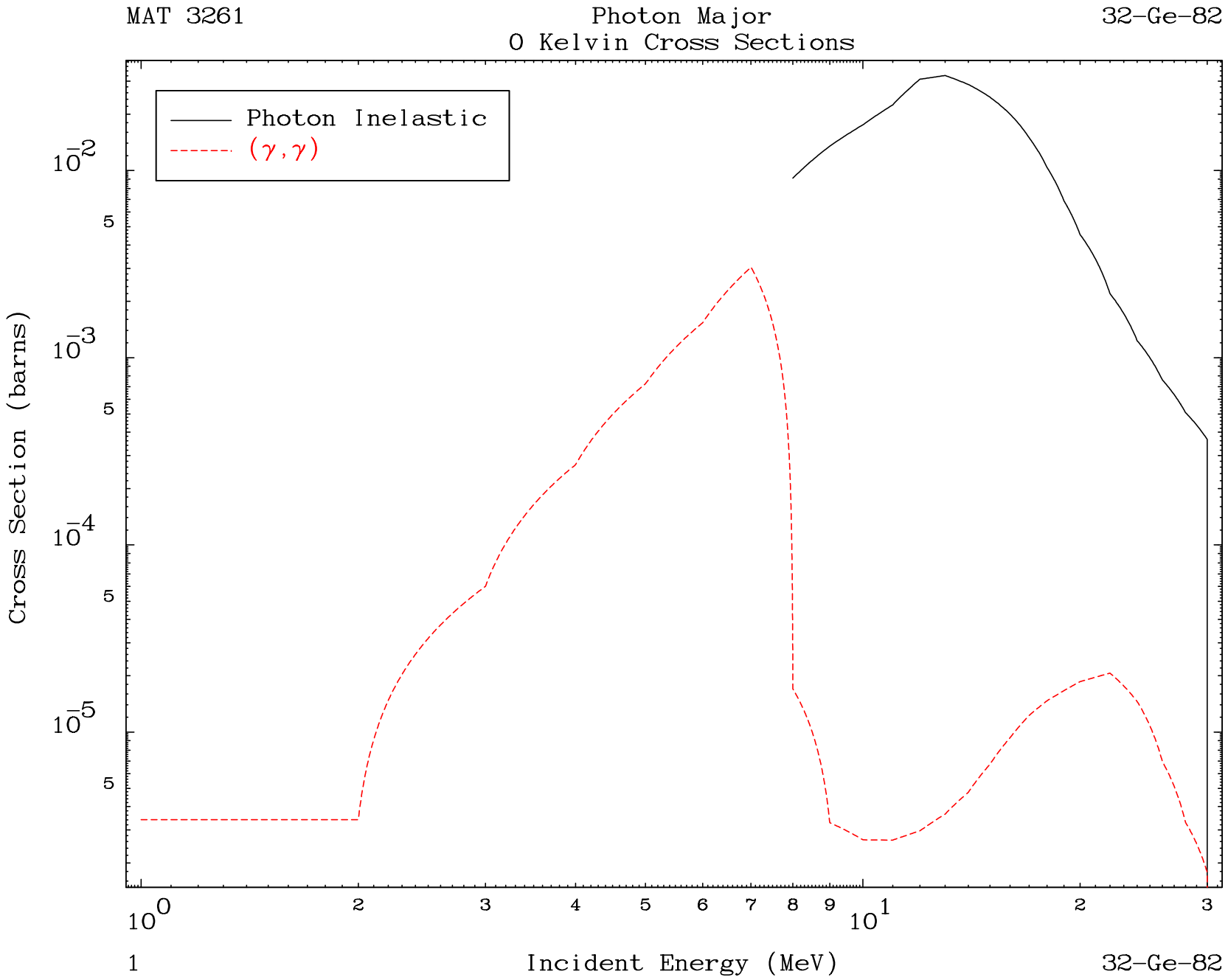
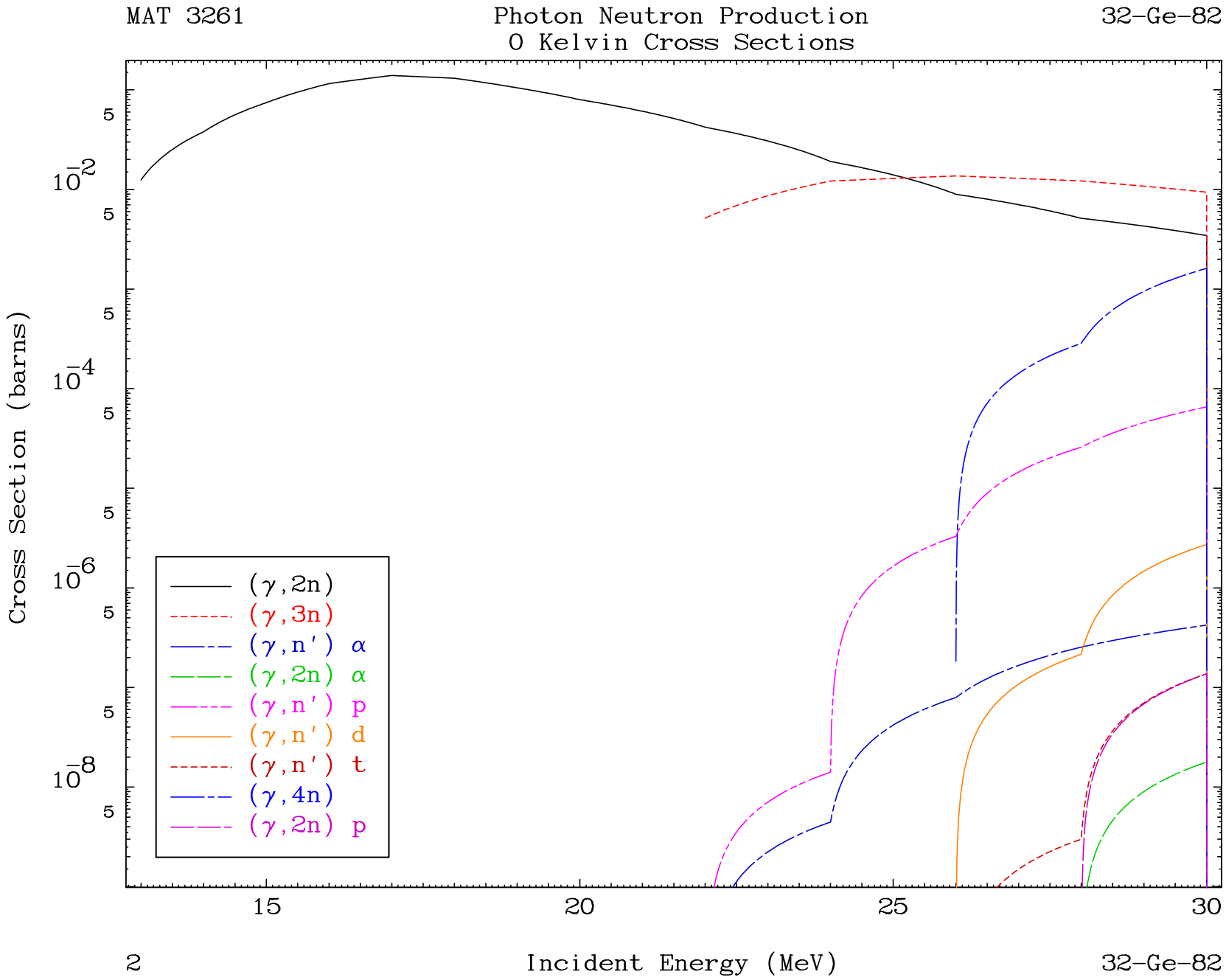
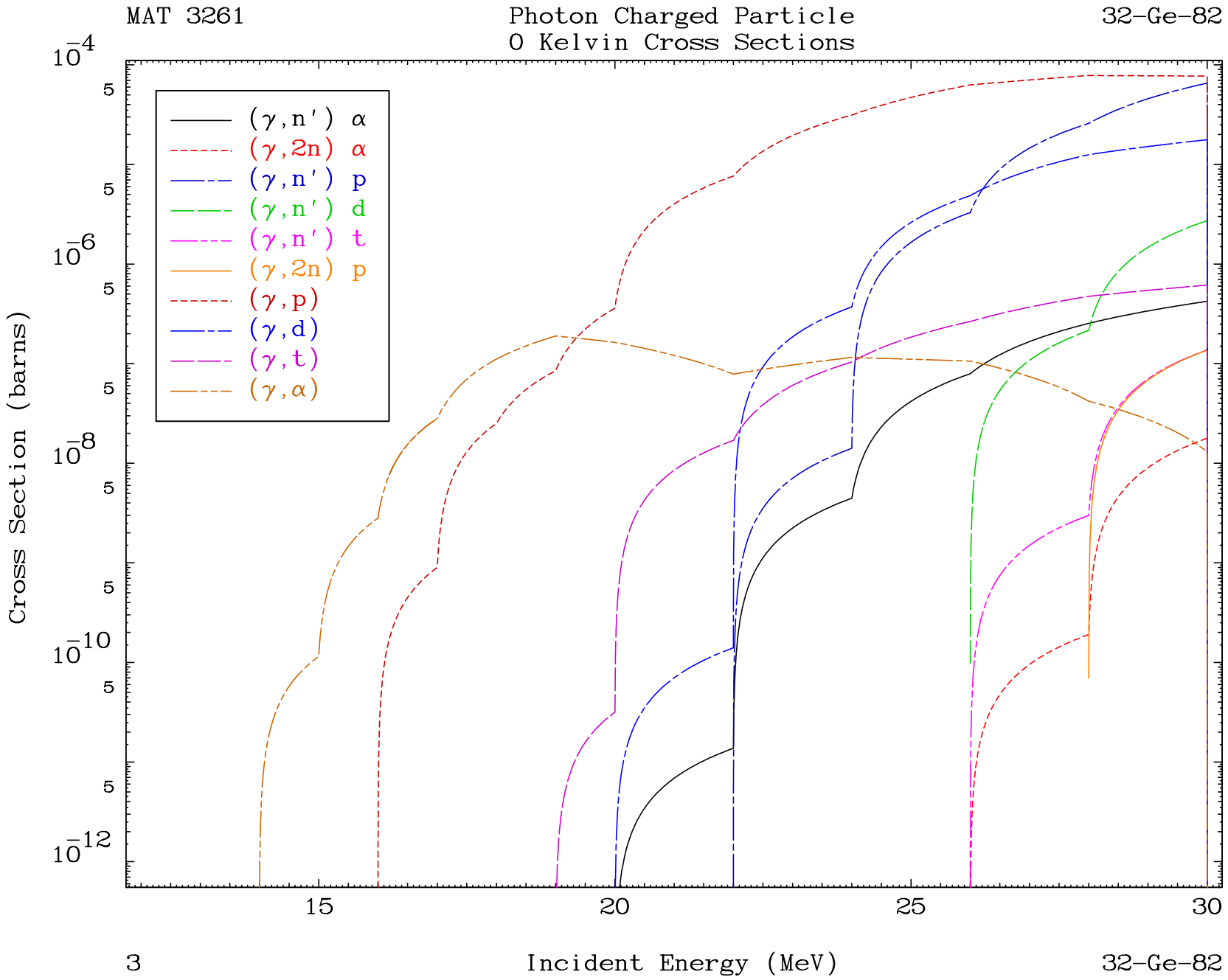
