

Software for compilation and evaluation used in CNDC

Workshop on Data Compilation of the
Multinationally-maintained Experimental Nuclear Reaction
Database (EXFOR)

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China Nuclear Data Center
China Institute of Atomic Energy (CIAE)

May 25, 2011



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- Chinese tools
- Other tools
- Feedback on ExfData(Ver.1.92)

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Short History

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Core Center

Country	Center	Joined
U.S.A	US National Nuclear Data Center	1966
France	OECD NEA Data Bank	1966
Austria	IAEA Nuclear Data Section	1966
Russia	Russian Nuclear Data Center	1966

Short History

- **1977** Neutron center network and charged-particle network were merged as NRDC(Nuclear Reaction Data Center) network
- **1984** China joined into IAEA
- **1987** CNDC joined into NRDC

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Country	Center	Joined
Russia	Nucl. Struc. & Nucl. Reac. Data Centre	1974
Japan	Japan Nuclear Reaction Data Center	1975
Russia	Centre for Exp. Photonuclear Data	1982
<i>China</i>	<i>China Nuclear Data Center</i>	<i>1987</i>
Japan	Nuclear Data Center	1991
Korea	Nuclear Data Evaluation Laboratory	2000
India	Nuclear Data Section	2008

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Short History

ZHUANG Youxiang
LIANG Qichang

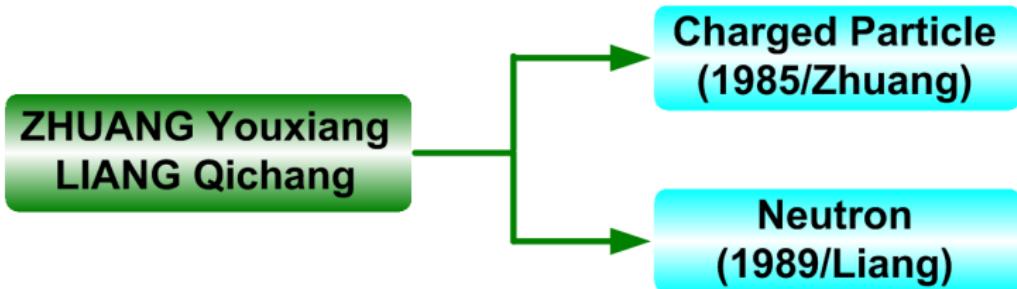
Short History

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LIANG Qichang

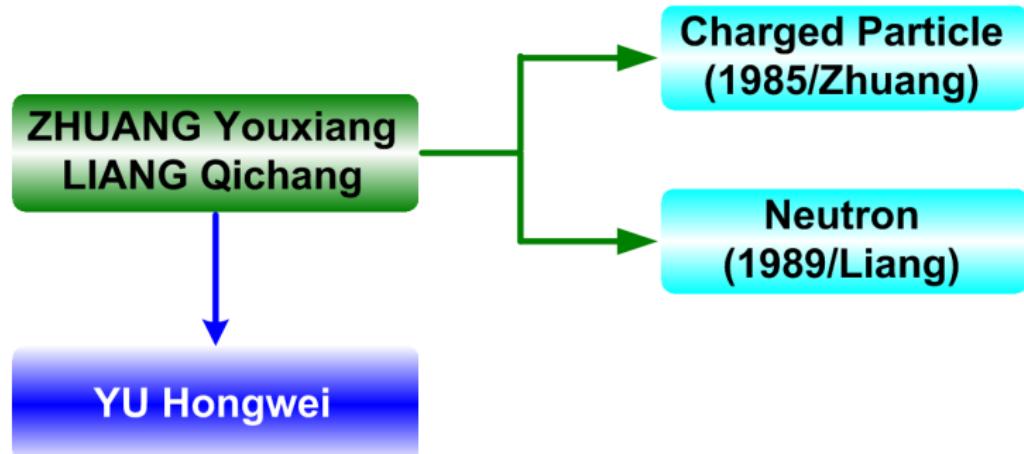
Charged Particle
(1985/Zhuang)



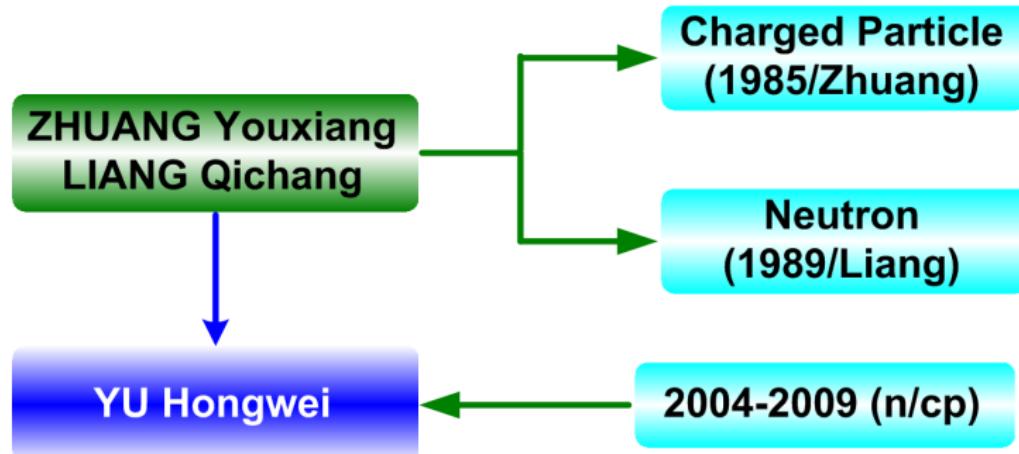
Short History



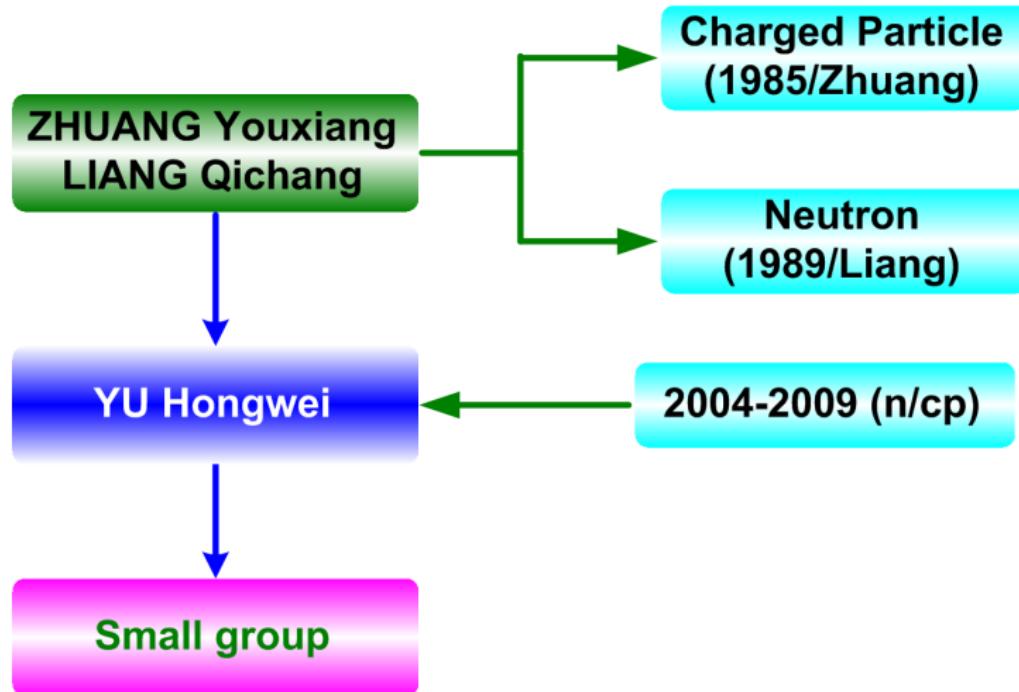
Short History



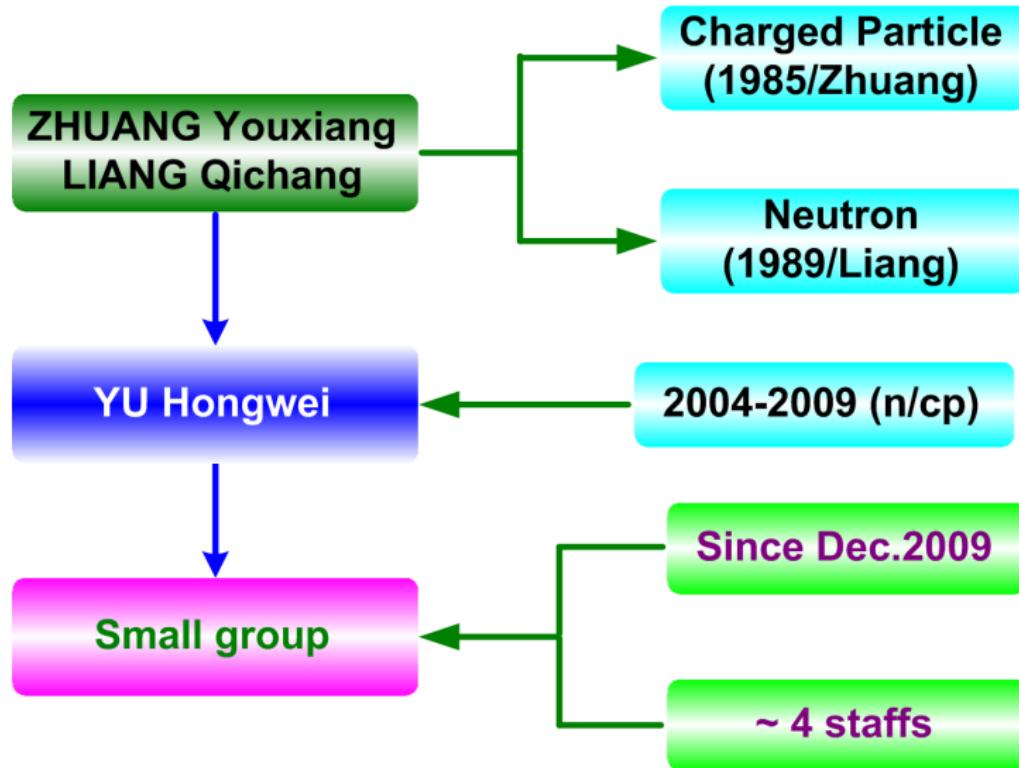
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Huangshan Mountains Meeting (May 1985)

- ① IAE-CP held a working meeting about compilation in EXFOR
- ② 15 charged particle X4 entries were transmitted to IAEA
- ③ Neutron X4 started at Jan. 1989



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01 Li Zhichang+	Yuanzineng Kexue Jishu 3(1977)229
02 Liang Qichang+	Yuanzineng Kexue Jishu 1(1977)10
03 Mao Zhenlin+	Conf. on Low Energy Nucl. Phys.3(1972)
04 Yuan Rongfang+	Chin. J. Nucl. Phys. 3(1981)155
05 Jiang Chenglie+	Conf. on Low Energy Nucl. Phys.3(1972)
06 Sun Hancheng+	Yuanzineng Kexue Jishu 3(1984)329
07 Yan Chen+	Chin. J. Nucl. Phys. 2(1980)137
08 Sun Hancheng+	Yuanzineng Kexue Jishu 2(1981)185
09 Ma Weiyi+	Chin. J. Nucl. Phys. 2(1980)239
10 Shen Wenqen+	High Energ.Phys.Nucl.Phys.1(1977)70
11 Tao Zhenlan+	Canadian Nucl Technol.45(1987)
12 X.Long+	NST-001 (1985)
13 Long Xianguan+	NST-003 (1989)
14 Tao Zhenlan+	Chin. J. Nucl. Phys. 3(1981)242
15 Tao Zhenlan+	Yuanzineng Kexue Jishu 5(1983)506

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SUBENT	32501001	900213	20050926	0000
BIB	15	33		
INSTITUTE	(3CPRLNZ)			
REFERENCE	#(3CPRLNZ) Lanzhou Univ., Lanzhou, China (J, PHR, 13, (4), 353, 8804) IN CHINESE			
AUTHOR	# (J.PHE,13,(4),353,8804) Journ.: High Energy Physics and Nucl.Phys. (WANG HUAMIN, WANG YONGCHANG, YUAN JUNQIAN, WANG XUEZHI, REN ZHONGLIANG)			
TITLE	THE CROSS SECTION MEASUREMENT FOR THE AG-107(N,2N)AG-			
SAMPLE	106M REACTION NATURAL SILVER, DIAMETER=20 MM, THICKNESS ABOUT 0.45 MM (CCW) 400 KEV NEUTRON GENERATOR AT LANZHOU UNIVERSITY.			
FACILITY	#(CCW) Cockcroft-Walton accelerator			
INC-SOURCE	(D-T) 360 KEV DEUTERON ON 1.6 MILLI-GRAM/CM ² , TITANIUM TRITIUM TARGET, NEUTRON FLUX ABOUT (1-2)*E+11 NEUTRONS/ 4PI/SEC			
METHOD	(ACTIV) #(ACTIV) Activation			
DETECTOR	(HPGE) CO-AXIAL HIGH PURITY GERMANIUM DETECTOR(FWHM 1.9 KEV AT 1330 KEV) FOR GAMMA RAY MEASUREMENT. GAMMA-RAY STANDARD SOURCES WAS USED FOR DETECTOR EFFI- CIENCY CALIBRATION.			
MONITOR	#(HPGE) Hyperpure Germanium detector (13-AL-27(N,A)11-NA-24,,SIG) TAKEN FROM S.TAGESEN AND H. VONACH, PHYSICA DATA 13-1(1981)			
PART-DET	(DG)			
CORRECTION	CORRECTION APPLIED FOR GAMMA SELF-ABSORPTION IN SAMPLE GAMMA-CASCADE COINCIDENCE			
ERR-ANALYS	MAIN ERROR SOURCES AS FOLLOWS 0.4-0.8 PER CENT STANDARD CROSS-SECTION 0.6-1.5 PER CENT STATISTICAL 3.0 PER CENT CALIBRATION OF DETECTOR EFFICIENCY 0.18 PER CENT WEIGHT OF SAMPLE 0.2 PER CENT SELF-ABSORPTION CORRECTION 0.2 PER CENT GAMMA-CASCADE COINCIDENCE CORRECTION			
STATUS	DATA TAKEN FROM TABLE 1 OF CHINESE J. OF HIGH ENERGY PHYSICS AND NUCLEAR PHYSICS(PHYSICA ENERGIAE FORTIS ET PHYSICA NUCLEARIS),13(4),353,8804.			
HISTORY	(891015C) COMPILED BY LIANG QICHANG AT CNDC			
ENDBIB	33			
NOCOMMON	0	0		
RNDSUBENT	36			
SUBENT	32501002	900213	20050926	0000
BIB	1	1		
REACTION	(47-AG-107(N,2N) 47-AG-106-M,,SIG) #(47-AG-107(N,2N)47-AG-106-M,,SIG)			
ENDBIB	1			
NOCOMMON	0	0		
DATA	3	6		
EN	DATA	DATA-ERR		
MEV	MB	MB		
13.5	469.	22.		
13.6	480.	22.		
13.9	503.	24.		
14.1	538.	25.		
14.35	555.	25.		
14.73	572.	26.		
RNDATA		8		

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Responsibility Journals & X4 Compilation Status



Responsibility of CNDC

- ☞ Compilation of numerical data and related information (X4 & CINDA) for nuclear reaction measurements performed in China
- ☞ Measurements are published in Chinese journal
- ☞ Compilation of bibliographic references (CINDA) to microscopic neutron reaction data and related data published in Chinese

Original main journals

- ① High Energy Physics and Nuclear Physics (CHN/1977;ENG/2007)
- ② Atomic Energy Science and Technology(CHN/1959)
- ③ Journal of Nuclear and Radiochemistry(CHN/1979)
- ④ Nuclear Physics Review (CHN/1984)
- ⑤ Nuclear Techniques (CHN/1978)
- ⑥ *Chinese journal of Nuclear Physics* (ENG/79-98)

- ⑦ Communication of Nuclear Data Progress (ENG/89)

Present main journals

- ① Chinese Physics C(ENG/2007;HEN)
- ② Atom. Energy Sci. & Tech.(CHN/1959)
- ③ J. of Nucl. & Radiochemistry(CHN/1979)
- ④ Nuclear Physics Review(CHN/1984)
- ⑤ Nuclear Techniques(CHN/1978;+ENG/1989)
- ⑥ Com. of Nucl. Data Prog.(ENG/1989)
- ⑦ Nuclear Science and Techniques(ENG/1989)
- ⑧ Chinese Physics Letters(ENG/1984)
- ⑨ Chinese Physics B (ENG)
- ⑩ Acta Physica Sinica(ENG/1933)
- ⑪ Conference, Workshop etc.

Responsibility Journals & X4 Compilation Status



X4 compilation group (~4)

- Small Group: ~ 4 staffs
- Participants: Ge, Zhuang, Wang, Tao, Chen
- Time consuming: 100% (×), 50% (×), ≈ 30% (?)

