**Nuclear Data Section**

**International Atomic Energy Agency**

**P.O.Box 100, A-1400 Vienna, Austria**

**Memo CP-D/988**

**Date:** 21 December 2019

**To:** Distribution

**From:** N. Otsuka

**Subject: Dictionary transmission 9121 and Season’s Greetings**

Dictionary transmission 9121 is available in three formats (Trans, Archive and Backup) from the NDS open area: <http://www-nds.iaea.org/nrdc/ndsx4/trans/dicts/>. These dictionaries in zipped form (dicts-2019-12-21.zip) are also available: <http://www-nds.iaea.org/exfor-master/backup/?C=M;O=D>.

All memos submitted no later than 20 November (for dictionary 1, 2, 4, 16, 24-25, 30-35, 37, 236) or 20 December (for other dictionaries) are considered in this update.

Nicolas Soppera reports that JANIS detects 12 uses of quantities (SF5-SF8), data headings and data units undefined in dictionary 24, 25 and 236 on the EXFOR Master (Ver.2019-12-16) with this new dictionary. (It was detecting 36 such error messages with the previous dictionary.).

Additional changes introduced in this memo are summarized below:

* I found the obsolete parameter code CRL (Correlation) is not used in any EXFOR entry, and **I deleted all quantity codes with CRL from Dictionary 236**, and the reaction types CO and COP from Dictionary 213. (The deletion of the quantity codes is listed in the long list appended to this memo only.).
* Nicolas Soppera searched for duplicated expansions and duplicated internal numerical equivalent fields, and the dictionary records of the following codes are corrected:

Duplicated expansions

12-MG-OXI (Dict.209), CRP (Dict.213), ,FM/DA,,AL1/RS (Dict.236), PAR,PY,,TT/CH (Dict.236), SL,POL/DA,\*,ANA (Dict.236)

Duplicated internal numerical equivalent fields

CURVE (Dict. 16), 60-ND-CMP (Dict. 209)

* In Dictionary 236, the reaction types of the thick target multiplicities and thick target product yield were systematically replaced as follows:

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| **Dictionary 213 (Reaction types)** |
| **Thick target multiplicity** | **Thick target product yield** |
| **Old** | **New** | **Old** | **New** |
| MLT | TT | PY | TT |
| MTA | TDA | PYA | TDA |
| MTE | TDE | PYE | TDE |
| PZ | TTP | PYP | TTP |
| PZA | TAP | PYQ | TAP |
|  |  | PY2 | TAE |

Also some unit family codes and reaction types were changed. The old and new ones have one-to-one correspondence, and it does not make any effect on existing entries.

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| **Dictionary 26 (Unit families)** |
| **Old** | **New** |
| PYT | YLDC |
| PYTA | YDAC |
| PYT2 | YAEC |
| **Dictionary 213 (Reaction types)** |
| **Old** | **New** |
| GZ | NUG |
| GZP | NGP |
| PYE | TDE |
| PYQ | TAP |
| PZA | TAP |
| TD2 | TAE |
| YAE | TAE |

Consequently the reaction type will not be differentiated by the choice of MLT or PY and TT or TT/CH. The affected change is listed in the long list appended to this memo only.

* All quantity codes with M- not accompanied with CUM or (CUM) in SF5 were made obsolete according to NRDC 2019 Conclusion 19.
* Two quantity codes having SEC/CHN in the branch field were made obsolete. (Used in two entries – EXFOR 22179 and 41047. CHN must be deleted in all cases.)

**Dictionary 3 (Institutes)**

2GERGSI (Expansion updated)

2SF JYV (Expansion updated)

2SWTUBE (Expansion updated)

3INDCCM National Centre for Compositional Characterisation of Materials, Hyderabad

3INDIIR Indian Institute of Technology, Ropar

3INDSAH (Expansion updated)

**Dictionary 5 (Journals)**

IMP/CS International Journal of Modern Physics Conference Series

RPR Journal of Radiation Protection and Research

**Dictionary 6 (Reports)**

CERN-PROC- CERN Proceedings

**Dictionary 7 (Conferences)**

2009VARENN (*Obsolete.* Use CERN-PROC-2010-001.)

