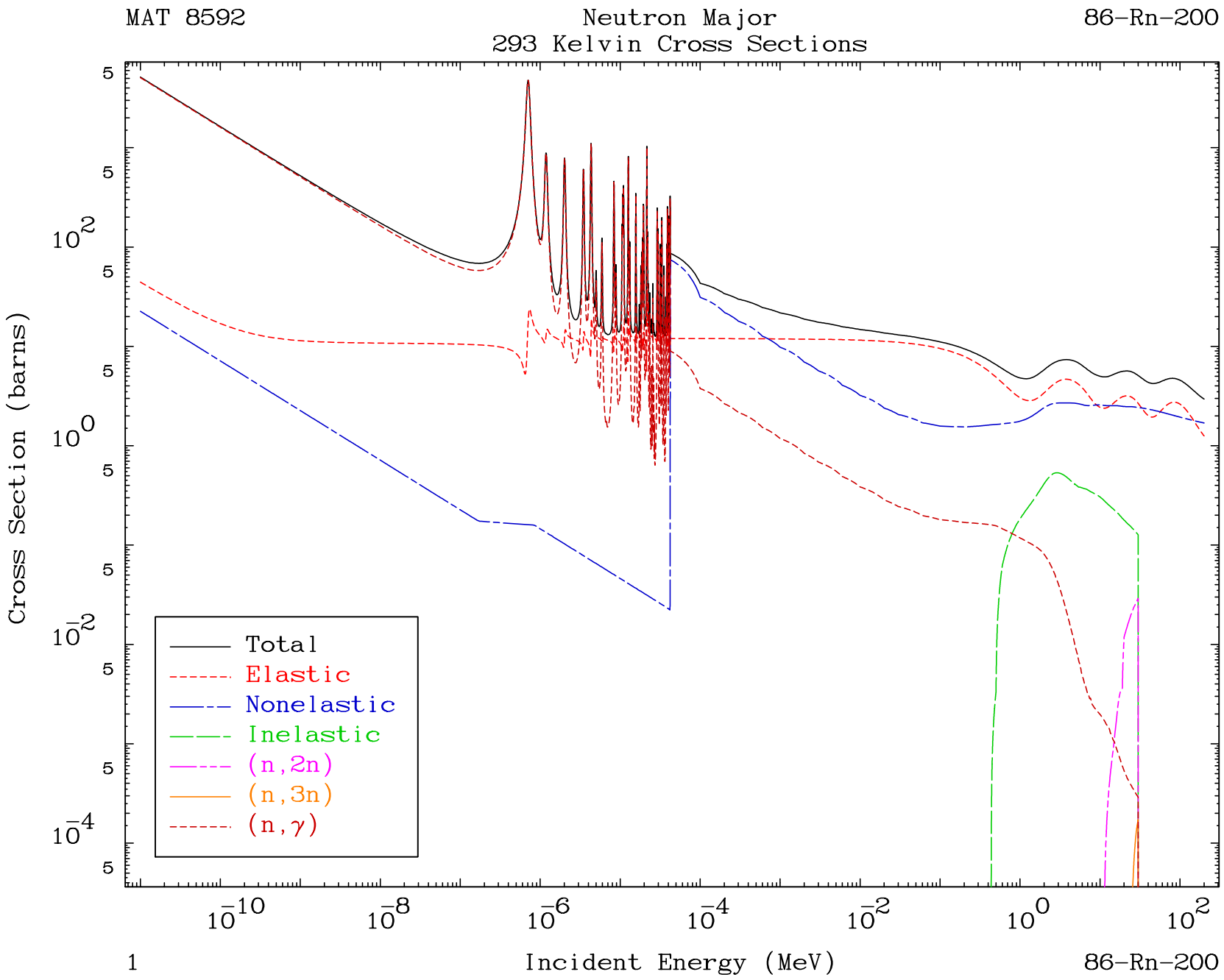
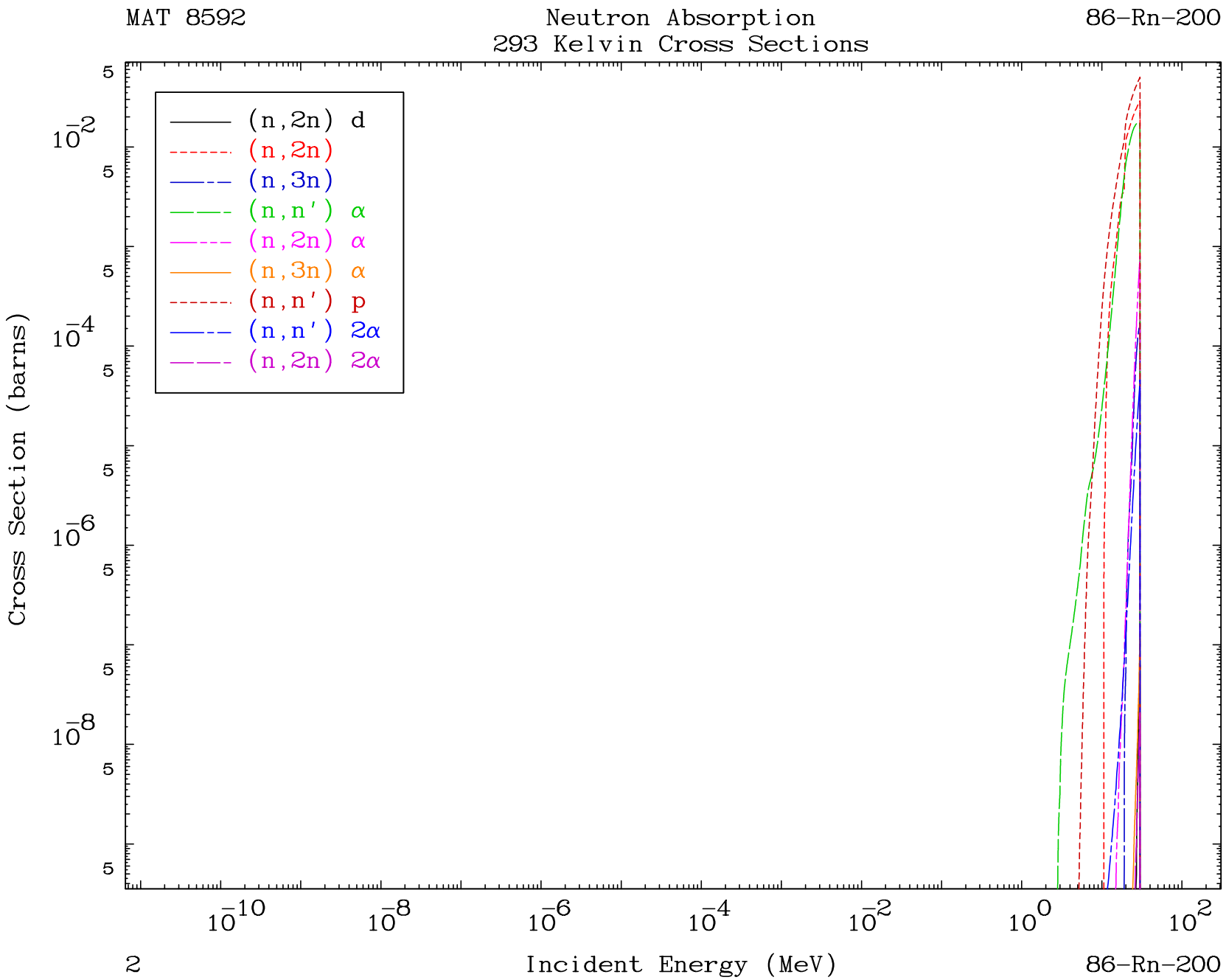
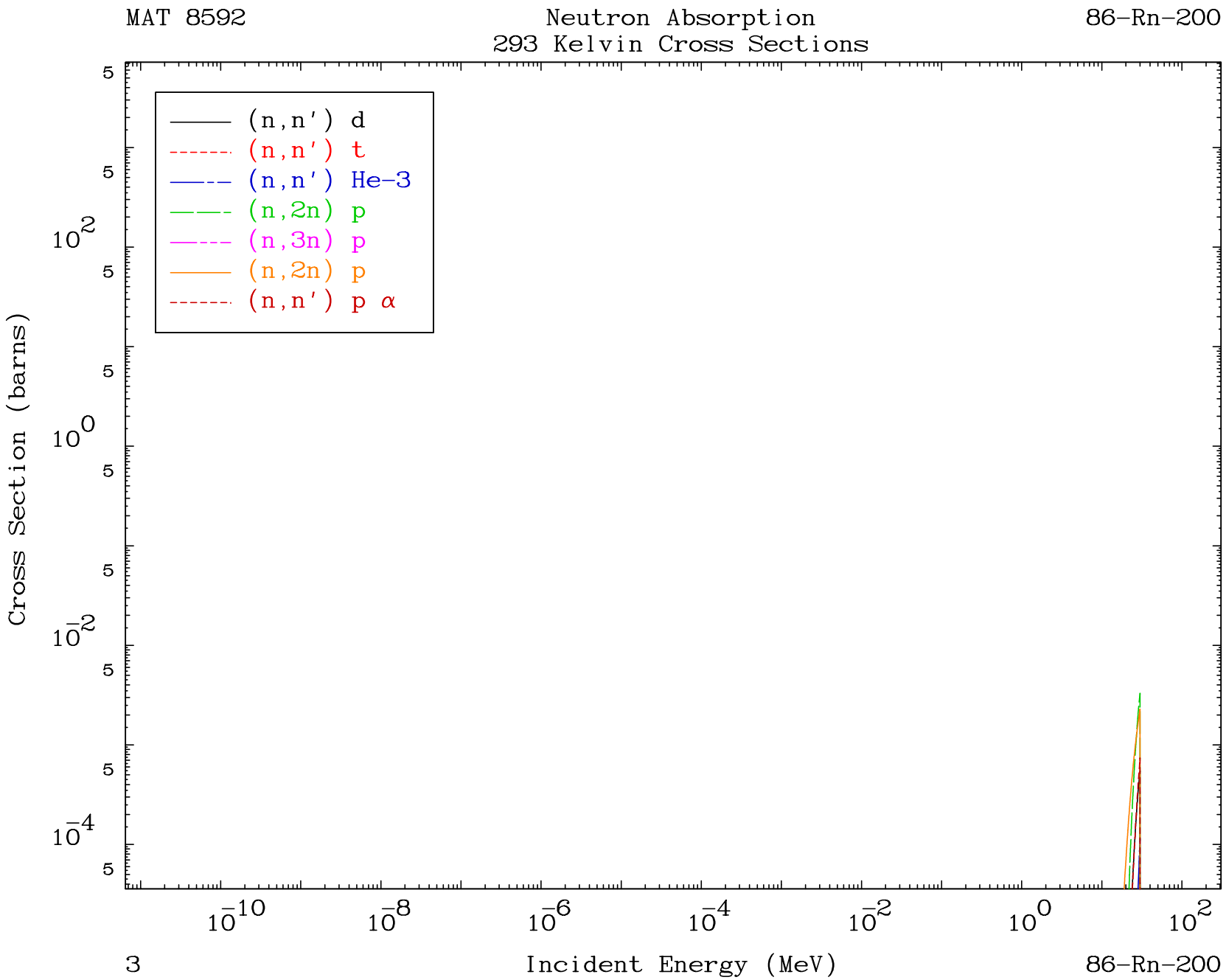
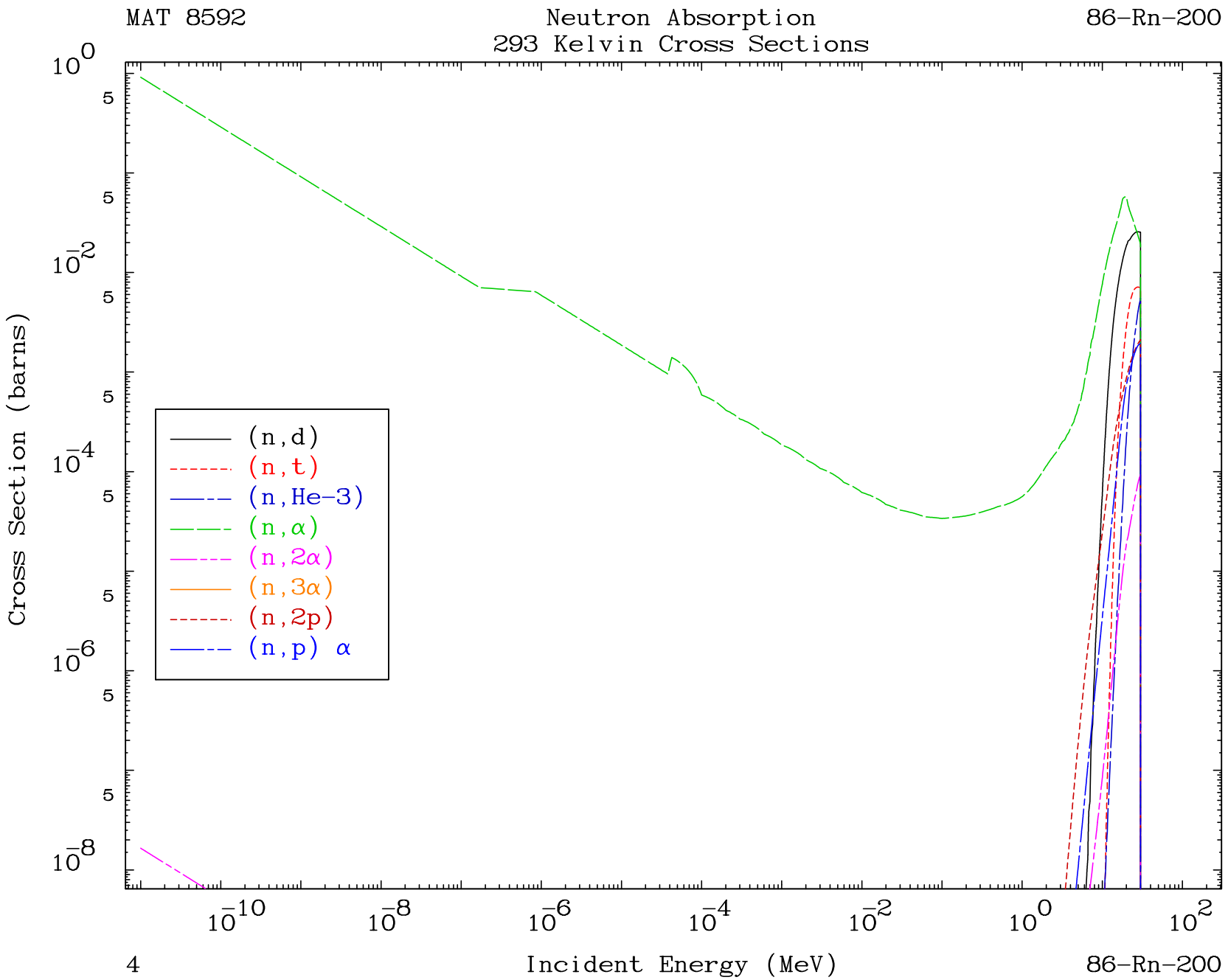
Program EVALPLOT
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

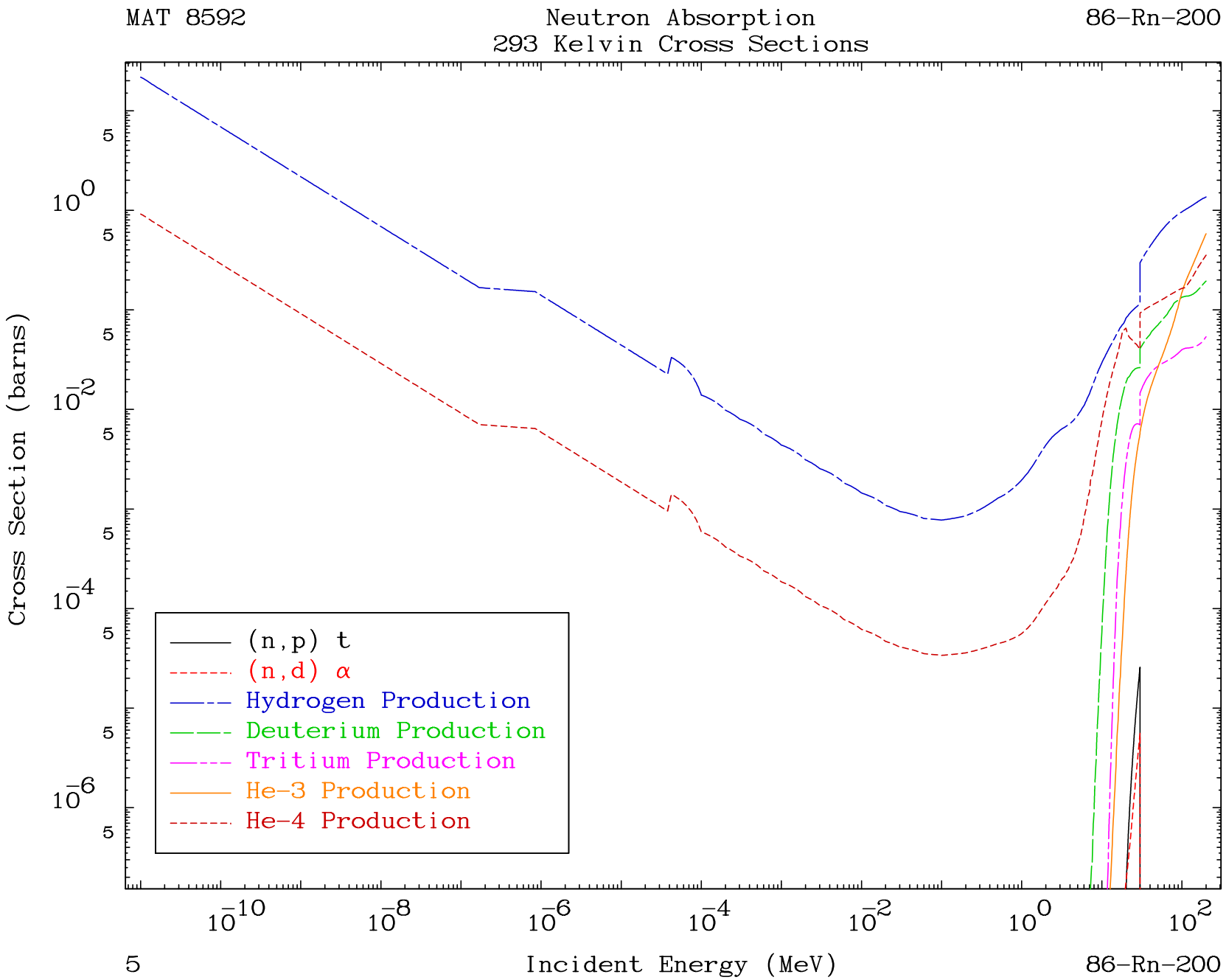
Press Mouse Button to Start

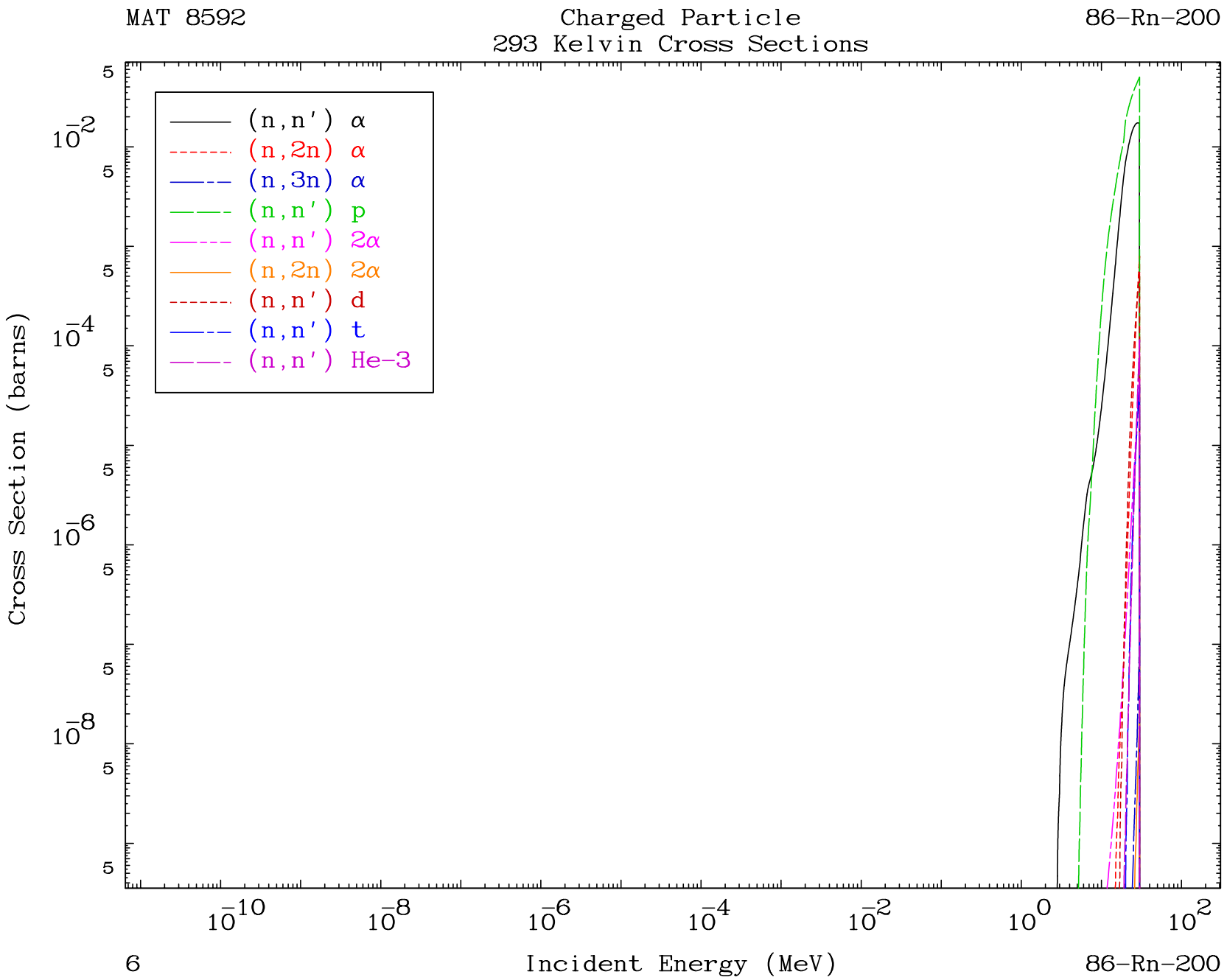

MAT 8592
Neutron Major
293 Kelvin Cross Sections
86-Rn-200
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
1
86-Rn-200

