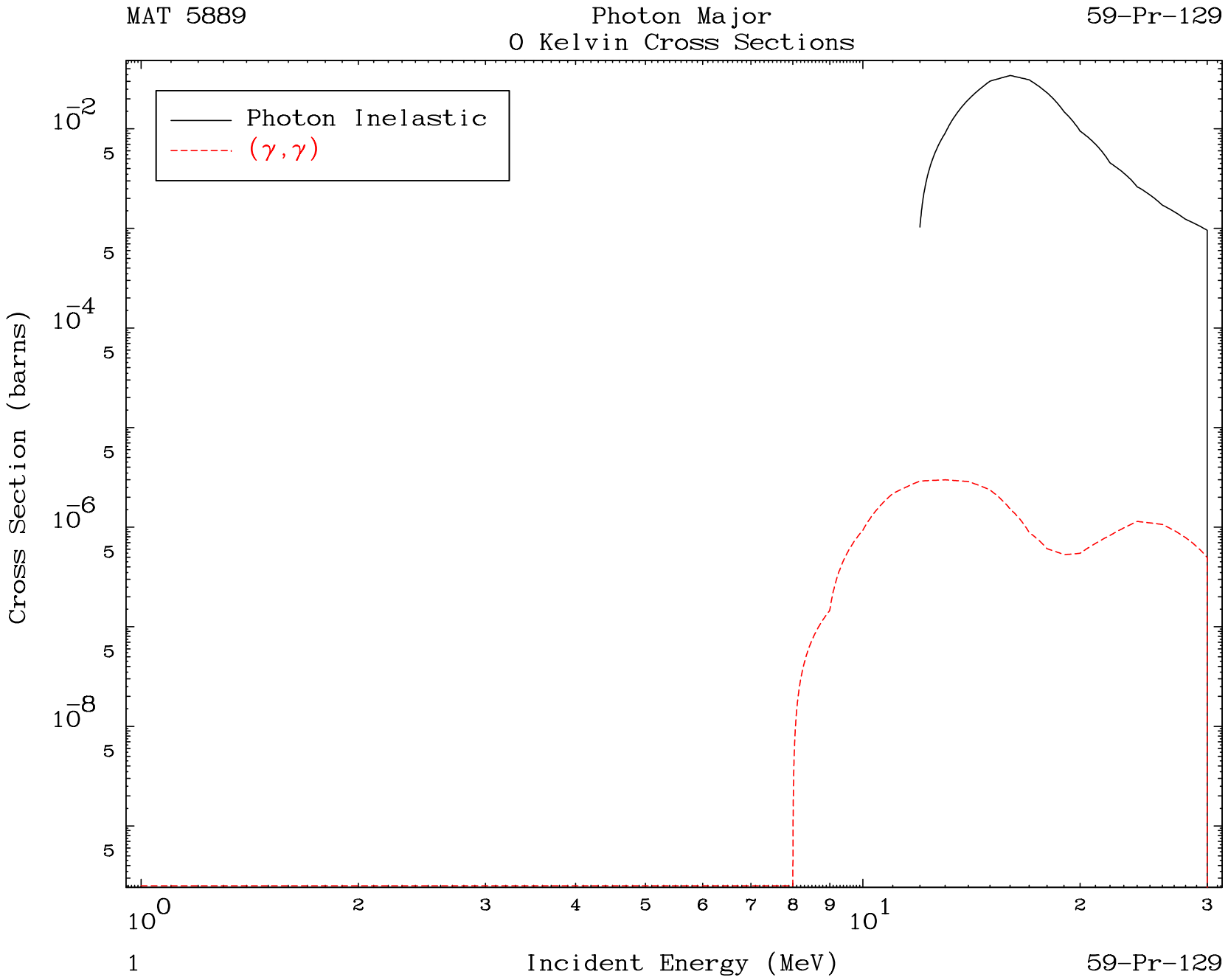
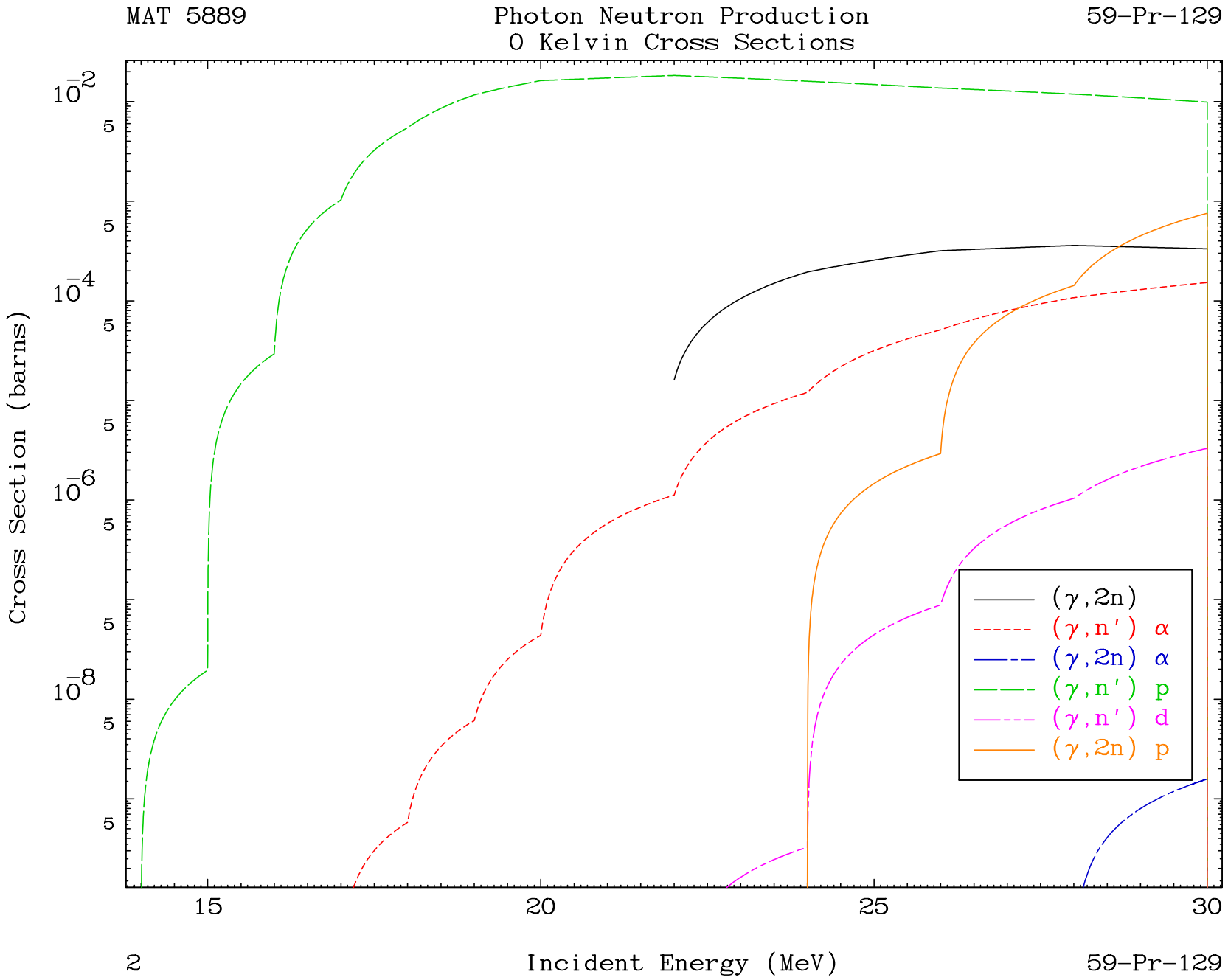
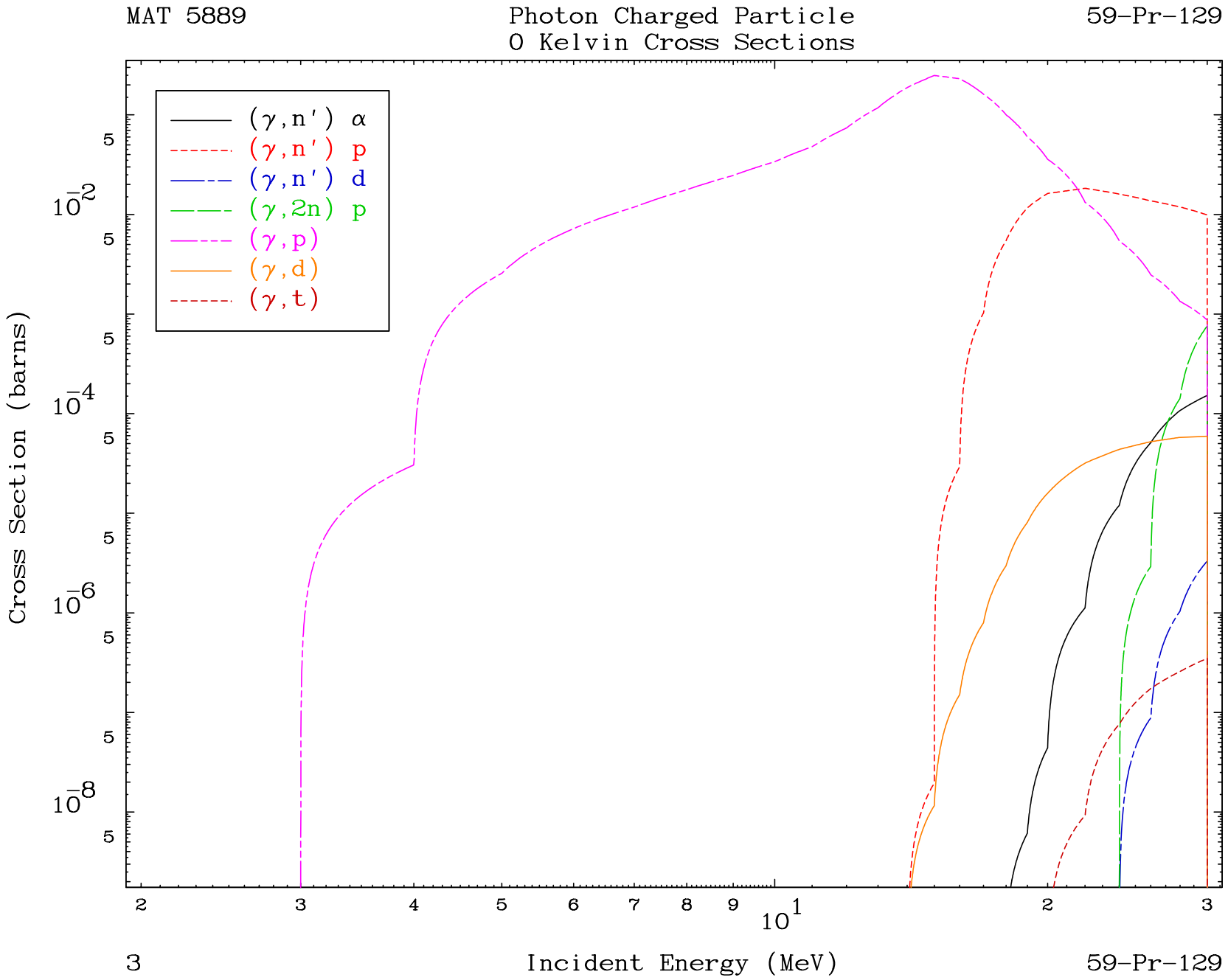
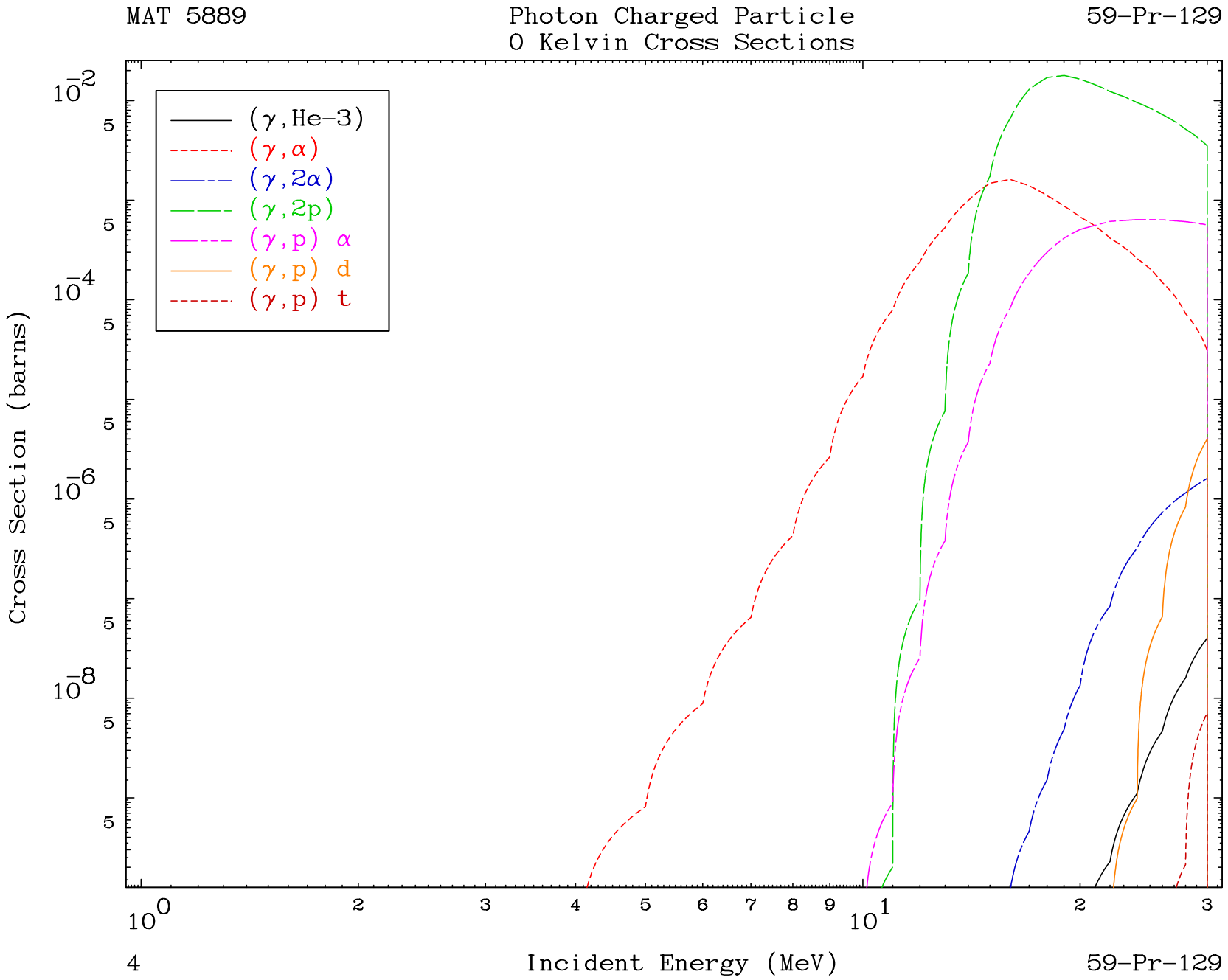
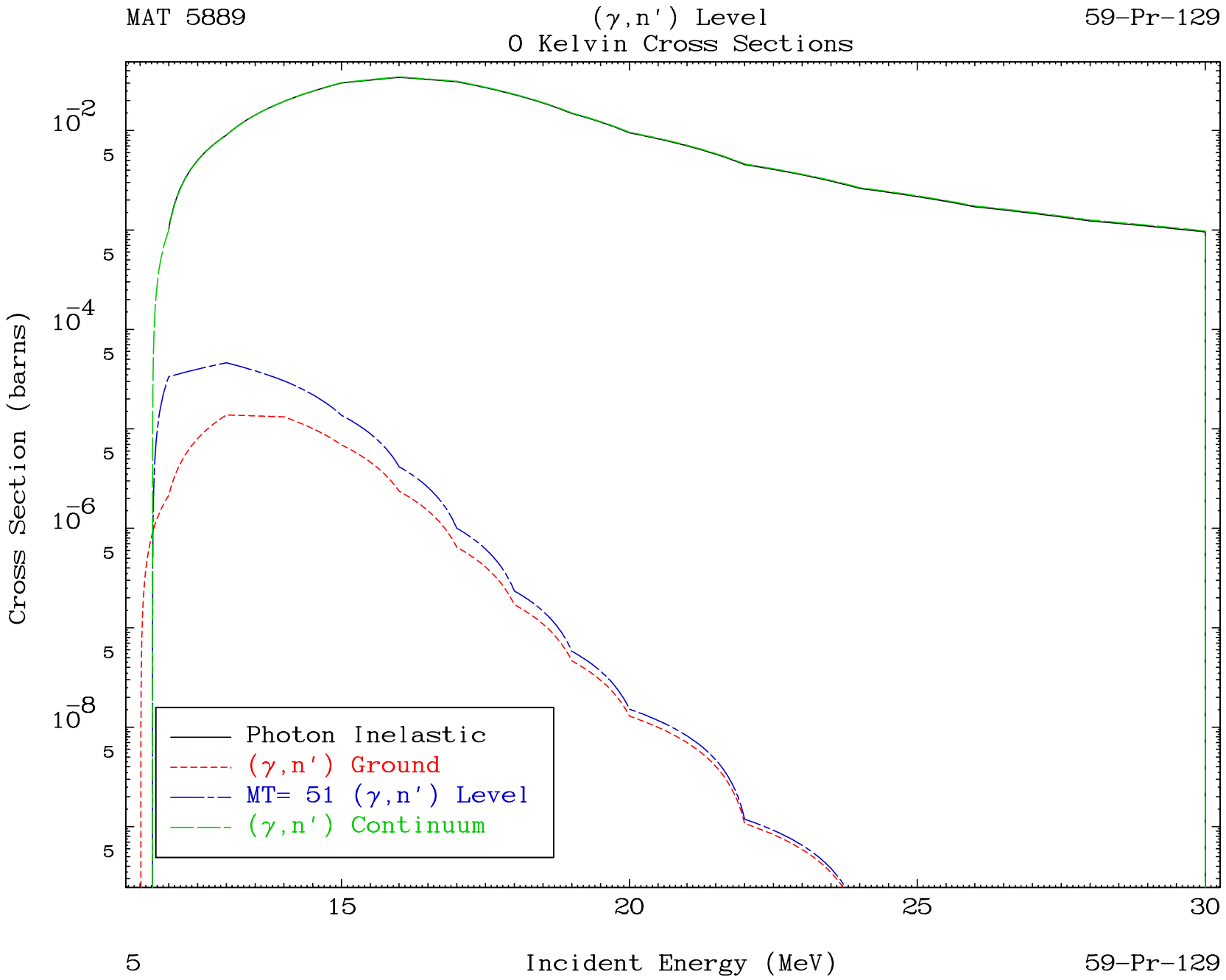
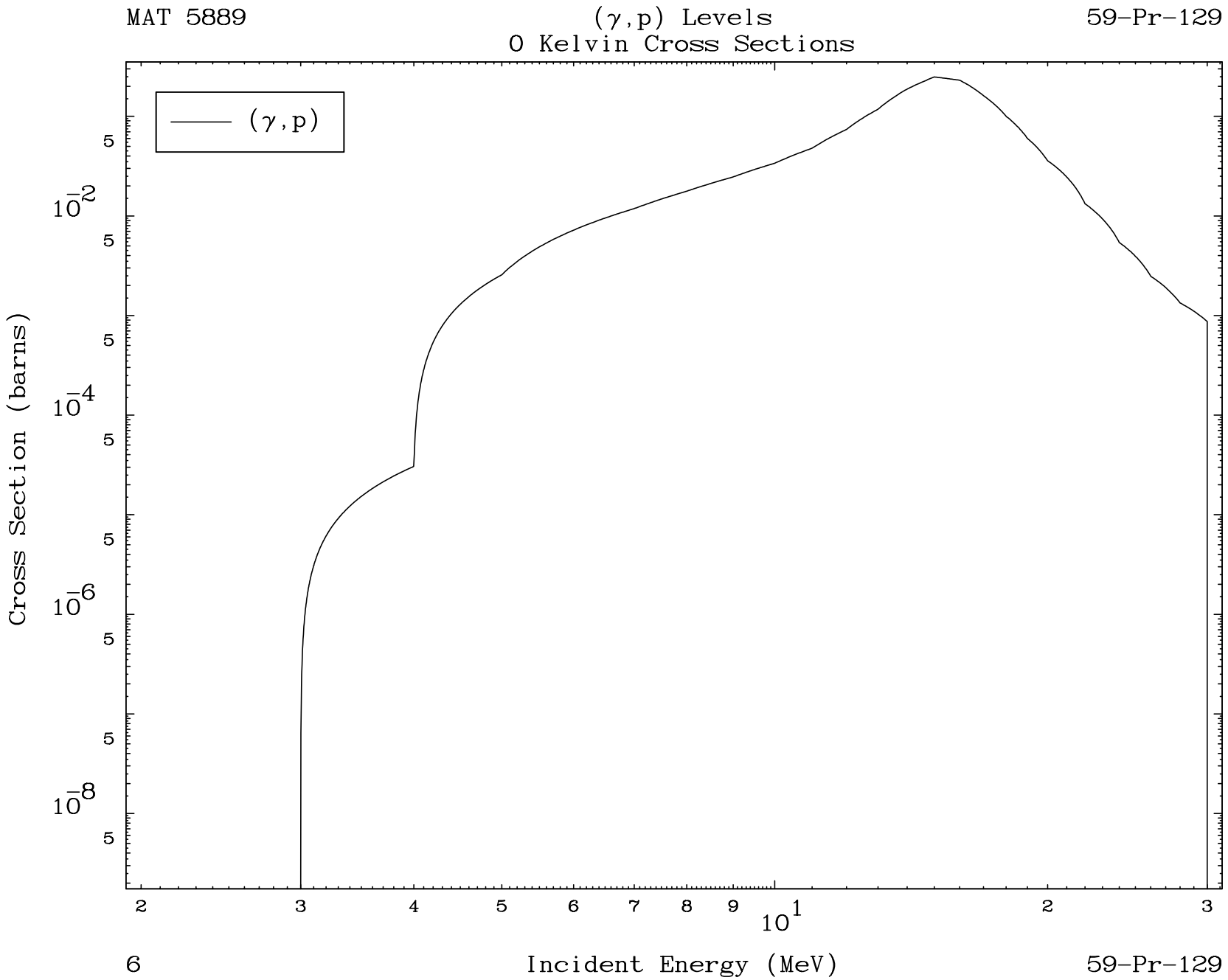

