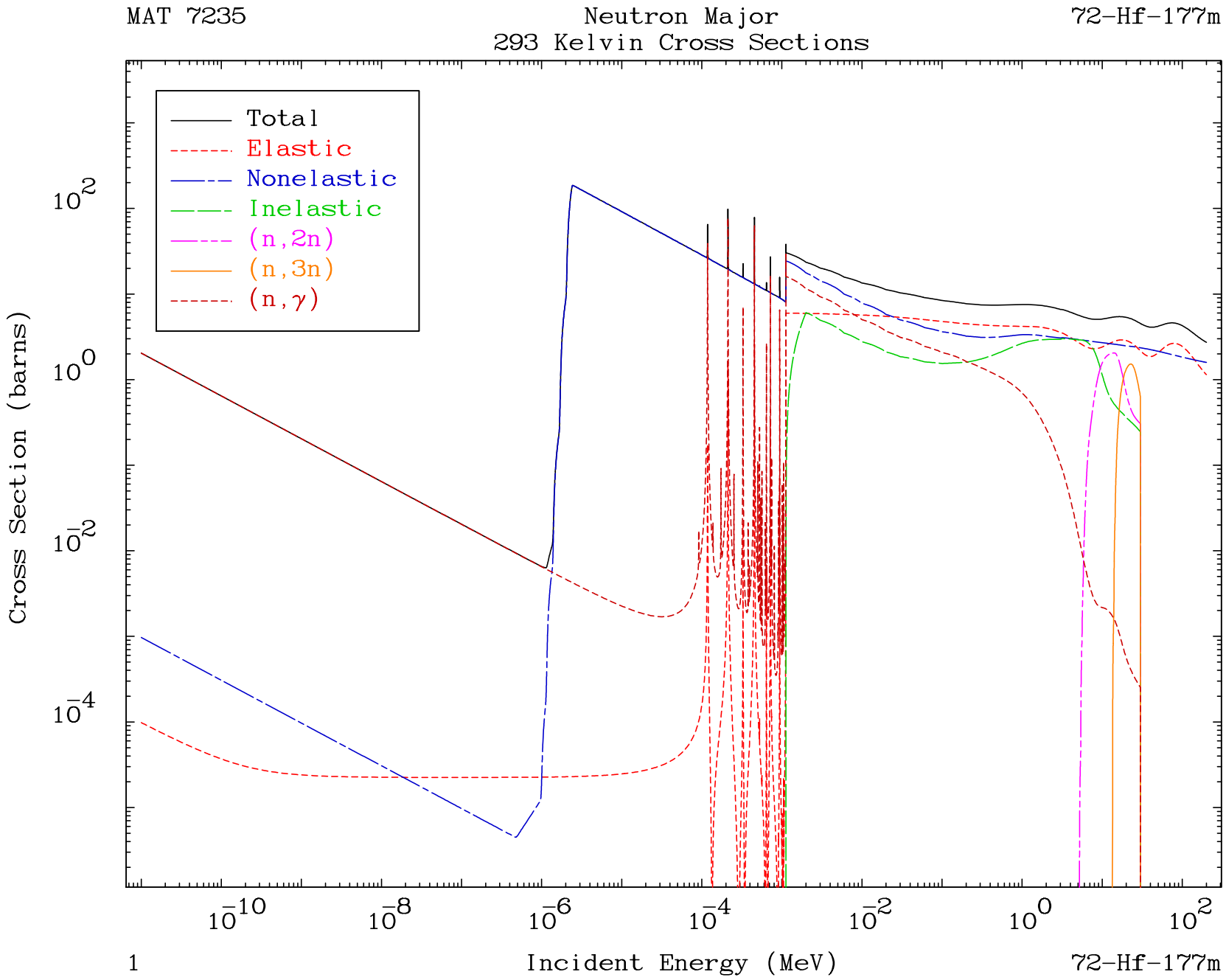
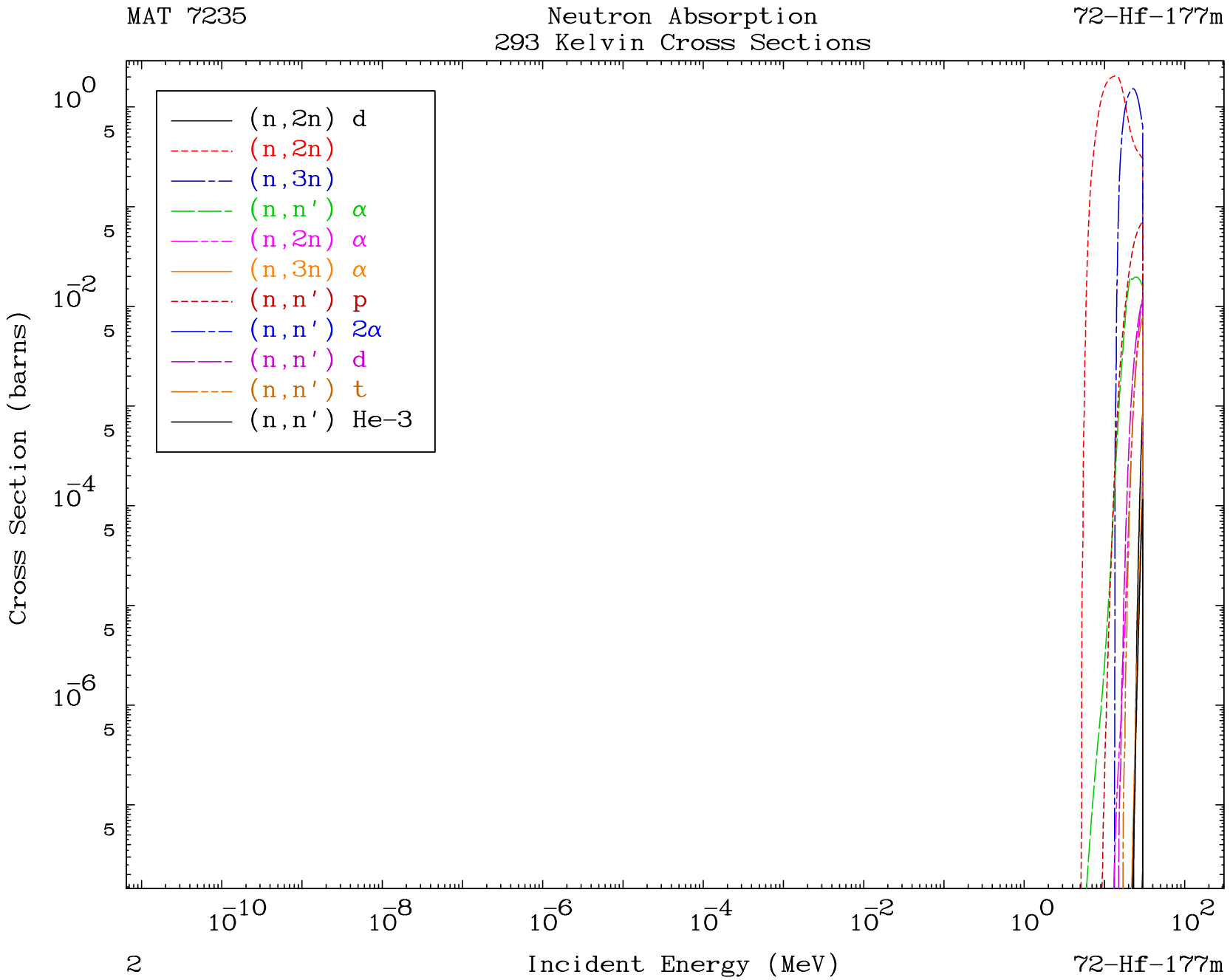
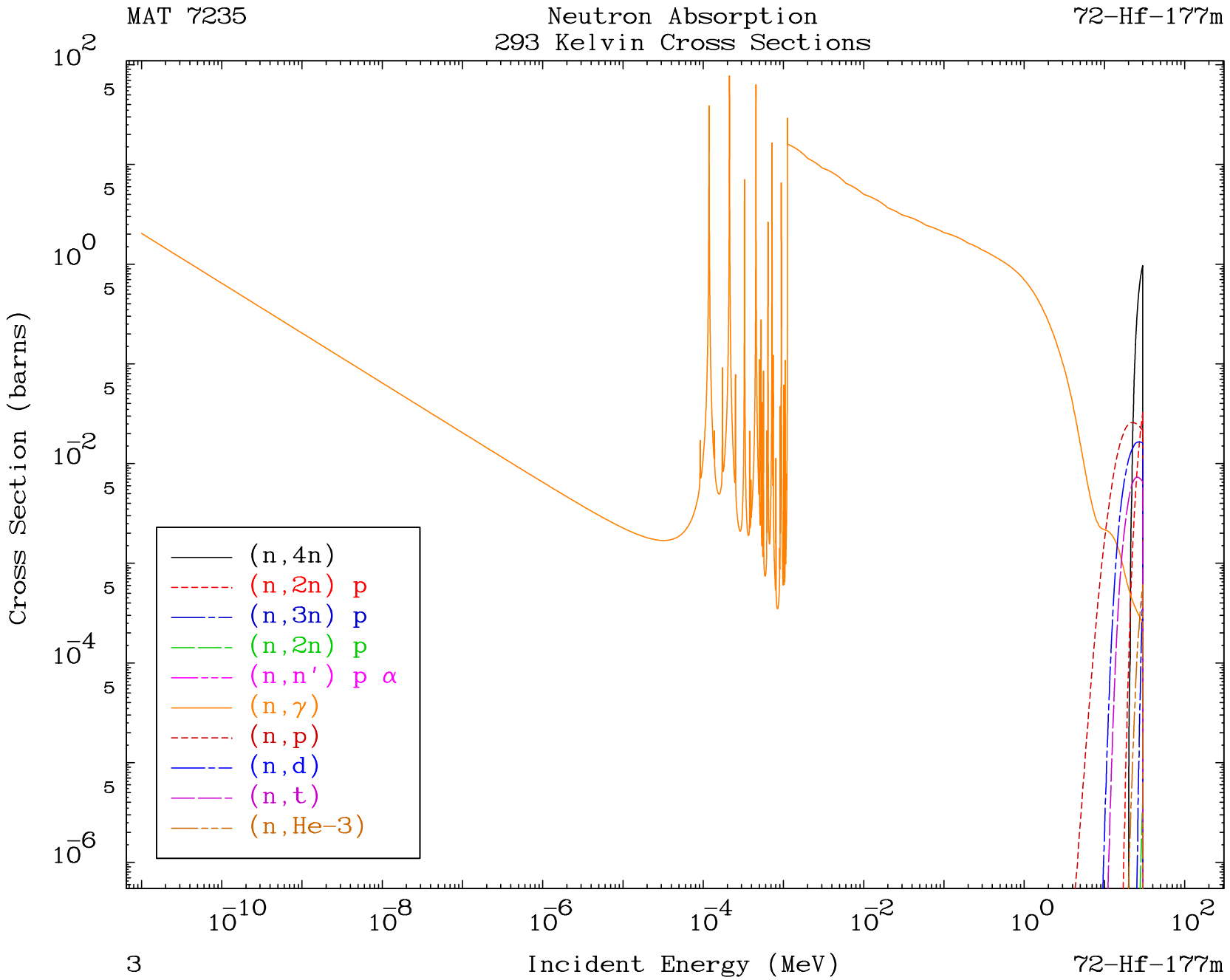
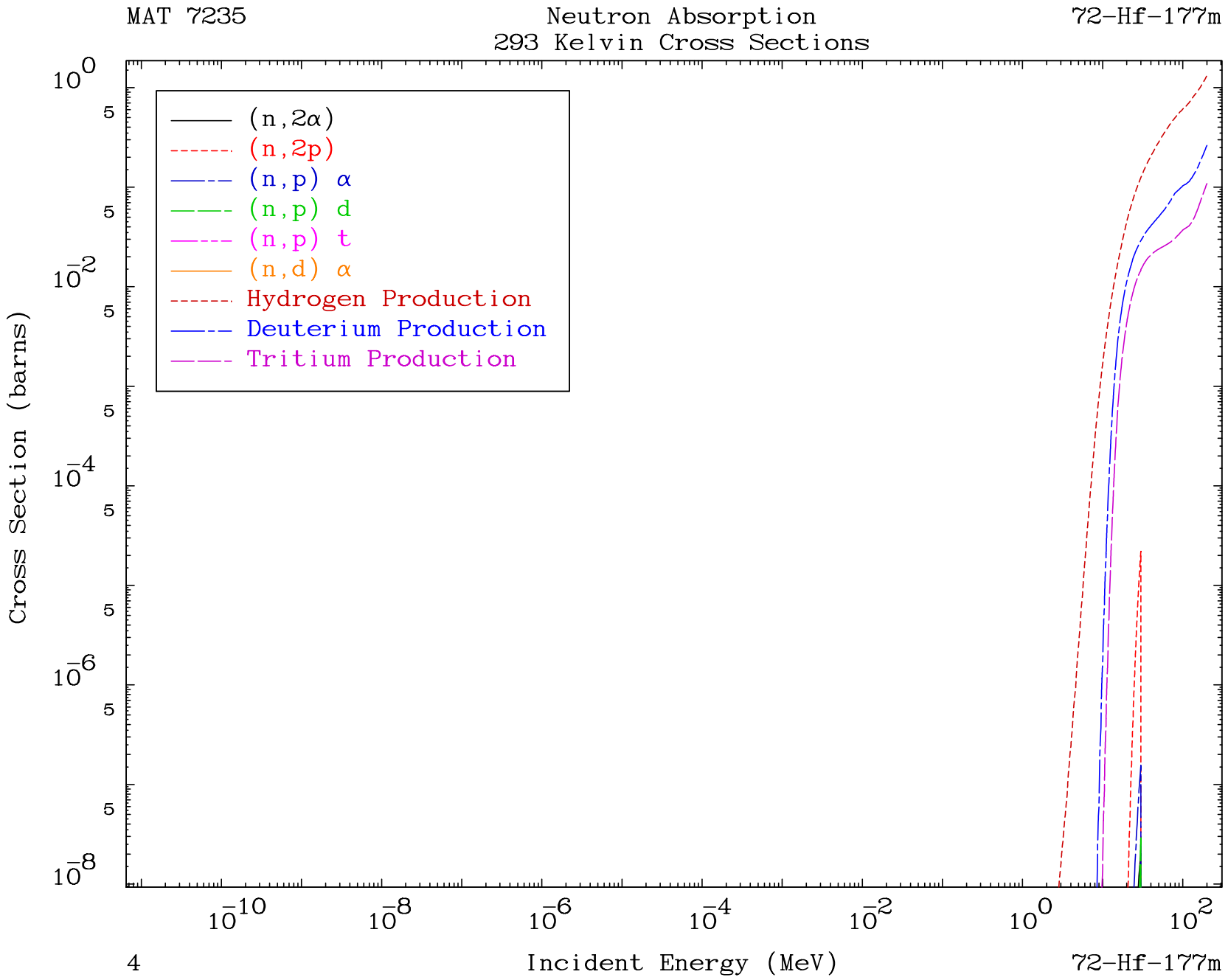
Program EVALPLOT
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