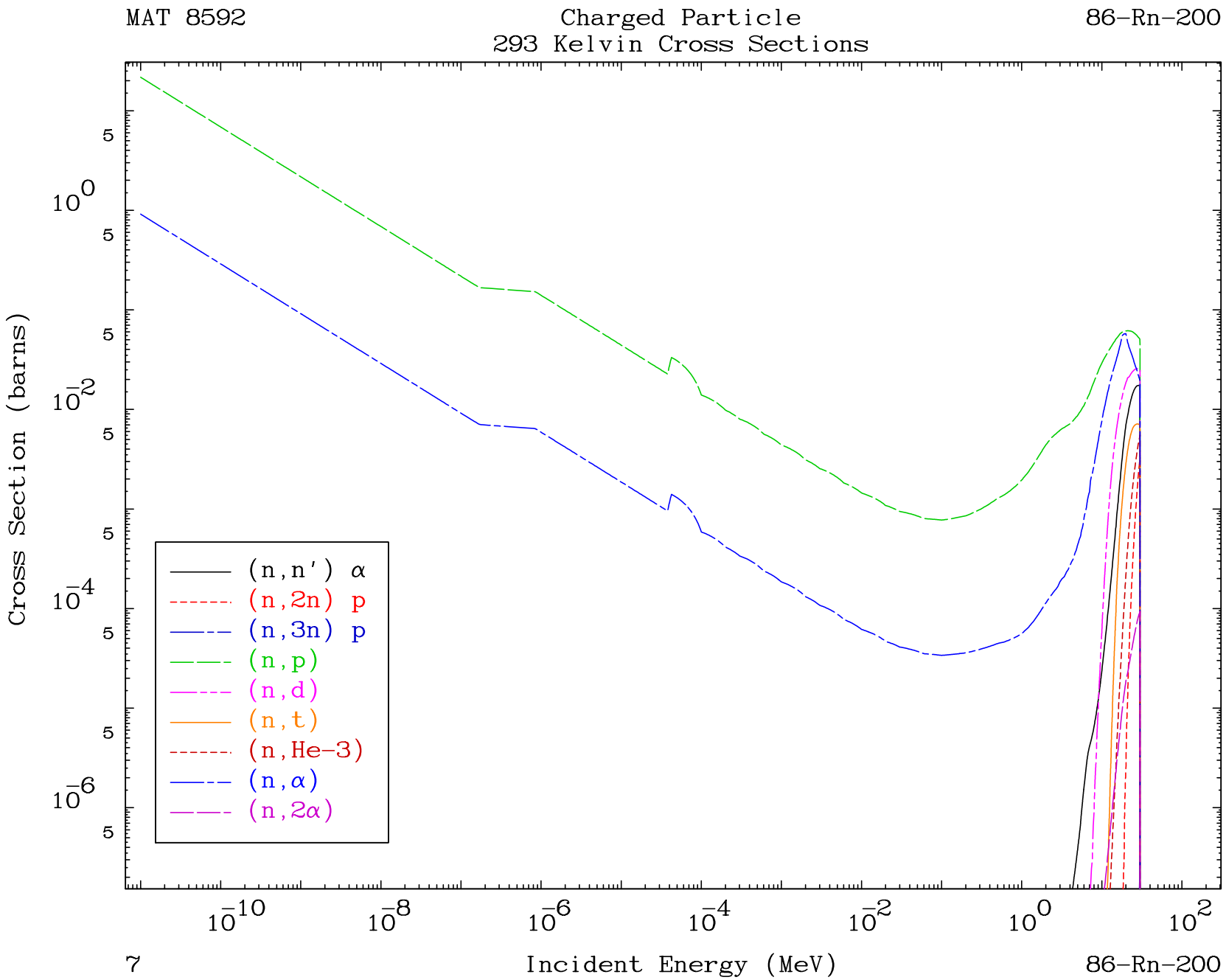

MAT 8592
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-200
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
Cross Section (barns)
Incident Energy (MeV)
2
86-Rn-200

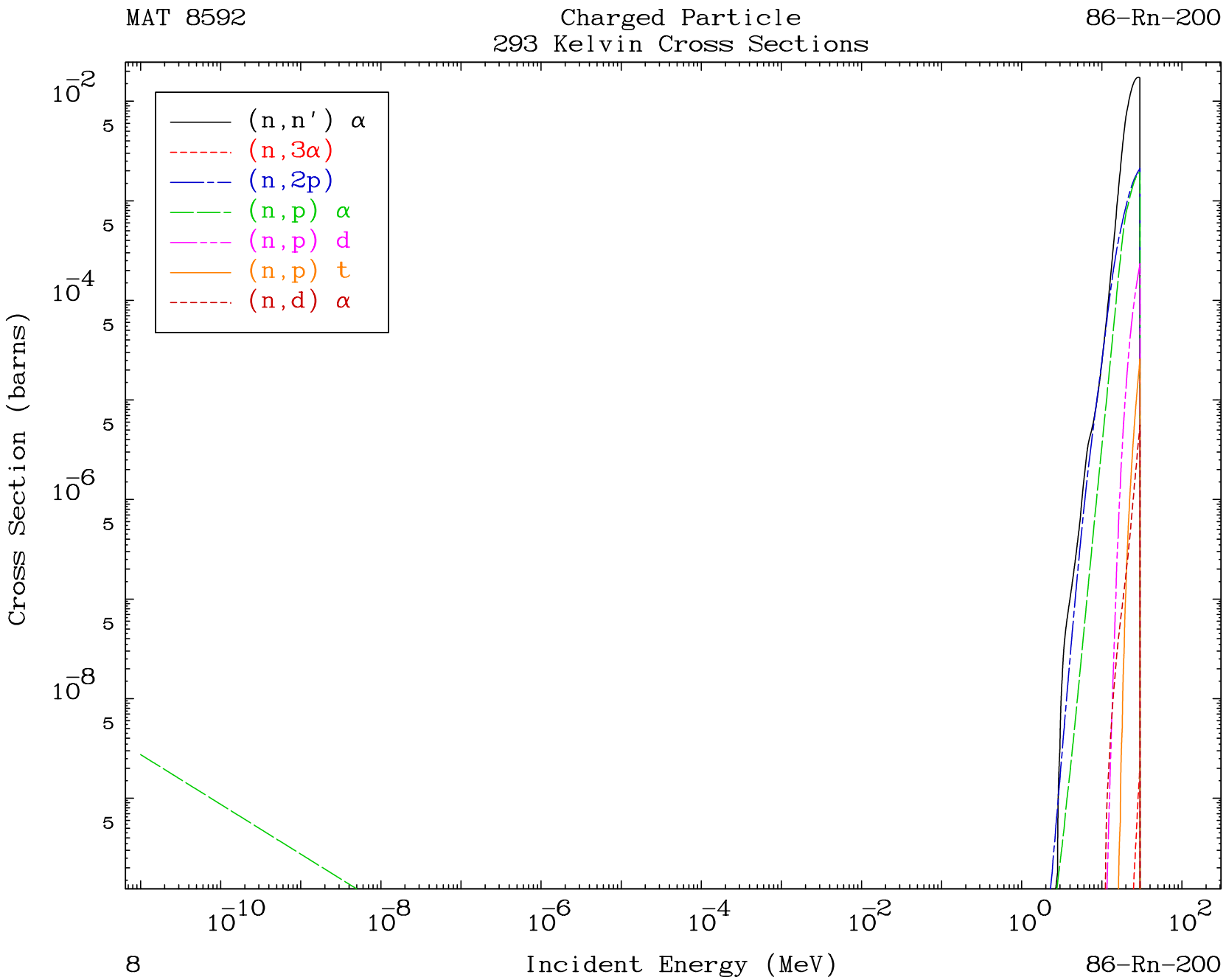

MAT 8592
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-200
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
Cross Section (barns)
Incident Energy (MeV)
3
86-Rn-200

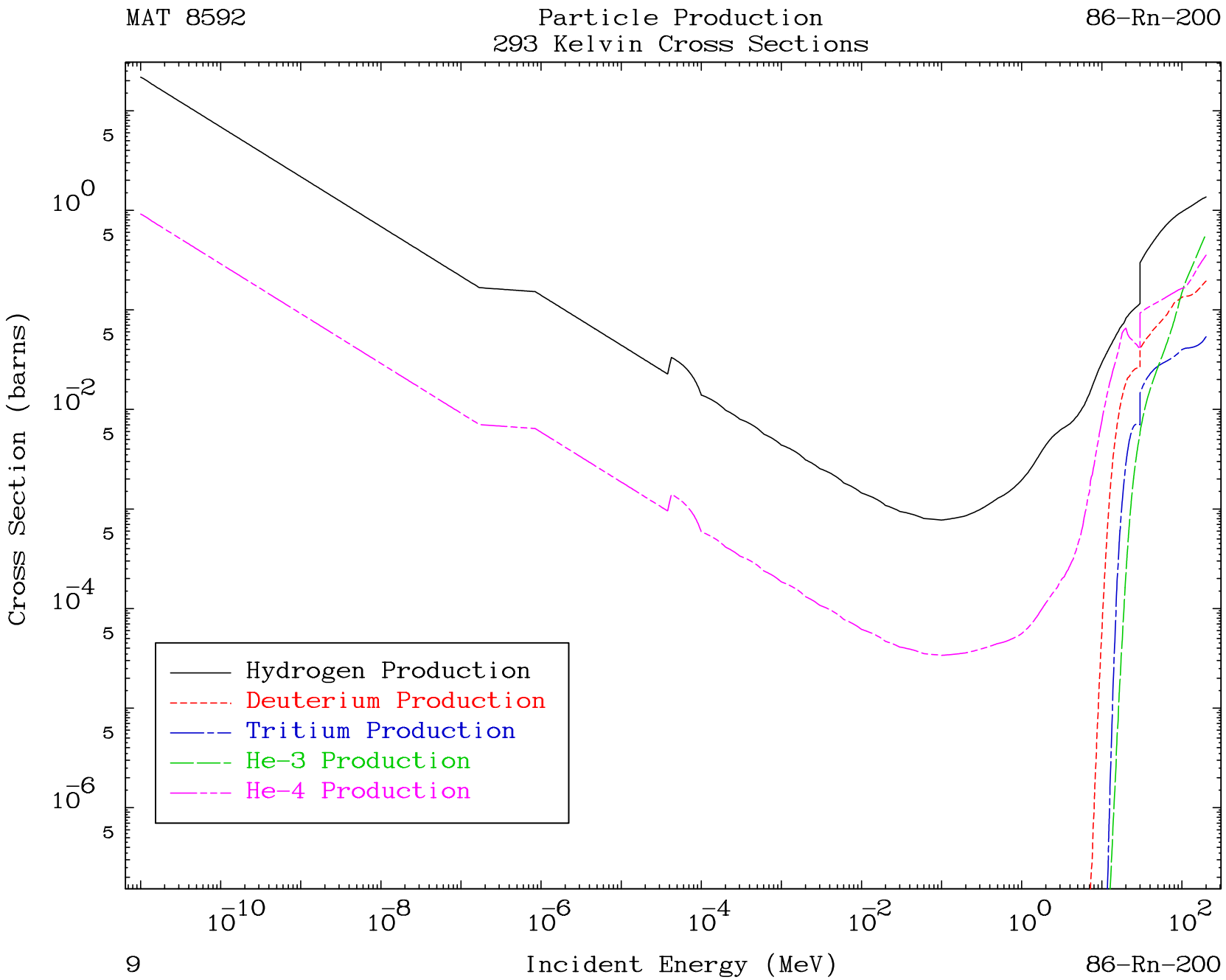

MAT 8592
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-200
Cross Section (barns)
Incident Energy (MeV)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,3α)
(n,2p)
(n,p) α
4
86-Rn-200

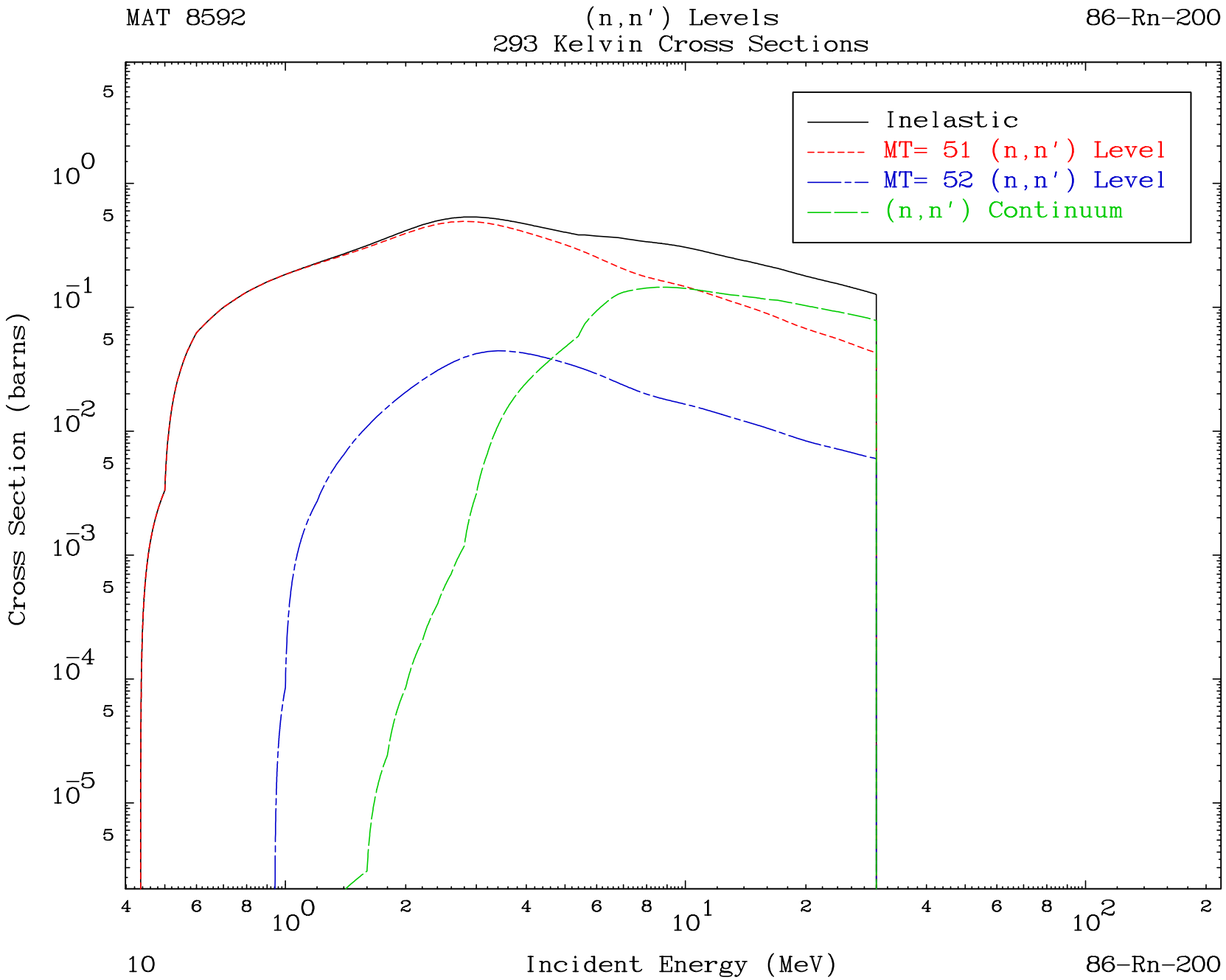

MAT 8592
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-200
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
5
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
5
86-Rn-200

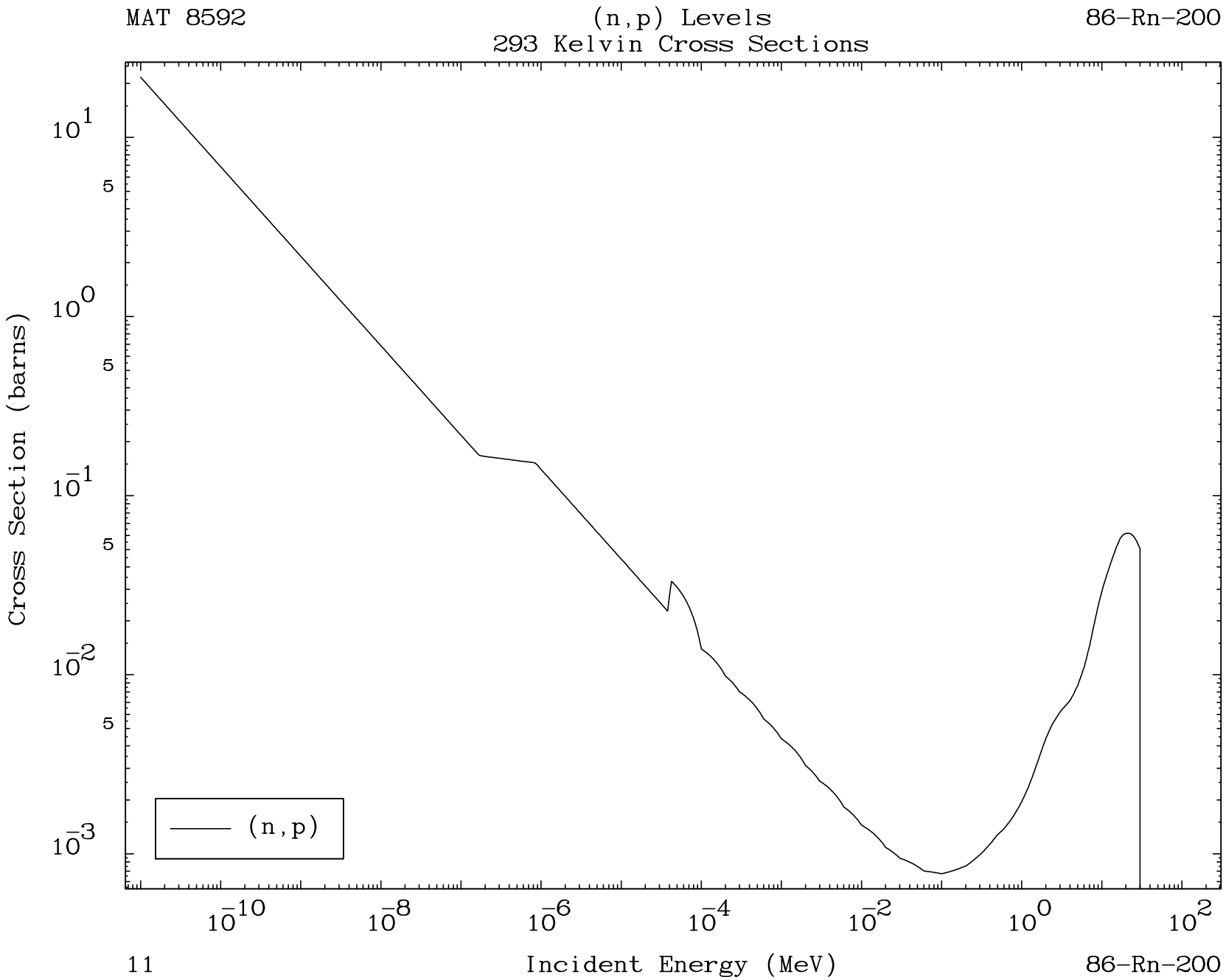

MAT 8592
Charged Particle
293 Kelvin Cross Sections
86-Rn-200
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
Cross Section (barns)
Incident Energy (MeV)
6
86-Rn-200

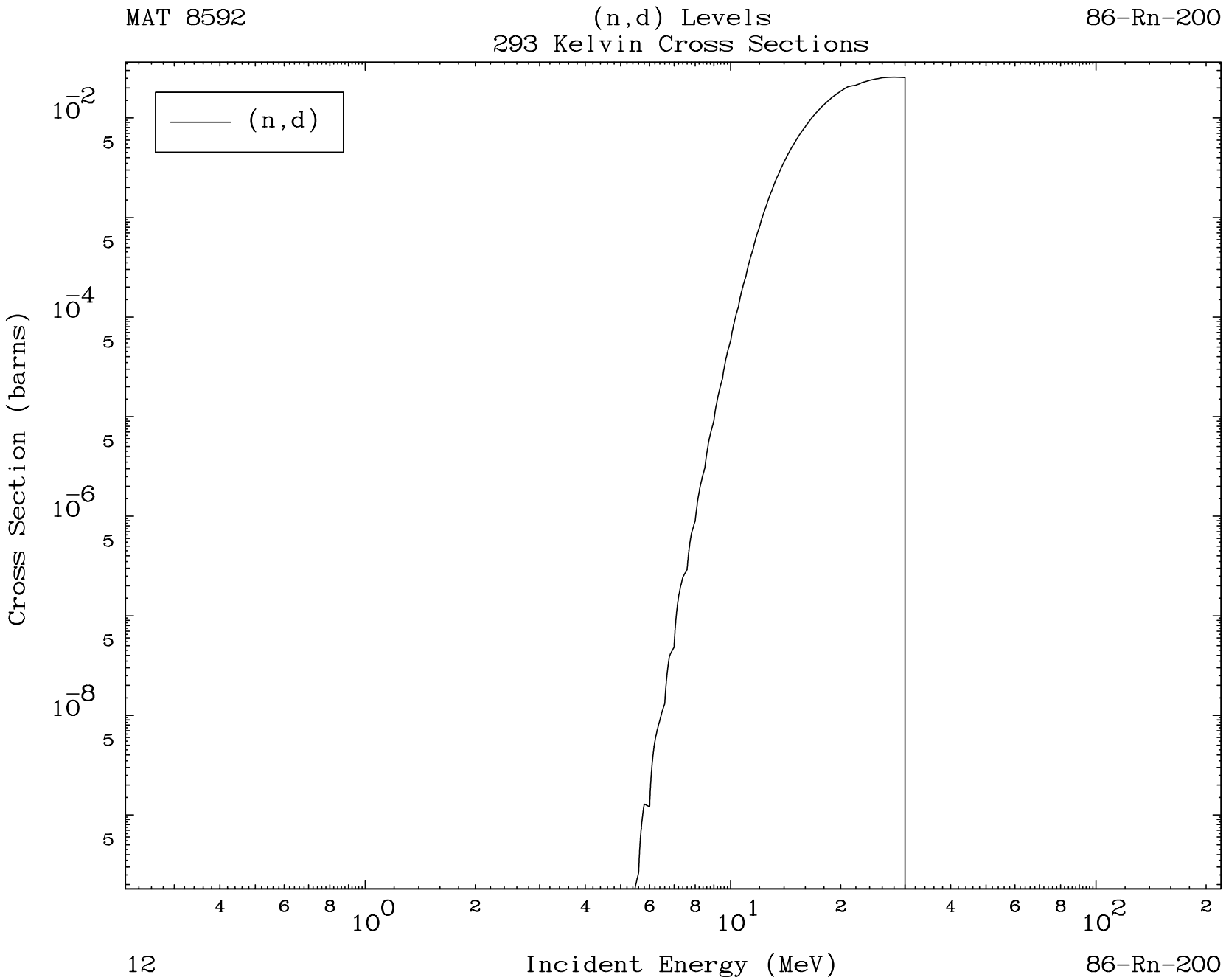

MAT 8592
Charged Particle
293 Kelvin Cross Sections
86-Rn-200
Cross Section (barns)
Incident Energy (MeV)
(n,n') α
(n,2n) p
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
7
86-Rn-200

