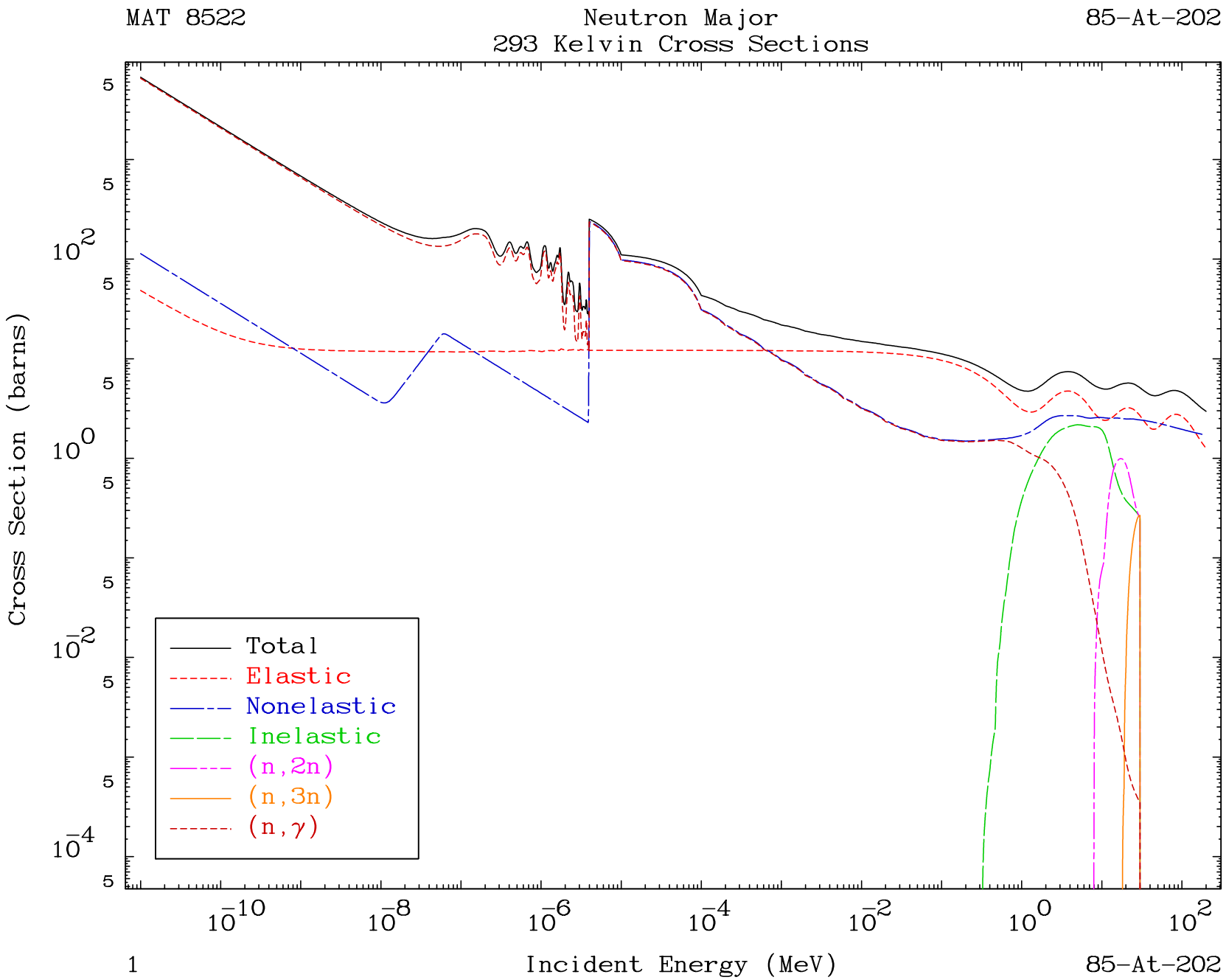
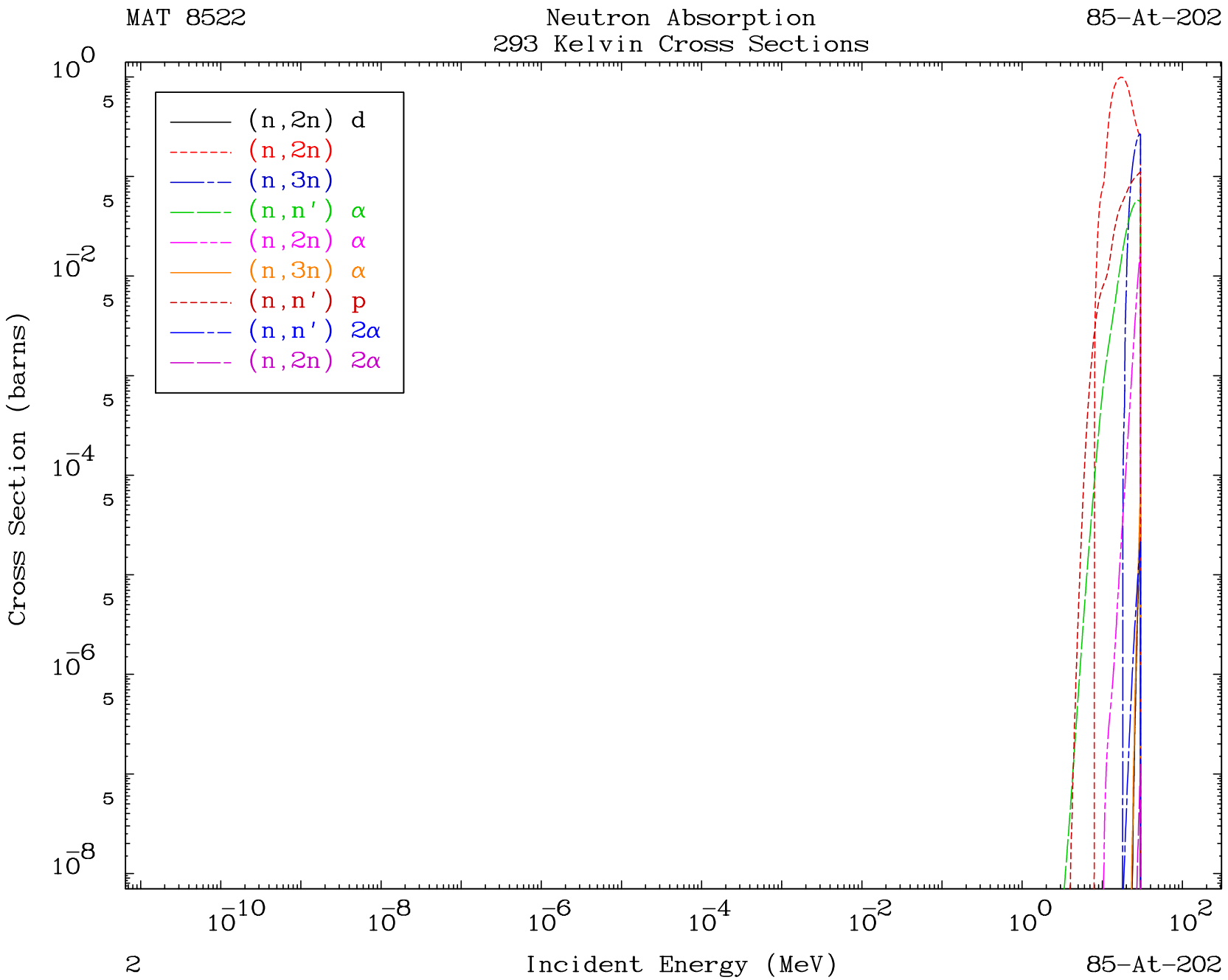
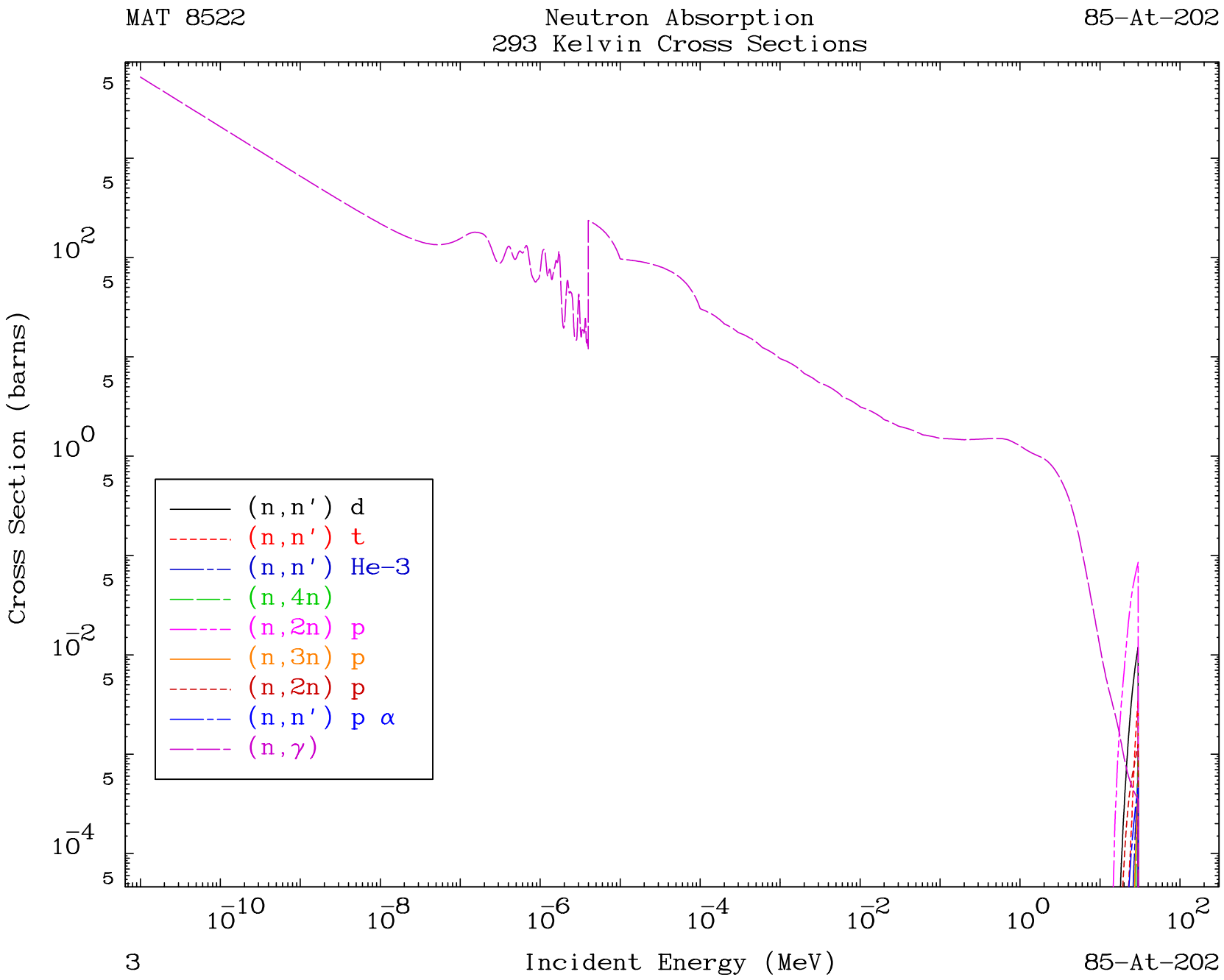
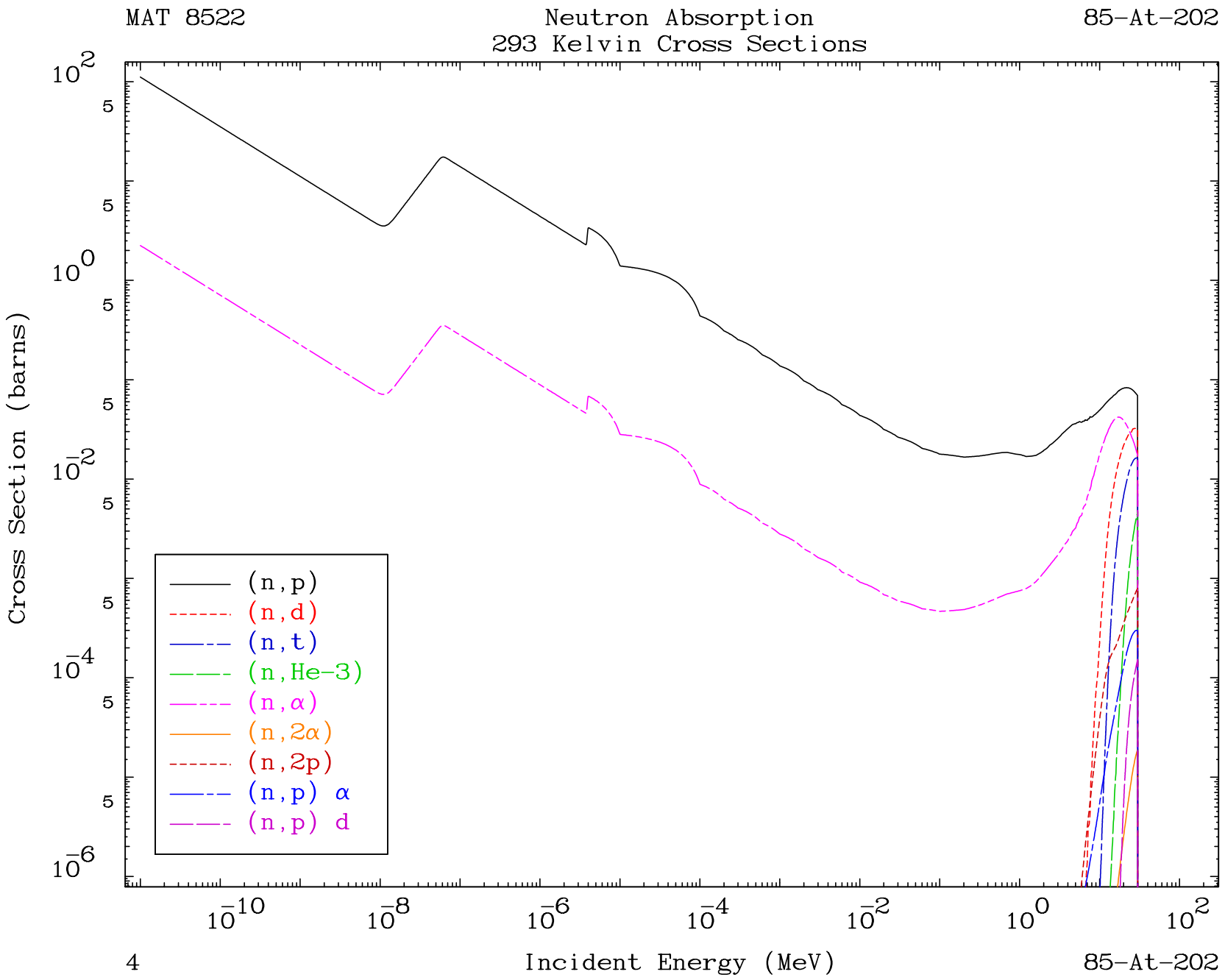
Program EVALPLOT
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

