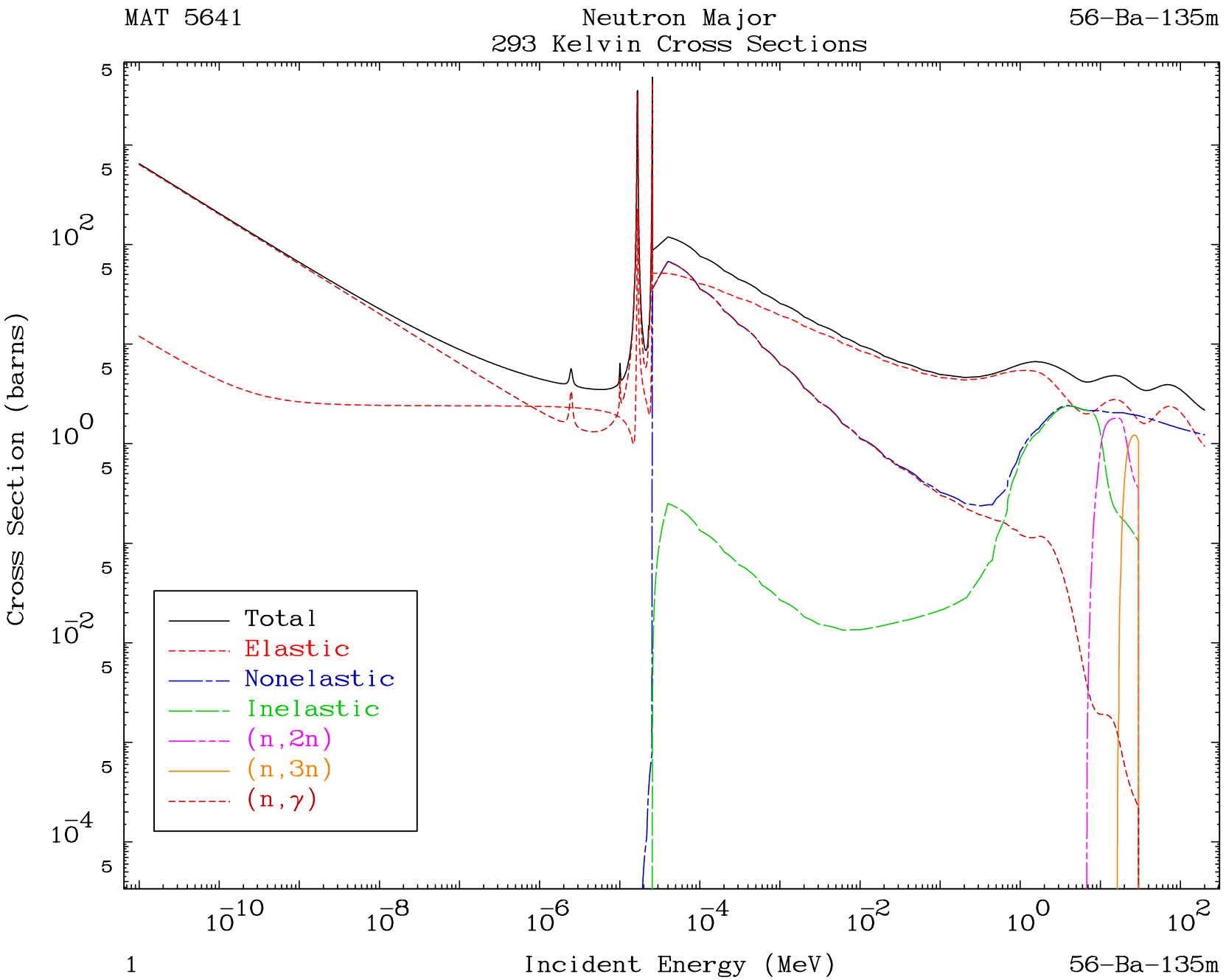
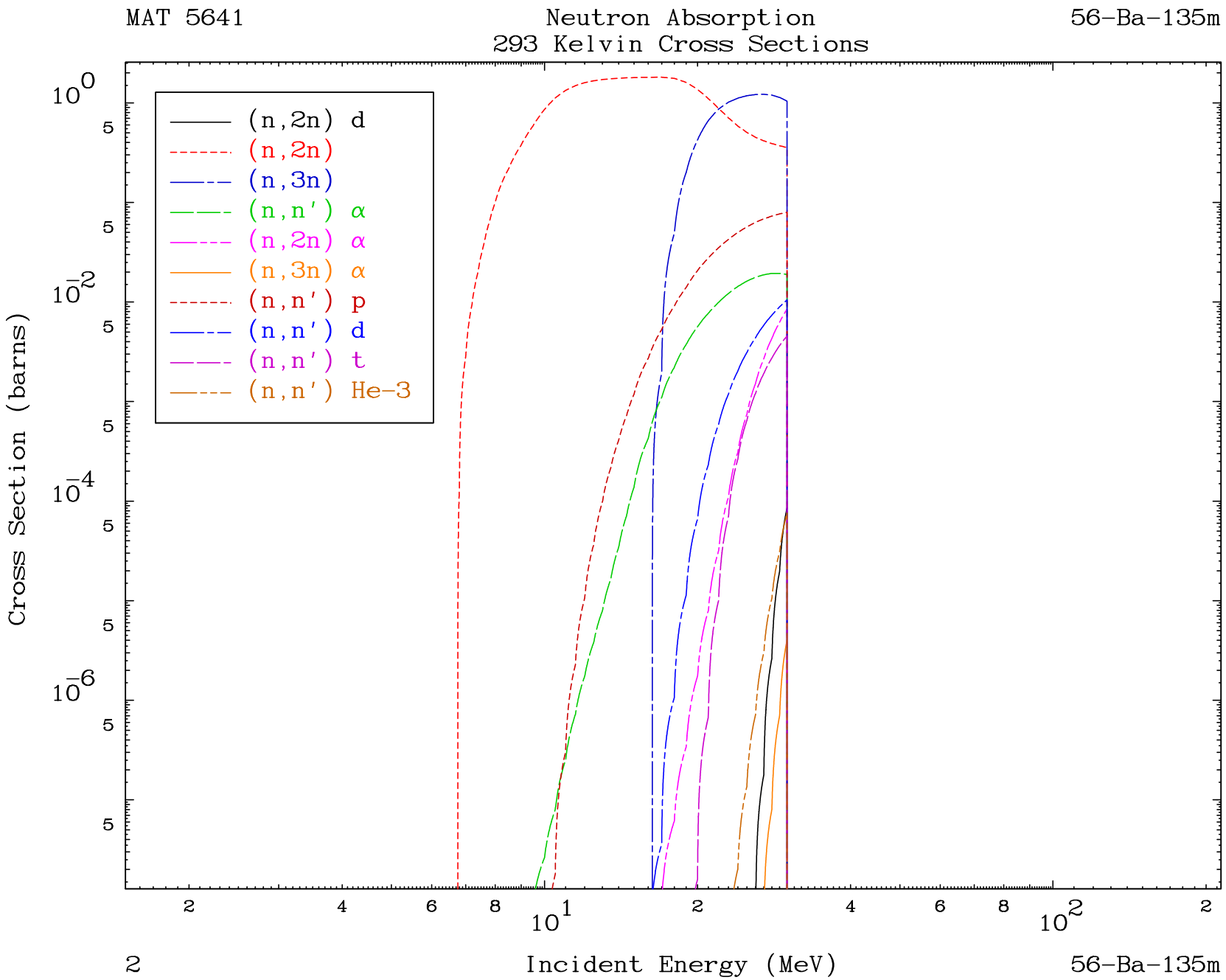
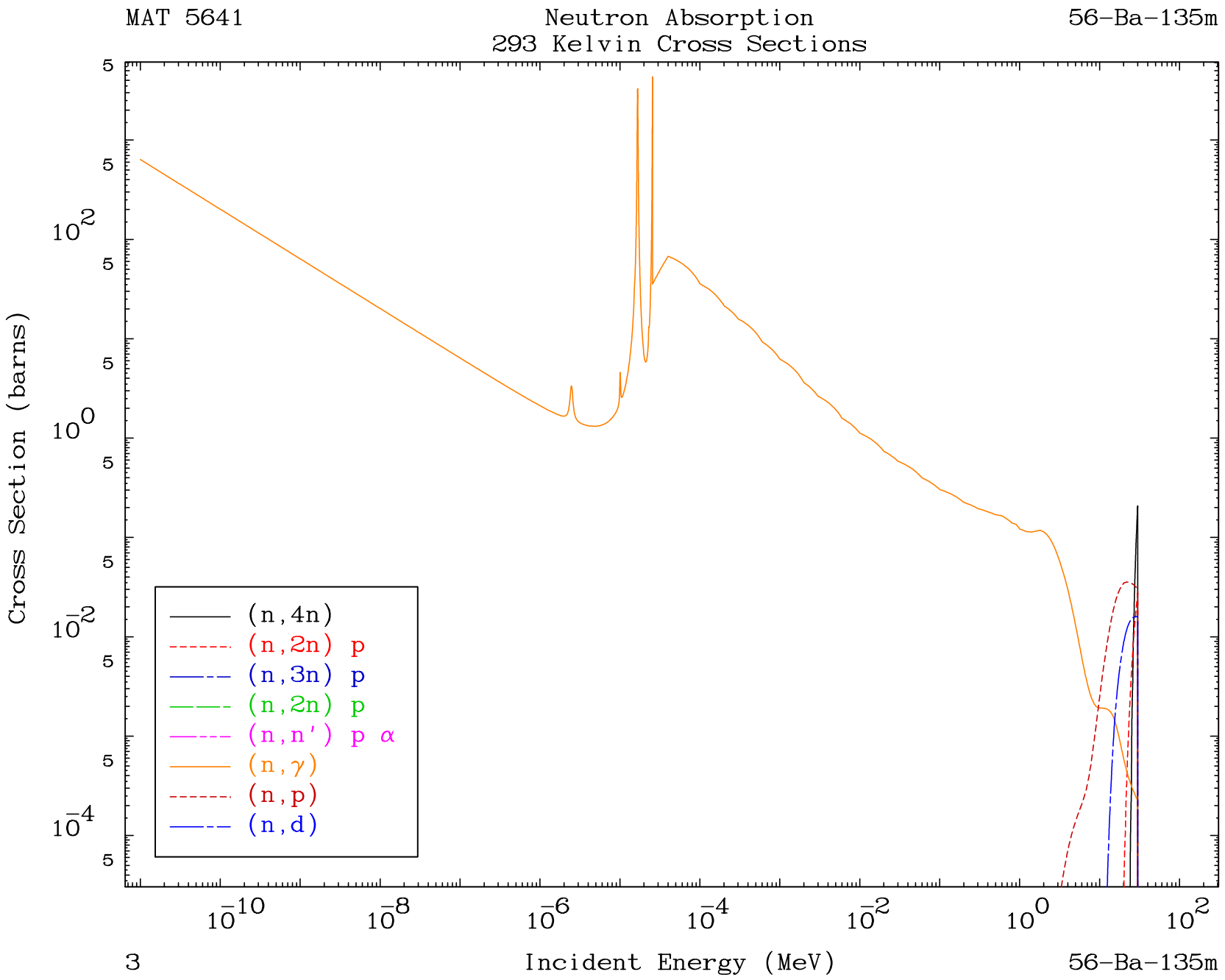
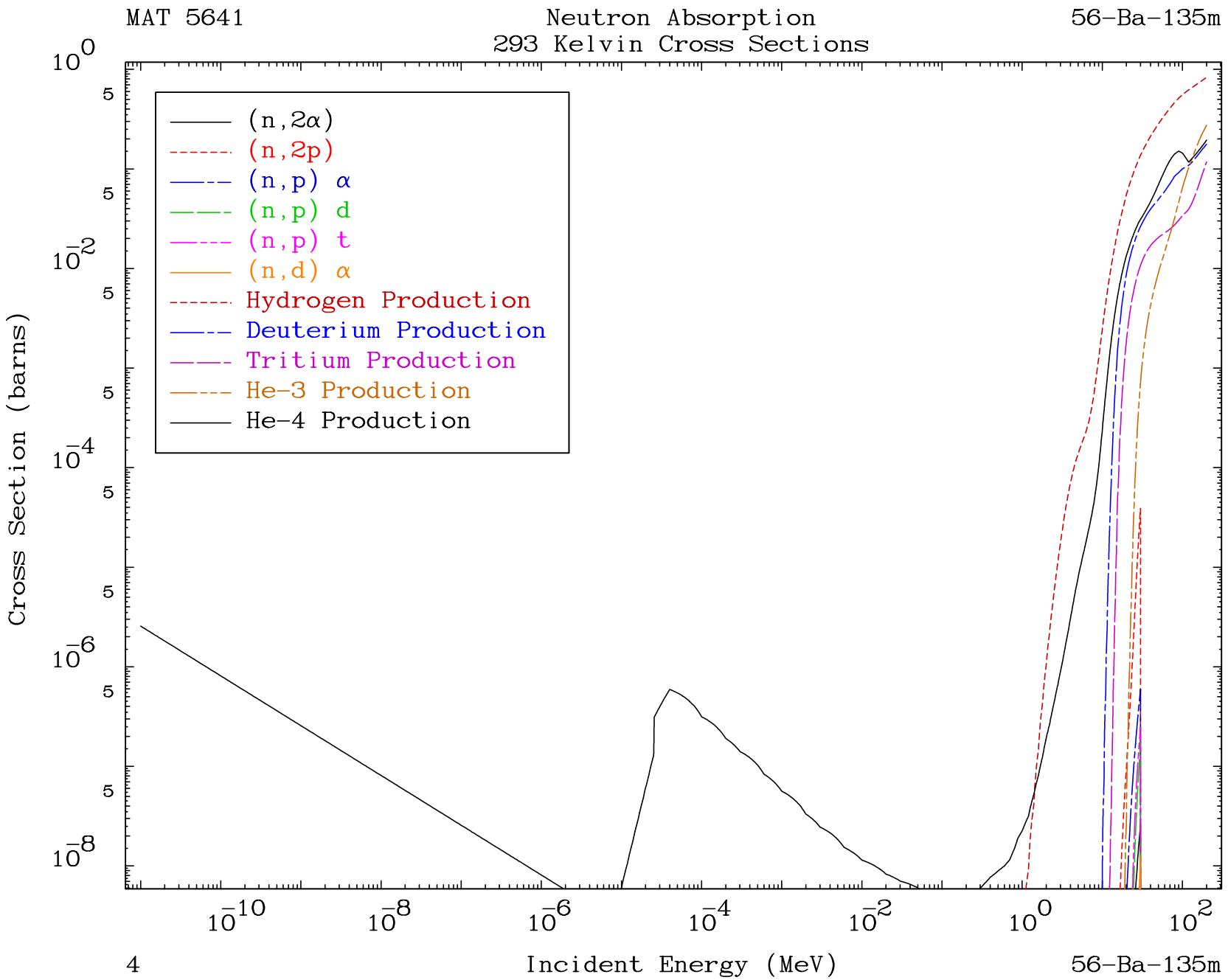
Program EVALPLOT
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

