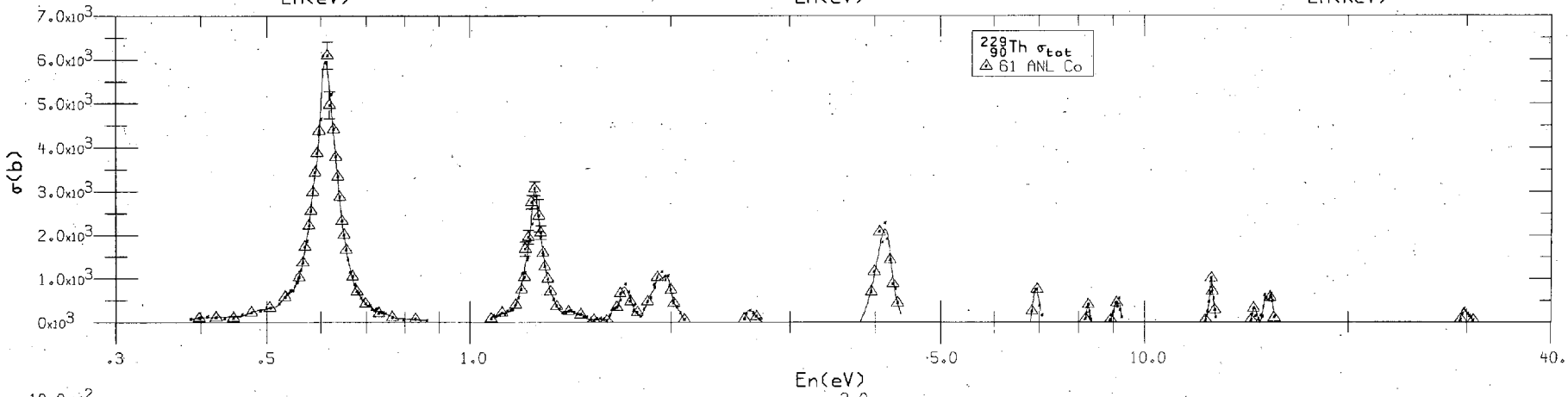
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{226}_{88}$Ra σ_{tot}			
56	CCP	Pevzner,et.al.	AE,1(4),67,56	225	.0221 eV to 52.3 eV	
			$^{226}_{88}$Ra $\sigma_{n\gamma}$			
52	CRC	Butler,et.al.	NAT,170,832,52	1	23.0 b at thermal	^{197}Au
			$^{226}_{88}$Ra σ_{n2n}			
60	ALD	O Conner,et.al.	JIN,13,5,60	1	1.600 b at 14.5 MeV	
			$^{226}_{88}$Ra σ_{n3n}			
60	ALD	O Conner,et.al.	JIN,13,5,60	1	.630 b at 14.5 MeV	
			$^{226}_{88}$Ra σ_{nf}			
68	CCP	Babenko,et.al.	YF,7,(2),269,68	18	3.000 MeV to 14.8 MeV	abs
58	LAS	Nobles,et.al.	NP,5,211,58	10	2.050 MeV to 22.5 MeV	^{252}Cf

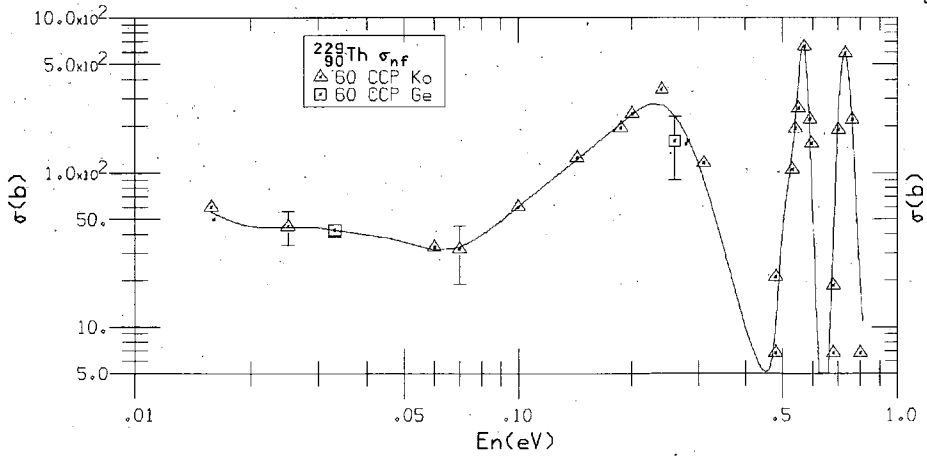
$^{228}_{90}Th$
σ_{tot}
σ_{nf}
$^{229}_{90}Th$
σ_{tot}
σ_{nf}

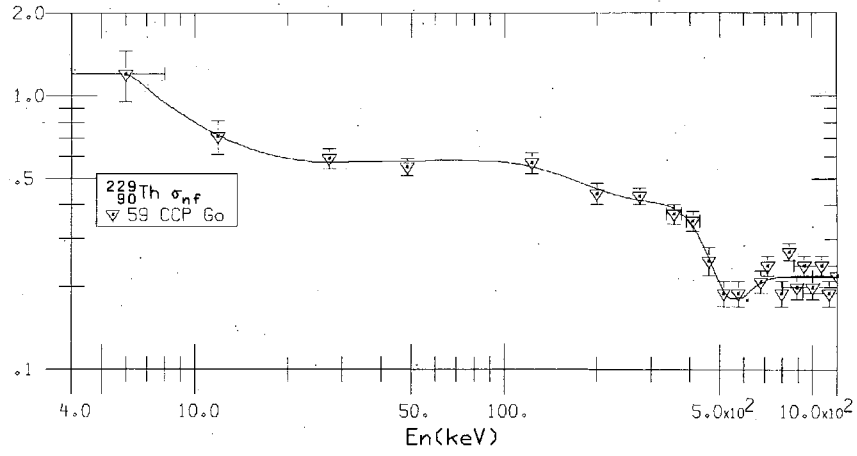








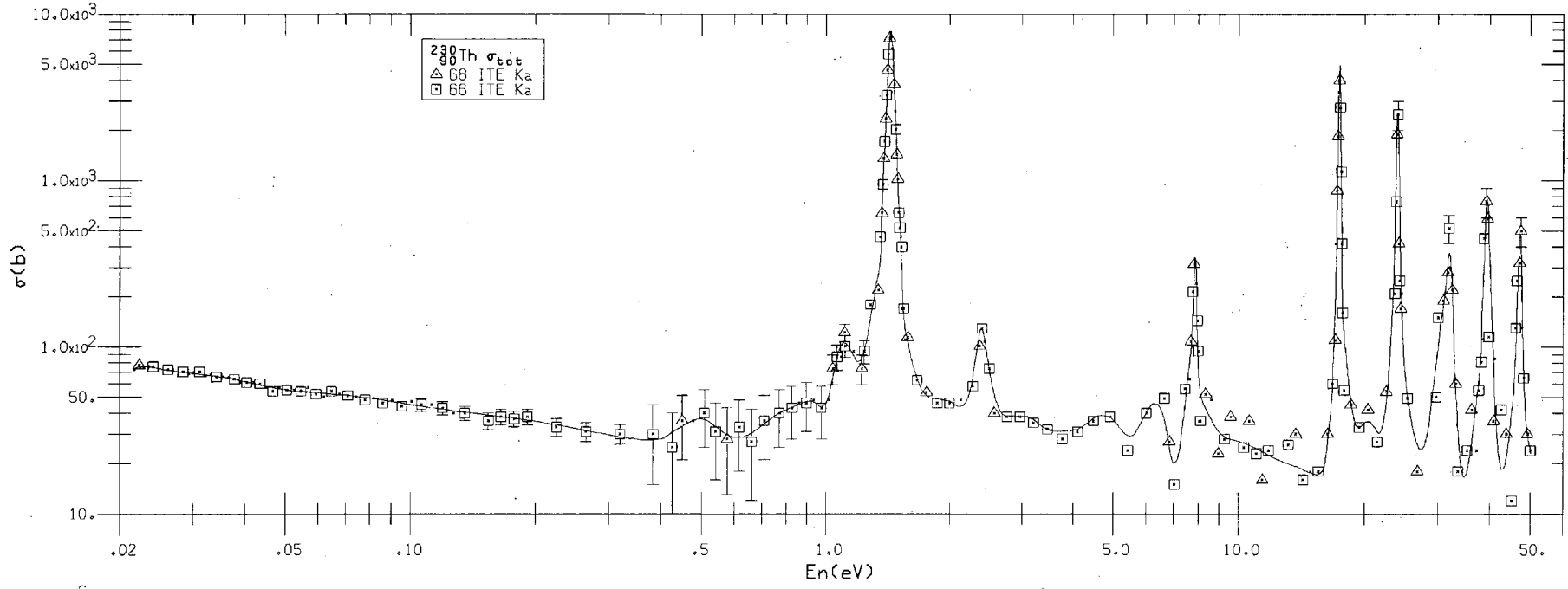


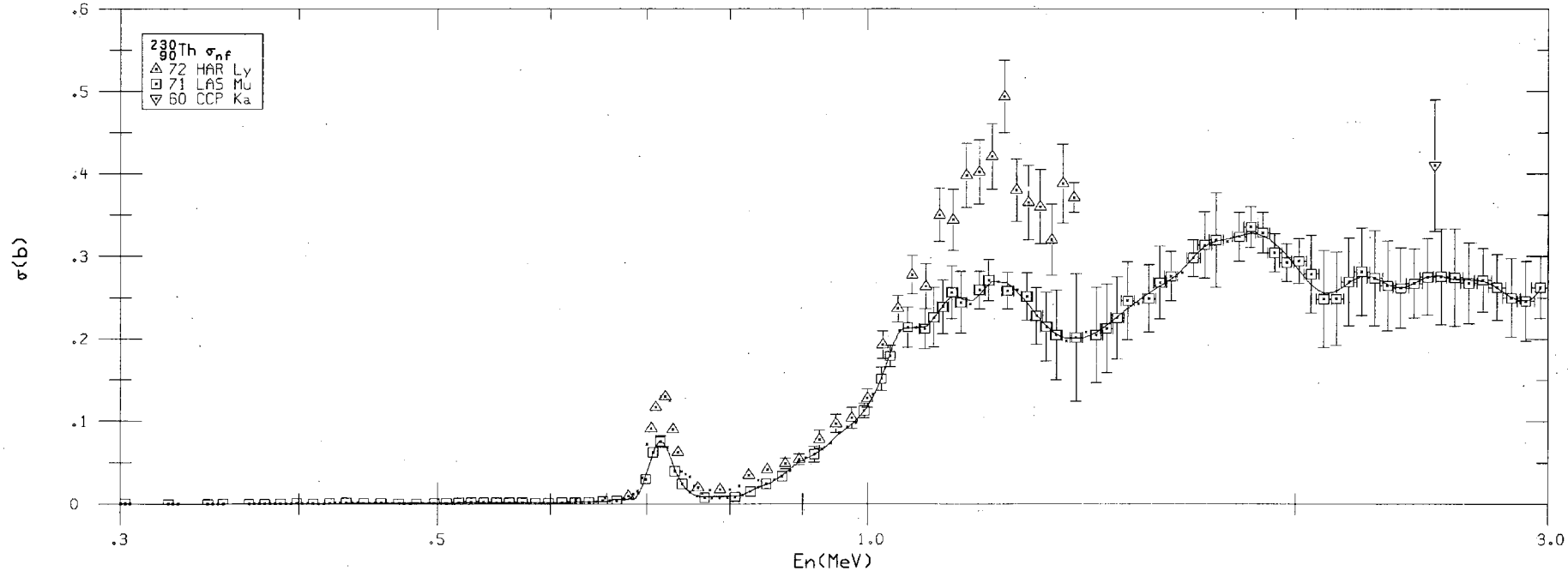


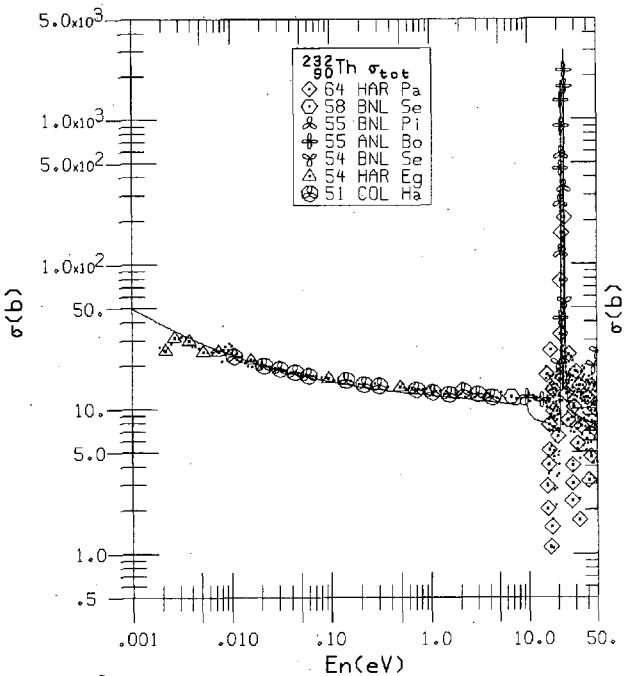
$^{230}_{90}Th$

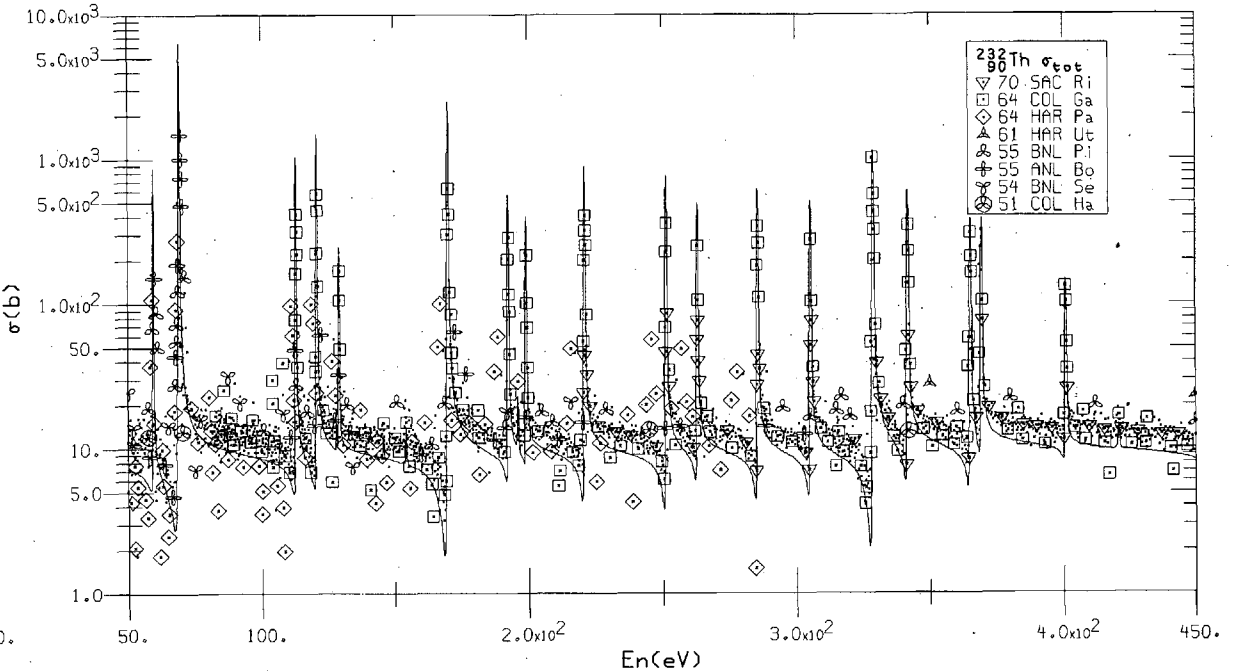
σ_{tot}

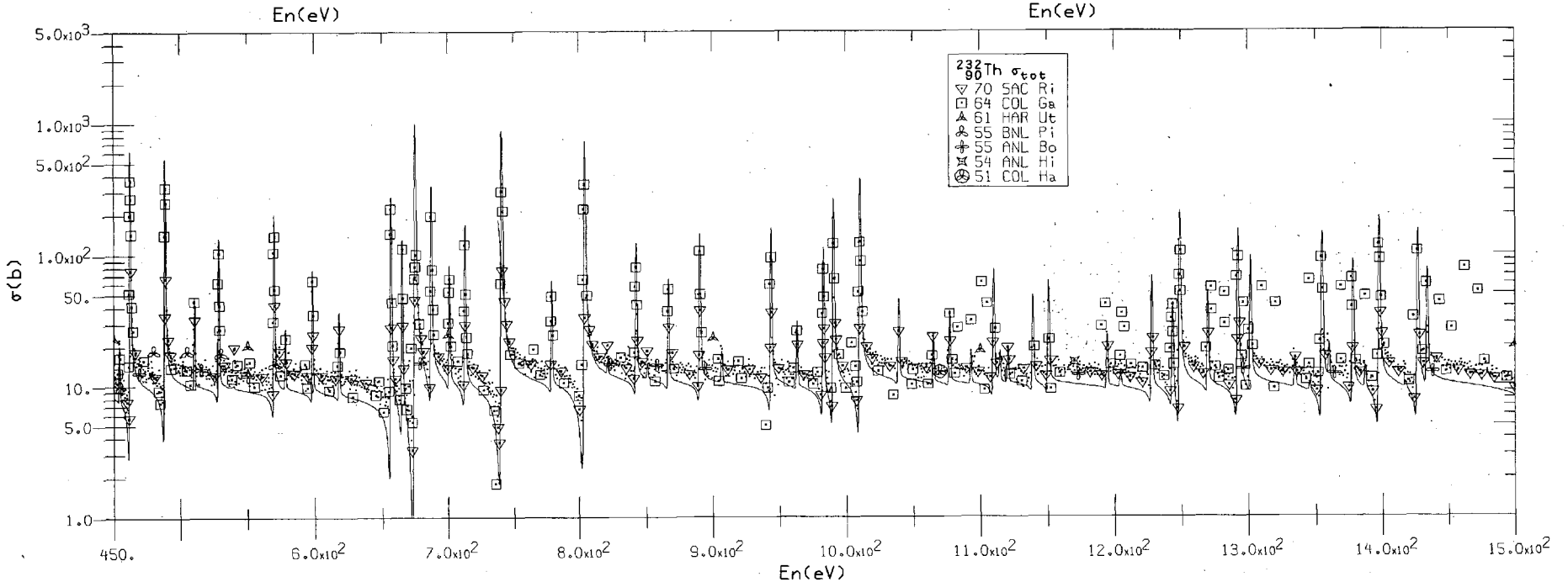
σ_{nf}






$^{232}_{90}$Th σ_{tot}
64 HAR Pa
58 BNL Se
55 BNL Pi
55 ANL Bo
54 BNL Se
54 HAR Eg
51 COL Ha
σ(b)
En(eV)


$^{232}_{90}$Th σ_{tot}
70 SAC Ri
64 COL Ga
64 HAR Pa
61 HAR Ut
55 BNL Pi
55 ANL Bo
54 BNL Se
51 COL Ha
σ(b)
En(eV)

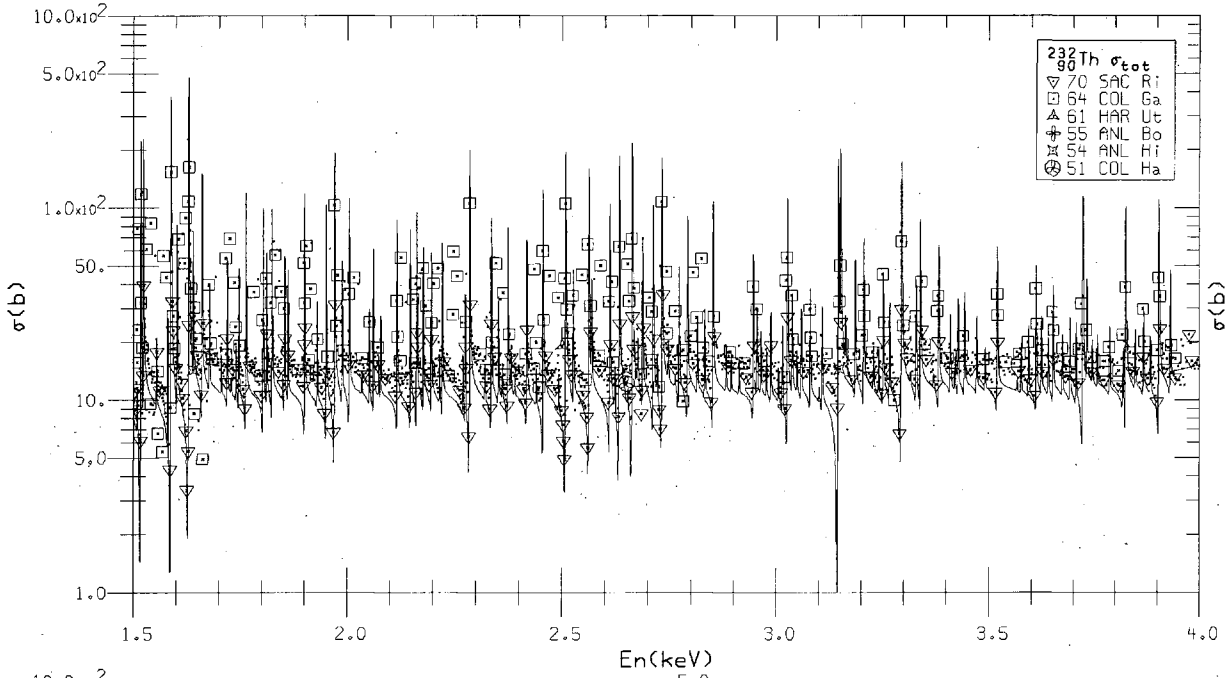

$^{232}_{90}$Th σ_{tot}
70 SAC Ri
64 COL Ga
61 HAR Ut
55 BNL Pi
55 ANL Bo
54 ANL Hi
51 COL Ha
σ(b)
En(eV)

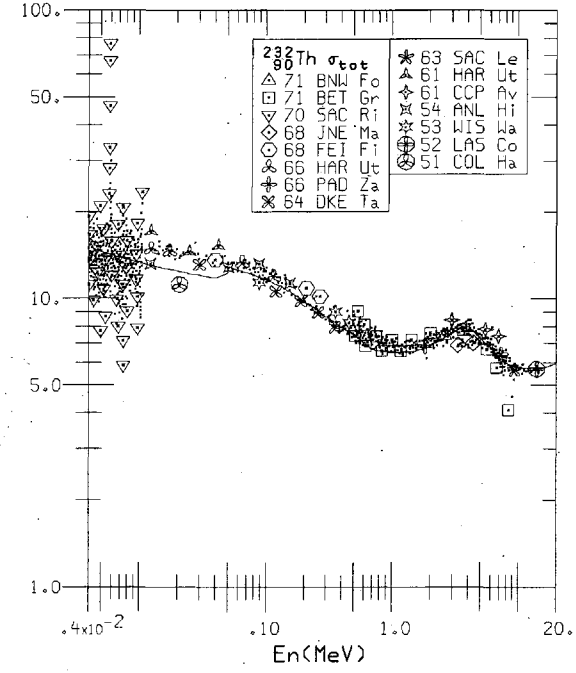
$^{232}_{90}$Th

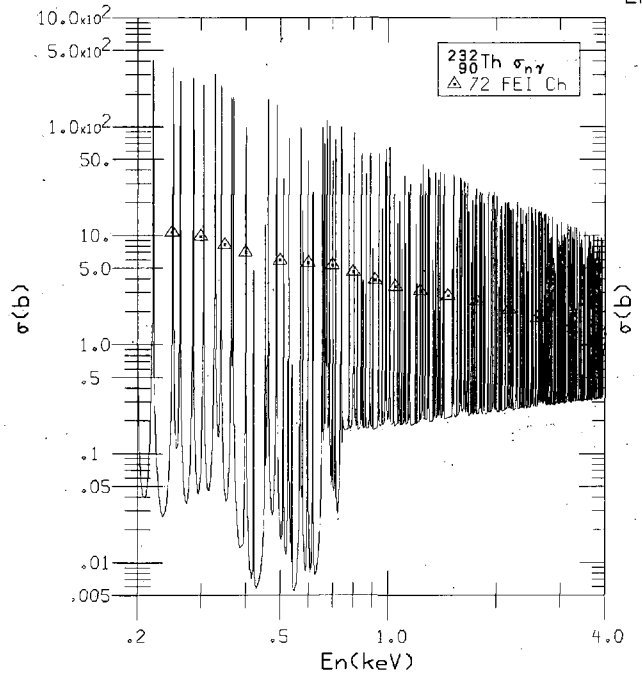
σ_{tot}

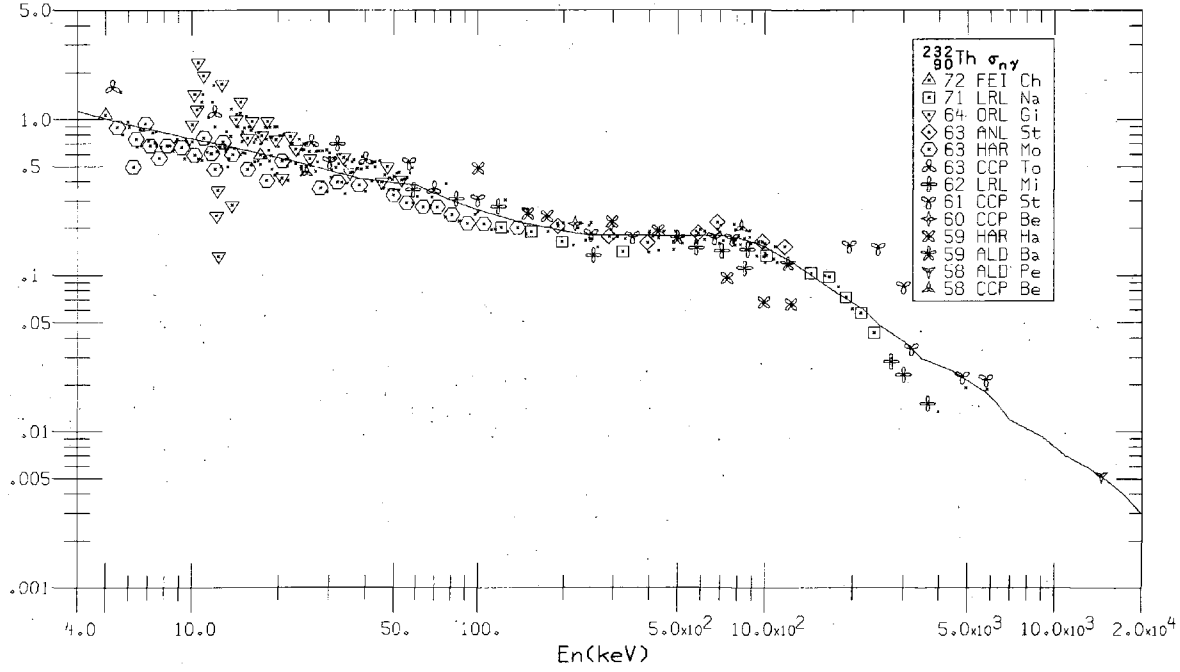
$\sigma_{n\gamma}$

[1296]









$^{232}_{90}$Th

σ_{el}

σ_{sct}

σ_{inl}

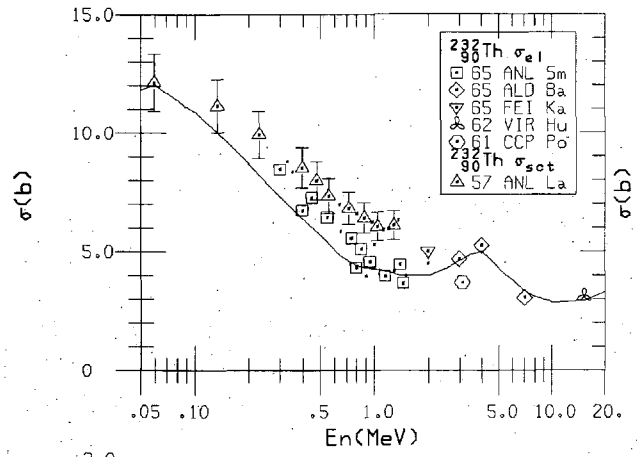
σ_{non}

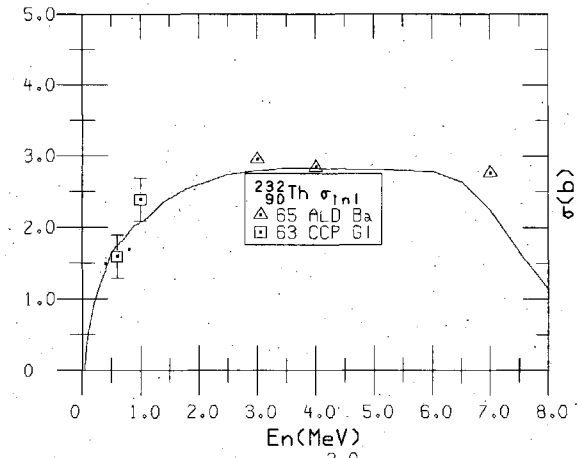
σ_{n2n}

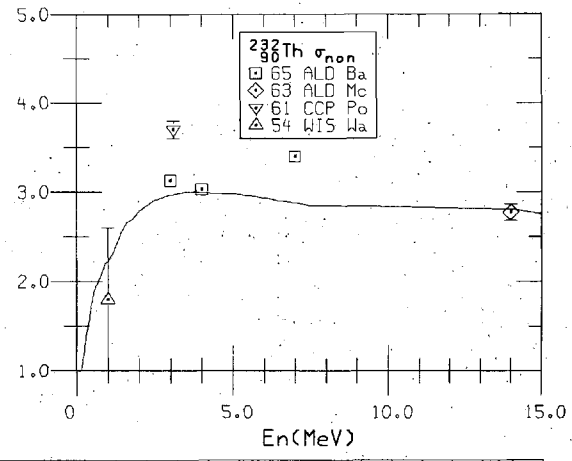
σ_{nf}

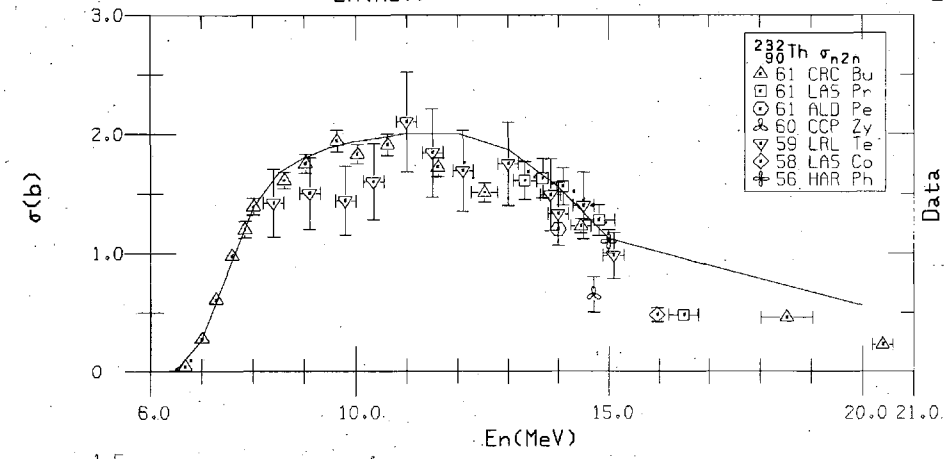
ν

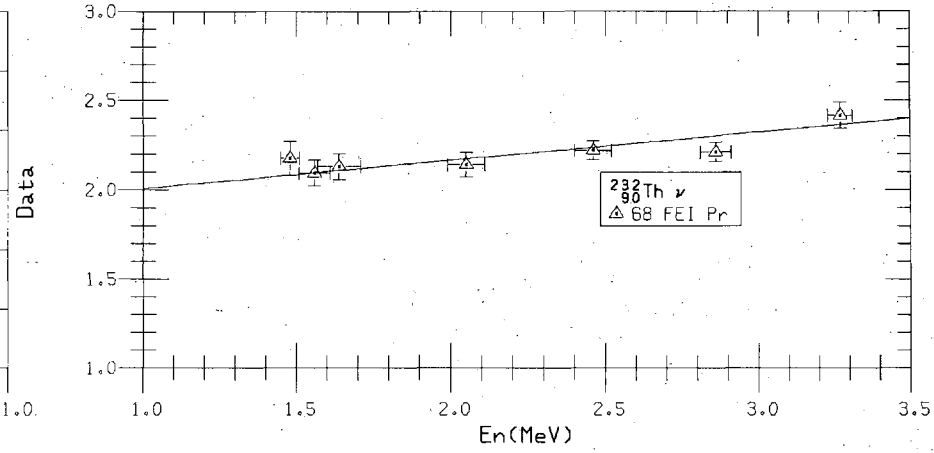
[1296]

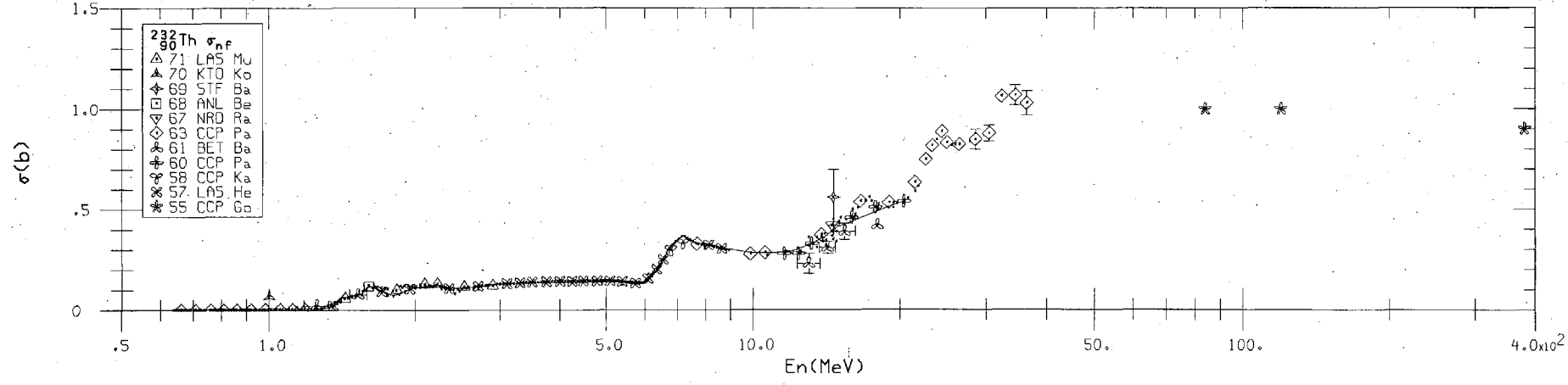












Yr	Lab	Author	Reference	Points	Range	Standard
			$^{227}_{90}$Th σ_{nf}			
73	MOL	Del Marmol,et.al	JIN,35,4323,73	1	.203 kb at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{228}_{90}$Th σ_{tot}			
67	MTR	Simpson,et.al.	NSE,29,423,67	213	1.779 eV to 8.038 eV	
			$^{228}_{90}$Th σ_{nf}			
72	KUR	Vorotnikov+	YFI-14,6,72	9	.190 MeV to 1.030 MeV	
			$^{229}_{90}$Th σ_{tot}			
61	ANL	Cote,et.al.	BAP,6,417 C1 ,61	231	.387 eV to 30.7 eV	
			$^{229}_{90}$Th σ_{nf}			
60	CCP	Konakhovich+	AE,8,47,60	26	.0158 eV to .800 eV	^{229}Th σ_{nf}
60	CCP	Gerasimov	AE,8,47,60-	3	.0160 eV to .260 eV	^{229}Th σ_{nf}
59	CCP	Gokhberg,et.al.	DOK,128,911,59	23	6.000 keV to 1.200 MeV	
			$^{230}_{90}$Th σ_{tot}			
68	ITE	Kalebin,et.al.	68DUBNA,(ACC-68/18)	221	.0217 eV to 50.1 eV	abs
66	ITE	Kalebin,et.al.	66PARIS,I,71,66	221	.0217 eV to 50.1 eV	abs
			$^{230}_{90}$Th $\sigma_{n\alpha}$			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	4.600 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{230}_{90}$Th σ_{nf}			
72	HAR	Lynn,et.al.	NP/A,189,225,72	50	.625 MeV to 1.400 MeV	^{230}Th σ_{nf}
71	LAS	Muir,et.al.	71KNOX,1,292,71	181	.300 MeV to 2.965 MeV	^{239}Pu σ_{nf}
67	CCP	Vorotnikov	YF,5,295,67	12	.650 MeV to 1.230 MeV	
65	ORL	Lamphere	65SALZBURG,1,63,65	42	.675 MeV to 2.930 MeV	
60	CCP	Kazarinova+	AE,8,139,60	2	2.500 MeV to 14.6 MeV	
			$^{232}_{90}$Th σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	242	2.263 MeV to 14.9 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	644	.501 MeV to 9.599 MeV	
70	SAC	Ribon	RIBON,70	4117	.212 keV to 10.7 keV	abs
68	JNE	Manero	ARS,64,373,68	60	3.340 MeV to 5.100 MeV	
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	8	20.0 keV to .350 MeV	
66	HAR	Uttley,et.al.	66PARIS,1,165,66	28	6.500 keV to .950 MeV	abs
66	PAD	Zago	ZAGO,66	139	1.470 MeV to 8.635 MeV	
65	ORL	Rayburn,et.al.	NP,61,381,65	1	13.3 b at 1.440 eV	
65	ALD	Batchelor,et.al.	NP,65,236,65	4	2.000 MeV to 7.000 MeV	abs
64	COL	Garg,et.al.	PR/B,134,985,64	5877	82.3 eV to 3.961 keV	
64	DKE	Tabony,et.al.	SETH,64	102	30.0 keV to .650 MeV	
64	HAR	Pattenden	PATTENDEN,64	832	15.3 eV to .289 keV	
63	SAC	Leroy,et.al.	JPR,24,826,63	56	1.980 MeV to 14.5 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	5.490 b at 28.4 MeV	
61	HAR	Uttley,et.al.	61SACLAY,,109,61	33	.350 keV to 60.0 keV	
61	CCP	Averchenkov+	SOV.PR.NP.,,191,61	17	1.900 MeV to 8.000 MeV	abs
60	JAE	Tsukada,et.al.	JPJ,15,1994,60	89	3.370 MeV to 5.070 MeV	
58	BNL	Seth,et.al.	PR,110,692,58	21	.526 eV to 53.7 eV	
55	BNL	Pilcher	PILCHER,55	139	21.3 eV to .580 keV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
55	ANL	Bollinger,et.al.	PR,98,223(B2),55	286	9.700 eV to 2.331 keV	
54	ANL	Hibdon,et.al.	ANL-5175,7,54	133	.670 keV to .155 MeV	abs
54	BNL	Seidl,et.al.	PR,95,476,54	128	16.9 eV to .225 keV	
54	HAR	Egelstaff	EGELSTAFF,54	52	.0019 eV to 2.500 eV	abs
53	WIS	Walt,et.al.	PR,89,1271,53	18	89.0 keV to 2.980 MeV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.690 b at 14.1 MeV	
51	COL	Havens Jr.+	AECD 3288,51	167	.0082 eV to 20.8 keV	
50	BRK	Hildebrand+	PR,80,842,50	1	5.030 b at 42.0 MeV	
			$^{232}_{90}$Th σ_{el}			
65	ANL	Smith,et.al.	EANDC US 62,65	16	.300 MeV to 1.500 MeV	C
65	ALD	Batchelor,et.al.	NP,65,236,65	4	2.000 MeV to 7.000 MeV	H
65	FEI	Kasakova,et.al.	65ANTWERP,,576,65	1	5.000 b at 2.000 MeV	
62	VIR	Hudson Jr,et.al.	PR,128,1271,62	1	3.130 b at 15.2 MeV	
61	CCP	Popov	SOV.PR.NP.,,224,61	1	3.700 b at 3.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	5.300 b at 1.000 MeV	
			$^{232}_{90}$Th σ_{inl}			
65	ALD	Batchelor,et.al.	NP,65,236,65	3	3.000 MeV to 7.000 MeV	
63	CCP	Glazkov	AE,14,400,63	4	.400 MeV to 1.000 MeV	
			$^{232}_{90}$Th σ_{sct}			
65	ORL	Rayburn,et.al.	NP,61,381,65	1	12.4 b at 1.440 eV	
57	ANL	Langsdorf Jr+	PR,107,1077,57	17	60.0 keV to 1.370 MeV	C
			$^{232}_{90}$Th σ_{non}			
65	ALD	Batchelor,et.al.	NP,65,236,65	3	3.000 MeV to 7.000 MeV	
63	ALD	Mc Taggart+	JNE,17,437,63	1	2.770 b at 14.0 MeV	
61	CCP	Popov	SOV.PR.NP.,,224,61	1	3.700 b at 3.100 MeV	
54	WIS	Walt,et.al.	PR,93,1062,54	1	1.800 b at 1.000 MeV	
			$^{232}_{90}$Th $\sigma_{n\gamma}$			
72	FEI	Chelnokov,et.al.	YFI-13,6,72	26	.200 keV to 34.6 keV	^{197}Au $\sigma_{n\gamma}$
71	LRL	Nagle,et.al.	71KNOX,2,259,71	30	.121 MeV to 2.730 MeV	^{235}U σ_{nf}
68	UPP	Lundgren	NUK,11,61,68	47	.0980 eV to 3.400 eV	
65	MUA	Chadbey,et.al.	NP,66,267,65	1	.480 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
64	ORL	Gibbons	GIBBONS,64	126	10.0 keV to 58.5 keV	
63	ANL	Stupegia,et.al.	JIN,25,627,63	22	.191 MeV to 1.170 MeV	^{235}U σ_{nf}
63	HAR	Moxon,et.al.	TRDWP/P-8,63	98	5.500 keV to .148 MeV	
63	CCP	Tolstikov,et.al.	AE,15,414,63	10	5.300 keV to .100 MeV	^{232}Th $\sigma_{n\gamma}$
62	LRL	Miskel,et.al.	PR,128,2717,62	26	32.0 keV to 3.970 MeV	^{235}U σ_{nf}
61	CCP	Stavisskii+	AE,10,508,61	38	30.0 keV to 5.850 MeV	^{235}U σ_{nf}
60	CCP	Belanova	AE,8,549,60	1	.213 b at .220 MeV	
59	HAR	Hanna,et.al.	JNE,8,197,59	24	.100 MeV to 1.230 MeV	^{197}Au $\sigma_{n\gamma}$
59	ALD	Barry,et.al.	PPS,74,685,59	10	.300 MeV to 1.200 MeV	
58	ALD	Perkin,et.al.	PPS,72,505,58	1	5.200 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	1	.217 b at .200 MeV	^{127}I
58	CCP	Belanova	ZFT,34,574,58	2	25.0 keV to .830 MeV	
57	SRL	Wade	DP-207,57	1	7.550 b at thermal	Fe $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.500 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
57	SAC	Hubert,et.al.	TID-7547,39,57	1	7.600 b at thermal	
55	HAR	Crocker	JNE,1,234,55	1	7.310 b at thermal	^{197}Au $\sigma_{n\gamma}$
55	HAR	Egelstaff,et.al.	EGELSTAFF,55	1	7.200 b at thermal	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
			$^{232}_{90}$Th σ_{n2n}			
61	CRC	Butler,et.al.	CJC,39,689,61	18	6.510 MeV to 20.4 MeV	^{32}S σ_{np}
61	LAS	Prestwood,et.al.	PR,121,1438,61	13	12.1 MeV to 16.5 MeV	^{238}U
61	LAS	Prestwood,et.al.	PR,121,1438,61	1	.480 b at 16.5 MeV	^{238}U
61	ALD	Perkin,et.al.	JNE,14,69,61	1	1.200 b at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
60	CCP	Zysin,et.al.	AE,8,360,60	1	.650 b at 14.7 MeV	^{238}U
59	LRL	Tewes,et.al.	BAP,4,445(C16),59	13	8.400 MeV to 15.1 MeV	
58	LAS	Cochran,et.al.	WASH-1013,34,58	2	7.030 MeV to 16.0 MeV	
56	HAR	Phillips	AERE-NP/R-2033,56	1	1.100 b at 15.0 MeV	
			$^{232}_{90}$Th σ_{n3n}			
63	ALD	Mc Taggart+	JNE,17,437,63	1	.850 b at 14.0 MeV	
			$^{232}_{90}$Th σ_{nf}			
71	LAS	Muir,et.al.	71KNOX,1,292,71	104	.598 MeV to 2.965 MeV	^{239}Pu σ_{nf}
70	KTO	Kobayashi,et.al.	EANDC(J)-19,37,70	1	67.0 mb at 1.000 MeV	^{58}Ni σ_{np}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.450 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	.560 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	TRM	Iyer,et.al.	69ROORKEE,2,289,69	1	.340 b at 14.1 MeV	^{238}U σ_{nf}
68	ANL	Behkami,et.al.	NP/A,118,65,68	3	1.200 MeV to 1.600 MeV	^{238}U σ_{nf}
67	NRD	Rago,et.al.	HP,13,654,67	16	12.5 MeV to 18.0 MeV	^{238}U σ_{nf}
67	CCP	Ermagambetov,+	AE,23,20,67	80	.580 MeV to 2.970 MeV	
63	CCP	Pankratov	AE,14,177,63	39	5.400 MeV to 36.5 MeV	
61	KYU	Katase	KATASE,61	3	13.5 MeV to 14.8 MeV	
61	BET	Babcock	BABCOCK,61	12	1.140 MeV to 18.0 MeV	^{238}U σ_{nf}
60	CCP	Pankratov,et.al.	AE,9,399,60	16	10.7 MeV to 21.5 MeV	
58	CCP	Protopopov+	AE,4,190,58	1	.350 b at 14.6 MeV	
58	CCP	Kalinin,et.al.	58GENEVA,16,136,58	9	3.100 MeV to 7.200 MeV	
58	CCP	Berezin,et.al.	AE,5,659,58	1	.370 b at 14.6 MeV	
57	LAS	Henkel	LA-2122,57	158	1.150 MeV to 9.000 MeV	^{235}U σ_{nf}
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	.347 b at 14.1 MeV	^{238}U σ_{nf}
55	CCP	Goldanskii+	DOK,101,1027,55	3	84.0 MeV to 380.0 MeV	
			$^{232}_{90}$Th ν			
68	FEI	Prokhorova+	YF,7,579,58	7	1.480 MeV to 3.270 MeV	^{235}U ν

$^{231}_{91}Pa$

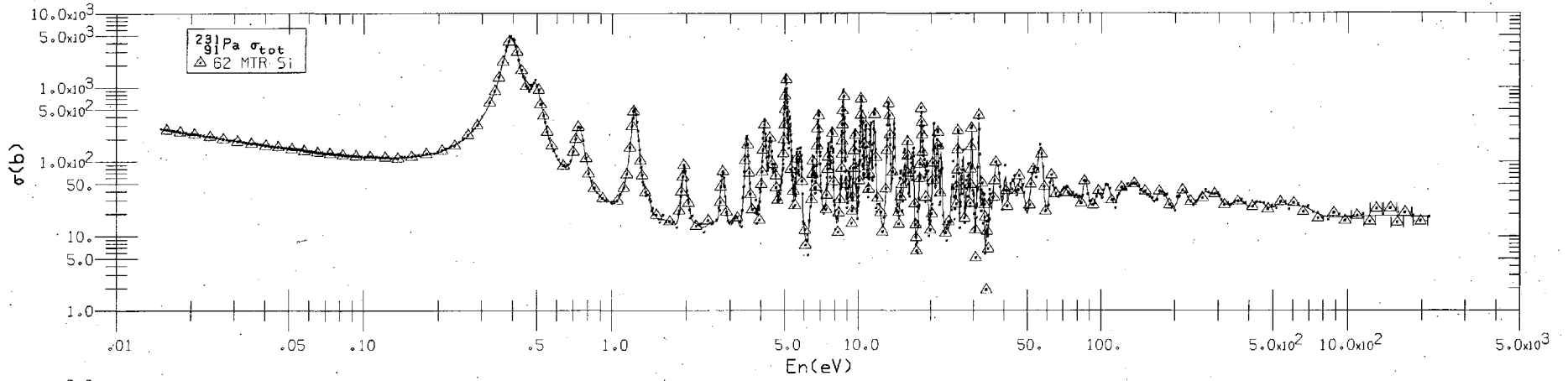
σ_{tot}

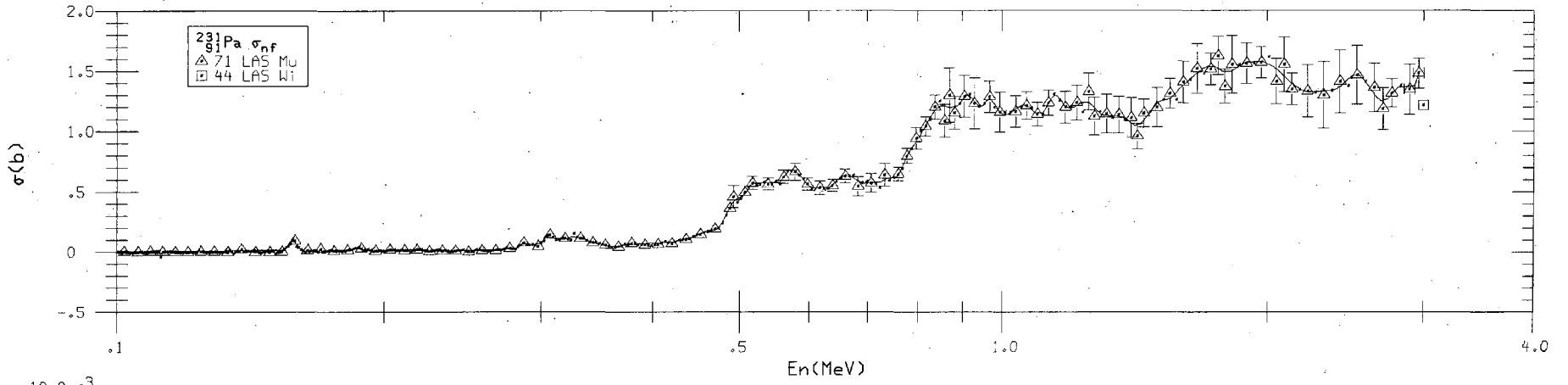
σ_{nf}

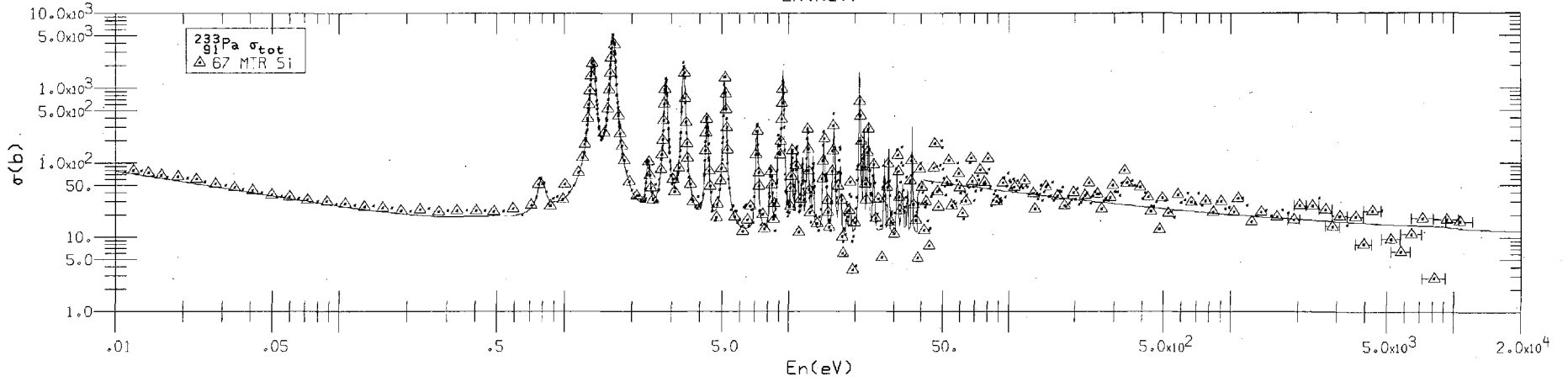
$^{233}_{91}Pa$

σ_{tot}

[1297]



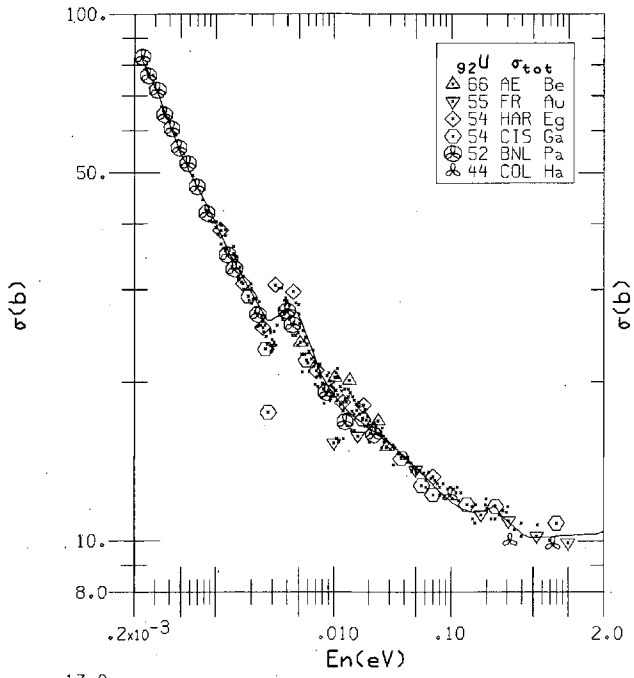


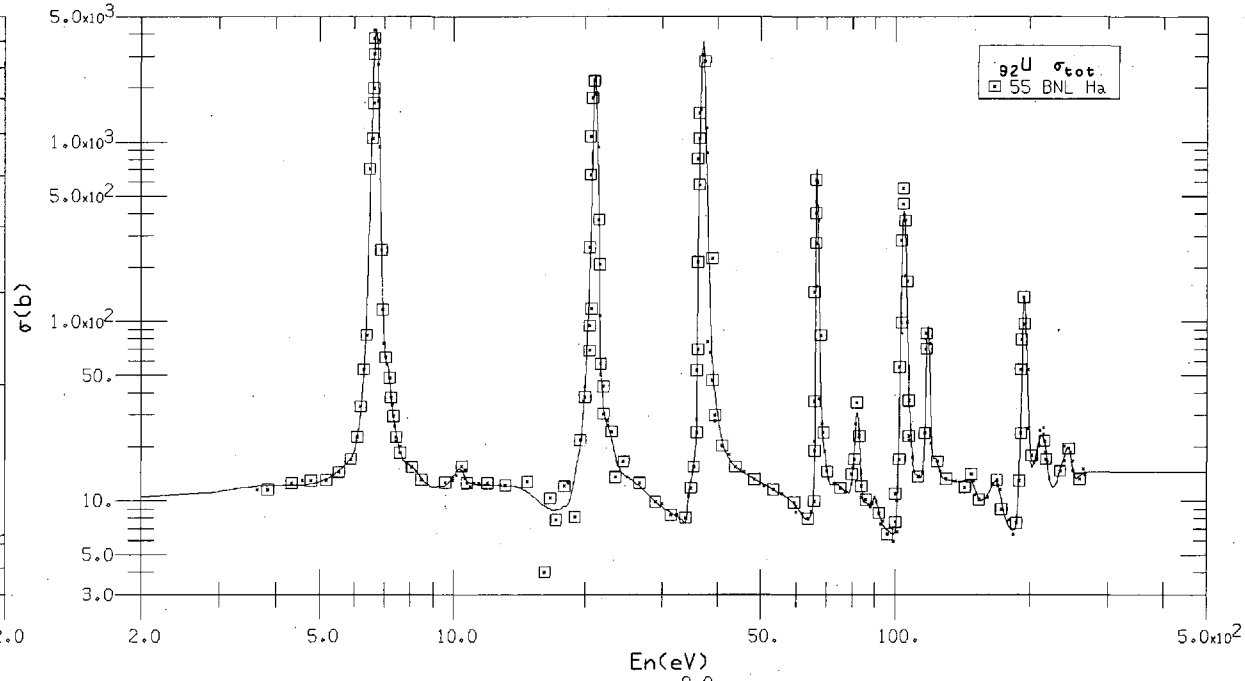


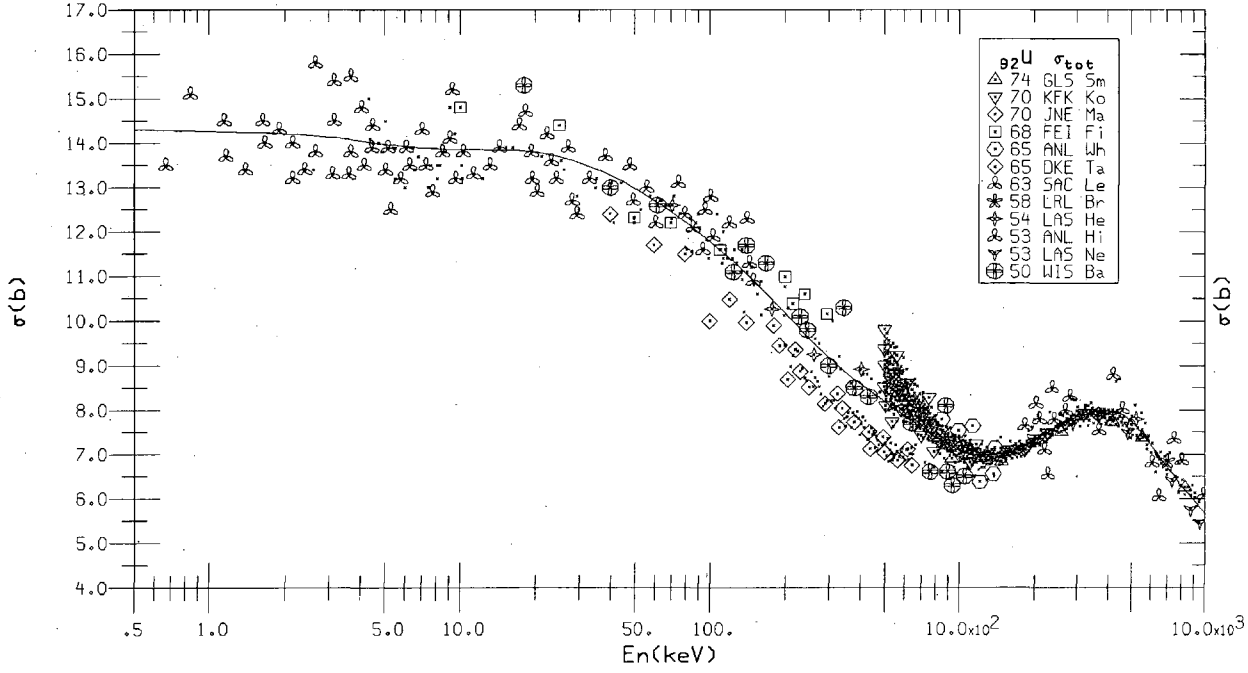
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{231}_{91}$Pa σ_{tot}			
62	MTR	Simpson,et.al.	NSE,12,243,62	1094	.531 eV to 2.141 keV	abs
62	MTR	Simpson,et.al.	NSE,12,243,62	248	.0152 eV to 10.6 eV	
62	MTR	Simpson,et.al.	NSE,12,243,62	1	.211 kb at thermal	
			$^{231}_{91}$Pa $\sigma_{n\gamma}$			
62	MTR	Simpson,et.al.	NSE,12,243,62	1	.200 kb at thermal	
			$^{231}_{91}$Pa σ_{nf}			
71	LAS	Muir,et.al.	71KNOX,1,292,71	374	.100 MeV to 2.965 MeV	^{239}Pu σ_{nf}
69	KEN	Birgul,et.al.	RCA,11,108,69	1	1.430 b at 14.8 MeV	^{238}U σ_{nf}
64	CCP	Dubrovina,et.al.	DOK,157,561,64	46	.133 MeV to 1.730 MeV	
44	LAS	Williams	LA-150,44	15	.430 MeV to 3.000 MeV	^{235}U σ_{nf}
			$^{233}_{91}$Pa σ_{tot}			
67	MTR	Simpson,et.al.	NSE,28,133,67	847	.0110 eV to 10.7 keV	
67	MTR	Simpson,et.al.	NSE,28,133,67	1	55.0 b at thermal	
			$^{233}_{91}$Pa $\sigma_{n\gamma}$			
70	BET	Connor	WAPD-TM-837,70	1	39.5 b at thermal	
67	MTR	Simpson,et.al.	NSE,28,133,67	1	41.0 b at thermal	
62	ORL	Halperin,et.al.	ORNL-3320,1,62	1	42.0 b at thermal	

