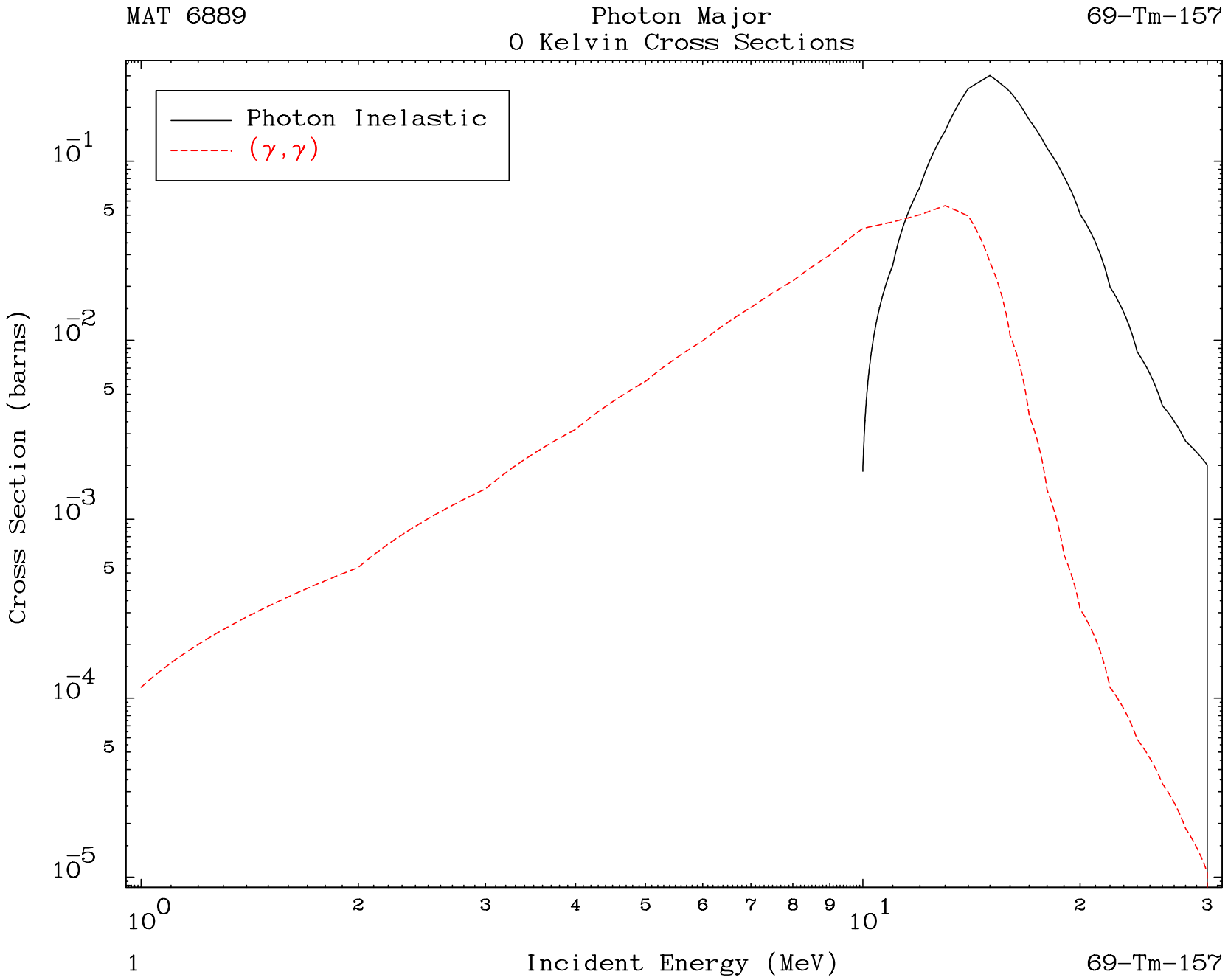
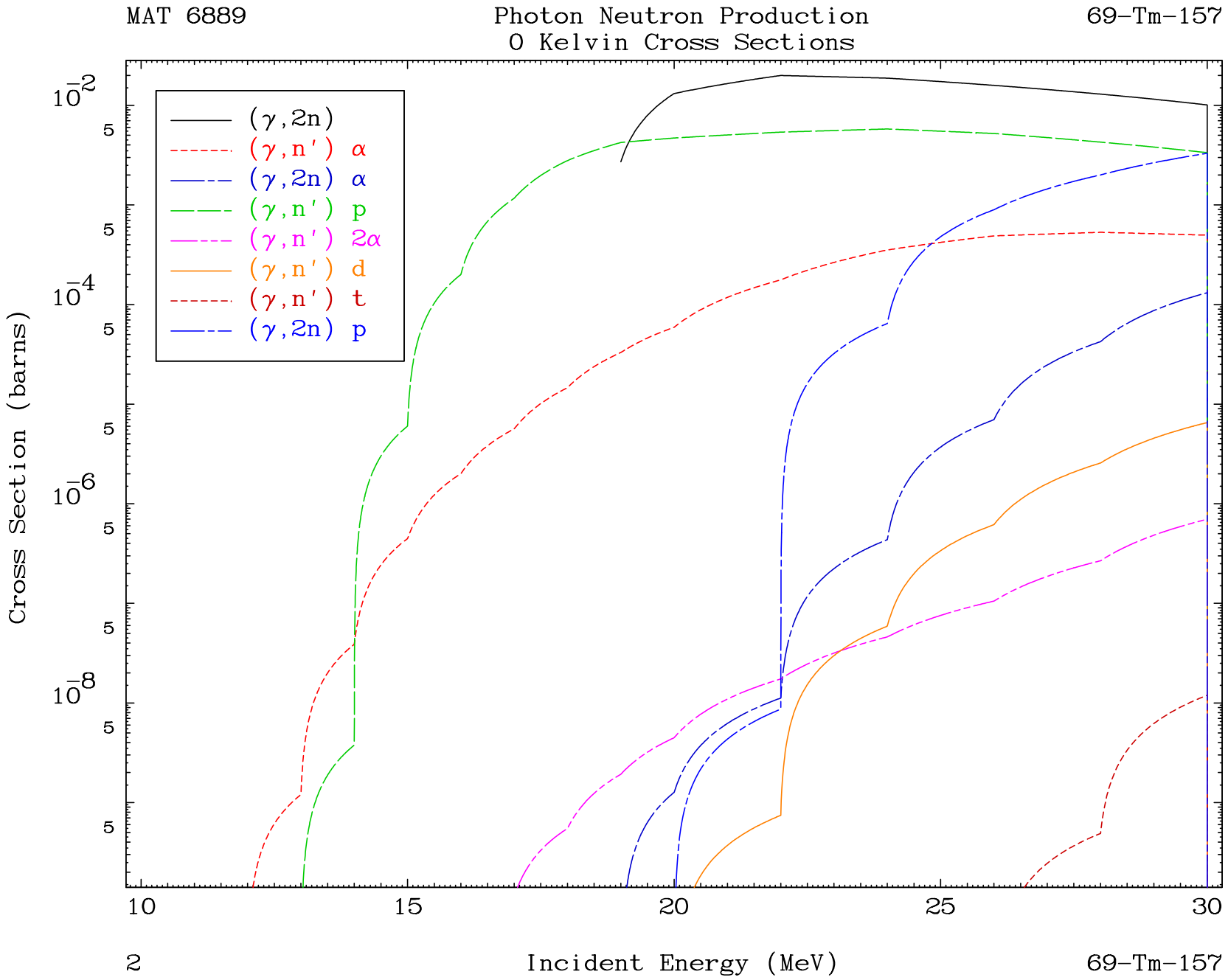
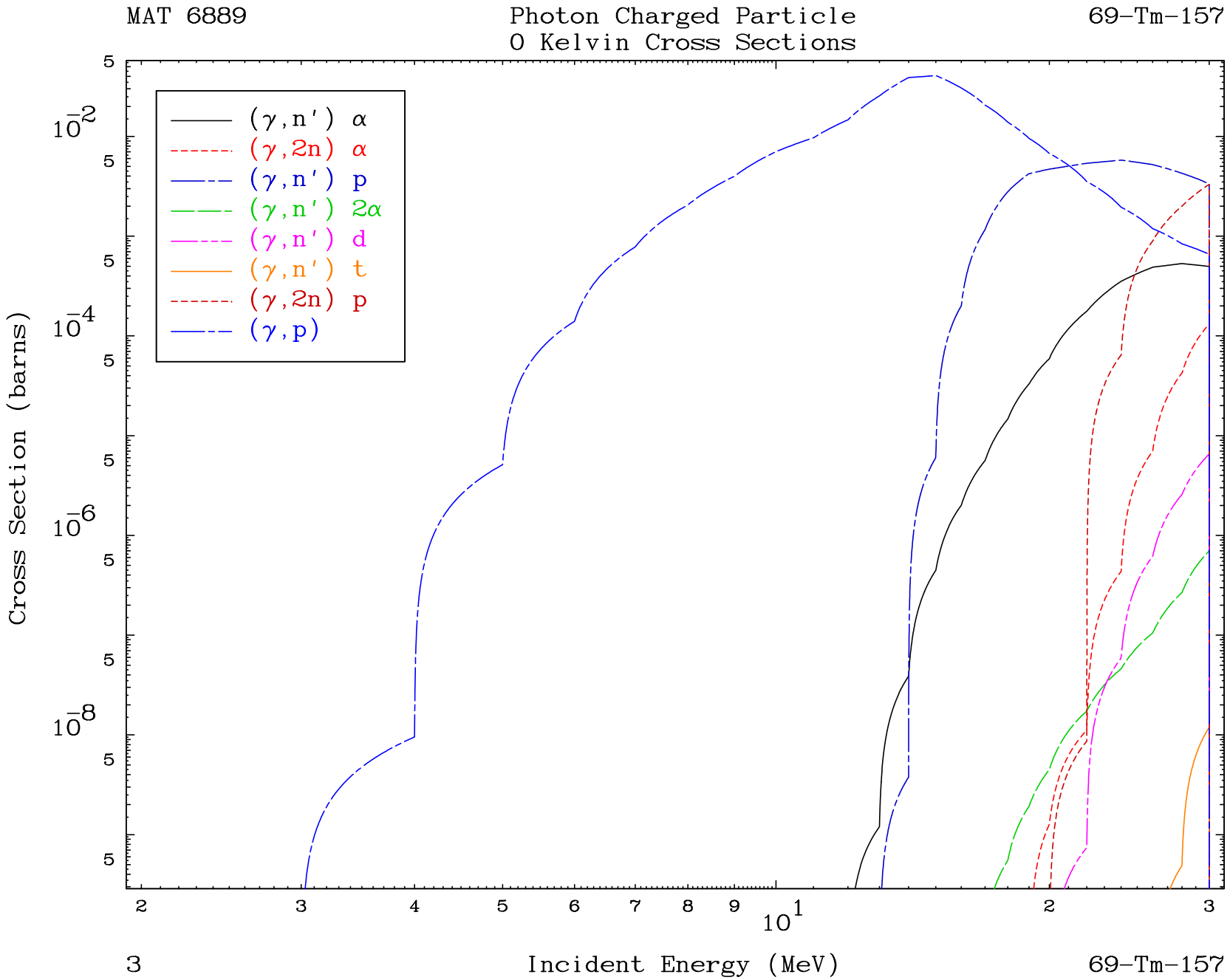
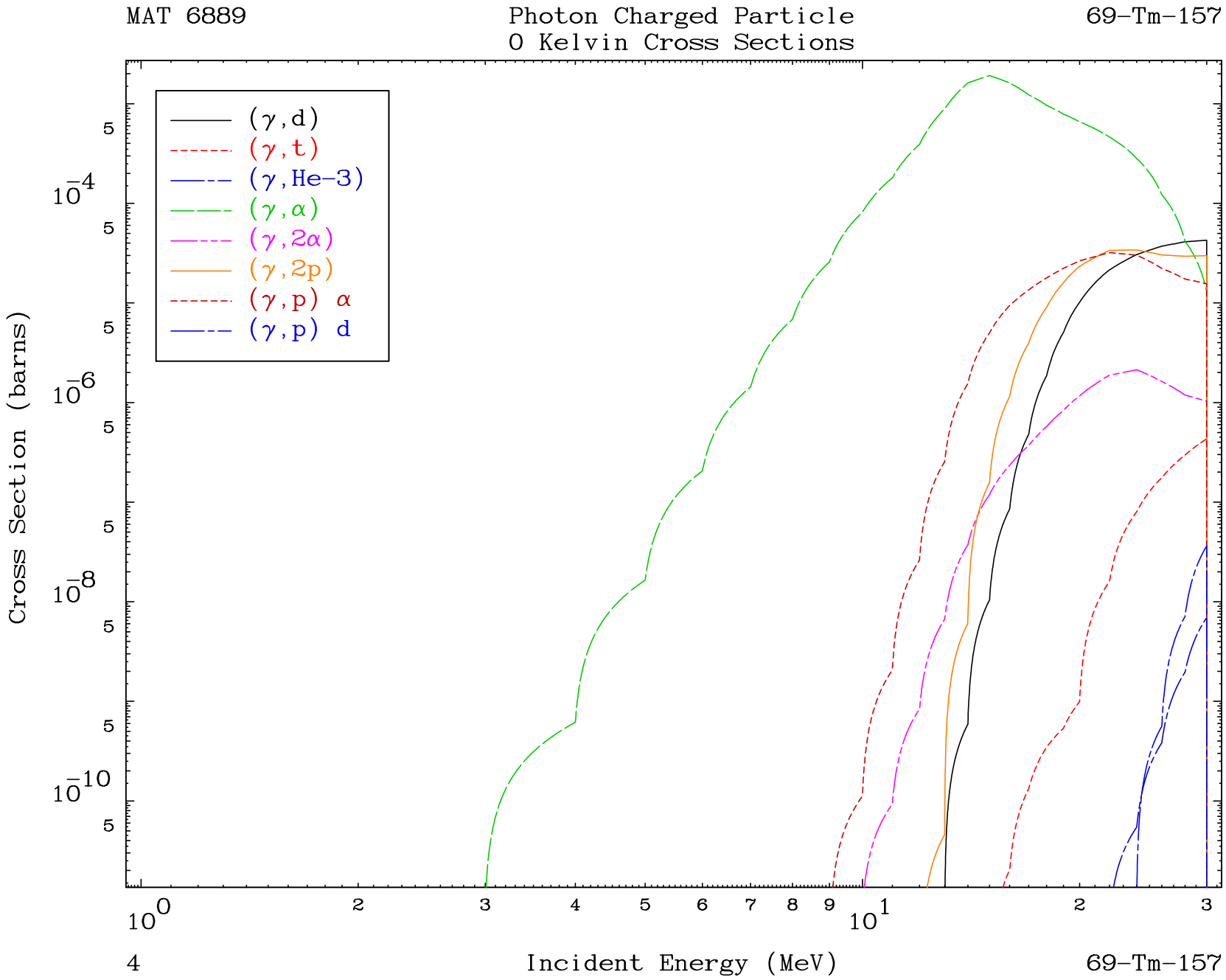
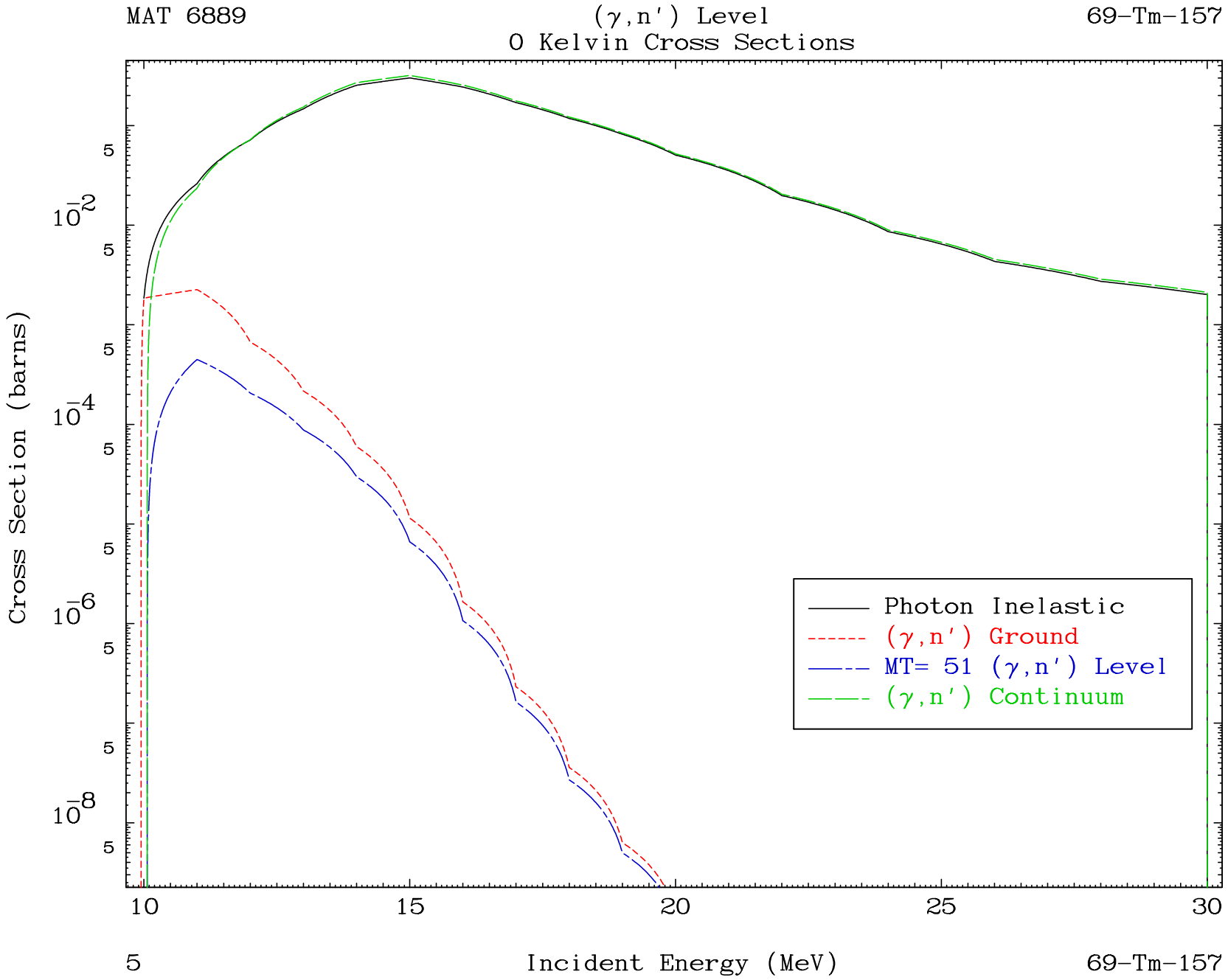
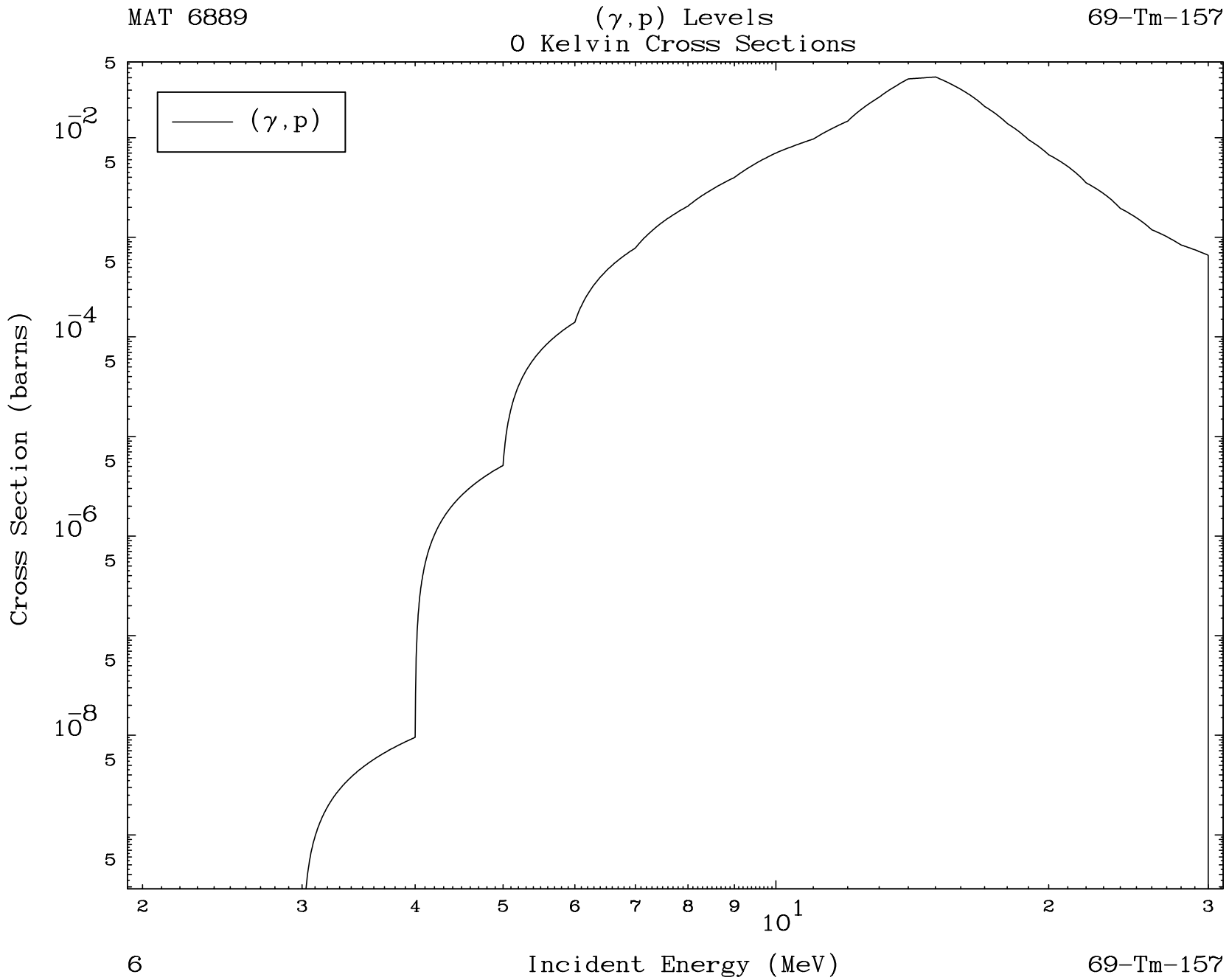