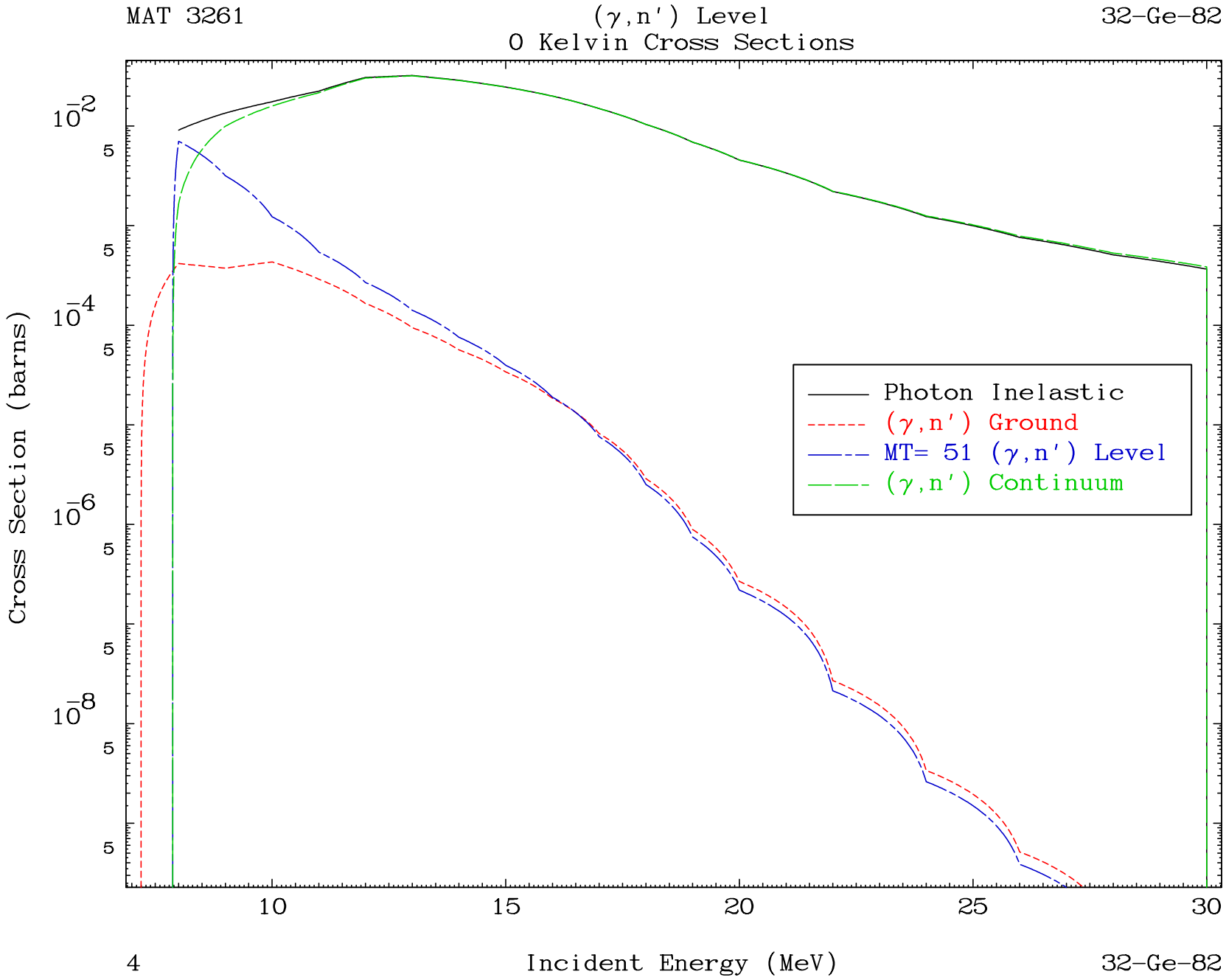
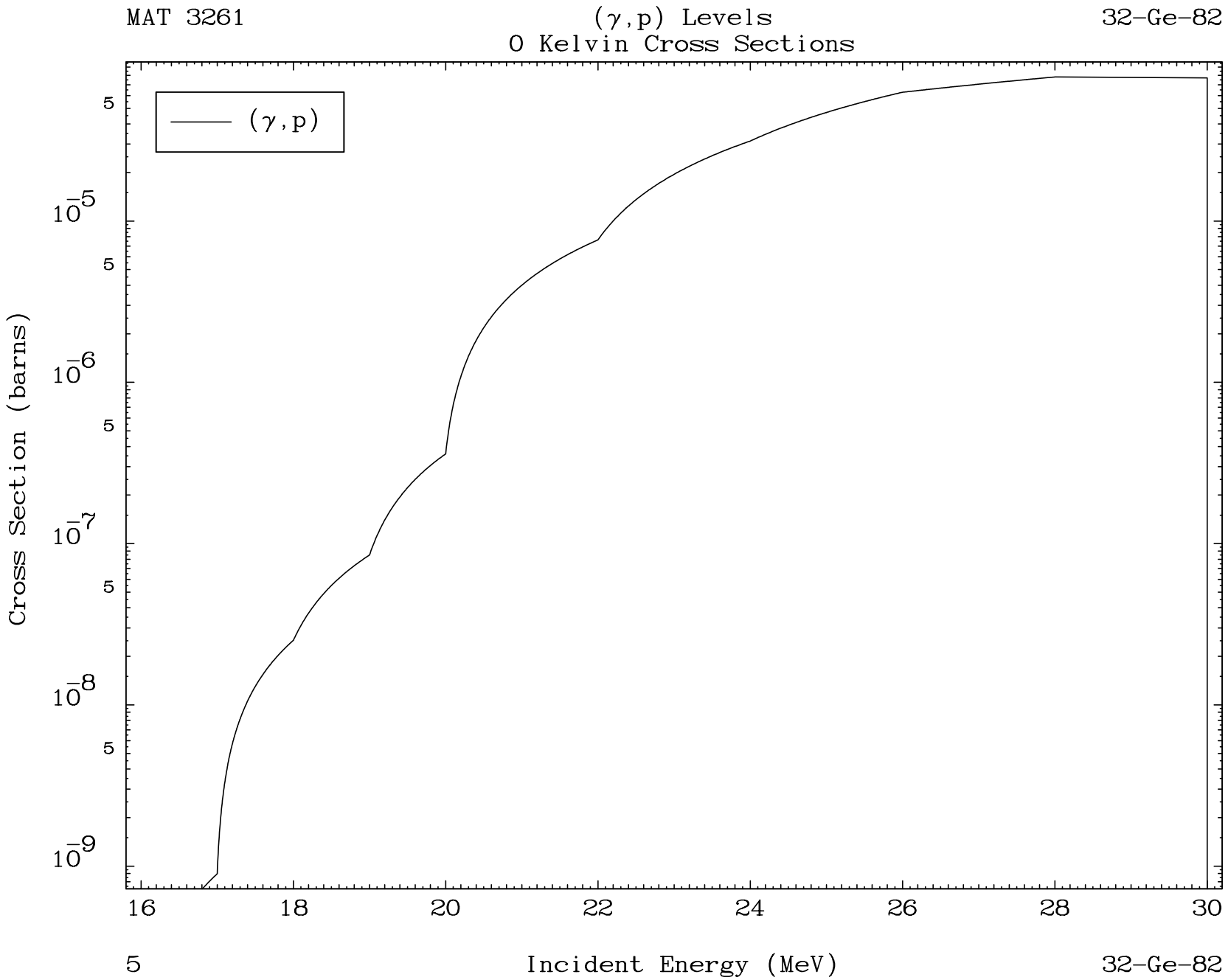
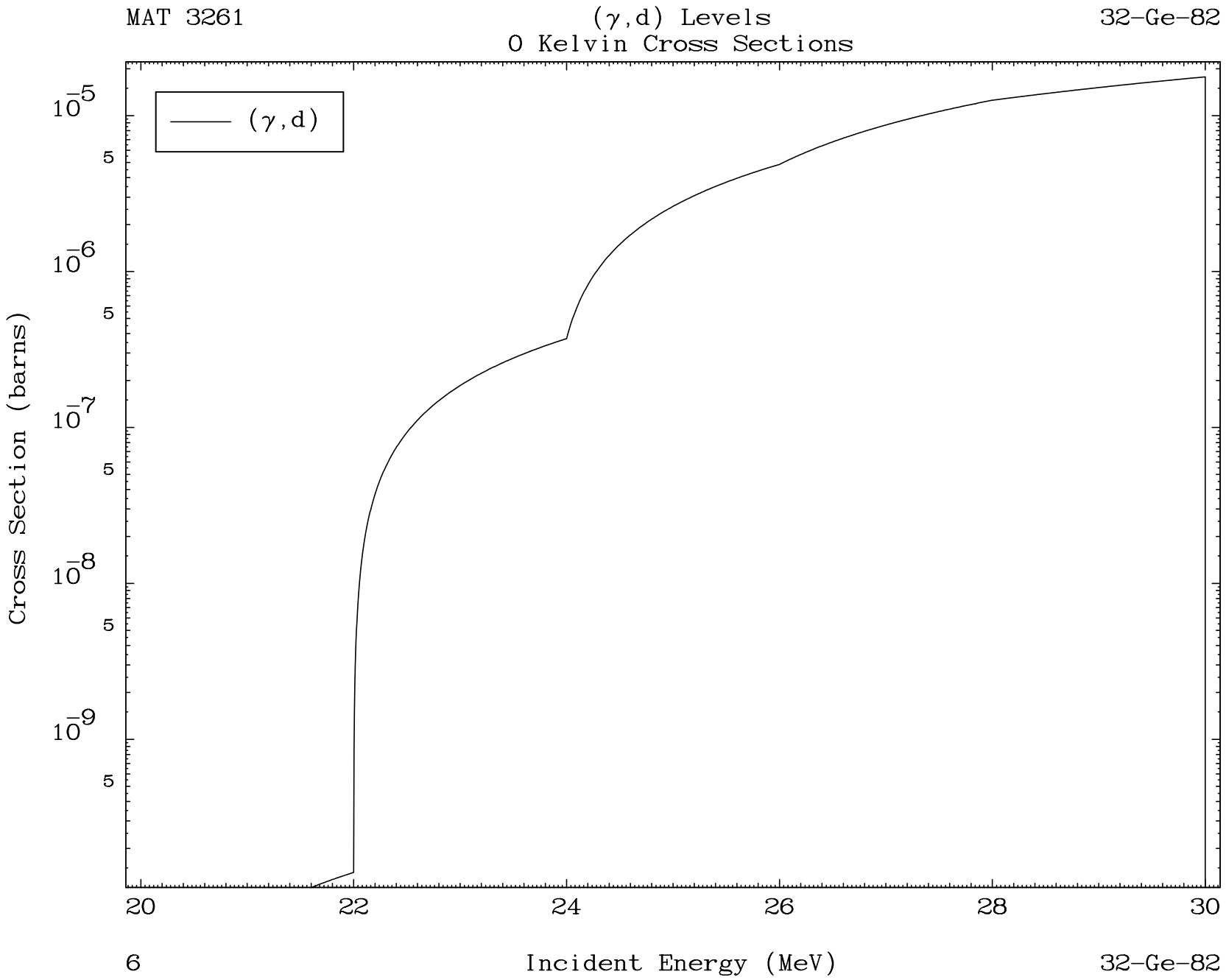