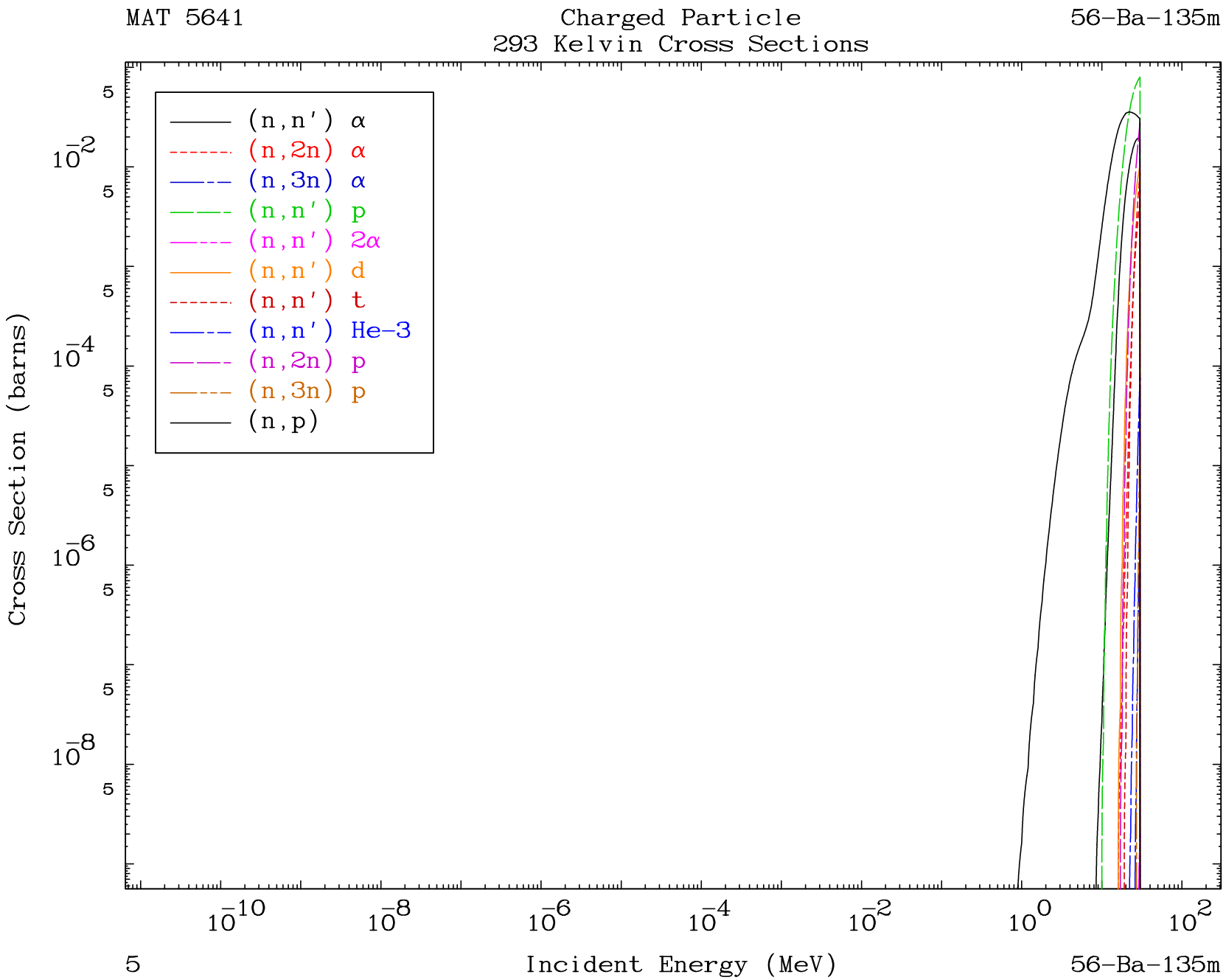
Press Mouse Button to Start

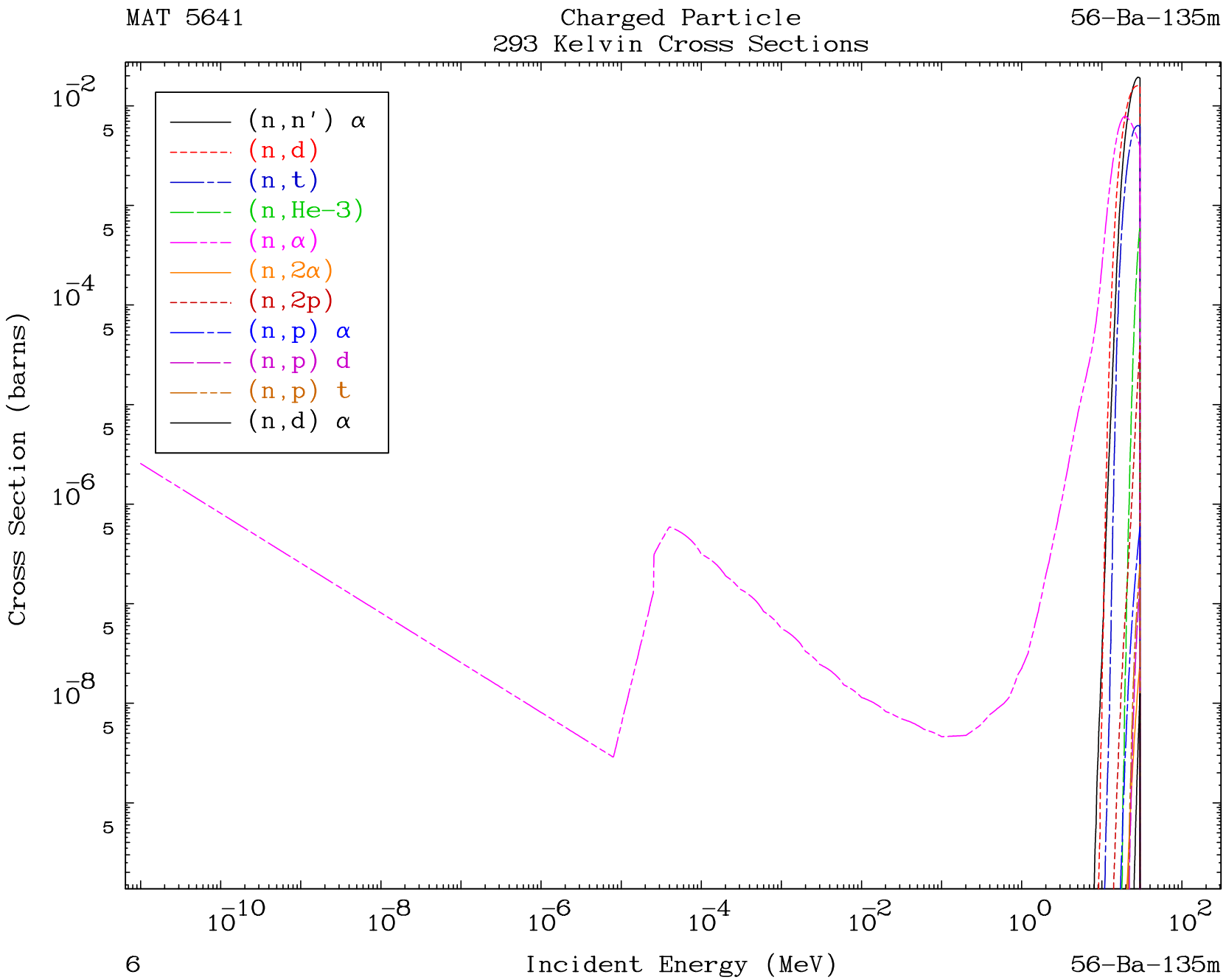

MAT 5641
Neutron Major
293 Kelvin Cross Sections
56-Ba-135m
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
1
56-Ba-135m

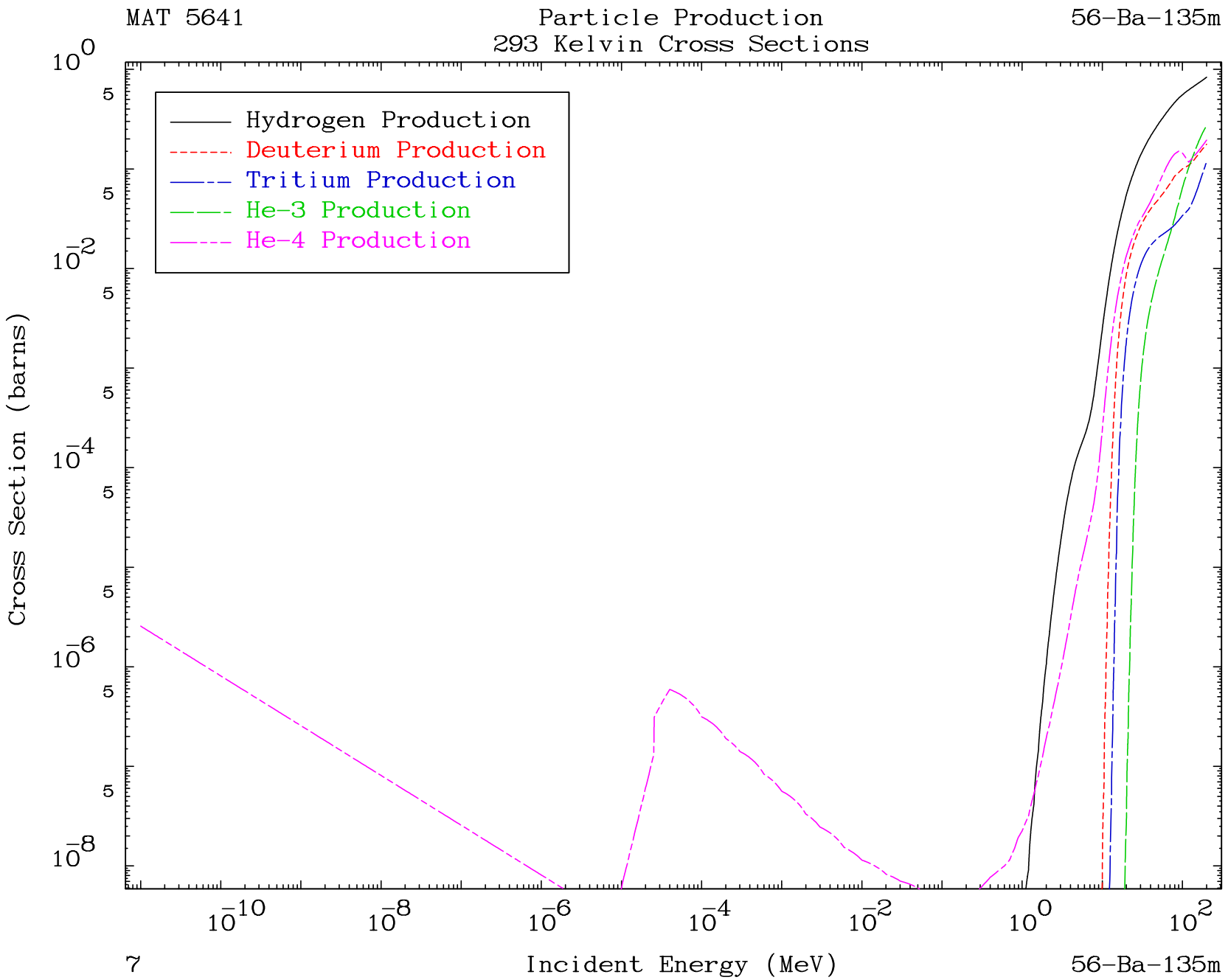

MAT 5641
Neutron Absorption
293 Kelvin Cross Sections
56-Ba-135m
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t
(n,n') He-3
Cross Section (barns)
Incident Energy (MeV)
56-Ba-135m

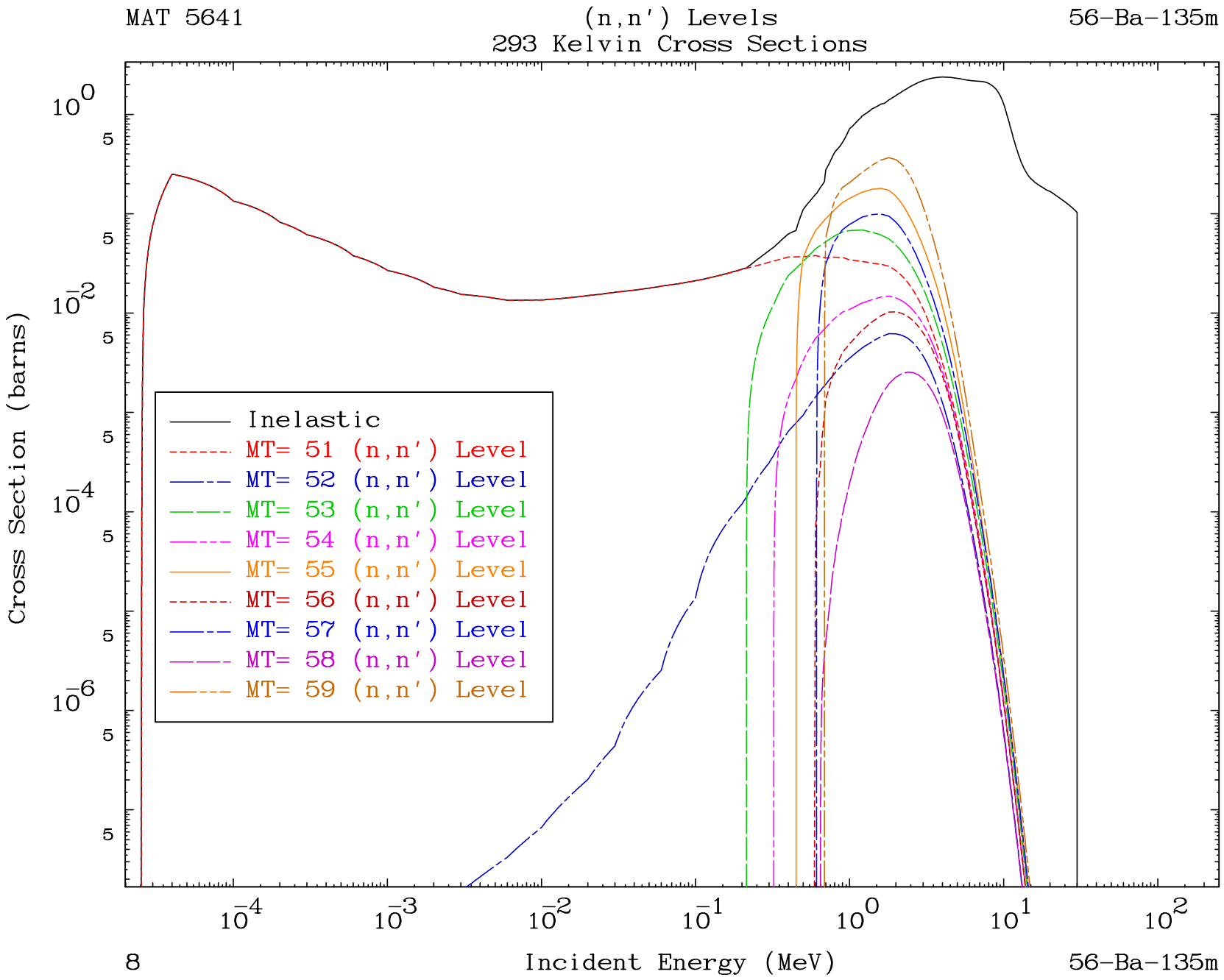

MAT 5641
Neutron Absorption
293 Kelvin Cross Sections
56-Ba-135m
Cross Section (barns)
Incident Energy (MeV)
3
56-Ba-135m
(n,4n)
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
(n,γ)
(n,p)
(n,d)

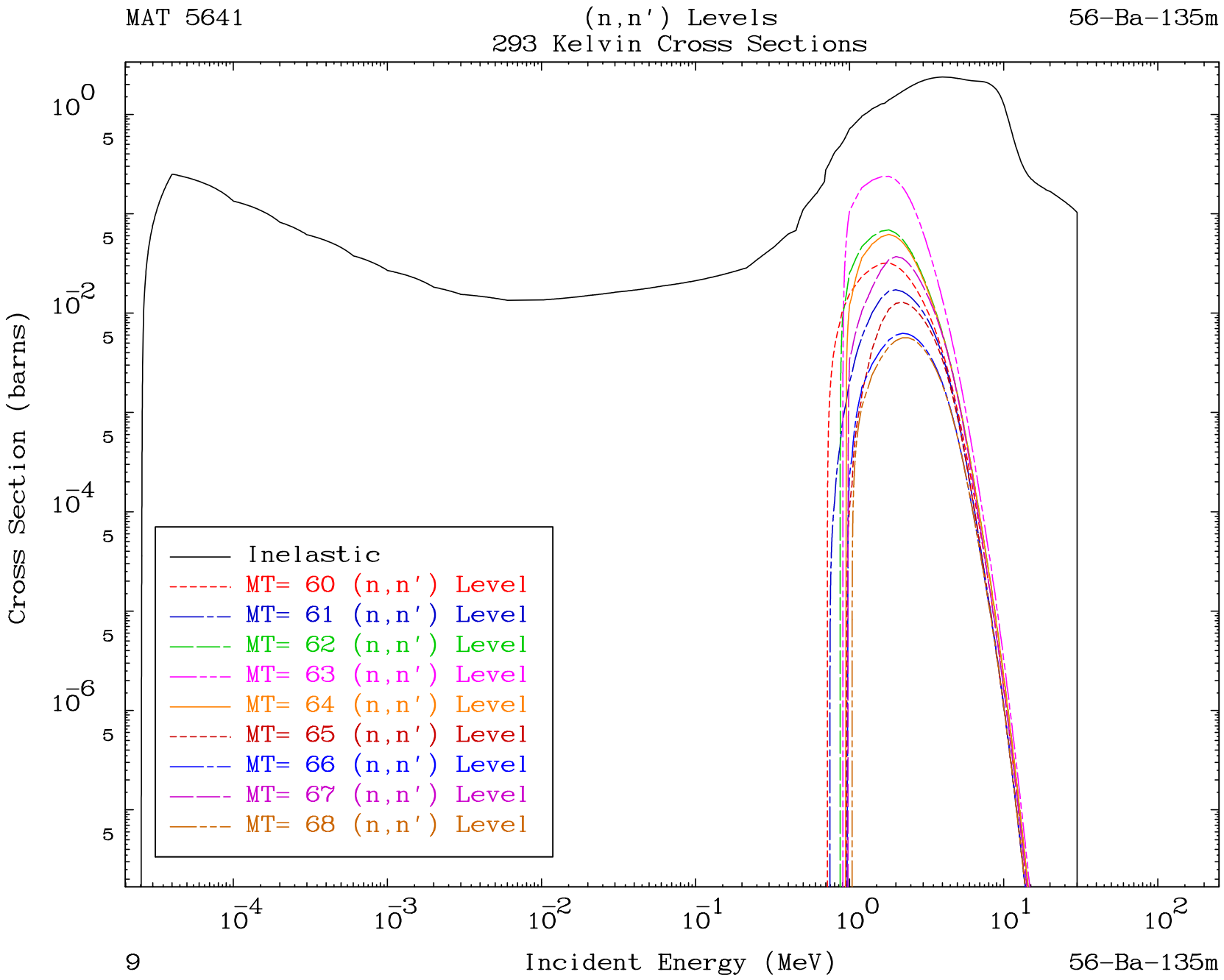

MAT 5641
Neutron Absorption
293 Kelvin Cross Sections
56-Ba-135m
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
56-Ba-135m
4