MAT 6889
Photon Major
69-Tm-157
0 Kelvin Cross Sections
Photon Inelastic
(γ,γ)
Cross Section (barns)
10-1
5
10-2
5
10-3
5
10-4
5
10-5
100
2
3
4
5
6
7
8
9
101
2
3
1
Incident Energy (MeV)
69-Tm-157

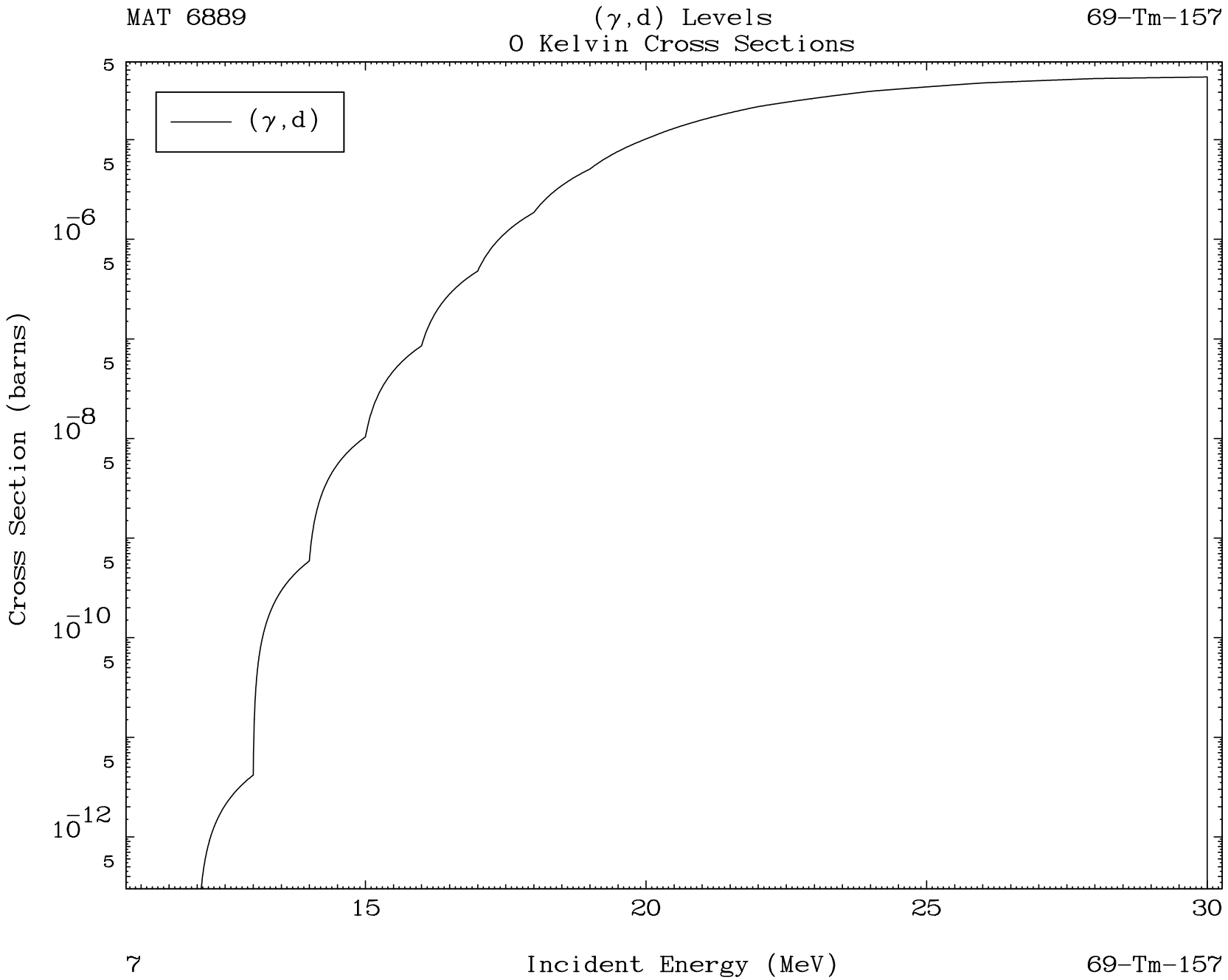

MAT 6889
Photon Neutron Production
0 Kelvin Cross Sections
69-Tm-157
(γ,2n)
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') 2α
(γ,n') d
(γ,n') t
(γ,2n) p
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
5
10
15
20
25
30
2
Incident Energy (MeV)
69-Tm-157

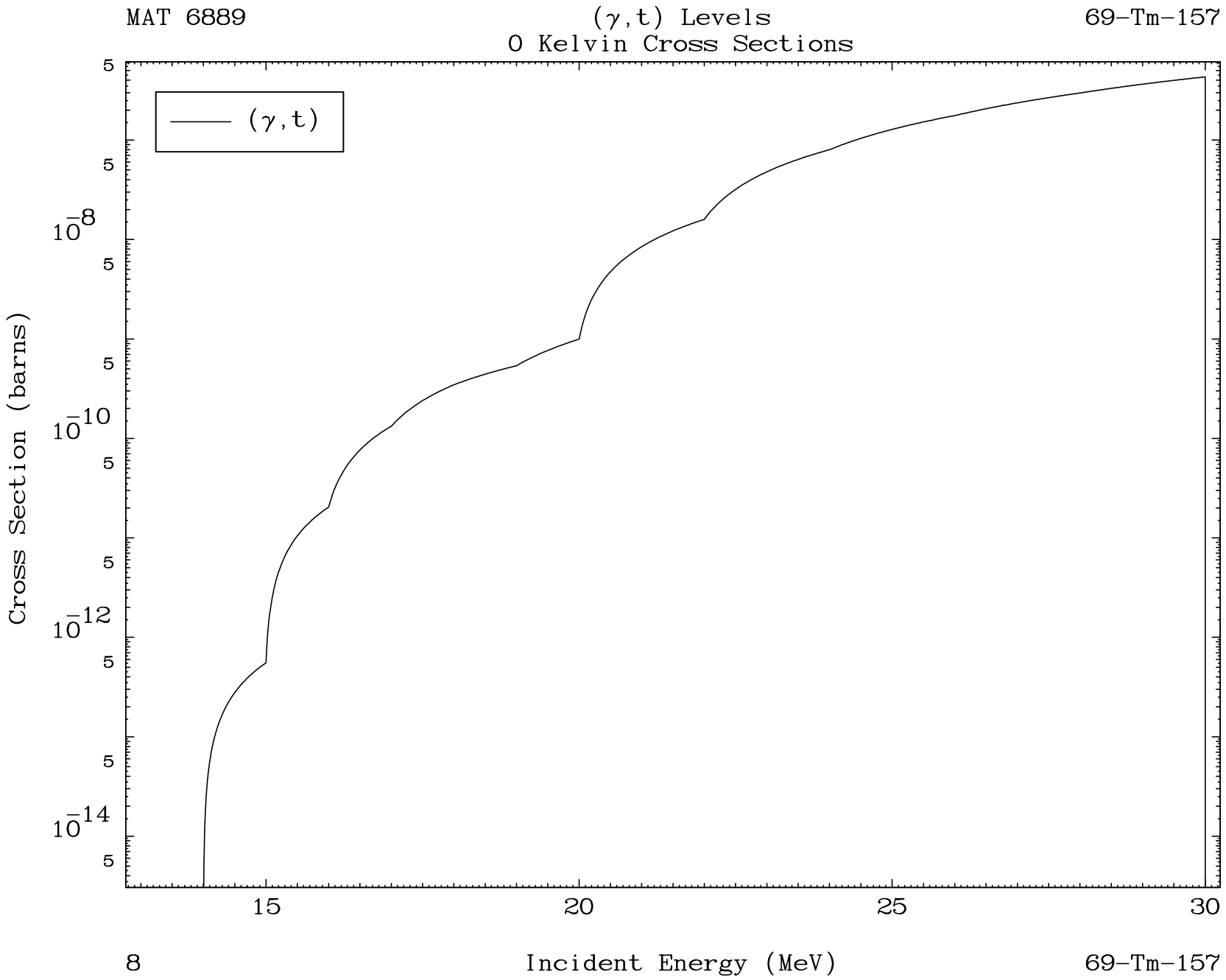

MAT 6889
Photon Charged Particle
0 Kelvin Cross Sections
69-Tm-157
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') 2α
(γ,n') d
(γ,n') t
(γ,2n) p
(γ,p)
Cross Section (barns)
Incident Energy (MeV)
3
69-Tm-157

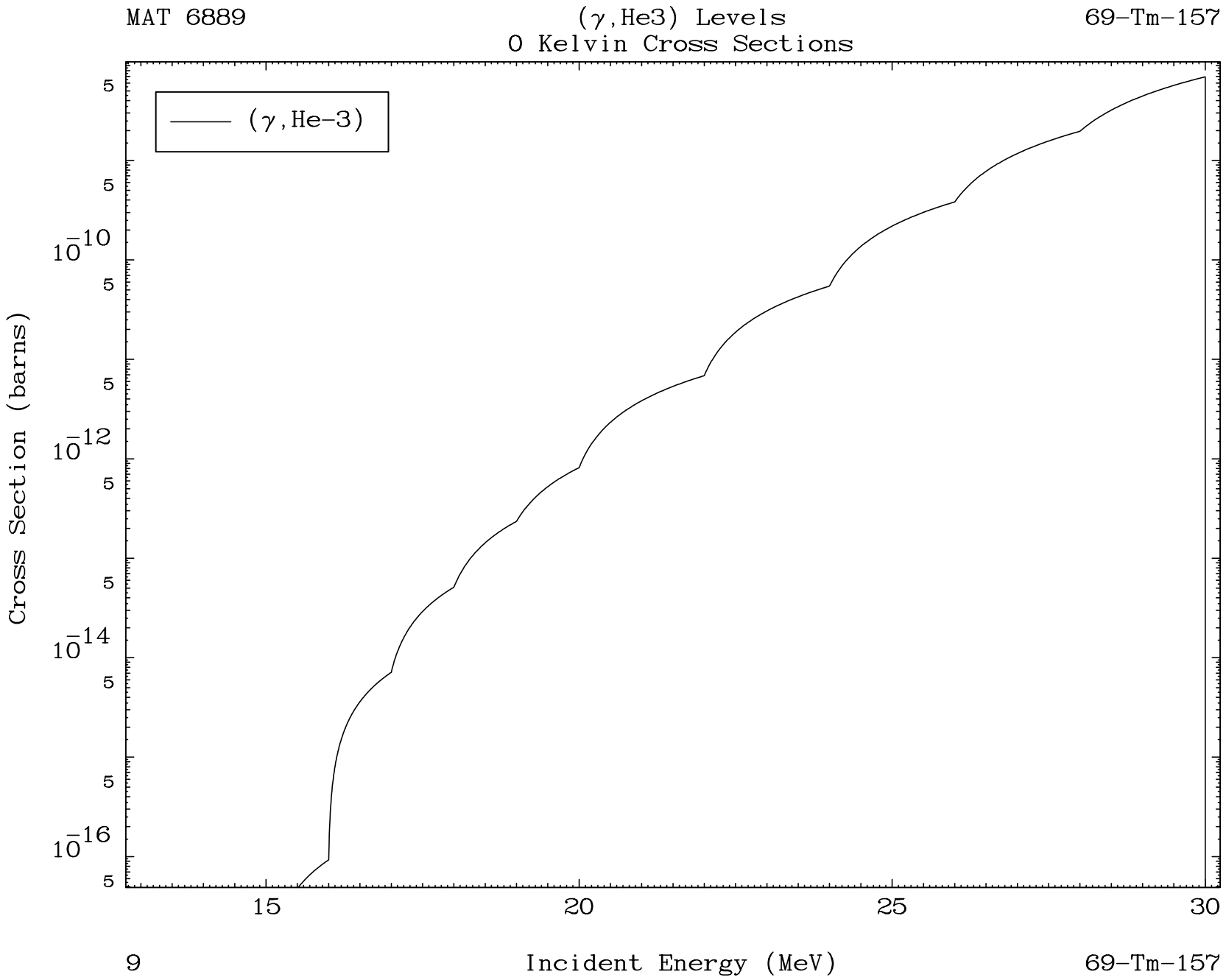

MAT 6889
Photon Charged Particle
0 Kelvin Cross Sections
69-Tm-157
(γ,d)
(γ,t)
(γ,He-3)
(γ,α)
(γ,2α)
(γ,2p)
(γ,p) α
(γ,p) d
Cross Section (barns)
10-4
10-6
10-8
10-10
100
101
Incident Energy (MeV)
69-Tm-157
4

