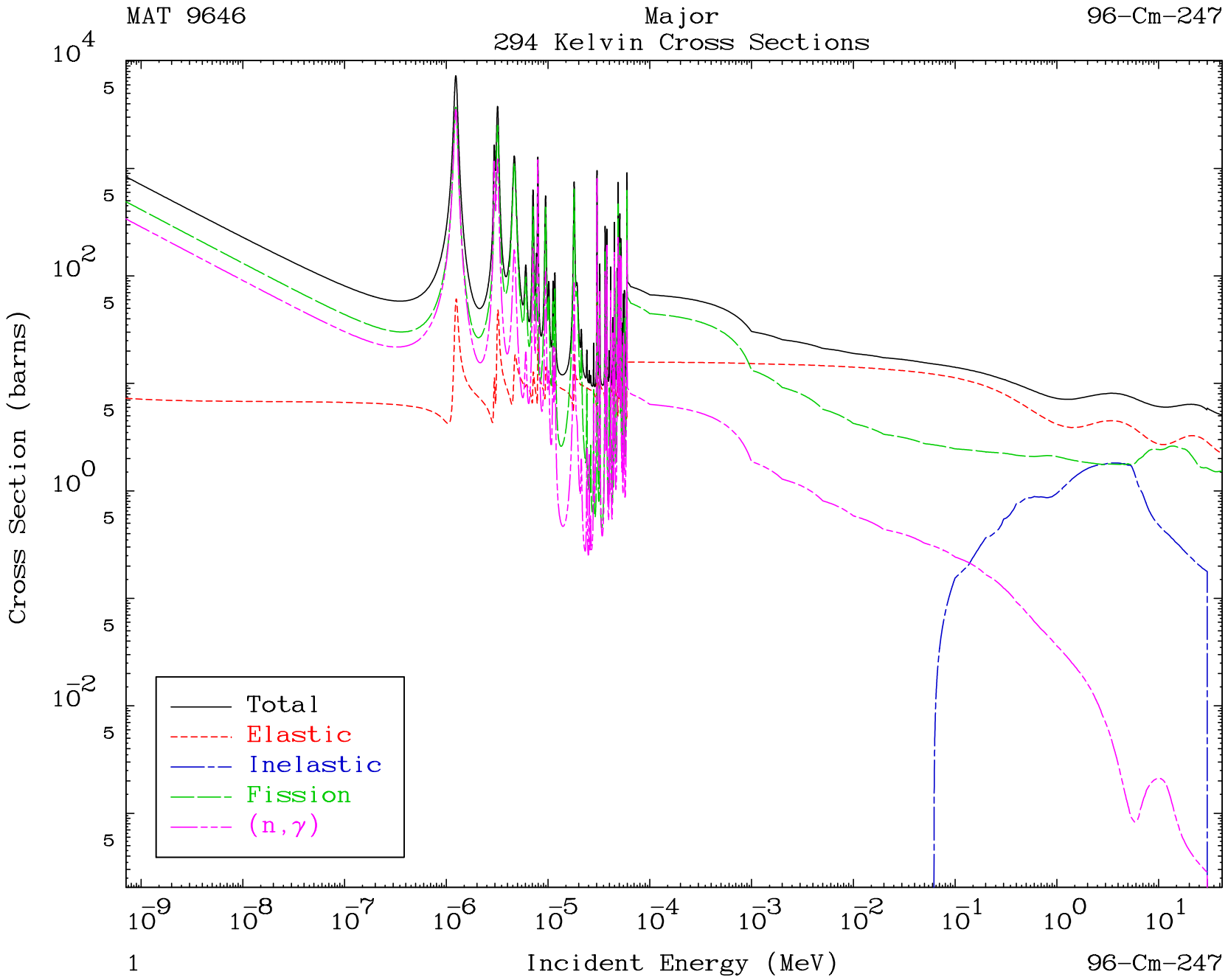
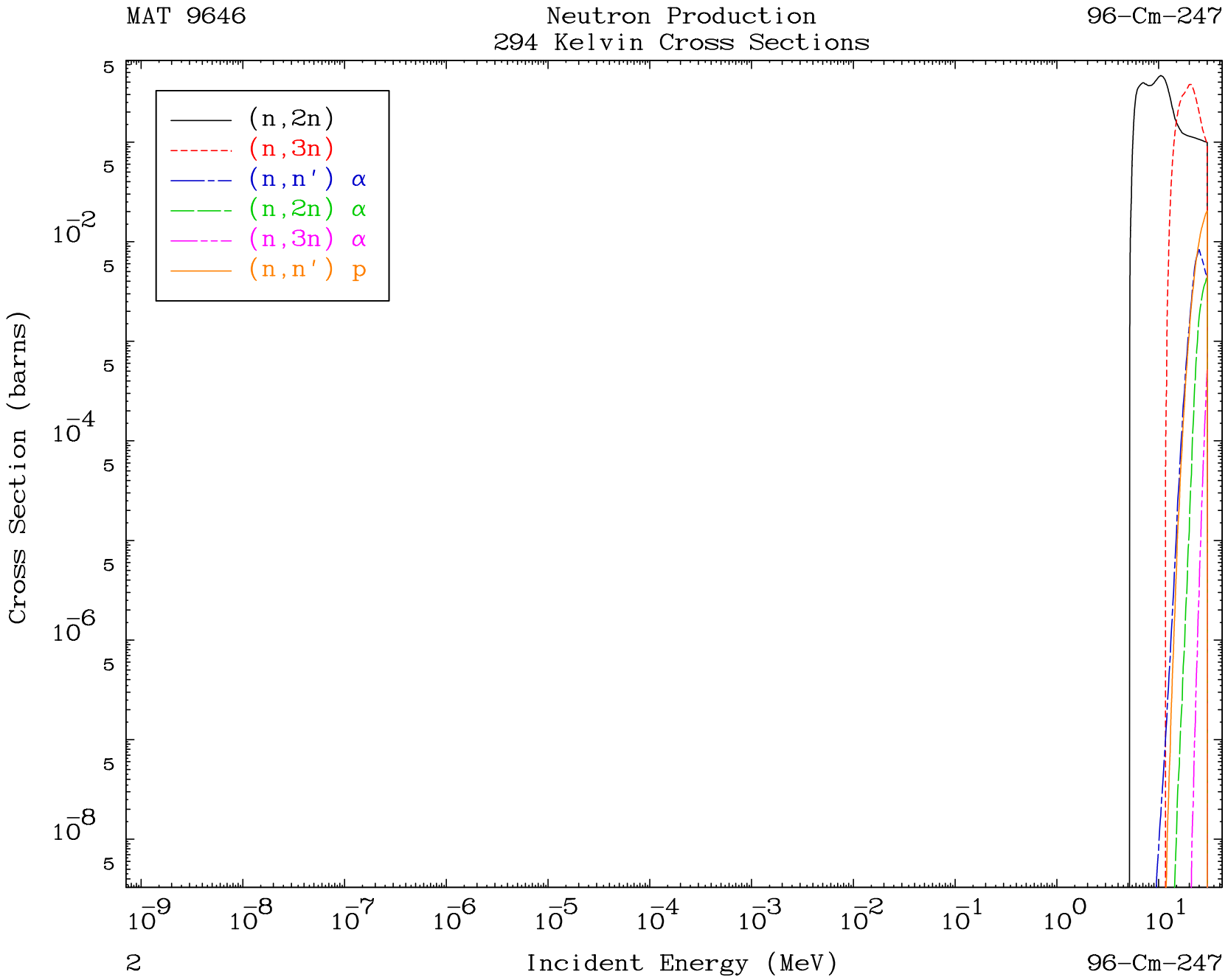
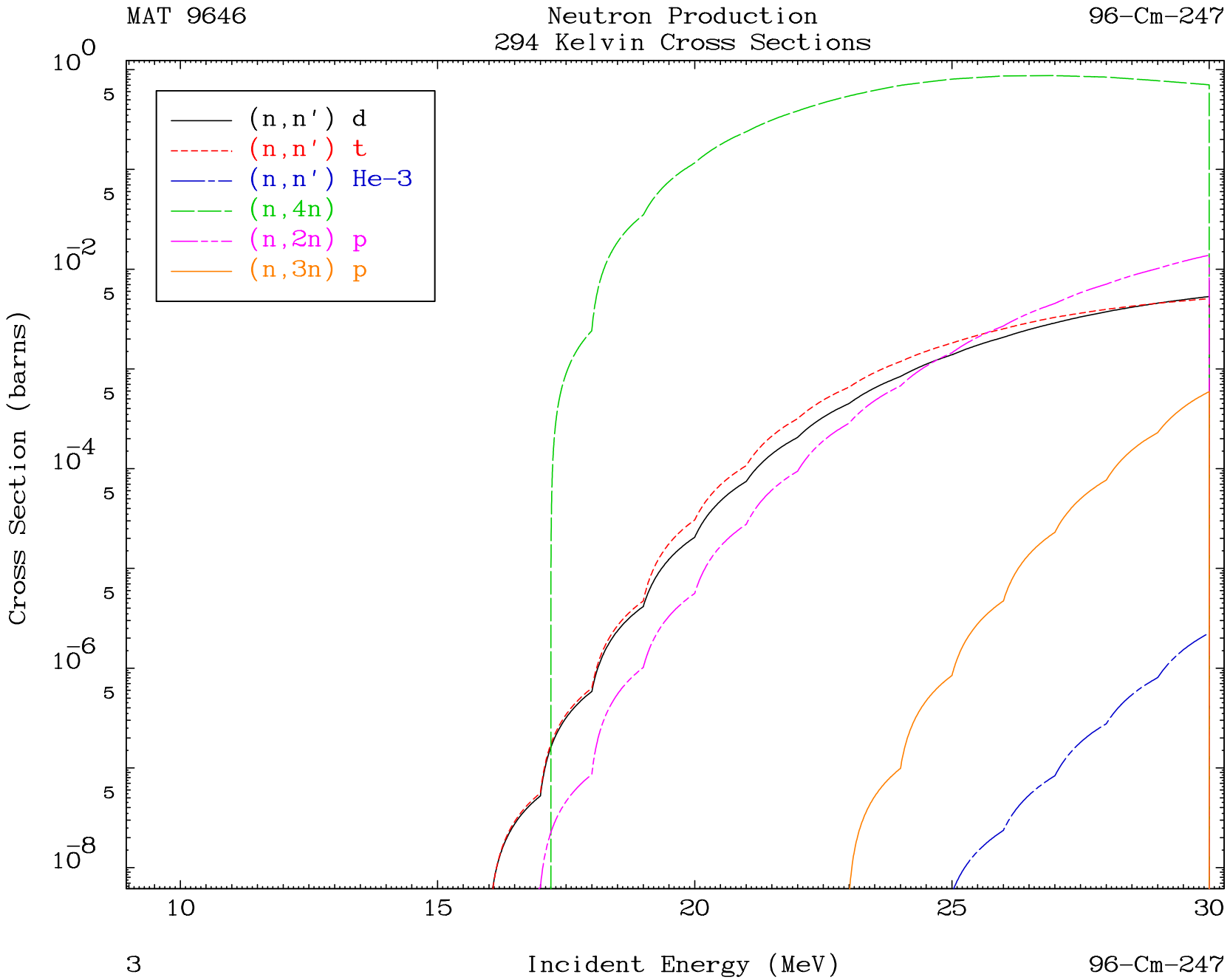
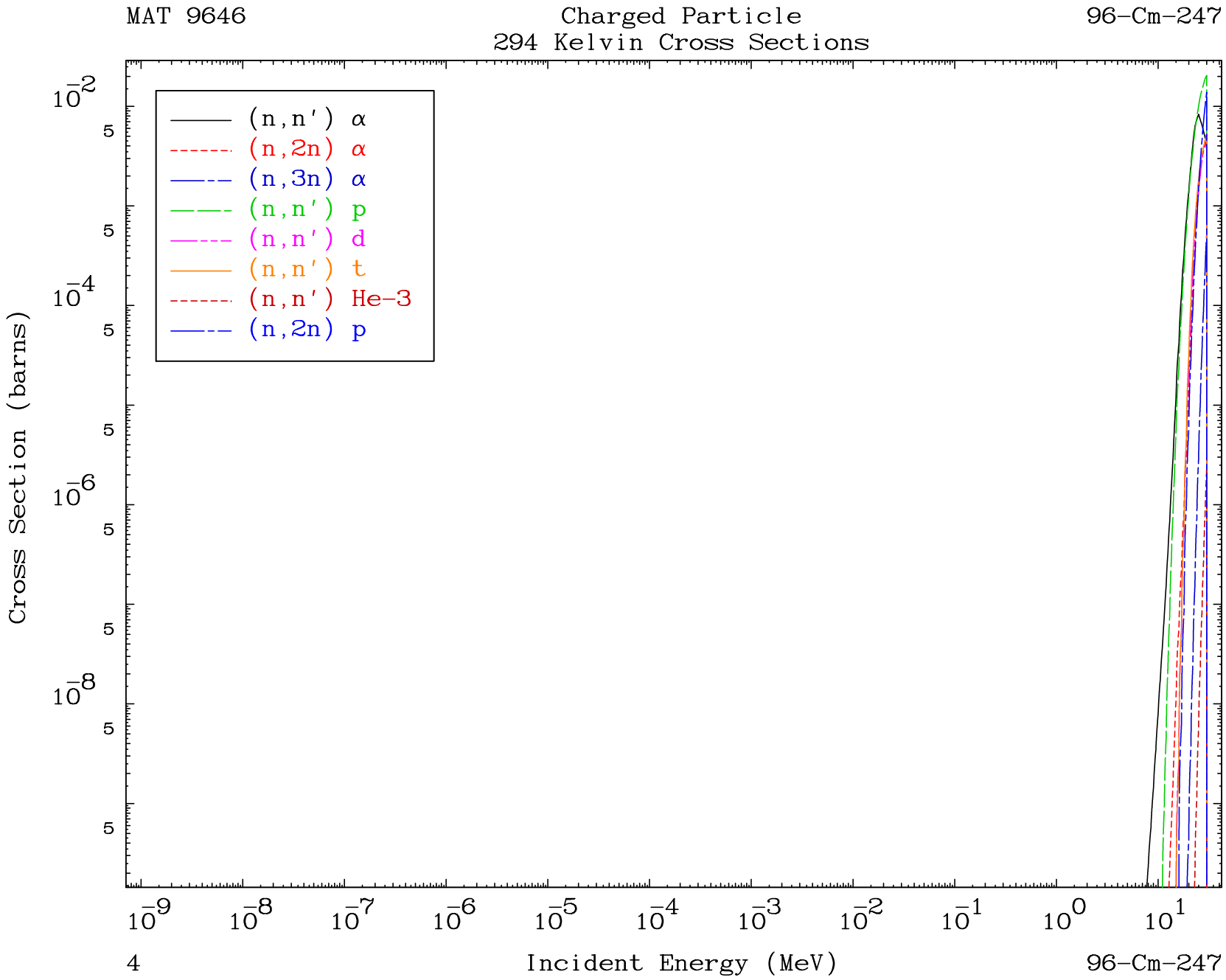
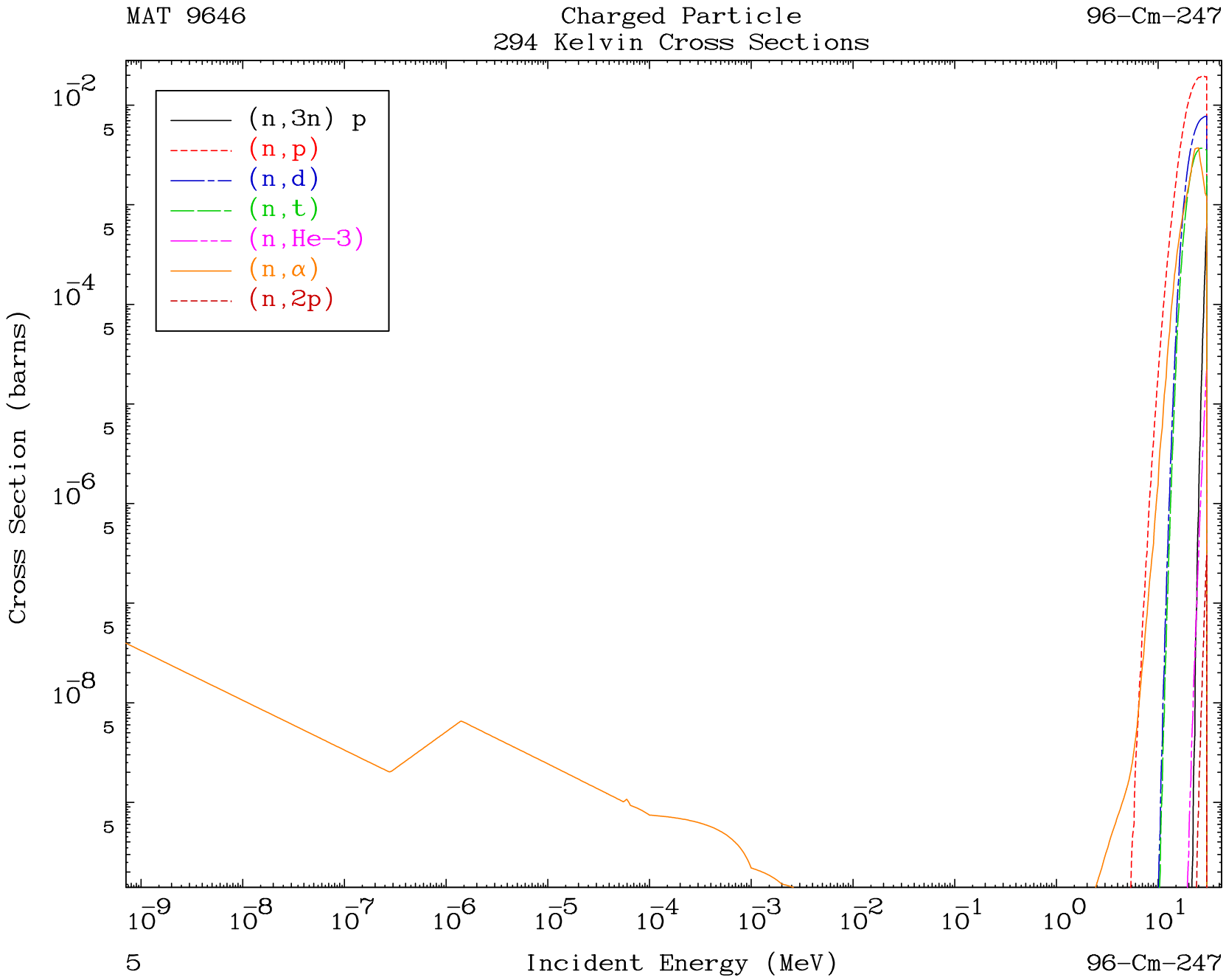
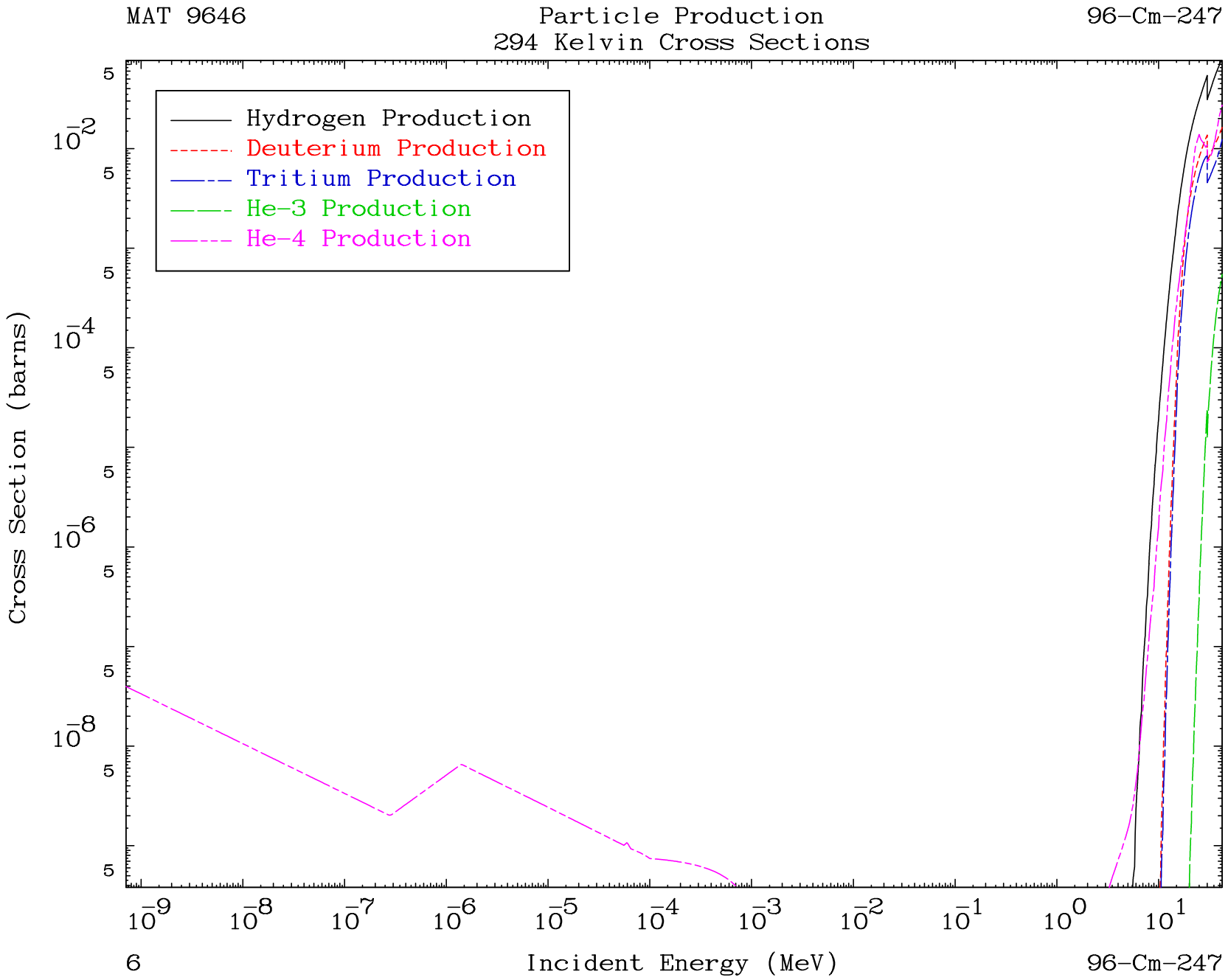