Task assign

- Respond to scan 1~2 journals
- Collect the scan results of all responsible journals ...
- Assign neutron & charged particle tasks
- Word → Elec. Table → Website(test)

Responsibility Journals & X4 Compilation Status



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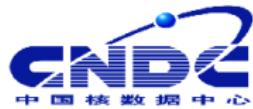
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详情	1	S, JAEA-C-	Preliminary Measurement of Neutron Emission Spectra for Beryllium at 21.65 MeV	JAEA-Conf-2009-004	2009-004	169	3CPRAEP	2010010	Changlin LAN	Allocated	Compiled	10	Guochang CHEN	32682	n
详情	2	S, ISINH-	Cross section measurements for the $^{143}\text{Nd}(\text{n}, \alpha)^{140}\text{Ce}$ reaction at 4.0, 5.0 and 6.0 MeV	17	1	323	3CPFRBJG	201007	Yu M. Gledenov	Allocated	Compiled	1	Guochang CHEN	32681	n
详情	3	S, ISINH-	Cross section measurements for the $^{143}\text{Nd}(\text{n}, \alpha)^{140}\text{Ce}$ reaction at 4.0, 5.0 and 6.0 MeV	17	1	323	3CPFRBJG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Guochang CHEN	32681	n
详情	4	J, RCA	Cross section measurements of $(\text{n}, 2\text{n})$, (n, p) and (n, α) reactions on gadolinium isotopes in the neutron energy range of 13.5 to 14.8 MeV 文献	96	3	127	3CPFRBPC	201003	Junhua Luo	Allocated	Compiled	6	Guochang CHEN	32680	n
详情	5	J, PR/C	Cross-section measurement and analysis for the $^{149}\text{Sm}(\text{n}, \alpha)^{146}\text{Nd}$ reaction at 8.0 MeV	82	1	14601	3CPFRBJG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Jimin YANG	32679	n
详情	6	J, NP/A	Lithium induced nuclear reactions of astrophysical interest	834	1-4	651c	3CPRAEP	201003	W.P. Liu	Allocated		7	Xi TAO	S0070	cp
详情	7	J, NP/A	Competition between fusion-fission and quasi fission processes in $^{325+184}\text{Fe}$ reaction	834	1-4	201c	3CPRAEP	201003	C. L. Zhang	Allocated		7		S0069	cp
详情	8	J, NP/A	Elastic resonance scattering of $^{13}\text{N}+\text{p}$ and $^{17}\text{F}+\text{p}$	834	1-4	100c	3CPRAEP	201003	T.B. Wang	Allocated		7	Xi TAO	S0068	cp
详情	9	J, NIM/B	Development of laboratory standards for AMS measurement of ^{237}Ra	268	11-12	1949	3CPRLNZ	201006	Xianggao Wang	Allocated	Compiled	3	Youxiang ZHUANG	32683	n
详情	10	J, NIM/B	Measurements of the $^{89}\text{Y}(\text{n}, \gamma)^{90m}\text{T}$ cross-section in the neutron energy range of 13.5-14.6 MeV	268	9	1367	3CPRLNZ	201005	Fengqun Zhou	Allocated	Compiled	4	Youxiang ZHUANG	32678	n



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详情	5	J, PR/C	Cross-section measurement and analysis for the 140 Sn(n,α)146 Nd reaction at 6.0 MeV		82	1	14601	3CPRBIG	201007	Tu. M. Gledenov	Allocated	Compiled	1	Jimin WANG	32679	n
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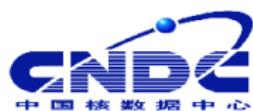
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修改 详情	1	S, JAEA-C-	Preliminary Measurement of Neutron Emission Spectra for Beryllium at 21.65 MeV	JAEA-Conf-2009-004	2009-004	169	3CPRAEP	200910	Changlin LAN	Allocated	Compiled	10	Guochang CHEN	32682	n
修改 详情	2	S, ISINN-	Cross section measurements for the 143Md(n,α)140Ce reaction at 4.0, 5.0 and 6.0 MeV	17	1	323	3CPRBJG	201007	Yu M Gledenov	Allocated	Compiled	1	Guochang CHEN	32681	n
修改 详情	3	S, ISINN-	Cross section measurements for the 143Md(n,α)140Ce reaction at 4.0, 5.0 and 6.0 MeV	17	1	323	3CPRBJG	201007	Yu M Gledenov	Allocated	Compiled	1	Guochang CHEN	32681	n
修改 详情	4	J, RCA	Cross section measurements of (n, $2n$), (n, p) and (n, n') reactions on gadolinium isotopes in the neutron energy range of 13.5 to 14.8 MeV 文献2	96	3	127	3CPRNPC	201003	Junhus Luo	Allocated	Compiled	6	Guochang CHEN	32680	n
修改 详情	5	J, PR/C	Cross-section measurement and analysis for the 149 Sm(n, α) 146 Nd reaction at 6.0 MeV	82	1	14601	3CPRBJG	201007	Yu M Gledenov	Allocated	Compiled	1	Jimin WANG	32679	n
修改 详情	6	J, NP/A	Lithium induced nuclear reactions of astrophysical interest	834	1-4	651c	3CPRAEP	201003	W.P. Liu	Allocated		7	Xi TAO	S0070	cp
修改 详情	7	J, NP/A	Competition between fusion-fission and quasi fission processes in 32S+184W reaction	834	1-4	201c	3CPRAEP	201003	C. L. Zhang	Allocated		7		S0069	cp
修改 详情	8	J, NP/A	Elastic resonance scattering of 13Mtp and 17Ftp	834	1-4	100c	3CPRAEP	201003	Y. B. Wang	Allocated		7	Xi TAO	S0068	cp
修改 详情	9	J, NIM/B	Development of laboratory standards for AMS measurement of 23Tlp	268	11-12	1949	3CPRLNZ	201006	Xianggao Wang	Allocated	Compiled	3	Youxiang ZHUANG	32683	n
修改 详情	10	J, NIM/B	Measurements of the 89Y(n, γ)90m cross-section in the neutron energy range of 13.5-14.6 MeV	268	9	1987	3CPRLNZ	201005	Fengqun Zhou	Allocated	Compiled	4	Youxiang ZHUANG	32678	n

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修改 详情	2	S, ISINN-	Cross section measurements for the 143Nd(n,α)140Ce reaction at 4.0, 5.0 and 6.0 MeV	17	1	323	3CPRBIG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Gaochang CHEN	32681	n
修改 详情	3	S, ISINN-	Cross section measurements for the 143Nd(n,α)140Ce reaction at 4.0, 5.0 and 6.0 MeV	17	1	323	3CPRBIG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Gaochang CHEN	32681	n
修改 详情	4	J, RIA	Cross section measurements of (n, 2n), (n, p) and (n, n') reactions on gadolinium isotopes in the neutron energy range of 13.5 to 14.8 MeV 文献2	98	3	127	3CPRNPC	201003	Junhua Luo	Allocated	Compiled	6	Gaochang CHEN	32680	n
修改 详情	5	J, PR/C	Cross-section measurement and analysis for the 149 Sm(n,α) 146 Nd reaction at 6.0 MeV	82	1	14601	3CPRBIG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Jimin WANG	32679	n
修改 详情	6	J, NP/A	Lithium induced nuclear reactions of astrophysical interest	834	1-4	651c	3CPRAEP	201003	W.P. Liu	Allocated		7	Xi TAO	S0070	cp
修改 详情	7	J, NP/A	Competition between fusion-fission and quasi fission processes in 32S+184W reaction	834	1-4	201c	3CPRAEP	201003	C. L. Zhang	Allocated		7		S0069	cp
修改 详情	8	J, NP/A	Elastic resonance scattering of 138Rb and 17F+p	834	1-4	100c	3CPRAEP	201003	Y. B. Wang	Allocated		7	Xi TAO	S0068	cp
修改 详情	9	J, NIM/B	Development of laboratory standards for AMS measurement of 237Np	268	11-12	1949	3CPRLNZ	201006	Xianggao Wang	Allocated	Compiled	3	Youxiang ZHUANG	32683	n
修改 详情	10	J, NIM/B	Measurements of the 89Y(n,γ)90mY cross-section in the neutron energy range of 13.5-14.6 MeV	268	9	1367	3CPRLNZ	201005	Fengqun Zhou	Allocated	Compiled	4	Youxiang ZHUANG	32678	n

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num 文献缩写 全名

修改	删除	1	J, CPL	Chinese Physics Letters (中国物理快报)
修改	删除	2	J, HEN	Chinese Physics C (中国物理 C/高能物理与核物理)
修改	删除	3	J, CNPR	Nuclear Physics Review (原子核物理评价)
修改	删除	4	J, CST	Atomic Energy Science and Technology (原子能科学技术)
修改	删除	5	J, ARI	Applied Radiation and Isotopes
修改	删除	6	J, EPJ/A	European Physical Journal A: Hadrons and Nuclei
修改	删除	7	J, IPC	Radiation Physics and Chemistry
修改	删除	8	J, JP/G	Jour. of Physics, Part G (Nucl. and Part. Phys.)
修改	删除	9	J, JRN	Journal of Radioanalytical and Nuclear Chemistry
修改	删除	10	J, NIM/A	Journal of Nucl. Instrum. Methods in Physics Res., Sect.A
修改	删除	11	J, NIM/B	Journal of Nucl. Instrum. Methods in Physics Res., Sect.B
修改	删除	12	J, NP/A	Nuclear Physics, Section A
修改	删除	13	J, PR/C	Physical Review, Part C, Nuclear Physics
修改	删除	14	J, RCA	Radiochimica Acta
修改	删除	15	S, ISINN-	Int. Sem. on Interactions of Neutrons with Nuclei
修改	删除	16	S, JAEA-C-	JAEA Conference proceedings

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修改 详情	1	S, JAEA-C-	Preliminary Measurement of Neutron Emission Spectra for Beryllium at 21.65 MeV	JAEA-Conf-2009-004	2009-004	169	3CPRAEP	200910	Changlin LAN	Allocated	Compiled	10	Guochang CHEN	32682	n	
修改 详情	2	S, ISIDN-	Cross section measurements for the 143Nd(n, α)140Ce reaction at 4.0, 5.0 and 6.0 MeV		17	1	323	3CPRBGJG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Guochang CHEN	32681	n
修改 详情	3	S, ISIDN-	Cross section measurements for the 143Nd(n, α)140Ce reaction at 4.0, 5.0 and 6.0 MeV		17	1	323	3CPRBGJG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Guochang CHEN	32681	n
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修改 详情	5	J, PR/C	Cross-section measurement and analysis for the 149 Sm(n, α)146 Nd reaction at 6.0 MeV		82	1	14601	3CPRBGJG	201007	Yu. M. Gledenov	Allocated	Compiled	1	Jimin WANG	32679	n
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修改 详情	8	J, NP/A	Elastic resonance scattering of 13NH⁺ and 17F⁺		834	1-4	100c	3CPRAEP	201003	T.B. Wang	Allocated		7	Xi TAO	S0068	cp
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修改 详情	10	J, NIM/B	Measurements of the 89Y(n, γ)90mY cross-section in the neutron energy range of 13.5-14.6 MeV		268	9	1367	3CPBLNZ	201005	Fengqun Zhou	Allocated	Compiled	4	Youxiang ZHUANG	32678	n

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修改 详情	5	J, PR/C	Cross-section measurement and analysis for the 149 Sm(n,α)148 Nd reaction at 6.0 MeV		82	1	14601	3CPRBGJG	201007	Yu M. Gledenov	Allocated	Compiled	1	Jimin WANG	32679	n
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修改 详情	9	J, NIM/B	Development of laboratory standards for AMS measurement of 237Ra		268	11-12	1949	3CPRLWZ	201006	Xianggao Wang	Allocated	Compiled	3	Youxiang ZHOUANG	32683	n
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4 Summary

Chinese Tools - ERES

ERES(1993)

- A PC code for X4 compilation
 - ① A PC software package assisting the X4 compilation
 - ② Developed by CNDC, Nankai Univ. & NDS
 - ③ Editor: Includes input, output, merge and editor
 - ④ Check: Checks X4 file & generates error messages file
 - ⑤ Retrieve: by ENTRY, SUBENT or REACTION



INTERNATIONAL ATOMIC ENERGY AGENCY

NUCLEAR DATA SERVICES

DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

IAEA-NDS-151

February 1994

ERES

A PC PROGRAM FOR NUCLEAR DATA COMPILATION IN EXFOR FORMAT

by Li Shubing
NanKai University, Tianjin, P.R. China

Liang Qichang, Liu Tingin
Chinese Nuclear Data Center, Institute of Atomic Energy
Beijing, P.R. China

Abstract: This document describes the use of the personal computer software package ERES for compilation of experimental nuclear reaction data in the internationally agreed EXFOR format. The software is available upon request from the IAEA Nuclear Data Section.

Chinese Tools - TT

TT: A plotting software for nuclear data

- ① Treatment of XS, DA, DE etc.
- ② Comparison of the exp. and eval. data
- ③ Plotting user-defined format data (free format)
- ④ Save the plotting data & figure(as jpg, eps etc.)
- ⑤ Online retrieve & transfer the exp. and eval. data from the database

Chinese Tools - TT

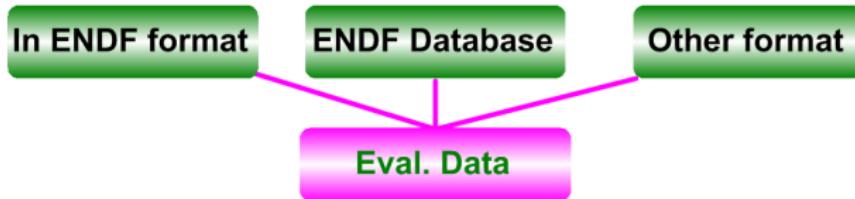


Exp. Data

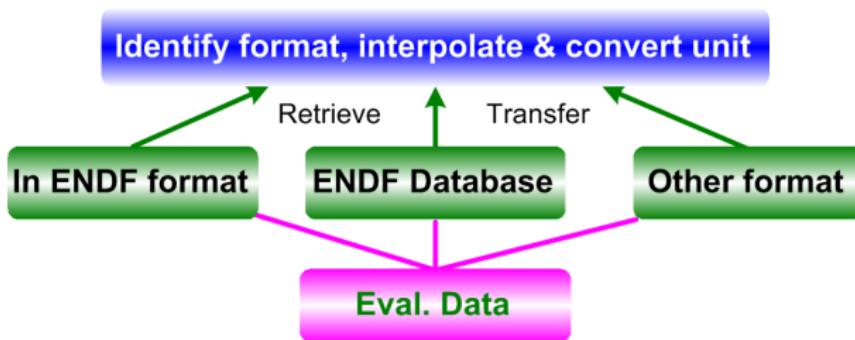
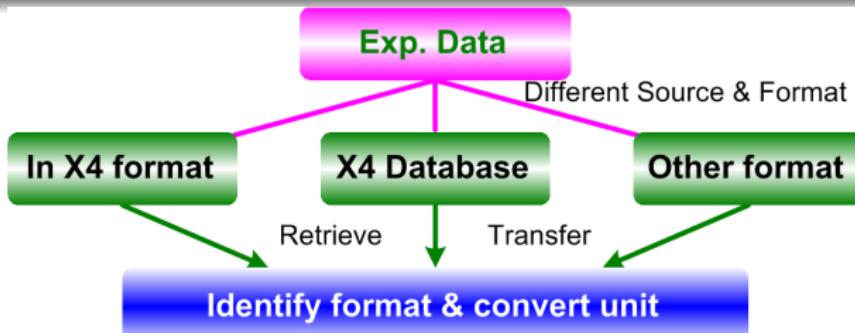
Different Source & Format

