Program EVALPLOT
(Version 2017-1)
by
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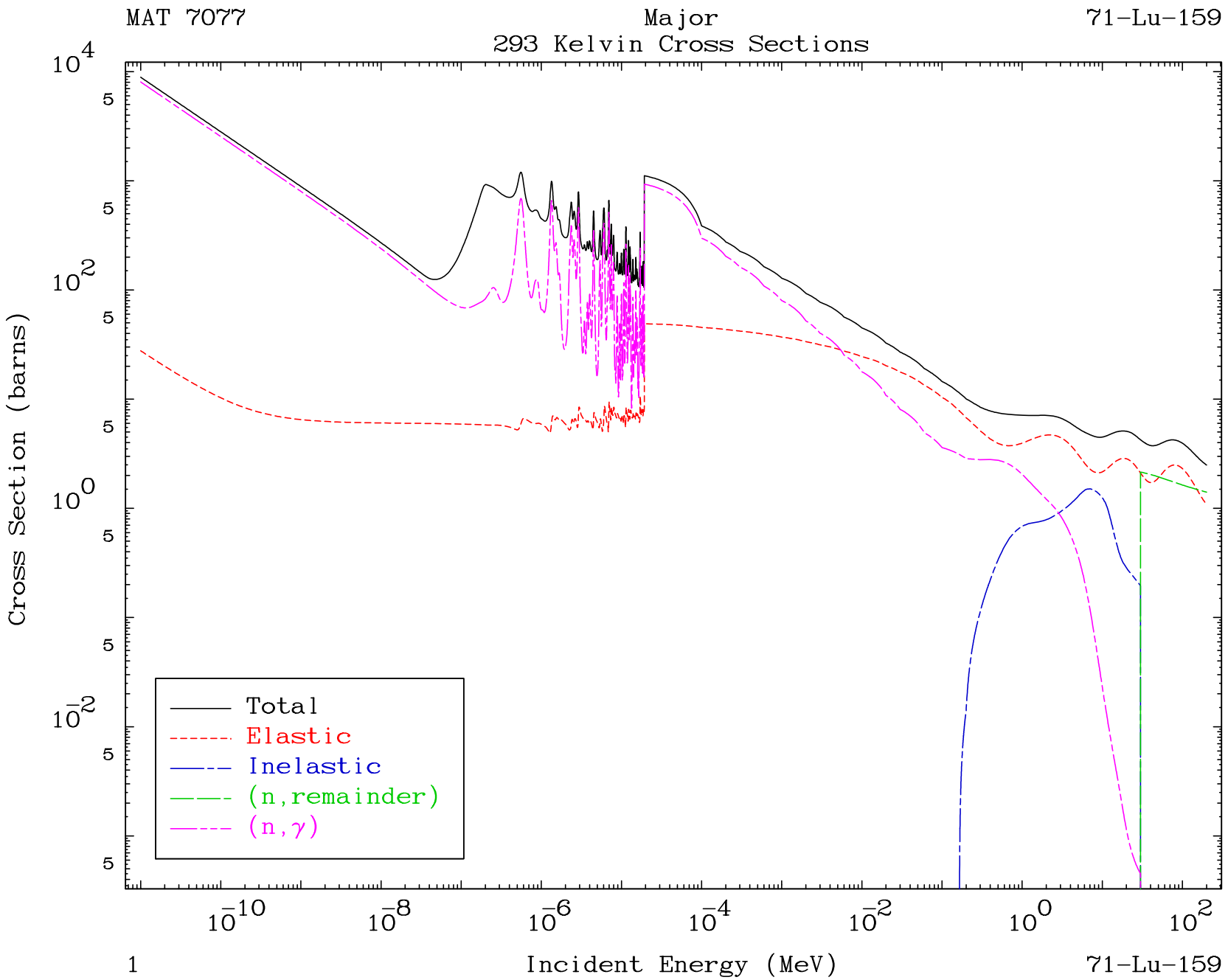
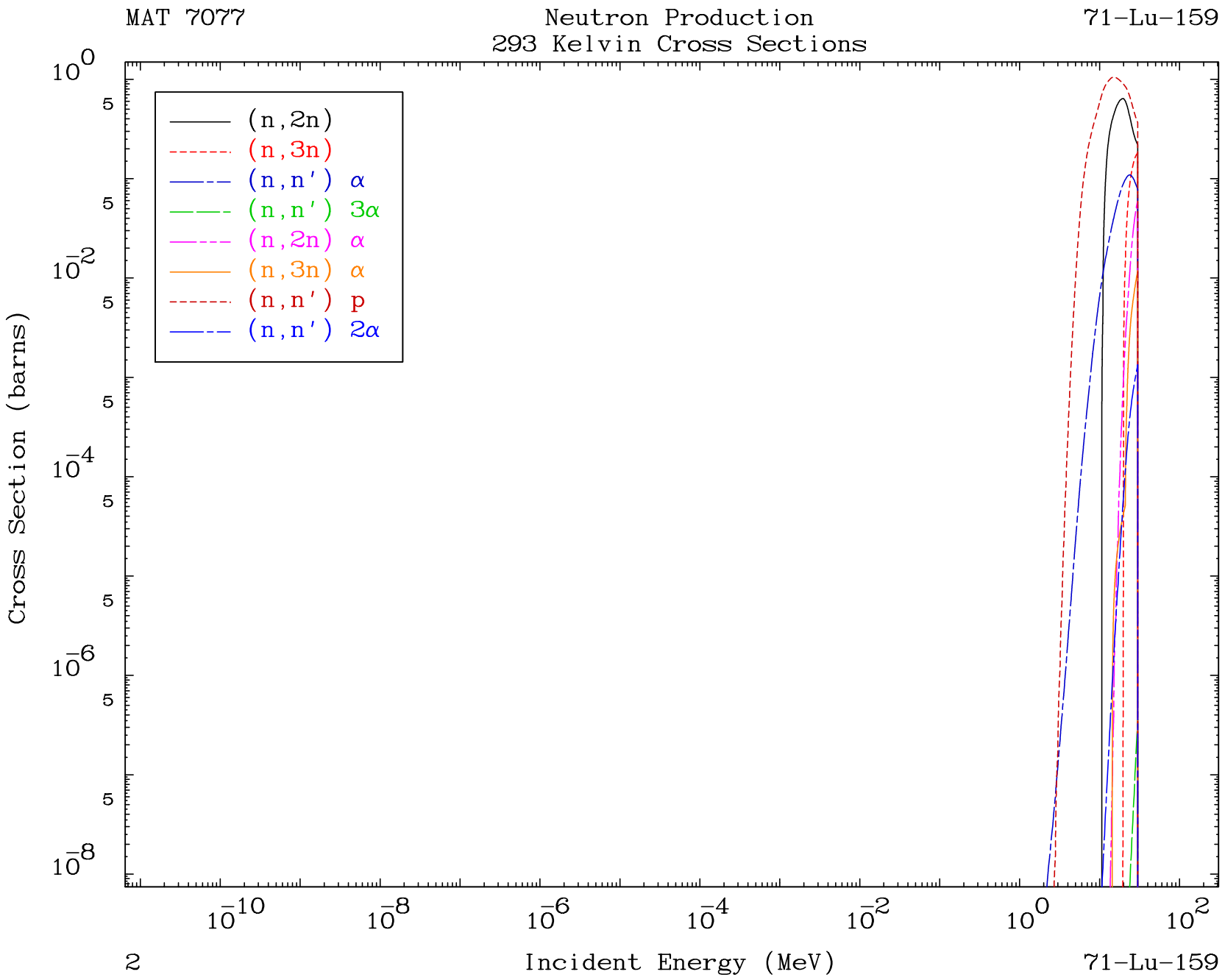
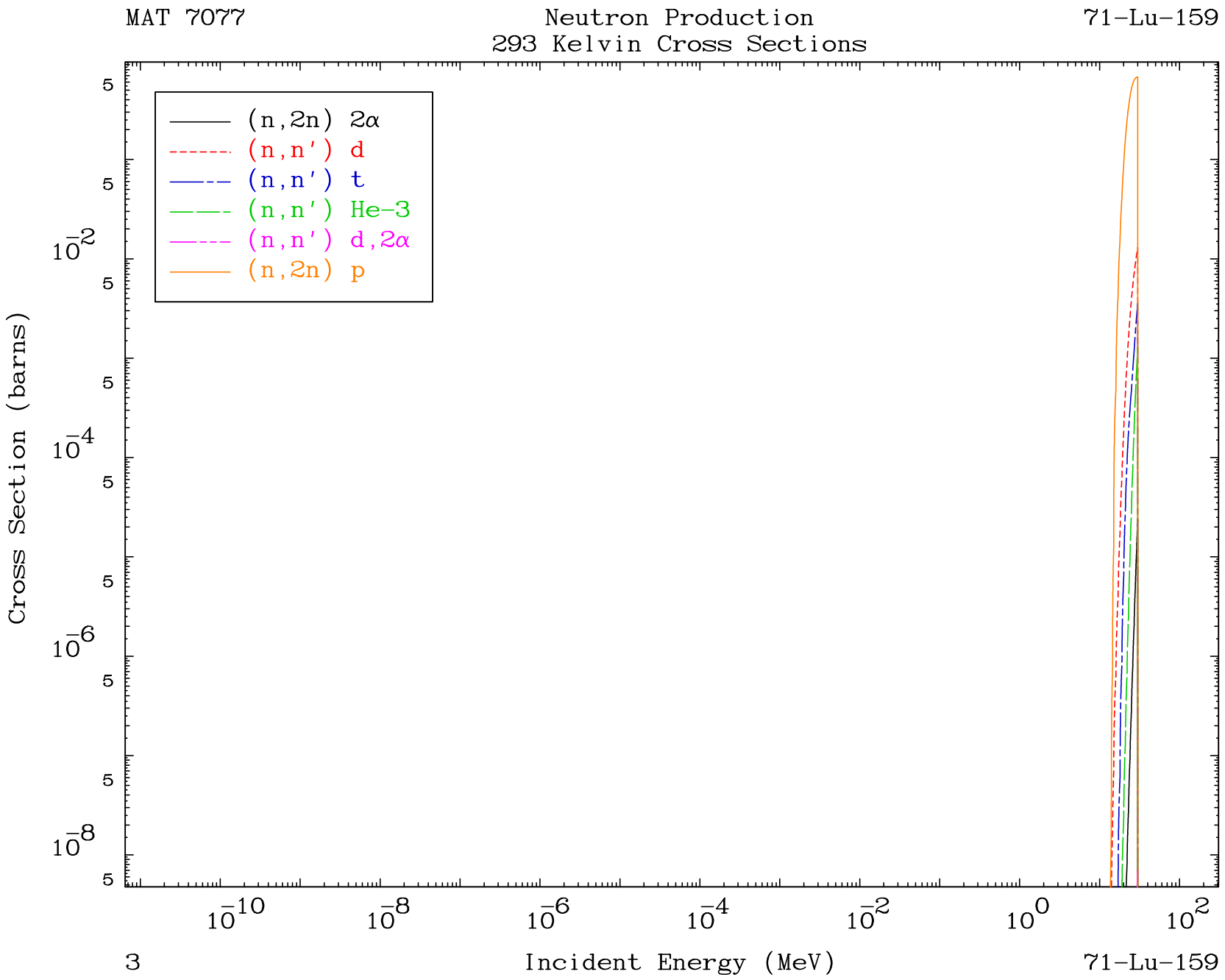
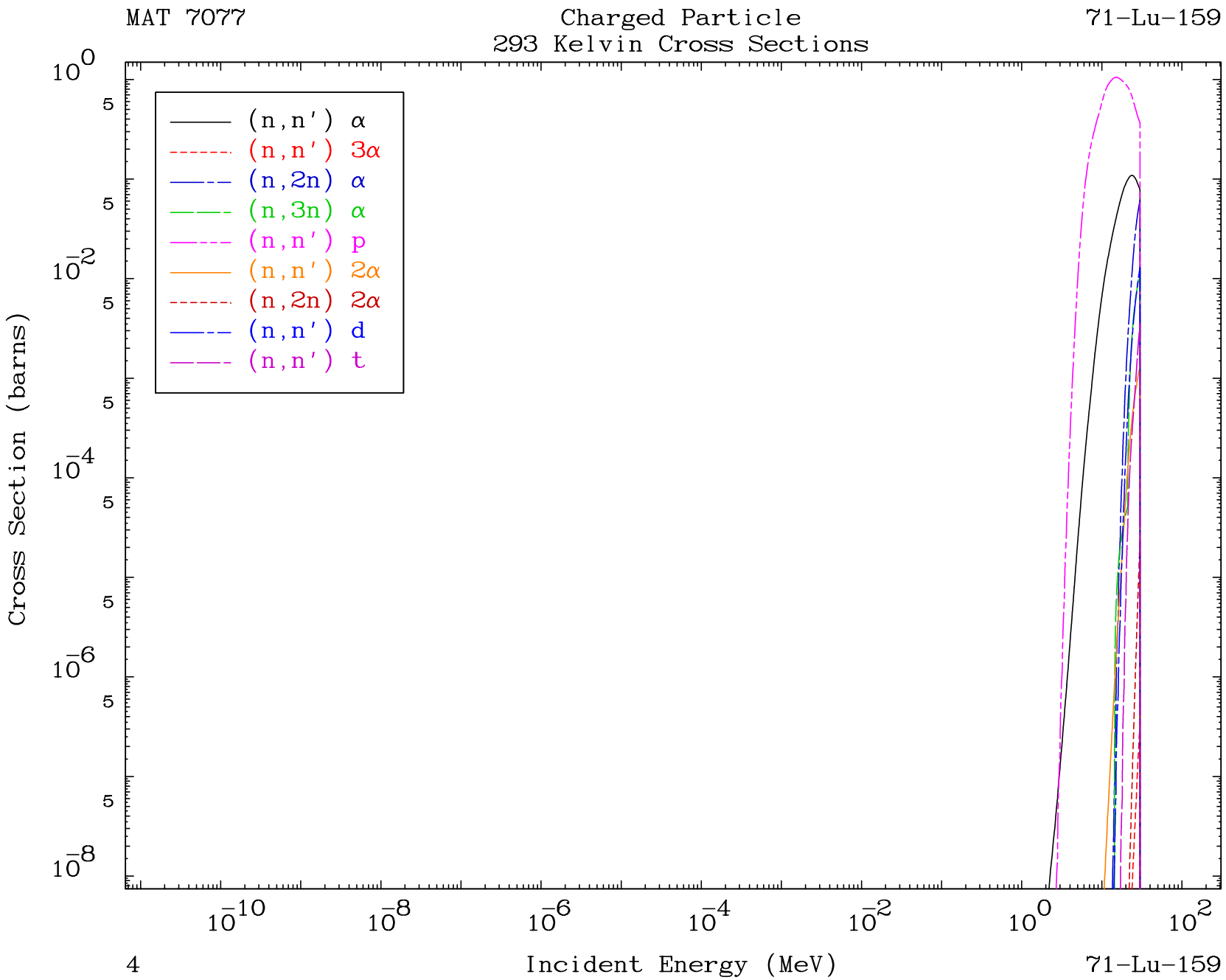
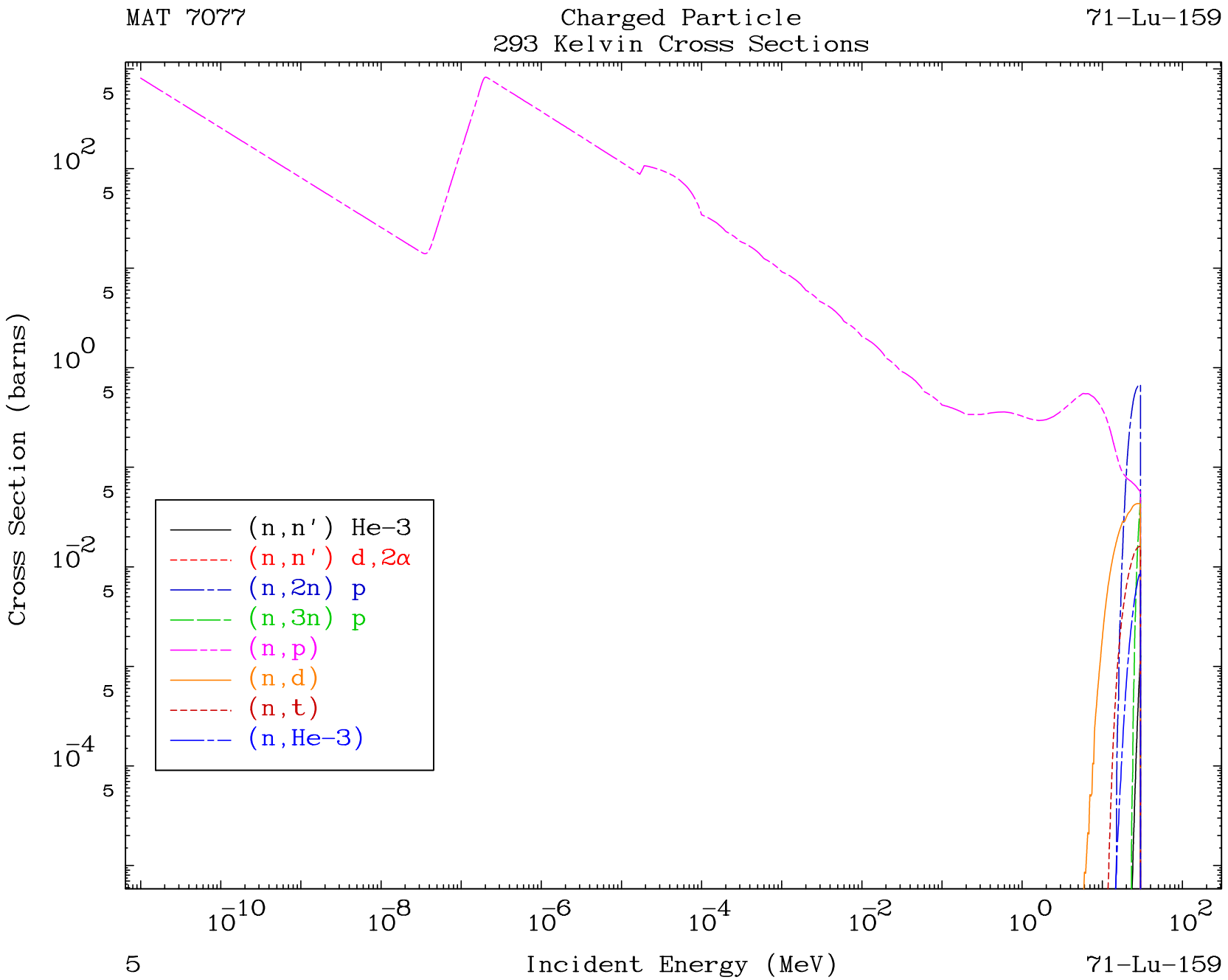
Press Mouse Button to Start

