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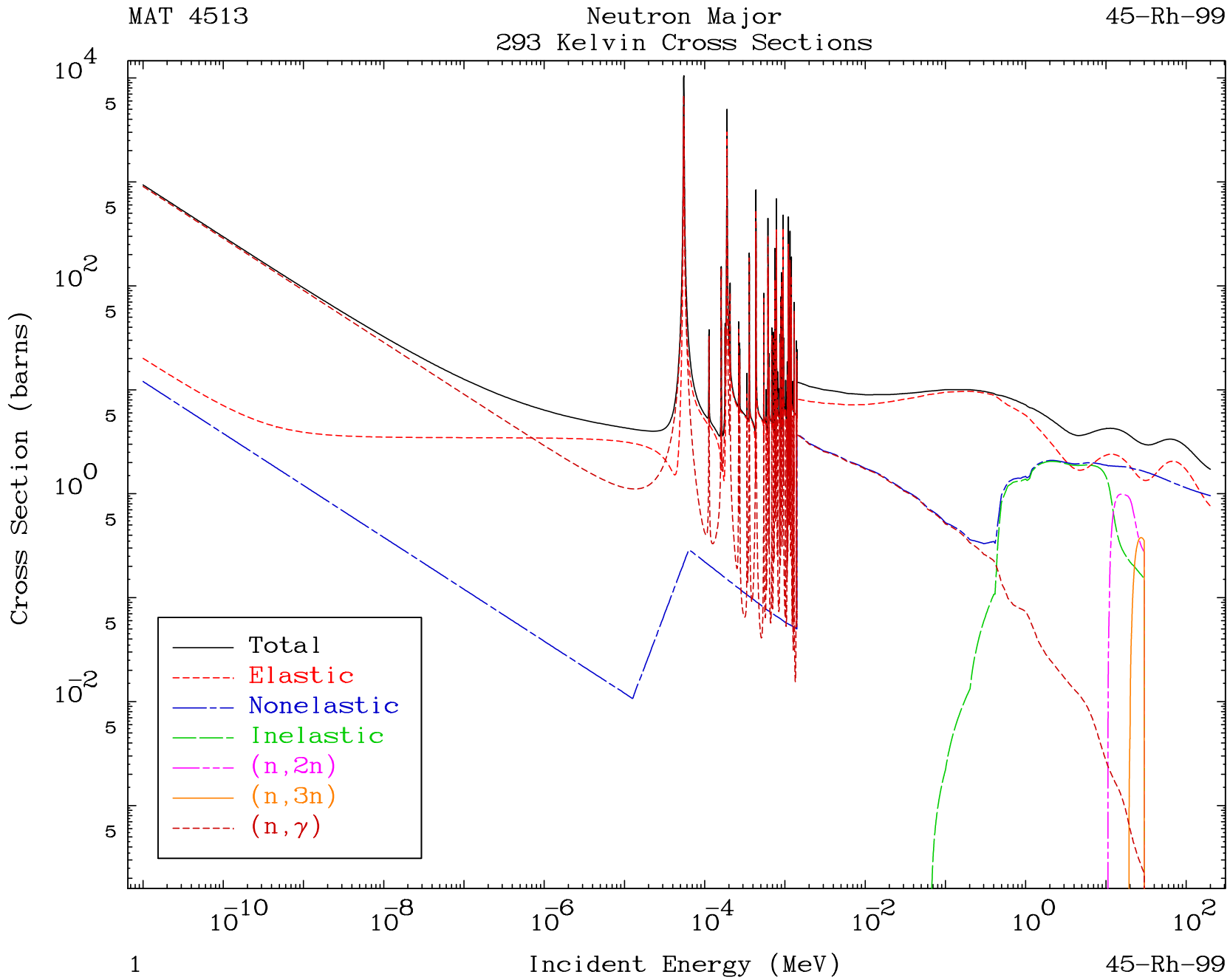
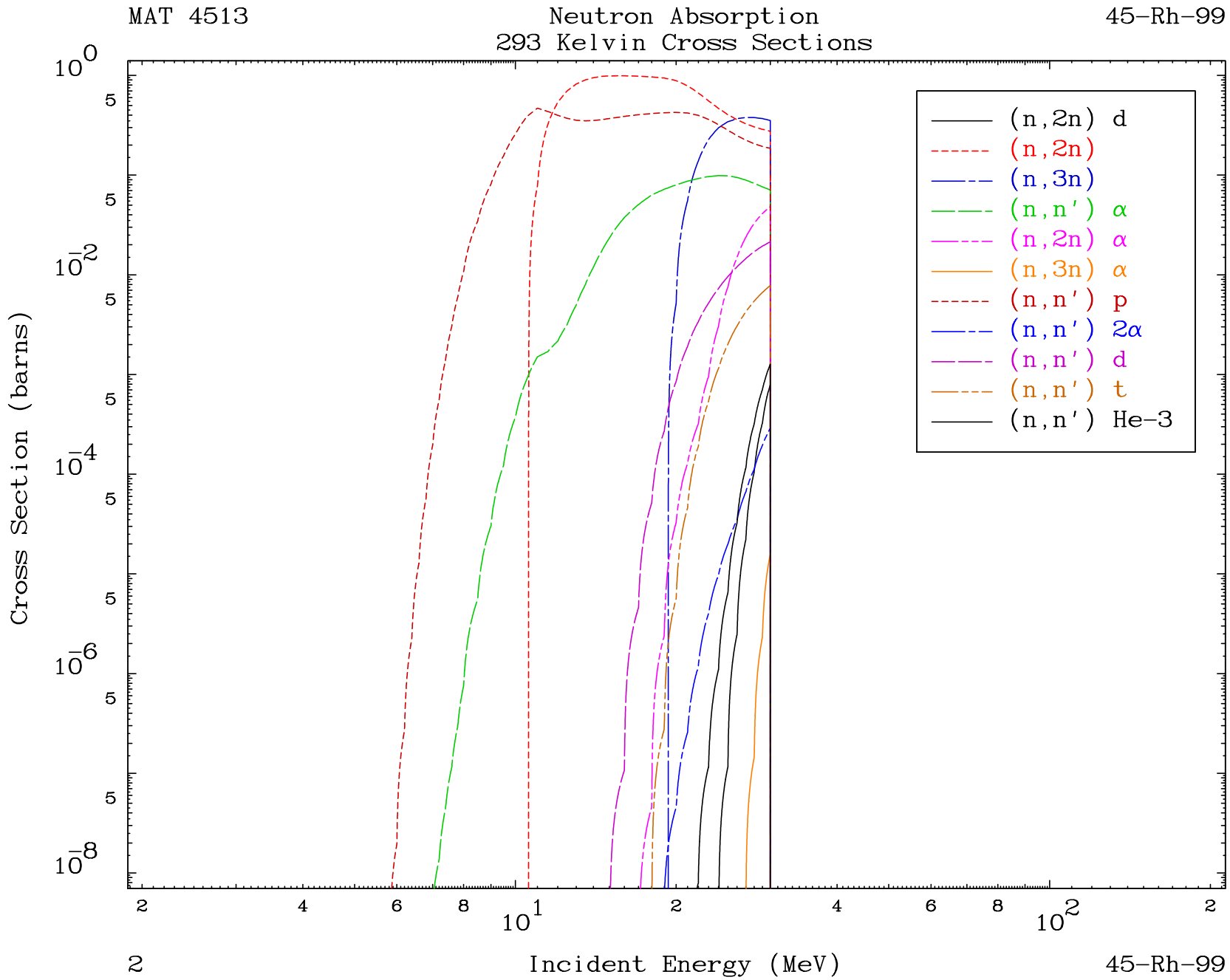
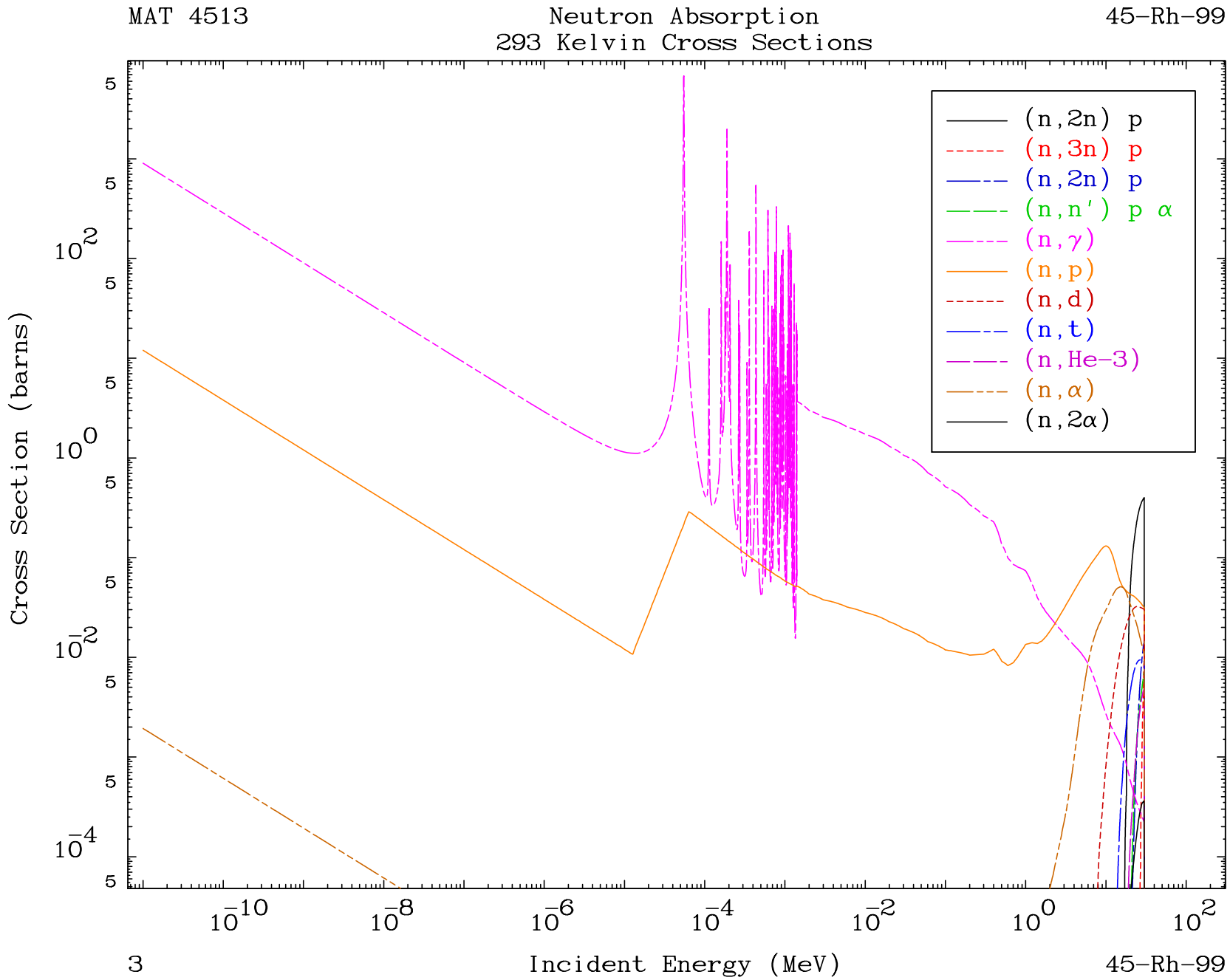
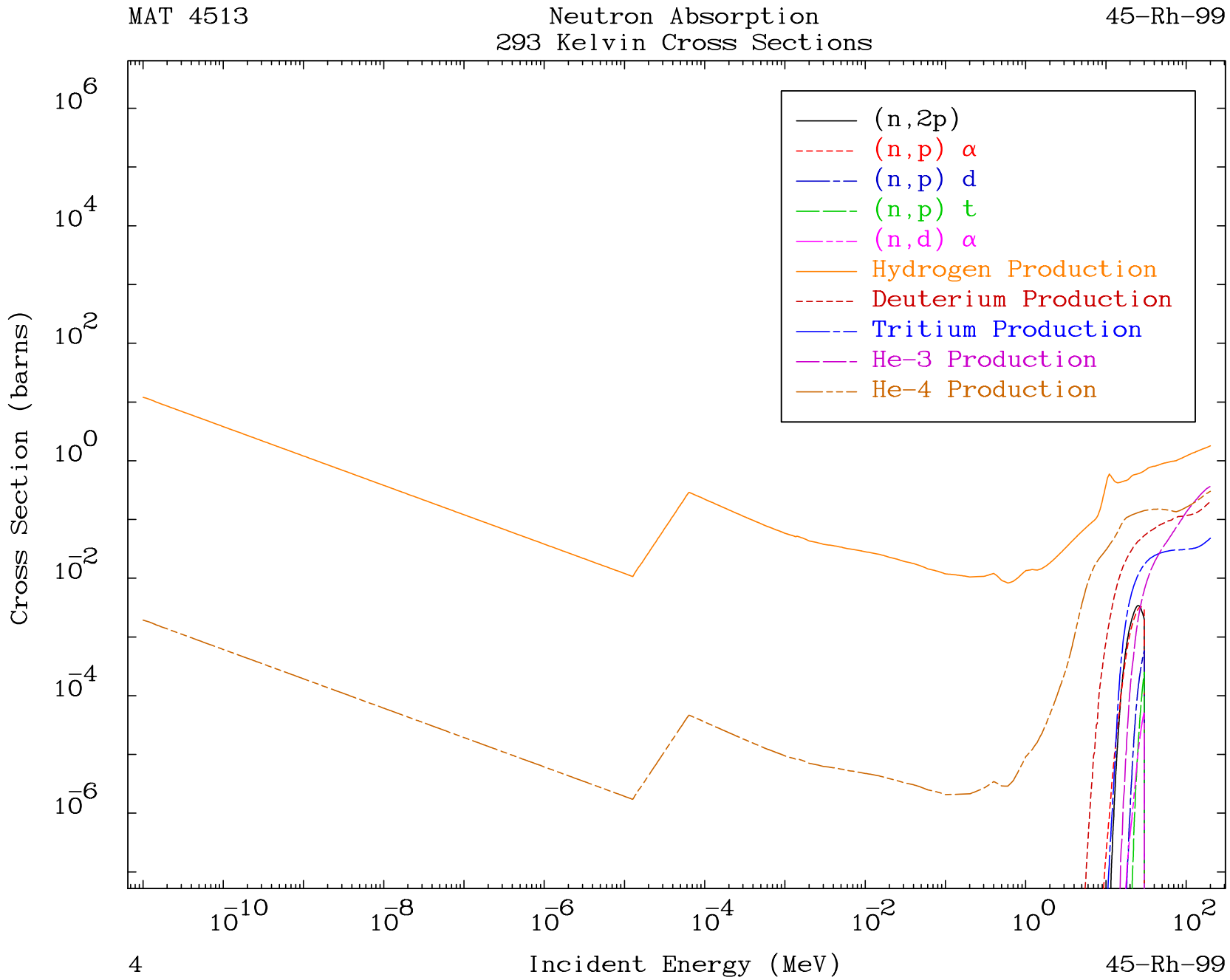
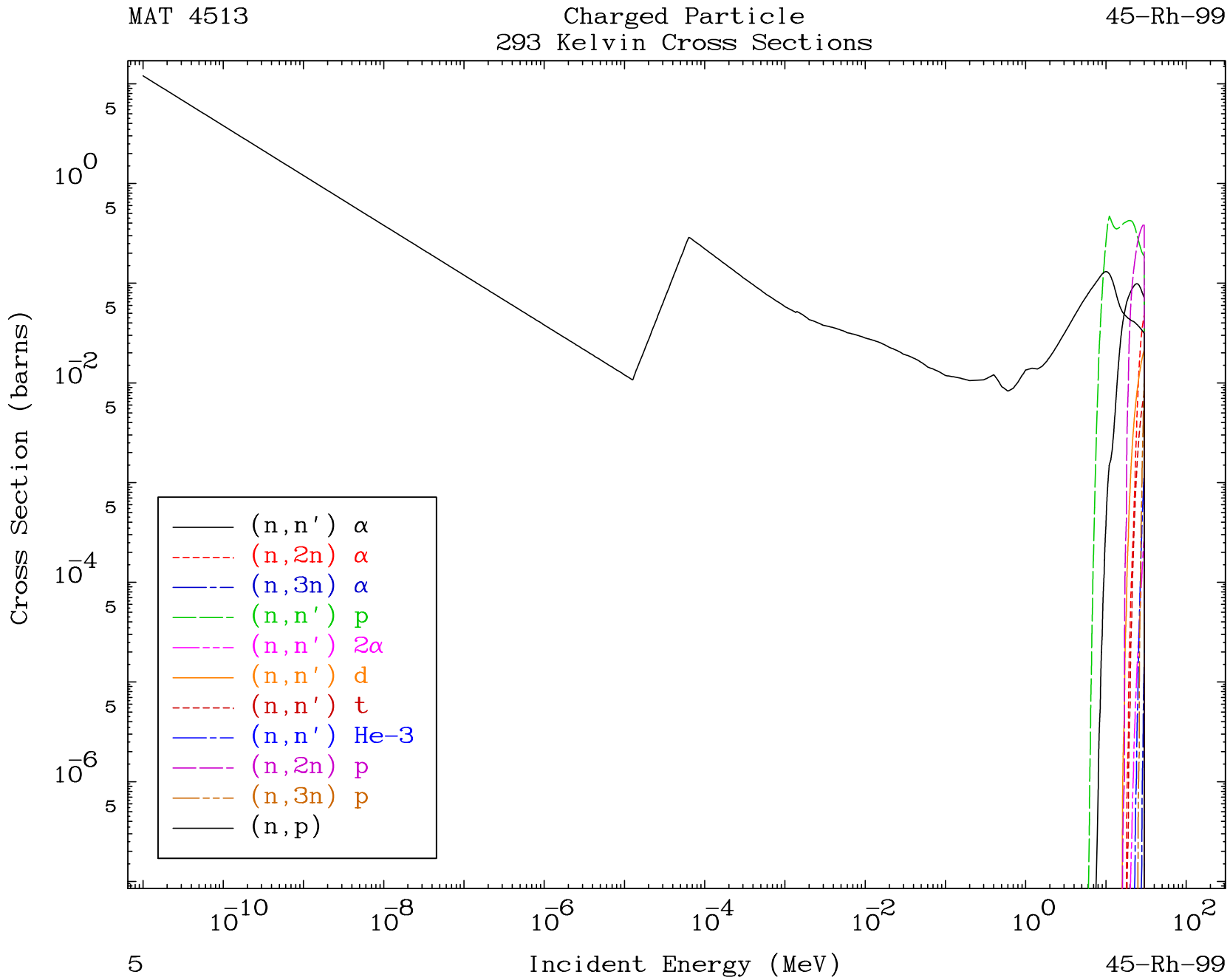
Press Mouse Button to Start

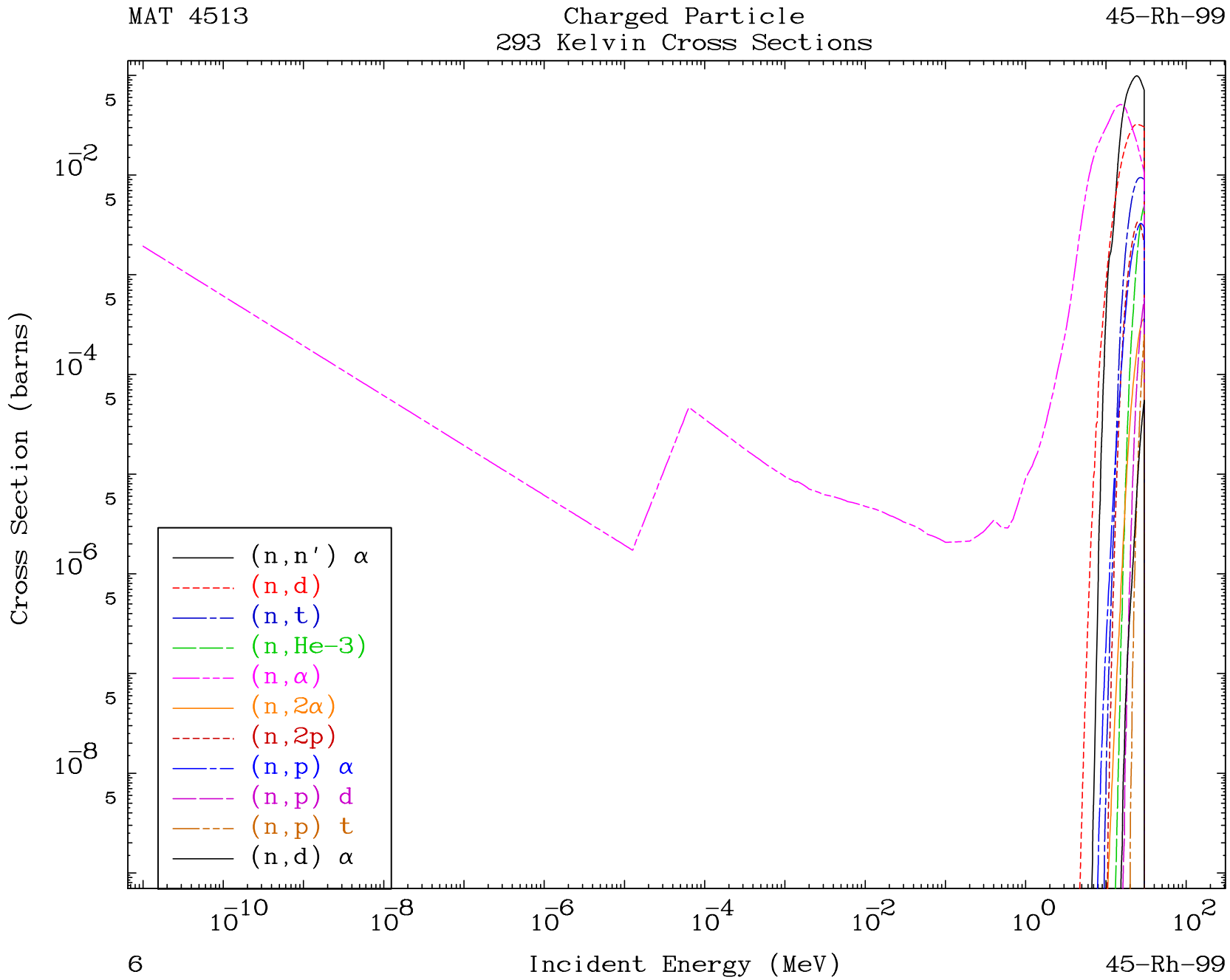

MAT 4513
Neutron Major
293 Kelvin Cross Sections
45-Rh-99
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
1
45-Rh-99

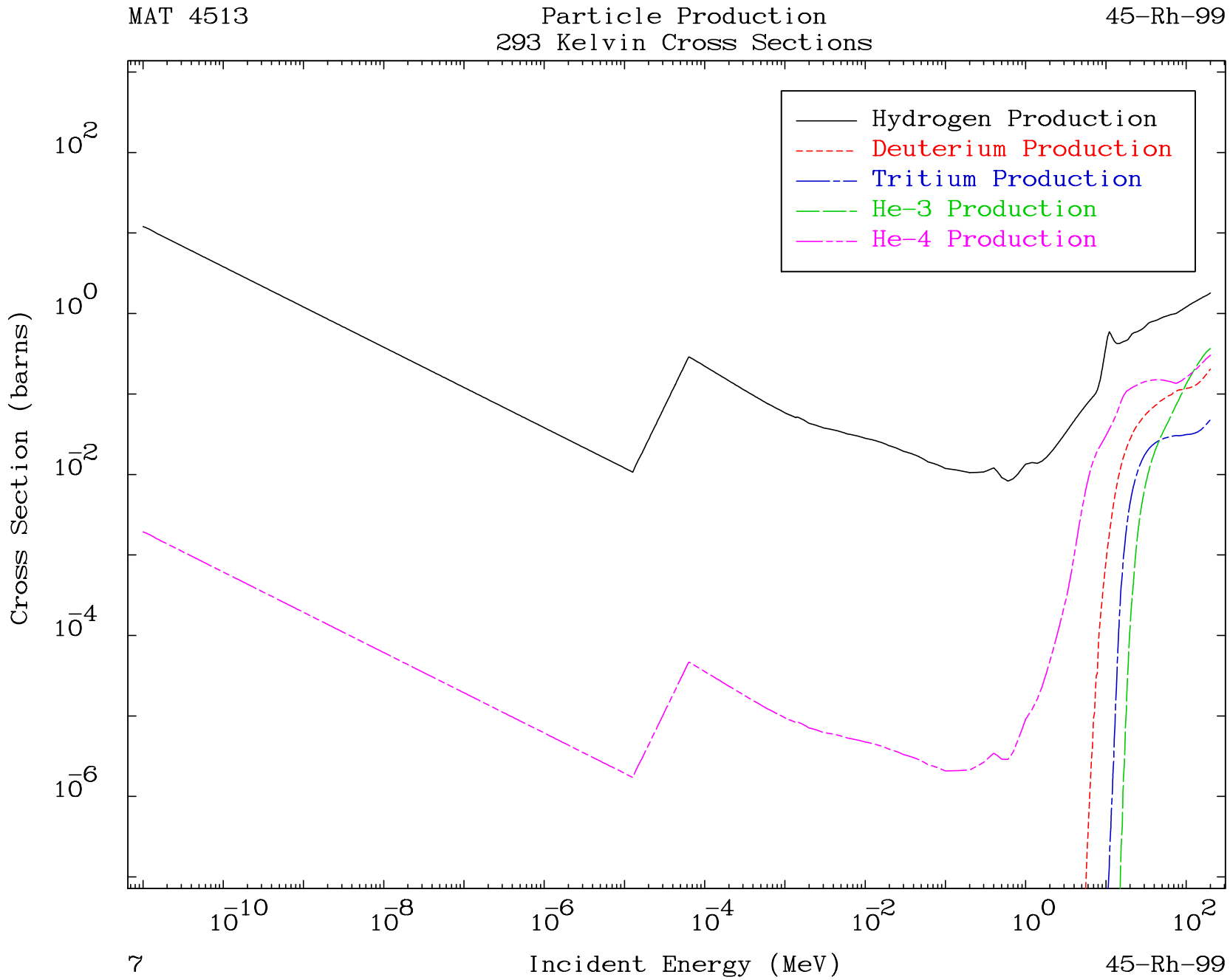

MAT 4513
Neutron Absorption
293 Kelvin Cross Sections
45-Rh-99
Cross Section (barns)
Incident Energy (MeV)
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,n') d
(n,n') t
(n,n') He-3
45-Rh-99

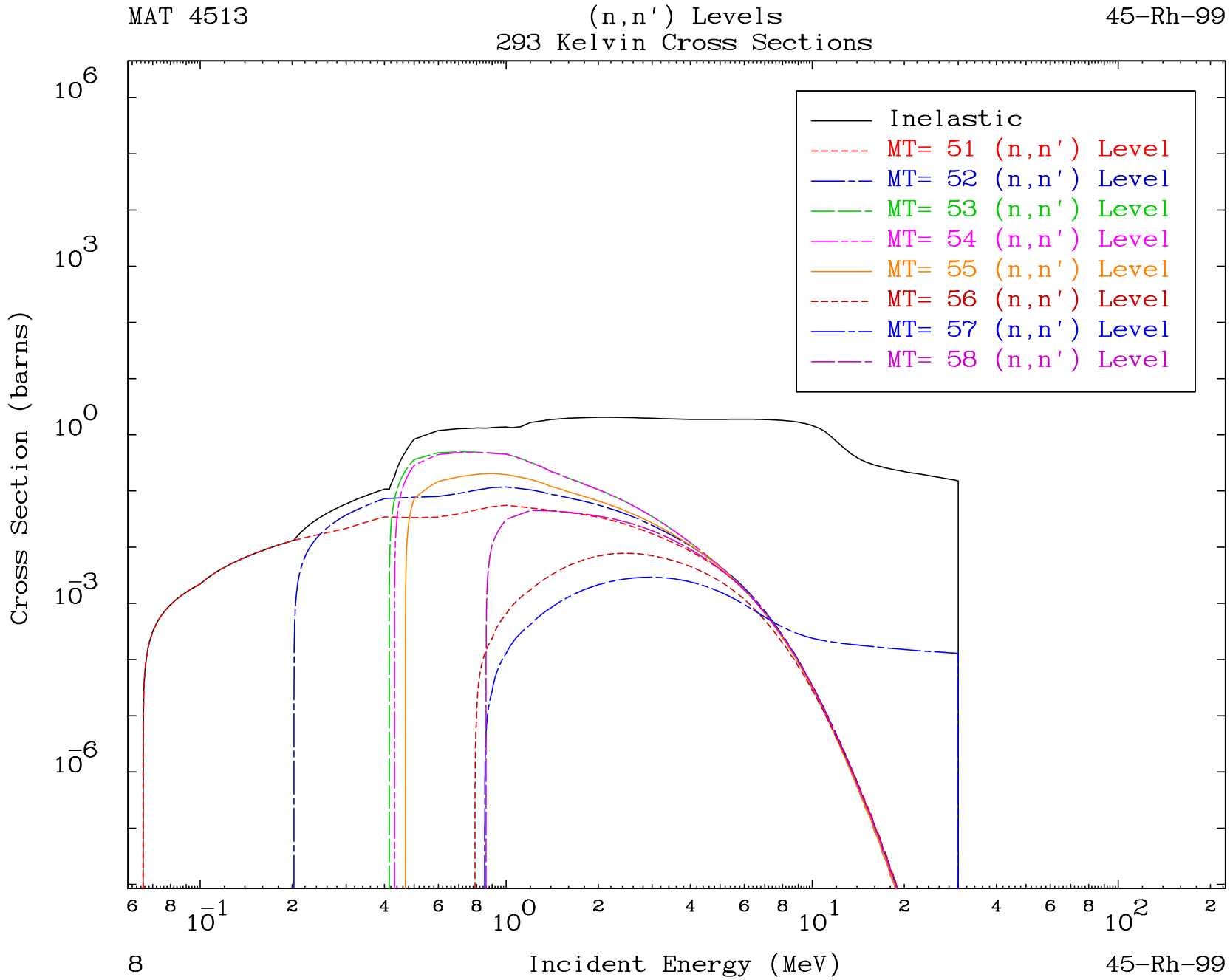

MAT 4513
Neutron Absorption
293 Kelvin Cross Sections
45-Rh-99
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
(n,γ)
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
Cross Section (barns)
Incident Energy (MeV)
3
45-Rh-99

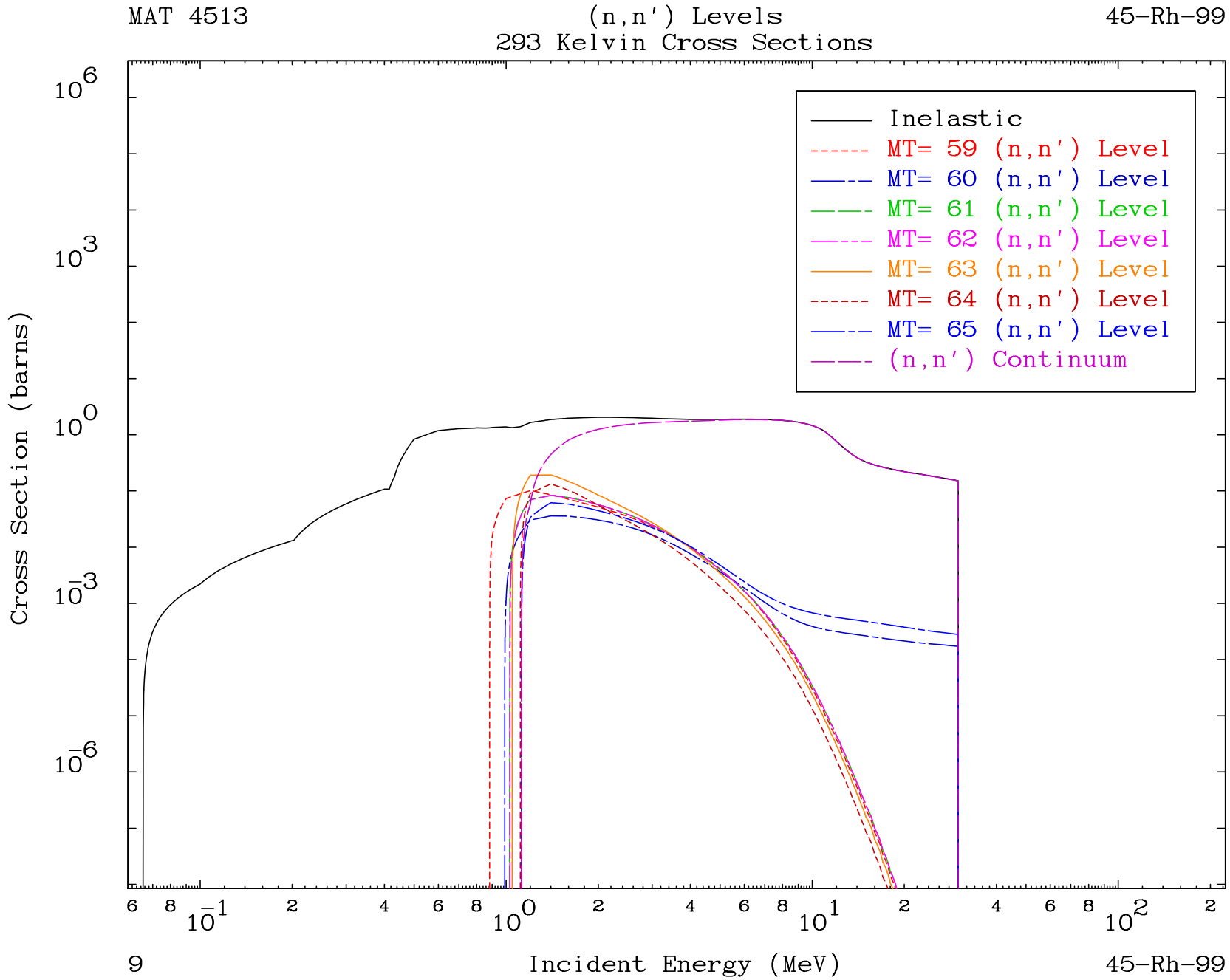

MAT 4513
Neutron Absorption
293 Kelvin Cross Sections
45-Rh-99
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
4
45-Rh-99

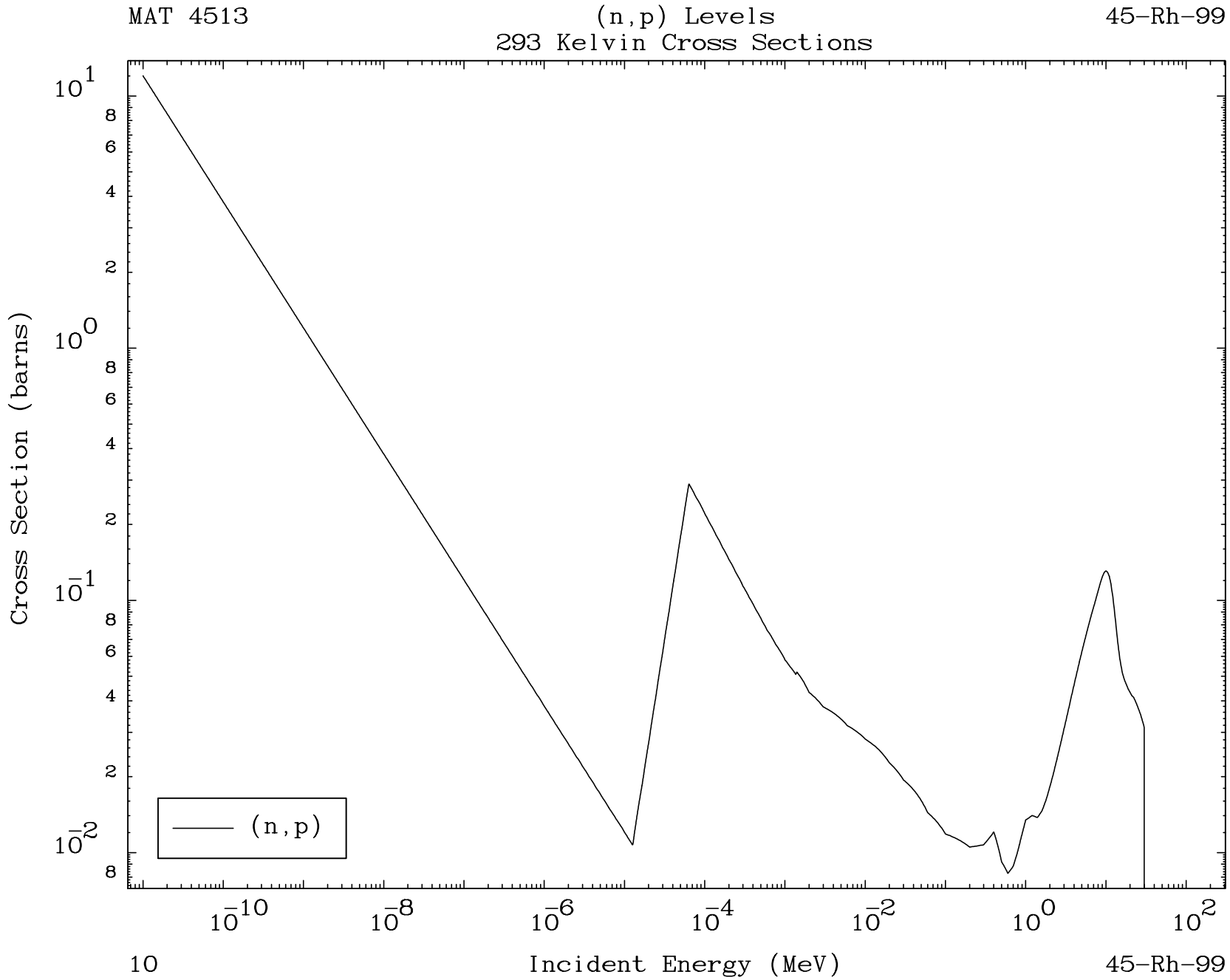

MAT 4513
Charged Particle
293 Kelvin Cross Sections
45-Rh-99
Cross Section (barns)
Incident Energy (MeV)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
5
45-Rh-99


MAT 4513
Charged Particle
293 Kelvin Cross Sections
45-Rh-99
Cross Section (barns)
Incident Energy (MeV)
(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
6
45-Rh-99