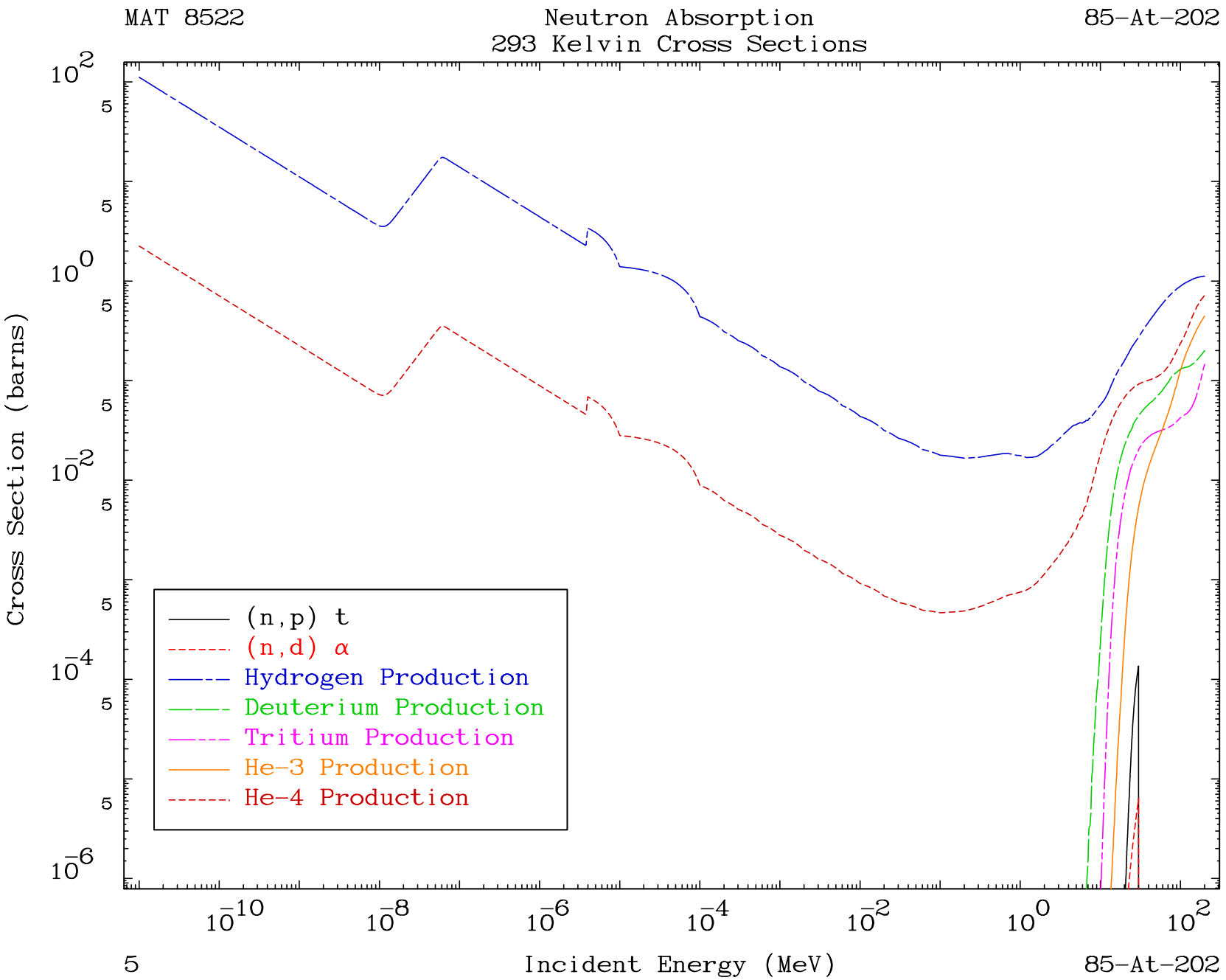
Press Mouse Button to Start

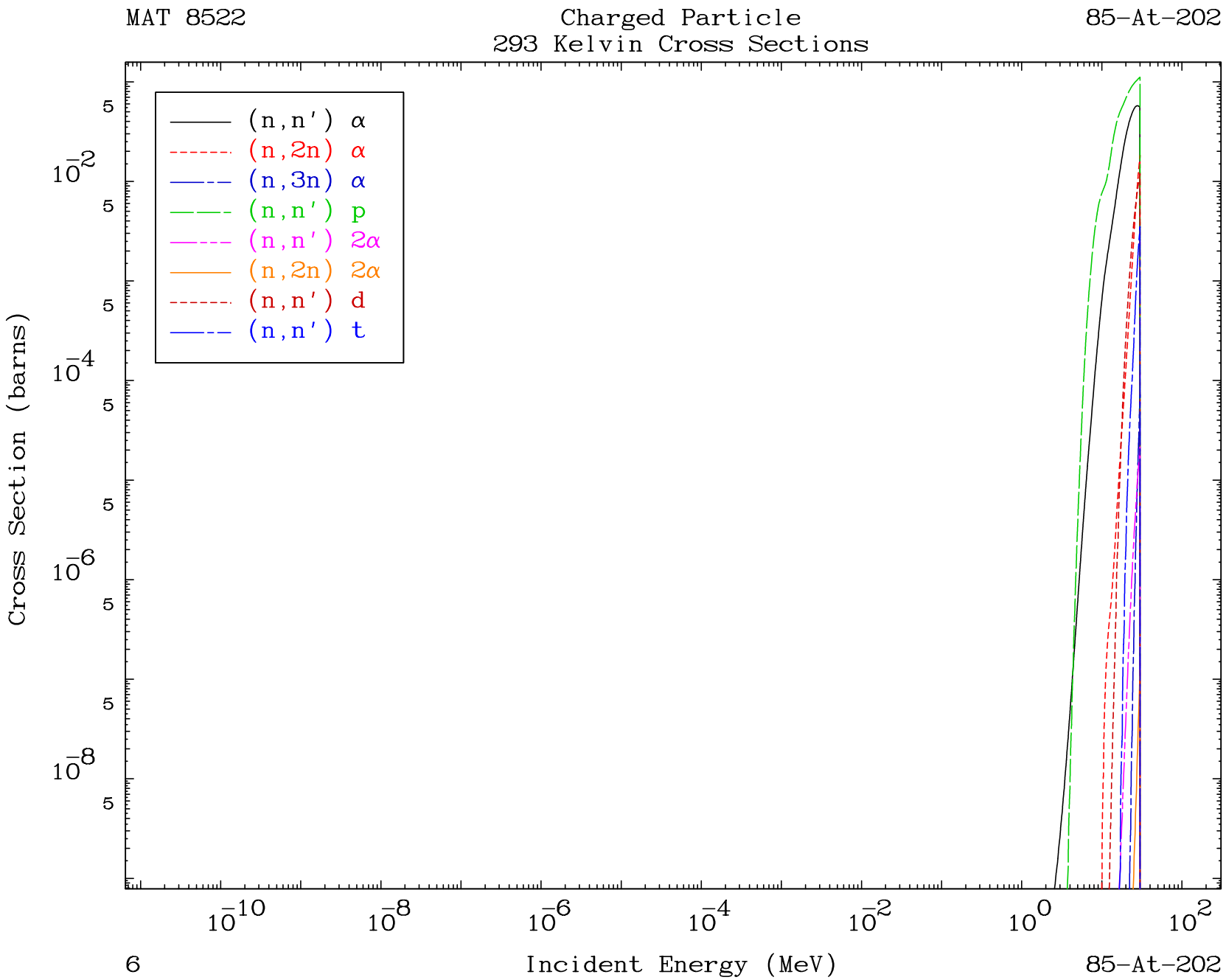

MAT 8522
Neutron Major
85-At-202
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
1
85-At-202

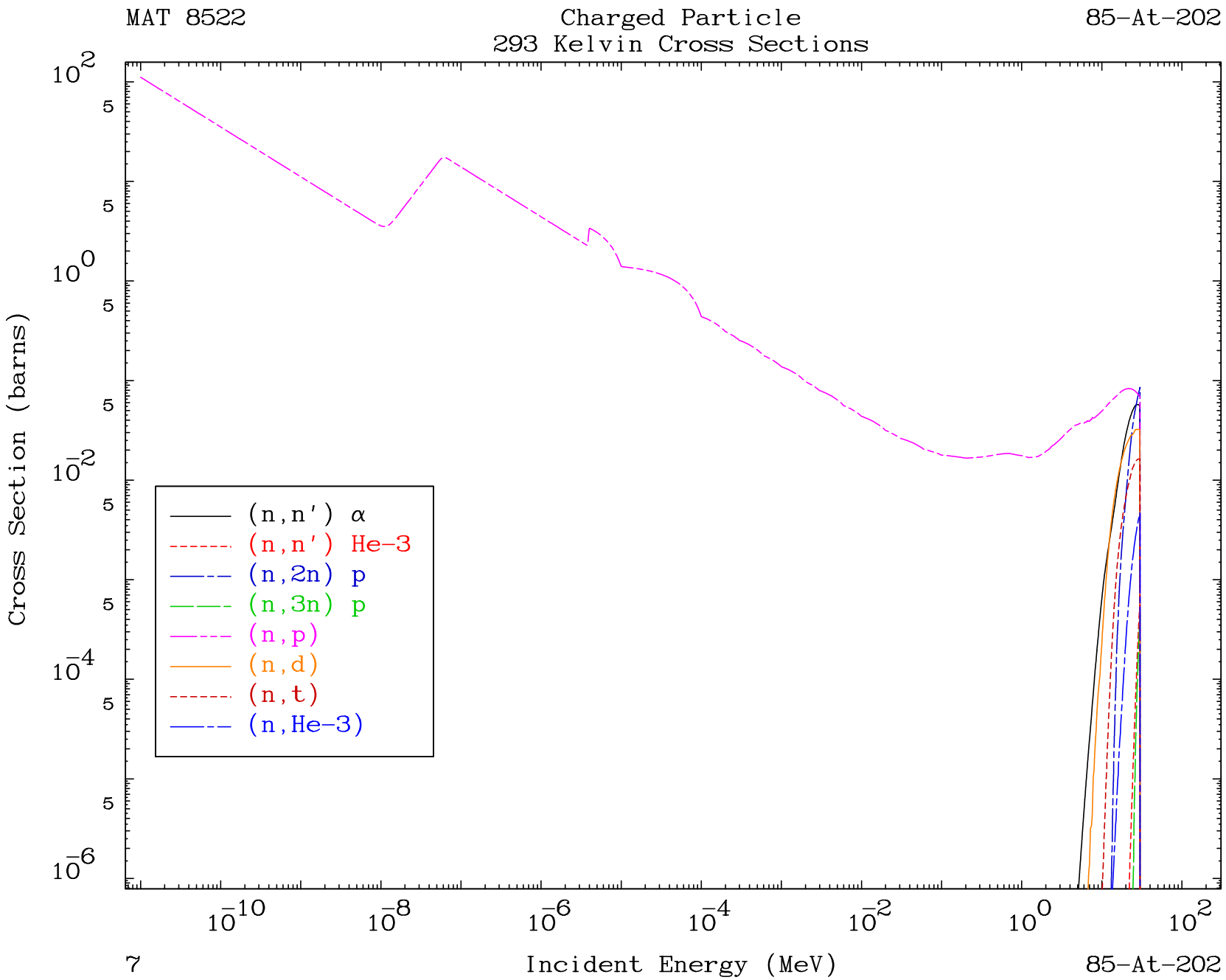

MAT 8522
Neutron Absorption
293 Kelvin Cross Sections
85-At-202