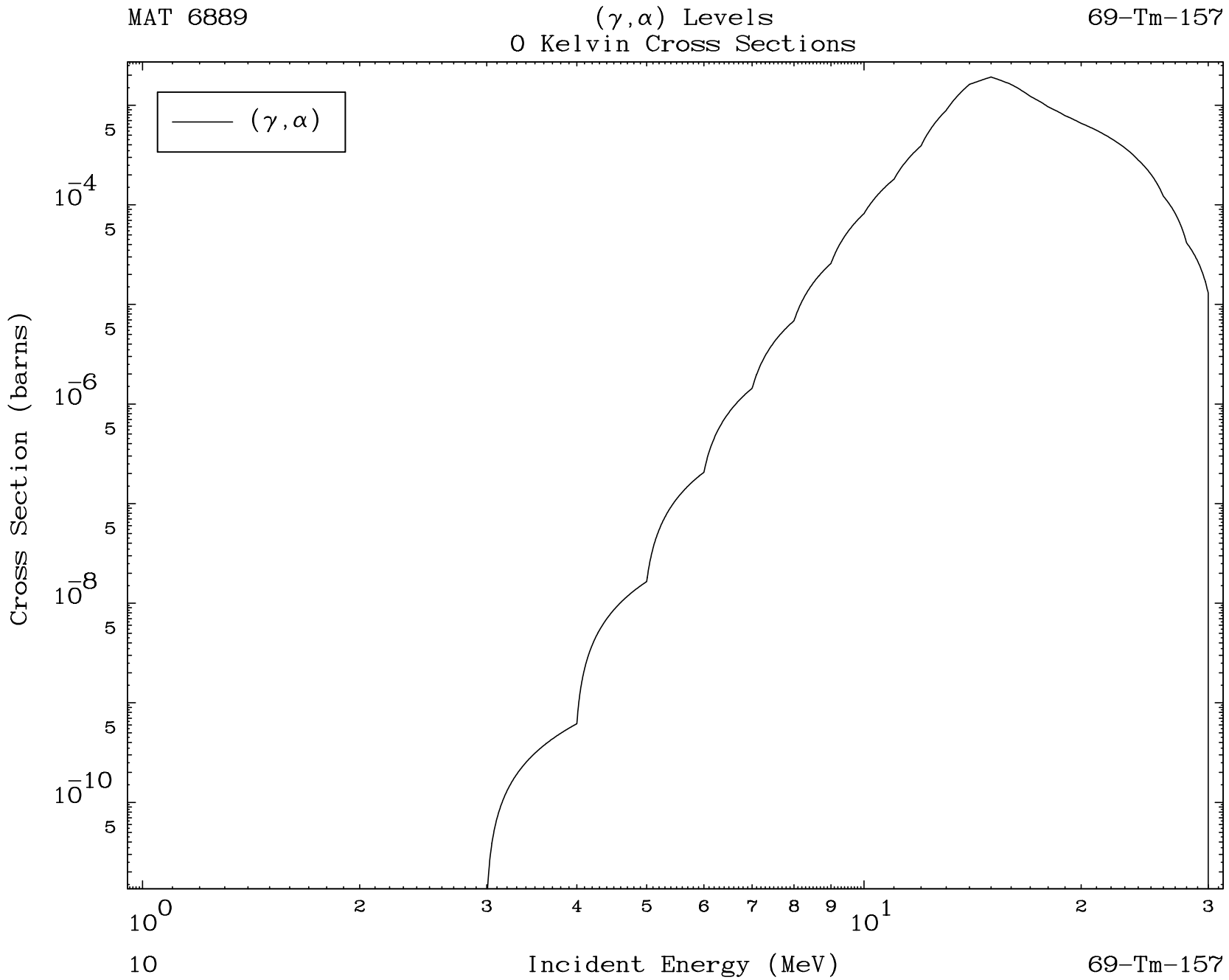

MAT 6889
(γ,n') Level
69-Tm-157
0 Kelvin Cross Sections
Cross Section (barns)
10-2
10-4
10-6
10-8
5
10
15
20
25
30
Incident Energy (MeV)
69-Tm-157
Photon Inelastic
(γ,n') Ground
MT= 51 (γ,n') Level
(γ,n') Continuum

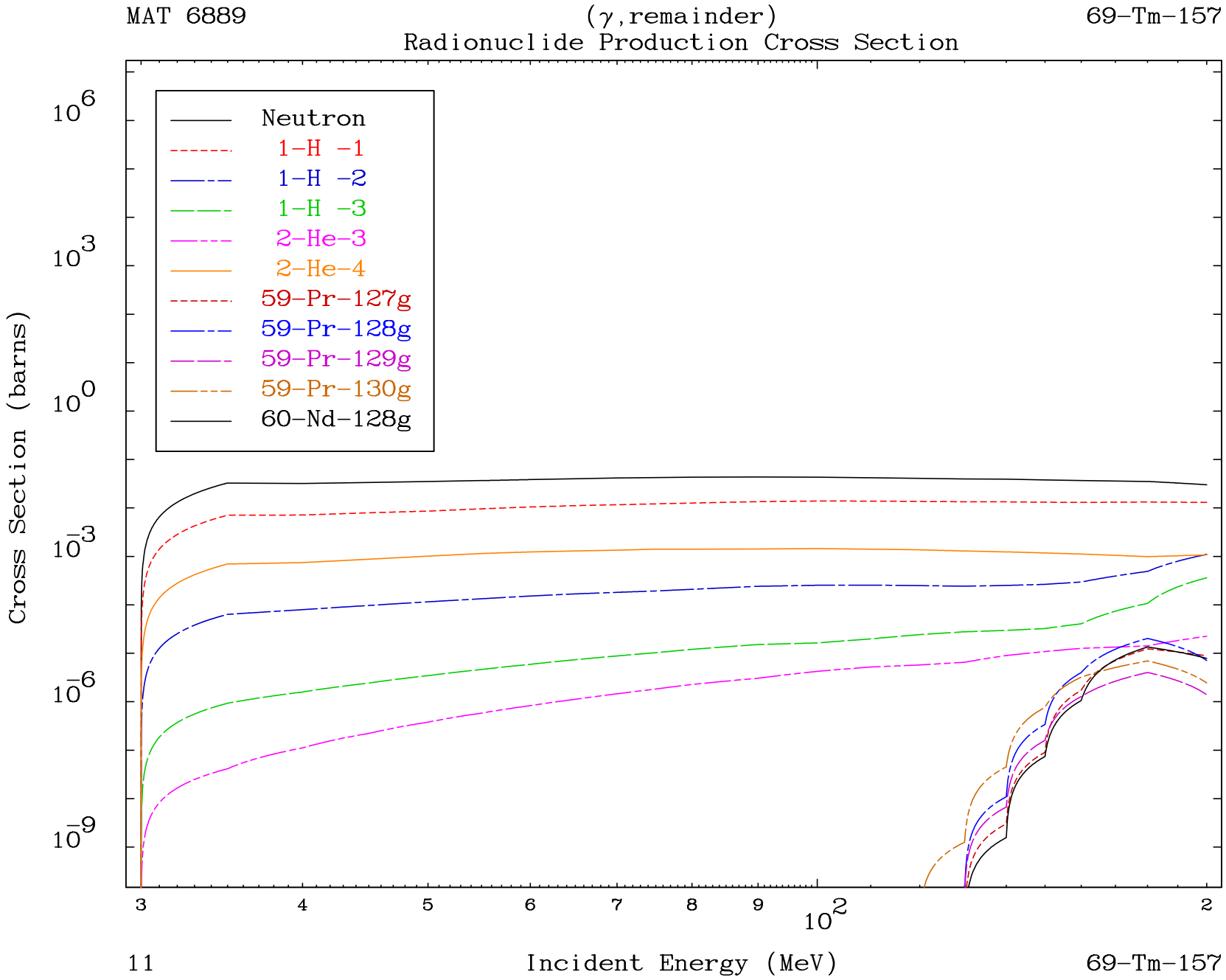

MAT 6889
(γ,p) Levels
69-Tm-157
0 Kelvin Cross Sections
(γ,p)
Cross Section (barns)
10-2
10-4
10-6
10-8
2
3
4
5
6
7
8
9
101
2
3
Incident Energy (MeV)
6
69-Tm-157

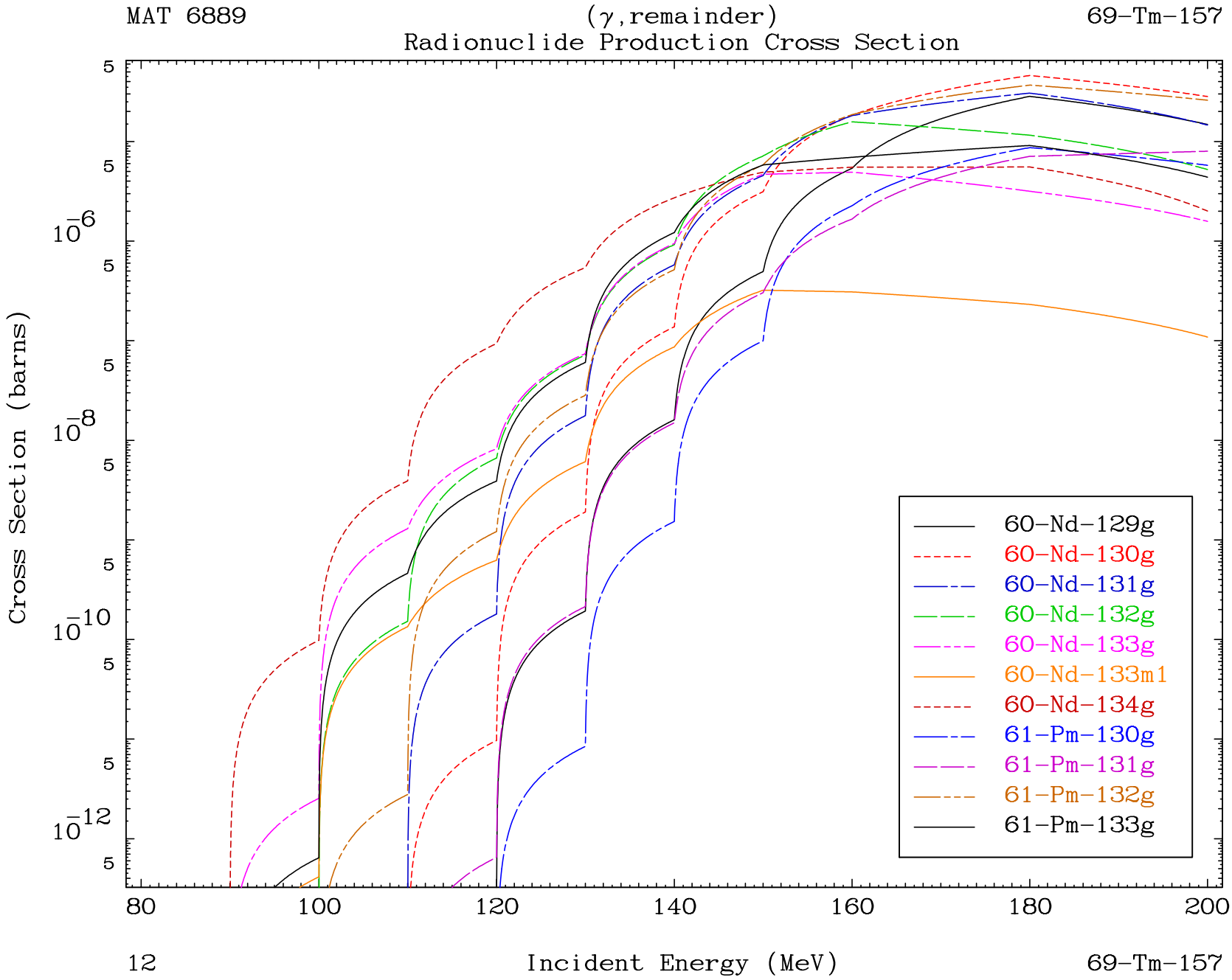

MAT 6889
(γ,d) Levels
69-Tm-157
0 Kelvin Cross Sections
(γ,d)
Cross Section (barns)
10-6
10-8
10-10
10-12
5
15
20
25
30
7
Incident Energy (MeV)
69-Tm-157

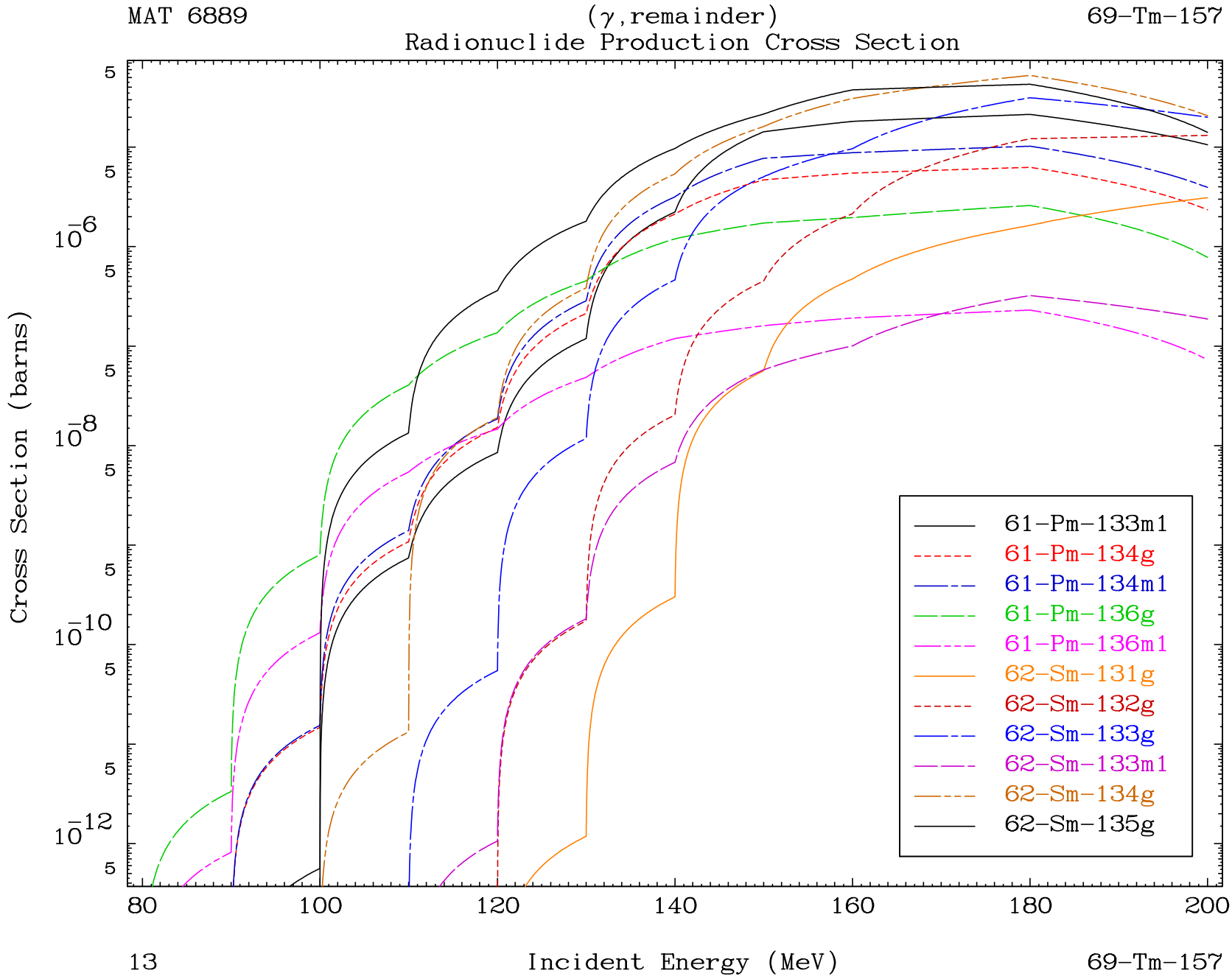

MAT 6889
(γ,t) Levels
69-Tm-157
0 Kelvin Cross Sections
(γ,t)
Cross Section (barns)
10-8
10-10
10-12
10-14
5
15
20
25
30
8
Incident Energy (MeV)
69-Tm-157

