**Nuclear Data Section**

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**Memo CP-D/965**

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**To:** Distribution

**From:** N. Otsuka, O. Gritzay

**Subject: New keyword – SUPPL-INF (Supplemental information)**

Proper use of a data set compiled in EXFOR sometimes requires supplemental information.:

***Examples***

1. A data set defined by a REACTION code with SF8=SPA can be well-defined only when the incident spectrum is available
2. An incident neutron energy determined by time-of-flight in the resonance region is properly treated by resonance analysis codes only when the resolution (response) function relating the time domain to the energy domain is available.

Such supplemental information has been kept as free text under a keyword (e.g., numerical incident neutron spectrum under INC-SPECT). However sometimes it occupies a lot of records (can be more than 1000 records), and it makes other free text less visible.

To improve the situation, we would like to propose a new keyword SUPPL-INF (Supplemental information) providing supplemental information in free text, and allow to have a subentry which has this keyword without REACITON in BIB section.

We also propose creation of a new dictionary (say, Dictionary 38 “Supplemental information types”) for a code indicating the type of the supplemental information included. Addition of the following two new codes are foreseen:

INCSP: Incident particle spectrum

RESFN: Resolution/response function

**EXFOR Format Manual update (proposal)**

**REACTION** Specifies the data presented in the DATA section in fields headed by DATA4.

1. Presence is obligatory with coded information unless SUPPL-MAT is used; use of free text is optional.

…

**SUPPL-INF** Provides a voluminous supplemental information which characterizes a data set in another subentry.

1. Contains a code from Dictionary 38 with free text.
2. The subentry having this keyword must be referred by another subentry by a status code SUPPL.
3. The subentry having this keyword must be with NOCOMMON and NODATA, and without REACTION.
4. ~~Use of this keyword is currently limited to store (1) incident neutron spectra, or (2) resolution or response function.~~

**LEXFOR update (proposal)**

**Supplemental Information**

Supplemental information that is required to make the data set well-defined may be provided under SUPPL-MAT. This is a useful option when the supplemental information is voluminous, and not suitable to keep it with other information in a BIB section. See also EXFOR Formats Chapter 7: **SUPPL-INF**.

Use of this keyword is currently limited to store (1) incident neutron spectra, or (2) resolution or response function.

***Example***

SUBENT 22850002 20101208 2285000200001

…

REACTION (43-TC-99(N,G)43-TC-100,,SIG,,AV) 2285000200003

…

STATUS (TABLE) Table 4 of Nucl.Sci.Technol.40(2003)61 2285000200014

 (SUPPL,22850010) Neutron source spectrum

…

SUBENT 22850010 20101208 2285001000001

BIB 1 997 2285000200002

SUPPL-INF (INCSP) Neutron flux (spectrum) normalized to 1 2285001000003

 Col. 1: Incident neutron energy (MeV) 2285001000004

 Col. 2: Neutron flux (1/MeV) 2285001000005

 --------------------------- 2285001000006

 0.0000E+00 0.0100E+00 2285001000007

 1.0000E+00 0.0100E+00 2285001000008

 2.0000E+00 0.0100E+00 2285001000009

...

ENDBIB 997 0 2285001001000

NOCOMMON 0 0 2285001001001

NODATA 0 0 2285001001002

ENDSUBENT 1001 0 2285001099999

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