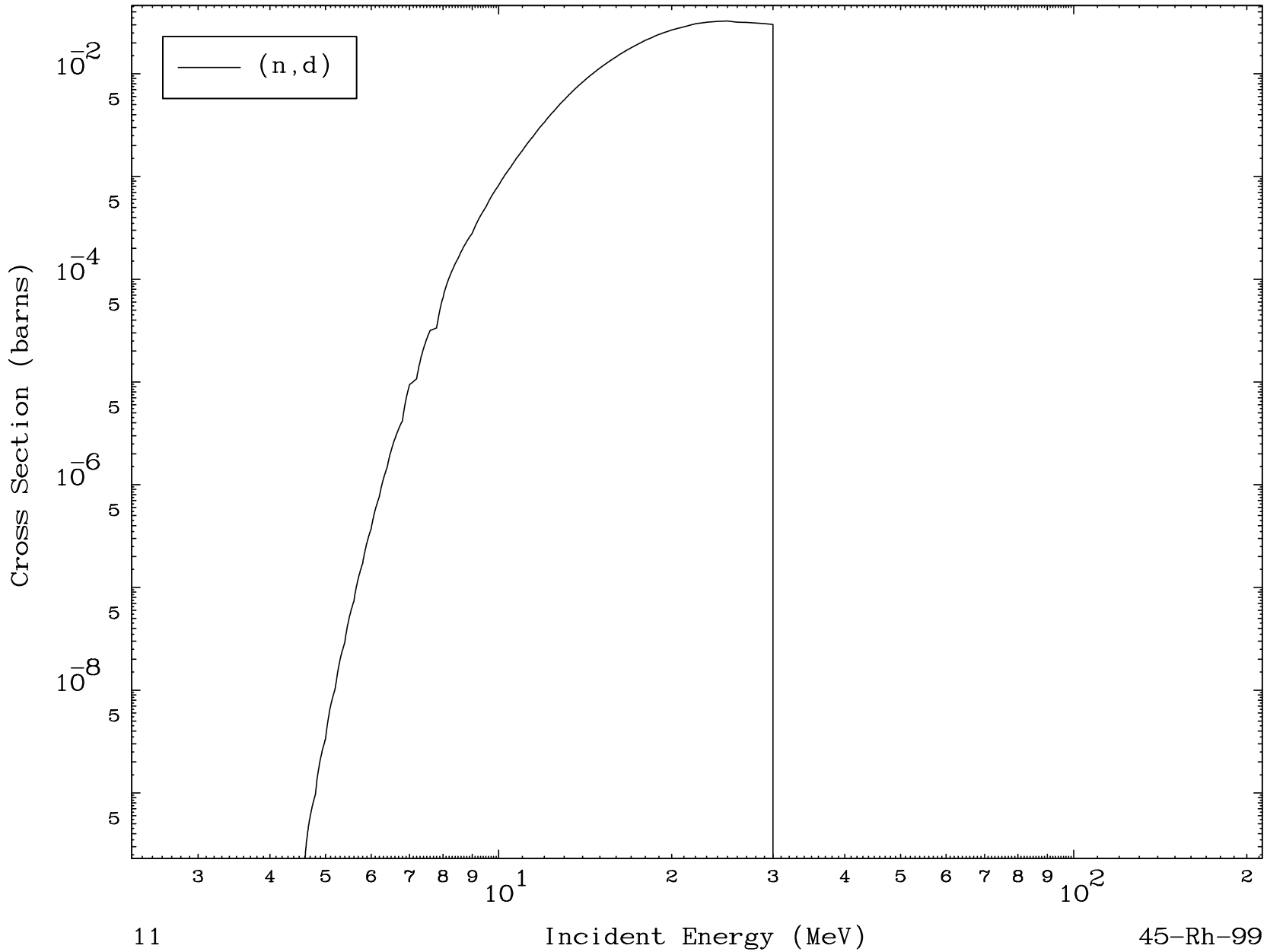

MAT 4513
Particle Production
293 Kelvin Cross Sections
45-Rh-99
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
7
45-Rh-99


MAT 4513
(n,n') Levels
293 Kelvin Cross Sections
45-Rh-99
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
Cross Section (barns)
Incident Energy (MeV)
8
45-Rh-99

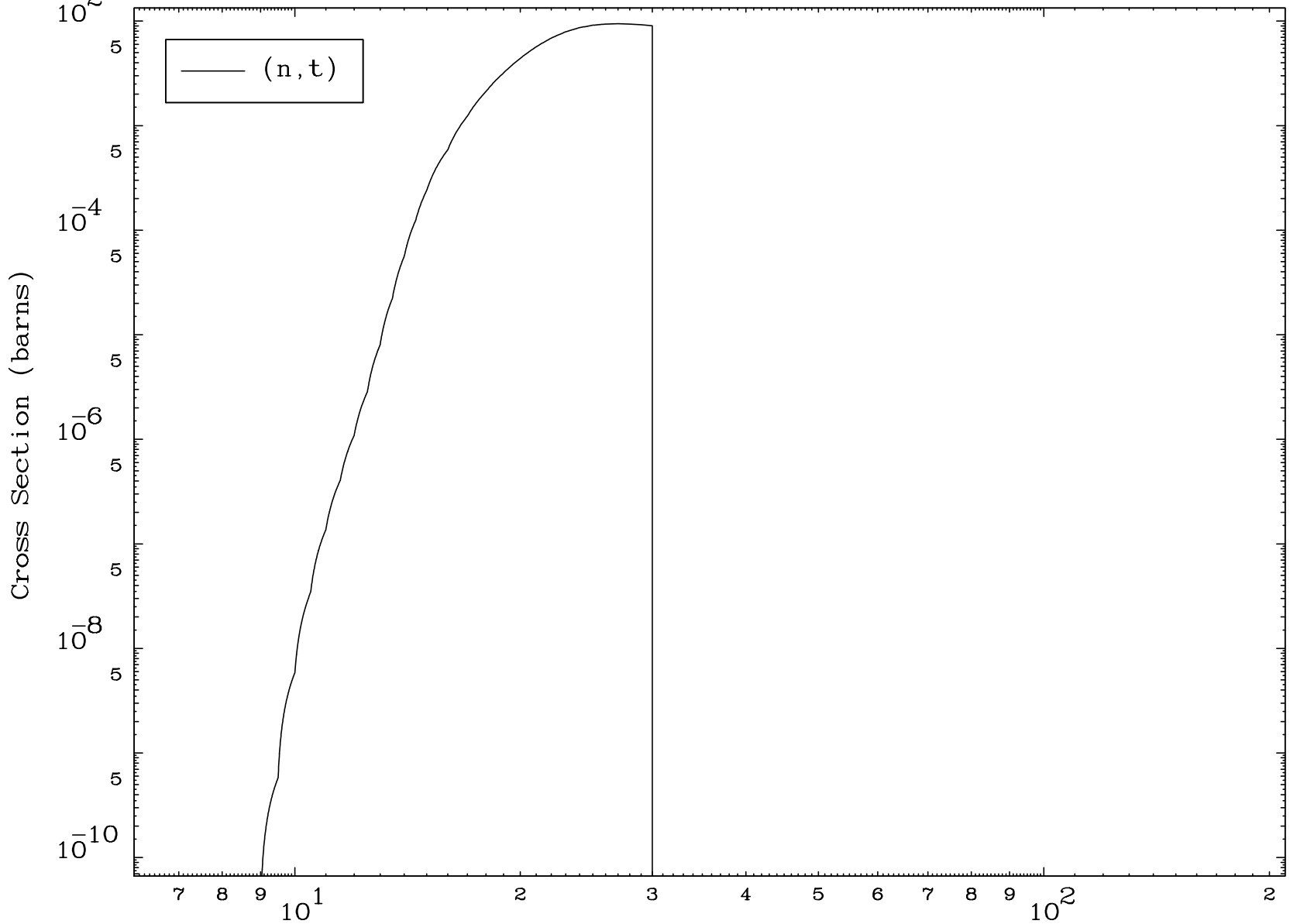

MAT 4513
(n,n') Levels
293 Kelvin Cross Sections
45-Rh-99
Inelastic
MT= 59 (n,n') Level
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
9
45-Rh-99


MAT 4513
(n,p) Levels
293 Kelvin Cross Sections
45-Rh-99
Cross Section (barns)
(n,p)
Incident Energy (MeV)
10
45-Rh-99

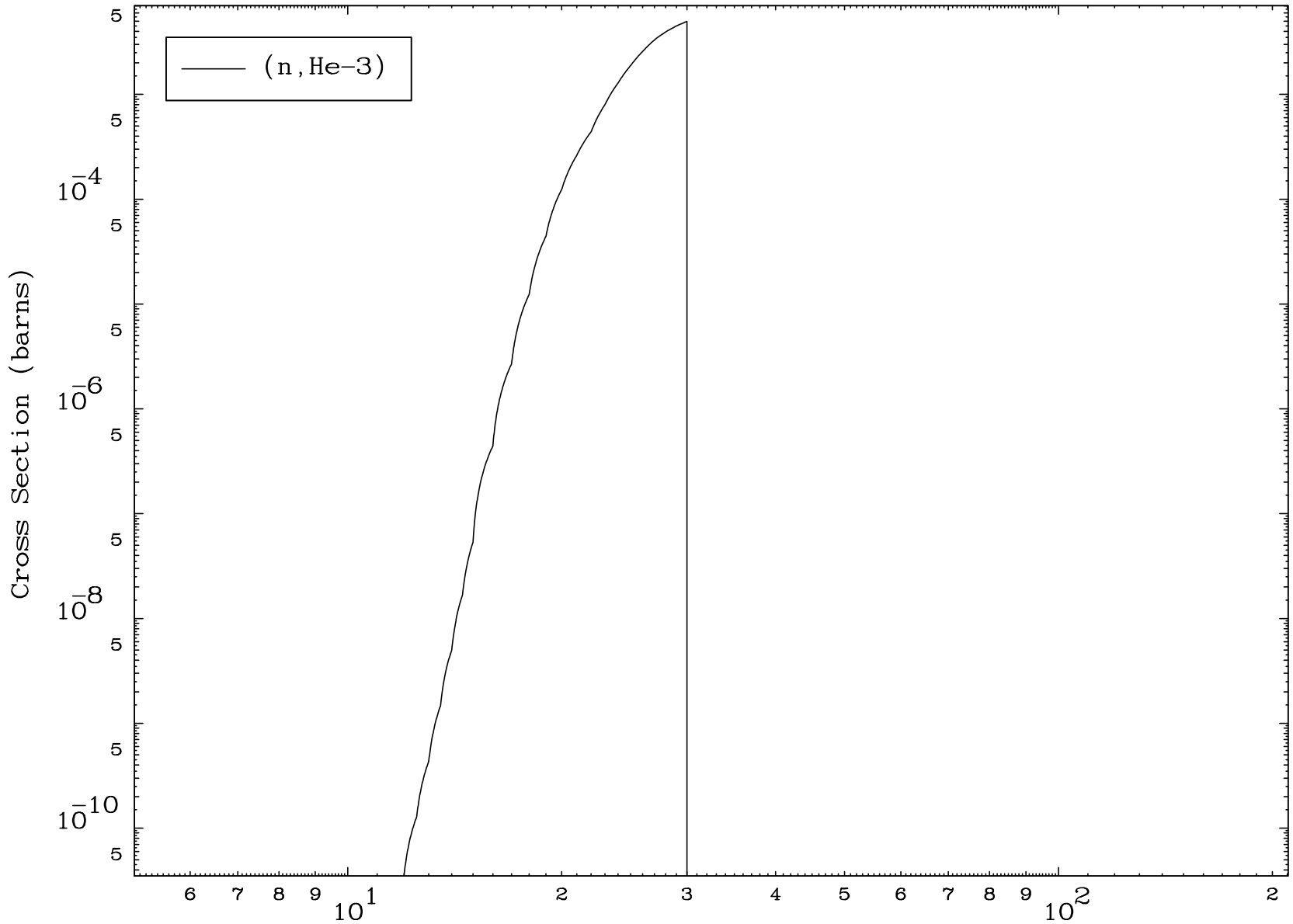
293 Kelvin Cross Sections

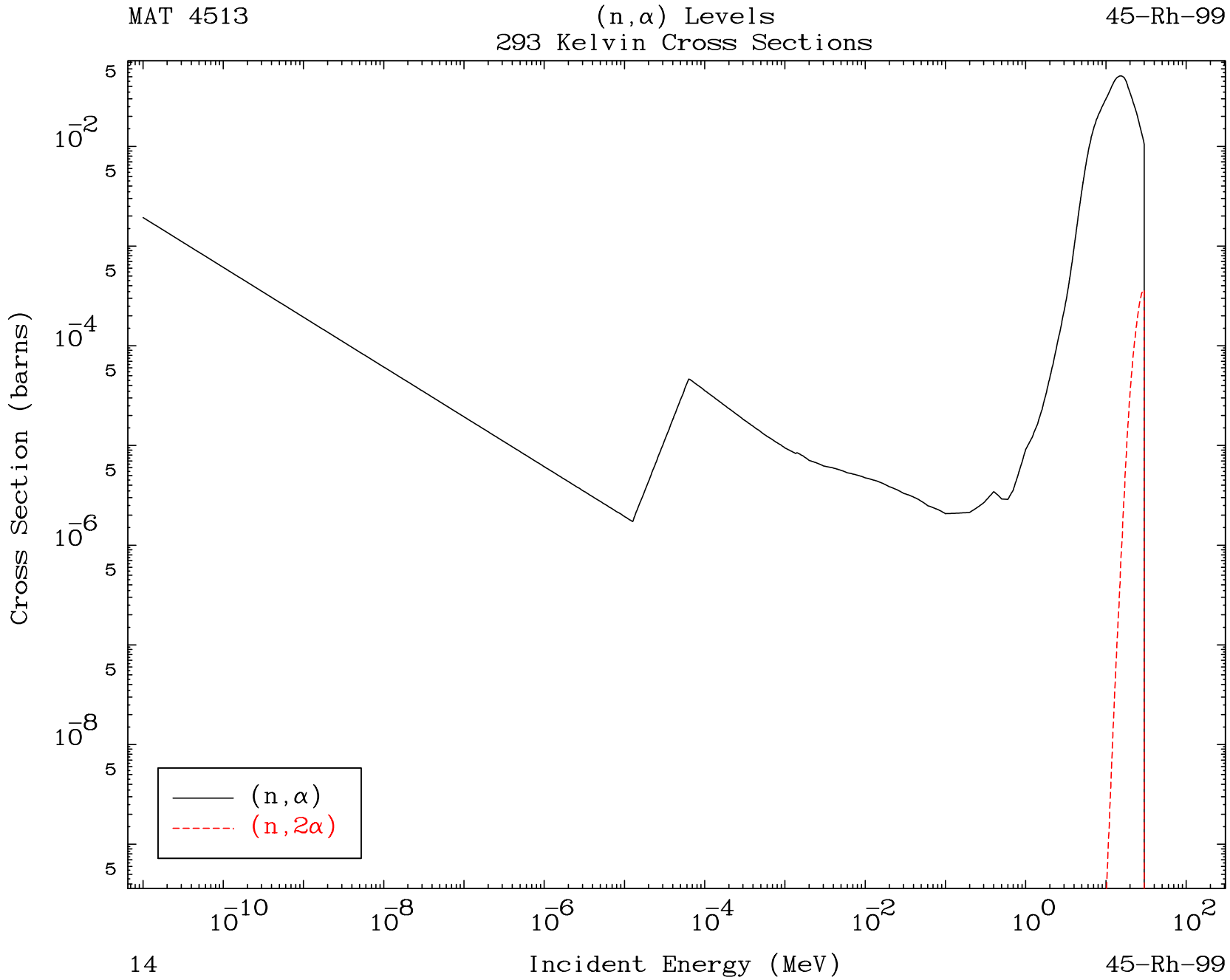


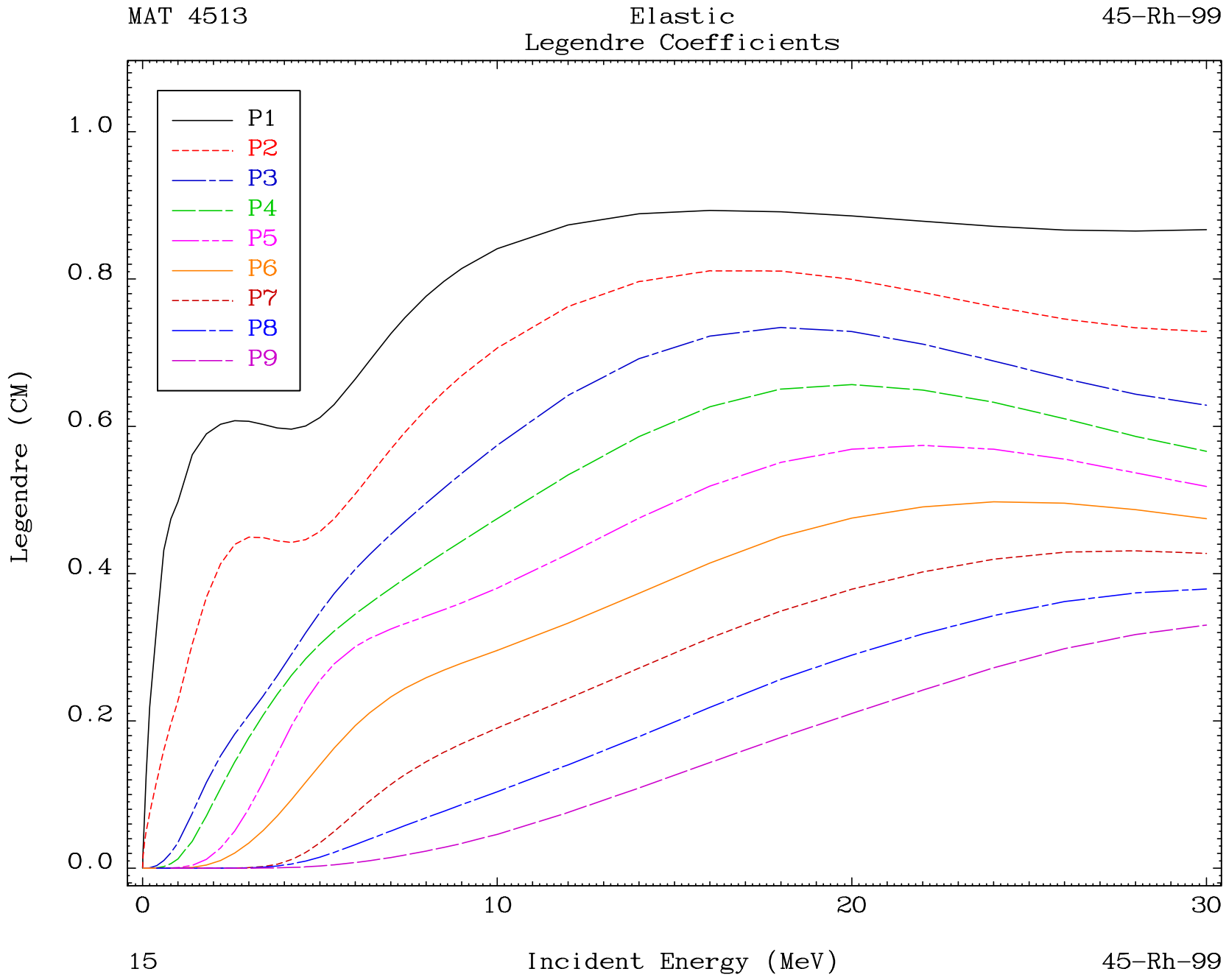
(n,t) Levels
293 Kelvin Cross Sections

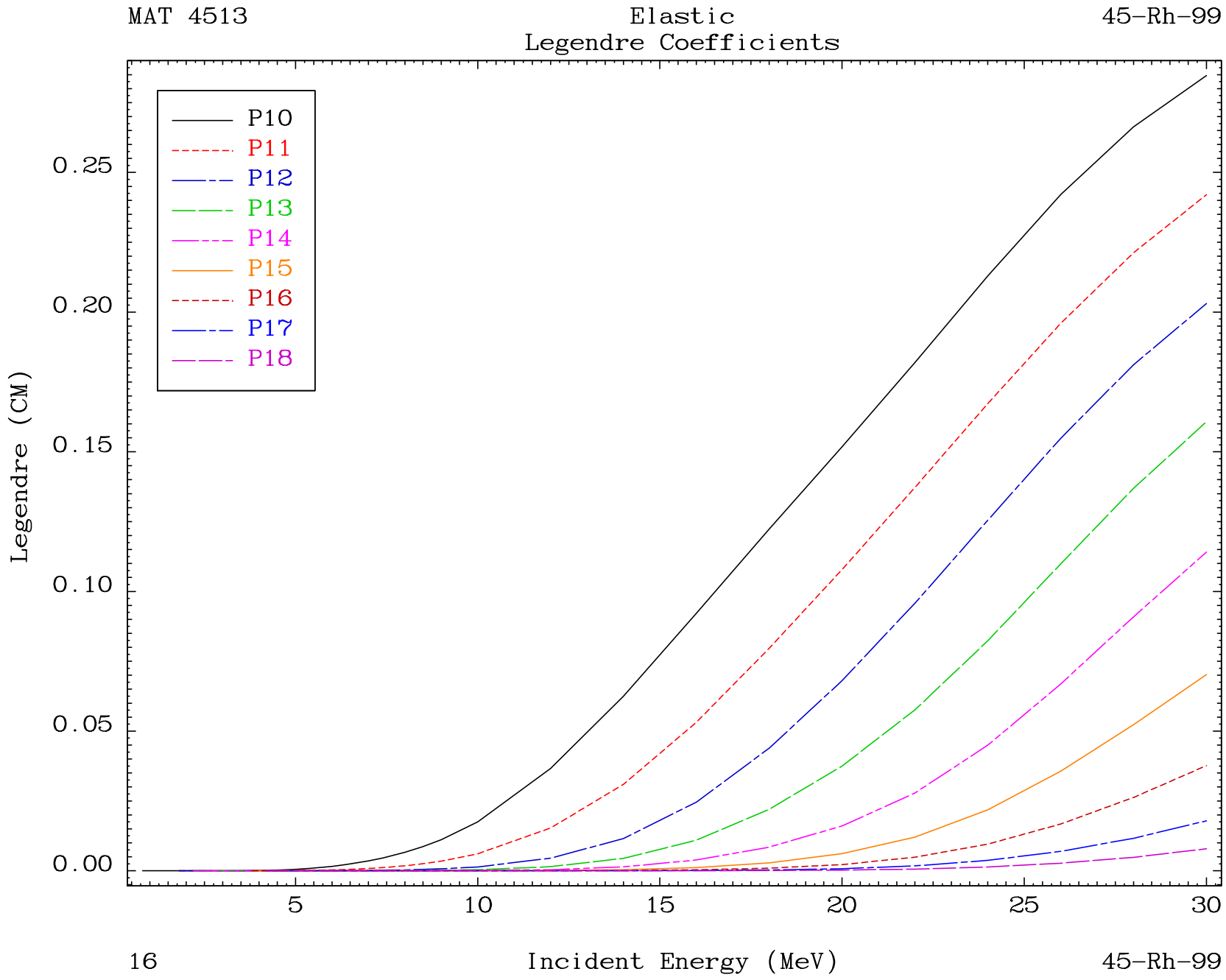


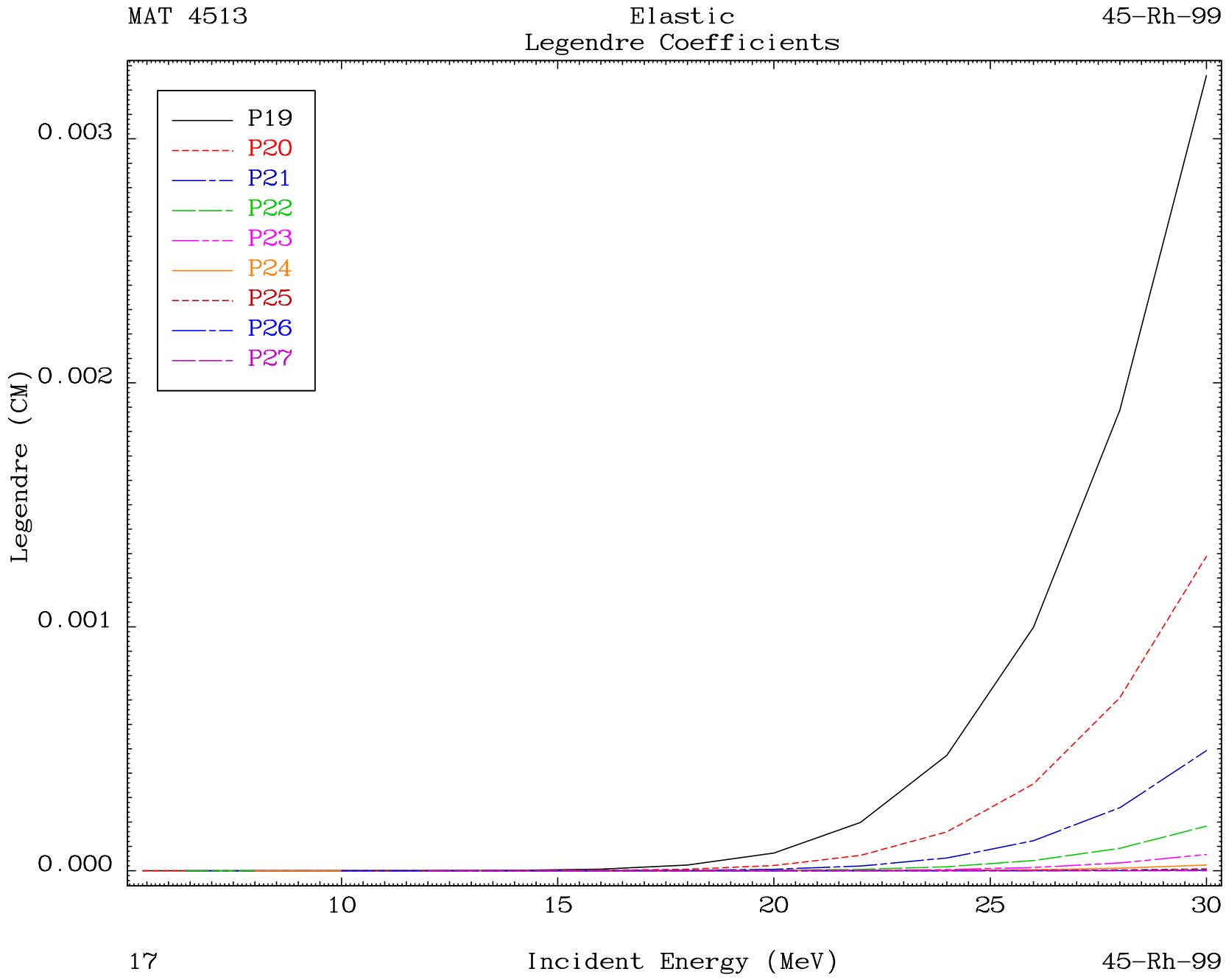
(n,He3) Levels
293 Kelvin Cross Sections

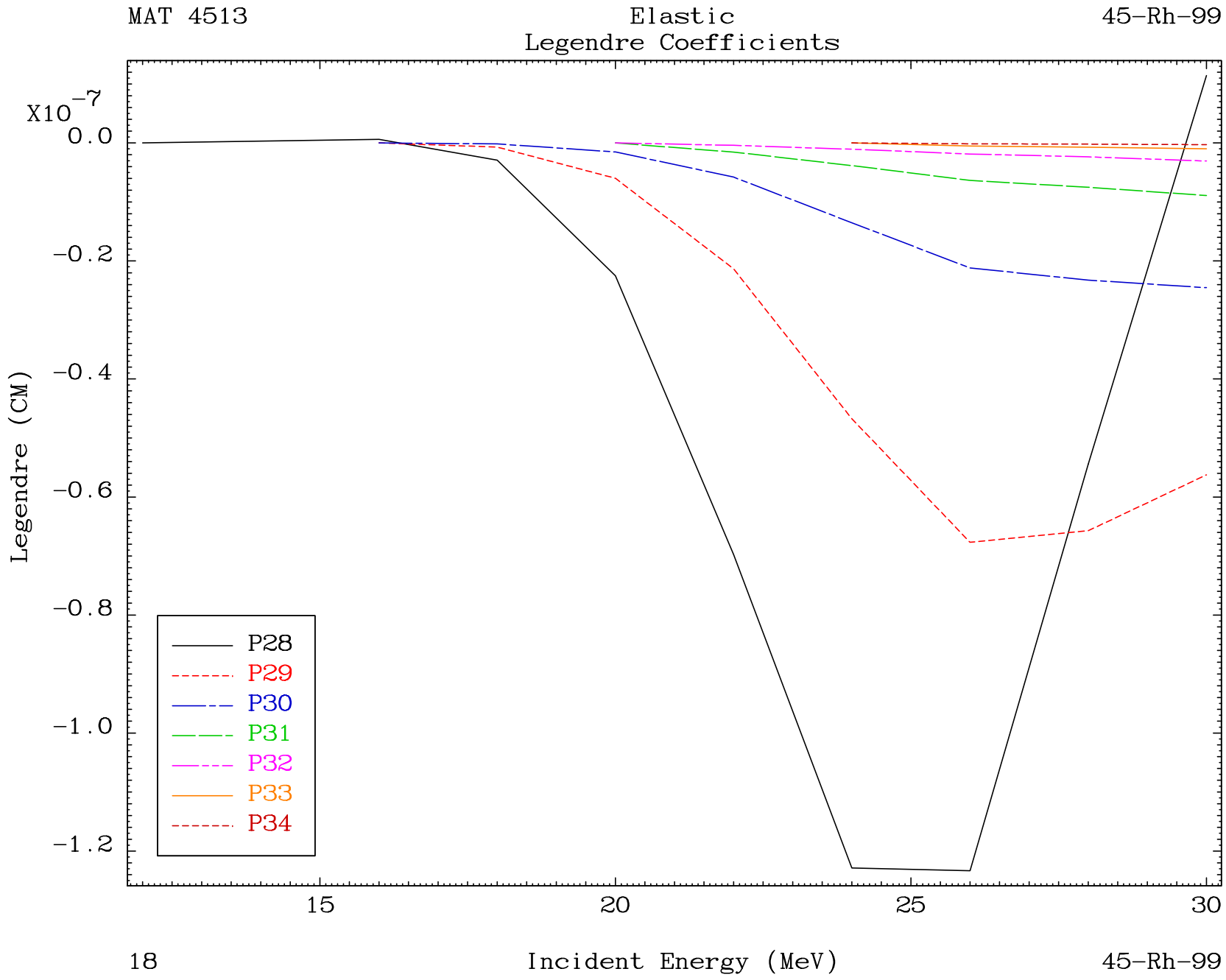


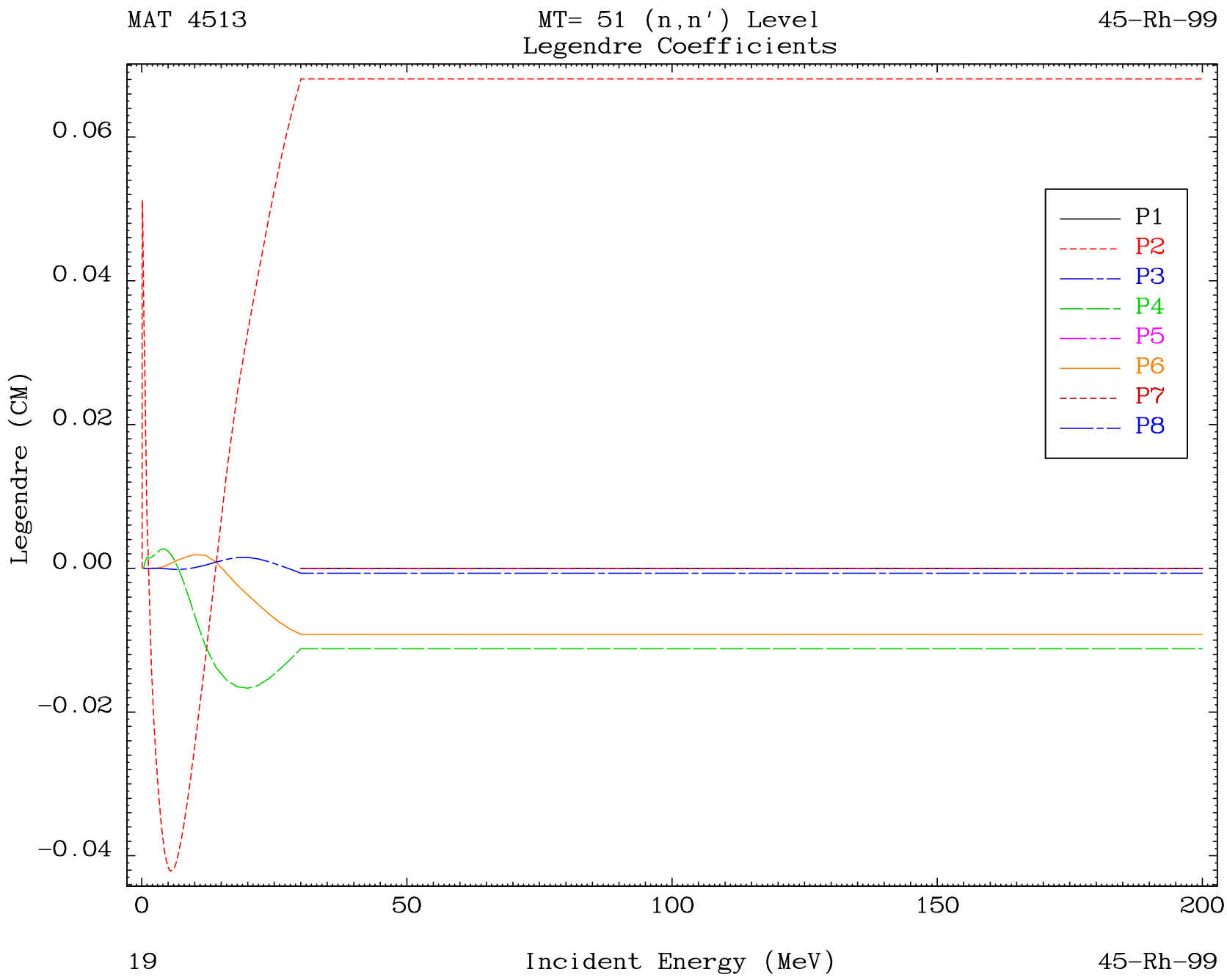

MAT 4513
(n,α) Levels
293 Kelvin Cross Sections
45-Rh-99
Cross Section (barns)
Incident Energy (MeV)
(n,α)
(n,2α)
14
45-Rh-99

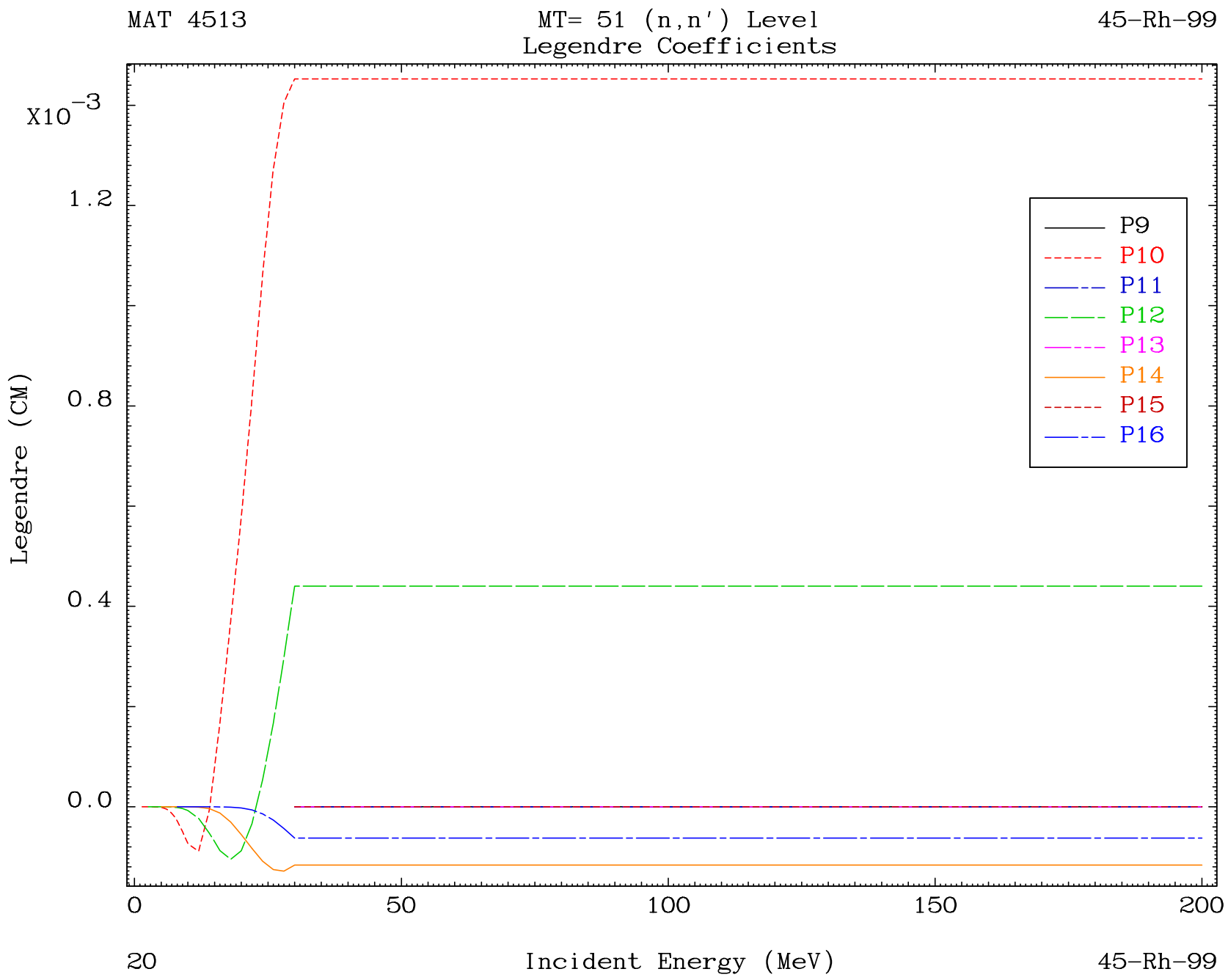

MAT 4513
Elastic
Legendre Coefficients
45-Rh-99
P1
P2
P3
P4
P5
P6
P7
P8
P9
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
10
20
30
15
Incident Energy (MeV)
45-Rh-99

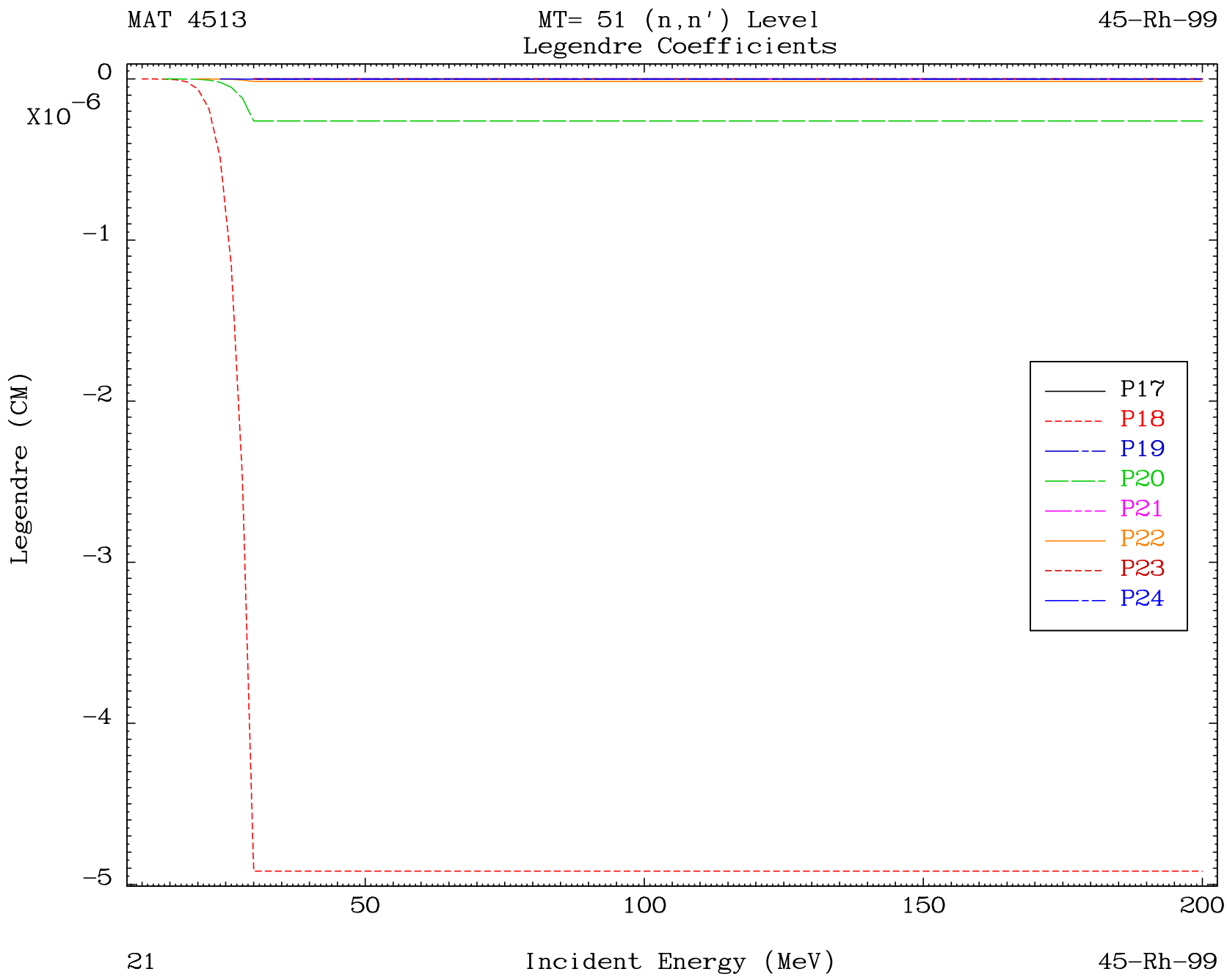

MAT 4513
Elastic
Legendre Coefficients
45-Rh-99
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.00
0.05
0.10
0.15
0.20
0.25
5
10
15
20
25
30
16
Incident Energy (MeV)
45-Rh-99

