

**Memo CP-D/284**

June 12, 1997

To: Distribution

From:    
O. Schwerer and H. Wienke

Subject: **Conclusions of the 1997 NRDC Meeting**

Please find attached the Actions and Conclusions of the Nuclear Reaction Data Centers' Meeting in Vienna, 26-28 May 1997. Note that, apart from some further editing, the Actions were resorted by topics, compared to the draft version distributed at the meeting. Attached are also the Agreement on Charged-Particle Data Compilation Responsibilities as amended at the meeting, and the final version of Working Paper 3 on Media for data exchange between the centers.

Please notify NDS as soon as possible, but not later than **15 July 1997**, of any corrections or additions you wish to suggest, by e-mail or fax. The full meeting report, including all status reports and part of the working paper, will be published later this year as an INDC report.

**Distribution:**

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OS/as x21726

**IAEA Consultants' Meeting**  
**on the Coordination of the Nuclear Reaction Data Centers**  
Vienna, Austria, 26-28 May 1997

**ACTIONS and CONCLUSIONS**

- | <b>Action</b> | <b>on</b>          | <b>General matters</b>   |
|---------------|--------------------|--|
| 1)            | <i>All</i>         | Include NDG-RFNC (Sarov) in distribution list of CP memos  |
| 2)            | <b>CONCLUSION</b>  | NDG-RFNC is assigned the center identification character 'F'.  |
| 3)            | <i>Recomm. All</i> | Investigate putting an invitation for experimentalists on the Centers' webpages to submit references for new data.                         |
| 4)            | <i>Recomm. All</i> | Contact publishers of magazines of applied fields (e.g. geophysics, astrophysics, etc.) about publishing articles on data centre services. |
| 5)            | <b>CONCLUSION</b>  | The next (full) NRDC meeting is planned for the second half of May 1998 in Vienna.   |
| 6)            | <i>All</i>         | Send the preferred date for the next NRDC meeting to NDS.  |

**EXFOR/CINDA dictionary system**

- |     |                   |  |
|-----|-------------------|--|
| 7)  | <i>McLane</i>     | Look into the possibility of adding additional sorting flags to dict. 36, in particular for: <ul style="list-style-type: none"><li>- special emission quantities;</li><li>- special quantities for fission;</li><li>- ternary fission;</li><li>- single level RP, multilevel RP.</li></ul> |
| 8)  | <i>Schwerer</i>   | Send old dictionary 36 (with all sorting flags) to McLane.   |
| 9)  | <i>McLane</i>     | (old #13 continuing) Change title of dict. 19 to old one and remove the word 'codes' from the other titles.  |
| 10) | <i>McLane</i>     | Prepare version of dict 36 including wildcards. Prepare test entries, which include the wild cards, to test the new dictionary 36 and send to NDS along with the dictionary.   |
| 11) | <i>Schwerer</i>   | Send dictionaries 36 and test entries to the other data centers to test their programs.  |
| 12) | <b>CONCLUSION</b> | It is agreed to add the wildcard '*' and '*FP' in dictionaries 36. '*FP' stands for fission fragment code, '*' stands for all codes from dict 33 and those from dict 27 which have a 3 or 'Z' in column 15.  |
| 13) | <i>McLane</i>     | Check whether the heading "for photonuclear data only" needs to be removed from the program DAN2X4 and to check dictionaries 24, 32,36.  |

### EXFOR Manuals

- 14) *All* (old #25 continuing) Send comments and corrections on the "EXFOR Basics" manual to McLane.
- 15) *McLane* (old #26 continuing) Add example entries to the "EXFOR Basics" manual.
- 16) *McLane* Put the updated version of the EXFOR manual (in PostScript) on the NNDC open area (including LEXFOR).
- 17) *All* (old #28 continuing) Proof-read the rewritten EXFOR manual and send comments to V. McLane.