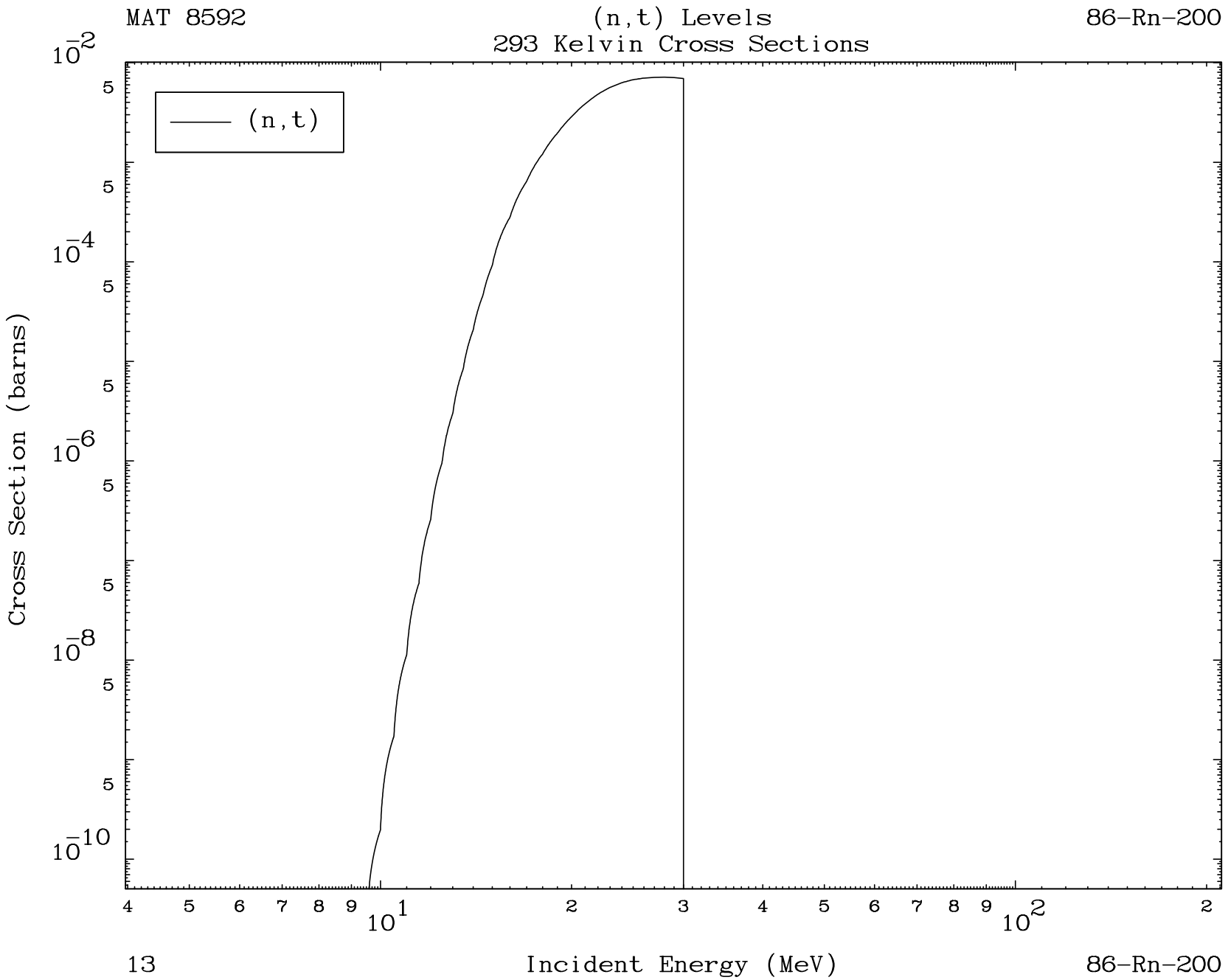

MAT 8592
Charged Particle
293 Kelvin Cross Sections
86-Rn-200
(n,n') α
(n,3α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
Cross Section (barns)
Incident Energy (MeV)
8
86-Rn-200

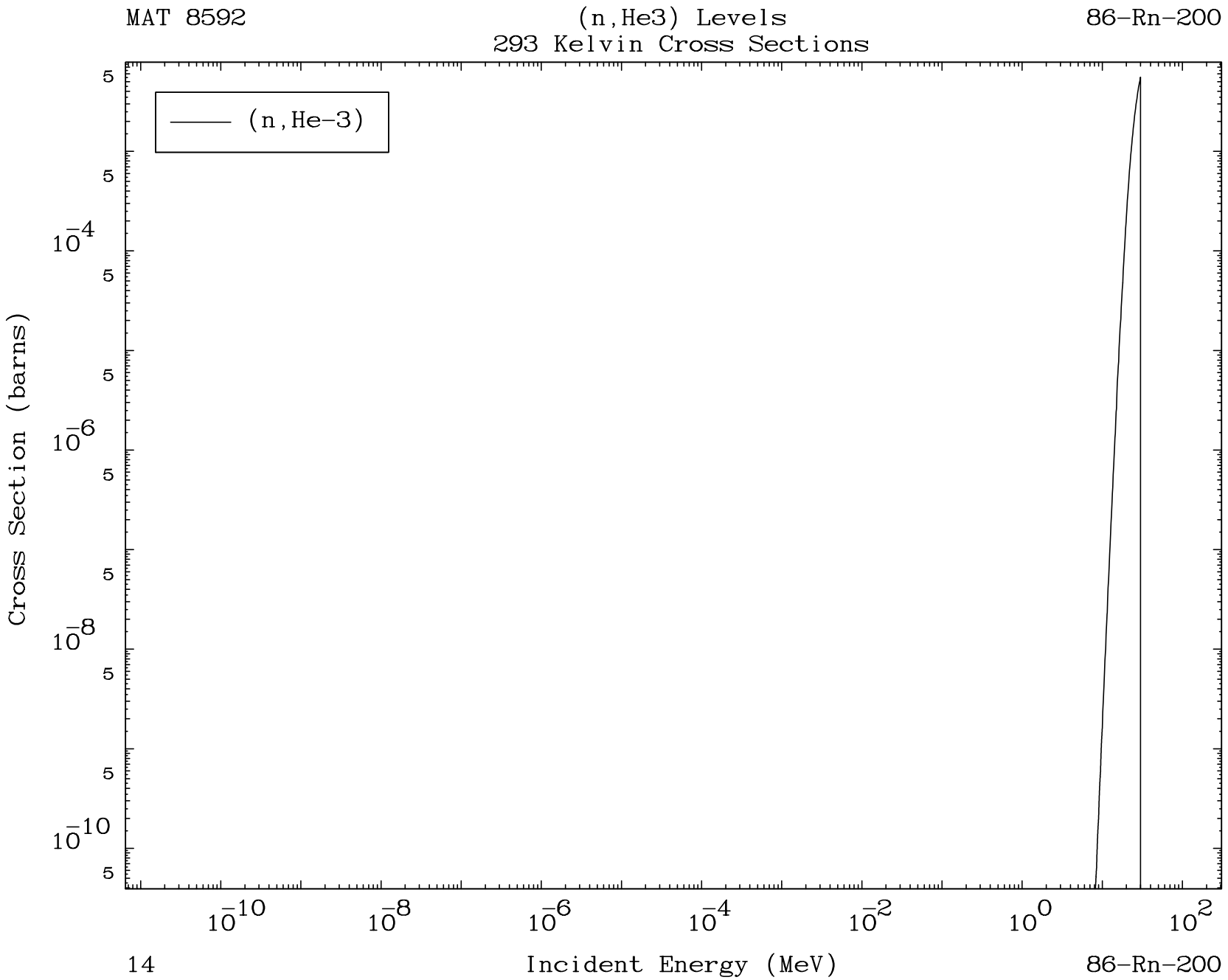

MAT 8592
Particle Production
293 Kelvin Cross Sections
86-Rn-200
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
9
86-Rn-200

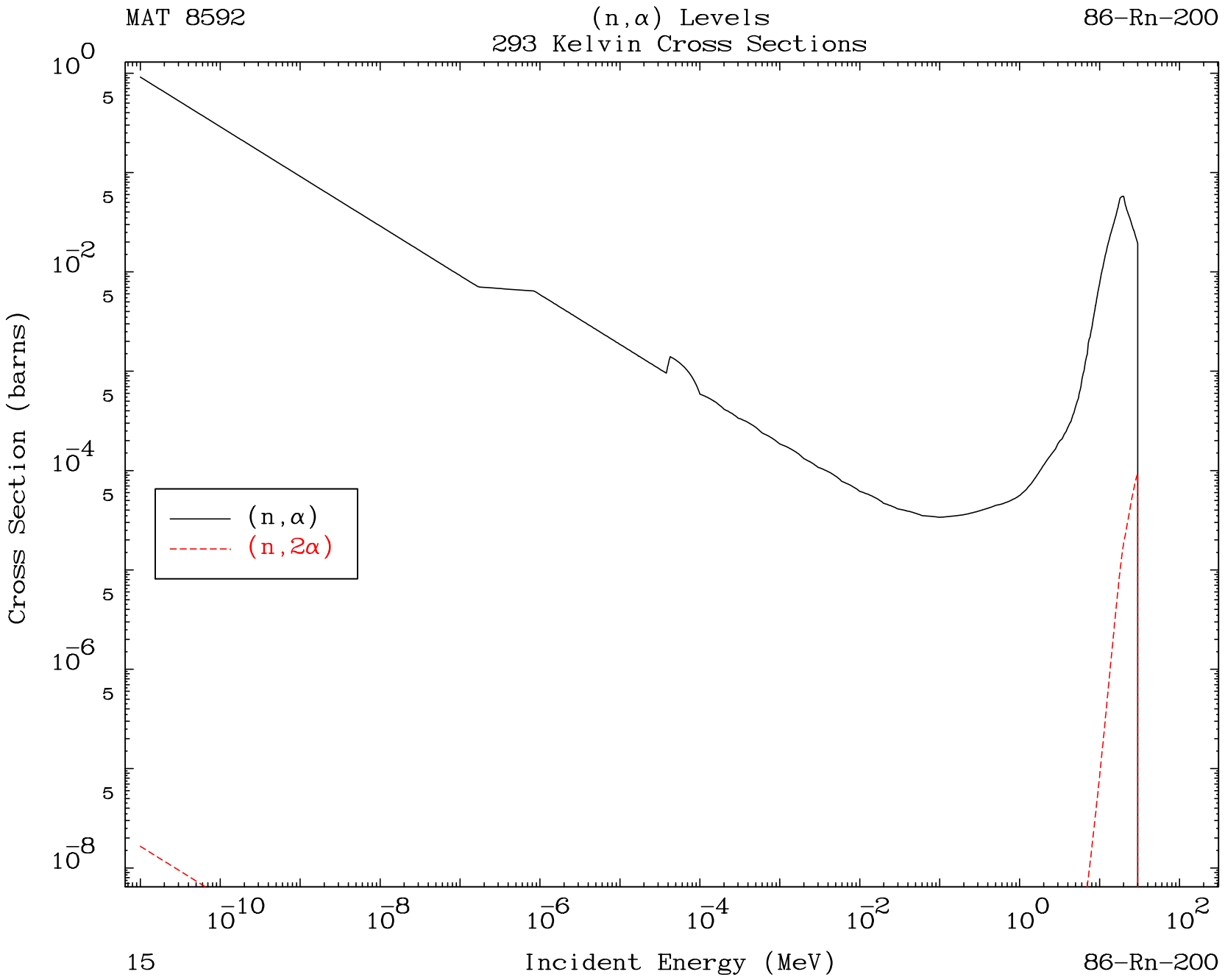

MAT 8592
(n,n') Levels
293 Kelvin Cross Sections
86-Rn-200
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
86-Rn-200

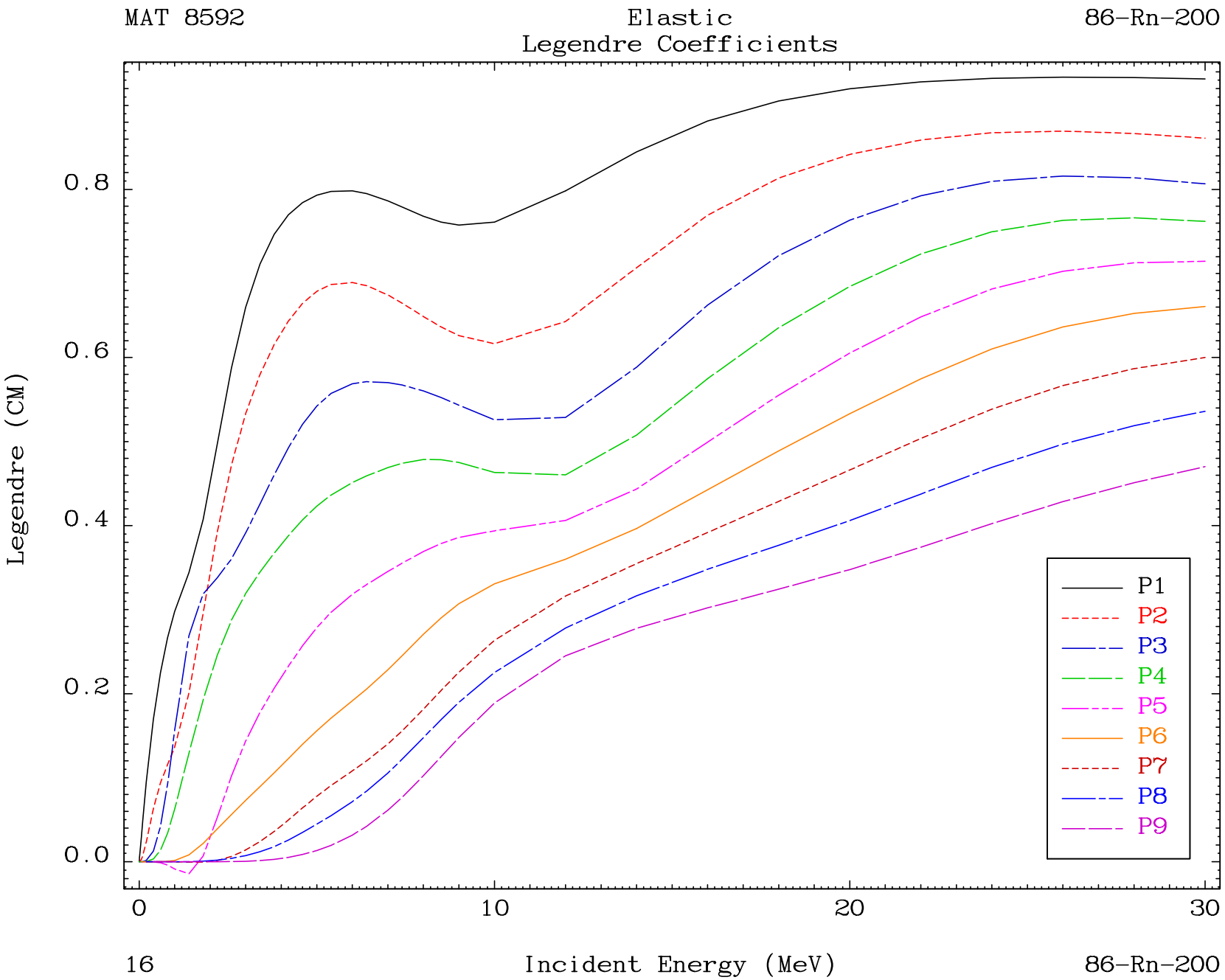

MAT 8592
(n,p) Levels
86-Rn-200
293 Kelvin Cross Sections
Cross Section (barns)
10^1
5
10^0
5
10^-1
5
10^-2
5
10^-3
(n,p)
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
11
Incident Energy (MeV)
86-Rn-200

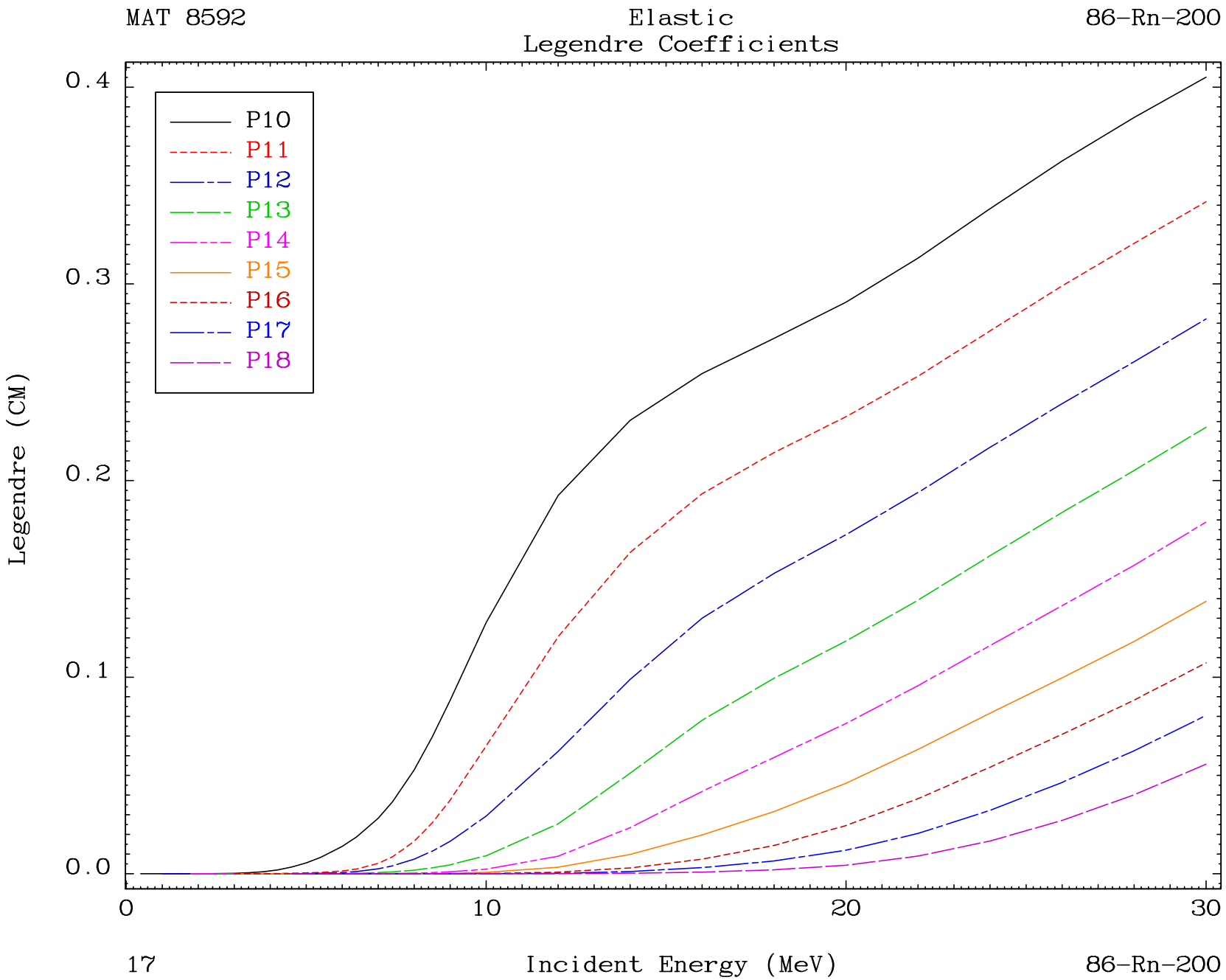

MAT 8592
(n,d) Levels
86-Rn-200
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
10-2
10-4
10-6
10-8
100
101
102
Incident Energy (MeV)
12
86-Rn-200

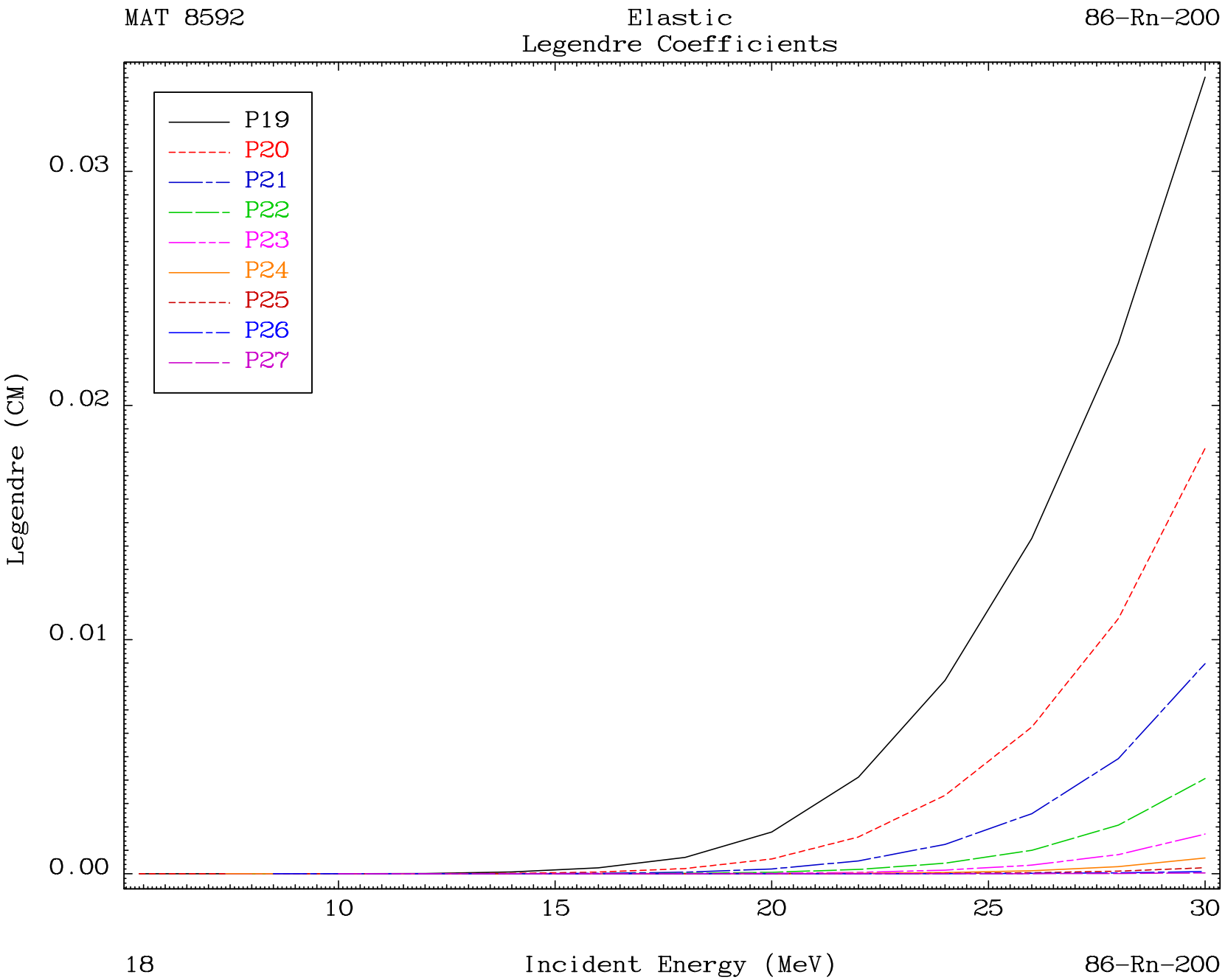

MAT 8592
(n,t) Levels
86-Rn-200
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
13
86-Rn-200