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
Cross Section (barns)
Incident Energy (MeV)
2
85-At-202

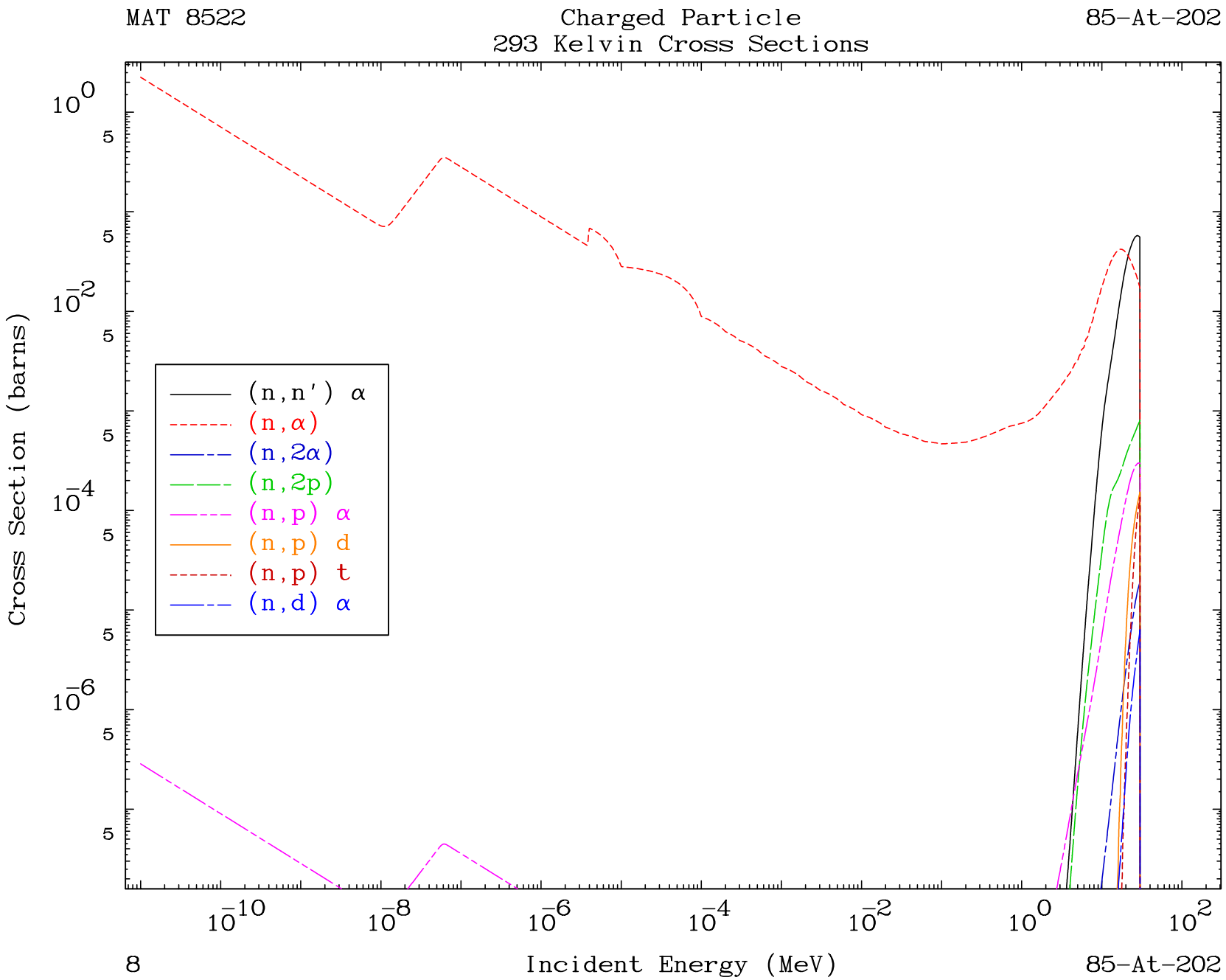

MAT 8522
Neutron Absorption
293 Kelvin Cross Sections
85-At-202
Cross Section (barns)
Incident Energy (MeV)
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
(n,γ)
3
85-At-202