**Dictionary 16 (Status)**

CURVE (Internal numerical equivalent field corrected)

**Dictionary 23 (Analysis)**

INTEF Integration of excitation function

**Dictionary 26 (Unit families)**

1/T (Flag 24 added)

L (Flag 24 added)

PYT (*Delete*)

PYT2 (*Delete*)

PYTA (*Delete*)

TTT (Expansion updated)

TTTE (Expansion updated)

TTY (Expansion updated)

YAE (Expansion updated)

YAEC yield/angle/energy/charge

YDA (Expansion updated)

YDAC yield/angle/charge

YDE (Expansion updated)

YLD (Expansion updated)

YLDC yield/charge

**Dictionary 209 (Chemical compounds)**

12-MG-OXI (Expansion corrected)

28-NI-OXI Nickel oxide

60-ND-CMP (Internal numerical equivalent field corrected)

91-PA-OXI Protactinium oxide

**Dictionary 213 (Reaction types)**

CO (*Delete*)

COP (*Delete*)

CRP (Expansion corrected)

CSG Cross section for specific half-life group

FYZ (Expansion updated)

GZ (*Delete*)

GZP (*Delete*)

NGP Partial neutron yield for specific half-life group

NUG Neutron yield for specific half-life group

TAE Differential thick target yield, d/dAngle/dE'

TAP Partial thick target yield, d/dAngle

TD2 (*Delete*)

TDE Differential thick target yield, d/dE

PYE (*Delete*)

PYQ (*Delete*)

PZA (*Delete*)

YAE (*Delete*)

**Dictionary 236 (Quantities)**

,DA,\*LEG (Expansion corrected)

,FM/DA,,AL1/RS (Expansion corrected)

,MLT,N,TT (*Delete.* Not in use.)

,NU/DE,,RRE (Reaction type corrected)

,POL,,DSP/ASY (*Delete.* Not in use.)

,SPC/DA (Unit family corrected)

CHG,FY (Reaction type corrected)

DL/GRP,NU (Reaction type corrected)

DL/GRP,SIG (Reaction type corrected)

DL/GRP,SIG,N (Reaction type corrected)

DL/GRP/PAR,NU (Reaction type corrected)

M-,SIG (*Obsolete*)

M-,TTY,,EOB (*Obsolete*)

M-,TTY,,PHY (*Obsolete*)

M-,TTY,,SAT (*Obsolete*)

PAR,NU (*Delete.* Not in use.)

PAR,PY,\*,TT (*Delete.* Not in use.)

PAR/M-,DA,G (*Obsolete*)

PR,NU/DE,,RRE (Reaction type corrected)

PR,NU/DE,,RTE (Reaction type corrected)

PR,NU/TKE (Reaction type corrected)

PR/FRG,NU/TKE (Reaction type corrected)

PR/PAR,NU (Reaction type corrected)

SEC/CHN,FY (*Obsolete*)

SEC/CHN,FY/DE (*Obsolete*)

SL,POL/DA,\*,ANA (Expansion corrected)

All changes are summarized below. “Status” gives alteration flags and status codes defined in EXFOR/CINDA Dictionary Manual.