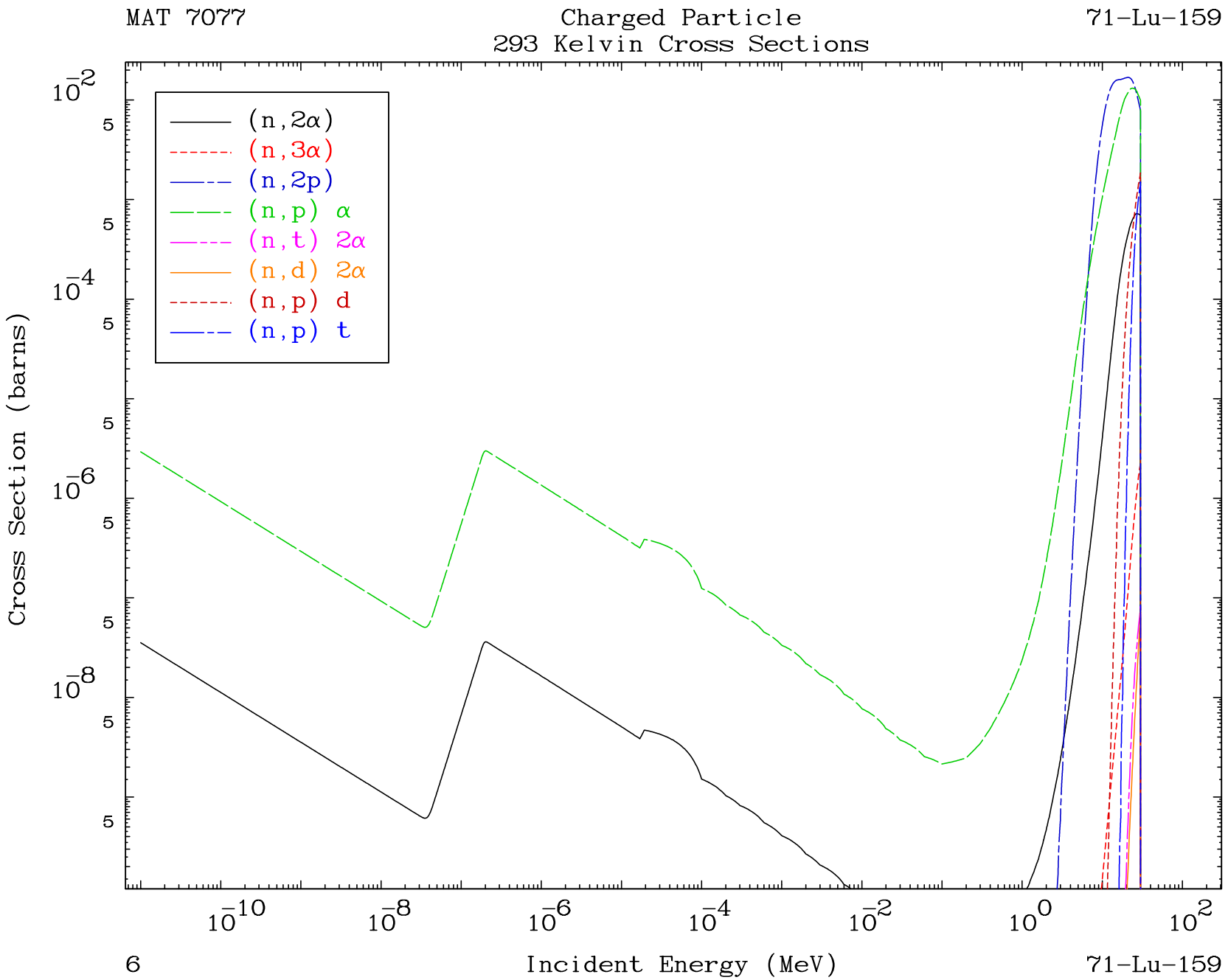

MAT 7077
Major
71-Lu-159
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,remainder)
(n,γ)
1
71-Lu-159

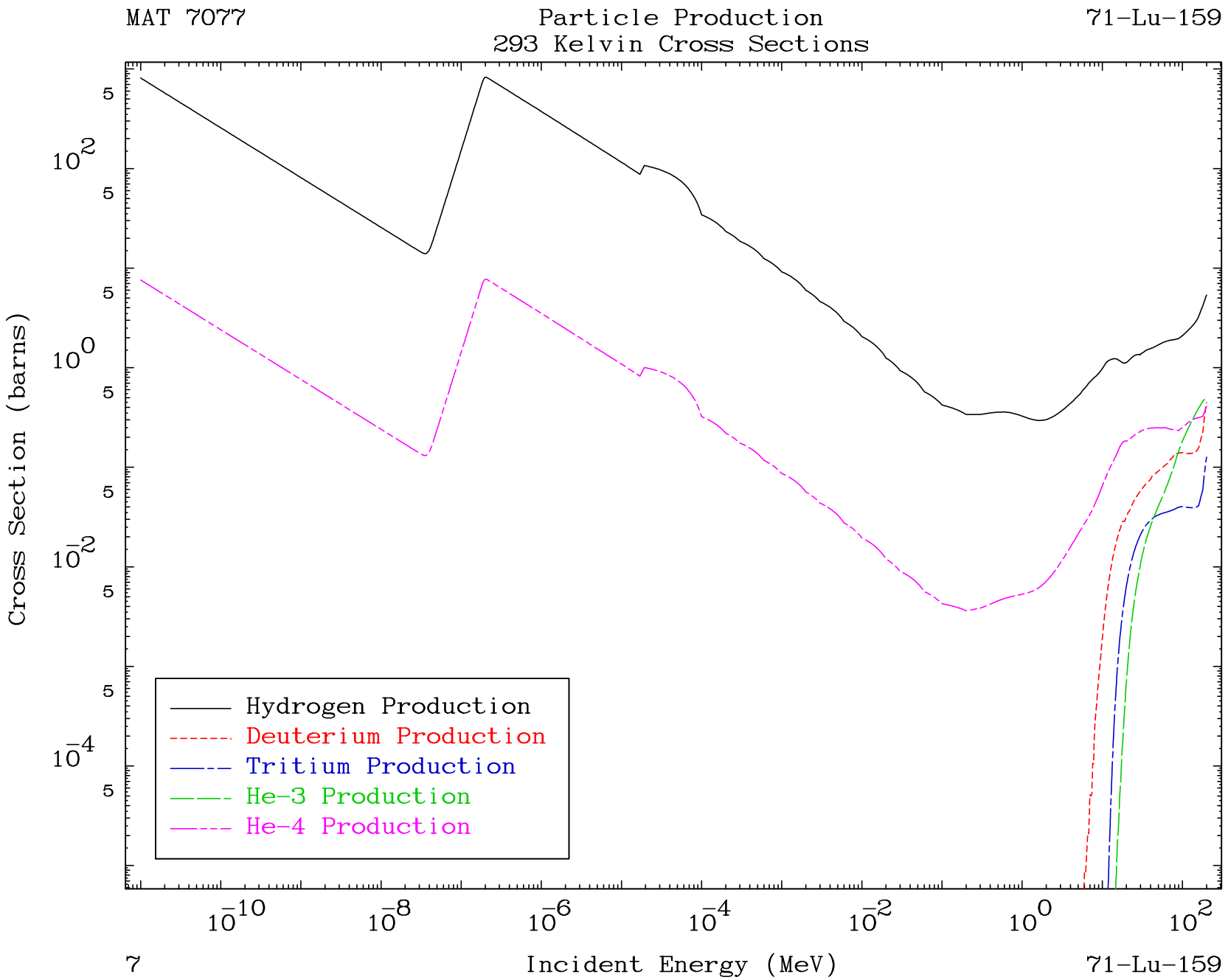

MAT 7077
Neutron Production
293 Kelvin Cross Sections
71-Lu-159
(n,2n)
(n,3n)
(n,n') α
(n,n') 3α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
Cross Section (barns)
Incident Energy (MeV)
2
71-Lu-159

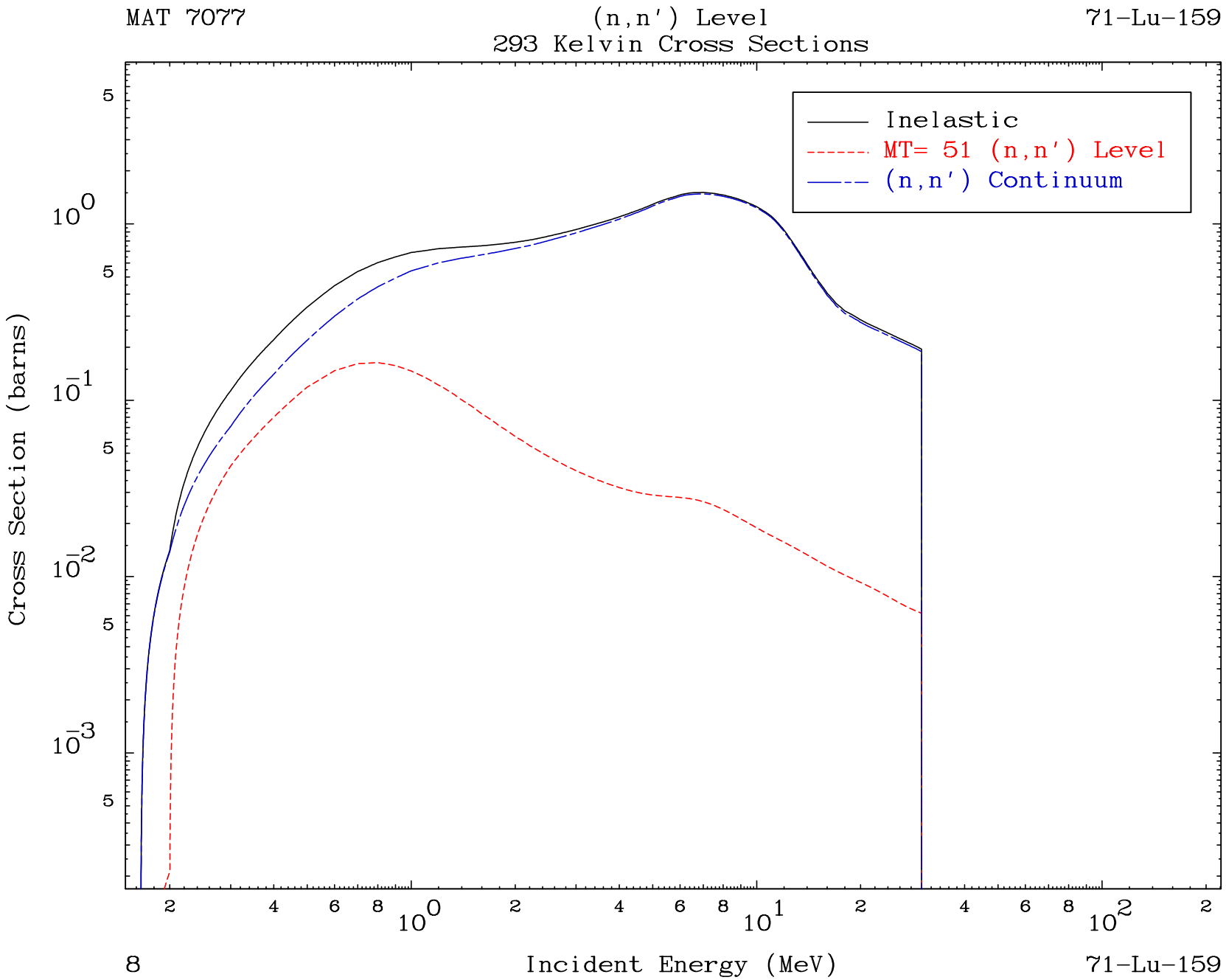

MAT 7077
Neutron Production
293 Kelvin Cross Sections
71-Lu-159
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,n') d,2α
(n,2n) p
Cross Section (barns)
Incident Energy (MeV)
3
71-Lu-159

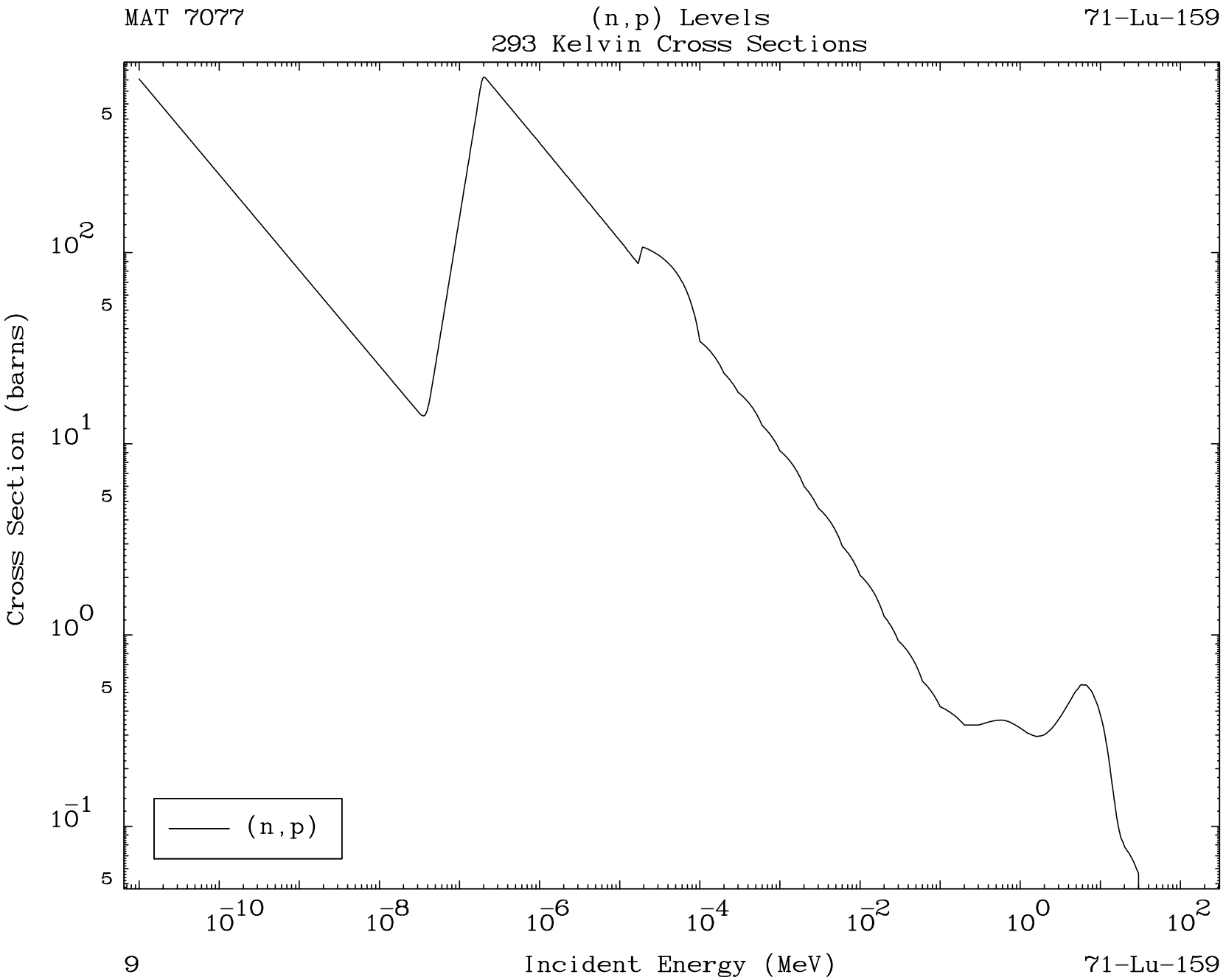

MAT 7077
Charged Particle
293 Kelvin Cross Sections
71-Lu-159
(n,n') α
(n,n') 3α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
Cross Section (barns)
Incident Energy (MeV)
4
71-Lu-159

