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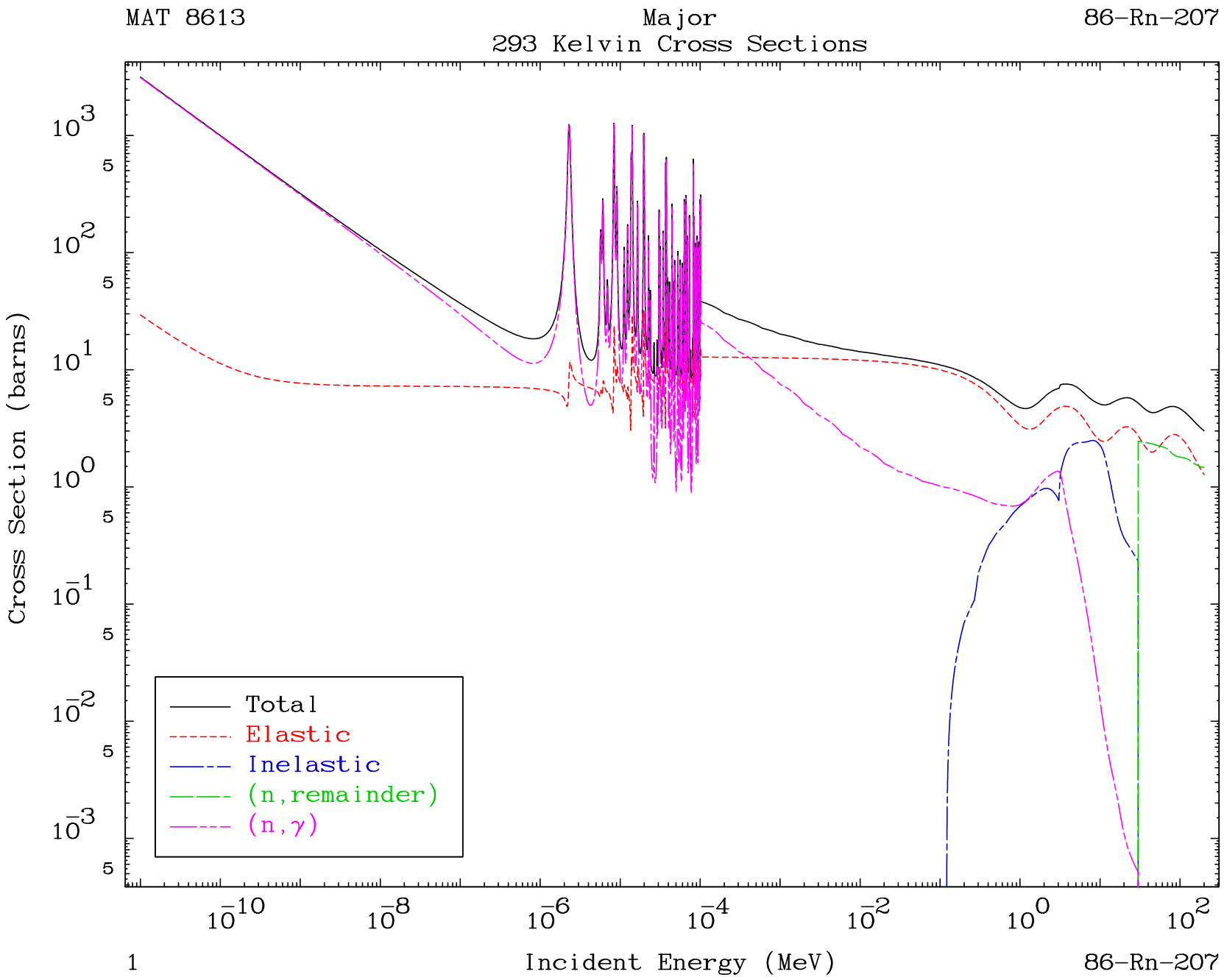
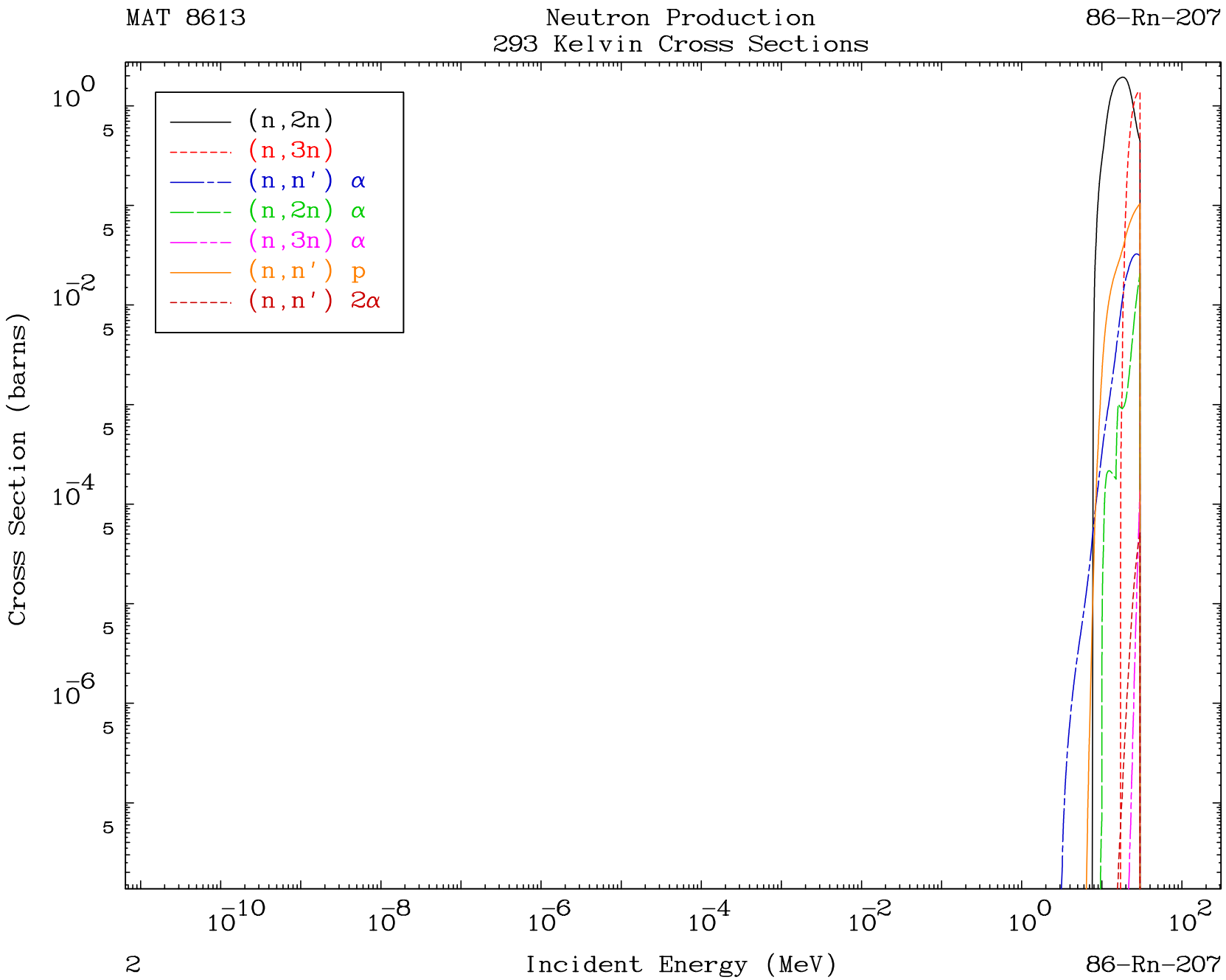
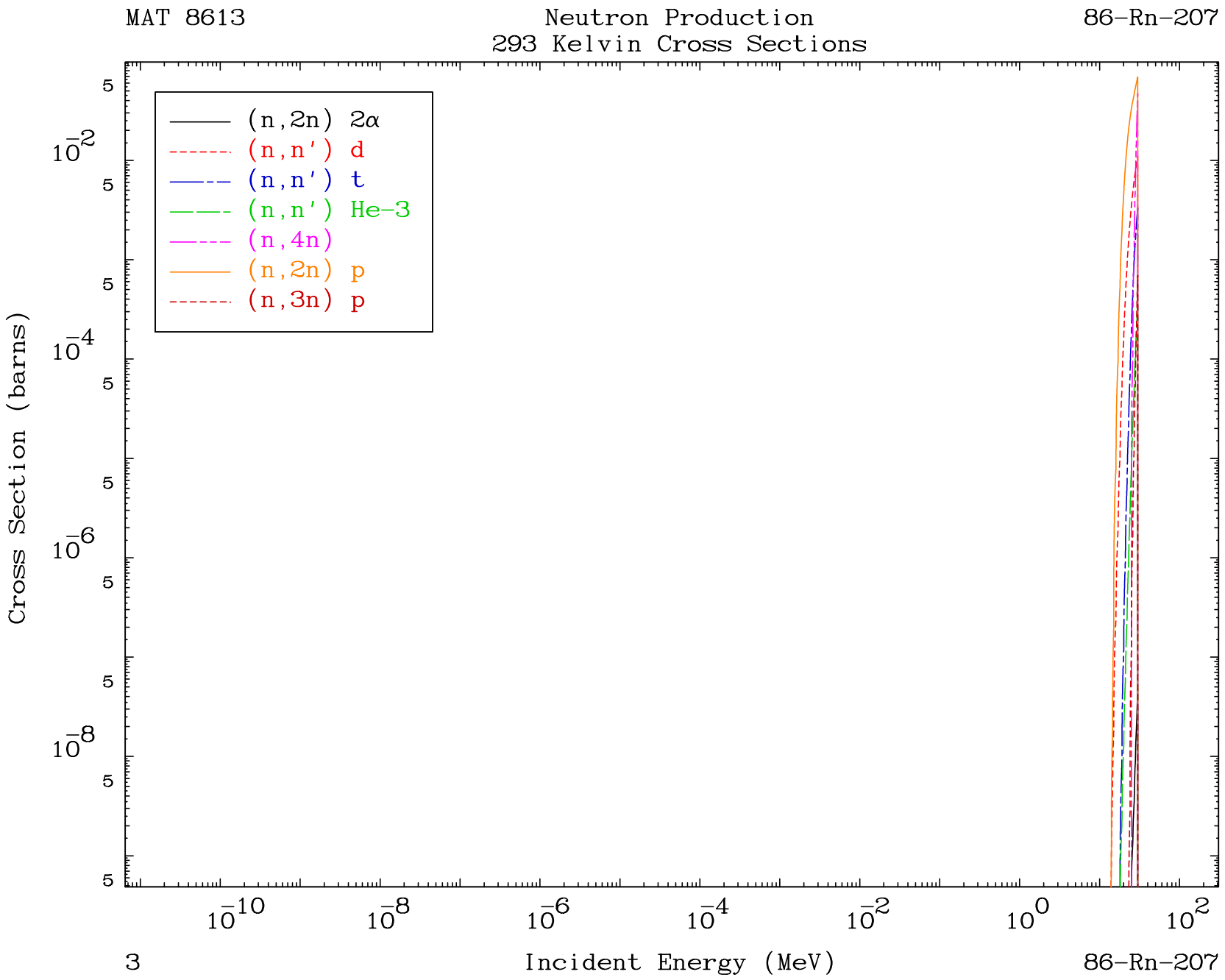
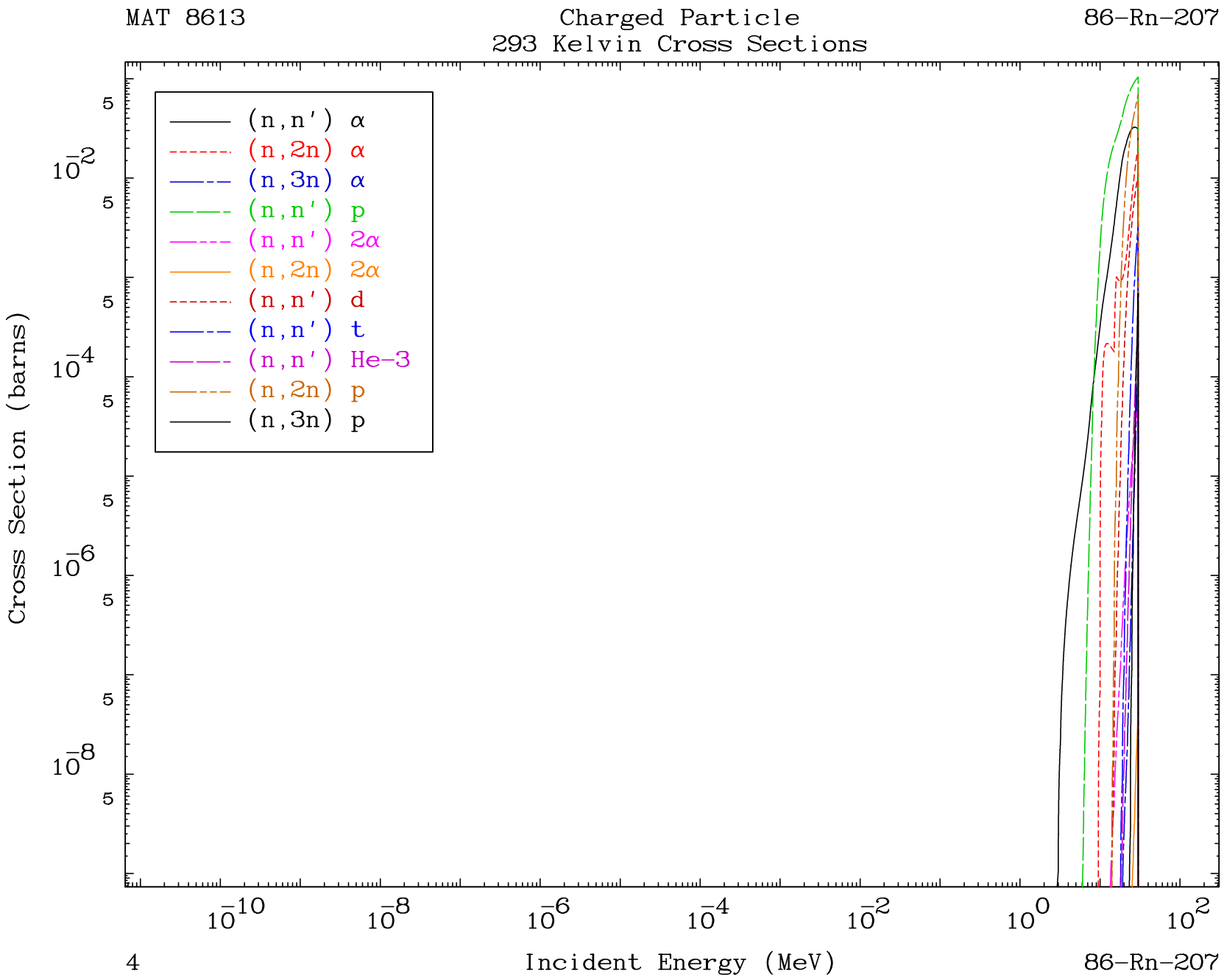
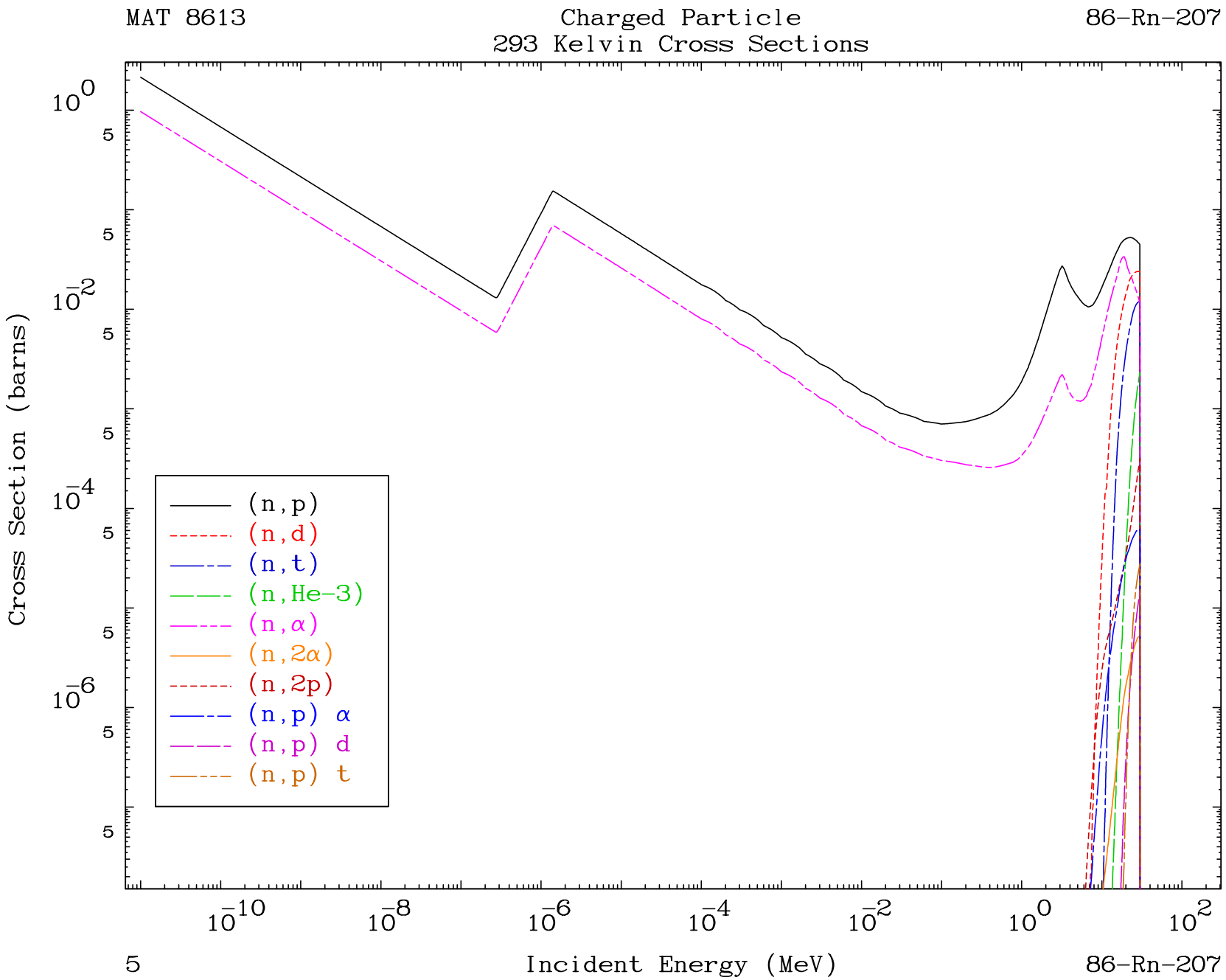
Press Mouse Button to Start

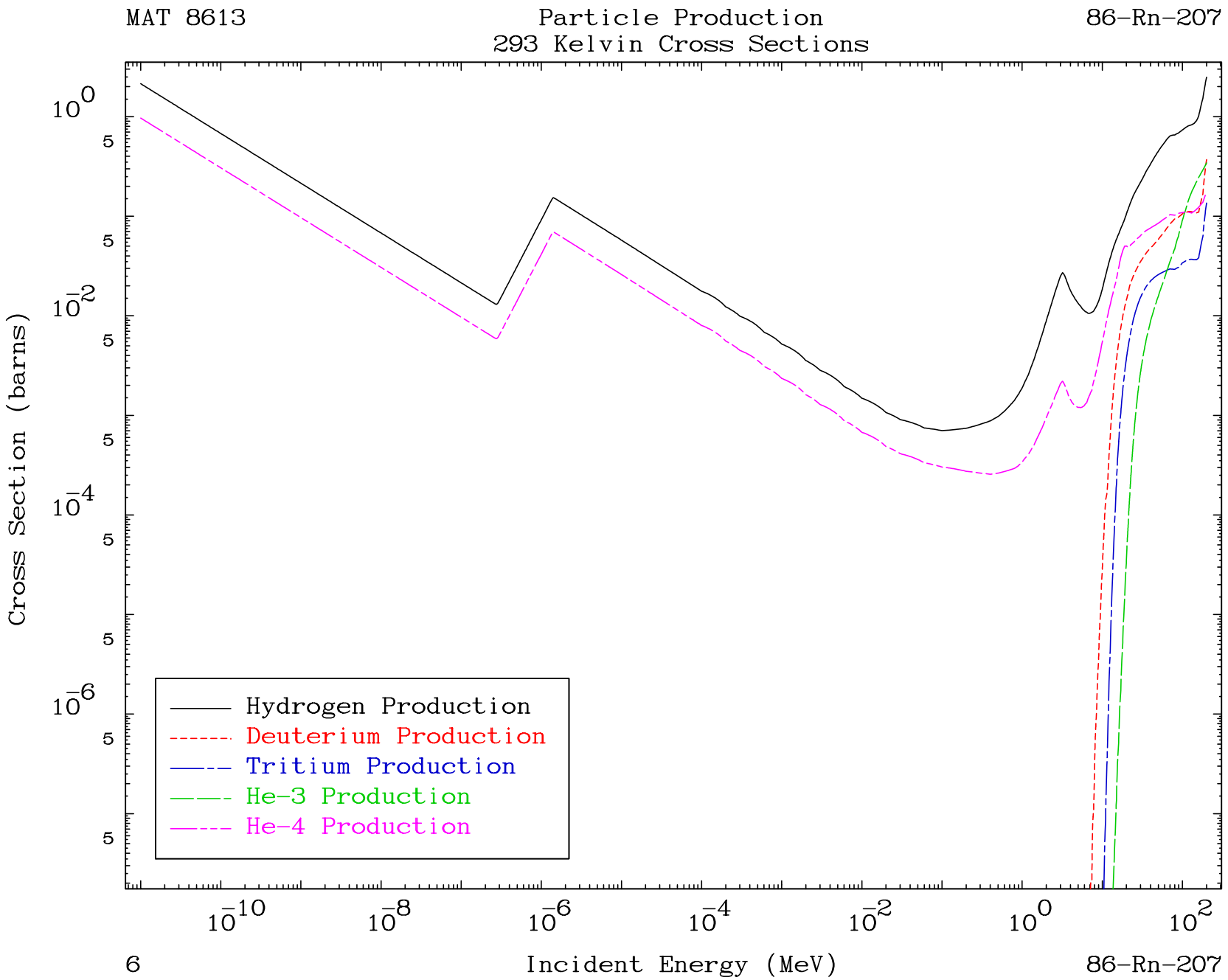

MAT 8613
Major
86-Rn-207
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,remainder)
(n,γ)
1
86-Rn-207

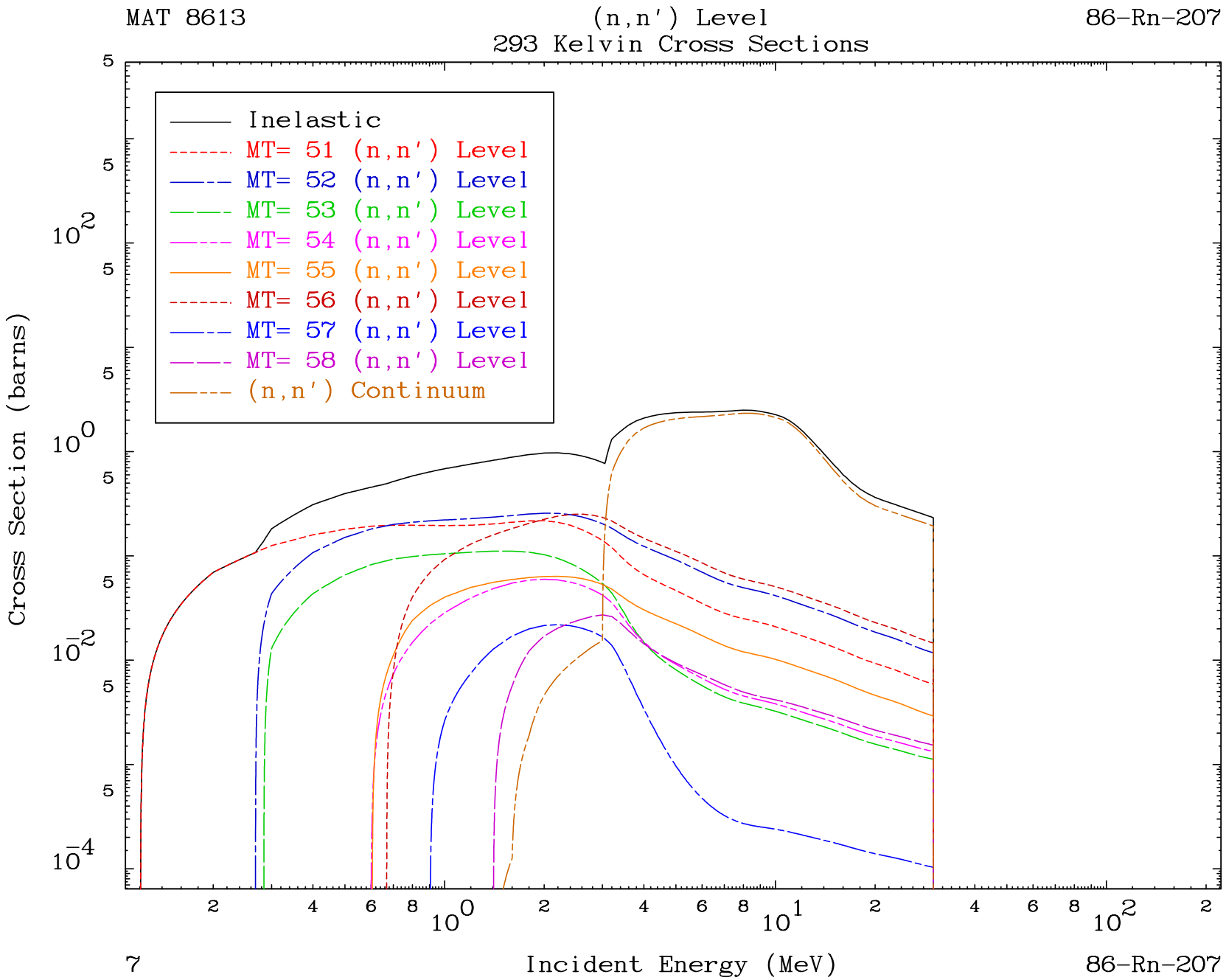

MAT 8613
Neutron Production
293 Kelvin Cross Sections
86-Rn-207
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
Cross Section (barns)
Incident Energy (MeV)
2
86-Rn-207