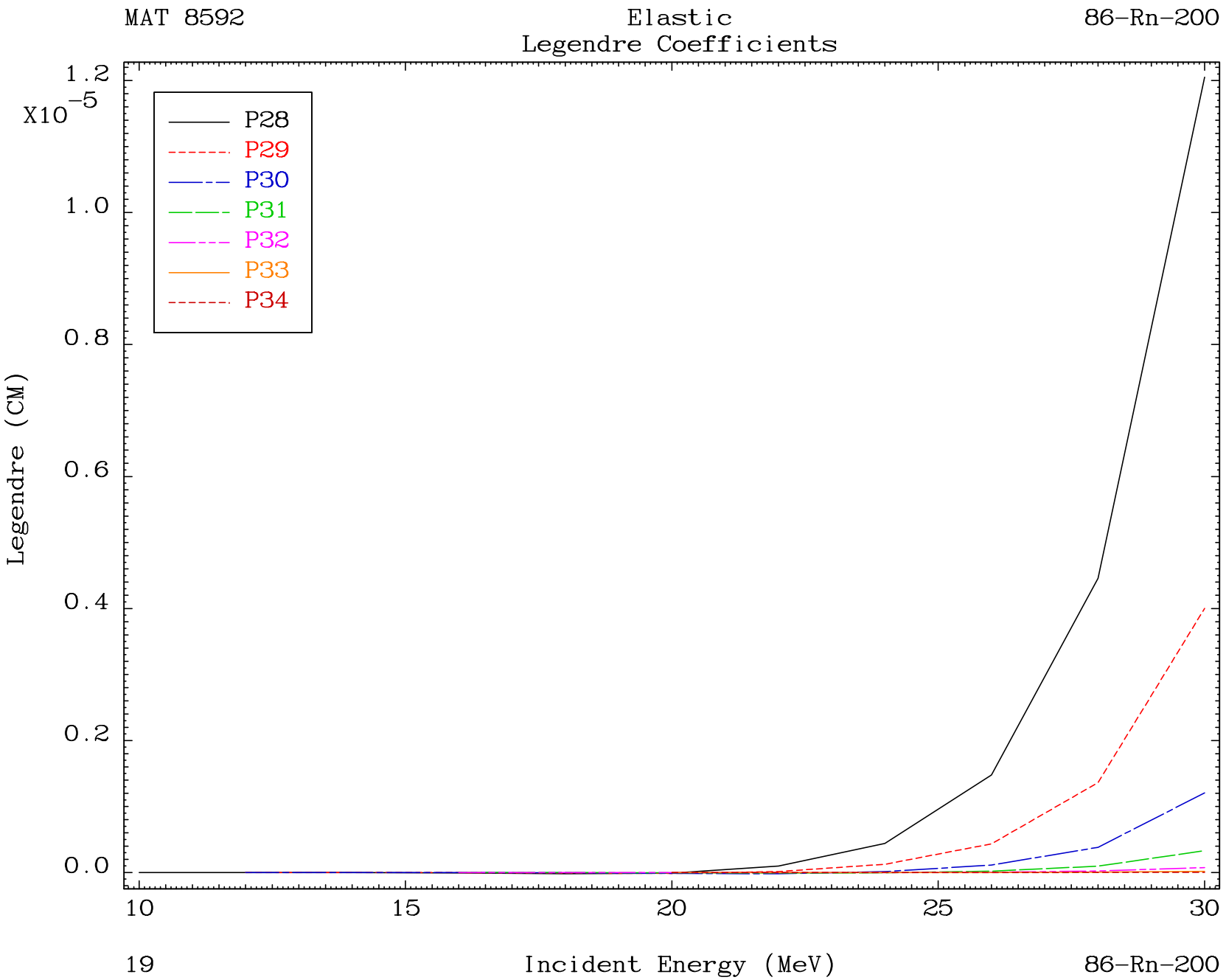

MAT 8592
(n,He3) Levels
86-Rn-200
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
Incident Energy (MeV)
14
86-Rn-200

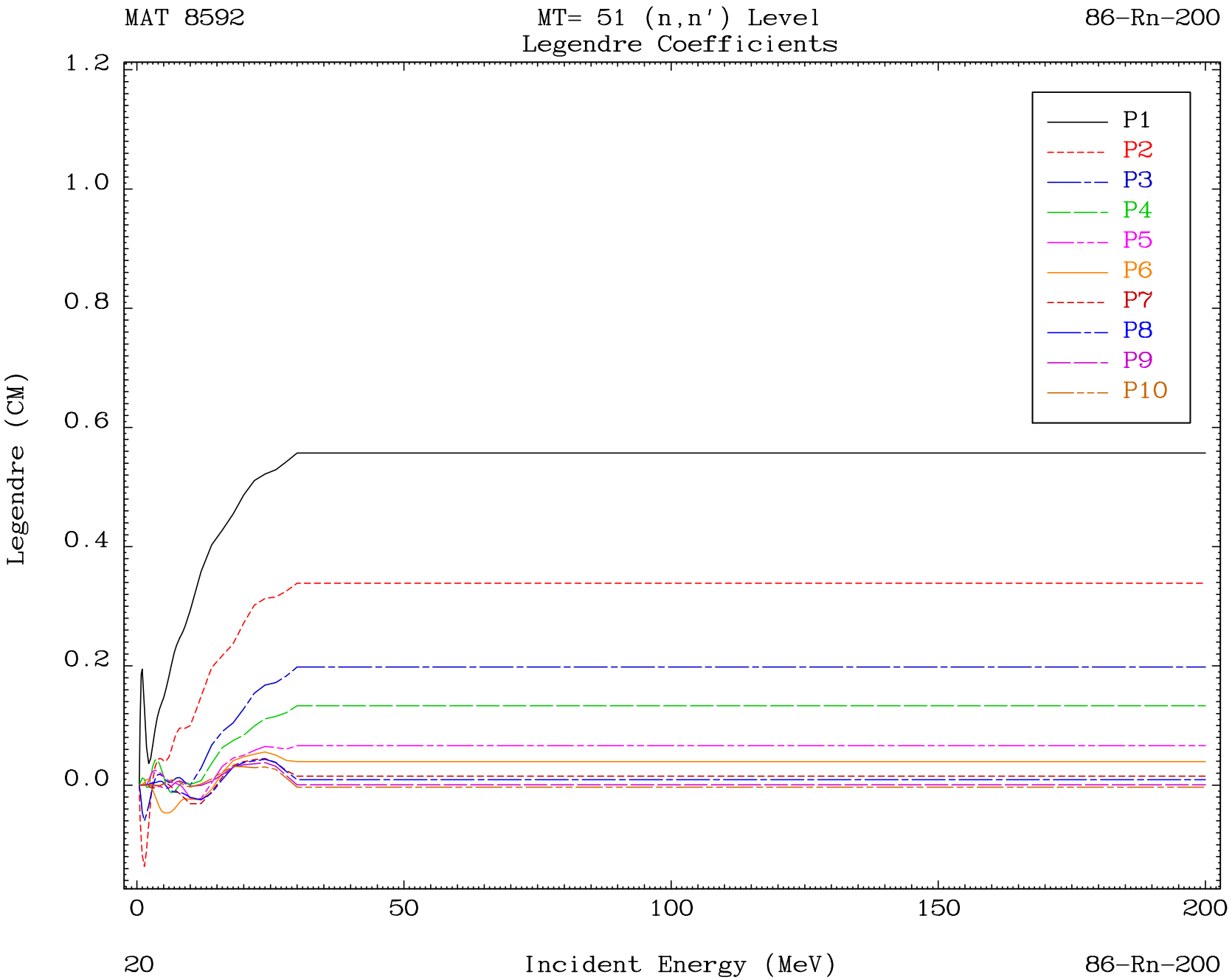

MAT 8592
(n,α) Levels
293 Kelvin Cross Sections
86-Rn-200
Cross Section (barns)
10^0
5
10^-2
5
10^-4
5
10^-6
5
10^-8
5
(n,α)
(n,2α)
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
15
86-Rn-200

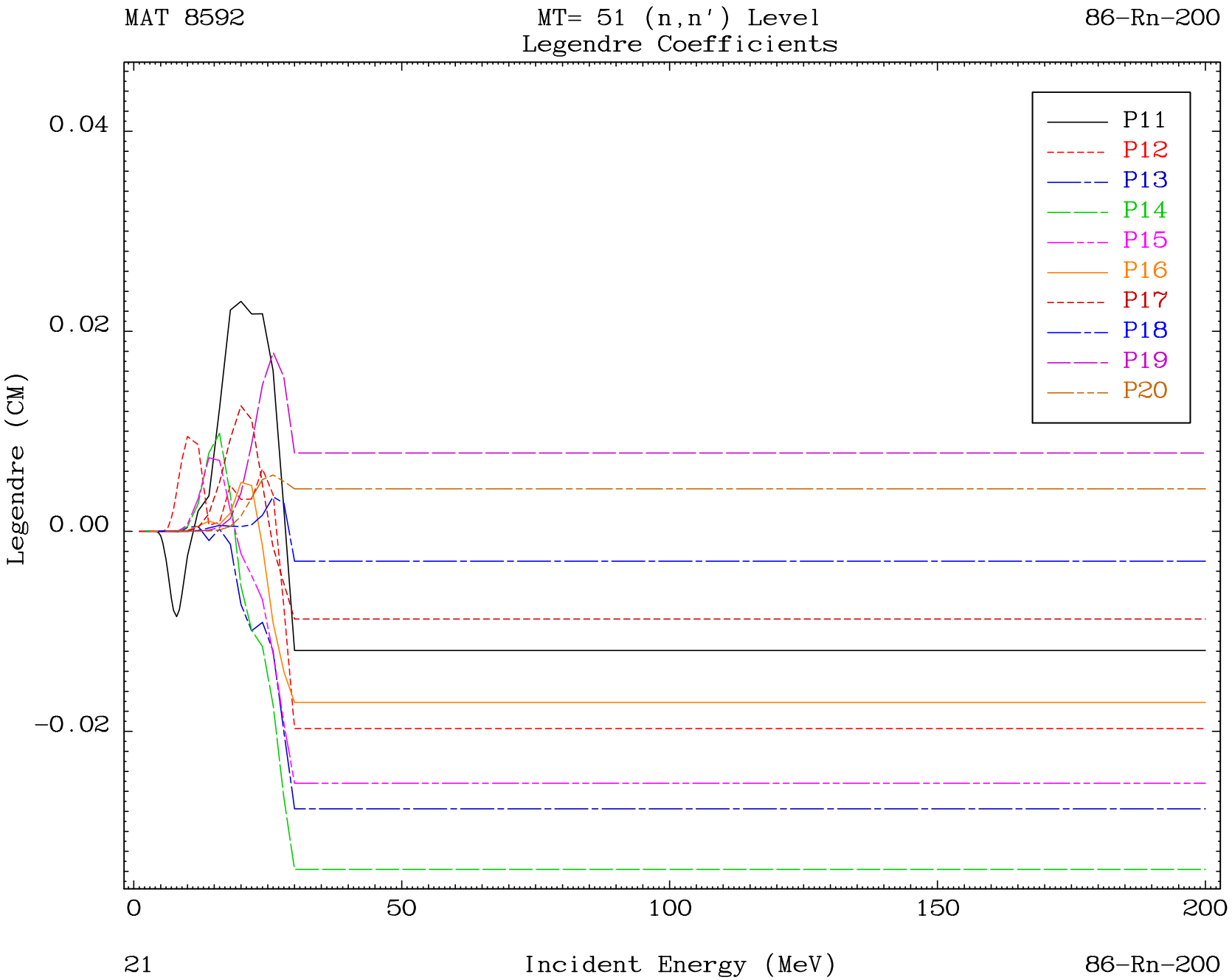

MAT 8592
Elastic
Legendre Coefficients
86-Rn-200
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
16
Incident Energy (MeV)
86-Rn-200
P1
P2
P3
P4
P5
P6
P7
P8
P9

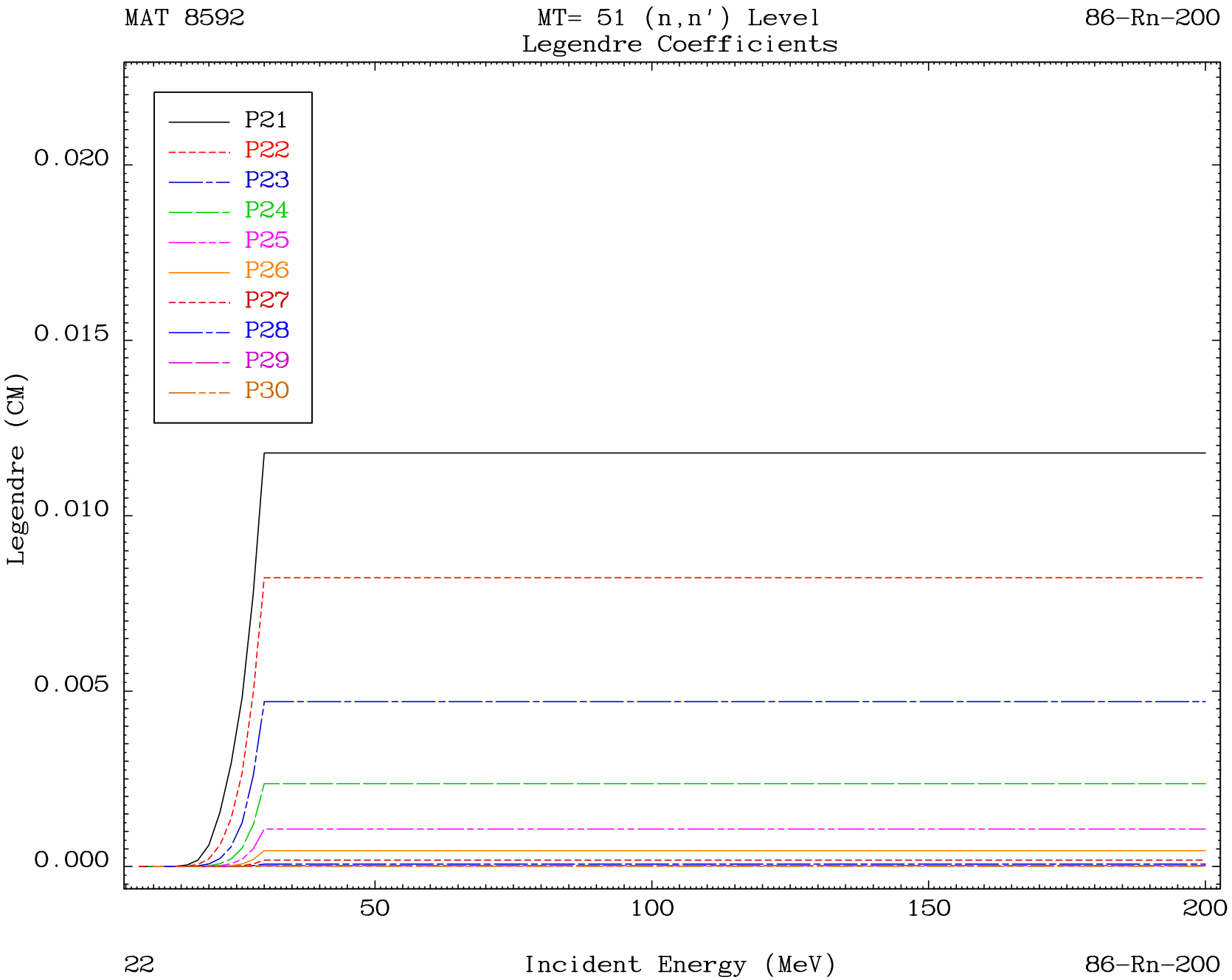

MAT 8592
Elastic
Legendre Coefficients
86-Rn-200
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
10
20
30
17
Incident Energy (MeV)
86-Rn-200

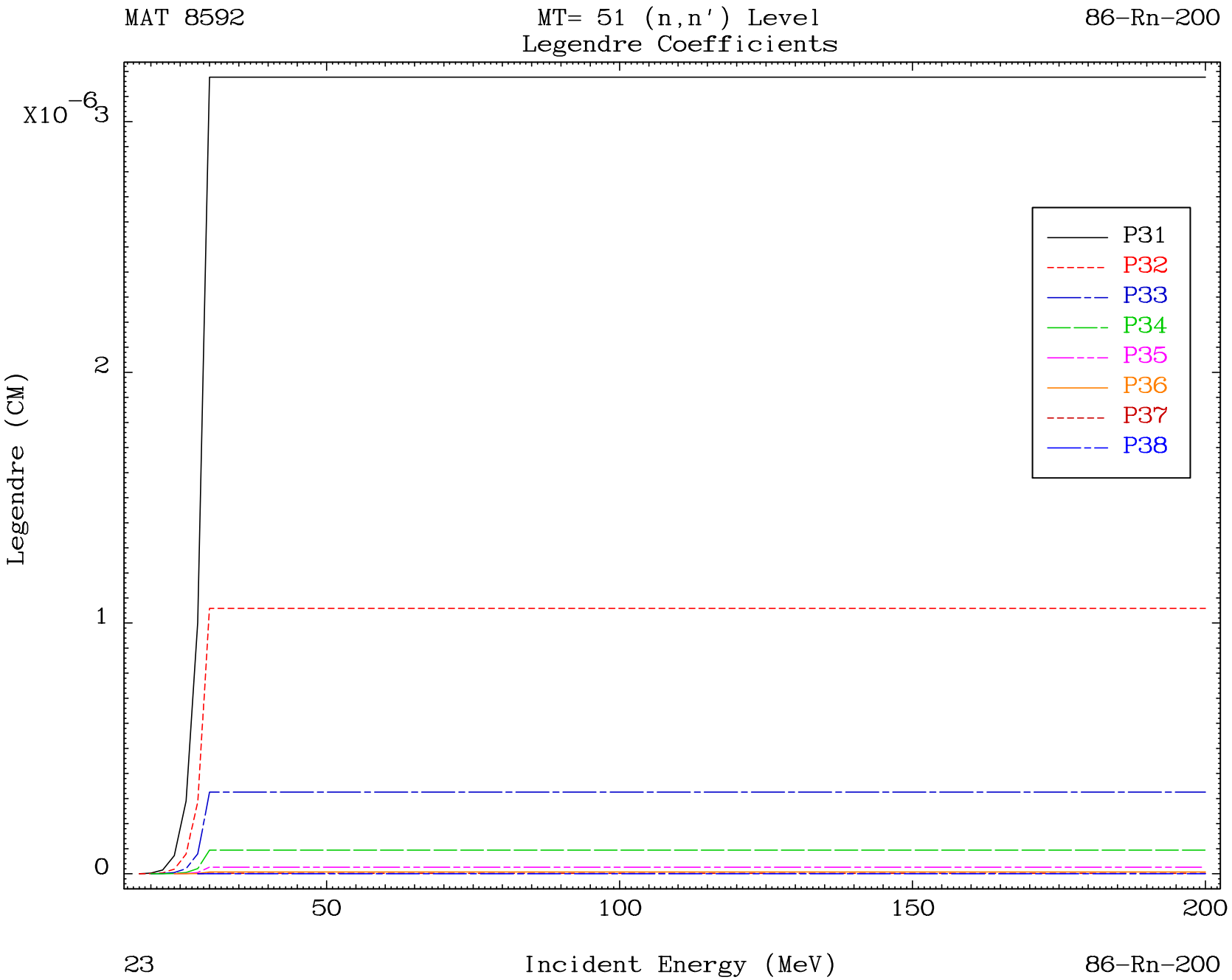

MAT 8592
Elastic
Legendre Coefficients
86-Rn-200
P19
P20
P21
P22
P23
P24
P25
P26
P27
Legendre (CM)
0.03
0.02
0.01
0.00
10
15
20
25
30
18
Incident Energy (MeV)
86-Rn-200

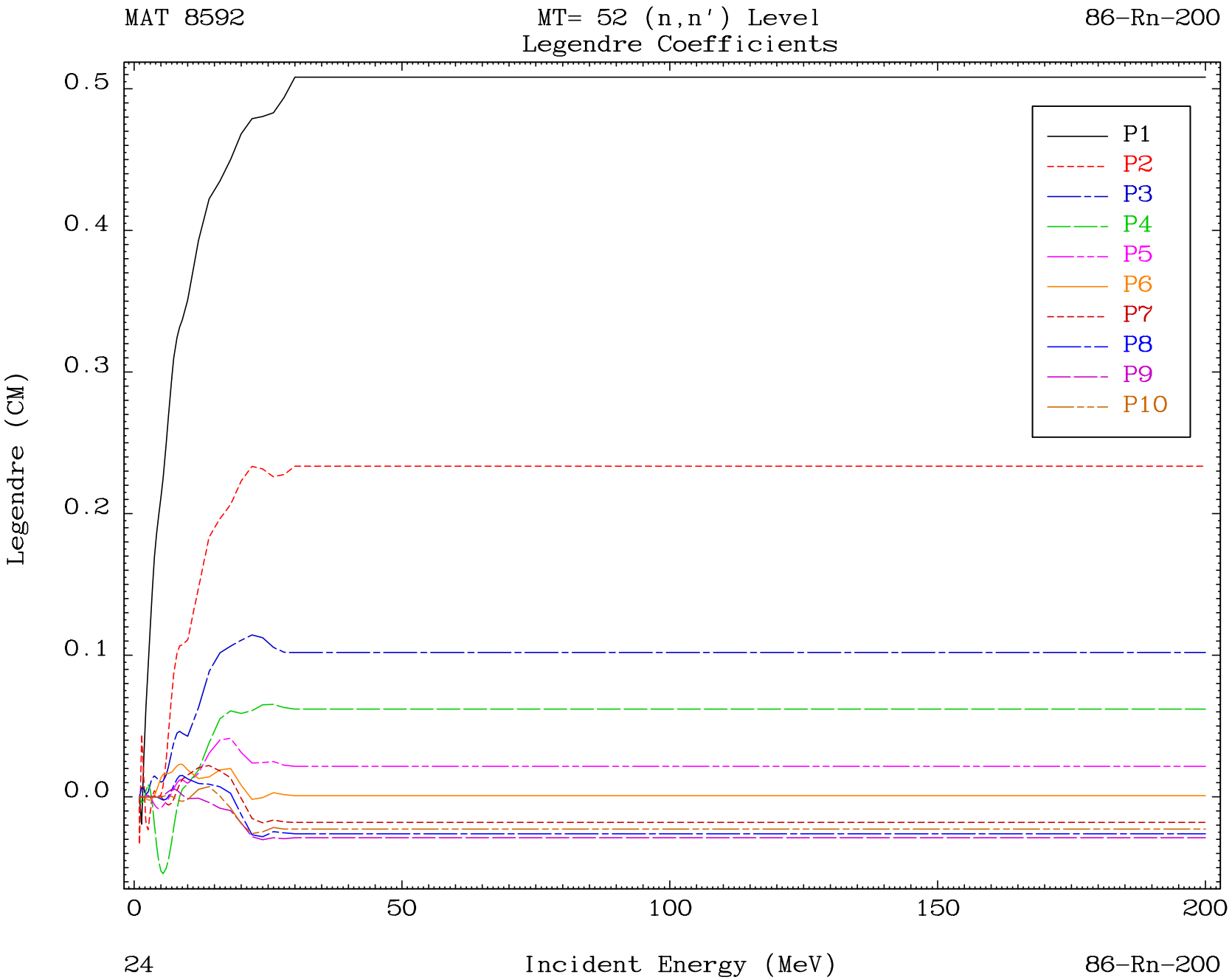

MAT 8592
Elastic
Legendre Coefficients
86-Rn-200
X10 -5
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
10
15
20
25
30
19
Incident Energy (MeV)
86-Rn-200

