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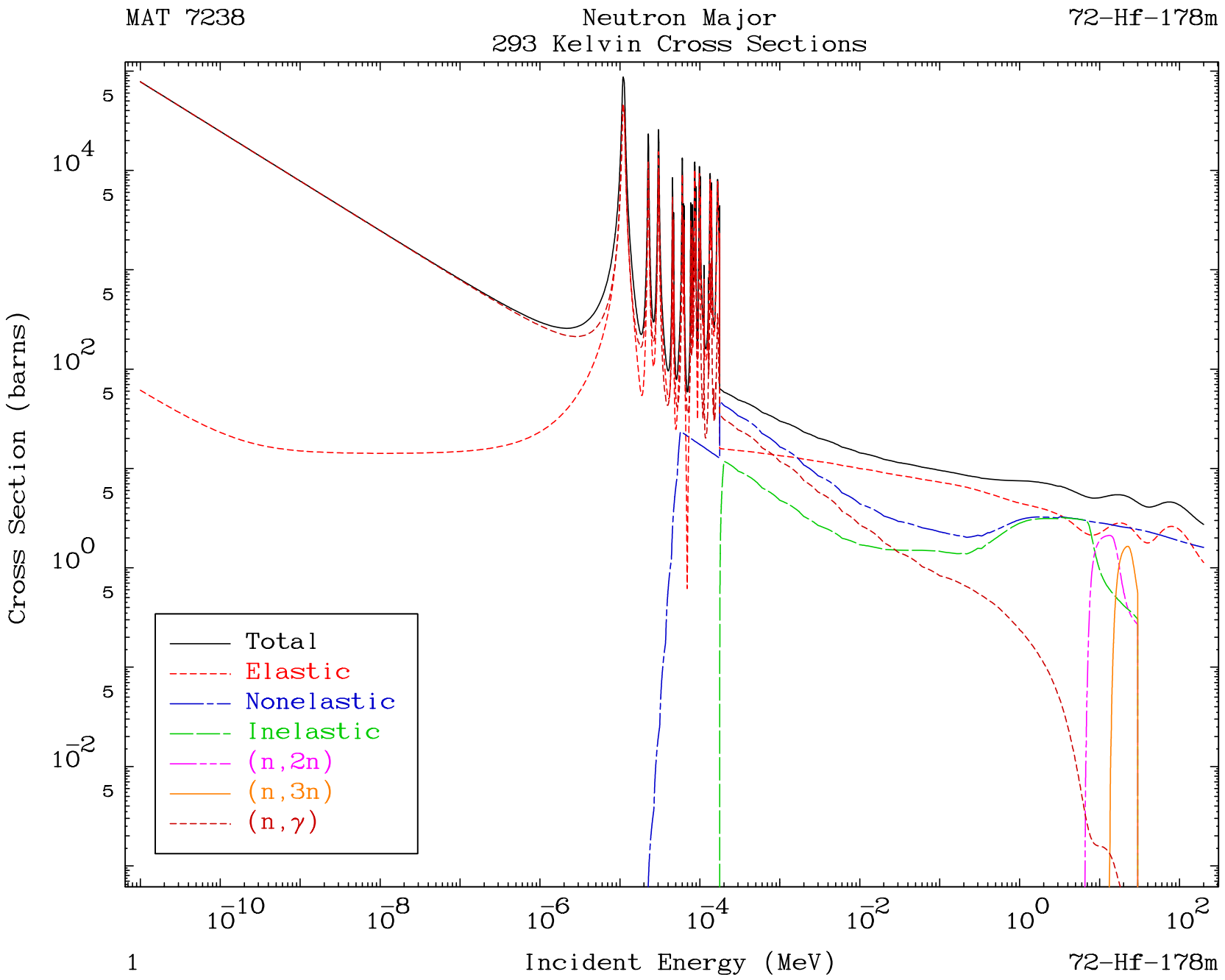
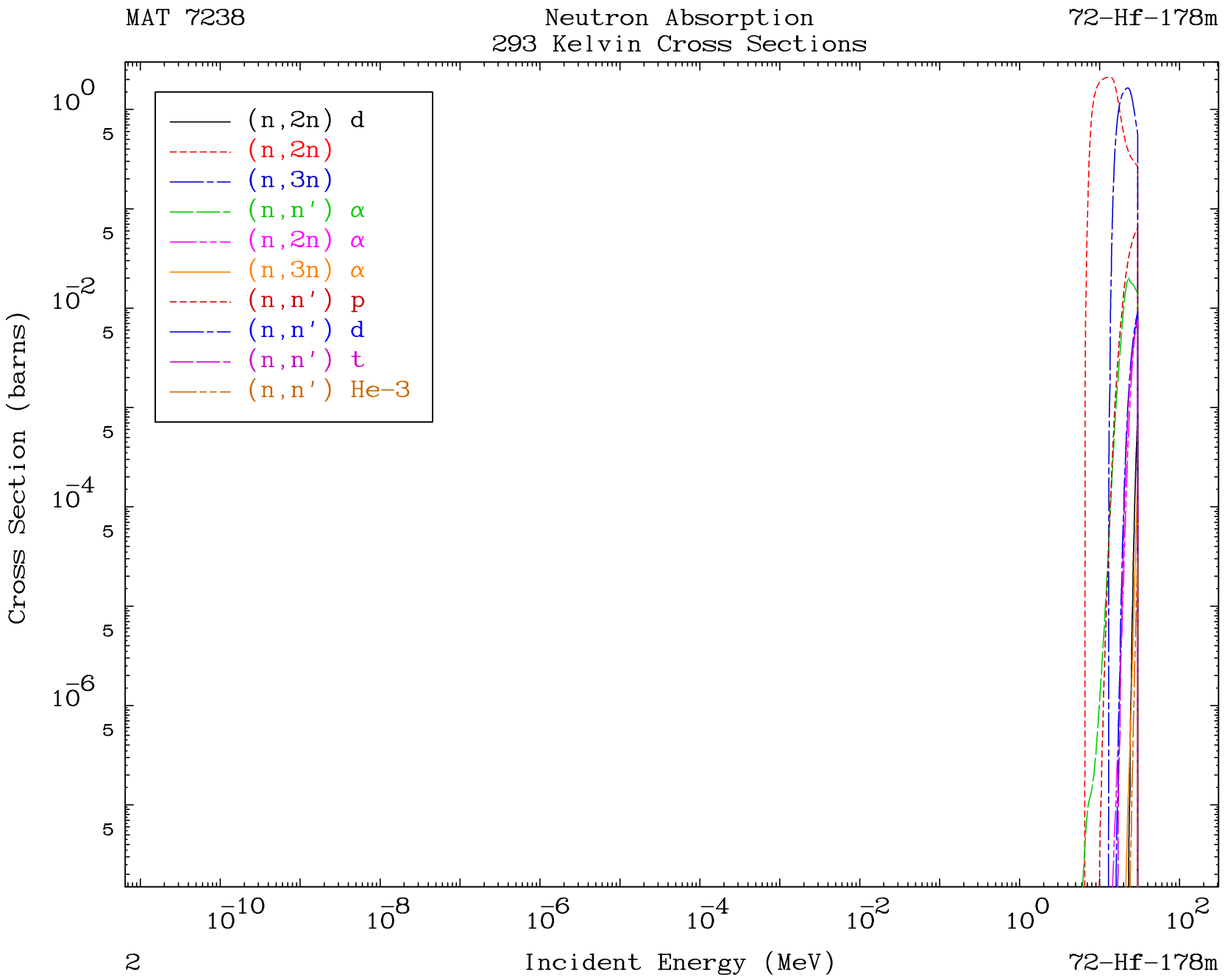
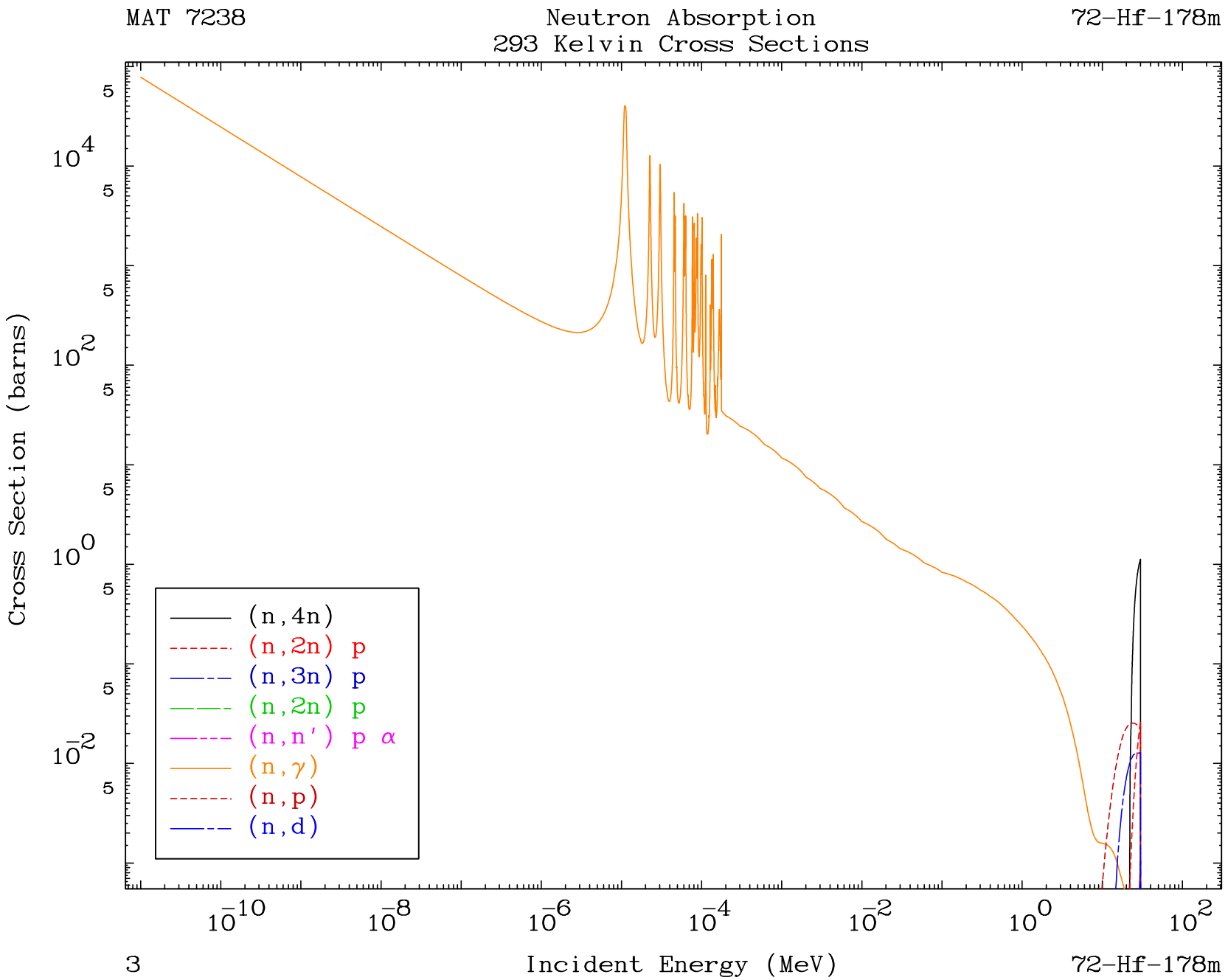
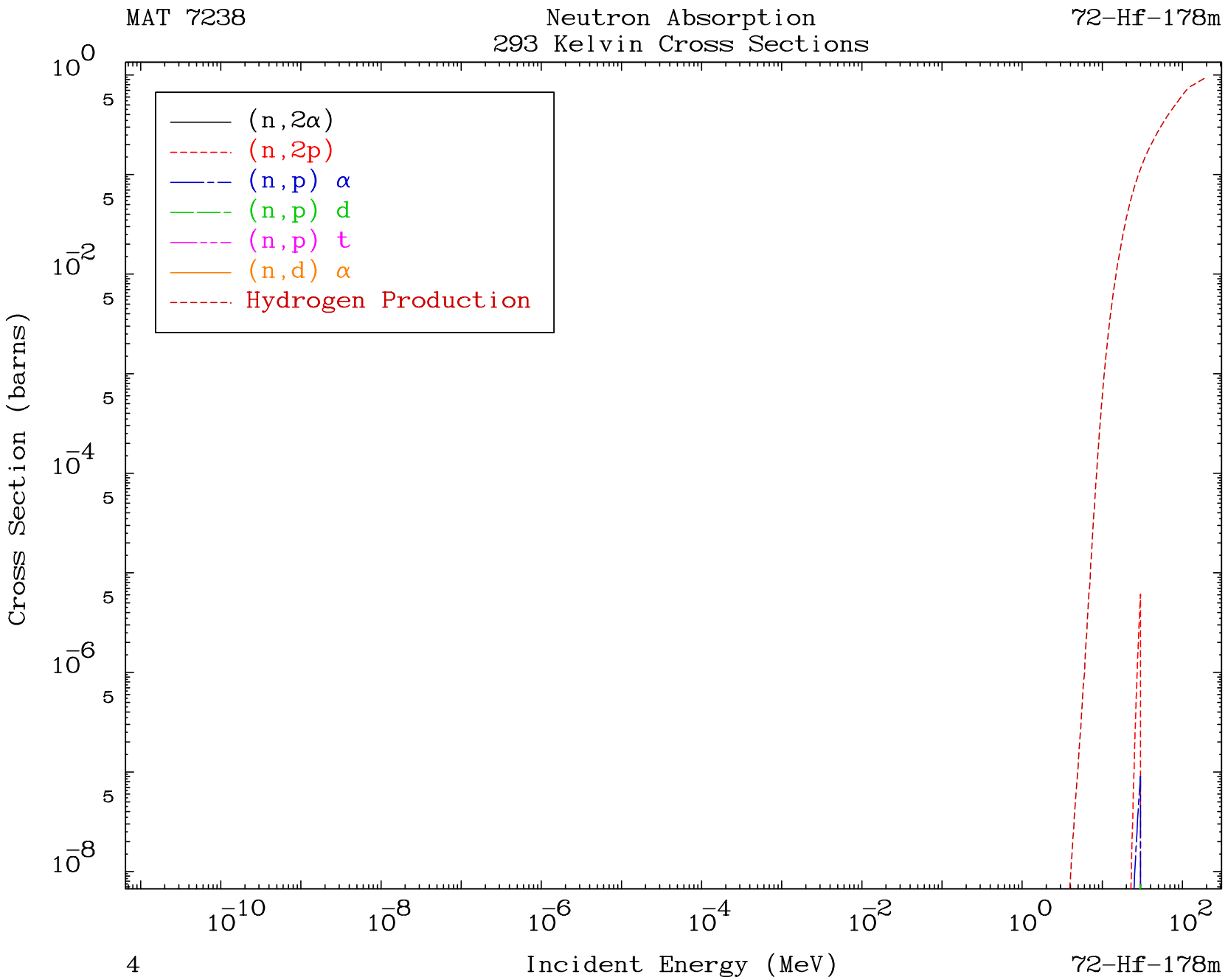
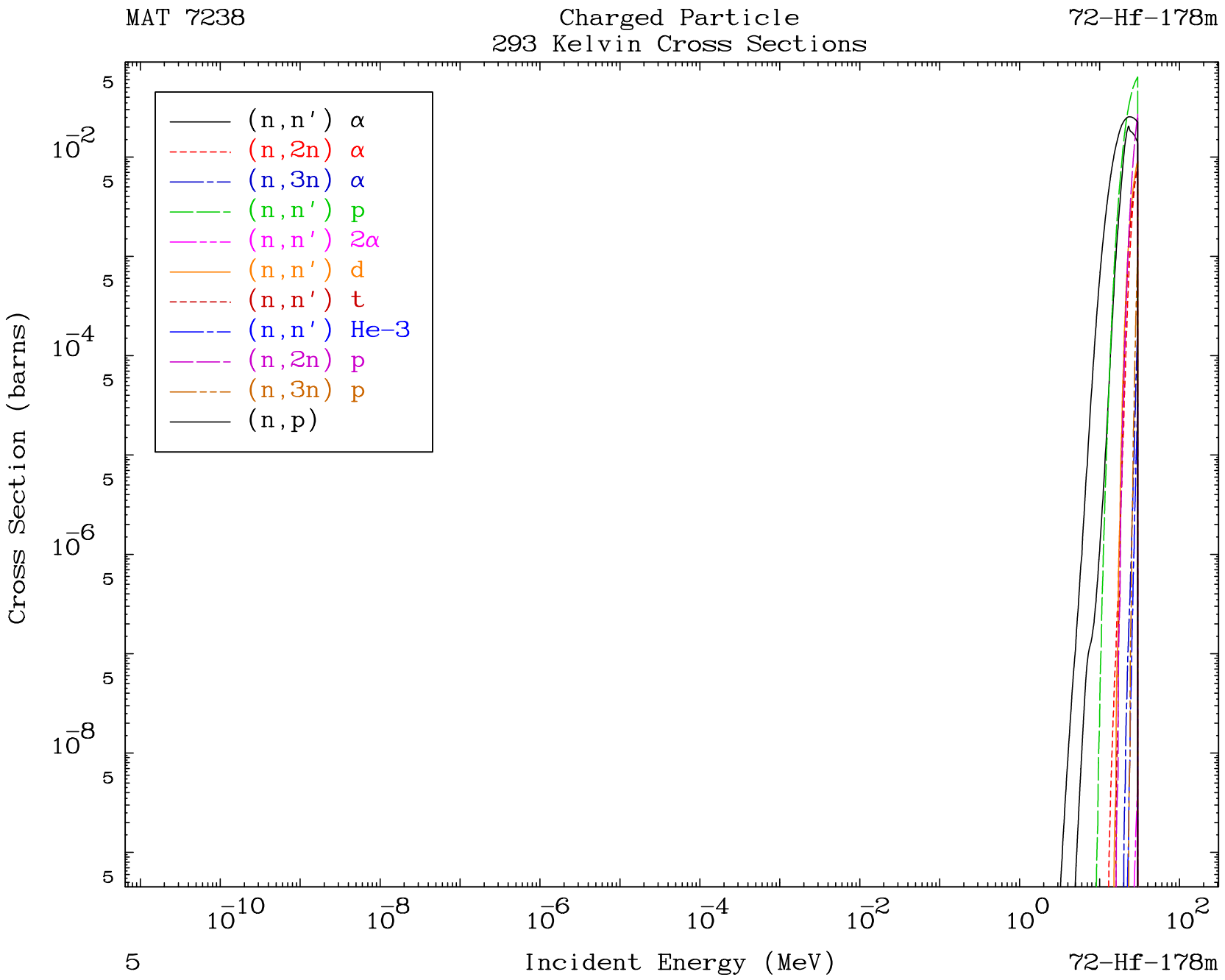
Press Mouse Button to Start