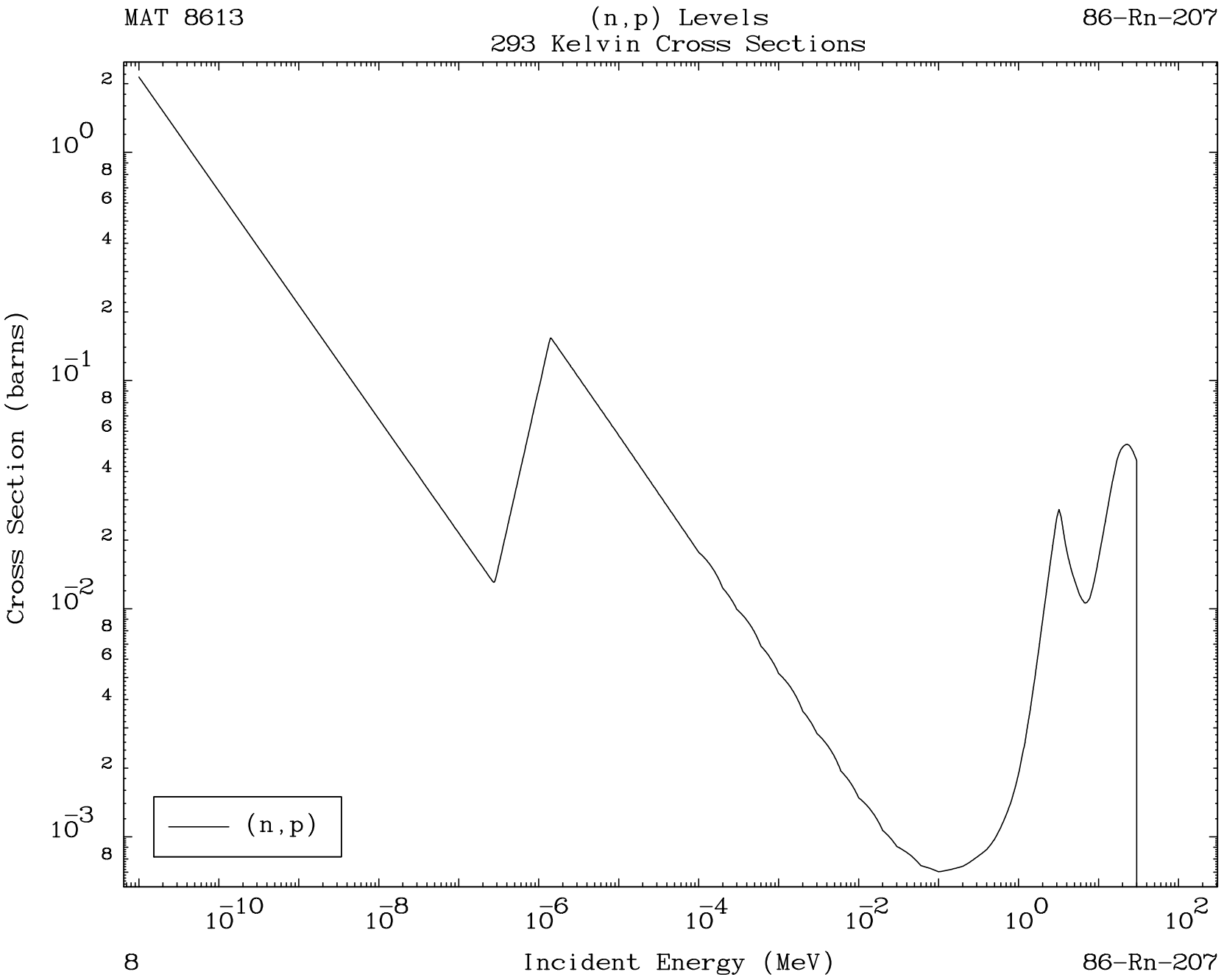

MAT 8613
Neutron Production
293 Kelvin Cross Sections
86-Rn-207
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
3
86-Rn-207

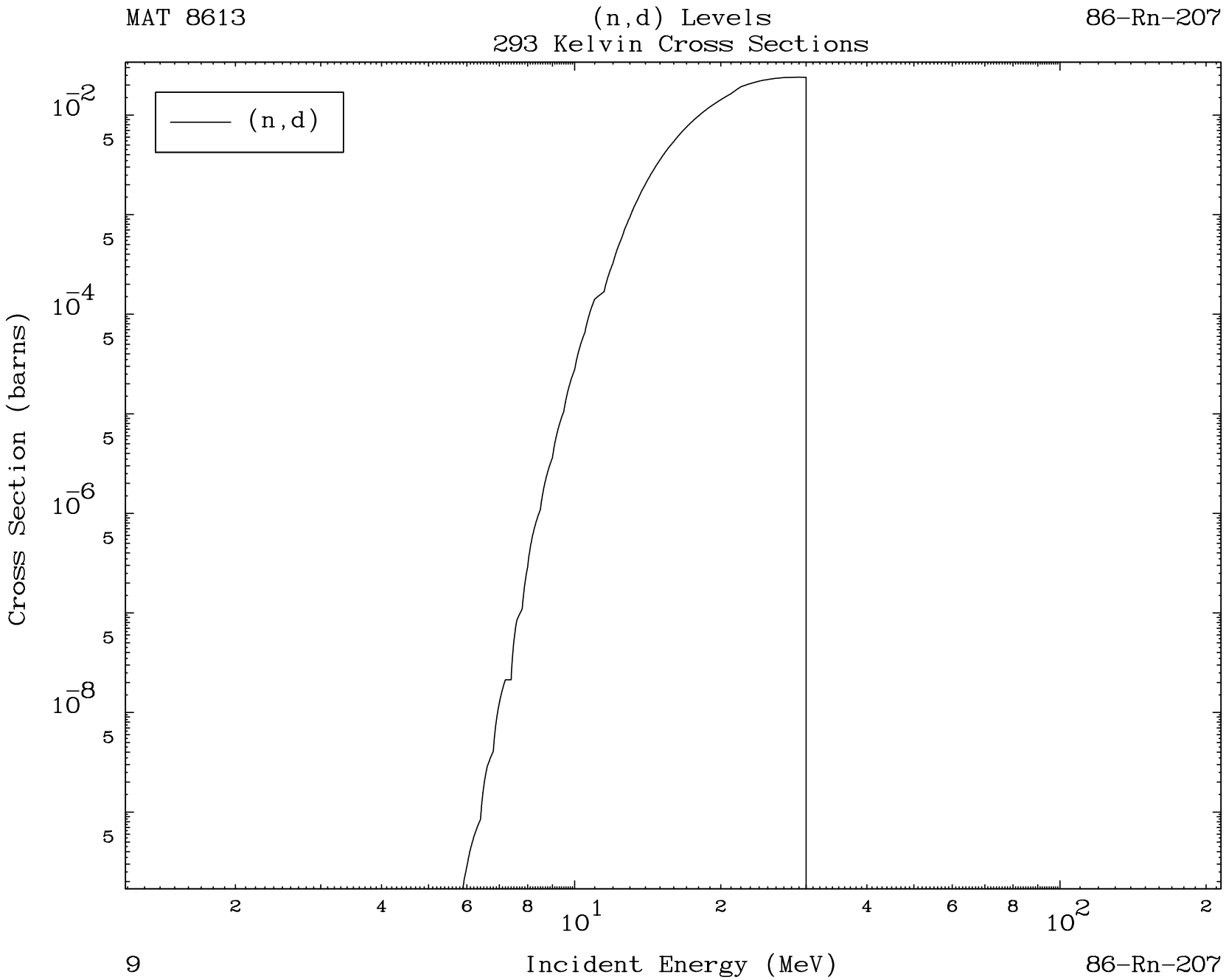

MAT 8613
Charged Particle
293 Kelvin Cross Sections
86-Rn-207
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
4
86-Rn-207

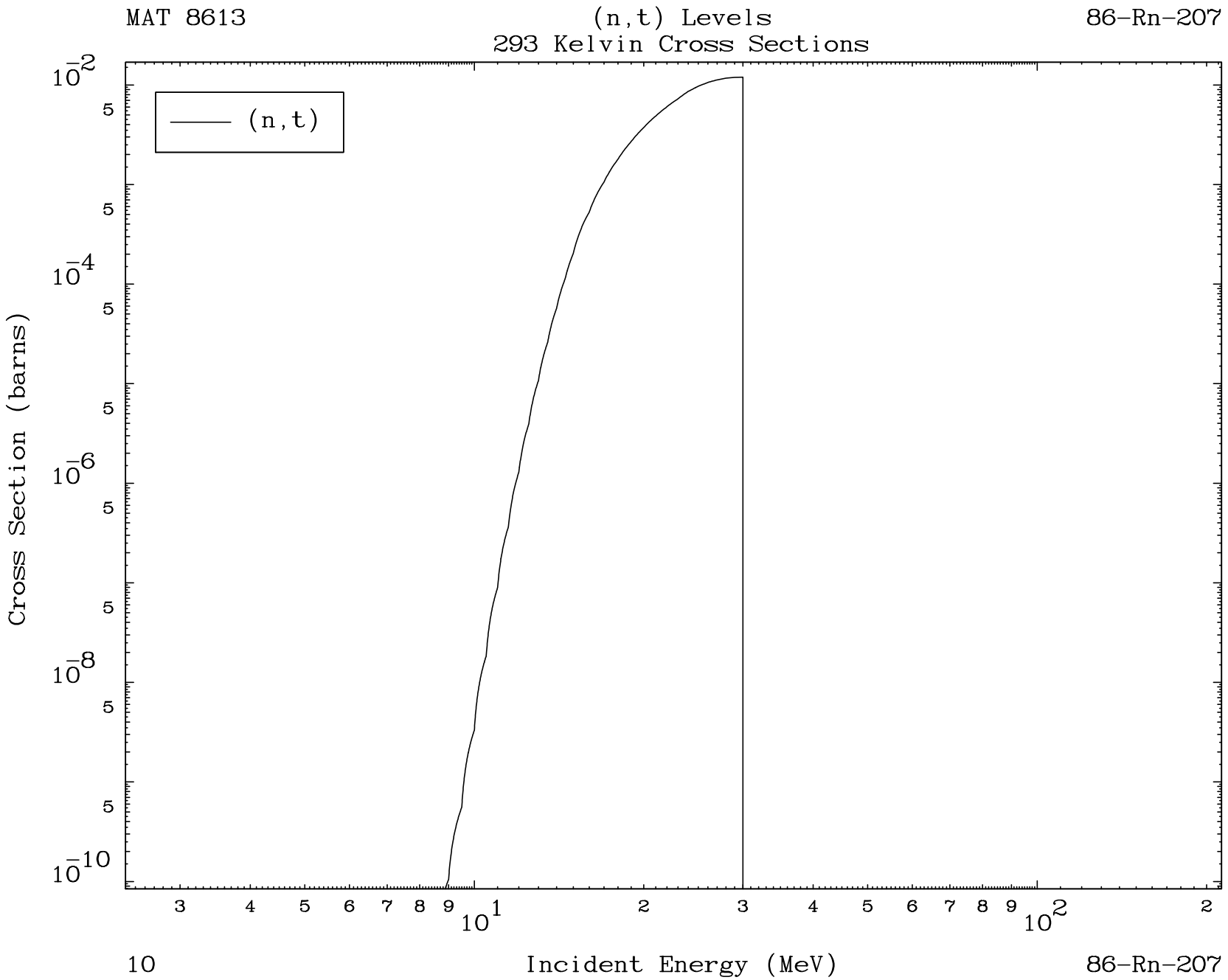

MAT 8613
Charged Particle
293 Kelvin Cross Sections
86-Rn-207
Cross Section (barns)
Incident Energy (MeV)
86-Rn-207
5
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t

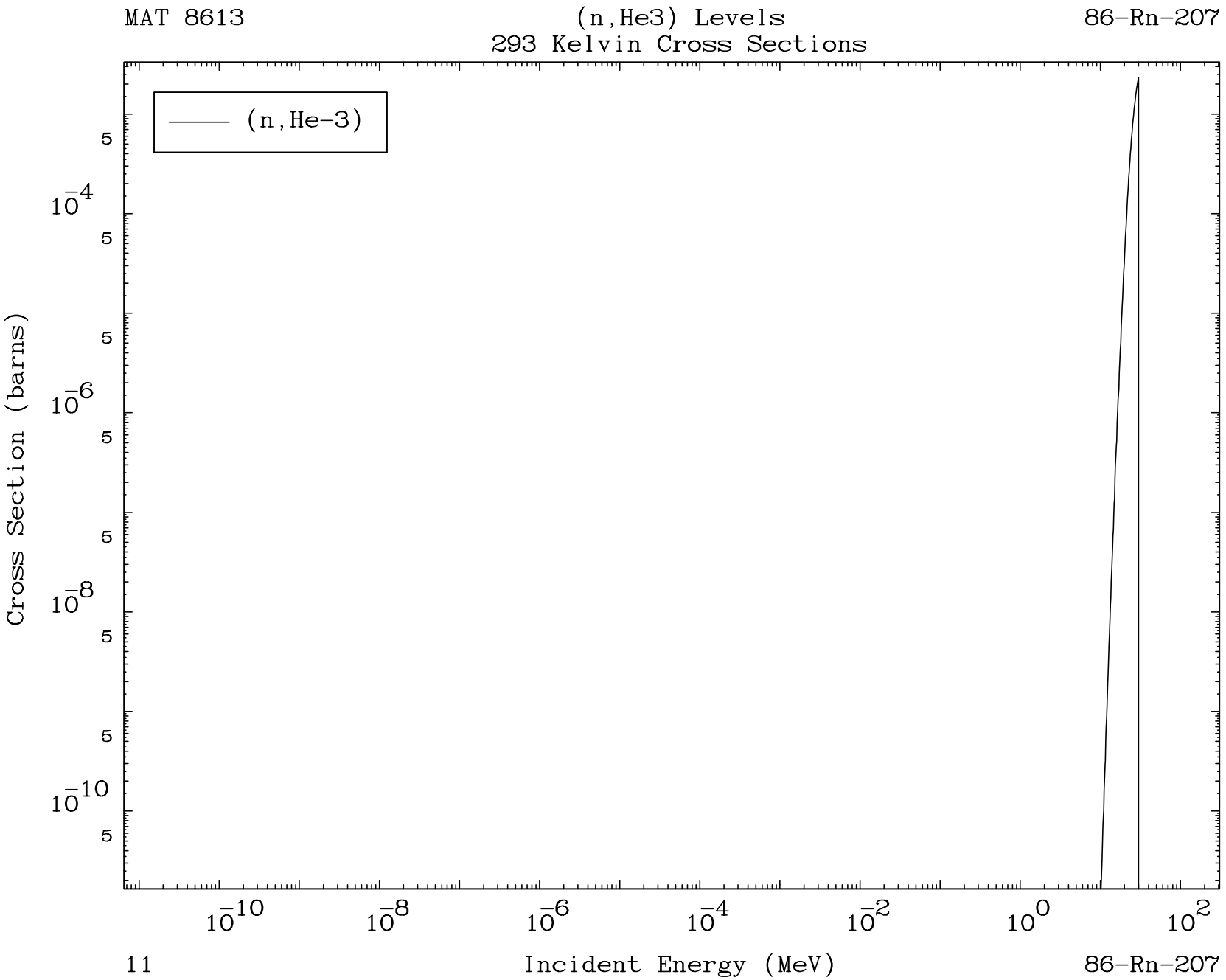

MAT 8613
Particle Production
293 Kelvin Cross Sections
86-Rn-207
Cross Section (barns)
10^0
5
10^-2
5
10^-4
5
10^-6
5
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
6
86-Rn-207

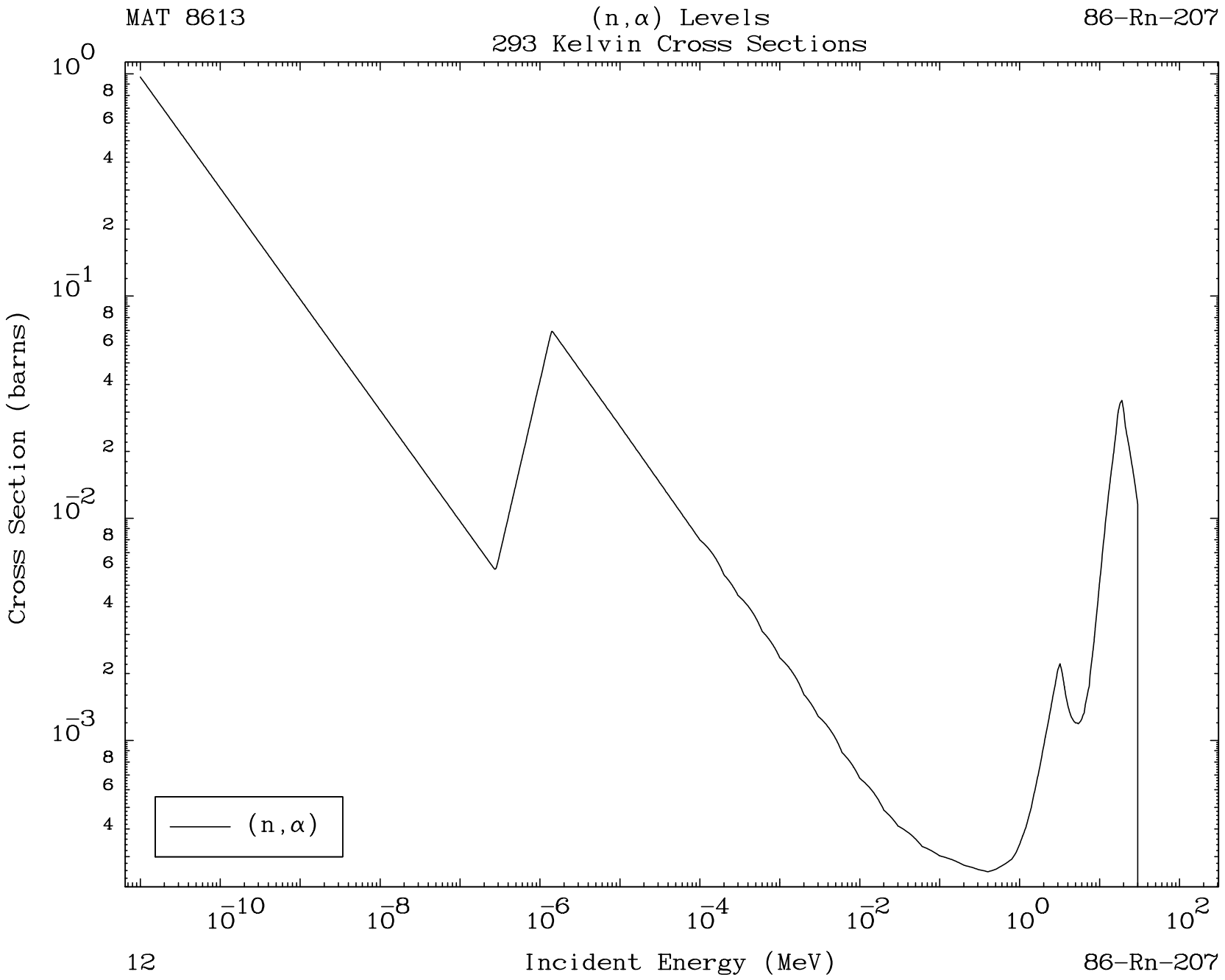

MAT 8613
(n,n') Level
86-Rn-207
293 Kelvin Cross Sections
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
7
86-Rn-207

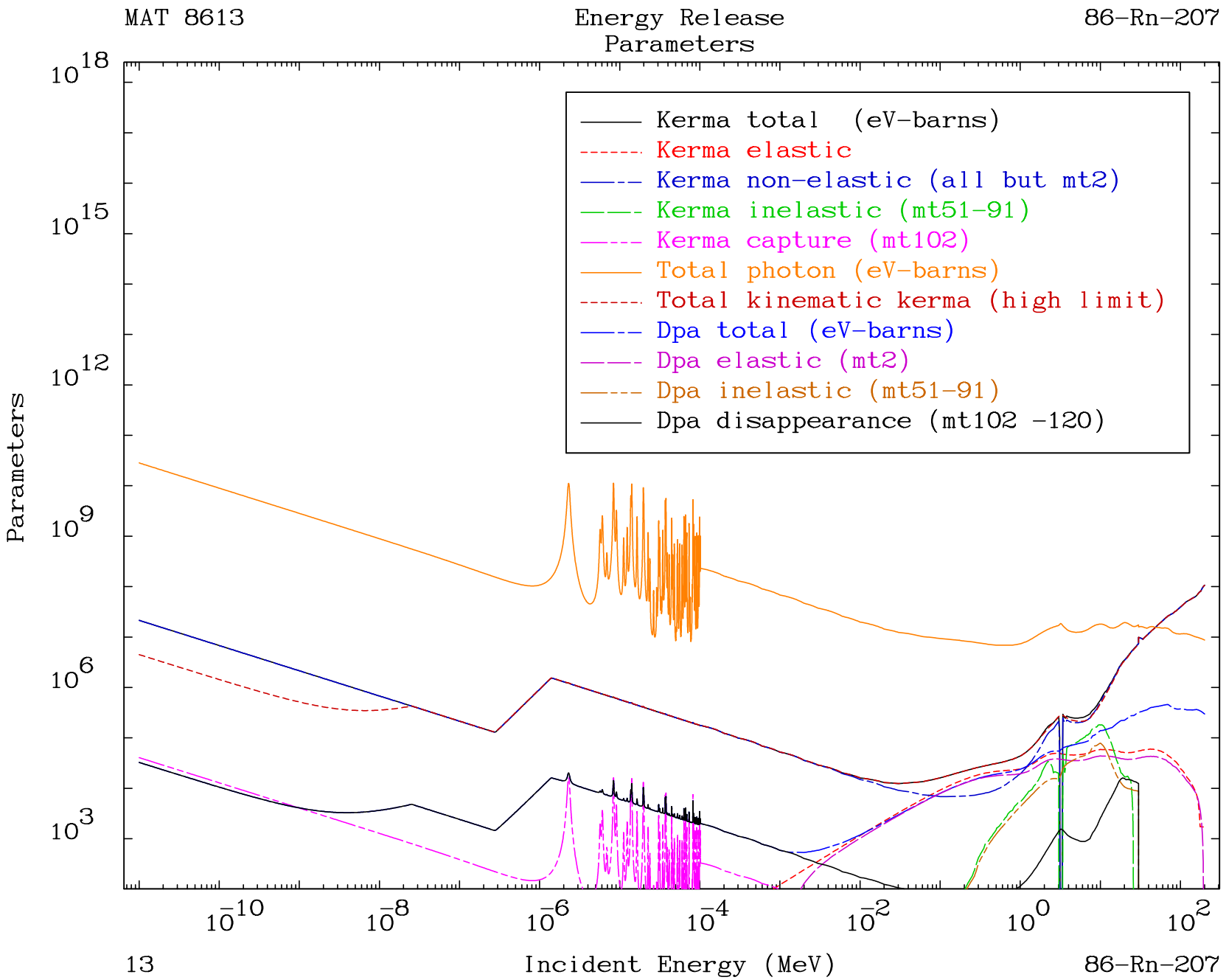

MAT 8613
(n,p) Levels
86-Rn-207
293 Kelvin Cross Sections
Cross Section (barns)
(n,p)
Incident Energy (MeV)
8
86-Rn-207

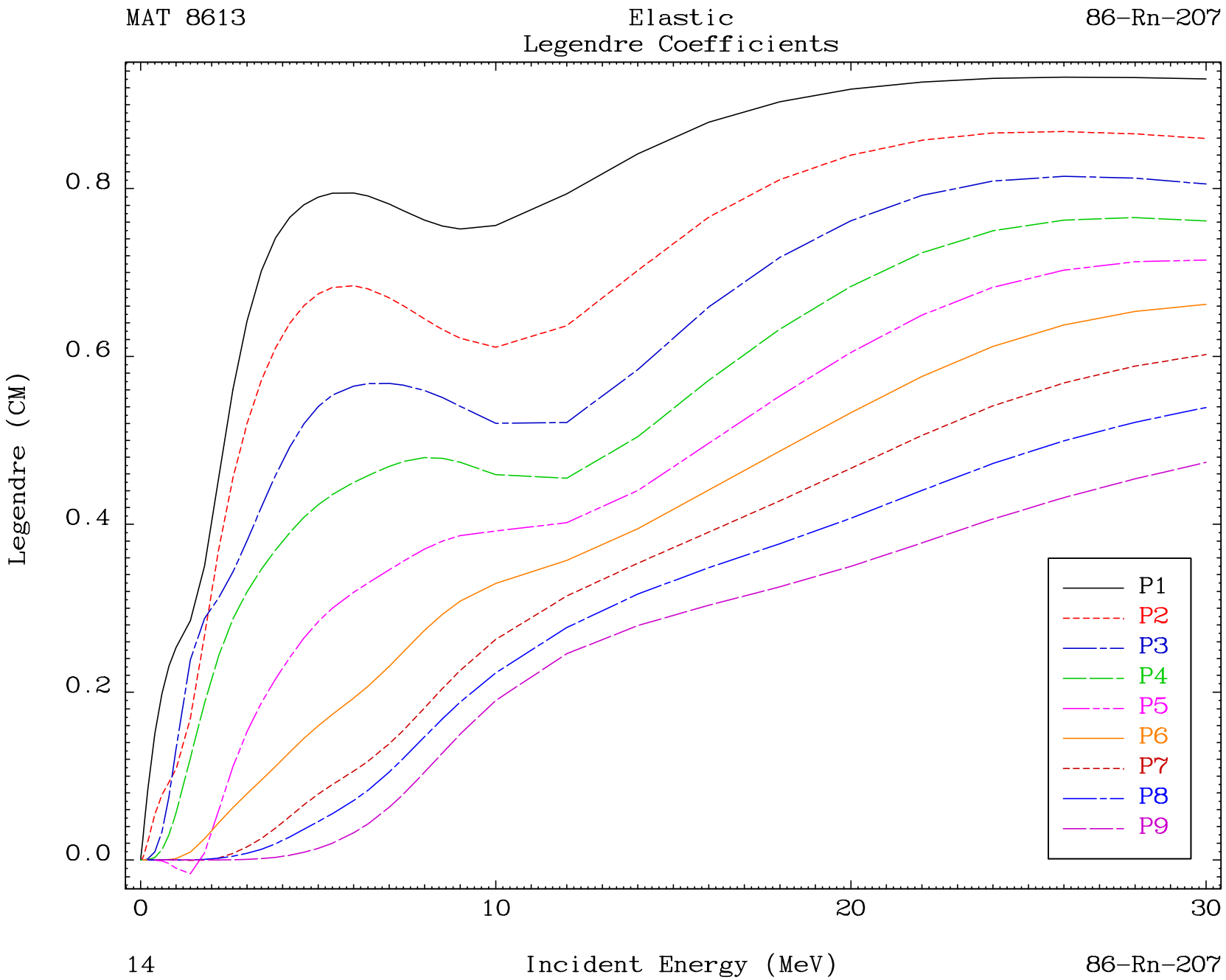

MAT 8613
(n,d) Levels
293 Kelvin Cross Sections
86-Rn-207
(n,d)
Cross Section (barns)
Incident Energy (MeV)
9
86-Rn-207