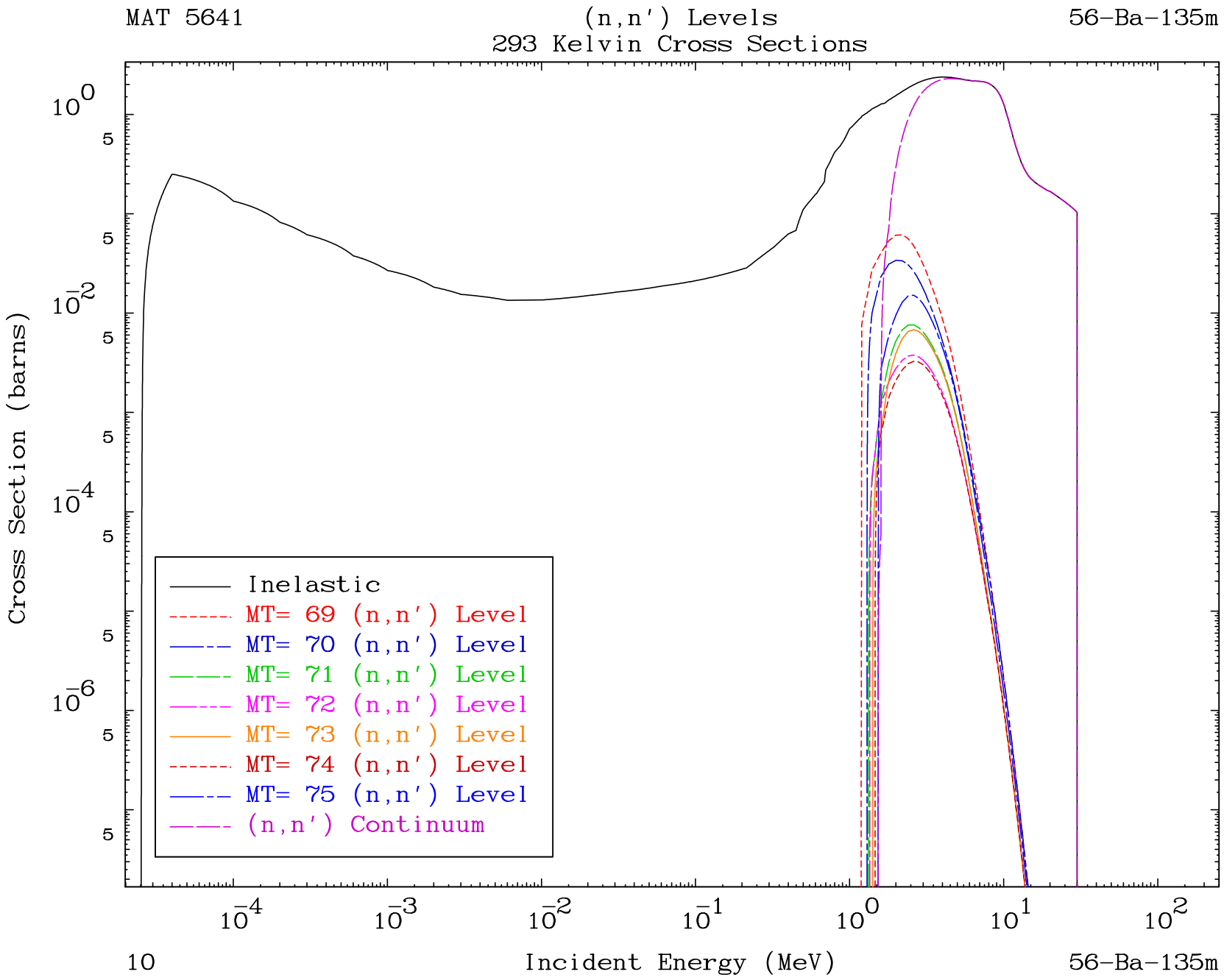

MAT 5641
Charged Particle
56-Ba-135m
293 Kelvin Cross Sections
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
Cross Section (barns)
Incident Energy (MeV)
56-Ba-135m

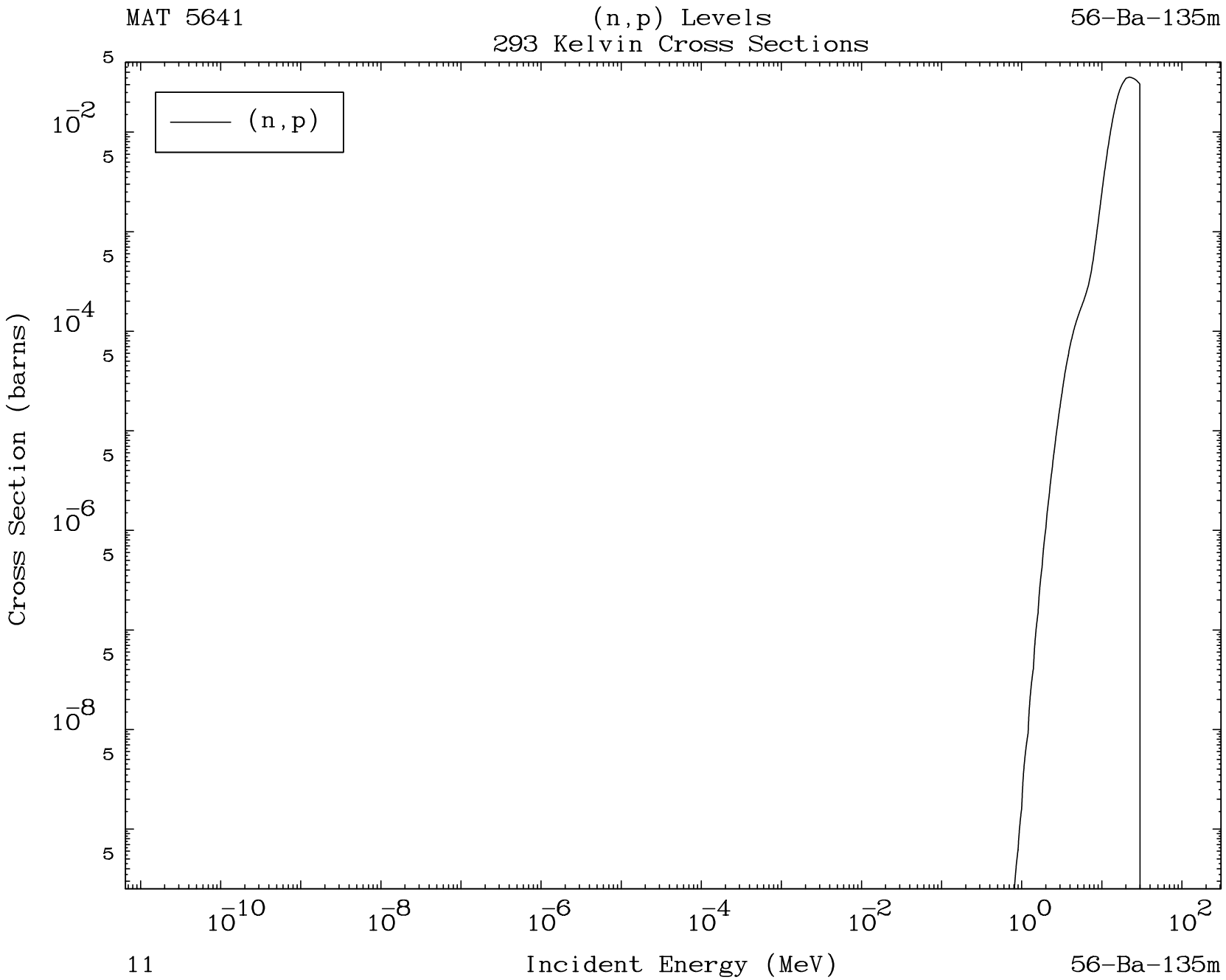

MAT 5641
Charged Particle
293 Kelvin Cross Sections
56-Ba-135m
(n,n') α
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
Cross Section (barns)
Incident Energy (MeV)
6
56-Ba-135m

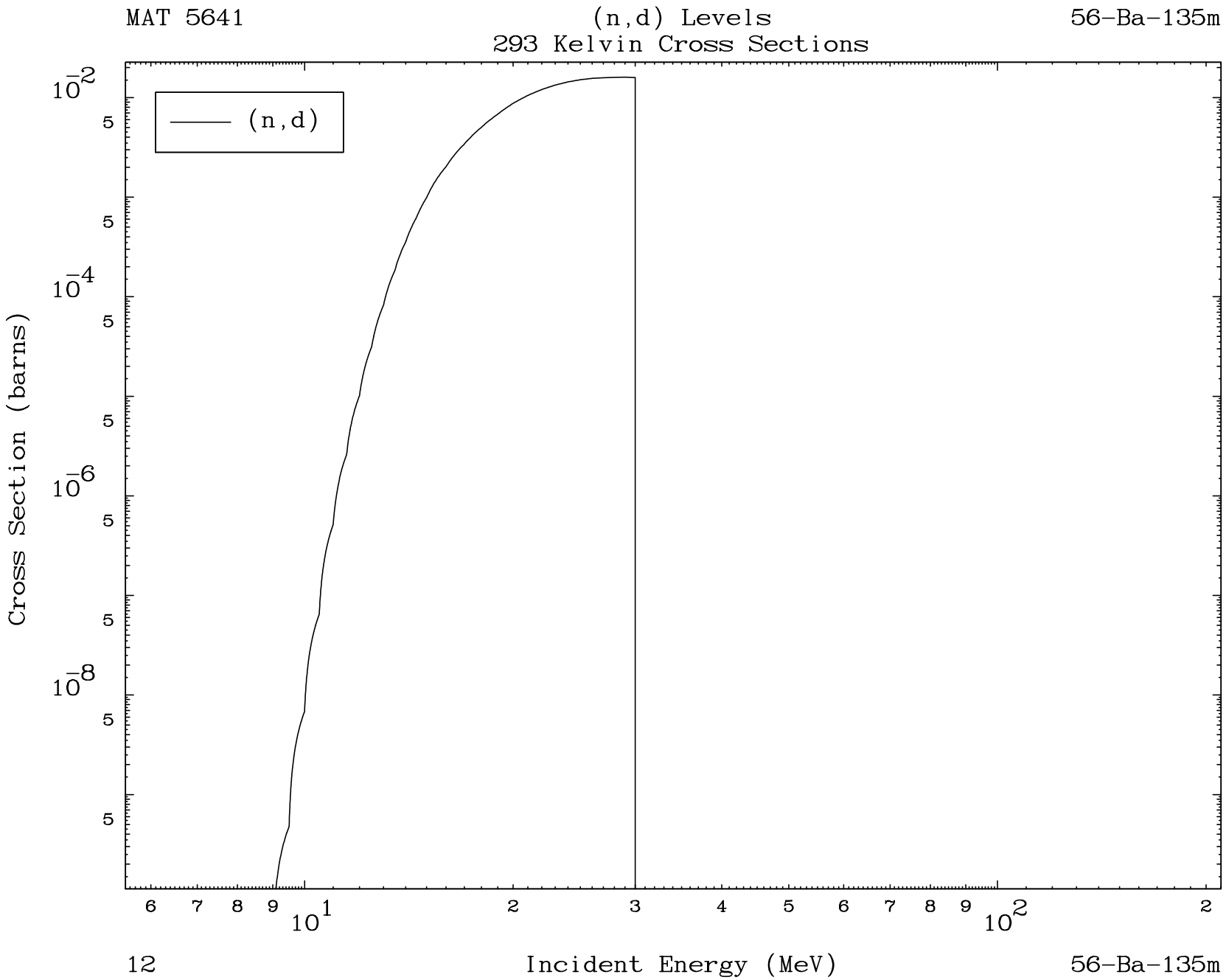

MAT 5641
Particle Production
293 Kelvin Cross Sections
56-Ba-135m
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
56-Ba-135m
7

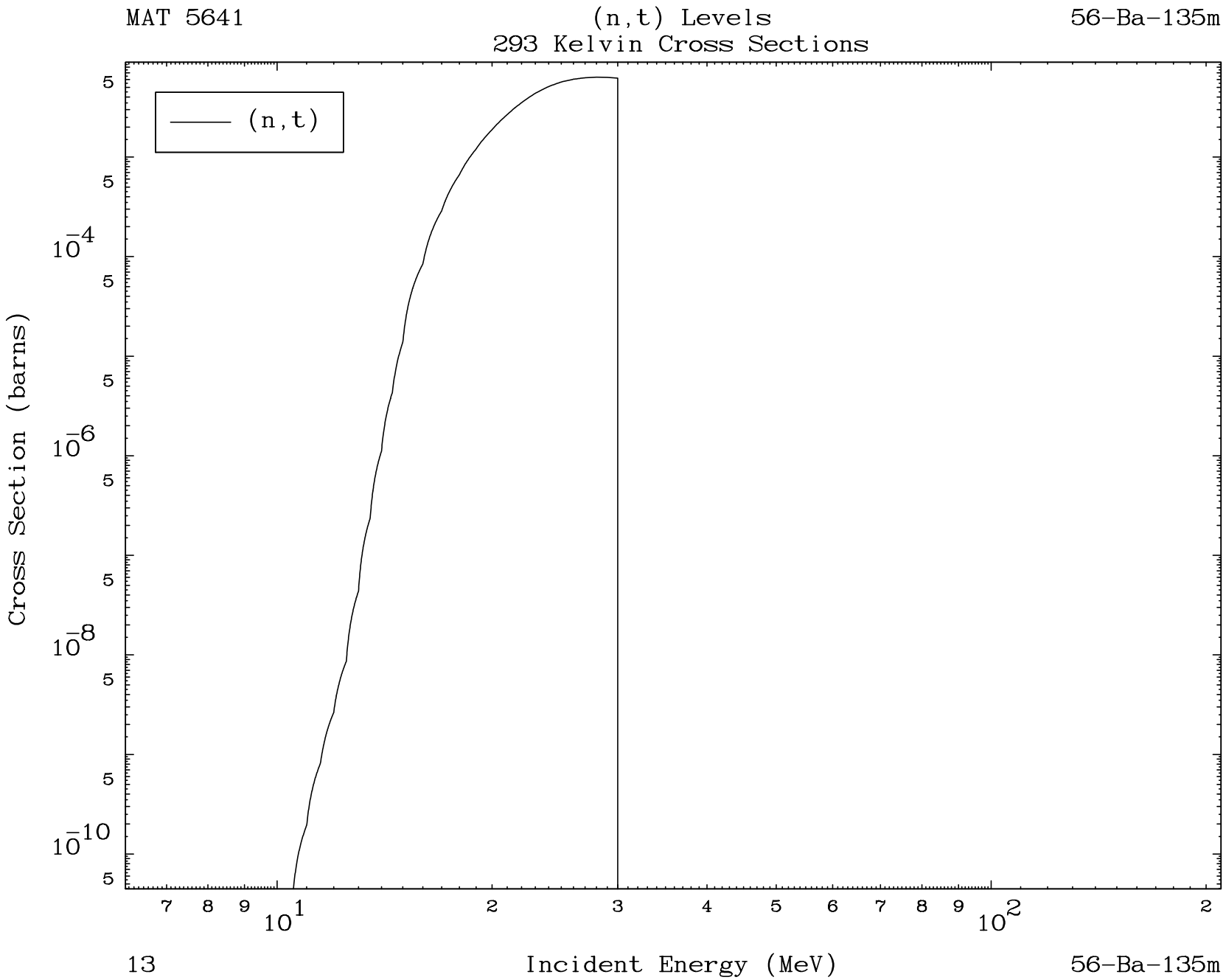

MAT 5641
(n,n') Levels
293 Kelvin Cross Sections
56-Ba-135m
Cross Section (barns)
Incident Energy (MeV)
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
8
56-Ba-135m