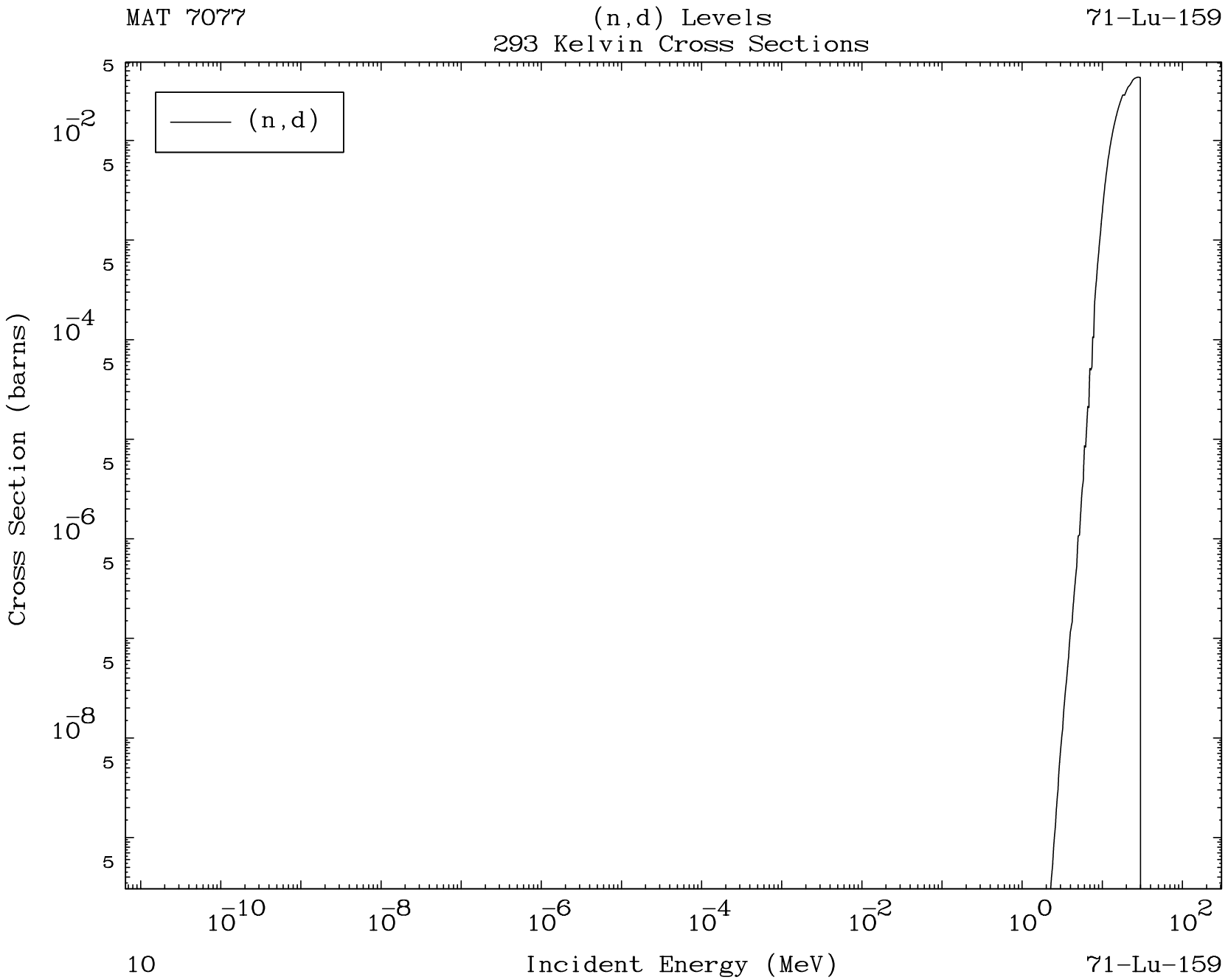

MAT 7077
Charged Particle
71-Lu-159
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
71-Lu-159
(n,n') He-3
(n,n') d,2α
(n,2n) p
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,He-3)

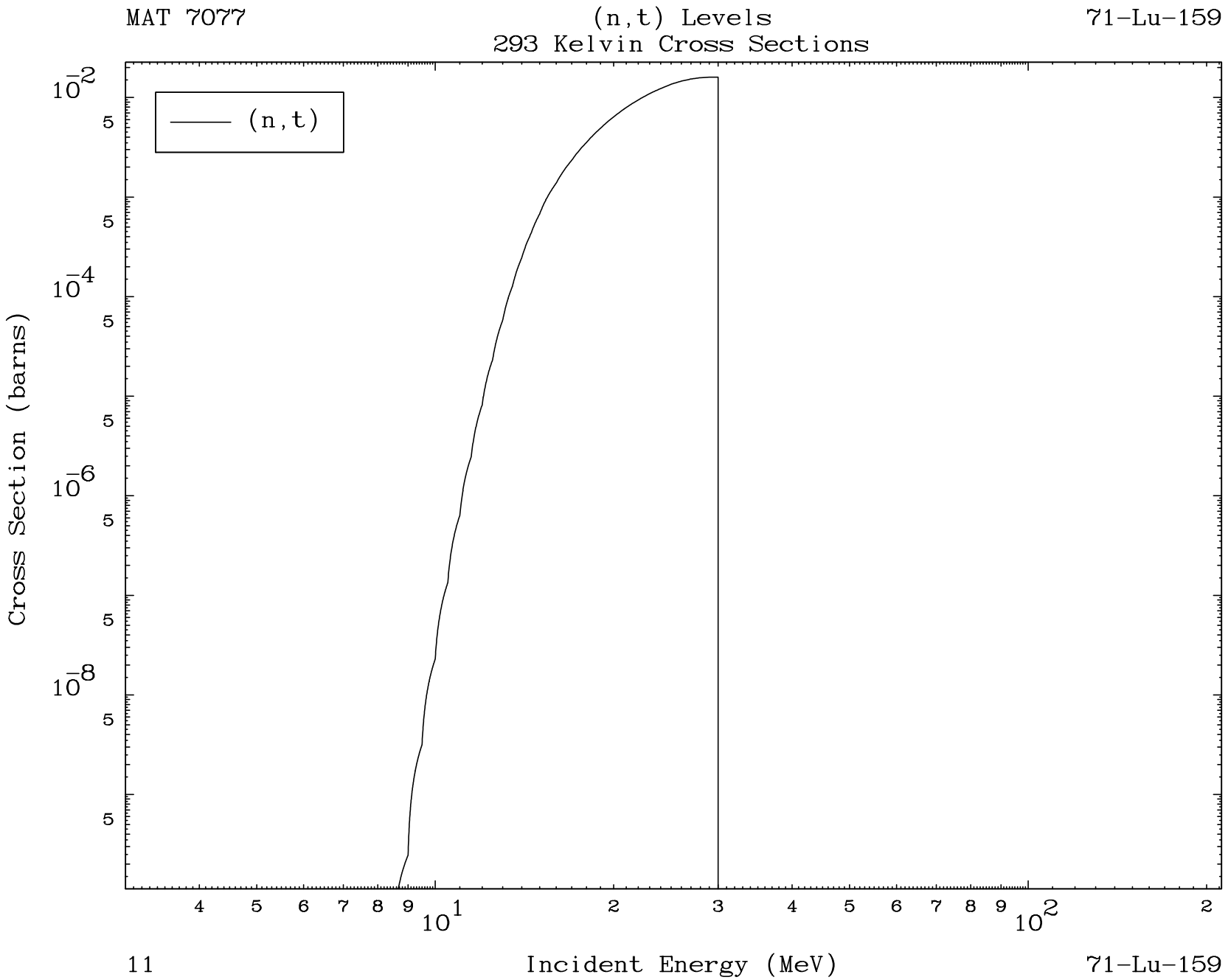

MAT 7077
Charged Particle
293 Kelvin Cross Sections
71-Lu-159
(n,2α)
(n,3α)
(n,2p)
(n,p) α
(n,t) 2α
(n,d) 2α
(n,p) d
(n,p) t
Cross Section (barns)
Incident Energy (MeV)
6
71-Lu-159

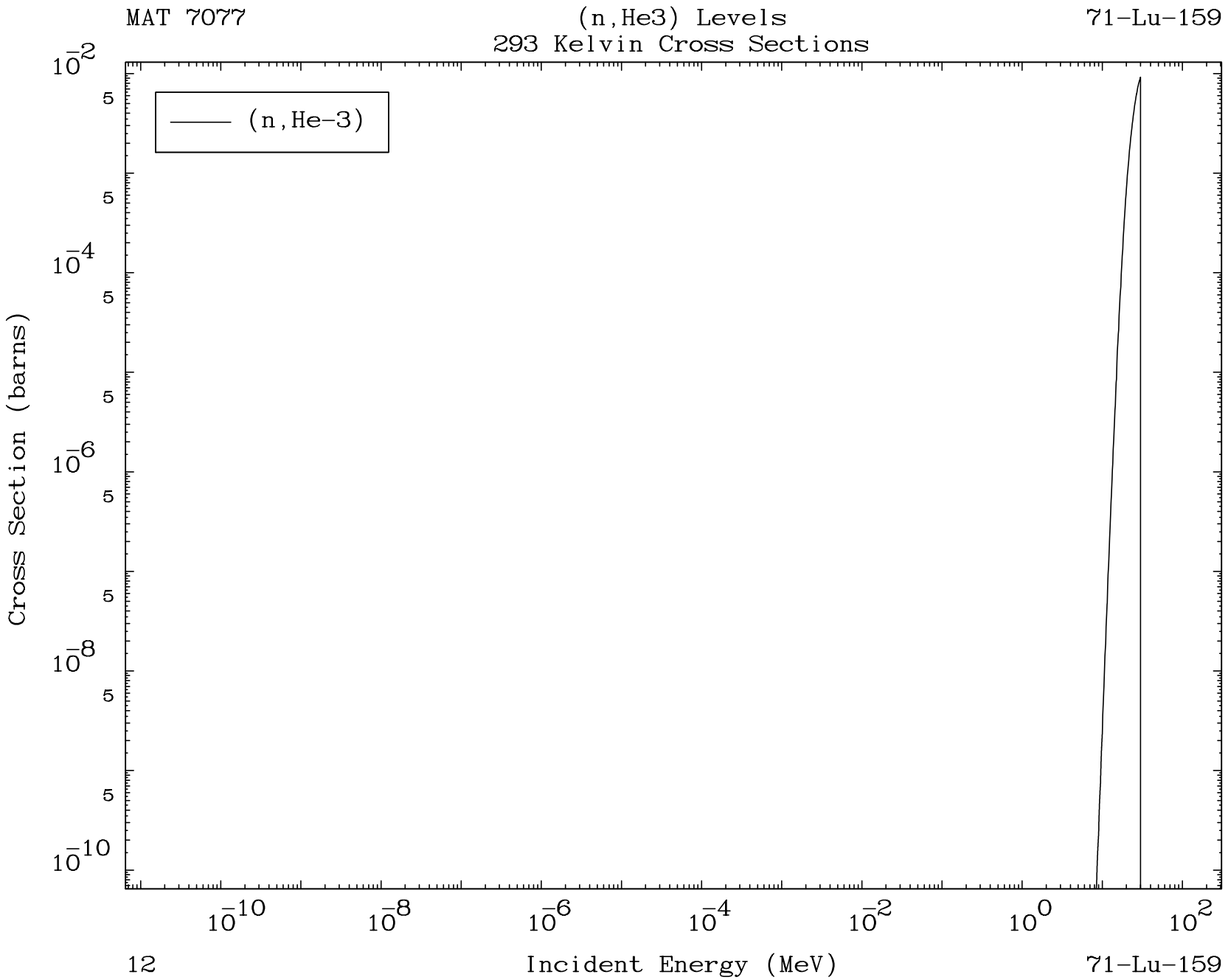

MAT 7077
Particle Production
293 Kelvin Cross Sections
71-Lu-159
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
7
71-Lu-159

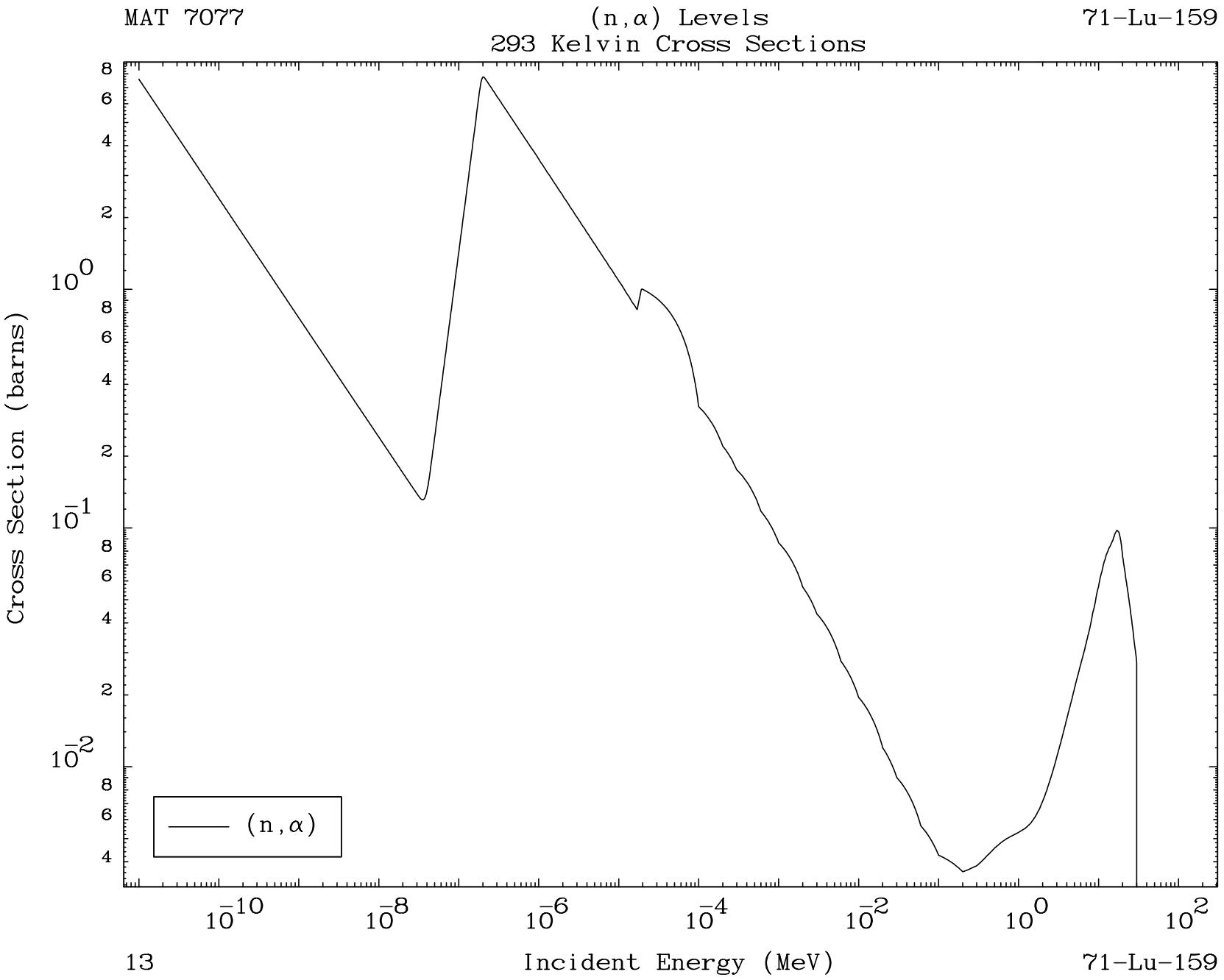

MAT 7077
(n,n') Level
71-Lu-159
293 Kelvin Cross Sections
Inelastic
MT= 51 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
8
71-Lu-159

