Memo CP-D/159

MAR 11 1987

24 February 1987

To: Distribution

From: H.D. Lemmel

Subject: Summary Record
Technical NRDC Meeting, Vienna, 7-9 October 1986

Please find attached the summary record of the above meeting.

Clearance: J.J. Schmidt

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CONTENTS

SUMMARY

The second meeting of the technical staff of the Nuclear Reaction Data Centers took place in Vienna, 7-9 October 1986. The discussions concentrated on technical matters of the jointly operated systems CINDA, EXFOR, ENDF/B AND WRENDA.

An important topic covered the data compilation scope of the centers, and it was noted

- that there are important data types that have been requested for applications, that are not compiled by any of the centers due to lack of manpower; see the Conclusions page 9 under the heading Compilation Scope.

Following a recommendation by the INDC, an intercomparison of EXFOR output formats has been performed. Such user friendly formats are different at the centers due to different computer configurations, but all centers have now easily readable output formats where cryptic codes were converted to legible expansions. "Computation formats" where the data units (e.g. in basic EXFOR data may be in b, mb, or μb) are converted to uniform units, exist at NNDC, NEA-DB and NDS and, to some extent (i.e. not as routine operations), also at the other centers.

The EXFOR system has stabilized and does not require significant changes any more. However, compilation rules must be updated continously with respect to

- new data types (e.g. Kerma factors),
- data types that may occur in various representations (e.g. gamma-production cross-sections),
- increased sophistication of machine processing of EXFOR data.

Consequently, a large number of conclusions and actions have been agreed upon.

With respect to evaluated data, centers and users are waiting for the ENDF-6 Formats Manual and for the ENDF/B-6 standards file in order to have a common basis for further data evaluation work and normalization of data.

The CINDA system has been changed to a de-centralized system. The CINDA users will not notice any change in the appearance. But many items in the co-operation scheme, in the CINDA exchange format, in the center-internal CINDA formats, and in the retrieval scheme for the book production had to be reviewed, clarified or revised.

LIST OF PARTICIPANTS

CAJaD	Ms. G.M. Zhuravleva
CJD	G. Timukhin
CNDC	Wang Dahai (presently at NDS)
NEA-DB	Ms. I. Forest H. Hofer
NNDC	Ms. V. McLane
RIKEN	Y. Tendow
NDS	D.E. Cullen D. Gandarias Cruz M. Lammer H.D. Lemmel K. Okamoto O. Schwerer Ms. M. Seits

AGENDA

1. Opening, adoption of agenda, announcements, etc.

2. Cinda

2.1 Cinda system and Manual

- various items in 4C-3/298
- selection criteria for Cinda Supplement Books: 4C-3/295
- quantities and definitions, e.g. polarization
- Cinda check programs

2.2 Cinda exchange mechanism: 4C-3/297 item 1.1

2.3 Cinda completeness

- completeness of coverage, delays?
- data index lines: EXFOR
- data index lines: non-EXFOR: 4C-3/297 item 2.4

2.4 Cinda Book

- book cover: proposed in 4C-3/294
- introductory text: 4C-3/297 item 1.2
  handbooks
  EXFOR advertisement: 4C-3/297 attachment 2.2

- proposal of including in Cinda a Chart of Nuclides

- book production schedule: 4C-3/297 item 1.3
  see also 4C-3/290

3. Exfor

3.1 Exfor system, coding rules, Manual

- Pending CP Memos
- Paramagnetic effects: CP-C/161, CP-D/149
- Isomers: CP-C/162, CP-D/151
- Gamma Spectra: CP-D/152
- Temperatures: CP-C/164, CP-D/153
- Institute in case of international cooperation: 4C-1/181
- Permitted character set

3.2 TRANS tapes

- disturbing mistakes in TRANS tapes: many memos
- specific items to improve the check-programs
- response to requested retransmissions

3.3 EXFOR completeness

- cleanup: many 4C-1 Memos and response
- redundant EXFOR entries: 4C-1/179

3.4 Customer services

- computation format: IAEA-NDS-80: X4TOC4
- intercomparison of EXFOR retrievals and output formats: reply to Memo CP-D/150
  Note: so far, we received only one reply from NEA-DB. Kindly send other replies soonest, or bring it with you to the meeting.

3.5 Dictionaries

- expansions in Dict. 7 (Books and Conf): CP-D/148
- nuclides: 4C-4/46 and others

3.6 Special CPND matters

3.7 Special PhotoND matters

- column heading M: CP-C/160
- new EXFOR center in UK?