MAT 5889
Photon Major
59-Pr-129
0 Kelvin Cross Sections
Photon Inelastic
(γ,γ)
Cross Section (barns)
10-2
10-4
10-6
10-8
5
100
2
3
4
5
6
7
8
9
101
2
3
1
Incident Energy (MeV)
59-Pr-129

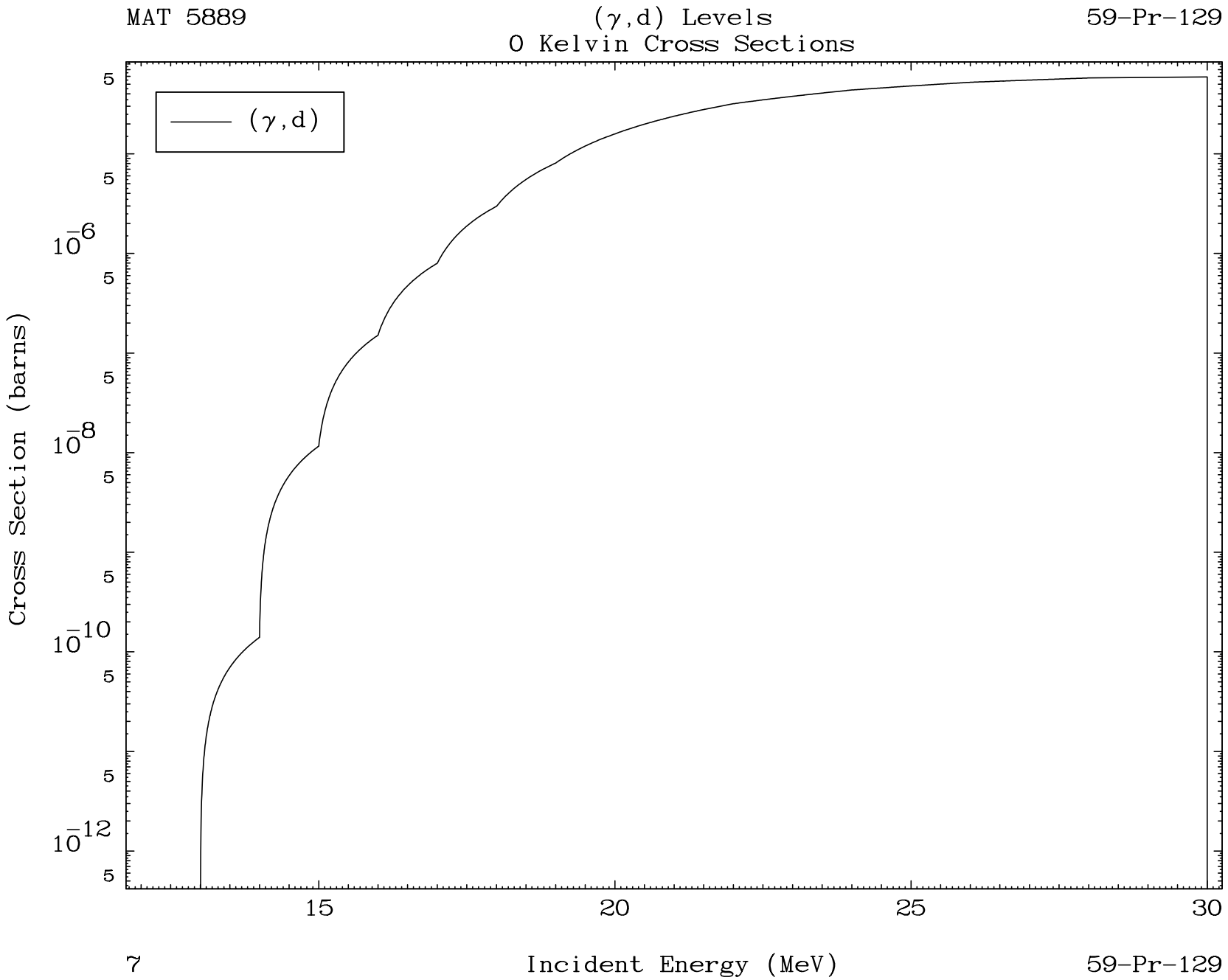

MAT 5889
Photon Neutron Production
0 Kelvin Cross Sections
59-Pr-129
Cross Section (barns)
10-2
10-4
10-6
10-8
5
15
20
25
30
2
Incident Energy (MeV)
59-Pr-129
(γ,2n)
(γ,n') α
(γ,2n) α
(γ,n') p
(γ,n') d
(γ,2n) p

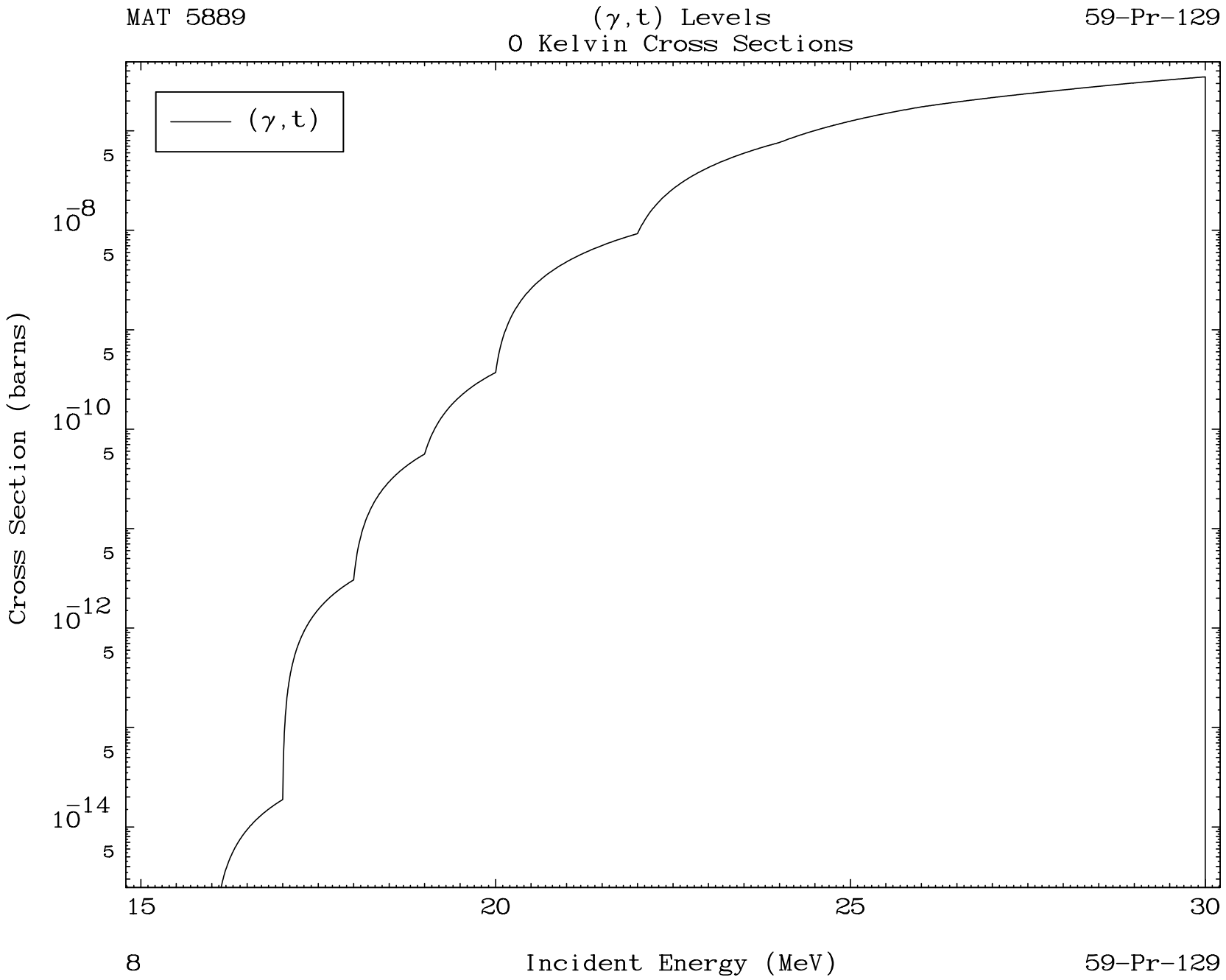

MAT 5889
Photon Charged Particle
0 Kelvin Cross Sections
59-Pr-129
(γ,n') α
(γ,n') p
(γ,n') d
(γ,2n) p
(γ,p)
(γ,d)
(γ,t)
Cross Section (barns)
10-2
10-4
10-6
10-8
5
2
3
4
6
7
8
9
101
Incident Energy (MeV)
3
59-Pr-129

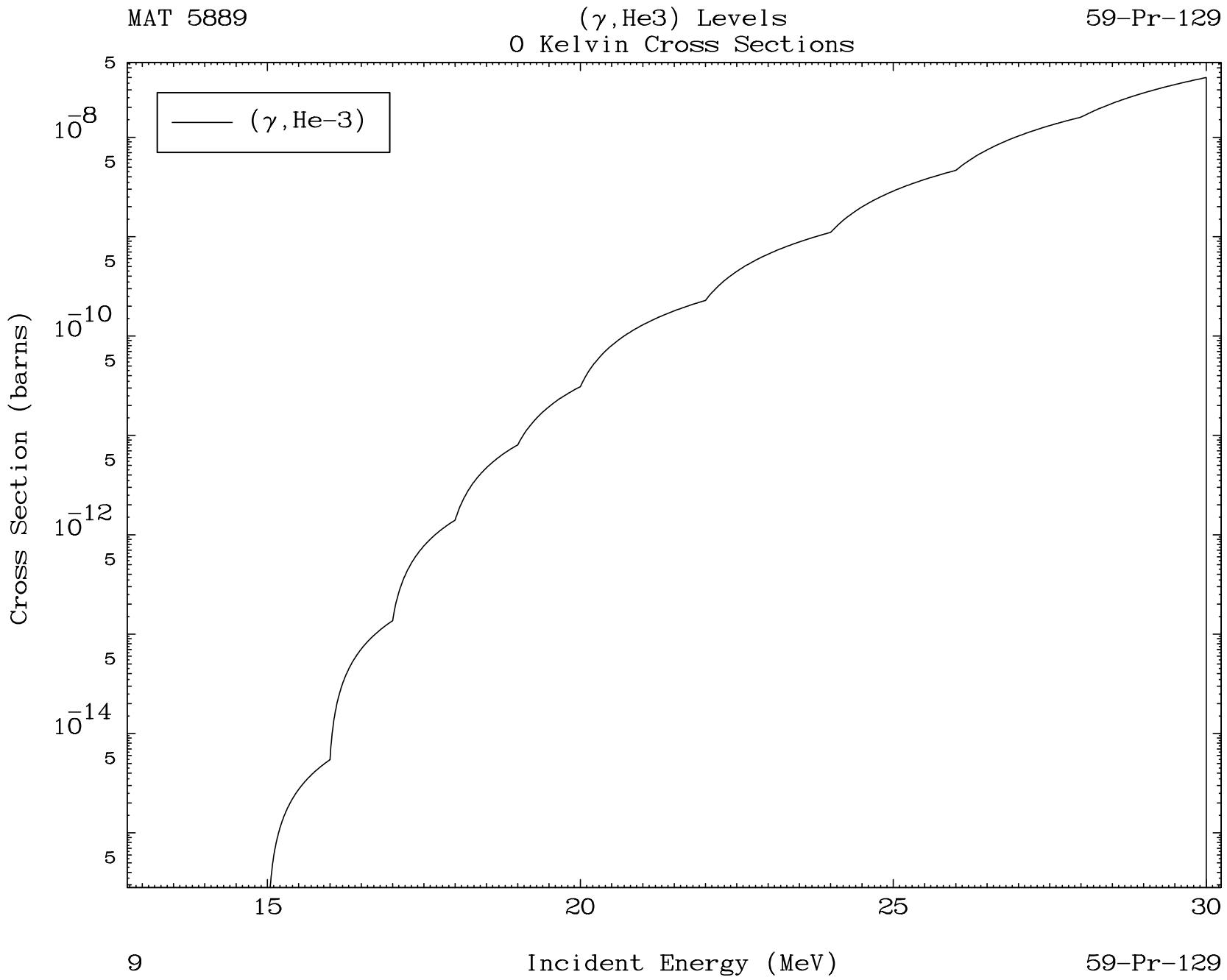

MAT 5889
Photon Charged Particle
0 Kelvin Cross Sections
59-Pr-129
(γ,He-3)
(γ,α)
(γ,2α)
(γ,2p)
(γ,p) α
(γ,p) d
(γ,p) t
Cross Section (barns)
Incident Energy (MeV)
59-Pr-129
4

