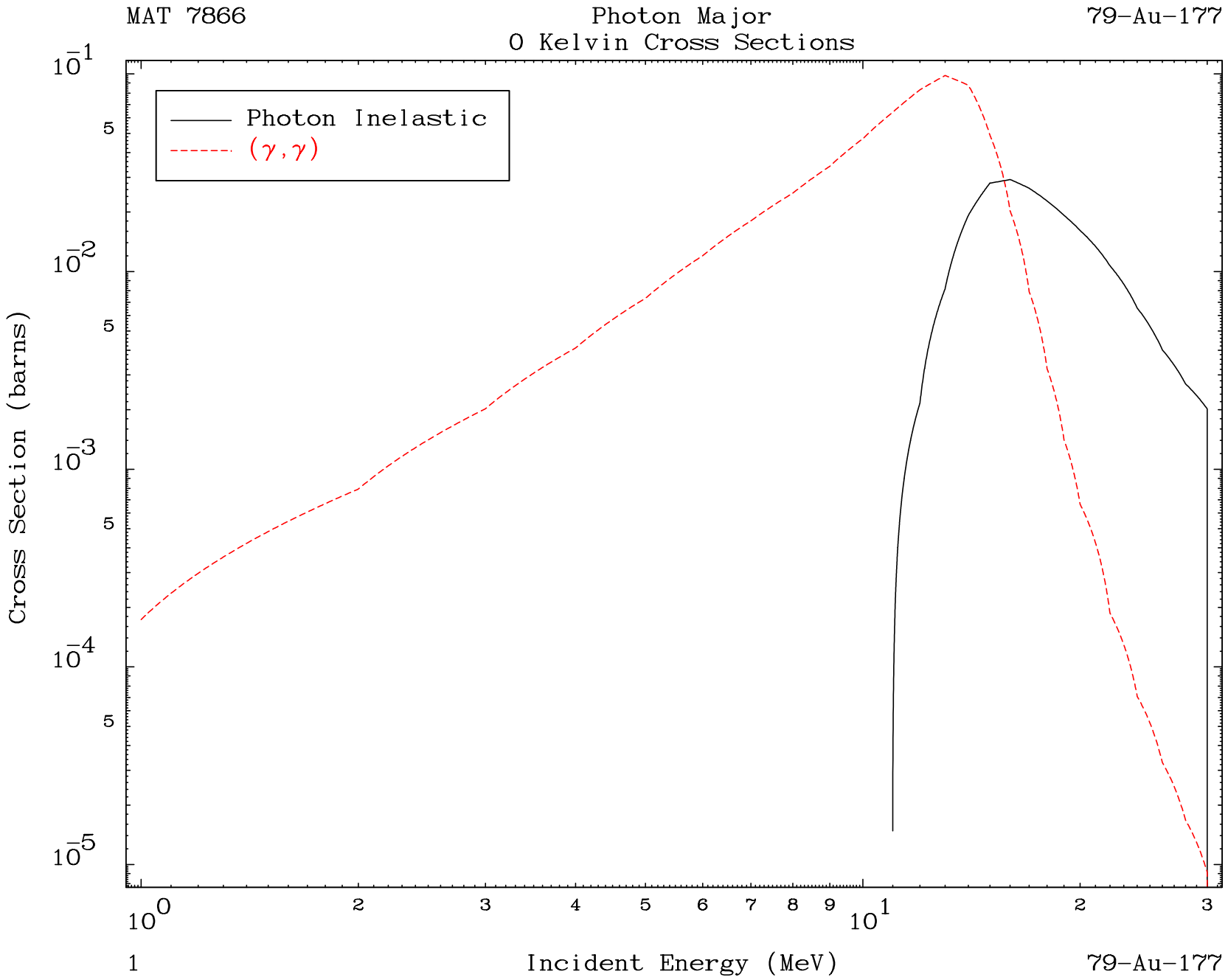
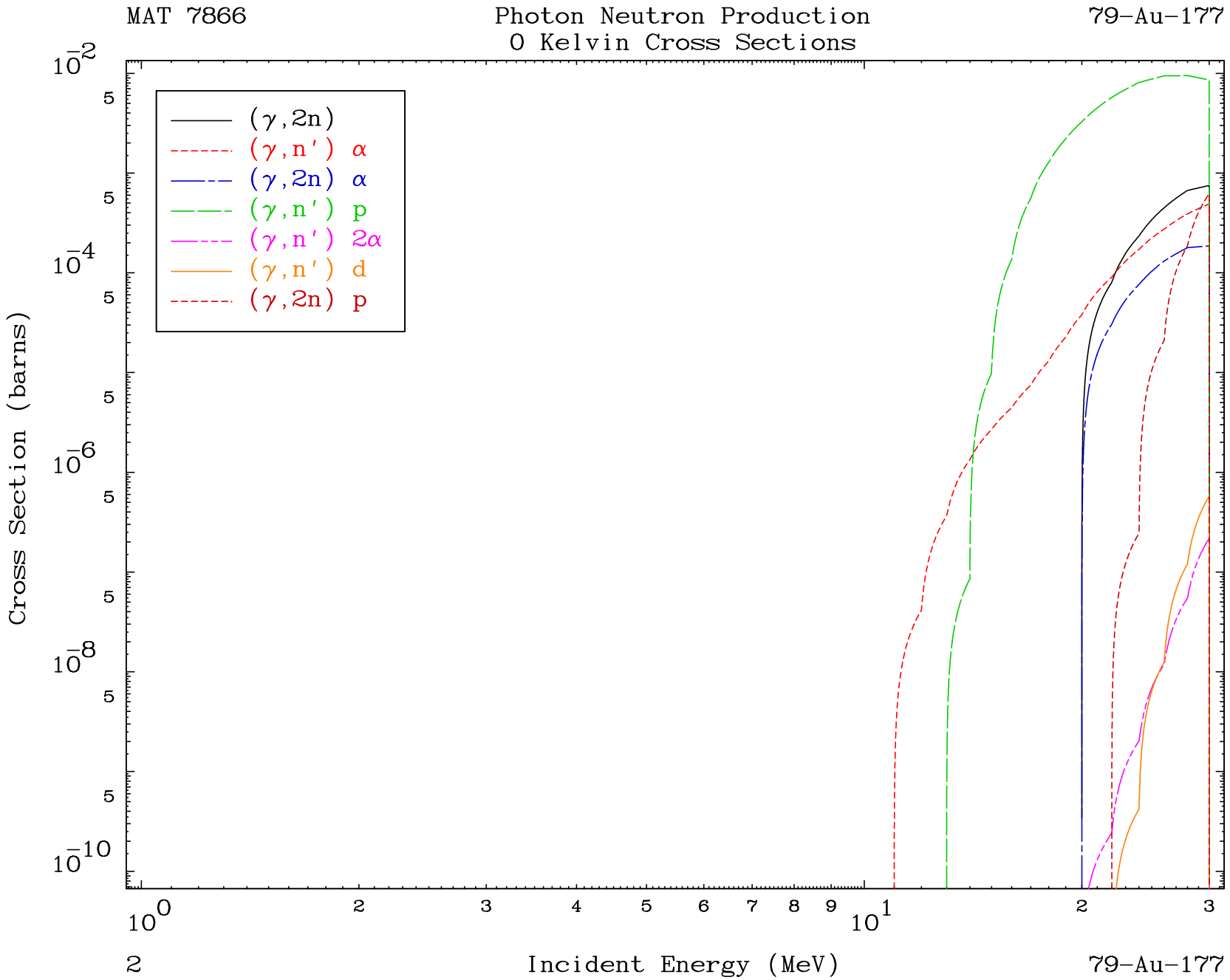
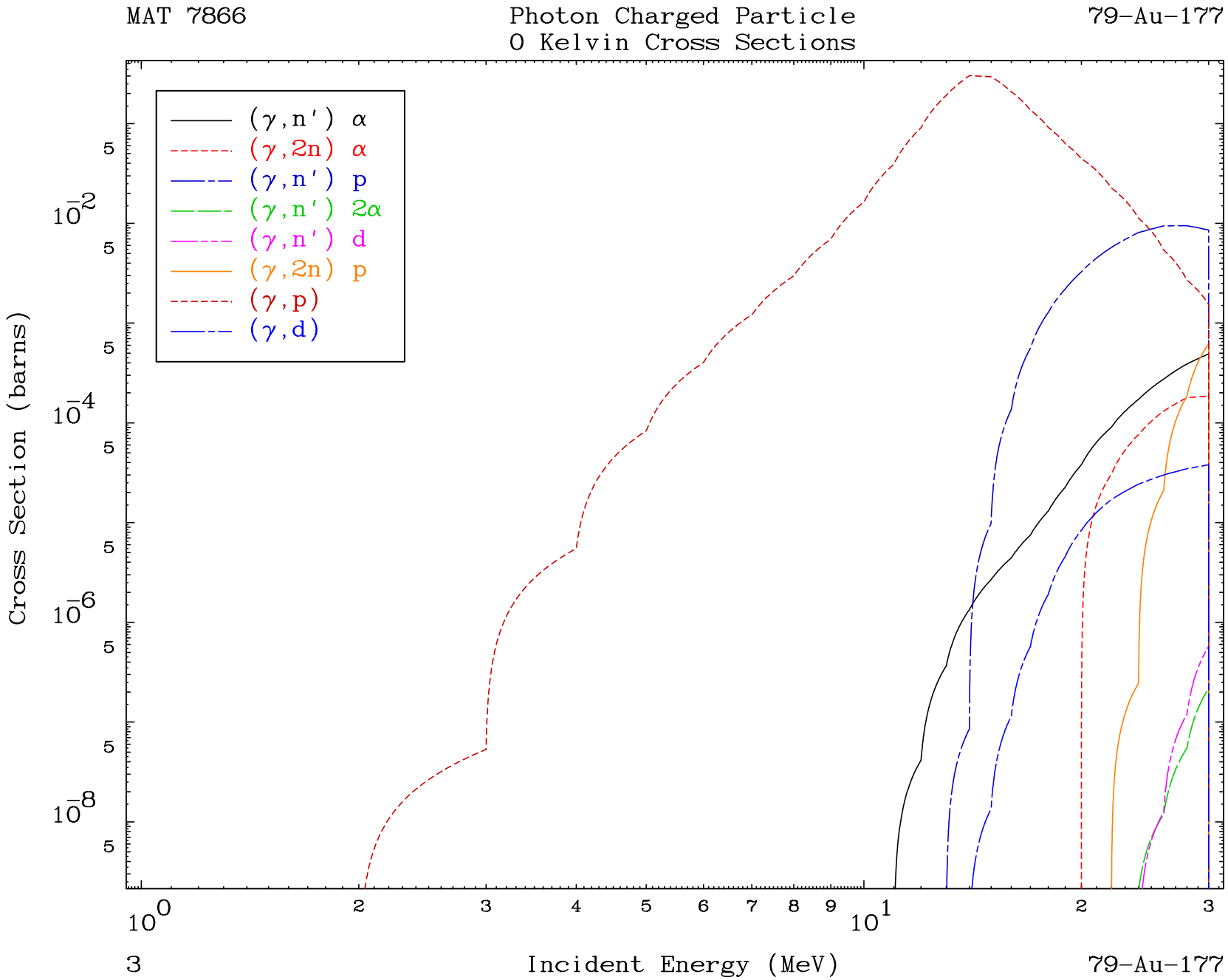
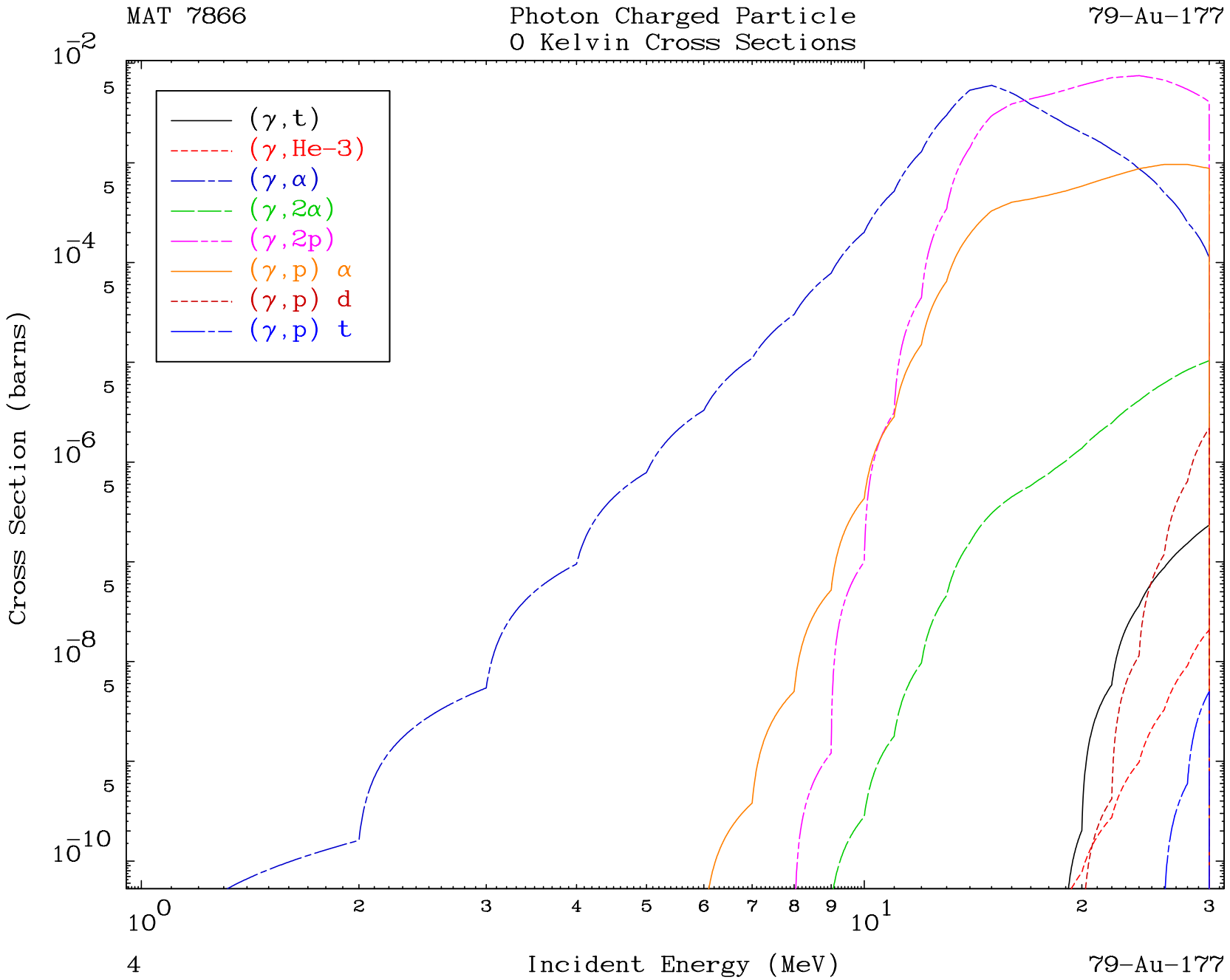
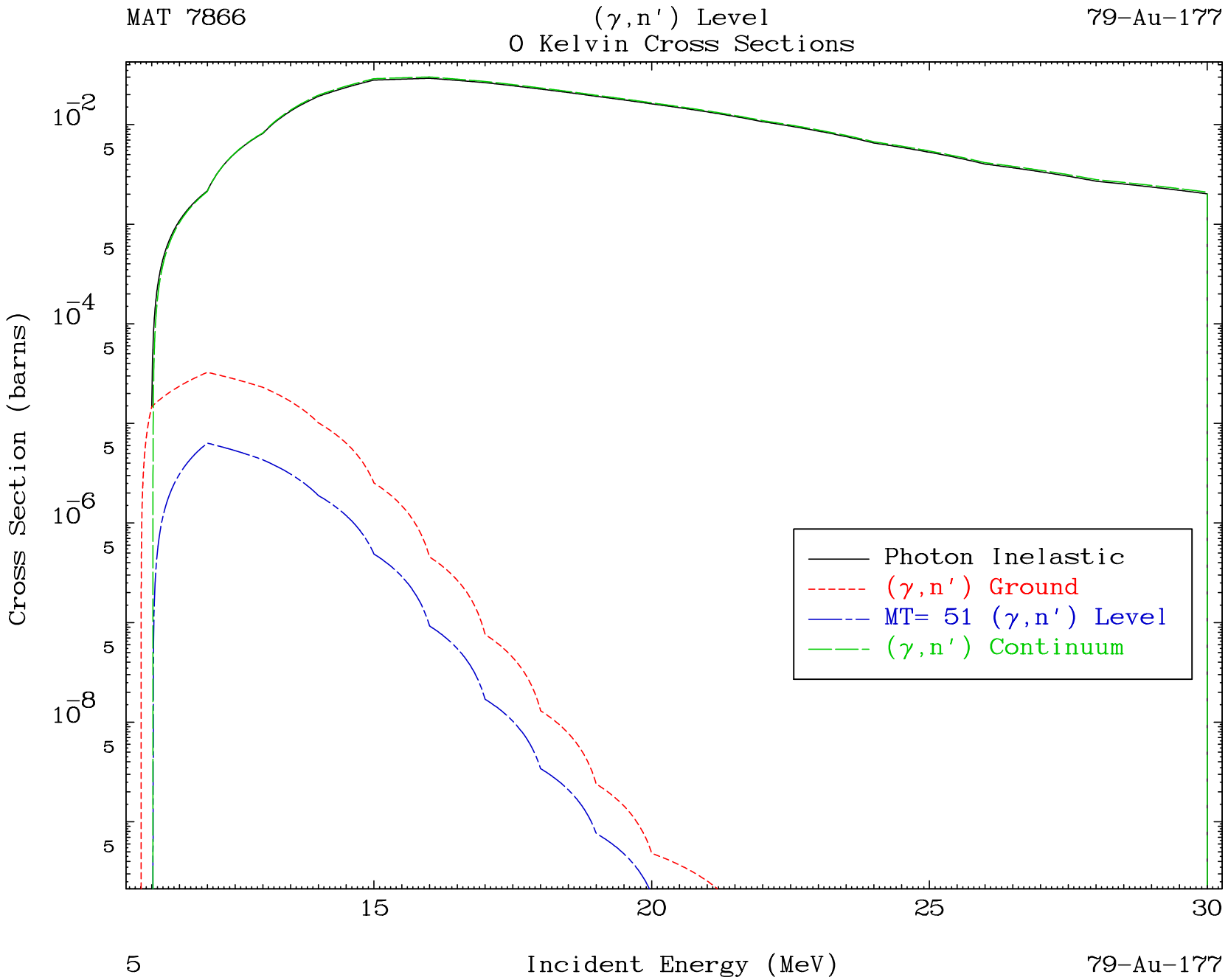
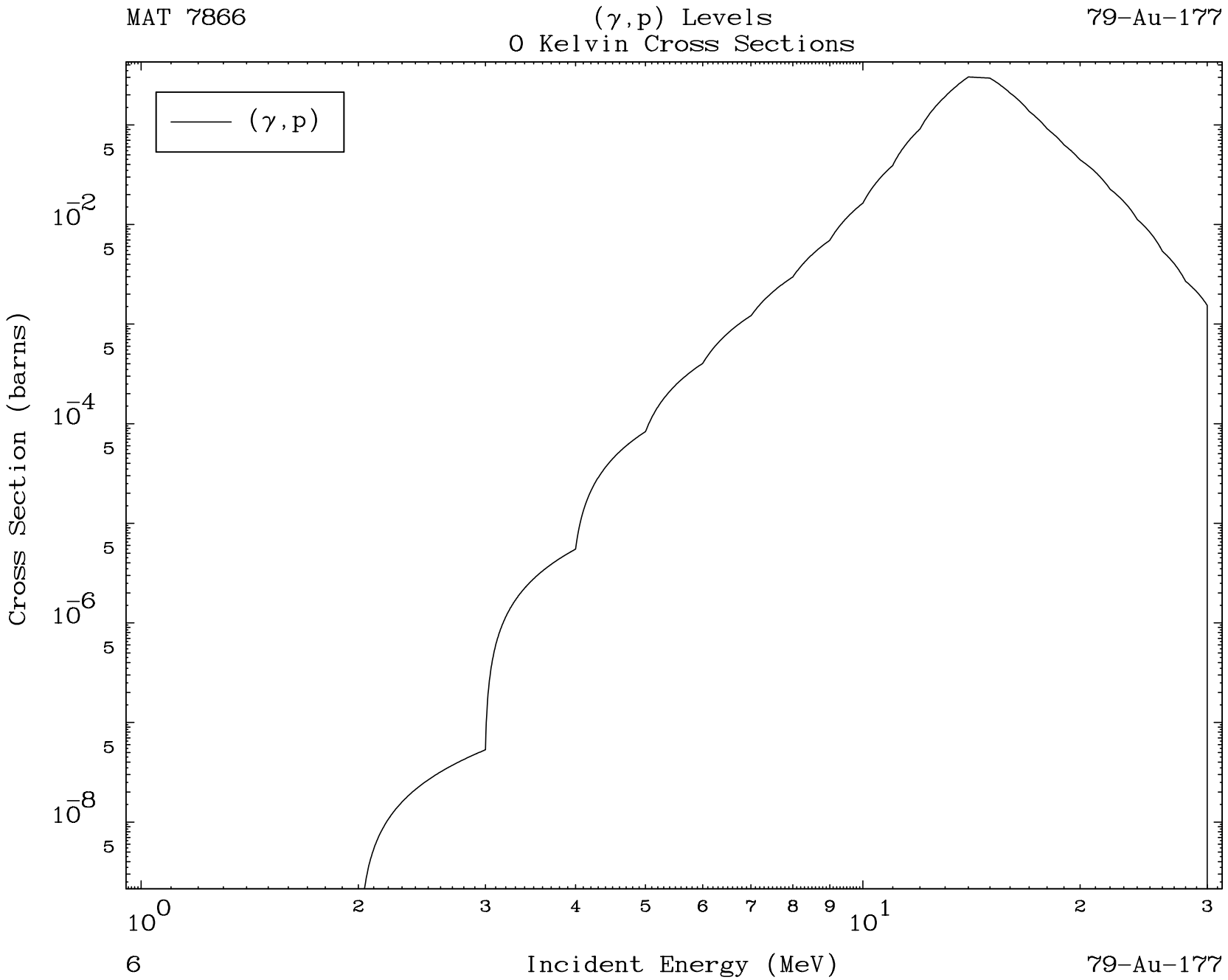

