Compilation statistics

Trans number	# Entries	# Subents total	# Data Subents new	#Data Subents corr
4144 prelim.	11	118	18	89
4143	29	244	36	179
4142	20	100	35	45
4140	23	118	26	69
SUM for “4”	83	580	115	464
2202prelim.	17	311	25	269
2200	10	54	31	13
2198	14	277	21	242
2196	14	233	26	193
2193	15	114	6	93
2191	18	146	23	105
SUM for “2”	88	1135	132	915
Total	171	1715	247	1379

EXFOR Entries corrections: important points

1. **Find all References and read.**

- **As REFERENCE – give only publications, which contain data for this ENTRY.**
- **Other references (containing details of experiment, method of analysis and so on) ->REL-REF lines.**
- **If the first author of second reference (or any subsequent references) is different from the first author of first (main) reference, then this should be mentioned in the free text of the lines with these references.**

2. Check data in Tables and in text, compare with data for ALL Subentries of Entry (visually and by plotting as graphs).

3. Check data at Figures of publication, their correspondence to Tables and EXFOR Entry data.

- **4. Search for duplications in EXFOR .**

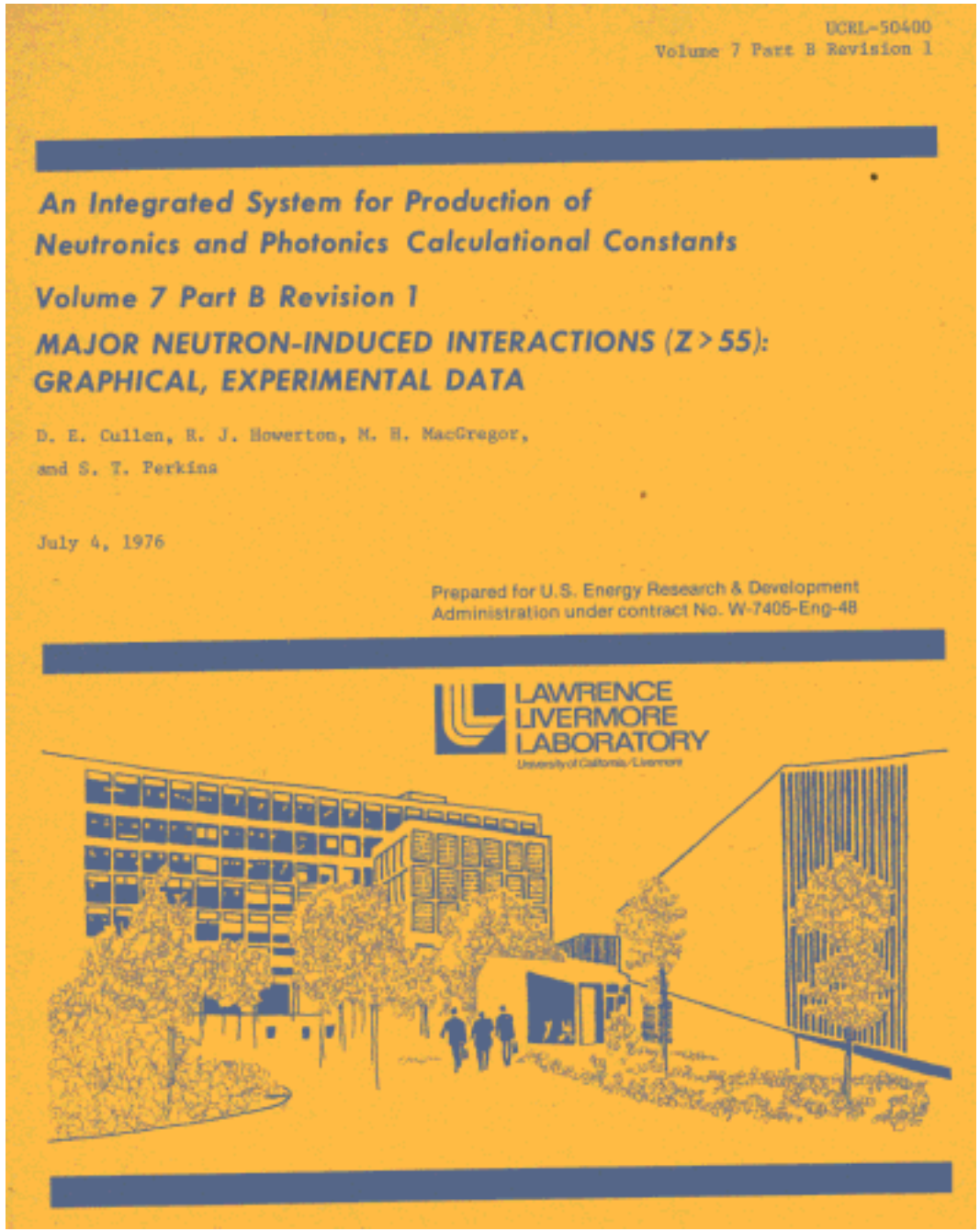
  It is very useful to make Quick Plot from EXFOR database and evaluated libraries by software developed by Victor Zerkin and compare data. Large difference with data from other entries or evaluations may show also, that used reaction code is wrong (e.g. “inelastic collision” used by authors does not mean inelastic scattering cross section, but non-elastic cross section, etc.)