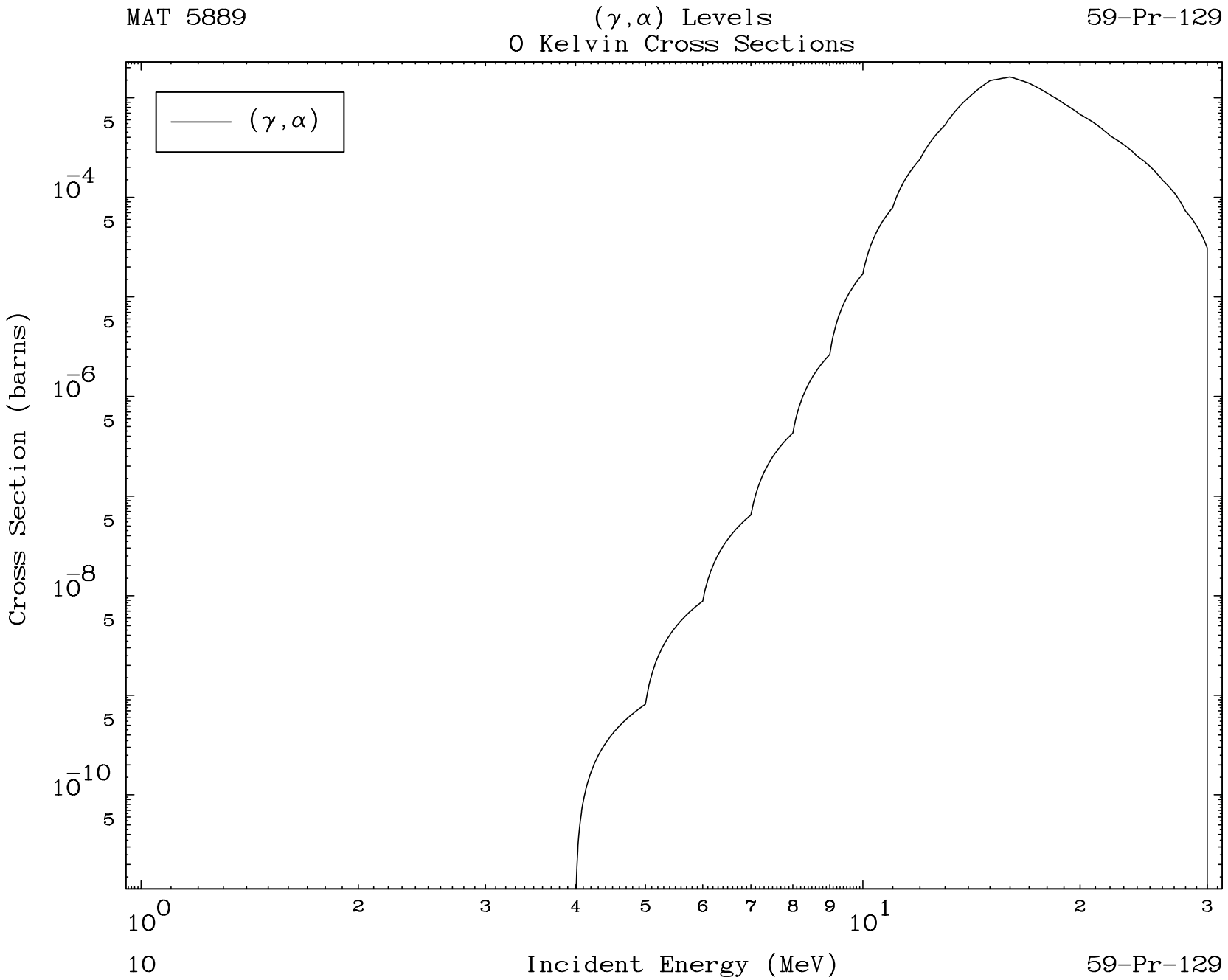

MAT 5889
(γ,n') Level
59-Pr-129
0 Kelvin Cross Sections
Cross Section (barns)
10-2
5
10-4
5
10-6
5
10-8
5
Photon Inelastic
(γ,n') Ground
MT= 51 (γ,n') Level
(γ,n') Continuum
15
20
25
30
5
Incident Energy (MeV)
59-Pr-129

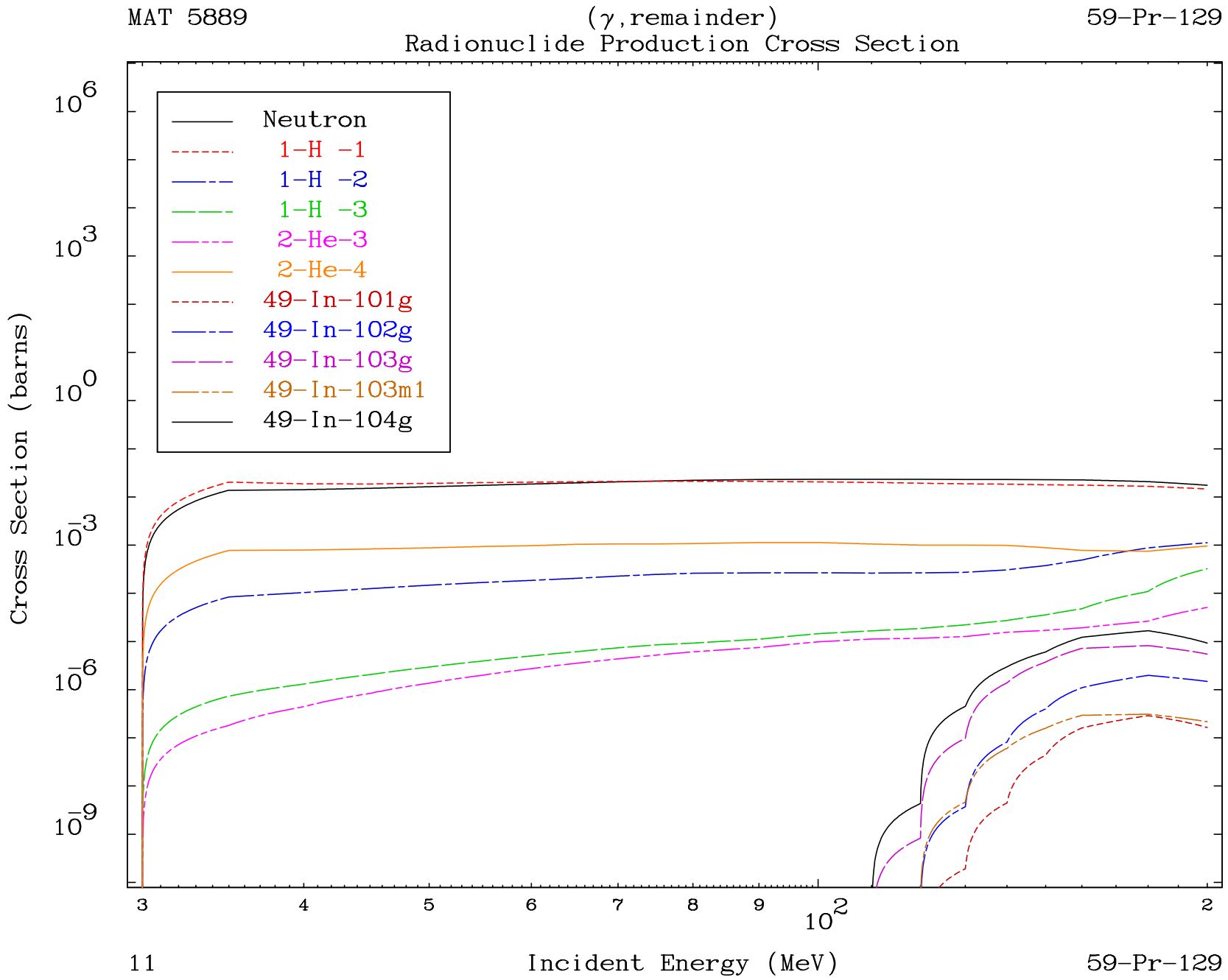

MAT 5889
(γ,p) Levels
59-Pr-129
0 Kelvin Cross Sections
(γ,p)
Cross Section (barns)
10-2
10-4
10-6
10-8
5
2
3
4
5
6
7
8
9
101
2
3
Incident Energy (MeV)
6
59-Pr-129

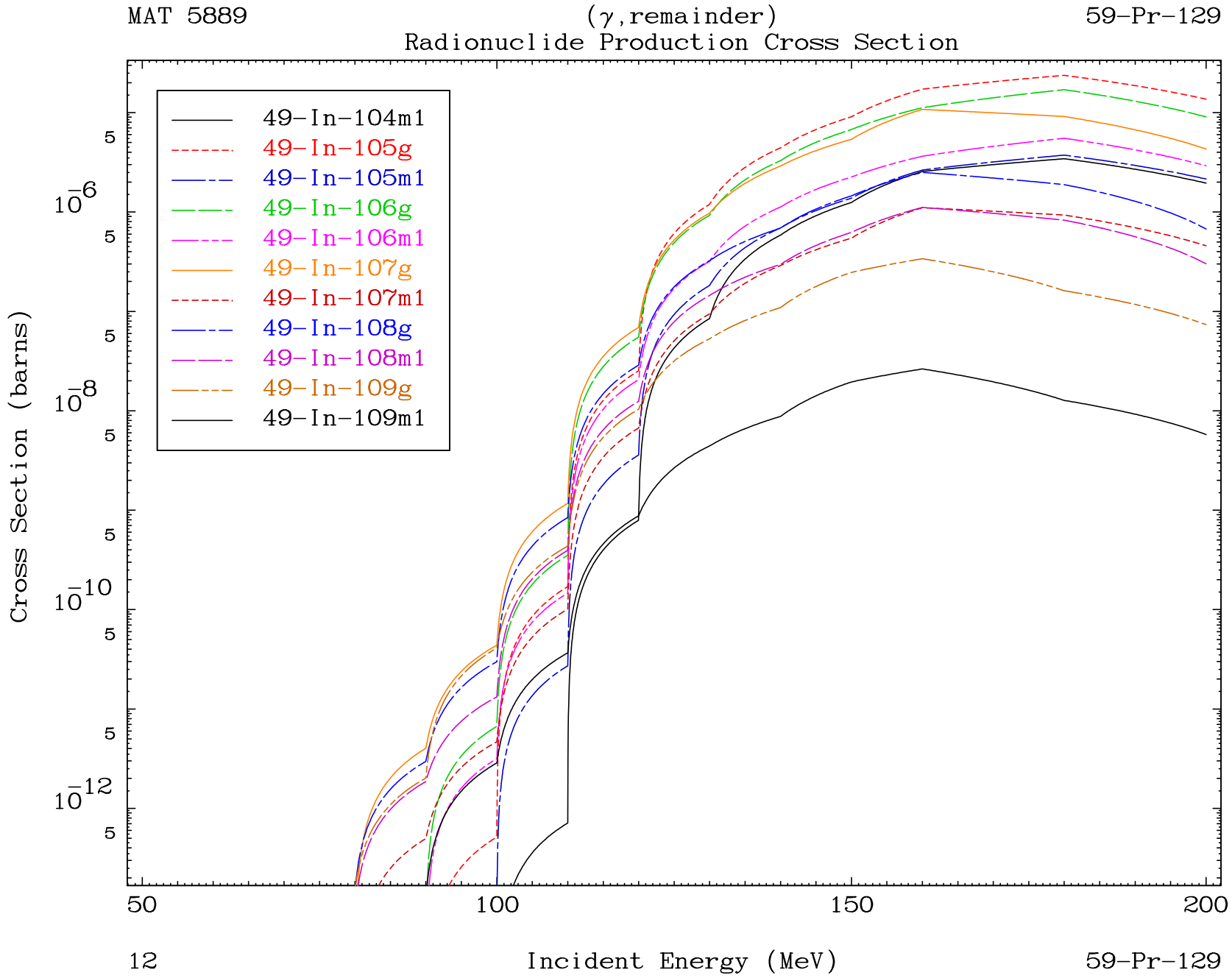

MAT 5889
(γ,d) Levels
59-Pr-129
0 Kelvin Cross Sections
(γ,d)
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
15
20
25
30
Incident Energy (MeV)
7
59-Pr-129

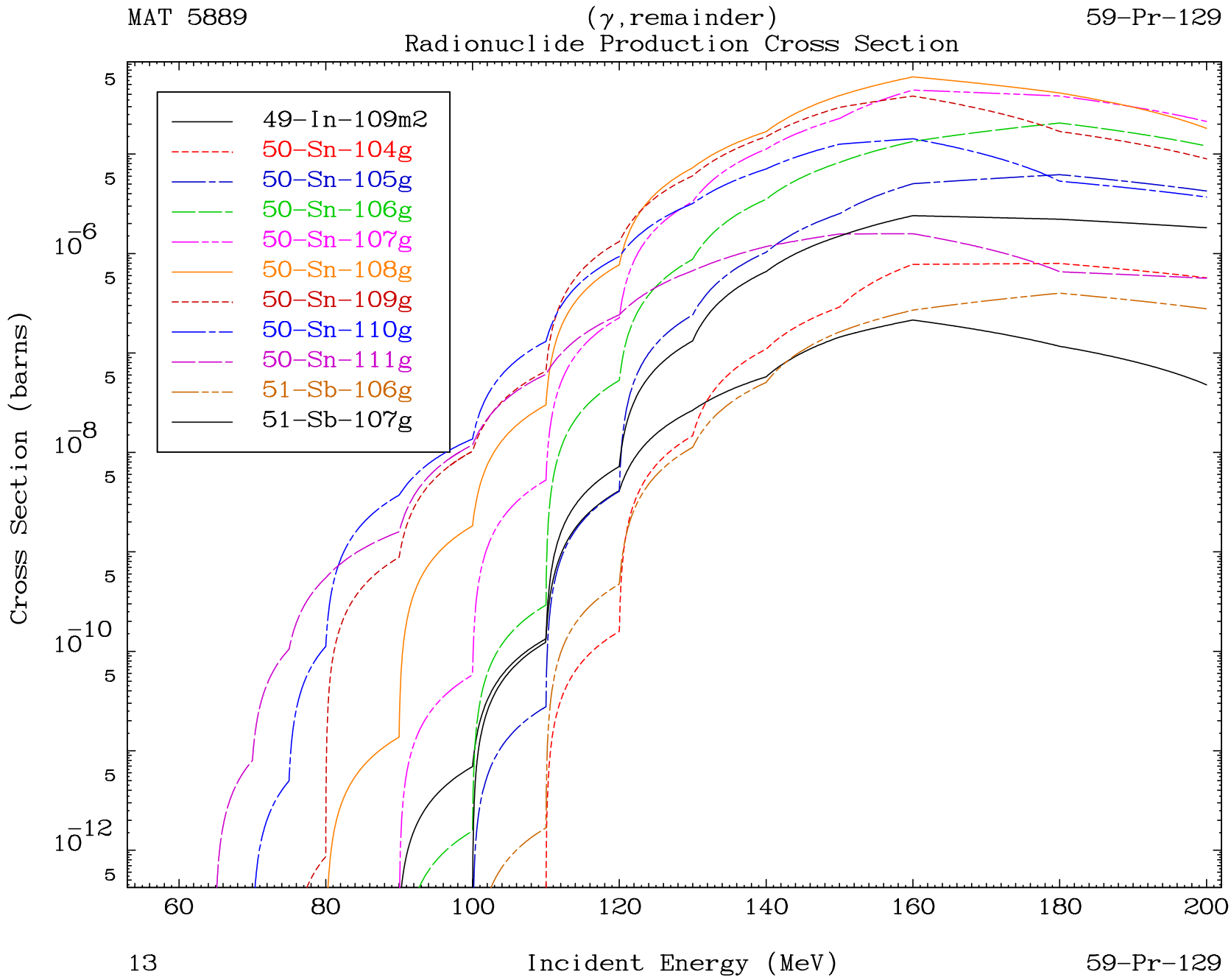

MAT 5889
(γ,t) Levels
59-Pr-129
0 Kelvin Cross Sections
(γ,t)
Cross Section (barns)
10-8
10-10
10-12
10-14
5
15
20
25
30
8
Incident Energy (MeV)
59-Pr-129