MAT 7866
Photon Major
79-Au-177
0 Kelvin Cross Sections
Photon Inelastic
(γ,γ)
Cross Section (barns)
Incident Energy (MeV)
79-Au-177

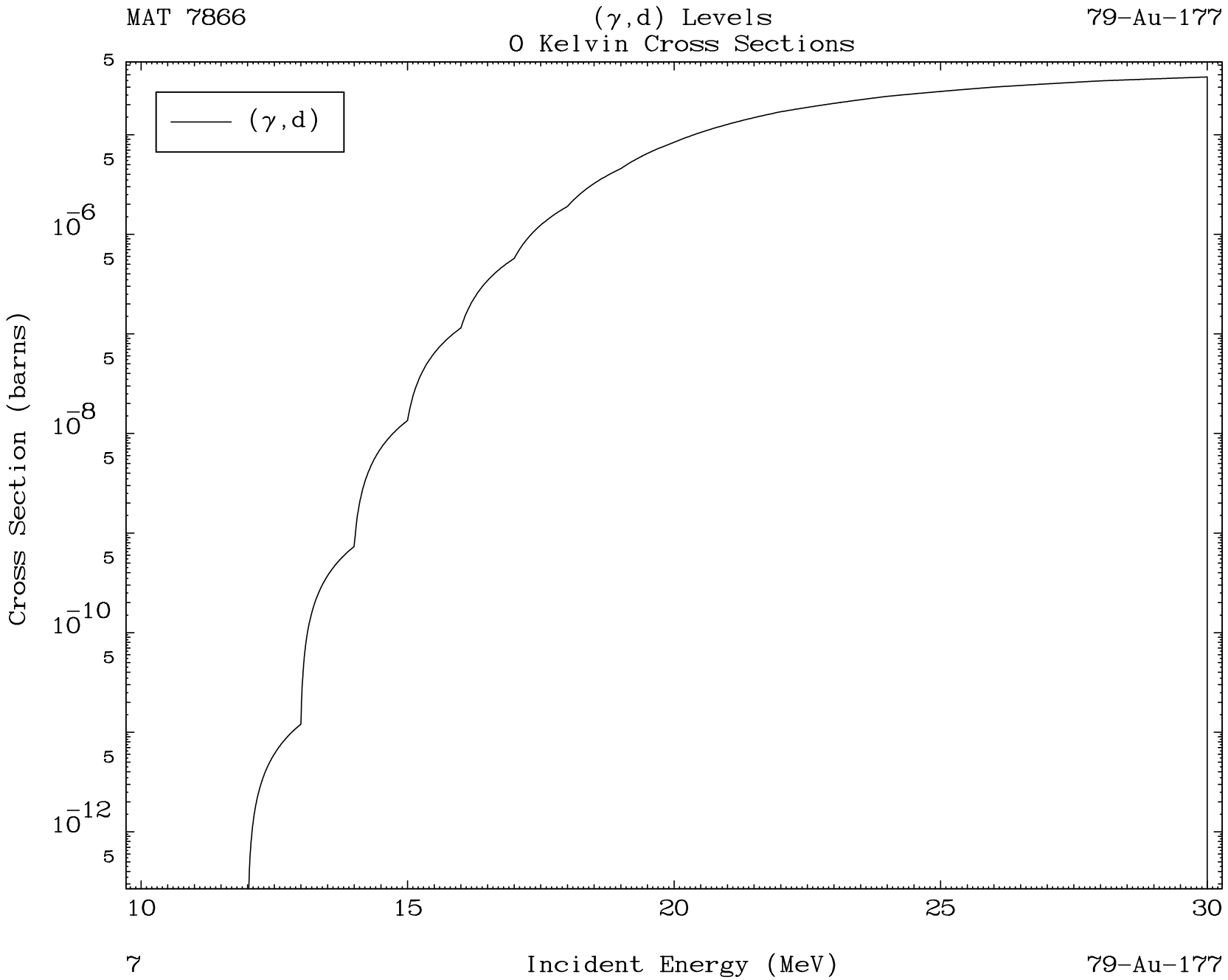

MAT 7866
Photon Neutron Production
0 Kelvin Cross Sections
79-Au-177
(γ,2n)
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') 2α
(γ,n') d
(γ,2n) p
Cross Section (barns)
Incident Energy (MeV)
79-Au-177

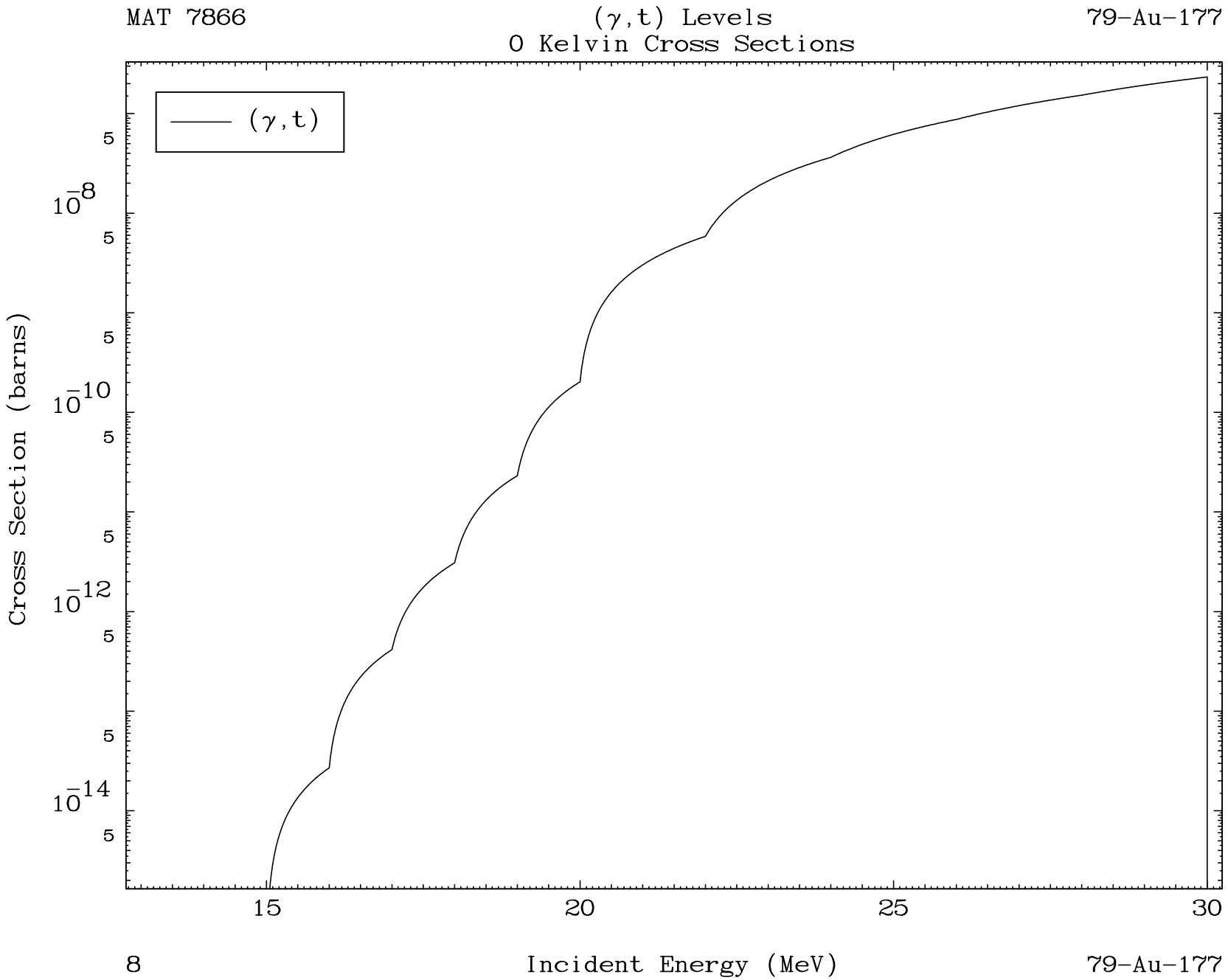

MAT 7866
Photon Charged Particle
0 Kelvin Cross Sections
79-Au-177
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') 2α
(γ,n') d
(γ,2n) p
(γ,p)
(γ,d)
Cross Section (barns)
10-2
10-4
10-6
10-8
100
101
Incident Energy (MeV)
3
79-Au-177