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| **Dict.** | **Status** | **Code** | **Expansion** | **Remark\*** |
| 003 | MTRA | 2GERGSI | GSI Helmholtzzentrum fuer Schwerionenforschung, Darmstadt | This memo |
| 003 | MTRA | 2SF JYV | University of Jyvaskyla, Jyvaskyla | This memo |
| 003 | MTRA | 2SWTUBE | Universitaet Bern, Bern | This memo |
| 003 | MTRA | 3AULCBR | Australian National University, Canberra | Editorial |
| 003 | ATRA | 3INDCCM | Nat. Centre for Composit. Charact. of Mat., Hyderabad | This memo |
| 003 | ATRA | 3INDIIR | Indian Institute of Technology, Ropar | This memo |
| 003 | MTRA | 3INDSAH | Saha Institute of Nuclear Physics, Kolkata | This memo |
| 005 | ATRA | IMP/CS | Int.Journal of Modern Physics, Conference Series | This memo |
| 005 | MTRA | IMP/E | Int.Journal of Modern Physics, Part E | Editorial |
| 005 | ATRA | RPR | Journal of Radiation Protection and Research | This memo |
| 006 | ATRA | CERN-PROC- | CERN Proceedings (CERN-Proceedings-) | This memo |
| 007 | ATRA | 69BIRMIN | 1st Conf.2 Body Prob.Nucl.Part.Phys., Birmingham 1969 | CP-F/020 |
| 007 | ATRA | 79GRENOB | Workshop Nucl. Spectr. of Fiss. Prod., Grenoble, 1979 | CP-C/473 |
| 007 | SOBS | 2009VARENN | 12th Int.Conf. on Nucl.React.Mechanism, Varenna,2009 | This memo |
| 016 | MTRA | CURVE | Data read from a curve | This memo |
| 023 | ATRA | INTEF | Integration of excitation function | This memo |
| 025 | MTRA | P/MEVMUCSR | particles/(MeV muC sr) | This memo |
| 025 | MTRA | PRD/MUAHR | products/micro-Ampere-hour | This memo |
| 025 | MTRA | PRD/MUC/SR | products/micro-Coulomb/sr | This memo |
| 025 | MTRA | PRD/MUCOUL | products/micro-Coulomb | This memo |
| 025 | MTRA | PRT/MAMIN | particles/milli-Ampere-minute | This memo |
| 025 | MTRA | PRT/MUAHR | particles/micro-Ampere-hour | This memo |
| 025 | MTRA | PRT/MUC/SR | particles/micro-Coulomb/steradian | This memo |
| 025 | MTRA | PRT/MUCOUL | particles/micro-Coulomb | This memo |
| 026 | MINT | 1/T | 1/time | This memo |
| 026 | MINT | L | length | This memo |
| 026 | DINT | PYT | thick target product yield (e.g. prd/muAhr) | This memo |
| 026 | DINT | PYT2 | thk targ.prod.yld/angle/en. (e.g. prd/muC/sr/MeV) | This memo |
| 026 | DINT | PYTA | thk targ.prod.yld/angle (e.g. prd/muC/sr) | This memo |
| 026 | MINT | TTT | activity/charge | This memo |
| 026 | MINT | TTTE | activity/charge/energy | This memo |
| 026 | MINT | TTY | activity/current | This memo |
| 026 | MINT | YAE | products/angle/energy/projectile | This memo |
| 026 | AINT | YAEC | products/angle/energy/charge | This memo |
| 026 | MINT | YDA | products/angle/projectile | This memo |
| 026 | AINT | YDAC | products/angle/charge | This memo |
| 026 | MINT | YDE | products/energy/projectile | This memo |
| 026 | MINT | YLD | products/projectile | This memo |
| 026 | AINT | YLDC | products /charge | This memo |
| 045 | MTRA | CHG | Fragment charge | CP-D/985 |
| 045 | MTRA | ETA | Eta | CP-D/985 |
| 045 | ATRA | MAS | Fragment mass | CP-D/985 |
| 045 | ATRA | MFQ | Differential fission neutron multiplicity | CP-D/985 |