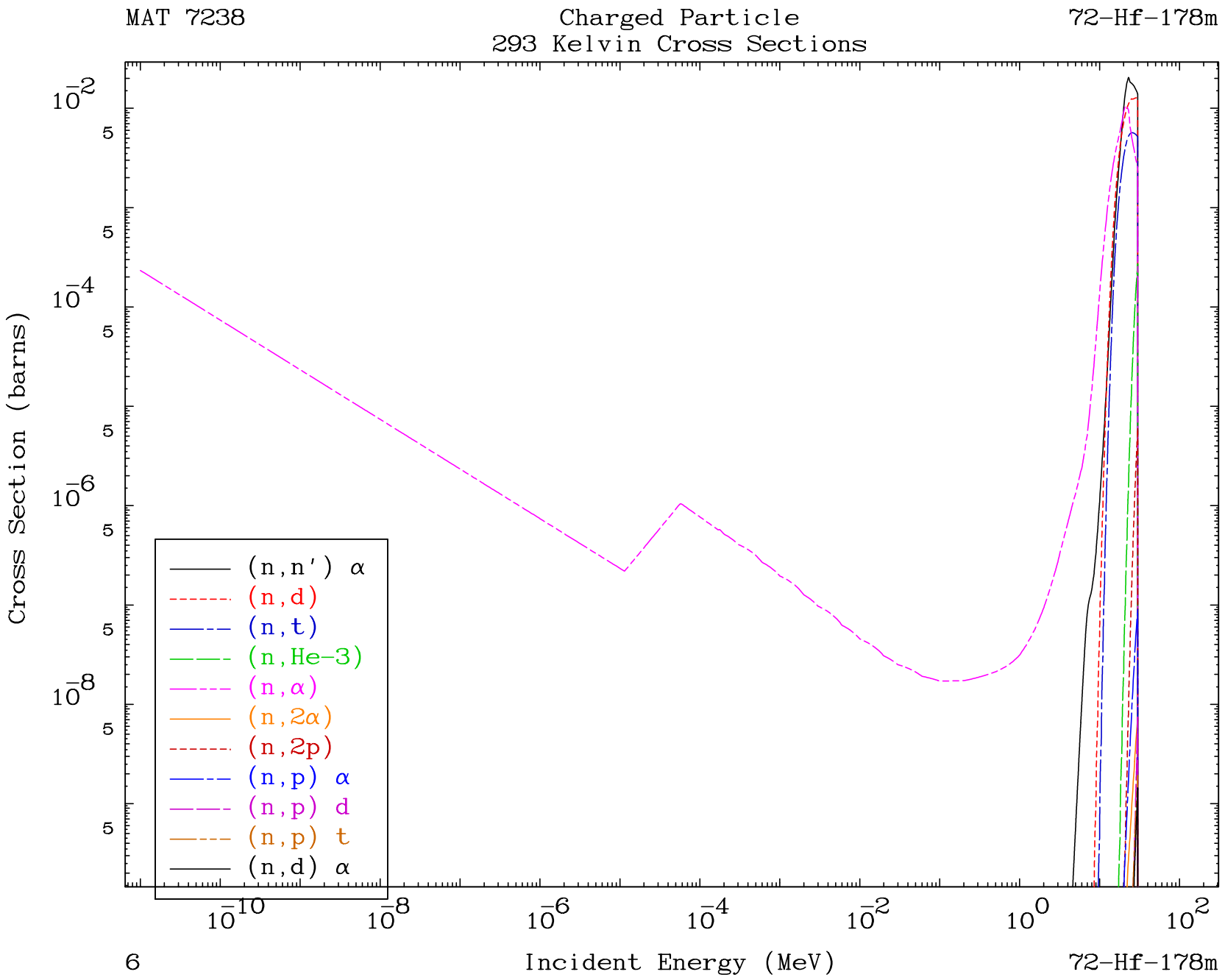

MAT 7238
Neutron Major
293 Kelvin Cross Sections
72-Hf-178m
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
72-Hf-178m
1

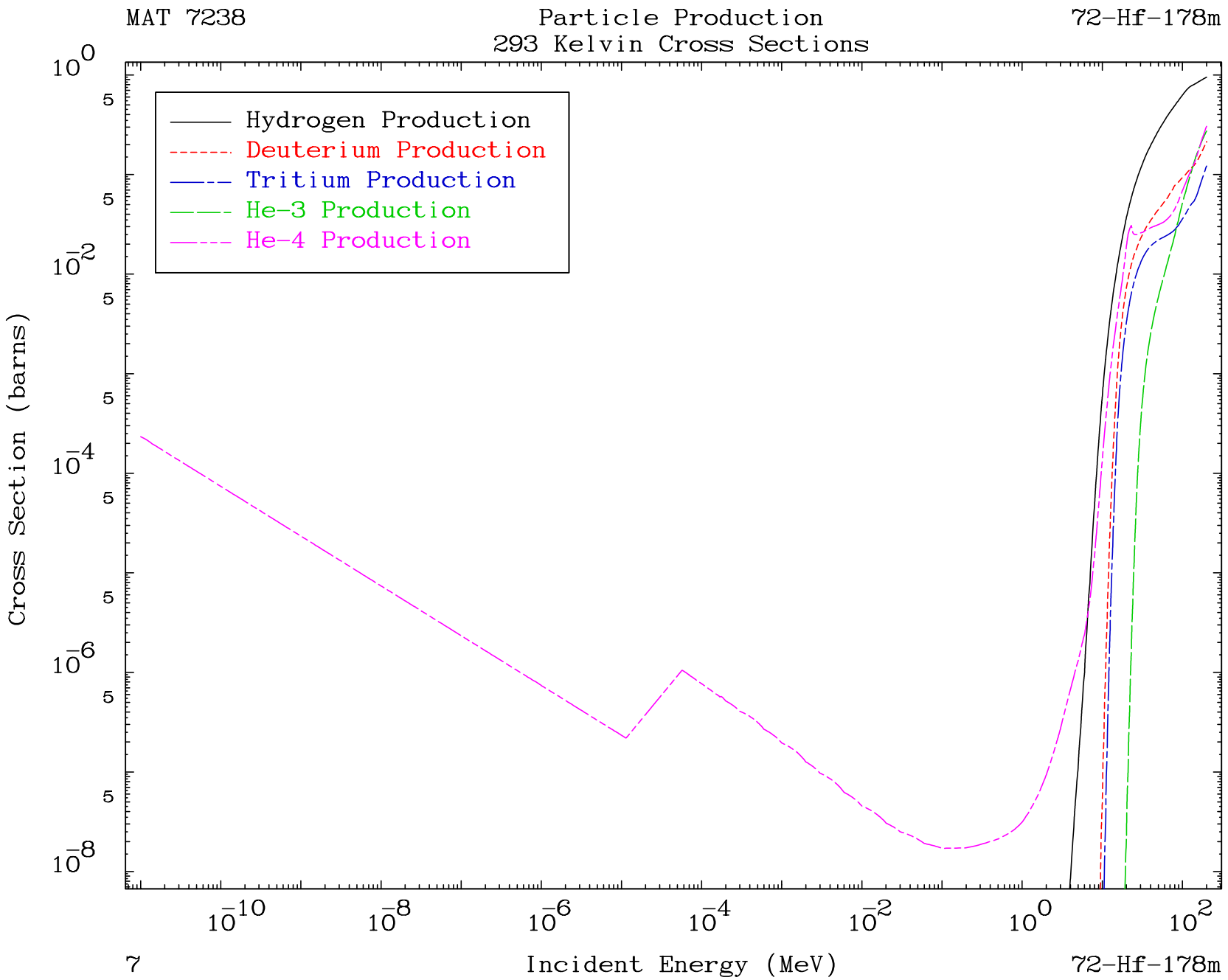

MAT 7238
Neutron Absorption
293 Kelvin Cross Sections
72-Hf-178m
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t
(n,n') He-3
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178m
2