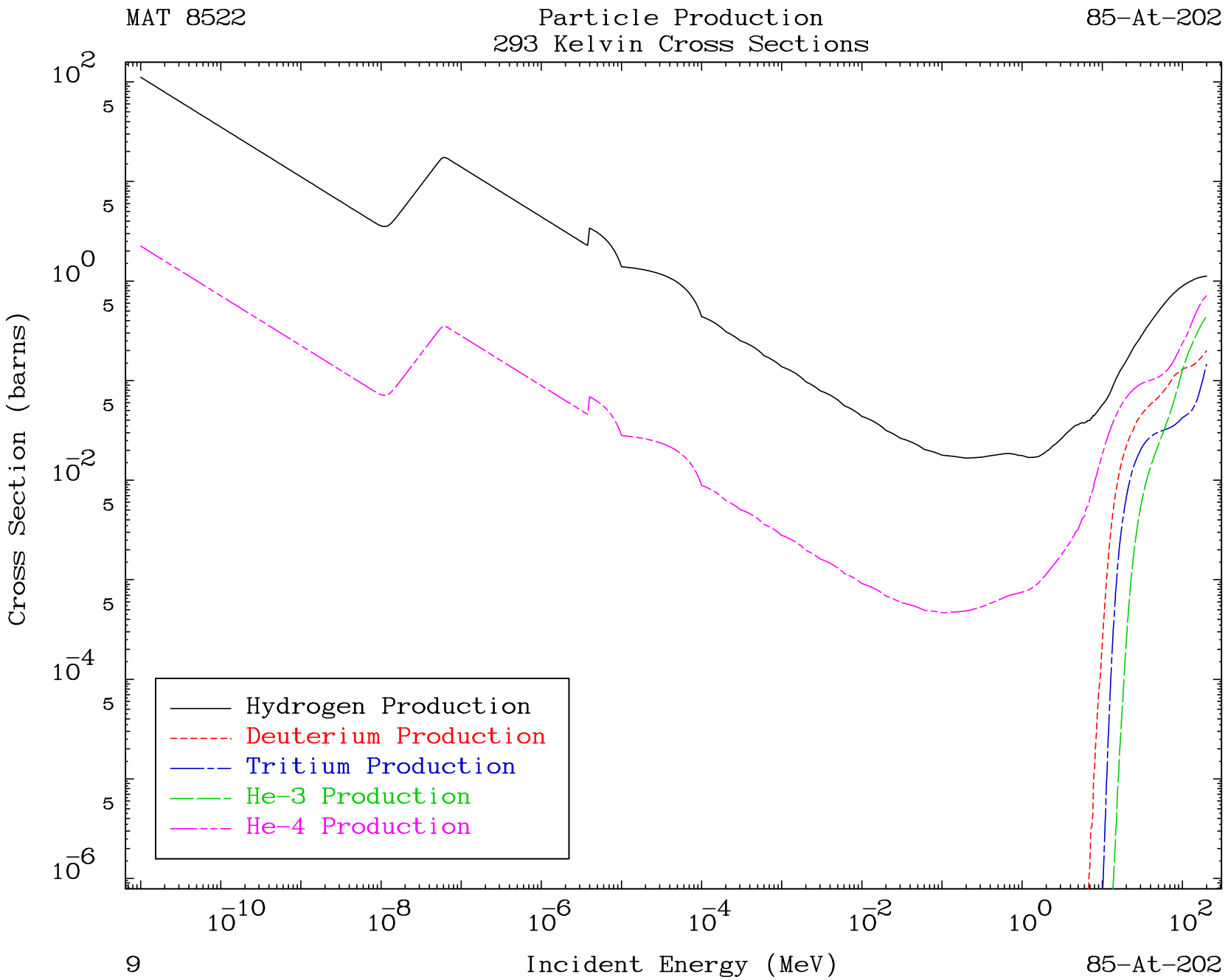

MAT 8522
Neutron Absorption
293 Kelvin Cross Sections
85-At-202
Cross Section (barns)
Incident Energy (MeV)
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
4
85-At-202

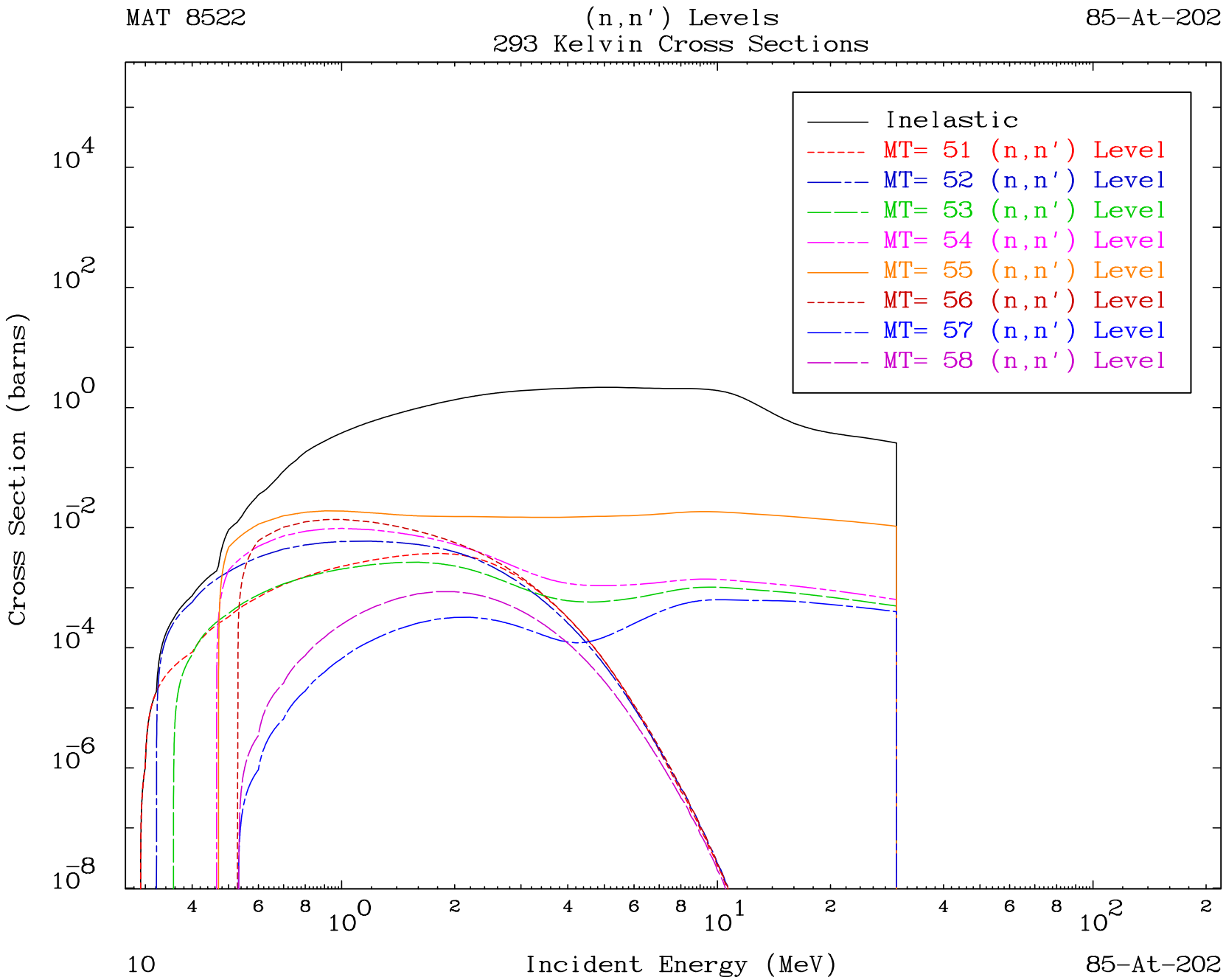

MAT 8522
Neutron Absorption
293 Kelvin Cross Sections
85-At-202
Cross Section (barns)
Incident Energy (MeV)
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production

