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**Memo CP-C/291**

**DATE:** July 24, 2001  
**TO:** Distribution  
**FROM:** V. McLane  
**SUBJECT:** Differential neutron multiplicity

I have received two data sets that measure neutron multiplicity as a function of angle and secondary energy for which I need to introduce a new quantity and units.

Proposed dictionary additions follow.

Dictionary 25 (UNITS)

P/MEVMUCSR Particles/(MeV muC sr)

Dictionary 36 (Quantities)

,MLT/DA/DE, ,TT Diff. particle multiplicity d/dA/dE

I have attached a sample coded entry. Has anybody else encountered similar data?

Distribution:

M. Chiba, Sapporo	S. Maev, CJD
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TRANS  
 ENTRY C0825  
 SUBENT C0825001  
 BIB  
 INSTITUTE (1USAOHO)  
 REFERENCE (J,NSE,129,175,1998)  
 AUTHOR (T.N.Massey,S.Al-Quraishi,C.E.Brent,J.F.Guillemette,  
 S.M.Grimes,D.Jacobs,J.E.O'Donnell,J.Oldendick,  
 R.Wheeler)  
 TITLE A Measurement of the  $^{27}\text{Al}(d,n)$  Spectrum for Use in  
 Neutron Detector Calibration  
 FACILITY (ACCEL,1USAOHO) Ohio tandem accelerator.  
 SAMPLE Thick aluminum foils.  
 METHOD (TOF)  
 DETECTOR (FISCH) 235U thick and thin foils.  
 ANALYSIS Results of measurements on 2 thick foils combined.  
 MONITOR (92-U-235(N,F),,SIG) Data taken from ENDF/B-VI.  
 CORRECTION Corrected for background, and absorption on neutrons  
 by aluminum of chamber, cadmium shield, and air.  
 ERR-ANALYS (ERR-S) Statistical uncertainty.  
 Normalization uncertainty of 4.9% is the dominant  
 source of uncertainty.  
 STATUS Data received by email from T. Massey, 17 August 1999.  
 HISTORY (20010731C) VM  
 ENDBIB  
 NOCOMMON  
 ENDSUBENT  
 SUBENT C0825002  
 BIB  
 REACTION (13-AL-27(D,X)0-NN-1,,MLT/DA/DE,,TT)  
 ENDBIB  
 COMMON  
 EN ANG  
 MEV ADEG  
 7.44 120.  
 ENDCOMMON  
 DATA  

E	DATA	ERR-S
MEV	P/MEVMUCSR	P/MEVMUCSR
0.2200	3.5395E+07	6.0147E+06
0.2700	4.1417E+07	5.4801E+06
0.3200	5.6495E+07	5.1177E+06
...		
13.7094	1.9483E+05	5.8838E+04

 ENDDATA  
 ENDSUBENT  
 ENENTRY