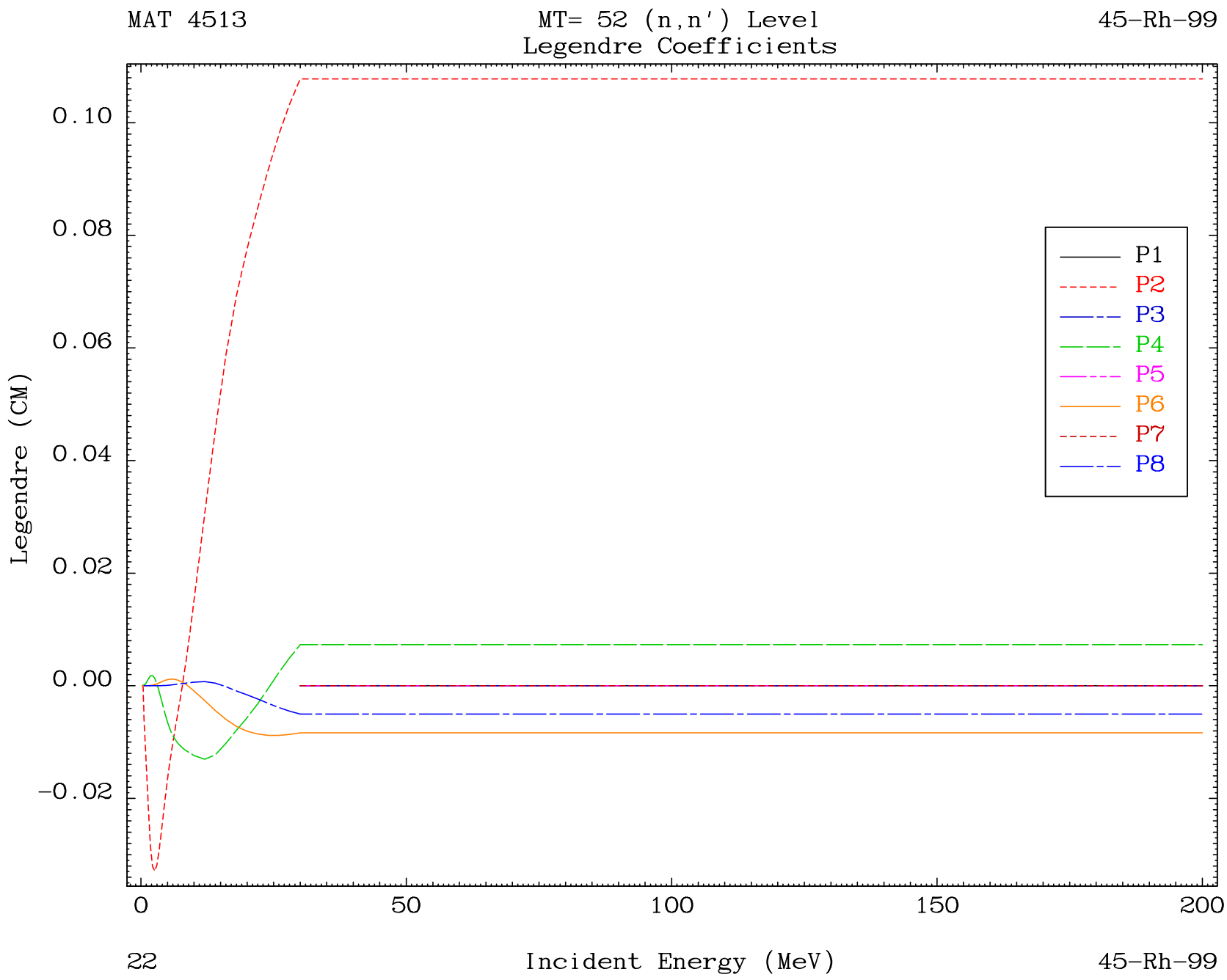

MAT 4513
Elastic
Legendre Coefficients
45-Rh-99
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.003
0.002
0.001
0.000
Legendre (CM)
10
15
20
25
30
17
Incident Energy (MeV)
45-Rh-99

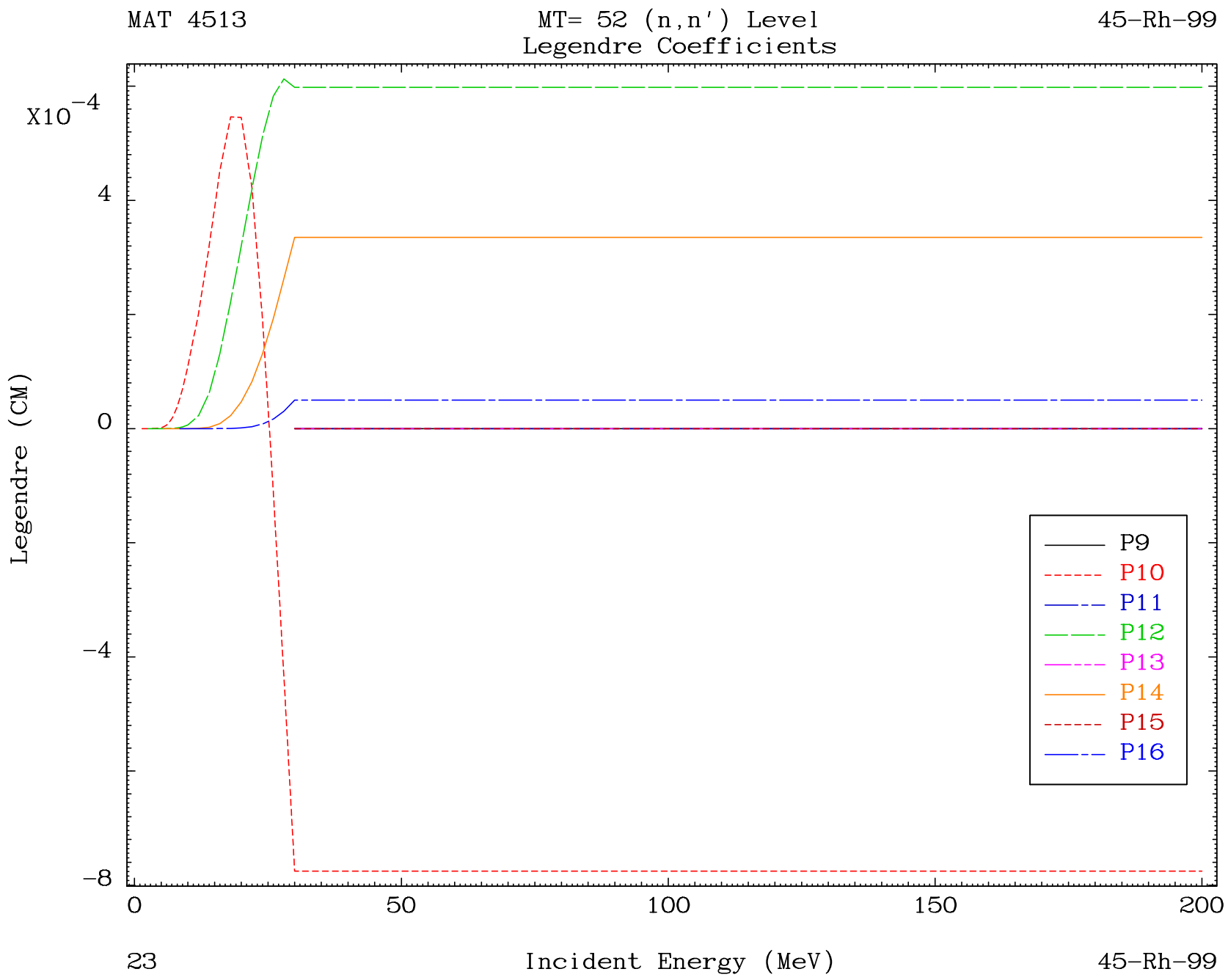

MAT 4513
Elastic
Legendre Coefficients
45-Rh-99
X10^-7
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
15
20
25
30
18
Incident Energy (MeV)
45-Rh-99

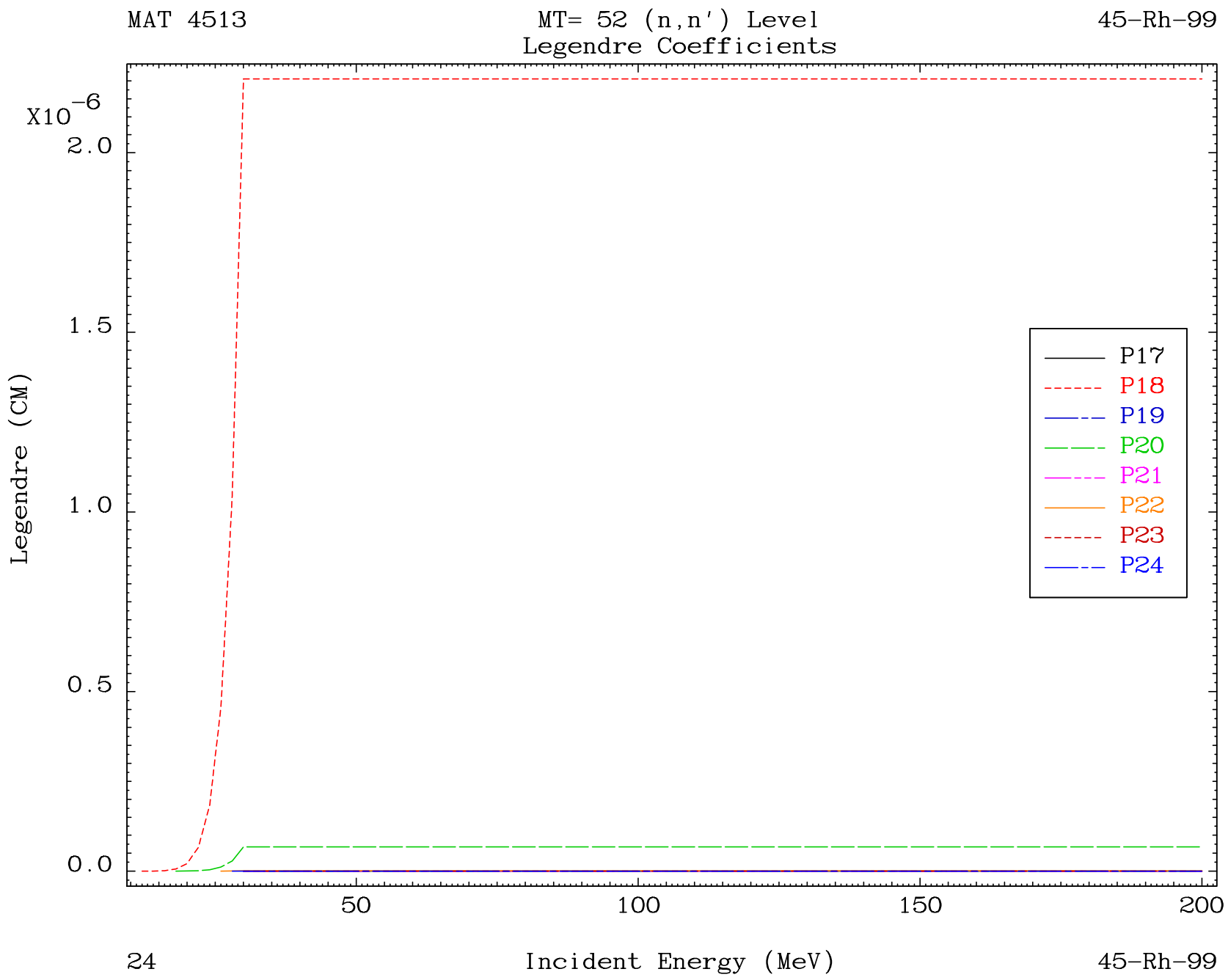

MAT 4513
MT= 51 (n,n') Level
Legendre Coefficients
45-Rh-99
0.06
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
19
45-Rh-99

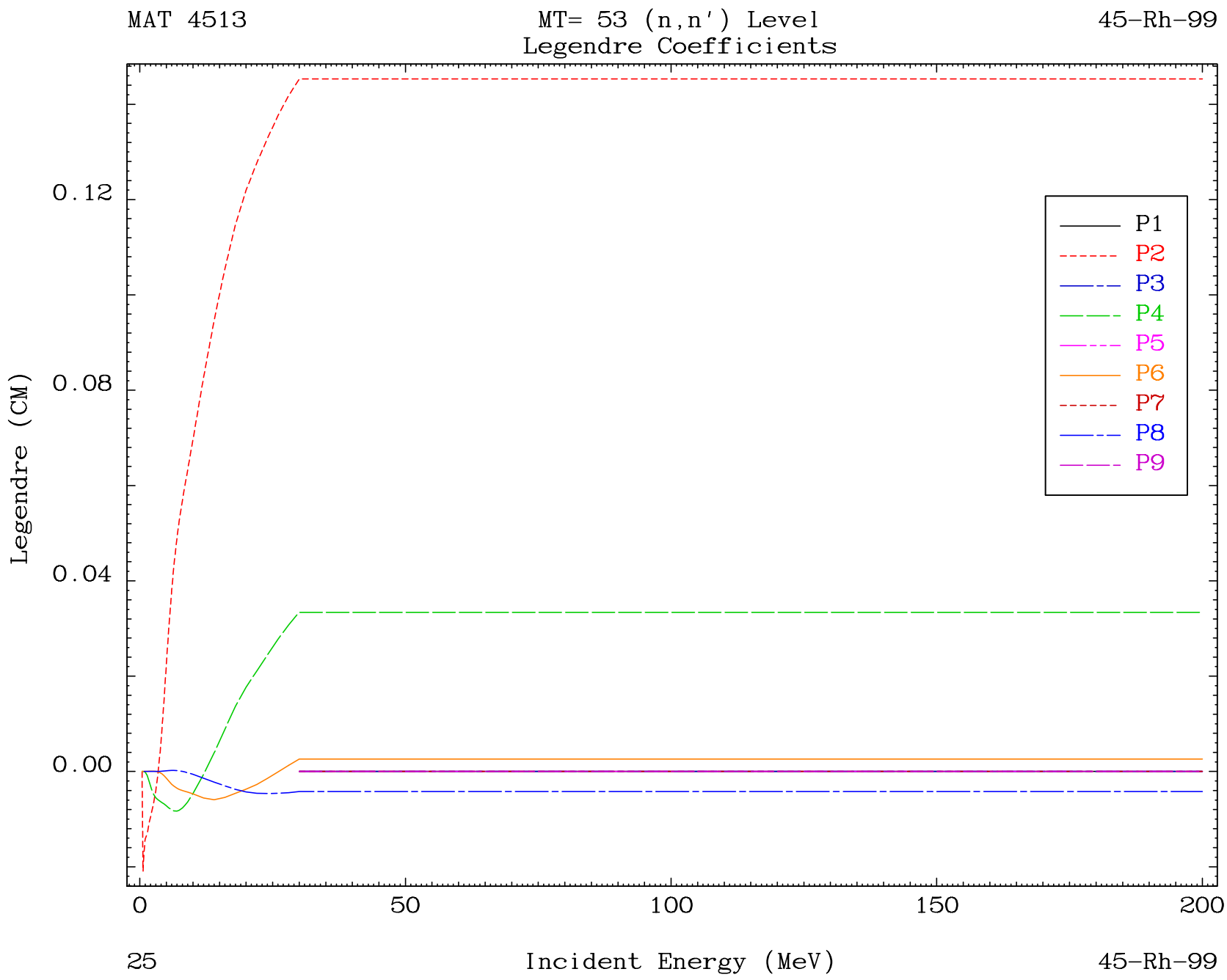

MAT 4513
MT= 51 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-3
1.2
0.8
0.4
0.0
Legendre (CM)
P9
P10
P11
P12
P13
P14
P15
P16
0
50
100
150
200
20
Incident Energy (MeV)
45-Rh-99

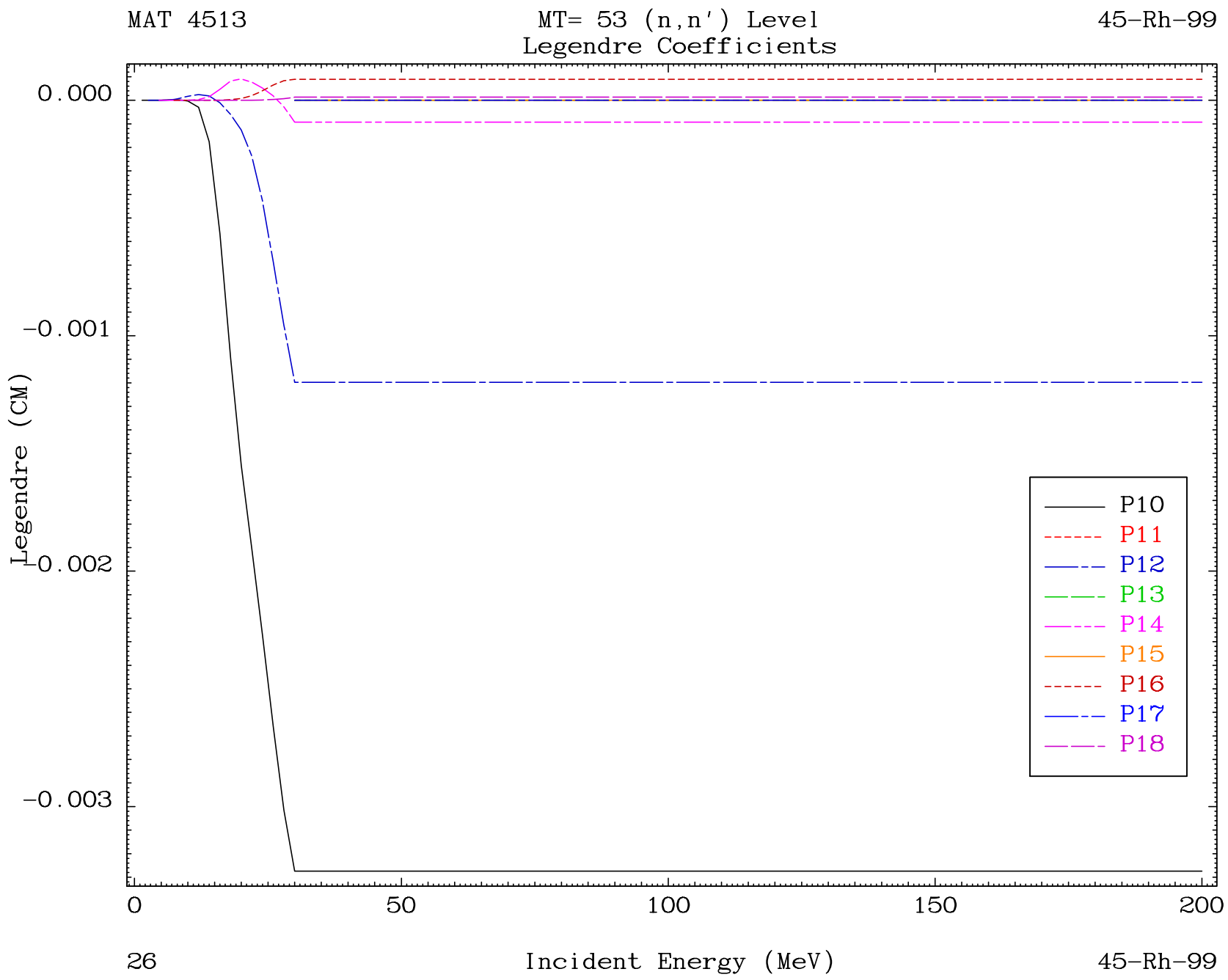

MAT 4513
MT= 51 (n,n') Level
Legendre Coefficients
45-Rh-99
0
X10^-6
-1
-2
-3
-4
-5
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
21
45-Rh-99
P17
P18
P19
P20
P21
P22
P23
P24

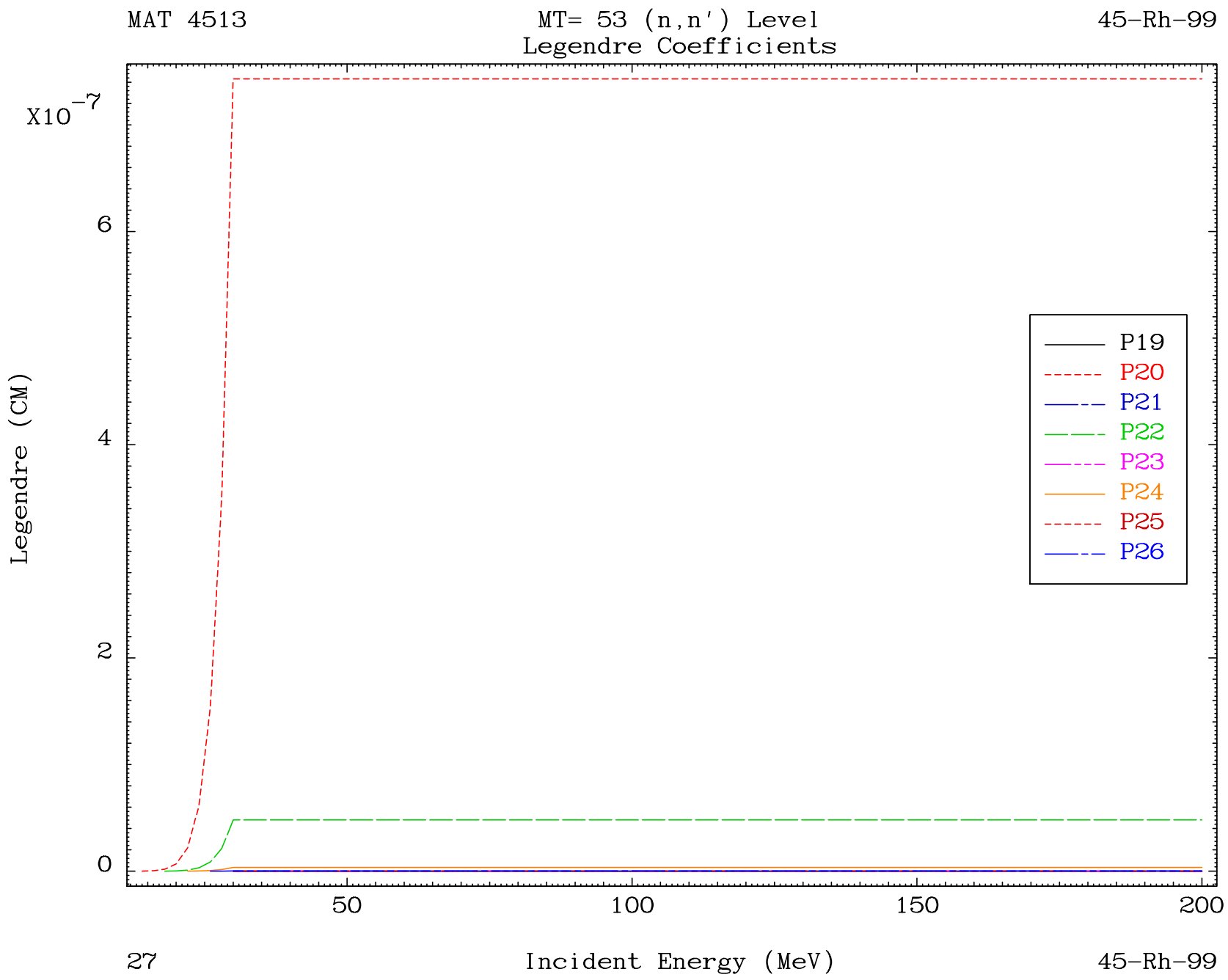

MAT 4513
MT= 52 (n,n') Level
Legendre Coefficients
45-Rh-99
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
22
45-Rh-99

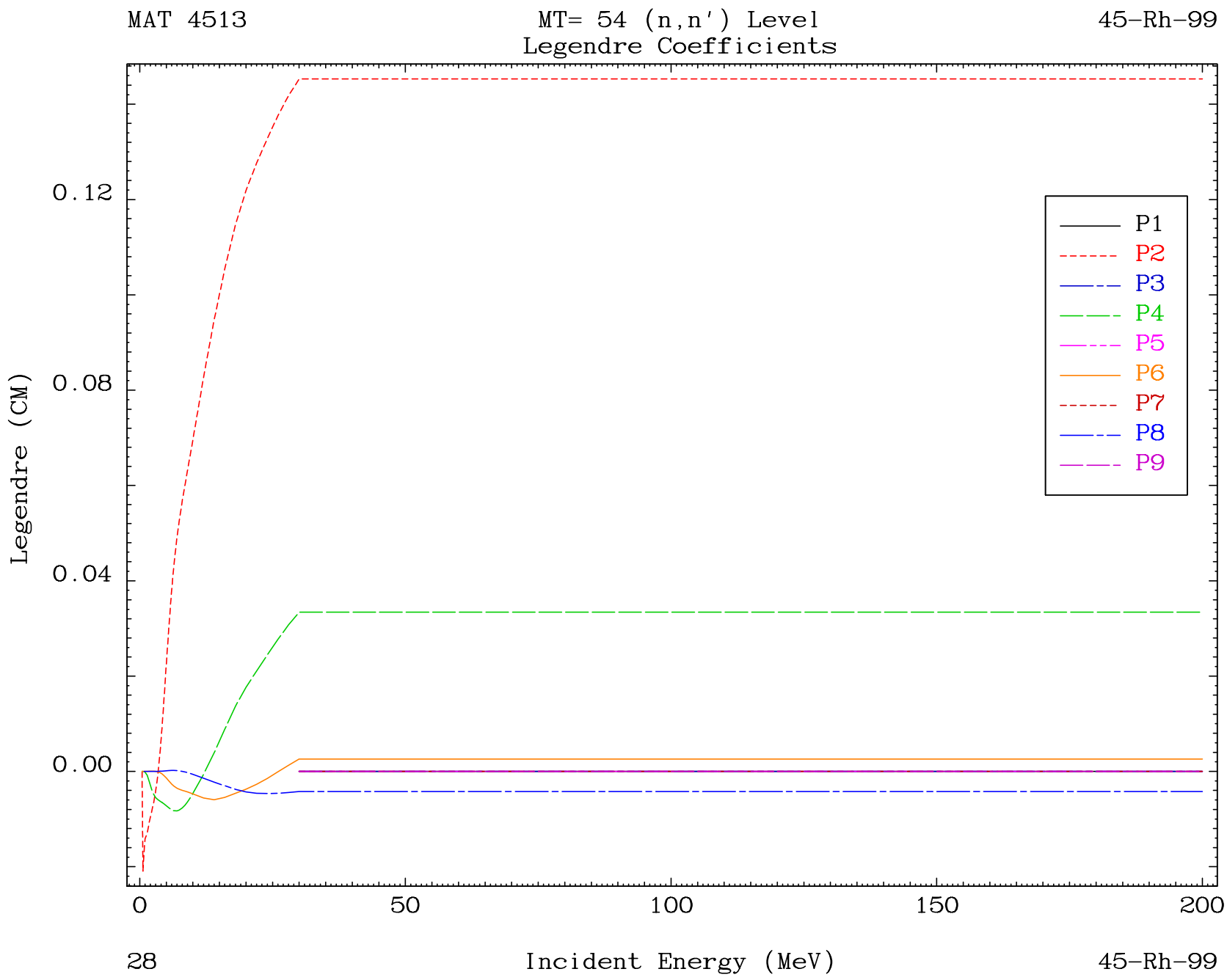

MAT 4513
MT= 52 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-4
4
0
-4
-8
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P9
P10
P11
P12
P13
P14
P15
P16
23
45-Rh-99

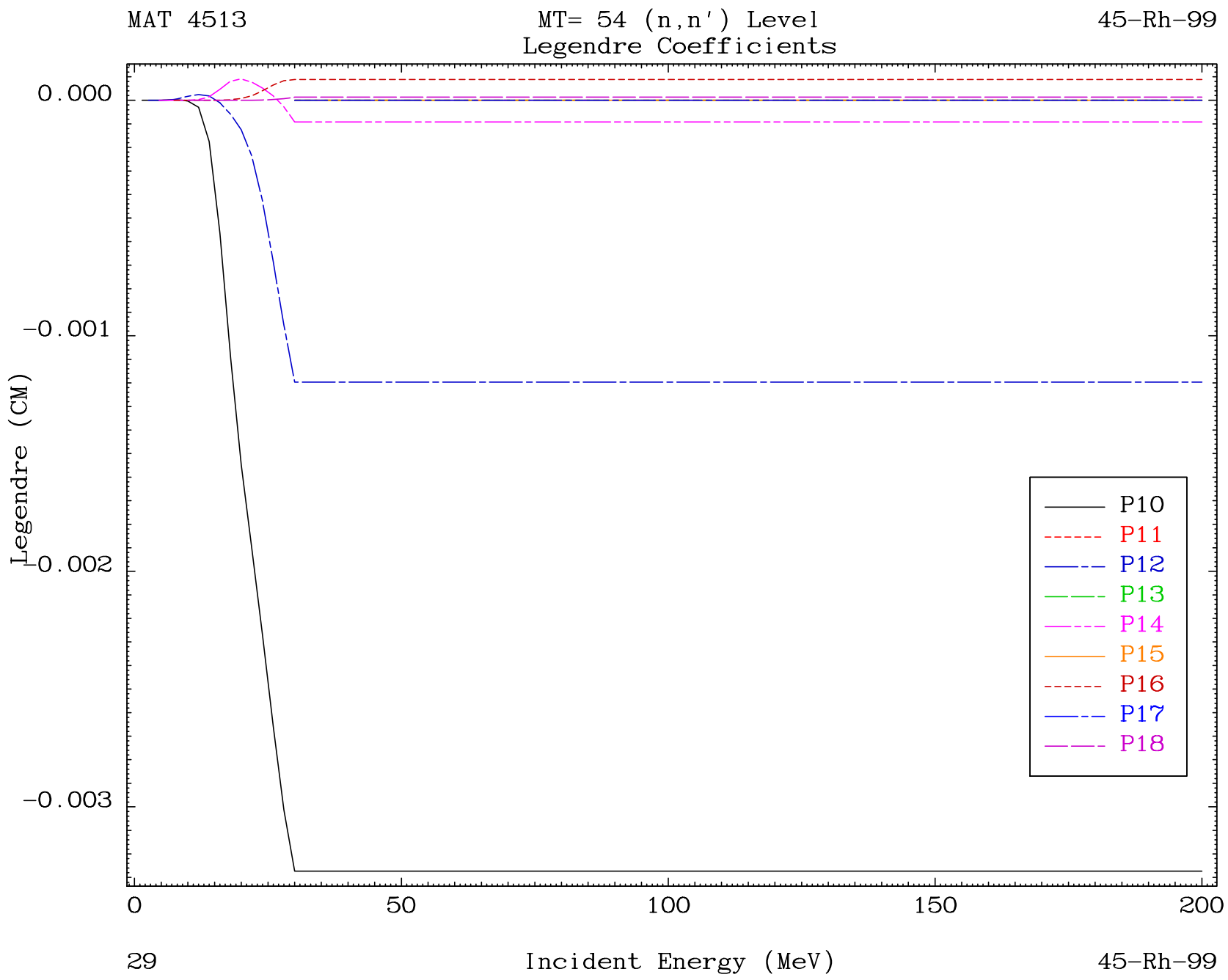

MAT 4513
MT= 52 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-6
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P17
P18
P19
P20
P21
P22
P23
P24
24
45-Rh-99

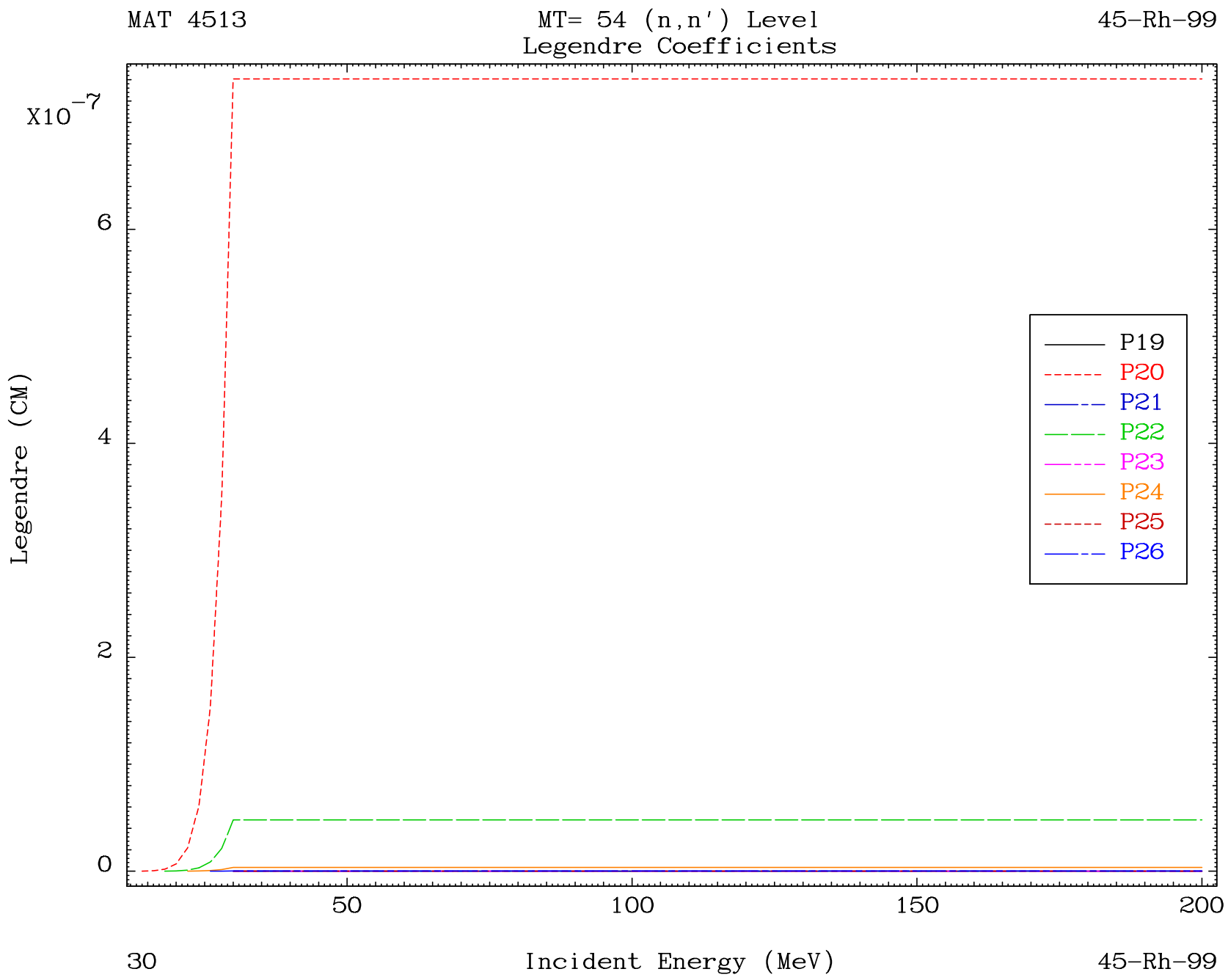

MAT 4513
MT= 53 (n,n') Level
Legendre Coefficients
45-Rh-99
0.12
0.08
0.04
0.00
Legendre (CM)
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
25
Incident Energy (MeV)
45-Rh-99

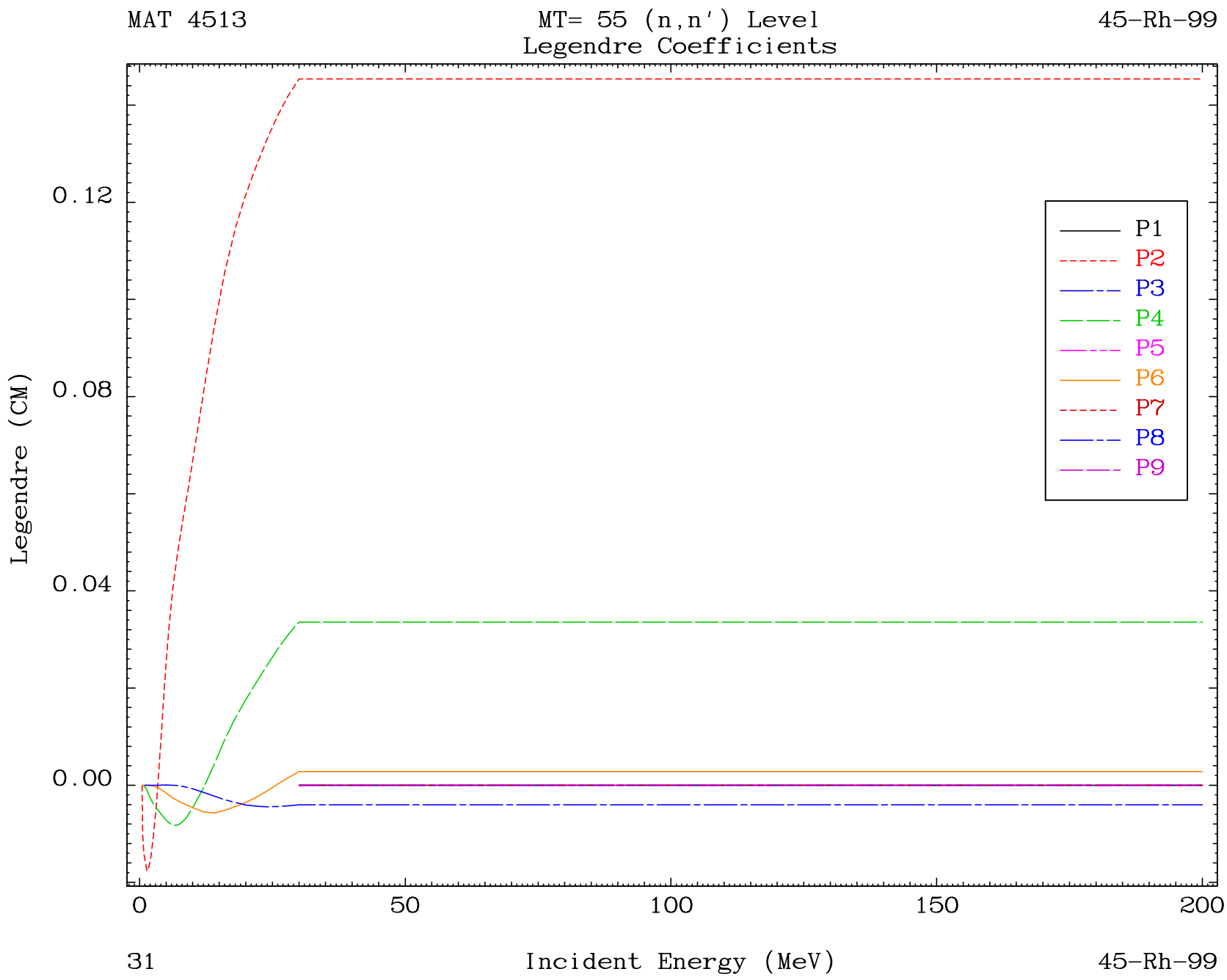

MAT 4513
MT= 53 (n,n') Level
Legendre Coefficients
45-Rh-99
0.000
-0.001
-0.002
-0.003
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
26
45-Rh-99
P10
P11
P12
P13
P14
P15
P16
P17
P18