Eval. Data

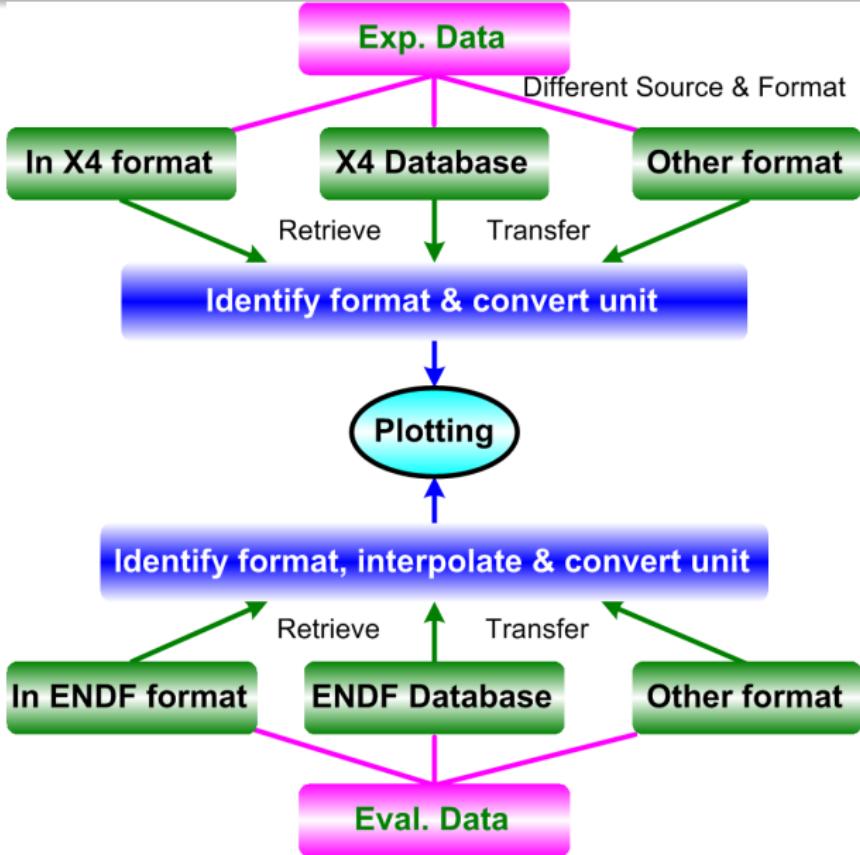
Chinese Tools - TT



Chinese Tools - TT

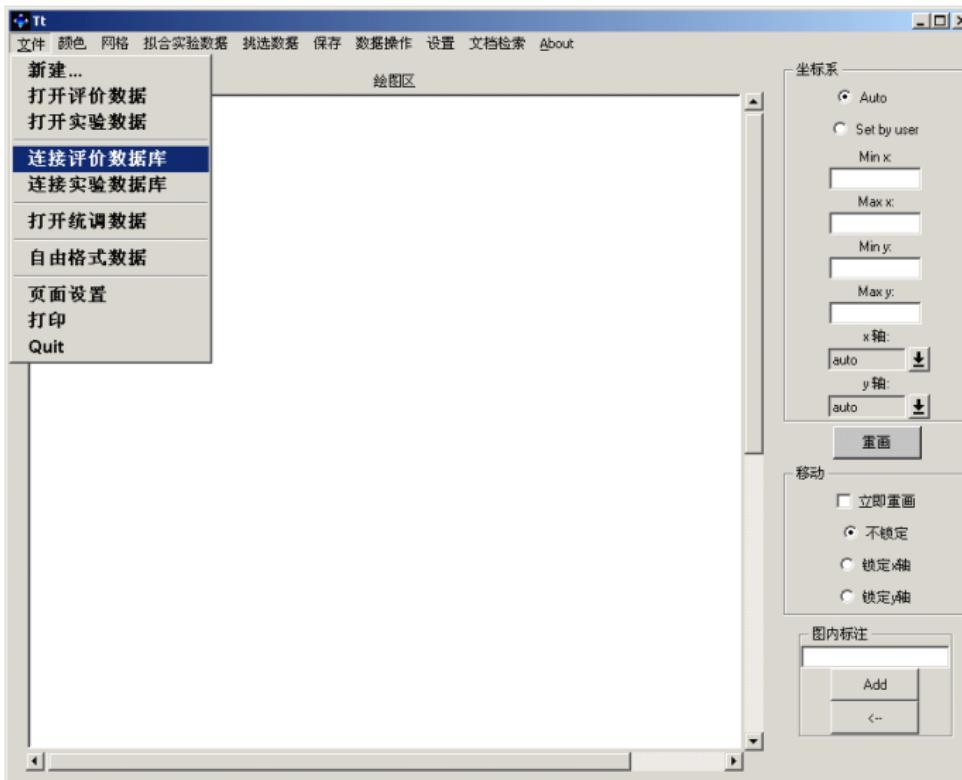


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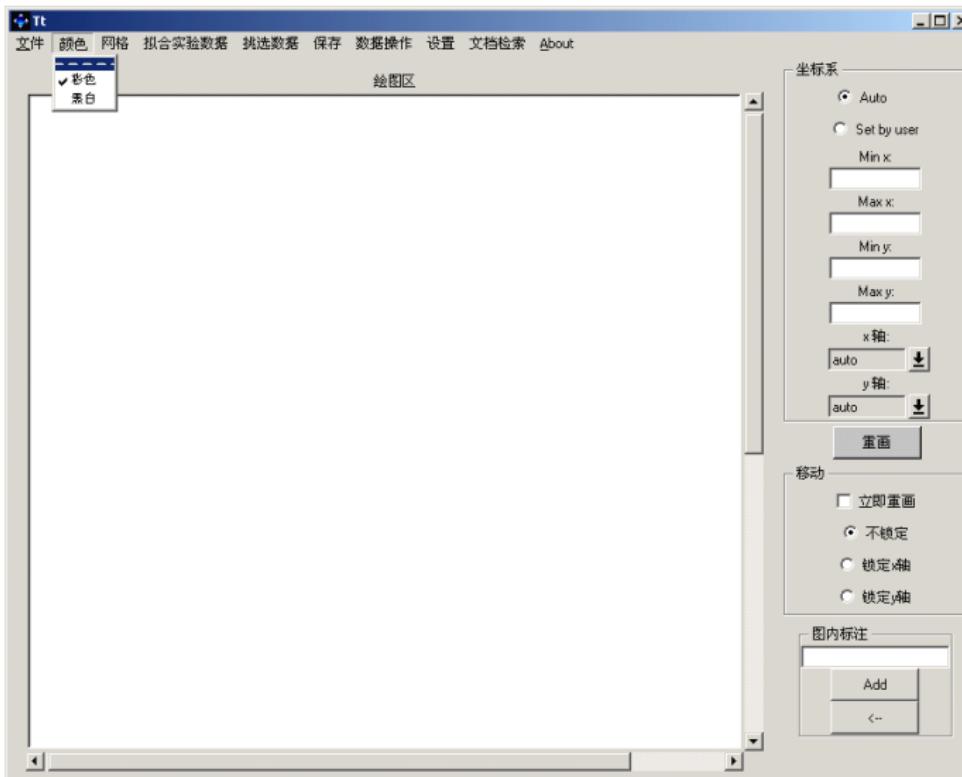
Chinese Tools - TT

• TT user interface



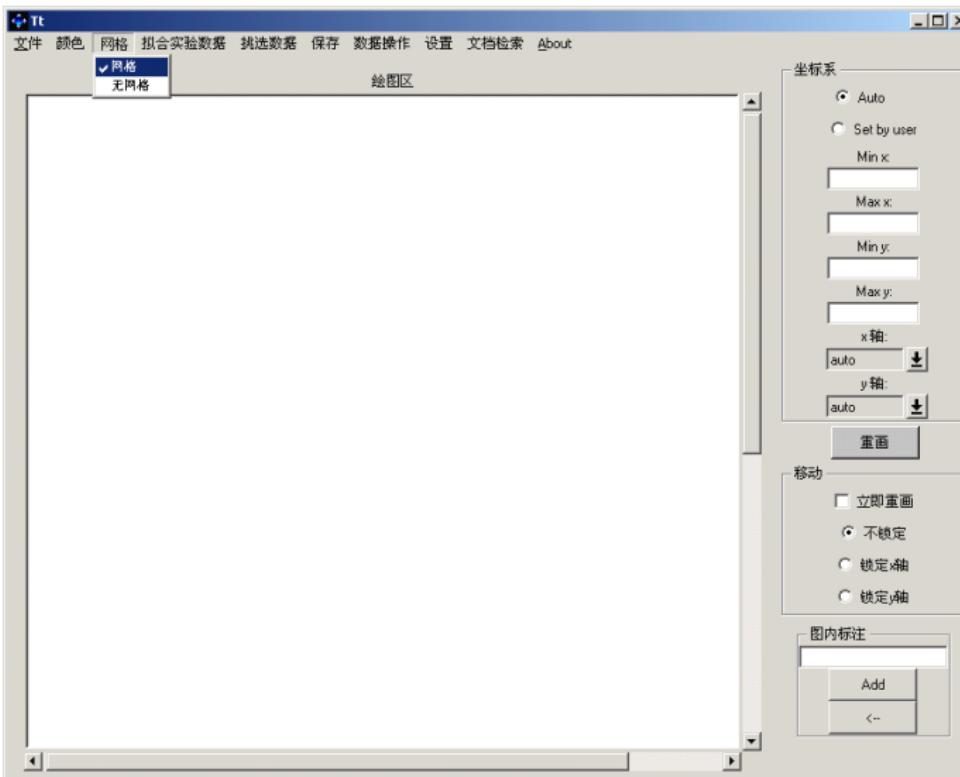
Chinese Tools - TT

• TT user interface



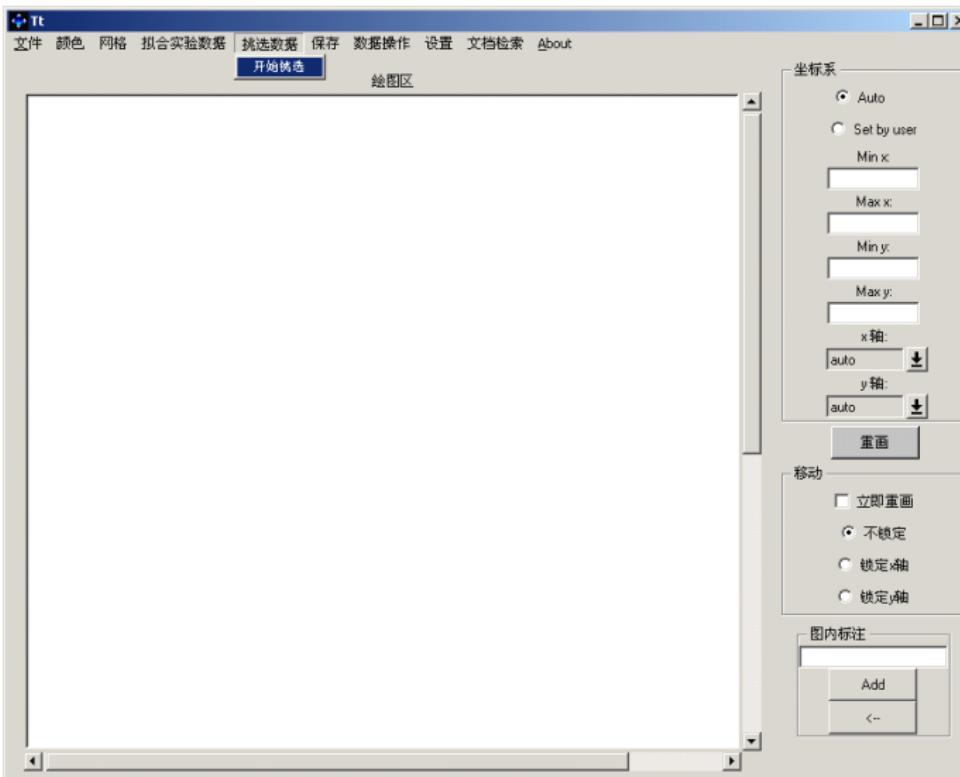
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• TT user interface



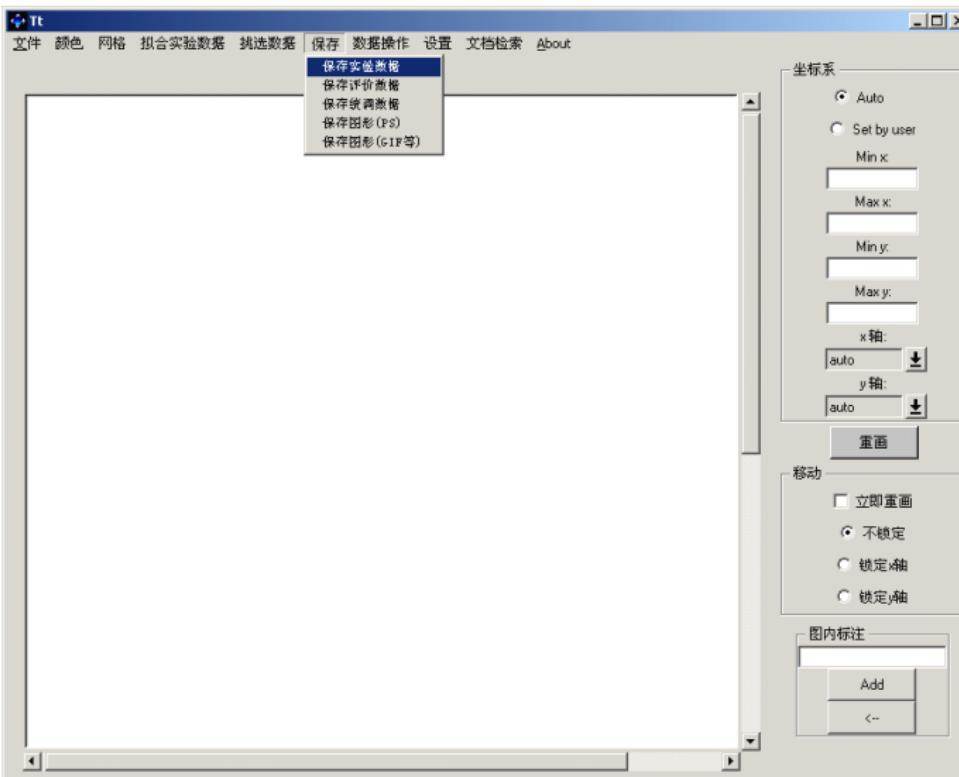
Chinese Tools - TT

• TT user interface



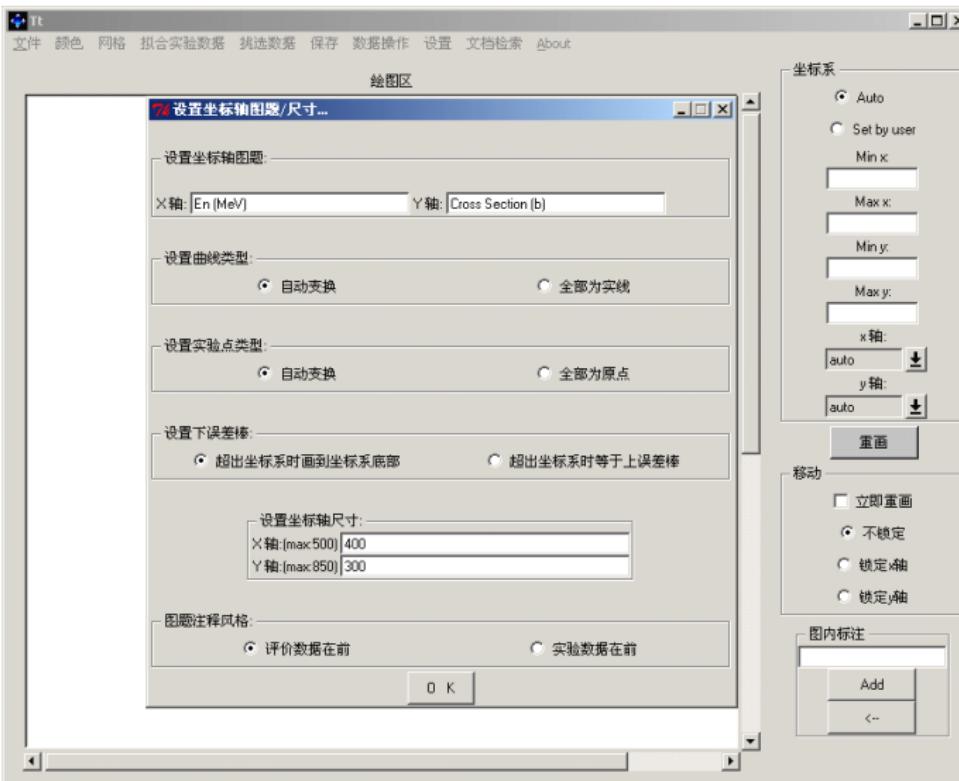
Chinese Tools - TT

• TT user interface



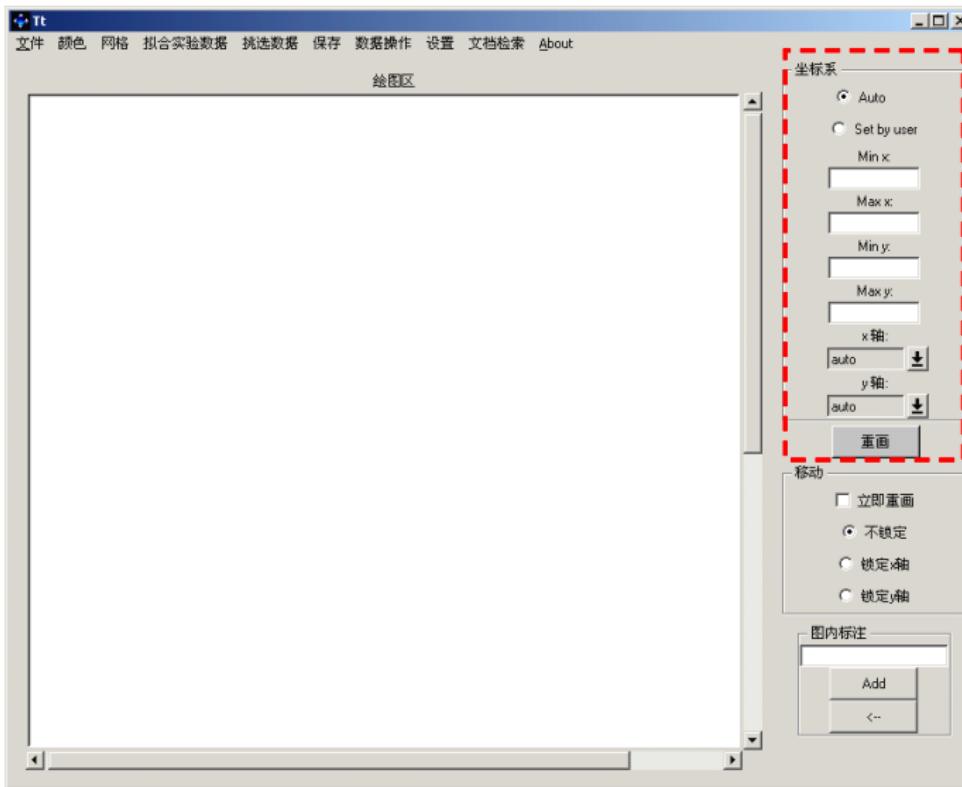
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• TT user interface



