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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?

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TRANS
 ENTRY C0825
 SUBENT C0825001
 BIB
 INSTITUTE (1USAHO)
 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,1USAHO) 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