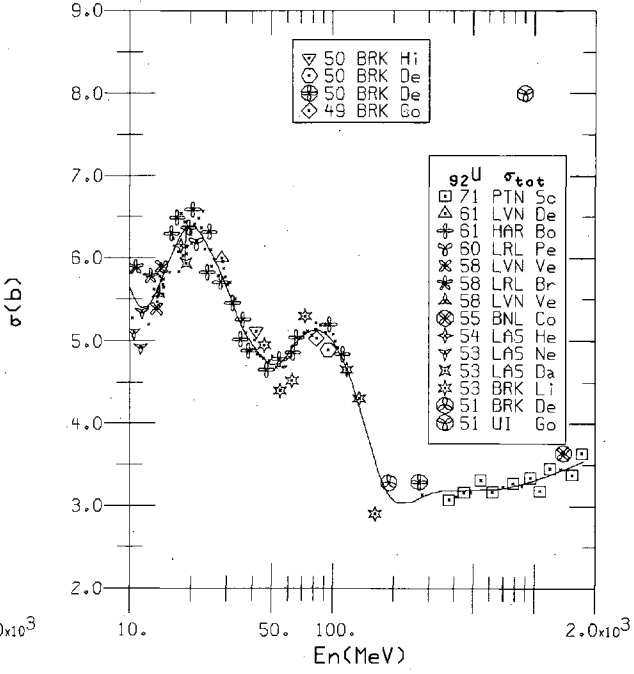
$_{92}U$

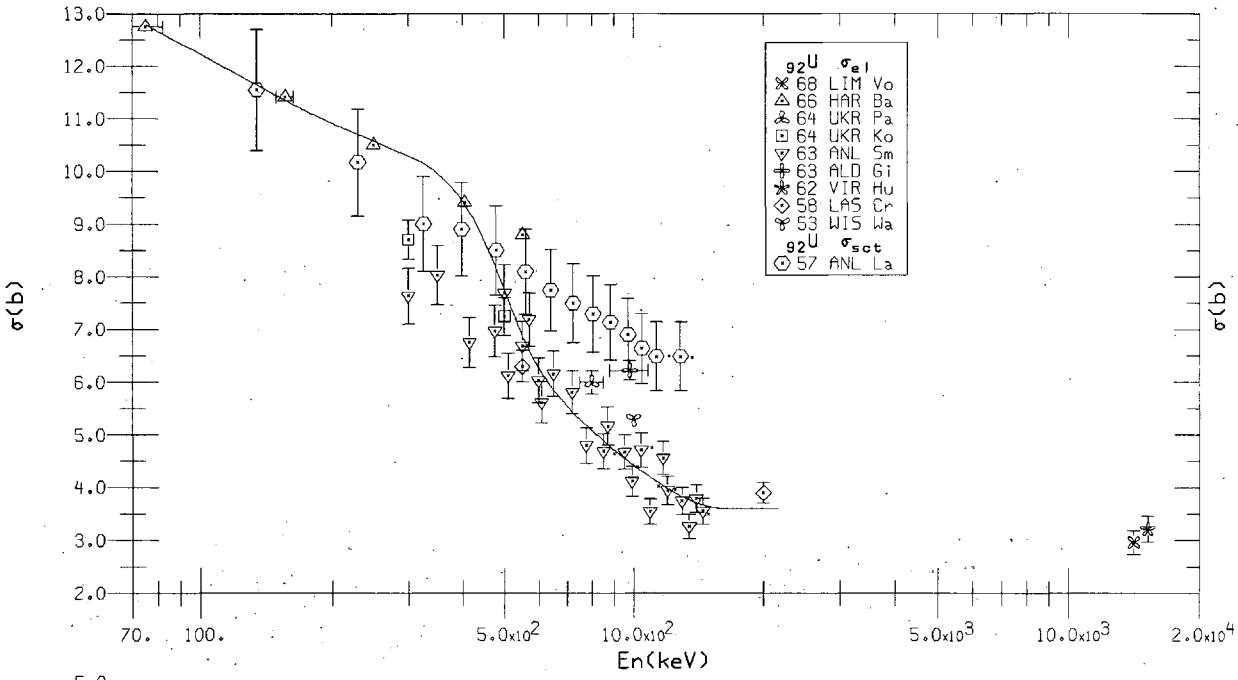
σ_{tot}

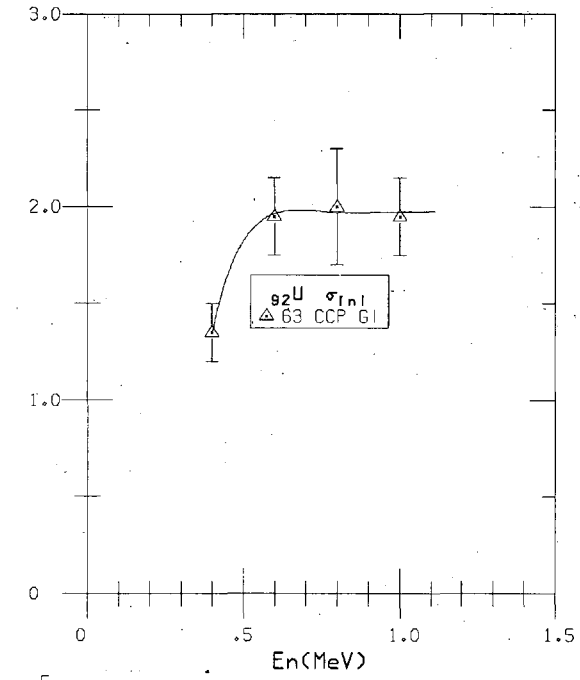


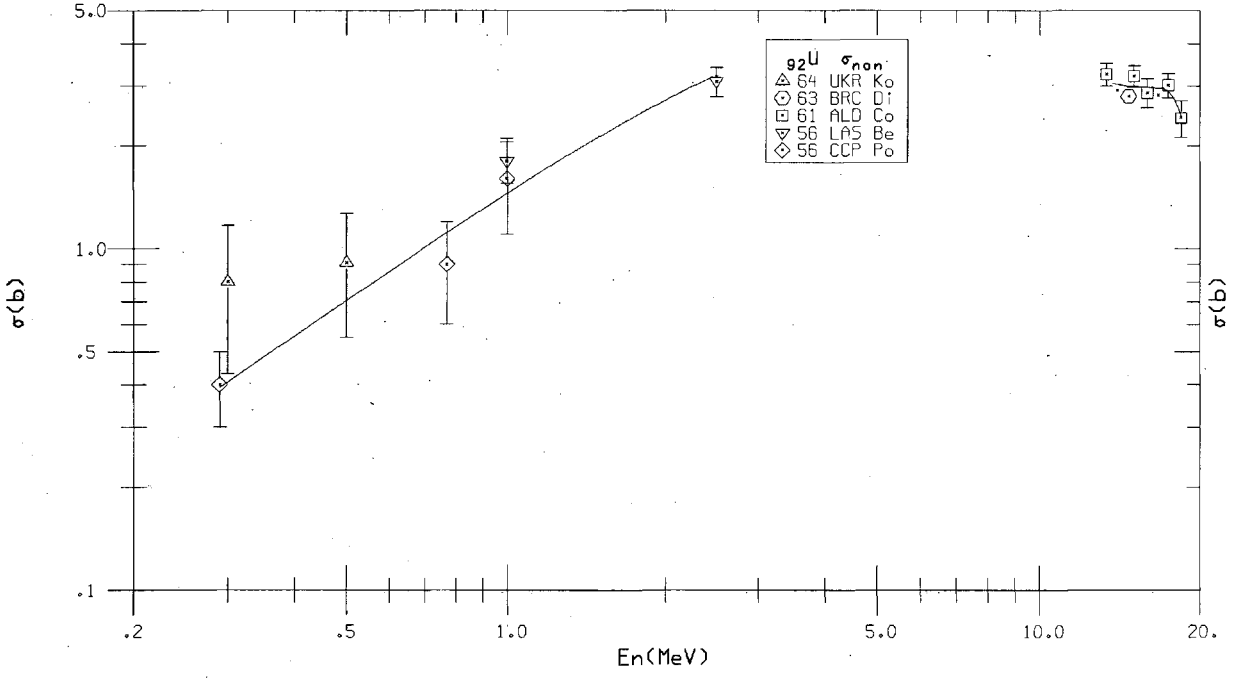


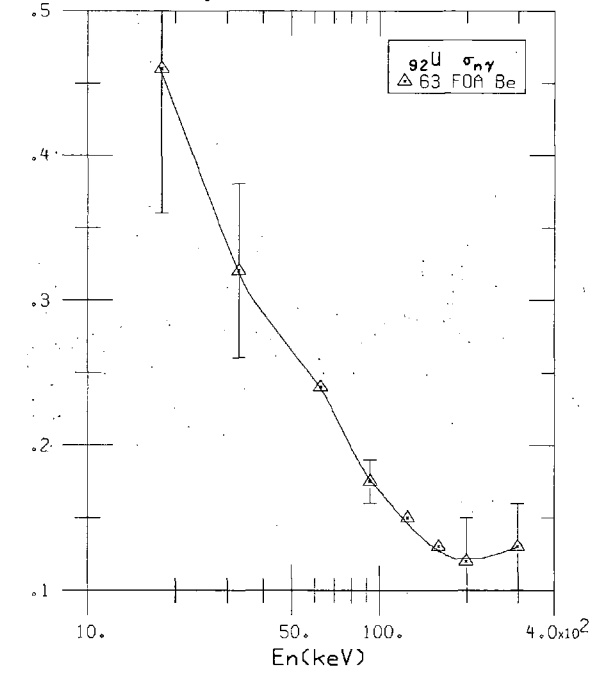










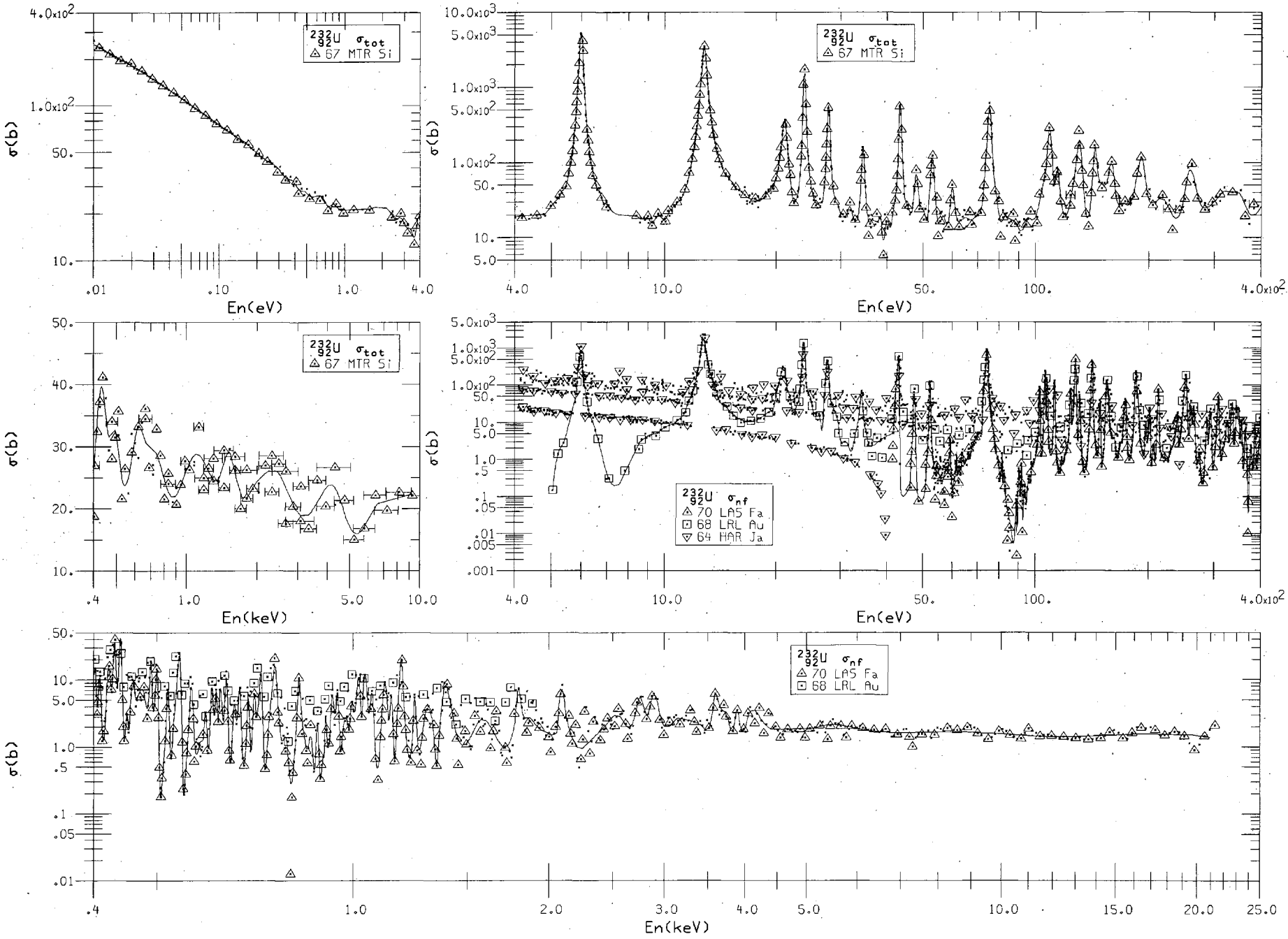


$_{92}U$
σ_{el}
σ_{sct}
σ_{inl}
σ_{non}
$\sigma_{n\gamma}$

$^{232}_{92}U$

σ_{tot}

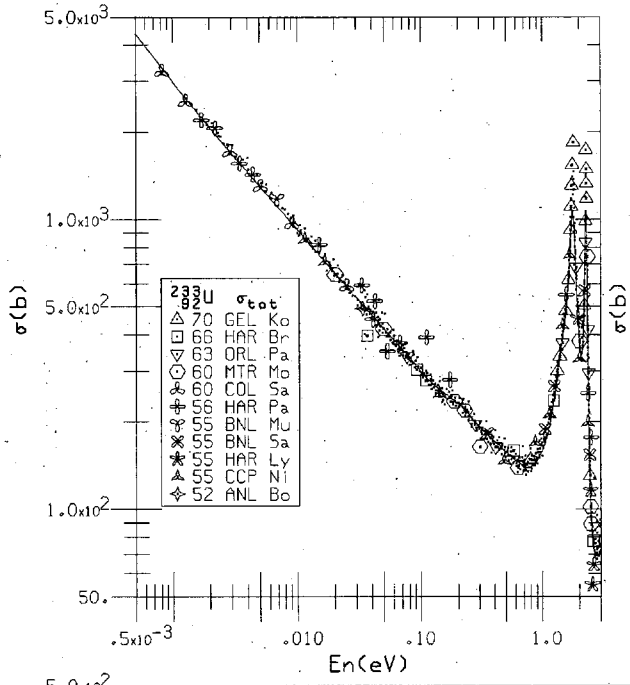
σ_{nf}

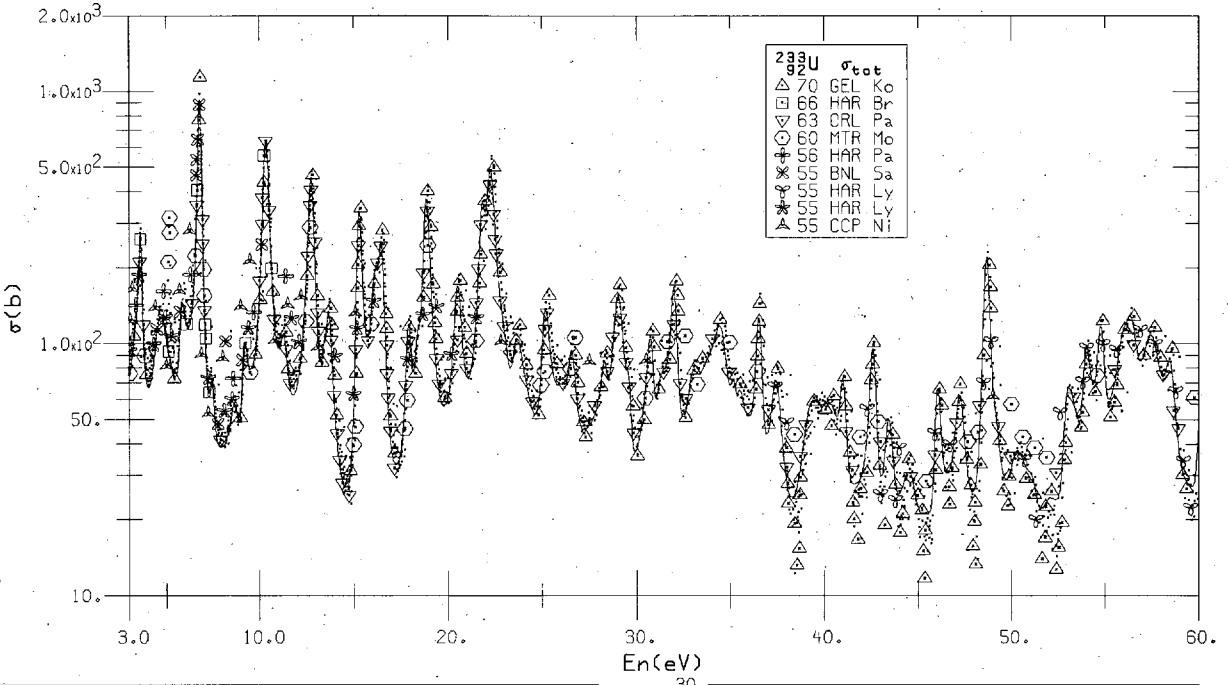


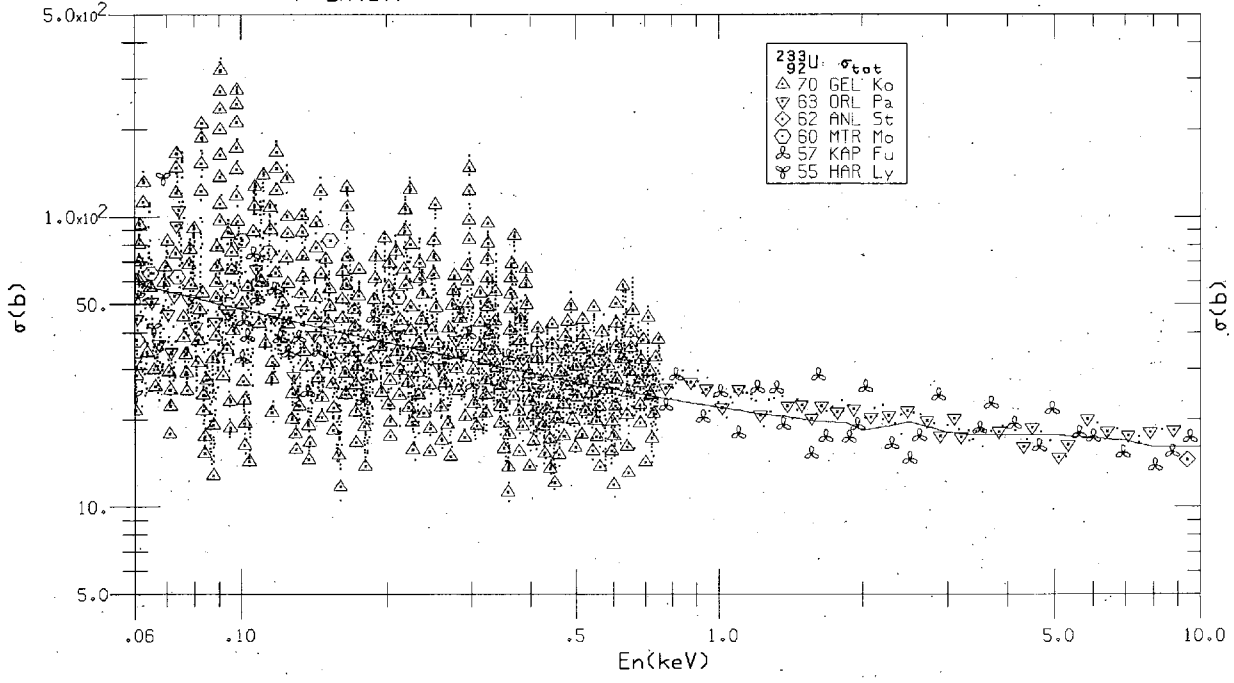
$^{233}_{92}U$

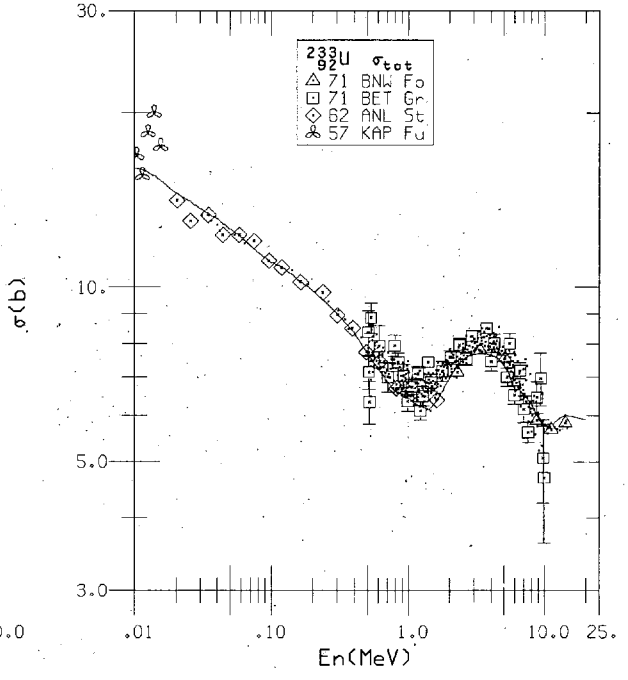
σ_{tot}

[1260]





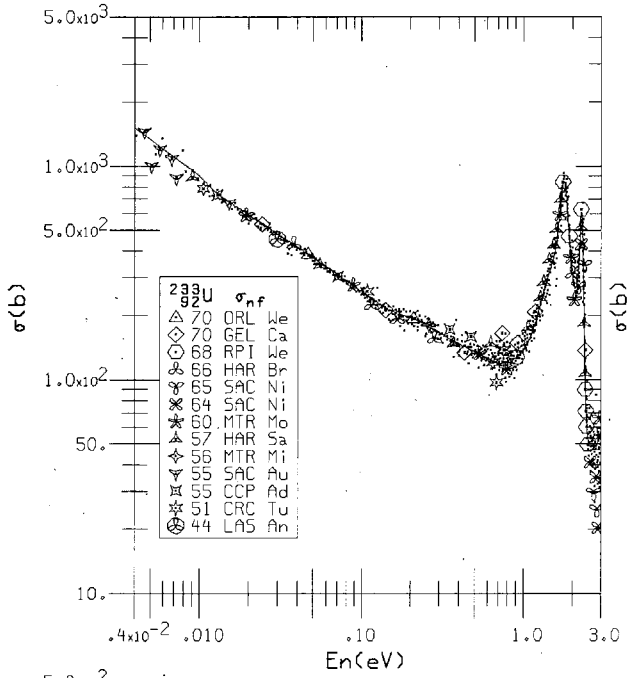


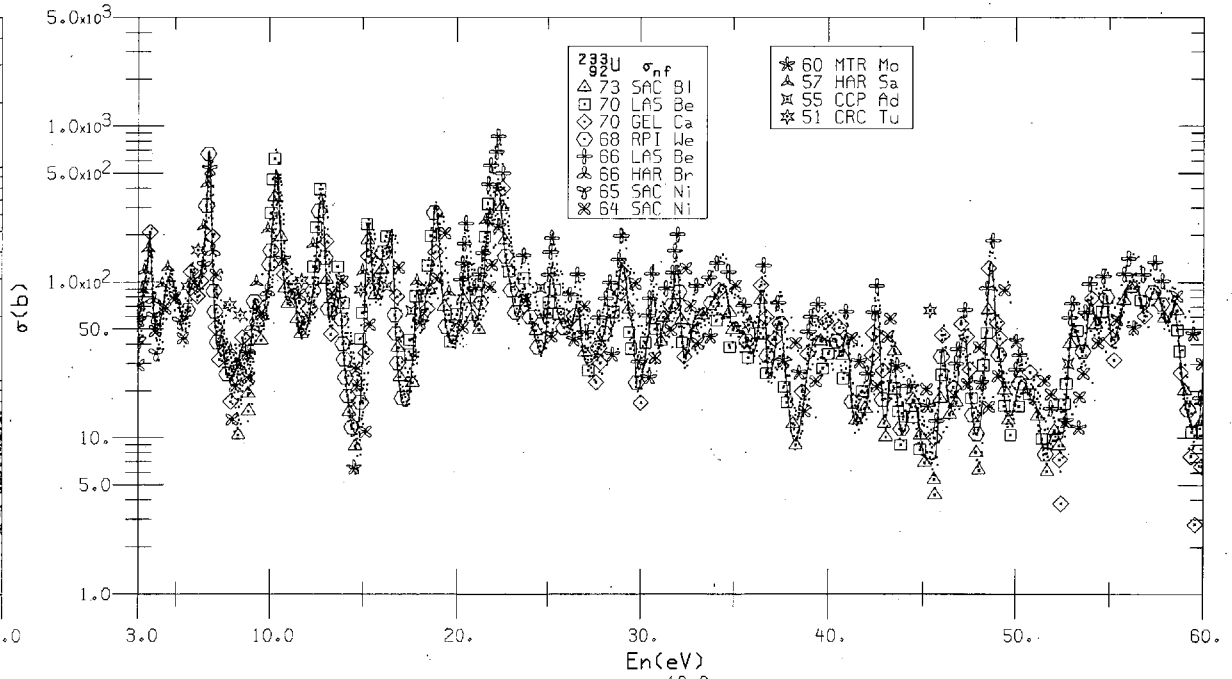


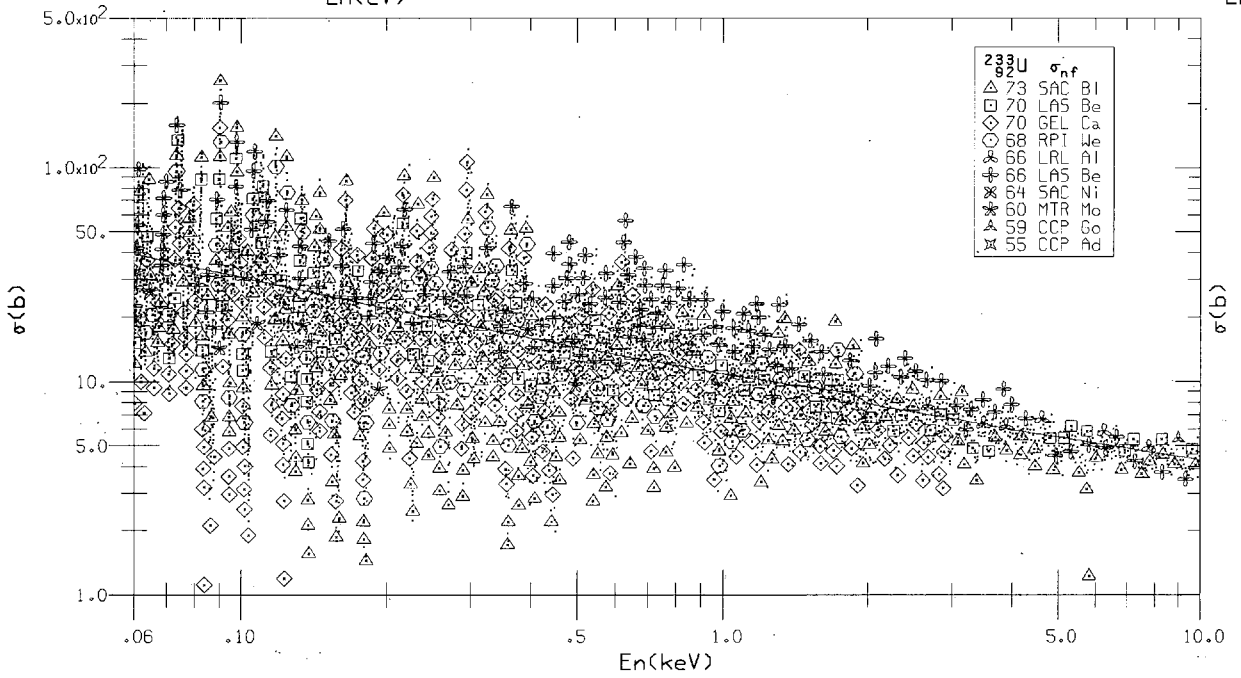
$^{233}_{92}U$

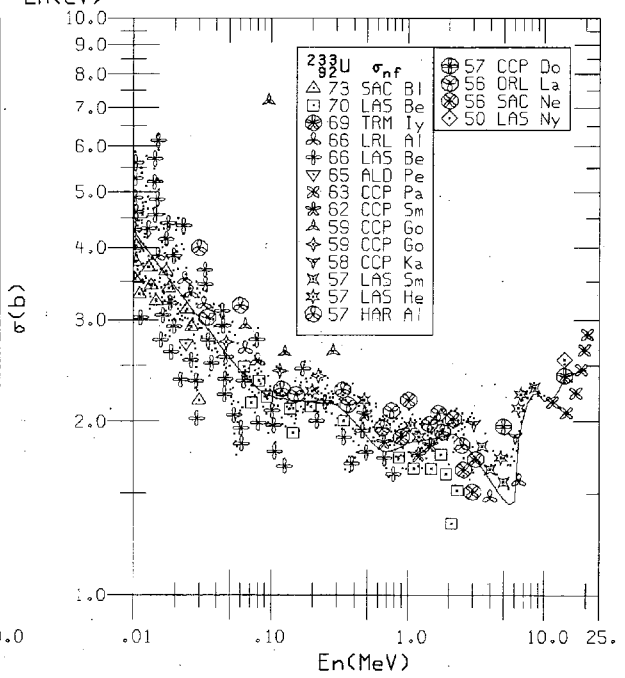
σ_{nf}

[1260]









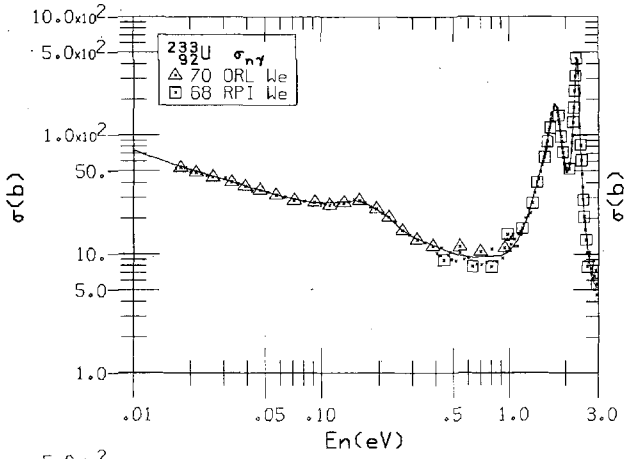
$^{233}_{92}U$

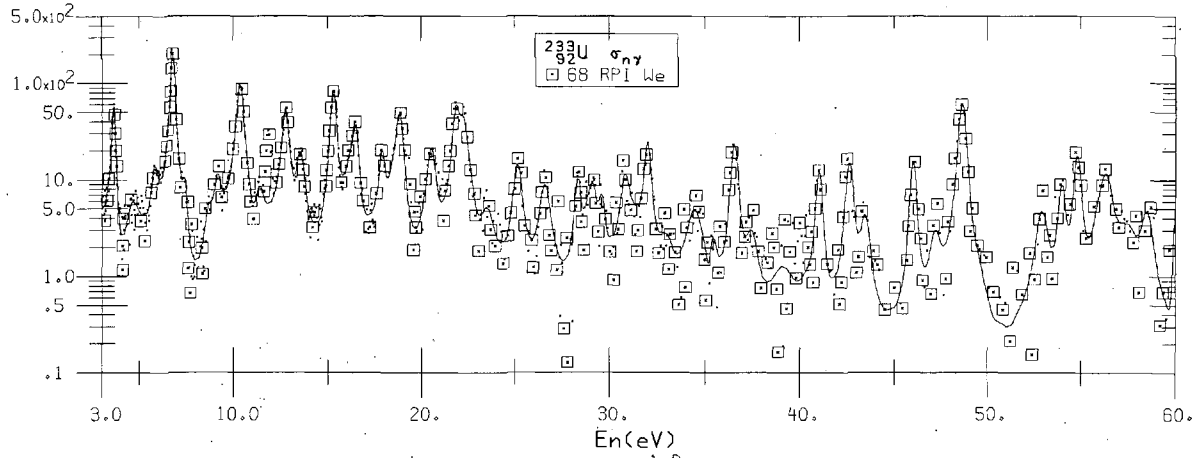
σ_{el}

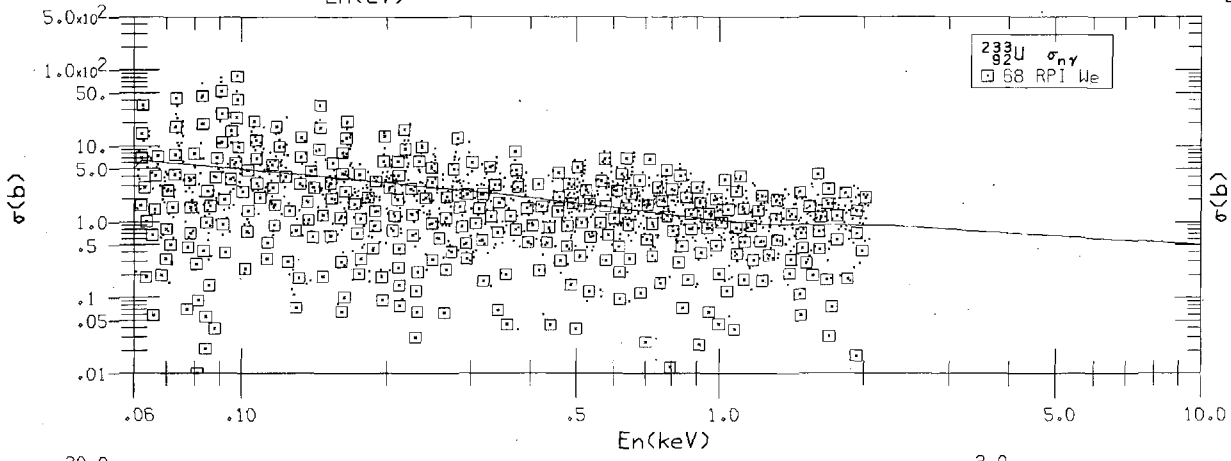
$\sigma_{n\gamma}$

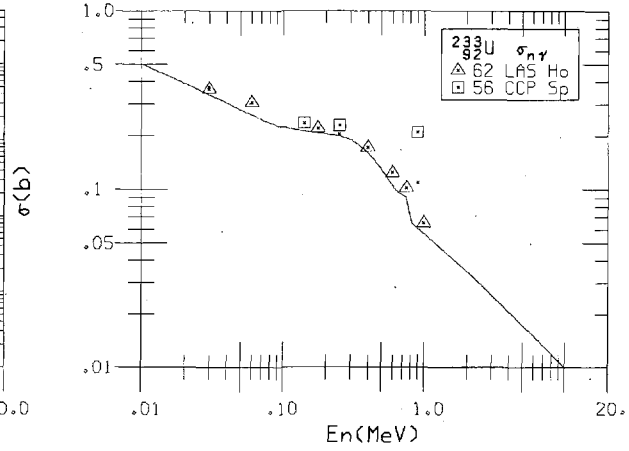
ν

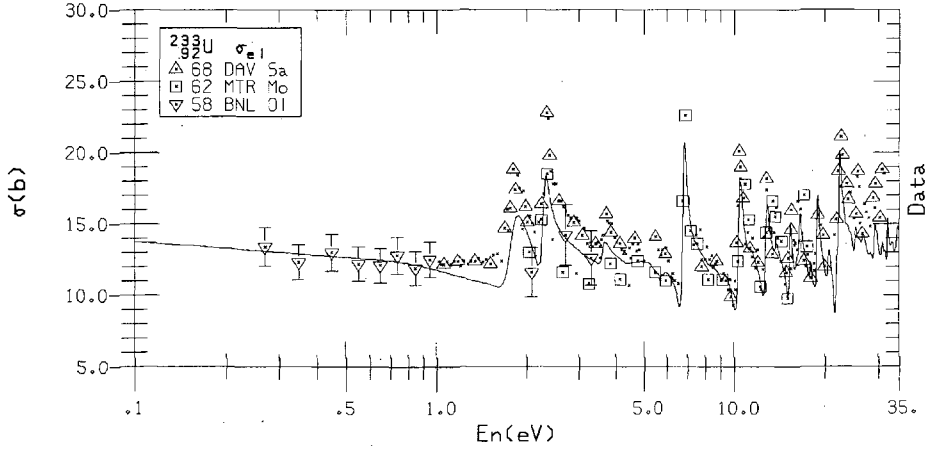
[1260]

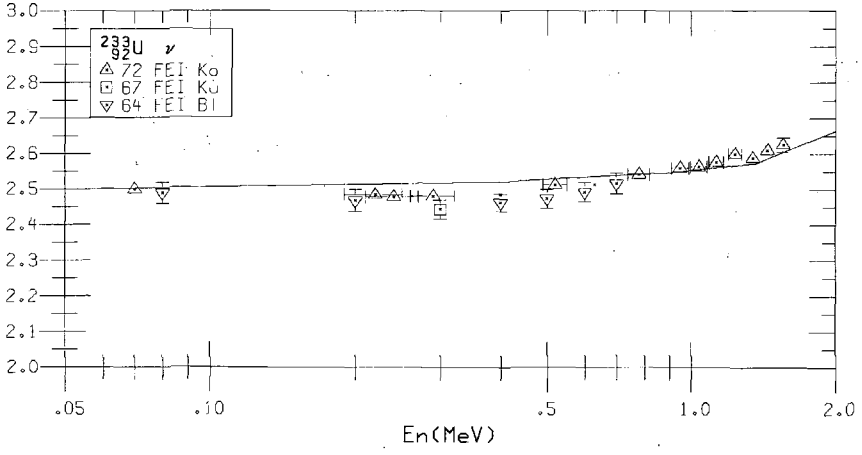




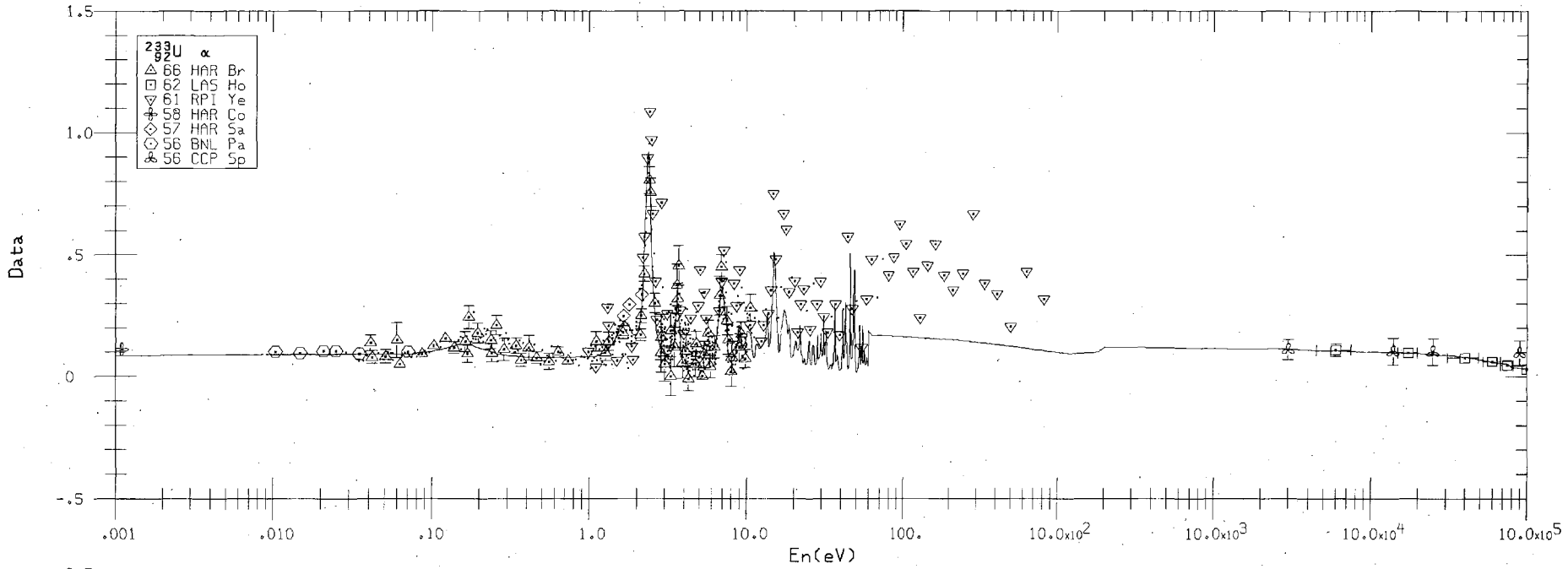


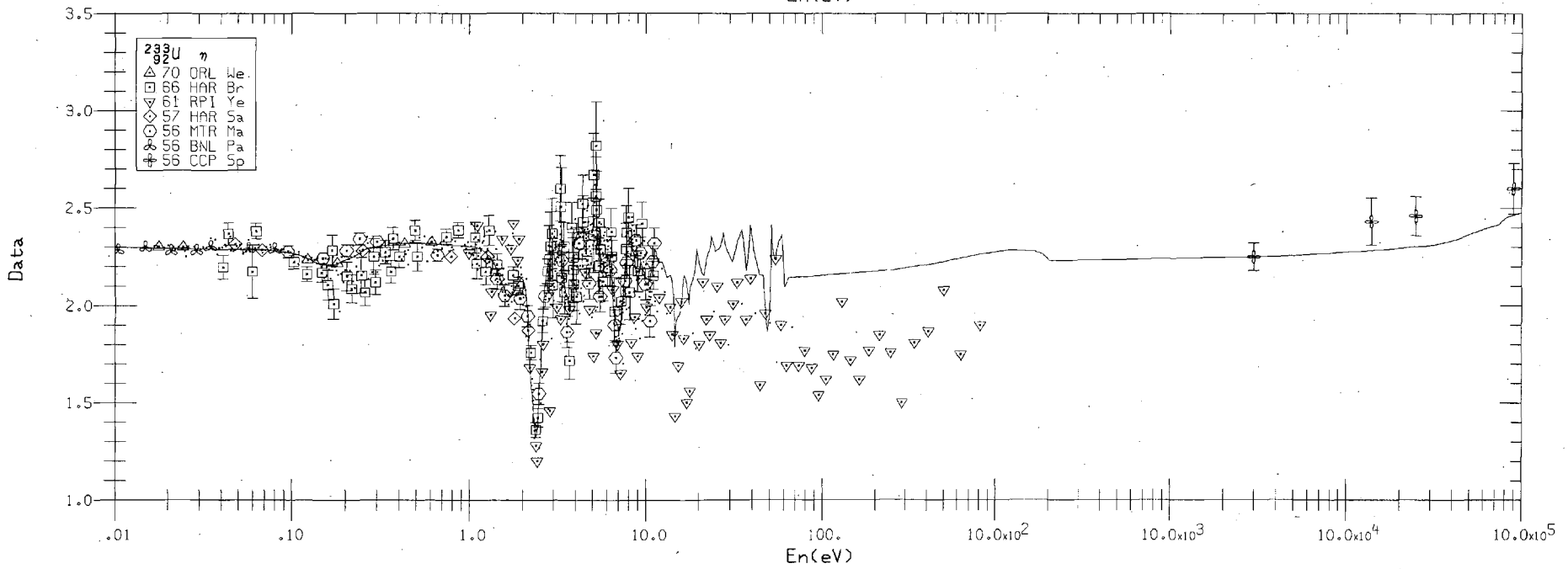






$^{233}_{92}U$
α
η
[1260]



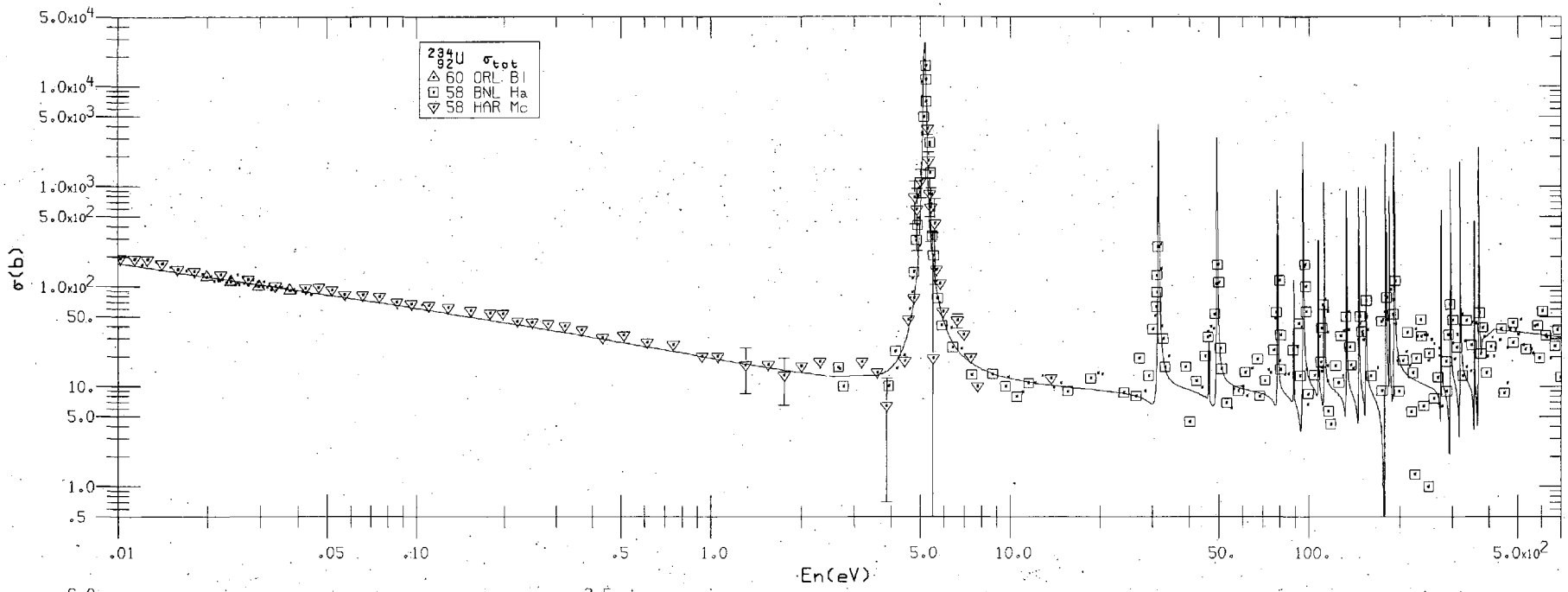


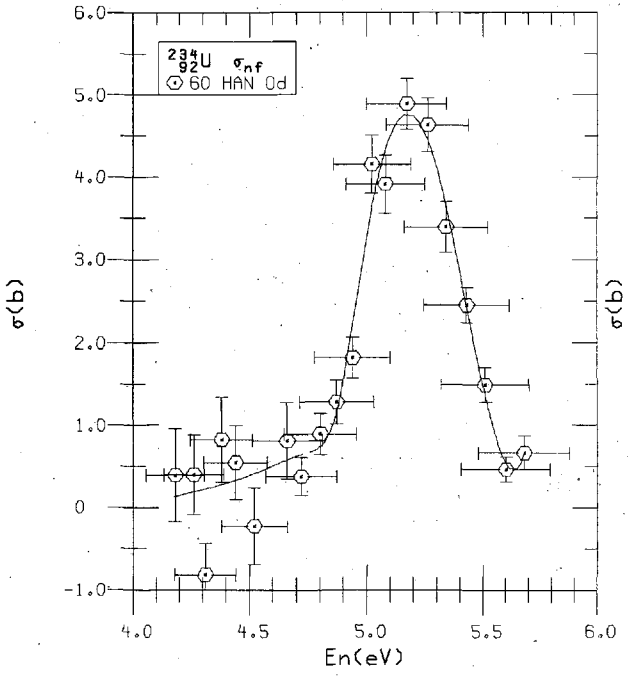
$^{234}_{92}U$

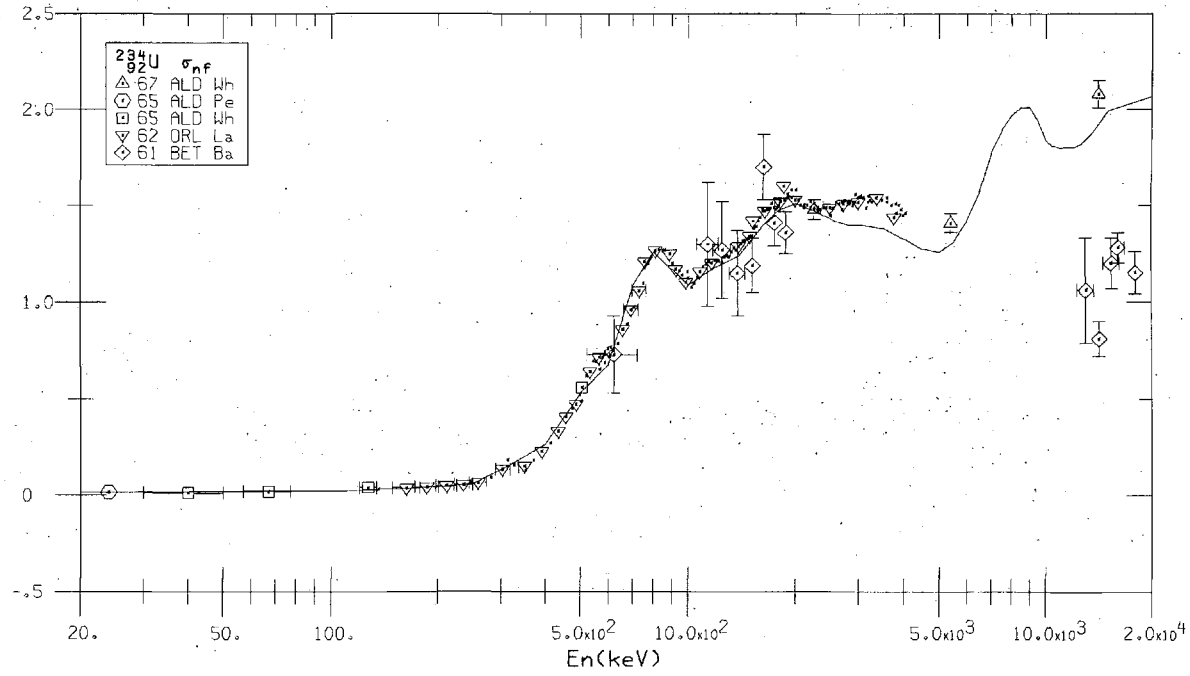
σ_{tot}

σ_{nf}

[1043]



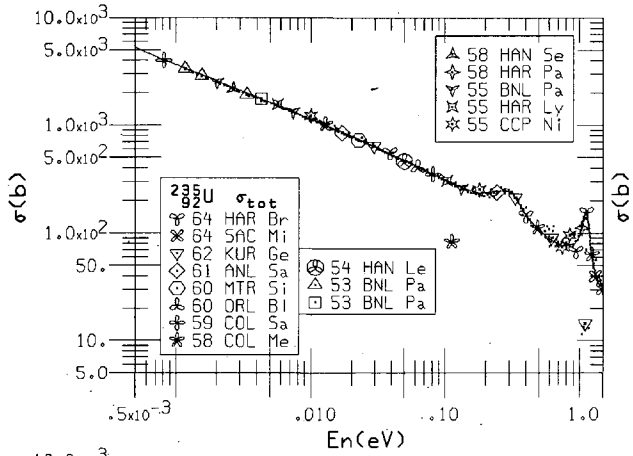


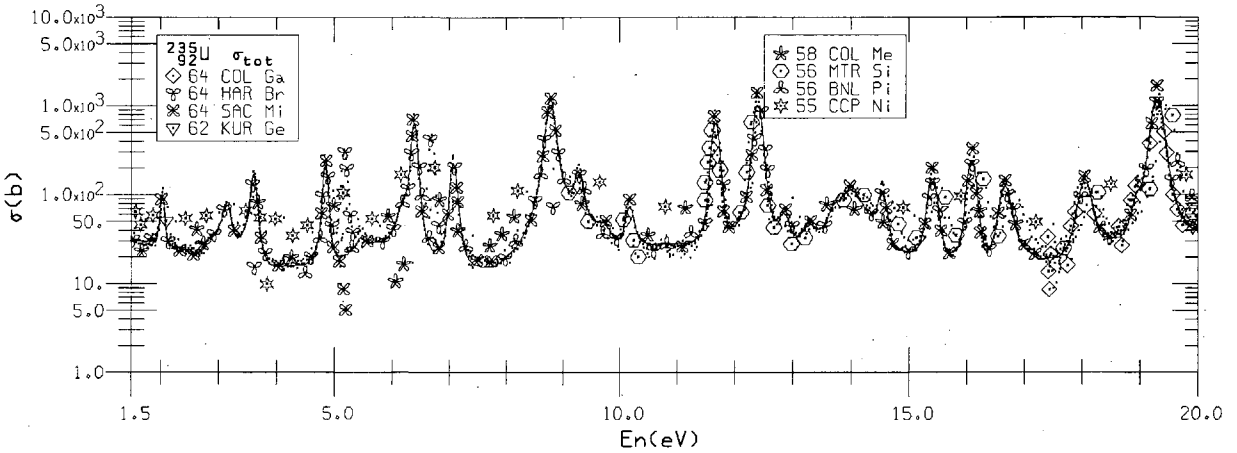


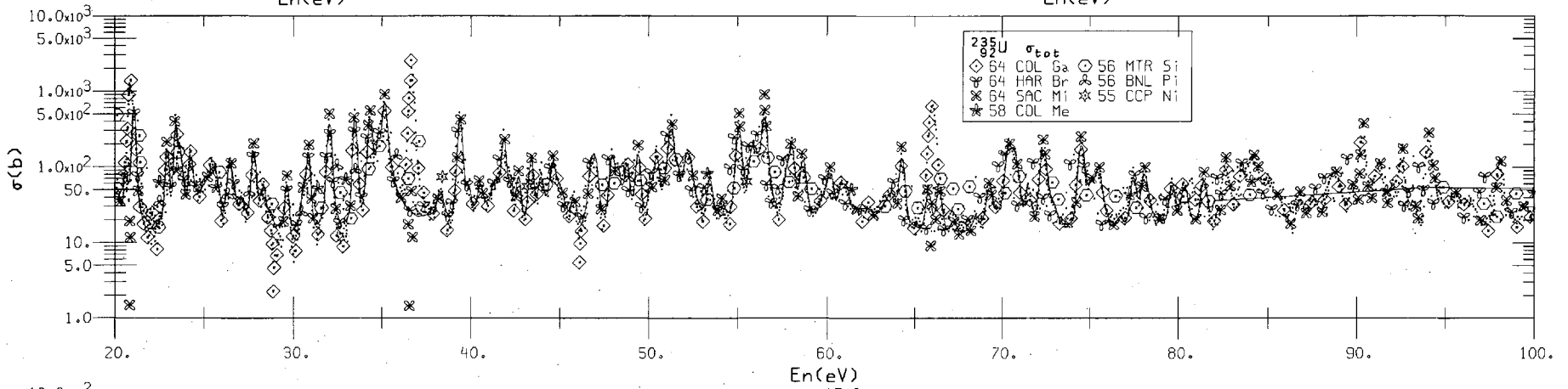
$^{235}_{92}U$

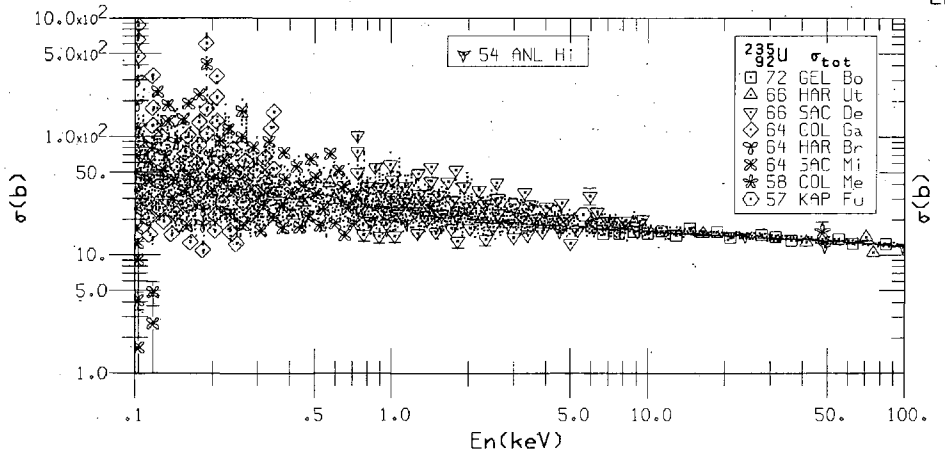
σ_{tot}

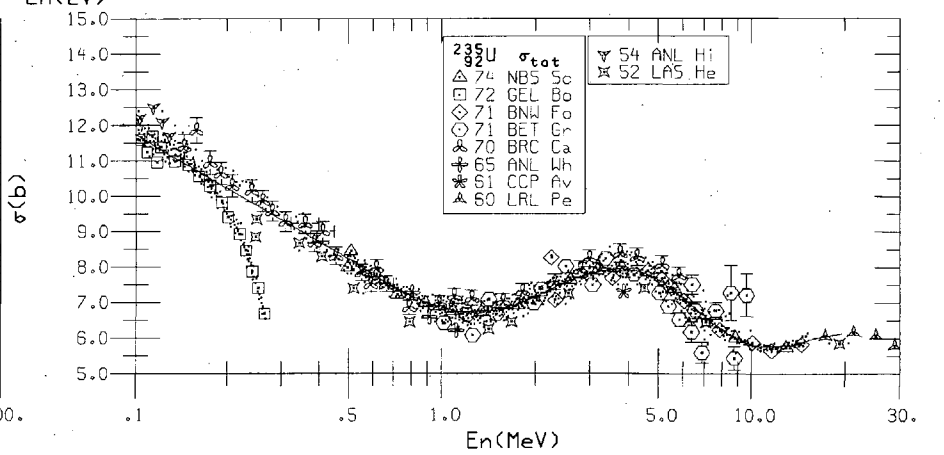
[1261]







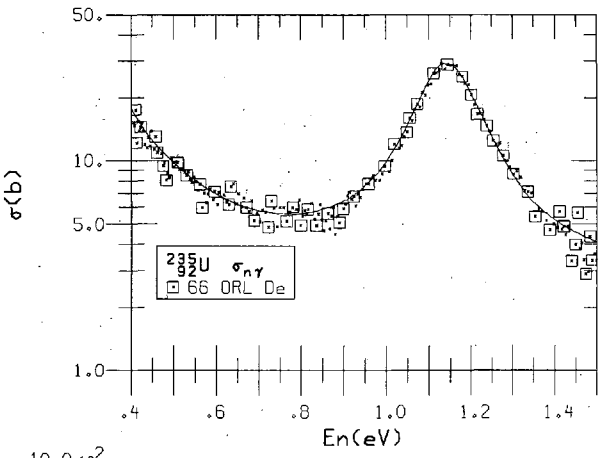


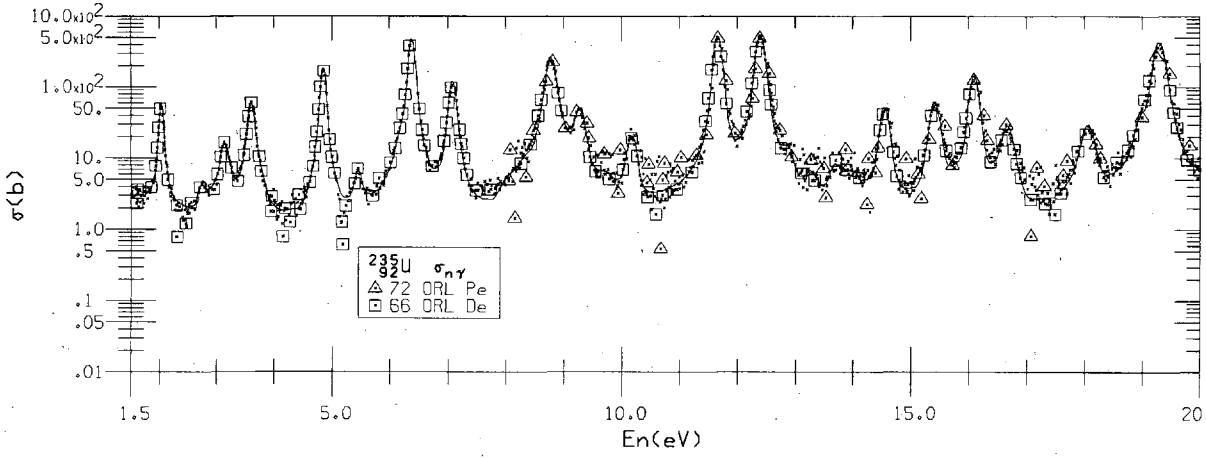


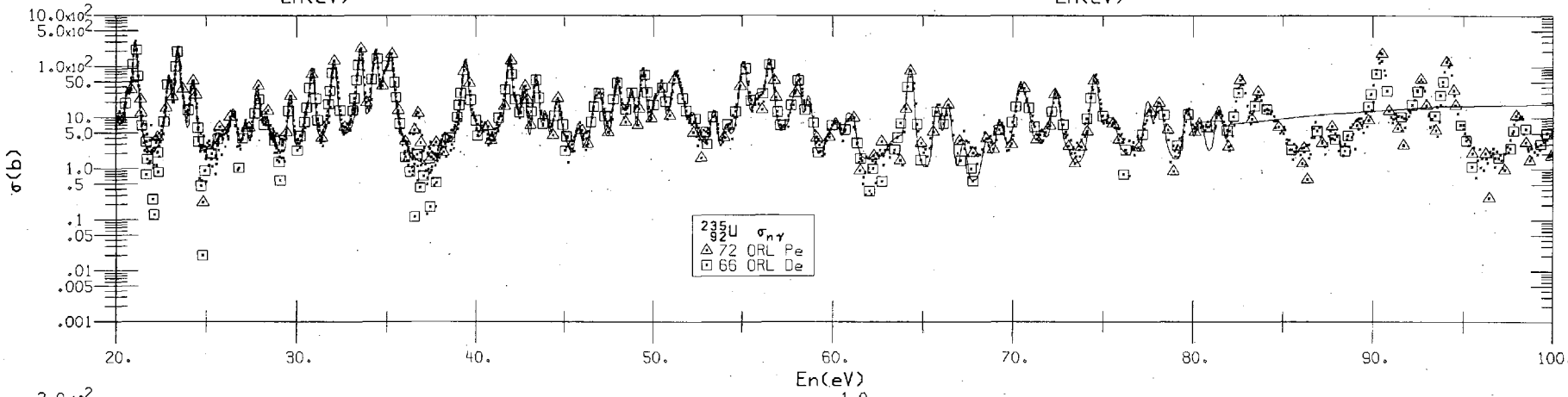
$^{235}_{92}U$

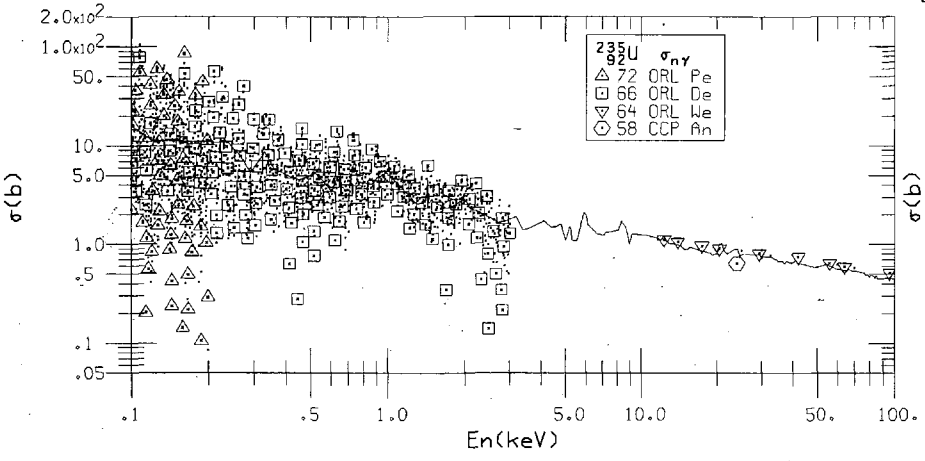
$\sigma_{n\gamma}$

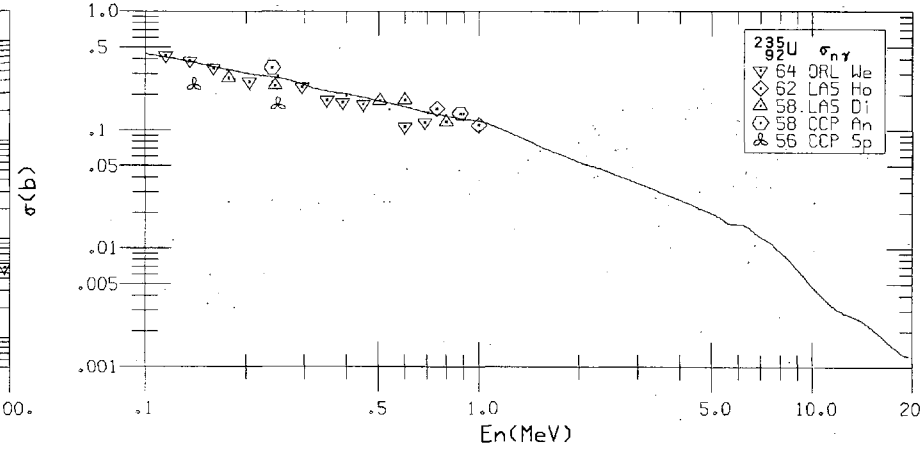
[1261]