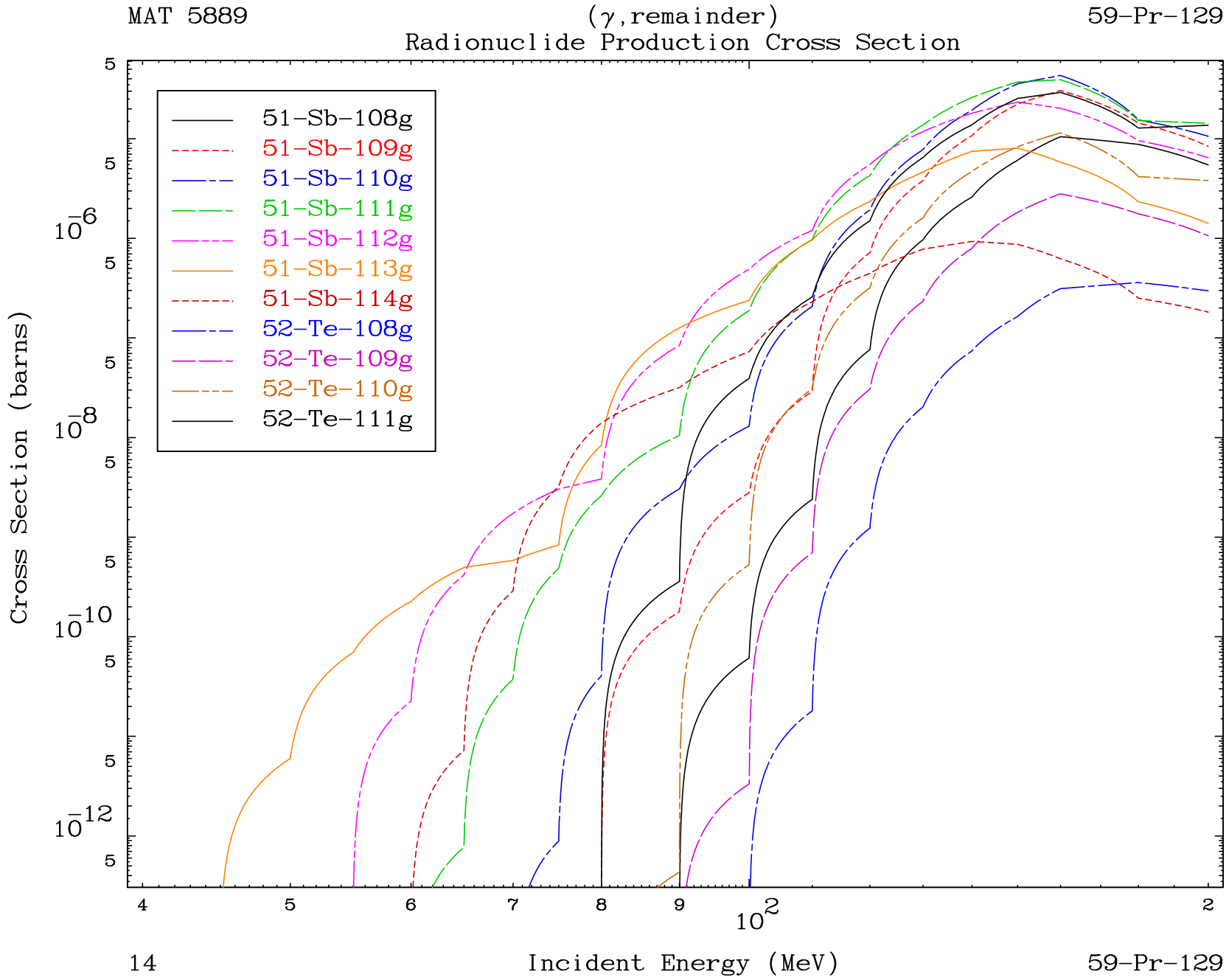

MAT 5889
(γ,He3) Levels
59-Pr-129
0 Kelvin Cross Sections
(γ,He-3)
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
15
20
25
30
9
Incident Energy (MeV)
59-Pr-129

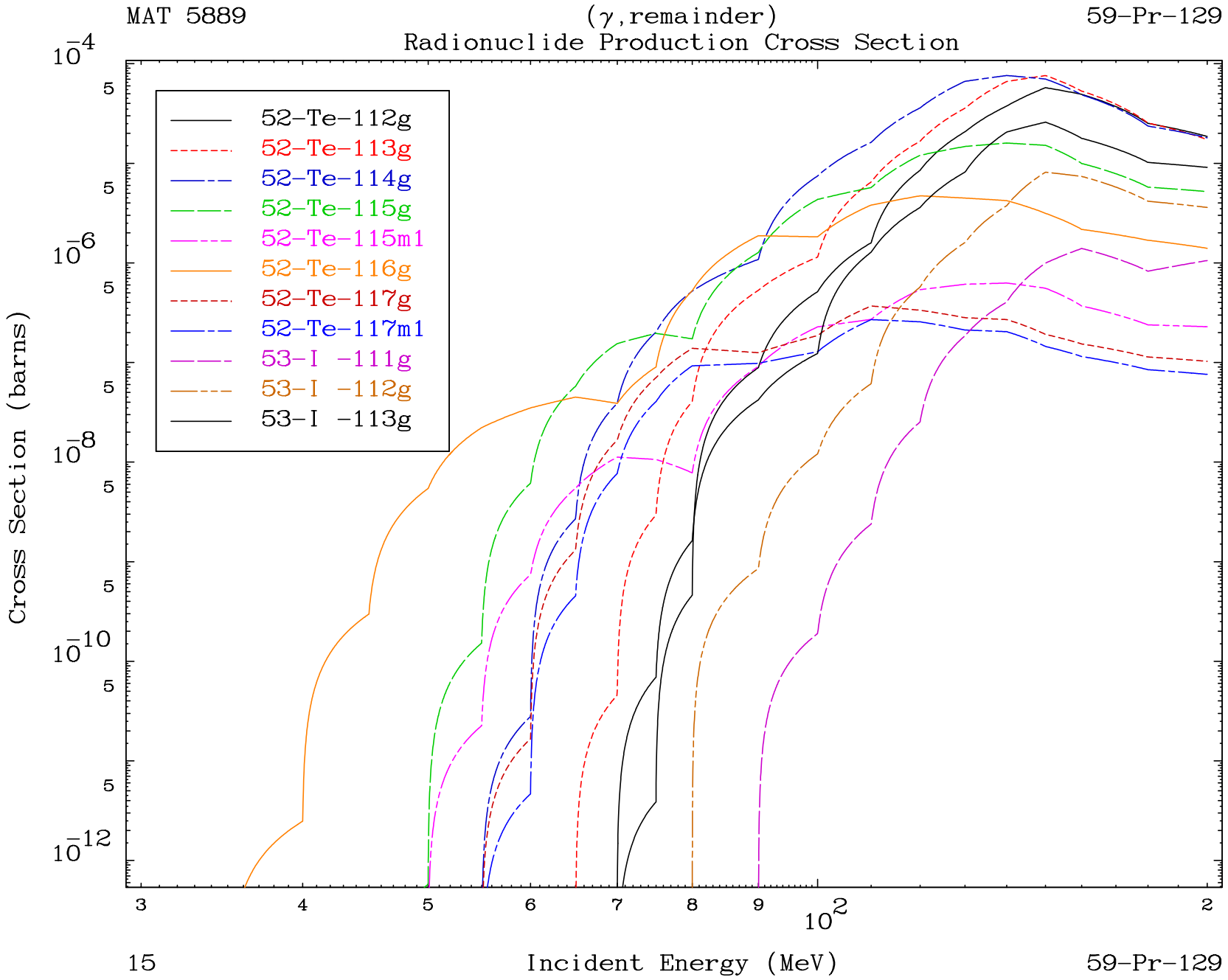

MAT 5889
(γ,α) Levels
59-Pr-129
0 Kelvin Cross Sections
(γ,α)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^0
10^1
Incident Energy (MeV)
59-Pr-129

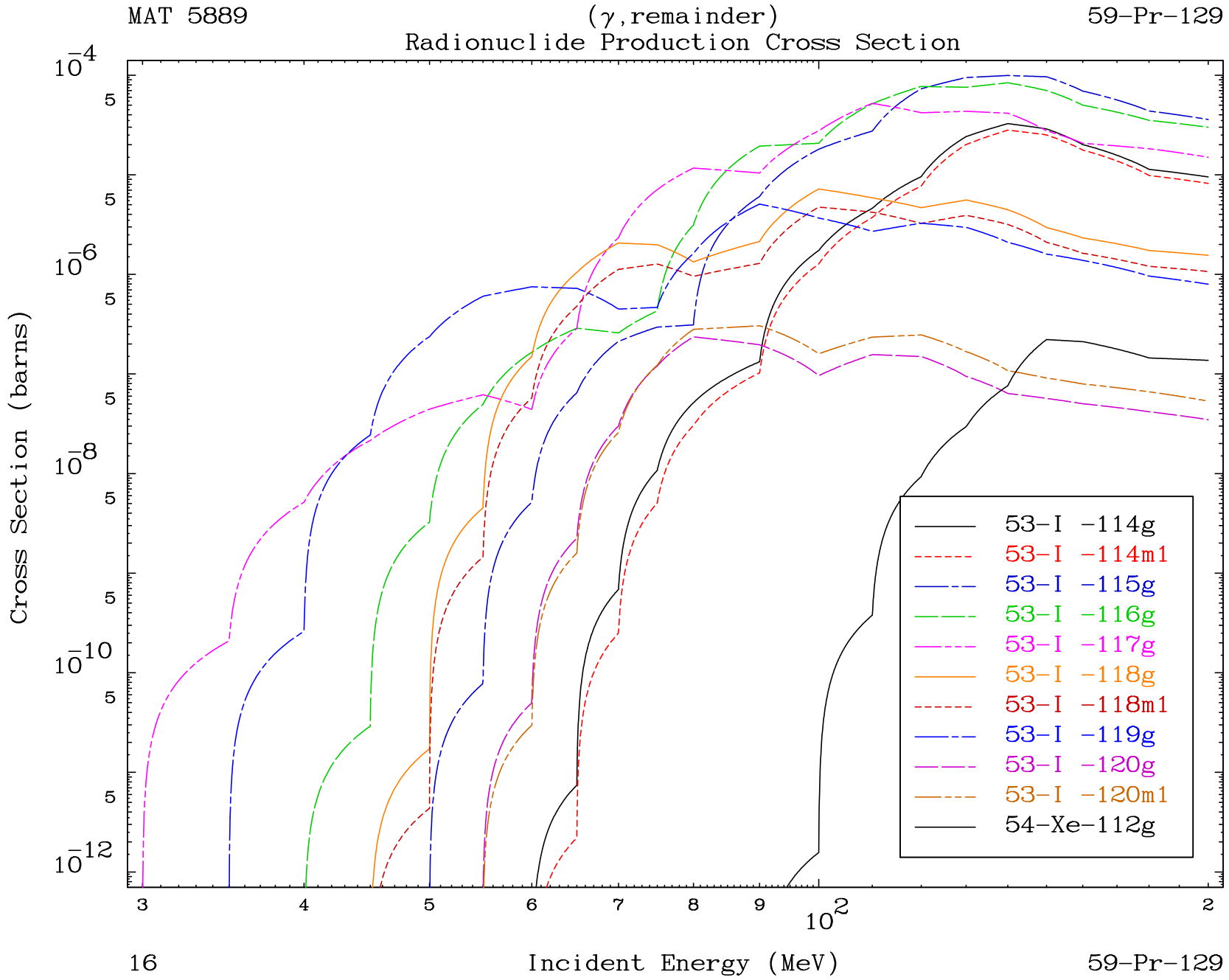

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Neutron
1-H -1
1-H -2
1-H -3
2-He-3
2-He-4
49-In-101g
49-In-102g
49-In-103g
49-In-103m1
49-In-104g
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-9
3
4
5
6
7
8
9
10^2
2
11
Incident Energy (MeV)
59-Pr-129

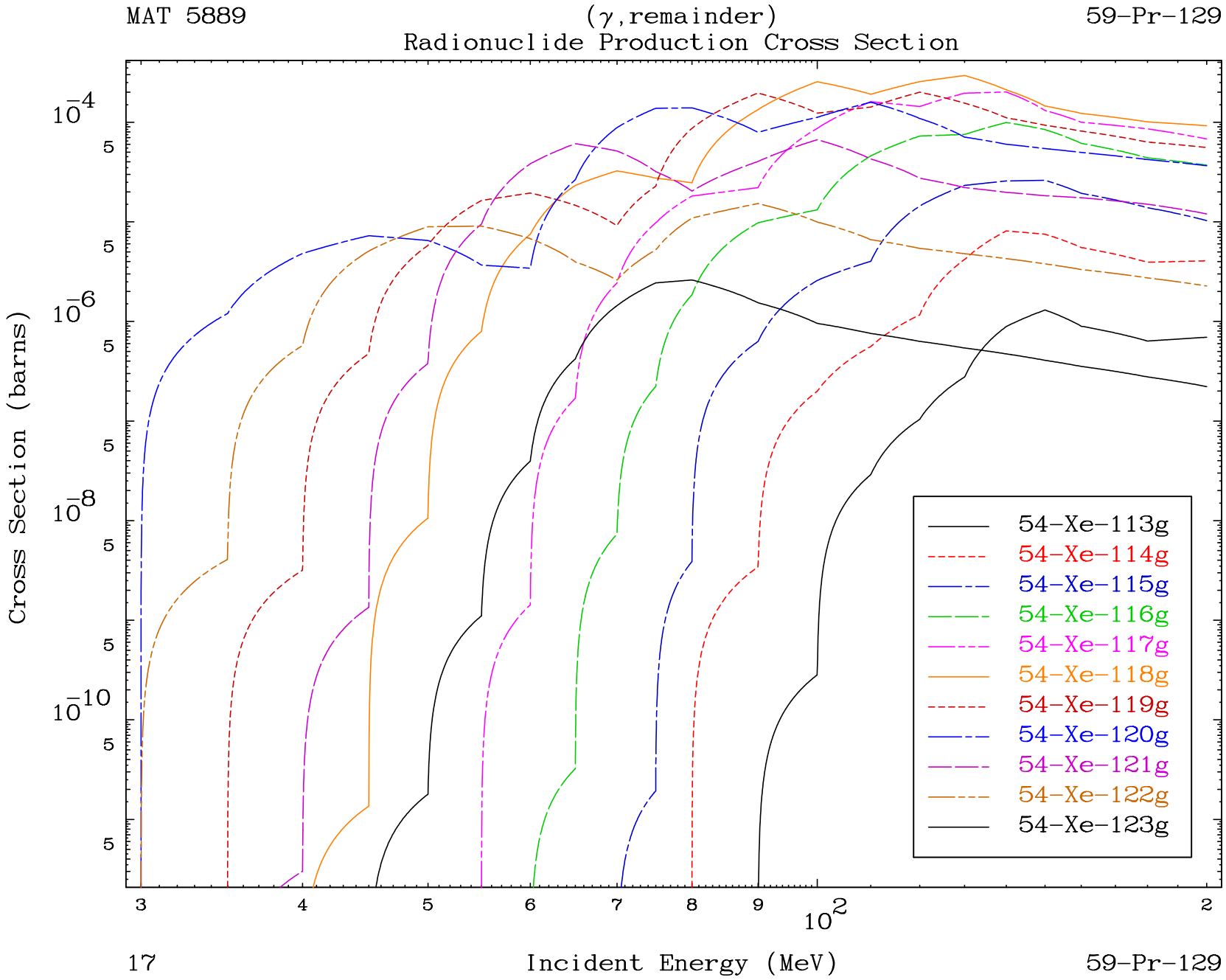

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
49-In-104m1
49-In-105g
49-In-105m1
49-In-106g
49-In-106m1
49-In-107g
49-In-107m1
49-In-108g
49-In-108m1
49-In-109g
49-In-109m1
Cross Section (barns)
10-6
10-8
10-10
10-12
5
50
100
150
200
12
Incident Energy (MeV)
59-Pr-129


MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
49-In-109m2
50-Sn-104g
50-Sn-105g
50-Sn-106g
50-Sn-107g
50-Sn-108g
50-Sn-109g
50-Sn-110g
50-Sn-111g
51-Sb-106g
51-Sb-107g
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
60
80
100
120
140
160
180
200
13
Incident Energy (MeV)
59-Pr-129

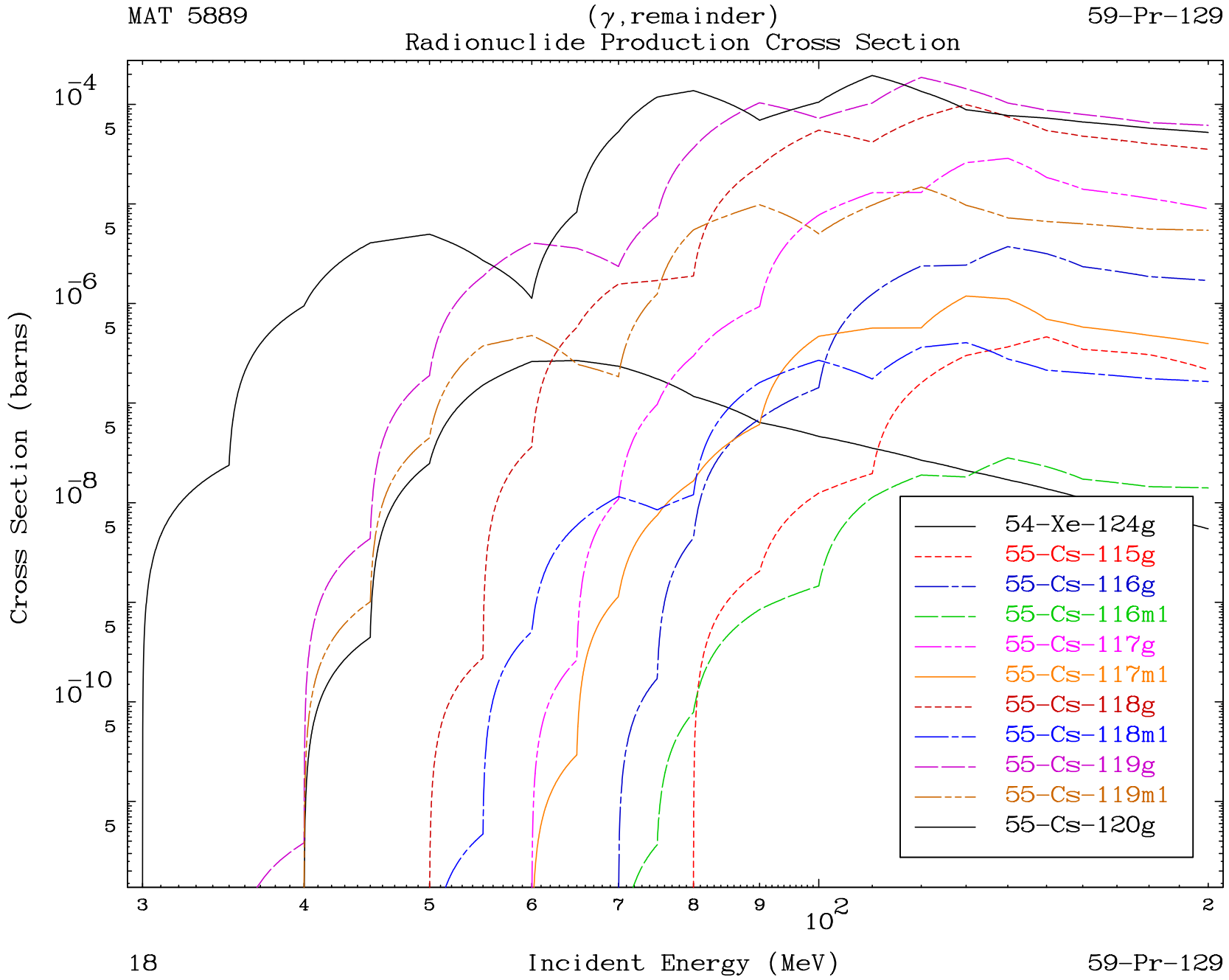

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
51-Sb-108g
51-Sb-109g
51-Sb-110g
51-Sb-111g
51-Sb-112g
51-Sb-113g
51-Sb-114g
52-Te-108g
52-Te-109g
52-Te-110g
52-Te-111g
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
4
6
7
8
9
10^2
2
14
Incident Energy (MeV)
59-Pr-129


MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
52-Te-112g
52-Te-113g
52-Te-114g
52-Te-115g
52-Te-115m1
52-Te-116g
52-Te-117g
52-Te-117m1
53-I -111g
53-I -112g
53-I -113g
Cross Section (barns)
Incident Energy (MeV)
15
59-Pr-129

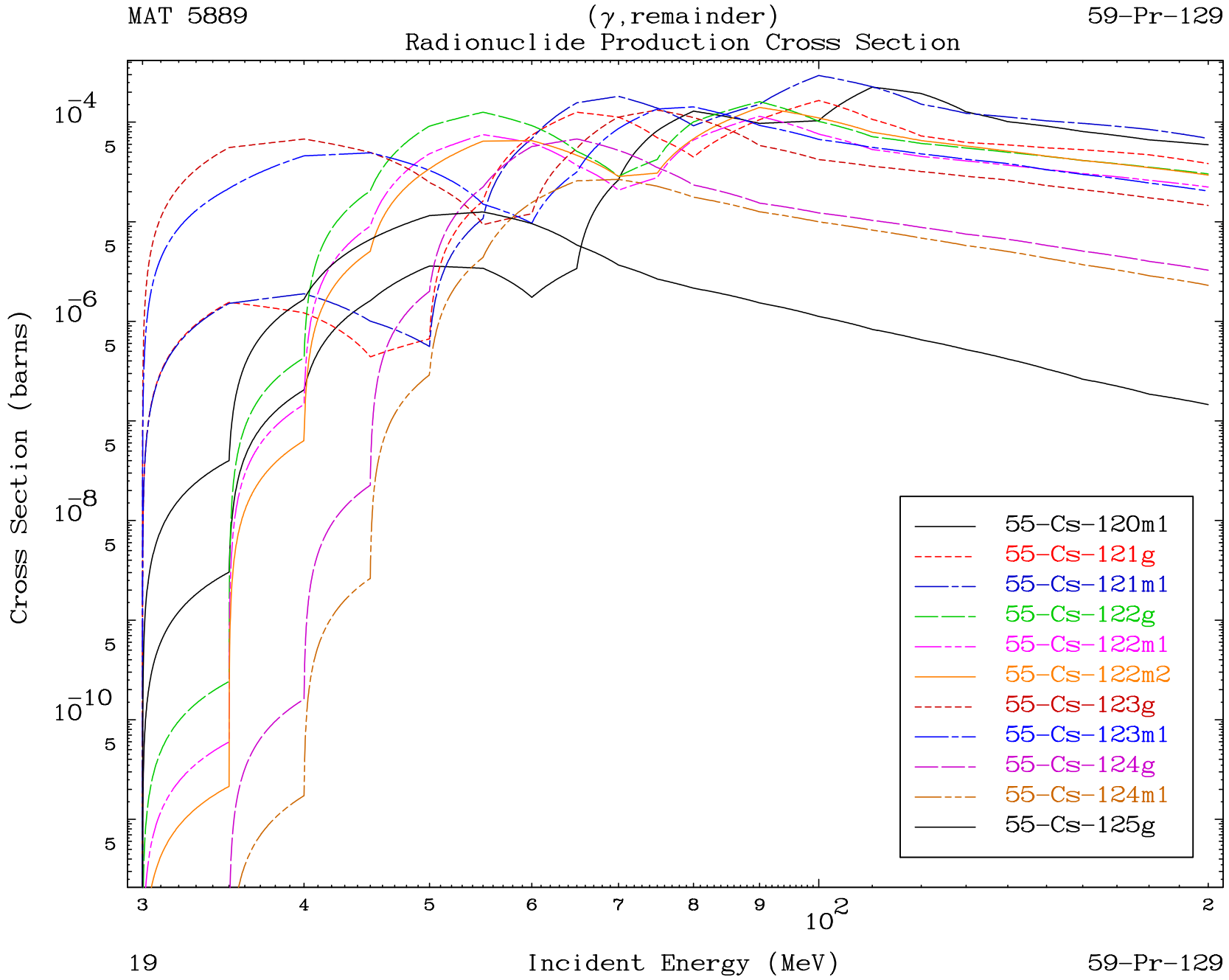

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
53-I -114g
53-I -114m1
53-I -115g
53-I -116g
53-I -117g
53-I -118g
53-I -118m1
53-I -119g
53-I -120g
53-I -120m1
54-Xe-112g


MAT 5889
(γ,remainder)
59-Pr-129
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)
54-Xe-113g
54-Xe-114g
54-Xe-115g
54-Xe-116g
54-Xe-117g
54-Xe-118g
54-Xe-119g
54-Xe-120g
54-Xe-121g
54-Xe-122g
54-Xe-123g

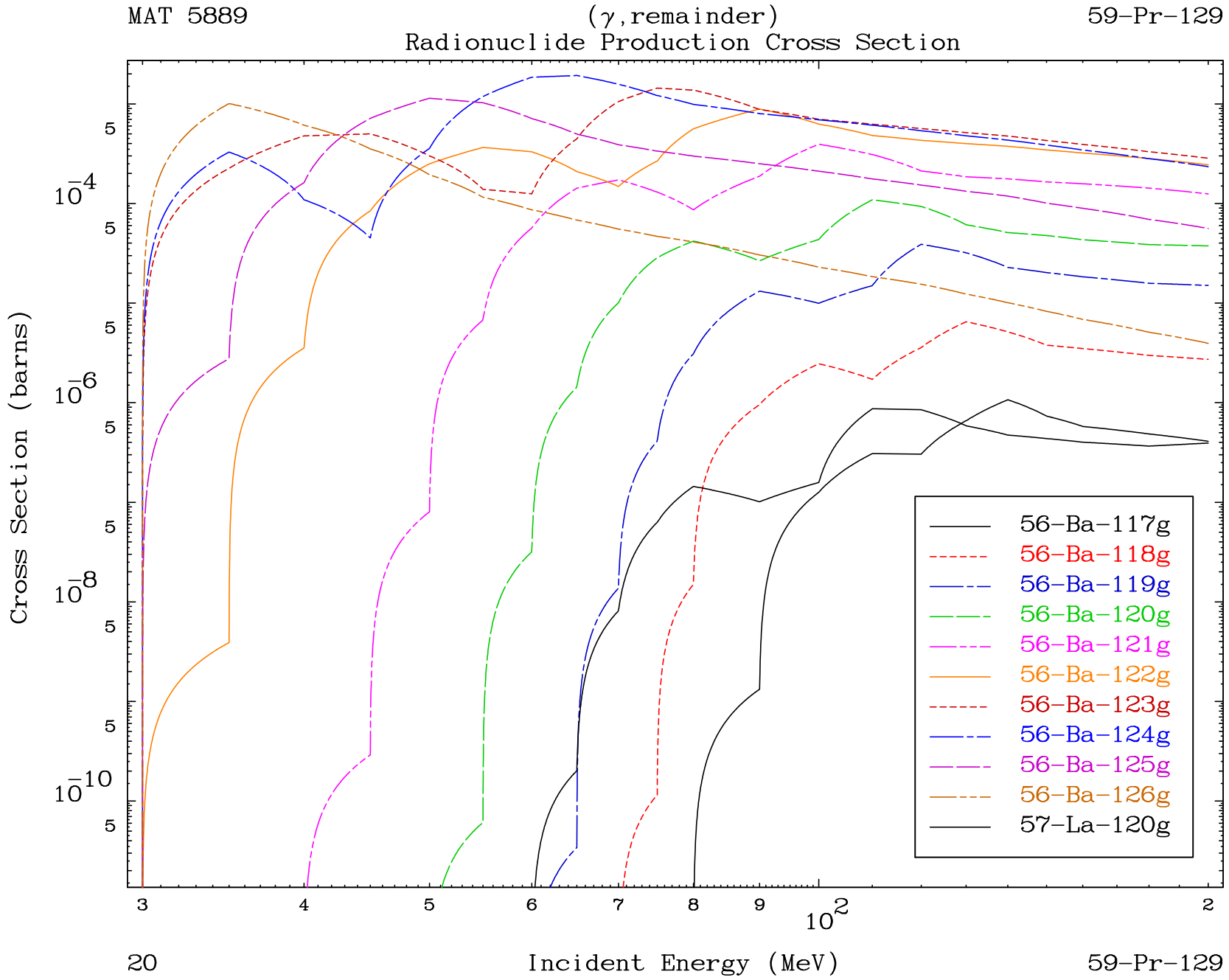
59-Pr-129

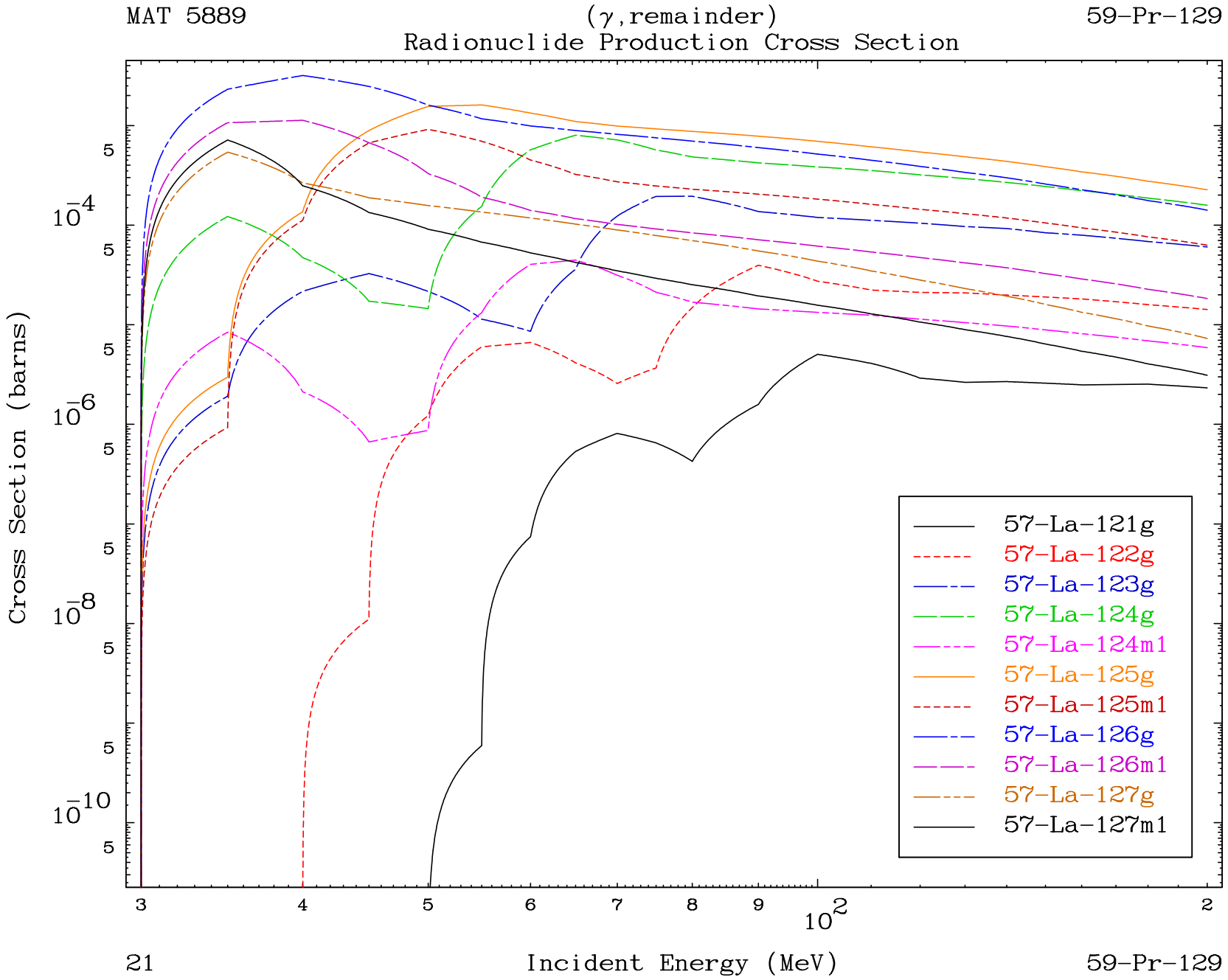

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
54-Xe-124g
55-Cs-115g
55-Cs-116g
55-Cs-116m1
55-Cs-117g
55-Cs-117m1
55-Cs-118g
55-Cs-118m1
55-Cs-119g
55-Cs-119m1
55-Cs-120g

