

## Conclusions and Actions of the 2010 NRDC Meeting

### *Conclusions*

#### **General**

- C1 It is important to have an EXFOR Workshop for compilers in addition to the technical NRDC-meeting. An EXFOR Workshop will be held in Vienna, Austria, at end of August, 2010.
- C2 The next technical NRDC meeting will be held in Vienna, Austria, 23-24 May 2011.
- C3 An EXFOR Workshop will be held in Vienna, Austria, 25-27 May 2011
- C4 The next full NRDC meeting will be held in Paris, France, during the second quarter of 2012.
- C5 NRDC confirmed new editions of the Protocol and Network Documents. Corrections can be made by Centres in the two months following the NRDC-2010 meeting
- C6 NRDC agreed that EXFOR Workshops in National Centres are very useful and should be supported.

#### **EXFOR, General**

- C7 KAERI will be responsible for the compilation of neutron, charged-particle and photon induced reaction data. Entries will be submitted through NDS.
- C8 It was emphasized that delays in checking preliminary TRANS files must be reduced to one month.
- C9 The changed scope of compilation during 2009 has shown:
  - 1. Improved completeness through scanning of journals by two Centres (NNDC and NDS);
  - 2. No improvement in reducing the delay in compilation;
  - 3. Creation of a certain number of duplication pairs in the database leading to conflicts.
- C10 NRDC agreed to return to compilation responsibility by geographical area.
- C11 Statistics of new article compilation was satisfactory; however the time for compilation should be reduced further.
- C12 In cases of no well defined responsibility, NDS will distribute articles for compilation if there is more than three months delay in allocation.

#### **CINDA**

- C13 Old agreement on CINDA compilation (WP2003-25, item 2) was cancelled. Centres willing to be responsible for CINDA entries will send their entries to NDS (WP2010-21).
- C14 Centres agreed to continue production of CINDA through automatic export from EXFOR and NSR databases, possibly using EXFOR “dummy” Entry (WP2010-22, 23).
- C15 Theoretical works and reviews will be accepted in future CINDA transmissions.

## **EXFOR, Technical**

- C16 NRDC concluded that it is impossible to keep a list of authors' e-mail addresses up-to-date. However, NRDC agreed, where possible, to help each other in finding particular authors' e-mail addresses. See also A46.
- C17 NRDC agreed to keep only E-RL for relative energy since it doesn't depend on the frame of reference.
- C18 NRDC concluded that adding a compiler's name in HISTORY is not obligatory. Regardless of the compiler's name, the Centre is responsible for the compilation.
- C19 NRDC agreed that, while there are many optional codes that can be used in an Entry, a compiler only needs to include them in the Entry if he/she thinks it is important for the description of the particular experiment.
- C20 The proposal on fission quantity coding has now been accepted. (Memo CP-D/599).
- C21 The proposal on clarification of usage of MLT and PY in LEXFOR has now been accepted (Memo CP-D/619).
- C22 The proposal on update of LEXFOR "General Quantity Modifiers" has now been accepted (Memo CP-D/621).
- C23 The proposal on data type DERIV for data measured by indirect reactions such as surrogates has now been accepted (Memo CP-D/582).
- C24 The proposal on reaction coding of the fields SF1-SF2 has now been accepted (Memo CP-D/607).
- C25 The proposal on adding examples in LEXFOR concerning usage of reaction combinations has now been accepted (Memo CP-D/614).
- C26 The proposal on correction of units and quantity codes in prompt fission neutron spectra has now been accepted (Memo CP-D/635).
- C27 NRDC agreed that it is important to add actual reference information under STATUS of compilation. This rule will be added into LEXFOR.
- C28 Concerning suggested addition to LEXFOR "Reaction Product" (WP2010-40), NRDC agreed that intermediate nuclides unstable against prompt particle decay will be coded when the states are exclusively identified by the experiment (See also A56).
- C29 The proposal of a new evaporation residue production cross section quantity is now accepted. The draft for LEXFOR chapter on fusion is also accepted (Memo CP-D/626).
- C30 If DOI is found through Internet, it can be included in new entries, starting with symbol "#" in a new line after the relevant reference. (Memo CP-D/604) (Moved from Action)
- C31 Obsolete code SIG/SUM (Memo 4C-4/175 rev) will be changed to SIG in retransmission. (Moved from Action)

## **EXFOR Software**

- C32 It was emphasized that compilation tools are available for downloading from the NRDC Webpage.