| 045 | MTRA | NU | Nu | CP-D/985 |
| 045 | MTRA | NUD | Nu delayed | CP-D/985 |
| 045 | SOBS | NUF | Fragment neutrons | CP-D/985 |
| 113 | MTRA | MFQ | Differential fission neutron multiplicities | CP-D/985 |
| 113 | ATRA | NU | Fission neutron multiplicities | CP-D/985 |
| 113 | ATRA | ZAP | Most probable charge or mass | CP-D/985 |
| 207 | SOBS | SEGRAVE | Segrave,The Three-Body Problem,Amsterdam 1970 | CP-F/020 |
| 209 | ATRA | 12-MG-OXI | Magnesium oxide | This memo |
| 209 | ATRA | 28-NI-OXI | Nickel oxide | This memo |
| 209 | MTRA | 60-ND-CMP | Neodymium compound | This memo |
| 209 | ATRA | 91-PA-OXI | Protoactinium oxide | This memo |
| 213 | MTRA | AP | Most probable mass | CP-D/985 |
| 213 | MTRA | APA | Most probable mass as a fn. of angle | CP-D/985 |
| 213 | MTRA | APP | Most probable mass for given fragment energy | CP-D/985 |
| 213 | MTRA | APR | Most probable mass at resonance | CP-D/985 |
| 213 | DOBS | CO | Angular correlation | This memo |
| 213 | DOBS | COP | Partial angular correlation | This memo |
| 213 | ATRA | CRP | Partial cross section at resonance | This memo |
| 213 | ATRA | CSG | Cross section for specific half-life group | This memo |
| 213 | MTRA | ETA | Neutron yield (Eta) | CP-D/985 |
| 213 | MTRA | ETR | Neutron yield (Eta) at resonance | CP-D/985 |
| 213 | MTRA | FYZ | Fission mass or element yield | This memo |
| 213 | DTRA | GZ | Yield for specific half-life group | This memo |
| 213 | DTRA | GZP | Partial yield for specific half-life group | This memo |
| 213 | MTRA | NAE | Neutron yield d/dAngle/dE' | CP-D/985 |
| 213 | ATRA | NGP | Partial neutron yield for spec.half-life group | This memo |
| 213 | MTRA | NU | Neutron yield (nu-bar) | CP-D/985 |
| 213 | MTRA | NUA | Neutron yield dep.on angle | CP-D/985 |
| 213 | MTRA | NUD | Delayed neutron yield (nu-bar delayed) | CP-D/985 |
| 213 | MTRA | NUE | Neutron yield dep.on sec.particle energy | CP-D/985 |
| 213 | SOBS | NUF | Neutron yield for fiss.fragments | CP-D/985 |
| 213 | ATRA | NUG | Neutron yield for specific half-life group | This memo |
| 213 | ATRA | NUN | Probability for emission of N neutrons | CP-D/985 |
| 213 | MTRA | NUP | Partial neutron yield (nu-bar) | CP-D/985 |
| 213 | MTRA | NUR | Neutron yield at resonance | CP-D/985 |
| 213 | MTRA | PN | Delayed neutron emission probability | CP-D/985 |
| 213 | MTRA | PNE | Delayed neutron spect. from individ. precursor | CP-D/985 |
| 213 | MTRA | PNP | Partial delayed neutron emission probability | This memo |
| 213 | DTRA | PYE | Product yield d/dAngle | This memo |
| 213 | DTRA | PYQ | Partial product yield d/dAngle | This memo |
| 213 | DTRA | PZA | Partial multiplicity d/dAngle | This memo |
| 213 | ATRA | TAE | Differential thick target yield, d/dAngle/dE' | This memo |
| 213 | ATRA | TAP | Partial thick target yield, d/dAngle | This memo |
| 213 | DTRA | TD2 | Differential thick target yield, d/dAngle/dE' | This memo |
| 213 | ATRA | TDE | Differential thick target yield, d/dE' | This memo |
| 213 | DTRA | YAE | Double-diff. multiplicity for thick target | This memo |
| 213 | MTRA | ZP | Most probable charge | CP-D/985 |