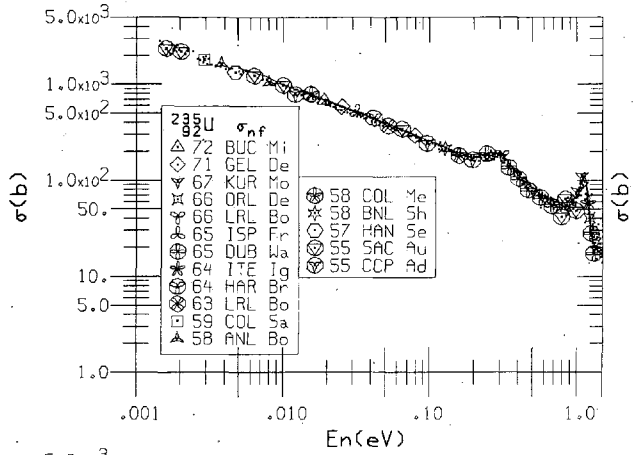


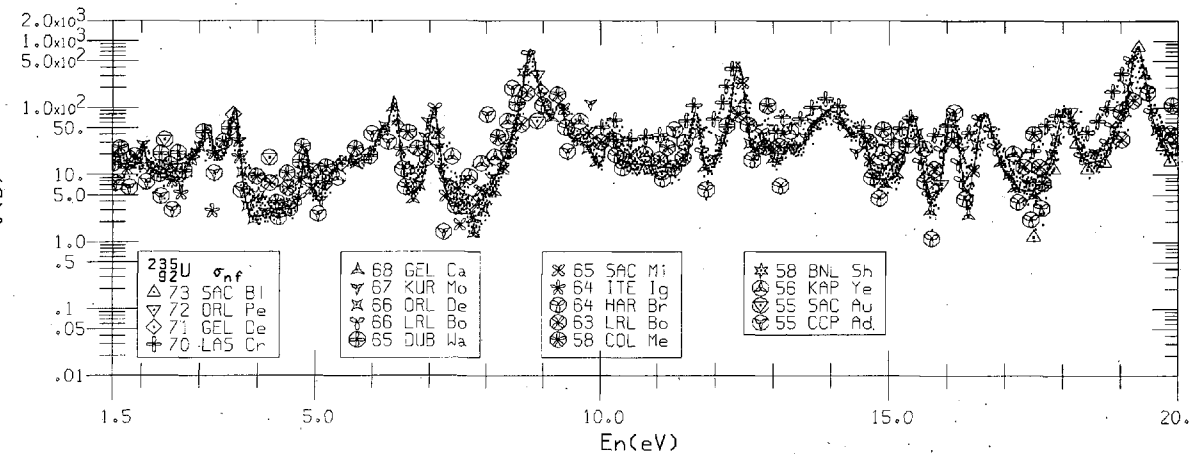


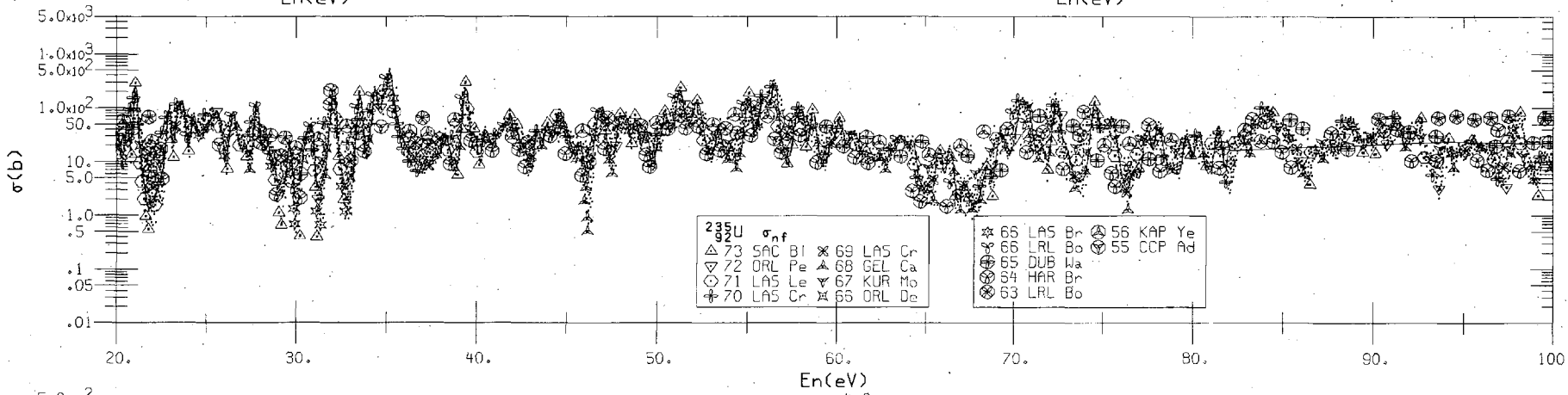
$^{235}_{92}U$

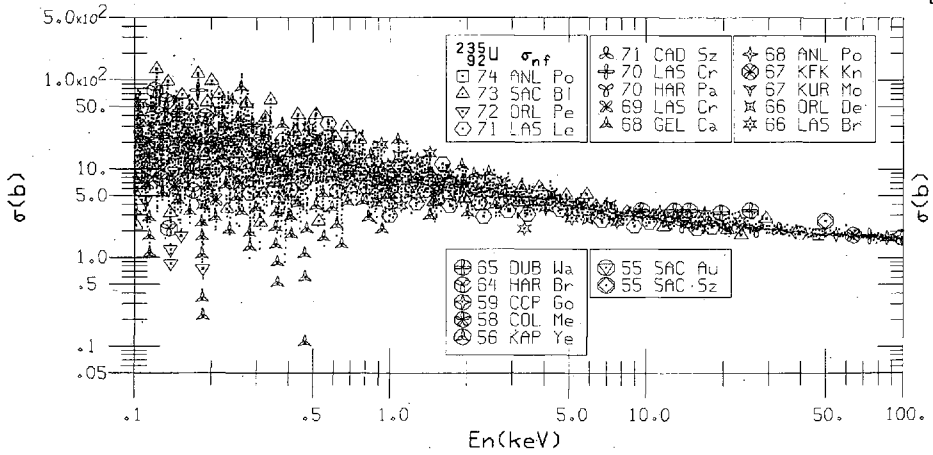
σ_{nf}

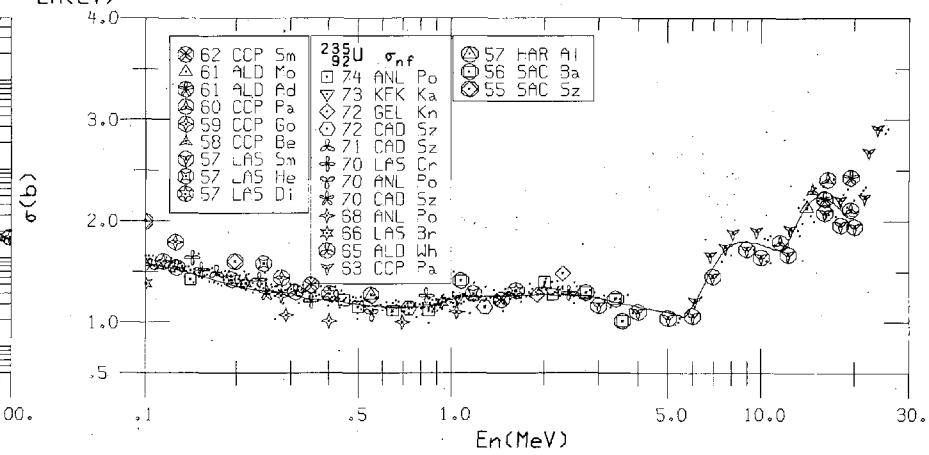
[1261]











$^{235}_{92}U$

σ_{inl}

σ_{non}

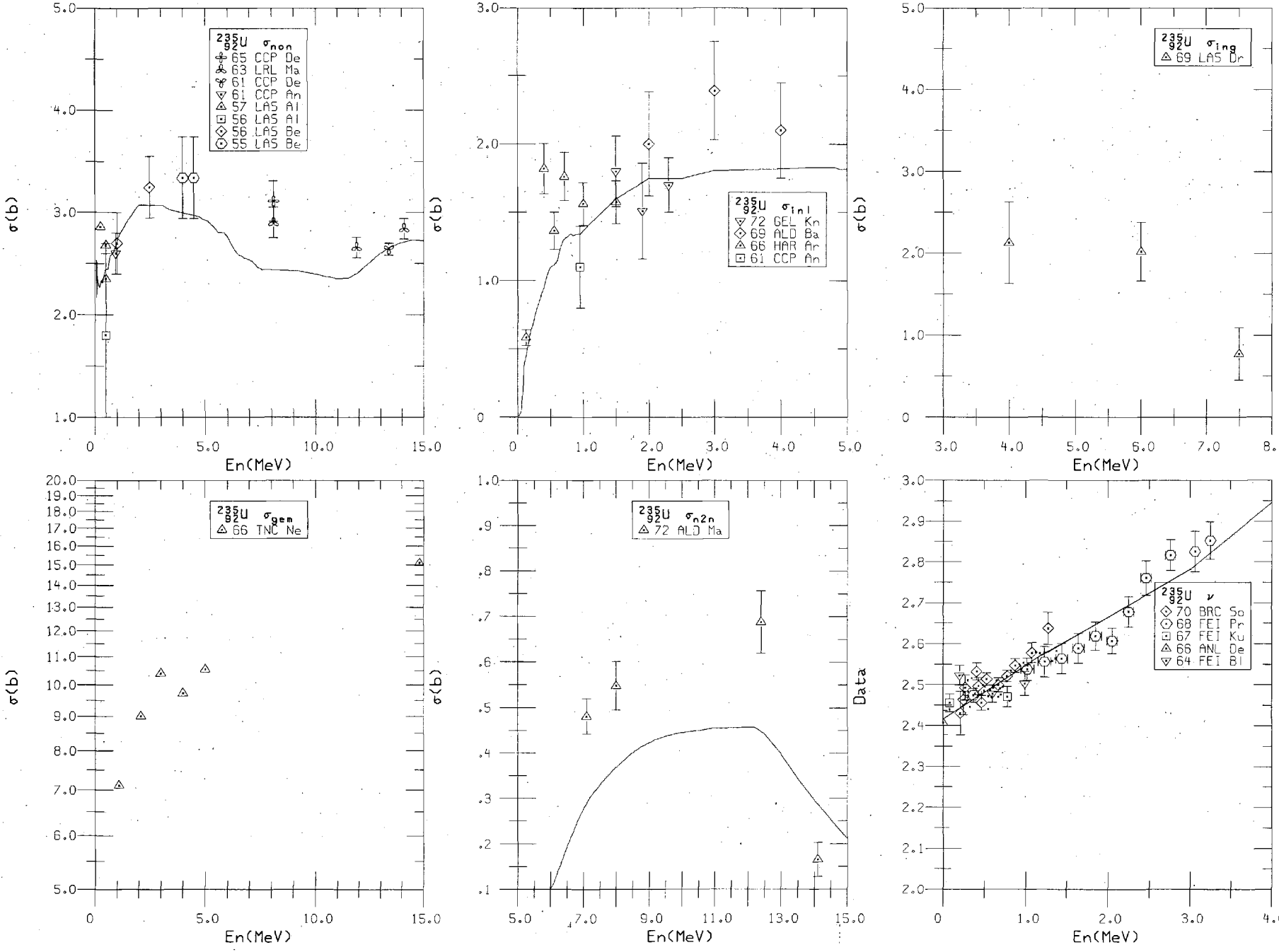
σ_{n2n}

ν

[1261]

σ_{ing}

σ_{gem}



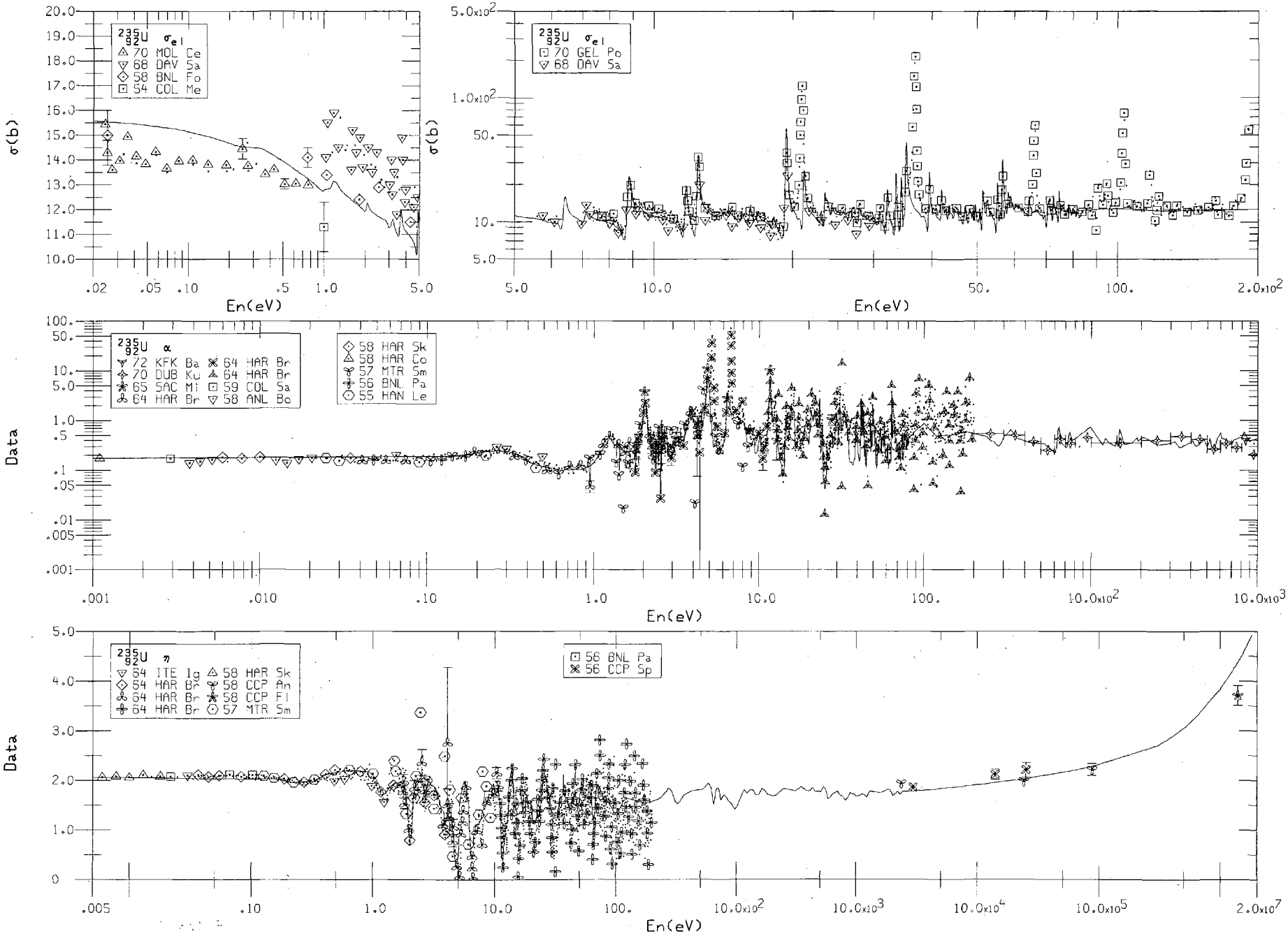
$^{235}_{92}U$

σ_{el}

α

η

[1261]

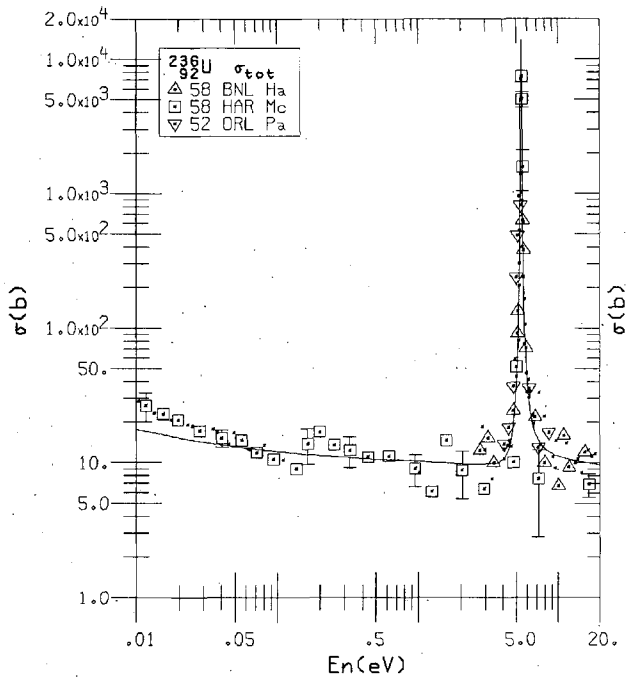


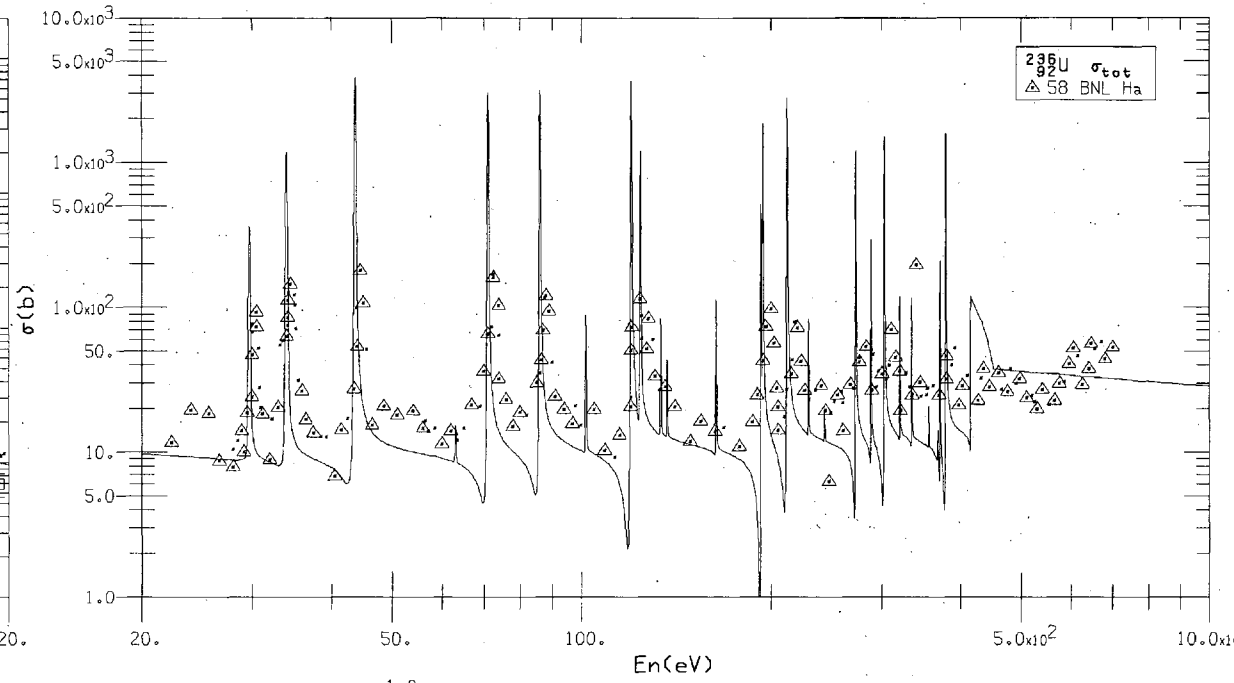
$^{236}_{92}U$

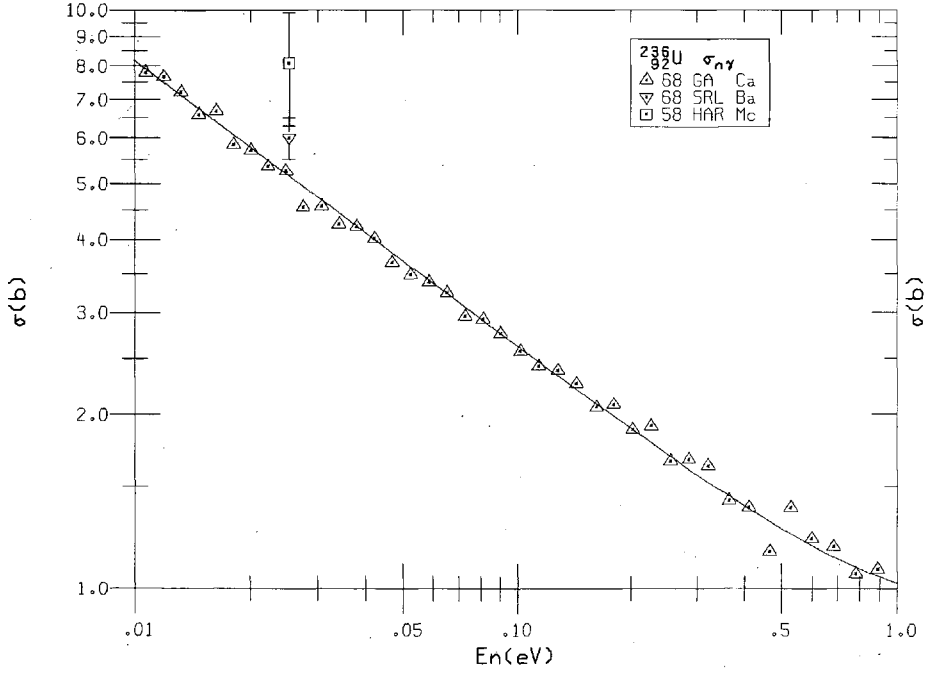
σ_{tot}

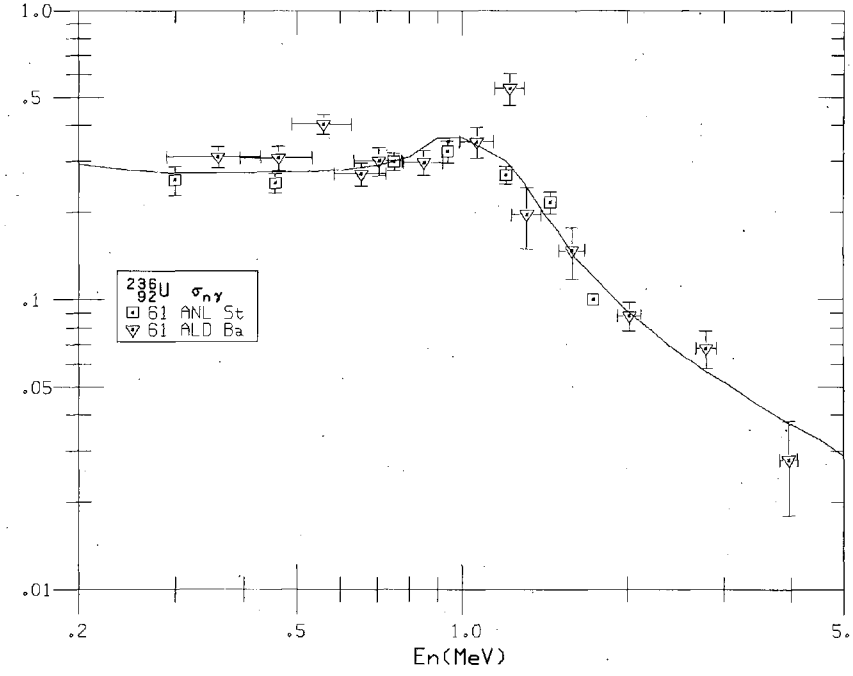
$\sigma_{n\gamma}$

[1163]





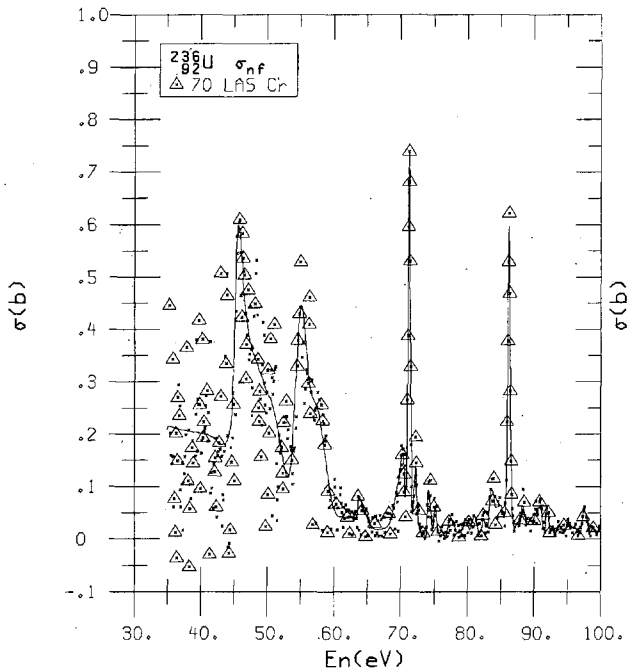


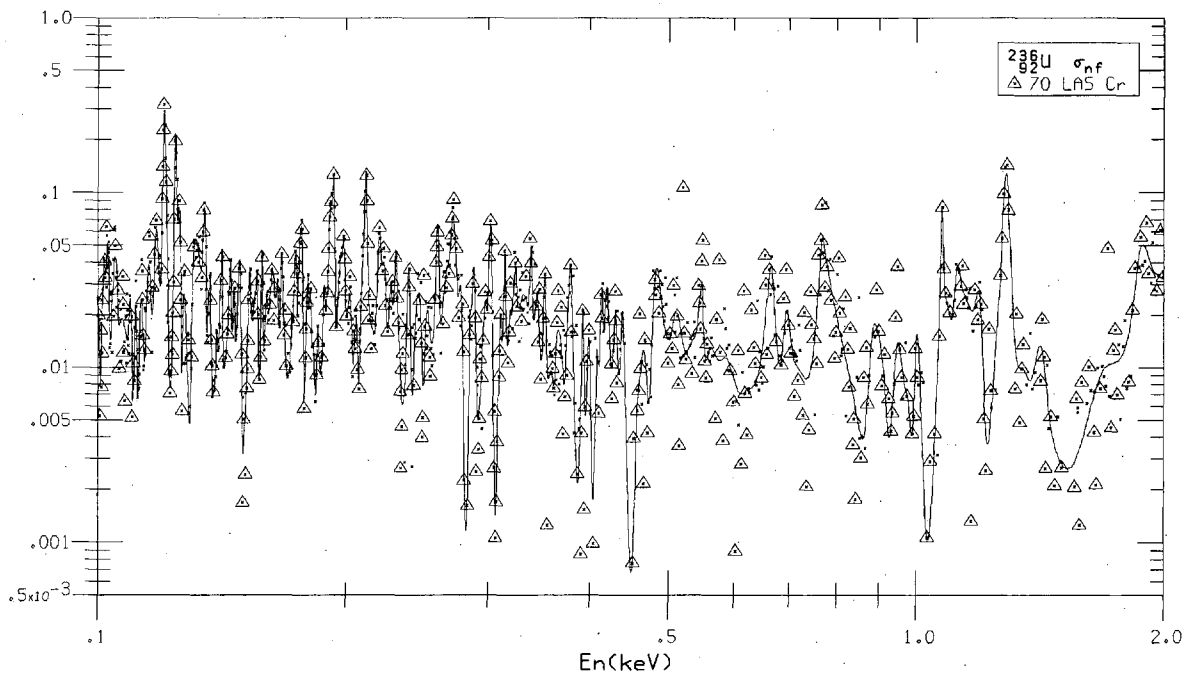


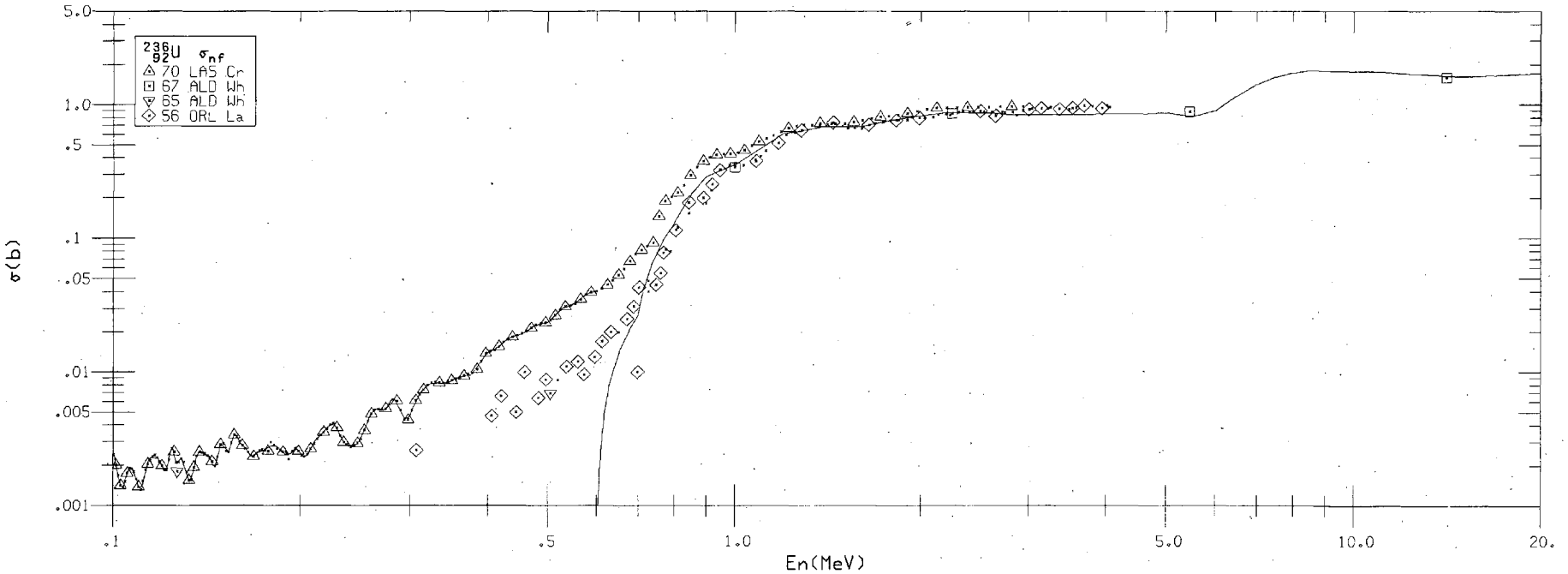
$^{236}_{92}U$

σ_{nf}

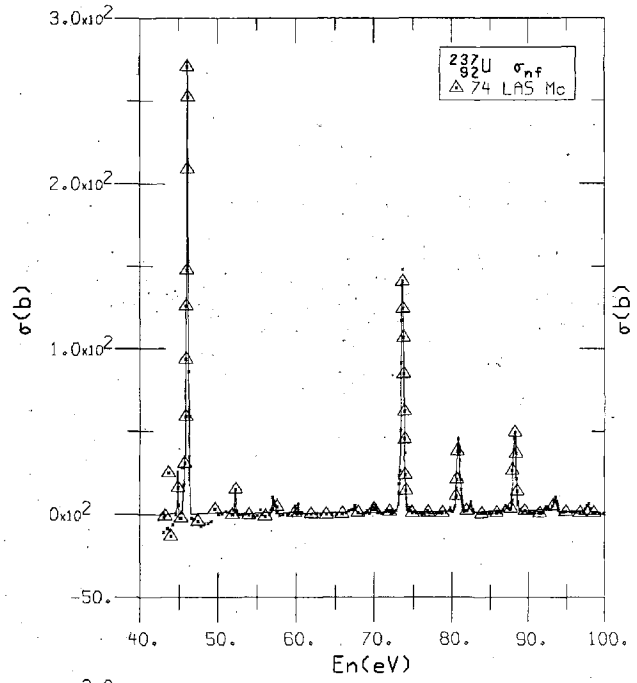
[1163]

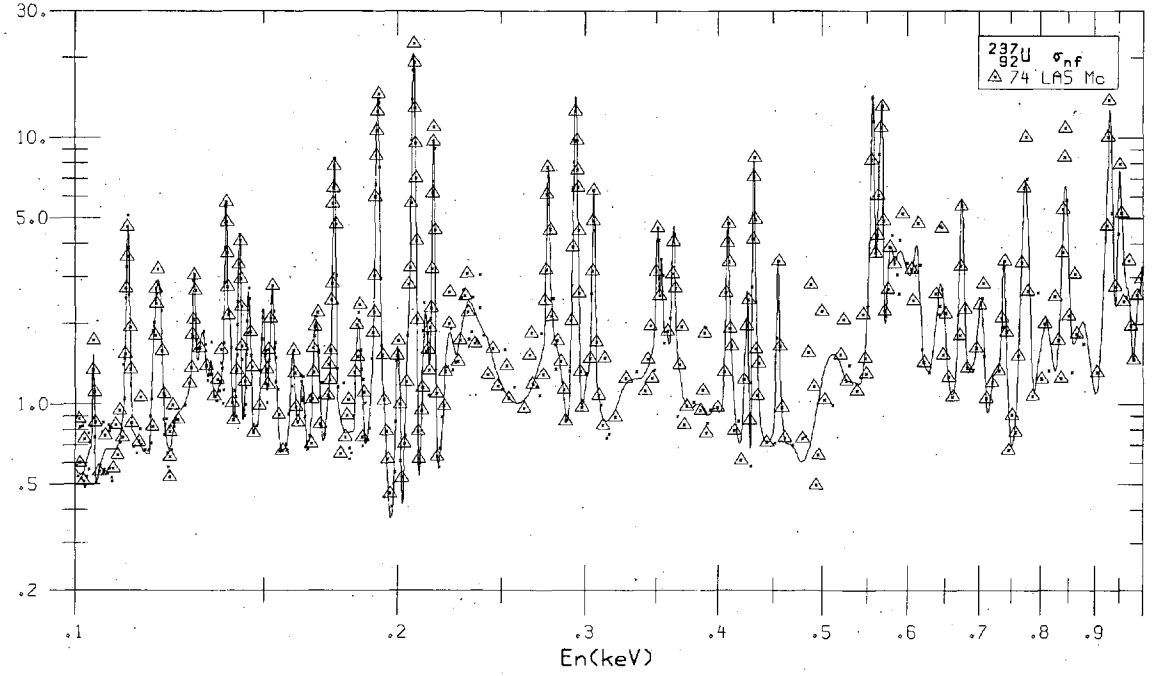


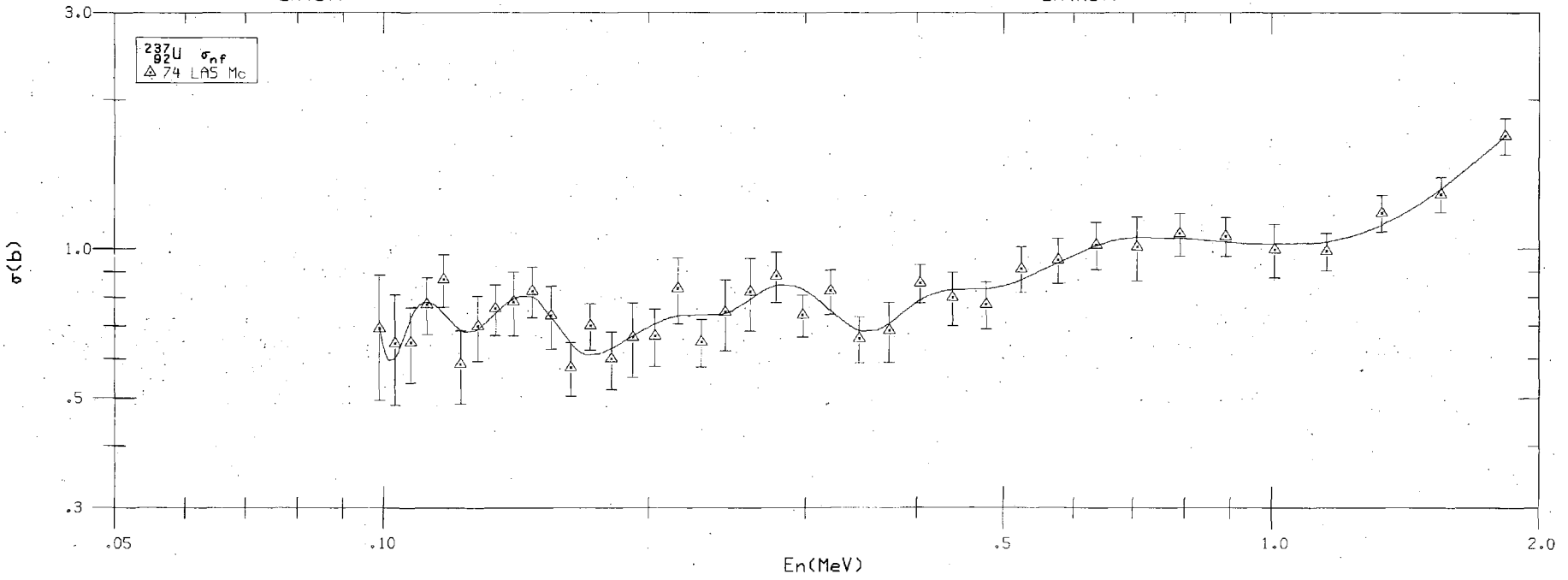




Curve below 0.6 MeV not from ENDF


$^{237}_{92}U$ σ_{nf}
△ 74 LAS Mc
σ(b)
3.0x10^2
2.0x10^2
1.0x10^2
0x10^2
-50.
40.
50.
60.
70.
80.
90.
100.
En(eV)

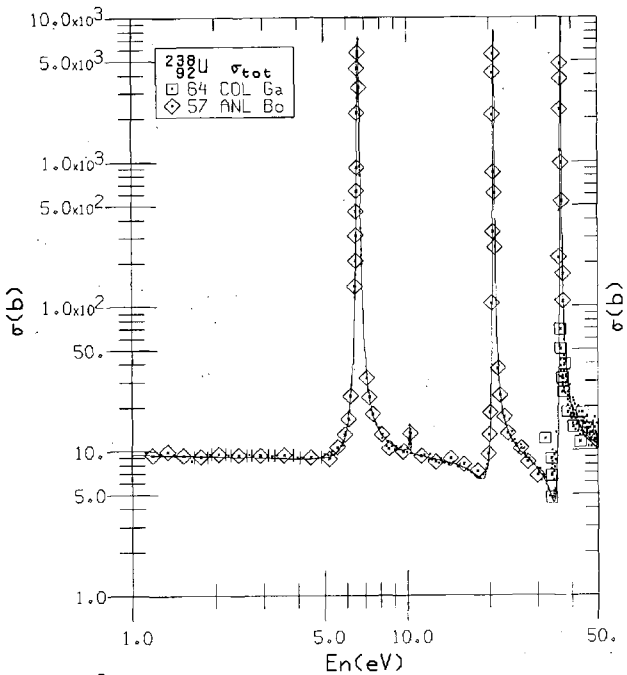

$^{237}_{92}U$ σ_{nf}
△ 74 LAS Mc
σ(b)
30.
10.
5.0
1.0
.5
.2
.1
.2
.3
.4
.5
.6
.7
.8
.9
En(keV)

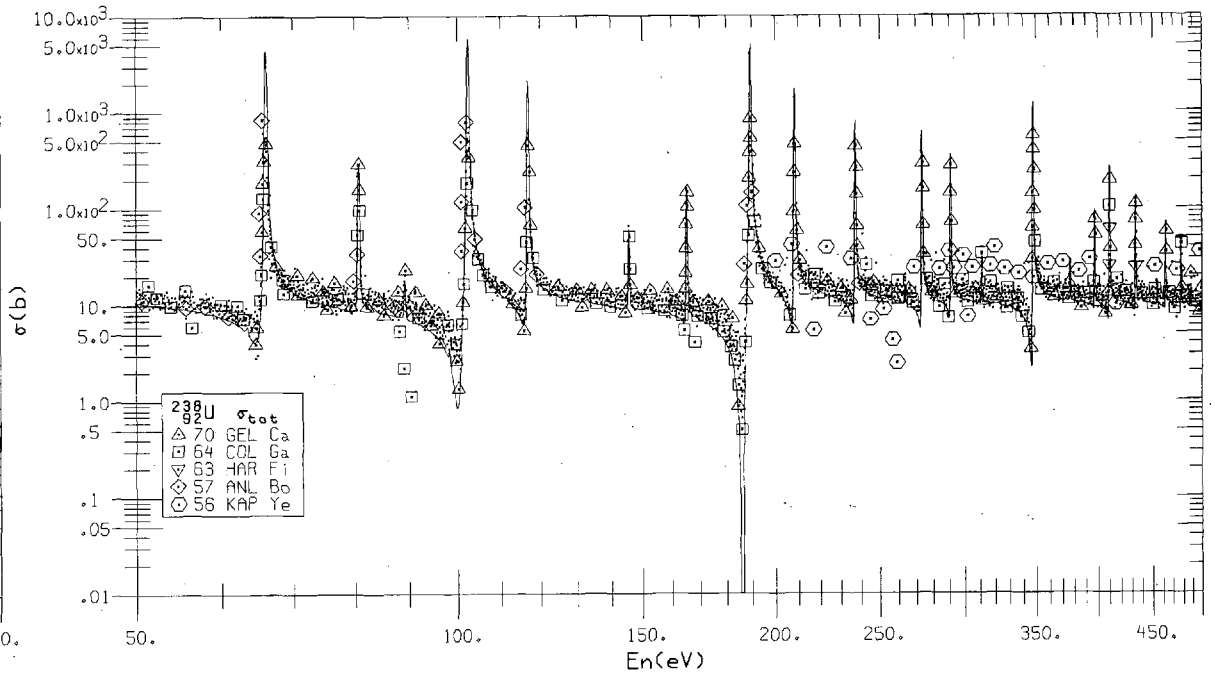

$^{237}_{92}U$ σ_{nf}
△ 74 LAS Mc
σ(b)
3.0
1.0
.5
.3
.05
.10
.5
1.0
2.0
En(MeV)

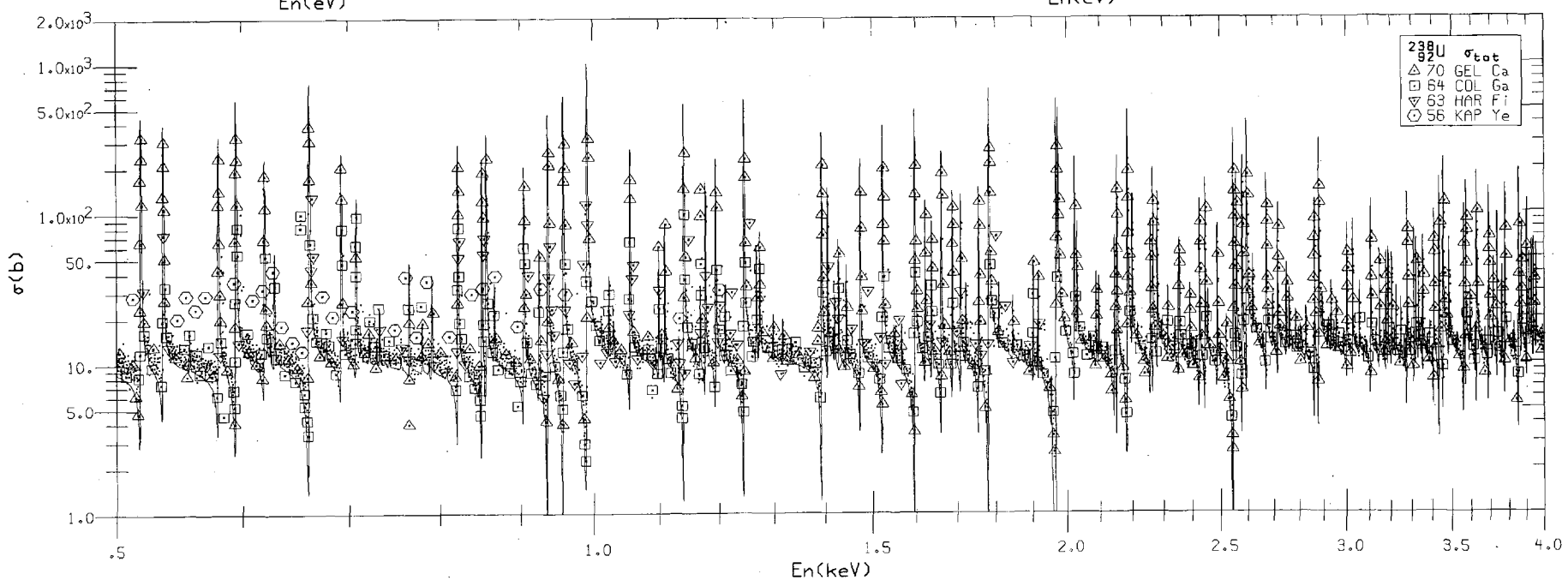
$^{238}_{92}U$

σ_{tot}

[1262]





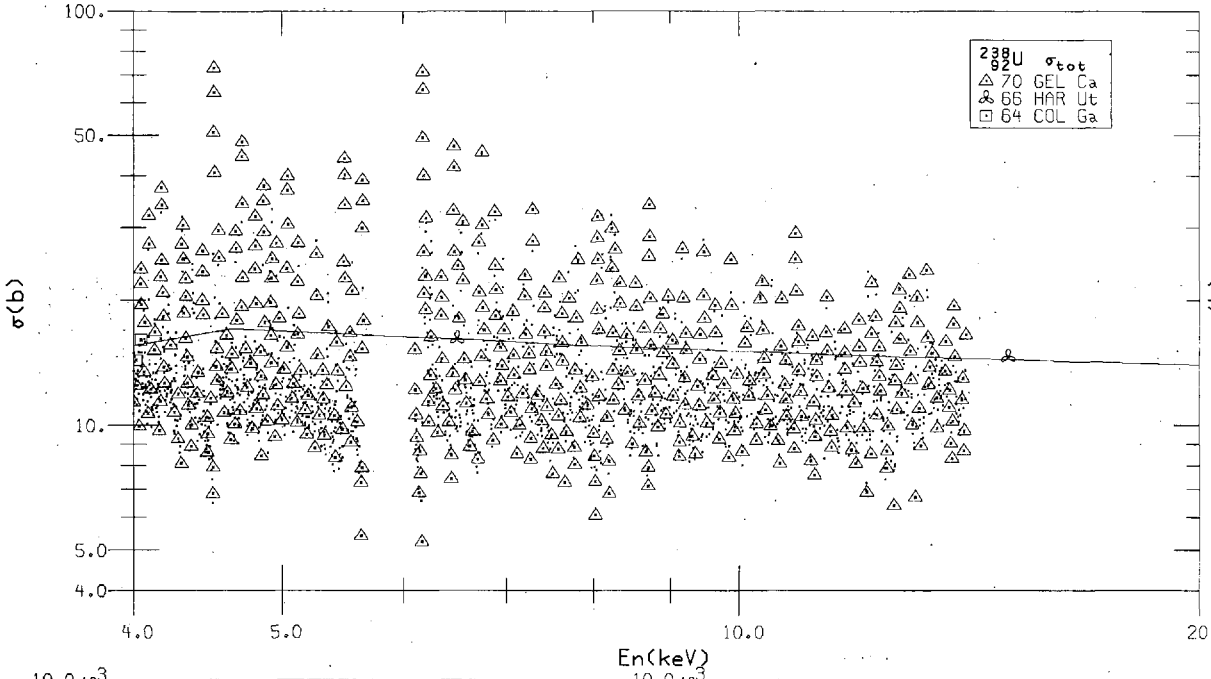


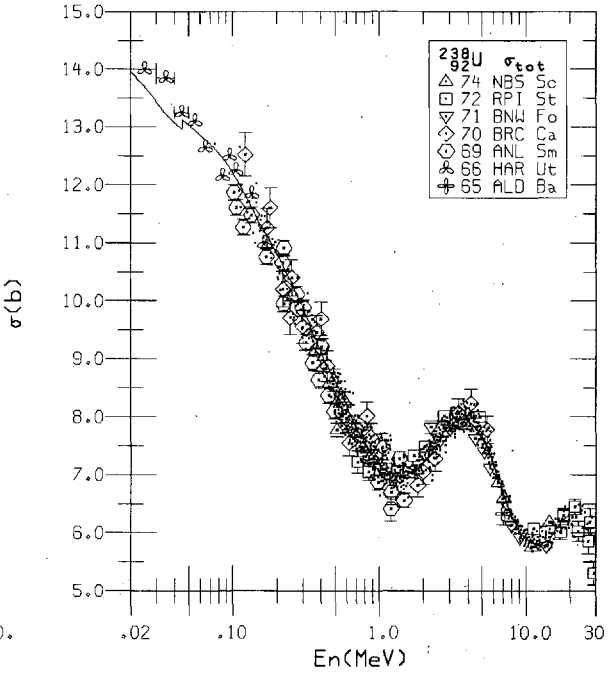
$^{238}_{92}U$

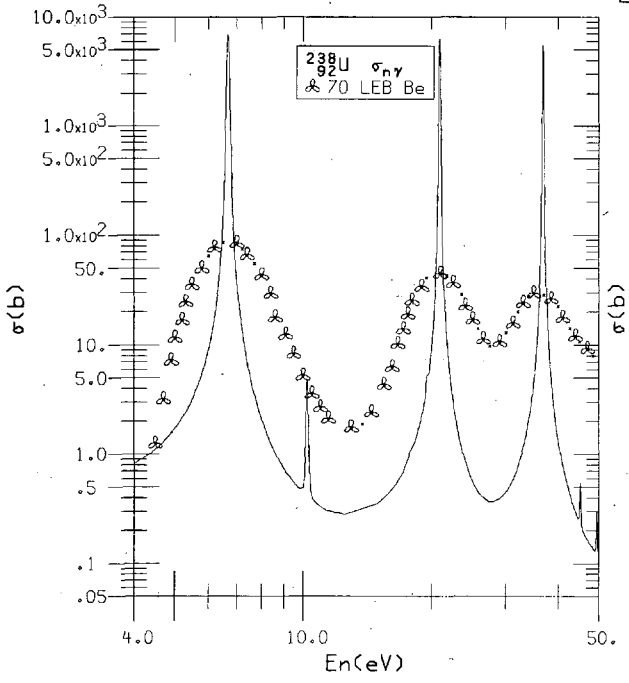
σ_{tot}

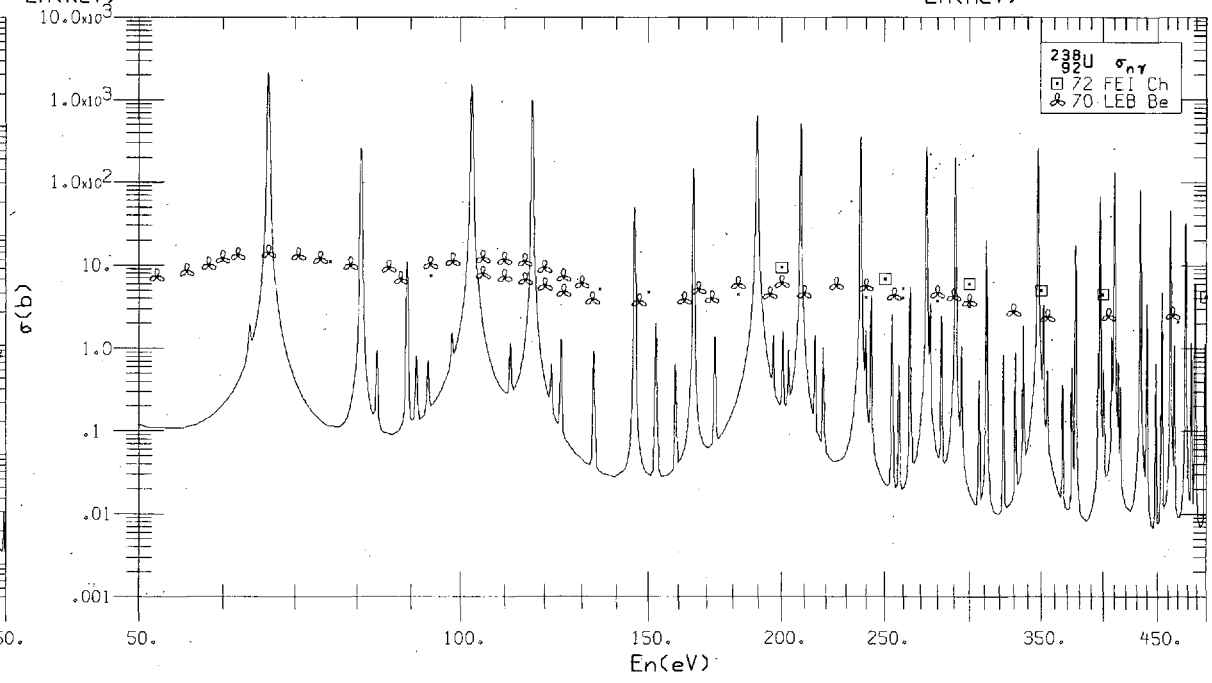
$\sigma_{n\gamma}$

[1262]







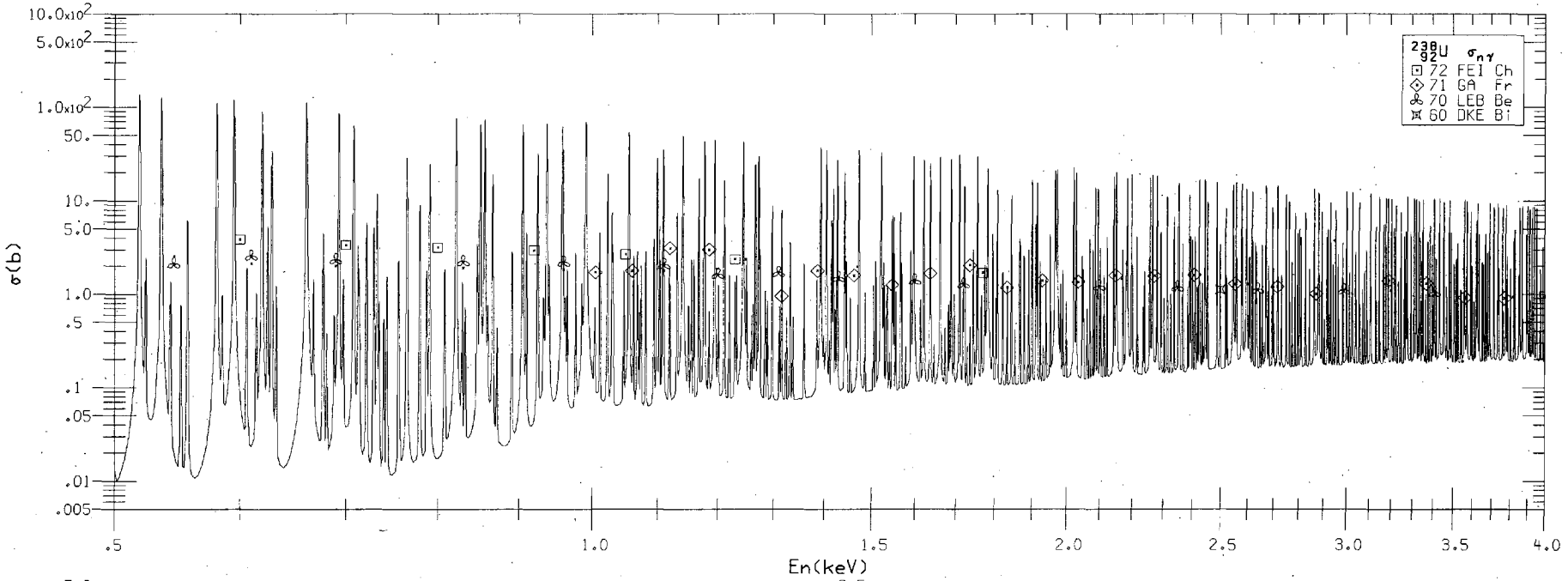


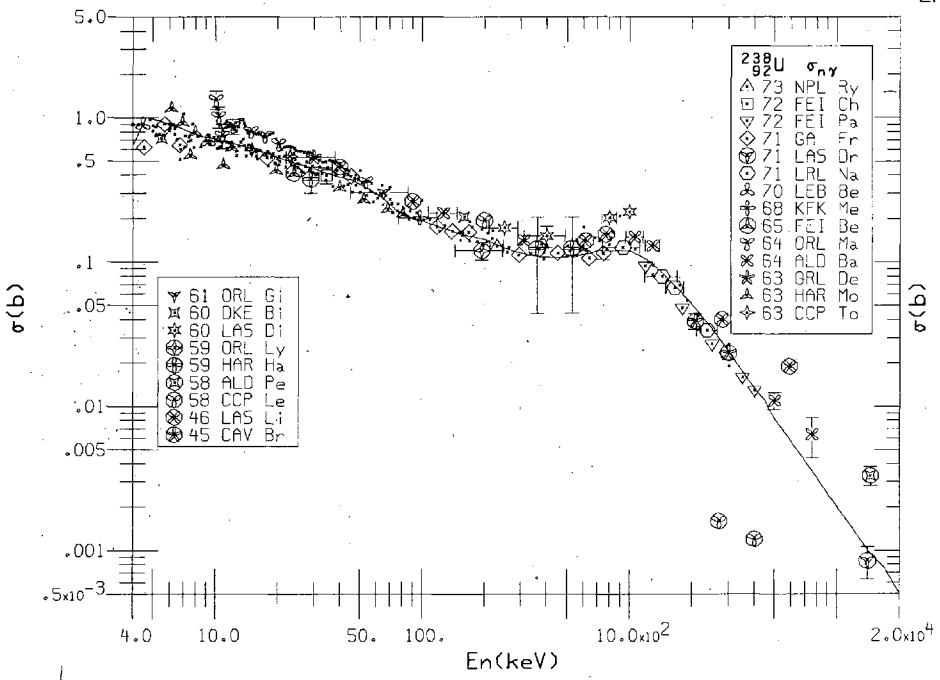
$^{238}_{92}U$

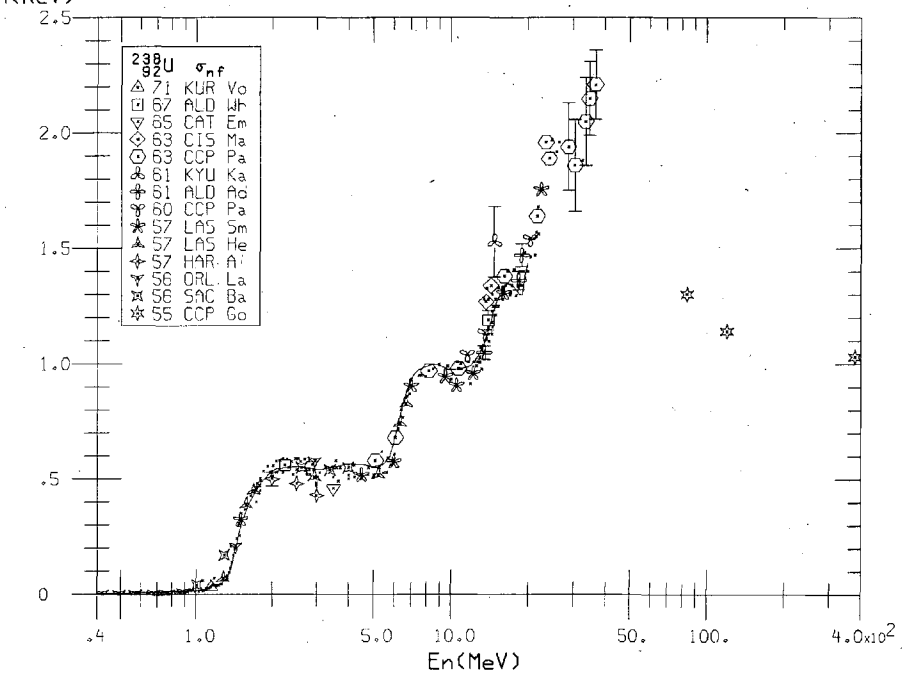
$\sigma_{n\gamma}$

σ_{nf}

[1262]







$^{238}_{92}U$

σ_{el}

σ_{inl}

σ_{non}

σ_{n2n}

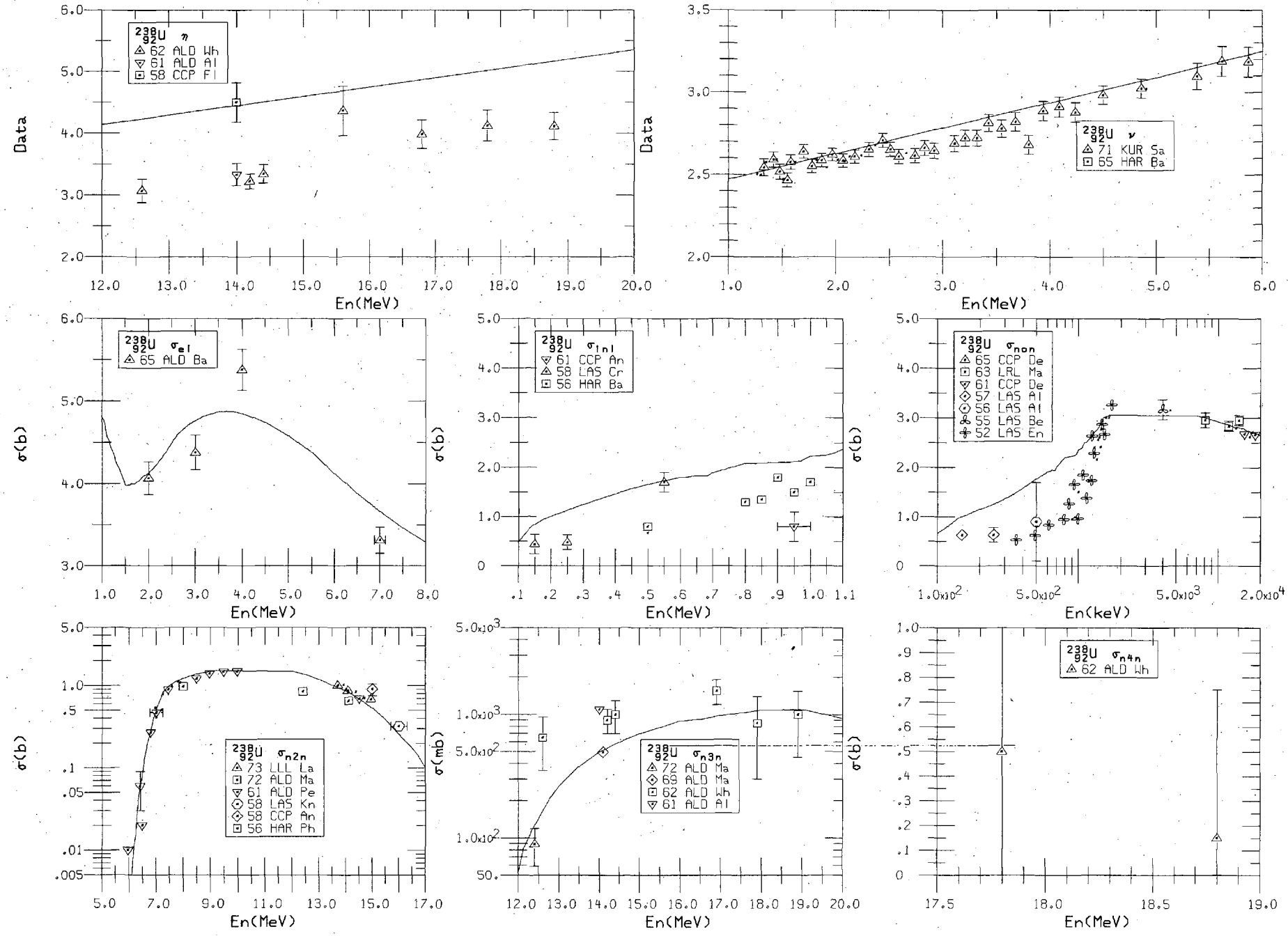
σ_{n3n}

σ_{n4n}

η

ν

[1262]



