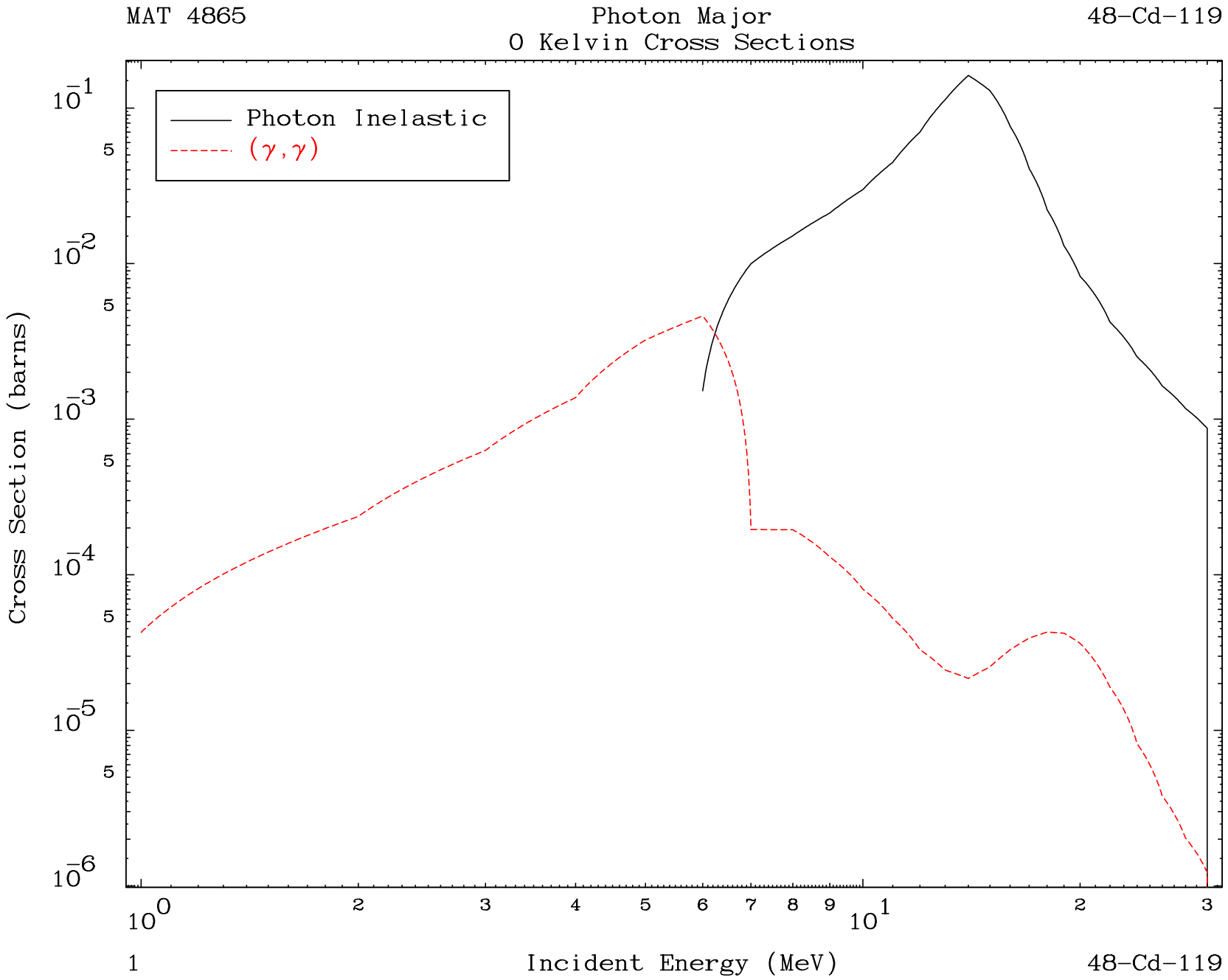
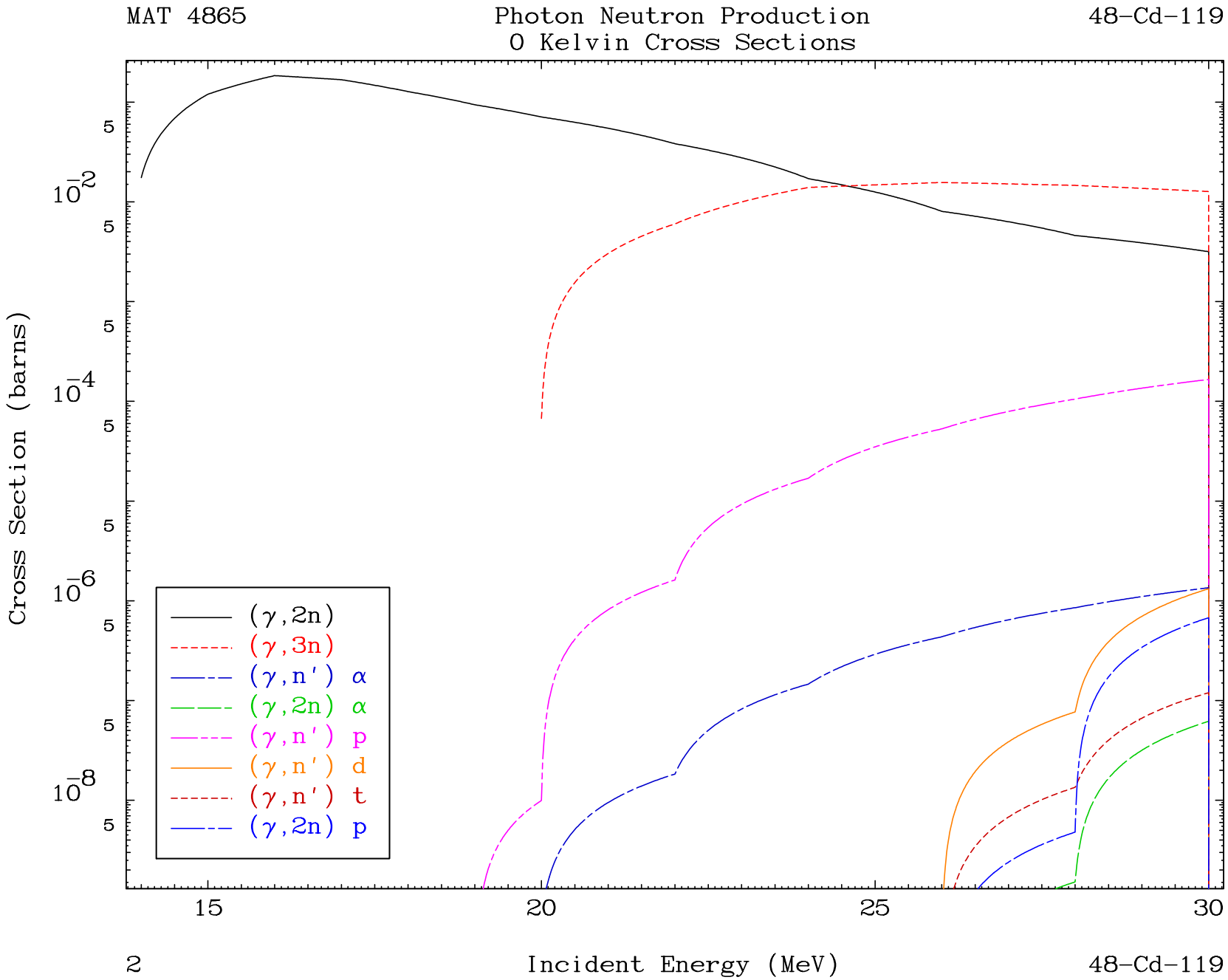
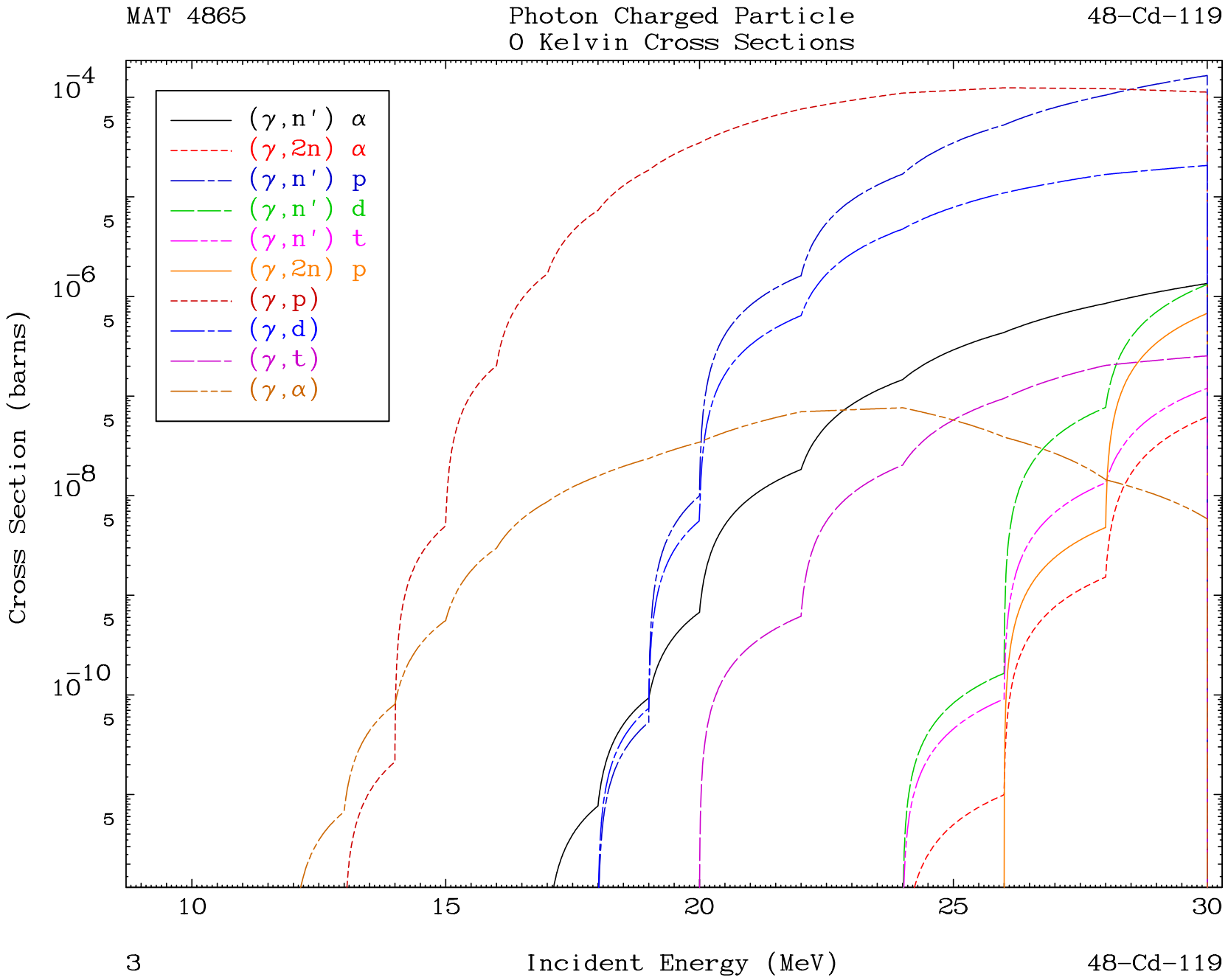
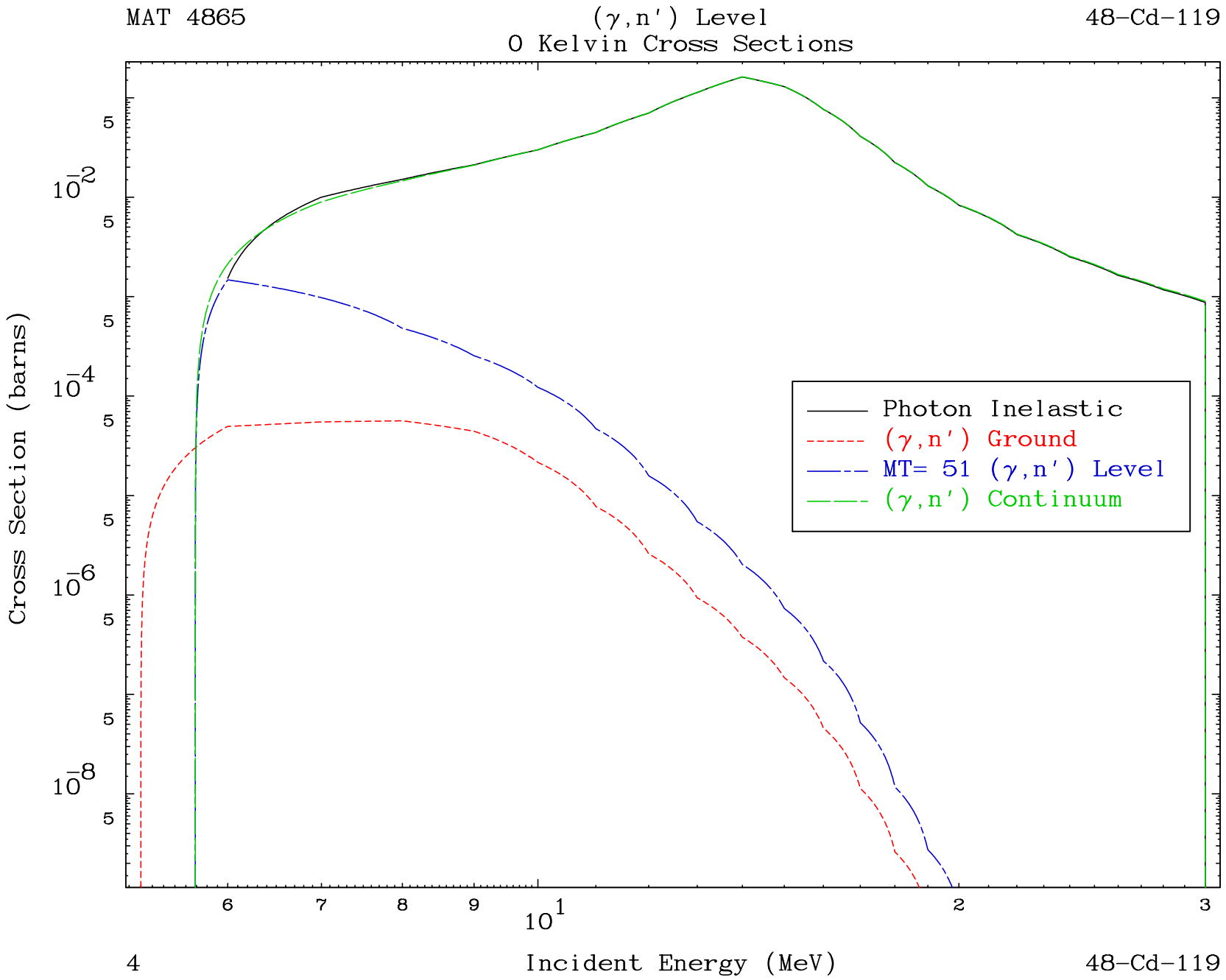
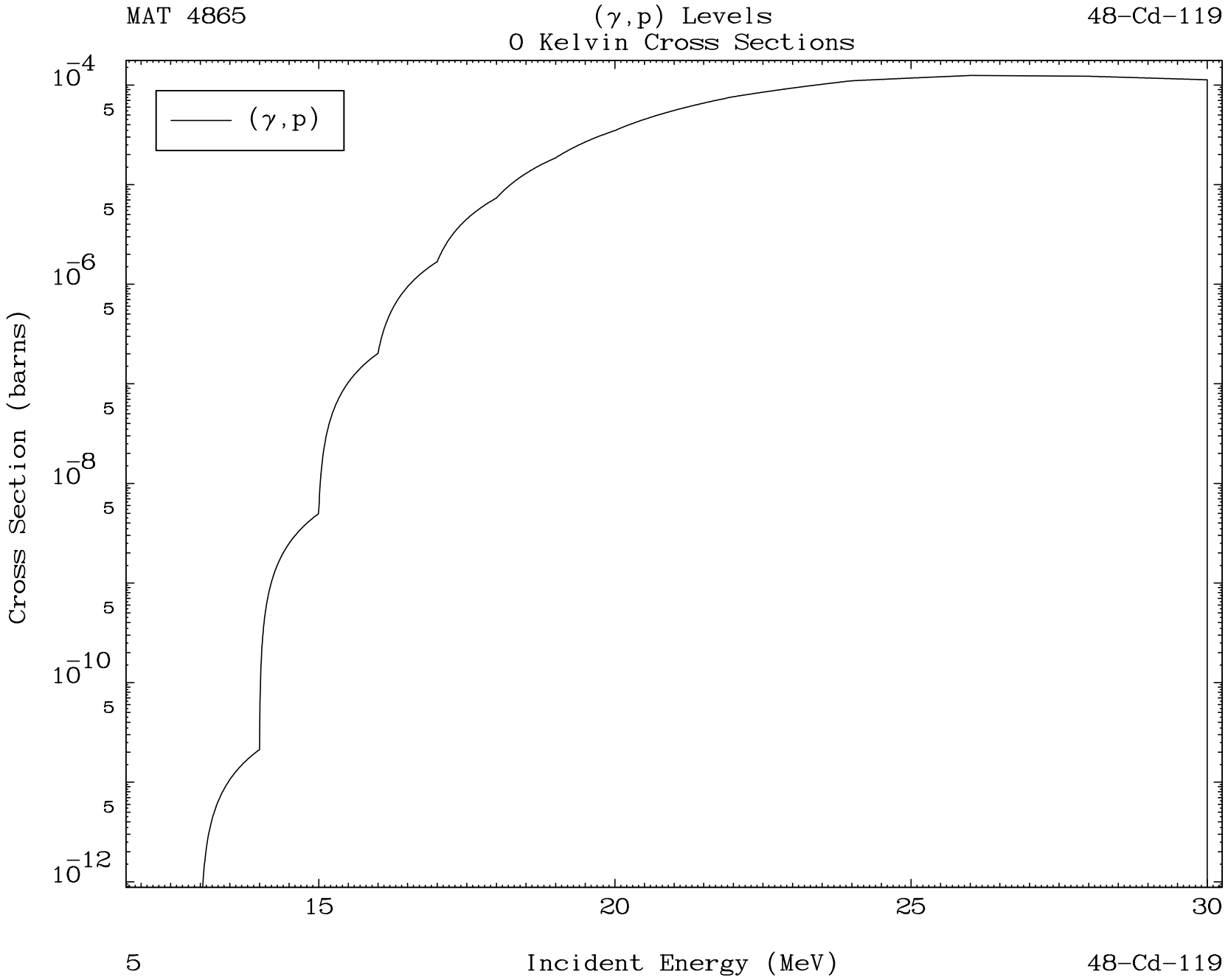
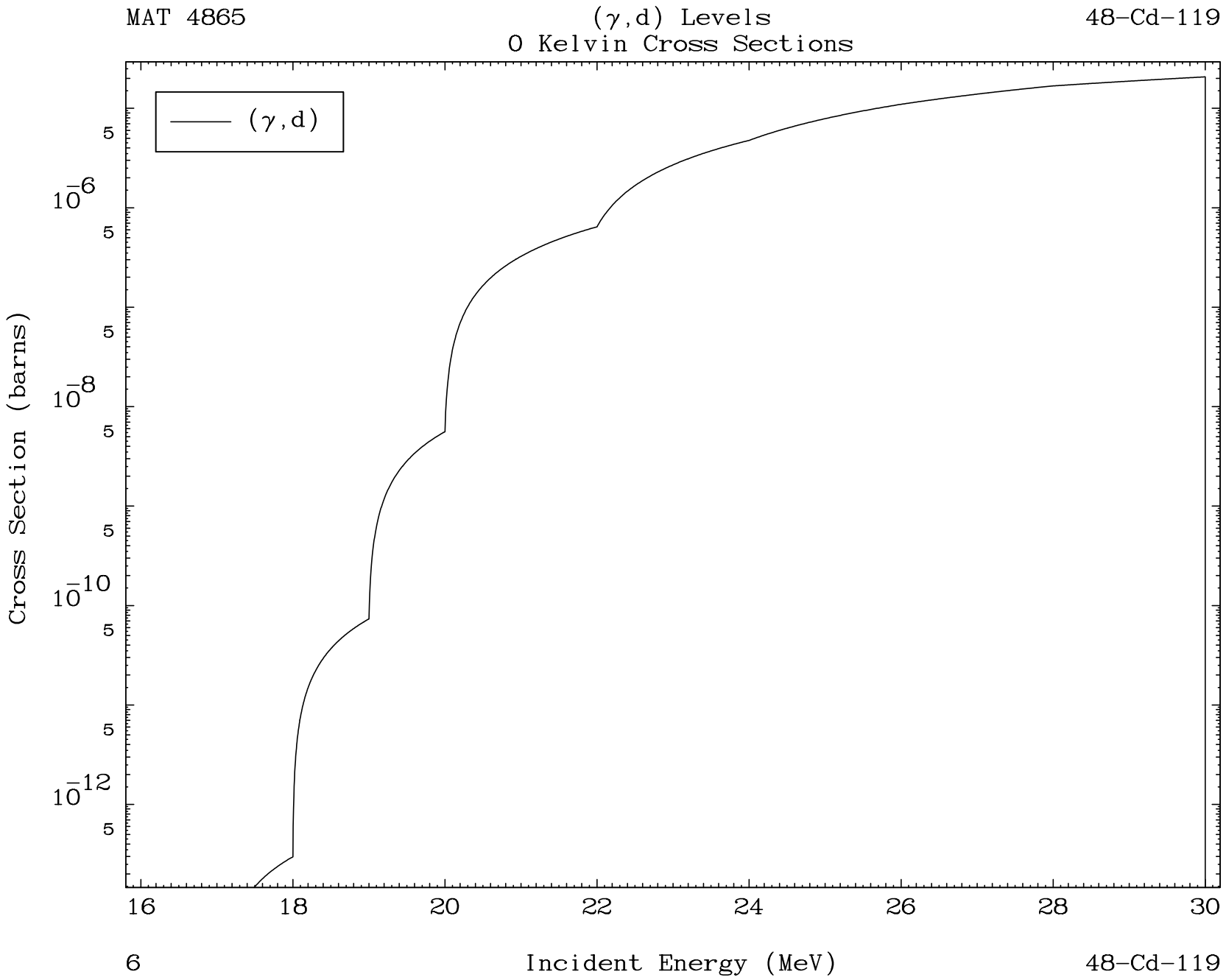

