Program EVALPLOT
(Version 2021-1)
by
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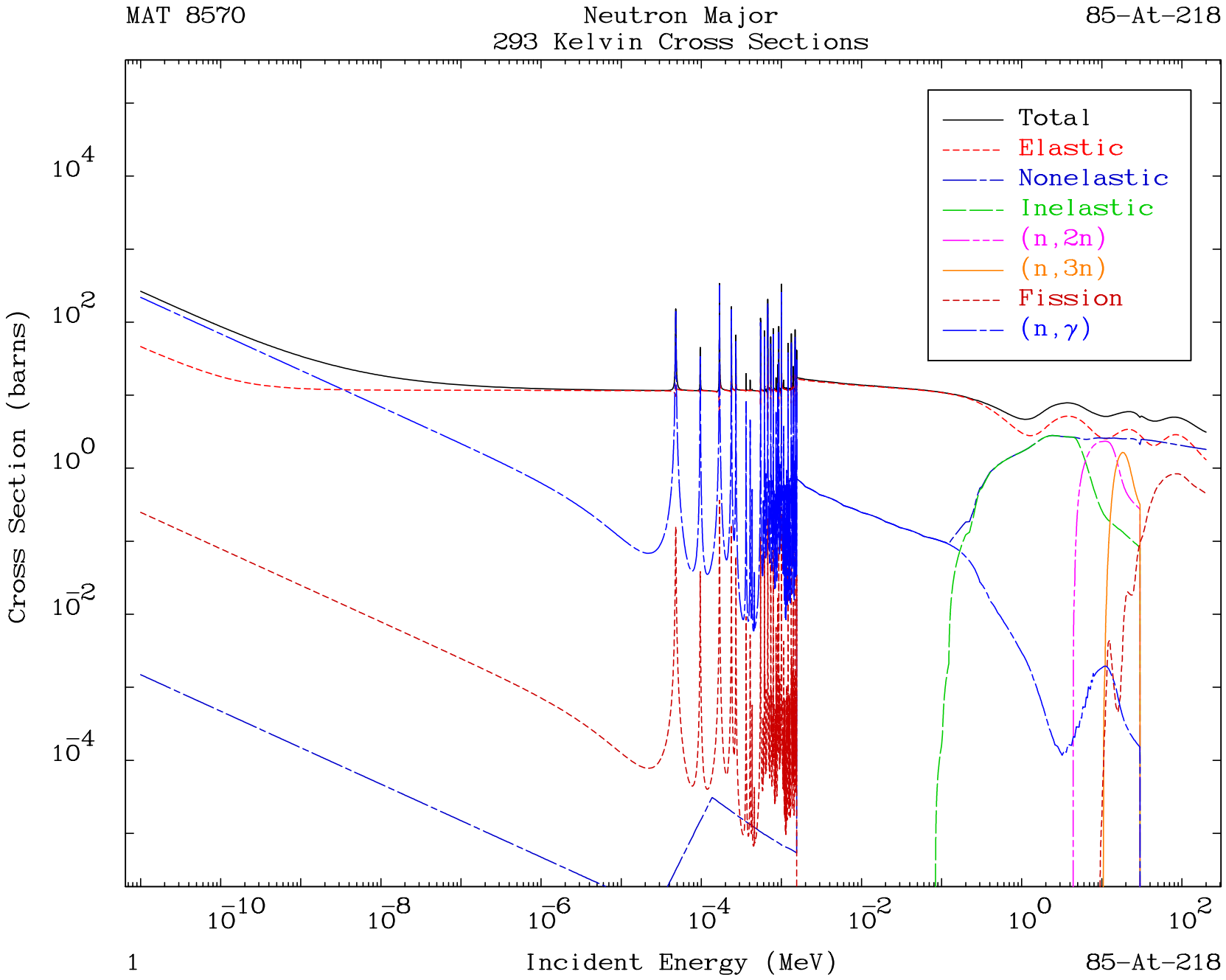
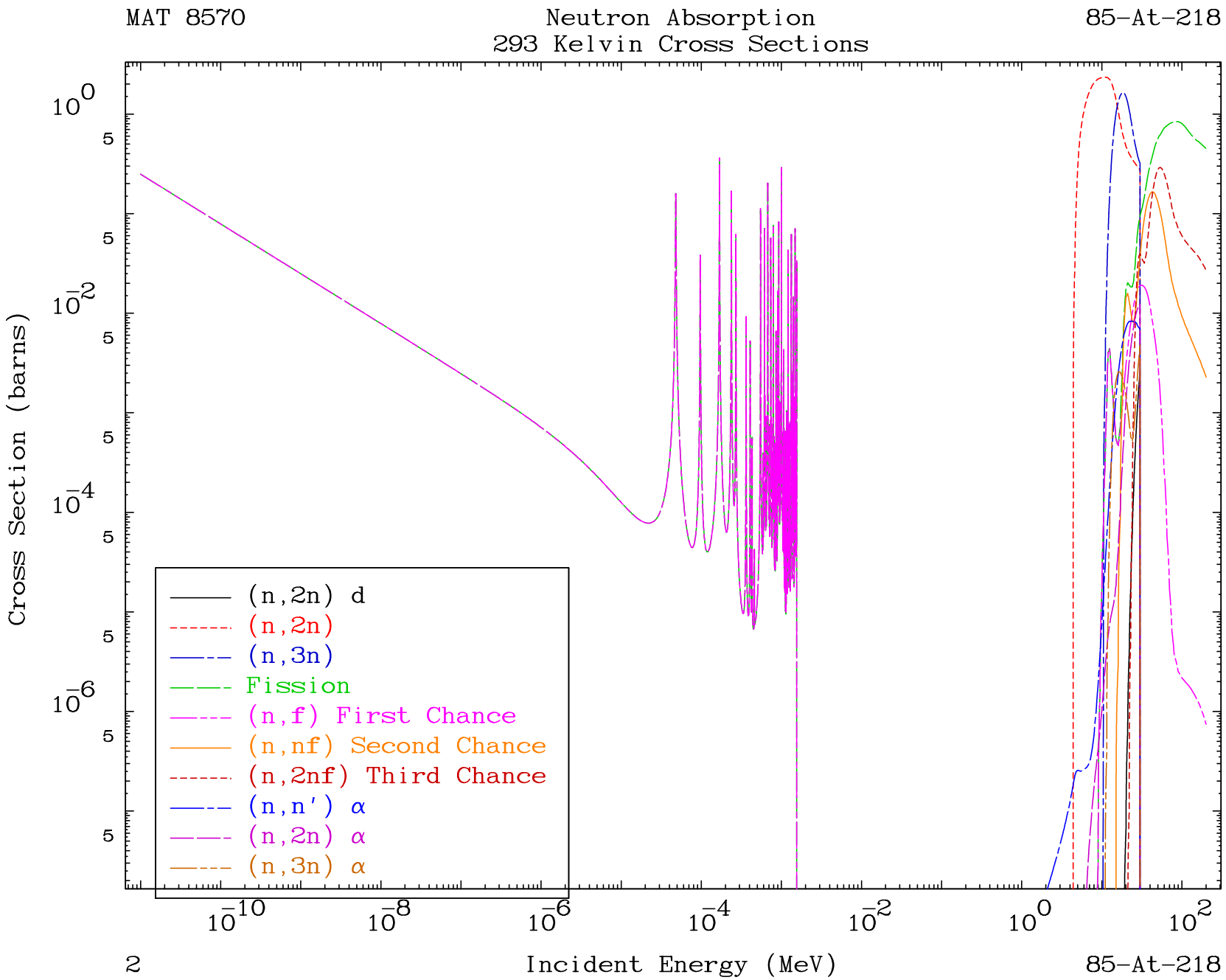
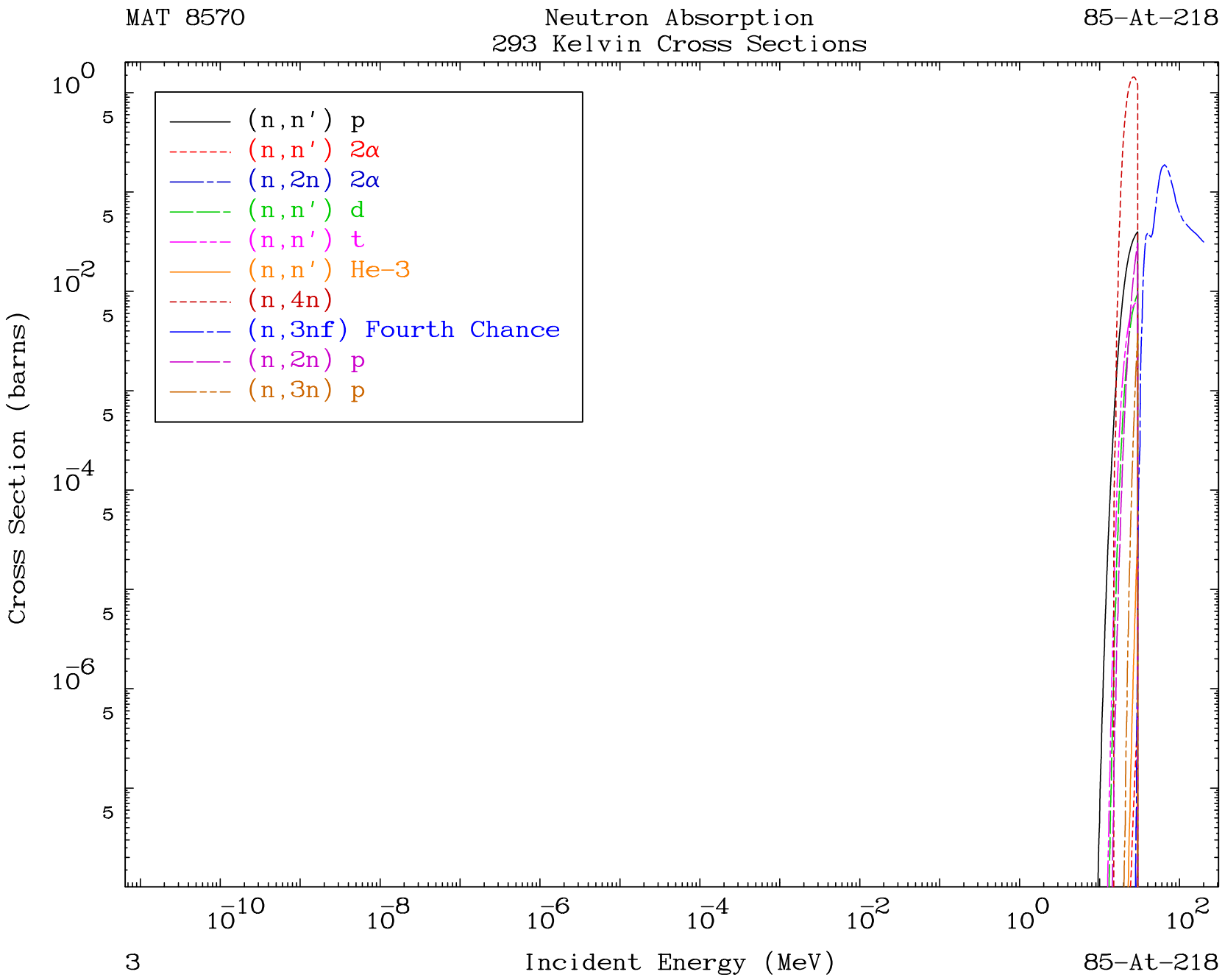
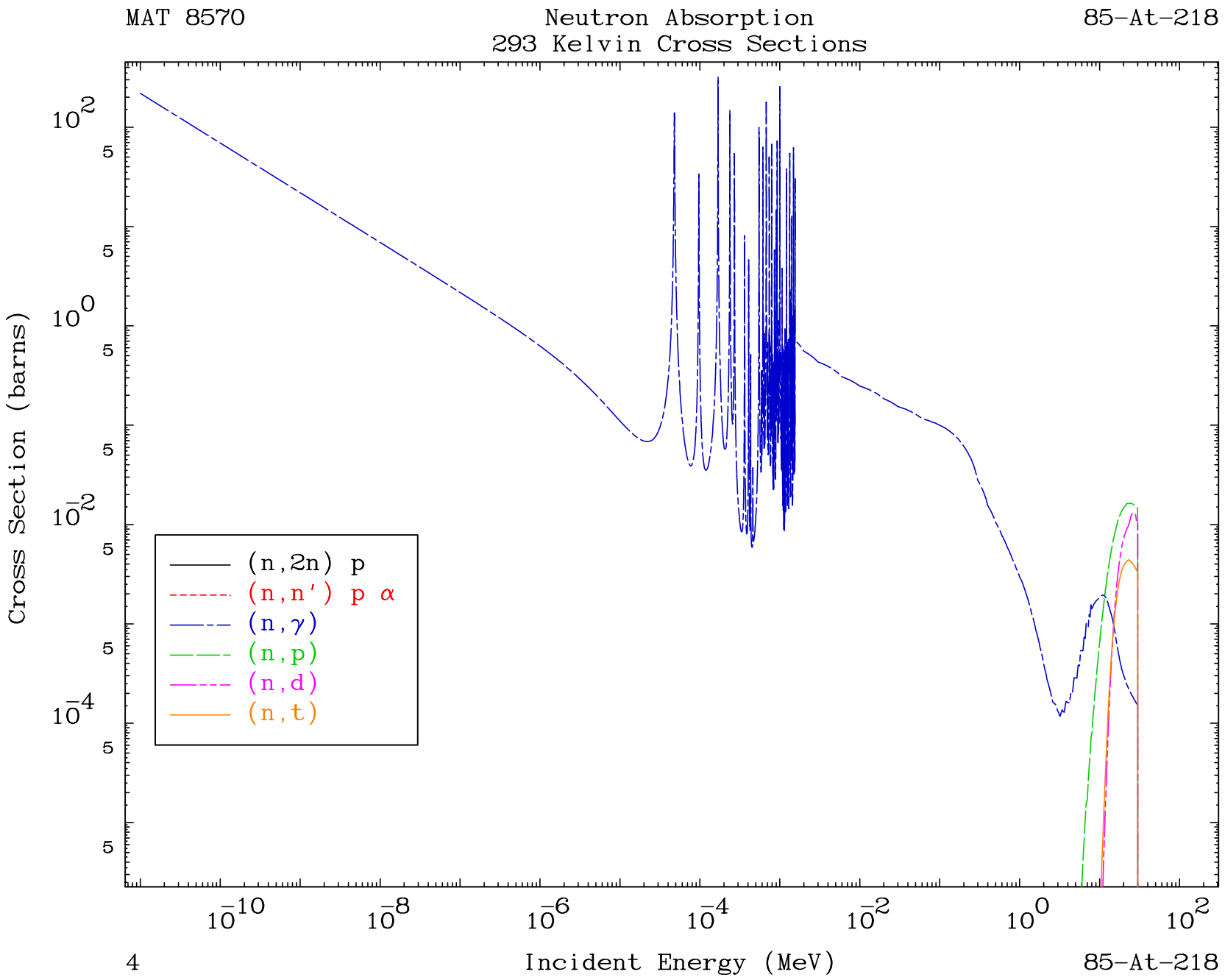
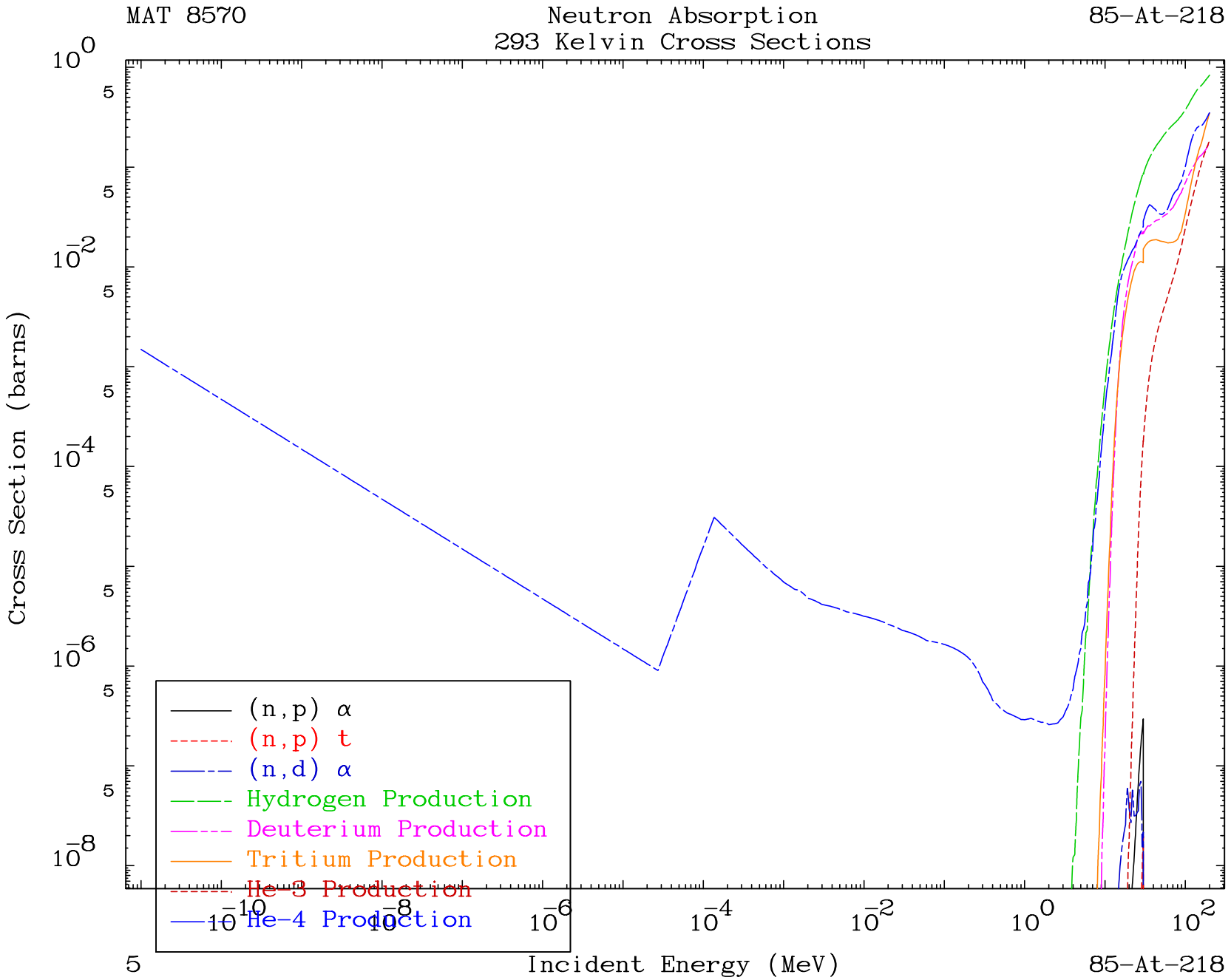
Press Mouse Button to Start