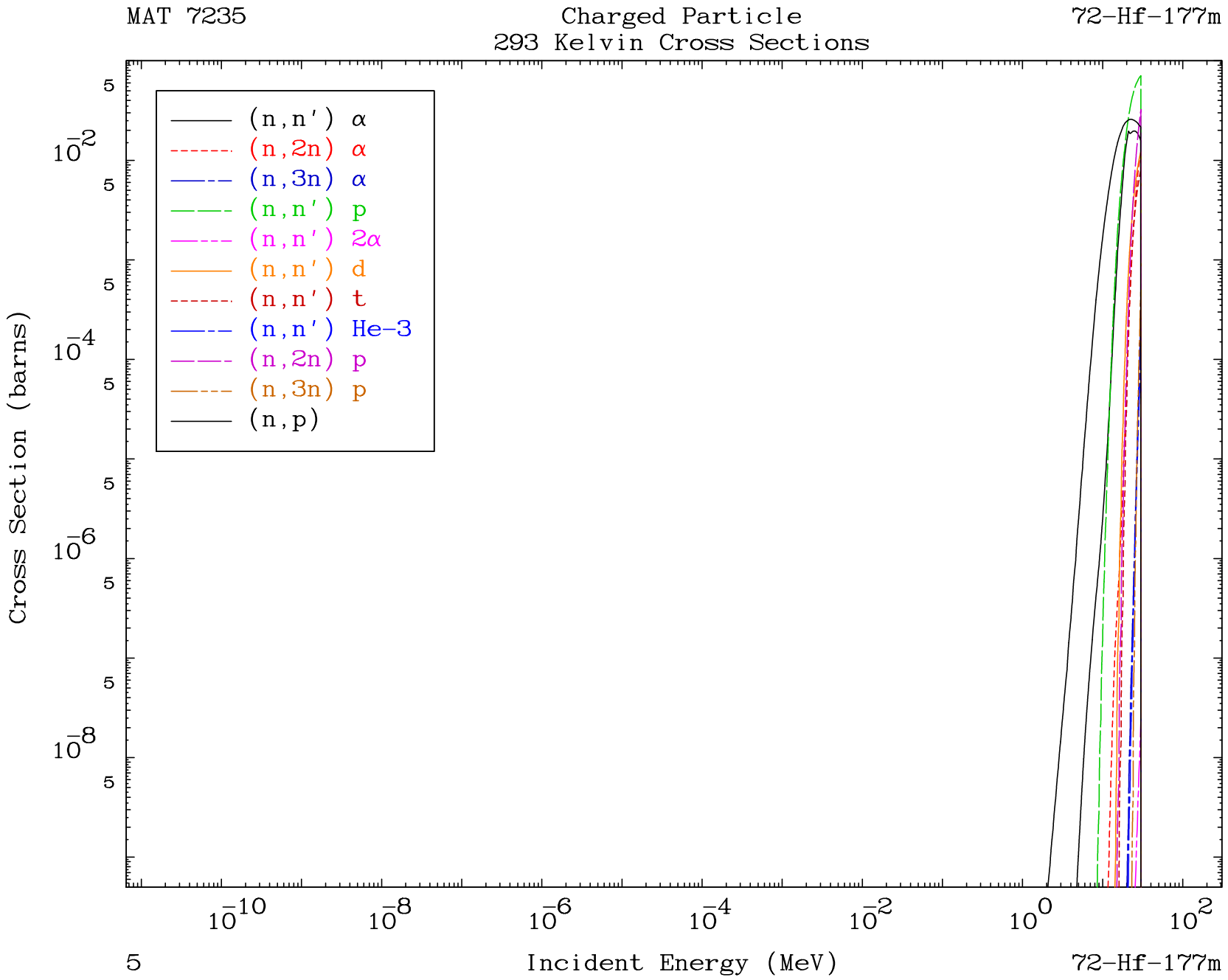
Press Mouse Button to Start

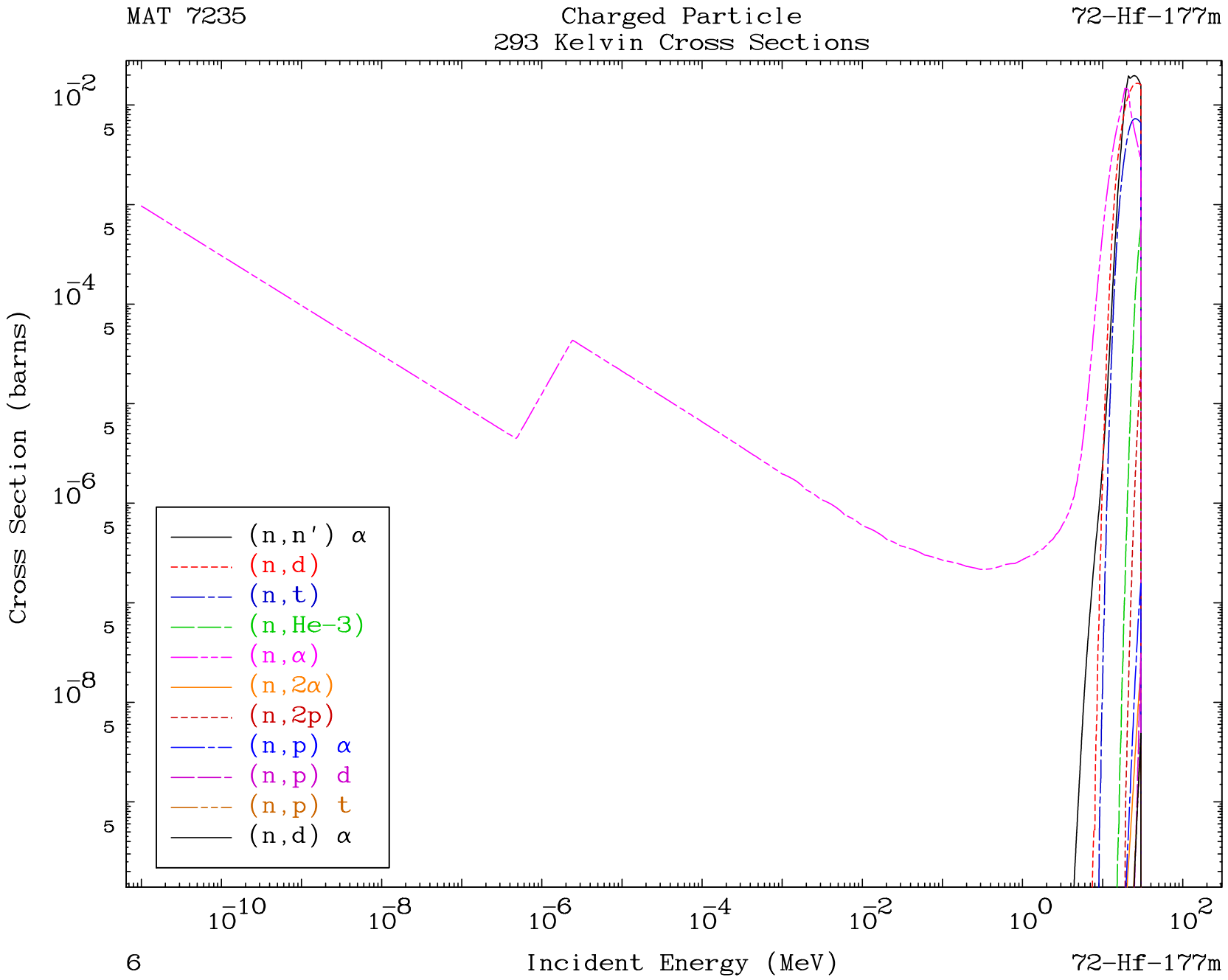

MAT 7235
Neutron Major
293 Kelvin Cross Sections
72-Hf-177m
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
Cross Section (barns)
10^2
10^0
10^-2
10^-4
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
1
Incident Energy (MeV)
72-Hf-177m