MAT 4865
Photon Major
48-Cd-119
0 Kelvin Cross Sections
Photon Inelastic
(γ,γ)
Cross Section (barns)
Incident Energy (MeV)
48-Cd-119

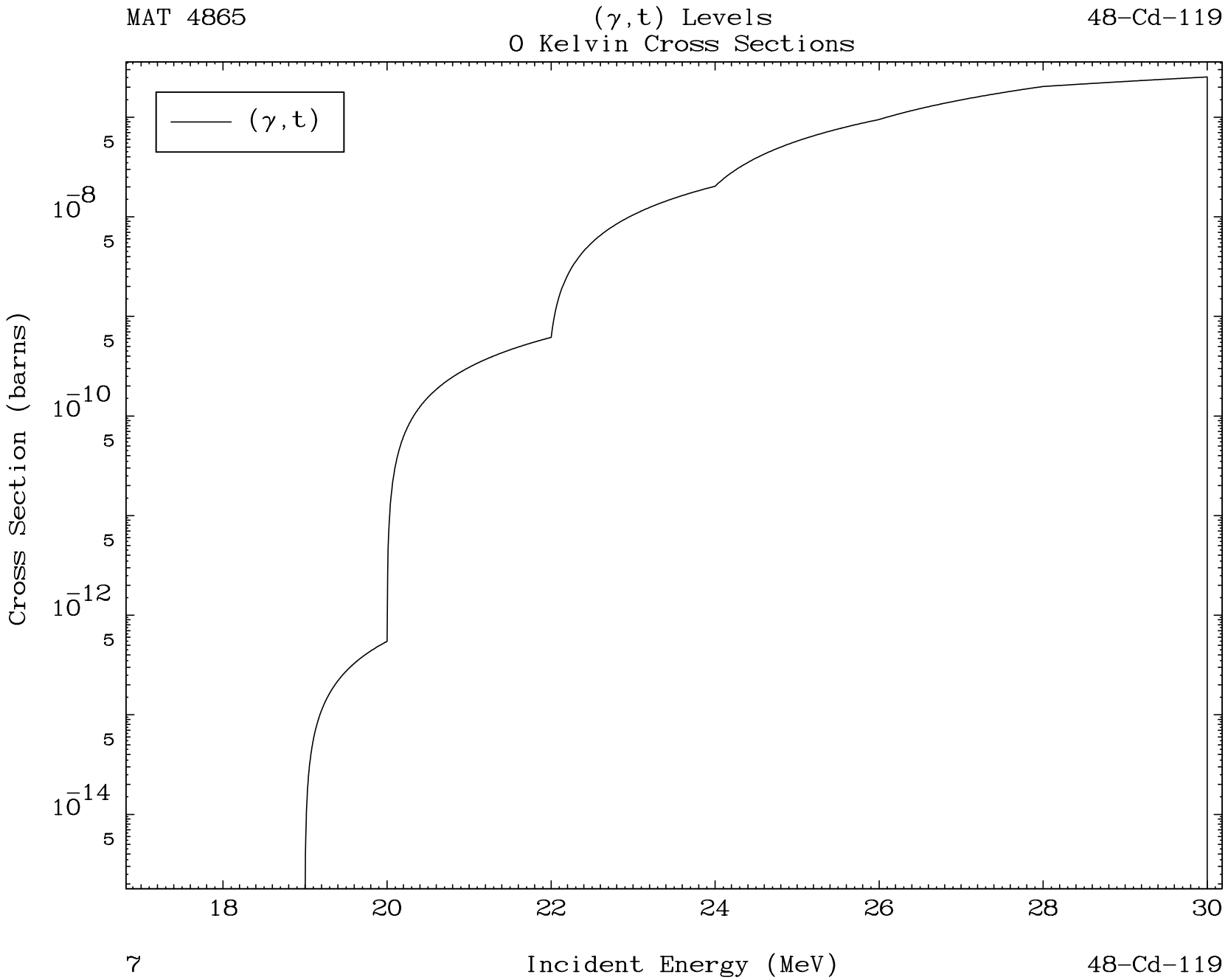

MAT 4865
Photon Neutron Production
0 Kelvin Cross Sections
48-Cd-119
Cross Section (barns)
10-2
10-4
10-6
10-8
(γ,2n)
(γ,3n)
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') d
(γ,n') t
(γ,2n) p
15
20
25
30
2
Incident Energy (MeV)
48-Cd-119

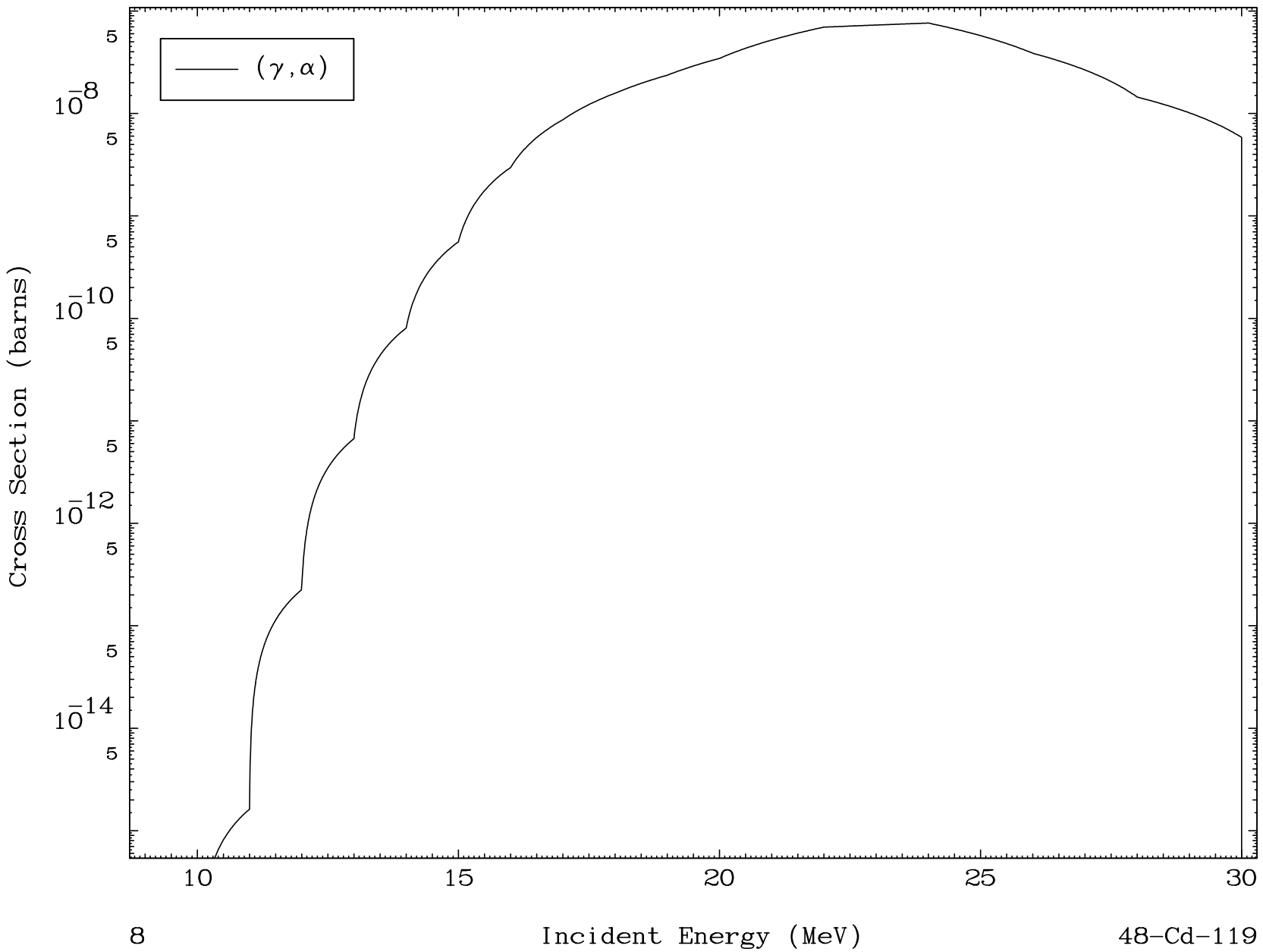

MAT 4865
Photon Charged Particle
0 Kelvin Cross Sections
48-Cd-119
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') d
(γ,n') t
(γ,2n) p
(γ,p)
(γ,d)
(γ,t)
(γ,α)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10
15
20
25
30
Incident Energy (MeV)
3
48-Cd-119

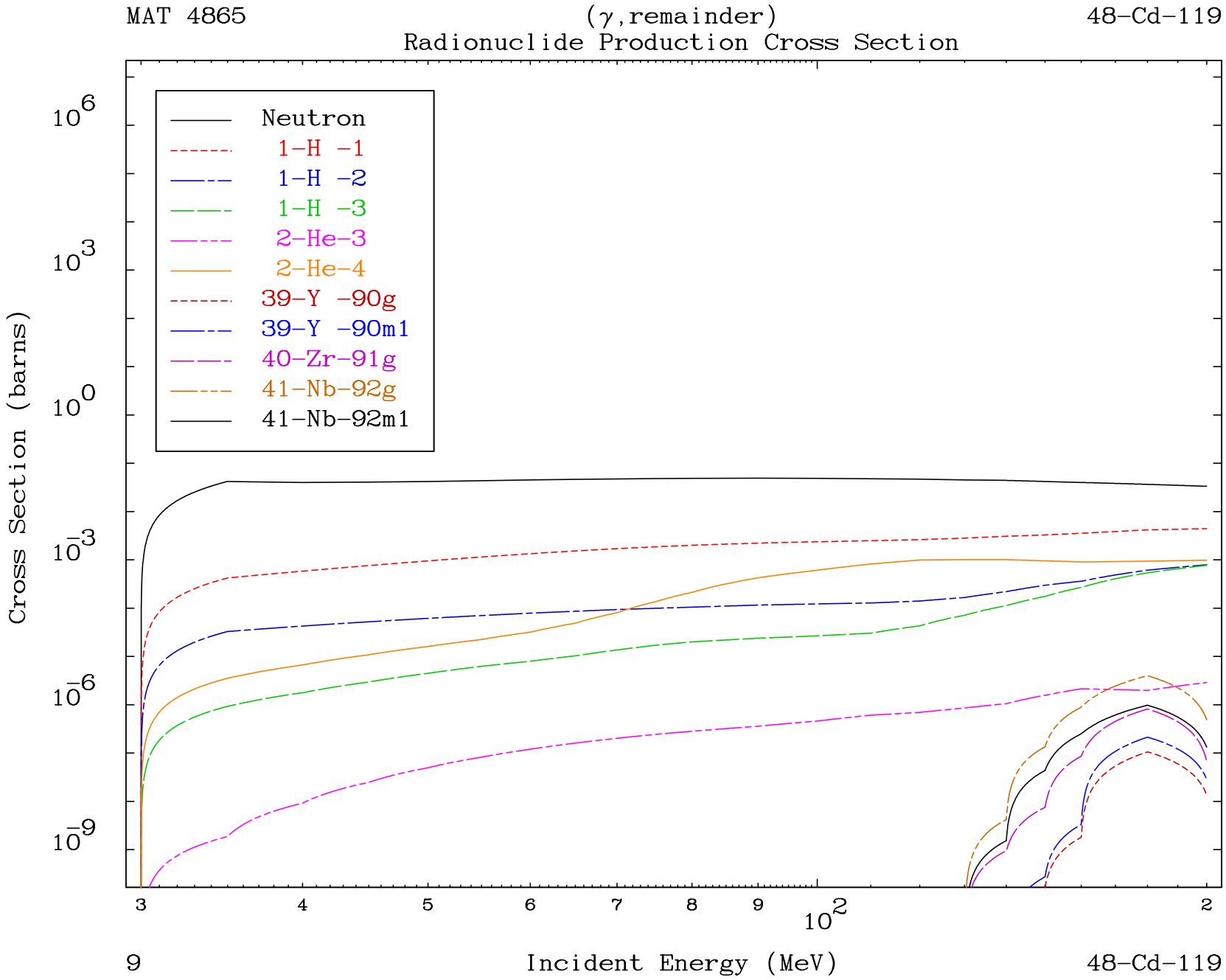

MAT 4865
(γ,n') Level
48-Cd-119
0 Kelvin Cross Sections
Cross Section (barns)
10-2
10-4
10-6
10-8
Photon Inelastic
(γ,n') Ground
MT= 51 (γ,n') Level
(γ,n') Continuum
4
6
7
8
9
10 1
2
3
Incident Energy (MeV)
48-Cd-119