MAT 9646
Major
96-Cm-247
294 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
Total
Elastic
Inelastic
Fission
(n,γ)

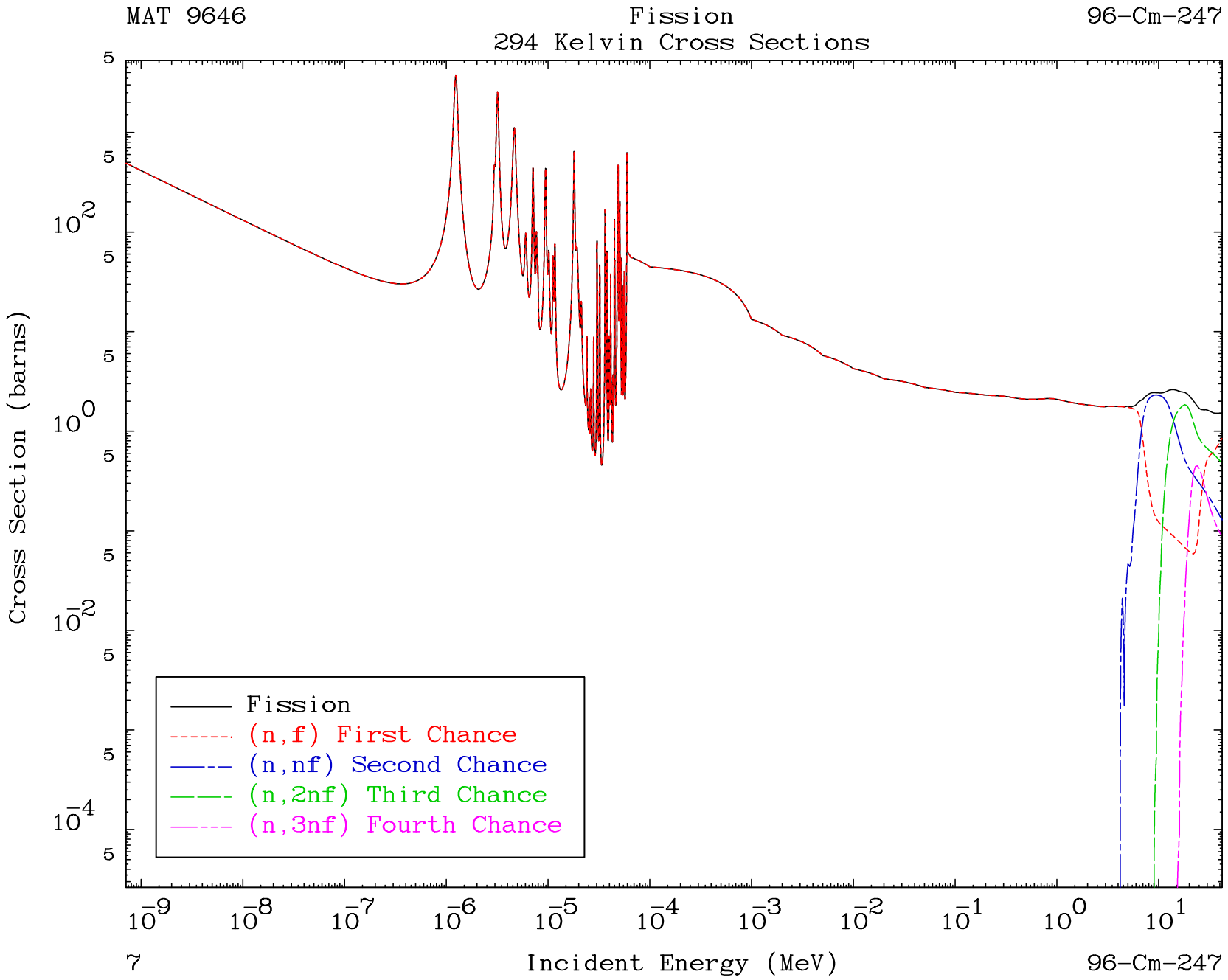

MAT 9646
Neutron Production
294 Kelvin Cross Sections
96-Cm-247
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
2

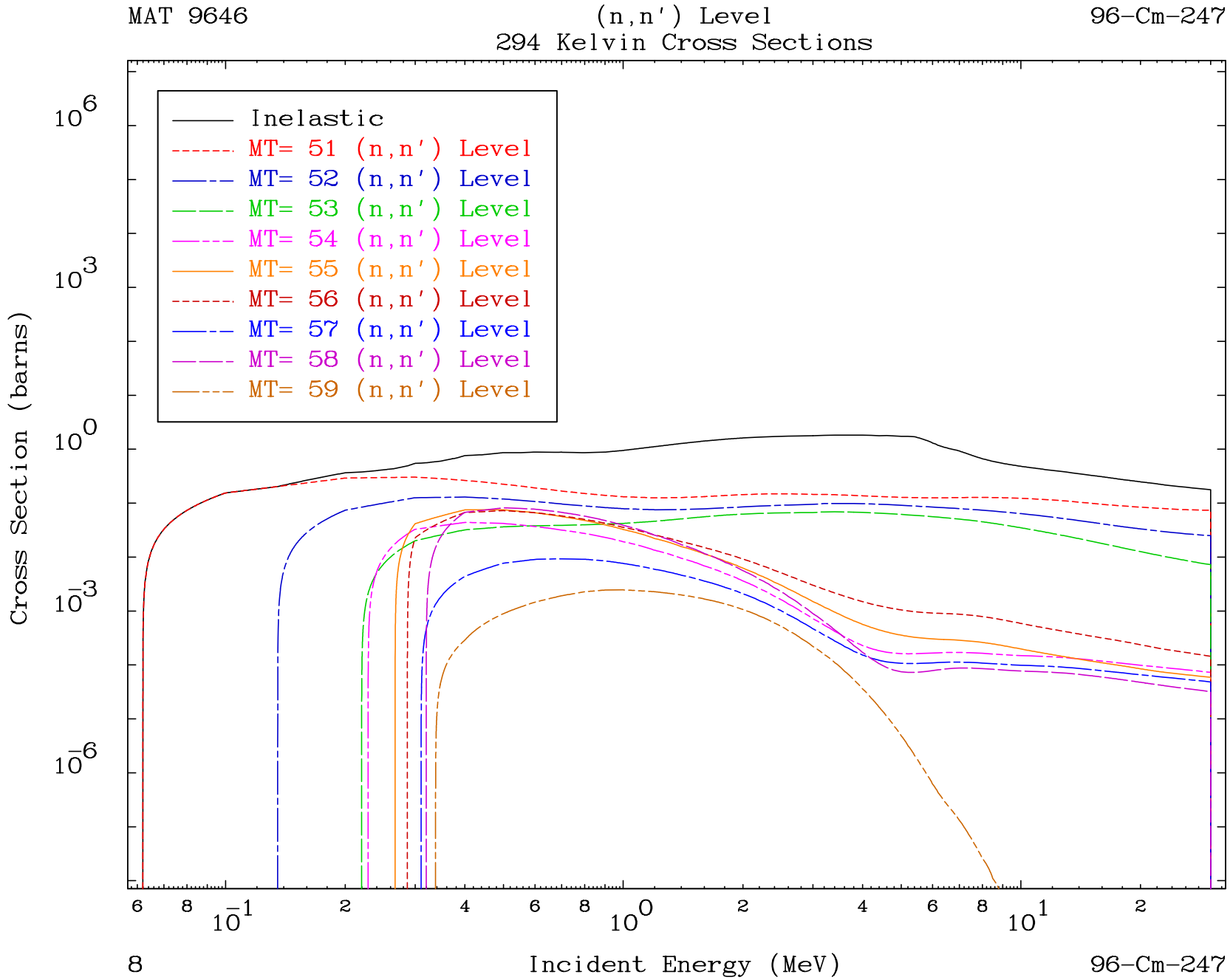

MAT 9646
Neutron Production
294 Kelvin Cross Sections
96-Cm-247
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
3

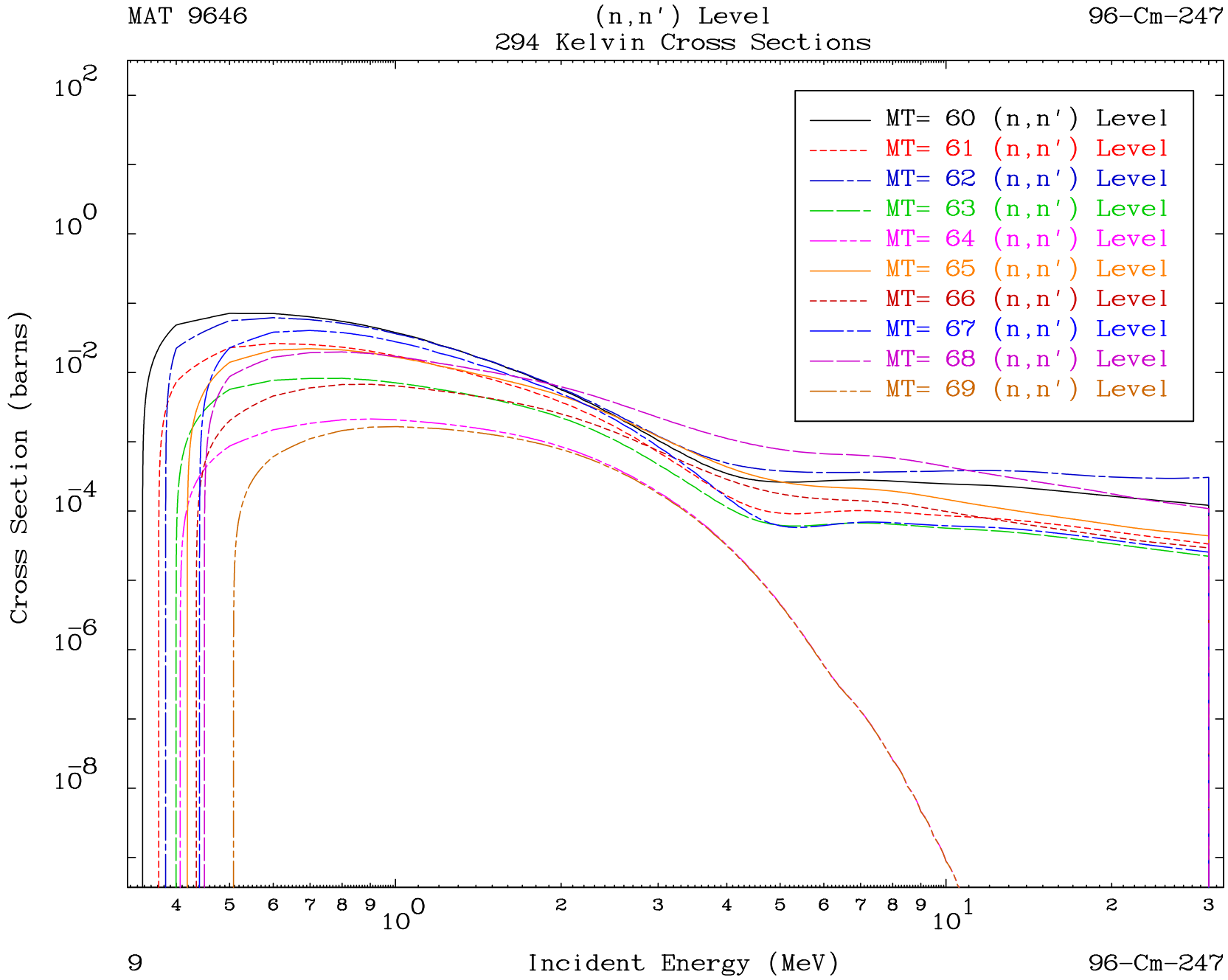

MAT 9646
Charged Particle
294 Kelvin Cross Sections
96-Cm-247
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
Cross Section (barns)
Incident Energy (MeV)
4
96-Cm-247

