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INDC

INTERNATIONAL NUCLEAR DATA COMMITTEE

Minutes of the Second Meeting of the Joint IFRC/INDC
Subcommittee on Atomic and Molecular Data for Fusion

Vienna, 14 May 1977

Compiled by
A. Lorenz and R.E. Seamon
Nuclear Data Section
International Atomic Energy Agency

August 1977

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

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Second Meeting of the Joint IFRC/INDC
Subcommittee on Atomic and Molecular Data for Fusion

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AGENDA

1. Adoption of agenda
2. Review of actions arising from last meeting
3. Review of current IAEA/NDS A+M Data programme status
 - a. Quarterly Bulletin
 - b. Index to Atomic Collision Data
 - c. Coordination of evaluation of important A+M data for fusion
4. Review of results of May 1977 A+M data centre meeting
5. Terms of Reference and Relationships with Parent Committees
6. International Cooperation
 - a. A+M data centre network
 - b. A+M Liaison officer network
7. Agenda items left from last meeting
8. Summary of actions and recommendations
9. Next meeting.

List of Meeting Participants

Name (Committee Affiliation)	Present at Meeting in capacity of	Home Address
E.C. Beaty	Observer	IAEA, Nuclear Data Section, Atomic and Molecular Data Unit
C.M. Braams (IFRC)	Joint Subcommittee Chairman	FOM-Instituut voor Plasmafysica Rijnhuizen, Jutphaas, The Netherlands
W.G. Cross (INDC Chairman)	Observer	Atomic Energy of Canada Ltd. Chalk River, Ontario, Canada
J. Decker (nominated by IFRC) (Advisor of US INDC Member)	Joint Subcommittee member	Div. of Magnetic Fusion Energy Energy Res. & Develop. Admin. Washington, D.C. 20545, USA
H.W. Drawin (nominated by IFRC)	Joint Subcommittee member	Dept. Phys. Plasmas & Fus. Contr. Association Euratom-C.E.A. sur la Fusion Controlée Rue du Panorama, B.P. 6 F-92260 Fontenay-aux-Roses
T. Fuketa (INDC)	Joint Subcommittee member	Nuclear Data Center, J.A.E.R.I. Tokai-Mura, Naka-Gun, Ibaraki-Ken 319-11 Japan
A. Lorenz (IAEA)	Scientific Secretary	IAEA, Nuclear Data Section
Yu.V. Martynenko (nominated by IFRC)	Joint Subcommittee member	Institut Atomnoi Energii I.V.Kurchatova 46 Ulitsa Kurchatova Moscow D-182, USSR
M.K. Mehta (INDC)	Joint Subcommittee member	Bhabha Atomic Research Centre Trombay, Bombay 400 085, India
H.T. Motz (INDC)	Observer	Los Alamos Scientific Laboratory P.O.B. 1663, Los Alamos, N.M. 87545 USA

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List of Meeting Participants

<u>Name (Committee Affiliation)</u>	<u>Present at Meeting in capacity of</u>	<u>Home Address</u>
J.J.Schmidt (IAEA/INDC)	Joint Subcommittee member	IAEA, Nuclear Data Section
R.E. Seamon (IAEA)	Observer	IAEA, Nuclear Data Section, Atomic and Molecular Data Unit
H. Suzuki	Observer	Dept. of Physics Faculty of Science and Technology Sophia University Chiyoda-Ku, Kioicho 7 Tokyo 102, Japan
G.B. Yankov (INDC)	Joint Subcommittee member	Institut Atomnoi Energii I.V. Kurchatova 46 Ul'tsa Kurchatova Moscow D-182, USSR