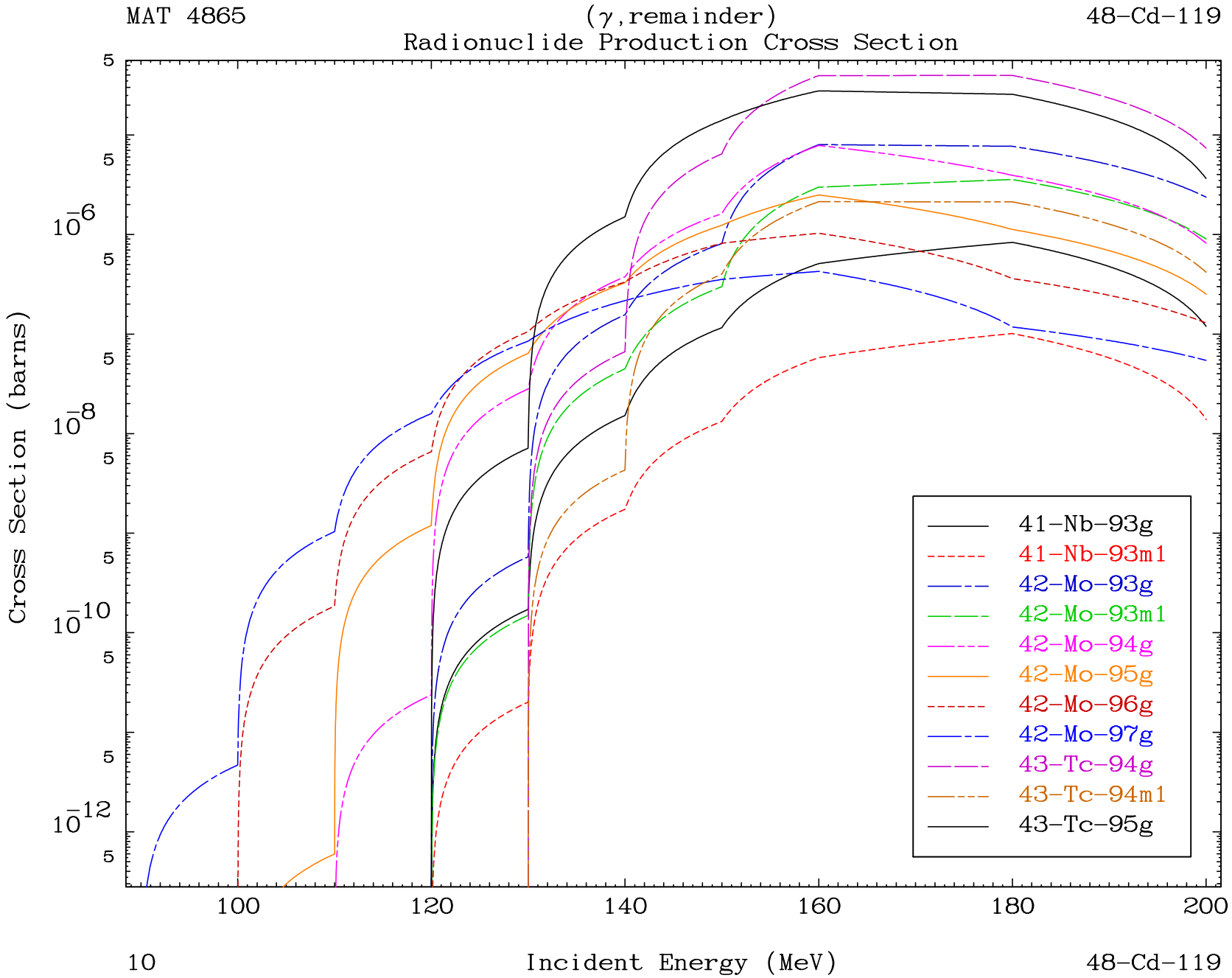

MAT 4865
(γ,p) Levels
48-Cd-119
0 Kelvin Cross Sections
(γ,p)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^-12
5
15
20
25
30
Incident Energy (MeV)
48-Cd-119

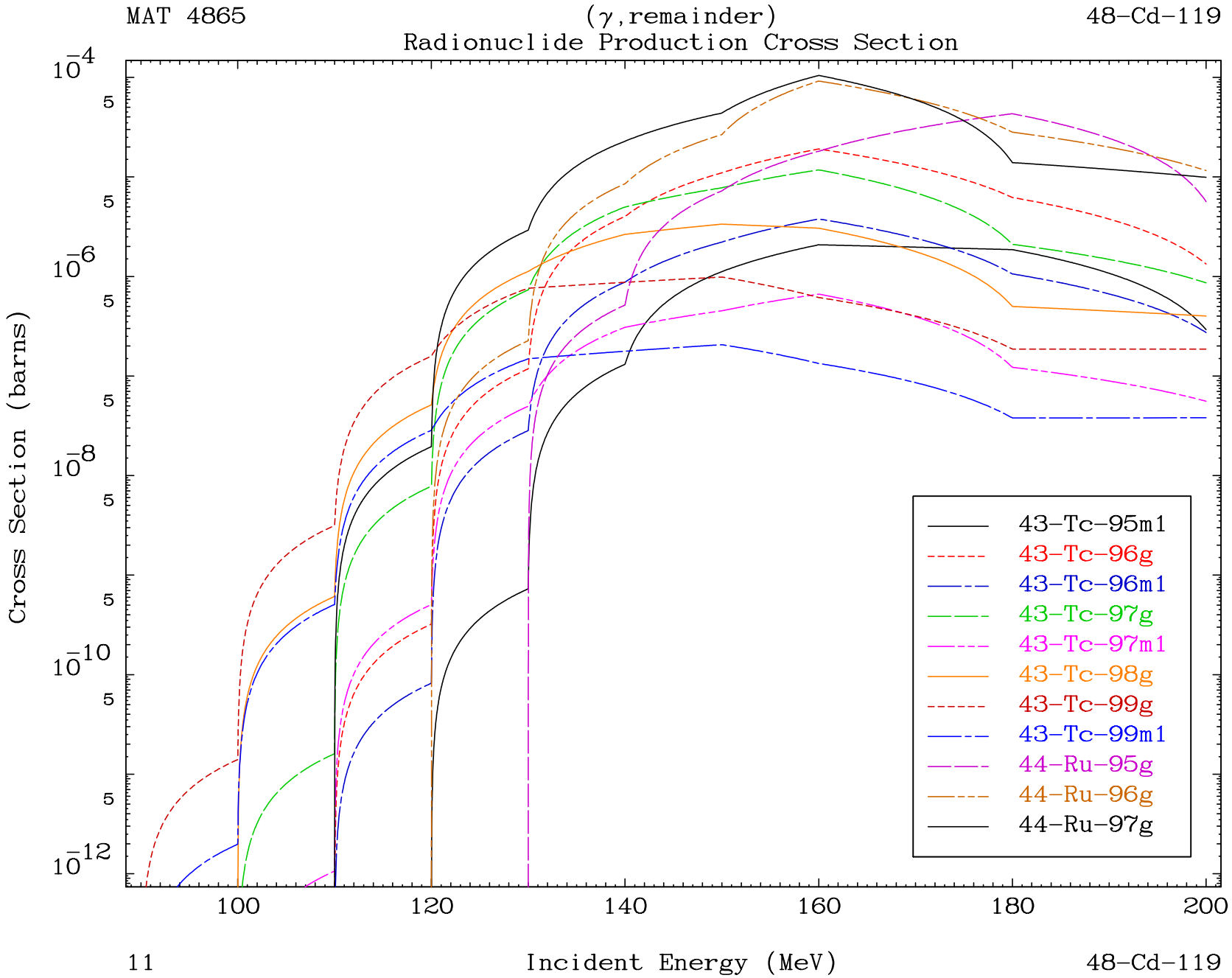

MAT 4865
(γ,d) Levels
48-Cd-119
0 Kelvin Cross Sections
(γ,d)
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
16
18
20
22
24
26
28
30
Incident Energy (MeV)
6
48-Cd-119

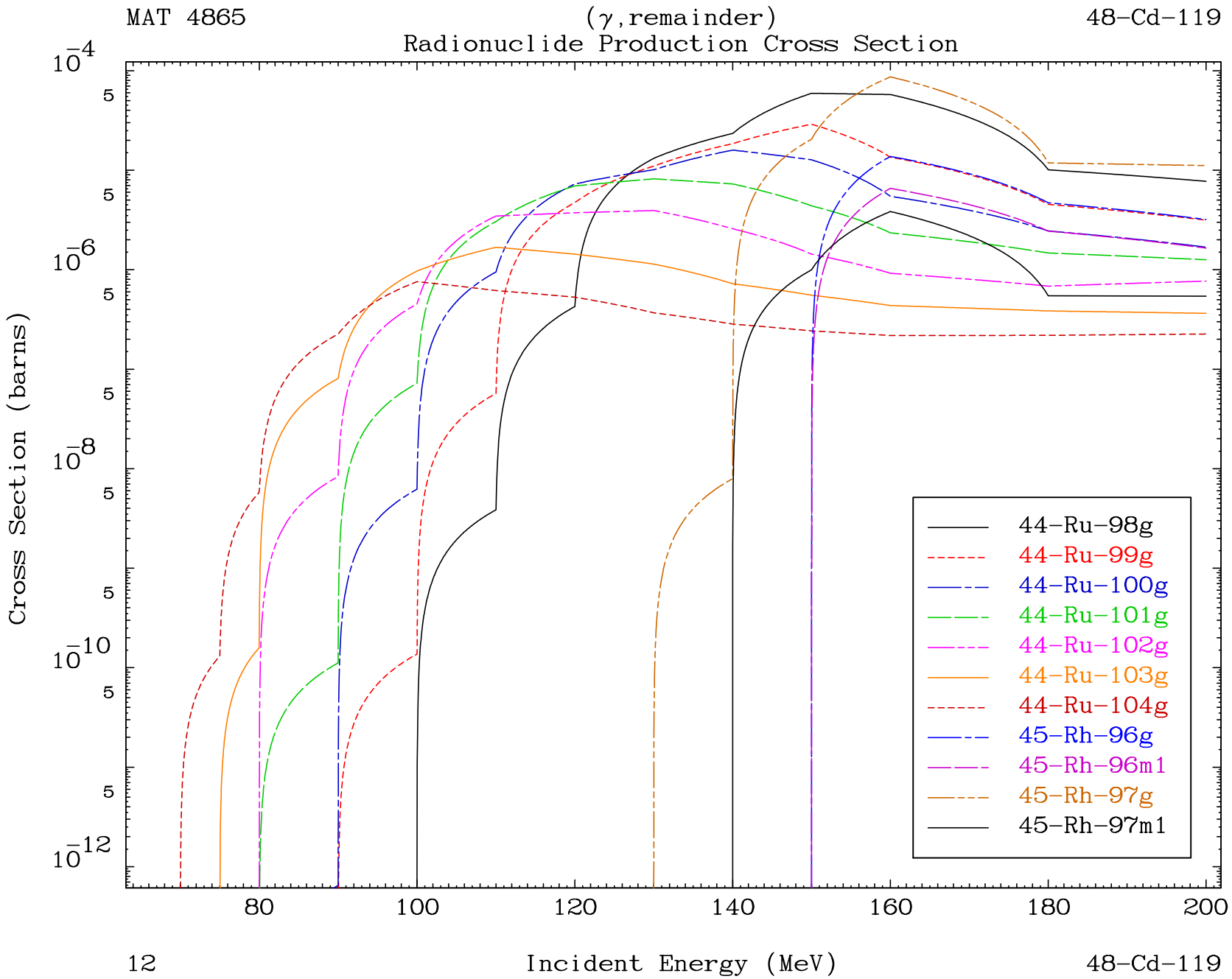

MAT 4865
(γ,t) Levels
48-Cd-119
0 Kelvin Cross Sections
(γ,t)
Cross Section (barns)
10-8
10-10
10-12
10-14
5
18
20
22
24
26
28
30
Incident Energy (MeV)
7
48-Cd-119

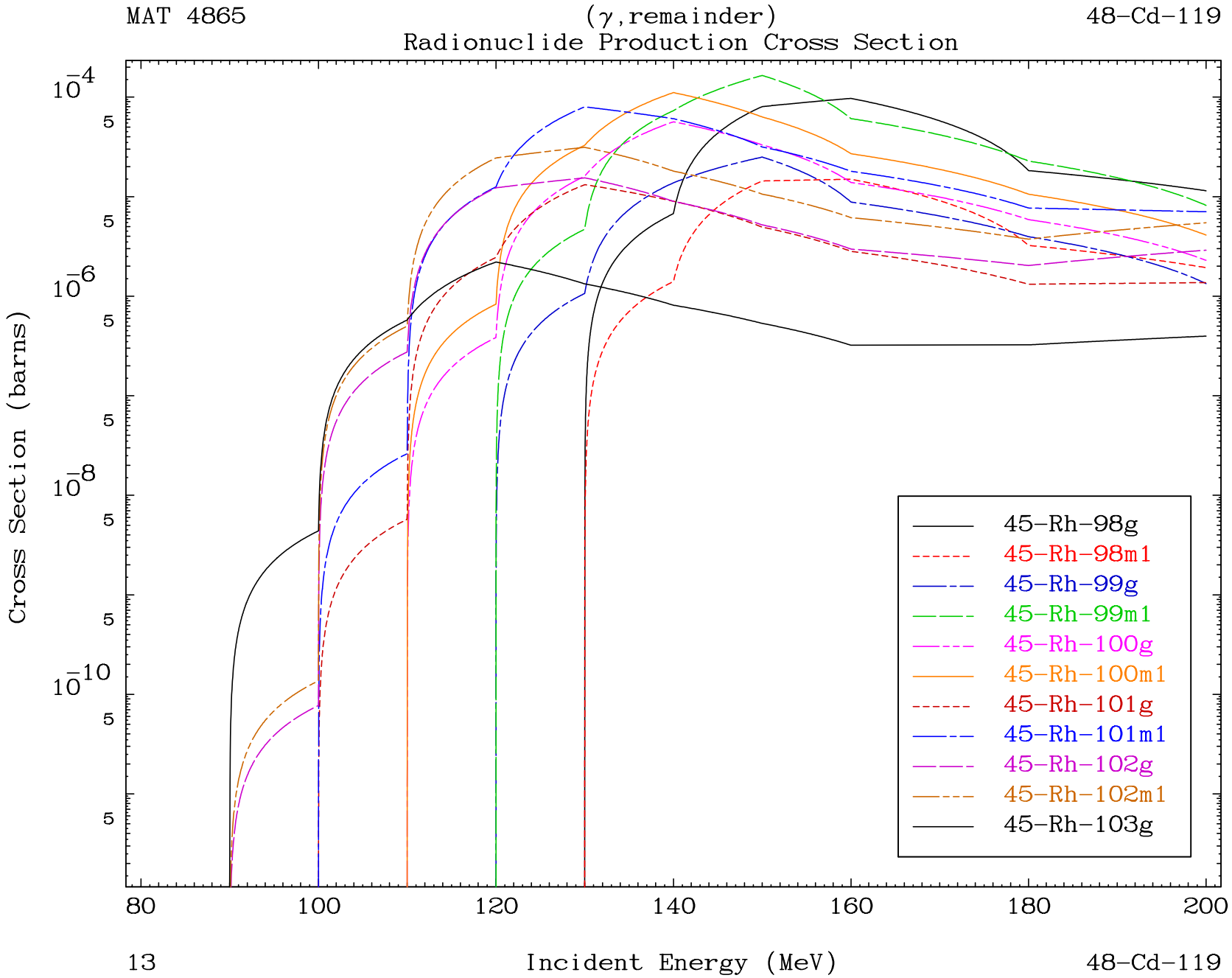

0 Kelvin Cross Sections
(γ,α)
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
10
15
20
25
30
Incident Energy (MeV)


MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
39-Y -90g
39-Y -90m1
40-Zr-91g
41-Nb-92g
41-Nb-92m1
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
9
Incident Energy (MeV)
48-Cd-119

