A38. "Assess whether the experimental spectrum averaged cross sections available in the SINBAD and ICSBEP databases are suitable for inclusion in EXFOR (Dupont, Simakov)".

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There are several **Integral Benchmark Databases** ICSBEP and SINBAD (NEA, RSICC), EASY (CCFE), IRDF-2002 (IAEA) …, which contain the measured reaction quantities of the EXFOR interest, such as spectrum averaged cross sections (SPA), thick target neutron yields (TT). As an example, the SPA available in the ICSBEP-2013 are collected here https://www-nds.iaea.org/IRDFFtest/ICSBEP_SPA.pdf. These dedicated integral benchmark databases also contain rather detailed information about the facilities where these measurements were performed as well as inputs for the transport codes which allow re-simulation of the facilities on the basis of modern transport cross section data and codes.

After comparison of databases contents and discussions with experts (O. Cabellos, M. Chadwick, R. Forrest, I. Kodeli, B. Pritychenko and staff of NDS) we come up with **recommendations on compilation of the integral data in EXFOR**:

 - compilation of integral data in EXFOR is desirable for the "simplest or clean" benchmarks which provide standards, reference or well characterised neutron fields (e.g., ^{252}Cf(s.f.) spectrum) that allow validation or study of the nuclear reaction quantities such as cross sections, neutron fission spectra (e.g., ^{235}U(n,f) PFNS) etc.
 - compilation in EXFOR of the integral physical quantities measured in the complex benchmarks has no necessity, if they characterise a device rather than nuclear data. Existing Integral Benchmarks Databases compile them.

We found several Entries in EXFOR with information which is also available in the Integral Benchmark Databases. Here are several examples and particular decisions or recommendations taken for each case.

1. EXFOR vs. ICSBEP

Entry *41068* (A. Zvonarev, fast nuclear reactor BR-1 at IPPE, Obninsk) has measured SPA which are identical to SPA available in Benchmark FUND-IPPE-FR-MULT-RRR-001 of ICSBEP , which additionally have detailed information on neutron spectrum.

The decision taken and implemented: the reference to this ICSBEP benchmark was inserted as a text under INC-SPECT.

2. EXFOR vs. IRDF-2002

Entries
 - *G.P.Lamaze 13153, B.M.Oliver 13752*   have SPA, measured in the ISNF spectrum;
 - *A.Fabry 20948, A.Hannan 20950, I.Garlea 30452, 30568* - SPA, measured in the Sig-Sig spectrum;
 - *Y.Harker 10218, E.P.Lippincott 13756*   - SPA, measured in the CFRMF spectrum;
 - *K.Kobayashi 21589, K.Kobayashi 20693*   - SPA, measured in the YAYOI spectrum.

All these spectra are available in IRDF-2002 database (Standard Specta).

The solution proposed: insert a reference to the IRDF-2002 collection of the reactor spectra as compiler's comment after keyword COMMENT.

3. EXFOR vs. EASY

Entry *23127* repots SPA measured in the "clean" benchmark by M. Pillon (FNG, ENEA, Frascati). The T-D and D-D sources neutron spectra were recently also obtained from author that gives now complete information for interpretation of reaction spectrum averaged cross sections.

The solution implemented: these sources neutron spectra were compiled in EXFOR (INC-SPECT) at NDS, and were sent to NEA DB for inclusion in the area 2 transmission.

4. EXFOR vs. SINBAD

EXFOR *E2298* and SINBAD NEA-1552/14 Entries have basically the same data: energy distributions of neutron from the thick Li target (N. Nakao et al., "Development of a quasi-monoenergetic neutron field using Li-7(p,n)Be-7 reaction in the 70 - 210 MeV energy range at RIKEN", NIM A420(1999)218).

However data units are different. EXFOR entry has original data and units, which were provided by authors (N. Nakao).

Proposal: the difference between RIKEN data in SINBAD and EXFOR should be understood. In the case of whole duplication, NEA-1552/14 has to be deleted (since thick target yields were always compiled in EXFOR) or NEA-1552/14 should have a reference to E2298 as a primary source.