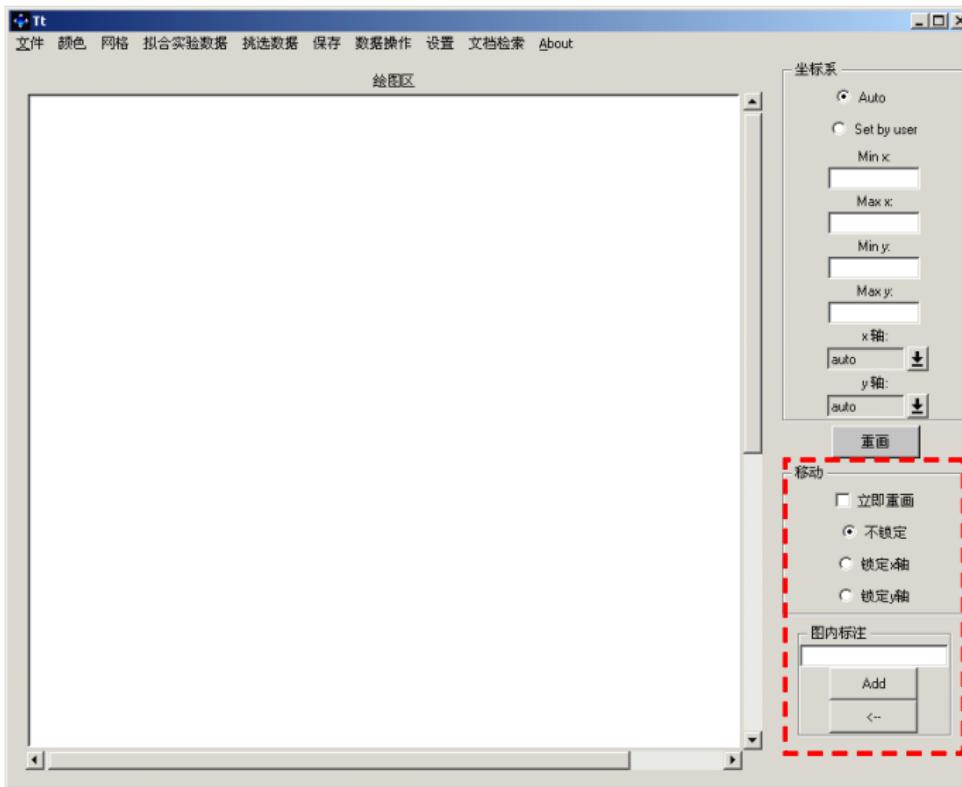
Chinese Tools - TT

• TT user interface



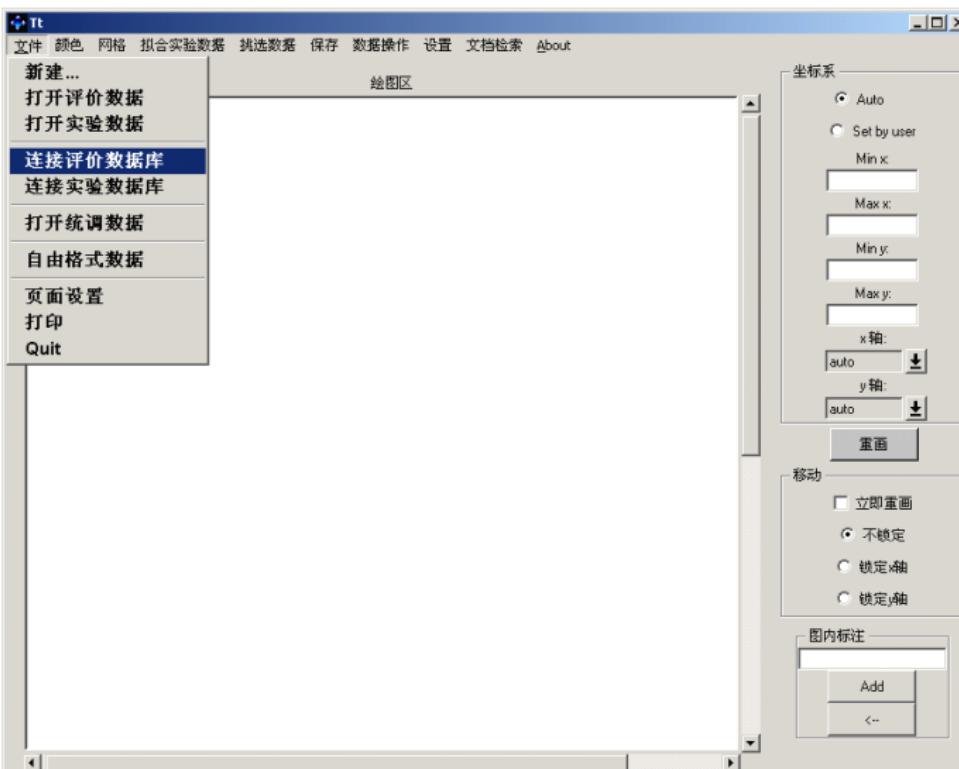
Chinese Tools - TT

• TT user interface



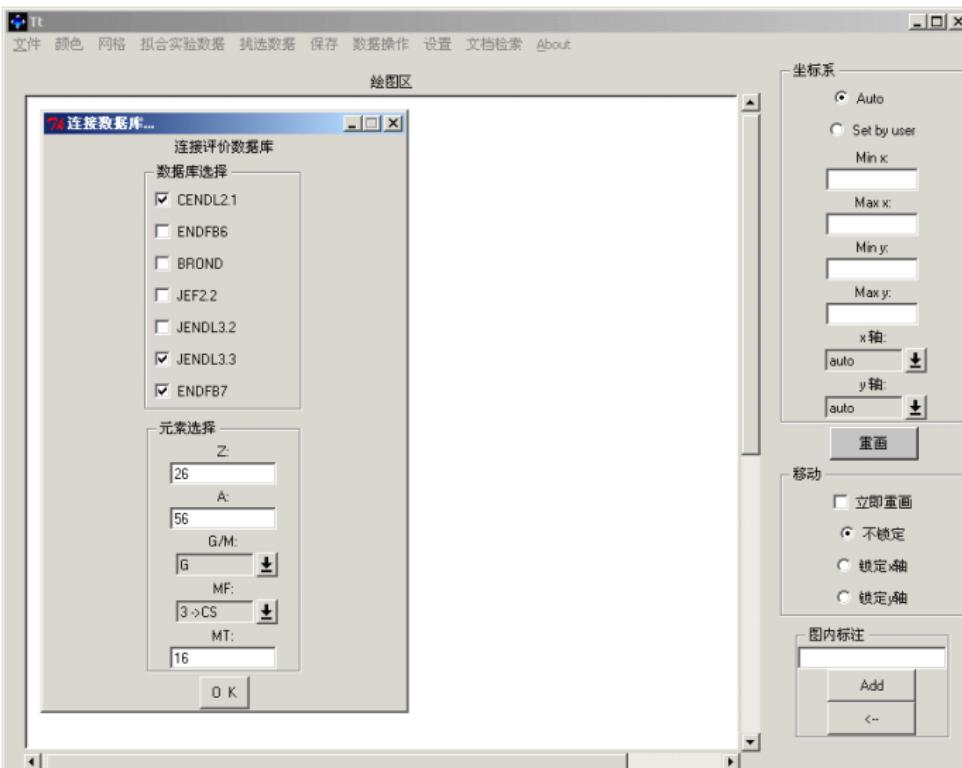
Chinese Tools - TT

• TT Example: $^{56}\text{Fe}(n, 2n)$ Reaction



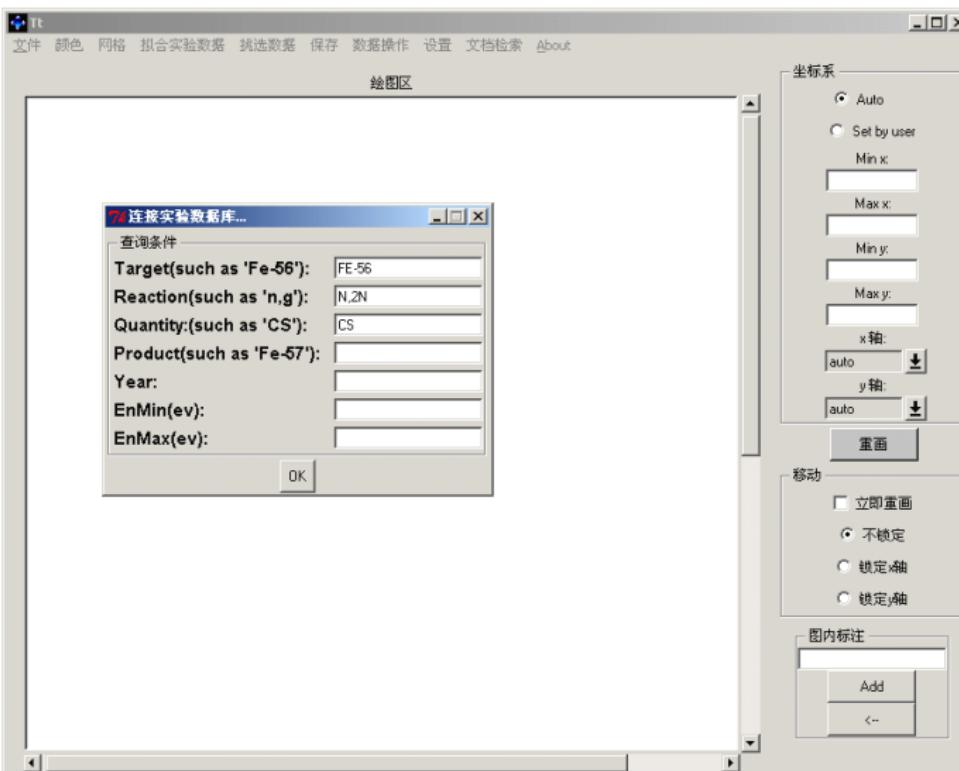
Chinese Tools - TT

• TT Example: $^{56}\text{Fe}(n, 2n)$ Reaction



Chinese Tools - TT

• TT Example: $^{56}\text{Fe}(n, 2n)$ Reaction



Chinese Tools - TT

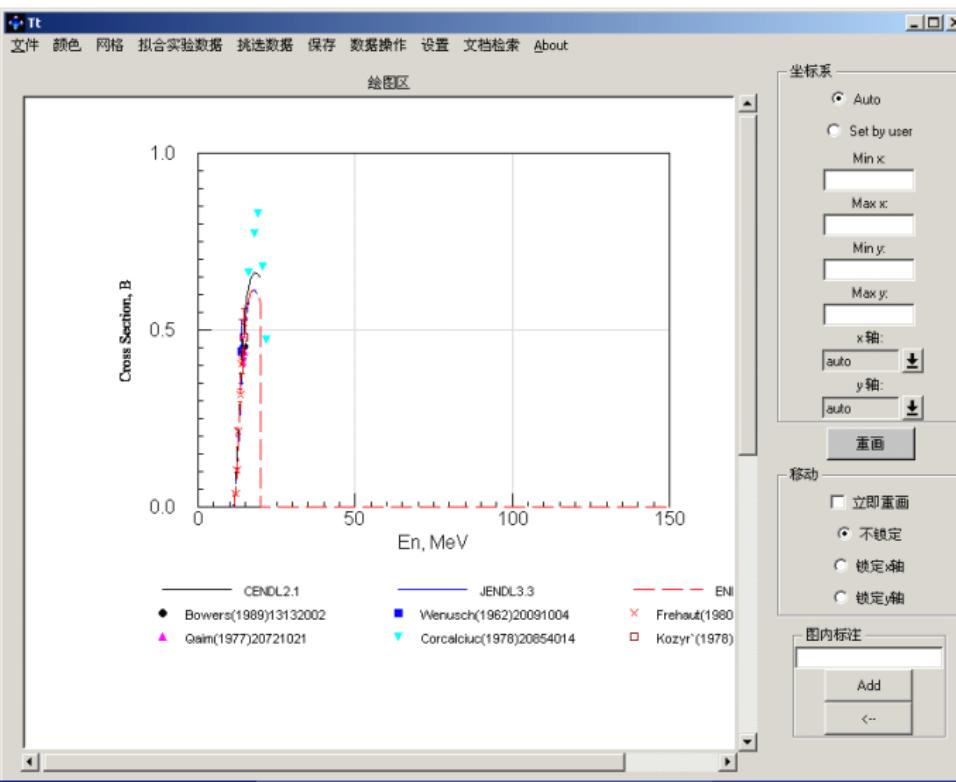
- TT Example: $^{56}\text{Fe}(\text{n}, 2\text{n})$ Reaction

FE-56,(N,2N),CS

Subentry	Author	Reference	FullCode	Year	EnMin(eV)	EnMax(eV)	nDataLines
View <input checked="" type="checkbox"/>	13132002 D.L.Bowers	S,ASTM-STP-1001,508,89	26-FE-56(N,2N)26-FE-55,,SIG	1989	1.40e+7	1.40e+7	1
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View <input checked="" type="checkbox"/>	20164008 B.Joensson	J,AF,39,295,6904	26-FE-56(N,2N)26-FE-55,,SIG	1969	1.47e+7	1.55e+7	1
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View <input checked="" type="checkbox"/>	20854014 V.Corcalciuc	J,NP/A,307,(3),445,7809	26-FE-56(N,2N)26-FE-55,,SIG	1978	1.62e+7	2.18e+7	5
View <input type="checkbox"/>	20854015 V.Corcalciuc	J,NP/A,307,(3),445,7809	26-FE-56(N,2N)26-FE-55,,SIG	1978	1.62e+7	2.18e+7	5
View <input type="checkbox"/>	40732003 A.A.Lychagin	R,FEI-923,79	(26-FE-56(N,INL)26-FE-56,,SIG)+(26-FE-56(N,2N)26-FE-55,,SIG)+(26-FE-56(N,2N)26-FE-55,,SIG)	1979	1.43e+7	1.43e+7	1
View <input type="checkbox"/>	41156007 S.P.Simakov	J,YK,,(4),93,9303	(26-FE-56(N,2N)26-FE-55,,SIG)+(26-FE-56(N,N+A)24-CR-52,,SIG)	1993	1.41e+7	1.41e+7	1
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View <input type="checkbox"/>	88016003 Yu.E.Kozyr`	J,YF,27,616,7803	26-FE-56(N,2N)26-FE-55,,SIG	1978	1.46e+7	1.46e+7	1
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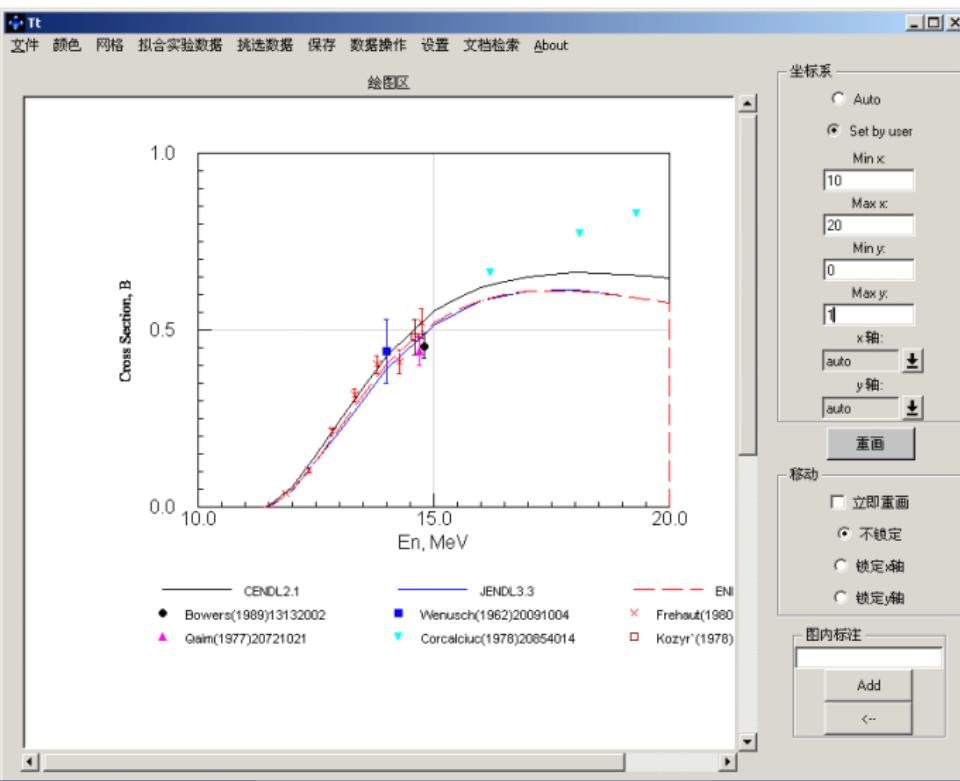
Chinese Tools - TT

- TT Example: $^{56}\text{Fe}(n, 2n)$ Reaction



Chinese Tools - TT

- TT Example: $^{56}\text{Fe}(n, 2n)$ Reaction



Chinese Tools - TT

New Features of TT

- Additional improvements to treat DDX and the discrete levels data;
- Redefine the format of output files, and new GUI;
- Realize to replot & modify the output figure (such as ORIGIN software);