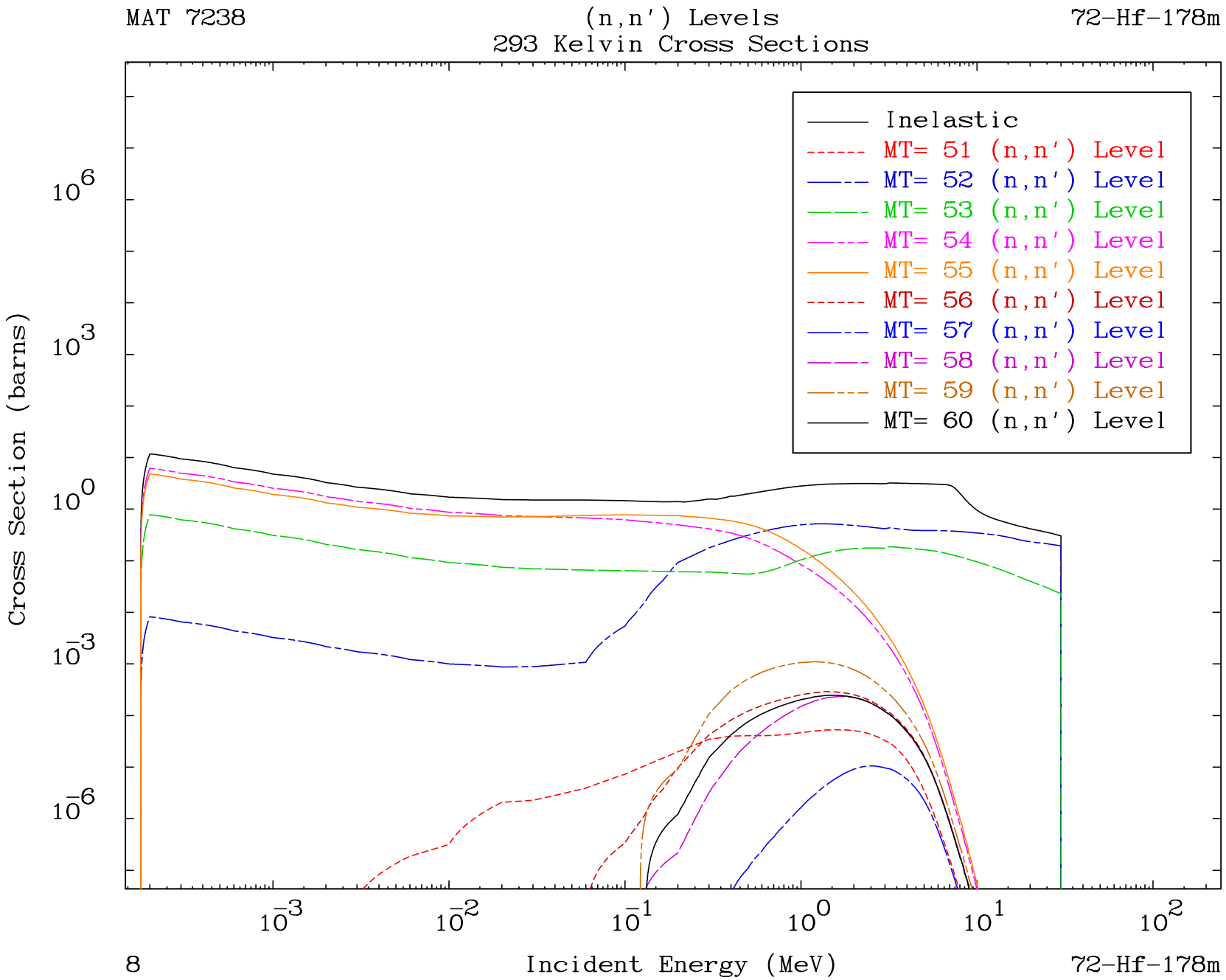

MAT 7238
Neutron Absorption
293 Kelvin Cross Sections
72-Hf-178m
Cross Section (barns)
10^4
10^2
10^0
10^-2
5
(n,4n)
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
(n,γ)
(n,p)
(n,d)
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
3
72-Hf-178m

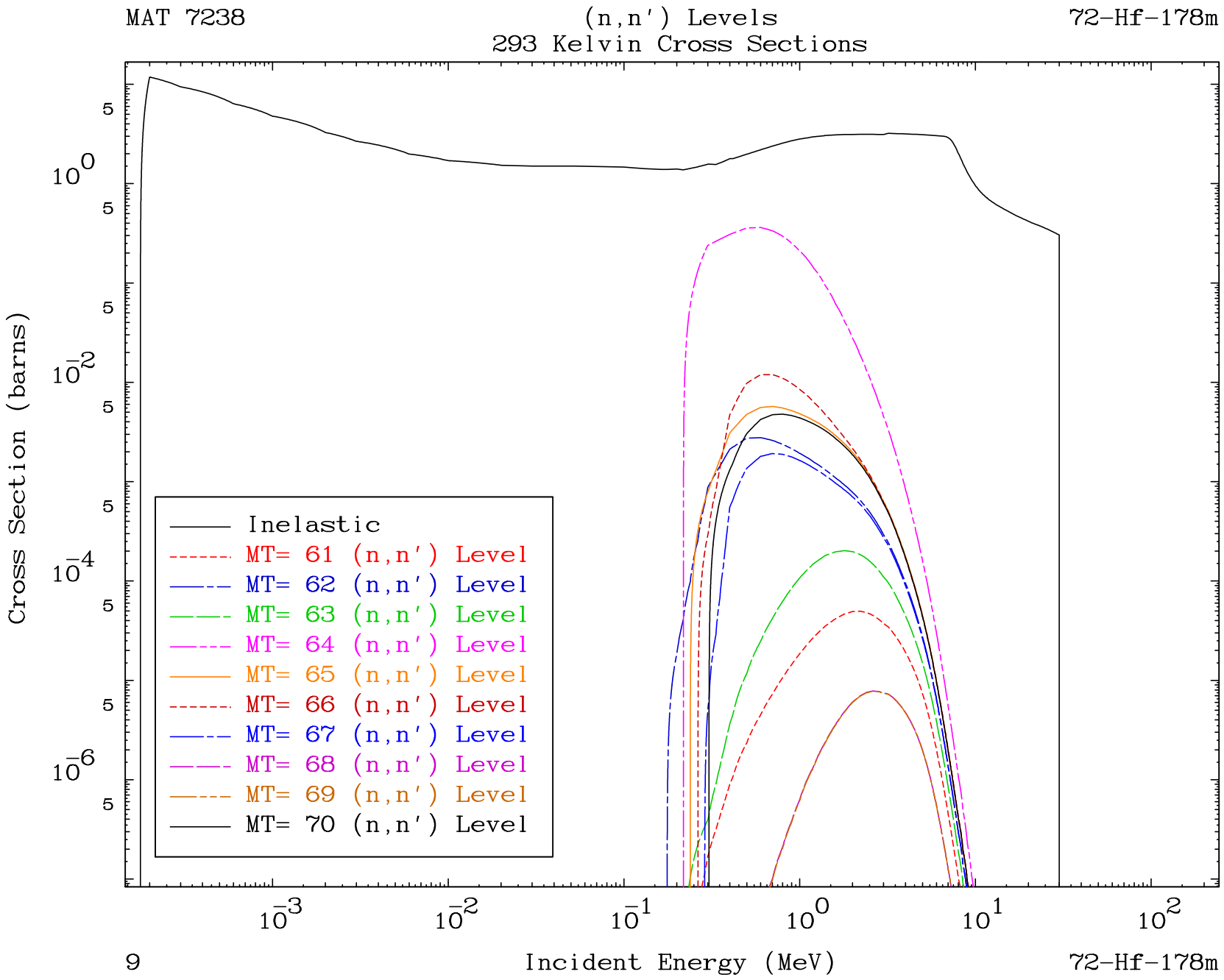

MAT 7238
Neutron Absorption
293 Kelvin Cross Sections
72-Hf-178m
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
Hydrogen Production
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178m

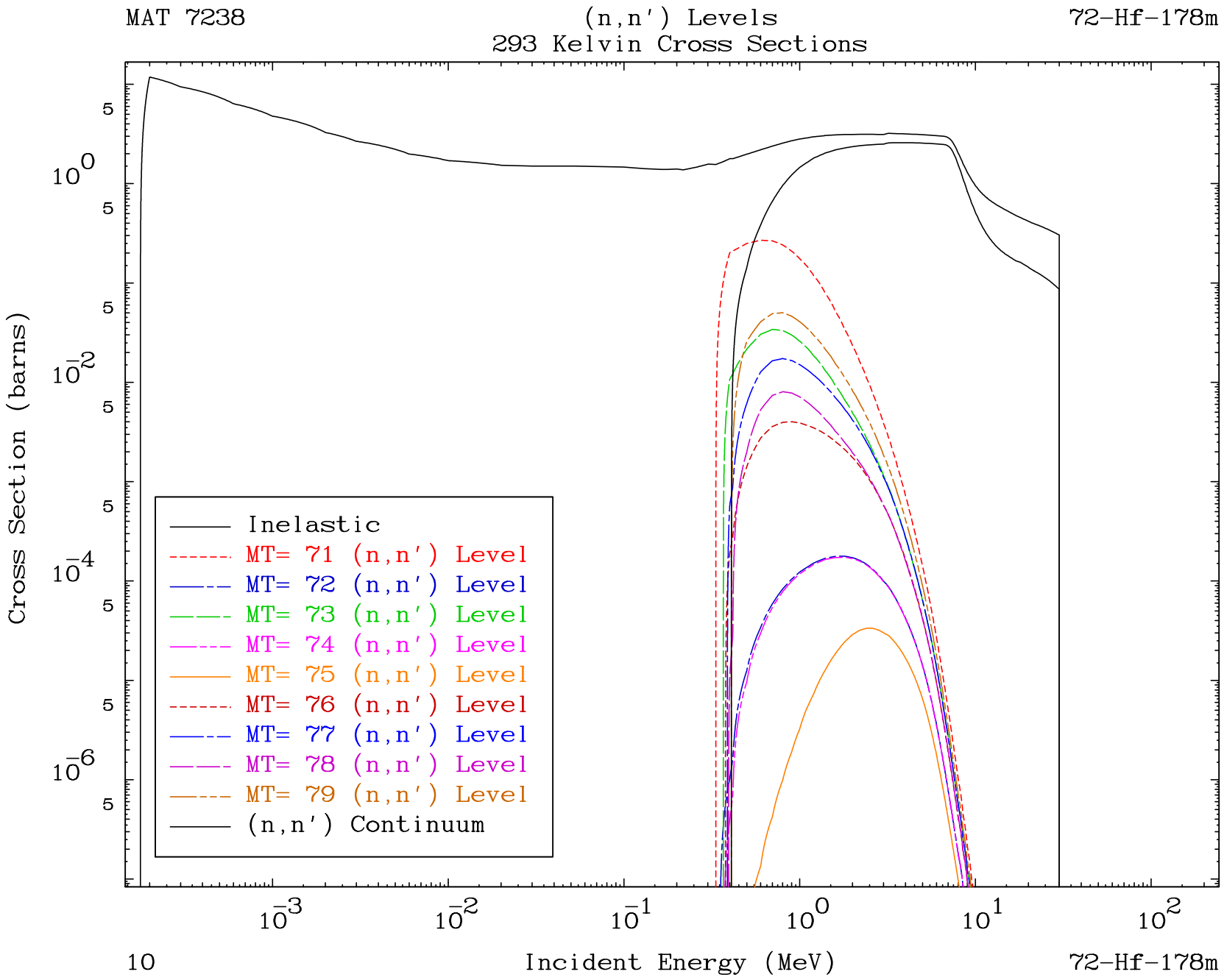

MAT 7238
Charged Particle
293 Kelvin Cross Sections
72-Hf-178m
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178m

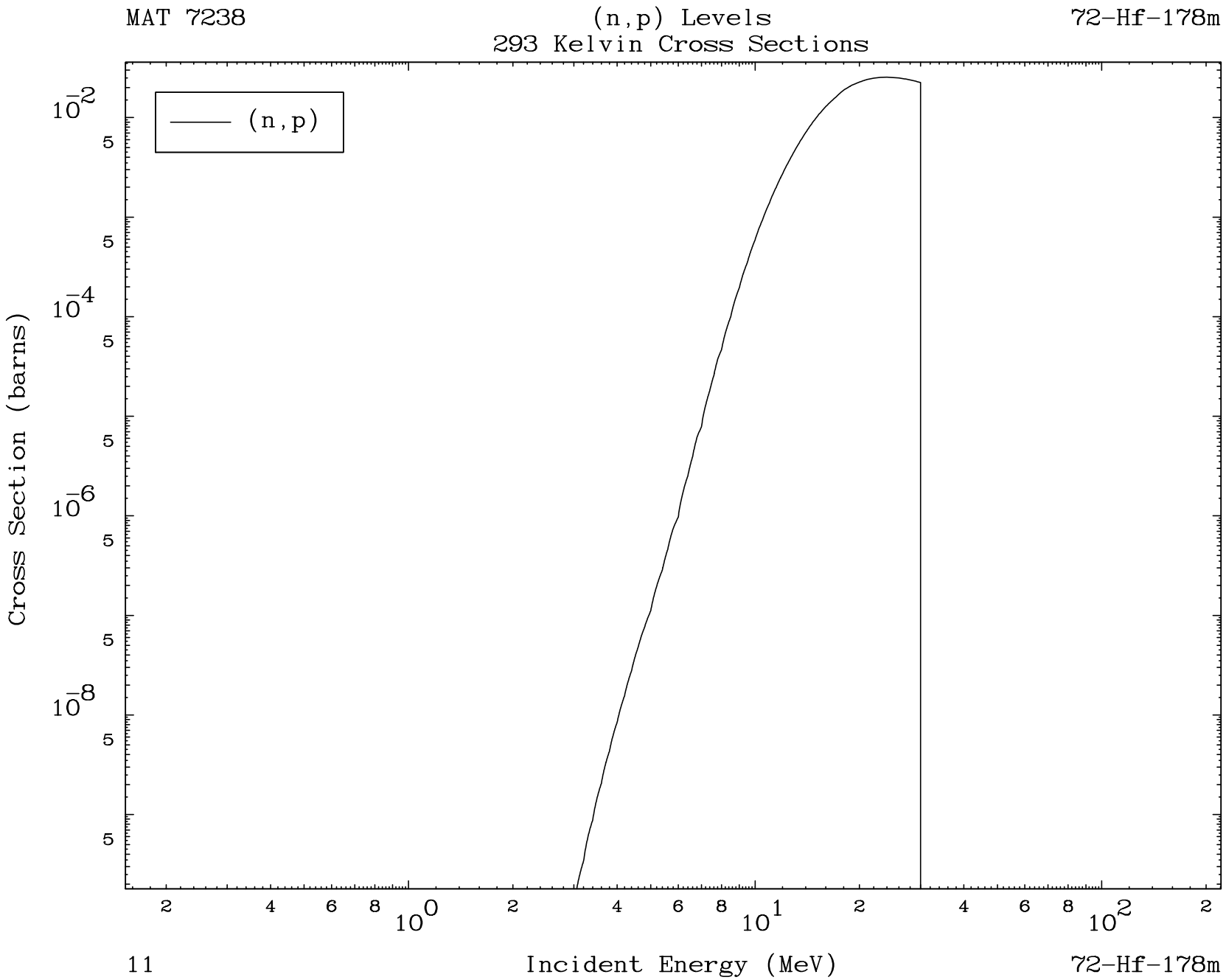

MAT 7238
Charged Particle
293 Kelvin Cross Sections
72-Hf-178m
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178m
6
(n,n') α
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α