59-Pr-129

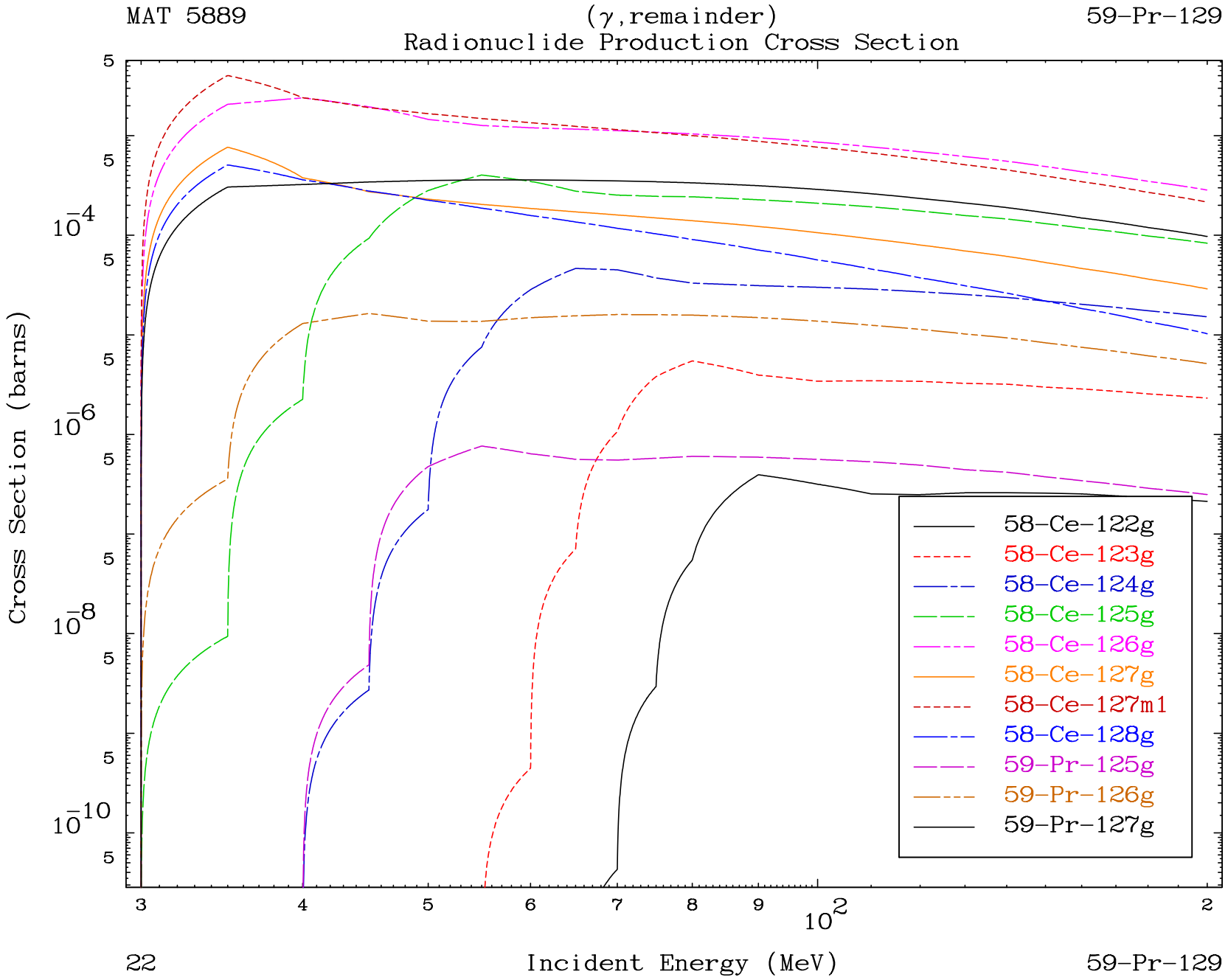

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
5
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
55-Cs-120m1
55-Cs-121g
55-Cs-121m1
55-Cs-122g
55-Cs-122m1
55-Cs-122m2
55-Cs-123g
55-Cs-123m1
55-Cs-124g
55-Cs-124m1
55-Cs-125g

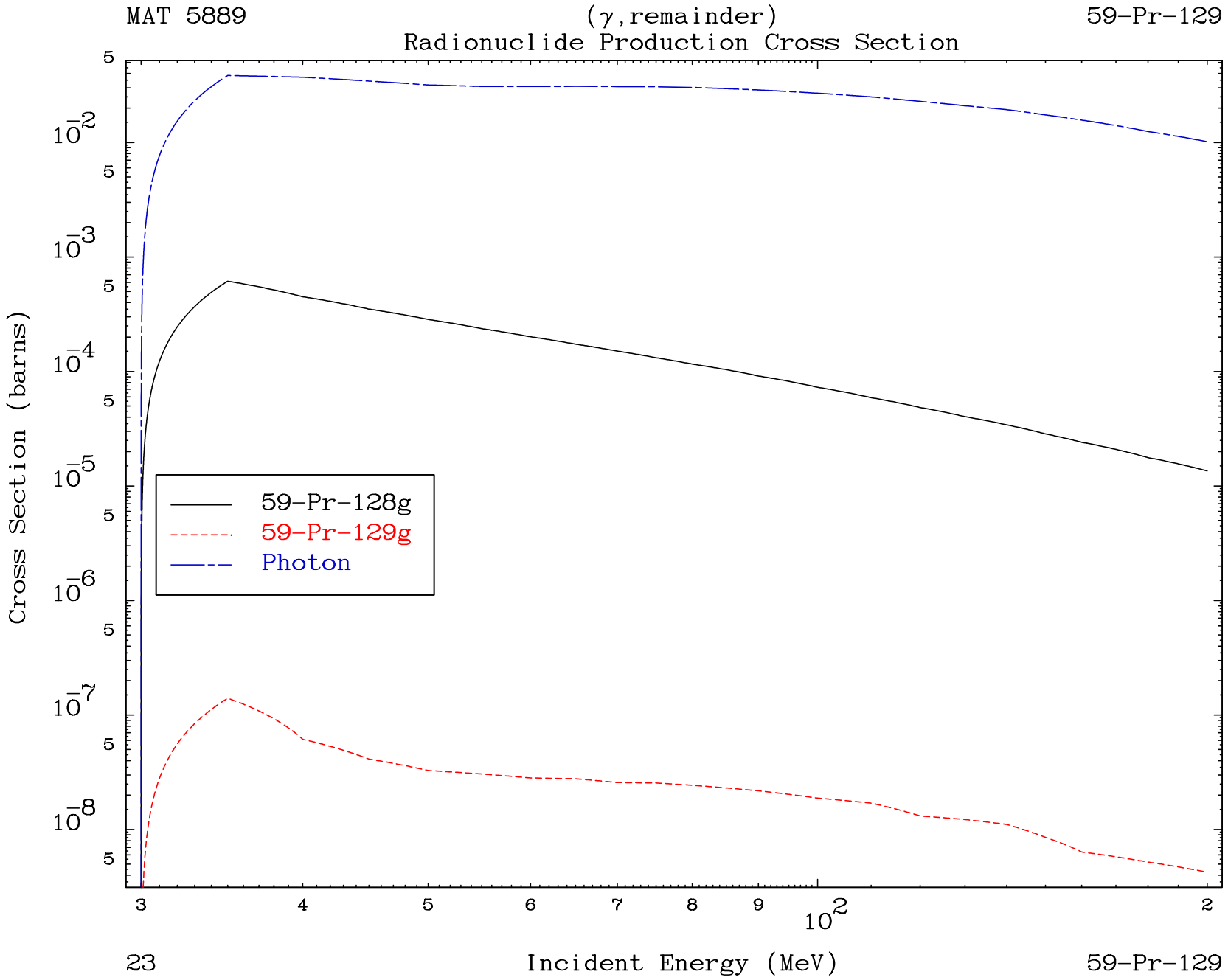
59-Pr-129

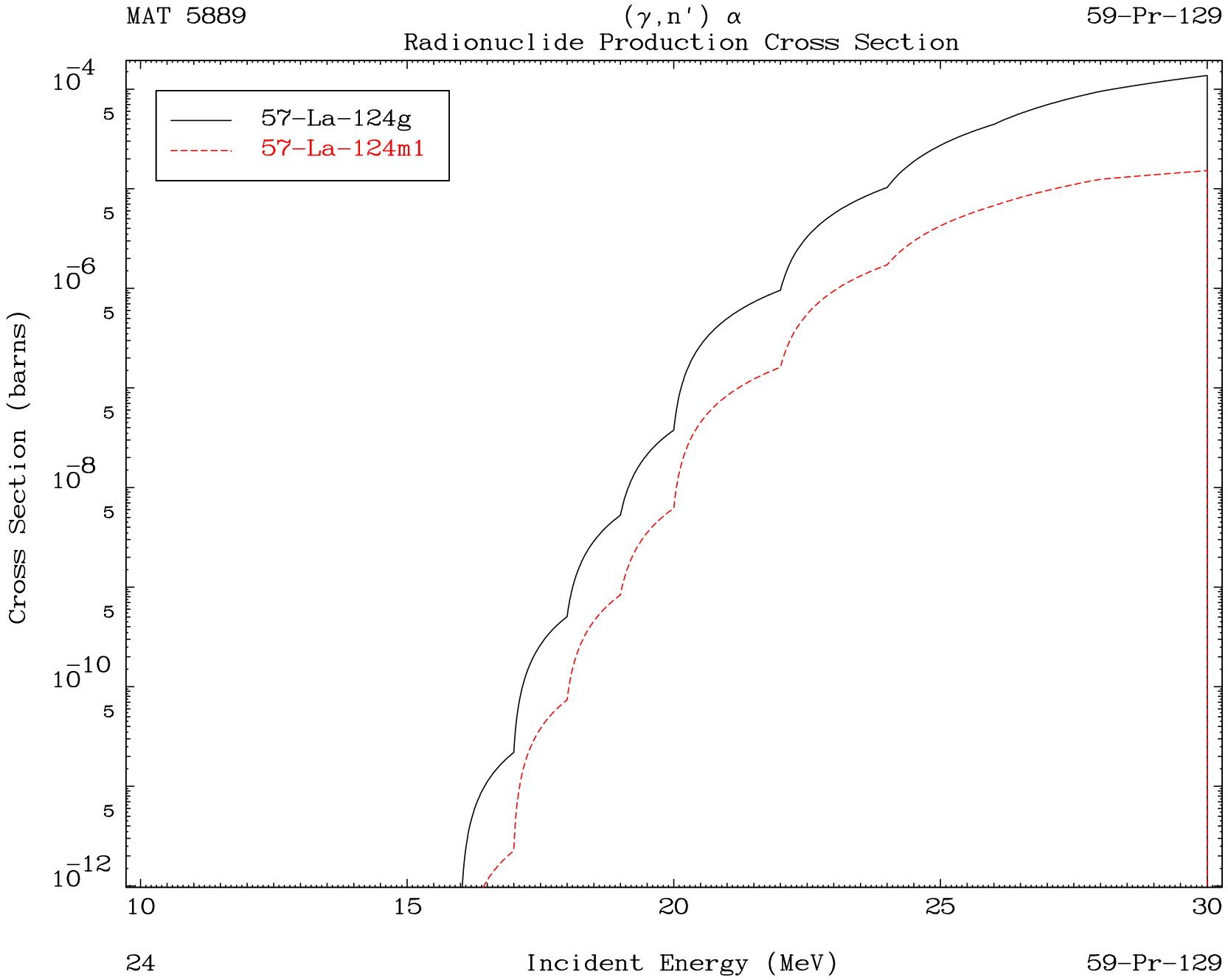

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
5
3
4
5
6
7
8
9
10 2
2
20
Incident Energy (MeV)
59-Pr-129
56-Ba-117g
56-Ba-118g
56-Ba-119g
56-Ba-120g
56-Ba-121g
56-Ba-122g
56-Ba-123g
56-Ba-124g
56-Ba-125g
56-Ba-126g
57-La-120g

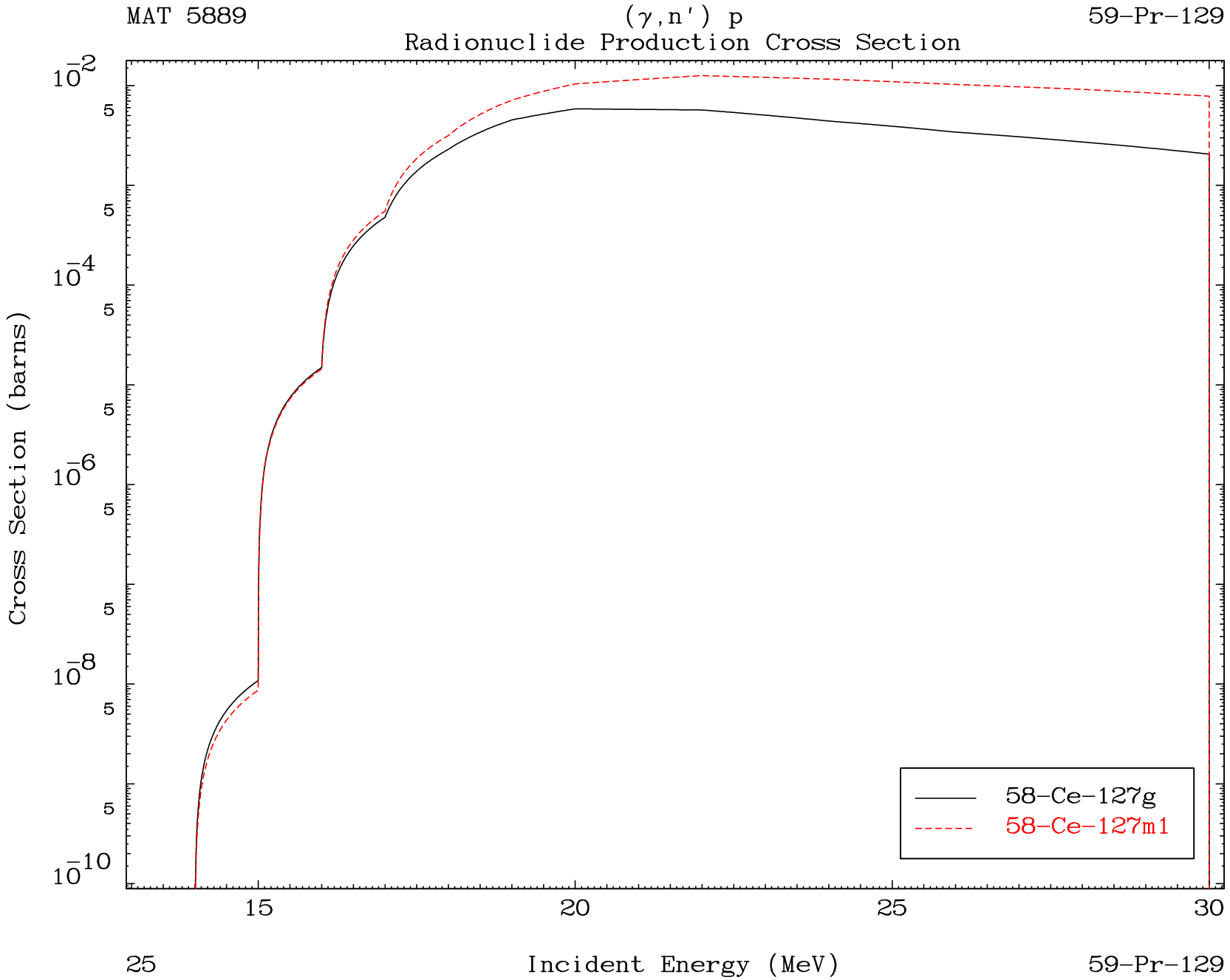

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
5
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
57-La-121g
57-La-122g
57-La-123g
57-La-124g
57-La-124m1
57-La-125g
57-La-125m1
57-La-126g
57-La-126m1
57-La-127g
57-La-127m1

