

## Conclusions and Actions of the NRDC 2012 Meeting

### Conclusions

#### General

- C1 The next full NRDC meeting will be held in Smolenice, Slovakia in the 2nd quarter of 2014.
- C2 The next technical NRDC meeting will be held in Vienna, Austria in the week of 22 - 26 April 2013.
- C3 The next EXFOR Compilation Workshop will be held in Vienna, Austria in the 3rd quarter of 2013.

#### EXFOR, General

- C4 CJD will scan AE, ZET, ZEP, PTE, FCY and FCY/L, and report the result to Semkova for every issue on a regular basis.
- C5 NNDC will scan AJ and AJ/L, and report the result to Semkova for every issue on a regular basis.

#### Manuals and Dictionaries

- C6 Unification of prefixes in unit codes proposed in WP2012-09 and change of prefixes MICRO- to MU- in dictionary 25 were approved.
- C7 The code length of particle codes (Dictionary 33) will be 6 or less for short nuclide codes (e.g., AM242M).
- C8 LEXFOR entry "Nuclear resonance fluorescence" proposed in WP2012-11 was approved.
- C9 A new related reference code o and its usage proposed in WP2012-12 was approved. The status code COREL will not be used for the purpose.

#### CINDA

- C10 Only Exchange files will be used in future CINDA transmissions (i.e., Reader files will be no longer used).

## **EXFOR Compilation**

- C11 All centres are recommended to collect and archive entry by entry all communications between compilers, authors and centres as ASCII files (e-mails) or PDF files (documentation).
- C12 The neutron source spectra format proposed in WP2012-15 was approved with correction of ,DE to ,PY/DE.
- C13 Compilers are not recommended to put the issue, day and month under the keyword REFERENCE, MONIT-REF and REL-REF unless they are essential to identify the article.
- C14 The covariance data format proposed in WP2012-27 was approved. Compilers and programmers are encouraged to use the new format.
- C15 The ERR-ANALYS format and the usage of headings ERR-1, ERR-2 etc. proposed in WP2012-28 were approved. The 4th field of ERR-ANALYS will be used to indicate correlation property of the source of uncertainties in future transmissions.
- C16 The parameter code SPC will be used for yield of discrete gamma line(s) while PAR,MLT and PAR,PY will be used for yield of continuous gamma (WP2012-29).
- C17 The following coding rule about the keyword SAMPLE were approved: (a) only abundances normalized to 1 (within uncertainties) will be coded in the isotopic abundance field; (b) no blanks permitted for isotopic abundance value; (c) only fixed (not ranges) abundances given by the authors are allowed as coded information (number) in the isotopic abundance field. Abundance ranges may be given in free text.
- C18 The keyword INC-SOURCE will not be permitted when the data set is for spontaneous fission.

## **Evaluated Data Libraries**

- C19 Centres are recommended to collect and make available through their nuclear data services old evaluated libraries, especially standard data used to derive experimental data compiled in EXFOR (WP2012-37).

## **Software and Dissemination**

- C20 NRDC encourages free exchange of software and co-operation in software development between Centres.

## **Actions**

### **EXFOR General**

- |    |  |  |
|----|--|--|
| A1 | All  | (Standing Action) Give highest priority to compiling new publications.   |
| A2 | Aikawa<br>Dupont<br>Hlavač<br>Pritychenko<br>Semkova<br>Yang | (Continuing action) Give high priority to compilation of articles published in the ND2010 conference (Jeju, Korea) and listed in WP2012-05.  |
| A3 | All  | (Continuing action) Correct erroneous entries listed on the EXFOR Feedback List on the NRDC web page according to the indicated priorities. All urgent corrections must be done by the next meeting.   |
| A4 | Semkova  | (Continuing Action) (1) Remove transmission number from the compiler name field of the EXFOR Compilation Control System; (2) Add the first author name to the EXFOR Compilation Control System, as time/resources permit.  |
| A5 | Centre Heads   | Nominate participants from the centre to the EXFOR working group coordinated by Zerkin, which will discuss the opportunity to use XML as a new EXchange FORmat and could participate in the related proposed WPEC subgroup on the evaluated Generalized Nuclear Data (GND) format. |
| A6 | NDS  | Prepare a list of questions to ask centres about the usages of compilation tools, output formats etc., and send it to centres.   |
| A7 | All  | Respond to the questions mentioned above.  |
| A8 | Otsuka   | Coordinate submission of an abstract to the ND2013 conference.   |

### **Manuals and Dictionaries**

- |     |              |  |
|-----|--------------|--|
| A9  | Centre Heads | Send comments on the Network document to Otsuka to prepare the next update to be reviewed and signed at the next Centre Heads meeting in 2014. |
| A10 | Otsuka       | Update the Network document following the comments by Centre Heads.  |