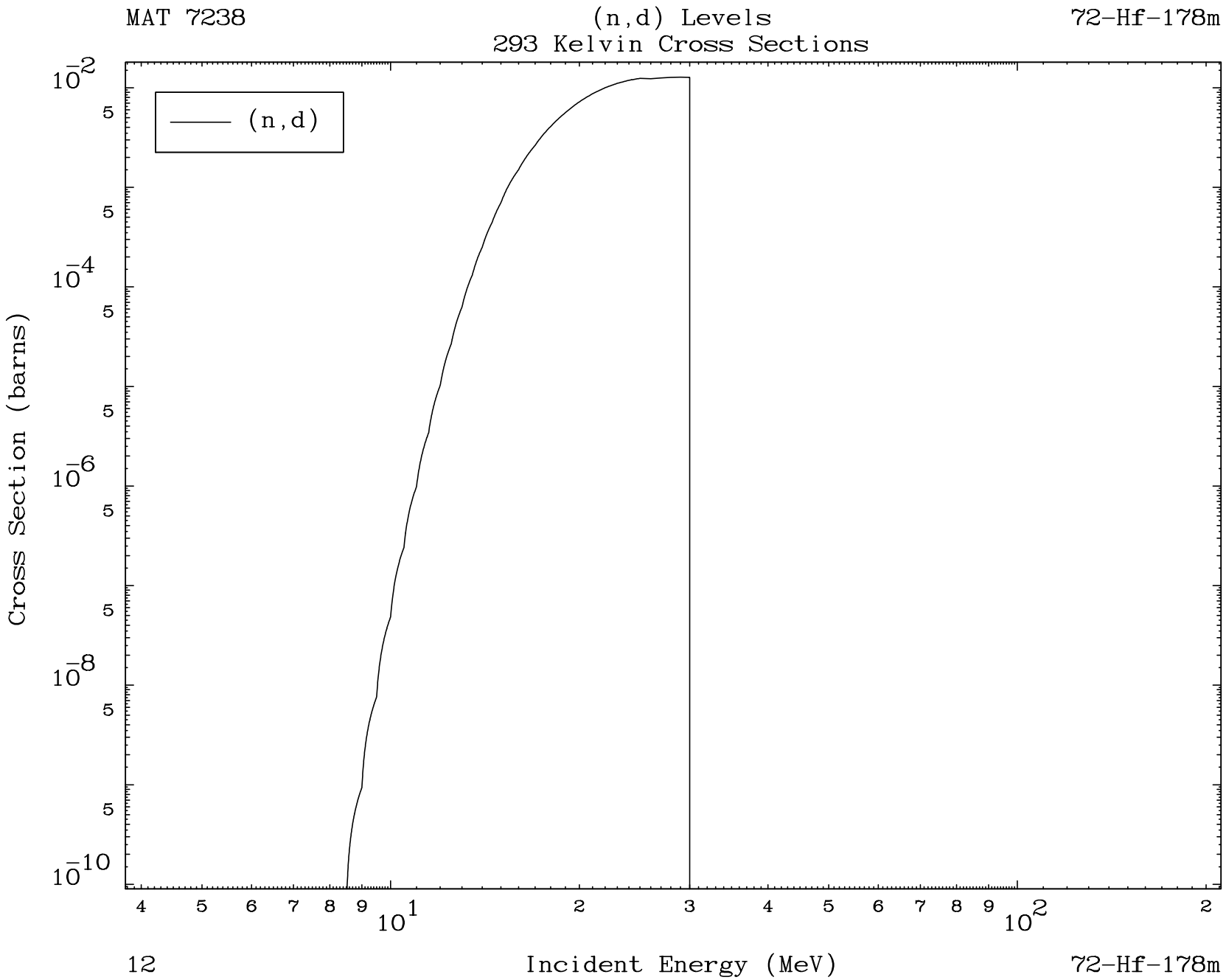

MAT 7238
Particle Production
293 Kelvin Cross Sections
72-Hf-178m
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
7
72-Hf-178m

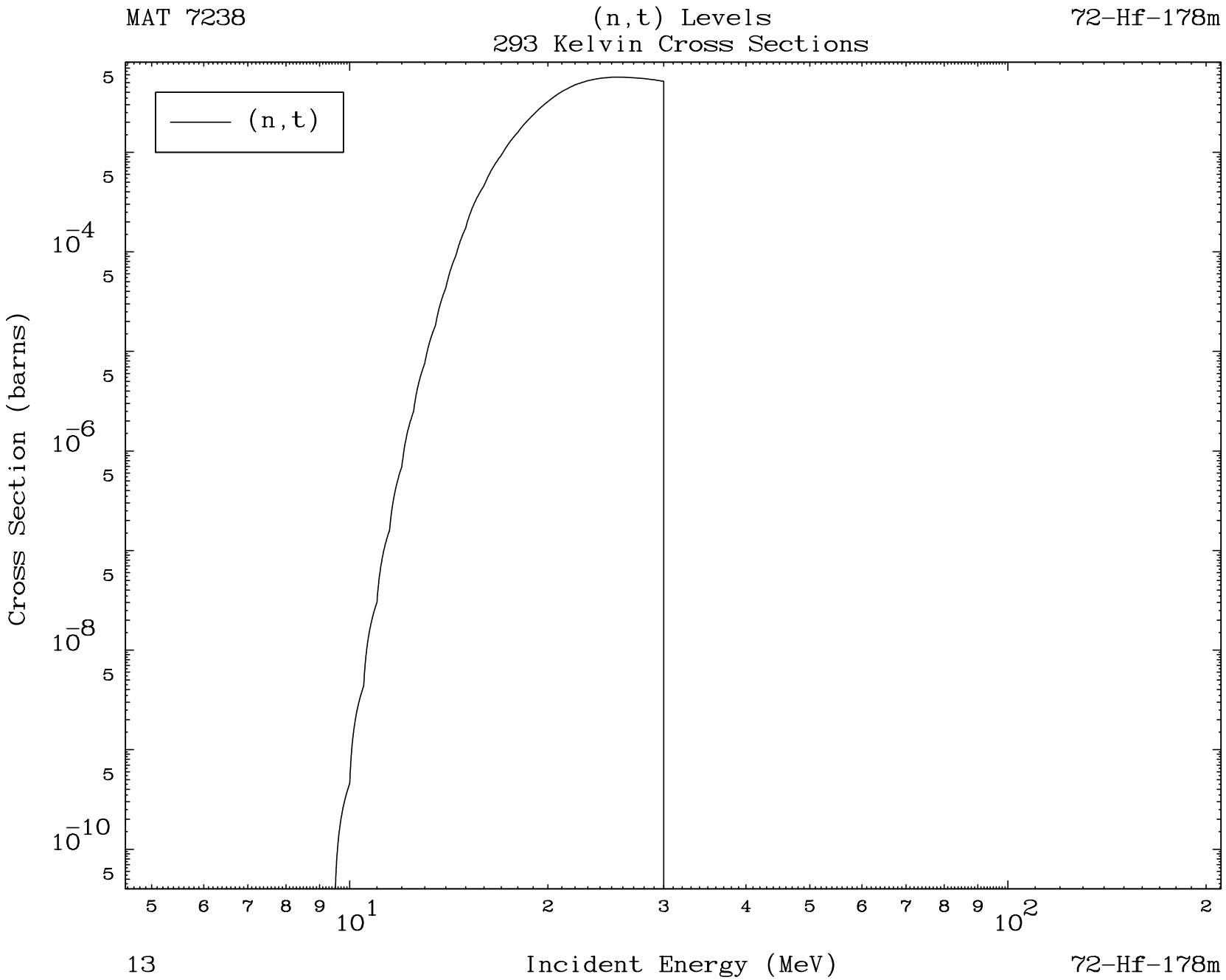

MAT 7238
(n,n') Levels
293 Kelvin Cross Sections
72-Hf-178m
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
MT= 60 (n,n') Level
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-3
10^-2
10^-1
10^0
10^1
10^2
Incident Energy (MeV)
8
72-Hf-178m

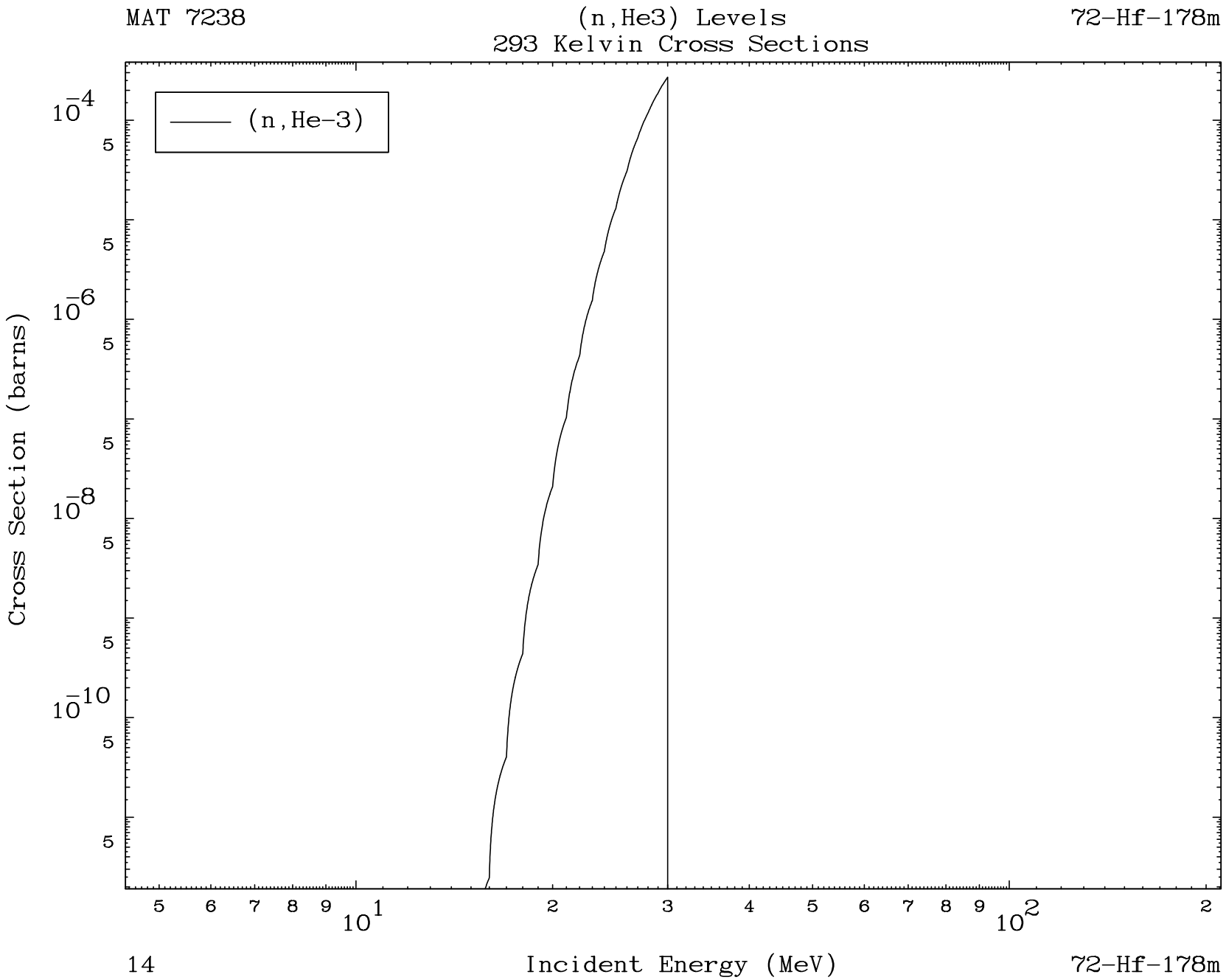

MAT 7238
(n,n') Levels
293 Kelvin Cross Sections
72-Hf-178m
Cross Section (barns)
Incident Energy (MeV)
Inelastic
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
MT= 67 (n,n') Level
MT= 68 (n,n') Level
MT= 69 (n,n') Level
MT= 70 (n,n') Level
9
72-Hf-178m