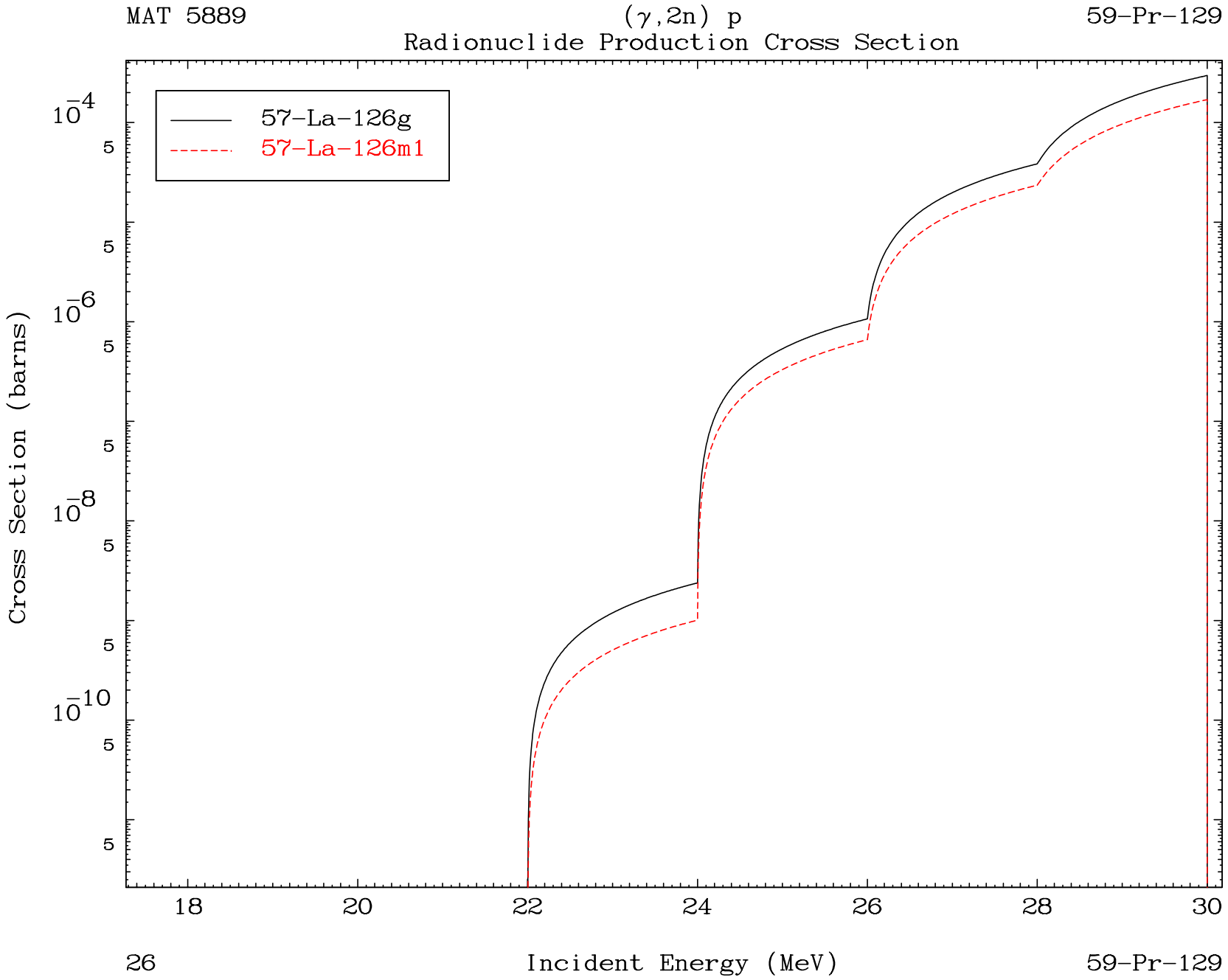
59-Pr-129

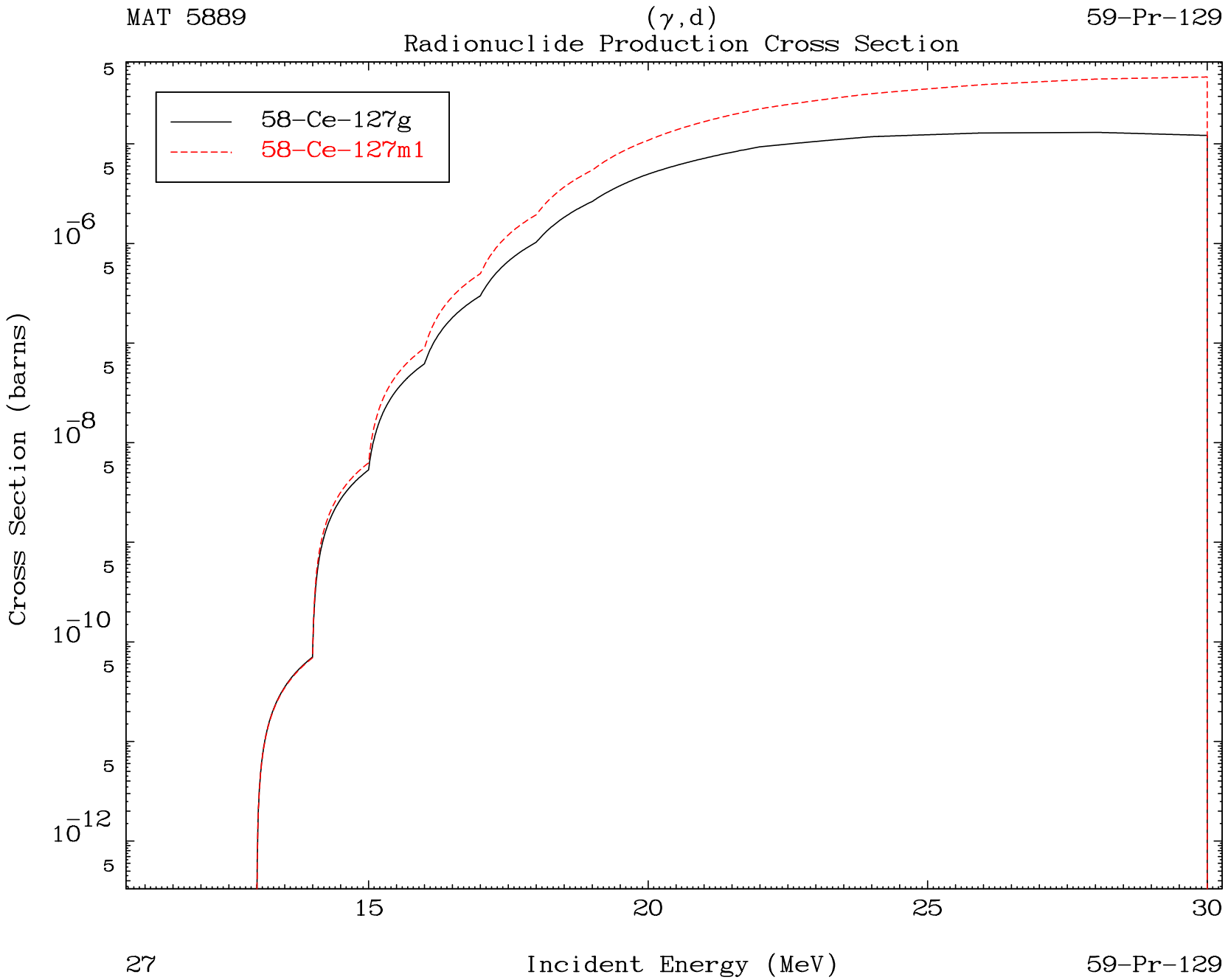

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-4
10-6
10-8
10-10
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
22
59-Pr-129
58-Ce-122g
58-Ce-123g
58-Ce-124g
58-Ce-125g
58-Ce-126g
58-Ce-127g
58-Ce-127m1
58-Ce-128g
59-Pr-125g
59-Pr-126g
59-Pr-127g

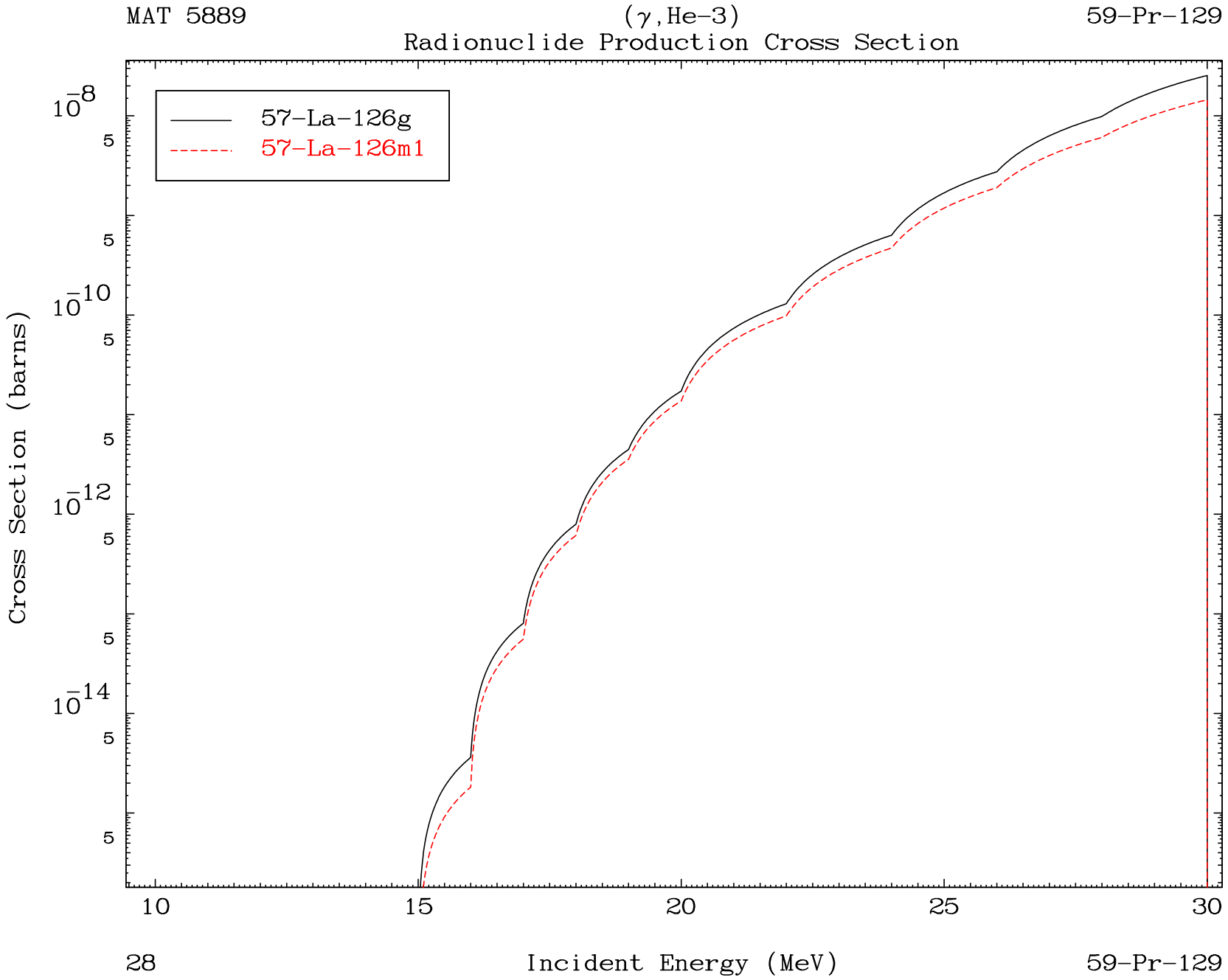

MAT 5889
(γ,remainder)
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10^2
10^3
10^4
10^5
10^6
10^7
10^8
5
59-Pr-128g
59-Pr-129g
Photon
3
4
5
6
7
8
9
10^2
2
23
Incident Energy (MeV)
59-Pr-129

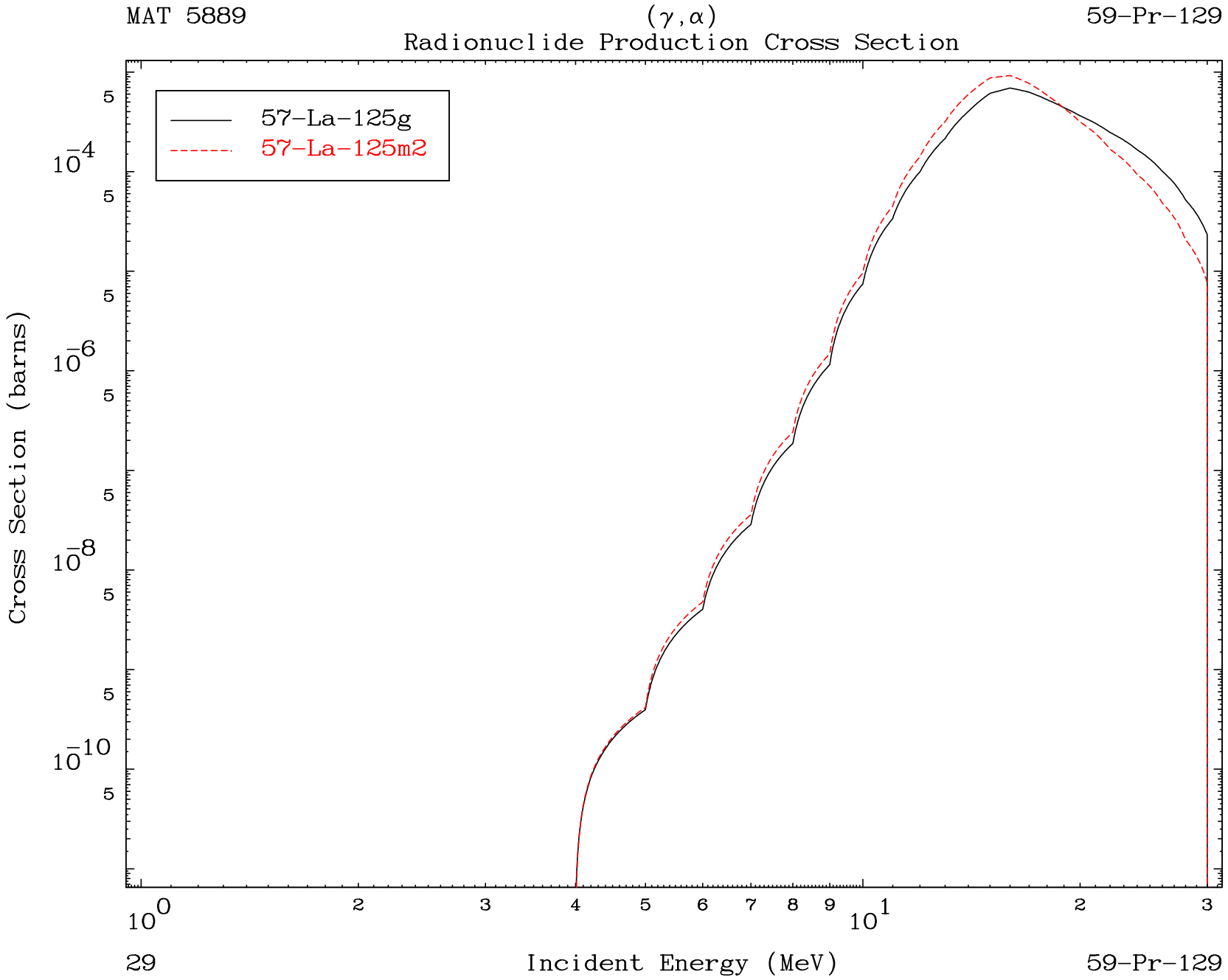

MAT 5889
(γ,n') α
59-Pr-129
Radionuclide Production Cross Section
57-La-124g
57-La-124m1
Cross Section (barns)
10^-4
5
10^-6
5
10^-8
5
10^-10
5
10^-12
10
15
20
25
30
24
Incident Energy (MeV)
59-Pr-129