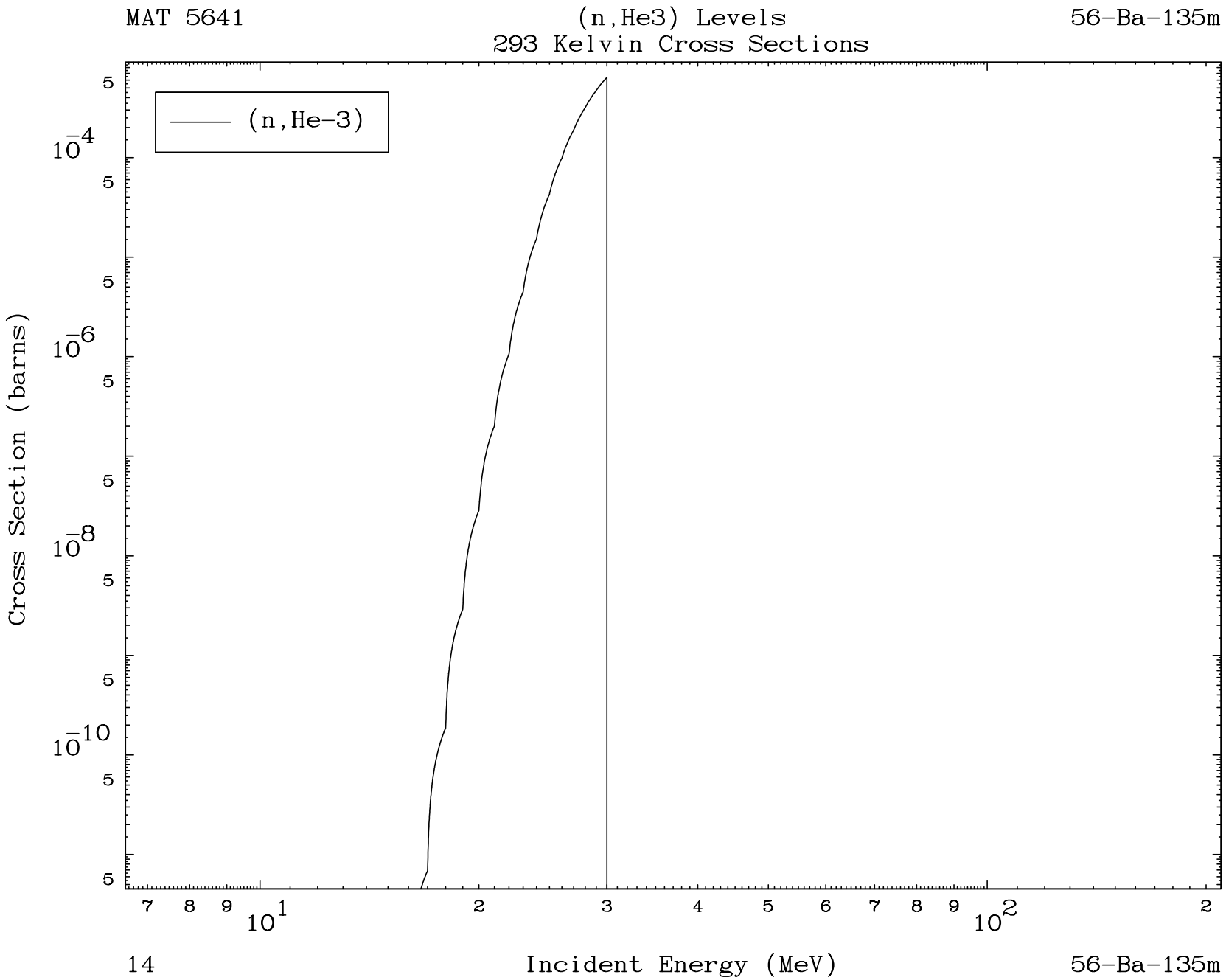

MAT 5641
(n,n') Levels
293 Kelvin Cross Sections
56-Ba-135m
Cross Section (barns)
Incident Energy (MeV)
Inelastic
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
MT= 67 (n,n') Level
MT= 68 (n,n') Level
9
56-Ba-135m

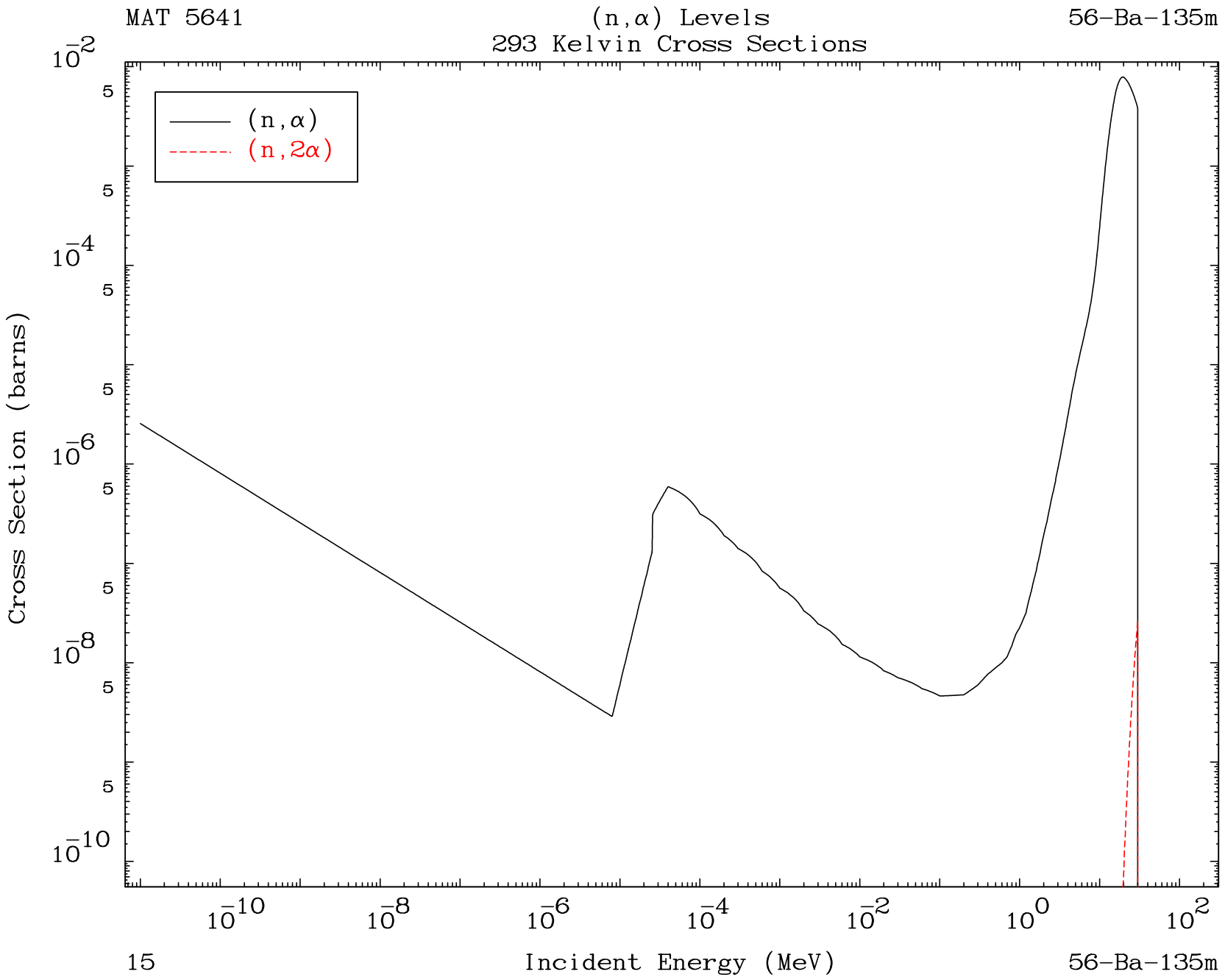

MAT 5641
(n,n') Levels
293 Kelvin Cross Sections
56-Ba-135m
Cross Section (barns)
Incident Energy (MeV)
Inelastic
MT= 69 (n,n') Level
MT= 70 (n,n') Level
MT= 71 (n,n') Level
MT= 72 (n,n') Level
MT= 73 (n,n') Level
MT= 74 (n,n') Level
MT= 75 (n,n') Level
(n,n') Continuum
10
56-Ba-135m

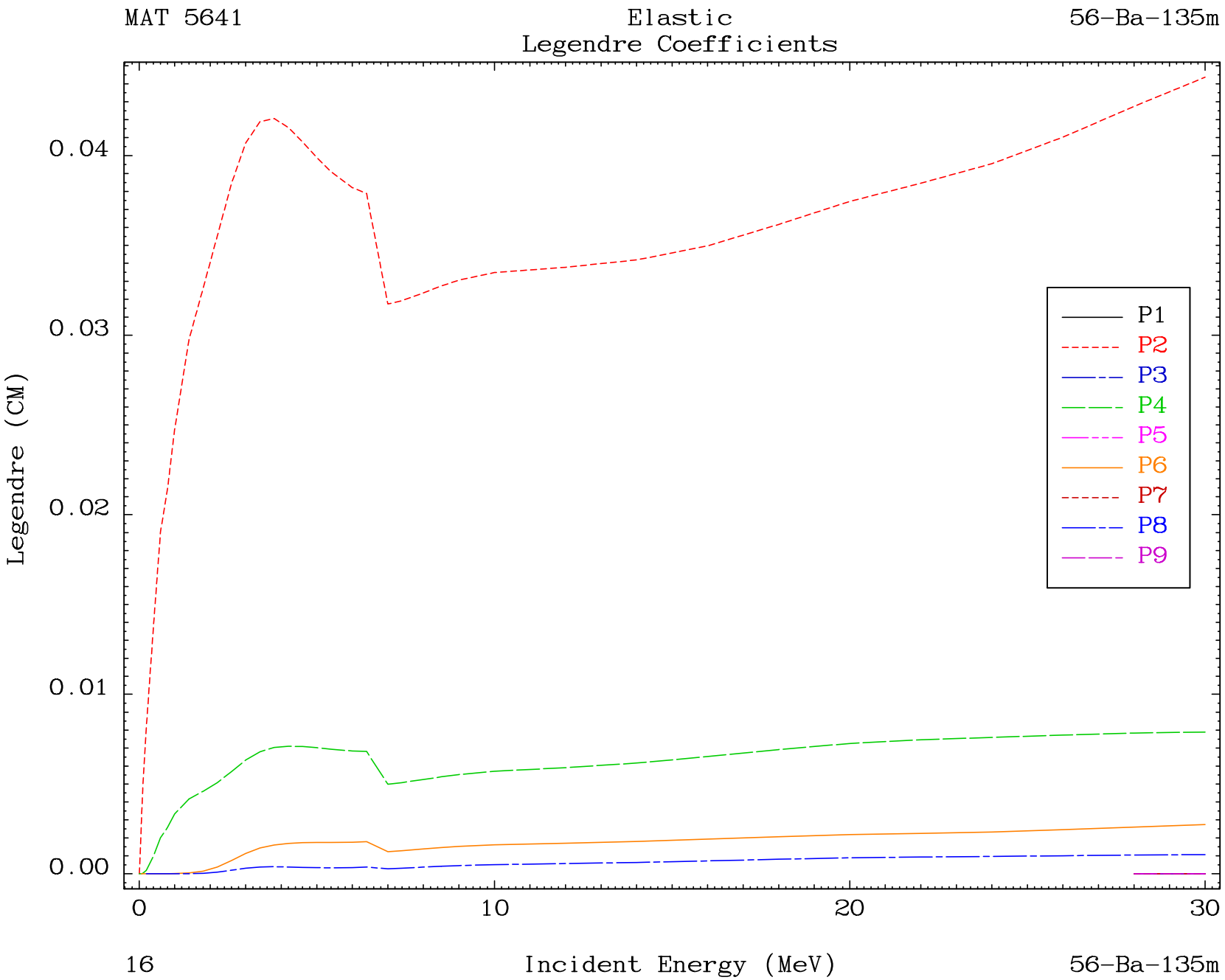

MAT 5641
(n,p) Levels
56-Ba-135m
293 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
11
56-Ba-135m

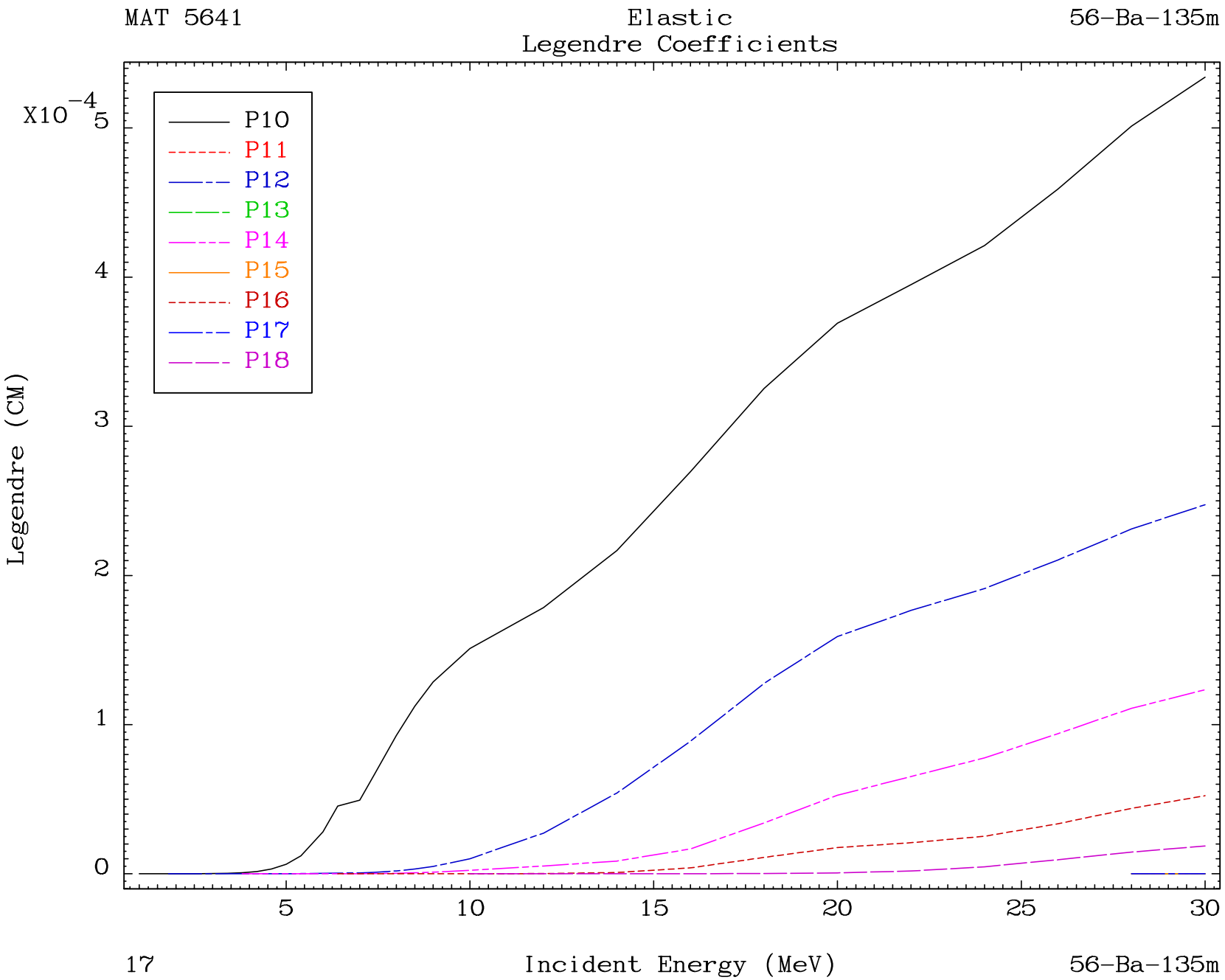

MAT 5641
(n,d) Levels
56-Ba-135m
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
12
56-Ba-135m