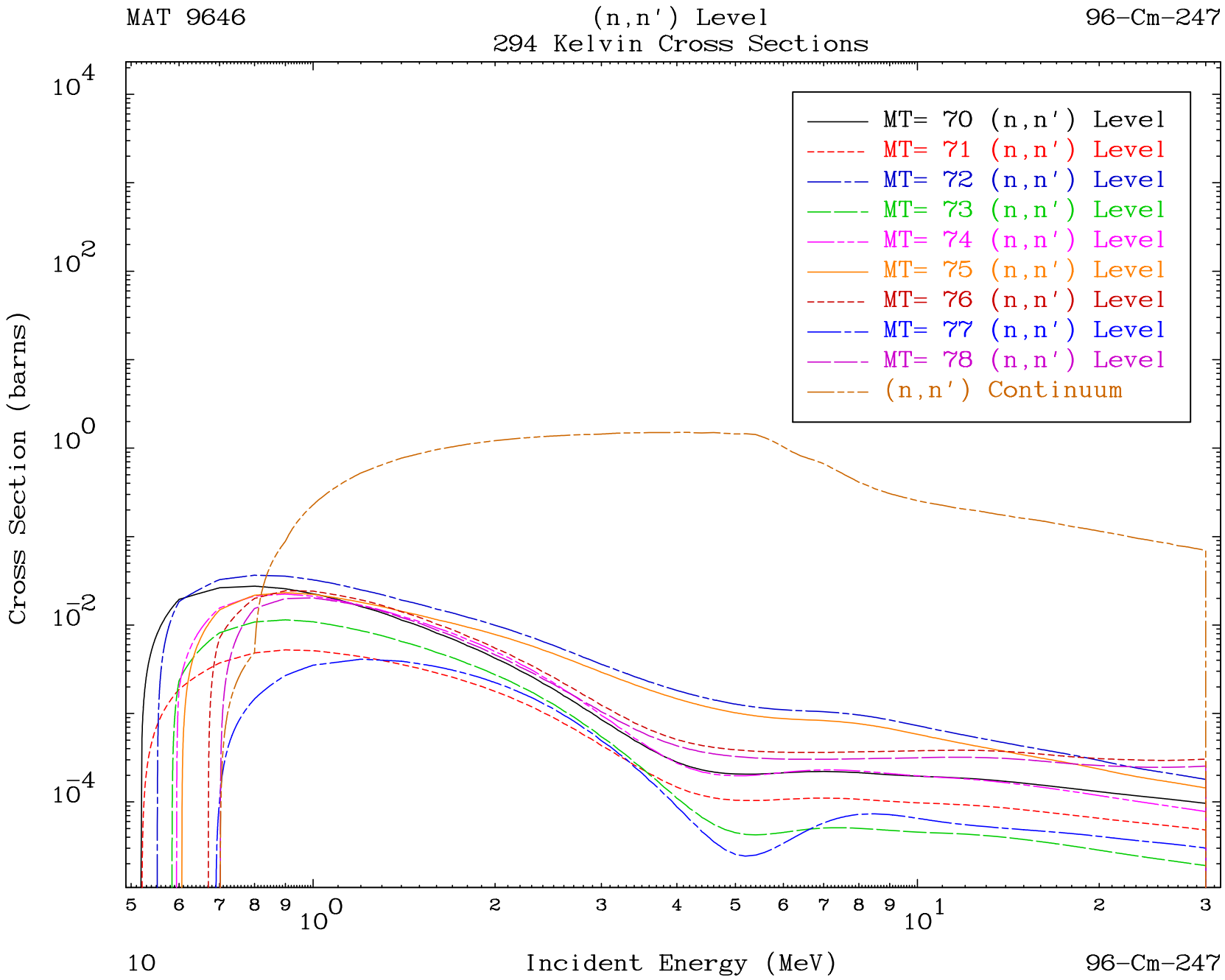

MAT 9646
Charged Particle
294 Kelvin Cross Sections
96-Cm-247
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2p)
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247

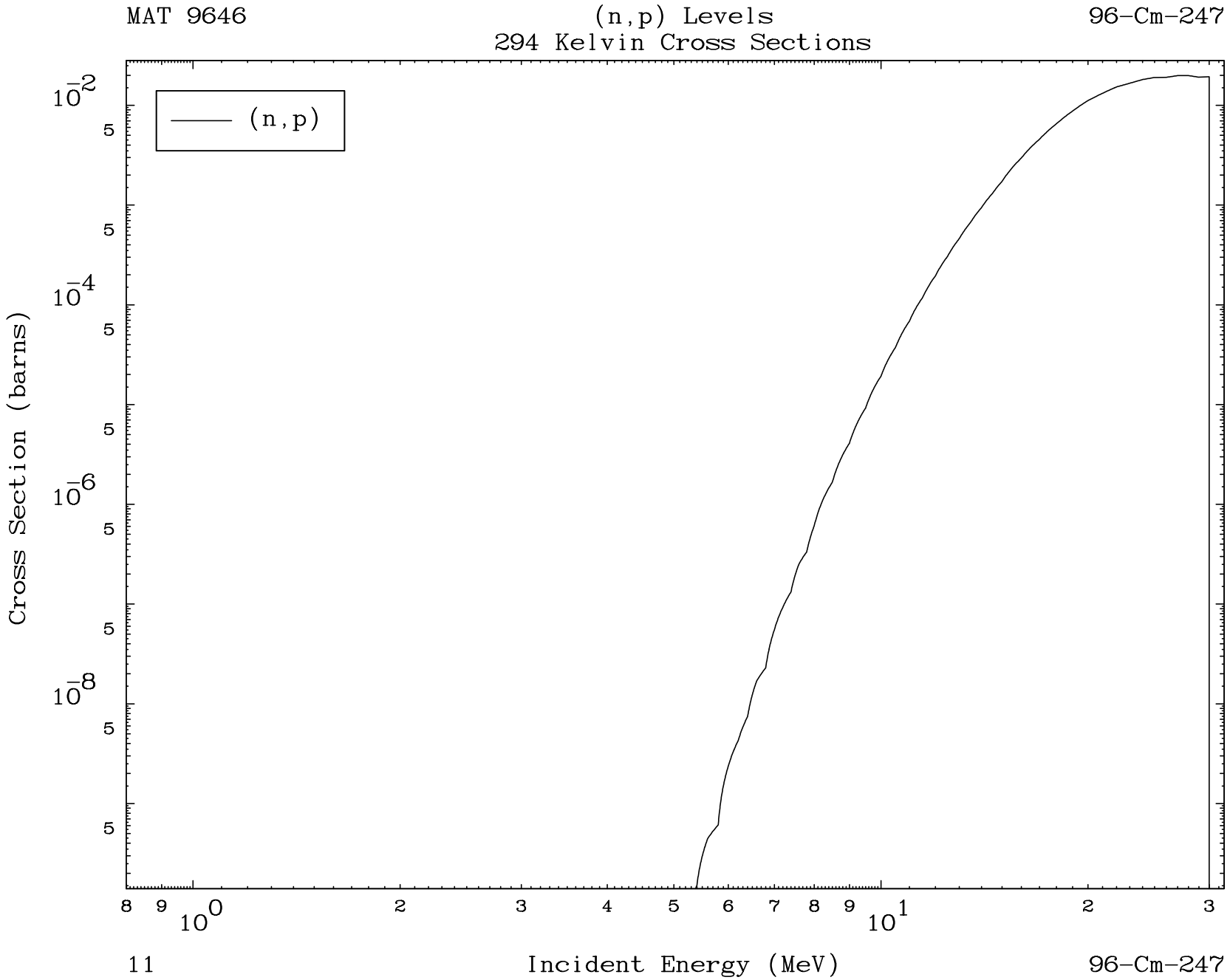

MAT 9646
Particle Production
294 Kelvin Cross Sections
96-Cm-247
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
6

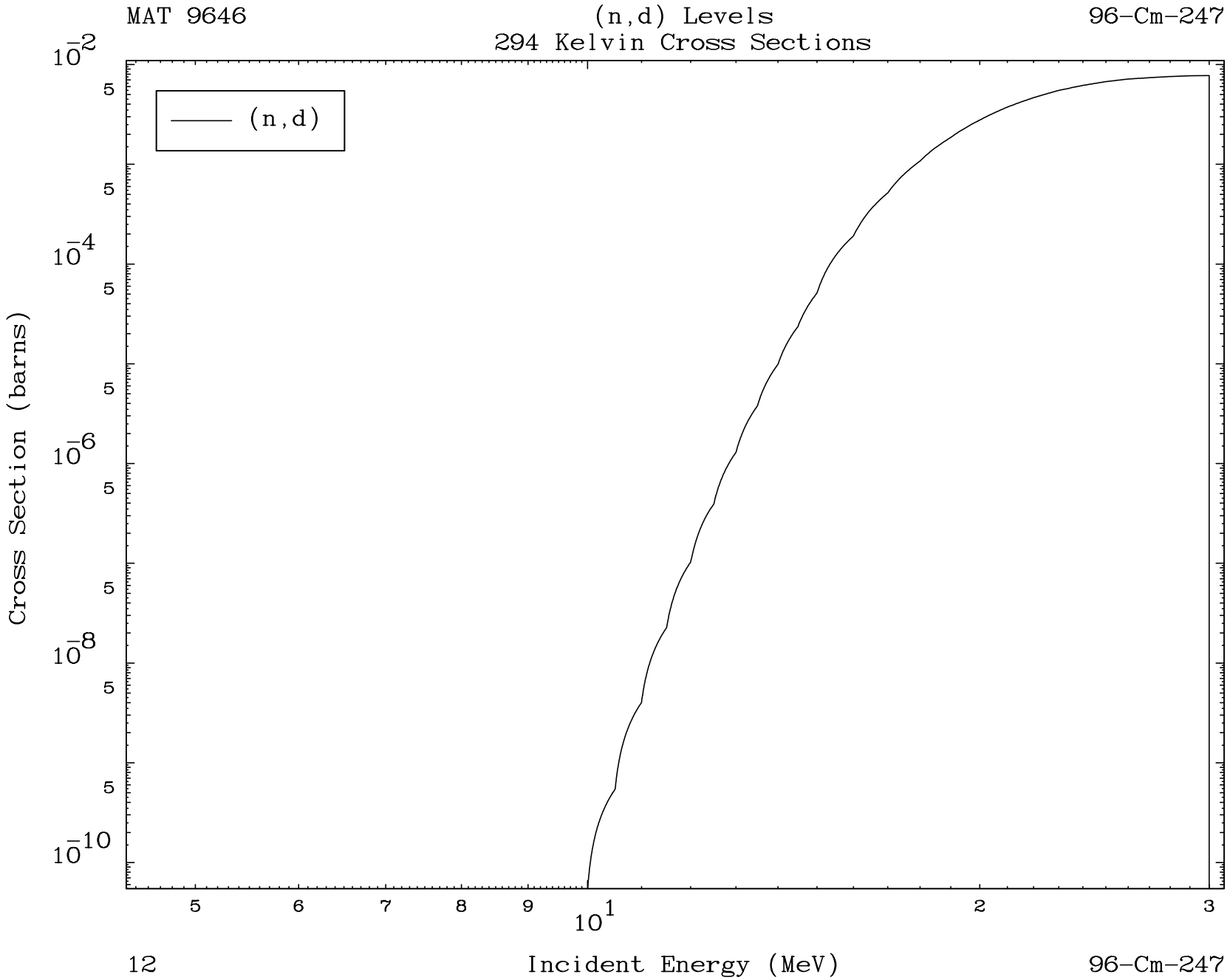

MAT 9646
Fission
96-Cm-247
294 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
7
Fission
(n,f) First Chance
(n,nf) Second Chance
(n,2nf) Third Chance
(n,3nf) Fourth Chance

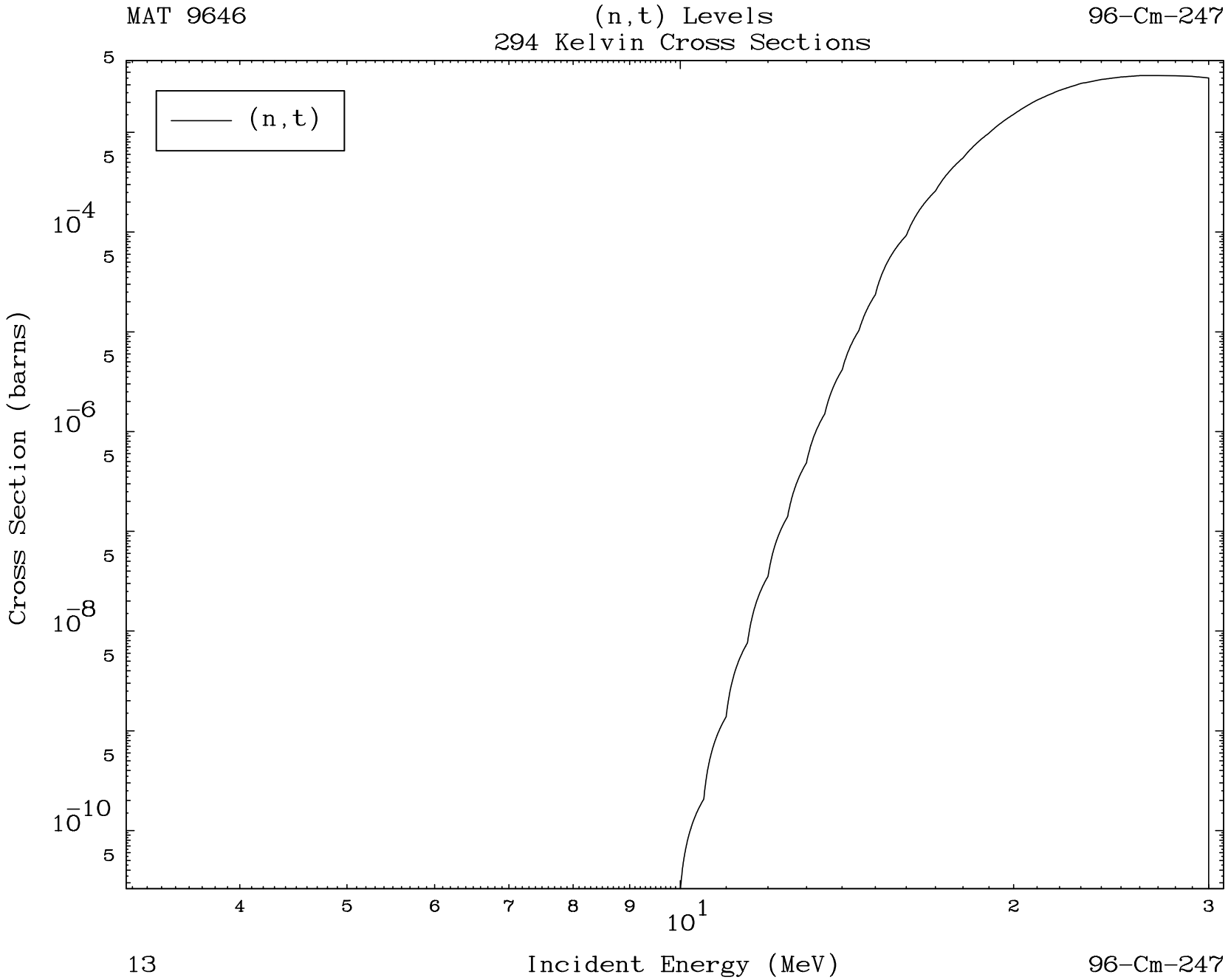

MAT 9646
(n,n') Level
96-Cm-247
294 Kelvin Cross Sections
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-1
10^0
10^1
Incident Energy (MeV)
8
96-Cm-247