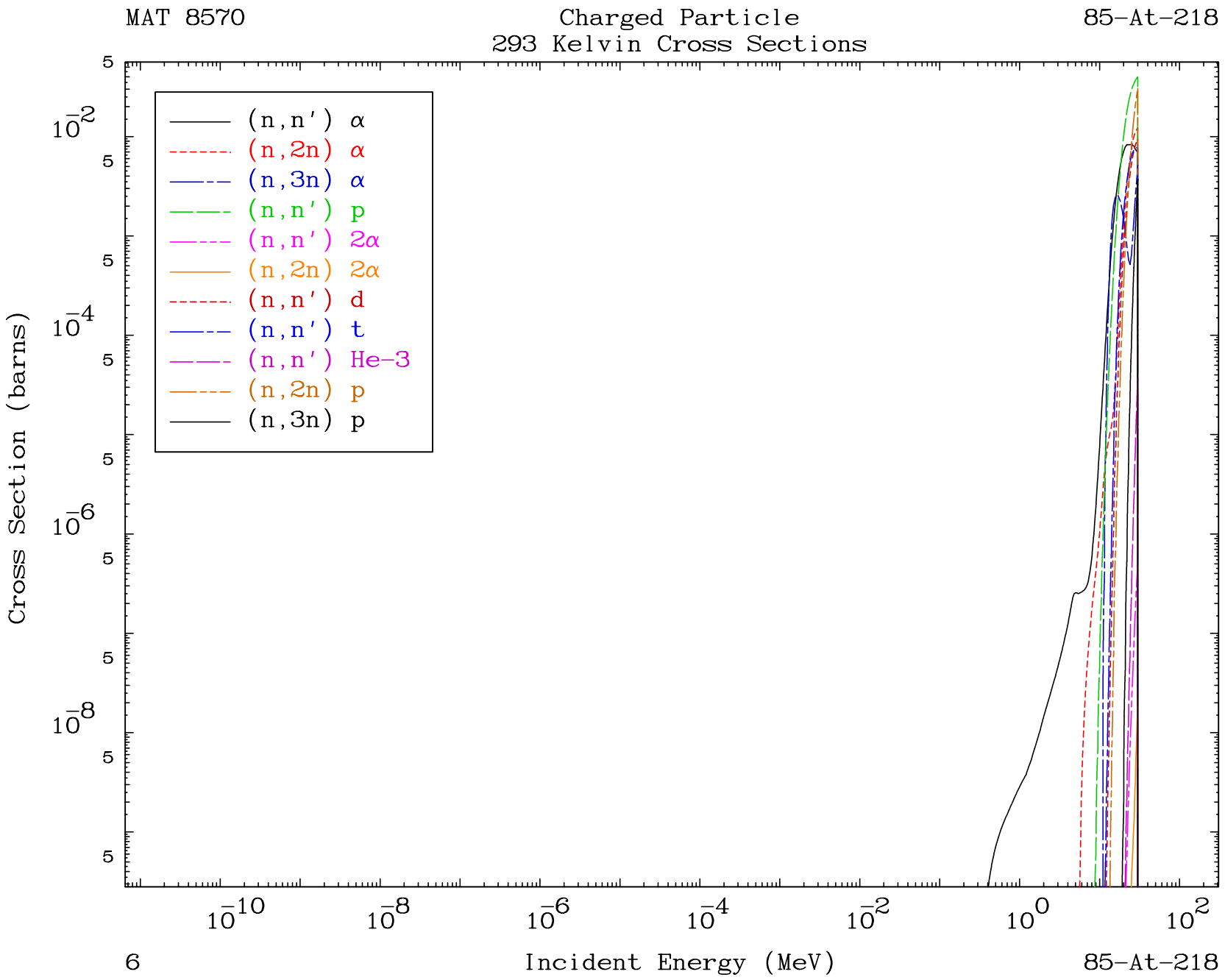

MAT 8570
Neutron Major
293 Kelvin Cross Sections
85-At-218
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
Fission
(n,γ)
Cross Section (barns)
10^4
10^2
10^0
10^-2
10^-4
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
1
Incident Energy (MeV)
85-At-218

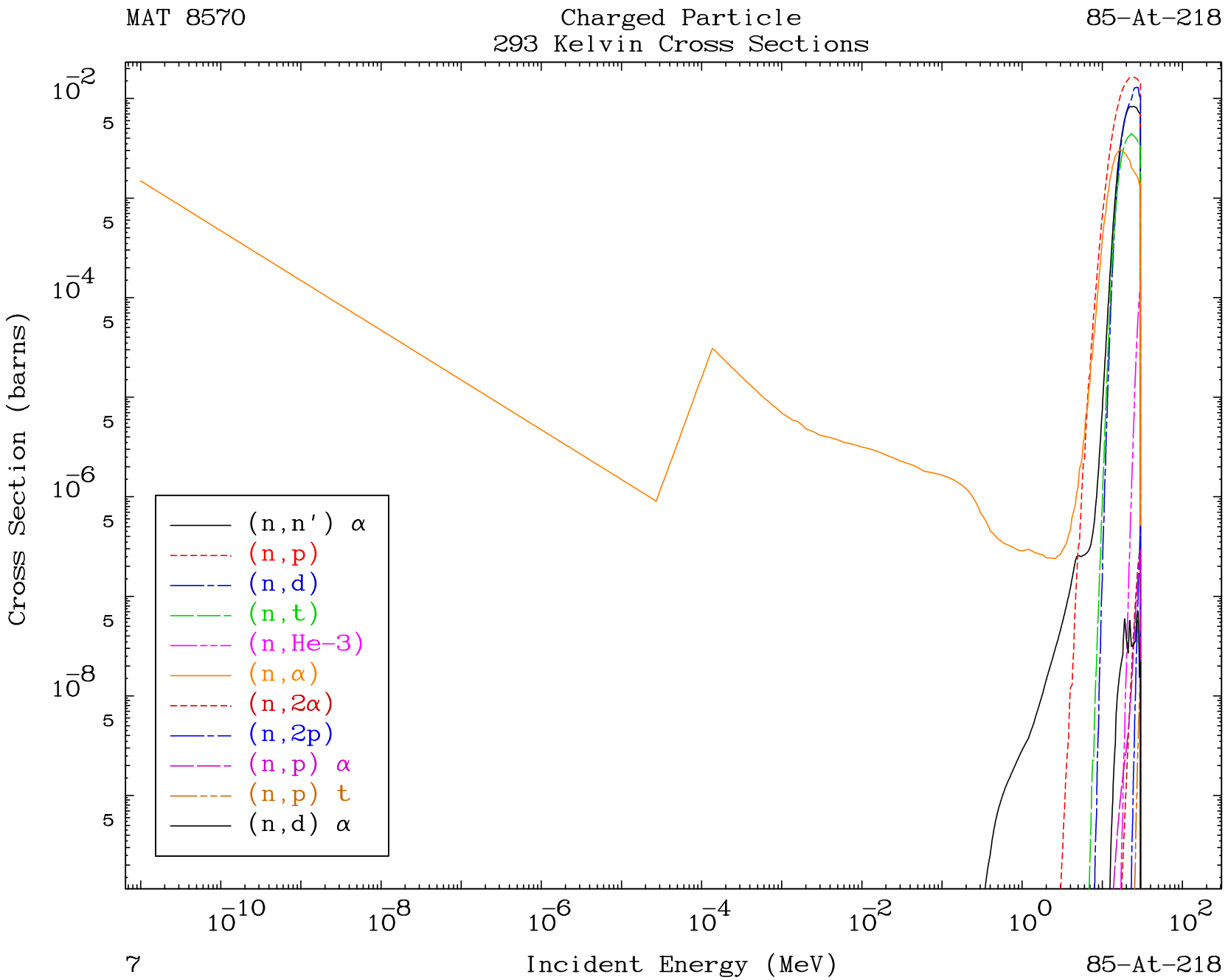

MAT 8570
Neutron Absorption
293 Kelvin Cross Sections
85-At-218
Cross Section (barns)
Incident Energy (MeV)
(n,2n) d
(n,2n)
(n,3n)
Fission
(n,f) First Chance
(n,nf) Second Chance
(n,2nf) Third Chance
(n,n') α
(n,2n) α
(n,3n) α
2
85-At-218

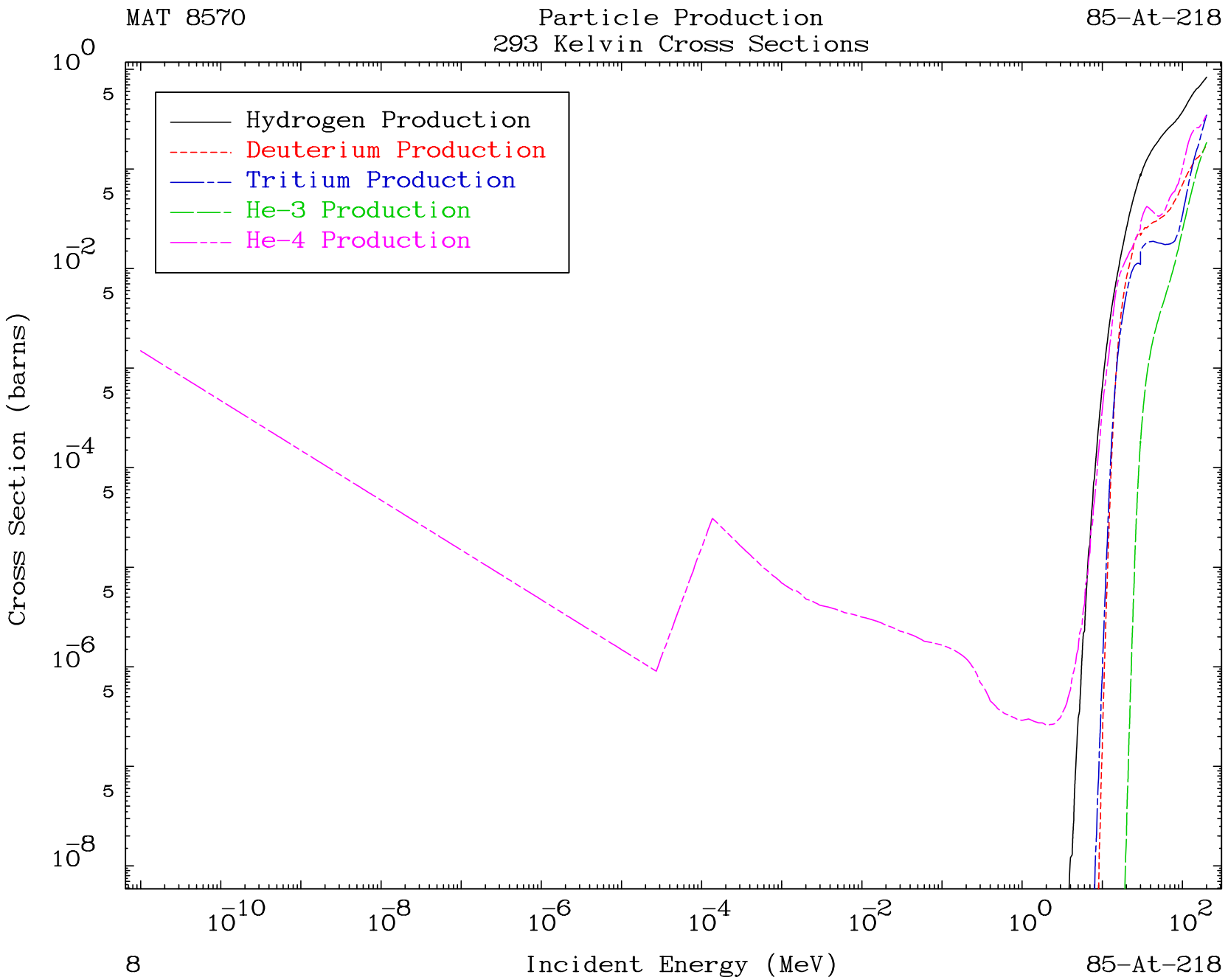

MAT 8570
Neutron Absorption
293 Kelvin Cross Sections
85-At-218
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,3nf) Fourth Chance
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
3
85-At-218

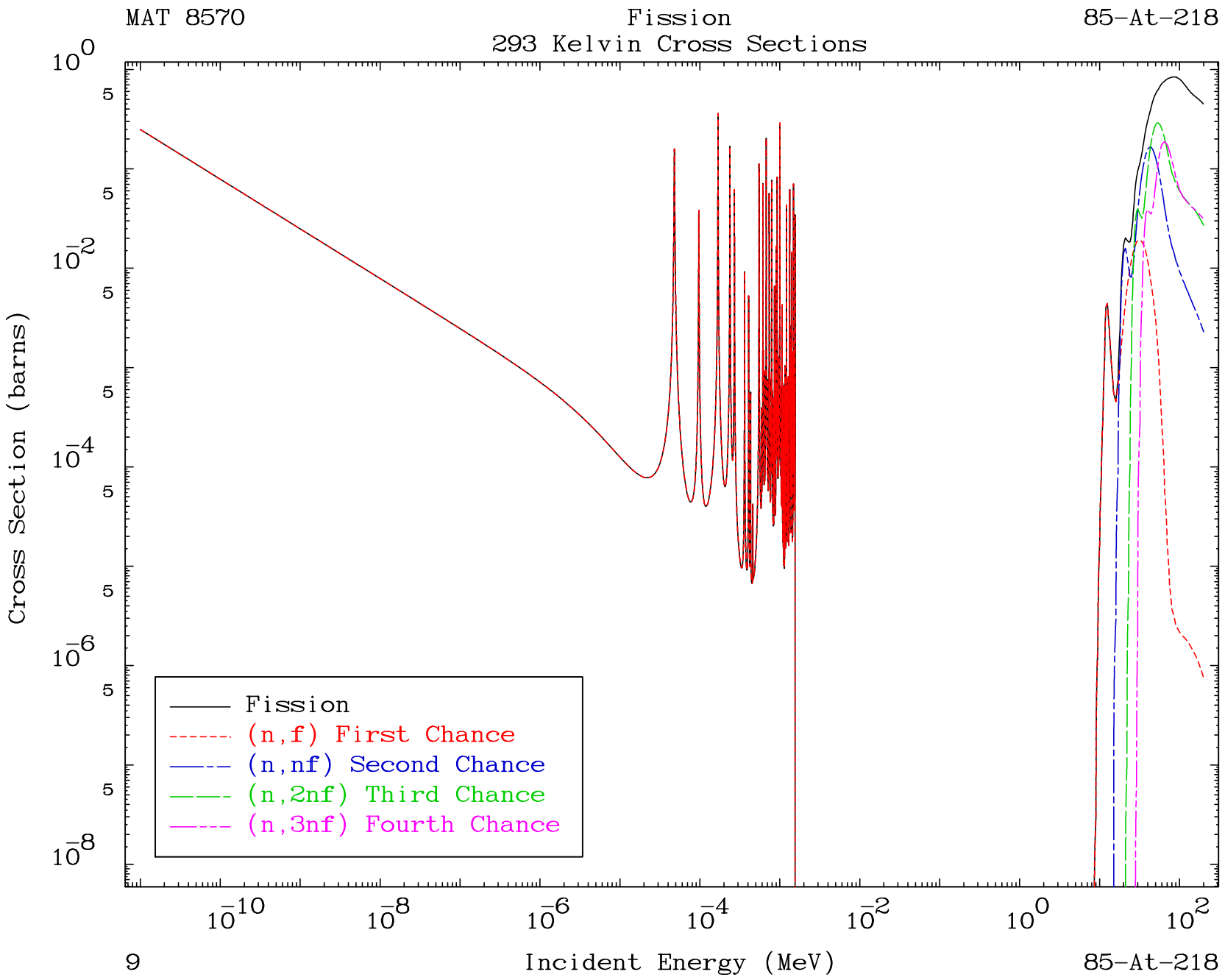

MAT 8570
Neutron Absorption
293 Kelvin Cross Sections
85-At-218
Cross Section (barns)
Incident Energy (MeV)
(n,2n) p
(n,n') p α
(n,γ)
(n,p)
(n,d)
(n,t)
4
85-At-218