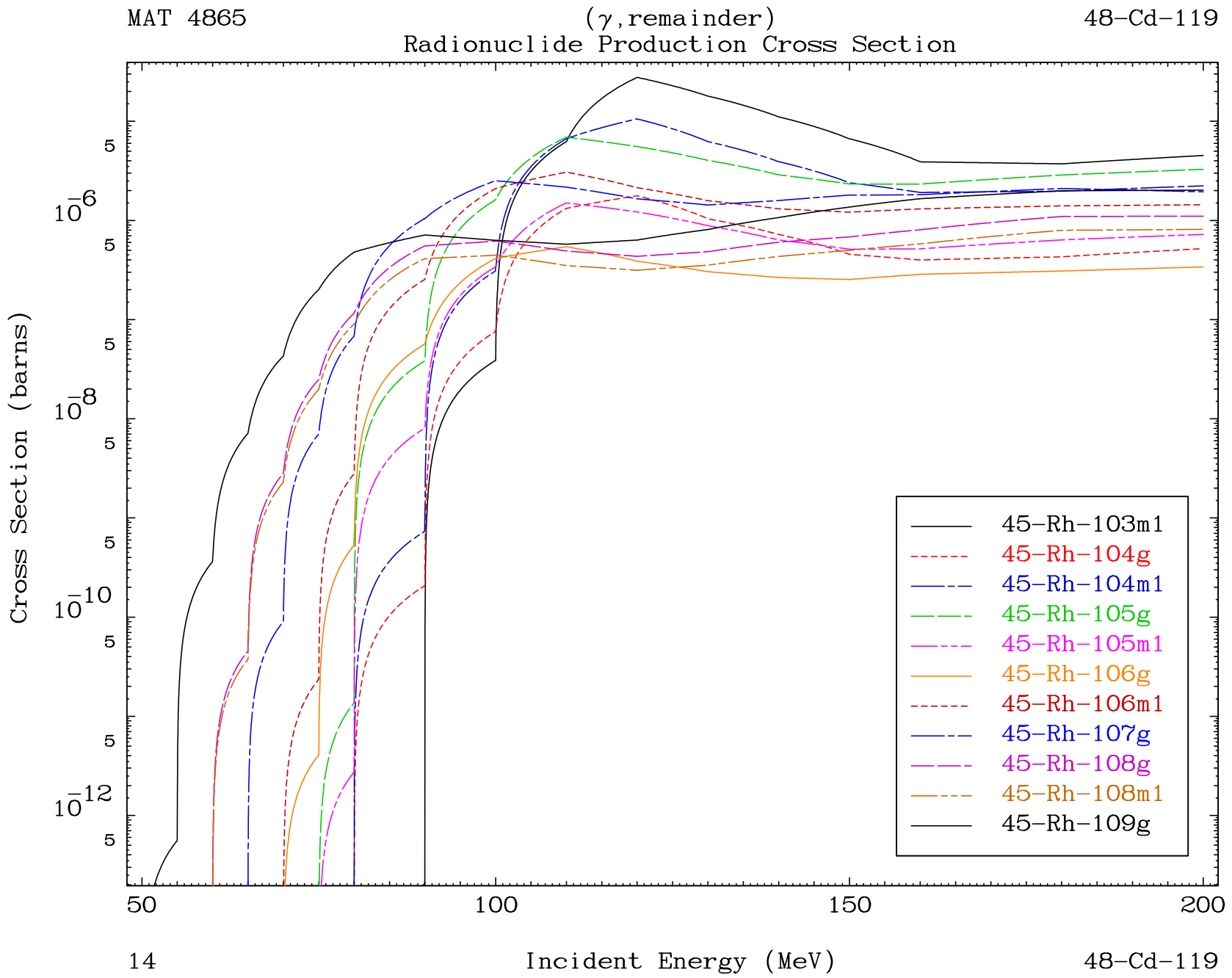

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
100
120
140
160
180
200
10
Incident Energy (MeV)
48-Cd-119
41-Nb-93g
41-Nb-93m1
42-Mo-93g
42-Mo-93m1
42-Mo-94g
42-Mo-95g
42-Mo-96g
42-Mo-97g
43-Tc-94g
43-Tc-94m1
43-Tc-95g

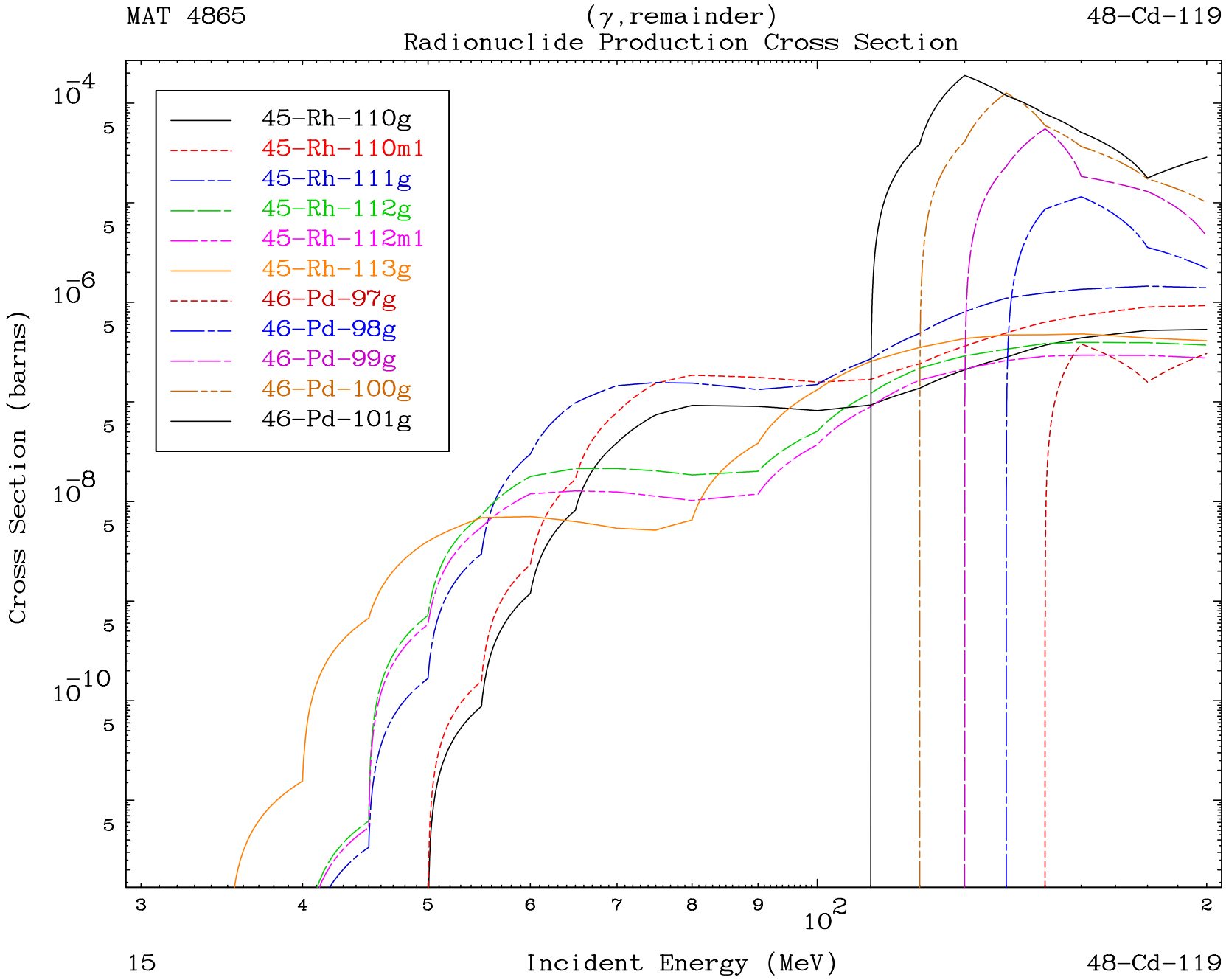

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^-12
100
120
140
160
180
200
Incident Energy (MeV)
11
48-Cd-119
43-Tc-95m1
43-Tc-96g
43-Tc-96m1
43-Tc-97g
43-Tc-97m1
43-Tc-98g
43-Tc-99g
43-Tc-99m1
44-Ru-95g
44-Ru-96g
44-Ru-97g

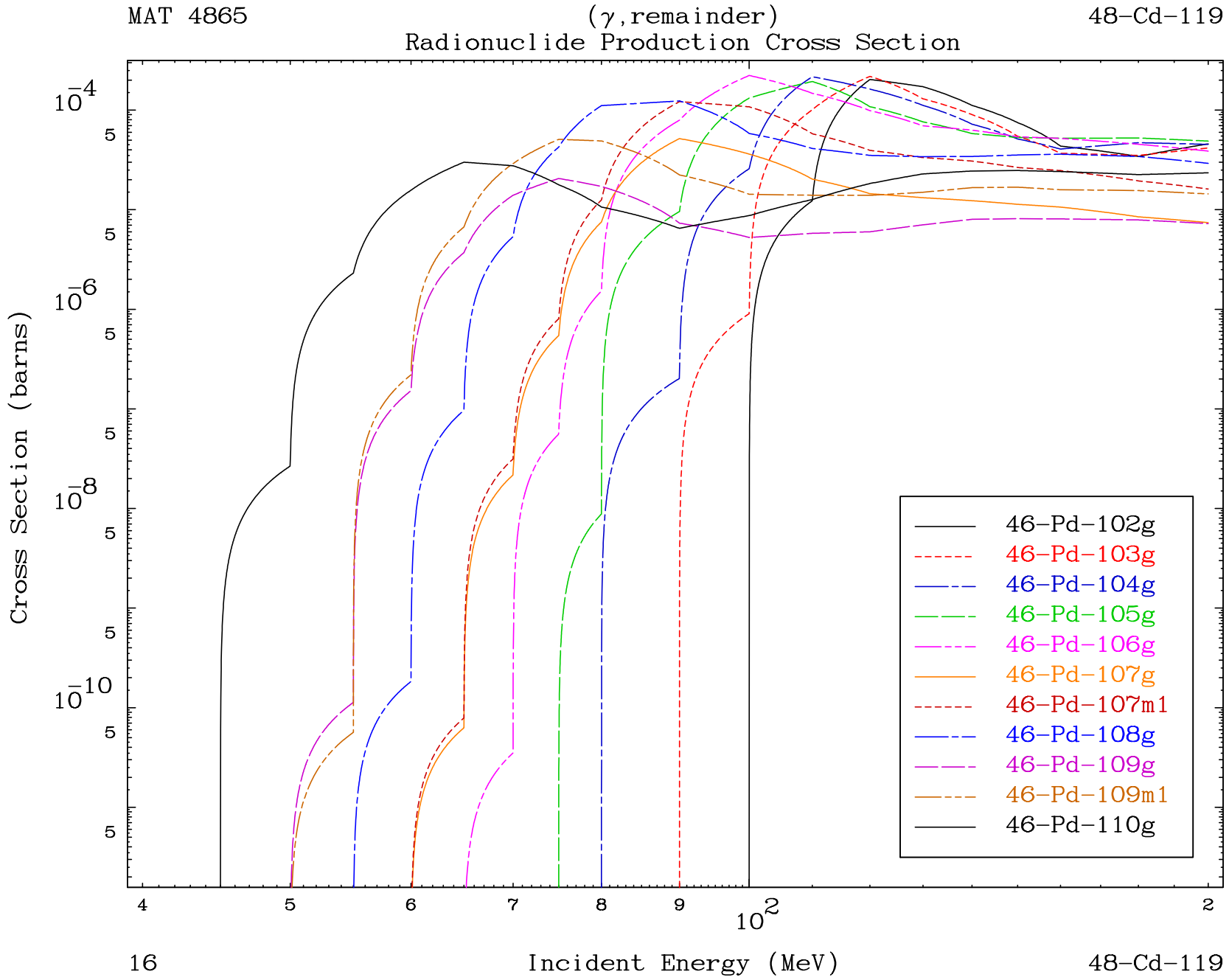

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-4
5
10-6
5
10-8
5
10-10
5
10-12
5
80
100
120
140
160
180
200
12
Incident Energy (MeV)
48-Cd-119
44-Ru-98g
44-Ru-99g
44-Ru-100g
44-Ru-101g
44-Ru-102g
44-Ru-103g
44-Ru-104g
45-Rh-96g
45-Rh-96m1
45-Rh-97g
45-Rh-97m1

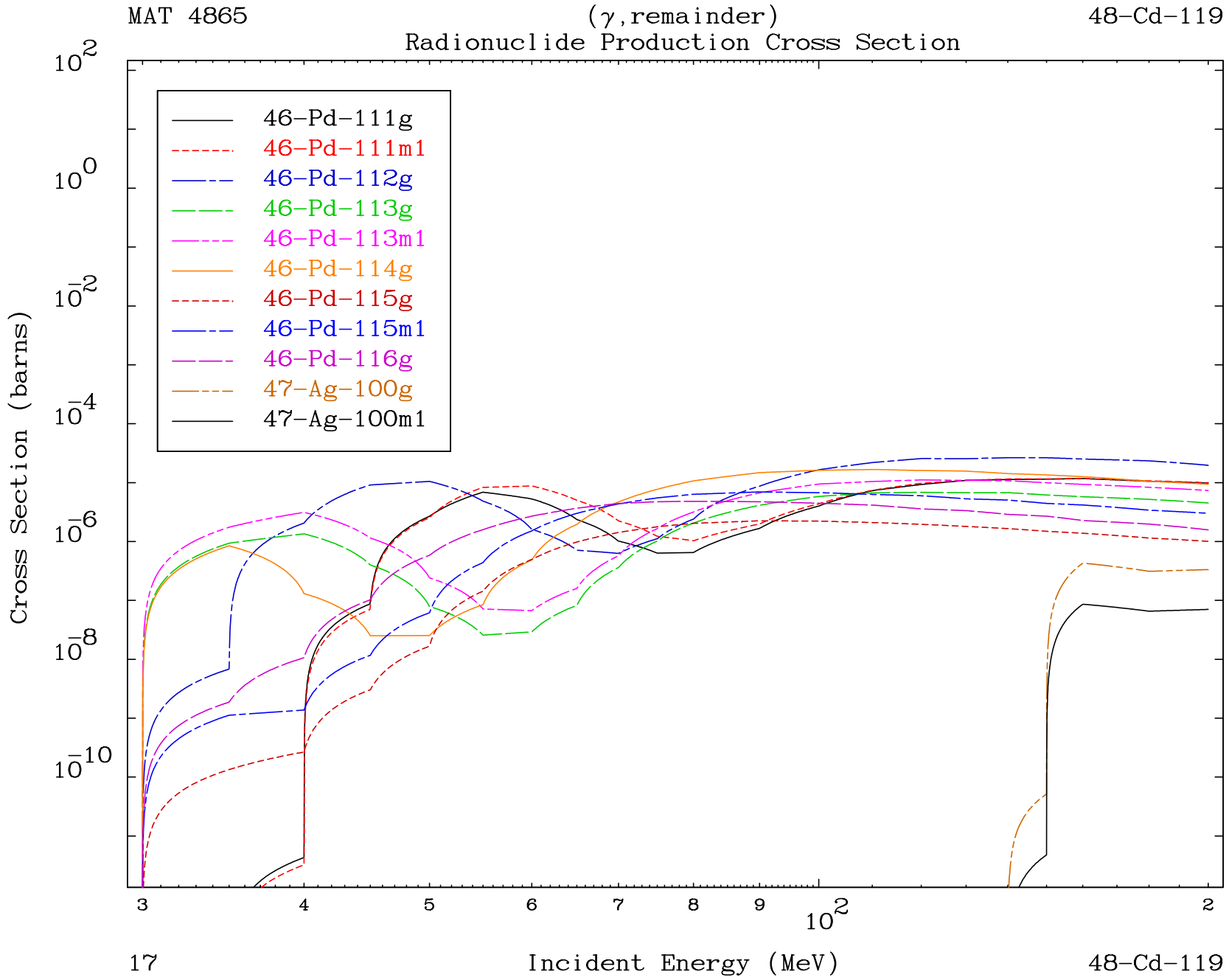

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
80
100
120
140
160
180
200
Incident Energy (MeV)
45-Rh-98g
45-Rh-98m1
45-Rh-99g
45-Rh-99m1
45-Rh-100g
45-Rh-100m1
45-Rh-101g
45-Rh-101m1
45-Rh-102g
45-Rh-102m1
45-Rh-103g