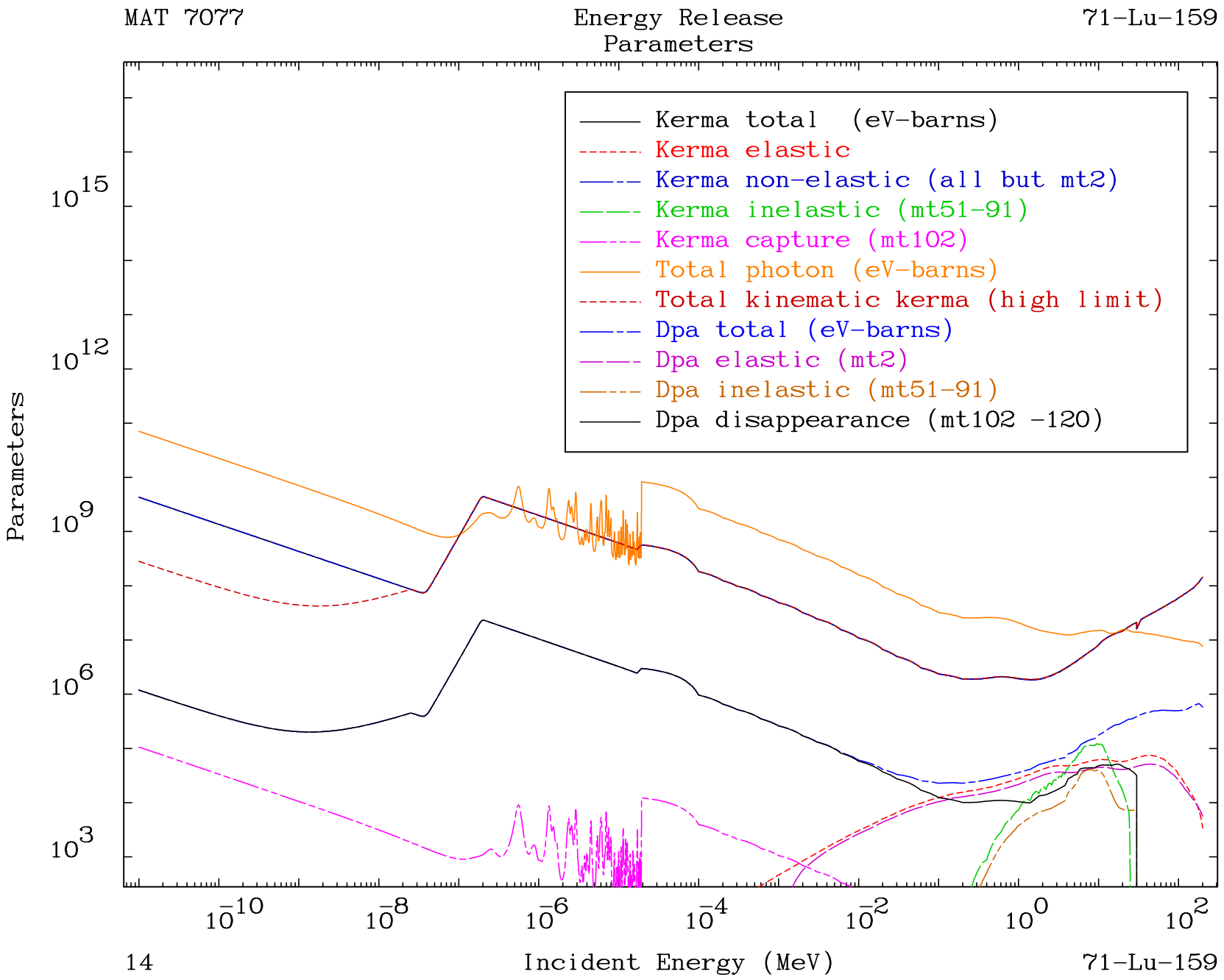

MAT 7077
(n,p) Levels
71-Lu-159
293 Kelvin Cross Sections
Cross Section (barns)
10^2
10^1
10^0
10^-1
5
(n,p)
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
9
71-Lu-159

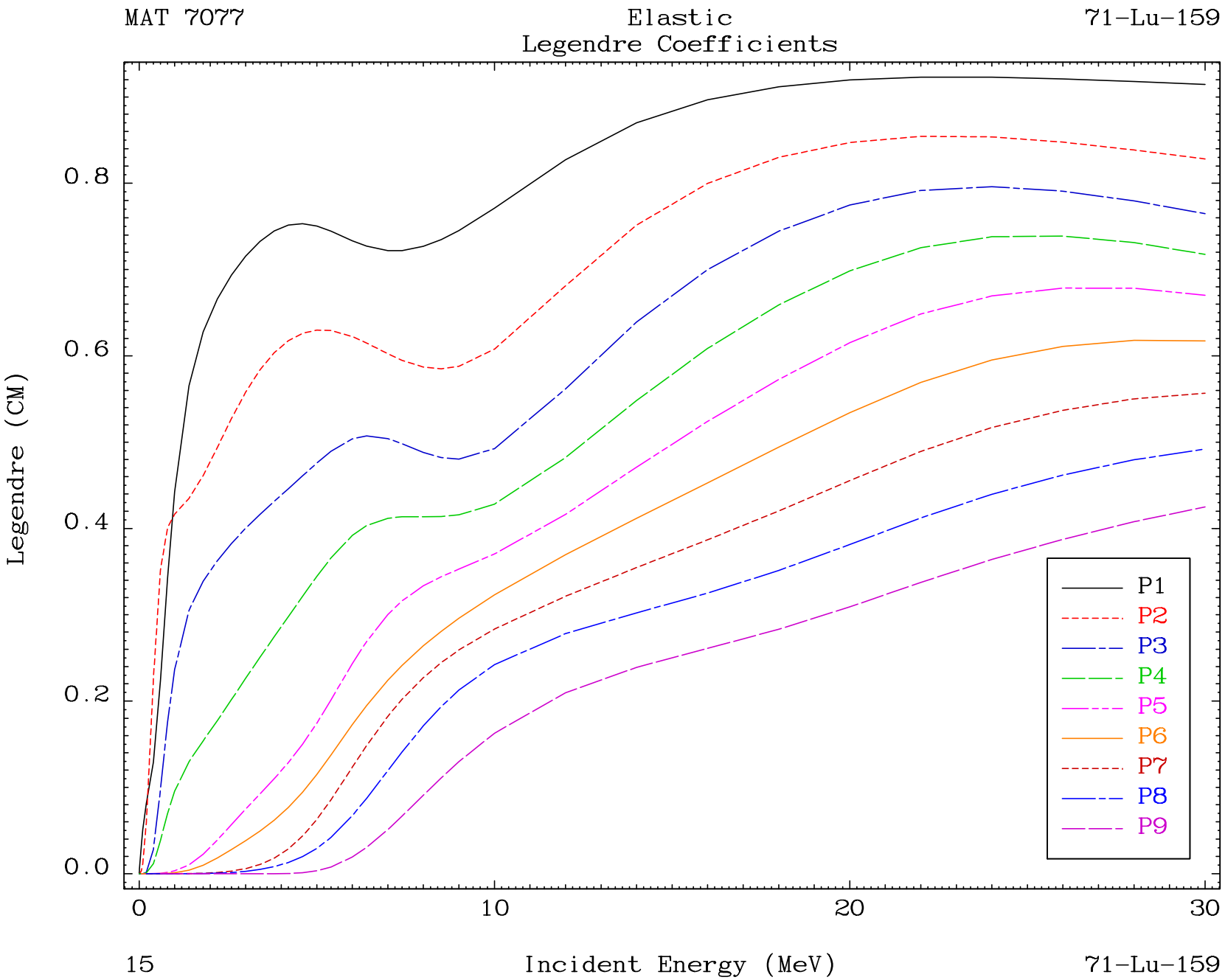

MAT 7077
(n,d) Levels
71-Lu-159
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
71-Lu-159
10

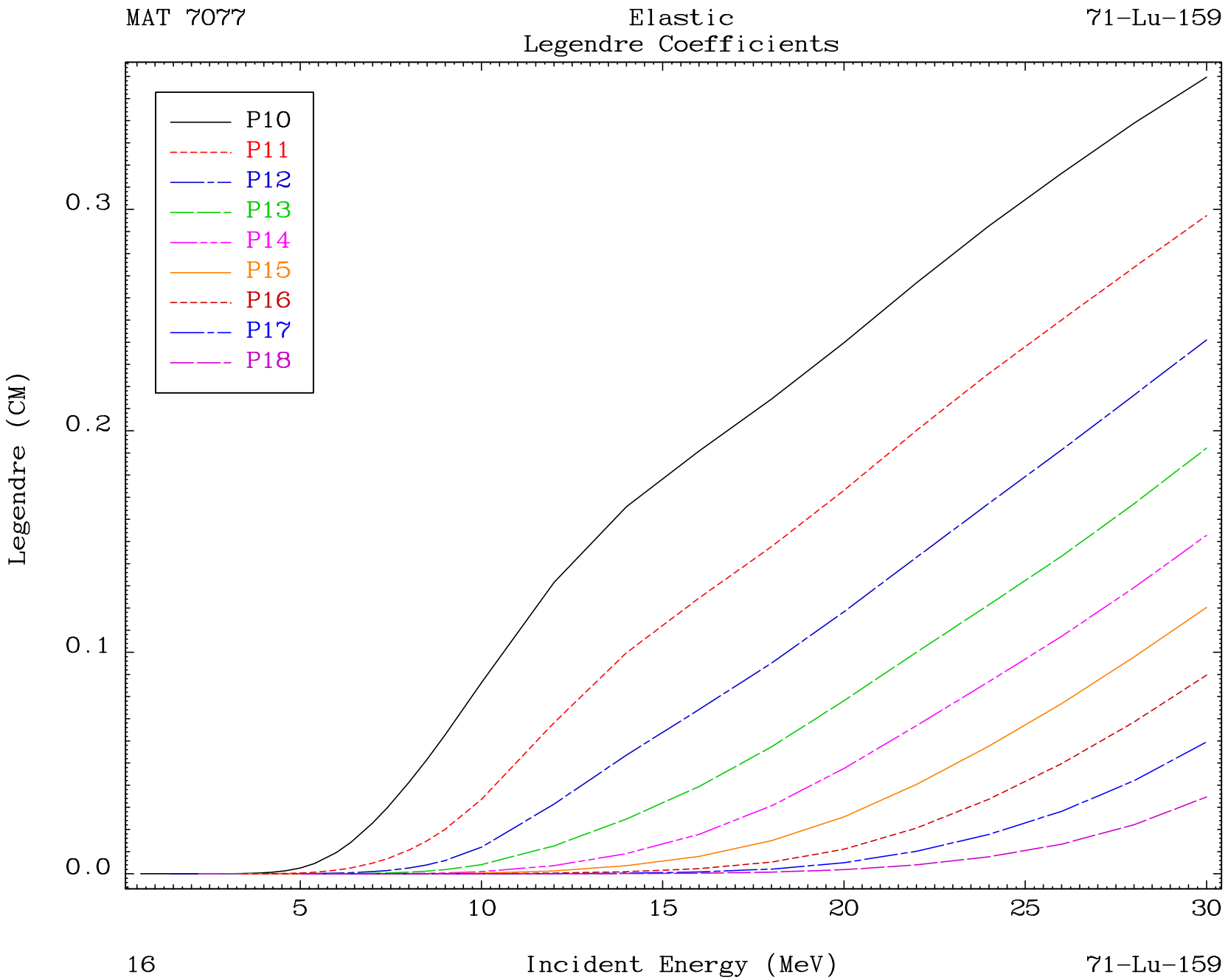

MAT 7077
(n,t) Levels
71-Lu-159
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
11
71-Lu-159

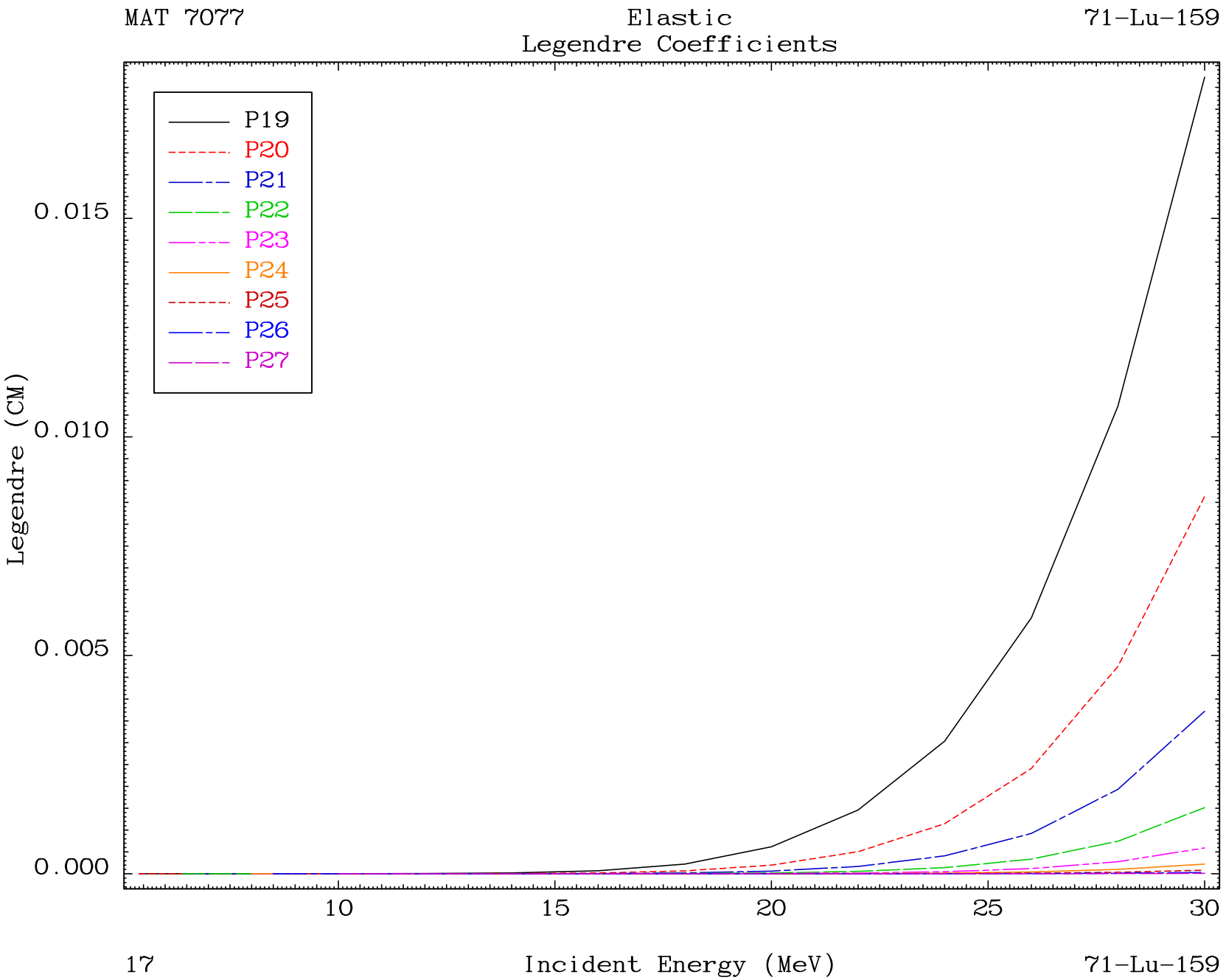

MAT 7077
(n,He3) Levels
71-Lu-159
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
Incident Energy (MeV)
12
71-Lu-159

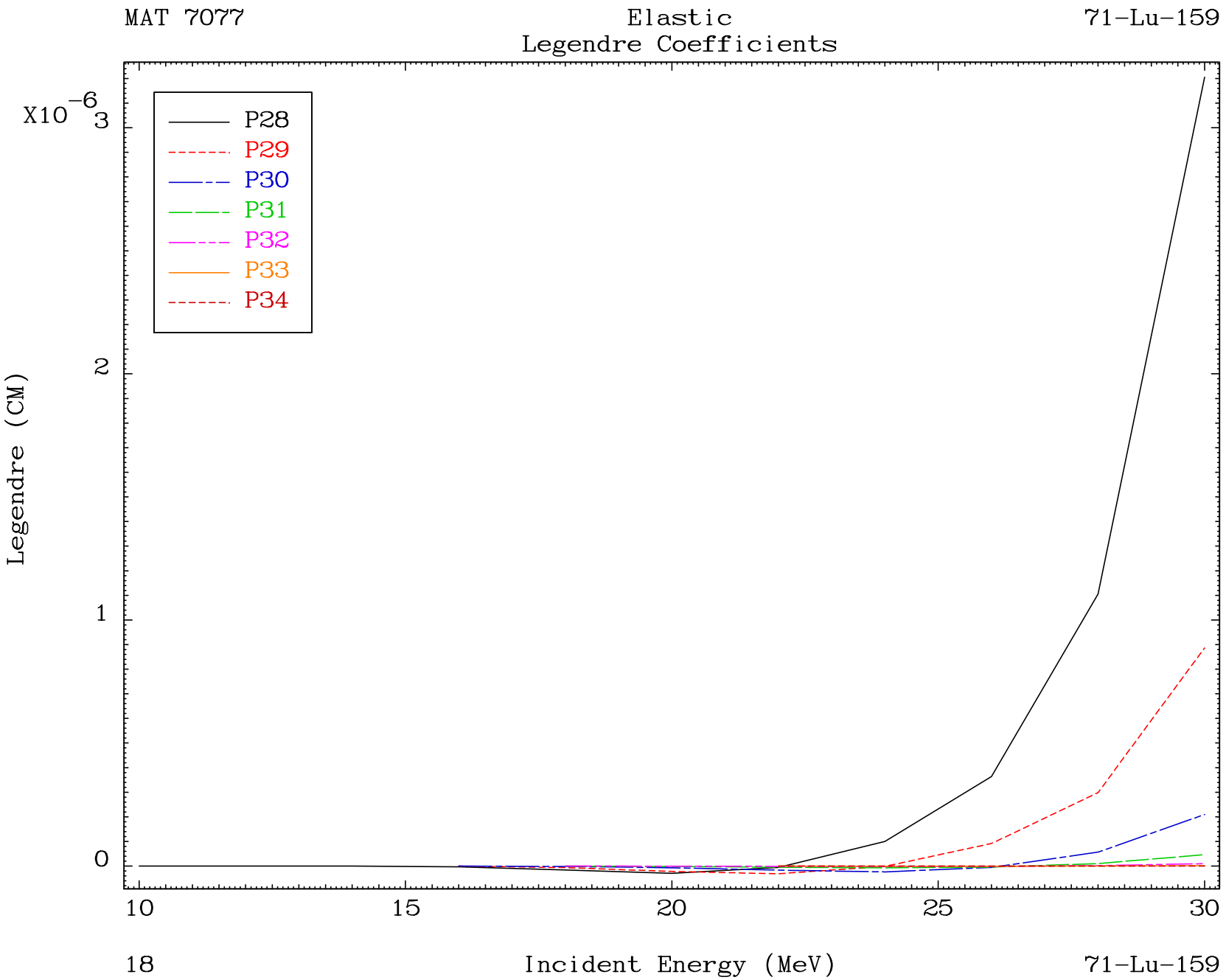

MAT 7077
(n,α) Levels
71-Lu-159
293 Kelvin Cross Sections
Cross Section (barns)
(n,α)
13
Incident Energy (MeV)
71-Lu-159