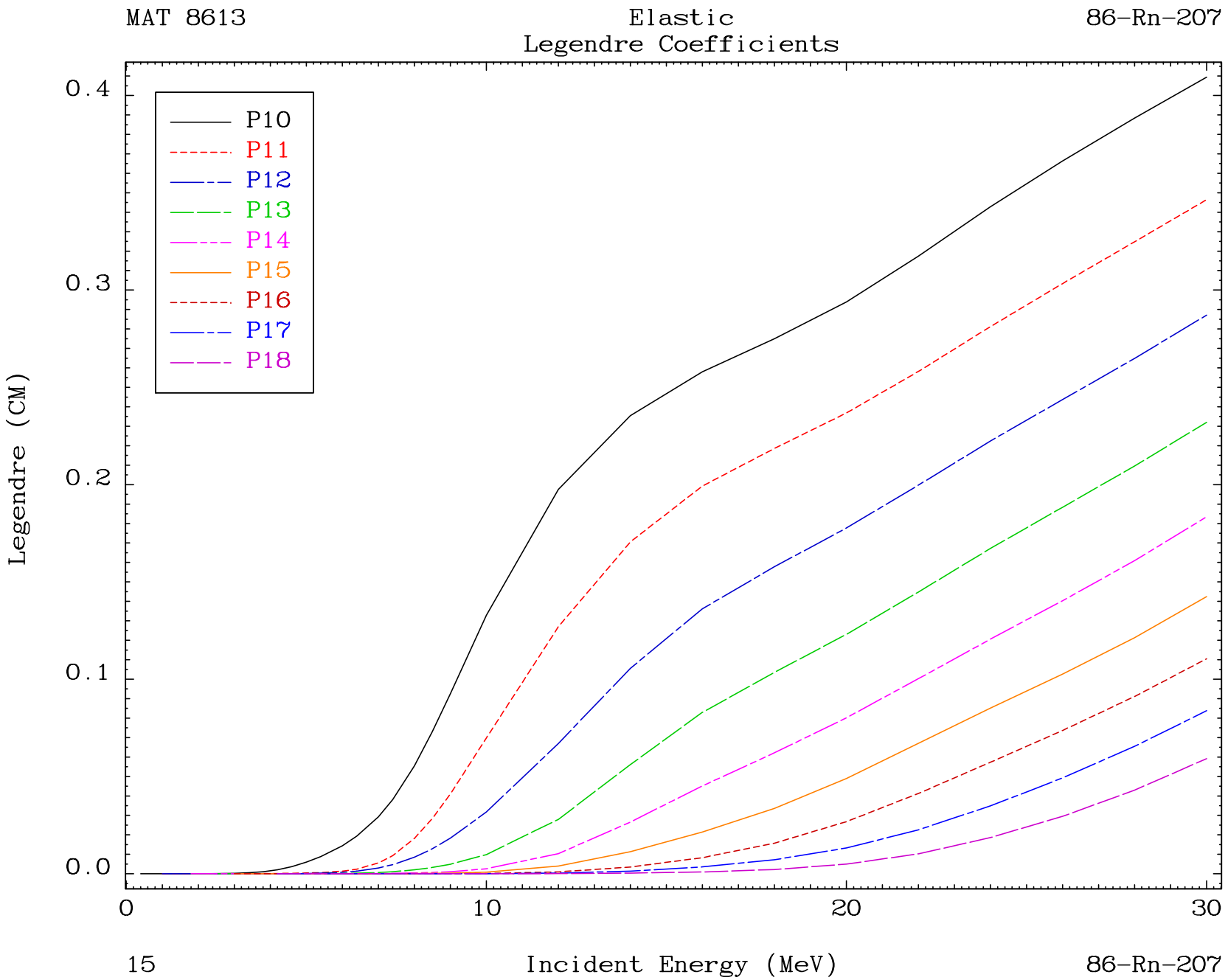

MAT 8613
(n,t) Levels
86-Rn-207
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
86-Rn-207

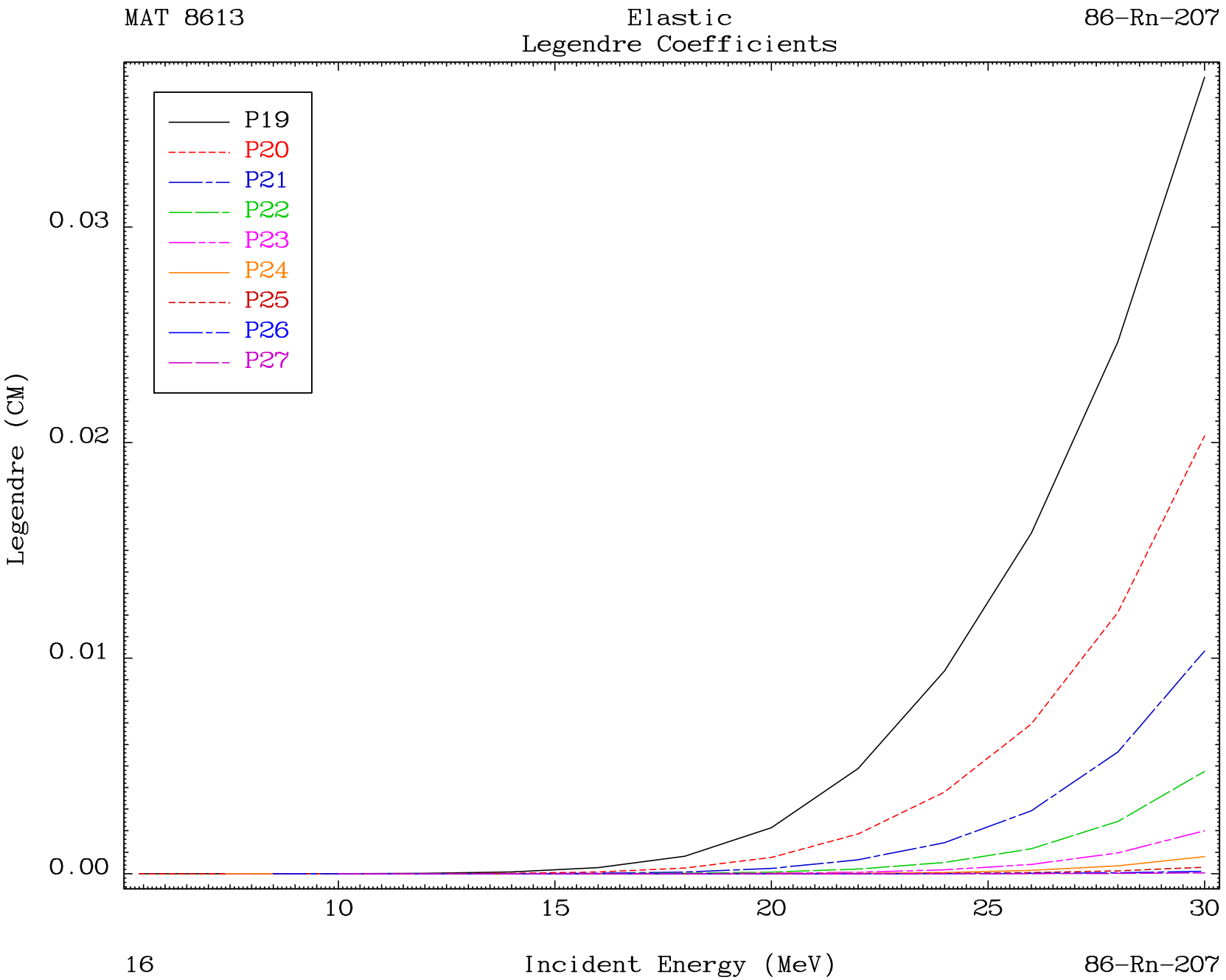

MAT 8613
(n,He3) Levels
86-Rn-207
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
11
Incident Energy (MeV)
86-Rn-207

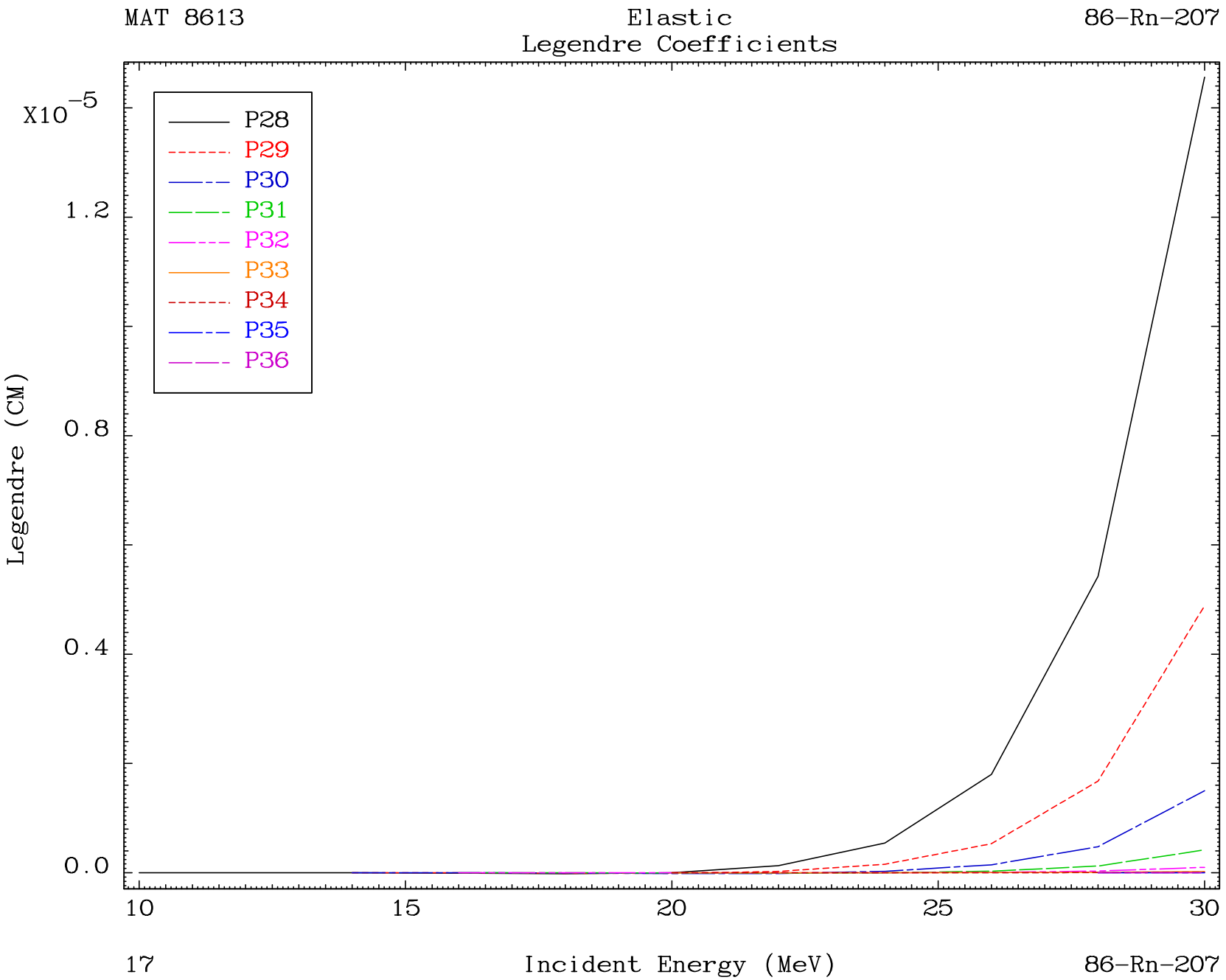

MAT 8613
(n,α) Levels
86-Rn-207
293 Kelvin Cross Sections
Cross Section (barns)
(n,α)
Incident Energy (MeV)
12
86-Rn-207

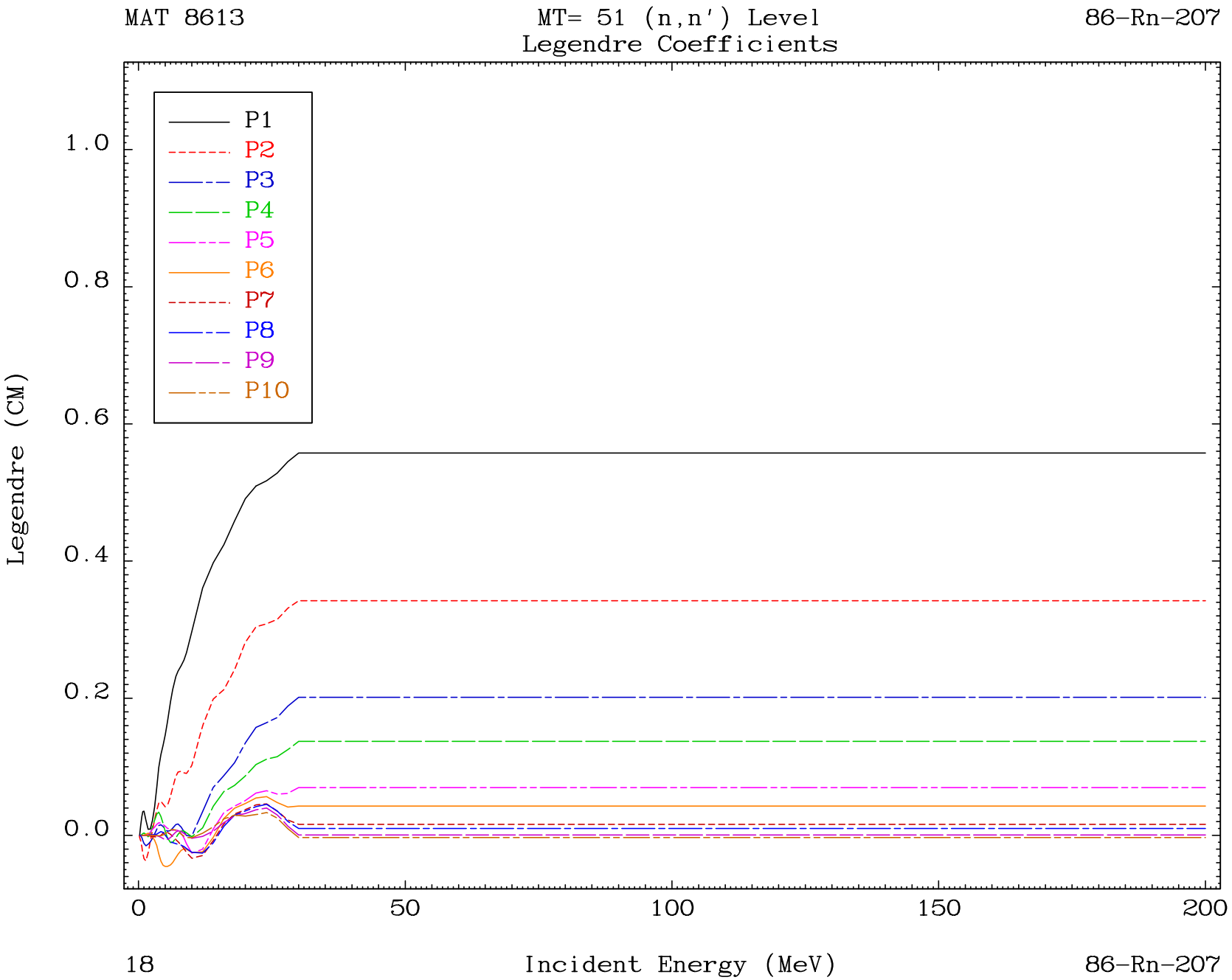

MAT 8613
Energy Release
Parameters
86-Rn-207
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma capture (mt102)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
Parameters
10^{18}
10^{15}
10^{12}
10^{9}
10^{6}
10^{3}
10^{-10}
10^{-8}
10^{-6}
10^{-4}
10^{-2}
10^{0}
10^{2}
13
Incident Energy (MeV)
86-Rn-207

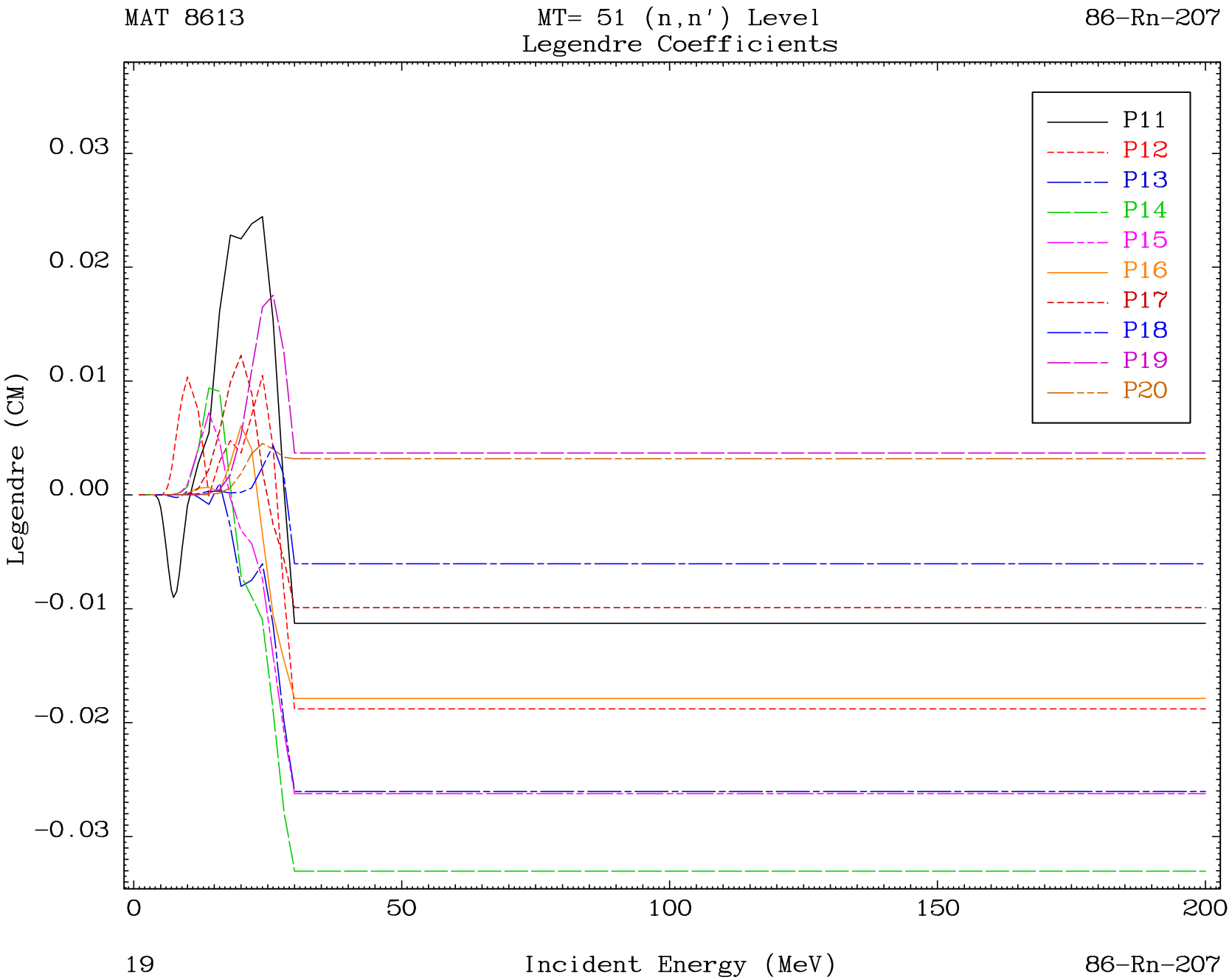

MAT 8613
Elastic
Legendre Coefficients
86-Rn-207
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
14
Incident Energy (MeV)
86-Rn-207
P1
P2
P3
P4
P5
P6
P7
P8
P9

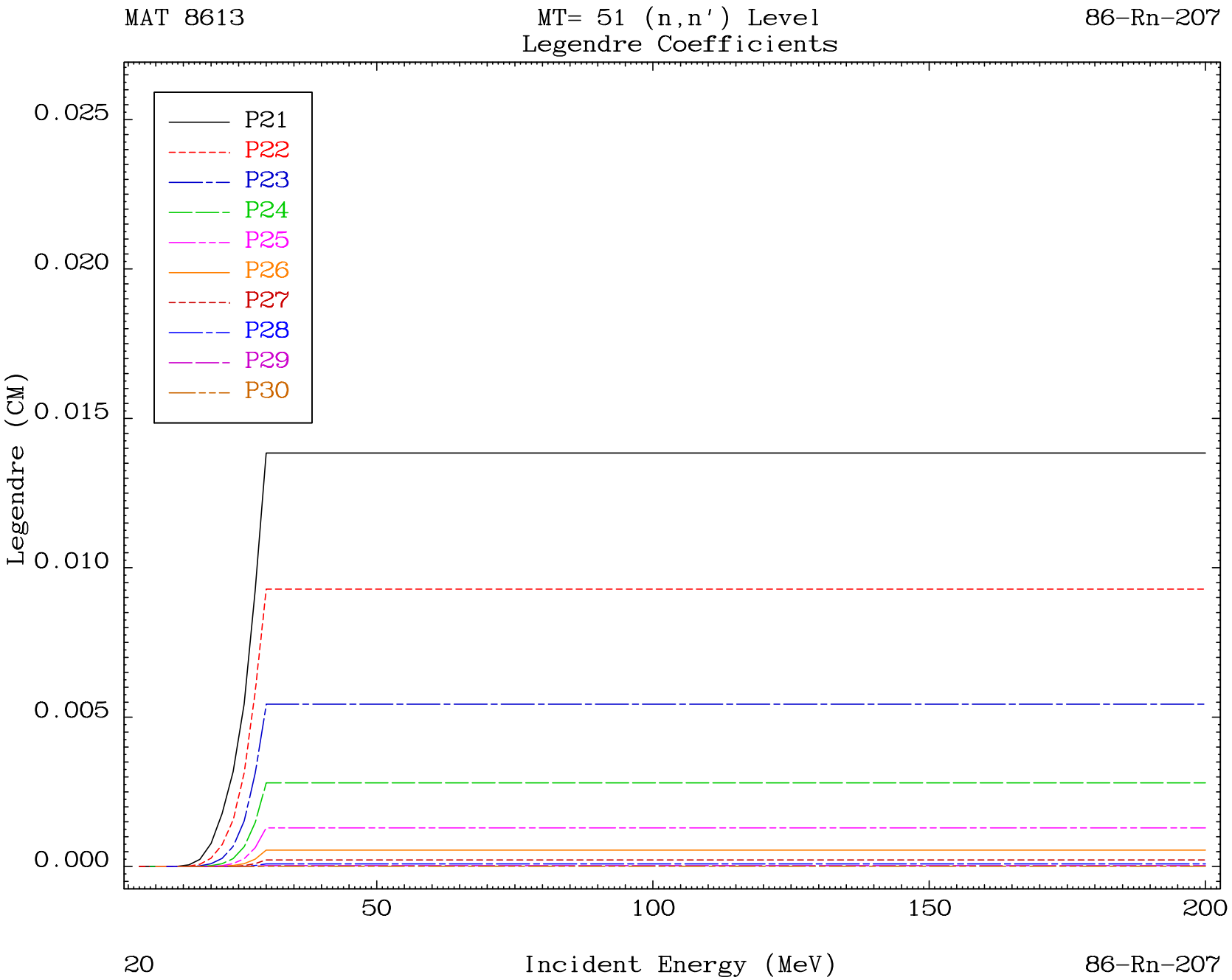

MAT 8613
Elastic
Legendre Coefficients
86-Rn-207
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
10
20
30
15
Incident Energy (MeV)
86-Rn-207

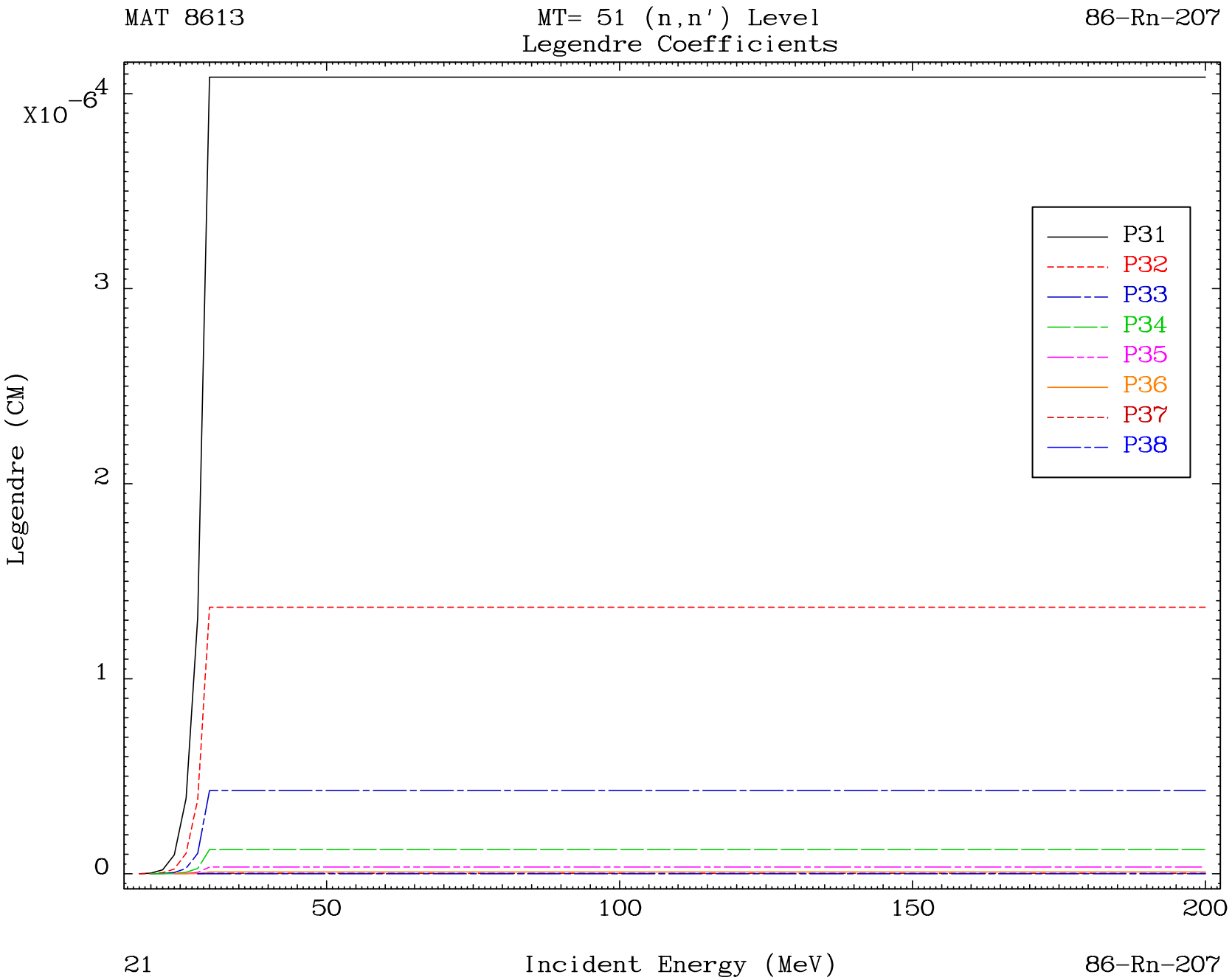

MAT 8613
Elastic
Legendre Coefficients
86-Rn-207
P19
P20
P21
P22
P23
P24
P25
P26
P27
Legendre (CM)
0.00
0.01
0.02
0.03
10
15
20
25
30
16
Incident Energy (MeV)
86-Rn-207

