

WORKING GROUP 19

Nuclear Data Validation

When validating Nuclear Data one has to observe conditions (Integral Data ,formalisms,algorithms,methodologies) so as to be sure that the information transfert from integral experiments to nuclear data has been performed in an exact and complete way .If these conditions are fulfilled ,then the validation approach is pertinent and even the integral information can be included in the Nuclear Data evaluation process .

***** :Preliminary proposals to organize the work in the subgroup 19

OBJECTIVES

In order to reach **common views** concerning this general problem of **Data validation** and promote a **large cooperation** between interested laboratories it is suggested the following general objectives for this subgroup :

1/ Exchange of information on current approaches .

It would be beneficial to make comparisons of methods so as to derive a present "status of the arte " ?.

2/ Benchmarking of methodologies for:

- a. Data processing
- b. Physics calculations
- c. Data adjustment

At this point the question of common group structures has to be raised .

3/ Realisation of a pool of integral data of minimum size and informative content , freely available .

NB :The quality of the uncertainty information (variance but also covariance terms)is of prime importance for x-section adjustment purpose.

In order to fulfill these objectives it is suggested the following steps :

Step 1 : Exchange of information on current adjustment techniques

- * Integral data base .
- * Processing techniques
Codes group structure , weighting function
- * Physics calculations
codes procedure
- * Adjustment technique
statistical technique
energy range
isotopes ,reactions

Step 2 : Benchmark of Processing and Physics(Neutronics)calculations

Application to simple benchmarks (thermal essentially +fast)

Step 3 : Benchmark of adjustment techniques

Step 4 : Define a structure of a common integral database .

- * Which kind of integral data are usefull for nuclear data adjustment ?
- * Are the integral data today available sufficient or not ?
- * Discussions about the possibility for some laboratories to release some useful data ?
- * Revision of the published uncertainty values ?

Step 5 Interest of a general benchmark using the common integral database ?

Finally it should be discussed about the interest to extend the scope of this subgroup to the techniques (very similar) used to assess requirements on Nuclear Data .

The different steps can be started in parallel but the management will be difficult .

These proposals have to be discussed ,in particular, at the occasion of the next WPEC meeting (15-17 June 1998,Antwerp).

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