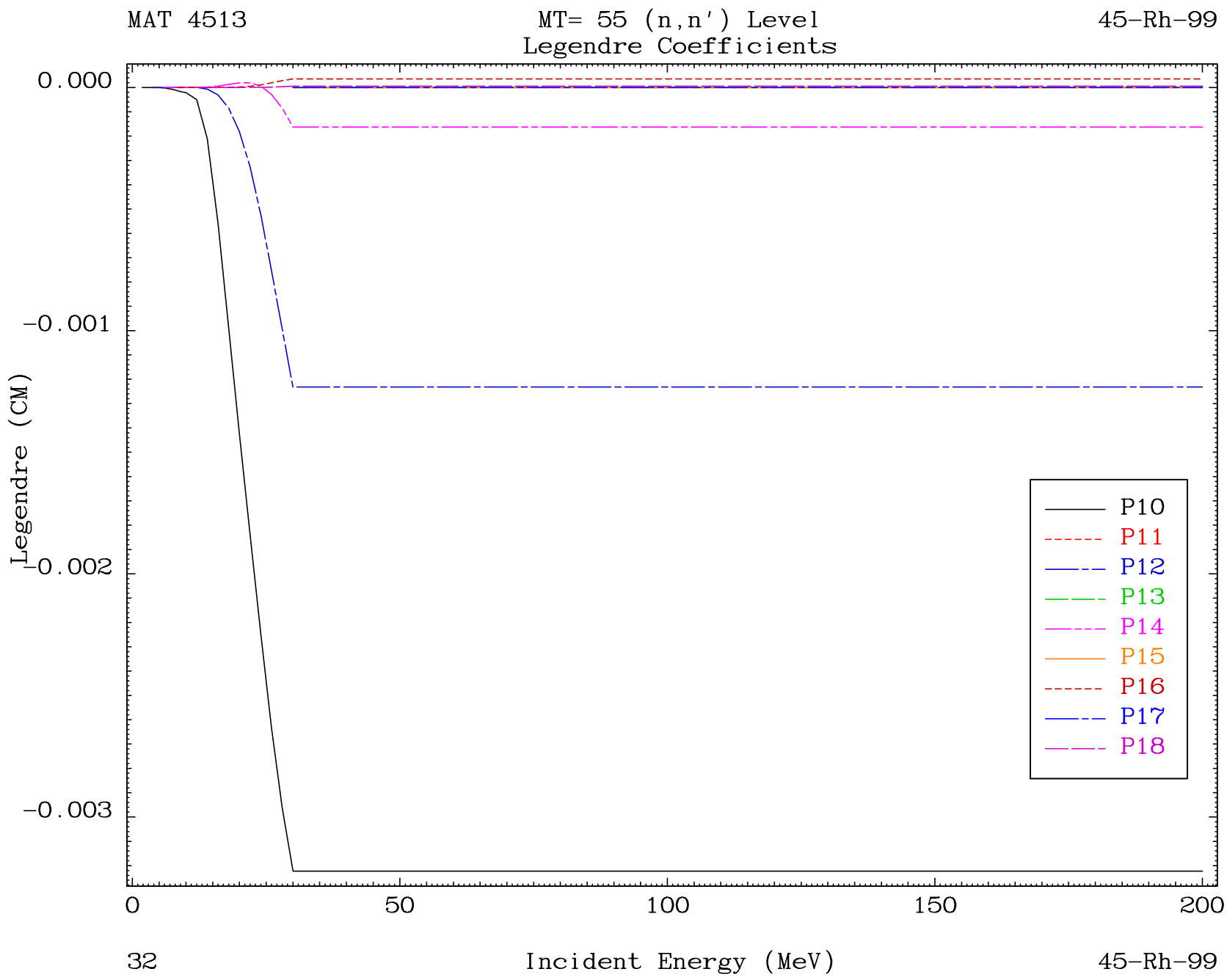

MAT 4513
MT= 53 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-7
6
4
2
0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
27
45-Rh-99
P19
P20
P21
P22
P23
P24
P25
P26

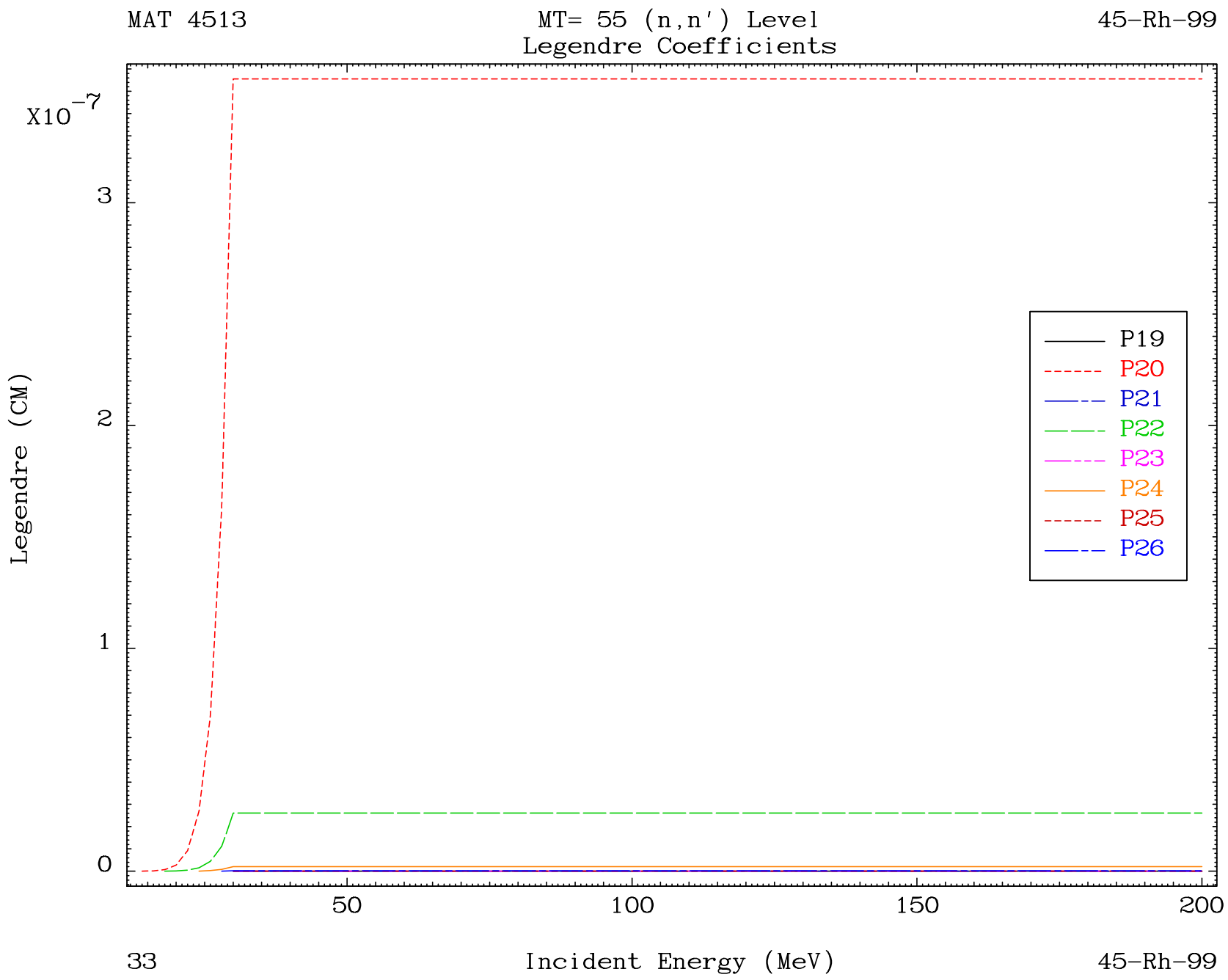

MAT 4513
MT= 54 (n,n') Level
Legendre Coefficients
45-Rh-99
0.12
0.08
0.04
0.00
Legendre (CM)
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
28
Incident Energy (MeV)
45-Rh-99

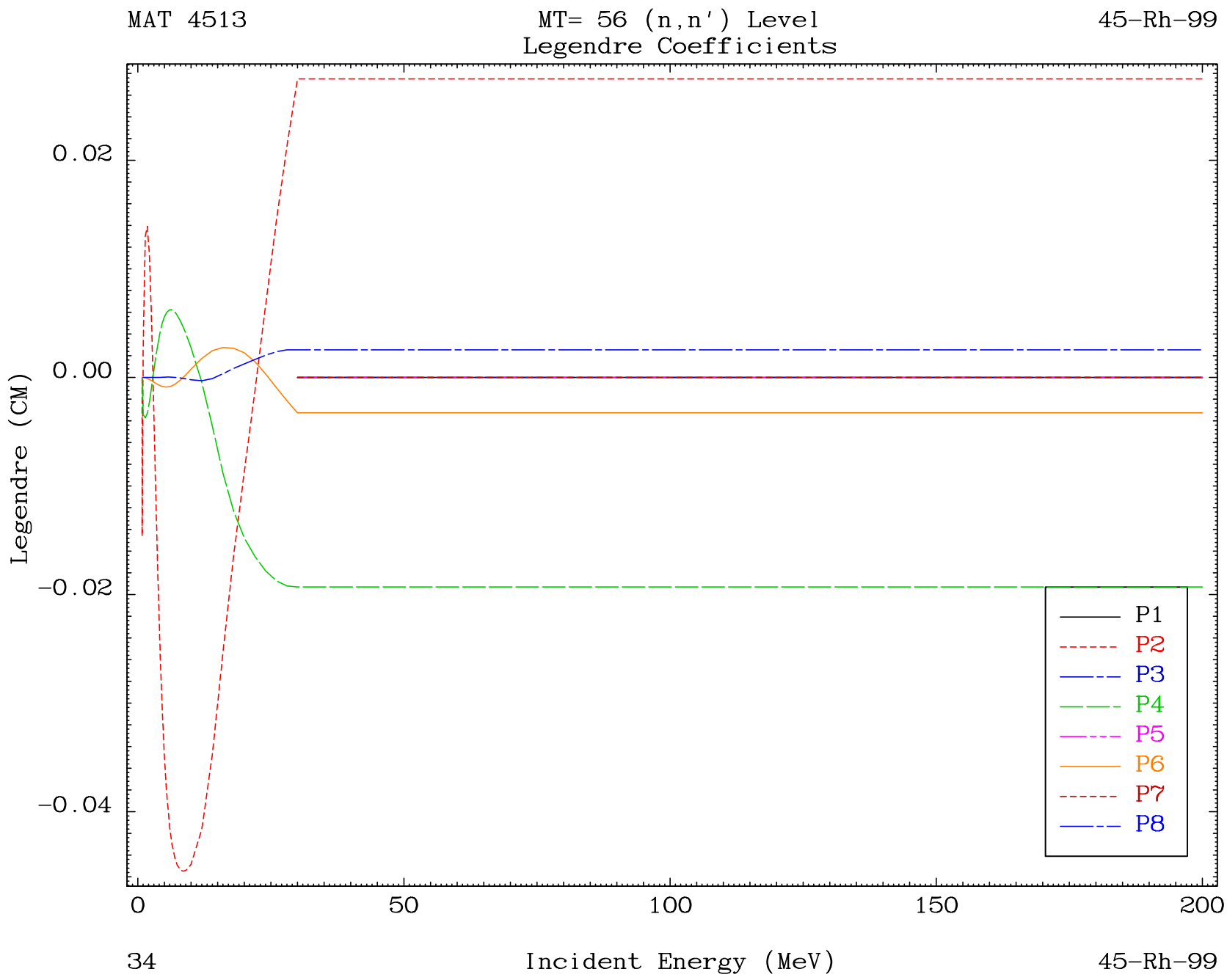

MAT 4513
MT= 54 (n,n') Level
Legendre Coefficients
45-Rh-99
0.000
-0.001
-0.002
-0.003
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
29
45-Rh-99
P10
P11
P12
P13
P14
P15
P16
P17
P18

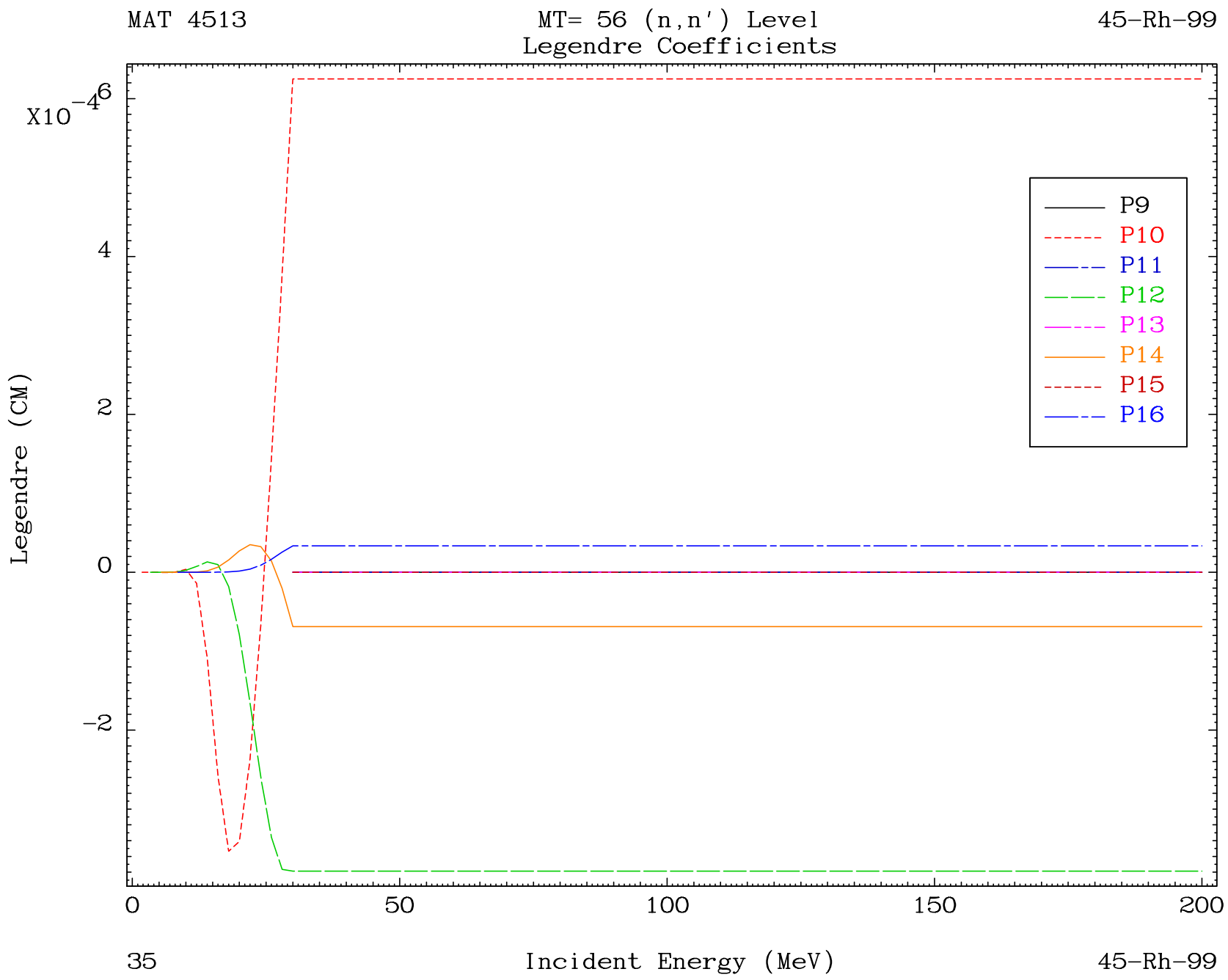

MAT 4513
MT= 54 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-7
6
4
2
0
Legendre (CM)
50
100
150
200
30
Incident Energy (MeV)
45-Rh-99
P19
P20
P21
P22
P23
P24
P25
P26

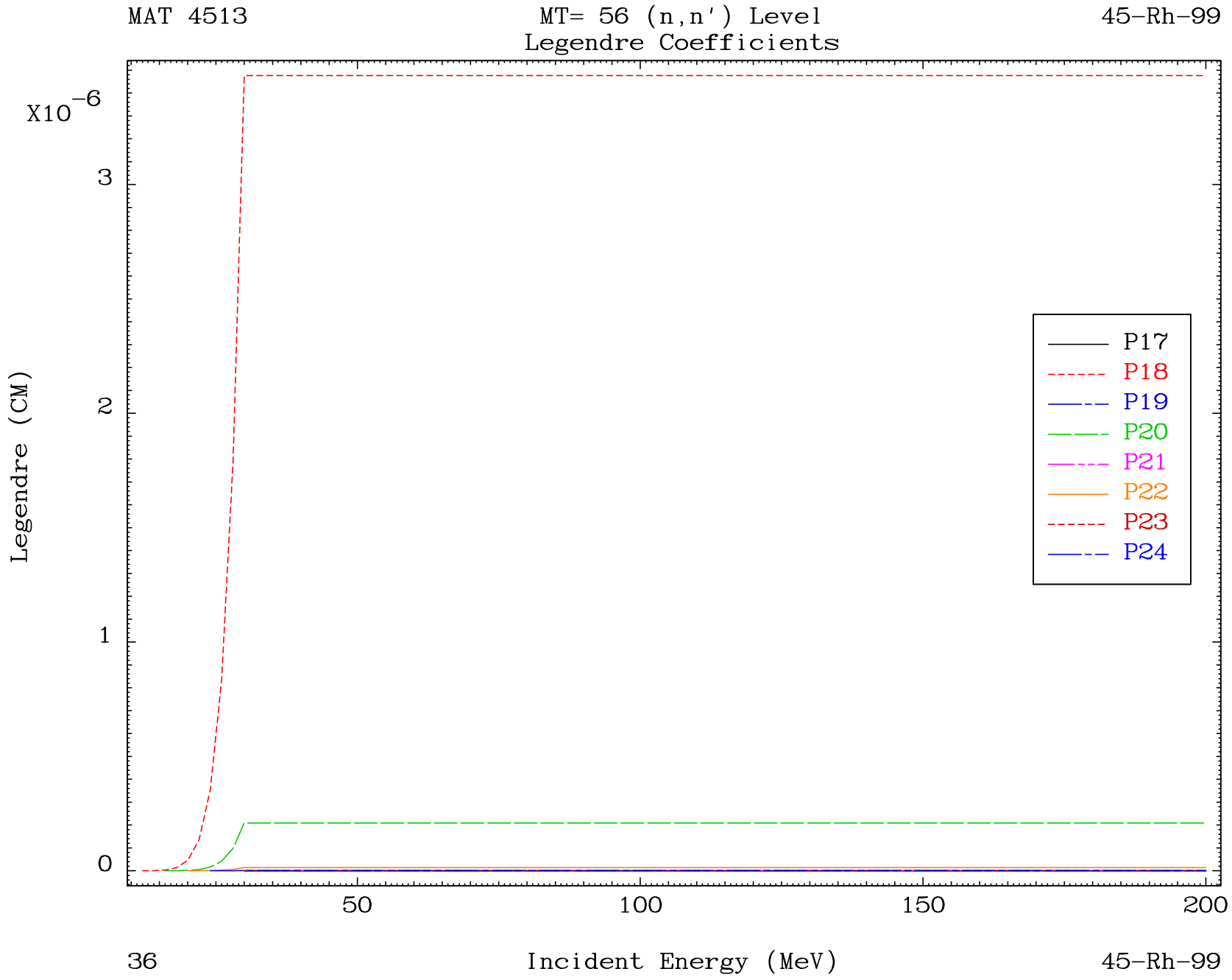

MAT 4513
MT= 55 (n,n') Level
Legendre Coefficients
45-Rh-99
0.12
0.08
0.04
0.00
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
P9
31
45-Rh-99

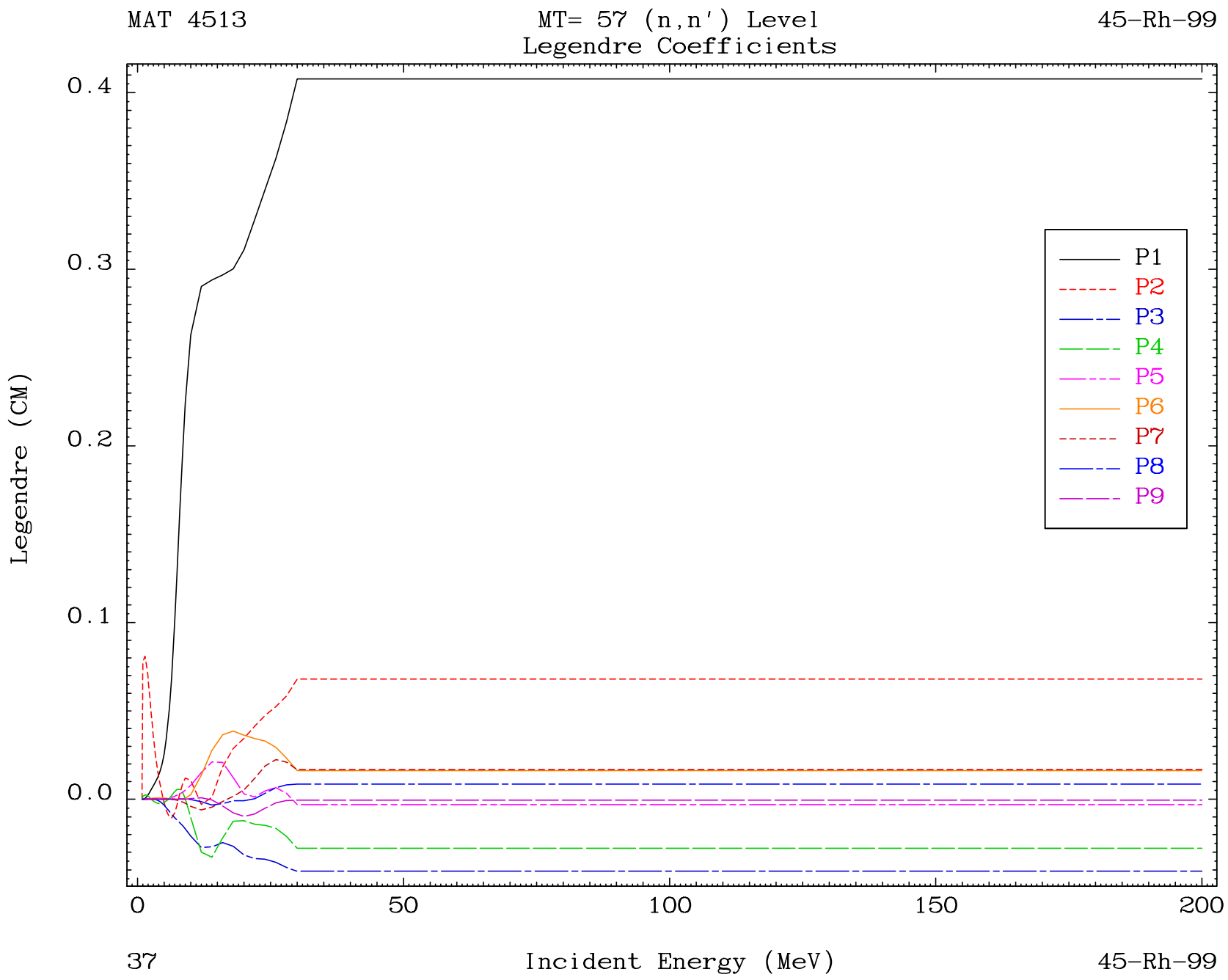

MAT 4513
MT= 55 (n,n') Level
Legendre Coefficients
45-Rh-99
0.000
-0.001
-0.002
-0.003
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P10
P11
P12
P13
P14
P15
P16
P17
P18
32
45-Rh-99

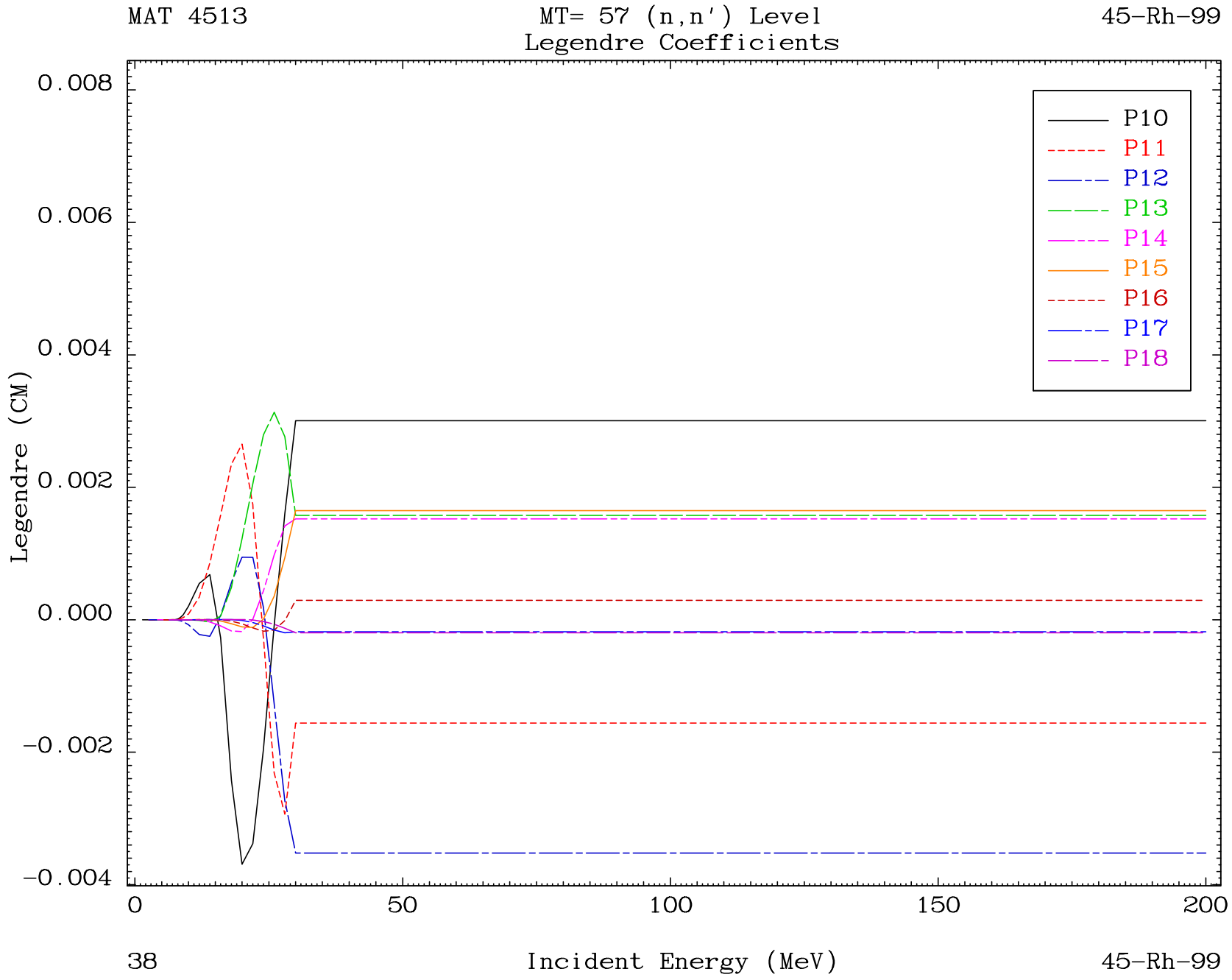

MAT 4513
MT= 55 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-7
3
2
1
0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P19
P20
P21
P22
P23
P24
P25
P26
33
45-Rh-99

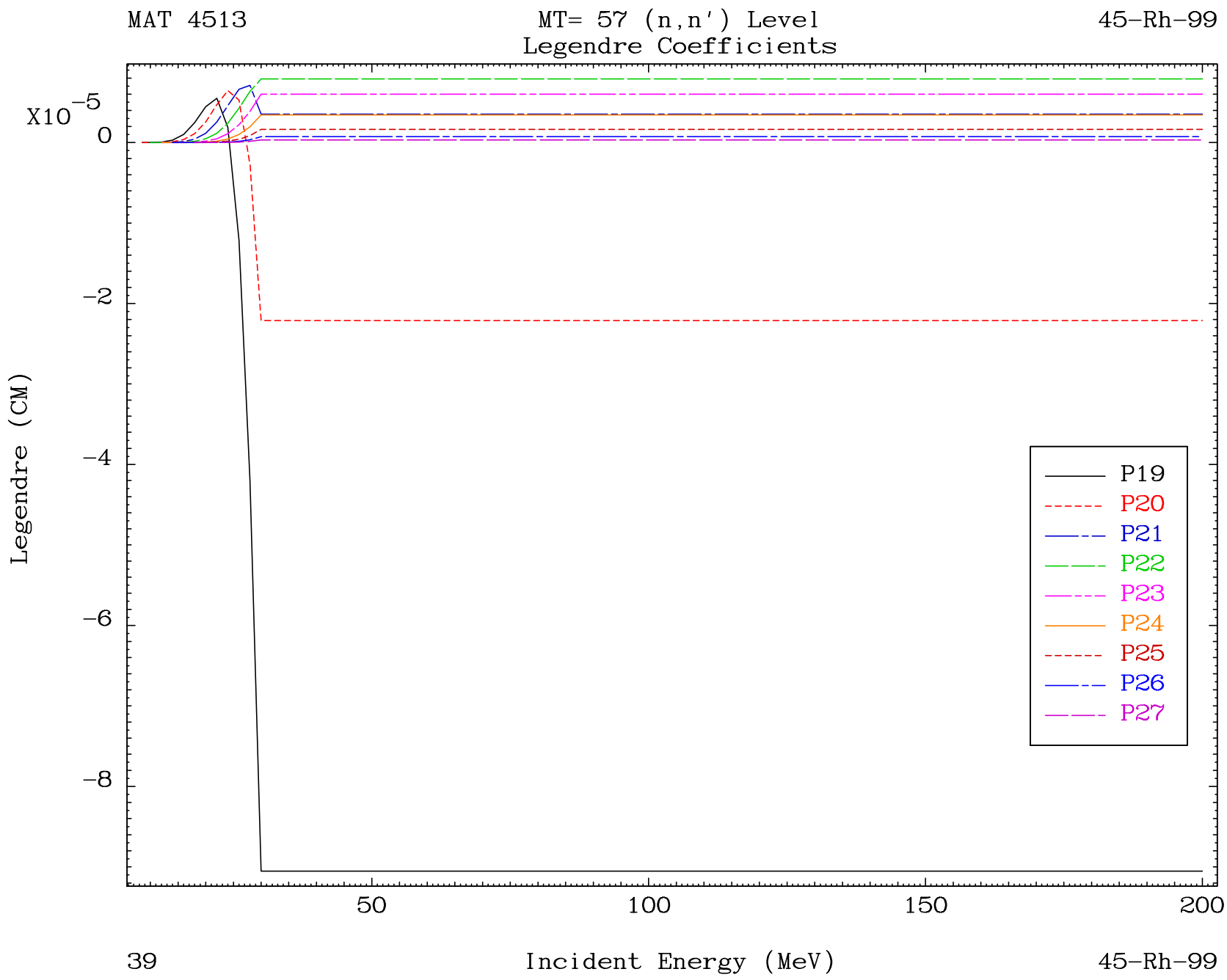

MAT 4513
MT= 56 (n,n') Level
Legendre Coefficients
45-Rh-99
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
34
45-Rh-99

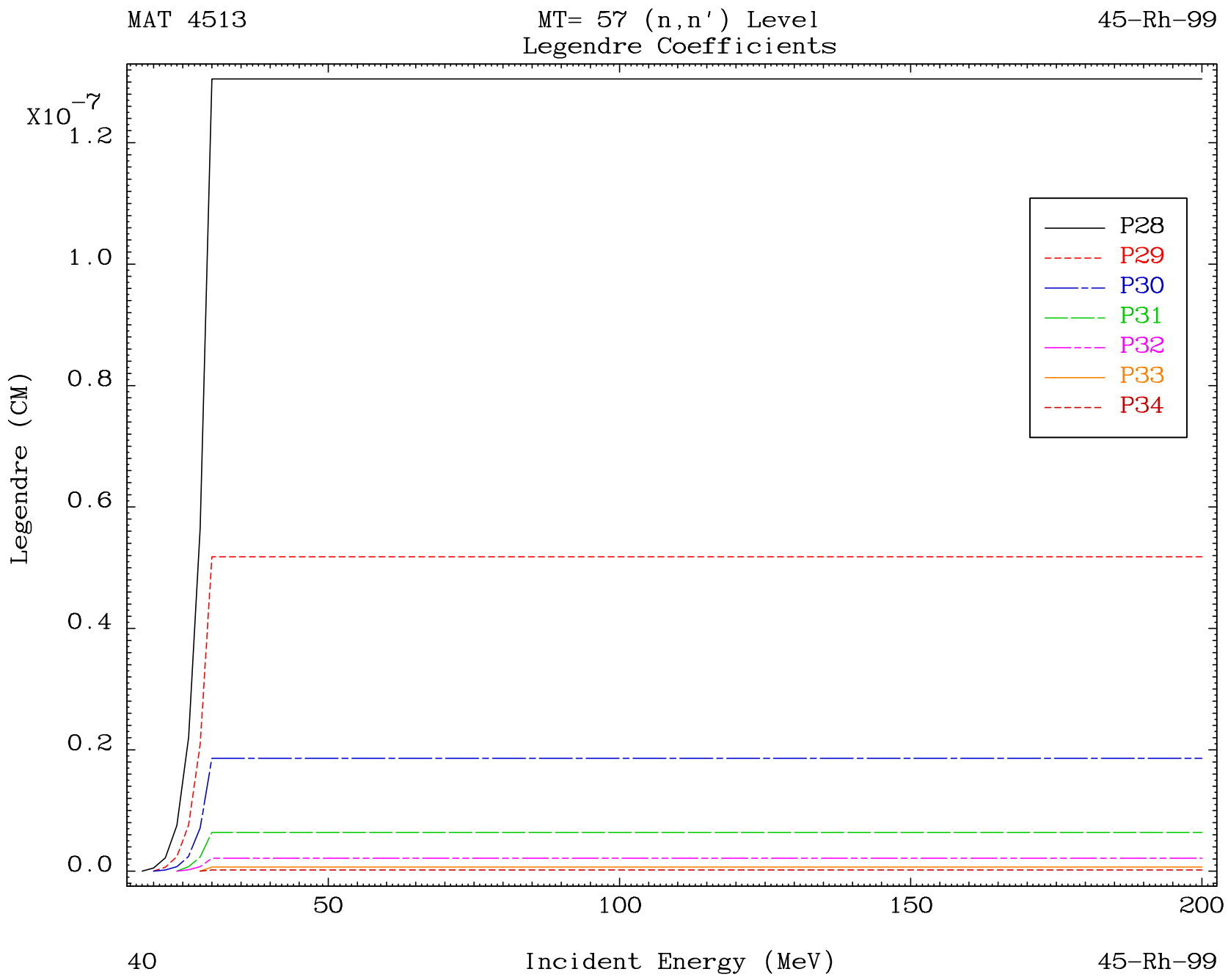

MAT 4513
MT= 56 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-4
6
4
2
0
-2
Legendre (CM)
P9
P10
P11
P12
P13
P14
P15
P16
0
50
100
150
200
35
Incident Energy (MeV)
45-Rh-99

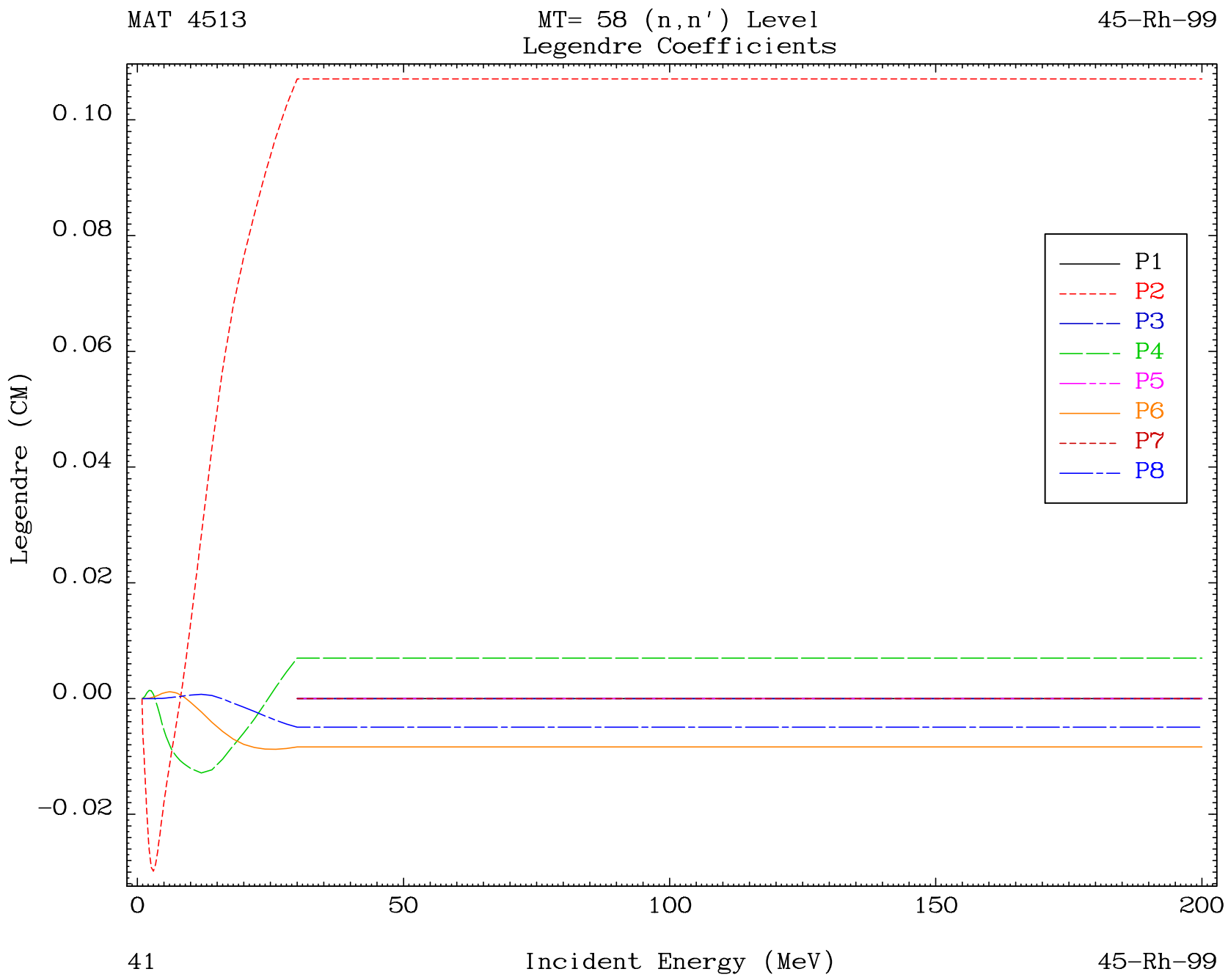

MAT 4513
MT= 56 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-6
3
2
1
0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P17
P18
P19
P20
P21
P22
P23
P24
36
45-Rh-99