Chinese Tools - GDgraph

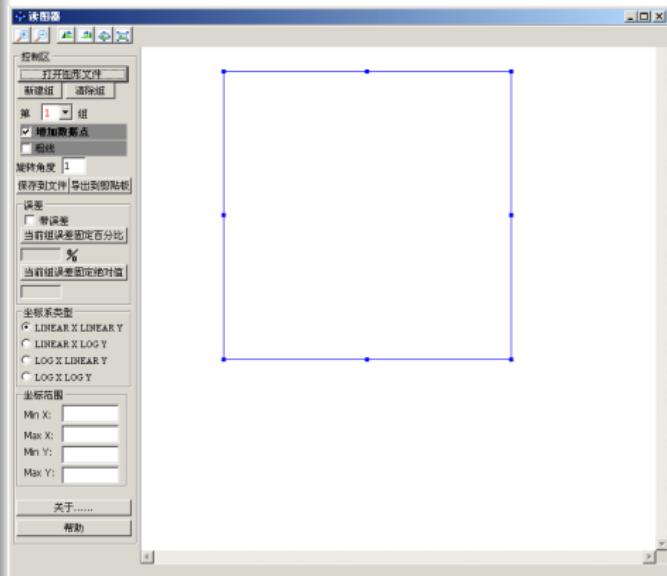
GDgraph: A graph digitizing software

- ① Digitizing Exp. data from graphs
- ② Change the size, and rotate graphs
- ③ 3 groups data with errorbars & 4 types of axis
- ④ Save digitizing data on clipboard or file
- ⑤ Version-2.0, OS-Windows and in Chinese

Chinese Tools - GDgraph

GDgraph control panel

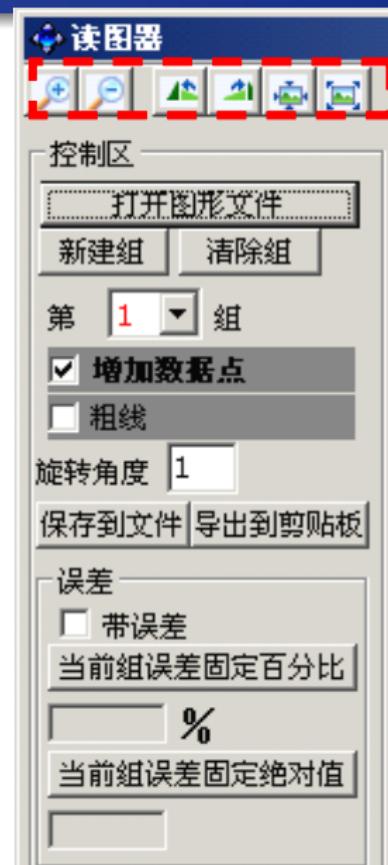
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes
- ⑥ Set X & Y range



Chinese Tools - GDgraph

GDgraph control panel

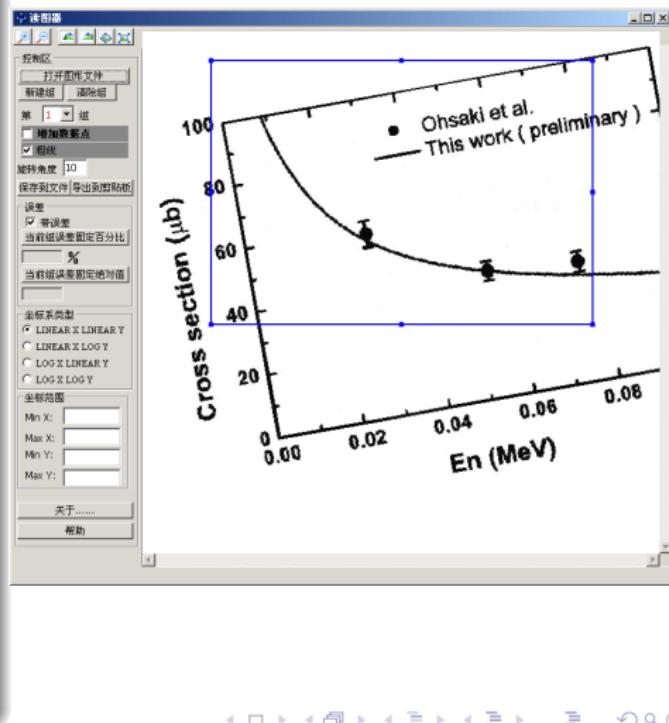
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes
- ⑥ Set X & Y range



Chinese Tools - GDgraph

GDgraph control panel

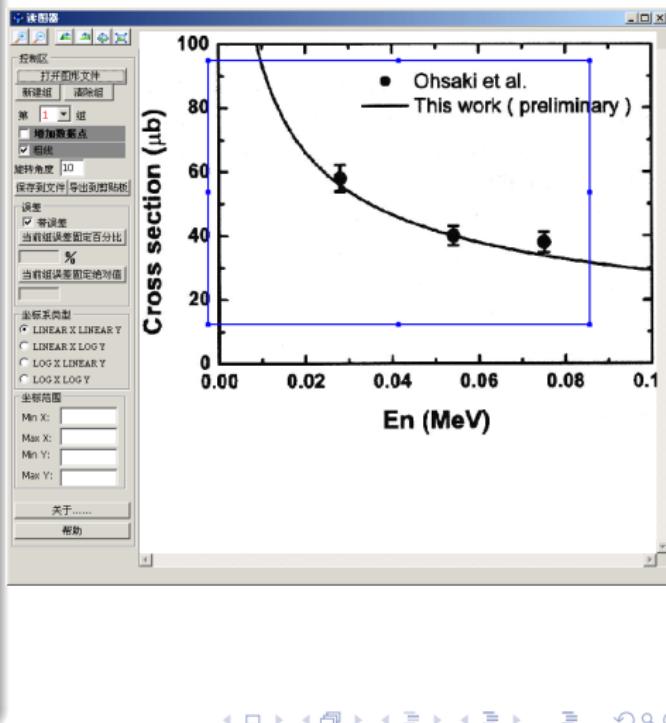
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes
- ⑥ Set X & Y range



Chinese Tools - GDgraph

GDgraph control panel

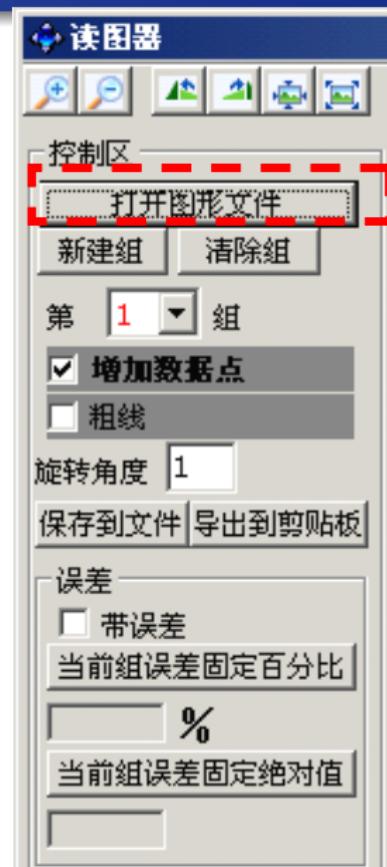
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes
- ⑥ Set X & Y range



Chinese Tools - GDgraph

GDgraph control panel

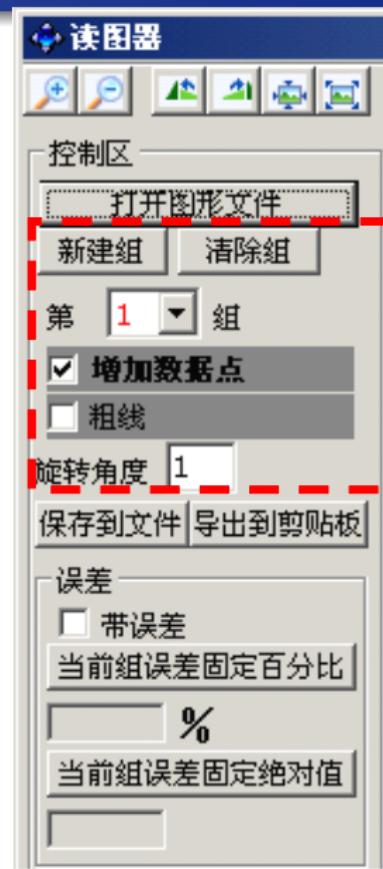
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
 - 3 group data
 - different color as blue, red and green
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes



Chinese Tools - GDgraph

GDgraph control panel

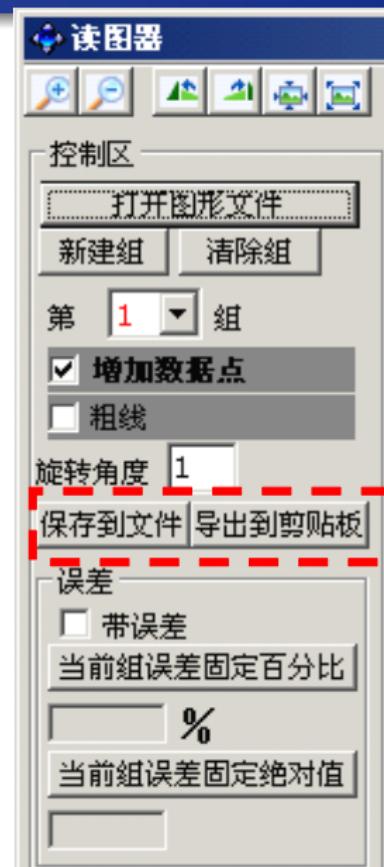
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
 - 3 group data
 - different color as blue, red and green
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes



Chinese Tools - GDgraph

GDgraph control panel

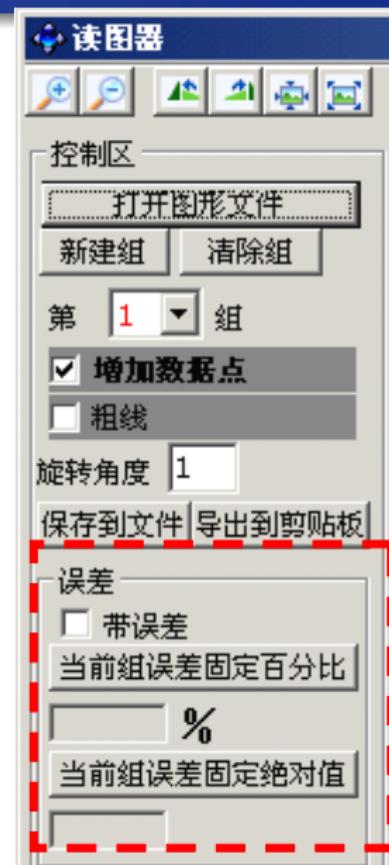
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
- ③ Save data as a file or clipboard
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Chinese Tools - GDgraph

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Chinese Tools - GDgraph

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Chinese Tools - GDgraph

GDgraph control panel

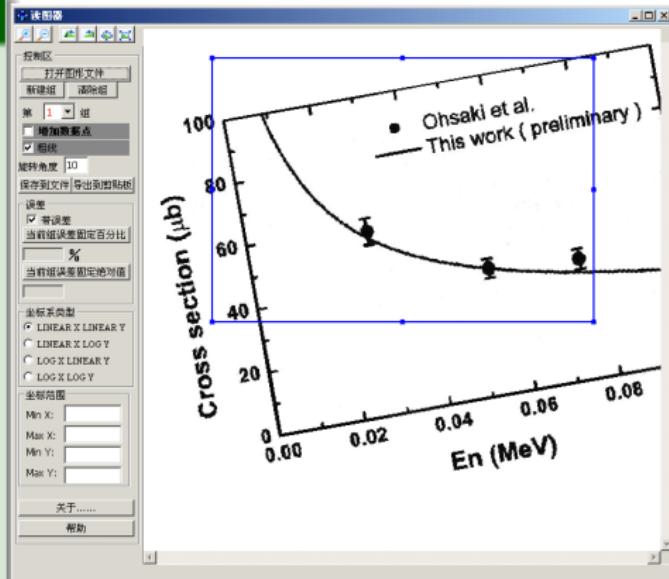
- ① Change the size, and rotate graphs
- ② Open file & Add or Del data groups
- ③ Save data as a file or clipboard
- ④ Data with error in free or fixed value
- ⑤ 4 types of axes
- ⑥ Set X & Y range



Chinese Tools - GDgraph

GDgraph Example

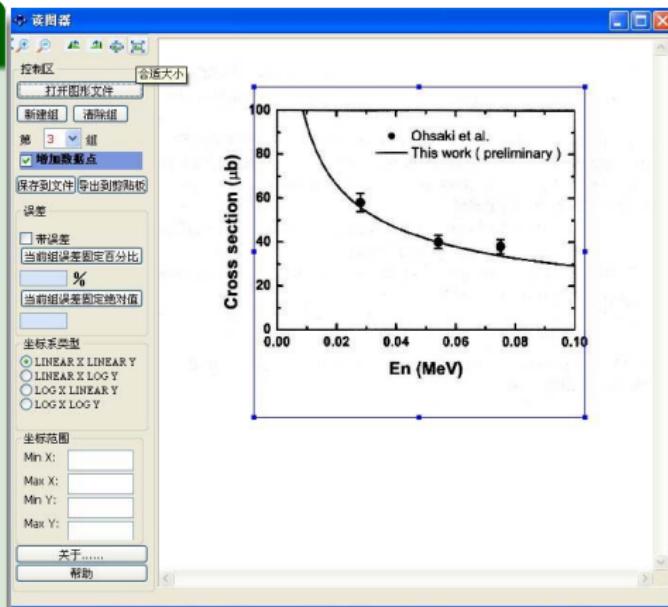
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Select axes type & fill X, Y range
- ④ Add a point & adjust error range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

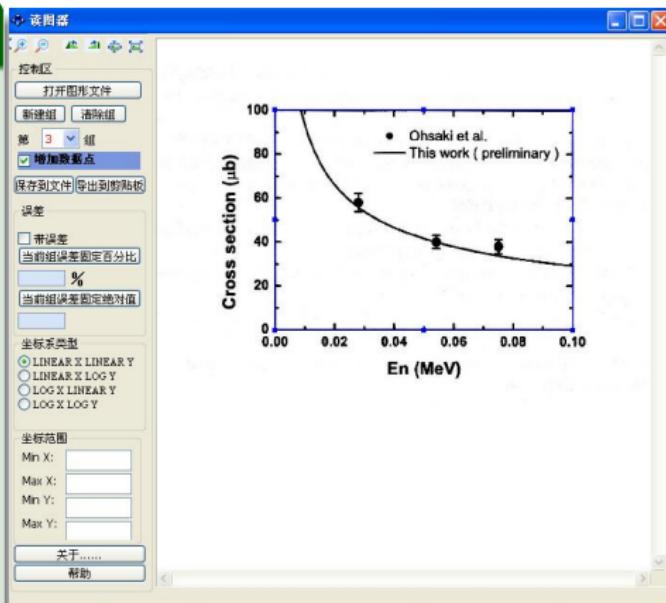
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Select axes type & fill X, Y range
- ④ Add a point & adjust error range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

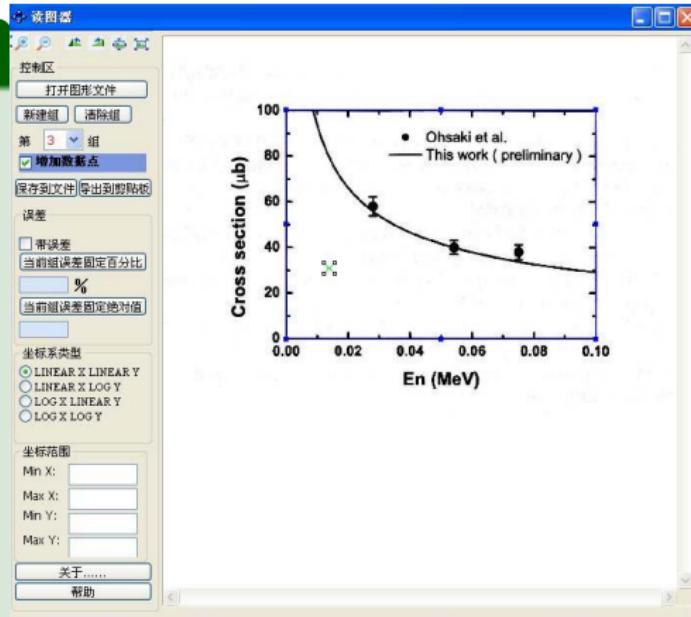
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

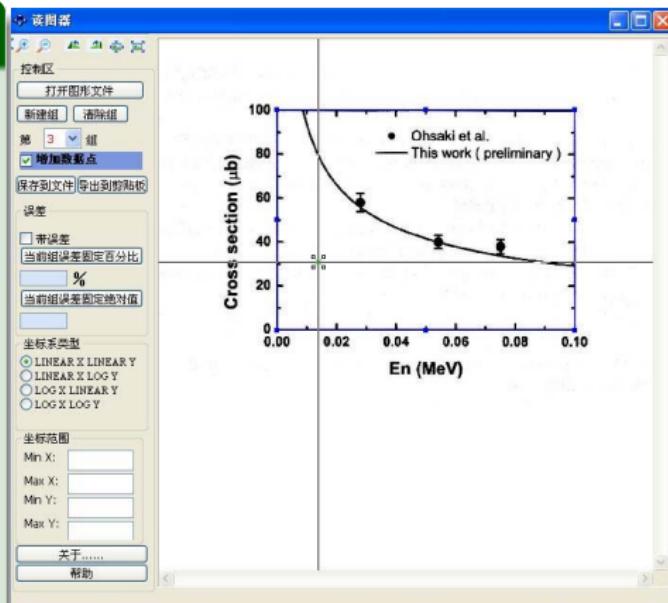
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