Yr	Lab	Author	Reference	Points	Range	Standard
			$_{92}U$ σ_{tot}			
74	GLS	Smye,et.al.	ANE,1,305,74	199	.801 MeV to 9.146 MeV	
73	EDG	Galloway,et.al.	NP/A,212,182,73	1	7.980 b at 3.000 MeV	
71	PTN	Schimmerling+	PL/B,37,177,71	15	379.0 MeV to 1731. MeV	
70	KFK	Kopsch,et.al.	70HELSINKI,2,39,70	3162	.500 MeV to 4.350 MeV	abs
70	JNE	Manero	ARS,66,27,70	60	3.340 MeV to 5.105 MeV	
69	MHG	Parker,et.al.	UNIV-MI-03028-3-T,69	1	3.620 b at 5700. MeV	abs
68	FEI	Filipov,et.al.	68DUBNA,(ACC-68/17)	14	10.0 keV to .295 MeV	
68	MHG	Jones,et.al.	PL/B,27,328,68	1	2.770 b at 27.0 GeV	
68	LIM	Voignier	CEA-R-3503,68	1	5.850 b at 14.1 MeV	
66	AE	Beshai	AE-222,66	64	.0050 eV to .0283 eV	abs
65	ANL	Whalen,et.al.	ANL-7110,15,65	35	.818 MeV to 1.490 MeV	C
65	DKE	Tabony	SETH,65	102	30.0 keV to .650 MeV	
63	SAC	Leroy,et.al.	JPR,24,826,63	74	1.610 MeV to 14.5 MeV	
61	LVN	Deconninck,et.al	JPR,22,652,61	1	6.000 b at 28.4 MeV	
61	HAR	Bowen,et.al.	NP,22,640,61	63	15.8 MeV to 117.5 MeV	C
61	FR	Didier	JPR/A,22,149,61	1	5.830 b at 14.7 MeV	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.9 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	22	13.6 MeV to 14.8 MeV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.3 MeV	
58	LVN	Vervier,et.al.	NP,6,260,58	22	13.6 MeV to 14.8 MeV	
56	CCP	Khaletskii	DOK,113,305,56	1	5.640 b at 14.8 MeV	
55	BNL	Coor,et.al.	PR,98,1369,55	1	3.640 b at 1400. MeV	
55	BNL	Harvey,et.al.	PR,99,10,55	245	3.650 eV to .267 keV	
55	FR	Auclair	AUCLAIR,55	28	.0100 eV to 1.000 eV	
54	LAS	Henkel,et.al.	PR,94,141,54	54	71.0 keV to 20.2 MeV	
54	HAR	Egelstaff	EGELSTAFF,54	103	.0010 eV to .121 eV	
54	CIS	Gatti,et.al.	NC,11,262,54	64	.0019 eV to .792 eV	
53	ANL	Hibdon	HIBDON,53	135	.670 keV to .155 MeV	
53	LAS	Nereson,et.al.	PR,89,775,53	30	2.900 MeV to 13.2 MeV	
53	LAS	Day,et.al.	PR,92,358,53	3	18.0 MeV to 20.1 MeV	
53	BRK	Linlor,et.al.	PR,92,835,53	10	46.0 MeV to 162.0 MeV	
52	BNL	Palevsky	PALEVSKY,52	94	.0002 eV to .0267 eV	
52	LAS	Coon,et.al.	PR,88,562,52	1	5.870 b at 14.1 MeV	
51	BRK	De Juren,et.al.	PR,81,919,51	1	3.280 b at 190.0 MeV	
51	UI	Good,et.al.	PR,59,917(19),51	1	8.000 b at 900.0 MeV	
50	WIS	Barschall,et.al.	LA-1060,50	63	18.0 keV to 1.412 MeV	
50	BRK	Hildebrand+	PR,80,842,50	1	5.120 b at 42.0 MeV	
50	BRK	De Juren,et.al.	PR,77,606,50	1	4.890 b at 95.0 MeV	
50	BRK	Fox,et.al.	PR,80,23,50	1	3.140 b at 280.0 MeV	
50	BRK	De Juren	PR,80,27,50	1	3.290 b at 270.0 MeV	
49	BRK	Cook,et.al.	PR,75,7,49	1	5.030 b at 83.0 MeV	
44	COL	Havens Jr,et.al.	M-1103,44	11	.0330 eV to .740 eV	
			$_{92}U$ σ_{el}			
68	LIM	Voignier	CEA-R-3503,68	1	2.960 b at 14.1 MeV	
66	HAR	Barnard,et.al.	NP,80,46,66	5	75.0 keV to .550 MeV	
64	UKR	Pasechnik,et.al.	AE,16,207,64	1	6.000 b at .800 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	2	.300 MeV to .500 MeV	
63	ANL	Smith	NP,47,633,63	30	.300 MeV to 1.495 MeV	C
63	ALD	Gilboy,et.al.	NP,42,86,63	1	6.220 b at .980 MeV	H
62	VIR	Hudson Jr,et.al.	PR,128,1271,62	1	3.210 b at 15.2 MeV	
58	LAS	Cranberg,et.al.	PR,109,2063,58	2	.550 MeV to 2.000 MeV	H
53	WIS	Walt,et.al.	TID-5157,53	1	5.300 b at 1.000 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{92}U$ σ_{inl}			
66	FEI	Pasechnik	INDSWG-126E,17,66	5	.800 MeV to 4.100 MeV	
63	CCP	Glazkov	AE,14,400,63	4	.400 MeV to 1.000 MeV	
61	CRC	Clarke	CJP,39,957,61	1	.150 b at 14.0 MeV	
			$_{92}U$ σ_{sct}			
57	ANL	Langsdorf Jr+	PR,107,1077,57	16	.135 MeV to 1.370 MeV	C
			$_{92}U$ σ_{non}			
68	LIM	Voignier	CEA-R-3503,68	1	2.890 b at 14.1 MeV	
64	UKR	Korzh,et.al.	UFZ,9,929,64	2	.300 MeV to .500 MeV	
63	BRC	Didier,et.al.	EANDC(E)-49,85,63	1	2.800 b at 14.7 MeV	
61	ALD	Cohen	JNE,14,180,61	7	13.4 MeV to 18.5 MeV	
58	CCP	Lebedev,et.al.	AE,5,522,58	1	2.910 b at 14.0 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	2	1.000 MeV to 2.500 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	1	3.100 b at 2.500 MeV	
56	CCP	Poze,et.al.	ZET,30,1017,56	3	.290 MeV to 1.000 MeV	
			$_{92}U$ $\sigma_{n\gamma}$			
63	FOA	Bergqvist	AF,23,425,63	8	18.0 keV to .300 MeV	Ag $\sigma_{n\gamma}$
61	BUC	Stefanescu,et.al.	61BUCHAR,553,61	1	7.830 b at thermal	B $\sigma_{n\gamma}$
			$^{232}_{92}U$ σ_{tot}			
67	MTR	Simpson,et.al.	NSE,29,415,67	931	.0101 eV to 9.292 keV	
			$^{232}_{92}U$ σ_{nf}			
70	KUR	Vorotnikov	YF,12,474,70	23	.130 MeV to 1.500 MeV	
70	LAS	Farrell	LA-4420,3,70	2199	40.1 eV to 21.3 keV	^{6}Li σ_{nt}
68	LRL	Auchampaugh+	NP/A,112,329,68	707	5.050 eV to 1.927 keV	^{232}U σ_{nf}
64	HAR	James	NP,55,517,64	3005	3.691 eV to .401 keV	^{235}U σ_{nf}
			$^{233}_{92}U$ σ_{tot}			
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	244	2.257 MeV to 15.0 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	696	.505 MeV to 9.887 MeV	
70	GEL	Kolar,et.al.	70HELSINKI,1,387,70	11454	.677 eV to .754 keV	abs
66	HAR	Brooks	BROOKS,66	667	.0350 eV to 11.0 eV	
63	ORL	Pattenden,et.al.	NSE,17,404,63	1512	.0723 eV to 8.814 keV	
62	ANL	Stupegia	JNE,16,201,62	45	3.400 keV to 1.611 MeV	
60	MTR	Simpson,et.al.	NSE,7,187,60	1	.587 kb at thermal	
60	ORL	Block,et.al.	NSE,8,112,60	41	.0184 eV to .0958 eV	
60	MTR	Moore,et.al.	PR,118,714,60	1071	.0203 eV to .217 keV	^{233}U σ_{nf}
60	COL	Safford,et.al.	PR,118,799,60	19	.0008 eV to .0818 eV	^{238}U $\sigma_{n\gamma}$
60	COL	Safford,et.al.	PR,118,799,60	1	.587 kb at thermal	^{238}U $\sigma_{n\gamma}$
60	COL	Safford,et.al.	PR,118,799,60	13	.0008 eV to .0600 eV	^{238}U $\sigma_{n\gamma}$
57	KAP	Fulwood,et.al.	KAPL-1770,65,57	222	89.7 eV to 15.5 keV	
56	HAR	Pattenden	JNE,3,28,56	264	.0016 eV to 11.4 eV	
56	HAR	Pattenden	JNE,3,28,56	1	.590 kb at thermal	
55	BNL	Muether	MUETHER,55	35	.0057 eV to .110 eV	
55	BNL	Sailor	PR,100,1249(IG),55	248	.300 eV to 11.3 eV	
55	HAR	Lynn	AERE-NRDC-81,4,55	99	37.0 eV to 68.9 eV	
55	HAR	Lynn,et.al.	55GENEVA,4,210,55	244	1.860 eV to 31.7 eV	^{197}Au
55	CCP	Nikitin,et.al.	55GENEVA,4,224,55	133	.0100 eV to 100.0 eV	
52	ANL	Bollinger,et.al.	ANL-4983,4,52	20	.0340 eV to .940 eV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{233}_{92}U$ σ_{el}			
68	DAV	Sauter,et.al.	PR,174,1413,68	192	1.020 eV to 31.3 eV	
62	MTR	Moore,et.al.	NSE,13,18,62	55	1.750 eV to 18.5 eV	Cu σ_{el}
58	BNL	Oleksa	PR,109,1645,58	11	.270 eV to 3.310 eV	Pb
			$^{233}_{92}U$ σ_{non}			
55	LAS	Taschek	TASCHEK,55	2	1.470 MeV to 1.600 MeV	^{238}U $\sigma_{n\gamma}$
			$^{233}_{92}U$ $\sigma_{n\gamma}$			
70	ORL	Weston,et.al.	NSE,42,143,70	50	.0168 eV to 1.063 eV	
68	RPI	Weston,et.al.	NSE,34,1,68	3423	.405 eV to 2.048 keV	^{233}U σ_{tot}
62	LAS	Hopkins,et.al.	NSE,12,169,62	9	30.0 keV to 1.000 MeV	
56	CCP	Spivak,et.al.	AE,1(3),21,56	4	30.0 keV to .900 MeV	
			$^{233}_{92}U$ σ_{nf}			
73	SAC	Blons	NSE,51,130,73	7255	8.325 eV to 30.0 keV	^{10}B $\sigma_{n\alpha}$
70	LAS	Bergen	LA-4420,21,70	2911	10.0 eV to 2.845 MeV	^{235}U σ_{nf}
70	ORL	Weston,et.al.	NSE,42,143,70	50	.0168 eV to 1.063 eV	
70	GEL	Cao,et.al.	JNE,24,111,70	5386	.0184 eV to 3.008 keV	^{233}U σ_{nf}
69	TRM	Iyer,et.al.	69ROORKEE,2,289,69	1	2.400 b at 14.1 MeV	^{238}U σ_{nf}
68	RPI	Weston,et.al.	NSE,34,1,68	3416	.405 eV to 2.048 keV	^{233}U σ_{tot}
67	ALD	White,et.al.	JNE,21,671,67	4	1.000 MeV to 14.1 MeV	^{235}U σ_{nf}
66	LRL	Albert	PR,142,778,66	72	.112 keV to 6.500 MeV	
66	LAS	Bergen,et.al.	66WASH,2,895,66	3047	20.1 eV to .978 MeV	
66	HAR	Brooks	BROOKS,66	667	.0350 eV to 11.0 eV	
65	ALD	Perkin,et.al.	JNE,19,423,65	1	2.730 b at 24.0 keV	
65	ALD	White,et.al.	65SALZBURG,1,219,65	5	40.0 keV to .505 MeV	
65	SAC	Nifenecker,et.al.	65SALZBURG,1,245,65	832	1.738 eV to 8.328 eV	^{233}U σ_{nf}
64	SAC	Nifenecker	JPR,25,877,64	2037	1.738 eV to 62.8 eV	
63	CCP	Pankratov	AE,14,177,63	10	9.050 MeV to 21.6 MeV	
62	CCP	Smirenken,et.al.	AE,13,366,62	42	.280 MeV to 2.630 MeV	
60	MTR	Moore,et.al.	PR,118,714,60	953	.0194 eV to .960 keV	^{233}U σ_{nf}
59	CCP	Gorlov,et.al.	AE,6,(4),453,59	24	3.400 keV to .772 MeV	
59	HAR	Raffle	AERE-R-2998,59	6	.0172 eV to .0292 eV	^{197}Au $\sigma_{n\gamma}$
59	CCP	Gorlov,et.al.	AE,6,453,59	24	3.360 keV to .770 MeV	^{233}U ν
58	CCP	Kalinin,et.al.	58GENEVA,16,136,58	13	3.050 MeV to 8.350 MeV	
57	LAS	Smith,et.al.	BAP,2,196(K4),57	19	2.000 MeV to 10.0 MeV	
57	LAS	Henkel	LA-2114,57	49	30.0 keV to 6.950 MeV	
57	HAR	Sanders,et.al.	JNE,6,114,57	197	.0091 eV to 28.2 eV	
57	HAR	Allen,et.al.	PPS/A,70,573,57	2	.550 MeV to 1.800 MeV	H
57	HAR	Allen,et.al.	PPS/A,70,573,57	25	30.0 keV to 3.000 MeV	^{233}U σ_{nf}
57	CCP	Dorofeev,et.al.	AE,2,10,57	5	30.0 keV to 5.000 MeV	
56	MTR	Miller,et.al.	BAP,1,247(C5),56	75	.124 eV to 3.797 eV	
56	ORL	Lamphere	PR,104,1654,56	61	13.0 keV to 3.050 MeV	
56	SAC	Netter,et.al.	JPR,17,565,56	34	.700 MeV to 3.360 MeV	
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	2.520 b at 14.1 MeV	
55	HAR	Lynn,et.al.	55GENEVA,4,210,55	1	.515 kb at thermal	^{197}Au
55	SAC	Auclair,et.al.	55GENEVA,4,235,55	34	.0041 eV to 1.000 eV	^{233}U σ_{nf}
55	CCP	Adamchuk,et.al.	55GENEVA,4,216,55	224	.0117 eV to .743 keV	
51	CRC	Tunnicliffe	CRGP-458,51	1	.386 kb at .0500 eV	B $\sigma_{n\alpha}$
51	CRC	Tunnicliffe	CRGP-458,51	1	.545 kb at thermal	B $\sigma_{n\alpha}$
51	CRC	Tunnicliffe	CRGP-458,51	113	.0106 eV to 48.6 eV	^{233}U σ_{nf}
50	LAS	Nyer	LAMS-938,50	1	2.550 b at 14.0 MeV	^{236}U σ_{nf}
44	LAS	Anderson,et.al.	LA-190,44	12	.0218 eV to .460 eV	B

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{233}_{92}U$ α			
70	CRC	Lounsbury,et.al.	70HELSINKI,1,287,70	1	89.9 mb at thermal	
66	HAR	Brooks	BROOKS,66	660	.0350 eV to 11.0 eV	
66	HAR	Cabell	66PARIS,2,3(21),66	1	92.3 mb at thermal	^{252}Cf ν
64	CRC	Okazaki,et.al.	AECL-2148,64	1	91.7 mb at thermal	
64	CRC	Okazaki,et.al.	AECL-2148,64	1	91.7 mb at thermal	
62	LAS	Hopkins,et.al.	NSE,12,169,62	9	30.0 keV to 1.000 MeV	
62	HAR	Cabell,et.al.	JNE,16,195,62	1	94.2 mb at thermal	
61	RPI	Yeater,et.al.	NSE,9,105,61	155	.998 eV to .821 keV	
58	HAR	Cocking	JNE,6,285,58	1	.113 b at .0011 eV	^{197}Au
57	HAR	Sanders,et.al.	JNE,5,186,57	12	1.070 eV to 2.160 eV	
56	BNL	Palevsky,et.al.	JNE,3,177,56	14	.0104 eV to .0990 eV	
56	CCP	Spivak,et.al.	AE,1(3),21,56	5	30.0 keV to .900 MeV	
			$^{233}_{92}U$ η			
70	ORL	Weston,et.al.	NSE,42,143,70	50	.0168 eV to 1.063 eV	
66	HAR	Brooks	BROOKS,66	668	.0350 eV to 11.0 eV	
61	RPI	Yeater,et.al.	NSE,9,105,61	155	.998 eV to .821 keV	
60	ORL	Macklin,et.al.	NSE,8,210,60	1	2.296 b at thermal	
59	ANL	Muehlhause+	NSE,5,225,59	1	2.250 b at thermal	B
57	HAR	Sanders,et.al.	JNE,5,186,57	27	.0480 eV to 2.160 eV	
57	HAR	Littler,et.al.	AERE-NP/R-2140,57	1	2.250 b at thermal	
56	MTR	Magleby,et.al.	BAP,1,327(G9),56	154	.0221 eV to 11.2 eV	
56	BNL	Palevsky,et.al.	JNE,3,177,56	14	.0104 eV to .0990 eV	
56	ORL	Thomas,et.al.	NSE,1,20,56	1	2.290 b at .0260 eV	^{235}U
56	CCP	Spivak,et.al.	AE,1(3),21,56	5	30.0 keV to .900 MeV	
			$^{233}_{92}U$ ν			
73	CCP	Nurpeisov	AE,34,491,73	12	.320 MeV to 1.400 MeV	
72	FEI	Sergachev	YF,16,475,72	36	.100 MeV to 5.400 MeV	
72	FEI	Kolosov,et.al.	AE,32,(1),83,72	15	70.0 keV to 1.560 MeV	^{233}U ν
67	FEI	Kuznetsov,et.al.	AE,22,401,67	7	80.0 keV to .700 MeV	
64	FEI	Biljumkina+	NP,52,(4),648,64	7	80.0 keV to .700 MeV	
			$^{234}_{92}U$ σ_{tot}			
60	ORL	Block,et.al.	NSE,8,112,60	26	.0199 eV to .0444 eV	
58	BNL	Harvey,et.al.	PR,109,471,58	253	2.650 eV to .695 keV	
58	HAR	Mccallum	JNE,6,181,58	97	.0102 eV to 20.3 eV	
			$^{234}_{92}U$ σ_{nf}			
68	HAR	James	NP/A,118,68	217	4.000 eV to 20.0 keV	
67	ALD	White,et.al.	JNE,21,671,67	4	1.000 MeV to 14.1 MeV	^{235}U σ_{nf}
65	ALD	Perkin,et.al.	JNE,19,423,65	1	15.0 mb at 24.0 keV	
65	ALD	White,et.al.	65SALZBURG,1,219,65	5	40.0 keV to .505 MeV	
62	ORL	Lamphere	NP,38,561,62	164	.136 MeV to 4.054 MeV	
61	BET	Babcock	BABCOCK,61	15	.350 MeV to 18.0 MeV	
60	HAN	Odegaarden	HW-64866,4,60	20	4.180 eV to 5.680 eV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{235}_{92}U$ σ_{tot}			
74	NBS	Schwartz,et.al.	NSE,54,322,74	1680	.496 MeV to 15.2 MeV	
72	GEL	Boeckhoff,et.al.	JNE,26,91,72	4093	5.823 keV to .270 MeV	
72	GEL	Knitter,et.al.	ZP,257,108,72	3	1.500 MeV to 2.300 MeV	^{1}H σ_{el}
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	486	2.253 MeV to 14.9 MeV	
71	BET	Green,et.al.	71KNOX,1,325,71	688	.507 MeV to 9.916 MeV	
70	BRC	Cabe,et.al.	70HELSINKI,2,31,70	390	.107 MeV to 5.990 MeV	
66	HAR	Langsford	LANGSFORD,66	1900	.200 MeV to 130.0 MeV	
66	HAR	Uttley,et.al.	66PARIS,1,165,66	487	.268 keV to 75.9 keV	
66	SAC	Derrien	DERRIEN,66	3982	.724 keV to 9.974 keV	
65	ANL	Whalen,et.al.	ANL-7110,15,65	69	.806 MeV to 1.497 MeV	
64	COL	Garg	GARG,64	5826	17.4 eV to .349 keV	
64	HAR	Brooks	BROOKS,64	2424	.0350 eV to .200 keV	
64	SAC	Michaudon	MICHAUDON,64	6776	1.312 eV to .724 keV	abs
62	KUR	Gerasimov,et.al.	AE,13,368,62	130	.0234 eV to 2.260 eV	
61	ANL	Saplakoglu	NSE,11,312,61	30	.0046 eV to .561 eV	
61	ANL	Saplakoglu	NSE,11,312,61	1	.694 kb at thermal	
61	CCP	Averchenkov+	SOV.PR.NP.,191,61	16	1.910 MeV to 8.000 MeV	
60	MTR	Simpson,et.al.	NSE,7,187,60	116	.0207 eV to .0803 eV	
60	ORL	Block,et.al.	NSE,8,112,60	48	.0184 eV to .159 eV	
60	ORL	Block,et.al.	NSE,8,112,60	1	.693 kb at thermal	
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.9 MeV	
59	COL	Safford,et.al.	NSE,6,433,59	31	.0008 eV to .0818 eV	
58	BNL	Shore	PR,112,191,58	370	.0880 eV to 6.900 eV	
58	COL	Melkonian,et.al.	NSE,3,435,58	223	.0119 eV to 48.0 keV	
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.3 MeV	
58	HAN	Seppi,et.al.	HW-55879,3,58	11	.0025 eV to .100 eV	
58	HAR	Pattenden,et.al.	AERE-NP/M-88,58	36	.983 eV to 1.227 eV	
57	KAP	Fulwood,et.al.	KAPL-1770,65,57	194	.213 keV to 7.856 keV	
56	MTR	Simpson,et.al.	PR,103,971,56	581	9.110 eV to 99.0 eV	
56	BNL	Pilcher,et.al.	PR,103,1342,56	221	4.500 eV to 36.3 eV	
55	BNL	Palevsky	PALEVSKY,55	55	.0017 eV to .162 eV	
55	HAR	Lynn,et.al.	55GENEVA,4,210,55	41	.0057 eV to .188 eV	
55	CCP	Nikitin,et.al.	55GENEVA,4,224,55	133	.0100 eV to 86.0 eV	
55	CCP	Nikitin,et.al.	55GENEVA,4,224,55	1	.710 kb at thermal	
54	ANL	Hibdon,et.al.	ANL-5175,7,54	134	.655 keV to .155 MeV	
54	BNL	Palevsky,et.al.	PR,94,1088,54	1	.700 kb at thermal	
54	HAN	Leonard Jr+	HW-33384,33,54	57	.0200 eV to .192 eV	
54	HAR	Egelstaff	JNE,1,92,54	1	.724 kb at thermal	
53	BNL	Palevsky,et.al.	BNL-222,53	76	.0012 eV to .0252 eV	
53	COL	Melkonian,et.al.	CU-115,53	1	.691 kb at thermal	
52	LAS	Henkel	LA-1493,52	71	40.5 keV to 20.5 MeV	
			$^{235}_{92}U$ σ_{el}			
72	GEL	Knitter,et.al.	ZP,257,108,72	3	1.500 MeV to 2.300 MeV	^{1}H σ_{el}
70	GEL	Poortmans,et.al.	70HELSINKI,1,449,70	1364	7.388 eV to .191 keV	Pb σ_{el}
70	MOL	Ceulemans,et.al.	70HELSINKI,1,461,70	32	.0744 eV to .763 eV	V σ_{el}
70	MOL	Ceulemans,et.al.	70HELSINKI,1,461,70	1	14.3 b at thermal	V σ_{el}
68	DAV	Sauter,et.al.	PR,174,1413,68	234	1.030 eV to 29.9 eV	
58	BNL	Foote Jr	PR,109,1641,58	7	.271 eV to 7.740 eV	Pb
58	BNL	Foote Jr	PR,109,1641,58	1	15.0 b at thermal	Pb
54	COL	Melkonian	MELKONIAN,54	1	11.3 b at 1.000 eV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{235}_{92}U$ σ_{inl}			
72	GEL	Knitter,et.al.	ZP,257,108,72	3	1.500 MeV to 2.300 MeV	^{1}H σ_{el}
69	ALD	Batchelor,et.al.	AWRE-O-55/69,69	3	2.000 MeV to 4.000 MeV	^{1}H σ_{el}
66	HAR	Armitage,et.al.	66PARIS,1,383,66	6	.130 MeV to 1.500 MeV	
61	CCP	Andreev	SOV.PR.NP.,211,61	1	1.100 b at .950 MeV	
			$^{235}_{92}U$ σ_{non}			
65	CCP	Degtyarev	AE,19,456,65	1	3.110 b at 8.100 MeV	
63	LRL	Mac Gregor+	PR,130,1471,63	3	8.100 MeV to 14.1 MeV	
61	CCP	Degtyarev+	AE,11,397,61	4	13.4 MeV to 18.7 MeV	
61	CCP	Andreev	SOV.PR.NP.,211,61	1	2.600 b at .950 MeV	
57	LAS	Allen	NSE,2,787,57	4	.250 MeV to 1.000 MeV	
56	LAS	Allen,et.al.	PR,104,731,56	2	.500 MeV to 1.000 MeV	
56	LAS	Beyster,et.al.	PR,104,1319,56	2	1.000 MeV to 2.500 MeV	
55	LAS	Bethe,et.al.	LA-1939,55	2	4.000 MeV to 4.500 MeV	
			$^{235}_{92}U$ $\sigma_{n\gamma}$			
72	ORL	Perez,et.al.	ORNL-TM-3696,72	2430	8.050 eV to .200 keV	
66	ORL	De Saussure,et.al.	66PARIS,2,233,66	2220	.404 eV to 62.8 eV	
66	ORL	De Saussure,et.al.	66PARIS,2,233,66	3164	17.5 eV to 3.024 keV	
64	ORL	Weston,et.al.	NSE,20,80,64	26	12.3 keV to .690 MeV	
62	LAS	Hopkins,et.al.	NSE,12,169,62	9	30.0 keV to 1.000 MeV	
60	MTR	Hogg,et.al.	WASH-1028,50,60	1	96.6 b at thermal	
58	LAS	Diven,et.al.	PR,109,144,58	9	.178 MeV to 1.005 MeV	
58	CCP	Andreev	AE,4,185,58	3	24.0 keV to .880 MeV	
56	CCP	Spivak,et.al.	AE,1(3),21,56	4	30.0 keV to .900 MeV	
			$^{235}_{92}U$ σ_{ing}			
69	LAS	Drake	NP/A,133,108,69	3	4.000 MeV to 7.500 MeV	
			$^{235}_{92}U$ σ_{gem}			
66	TNC	Nellis,et.al.	ORO-2791-17,66	6	1.090 MeV to 14.8 MeV	
			$^{235}_{92}U$ σ_{n2n}			
72	ALD	Mather,et.al.	AWRE-O-72/72,72	4	7.100 MeV to 14.1 MeV	
			$^{235}_{92}U$ σ_{n3n}			
72	ALD	Mather,et.al.	AWRE-O-72/72,72	2	12.4 MeV to 14.1 MeV	
			$^{235}_{92}U$ σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.860 mb at 14.5 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{235}_{92}U$ σ_{nf}			
74	MHG	Gilliam	GILLIAM,74	1	1.210 b at .964 MeV	
74	ANL	Poenitz	NSE,53,370,74	1	1.198 b at 3.500 MeV	
74	ANL	Poenitz	NSE,53,370,74	7	.448 MeV to .800 MeV	
74	ANL	Poenitz	NSE,53,370,74	1	1.151 b at .498 MeV	
74	ANL	Poenitz	NSE,53,370,74	45	.399 MeV to 2.803 MeV	
74	ANL	Poenitz	NSE,53,370,74	74	35.0 keV to 3.500 MeV	
74	ANL	Poenitz	NSE,53,370,74	10	34.5 keV to .250 MeV	^{6}Li σ_{nt}
73	KFK	Kaeppeler	KFK-1772,73	7	.546 MeV to 1.175 MeV	
73	KFK	Kaeppeler	KFK-1772,73	13	.513 MeV to 1.164 MeV	^{235}U σ_{nf}
73	BUC	Borcea,et.al.	IFA-NR-47-1973,73	1	.586 kb at thermal	
73	SAC	Blons	NSE,51,130,73	8071	17.5 eV to 30.1 keV	^{10}B $\sigma_{n\alpha}$
72	ORL	Perez,et.al.	ORNL-TM-3696,72	2430	8.050 eV to .200 keV	
72	GEL	Knitter,et.al.	ZP,257,108,72	3	1.500 MeV to 2.300 MeV	^{1}H σ_{el}
72	BUC	Mihailescu+	IFA-NR-41,72	80	.0172 eV to .153 eV	^{235}U σ_{nf}
72	FEI	Chelnokov,et.al.	YFI-13,6,72	26	.200 keV to 34.6 keV	^{235}U σ_{nf}
72	CAD	Szabo	SZABO,72	22	.730 MeV to 2.100 MeV	
71	LAS	Lemley,et.al.	NSE,43,281,71	6847	20.0 eV to 99.9 keV	^{6}Li $\sigma_{n\alpha}$
71	GEL	Deruytter,et.al.	JNE,25,263,71	870	.0202 eV to 11.0 eV	
71	CAD	Szabo,et.al.	KNOX,2,573,71	15	11.5 keV to .199 MeV	
70	LAS	Cramer	LA-4420,45,70	3600	10.0 eV to 2.840 MeV	^{235}U σ_{nf}
70	ANL	Poenitz	70ANL,281,70	2	.552 MeV to .644 MeV	abs
70	GEL	Deruytter,et.al.	70HELSINKI,1,117,70	1	.588 kb at thermal	
70	KFK	Kaeppeler	KFK-1313,70	2	.440 MeV to .530 MeV	^{1}H σ_{el}
70	CAD	Szabo,et.al.	70ANL,257,70	31	17.5 keV to 1.010 MeV	
70	HAR	Patrick,et.al.	JNE,24,269,70	239	10.0 keV to 29.9 keV	
69	LAS	Cramer,et.al.	LA-4285,69	2801	20.0 eV to 1.007 keV	^{3}He σ_{np}
69	TRM	Iyer,et.al.	69ROORKEE,2,289,69	1	2.200 b at 14.1 MeV	^{238}U σ_{nf}
68	GEL	Cao,et.al.	JNE,22,211,68	9777	5.999 eV to 3.006 keV	^{235}U $\sigma_{nf/a}$
68	GEL	Deruytter,et.al.	68WASH,1,491,68	1	.587 kb at thermal	^{10}B $\sigma_{n\alpha}$
68	GEL	Deruytter,et.al.	68WASH,1,491,68	1	.585 kb at thermal	^{10}B $\sigma_{n\alpha}$
68	ANL	Poenitz	68WASH,1,503(D5),68	14	30.0 keV to 1.470 MeV	
67	KFK	Knoll,et.al.	JNE,21,643,67	1	2.190 b at 30.0 keV	
67	KFK	Knoll,et.al.	JNE,21,643,67	1	1.780 b at 64.0 keV	^{235}U σ_{nf}
67	KUR	Mostovaya	IAE-1302,67	1862	.824 eV to .169 keV	
66	ORL	De Saussure,et.al.	66PARIS,2,233,66	5724	.404 eV to 10.3 keV	
66	LAS	Brown,et.al.	66WASH,2,971,66	3087	20.1 eV to .978 MeV	
66	LRL	Bowman,et.al.	66WASH,2,1004,66	1482	.278 eV to 79.8 eV	
65	ALD	White	JNE,19,325,65	4	.505 MeV to 5.400 MeV	H
65	ALD	White	JNE,19,325,65	9	40.0 keV to 14.1 MeV	H
65	ALD	Perkin,et.al.	JNE,19,423,65	1	2.360 b at 24.0 keV	
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.331 kb at .0626 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.357 kb at .0626 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.343 kb at .0626 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.512 kb at .0322 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.337 kb at .0626 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.588 kb at thermal	^{235}U σ_{nf}
65	DUB	Wang,et.al.	65SALZBURG,1,287,65	2910	.220 eV to 30.6 keV	
65	SAC	Michaudon,et.al.	NP,69,545,65	1258	.379 eV to 7.236 eV	^{235}U $\sigma_{nf/a}$
65	SAC	Michaudon,et.al.	NP,69,545,65	1004	7.208 eV to 17.5 eV	^{235}U $\sigma_{nf/a}$
64	ITE	Ignatiev,et.al.	AE,16,(2),110,64	258	.916 eV to 8.084 eV	
64	ITE	Ignatiev,et.al.	AE,16,(2),110,64	191	2.840 eV to 7.303 eV	
64	HAR	Brooks	BROOKS,64	2426	.0350 eV to .200 keV	^{235}U η
63	LRL	Bowman,et.al.	PR,130,1482,63	1438	.0322 eV to 59.8 eV	
63	CCP	Pankratov	AE,14,177,63	30	6.100 MeV to 25.7 MeV	
62	CCP	Smirenken,et.al.	AE,13,366,62	52	.350 MeV to 2.620 MeV	
61	MOL	Deruytter	JNE/AB,15,165,61	26	.0110 eV to .119 eV	^{197}Au $\sigma_{n\gamma}$
61	ALD	Moat	JNE,14,85,61	1	2.130 b at 14.0 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
61	ALD	Adams,et.al.	JNE,14,85,61	13	13.2 MeV to 19.4 MeV	^{238}U σ_{nf}
60	CCP	Pankratov,et.al.	AE,9,399,60	16	10.5 MeV to 21.4 MeV	^{235}U σ_{nf}
59	CCP	Gorlov,et.al.	AE,6,(4),453,59	24	3.400 keV to .772 MeV	
59	COL	Safford,et.al.	NSE,6,433,59	1	1.818 kb at .0029 eV	
59	COL	Safford,et.al.	NSE,6,433,59	1	.591 kb at thermal	
59	COL	Safford,et.al.	PR,113,1285,59	1	.580 kb at thermal	
59	HAR	Raffle	AERE-R-2998,59	5	.0194 eV to .0341 eV	^{197}Au $\sigma_{n\gamma}$
59	HAR	Raffle	AERE-R-2998,59	1	.582 kb at thermal	^{197}Au $\sigma_{n\gamma}$
58	ANL	Bollinger	BOLLINGER,58	31	.0038 eV to .949 eV	^{235}U σ_{nf}
58	ANL	Saplakoglu,et.al.	58GENEVA,16,103,58	1	.605 kb at thermal	
58	COL	Melkonian,et.al.	NSE,3,435,58	336	.0111 eV to 40.2 keV	^{235}U σ_{nf}
58	BNL	Shore,et.al.	PR,112,191,58	278	.100 eV to 10.0 eV	^{235}U σ_{nf}
58	CRC	Bigham,et.al.	58GENEVA,16,125,58	1	.569 kb at thermal	
58	CCP	Berezin,et.al.	AE,5,659,58	1	2.300 b at 14.6 MeV	^{238}U σ_{nf}
57	LAS	Smith,et.al.	BAP,2,196(K4),57	27	2.220 MeV to 20.5 MeV	H
57	LAS	Henkel	LA-2122,57	38	20.8 keV to 2.030 MeV	^{235}U σ_{nf}
57	HAN	Seppi,et.al.	HW-53492,22,57	10	.0027 eV to .0051 eV	
57	LAS	Diven	PR,105,1350,57	14	.403 MeV to 1.620 MeV	^{1}H σ_{el}
57	LAS	Diven	PR,105,1350,57	1	1.270 b at 1.272 MeV	H σ_{tot}
57	HAN	Leonard Jr+	HW-48893,98,57	1	.238 kb at .100 eV	^{197}Au $\sigma_{n\gamma}$
57	HAR	Allen,et.al.	PPS/A,70,573,57	2	.550 MeV to 1.800 MeV	H
57	HAR	Allen,et.al.	PPS/A,70,573,57	23	60.0 keV to 3.000 MeV	^{235}U σ_{nf}
56	HAN	Friesen,et.al.	HW-47012,50,56	1	.552 kb at thermal	^{197}Au $\sigma_{n\gamma}$
56	KAP	Yeater,et.al.	PR,104,479,56	447	5.320 eV to 1.970 keV	
56	SAC	Ballini	NETTER,56	28	1.020 MeV to 3.850 MeV	
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	2.200 b at 14.0 MeV	^{238}U σ_{nf}
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	2.200 b at 14.1 MeV	^{238}U σ_{nf}
55	SAC	Auclair,et.al.	55GENEVA,4,235,55	196	.0015 eV to .100 keV	
55	SAC	Szteinsznaider+	55GENEVA,4,245,55	8	50.0 keV to .810 MeV	
55	CCP	Adamchuk,et.al.	55GENEVA,4,216,55	209	.0117 eV to .970 keV	
54	KAP	Yeater,et.al.	KAPL-1109,54	28	.720 keV to 45.0 keV	^{235}U σ_{nf}
54	HAN	Leonard Jr+	HW-33384,33,54	79	.0213 eV to .975 eV	
54	LAS	Wahl,et.al.	LA-1681,54	1	2.210 b at 14.1 MeV	
50	LAS	Nyer	LAMS-938,50	1	2.160 b at 14.0 MeV	
44	LAS	Williams	LA-150,44	19	4.300 keV to 1.800 MeV	
44	LAS	Williams	LA-150,44	6	47.0 keV to .490 MeV	
			$^{235}_{92}U$ α			
72	KFK	Bandl,et.al.	NSE,48,324,72	21	8.500 keV to 55.0 keV	^{235}U α
71	FEI	Kononov	KONONOV,71	47	12.4 keV to 1.100 MeV	
70	CRC	Lounsbury,et.al.	70HELSINKI,1,287,70	1	.170 b at thermal	
70	DUB	Kurov,et.al.	JINR-P3-5113,70	22	.150 keV to 27.5 keV	
68	CRC	Lounsbury,et.al.	EANDC(CAN)-34,10,68	1	.177 b at thermal	
66	ORL	De Saussure,et.al.	66PARIS,2,233,66	41	17.7 keV to .600 MeV	
66	CRC	Durham,et.al.	66PARIS,2,17,66	1	.177 b at thermal	
65	MTR	Maeck,et.al.	ANS,8,10,65	1	.172 b at thermal	
65	SAC	Michaudon,et.al.	NP,69,545,65	50	2.030 eV to 50.1 eV	
64	ORL	Weston,et.al.	NSE,20,80,64	26	12.3 keV to .690 MeV	
64	CRC	Okazaki,et.al.	AECL-1965,64	1	.172 b at thermal	
64	HAR	Brooks	BROOKS,64	206	.0350 eV to 3.985 eV	
64	HAR	Brooks	BROOKS,64	2218	1.783 eV to .199 keV	^{235}U η
62	LAS	Hopkins,et.al.	NSE,12,169,62	9	30.0 keV to 1.000 MeV	
61	CRC	Jones,et.al.	EANDC(CAN)-11,61	1	.173 b at thermal	
59	COL	Safford,et.al.	PR,113,1285,59	1	.171 b at .0029 eV	
58	ANL	Bollinger	BOLLINGER,58	28	.0038 eV to .492 eV	^{235}U η
58	LAS	Diven,et.al.	PR,109,144,58	9	.178 MeV to 1.005 MeV	
58	HAR	Skarsgard,et.al.	JNE,6,212,58	8	.0060 eV to .0500 eV	

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
58	HAR	Cocking	JNE,6,285,58	1	.172 b at .0011 eV	^{197}Au
58	CCP	Andreev	AE,4,185,58	4	24.0 keV to .880 MeV	
57	MTR	Smith,et.al.	WASH-194,60,57	84	.105 eV to 9.280 eV	^{235}U α
56	BNL	Palevsky,et.al.	JNE,3,177,56	20	.0102 eV to .169 eV	
56	CCP	Spivak,et.al.	AE,1(3),21,56	5	30.0 keV to .900 MeV	
55	HAN	Leonard,et.al.	HW-38202,41,55	22	.0250 eV to .450 eV	
			$^{235}_{92}$U η			
66	MTR	Smith,et.al.	IDO-17083,66	1	2.079 b at .0250 eV	
64	ITE	Ignatiev,et.al.	AE,16,(2),110,64	58	.0302 eV to 1.245 eV	
64	HAR	Brooks	BROOKS,64	2427	.0350 eV to .200 keV	^{235}U η
60	ORL	Macklin,et.al.	NSE,8,210,60	1	2.077 b at thermal	
59	ANL	Muehlhause+	NSE,5,225,59	1	2.050 b at thermal	
58	HAR	Skarsgard,et.al.	JNE,6,212,58	8	.0060 eV to .0500 eV	
58	CCP	Andreev	AE,4,185,58	3	24.0 keV to .880 MeV	
58	CCP	Fierov,et.al.	AE,5,653,58	1	3.710 b at 14.0 MeV	
57	MTR	Smith,et.al.	WASH-194,60,57	83	.105 eV to 9.280 eV	^{235}U η
57	HAR	Littler,et.al.	AERE-NP/R-2140,57	1	2.050 b at thermal	
56	BNL	Palevsky,et.al.	JNE,3,177,56	20	.0102 eV to .169 eV	
56	HAR	Harvey,et.al.	PNE,1,34,56	1	2.050 b at thermal	
56	CCP	Spivak,et.al.	AE,1(3),21,56	5	30.0 keV to .900 MeV	
			$^{235}_{92}$U ν			
70	BRC	Soleilhac,et.al.	70HELSINKI,2,145,70	40	.210 MeV to 1.375 MeV	
68	FEI	Prokhorova+	YF,7,961,68	14	.370 MeV to 3.250 MeV	
67	FEI	Kuznetsov,et.al.	AE,22,401,67	13	80.0 keV to .990 MeV	
66	ANL	De Volpi,et.al.	66PARIS,1,297,66	1	2.407 b at thermal	
64	FEI	Bijumkina+	NP,52,(4),648,64	13	80.0 keV to .990 MeV	^{235}U ν
58	LAS	Wahl	AECD-4261,58	1	5.200 b at 14.0 MeV	
			$^{236}_{92}$U σ_{tot}			
58	BNL	Harvey,et.al.	PR,109,471,58	240	2.750 eV to .700 keV	
58	HAR	Mccallum	JNE,6,181,58	52	.0105 eV to 16.8 eV	
58	HAR	Mccallum	JNE,6,181,58	1	18.7 b at thermal	
52	ORL	Pawlicki,et.al.	ORNL-1477,52	18	4.100 eV to 9.500 eV	
			$^{236}_{92}$U $\sigma_{n\gamma}$			
68	GA	Carlson,et.al.	GA-9057,68	40	.0107 eV to .891 eV	^{197}Au $\sigma_{n\gamma}$
68	SRL	Baumann,et.al.	NSE,32,265,68	1	6.000 b at thermal	
61	ANL	Stupegia,et.al.	JNE,15,200,61	8	.300 MeV to 1.732 MeV	
61	ALD	Barry,et.al.	PPS,78,801,61	14	.360 MeV to 3.970 MeV	
58	HAR	Mccallum	JNE,6,181,58	1	8.100 b at thermal	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{236}_{92}$U σ_{nf}			
70	LAS	Cramer,et.al.	LA-4420,74,70	2061	35.2 eV to 2.935 MeV	^{235}U σ_{nf}
67	ALD	White,et.al.	JNE,21,671,67	4	1.000 MeV to 14.1 MeV	^{235}U σ_{nf}
65	ALD	Perkin,et.al.	JNE,19,423,65	1	4.000 mb at 24.0 keV	
65	ALD	White,et.al.	65SALZBURG,1,219,65	2	.127 MeV to .505 MeV	
56	ORL	Lamphere	PR,104,1654,56	101	.307 MeV to 4.050 MeV	^{235}U σ_{nf}
			$^{237}_{92}$U σ_{nf}			
74	LAS	Mc Nally,et.al.	PR/C,9,717,74	1116	43.0 eV to 1.830 MeV	
			$^{238}_{92}$U σ_{tot}			
74	NBS	Schwartz,et.al.	NSE,54,322,74	1706	.484 MeV to 15.2 MeV	
72	RPI	Stoler	GOULDING,72	747	.700 MeV to 30.0 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	488	2.254 MeV to 14.9 MeV	
70	GEL	Carraro,et.al.	70HELSINKI,1,403,70	10617	64.6 eV to 14.1 keV	abs
70	BRC	Cabe,et.al.	70HELSINKI,2,31,70	417	.112 MeV to 6.110 MeV	
69	ANL	Smith	SMITH,69	528	.102 MeV to 1.498 MeV	abs
66	HAR	Uttley,et.al.	66PARIS,1,165,66	34	6.500 keV to .950 MeV	abs
65	ALD	Batchelor,et.al.	NP,65,236,65	4	2.000 MeV to 7.000 MeV	H
64	COL	Garg,et.al.	PR/B,134,985,64	8459	32.1 eV to 4.080 keV	
63	HAR	Firk,et.al.	NP,41,614,63	670	.401 keV to 1.942 keV	
57	ANL	Bollinger,et.al.	PR,105,661,57	402	1.120 eV to .391 keV	
56	KAP	Yeater	YEATER,56	144	.200 keV to 1.225 keV	
			$^{238}_{92}$U σ_{el}			
65	ALD	Batchelor,et.al.	NP,65,236,65	4	2.000 MeV to 7.000 MeV	H
			$^{238}_{92}$U σ_{inl}			
61	CCP	Andreev	SOV.PR.NP.,211,61	1	.800 b at .950 MeV	
58	LAS	Cranberg,et.al.	PR,109,2063,58	1	1.700 b at .550 MeV	
57	LAS	Allen	PR,105,1796,57	3	.150 MeV to .500 MeV	
56	HAR	Batchelor	PPS/A,69,214,56	6	.500 MeV to 1.000 MeV	^{235}U ν
			$^{238}_{92}$U σ_{non}			
65	CCP	Degtyarev	AE,19,456,65	2	8.100 MeV to 17.5 MeV	
63	LRL	Mac Gregor+	PR,130,1471,63	3	8.100 MeV to 14.1 MeV	
61	CCP	Degtyarev+	AE,11,397,61	4	13.4 MeV to 18.4 MeV	
61	CCP	Andreev	SOV.PR.NP.,211,61	1	1.000 b at .950 MeV	
57	LAS	Allen	PR,105,1796,57	3	.150 MeV to .500 MeV	
56	LAS	Allen,et.al.	PR,104,731,56	2	.500 MeV to 1.000 MeV	
55	LAS	Bethe,et.al.	LA-1939,55	2	4.000 MeV to 4.500 MeV	
52	LAS	Ennis	ENNIS,52	25	.360 MeV to 1.725 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{238}_{92}U$ $\sigma_{n\gamma}$			
73	NPL	Ryves,et.al.	JNE,27,519,73	4	.157 MeV to .624 MeV	^{115}In $\sigma_{n\gamma}$
72	FEI	Chelnokov,et.al.	YFI-13,6,72	26	.200 keV to 34.6 keV	
72	FEI	Panitkin,et.al.	AE,33,(3),782,72	11	1.200 MeV to 4.000 MeV	
71	FEI	Stavisskii,+	AE,31,107,71	154	4.000 eV to 30.0 keV	
71	GA	Fricke,et.al.	71KNOX,1,252,71	93	1.005 keV to .752 MeV	^{10}B $\sigma_{n\alpha}$
71	LAS	Drake,et.al.	PL/B,36,557,71	1	.845 mb at 14.0 MeV	H σ_{tot}
71	LRL	Nagle,et.al.	71KNOX,2,259,71	23	.121 MeV to 2.730 MeV	^{235}U σ_{nf}
71	WWA	Brzosko,et.al.	APP/B,2,489,71	1	.127 b at .400 MeV	abs
70	LEB	Bergman,et.al.	ICD-6,32,70	29	.470 keV to 30.5 keV	^{197}Au $\sigma_{n\gamma}$
70	LEB	Bergman,et.al.	ICD-6,32,70	123	4.500 eV to 1.600 keV	^{197}Au $\sigma_{n\gamma}$
68	KFK	Menlove,et.al.	NSE,33,24,68	9	24.4 keV to .503 MeV	^{197}Au $\sigma_{n\gamma}$
65	FEI	Belanova,et.al.	AE,19,3,65	1	.412 b at 24.0 keV	
64	ORL	Macklin,et.al.	WASH-1046,88,64	125	10.1 keV to 57.1 keV	
64	ALD	Barry,et.al.	JNE,18,481,64	13	.127 MeV to 7.600 MeV	^{1}H
63	ORL	De Saussure,et.al.	ORNL-3360,51,63	2	30.0 keV to 64.0 keV	
63	HAR	Moxon,et.al.	TRDWP/P-8,63	91	6.050 keV to 92.0 keV	
63	CCP	Tolstikov,et.al.	AE,15,414,63	10	15.0 keV to .170 MeV	^{238}U $\sigma_{n\gamma}$
61	ORL	Gibbons,et.al.	PR,122,182,61	2	30.0 keV to 65.0 keV	In $\sigma_{n\gamma}$
60	DKE	Bilpuch,et.al.	AP,10,455,60	15	2.500 keV to .220 MeV	^{238}U $\sigma_{n\gamma}$
60	LAS	Diven,et.al.	PR,120,556,60	7	.175 MeV to 1.000 MeV	^{235}U
60	CCP	Belanova	AE,8,549,60	3	24.0 keV to .830 MeV	
59	ORL	Lyon,et.al.	PR,114,1619,59	1	.120 b at .195 MeV	In $\sigma_{n\gamma}$
59	HAR	Hanna,et.al.	JNE,8,197,59	10	29.0 keV to .840 MeV	^{59}Co $\sigma_{n\gamma}$
58	ALD	Perkin,et.al.	PPS,72,505,58	1	3.300 mb at 14.5 MeV	
58	CCP	Leipunsky,et.al.	58GENEVA,15,50,58	3	.200 MeV to 4.000 MeV	^{127}I $\sigma_{n\gamma}$
57	ORL	Macklin,et.al.	PR,107,504,57	1	.610 b at 24.0 keV	^{127}I $\sigma_{n\gamma}$
55	BNL	Palevsky,et.al.	55GENEVA,4,147,55	1	2.730 b at thermal	B σ_{abs}
55	HAR	Crocker	JNE,1,234,55	1	2.750 b at thermal	^{197}Au $\sigma_{n\gamma}$
46	LAS	Linenberger+	LA-467,46	14	5.000 keV to 5.900 MeV	^{235}U σ_{nf}
45	CAV	Broda,et.al.	BR-574,45	5	.400 MeV to 3.000 MeV	
			$^{238}_{92}U$ σ_{n2n}			
73	LLL	Landrum,et.al.	PR/C,8,1938,73	7	13.7 MeV to 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
72	ALD	Mather,et.al.	AWRE-O-72/72,72	3	7.000 MeV to 12.4 MeV	
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	.822 b at 14.1 MeV	^{238}U σ_{nf}
61	ALD	Perkin,et.al.	JNE,14,69,61	1	.690 b at 14.5 MeV	^{63}Cu σ_{n2n}
58	LAS	Knight,et.al.	PR,112,259,58	17	5.980 MeV to 16.0 MeV	^{238}U
58	LAS	Knight,et.al.	PR,112,259,58	16	5.980 MeV to 9.970 MeV	^{238}U σ_{nf}
58	LAS	Knight,et.al.	PR,112,259,58	1	.320 b at 16.0 MeV	^{238}U σ_{nf}
58	CCP	Antropov,et.al.	AE,5,456,58	1	.900 b at 15.0 MeV	
56	HAR	Phillips	AERE-NP/R-2033,56	1	.650 b at 14.1 MeV	
			$^{238}_{92}U$ σ_{n3n}			
72	ALD	Mather,et.al.	AWRE-O-72/72,72	1	89.0 mb at 12.4 MeV	
69	ALD	Mather,et.al.	AWRE-O-47/69,69	1	.494 b at 14.1 MeV	^{238}U σ_{nf}
62	ALD	White	JNE,16,261,62	6	12.6 MeV to 18.9 MeV	
61	ALD	Allen,et.al.	JNE,14,100,61	1	1.100 b at 14.0 MeV	
			$^{238}_{92}U$ σ_{n4n}			
62	ALD	White	JNE,16,261,62	2	17.8 MeV to 18.8 MeV	
			$^{238}_{92}U$ σ_{np}			
69	MNZ	Trautmann,et.al.	RCA,11,168,69	1	1.500 mb at 14.8 MeV	
			$^{238}_{92}U$ σ_{nnp}			
69	MNZ	Trautmann,et.al.	RCA,11,168,69	1	.230 mb at 14.8 MeV	
			$^{238}_{92}U$ $\sigma_{n\alpha}$			
69	MNZ	Trautmann,et.al.	RCA,11,168,69	1	.600 mb at 14.8 MeV	
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.500 mb at 14.5 MeV	
			$^{238}_{92}U$ σ_{nf}			
73	RPI	Block	PRL,31,247,73	0	.720 keV to 35.0 keV	
73	KFK	Cierjacks	EANDC(E)157U,7,73	137	.810 MeV to 30.0 MeV	
71	CCP	Kuks,et.al.	AE,30,(1),55,71	1	.550 b at 2.500 MeV	
71	KUR	Vorotnikov+	YFI-12,22,71	19	.550 MeV to 1.450 MeV	^{238}U σ_{nf}
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	1.240 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
69	STF	Barrall,et.al.	AFWL-TR-68-134,69	1	1.160 b at 14.6 MeV	^{27}Al $\sigma_{n\alpha}$
67	ALD	White,et.al.	JNE,21,671,67	3	2.250 MeV to 14.0 MeV	^{235}U σ_{nf}
65	CAT	Emma,et.al.	NP,63,641,65	7	1.800 MeV to 4.500 MeV	^{238}U σ_{nf}
63	CIS	Mangialajo,et.al.	NP,43,124,63	8	13.8 MeV to 14.8 MeV	^{1}H
63	CCP	Pankratov	AE,14,177,63	35	5.100 MeV to 36.6 MeV	
61	KYU	Katase	KATASE,61	3	13.5 MeV to 14.8 MeV	
61	ALD	Moat	JNE,14,85,61	1	1.130 b at 14.0 MeV	
61	ALD	Adams,et.al.	JNE,14,85,61	14	12.7 MeV to 19.4 MeV	^{238}U σ_{nf}
60	CCP	Pankratov,et.al.	AE,9,399,60	16	10.6 MeV to 21.5 MeV	
58	CCP	Flerov,et.al.	AE,5,657,58	1	1.130 b at 14.6 MeV	
58	CCP	Kalinin,et.al.	58GENEVA,16,136,58	7	3.100 MeV to 6.400 MeV	
57	LAS	Smith,et.al.	BAP,2,196(K4),57	44	1.000 MeV to 22.5 MeV	H
57	LAS	Henkel	LA-2122,57	33	1.280 MeV to 6.940 MeV	
57	HAR	Allen,et.al.	PPS/A,70,573,57	6	1.000 MeV to 3.000 MeV	^{233}U
56	ORL	Lamphere	PR,104,1654,56	90	.420 MeV to 2.995 MeV	^{235}U σ_{nf}
56	SAC	Ballini	NETTER,56	28	1.010 MeV to 4.000 MeV	
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	1.140 b at 14.1 MeV	
55	CCP	Goldanskii+	DOK,101,1027,55	3	84.0 MeV to 380.0 MeV	
50	LAS	Nyer	LAMS-938,50	1	1.130 b at 14.5 MeV	
			$^{238}_{92}U$ η			
62	ALD	White	JNE,16,261,62	7	12.6 MeV to 18.8 MeV	
61	ALD	Allen,et.al.	JNE,14,100,61	1	3.330 b at 14.0 MeV	
58	CCP	Flerov,et.al.	AE,5,653,58	1	4.500 b at 14.0 MeV	
			$^{238}_{92}U$ ν			
71	KUR	Savin,et.al.	FEI-12,16,71	46	1.270 MeV to 5.870 MeV	
65	HAR	Barnard,et.al.	NP,71,228,65	2	2.086 MeV to 4.908 MeV	

$^{237}_{93}$Np

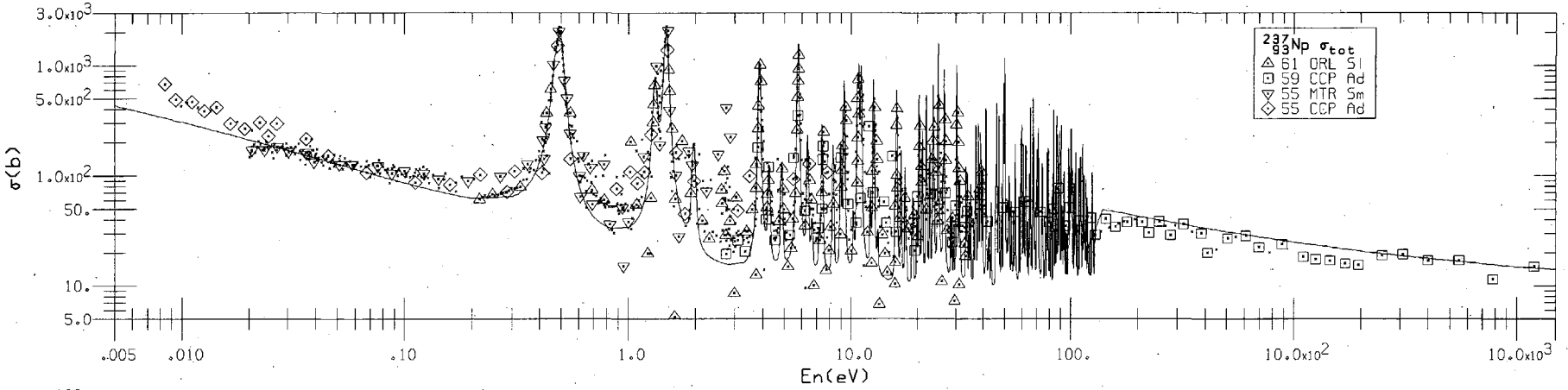
σ_{tot}

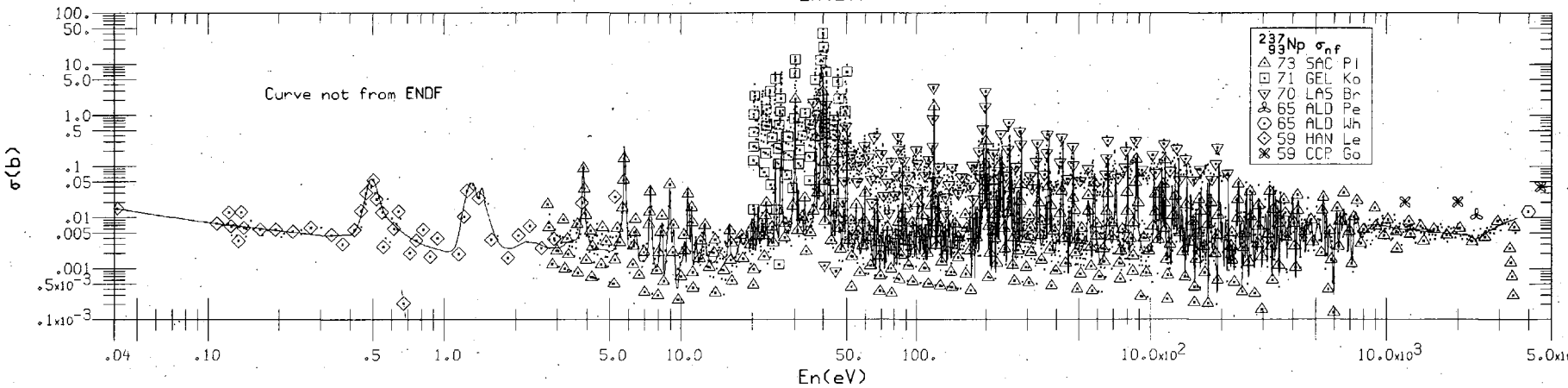
$\sigma_{n\gamma}$

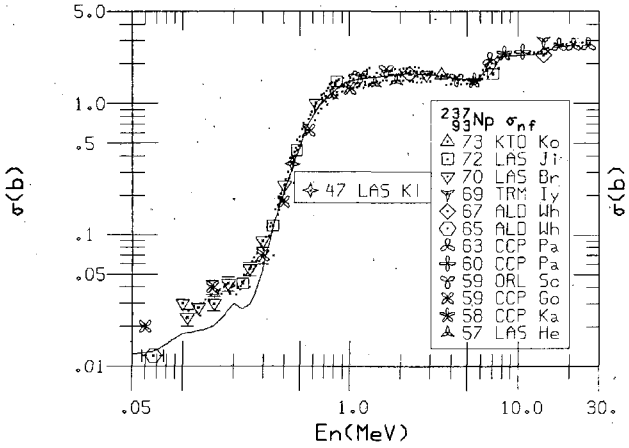
σ_{n2n}

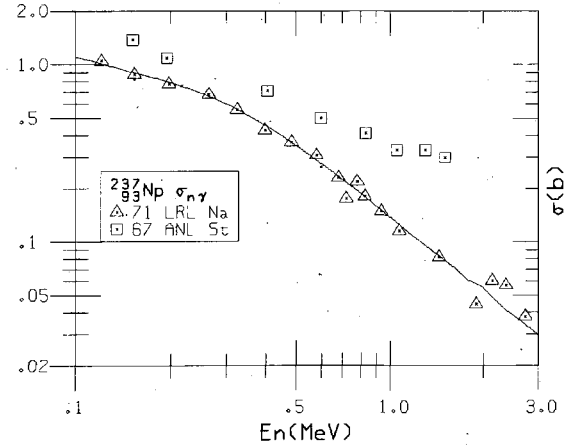
σ_{nf}

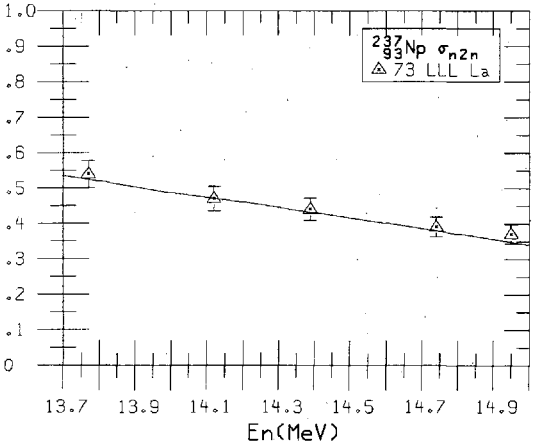
[1263]











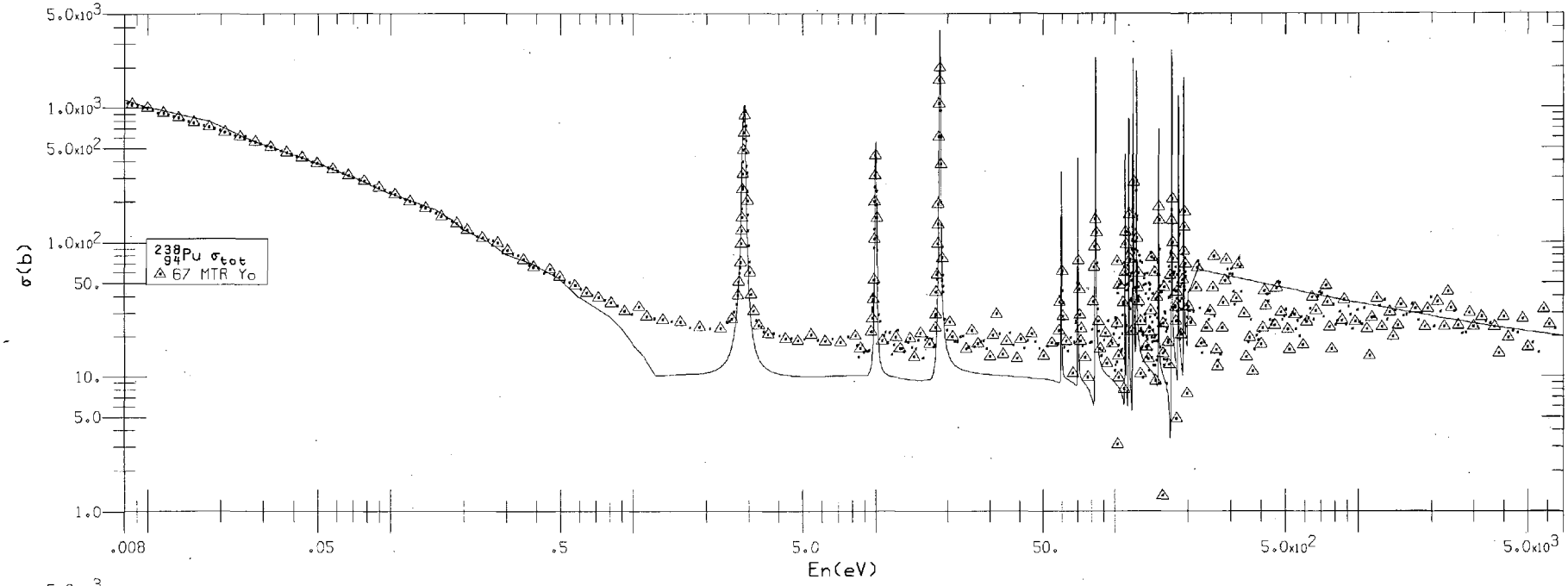
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{237}_{93}$Np σ_{tot}			
61	ORL	Slaughter,et.al.	BAP,6,70(X8),61	744	.216 eV to 41.3 eV	abs
59	CCP	Adamchuk,et.al.	AE,6,569,59	190	2.700 eV to 12.0 keV	abs
55	MTR	Smith,et.al.	PR,99,611(B6),55	312	.0202 eV to 2.876 eV	abs
55	CCP	Adamchuk,et.al.	55GENEVA,4,21,55	88	.0084 eV to 9.700 eV	abs
			$^{237}_{93}$Np $\sigma_{n\gamma}$			
71	LRL	Nagle,et.al.	71KNOX,2,259,71	23	.121 MeV to 2.730 MeV	
67	ANL	Stupegia,et.al.	NSE,29,218,67	8	.152 MeV to 1.505 MeV	^{235}U σ_{nf}
			$^{237}_{93}$Np σ_{n2n}			
73	LLL	Landrum,et.al.	PR/C,8,1938,73	5	13.8 MeV to 15.0 MeV	^{27}Al $\sigma_{n\alpha}$
61	ALD	Perkin,et.al.	JNE,14,69,61	1	.390 b at 14.0 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{237}_{93}$Np σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	1.300 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{237}_{93}$Np σ_{nf}			
73	KTO	Kobayashi,et.al.	KOBAYASHI,73	7	3.500 MeV to 4.900 MeV	^{115}In σ_{inl}
73	SAC	Plattard,et.al.	PLATTARD,73	3923	2.720 eV to 35.2 keV	^{10}B $\sigma_{n\alpha}$
72	LAS	Jiacoletti+	NSE,48,412,72	102	.200 MeV to 7.657 MeV	
71	GEL	Kolar,et.al.	ZP,248,355,71	1171	20.1 eV to 52.1 eV	
70	LAS	Brown,et.al.	NP/A,156,609,70	2496	31.6 eV to 2.848 MeV	^{235}U σ_{nf}
69	TRM	Iyer,et.al.	69RODRKEE,2,289,69	1	2.980 b at 14.1 MeV	^{238}U σ_{nf}
67	ALD	White,et.al.	JNE,21,671,67	3	1.000 MeV to 14.1 MeV	^{235}U
65	ALD	Perkin,et.al.	JNE,19,423,65	1	11.0 mb at 24.0 keV	
65	ALD	White,et.al.	65SALZBURG,1,65	4	40.0 keV to .505 MeV	^{235}U
63	CCP	Pankratov	AE,14,177,63	29	2.500 MeV to 26.4 MeV	
60	CCP	Pankratov,et.al.	AE,9,399,60	17	9.600 MeV to 21.8 MeV	
59	HAN	Leonard Jr+	BAP,4,31(K1),59	200	.0412 eV to 5.250 eV	
59	ORL	Schmitt,et.al.	PR,116,1575,59	47	1.640 MeV to 7.430 MeV	
59	ORL	Schmitt,et.al.	PR,116,1575,59	74	.910 MeV to 7.430 MeV	
59	CCP	Gokhberg,et.al.	DOK,128,1157,59	25	12.0 keV to 1.500 MeV	
58	CCP	Protopopov+	AE,4,190,58	1	2.400 b at 14.6 MeV	
58	CCP	Kalinin,et.al.	58GENEVA,16,136,58	13	2.500 MeV to 8.300 MeV	
57	LAS	Henkel	LA-2122,57	52	.460 MeV to 14.0 MeV	^{237}Np σ_{nf}
47	LAS	Klema	PR,72,88,47	16	.250 MeV to 3.000 MeV	