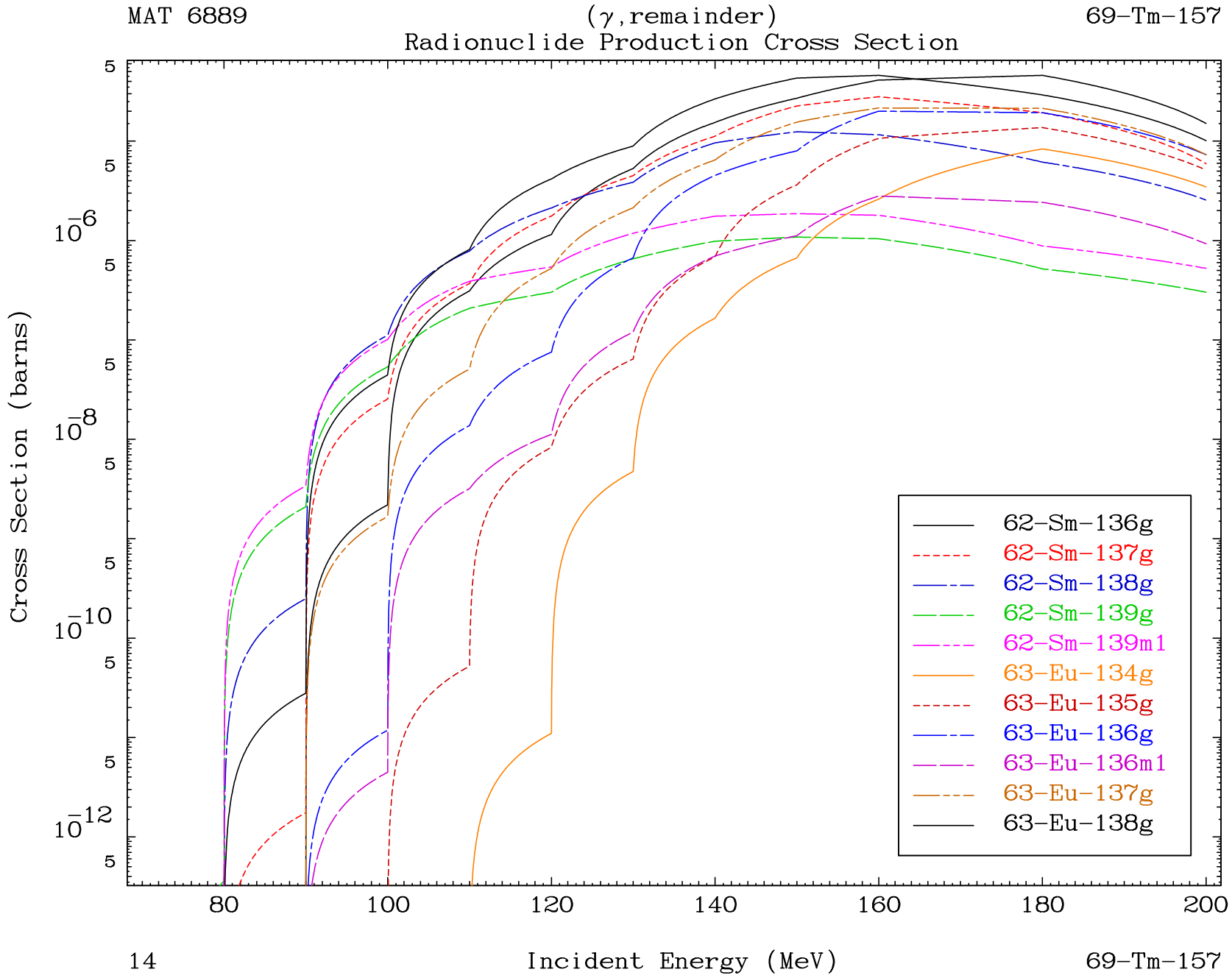

MAT 6889
(γ,He3) Levels
69-Tm-157
0 Kelvin Cross Sections
(γ,He-3)
Cross Section (barns)
10^-10
10^-12
10^-14
10^-16
5
15
20
25
30
Incident Energy (MeV)
9
69-Tm-157

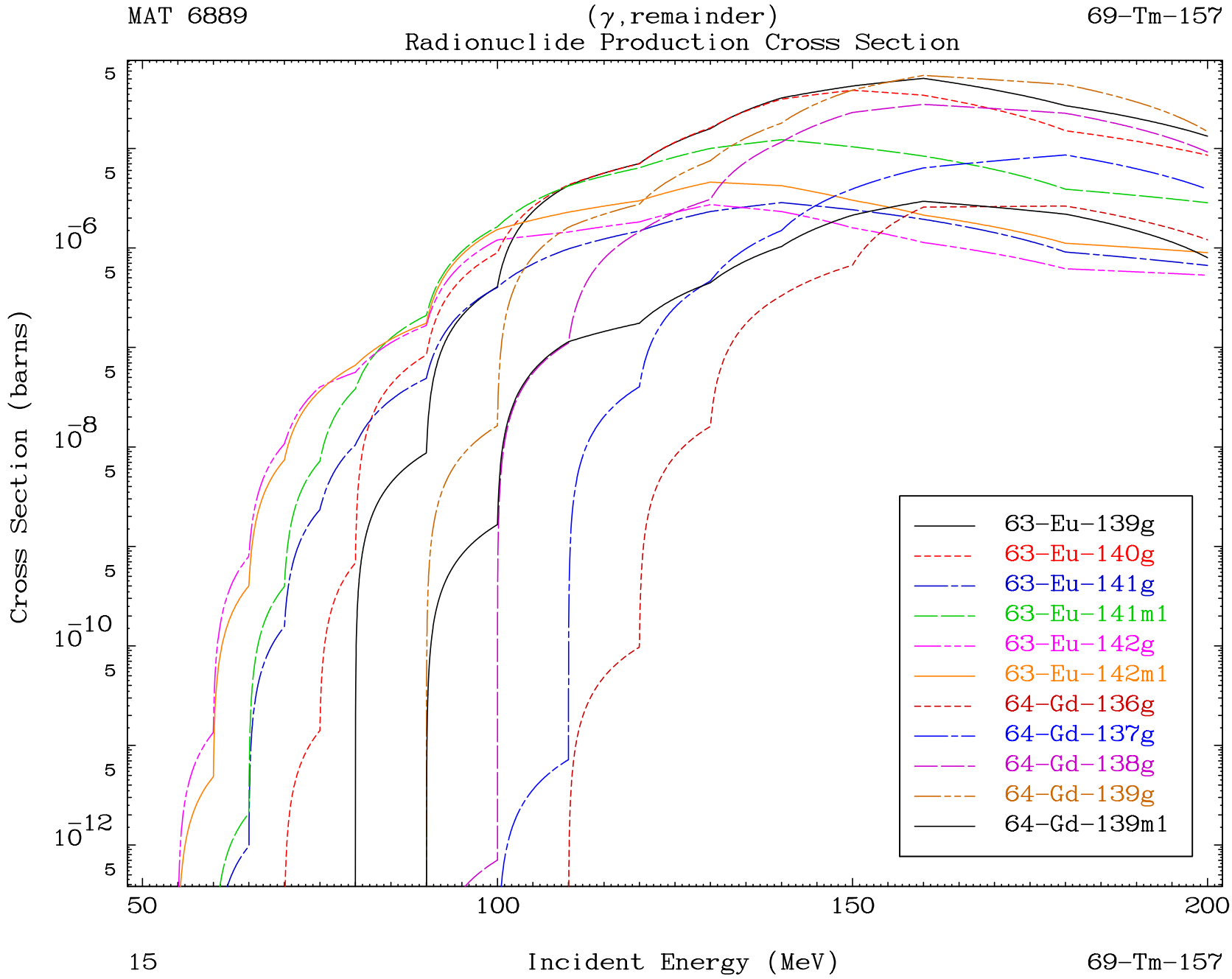

MAT 6889
(γ,α) Levels
69-Tm-157
0 Kelvin Cross Sections
(γ,α)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
10^0
2
3
4
5
6
7
8
9
10^1
2
3
10
Incident Energy (MeV)
69-Tm-157

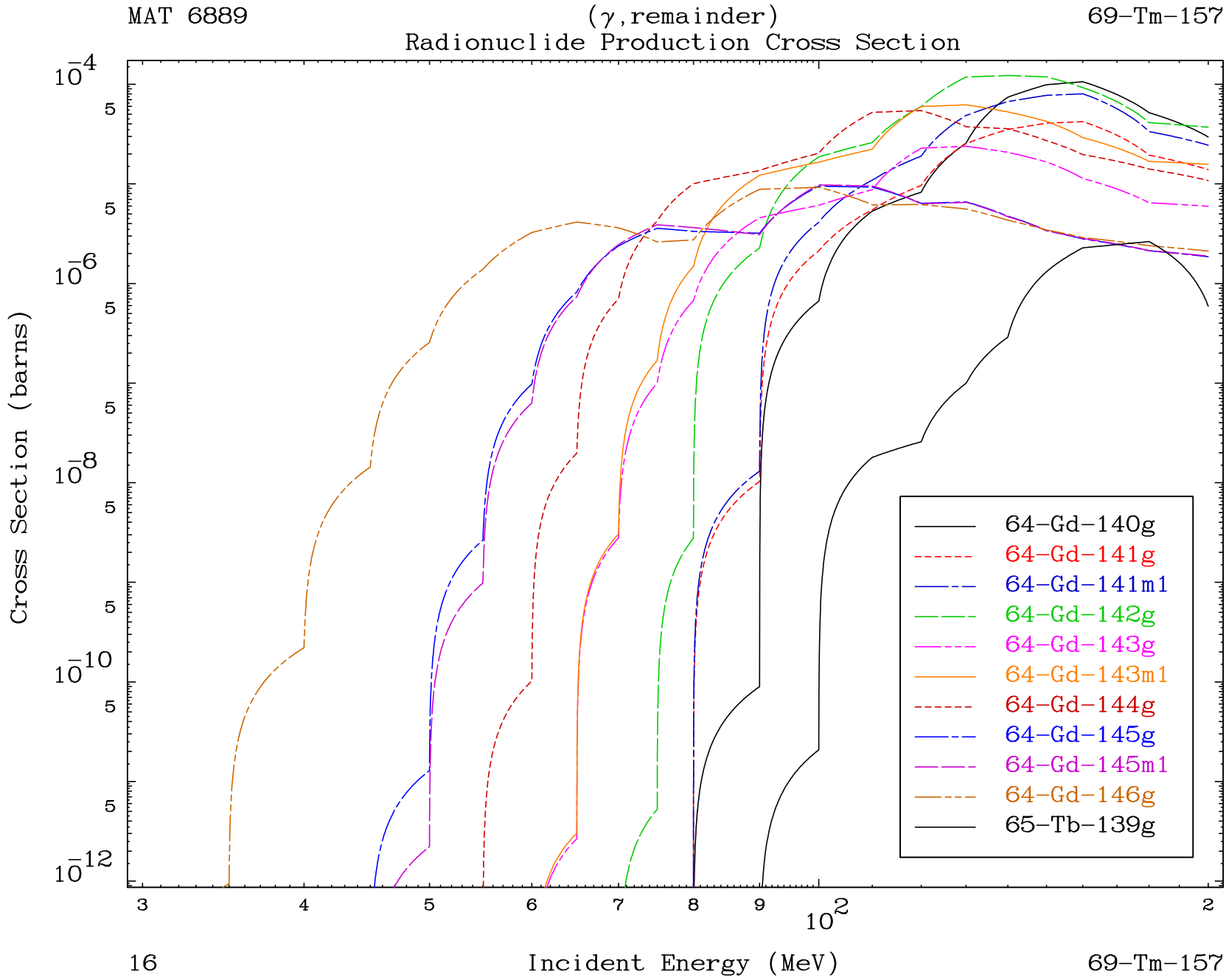

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
59-Pr-127g
59-Pr-128g
59-Pr-129g
59-Pr-130g
60-Nd-128g
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-9
3
4
5
6
7
8
9
10^2
2
11
Incident Energy (MeV)
69-Tm-157

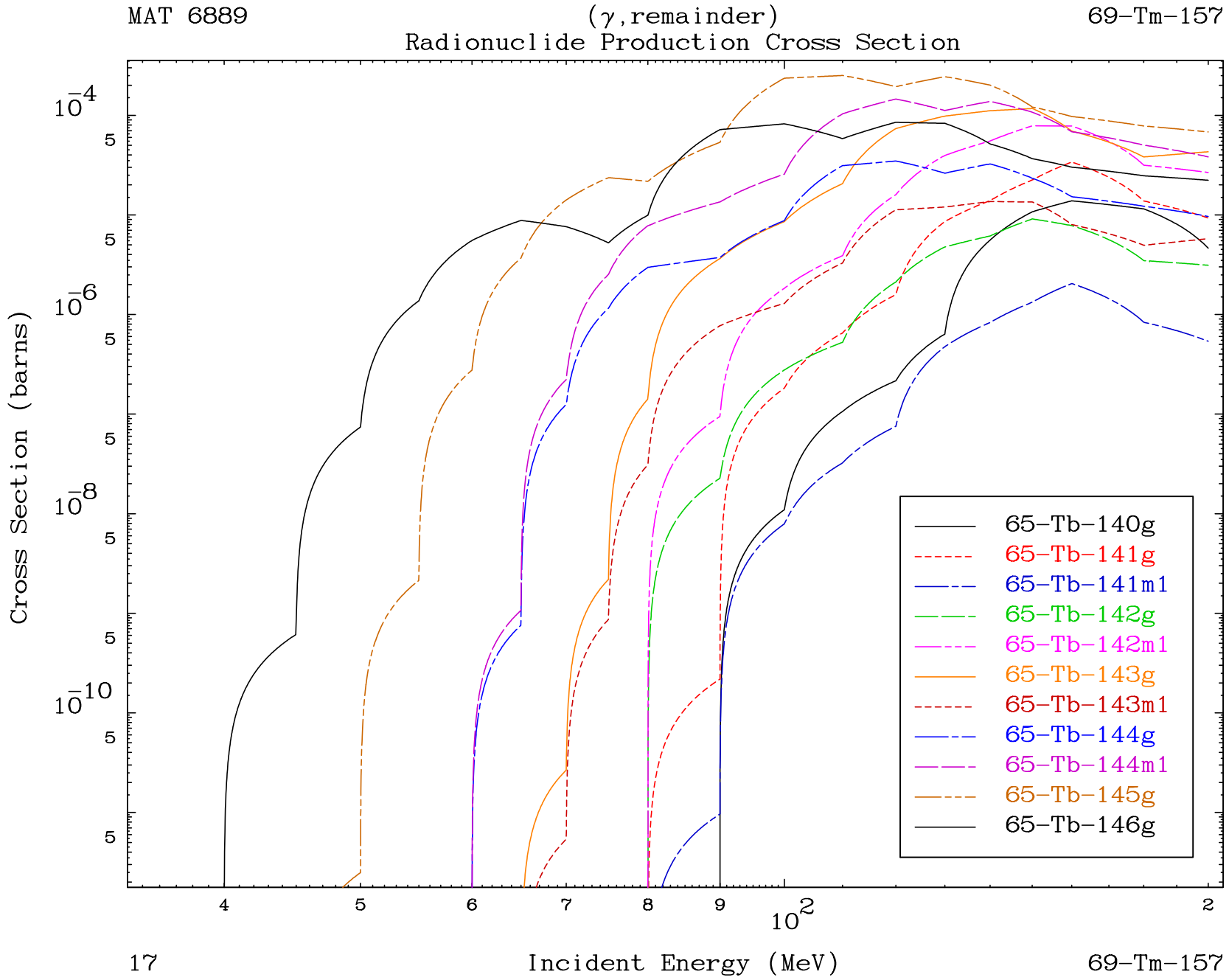

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
80
100
120
140
160
180
200
12
Incident Energy (MeV)
69-Tm-157
60-Nd-129g
60-Nd-130g
60-Nd-131g
60-Nd-132g
60-Nd-133g
60-Nd-133m1
60-Nd-134g
61-Pm-130g
61-Pm-131g
61-Pm-132g
61-Pm-133g