### EXFOR, general

- 18) *CJD* (old #31 continuing) Update lab dictionaries for Russian institutes continuously as necessary.
- 19) *McLane, Varlamov* (old #32 continuing) To provide LEXFOR entry for energy spectra of particle pairs and PAR,SIG,P/T.
- 20) *McLane* Check the status of EXFOR entries on 'correlation' entries (replacing COR by DA/CRL).
- 21) *McLane Chukreev* (old #55 continuing) Update check programs to allow embedded blanks in dictionary 7 codes.
- 22) *McLane* (old #57 continuing) Provide more information on the proposed new nuclide code 4-BE-6.
- 23) *Statement* A new version of CAJaD's check program TEST-EXF was distributed at the meeting.
- 24) *McLane* (old #70 continuing) To make a benchmark test of TEST-EXF.
- 25) *CONCLUSION* Reaction SF9 may be omitted if the data are experimental, also for CPND. For MONITOR omitting SF9 may also mean that it is not known whether the data are experimental.
- 26) *CONCLUSION* The proposal on momentum transfer, as given in memo CP-C/232 is approved.  
For momentum transfer the heading MOM-TR (instead of WVE-NM) is used with the units 1/FERMI.
- 27) *Schwerer* Add the names of elements 104-109 ( see WP 5 item 2) to the dictionaries as soon as they are official.
- 28) *CONCLUSION* The proposal on INC-SOURCE codes in dict. 19 (Memo CP-C/225) is approved.

- 29) *CONCLUSION* The proposal on Thick Target Yields (Memo CP-C/224 with further discussions in CP-C/233) is approved with one modification: the code TTT (for thick target yield per unit time) is replaced by TTY,,DT.
- 30) *McLane* Distribute revised version of memo CP-C/224 on thick target yields.
- 31) *CONCLUSION* Codes on Polarization as proposed in Memo CP-C/230 are approved.
- 32) *All* Comment on Memo CP-C/230.
- 33) *McLane* Send to Schwerer list of those 'provisional' Polarization codes which were entered in dictionaries in January 1997 and should now be deleted.
- 34) *McLane* Change Lexfor and EXFOR Manual: MISC-ERR is allowed in COMMON (but MISC is not).
- 35) *CONCLUSION* The proposal of memo CP-A/77 on INC-SPECT is not approved.
- 36) *CONCLUSION* Unit B\*KEV is not approved because it is identical to MB\*MEV.
- 37) *Lammer* (old #43 continuing) Check existing codes for fission quantities for possible overlap with the case of memo CP-C/209 and existing EXFOR entries for necessary revisions.
- 38) *Lammer* (old #45 continuing) Reply to items 1, 2 and 4 of memo 4C/57 (codes PR,NU,FF,PRE,FY/DE, and PAR/IND,FY,G for dict. 36) and propose solutions for the remaining questions on entry 40420 in a CP memo.
- 39) *CJD* (old #46 continuing) Retransmit entry 40420 accordingly, after fulfillment of the previous action.
- 40) *Recomm.* Compilers should check, if possible, with the experimentalists, before compiling data received from a third party.
- 41) *CONCLUSION* Compilers should check with ENSDF before arbitrarily adding metastable states to dict. 27.
- 42) *McLane* Submit a memo introducing a new flag 'V' in dict. 27 to identify virtual products (e.g. Be-6, He-2).
- 43) *Recomm.* Compilers should look for equivalent units before proposing new ones for dict. 25.
- 44) *McLane* Investigate the possibility of including separate index lines for the ELEM/MASS formalism in the indexing program.
- 45) *NNDC*  
*NDS* (old #71 continuing) EXFOR retrievals by fission-product nuclides should be possible. While the old NDS EXFOR index provided this possibility, it is not yet possible in the VAX EXFOR retrieval system, which should be updated accordingly.

- 46) *Recomm.* EXFOR TRANS tapes should not exceed 100000 lines
- 47) *CONCLUSION* The alter flags in column 80 are no longer compulsory except for the SUBENT line.
- 48) *CONCLUSION* Centers are free to add evaluated, calculated or derived data to any EXFOR entry (using the proper modifiers in REACTION SF9).
- 49) *Lammer* (old #72 and #74 continuing) To revise the LEXFOR entry on FP yields. Submit a proposal on the coding of mass yields as a CP memo with information on corresponding measurements.

