

# American Nuclear Society

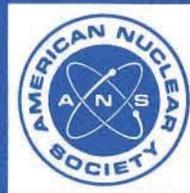
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July 10, 2005  
ANSI/ANS-19.5-1995

requirements for reference  
factor physics measurements

an American National Standard

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**American National Standard  
Requirements for Reference  
Reactor Physics Measurements**

Secretariat  
**American Nuclear Society**

Prepared by the  
**American Nuclear Society  
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# Foreword

(This Foreword is not a part of American National Standard Requirements for Reference Reactor Physics Measurements, ANSI/ANS-19.5-1995.)

It is the intent of this American National Standard to provide minimum criteria for reference reactor physics data obtained primarily with "zero power" critical or exponential assemblies. This standard is intended for the qualification of reference reactor physics data. In this regard, it supports other standards, developed by ANS-19 working groups, that require high quality reference data for the performance and validation of specific calculational methods. In applications of reference reactor physics data, it is assumed that the application of other standards such as American National Standard for the Determination of Neutron Reaction Rate Distributions and Reactivity of Nuclear Reactors, ANSI/ANS-19.3-1983 (R1989), and American National Standard for the Determination of Thermal Energy Deposition Rates in Nuclear Reactors, ANSI/ANS-19.3.4-1976 (R1989), require demonstration of the relevance and applicability of the reference data to methods being tested.

Compliance with this standard can be demonstrated by meeting the following requirements:

1. Citing clear and adequate documentation of the reference measurements.
2. Showing that error estimates for the reference data are consistent with the available evidence.
3. Comparison with independent measurements with similar configuration or against broad data bases using accepted calculational methods, as necessary, to account for specific conditions.

Organizations having measurements that comply with this standard are invited to forward them to the Brookhaven National Laboratory National Nuclear Data Center (NNDC). The NNDC will maintain them on file so that they will be readily available for use in subsequent validations of specific calculational methods.

This revision of the standard was developed by Working Group ANS-19.5 of the American Nuclear Society Standards Committee; the working group had the following members at the time it prepared and approved the standard's revision:

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Consensus Committee N17, Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods, had the following membership at the time it reviewed and approved this standard:

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