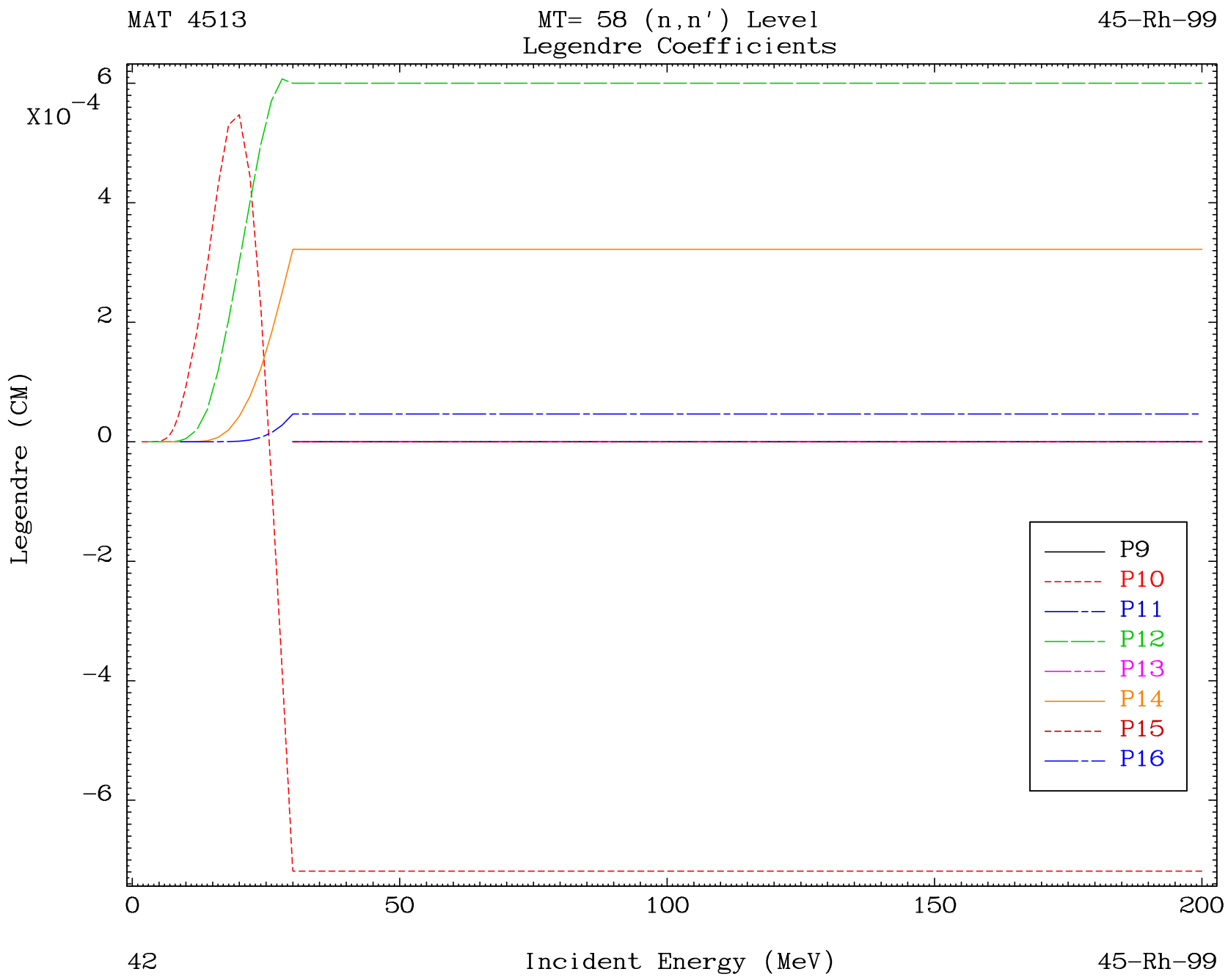

MAT 4513
MT= 57 (n,n') Level
Legendre Coefficients
45-Rh-99
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
P9
37
45-Rh-99

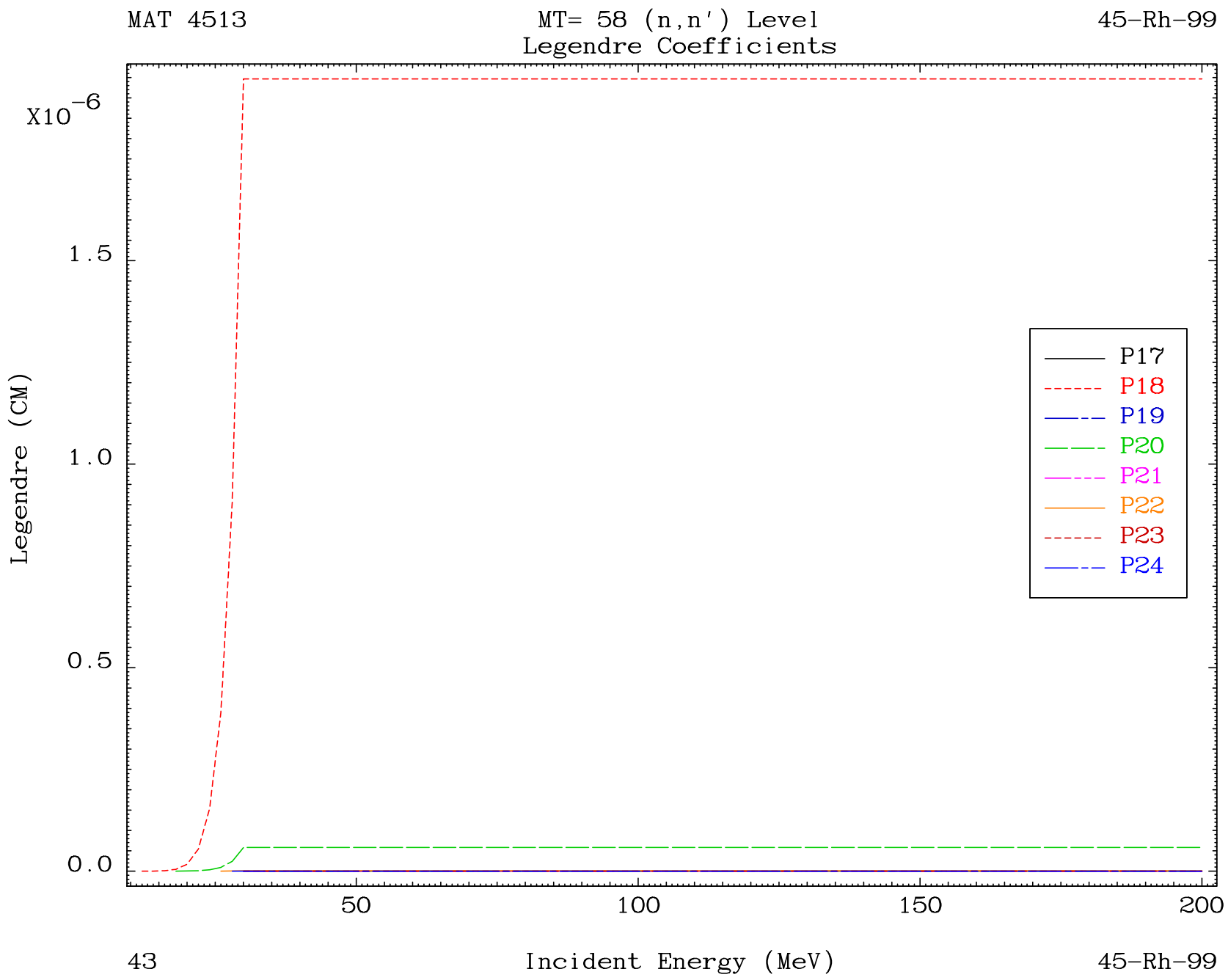

MAT 4513
MT= 57 (n,n') Level
Legendre Coefficients
45-Rh-99
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P10
P11
P12
P13
P14
P15
P16
P17
P18
38
45-Rh-99

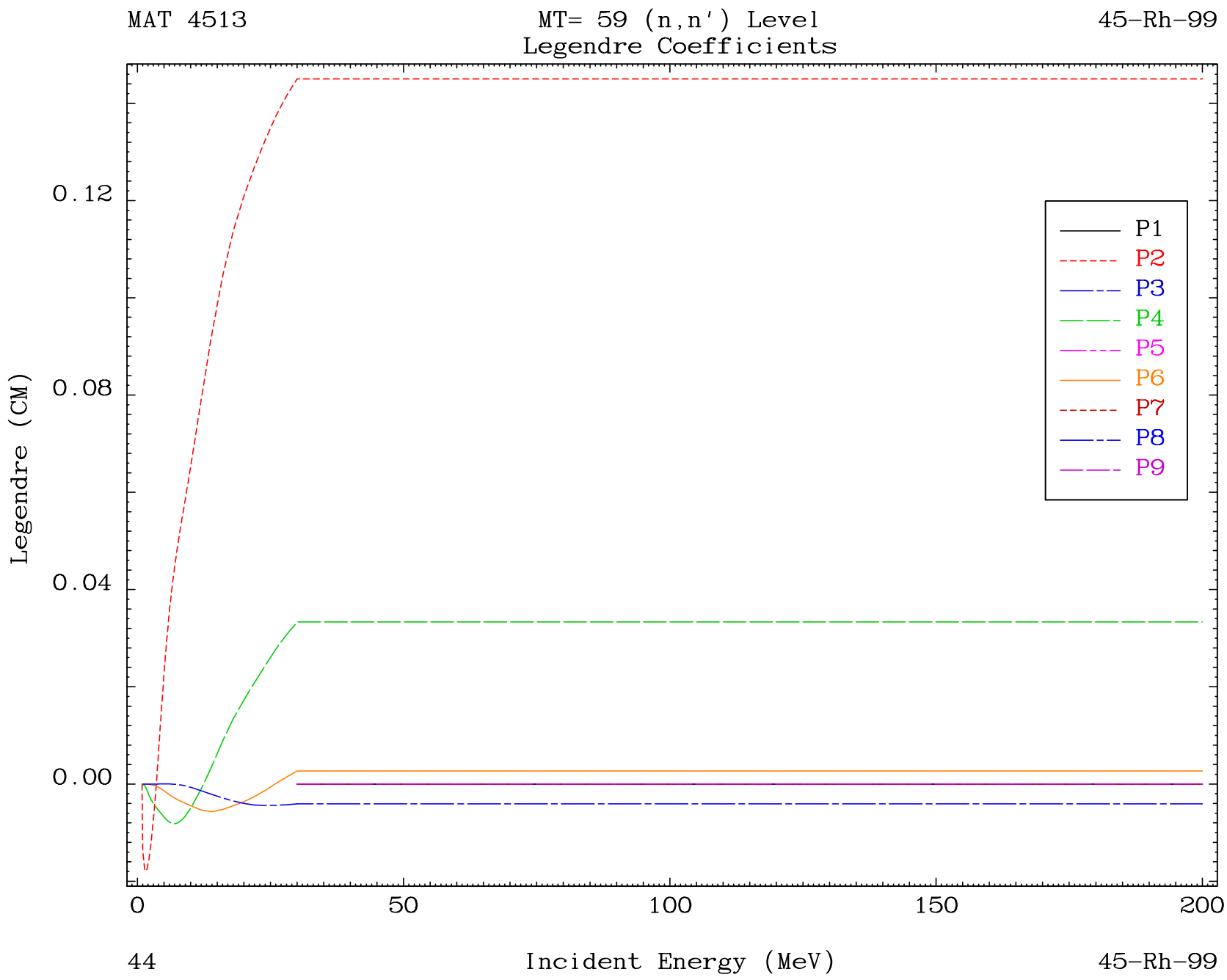

MAT 4513
MT= 57 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-5
0
-2
-4
-6
-8
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
39
45-Rh-99
P19
P20
P21
P22
P23
P24
P25
P26
P27

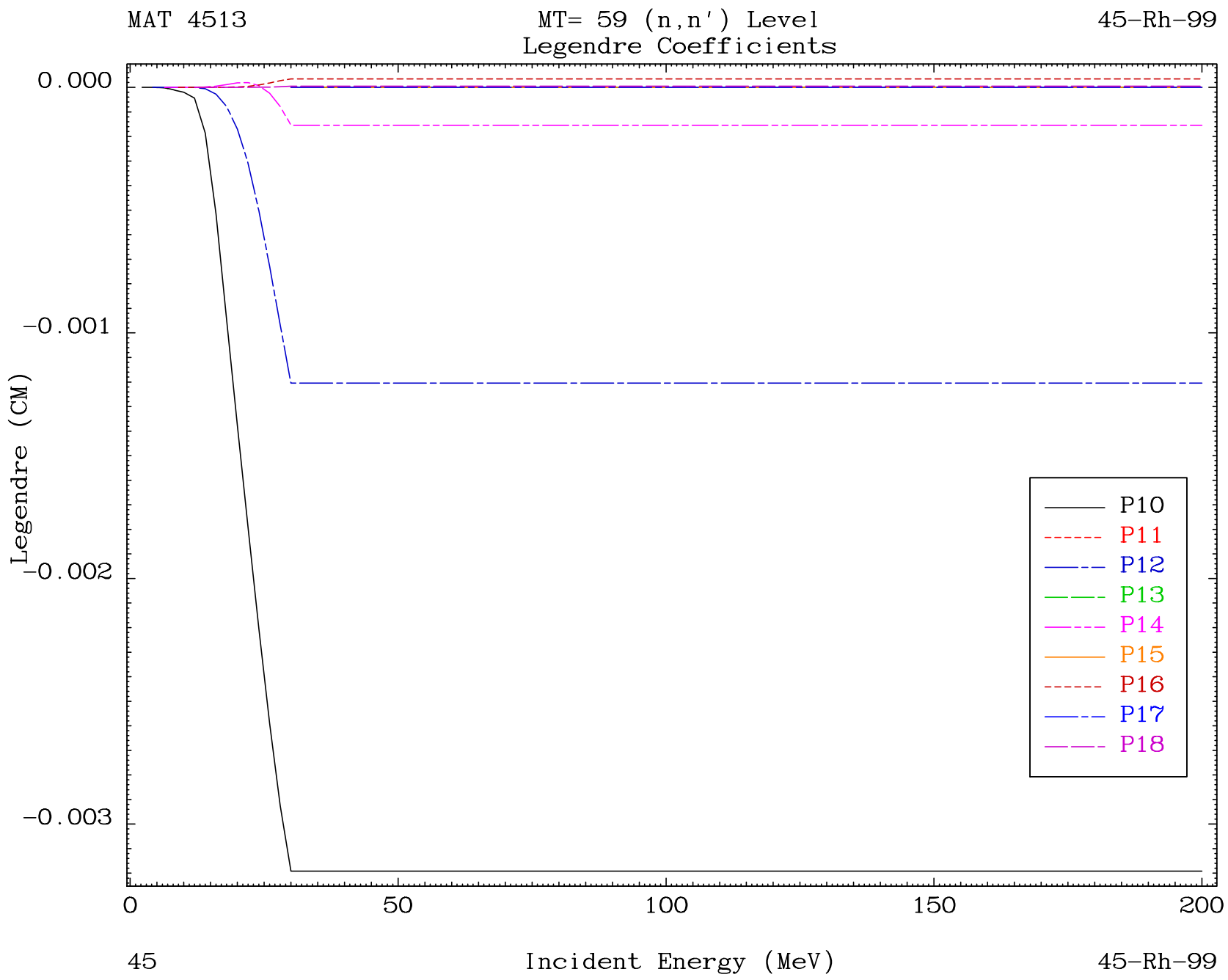

MAT 4513
MT= 57 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-7
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
40
50
100
150
200
Incident Energy (MeV)
45-Rh-99

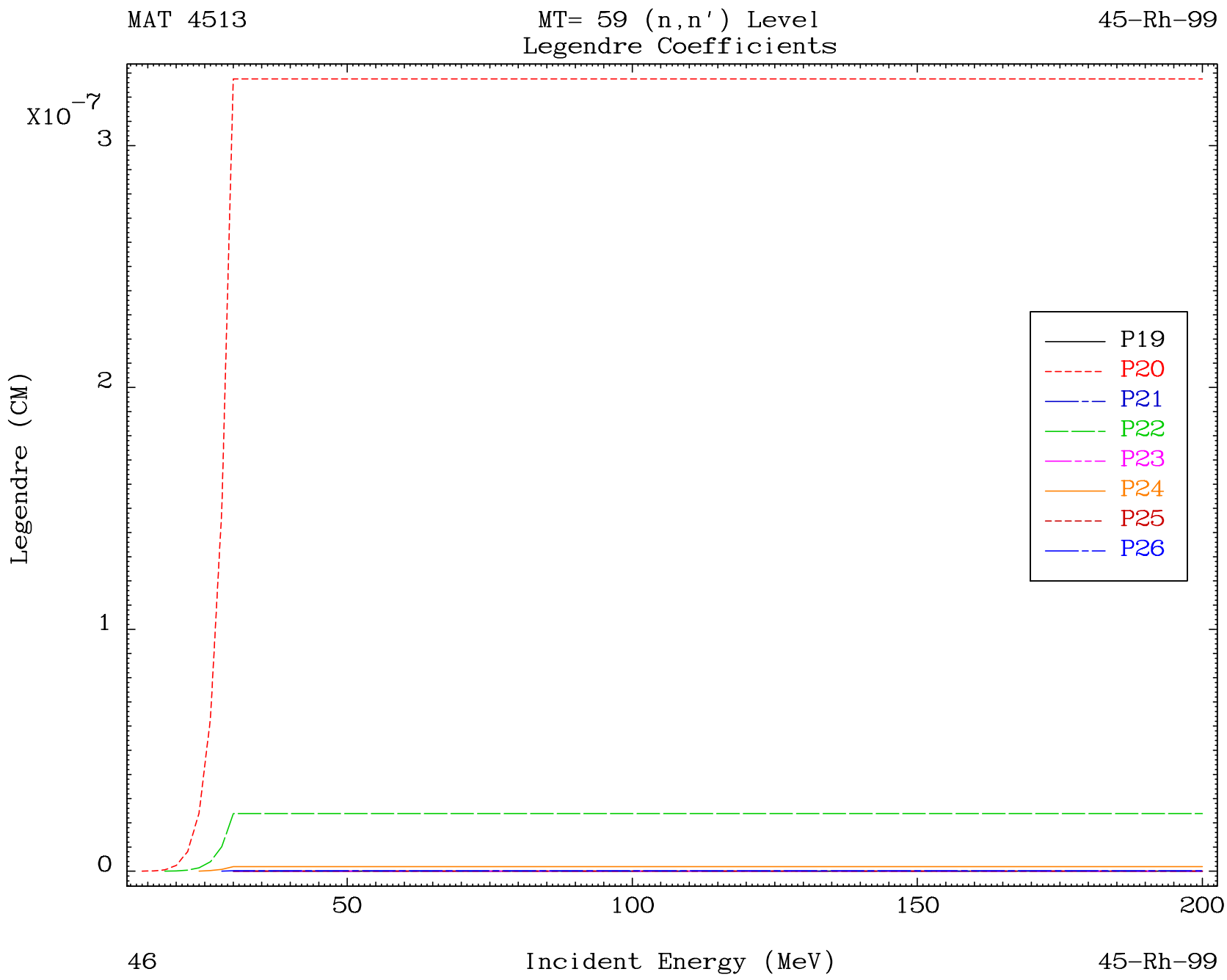

MAT 4513
MT= 58 (n,n') Level
Legendre Coefficients
45-Rh-99
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
41
45-Rh-99

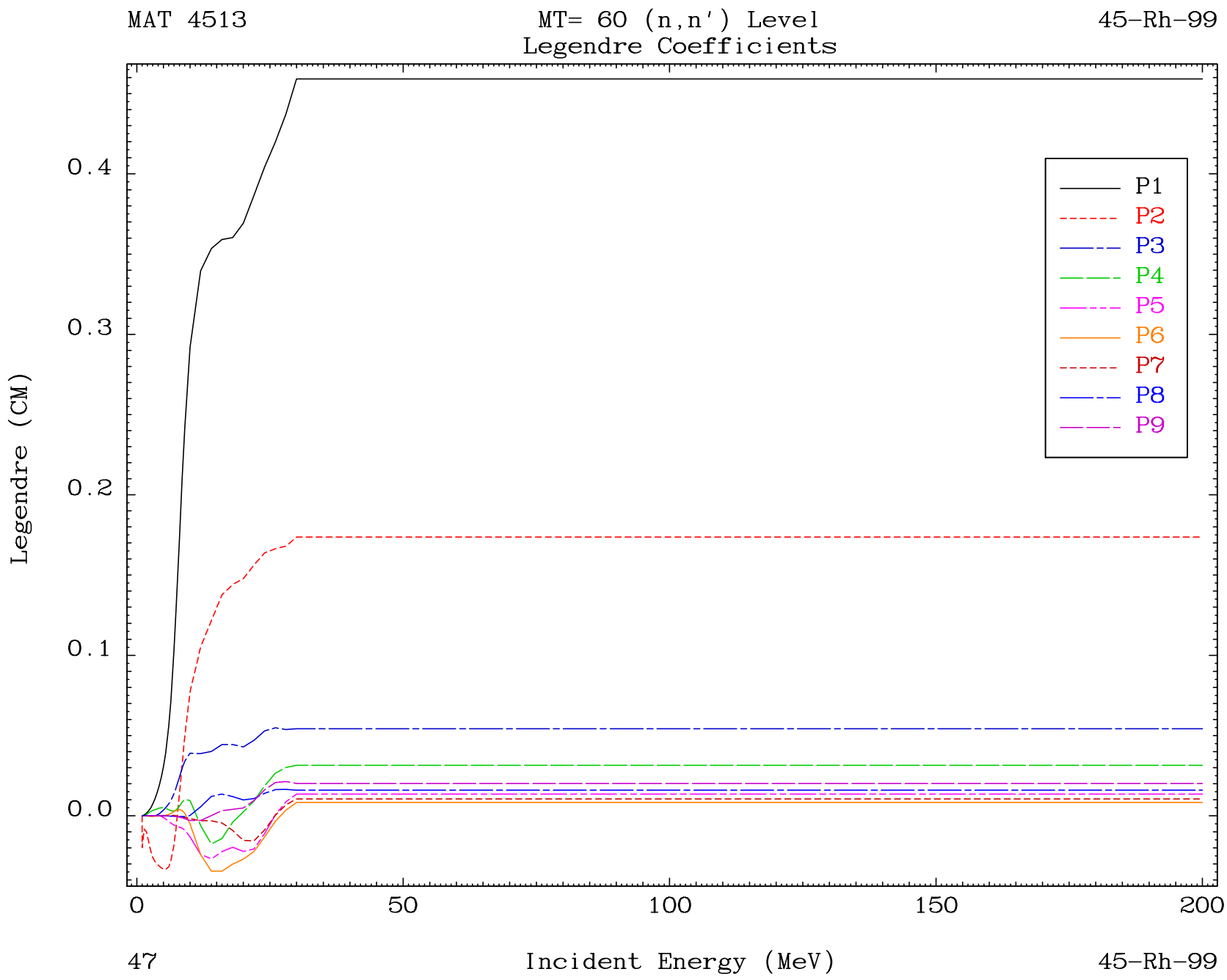

MAT 4513
MT= 58 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-4
6
4
2
0
-2
-4
-6
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P9
P10
P11
P12
P13
P14
P15
P16
42
45-Rh-99

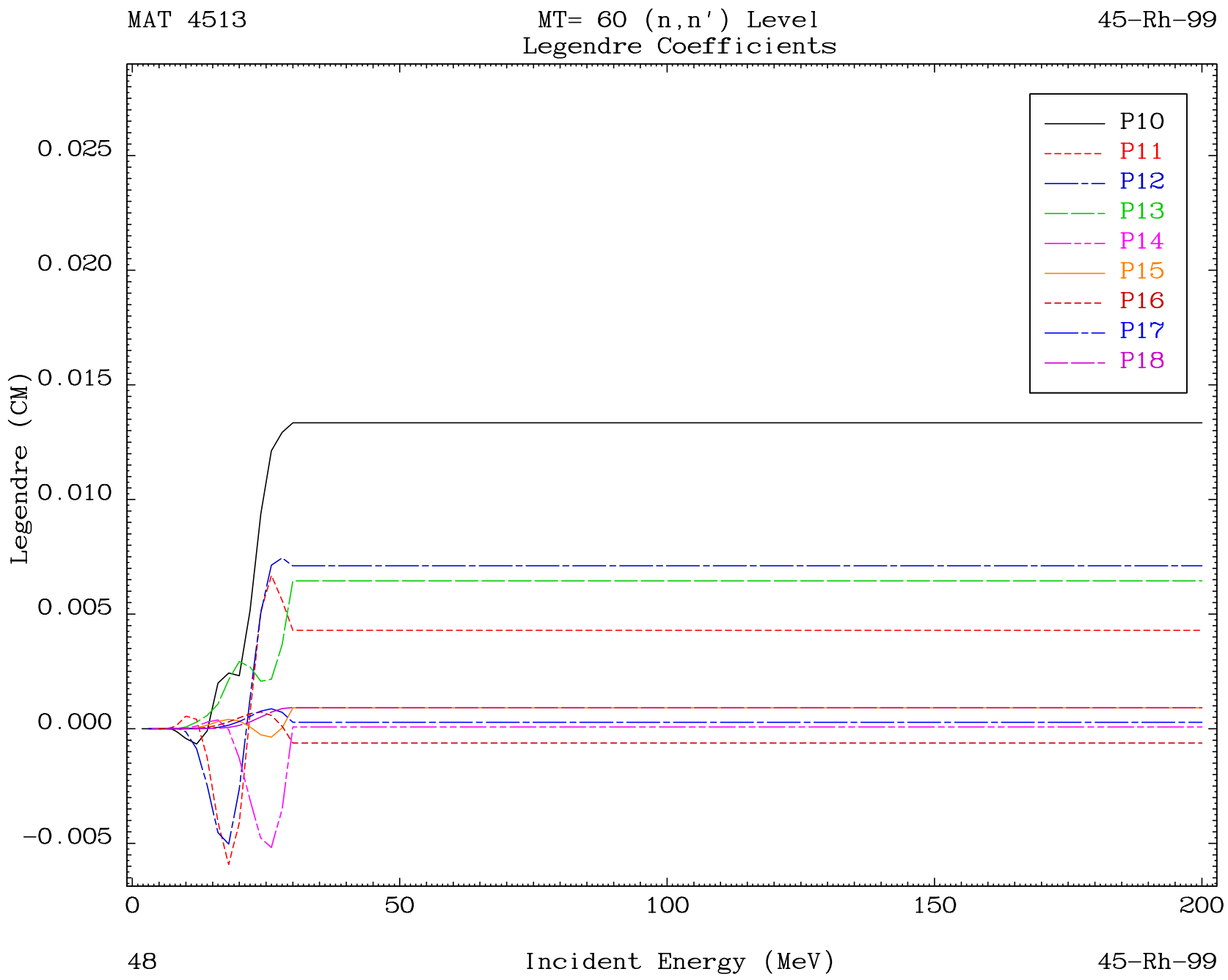

MAT 4513
MT= 58 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
50
100
150
200
P17
P18
P19
P20
P21
P22
P23
P24
43
Incident Energy (MeV)
45-Rh-99

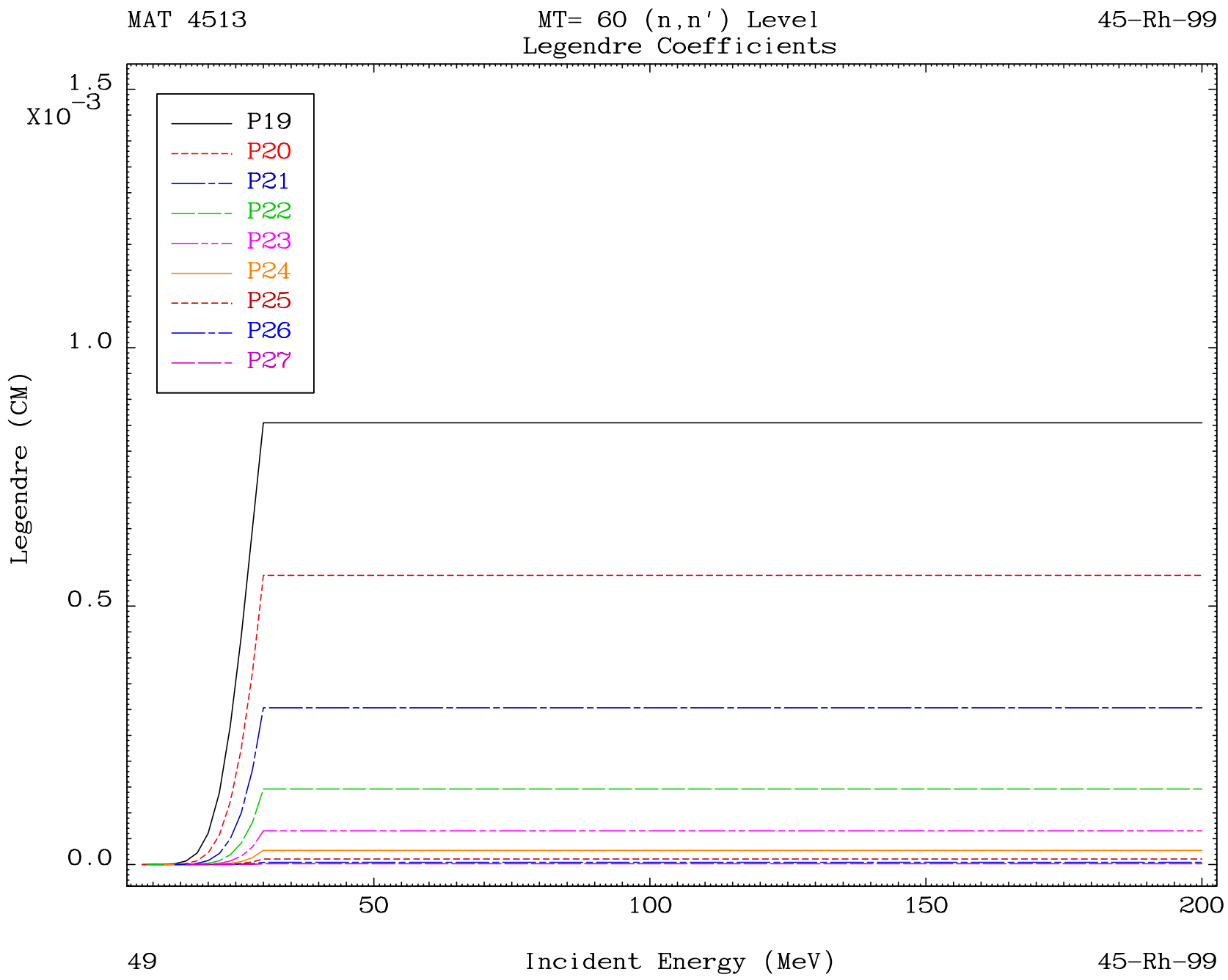

MAT 4513
MT= 59 (n,n') Level
Legendre Coefficients
45-Rh-99
0.12
0.08
0.04
0.00
Legendre (CM)
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
44
Incident Energy (MeV)
45-Rh-99

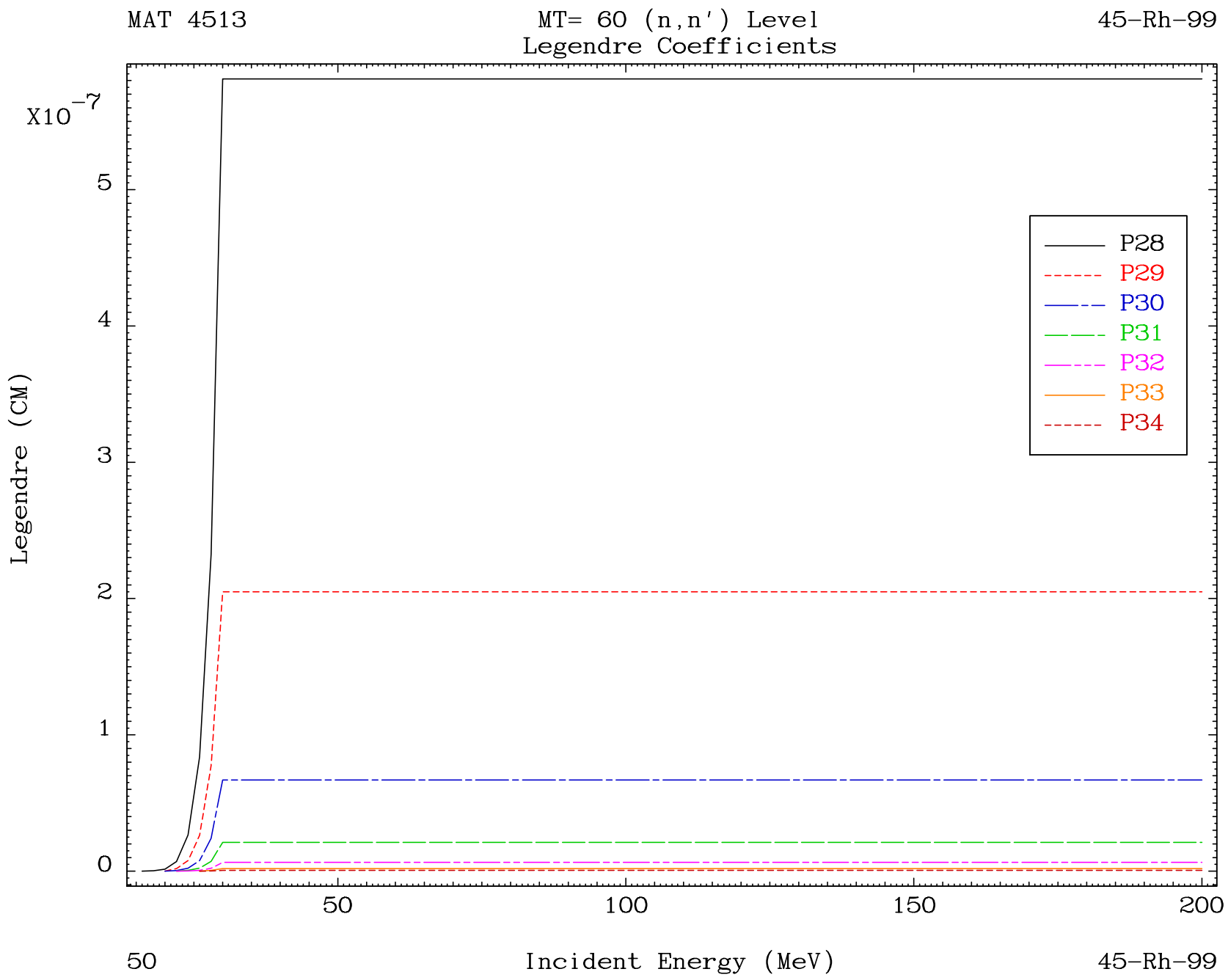

MAT 4513
MT= 59 (n,n') Level
Legendre Coefficients
45-Rh-99
0.000
-0.001
-0.002
-0.003
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
45
45-Rh-99
P10
P11
P12
P13
P14
P15
P16
P17
P18

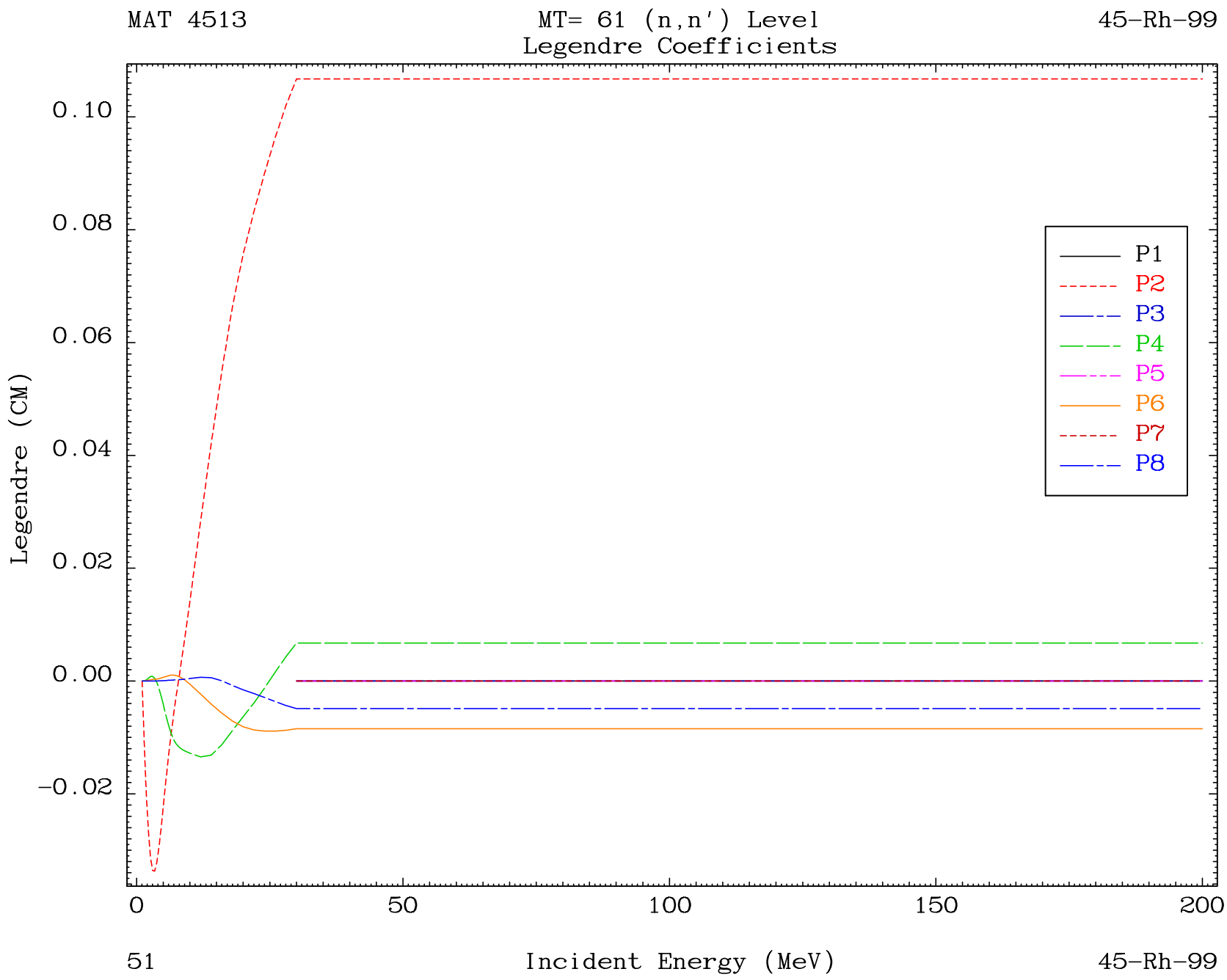

MAT 4513
MT= 59 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-7
3
2
1
0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P19
P20
P21
P22
P23
P24
P25
P26
46
45-Rh-99