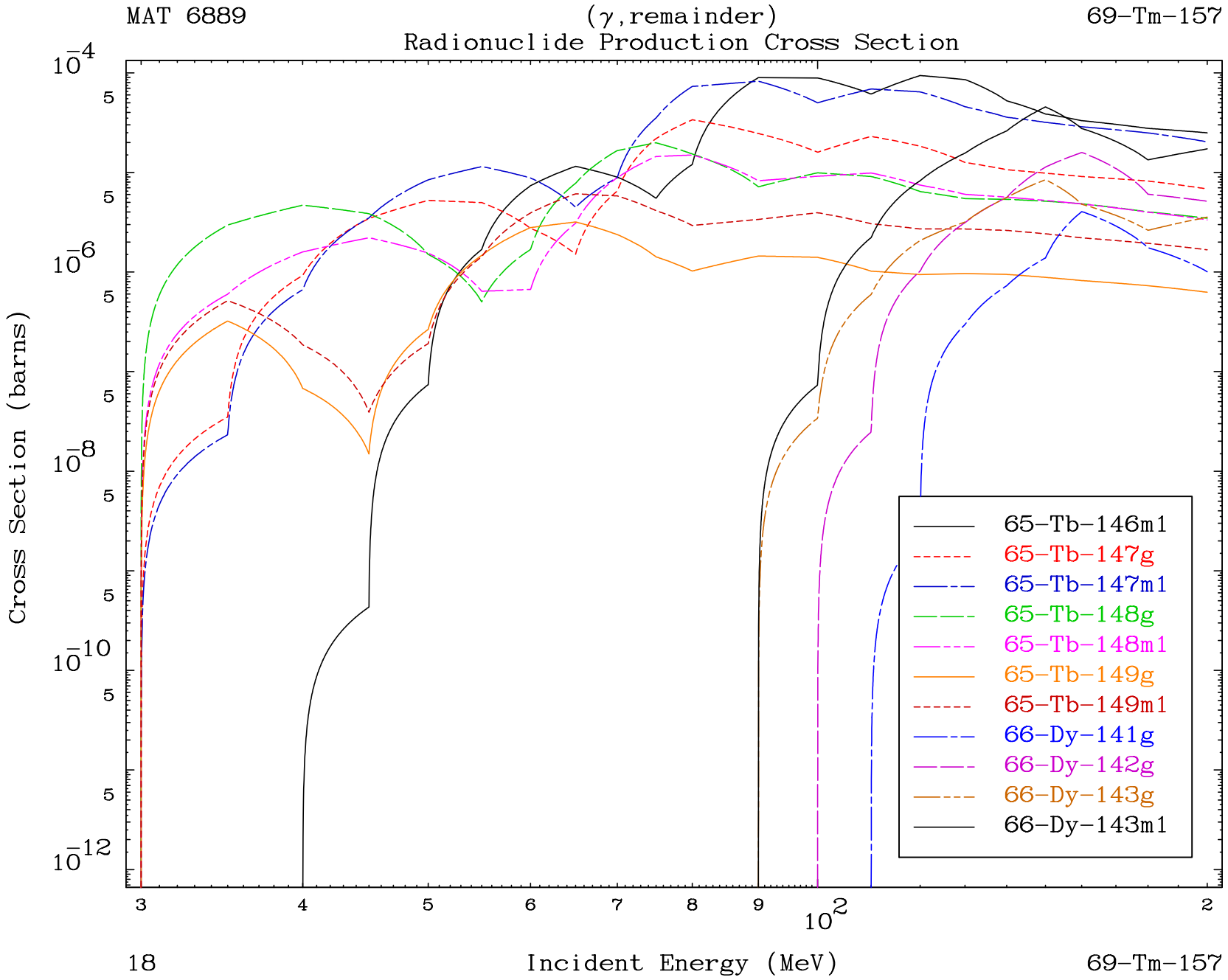

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
5
80
100
120
140
160
180
200
Incident Energy (MeV)
61-Pm-133m1
61-Pm-134g
61-Pm-134m1
61-Pm-136g
61-Pm-136m1
62-Sm-131g
62-Sm-132g
62-Sm-133g
62-Sm-133m1
62-Sm-134g
62-Sm-135g

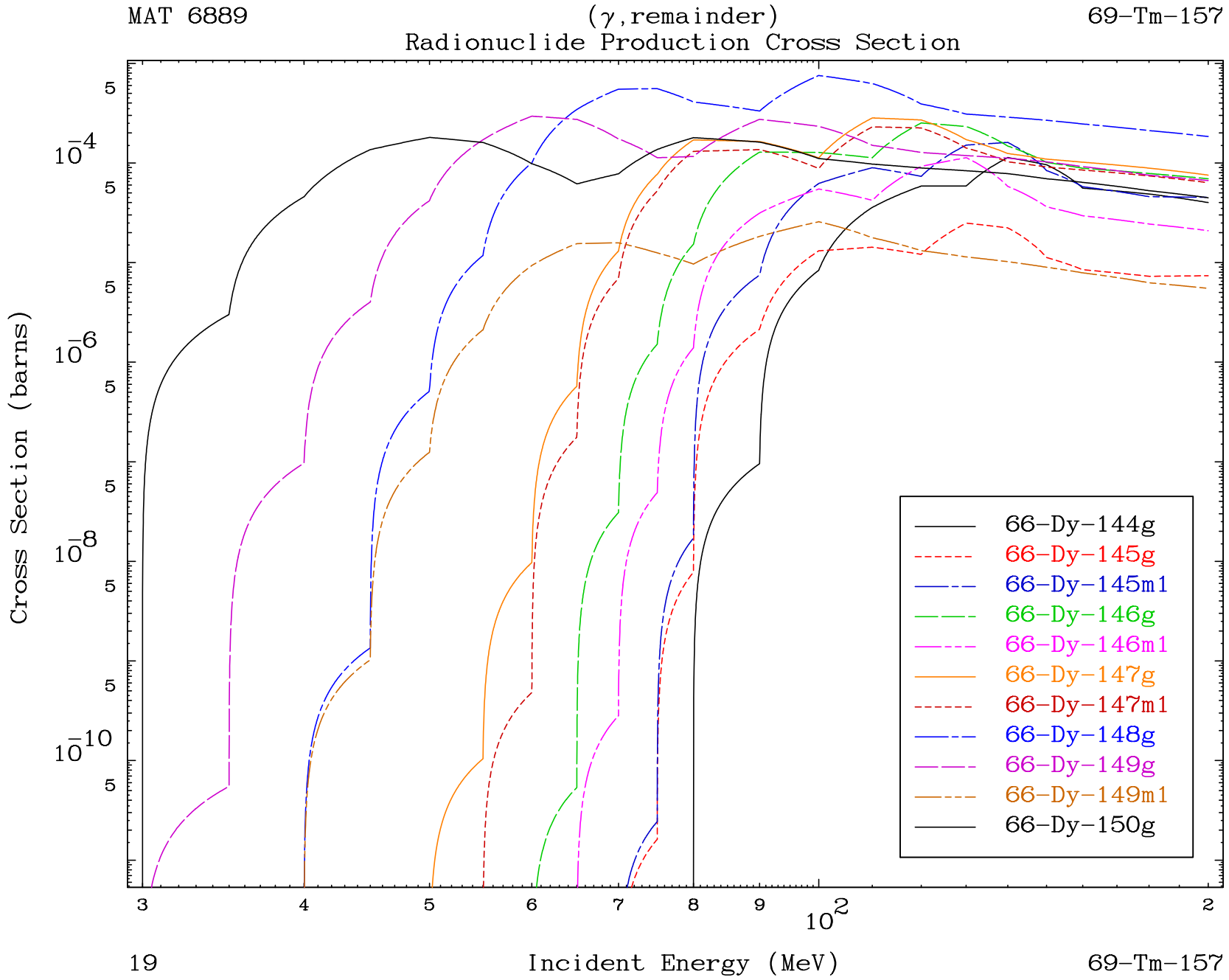

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
80
100
120
140
160
180
200
Incident Energy (MeV)
62-Sm-136g
62-Sm-137g
62-Sm-138g
62-Sm-139g
62-Sm-139m1
63-Eu-134g
63-Eu-135g
63-Eu-136g
63-Eu-136m1
63-Eu-137g
63-Eu-138g

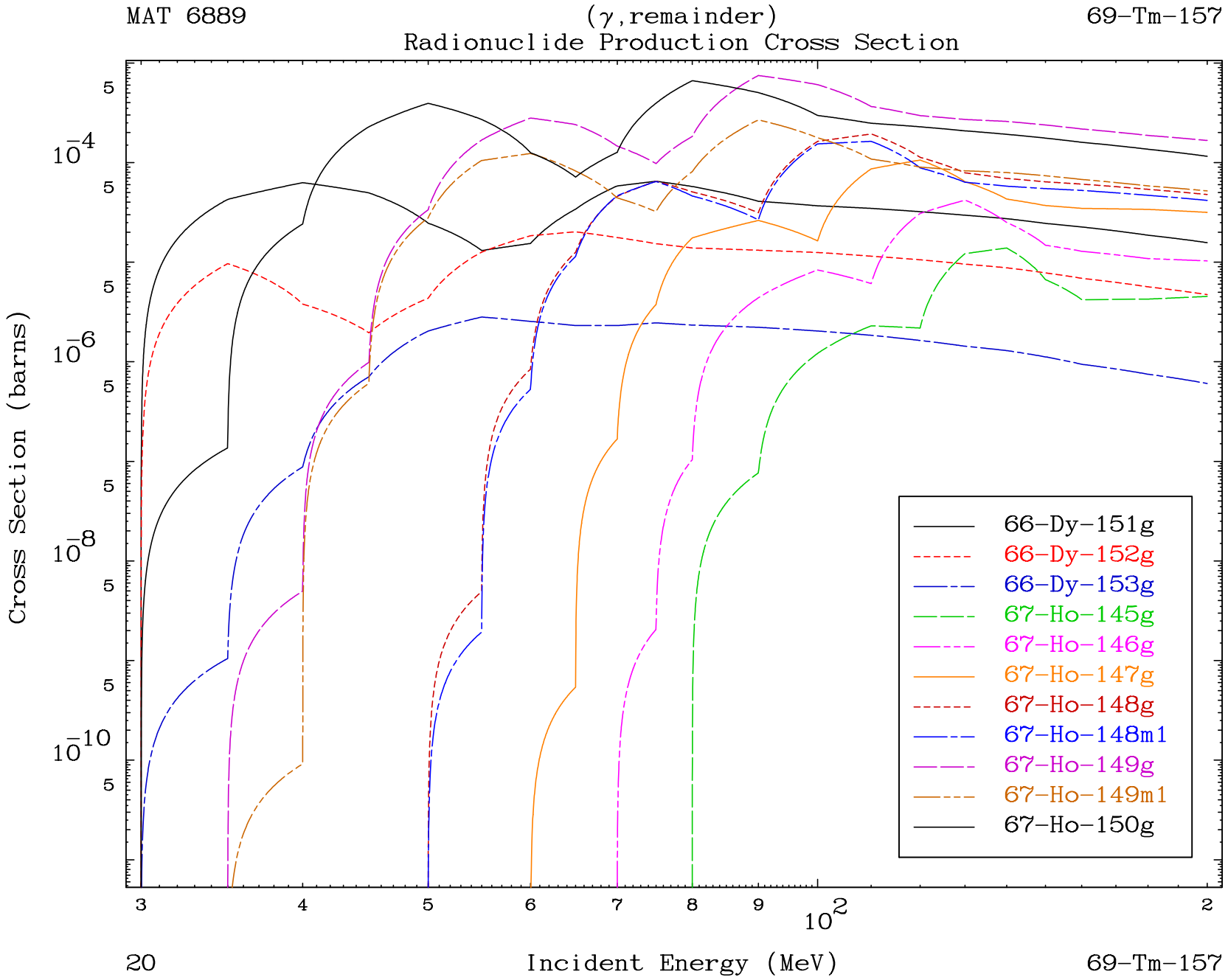

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
5
50
100
150
200
15
Incident Energy (MeV)
69-Tm-157
63-Eu-139g
63-Eu-140g
63-Eu-141g
63-Eu-141m1
63-Eu-142g
63-Eu-142m1
64-Gd-136g
64-Gd-137g
64-Gd-138g
64-Gd-139g
64-Gd-139m1

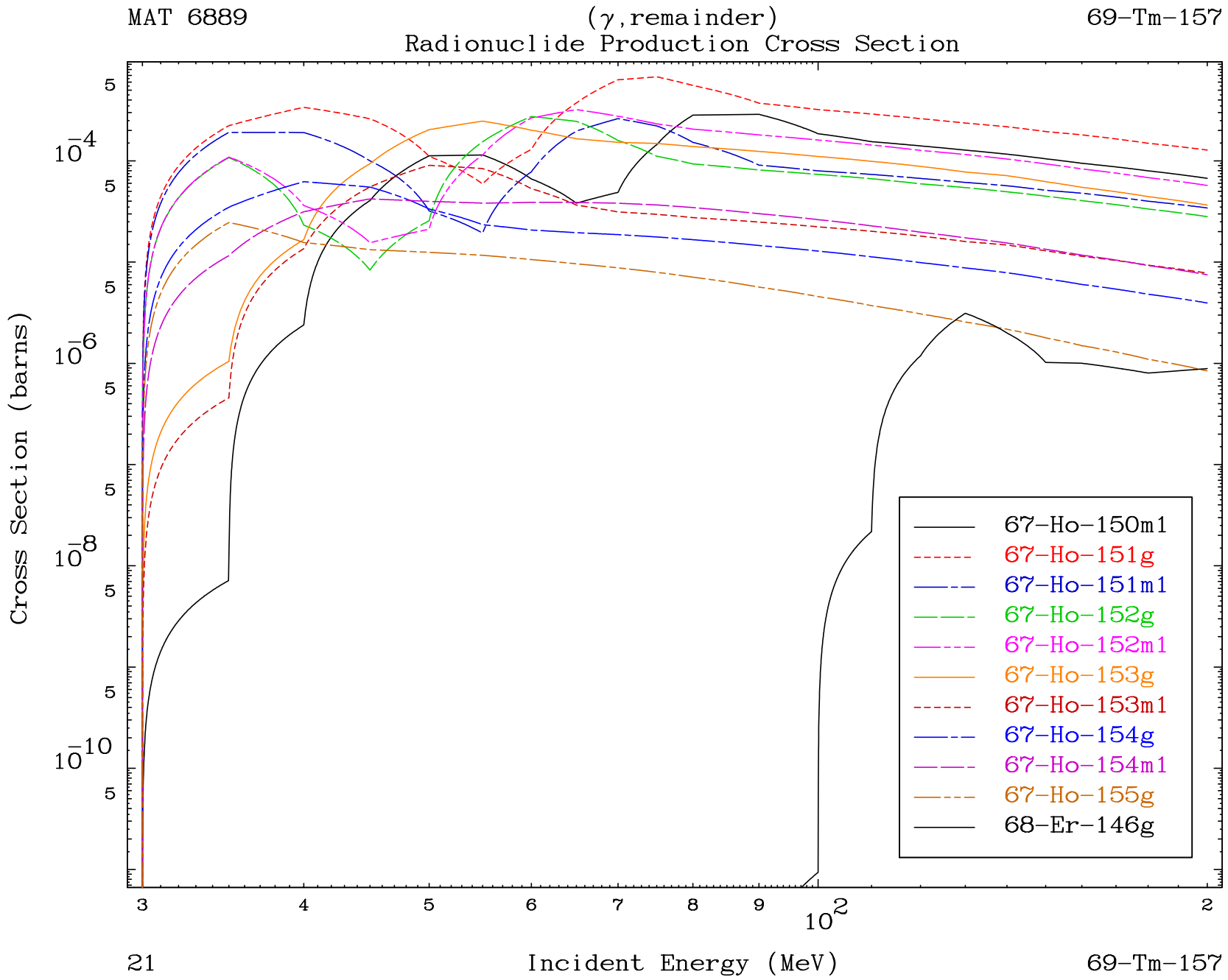

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
64-Gd-140g
64-Gd-141g
64-Gd-141m1
64-Gd-142g
64-Gd-143g
64-Gd-143m1
64-Gd-144g
64-Gd-145g
64-Gd-145m1
64-Gd-146g
65-Tb-139g