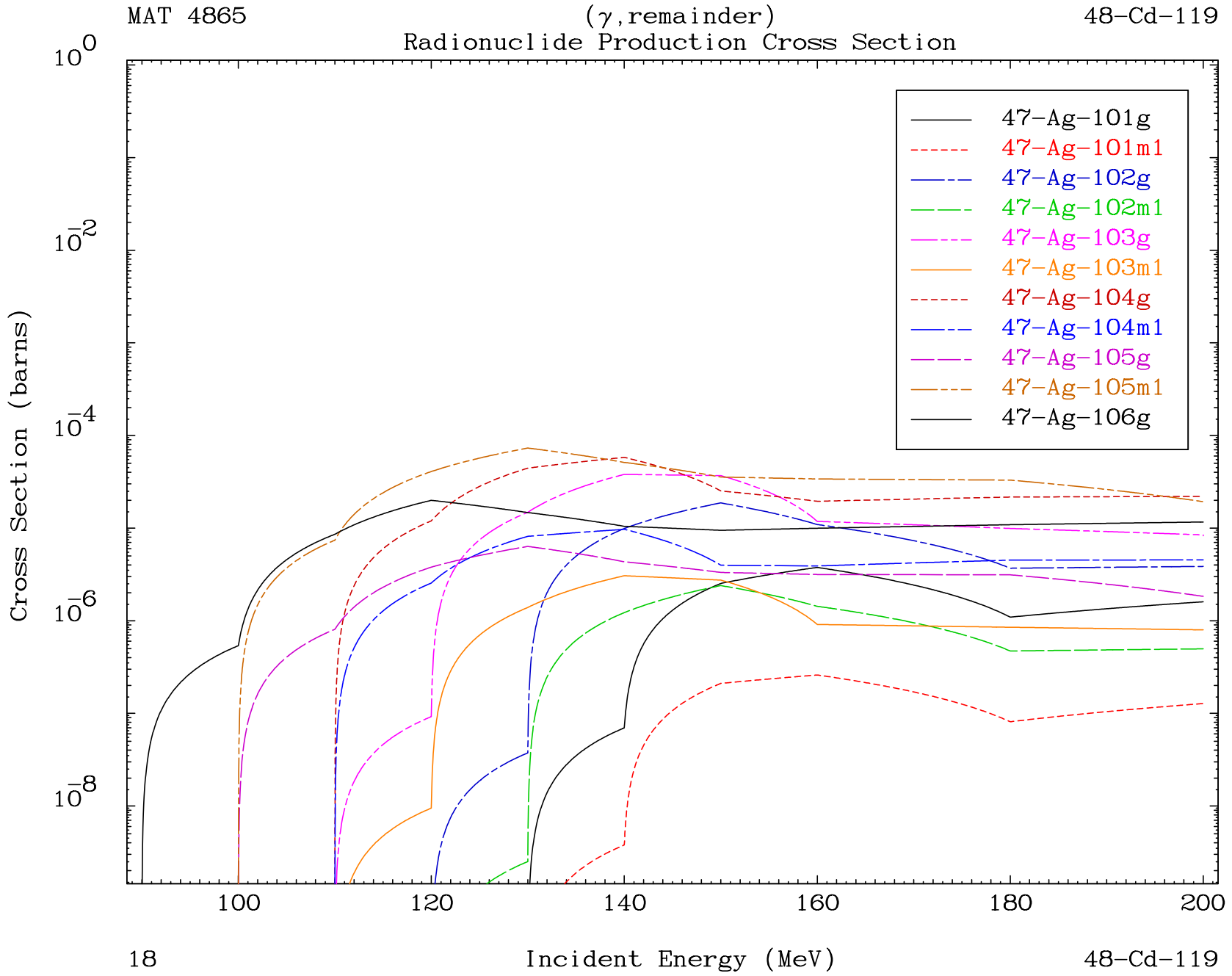
48-Cd-119

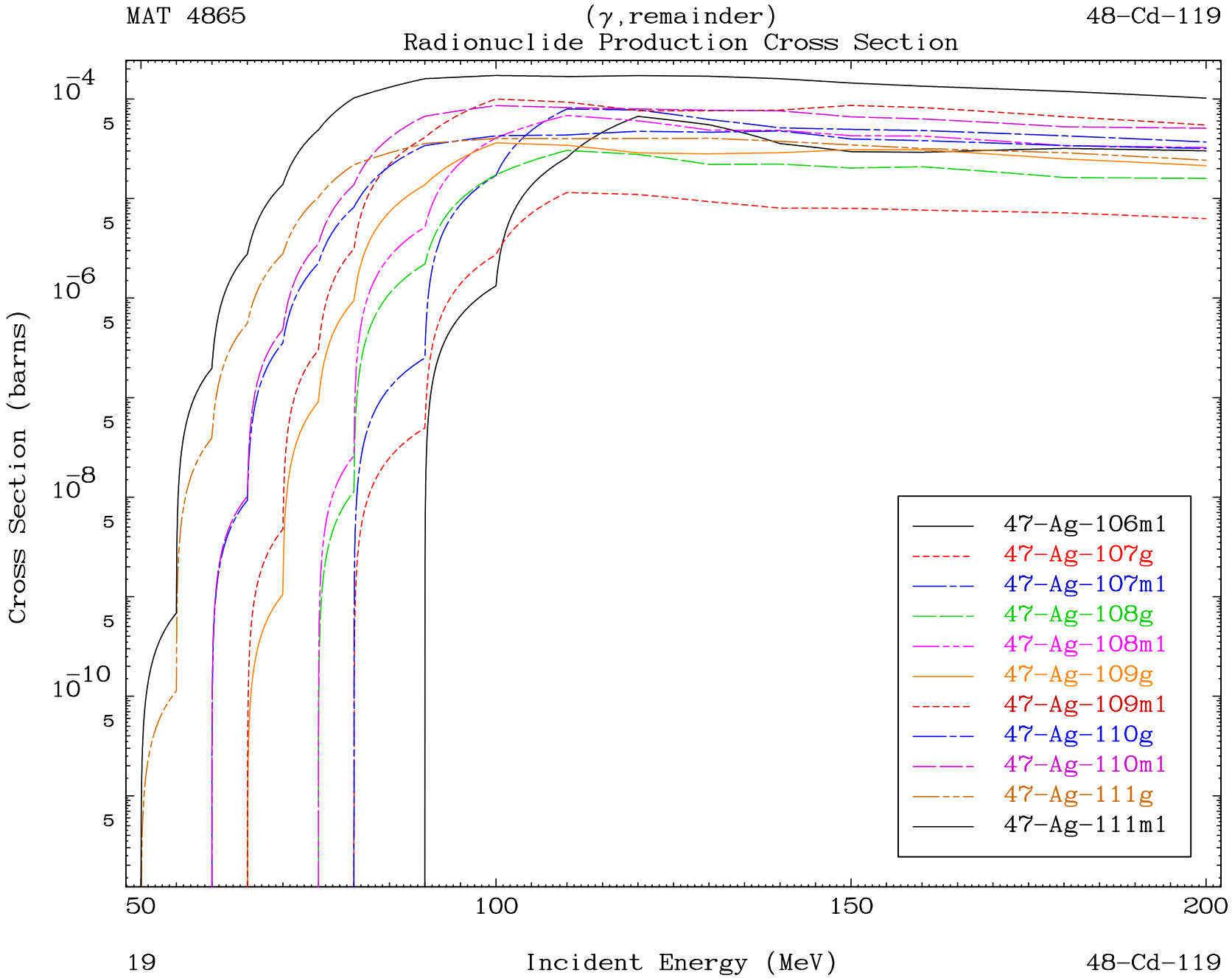

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-6
10-8
10-10
10-12
5
50
100
150
200
14
Incident Energy (MeV)
48-Cd-119
45-Rh-103m1
45-Rh-104g
45-Rh-104m1
45-Rh-105g
45-Rh-105m1
45-Rh-106g
45-Rh-106m1
45-Rh-107g
45-Rh-108g
45-Rh-108m1
45-Rh-109g

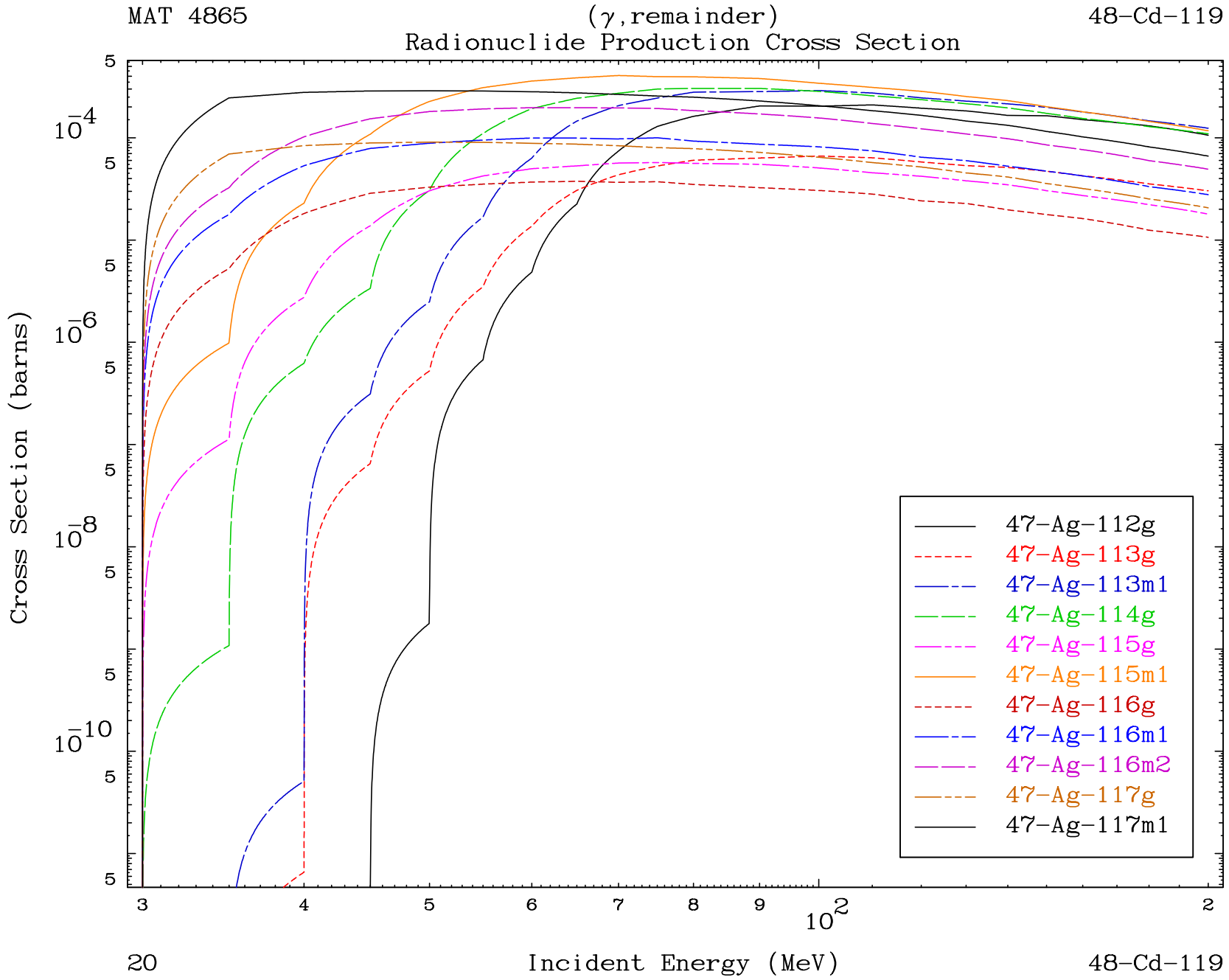

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
45-Rh-110g
45-Rh-110m1
45-Rh-111g
45-Rh-112g
45-Rh-112m1
45-Rh-113g
46-Pd-97g
46-Pd-98g
46-Pd-99g
46-Pd-100g
46-Pd-101g
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
3
4
5
6
7
8
9
10^2
2
15
Incident Energy (MeV)
48-Cd-119

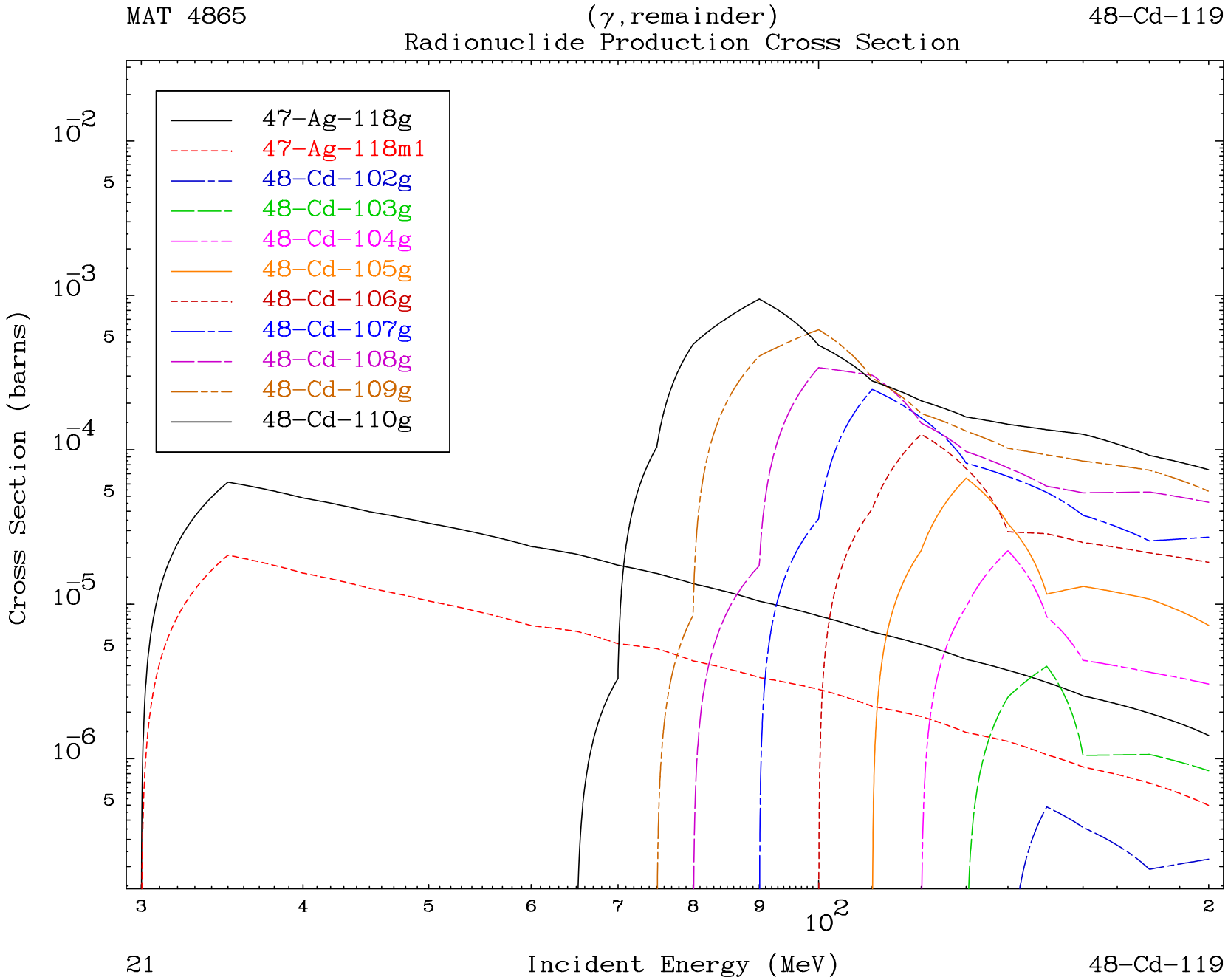

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
4
5
6
7
8
9
10^2
2
Incident Energy (MeV)
46-Pd-102g
46-Pd-103g
46-Pd-104g
46-Pd-105g
46-Pd-106g
46-Pd-107g
46-Pd-107m1
46-Pd-108g
46-Pd-109g
46-Pd-109m1
46-Pd-110g

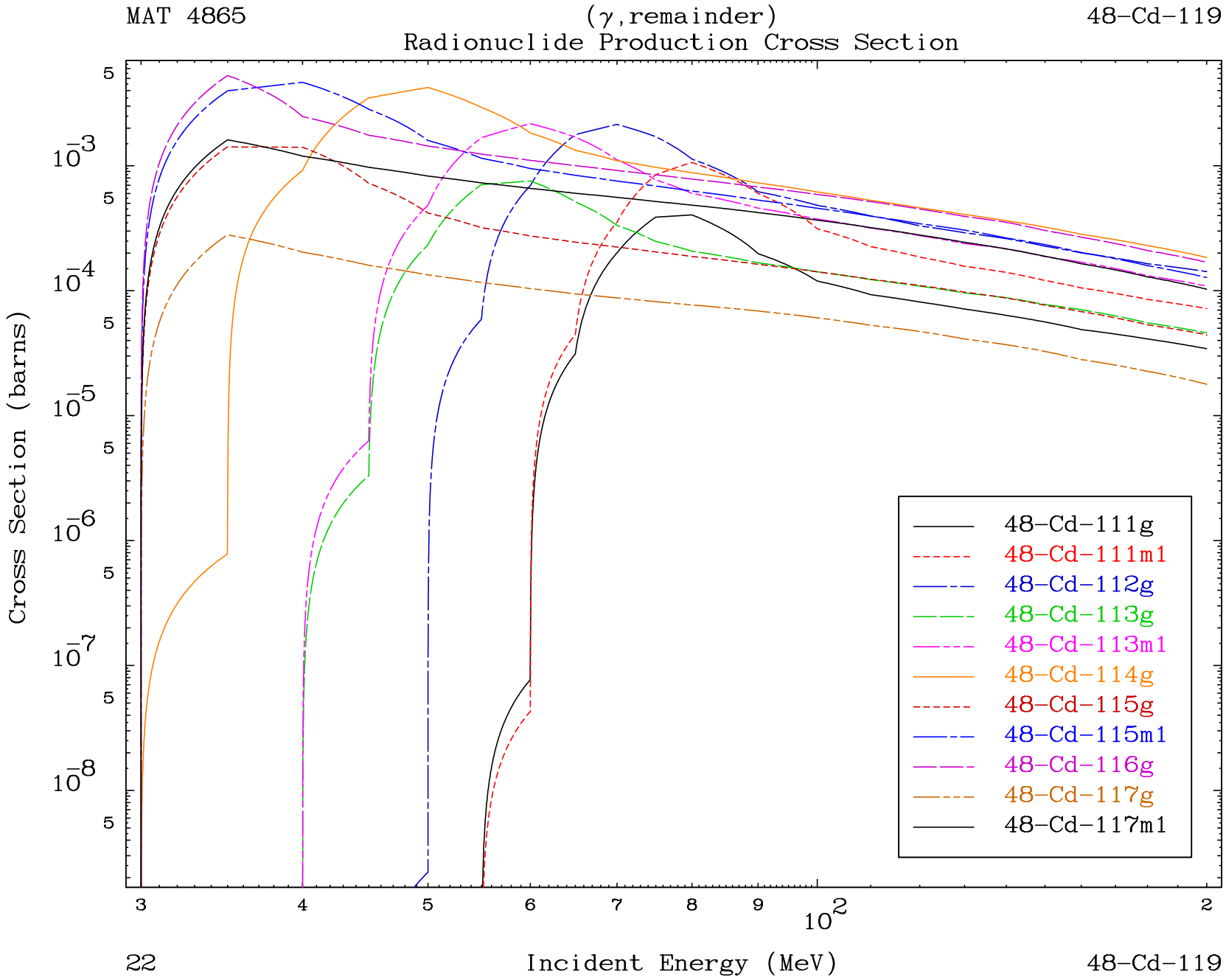

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
46-Pd-111g
46-Pd-111m1
46-Pd-112g
46-Pd-113g
46-Pd-113m1
46-Pd-114g
46-Pd-115g
46-Pd-115m1
46-Pd-116g
47-Ag-100g
47-Ag-100m1
Cross Section (barns)
Incident Energy (MeV)
17
48-Cd-119

