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MEMO 4-C 2/103

To : See Distribution
From : Peter Johnston P.J (OECD)
Subject : Capture and Transmission Yield Data

3rd February, 1978

The working groups at the NEANDC/NEACRP Specialists meeting on neutron data of structural materials for fast reactors at Geel, December 1977 made a number of recommendations concerning the activities of the 4-C network of neutron data centres. These recommendations will of course be discussed at the next NEANDC and NEACRP meetings, but I have distributed them here for your information, and so that they may also be discussed at the next 4-C meeting.

- 1) Data Centres should be ready to accept and exchange transmission and capture yield data. Experimentalists should be encouraged to send capture yield data as well as corrected cross sections to the data centres. Such data would then be available for re-analysis when improvements in analysis techniques are made.
- 2) The accuracy of capture data resonance analysis programs should be tested using benchmark capture yield data on natural iron, to be supplied to the Data Centres by D.B. Gayther. Full experimental details will be given in Appendix 2 of the proceedings of the meeting.
- 3) A realistic assessment of the error in data is becoming increasingly important to evaluators. The errors quoted should be separated into correlated and uncorrelated components and accompanied by descriptive statements on the nature of the correlations. This should not be taken as a request for a complete covariance matrix on all the quantities measured but more simply for a realistic statement on the salient features of correlations in the quoted errors.

I will try to collect yield data only for structural materials from Area 2, to get some idea of the quantity of material available. The data set referred to in the second recommendation will be sent to us by Dr Gayther and will be exchanged in the usual way as soon as possible.

The third recommendation refers more to the experimentors than to the compilation, but does reflect a major preoccupation at both this meeting and the recent "Fe shielding benchmark" meeting held in Paris in November.

78/02/13
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