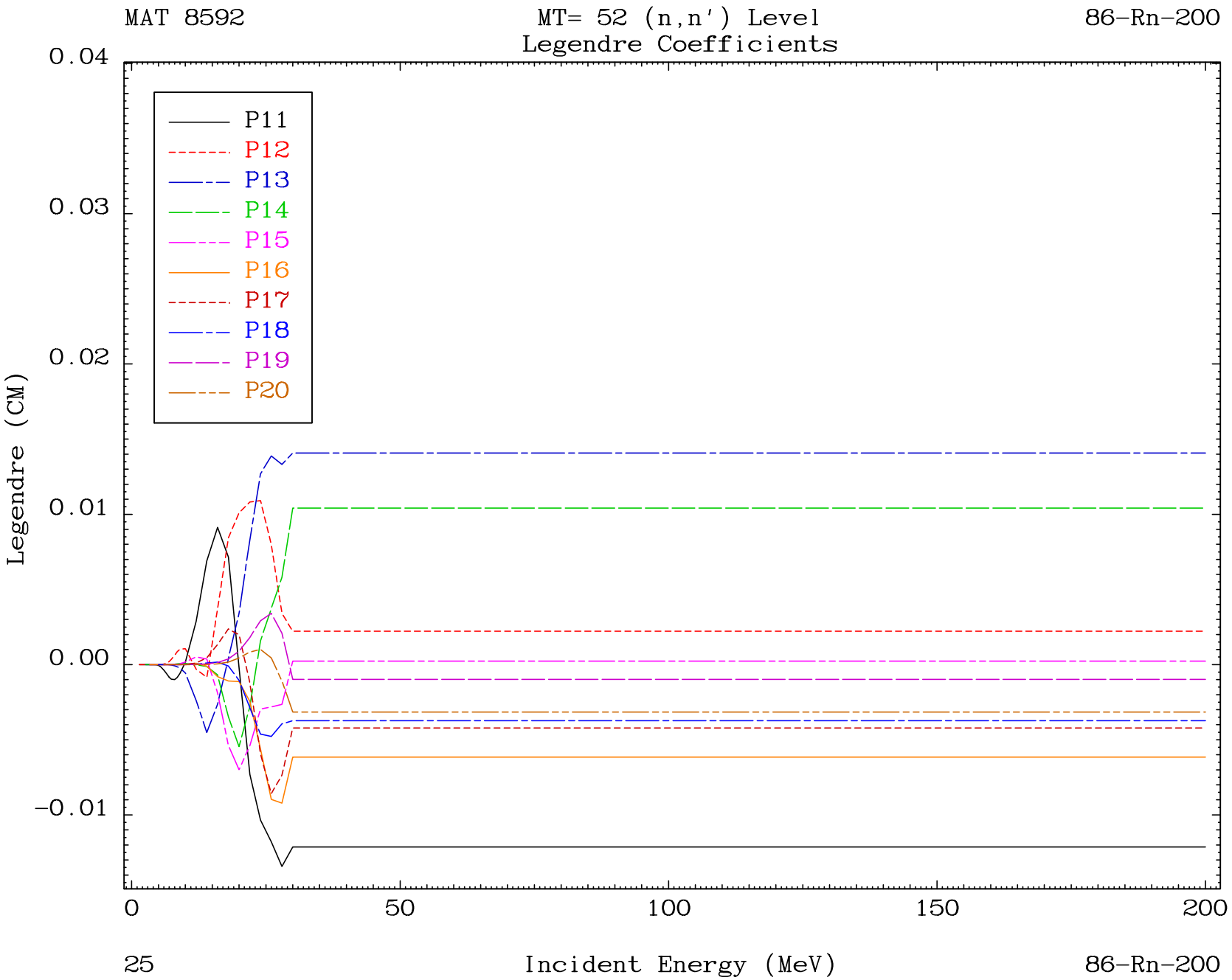

MAT 8592
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-200
Legendre (CM)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
20
Incident Energy (MeV)
86-Rn-200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

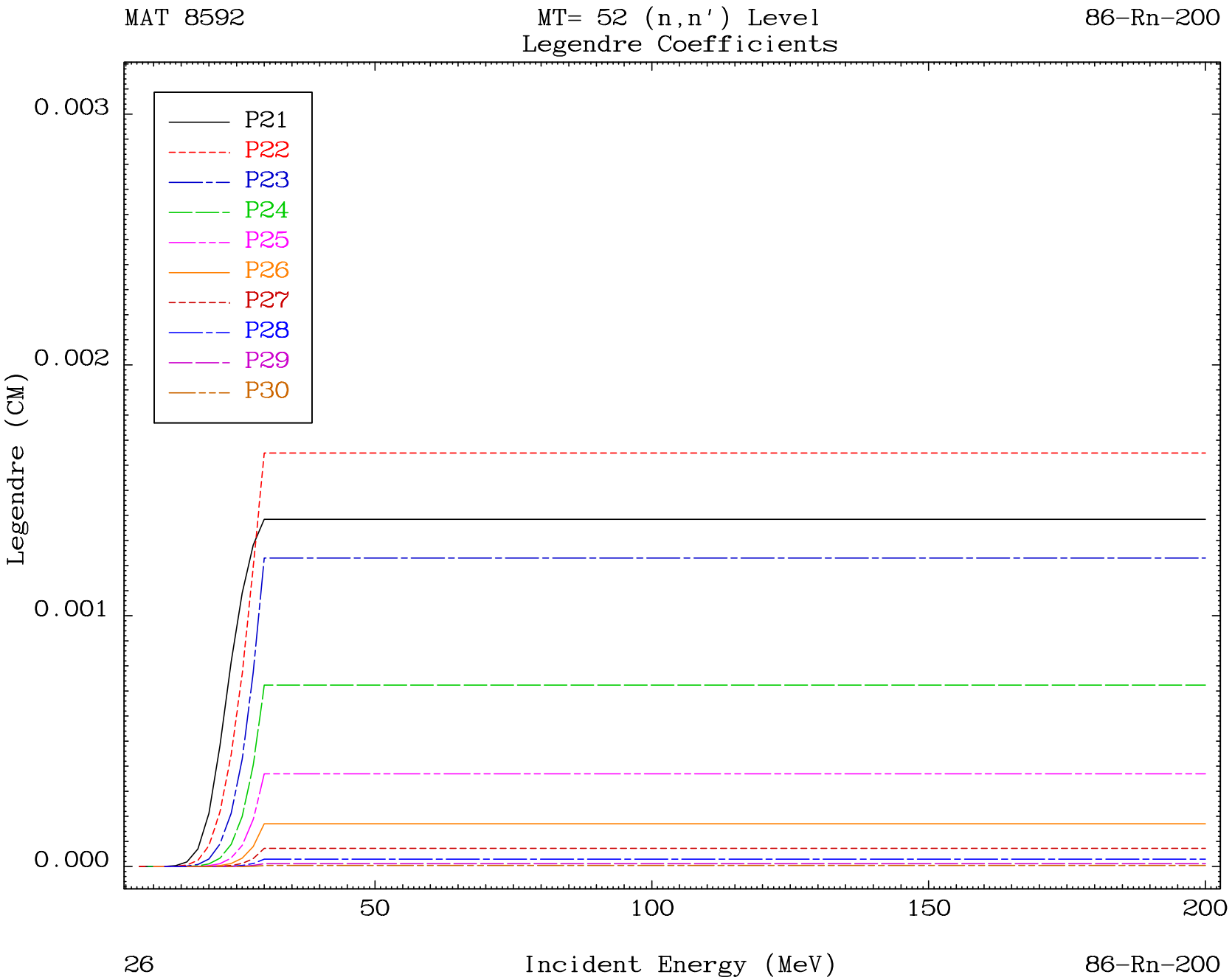

MAT 8592
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-200
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
21
Incident Energy (MeV)
86-Rn-200

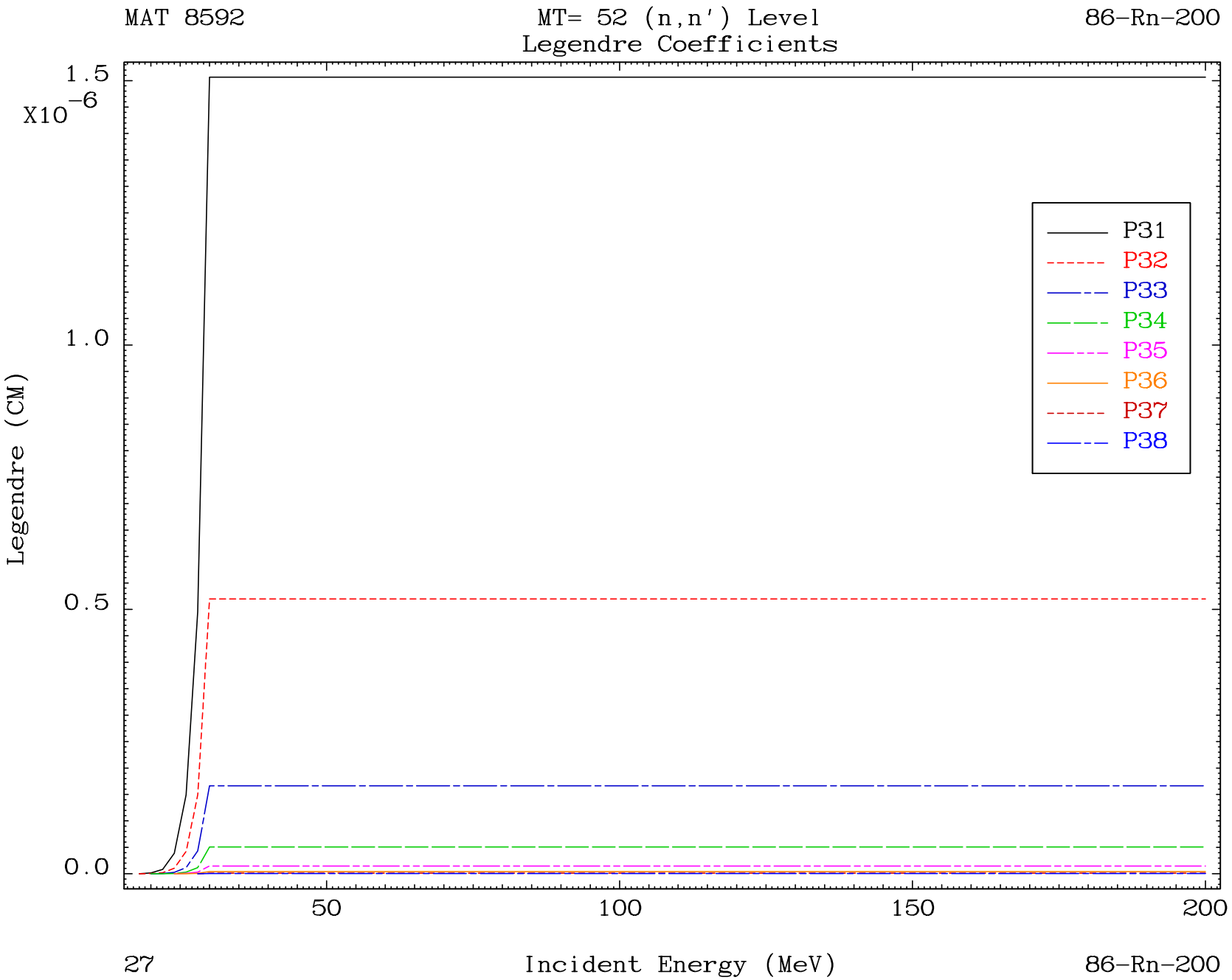

MAT 8592
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-200
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
22
Incident Energy (MeV)
86-Rn-200

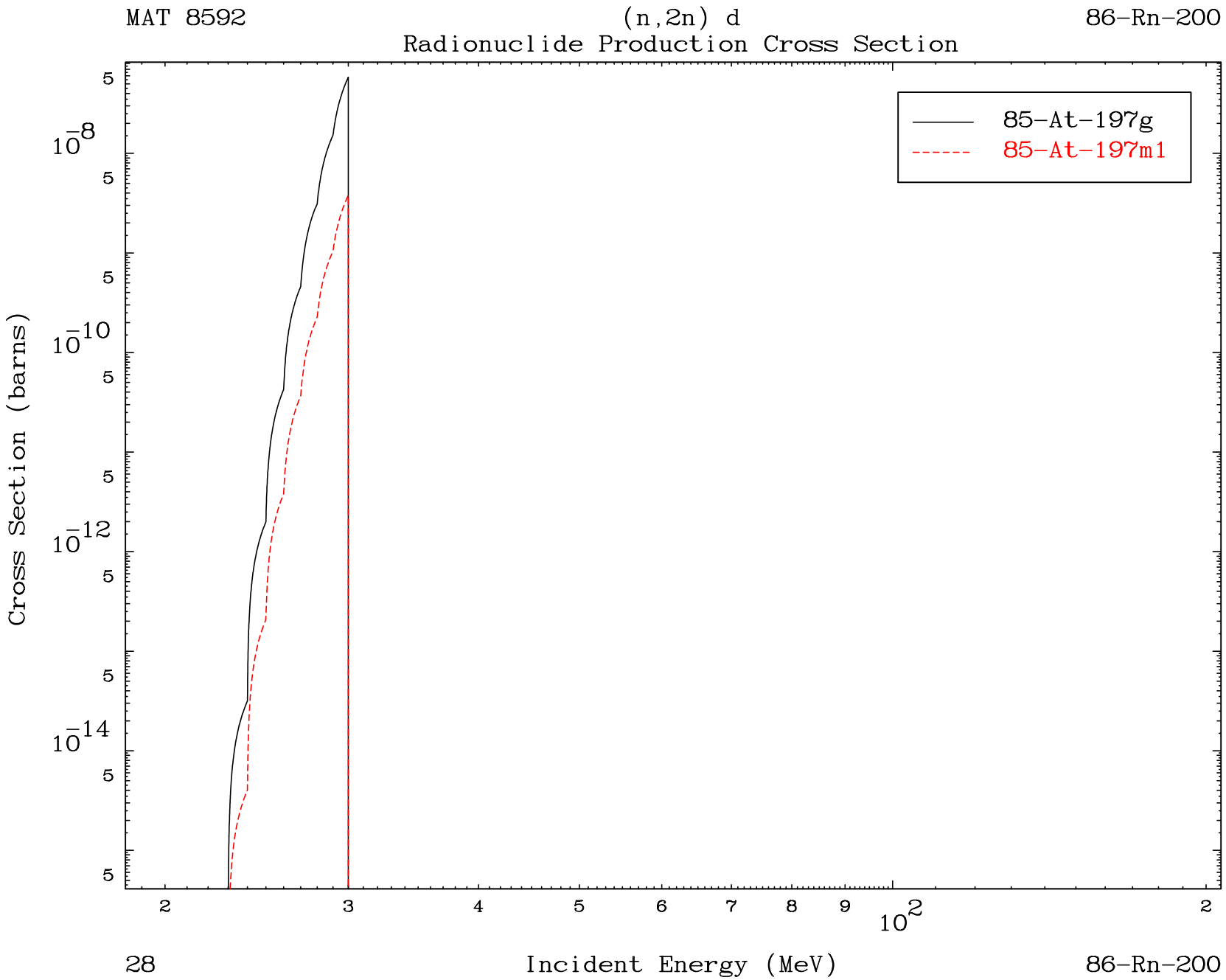

MAT 8592
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-200
X10 -6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
23
Incident Energy (MeV)
86-Rn-200

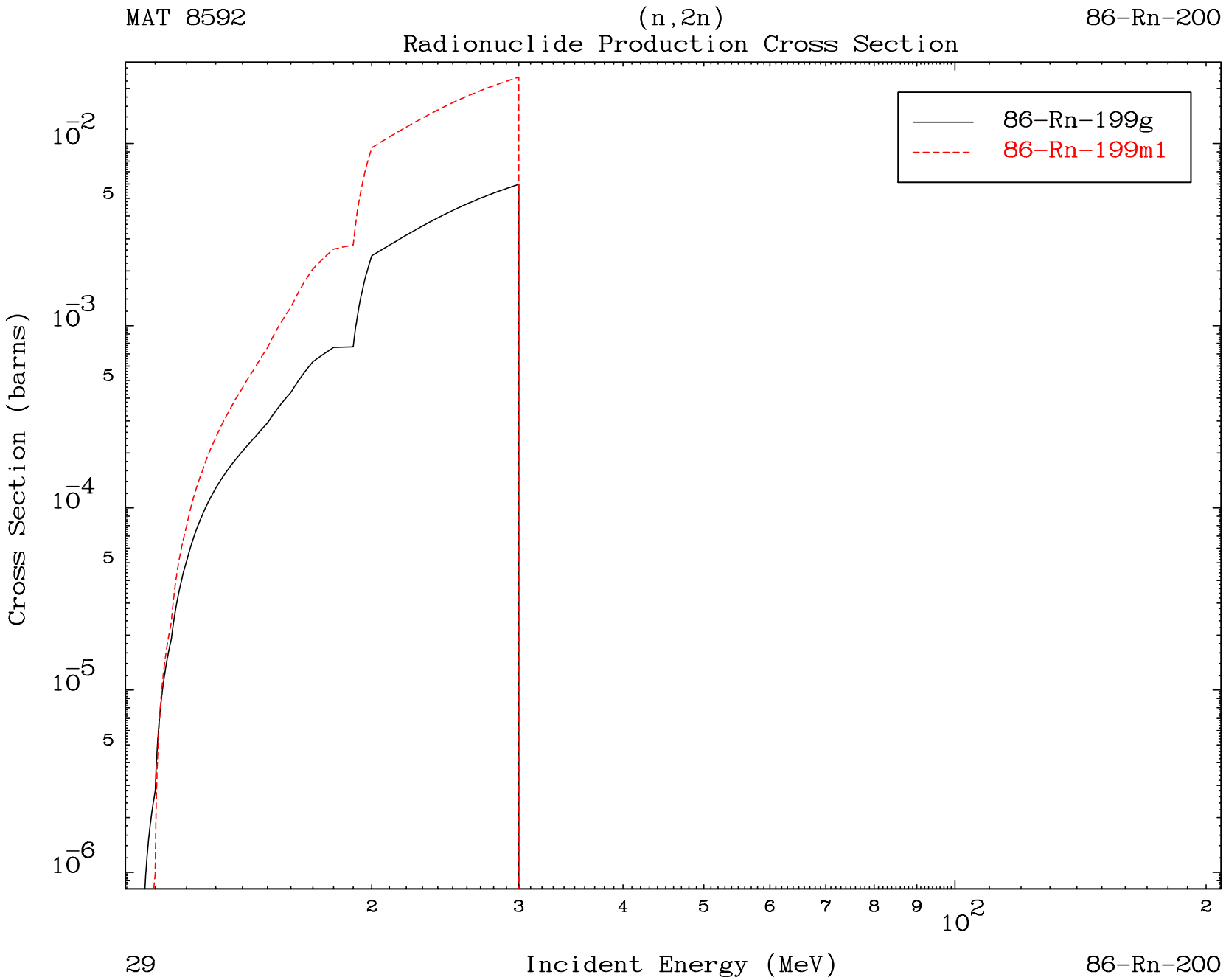

MAT 8592
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-200
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
24
Incident Energy (MeV)
86-Rn-200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

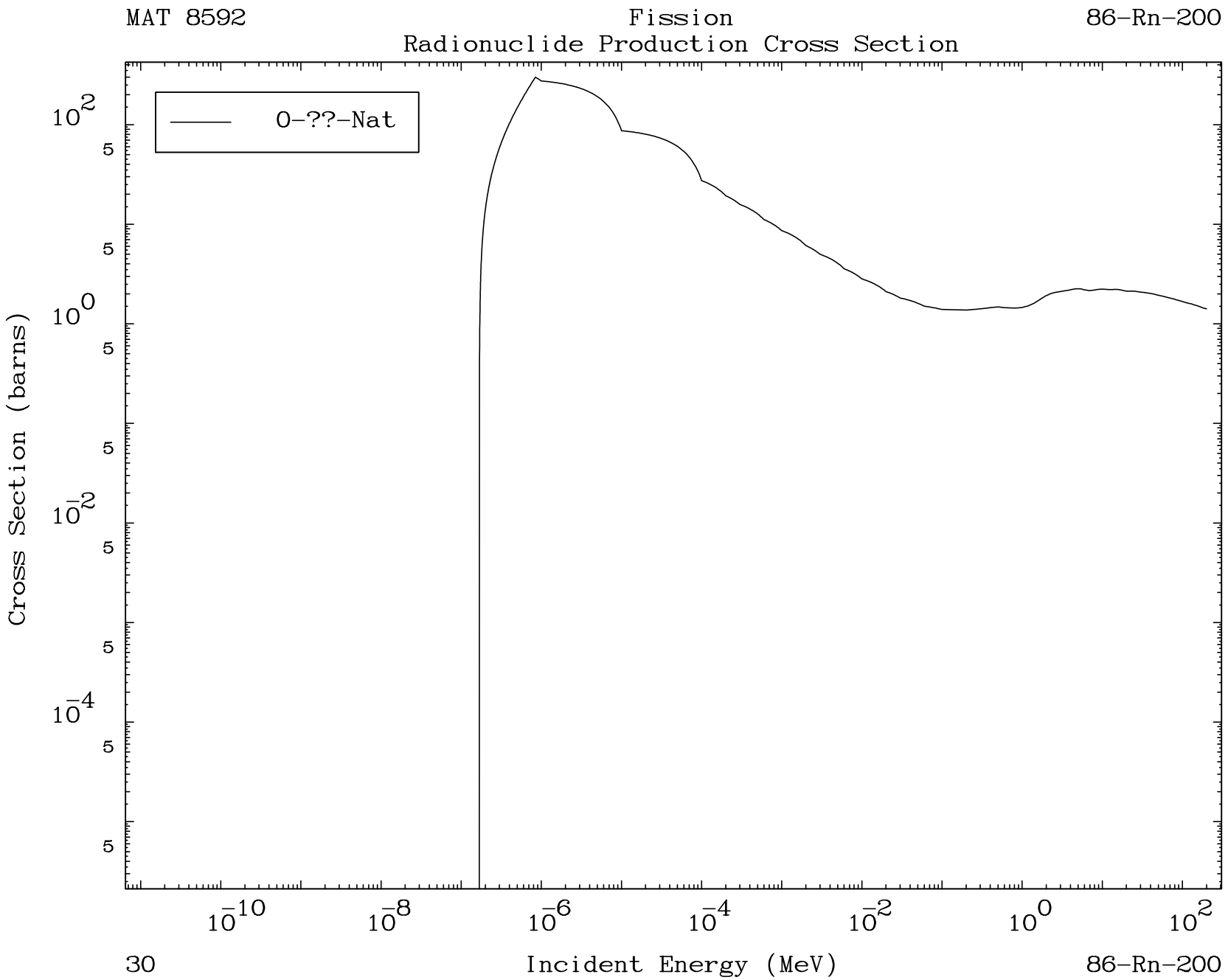

MAT 8592
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-200
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
25
Incident Energy (MeV)
86-Rn-200