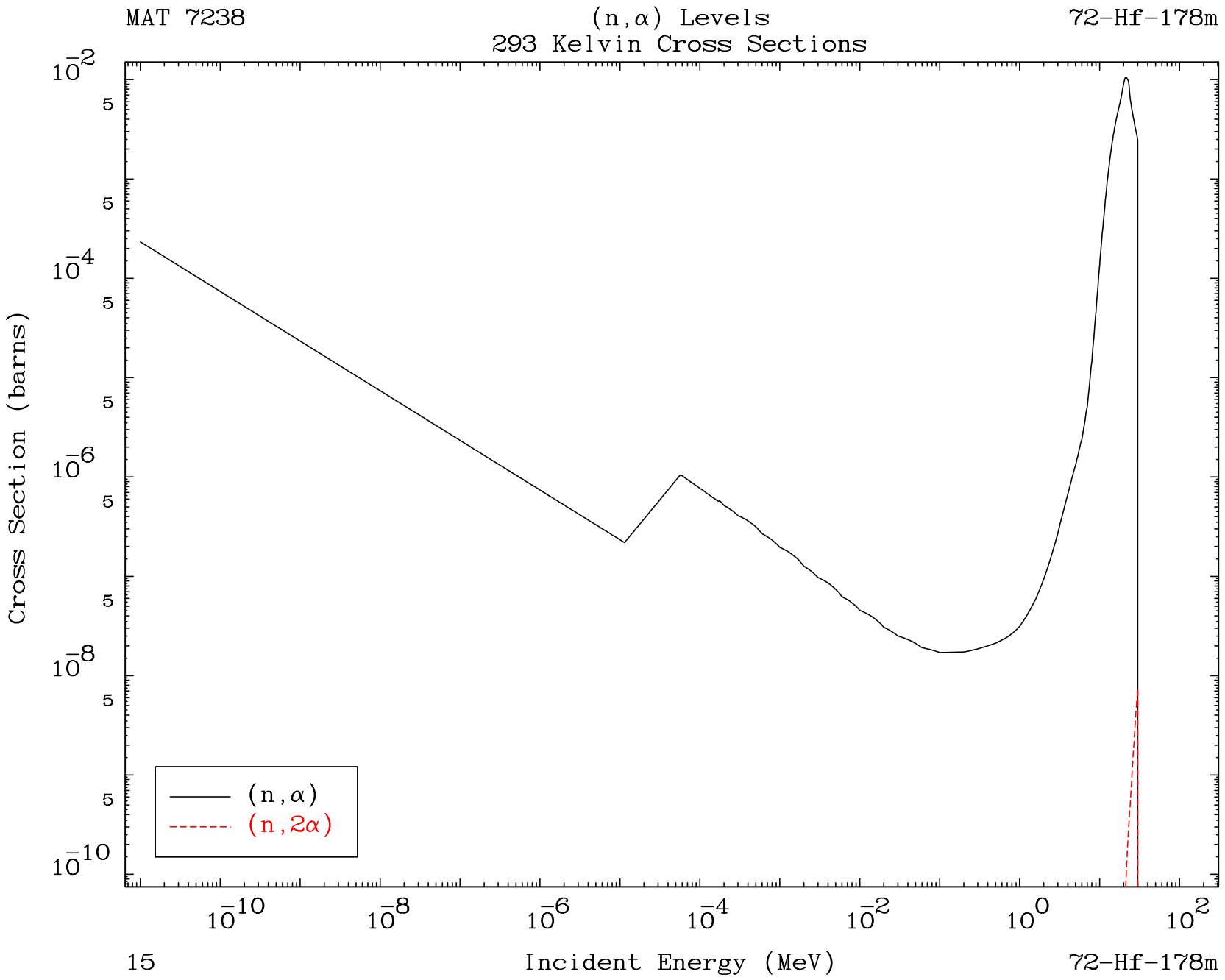

MAT 7238
(n,n') Levels
293 Kelvin Cross Sections
72-Hf-178m
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178m
10
Inelastic
MT= 71 (n,n') Level
MT= 72 (n,n') Level
MT= 73 (n,n') Level
MT= 74 (n,n') Level
MT= 75 (n,n') Level
MT= 76 (n,n') Level
MT= 77 (n,n') Level
MT= 78 (n,n') Level
MT= 79 (n,n') Level
(n,n') Continuum

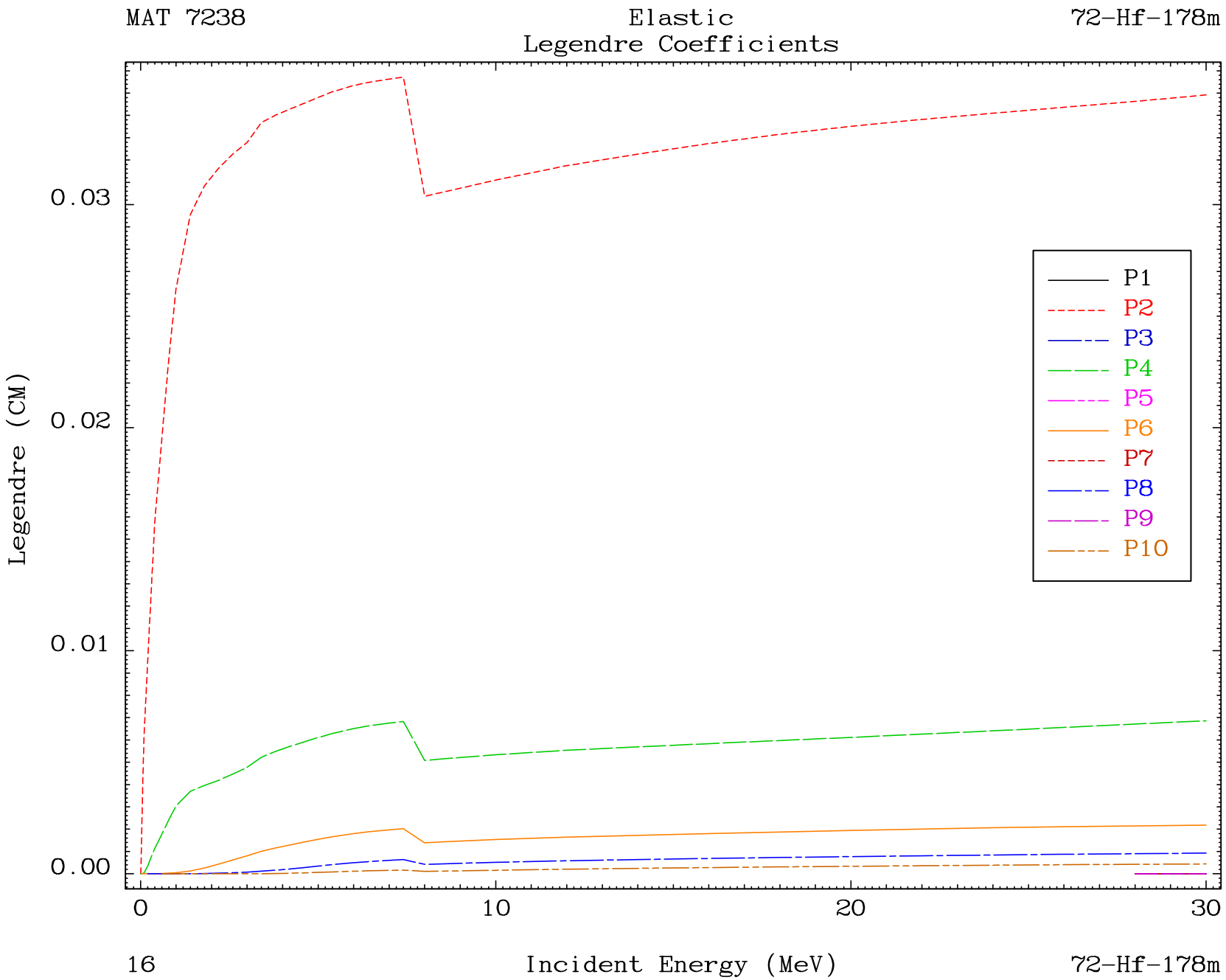

MAT 7238
(n,p) Levels
72-Hf-178m
293 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
11
72-Hf-178m

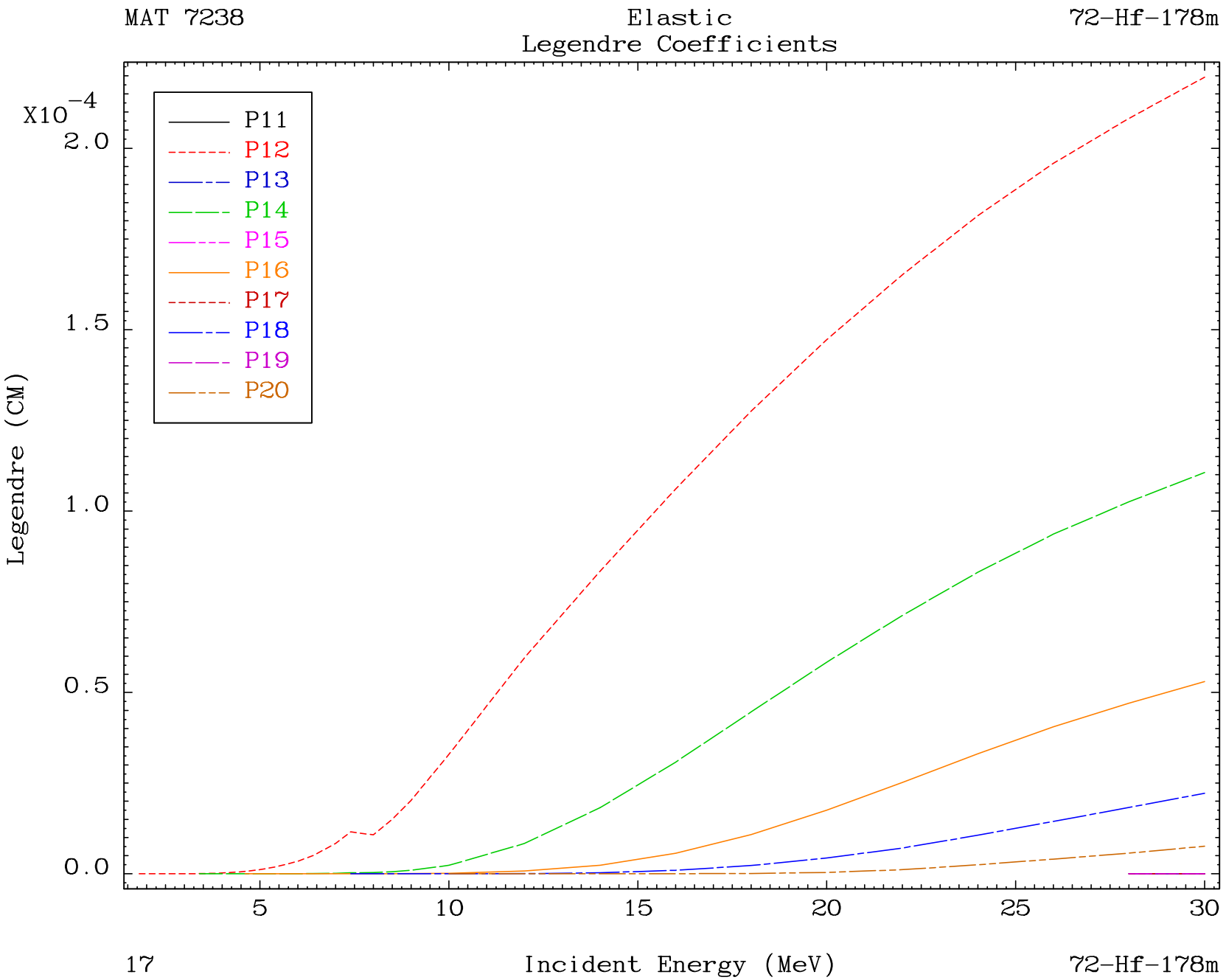

MAT 7238
(n,d) Levels
293 Kelvin Cross Sections
72-Hf-178m
(n,d)
Cross Section (barns)
Incident Energy (MeV)
12
72-Hf-178m

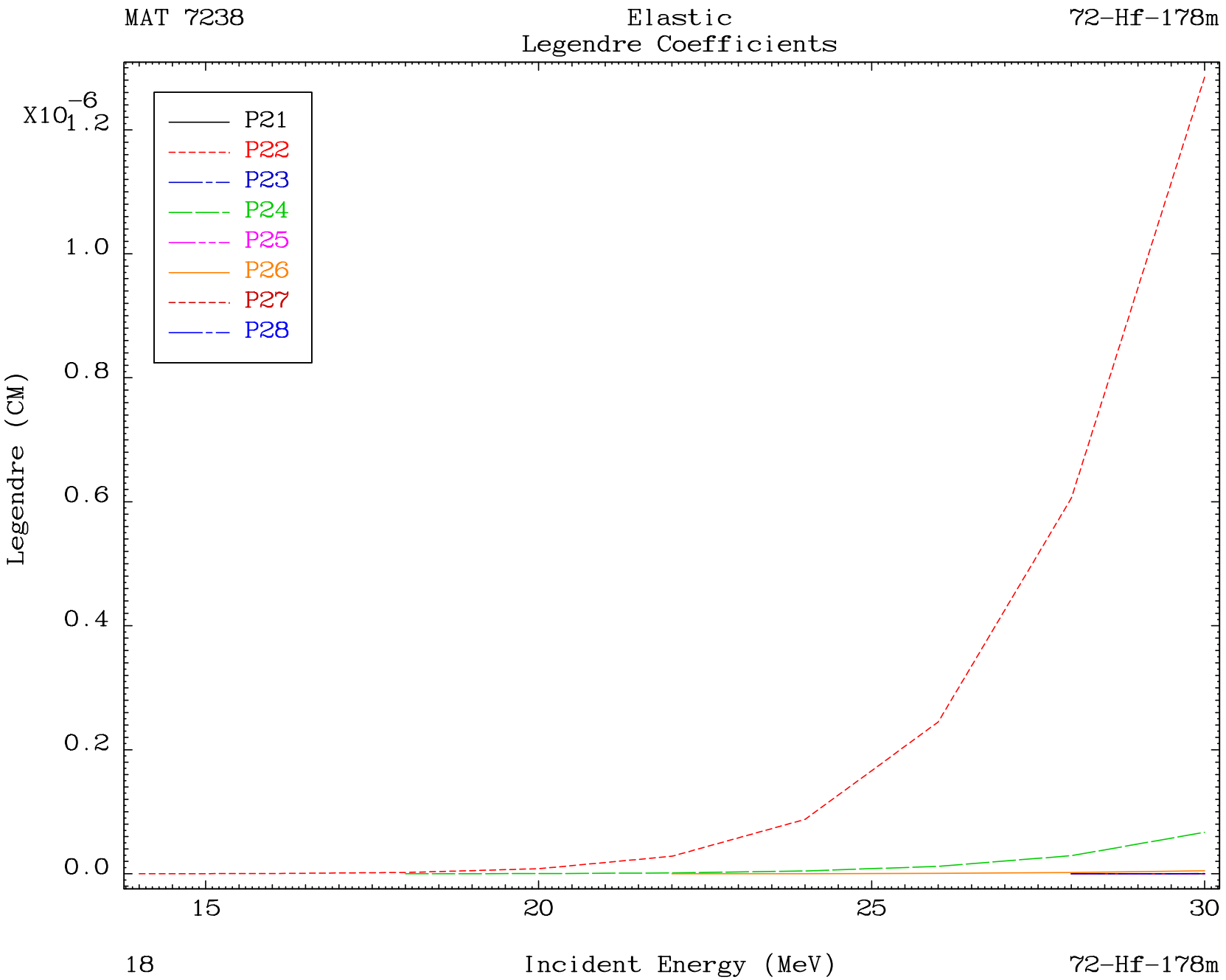

MAT 7238
(n,t) Levels
72-Hf-178m
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
13
72-Hf-178m