3.8 Miscellaneous

- Chinese author names in EXFOR
- Transliteration of Russian author names

1. Non-EXFOR data libraries

4.1 Inventory of available libraries:
IAEA-NDS-7, IAEA-NDS-70

4.2 Status of new versions of available libraries:

- INDL
- UKNDL
- BROND (Obninsk)
- JENDL-3
- ENDF/B-6 evaluations
- ENDF/B-5 files in ENDF-6 format
- Fission yields
- Others?

4.3 Codes

- ENDF-5 codes: IAEA-NDS-29: Utility programs
  IAEA-NDS-39: Pre-processing codes
  IAEA-NDS-79: PLOTC4

4.4 Status of ENDF-6 Manual and codes
4.5 International co-operation in data evaluation

6. Wrenda

Schedule and actions for next issue

7. Miscellaneous

7.1 List of nuclear data meetings: CP-D/146

7.2 Date of next NRDC-Meeting

CONCLUSIONS AND ACTIONS

1. Compilation scope:

1.1 The IAEA Advisory Group Meeting on Nuclear Data for Medical Radiotherapy (Delft, Netherlands, 16-20 Sept. 1985) had stated the need for compilation of selected differential CPND (see EXFOR conclusion 7.3 from the 1985 NRDC meeting). - None of the centers is doing a systematic effort in this field, though a few such data may be found in EXFOR.

1.2 Higher energy neutron data (e.g. up to 100 MeV for radiotherapy; above 100 MeV for accelerator breeding) (see EXFOR conclusion 7.4 from the 1985 NRDC Meeting) are compiled at Brookhaven and Obninsk but not at Saclay. (In the NDS service area such data are not measured.)
Considering, that the frequency of such data is not very high, the centers recommend the NEA-DB to compile such data from the NEA-DB service area in EXFOR. Should this not be possible, NNDC would be free to compile such data into the EXFOR file 6, subject to availability of manpower.

1.3 Polarized neutron data (including polarized targets and polarized beams) seem to be compiled systematically at NNDC and NEA-DB, and to some extent at CJD. (No such data in area 3.)

1.4 None of the centers is compiling systematically (d,pf), (t,df) and similar data that had been requested by neutron data evalutors.

1.5 RIKEN concentrates on the compilation of charged-particle induced reaction data for the production of radioisotopes. The list of isotopes considered is still the same as reported in INDC(NDS)-154 page 70. At present, cross-sections for the production of I-123, I-125 and C-11 are being compiled.

1.6 None of the neutron data centers does a systematic compilation of neutron-induced gamma-spectra data. However, cross-section data for producing specific strong gamma-lines (as required, e.g. for geophysics) are compiled by the four centers.

1.7 The neutron data centers continue to compile all data for neutron-induced reactions (with some limitations as mentioned elsewhere in these conclusions). It was not possible to define a specific area of neutron data that would be used only very little. Consequently, no reduction of compilation workload seems to be possible.

1.8 Cold neutron data do almost not exist in EXFOR, although a number of experimental data exists in the literature. NEA-DB had a request for such data.

1.9 Compilation and evaluation activities on fission yield data (M. James, UK, and others) rely on the compilation of such data in EXFOR. (Older such data, that exist in the Crouch compilation, are incomplete in EXFOR.) Compilation and evaluation activities on delayed neutron yield data and P_n values by T. England should also rely on EXFOR, where a new formalism for P_n values has been introduced recently.

1.10 The EXFOR completeness of CPND data for medical applications, i.e.

- data for radiotherapy (Kerma factors, transport calculations) in tissue materials and in detector materials

- excitation functions for radioisotope production

is poor. Special efforts are needed. NDS will contact CAJaD, IAE-CP, NNDC, RIKEN and ask about possibilities for additional compilation work for some well-defined data types.

2. EXFOR general, conclusions:

2.1 When revised EXFOR entries are retransmitted, it is essential to summarize the revision under HISTORY.
Where appropriate, an accompanying CP-Memo should be sent together with the retransmission, indicating, for example, that the retransmissions included in TRANS-tape xxx are the response to memo CP-xxx.
Centers are urged to respond fast and carefully to requests by other centers for EXFOR corrections and retransmissions.