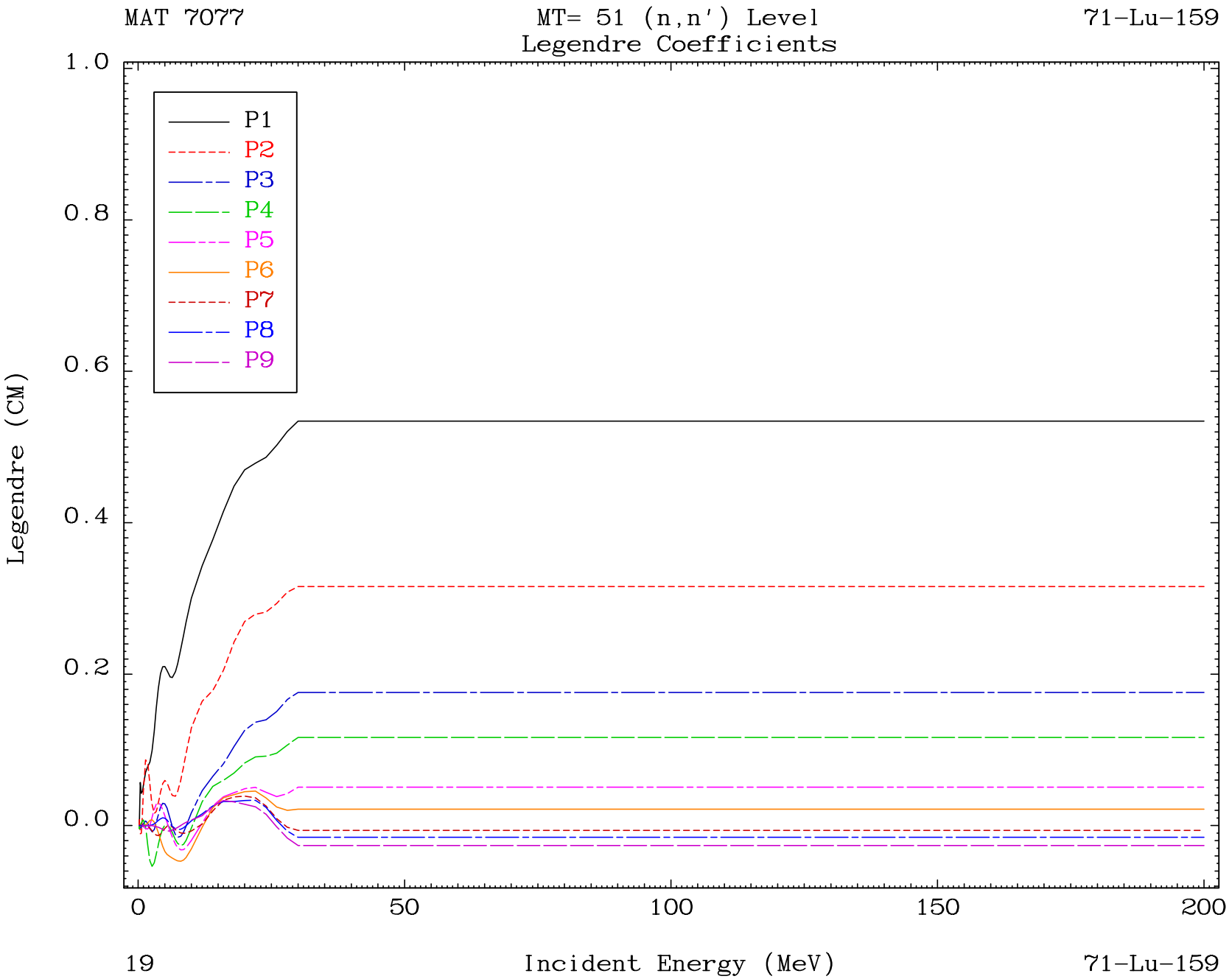

MAT 7077
Energy Release
Parameters
71-Lu-159
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma capture (mt102)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
Parameters
$10^{15}$
$10^{12}$
$10^{9}$
$10^{6}$
$10^{3}$
$10^{-10}$
$10^{-8}$
$10^{-6}$
$10^{-4}$
$10^{-2}$
$10^{0}$
$10^{2}$
14
Incident Energy (MeV)
71-Lu-159

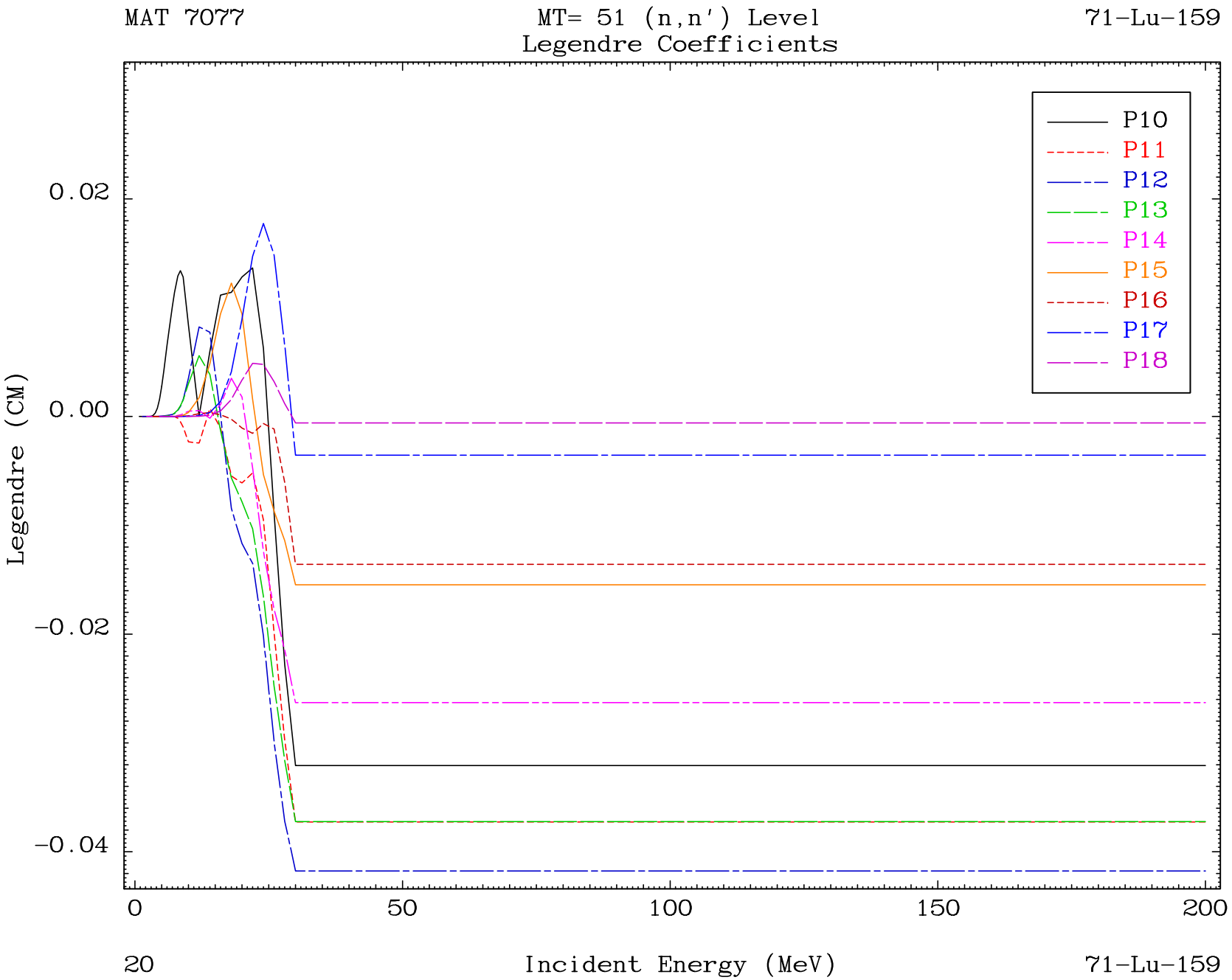

MAT 7077
Elastic
Legendre Coefficients
71-Lu-159
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
15
Incident Energy (MeV)
71-Lu-159
P1
P2
P3
P4
P5
P6
P7
P8
P9

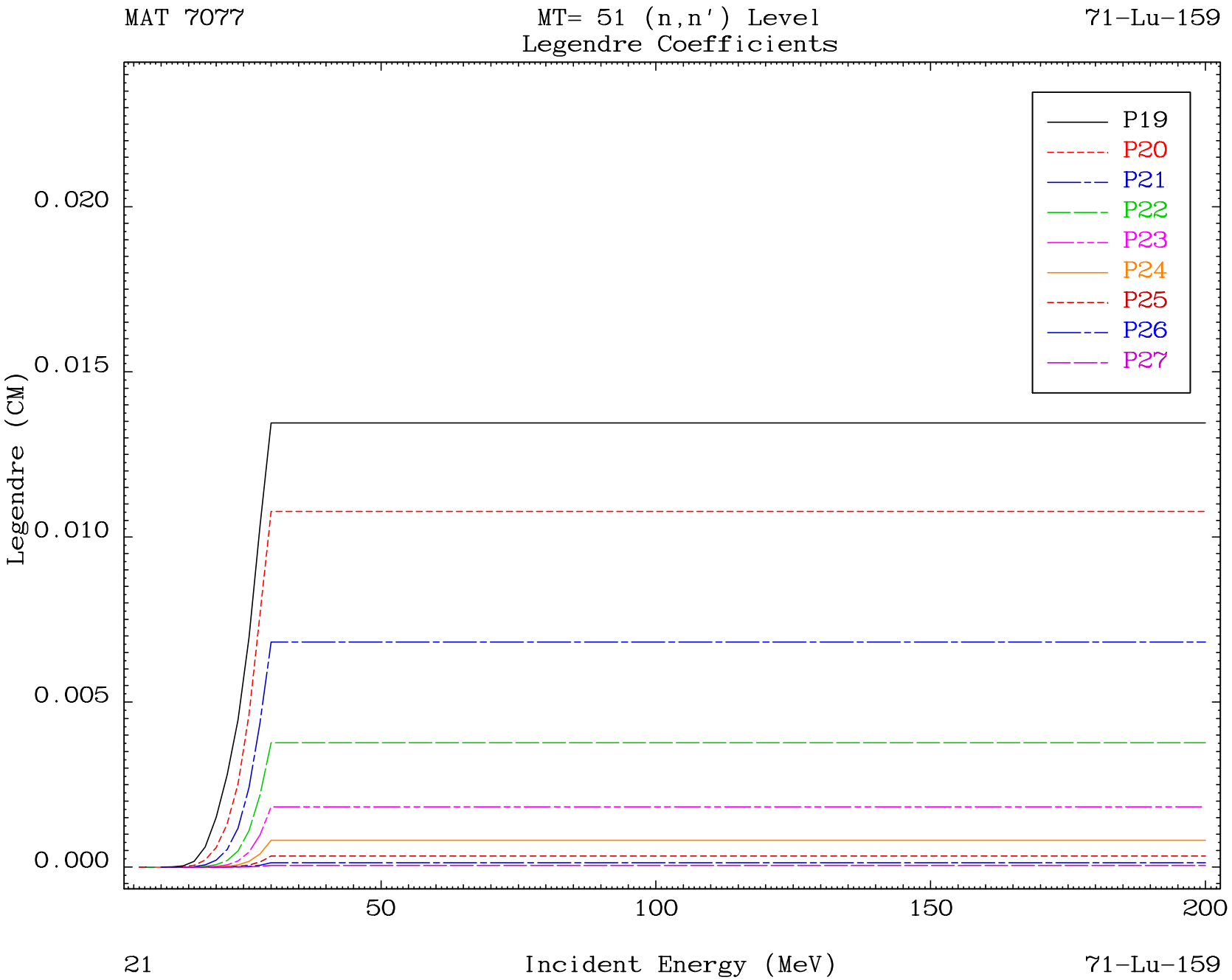

MAT 7077
Elastic
Legendre Coefficients
71-Lu-159
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.0
0.1
0.2
0.3
5
10
15
20
25
30
16
Incident Energy (MeV)
71-Lu-159

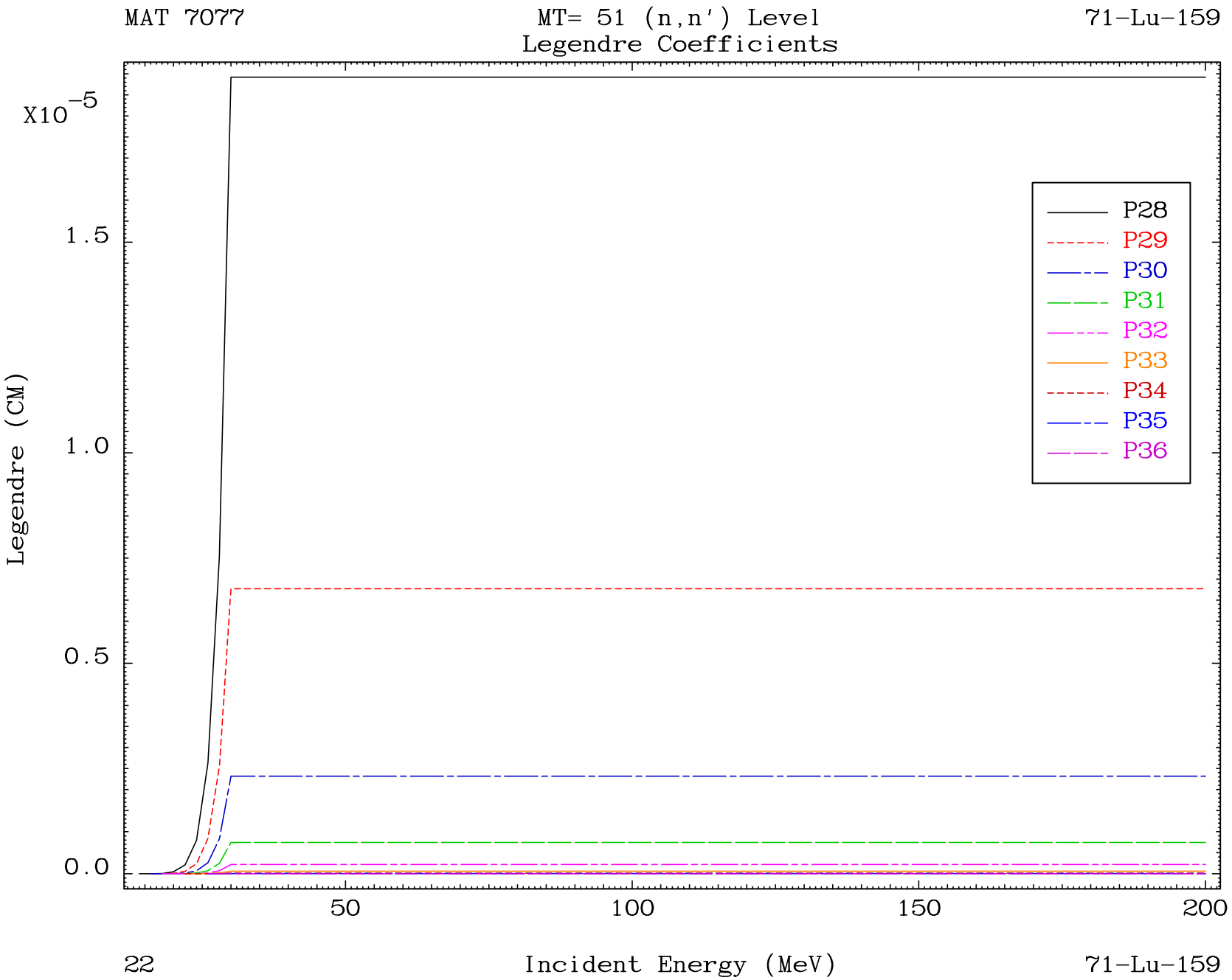

MAT 7077
Elastic
Legendre Coefficients
71-Lu-159
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
10
15
20
25
30
17
Incident Energy (MeV)
71-Lu-159