MAT 3261
Photon Major
32-Ge-82
0 Kelvin Cross Sections
Photon Inelastic
(γ,γ)
Cross Section (barns)
10-2
5
10-3
5
10-4
5
10-5
5
10 0
2
3
4
5
6
7
8
9
10 1
2
3
1
Incident Energy (MeV)
32-Ge-82


MAT 3261
Photon Neutron Production
0 Kelvin Cross Sections
32-Ge-82
Cross Section (barns)
10-2
10-4
10-6
10-8
5
15
20
25
30
2
Incident Energy (MeV)
32-Ge-82
(γ,2n)
(γ,3n)
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') d
(γ,n') t
(γ,4n)
(γ,2n) p

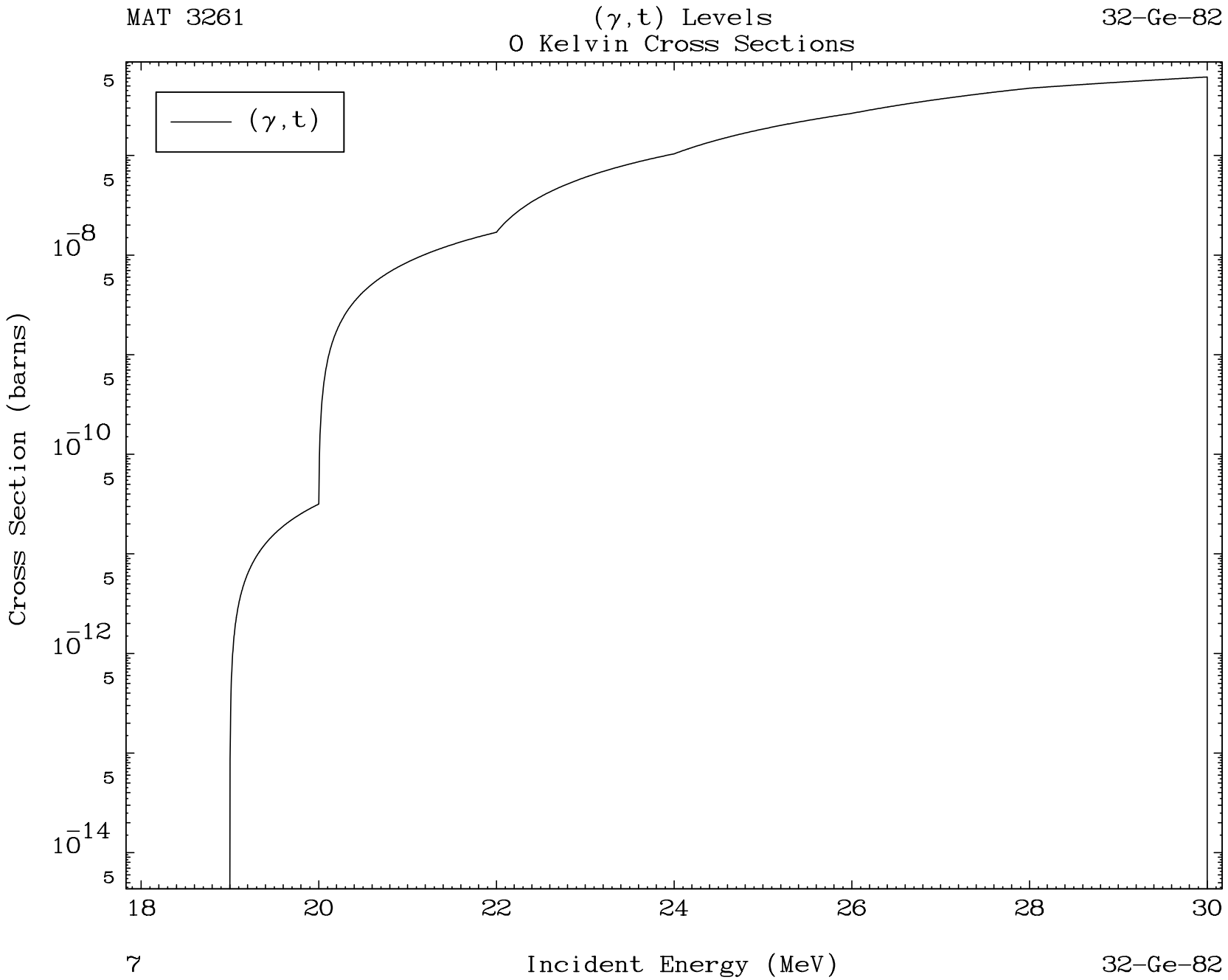

MAT 3261
Photon Charged Particle
0 Kelvin Cross Sections
32-Ge-82
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') d
(γ,n') t
(γ,2n) p
(γ,p)
(γ,d)
(γ,t)
(γ,α)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^-12
15
20
25
30
Incident Energy (MeV)
3
32-Ge-82

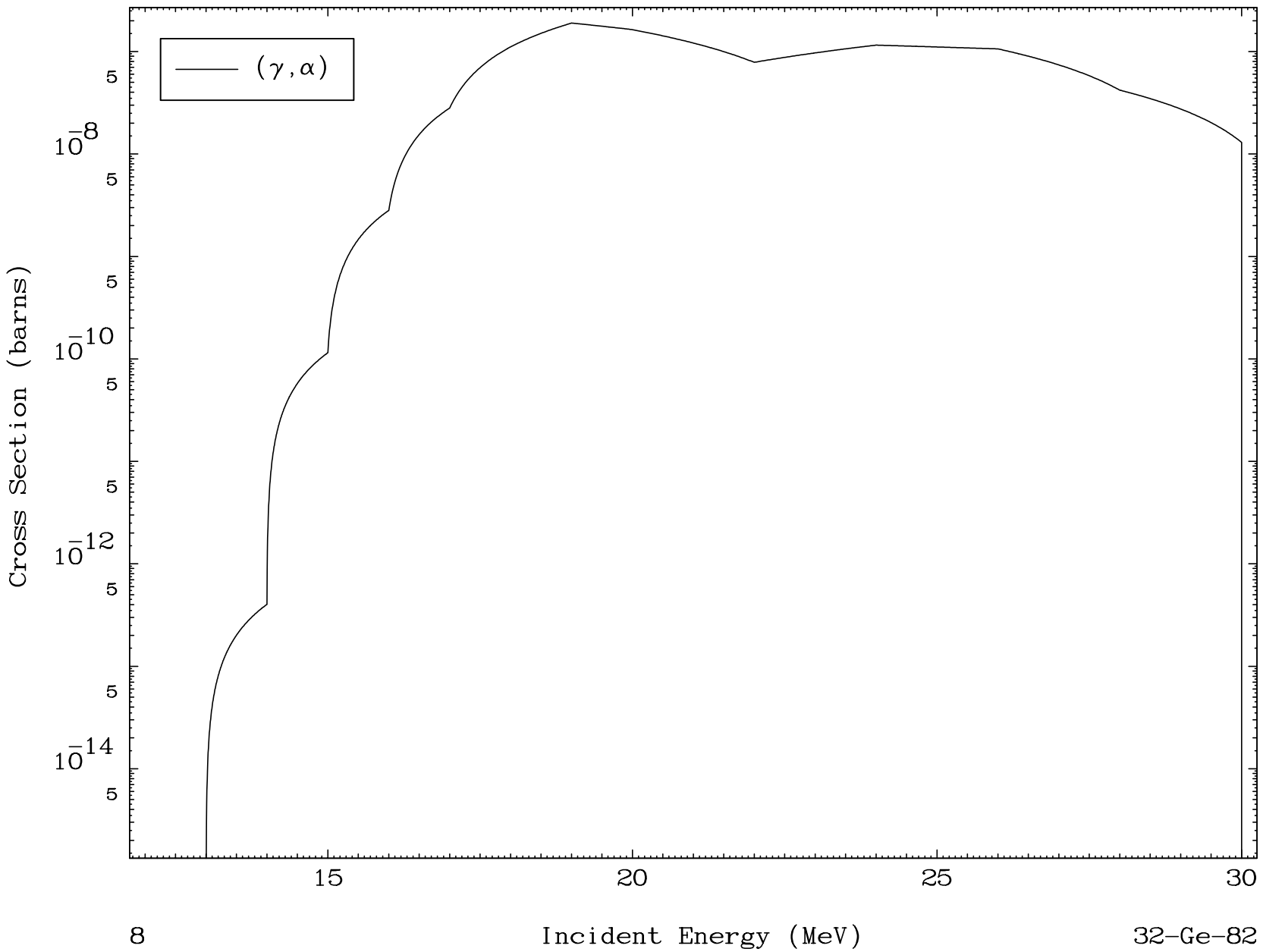

MAT 3261
(γ,n') Level
32-Ge-82
0 Kelvin Cross Sections
Cross Section (barns)
10^-2
5
10^-4
5
10^-6
5
10^-8
5
5
10
15
20
25
30
4
Incident Energy (MeV)
32-Ge-82
Photon Inelastic
(γ,n') Ground
MT= 51 (γ,n') Level
(γ,n') Continuum

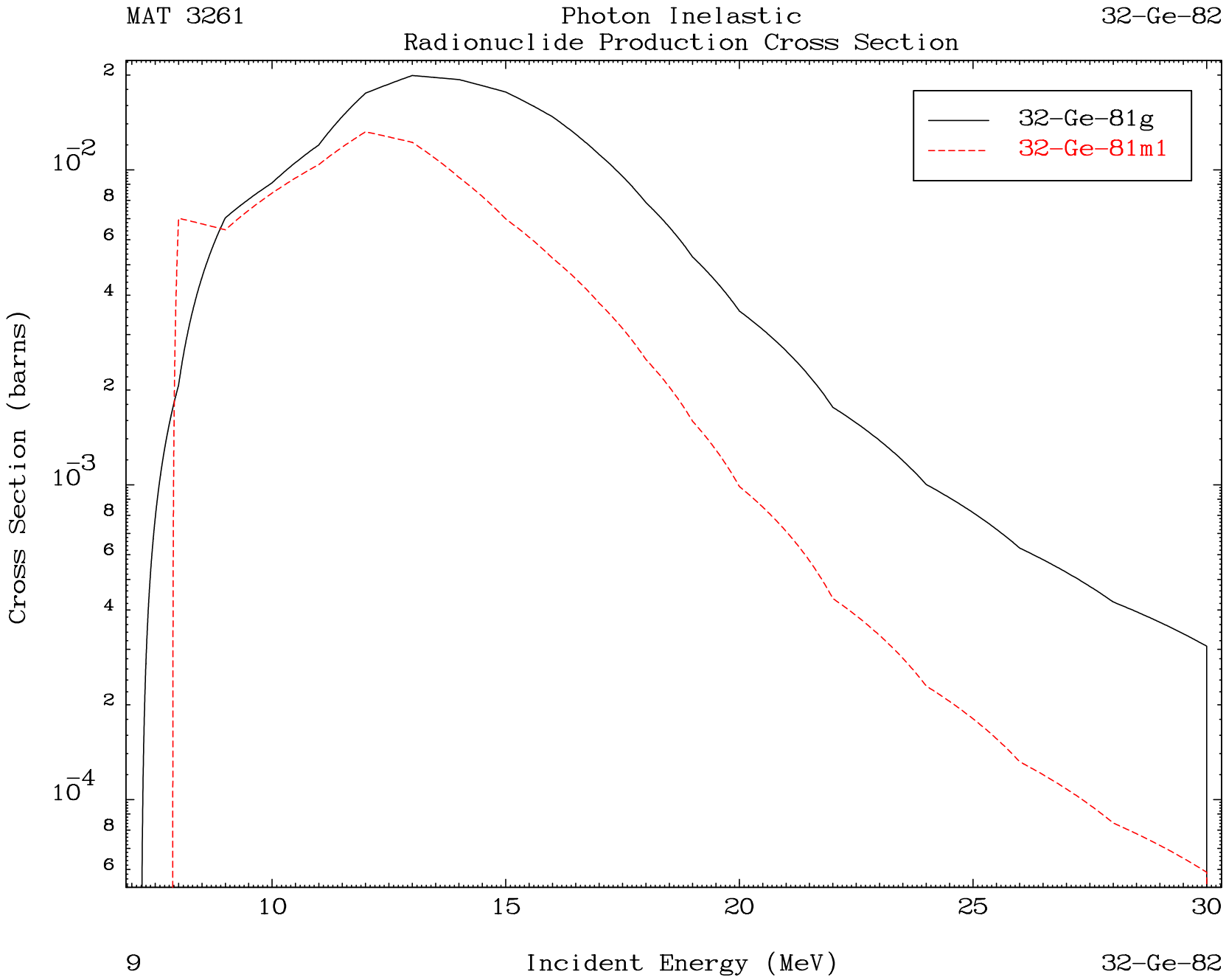

MAT 3261
(γ,p) Levels
32-Ge-82
0 Kelvin Cross Sections
(γ,p)
Cross Section (barns)
10-5
10-6
10-7
10-8
10-9
16
18
20
22
24
26
28
30
Incident Energy (MeV)
32-Ge-82