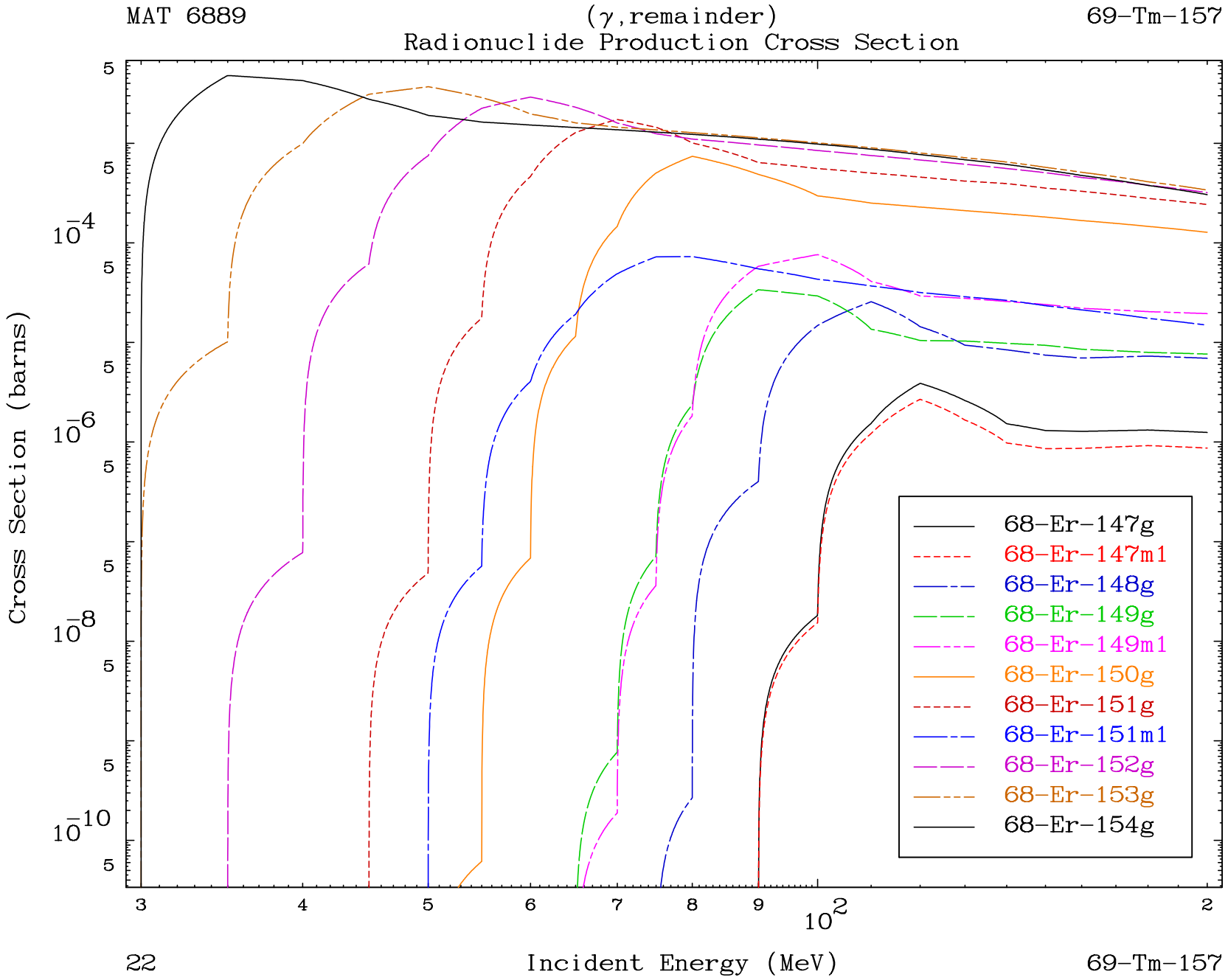

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
65-Tb-140g
65-Tb-141g
65-Tb-141m1
65-Tb-142g
65-Tb-142m1
65-Tb-143g
65-Tb-143m1
65-Tb-144g
65-Tb-144m1
65-Tb-145g
65-Tb-146g

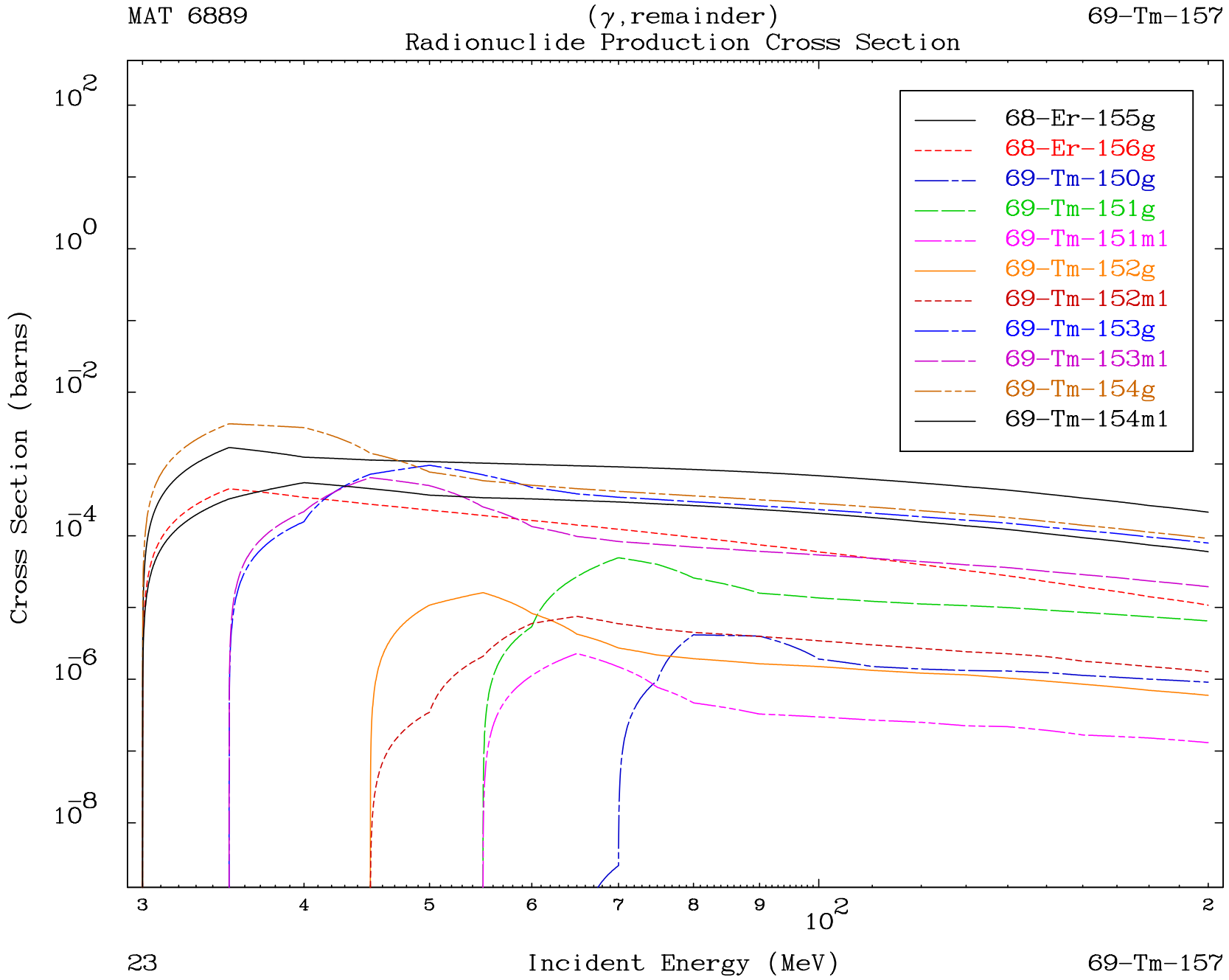

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
5
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
65-Tb-146m1
65-Tb-147g
65-Tb-147m1
65-Tb-148g
65-Tb-148m1
65-Tb-149g
65-Tb-149m1
66-Dy-141g
66-Dy-142g
66-Dy-143g
66-Dy-143m1

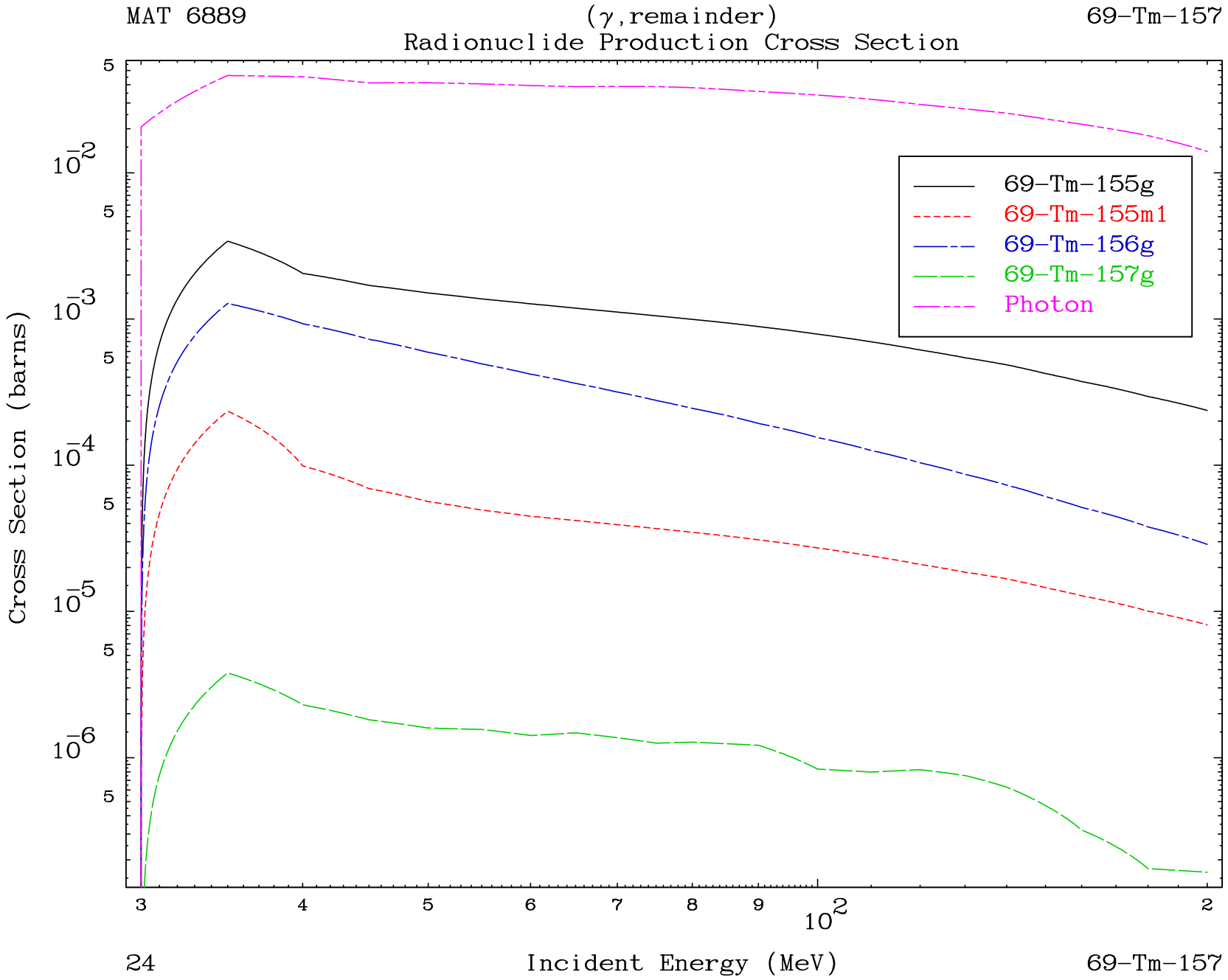

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
66-Dy-144g
66-Dy-145g
66-Dy-145m1
66-Dy-146g
66-Dy-146m1
66-Dy-147g
66-Dy-147m1
66-Dy-148g
66-Dy-149g
66-Dy-149m1
66-Dy-150g

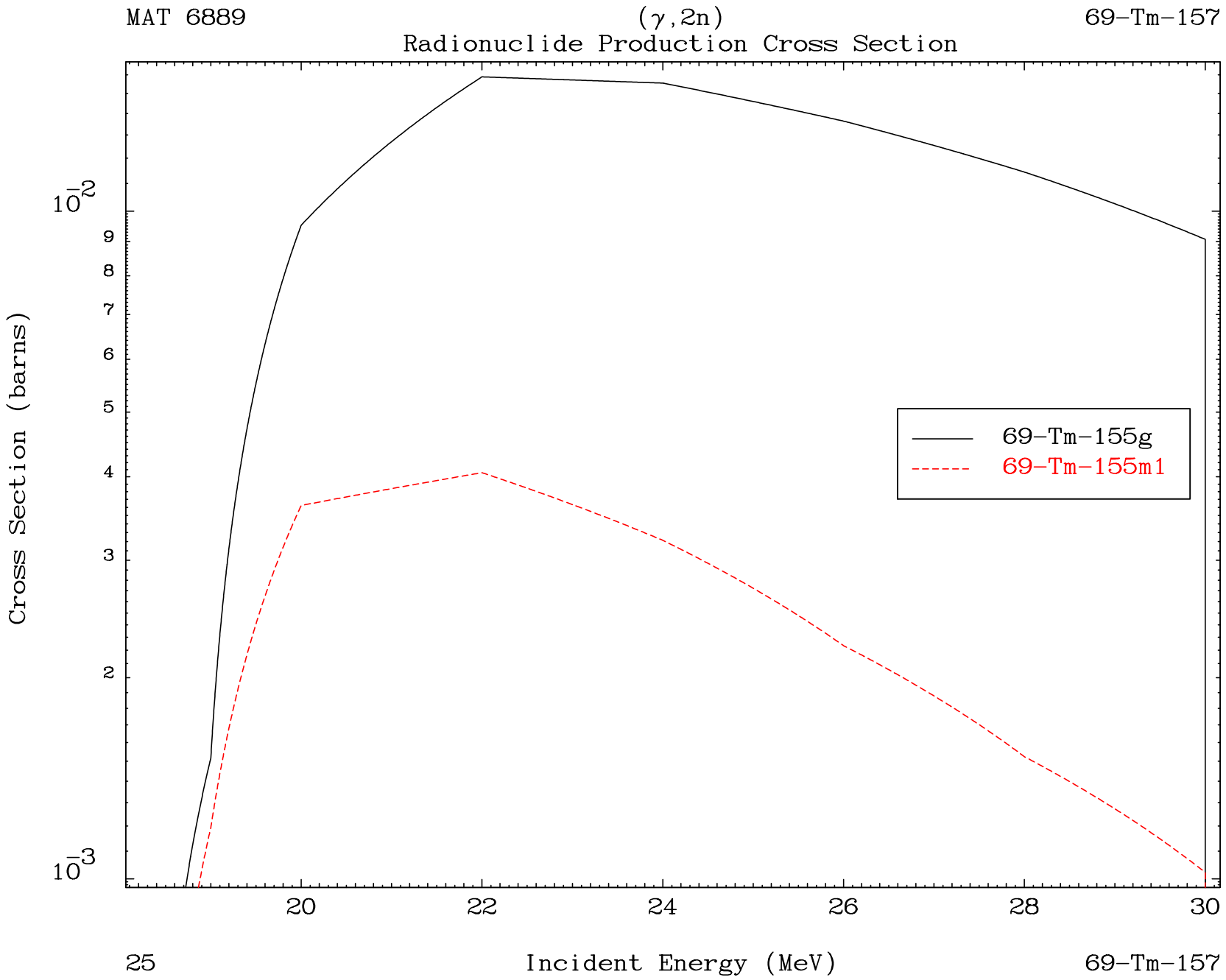

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
Incident Energy (MeV)
20
69-Tm-157
66-Dy-151g
66-Dy-152g
66-Dy-153g
67-Ho-145g
67-Ho-146g
67-Ho-147g
67-Ho-148g
67-Ho-148m1
67-Ho-149g
67-Ho-149m1
67-Ho-150g