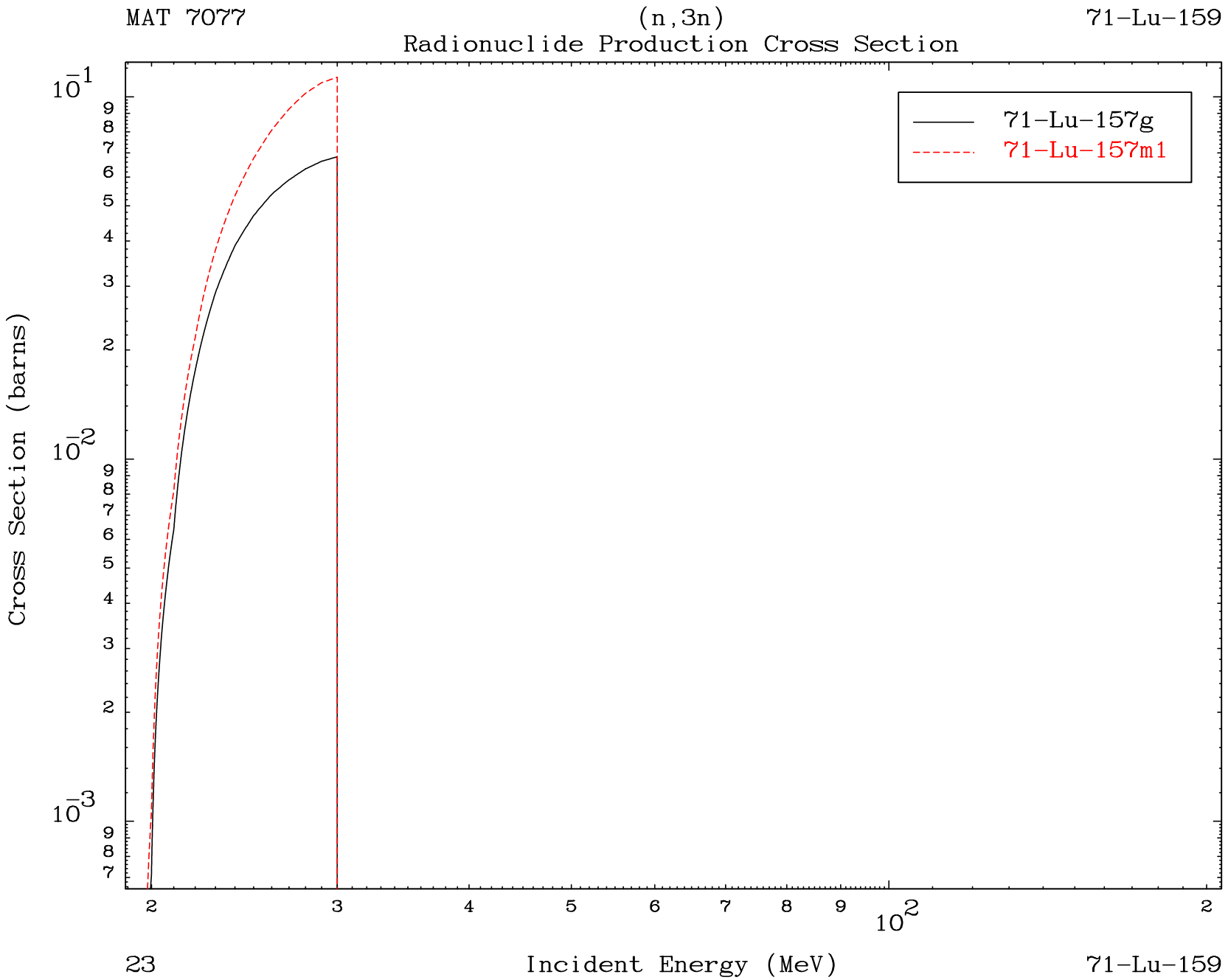

MAT 7077
Elastic
Legendre Coefficients
71-Lu-159
X10 -6
3
2
1
0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
10
15
20
25
30
18
Incident Energy (MeV)
71-Lu-159

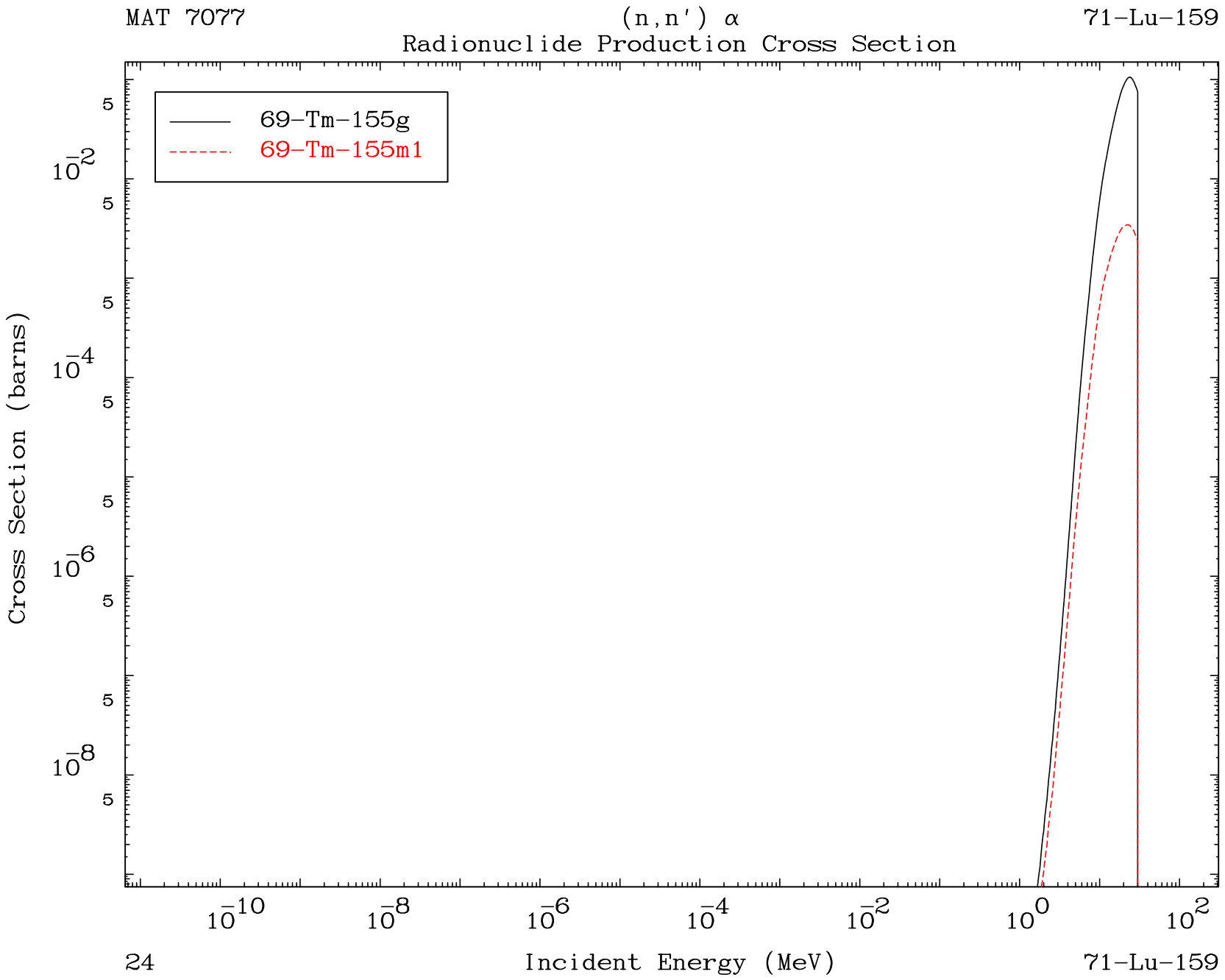

MAT 7077
MT= 51 (n,n') Level
Legendre Coefficients
71-Lu-159
P1
P2
P3
P4
P5
P6
P7
P8
P9
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
19
Incident Energy (MeV)
71-Lu-159

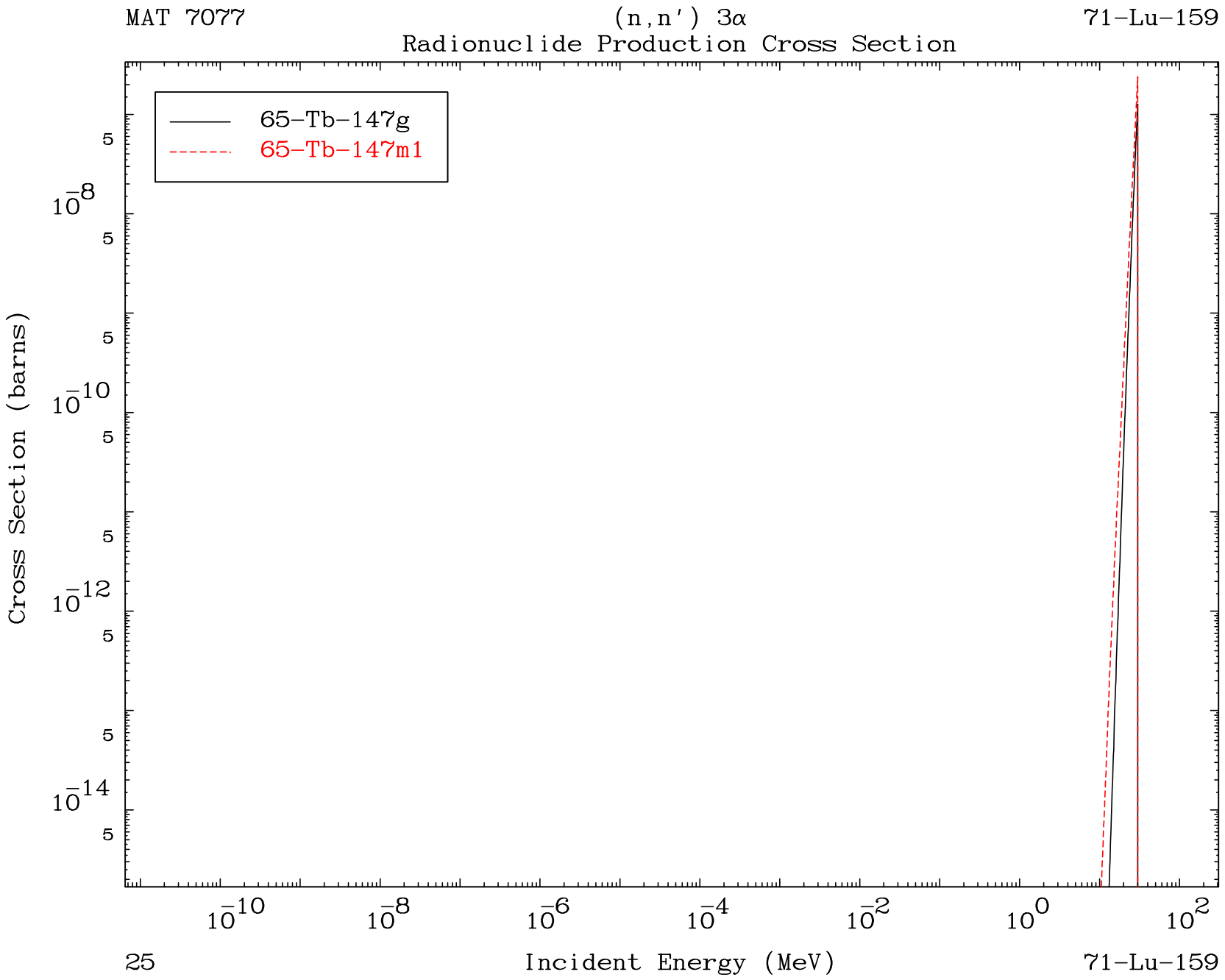

MAT 7077
MT= 51 (n,n') Level
Legendre Coefficients
71-Lu-159
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
20
Incident Energy (MeV)
71-Lu-159

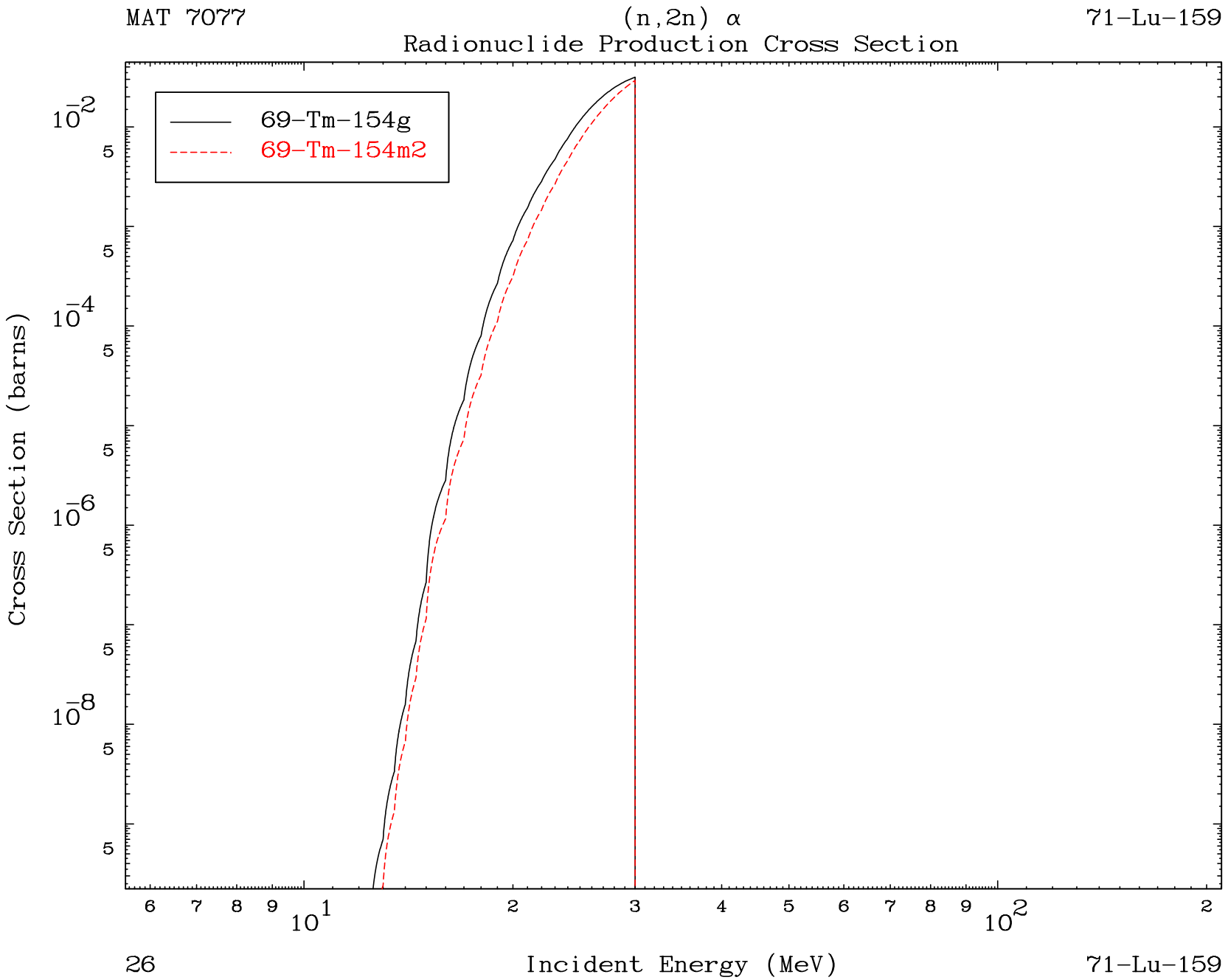

MAT 7077
MT= 51 (n,n') Level
Legendre Coefficients
71-Lu-159
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
21
Incident Energy (MeV)
71-Lu-159

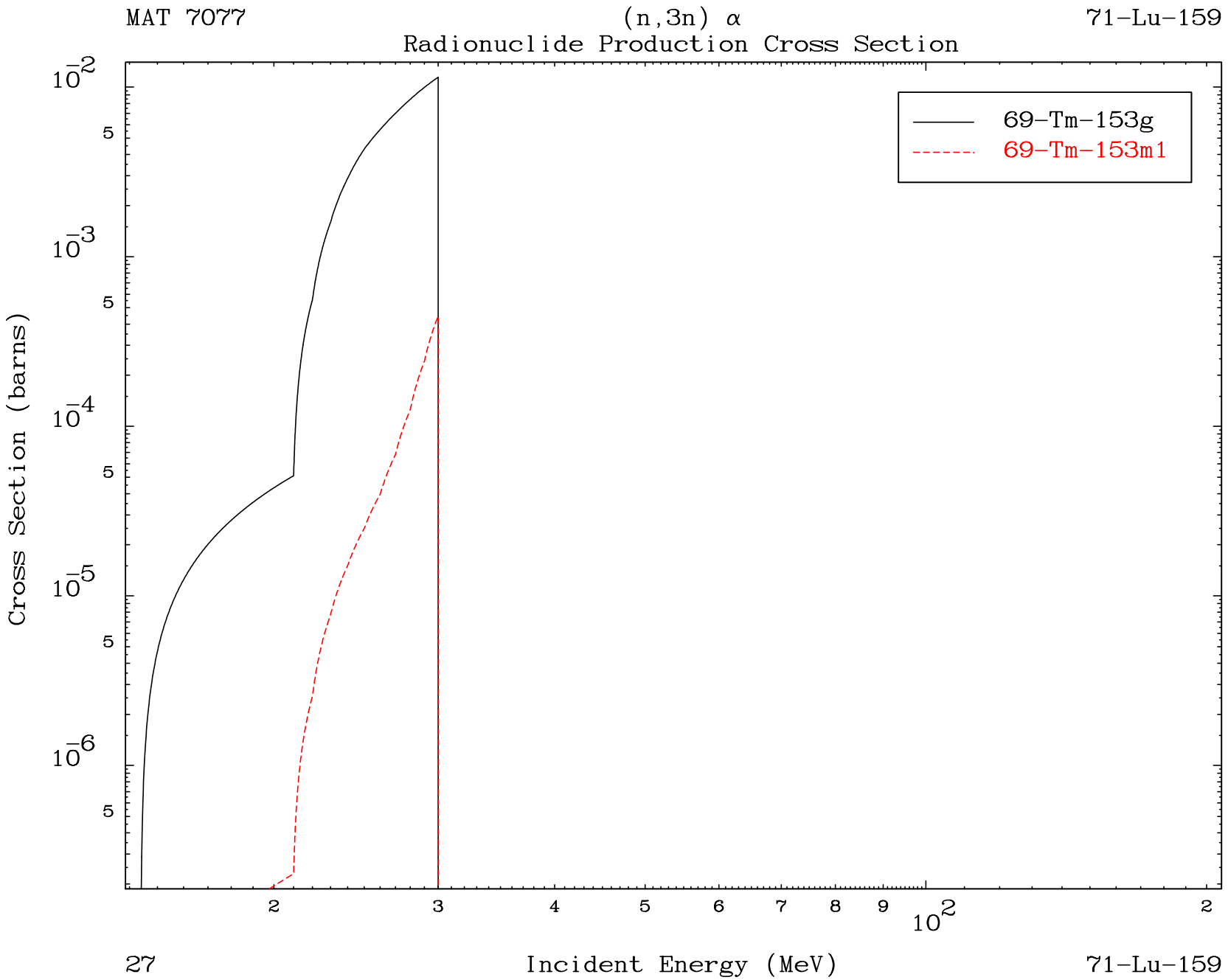

MAT 7077
MT= 51 (n,n') Level
Legendre Coefficients
71-Lu-159
X10-5
1.5
1.0
0.5
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
22
Incident Energy (MeV)
71-Lu-159