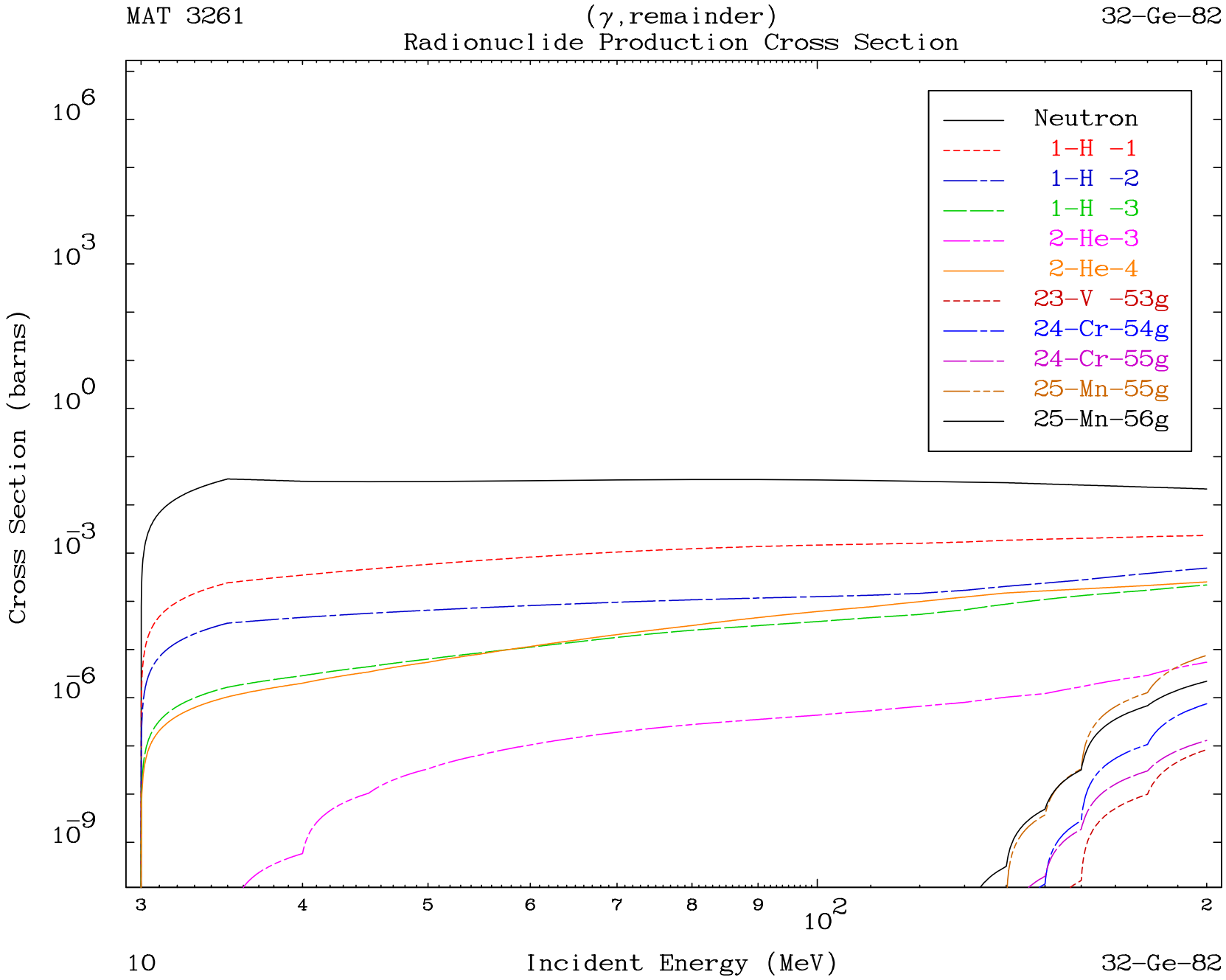

MAT 3261
(γ,d) Levels
32-Ge-82
0 Kelvin Cross Sections
(γ,d)
Cross Section (barns)
10-5
5
10-6
5
10-7
5
10-8
5
10-9
5
20
22
24
26
28
30
Incident Energy (MeV)

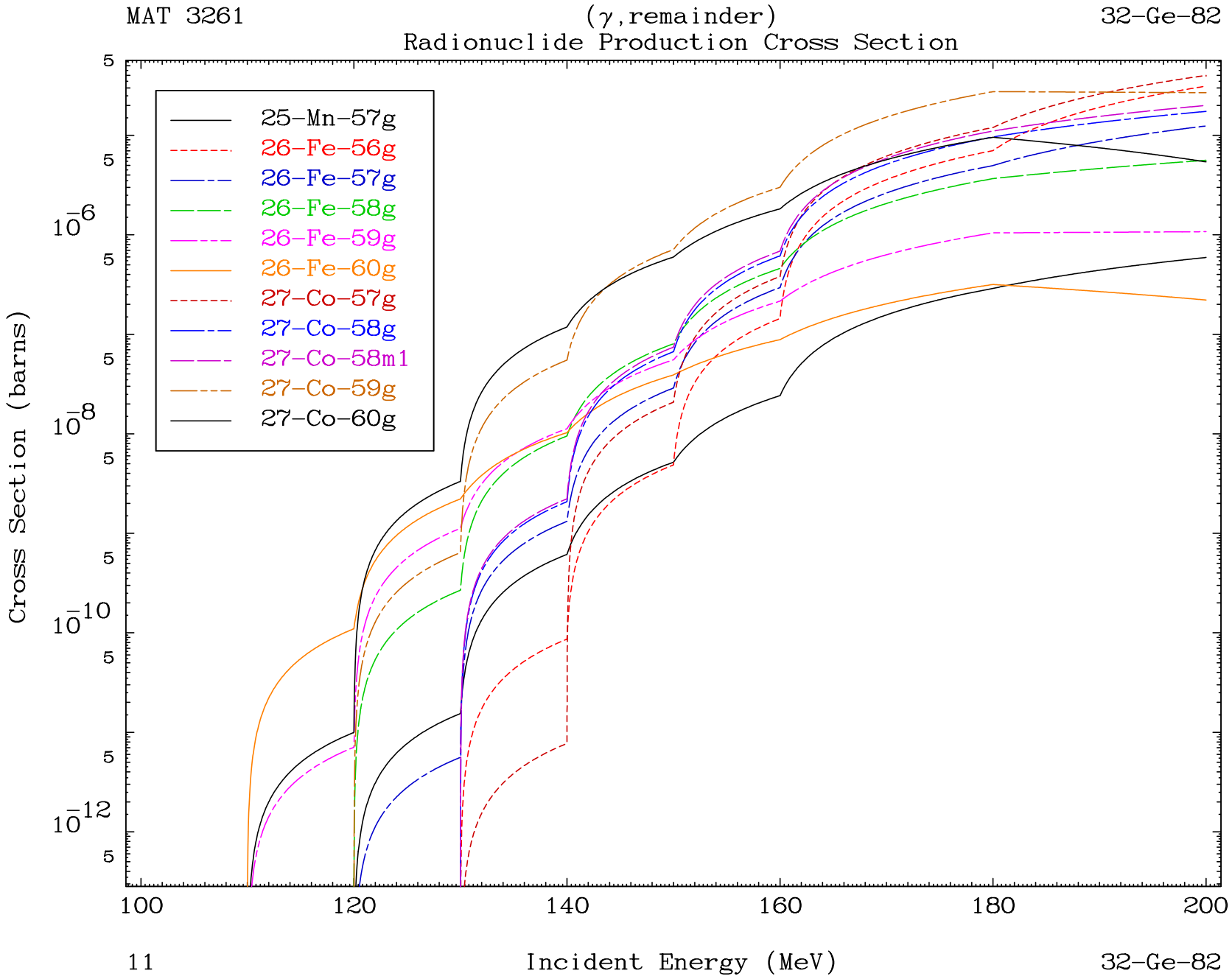
32-Ge-82

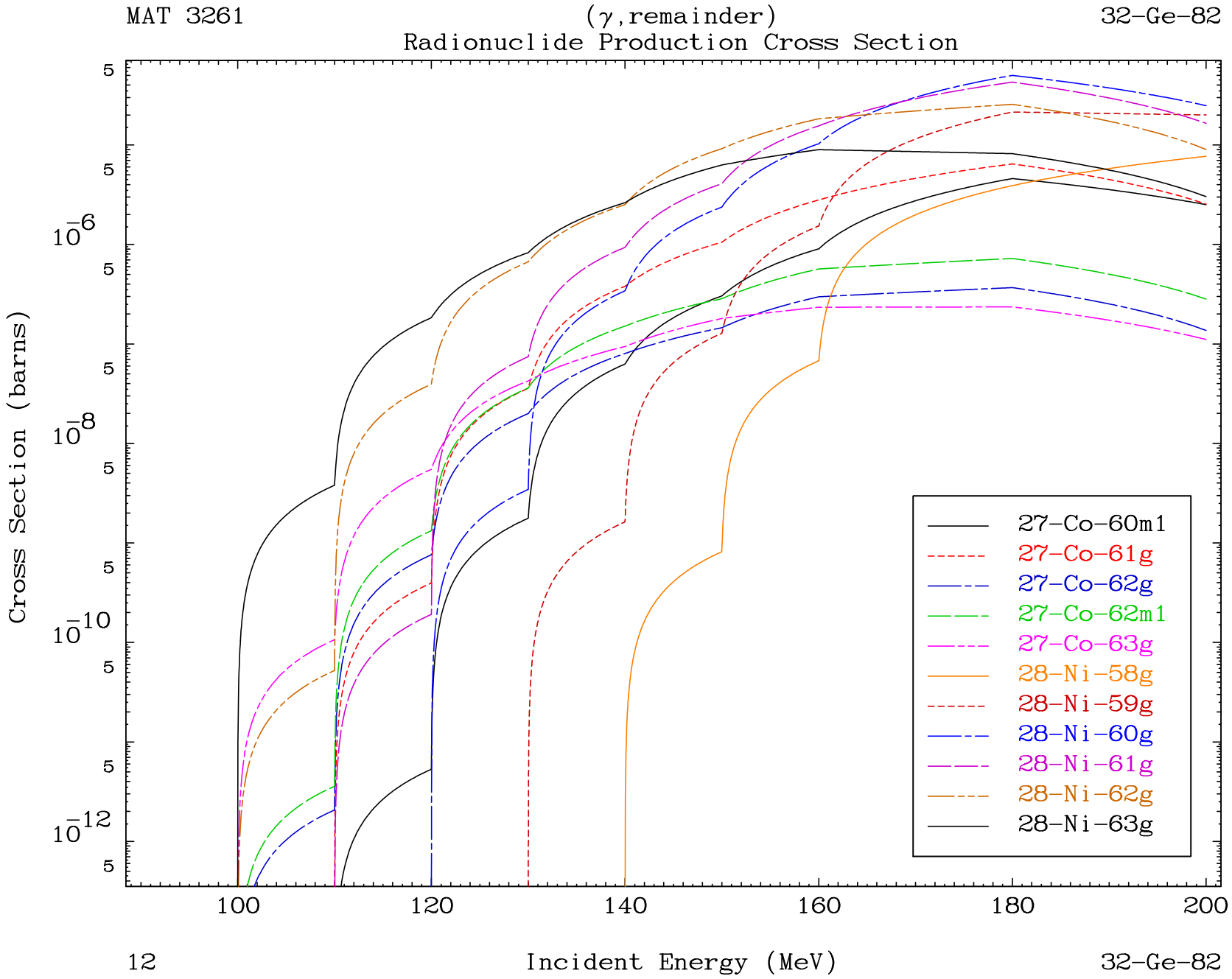

MAT 3261
(γ,t) Levels
32-Ge-82
0 Kelvin Cross Sections
(γ,t)
Cross Section (barns)
10⁻⁸
10⁻¹⁰
10⁻¹²
10⁻¹⁴
5
18
20
22
24
26
28
30
7
Incident Energy (MeV)
32-Ge-82