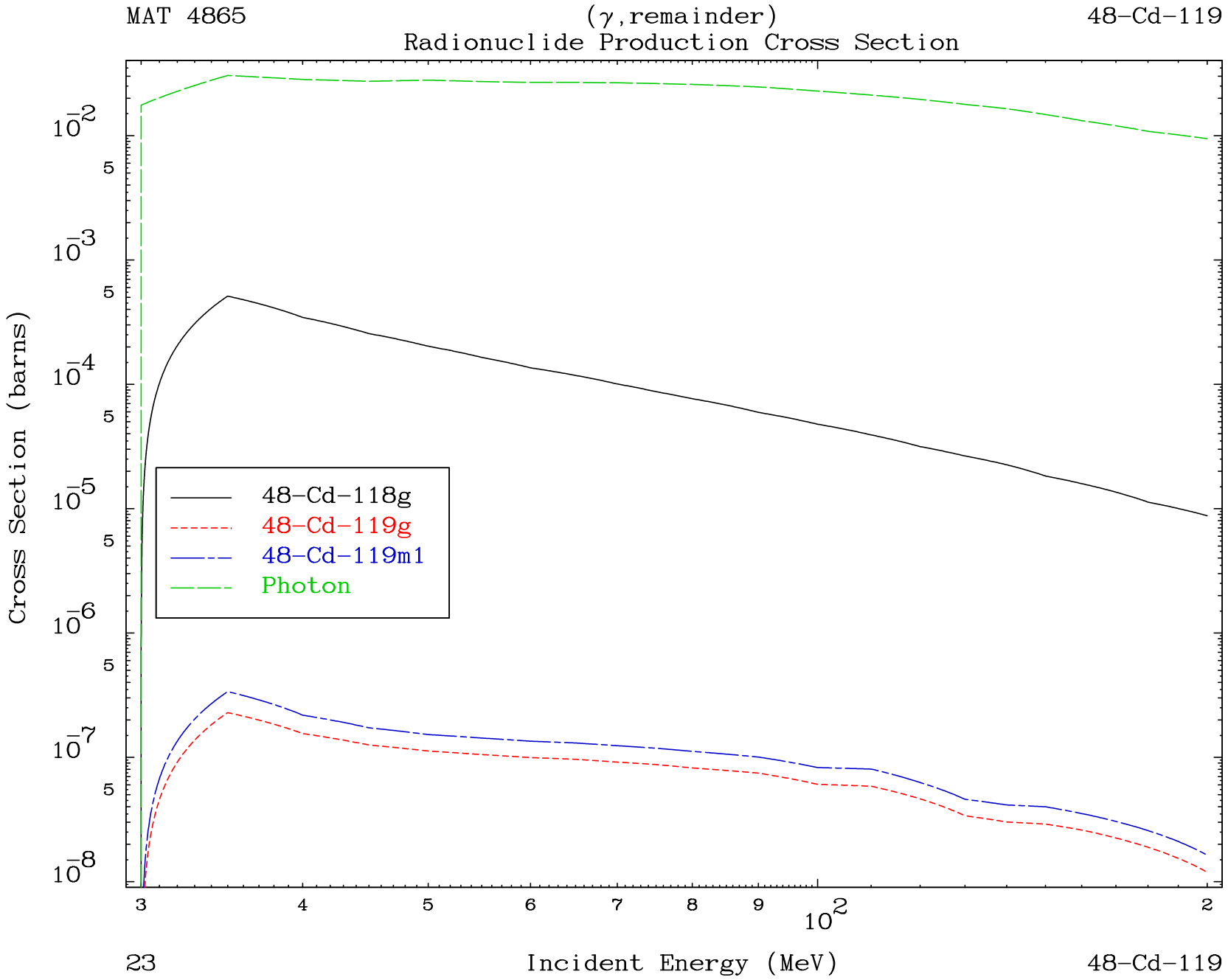

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
10^-8
47-Ag-101g
47-Ag-101m1
47-Ag-102g
47-Ag-102m1
47-Ag-103g
47-Ag-103m1
47-Ag-104g
47-Ag-104m1
47-Ag-105g
47-Ag-105m1
47-Ag-106g
100
120
140
160
180
200
18
Incident Energy (MeV)
48-Cd-119

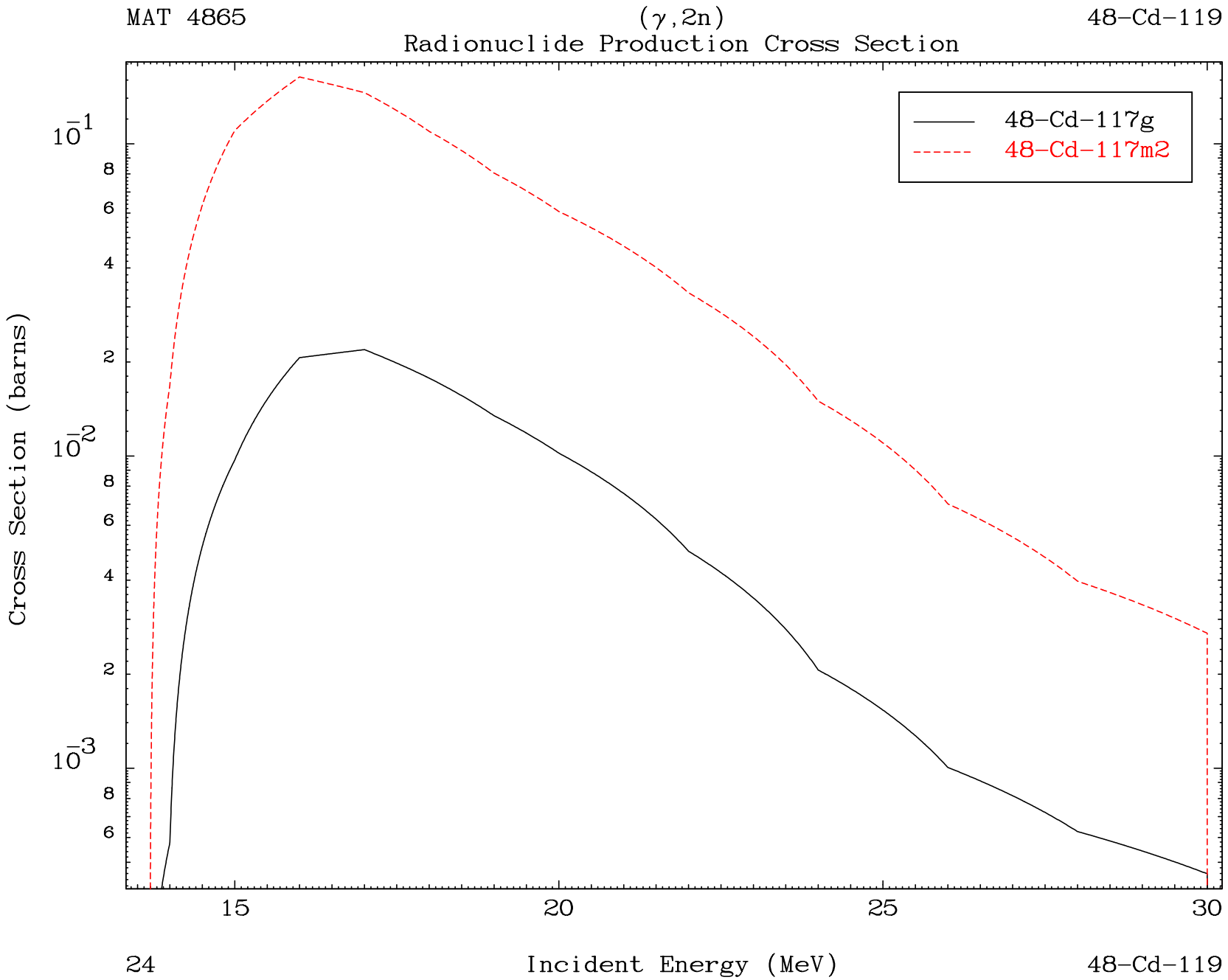

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-4
5
10-6
5
10-8
5
10-10
5
5
50
100
150
200
19
Incident Energy (MeV)
48-Cd-119
47-Ag-106m1
47-Ag-107g
47-Ag-107m1
47-Ag-108g
47-Ag-108m1
47-Ag-109g
47-Ag-109m1
47-Ag-110g
47-Ag-110m1
47-Ag-111g
47-Ag-111m1

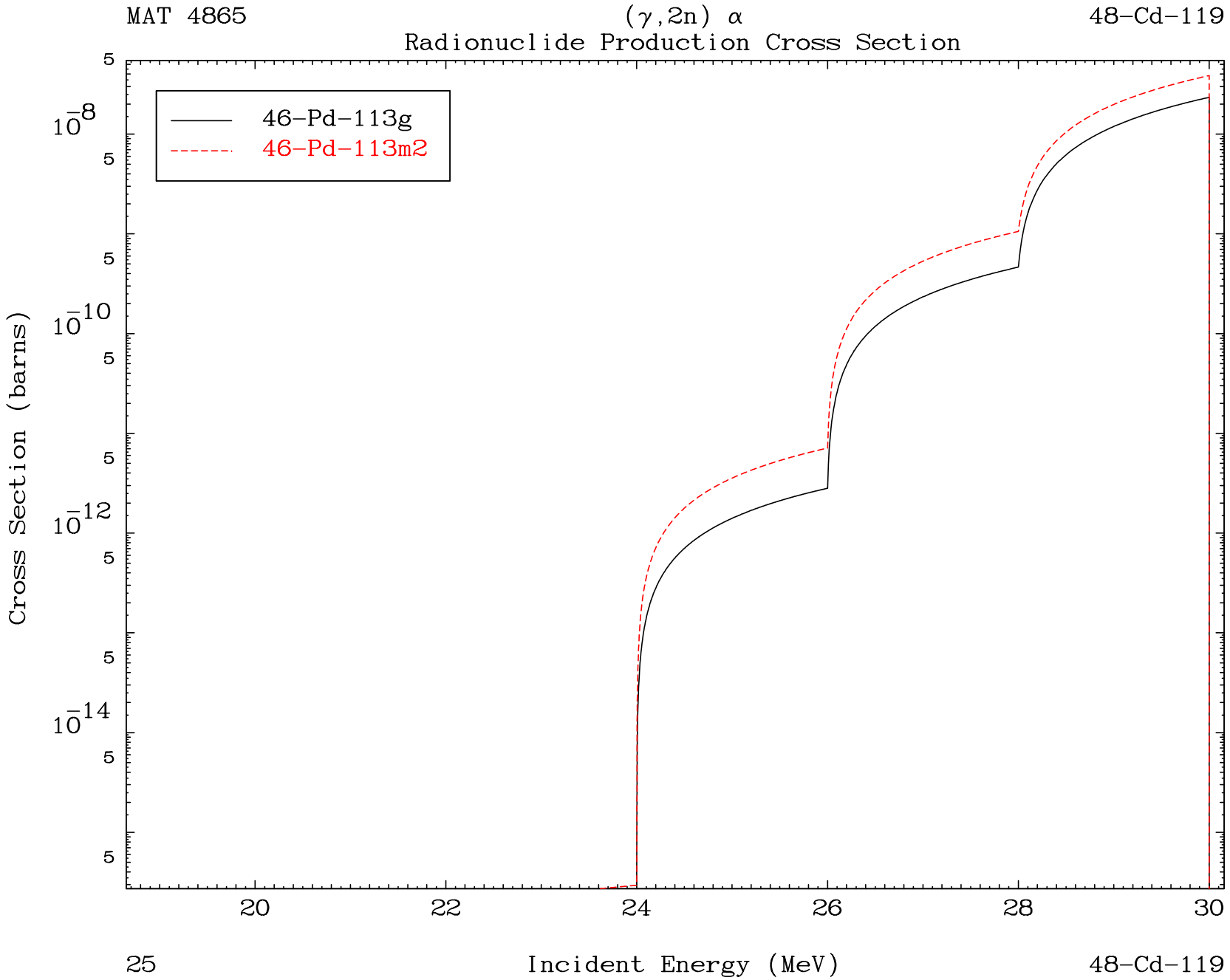

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
Incident Energy (MeV)
47-Ag-112g
47-Ag-113g
47-Ag-113m1
47-Ag-114g
47-Ag-115g
47-Ag-115m1
47-Ag-116g
47-Ag-116m1
47-Ag-116m2
47-Ag-117g
47-Ag-117m1
20
48-Cd-119

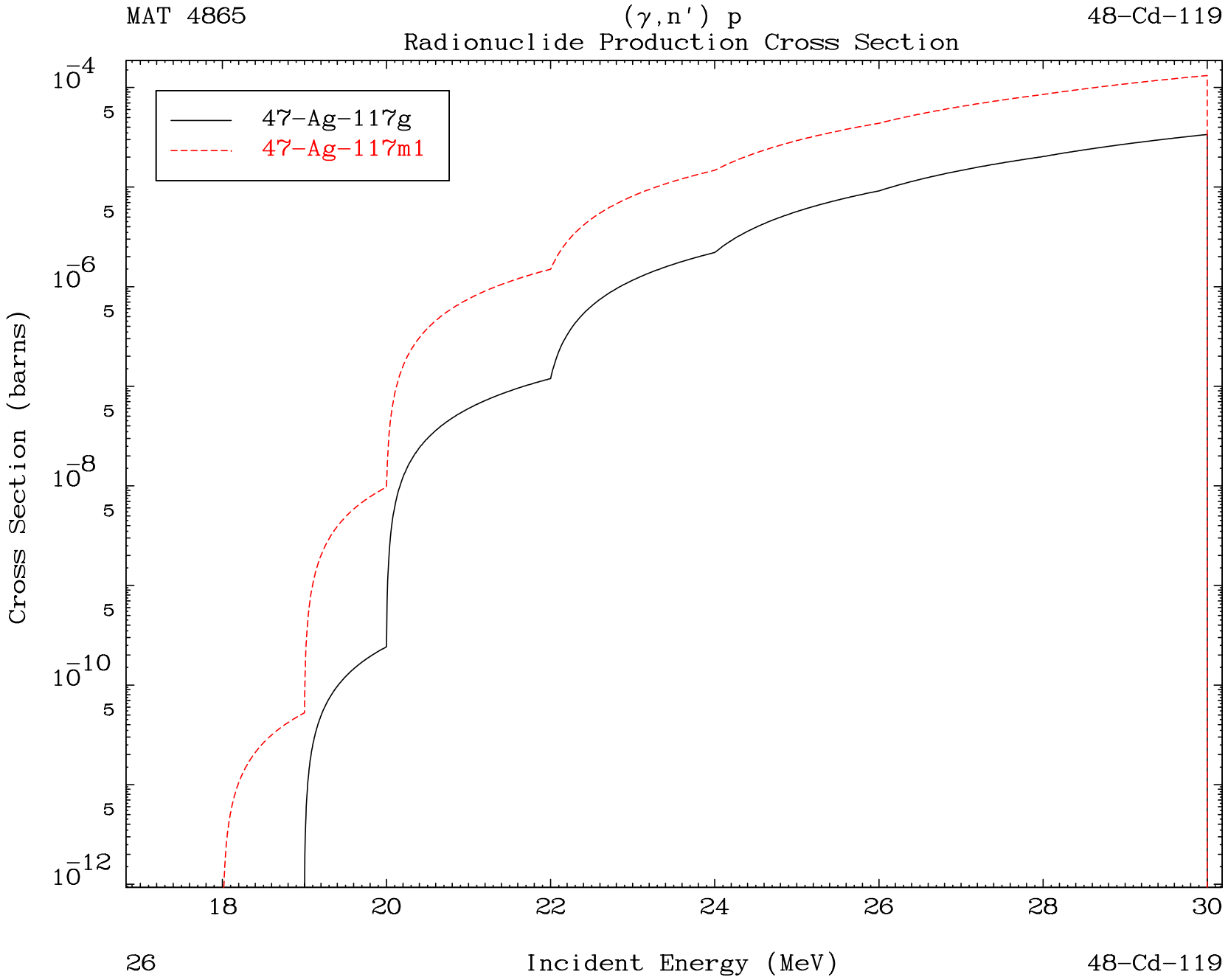

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
47-Ag-118g
47-Ag-118m1
48-Cd-102g
48-Cd-103g
48-Cd-104g
48-Cd-105g
48-Cd-106g
48-Cd-107g
48-Cd-108g
48-Cd-109g
48-Cd-110g
Cross Section (barns)
10-2
10-3
10-4
10-5
10-6
5
3
4
5
6
7
8
9
10 2
2
21
Incident Energy (MeV)
48-Cd-119