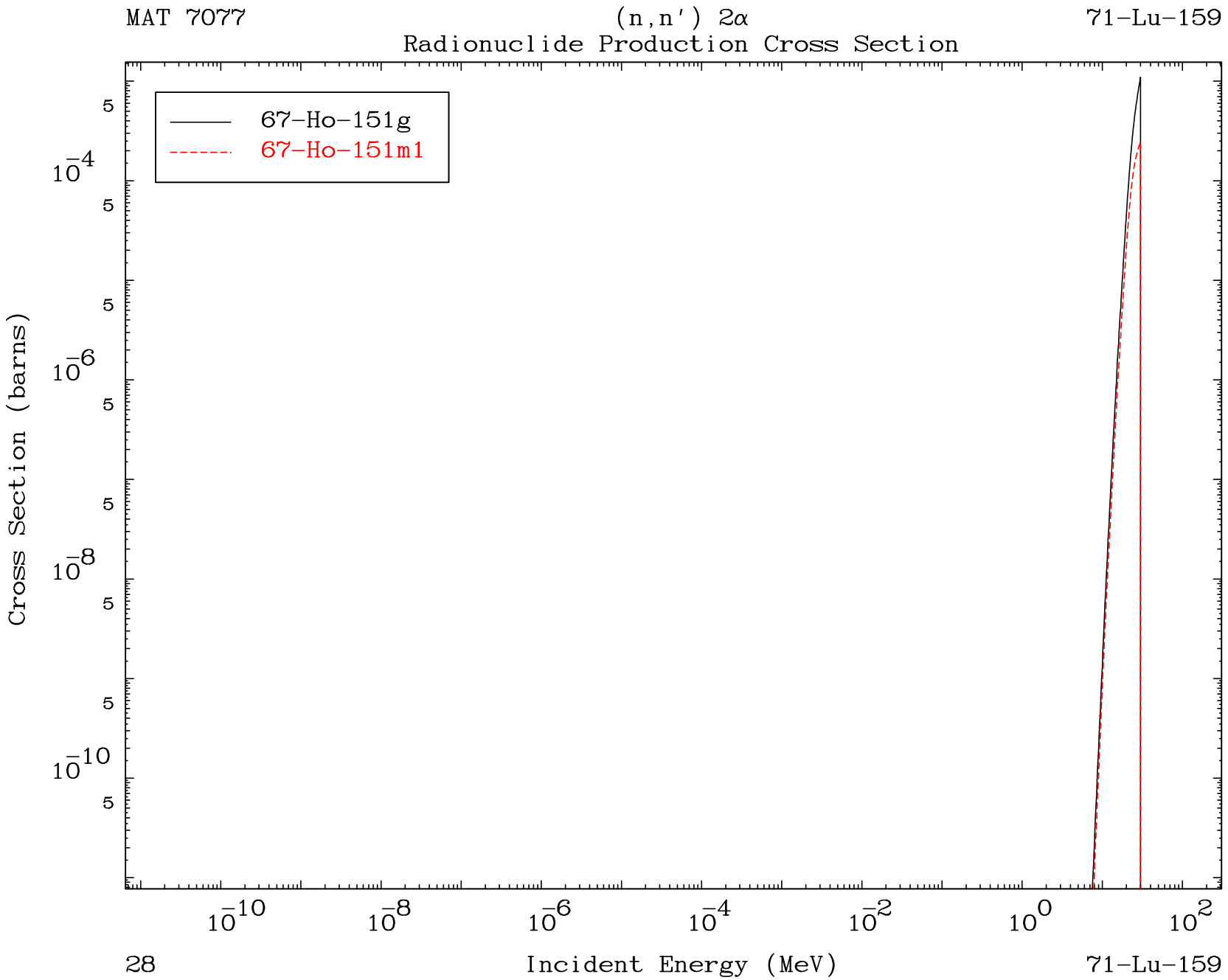

MAT 7077
(n,3n)
71-Lu-159
Radionuclide Production Cross Section
71-Lu-157g
71-Lu-157m1
Cross Section (barns)
Incident Energy (MeV)
23
71-Lu-159

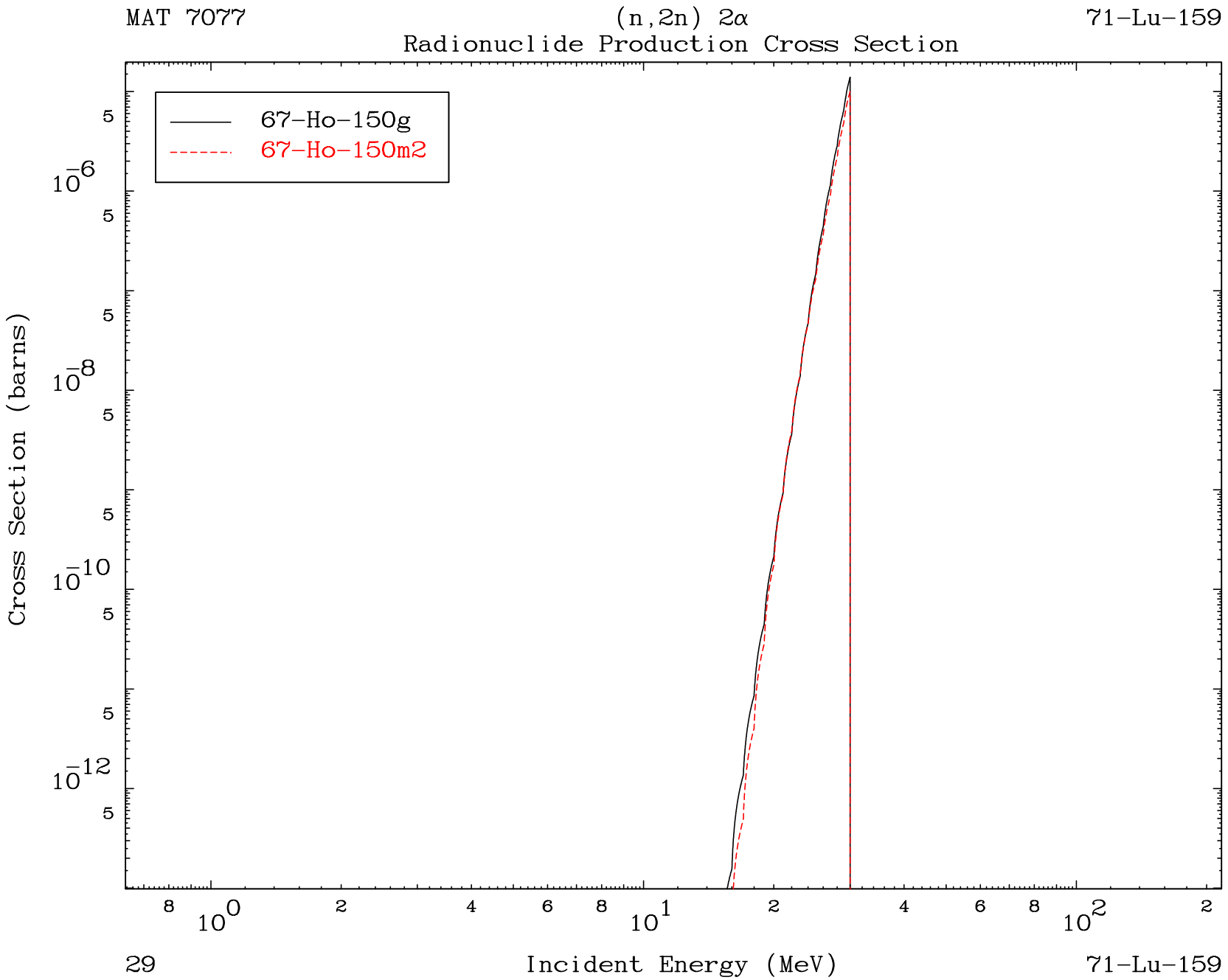

MAT 7077
(n,n') α
71-Lu-159
Radionuclide Production Cross Section
69-Tm-155g
69-Tm-155m1
Cross Section (barns)
Incident Energy (MeV)
24
71-Lu-159

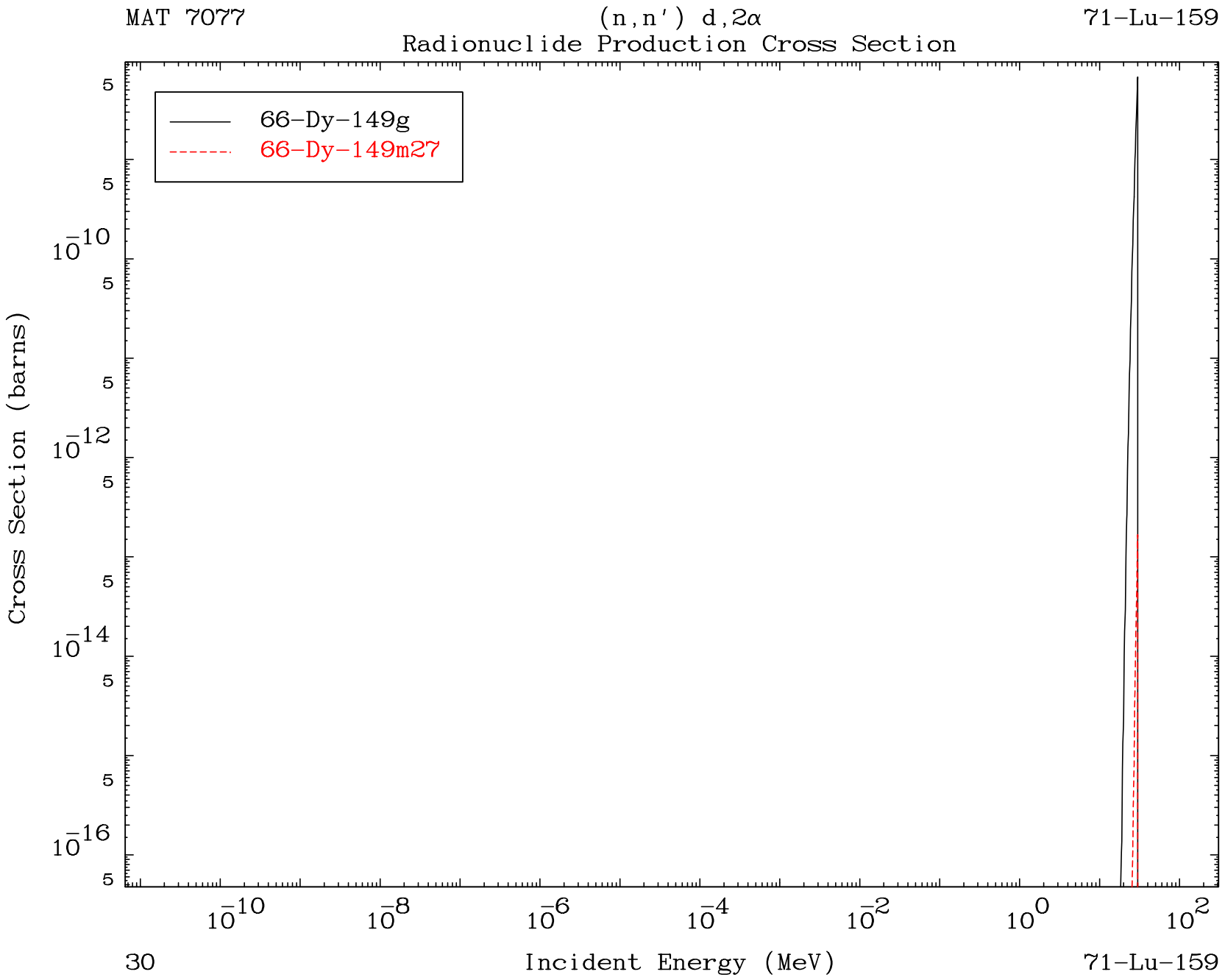

MAT 7077
(n,n') 3α
71-Lu-159
Radionuclide Production Cross Section
65-Tb-147g
65-Tb-147m1
Cross Section (barns)
Incident Energy (MeV)
25
71-Lu-159

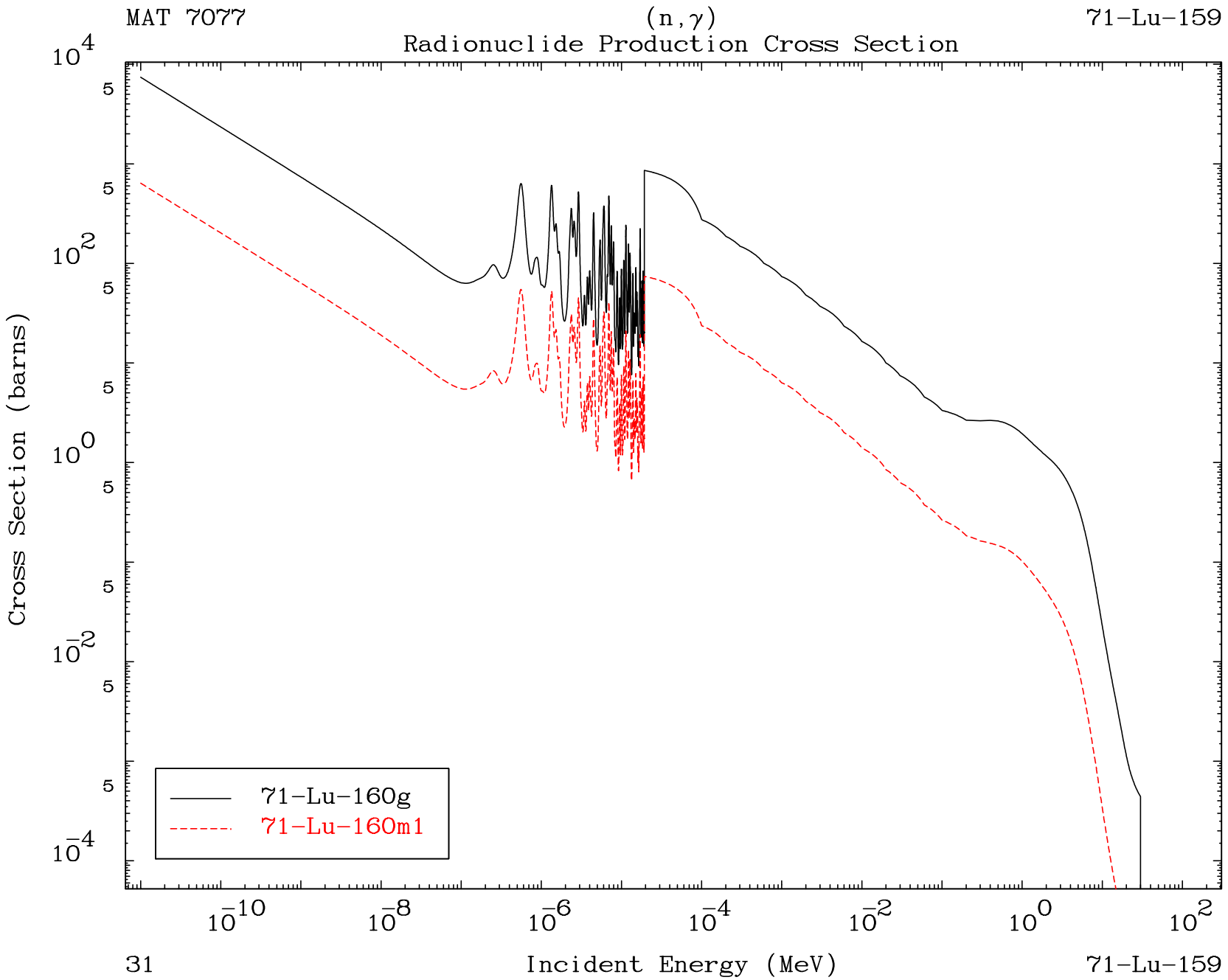

MAT 7077
(n,2n) α
71-Lu-159
Radionuclide Production Cross Section
69-Tm-154g
69-Tm-154m2
Cross Section (barns)
Incident Energy (MeV)
26
71-Lu-159