5. Old data (before 1976 year) could be checked against data published in UCRL-50400.

Careful analysis of data was done by R.J.Howerton, D.E.Cullen, M.H.MacGregor and S.T.Perkins, when Livermore Evaluated Data Library was prepared.

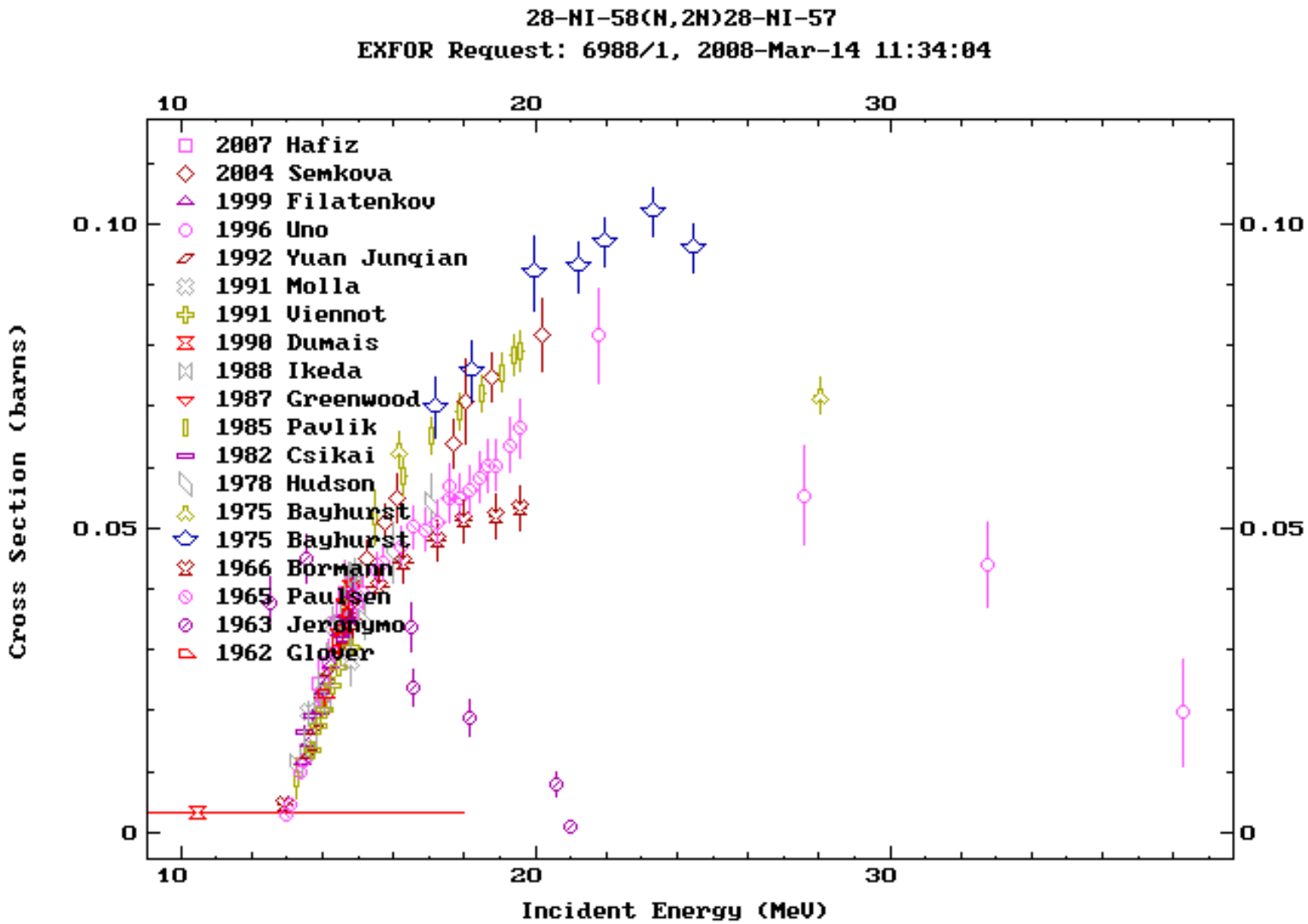
There are several volumes, where experimental and evaluated data are presented at Figures.
Data from many journals, reports, even private communication are presented and could be find using author name or reference or reaction.