Conclusions and Recommendations

1. Plans and schedule for the publication of the Quarterly International Bulletin on Atomic and Molecular Data for Fusion as proposed* were considered acceptable. It was agreed to allow the publication of unpublished preliminary data in the Bulletin, and to allow requests and statements about data requirements for fusion to be included. Emphasis was placed on the need to be selective in the papers and topics chosen from the whole range of atomic physics. The best service by the Nuclear Data Section's (NDS) A+M Data Unit as a whole would be provided if the Unit could demonstrate the ability to be selective, thereby making the product clearly related to fusion. Admittedly, there is no unified view of what is really needed, but it was felt that the papers presented at the Agency's Advisory Group Meeting on Atomic and Molecular Data for Fusion, held at the Culham Laboratory in November 1976 could be of guidance in reaching decisions.
2. Concerning the Index to atomic collision data, the A+M Data Unit is requested to work out a schedule leading, if possible, to the publication of the first issue of the Index by the end of 1978. It was agreed
 - that there should be no truncation in time of the material to be included in the Index (i.e. papers from the 1950's should be included);
 - that data for all atoms should be included unless specifically excluded, while data for molecules should be excluded unless specifically included;
 - that, as a compromise solution, full bibliographic citations including titles should be included in the data file but omitted from the first issue of the Index;
 - that the scope should be limited by considering the needs of magnetically confined fusion systems.
3. Concerning the needs for A+M data within the fusion community, the initial priority given by the IAEA programme to magnetic confinement devices was accepted at this time because of the limited manpower of the A+M Data Unit. It was emphasized that it is not appropriate to exclude requirements for inertial confinement devices, and that their associated needs - even if not well defined at this time - must be taken into account as the programme matures.

* First Meeting of the Atomic and Molecular Data Centre Network. Summary Report. INDC(NDS)-88/GB (July 1977).

4. In spite of the work load confronting the NDS/A+M Data Unit, it was felt that a detailed proposal was needed before the subcommittee could recommend the hiring of two additional staff (a P-2 physicist and a G-6 data analyst). The NDS was instructed to keep the budget open to allow for possible addition to the staff during 1978, and to inform the Subcommittee on the staff situation by October 1977.
5. It was agreed that during the trial period the NDS/A+M Data Unit would not become involved in granting research contracts for data evaluation or measurements.
6. It was recognized that data on plasma-surface interactions are definitely part of A+M data, but that they will not be included in the Atomic Collision Data Index. The subcommittee noted the ZAED (Karlsruhe) work in this area.
7. It was agreed to drop all efforts on the compilation of atomic wave-functions during the trial period (i.e. 1977-1978).
8. The need to clarify the relation between this subcommittee and the parent IFRC and INDC Committees was recognized. It was agreed that before any official approach to outside organizations is made, and that before any commitments of the NDS are made, the intended actions should be indicated to the chairmen of both the IFRC and the INDC.
9. The next regular meeting of this subcommittee will be held in May, 1978. The possibility of having an intermediate meeting in October 1977, in particular to address the question of the A+M Data Unit staff, was left open.
10. Dr. Schmidt was asked to summarize this meeting at the Ninth INDC meeting.
11. In conclusion, the Joint IFRC/INDC Subcommittee made the following statement:

Since the initial decision to embark on an A+M data programme was made, it has become even more apparent to the fusion community that the need exists for an efficient data collection and dissemination system. The trial period is going according to the best expectations of the Joint IFRC/INDC Subcommittee on A+M Data for Fusion; there has been considerable work accomplished, and there is good evidence that this programme should be continued after the trial period. The Joint Subcommittee will continue to review progress and will make a more definitive assessment at a later stage during the trial period.

Appendix

Consideration of Discussion Points left over from Last Meeting

Summary of Actions resulting from the First Meeting of the Joint IFRC/INDC Subcommittee, (INDC(SEC)-57/GA, p. 12).

- With regard to the proposed formation of a West European A+M data centre, Dr. Drawin (speaking as representative of the CEC) indicated that it is premature to consider the creation of a separate centre for A+M data, but that CEC is prepared to cooperate with the IAEA Centre and take appropriate action if so requested by the Joint Subcommittee.

- Regarding the review of dielectronic recombination data, Dr. M.F.A. Harrison conveyed to the Committee (letter to Dr. J.J. Schmidt, 9 March 1977) that dielectronic recombination as applied to fusion plasmas are still not fully assessed, and a review at this stage might be premature.

- Regarding the use by the IAEA/A+M Data Unit of an international network of "liaison officers" for A+M data for fusion, it was agreed that at present no formal action is necessary, that the network of liaison officers should evolve as the programme grows, and that the A+M liaison officers' network would in no way be related to the Liaison Officers of the International Nuclear Data Committee.