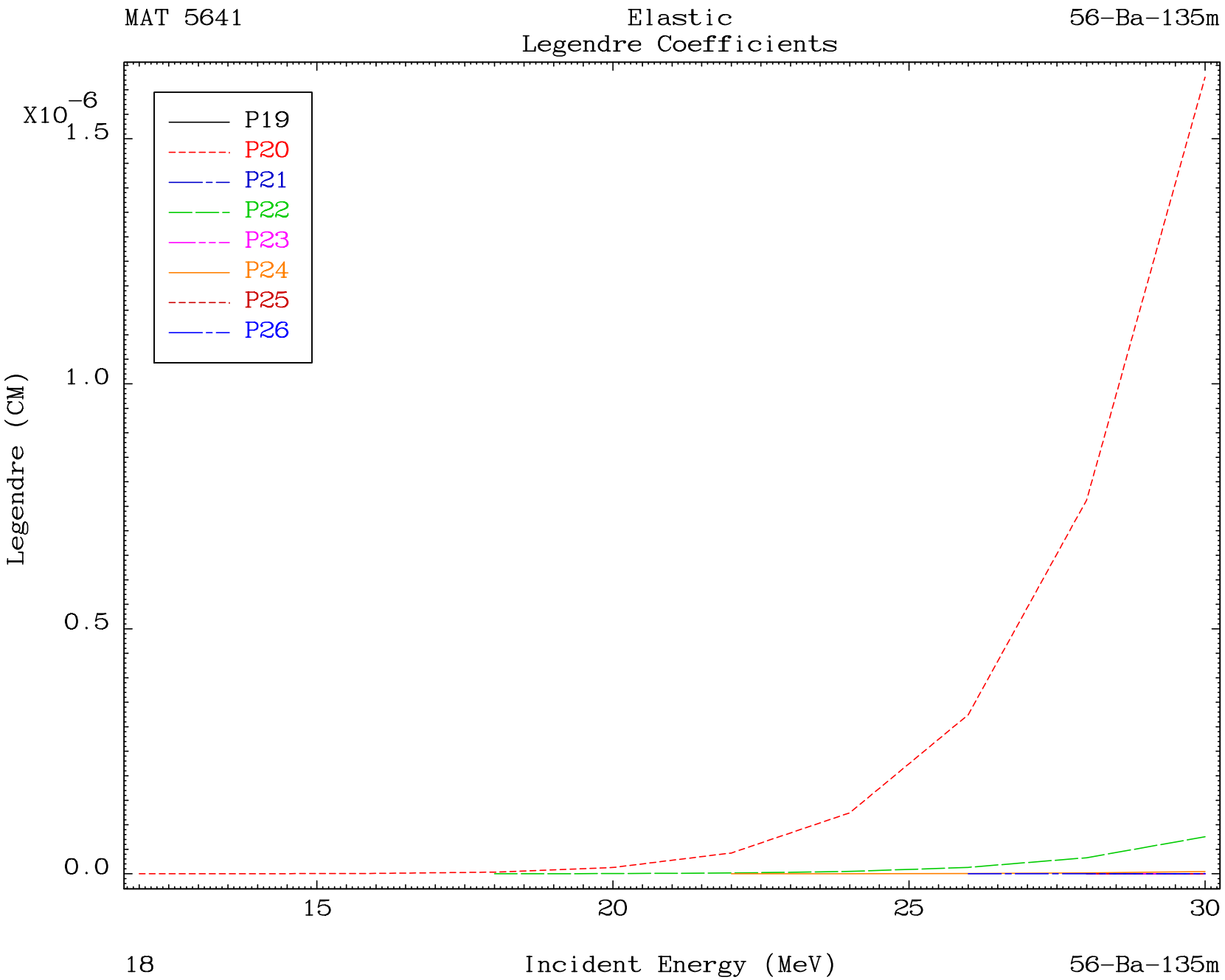

MAT 5641
(n,t) Levels
56-Ba-135m
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
13
56-Ba-135m

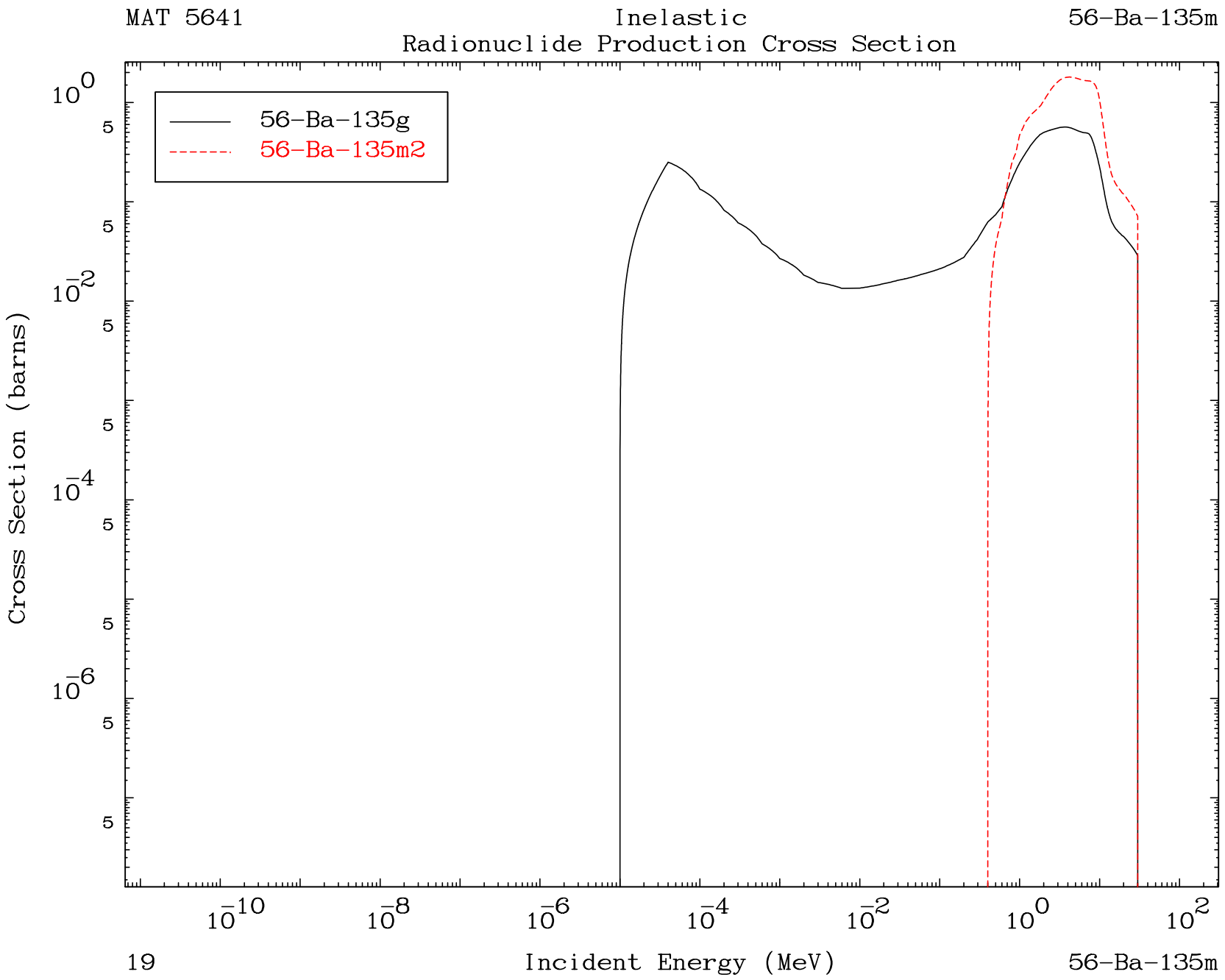

MAT 5641
(n,He3) Levels
56-Ba-135m
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10-4
10-6
10-8
10-10
Incident Energy (MeV)
14
56-Ba-135m

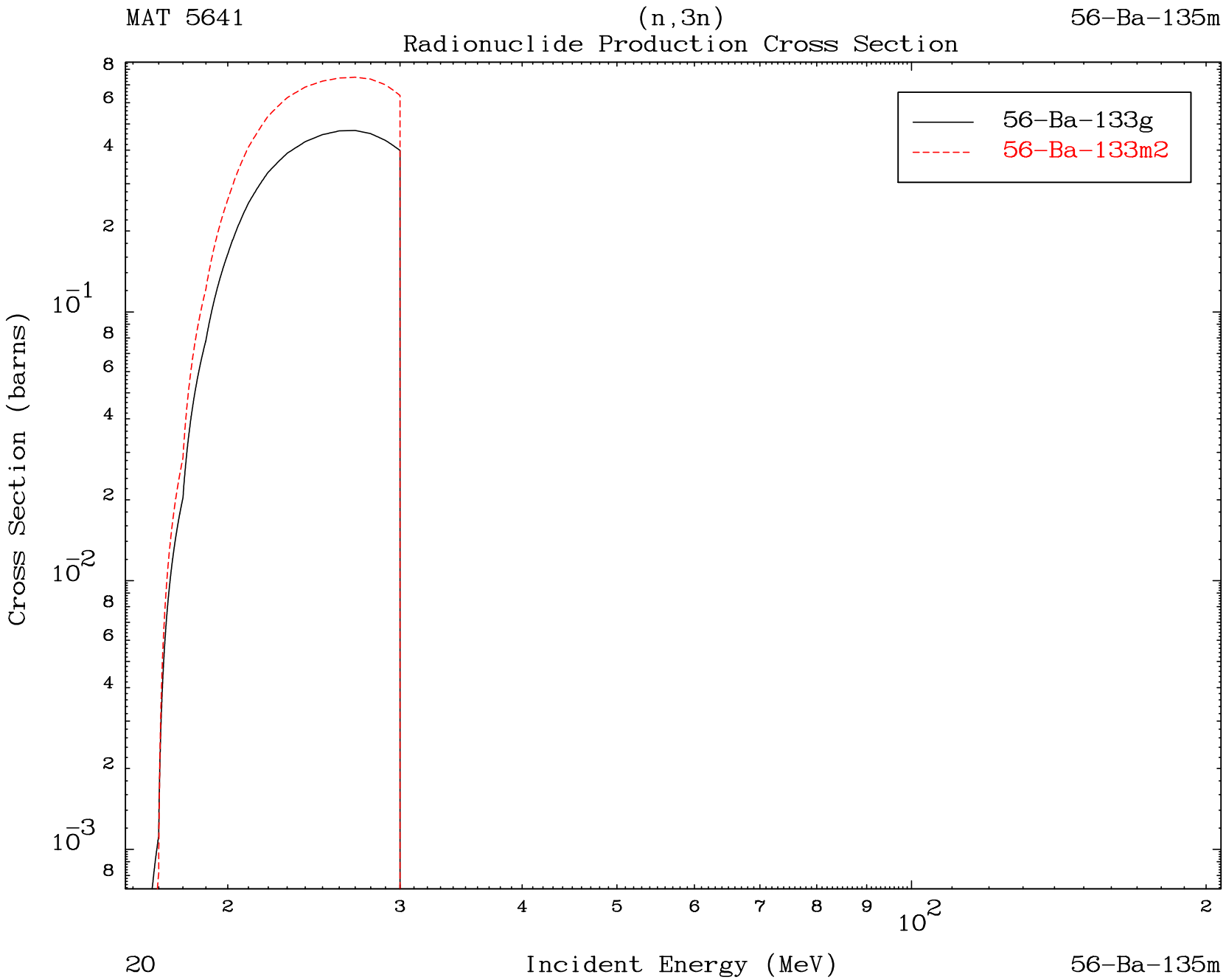

MAT 5641
(n,α) Levels
56-Ba-135m
293 Kelvin Cross Sections
(n,α)
(n,2α)
Cross Section (barns)
Incident Energy (MeV)
15
56-Ba-135m

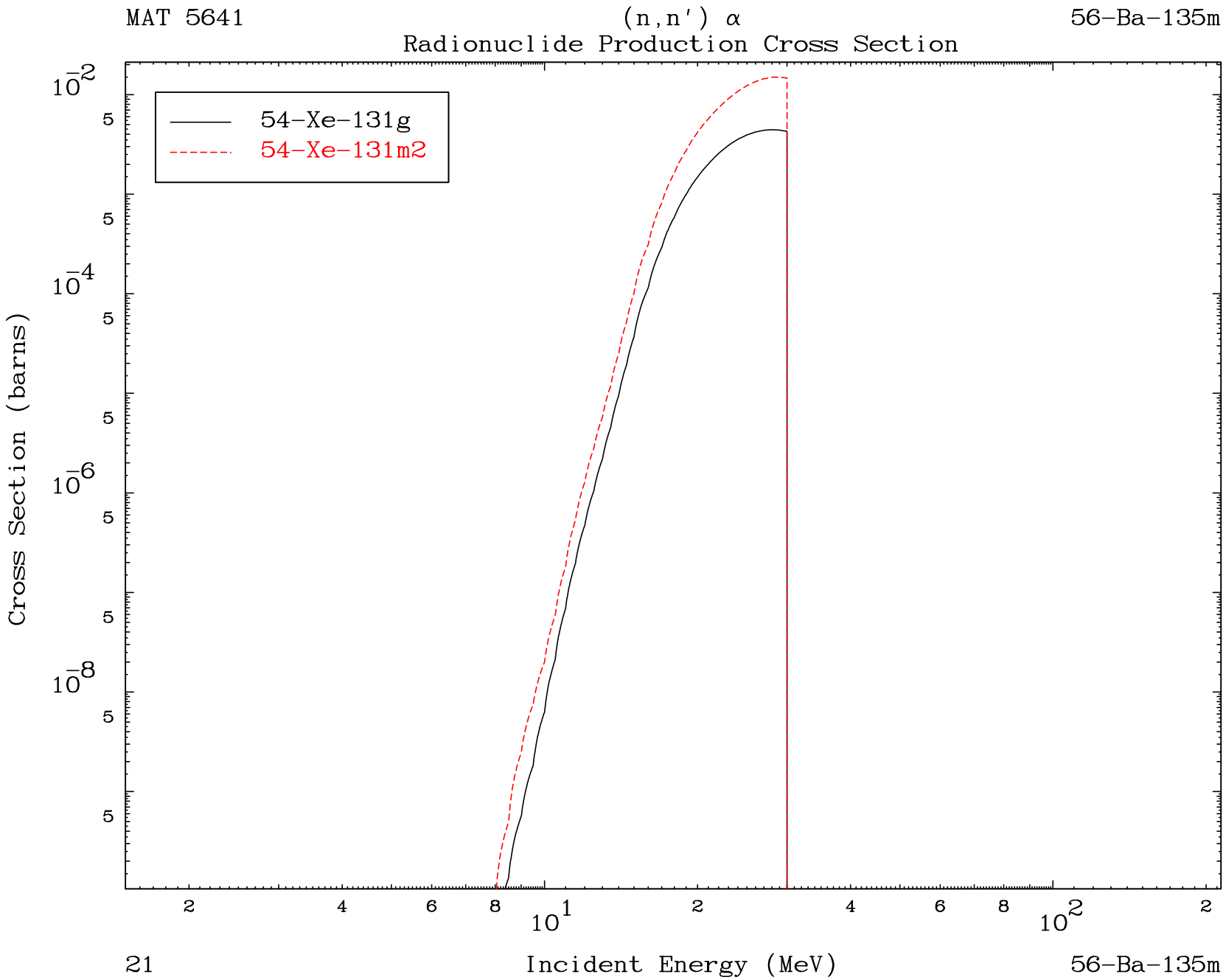

MAT 5641
Elastic
Legendre Coefficients
56-Ba-135m
0.04
0.03
0.02
0.01
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
10
20
30
16
Incident Energy (MeV)
56-Ba-135m