- A11 Otsuka Update the NRDC Protocol Appendix B following the new scanning responsibilities of NNDC and CJD. (Conclusion 4 and 5).
- A12 Otsuka Revise LEXFOR for (a) TOF covariance (WP2011-27); (b) new branch code ISP (WP2011-29); (c) specific temperatures for prompt fission neutron spectrum averaged quantities (WP2011-30); (d) compilation of prompt fission neutron quantities (WP2011-31); (e) nuclear resonance fluorescence (WP2012-11); (f) additional reference compiled in another entry (WP2012-12).
- A13 Otsuka Revise the EXFOR Formats Manual for (a) short nuclide codes in REACTION SF7 (WP2011-28); (b) the keyword ERR-ANALYS (Conclusion 15); (c) the keyword SAMPLE (Conclusion 17).
- A14 Zerkin Submit an update of the EXFOR Formats Manual (Appendix B) for the new covariance format (WP2012-27).
- A15 Otsuka Revise NRDC Protocol according to the Conclusion 20.
- A16 Otsuka Consider revision of the NRDC Protocol for submission of transmission tapes specialized for corrections.
- A17 Otsuka Update dictionary 25 (Unit codes) for agreed change (Conclusion 6).
- A18 Otsuka Assess the current use of various dictionaries and their types (archive, backup, trans) by compilers and computer programs maintained by data centres for possible simplification (WP2012-13).
- A19 Otsuka (Continuing Action) Consider to make available preliminary up-to-date dictionaries to suppress unnecessary error messages from checking programs (WP2012-13).
- A20 Otsuka (Continuing Action) Update Dictionaries every four months.

### **CINDA**

- A21 Dupont (Continuing Action) Correct errors detected during CINDA loading procedure, as described in WP2008-36.
- A22 Dupont (Continuing Action) Correct all CINDA lines, as described in WP2009-30.
- A23 Zerkin (Continuing Action) Periodically export EXFOR and NSR to CINDA.

- A24 Zerkin (Continuing Action) Periodically update the CINDA Master File and distribute it to other Centres.
- A25 Aikawa Inform Zerkin whether the Centres want to receive the NSR  
Dupont exportation part in the CINDA Master File.

### **EXFOR Compilation**

- A26 Aikawa (Continuing Action) Compile neutron source spectra listed in  
Dupont WP2012-16.  
Hlavač  
Pritychenko  
Semkova  
Taova
- A27 Otsuka Compile Mannhart's  $^{252}\text{Cf}$  standard neutron spectrum.
- A28 Hlavač Compile proton-induced reaction cross section (R.D. Albert et al.)  
in WP2012-18.
- A29 Babykina Compile proton-induced isotope production cross sections listed  
Dupont in the 1<sup>st</sup> table of WP2012-19. Also consider to compile cross  
Otsuka sections listed in the 2<sup>nd</sup> table of WP2012-19 if possible.  
Takács
- A30 Otsuka Continue comparison between Landolt-Börnstein compilation and  
Babykina EXFOR for light charged-particle induced isotope production  
cross sections.
- A31 All (Continuing Action) According to the list of Entries with `NODATA`  
one of the following corrections has to be made (see "Guide for  
EXFOR Compilers"): (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.
- A32 All (Continuing Action) Revise remaining upper case entries and  
other necessary corrections as time permits. (WP2012-20)
- A33 Dupont Revise entries listed in the WPEC SG30 list (WP2012-21, also  
Pritychenko registered to the EXFOR Feedback List).

- A34 Otsuka Merge WPEC SG30 list to the EXFOR Feedback List.
- A35 Aikawa Correct entries for data sets which are partial for secondary  
Babykina energies listed in WP2012-22 (also registered to the EXFOR  
Dupont Feedback System).  
Mikhaylyukova  
Otsuka  
Pritychenko  
Taova  
Varlamov
- A36 Aikawa (Continuing Action) Replace element symbols of asterisk in  
REACTION SF4 in Entry E2054 (WP2012-23).
- A37 Dupont (Continuing Action) Add English translation information of  
Mikhaylyukova Atomnaya Energiya under the keyword REFERENCE as listed in  
Varlamov WP2011-26 (also registered to the EXFOR Feedback List).
- A38 Babykina Add English translation information of Yadernaya Fizika under  
Dupont the keyword REFERENCE as listed in WP2012-24 (also registered  
Mikhaylyukova to the EXFOR Feedback System).  
Otsuka  
Taova  
Varlamov
- A39 Babykina (Continuing Action) Provide a list of English translation  
information of Russian journals, e.g., IZV.
- A40 Otsuka Update the feedback list with information from WP2012-24 and  
WP2012-35.
- A41 Soppera Provide JANIS Import Log created from the EXFOR Master File  
to Otsuka on a regular basis.
- A42 Otsuka Assess the JANIS Import Log provided by Soppera as above, and  
register important errors to the EXFOR Feedback System.
- A43 Dupont Correct errors listed in WP2012-25.  
Mikhaylyukva  
Pritychenko
- A44 Dupont (Continuing Action) Assess neutron cross section data useful for  
Hlavač standard evaluation listed in WP2011-15 and compile them when  
Pritychenko appropriate.  
Semkova
- A45 Dupont (Continuing Action) Provide NDS a list of erroneous and  
suspicious outliers by using the new statistical approach being  
developed when available (WP2011-17).

