

Thick-Target yields

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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:

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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.