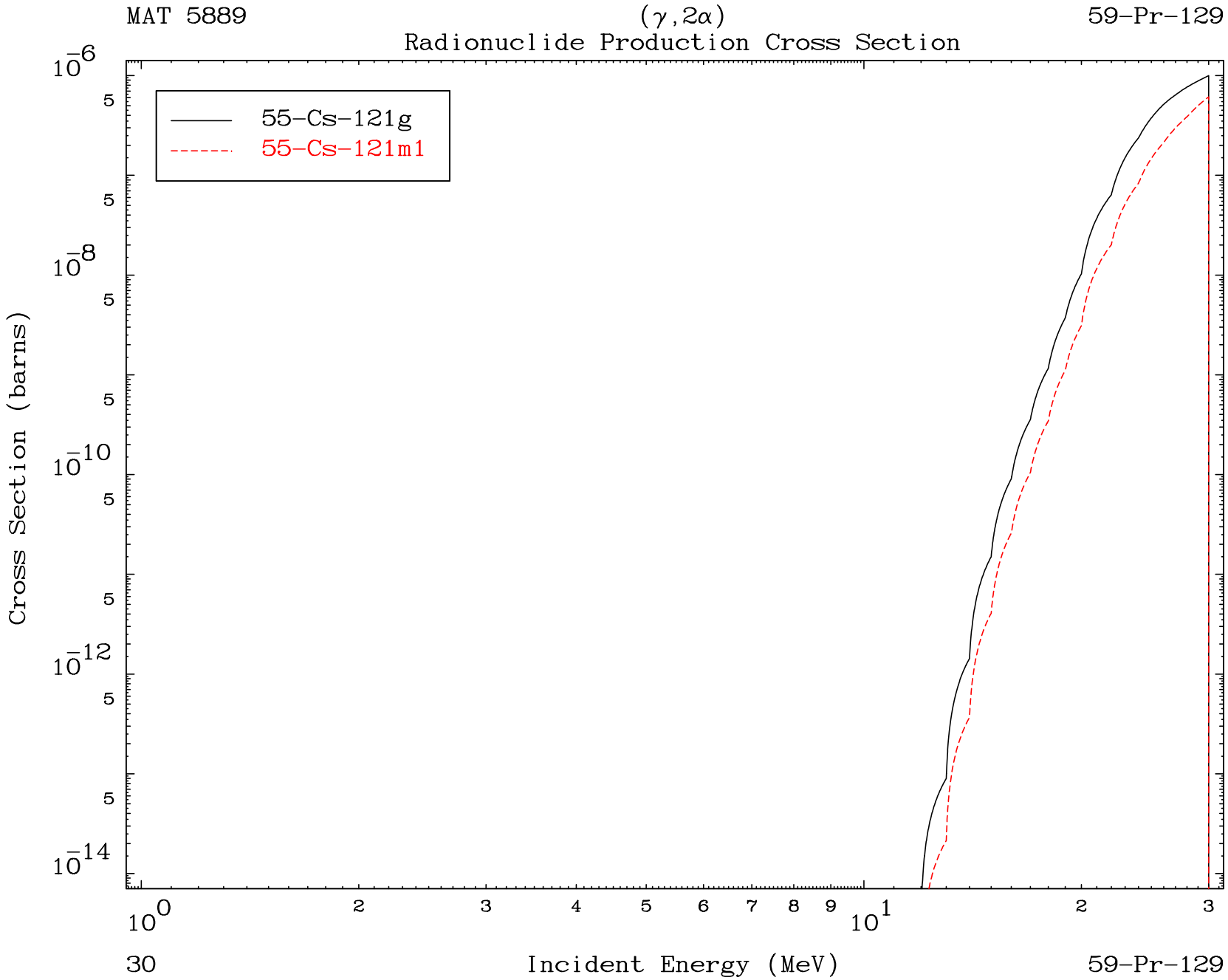

MAT 5889
(γ,n') p
59-Pr-129
Radionuclide Production Cross Section
Cross Section (barns)
10-2
5
10-4
5
10-6
5
10-8
5
10-10
15
20
25
30
58-Ce-127g
58-Ce-127m1
25
Incident Energy (MeV)
59-Pr-129

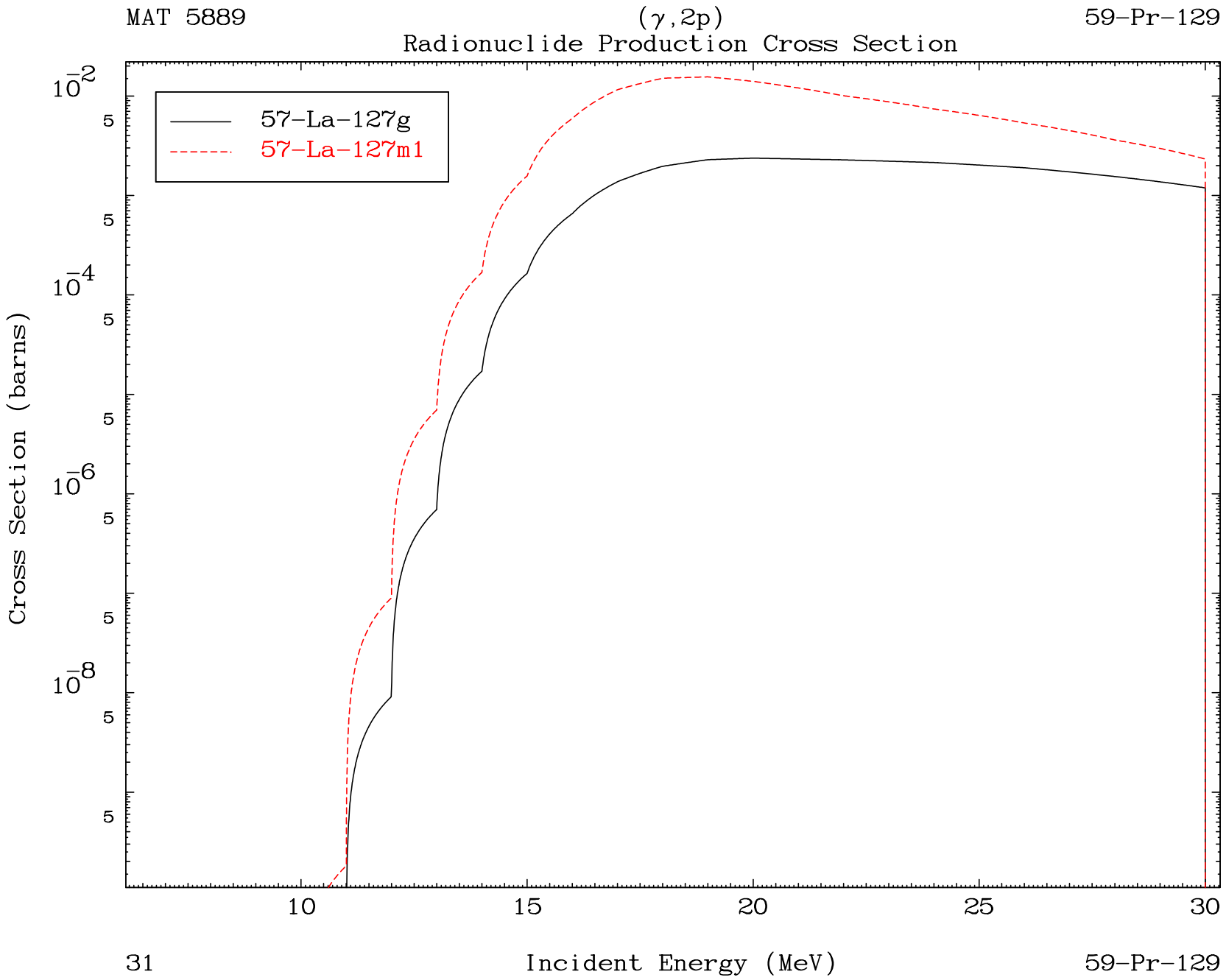

MAT 5889
(γ,2n) p
59-Pr-129
Radionuclide Production Cross Section
57-La-126g
57-La-126m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
18
20
22
24
26
28
30
26
Incident Energy (MeV)
59-Pr-129

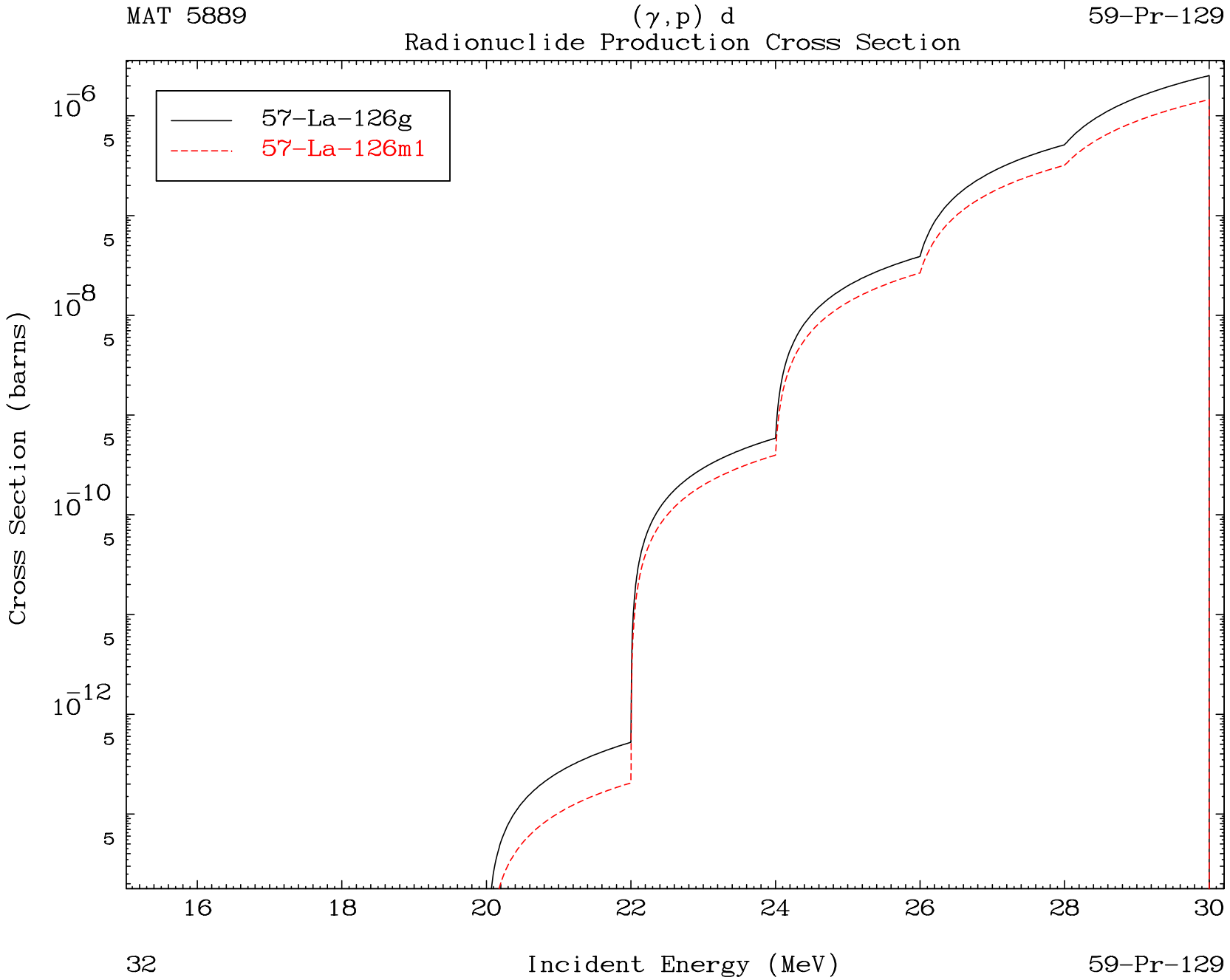

MAT 5889
(γ,d)
59-Pr-129
Radionuclide Production Cross Section
58-Ce-127g
58-Ce-127m1
Cross Section (barns)
10-6
10-8
10-10
10-12
15
20
25
30
27
Incident Energy (MeV)
59-Pr-129

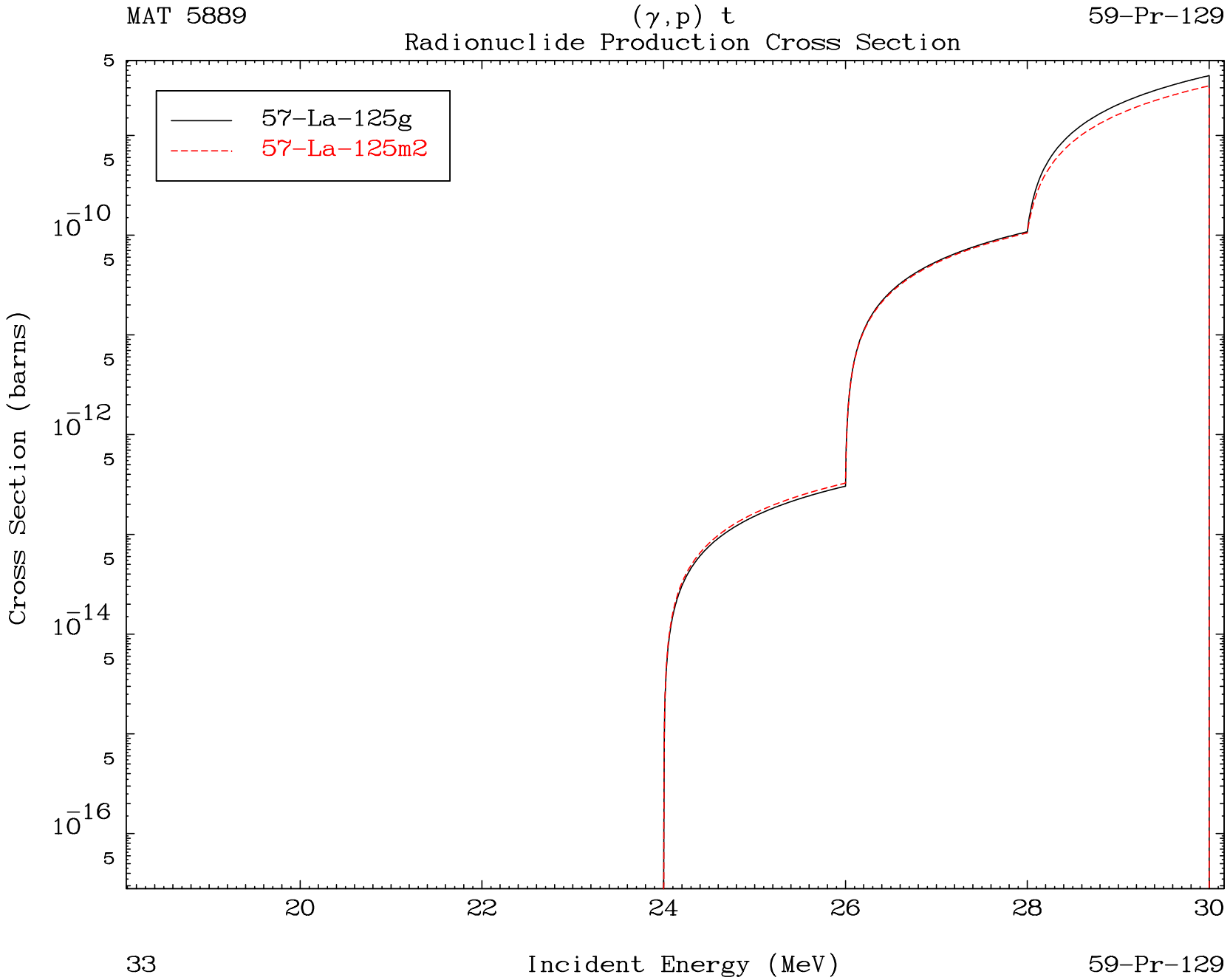

MAT 5889
(γ,He-3)
59-Pr-129
Radionuclide Production Cross Section
57-La-126g
57-La-126m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
10
15
20
25
30
28
Incident Energy (MeV)
59-Pr-129


MAT 5889
(γ,α)
59-Pr-129
Radionuclide Production Cross Section
57-La-125g
57-La-125m2
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^0
10^1
Incident Energy (MeV)
29
59-Pr-129


MAT 5889
(γ,2α)
59-Pr-129
Radionuclide Production Cross Section
55-Cs-121g
55-Cs-121m1
Cross Section (barns)
Incident Energy (MeV)
30
59-Pr-129


MAT 5889
(γ,2p)
59-Pr-129
Radionuclide Production Cross Section
57-La-127g
57-La-127m1
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
5
10
15
20
25
30
31
Incident Energy (MeV)
59-Pr-129


MAT 5889
(γ,p) d
59-Pr-129
Radionuclide Production Cross Section
57-La-126g
57-La-126m1
Cross Section (barns)
10-6
10-8
10-10
10-12
5
16
18
20
22
24
26
28
30
32
Incident Energy (MeV)
59-Pr-129


MAT 5889
(γ,p) t
59-Pr-129
Radionuclide Production Cross Section
57-La-125g
57-La-125m2
Cross Section (barns)
10^-10
10^-12
10^-14
10^-16
5
20
22
24
26
28
30
33
Incident Energy (MeV)
59-Pr-129