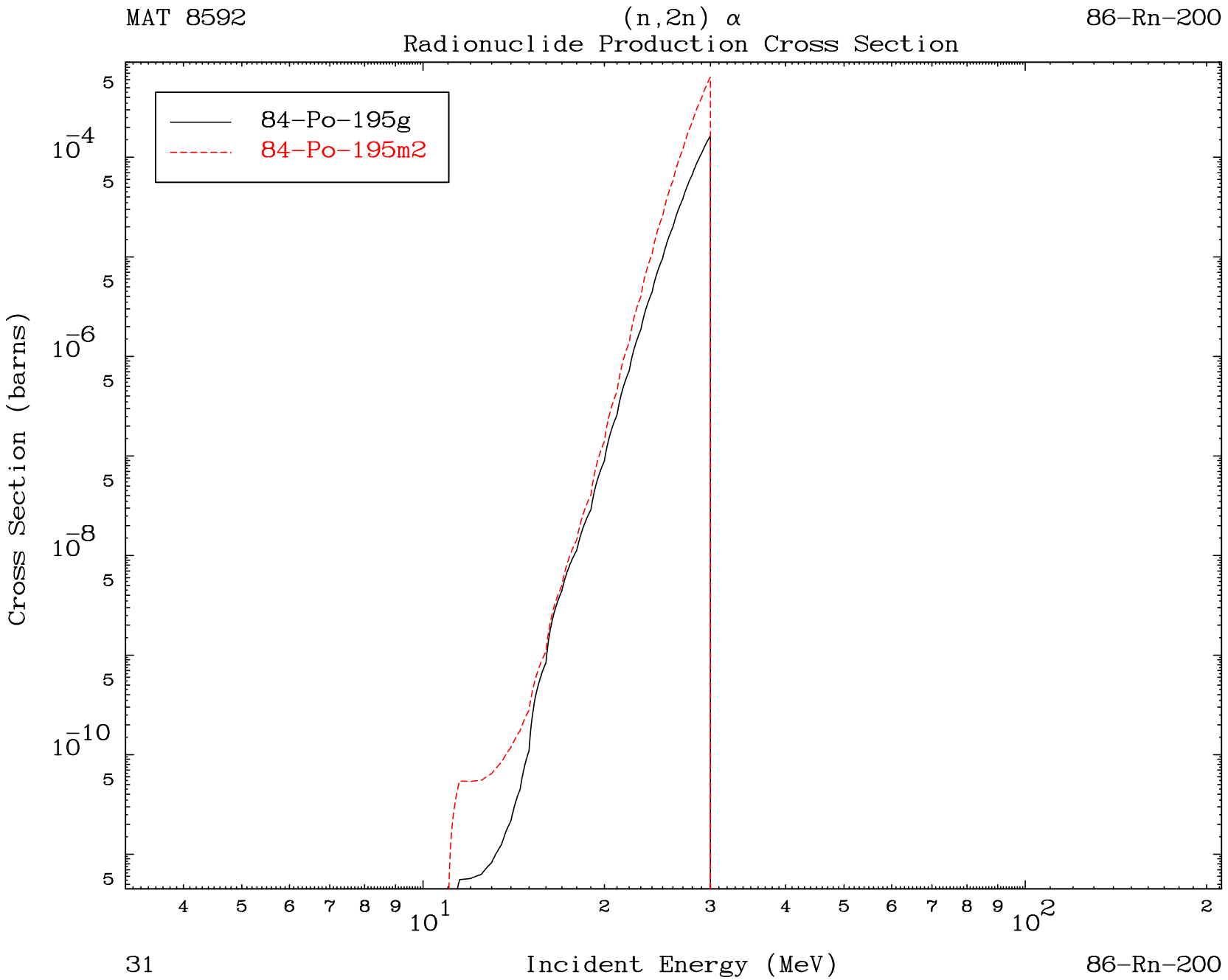

MAT 8592
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-200
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
26
Incident Energy (MeV)
86-Rn-200

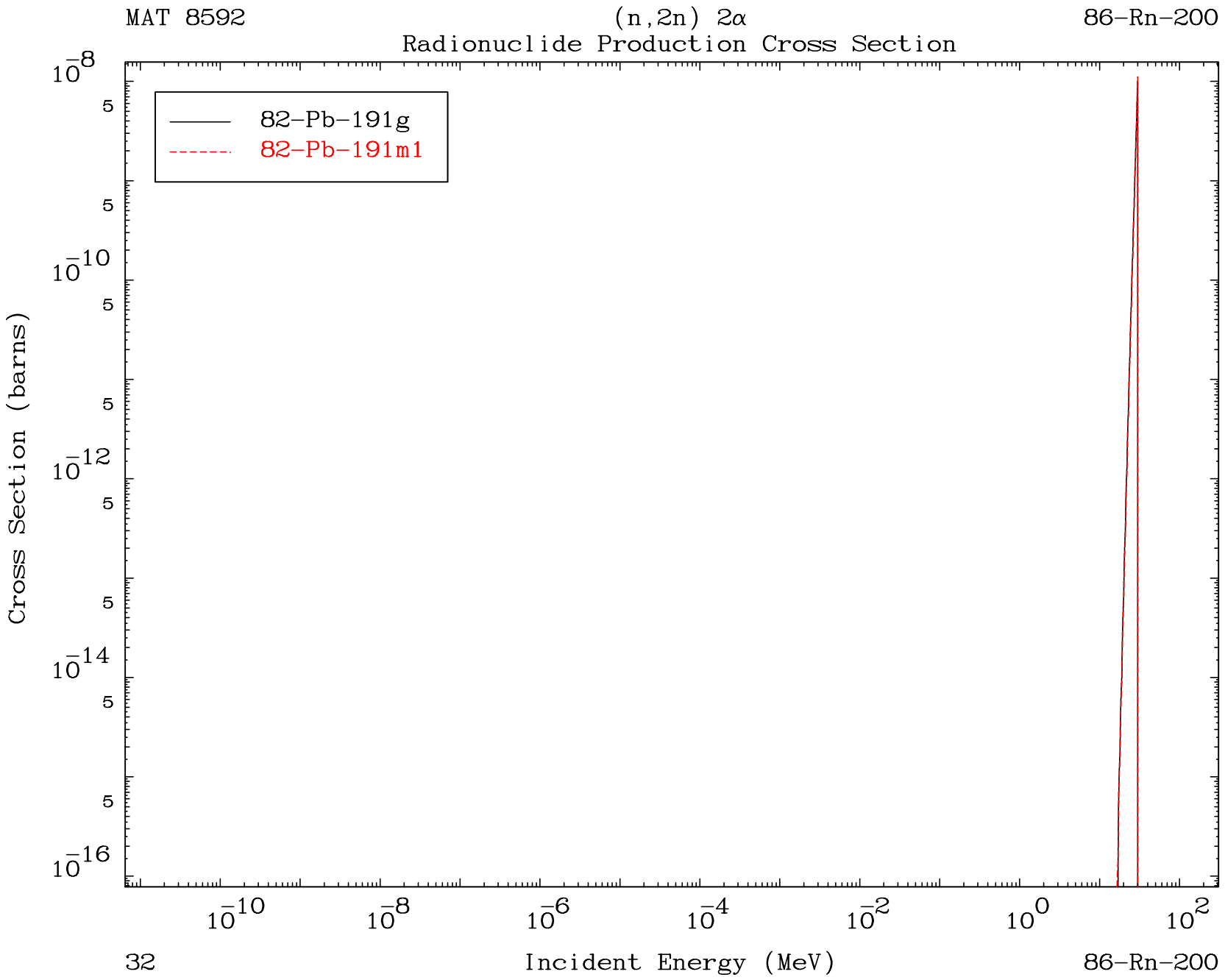

MAT 8592
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-200
X10 −6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
27
Incident Energy (MeV)
86-Rn-200

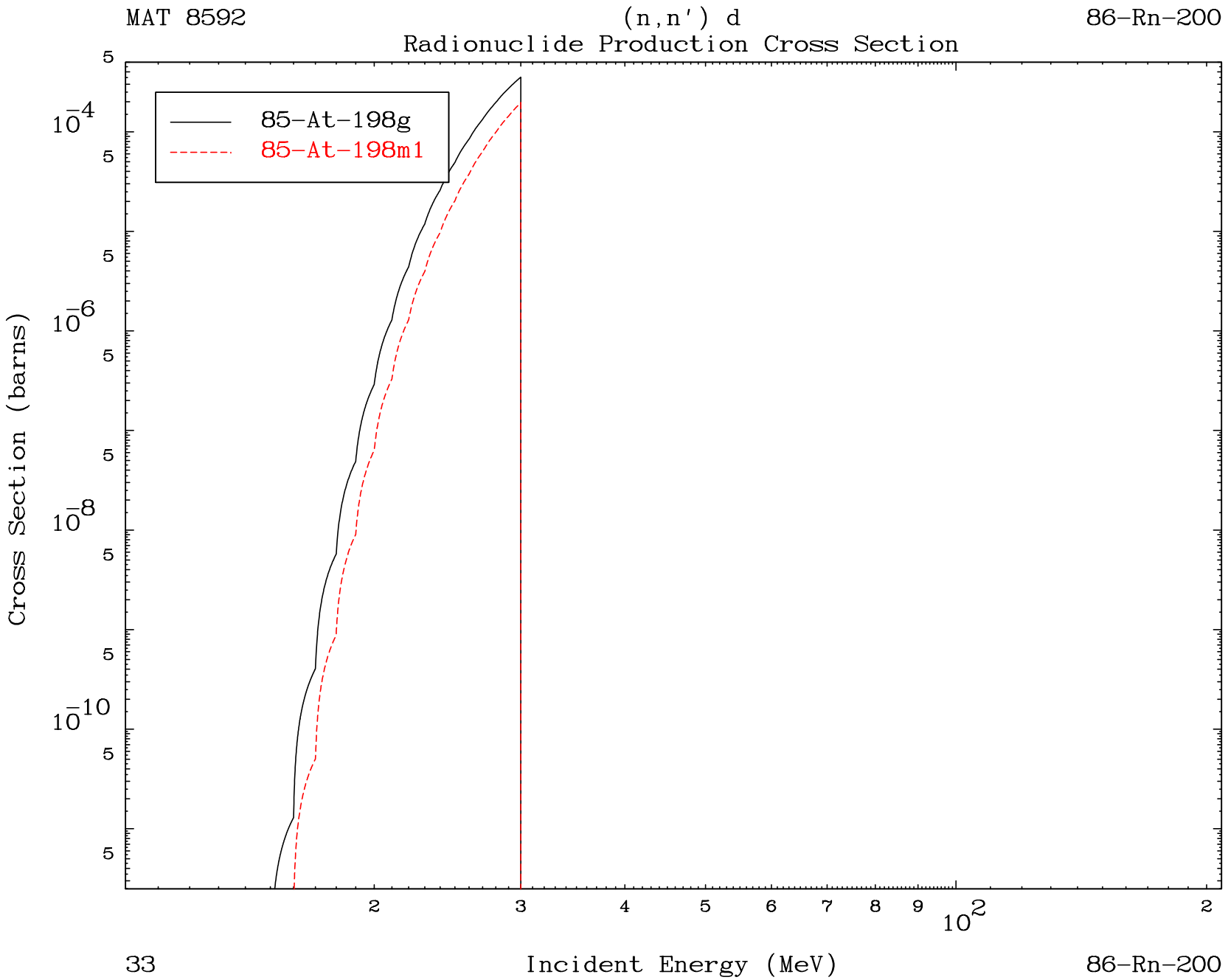

MAT 8592
(n,2n) d
86-Rn-200
Radionuclide Production Cross Section
85-At-197g
85-At-197m1
Cross Section (barns)
10-8
10-10
10-12
10-14
5
2
3
4
5
6
7
8
9
10 2
2
28
Incident Energy (MeV)
86-Rn-200

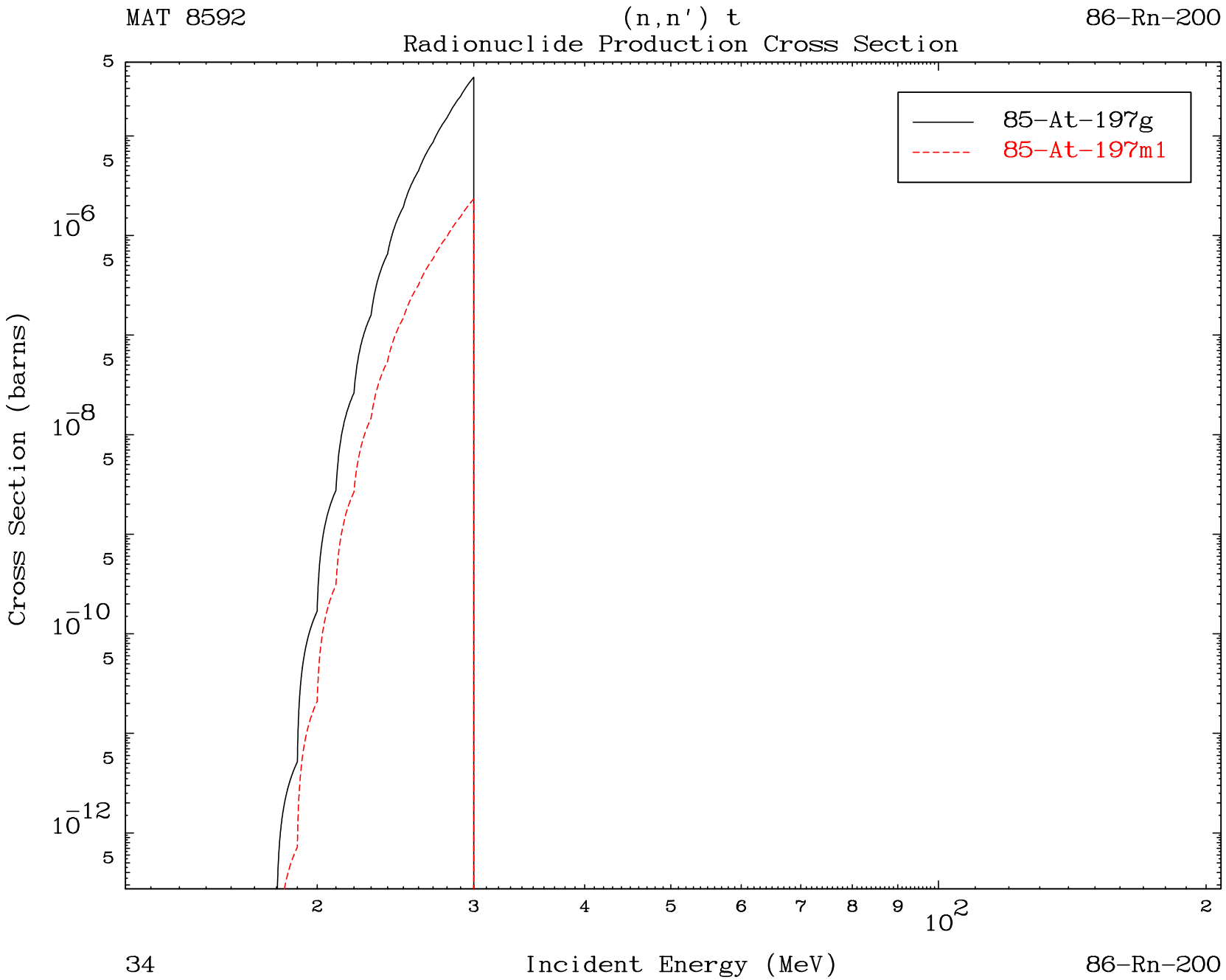

MAT 8592
(n,2n)
86-Rn-200
Radionuclide Production Cross Section
86-Rn-199g
86-Rn-199m1
Cross Section (barns)
10-2
5
10-3
5
10-4
5
10-5
5
10-6
2
3
4
5
6
7
8
9
10 2
2
29
Incident Energy (MeV)
86-Rn-200

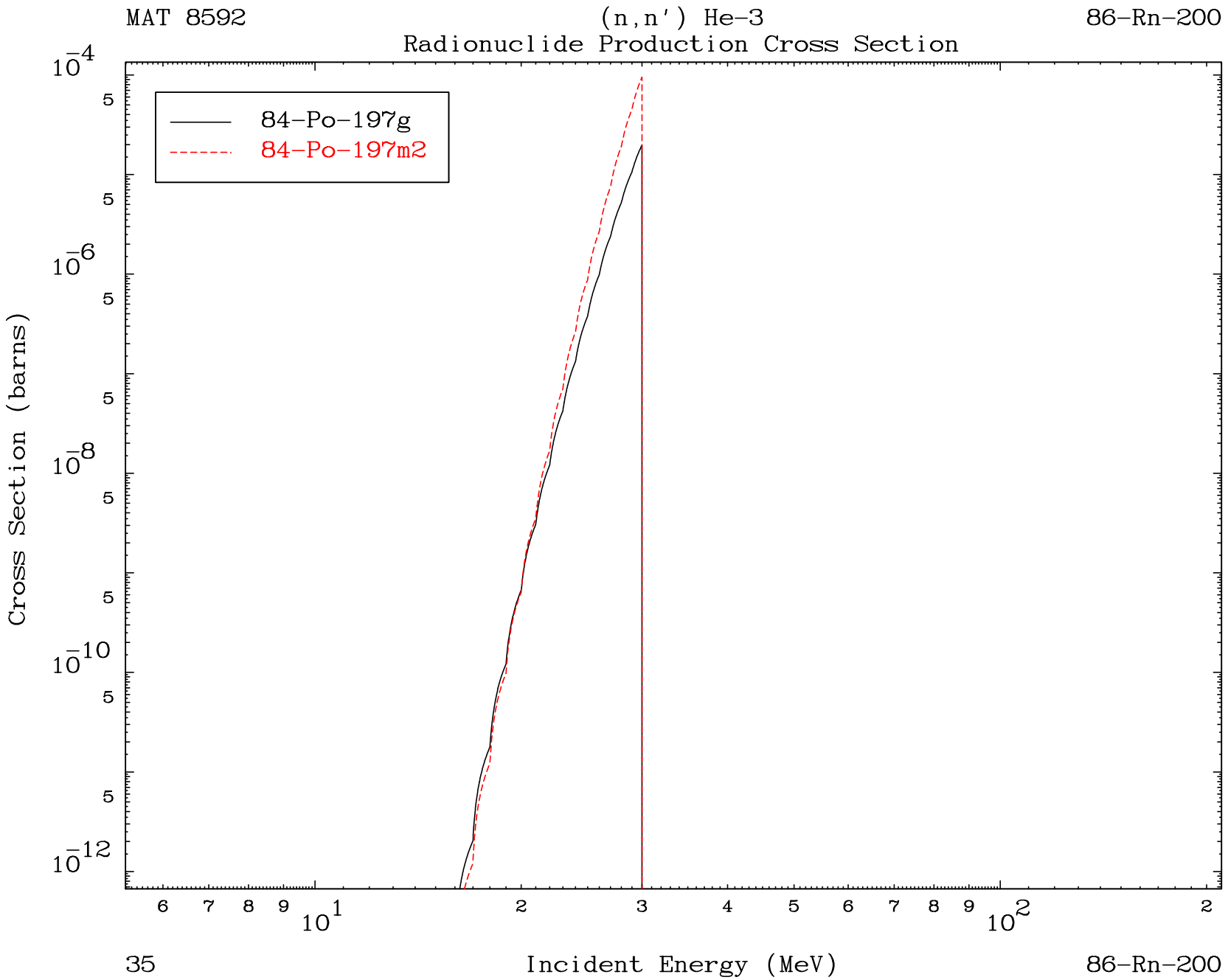

MAT 8592
Fission
86-Rn-200
Radionuclide Production Cross Section
0-??-Nat
Cross Section (barns)
10^2
10^0
10^-2
10^-4
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
30
Incident Energy (MeV)
86-Rn-200

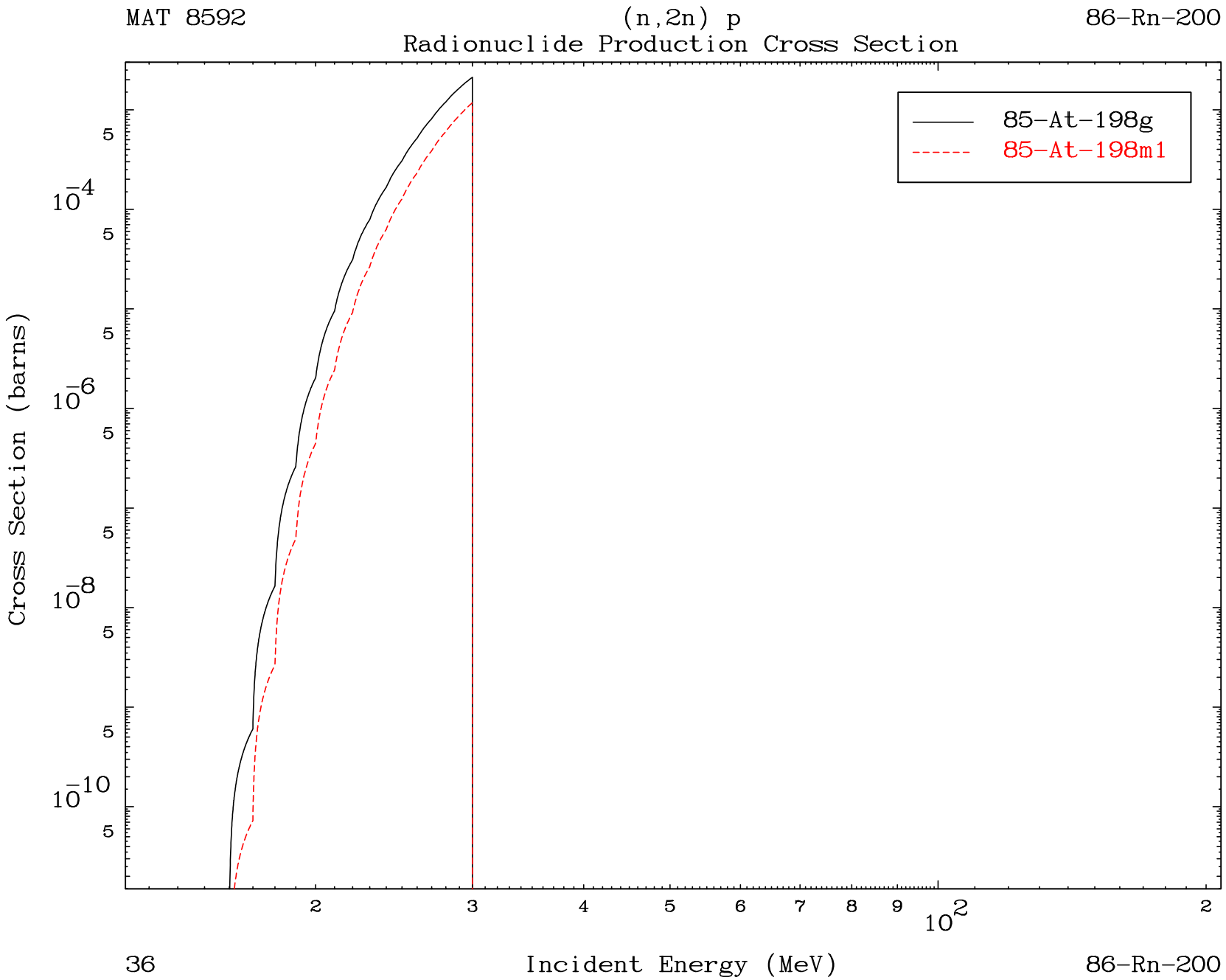

MAT 8592
(n,2n) α
86-Rn-200
Radionuclide Production Cross Section
84-Po-195g
84-Po-195m2
Cross Section (barns)
Incident Energy (MeV)
31
86-Rn-200