- A46 Dupont (Continuing Action) Provide JANIS–TRANS Checker Log list on every preliminary TRANS-file.
- A47 Dupont Assess the articles reporting keV neutron capture cross section entries listed in WP2012-31, and made necessary corrections and additions.  
Hlavač  
Mikhaylyukova  
Otsuka  
Pritychenko
- A48 Otsuka Consider compilation of  $kT = 30$  keV Maxwellian Averaged Cross Section compiled in KADoNiS as an EXFOR entry.
- A49 Otsuka Extract serious errors (e.g., opening parenthesis in column 12, `ENR=0.`) from WP2012-34, and distribute a list to centres as a memo for corrections with addition of the entries to the EXFOR Feedback List.
- A50 Dupont Correct entries using the keyword `INC-SOURCE` for spontaneous fission as listed in WP2012-35, and move information to another keyword or subentry when necessary.  
Hlavač  
Mikhaylyukova  
Pritychenko  
Semkova
- A51 Otsuka Check if each centre agrees with entries included in `PRELIM.Y008`.
- A52 Semkova Check and finalize `PRELIM.Y008` (after trivial corrections if necessary).  
Otsuka
- A53 Zerkin Assess the technical feasibility to automatically update the entries affected by the change of prefixes in the unit code (Conclusion 6), and prepare a draft of a preliminary area Y transmission tape.
- A54 Semkova Submit the preliminary tape mentioned above to the NDS open area (after trivial corrections if necessary).
- A55 Otsuka Check if each centre agrees with the entries included in the area Y preliminary tape mentioned above.
- A56 Otsuka Assess the correlation properties of uncertainties given under the heading `ERR-1`, `ERR-2` etc. in the existing entries.

### Software and Dissemination

- A57 NEA DB (Continuing Action) Continue development and testing of the JANIS –TRANS Checker in cooperation with NDS and the other centres.
- A58 Otsuka (Continuing Action) Provide EXFOR News for every EXFOR Master File.

- A59 Zerkin (Continuing Action) Continue development of EXFOR+ (interpreted / extended EXFOR format).
- A60 All Consider to use the EXFOR+ format for author approval, and also send feedback to Zerkin.
- A61 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.
- A62 Zerkin (Continuing Action) Generate and distribute list of errors to NRDC after every new EXFOR Master File creation.
- A63 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.
- A64 Zerkin (Continuing Action) Develop the program to generate EXFOR+ from a standalone EXFOR entry.
- A65 Pikulina, Zerkin Implement the X4+ converter code into the EXFOR-Editor in a form of independent executable module.
- A66 NDS Assess the current status of NDS EXFOR checking codes (ZCHEX, Zerkin's upload system) and to prepare a consolidated proposal on which checking code should be maintained / developed as the NRDC checking code that must be used by compilers.
- A67 Zerkin (Continuing Action) Update ZCHEX based on comments from compilers (e.g., WP2011-36) as time permits.
- A68 All (Continuing Action) Provide feedback to NDS on the existing ZCHEX version (on bugs as well as desired additions.).
- A69 Zerkin (Continuing Action) Continue development of the EXFOR upload web tool.
- A70 Zerkin Prepare coding of covariance data for all EXFOR Entries having authors' covariances, and offer them to compilers according to Areas for finalizing and submitting to the database.
- A71 JCPRG (Continuing Action) Continue development and testing of the digitizing software GSYS in cooperation with NDS and other centres.
- A72 CNPD Provide more detailed information on future development of the EXFOR-Editor.



- A73 All Provide feedback on the current version of the EXFOR-Editor and requests for the development of the next version.
- A74 CNPD (Continuing Action) Continue development and testing of the EXFOR-Editor and digitizer in cooperation with NDS and other data Centres, taking into account compilers' remarks.