2.2 The matter of isomer coding, specifically of short-living isomers, as discussed in Memos CP-C/162 and CP-D/151 was postponed. A memo by F. Chukreev was announced. further discussion by exchange of CP-Memos was encouraged so that a solution could be proposed for adoption at the 1987 data centers meeting.
A clean solution may not be possible for two reasons:

a) When new isomers are discovered, it will hardly be possible to revise old entries whether the previously unknown isomer was included or not.

b) For many applications a short-living isomer can be ignored and, therefore, no isomer extension will be coded although, strictly speaking, an isomer extension could be required.

2.3 Dr. Tendow submitted a RIKEN paper summarizing recent changes in the knowledge of isomers. This will be helpful to compilers when coding isomer cross-sections in EXFOR. The paper will be distributed as a CP-R memo.

2.4 Sample temperature TEMP and spectrum temperature kT must be distinguished carefully: kT must not be given in DEG but in eV. Where appropriate, kT can replace the incident particle energy EN. Checking codes should be updated accordingly, where necessary. The keyword EN-DUMMY should be avoided when more suitable keywords exist.

2.5 The revision of Dictionary 7 on books and conferences, including now short expandions and long expansions, was appreciated but centers were asked to submit to NDS proposals for further improvements.

2.6 Memo CP-D/152 on Gamma-spectra was adopted. This memo introduced coding rules for gamma-ray production cross-sections as distinct from other representations of gamma yield data.

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2.7 The special characters % > < : ; ! ? & as adopted earlier for CINDA (Memo 4C-3/281) can now be used also in EXFOR in the free text, but not within the numerical fields under COMMON and DATA. It will be investigated (action NDS) whether additional signs can be adopted and whether there exist ambiguities in the bit configuration according to standards (ASCII, EBCDIC). For the time being lower-case characters will not be adopted.

2.8 The code "SUM" whithin the REACTION string is made obsolete. The code "RAT" remains important, because it indicates that the data given are not in barns but in the data unit NO-DIM. The keyword-headings SUM and RATIO are dropped. In dictionaries, these codes will be marked as obsolete. These codes will continue to occur in entries compiled so far, and centers are not requested to remove these codes in old entries, except in the case of retransmissions.

2.9 Centers are reminded to use the Multiple REACTION Formalism strictly in those cases only that are given in the EXFOR Manual. Otherwise receiving centers will have serious difficulties when processing the data.

2.10 A few cases of equivalent REACTION codings were found, e.g.

- isotope-production cross-section on a natural target
- " " " " on an isotopic target with the abundance modifier A
- A similar case exists in the case of thick-target yields for enriched samples
- inelastic scattering to a fission isomer
- process code INL+F

Such cases should be mentioned in the EXFOR Manual, and no preference was given for either of the possible codes.

2.11 Tape densities:
CJD and CAJaD still require 800 bpi; In all other cases 800 bpi should no longer be used. RIKEN, NNDC, NEA-DB, NDS accept 1600 or 6250 bpi.

2.12 The different retrieval mechanisms and output formats of the centers were reviewed as response to Memo CP-D/150 following a proposal by the INDC to stimulate customer-friendly output formats. An additional response from CJD was announced. NDS will write a summary of the outcome of this exercise.

2.13 All EXFOR centers prepare EXFOR entries at the screen in interactive mode, except for NDS where entry forms are still used. Lack of programming manpower and priority of other projects (e.g. rewriting of CINDA codes) did not yet permit a more modern system.

2.14 Under AUTHOR, a blank after a comma is permitted, to improve legibility. Blanks between initials, and blanks between initials and family names remain forbidden.

2.15 Heading keywords should not be identical to Unit keywords.

2.16 When NDS adds a new quantity code to Dictionary 36 because this was encountered in a TRANS tape without prior announcement in a CP-Memo, NDS should review the code and, if found acceptable, send an accompanying memo with the Dict. update. Centers are reminded again not to transmit new codes without notification.