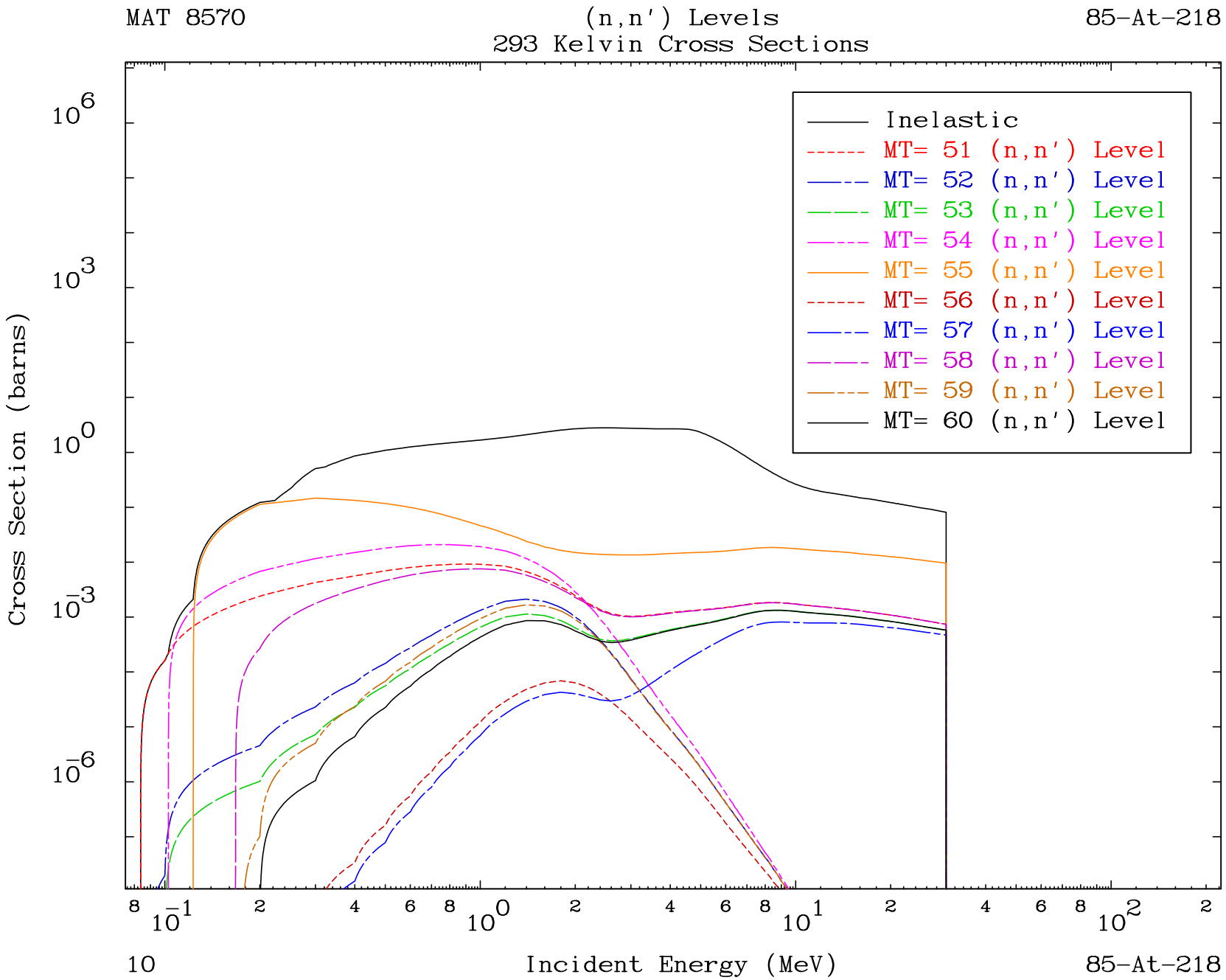

MAT 8570
Neutron Absorption
293 Kelvin Cross Sections
85-At-218
Cross Section (barns)
Incident Energy (MeV)
85-At-218
(n,p) α
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production

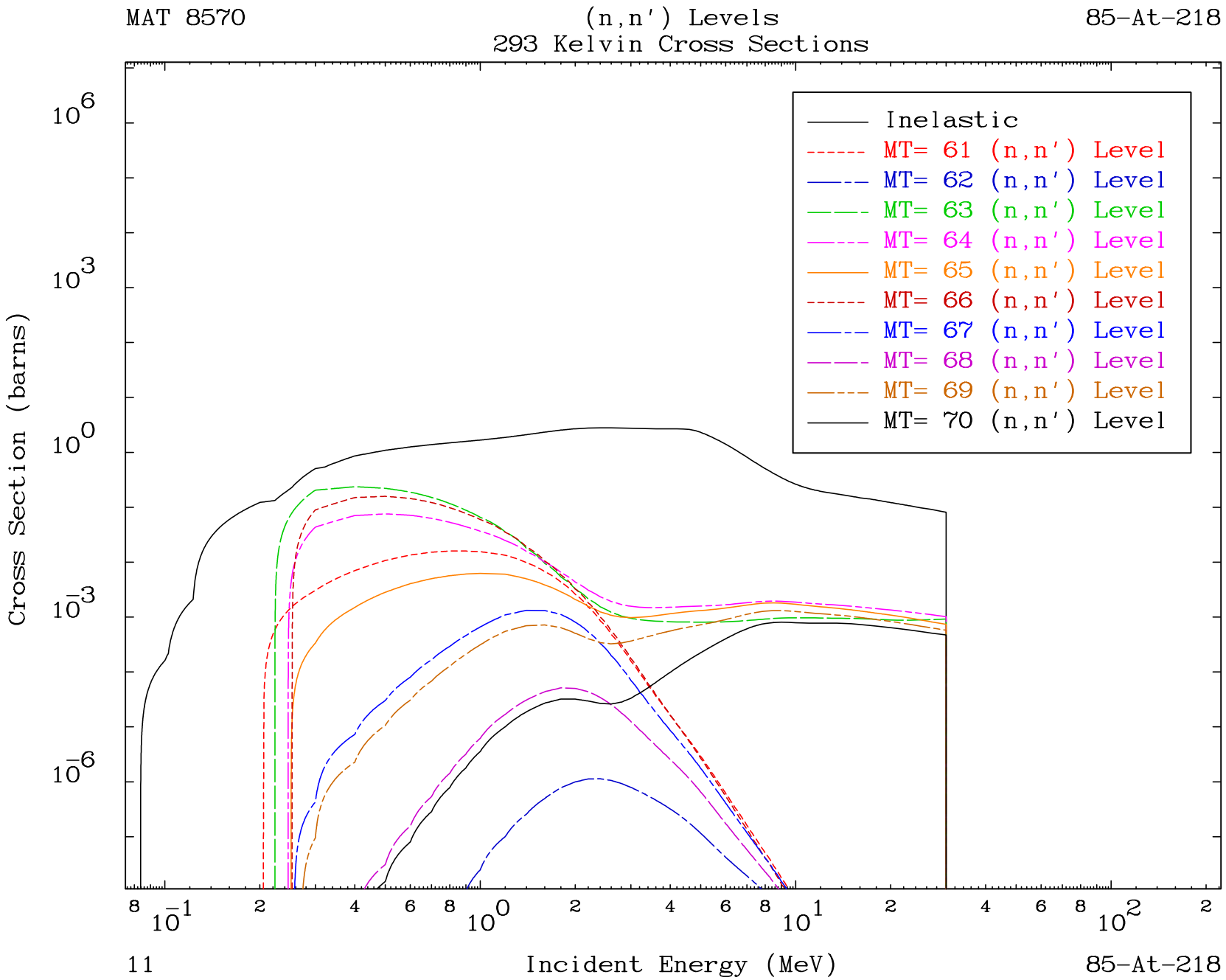

MAT 8570
Charged Particle
85-At-218
293 Kelvin Cross Sections
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
6
85-At-218

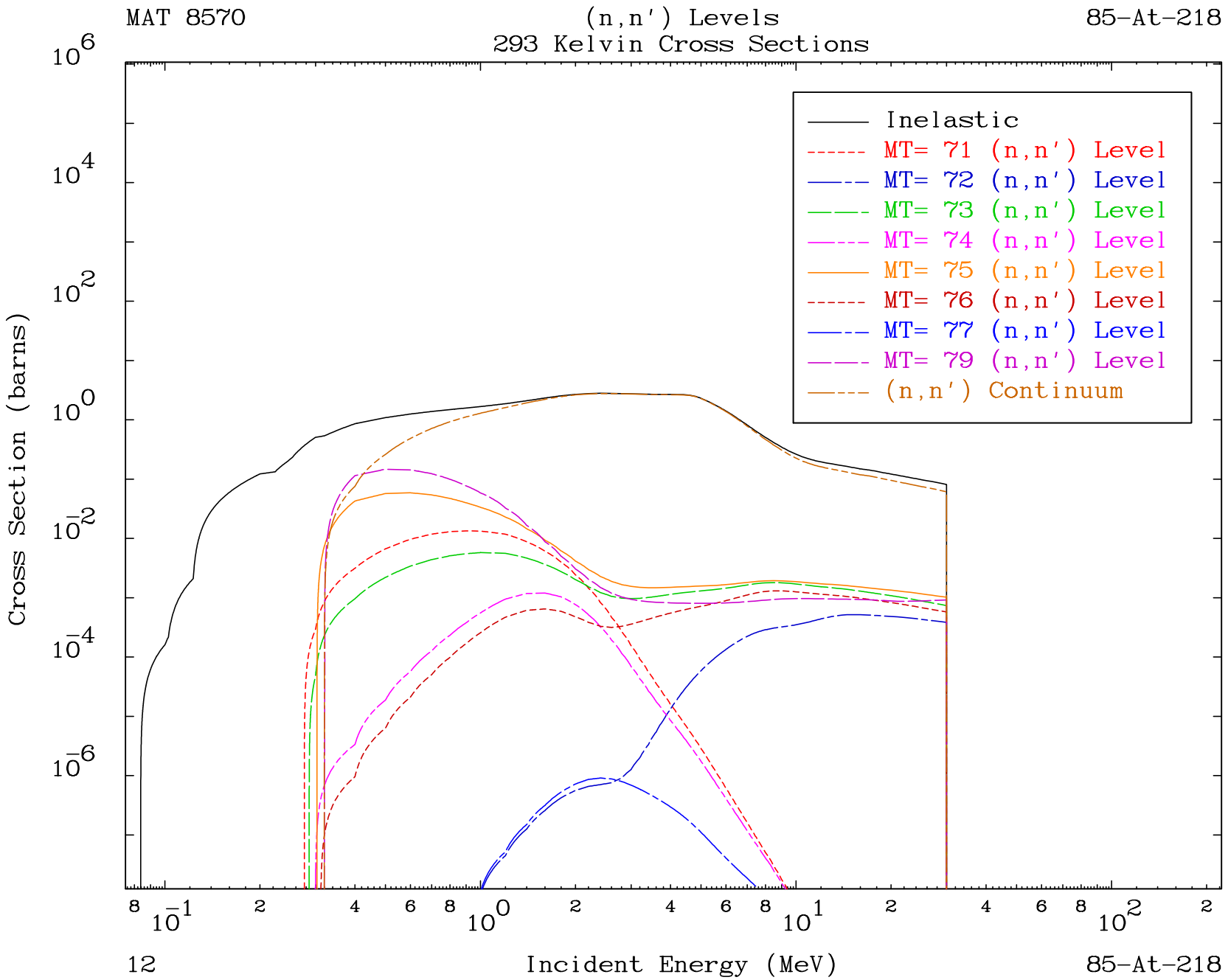

MAT 8570
Charged Particle
85-At-218
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
7
85-At-218
(n,n') α
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) t
(n,d) α

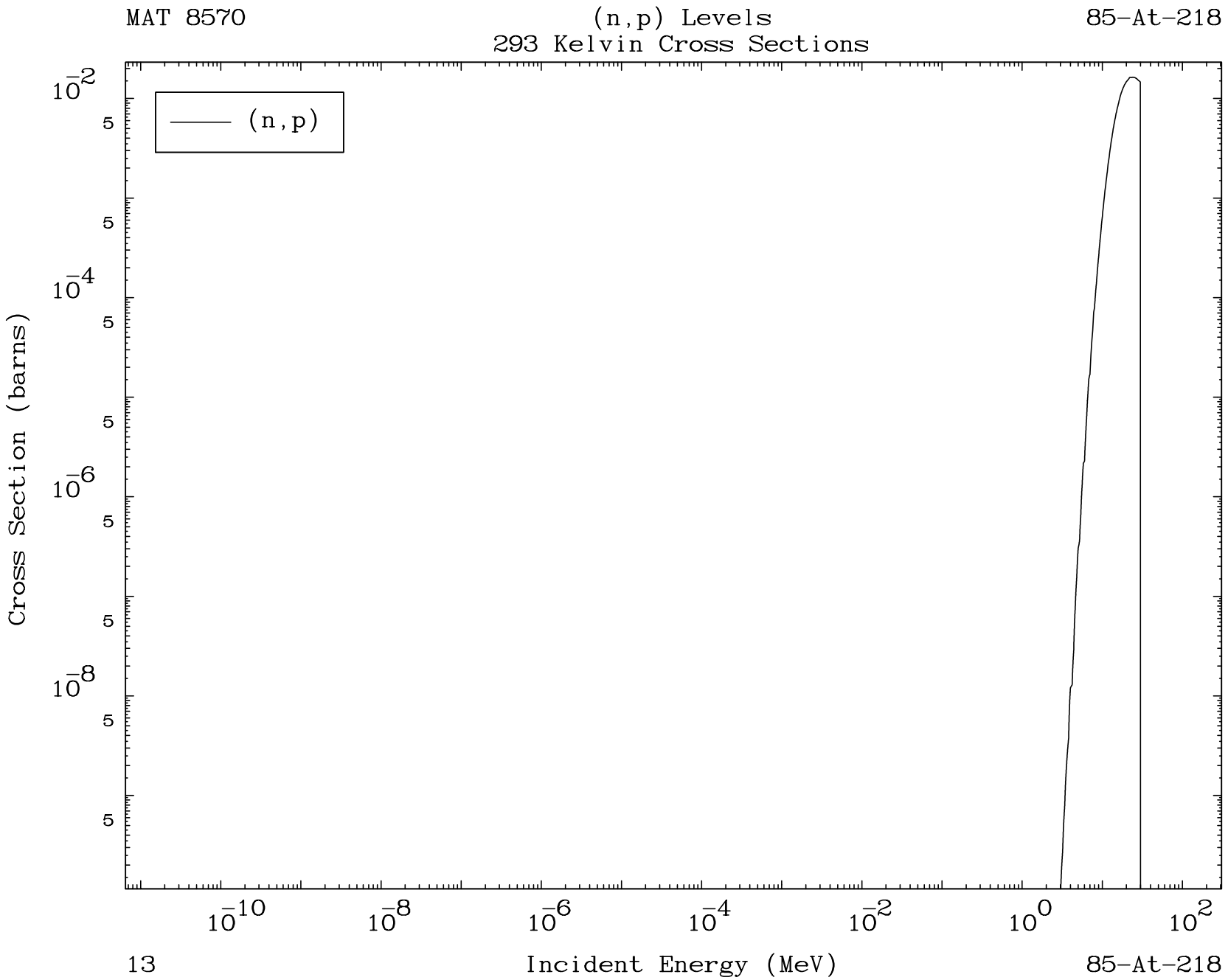

MAT 8570
Particle Production
293 Kelvin Cross Sections
85-At-218
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
8
85-At-218

