

**Nuclear Data Section
International Atomic Energy Agency
P.O.Box 100, A-1400 Vienna, Austria**

Memo CP-D/658

Date: 25 July 2010
To: Distribution
From: N. Otsuka
Subject: **New codes for prompt fission neutron spectrum**
Reference: Memo CP-D/635

General coding rule of prompt fission neutron spectrum was presented in the NRDC 2010 meeting and approved (Conclusion 26). To update prompt fission neutron emission probabilities and their ratio to Maxwellian compiled in EXFOR 30969.002-005 (also in EXFOR 22219.002-005 as duplication) [1], the following new codes are proposed:

Dictionary 25 (Data Units)

1/MEV/FIS per MeV per fission

Dictionary 34 (Modifiers)

NPD Normalized to probability distribution
 (It replaces NT1 proposed in Memo CP-D/635)

Dictionary 236 (Quantities)

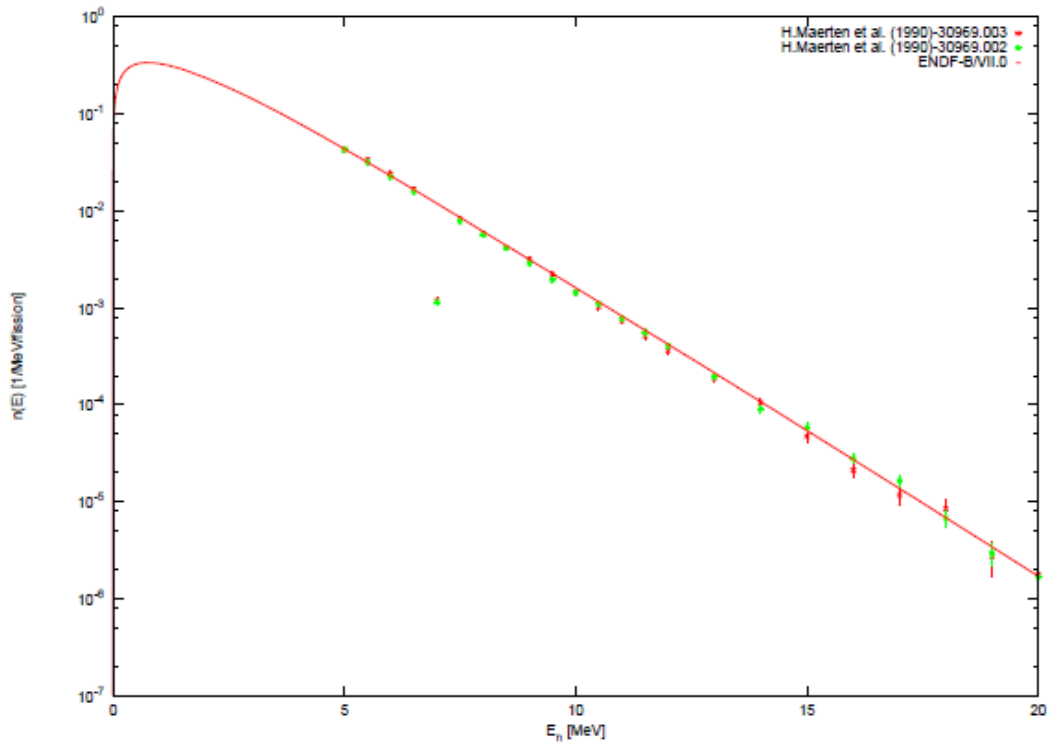
PR, NU/DE, , NPD Prompt fission neutron spectrum in probability
 PR, NU/DE, , MXD Prompt fission neutron spectrum relative to Maxwellian of given
 temperature
 PR, DE, N, MXD (Obsolete)

Unit / Quantity	Reaction type	Family flag
1/MEV/FIS	-	FYDE
PR, NU/DE, , NPD	NUE	FYDE
PR, NU/DE, , MXD	NUE	NO

When probability distribution is compiled, the compilers must try to keep normalization condition. As shown in the next page, 30969.002-003 gives data above 5 MeV which does not cover the major part of the spectra. More than half part of contribution is from $1 \text{ MeV} < E_n < 3 \text{ MeV}$.

Reference

[1] H.Maerten *et al.* Nucl. Sci. Eng. 106(1990)353.



EXFOR 30969.002-003 with ENDF-B/VII.0 (NSUB=4, MF=5, MT=18)

Distribution:

blokhin@ippe.ru
 chiba@earth.sgu.ac.jp
 claes.nordborg@oecd.org
 emmeric.dupont@oecd.org
 ganesan@barc.gov.in
 gezg@ciae.ac.cn
 hongwei@ciae.ac.cn
 jhchang@kaeri.re.kr
 j.roberts@iaea.org
 kaltchenko@kinr.kiev.ua
 katakura.junichi@jaea.go.jp
 kato@nucl.sci.hokudai.ac.jp
 kiralyb@atomki.hu
 l.vrapcenjak@iaea.org
 manuel.bossant@oecd.org
 manokhin@ippe.ru
 mmarina@ippe.ru
 mwherman@bnl.gov
 nicolas.soppera@oecd.org
 nklimova@kinr.kiev.ua

n.otsuka@iaea.org
 nrhc@jcprg.org
 oblozinsky@bnl.gov
 ogritzay@kinr.kiev.ua
 otto.schwerer@aon.at
 pronyaev@ippe.ru
 r.forrest@iaea.org
 samaev@obninsk.ru
 s.babykina@polyn.kiae.su
 scyang@kaeri.re.kr
 s.dunaeva@iaea.org
 stakacs@atomki.hu
 stanislav.hlavac@savba.sk
 taova@expd.vniief.ru
 tarkanyi@atomki.hu
 varlamov@depni.sinp.msu.ru
 vlasov@kinr.kiev.ua
 vmclane@optonline.net
 v.zerkin@iaea.org
 yolee@kaeri.re.