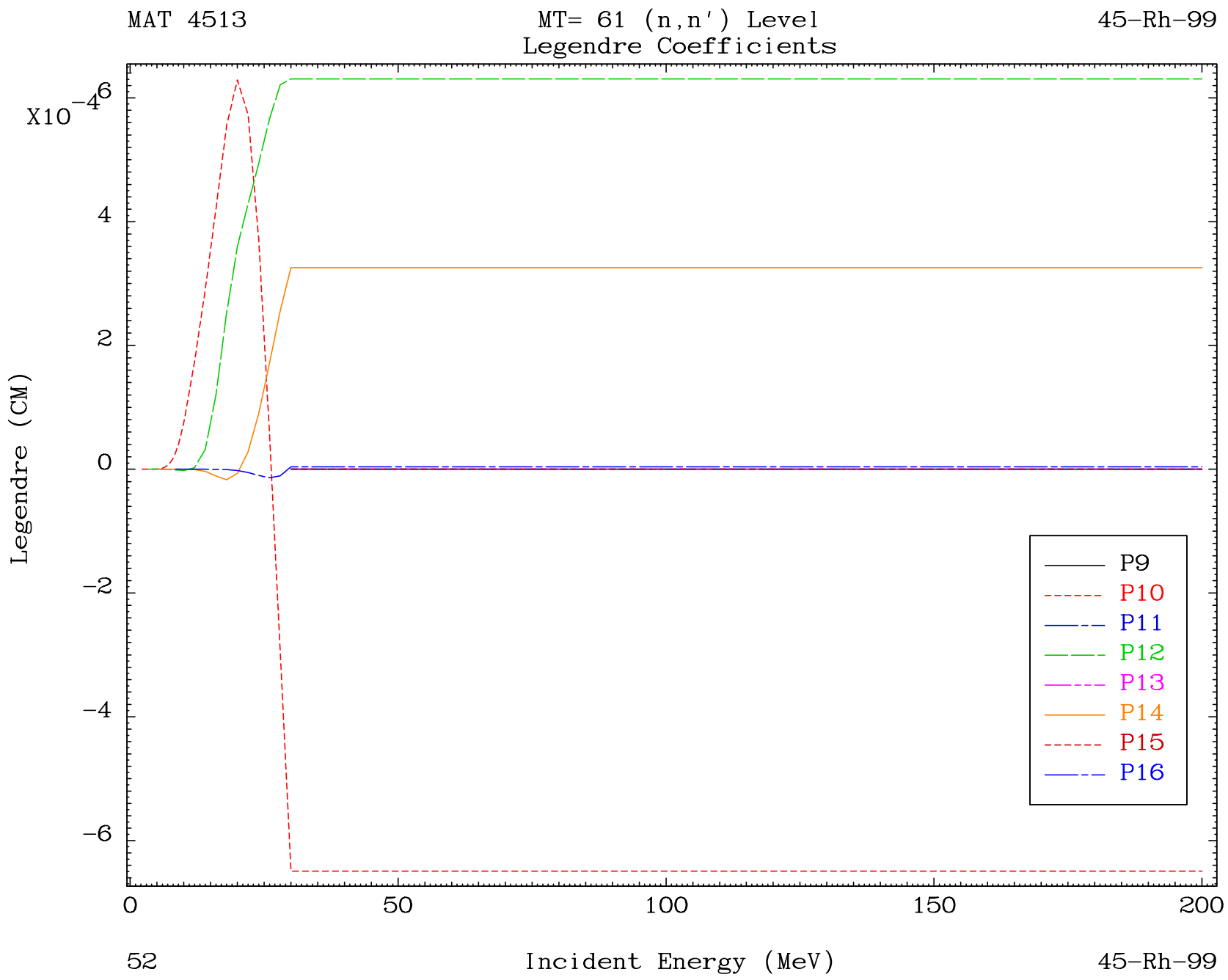

MAT 4513
MT= 60 (n,n') Level
Legendre Coefficients
45-Rh-99
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
47
Incident Energy (MeV)
45-Rh-99

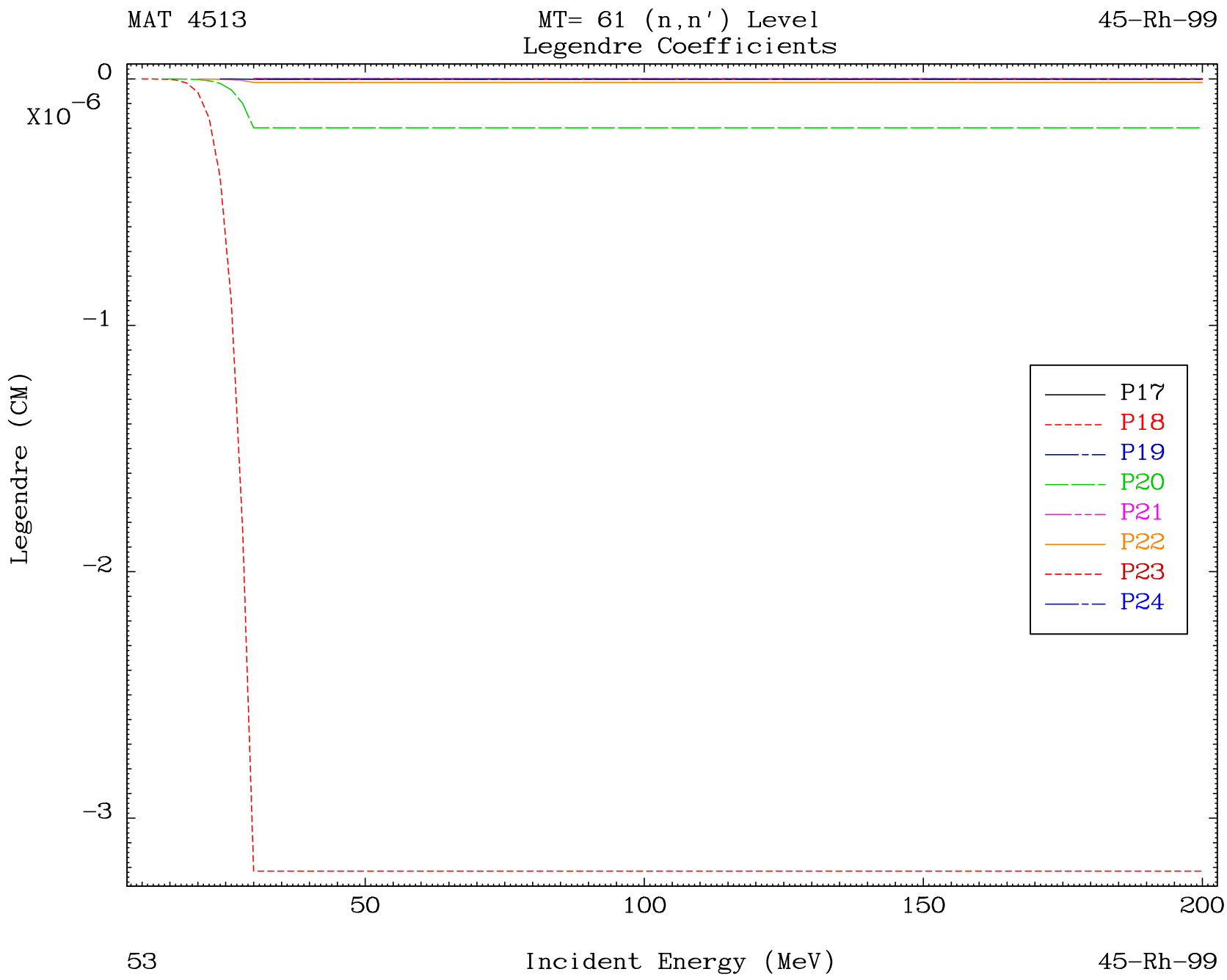

MAT 4513
MT= 60 (n,n') Level
Legendre Coefficients
45-Rh-99
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
0
50
100
150
200
48
Incident Energy (MeV)
45-Rh-99

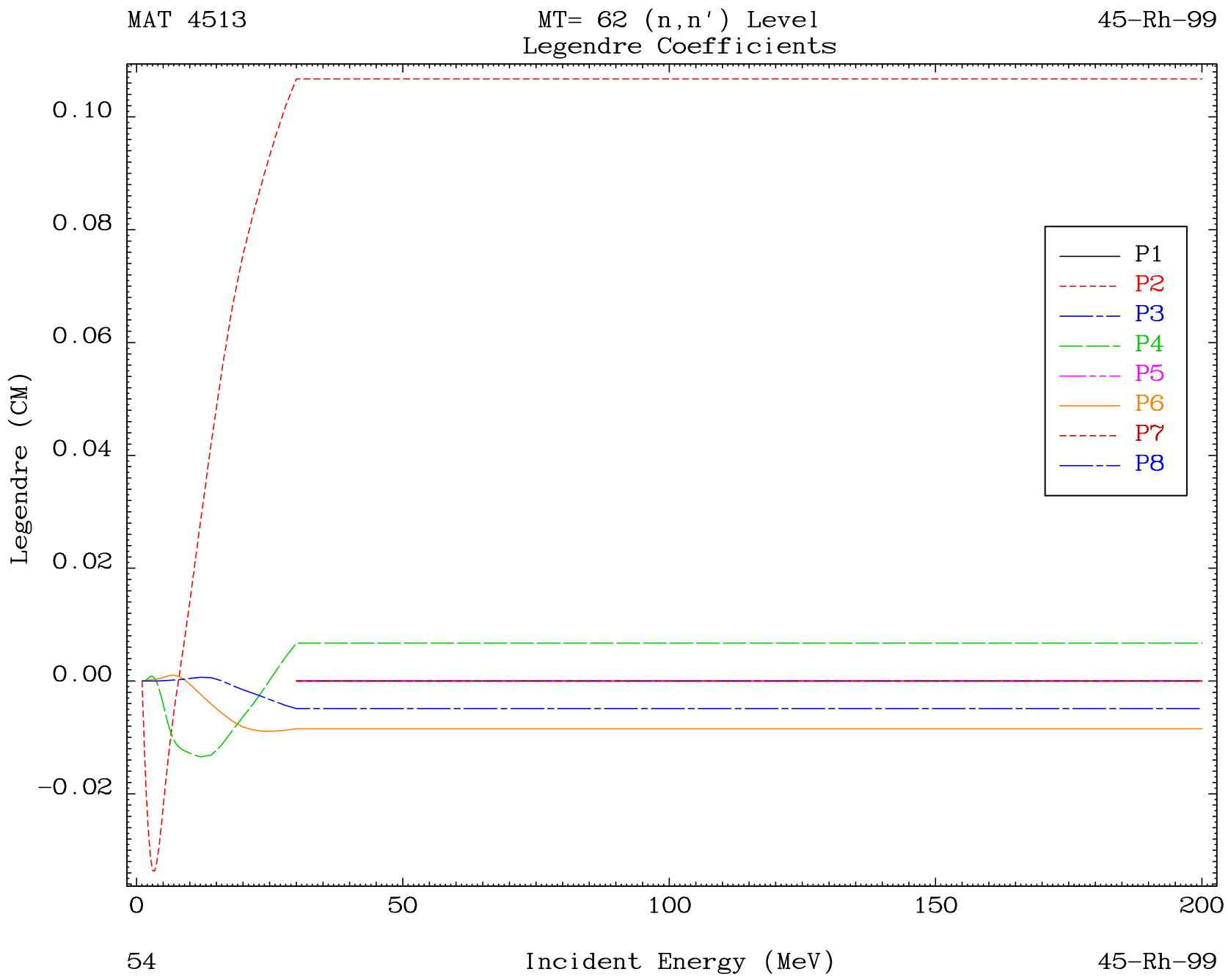

MAT 4513
MT= 60 (n,n') Level
Legendre Coefficients
45-Rh-99
1.5
X10^-3
1.0
0.5
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
49
Incident Energy (MeV)
45-Rh-99

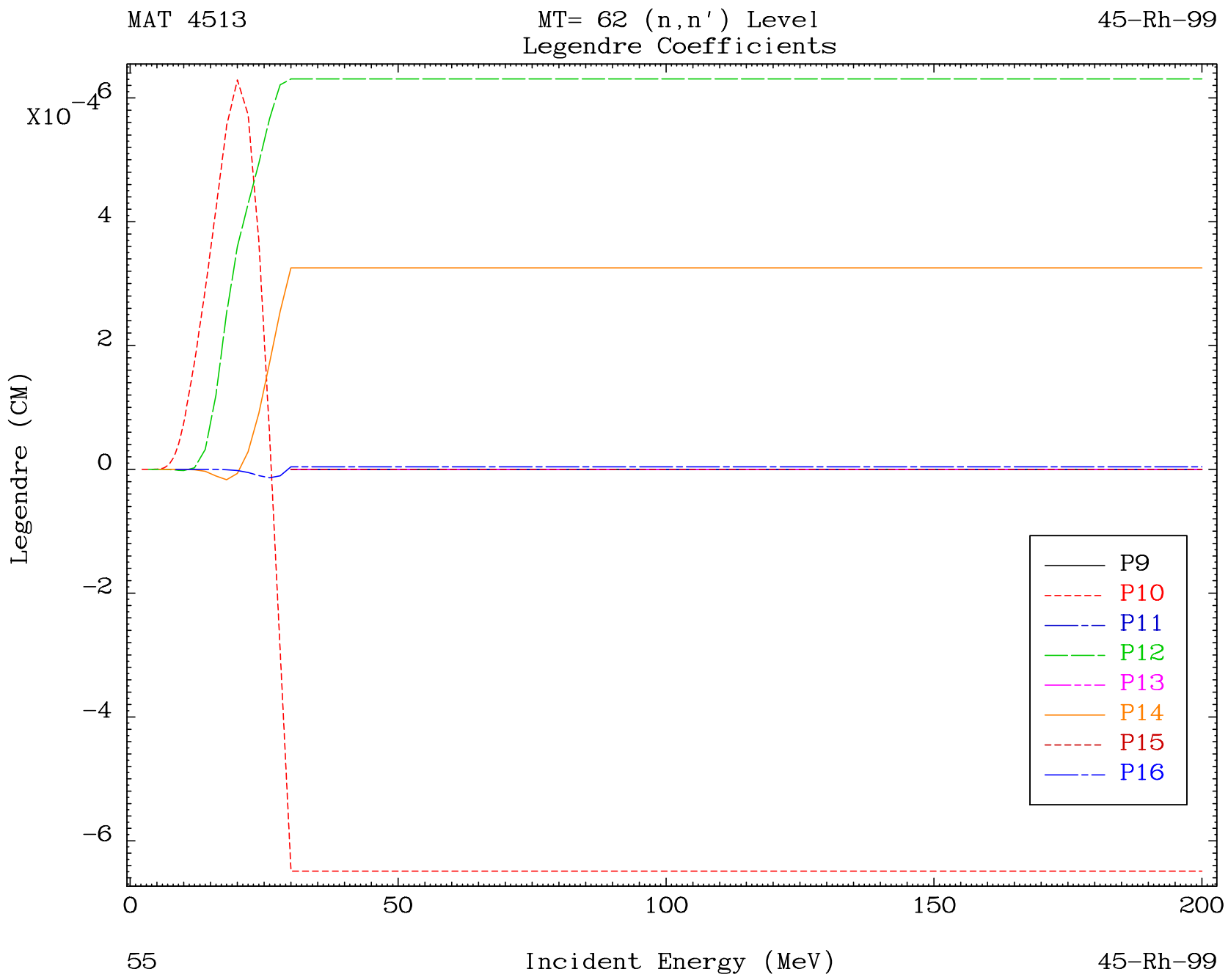

MAT 4513
MT= 60 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-7
5
4
3
2
1
0
Legendre (CM)
50
100
150
200
P28
P29
P30
P31
P32
P33
P34
50
Incident Energy (MeV)
45-Rh-99

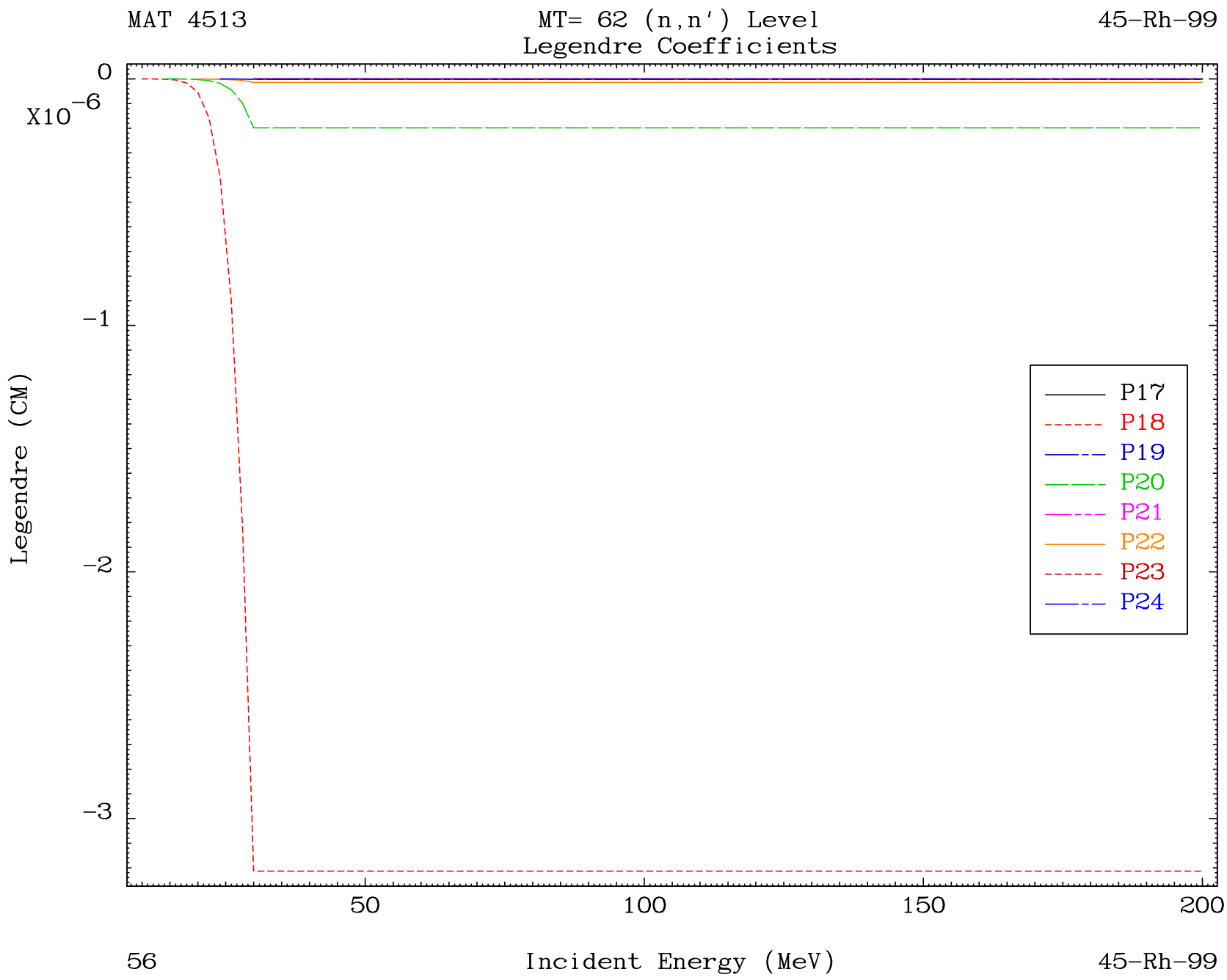

MAT 4513
MT= 61 (n,n') Level
Legendre Coefficients
45-Rh-99
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
51
Incident Energy (MeV)
45-Rh-99

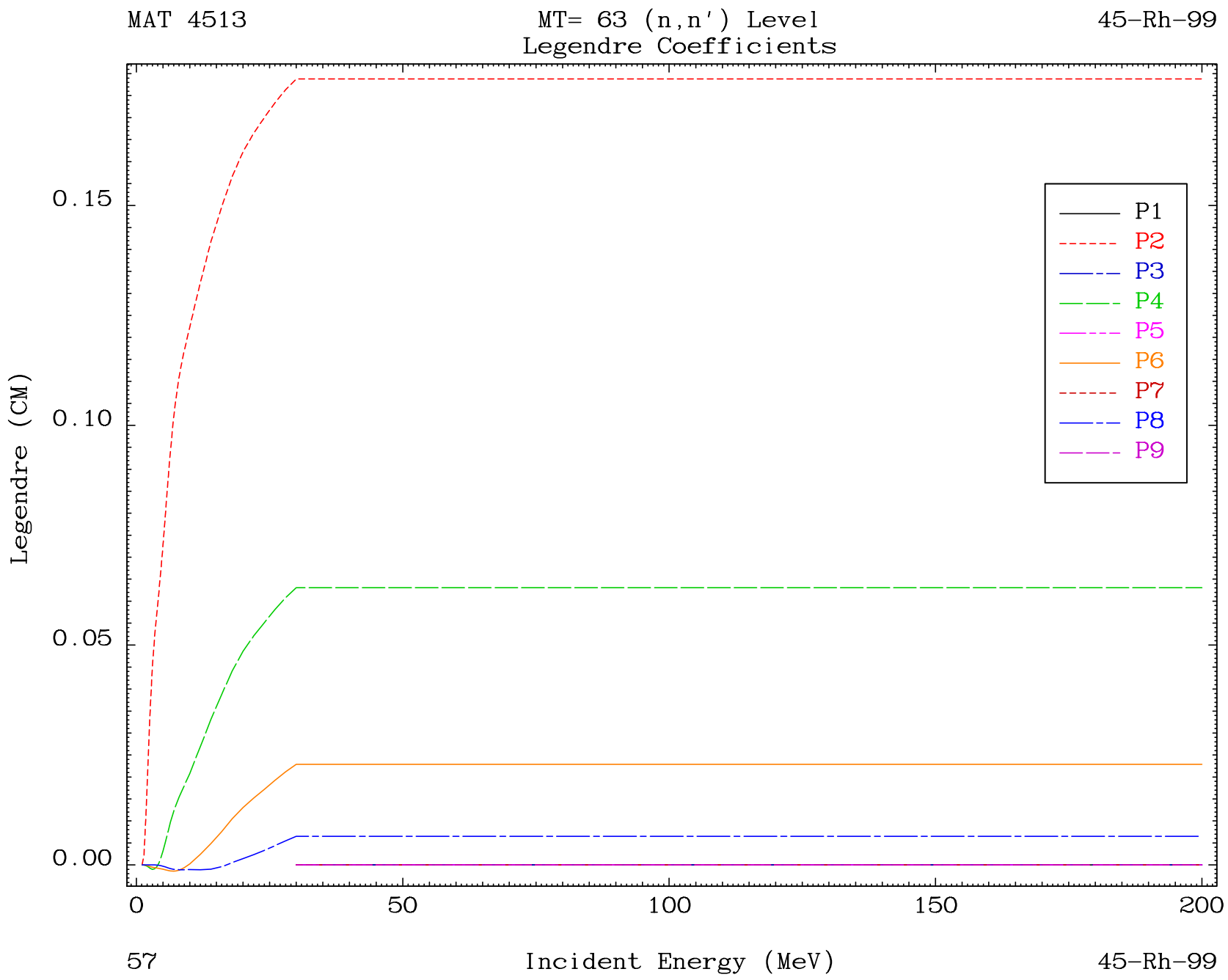

MAT 4513
MT= 61 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-4
6
4
2
0
-2
-4
-6
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P9
P10
P11
P12
P13
P14
P15
P16
52
45-Rh-99

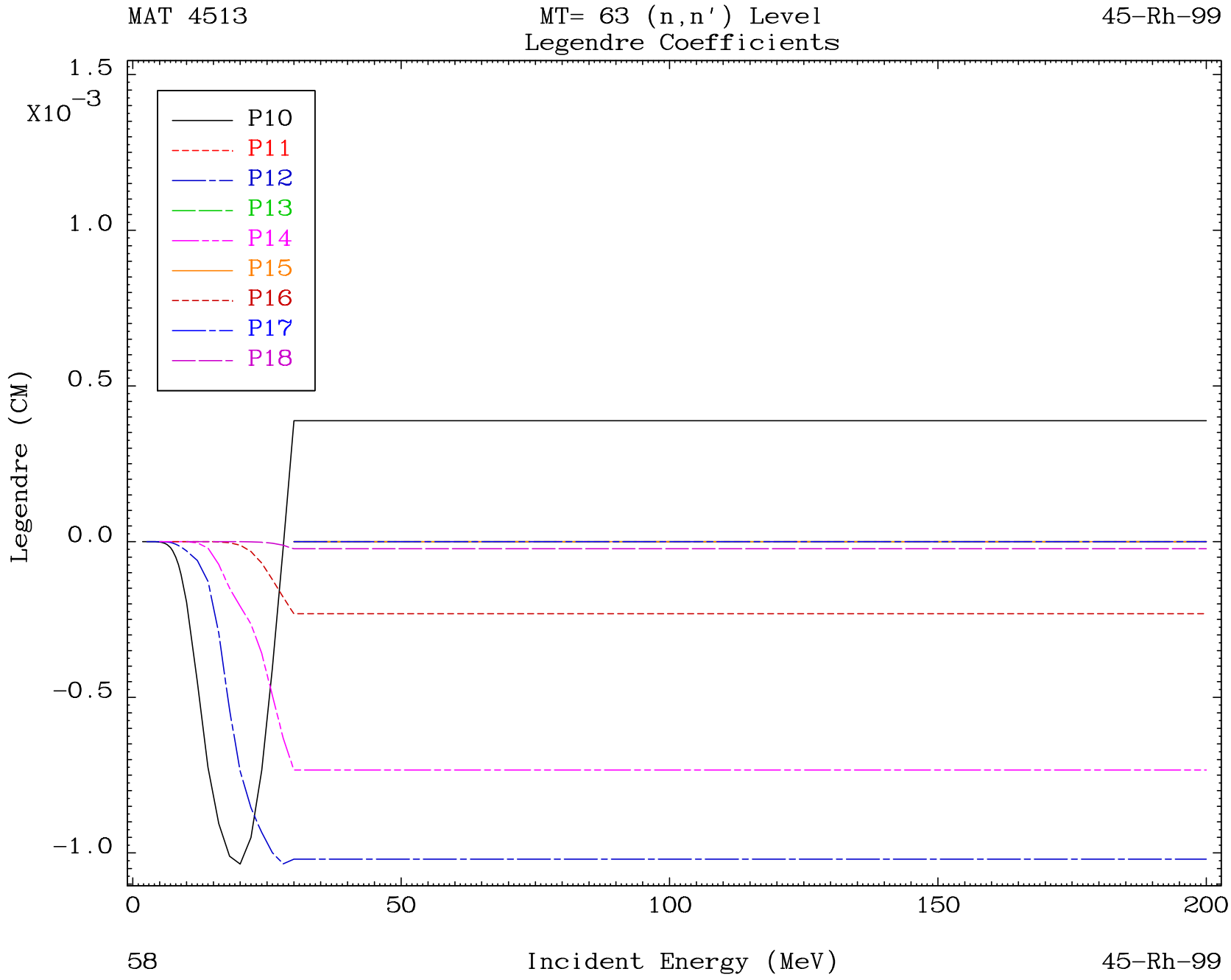

MAT 4513
MT= 61 (n,n') Level
Legendre Coefficients
45-Rh-99
0
X10^-6
-1
-2
-3
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P17
P18
P19
P20
P21
P22
P23
P24
53
45-Rh-99

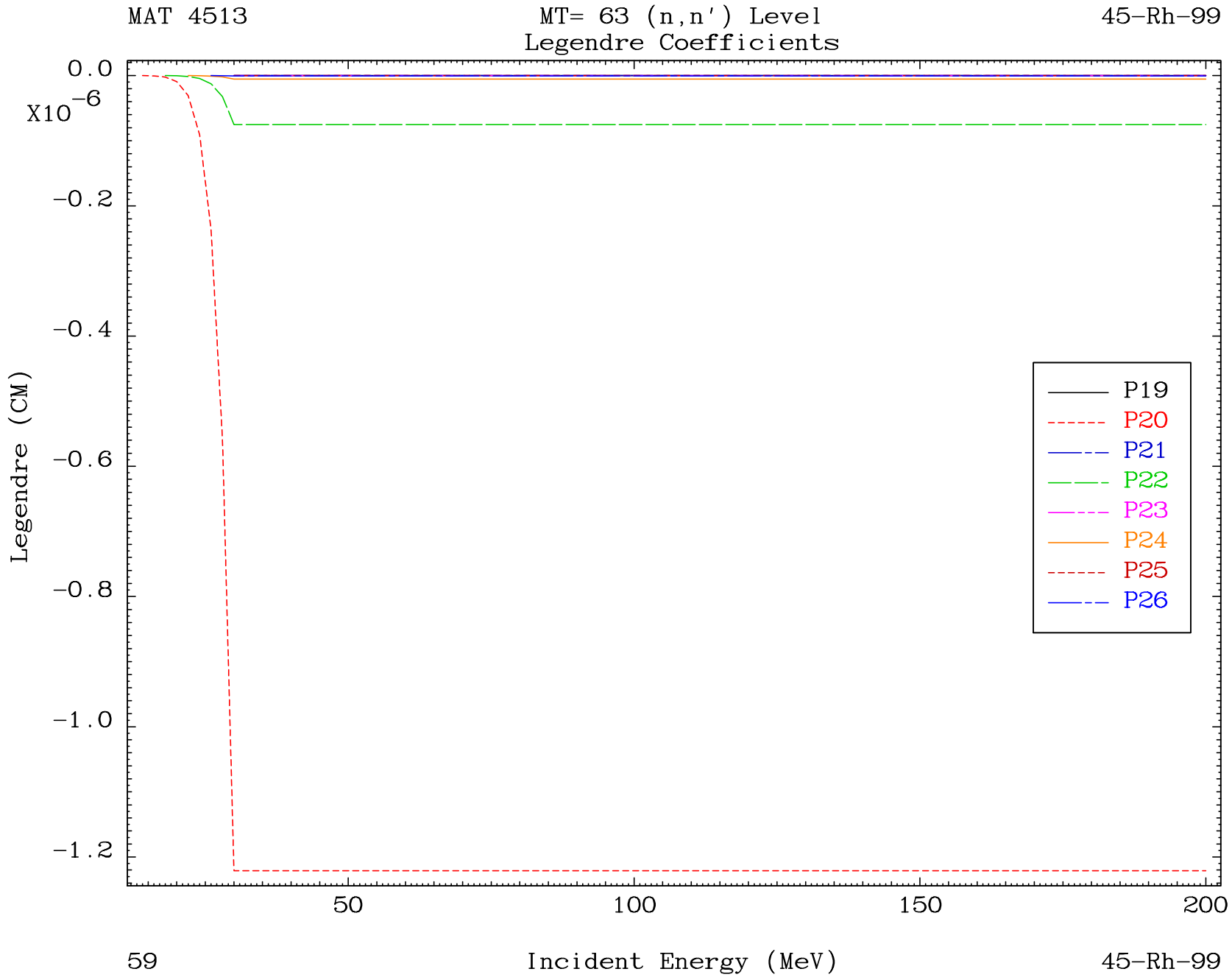

MAT 4513
MT= 62 (n,n') Level
Legendre Coefficients
45-Rh-99
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
54
45-Rh-99

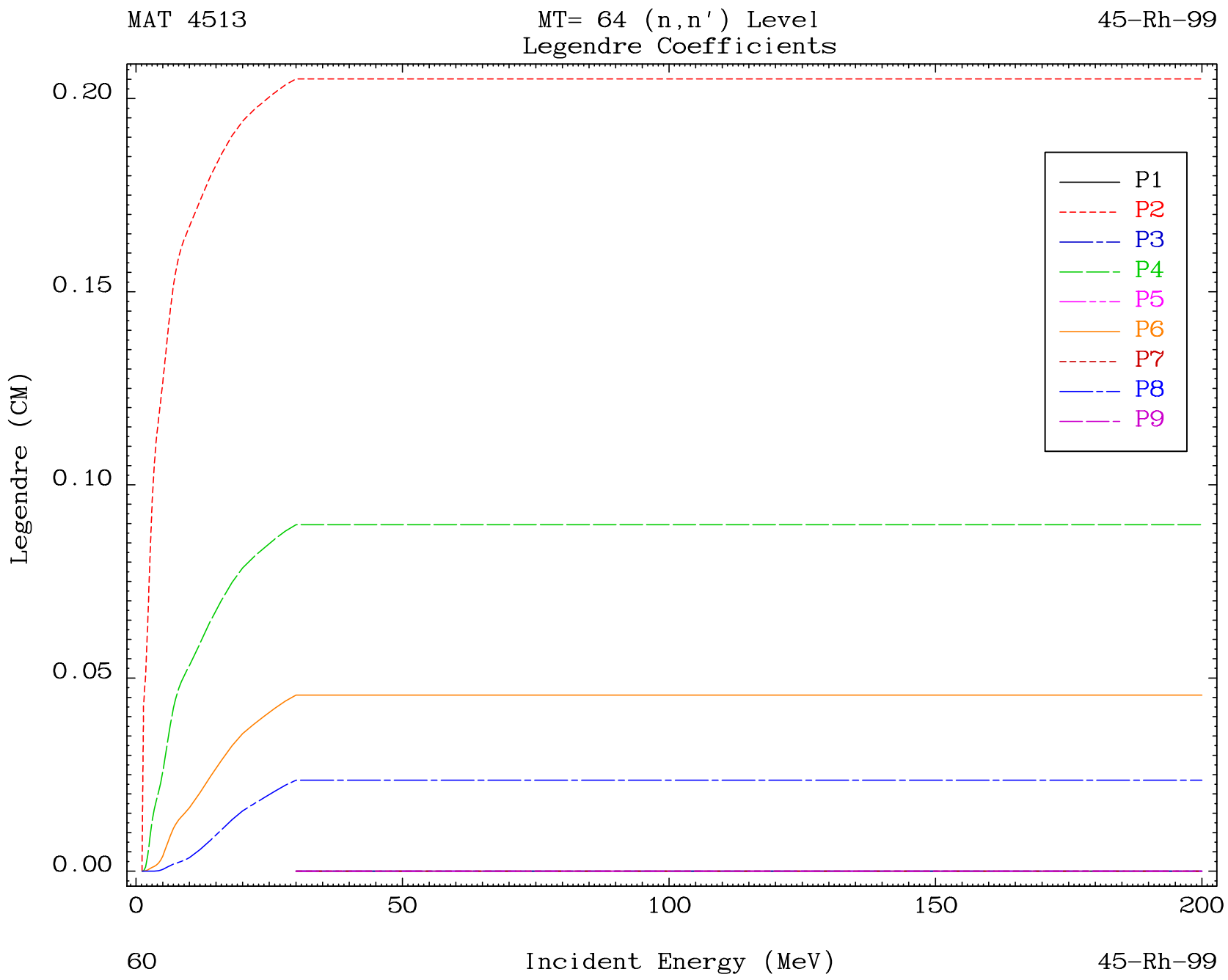

MAT 4513
MT= 62 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-4
6
4
2
0
-2
-4
-6
Legendre (CM)
0
50
100
150
200
55
Incident Energy (MeV)
45-Rh-99
P9
P10
P11
P12
P13
P14
P15
P16

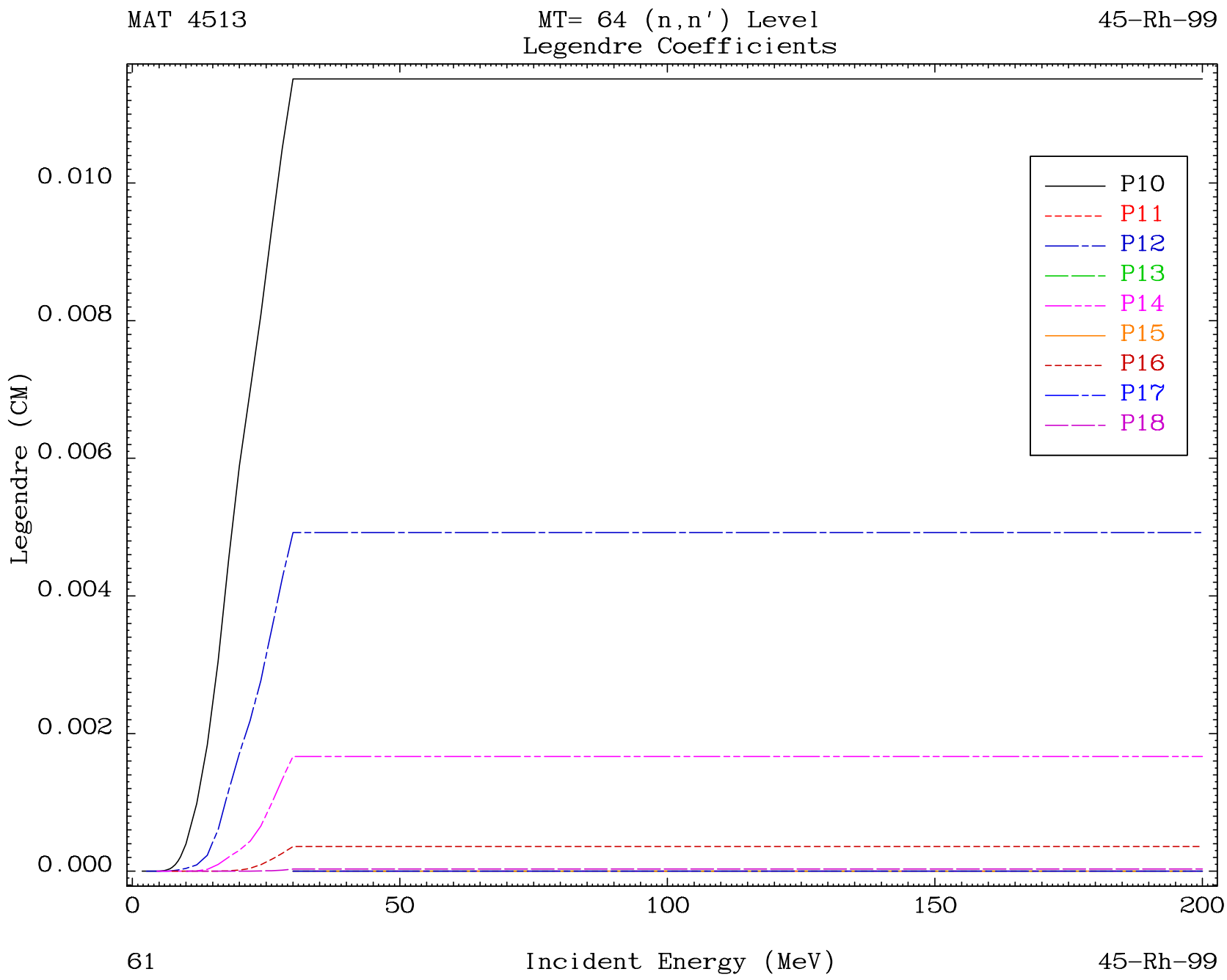

MAT 4513
MT= 62 (n,n') Level
Legendre Coefficients
45-Rh-99
0
X10^-6
-1
-2
-3
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P17
P18
P19
P20
P21
P22
P23
P24
56
45-Rh-99