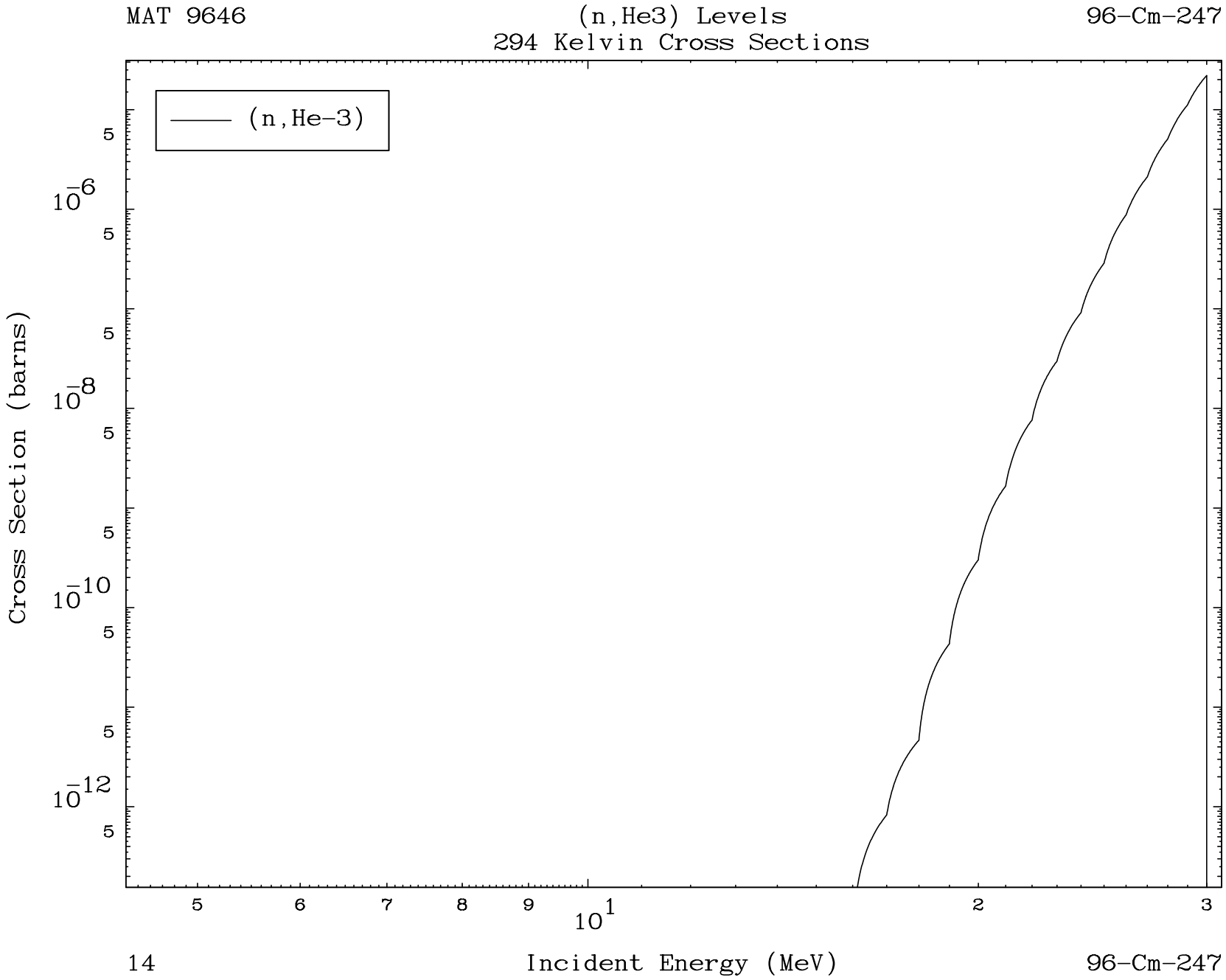

MAT 9646
(n,n') Level
96-Cm-247
294 Kelvin Cross Sections
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
MT= 67 (n,n') Level
MT= 68 (n,n') Level
MT= 69 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
9
96-Cm-247

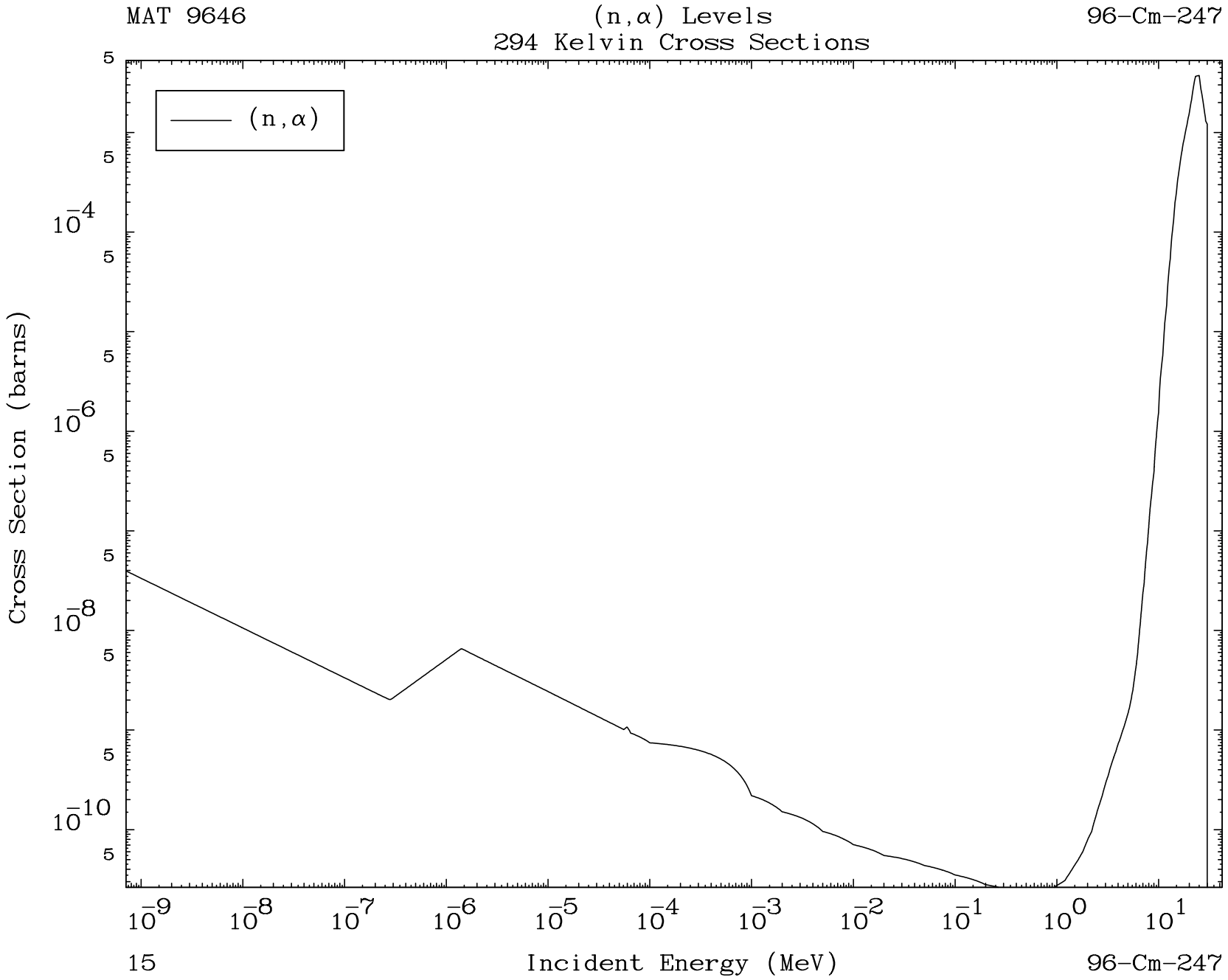

MAT 9646
(n,n') Level
96-Cm-247
294 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
MT= 70 (n,n') Level
MT= 71 (n,n') Level
MT= 72 (n,n') Level
MT= 73 (n,n') Level
MT= 74 (n,n') Level
MT= 75 (n,n') Level
MT= 76 (n,n') Level
MT= 77 (n,n') Level
MT= 78 (n,n') Level
(n,n') Continuum

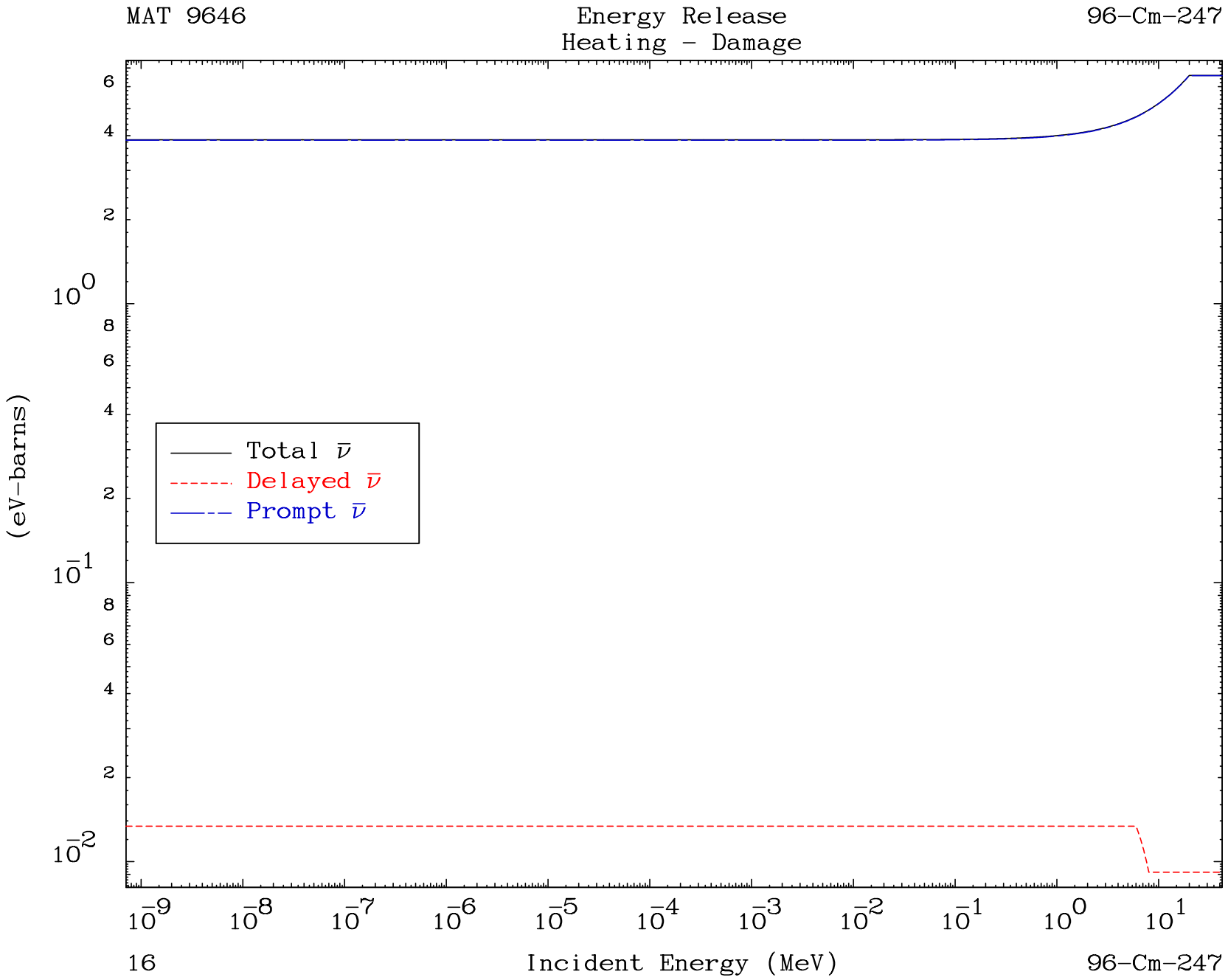

MAT 9646
(n,p) Levels
96-Cm-247
294 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
11
96-Cm-247

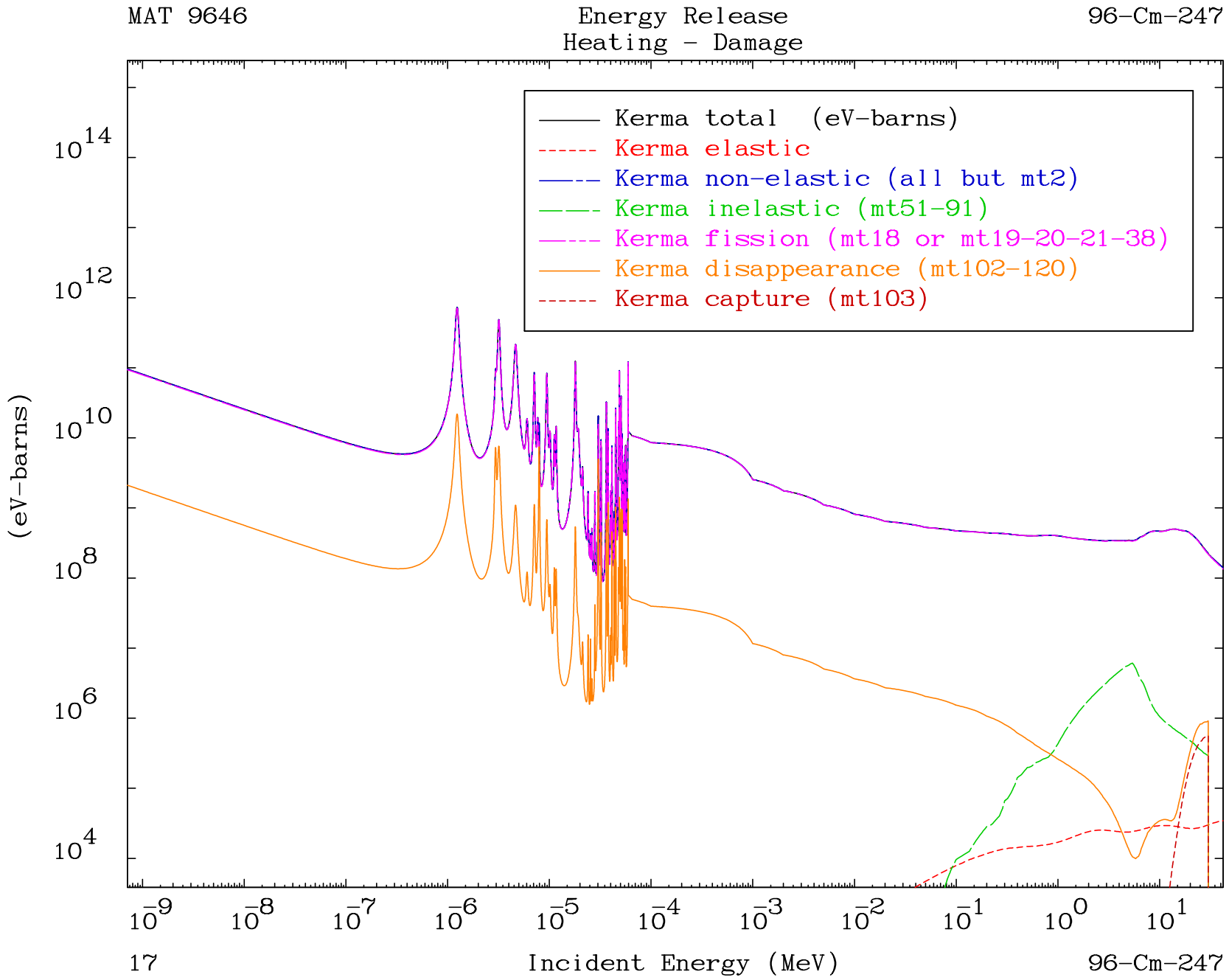

MAT 9646
(n,d) Levels
96-Cm-247
294 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247

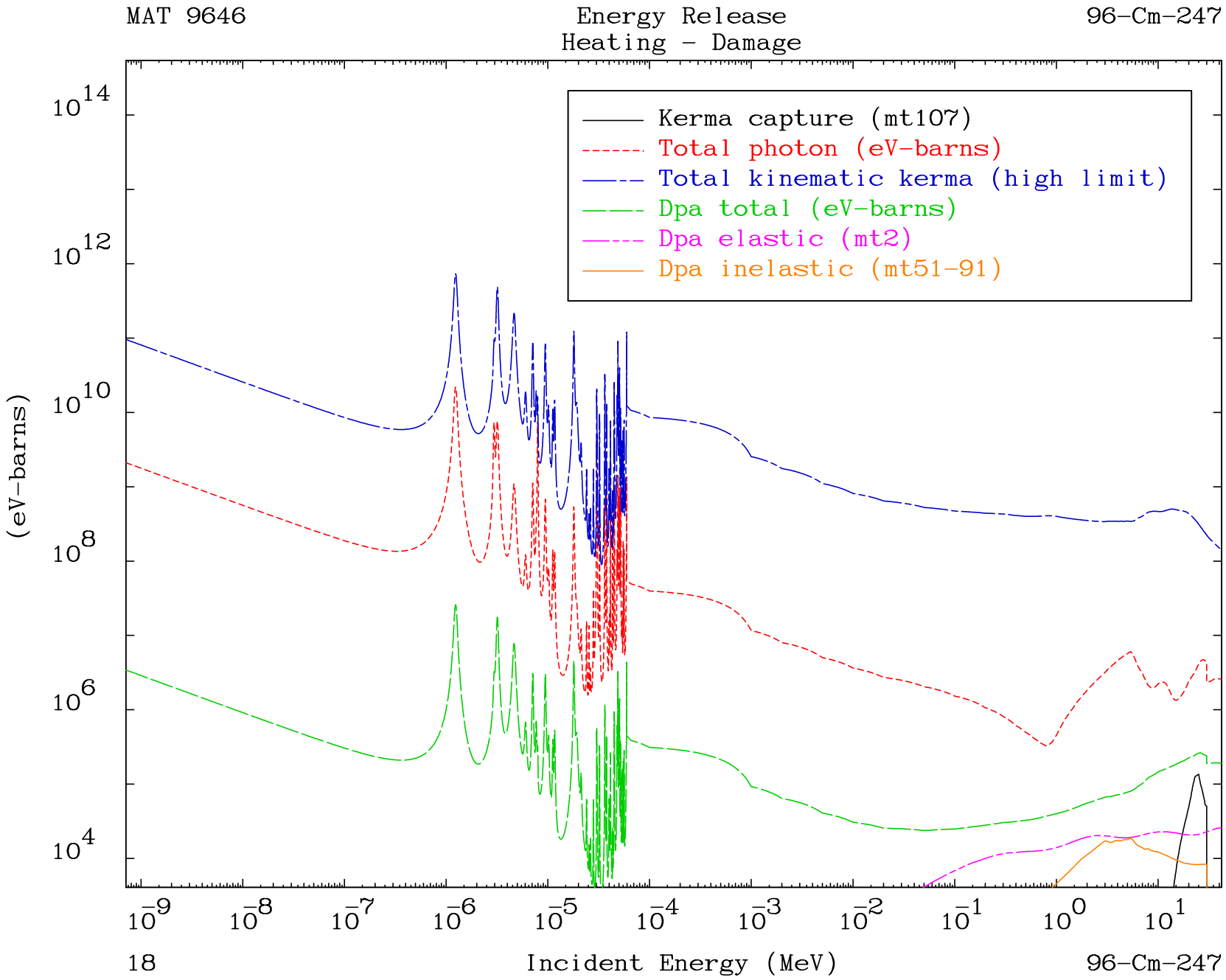

MAT 9646
(n,t) Levels
96-Cm-247
294 Kelvin Cross Sections
(n,t)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
4
5
6
7
8
9
10^1
2
3
Incident Energy (MeV)
13
96-Cm-247