## *Actions*

### **General**

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|----|--------|---|
| A1 | Otsuka | Correct titles of EXFOR Manuals to agree with the contents.   |
| A2 | Otsuka | Add all standing actions to the NRDC Protocol.  |
| A3 | All    | Send all corrections that have to be made in Protocol (WP2010-02) and Network documents (WP2010-03) within one month. |

### **EXFOR General**

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| A4  | All   | (Standing Action) All Centres should give highest priority to compiling new publications.   |
| A5  | All   | Give high priority to compilation of papers from the ND2010 (Jeju, Korea) conference.   |
| A6  | Otsuka  | Discuss with Organizers of ND2010 possibility of getting data from authors at the same time as acceptance of paper for publication in proceedings   |
| A7  | Otsuka  | Add flag on the NRDC web page “List of corrections” for important corrections. See also A8.   |
| A8  | Otsuka,<br>Mikhaylyukova,<br>Schwerer,<br>Dupont,<br>Furutachi,<br>Babykina,<br>Taova | Complete all important corrections (flagged) within three months. See also A7.  |
| A9  | Herman,<br>Otsuka, Zerkin   | Find algorithm of automatic DOI number creation and issue Memo.   |
| A10 | Zerkin  | Investigate possible problems of automatic adding of DOI number to original EXFOR Entries and create software if appropriate.   |
| A11 | All   | (Standing Action) Scan national journals and send results to NDS. See also first proposal of WP2010-14.   |
| A12 | NDS   | (Continuing Action) Develop sensible means of communication of numerical data between authors and NRDC for the major journals.  |
| A13 | All   | (Continuing Action) Make efforts to change all remaining upper case entries to lower case. On retransmission, the old entries should be checked and any other necessary corrections must be made. |
| A14 | Zerkin  | (Continuing Action) Further develop EXFOR+ (interpreted/extended EXFOR format).   |
| A15 | Zerkin  | Issue documentation for C4 and XC4 formats.   |
| A16 | Otsuka  | (Continuing Action) Update Dictionaries every four months.  |

- A17 Zerkin (Continuing Action) Every four months produce an EXFOR distribution with (a) full Dictionary distribution; (b) EXFOR in C4 and XC4 format; (c) Dictionaries in MS Access; (d) X4Map and X4Archive.
- A18 Zerkin (Continuing Action) Generate and distribute list of errors to NRDC after every new EXFOR/CINDA dictionary transmission.
- A19 All (Continuing Action) Correct errors within the Centre's area (see also list in WP2010-09 to 11); all mistakes from such lists (produced according to Memo CP-D/623, 627 and 633) should be corrected in the next transmission.
- A20 Zerkin (Continuing Action) Include DOI in EXFOR DB as defined in WP2009-25.
- A21 Zerkin (Continuing Action) Regularly export full EXFOR to XC4.
- A22 Zerkin (Continuing Action) Add hyperlink on the main EXFOR page to the EXFOR User Manual.
- A23 Otsuka (Continuing Action) Send list of errors, based on analysis of the list formulated by OECD-NEA WPEC subgroup 30, to responsible Centres.
- A24 Dupont (Standing Action) Distribute JANIS-TRANS Checker Log list on every preliminary TRANS-file.
- A25 Otsuka, Gritzay Asses the way to store numerical data of incident particle spectra used in generation of averaged quantity data compiled in EXFOR.
- A26 Hlavac Delete duplication from area 1, C and L according to the third proposal in the WP2010-14.

### **Common EXFOR/CINDA dictionaries**

- A27 Hlavac, Otsuka (Continuing Action) Investigate Dictionary 25 for differences in labels and units (e.g.: MUB, MU-B and MICRO-B used for 'µb'), with the aim of achieving consistency.

### **CINDA**

- A28 Dupont (Continuing Action) Search for experimental and mixed entries in which the target is coded by MNY, and replace with individual isotope/compound entries as outlined in WP2008-36.
- A29 Dupont (Continuing Action) Correct errors detected during CINDA loading procedure, as described in WP2008-36.
- A30 Dupont (Continuing Action) Correct all CINDA lines, as described in WP2009-30.
- A31 Zerkin Regular export from EXFOR DB to CINDA.
- A32 Zerkin Regular export from NSR to CINDA.
- A33 All Add CINDA lines manually on voluntary basis.
- A34 All (Standing Action) Create "dummy" EXFOR file if it is impossible to find experimental data.
- A35 Zerkin Prepare tools for creating CINDA file from EXFOR "dummy" Entries.