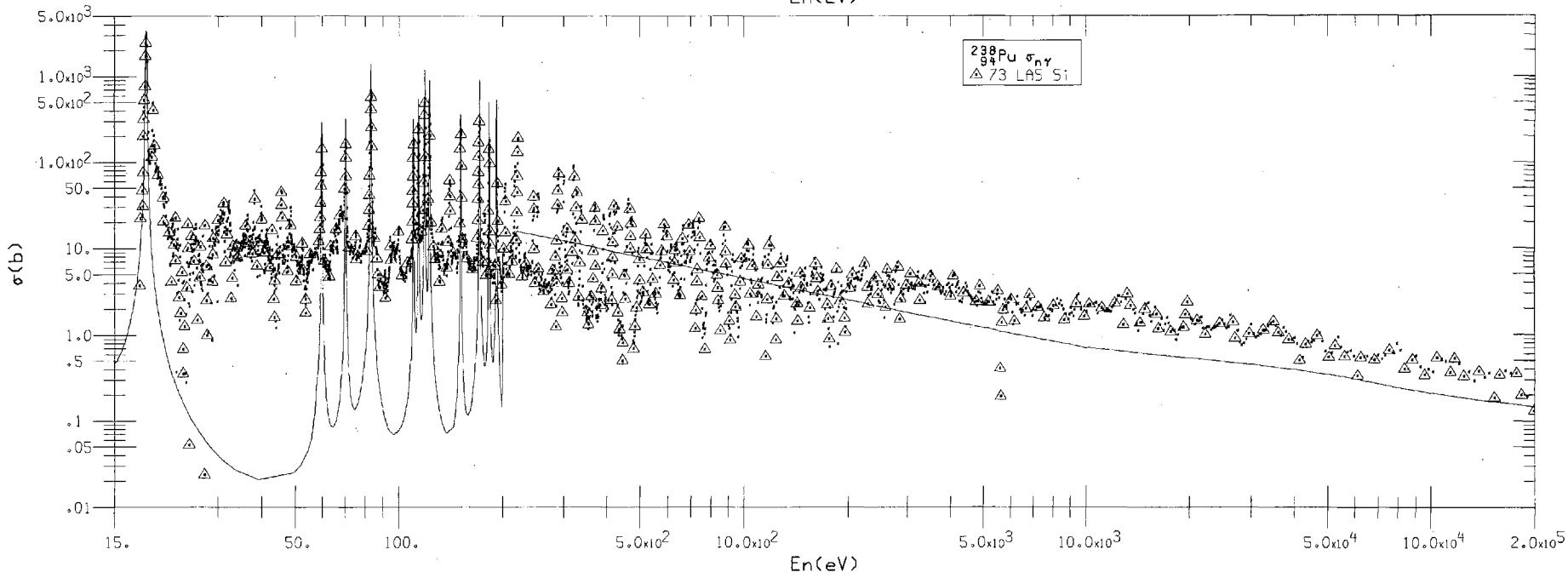
$^{238}_{94}Pu$

σ_{tot}

$\sigma_{n\gamma}$

[1050]

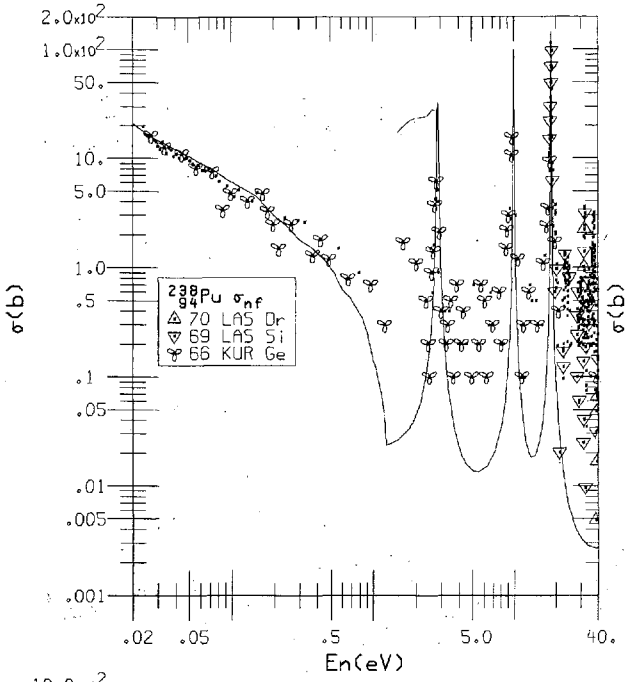


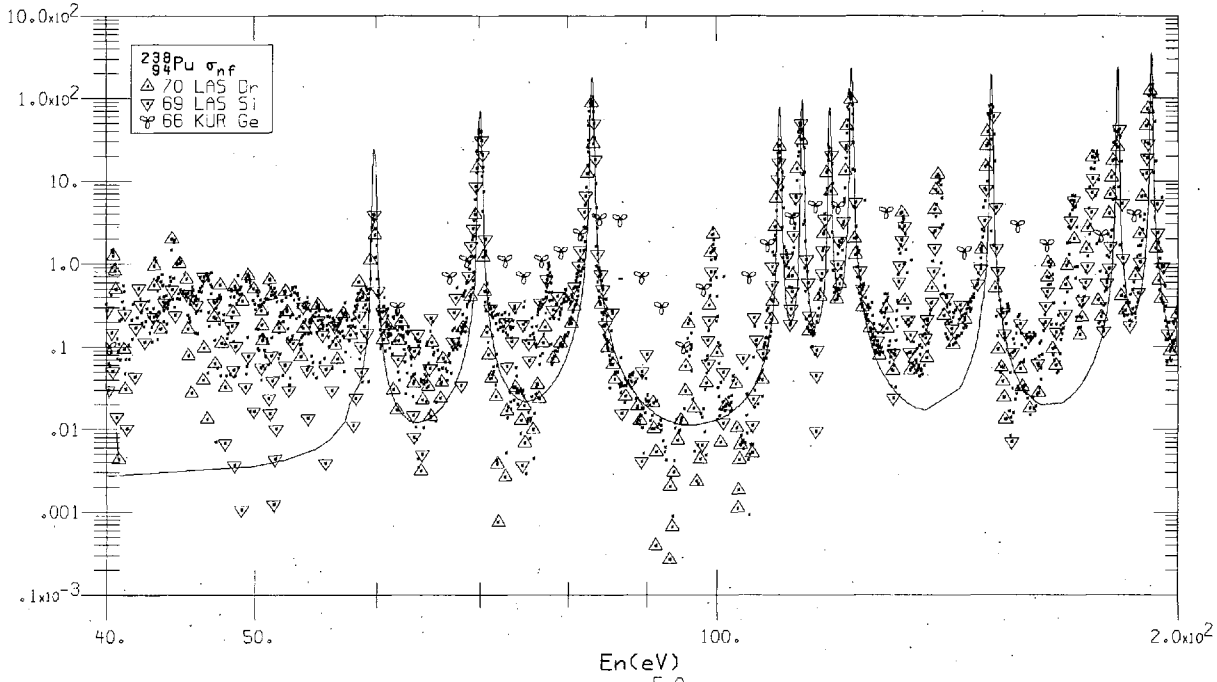


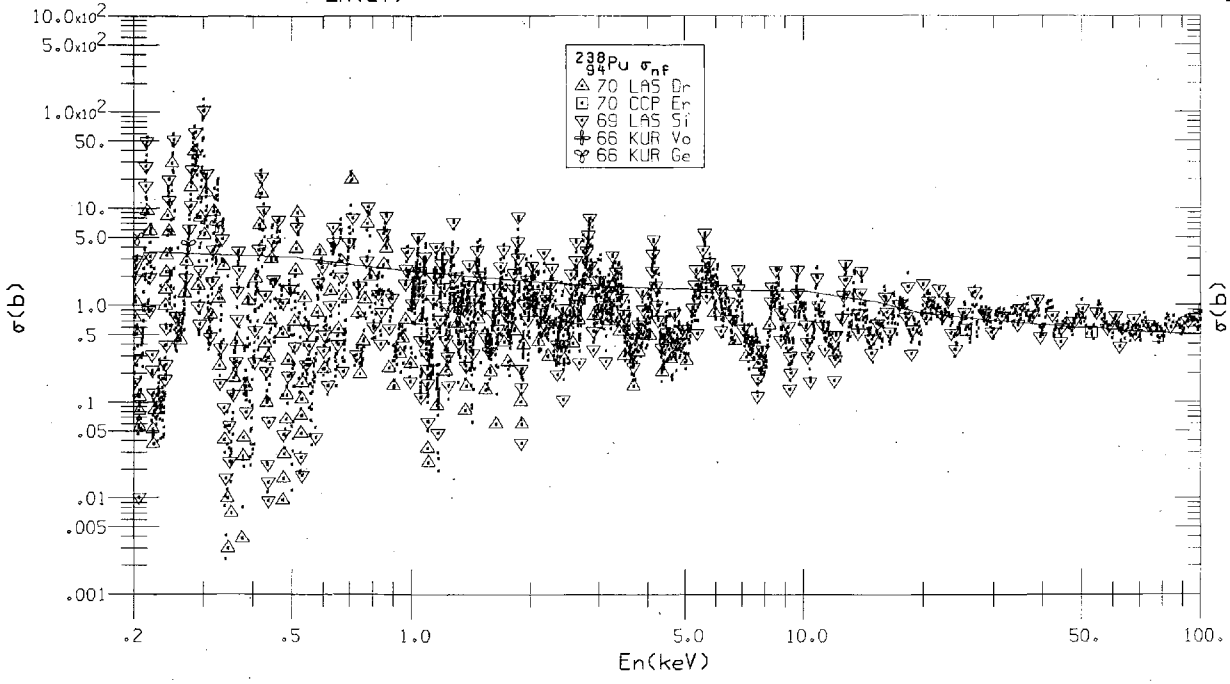
$^{238}_{94}Pu$

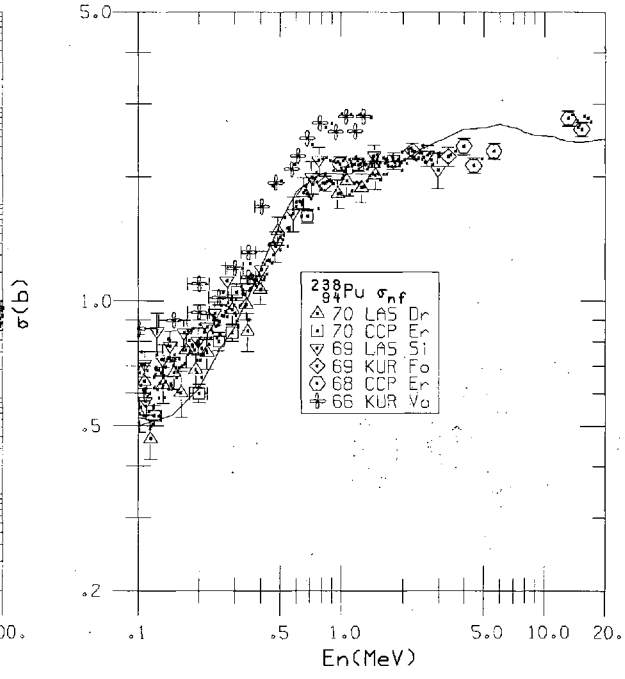
σ_{nf}

[1050]





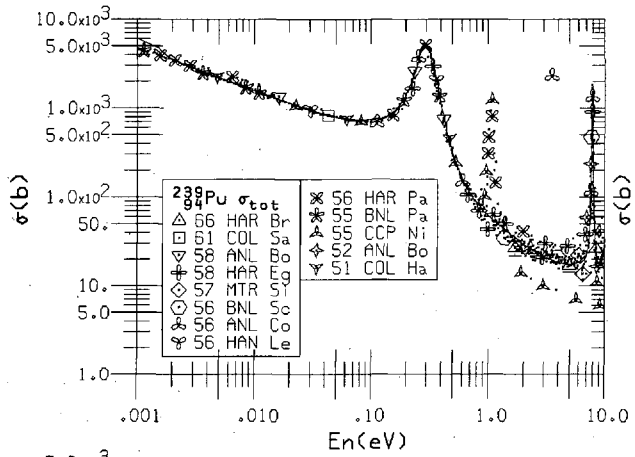


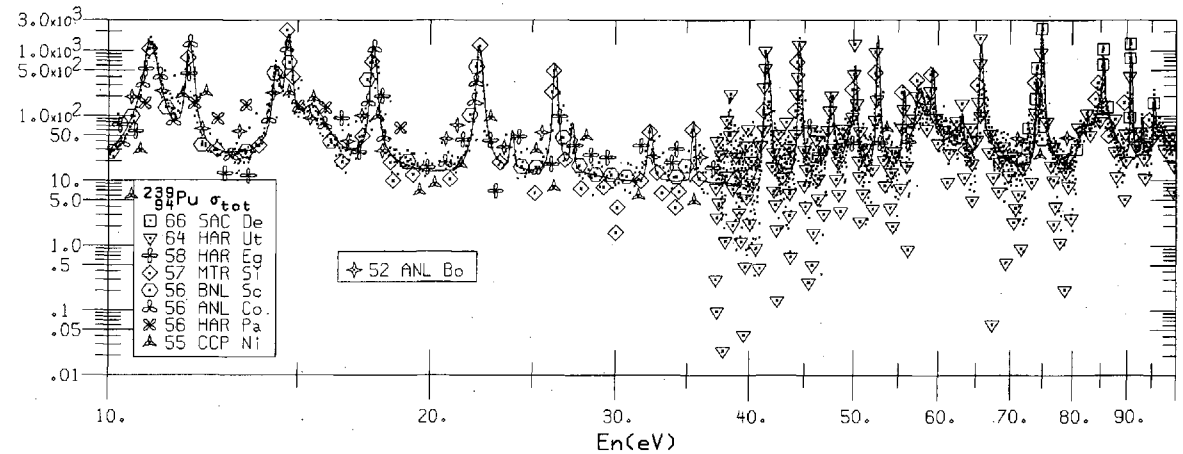


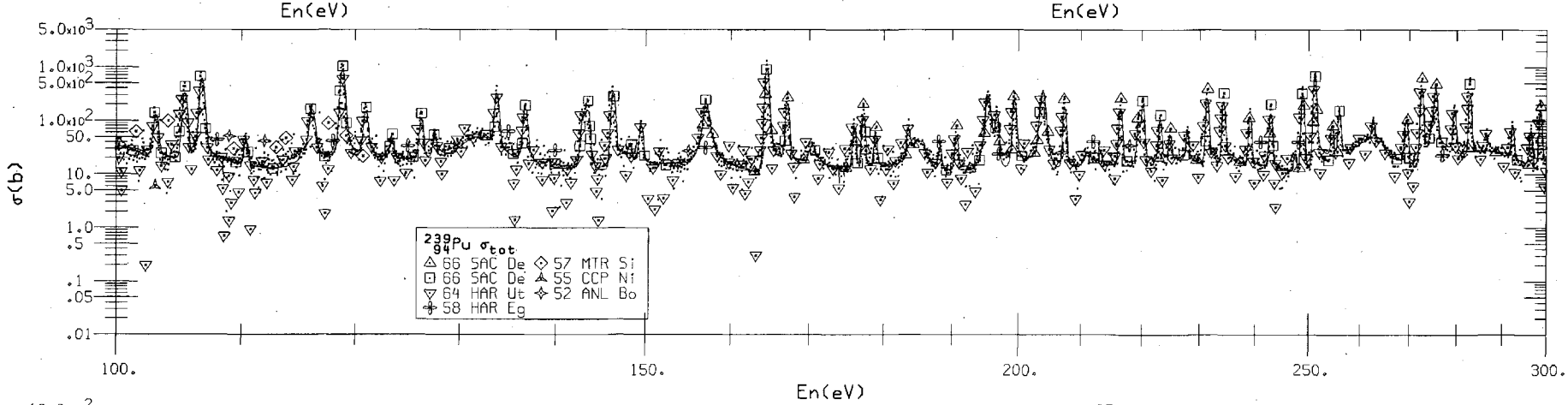
$^{239}_{94}Pu$

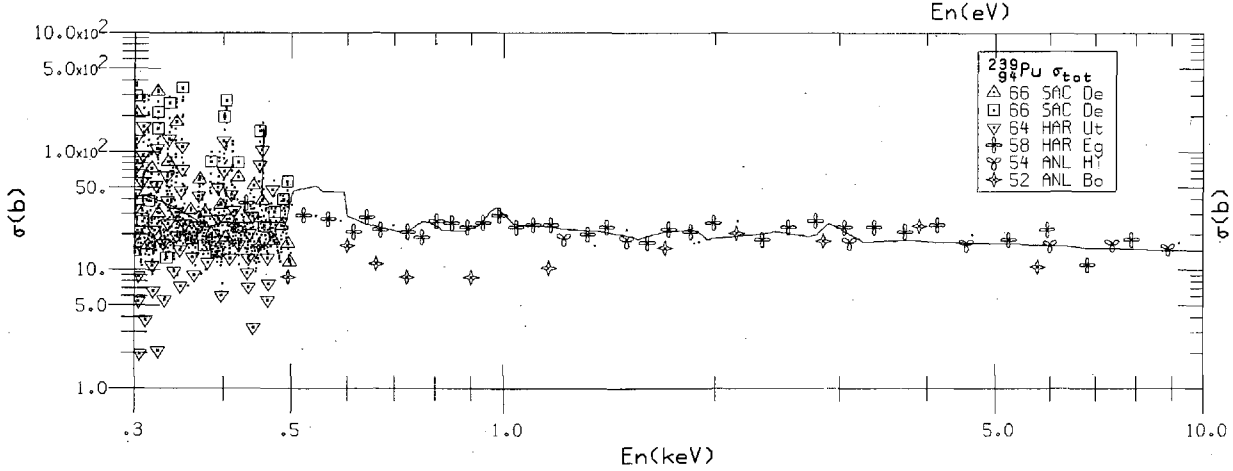
σ_{tot}

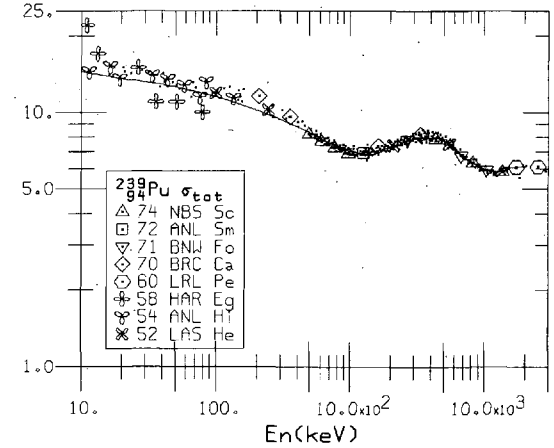
[1264]

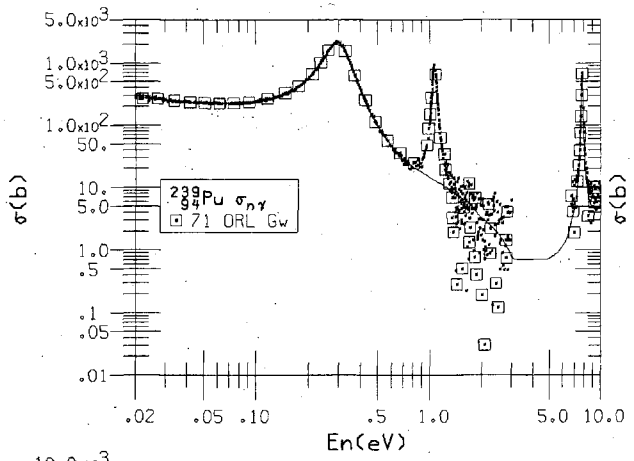


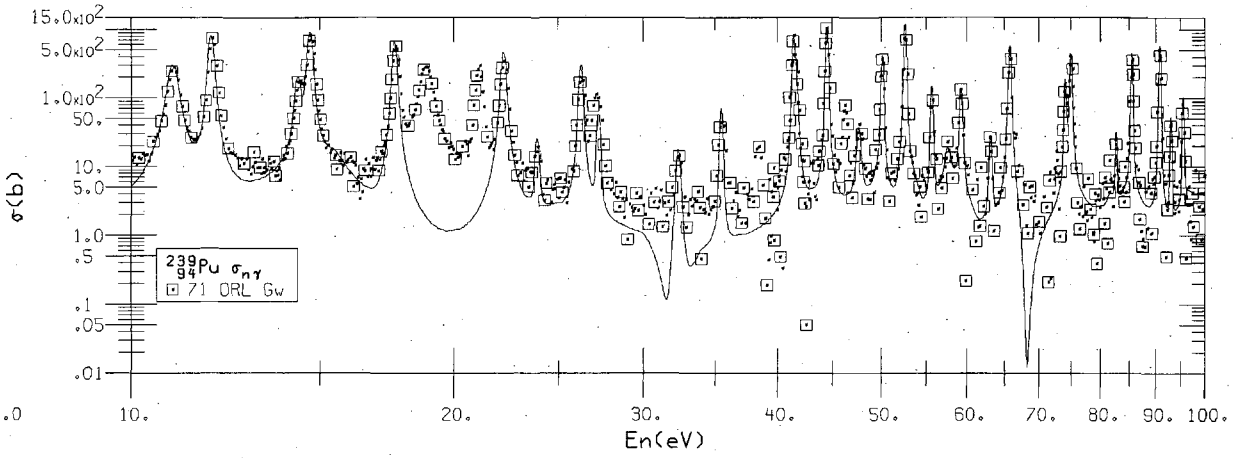


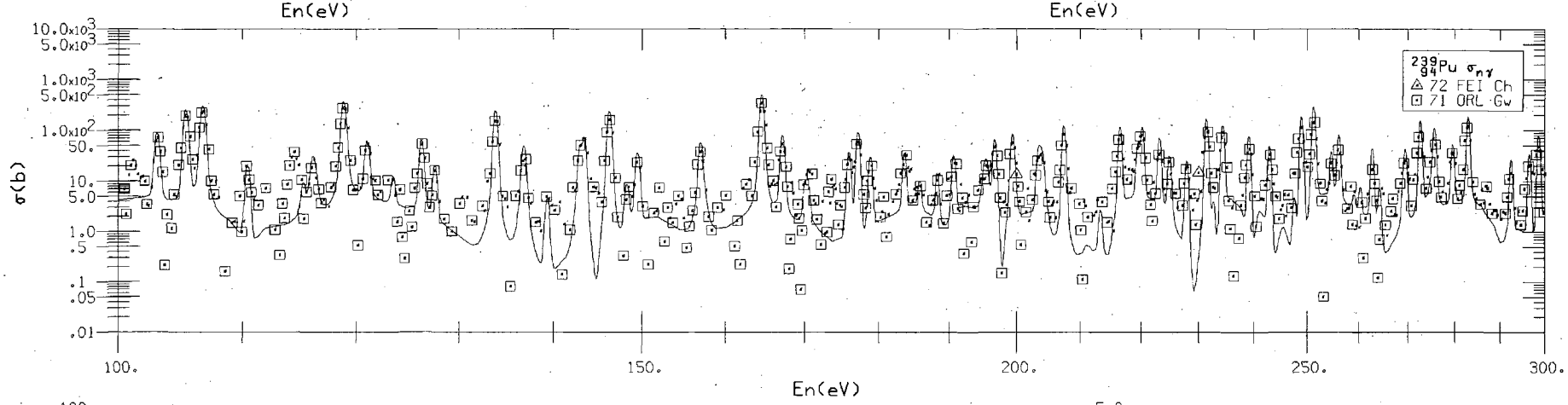


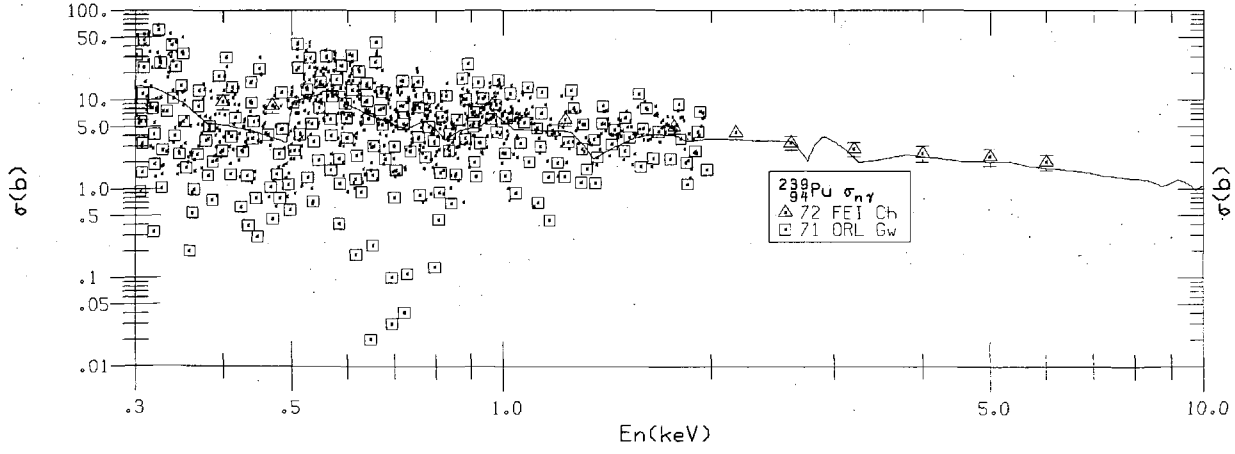


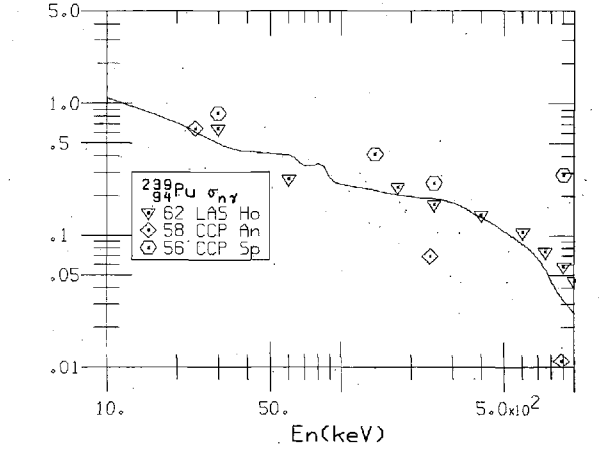



$^{239}_{94}$Pu $\sigma_{n\gamma}$
71 ORL Gw
σ(b)
En(eV)


$^{239}_{94}$Pu $\sigma_{n\gamma}$
71 ORL Gw
σ(b)
En(eV)


$^{239}_{94}$Pu $\sigma_{n\gamma}$
72 FEI Ch
71 ORL Gw
σ(b)
En(eV)

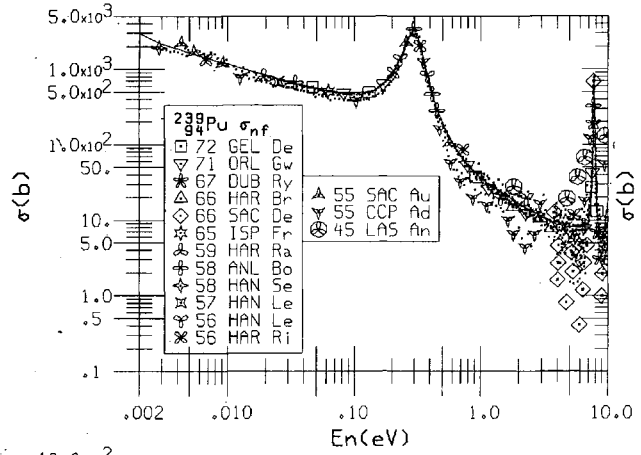

$^{239}_{94}$Pu $\sigma_{n\gamma}$
72 FEI Ch
71 ORL Gw
σ(b)
En(keV)

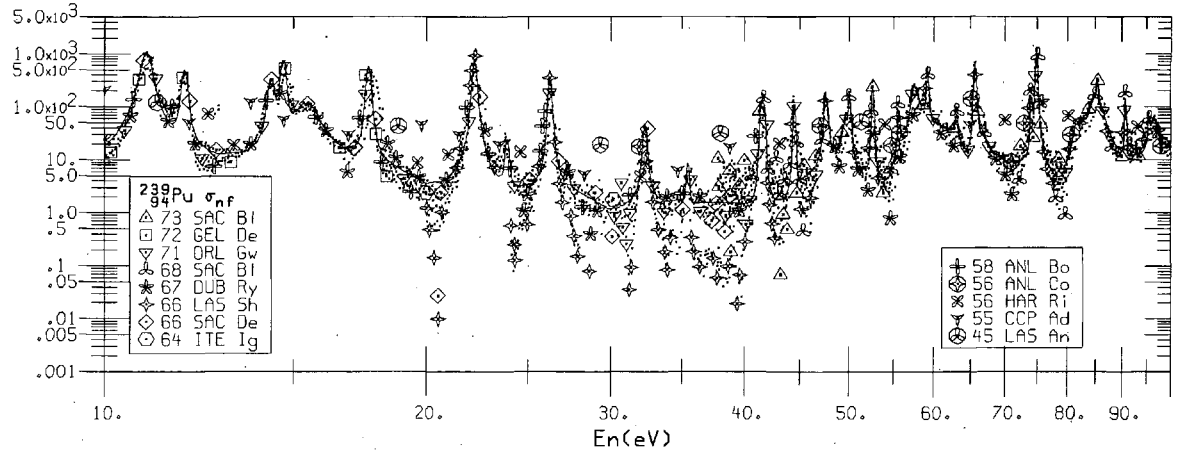

$^{239}_{94}$Pu $\sigma_{n\gamma}$
62 LAS Ho
58 CCP An
56 CCP Sp
σ(b)
En(keV)

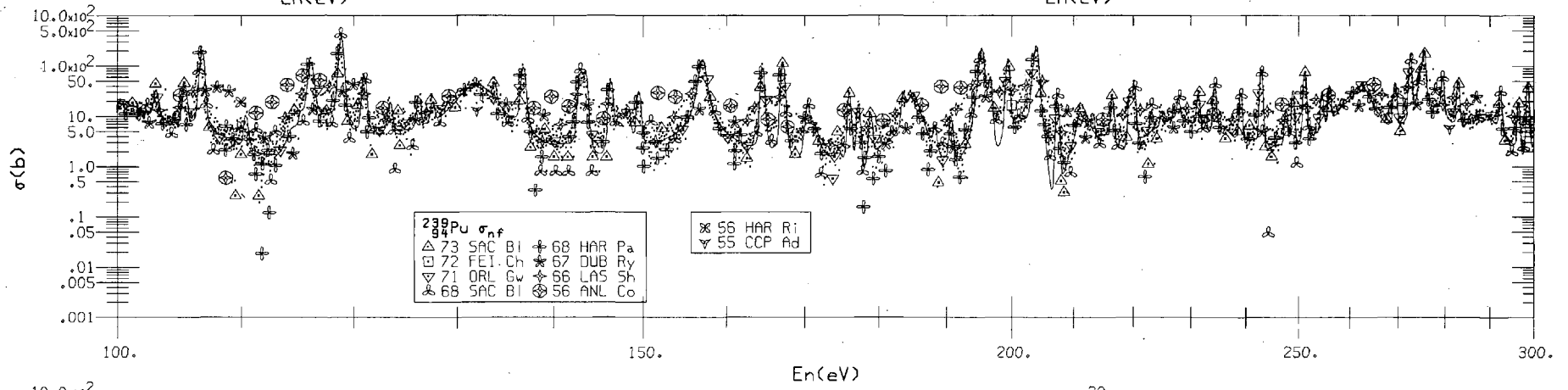
$^{239}_{94}Pu$

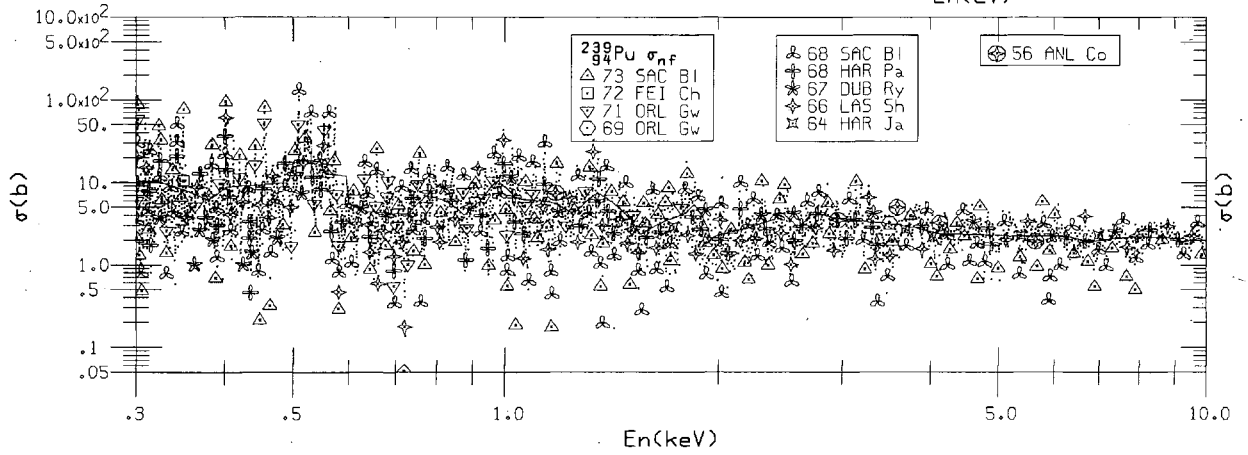
σ_{nf}

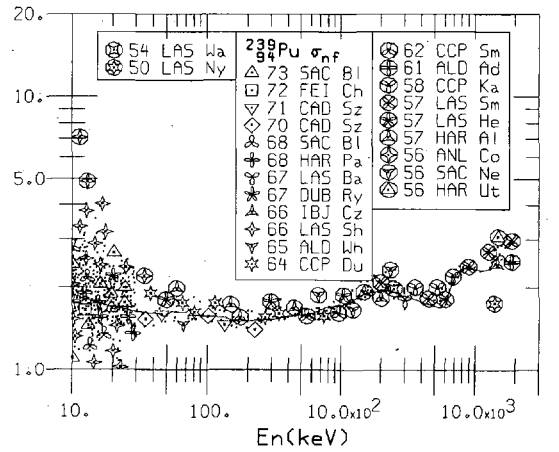
[1264]











$^{239}_{94}Pu$

σ_{inl}

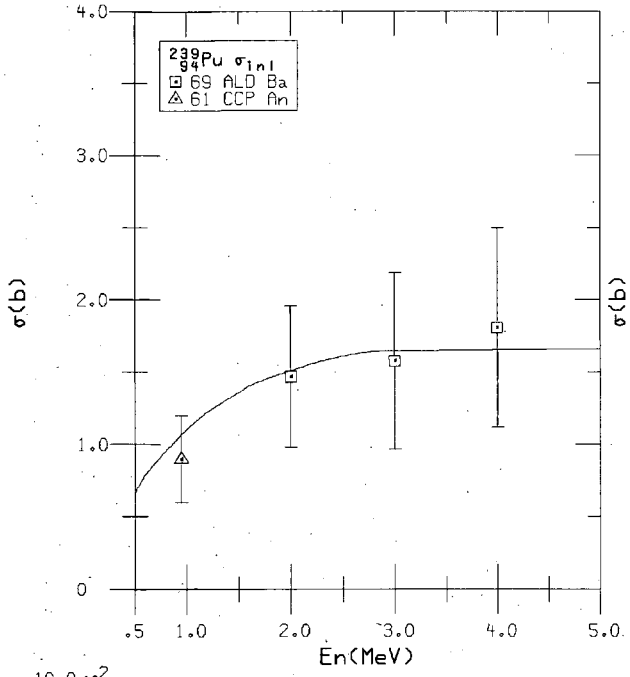
σ_{non}

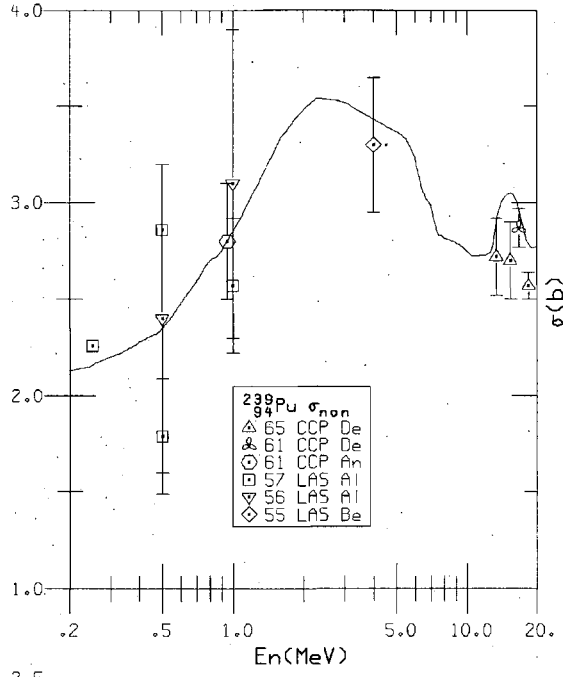
σ_{n2n}

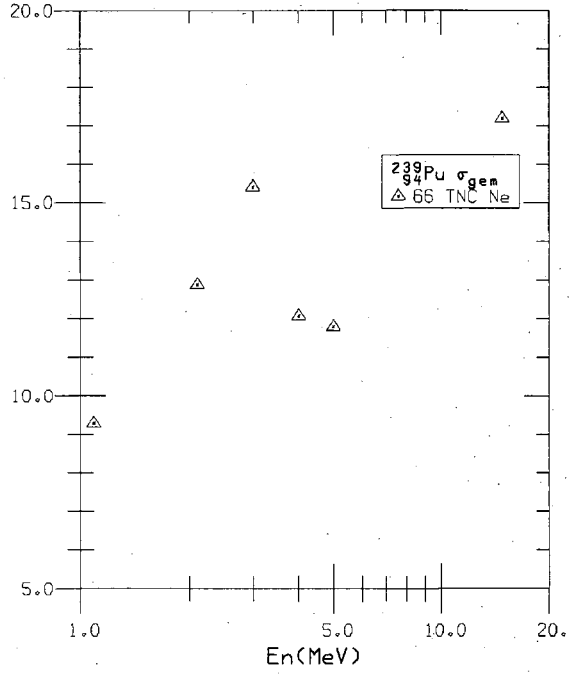
ν

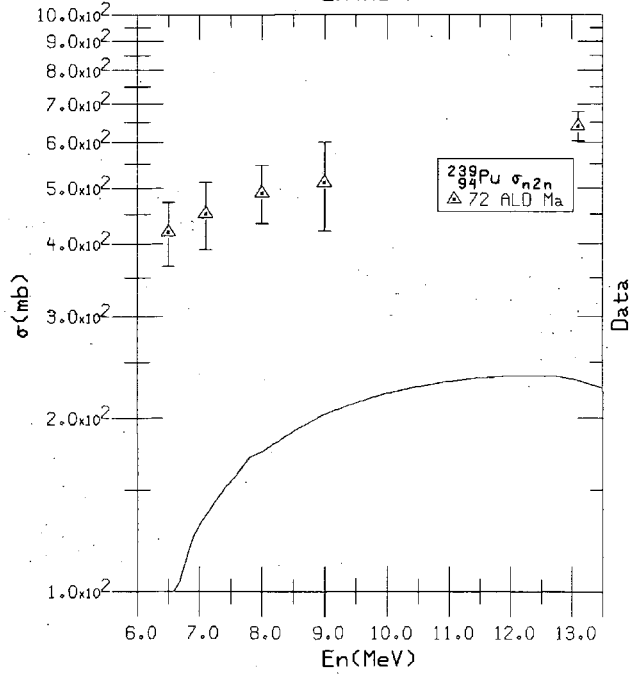
[1264]

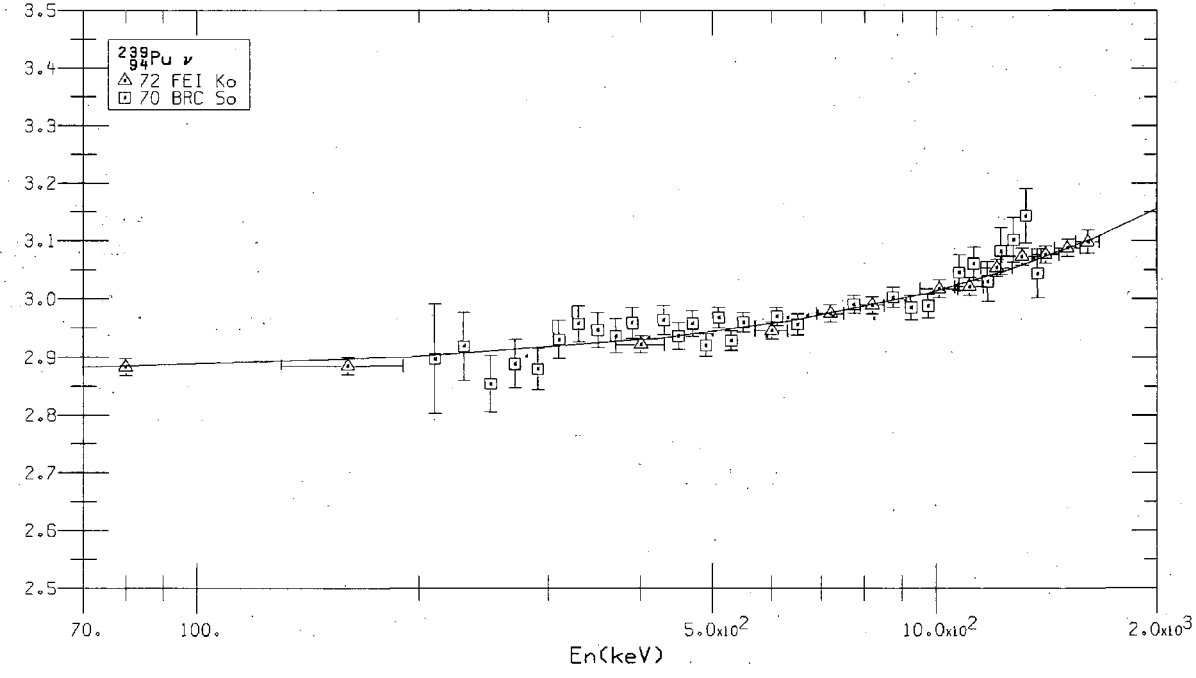
σ_{gem}



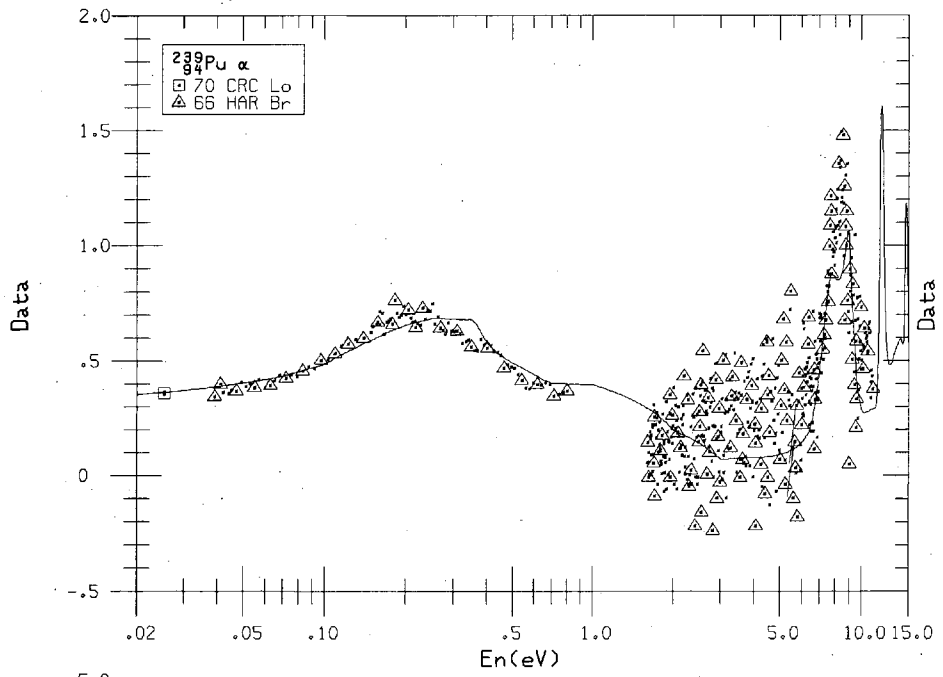


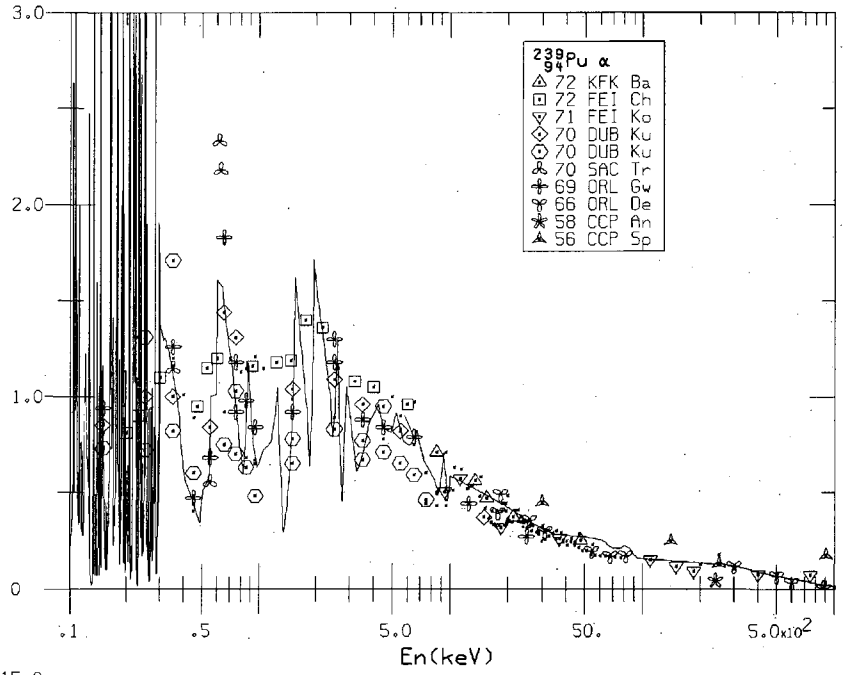


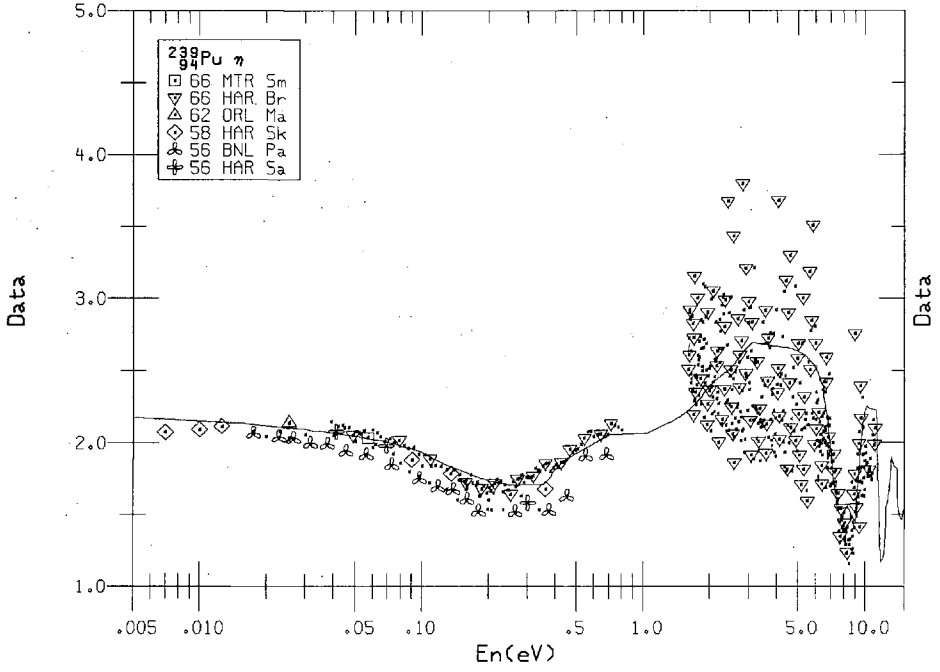


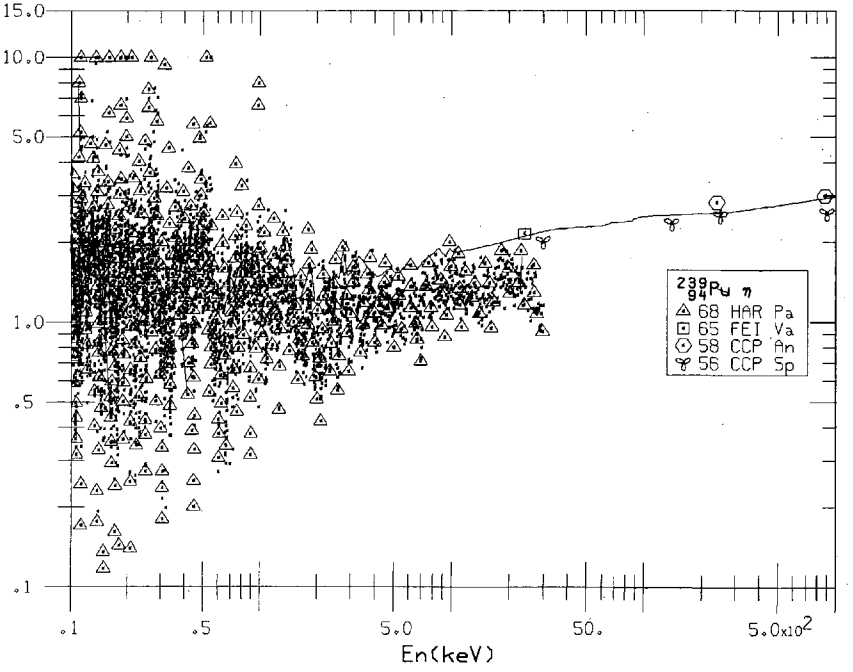


$^{239}_{94}$Pu
α
η
[1264]







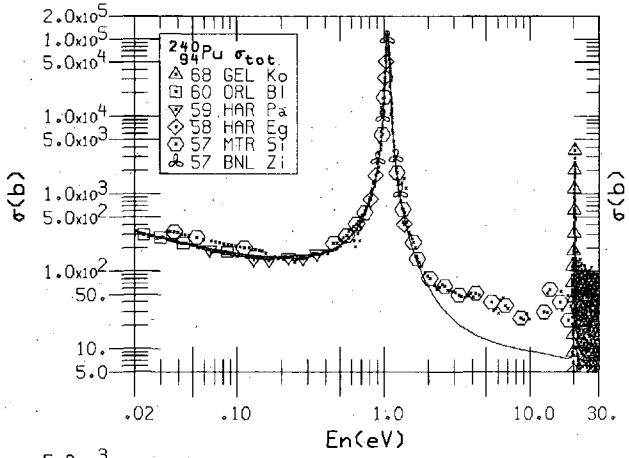


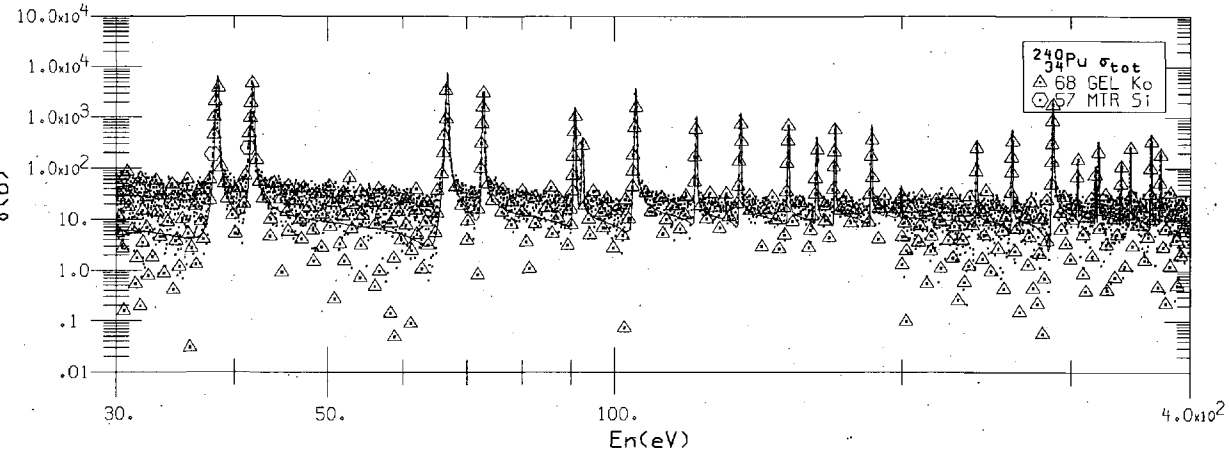
$^{240}_{94}Pu$

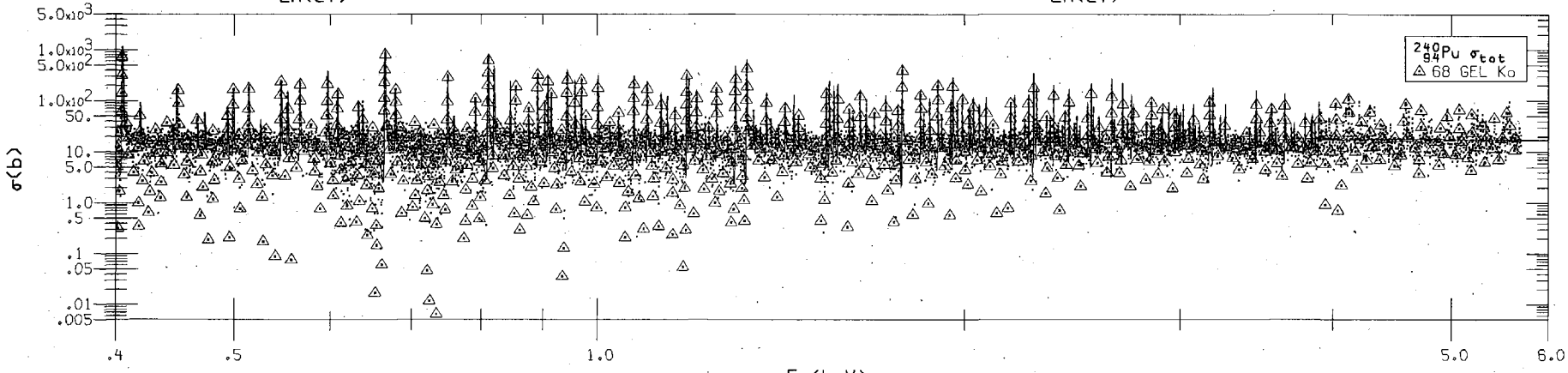
σ_{tot}

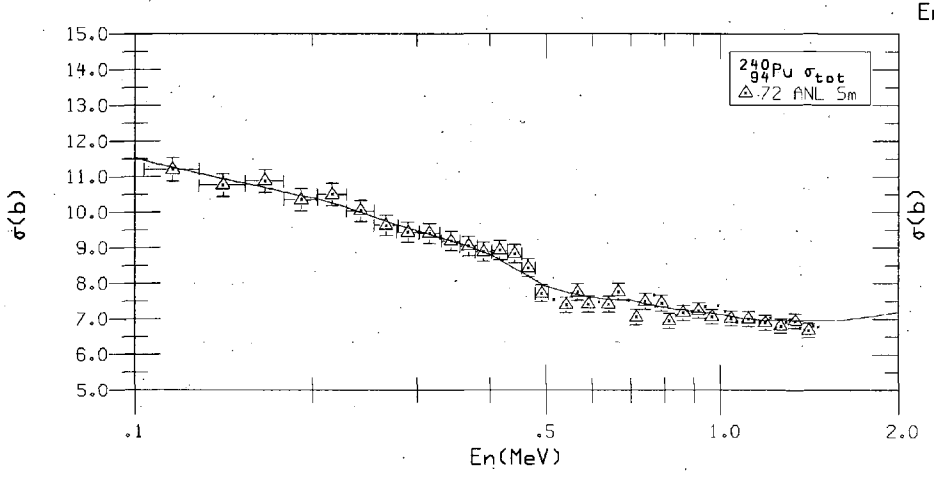
σ_{el}

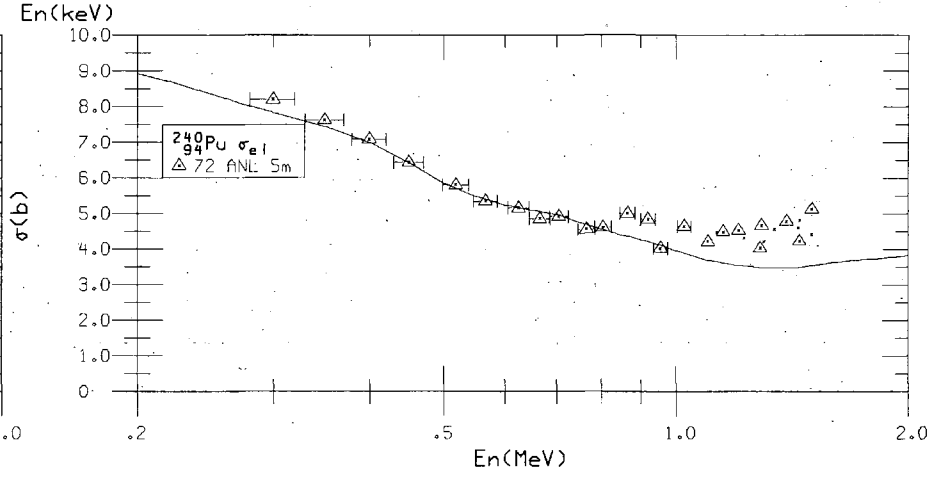
[1265]







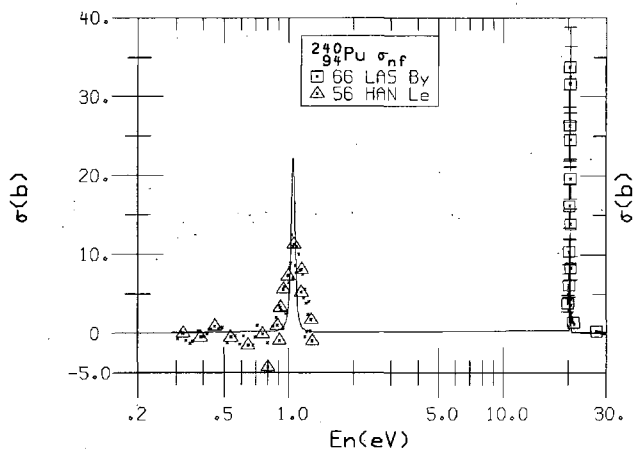


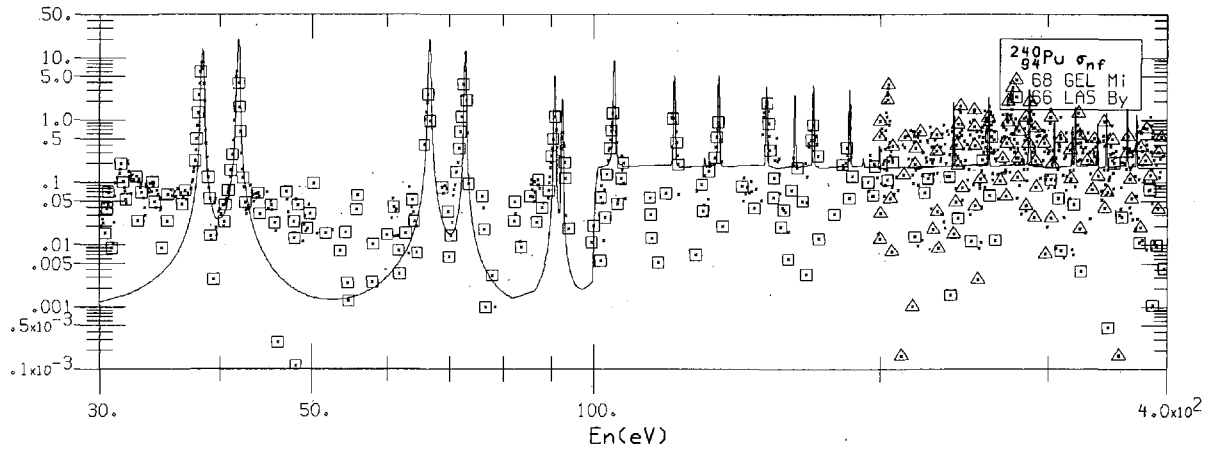


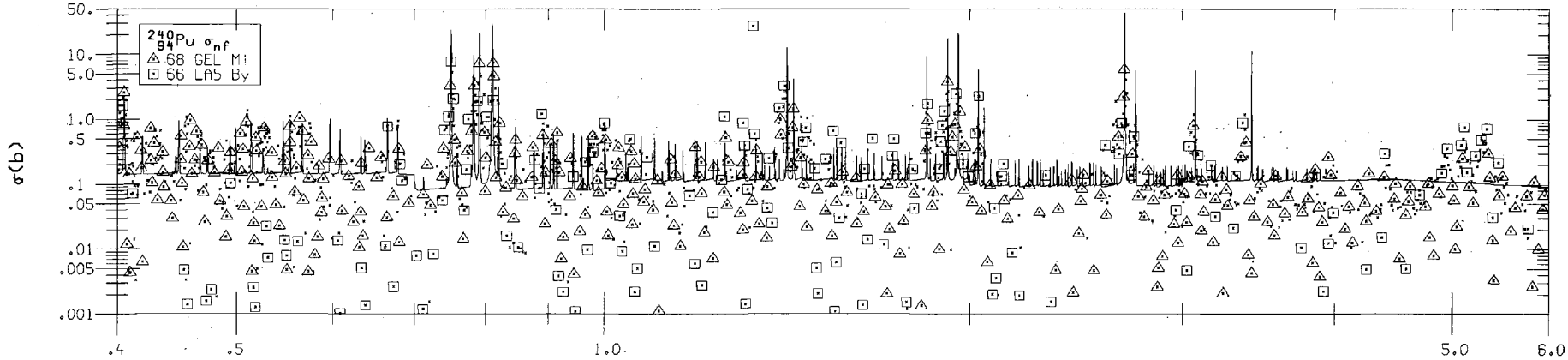
$^{240}_{94}Pu$

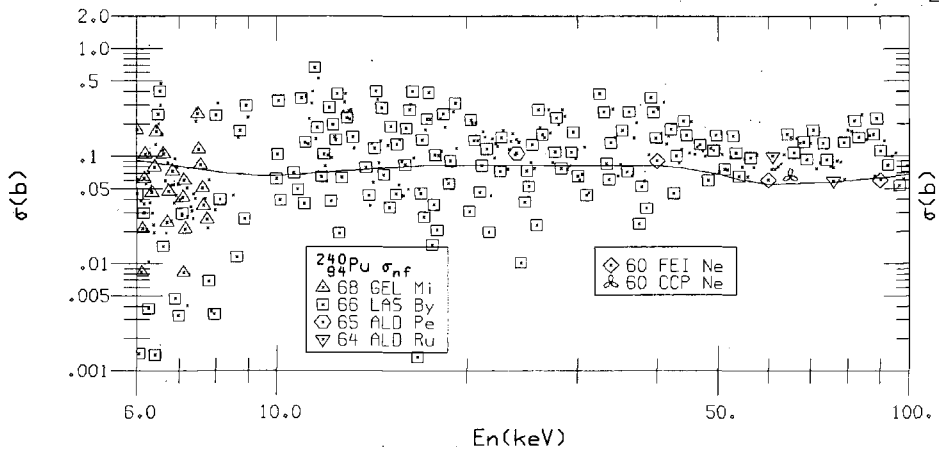
σ_{nf}

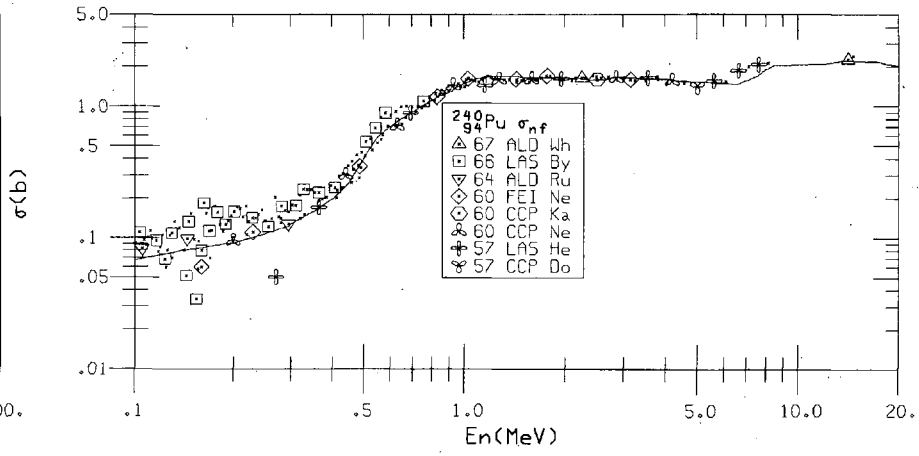
[1265]