#### EXFOR corrections

- 50) *NNDC* (old #34 modified) Send an index of the remaining entries from the EXFOR 6000 and 8000 series to respective centers.
- 51) *NEA-DB, CJD* (old #35 continuing) Go through these entries and decide which entries need conversion to EXFOR.
- 52) *NDS* (old #40 continuing) Retransmit entry 22242 with an EXFOR N-series number.
- 53) *NDS* To issue a memo on pending EXFOR retransmissions.
- 54) *All* Check the list of requested EXFOR corrections (distributed at this meeting by V. McLane individually to the other centers) and make the necessary retransmissions.
- 55) *CAJaD* To retransmit TRANS A039 with NOSUBENT records for deletion of subentries A1125003 and A1403002,3.
- 56) *NDS* Send to RIKEN the deletion of ENTRY R0010.

#### CPND compilation

- 57) *Statement* Dr. Angulo is going to send the NACRE experimental data to NNDC for inclusion in EXFOR after the compilation has been published in ADNDT.
- 58) *McLane* To compare the NACRE compilation with the existing EXFOR files and to arrange with the other centers for conversion to EXFOR where necessary.
- 59) *All* To compare CPND EXFOR with the Landolt-Börnstein compilation when the EXFOR file is more complete ( including all Arzamas and NACRE data).
- 60) *NDS* (old #90 continuing) Obtain the Chinese data that were sent to T. Benson/IAEA.

- 61) *CAJaD* (old #94 continuing) Create a FINAL version of the EXFOR area B file, using
- CAJaD master file
  - NDS master file
  - TRANS B012 through B015 in the versions modified by NDS.
- 62) *NDS* (old #38 continuing) Distribute corrected Münzel data after final corrections by CAJaD.
- 63) *NEA-DB* (old #98 continuing) To keep the NRDC network and specifically the CPND centres informed about developments for intermediate energy CPND.
- 64) *NDS* Correct last year's agreement on CPND responsibility:
- (New data:) JCPRG will be responsible for data from Japan.
  - Replace everywhere 'Sapporo' by 'JCPRG'.
- 65) *CONCLUSION* The 1996 agreement on CPND compilation responsibilities is amended as follows: '1989' is replaced by '1980' and '1988' by '1979'. (See Appendix I).

#### Photonuclear data

- 66) *Statement* NDG-RFNC is compiling also photonuclear data (which are transmitted in coordination with CDFE).
- 67) *Statement* Dr. Martins from Univ. Sao Paulo has started compiling photonuclear data in EXFOR in the framework of an IAEA CRP.
- 68) *McLane* To put the photonuclear bibliographic file on the NDS open area and inform the other data centers.

#### CINDA

- 69) *Lammer* (old #83 continuing) Distribute the list on who is covering what for CINDA to other centres.
- 70) *NDS, NEA, CJD* Cover conference proceedings for CINDA.
- 71) *NEA-DB* Review the NEA CINDA checking code and investigate the possibility of adopting the NNDC codes.
- 72) *All* To send comments on the CINDA 2000 proposal ( Memo CP-C/234) to V. McLane by 30 June 1997.
- 73) *Konieczny* To submit proposal for the CINDA database on CD-ROM and on diskette.
- 74) *All* After receiving above proposal inquire about the need for the CINDA book in the respective service areas.

### Evaluated data libraries

- 75) *All centers concerned* Compile and maintain a list of known errors in the evaluated libraries for which they are responsible and make this list available to the users of the online system.
- 76) *All centers concerned* To circulate the parameters being used for producing pointwise cross sections including the code name, version number and input deck.
- 77) *Recomm. All* All centers responsible for evaluated data libraries should try to make the documentation available online.
- 78) *Manokhin* To select the most important cases from his collection of important discrepancies in evaluated data libraries and send to NDS for publication as an INDC report.
- 79) *Recomm.* If a data library has an official (national or international) approval, this should be mentioned in the documentation.
- 80) *NEA-DB* (old #103 continuing) Possibly release a version of JEF-PC to the network centres for their internal use free of charge.