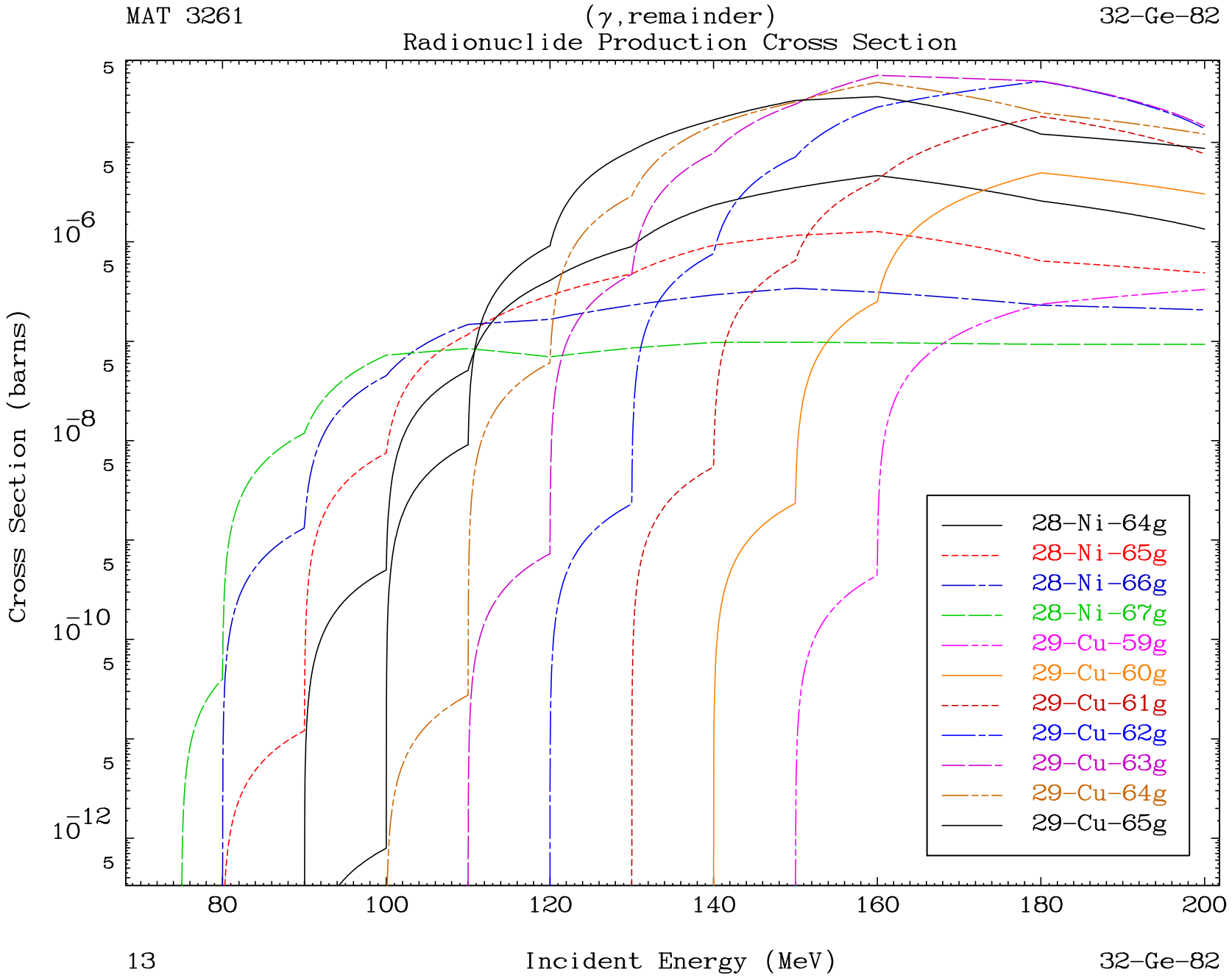

0 Kelvin Cross Sections
(γ,α)
Cross Section (barns)
10-8
10-10
10-12
10-14
5
15
20
25
30
Incident Energy (MeV)

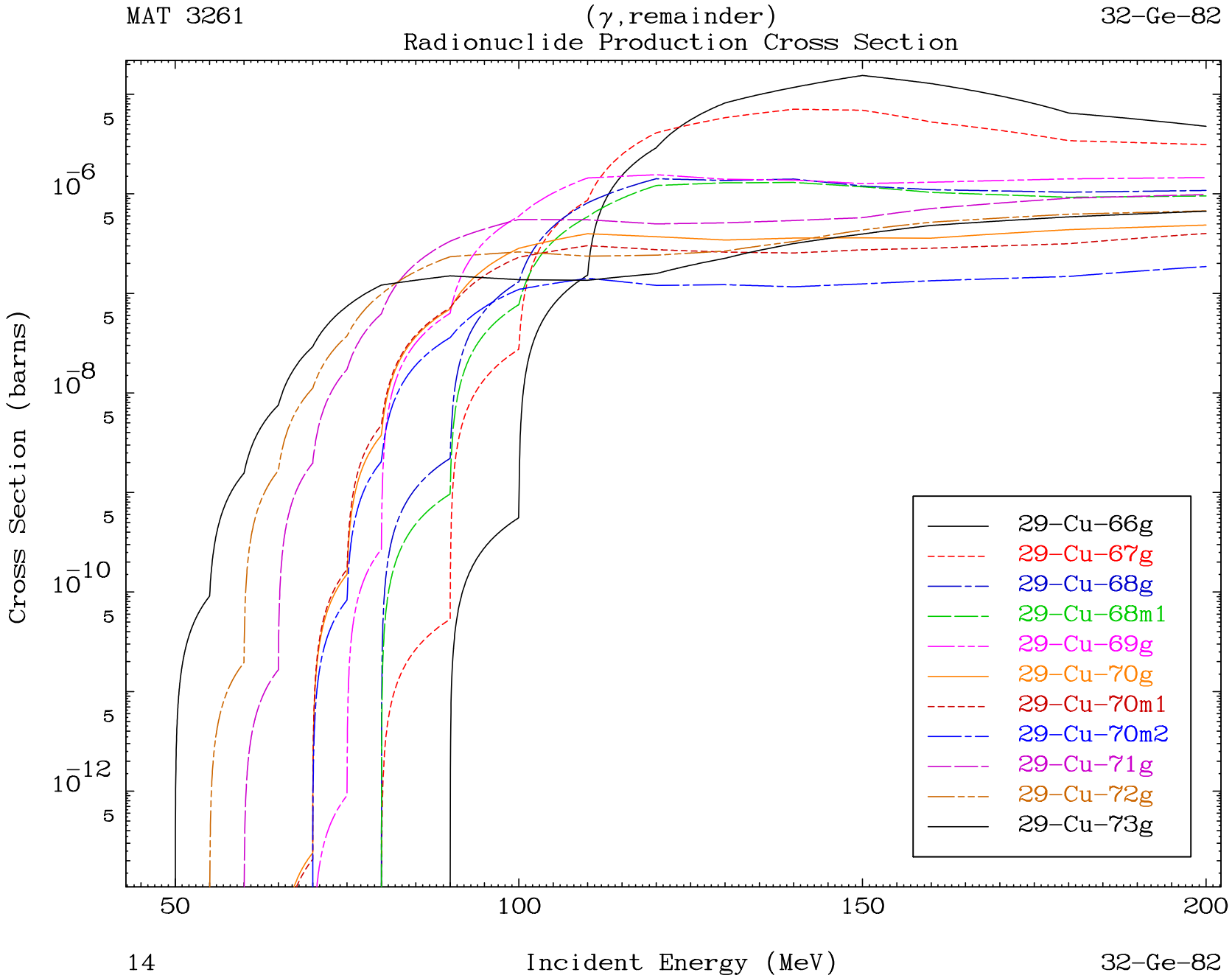

MAT 3261
Photon Inelastic
32-Ge-82
Radionuclide Production Cross Section
32-Ge-81g
32-Ge-81m1
Cross Section (barns)
Incident Energy (MeV)
32-Ge-82
9
10
15
20
25
30

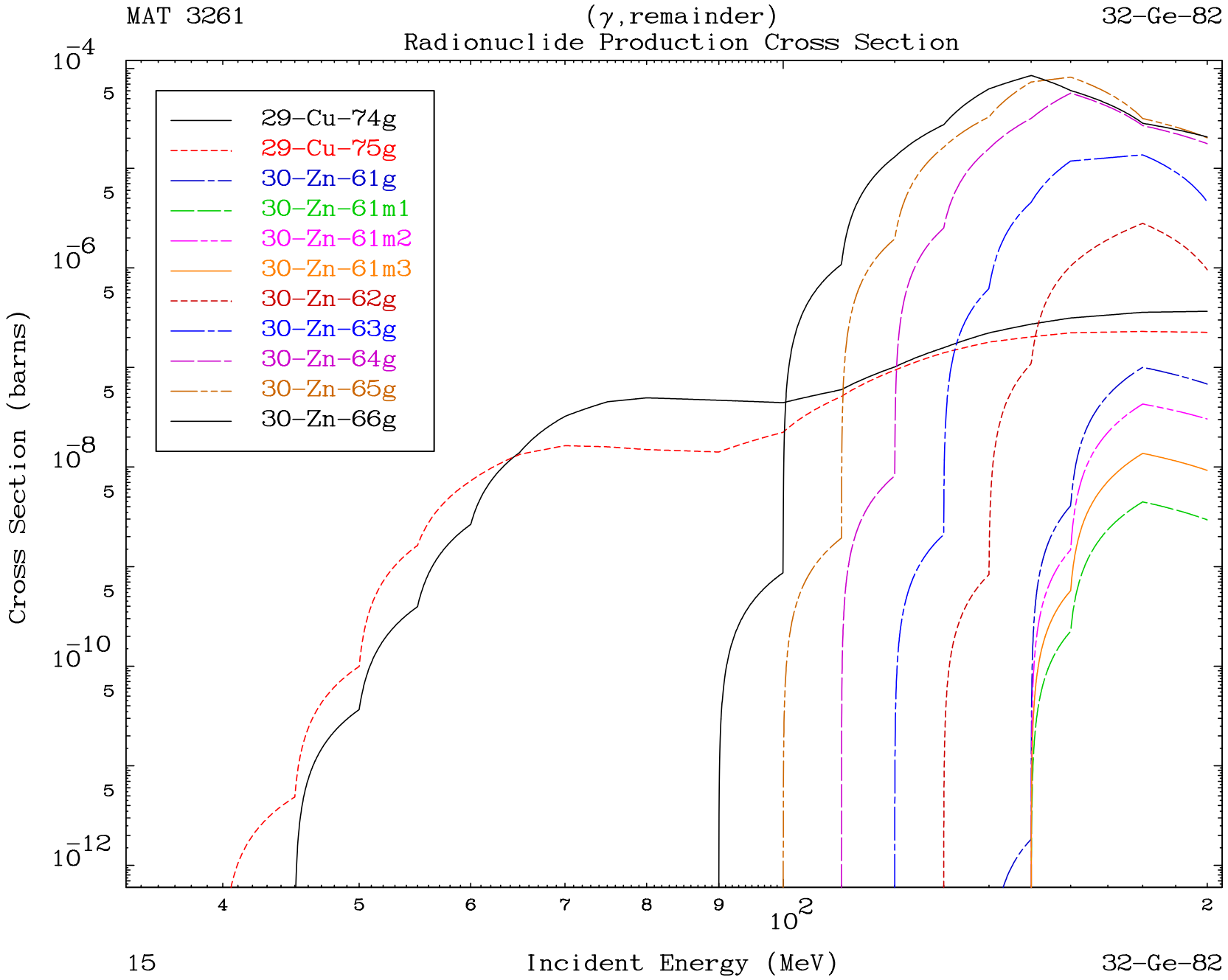

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-9
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
23-V -53g
24-Cr-54g
24-Cr-55g
25-Mn-55g
25-Mn-56g
3
4
5
6
7
8
9
10^2
2
10
Incident Energy (MeV)
32-Ge-82