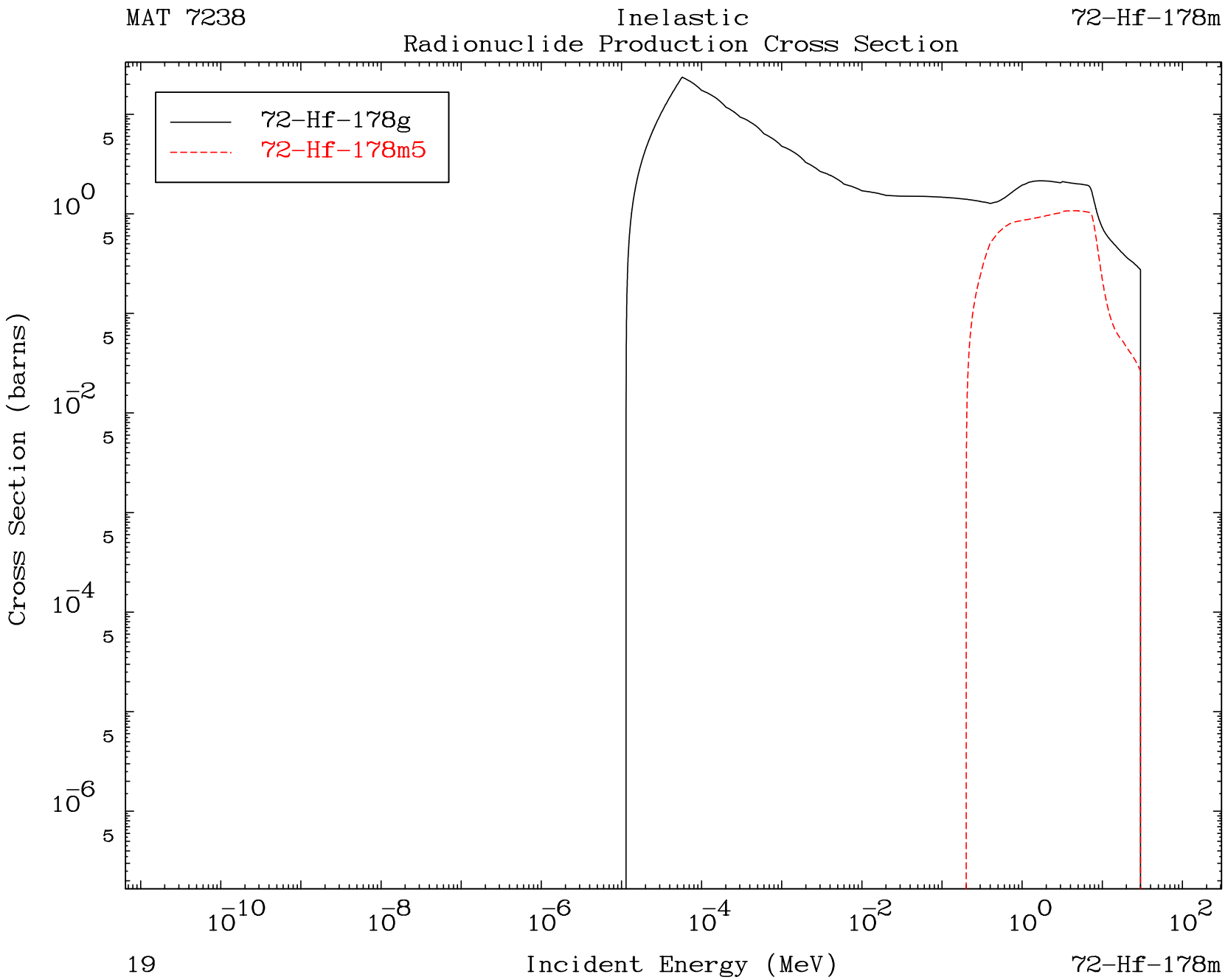

MAT 7238
(n,He3) Levels
72-Hf-178m
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
5
5
5
5
5
5
5
5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2 2
Incident Energy (MeV)
14
72-Hf-178m

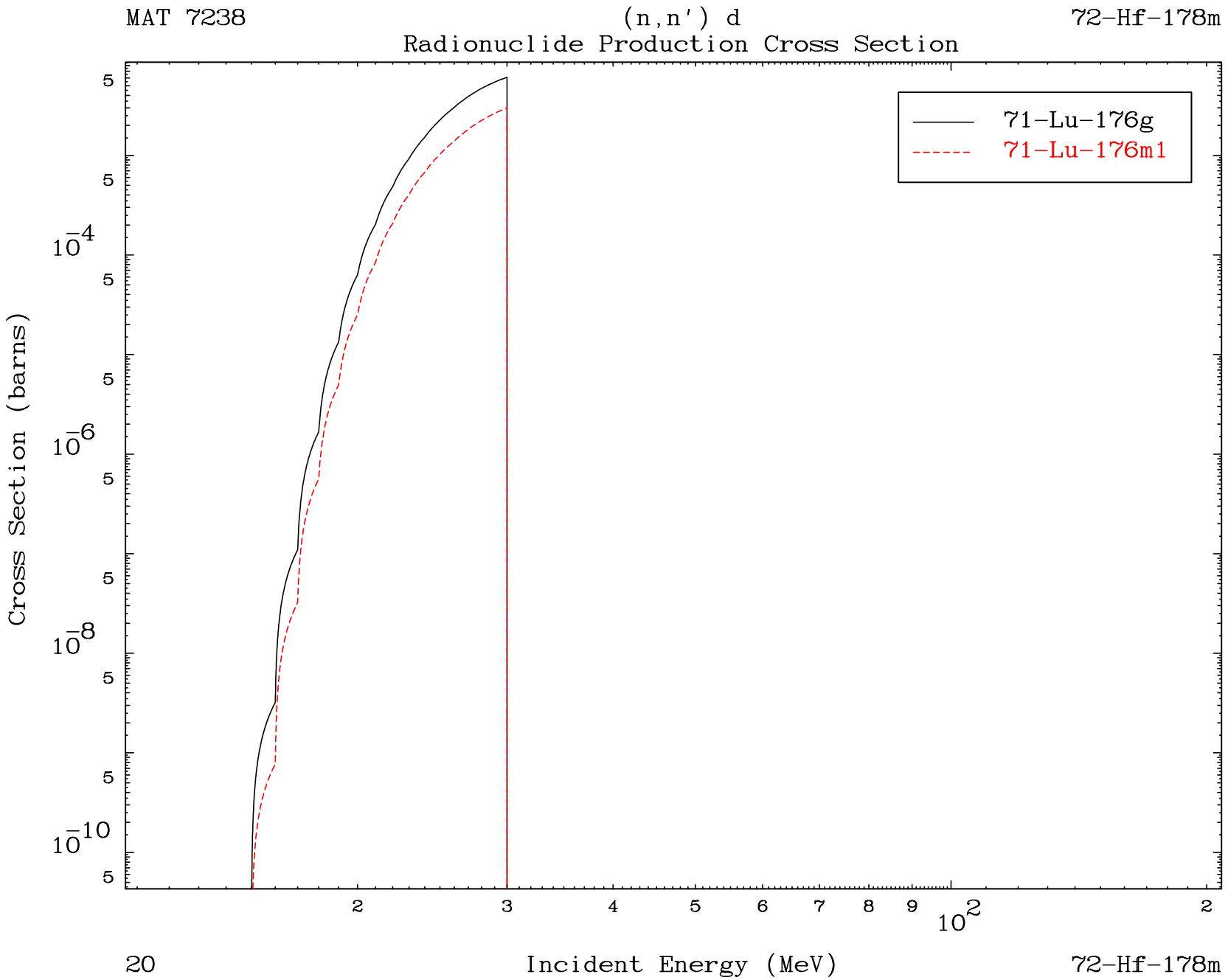

MAT 7238
(n,α) Levels
293 Kelvin Cross Sections
72-Hf-178m
Cross Section (barns)
10-2
5
10-4
5
10-6
5
10-8
5
10-10
5
(n,α)
(n,2α)
10-10
10-8
10-6
10-4
10-2
100
102
Incident Energy (MeV)
72-Hf-178m

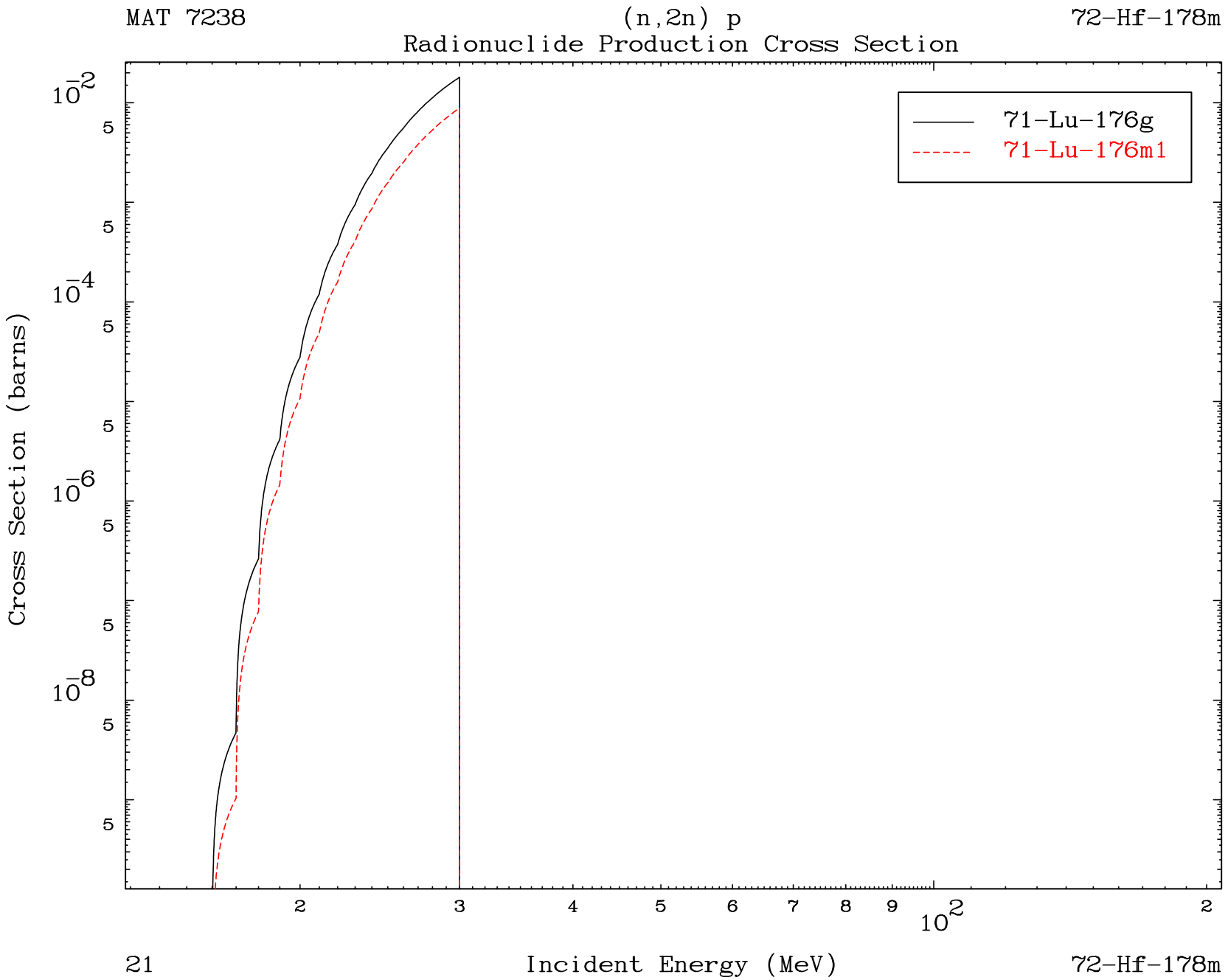

MAT 7238
Elastic
Legendre Coefficients
72-Hf-178m
0.03
0.02
0.01
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
0
10
20
30
16
Incident Energy (MeV)
72-Hf-178m