A36 Zerkin Periodically update the CINDA master file and distribute it to other Centres.

### EXFOR Technical

- A37 Otsuka (Continuing Action) Review the various types of gamma spectra in EXFOR, as well as the related quantities and units.
- A38 Otsuka Make code E-RL-CM obsolete.
- A39 All (Standing Action) When coming across report codes in Dictionary 6, which differ significantly from what is shown on the report cover, submit additional explanation to NDS for inclusion.
- A40 All (Standing Action) Run CHEX in TRANS mode (not DATA mode) when checking new entries or TRANS files, to make sure that all important errors are found.
- A41 All (Continuing Action) Check error lists available on the NRDC Webpage, and correct as soon as possible (see also WP2009-02, WP2010-09).
- A42 NDS (Standing Action) Assess the need for undertaking both trivial and non-trivial compilation corrections, and inform responsible Centres.
- A43 Zerkin (Continuing Action) Development of a new database encompassing correction factors and relevant comments for suspect/erroneous data (X4-evaluated) presented in WP2010-19; keep NRDC informed about conclusions of discussions on new database.
- A44 Otsuka (Standing Action) Add this action to EXFOR Manual: "Use alteration flags in col. 11 of ENTRY and SUBENT lines in retransmission (also optional for all corrected lines in col. 80)".
- A45 All According to the list of Entries with NODATA one of the following corrections has to be made:
- (a) Restore numerical data from old EXFOR backup in retransmission if data were not superseded before in this Entry;
  - (b) Delete Subentry, or the whole Entry, if it is real duplication in reference and data, as well as adding a comment in HISTORY;
  - (c) Add SPSDD under STATUS when it is applicable;
  - (d) Digitize numerical data if the quality of the figures is enough for digitization, if SPSDD not applicable, and if the article was published before 2000;
  - (e) Add UNOBT and comment if it is impossible to digitize the data and the article was published before 2000;
  - (f) Try to find numerical data if the article was published later than 2000.
- A46 All (Continuing Action) If an author's e-mail address is impossible to find through Internet, try to find it with the

- help of NRDC collaboration. See also C16.
- A47 Otsuka Add phrase in LEXFOR Manual concerning the particular source of the data:  
*“...The actual source from which the numerical values given in the data set were taken must be entered in free text under STATUS only as the well defined reference as it is coded in REFERENCE lines”* (WP2010-29).
- A48 Pikulina Add to EXFOR-Editor automatic addition of reference information under STATUS keyword.
- A49 All According to the list in WP2010-31, make corrections for averaged kinetic energy and most probable kinetic energy, mass and charge (KE, AKE, KEP, KEM, AP, AZ) after checking original articles.
- A50 Otsuka (Continuing Action) Make all corrections and additions in LEXFOR Manual according to the adopted NRDC-2010 decision (WP2010-13, WP2010-29, WP2010-31 to 39).
- A51 Otsuka (Continuing Action) Prepare final version of Memo “Uncertainty propagation in TOF-data”.
- A52 Otsuka (Continuing Action) Correct LEXFOR and EXFOR formats Manuals according to WP2009-17 for the keyword INSTITUTE.
- A53 Dupont (Continuing Action) Send list of incorrect authors’ names and titles to NRDC participants.
- A54 Dupont (Continuing Action) Prepare full list of recommendations for spelling of nuclides and mathematical expressions in free text of EXFOR entries.
- A55 Otsuka Distribute list of Entries with obsolete code SIG/SUM (Memo 4C-4/175 rev) still existing in EXFOR DB.
- A56 Otsuka Provide update of LEXFOR entry “Light-nuclei neutron reactions” (See also C28).

### **EXFOR software**

- A57 All (Standing Action) Inform each other about EXFOR-related software being used and/or developed.
- A58 All (Standing Action) Provide feedback on the digitizing software GSYS to JCPRG.
- A59 All (Standing Action) Provide feedback to NDS on the existing CHEX version (on bugs as well as desired additions).
- A60 Sarov (Continuing Action) Continue development and testing of the EXFOR-Editor in cooperation with NDS and other data Centres, taking into account compilers’ remarks.
- A61 Pikulina Develop the EXFOR-Editor software to create “dummy” Entry.
- A62 All (Continuing Action) Provide feedback on the JANIS – TRANS Checker code to NEA DB.

### **Evaluated data libraries**

- A63 Katakura Notify other centres when JENDL-4.0 is released.