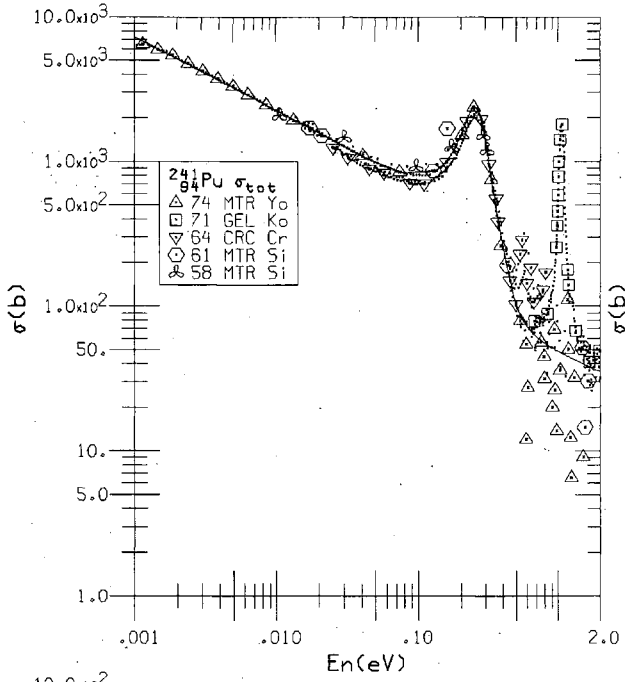


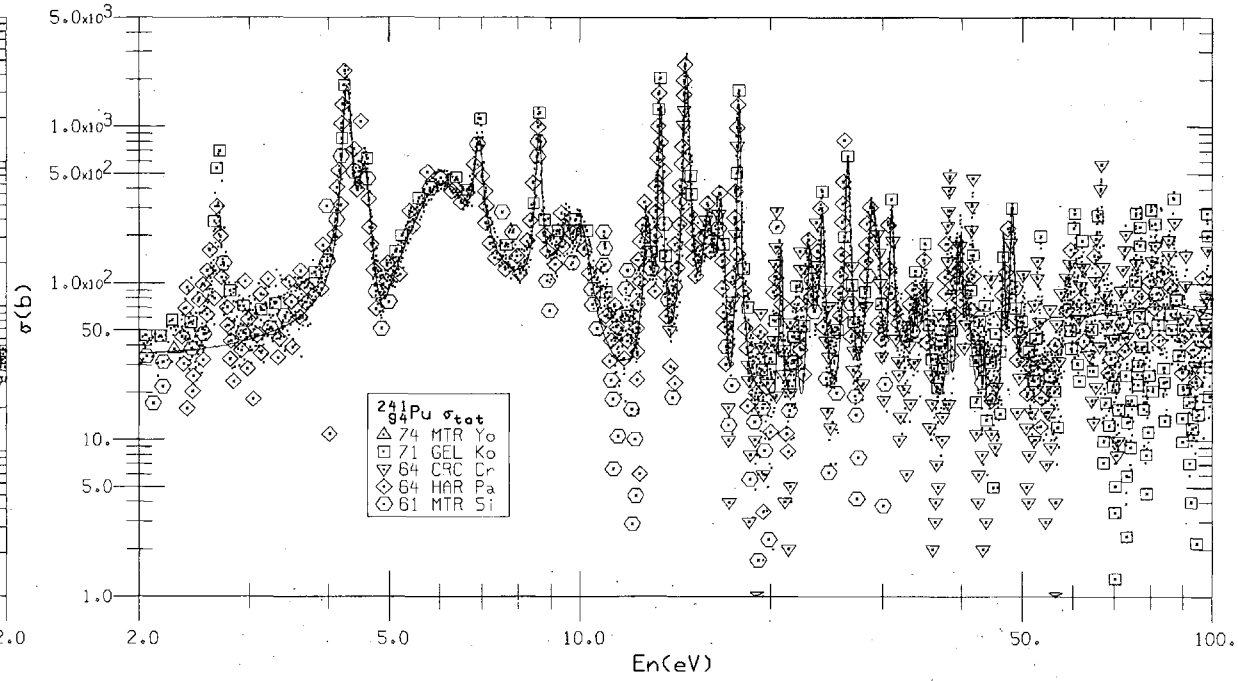


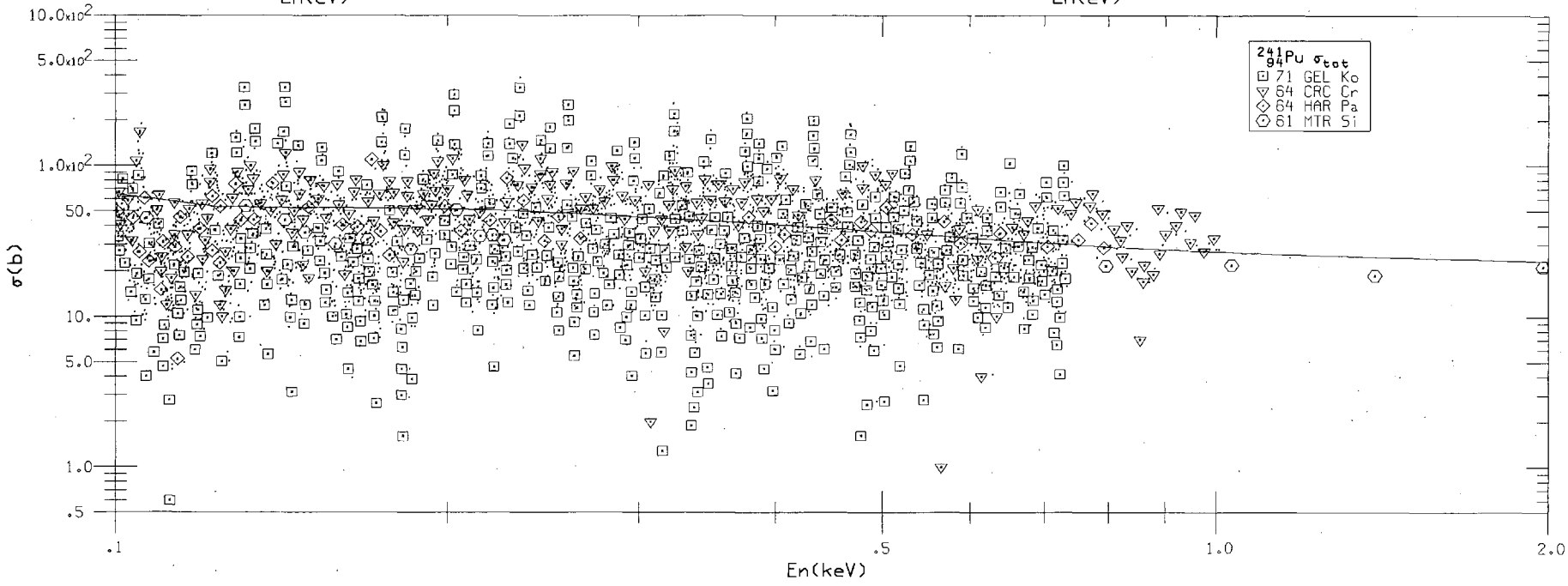
$^{241}_{94}Pu$

σ_{tot}

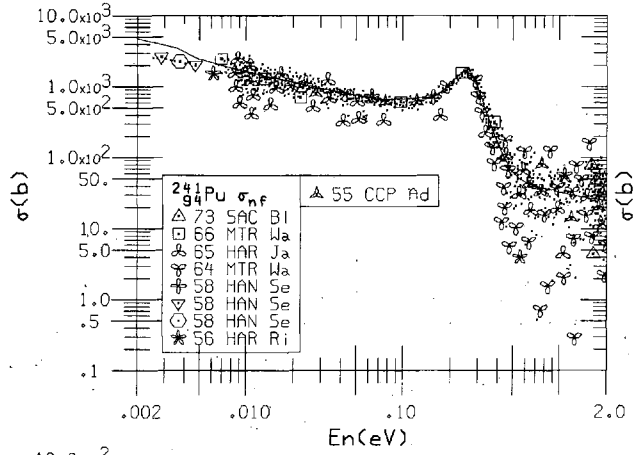
[1266]

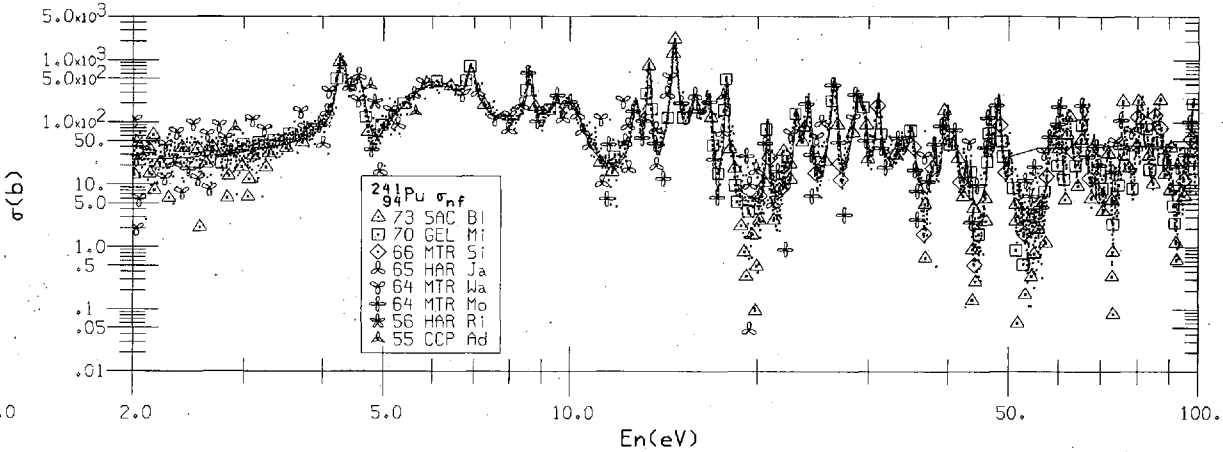


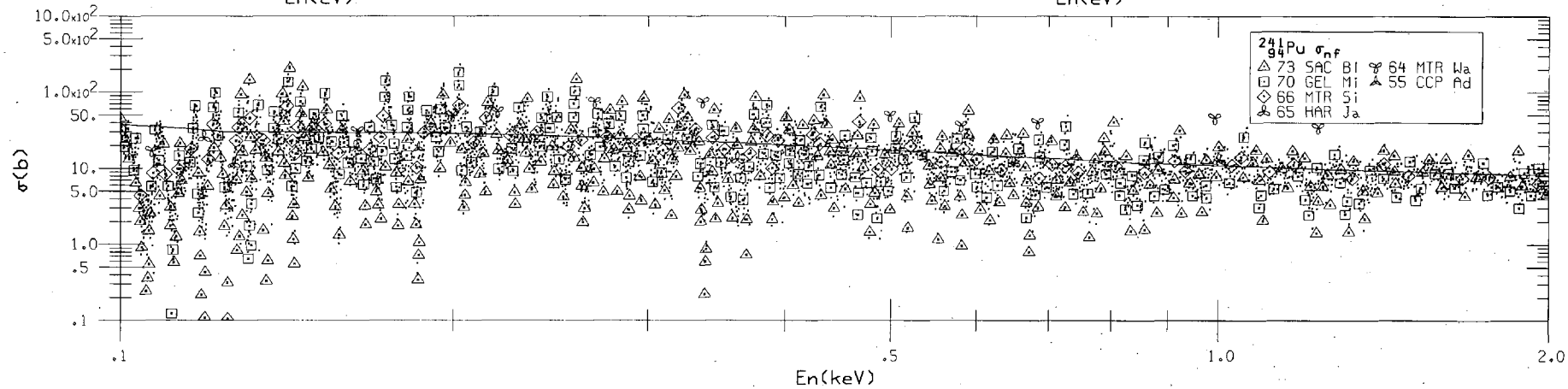


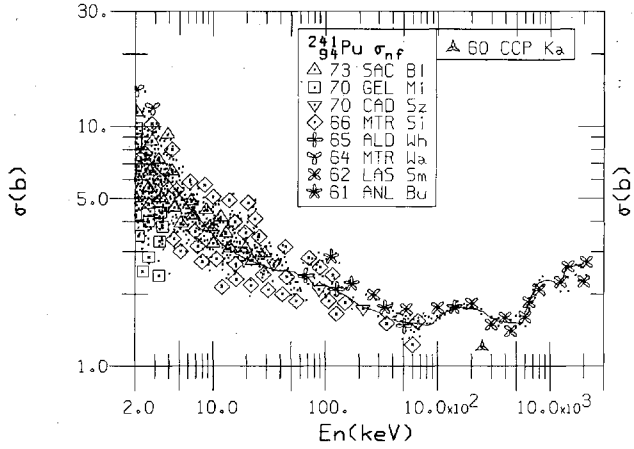


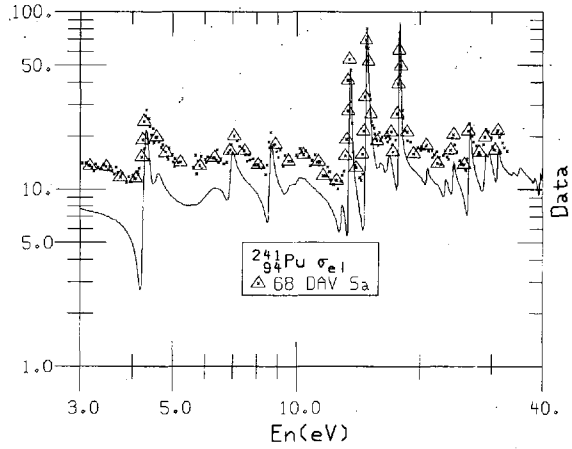
$^{241}_{94}$Pu
σ_{el}
σ_{nf}
η
[1266]

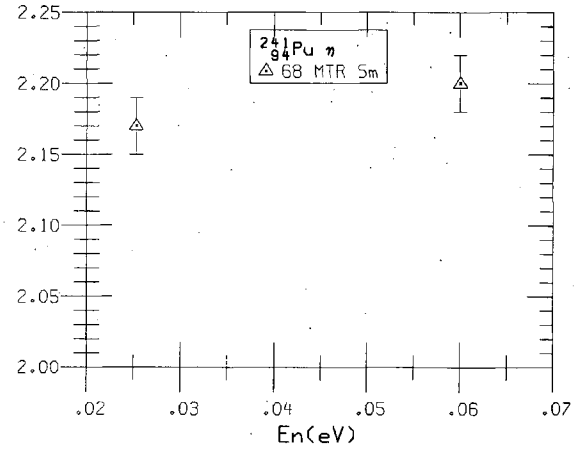










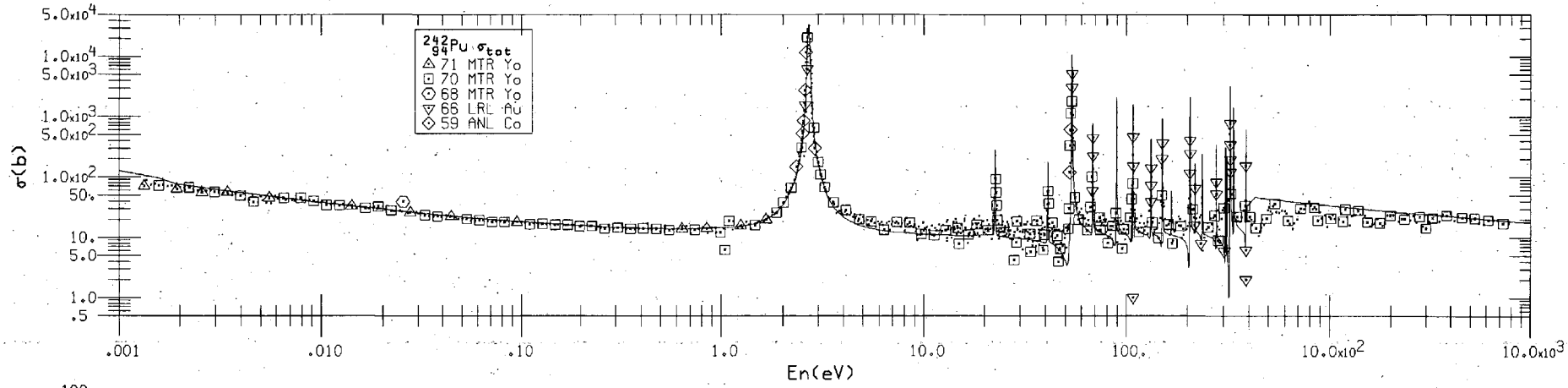


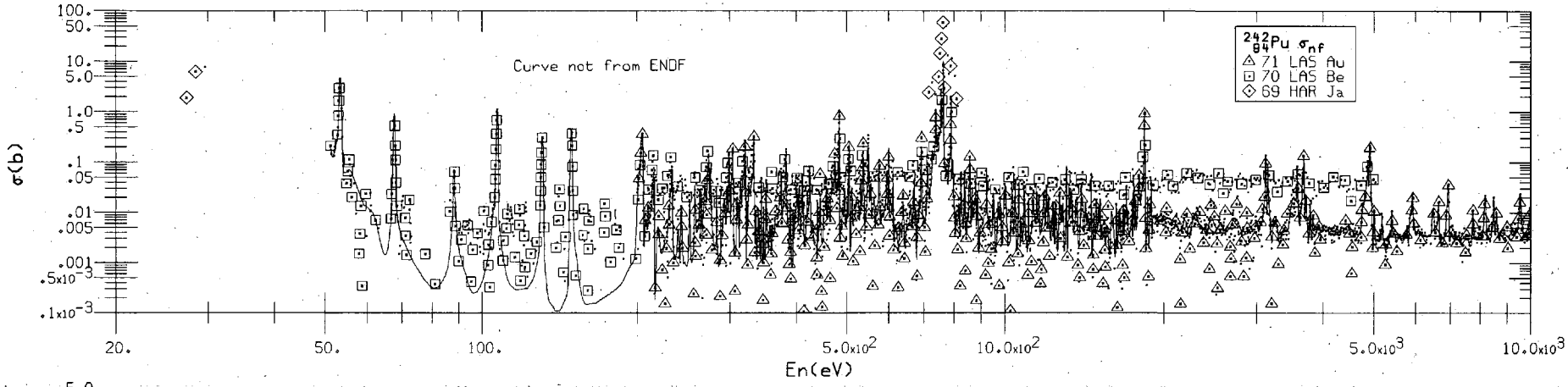
$^{242}_{94}Pu$

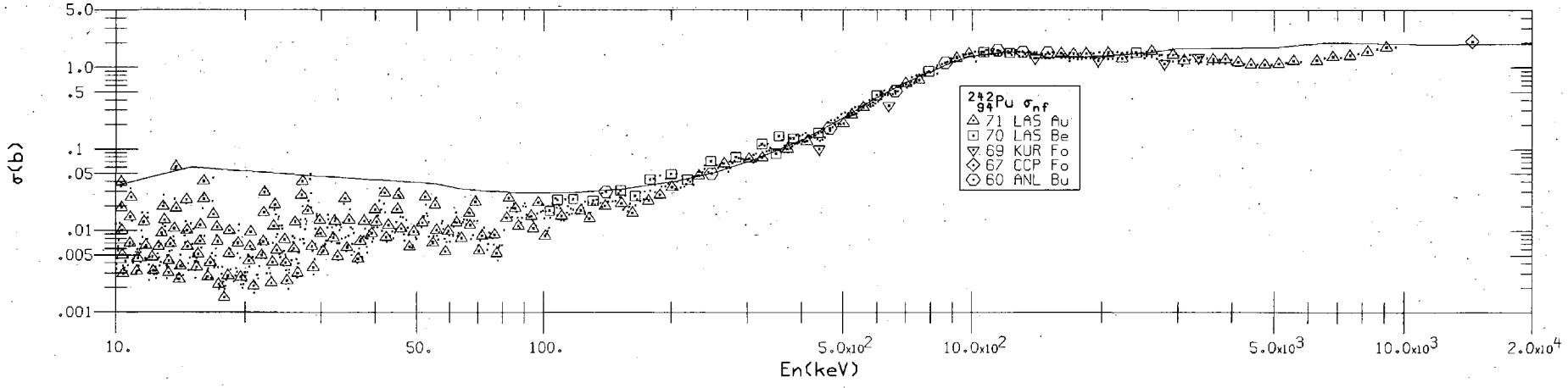
σ_{tot}

σ_{nf}

[1161]







Yr	Lab	Author	Reference	Points	Range	Standard
			$^{238}_{94}$Pu σ_{tot}			
67	MTR	Young,et.al.	NSE,30,355,67	595	.0082 eV to 6.496 keV	abs
67	MTR	Young,et.al.	NSE,30,355,67	179	.100 keV to .200 keV	
62	BNL	Brunhart,et.al.	BAP,7,305(K16),62	1	.615 kb at thermal	
			$^{238}_{94}$Pu $\sigma_{n\gamma}$			
73	LAS	Silbert,et.al.	NSE,52,187,73	3505	17.8 eV to .199 MeV	
62	BNL	Brunhart,et.al.	BAP,7,305(K16),62	1	.588 kb at thermal	
57	CRC	Butler,et.al.	CJP,35,147,57	1	.410 kb at thermal	^{59}Co $\sigma_{n\gamma}$
			$^{238}_{94}$Pu σ_{nem}			
65	LAS	Stubbins	STUBBINS,65	1	3.760 b at 1.670 MeV	
			$^{238}_{94}$Pu σ_{nf}			
70	LAS	Drake,et.al.	LA-4420,101,70	2613	31.7 eV to 2.583 MeV	^{235}U σ_{nf}
70	CCP	Ermagombetov+	AE,29,(6),422,70	31	2.400 keV to 2.400 MeV	^{235}U σ_{nf}
69	LAS	Silbert	LA-4108-MS,69	6759	17.8 eV to 2.967 MeV	^{3}He σ_{np}
69	KUR	Fomushkin,et.al.	YF,10,(5),917,69	14	.440 MeV to 3.620 MeV	^{235}U σ_{nf}
68	CCP	Ermagambetov+	AE,25,527,68	20	.500 MeV to 16.9 MeV	^{235}U
67	LAS	Barton,et.al.	PR,162,1070,67	4	1.000 MeV to 14.9 MeV	^{235}U
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	2.730 b at 14.5 MeV	^{238}U
66	KUR	Vorotnikov+	YF,3,(3),479,66	30	50.0 keV to 1.400 MeV	^{238}Pu σ_{nf}
66	KUR	Gerasimov	66PARIS,2,129,,66	233	.0238 eV to .420 keV	^{238}Pu σ_{nf}
			$^{239}_{94}$Pu σ_{tot}			
74	NBS	Schwartz,et.al.	NSE,54,322,74	1680	.496 MeV to 15.2 MeV	C σ_{el}
72	ANL	Smith	SMITH,72	393	.651 MeV to 1.499 MeV	
71	BNW	Foster Jr,et.al.	PR/C,3,576,71	243	2.258 MeV to 15.0 MeV	
70	BRC	Cabe,et.al.	70HELSINKI,2,31,70	148	.160 MeV to 5.990 MeV	
66	HAR	Brooks	BROOKS,66	337	1.602 eV to 10.2 eV	abs
66	SAC	Derrien	DERRIEN,66	5835	.151 keV to .500 keV	abs
66	SAC	Derrien	DERRIEN,66	8494	69.5 eV to .500 keV	abs
64	HAR	Uttley	UTTLEY,64	7903	37.2 eV to .471 keV	
61	COL	Safford,et.al.	NSE,11,65,61	17	.0029 eV to .100 eV	abs
60	LRL	Peterson,et.al.	PR,120,521,60	4	17.3 MeV to 28.9 MeV	abs
58	ANL	Bollinger,et.al.	58GENEVA,15,127,58	98	.0138 eV to .720 eV	abs
58	LRL	Bratenahl,et.al.	PR,110,927,58	5	7.050 MeV to 14.3 MeV	abs
58	HAR	Egelstaff,et.al.	JNE,6,303,58	509	.225 eV to 79.3 keV	
57	MTR	Simpson,et.al.	IDO-16394,51,57	735	5.480 eV to .121 keV	abs
56	BNL	Schwartz,et.al.	BAP,1,187(K3),56	227	1.380 eV to 88.7 eV	abs
56	ANL	Cote,et.al.	BAP,1,187(K5),56	713	.101 eV to 22.5 eV	
56	HAN	Leonard Jr+	HW-44525,47,56	22	therm t to .500 eV	
56	HAR	Pattenden	JNE,2,187,56	1	1.050 kb at thermal	
56	HAR	Pattenden	JNE,2,187,56	178	.0016 eV to 18.7 eV	abs
55	BNL	Palevsky	PALEVSKY,55	173	.0011 eV to .655 eV	
55	BNL	Palevsky	PALEVSKY,55	1	1.025 kb at thermal	
55	CCP	Nikitin,et.al.	55GENEVA,4,224,55	139	.0125 eV to .110 keV	abs
55	CCP	Nikitin,et.al.	55GENEVA,4,224,55	1	1.040 kb at thermal	
54	ANL	Hibdon,et.al.	ANL-5175,7,54	35	1.220 keV to .157 MeV	
52	LAS	Henkel	LA-1493,52	59	41.0 keV to 20.5 MeV	
52	ANL	Bollinger,et.al.	ANL-4983,4,52	138	7.000 eV to 5.750 keV	
52	LAS	Coon,et.al.	LA-1446,52	1	5.910 b at 14.1 MeV	
51	COL	Havens Jr,et.al.	CUO-92,51	58	.0041 eV to .738 eV	abs
45	LAS	Anderson,et.al.	LA-266,45	1	1.045 kb at thermal	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{239}_{94}$Pu σ_{inl}			
69	ALD	Batchelor,et.al.	AWRE-O-55/69,69	3	2.000 MeV to 4.000 MeV	^{1}H σ_{el}
61	CCP	Andreev	SOV.PR.NP.,,211,61	1	.900 b at .950 MeV	
			$^{239}_{94}$Pu σ_{non}			
65	CCP	Degtyarev	AE,19,456,65	3	13.4 MeV to 18.4 MeV	
63	LRL	Macgregor	PR,130,1471,63	3	8.100 MeV to 14.1 MeV	
61	CCP	Degtyarev+	AE,11,397,61	1	2.870 b at 16.8 MeV	abs
61	CCP	Andreev	SOV.PR.NP.,,211,61	1	2.800 b at .950 MeV	
57	LAS	Allen	NSE,2,787,57	2	.250 MeV to .500 MeV	abs
57	LAS	Allen	NSE,2,787,57	1	1.790 b at .500 MeV	abs
57	LAS	Allen	NSE,2,787,57	1	2.570 b at 1.000 MeV	abs
56	LAS	Allen,et.al.	PR,104,731,56	2	.500 MeV to 1.000 MeV	
55	LAS	Bethe,et.al.	LA-1939,55	2	4.000 MeV to 4.500 MeV	abs
			$^{239}_{94}$Pu $\sigma_{n\gamma}$			
72	FEI	Chelnokov,et.al.	YFI-13,6,72	22	.200 keV to 6.000 keV	^{239}Pu α
71	ORL	Gwin,et.al.	NSE,45,25,71	1317	.0190 eV to 42.4 eV	^{239}Pu $\sigma_{n\gamma}$
71	ORL	Gwin,et.al.	NSE,45,25,71	2322	39.2 eV to 1.976 keV	^{239}Pu $\sigma_{n\gamma}$
62	LAS	Hopkins,et.al.	NSE,12,169,62	9	30.0 keV to 1.000 MeV	
58	CCP	Andreev	AE,4,185,58	3	24.0 keV to .880 MeV	
56	CCP	Spivak,et.al.	AE,1(3),21,56	4	30.0 keV to .900 MeV	
			$^{239}_{94}$Pu σ_{gem}			
66	TNC	Nellis,et.al.	ORO-2791-17,66	6	1.090 MeV to 14.8 MeV	
			$^{239}_{94}$Pu σ_{n2n}			
72	ALD	Mather,et.al.	AWRE-O-72/72,72	4	6.500 MeV to 9.000 MeV	
72	ALD	Mather,et.al.	AWRE-O-72/72,72	1	.641 b at 13.1 MeV	
			$^{239}_{94}$Pu σ_{n3n}			
72	ALD	Mather,et.al.	AWRE-O-72/72,72	1	.123 b at 13.1 MeV	
			$^{239}_{94}$Pu σ_{np}			
59	ALD	Coleman,et.al.	PPS,73,215,59	1	3.000 mb at 14.5 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{239}_{94}$Pu σ_{nf}			
73	SAC	Blons	NSE,51,130,73	7295	37.7 eV to 30.1 keV	^{10}B $\sigma_{n\alpha}$
72	GEL	Deruytter,et.al.	JNE,26,293,72	560	.0198 eV to 20.1 eV	^{238}Pu $\sigma_{nf/a}$
72	FEI	Chelnokov,et.al.	YFI-13,6,72	26	.200 keV to 34.6 keV	^{239}Pu σ_{nf}
71	ORL	Gwin,et.al.	NSE,45,25,71	1317	.0190 eV to 42.4 eV	^{239}Pu σ_{nf}
71	ORL	Gwin,et.al.	NSE,45,25,71	2322	39.2 eV to 1.976 keV	^{239}Pu σ_{nf}
71	CAD	Szabo,et.al.	KNOX,2,573,71	15	11.5 keV to .199 MeV	
70	GEL	Deruytter,et.al.	70HELSINKI,1,117,70	1	.742 kb at thermal	^{10}B $\sigma_{n\alpha}$
70	BUC	Borcea,et.al.	IFA-NR-33,,70	1	.740 kb at thermal	
70	CAD	Szabo,et.al.	70ANL,,257,70	21	35.0 keV to .972 MeV	
69	TRM	Iyer,et.al.	69ROORKEE,2,289,69	1	2.650 b at 14.1 MeV	^{238}U σ_{nf}
69	ORL	Gwin,et.al.	ORNL-TM-2598,69	20	.150 keV to 25.0 keV	^{239}Pu σ_{abs}
69	ORL	Gwin,et.al.	ORNL-TM-2598,69	20	.150 keV to 25.0 keV	^{239}Pu σ_{abs}
68	SAC	Blons,et.al.	CR,267,901,68	7112	40.1 eV to 20.1 keV	^{239}Pu σ_{nf}
68	HAR	Patrick,et.al.	EANDC(UK)-96,68	5302	100.0 eV to 29.9 keV	
67	LAS	Barton,et.al.	PR,162,1070,67	2	3.000 MeV to 14.9 MeV	^{235}U

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
67	ALD	White,et.al.	JNE,21,671,67	3	1.000 MeV to 14.1 MeV	
67	DUB	Ryabov,et.al.	YF,5,925,67	1396	5.550 eV to 23.0 keV	
66	IBJ	Czyzevski,et.al.	INR-688,66	5	13.1 MeV to 15.3 MeV	
66	CRC	Durham,et.al.	66PARIS,2,17,,66	1	.751 kb at thermal	
66	LAS	Shunk,et.al.	66WASH,2,979,66	2867	20.0 eV to 29.8 keV	
66	HAR	Brooks	BROOKS,66	280	1.602 eV to 6.005 eV	^{239}Pu σ_{nf}
66	ALD	White,et.al.	66PARIS,2,29,,66	1	.737 kb at thermal	^{235}U σ_{nf}
66	ALD	White,et.al.	66PARIS,2,29 58 ,66	1	.723 kb at thermal	^{235}U σ_{nf}
66	ALD	White,et.al.	66PARIS,2,29 58 ,66	1	.713 kb at thermal	^{235}U σ_{nf}
66	SAC	Derrien,et.al.	66PARIS,2,195,66	1099	3.775 eV to 40.1 eV	^{239}Pu $\sigma_{nf/a}$
65	ALD	Perkin,et.al.	JNE,19,423,65	1	1.660 b at 24.0 keV	
65	ALD	White,et.al.	65SALZBURG,1,255,65	4	40.0 keV to .505 MeV	^{235}U
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.658 kb at .0322 eV	
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.673 kb at .0322 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.507 kb at .0626 eV	B σ_{abs}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.515 kb at .0626 eV	^{235}U σ_{nf}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.737 kb at thermal	^{235}U σ_{nf}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	.738 kb at thermal	^{235}U σ_{nf}
65	ISP	Fraysse,et.al.	65SALZBURG,1,255,65	1	3.275 kb at .275 eV	B σ_{abs}
64	ITE	Ignat'ev,et.al.	AE,16,(2),110,64	19	3.170 eV to 30.2 eV	
64	HAR	James,et.al.	AERE-PR/NP-6,63,64	99	1.014 keV to 15.0 keV	
64	CCP	Dubrovina,et.al.	DOK,157,561,64	42	1.630 keV to 1.390 MeV	
62	CCP	Smirenken,et.al.	AE,13,366,62	44	.290 MeV to 2.530 MeV	^{238}U σ_{nf}
61	ALD	Moat	JNE,14,85,61-	1	2.610 b at 14.0 MeV	
61	ALD	Adams,et.al.	JNE,14,85,61	13	13.4 MeV to 19.4 MeV	^{238}U σ_{nf}
59	HAR	Raffle	AERE-R-2998,59	6	.0194 eV to .0341 eV	^{197}Au $\sigma_{n\gamma}$
58	ANL	Bollinger,et.al.	58GENEVA,15,127,58	316	.457 eV to 43.4 eV	
58	ANL	Bollinger,et.al.	58GENEVA,15,127,58	48	.0240 eV to .480 eV	^{239}Pu σ_{nf}
58	ANL	Bollinger,et.al.	58GENEVA,15,127,58	12	.405 eV to .570 eV	^{239}Pu η
58	CRC	Bigham,et.al.	58GENEVA,16,125,58	1	.751 kb at thermal	^{233}U σ_{nf}
58	HAN	Seppi,et.al.	HW-55879,3,58	9	.0027 eV to .0047 eV	^{239}Pu σ_{nf}
58	HAN	Seppi,et.al.	HW-55879,3,58	1	2.034 kb at .0025 eV	
58	CCP	Kalinin,et.al.	58GENEVA,16,136,58	13	3.000 MeV to 8.250 MeV	
57	LAS	Smith,et.al.	BAP,2,196(X4),57	26	2.000 MeV to 20.0 MeV	H
57	LAS	Henkel	LA-2114,57	11	50.0 keV to 1.380 MeV	^{235}U
57	HAN	Leonard	57COLUMBIA,,115,57	1	.710 kb at thermal	^{235}U σ_{nf}
57	HAN	Leonard Jr+	HW-48893,98,57	1	.430 kb at .100 eV	^{197}Au $\sigma_{n\gamma}$
57	HAN	Leonard Jr+	HW-48893,98,57	1	.680 kb at thermal	^{197}Au $\sigma_{n\gamma}$
57	HAR	Allen,et.al.	PPS/A,70,573,57	22	30.0 keV to 3.000 MeV	^{239}Pu σ_{nf}
57	HAR	Allen,et.al.	PPS/A,70,573,57	1	1.660 b at .550 MeV	H
56	ANL	Cote,et.al.	BAP,1,187(K5),56	262	26.6 eV to 34.6 keV	
56	HAN	Leonard Jr	LEONARD,56	287	.0050 eV to 2.500 eV	
56	ORL	Pratt,et.al.	ORNL-2081,102,56	1	.713 kb at thermal	^{235}U σ_{nf}
56	HAR	Richmond,et.al.	JNE,2,177,56	175	.0068 eV to .690 keV	^{239}Pu σ_{nf}
56	SAC	Netter,et.al.	JPR,17,565,56	40	.680 MeV to 3.360 MeV	^{239}Pu σ_{nf}
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	3.060 b at 15.0 MeV	^{238}U σ_{nf}
56	HAR	Uttley,et.al.	AERE-NP/R-1996,56	1	2.580 b at 14.1 MeV	^{238}U σ_{nf}
55	SAC	Auclair,et.al.	55GENEVA,4,235,,55	56	.0043 eV to .980 eV	^{239}Pu σ_{nf}
55	CCP	Adamchuk,et.al.	55GENEVA,4,216,,55	237	.0122 eV to .972 keV	^{239}Pu σ_{nf}
54	LAS	Wahl,et.al.	LA-1681,54	2	2.500 MeV to 14.1 MeV	^{235}U σ_{nf}
51	CRC	Tunnicliffe	CRGP-458,51	1	.688 kb at .0250 eV	B $\sigma_{n\alpha}$
51	CRC	Tunnicliffe	CRGP-458,51	1	.517 kb at .0500 eV	B $\sigma_{n\alpha}$
50	LAS	Nyer	LAMS-938,50	1	1.750 b at 14.0 MeV	^{235}U ν
45	LAS	Anderson,et.al.	LA-266,45	38	.520 eV to .475 keV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{239}_{94}$Pu α			
72	KFK	Bandl,et.al.	NSE,48,324,72	21	8.500 keV to 55.0 keV	^{239}Pu α
72	FEI	Chelnokov,et.al.	YFI-13,6,72	22	.200 keV to 6.000 keV	^{239}Pu α
71	FEI	Kononov,et.al.	KONONOV,71	52	9.400 keV to 1.000 MeV	^{252}Cf $\sigma_{sf/n}$
70	CRC	Lounsbury,et.al.	70HELSINKI,1,287,70	1	.360 b at thermal	
70	DUB	Ryabov	JINR-P3-5113,70	19	.150 keV to 15.0 keV	
70	DUB	Kononov	JINR-P3-5112,70	38	.150 keV to 19.8 keV	
70	SAC	Trochon,et.al.	70HELSINKI,1,495,70	7	.150 keV to .625 keV	
69	ORL	Gwin,et.al.	ORNL-TM-2598,69	21	.150 keV to 25.0 keV	^{239}Pu σ_{abs}
69	ORL	Gwin,et.al.	ORNL-TM-2598,69	11	.150 keV to 2.500 keV	^{239}Pu σ_{abs}
66	ORL	De Saussure,et.a	68PARIS,2,233,,66	41	17.7 keV to .600 MeV	
66	CRC	Durham,et.al.	66PARIS,2,17,,66	1	.360 b at thermal	
66	HAR	Brooks	BROOKS,66	553	.0390 eV to 11.0 eV	^{239}Pu
66	HAR	Cabell	66PARIS,2,3,,66	1	.356 b at thermal	
65	FEI	Van'kov,et.al.	AE,19,41,65	1	.349 b at 24.0 keV	
63	CRC	Crocker,et.al.	EANDC(CAN)17,4,63	1	.365 b at thermal	^{235}U σ_{abs}
63	HAR	Cabell,et.al.	JIN,25,607,63	1	.356 b at thermal	
58	HAR	Cocking	JNE,6,285,58	1	.300 b at .0011 eV	^{197}Au
58	CCP	Andreev	AE,4,185,58	3	24.0 keV to .880 MeV	
56	CCP	Spivak,et.al.	AE,1(3),21,56	5	30.0 keV to .900 MeV	
			$^{239}_{94}$Pu η			
68	HAR	Patrick,et.al.	EANDC(UK)-96,68	5302	100.0 eV to 29.9 keV	
66	MTR	Smith,et.al.	IDO-17083,66	2	.0250 eV to .0570 eV	
66	HAR	Brooks	BROOKS,66	553	.0390 eV to 11.0 eV	^{239}Pu η
65	FEI	Van'kov,et.al.	AE,19,41,65	1	2.150 b at 24.0 keV	
62	ORL	Macklin,et.al.	NSE,14,101,62	1	2.138 b at thermal	
60	CCP	Flerov,et.al.	AE,10,68,60	1	4.530 b at 14.0 MeV	^{239}Pu σ_{non}
59	ANL	Muehlhause+	NSE,5,225,59	1	2.040 b at thermal	B
58	KAP	Gaerttner,et.al.	NSE,3,758,58	1	2.025 b at thermal	^{235}U η
58	HAR	Skarsgard,et.al.	JNE,6,212,58	17	.0070 eV to .360 eV	
58	CCP	Andreev	AE,4,185,58	3	24.0 keV to .880 MeV	
56	BNL	Palevsky,et.al.	JNE,3,177,56	28	.0175 eV to .680 eV	^{239}Pu η
56	HAR	Sanders	SANDERS,56	10	.0410 eV to .361 eV	^{239}Pu η
56	CCP	Spivak,et.al.	AE,1(3),21,56	5	30.0 keV to .900 MeV	abs
			$^{239}_{94}$Pu ν			
72	FEI	Kolosov,et.al.	AE,32,(1),83,72	16	80.0 keV to 1.610 MeV	
70	BRC	Soleilhac,et.al.	70HELSINKI,2,145,70	40	.210 MeV to 1.375 MeV	
60	CCP	Flerov,et.al.	AE,10,68,60	1	4.620 b at 14.0 MeV	
			$^{240}_{94}$Pu σ_{tot}			
72	ANL	Smith,et.al.	NSE,47,19,72	55	.116 MeV to 1.467 MeV	abs
68	GEL	Kolar,et.al.	JNE,22,299,68	39295	19.7 eV to 5.705 keV	abs
60	ORL	Block,et.al.	NSE,8,112,60	41	.0205 eV to .152 eV	
59	HAR	Pattenden,et.al.	JNE,11,14,59	288	.0653 eV to .788 eV	
58	HAR	Egelstaff,et.al.	JNE,6,303,58	46	.627 eV to 1.372 eV	abs
57	MTR	Simpson,et.al.	BAP,2,219(S12),57	240	.0338 eV to 43.2 eV	abs
57	BNL	Zimmerman	ZIMMERMAN,57	52	.818 eV to 1.414 eV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{240}_{94}$Pu σ_{el}			
72	ANL	Smith,et.al.	NSE,47,19,72	30	.300 MeV to 1.500 MeV	C σ_{el}
			$^{240}_{94}$Pu $\sigma_{n\gamma}$			
70	CRC	Lounsbury,et.al.	70HELSINKI,1,287,70	1	.290 kb at thermal	
			$^{240}_{94}$Pu σ_{nf}			
68	GEL	Migneco,et.al.	NP/A,112,603,68	3290	.200 keV to 7.988 keV	^{239}Pu σ_{nf}
67	ALD	White,et.al.	JNE,21,671,67	3	1.000 MeV to 14.1 MeV	^{235}U σ_{nf}
66	LAS	Byers,et.al.	66WASH,2,903,,66	2374	20.0 eV to .978 MeV	
65	ALD	Perkin,et.al.	JNE,19,423,65	1	.106 b at 24.0 keV	
64	ALD	Ruddick,et.al.	JNE,18,561,64	13	61.0 keV to .485 MeV	
60	FEI	Nesterov,et.al.	AE,9,(1),16,60	73	40.0 keV to 3.790 MeV	^{239}Pu σ_{nf}
60	CCP	Kazarinova+	AE,8,139,60	2	2.500 MeV to 14.6 MeV	
60	CCP	Nesterov,et.al.	AE,9,16,60	76	40.0 keV to 4.200 MeV	^{239}Pu
57	LAS	Henkel,et.al.	AECD-4256,57	21	.270 MeV to 8.120 MeV	^{235}U
57	CCP	Dorofeev,et.al.	AE,2,10,57	2	.900 MeV to 5.000 MeV	
56	HAN	Leonard Jr+	BAP,1,248(C13),56	67	.305 eV to 1.298 eV	
			$^{241}_{94}$Pu σ_{tot}			
74	MTR	Young	YOUNG,74	374	.0010 eV to 3.554 eV	^{239}Pu ν
71	GEL	Kolar,et.al.	71KNOX,2,823,71	6996	.679 eV to .735 keV	abs
64	CRC	Craig,et.al.	CJP,42,2384,64	4438	.0247 eV to 1.005 keV	abs
64	HAR	Pattenden	PATTENDEN,64	3637	2.342 eV to .848 keV	
61	MTR	Simpson,et.al.	NSE,11,111,61	1797	.0160 eV to 1.979 keV	
58	MTR	Simpson,et.al.	BAP,3,176(F2),58	1	1.410 kb at thermal	
58	MTR	Simpson,et.al.	BAP,3,176(F2),58	44	.0105 eV to .540 eV	abs
			$^{241}_{94}$Pu σ_{el}			
68	DAV	Sauter,et.al.	PR,174,1413,68	299	3.040 eV to 32.8 eV	
			$^{241}_{94}$Pu σ_{nf}			
73	SAC	Blons	NSE,51,130,73	10340	1.596 eV to 29.8 keV	^{10}B $\sigma_{n\alpha}$
70	GEL	Migneco,et.al.	70HELSINKI,1,437,70	10430	2.722 eV to 4.043 keV	^{241}Pu σ_{nf}
70	CAD	Szabo,et.al.	70ANL,257,70	15	35.0 keV to .970 MeV	^{241}Pu σ_{nf}
66	MTR	Watanabe	IN-1012,66	256	.0063 eV to .497 eV	^{241}Pu σ_{nf}
66	MTR	Simpson,et.al.	66WAH,2,910,,66	2554	20.0 eV to .978 MeV	
66	ALD	White,et.al.	66PARIS,2,29,,66	1	1.028 kb at thermal	^{235}U σ_{nf}
66	ALD	White,et.al.	66PARIS,2,29,,66	1	1.022 kb at thermal	^{235}U σ_{nf}
66	ALD	White,et.al.	66PARIS,2,29,,66	1	.994 kb at thermal	^{235}U σ_{nf}
65	ALD	Perkin,et.al.	JNE,19,423,65	1	2.830 b at 24.0 keV	^{235}U ν
65	HAR	James	NP,65,353,65	1638	.0084 eV to 2.452 keV	
65	ALD	White,et.al.	65SALZBURG,1,219,65	4	40.0 keV to .505 MeV	^{235}U
64	MTR	Watanabe,et.al.	IDO-16995,64	223	.0236 eV to 1.882 eV	^{239}Pu
64	MTR	Watanabe,et.al.	IDO-16995,64	593	.245 eV to 2.854 keV	^{241}Pu σ_{nf}
64	MTR	Watanabe,et.al.	IDO-16995,64	15	3.118 eV to 7.264 eV	^{241}Pu σ_{nf}
64	MTR	Watanabe,et.al.	IDO-16995,64	1	.962 kb at thermal	^{241}Pu σ_{nf}
64	MTR	Moore,et.al.	PR/B,135,945,64	1018	2.247 eV to 99.5 eV	
62	MTR	Watanabe,et.al.	BAP,7,303(K4),62	1	.943 kb at thermal	
62	LAS	Smith,et.al.	PR,125,1329,62	86	.120 MeV to 21.0 MeV	^{235}U σ_{nf}
61	ANL	Butler,et.al.	PR,124,1129,61	82	.101 MeV to 1.825 MeV	^{235}U
60	CCP	Kazarinova+	AE,8,139,60	2	2.500 MeV to 14.6 MeV	
59	HAN	Leonard Jr+	HW-62727,19,59	1	.935 kb at thermal	^{235}U σ_{nf}
59	HAR	Raffle	AERE-R-2998,59	30	.0062 eV to .0975 eV	^{239}Pu

Yr	Lab	Author	Reference	Points	Range	Standard
			cont			
58	HAN	Seppi	SEPPI,58	62	.0257 eV to .938 eV	
58	CRC	Bigham,et.al.	58GENEVA,16,125,58	2	therm I to thermal	^{239}Pu σ_{nf}
58	HAN	Seppi,et.al.	HW-55879,3,58	20	.0025 eV to .0047 eV	^{241}Pu σ_{nf}
57	HAN	Leonard Jr+	HW-48893,98,57	1	.541 kb at .100 eV	^{197}Au $\sigma_{n\gamma}$
57	HAN	Leonard Jr+	HW-48893,98,57	1	.905 kb at thermal	^{197}Au $\sigma_{n\gamma}$
56	HAR	Richmond,et.al.	JNE,2,177,56	77	.0062 eV to 7.510 eV	^{241}Pu σ_{nf}
55	HAR	Raffle,et.al.	55GENEVA,4,187,55	1	.987 kb at thermal	^{239}Pu σ_{nf}
55	HAR	Egelstaff,et.al.	NRDC-84,9,55	1	.971 kb at thermal	^{239}Pu σ_{nf}
55	CCP	Adamchuk,et.al.	55GENEVA,4,216,55	157	.0117 eV to .743 keV	^{241}Pu σ_{nf}
			$^{241}_{94}$Pu α			
66	HAR	Cabell	66PARIS,2,3,,66	1	.355 b at thermal	
			$^{241}_{94}$Pu η			
68	MTR	Smith,et.al.	68WASH,1,589,68	2	therm I to .0600 eV	
			$^{242}_{94}$Pu σ_{tot}			
71	MTR	Young,et.al.	NSE,43,341,71	79	.0013 eV to 2.006 eV	abs
70	MTR	Young,et.al.	NSE,40,389,70	1017	.0013 eV to 7.726 keV	
68	MTR	Young,et.al.	IN-1132,68	1	39.0 b at thermal	
66	LRL	Auchampaugh+	PR,146,840,66	182	2.550 eV to .388 keV	abs
66	MTR	Young,et.al.	BAP,11,335(DB5),66	1	39.8 b at thermal	
59	ANL	Cote,et.al.	PR,114,505,59	50	2.336 eV to 54.7 eV	abs
			$^{242}_{94}$Pu $\sigma_{n\gamma}$			
57	CRC	Butler,et.al.	CJP,35,147,57	1	19.8 b at thermal	^{59}Co $\sigma_{n\gamma}$
56	ANL	Fields,et.al.	NSE,1,62,56	1	30.0 b at thermal	
			$^{242}_{94}$Pu σ_{nf}			
71	LAS	Auchampaugh+	NP/A,171,31,71	6601	.200 keV to 9.573 MeV	^{6}Li σ_{nt}
70	LAS	Bergen,et.al.	LA-4420,123,70	1647	51.2 eV to 2.963 MeV	^{235}U σ_{nf}
69	KUR	Fomushkin,et.al.	YF,10,(5),917,69	14	.440 MeV to 3.620 MeV	^{235}U σ_{nf}
69	HAR	James	NP/A,123,24,69	24	27.3 eV to .815 keV	
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	2.060 b at 14.5 MeV	^{238}U
60	ANL	Butler	PR,117,1305,60	65	.141 MeV to 1.663 MeV	^{235}U σ_{nf}

$^{241}_{95}Am$

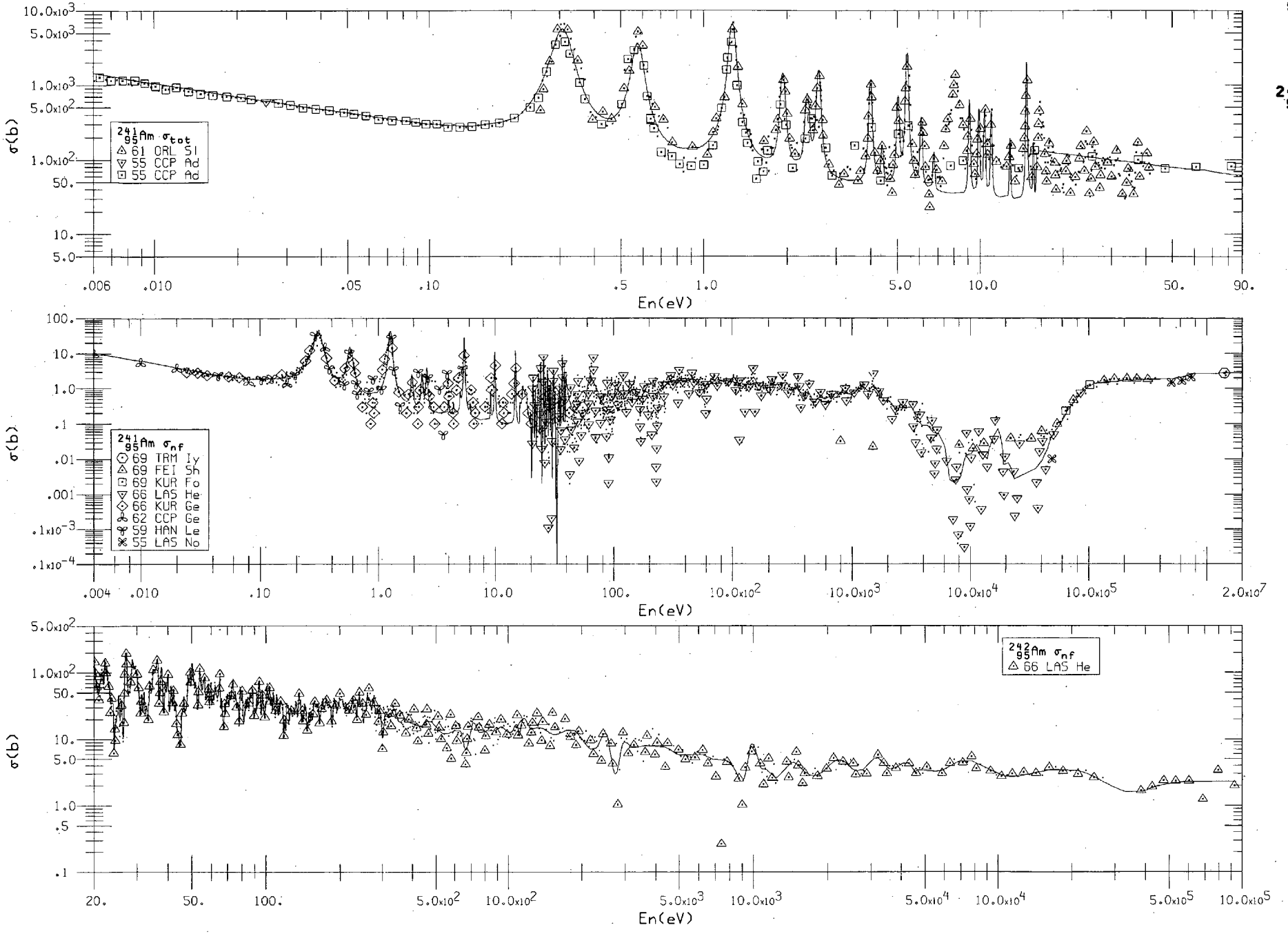
σ_{tot}

σ_{nf}

[1056]

$^{242}_{95}Am$

σ_{nf}

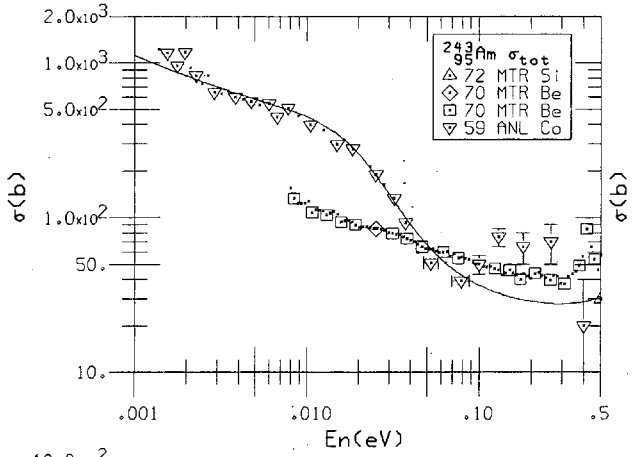


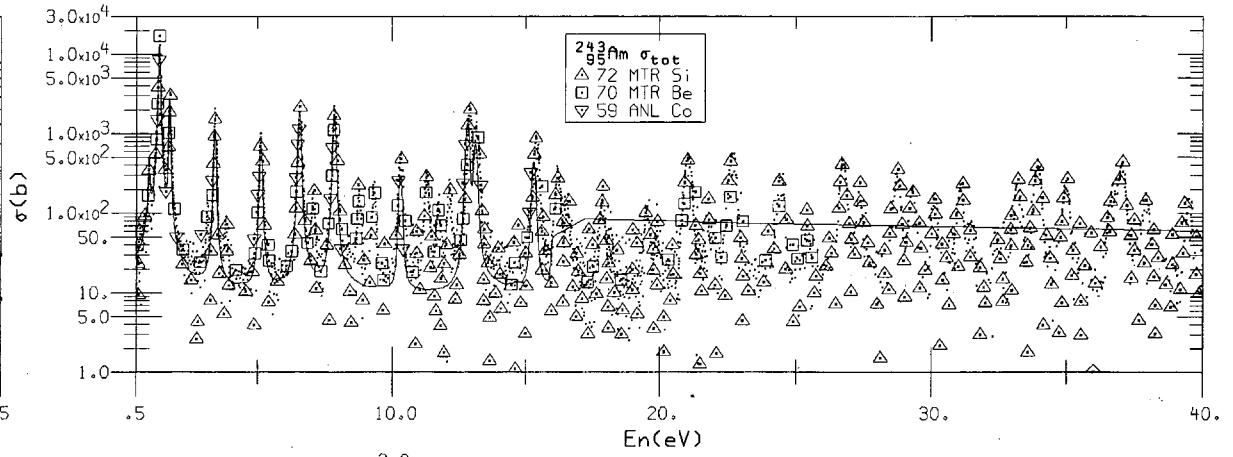
$^{243}_{95}Am$

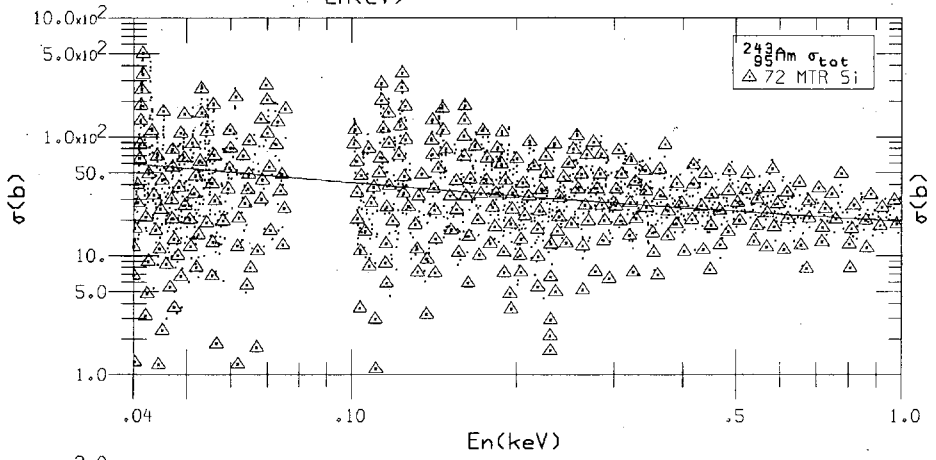
σ_{tot}

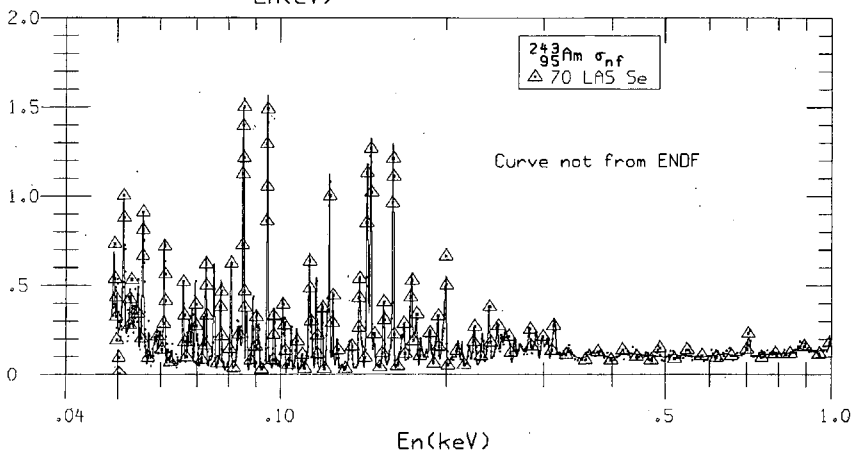
σ_{nf}

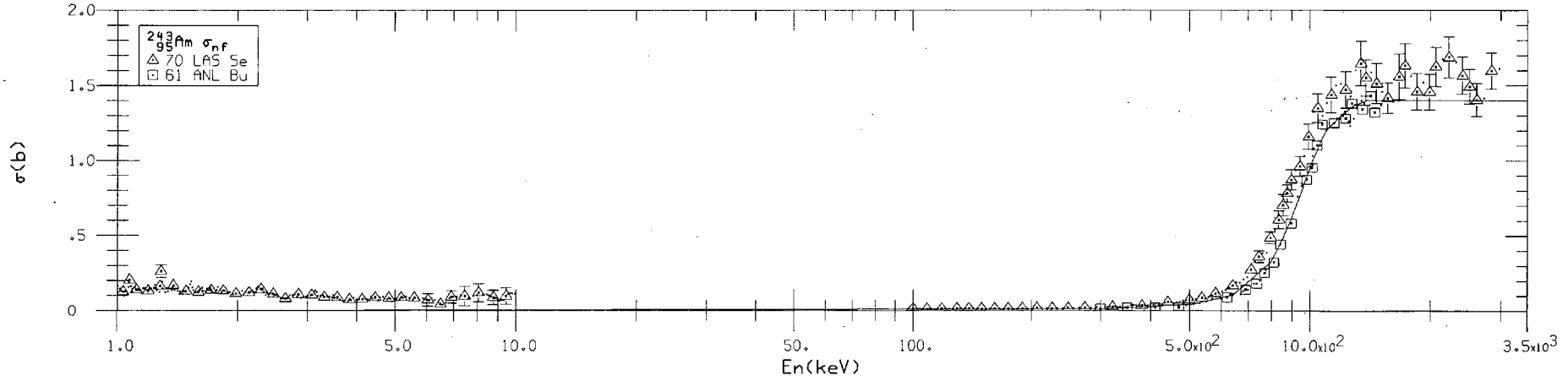
[1057]