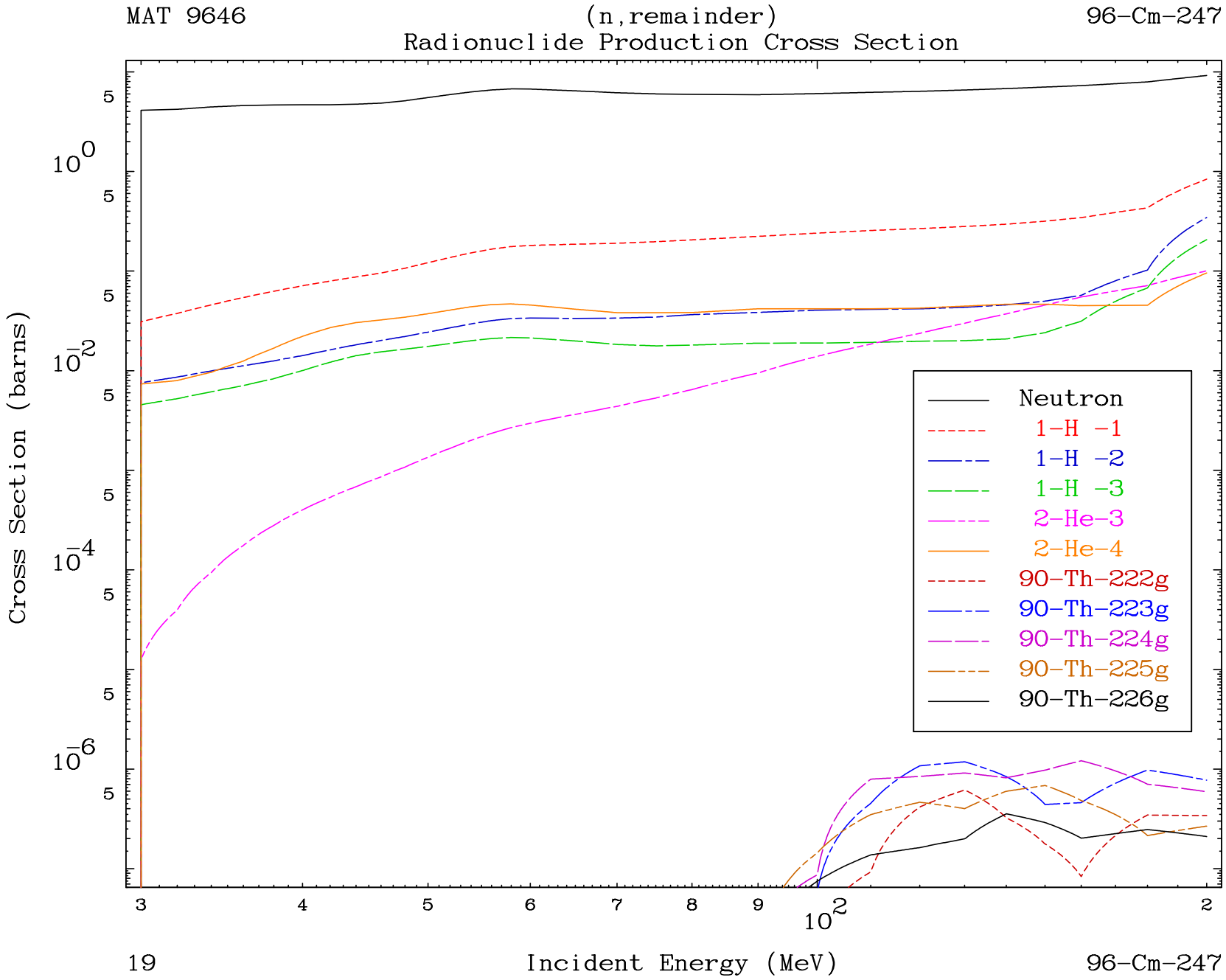

MAT 9646
(n,He3) Levels
96-Cm-247
294 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
5
5
5
5
5
5
5
5
6
7
8
9
10^1
2
3
Incident Energy (MeV)
14
96-Cm-247

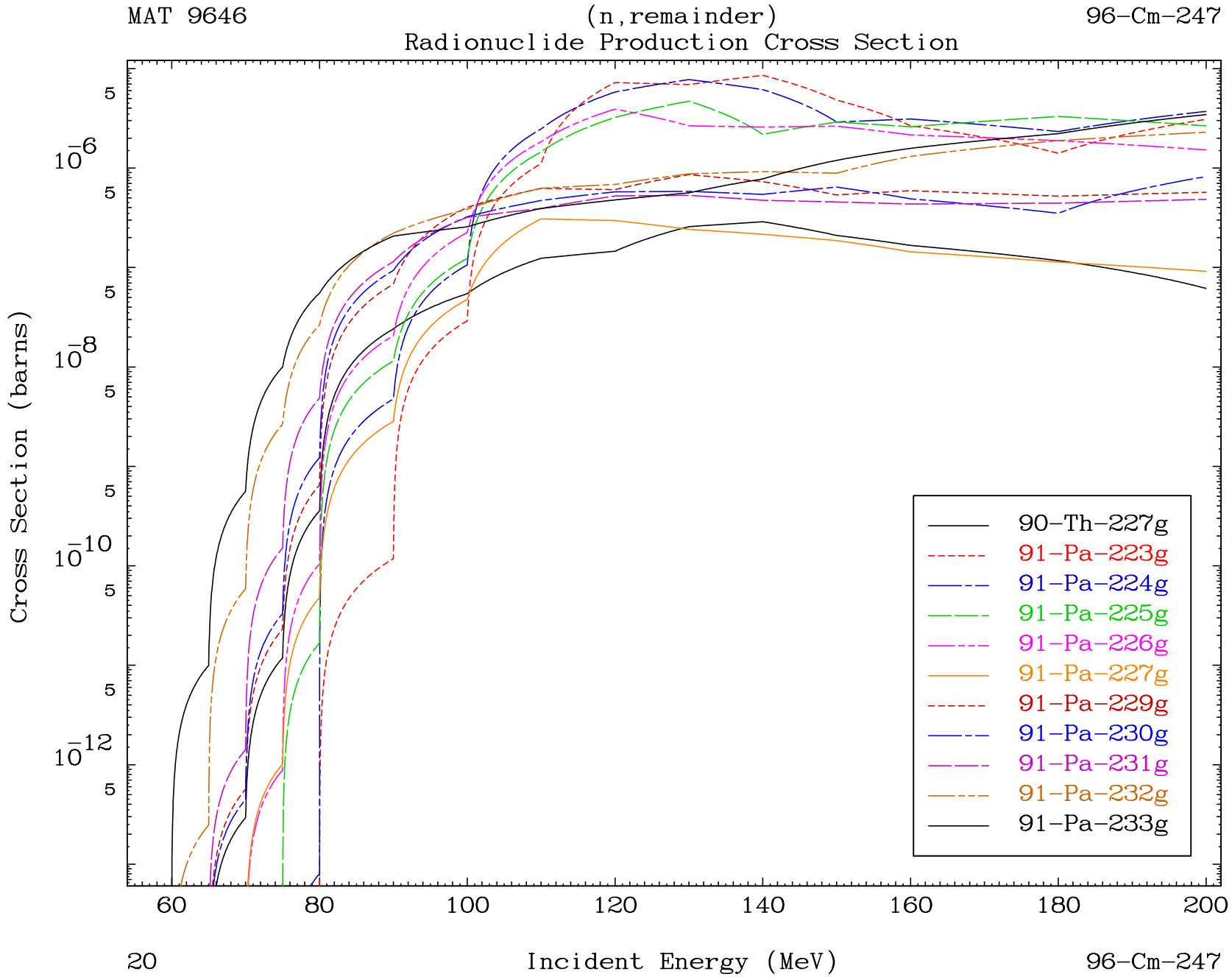

MAT 9646
(n,α) Levels
96-Cm-247
294 Kelvin Cross Sections
(n,α)
Cross Section (barns)
Incident Energy (MeV)
96-Cm-247
15

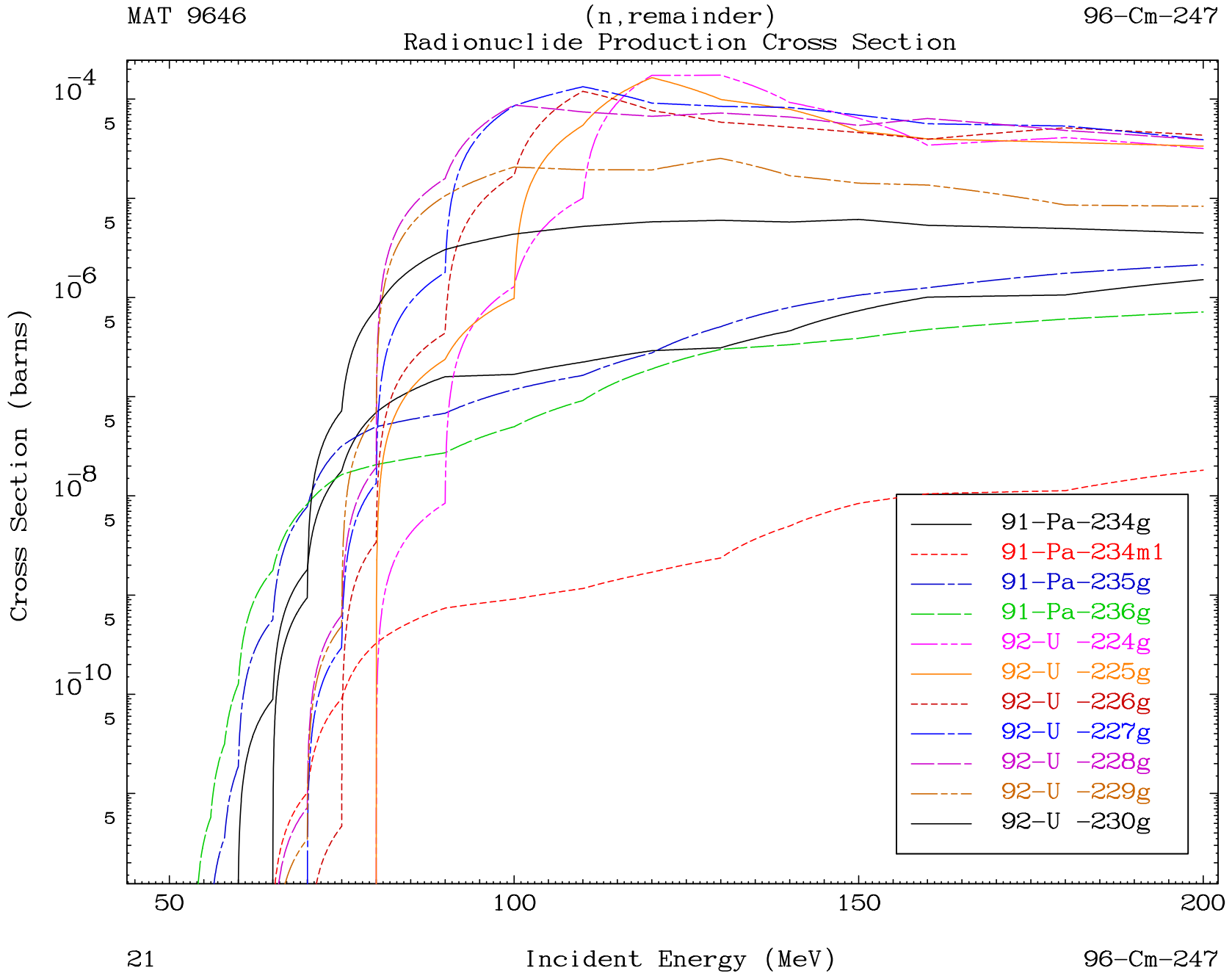

MAT 9646
Energy Release
Heating - Damage
96-Cm-247
(eV-barns)
Total $\bar{\nu}$
Delayed $\bar{\nu}$
Prompt $\bar{\nu}$
Incident Energy (MeV)
16
96-Cm-247

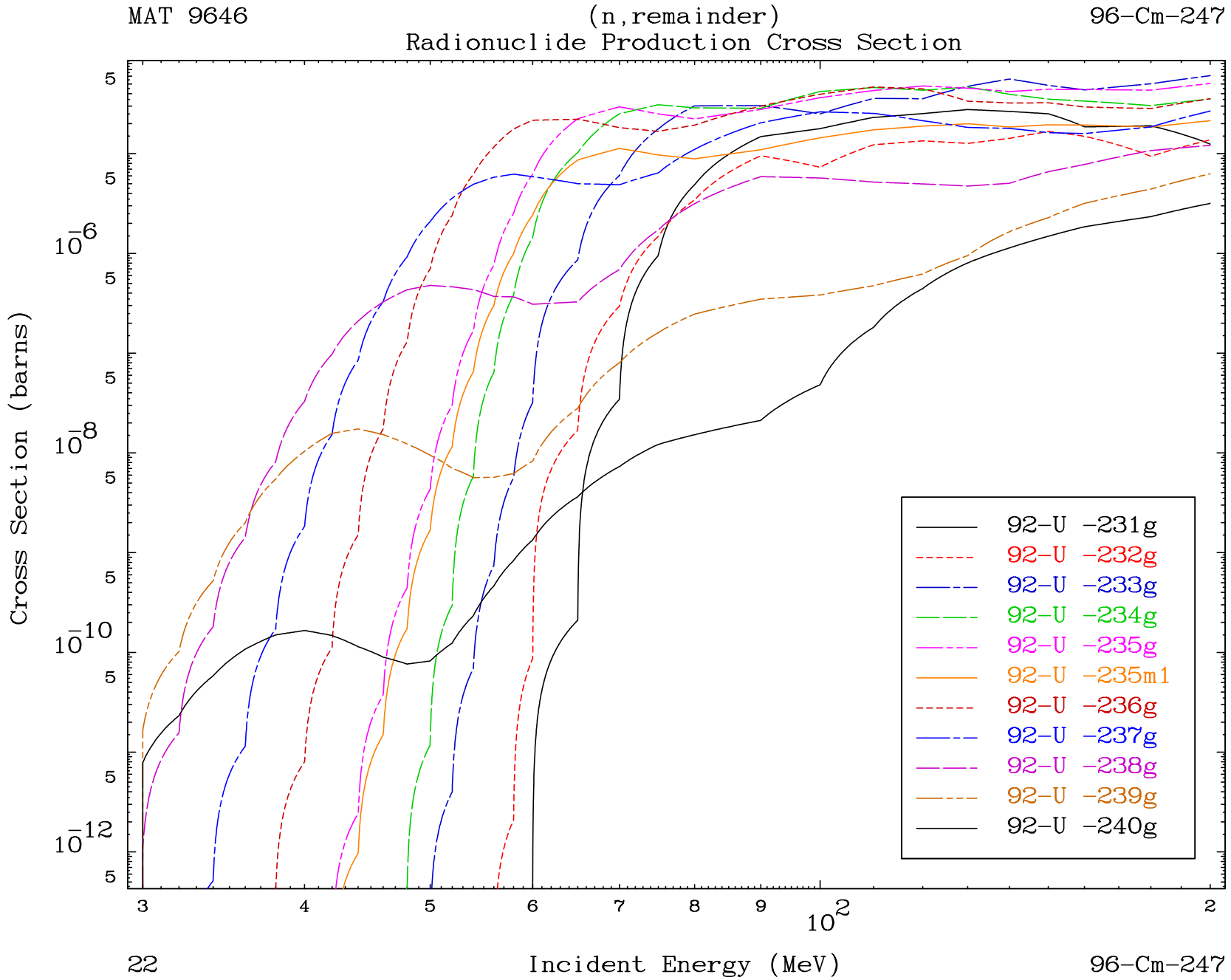

MAT 9646
Energy Release
Heating - Damage
96-Cm-247
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma fission (mt18 or mt19-20-21-38)
Kerma disappearance (mt102-120)
Kerma capture (mt103)
(eV-barns)
10^14
10^12
10^10
10^8
10^6
10^4
10^-9
10^-8
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
17
Incident Energy (MeV)
96-Cm-247