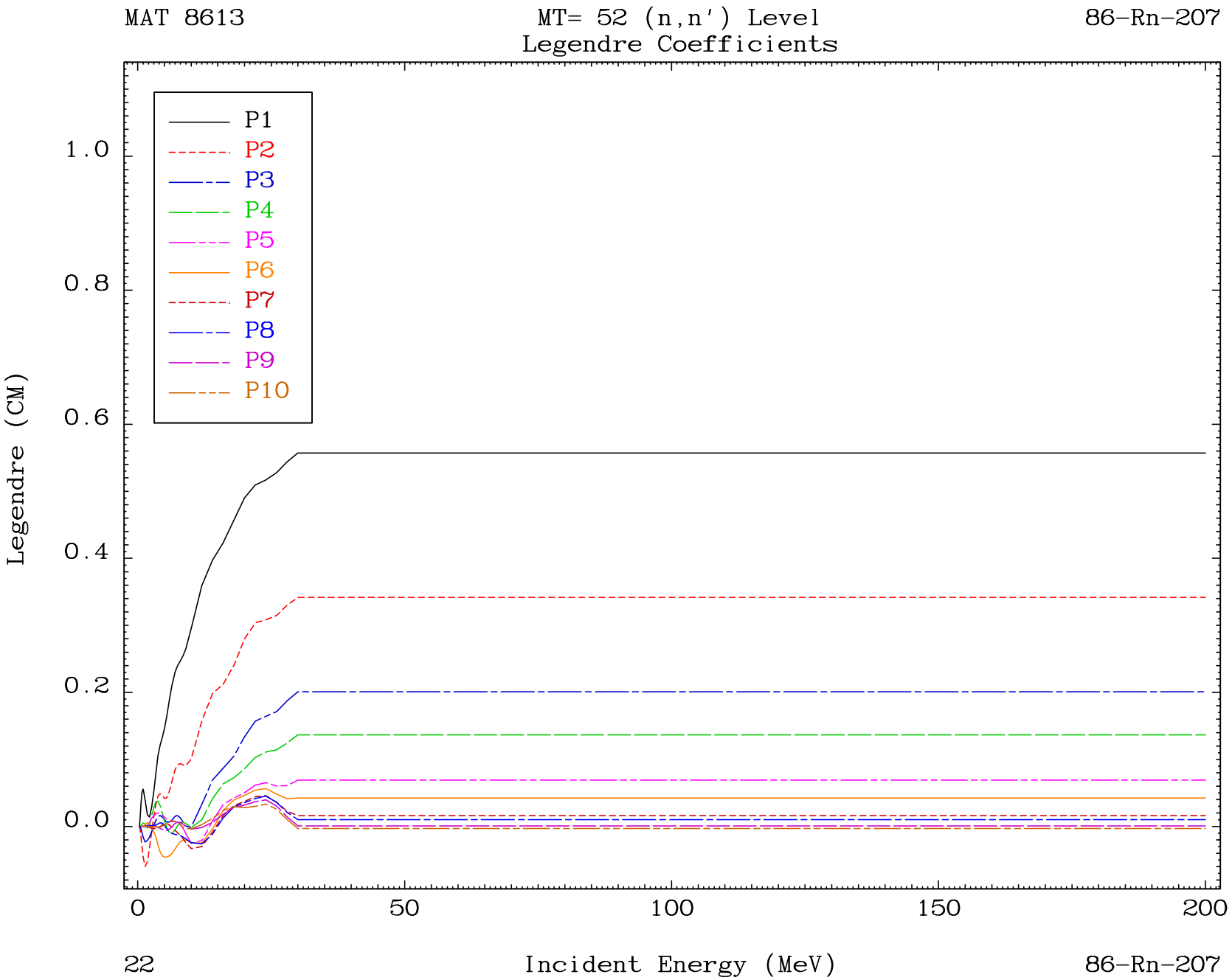

MAT 8613
Elastic
Legendre Coefficients
86-Rn-207
X10 -5
1.2
0.8
0.4
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
10
15
20
25
30
17
Incident Energy (MeV)
86-Rn-207

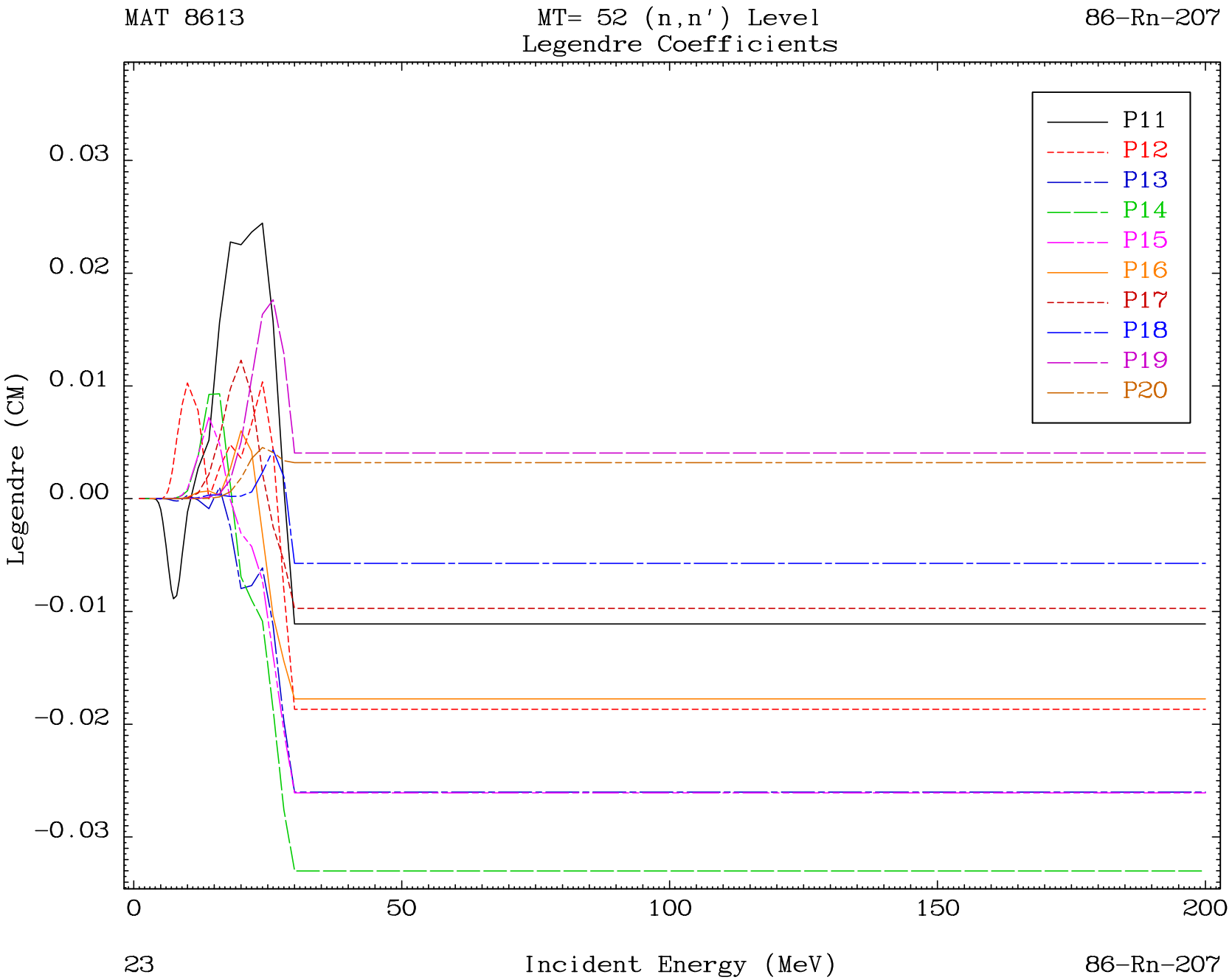

MAT 8613
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-207
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
18
Incident Energy (MeV)
86-Rn-207

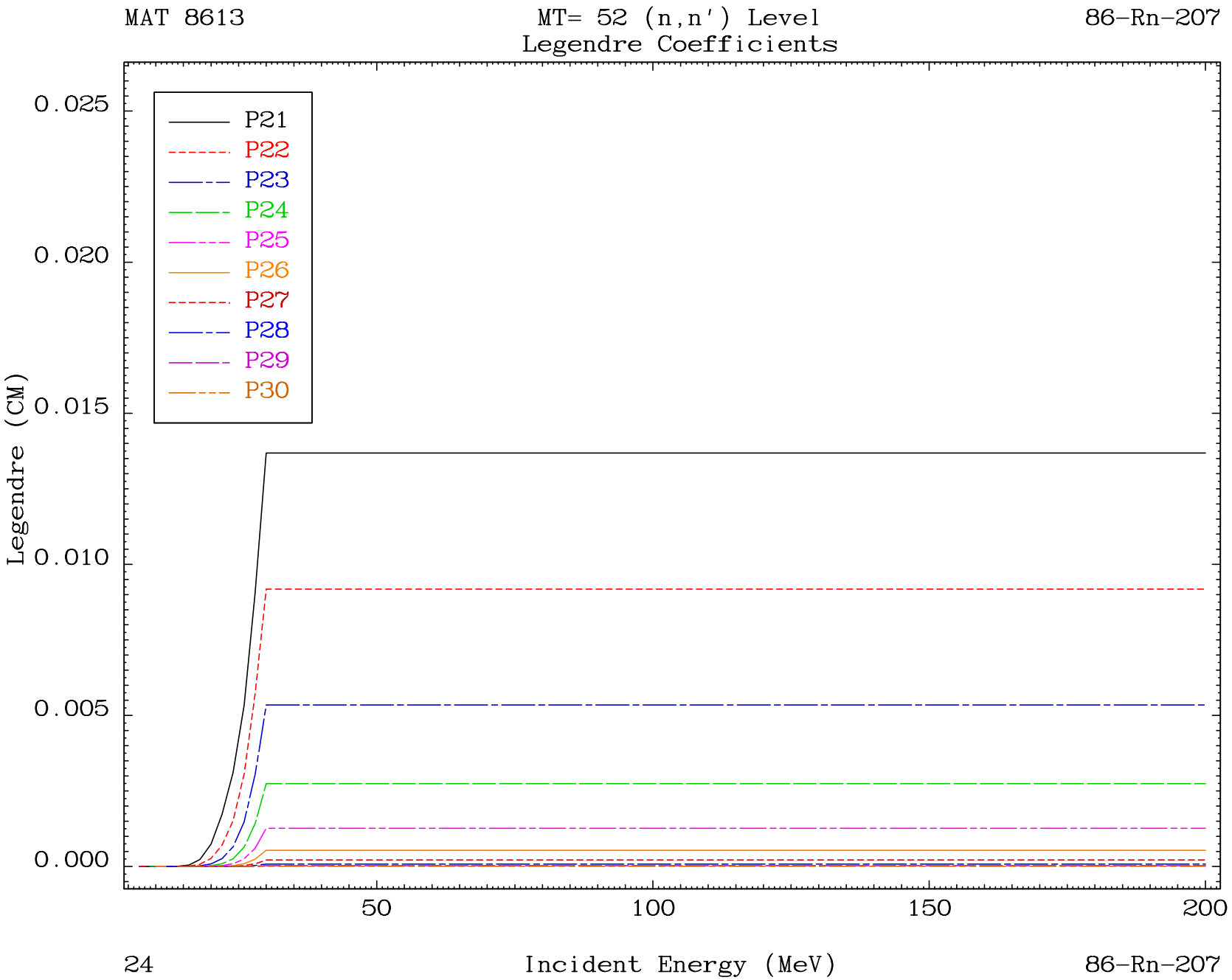

MAT 8613
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-207
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
19
Incident Energy (MeV)
86-Rn-207

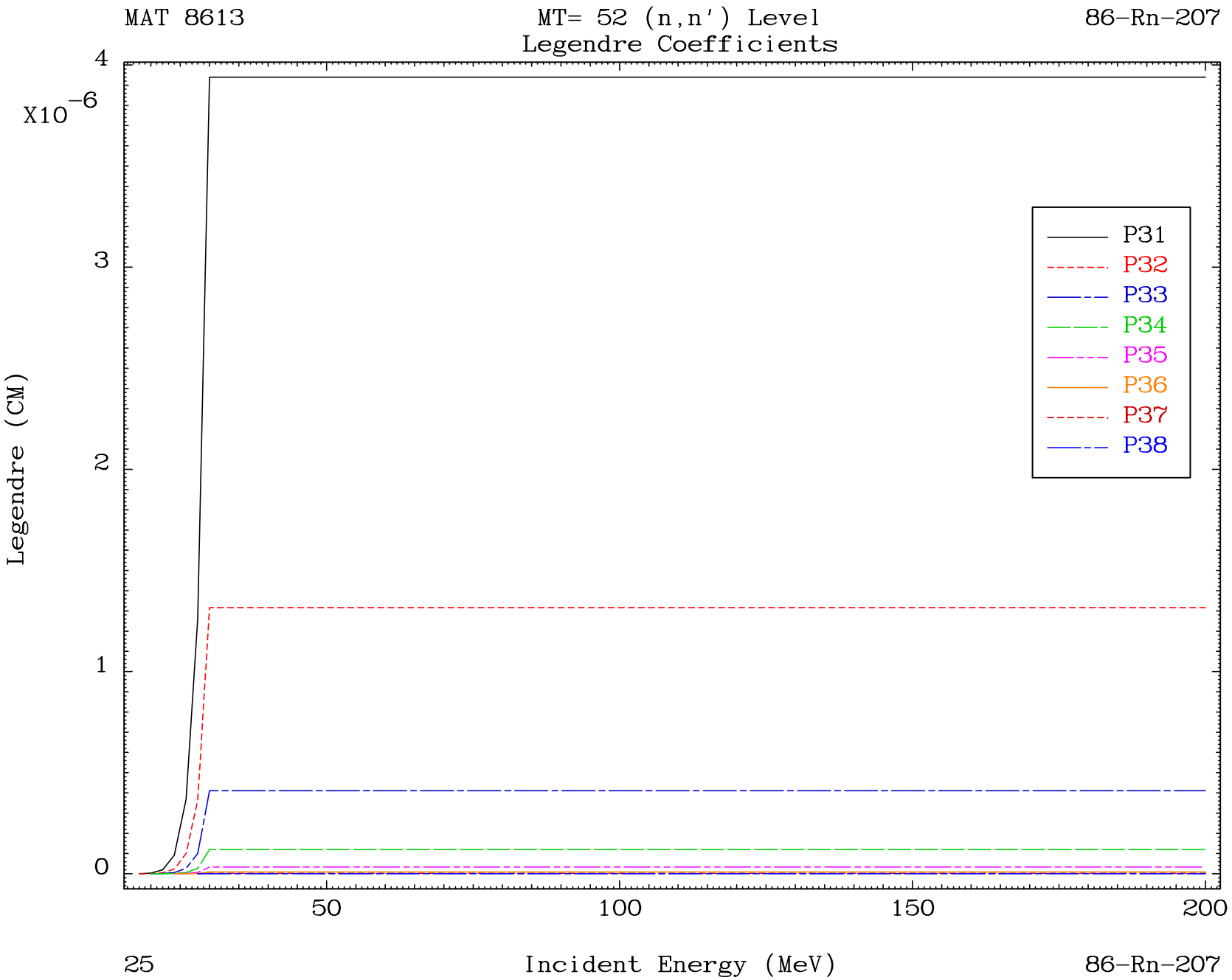

MAT 8613
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
20
Incident Energy (MeV)
86-Rn-207

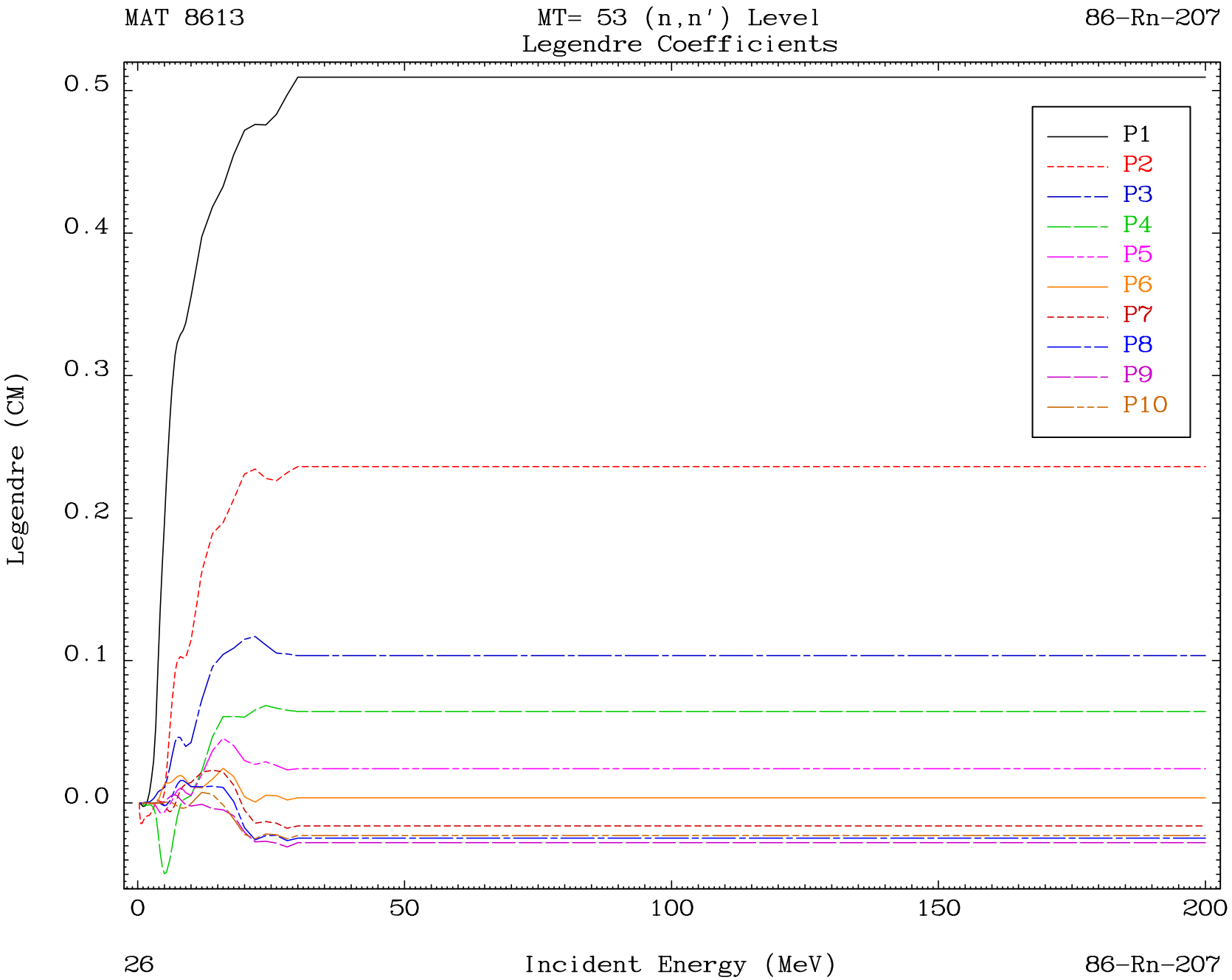

MAT 8613
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-207
X10 -6 4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
21
Incident Energy (MeV)
86-Rn-207

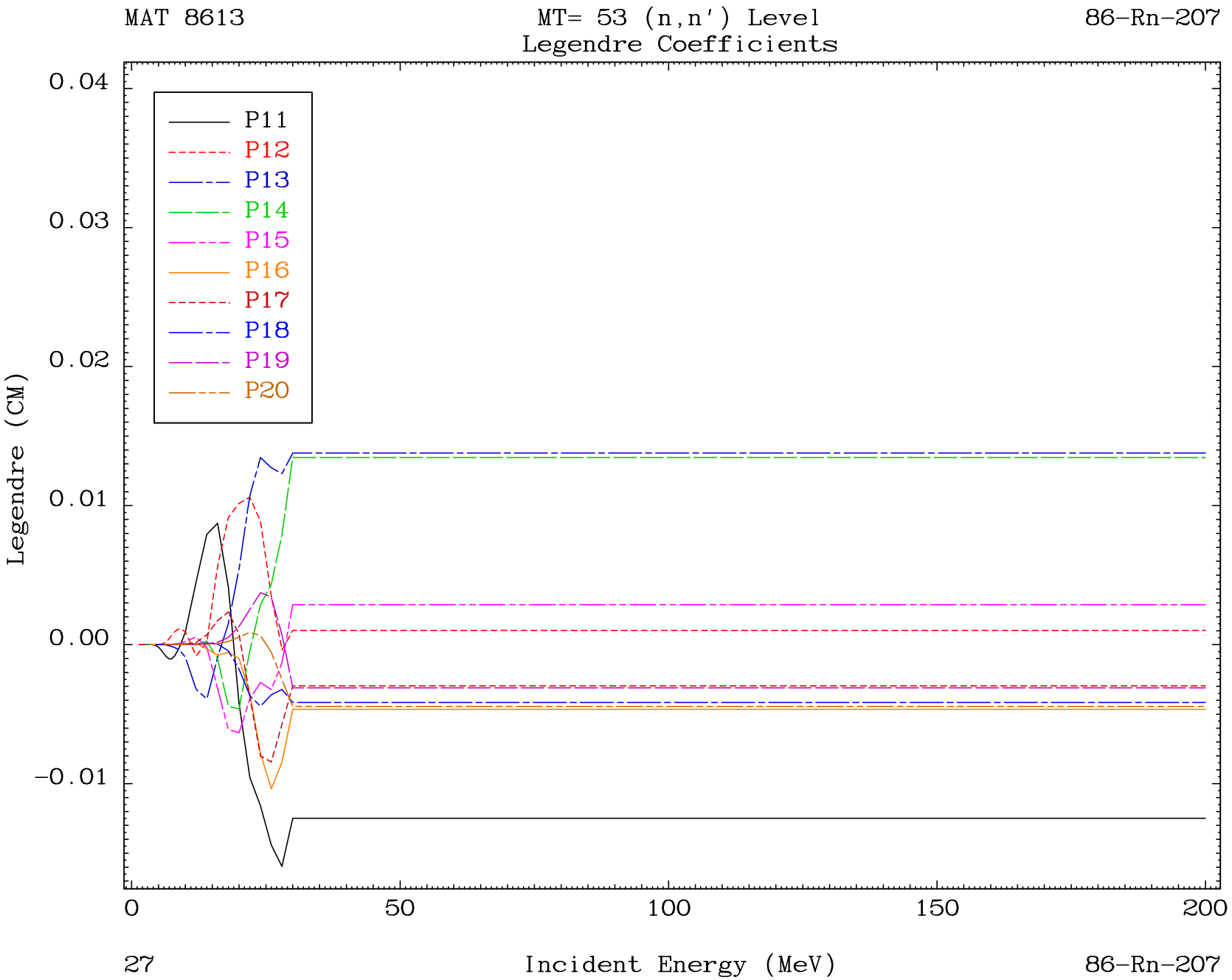

MAT 8613
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-207
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
22
Incident Energy (MeV)
86-Rn-207

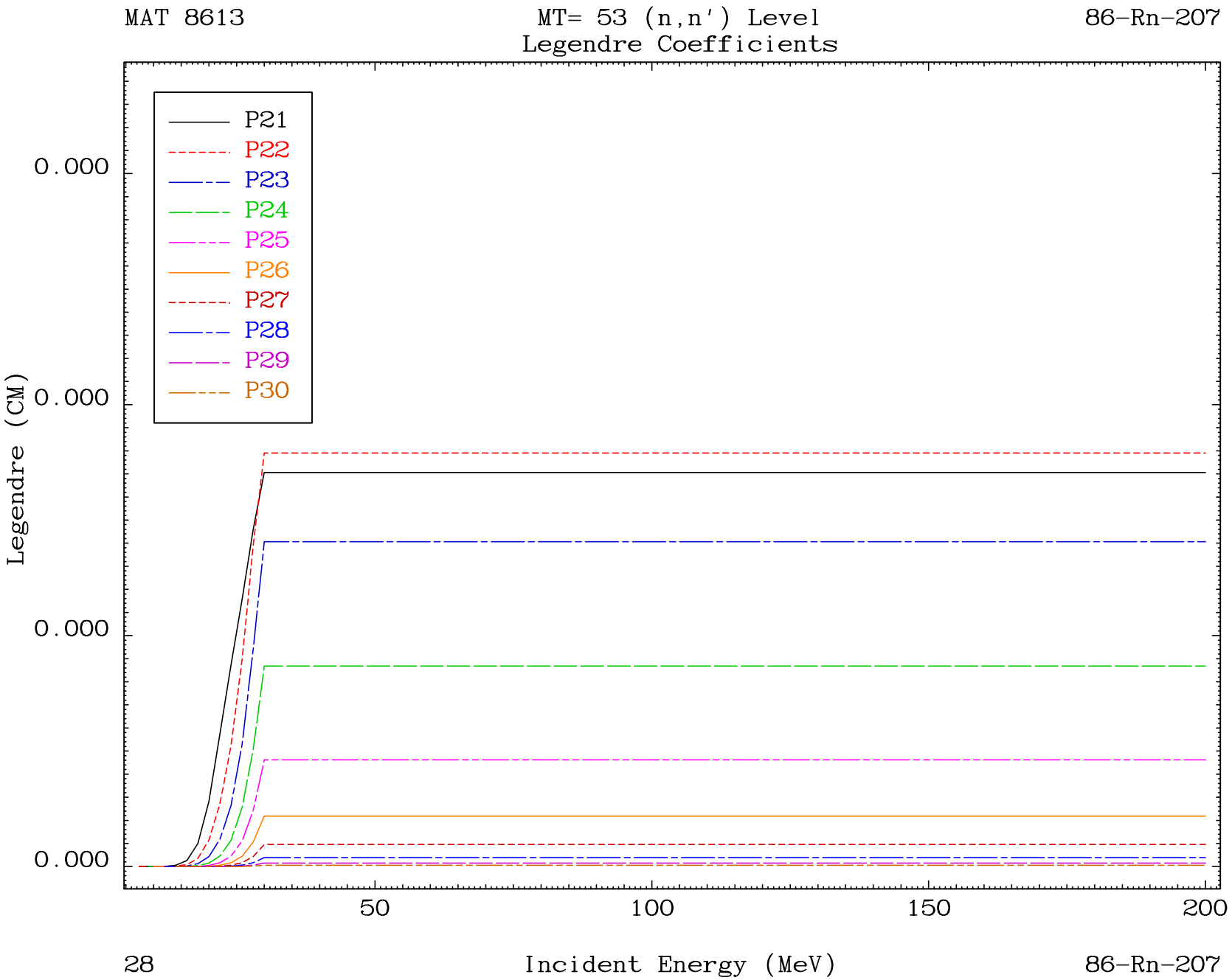

MAT 8613
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-207
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
23
Incident Energy (MeV)
86-Rn-207

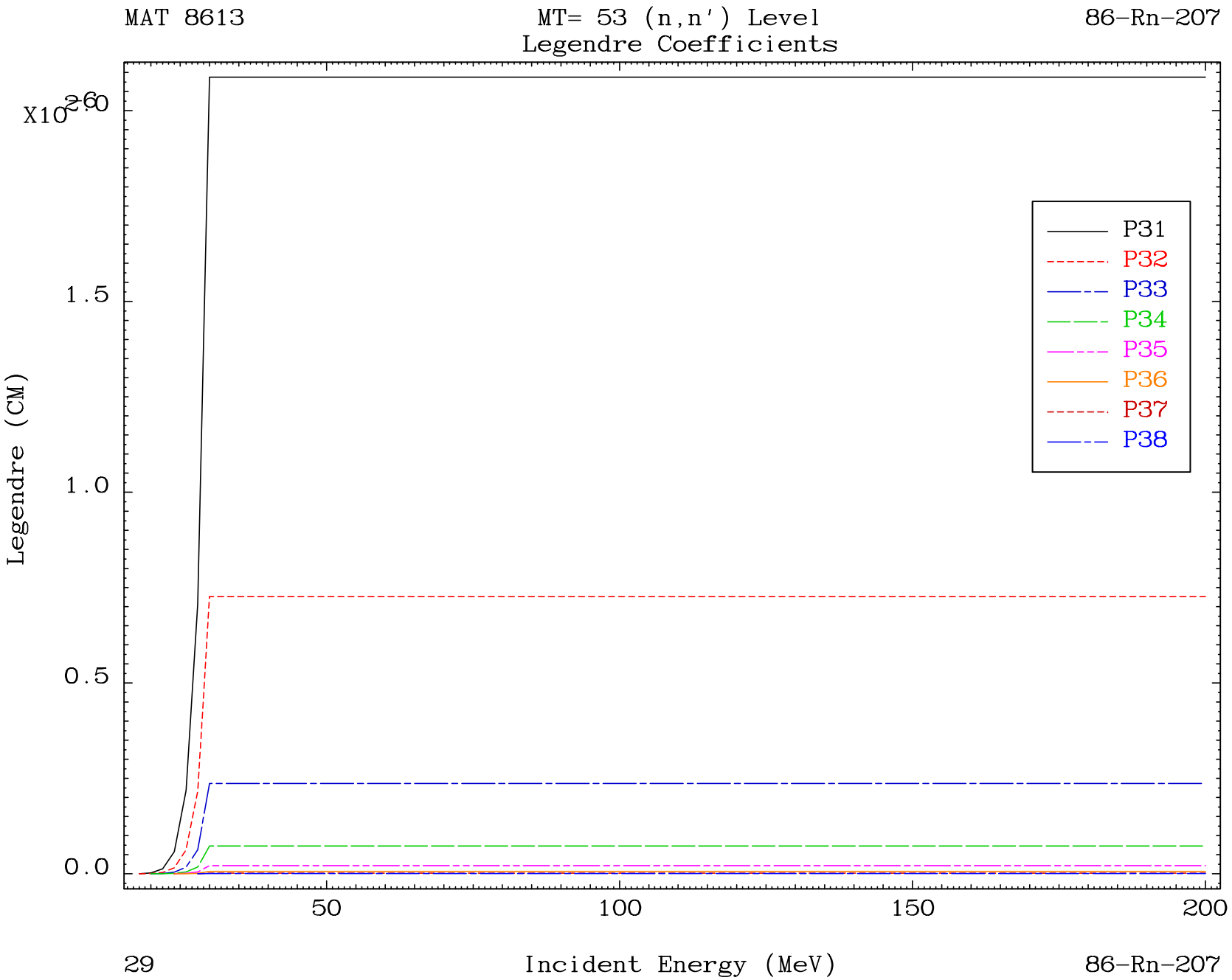

MAT 8613
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
24
Incident Energy (MeV)
86-Rn-207