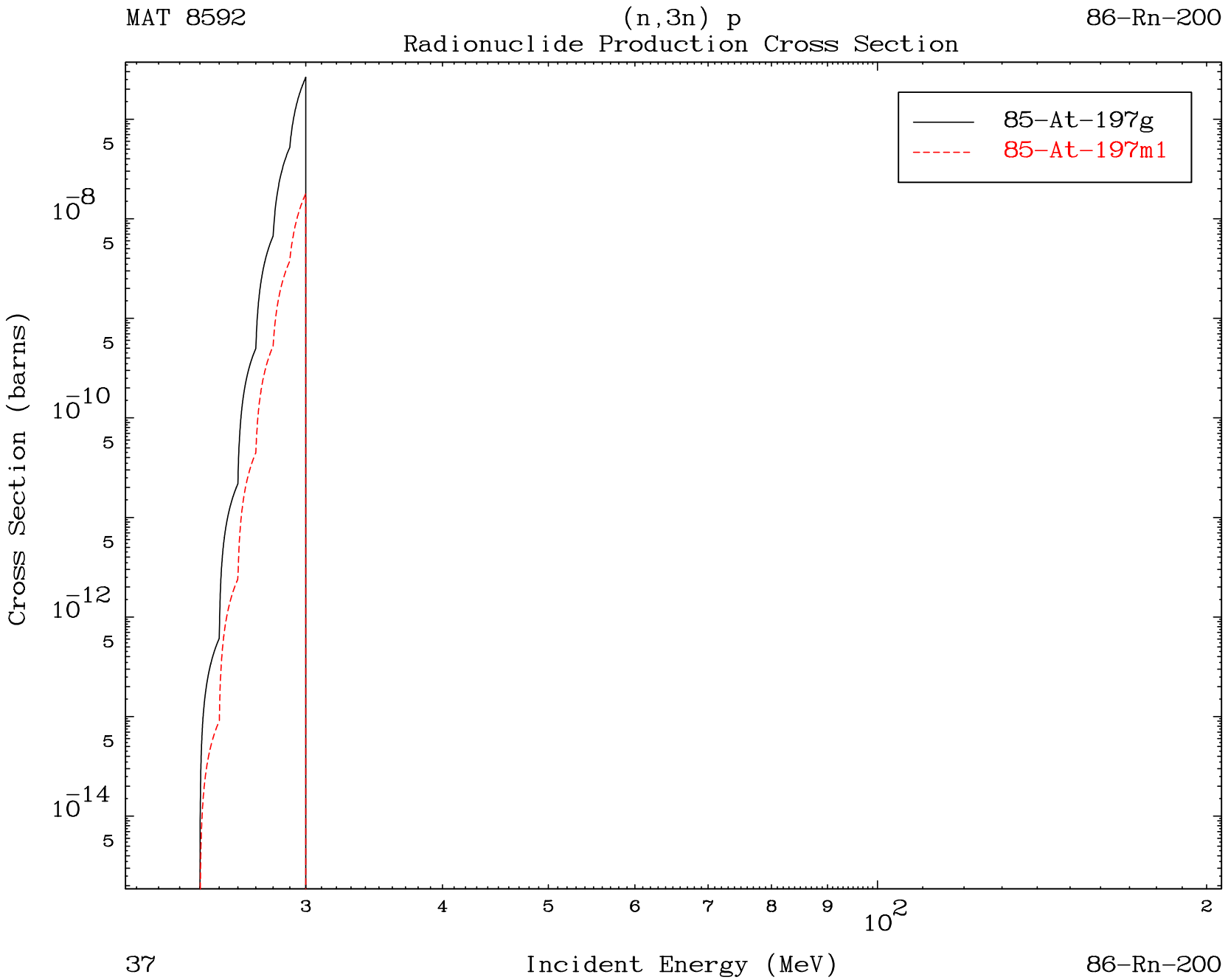

MAT 8592
(n,2n) 2α
86-Rn-200
Radionuclide Production Cross Section
82-Pb-191g
82-Pb-191m1
Cross Section (barns)
Incident Energy (MeV)
32
86-Rn-200

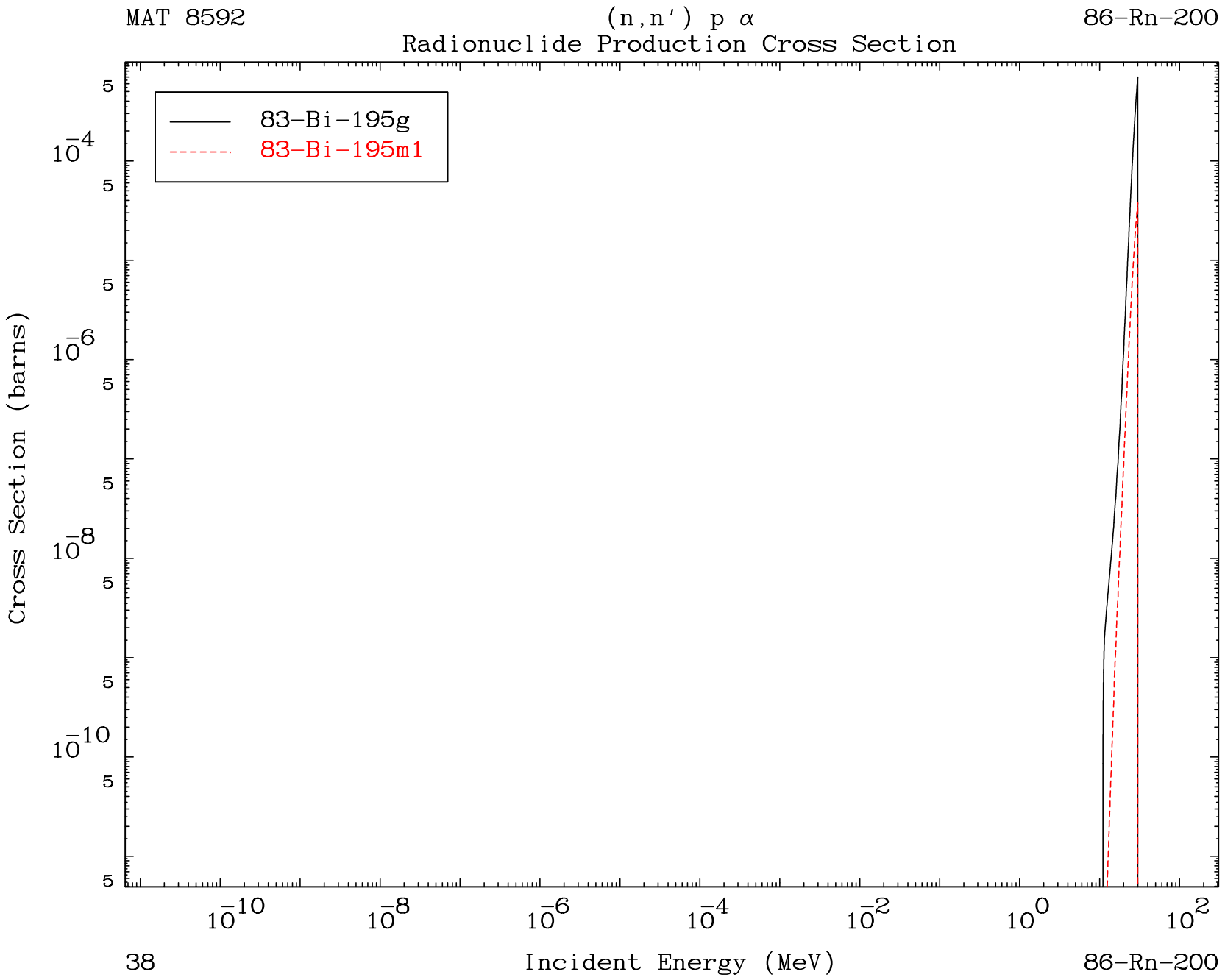

MAT 8592
(n,n') d
86-Rn-200
Radionuclide Production Cross Section
85-At-198g
85-At-198m1
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
2
3
4
5
6
7
8
9
10^2
2
33
Incident Energy (MeV)
86-Rn-200

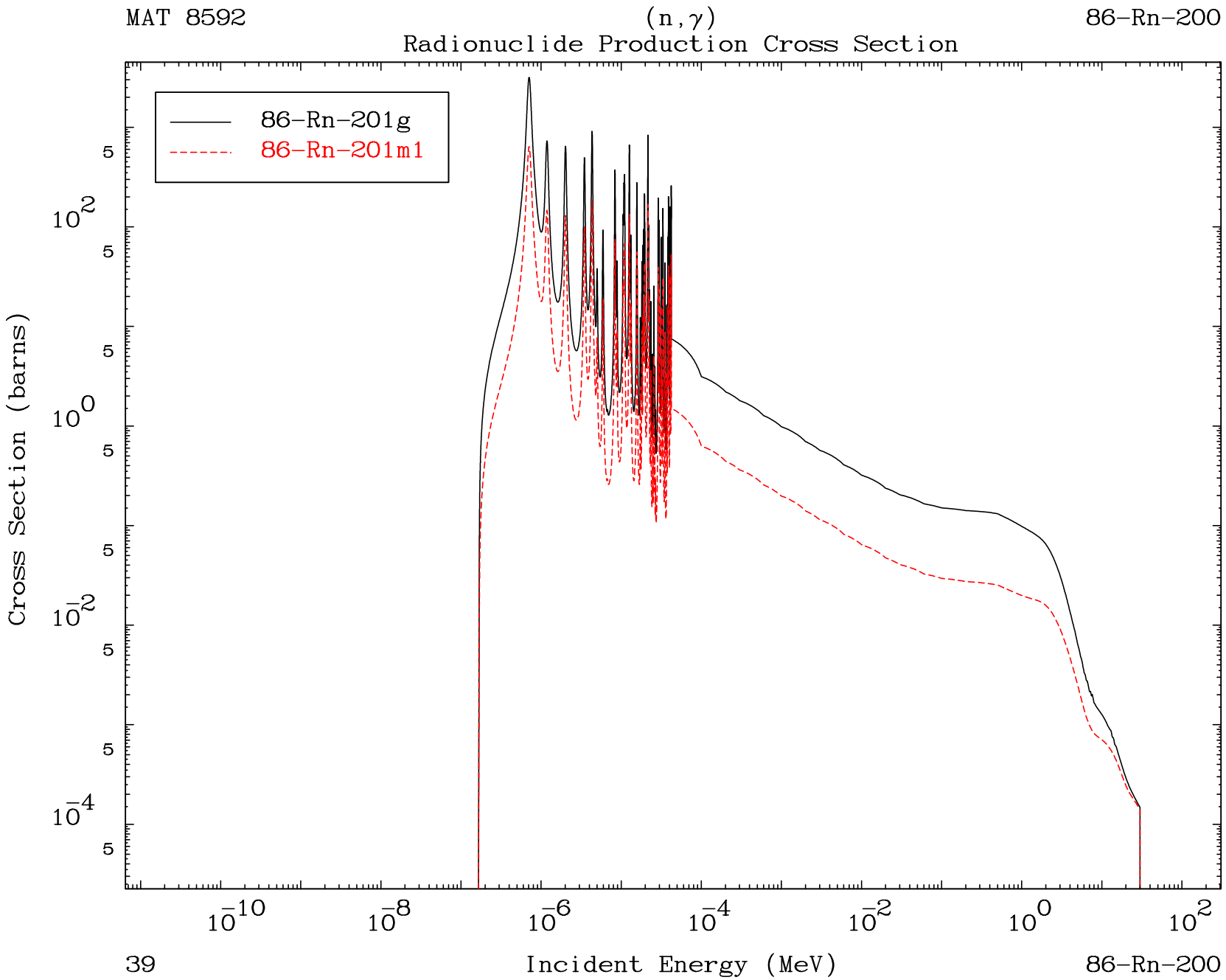

MAT 8592
(n,n') t
86-Rn-200
Radionuclide Production Cross Section
85-At-197g
85-At-197m1
Cross Section (barns)
Incident Energy (MeV)
34
86-Rn-200

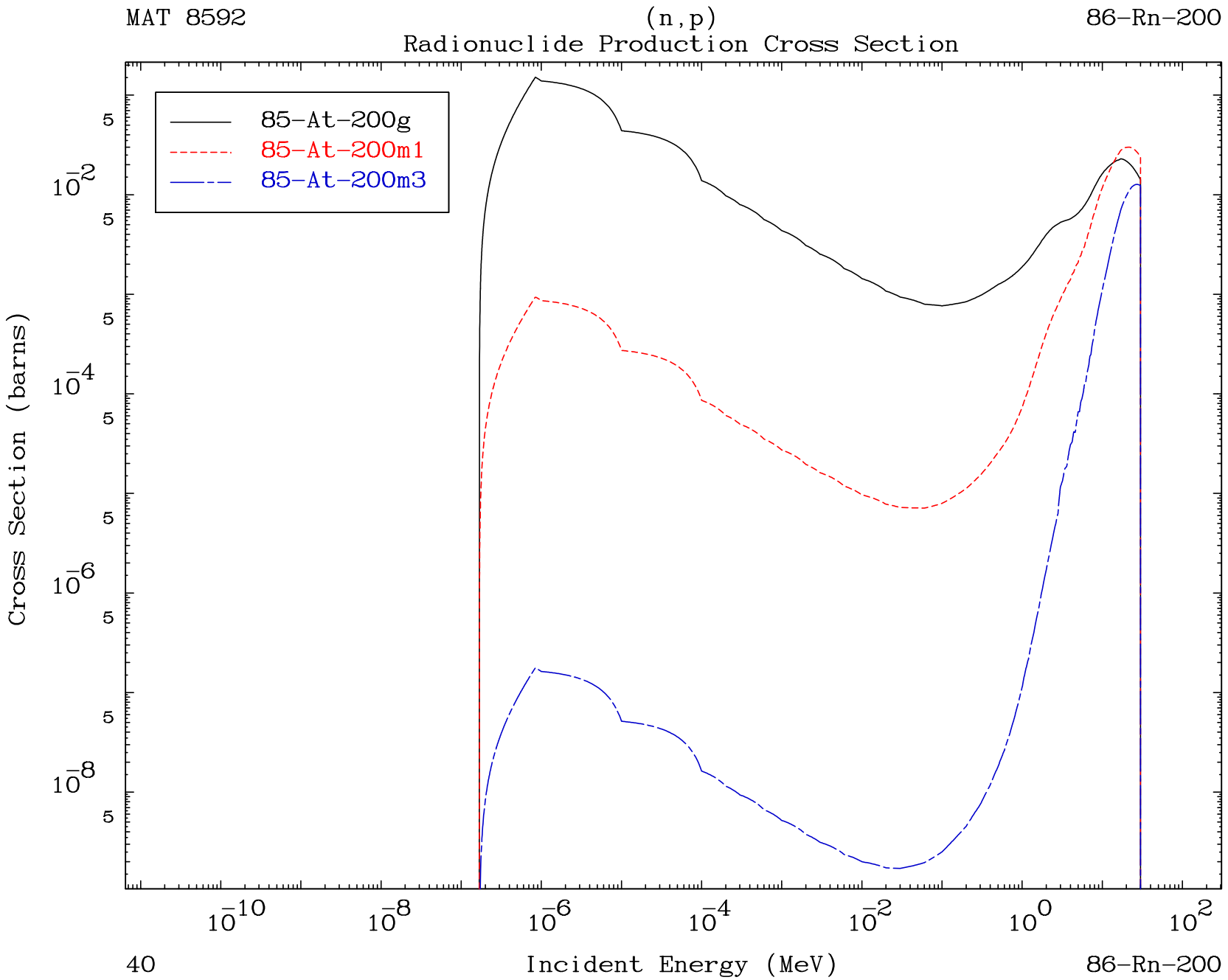

MAT 8592
(n,n') He-3
86-Rn-200
Radionuclide Production Cross Section
84-Po-197g
84-Po-197m2
Cross Section (barns)
Incident Energy (MeV)
35
86-Rn-200

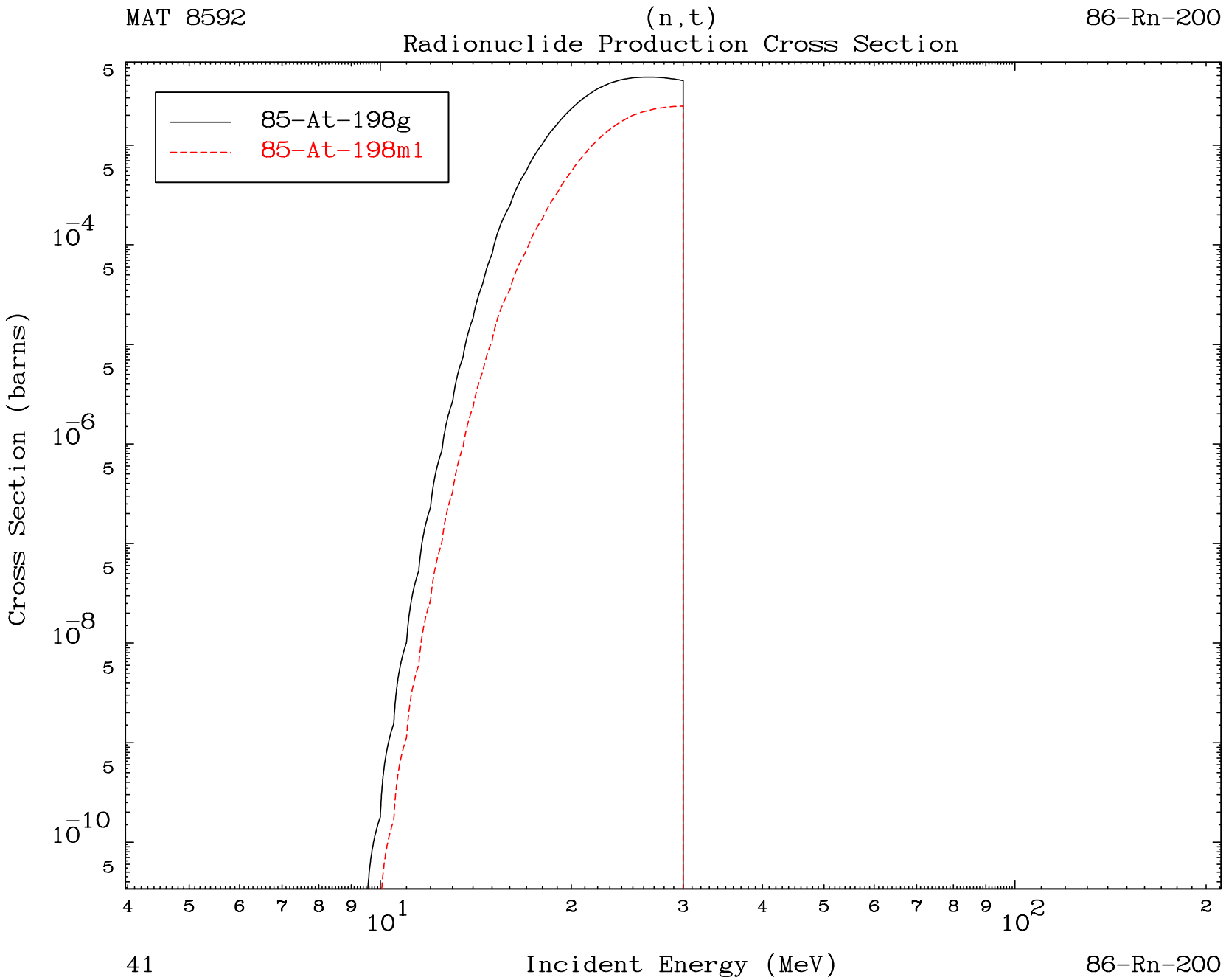

MAT 8592
(n,2n) p
86-Rn-200
Radionuclide Production Cross Section
85-At-198g
85-At-198m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
2
3
4
6
7
8
9
10 2
Incident Energy (MeV)
36
86-Rn-200

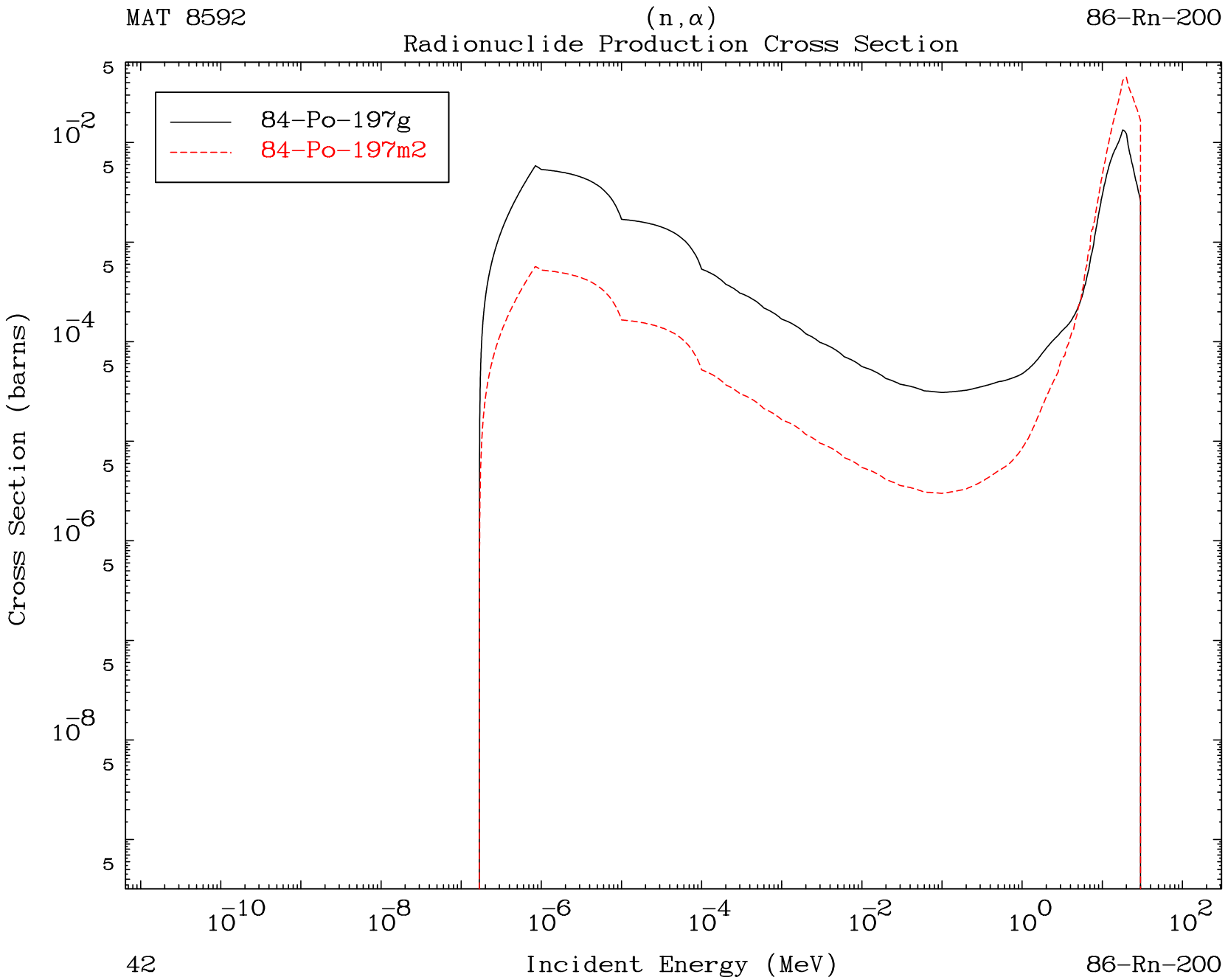

MAT 8592
(n,3n) p
86-Rn-200
Radionuclide Production Cross Section
85-At-197g
85-At-197m1
Cross Section (barns)
10^-8
10^-10
10^-12
10^-14
5
3
4
5
6
7
8
9
10^2
2
37
Incident Energy (MeV)
86-Rn-200