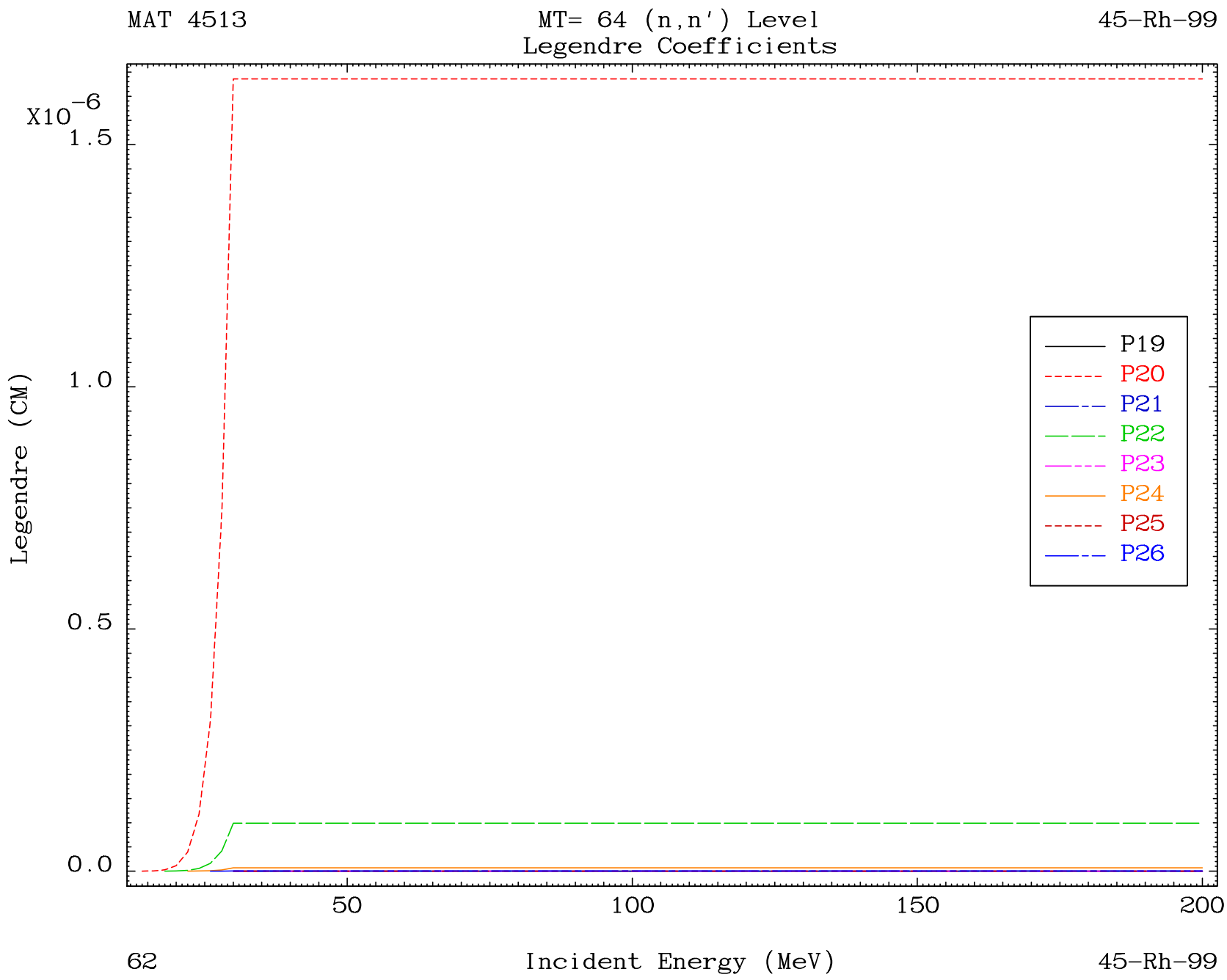

MAT 4513
MT= 63 (n,n') Level
Legendre Coefficients
45-Rh-99
Legendre (CM)
0.15
0.10
0.05
0.00
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
57
Incident Energy (MeV)
45-Rh-99

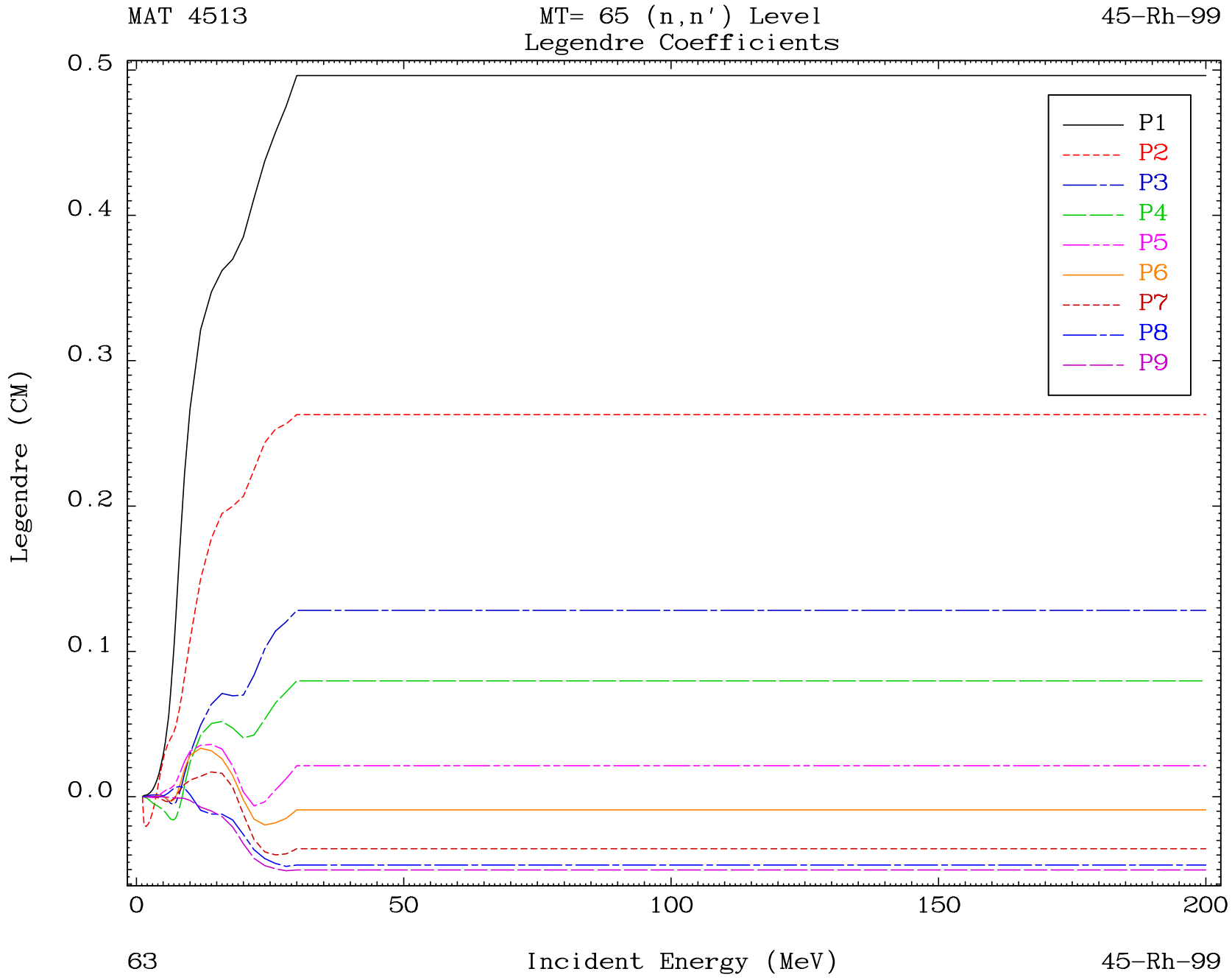

MAT 4513
MT= 63 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-3
1.5
1.0
0.5
0.0
-0.5
-1.0
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
58
Incident Energy (MeV)
45-Rh-99

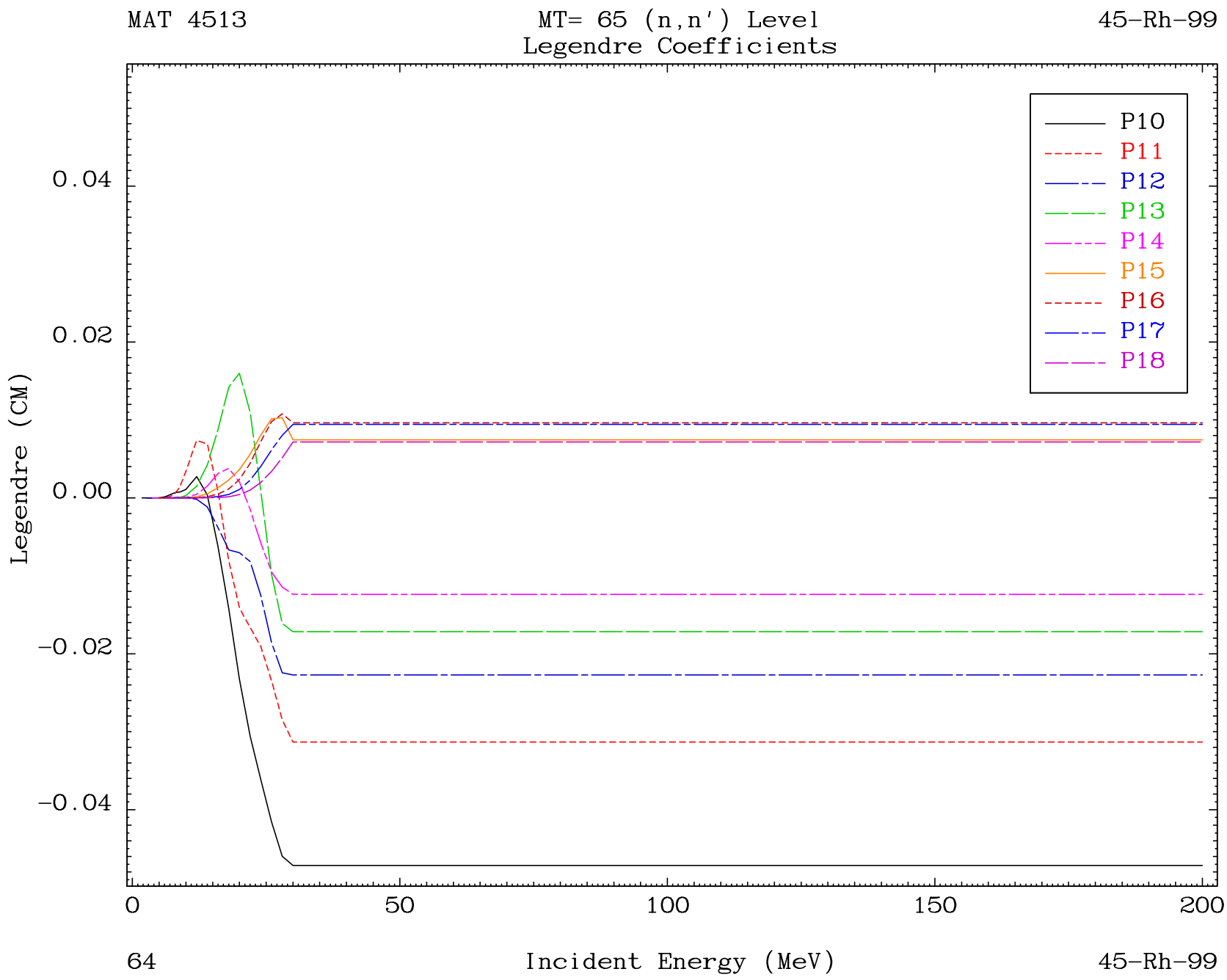

MAT 4513
MT= 63 (n,n') Level
Legendre Coefficients
45-Rh-99
0.0
X10^-6
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
Legendre (CM)
50
100
150
200
P19
P20
P21
P22
P23
P24
P25
P26
59
Incident Energy (MeV)
45-Rh-99

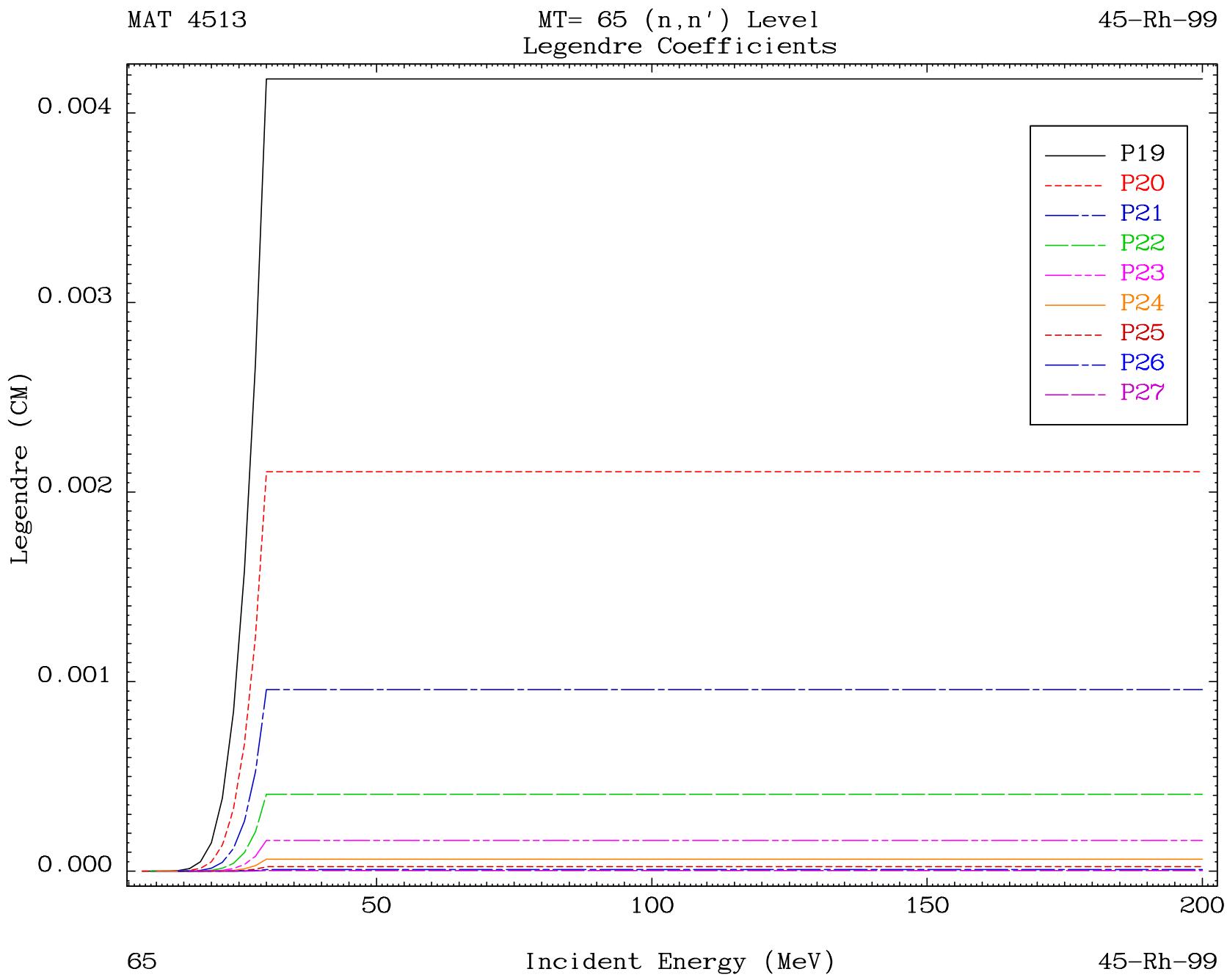

MAT 4513
MT= 64 (n,n') Level
Legendre Coefficients
45-Rh-99
0.20
0.15
0.10
0.05
0.00
Legendre (CM)
0
50
100
150
200
60
Incident Energy (MeV)
45-Rh-99
P1
P2
P3
P4
P5
P6
P7
P8
P9

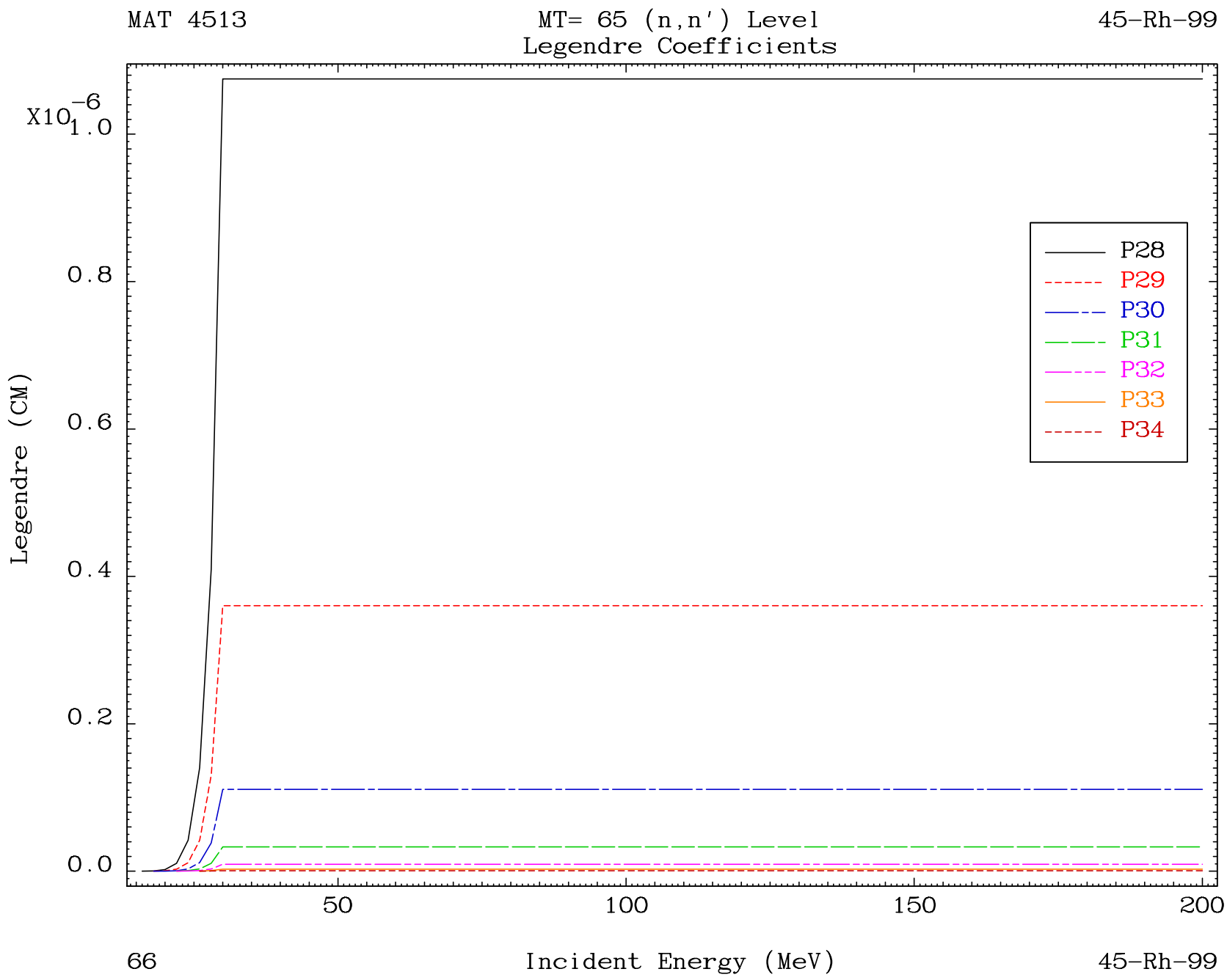

MAT 4513
MT= 64 (n,n') Level
Legendre Coefficients
45-Rh-99
0.010
0.008
0.006
0.004
0.002
0.000
Legendre (CM)
0
50
100
150
200
P10
P11
P12
P13
P14
P15
P16
P17
P18
61
Incident Energy (MeV)
45-Rh-99

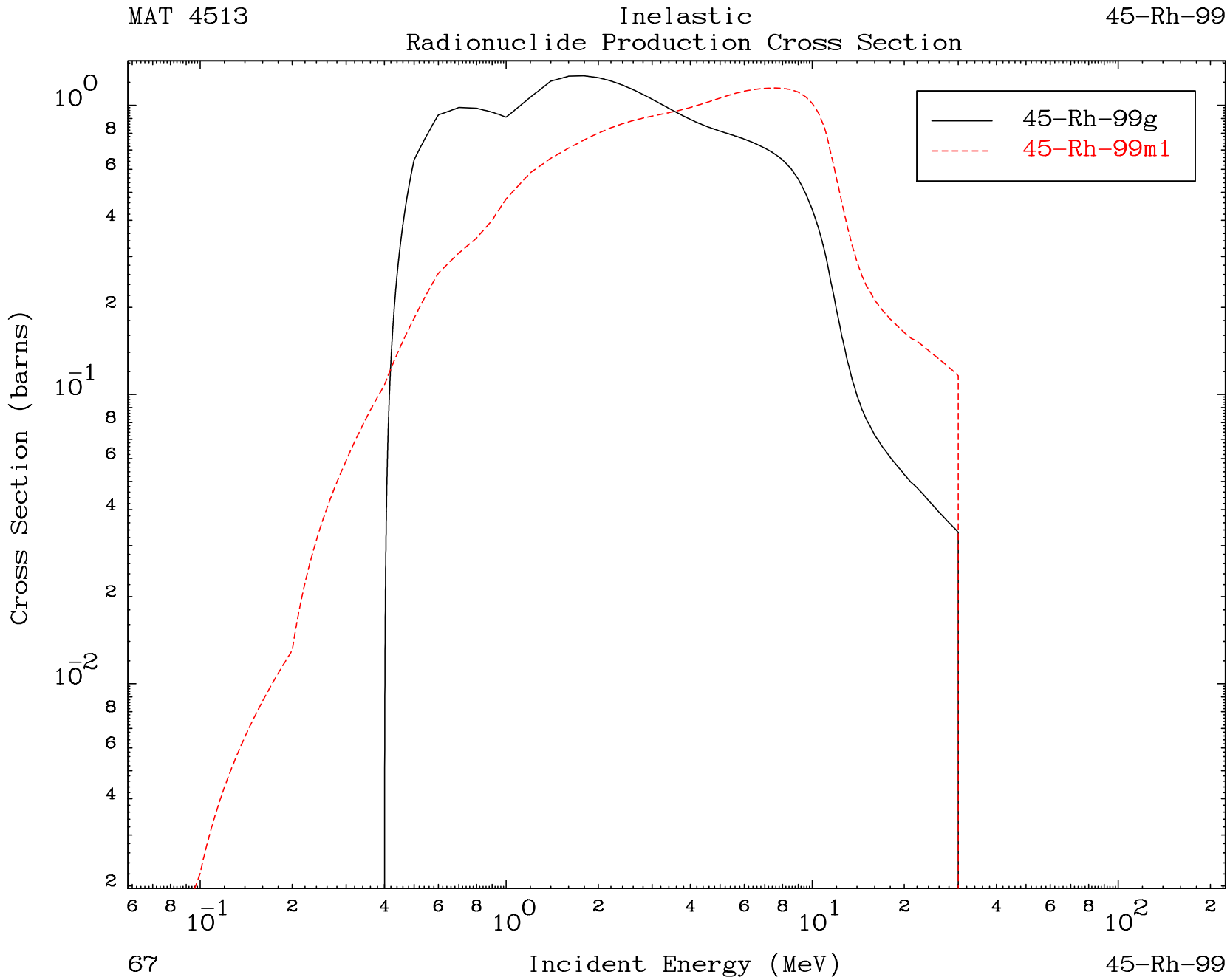

MAT 4513
MT= 64 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
62
45-Rh-99
P19
P20
P21
P22
P23
P24
P25
P26

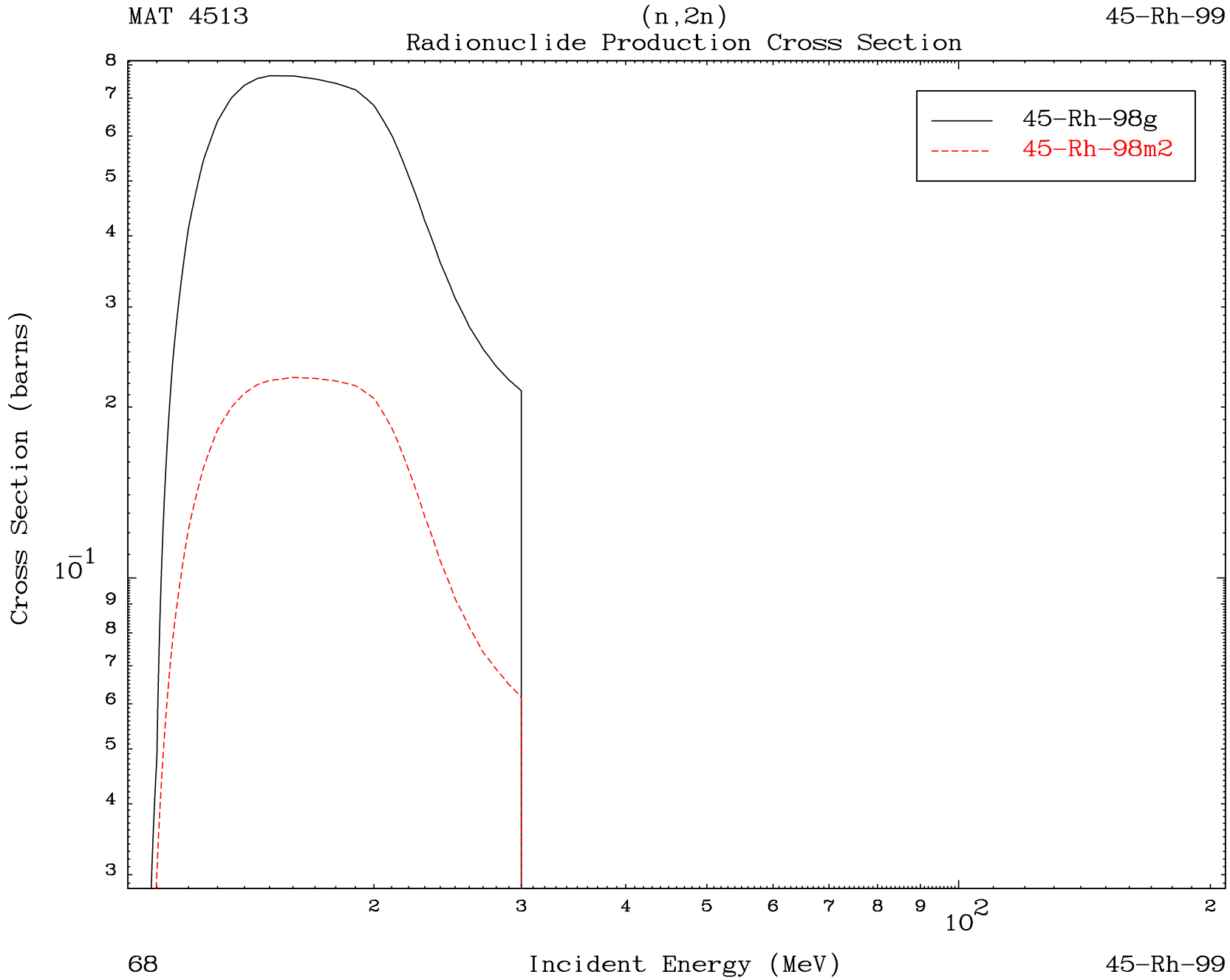

MAT 4513
MT= 65 (n,n') Level
Legendre Coefficients
45-Rh-99
0.5
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
P9
63
45-Rh-99

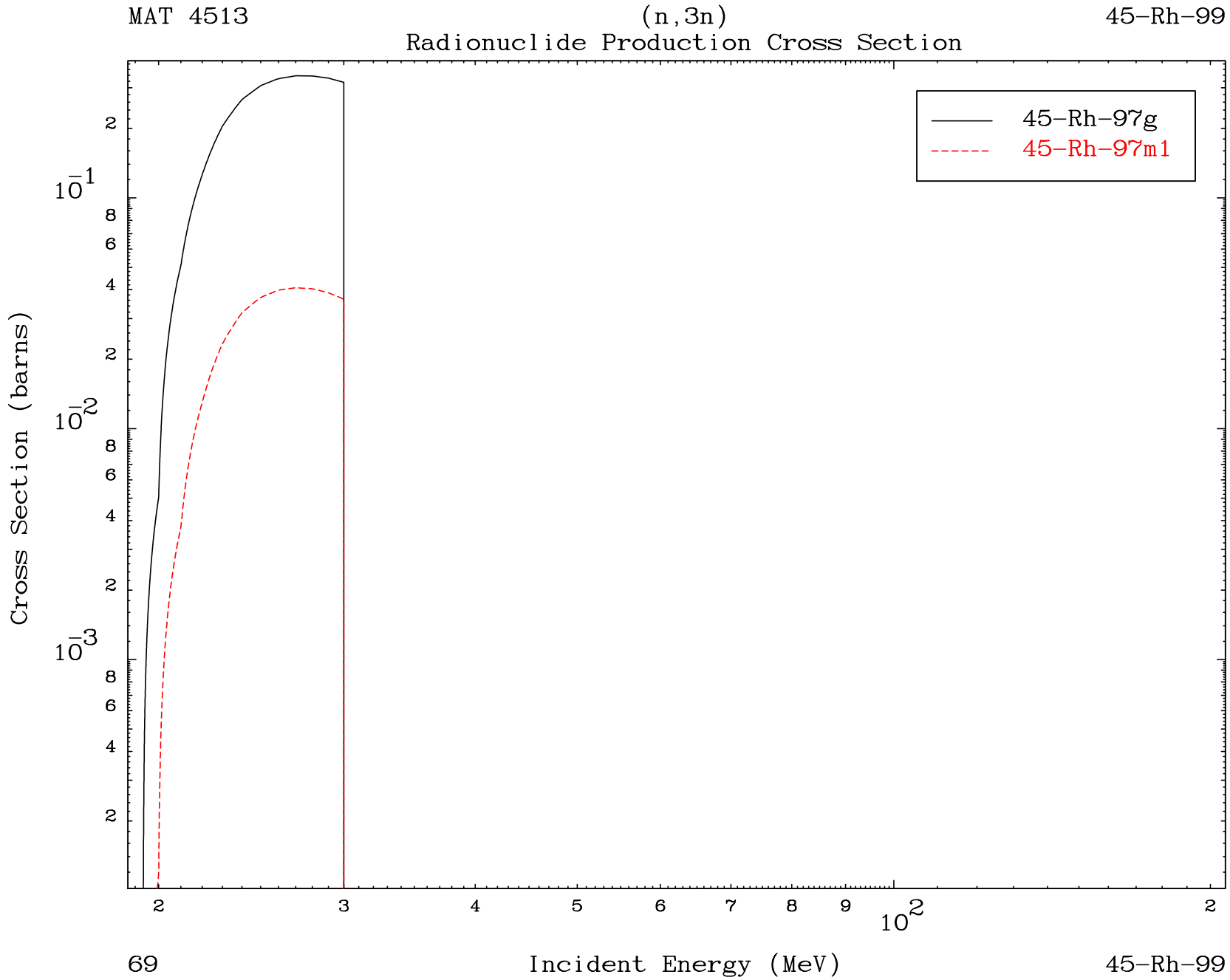

MAT 4513
MT= 65 (n,n') Level
Legendre Coefficients
45-Rh-99
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
64
Incident Energy (MeV)
45-Rh-99

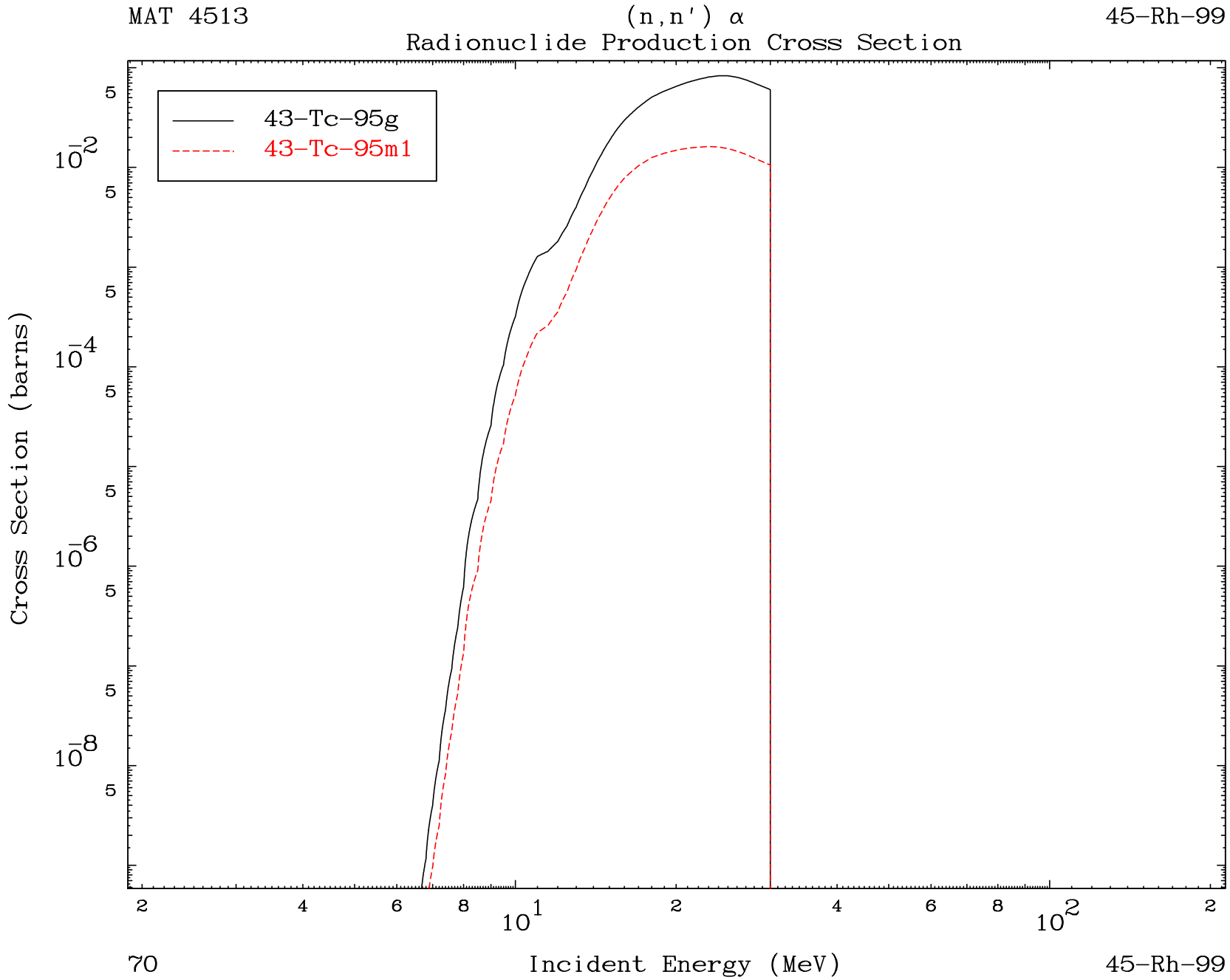

MAT 4513
MT= 65 (n,n') Level
Legendre Coefficients
45-Rh-99
0.004
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
P19
P20
P21
P22
P23
P24
P25
P26
P27
65
Incident Energy (MeV)
45-Rh-99

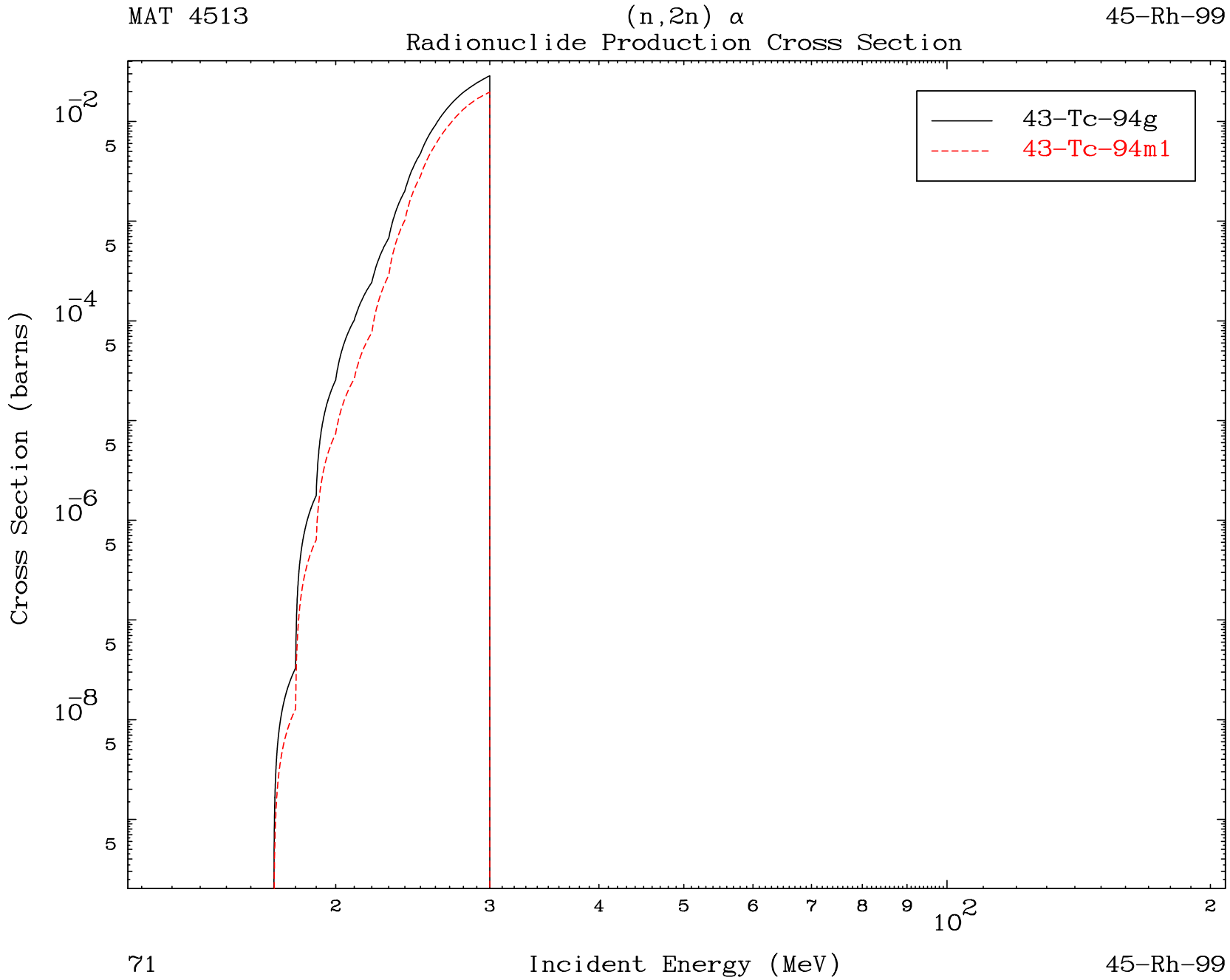

MAT 4513
MT= 65 (n,n') Level
Legendre Coefficients
45-Rh-99
X10^-6
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
66
45-Rh-99
P28
P29
P30
P31
P32
P33
P34