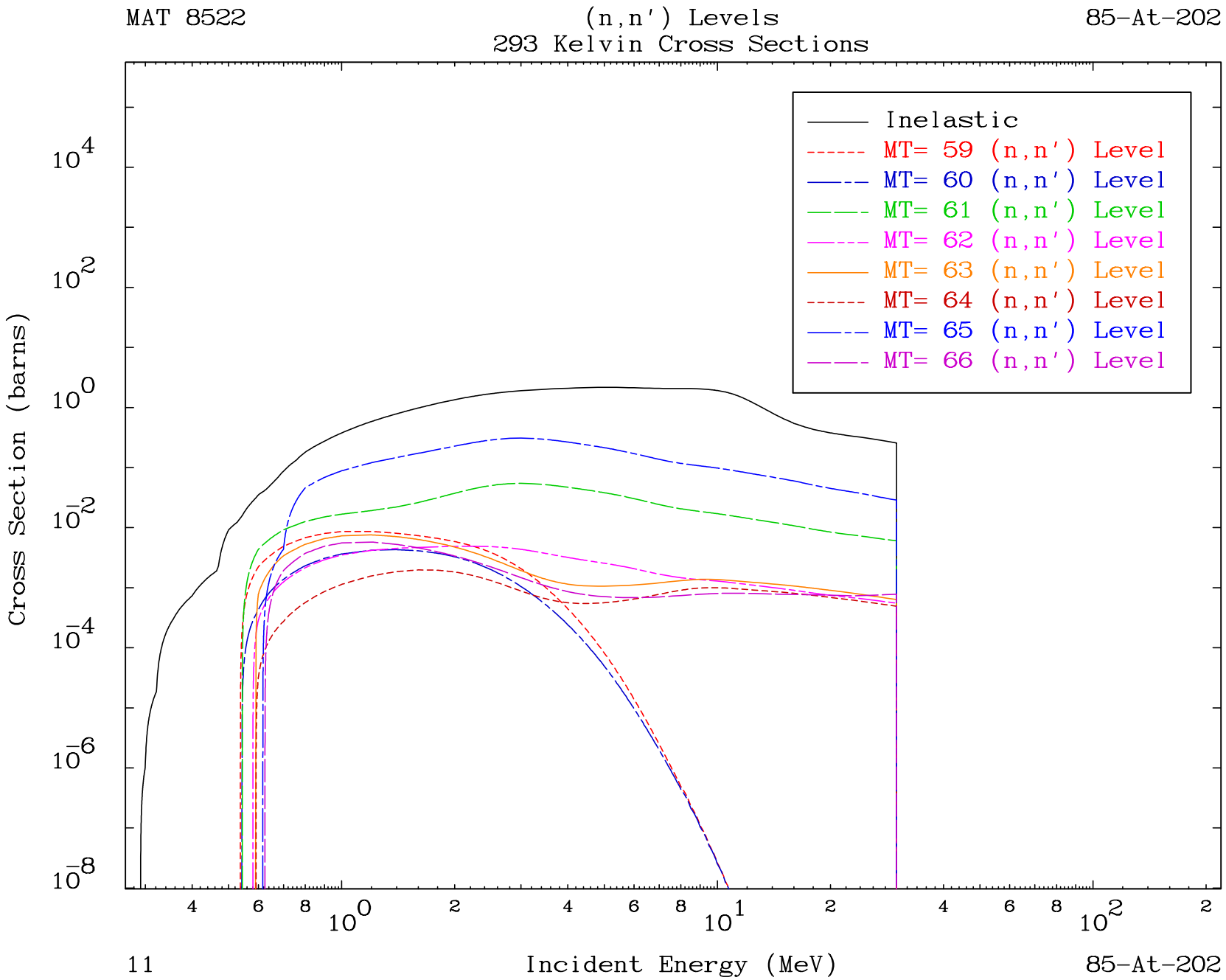

MAT 8522
Charged Particle
85-At-202
293 Kelvin Cross Sections
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
Cross Section (barns)
Incident Energy (MeV)
6
85-At-202

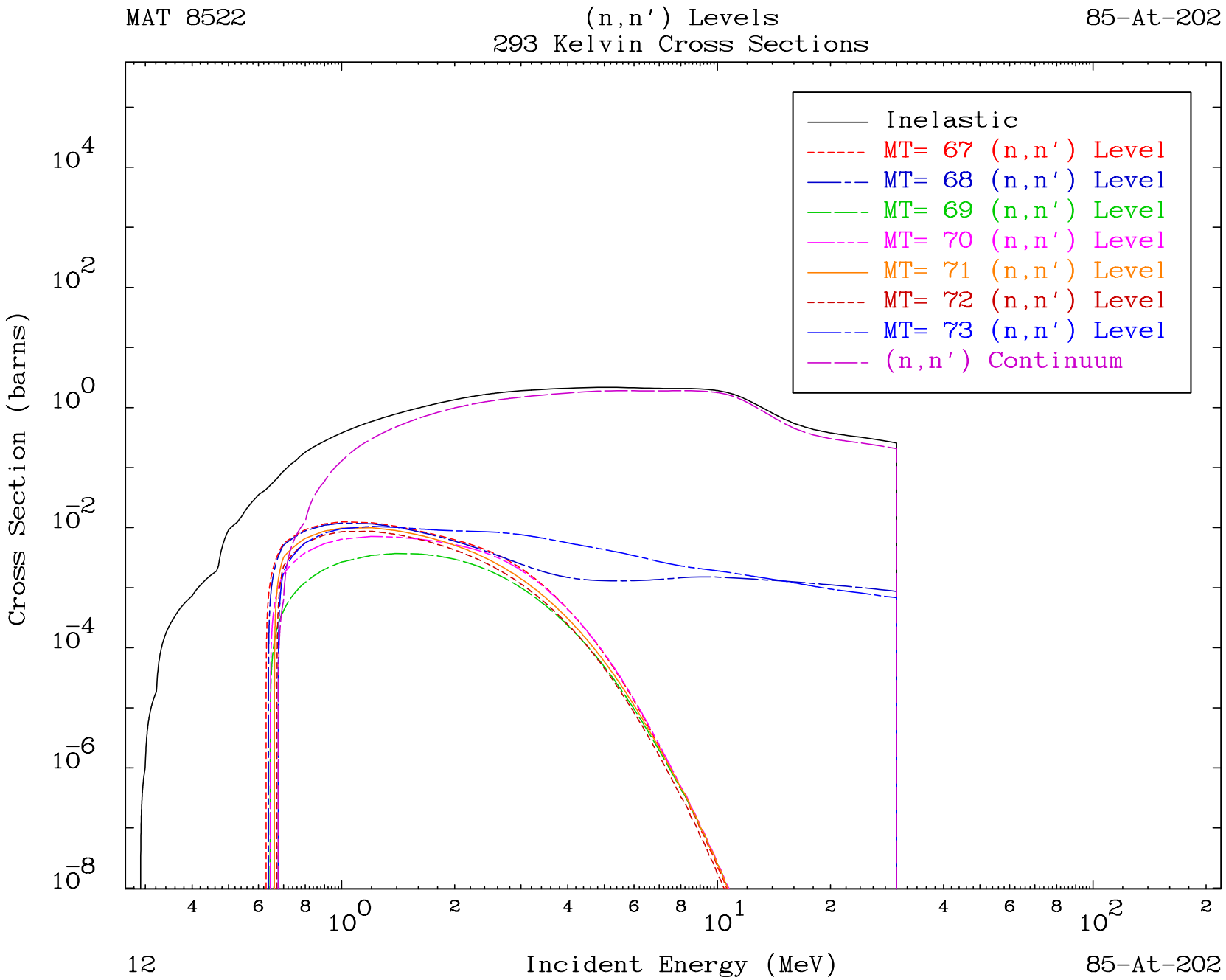

MAT 8522
Charged Particle
85-At-202
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
(n,n') α
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,He-3)
7
85-At-202

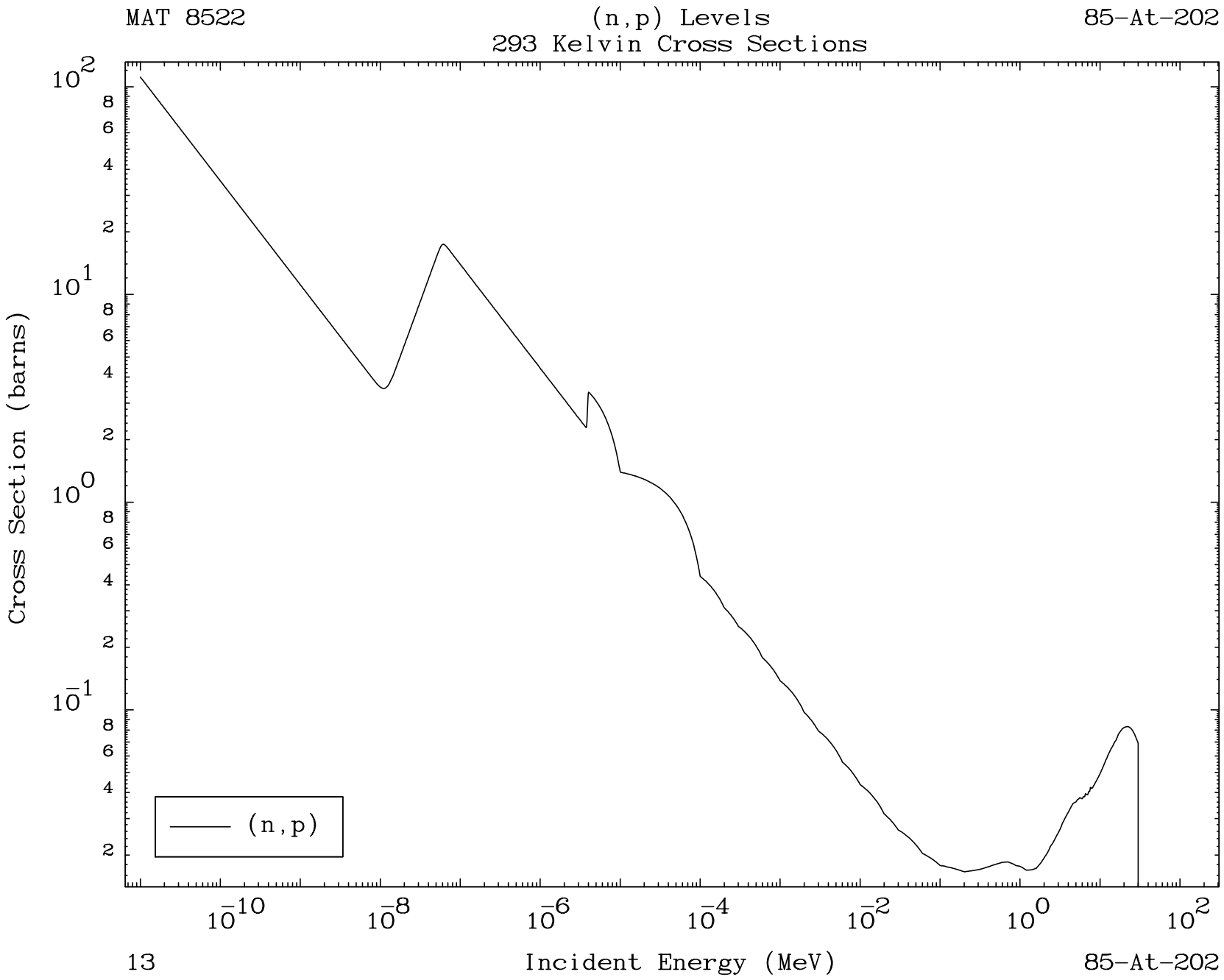

MAT 8522
Charged Particle
293 Kelvin Cross Sections
85-At-202
Cross Section (barns)
Incident Energy (MeV)
(n,n') α
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
8
85-At-202