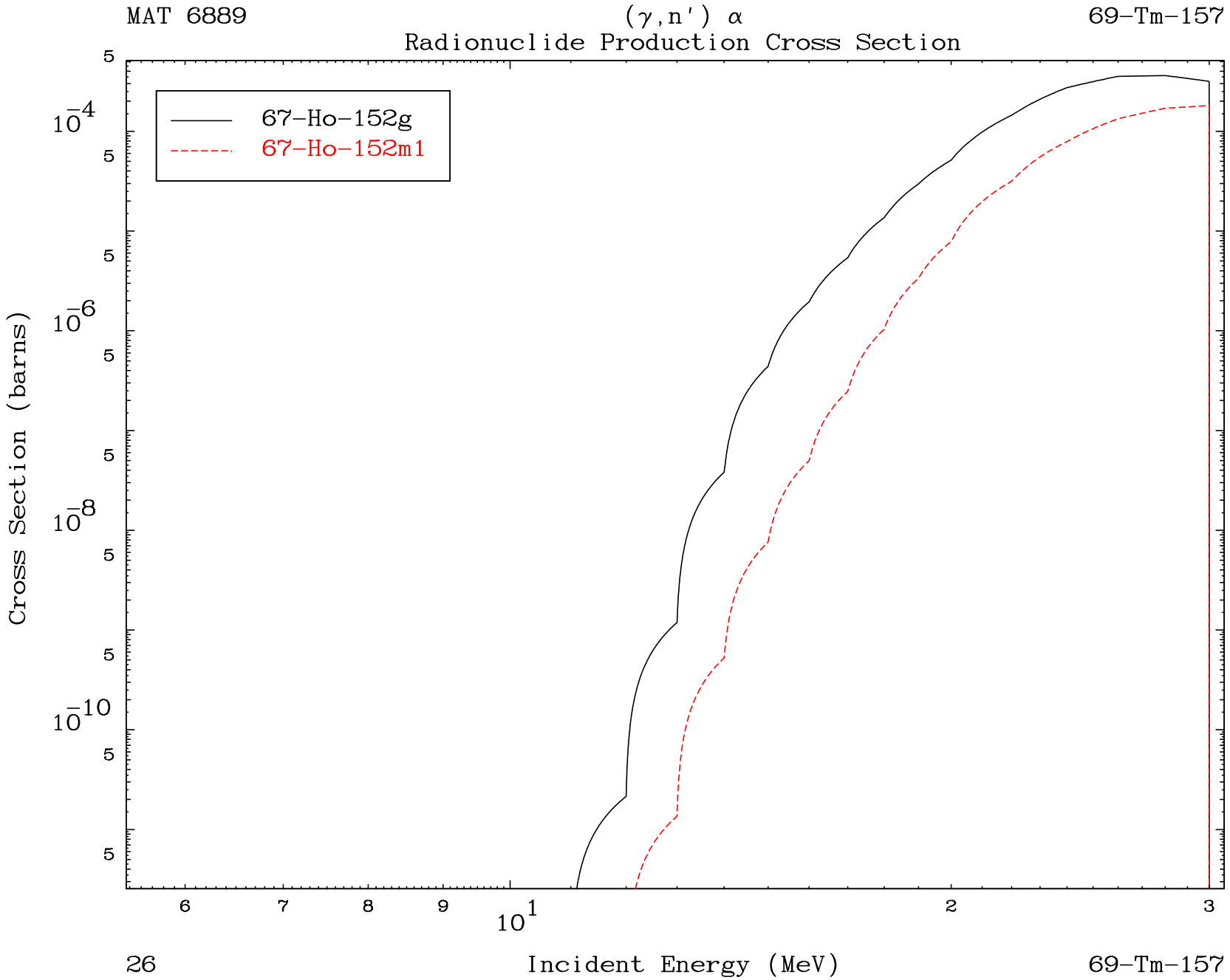

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
5
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
67-Ho-150m1
67-Ho-151g
67-Ho-151m1
67-Ho-152g
67-Ho-152m1
67-Ho-153g
67-Ho-153m1
67-Ho-154g
67-Ho-154m1
67-Ho-155g
68-Er-146g
21
69-Tm-157

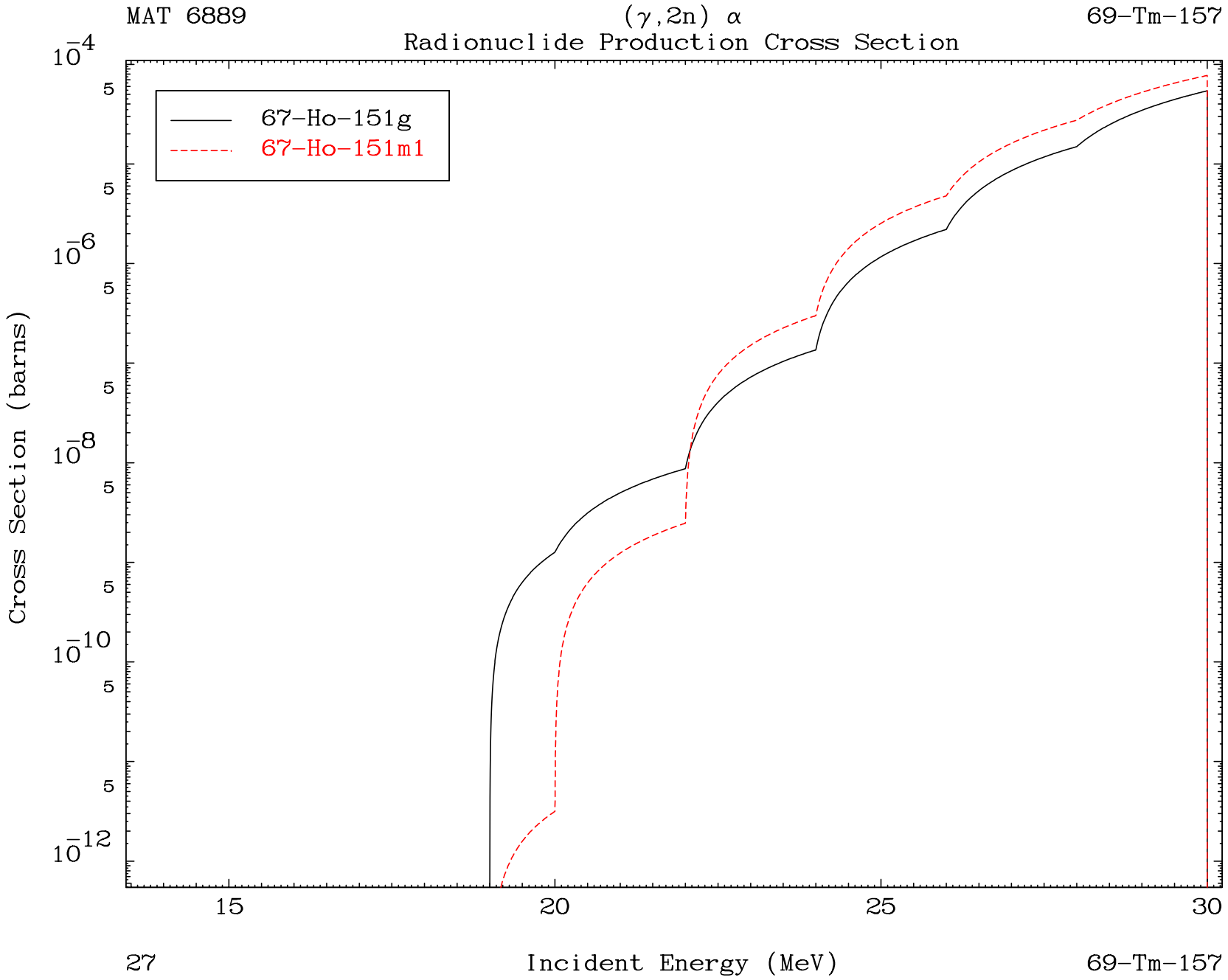

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
22
69-Tm-157
68-Er-147g
68-Er-147m1
68-Er-148g
68-Er-149g
68-Er-149m1
68-Er-150g
68-Er-151g
68-Er-151m1
68-Er-152g
68-Er-153g
68-Er-154g

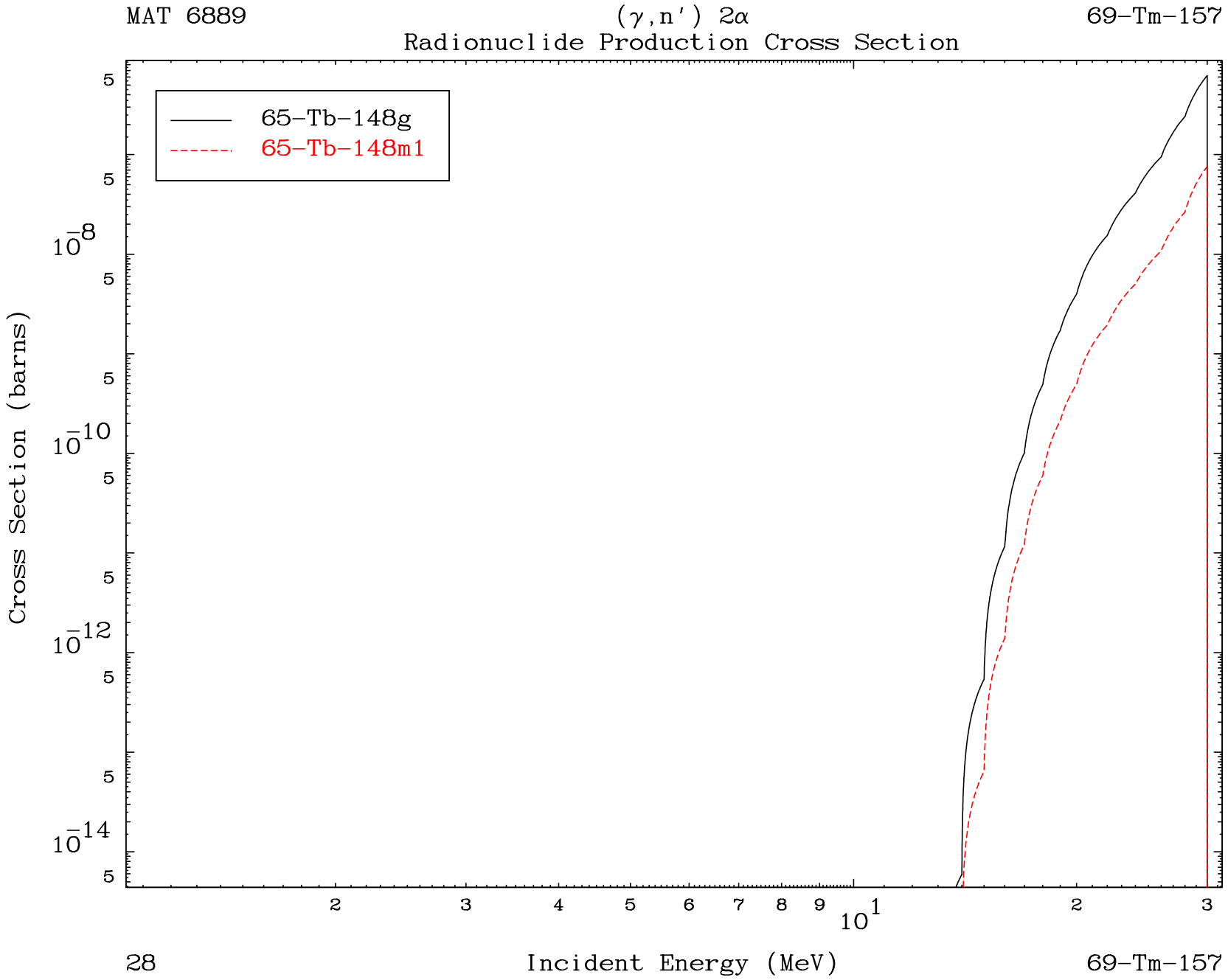

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10^2
10^0
10^-2
10^-4
10^-6
10^-8
3
4
5
6
7
8
9
10^2
2
Incident Energy (MeV)
68-Er-155g
68-Er-156g
69-Tm-150g
69-Tm-151g
69-Tm-151m1
69-Tm-152g
69-Tm-152m1
69-Tm-153g
69-Tm-153m1
69-Tm-154g
69-Tm-154m1

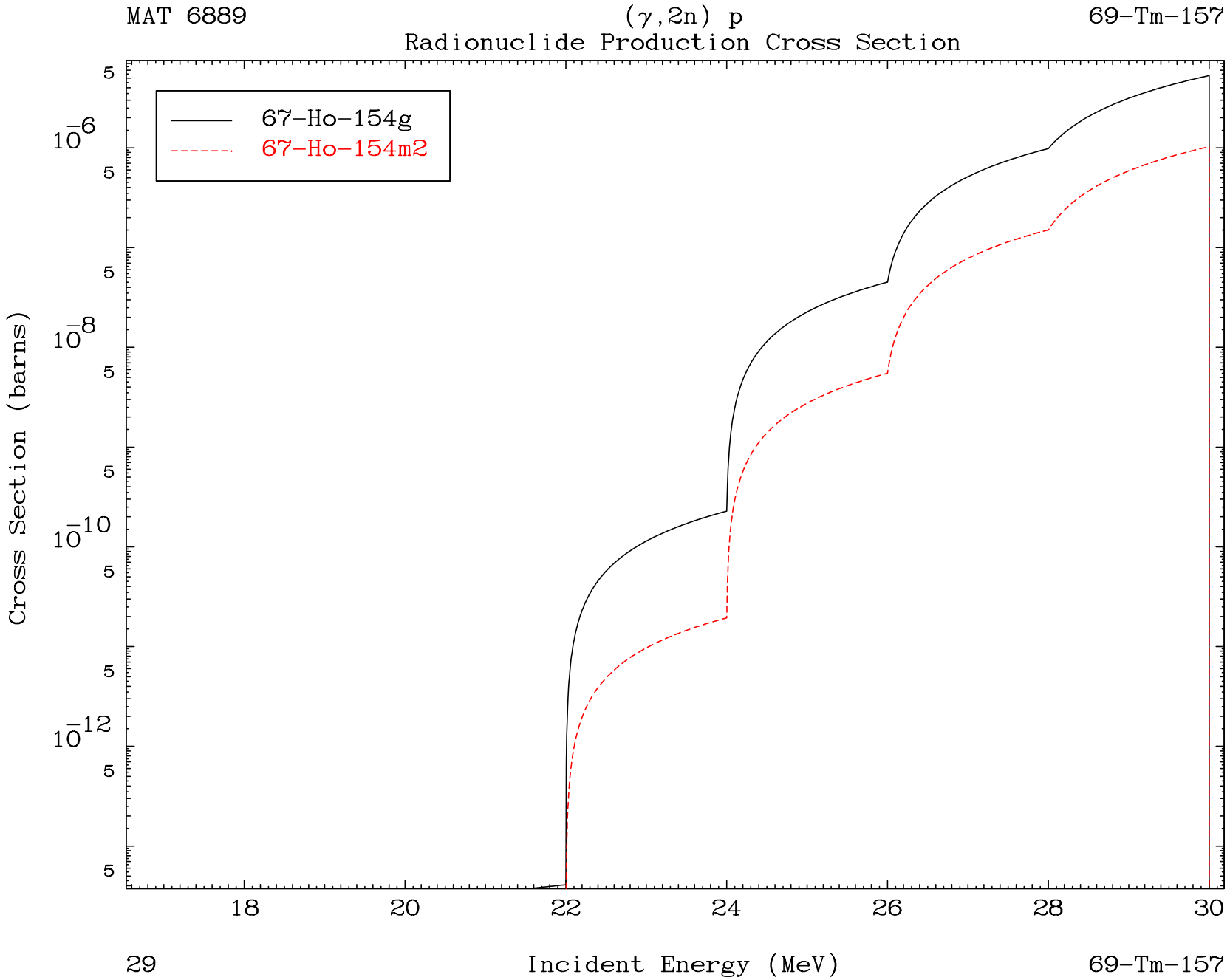

MAT 6889
(γ,remainder)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-3
10-4
10-5
10-6
69-Tm-155g
69-Tm-155m1
69-Tm-156g
69-Tm-157g
Photon
3
4
5
6
7
8
9
10 2
2
24
Incident Energy (MeV)
69-Tm-157

