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INTERNATIONAL NUCLEAR DATA COMMITTEE

CHAIRMAN'S REPORT  
ON THE  
INTERNATIONAL NUCLEAR DATA COMMITTEE  
FOR 1968 AND 1969

by  
G. H. KINCHIN

Dounreay, 27th May 1970.

IAEA NUCLEAR DATA SECTION, KÄRNTNER RING 11, A-1010 VIENNA



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## INTRODUCTION

1. The International Nuclear Data Committee was set up at the beginning of 1968 following meetings of the "pre-INDC", with terms of reference including the following statement:-

".... the INDIC will have the dual purpose of serving as a means of promoting international cooperation in all phases of nuclear data activity, and of advising the Director General of the IAEA in this field".

2. During my two-year term as Chairman, two meetings of the Committee have been held, the first in Vienna in May 1968, and the second in Brookhaven in June 1969. The outcome of these meetings has been summarised in two separate Reports to the Director General, and reported in more detail in the informal minutes of the Committee..

3. Bearing in mind the existing full reports of Committee work, the purpose of this report is to review briefly some of the more important achievements of the Committee during the past two years and to present some personal views on the future of the Committee.

## PROGRESS IN 1968 AND 1969

4. A significant part of the Committee's work has been concerned with advising on the development of the Nuclear Data Section of the IAEA - directly in minor matters and by recommendations to the Director General on matters of substance.

5. The discussion of progress reports both from states represented on the Committee and from other member states of the IAEA has been valuable in disseminating information and the channels of communication with member states through Liaison Officers have been improved.

6. The Committee has sponsored and actively supported the coordination of the activities of the four data centres at Brookhaven, Obninsk, Saclay and Vienna. Whilst the present full exchange of experimental data would be impossible without the willing cooperation of the four centres, the Committee can justly claim to have played a significant role in bringing this about. Similarly, the existence of the Committee as a forum for discussion has been instrumental in bringing about the broadening of CINDA neutron data bibliography to a truly world-wide enterprise.

7. Some progress has been made in collecting together a world-wide request list for measurements of nuclear data to accuracies which can be justified by the purposes for which the data are needed. Steps have been taken to initiate the exchange of evaluated nuclear data - the information most directly useful for reactor calculations.

8. The Committee has made recommendations for Conferences and Panels, and the value of the recommendations may be judged by the high proportion of the recommendations which have been accepted by the IAEA.

9. The activities of the IAEA in the field of standards have been supported by the Committee, including the exercise in evaluating the basic 2200 m/s cross-sections.

10. Finally, the Committee has made recommendations on a proposal for compilation of data on radioactive isotopes and nuclear levels.

## FUTURE OF THE COMMITTEE

11. With the establishment of the four-centre meetings to coordinate data compilation, the attention of the Committee needs to be directed *only to matters* of major significance, and to monitoring the performance and usefulness of the system as a whole.
12. The major problems of implementing the world-wide neutron data bibliography are resolved, but the INDC should assess the adequacy and thoroughness of CINDA coverage, and forecast the likely future development.
13. The move towards a world-wide request list is slow, and this is perhaps inevitable in international cooperation which must advance by general agreement. There are problems associated with such a request list. The first is that the long period of time which must elapse between initiation of a request and its appearance in a published list means that the lists cannot be up-to-date; the second problem is that the accretion of multiple requests leads to lists which are so large that they cannot be surveyed. It is for consideration whether the production of world-wide request lists of the form presently envisaged is a useful continuing activity.
14. The evaluation of nuclear data, using differential measurements, nuclear theory and integral measurements to make the best estimates for cross-sections and other parameters is time-consuming. It is a necessary process for producing the best information for reactor calculations and is a fruitful field for international collaboration. At present the exchange is on much the same basis as the initial stages of the exchange of experimental data and should be able to build on the mechanisms established for the latter purpose.
15. The Committee has declared itself willing to advise the Director General on proposals and research contracts within its field of competence and no doubt this advice will continue to be sought, together with advice on Conferences and Panels.
16. If the Committee is working well, it should successively achieve its objectives and I suggest that it will be appropriate to review the future life and responsibilities of the Committee at the time of the next Chairman's report.

## RECOMMENDATIONS

17. Without merely repeating the contents of the existing reports on the Committee's meetings, I have attempted to summarise some of the main achievements in the section on "Progress". The Committee is invited:-
  - (a) to comment on the form of the Report.
  - (b) to agree to the section summarising progress.
  - (c) to comment on the personal views expressed in the section on the future of the Committee.

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