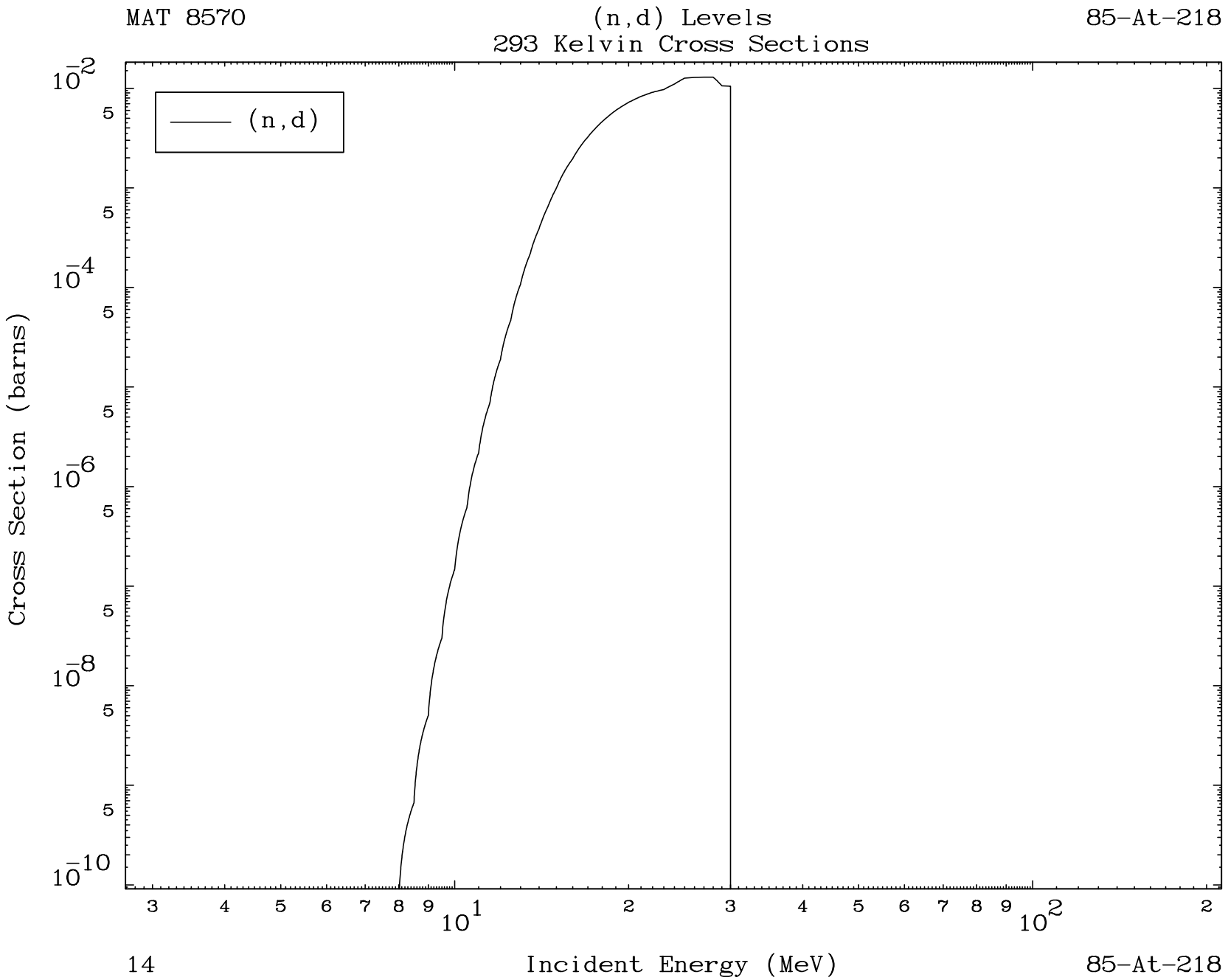

MAT 8570
Fission
85-At-218
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Fission
(n,f) First Chance
(n,nf) Second Chance
(n,2nf) Third Chance
(n,3nf) Fourth Chance
9
85-At-218

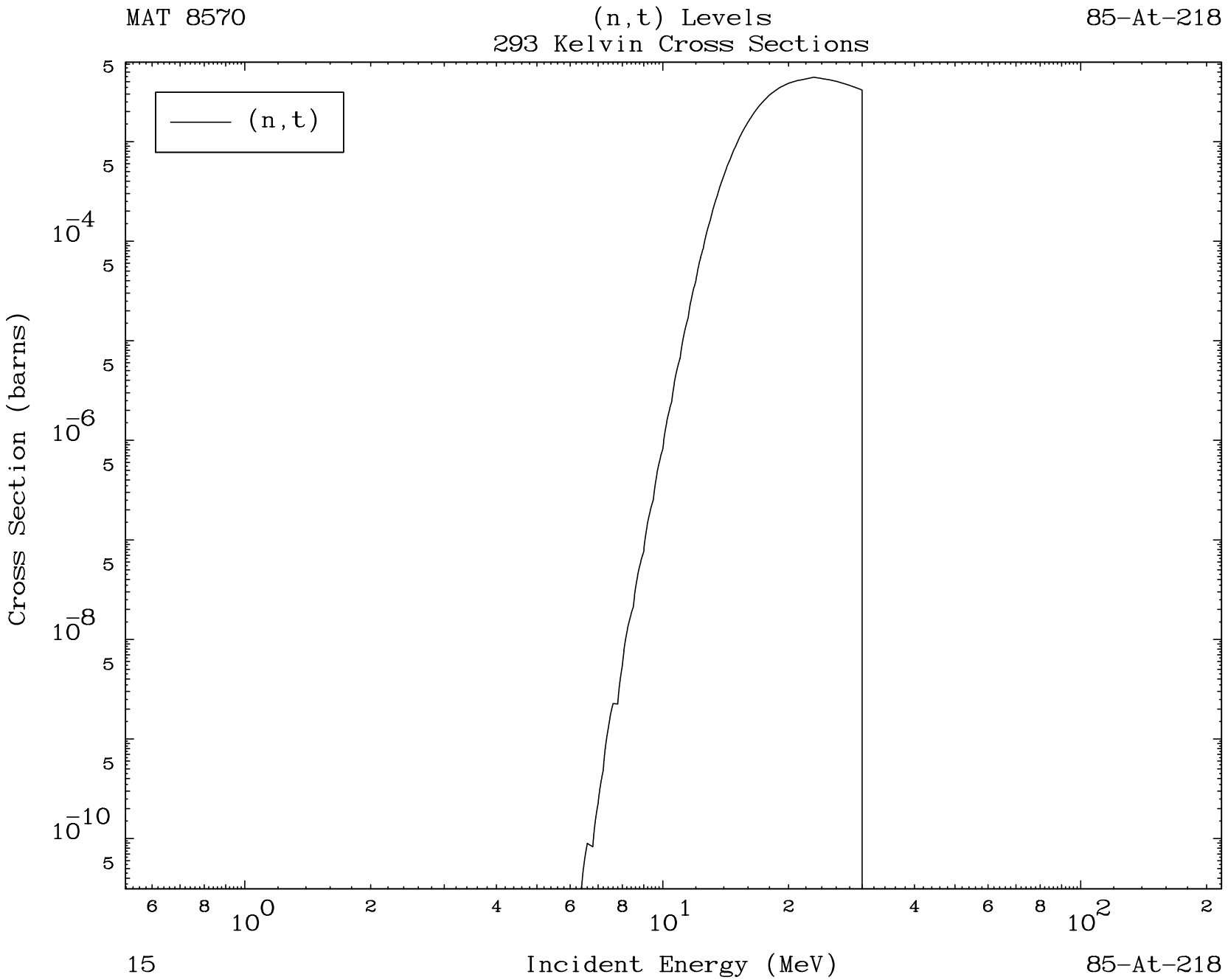

MAT 8570
(n,n') Levels
293 Kelvin Cross Sections
85-At-218
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
MT= 60 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
85-At-218

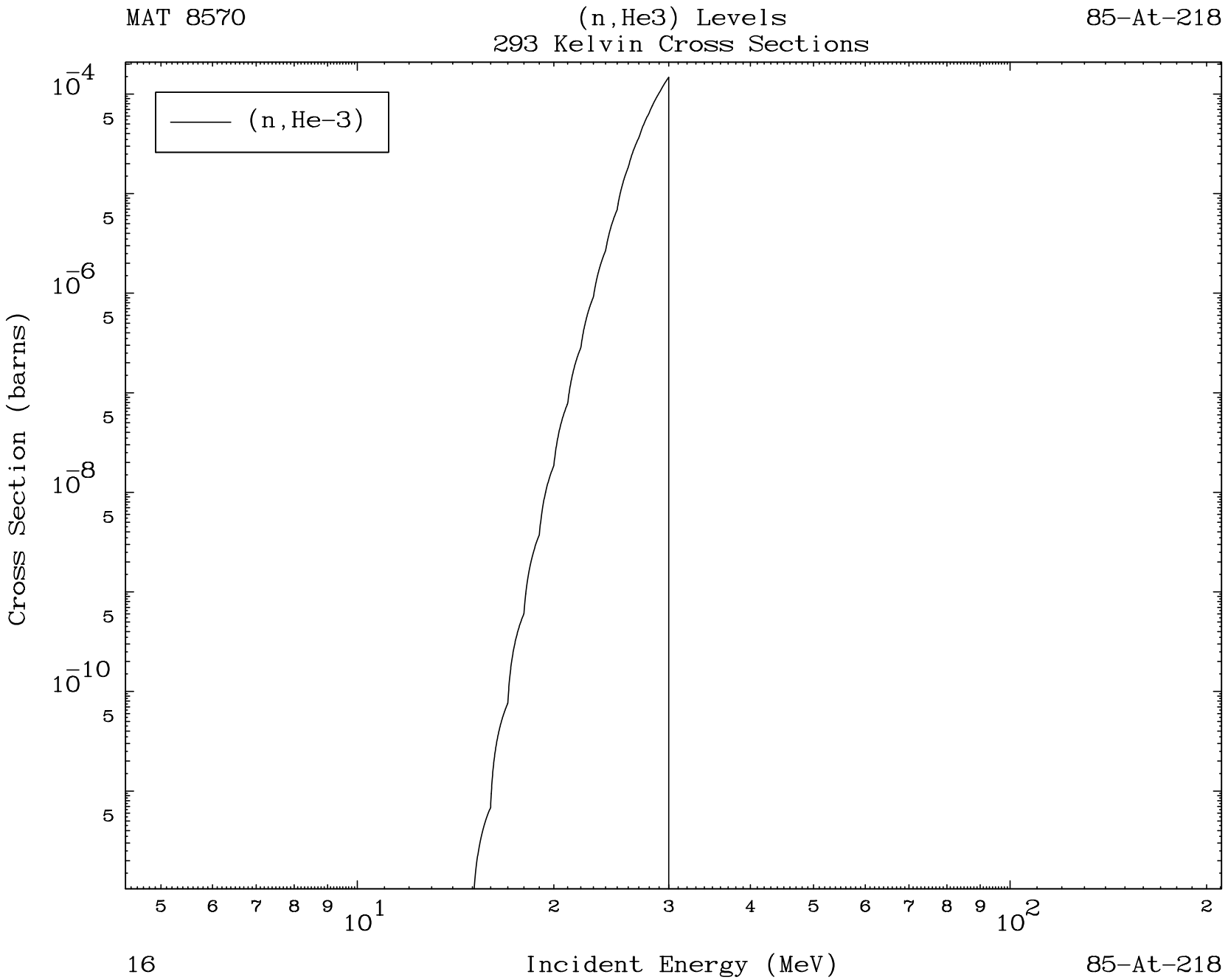

MAT 8570
(n,n') Levels
293 Kelvin Cross Sections
85-At-218
Cross Section (barns)
Incident Energy (MeV)
Inelastic
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
MT= 67 (n,n') Level
MT= 68 (n,n') Level
MT= 69 (n,n') Level
MT= 70 (n,n') Level
11
85-At-218

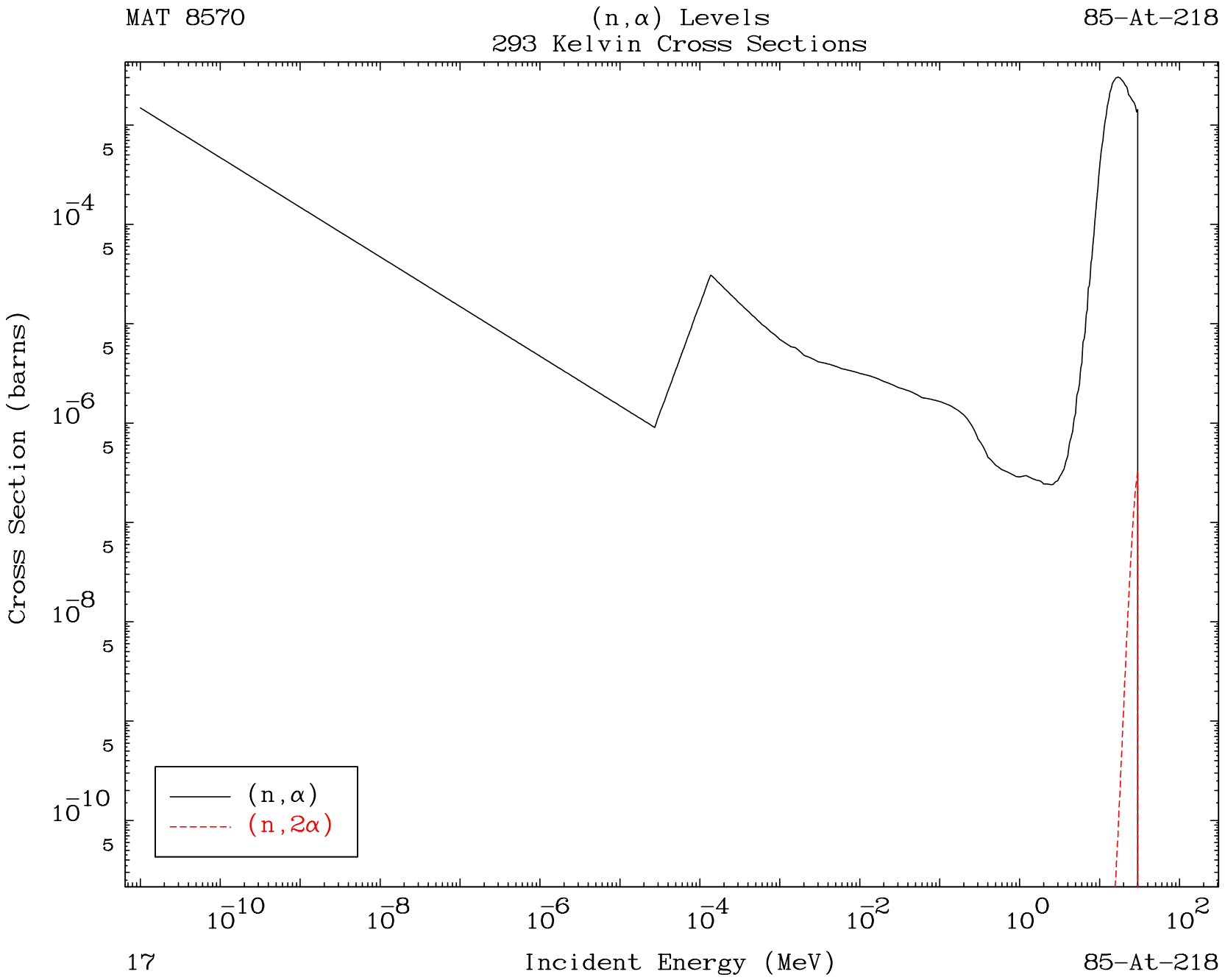

MAT 8570
(n,n') Levels
293 Kelvin Cross Sections
85-At-218
Cross Section (barns)
Incident Energy (MeV)
Inelastic
MT= 71 (n,n') Level
MT= 72 (n,n') Level
MT= 73 (n,n') Level
MT= 74 (n,n') Level
MT= 75 (n,n') Level
MT= 76 (n,n') Level
MT= 77 (n,n') Level
MT= 79 (n,n') Level
(n,n') Continuum
12
85-At-218

