

# Japan Charged-Particle Nuclear Reaction Data Group

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## Memo CP-E/060 (Revised)

**Date:** December 8, 2004  
**To:** Distribution  
**From:** OTSUKA Naohiko  
**Subject:** Addition to Dictionary ~~25~~ 34 (Modifiers) and Dictionary 36 (Quantities)

We propose the following quantity codes:

### Dictionary ~~25~~ 34 (Modifiers)

IPE integrated over partial energy range

### Dictionary 36 (Quantities)

, PY/DA/DE , , TT/IPE

YLD Differential product yield for thick target yield with respect to angle and energy of out going particle, integrated over partial energy range

, PY/DE , , TT/IPE

1/E Differential product yield for thick target yield with respect to energy of out going particle, integrated over partial energy range

| Quantity              | Reaction Type | Dimension | Reference                               | Subentry  |
|-----------------------|---------------|-----------|---|-----------|
| , PY/DA/DE , , TT/IPE | PY2           | YLD       | S. Yonai <i>et al.</i> ,<br>Nucl.       | E1858.009 |
| , PY/DE , , TT/IPE    | PYE           | 1/E       | Instrum.Meth.,<br><b>A515</b> (2003)733 | E1858.010 |

### Note that:

- In dictionary entry, “TT/” and “for thick target yield” may be omitted, because “TT” is approved as a general quantity modifier in the 2004 NRDC meeting.
- Then, if we keep the rule, “General quantity modifiers should trail other modifiers”, “TT/IPE” in SF8 must be “IPE/TT”. However I use “TT/IPE” in E1858 for the time being to keep consistency with other entries.

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**Sample of coded entry (E1858.009)**S. Yonai *et al.*, Nucl. Instrum.Meth., **A515**(2003)733 Fig.11

|            |  |            |               |
|------------|--|------------|---------------|
| SUBENT     | E1858009   | 20041122   | E185800900001 |
| BIB        | 6  | 14         | E185800900002 |
| REACTION   | (26-FE-0(P,X)0-NN-1,,PY/DA/DE,,TT/IPE)   |            | E185800900003 |
| EN-SEC     | ANG is polar angle between beam and neutron in laboratory system   |            | E185800900004 |
|            | (E,N) Lower limit energy to obtain double differential multiplicity integrated over neutron energy   |            | E185800900005 |
|            |  |            | E185800900006 |
|            |  |            | E185800900007 |
| ANALYSIS   | (INTED) Integration for energy range above 5 MeV   |            | E185800900008 |
| ERR-ANALYS | (ERR-S) Statistical error  |            | E185800900009 |
| ADD-RES    | (COMP) Intranuclear cascade model (MCNPX [L.S.Waters(Ed.) MCNPX User's Manual Version 2.4.0, LA-CP-02-408, LANL, 2002] and NMTC/JAM [K.Niita et al., Nucl. Instr. Meth. B184(2001)406].) |            | E185800900010 |
|            |  |            | E185800900011 |
|            |  |            | E185800900012 |
|            |  |            | E185800900013 |
|            |  |            | E185800900014 |
| STATUS     | (TABLE) Data (Fig. 11, p742 in reference) received by e-mail from S.Yonai (2003.12.8)  |            | E185800900015 |
|            |  |            | E185800900016 |
| ENDBIB     | 14   | 0          | E185800900017 |
| COMMON     | 1  | 3          | E185800900018 |
| E-MIN      |  |            | E185800900019 |
| MEV        |  |            | E185800900020 |
| 5.         |  |            | E185800900021 |
| ENDCOMMON  | 3  | 0          | E185800900022 |
| DATA       | 3  | 7          | E185800900023 |
| ANG        | DATA   | ERR-S      | E185800900024 |
| ADEG       | PRD/INC/SR   | PRD/INC/SR | E185800900025 |
| 0.         | 7.640E-02  | 8.340E-05  | E185800900026 |
| 7.5        | 6.120E-02  | 6.690E-05  | E185800900027 |
| 15.        | 5.230E-02  | 6.210E-05  | E185800900028 |
| 30.        | 4.530E-02  | 7.960E-05  | E185800900029 |
| 60.        | 1.880E-02  | 3.090E-05  | E185800900030 |
| 90.        | 1.000E-02  | 3.560E-05  | E185800900031 |
| 110.       | 7.340E-03  | 3.160E-05  | E185800900032 |
| ENDDATA    | 9  | 0          | E185800900033 |
| ENDSUBENT  | 32   | 0          | E185800999999 |