3. EXFOR general, actions:

3.1	NDS	(if not yet done:) to correct the EXFOR check program which was reported to have given an error message for the correct quantity coding (0,0),,LDP.
3.2	NDS	to send the EXFOR check program, whenever the new version is ready, also to NEA-DB in addition to the established distributions which includes CJD, CAJaD, RIKEN, IAE-CP, TUD.
3.3	All	to contribute to the cleanup of Dictionary 3 (institutes) and of the reference dictionaries 5, 6, 7 and to keep them up-to-date. Specifically: New conference proceedings and any changes in institute names or journal names should be reported to NDS. Comments for improvements in the new "short expansions" for conference proceedings are welcome.
3.4	All	with high priority to review memos containing requests for retransmissions of erroneous EXFOR entries and to correct and retransmit them speedily; specifically to review the list of requested retransmissions by O. Schwerer (will be sent out as a Memo)
3.5	CAJaD	as announced, to submit a CP-Memo on short-lived isomers.
3.6	NNDC	to submit suitable examples for the measurement of partial cross-sections to short-living levels or isomers, in order to have a basis for the discussions on how to code them in EXFOR.
3.7	NNDC	to review in the EXFOR Manual whether the definition for EN-DUMMY is still appropriate after other keywords such as KT had been introduced.
3.8	NDS	to review any possible complications that may arise from adopting in EXFOR additional special characters, e.g. [], and to report to the other centers.
3.9	All	to update their EXFOR checking programs to include the items included in the list of disturbing errors found in TRANS tapes (see appendix ...)
3.10	CJD	to send the response to Memo CP-D/150 on the EXFOR retrieval intercomparison.

3.11 NDS to evaluate and summarize the responses to Memo CP-D/150 on the different retrieval facilities and output formats.

3.12 NDS CJD to take appropriate action about the transliteration of Russian names. Originally, the international ISO scheme had been adopted for CINDA and EXFOR as approved by INDSWG at that time. Meanwhile, the US transliteration scheme had been adopted by INIS and should probably be adopted also by CINDA and EXFOR.

3.13 NDS to write a Lexfor entry on the special treatment in EXFOR of Chinese and other South-East Asian names.

3.14 NNDC to finalize and distribute as X4 Memo the Manual updates resulting from the 1985 NRDC Meeting.

3.15 NNDC to update the Manual according to the conclusions of the present meeting.

3.16 NDS to update the Dictionaries according to the conclusions of the present meeting.

3.17 All to update their computer codes according to the conclusions of the present meeting.

3.18 All to update their distribution lists:

- change Dr. B.S. Ishkhanov to Dr. V. Varlamov

(Name and address for Beijing should not be changed although Dr. Zhuang stays at Brookhaven for a limited period.)

3.19 NDS to contact Dr. Cai Dunjiu and clarify the EXFOR coding of fission-products as mentioned in his letter of 86/9/23.

3.20 RIKEN to distribute the paper on recent changes in the knowledge of isomers as CP-R memo (compare conclusion 2.3 above).

4. Neutron EXFOR, conclusions:

4.1. In the course of the book production NNDC has reactivated the EXFOR files 6, 7, 8 for compiling missing data sets from areas 2, 3, 4 respectively. These data will be transmitted soon.

NNDC found a number of USSR entries from the old EXFOR file 8 that had not yet been corrected into the EXFOR file 4. These data will be retransmitted. NDS had deleted their EXFOR file 8 assuming that all had been converted by CJD into the EXFOR file 4 which turned out to be a wrong assumption.

4.2 Re Memo 4C-1/181 pointing out the questions which center is responsible for compilation when institutes from different areas co-operate (e.g. Australia - Oak Ridge), centers are reminded to contact each other in time before starting the compilation work.

4.3 A thorough review and, perhaps, revision of the quantities relating to thermal scattering may be necessary. NNDC is asked to prepare a proposed Lexfor entry with examples. Special emphasis should be given to the questions, which of the quantities are dependent or independent on temperature, and to questions of overlapping quantity definitions (e.g. transition from "thermal scattering" to "elastic scattering"). Changes of existing quantity codes should be proposed only when necessary. The code PM+ to indicate that paramagnetic scattering is included, was adopted following Memo CP-C/161.

4.4 For temperature-dependent cross-sections the code SIG/TEM was adopted. The code TEM should, however, not be used for data with the process code THS, in which case the code TEM may be redundant. An accompanying Lexfor entry will be submitted by NNDC (compare action 5.5).

4.5 The EXFOR completeness check by NNDC was done by comparison against CINDA which was felt sufficiently complete (except for delays with recent literature and some secondary literature of secondary importance). K. Okamoto drew the attention to the fact that NDS had used, when compiling evaluted data in EXFOR-V and INDL, the evaluator's lists of experiments as a most useful completeness check of EXFOR.