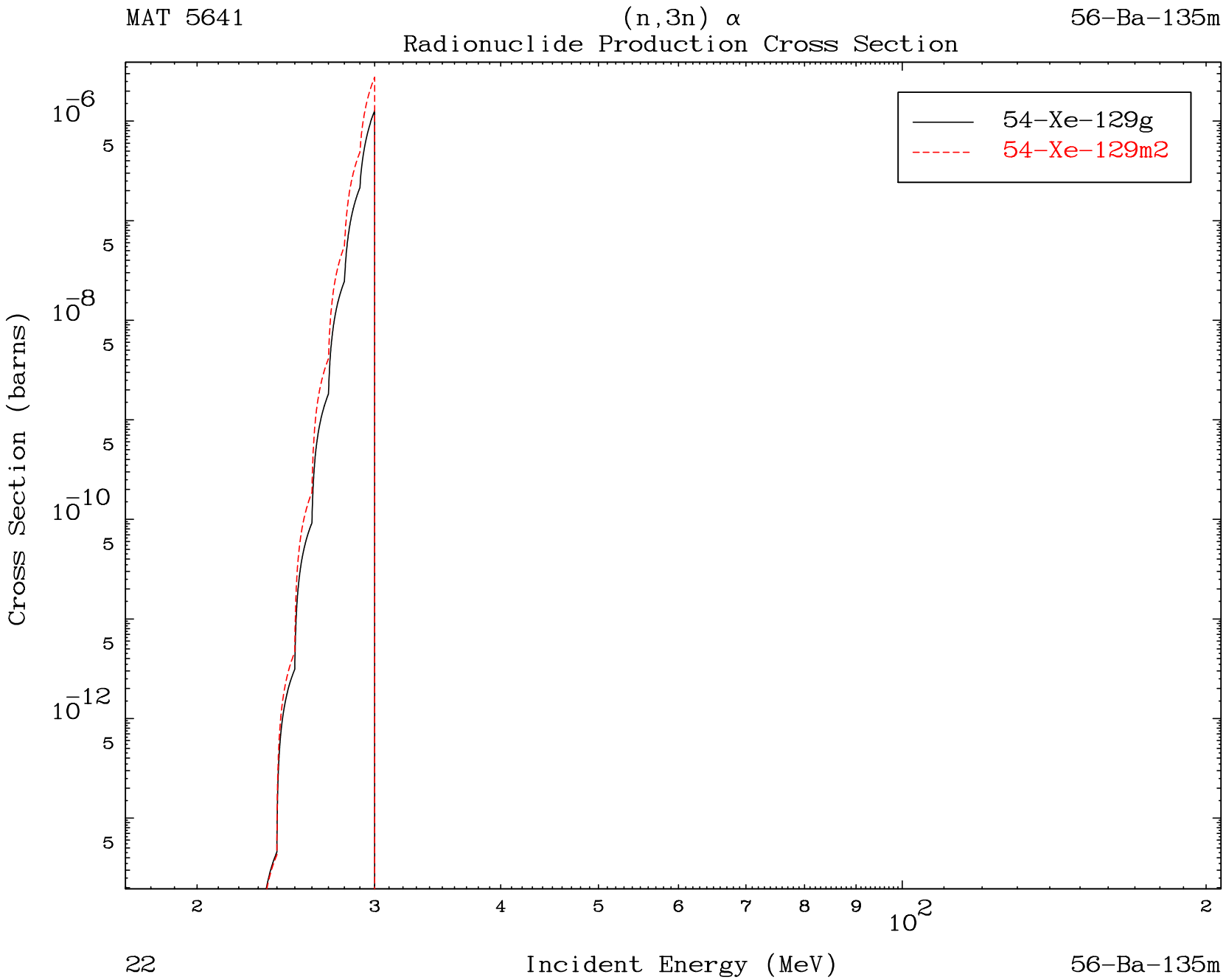

MAT 5641
Elastic
Legendre Coefficients
56-Ba-135m
X10^-4
5
4
3
2
1
0
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
5
10
15
20
25
30
17
Incident Energy (MeV)
56-Ba-135m

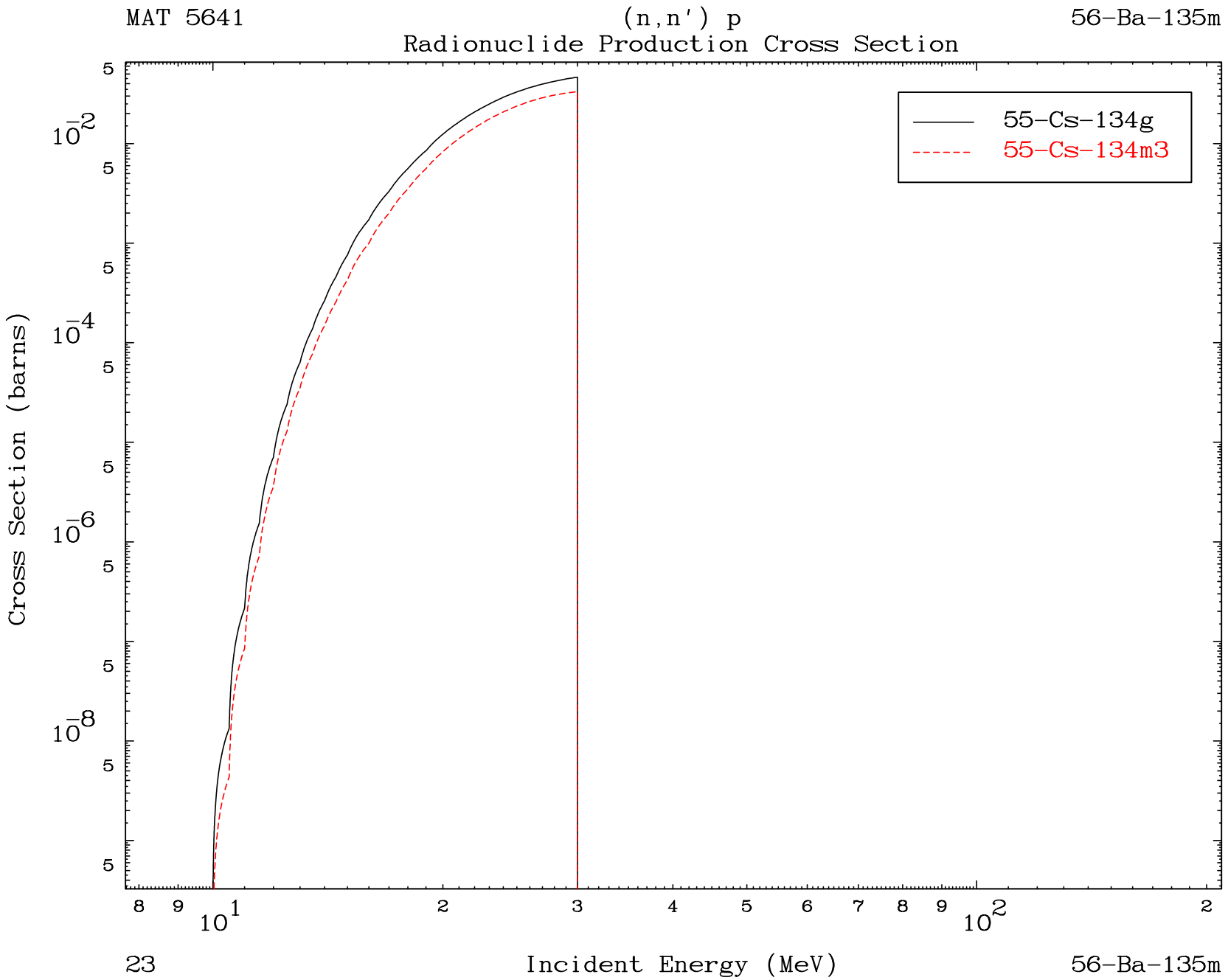

MAT 5641
Elastic
Legendre Coefficients
56-Ba-135m
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
15
20
25
30
18
Incident Energy (MeV)
56-Ba-135m

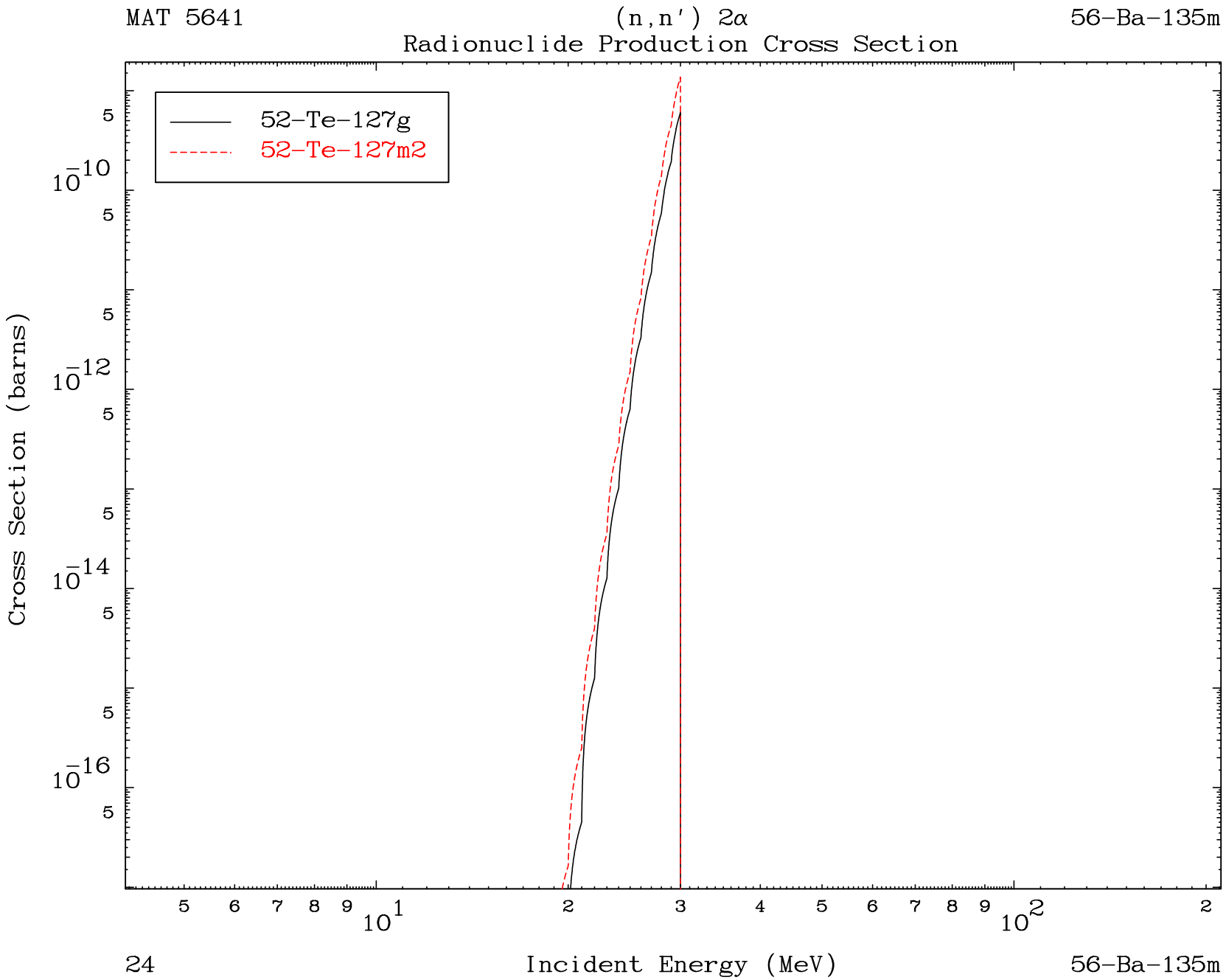

MAT 5641
Inelastic
56-Ba-135m
Radionuclide Production Cross Section
56-Ba-135g
56-Ba-135m2
Cross Section (barns)
Incident Energy (MeV)
19
56-Ba-135m

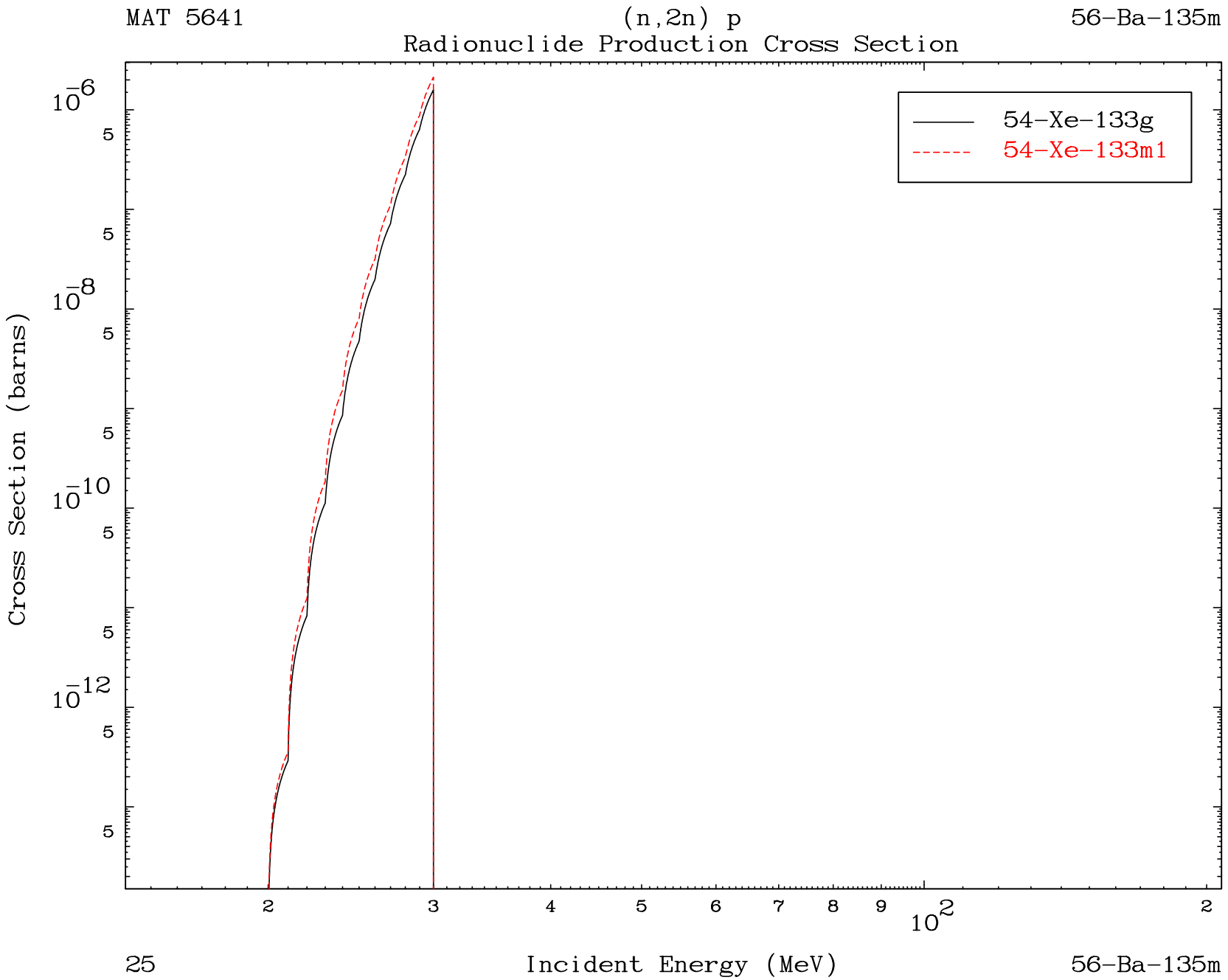

MAT 5641
(n,3n)
56-Ba-135m
Radionuclide Production Cross Section
56-Ba-133g
56-Ba-133m2
Cross Section (barns)
Incident Energy (MeV)
20
56-Ba-135m