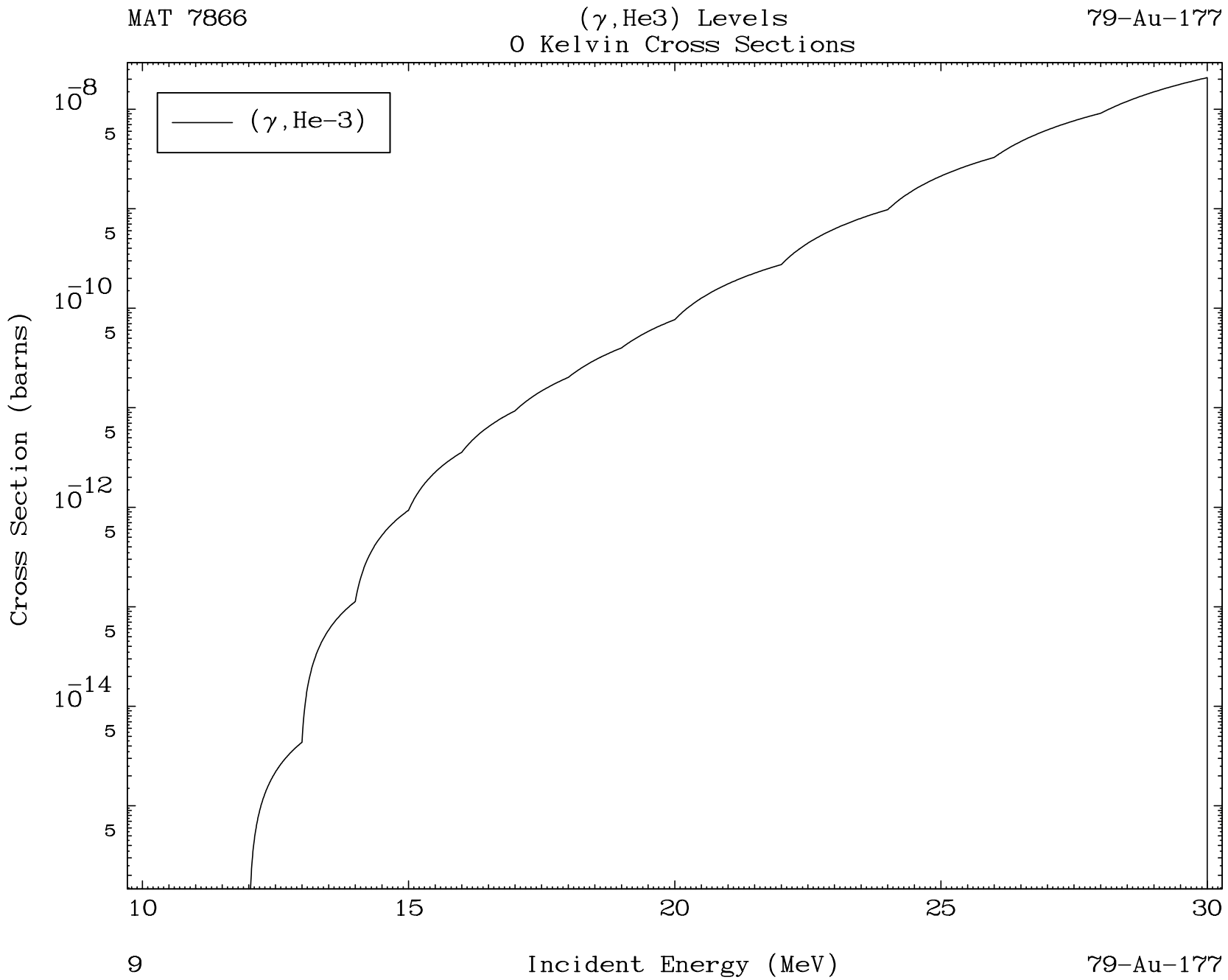

MAT 7866
Photon Charged Particle
0 Kelvin Cross Sections
79-Au-177
(γ,t)
(γ,He-3)
(γ,α)
(γ,2α)
(γ,2p)
(γ,p) α
(γ,p) d
(γ,p) t
Cross Section (barns)
Incident Energy (MeV)
79-Au-177
4

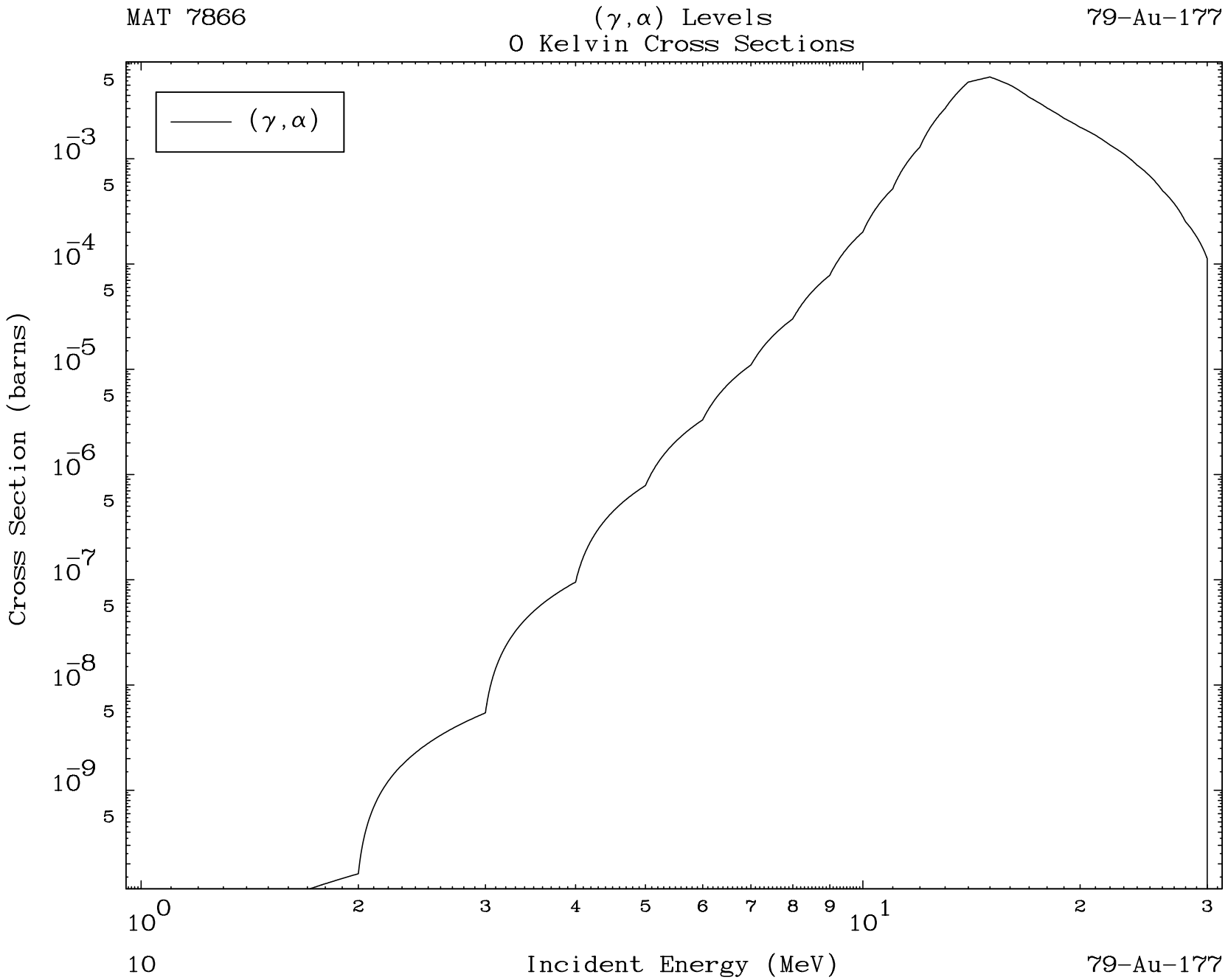

MAT 7866
(γ,n') Level
79-Au-177
0 Kelvin Cross Sections
Cross Section (barns)
10-2
10-4
10-6
10-8
5
15
20
25
30
Incident Energy (MeV)
79-Au-177
Photon Inelastic
(γ,n') Ground
MT= 51 (γ,n') Level
(γ,n') Continuum

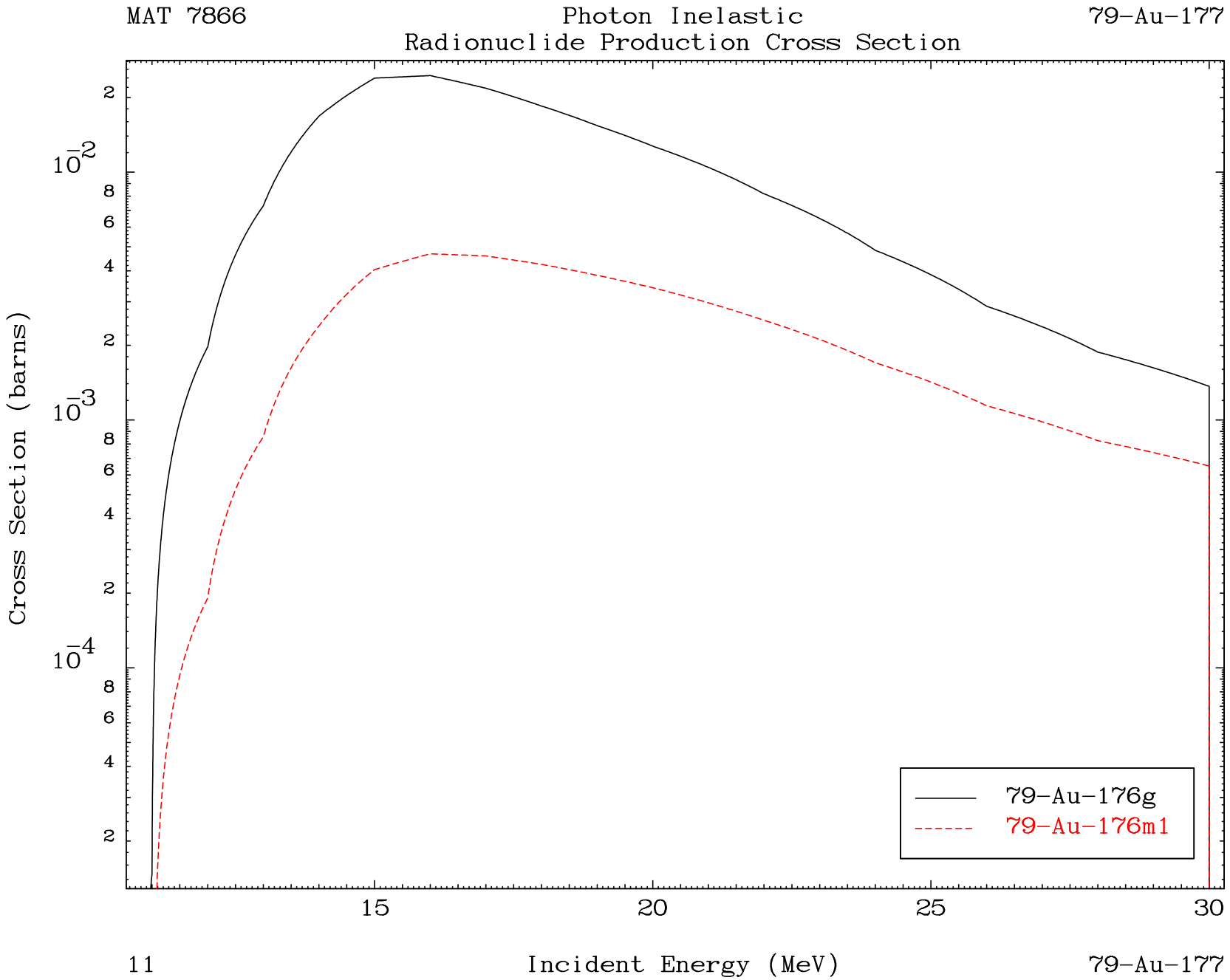

MAT 7866
(γ,p) Levels
79-Au-177
0 Kelvin Cross Sections
(γ,p)
Cross Section (barns)
10-2
10-4
10-6
10-8
100
101
Incident Energy (MeV)
79-Au-177

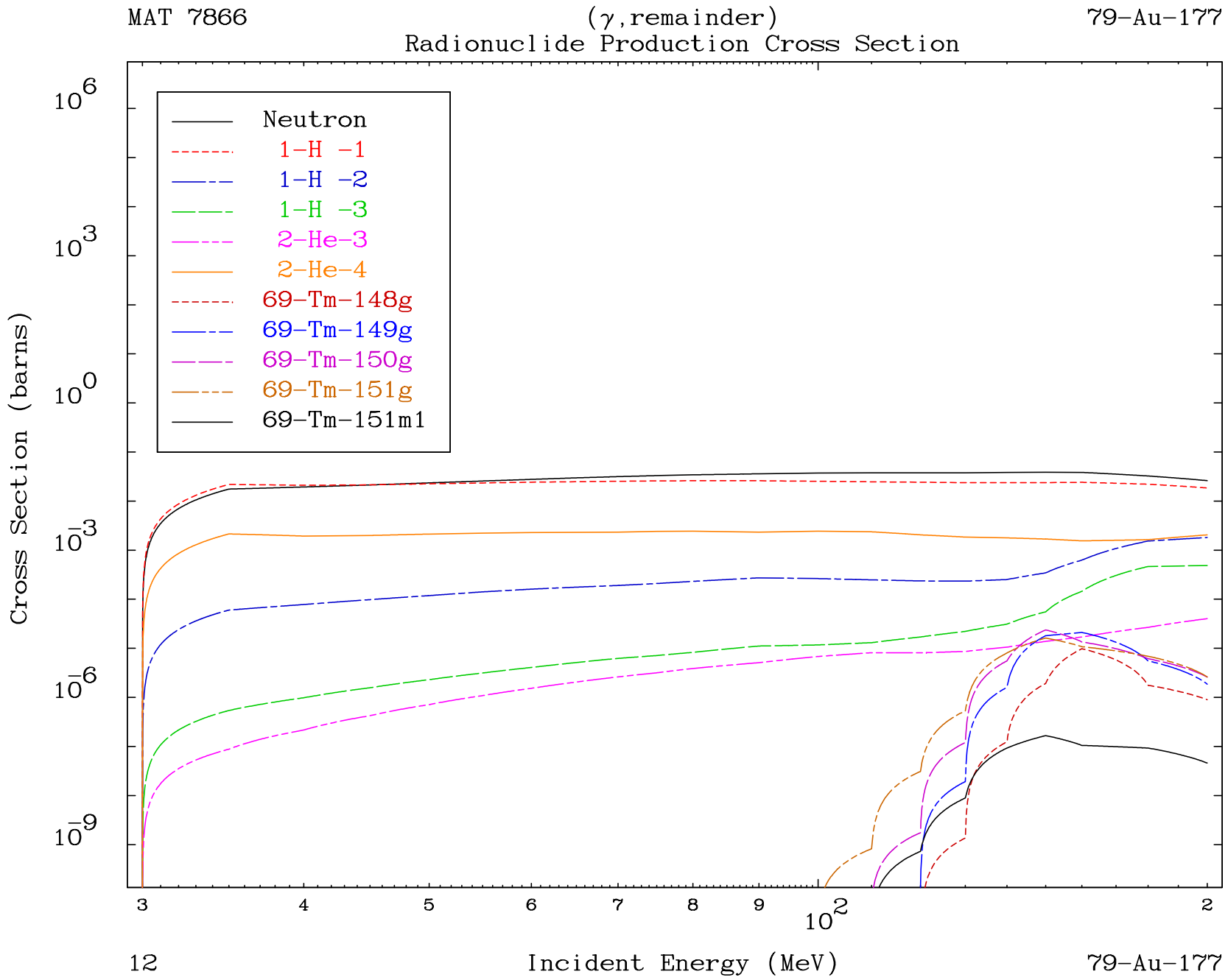

MAT 7866
(γ,d) Levels
79-Au-177
0 Kelvin Cross Sections
(γ,d)
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
10
15
20
25
30
7
Incident Energy (MeV)
79-Au-177