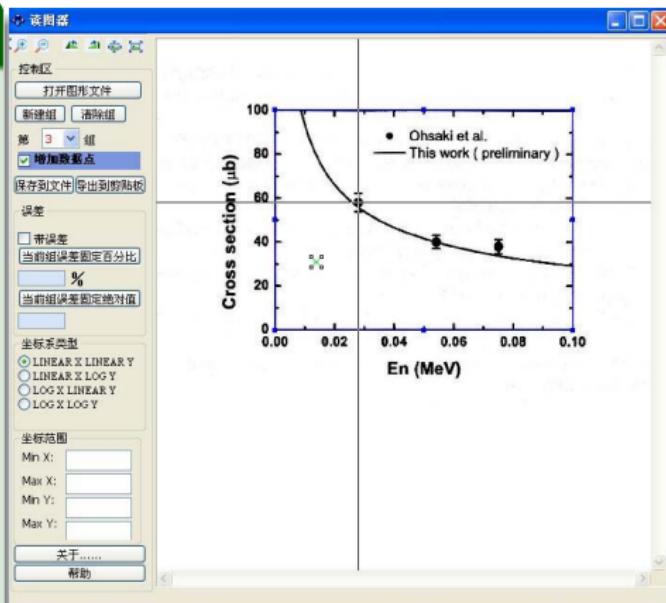
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

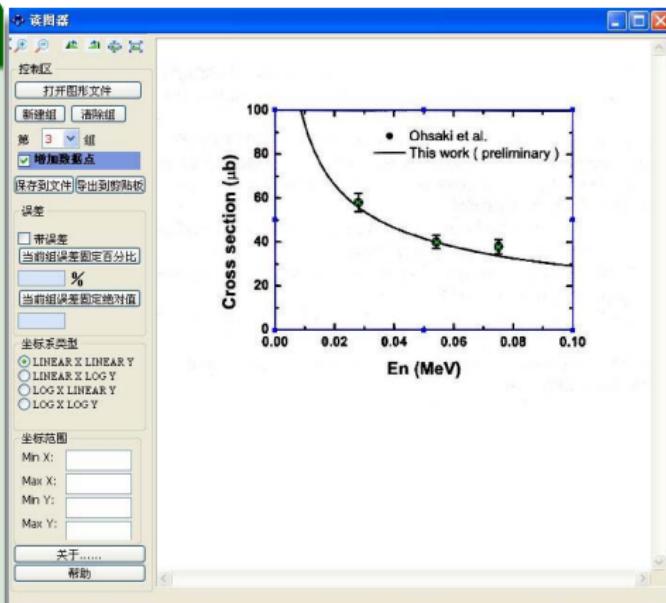
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

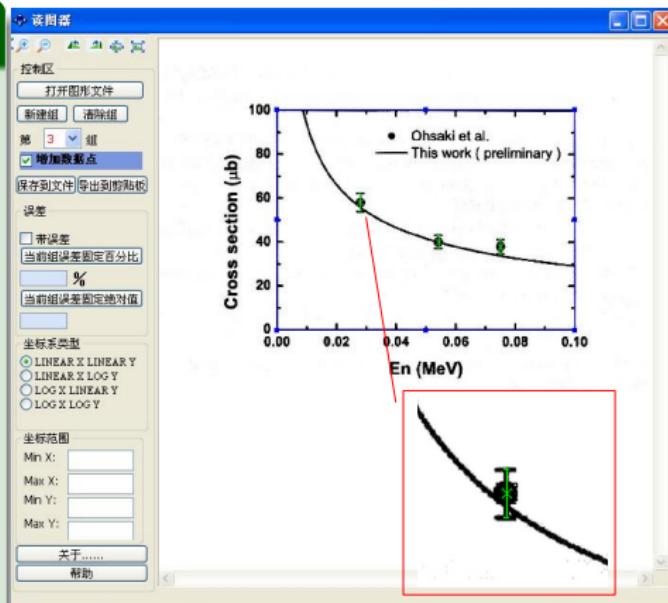
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

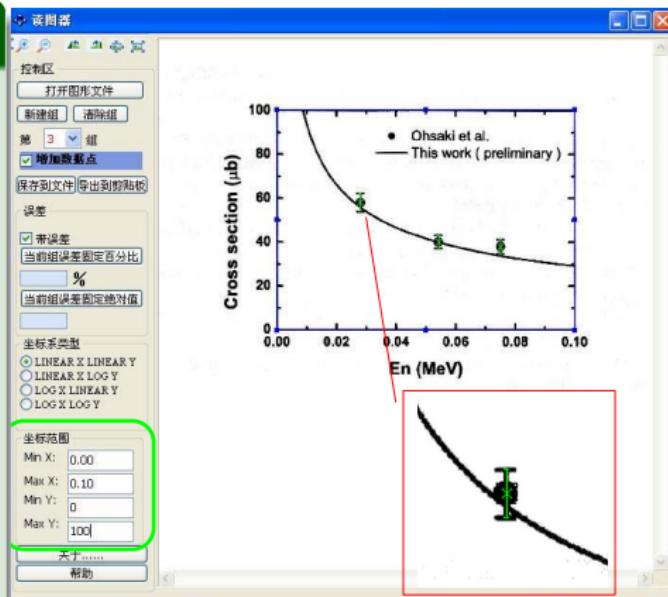
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file



Chinese Tools - GDgraph

GDgraph Example

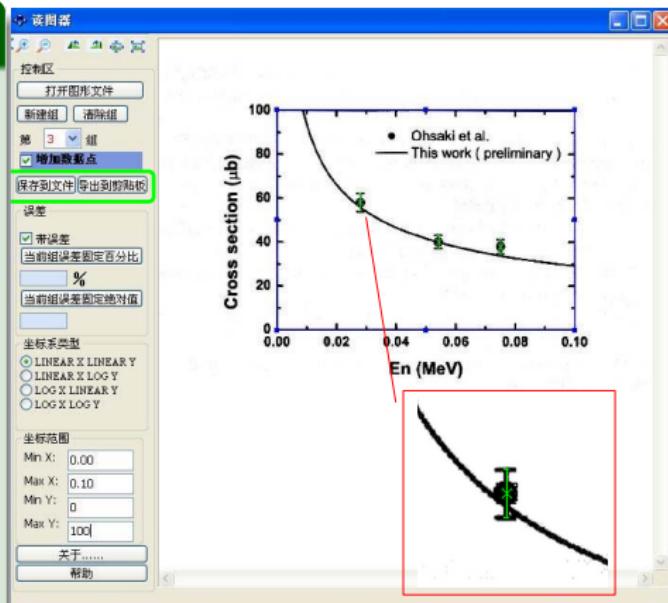
- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
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Chinese Tools - GDgraph

GDgraph Example

- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
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Chinese Tools - GDgraph

GDgraph Example

- ① Open & adjust a graph
- ② Adjust axes frame to fit graph
- ③ Add a point & adjust error range
- ④ Select axes type & fill X, Y range
- ⑤ Save data as a file

```
#####group 1 ####(3 points) #####
0.02798673 57.61194 4.626866 4.179104
0.05420354 40.14925 2.686567 3.582090
0.07511062 38.05970 2.686567 2.537313
          X           Y       +ERR      -ERR
```

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1 Short History

2 Responsibility Journals & X4 Compilation Status

3 Compilation tools

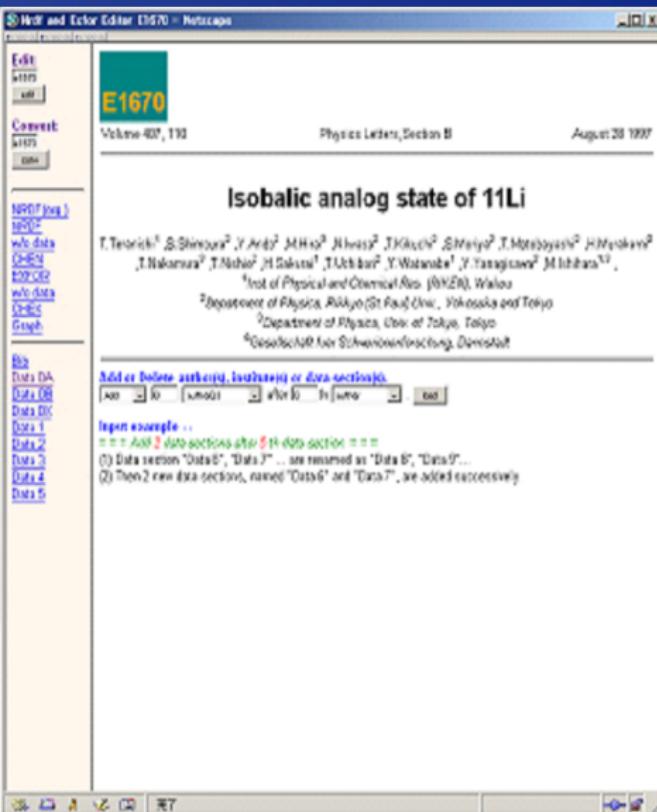
- Chinese tools
- Other tools
- Feedback on ExfData(Ver.1.92)

4 Summary

Other tools

Japanese tools

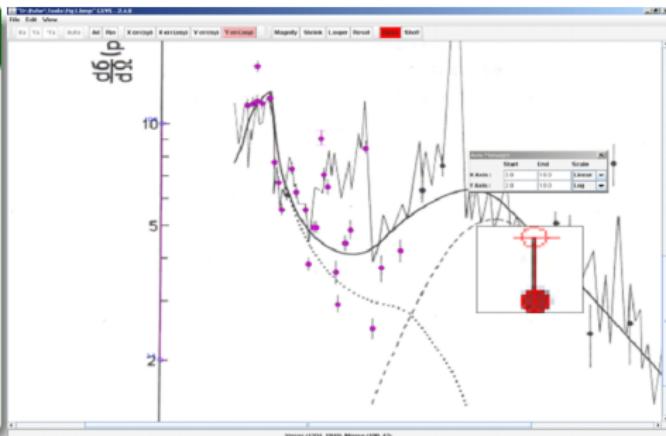
- ① HENDEL: X4 compilation, website version, guest
- ② Gsys: Digitizing of exp. data



Other tools

Japanese tools

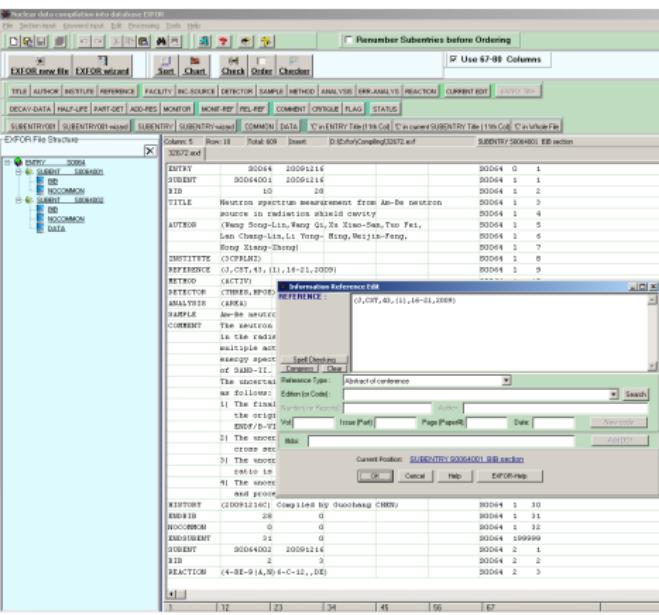
- ① HENDEL: X4 compilation, website version, guest
- ② Gsys: Digitizing of exp. data



Other tools

IAEA/NDS tools

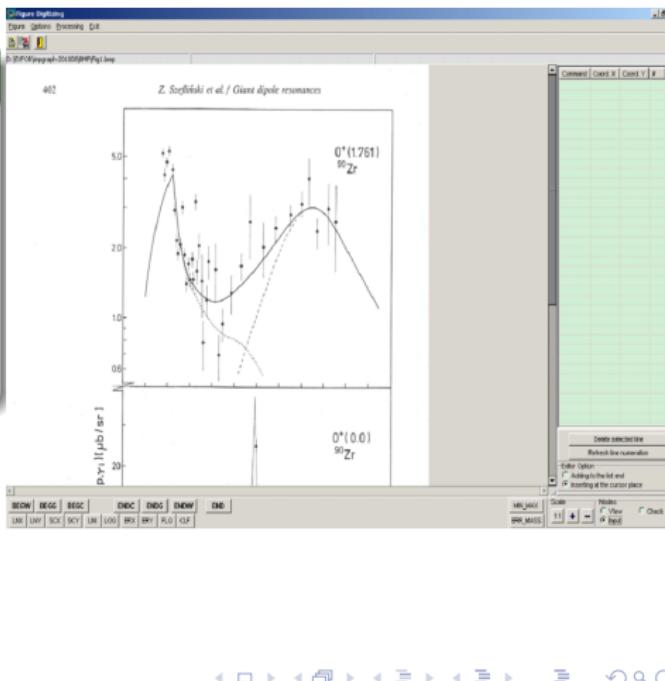
- ① ExfData: X4 compilation main software, PC
- ② InpGraph: Digitizing of exp. data



Other tools

IAEA/NDS tools

- ① ExfData: X4 compilation main software, PC
- ② InpGraph: Digitizing of exp. data



Contents

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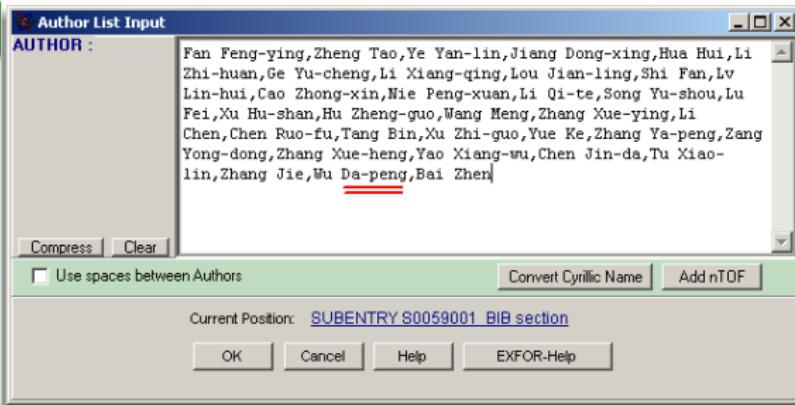
- Chinese tools
- Other tools
- Feedback on ExfData(Ver.1.92)

4 Summary

Feedback on ExfData(Ver.1.92)

AUTHOR

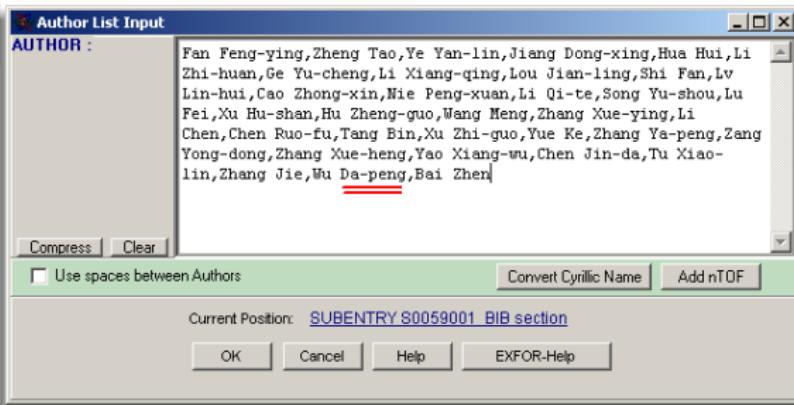
- ① With lowercase for ownname
- ② With uppercase for ownname by code



Feedback on ExfData(Ver.1.92)

AUTHOR

- ① With lowercase for ownname
- ② With uppercase for ownname by code



Feedback on ExfData(Ver.1.92)

AUTHOR

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Nuclear data compilation into database EXFOR

File Section input Keyword input Edit Processing Tools Help

Renumber Subentries before Ordering Use 67-80 Columns

EXFOR new file EXFOR wizard Sort Chart Check Order Checker

DECAY-DATA HALF-LIFE PART-DET ADD-RES MONITOR MONIT-REF REL-REF COMMENT CRITIQUE FLAG STATUS

SUBENTRY001 SUBENTRY001-wizard SUBENTRY SUBENTRY-wizard COMMON DATA ^{1C in ENTRY Title (11th Col) 1C in current SUBENTRY Title (11th Col) 1C in Whole File}

EXFOR File Structure

Column 1 Row 14 Total: 73 Insert D:\Exfor\Compiling\S0059.esf S0059.exf

32684	exf	32689	exf	32687	exf	32686	EXF	S0059	exf	
SUBENTRY001										
ENTRY	S0059	20110415						S0059	0	1
SUBENT	S0059001	20110415						S0059	1	1
BIB	12		41					S0059	1	2
TITLE	Quasi-Elastic Scattering of 16C from 12C at 47.5 MeV/Nucleon							S0059	1	3
AUTHOR	Fan Feng-Ying, Zheng Tao, Ye Yan-Lian, Jiang Dong-Xing, Hu Hui, Li Zhi-Huan, Ge Yu-Cheng, Li Xiang-Qing, Lou Jian-Ling, Shi Fan, Xu Lin-Hui, Cao Zhong-Xin, Ni Feng-Xuan, Li Qi-Tie, Song Yu-Shou, Lu Fei, Ma Hu-Shan, Hu Zheng-Guo, Wang Meng, Zhang Yue-Ming, Li Chen, Chen Ruo-Fu, Tang Bin, Xu Zhi-Guo, Yu Ke, Zhang Ya-Peng, Zhang Yong-Dong, Zhang Xue-Heng, Yao Xiang-Wu, Chen Jin-Bu, Tu Xiao-Lian, Chang Jip, Wu Da-Peng, Bai Zhen							S0059	1	4
INSTITUTE	{JCPRG} School of Physics and State Key Laboratory of Nuclear Physics and Technology, Peking University, Beijing, China.							S0059	1	14
REFERENCE	{JCPRL} Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China.							S0059	1	15
FACILITY	{PRJFS,3CPIMP}							S0059	1	16
DETECTOR	{PAPAC,TELES,SISD,CSICR,PS,SIBAR}							S0059	1	17
								S0059	1	18
								S0059	1	19
								S0059	1	20

1 12 23 34 45 56 67

Feedback on ExfData(Ver.1.92)

SUBENT	SO0059001	20110415
BIB	12	41
TITLE	Quasi-Elastic Scattering of ^{16}C from ^{12}C at 47.5 MeV/Nucleon	
AUTHOR	(Fan Feng-Ying, Zheng Tao, Ye Yan-Lin, Jiang Dong-Xing, Hua Hui, Li Zhi-Huan, Ge Yu-Cheng, Li Xiang-Qing, Lou Jian-Ling, Shi Fan, Lv Lin-Hui, Cao Zhong-Xin, Nie Peng-Xuan, Li Qi-Te, Song Yu-Shou, Lu Fei, Xu Hu-Shan, Hu Zheng-Guo, Wang Meng, Zhang Xue-Ying, Li Chen, Chen Ruo-Fu, Tang Bin, Xu Zhi-Guo, Yue Ke, Zhang Ya-Peng, Zang Yong-Dong, Zhang Xue-Heng, Yao Xiang-Wu, Chen Jin-Da, Tu Xiao- Lin, Zhang Jie, Wu Da-Peng, Bai Zhe)	
INSTITUTE	(3CPRBJG) School of Physics and State Key Laboratory of Nuclear Physics and Technology, Peking University, Beijing, China. (3CPRIMP) Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China.	