| 213 | MTRA | ZPP | Most probable charge for given fragment energy | CP-D/985 |
| 236 | MTRA | ,DA,\*,LEG | Leg.coef. d/dA=a(0)+Sum(a(L)\*P(L)) for part. spec. | This memo |
| 236 | DOBS | ,DA/CRL | Angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,\*/\* | Angular correlation of particle pair specified | This memo |
| 236 | DOBS | ,DA/CRL,A/A/FF | Angular correlation alphas/alphas/fiss.prod. | This memo |
| 236 | DOBS | ,DA/CRL,A/FF | Alpha to fission fragment angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,A/G | Alpha / gamma angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,A/HF | Alpha to heavy fragment angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,FF/FF | Fragment to fragment angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,N/D | Angular correlation neutrons/deuterons | This memo |
| 236 | DOBS | ,DA/CRL,N/FF | Neutron to fission fragment angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,N/P | Angular correlation neutrons/protons | This memo |
| 236 | DOBS | ,DA/CRL,N/T/A | Neutron/triton/alpha angular correlation | This memo |
| 236 | DOBS | ,DA/CRL,P/A/FF | Angular correlation protons/alphas/fiss.prod. | This memo |
| 236 | DOBS | ,DA/CRL,P/D | Angular correlation protons/deuterons | This memo |
| 236 | DOBS | ,DA/CRL,P/P/FF | Angular correlation protons/protons/fiss.prod. | This memo |
| 236 | MTRA | ,FM/DA,,AL1/RS | Leg.coef.of 1st kind for spin-pol.prob. \* d/dA \*(4pi/sigma) | This memo |
| 236 | DOBS | ,KE/CRL,LF/HF | Total kinetic energy of light/heavy frag. pair | This memo |
| 236 | MTRA | ,MLT,\*,TT | Thick target multiplicity of particle specified | This memo |
| 236 | MTRA | ,MLT,,TT | Multiplicity for thick target,no.part./inc. | This memo |
| 236 | MTRA | ,MLT,,TT/CH | Multiplicity for thick target per elect. charge | This memo |
| 236 | DTRA | ,MLT,N,TT | Neutron multiplicity for a thick target | This memo |
| 236 | MTRA | ,MLT/DA,,TT | Particle multiplicity f.thick target d/dA | This memo |
| 236 | MTRA | ,MLT/DA,,TT/CH | Part.mult.f.thick targ.d/dA per electric charge | This memo |
| 236 | MTRA | ,MLT/DA,G,TT | Gamma multiplicity for thick target d/dA | This memo |
| 236 | MTRA | ,MLT/DA,G,TT/CH | Thick target gamma mult.d/dA per electric charge | This memo |
| 236 | MTRA | ,MLT/DA/DE,,TT | Particle multiplicity f.thick target d2/dA/dE | This memo |
| 236 | MTRA | ,MLT/DA/DE,,TT/CH | Part.mult.f.thick targ.d2/dA/dE per elec.charge | This memo |
| 236 | MTRA | ,MLT/DE,,TT | Particle multiplicity f.thick target d/dE | This memo |
| 236 | MTRA | ,MLT/DE,,TT/NPD | Particle multipl.f.thick target d/dE prob.dist. | This memo |
| 236 | MTRA | ,MLT/IPA/DE,,TT/NPD | Mult.f.thick tar.d2/dA/dE in.ov.ang.ran.pro.dis. | This memo |
| 236 | MTRA | ,NU/DE,,RRE | Diff. fiss. neutron mult.rel.to square root(E) | This memo |
| 236 | DTRA | ,POL,,DSP/ASY | Spin-spin asymmetry (antiparallel-parallel) | This memo |
| 236 | ATRA | ,POL/DA,\*,ASY/PP | Asymmetry parallel/perpend of particle specified | CP-M/038 |
| 236 | MTRA | ,PY,,TT | Prod.yield for thick target,no.of nucl./inc. | This memo |