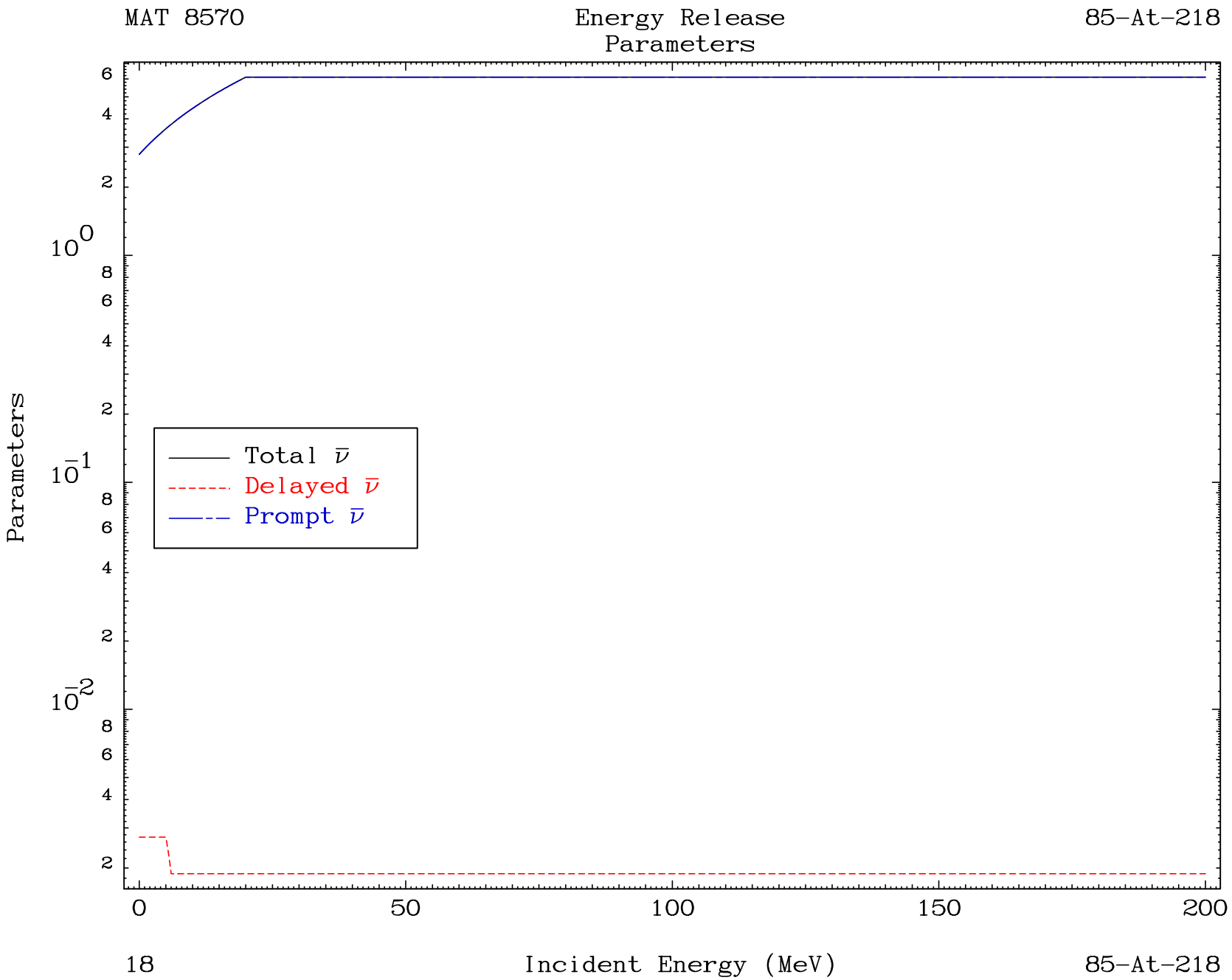

MAT 8570
(n,p) Levels
85-At-218
293 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
13
85-At-218

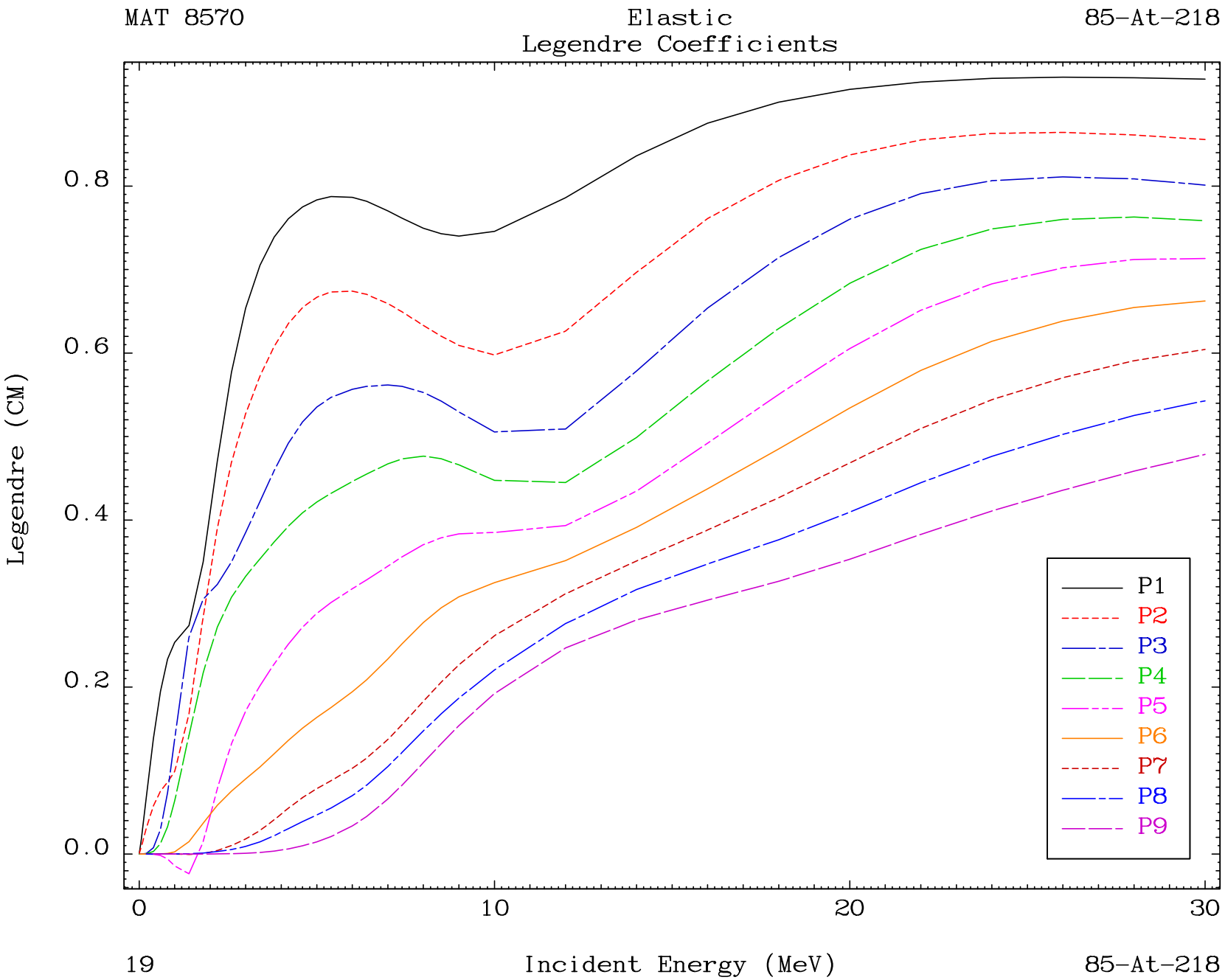

MAT 8570
(n,d) Levels
85-At-218
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
14
85-At-218

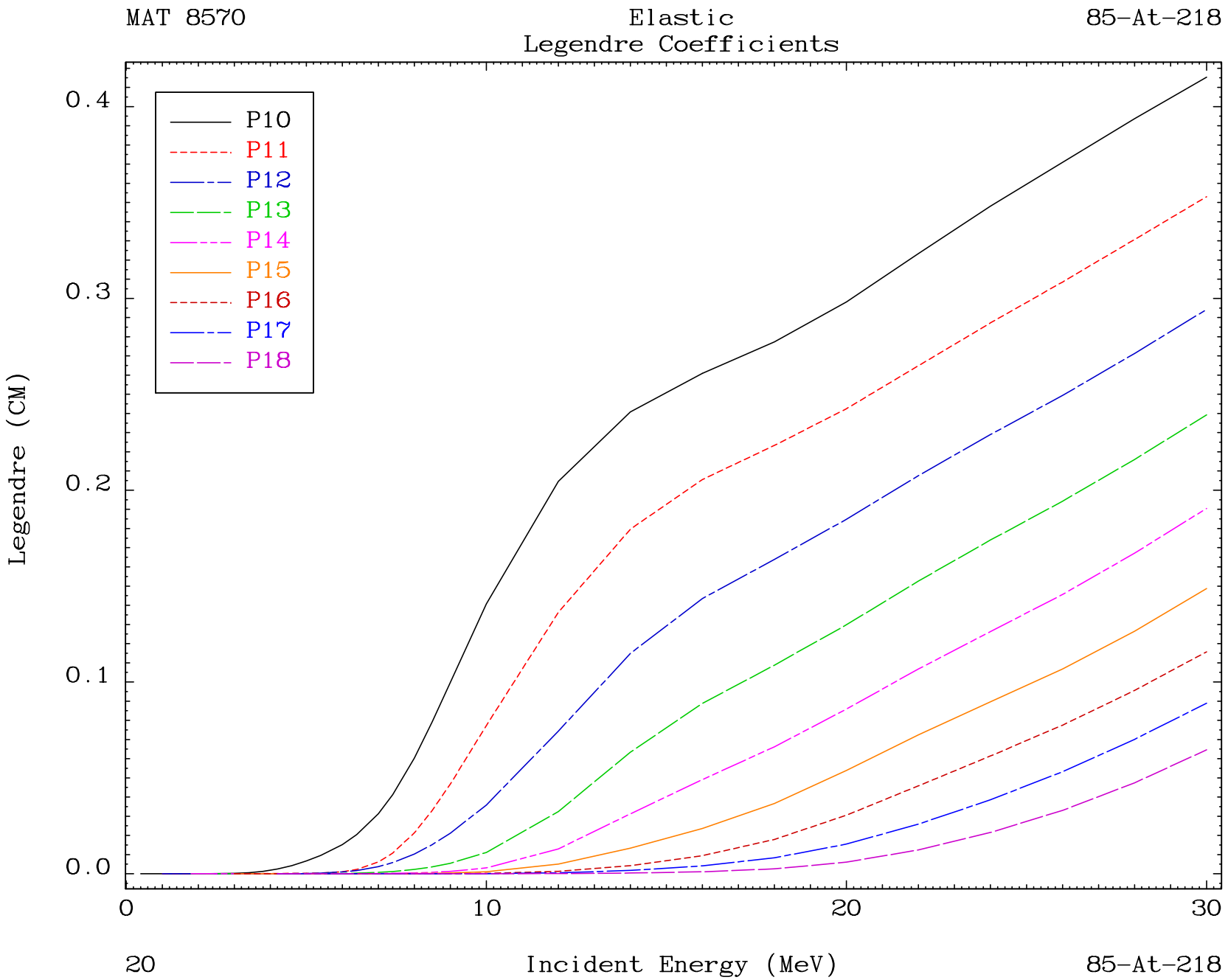

MAT 8570
(n,t) Levels
85-At-218
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
15
85-At-218

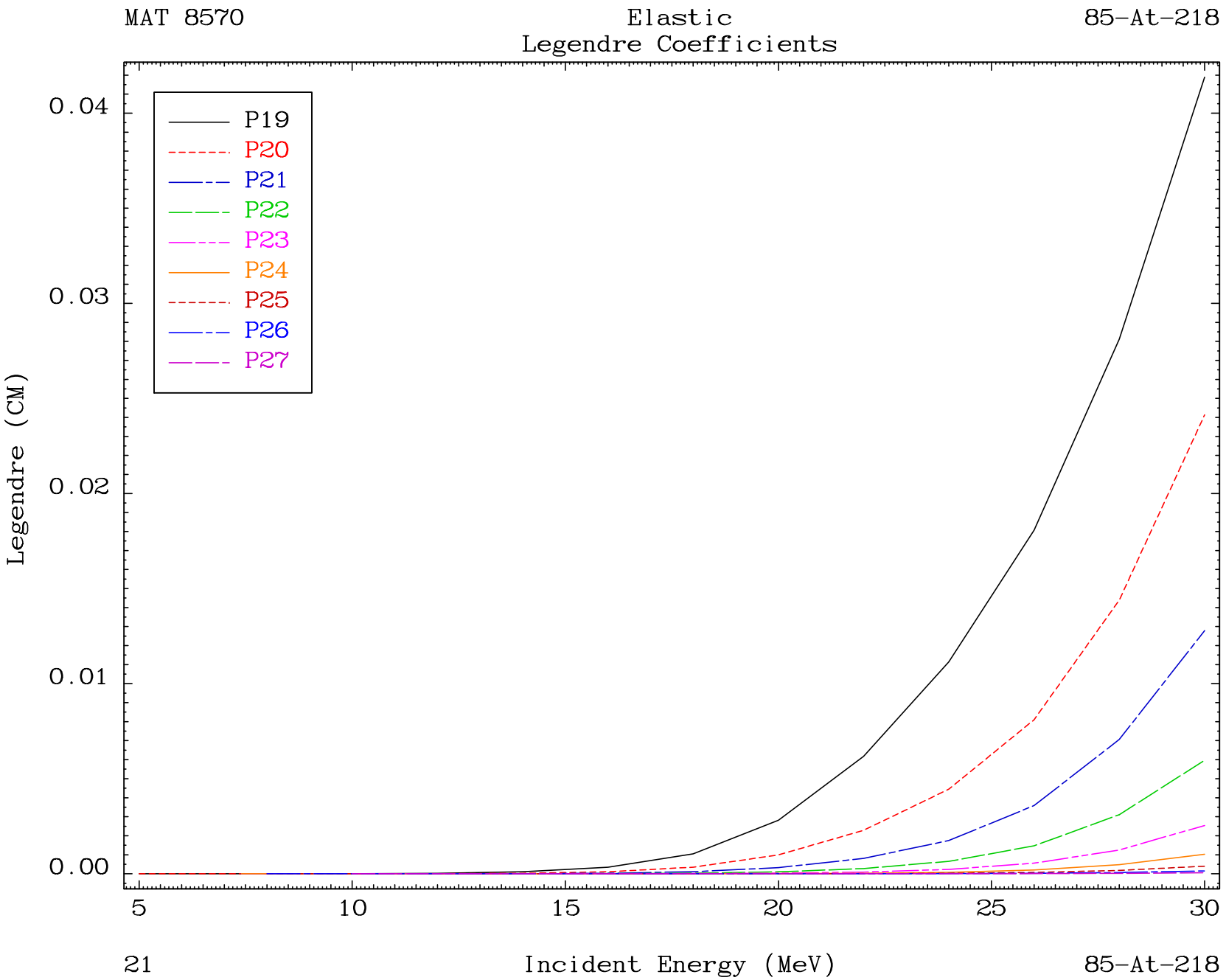

MAT 8570
(n,He3) Levels
85-At-218
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
Incident Energy (MeV)
16
85-At-218

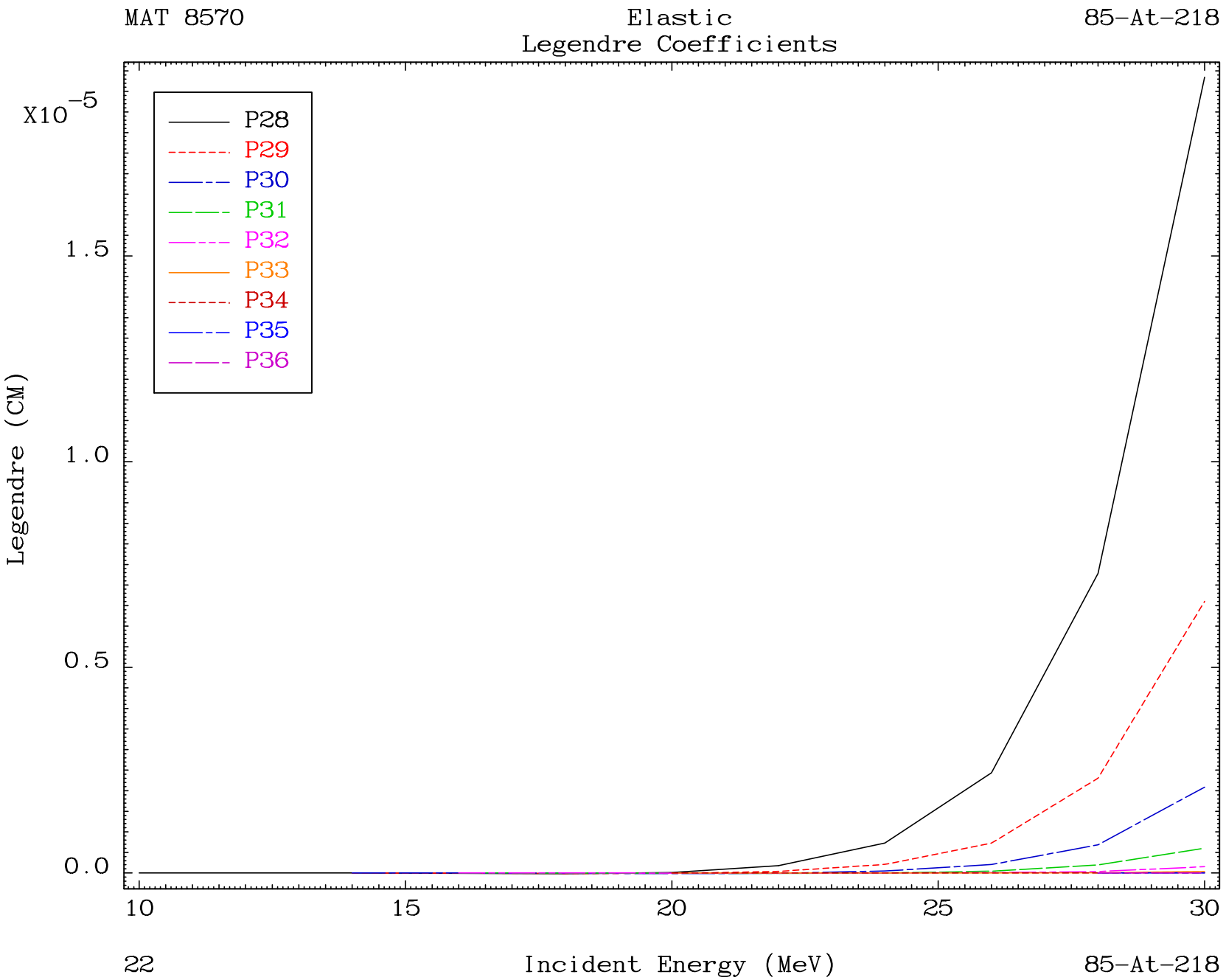

MAT 8570
(n,α) Levels
85-At-218
293 Kelvin Cross Sections
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
(n,α)
(n,2α)
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
17
Incident Energy (MeV)
85-At-218