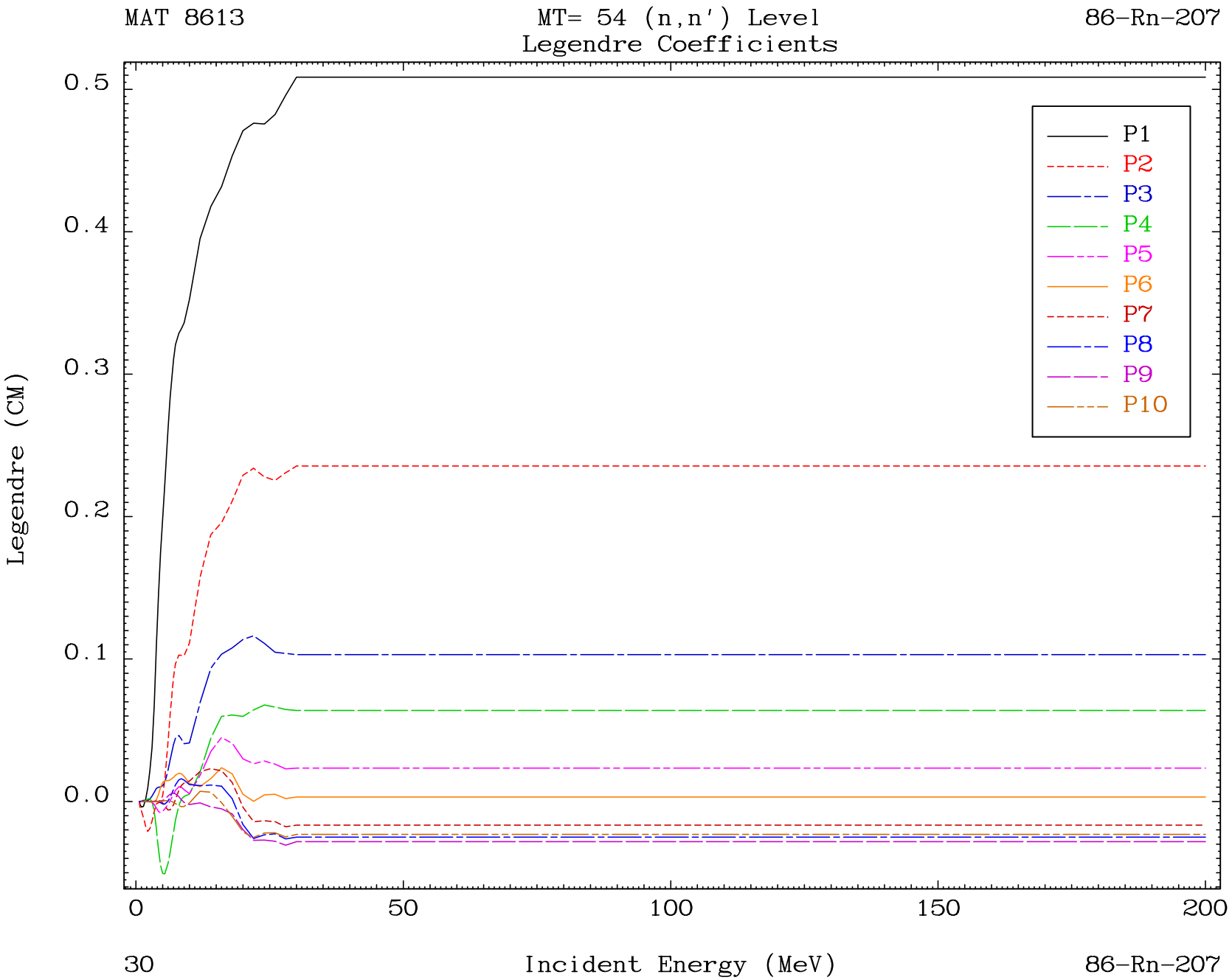

MAT 8613
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-207
X10^-6
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
25
Incident Energy (MeV)
86-Rn-207

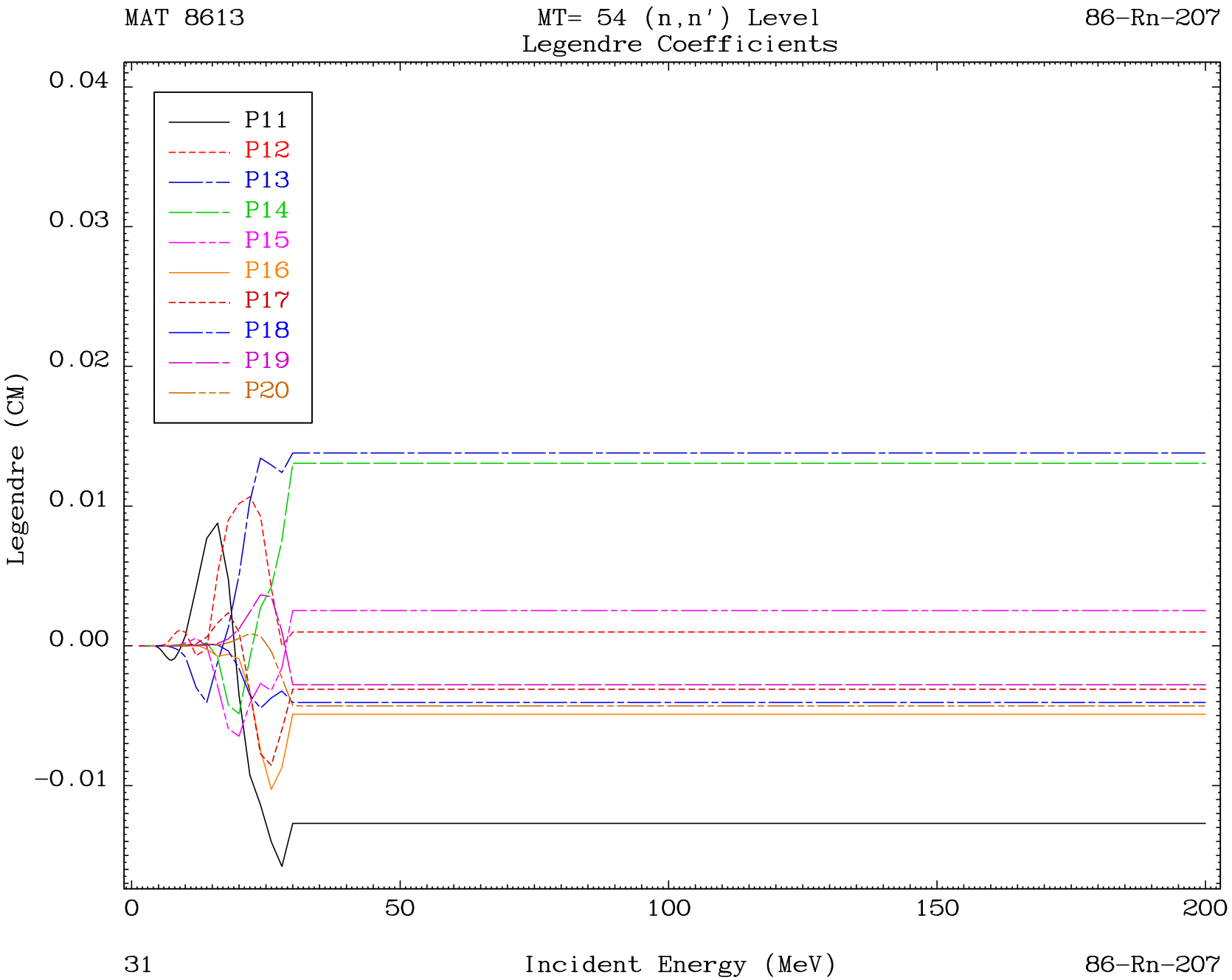

MAT 8613
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-207
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
26
Incident Energy (MeV)
86-Rn-207

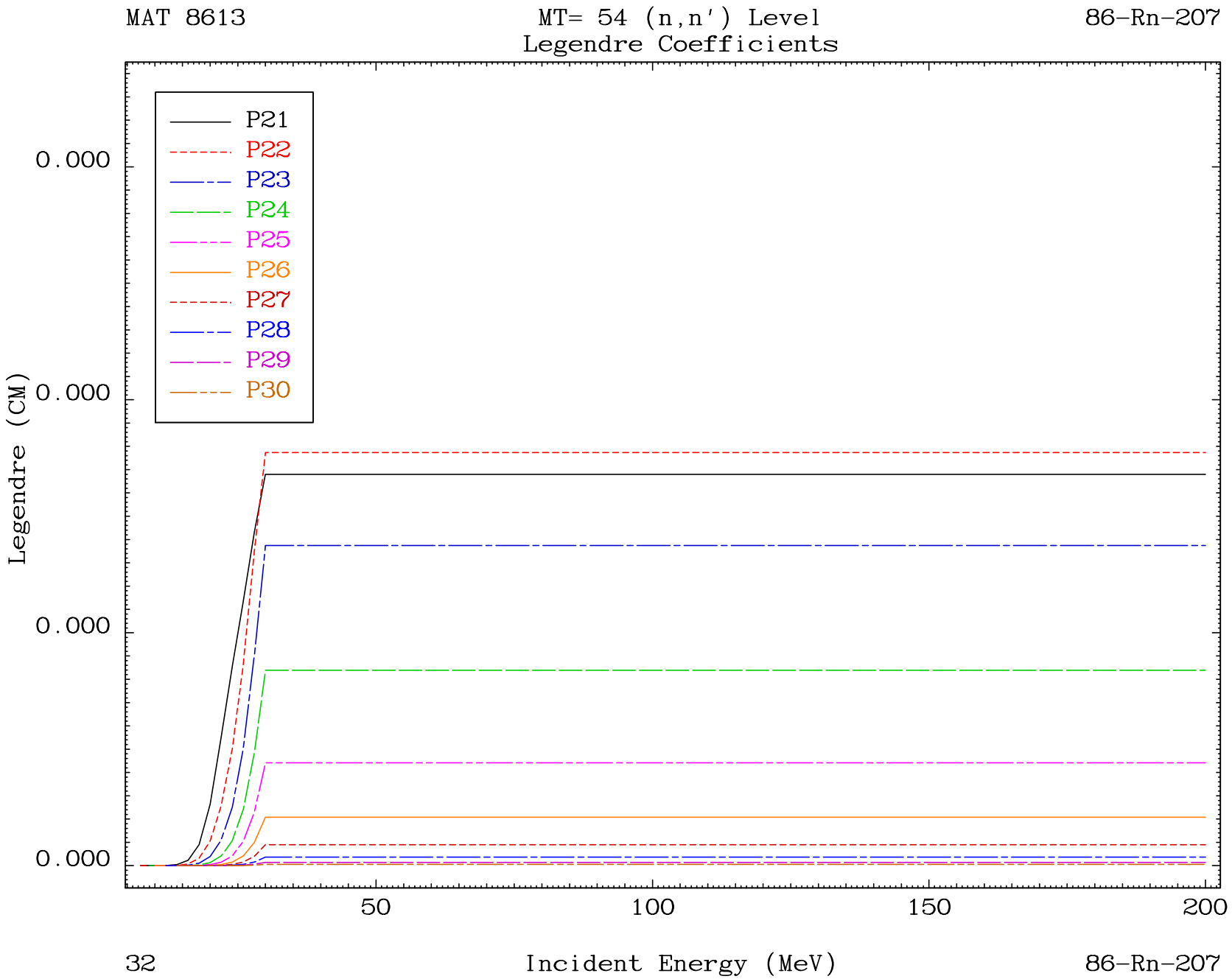

MAT 8613
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-207
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
27
Incident Energy (MeV)
86-Rn-207

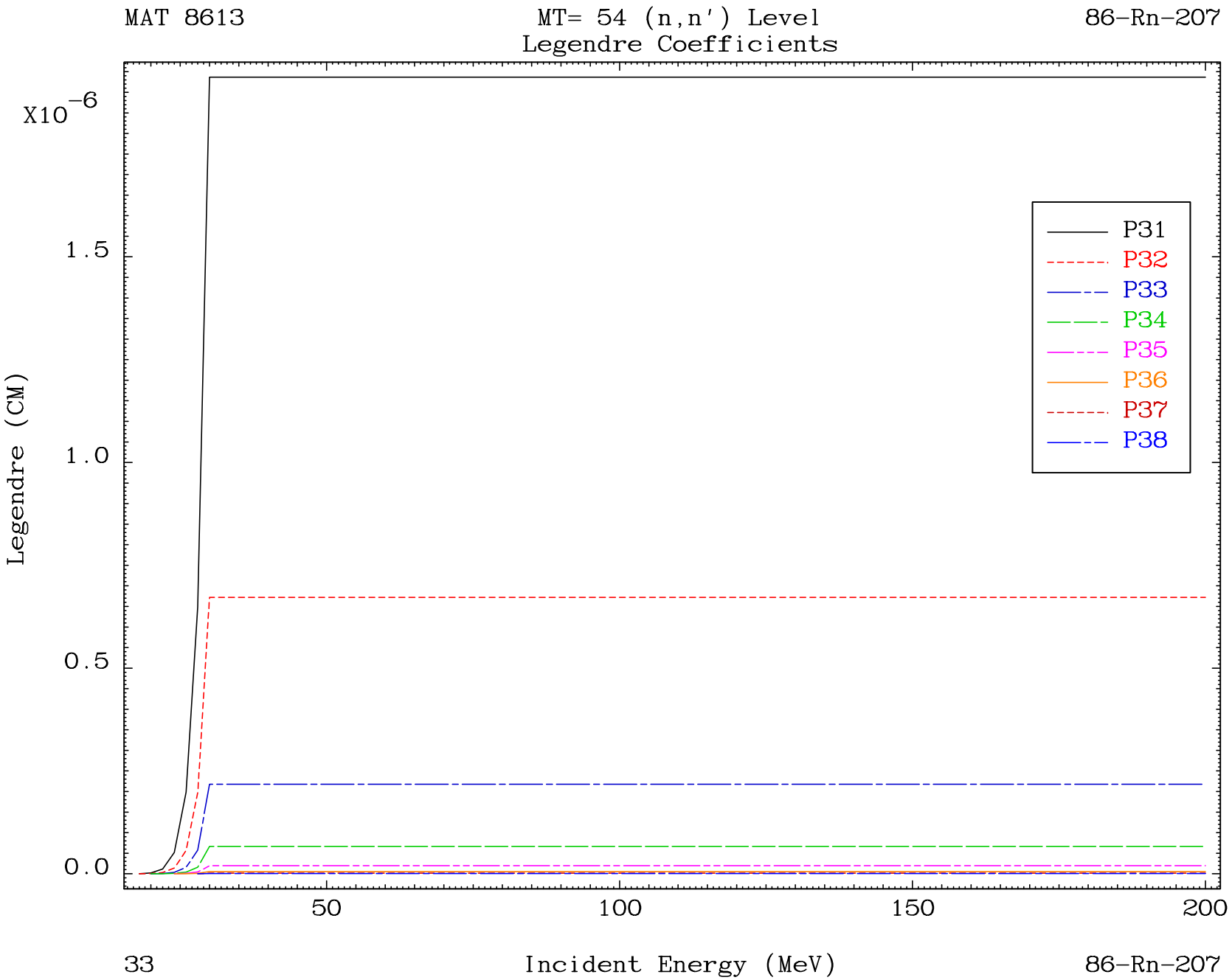

MAT 8613
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.000
0.000
0.000
0.000
Legendre (CM)
50
100
150
200
28
Incident Energy (MeV)
86-Rn-207

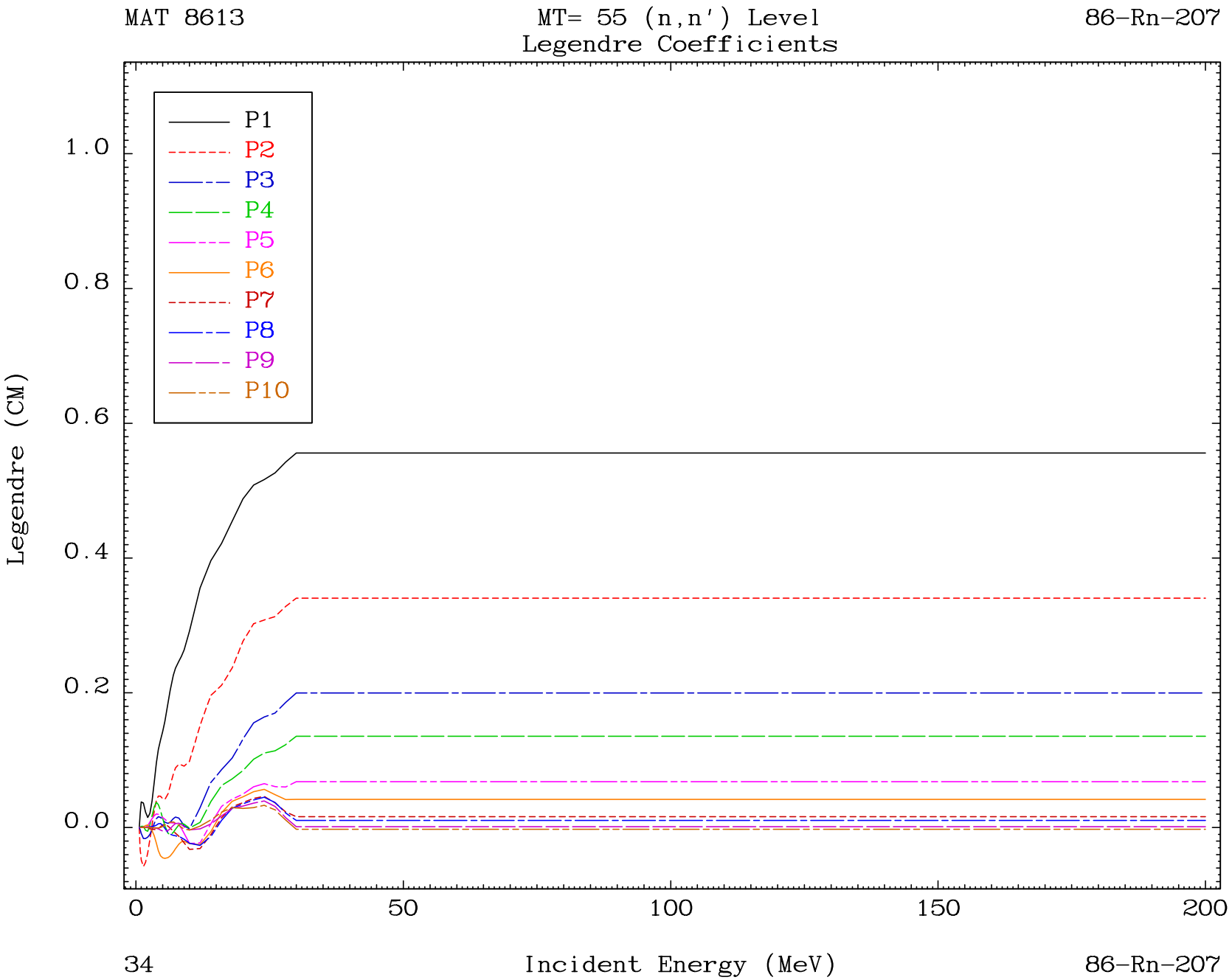

MAT 8613
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-207
X10+0
2
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
29
Incident Energy (MeV)
86-Rn-207

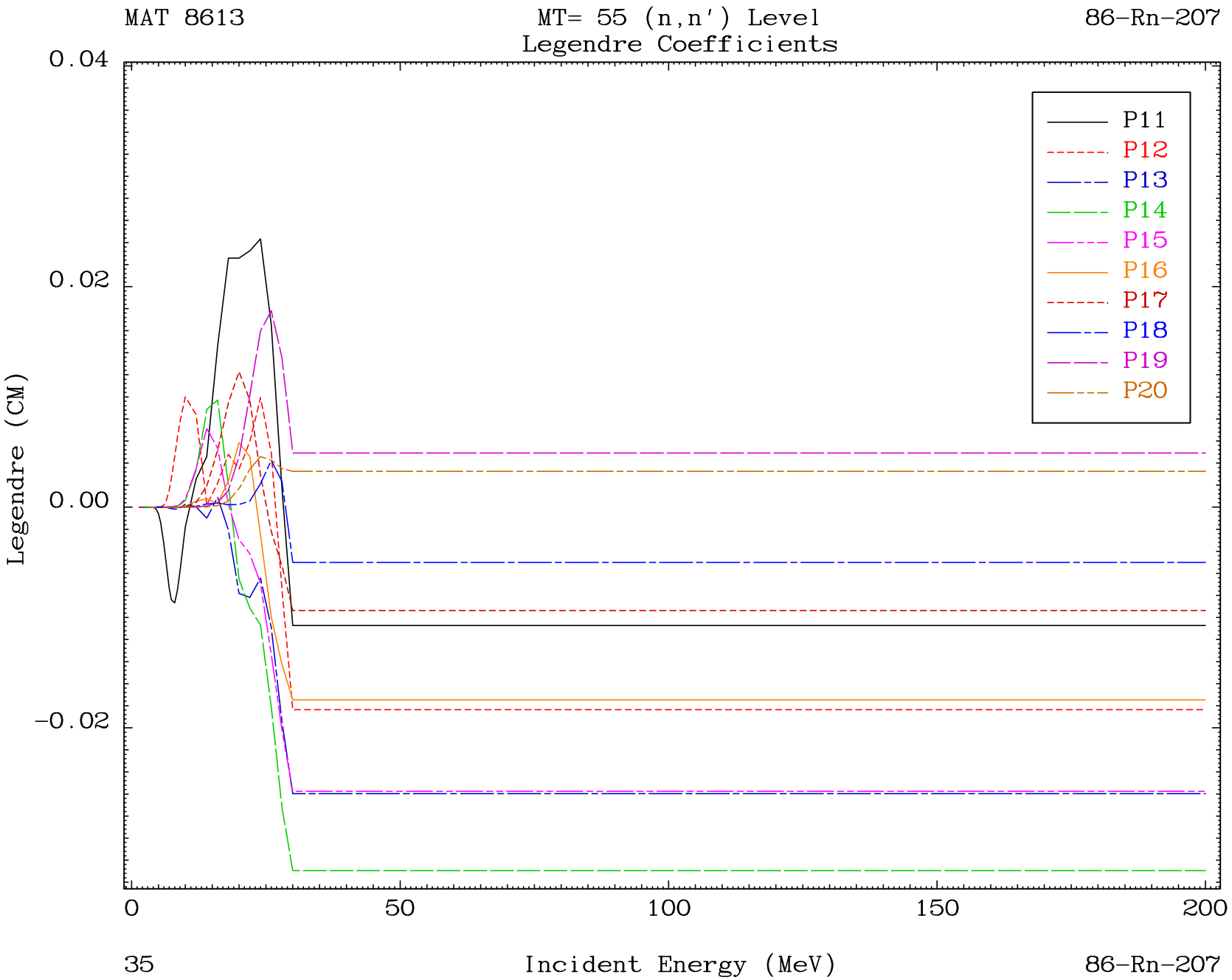

MAT 8613
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-207
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
30
Incident Energy (MeV)
86-Rn-207
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

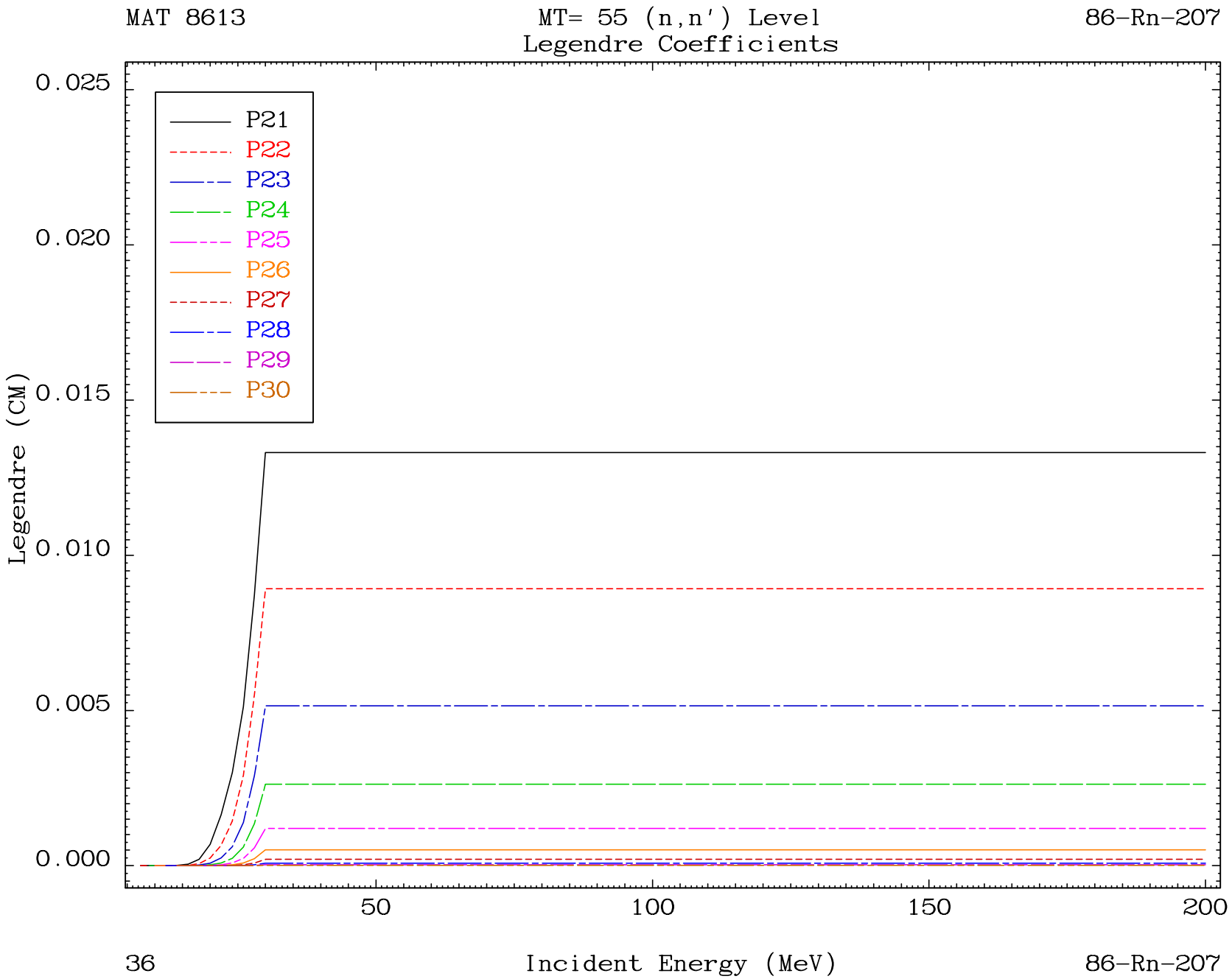

MAT 8613
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-207
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
31
Incident Energy (MeV)
86-Rn-207