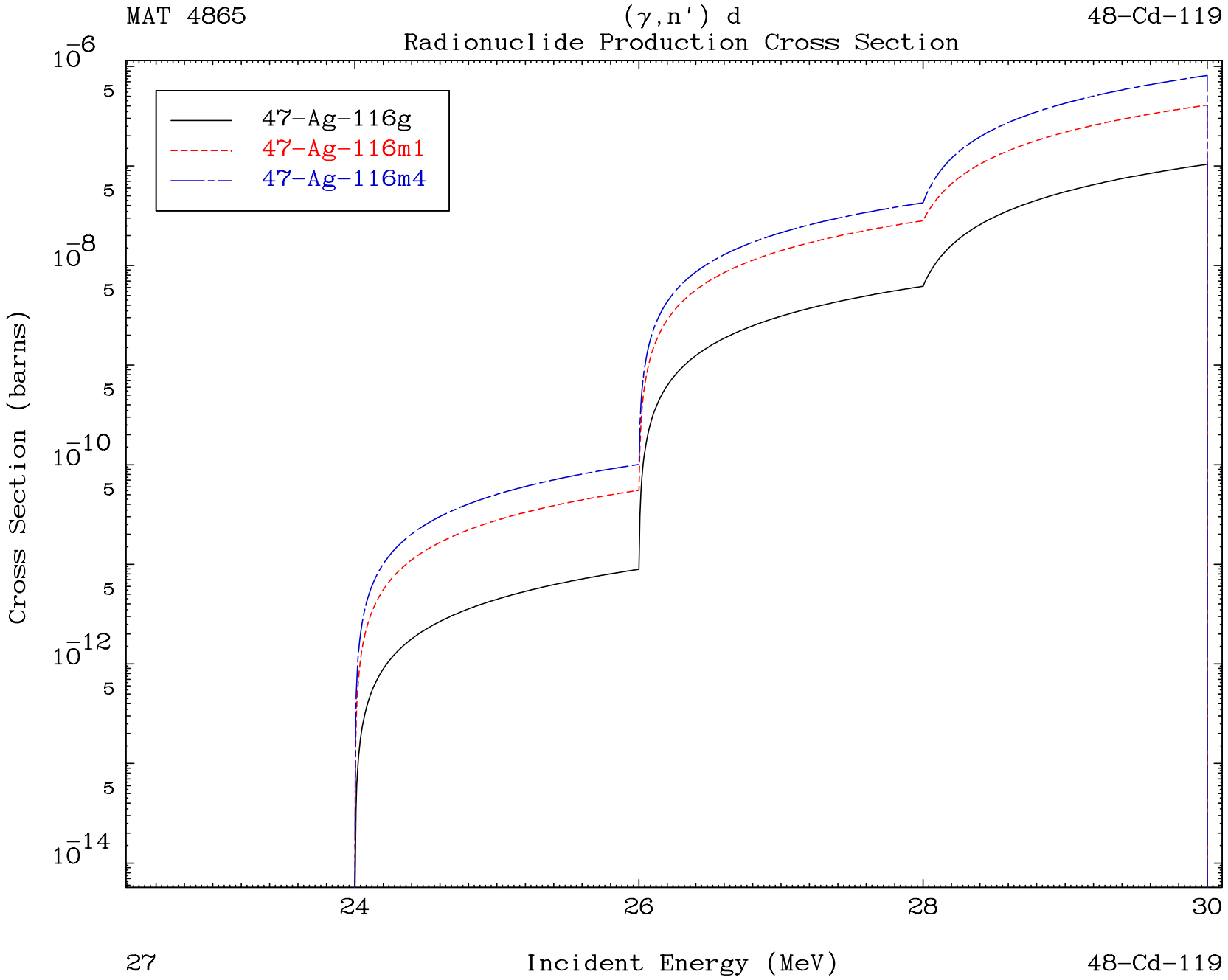

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
Incident Energy (MeV)
22
48-Cd-119
48-Cd-111g
48-Cd-111m1
48-Cd-112g
48-Cd-113g
48-Cd-113m1
48-Cd-114g
48-Cd-115g
48-Cd-115m1
48-Cd-116g
48-Cd-117g
48-Cd-117m1

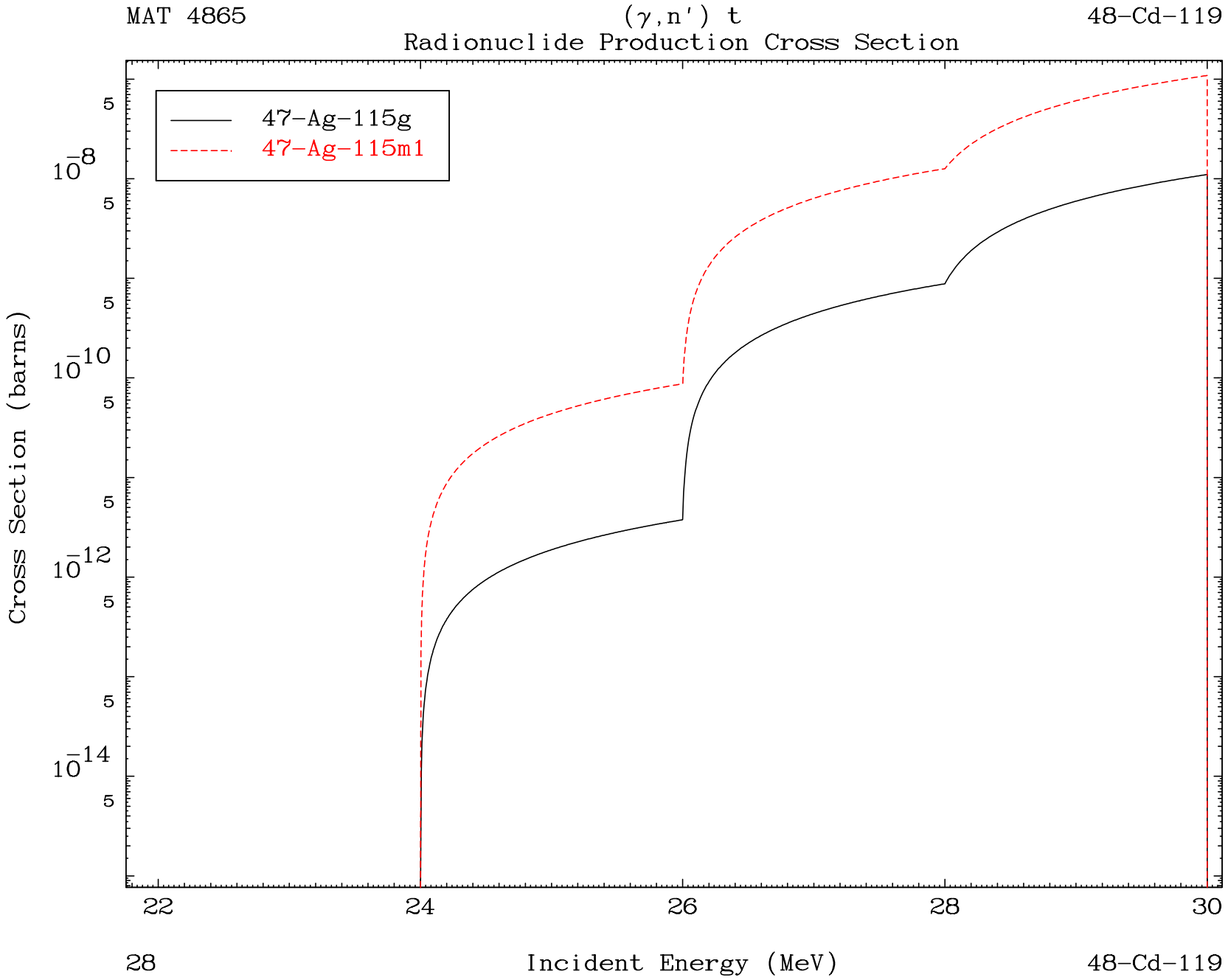

MAT 4865
(γ,remainder)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-2
10-3
10-4
10-5
10-6
10-7
10-8
48-Cd-118g
48-Cd-119g
48-Cd-119m1
Photon
3
4
5
6
7
8
9
10 2
2
23
Incident Energy (MeV)
48-Cd-119

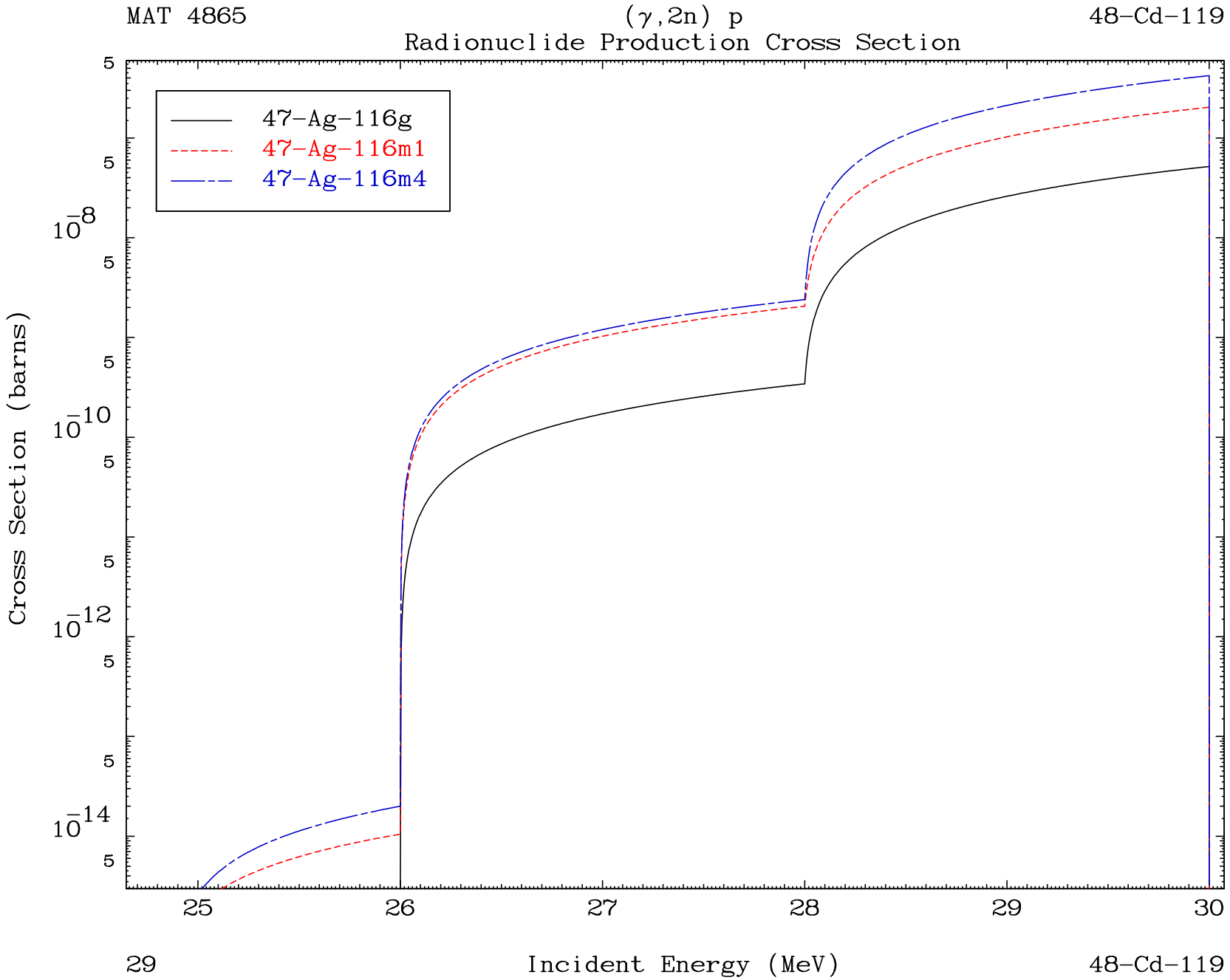

MAT 4865
(γ,2n)
48-Cd-119
Radionuclide Production Cross Section
48-Cd-117g
48-Cd-117m2
Cross Section (barns)
10-1
8
6
4
2
10-2
8
6
4
2
10-3
8
6
15
20
25
30
24
Incident Energy (MeV)
48-Cd-119

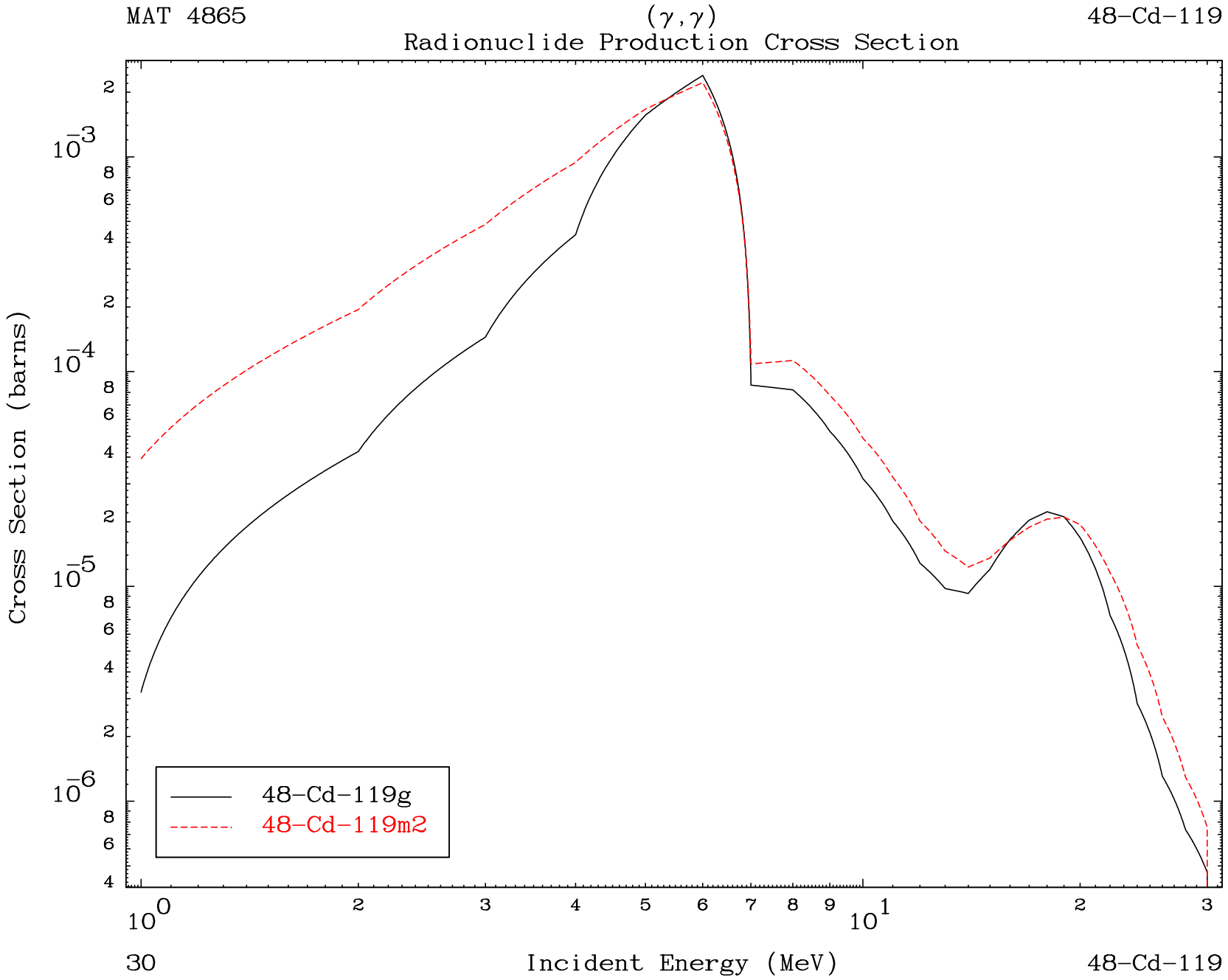

MAT 4865
(γ,2n) α
48-Cd-119
Radionuclide Production Cross Section
46-Pd-113g
46-Pd-113m2
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
20
22
24
26
28
30
25
Incident Energy (MeV)
48-Cd-119