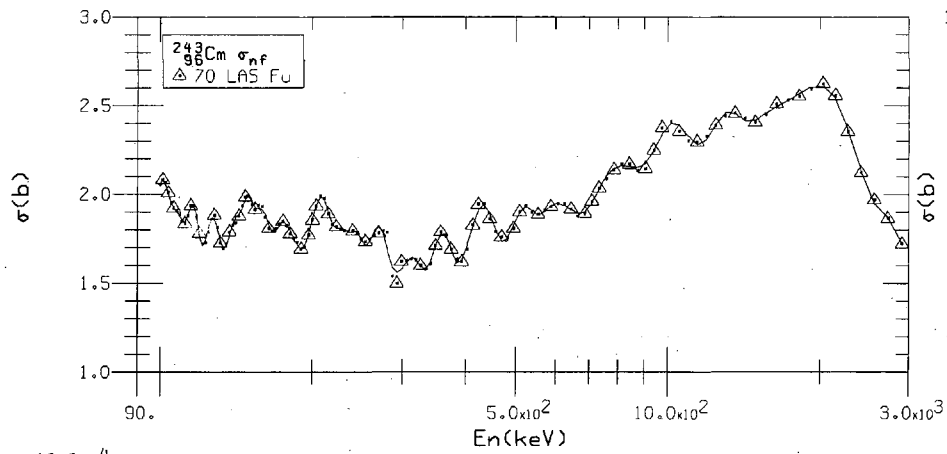


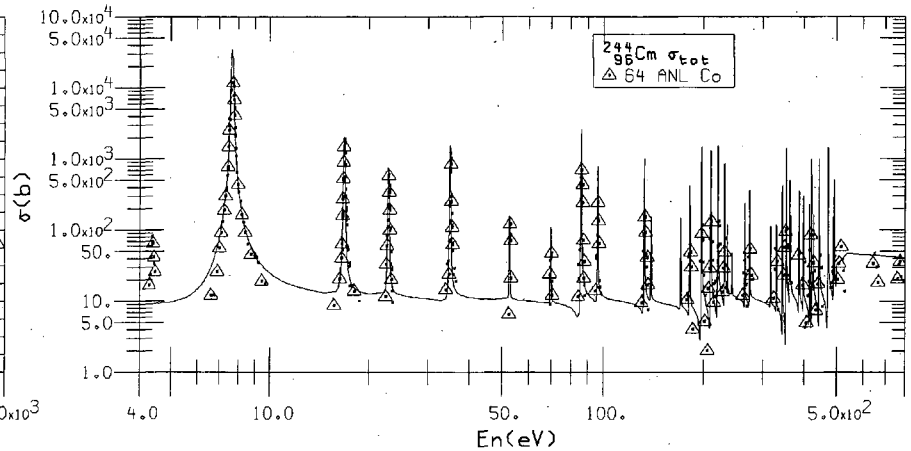


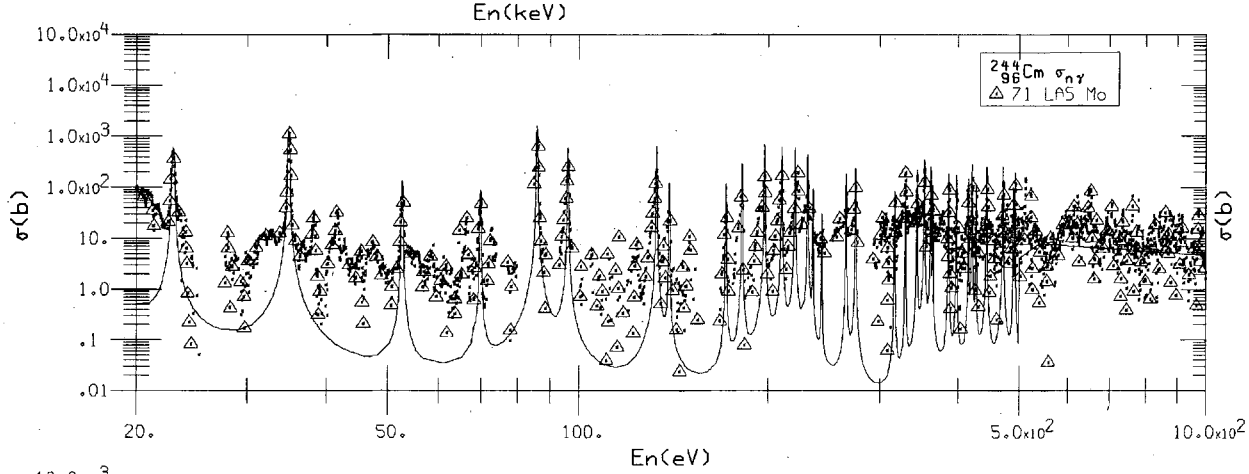


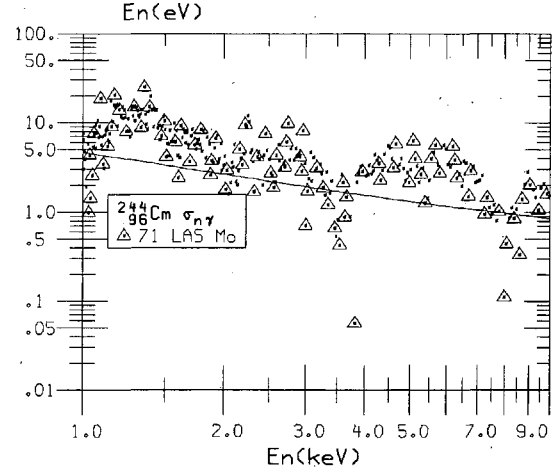
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{241}_{95}$Am σ_{tot}			
61	ORL	Slaughter,et.al.	BAP,6,70(X8),61	454	.255 eV to 41.7 eV	abs
55	CCP	Adamchuk,et.al.	55GENEVA,4,216,55	1	.600 kb at thermal	
55	CCP	Adamchuk,et.al.	55GENEVA,4,216,55	199	.0061 eV to 82.1 eV	abs
			$^{241}_{95}$Am σ_{nf}			
69	TRM	Iyer,et.al.	69ROORKEE,2,289,69	1	2.700 b at 14.1 MeV	
69	FEI	Shpak,et.al.	YFI-8,4,69	43	8.000 keV to 3.300 MeV	^{239}Pu σ_{nf}
69	KUR	Fomushkin,et.al.	YF,10(5),917,69	14	.440 MeV to 3.620 MeV	^{235}U σ_{nf}
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	2.300 b at 14.5 MeV	^{238}U
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	2.530 b at 14.5 MeV	^{238}U
66	KYU	Hyakutake	HYAKUTAKE,66	1	3.800 b at .0250 eV	^{235}U σ_{nf}
66	LAS	Hemmendinger	HEMMINDINGER,66	2463	20.0 eV to .978 MeV	
66	KUR	Gerasimov	66PARIS,2,129,66	588	.0231 eV to 50.3 eV	^{241}Am σ_{nf}
65	LRL	Bowman,et.al.	PR/B,137,326,65	483	.0321 eV to 5.226 keV	^{241}Am σ_{nf}
62	CCP	Gerasimov	IFG,8,75,62	15	.0040 eV to .420 eV	abs
60	CCP	Kazarinova+	AE,8,139,60	2	2.500 MeV to 14.6 MeV	
59	HAN	Leonard Jr+	BAP,4,31(K1),59	110	.0309 eV to 5.250 eV	
59	CCP	Protopopov+	AE,6,67,59	1	2.350 b at 14.6 MeV	
55	LAS	Nobles,et.al.	PR,99,616(CA2),55	13	.490 MeV to 7.340 MeV	^{235}U
			$^{242}_{95}$Am σ_{nf}			
66	LAS	Hemmendinger	HEMMINDINGER,66	1860	20.0 eV to .929 MeV	
			$^{243}_{95}$Am σ_{tot}			
72	MTR	Simpson,et.al.	ANCR-1060,72	6633	.500 eV to 1.003 keV	abs
70	MTR	Berreth,et.al.	IN-1407,66,70	923	.0080 eV to 25.6 eV	
59	ANL	Cote,et.al.	PR,114,505,59	194	.0014 eV to 15.4 eV	abs
59	ANL	Cote,et.al.	PR,114,505,59	1	.190 kb at thermal	
59	ANL	Cote,et.al.	PR,114,505,59	6	.100 eV to .630 eV	abs
			$^{243}_{95}$Am $\sigma_{n\gamma}$			
57	CRC	Butler,et.al.	CJP,35,147,57	1	68.5 b at thermal	^{59}Co $\sigma_{n\gamma}$
			$^{243}_{95}$Am σ_{nf}			
70	LAS	Seeger	LA-4420,138,70	2199	48.9 eV to 2.973 MeV	^{235}U σ_{nf}
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	2.290 b at 14.5 MeV	^{238}U
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	2.150 b at 14.5 MeV	^{238}U
61	ANL	Butler,et.al.	PR,124,1129,61	65	.300 MeV to 1.670 MeV	^{235}U

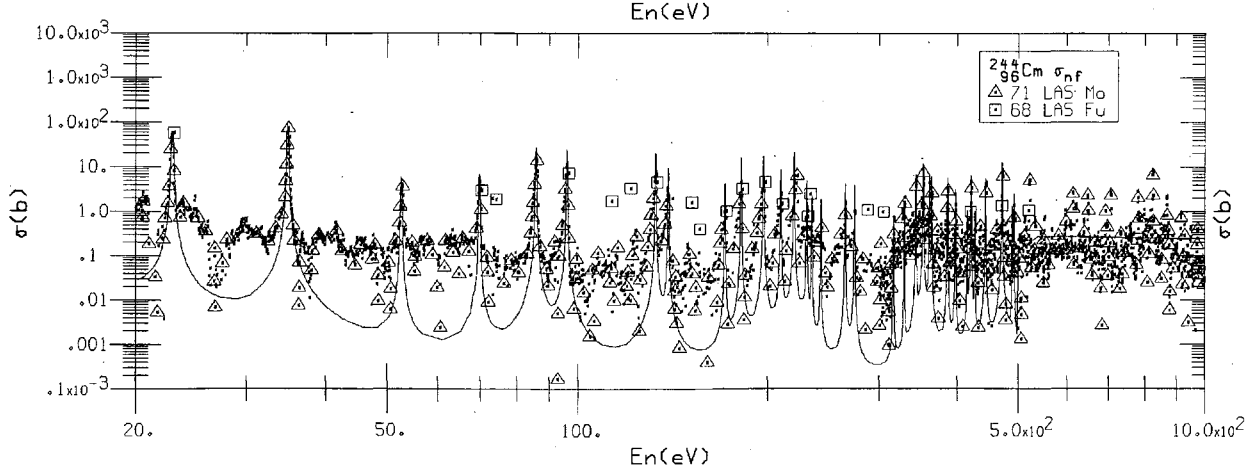
$^{243}_{96}$Cm
σ_{nf}
$^{244}_{96}$Cm
σ_{tot}
$\sigma_{n\gamma}$
σ_{nf}
[1162]

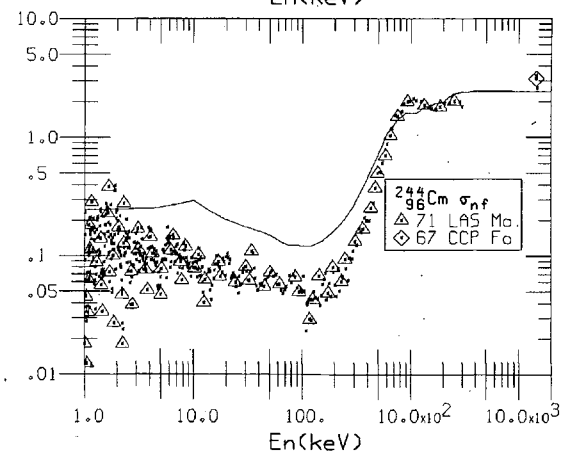




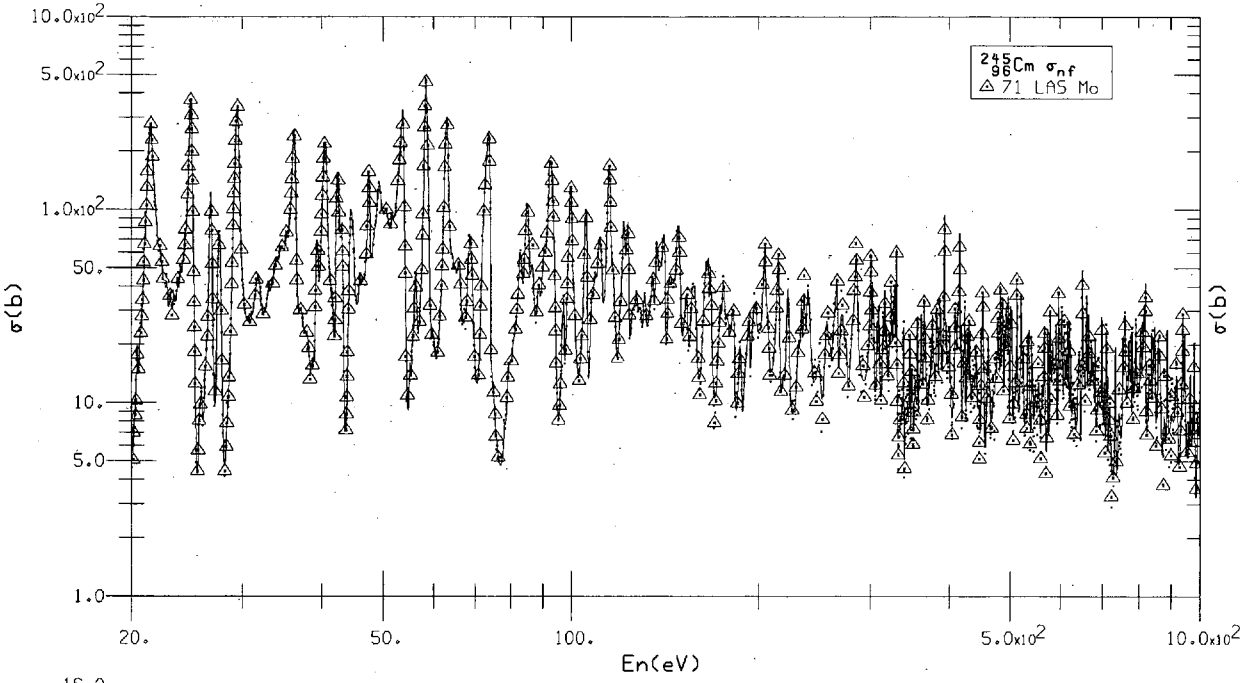


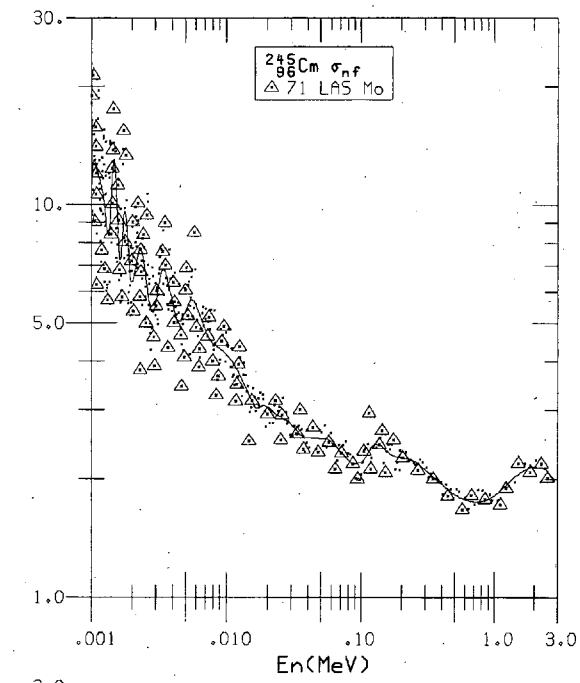


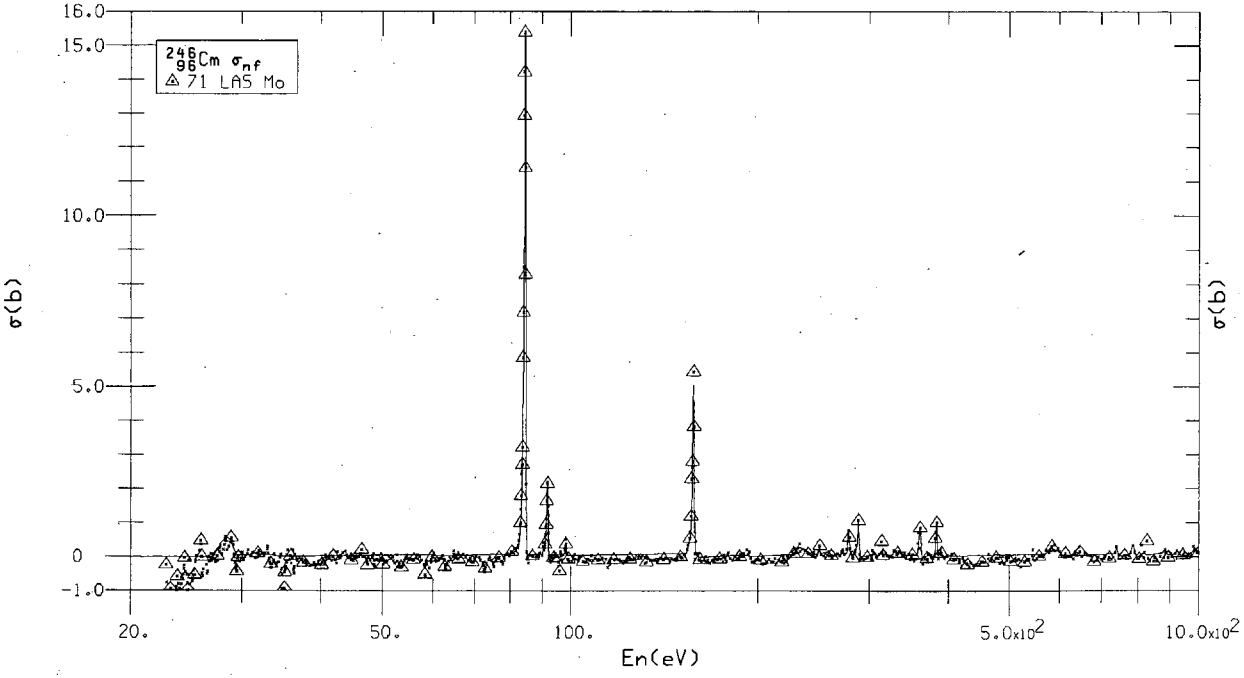


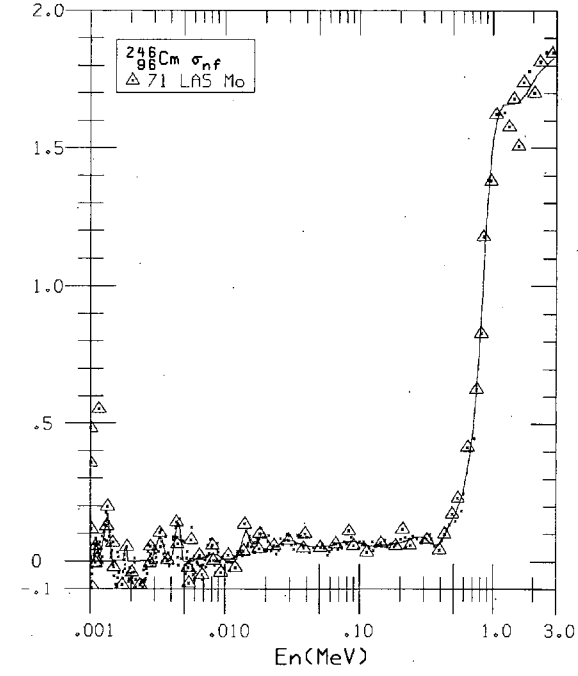


$^{245}_{96}Cm$ σ_{nf}
$^{246}_{96}Cm$ σ_{nf}



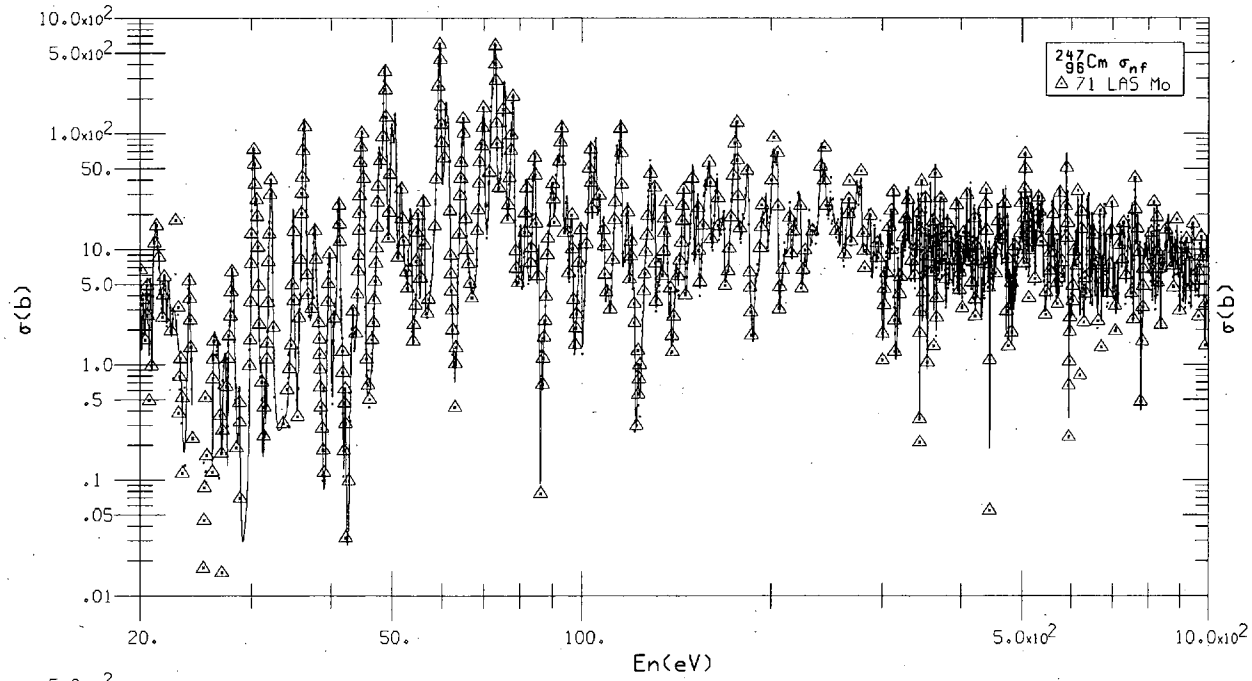


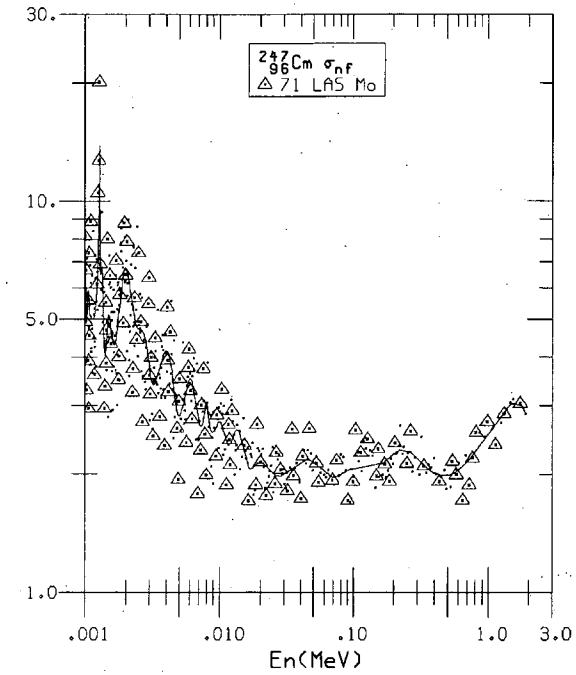


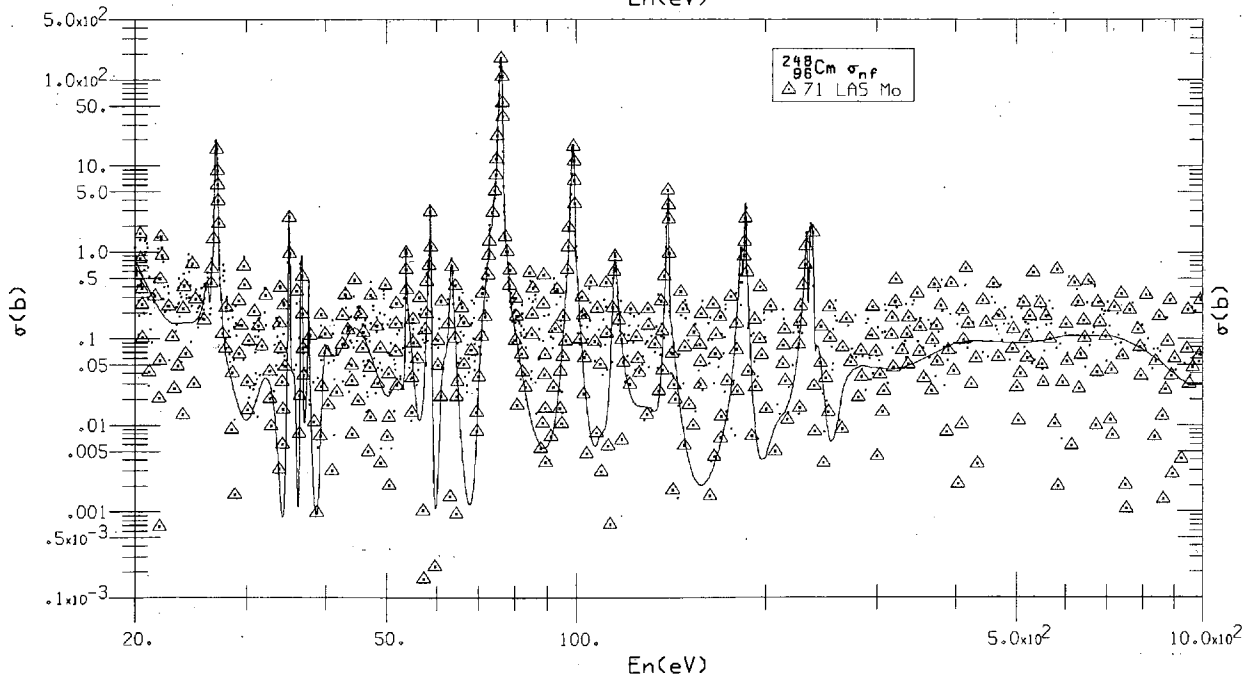


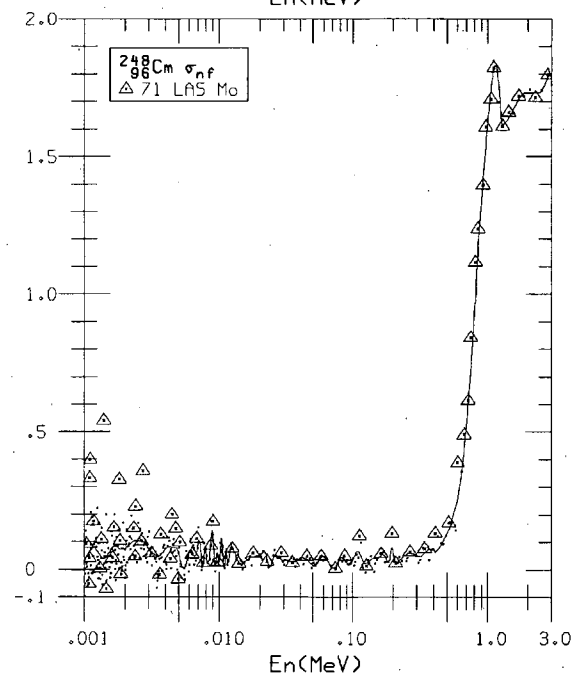
$^{247}_{96}Cm$ σ_{nf}

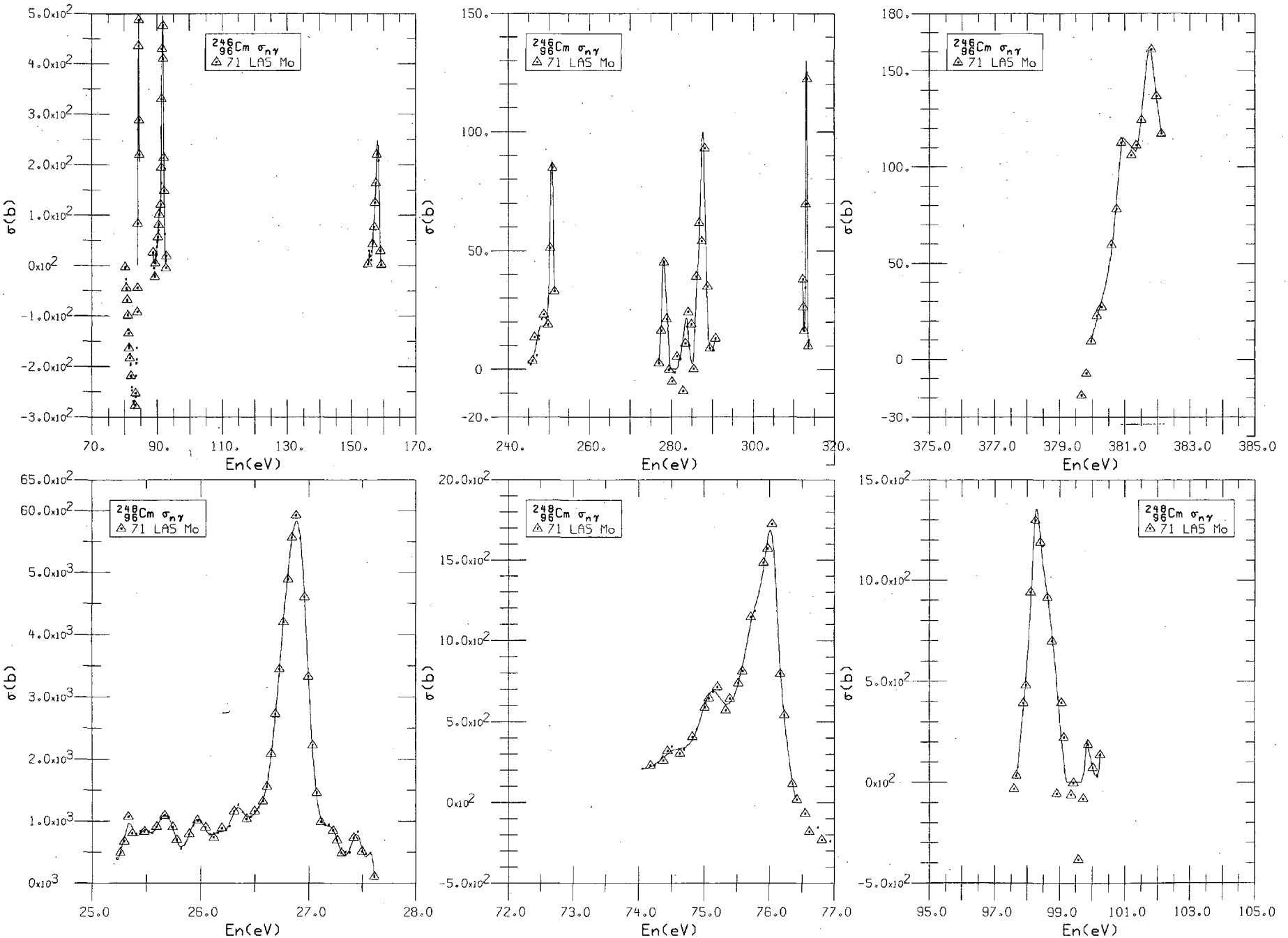
$^{248}_{96}Cm$ σ_{nf}





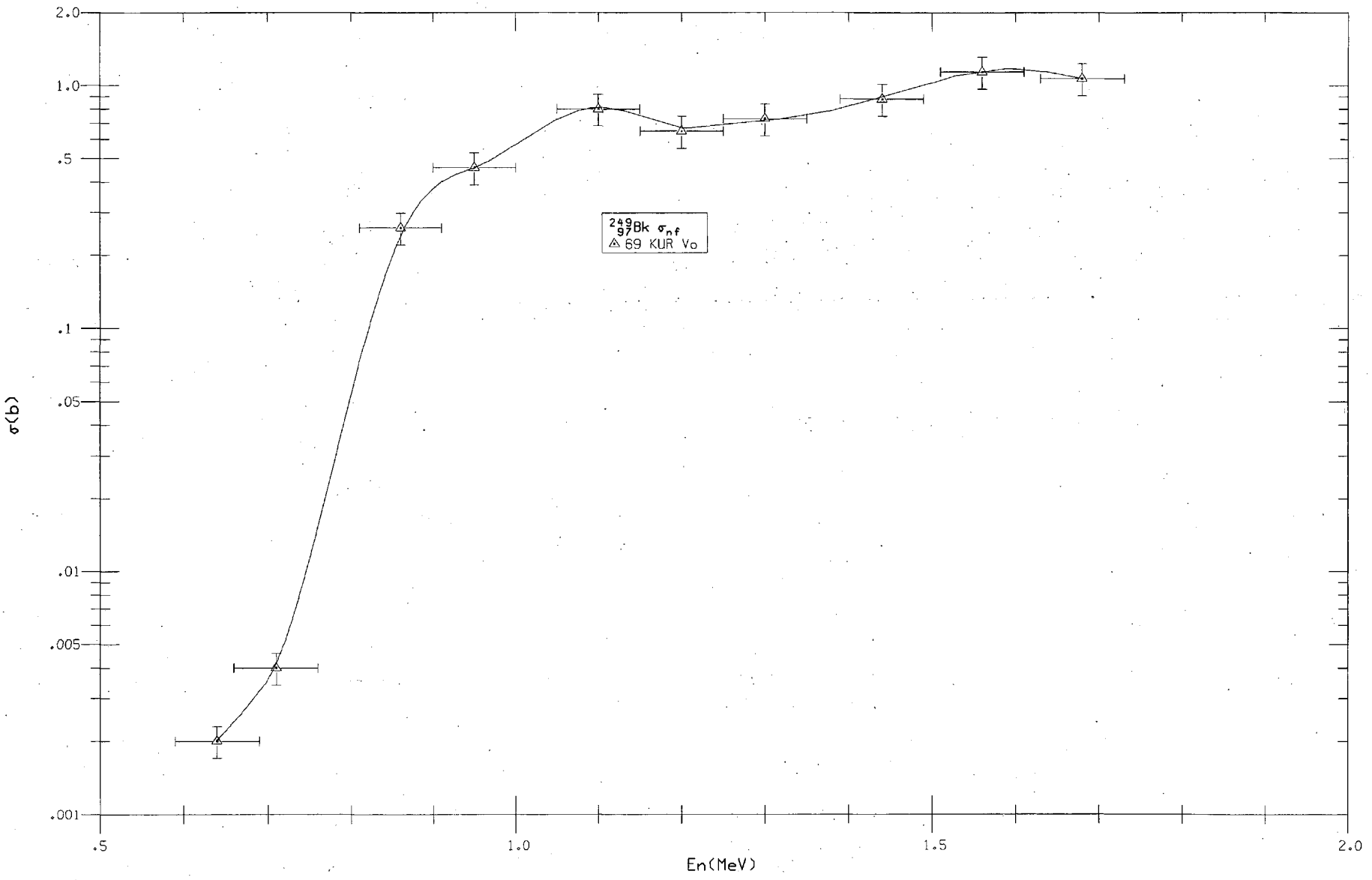





246 96 Cm σnγ
71 LAS Mo
248 96 Cm σnγ
71 LAS Mo
σ(b)
En(eV)

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{242}_{96}$Cm σ_{nf}			
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	3.030 b at 14.5 MeV	
			$^{243}_{96}$Cm σ_{nf}			
70	LAS	Fullwood,et.al.	LA-4420.157,70	134	99.7 keV to 2.910 MeV	^{235}U σ_{nf}
			$^{244}_{96}$Cm σ_{tot}			
72	MTR	Berreth,et.al.	NSE,49,145,72	1	23.0 b at thermal	
64	ANL	Cote,et.al.	PR/B,134,1047,64	328	4.273 eV to .780 keV	abs
			$^{244}_{96}$Cm $\sigma_{n\gamma}$			
71	LAS	Moore,et.al.	PR/C,3,1656,71	3791	20.0 eV to 9.951 keV	^{6}Li σ_{nt}
			$^{244}_{96}$Cm σ_{nf}			
72	SRL	Benjamin,et.al.	NSE,47,203,72	1	1.100 b at .0250 eV	
71	LAS	Moore,et.al.	PR/C,3,1656,71	4311	20.0 eV to 2.830 MeV	^{6}Li σ_{nt}
68	LAS	Fullwood,et.al.	68WASH,1,567,,68	43	23.0 eV to 1.409 keV	^{6}Li $\sigma_{n\alpha}$
68	LAS	Koontz,et.al.	68WASH,1,597,,68	4	1.000 MeV to 14.9 MeV	^{235}U
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	3.280 b at 14.5 MeV	
67	CCP	Fomushkin,et.al.	YF,5,966,67	1	3.100 b at 14.5 MeV	
			$^{245}_{96}$Cm σ_{tot}			
72	MTR	Berreth,et.al.	NSE,49,145,72	1	2.900 kb at thermal	
			$^{245}_{96}$Cm $\sigma_{n\gamma}$			
69	ORL	Halperin,et.al.	ORNL-4437,69	1	.340 kb at .0250 eV	
			$^{245}_{96}$Cm σ_{nf}			
72	SRL	Benjamin,et.al.	NSE,47,203,72	1	2.018 kb at .0250 eV	
71	LAS	Moore,et.al.	PR/C,3,1656,71	4301	20.0 eV to 2.831 MeV	^{6}Li σ_{nt}
70	ORL	Halperin,et.al.	ORNL-4581,37,70	1	1.920 kb at .0250 eV	^{197}Au $\sigma_{n\gamma}$
			$^{246}_{96}$Cm $\sigma_{n\gamma}$			
71	LAS	Moore,et.al.	PR/C,3,1656,71	157	80.1 eV to .382 keV	^{6}Li σ_{nt}
69	ORL	Halperin,et.al.	ORNL-4437,69	1	1.200 b at .0250 eV	
			$^{246}_{96}$Cm σ_{nf}			
72	SRL	Benjamin,et.al.	NSE,47,203,72	1	.170 b at .0250 eV	
71	LAS	Moore,et.al.	PR/C,3,1656,71	2797	20.0 eV to 2.830 MeV	^{6}Li σ_{nt}

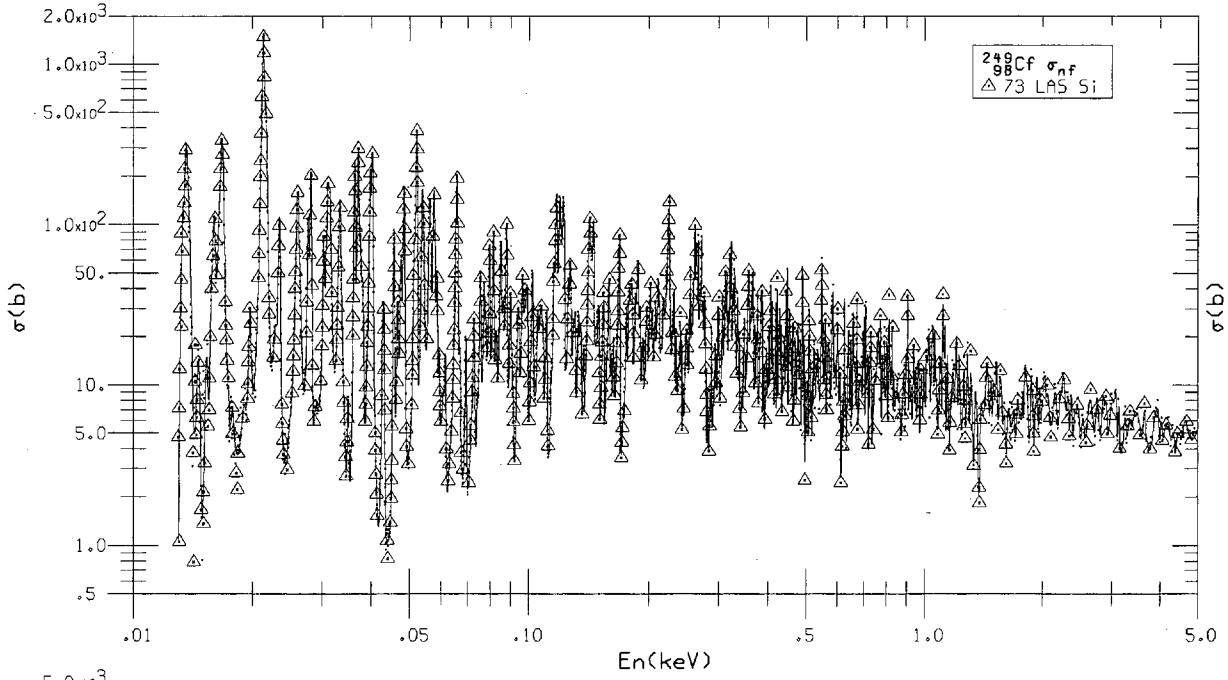
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{247}_{96}$Cm σ_{nf}			
72	SRL	Benjamin,et.al.	NSE,47,203,72	1	82.0 b at .0250 eV	
71	LAS	Moore,et.al.	PR/C,3,1656,71	4296	20.0 eV to 1.908 MeV	^{6}Li σ_{nt}
70	ORL	Halperin,et.al.	ORNL-4581,37,70	1	.120 kb at .0250 eV	^{197}Au $\sigma_{n\gamma}$
			$^{248}_{96}$Cm $\sigma_{n\gamma}$			
71	LAS	Moore,et.al.	PR/C,3,1656,71	119	25.2 eV to .100 keV	^{6}Li σ_{nt}
			$^{248}_{96}$Cm σ_{nf}			
72	SRL	Benjamin,et.al.	NSE,47,203,72	1	.340 b at .0250 eV	
71	LAS	Moore,et.al.	PR/C,3,1656,71	2795	20.0 eV to 2.831 MeV	^{6}Li σ_{nt}

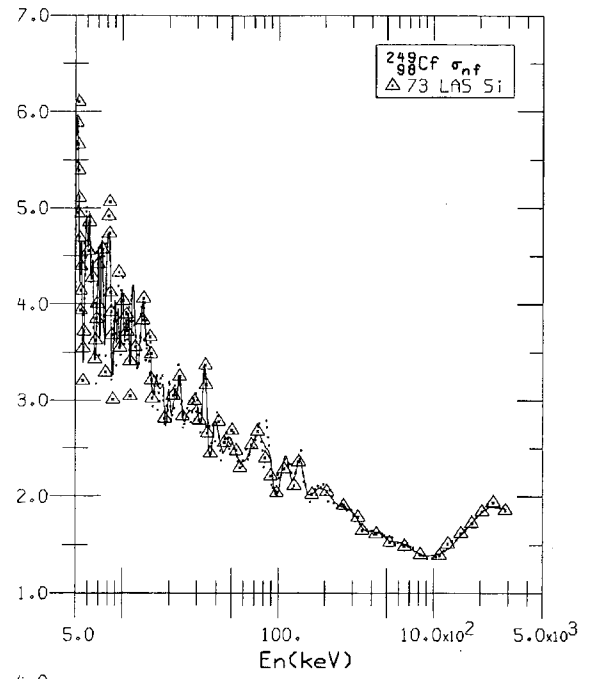


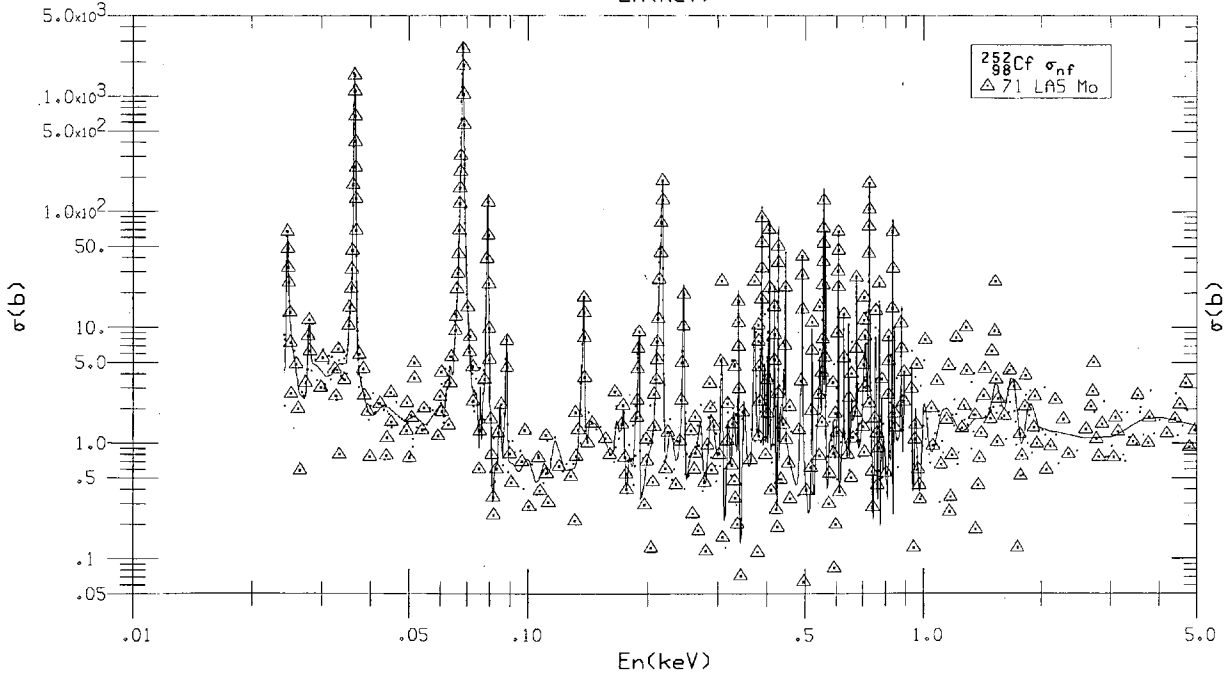
Yr	Lab	Author	Reference	Points	Range	Standard
			$^{249}_{97}Bk$ σ_{nf}			
69	KUR	Vorotnikov+	YF,10,726,69	11	.640 MeV to 5.000 MeV	

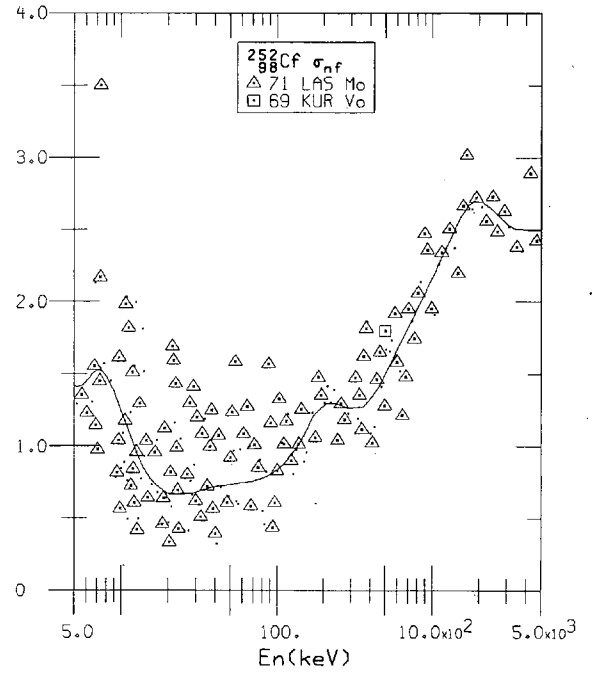
$^{249}_{98}Cf$ σ_{nf}

$^{252}_{98}Cf$ σ_{nf}









Yr	Lab	Author	Reference	Points	Range	Standard
			$^{249}_{98}$Cf $\sigma_{n\gamma}$			
71	ORL	Halperin,et.al.	ORNL-4706,47,71	1	.478 kb at .0250 eV	
			$^{249}_{98}$Cf σ_{nf}			
73	LAS	Silbert,et.al.	NSE,51,376,73	5170	13.0 eV to 2.897 MeV	
72	SRL	Benjamin,et.al.	NSE,47,203,72	1	1.660 kb at .0250 eV	
70	ORL	Halperin,et.al.	ORNL-4581,37,70	1	1.690 kb at .0250 eV	
			$^{250}_{98}$Cf $\sigma_{n\gamma}$			
71	ORL	Halperin,et.al.	ORNL-4706,47,71	1	2.030 kb at .0250 eV	
			$^{251}_{98}$Cf $\sigma_{n\gamma}$			
71	ORL	Halperin,et.al.	ORNL-4706,47,71	1	2.850 kb at .0250 eV	
			$^{252}_{98}$Cf $\sigma_{n\gamma}$			
69	ORL	Halperin,et.al.	NSE 37,228,69	1	20.4 b at .0250 eV	
			$^{252}_{98}$Cf σ_{nf}			
71	ORL	Halperin,et.al.	ORNL-4706,71	1	32.0 b at .0250 eV	
71	LAS	Moore,et.al.	PR/C,4,273,71	1396	24.0 eV to 4.681 MeV	^{6}Li σ_{nt}
69	KUR	Vorotnikov+	YF,10,726,69	1	1.800 b at .500 MeV	

Laboratory Mnemonics

Code	Laboratory	Country
ABD	US Army Aberdeen Res. and Devel. Center, Aberdeen, Md.	USA
AE	AB Atomenergi, Studsvik and Stockholm	Sweden
ALD	AWRE, Aldermaston, England	UK
AML	Univ. of Melbourne, Melbourne	Australia
AMS	Univ. of Amsterdam, Amsterdam	Netherlands
ANC	Aerojet Nuclear Corp., Idaho Falls, Idaho	USA
	Until 1971 Idaho Nuclear Corp.	
ANL	Argonne National Lab., Argonne, Illinois	USA
ARK	Univ. of Arkansas, Fayetteville, Ark.	USA
ATH	NRC Democritus, Athens	Greece
AUA	AAEC Res. Establishment, Lucas Heights, NSW	Australia
AUB	Auburn Univ., Auburn, Alabama	USA
AUS	Austria	Austria
AUW	Andrah Univ., Nuclear Res. Lab., Waltair	India
BAR	Bartol Research Foundation, Swarthmore, Pa.	USA
BAS	Basel Univ., Basel	Switzerland
BEH	Humboldt Univ. Berlin and Daw Zeuthen	Germany, D.R.
BET	Westinghouse, Bettis Atomic Power Lab., Pittsburgh, Pa.	USA
BIA	Univ. of Aston, Birmingham, England	UK
BIR	Univ. of Birmingham, Birmingham, England	UK
BKB	Inst. Boris Kidrich, Vinca	Yugoslavia
BLN	Brooklyn College of the City Univ. of N.Y., Brooklyn, N.Y.	USA
BNL	Brookhaven National Lab., Upton, N.Y.	USA
BNW	Battelle Northwest Lab., Richland, Wash.	USA
BOL	C.N.E.N., Bologna	Italy
BOR	Bordeaux Univ., Bordeaux	France
BOS	Bose Institute, Calcutta	India
BRC	CEN, Bruyere le Chate	France
BRK	Univ. of Calif., Lawrence Berkeley Lab., Berkeley, Calif.	USA
	Until 1971 Lawrence Radiation Lab., Berkeley	
BRN	Brown Univ., Providence, R.I.	USA
BUC	Inst. for Atomic Physics, Bucharest	Rumania
CAB	Univ. San Carlos y Centro Atomico, Bariloche	Argentina
CAD	Cadarache, Bouches-du-Rhone, St. Paul-les-Durance	France
CAI	A.E.E., Cairo	UAR
CAN	Canada	Canada
CAR	Carnegie Inst. of Tech., Pittsburgh, Pa.	USA
CAT	Univ. of Catania, Catania	Italy
CAV	Cavendish Lab., Cambridge, England	UK
CBR	Australian National Univ., Canberra	Australia
CCP	Union of Sov. Social. Republics	USSR
CEC	Comision de Energia Nuclear, Santiago	Chile
CHF	Republic of China	Taiwan
CIS	Centre Inform. Studi Esp., Milan	Italy
CLA	Univ. of California, Los Angeles, Calif.	USA
CNA	Cekmece Nuclear Res. Center, Istanbul	Turkey
CNE	Comision Nacional de Energia Atomica, Buenos Aires	Argentina
COL	Columbia Univ., New York, N.Y.	USA
COR	Cornell Univ., Ithaca, N.Y.	USA
CRC	A.E.C.L., Chalk River, Ontario	Canada
CSE	Case Western Reserve Univ., Cleveland, Ohio	USA
DAC	Dacca Univ., Dacca	Bangladesh
DAV	Univ. of California, Davis, Calif.	USA
DEB	Atommag Kutato Intezet (Inst. of Nuclear Res. of the Hung.	
	Academy of Science), Debrecen	Hungary
DKE	Duke Univ., Durham, N. Carolina	USA
DUB	Joint Inst. for Nuclear Res., Dubna	USSR
DUR	Univ. of Durham, Durham, England	UK
EDG	Univ. of Edinburgh, Edinburgh, Scotland	UK
ETH	Eidgenossische Technische Hochschule, Zurich	Switzerland
FAR	CEA Fontenay-aux-Roses, Seine	France
FEI	Fiziko-Energeticheskij Inst., Obninsk	USSR
FIR	Univ. of Florence, Florence	Italy
FLA	Univ. of Florida, Gainesville, Fla.	USA
FOA	Research Inst. for National Defence, Stockholm	Sweden
FR	France	France
FRK	J.W. Goethe Univ., Frankfurt	Germany, F.R.
	Including Inst. fuer Kernphysik, Univ. Frankfurt	
FTI	Fiziko-Tekhnicheskij Inst. Ioffe, Leningrad	USSR
GA	Gulf Energy and Environmental Systems, San Diego, Calif.	USA
GDT	General Dynamics, Fort Worth, Texas	USA
GEF	General Electric, Space Science Lab., Valley Forge, Pa.	USA
GEL	B.C.M.N. Geel CEC	Belgium
	(Commission of European Communities, Bureau Central des	
	Mesures Nucleaires, Geel, Belgium)	
GEO	Univ. of Georgia, Athens, Georgia	USA
GHT	Univ. of Ghent, Ghent	Belgium
GIT	Georgia Inst. of Tech., Atlanta, Ga.	USA
GLS	Univ. of Glasgow, Glasgow, Scotland	UK
GRC	Greece	Greece
GRN	Groningen	Netherlands
GRT	Gulf Radiation Technology, San Diego, Calif.	USA
HAM	Hamburg Univ., Hamburg	Germany, F.R.
HAN	Hanford Atomic Products, Richland, Wash.	USA
HAR	AERE, Harwell, Berkshire, England	UK
HLT	Helsinki Tech. Univ., Otaniemi	Finland
HRV	Harvard Univ., Cambridge, Mass.	USA
IBJ	Inst. Badan Jadr (Inst. Nuclear Res.), Swierk and Warszawa	Poland
ICP	Inst. of Chemical Phys., Moscow	USSR
IEA	Inst. de Energia Atomica, Sao Paulo	Brazil
IFU	Inst. Fiziki A.N. Ukrainskoi SSR, Kiev	USSR
IIT	Illinois Inst. of Tech., Chicago, Ill.	USA
IRK	Inst. fuer Radiumforshung und Kernphysik, Vienna	Austria
ISL	Israel	Israel
ISP	Euratom, Ispra	Italy
ISS	Inst. of Solid State Physics, Univ. of Tokyo, Tokyo	Japan

Laboratory Mnemonics

Code	Laboratory	Country
IST	Imperial College of Sci. and Tech., London	UK
ISU	Idaho State Univ., Pocatello, Idaho	USA
ITE	Inst. Teoreticheskoi i Experimentalnoi Fiziki, Moscow	USSR
JAE	JAERI, Jap. Atomic Energy Research Inst., Tokai	Japan
JAP	Japan	Japan
JEL	Electric Power Dev. Corp., AED, Tokyo	Japan
JHU	Johns Hopkins Univ., Baltimore, Maryland	USA
JNE	Junta Energia Nuclear, Madrid	Spain
JUL	Kernforschungsanlage Juelich	Germany, F.R.
KAP	Knolls Atomic Power Lab., N.Y.	USA
KAZ	Inst. Jadernoi Fiziki, Alma-Ata, Kazakhstan	USSR
KEN	Univ. of Kent, Canterbury	UK
KFI	Kozponti Fisikai Kutato Intezet (Central Res. Inst. for Phys., Hung. Acad. of Sci.), Budapest	Hungary
KFK	Kernforschungszentrum, Karlsruhe	Germany, F.R.
KIL	Univ. of Kiel, Kiel	Germany, F.R.
KJL	Inst. for Atomenergi, Kjeller	Norway
KLN	Univ. of Cologne, Cologne	Germany, F.R.
KON	Konan Univ., Kobe	Japan
KOS	Kossuth Univ. Debrecen Kiserleti Fisikai Intezet (Inst. for Experimental Physics, Kossuth Univ., Debrecen)	Hungary
KTO	Kyoto Univ., Kyoto	Japan
KTY	Univ. of Kentucky, Lexington, Ky.	USA
KUR	I.V. Kurchatova Atomic Energy Inst., Moscow	USSR
KYU	Kyushu Univ., Dept. of Nuclear Eng., Fukuoka	Japan
LAH	Atomic Energy Centre, Lahore	Pakistan
LAS	Los Alamos Scientific Lab., Los Alamos, New Mexico	USA
LAU	Univ. of Lausanne, Lausanne	Switzerland
LEB	Fizikii Inst. Lebedev, Moscow	USSR
LIM	C.E.N., Limeil	France
LLL	Univ. of Calif., Lawrence Livermore Lab., Livermore, Calif.	USA
LMS	Lockheed Missiles and Space Div., Palo Alto, Calif.	USA
LND	Lund Univ. and Tech. Univ., Lund	Sweden
LOK	Lockheed Aircraft Corp., Sunnyvale, Calif.	USA
LOU	Univ. of Lodz, Lodz	Poland
LRC	NASA-Lewis Research Center, Cleveland, Ohio	USA
LRL	Univ. of Calif., Lawrence Livermore Lab., Livermore, Calf. Until 1971 Lawrence Radiation Lab., Livermore, Calif.	USA
LVN	Univ. of Louvain, Louvain	Belgium
LYO	Univ. of Lyon, Villeurbanne, Rhone	France
MHG	Univ. of Michigan, Ann Arbor, Mich.	USA
MIL	Univ. of Milan, Milan	Italy
MIN	Univ. of Minnesota, Minneapolis, Minn.	USA
MIT	Massachusetts Inst. of Tech., Cambridge, Mass.	USA
MNA	Univ. of Manitoba, Cyclotron Lab., Winnipeg, Manitoba	Canada
MNZ	Univ. of Mainz, Mainz	Germany, F.R.
MOL	C.E.N., Mol	Belgium
MRY	Maryland Univ., College Park, Md.	USA

Code	Laboratory	Country
MTR	Idaho Nuclear Corp., Idaho Falls Changed To Aerojet Nuclear Corp. in 1971.	USA
MUA	Aligarh Muslim Univ., Aligarh	India
MUN	Technische Univ., Muenchen	Germany, F.R.
NAP	Univ. of Naples, Naples	Italy
NAS	NASA, Washington, D.C.	USA
NBS	National Bureau of Standards, Washington, D.C.	USA
NDL	US Army Nuclear Defence Lab., Edgewood Arsenal, Maryland	USA
NEU	Univ. of Neuchatel, Neuchatel	Switzerland
NJS	Inst. Jozef Stefan, Ljubljana	Yugoslavia
NOT	Univ. of Notre Dame, South Bend, Indiana	USA
NPL	National Physics Lab., Teddington, England	UK
NRD	US Naval Radiol. Defense Lab., San Francisco, Calif.	USA
NRL	US Naval Res. Lab., Washington, D.C.	USA
NTU	National Taiwan Univ., Taipei	Taiwan
NWU	Northwestern Univ., Evanston, Ill.	USA
NZW	Univ. of Wellington, Nuclear Science Inst., Wellington	New Zealand
OAU	Oak Ridge Associated Univ., Oak Ridge, Tenn.	USA
OBN	Fiziko-Energeticheskij Inst., Obninsk	USSR
OHO	Ohio Univ., Athens, Ohio	USA
ORL	Oak Ridge National Lab., Oak Ridge, Tenn.	USA
OSL	Univ. of Oslo, Oslo	Norway
OTC	National Research Council, Ottawa, Ontario	Canada
OTU	Univ. of Ottawa, Ottawa, Ontario	Canada
OXF	Univ. of Oxford, Oxford, England	UK
PAD	Univ. of Padua, Padua, and Lab. National Legnaro	Italy
PAK	Pakistan	Pakistan
PAR	Univ. of Paris, (including Orsay), Paris	France
PEL	Atomic Energy Board, Pelindaba, Pretoria	South Africa
PEN	Univ. of Pennsylvania, Philadelphia, Pa.	USA
PPO	Phillips Petroleum Co., Bartletsville, Okla.	USA
PTN	Princeton Univ., Princeton, N.J.	USA
RAM	Dacca, Atomic Energy Centre, Ramna	Bangladesh
RBZ	Inst. Rudjer Boskovic, Zagreb	Yugoslavia
RED	Redstone Arsenal, Huntsville, Alabama	USA
REN	Reno Metallurgical Research Center, Nevada	USA
RHI	Rhode Island Univ., Kingston, R.I.	USA
RI	Khlopin Radiev. Inst., Leningrad	USSR
RIC	Rice Inst., Houston, Texas	USA
RIS	Riso, Roskilde	Denmark
ROS	Zentralinst. fuer Kernphysik, Rossendorf	Germany, D.R.
RPI	Rensselaer Polytech. Inst., Troy, N.Y.	USA
SAC	C.E.N. Saclay, Essonne including CEN Limeil	France
SAH	Saha Institute, Calcutta	India
SAN	Univ. de Chile, Santiago	Chile
SMU	Southern Methodist Univ., Dallas, Texas	USA
SRL	Dupont Savannah River Lab., Aiken, S.C.	USA
STF	Stanford Univ., Palo Alto, Calif.	USA

Laboratory Mnemonics

Code	Laboratory	Country
STL	Univ. of Stellenbosch, Stellenbosch	South Africa
STR	Nuclear Res. Centre, Strasbourg	France
SUN	Nuclear Inst., Southern Univ., Faure, Cape Prov.	South Africa
TAM	Texas A. and M. College, College Station, Texas	USA
TAT	Tata Institute, Bombay	India
TEX	Univ. of Texas, Austin, Texas	USA
THA	Tech. Hochschule, Aachen	Germany, F.R.
THU	National Tsing Hua Univ., Hsin-Chu	Taiwan
TIT	Tokyo Inst. of Technology, Tokyo	Japan
TNC	Texas Nuclear Corp., Austin, Texas	USA
TOK	Tokyo Univ., Tokyo	Japan
TOR	Univ. of Toronto, Toronto, Ontario	Canada
TOU	Univ. of Toulouse, Toulouse, Haute-Garonne	France
TRI	Univ. of Trieste, Trieste	Italy
TRM	Bhabha Atomic Res. Centre, Trombay	India
TUD	Tech. Univ. at Dresden and Pirna	Germany, D.R.
TUR	Univ. of Turin, Turin	Italy
UI	Univ. of Illinois, Chicago, Ill.	USA
UID	Univ. of Idaho, Moscow, Idaho	USA
UJV	Ustav Jad. Vyskumu (Inst. Nuclear Res.), Prague	Czechoslovakia
UKR	Ukraine	USSR
UKW	Windscale Reactor Development Labs., Seascale	UK
UMX	Univ. Nacional Autonomá de Mexico, Mexico City	Mexico
USA	United States of America	USA
USP	Univ. de Sao Paulo, Sao Paulo	Brazil
VBT	Vanderbilt Univ., Nashville, Tenn.	USA
VIP	Virginia Polytechnic Inst., Blacksburg, Va.	USA
VIR	Univ. of Virginia, Charlottesville, Va.	USA
WIS	Univ. of Wisconsin, Madison, Wis.	USA
WUR	Eidgenossisches Inst. fuer Reaktor Forsch., Wuerenlingen	Switzerland
WVU	Univ. of West Virginia, Morgantown, W.Va.	USA
WWA	Warszawa Univ., Warsaw	Poland
YOK	Rikkyo(St. Paul)Univ., Yokosuka	Japan

Reference Mnemonics

Code	Report, Journal, or Conference
AAEC/TM-	Australian AEC Technical Memos
ACO/UK/	Internal Aldermaston reports
ADP	Annalen der Physik
AE	Atomnaja Energija
AE/S	Atomnaja Energija, Supplement
AE-	Aktiebolaget Atomenergi Repts. Stockholm/Studsvick
AECD-	D.T.I.E. Report Series. Extinct 1960
AECD/EP-	Atomic Energy Centre, Dacca, Reports.
AECD/MISC-	Atomic Energy Centre, Dacca, Progress Reports
AECL-	Atomic Energy of Canada LTD., Chalk River Report Series, Canada
AERE-N/R-	AERE-Harwell Reports
AERE-NP/M-	AERE-Harwell Reports
AERE-NP/R-	AERE-Harwell Reports
AERE-NRDC-	AERE-Harwell Reports
AERE-PR/NP-	AERE-Harwell Reports
AERE-R-	AERE-Harwell Reports
AF	Arkiv foer Fysik, Sweden
AFSWC-TR-	Air Force Special Weapons Center, Kirtland Reports.
AFWL-TR-	Air Force Weapons Lab., Kirtland Reports.
AHP	Acta Physica Academia Scientiarum Hungaricae
AJP	American Journal of Physics
AK	Atomki Kozlemenyek
AKS	Atomki Kozlemenyek, Supplement
ANCR-	Aerojet Nuclear Corp. National Reactor Test Station Reports, USA
ANE	Annals of Nuclear Science and Engineering, UK
ANL-	Argonne National Laboratory Report Series
ANL-NDM	Argonne National Laboratory Reports
ANS	Transactions of the American Nuclear Society
AP	Annals of Physics (New York)
APA	Acta Physica Austriaca
APP	Acta Physica Polonica until Vol. 36 (1969), Poland.
APP/B	Acta Physica Polonica Part B starting with Vol. 1 (1970), Poland.
ARI	International Journal of Applied Radiation and Isotopes
ARS	Anales Real Socidad d'Espana Fisica Y Quimica, Spain
ASS	Annales de la Societe Scientifique de Bruxelles
AUJ	Australian Journal of Physics
AWRE-CNR/PR-	AWRE-Aldermaston Reports, UK
AWRE-NR/C	AWRE-Aldermaston Reports, UK
AWRE-O-	AWRE-Aldermaston reports, UK
BAP	Bulletin of the American Physical Society
BARC-	Trombay Report Series, India
BNL-	Brookhaven National Lab. Report Series
BR-	Early Reports from Cavendish Lab., UK
BRL-	Ballistic Research Labs. Reports
CEA-	Centre D'Etudes Nucleaires Report Series
CEA-R-	Centre D'Etudes Nucleaires, Saclay, Reports
CEC	Ciencia e Cultura, Sao Paulo, Brazil
CHP	Chinese Journal of Physics, Taipei

Code	Report, Journal, or Conference
CJC	Canadian Journal of Chemistry
CJP	Canadian Journal of Physics
CNAEM-	Cekmece Nuclear Res. and Training Centre Reports
COO-	Chicago Operations Office, AEC, Contract Reports
CP-	Chicago Univ. Metallurgical Lab. Reports and some Argonne National Lab. early Physics Reports
CR	Comptes Rendus Hebdomadaires des Seances de L'Academie des Sciences, France.
CRGP-	Chalk River, Ontario, Early Reports, Canada
CU-	Columbia Univ. Reports
CUD-	Reports of Columbia Univ., New York, USA
CZJ/A	Czech. Journal Phys., Part A
CZJ/B	Czech. Journal Phys., Part B, International Issue. Part B is not a translation of Part A
DA/B	Dissertation Abstracts B (Sciences)
DOK	Doklady Akademii Nauk SSSR
DP-	Du Pont, Savannah River Laboratory Reports
EANDC-	European-American Nuclear Data Committee Documents
EANDC(CAN)-	Canadian Reports to EANDC
EANDC(E)	Reports from Euratom Countries and Euratom to EANDC
EANDC(J)	Japanese Reports to EANDC
EANDC(OR)	Reports from miscellaneous OECD countries to EANDC
EANDC(UK)-	UK Reports to EANDC
EANDC(US)-	US Reports to EANDC
EIR-	Eidg. Inst. Reaktorforschung Wuerenlingen Reports, Switzerland
FEI-	Fiziko-Energeticheskii Institut, Obinsk, Report series, USSR
FIZ/S	Fizika, Experimental and Theoretical Physics, Supplement, Yugoslavia
GA-	General Atomic Div. Reports
GULF-RT-A	Gulf Radiation Technology, San Diego Reports, Calif.
HP	Health Physics, UK and USA
HPA	Helvetica Physica Acta, Switzerland
HPA/S	Helvetica Physica Acta, Supplement, Switzerland
HW-	Hanford Reports, Extinct 1965
IAE-	Reports from Inst. Atomnoj Energii, Kurchatov, Moscow, USSR
IBK	Bulletin Inst. Boris Kidric, Vol. 1-17. Yugoslavia
ICD-	Bulletin from Information Center for Nuclear Data, Obninsk, USSR
IDO-	Reports of Phillips Petrolium Co., Idaho Falls, Idaho.
IEA	Instituto de Energia Atomica, Univ. Sao Paulo, Brazil
IF-	Akademija Nauk Ukrainskaja (Kiev) Reports, USSR
IFA-	Reports of the Rumaniam Acad. Sci. Inst. Atomic Phys., Rumania
IFG	Trudy Instituta Fiziki Akademii Nauk Gruzinskoi, USSR
IJP	Indian Journal of Physics
IN-	Reports of Idaho Nuclear Corp., Idaho Falls, Idaho
INDC-	International Nuclear Data Committee, Report Series
INDC(NOR)	Norwegian Reports to the International Nuclear Data Committee
INDC(SEC)	International Nuclear Data Committee, Report Series
INDSWG-	International Nuclear Data Sci. Working Group, cont'd as INDC-
INTEL-RT-	Intelcom Rad Tech Reports

Reference Mnemonics

Code	Report, Journal, or Conference
INR-	Inst. Baden Jadrowych (Nuclear Res.), Warsaw, Reports
IZV	Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya
JAERI-	Report of Japanese Atomic Energy Res. Inst., Tokyo, Japan
JCP	Journal of Chemical Physics
JFI	Journal Franklin Inst.
JIN	Journal of Inorganic and Nuclear Chemistry
JINR-	Dubna Report Series, USSR
JMJ	Proceedings of Phys.-Math. Society of Japan
JNE	Journal of Nuclear Energy
JNE/AB	Journal Nuclear Energy, Section A/B
JP/A	Journal of Physics, Part A = Math. and Nuclear Phys.
JP/D	Journal of Physics, Part D = Applied Physics
JPJ	Journal of the Physical Society of Japan
JPR	Journal de Physique , France
JPR/A	Journal de Physique, Suppl. A, Physique Appliquee, France
JUEL-	Kernforschungsanlage, Juelich, Reports, Germany F.R.
KAPL-	Knolls Atomic Power Lab. Report Series
KE	Kernenergie, Germany
KFI	Journal of the Central Research Inst. of Physics, Academy of Sciences, Hungary
KFK-	Kernforschungszentrum Karlsruhe Report Series, Germany F.R.
KFKI-	Reports of Central Research Inst. of Physics, Acad. of Sciences, Hung.
LA-	Los Alamos Scientific Lab. Report Series, New Mexico
LA-DC-	Los Alamos Report Series, New Mexico
LAMS-	Los Alamos Sci. Lab. Report Series, New Mexico
LNS-	Inst. Rudjer Boskovic Reports
MIT-REP-	Massachusetts Inst. Technology Reports, Cambridge, Mass.
NASA-TN-D-	NASA Technical Note
NAT	Nature, UK
NBS-	National Bureau of Standards
NC	Nuovo Cimento, Italy
NC/A	Nuovo Cimento, Section A, Italy
NC/B	Nuovo Cimento, Section B, Italy
NIJS-R-	Reports of Nuk. Inst. Josef Stefan, Ljubljana, Yugoslavia
NIM	Nuclear Instruments and Methods (Formerly Nuclear Inst.)
NP	Nuclear Physics, Netherlands
NP/A	Nuclear Physics, Section A, Netherlands
NRDC-	AERE-Harwell Report Series, UK
NSE	Nuclear Science and Engineering
NSP	Nuclear Science and Applications, Pakistan
NSP/B	Nuclear Science and Applications, Section B, Pakistan
NST	Journal of Nuclear Science and Technology, Japan
NUK	Nukleonik, Germany F.R.
NYO-73-	New York Operations Office Reports
NYO-GEN-72-	New York Operations Office Reports
OAW	Oesterreichische Akademie der Wissenschaften, Mathematisch-Naturwiddenschaftlichen Klasse, Sitzengsbericht, Austria

Code	Report, Journal, or Conference
ORNL-	Oak Ridge National Lab., Report Series
ORNL-CF-	Oak Ridge National Lab., Central File Memos
ORNL-TM-	Oak Ridge National Lab., Technical Memos
ORO-	Oak Ridge Operations Office Contract Reports
OSA	Anzeiger der Oesterreichische Akademie der Wissenschaften, Mathematische- Naturwissenschaftlichen Klasse, Austria
PEL-	Atomic Energy Board, Pelindaba, Reports, South Africa
PHY	Physica, Netherlands
PL	Physics Letters, Netherlands
PL/B	Physics Letters, Section B, Netherlands
PM	Philosophical Magazine, UK
PNE-	USAEC Reports on Peaceful Nuclear Explosions
PPA	Proceedings of Pakistan Academy of Science
PPM	Proceedings of Physical Math. Society, Japan
PPS	Proceedings of the Physical Society, London
PPS/A	Proceedings of the Physical Society, London (Part A)
PR	Physical Review
PR-P-	AECL-Reports. Extinct
PR/B	Physical Review, Part B
PR/C	Physical Review, Part C, Nuclear Physics
PRL	Physical Review Letters
PRS/A	Proceedings of the Royal Society, London (Part A)
PS	Physica Scripta, Sweden
RCA	Radiochimica Acta, Germany F.R.
RPI-	Rensselaer Polytechnic Inst. Reports
RR-TR-	Army Missile Command, Redstone Arsenal Reports
RRL	Radiochemical and Radioanalytical Letters
RRP	Rev. Roumaine de Physique, Rumania
RSI	Review of Scientific Instruments
SCF	Academia Republicii Populare Romine, Studi si Cercetari de Fizica, Rumania
SPN	Soviet Progress in Neutron Physics, Moscow 1961.
SUHP-	Stanford Univ., Health Physics Report
TID-	Div. of Tech. Inform. Ext., AEC Report Series, USA
TRDWP/P-	Harwell Report Series (now extinct), UK
UCRL-	Lawrence Rad. Lab. (Both Berkeley and Livermore)
UFZ	Ukrains'Kii Fizichnii Zhurnal, USSR
UNIV-MI-	Univ. of Michigan, Reports, Ann Arbor
WADC-TR-	Wright Air Development Center, Ohio, Report series
WADD-TR-	Wright Air Development Division, Ohio, Report series
WAPD-TRANS-	Westinghouse Atomic Power Division (Bettis) Reports
WASH-	USAEC Report Series
YF	Yadernaya Fizika
YFI-	Jaderno-Fizicheskie Issledovanija (Progress reports), USSR
YK-	Jadernye Konstanty, Obninsk Reports, USSR
ZET	Zhurnal Eksperimental'noi I Teoreticheskoi Fiziki, USSR
ZFK-	Zentral Inst. Kernphysik Rossendorf, Reports, Germany D.R.