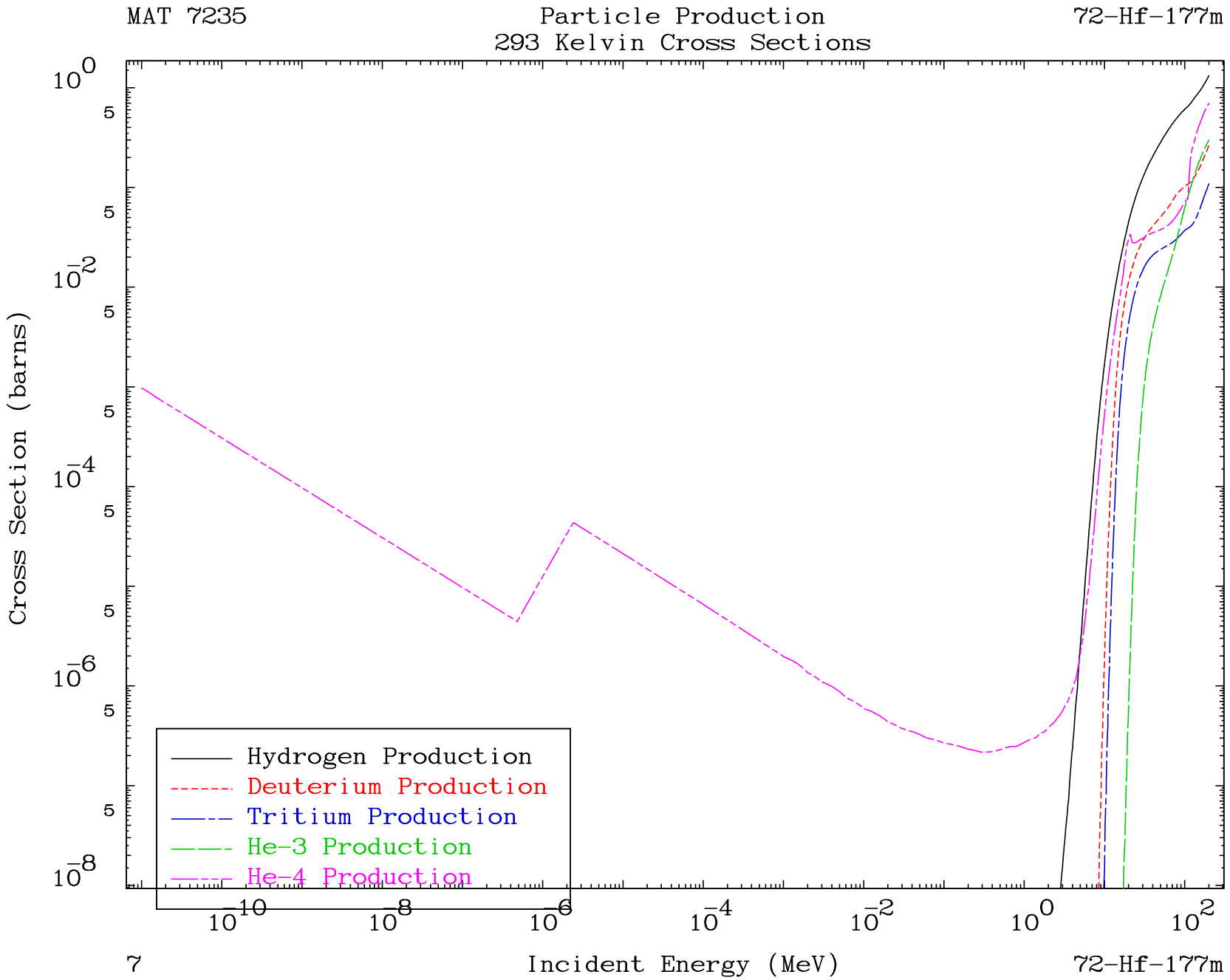

MAT 7235
Neutron Absorption
293 Kelvin Cross Sections
72-Hf-177m
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,n') d
(n,n') t
(n,n') He-3
Cross Section (barns)
Incident Energy (MeV)
72-Hf-177m
2

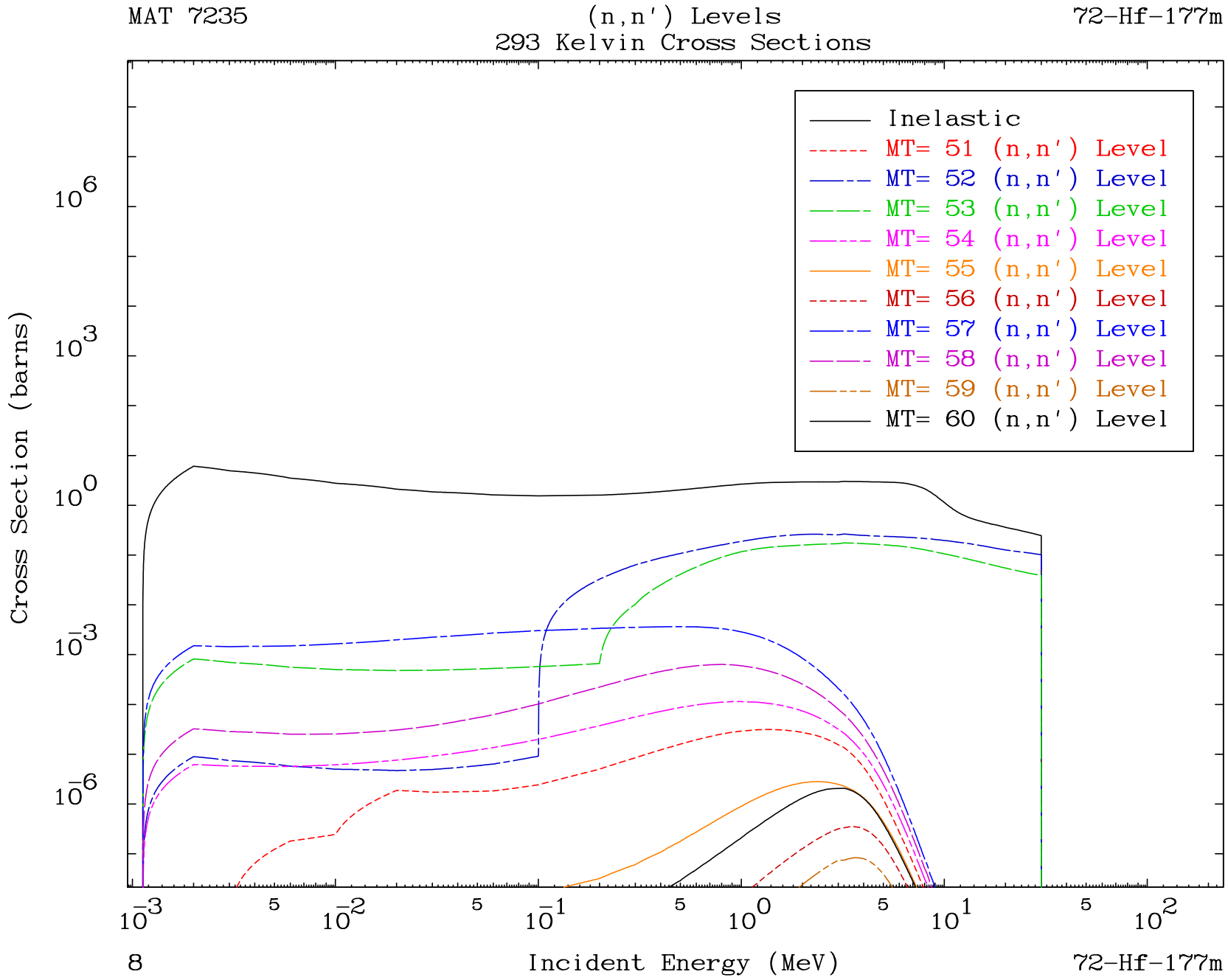

MAT 7235
Neutron Absorption
293 Kelvin Cross Sections
72-Hf-177m
Cross Section (barns)
Incident Energy (MeV)
(n,4n)
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
(n,γ)
(n,p)
(n,d)
(n,t)
(n,He-3)
3