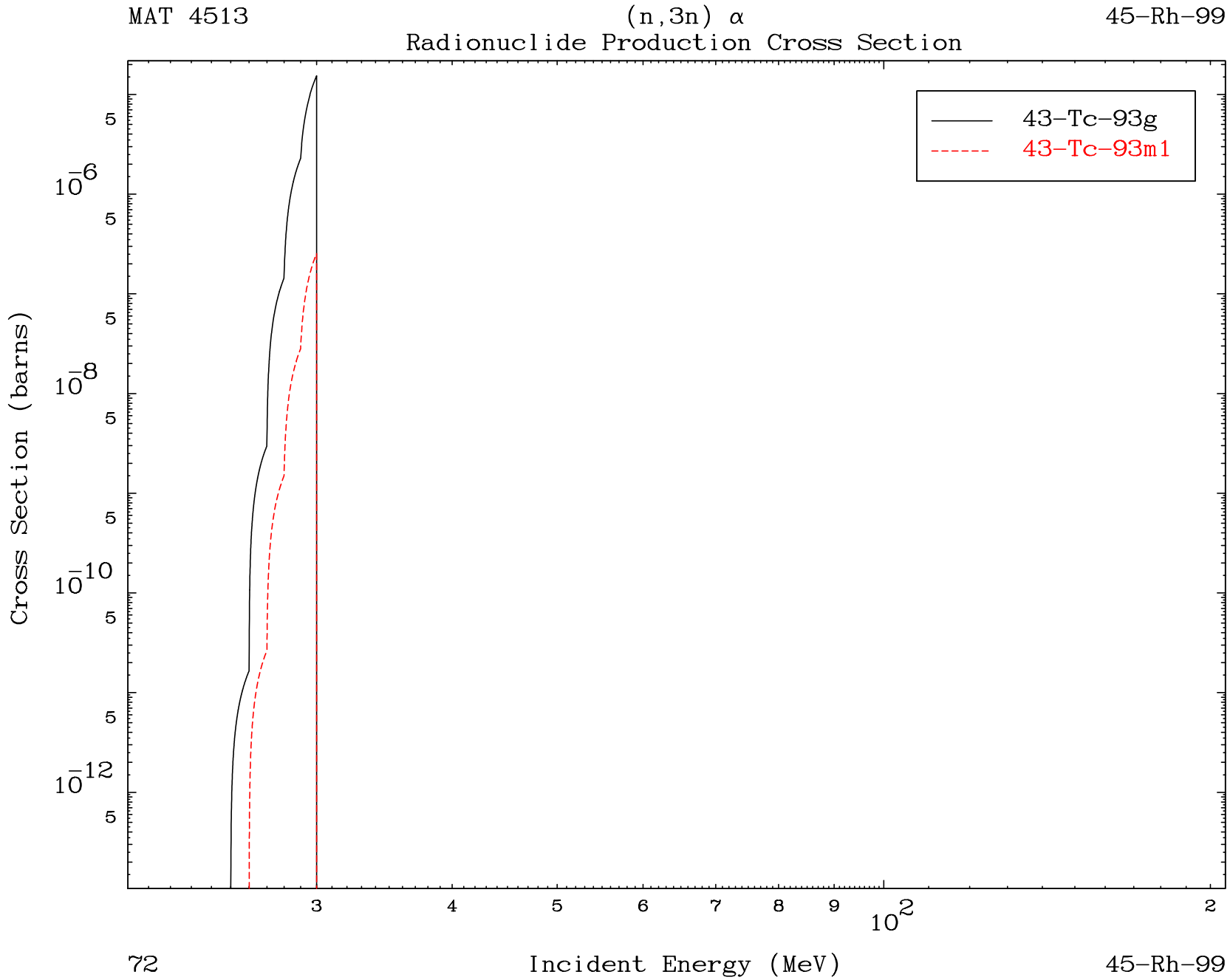

MAT 4513
Inelastic
Radionuclide Production Cross Section
45-Rh-99
45-Rh-99g
45-Rh-99m1
Cross Section (barns)
Incident Energy (MeV)
67
45-Rh-99

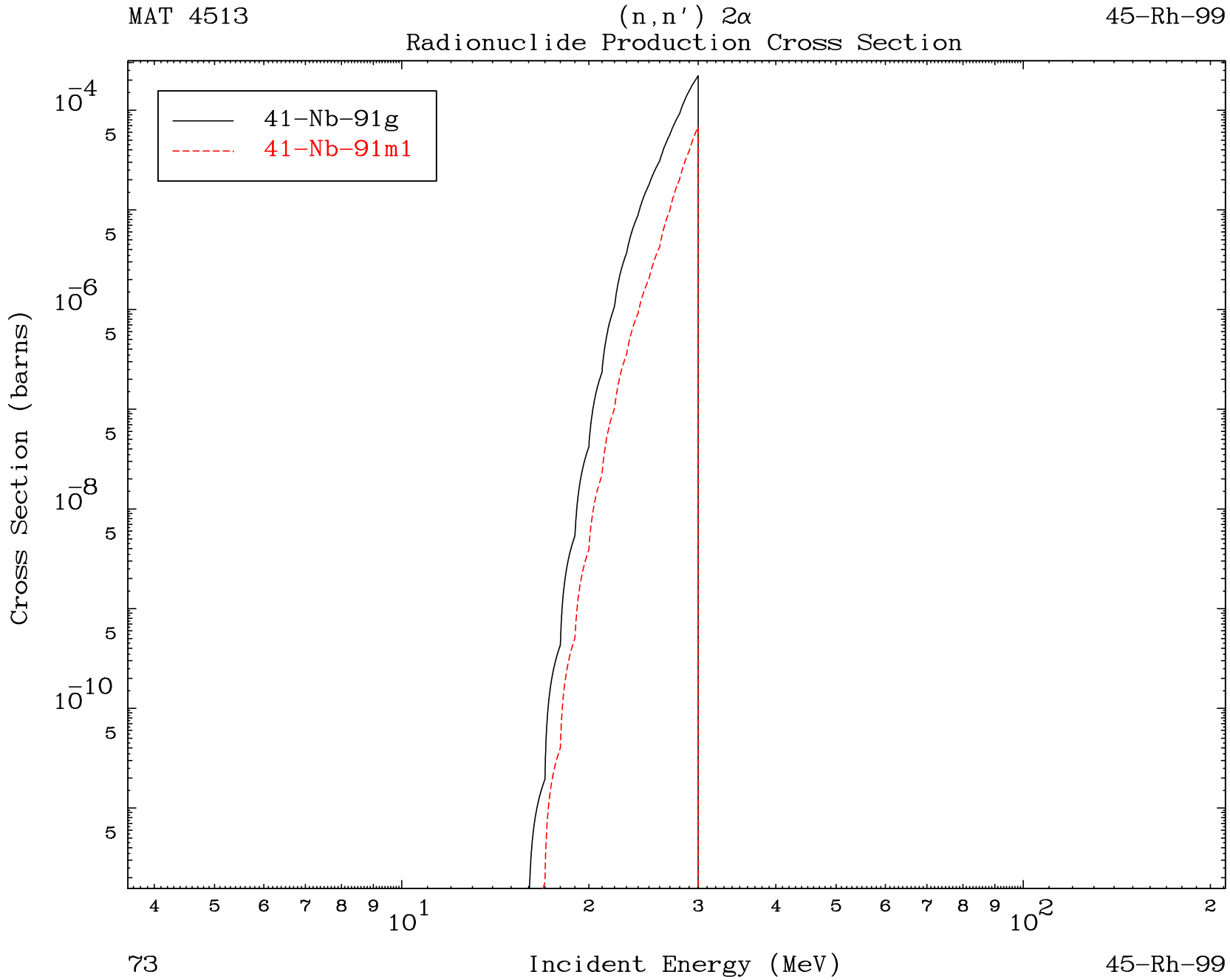

MAT 4513
(n,2n)
45-Rh-99
Radionuclide Production Cross Section
45-Rh-98g
45-Rh-98m2
Cross Section (barns)
Incident Energy (MeV)
68
45-Rh-99

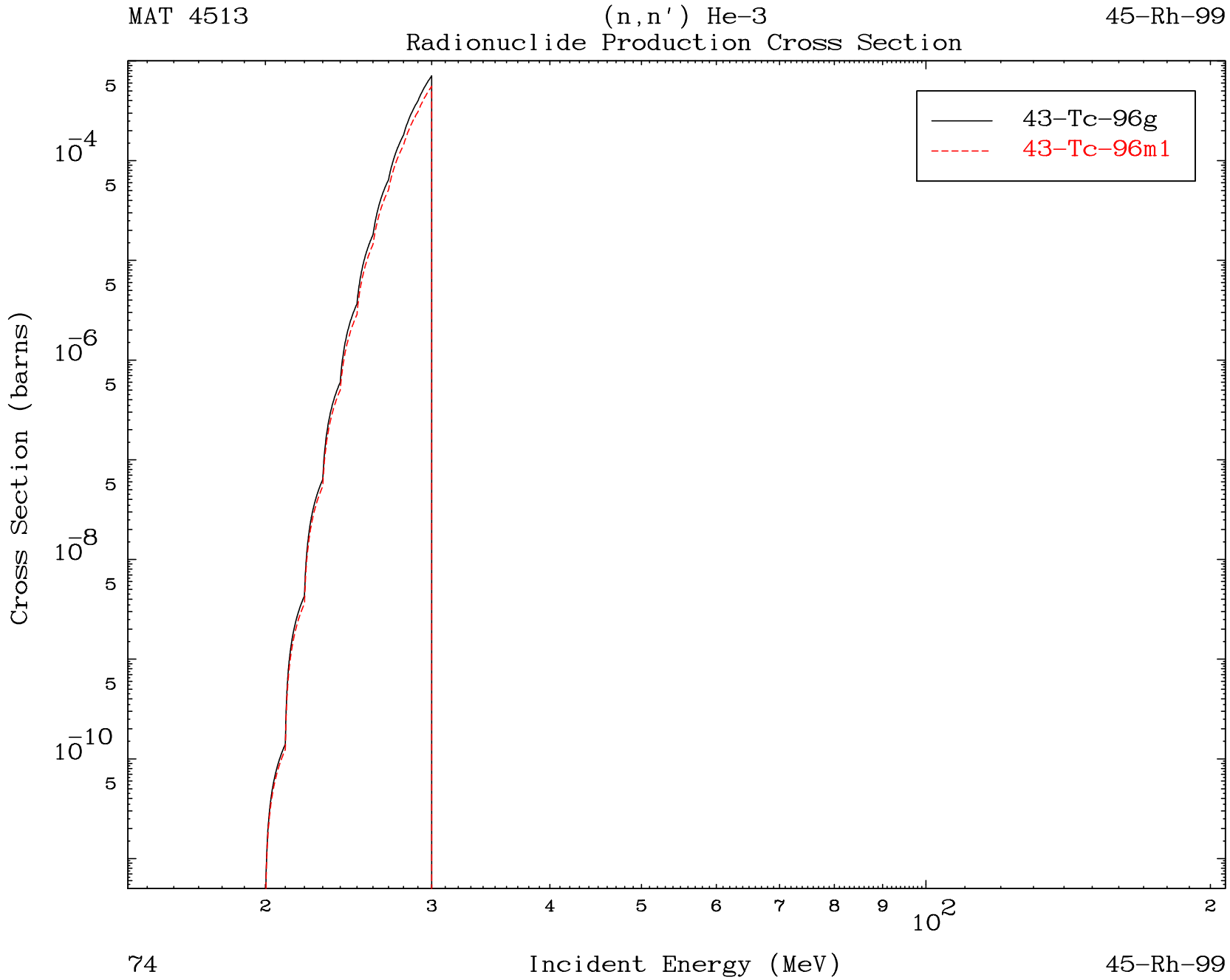

MAT 4513
(n,3n)
45-Rh-99
Radionuclide Production Cross Section
45-Rh-97g
45-Rh-97m1
Cross Section (barns)
Incident Energy (MeV)
69
45-Rh-99

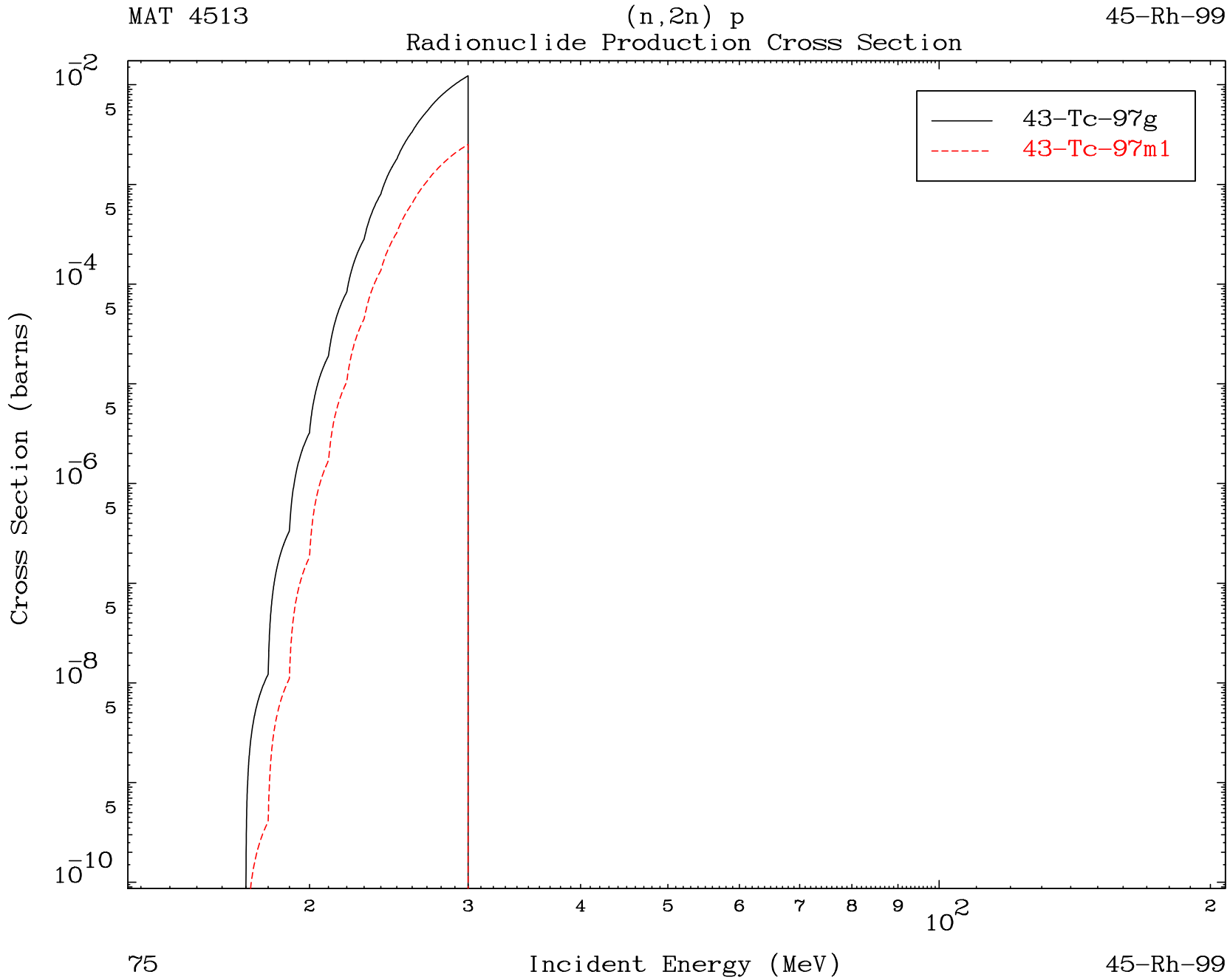

MAT 4513
(n,n') α
45-Rh-99
Radionuclide Production Cross Section
43-Tc-95g
43-Tc-95m1
Cross Section (barns)
Incident Energy (MeV)
70
45-Rh-99

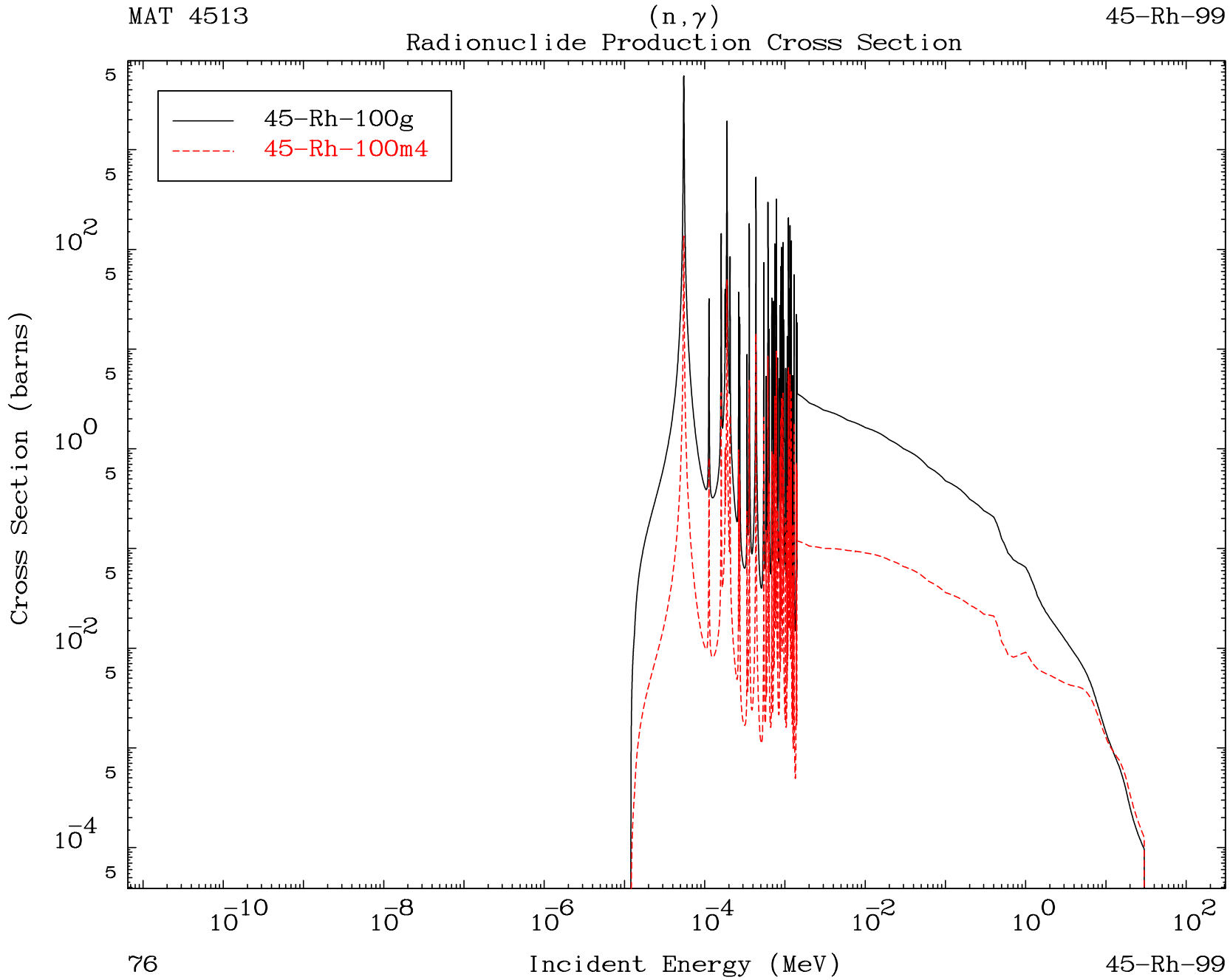

MAT 4513
(n,2n) α
45-Rh-99
Radionuclide Production Cross Section
43-Tc-94g
43-Tc-94m1
Cross Section (barns)
Incident Energy (MeV)
71
45-Rh-99

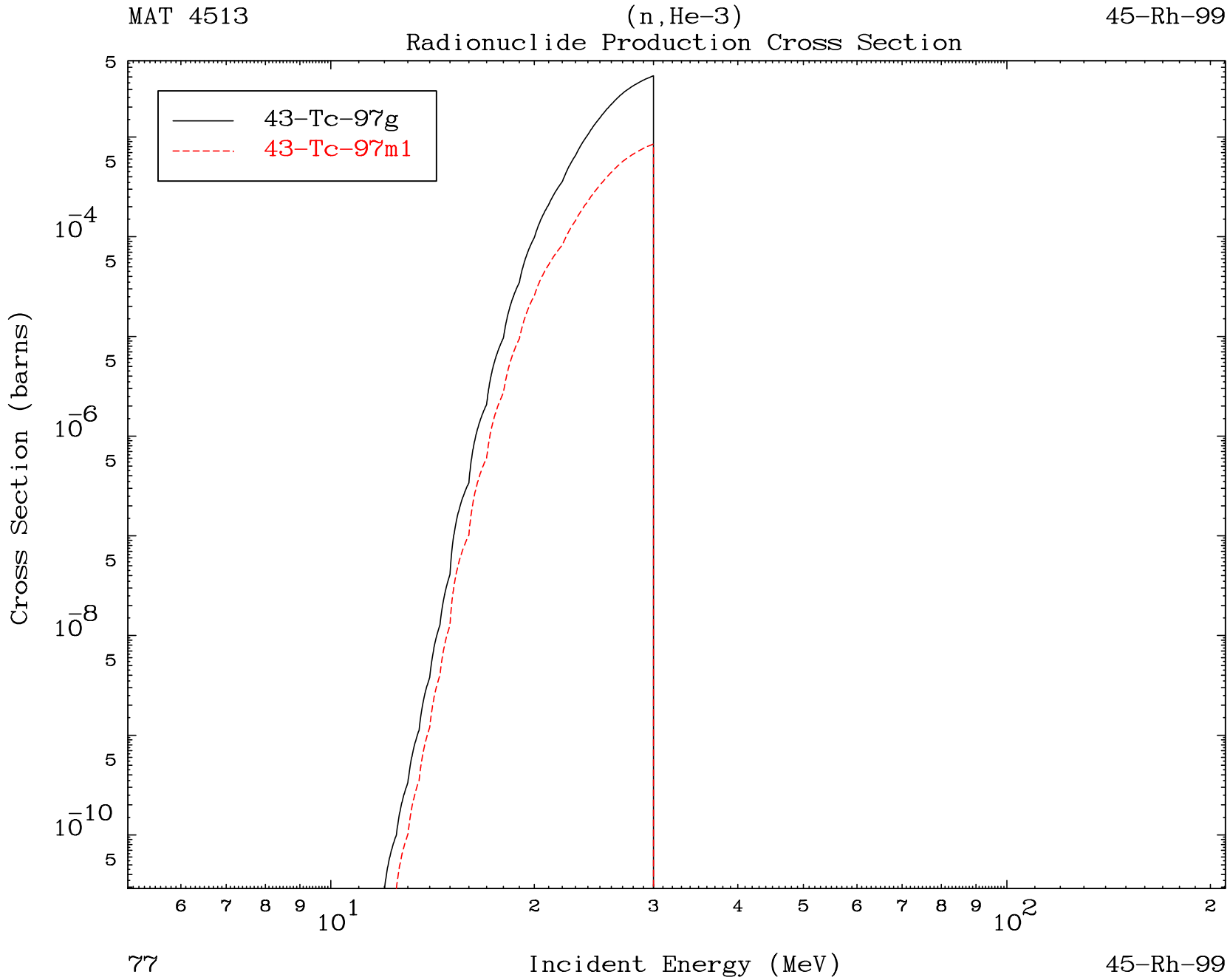

MAT 4513
(n,3n) α
45-Rh-99
Radionuclide Production Cross Section
43-Tc-93g
43-Tc-93m1
Cross Section (barns)
Incident Energy (MeV)
72
45-Rh-99

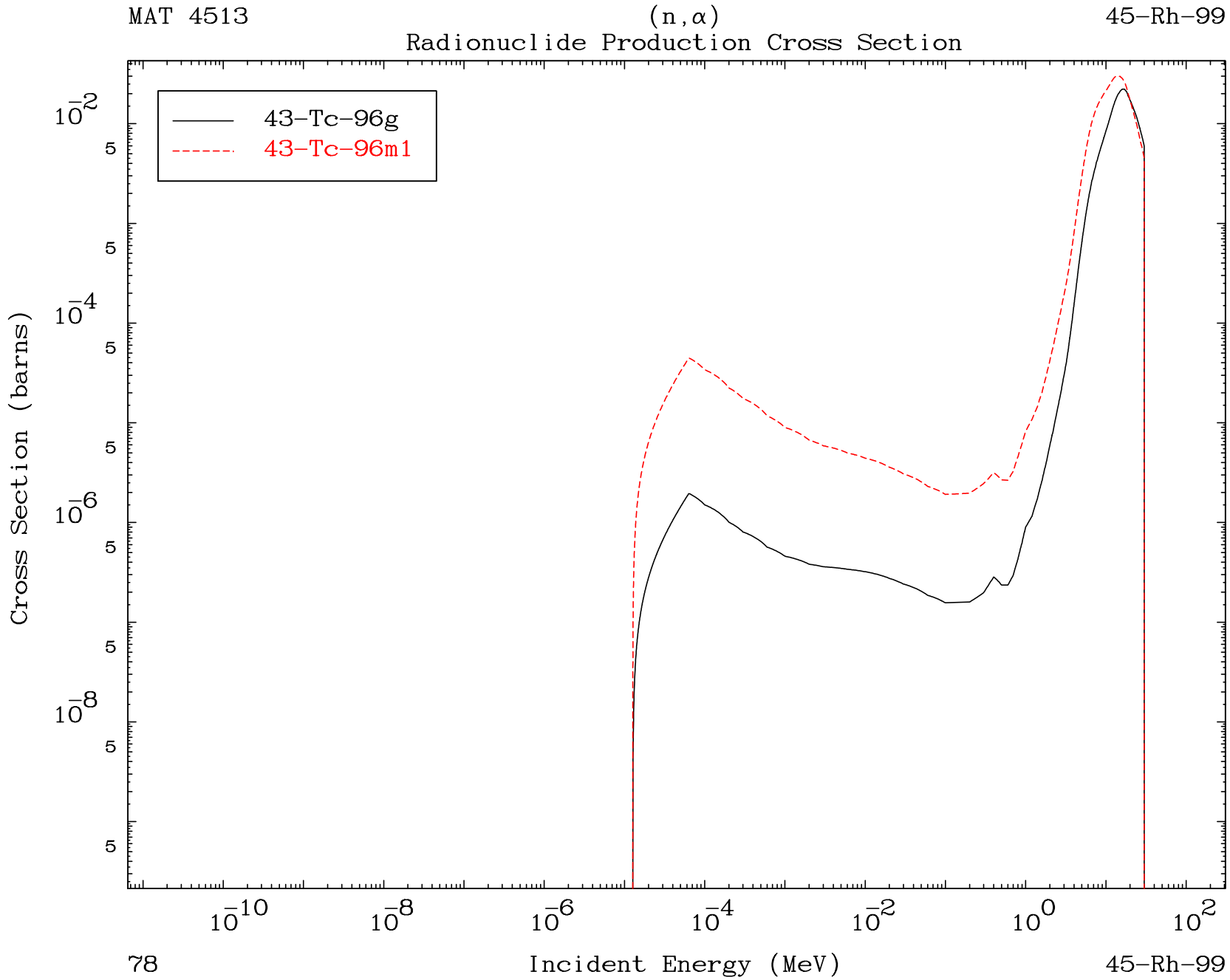

MAT 4513
(n,n') 2α
45-Rh-99
Radionuclide Production Cross Section
41-Nb-91g
41-Nb-91m1
Cross Section (barns)
Incident Energy (MeV)
73
45-Rh-99

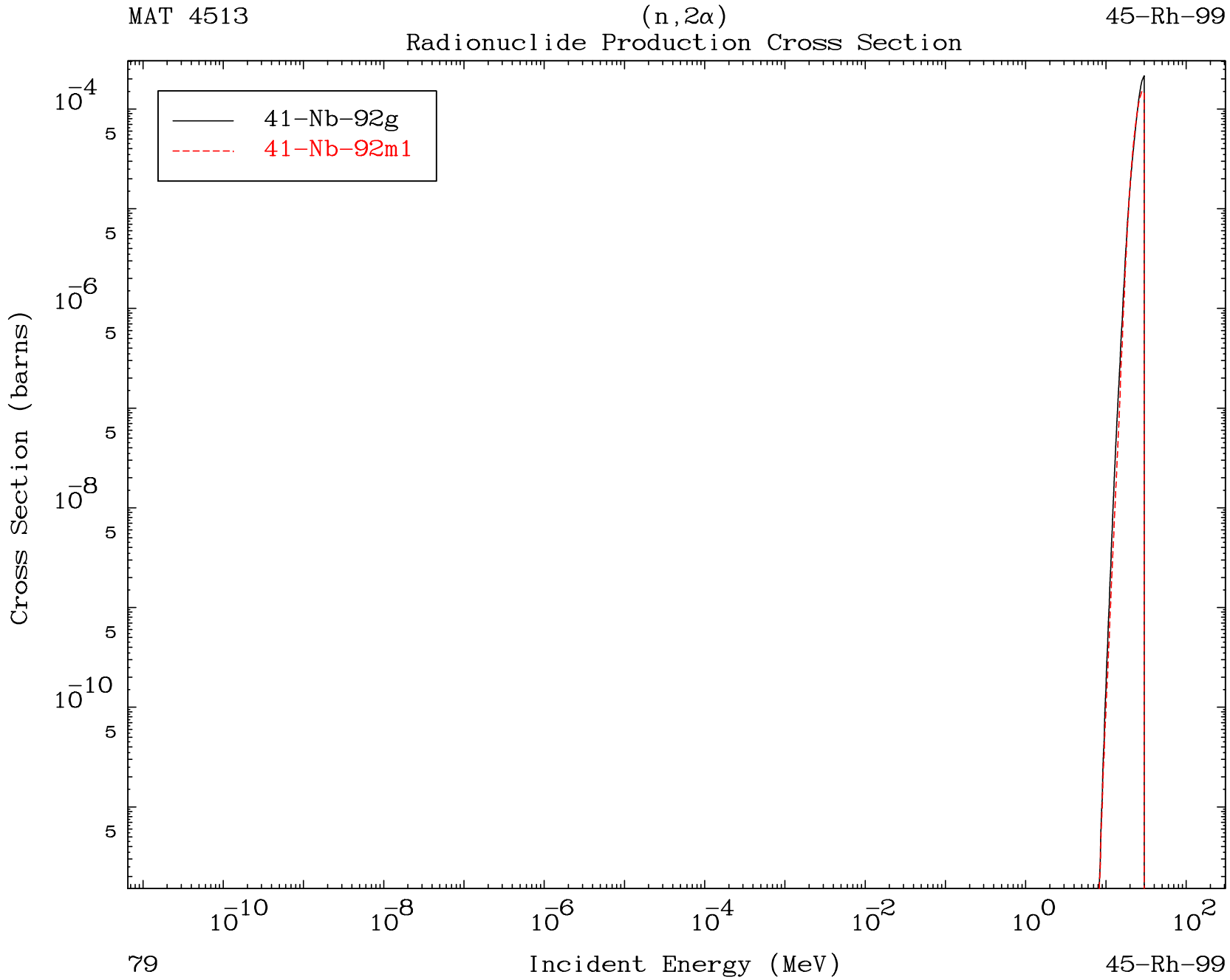

MAT 4513
(n,n') He-3
45-Rh-99
Radionuclide Production Cross Section
43-Tc-96g
43-Tc-96m1
Cross Section (barns)
Incident Energy (MeV)
74
45-Rh-99

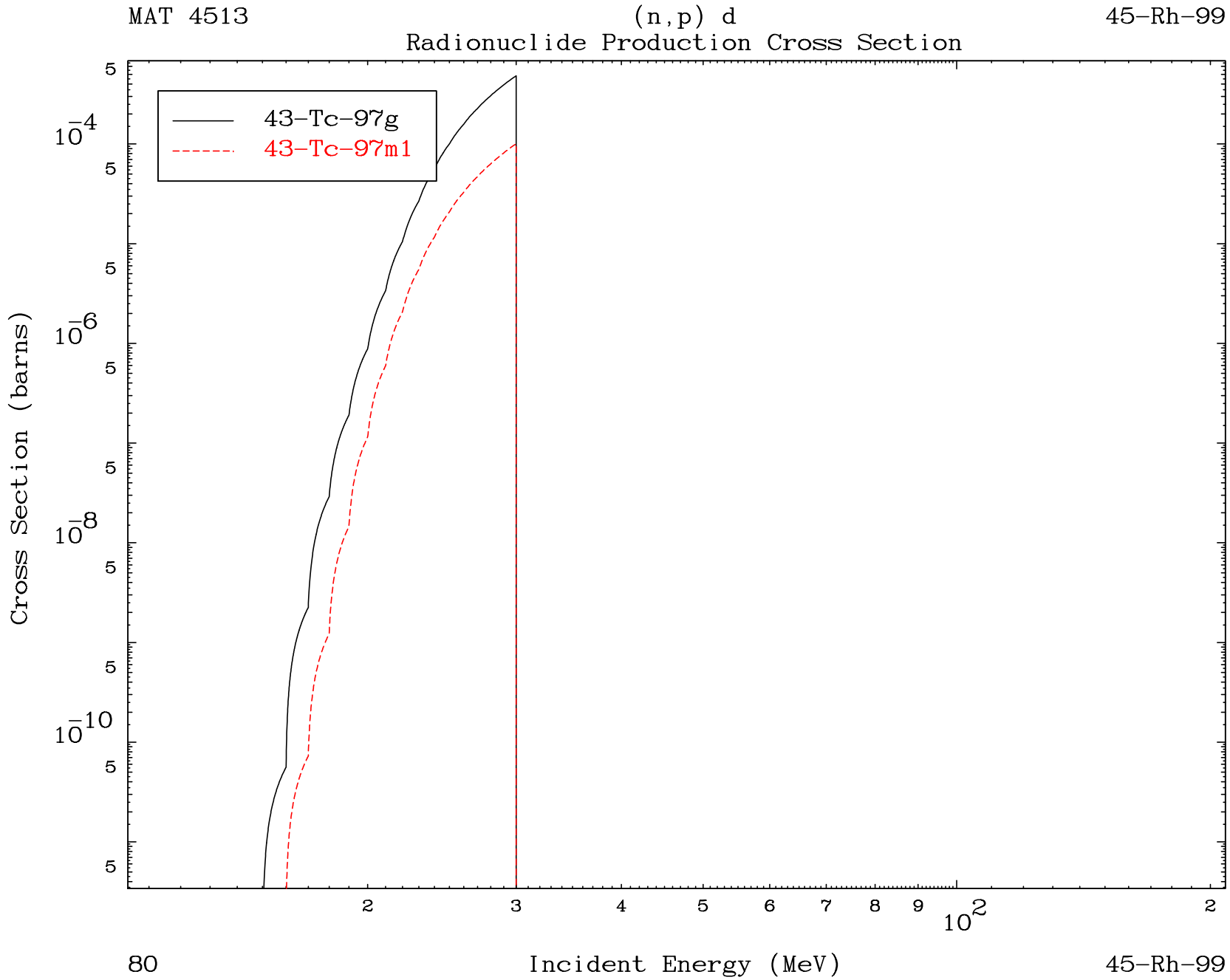

MAT 4513
(n,2n) p
45-Rh-99
Radionuclide Production Cross Section
43-Tc-97g
43-Tc-97m1
Cross Section (barns)
Incident Energy (MeV)
75
45-Rh-99

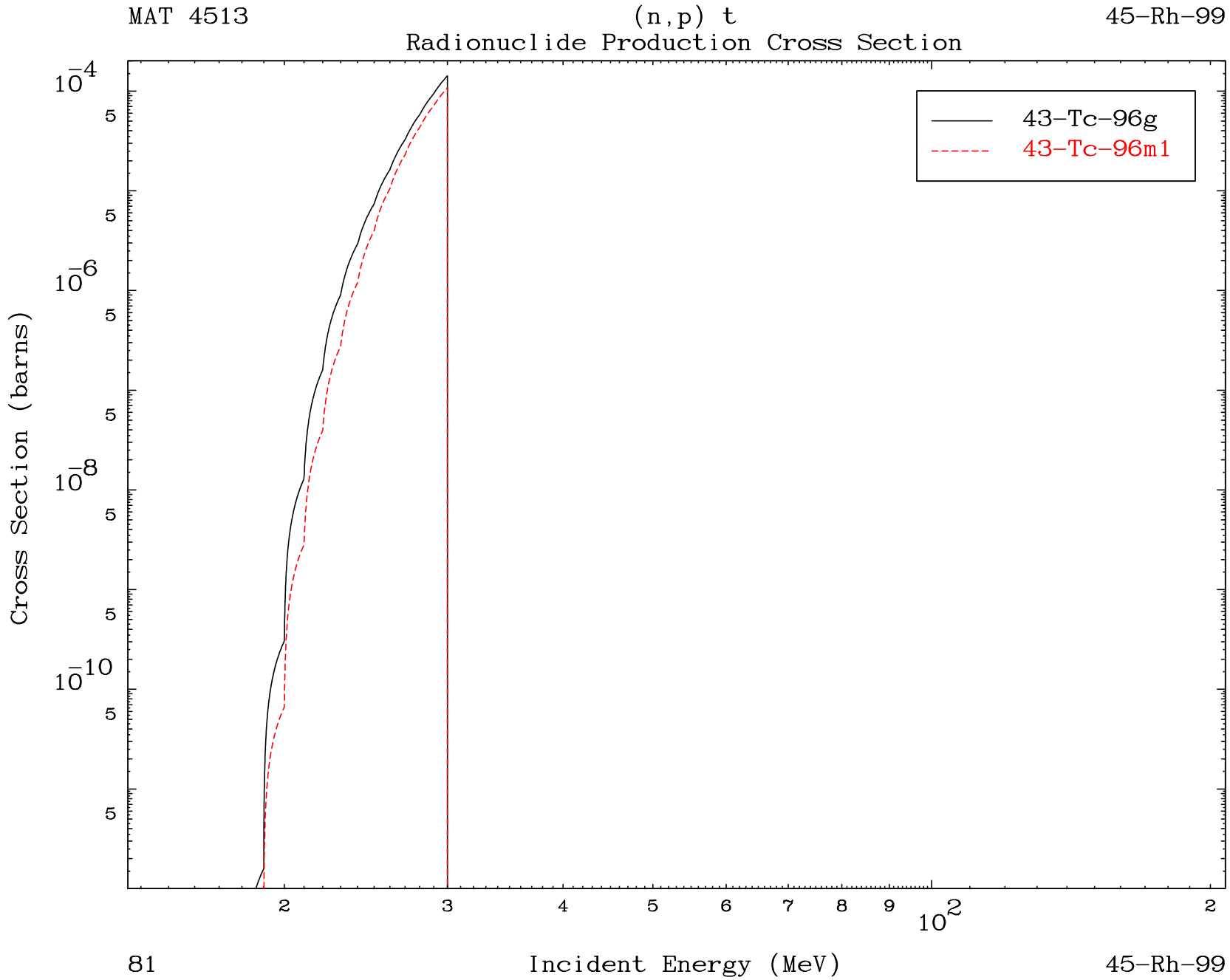

MAT 4513
(n,γ)
45-Rh-99
Radionuclide Production Cross Section
45-Rh-100g
45-Rh-100m4
Cross Section (barns)
Incident Energy (MeV)
76
45-Rh-99


MAT 4513
(n,He-3)
45-Rh-99
Radionuclide Production Cross Section
43-Tc-97g
43-Tc-97m1
Cross Section (barns)
Incident Energy (MeV)
77
45-Rh-99


MAT 4513
(n,α)
45-Rh-99
Radionuclide Production Cross Section
43-Tc-96g
43-Tc-96m1
Cross Section (barns)
Incident Energy (MeV)
78
45-Rh-99


MAT 4513
(n,2α)
45-Rh-99
Radionuclide Production Cross Section
41-Nb-92g
41-Nb-92m1
Cross Section (barns)
Incident Energy (MeV)
79
45-Rh-99


MAT 4513
(n,p) d
45-Rh-99
Radionuclide Production Cross Section
43-Tc-97g
43-Tc-97m1
Cross Section (barns)
Incident Energy (MeV)
80
45-Rh-99


MAT 4513
(n,p) t
45-Rh-99
Radionuclide Production Cross Section
43-Tc-96g
43-Tc-96m1
Cross Section (barns)
Incident Energy (MeV)
81
45-Rh-99