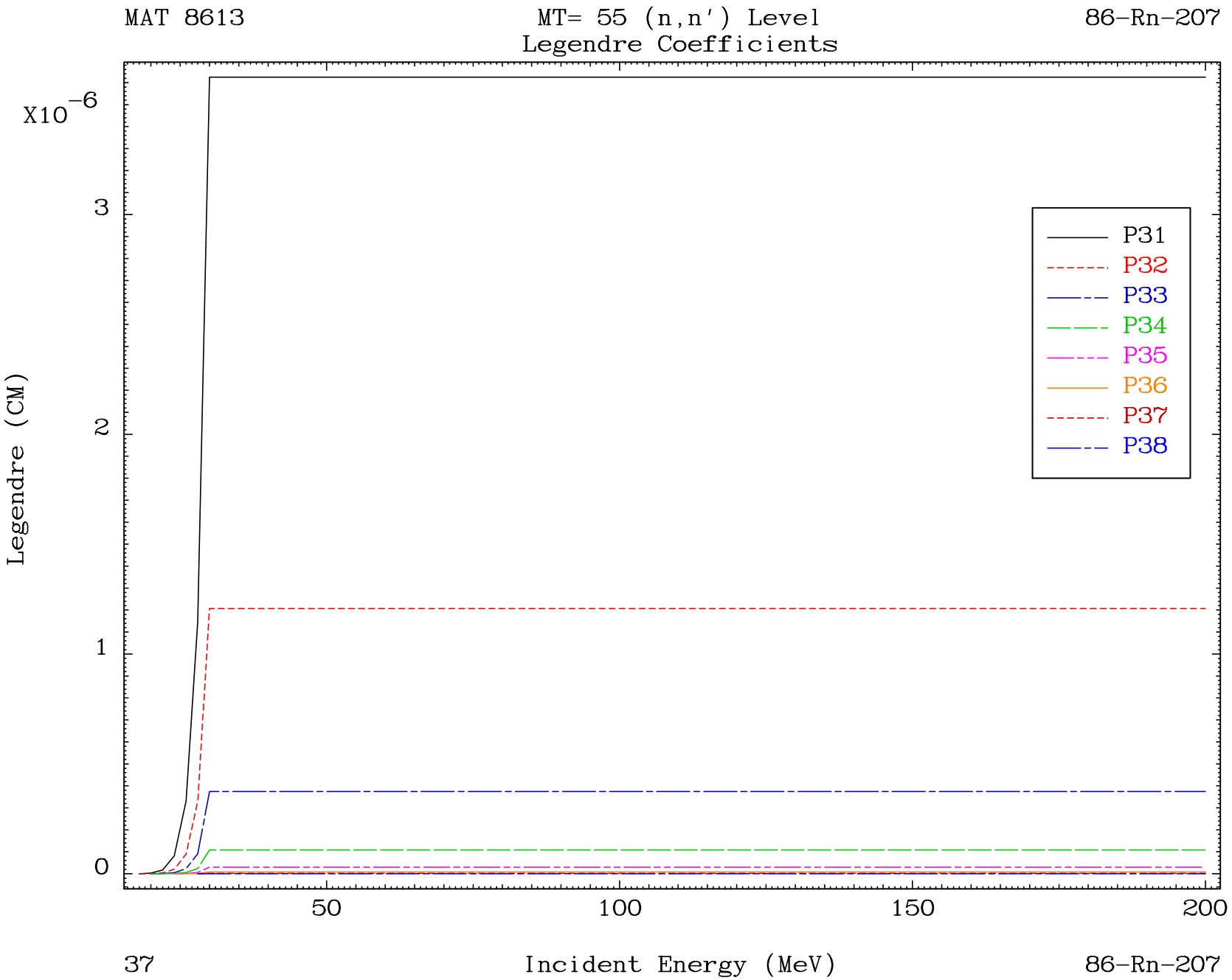

MAT 8613
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.000
0.000
0.000
0.000
Legendre (CM)
50
100
150
200
32
Incident Energy (MeV)
86-Rn-207

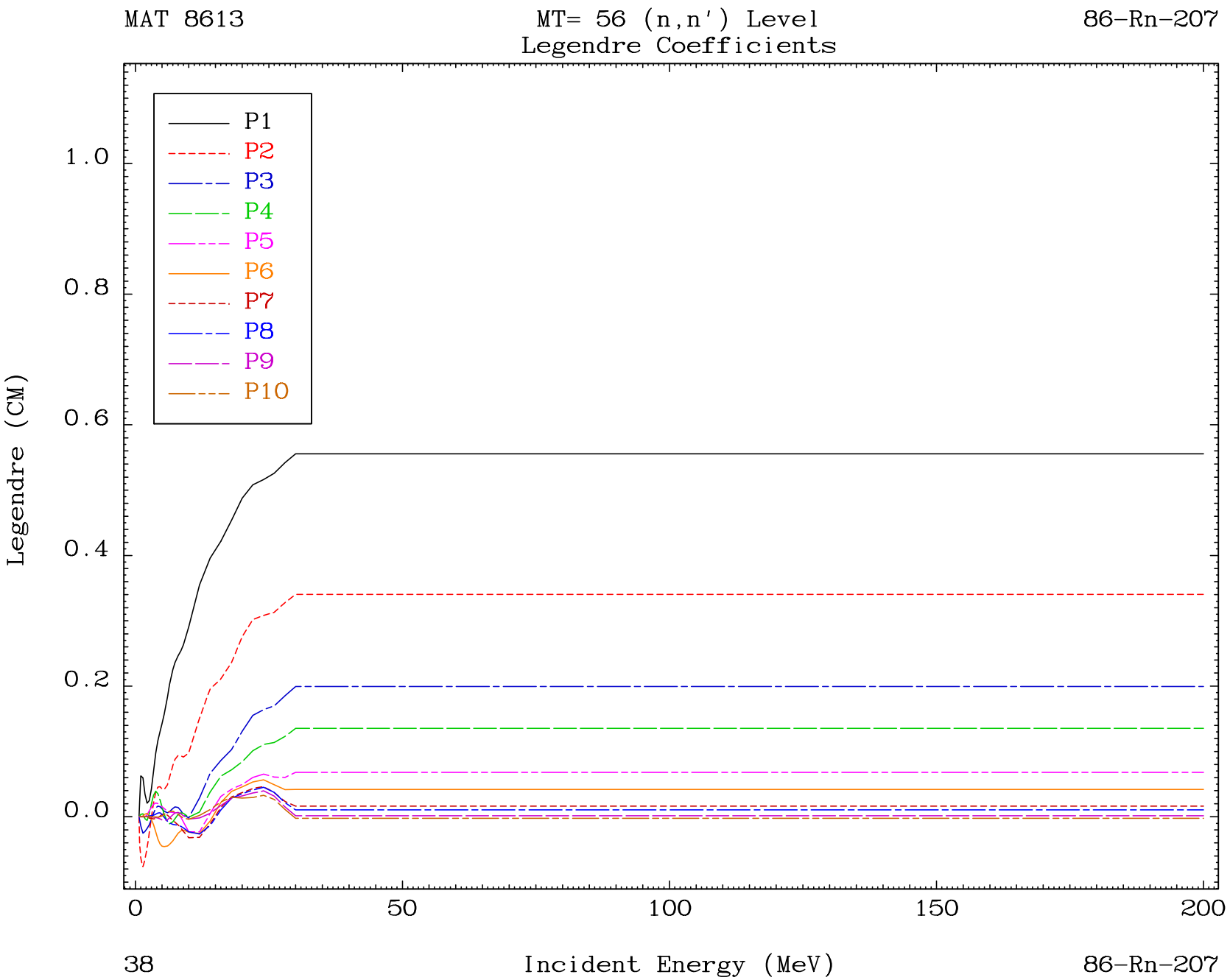

MAT 8613
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-207
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
33
Incident Energy (MeV)
86-Rn-207

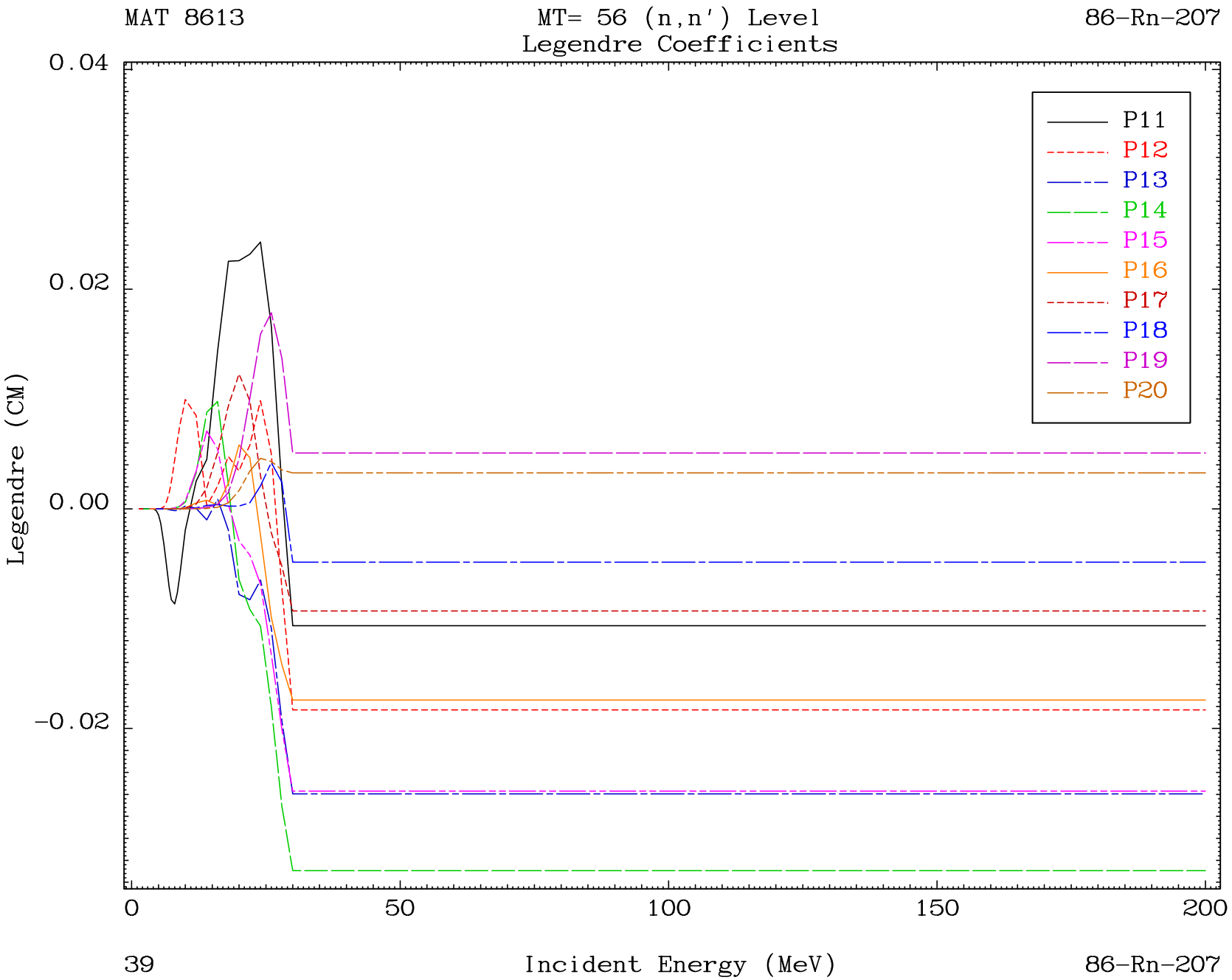

MAT 8613
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-207
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
34
Incident Energy (MeV)
86-Rn-207

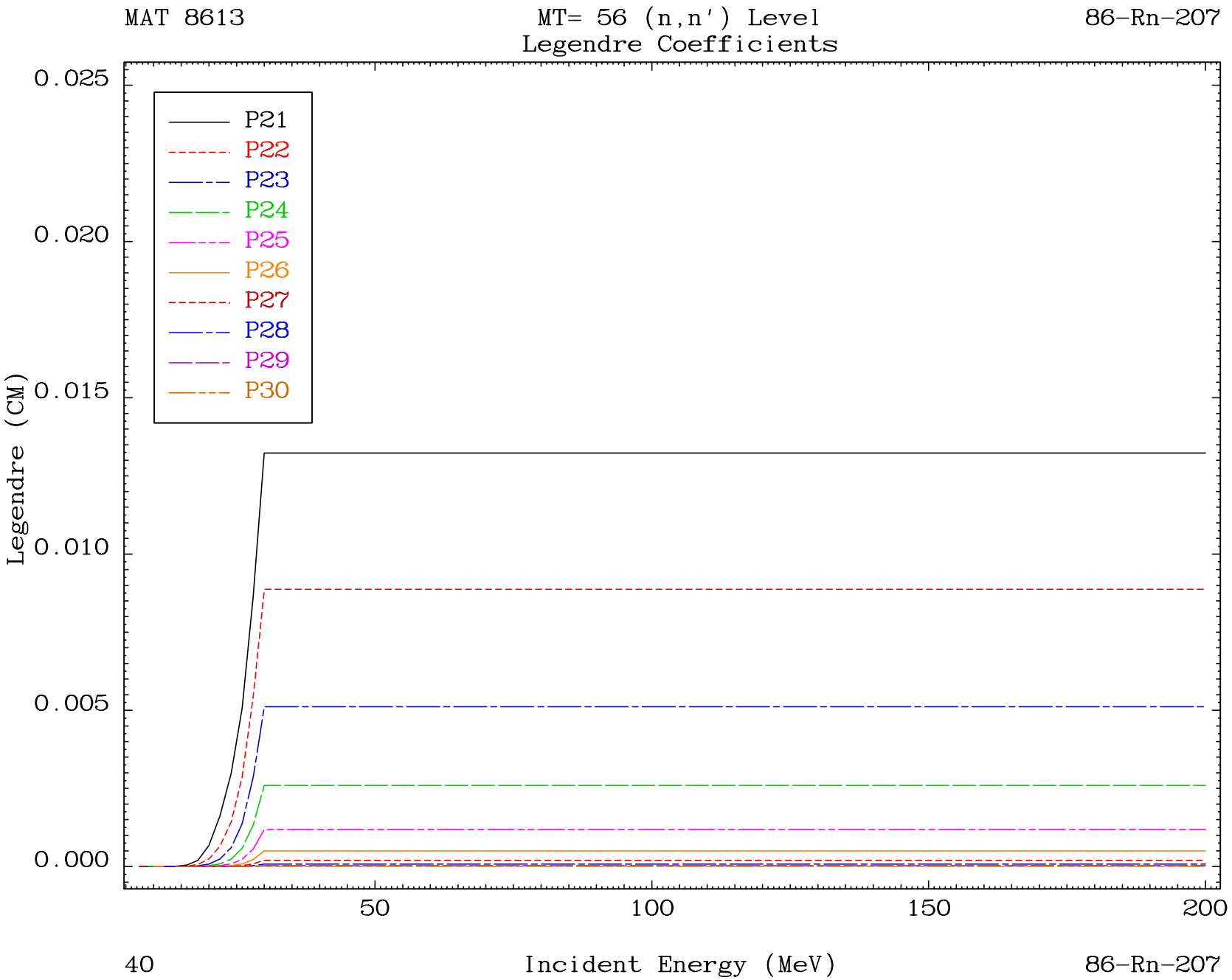

MAT 8613
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-207
0.04
0.02
0.00
-0.02
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
35
Incident Energy (MeV)
86-Rn-207

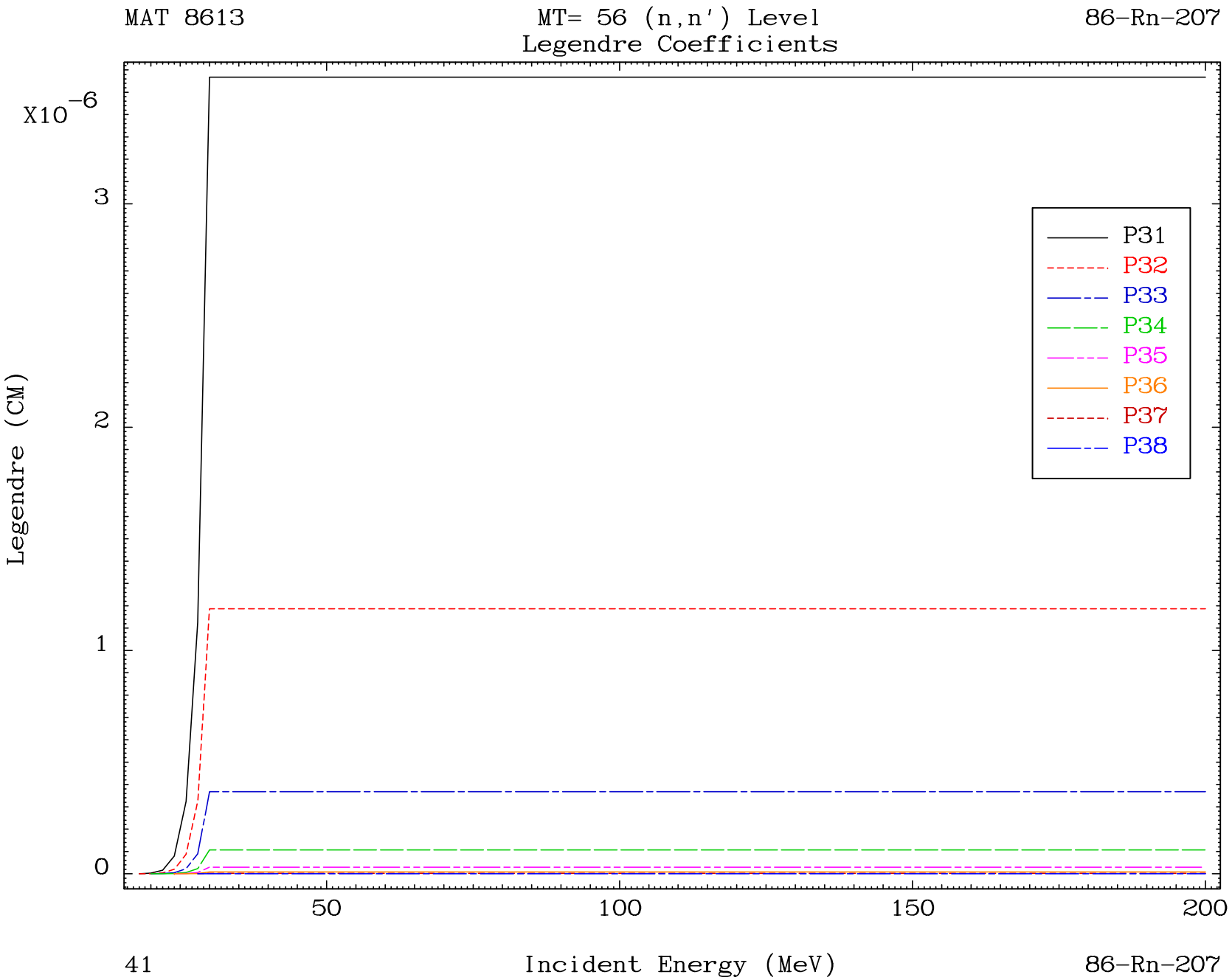

MAT 8613
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
36
Incident Energy (MeV)
86-Rn-207

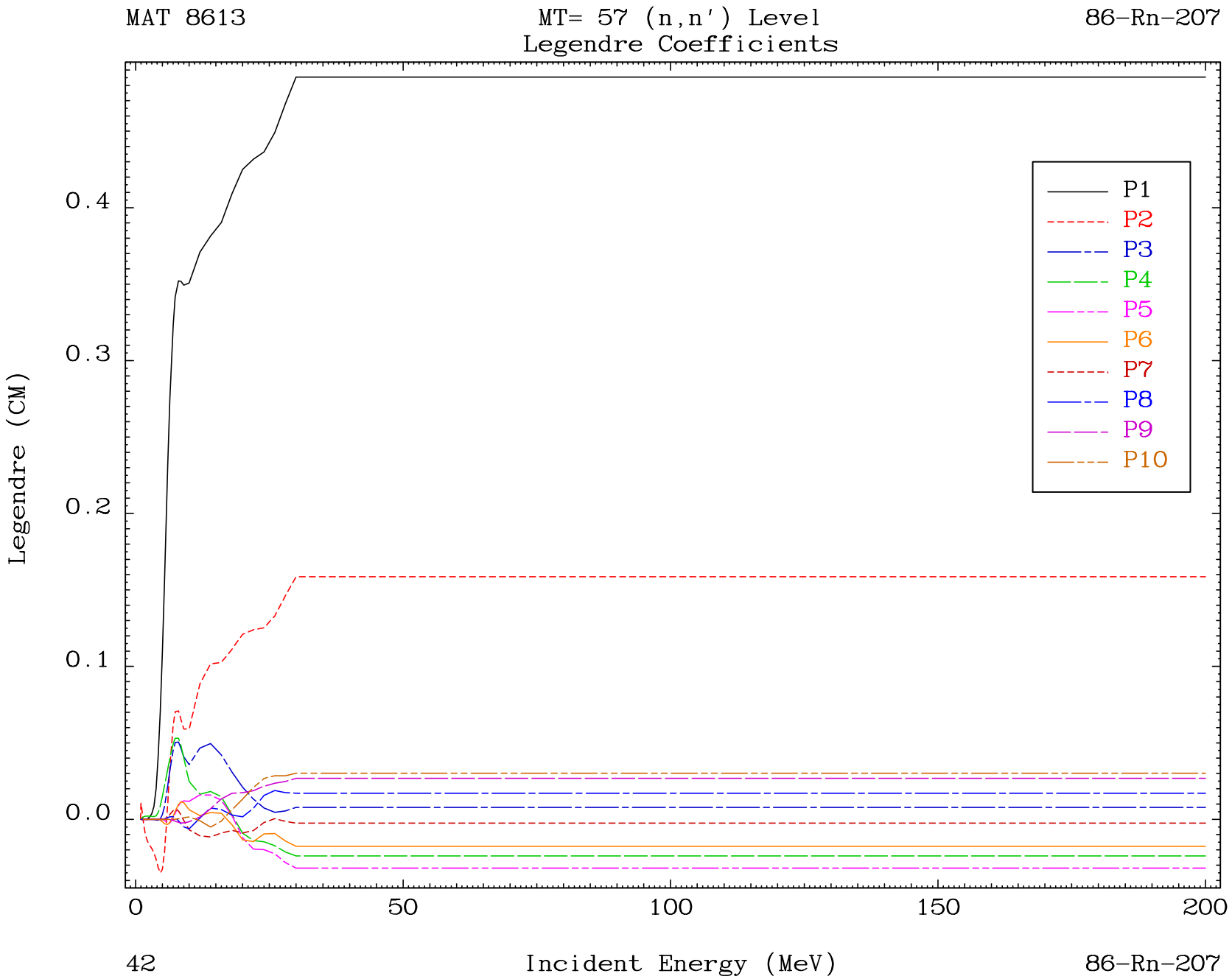

MAT 8613
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-207
X10 −6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
37
Incident Energy (MeV)
86-Rn-207

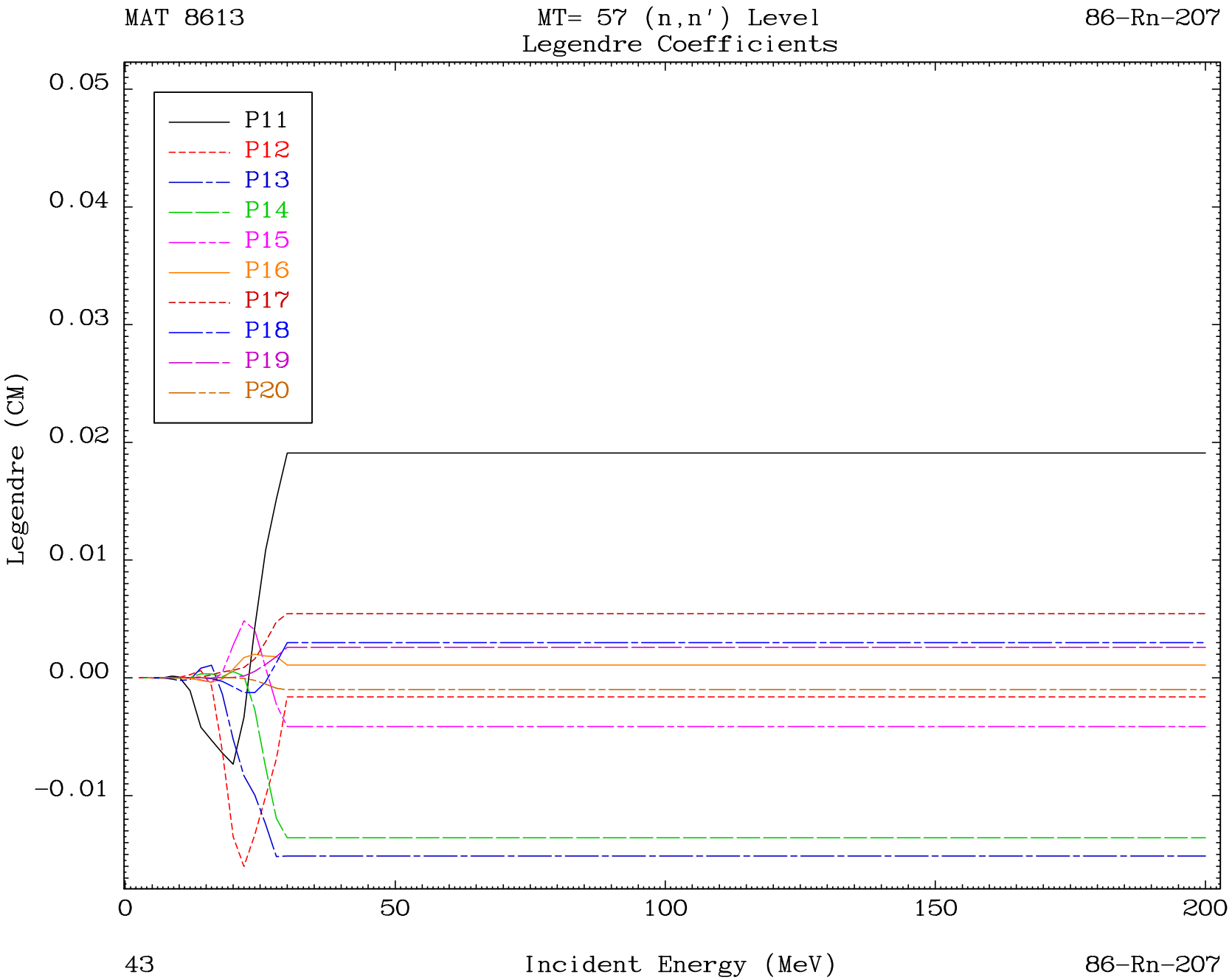

MAT 8613
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-207
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
38
Incident Energy (MeV)
86-Rn-207