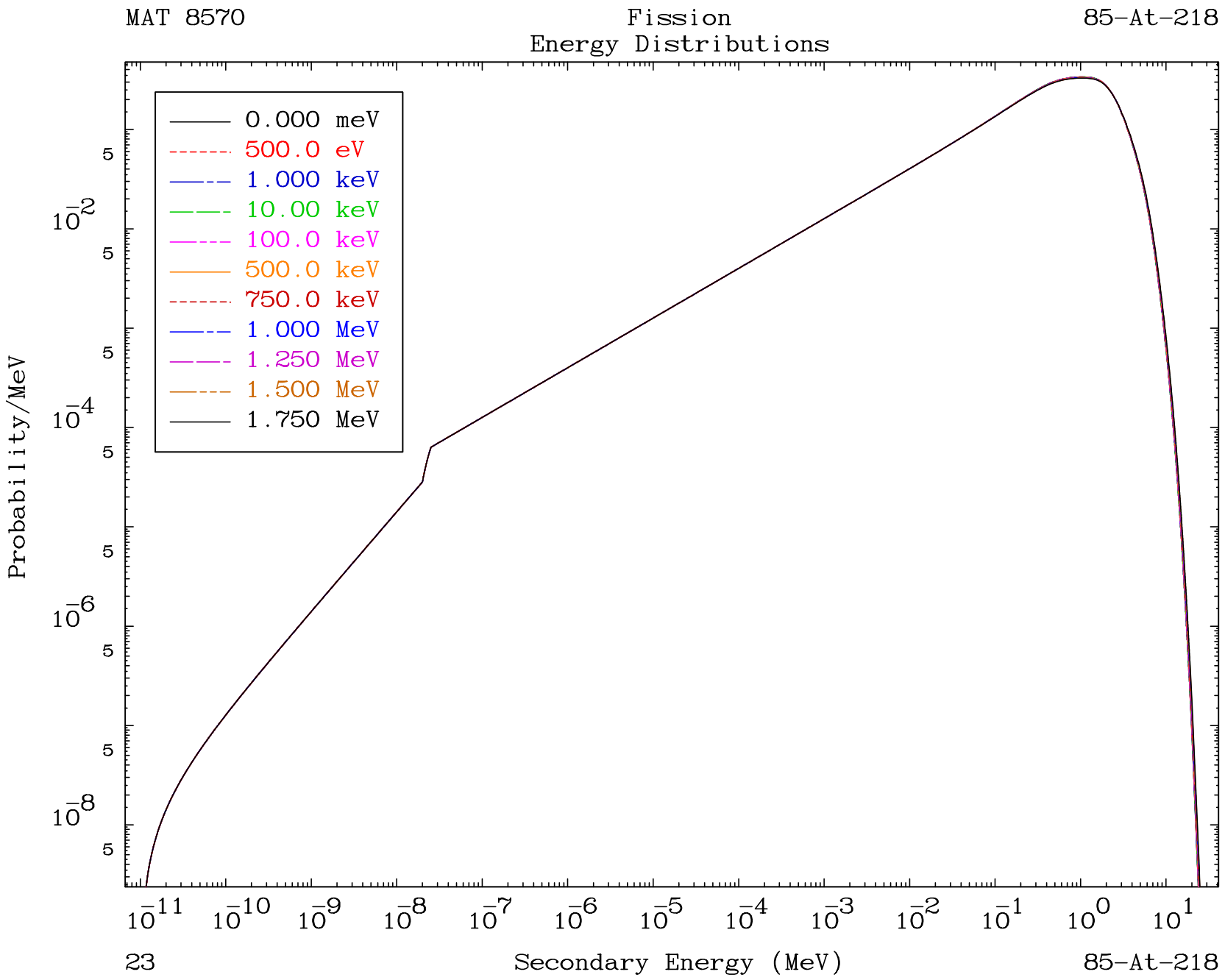

MAT 8570
Energy Release
Parameters
85-At-218
Parameters
Total $\bar{\nu}$
Delayed $\bar{\nu}$
Prompt $\bar{\nu}$
0
50
100
150
200
18
Incident Energy (MeV)
85-At-218

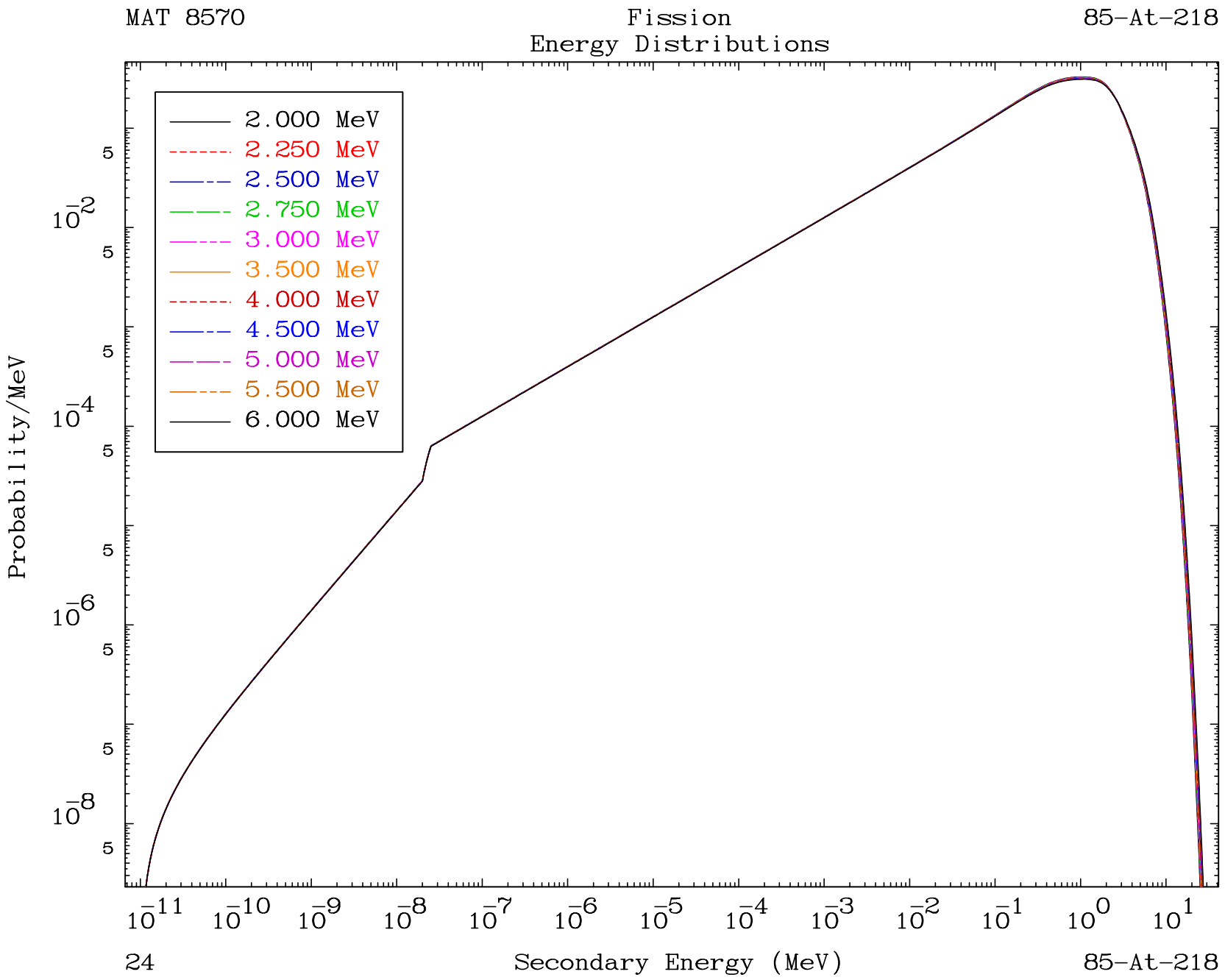

MAT 8570
Elastic
Legendre Coefficients
85-At-218
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
19
Incident Energy (MeV)
85-At-218
P1
P2
P3
P4
P5
P6
P7
P8
P9

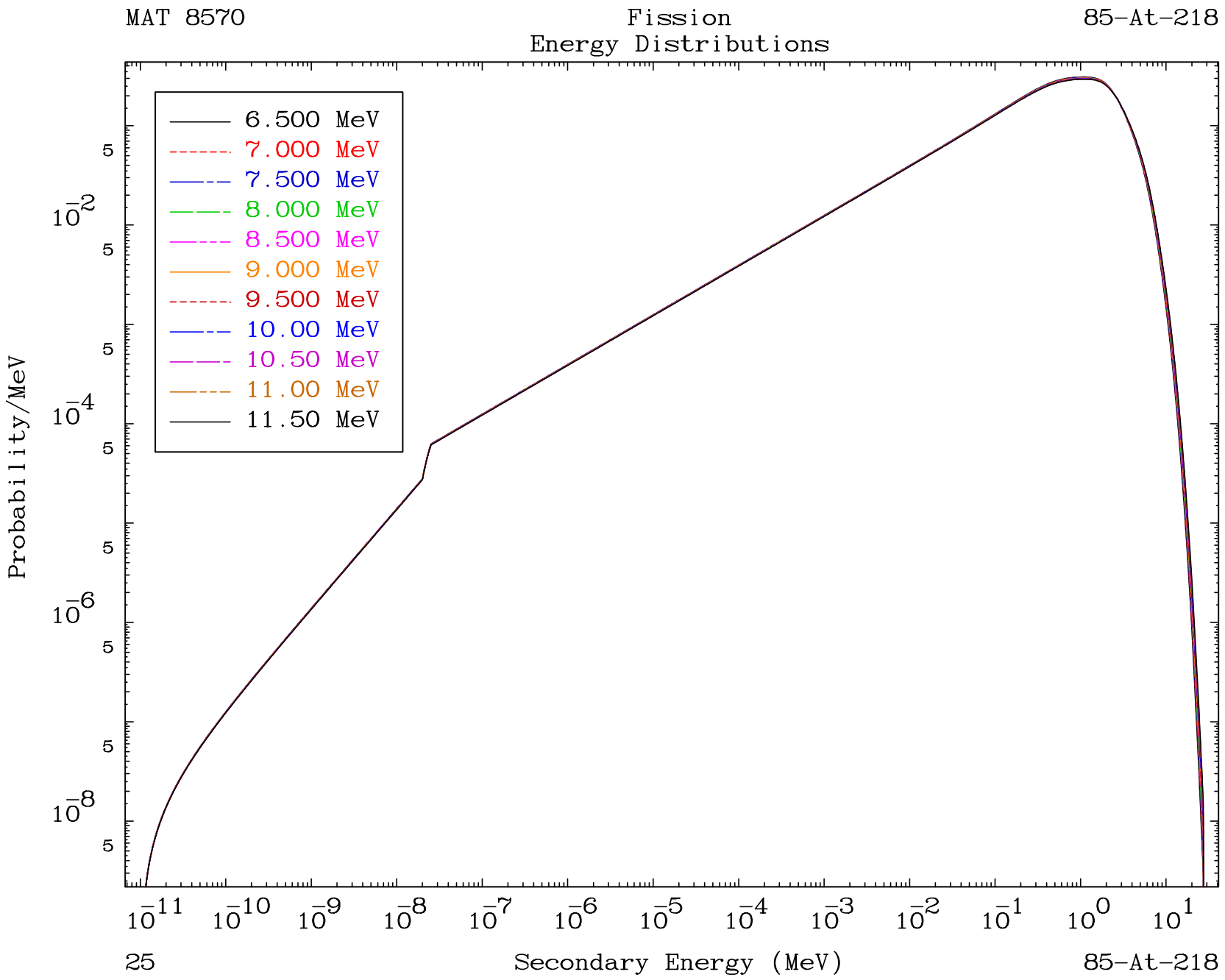

MAT 8570
Elastic
Legendre Coefficients
85-At-218
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
10
20
30
20
Incident Energy (MeV)
85-At-218

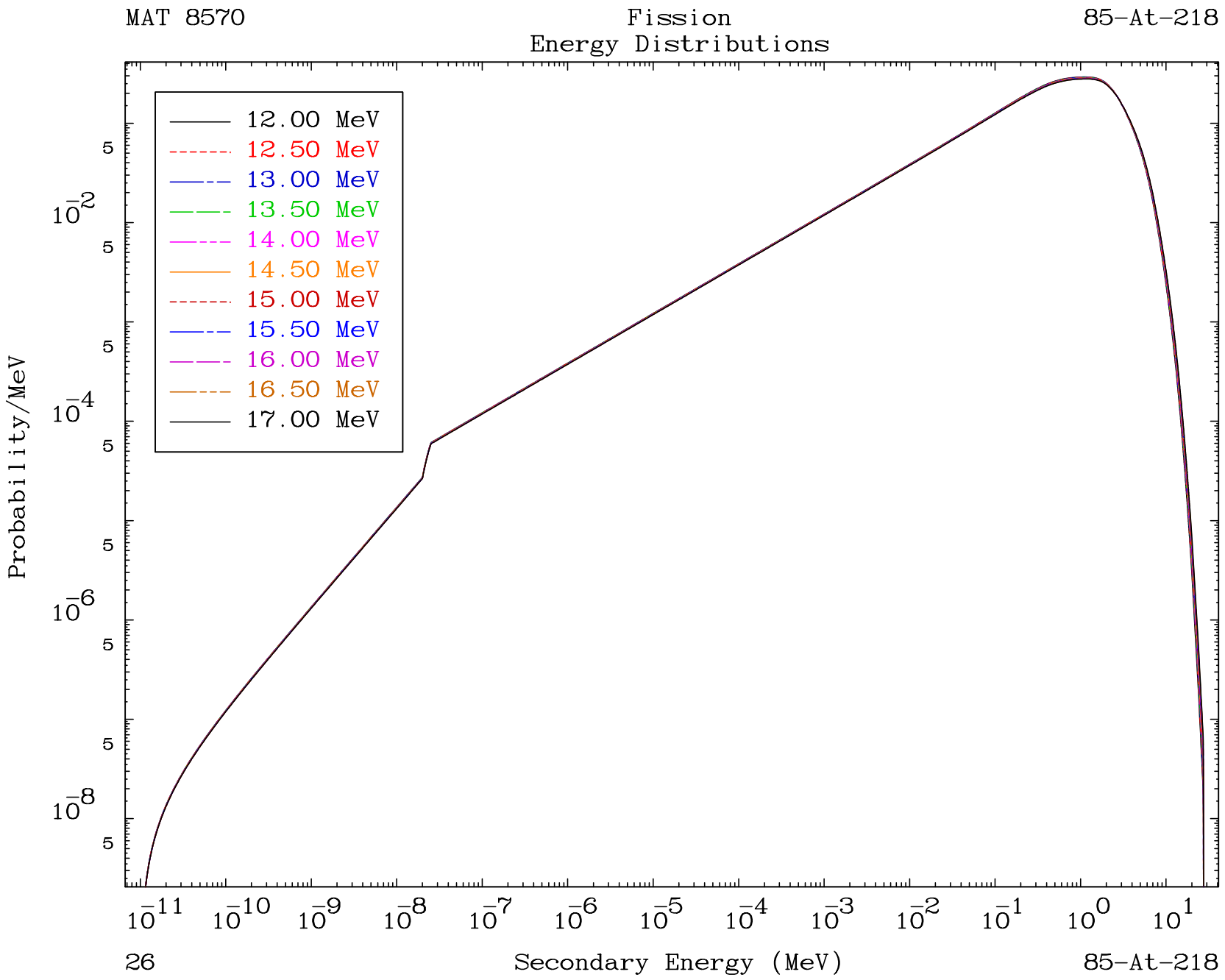

MAT 8570
Elastic
Legendre Coefficients
85-At-218
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.04
0.03
0.02
0.01
0.00
Legendre (CM)
5
10
15
20
25
30
21
Incident Energy (MeV)
85-At-218