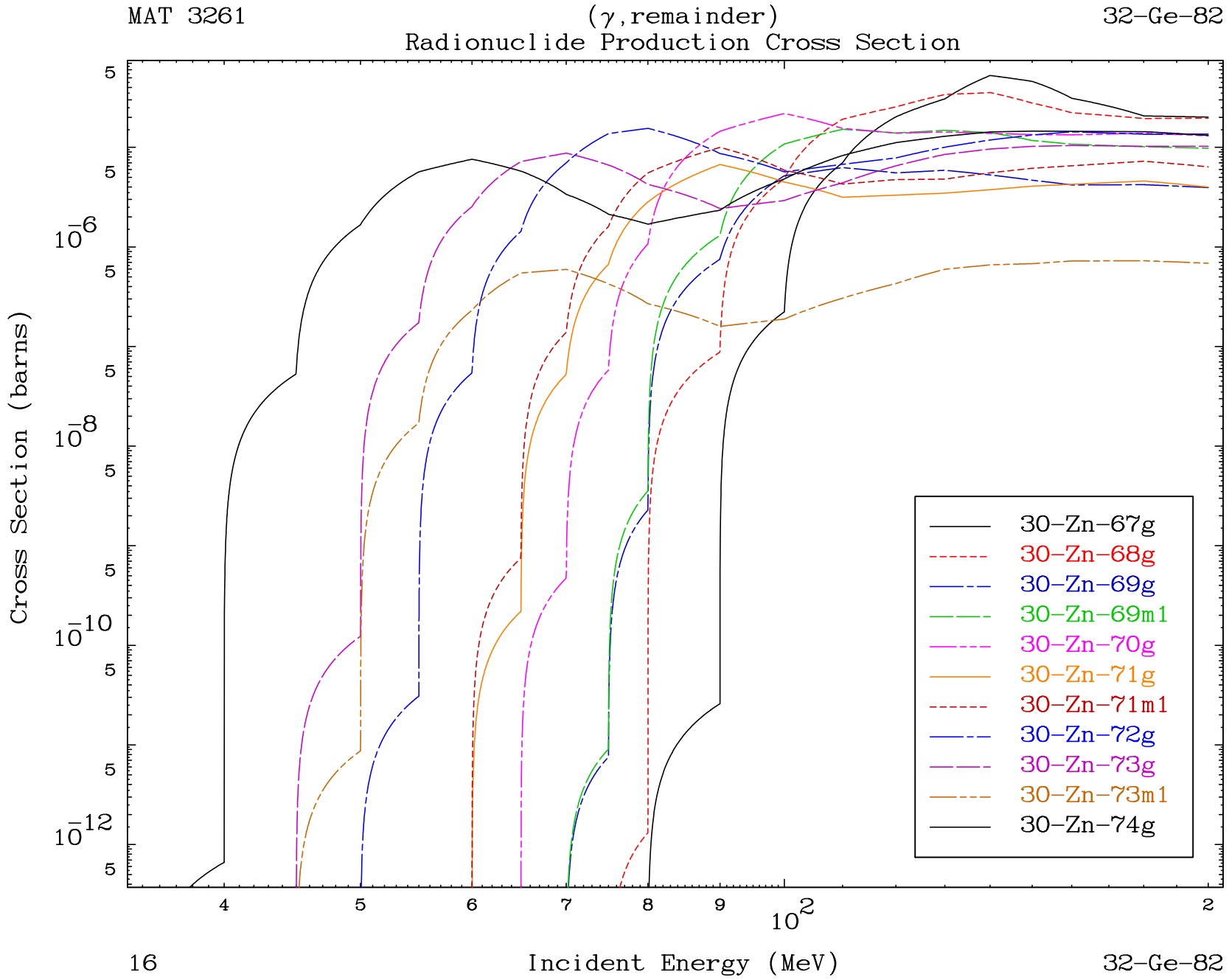

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
25-Mn-57g
26-Fe-56g
26-Fe-57g
26-Fe-58g
26-Fe-59g
26-Fe-60g
27-Co-57g
27-Co-58g
27-Co-58m1
27-Co-59g
27-Co-60g
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
100
120
140
160
180
200
Incident Energy (MeV)
11
32-Ge-82

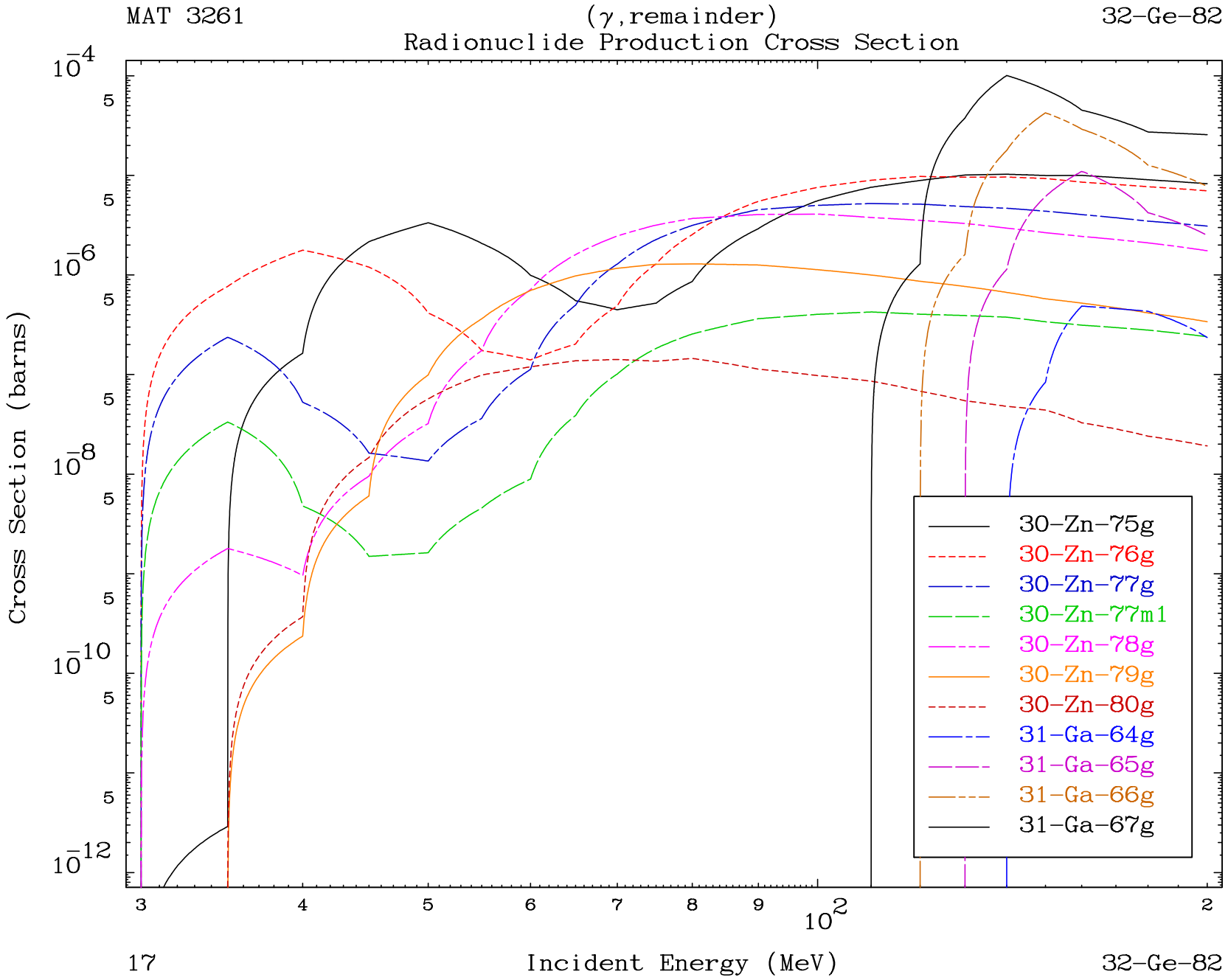

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
100
120
140
160
180
200
Incident Energy (MeV)
27-Co-60m1
27-Co-61g
27-Co-62g
27-Co-62m1
27-Co-63g
28-Ni-58g
28-Ni-59g
28-Ni-60g
28-Ni-61g
28-Ni-62g
28-Ni-63g


MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
5
80
100
120
140
160
180
200
Incident Energy (MeV)
28-Ni-64g
28-Ni-65g
28-Ni-66g
28-Ni-67g
29-Cu-59g
29-Cu-60g
29-Cu-61g
29-Cu-62g
29-Cu-63g
29-Cu-64g
29-Cu-65g

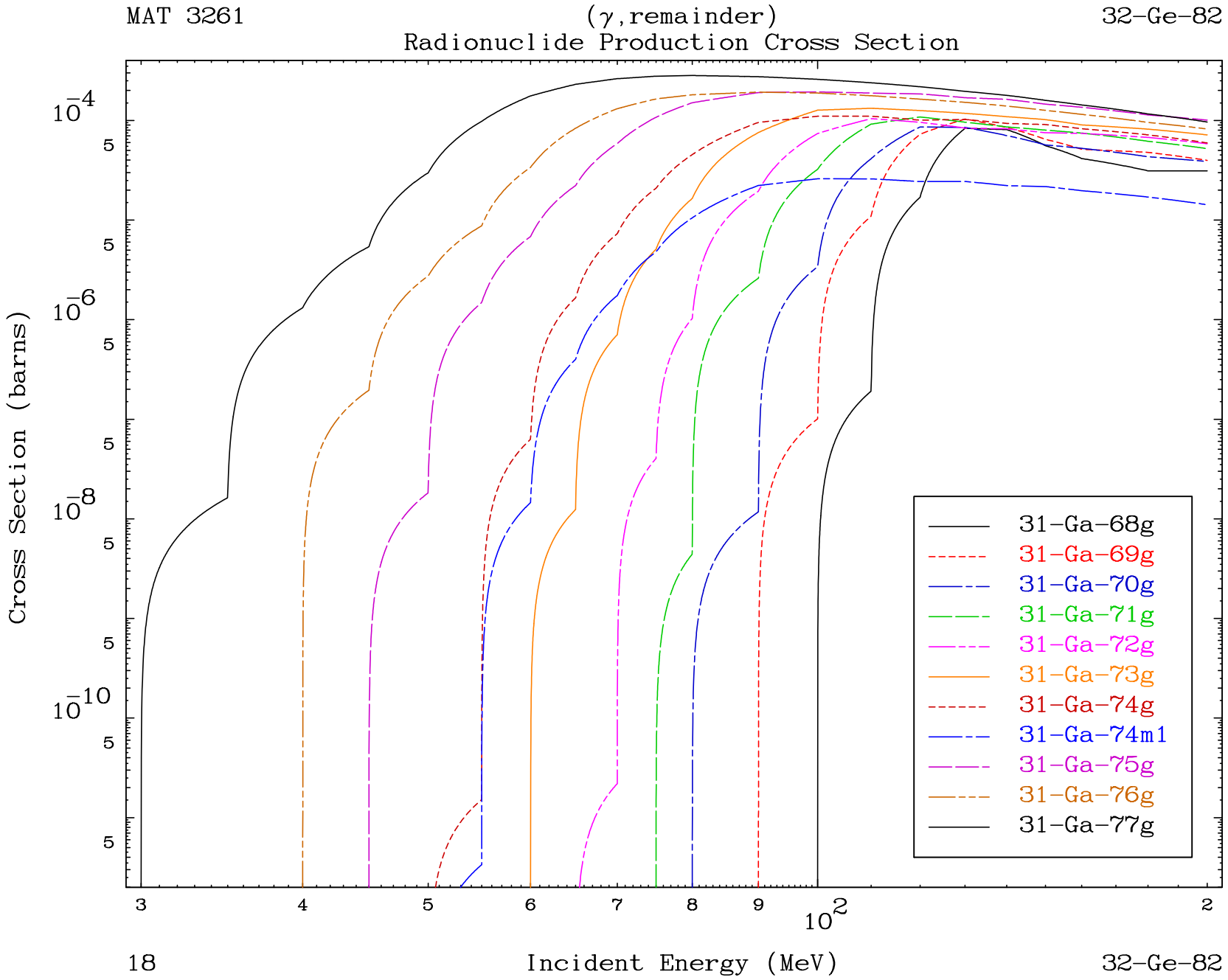

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
5
50
100
150
200
Incident Energy (MeV)
29-Cu-66g
29-Cu-67g
29-Cu-68g
29-Cu-68m1
29-Cu-69g
29-Cu-70g
29-Cu-70m1
29-Cu-70m2
29-Cu-71g
29-Cu-72g
29-Cu-73g


MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
29-Cu-74g
29-Cu-75g
30-Zn-61g
30-Zn-61m1
30-Zn-61m2
30-Zn-61m3
30-Zn-62g
30-Zn-63g
30-Zn-64g
30-Zn-65g
30-Zn-66g
Cross Section (barns)
Incident Energy (MeV)
15
32-Ge-82

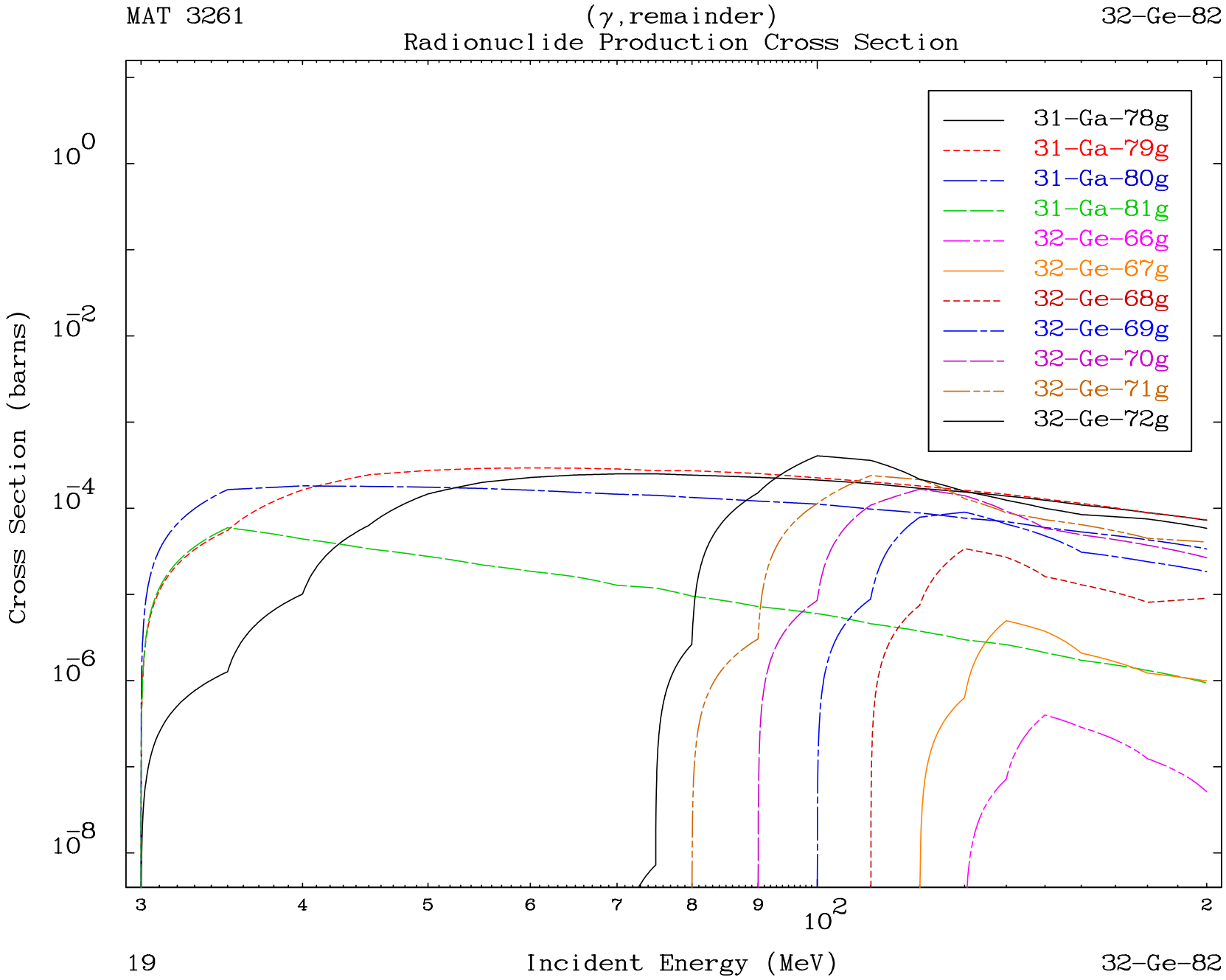

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
30-Zn-67g
30-Zn-68g
30-Zn-69g
30-Zn-69m1
30-Zn-70g
30-Zn-71g
30-Zn-71m1
30-Zn-72g
30-Zn-73g
30-Zn-73m1
30-Zn-74g

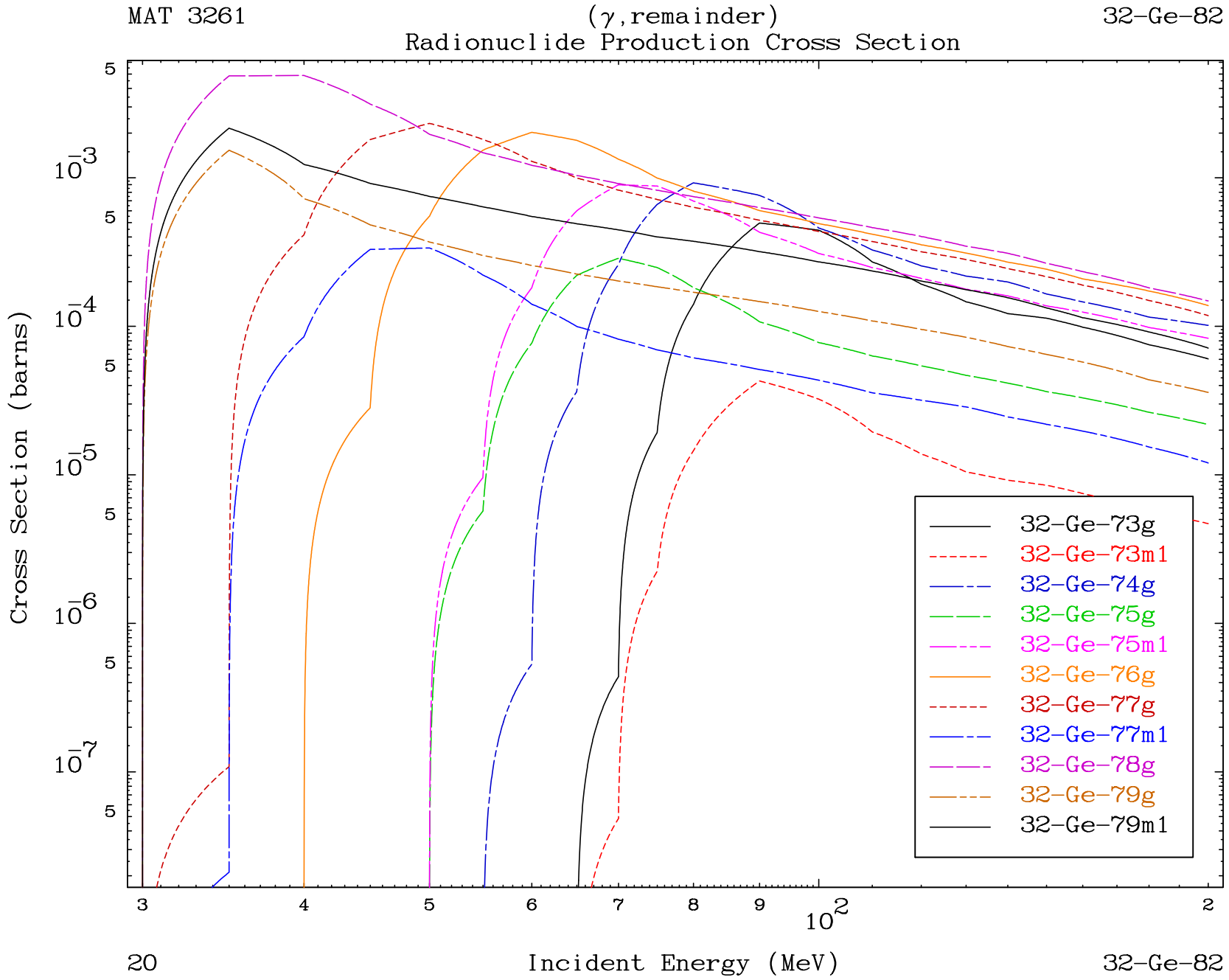

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
30-Zn-75g
30-Zn-76g
30-Zn-77g
30-Zn-77m1
30-Zn-78g
30-Zn-79g
30-Zn-80g
31-Ga-64g
31-Ga-65g
31-Ga-66g
31-Ga-67g