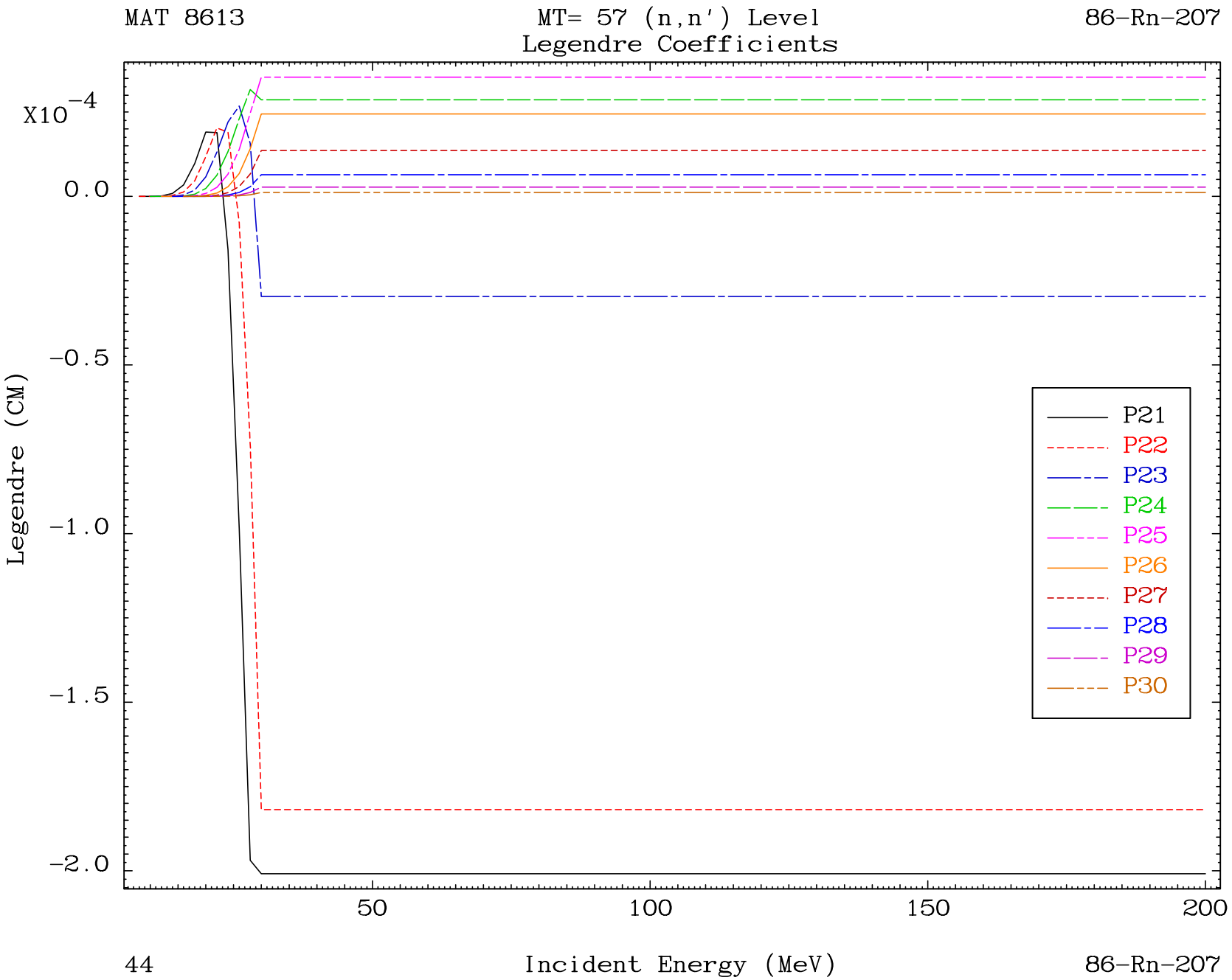

MAT 8613
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-207
0.04
0.02
0.00
-0.02
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
39
Incident Energy (MeV)
86-Rn-207


MAT 8613
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
40
50
100
150
200
Incident Energy (MeV)
86-Rn-207

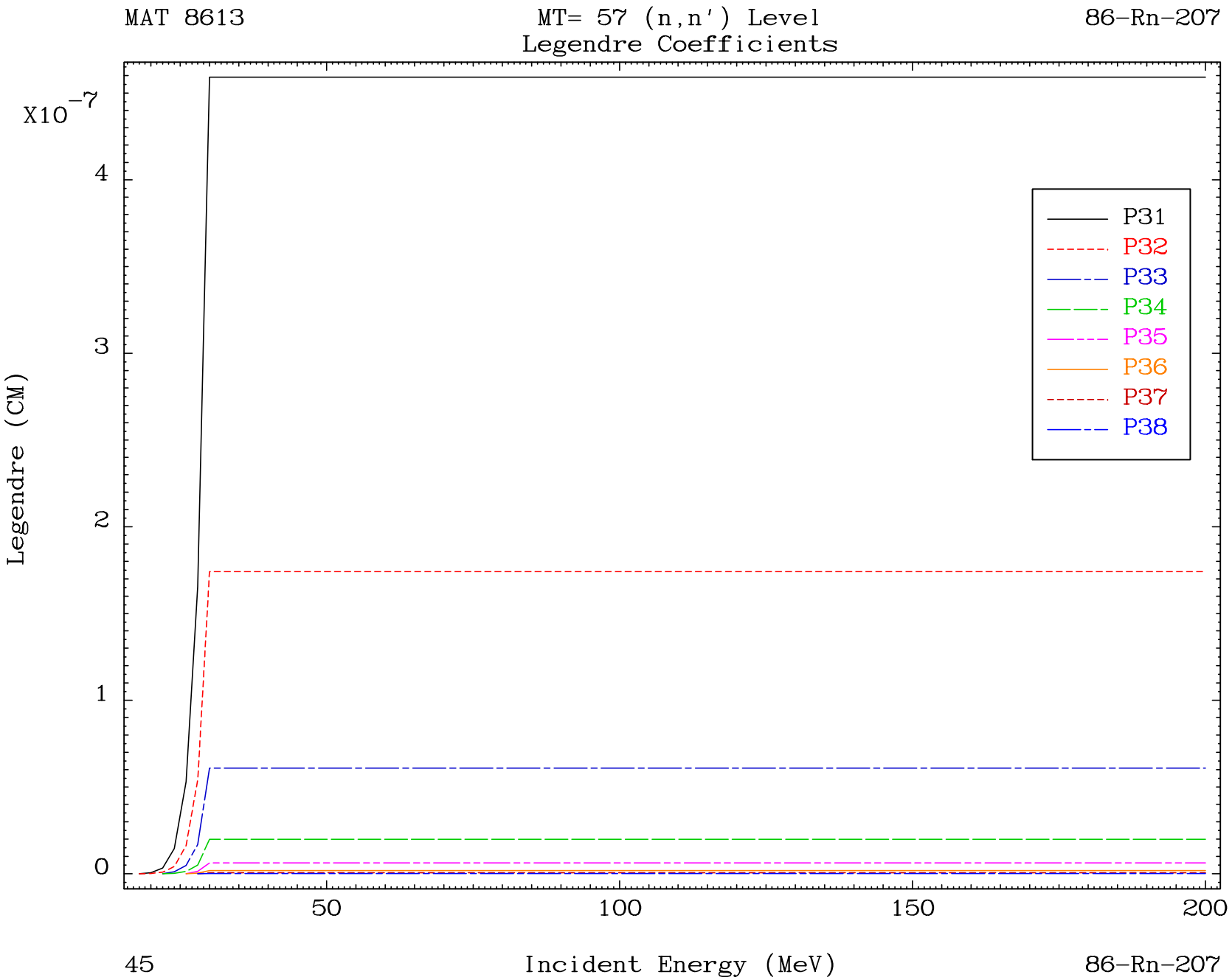

MAT 8613
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-207
X10 −6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
41
Incident Energy (MeV)
86-Rn-207

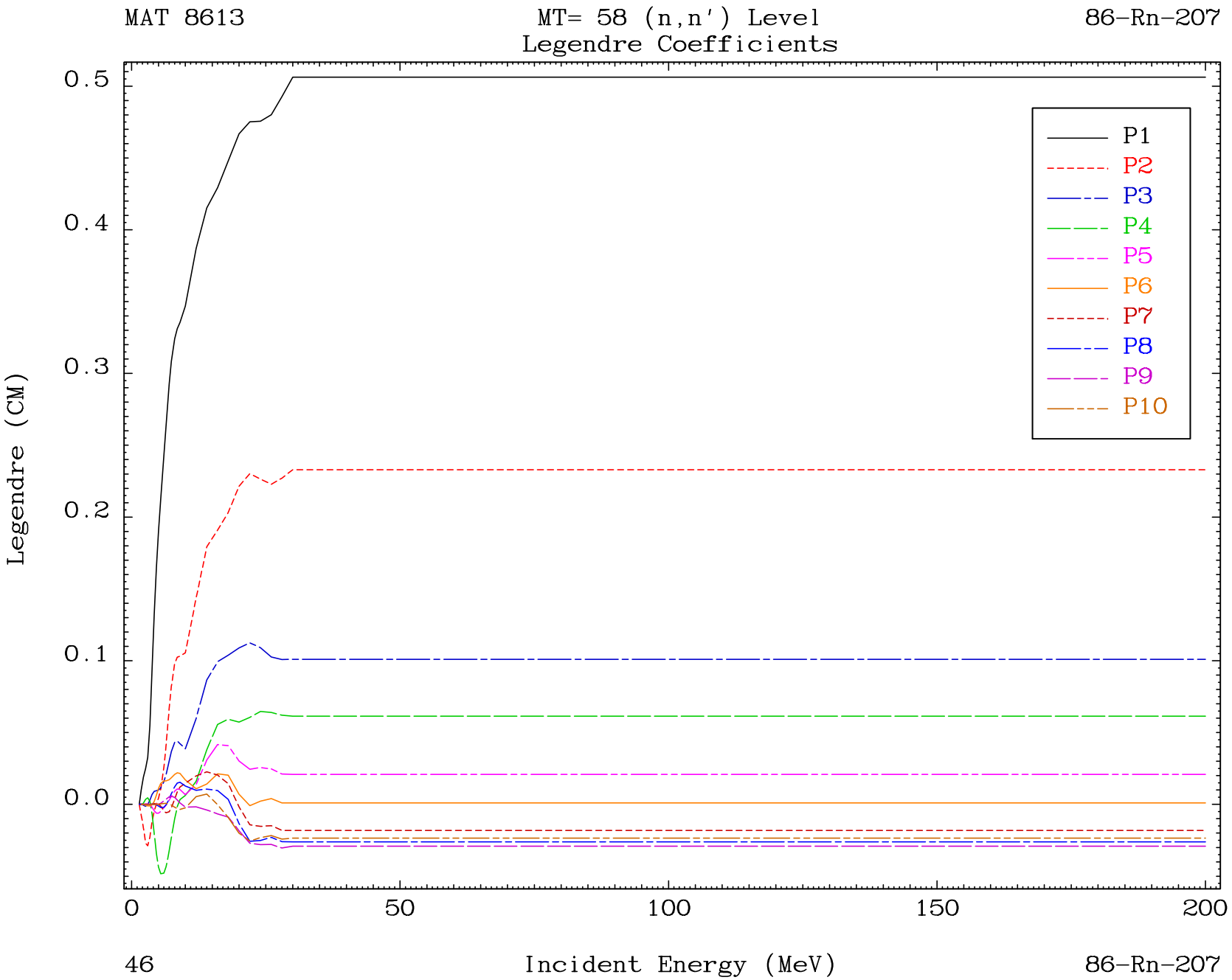

MAT 8613
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-207
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
42
Incident Energy (MeV)
86-Rn-207

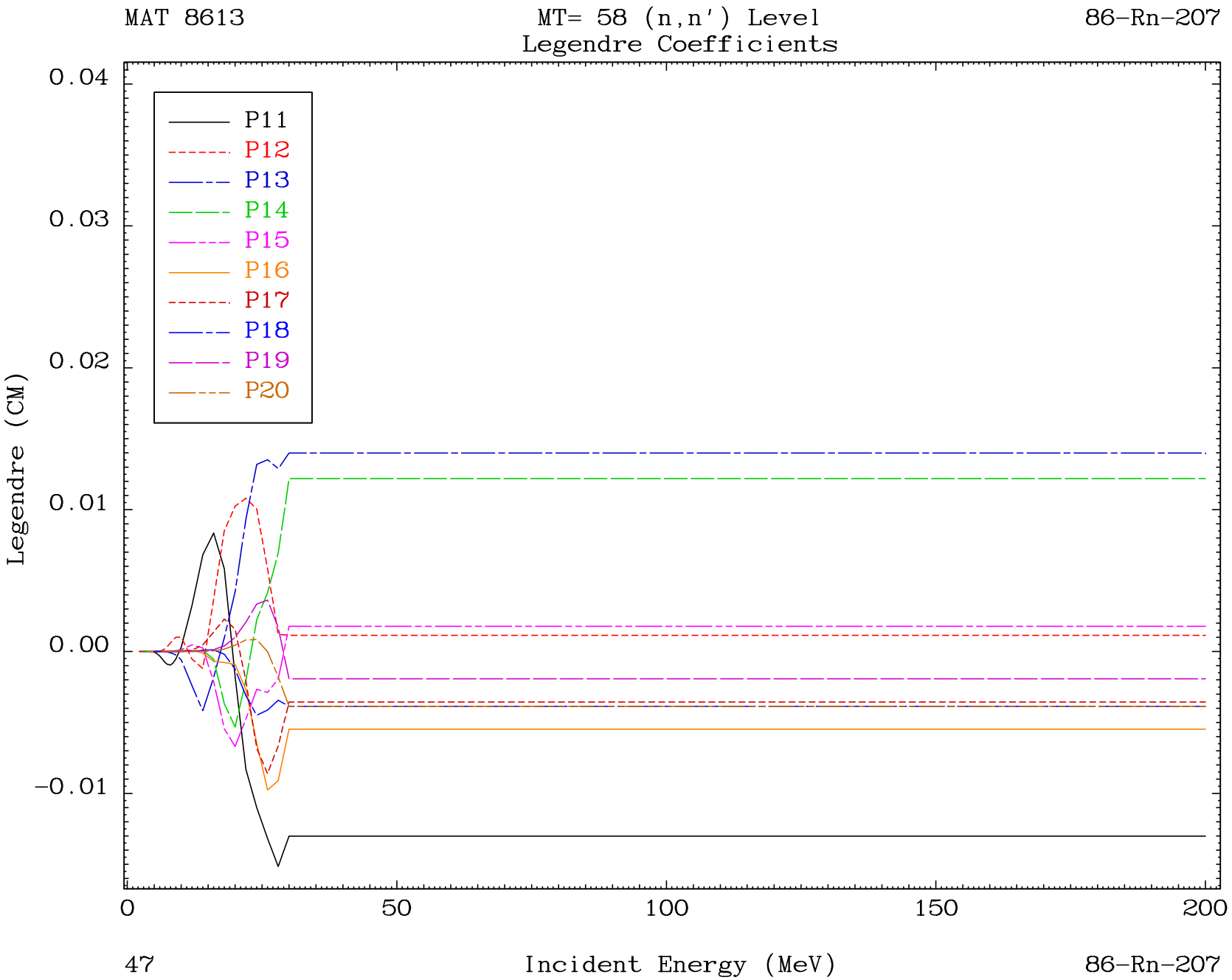

MAT 8613
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-207
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
43
Incident Energy (MeV)
86-Rn-207

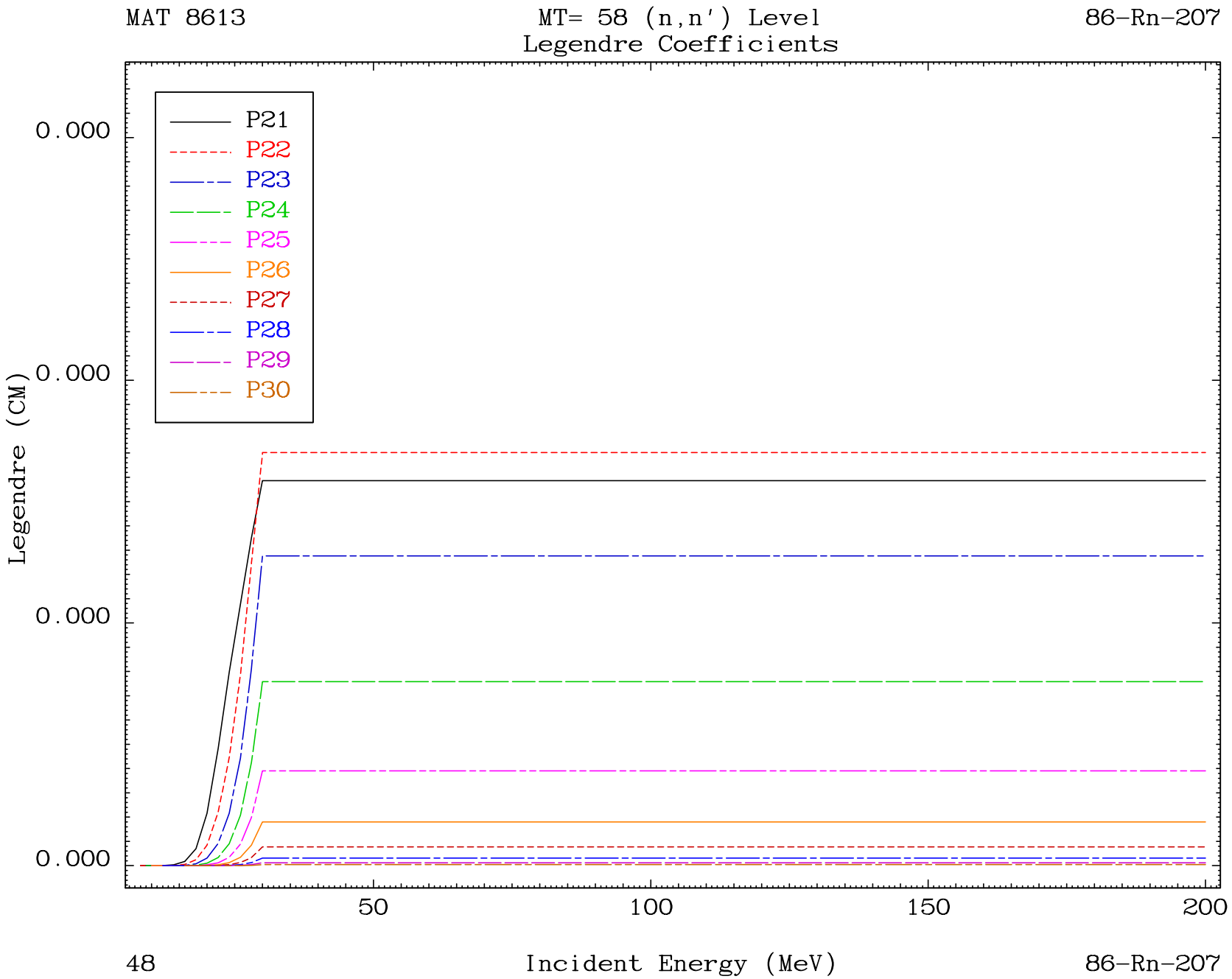

MAT 8613
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-207
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30

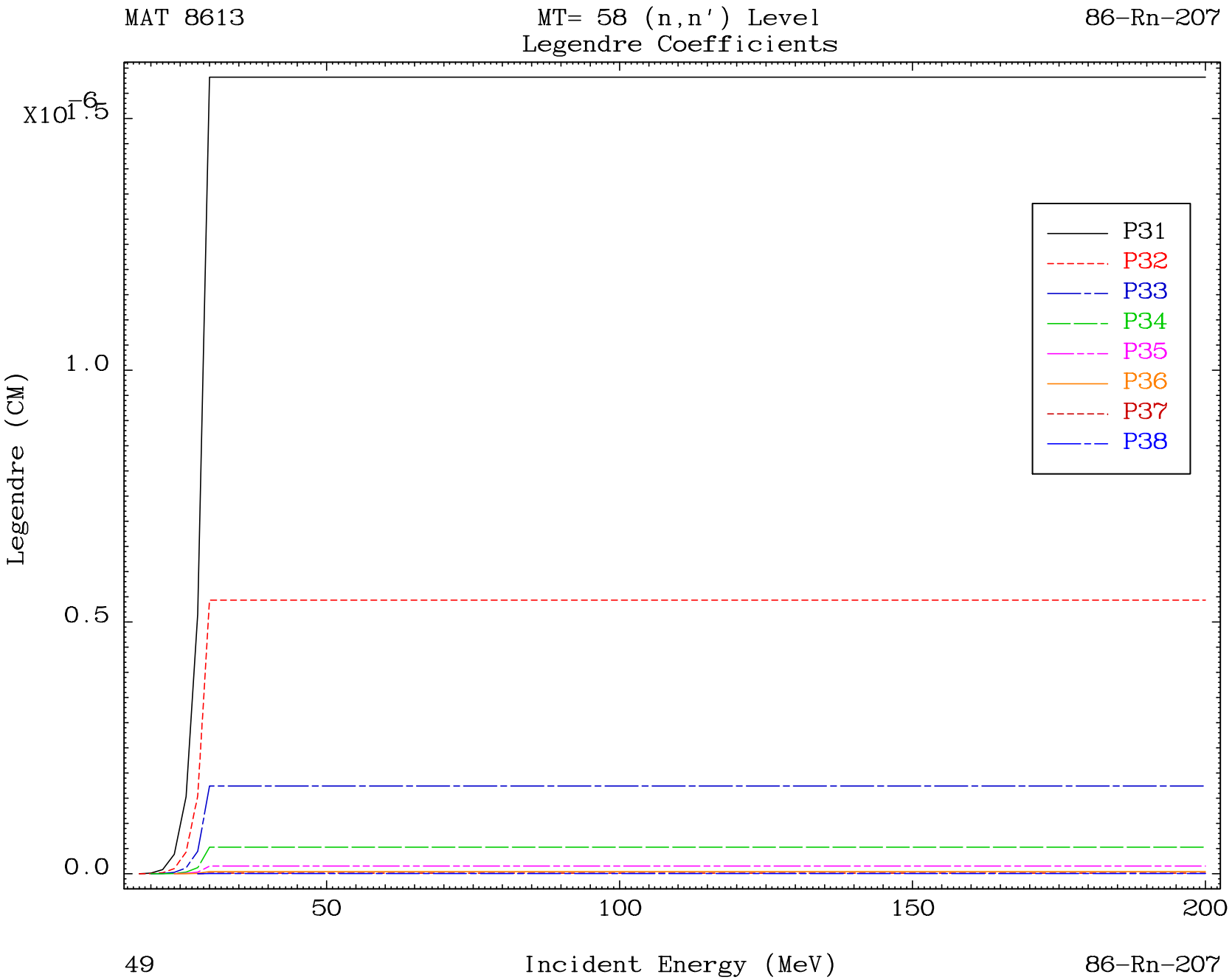
86-Rn-207

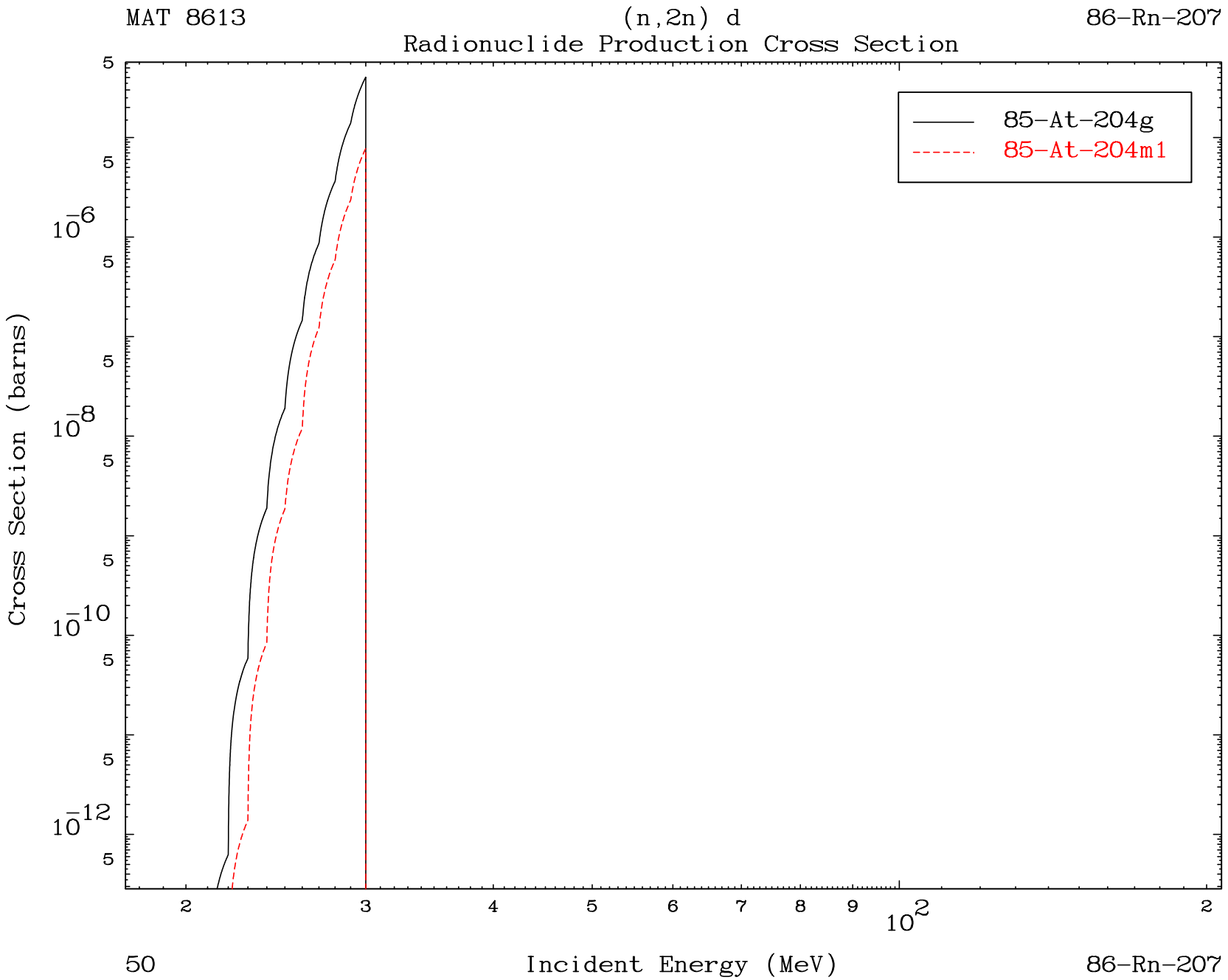

MAT 8613
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-207
X10-7
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
45
Incident Energy (MeV)
86-Rn-207