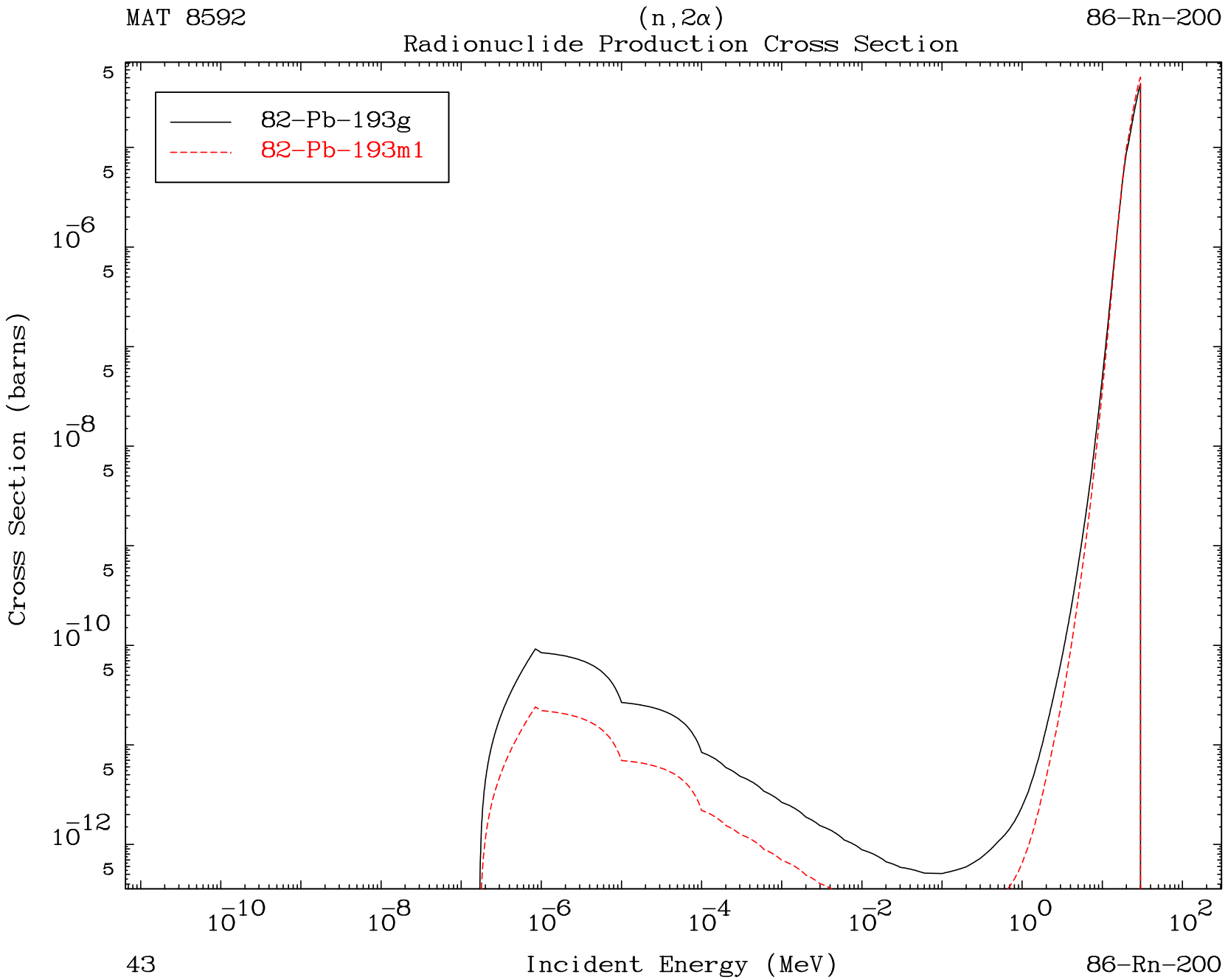

MAT 8592
(n,n') p α
86-Rn-200
Radionuclide Production Cross Section
83-Bi-195g
83-Bi-195m1
Cross Section (barns)
Incident Energy (MeV)
38
86-Rn-200

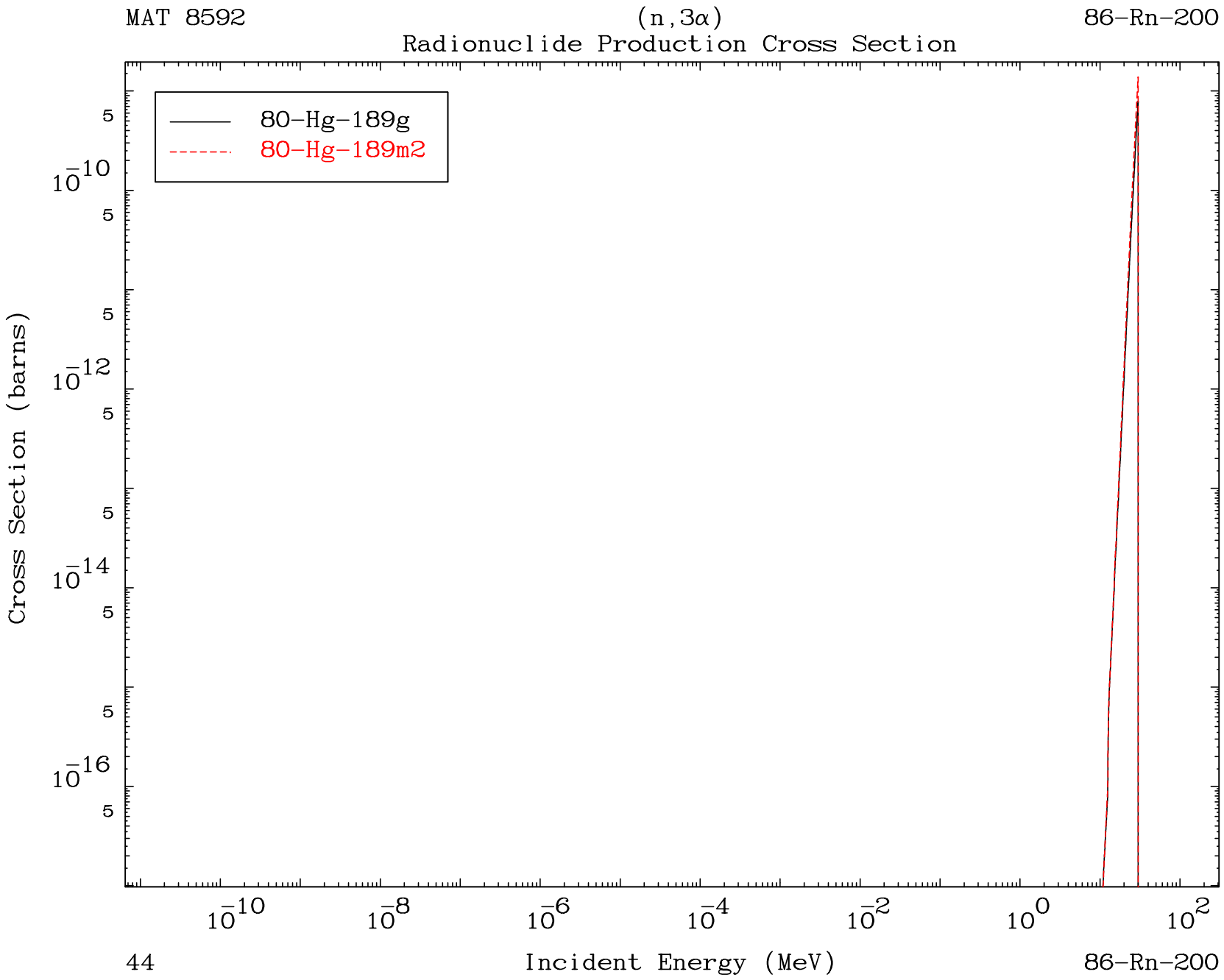

MAT 8592
(n,γ)
86-Rn-200
Radionuclide Production Cross Section
86-Rn-201g
86-Rn-201m1
Cross Section (barns)
10^2
10^0
10^-2
10^-4
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
39
Incident Energy (MeV)
86-Rn-200

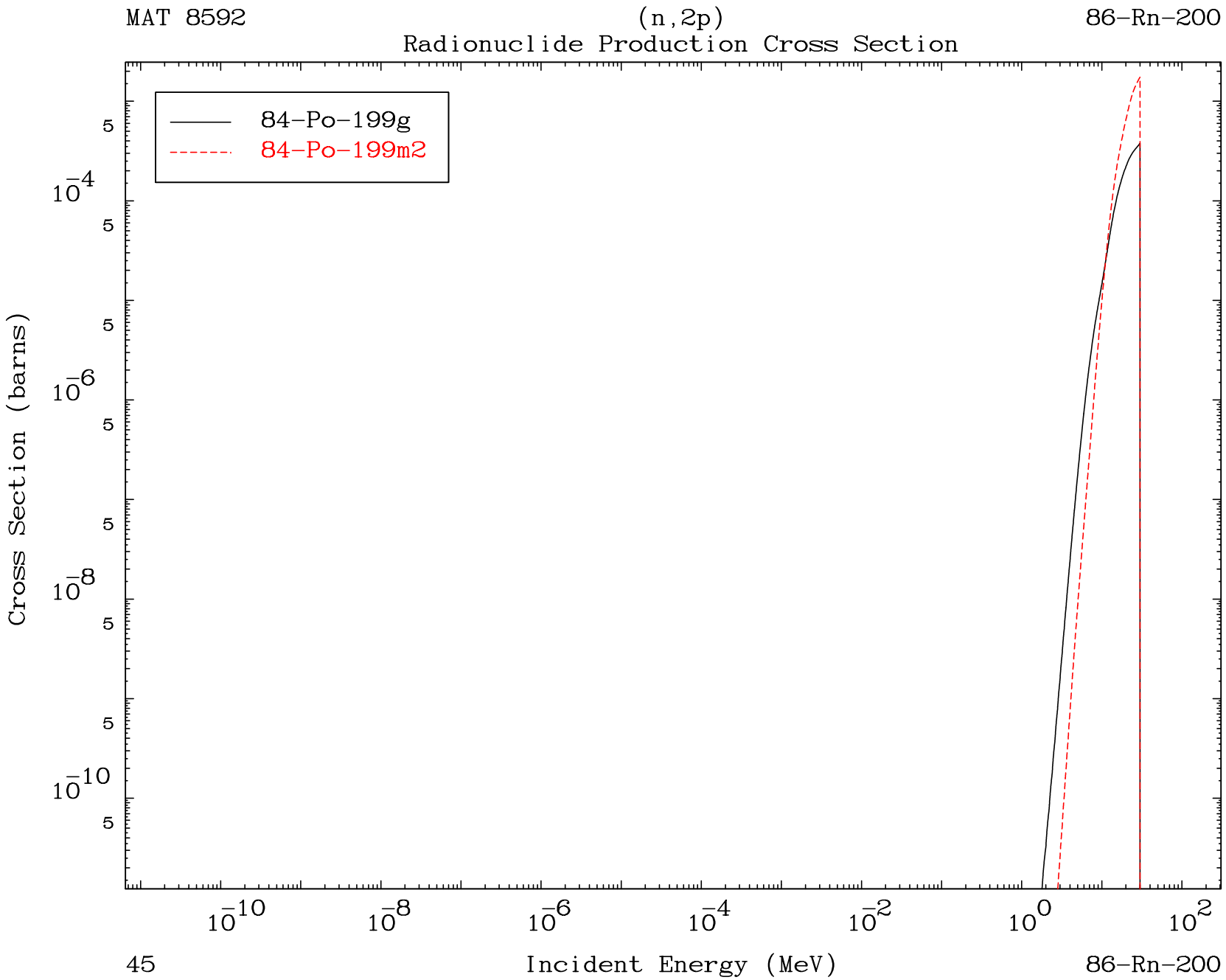

MAT 8592
(n,p)
86-Rn-200
Radionuclide Production Cross Section
85-At-200g
85-At-200m1
85-At-200m3
Cross Section (barns)
Incident Energy (MeV)
40
86-Rn-200

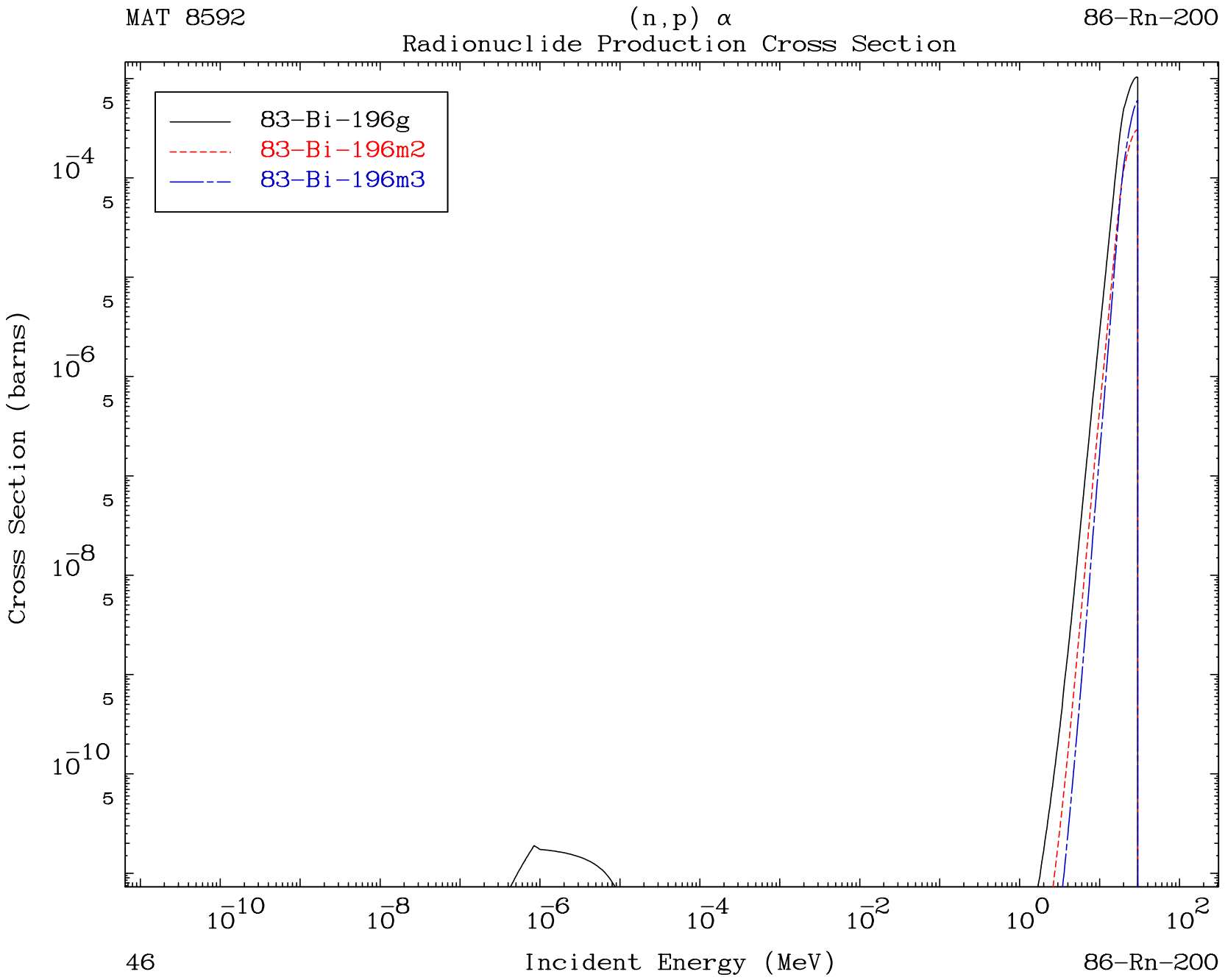

MAT 8592
(n,t)
86-Rn-200
Radionuclide Production Cross Section
85-At-198g
85-At-198m1
Cross Section (barns)
Incident Energy (MeV)
41
86-Rn-200

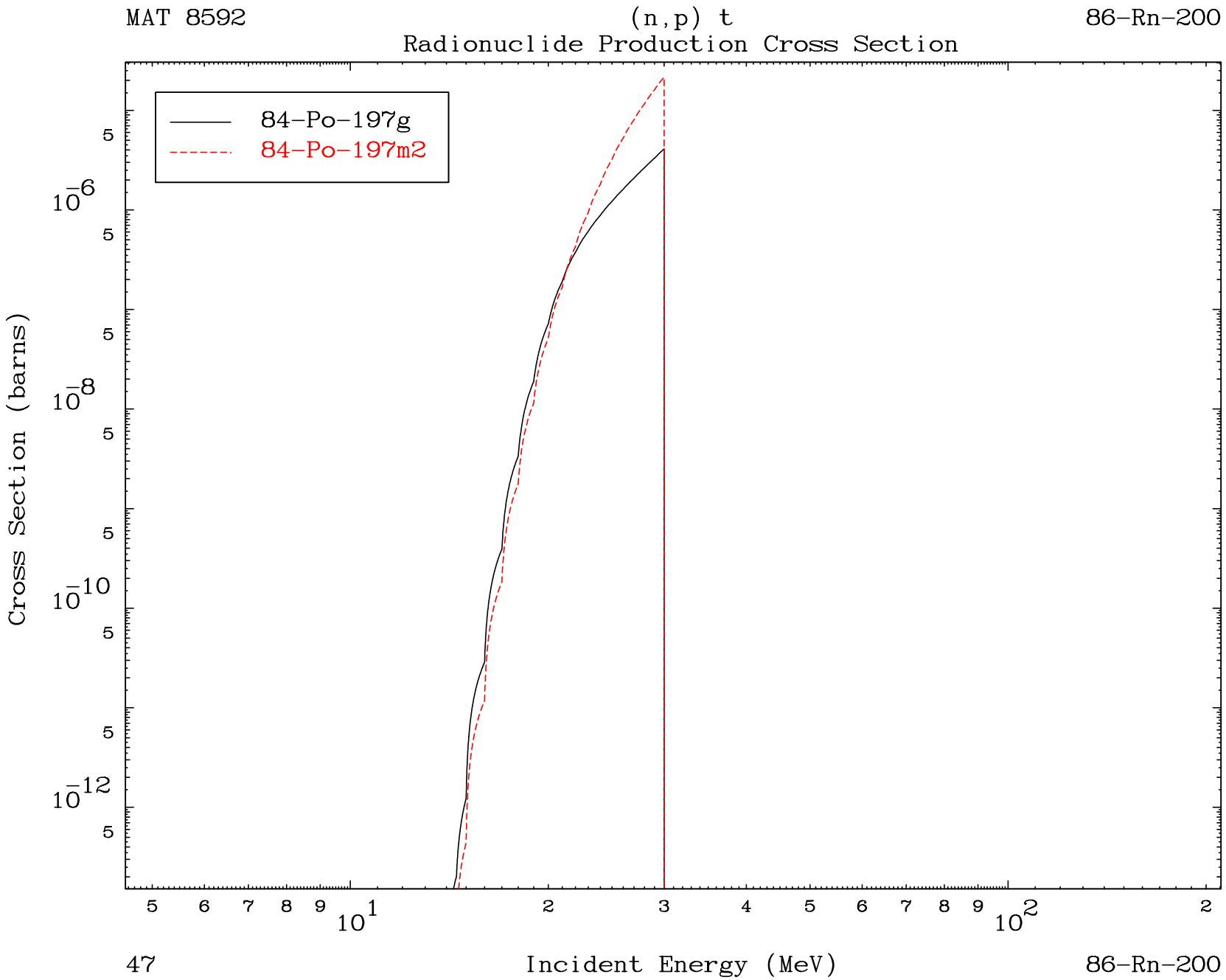

MAT 8592
(n,α)
86-Rn-200
Radionuclide Production Cross Section
84-Po-197g
84-Po-197m2
Cross Section (barns)
Incident Energy (MeV)
42
86-Rn-200

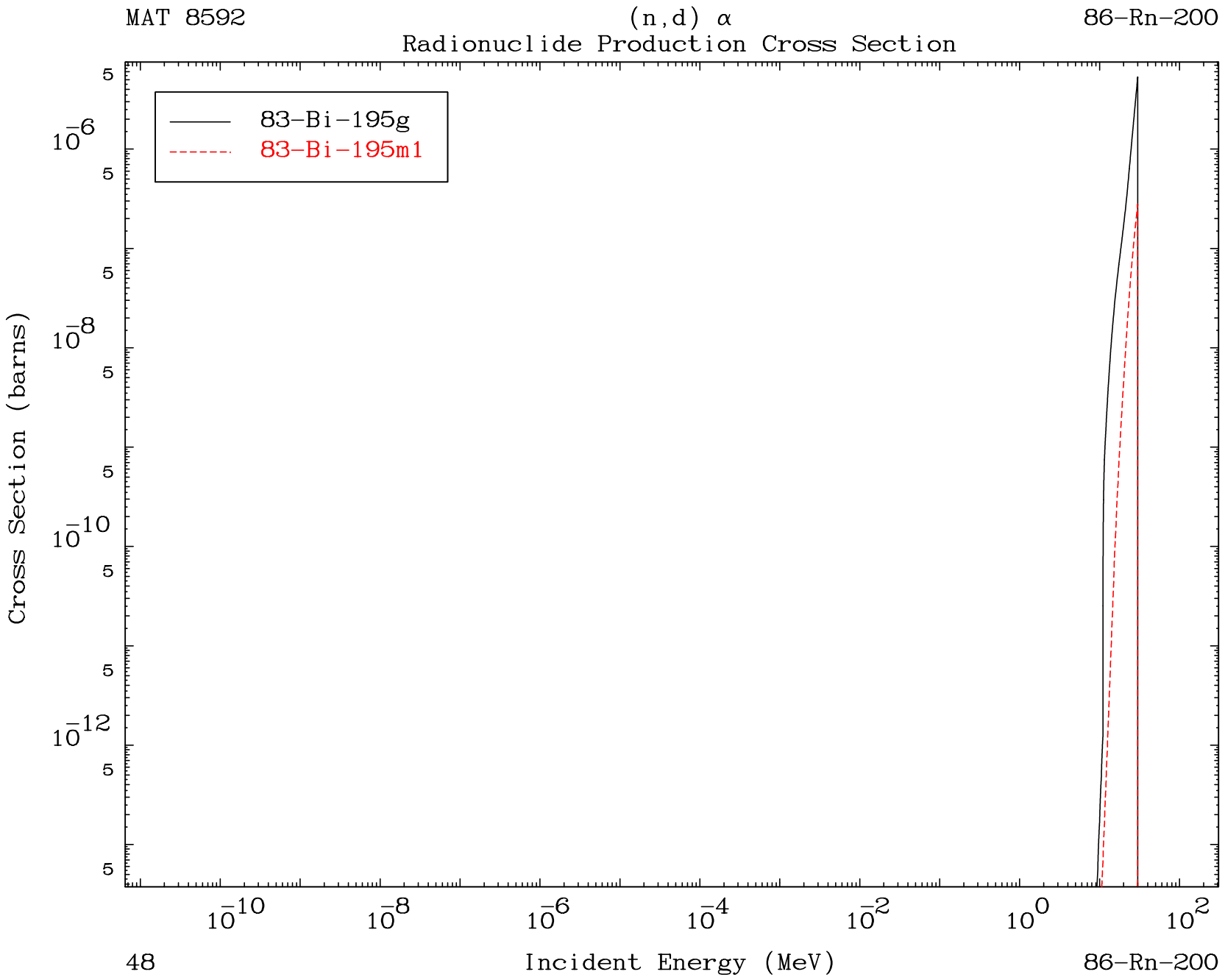

MAT 8592
(n,2α)
86-Rn-200
Radionuclide Production Cross Section
82-Pb-193g
82-Pb-193m1
Cross Section (barns)
Incident Energy (MeV)
43
86-Rn-200


MAT 8592
(n,3α)
86-Rn-200
Radionuclide Production Cross Section
80-Hg-189g
80-Hg-189m2
Cross Section (barns)
Incident Energy (MeV)
44
86-Rn-200


MAT 8592
(n,2p)
86-Rn-200
Radionuclide Production Cross Section
84-Po-199g
84-Po-199m2
Cross Section (barns)
Incident Energy (MeV)
45
86-Rn-200


MAT 8592
(n,p) α
86-Rn-200
Radionuclide Production Cross Section
83-Bi-196g
83-Bi-196m2
83-Bi-196m3
Cross Section (barns)
Incident Energy (MeV)
46
86-Rn-200


MAT 8592
(n,p) t
86-Rn-200
Radionuclide Production Cross Section
84-Po-197g
84-Po-197m2
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
5
5
5
5
5
10^1
10^2
2
3
4
5
6
7
8
9
2
47
Incident Energy (MeV)
86-Rn-200


MAT 8592
(n,d) α
86-Rn-200
Radionuclide Production Cross Section
83-Bi-195g
83-Bi-195m1
Cross Section (barns)
Incident Energy (MeV)
48
86-Rn-200