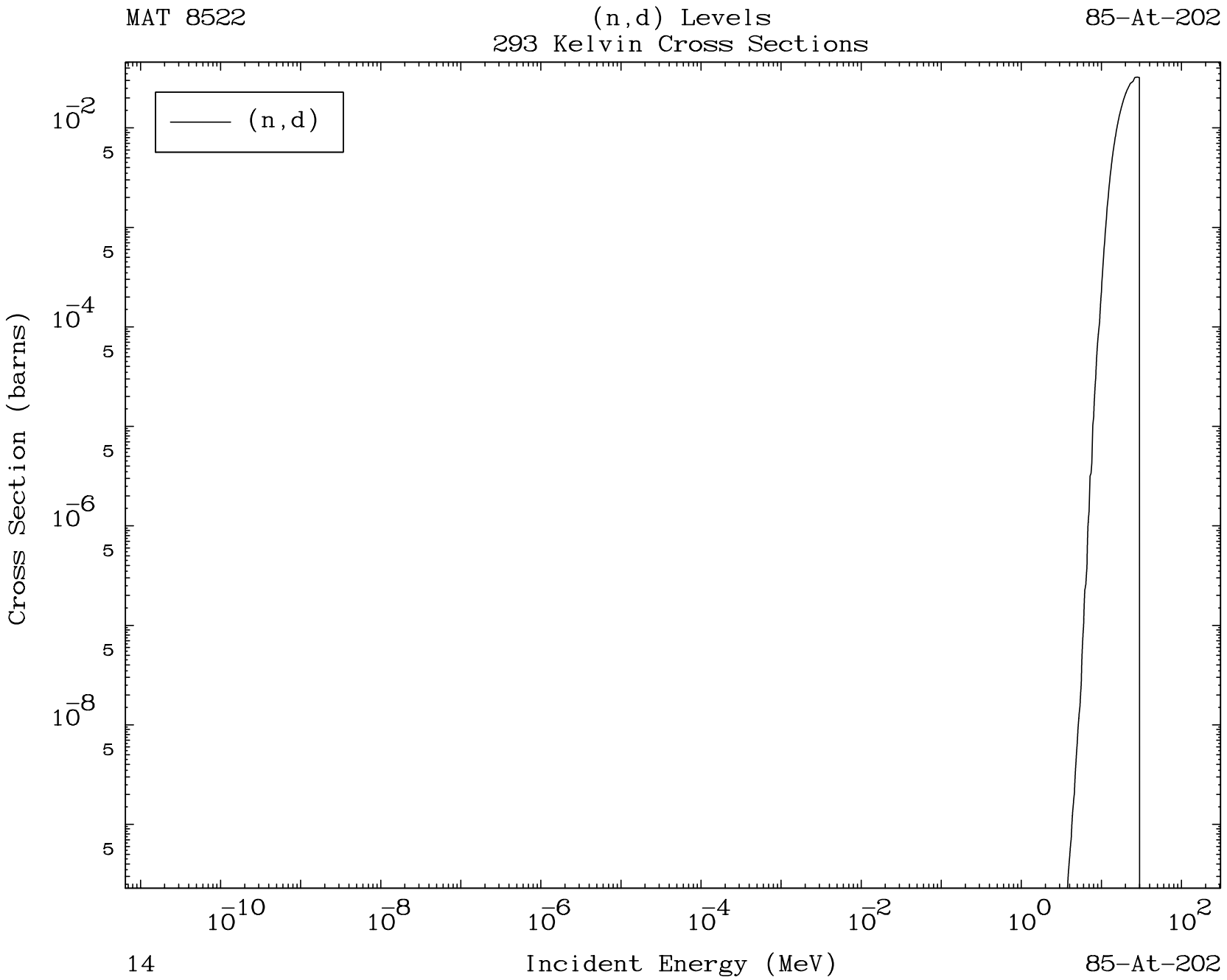

MAT 8522
Particle Production
293 Kelvin Cross Sections
85-At-202
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
9
85-At-202

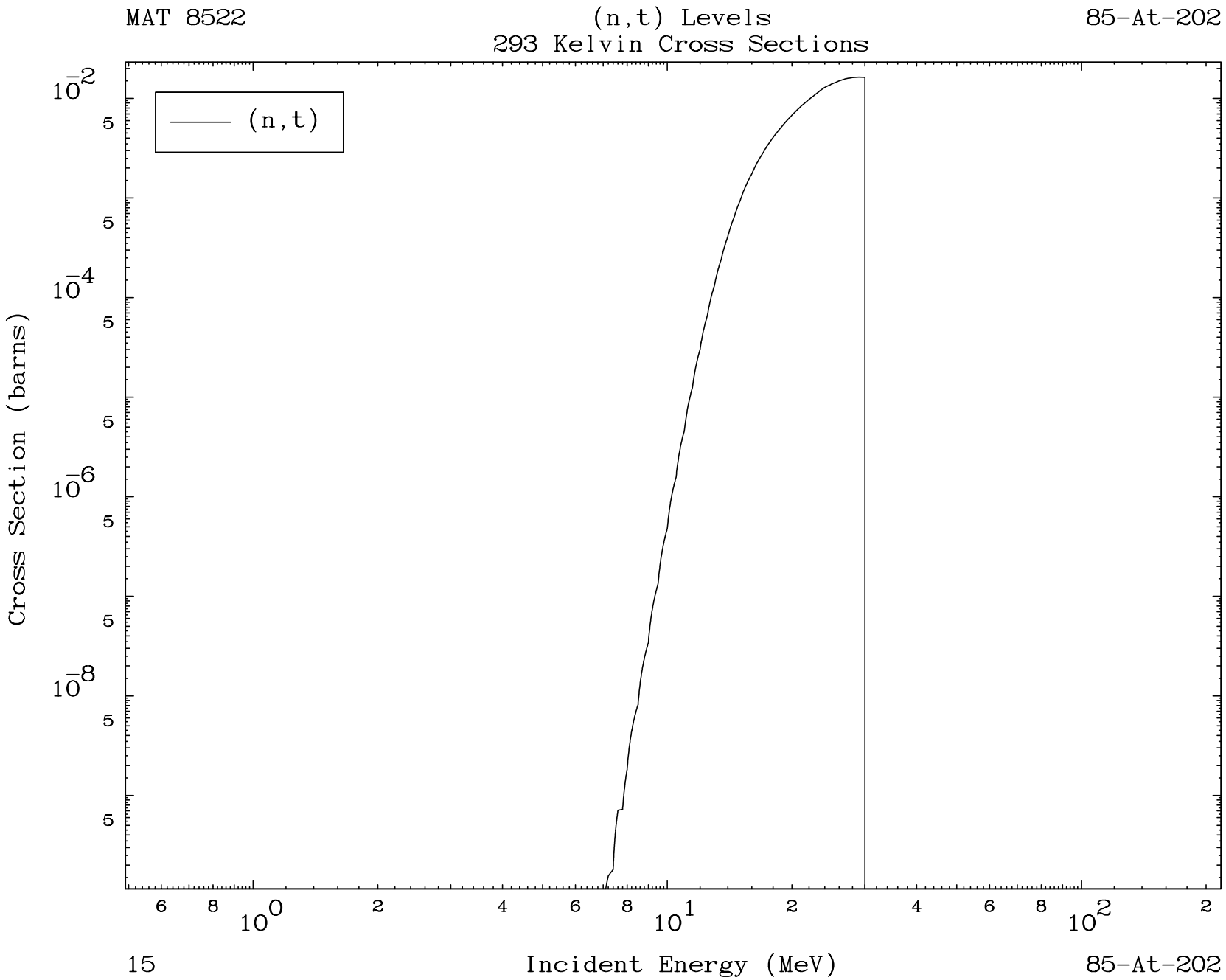

MAT 8522
(n,n') Levels
293 Kelvin Cross Sections
85-At-202
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
10
85-At-202

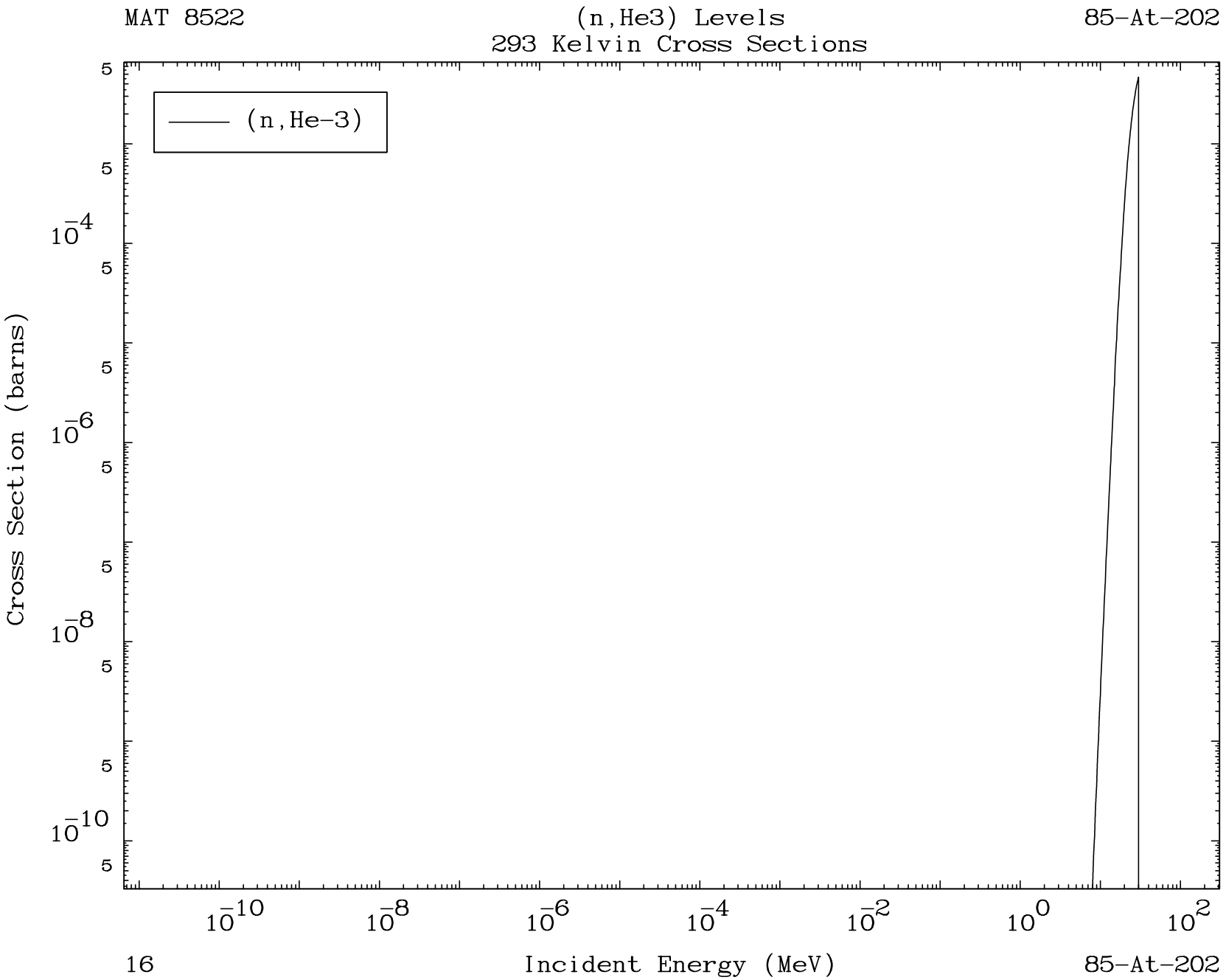

MAT 8522
(n,n') Levels
293 Kelvin Cross Sections
85-At-202
Inelastic
MT= 59 (n,n') Level
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
11
85-At-202