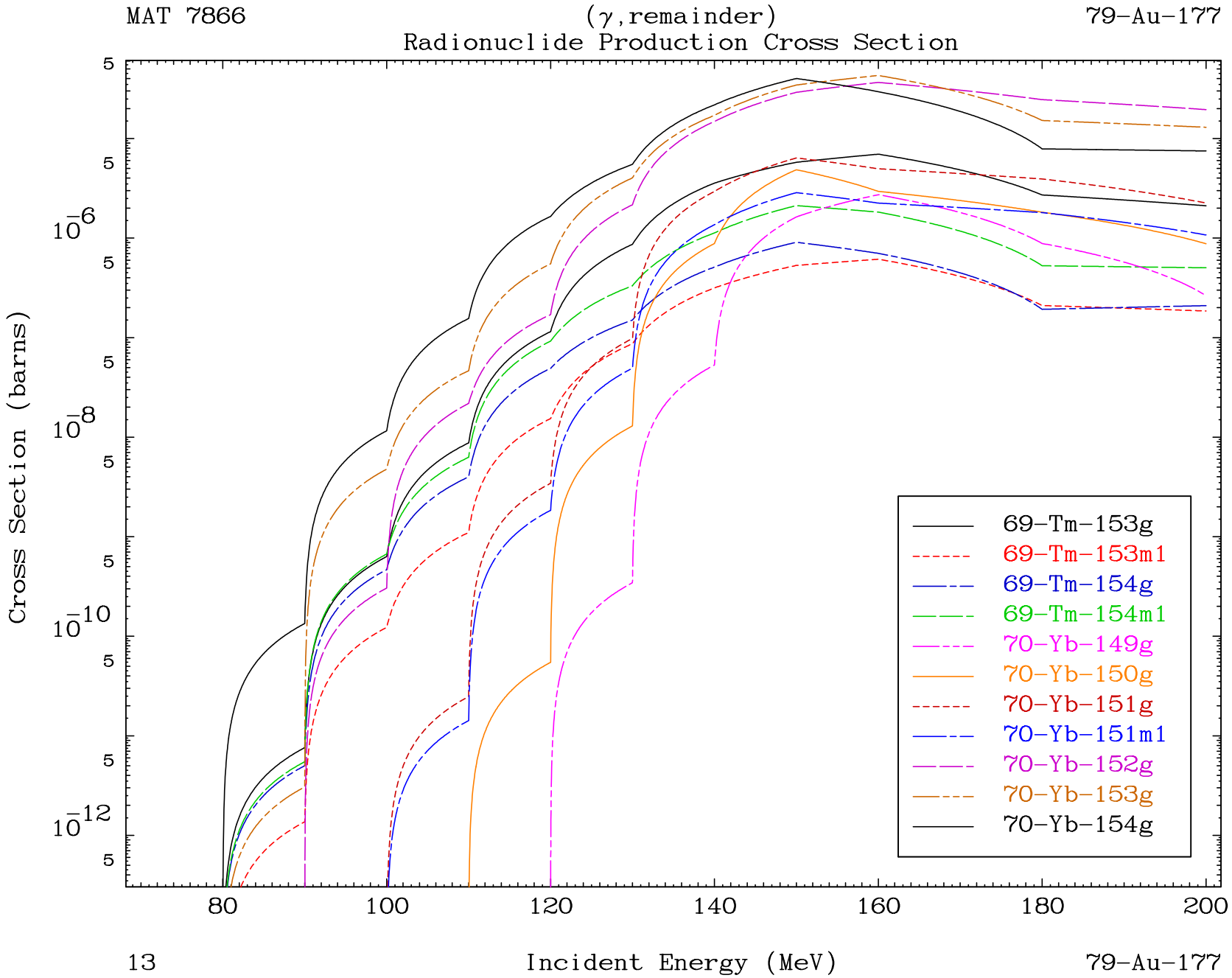

MAT 7866
(γ,t) Levels
79-Au-177
0 Kelvin Cross Sections
(γ,t)
Cross Section (barns)
10-8
10-10
10-12
10-14
5
15
20
25
30
Incident Energy (MeV)
8
79-Au-177


MAT 7866
(γ,He3) Levels
79-Au-177
0 Kelvin Cross Sections
(γ,He-3)
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
10
15
20
25
30
9
Incident Energy (MeV)
79-Au-177

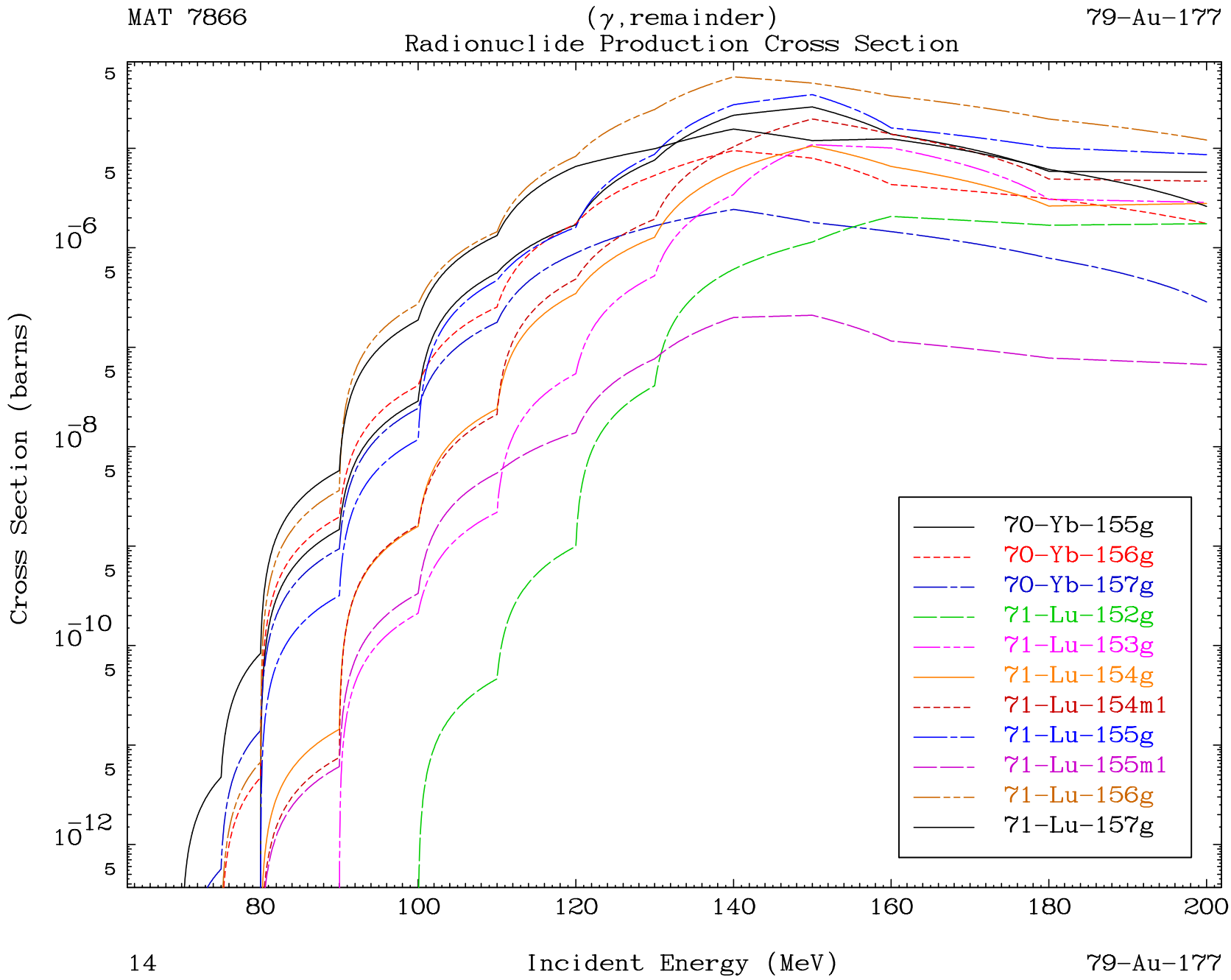

MAT 7866
(γ,α) Levels
79-Au-177
0 Kelvin Cross Sections
(γ,α)
Cross Section (barns)
Incident Energy (MeV)
79-Au-177

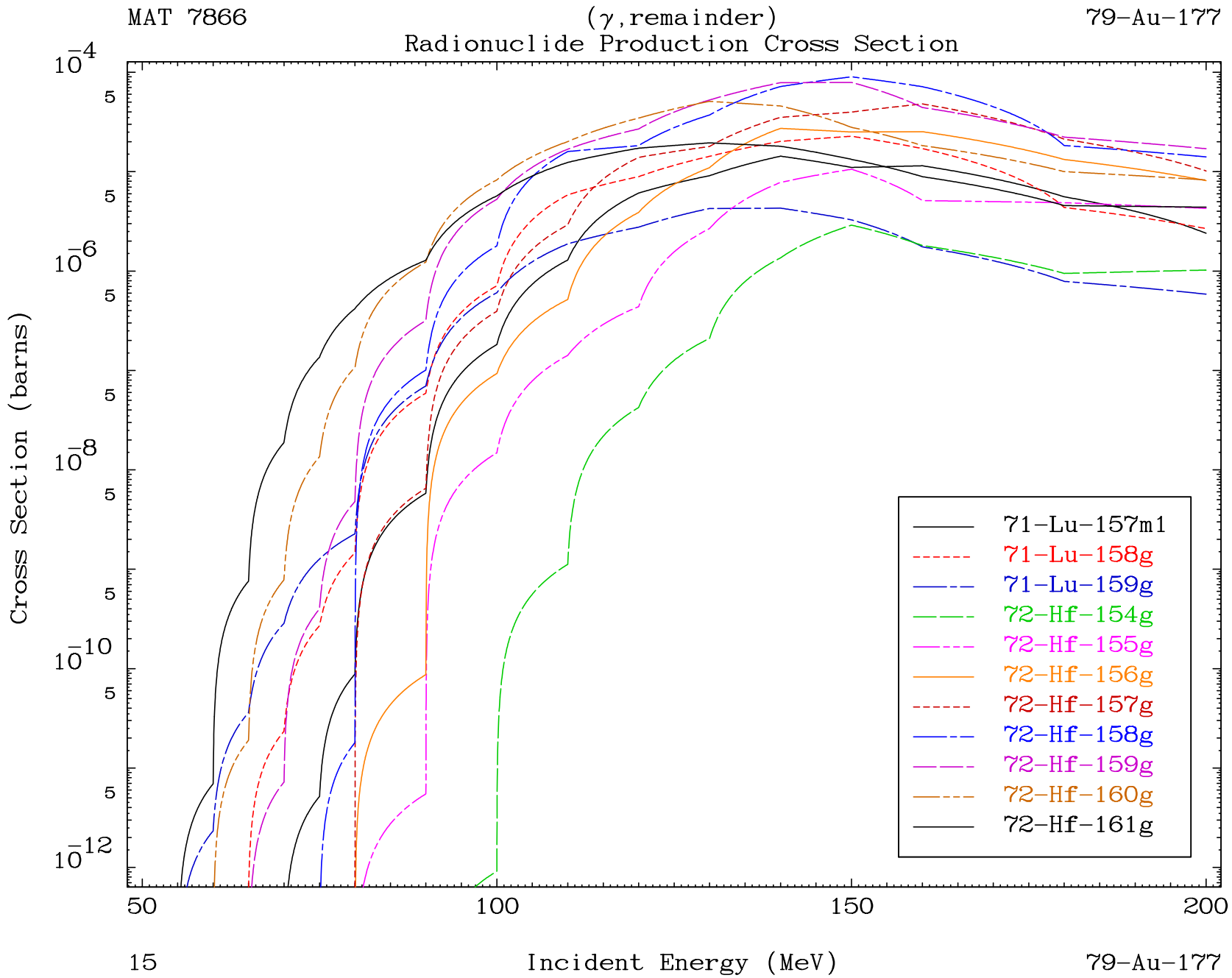

MAT 7866
Photon Inelastic
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-3
10-4
2
8
6
4
15
20
25
30
11
Incident Energy (MeV)
79-Au-177
79-Au-176g
79-Au-176m1

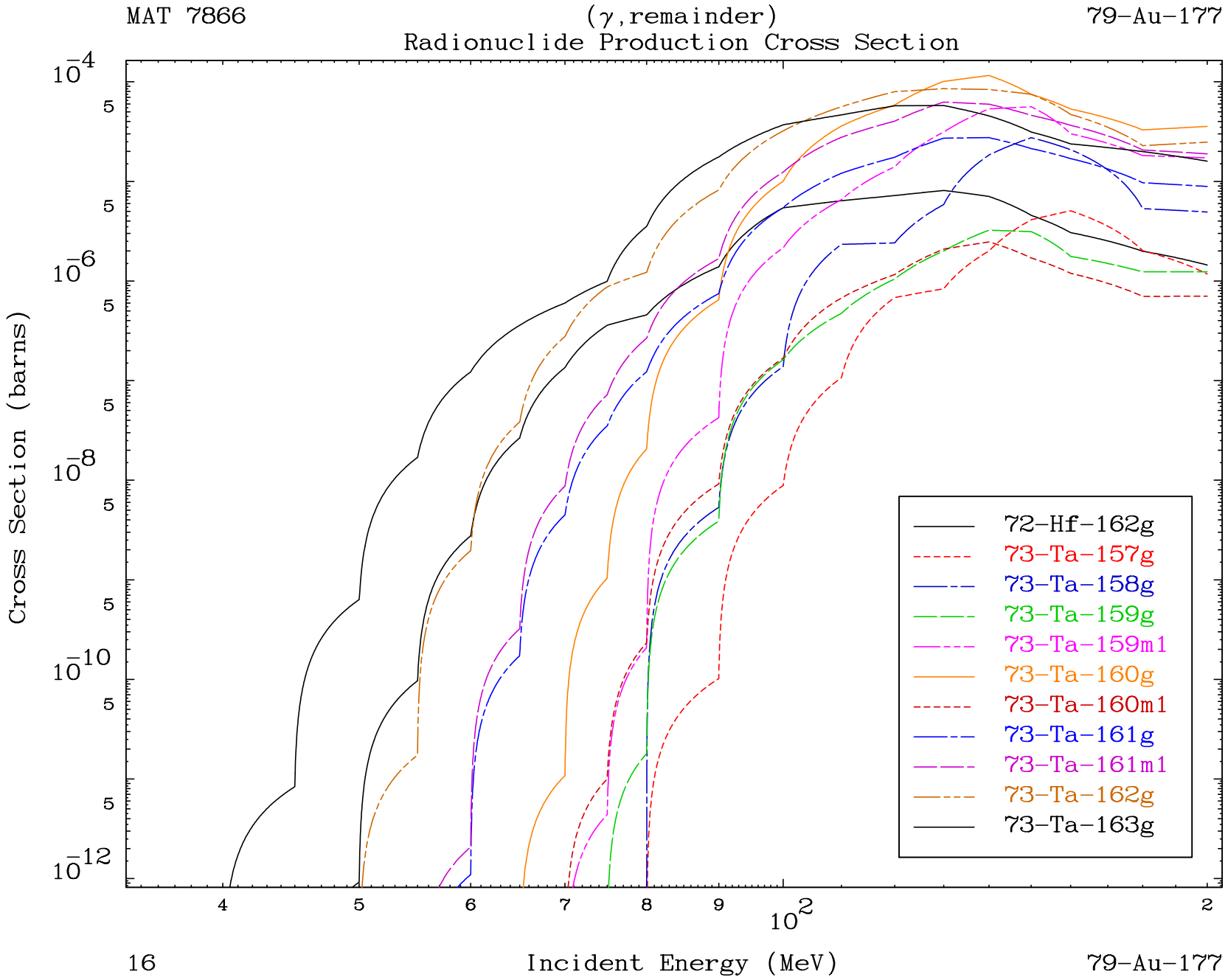

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
69-Tm-148g
69-Tm-149g
69-Tm-150g
69-Tm-151g
69-Tm-151m1
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-9
3
4
5
6
7
8
9
10^2
2
12
Incident Energy (MeV)
79-Au-177