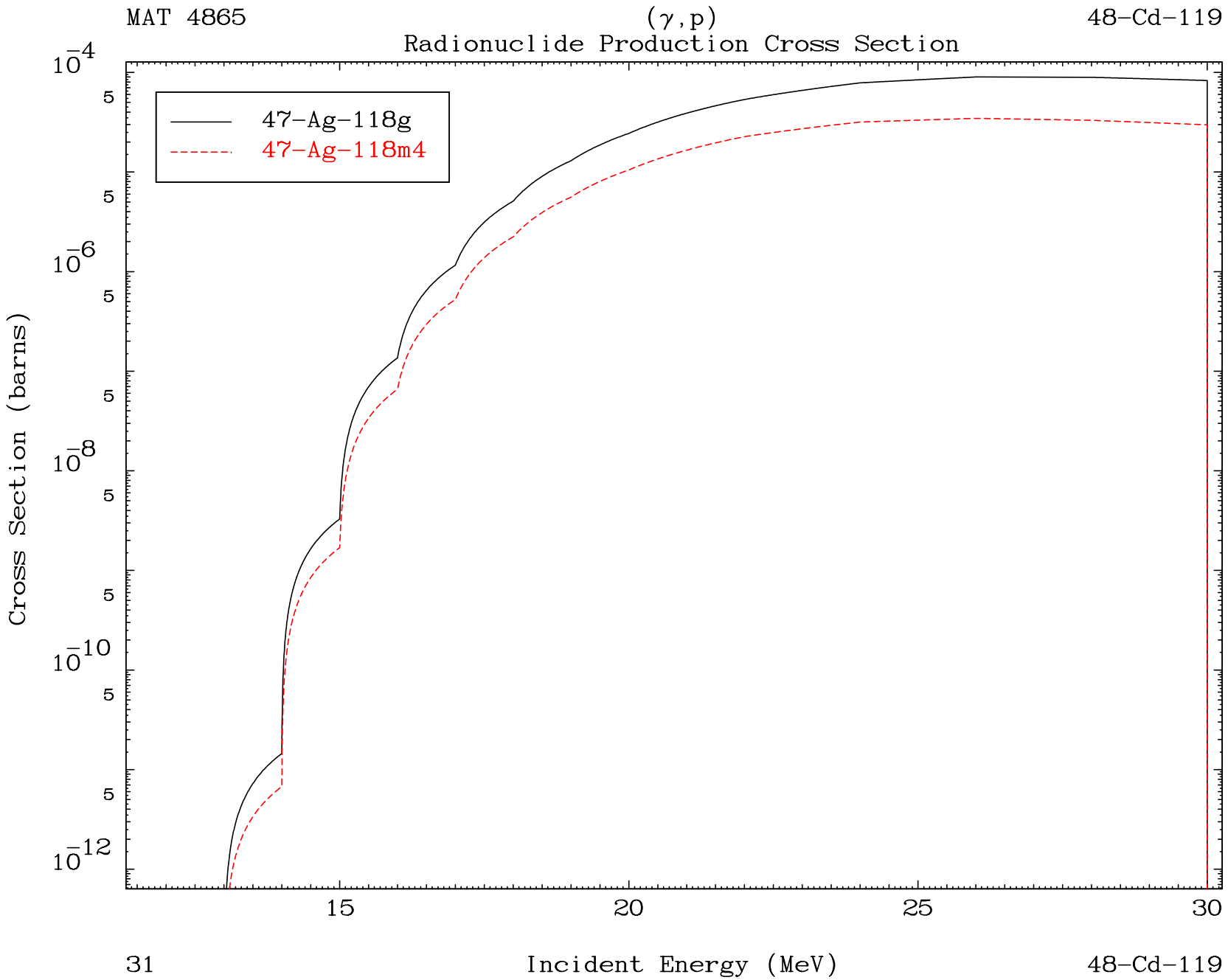

MAT 4865
(γ,n') p
48-Cd-119
Radionuclide Production Cross Section
47-Ag-117g
47-Ag-117m1
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
18
20
22
24
26
28
30
26
Incident Energy (MeV)
48-Cd-119

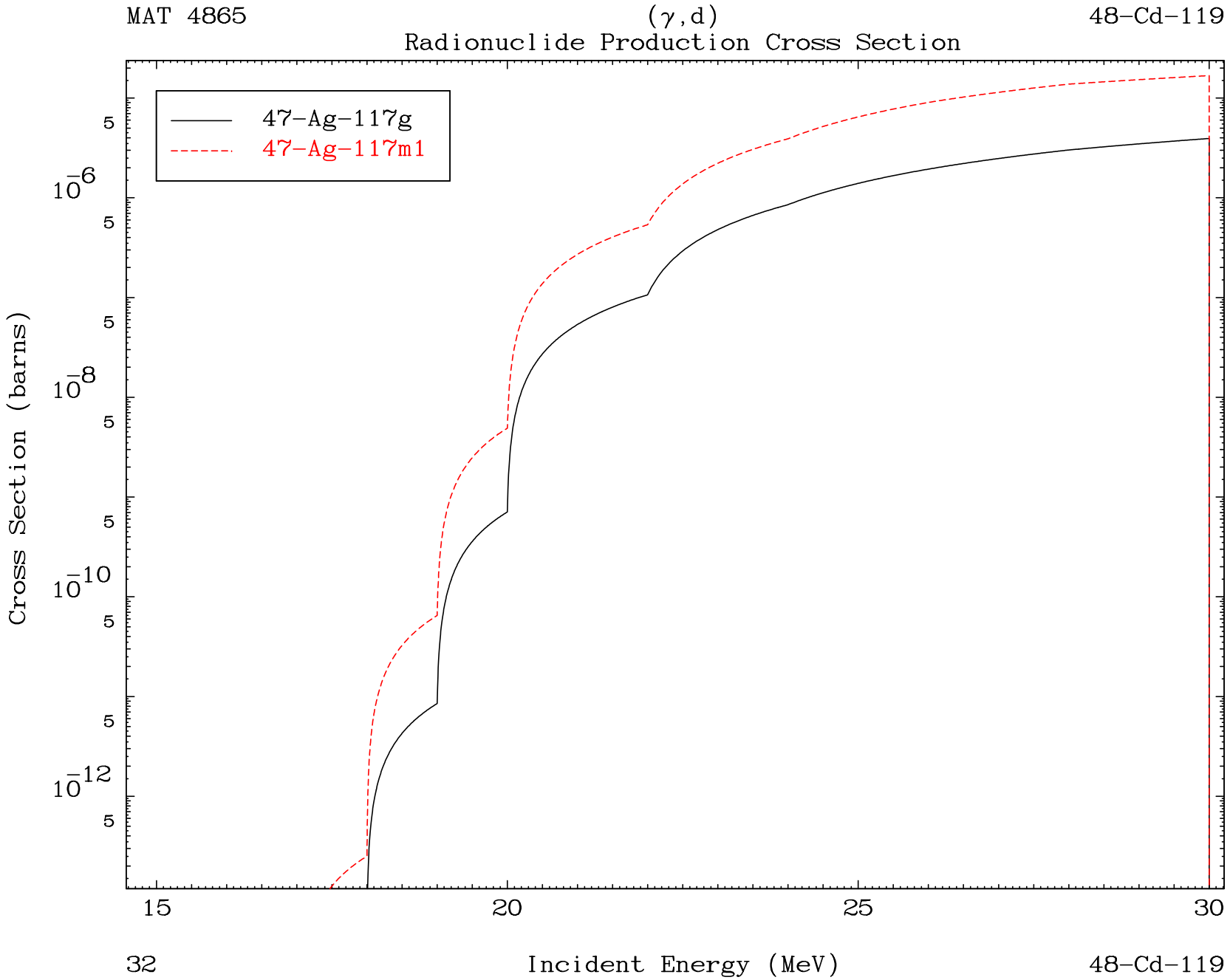

MAT 4865
(γ,n') d
48-Cd-119
Radionuclide Production Cross Section
47-Ag-116g
47-Ag-116m1
47-Ag-116m4
Cross Section (barns)
10^-6
5
10^-8
5
10^-10
5
10^-12
5
10^-14
24
26
28
30
27
Incident Energy (MeV)
48-Cd-119

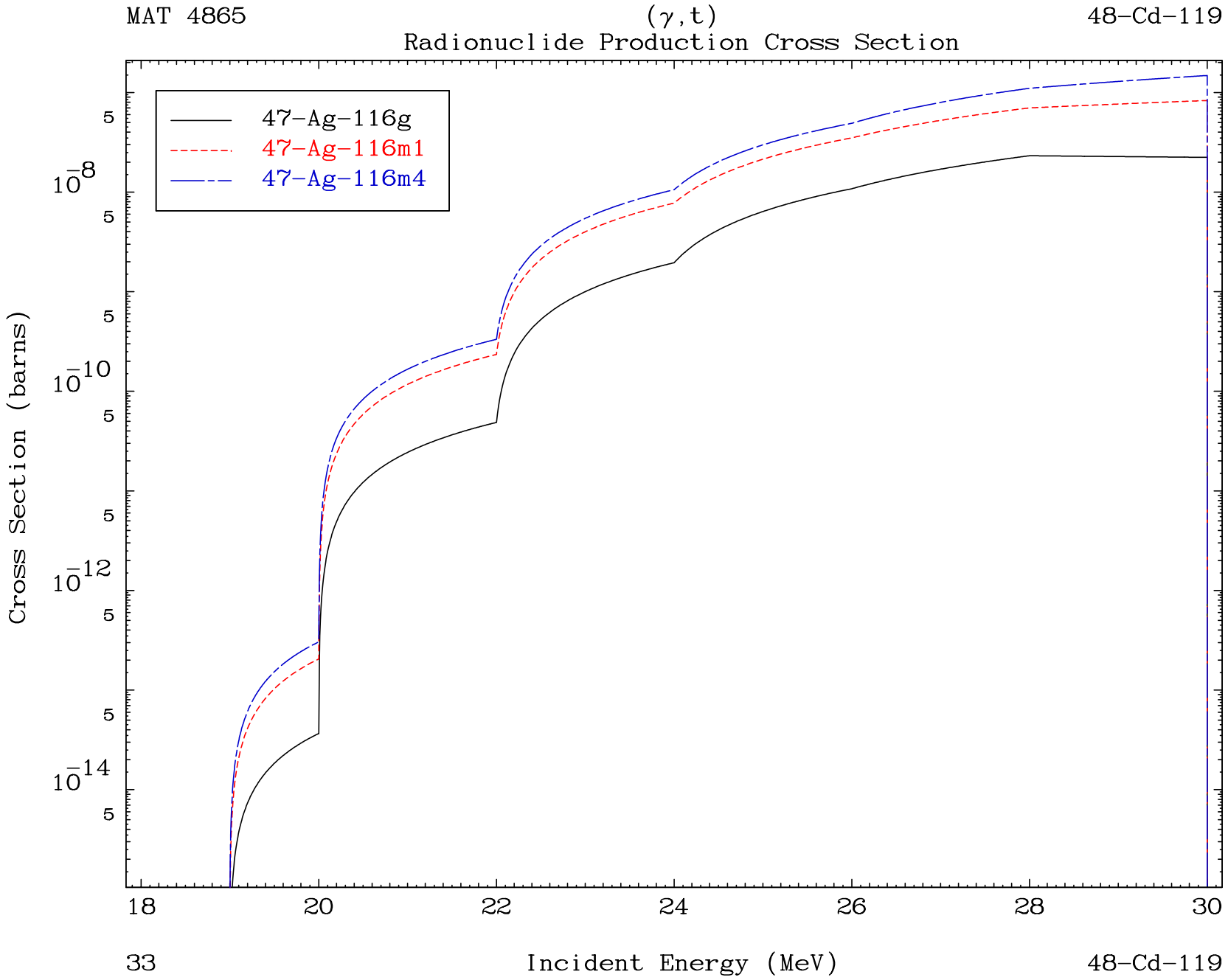

MAT 4865
(γ,n') t
48-Cd-119
Radionuclide Production Cross Section
47-Ag-115g
47-Ag-115m1
Cross Section (barns)
10-8
10-10
10-12
10-14
5
22
24
26
28
30
28
Incident Energy (MeV)
48-Cd-119

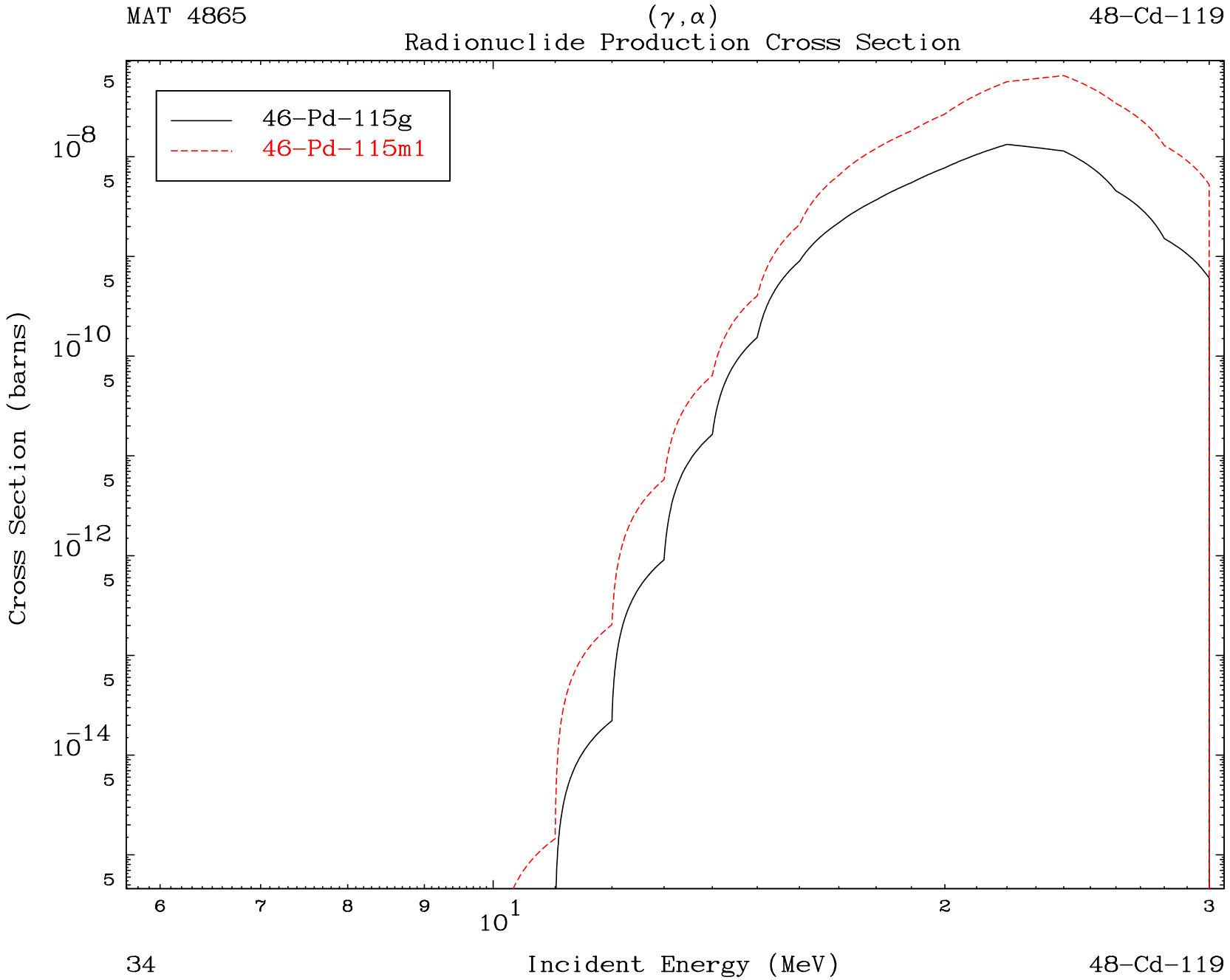

MAT 4865
(γ,2n) p
48-Cd-119
Radionuclide Production Cross Section
47-Ag-116g
47-Ag-116m1
47-Ag-116m4
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
25
26
27
28
29
30
29
Incident Energy (MeV)
48-Cd-119


MAT 4865
(γ,γ)
48-Cd-119
Radionuclide Production Cross Section
Cross Section (barns)
10-3
10-4
10-5
10-6
100
101
Incident Energy (MeV)
48-Cd-119g
48-Cd-119m2
30
48-Cd-119


MAT 4865
(γ,p)
48-Cd-119
Radionuclide Production Cross Section
47-Ag-118g
47-Ag-118m4
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
15
20
25
30
31
Incident Energy (MeV)
48-Cd-119


MAT 4865
(γ,d)
48-Cd-119
Radionuclide Production Cross Section
47-Ag-117g
47-Ag-117m1
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
15
20
25
30
32
Incident Energy (MeV)
48-Cd-119


MAT 4865
(γ,t)
48-Cd-119
Radionuclide Production Cross Section
47-Ag-116g
47-Ag-116m1
47-Ag-116m4
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
18
20
22
24
26
28
30
33
Incident Energy (MeV)
48-Cd-119


MAT 4865
(γ,α)
48-Cd-119
Radionuclide Production Cross Section
46-Pd-115g
46-Pd-115m1
Cross Section (barns)
10-8
10-10
10-12
10-14
5
6
7
8
9
10 1
2
3
34
Incident Energy (MeV)
48-Cd-119