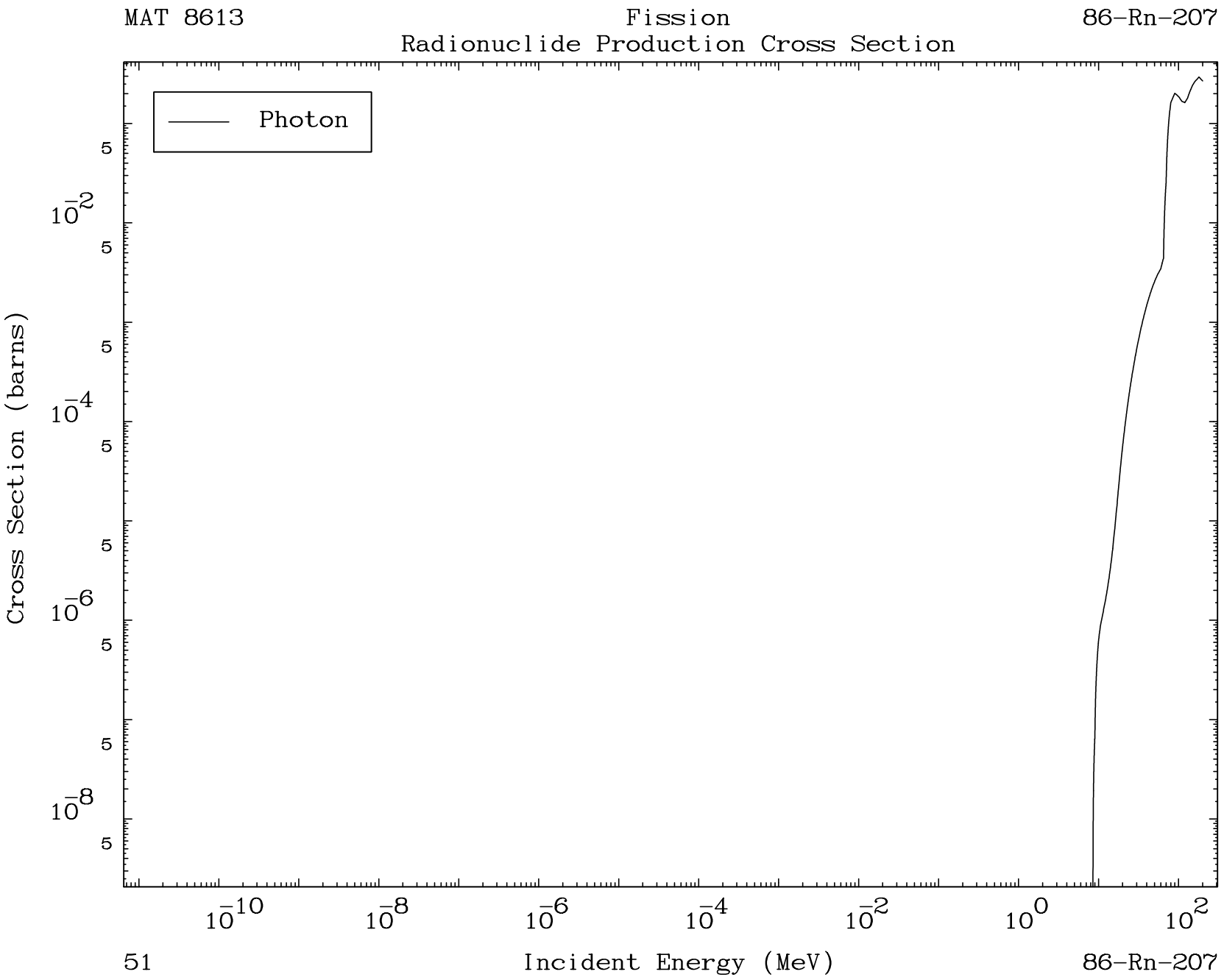

MAT 8613
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-207
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
46
Incident Energy (MeV)
86-Rn-207

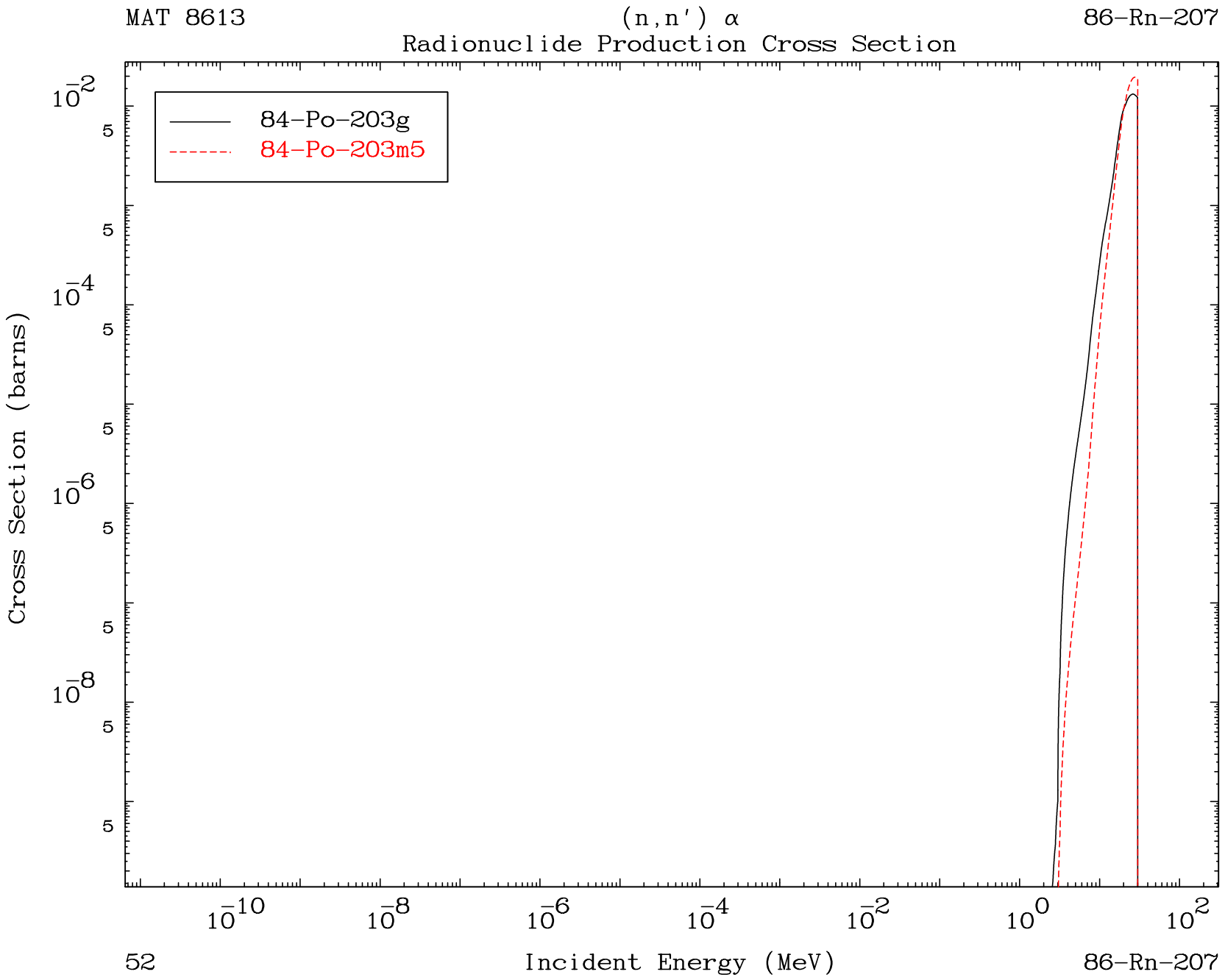

MAT 8613
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-207
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
47
Incident Energy (MeV)
86-Rn-207

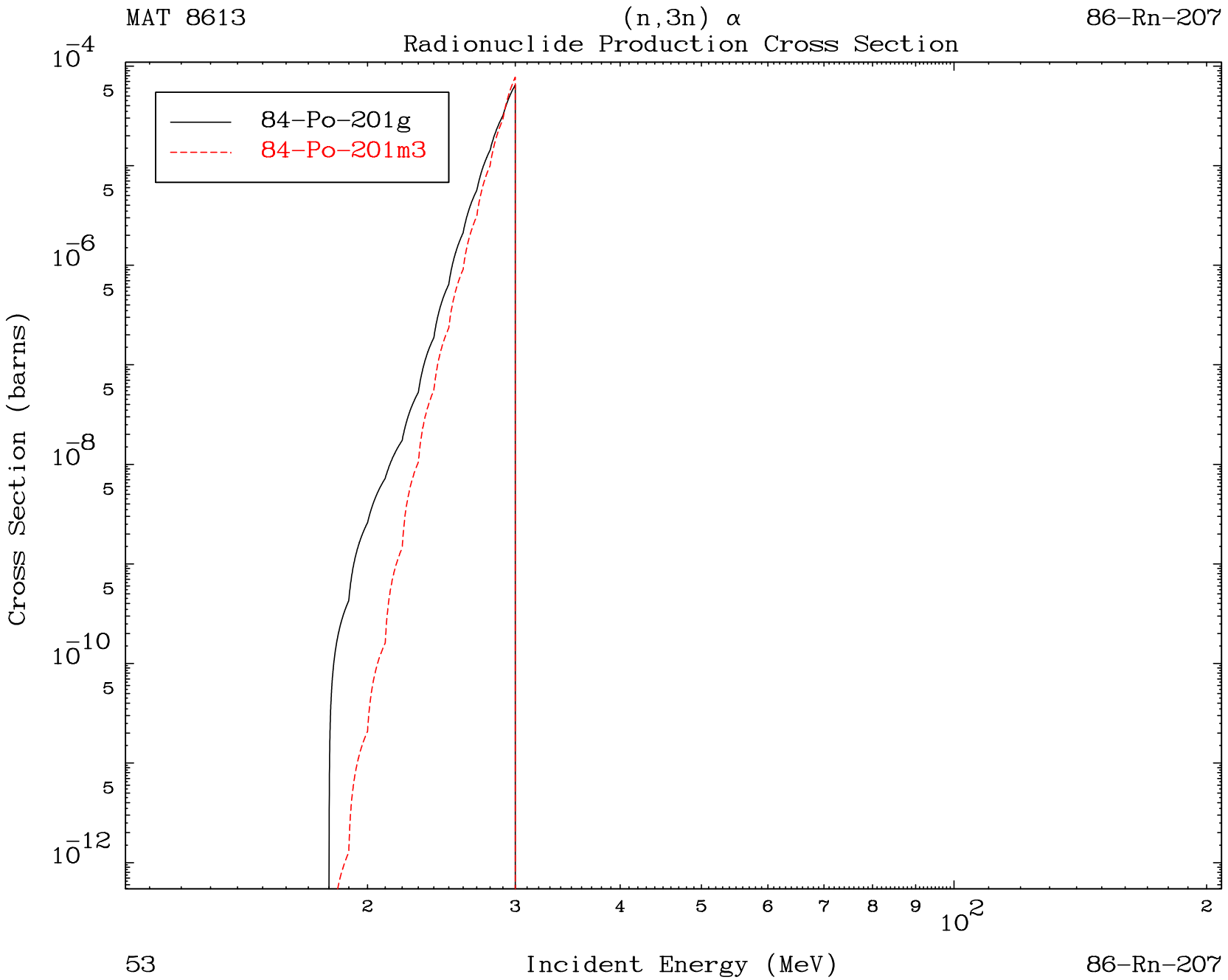

MAT 8613
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-207
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.000
0.000
0.000
0.000
Legendre (CM)
50
100
150
200
48
Incident Energy (MeV)
86-Rn-207

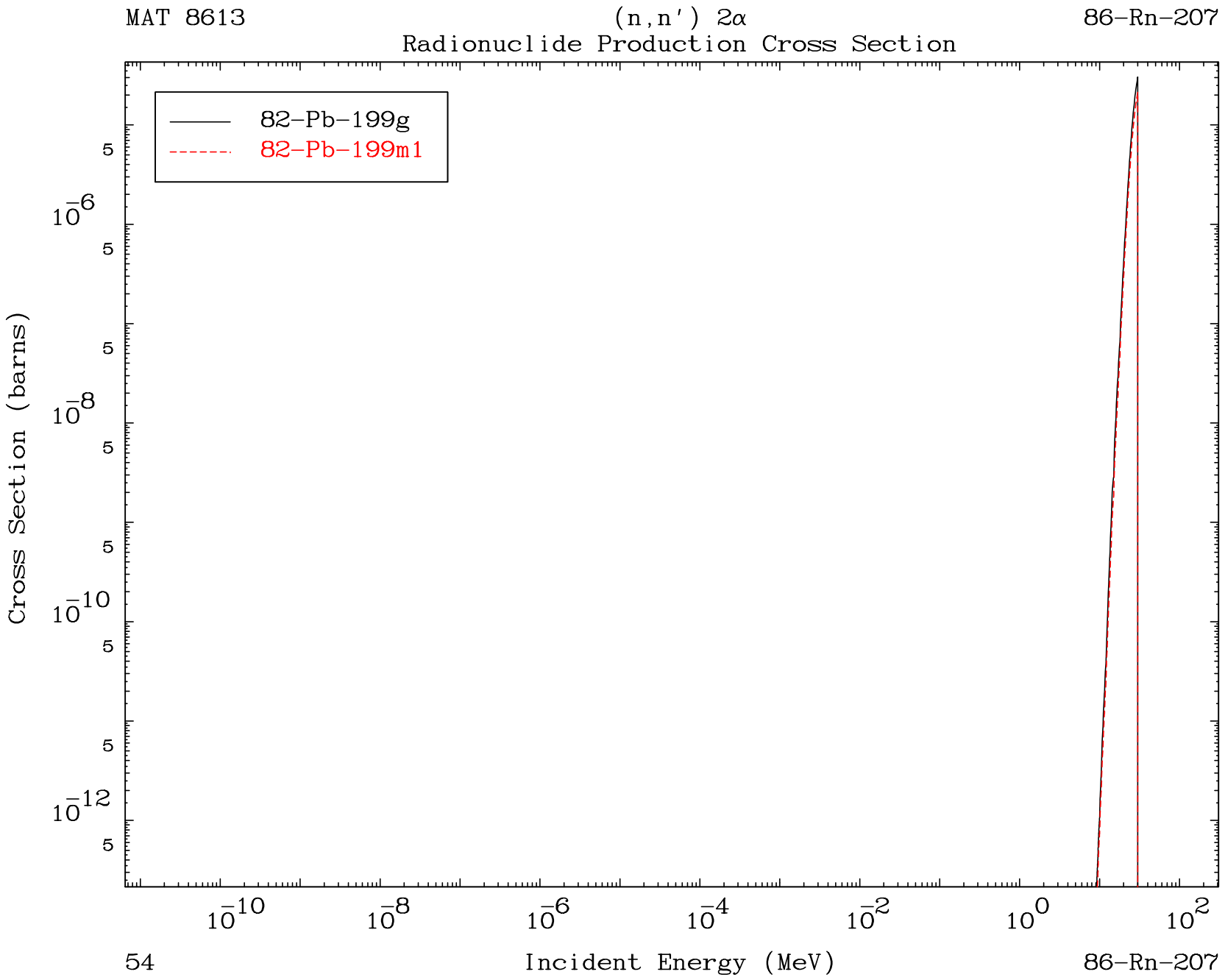

MAT 8613
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-207
X10-6
1.5
1.0
0.5
0.0
Legendre (CM)
50
100
150
200
P31
P32
P33
P34
P35
P36
P37
P38
49
Incident Energy (MeV)
86-Rn-207

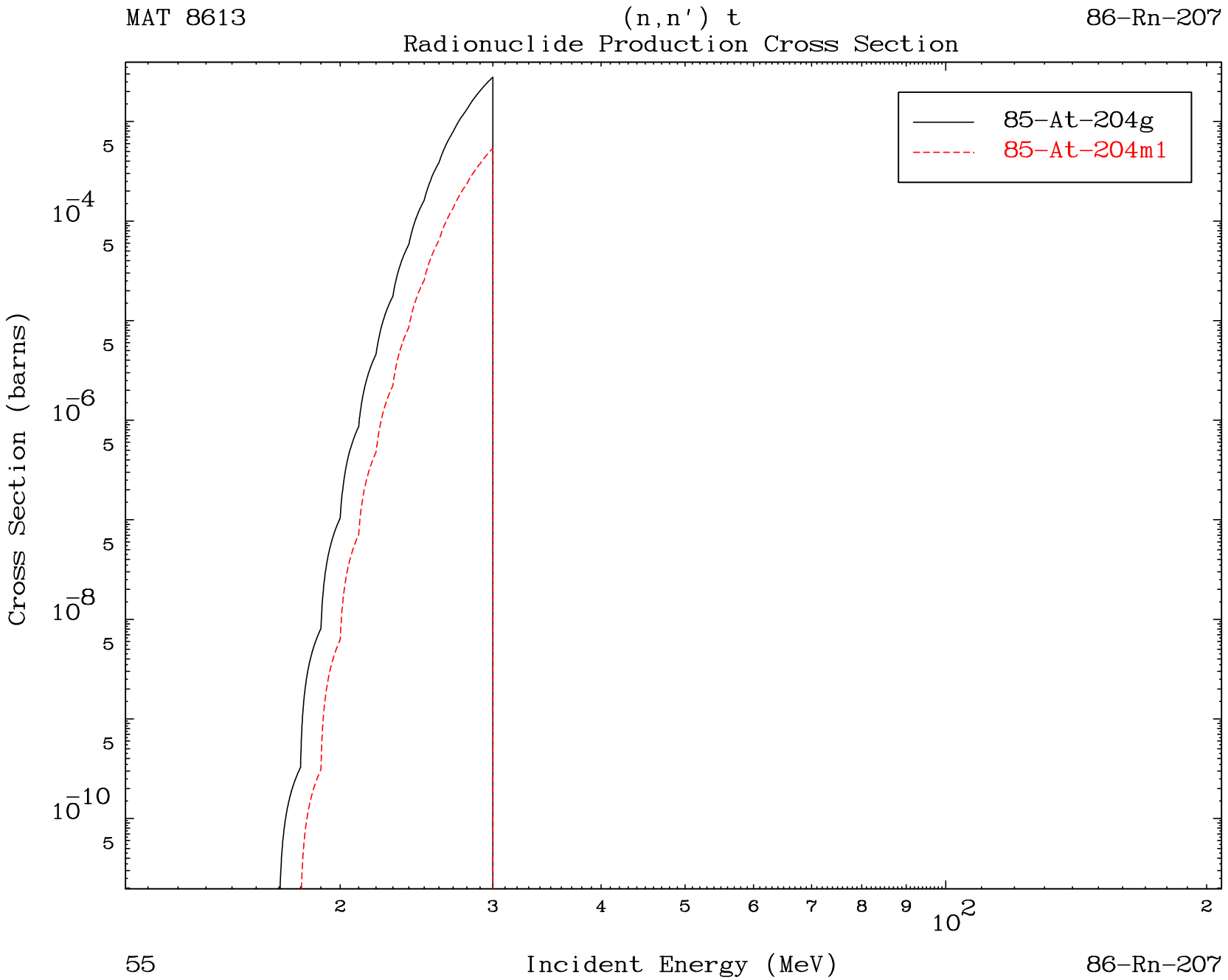

MAT 8613
(n,2n) d
86-Rn-207
Radionuclide Production Cross Section
85-At-204g
85-At-204m1
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
2
3
4
6
7
8
9
10^2
50
Incident Energy (MeV)
86-Rn-207

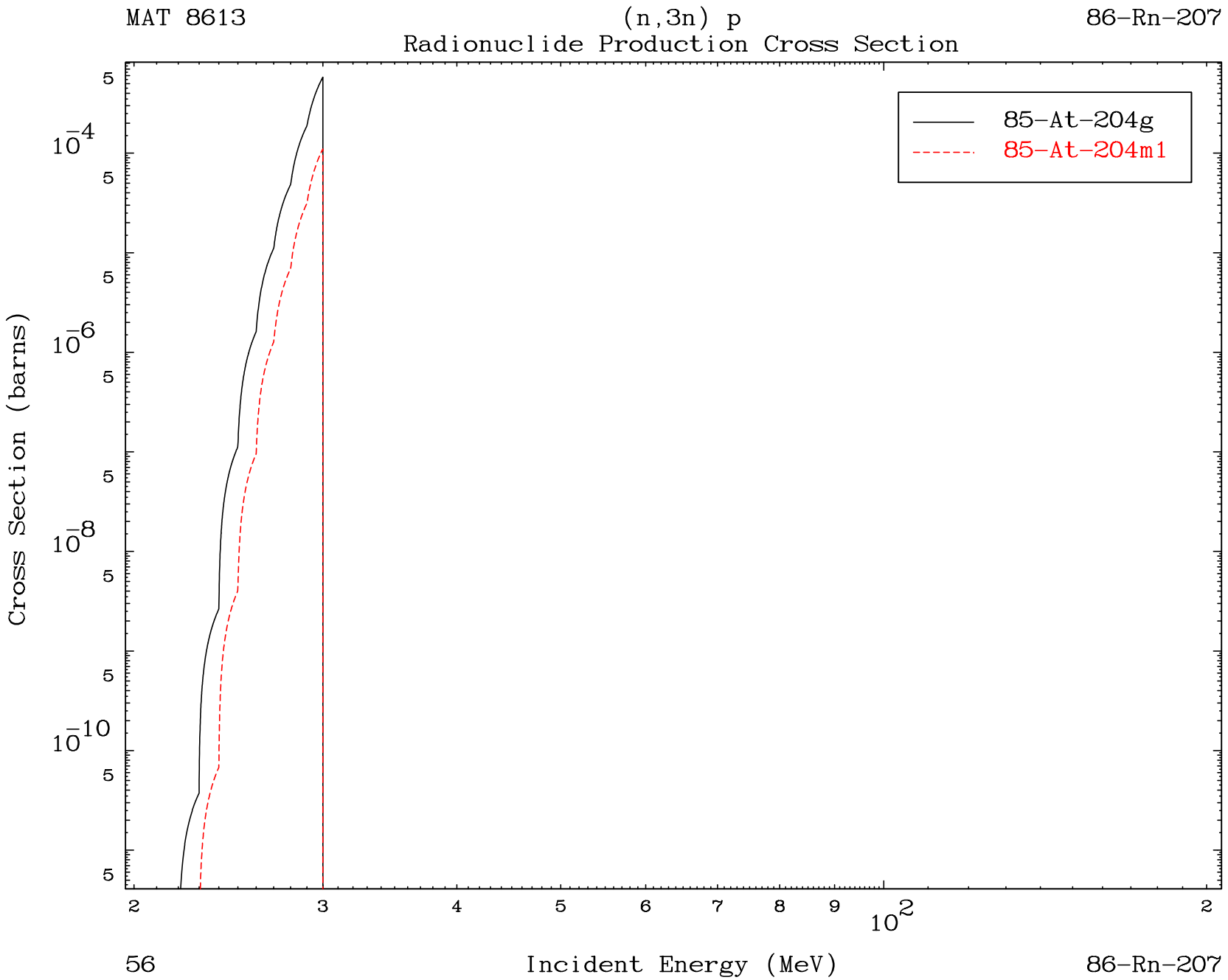

MAT 8613
Fission
86-Rn-207
Radionuclide Production Cross Section
Photon
Cross Section (barns)
Incident Energy (MeV)
51
86-Rn-207

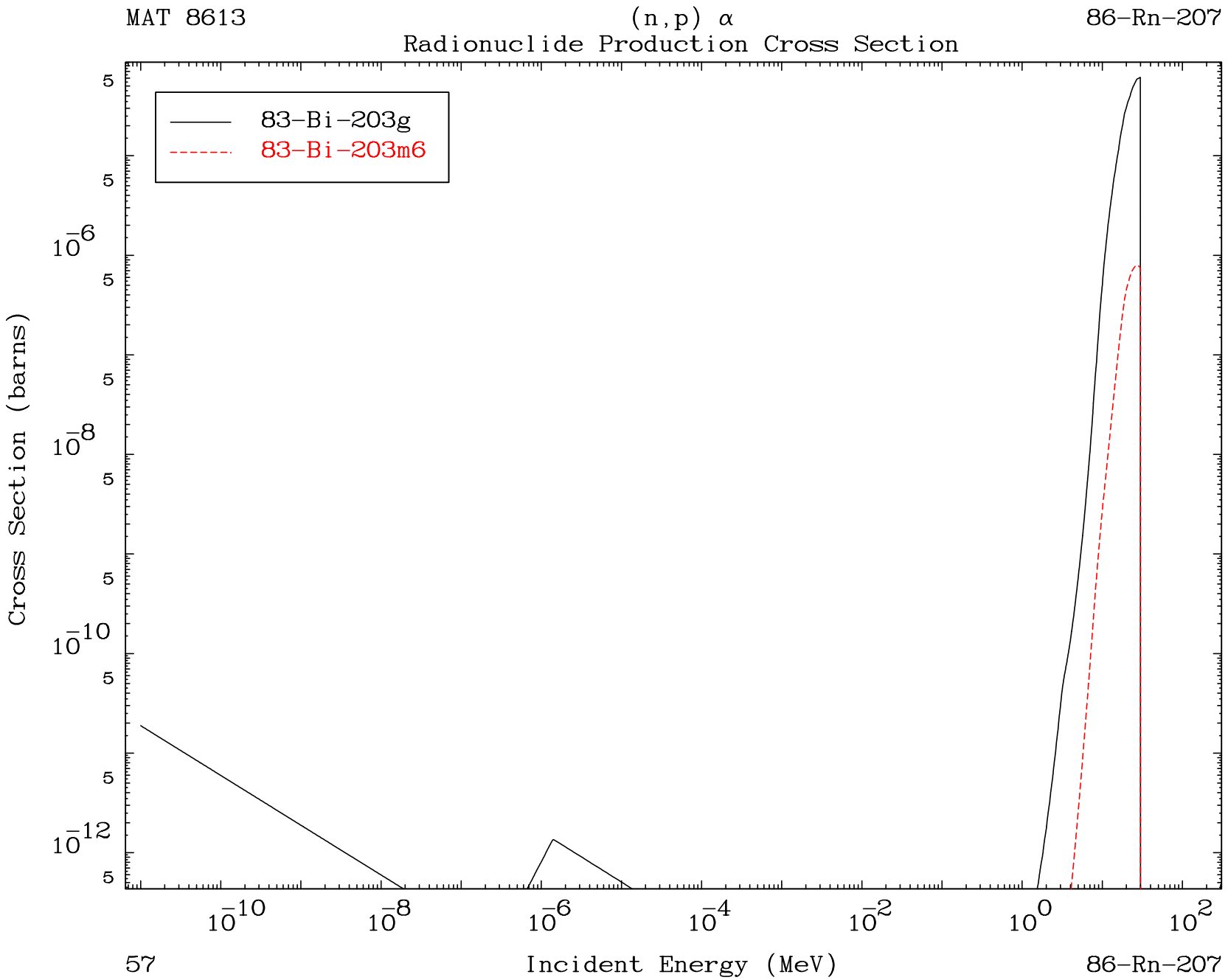

MAT 8613
(n,n') α
86-Rn-207
Radionuclide Production Cross Section
84-Po-203g
84-Po-203m5
Cross Section (barns)
Incident Energy (MeV)
52
86-Rn-207


MAT 8613
(n,3n) α
86-Rn-207
Radionuclide Production Cross Section
84-Po-201g
84-Po-201m3
Cross Section (barns)
10-4
10-6
10-8
10-10
10-12
5
2
3
4
6
7
8
9
10 2
Incident Energy (MeV)
53
86-Rn-207


MAT 8613
(n,n') 2α
86-Rn-207
Radionuclide Production Cross Section
82-Pb-199g
82-Pb-199m1
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
54
Incident Energy (MeV)
86-Rn-207


MAT 8613
(n,n') t
86-Rn-207
Radionuclide Production Cross Section
85-At-204g
85-At-204m1
Cross Section (barns)
10-4
10-6
10-8
10-10
5
2
3
4
5
6
7
8
9
10 2
2
55
Incident Energy (MeV)
86-Rn-207


MAT 8613
(n,3n) p
86-Rn-207
Radionuclide Production Cross Section
85-At-204g
85-At-204m1
Cross Section (barns)
Incident Energy (MeV)
56
86-Rn-207


MAT 8613
(n,p) α
86-Rn-207
Radionuclide Production Cross Section
83-Bi-203g
83-Bi-203m6
Cross Section (barns)
Incident Energy (MeV)
57
86-Rn-207