

Thick-Target yields

NATIONAL NUCLEAR DATA CENTER
Bldg. 197D
Brookhaven National Laboratory
P. O. Box 5000
Upton, NY 11973-5000 U.S.A.

(Internet) "NNDC@BNL.GOV"

Telephone: (516)344-2902

FAX: (516)344-2806

Memo CP-C/344

DATE: May 4, 2004
TO: Distribution
FROM: V. McLane
SUBJECT: Quantities and units for thick/thin target yields (see also Memo CP-E/040).

I was moved by Memo CP-C/040 to go through the dictionaries and check all the quantity codes and units given relating to thick/thin target yields. I do not agree with some of the recommendations of that memo.

I next checked to see whether the quantities given in the archive dictionaries were found on our database. Then I made an attempt to specify a consistent set of unit codes. Attached are the results.

Distribution:

M. Chiba, Sapporo
F. E. Chukreev, CAJaD
S. Dunaeva, NDS
S. Taova, Sarov
O. Gritzay, KINR
K. Kato, JCPDG
M. Kellett, NEADB
V. N. Manokhin, CJD

S. Maev, CJD
O. Schwerer, NDS
S. Takács, ATOMKI
F. T. Tárkányi, ATOMKI
V. Varlamov, CDFE
CNDC
NNDC Distribution

Thick-Target yields

Quantity Dictionary

These were found on database or recently proposed.

(CUM), TTY	TTY	Saturated target yield (assumed cumulative)
(M), TTY	TTY	Saturated target yld (uncert.if isom.trans.incl)
, TTY	TTY	Saturated thick/thin target yield
, TTY, , DT	TTT	Production thick/thin target yield
, TTY, , PHY	TTT	Physical thick/thin target yield
, TTY/DA	TDA	Saturated thick/thin target yield d/dA
, TTY/DE, , DT	TTTE	Production thick/thin target yield d/dE
, TTY/MLT	PYT	Saturated thick/thin target yield multipl.
, TTY/MLT/DA	PYTA	Saturated thick/thin target multiplicity d/dA
, TTY/MLT/DA, G	PYTA	Saturated thick/thin multiplicity d/dA(gammas)
, TTY/MLT/DA/DE	TD2	Saturated thick/thin target multiplic. d2/dA/dE
, TTY/PY	PYT	Saturated thick/thin target product yield
, TTY/PY/DA	PYTA	Saturated thick/thin target product yield d/dA
, TTY/PY/DA/DE	TD2	Saturated thick/thin targ.prod.yield d2/dA/dE
CUM, TTY	TTY	Cumulative saturated thick/thin target yield
CUM, TTY, , DT	TTT	Cumulative production thick/thin target yield
IND, TTY ?	TTY	Independent saturated thick/thin target yield
IND, TTY, , DT	TTT	Independent production thick/thin-target yield
IND/M+, TTY	TTY	Indep. saturated target yield, incl.isom.trans.
IND/M+, TTY, , DT	TTT	Indep. production target yield incl.isom.trans.
M+, TTY	TTY	Saturated target yield, incl. via isom.transit.
M+, TTY, , DT	TTT	Production target yield incl. via isom.transit.
PAR, TTY	TTY	Partial saturated target yield
PAR, TTY/MLT/DA	PYTA	Partial saturated target multiplicity d/dA
PAR, TTY/MLT/DA, G	PYTA	Partial saturated target multipl. d/dA(gammas)

? Code missing on archive dictionary

This found only for C0108 and C0118; both corrected to PAR, TTY/MLT/DA (both given as REL); make quantity obsolete.

PAR, TTY/DA	TDP	Partial saturated target yield d/dA
-------------	-----	-------------------------------------

This found only for A0527 and C0838; both should be corrected to , TTY/PY/DA/DE; make quantity obsolete.

, TTY/DA/DE	*1/AE	Saturated thick/thin target yield d/dA/dE
-------------	-------	---

* If not deleted, correct unit code.

This found on entry O0530; should be coded as IND, PY, , TT, or more correctly giving authors original data in KBQ/MUAHR: IND, TTY, , DT

IND, PY, , DT	YLD	Independent product yield per unit time
---------------	-----	---

These were not found on library; may be removed if not needed.

(CUM), TTY, , DT	TTT	Production target yield (assumed cumulative)
, TTY/DA, , DT	TTDA	Production thick/thin target yield d/dA
, TTY/DE	1/E*	Saturated thick/thin target yield d/dE
, TTY/RAT	NO	Saturated thick/thin target yield ratio
CUM, TTY/RAT	NO	Cumul. saturated thick/thin target yield ratio
CUM/(M), TTY	TTY	Cum.satur.target yield (uncert.isom.trans.incl)

Thick-Target yields

CUM/M-,TTY	TTY	Cumul.saturated target yield,exclud.isom.trans
EM,TTY/DA/DE	1/AE*	Double-diff.thick/thin target yld for emission
IND,TTY/RAT	NO	Independent saturated target yield ratio
M-,TTY	TTY	Saturated target yield, excl. isomeric transit.
PAR,TTY,G	TTY	Partial saturated thick/thin target gamma yield
SEQ,TTY	TTY	Saturated target yield for specif.reaction seq.

* If not deleted, correct unit codes.

These were not found on library; may be removed if not needed.

Not correct in any case; SF6 should be ,TTY/PY; units should be PYT.

,PY,,DT	YLD	Product yield per unit time
CUM,PY,,DT	YLD	Cumulative product yield per unit time

Units Dictionary

CI/AHR/MEV	Curie/Ampere-hour/MeV	TTTE
DPS/MUAHR	decays per sec/micro-Ampere-hour	TTT
GBQ/COUL	Giga-Becquerel/Coulomb	TTT
GBQ/MUA	Giga-Becquerel/micro-Ampere	TTY
KBQ/MUAHR	Kilo-Becquerel/micro-Ampere-hour	TTT
MBQ/MUA	Mega-Becquerel/micro-Ampere	TTY
MBQ/MUAHR	Mega-Becquerel/micro-Ampere-hour	TTT
MCI/MUA	milli-Curie/micro-Ampere	TTY
MCI/MUAHR	milli-Curie/micro-Ampere-hour	TTT
MUCI/HRMEV	micro-Curie/micro-Ampere-hour/MeV	TTTE
MUCI/MUA	micro-Curie/micro-Ampere	TTY
MUCI/MUAHR	micro-Curie/micro-Ampere-hour	TTT
P/MEVMUCSR	particles/(MeV muC sr)	TD2
PART/MUAHR	particles/micro-Ampere-hour	TTY
PRD/MUAHR	products/micro-Ampere-hour	PYT*
PRD/MUC/SR	products/micro-Coulomb/steradian	PYTA
PRD/MUCOUL	products/micro-Coulomb	PYT
PRT/MUAHR	particles/micro-Ampere-hour	PYT
PRT/MUC/SR	partcles/micro-Coulomb/steradian	PYTA
PPRT/MUCOUL	particles/micro-Coulomb	PYT

* Unit code corrected.