| 236 | MTRA | ,PY,,TT/CH | Thick target product yield per electric charge | This memo |
| 236 | MTRA | ,PY/DA,,TT | Diff.product yield d/dA for thick target | This memo |
| 236 | MTRA | ,PY/DA,,TT/CH | Thick target prod. yld. d/dA per electric charge | This memo |
| 236 | MTRA | ,PY/DA/DE,,TT | Double-diff.product yield for thick target | This memo |
| 236 | MTRA | ,PY/DA/DE,,TT/CH | Thick targ.prod.yld. d/dA/dE per electric charge | This memo |
| 236 | MTRA | ,PY/DE,,TT | Diff.product yield d/dE for thick target | This memo |
| 236 | MTRA | ,PY/DE,,TT/NPD | Diff.prod.yield d/dE f.thick target prob.dist. | This memo |
| 236 | MTRA | ,PY/IPA,,TT | Prod.yield d/dA f.thick target,int.ang.range | This memo |
| 236 | MTRA | ,PY/IPA/DE,,TT | Prod.yield d/dA/dE f.thick target,int.ang.range | This memo |
| 236 | MTRA | ,SPC/DA | Gamma spectrum as function of angle | This memo |
| 236 | MOBS | ,TTY/MLT | Outg.part.mult.f.thick tgt,fct.of beam curr. | This memo |
| 236 | MOBS | ,TTY/MLT/DA,G | Thick targ.mult.d/dA,fct.of beam curr., for g | This memo |
| 236 | MOBS | ,TTY/MLT/DA/DE | Thick target mult.d/dA/dE,fct.of beam current | This memo |
| 236 | MOBS | ,TTY/PY | Thick-target prod.yld(fct.of inc.beam curr.) | This memo |
| 236 | MOBS | ,TTY/PY/DA | Thk-targ.prd.yld(fct.of inc.beamcurr.)d/dA | This memo |
| 236 | MOBS | ,TTY/PY/DA/DE | Thk-targ.prd.yld(fct.of inc.beamcurr.)d/dAdE | This memo |
| 236 | MTRA | CHG,FY | Total element yield of fission products | This memo |
| 236 | ATRA | CHG/TER,FY | Total element yield of fiss.prod.,ternary fiss. | CP-D/984 |
| 236 | ATRA | CHG/TER/CRN,FY | Total element yield of ternary fission product pair specified | CP-D/984 |
| 236 | MTRA | DL/GRP,NU | Delayed neutron yield for given half-life group | This memo |
| 236 | MTRA | DL/GRP,SIG | Cross sect.of delayed prod.f.gvn.half-life grp. | This memo |
| 236 | MTRA | DL/GRP,SIG,N | Del.neutron emiss.cs for given half-life group | This memo |
| 236 | MTRA | DL/GRP/PAR,NU | Partial del.neutron yld.for gvn half-life group | This memo |
| 236 | DOBS | IND,FY/CRL | Independent yield of correlated fragment pairs | This memo |
| 236 | DOBS | IND,FY/CRL,LF/HF | Indep.yield of correl.light/heavy fragm.pairs | This memo |
| 236 | SOBS | M-,SIG | Cross section, excluding isomeric transition | This memo |
| 236 | SOBS | M-,TTY,,EOB | EOB thick target yield excl.isom.transition | This memo |
| 236 | SOBS | M-,TTY,,PHY | Physical thick target yld., excl.isom.transition | This memo |
| 236 | SOBS | M-,TTY,,SAT | Saturation thick target yld., excl.isom.transit. | This memo |
| 236 | MTRA | NUM,NU | Probability for emission of N neutrons | CP-D/985 |
| 236 | DOBS | PAR,DA/CRL | Ang.correl. of particle pair spec., partial | This memo |
| 236 | DOBS | PAR,DA/CRL,\*/\* | Ang.correl. of particle pair spec., partial | This memo |