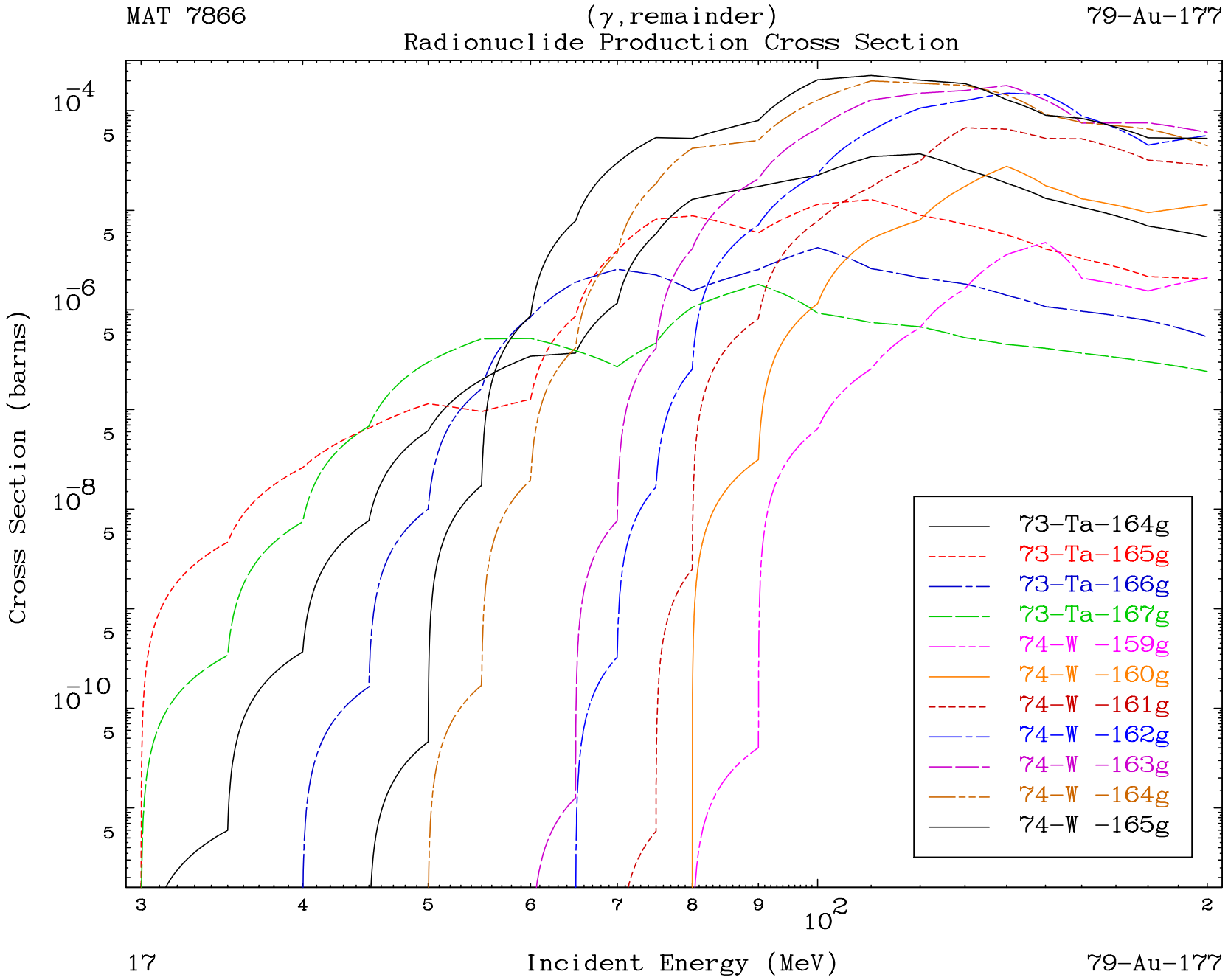

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
80
100
120
140
160
180
200
Incident Energy (MeV)
69-Tm-153g
69-Tm-153m1
69-Tm-154g
69-Tm-154m1
70-Yb-149g
70-Yb-150g
70-Yb-151g
70-Yb-151m1
70-Yb-152g
70-Yb-153g
70-Yb-154g

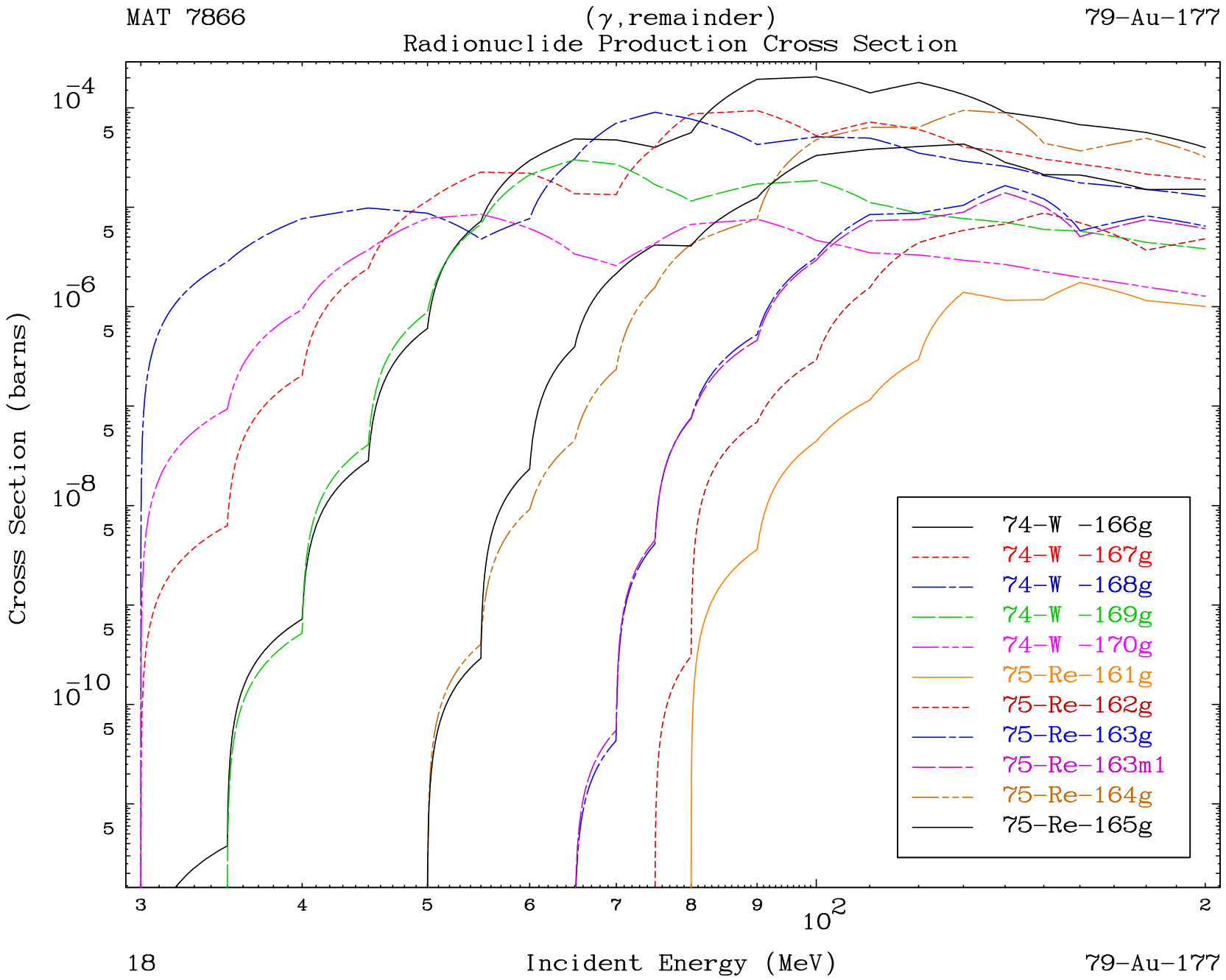

79-Au-177


MAT 7866
(γ,remainder)
79-Au-177
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)
70-Yb-155g
70-Yb-156g
70-Yb-157g
71-Lu-152g
71-Lu-153g
71-Lu-154g
71-Lu-154m1
71-Lu-155g
71-Lu-155m1
71-Lu-156g
71-Lu-157g

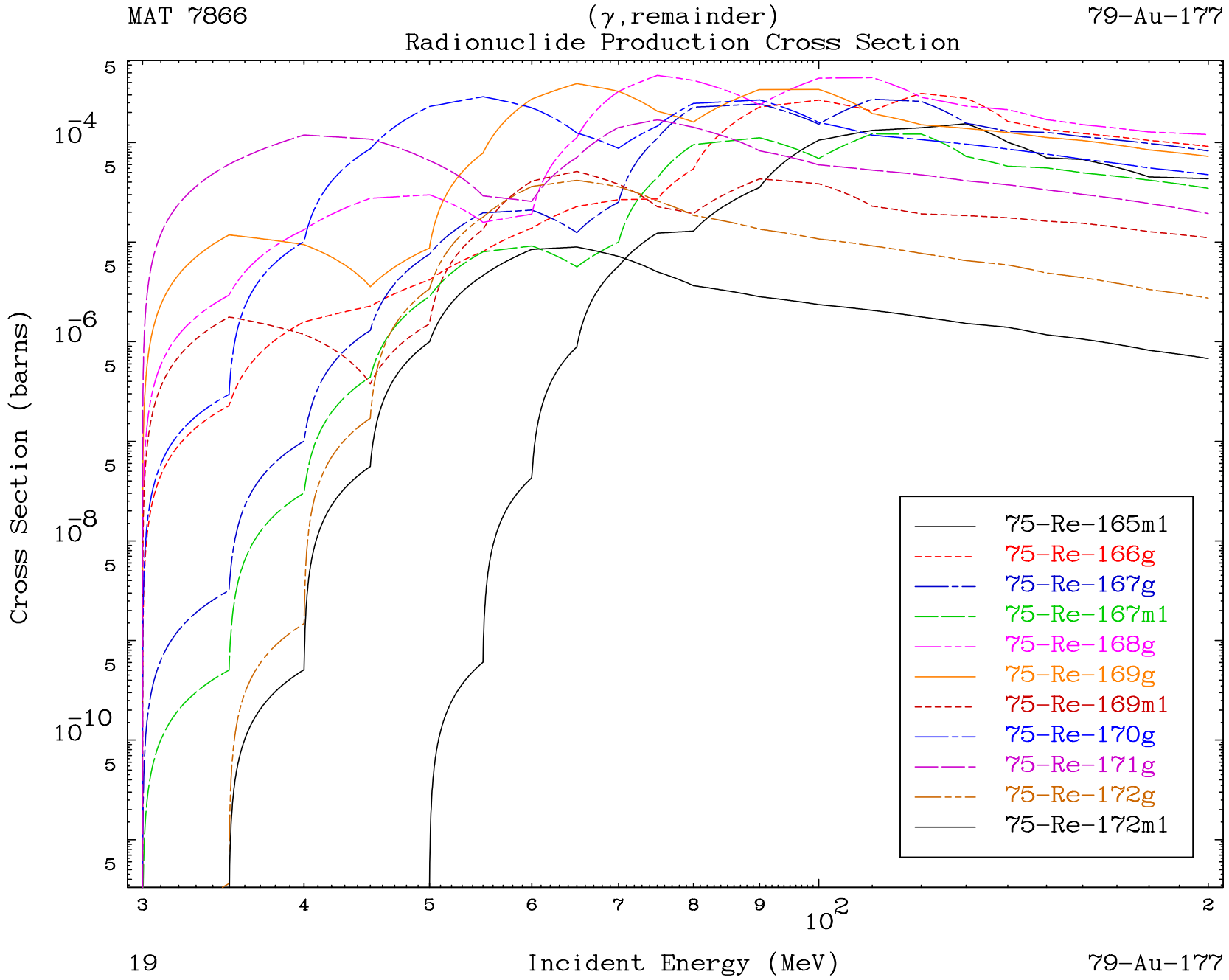

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
50
100
150
200
15
Incident Energy (MeV)
79-Au-177
71-Lu-157m1
71-Lu-158g
71-Lu-159g
72-Hf-154g
72-Hf-155g
72-Hf-156g
72-Hf-157g
72-Hf-158g
72-Hf-159g
72-Hf-160g
72-Hf-161g

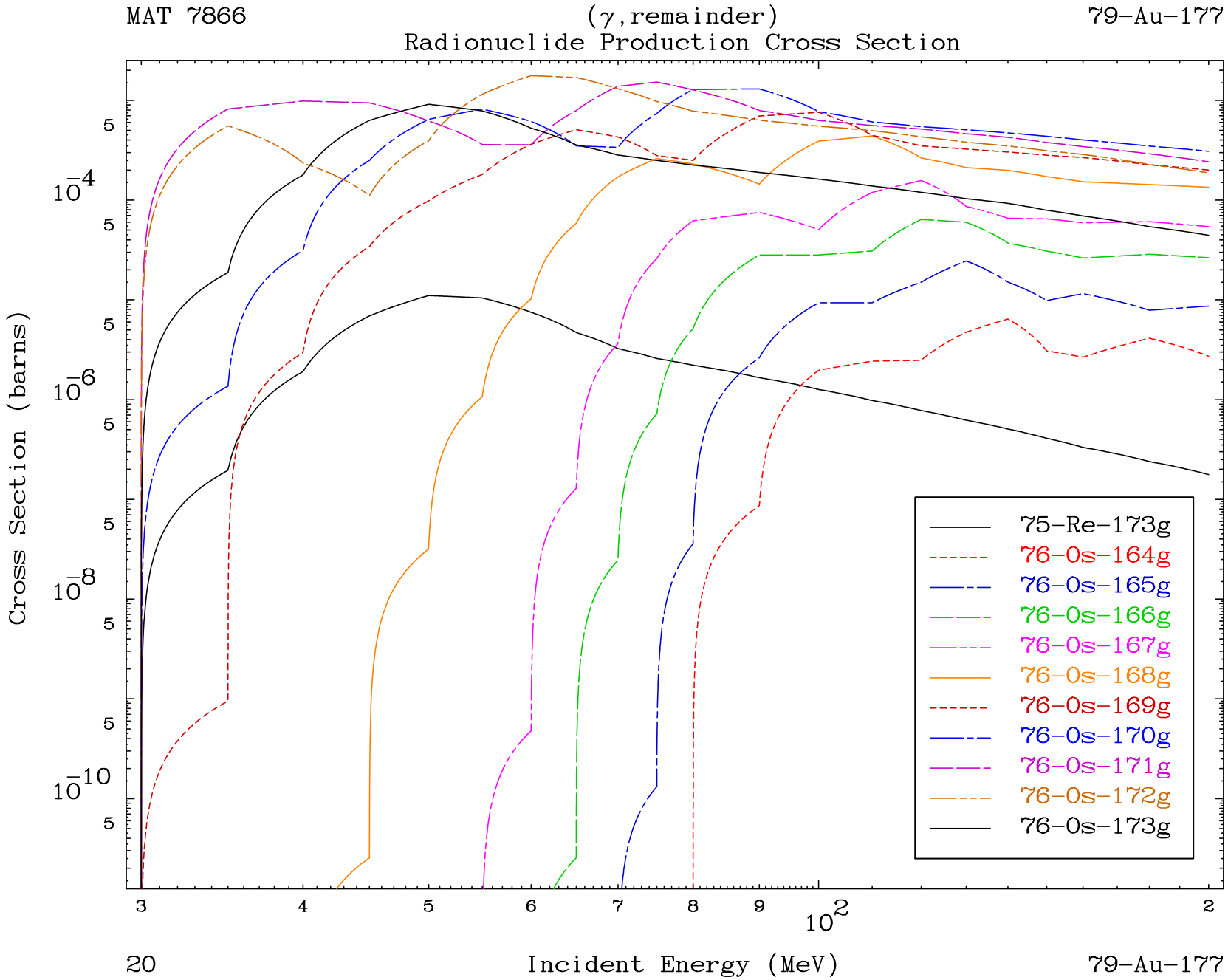

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^-12
4
5
6
7
8
9
10^2
2
Incident Energy (MeV)
72-Hf-162g
73-Ta-157g
73-Ta-158g
73-Ta-159g
73-Ta-159m1
73-Ta-160g
73-Ta-160m1
73-Ta-161g
73-Ta-161m1
73-Ta-162g
73-Ta-163g