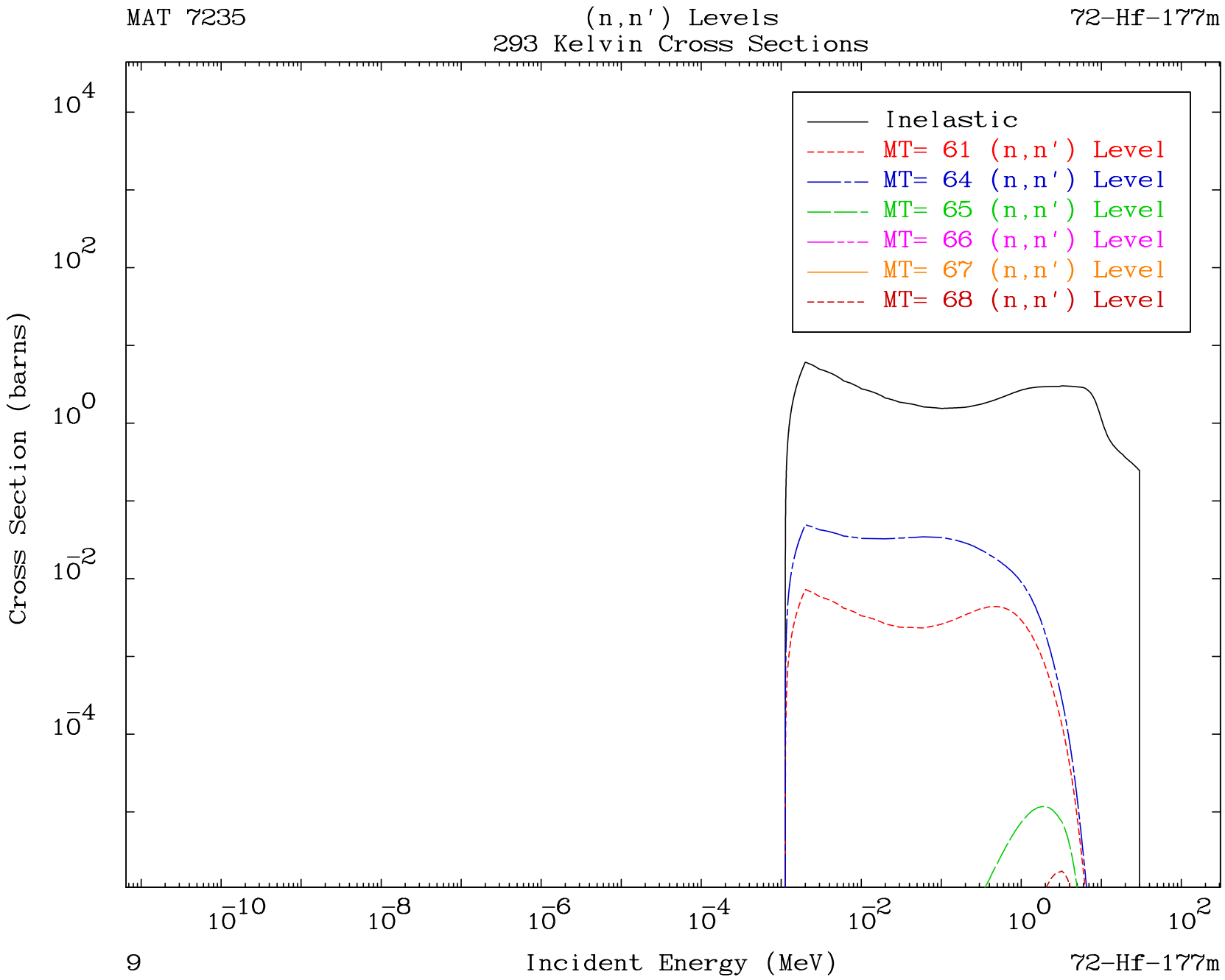

MAT 7235
Neutron Absorption
293 Kelvin Cross Sections
72-Hf-177m
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
Cross Section (barns)
Incident Energy (MeV)
72-Hf-177m
4

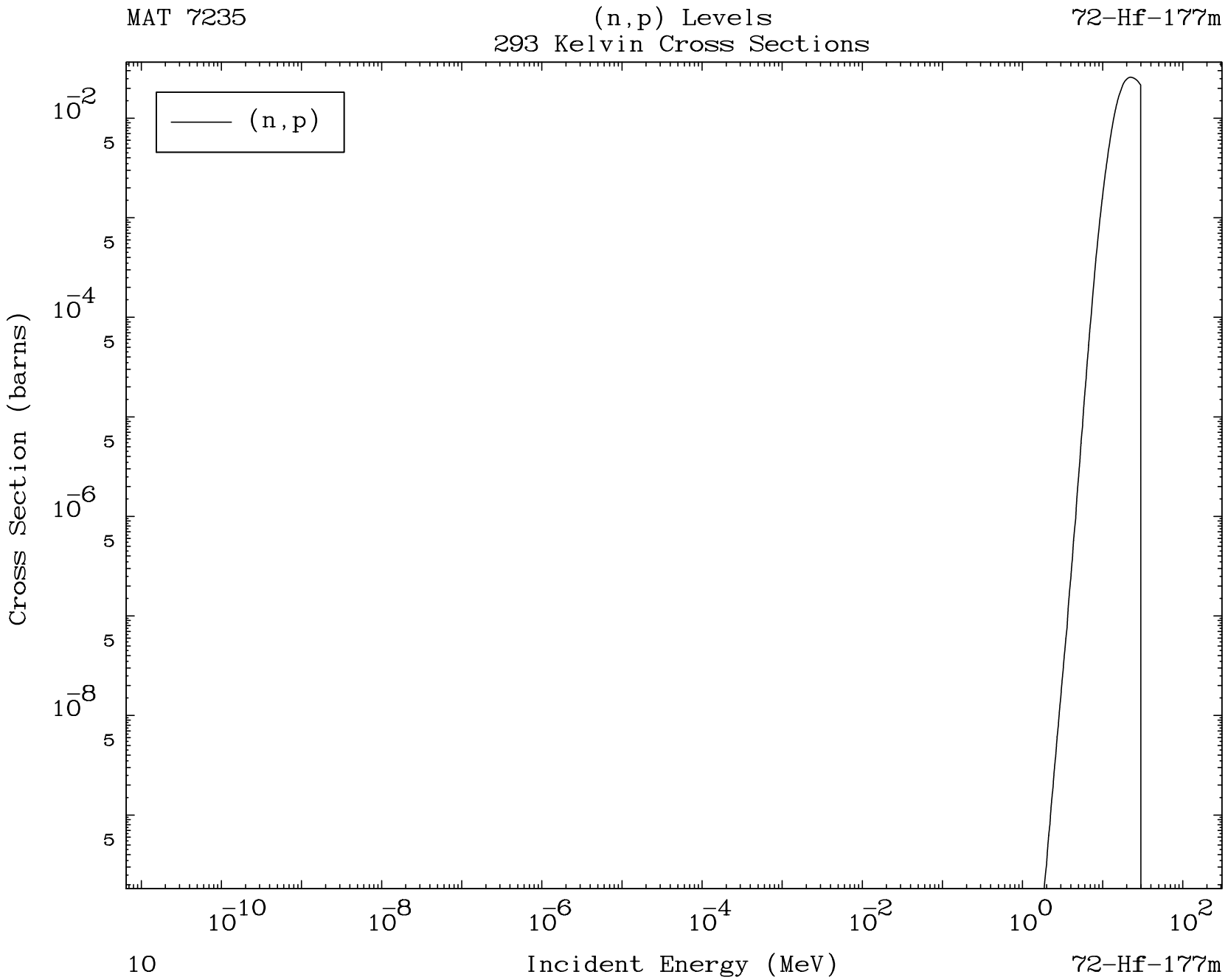

MAT 7235
Charged Particle
293 Kelvin Cross Sections
72-Hf-177m
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
Cross Section (barns)
Incident Energy (MeV)
72-Hf-177m

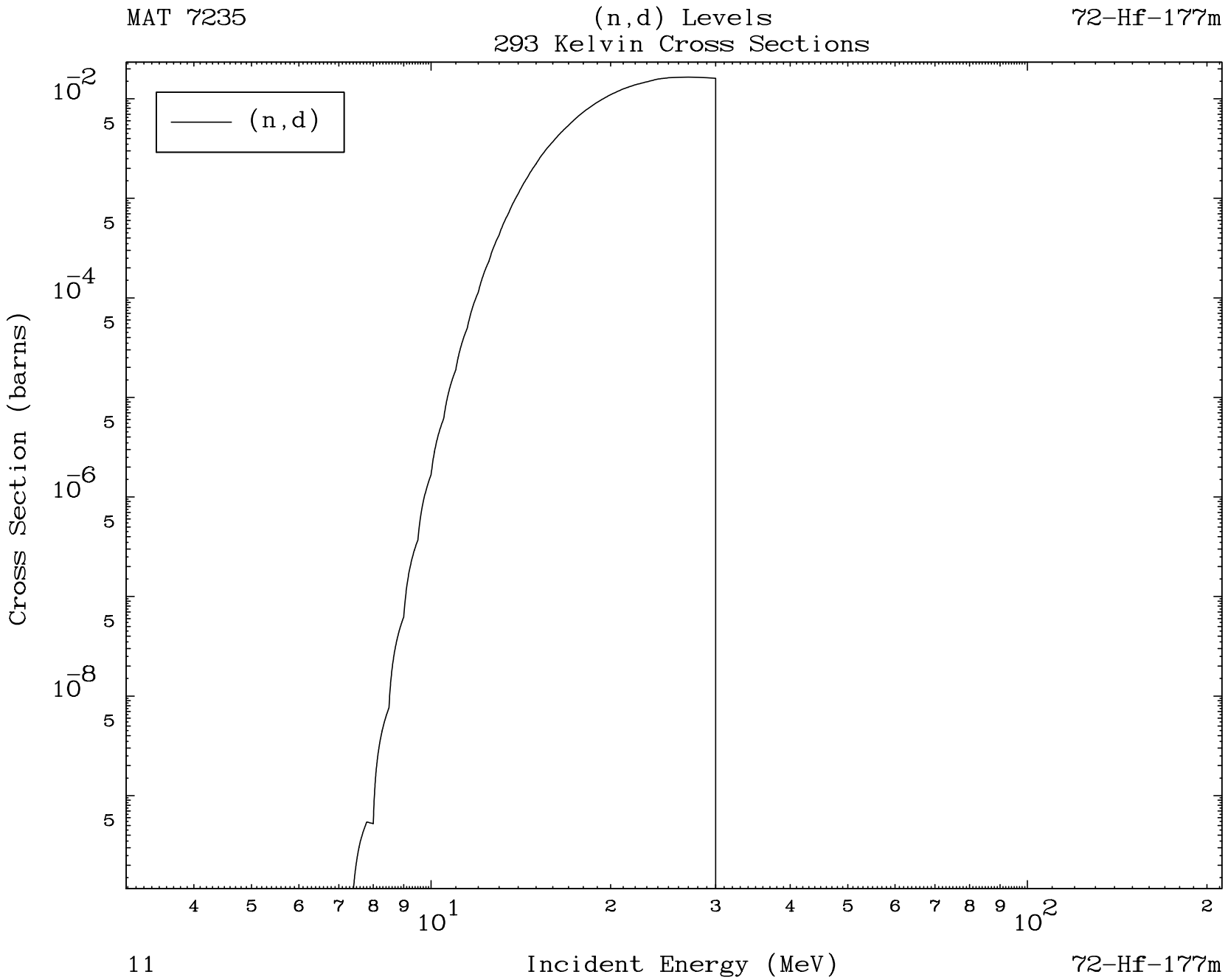

MAT 7235
Charged Particle
293 Kelvin Cross Sections
72-Hf-177m
Cross Section (barns)
Incident Energy (MeV)
72-Hf-177m
6
(n,n') α
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α