| 236 | DOBS | PAR,DA/CRL,A/A | Alpha / alpha angular correl.,partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,A/G | Alpha / gamma angular correl.,partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,A/HE6 | Alpha / He-6 angular correl.,partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,D/A | Deuteron/alpha angular correl.,partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,G/G | Gamma/gamma angular correl., partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,G/N | Gamma/neutron angular correl., partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,G/P | Gamma/proton angular correl., partial reaction | This memo |
| 236 | DOBS | PAR,DA/CRL,N/P | Neutron/proton angular correl., partial reactio | This memo |
| 236 | MTRA | PAR,MLT,\*,TT | Partial multiplicity of part.spec.f. thick targ. | This memo |
| 236 | MTRA | PAR,MLT,,TT | Partial thick target multiplicity | This memo |
| 236 | MTRA | PAR,MLT,,TT/CH | Partial thick target mulit. per electric charge | This memo |
| 236 | MTRA | PAR,MLT,G,TT/CH | Ptl.thick target gamma mult.per electric charge | This memo |
| 236 | MTRA | PAR,MLT/DA | Partial multiplicity d/dA | This memo |
| 236 | MTRA | PAR,MLT/DA,\* | Partial multiplicity d/DA for particle specified | This memo |
| 236 | MTRA | PAR,MLT/DA,,TT/CH | Ptl.thick target mult. d/dA per electric charge | This memo |
| 236 | MTRA | PAR,MLT/DA,G,TT/CH | Ptl.thick targ.gam.mult.d/dA per electric chrg. | This memo |
| 236 | DTRA | PAR,NU | Partial yield of neutrons | This memo |
| 236 | DTRA | PAR,PY,\*,TT | Product yield for thick target for part.spec. | This memo |
| 236 | MTRA | PAR,PY,,TT | Partial product yield for thick target | This memo |
| 236 | ATRA | PAR,PY,,TT/CH | Partial product yield for thick target per electric charge | CP-F/021 |
| 236 | MTRA | PAR,PY/DA | Partial diff.product yield d/dA | This memo |
| 236 | MTRA | PAR,PY/DA,,TT | Partial diff.product yield d/dA for thick target | This memo |
| 236 | MTRA | PAR,PY/DA,,TT/CH | Ptl.dif.prod.yld.d/dA for thick targ.per e.chrg. | This memo |
| 236 | MTRA | PAR,PY/DA,G | Partial diff.product yield for gammas | This memo |
| 236 | MTRA | PAR,PY/IPA,,TT | Ptl.prod.yld. d/dA for thick targ.,int.ang.range | This memo |
| 236 | MOBS | PAR,TTY/MLT | Partial thick target mult. as fct.of beam curr. | This memo |
| 236 | MOBS | PAR,TTY/MLT,G | Thick targ.multiplicity,fct.of beam curr., for g | This memo |
| 236 | MOBS | PAR,TTY/MLT/DA | Partial thick target mult.d/dA,fct.of beam curr. | This memo |
| 236 | MOBS | PAR,TTY/MLT/DA,G | Thick targ.mult.d/dA,fct.of beam curr., for g | This memo |
| 236 | MOBS | PAR,TTY/PY/DA | Ptl.Thk-targ.prd.yld(fct.of inc.beamcurr.)d/dA | This memo |
| 236 | SOBS | PAR/M-,DA,G | Ang.distr.of discrete gammas excl.isom.trans. | This memo |
| 236 | DOBS | PR,CRL,N/N | Angular correlation of prompt fission neutrons | This memo |
| 236 | DOBS | PR,DA/CRL,N/N | Angular correlation of prompt fission neutrons | This memo |
| 236 | ATRA | PR,FY/TKE | Yield of promopt fission particles at given TKE | CP-S/004 |
| 236 | DOBS | PR,KE/CRL,N/HF | Energy correl. neutron / heavy fission fragment | This memo |
| 236 | DOBS | PR,KE/CRL,N/LF | Energy correl. neutron / light fission fragment | This memo |
| 236 | MTRA | PR,NU/DE,,RRE | Prompt neut.spect. relative to square root(E) | This memo |