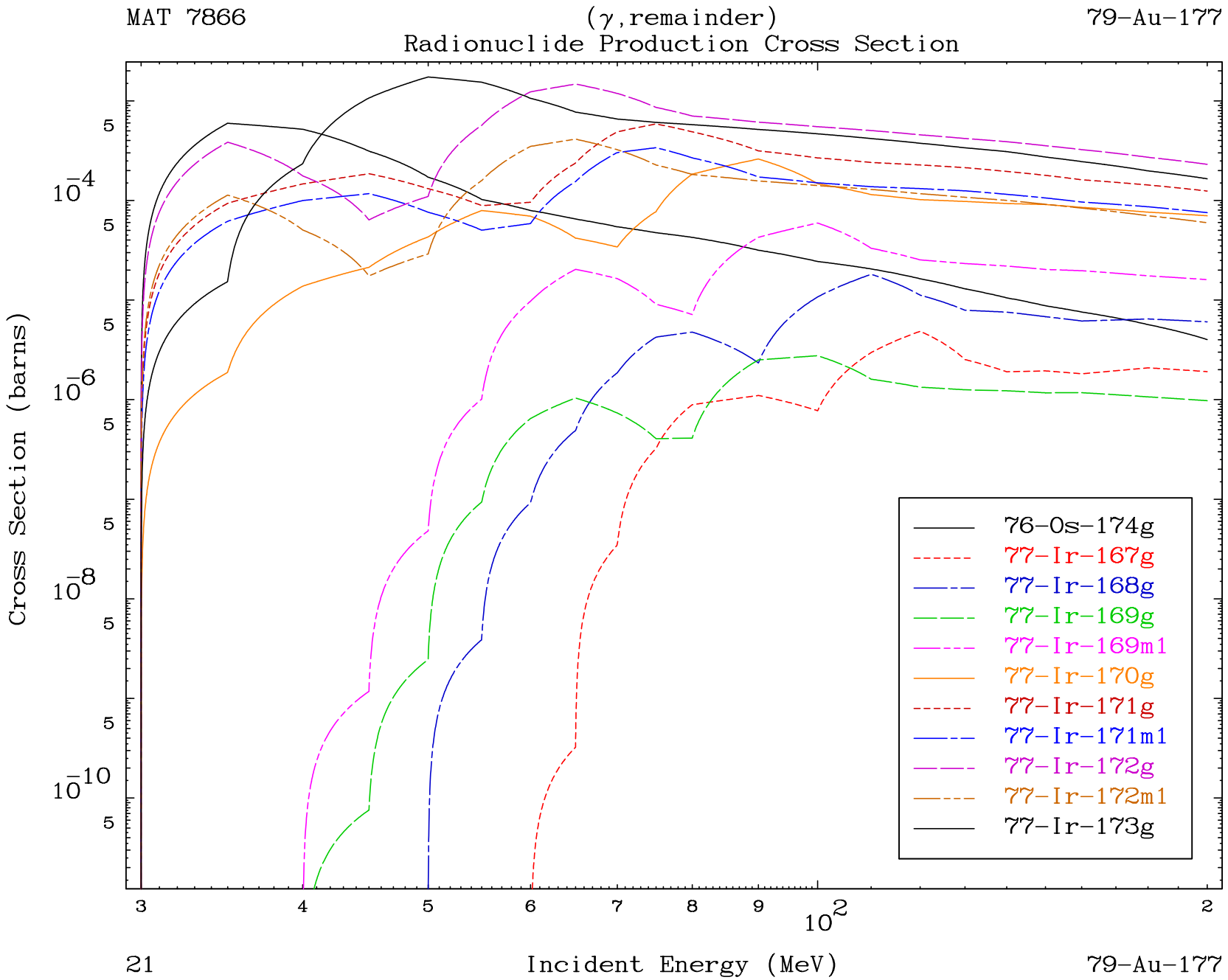

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
17
79-Au-177
73-Ta-164g
73-Ta-165g
73-Ta-166g
73-Ta-167g
74-W -159g
74-W -160g
74-W -161g
74-W -162g
74-W -163g
74-W -164g
74-W -165g

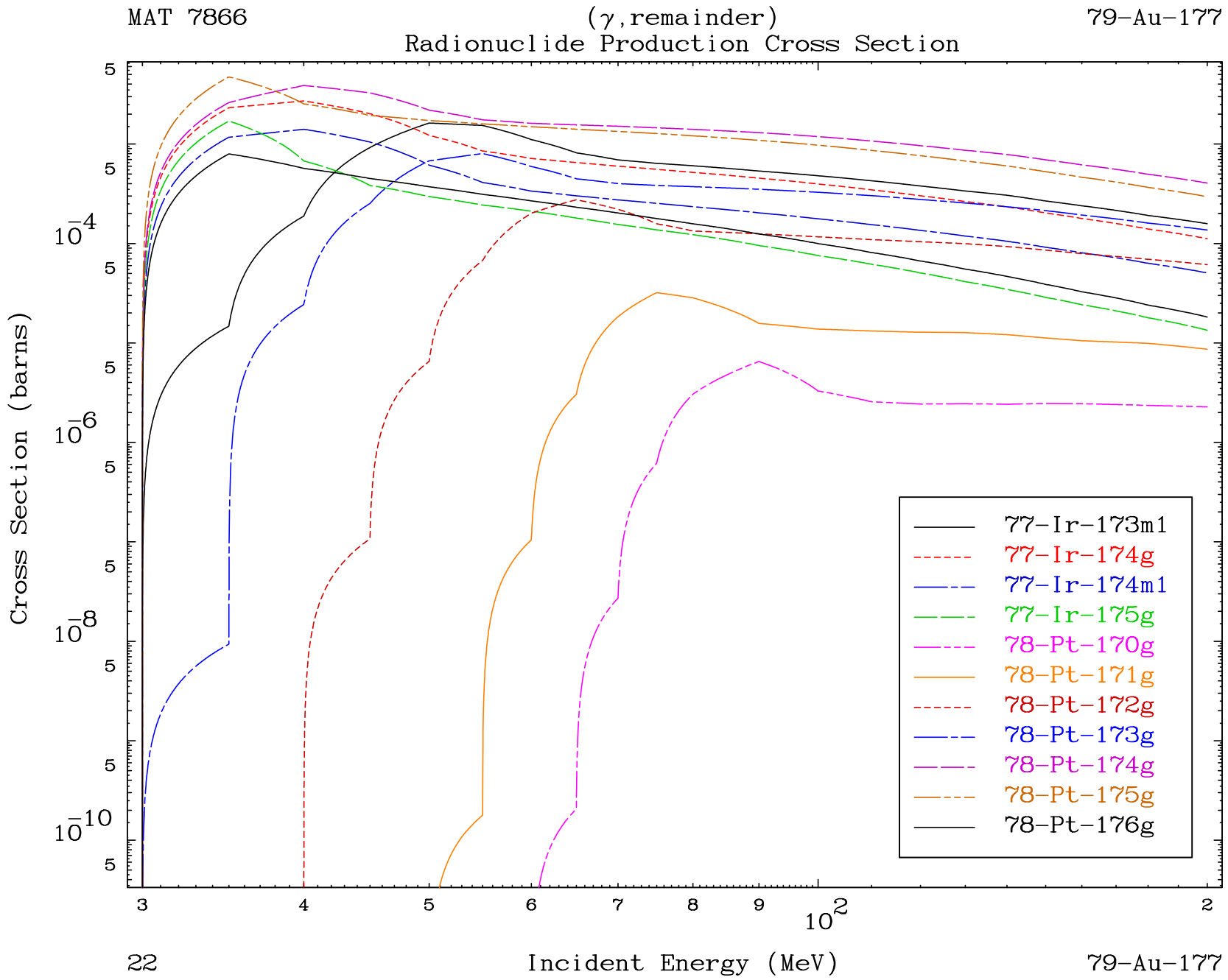

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
5
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
74-W -166g
74-W -167g
74-W -168g
74-W -169g
74-W -170g
75-Re-161g
75-Re-162g
75-Re-163g
75-Re-163m1
75-Re-164g
75-Re-165g

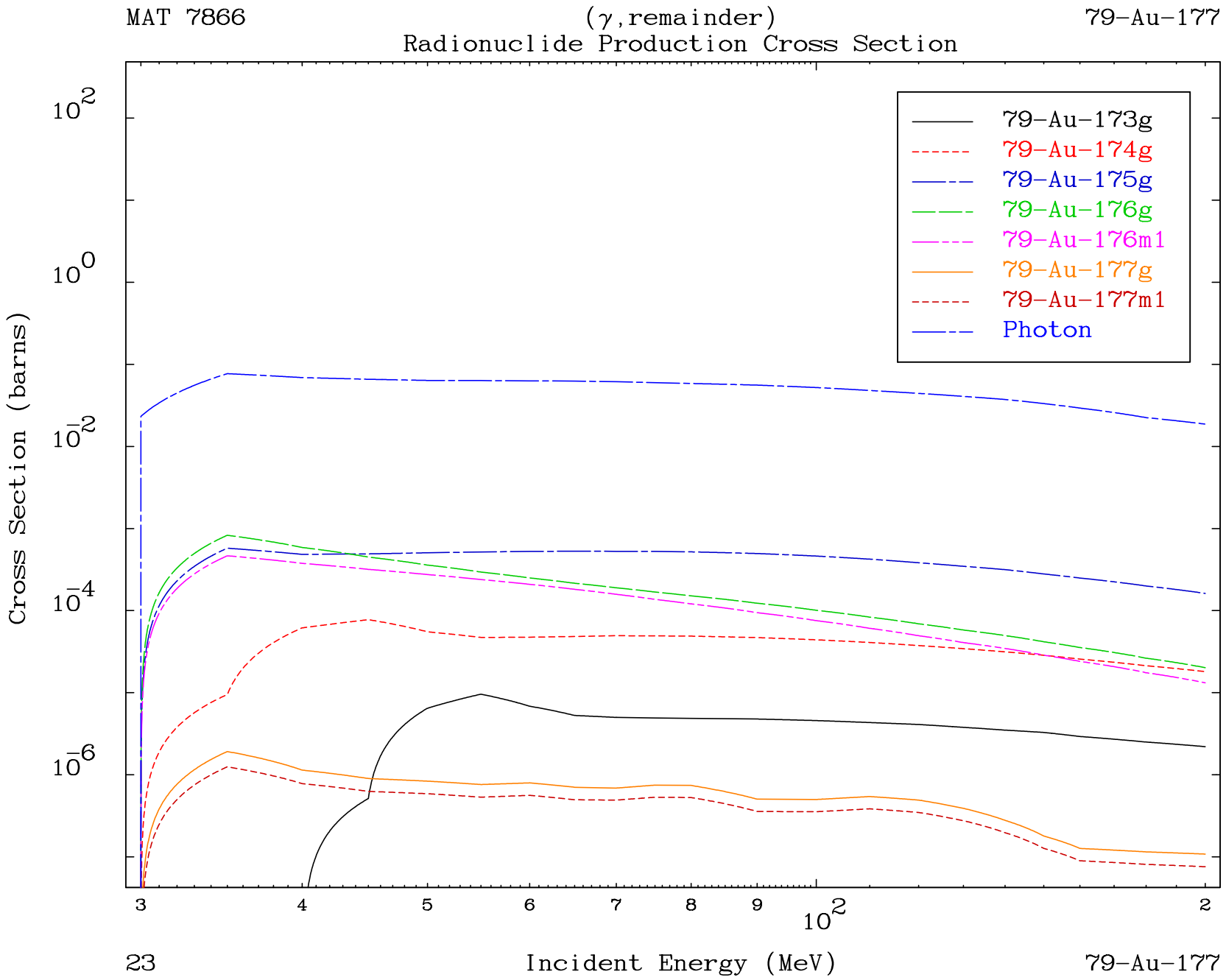

79-Au-177

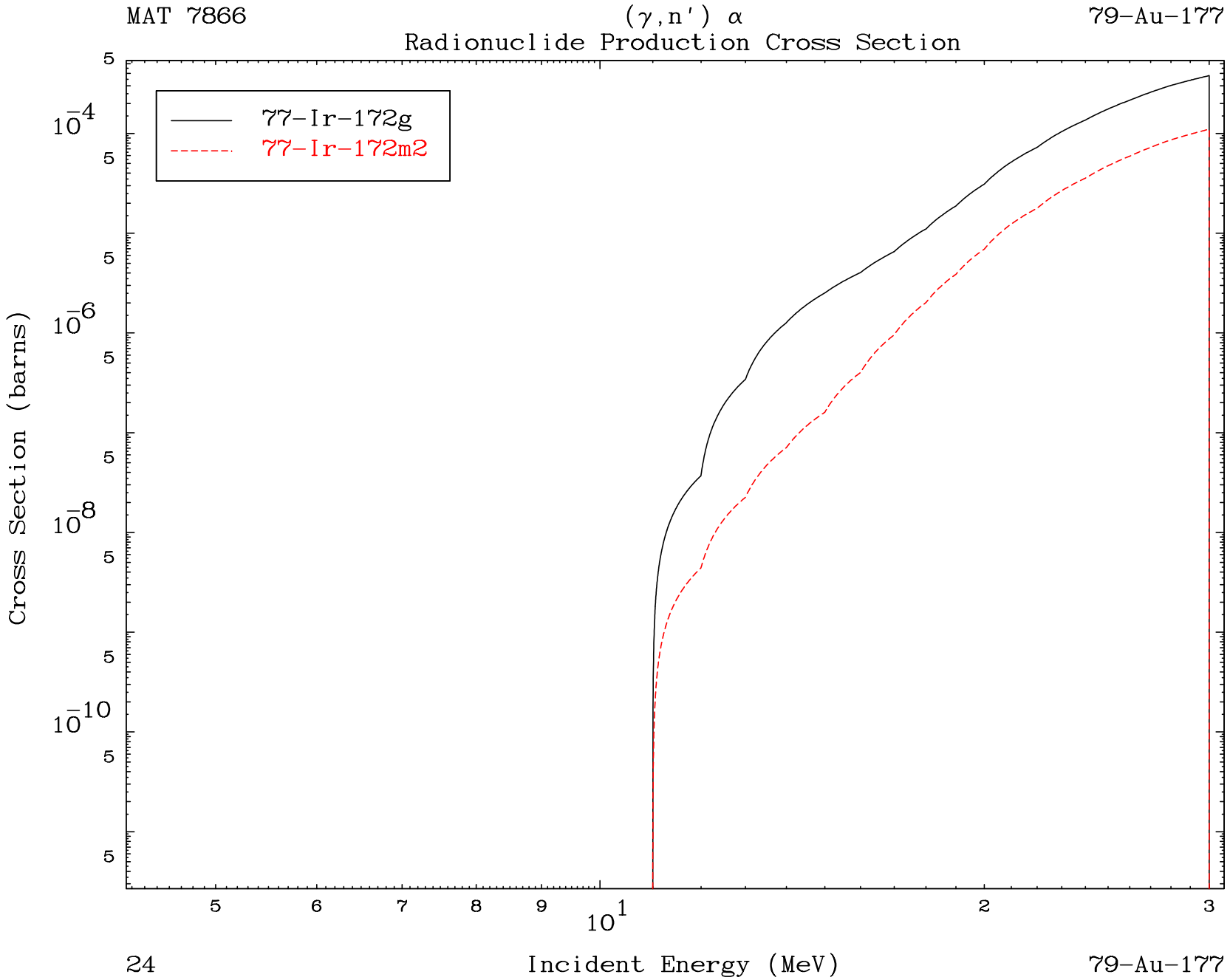

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
19
79-Au-177
75-Re-165m1
75-Re-166g
75-Re-167g
75-Re-167m1
75-Re-168g
75-Re-169g
75-Re-169m1
75-Re-170g
75-Re-171g
75-Re-172g
75-Re-172m1