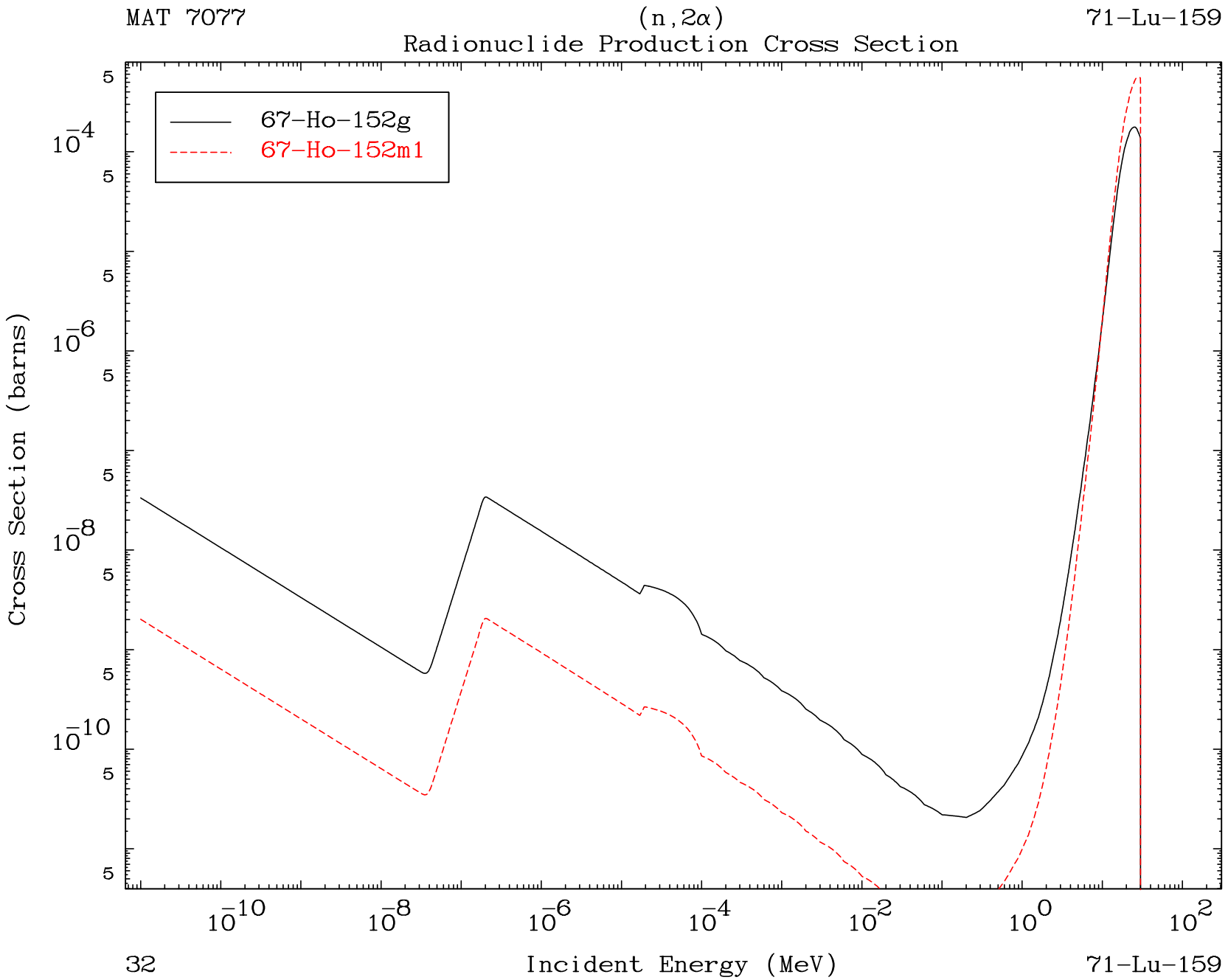

MAT 7077
(n,3n) α
71-Lu-159
Radionuclide Production Cross Section
69-Tm-153g
69-Tm-153m1
Cross Section (barns)
10-2
10-3
10-4
10-5
10-6
5
2
3
4
5
6
7
8
9
10 2
2
27
Incident Energy (MeV)
71-Lu-159

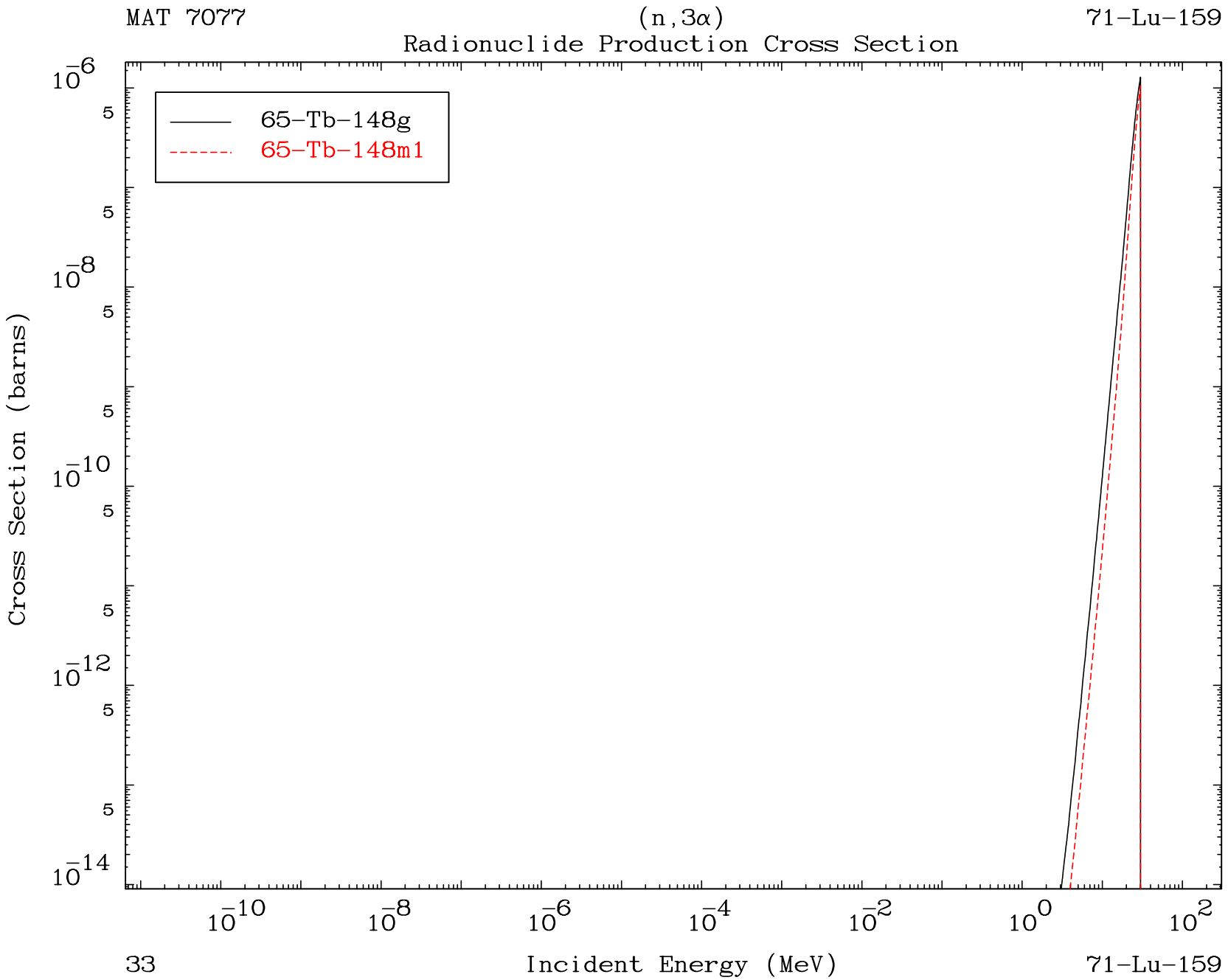

MAT 7077
(n,n') 2α
71-Lu-159
Radionuclide Production Cross Section
67-Ho-151g
67-Ho-151m1
Cross Section (barns)
Incident Energy (MeV)
28
71-Lu-159

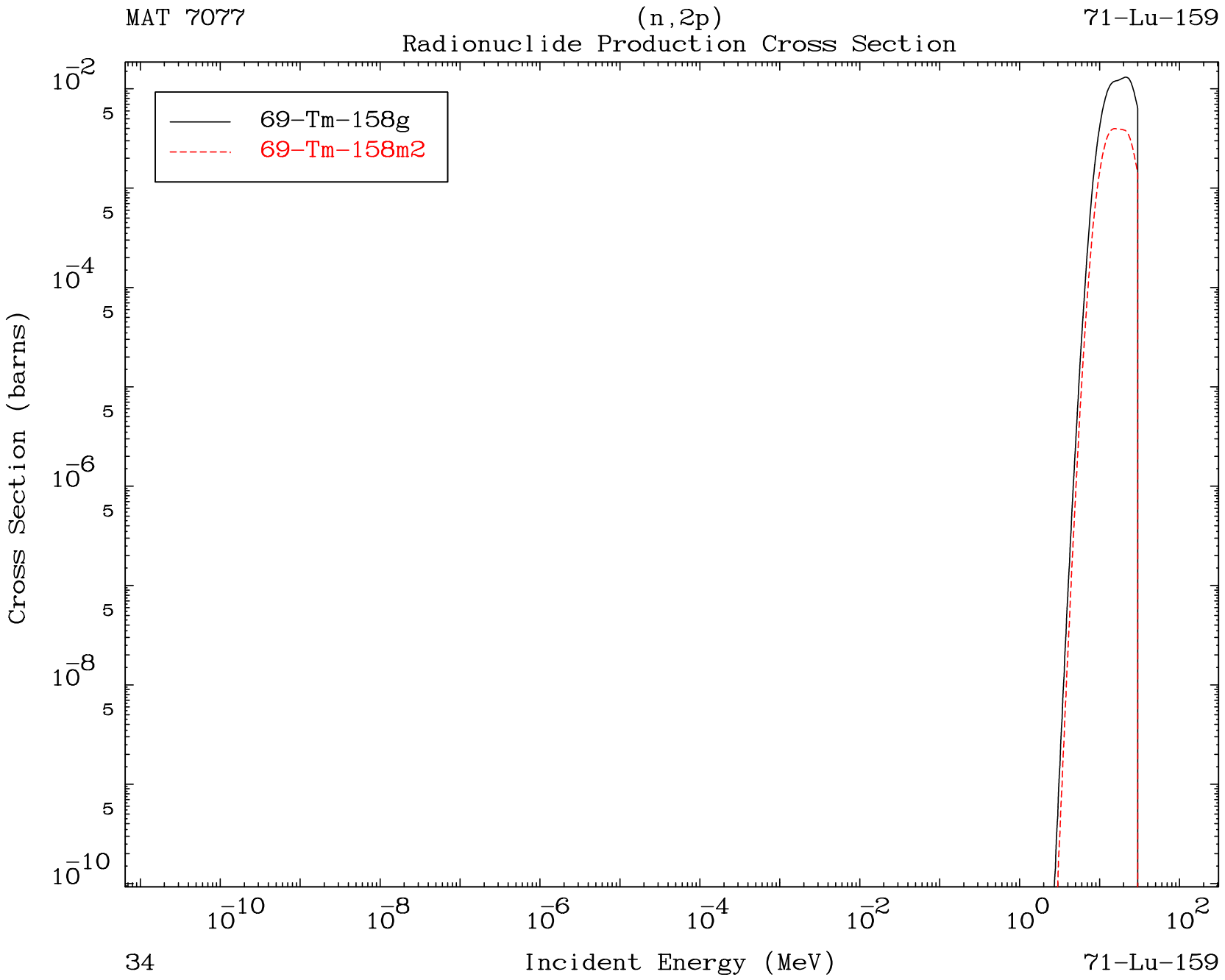

MAT 7077
(n,2n) 2α
71-Lu-159
Radionuclide Production Cross Section
67-Ho-150g
67-Ho-150m2
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
10^0
10^1
10^2
Incident Energy (MeV)
29
71-Lu-159

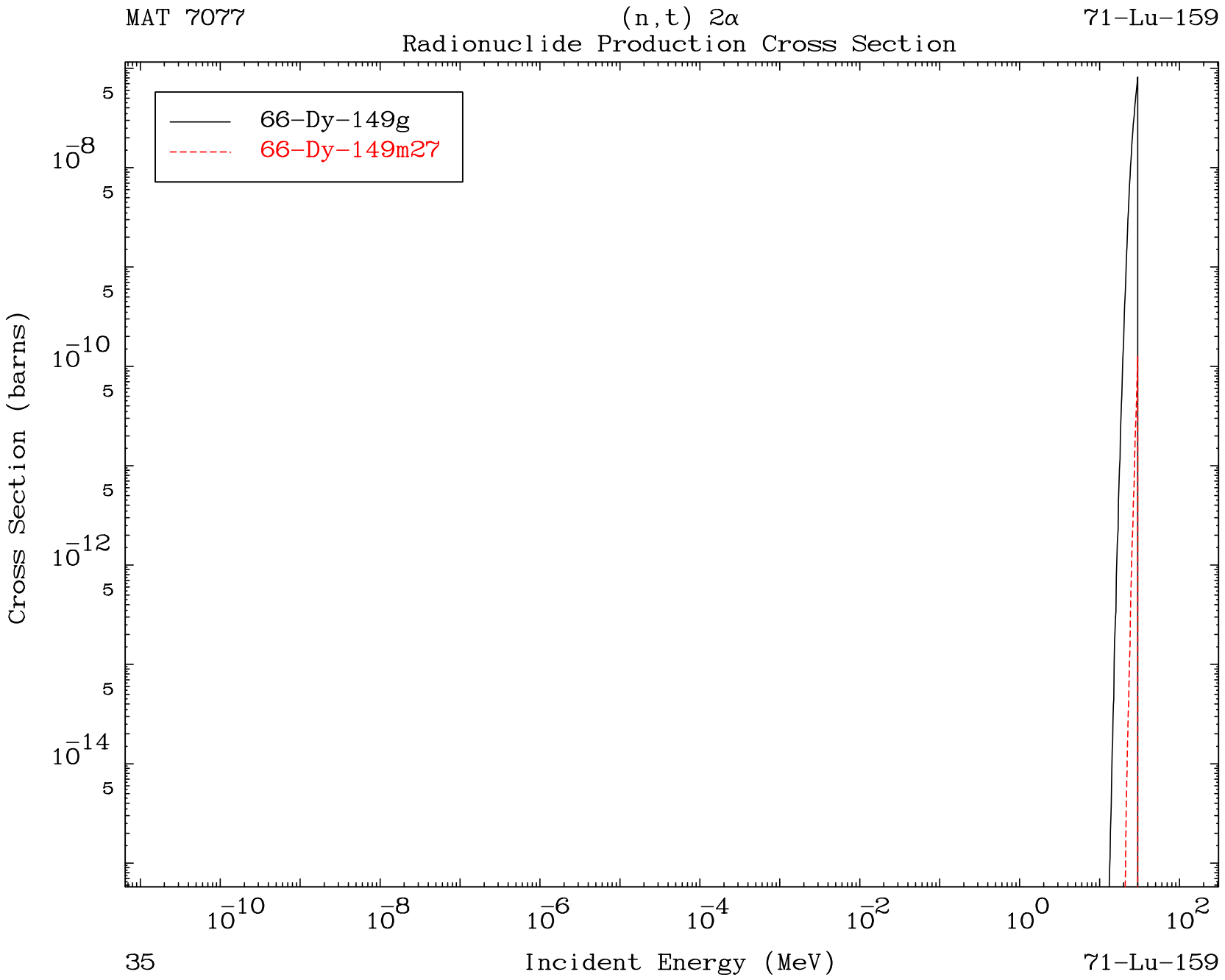

MAT 7077
(n,n') d,2α
71-Lu-159
Radionuclide Production Cross Section
66-Dy-149g
66-Dy-149m27
Cross Section (barns)
Incident Energy (MeV)
30
71-Lu-159


MAT 7077
(n,γ)
71-Lu-159
Radionuclide Production Cross Section
Cross Section (barns)
Incident Energy (MeV)
71-Lu-160g
71-Lu-160m1
31
71-Lu-159


MAT 7077
(n,2α)
71-Lu-159
Radionuclide Production Cross Section
67-Ho-152g
67-Ho-152m1
Cross Section (barns)
Incident Energy (MeV)
32
71-Lu-159


MAT 7077
(n,3α)
71-Lu-159
Radionuclide Production Cross Section
65-Tb-148g
65-Tb-148m1
Cross Section (barns)
Incident Energy (MeV)
33
71-Lu-159


MAT 7077
(n,2p)
71-Lu-159
Radionuclide Production Cross Section
69-Tm-158g
69-Tm-158m2
Cross Section (barns)
Incident Energy (MeV)
34
71-Lu-159


MAT 7077
(n,t) 2α
71-Lu-159
Radionuclide Production Cross Section
66-Dy-149g
66-Dy-149m27
Cross Section (barns)
Incident Energy (MeV)
35
71-Lu-159