| 236 | MOBS | PR,NU/DE,,RTE | Prompt neut.spect. relative to square root(E) | This memo |
| 236 | MTRA | PR,NU/TKE | Prompt neut.mult.for a given tot.kin.energy | This memo |
| 236 | ATRA | PR/FRG,FY,G | Yield of prompt fission gammas from the fragment specified | CP-S/004 |
| 236 | MTRA | PR/FRG,NU/TKE | Mult.of pr.neut.from the frag.spec.at given TKE | This memo |
| 236 | MTRA | PR/NUM,NU | Probability for emission of N prompt neutrons | CP-D/985 |
| 236 | DOBS | PR/PAR,DA/CRL,N/N | Ang.correl.of prompt fiss.neutr.of certain en. | This memo |
| 236 | MTRA | PR/PAR,NU | Partial prompt neutron yield (nu-bar) | This memo |
| 236 | DOBS | PRE,FY/CRL | Primary fiss.prod.yield of correl.frag. pairs | This memo |
| 236 | DOBS | PRE,FY/CRL,LF/HF | Yield of correl.primary light/heavy fragm.pairs | This memo |
| 236 | DOBS | PRE,KE/CRL,LF/HF | Total kinetic energy of primary frag. pair | This memo |
| 236 | DOBS | PRE/TER,AKE/CRL,A/FF | Av.kin.en.of tern.alphas corr.w.pr.fragm.energy | This memo |
| 236 | DOBS | PRE/TER,KE/CRL,FF/A | Energy correlation prim.fragment/tern.alphas | This memo |
| 236 | DOBS | PRE/TER/PAR,FY/CRL,A/FF | Yield of alphas of giv.en.corr.w.pr.fragm.energ | This memo |
| 236 | DOBS | SEC,FY/CRL | Post-neutron-emiss.yield of correl.fragm.pairs | This memo |
| 236 | SOBS | SEC/CHN,FY | Pre-delayed-neutron chain yield | This memo |
| 236 | SOBS | SEC/CHN,FY/DE | Pre-delayed-neutron chain yield d/d(kin. en.) | This memo |
| 236 | DOBS | SEQ/PAR,DA/CRL,N/HE2 | Partial ang.correl.neutrons/He2,spec.reac.seq. | This memo |
| 236 | MTRA | SL,POL/DA,\*,ANA | Tensor analyzing power, A(xz)/dA(\*) | This memo |
| 236 | DOBS | TER,DA/CRL,G/A,LEG/RS | Lg.cf.4pi/Sig d/dA=Sum(a(L)P(L))cor.a/g,tern.f. | This memo |
| 236 | DOBS | TER,DA/CRL,G/A,RSD | Ang.corr.gammas/alphas rel.90 deg., tern.fiss. | This memo |
| 236 | DOBS | TER,DA/CRL,G/LCP,LEG/RS | Lg.cf.4pi/Sig d/dA=Sum(a(L)P(L))cor.g/lcp,tern. | This memo |
| 236 | DOBS | TER,DA/CRL,G/LCP,RSD | Ang.corr.gammas/light c.p.rel.90 deg.,tern.fiss | This memo |
| 236 | DOBS | TER,FY/CRL,\*/\*F | (particle)/(fragment) correl., ternary fission | This memo |
| 236 | DOBS | TER,FY/CRL,\*F | Frag.given/(fragment) correl., ternary fission | This memo |
| 236 | DOBS | TER,FY/CRL,A | Fragment given/alpha correl., ternary fission | This memo |
| 236 | DOBS | TER,FY/CRL,FF/FF | Fragment/fragment correl., ternary fission | This memo |
| 236 | DOBS | TER,FY/CRL,HCP | Fragm.gvn/heavy charged partl.corr.,tern.fiss. | This memo |
| 236 | DOBS | TER,FY/CRL,HF/LF | Heavy frag./light frag.ang.correl.,tern.fission | This memo |
| 236 | DOBS | TER,FY/CRL,LCP | Fragm.gvn/light charged partl.corr.,tern.fiss. | This memo |
| 236 | DOBS | TER,FY/CRL,LCP/HF | Light chgd prt./heavy frag.corr.,tern.fiss. | This memo |
| 236 | DOBS | TER,FY/CRL,LCP/LF | Light chgd prt./light frag.corr.,tern.fiss. | This memo |
| 236 | DOBS | TER,FY/CRL,LF/HF | Light frag./heavy frag.correl.,tern.fission | This memo |
| 236 | SOBS | TER/CHG,FY | Total element yield of fiss.prod.,ternary fiss. | CP-D/984 |



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