### Citation Guidelines

- 81) *Recomm. NNDC* (old #111 continuing) Write and publish a NUDAT Manual (as BNL-NCS report).
- 82) *Recomm. All* (old #113 continuing) For the online services, the keyword "citation" should be clearly visible within each database.
- 83) *Recomm. All* (old #114 continuing) For FTP servers, a file AAACITE.TXT should be created for each data file type.
- 84) *CONCLUSION* (old #115 modified)  
Guidelines for contents of data library documentations  
Future documentations should include:
- A good abstract;
  - Uses/applications of library;
  - Procedures used for generating the contents of the library;
  - Description of network responsible for contributing to and/or for maintaining the library;
  - Quality control procedures, and reference to codes, benchmarks, etc., used;
  - Contents, or reference to contents;
  - Citations for other databases or computer codes used in producing the library;
  - How to obtain data contained in library.

**Computer matters**

- 85) *Konieczny* Send ORACLE design specification developed at NEA for CINDA and EXFOR to V. McLane.
- 86) *Recomm.* The production of a CD-ROM containing the complete EXFOR library with graphics interface, plotting and retrieval codes is recommended.
- 87) *NNDC, NEA  
NDS* To investigate possibilities of finding and funding a suitable programmer for this task.



**Agreement on Charged-Particle Data Compilation Responsibility**

(amended 27 May 1997)

**Compilation Centers**

NNDC	NEADB
JCPRG	RIKEN
CAJaD	CNDC
ATOMKI	

**Area of Responsibility**

New Data (1980→)

NNDC will be responsible for data from the U.S. and Canada.

JCPRG will be responsible for data from Japan.

ATOMKI will be responsible for data from Hungary and Jülich.

CAJaD will be responsible for the rest of the world.

Old Data (→1979)

JCPRG will be responsible for data from Japan.

CAJaD will be responsible for all other data.

**Data Compilation**

New Data (1980→)

A center wishing to compile data (C1) will contact the center in whose area of responsibility the data were produced (C2) with a list of the data sets to be compiled. C2 will inform C1, as quickly as possible, whether the data either have been compiled or are in the process of being compiled by another center.

If the data are not compiled or being compiled, C2 will either agree to compile them with priority, or ask that C1 compile the data and send them to C2 to be included in the next regular C2 transmission file.

Old Data (→1979)

A center wishing to compile data (C1) will contact all other centers with a list of the data sets to be compiled. The center responsible for the data (Sapporo or CAJaD) will inform C1, as quickly as possible, whether the data either have been compiled or are in the process of being compiled by another center.

If the data are not compiled or being compiled, C1 will compile the data and include in the next regular C1 transmission file.

### Media for data exchange between Centres

Please indicate which centre will accept what media for the various types of data. If more than one medium is acceptable, the preferred one is in **bold**.

- I = e-mail (Internet)      D5 = PC diskette 5½ inch
- F = FTP (Internet File Transfer)      D3 = PC diskette 3½ inch
- T = conventional magnetic tape      H = hardcopy or fax

	NNDC	NEA-DB	NDS	CJD	CAJaD	CDFE	CNDC	RIKEN	JCPRG	ATOMKI	NDG-RFNC
Cinda batch	I,F	I,F,D3	I (F,D3,D5)	(D3,D5) I,F	-	-	I,T,(D3,D5)	-	-	-	-
EXFOR TRANS	I,F	I,F,D3	T,F,D3,D5	(D3,D5) I,F	D3,D5	F,D3	D3,I,T,D5	F,D3	F	D3,D5,F	F
CP-Memos and 4C-Memos	I,H	H,I	H,I	(H),I,F	I,(H)	I,F	H,D5,I,D3	H,I	I,H	H,I	I,H

**Notes:**

- 1) If data are sent in zipped (compressed) mode on diskette, the unzipping code should be included on the diskette.
- 2) For memos, **H (hardcopy)** should be acceptable at least as a secondary choice (for receiving). Centres are free to send their own memos always electronically.