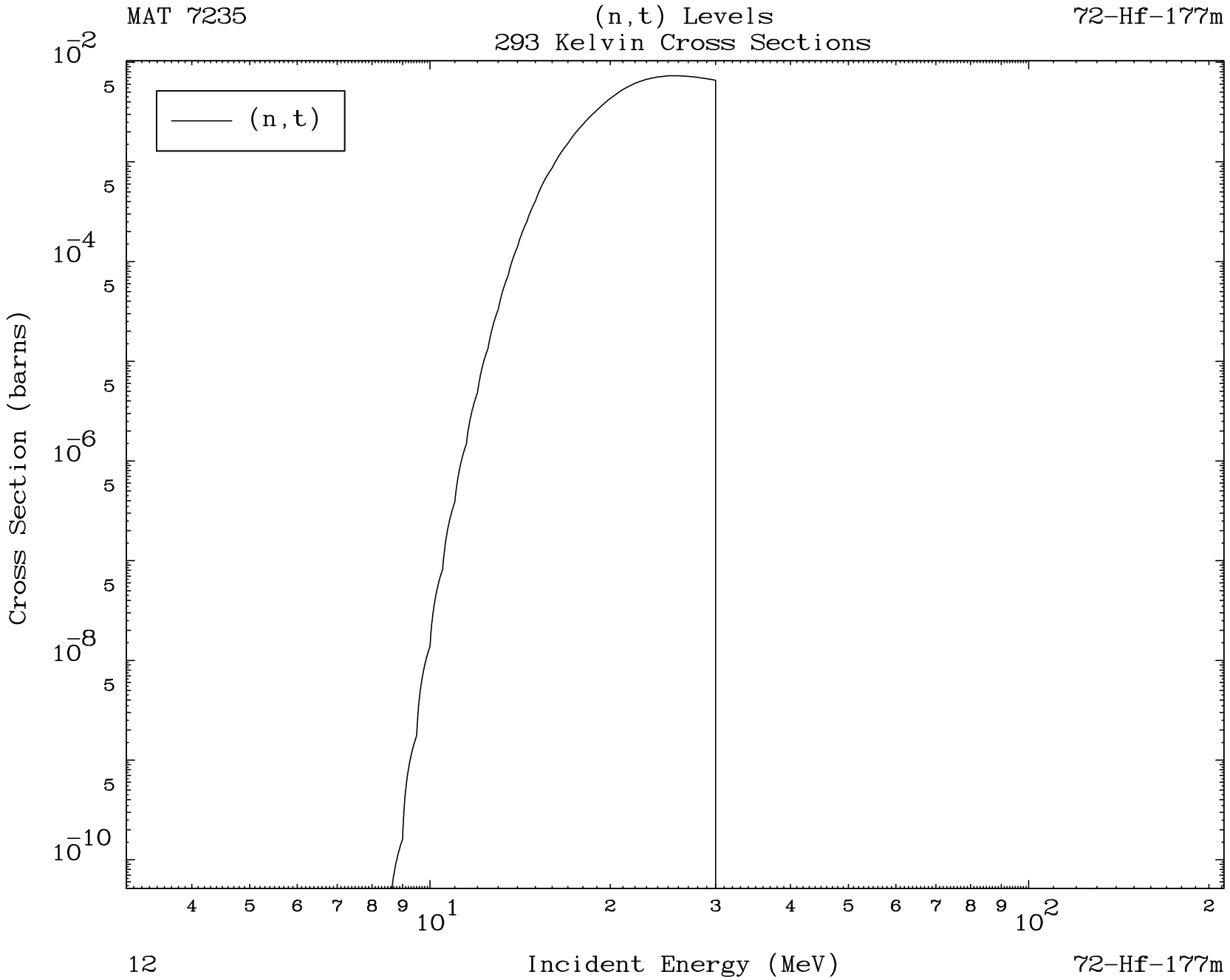

MAT 7235
Particle Production
293 Kelvin Cross Sections
72-Hf-177m
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
7
72-Hf-177m

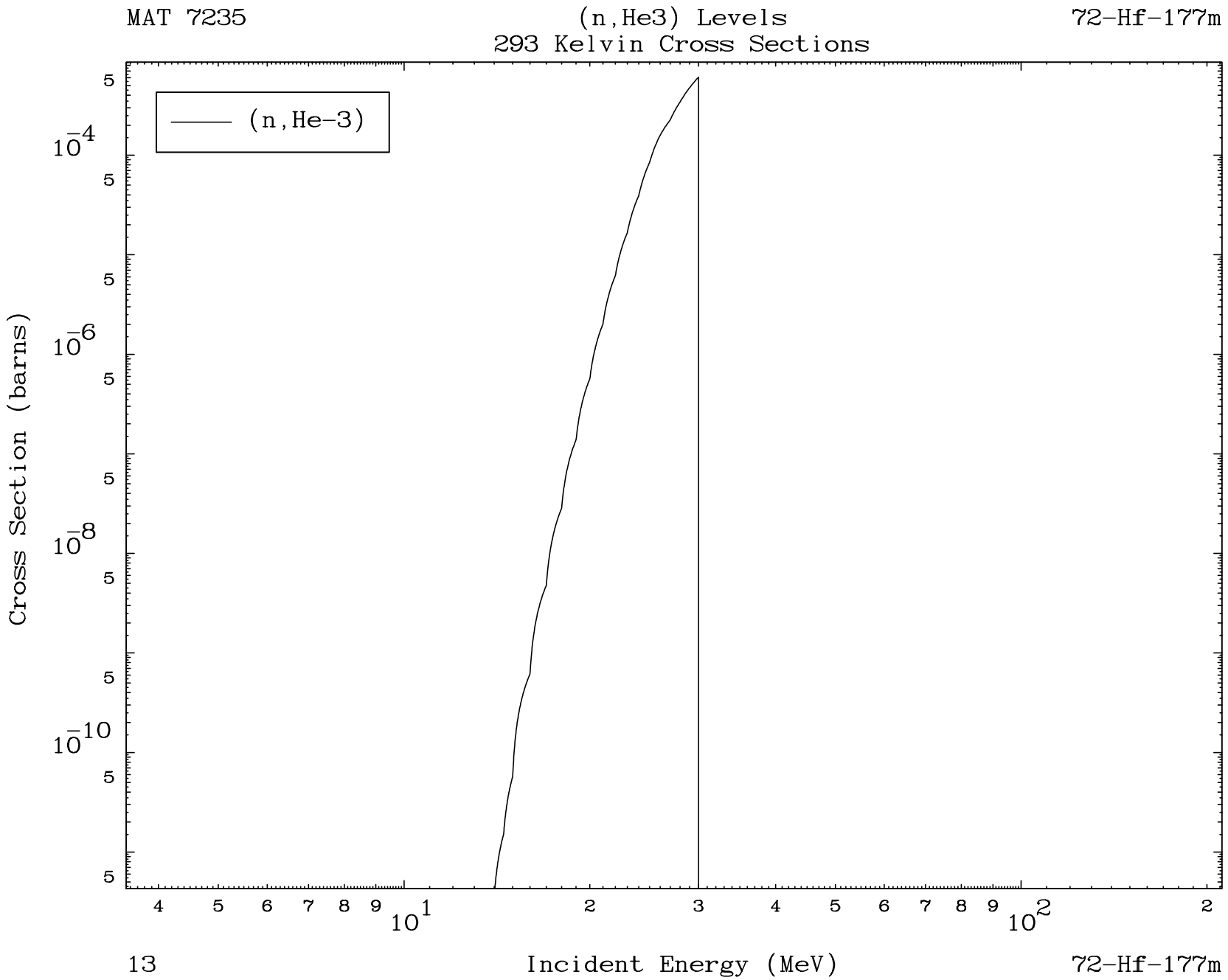

MAT 7235
(n,n') Levels
293 Kelvin Cross Sections
72-Hf-177m
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
MT= 60 (n,n') Level
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-3
10^-2
10^-1
10^0
10^1
10^2
5
Incident Energy (MeV)
8
72-Hf-177m

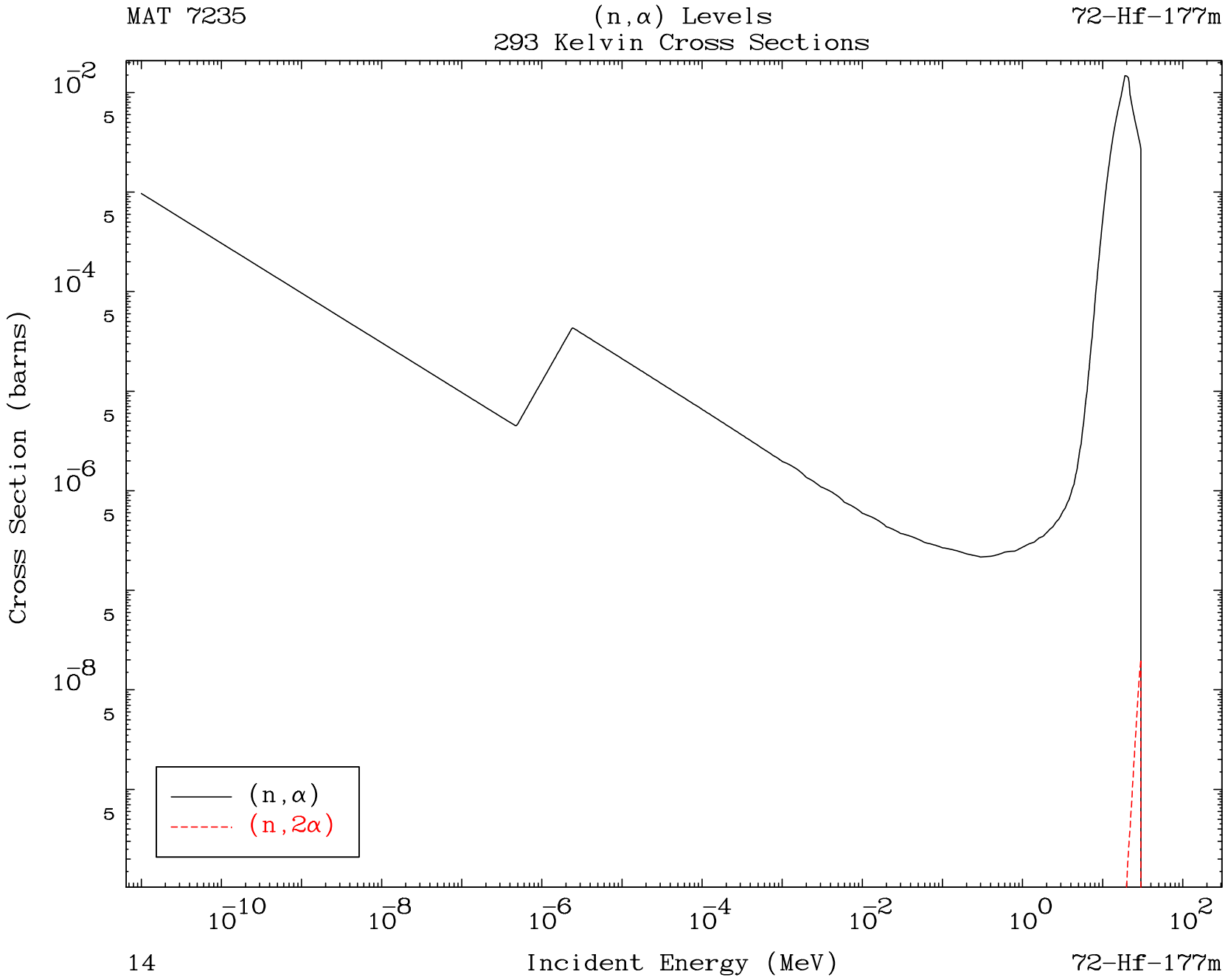

MAT 7235
(n,n') Levels
293 Kelvin Cross Sections
72-Hf-177m
Inelastic
MT= 61 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
MT= 67 (n,n') Level
MT= 68 (n,n') Level
Cross Section (barns)
10^4
10^2
10^0
10^-2
10^-4
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
9
72-Hf-177m