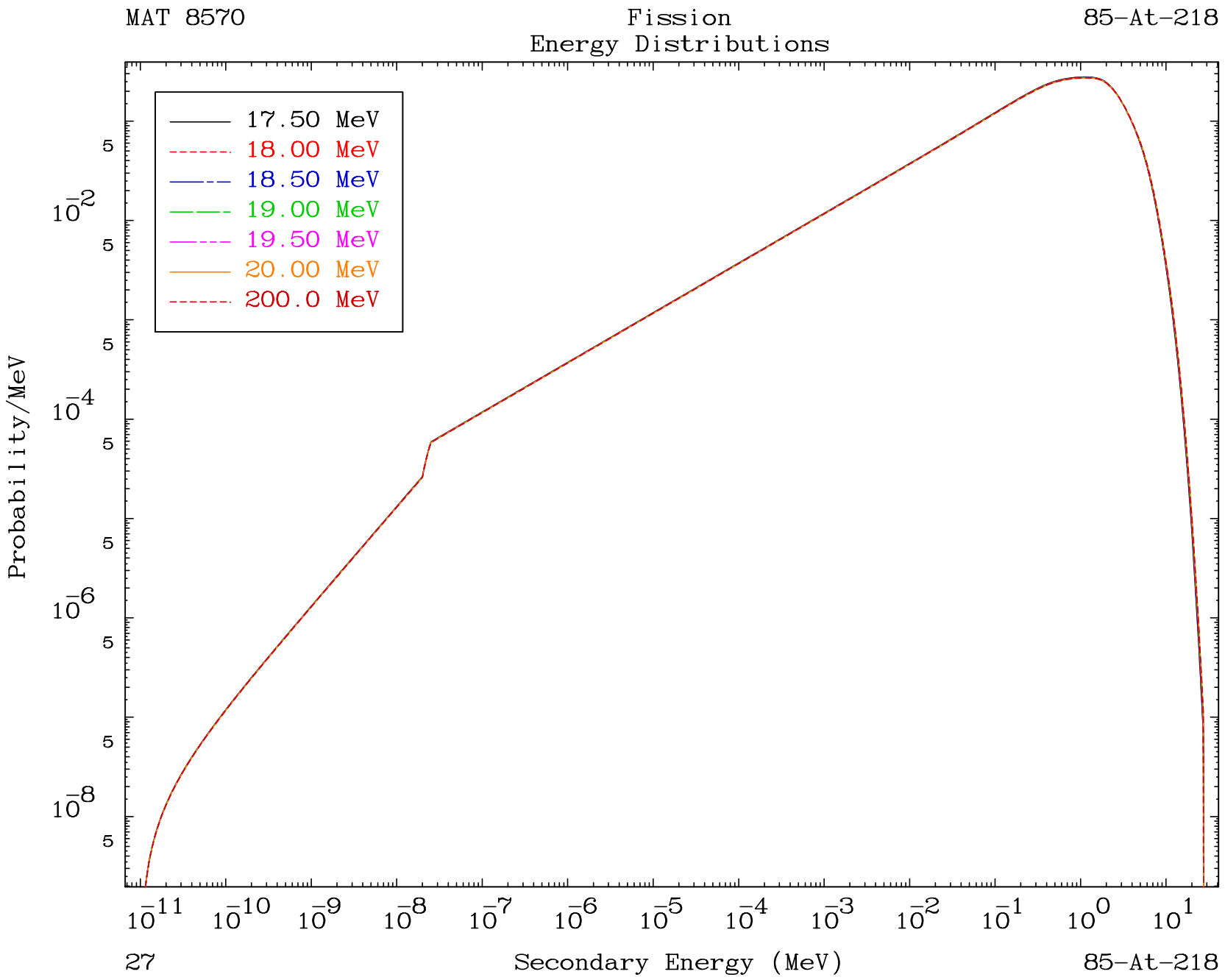

MAT 8570
Elastic
Legendre Coefficients
85-At-218
X10^-5
1.5
1.0
0.5
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
10
15
20
25
30
22
Incident Energy (MeV)
85-At-218

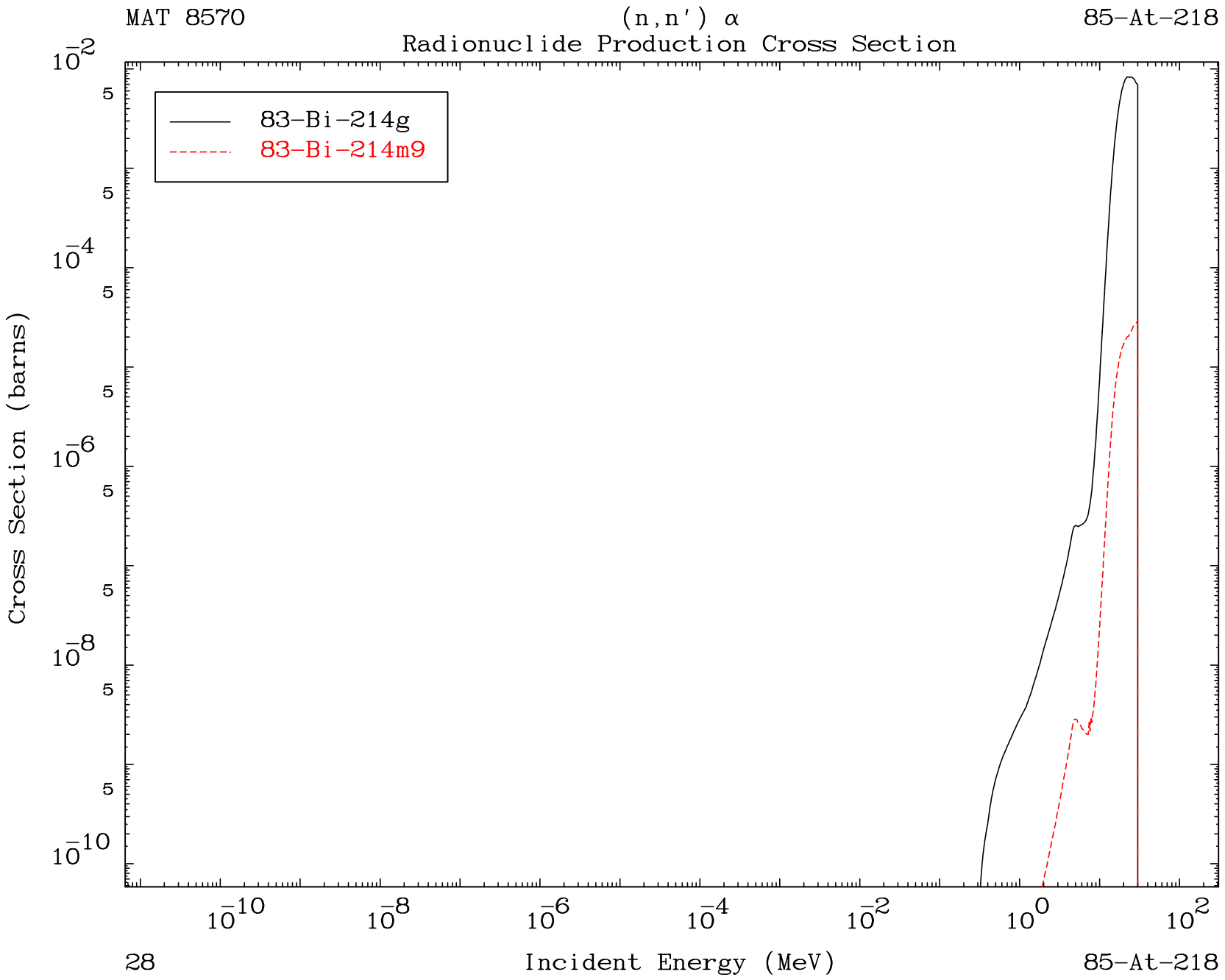

MAT 8570
Fission
85-At-218
Energy Distributions
0.000 meV
500.0 eV
1.000 keV
10.00 keV
100.0 keV
500.0 keV
750.0 keV
1.000 MeV
1.250 MeV
1.500 MeV
1.750 MeV
Probability/MeV
Secondary Energy (MeV)
23
85-At-218

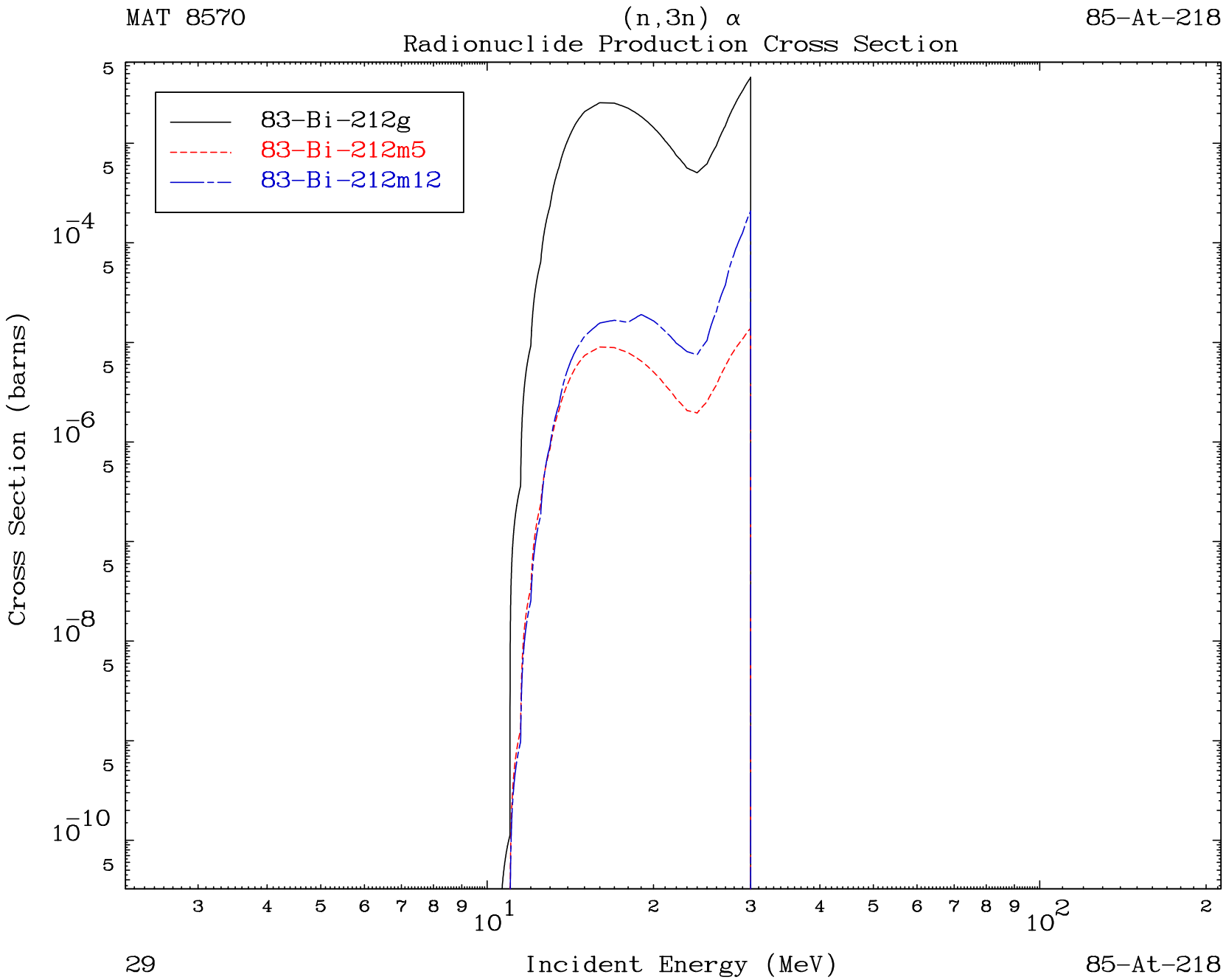

MAT 8570
Fission
85-At-218
Energy Distributions
2.000 MeV
2.250 MeV
2.500 MeV
2.750 MeV
3.000 MeV
3.500 MeV
4.000 MeV
4.500 MeV
5.000 MeV
5.500 MeV
6.000 MeV
Probability/MeV
Secondary Energy (MeV)
24
85-At-218

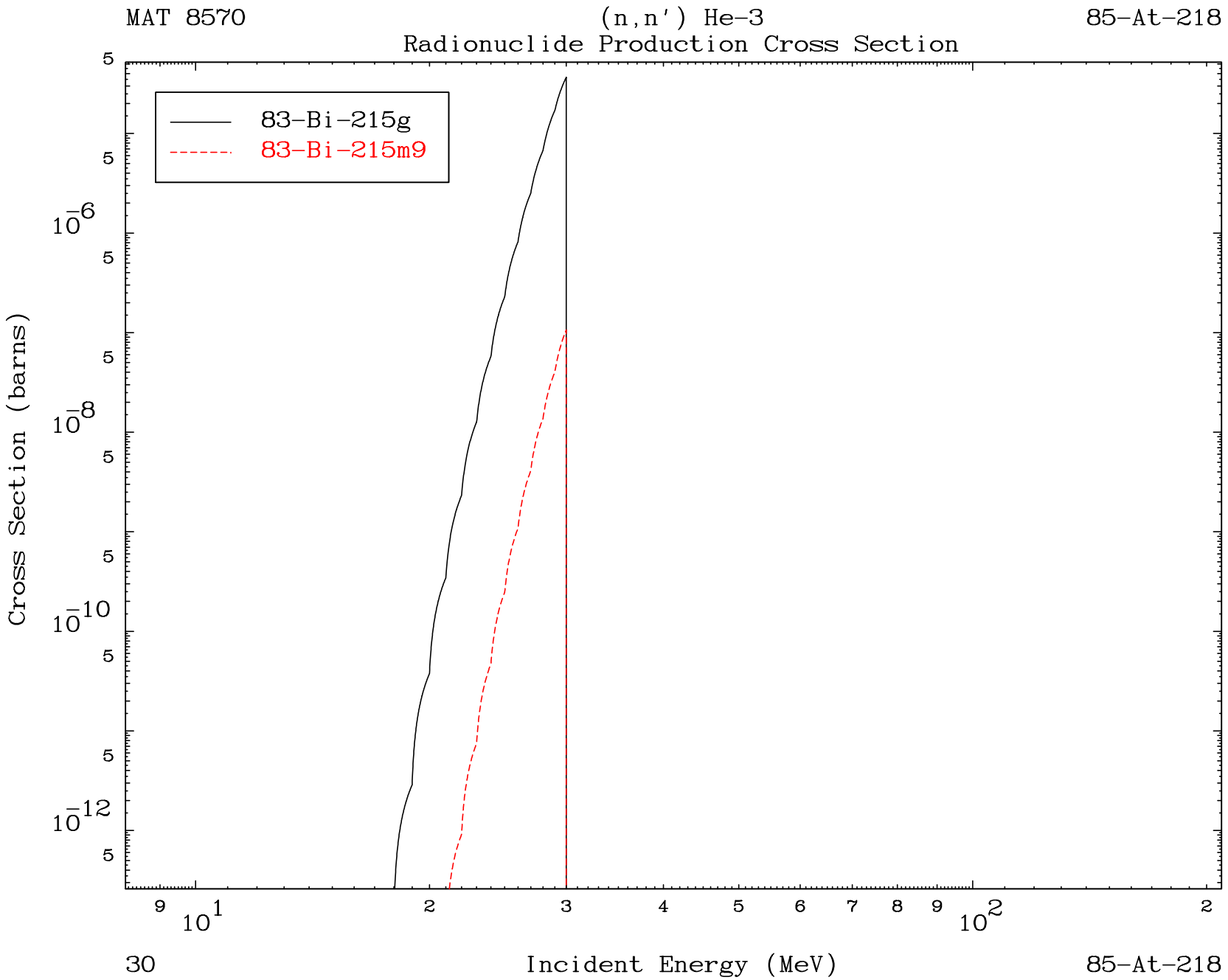

MAT 8570
Fission
Energy Distributions
85-At-218
6.500 MeV
7.000 MeV
7.500 MeV
8.000 MeV
8.500 MeV
9.000 MeV
9.500 MeV
10.00 MeV
10.50 MeV
11.00 MeV
11.50 MeV
Probability/MeV
Secondary Energy (MeV)
25
85-At-218