Feedback on ExfData(Ver.1.92)

AUTHOR

- ① With lowercase for ownname
- ② With uppercase for ownname by code

Nuclear data compilation into database EXFOR

File Section input Keyword input Edit Processing Tools Help

Renumber Subentries before Ordering Use 67-80 Columns

EXFOR new file EXFOR wizard Sort Chart Check Order Checker

DECAY-DATA HALF-LIFE PART-DET ADD-RES MONITOR MONIT-REF REL-REF COMMENT CRITIQUE FLAG STATUS

SUBENTRY001 SUBENTRY001-wizard SUBENTRY SUBENTRY-wizard COMMON DATA 'C' in ENTRY Title (11th Col) 'C' in current SUBENTRY Title (11th Col) 'C' in Whole File

EXFOR File Structure

Column 1 Row 14 Total: 73 Insert D:\Exfor\Compiling\S0059.esf SUBENTRY S0059001 BIB sect

	32684.esf	32689.esf	32687.esf	32686.ExF	S0059.esf	
ENTRY	S0059	20110415			S0059	0 1
SUBENT	S0059001		S0059001		S0059	1 1
BIB			12	41	S0059	1 2
TITLE	Quasi-Elastic Scattering of 16C from 12C at 47.5 MeV/Nucleon				S0059	1 3
AUTHOR	Fan Feng-ying, Zheng Tao, Ye Yan-lin, Jiang Dong-xing, Hu Hui, Li Zhi-huan, Ge Yu-cheng, Li Xiang-qing, Lou Jian-ling, Shi Fan, Xu Lin-hui, Cao Zhong-xin, Ni Feng-xuan, Li Qi-te, Song Yu-shou, Lu Fei, Ma Hu-shan, Hu Zheng-guo, Wang Meng, Zhang Yue-ying, Li Chen, Chen Ruo-fu, Tang Bin, Xu Zhi-guo, Yu Ke, Zhang Ya-peng, Zhang Yong-hong, Zhang Xue-heng, Yao Xiang-wu, Chen Jin-dai, Tu Xiao-lin, Zhang Jie, Wu Da-peng, Mai Zhen				S0059	1 4
INSTITUTE	{3CPNRUG} School of Physics and State Key Laboratory of Nuclear Physics and Technology, Peking University, Beijing, China.				S0059	1 14
REFERENCE	{3CPIMP} Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China.				S0059	1 15
FACILITY	{PRJFS,3CPIMP}				S0059	1 16
DETECTOR	{PAPAC,TELES,SISD,CSICR,PS,SIBAR}				S0059	1 17

1 12 23 34 45 56 67

Feedback on ExfData(Ver.1.92)

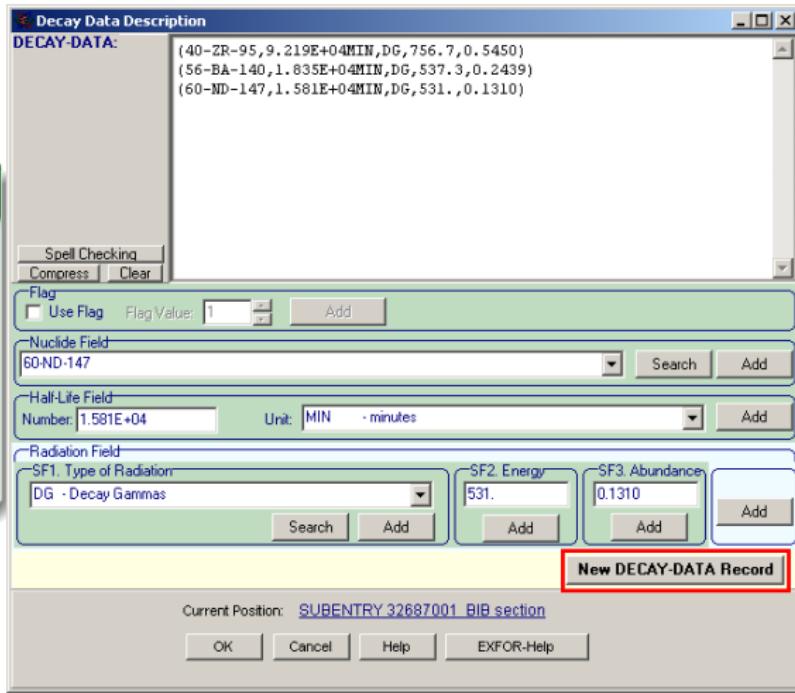
SUBENT	SO0059001	20110415
BIB	12	41
TITLE	Quasi-Elastic Scattering of ^{16}C from ^{12}C at 47.5 MeV/Nucleon	
AUTHOR	(Fan Feng-ying, Zheng Tao, Ye Yan-lin, Jiang Dong-xing, Hua Hui, Li Zhi-huan, Ge Yu-cheng, Li Xiang-qing, Lou Jian-ling, Shi Fan, Lv Lin-hui, Cao Zhong-xin, Nie Peng-xuan, Li Qi-te, Song Yu-shou, Lu Fei, Xu Hu-shan, Hu Zheng-guo, Wang Meng, Zhang Xue-ying, Li Chen, Chen Ruo-fu, Tang Bin, Xu Zhi-guo, Yue Ke, Zhang Ya-peng, Zang Yong-dong, Zhang Xue-heng, Yao Xiang-wu, Chen Jin-da, Tu Xiao-lin, Zhang Jie, Wu Da-peng, Bai Zhen)	
INSTITUTE	(3CPRBJG) School of Physics and State Key Laboratory of Nuclear Physics and Technology, Peking University, Beijing, China. (3CPRIMP) Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China.	

Feedback on ExfData(Ver.1.92)

DECAY-DATA

① Fill decay data

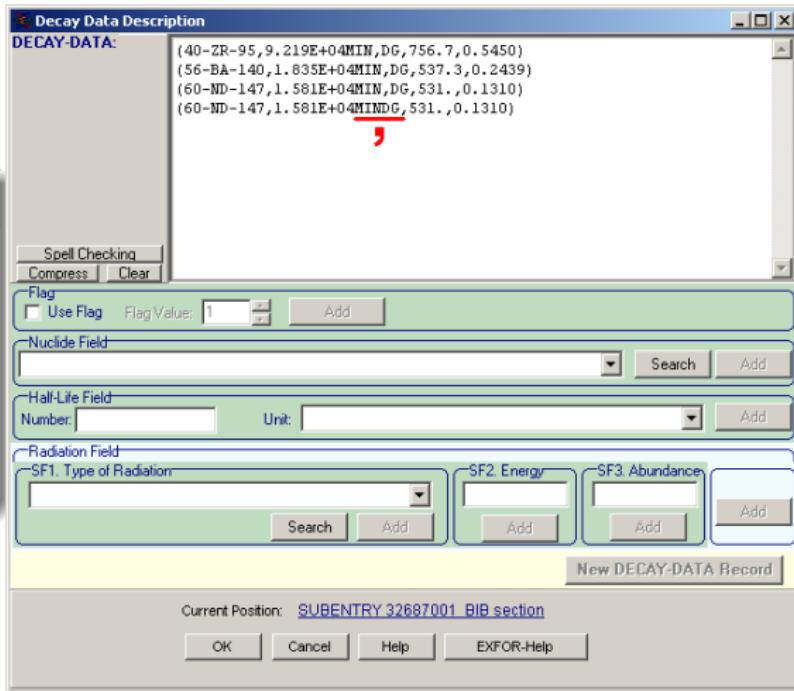
② Missing a comma
between unit &
SF1



Feedback on ExfData(Ver.1.92)

DECAY-DATA

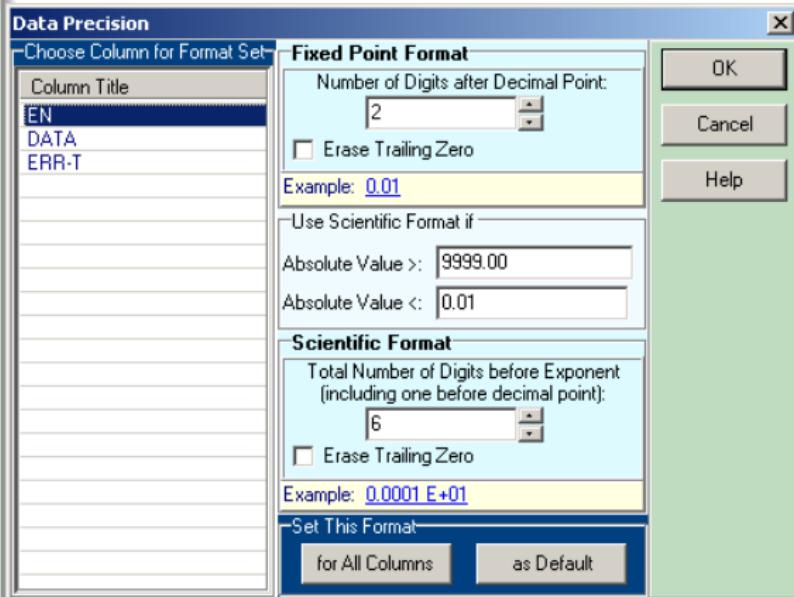
- ① Fill decay data
- ② Missing a comma between unit & SF1



Feedback on ExfData(Ver.1.92)

DATA: Precision

- ① Data format defined by user
- ② Re-edit data, need to re-set data format
- ③ Format will automatically change into default (Comment)



Feedback on ExfData(Ver.1.92)

DATA: Precision

- ① Data format defined by user
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Nuclear data compilation into database EXFOR

File Section input Keyword input Edit Processing Tools Help

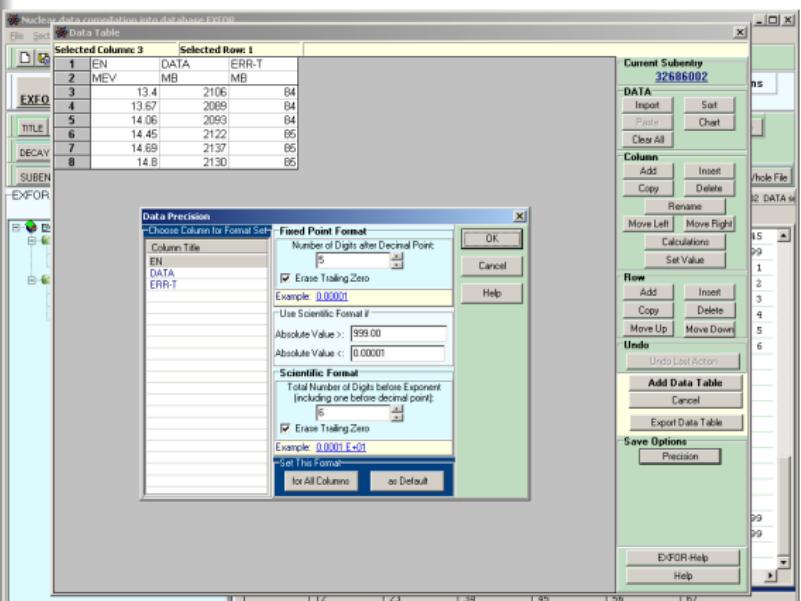
Renumber Subentries before Ordering Use 67-80 Columns

EXFOR new file		EXFOR wizard		Sort	Chart	Check	Order	Checker			
DECAY-DATA	HALF-LIFE	PART-DET	ADDRES	MONITOR	MONIT-REF	REL-REF	COMMENT	CRITIQUE	FLAG	STATUS	
SUBENTRY001	SUBENTRY001-wizard		SUBENTRY		SUBENTRY-wizard		COMMON		DATA		
C in ENTRY Title (11th Col) C in current SUBENTRY Title (11th Col) C in Whole File											
EXFOR File Structure											
ENTRY 32686		SUBENT 32686001		ENDCOMMON		6		0		32686 1 45	
		BIB		ENDSUBENT		44		0		32686 199999	
		COMMAND		SUBENT		32686002		20110408		32686 2 1	
		NOBIB		BIB		2		2		32686 2 2	
		NOCOMMON		REACTION		(72-HF-176, N, 2N) 72-HF-175,,SIG)				32686 2 3	
				DECAY-DATA		(72-HF-175,70,D,34,4,0.04)				32686 2 4	
				ENDBIB		2		0		32686 2 5	
				NOCOMMON		0		0		32686 2 6	
				DATA		3		6			
				EN	DATA	ERR-T					
				MEV	NB	MB					
				13.40	2106.	84.					
				13.67	2089.	84.					
				14.06	2093.	84.					
				14.45	2122.	85.					
				14.69	2137.	85.					
				14.80	2130.	85.					
				ENDDATA							
				ENDSUBENT		15		0		32686 299999	
				ENDENTRY		2		0		32686999999999	
1 12 23 34 45 56 67											

Feedback on ExfData(Ver.1.92)

DATA: Precision

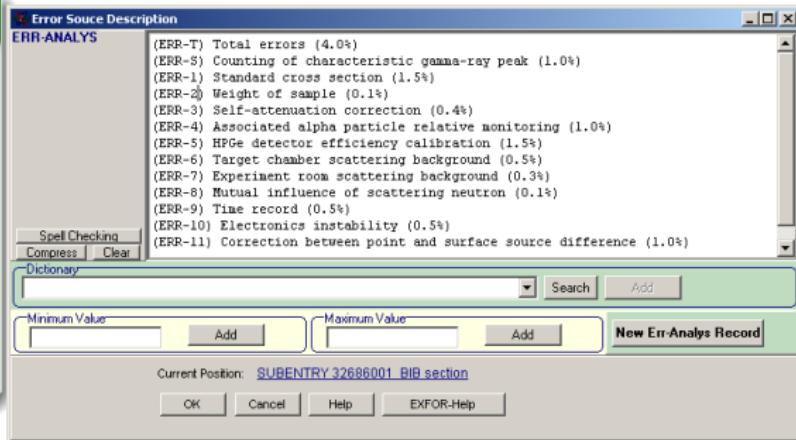
- ① Data format defined by user
- ② Re-edit data, need to re-set data format
- ③ Format will automatically change into default (Comment)



Feedback on ExfData(Ver.1.92)

ERR-ANALYS

- ① Fill error data by user
- ② More blank before error information



Feedback on ExfData(Ver.1.92)

ERR-ANALYS

- ① Fill error data by user
- ② More blank before error information

Nuclear data compilation into database EXFOR

File Section input Keyword input Edit Processing Tools Help

Renumber Subentries before Ordering Use 67-80 Columns

EXFOR new file EXFOR wizard Sort Chart Check Order Checker

TITLE AUTHOR INSTITUTE REFERENCE FACILITY INC-SOURCE DETECTOR SAMPLE METHOD ANALYSIS ERR-ANALYS REACTION CURRENT EDIT Entry file

DECAY-DATA HALF-LIFE PART-DET ADO-RES MONITOR MONIT-REF REL-REF COMMENT CRITIQUE FLAG STATUS

SUBENTRY001 SUBENTRY001-wizard SUBENTRY SUBENTRY-wizard COMMON DATA 'C' in ENTRY Title (11th Col) 'C' in current SUBENTRY Title (11th Col) 'C' in Whole File

