**Nuclear Data and Benchmarks for Reactor Shielding**
(Proceedings of a Specialists' Meeting in Paris, France, sponsored by the NEA Committee on Reactor Physics)

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This book consists of the proceedings of a meeting by the same title held in Paris, France, during October 27-29, 1980. Since the book is not written by a single individual, it suffers from the nonuniformity of style that is unavoidable for publications of this nature. There are 28 articles in the book, 6 of them written in French, the rest in English. All the articles are addressed (another way of saying they will be useful) to persons who are familiar with the subjects discussed.

The first section of this volume is entitled "Status of Multigroup Data Sets and Covariance Information." It gives the characteristics of all the major multigroup libraries developed in the United States and Europe. Versions of variance-covariance matrices, optimization of broad energy group structure, and sensitivity profiles available to users are discussed. There is a piece of information missing that I believe should have been included for the sake of completeness and that is the group energy boundaries for the libraries mentioned.

The second section, entitled "Compilation of Generic Problems for Analysis to Assess Shielding Data Requirements," consists of four papers. One deals with safety problems of reprocessing facilities, two discuss data for thermal reactors, and the last one for fast breeder reactors.

The third section, entitled "Sensitivity Methods and Their Applications," is an excellent, up-to-date review (up to 1980) of the subject. The reader will find a wealth of information about all the important transport and Monte Carlo codes dealing with sensitivity analysis.

"Review of Experimental Programs" is the title of the fourth section. It presents results from standard iron benchmark experiments as well as penetration experiments in several media such as sodium and sodium-steel mixtures. A new French experimental program, JASON, will assess the shielding characteristics of steel combined with natural boron carbide.

The last section of the book deals with "Analytical Techniques." Specifically, this part discusses techniques used to adjust nuclear data such as cross sections and results of integral experiments.

In conclusion, despite the stylistic shortcomings and the not-so-perfect reproduction of data in certain articles, I find the book to be a valuable addition to the library of any person who works or is interested in shielding calculations.

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