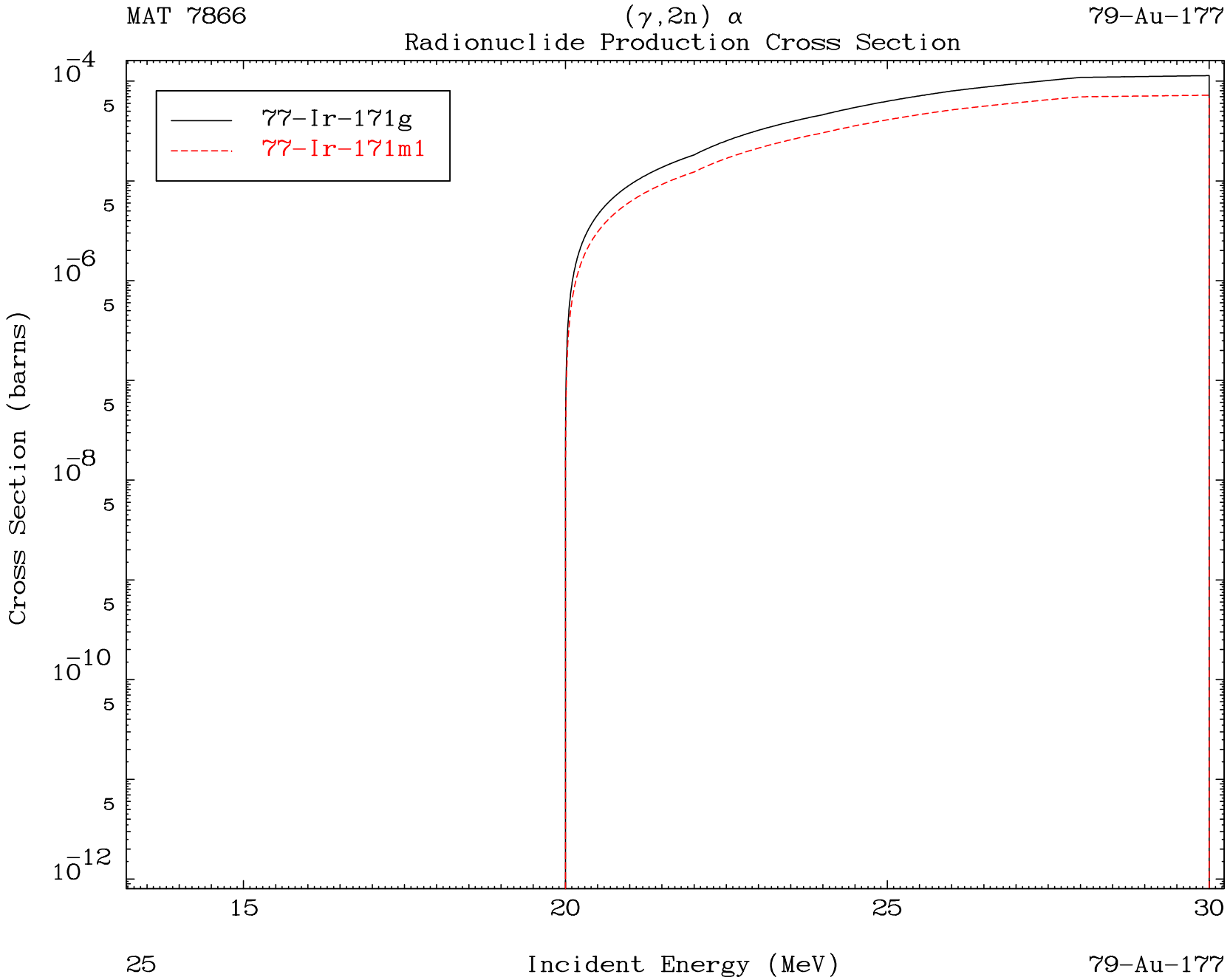

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
20
79-Au-177
75-Re-173g
76-Os-164g
76-Os-165g
76-Os-166g
76-Os-167g
76-Os-168g
76-Os-169g
76-Os-170g
76-Os-171g
76-Os-172g
76-Os-173g

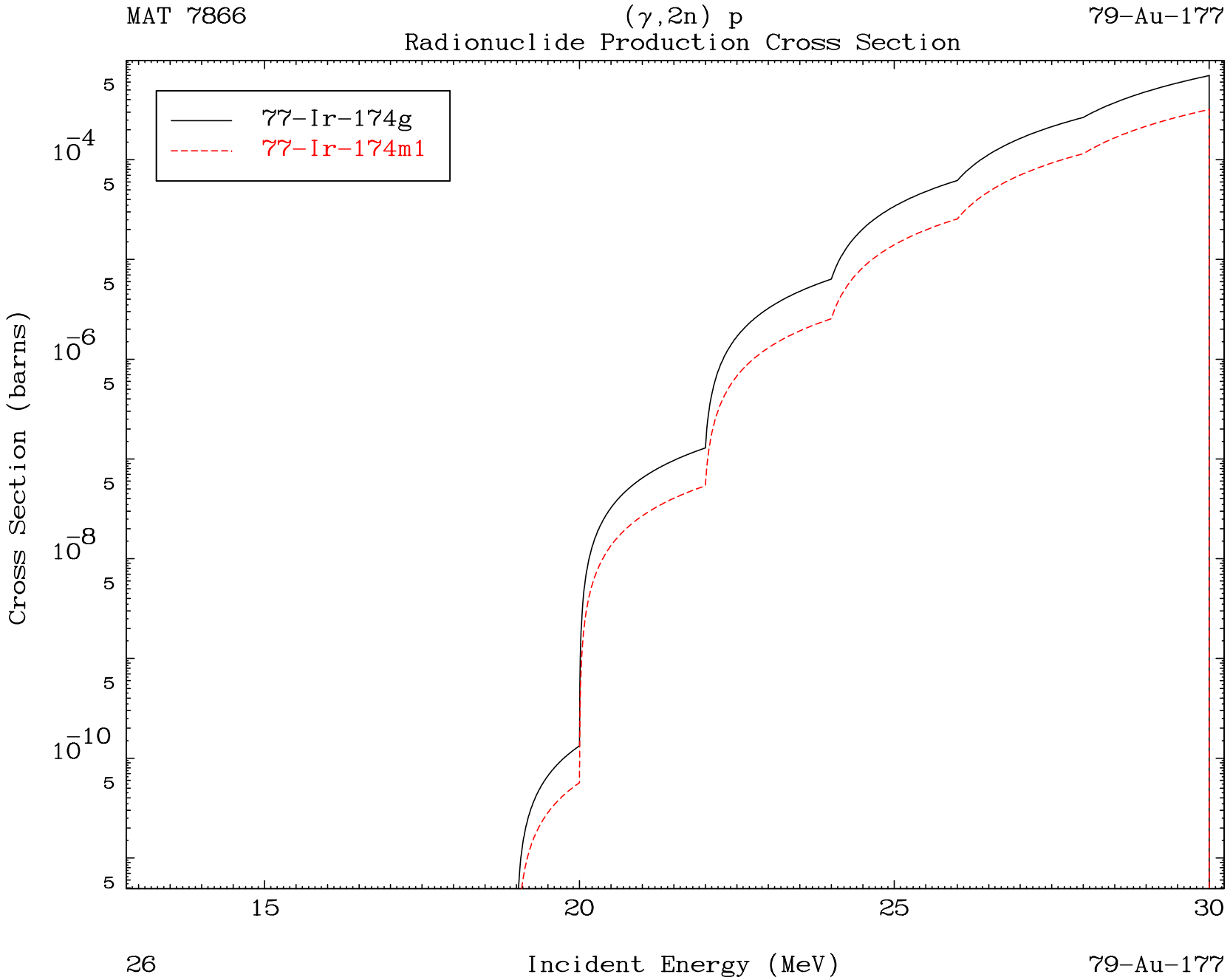

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
21
79-Au-177
76-Os-174g
77-Ir-167g
77-Ir-168g
77-Ir-169g
77-Ir-169m1
77-Ir-170g
77-Ir-171g
77-Ir-171m1
77-Ir-172g
77-Ir-172m1
77-Ir-173g

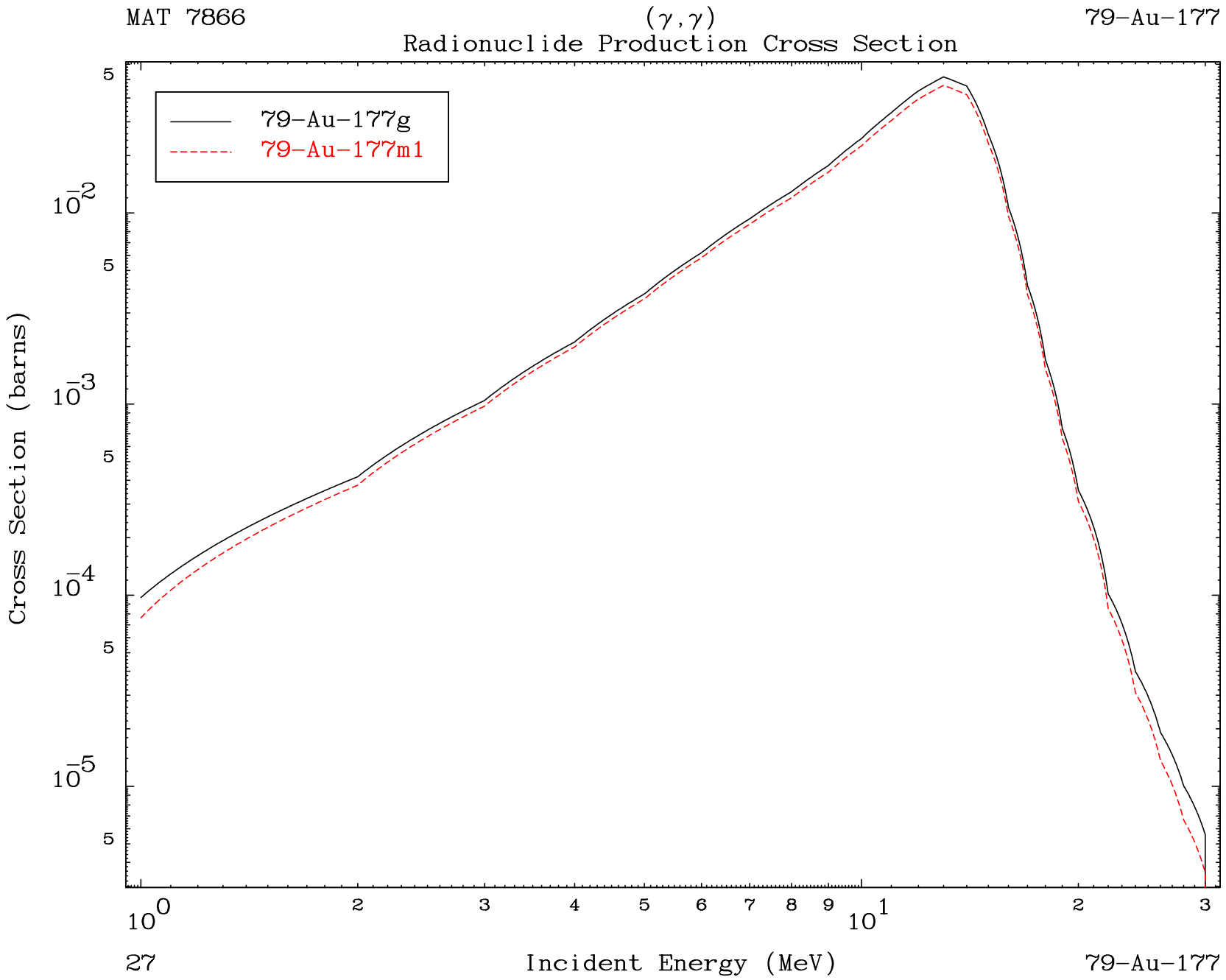

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
22
79-Au-177
77-Ir-173m1
77-Ir-174g
77-Ir-174m1
77-Ir-175g
78-Pt-170g
78-Pt-171g
78-Pt-172g
78-Pt-173g
78-Pt-174g
78-Pt-175g
78-Pt-176g

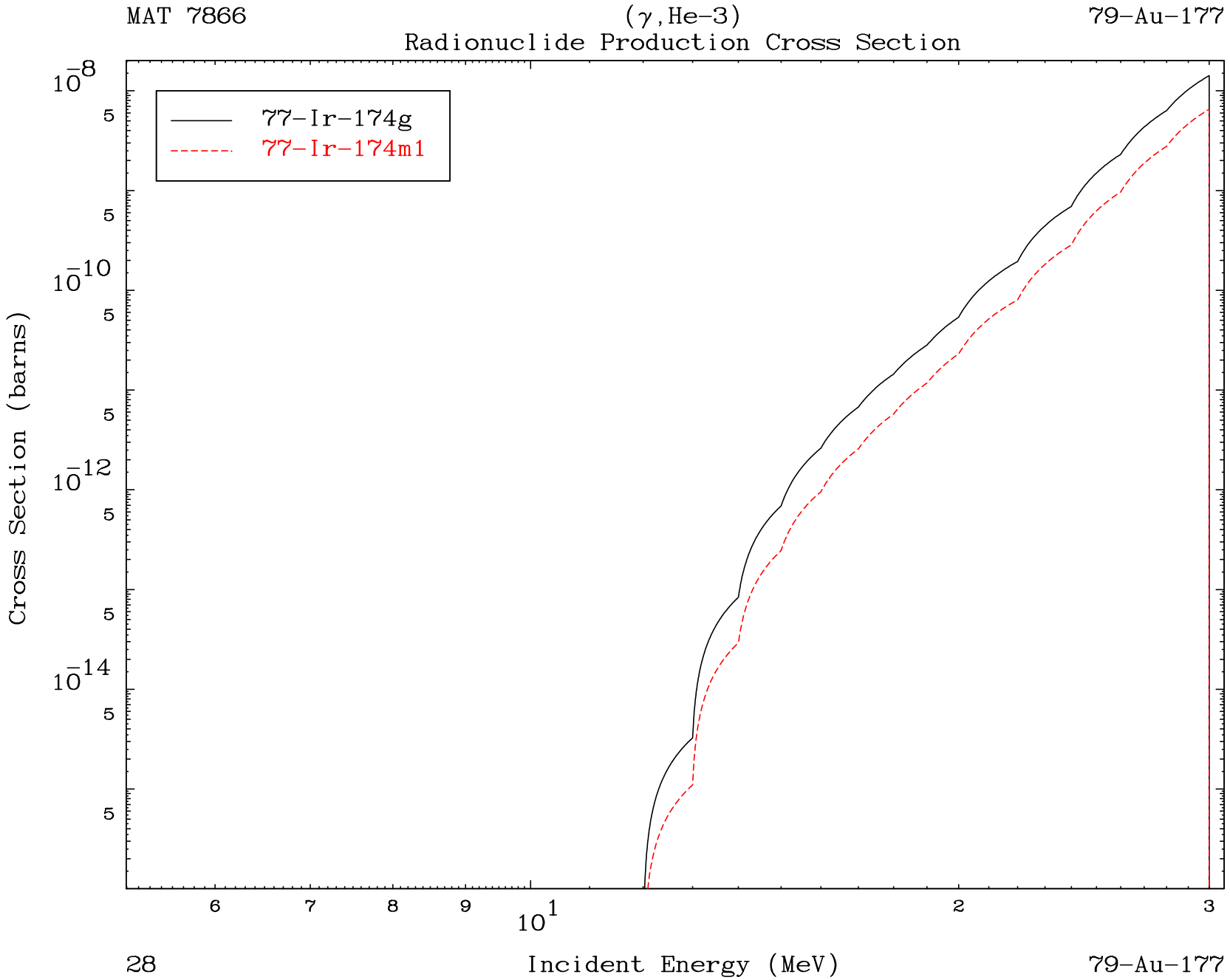

MAT 7866
(γ,remainder)
79-Au-177
Radionuclide Production Cross Section
Cross Section (barns)
10^2
10^0
10^-2
10^-4
10^-6
79-Au-173g
79-Au-174g
79-Au-175g
79-Au-176g
79-Au-176m1
79-Au-177g
79-Au-177m1
Photon
3
4
5
6
7
8
9
10^2
2
23
Incident Energy (MeV)
79-Au-177