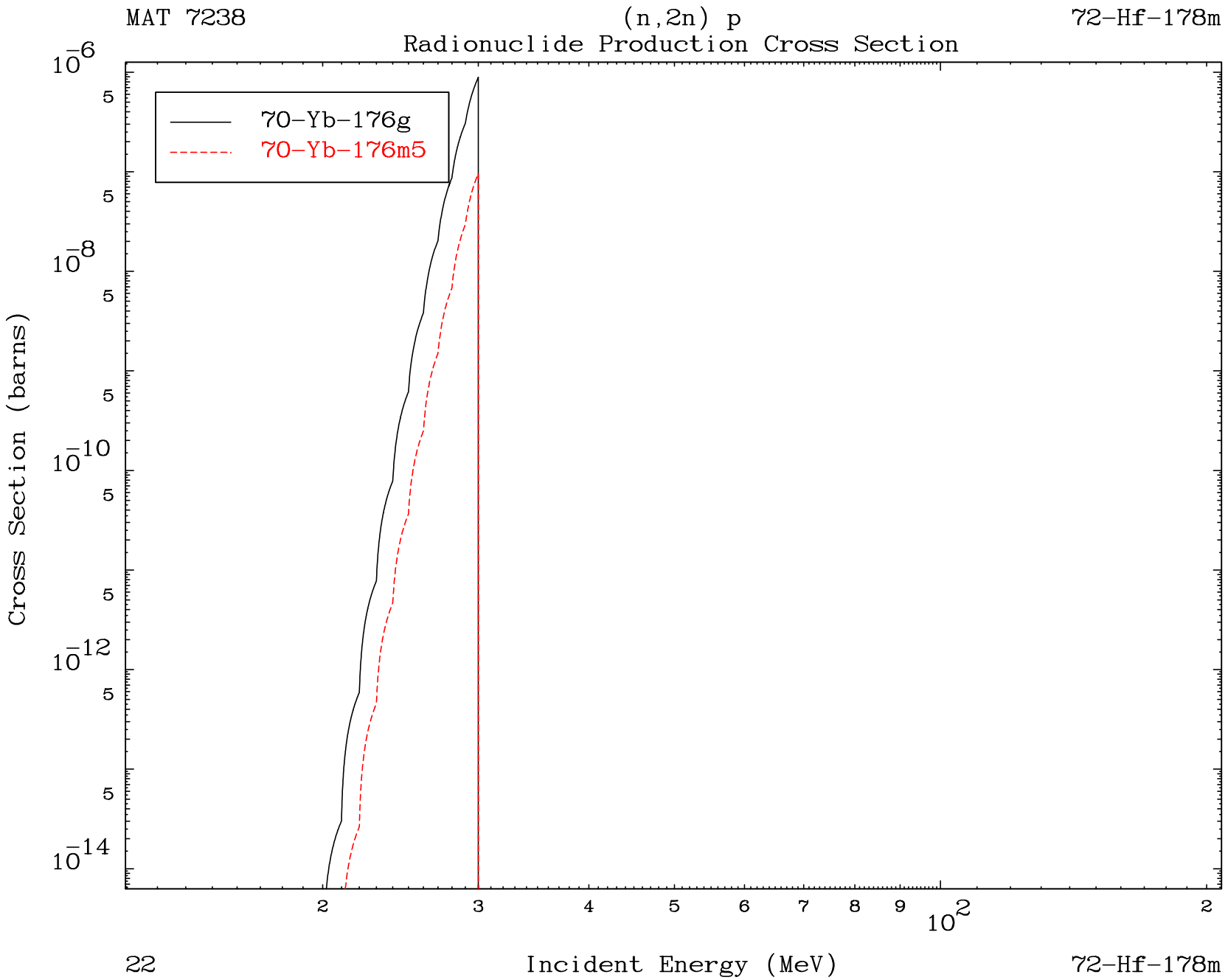

MAT 7238
Elastic
Legendre Coefficients
72-Hf-178m
X10 -4
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
5
10
15
20
25
30
17
Incident Energy (MeV)
72-Hf-178m

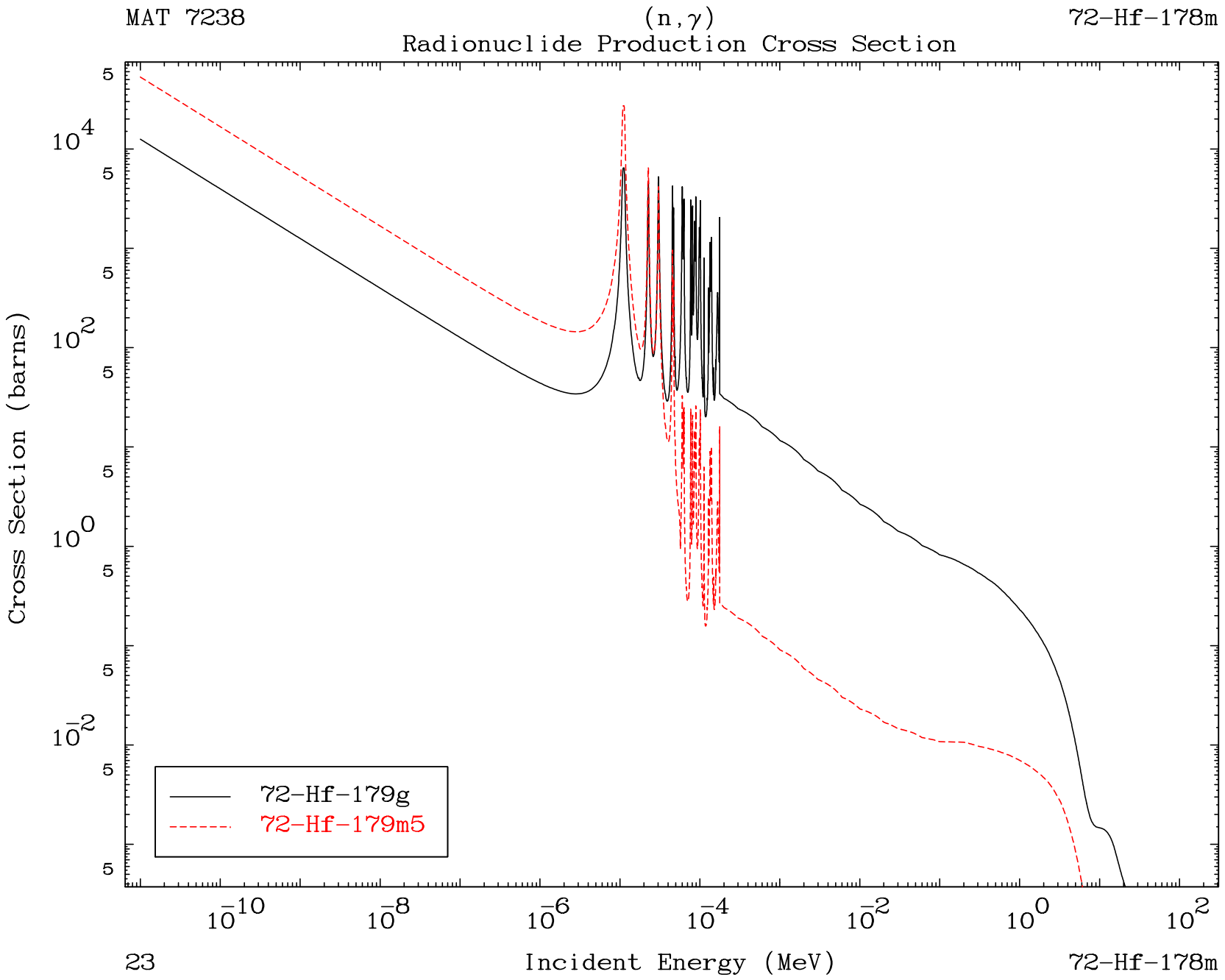

MAT 7238
Elastic
Legendre Coefficients
72-Hf-178m
X10^-6
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
15
20
25
30
18
Incident Energy (MeV)
72-Hf-178m

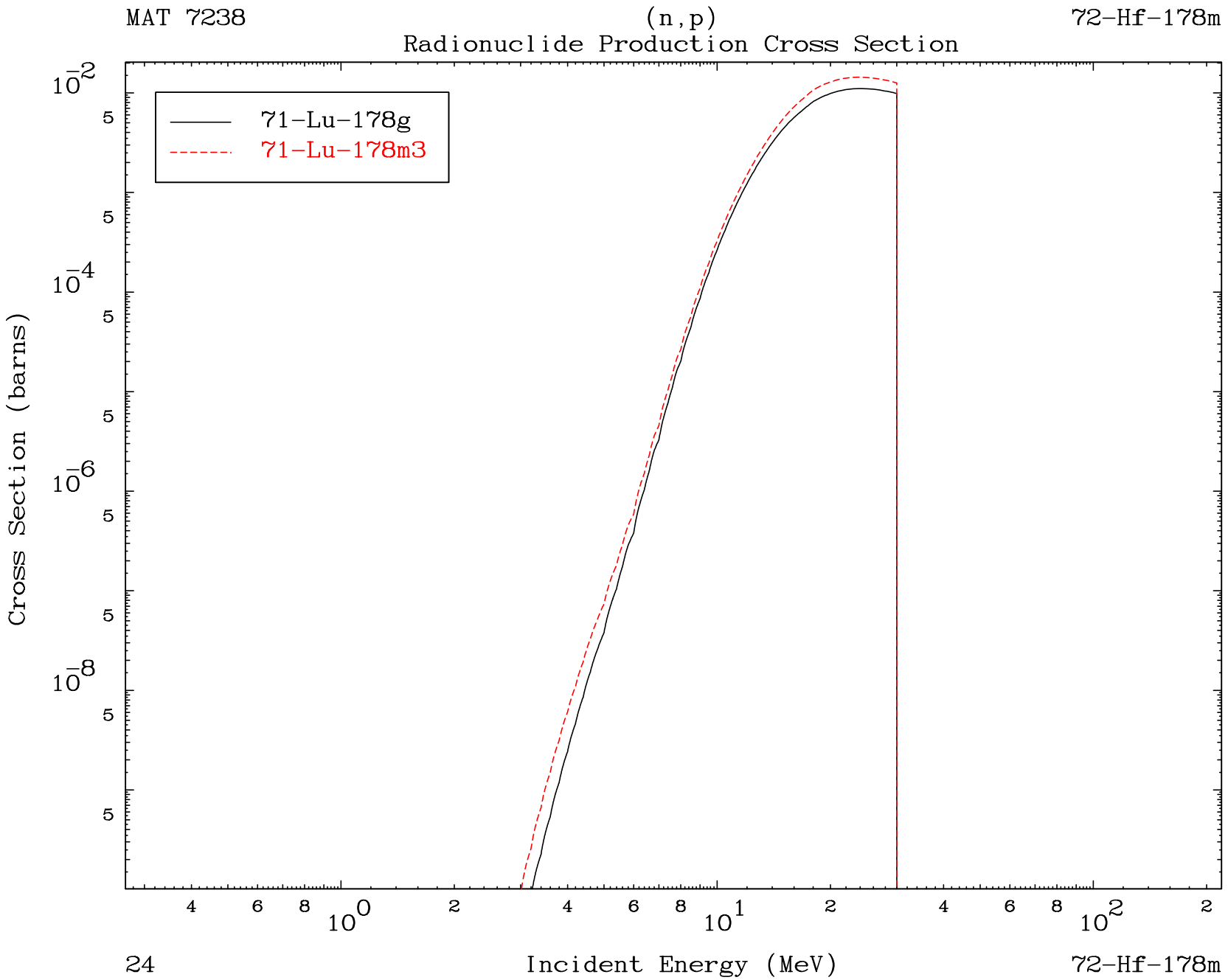

MAT 7238
Inelastic
72-Hf-178m
Radionuclide Production Cross Section
72-Hf-178g
72-Hf-178m5
Cross Section (barns)
Incident Energy (MeV)
19
72-Hf-178m

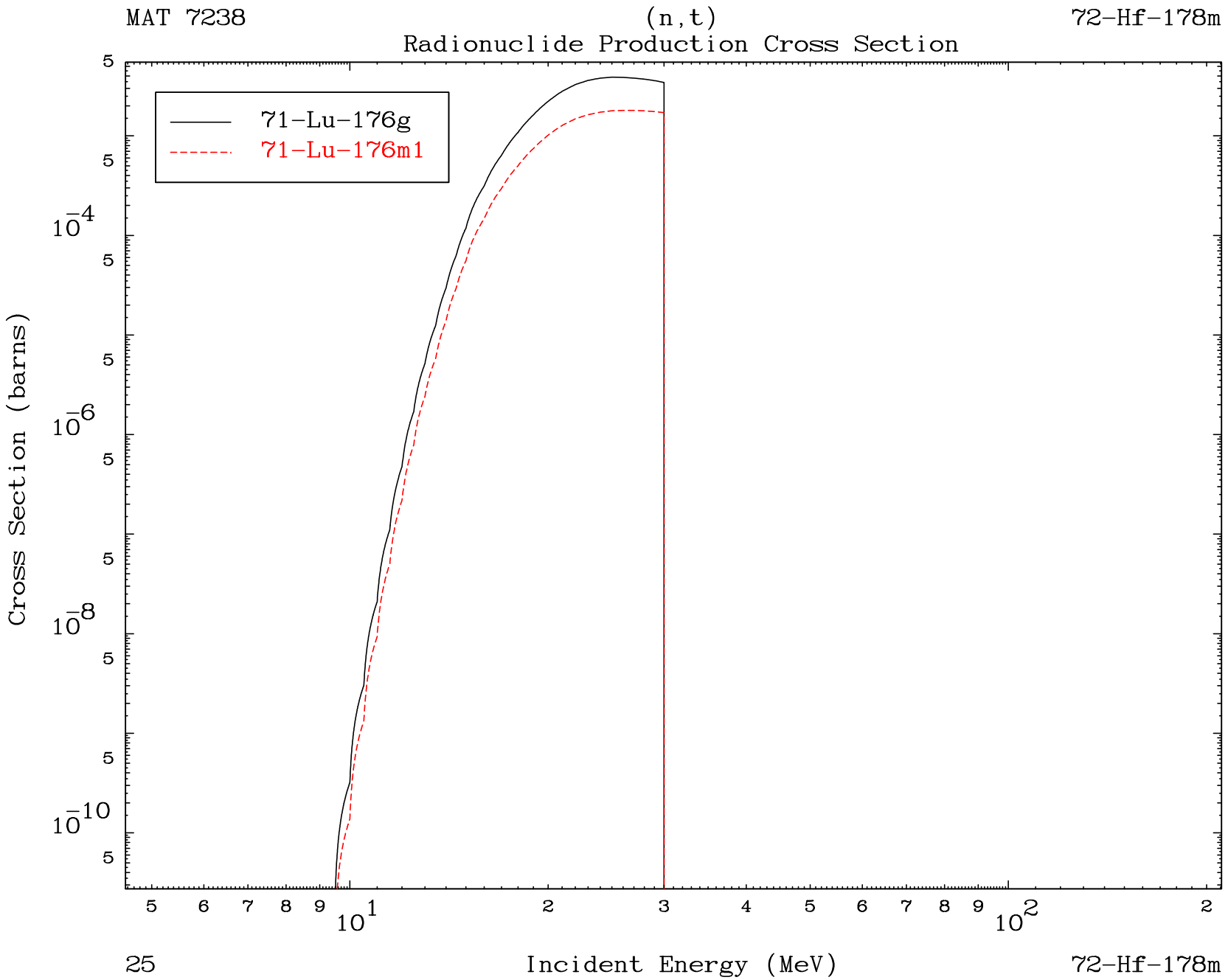

MAT 7238
(n,n') d
72-Hf-178m
Radionuclide Production Cross Section
71-Lu-176g
71-Lu-176m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
2
3
4
6
7
8
9
10 2
Incident Energy (MeV)
20
72-Hf-178m