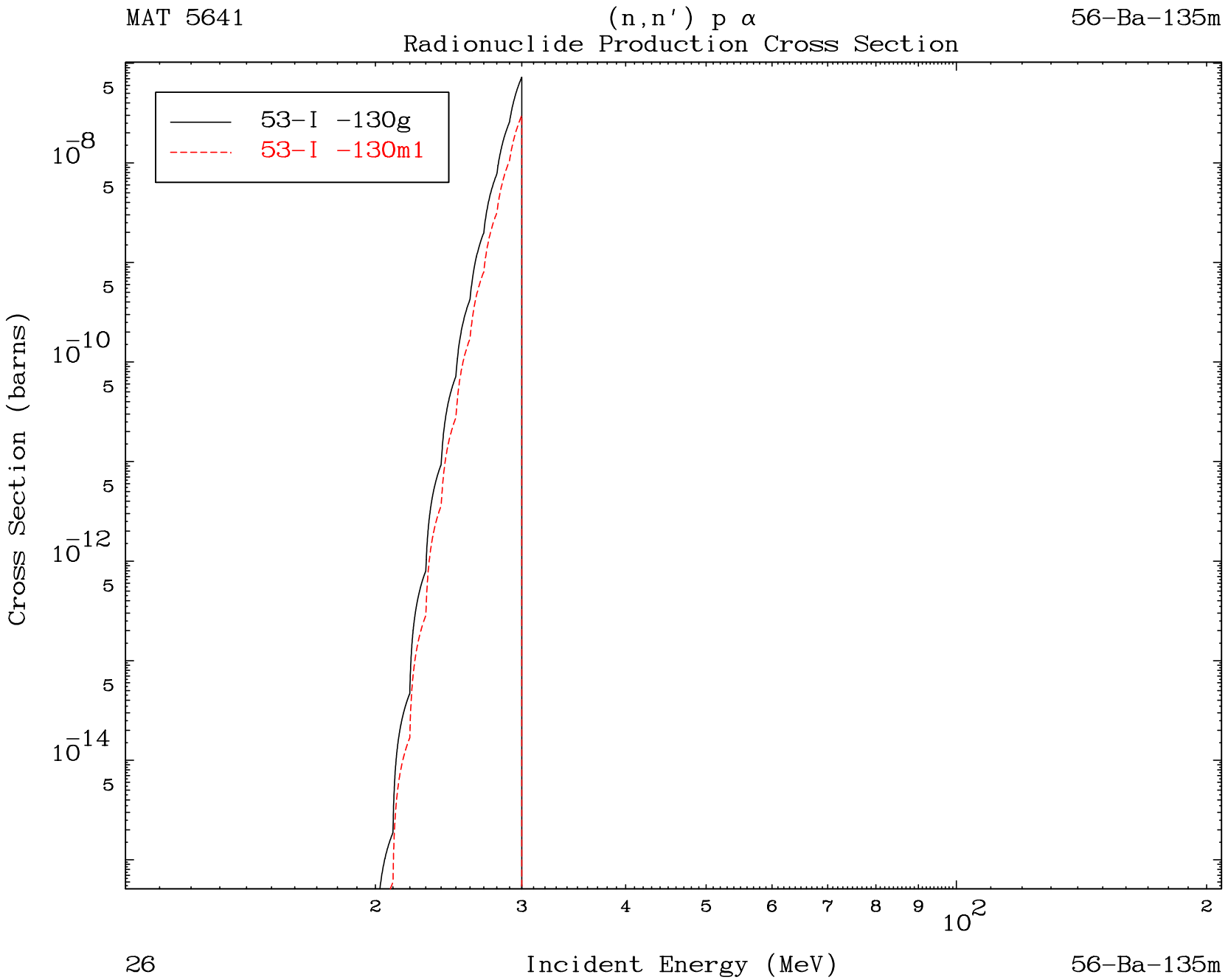

MAT 5641
(n,n') α
56-Ba-135m
Radionuclide Production Cross Section
54-Xe-131g
54-Xe-131m2
Cross Section (barns)
Incident Energy (MeV)
21
56-Ba-135m

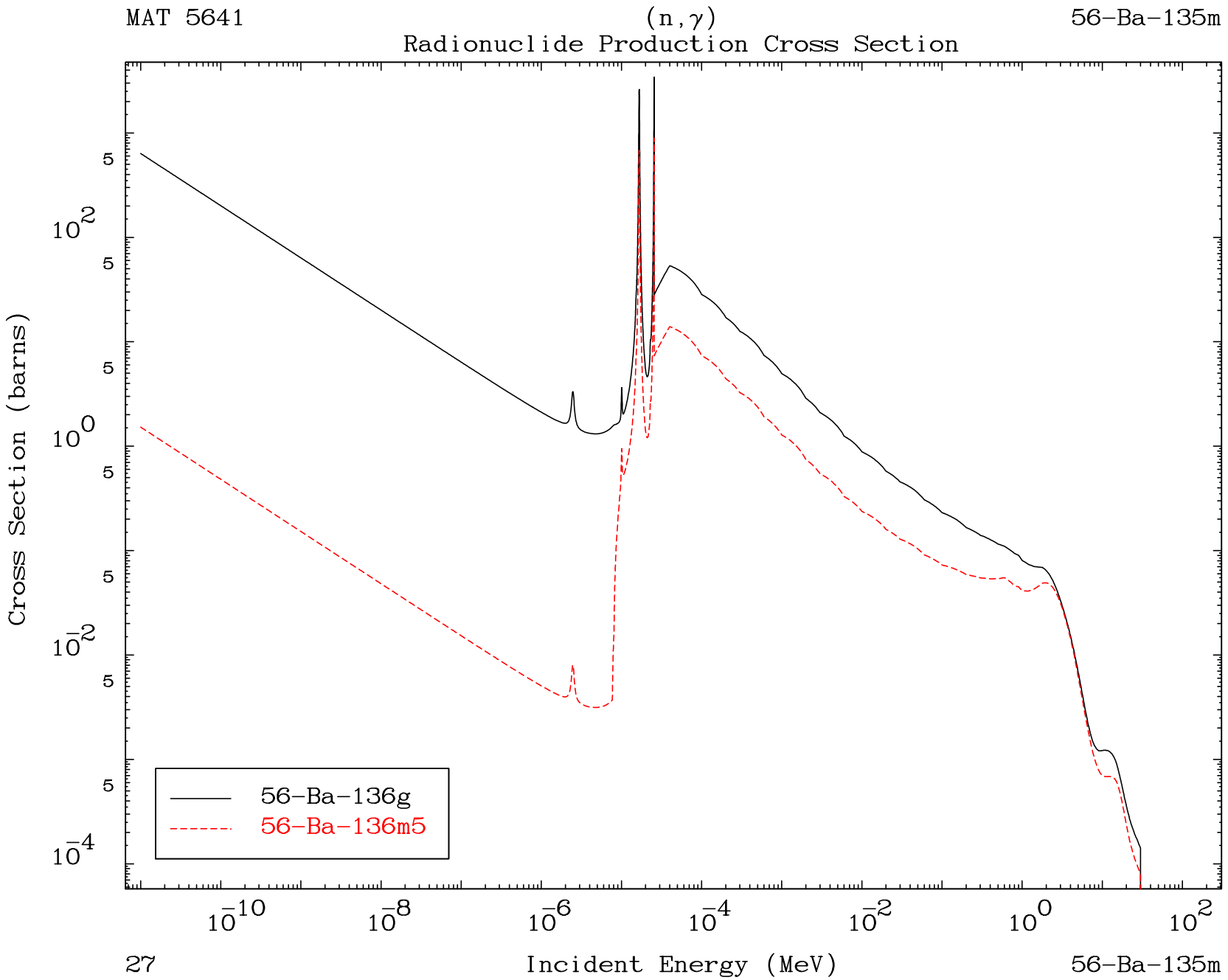

MAT 5641
(n,3n) α
56-Ba-135m
Radionuclide Production Cross Section
54-Xe-129g
54-Xe-129m2
Cross Section (barns)
10-6
10-8
10-10
10-12
5
2
3
4
5
6
7
8
9
10 2
2
22
Incident Energy (MeV)
56-Ba-135m

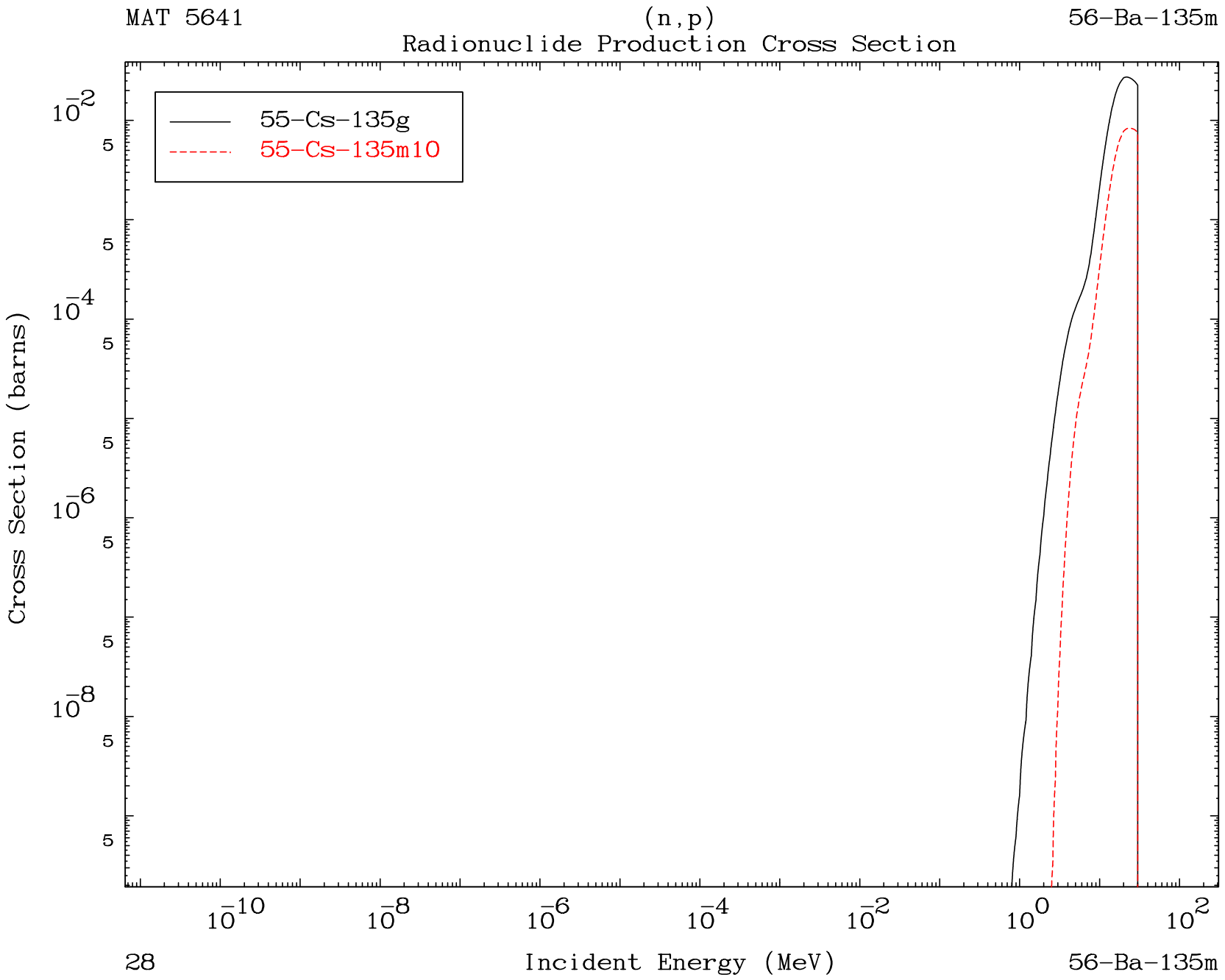

MAT 5641
(n,n') p
56-Ba-135m
Radionuclide Production Cross Section
55-Cs-134g
55-Cs-134m3
Cross Section (barns)
Incident Energy (MeV)
23
56-Ba-135m

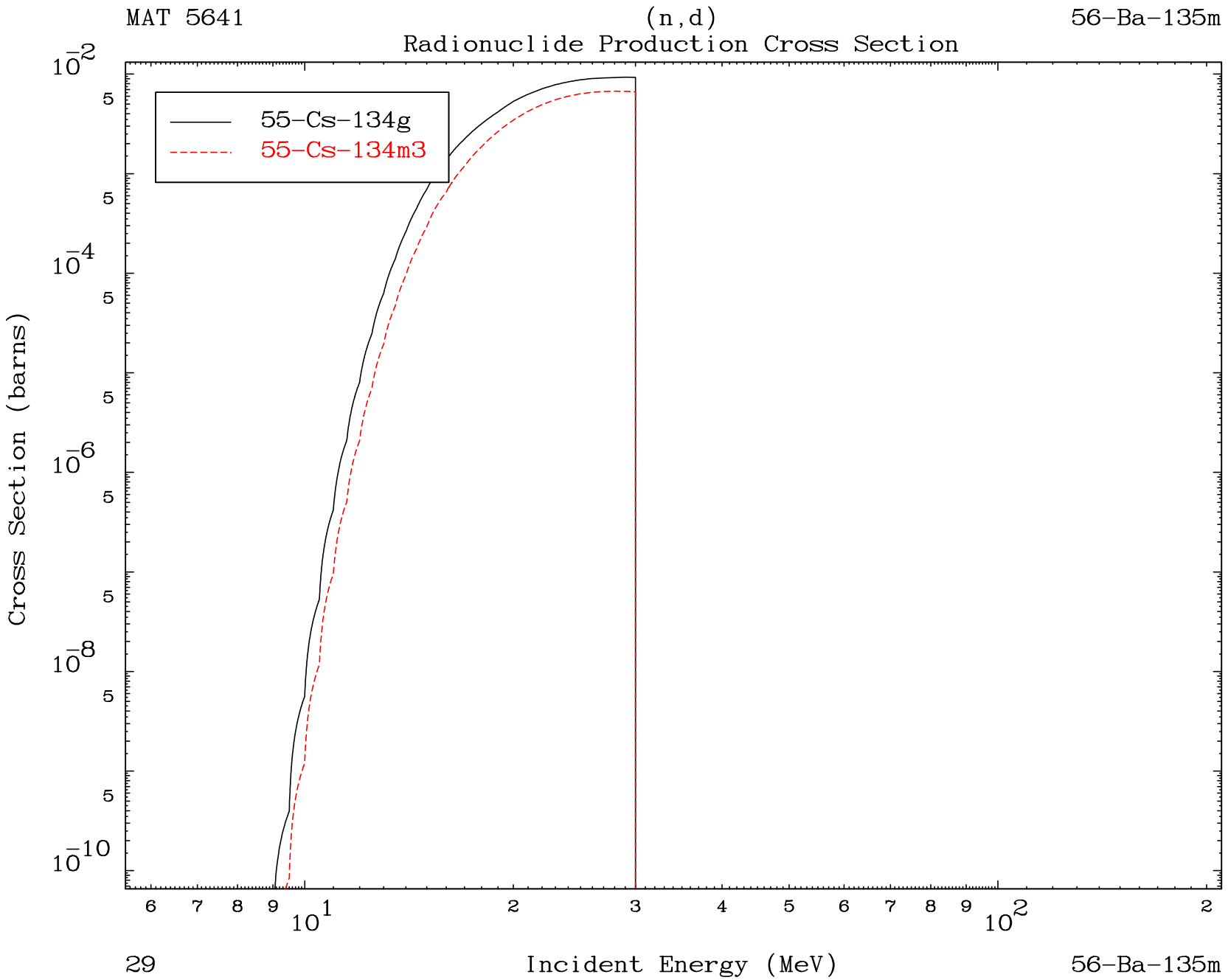

MAT 5641
(n,n') 2α
56-Ba-135m
Radionuclide Production Cross Section
52-Te-127g
52-Te-127m2
Cross Section (barns)
Incident Energy (MeV)
24
56-Ba-135m