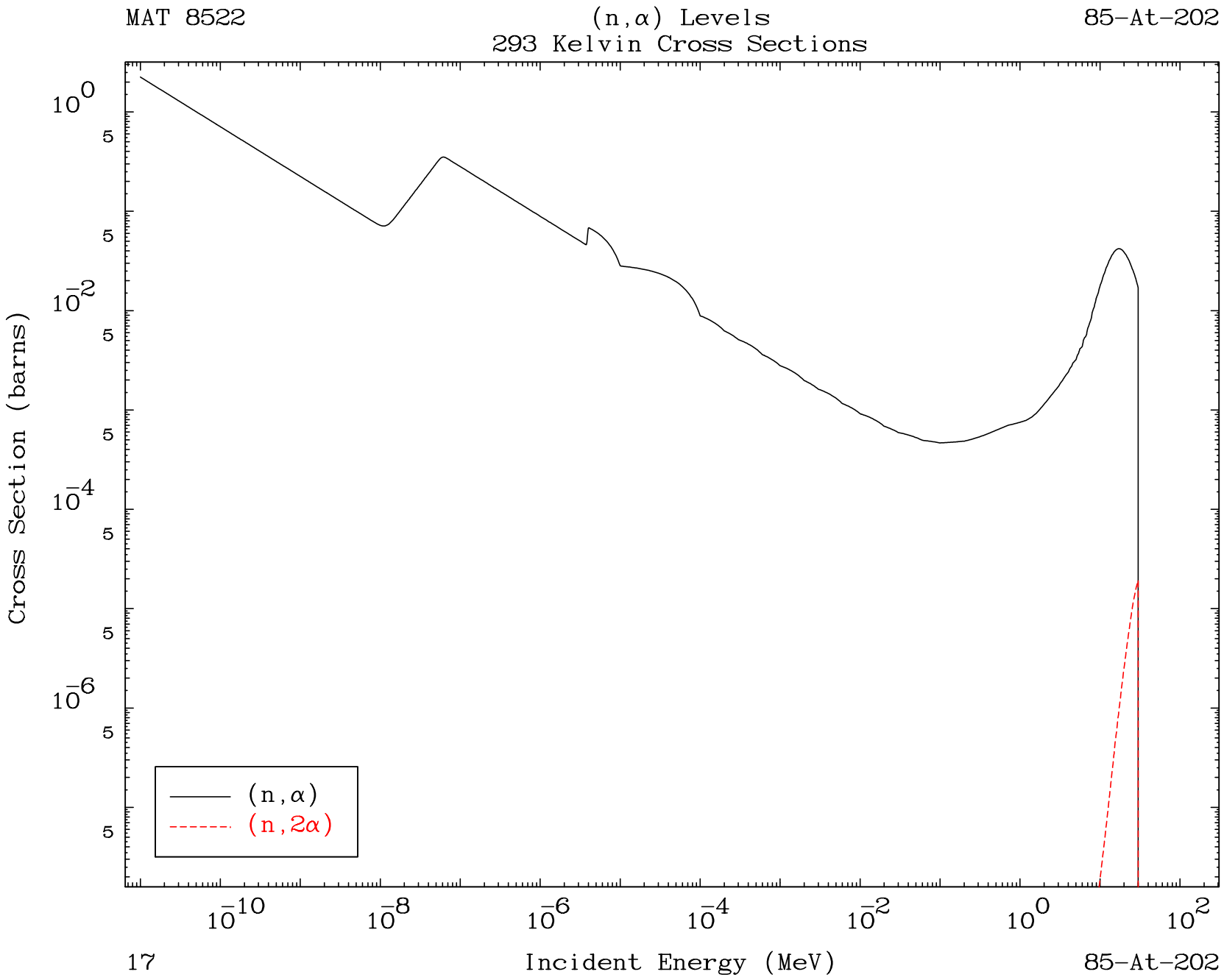

MAT 8522
(n,n') Levels
293 Kelvin Cross Sections
85-At-202
Inelastic
MT= 67 (n,n') Level
MT= 68 (n,n') Level
MT= 69 (n,n') Level
MT= 70 (n,n') Level
MT= 71 (n,n') Level
MT= 72 (n,n') Level
MT= 73 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
12
85-At-202

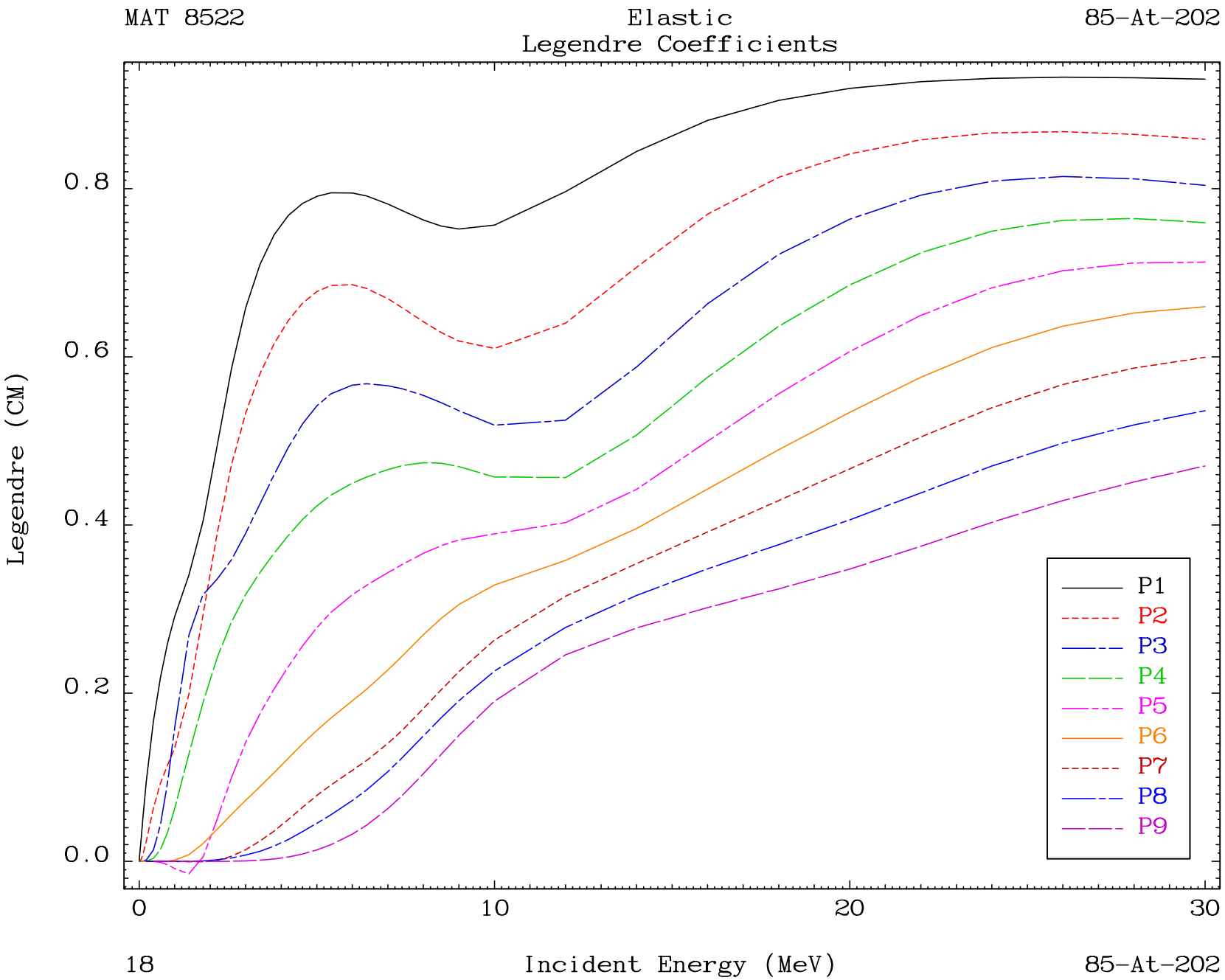

MAT 8522
(n,p) Levels
85-At-202
293 Kelvin Cross Sections
Cross Section (barns)
(n,p)
13
Incident Energy (MeV)
85-At-202