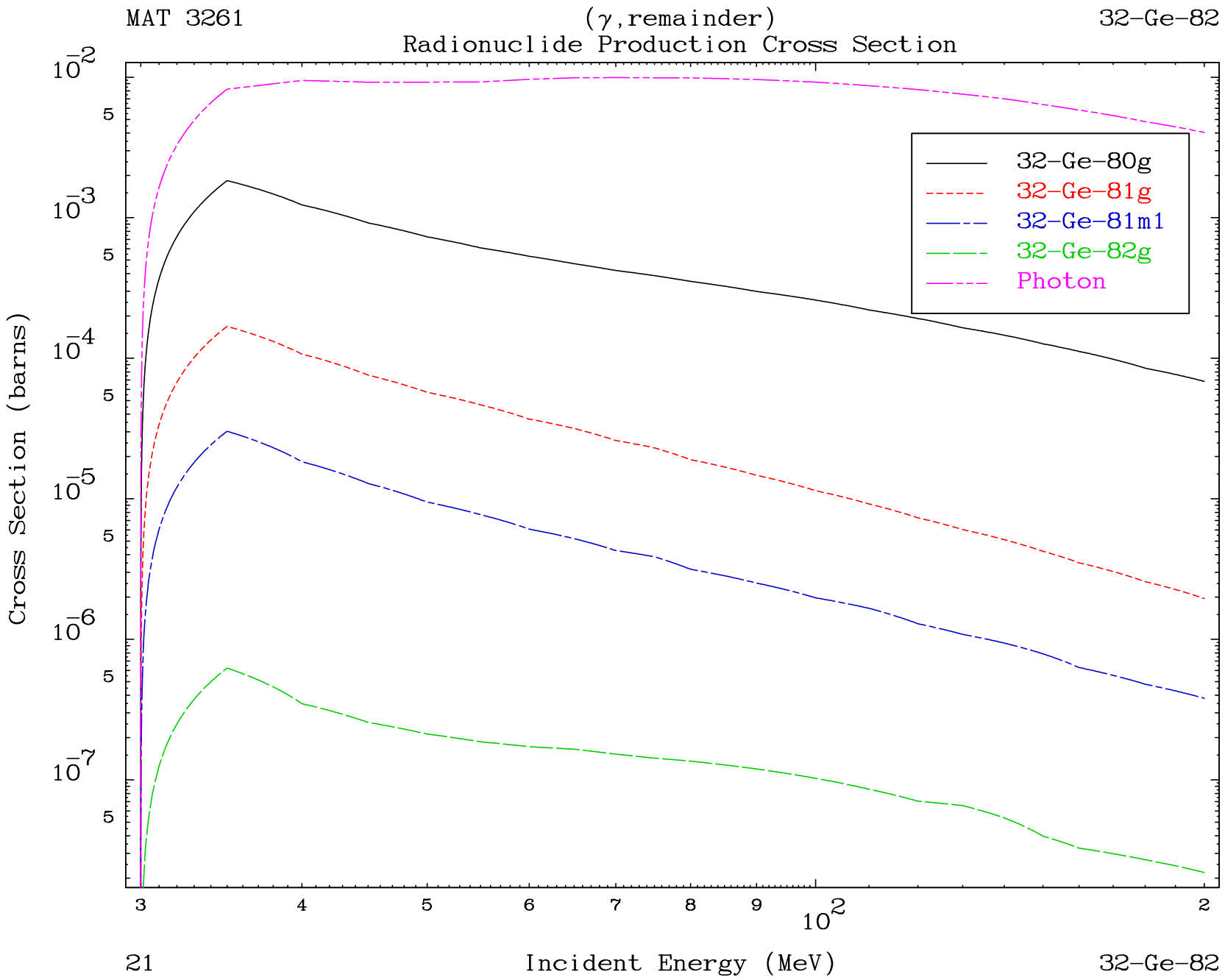
32-Ge-82

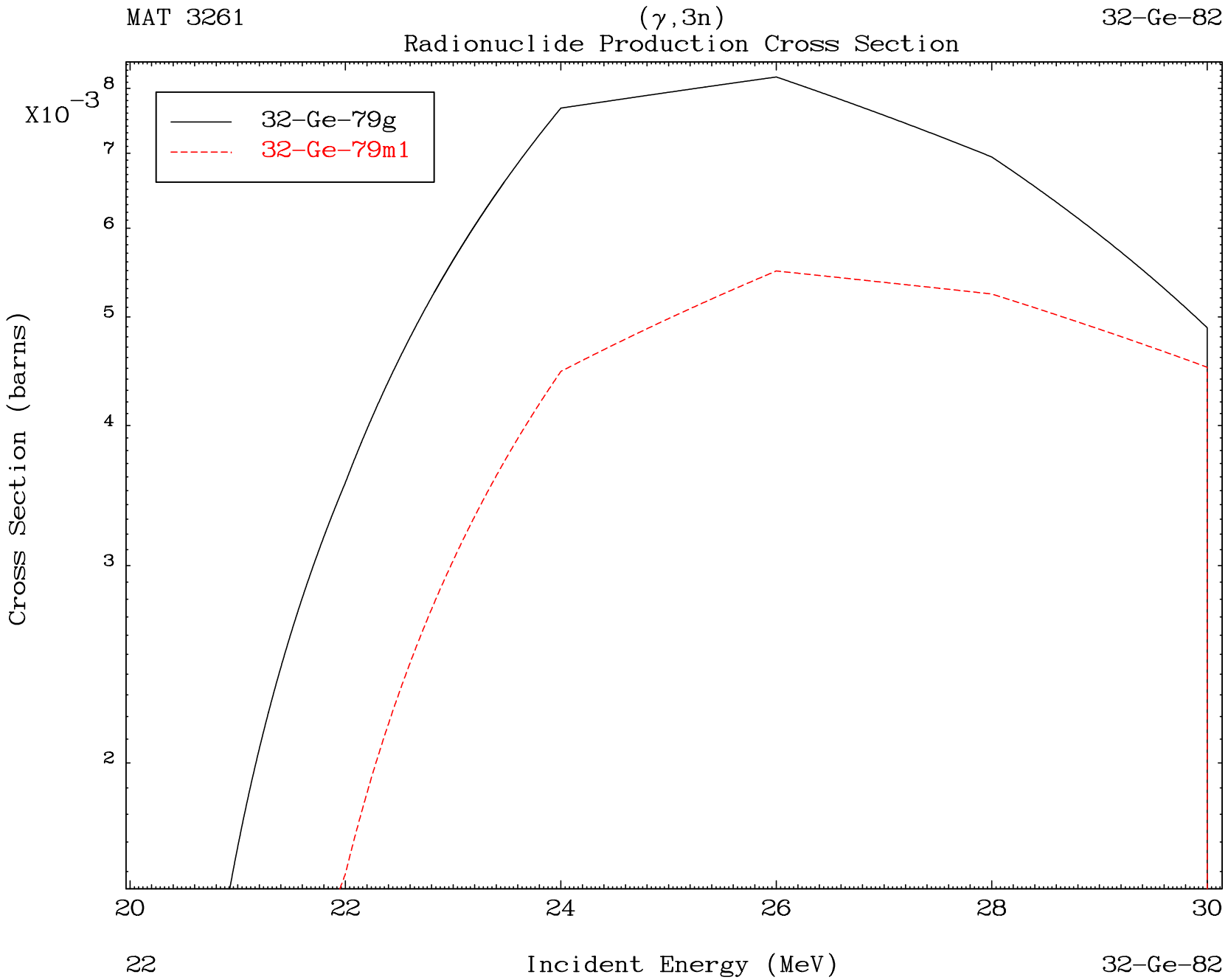

MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
31-Ga-68g
31-Ga-69g
31-Ga-70g
31-Ga-71g
31-Ga-72g
31-Ga-73g
31-Ga-74g
31-Ga-74m1
31-Ga-75g
31-Ga-76g
31-Ga-77g

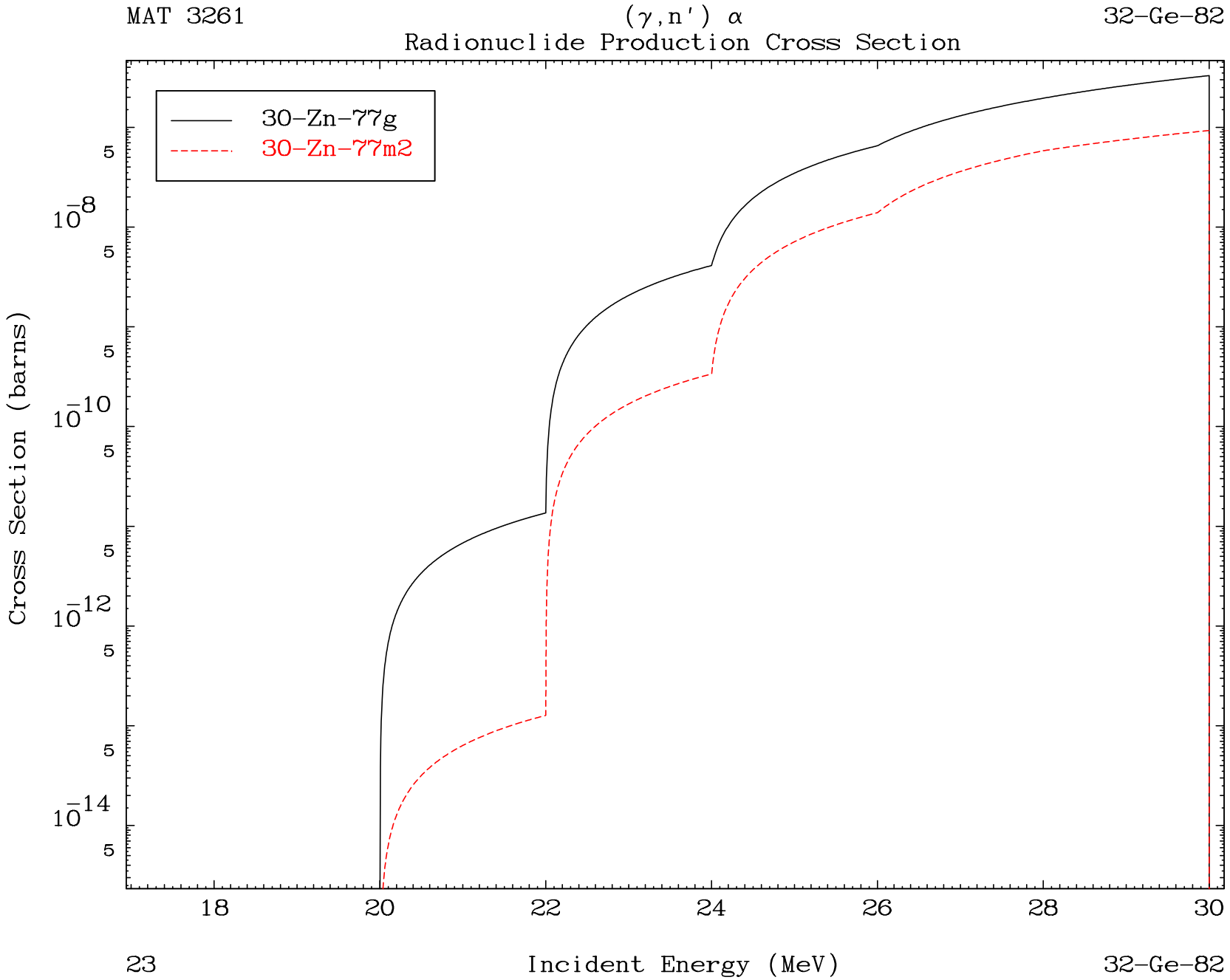
32-Ge-82


MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
31-Ga-78g
31-Ga-79g
31-Ga-80g
31-Ga-81g
32-Ge-66g
32-Ge-67g
32-Ge-68g
32-Ge-69g
32-Ge-70g
32-Ge-71g
32-Ge-72g
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
10^-8
3
4
5
6
7
8
9
10^2
2
19
Incident Energy (MeV)
32-Ge-82


MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-3
10-4
10-5
10-6
10-7
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
20
32-Ge-82
32-Ge-73g
32-Ge-73m1
32-Ge-74g
32-Ge-75g
32-Ge-75m1
32-Ge-76g
32-Ge-77g
32-Ge-77m1
32-Ge-78g
32-Ge-79g
32-Ge-79m1


MAT 3261
(γ,remainder)
32-Ge-82
Radionuclide Production Cross Section
Cross Section (barns)
10-2
5
10-3
5
10-4
5
10-5
5
10-6
5
10-7
5
32-Ge-80g
32-Ge-81g
32-Ge-81m1
32-Ge-82g
Photon
3
4
5
6
7
8
9
10 2
2
21
Incident Energy (MeV)
32-Ge-82


MAT 3261
(γ,3n)
32-Ge-82
Radionuclide Production Cross Section
X10-3
8
7
6
5
4
3
2
32-Ge-79g
32-Ge-79m1
Cross Section (barns)
20
22
24
26
28
30
22
Incident Energy (MeV)
32-Ge-82


MAT 3261
(γ,n') α
32-Ge-82
Radionuclide Production Cross Section
30-Zn-77g
30-Zn-77m2
Cross Section (barns)
10-8
10-10
10-12
10-14
5
18
20
22
24
26
28
30
23
Incident Energy (MeV)
32-Ge-82