Reference Mnemonics

Code	Report, Journal, or Conference
ZN/A	Zeitschrift fuer Naturforschung, Section A, Germany F.R.
ZP	Zeitschrift fuer Physik, Germany F.R.
55GENEVA	First UN Conference on the Peaceful Uses of Atomic Energy. Geneva 8-20 Aug. 1955.
56AMSTERDM	International Conference on Nuclear Reactions, Amsterdam, Netherlands 2-7 July 1956, Published in Physica 22, 941-1196
57COLUMBIA	Columbia Conference, New York, 1957
58GENEVA	Second UN Conference on the Peaceful Uses of Atomic Energy. Geneva, 1-13 Sep. 1958.
58PARIS	Paris Conf. on Nuclear Spectroscopy, July 1958.
61BUCHAR	International Conference on Physics and Technique of Research Reactors. Bucuresti, Romania, 10-17 Nov. 1961 Proceedings published as Supplement to Revue de Physique Vol. 6 (1961)
61SACLAY	EANDC Conference On Time of Flight Methods. Saclay, France, 24-27 July 1961.
61VIENNA	IAEA Seminar on the Physics of Fast and Intermediate Reactors. Vienna, 3-11 Aug. 1961.
62MADRAS	Nuclear Physics Symposium, Madras, February 1962.
62PADUA	Direct Interactions and Nuclear Reactions Mechanisms, Padua, September 3-8, 1962.
63BOMBAY	Symposium on Nuclear Physics and Solid State Physics, Bombay, Feb.-March 1963.
63KARLSRHE	Neutron Physics Conference, Karlsruhe 8-10 Oct. 1963.
64DUBNA	Conference on Interactions of Neutrons with Nuclei. Dubna, USSR, June 1964. Published as JINR-1845.
64PARIS	Congres International de Physique Nucleaire. Paris, 2-8 Jul 1964.
65ANTWERP	International Conference On the Study of Nuclear Structure. Antwerp, Belgium, 19-23 July 1965. For full papers see EANDC-50.
65KRLSRH	IAEA Symposium on Pulsed Neutron Research, Karlsruhe, 10-14 May 1965.
65SALZBURG	IAEA Symposium on Physics and Chemistry of Fission, Salzburg, Austria, 22-26 March 1965.
66PARIS	IAEA Conference on Nuclear Data for Reactors. Paris, France, 17 - 21 Oct 1966.
66WASH	Conference on Neutron Cross-Section and Technology. Washington, D. C., 22-24 March 1966.
67KANPUR	Symposium on Nuclear Physics and Solid State Physics, Kanpur, 28 Feb. - 3 March 1967.
67KARLSRHE	IAEA Symposium on Fast Reactor Physics and Related Safety Problems, Karlsruhe 30 Oct. - 3 Nov. 1967.
68DUBNA	UK-USSR Seminar on Nuclear Data for Reactor Computations, Dubna, June 1968.
68WASH	2nd Conference on Nuclear Cross-Sections and Technology, Washington, D. C., 4-7 March 1968.
69ROORKEE	Nuclear Physics and Solid State Physics Symposium, Roorkee 28-31 December 1969. Vol. 1 = Invited Talks, Vol. 2 = Nuclear Physics Vol. 3 = Solid State Physics
70ANL	EANDC Symposium on Neutron Standards and Flux Normalization, Argonne National Lab., 21-23 Oct. 1970.
70HELSINKI	Second IAEA Conference on Nuclear Data For Reactors, Helsinki, Finland, 15-19 June 1970.
70MADURAI	Nuclear Physics Solid State Physics Symposium, Madurai, 27-30 December 1970. Vol. 1=Invited Talks, Vol. 2=Nuclear Physics, Vol. 3=Solid State Physics
71CANTERBY	Conference on Chemical Nuclear Data, Measurements and Applications, Univ. of Kent, Canterbury, 20-22 Sept. 1971.
71KNOX	3rd Conference on Neutron Cross-Sections and Technology Univ. of Tennessee, Knoxville, 15-17 March 1971.
72LOSANGLS	International Conference on Few-Particle Problems in the Nuclear Interactions, Los Angeles, 28 Aug. -1 Sept. 1972.
73KARLSR	Specialists' Panel on Capture Cross-Sections of the Structural Materials Ni, Fe, Cr., Karlsruhe, Germany, 8-9 May 1973.
73KIEV	Conference on Neutron Physics, Kiev, 28 May -1 June 1973.

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{2}_{1}H$ σ_{tot}			
73	RPI	Stoler,et.al.	PR/C,8,1539,73	11	24.7 keV to .938 MeV	C σ_{tot}
73	RPI	Stoler,et.al.	PR/C,8,1539,73	435	22.4 keV to .993 MeV	
			$^{6}_{3}Li$ σ_{nt}			
75	WIS	Bartle	BAP,20,163,75	24	2.160 MeV to 9.660 MeV	
			$^{9}_{4}Be$ σ_{tot}			
75	KTO	Block,et.al.	NST,12,1,75	1	5.903 b at 23.5 keV	
72	KUR	Gerasimov	IAE-2222,72	503	.0045 eV to 11.6 eV	
71	BRC	Cabe	CABE,71	275	.122 MeV to 1.200 MeV	
			$_{5}B$ σ_{el}			
66	OHO	Frasca,et.al.	PR,144,854,66	1	.938 b at 14.0 MeV	^{1}H σ_{el}
			$^{10}_{5}B$ σ_{tot}			
70	ALD	Porter,et.al.	AWRE-O-45/70,70	7	2.032 MeV to 4.823 MeV	
			$^{10}_{5}B$ σ_{el}			
70	ALD	Porter,et.al.	AWRE-O-45/70,70	7	2.032 MeV to 4.823 MeV	
			$^{10}_{5}B$ σ_{non}			
70	ALD	Porter,et.al.	AWRE-O-45/70,70	7	2.032 MeV to 4.823 MeV	
			$^{10}_{5}B$ $\sigma_{n\alpha}$			
74	GRT	Friesenhahn+	INTEL-RT-7011,1,74	86	4.150 keV to .785 MeV	
			$^{11}_{5}B$ σ_{tot}			
73	BRC	Cance	CABE,73	937	80.3 keV to 7.345 MeV	abs
70	ALD	Porter,et.al.	AWRE-O-45/70,70	7	2.032 MeV to 4.823 MeV	
			$^{11}_{5}B$ σ_{el}			
70	ALD	Porter,et.al.	AWRE-O-45/70,70	7	2.032 MeV to 4.823 MeV	
			$^{11}_{5}B$ σ_{non}			
70	ALD	Porter,et.al.	AWRE-O-45/70,70	7	2.032 MeV to 4.823 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{6}C$ σ_{tot}			
75	KTO	Block,et.al.	NST,12,1,75	1	4.684 b at 23.5 keV	
74	SHI	Chi-Fong Ai+	NSF,11,179,74	55	1.000 MeV to 4.830 MeV	
			$^{12}_{6}C$ σ_{el}			
66	OHO	Frasca,et.al.	PR,144,854,66	1	.785 b at 14.0 MeV	^{1}H σ_{el}
64	KUR	Gorlov	DOK,158,(3),574,64	1	1.960 b at 4.000 MeV	
			$^{12}_{6}C$ σ_{np}			
72	KUR	Ablesimov	71KIEV,1,173,72	2	14.1 MeV to 14.8 MeV	
			$_{8}O$ σ_{tot}			
75	KTO	Block,et.al.	NST,12,1,75	1	3.736 b at 23.5 keV	
			$^{16}_{8}O$ σ_{inl}			
69	LEB	Burymov	YF,9,(5),933,69	1	.240 kb at 14.6 MeV	
69	LEB	Burymov	YF,9,(5),933,69	1	40.0 b at 14.6 MeV	
69	LEB	Burymov	YF,9,(5),933,69	1	.240 kb at 14.6 MeV	
			$^{19}_{9}F$ σ_{tot}			
74	COL	Singh,et.al.	PR/C,10,2147,74	324	.542 keV to .197 MeV	
			$^{23}_{11}Na$ σ_{el}			
71	ALD	Coles	AWRE-O-03/71,71	1	.875 b at 5.000 MeV	^{1}H σ_{el}
			$^{23}_{11}Na$ σ_{inl}			
71	ALD	Coles	AWRE-O-03/71,71	1	.805 b at 5.000 MeV	^{1}H σ_{el}
			$_{12}Mg$ σ_{el}			
68	IFU	Korzh	UFZ,13,1781,68	1	2.540 b at 1.500 MeV	
			$^{27}_{13}Al$ σ_{tot}			
75	COL	Singh,et.al.	PR/C,11,1117,75	432	4.059 keV to .419 MeV	
73	BRC	Cance	CABE,73	517	30.0 keV to 1.195 MeV	
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0700 eV to .835 eV	^{197}Au $\sigma_{n\gamma}$
			$^{27}_{13}Al$ $\sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0700 eV to .835 eV	^{197}Au $\sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	.238 b at thermal	^{197}Au $\sigma_{n\gamma}$

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{27}_{13}Al$ σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	24	2.805 MeV to 3.962 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	58	4.012 MeV to 9.960 MeV	
			$_{16}S$ σ_{tot}			
73	BRC	Cance	CABE,73	454	30.0 keV to 1.195 MeV	
			$^{32}_{16}S$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	.230 kb at 14.8 MeV	
			$_{17}Cl$ σ_{tot}			
74	COL	Singh,et.al.	PR/C,10,2138.74	1045	20.3 eV to .399 MeV	
			$_{19}K$ σ_{tot}			
73	COL	Singh,et.al.	PR/C,8,1833,73	1197	1.005 keV to .399 MeV	
			$_{19}K$ σ_{el}			
66	OHO	Frasca,et.al.	PR,144,854,66	1	1.038 b at 14.0 MeV	^{1}H σ_{el}
			$^{41}_{19}K$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	34.0 b at 14.8 MeV	
			$^{41}_{19}K$ $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	31.0 b at 14.8 MeV	
			$_{20}Ca$ σ_{tot}			
74	COL	Singh,et.al.	PR/C,10,2143,74	702	1.616 keV to .549 MeV	
			$_{20}Ca$ σ_{el}			
66	OHO	Frasca,et.al.	PR,144,854,66	1	.918 b at 14.0 MeV	^{1}H σ_{el}
			$_{20}Ca$ $\sigma_{n\alpha}$			
75	LAS	Barnes,et.al.	JIN,37,399,75	2	14.1 MeV to 14.7 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{40}_{20}Ca$ $\sigma_{n\alpha}$			
75	LAS	Barnes,et.al.	JIN,37,399,75	5	2.980 MeV to 6.820 MeV	^{115}In σ_{inl}
75	LAS	Barnes,et.al.	JIN,37,399,75	5	7.520 MeV to 9.300 MeV	^{27}Al $\sigma_{n\alpha}$

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{42}_{20}Ca$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	.180 kb at 14.8 MeV	
			$^{44}_{20}Ca$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	38.0 b at 14.8 MeV	
			$^{45}_{21}Sc$ σ_{n2n}			
75	AUB	Kao,et.al.	NP/A,237,11,75	1	.322 b at 15.1 MeV	
75	BRC	Frehaut,et.al.	75KIEV,,,75	6	12.4 MeV to 14.8 MeV	
			$^{45}_{21}Sc$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	38.0 b at 14.8 MeV	
			$^{45}_{21}Sc$ $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	49.0 b at 14.8 MeV	
			$_{22}Ti$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	2.569 b at .894 MeV	C σ_{el}
			$_{22}Ti$ σ_{inl}			
66	FEI	Broder	YFI-2,9,66	13	1.100 MeV to 2.300 MeV	
			$^{46}_{22}Ti$ σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.454 b at 14.2 MeV	
			$^{47}_{22}Ti$ σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.319 b at 14.2 MeV	
			$^{47}_{22}Ti$ σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	35	.914 MeV to 3.958 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	38	4.014 MeV to 9.950 MeV	
			$^{48}_{22}Ti$ σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.492 b at 14.2 MeV	
			$^{48}_{22}Ti$ σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	9	5.964 MeV to 9.952 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{49}_{22}$Ti σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.417 b at 14.2 MeV	
			$^{50}_{22}$Ti σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.393 b at 14.2 MeV	
			$_{23}$V σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	2.646 b at .897 MeV	C σ_{el}
70	ORL	Perey,et.al.	ORNL-4551,70	4	5.440 MeV to 8.560 MeV	
			$^{51}_{23}$V σ_{el}			
73	BRC	Cabe	CABE,73	13	.550 MeV to 1.180 MeV	
			$^{51}_{23}$V σ_{inl}			
73	BRC	Cabe	CABE,73	6	.925 MeV to 1.180 MeV	
			$_{24}$Cr $\sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	10.0 b at 24.0 keV	
			$^{50}_{24}$Cr σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.428 b at 14.2 MeV	
72	KFK	Spencer	KFK-1517,7211	5181	26.0 keV to .285 MeV	
			$^{52}_{24}$Cr σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.453 b at 14.2 MeV	
72	KFK	Spencer	KFK-1517,7211	5281	21.0 keV to .285 MeV	
			$^{53}_{24}$Cr σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.422 b at 14.2 MeV	
			$^{54}_{24}$Cr σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.541 b at 14.2 MeV	
			$^{55}_{25}$Mn σ_{n2n}			
71	FEI	Salnikov	SNP,122,620,71	1	.540 kb at 14.4 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{55}_{25}$Mn σ_{nem}			
71	FEI	Salnikov	SNP,122,620,71	1	1.610 b at 14.4 MeV	
			$_{26}$Fe σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	2.336 b at .902 MeV	C σ_{el}
71	IJI	Korzh	IZV,35,(4),823,71	1	2.024 b at 1.500 MeV	
			$_{26}$Fe σ_{inl}			
71	FEI	Salnikov	SNP,122,620,71	1	.660 kb at 14.4 MeV	
			$_{26}$Fe σ_{n2n}			
71	FEI	Salnikov	SNP,122,620,71	1	.460 kb at 14.4 MeV	
			$_{26}$Fe σ_{nem}			
71	FEI	Salnikov	SNP,122,620,71	1	1.530 b at 14.4 MeV	
			$^{54}_{26}$Fe σ_{tot}			
72	KFK	Beer,et.al.	KFK-1516,72	5706	4.850 keV to .290 MeV	
			$^{54}_{26}$Fe σ_{el}			
74	ORL	Kinney,et.al.	ORNL-4907,74	3	5.500 MeV to 8.500 MeV	^{1}H σ_{el}
			$^{54}_{26}$Fe σ_{n2n}			
75	ARK	Sigg,et.al.	JIN,37,631,75	1	15.0 mb at 14.8 MeV	
68	KUR	Andreev	YF,7,(4),745,68	20	13.9 MeV to 17.4 MeV	
			$^{54}_{26}$Fe σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	13	1.979 MeV to 3.990 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	26	4.183 MeV to 9.948 MeV	
			$^{56}_{26}$Fe σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,.,75	7	11.9 MeV to 14.8 MeV	
			$^{56}_{26}$Fe σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	1	5.354 mub at 3.979 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	28	4.078 MeV to 9.945 MeV	
68	KAZ	Levkovsky	YF,8,(1),7,68	1	.106 kb at 14.8 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{59}_{27}$Co σ_{tot}			
72	LMS	Fisher,et.al.	NP/A,179,241,72	76	.300 MeV to .954 MeV	
			$^{59}_{27}$Co σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	3.305 b at .896 MeV	C σ_{el}
71	IJI	Korzh	IZV,35,(4),823,71	1	2.650 b at 1.500 MeV	
64	KUR	Gorlov	DOK,158,(3),574,64	1	2.200 b at 4.000 MeV	
			$^{59}_{27}$Co σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	9	10.9 MeV to 14.8 MeV	
71	FEI	Salnikov	SNP,122,620,71	1	.570 kb at 14.4 MeV	
			$^{59}_{27}$Co σ_{nem}			
71	FEI	Salnikov	SNP,122,620,71	1	1.780 b at 14.4 MeV	
			$^{59}_{27}$Co σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	37.0 b at 14.8 MeV	
			$^{59}_{27}$Co $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	32.0 b at 14.8 MeV	
			$^{}_{28}$Ni σ_{tot}			
73	BRC	Cance	CABE,73	132	1.105 MeV to 6.190 MeV	
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	^{197}Au $\sigma_{n\gamma}$
69	NBS	Schwartz,et.al.	BAP,14,494(AH7),69	2448	.571 MeV to 4.416 MeV	
			$^{}_{28}$Ni σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	3.155 b at .875 MeV	C σ_{el}
71	IJI	Korzh	IZV,35,(4),823,71	1	3.303 b at 1.500 MeV	
			$^{}_{28}$Ni $\sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	^{197}Au $\sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	4.270 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{}_{28}$Ni σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	9	10.9 MeV to 14.8 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{58}_{28}$Ni σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	37	.441 MeV to 3.960 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	32	4.008 MeV to 9.897 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	45	2.854 MeV to 3.994 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	1	.631 b at 4.019 MeV	
			$^{59}_{28}$Ni σ_{np}			
75	CTH	Mc Donald,et.al.	75WASH,HB-25,75	1	90.0 b at thermal	
			$^{59}_{28}$Ni $\sigma_{n\alpha}$			
75	CTH	Mc Donald,et.al.	75WASH,HB-25,75	1	22.2 b at thermal	
75	CRC	Werner,et.al.	NSE,56,98,75	1	12.0 b at .0551 eV	^{197}Au $\sigma_{n\gamma}$
75	CRC	Werner,et.al.	NSE,56,98,75	1	18.0 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{61}_{28}$Ni $\sigma_{n\alpha}$			
75	CTH	Mc Donald,et.al.	75WASH,HB-25,75	1	2.000 mb at thermal	
			$^{62}_{28}$Ni σ_{tot}			
72	KFK	Spencer	KFK-1517,72	5481	10.0 keV to .285 MeV	
			$^{62}_{28}$Ni $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	17.0 b at 14.8 MeV	
			$^{64}_{28}$Ni σ_{tot}			
72	KFK	Spencer	KFK-1517,72	5381	16.0 keV to .285 MeV	
			$^{64}_{28}$Ni $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	5.200 b at 14.8 MeV	
			$^{}_{29}$Cu σ_{tot}			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	^{197}Au $\sigma_{n\gamma}$
			$^{}_{29}$Cu σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	2.862 b at .877 MeV	C σ_{el}
71	IJI	Korzh	IZV,35,(4),823,71	1	2.525 b at 1.500 MeV	
			$^{}_{29}$Cu σ_{inl}			
71	FEI	Salnikov	SNP,122,620,71	1	.840 kb at 14.4 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{29}Cu$ $\sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	^{197}Au $\sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	3.680 b at thermal	^{197}Au $\sigma_{n\gamma}$
66	FEI	Koroleva	AE,20,(5),431,66	1	59.0 b at 24.0 keV	
65	FEI	Belanova	AE,19,(1),3,65	1	59.0 b at 24.0 keV	
			$_{29}Cu$ σ_{n2n}			
71	FEI	Salnikov	SNP,122,620,71	1	.465 kb at 14.4 MeV	
			$_{29}Cu$ σ_{nem}			
71	FEI	Salnikov	SNP,122,620,71	1	1.770 b at 14.4 MeV	
			$^{63}_{29}Cu$ σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.905 b at 14.2 MeV	
			$^{63}_{29}Cu$ σ_{n2n}			
68	KUR	Andreev	YF,7,(4),745,68	9	13.9 MeV to 17.4 MeV	
			$^{65}_{29}Cu$ σ_{tot}			
72	FTI	Djumin	IZV,36,(4),852,72	1	2.964 b at 14.2 MeV	
			$_{30}Zn$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	3.403 b at .875 MeV	C σ_{el}
71	IJI	Korzh	IZV,35,(4),823,71	1	2.437 b at 1.500 MeV	
			$_{30}Zn$ $\sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	64.0 b at 24.0 keV	
			$^{64}_{30}Zn$ σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-10,75	15	1.159 MeV to 3.958 MeV	
75	ANL	Smith,et.al.	ANL-NDM-10,75	18	4.172 MeV to 9.939 MeV	
			$^{66}_{30}Zn$ σ_{np}			
75	ANL	Smith,et.al.	ANL-NDM-14,75	16	5.561 MeV to 9.965 MeV	^{238}U σ_{nf}
			$_{31}Ga$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	11	9.930 MeV to 14.8 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{71}_{31}Ga$ $\sigma_{n\gamma}$			
70	BOS	Majumder	IJP,44,204,70	1	1.290 mb at 14.8 MeV	
			$^{71}_{31}Ga$ σ_{n2n}			
75	IBJ	Grochulski,et.al	APP/B,6,139,75	10	13.0 MeV to 17.8 MeV	
			$^{76}_{32}Ge$ σ_{n2n}			
74	SLO	Hlavac,et.al.	HLAVAC,74	1	1.215 b at 14.7 MeV	
			$^{75}_{33}As$ $\sigma_{n\gamma}$			
70	BOS	Majumder	IJP,44,204,70	1	1.390 mb at 14.8 MeV	
			$^{75}_{33}As$ σ_{n2n}			
75	IBJ	Grochulski,et.al	APP/B,6,139,75	9	13.0 MeV to 17.8 MeV	
			$^{75}_{33}As$ σ_{np}			
75	IBJ	Grochulski,et.al	APP/B,6,139,75	10	13.0 MeV to 17.8 MeV	
			$^{75}_{33}As$ $\sigma_{n\alpha}$			
71	GIT	Venugopala Rao+	PR/C,3,629,71	1	13.5 mb at 14.4 MeV	
			$_{34}Se$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.118 b at .836 MeV	C σ_{el}
			$^{76}_{34}Se$ σ_{el}			
75	BRC	Lachkar,et.al.	75KIEV,,,75	3	6.000 MeV to 10.0 MeV	
			$^{76}_{34}Se$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	7	11.9 MeV to 14.8 MeV	
			$^{77}_{34}Se$ σ_{nd}			
69	CCP	Ivanenko	YF,9,(2),258,69	1	15.6 b at 14.7 MeV	
			$^{78}_{34}Se$ σ_{el}			
75	BRC	Lachkar,et.al.	75KIEV,,,75	1	1.998 b at 8.000 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{78}_{34}Se$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	9	10.9 MeV to 14.8 MeV	
			$^{80}_{34}Se$ σ_{el}			
75	BRC	Lachkar,et.al.	75KIEV,,,75	1	2.155 b at 8.000 MeV	
			$^{80}_{34}Se$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	10	10.4 MeV to 14.8 MeV	
			$^{82}_{34}Se$ σ_{el}			
75	BRC	Lachkar,et.al.	75KIEV,,,75	3	6.000 MeV to 10.0 MeV	
			$^{82}_{34}Se$ σ_{n2n}			
75	AUB	Kao,et.al.	NP/A,237,11,75	1	1.374 b at 15.1 MeV	
75	BRC	Frehaut,et.al.	75KIEV,,,75	11	9.930 MeV to 14.8 MeV	
			$^{81}_{35}Br$ σ_{n2n}			
75	AUB	Kao,et.al.	NP/A,237,11,75	1	1.100 b at 15.1 MeV	
			$^{85}_{37}Rb$ $\sigma_{n\alpha}$			
74	IBJ	Augustyniak,et.al.	INDC(SEC)-42,205,74	5	13.3 MeV to 15.5 MeV	
68	KAZ	Levkovsky	YF,8,(1),7,68	1	6.100 b at 14.8 MeV	
			$^{87}_{37}Rb$ $\sigma_{n\gamma}$			
67	FEI	Dovbenko	AE,23,(2),151,67	19	11.0 keV to 2.646 MeV	
			$^{87}_{37}Rb$ $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	2.100 b at 14.8 MeV	
			$^{86}_{38}Sr$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	48.0 b at 14.8 MeV	
			$^{88}_{38}Sr$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	16.0 b at 14.8 MeV	
			$^{89}_{39}Y$ σ_{tot}			
74	SHI	Chi-Fong Ai+	NSF,11,179,74	34	1.000 keV to 4.830 keV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{89}_{39}Y$ σ_{n2n}			
75	ALS	Ghorai,et.al.	BAP,20,560(AN4),75	7	12.6 MeV to 17.8 MeV	^{27}Al $\sigma_{n\alpha}$
75	BRC	Frehaut,et.al.	75KIEV,,,75	7	11.9 MeV to 14.8 MeV	
			$^{89}_{39}Y$ σ_{np}			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	25.0 b at 14.8 MeV	
			$^{89}_{39}Y$ $\sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	6.300 b at 14.8 MeV	
			$_{40}Zr$ σ_{tot}			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	^{197}Au $\sigma_{n\gamma}$
			$_{40}Zr$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.583 b at .902 MeV	C σ_{el}
71	IJI	Korzh	IZV,35,(4),823,71	1	4.836 b at 1.500 MeV	
			$_{40}Zr$ $\sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	^{197}Au $\sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	.250 b at thermal	^{197}Au $\sigma_{n\gamma}$
65	FEI	Belanova	AE,19,(1),3,65	1	19.0 b at 24.0 keV	
			$^{90}_{40}Zr$ σ_{tot}			
74	ANL	Guenther,et.al.	ANL-NDM-4,74	129	.933 MeV to 5.513 MeV	
			$^{90}_{40}Zr$ σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.979 b at 1.500 MeV	^{1}H σ_{el}
			$^{90}_{40}Zr$ σ_{n2n}			
72	LRL	Nethaway	NP/A,190,635,72	12	13.7 MeV to 14.9 MeV	^{27}Al $\sigma_{n\alpha}$
			$^{90}_{40}Zr$ σ_{np}			
73	RI	Nemilov	YK-12,61,73	4	7.600 MeV to 9.300 MeV	
			$^{92}_{40}Zr$ σ_{tot}			
74	ANL	Guenther,et.al.	ANL-NDM-4,74	129	.933 MeV to 5.513 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{92}_{40}Zr$ σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.253 b at 1.500 MeV	^{1}H σ_{el}
			$^{92}_{40}Zr$ σ_{np}			
70	GIT	Wen-Deh Lu+	PR/C,1,358,70	1	18.5 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{94}_{40}Zr$ σ_{el}			
74	KTY	Mc Daniel,et.al.	PR/C,10,1087,74	1	4.269 b at 1.500 MeV	^{1}H σ_{el}
			$^{93}_{41}Nb$ σ_{el}			
71	IJI	Korzh	IZV,35, 4 ,823,71	1	4.170 b at 1.500 MeV	
			$^{93}_{41}Nb$ $\sigma_{n\gamma}$			
75	TIT	Yamamuro,et.al.	75WASH,HB-22,75	1	.330 b at 23.7 keV	
65	FEI	Belanova	AE,19,(1),3,65	1	.270 kb at 24.0 keV	
			$^{93}_{41}Nb$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	12	9.440 MeV to 14.8 MeV	
			$^{93}_{41}Nb$ σ_{nem}			
71	FEI	Salnikov	SNP,122,620,71	1	2.500 b at 14.4 MeV	
			$_{42}Mo$ σ_{el}			
71	IJI	Korzh	IZV,35,(4),823,71	1	4.547 b at 1.500 MeV	
			$_{42}Mo$ $\sigma_{n\gamma}$			
66	FEI	Koroleva	AE,20,(5),431,66	1	.188 kb at 24.0 keV	
65	FEI	Belanova	AE,19,(1),3,65	1	.192 kb at 24.0 keV	
			$^{92}_{42}Mo$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	103	.130 MeV to .640 MeV	
			$^{94}_{42}Mo$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	212	.110 MeV to .650 MeV	
			$^{95}_{42}Mo$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	103	.130 MeV to .640 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{96}_{42}Mo$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	103	.130 MeV to .640 MeV	
			$^{96}_{42}Mo$ σ_{np}			
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	21.3 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{98}_{42}Mo$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	103	.130 MeV to .640 MeV	
			$^{100}_{42}Mo$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	103	.130 MeV to .640 MeV	
			$_{44}Ru$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	30	.120 MeV to .640 MeV	
			$^{103}_{45}Rh$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	106	.110 MeV to .640 MeV	
			$^{103}_{45}Rh$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	11	9.930 MeV to 14.8 MeV	
			$^{103}_{45}Rh$ σ_{np}			
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	16.9 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{105}_{46}Pd$ $\sigma_{n\gamma}$			
74	RPI	Knox,et.al.	COO-3058-50,74	562	6.314 keV to .297 MeV	
			$^{105}_{46}Pd$ σ_{np}			
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	37.6 mb at 14.4 MeV	^{56}Fe σ_{np}
			$^{108}_{46}Pd$ σ_{np}			
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	8.300 mb at 14.4 MeV	^{56}Fe σ_{np}
			$_{47}Ag$ σ_{tot}			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0700 eV to .835 eV	^{197}Au $\sigma_{n\gamma}$
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	61	.100 MeV to .660 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{47}Ag\ \sigma_{n\gamma}$			
75	TIT	Yamamuro,et.al.	75WASH,HB-22,75	1	1.100 b at 23.7 keV	
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0700 eV to .835 eV	$^{197}Au\ \sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	67.5 b at thermal	$^{197}Au\ \sigma_{n\gamma}$
65	FEI	Belanova	AE,19,(1),3,65	1	.980 kb at 24.0 keV	
			$_{48}Cd\ \sigma_{tot}$			
74	KIL	Harz	GKSS-74-E-39,74	848	.0310 eV to 5.606 eV	
71	MHG	Jones,et.al.	PL/B,36,509,71	1	1.907 b at 27.00 GeV	
			$_{48}Cd\ \sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	.384 kb at 24.0 keV	
			$^{112}_{48}Cd\ \sigma_{np}$			
75	IBJ	Augustyniak,et.al.	INR-1502,11,75	8	13.0 MeV to 16.6 MeV	
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	15.0 mb at 14.4 MeV	
			$^{116}_{48}Cd\ \sigma_{np}$			
73	OSL	Bjornstad,et.al.	RRL,14,247,73	1	2.200 mb at 14.7 MeV	$^{27}Al\ \sigma_{np}$
			$_{49}In\ \sigma_{tot}$			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	32	.120 MeV to .660 MeV	
			$_{49}In\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.000 keV to 84.0 keV	
66	FEI	Koroleva	AE,20,431,66	1	.778 b at 24.0 keV	
65	FEI	Belanova	AE,19,(1),3,65	1	.778 kb at 24.0 keV	
			$_{50}Sn\ \sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	.128 kb at 24.0 keV	
			$^{117}_{50}Sn\ \sigma_{np}$			
75	IBJ	Grochulski,et.al	APP/B,6,139,75	9	13.0 MeV to 17.3 MeV	
			$_{51}Sb\ \sigma_{el}$			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.975 b at .870 MeV	C σ_{el}
			$_{51}Sb\ \sigma_{n\gamma}$			
68	FEI	Tolstikov	AE,24,(6),576,68	18	.200 MeV to 2.723 MeV	
65	FEI	Belanova	AE,19,(1),3,65	1	.580 kb at 24.0 keV	
			$^{121}_{51}Sb\ \sigma_{n\gamma}$			
68	FEI	Tolstikov	AE,24,(6),576,68	28	11.0 keV to 3.130 MeV	
			$^{123}_{51}Sb\ \sigma_{n\gamma}$			
68	FEI	Tolstikov	AE,24,(6),576,68	18	.200 MeV to 2.723 MeV	
			$^{127}_{53}I\ \sigma_{n\gamma}$			
75	TIT	Yamamuro,et.al.	75WASH,HB-22,75	1	.760 b at 23.7 keV	
70	BOS	Majumder	IJP,44,204,70	1	2.740 mb at 14.8 MeV	
			$^{133}_{55}Cs\ \sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	2.500 b at 14.8 MeV	
			$_{56}Ba\ \sigma_{el}$			
72	ANL	Cox,et.al.	ANL-7935,72	1	6.698 b at .884 MeV	C σ_{el}
			$^{136}_{56}Ba\ \sigma_{np}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	8.000 b at 14.8 MeV	
			$^{138}_{56}Ba\ \sigma_{n\gamma}$			
70	BOS	Majumder	IJP,44,204,70	1	1.120 mb at 14.8 MeV	
			$^{138}_{56}Ba\ \sigma_{np}$			
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	3.800 mb at 14.4 MeV	$^{56}Fe\ \sigma_{np}$
68	KAZ	Levkovsky	YF,8,(1),7,68	1	2.400 b at 14.8 MeV	
			$_{57}La\ \sigma_{tot}$			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	642	.700 MeV to 9.034 MeV	
			$^{139}_{57}La\ \sigma_{tot}$			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	28	.120 MeV to .640 MeV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{139}_{57}La\ \sigma_{np}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	5.300 b at 14.8 MeV	
			$^{58}Ce\ \sigma_{tot}$			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	642	.700 MeV to 9.034 MeV	
			$^{140}_{58}Ce\ \sigma_{np}$			
70	GIT	Wen-Deh-Lu+	PR/C,1,358,70	1	6.300 mb at 14.4 MeV	$^{56}Fe\ \sigma_{np}$
			$^{142}_{58}Ce\ \sigma_{n\alpha}$			
68	KAZ	Levkovsky	YF,8,(1),7,68	1	4.500 b at 14.8 MeV	
			$^{141}_{59}Pr\ \sigma_{n\gamma}$			
70	BOS	Majumder	IJP,44,204,70	1	2.190 mb at 14.8 MeV	
			$^{141}_{59}Pr\ \sigma_{n2n}$			
75	ARK	Sigg,et.al.	JIN,37,631,75	1	1.570 b at 14.8 MeV	
			$^{60}Nd\ \sigma_{tot}$			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	646	.700 MeV to 9.065 MeV	
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	$^{197}Au\ \sigma_{n\gamma}$
			$^{60}Nd\ \sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	$^{197}Au\ \sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	58.0 b at thermal	$^{197}Au\ \sigma_{n\gamma}$
			$^{64}Gd\ \sigma_{tot}$			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	646	.700 MeV to 9.065 MeV	
			$^{154}_{64}Gd\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{155}_{64}Gd\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{156}_{64}Gd\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{157}_{64}Gd\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{158}_{64}Gd\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{160}_{64}Gd\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{159}_{65}Tb\ \sigma_{tot}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	$^{197}Au\ \sigma_{n\gamma}$
			$^{159}_{65}Tb\ \sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	$^{197}Au\ \sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	25.5 b at thermal	$^{197}Au\ \sigma_{n\gamma}$
			$^{164}_{66}Dy\ \sigma_{tot}$			
7	IJI	Vertebnyj	UFZ,15,(12),2050,70	51	1.000 eV to .322 keV	
			$^{165}_{67}Ho\ \sigma_{tot}$			
74	GLS	Kellie,et.al.	JP/A,7,1758,74	588	.800 MeV to 9.023 MeV	
			$^{165}_{67}Ho\ \sigma_{n\gamma}$			
75	TIT	Yamamuro,et.al.	75WASH,HB-22,75	1	1.260 b at 23.7 keV	
			$^{68}Er\ \sigma_{tot}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	$^{197}Au\ \sigma_{n\gamma}$
			$^{68}Er\ \sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	4	.0330 eV to .270 eV	$^{197}Au\ \sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	.175 kb at thermal	$^{197}Au\ \sigma_{n\gamma}$
			$^{166}_{68}Er\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{167}_{68}Er\ \sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	31	6.040 keV to 68.2 keV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{168}_{68}Er$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{170}_{68}Er$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.280 keV to 68.2 keV	
			$^{169}_{69}Tm$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	14	8.440 MeV to 14.8 MeV	
			$^{171}_{70}Yb$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,20,1092,74	32	5.000 keV to 80.0 keV	
			$^{172}_{70}Yb$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,20,1092,74	32	5.000 keV to 80.0 keV	
			$^{173}_{70}Yb$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,20,1092,74	32	5.000 keV to 80.0 keV	
			$^{174}_{70}Yb$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,20,1092,74	32	5.000 keV to 80.0 keV	
			$^{176}_{70}Yb$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,20,1092,74	32	5.000 keV to 80.0 keV	
			$^{175}_{71}Lu$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	14	8.440 MeV to 14.8 MeV	
			$_{73}Ta$ $\sigma_{n\gamma}$			
70	BNL	Malik,et.al.	NIM,86,83,70	8	.0700 eV to .835 eV	^{197}Au $\sigma_{n\gamma}$
70	BNL	Malik,et.al.	NIM,86,83,70	1	21.2 b at thermal	^{197}Au $\sigma_{n\gamma}$
			$^{181}_{73}Ta$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	15	.121 MeV to 1.660 MeV	^{235}U σ_{nf}
			$^{181}_{73}Ta$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	14	8.440 MeV to 14.8 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{74}W$ $\sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	.300 kb at 24.0 keV	
			$_{74}W$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	15	7.930 MeV to 14.8 MeV	
			$^{186}_{74}W$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	15	.121 MeV to 1.660 MeV	^{235}U σ_{nf}
			$^{185}_{75}Re$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	8	.121 MeV to .935 MeV	^{235}U σ_{nf}
			$^{187}_{75}Re$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	8	.121 MeV to .935 MeV	^{235}U σ_{nf}
			$^{186}_{76}Os$ σ_{n2n}			
75	DEB	Kovacs	URAY,75	1	1.403 b at 14.70 MeV	
			$^{188}_{76}Os$ σ_{np}			
75	DEB	Kovacs	URAY,75	1	6.000 mb at 14.70 MeV	
			$^{189}_{76}Os$ σ_{np}			
75	DEB	Kovacs	URAY,75	1	6.500 mb at 14.70 MeV	
			$^{192}_{76}Os$ $\sigma_{n\gamma}$			
75	DEB	Kovacs	URAY,75	1	4.000 mb at 14.70 MeV	
			$^{192}_{76}Os$ $\sigma_{n\alpha}$			
75	DEB	Kovacs	URAY,75	1	.150 mb at 14.70 MeV	
			$^{191}_{77}Ir$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	8	.121 MeV to .935 MeV	^{235}U σ_{nf}
			$^{193}_{77}Ir$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	8	.121 MeV to .935 MeV	^{235}U σ_{nf}

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$_{78}Pt$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	15	7.930 MeV to 14.8 MeV	
			$^{198}_{78}Pt$ $\sigma_{n\gamma}$			
73	DEB	Uray,et.al.	AK,15,(3),161,73	1	12.0 mb at 15.00 MeV	^{198}Pt σ_{n2n}
			$^{198}_{78}Pt$ σ_{n2n}			
74	SLO	Hlávac	HLAVAC,74	1	1.810 b at 14.7 MeV	
			$^{198}_{78}Pt$ σ_{nd}			
73	DEB	Uray,et.al.	AK,15,(3),161,73	1	.400 mb at 15.00 MeV	^{198}Pt σ_{n2n}
			$^{198}_{78}Pt$ $\sigma_{n\alpha}$			
73	DEB	Uray,et.al.	AK,15,(3),161,73	1	.200 mb at 15.00 MeV	^{198}Pt σ_{n2n}
			$^{197}_{79}Au$ $\sigma_{n\gamma}$			
74	FEI	Shorin	YF,19,5,74	32	5.000 keV to 84.0 keV	
74	GEL	Liskien,et.al.	NEANDC(E)-161U,7,74	19	.200 MeV to 3.000 MeV	
74	LRL	Lindner,et.al.	UCRL-75838,74	15	.121 MeV to 1.660 MeV	^{235}U σ_{nf}
65	FEI	Belanova	AE,19,(1),3,65	1	.570 kb at 24.0 keV	
			$^{197}_{79}Au$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	14	8.440 MeV to 14.8 MeV	
			$_{80}Hg$ $\sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	.233 kb at 24.0 keV	
			$_{81}Tl$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	110	.110 MeV to .650 MeV	
			$_{82}Pb$ σ_{tot}			
72	KUR	Adamchuk	71KIEV,1,124,72	10	21.4 eV to .396 keV	
			$_{82}Pb$ $\sigma_{n\gamma}$			
65	FEI	Belanova	AE,19,(1),3,65	1	43.0 b at 24.0 keV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{209}_{83}Bi$ σ_{tot}			
74	SHI	Chi-Fong Ai+	NSF,11,179,74	33	1.000 MeV to 4.830 MeV	
			$^{209}_{83}Bi$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	15	7.930 MeV to 14.8 MeV	
			$^{209}_{83}Bi$ σ_{nem}			
71	FEI	Salnikov	SNP,122,620,71	1	4.040 b at 14.4 MeV	
			$^{226}_{88}Ra$ σ_{tot}			
71	ITE	Kalebin	YF,14,(1),22,71	203	.0221 eV to .327 keV	
			$^{232}_{90}Th$ σ_{tot}			
74	ANL	Smith	SMITH,74	513	.102 MeV to 1.463 MeV	
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	10	.150 MeV to .600 MeV	
			$^{232}_{90}Th$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	4.682 b at .873 MeV	C σ_{el}
			$^{232}_{90}Th$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	14	.121 MeV to 1.660 MeV	^{235}U σ_{nf}
66	FEI	Koroleva	AE,20,(5),431,66	1	.611 kb at 24.0 keV	
65	FEI	Belanova	AE,19,(1),3,65	1	.615 kb at 24.0 keV	
			$_{92}U$ σ_{tot}			
68	DKE	Divadeenam,et.al.	DA/B,28,3834,68	10	.150 MeV to .600 MeV	
			$_{92}U$ σ_{el}			
72	ANL	Cox,et.al.	ANL-7935,72	1	5.050 b at .872 MeV	C σ_{el}
			$^{233}_{92}U$ σ_{tot}			
74	GEL	Deruytter	DERUYTTER,74	1359	.0182 eV to 30.0 eV	^{10}B $\sigma_{n\alpha}$
73	IJI	Vertebnyj	YFI-16,8,73	29	.0325 eV to .939 eV	
			$^{233}_{92}U$ σ_{sot}			
73	IJI	Vertebnyj	YFI-16,8,73	11	.0970 eV to .460 eV	

Additional Bibliography

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{233}_{92}U$ σ_{nf}			
74	GEL	Deruytter	DERUYTTER,74	1359	.0182 eV to 30.0 keV	
			$^{235}_{92}U$ σ_{tot}			
73	IJI	Vertebnyj	YFI-16,8,73	27	.0425 eV to .939 eV	
			$^{235}_{92}U$ σ_{nf}			
75	BRC	Cance,et.al.	75KIEV,,,75	1	2.000 b at 14.6 MeV	
73	CCP	Kuks	73KIEV,4,18,73	1	1.310 b at 2.500 MeV	
72	HAR	Gayther,et.al.	72VIENNA,201,72	304	1.013 keV to 1.004 MeV	
65	DUB	Van Shi-Di	AE,19,(1),43,65	2913	.220 eV to 30.6 keV	
			$^{235}_{92}U$ α			
72	FEI	Dvukhsherstnov+	71KIEV,2,318,72	1	.490 b at 2.000 keV	
72	FEI	Dvukhsherstnov+	71KIEV,2,318,72	1	.430 b at 24.5 keV	
64	ITE	Ignatiev	AE,16,(3),211,64	505	1.999 eV to 3.200 MeV	
			$^{238}_{92}U$ $\sigma_{n\gamma}$			
75	TIT	Yamamuro,et.al.	75WASH,HB-22,75	1	.500 b at 23.7 keV	
75	BNL	Rimawi,et.al.	BAP,20,173(IB8),75	1	.500 b at 24.3 keV	^{10}B $\sigma_{n\alpha}$
74	ANL	Poenitz	POENITZ,74	54	20.0 keV to 1.200 MeV	^{197}Au $\sigma_{n\gamma}$
74	LRL	Lindner,et.al.	UCRL-75838,74	15	.121 MeV to 1.660 MeV	^{235}U σ_{nf}
66	FEI	Koroleva	AE,20,(5),431,66	1	.380 kb at 24.0 keV	
			$^{238}_{92}U$ σ_{n2n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	15	7.930 MeV to 14.8 MeV	
			$^{238}_{92}U$ σ_{n3n}			
75	BRC	Frehaut,et.al.	75KIEV,,,75	7	11.9 MeV to 14.8 MeV	
			$^{238}_{92}U$ σ_{nf}			
75	BRC	Cance,et.al.	75KIEV,,,75	1	1.180 b at 14.6 MeV	
			$^{237}_{93}Np$ $\sigma_{n\gamma}$			
74	LRL	Lindner,et.al.	UCRL-75838,74	7	.121 MeV to .779 MeV	^{235}U σ_{nf}
			$^{237}_{93}Np$ σ_{nf}			
75	SAC	Plattard,et.al.	75KIEV,,,75	1592	99.9 keV to 2.100 MeV	

Yr	Lab	Author	Reference	Points	Range	Standard
			$^{239}_{94}Pu$ $\sigma_{n\gamma}$			
70	ITE	Beljaev	70HELSINKI,1,339,70	96	99.4 eV to 9.863 keV	
			$^{239}_{94}Pu$ σ_{nf}			
75	HAR	Gayther	75WASH,GB-6,75	294	1.005 keV to 1.004 MeV	
64	ITE	Ignatiev	AE,16,(3),211,64	19	3.170 eV to 30.2 eV	
70	ITE	Beljaev	70HELSINKI,1,339,70	96	99.4 eV to 9.863 keV	
			$^{239}_{94}Pu$ α			
74	FEI	Dvukhsherstnov	YFI-18,3,74	1	1.284 b at 2.000 keV	
74	FEI	Dvukhsherstnov	YFI-18,3,74	1	.384 b at 24.5 keV	
74	FEI	Dvukhsherstnov	YFI-18,3,74	1	.122 b at .140 MeV	
72	FEI	Dvukhsherstnov+	71KIEV,2,318,72	1	1.350 b at 2.000 keV	
72	FEI	Dvukhsherstnov+	71KIEV,2,318,72	1	.300 b at 24.5 keV	
71	FEI	Bergman	YF,14,(6),1123,71	25	.200 keV to 12.5 keV	
70	ITE	Beljaev	70HELSINKI,1,339,70	101	99.4 eV to 10.0 keV	
			$^{241}_{94}Pu$ σ_{nf}			
75	GEL	Wagemans,et.al.	75WASH,GB17,75	328	.0195 eV to .560 eV	
			$^{242}_{94}Pu$ $\sigma_{n\gamma}$			
74	RPI	Sanislo,et.al.	USNDC-11,220,74	251	6.271 keV to 87.0 keV	
			$^{241}_{95}Am$ σ_{tot}			
75	SAC	Derrien,et.al.	75WASH,GB26,75	13840	.785 eV to 1.077 keV	
			$^{241}_{95}Am$ σ_{nf}			
75	SAC	Derrien,et.al.	75WASH,GB26,75	2156	1.000 eV to 40.0 eV	
			$^{243}_{95}Am$ σ_{tot}			
74	MTR	Simpson	NSE,55,273,74	2337	.500 eV to 75.8 eV	
			$^{249}_{98}Cf$ σ_{nf}			
74	FEI	Fursov	YF,19,(1),50,74	13	.500 MeV to 7.000 MeV	
72	FEI	Fursov	AE,32,(2),178,72	7	.500 MeV to 5.020 MeV	

ENDF/B-IV Library Content

ENDF/B IV General Purpose Materials

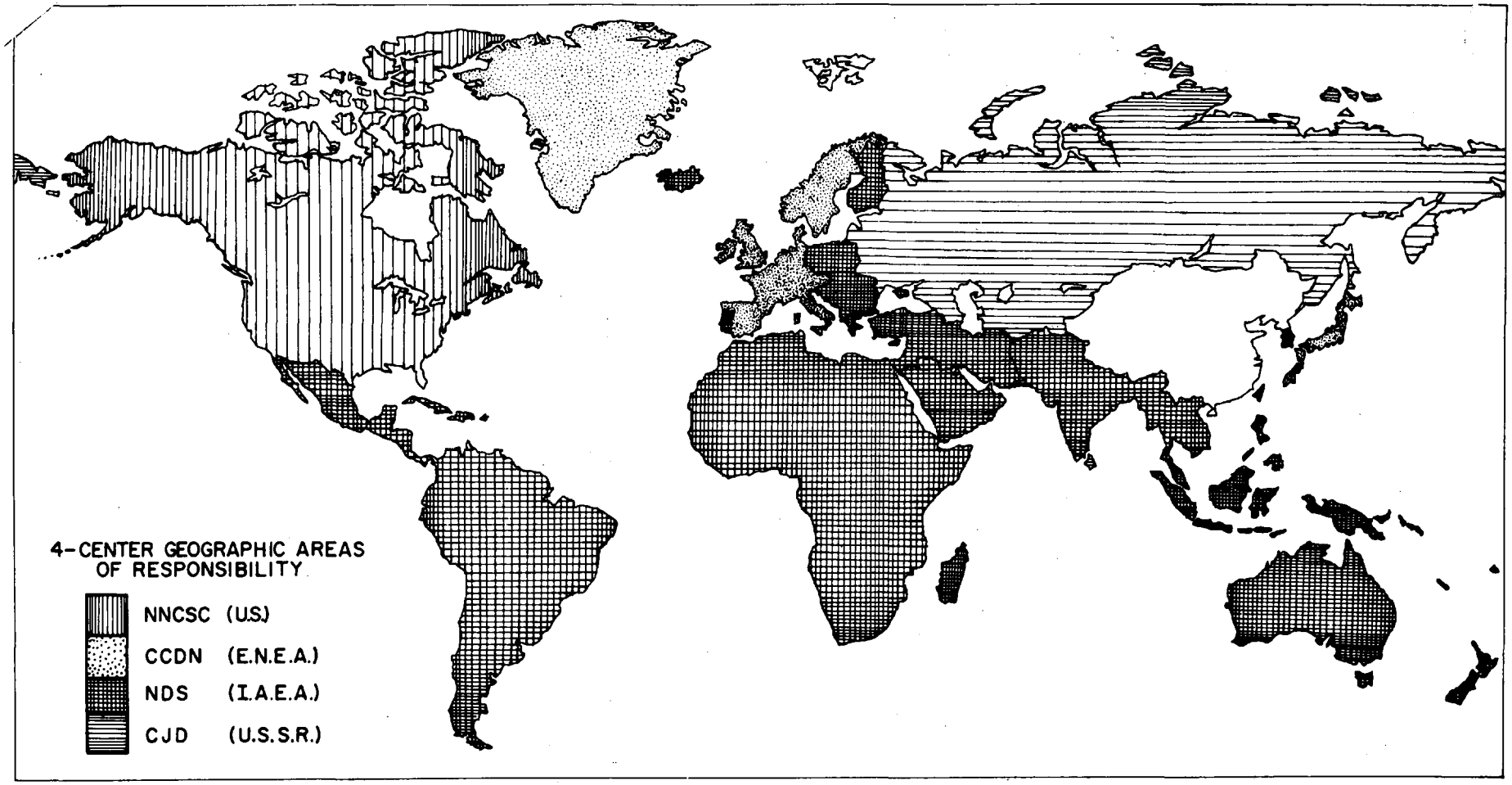
Sym	MAT	Lab	Author	Reviewer
$^{1}_{1}H$	1269	LASL	Stewart	Howerton
$^{2}_{1}H$	1120	BNW	Leonard	N.A.
$^{3}_{1}H$	1169	LASL	Stewart	
$^{3}_{2}He$	1146	LASL	Stewart	N.A.
$^{4}_{2}He$	1270	LASL	Nisley	
$^{6}_{3}Li$	1271	LASL	Labauve	Leonard
$^{7}_{3}Li$	1272	LASL	Labauve	Howerton
$^{9}_{4}Be$	1289	LLL	Howerton	Weisbin
$^{10}_{5}B$	1273	LASL	Hale	Leonard
$^{11}_{5}B$	1160	GE,BNL	Cowan	D.T.S.
$^{12}_{6}C$	1274	ORNL	Perey	Labauve
$^{14}_{7}N$	1275	LASL	Young	Labauve
$^{16}_{8}O$	1276	LASL	Young	Labauve
^{9}F	1277	ORNL	Perey	Grimesy
$^{23}_{11}Na$	1156	WARD	Paik	D.T.S.
^{12}Mg	1280	SAI	Drake	Fu
$^{27}_{13}Al$	1193	LASL	Young	Roussin
^{14}Si	1194	ORNL	Perey	Bhat
^{17}Cl	1149	GGA	Allen	D.T.S.
^{19}K	1150	GGA	Drake	D.T.S.
^{20}Ca	1195	ORNL	Perey	Maerker
^{22}Ti	1286	LLL	Howerton	Roussin
^{23}V	1196	ORNL	Penny	Young
^{24}Cr	1191	BNL	Prince	Maerker
$^{55}_{25}Mn$	1197	BNL	Takahashi	Roussin
^{26}Fe	1192	ORNL	Perey	Stewart
$^{59}_{27}Co$	1199	BNL	Krieger	Cobb
^{28}Ni	1190	BNL	Bhat	Maerker
^{29}Cu	1295	SAI	Drake	Perey
$^{93}_{41}Nb$	1189	ANL	Smith	Muir
^{42}Mo	1287	LLL	Howerton	Roussin
$^{99}_{43}Tc$	1137	B+W	Livolsi	D.T.S.
$^{103}_{45}Rh$	1125	B+W	Livolsi	D.T.S.
$^{107}_{47}Ag$	1138	BNL	Bhat	D.T.S.
$^{109}_{47}Ag$	1139	BNL	Bhat	D.T.S.
^{48}Cd	1281	UK,BNL	Pearlstein	Wheeler
$^{135}_{54}Xe$	1294	BNW	Leonard	D.T.S.
$^{133}_{55}Cs$	1141	BNL	Bhat	D.T.S.
$^{151}_{63}Eu$	1290	BNL	Takahashi	Schenter
$^{153}_{63}Eu$	1291	BNL	Takahashi	Schenter
^{64}Gd	1030	ANL	Pennington	D.T.S.
$^{164}_{66}Dy$	1031	BNW	Leonard	
$^{175}_{71}Lu$	1032	BNW	Leonard	

ENDF/B IV General Purpose Materials

Sym	MAT	Lab	Author	Reviewer
$^{176}_{71}Lu$	1033	BNW	Leonard	
$^{181}_{73}Ta$	1285	LLL	Howerton	Young
$^{182}_{73}Ta$	1127	AI	Otter	
$^{182}_{74}W$	1128	AI,LASL	Alter	
$^{183}_{74}W$	1129	AI,LASL	Alter	
$^{184}_{74}W$	1130	AI,LASL	Alter	
$^{186}_{74}W$	1131	AI,LASL	Alter	
$^{185}_{75}Re$	1083	GE	Henderson	D.T.S.
$^{187}_{75}Re$	1084	GE	Henderson	D.T.S.
$^{197}_{79}Au$	1283	BNL	Goldberg	Leonard
^{82}Pb	1288	ORNL	Perey	Livolsi
$^{232}_{90}Th$	1296	B+W	Wittkopf	Mathews
$^{233}_{91}Pa$	1297	BAPL	Young	D.T.S.
$^{233}_{92}U$	1260	BAPL		Weston
$^{234}_{92}U$	1043	GGA	Drake	D.T.S.
$^{235}_{92}U$	1261	TASK F.	Stewart	Hutchins
$^{236}_{92}U$	1163	SRL	Mccrosson	D.T.S.
$^{238}_{92}U$	1262	TASK F.	Paik	Stewart
$^{237}_{93}Np$	1263	ANC,LASL	Smith	Carlson
$^{238}_{94}Pu$	1050	AI	Alter	D.T.S.
$^{239}_{94}Pu$	1264	TASK F.	Hutchins	Paik
$^{240}_{94}Pu$	1265	TASK F.	Hummel	Mccrosson
$^{241}_{94}Pu$	1266	TASK F.	Hummel	Hunter
$^{242}_{94}Pu$	1161	AI,ANC	Alter	D.T.S.
$^{241}_{95}Am$	1056	ANC	Smith	D.T.S.
$^{243}_{95}Am$	1057	ANC	Smith	D.T.S.
$^{244}_{96}Cm$	1162	AI,ANC	Alter	D.T.S.

ENDF/B-IV Dosimetry Materials

Sym	MAT	Lab	Author	Reaction
$^{32}_{16}S$	6407	ANL	Dudey+	(n,p)
$^{45}_{21}Sc$	6415	BNL	Magurno+	(n,γ)
$^{46}_{22}Ti$	6421	BNL	Magurno	(n,p)
$^{47}_{22}Ti$	6422	BNL	Magurno	(n,p),(n,np)
$^{48}_{22}Ti$	6423	BNL	Magurno	(n,p),(n,np)
$^{54}_{26}Fe$	6417	HEDL	Schenter	(n,p)
$^{56}_{26}Fe$	6410	ANL	Dudey+	(n,p)
$^{58}_{28}Ni$	6419	BNL,HEDL	Bhat,Schenter	(n,2n),(n,p)
$^{60}_{28}Ni$	6420	BNL	Bhat	(n,p)
$^{63}_{29}Cu$	6411	A.I.	Alter	(n,γ),(n,α)
$^{65}_{29}Cu$	6412	A.I.	Rose	(n,2n)
$^{115}_{49}In$	6416	HEDL	Schmittroth	(n,γ)
$^{127}_{53}I$	6414	STF	Sher	(n,2n)



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