EXFOR File Structure

ENTRY_32686
 └─ SUBENT_32686001
 └─ NB
 └─ COMMON
 └─ NB
 └─ NCOMMON
 └─ DATA

Column 1	Row: 22	Total: 66	Insert: D:\Exfor\Compiling\32686.EXF	SUBENTRY 32686001 BB sect
32686.exf	32689.exf	32687.exf	32686.EXF	32686 1 16
MONITOR (41-NB-93 (N,2N) 41-NB-92-M,,S1G)				
DECAY-MON (41-NB-92-M,10.1SD,DG,934.4,0.990)				
ERR-ANALYS (ERR-T) Total errors (4.08)				
(ERR-3) Counting of characteristic gamma-ray peak (1.0%)				
(ERR-1) Standard cross section (1.5%)				
(ERR-2) Associated alpha particle relative monitoring (1.0%)				
(ERR-3) HPGe detector efficiency calibration (1.5%)				
(ERR-4) Self-attenuation correction (0.4%)				
(ERR-5) Target chamber scattering background (0.5%)				
(ERR-6) Experiment room scattering background (0.3%)				
(ERR-7) Mutual influence of scattering neutron (0.1%)				
(ERR-8) Weight of sample (0.1%)				
(ERR-9) Time record (0.5%)				
(ERR-10) Electronics instability (0.5%)				
(ERR-11) Correction between point and surface source difference (1.0%)				
STATUS (TABLE) Taken from Table 1 in page 11 of J,CST,44,(suppl.),7,201009.				
HISTORY (20110408C) Compiled by ZHUANG Youxiang (CNDC)				

1 12 23 34 45 56 67

Feedback on ExfData(Ver.1.92)

ERR-ANALYS

- ① Fill error data by user
- ② More blank before error information

Nuclear data compilation into database EXFOR

File Section input Keyword input Edit Processing Tools Help

Renumber Subentries before Ordering Use 67-80 Columns

EXFOR new file EXFOR wizard Sort Chart Check Order Checker

DECAY-DATA HALF-LIFE PART-DET ADO-RES MONITOR MONIT-REF REL-REF COMMENT CRITIQUE FLAG STATUS

SUBENTRY001 SUBENTRY001-wizard SUBENTRY SUBENTRY-wizard COMMON DATA 'C' in ENTRY Title (11th Col) 'C' in current SUBENTRY Title (11th Col) 'C' in Whole File

EXFOR File Structure

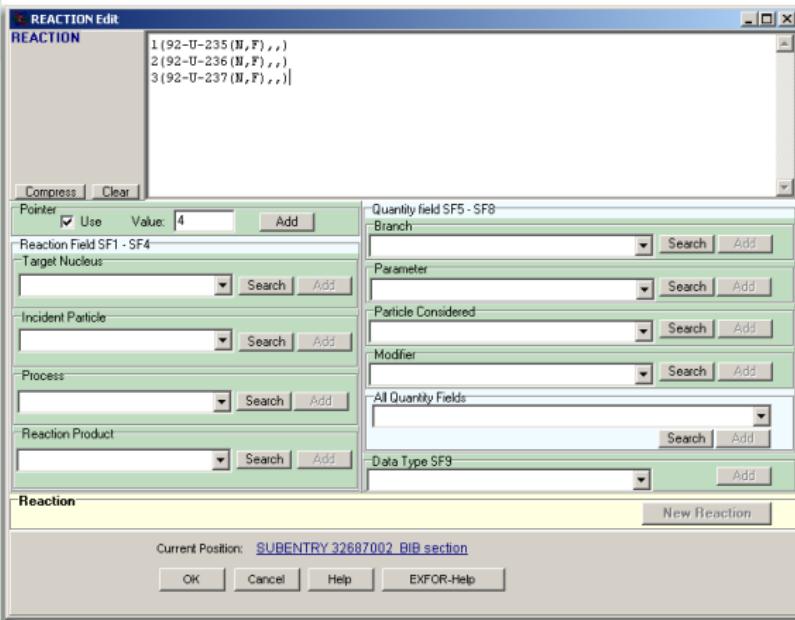
ENTRY 32686
 └─ SUBENT 32686001
 └─ NR
 └─ COMMON
 └─ NR
 └─ NCOMMON
 └─ DATA

Column 1	Row: 22	Total: 66	Insert: D:\Exfor\Compiling\32686.EXF	SUBENTRY 32686001 BB sect		
32686.exf	32689.exf	32687.exf	32686.EXF	32686 1 16		
MONITOR [41-NB-93 (N,2N) 41-NB-92-M,,S1G]				32686 1 17		
DECAY-MON [41-NB-92-M, 10.1SD, DG, 934.4, 0.990]						
ERR-ANALYS (ERR-T) Total errors (4.08)						
(ERR-S) Counting of characteristic gamma-ray						
peak (1.0%)						
(ERR-1) Standard cross section (1.5%)						
(ERR-2) Associated alpha particle relative monitoring (1.0%)						
(ERR-3) HPGe detector efficiency calibration (1.5%)						
(ERR-4) Self-attenuation correction (0.4%)						
(ERR-5) Target chamber scattering background (0.5%)						
(ERR-6) Experiment room scattering background (0.3%)						
(ERR-7) Mutual influence of scattering neutron (0.1%)						
(ERR-8) Weight of sample (0.1%)						
(ERR-9) Time record (0.5%)						
(ERR-10) Electronics instability (0.5%)						
(ERR-11) Correction between point and surface source difference (1.0%)						
STATUS (TABLE) Taken from Table 1 in page 11 of J,CST,44,(suppl),7,201009.						
HISTORY (20110408C) Compiled by ZHUANG Youxiang (CNDC)						
1	12	23	34	45	56	67

Feedback on ExfData(Ver.1.92)

REACTION

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Nuclear data compilation into database EXFOR

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Renumber Subentries before Ordering Use 67-80 Columns

EXFOR new file	EXFOR wizard	Sort	Chart	Check	Order	Checker
TITLE AUTHOR INSTITUTE REFERENCE	FACILITY INC-SOURCE DETECTOR SAMPLE METHOD ANALYSIS ERR-ANALYS REACTION	CURRENT EDIT	BROWSE FILE			
DECAY-DATA HALF-LIFE PART-DET ADD-RES MONITOR MONIT-REF REL-REF COMMENT CRITIQUE FLAG STATUS						
SUBENTRY001 SUBENTRY001-wizard	SUBENTRY SUBENTRY-wizard	COMMON DATA	C in ENTRY Title (11th Col) C in current SUBENTRY Title (11th Col) C in Whole File			

EXFOR File Structure

Column 11	Row 66	Total: 83	Insert	ID:ExforCompiling/32687.exf	SUBENTRY 32687002 BB sect																																																																																																																														
32684.exf	32689.exf	32687.exf	32686.EXF	S0059.exf																																																																																																																															
<table border="1"> <tr><td>ENDCOMMON</td><td>3</td><td>0</td><td></td><td></td><td>32687 1 59</td></tr> <tr><td>ENDSUBENT</td><td>58</td><td>0</td><td></td><td></td><td>32687 199999</td></tr> <tr><td>SUBENT</td><td>32687002</td><td>20110330</td><td></td><td></td><td>32687 2 1</td></tr> <tr><td>BIB</td><td>1</td><td>3</td><td></td><td></td><td>32687 2 2</td></tr> <tr><td colspan="3">REACTION</td><td>1 (92-U-235 (N, F) _r)</td><td></td><td></td></tr> <tr><td colspan="3"></td><td>2 (92-U-235 (N, F) _r)</td><td></td><td></td></tr> <tr><td colspan="3"></td><td>3 (92-U-235 (N, F) _r)</td><td></td><td></td></tr> <tr><td>ENDBIB</td><td>3</td><td>0</td><td></td><td></td><td>32687 2 6</td></tr> <tr><td>NOCOMMON</td><td>0</td><td>0</td><td></td><td></td><td>32687 2 7</td></tr> <tr><td>DATA</td><td>7</td><td>3</td><td></td><td></td><td>32687 2 8</td></tr> <tr><td>EN</td><td>DATA</td><td>1DATA-ERR</td><td>1DATA</td><td>2DATA-ERR</td><td>2DATA</td></tr> <tr><td>DATA-ERR</td><td>3</td><td></td><td></td><td></td><td>32687 2 9</td></tr> <tr><td>MV</td><td>PC/FIS</td><td>PC/FIS</td><td>PC/FIS</td><td>PC/FIS</td><td>32687 2 10</td></tr> <tr><td>PC/FIS</td><td></td><td></td><td></td><td></td><td>32687 2 11</td></tr> <tr><td>0.57</td><td>6.64</td><td>0.21</td><td>6.37</td><td>0.22</td><td>2.3732687 2 13</td></tr> <tr><td>0.08</td><td></td><td></td><td></td><td></td><td>32687 2 14</td></tr> <tr><td>1.0</td><td>6.49</td><td>0.19</td><td>6.35</td><td>0.18</td><td>2.2532687 2 15</td></tr> <tr><td>0.07</td><td></td><td></td><td></td><td></td><td>32687 2 16</td></tr> <tr><td>1.5</td><td>6.59</td><td>0.19</td><td>6.25</td><td>0.18</td><td>2.3732687 2 17</td></tr> <tr><td>0.07</td><td></td><td></td><td></td><td></td><td>32687 2 18</td></tr> <tr><td>ENDDATA</td><td>10</td><td>0</td><td></td><td></td><td>32687 2 19</td></tr> </table>						ENDCOMMON	3	0			32687 1 59	ENDSUBENT	58	0			32687 199999	SUBENT	32687002	20110330			32687 2 1	BIB	1	3			32687 2 2	REACTION			1 (92-U-235 (N, F) _r)						2 (92-U-235 (N, F) _r)						3 (92-U-235 (N, F) _r)			ENDBIB	3	0			32687 2 6	NOCOMMON	0	0			32687 2 7	DATA	7	3			32687 2 8	EN	DATA	1DATA-ERR	1DATA	2DATA-ERR	2DATA	DATA-ERR	3				32687 2 9	MV	PC/FIS	PC/FIS	PC/FIS	PC/FIS	32687 2 10	PC/FIS					32687 2 11	0.57	6.64	0.21	6.37	0.22	2.3732687 2 13	0.08					32687 2 14	1.0	6.49	0.19	6.35	0.18	2.2532687 2 15	0.07					32687 2 16	1.5	6.59	0.19	6.25	0.18	2.3732687 2 17	0.07					32687 2 18	ENDDATA	10	0			32687 2 19
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Feedback on ExfData(Ver.1.92)

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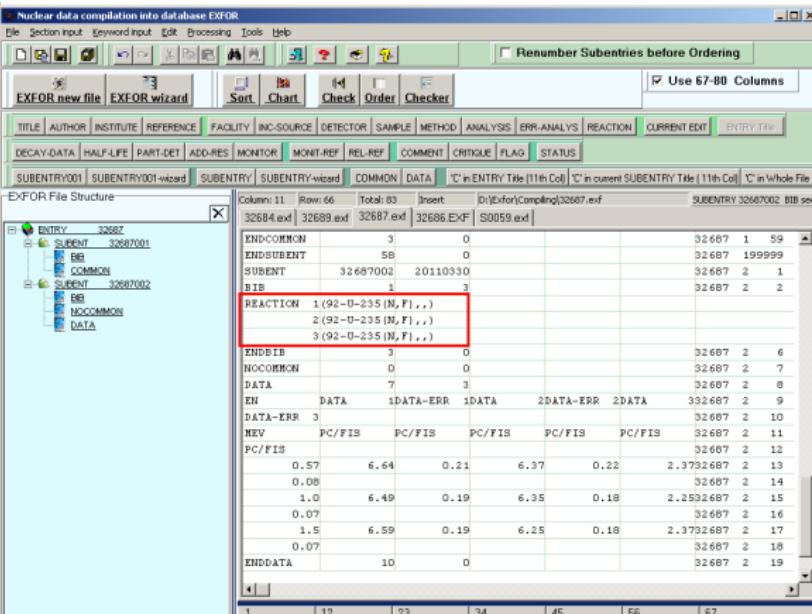
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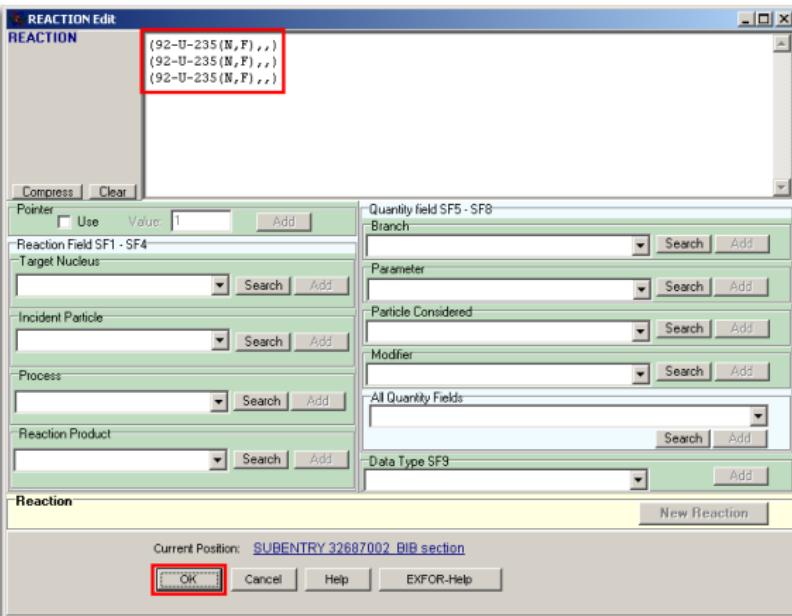


Nuclear data compilation into database EXFOR						
Section Input		Keyword Input		Processing Tools Help		
EXFOR new file		EXFOR wizard		Sort	Chart	Check Order Checker
TITLE	AUTHOR	INSTITUTE	REFERENCE	FACILITY	INC-SOURCE	DETECTOR
DECAY-DATA	HALF-LIFE	PART-DET	ADD-RES	MONITOR	MONIT-REF	REL-REF
SUBENTRY001	SUBENTRY001-wizard	SUBENTRY	SUBENTRY-wizard	COMMON	DATA	
ExFOR File Structure						
Column 11	Row: 66	Total: 83	Insert	0 ExforCompiling 32687.exf	SUBENTRY 32687002	BIB se
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ENDCOMMON	3	0			32687 1 59	
ENDSUBENT	5B	0			32687 199999	
SUBENT	32687002	20110330			32687 2 1	
BIB	1	3			32687 2 2	
REACTION	1 (92-0-235 [M, F], ,)					
	2 (92-0-235 [M, F], ,)					
	3 (92-0-235 [M, F], ,)					
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NOCOMMON	0	0			32687 2 7	
DATA	7	3			32687 2 8	
EN	DATA	1DATA-ERR	1DATA	2DATA-ERR	2DATA	32687 2 9
DATA-ERR	3					32687 2 10
MEV	PC/FIS	PC/FIS	PC/FIS	PC/FIS	PC/FIS	32687 2 11
PC/FIS	0.57	6.64	0.21	6.37	0.22	3.732687 2 13
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Feedback on ExfData(Ver.1.92)

REACTION

- ① Using pointer to fill a few reactions
- ② Pointer information is missing
- ③ Re-Edit reaction, the pointer inf. is missing also

Nuclear data compilation into database EXFOR

File Section Input Keyword Input Edit Processing Tools help

Renumber Subentries before Ordering Use 67-80 Columns

TITLE AUTHOR INSTITUTE REFERENCE FACILITY INC-SOURCE DETECTOR SAMPLE METHOD ANALYSIS ERR-ANALYS REACTION CURRENT EDIT ENTRY FILE

DECAY-DATA HALF-LIFE PART-DET ADD-RES MONITOR MONIT-REF REL-REF COMMENT CRITIQUE FLAG STATUS

SUBENTRY001 SUBENTRY001-wizard SUBENTRY SUBENTRY-wizard COMMON DATA C in ENTRY Title (11th Col) C in current SUBENTRY Title (11th Col) C in Whole File

EXFOR File Structure

	Column: 29	Row: 66	Total: 83	Insert	ID:ExforCompiling/32687.exf	Subentry: 32687002 BB sect
	32684.exf	32689.exf	32687.exf	32686.EXF	S0059.exf	
ENDCOMMON	3	0				32687 1 59
ENDSUBENT	58	0				32687 199999
SUBENT	32687002	20110330				32687 2 1
BIB	1	3				32687 2 10
REACTION	1	(92-U-235 (N, γ) _{ex})				
	2	(92-U-235 (N, γ) _{ex})				
	3	(92-U-235 (N, γ) _{ex})				
ENDBIB	3	0				32687 2 6
NOCOMMON	0	0				32687 2 7
DATA	7	3				32687 2 8
EN DATA	1DATA-ERR	1DATA	2DATA-ERR	2DATA		32687 2 9
DATA-ERR	3					32687 2 10
MV	PC/FIS	PC/FIS	PC/FIS	PC/FIS		32687 2 11
PC/FIS						32687 2 12
0.57	6.64	0.21	6.37	0.22		2.3732687 2 13
0.08						32687 2 14
1.0	6.49	0.19	6.35	0.18		2.2532687 2 15
0.07						32687 2 16
1.5	6.59	0.19	6.25	0.18		2.3732687 2 17
0.07						32687 2 18
ENDDATA	10	0				32687 2 19

1 12 23 34 45 56 67

Contents

1 Short History

2 Responsibility Journals & X4 Compilation Status

3 Compilation tools

- Chinese tools
- Other tools
- Feedback on ExfData(Ver.1.92)

4 Summary

Summary

- ① 1987, CNDC joined into NRDC
- ② 1985, CNDC start to compile cp X4
- ③ 3 "generation" compile X4, do more contribution to X4
- ④ TT: A plotting software for nuclear data eval. and X4
- ⑤ GDgraph, Gsys & InpGraph: A graph digitizing exp. data software
- ⑥ ERES, HENDEL & ExfData: X4 compilation tools

Thank you for your
attention!

Welcome to China!