MAT 9646
Energy Release
Heating - Damage
96-Cm-247
Kerma capture (mt107)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
(eV-barns)
Incident Energy (MeV)
18
96-Cm-247

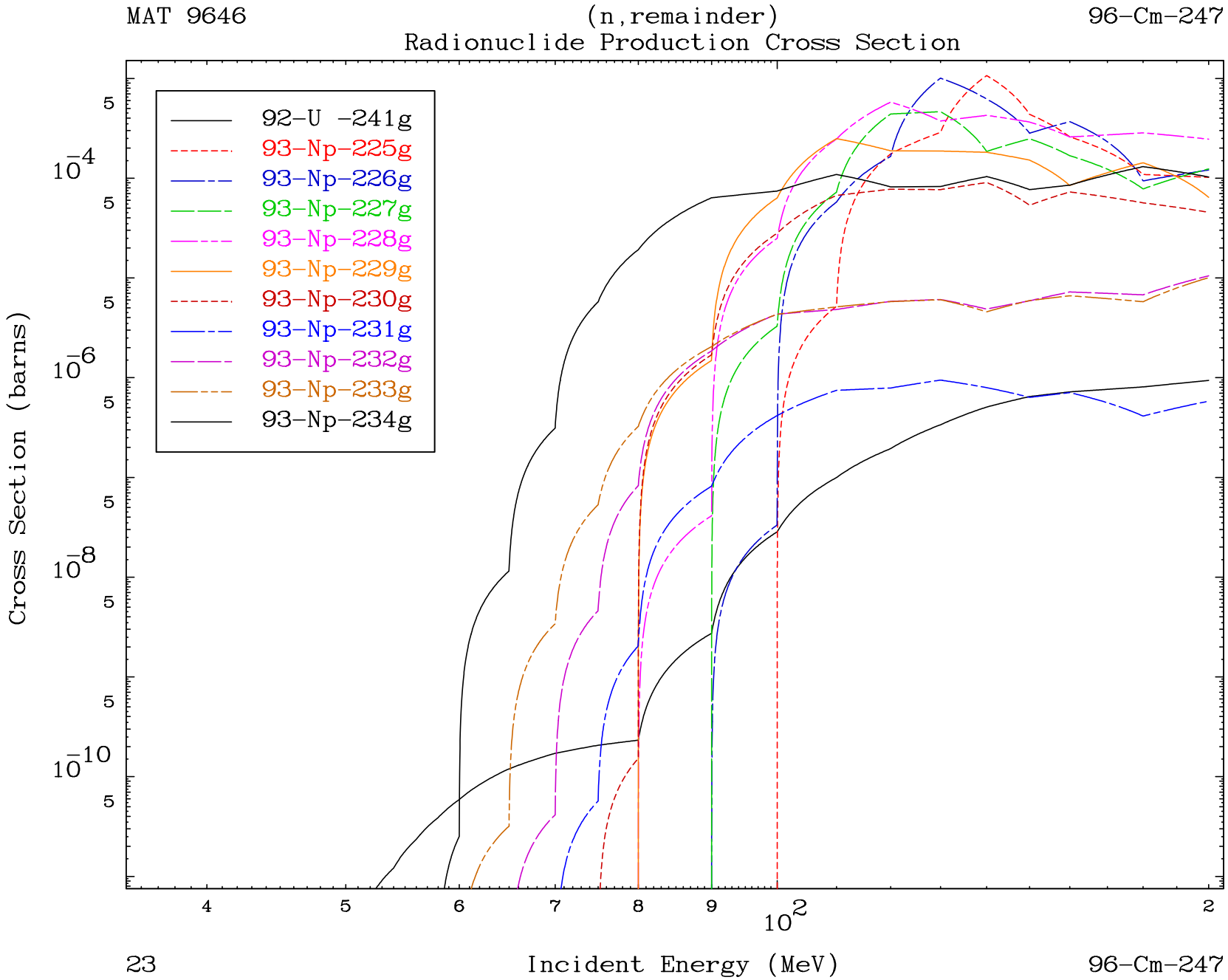

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
5
3
4
5
6
7
8
9
10^2
2
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
90-Th-222g
90-Th-223g
90-Th-224g
90-Th-225g
90-Th-226g
19
Incident Energy (MeV)
96-Cm-247

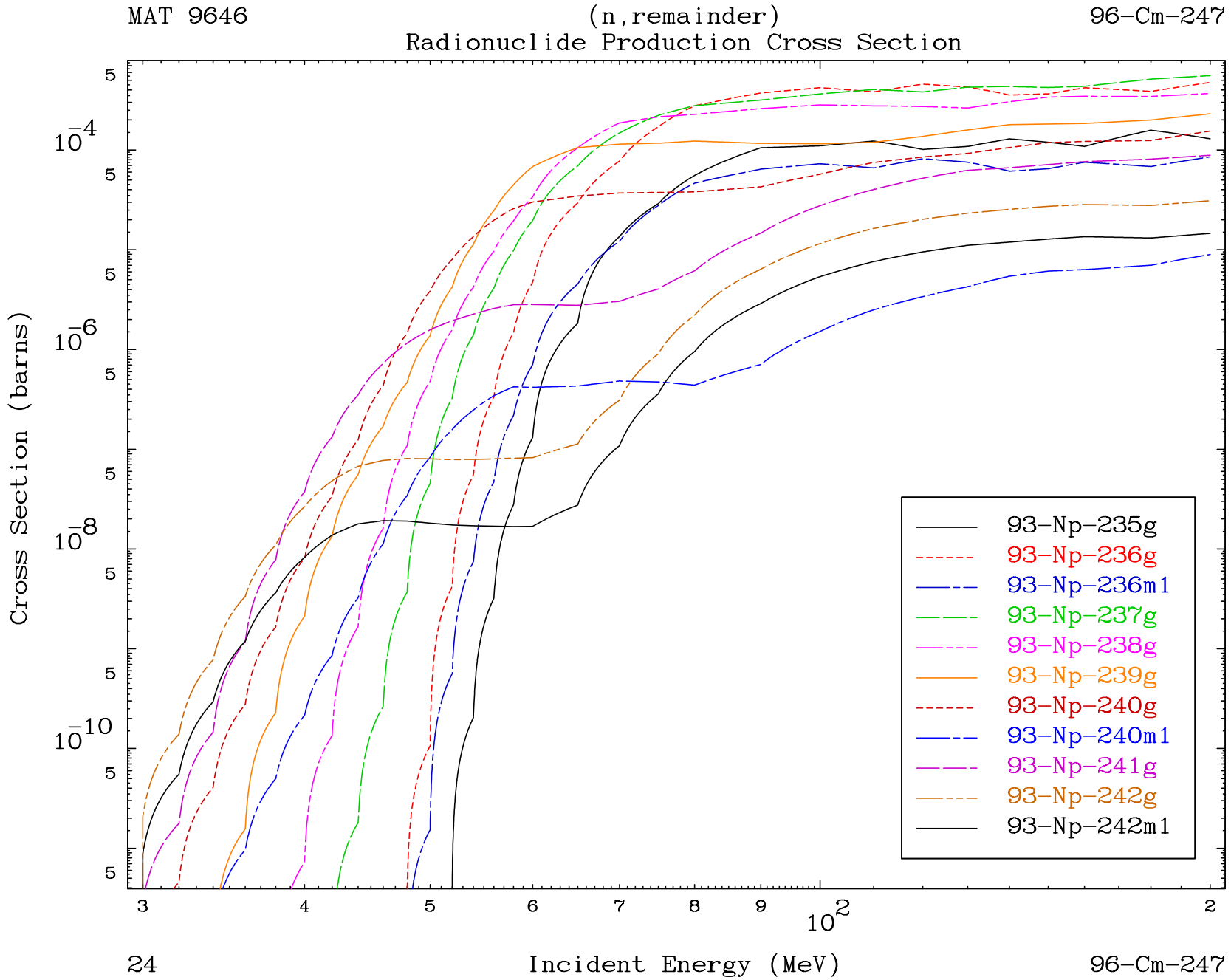

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
5
60
80
100
120
140
160
180
200
20
Incident Energy (MeV)
96-Cm-247
90-Th-227g
91-Pa-223g
91-Pa-224g
91-Pa-225g
91-Pa-226g
91-Pa-227g
91-Pa-229g
91-Pa-230g
91-Pa-231g
91-Pa-232g
91-Pa-233g

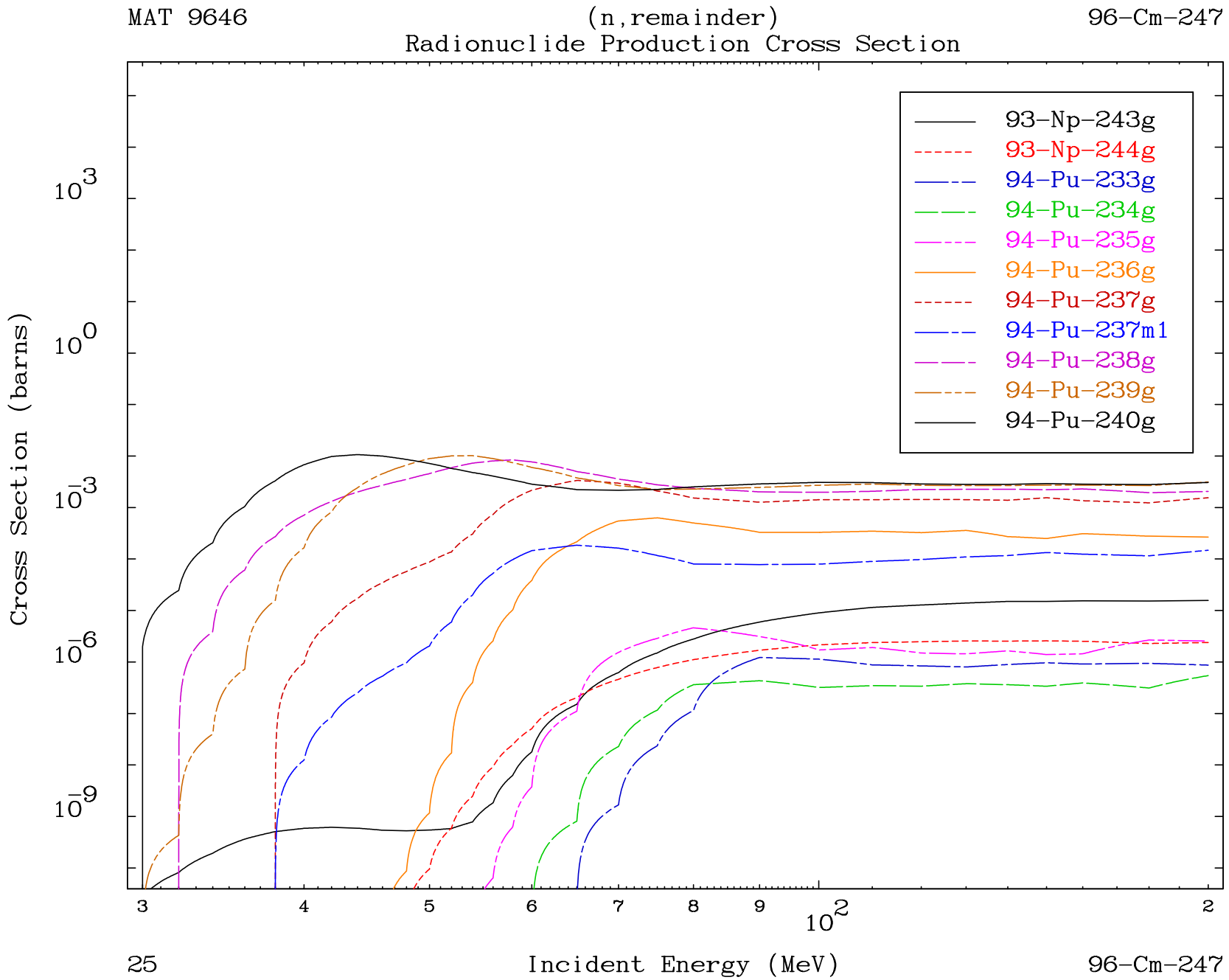

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10-4
5
10-6
5
10-8
5
10-10
5
5
50
100
150
200
21
Incident Energy (MeV)
96-Cm-247
91-Pa-234g
91-Pa-234m1
91-Pa-235g
91-Pa-236g
92-U -224g
92-U -225g
92-U -226g
92-U -227g
92-U -228g
92-U -229g
92-U -230g

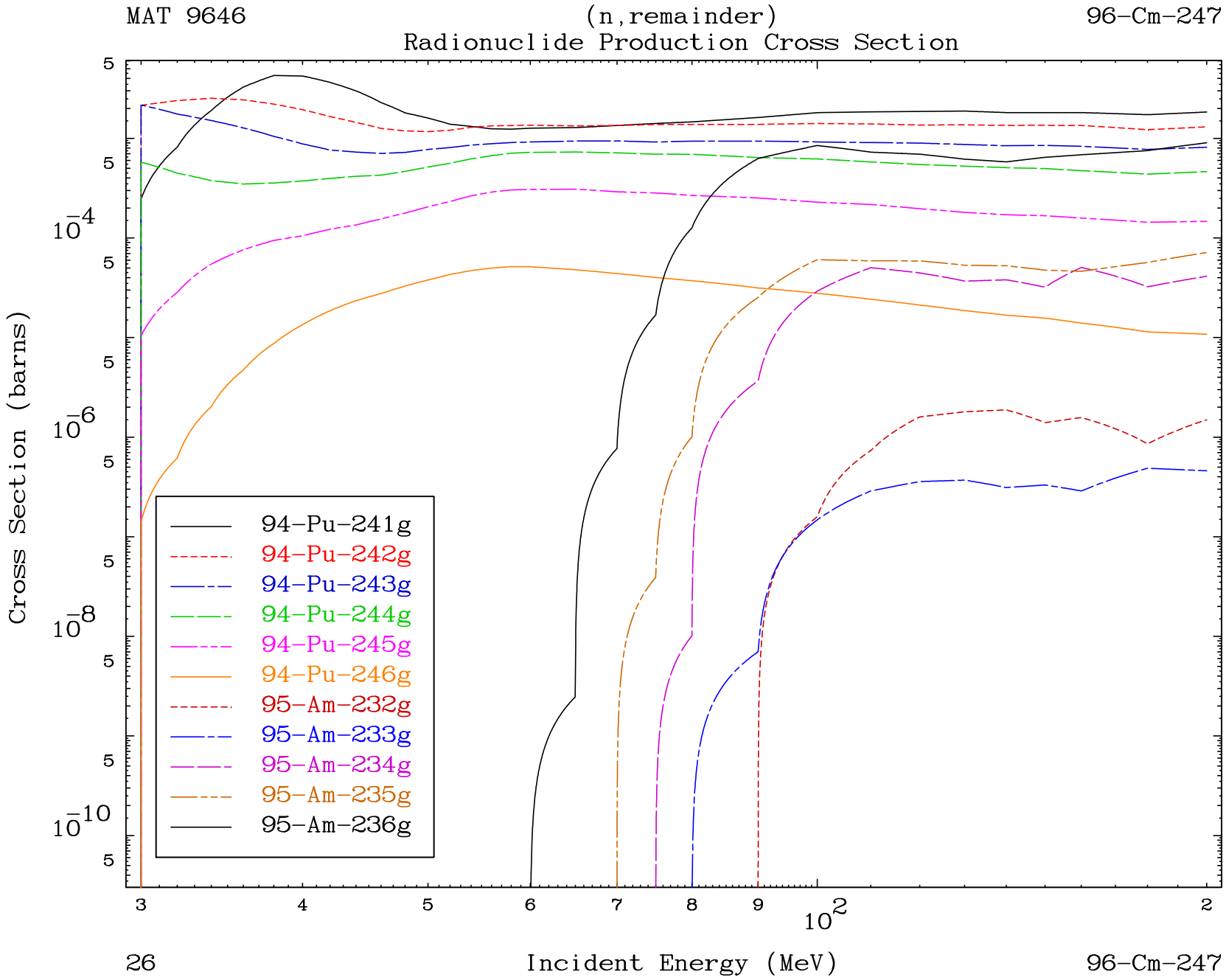

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
92-U -231g
92-U -232g
92-U -233g
92-U -234g
92-U -235g
92-U -235m1
92-U -236g
92-U -237g
92-U -238g
92-U -239g
92-U -240g

