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Nuclear Data Sheets: Journal for Structure & Reaction Data?

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Special Issue on ENDF/B-VII.0, Dec 2006



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Nuclear Data Sheets

*A Journal Devoted to Compilations and Evaluations
of Experimental and Theoretical Results in Nuclear Physics*

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**Special Issue on
Evaluated Nuclear Data File ENDF/B-VII.0**

Special Issue Editors: P. Obložinský and M. Herman

Why Common Session Today?

Explain what happened.

Initiate discussion what to do in future.

What Happened?

Nov. 2004: CSEWG decided to produce a big paper on ENDF/B-VII.0 (~ 40 or more pages in Nuclear Science and Engineering).

Nov. 2005: Objections raised against NSE (old fashioned, slow, ...)

Early 2006: NNDC offered the space in NDS, released by an earlier decision to drop publishing Recent References → Special Issue on ENDF/B-VII.0.

Special issue: 187 pages = 6.0% of the NDS volume in 2006.

Scope of NDS was not changed, but tradition yes.

“A Journal Devoted to Compilations and Evaluations of Experimental and Theoretical Results in Nuclear Physics”

Big Paper on ENDF/B-VII.0

- Chadwick et al. (48 authors, 16 laboratories)
- 129 pages, 119 color figures, 296 references, 3 Appendices
- Unprecedented effort
- New standard for future ENDF-type papers
- Companion paper, van der Marck “Benchmarking ENDF/B-VII.0”

- Submitted to Nuclear Data Sheets on Oct 2, 2006
- Due peer-review process
- Given to Elsevier for print on Oct 31, 2006
- Will be published in Dec 2006
- Several hundreds extra copies will be distributed
- It has potential to become a highly cited paper

Nuclear Data Sheets: Background

- 12 issues per year (2,400 - 3,100 pages)
 - 11 issues devoted to ENSDF mass chain evaluations
 - 1 issue of Recent References (NSR) - dropped in 2005
- In 2006: 18 mass chains, ~150-200 pages per paper
Special issue (2 papers), total of 187 pages
- Until 1980, edited and published by Nuclear Data Program, ORNL
- In 1980, responsibility shifted to the NNDC; Jag Tuli is editor-in-chief since 1998
- The NNDC prepares photo-ready copies, sends to Elsevier for print; style etc. practically unchanged since ~1985

Nuclear Data Sheets: Future

Keep focus on ENSDF (~80%), but reduce size of papers, and make space for non-ENSDF structure and reaction papers.

There is demand for extensive nuclear data papers of considerable importance and impact. Examples:

- Big paper on ENDF/B-VII.0
- Detailed papers on evaluation methodology, codes
- Results of international projects such as CRPs (RIPL library, Actinide decay library, Standards cross sections,...)

By using existing resources & modern technology, adding new quality papers, we can transform NDS to the leading journal in the field, both for structure and reaction data. This would increase NDS prestige, strengthen the two communities, and bring them closer together.