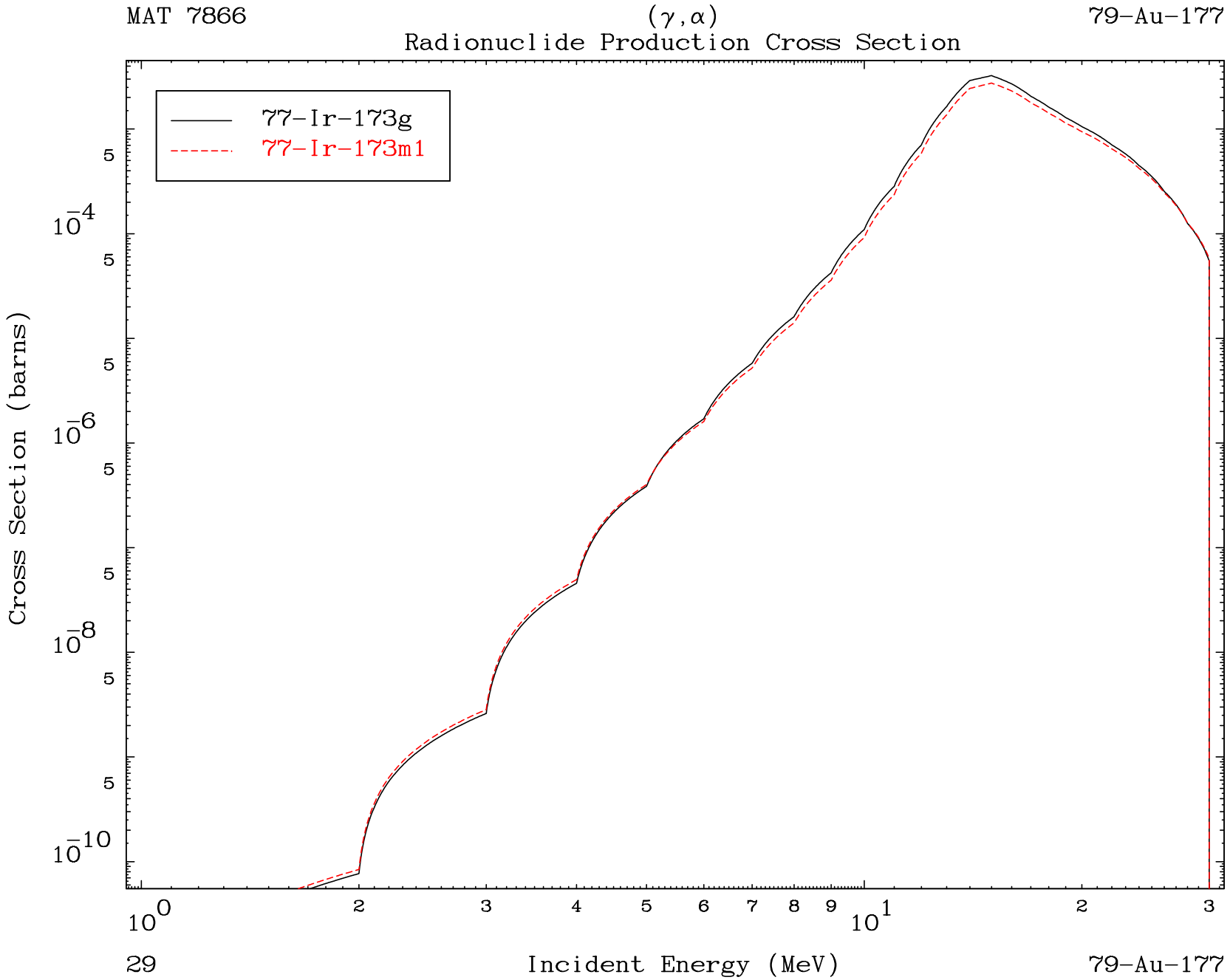

MAT 7866
(γ,n') α
79-Au-177
Radionuclide Production Cross Section
77-Ir-172g
77-Ir-172m2
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
6
7
8
9
10^1
2
3
24
Incident Energy (MeV)
79-Au-177

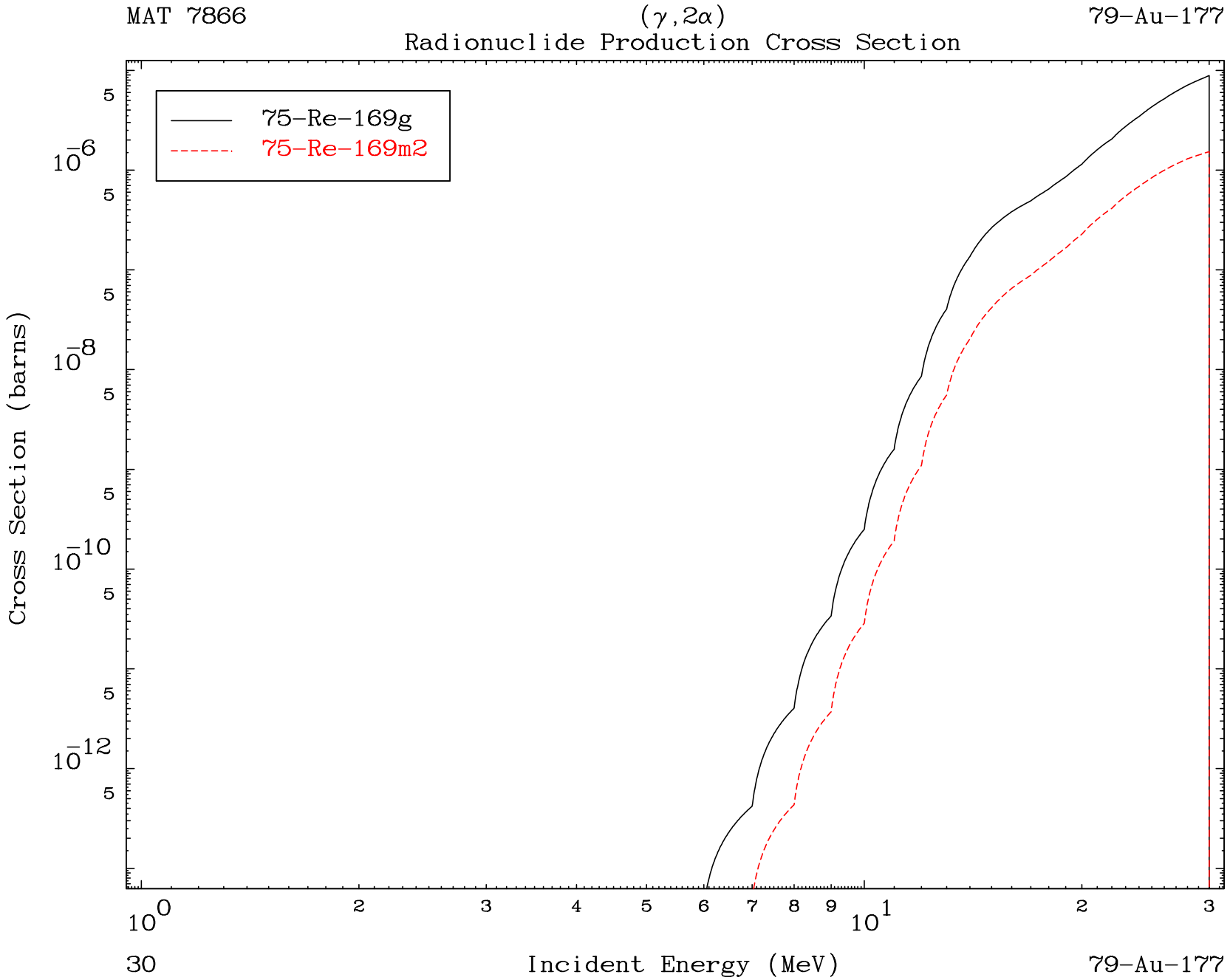

MAT 7866
(γ,2n) α
79-Au-177
Radionuclide Production Cross Section
77-Ir-171g
77-Ir-171m1
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
15
20
25
30
25
Incident Energy (MeV)
79-Au-177

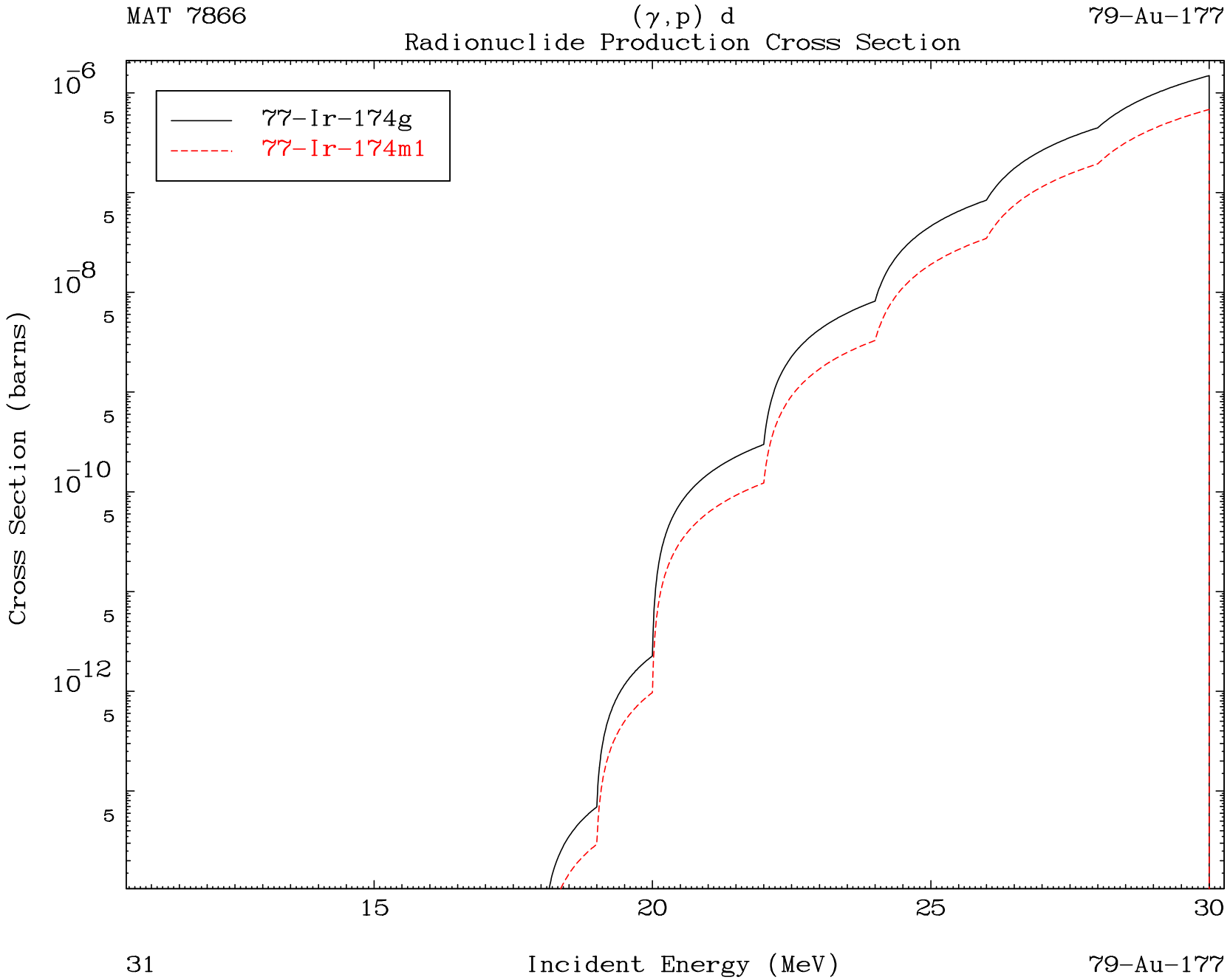

MAT 7866
(γ,2n) p
79-Au-177
Radionuclide Production Cross Section
77-Ir-174g
77-Ir-174m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
15
20
25
30
26
Incident Energy (MeV)
79-Au-177

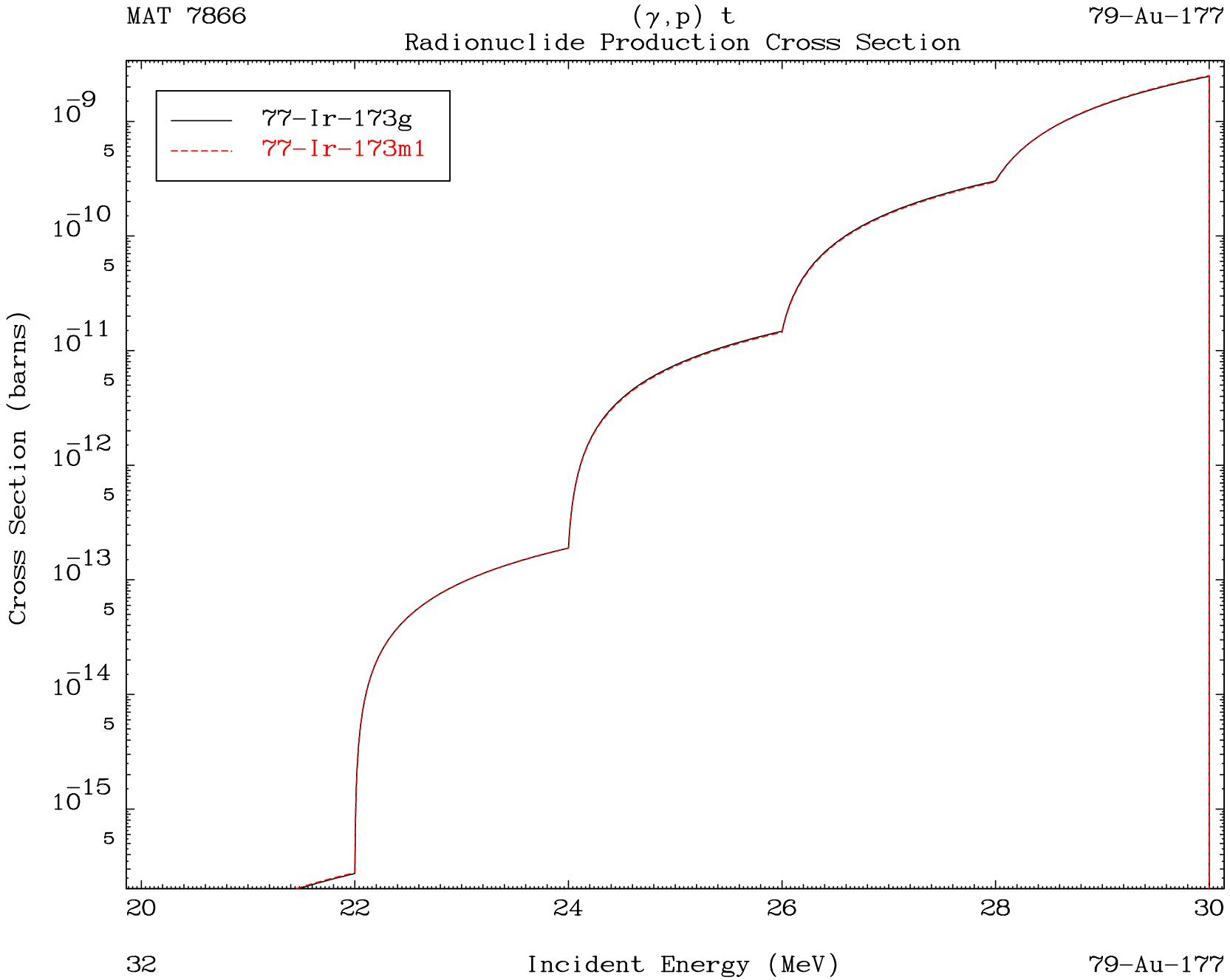

MAT 7866
(γ,γ)
79-Au-177
Radionuclide Production Cross Section
79-Au-177g
79-Au-177m1
Cross Section (barns)
Incident Energy (MeV)
27
79-Au-177


MAT 7866
(γ,He-3)
79-Au-177
Radionuclide Production Cross Section
77-Ir-174g
77-Ir-174m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
6
7
8
9
10^1
2
3
28
Incident Energy (MeV)
79-Au-177


MAT 7866
(γ,α)
79-Au-177
Radionuclide Production Cross Section
77-Ir-173g
77-Ir-173m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
100
2
3
4
5
6
7
8
9
101
2
3
Incident Energy (MeV)
29
79-Au-177


MAT 7866
(γ,2α)
79-Au-177
Radionuclide Production Cross Section
75-Re-169g
75-Re-169m2
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
10^0
10^1
Incident Energy (MeV)
30
79-Au-177


MAT 7866
(γ,p) d
79-Au-177
Radionuclide Production Cross Section
77-Ir-174g
77-Ir-174m1
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
15
20
25
30
31
Incident Energy (MeV)
79-Au-177


MAT 7866
(γ,p) t
79-Au-177
Radionuclide Production Cross Section
77-Ir-173g
77-Ir-173m1
Cross Section (barns)
10-9
10-10
10-11
10-12
10-13
10-14
10-15
5
20
22
24
26
28
30
32
Incident Energy (MeV)
79-Au-177