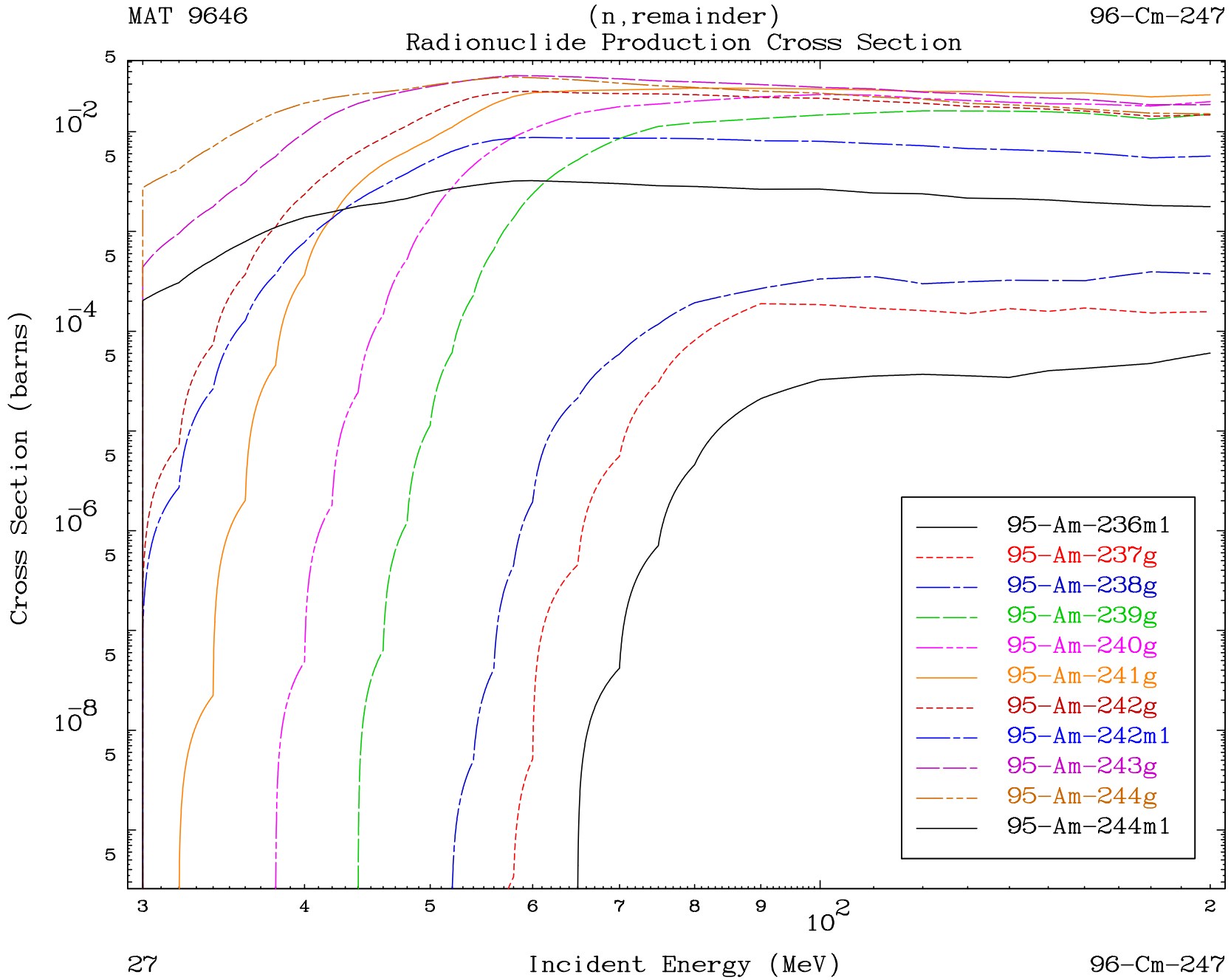
96-Cm-247

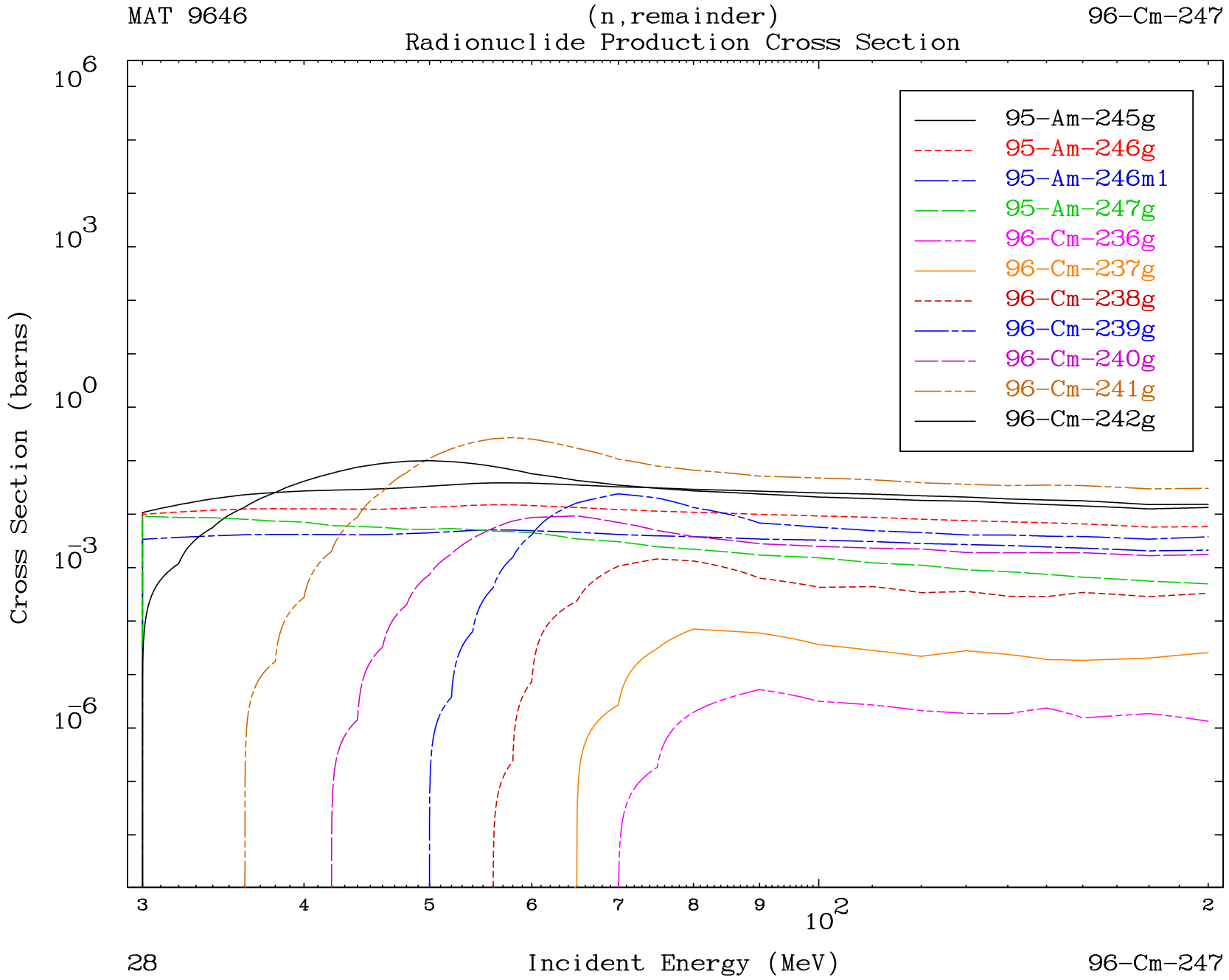

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
92-U -241g
93-Np-225g
93-Np-226g
93-Np-227g
93-Np-228g
93-Np-229g
93-Np-230g
93-Np-231g
93-Np-232g
93-Np-233g
93-Np-234g
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
4
5
6
7
8
9
10^2
2
23
Incident Energy (MeV)
96-Cm-247

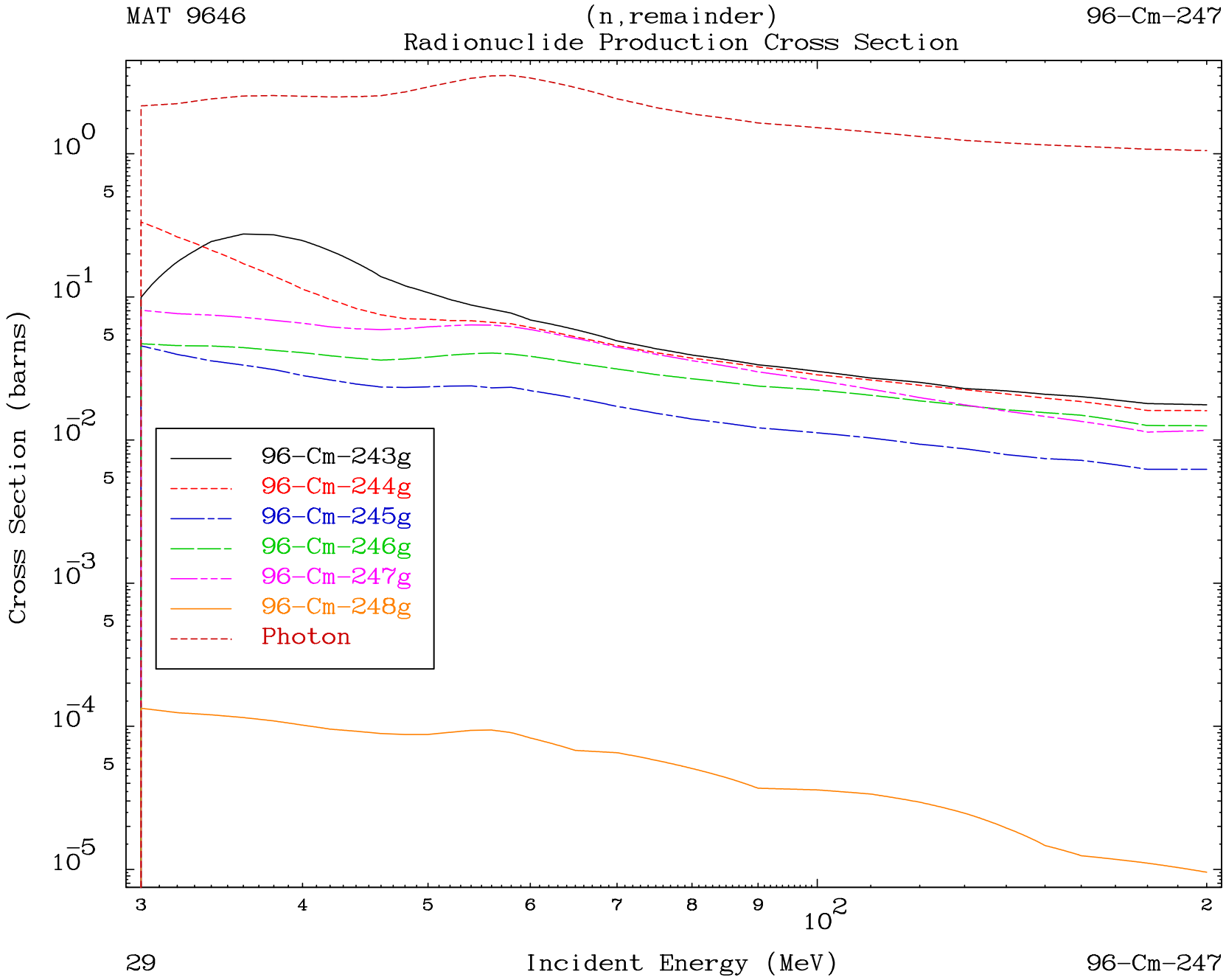

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
Incident Energy (MeV)
24
96-Cm-247
93-Np-235g
93-Np-236g
93-Np-236m1
93-Np-237g
93-Np-238g
93-Np-239g
93-Np-240g
93-Np-240m1
93-Np-241g
93-Np-242g
93-Np-242m1

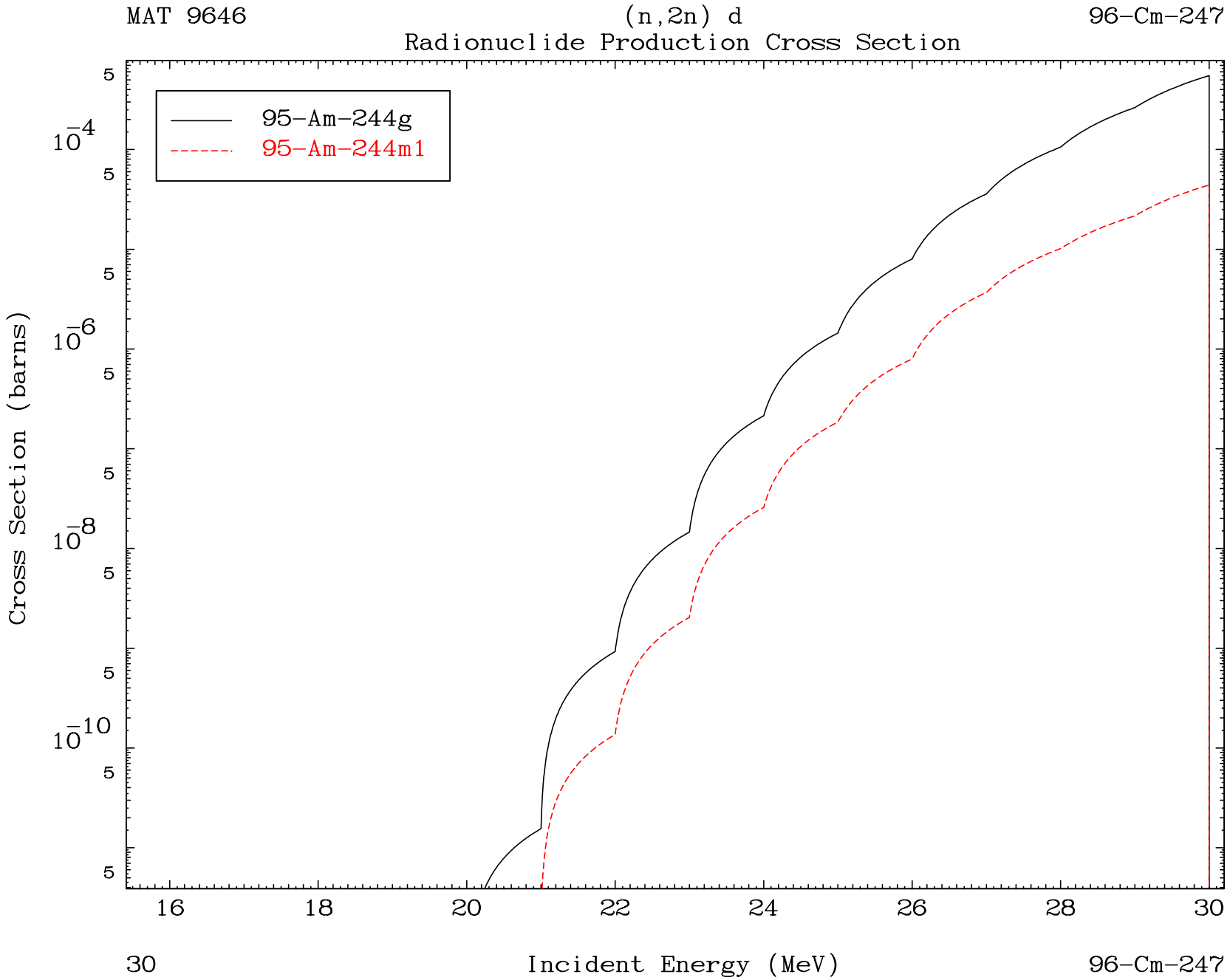

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
93-Np-243g
93-Np-244g
94-Pu-233g
94-Pu-234g
94-Pu-235g
94-Pu-236g
94-Pu-237g
94-Pu-237m1
94-Pu-238g
94-Pu-239g
94-Pu-240g
Cross Section (barns)
10^3
10^0
10^-3
10^-6
10^-9
3
4
5
6
7
8
9
10^2
2
25
Incident Energy (MeV)
96-Cm-247