5. Neutron-EXFOR, actions:

5.1	NEA-DB NDS CJD	to work with high priority on compiling and transmitting those data sets that were identified by NNDC as missing for Z>30. The deadline for the book production at NNDC is December 1986. Such data should be sent speedily even outside normal transmission.
5.2	NEA-DB NDS CJD	to review the EXFOR files 6, 7, 8 recently compiled by NNDC for missing data from areas 2, 3, 4, as soon as this has been transmitted. However, the compilation of new data should have higher priority than the conversion of the EXFOR 6, 7, 8 files into the regular 2, 3, 4 files.
5.3	NDS	to review action 9.7 from the 1985 NRDC Meeting to check whether the quantity code PR/PRE,AP still exists in EXFOR and to decide what remains to be done.
5.4	CJD	to respond to the duplicated EXFOR entries identified in Memo 4C-1/179 and to continue similar cleanup for area 4.
5.5	NNDC	to propose an improved Lexfor entry on thermal scattering quantities with examples and definitions and, when necessary, an improved coding scheme.
5.6	NNDC	to propose a Lexfor entry on the newly introduced code SIG/TEM for temperature dependent cross-sections.
5.7	NDS	to retransmit to CJD the tapes TRANS 3053 and UPDAT 3006 and 3008.

5.8 NNDC to retransmit to CJD the tapes TRANS 1194, 1197, 1211.

6. CPND EXFOR, actions:

6.1 CAJaD to inform whether the data of the handbook by P.P. Dimitriev are available in computerized form. Any format would be welcome.

6.2 CAJaD to inform other centers which duplicate entries should be deleted, and to retransmit any combinations made from duplicate entries.

6.3 NDS to retransmit those B-entries where errors were found in TRANS-C005 (work was almost finished).

6.4 NNDC to retransmit that entry from TRANS-C004 where Na-22 and C-12 were inverted.

7. Photo-ND, conclusions:

7.1 Vladimir Varlamov is now the head of CDFE.

7.2 Prof. Reid, Glasgow, had announced that he will start compiling, through NDS, Photonuclear data in EXFOR. Progress will be reported to the other centers.

7.3 The column heading M for a secondary momentum is changed to MOM-SEC.

8. Photo-ND, action:

8.1 CDFE to propose Lexfor entries describing the use of the BIB keywords EMS-SEC and MOM-SEC, and of the quantity parameters ECO, MCO, EMC.

9. Evaluated data, conclusions:

9.1 UKNDL-81 is the last version that was issued. It is superseded by JEF.

9.2 ENDF/B-6 Standards will be ready in spring of 1987.

9.3 No information was available on the status of the USSR evaluated data file BROND, though the Konshin evaluations from BROND had been distributed earlier as a supplement to INDL.

9.4 Another supplement to INDL will include some new Chinese evaluations and, perhaps, others.

9.5 The ENDF-6 Formats Manual is in preparation. It should be distributed to the other enters as soon as it is ready.

10. Evaluated data, actions:

10.1 NDS — to distribute, at regular intervals, tape copies of IAEA-NDS-70, the Z-S-A index to evaluated data libraries.

10.2 NEA-DB — to distribute the new JENDL-2 FP library.

10.3 NEA-DB — if existing, to provide (or quote the reference 1) the documentation for JENDL-2 evaluations, including the FP library.

10.4 All — to adopt the practice, as in CINDA, to quote an evaluated data set by library-name and MAT number (plus version or mod. number where this exists).

10.5 NNDC — to transmit ECPL-86 to NDS, CAJaD, RIKEN, CNDC/CP.

10.6 NNDC — Re ENDF Formats Manual file 8, CNDC has proposed in a letter dated 86/9/23,

- to change under MT=454 the term "franctional (independent) yield" to "independent yield";
- to specify that the yields should sum up to exactly 2 instead of approximately 2.0;
- to change under MT=459 the terms "cumulative fractional yield" and "direct fractional yield".

It appears that these proposals are correct and NNDC is asked to consider them for updating of the ENDF Formats Manual. The term "fractional yield" should always refer to the ratio "yield/chain yield".

11. WRENDA

11.1 A new issue of WRENDA is to be prepared in 1987 by the four neutron data centers, similar to the procedures of the previous issue. Schedule and workplans will be communicated in a memo by NDS.

12. CINDA conclusions:

12.1 The changes of coding rules and of manual pages proposed in Memo 4C-3/298 were adopted, except items 6 and 7 (cosmetic corrections). In this case the assignment was left to the discretion of the responsible CINDA centre and the procedure set out in 4C-3/295 agreed.