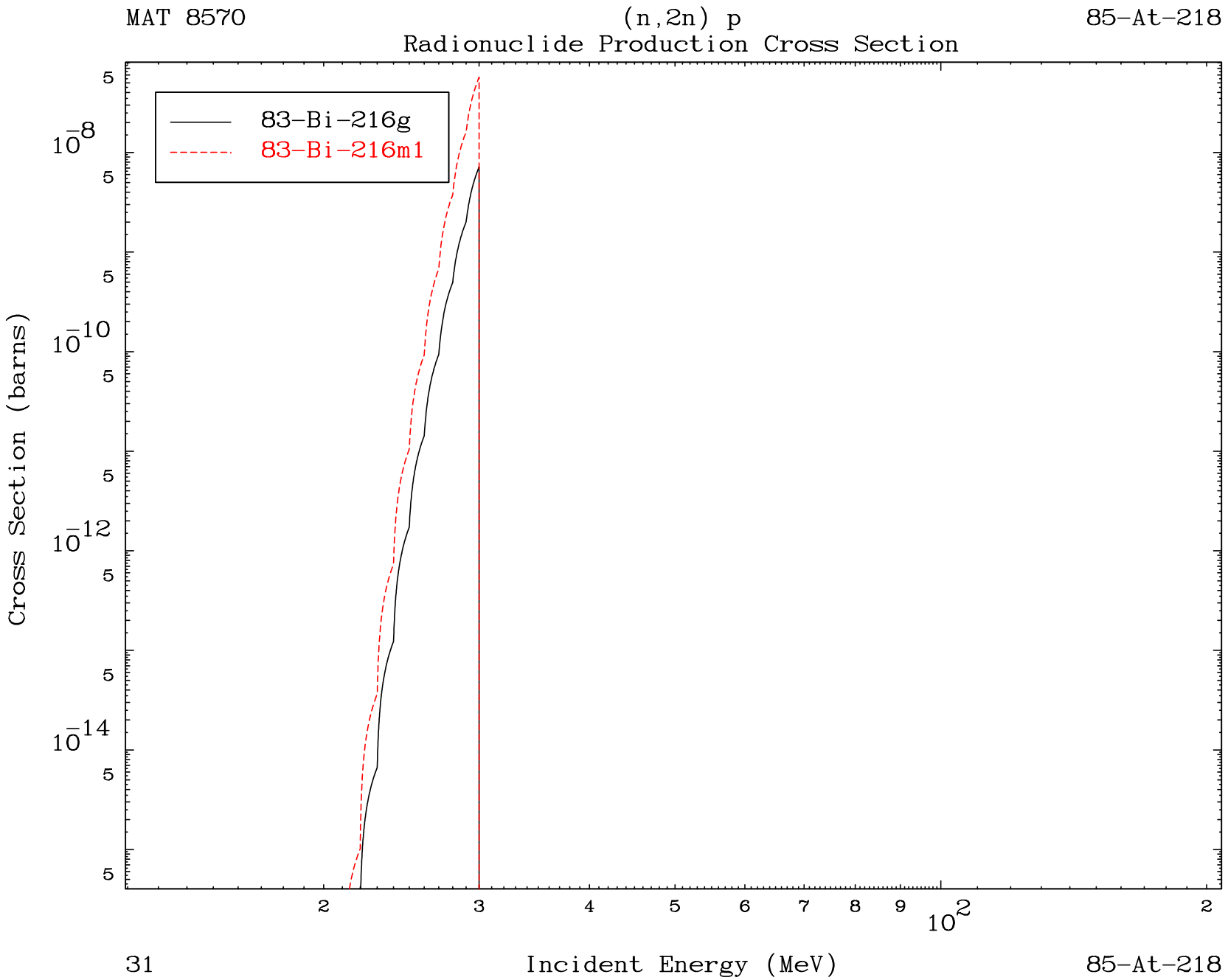

MAT 8570
Fission
85-At-218
Energy Distributions
12.00 MeV
12.50 MeV
13.00 MeV
13.50 MeV
14.00 MeV
14.50 MeV
15.00 MeV
15.50 MeV
16.00 MeV
16.50 MeV
17.00 MeV
Probability/MeV
Secondary Energy (MeV)
26
85-At-218

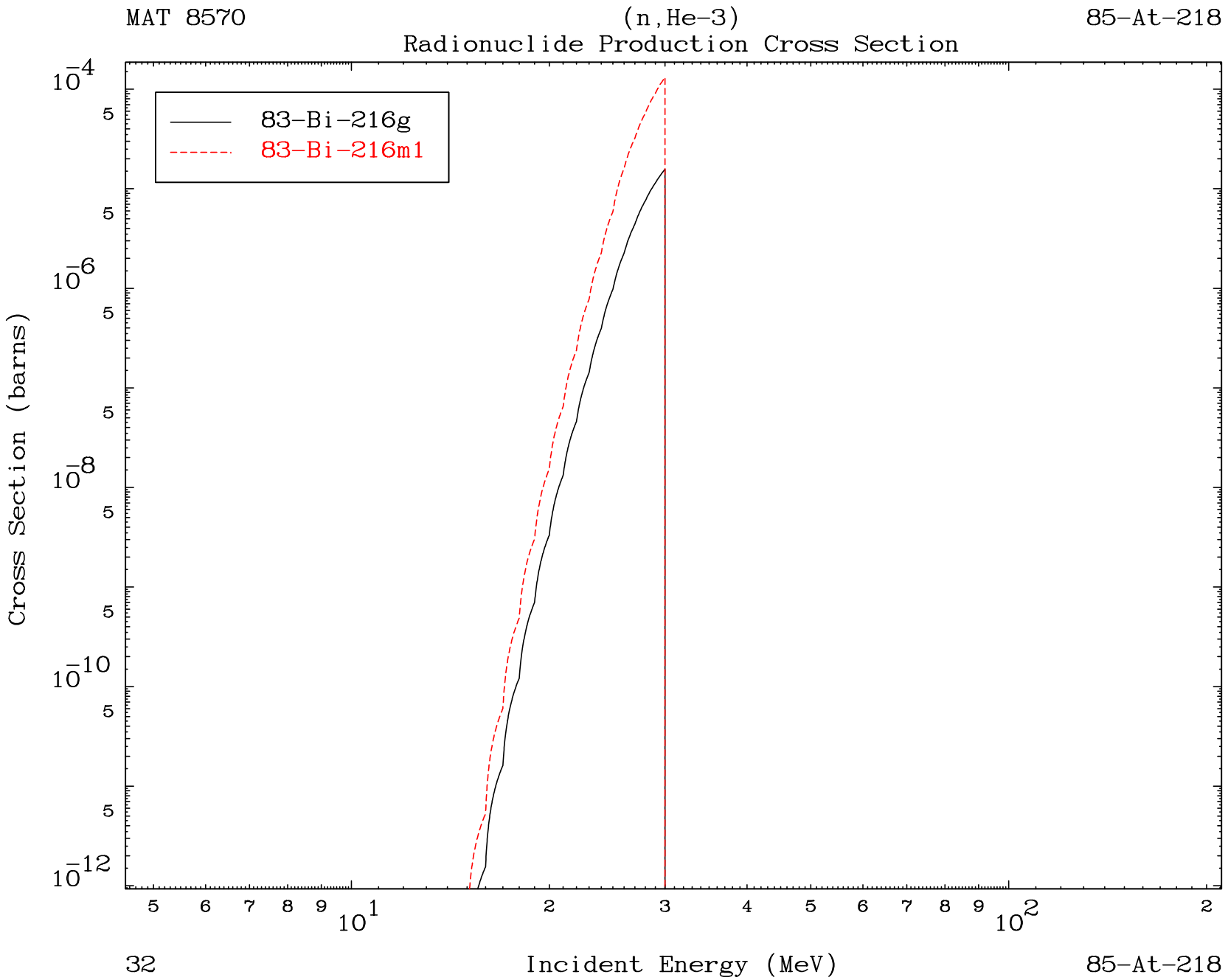

MAT 8570
Fission
Energy Distributions
85-At-218
17.50 MeV
18.00 MeV
18.50 MeV
19.00 MeV
19.50 MeV
20.00 MeV
200.0 MeV
Probability/MeV
Secondary Energy (MeV)
27
85-At-218

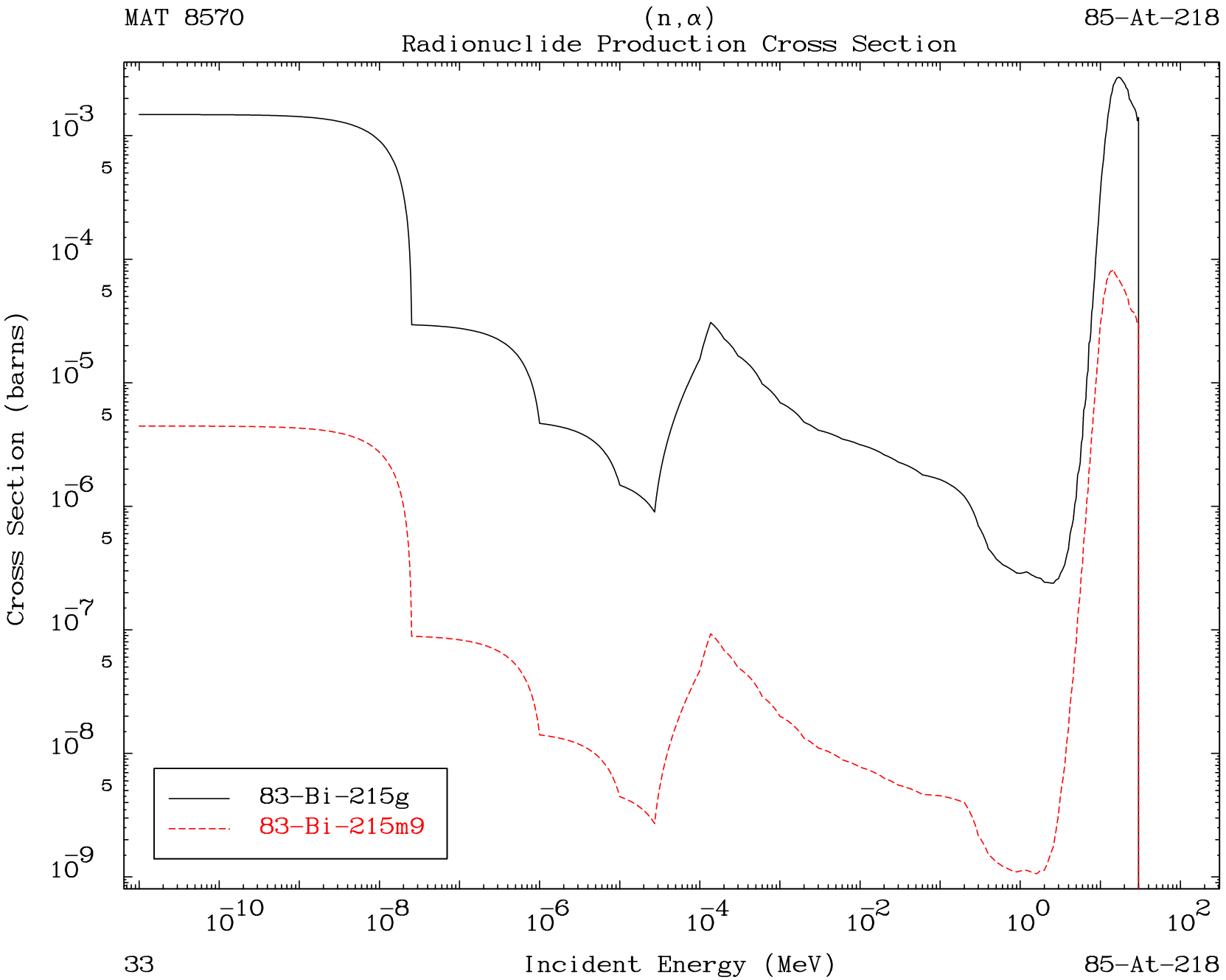

MAT 8570
(n,n') α
85-At-218
Radionuclide Production Cross Section
83-Bi-214g
83-Bi-214m9
Cross Section (barns)
Incident Energy (MeV)
28
85-At-218

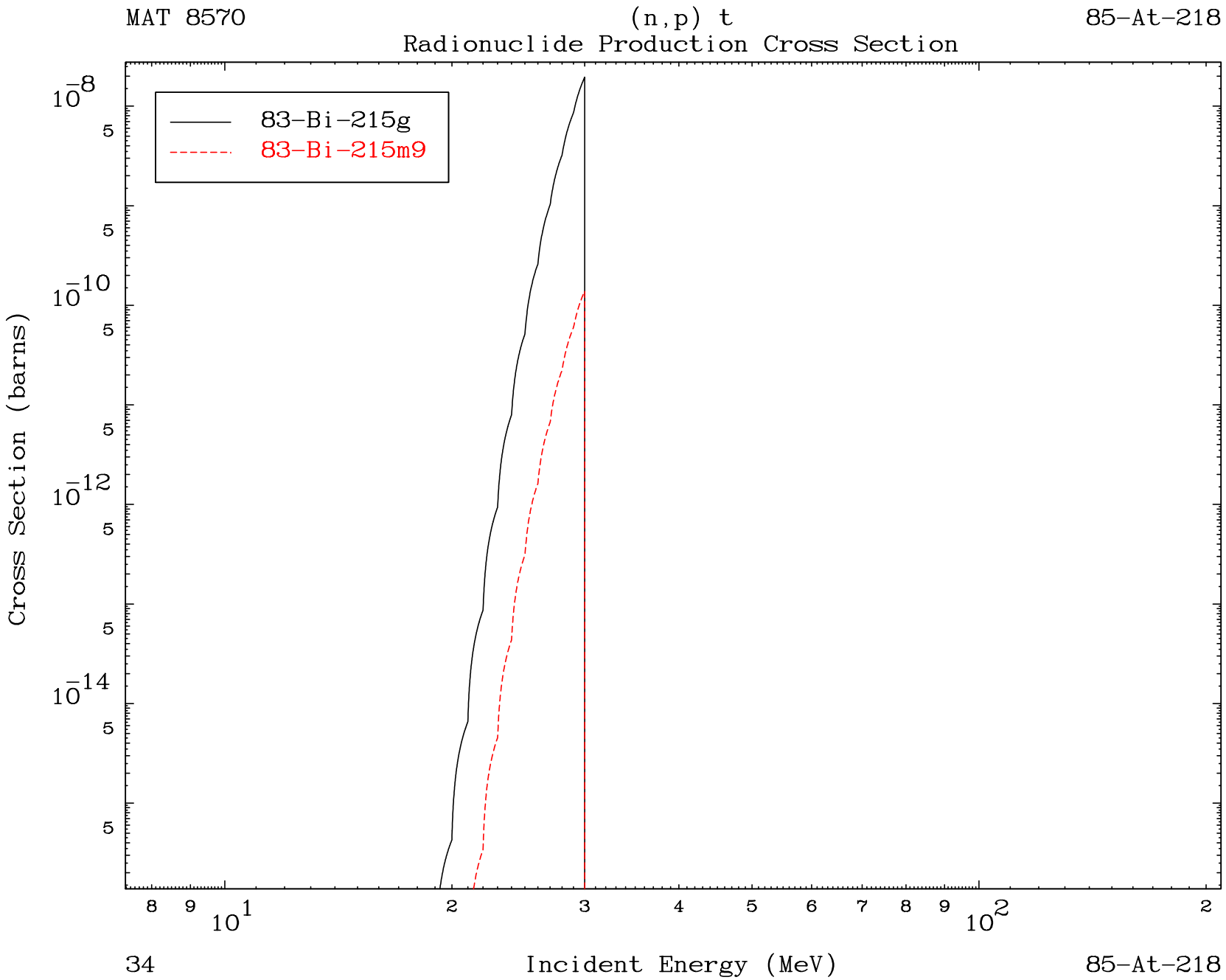

MAT 8570
(n,3n) α
85-At-218
Radionuclide Production Cross Section
83-Bi-212g
83-Bi-212m5
83-Bi-212m12
Cross Section (barns)
Incident Energy (MeV)
29
85-At-218


MAT 8570
(n,n') He-3
85-At-218
Radionuclide Production Cross Section
83-Bi-215g
83-Bi-215m9
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
9
10^1
2
3
4
5
6
7
8
9
10^2
2
30
Incident Energy (MeV)
85-At-218


MAT 8570
(n,2n) p
85-At-218
Radionuclide Production Cross Section
83-Bi-216g
83-Bi-216m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
2
3
4
5
6
7
8
9
10^2
2
31
Incident Energy (MeV)
85-At-218


MAT 8570
(n,He-3)
85-At-218
Radionuclide Production Cross Section
83-Bi-216g
83-Bi-216m1
Cross Section (barns)
Incident Energy (MeV)
32
85-At-218


MAT 8570
(n,α)
85-At-218
Radionuclide Production Cross Section
Cross Section (barns)
10-3
5
10-4
5
10-5
5
10-6
5
10-7
5
10-8
5
10-9
83-Bi-215g
83-Bi-215m9
10-10
10-8
10-6
10-4
10-2
100
102
33
Incident Energy (MeV)
85-At-218


MAT 8570
(n,p) t
85-At-218
Radionuclide Production Cross Section
83-Bi-215g
83-Bi-215m9
Cross Section (barns)
Incident Energy (MeV)
34
85-At-218