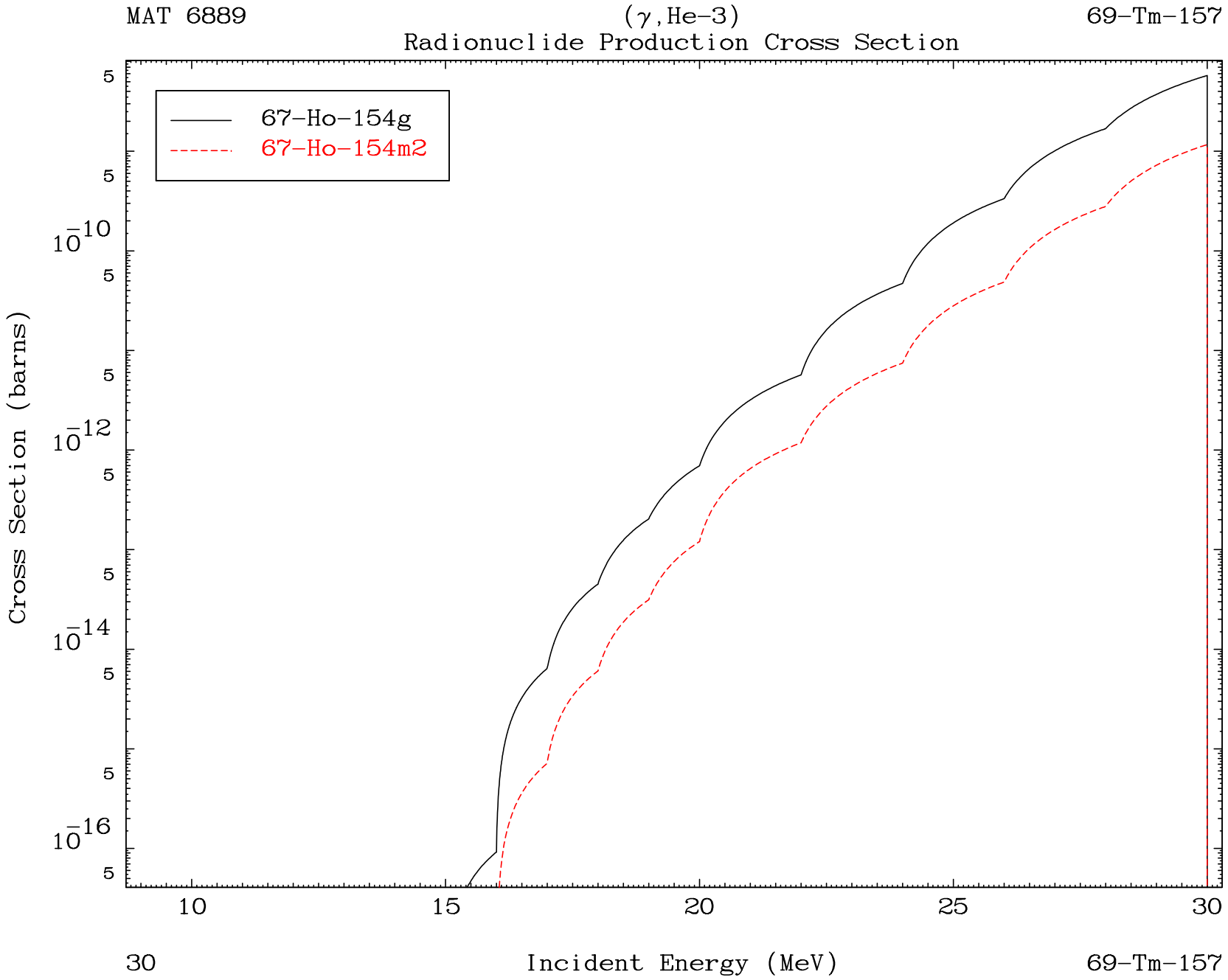

MAT 6889
(γ,2n)
69-Tm-157
Radionuclide Production Cross Section
Cross Section (barns)
10-2
9
8
7
6
5
4
3
2
10-3
20
22
24
26
28
30
69-Tm-155g
69-Tm-155m1
25
Incident Energy (MeV)
69-Tm-157

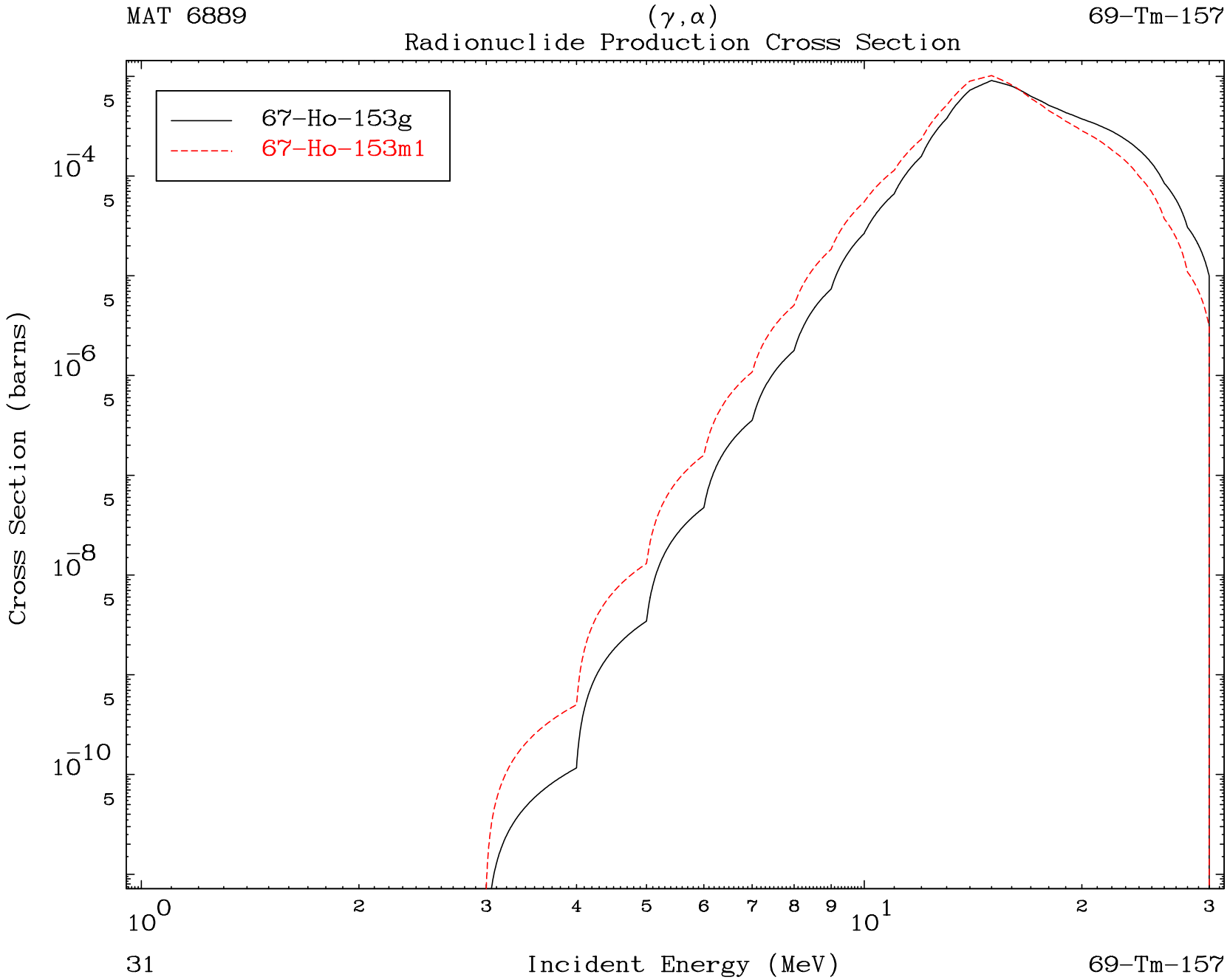

MAT 6889
(γ,n') α
69-Tm-157
Radionuclide Production Cross Section
67-Ho-152g
67-Ho-152m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
6
7
8
9
10 1
2
3
26
Incident Energy (MeV)
69-Tm-157

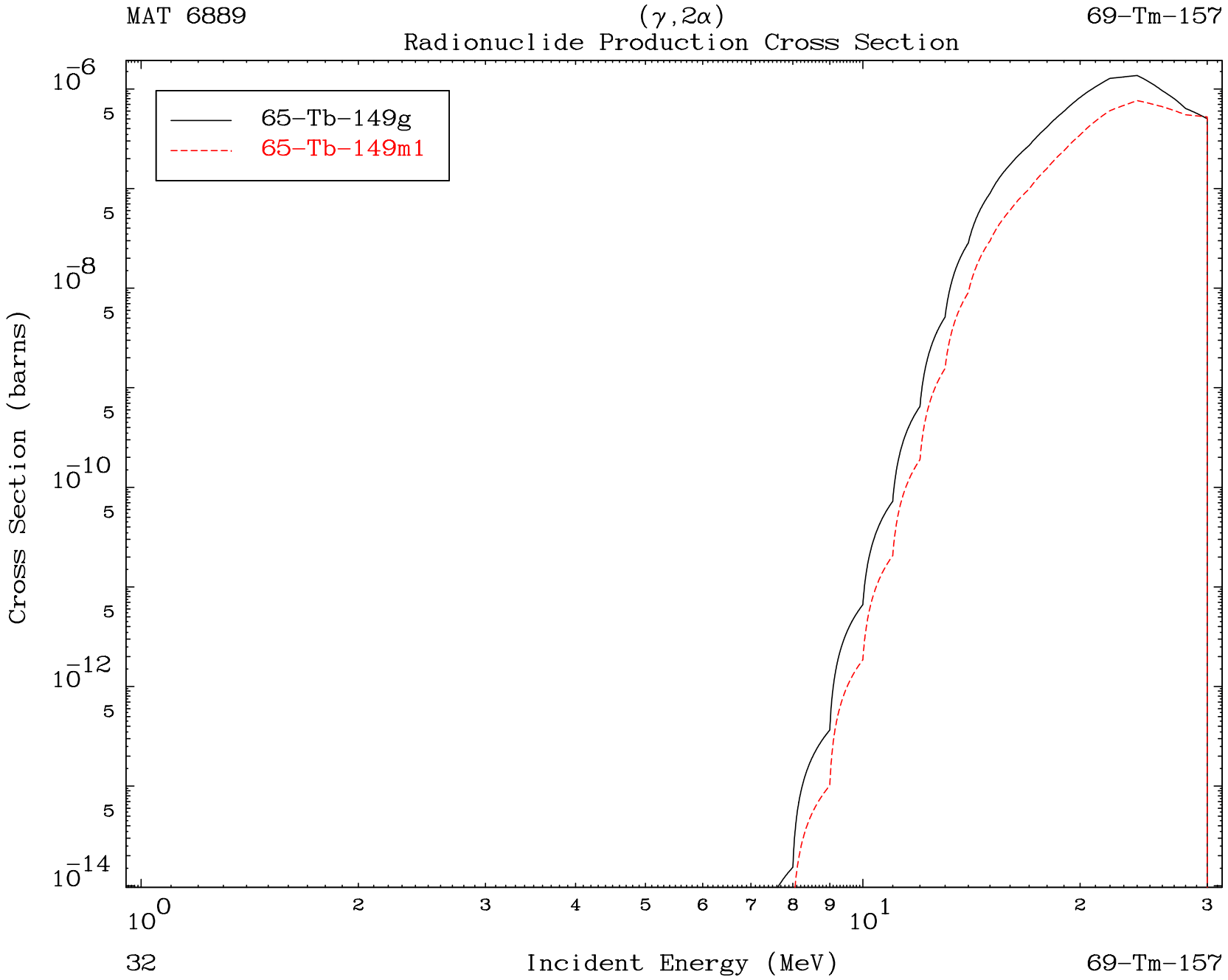

MAT 6889
(γ,2n) α
69-Tm-157
Radionuclide Production Cross Section
67-Ho-151g
67-Ho-151m1
Cross Section (barns)
10-4
5
10-6
5
10-8
5
10-10
5
10-12
5
15
20
25
30
27
Incident Energy (MeV)
69-Tm-157

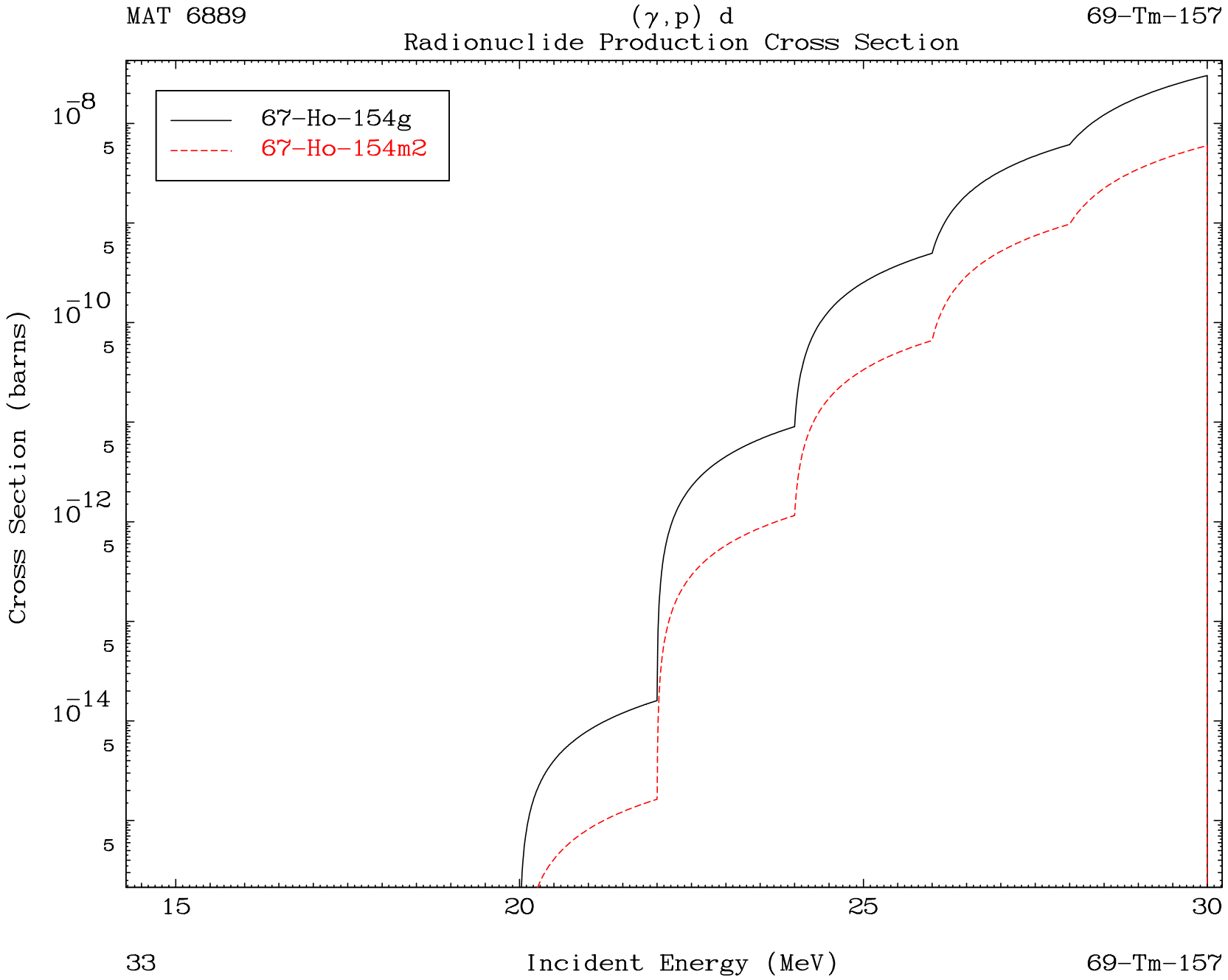

MAT 6889
(γ,n') 2α
69-Tm-157
Radionuclide Production Cross Section
65-Tb-148g
65-Tb-148m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
2
3
4
5
6
7
8
9
10^1
2
3
28
Incident Energy (MeV)
69-Tm-157


MAT 6889
(γ,2n) p
69-Tm-157
Radionuclide Production Cross Section
67-Ho-154g
67-Ho-154m2
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
18
20
22
24
26
28
30
29
Incident Energy (MeV)
69-Tm-157


MAT 6889
(γ,He-3)
69-Tm-157
Radionuclide Production Cross Section
67-Ho-154g
67-Ho-154m2
Cross Section (barns)
10^-10
10^-12
10^-14
10^-16
5
10
15
20
25
30
Incident Energy (MeV)
69-Tm-157


MAT 6889
(γ,α)
69-Tm-157
Radionuclide Production Cross Section
67-Ho-153g
67-Ho-153m1
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^0
10^1
Incident Energy (MeV)
31
69-Tm-157


MAT 6889
(γ,2α)
69-Tm-157
Radionuclide Production Cross Section
65-Tb-149g
65-Tb-149m1
Cross Section (barns)
Incident Energy (MeV)
32
69-Tm-157


MAT 6889
(γ,p) d
69-Tm-157
Radionuclide Production Cross Section
67-Ho-154g
67-Ho-154m2
Cross Section (barns)
10-8
5
10-10
5
10-12
5
10-14
5
15
20
25
30
33
Incident Energy (MeV)
69-Tm-157