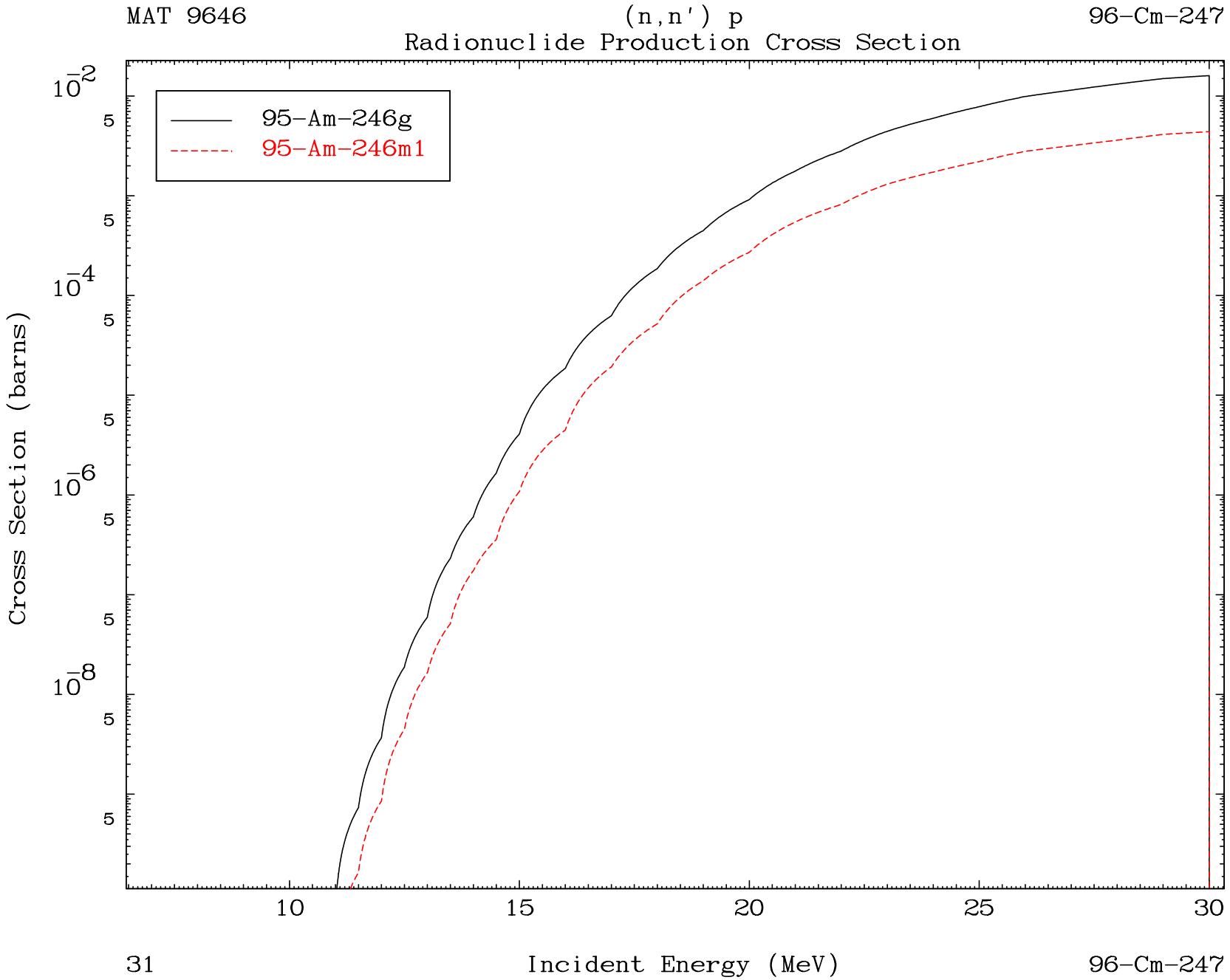

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
94-Pu-241g
94-Pu-242g
94-Pu-243g
94-Pu-244g
94-Pu-245g
94-Pu-246g
95-Am-232g
95-Am-233g
95-Am-234g
95-Am-235g
95-Am-236g
3
4
5
6
7
8
9
10^2
2
26
Incident Energy (MeV)
96-Cm-247

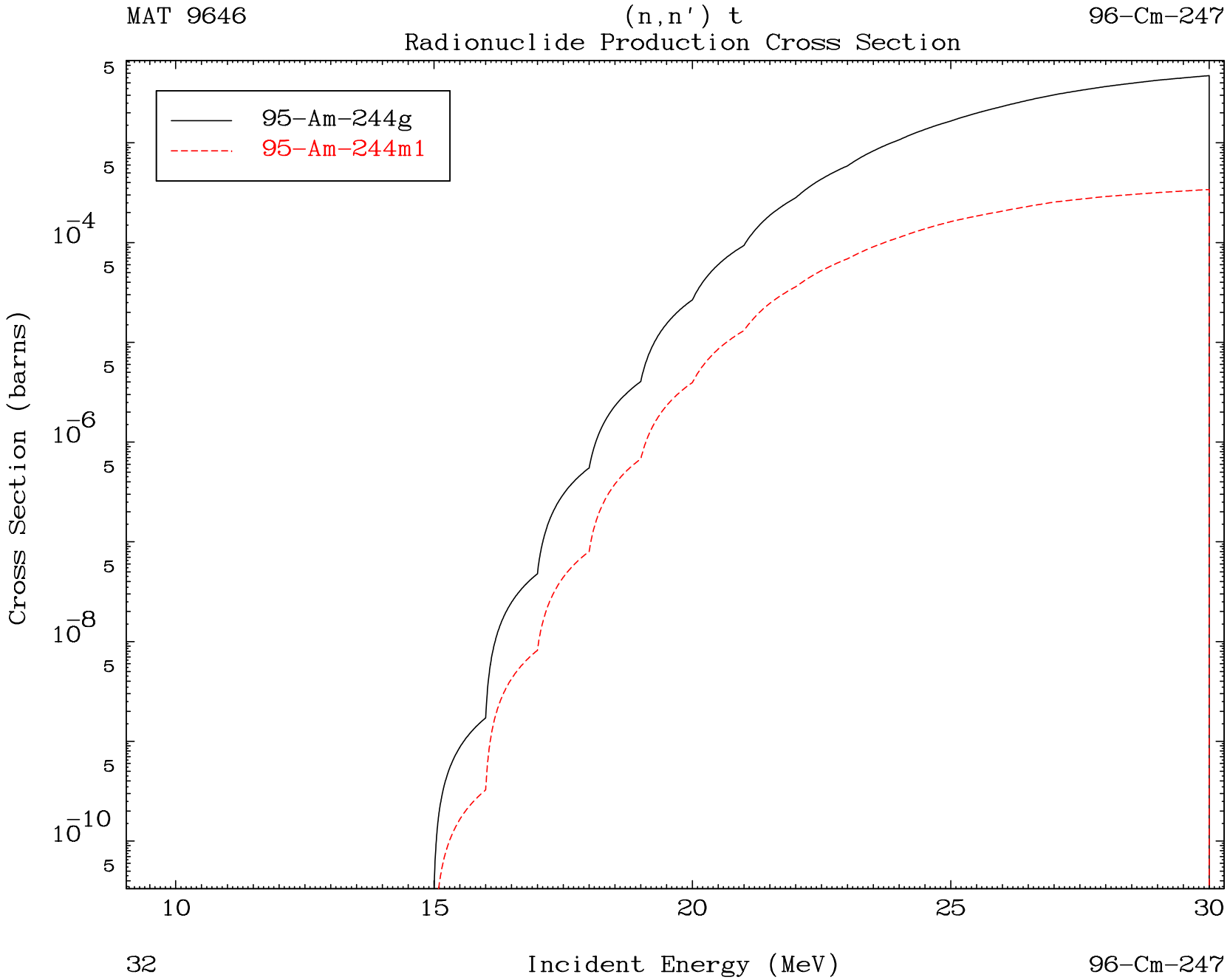

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-4
10-6
10-8
3
4
5
6
7
8
9
10^2
2
Incident Energy (MeV)
95-Am-236m1
95-Am-237g
95-Am-238g
95-Am-239g
95-Am-240g
95-Am-241g
95-Am-242g
95-Am-242m1
95-Am-243g
95-Am-244g
95-Am-244m1

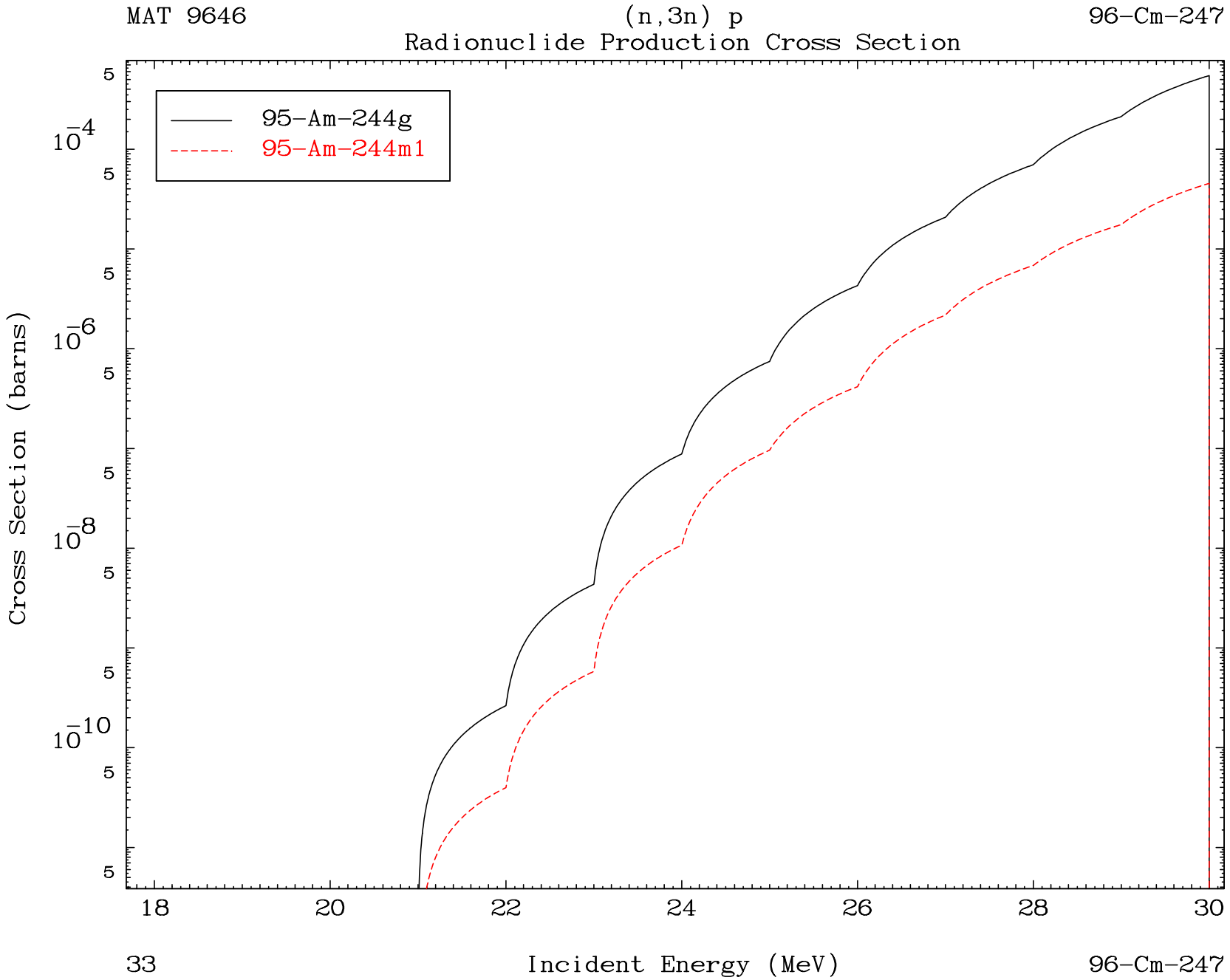

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
95-Am-245g
95-Am-246g
95-Am-246m1
95-Am-247g
96-Cm-236g
96-Cm-237g
96-Cm-238g
96-Cm-239g
96-Cm-240g
96-Cm-241g
96-Cm-242g
3
4
5
6
7
8
9
10^2
2
28
Incident Energy (MeV)
96-Cm-247

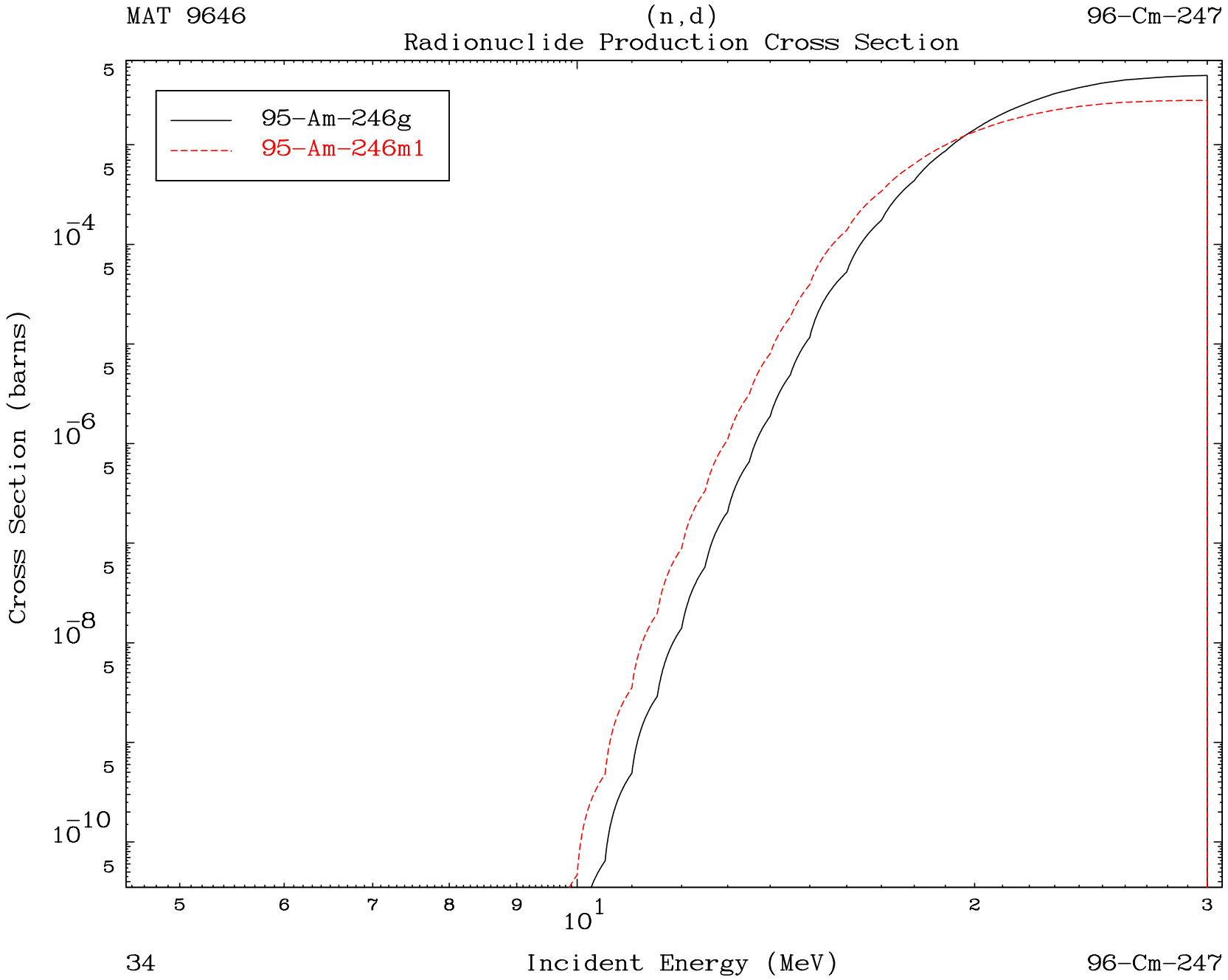

MAT 9646
(n,remainder)
96-Cm-247
Radionuclide Production Cross Section
Cross Section (barns)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
96-Cm-243g
96-Cm-244g
96-Cm-245g
96-Cm-246g
96-Cm-247g
96-Cm-248g
Photon
3
4
5
6
7
8
9
10^2
2
29
Incident Energy (MeV)
96-Cm-247


MAT 9646
(n,2n) d
96-Cm-247
Radionuclide Production Cross Section
95-Am-244g
95-Am-244m1
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
16
18
20
22
24
26
28
30
Incident Energy (MeV)
96-Cm-247


MAT 9646
(n,n') p
96-Cm-247
Radionuclide Production Cross Section
95-Am-246g
95-Am-246m1
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
5
10
15
20
25
30
31
Incident Energy (MeV)
96-Cm-247


MAT 9646
(n,n') t
96-Cm-247
Radionuclide Production Cross Section
95-Am-244g
95-Am-244m1
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10
15
20
25
30
32
Incident Energy (MeV)
96-Cm-247


MAT 9646
(n,3n) p
96-Cm-247
Radionuclide Production Cross Section
95-Am-244g
95-Am-244m1
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
18
20
22
24
26
28
30
33
Incident Energy (MeV)
96-Cm-247


MAT 9646
(n,d)
96-Cm-247
Radionuclide Production Cross Section
95-Am-246g
95-Am-246m1
Cross Section (barns)
Incident Energy (MeV)
34
96-Cm-247