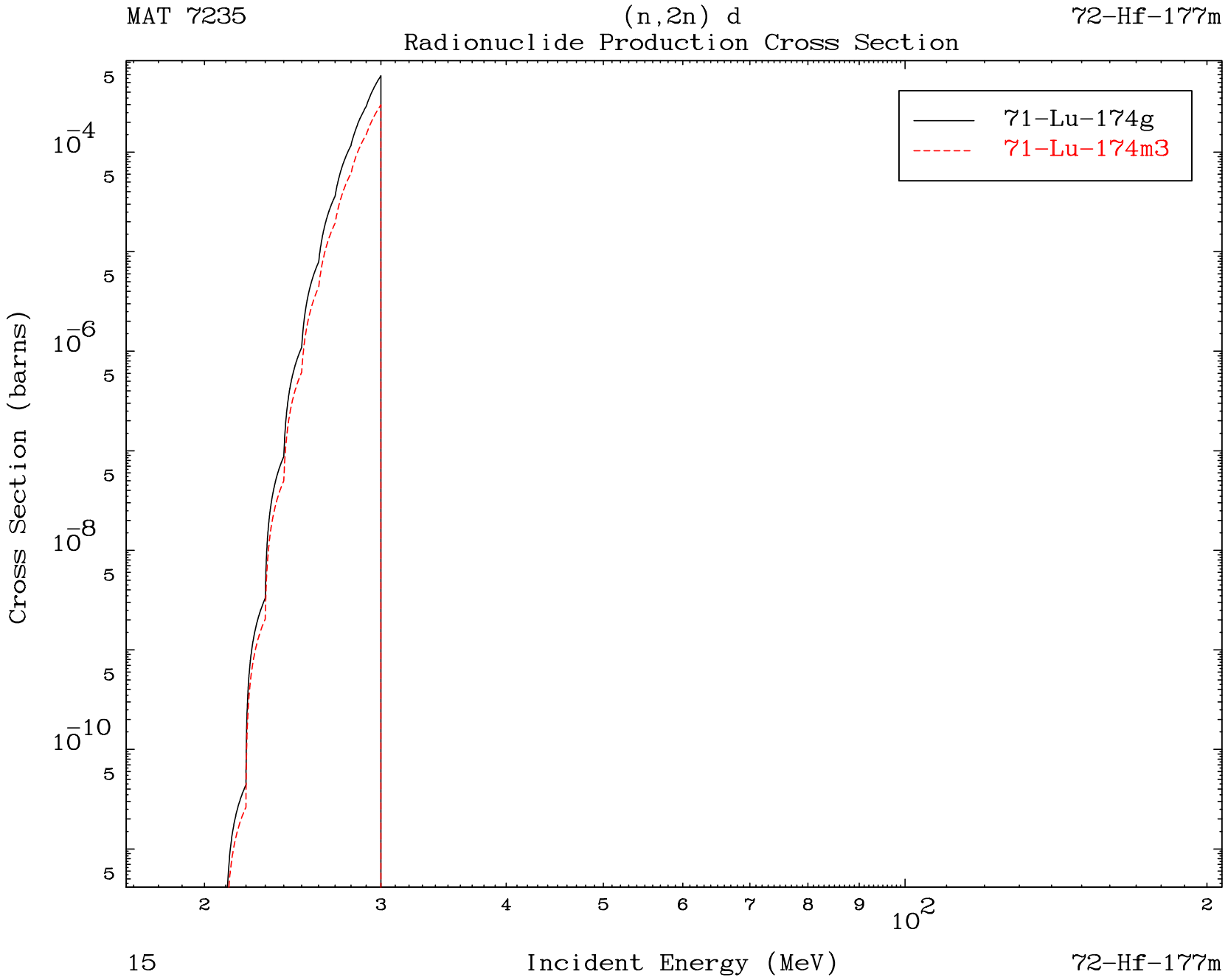

MAT 7235
(n,p) Levels
72-Hf-177m
293 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
72-Hf-177m
10

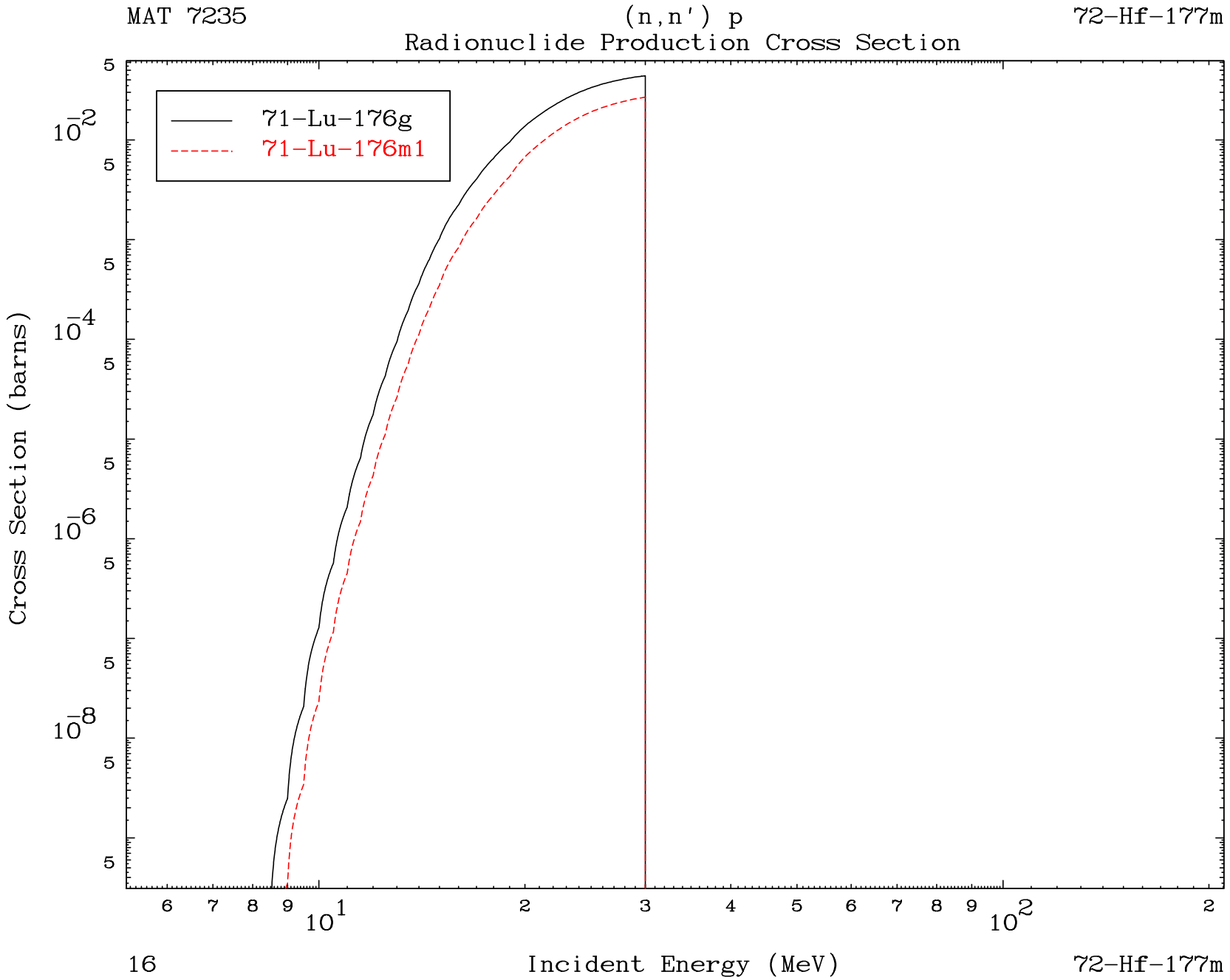

MAT 7235
(n,d) Levels
72-Hf-177m
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
11
72-Hf-177m

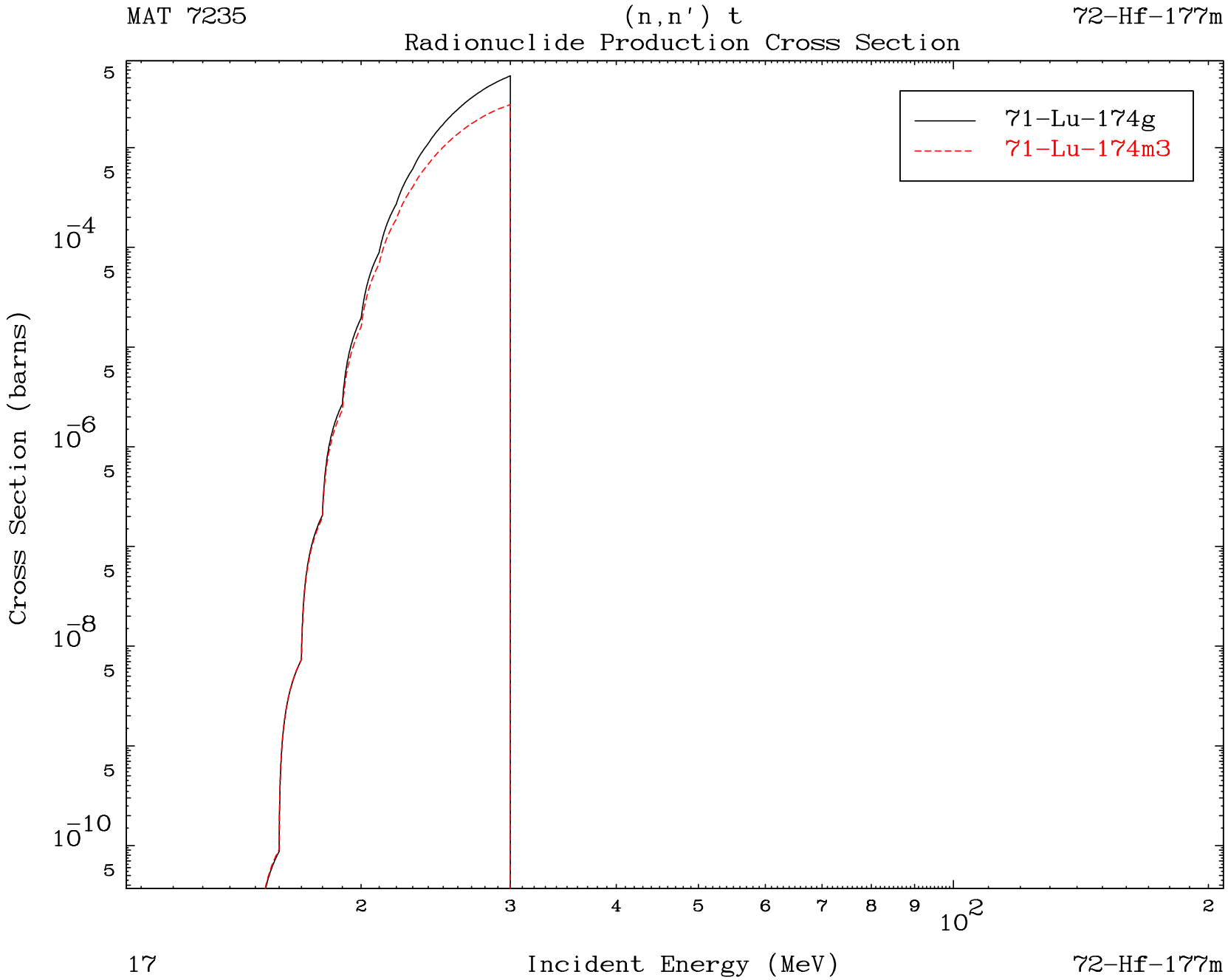

MAT 7235
(n,t) Levels
72-Hf-177m
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
12
72-Hf-177m