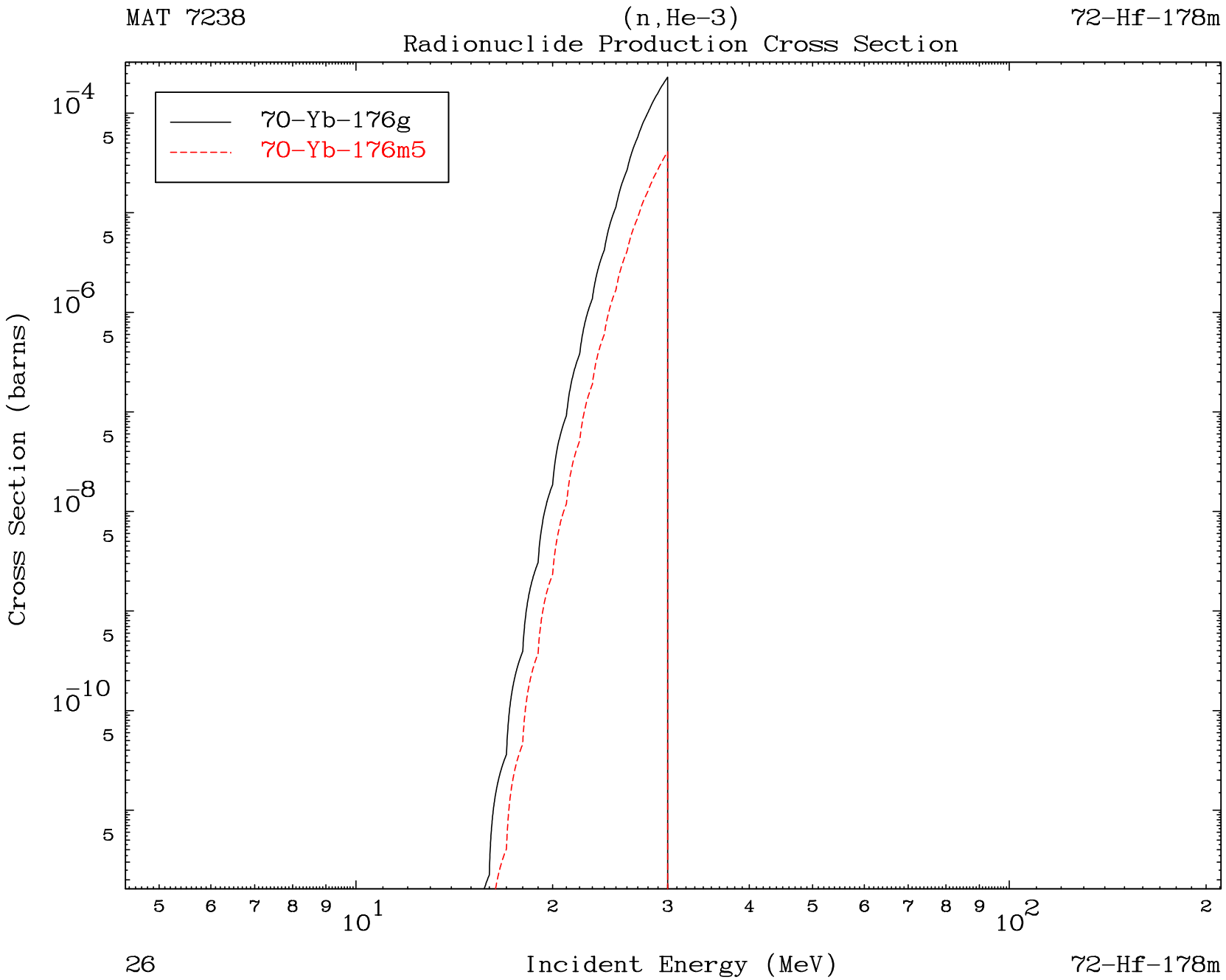

MAT 7238
(n,2n) p
72-Hf-178m
Radionuclide Production Cross Section
71-Lu-176g
71-Lu-176m1
Cross Section (barns)
Incident Energy (MeV)
21
72-Hf-178m

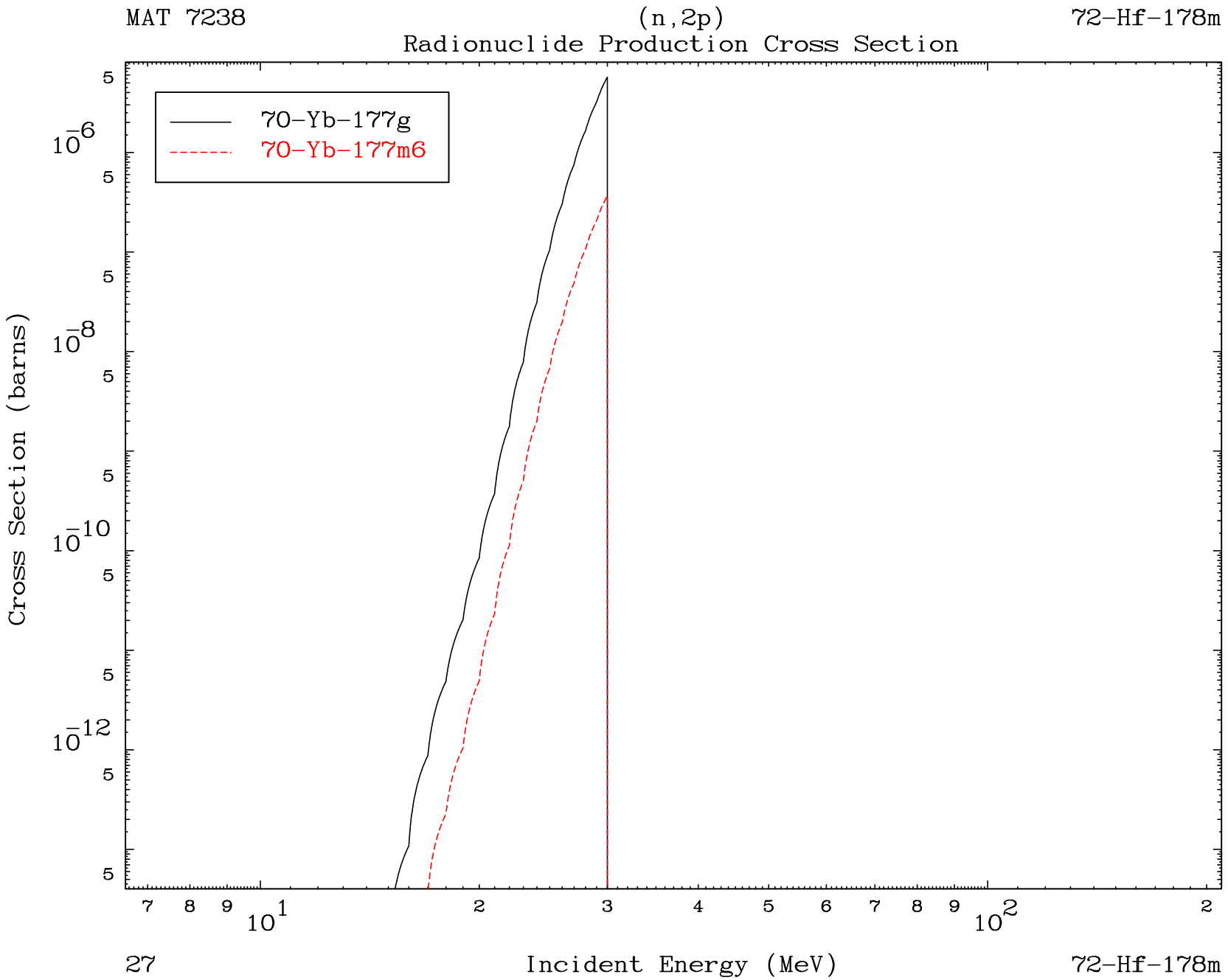

MAT 7238
(n,2n) p
72-Hf-178m
Radionuclide Production Cross Section
70-Yb-176g
70-Yb-176m5
Cross Section (barns)
Incident Energy (MeV)
22
72-Hf-178m

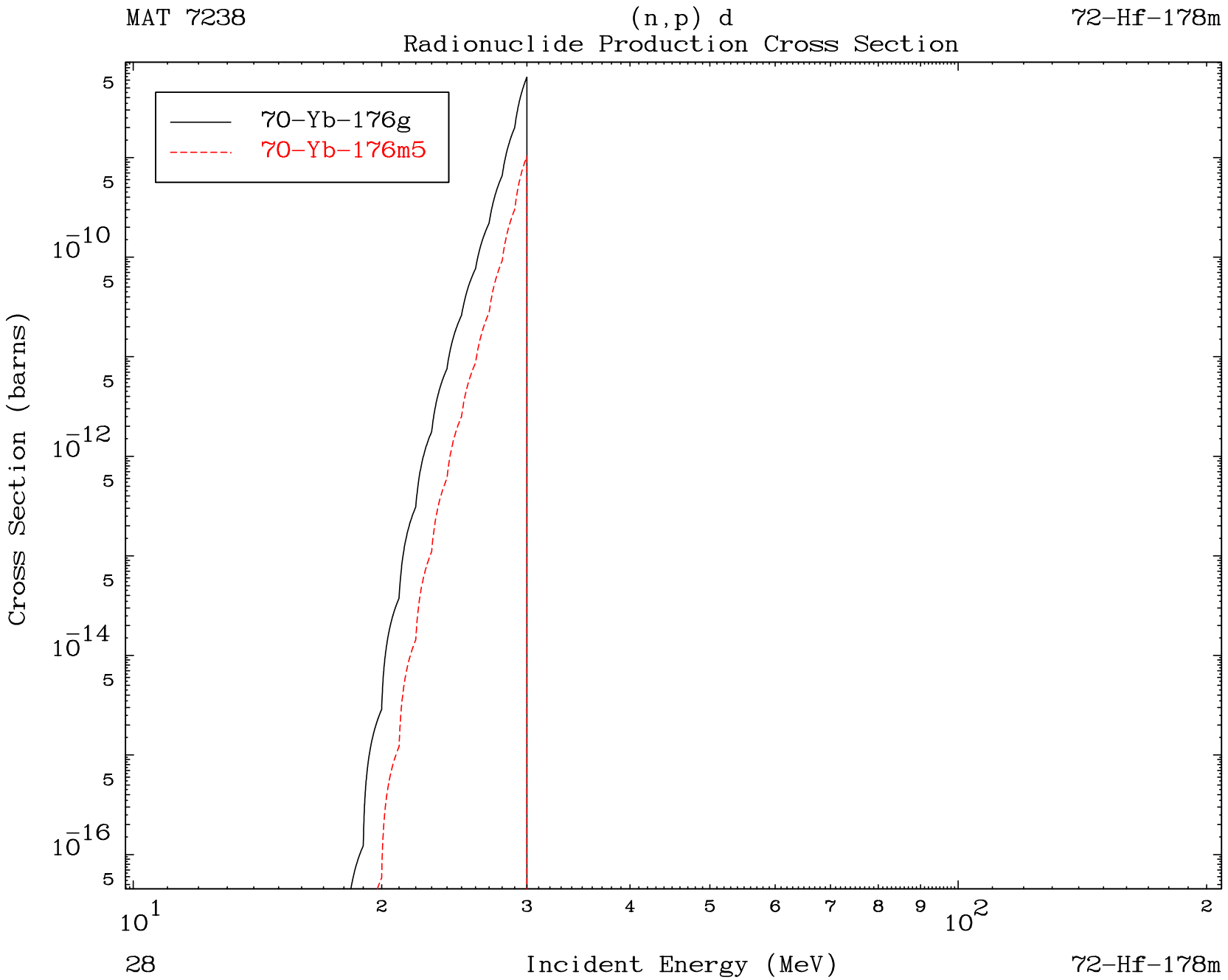

MAT 7238
(n,γ)
72-Hf-178m
Radionuclide Production Cross Section
Cross Section (barns)
10^4
10^2
10^0
10^-2
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
72-Hf-179g
72-Hf-179m5
23
Incident Energy (MeV)
72-Hf-178m


MAT 7238
(n,p)
72-Hf-178m
Radionuclide Production Cross Section
71-Lu-178g
71-Lu-178m3
Cross Section (barns)
Incident Energy (MeV)
24
72-Hf-178m


MAT 7238
(n,t)
72-Hf-178m
Radionuclide Production Cross Section
71-Lu-176g
71-Lu-176m1
Cross Section (barns)
Incident Energy (MeV)
25
72-Hf-178m


MAT 7238
(n,He-3)
72-Hf-178m
Radionuclide Production Cross Section
70-Yb-176g
70-Yb-176m5
Cross Section (barns)
Incident Energy (MeV)
26
72-Hf-178m


MAT 7238
(n,2p)
72-Hf-178m
Radionuclide Production Cross Section
70-Yb-177g
70-Yb-177m6
Cross Section (barns)
10-6
10-8
10-10
10-12
5
7 8 9 10 1 2 3 4 5 6 7 8 9 10 2 2
27
Incident Energy (MeV)
72-Hf-178m


MAT 7238
(n,p) d
72-Hf-178m
Radionuclide Production Cross Section
70-Yb-176g
70-Yb-176m5
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178m
28