12.2 The following technical details of CINDA were discussed and agreed:

a) Review articles should not be blocked together with experiments.
b) The code POL should only be used if the polarization of outgoing neutrons was measured; all other polarization experiments should be coded under the quantities measured.

c) Eta, alpha and nu deduced from resonance parameters should not be coded under the quantities ETA, ALF, NU, but under RES.
d) Reminder not to code issue numbers of journals unless each issue starts with page 1.
e) Reminder to insert a hyphen between report codes and number(s).

These conclusions should be included in the CINDA coding manual.

12.3 CINDA coverage in the past seems to be fairly complete. However, concern is expressed about the completeness of coverage by external CINDA readers in the NEA-DB area. Also, delays in the coverage of current literature by CJD is observed.

12.4 The proposals for the new CINDA cover submitted by NEA-DB were rejected because they either contained too small characters not suitable for printing, or did not advertise EXFOR. A revised version of the NDS proposal (4C-3/294) was agreed as attached.

12.5 The advertisement of EXFOR on page I.18 of CINDA86 was accepted. The inclusion of an example of an EXFOR entry in the CINDA book was considered unnecessary and dropped.

The proposal to include a chart of nuclides with CINDA issues was dropped as being not easy to accomplish and too expensive.

12.6 The general changes in the deadlines given in the book production schedule were accepted.

12.7 From now on only area 4 CINDA entries submitted by CJD should be entered into the area 4 subfile, so that they can keep control over the file contents. Other centers should send their area 4 entries to CJD.

12.8 NEA-DB is asked to consider compiling in CINDA, like the other CINDA centers, neutron data above 20 MeV, as this should not be a significant additional workload.

13. CINDA actions:

13.1 All to submit proposals for manual changes before end of December 1986 to NEA-DB.

13.2 NEA-DB to update and distribute the manual pages after receipt of proposals (December 1986).

13.3 All to check target nuclei entered in CINDA against EXFOR Dict. 27, and to submit new nuclides for inclusion before transmission of the corresponding entries to other centers.

13.4 CJD to make sure that mail delays are minimized. Full-scale CINDA co-operation cannot function without prompt transmission of correspondence and magentic tapes. For information of the receiving centres CJD should send telexes announcing the dispatches.

13.5 NEA-DB — to thoroughly check entries submitted by external readers, in particular the use of the quantities FPB and FPG.

13.6 All — to ensure that the coding of index lines to non-EXFOR data libraries is complete and up-to-date until CINDA87.

13.7 NNDC NEA-DB CJD — to explicitly agree to or reject (together with a counter-proposal) the attached proposal for the new CINDA cover.

13.8 NNDC NEA-DB CJD — Reminder: to contribute to CINDA text pages, in particular
a) to send coverage cutoff dates for literature listed under "selected" literature scanned for the present edition (new for CJD)
b) to explicitely state any codes to be added to or omitted from this list
c) to send information on conferences indexed since the last edition
d) to check other sections of the text pages and submit revisions and additions, in particular the sections:
- Neutron Data Handbooks
- Acknowledgements
- Annex, section 8 (numerical data libraries)

13.9 NDS CJD — to continue work towards full responsibility of CJD for the area 4 CINDA subfile.

13.10 CJD — to plan another visit of staff to Vienna for cleanup of the area 4 subfile and work on action 13.9.

13.11 NDS — to continue to send to CJD
- fast feedback on their CINDA entries
- CINDA checking codes and updates
- CINDA file (in agreed schedule)

13.12 NNDC NEA-DB NDS — to send to CJD from now on also all area 4 entries in reader format prepared by NDS, NNDC or NEA-DB, and update the area 4 subfile only with entries received from CJD.

13.13 NDS — The request in Memo 4C-4/46 for an update of Dictionary 27 (Nuclides) may have referred to CINDA. NDS to check.

13.14 All — to bring EXFOR index lines in CINDA up-to-date with high priority, because CINDA is used in NNDC and elsewhere as an EXFOR index. (CJD plans to finish this job before the end of 1986).

14. Miscellaneous conclusions:

14.1 Data transmission: Manpower could be saved by transmission of data through telephone lines, which should be economic for small data sets. Centers are encouraged to try this out and to communicate to each other the necessary technical arrangements (available nets, user names, etc.).

14.2 Date of next NRDC Meetings:

The next full meeting to be attended by center heads and technical staff will be at the Brookhaven National Laboratory, USA, 26-30 October 1987.
Note: This date was confirmed by correspondence subsequent to the present meeting.

The next technical meeting to be attended by technical staff (at no cost to the IAEA) is envisaged to be held in Vienna in October 1988.