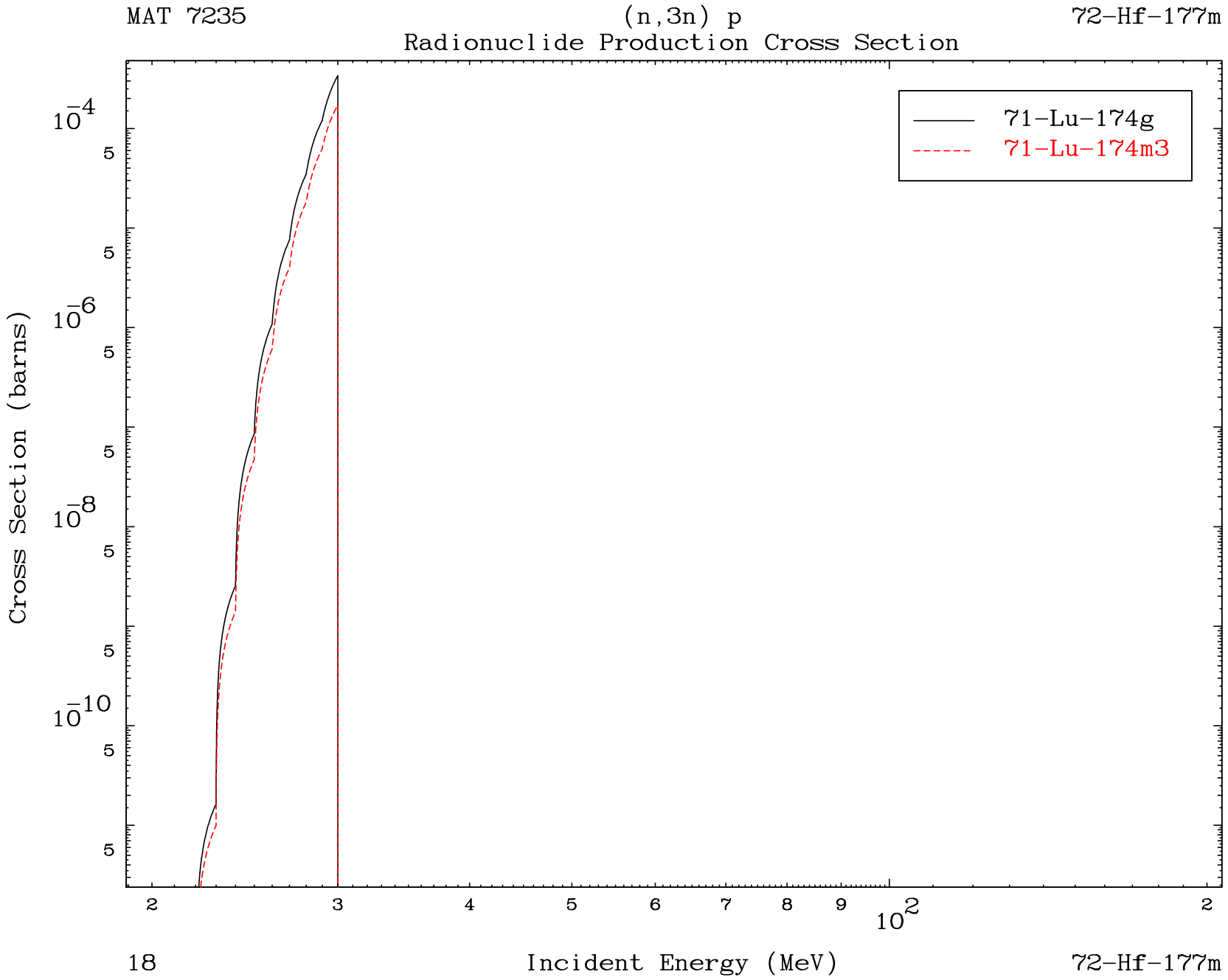

MAT 7235
(n,He3) Levels
72-Hf-177m
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
4 5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2 2
13
Incident Energy (MeV)
72-Hf-177m

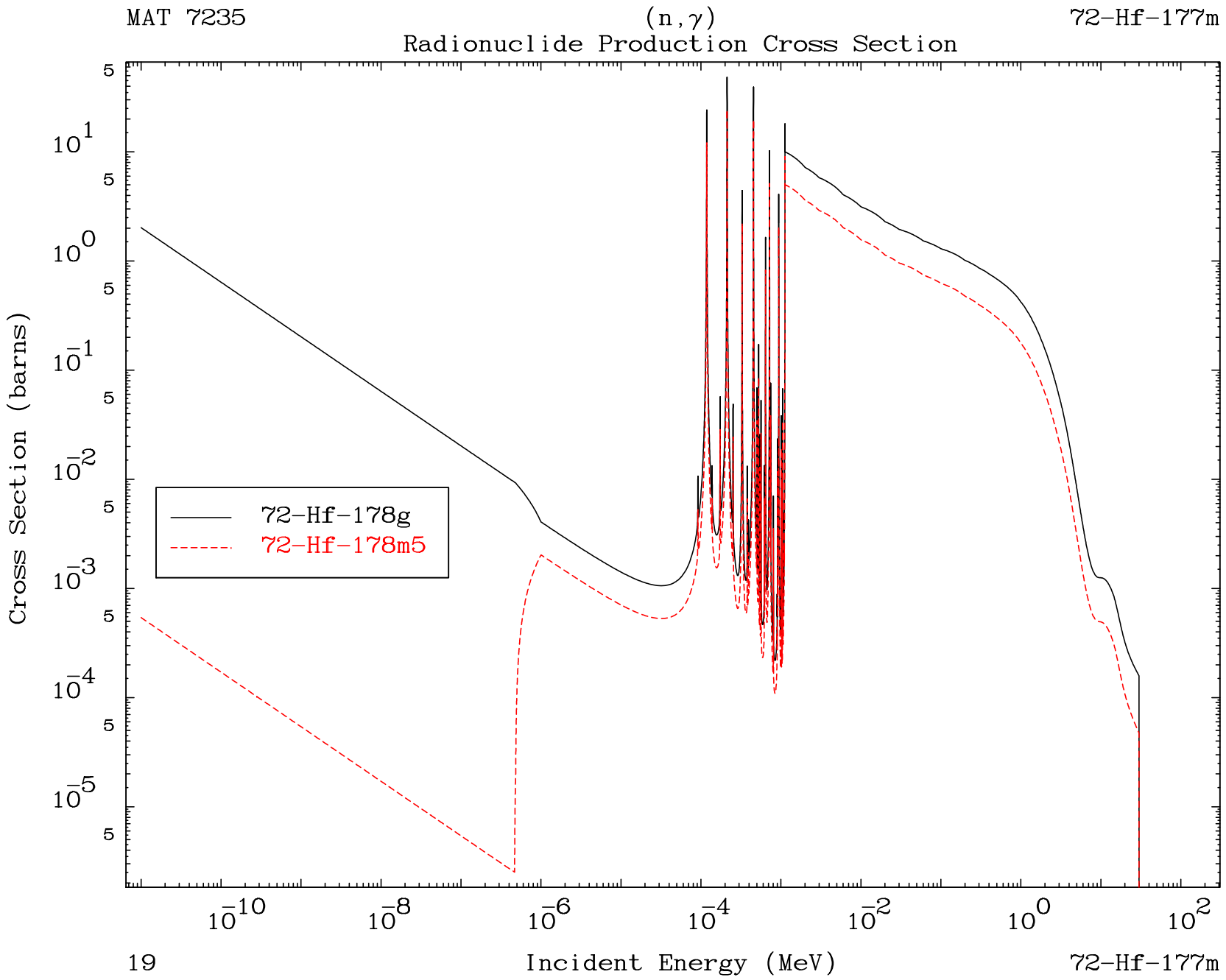

MAT 7235
(n,α) Levels
293 Kelvin Cross Sections
72-Hf-177m
Cross Section (barns)
10-2
5
10-4
5
10-6
5
10-8
5
(n,α)
(n,2α)
10-10
10-8
10-6
10-4
10-2
100
102
14
Incident Energy (MeV)
72-Hf-177m