UCRL-50400


UCRL-50400
Volume 7 Part B Revision 1
An Integrated System for Production of
Neutronics and Photonics Calculational Constants
Volume 7 Part B Revision 1
MAJOR NEUTRON-INDUCED INTERACTIONS (Z > 55):
GRAPHICAL, EXPERIMENTAL DATA
D. E. Cullen, R. J. Howerton, M. H. MacGregor,
and S. T. Perkins
July 4, 1976
Prepared for U.S. Energy Research & Development
Administration under contract No. W-7405-Eng-48
LAWRENCE
LIVERMORE
LABORATORY
University of California/Livermore

Example of correction - 1963 Jeronymo+

EXFOR data -from Table (before correction)



Data from Figure of publication

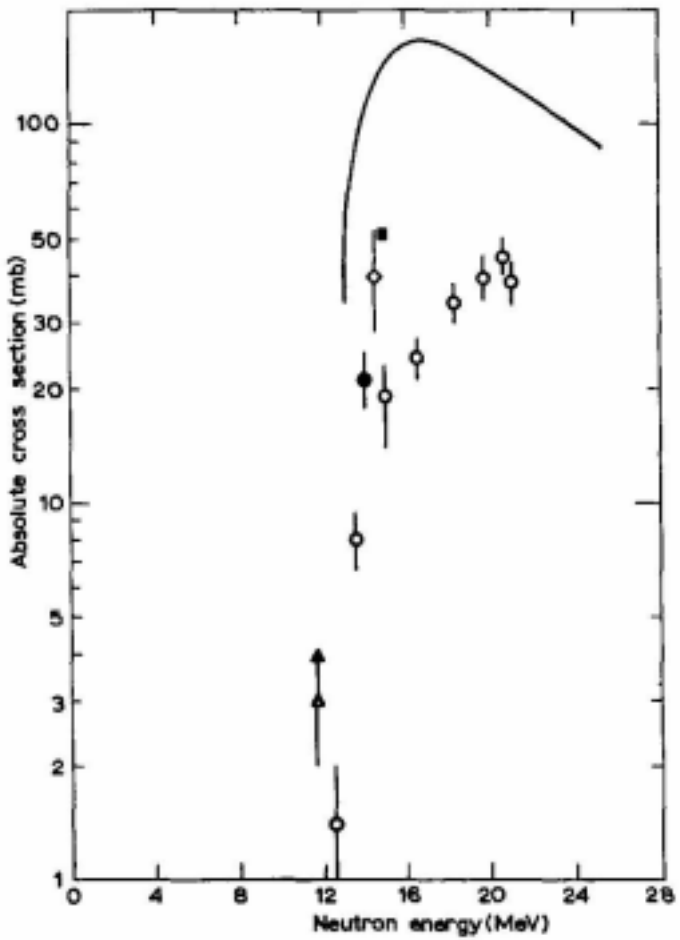
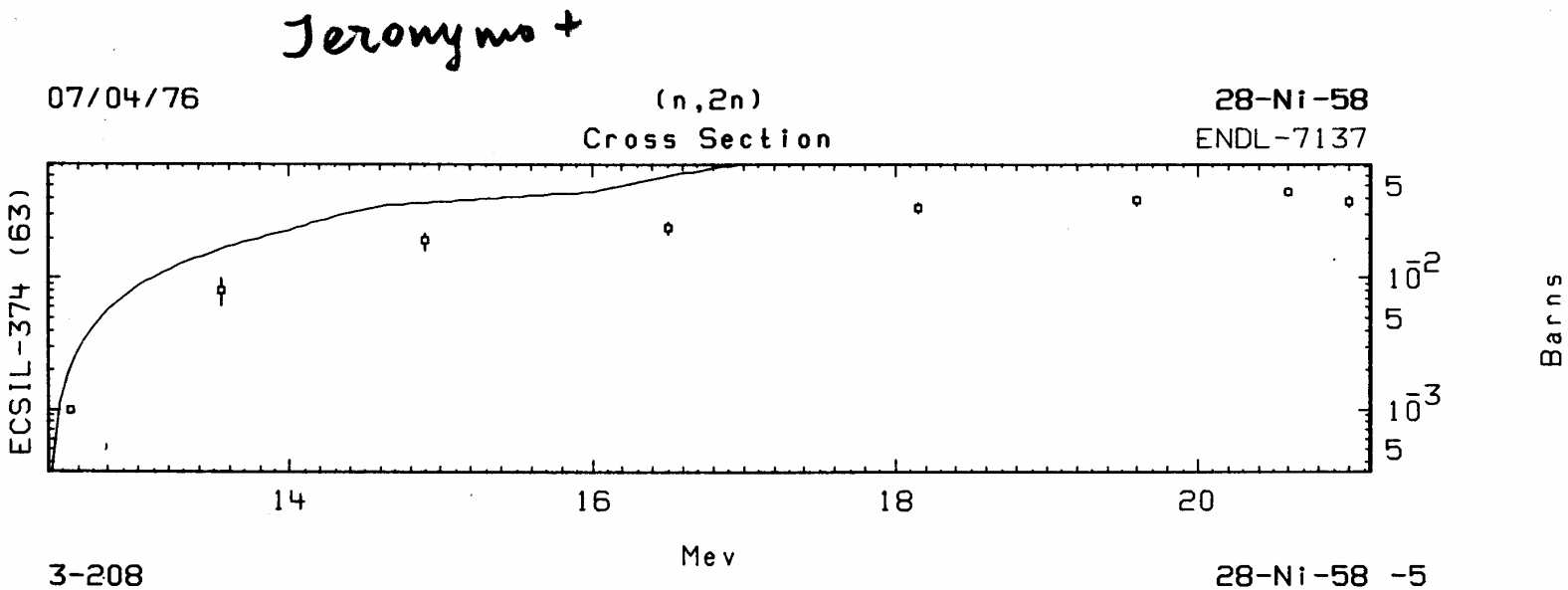


Fig. 13. Total cross-section for $Ni^{58}(n, 2n)Bi^{57}$ reaction. ○-Present data, ■-Preiss and Fink [19]), ●-Howerton [20]), △-Cohen [16]), ◇-Paul and Clarke [17]). The full line is the theoretical estimate for the $Ni^{58}(n, 2n)Ni^{57} + Ni^{58}(n, np)Co^{57}$ reaction by Mani and Melkanoff.

Plot from UCRL-50400



6. Check of physical meaning of data. The questions should be answered:

- **What was really measured (primarily measured quantity)?**
- **How was done (if done) the normalization of the cross sections, which standard cross section or monitor reaction was used?**
- **It is very useful to communicate with evaluators and physicists. Any questions and discussions are helpful. Again it's useful to make Quick Plot to compare with other data for the same reaction. These plots can be sent to authors for explanations if they differ too much from other data in the EXFOR database.**

7. **Ask authors (if possible) any questions about found disagreements and possible misprints through e-mail.**

   Often authors answer more readily at the questions about possible misprints, than on request at their data.

8. **Use NuDat retrievals to understand decay properties and decay radiation actually used (if used) in measurements.**

9. **Check also ERRATA or CORRIGENDUM lists published usually in the last issue of the journal of the year of publication.**

10. **Use CHEX code to find errors.**

11. **Use Spellcheckers to correct free text and remove simple misprints.**

Proposals:

- To **prepare a short Guideline for EXFOR** compilers on the base of these working papers with adding comments and other proposals worked out at the meeting.
- To **recommend all compilers to use this Guideline as checklist** at correction of old Entries and at compilation of new ones.