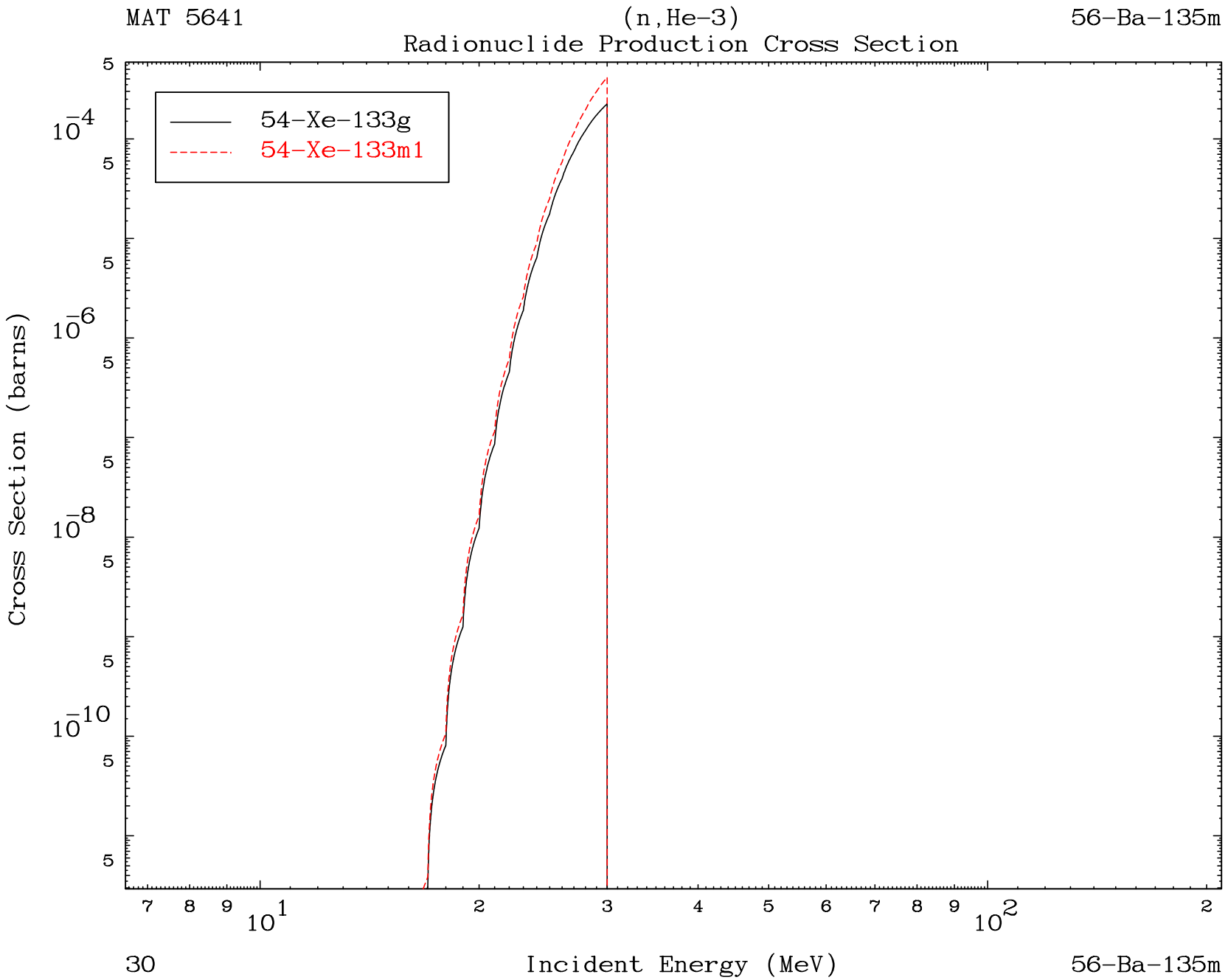

MAT 5641
(n,2n) p
56-Ba-135m
Radionuclide Production Cross Section
54-Xe-133g
54-Xe-133m1
Cross Section (barns)
10-6
10-8
10-10
10-12
5
2
3
4
5
6
7
8
9
10 2
2
25
Incident Energy (MeV)
56-Ba-135m

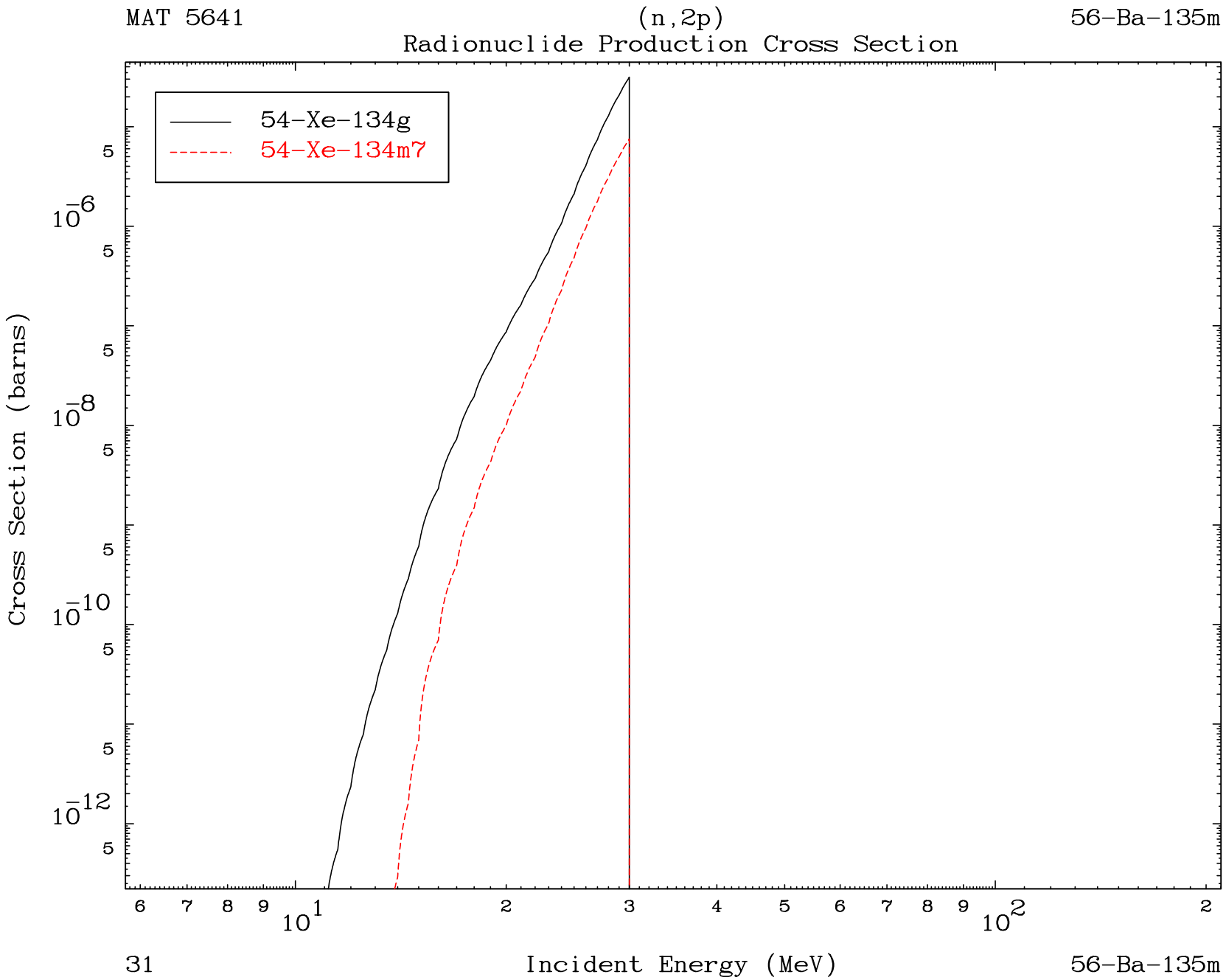

MAT 5641
(n,n') p α
56-Ba-135m
Radionuclide Production Cross Section
53-I -130g
53-I -130m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
2
3
4
5
6
7
8
9
10^2
2
26
Incident Energy (MeV)
56-Ba-135m

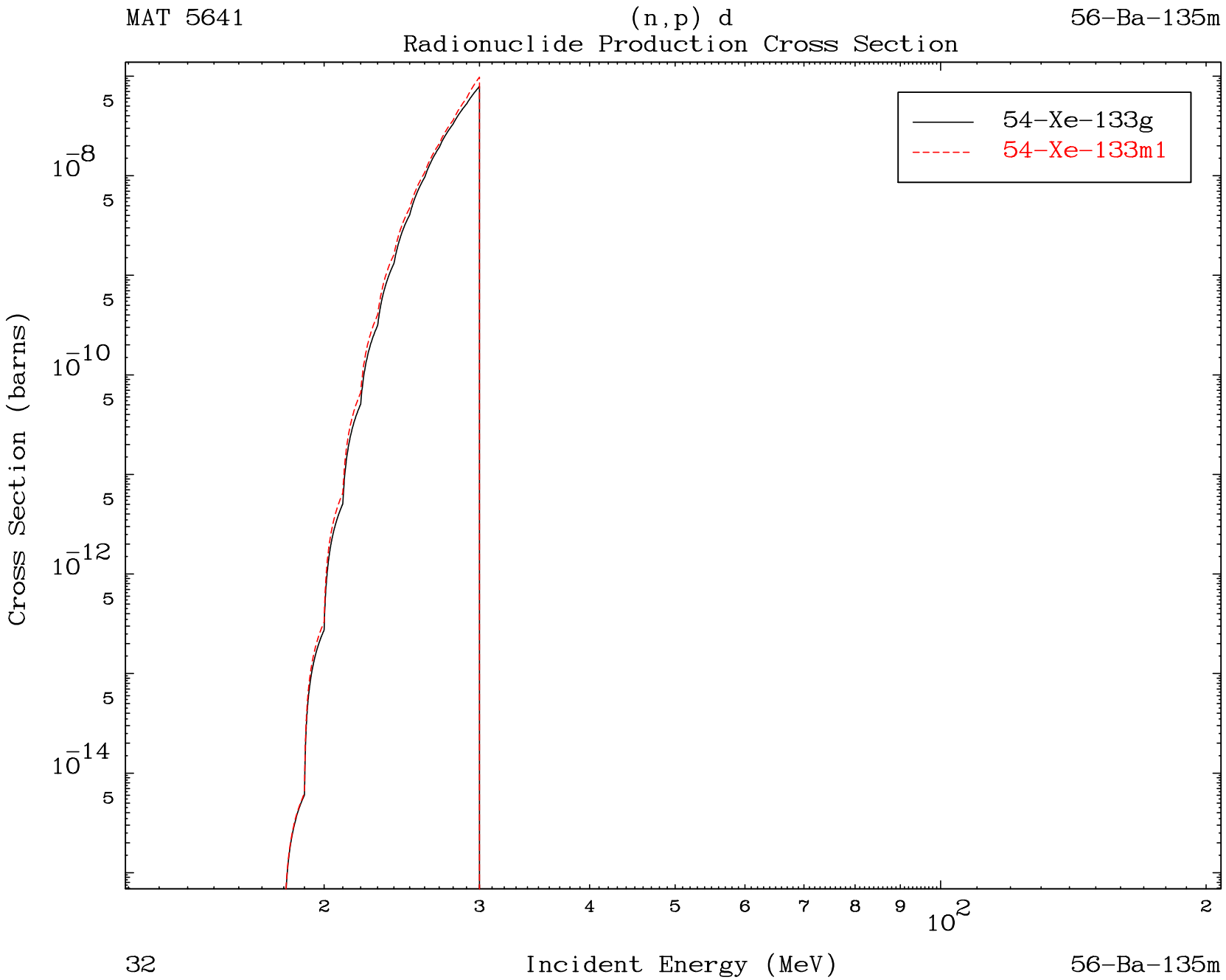

MAT 5641
(n,γ)
56-Ba-135m
Radionuclide Production Cross Section
Cross Section (barns)
10^2
10^0
10^-2
10^-4
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
56-Ba-136g
56-Ba-136m5
27
Incident Energy (MeV)
56-Ba-135m

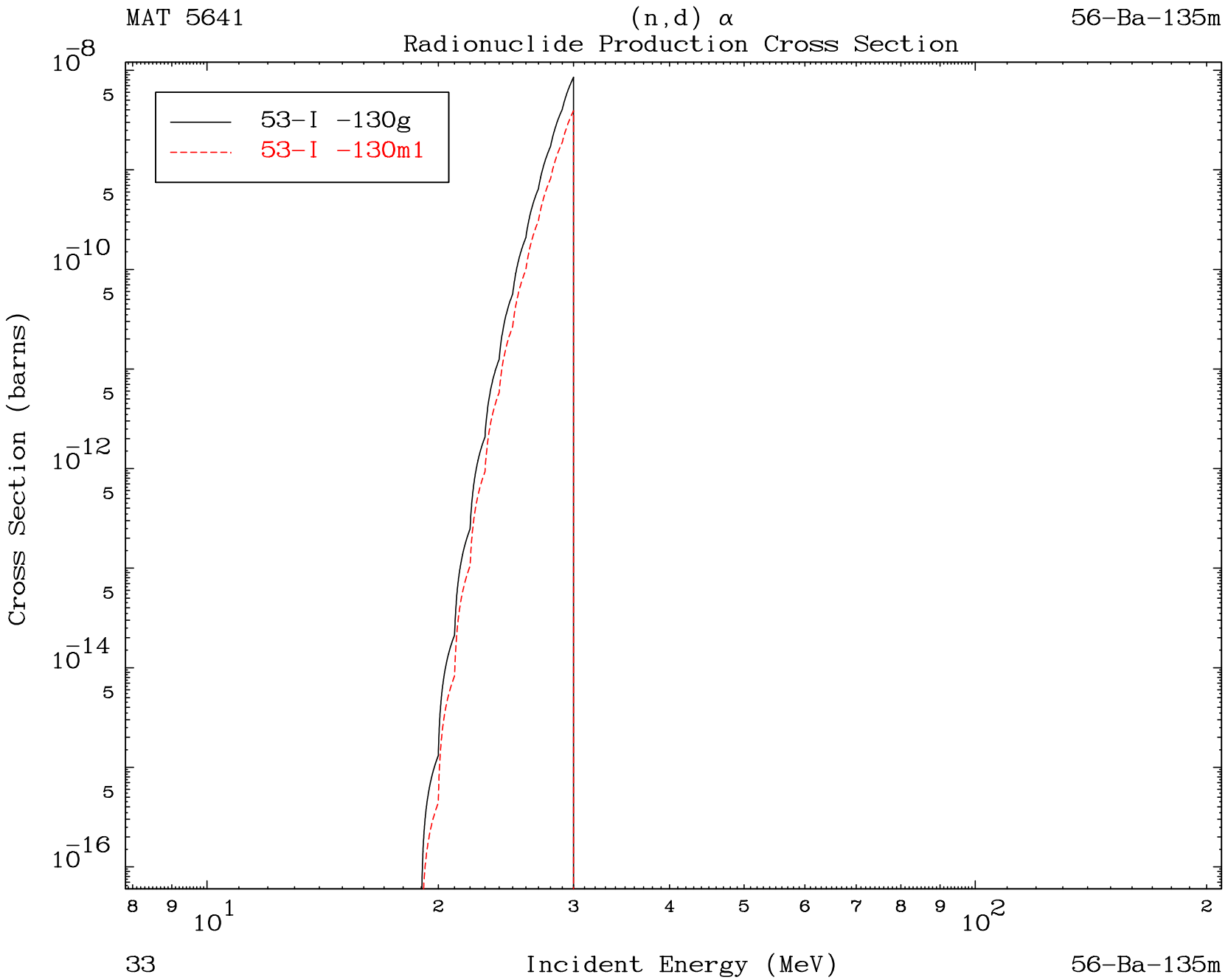

MAT 5641
(n,p)
56-Ba-135m
Radionuclide Production Cross Section
55-Cs-135g
55-Cs-135m10
Cross Section (barns)
Incident Energy (MeV)
28
56-Ba-135m


MAT 5641
(n,d)
56-Ba-135m
Radionuclide Production Cross Section
55-Cs-134g
55-Cs-134m3
Cross Section (barns)
Incident Energy (MeV)
29
56-Ba-135m


MAT 5641
(n,He-3)
56-Ba-135m
Radionuclide Production Cross Section
54-Xe-133g
54-Xe-133m1
Cross Section (barns)
Incident Energy (MeV)
30
56-Ba-135m


MAT 5641
(n,2p)
56-Ba-135m
Radionuclide Production Cross Section
54-Xe-134g
54-Xe-134m7
Cross Section (barns)
10-6
10-8
10-10
10-12
5
6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2 2
31
Incident Energy (MeV)
56-Ba-135m


MAT 5641
(n,p) d
56-Ba-135m
Radionuclide Production Cross Section
54-Xe-133g
54-Xe-133m1
Cross Section (barns)
10-8
10-10
10-12
10-14
5
2
3
4
5
6
7
8
9
10 2
2
32
Incident Energy (MeV)
56-Ba-135m


MAT 5641
(n,d) α
56-Ba-135m
Radionuclide Production Cross Section
53-I -130g
53-I -130m1
Cross Section (barns)
Incident Energy (MeV)
33
56-Ba-135m