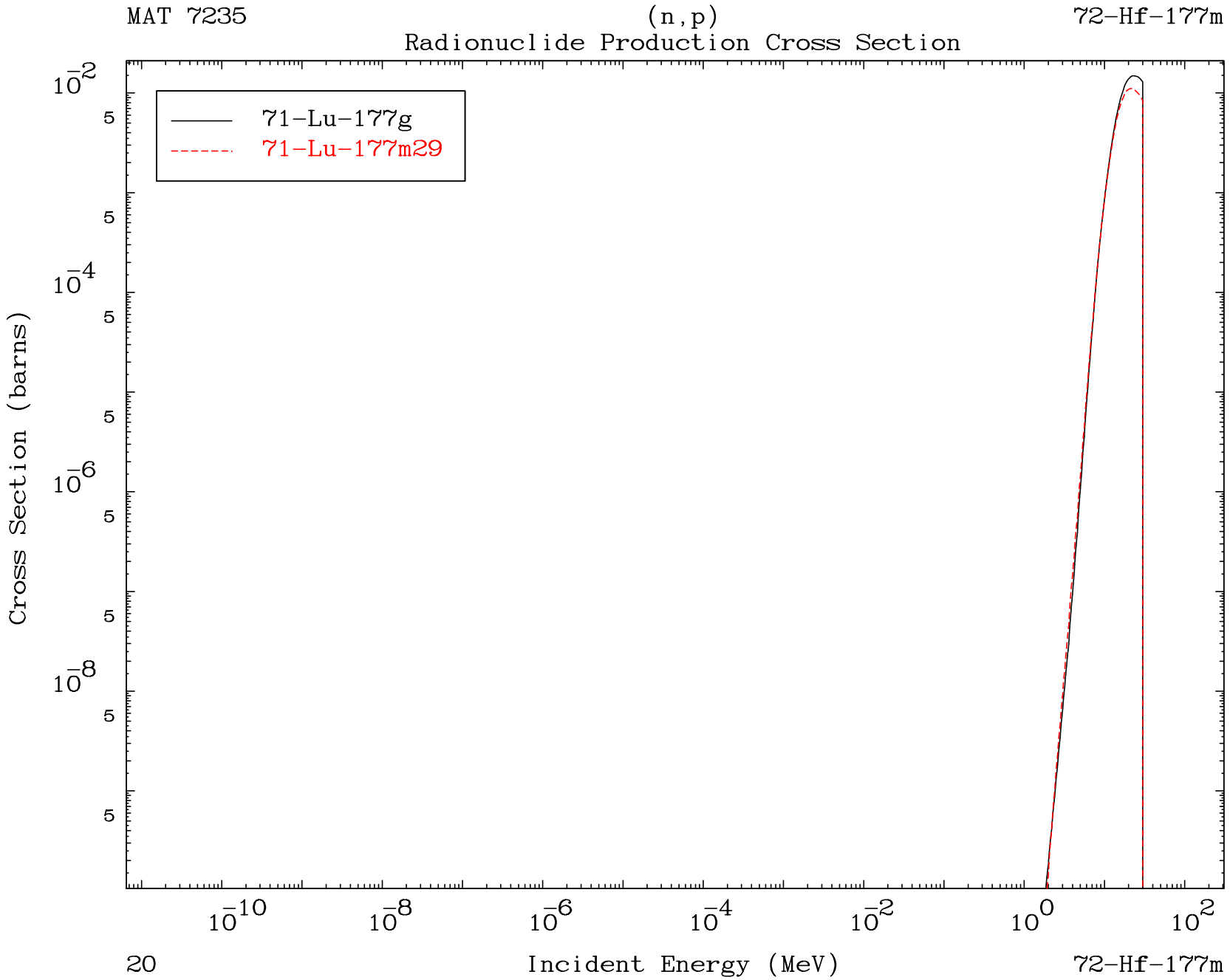

MAT 7235
(n,2n) d
72-Hf-177m
Radionuclide Production Cross Section
71-Lu-174g
71-Lu-174m3
Cross Section (barns)
Incident Energy (MeV)
15
72-Hf-177m

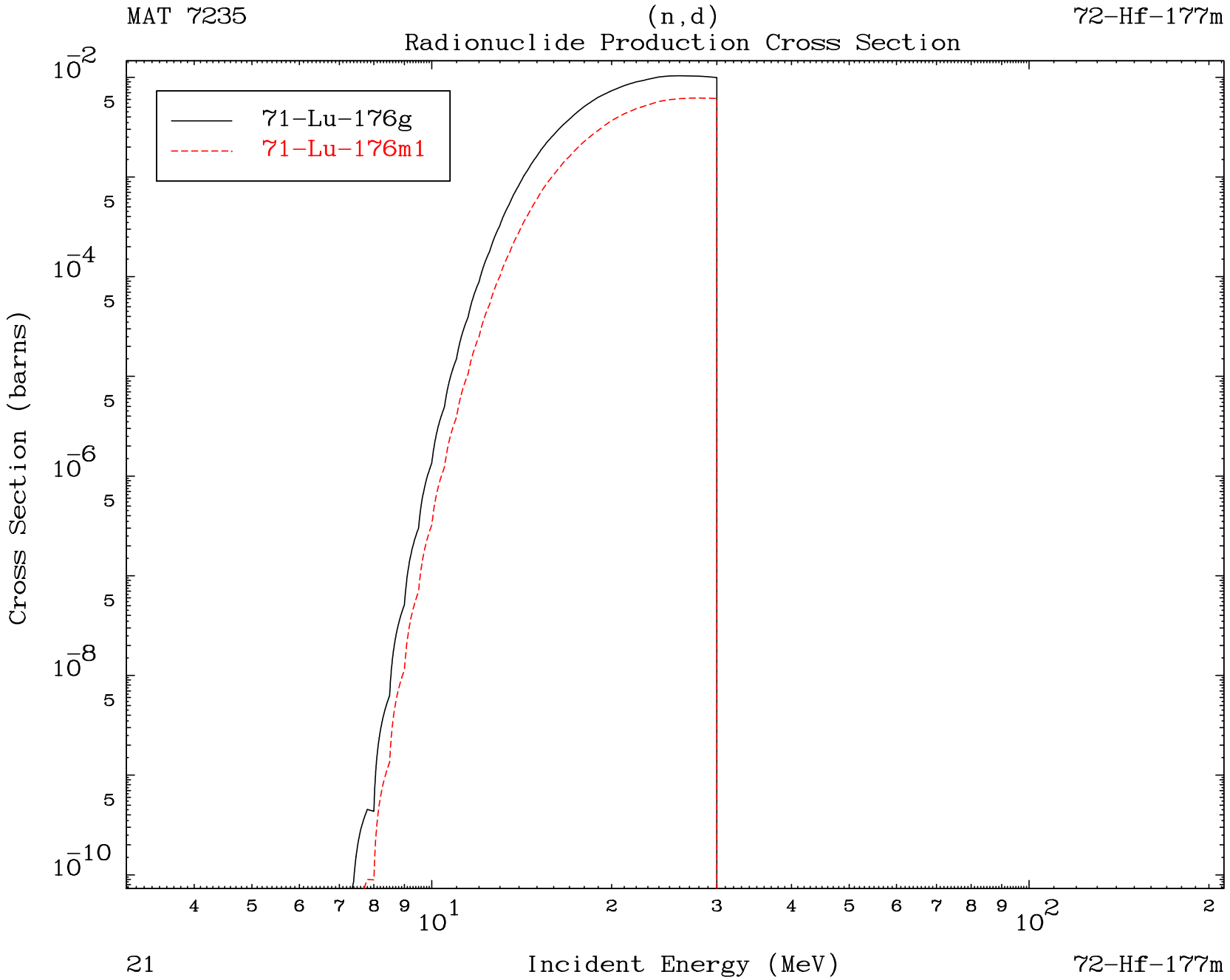

MAT 7235
(n,n') p
72-Hf-177m
Radionuclide Production Cross Section
71-Lu-176g
71-Lu-176m1
Cross Section (barns)
Incident Energy (MeV)
16
72-Hf-177m

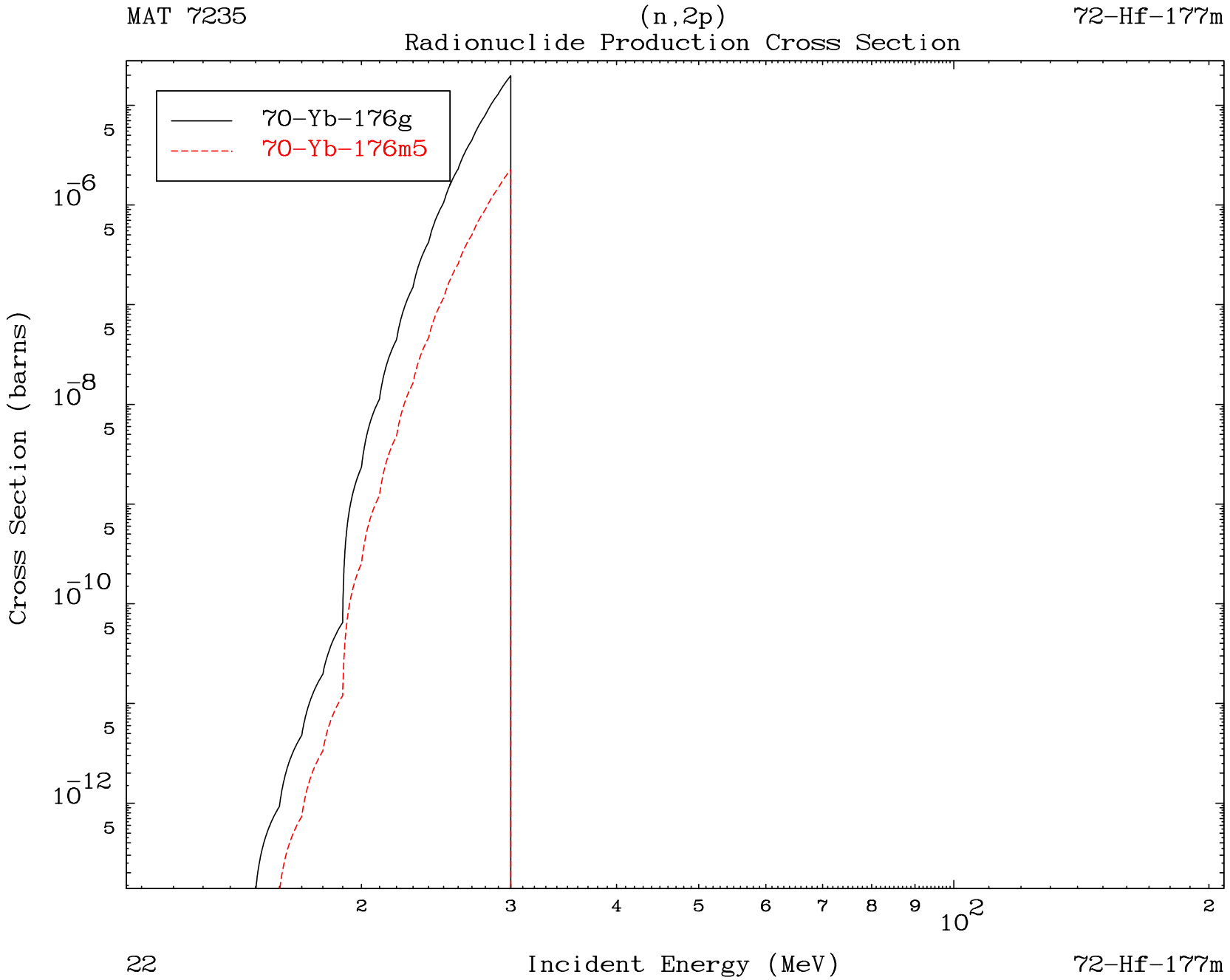

MAT 7235
(n,n') t
72-Hf-177m
Radionuclide Production Cross Section
71-Lu-174g
71-Lu-174m3
Cross Section (barns)
Incident Energy (MeV)
17
72-Hf-177m


MAT 7235
(n,3n) p
72-Hf-177m
Radionuclide Production Cross Section
71-Lu-174g
71-Lu-174m3
Cross Section (barns)
10-4
10-6
10-8
10-10
5
2
3
4
6
7
8
9
10 2
Incident Energy (MeV)
18
72-Hf-177m


MAT 7235
(n,γ)
72-Hf-177m
Radionuclide Production Cross Section
Cross Section (barns)
Incident Energy (MeV)
72-Hf-178g
72-Hf-178m5
19
72-Hf-177m


MAT 7235
(n,p)
72-Hf-177m
Radionuclide Production Cross Section
71-Lu-177g
71-Lu-177m29
Cross Section (barns)
Incident Energy (MeV)
20
72-Hf-177m


MAT 7235
(n,d)
72-Hf-177m
Radionuclide Production Cross Section
71-Lu-176g
71-Lu-176m1
Cross Section (barns)
Incident Energy (MeV)
21
72-Hf-177m


MAT 7235
(n,2p)
72-Hf-177m
Radionuclide Production Cross Section
70-Yb-176g
70-Yb-176m5
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)
72-Hf-177m