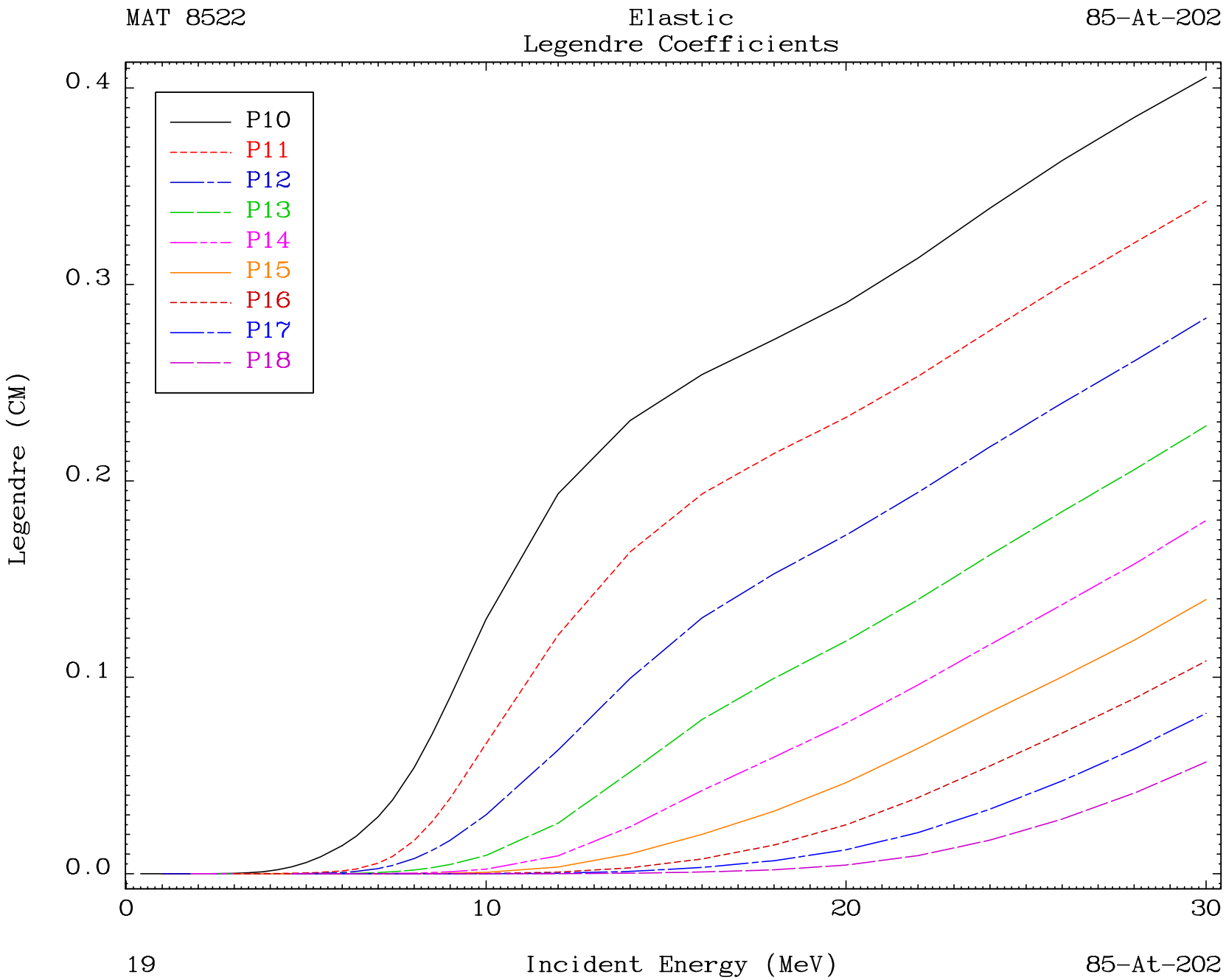

MAT 8522
(n,d) Levels
85-At-202
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
14
85-At-202

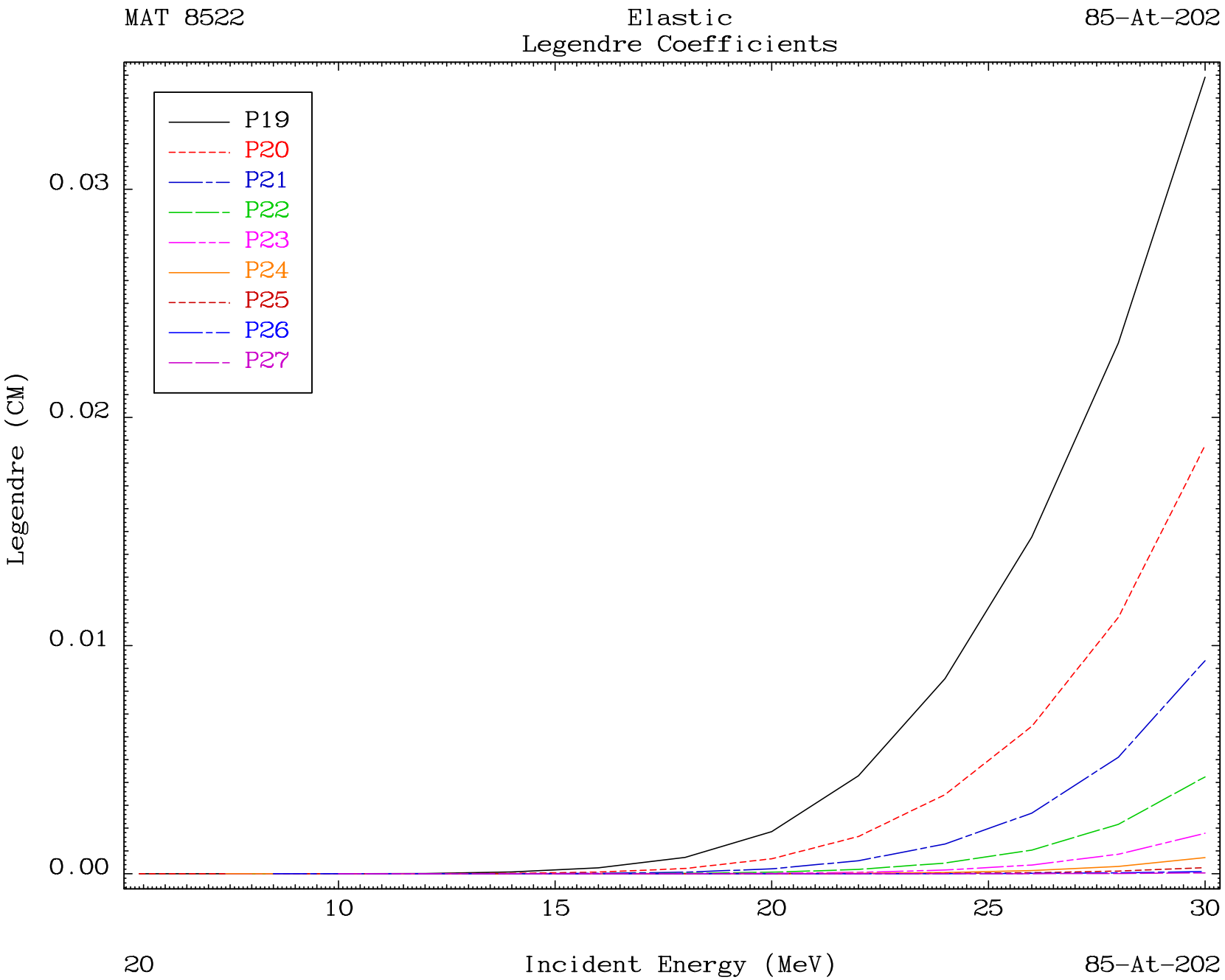

MAT 8522
(n,t) Levels
85-At-202
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
15
85-At-202

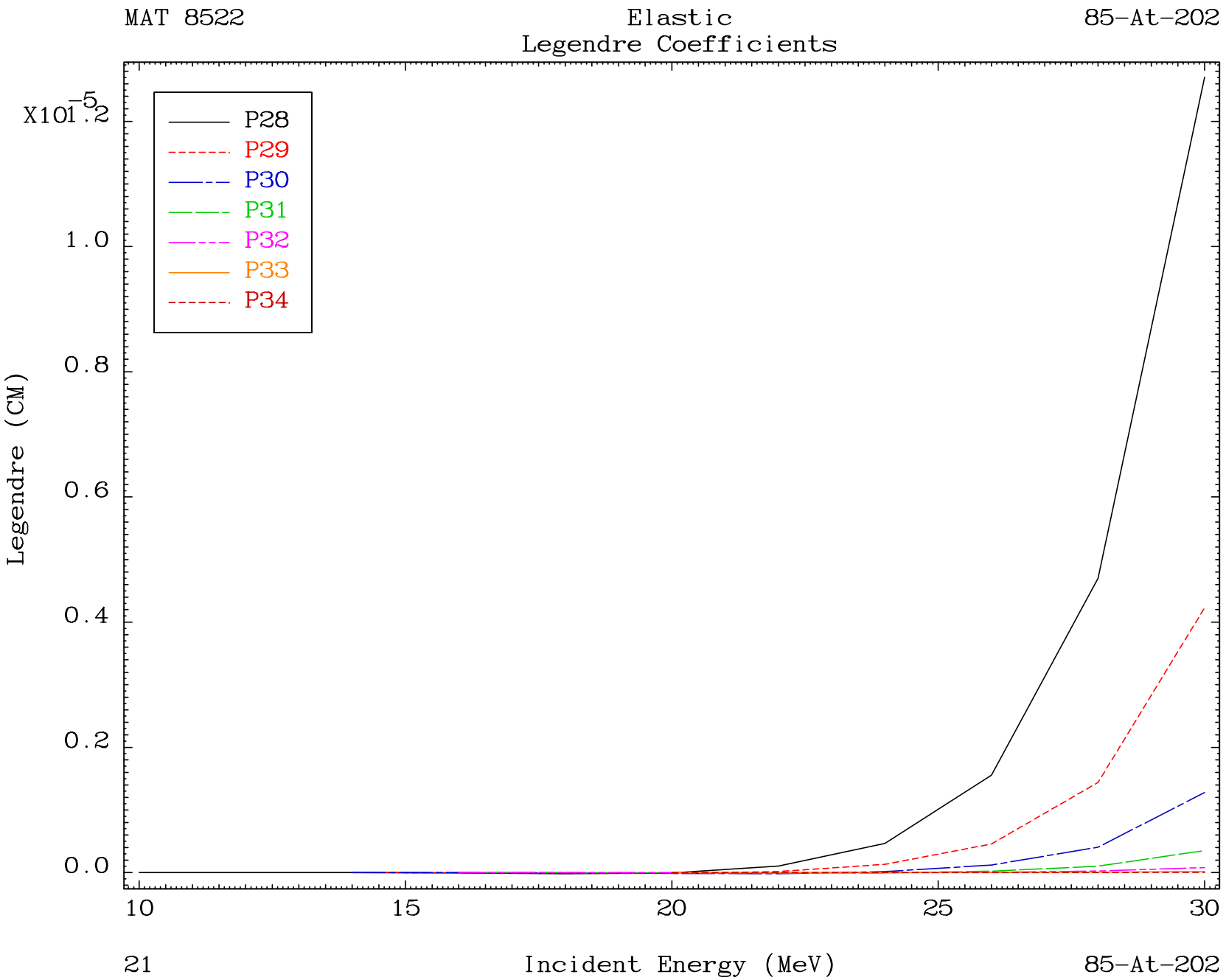

MAT 8522
(n,He3) Levels
85-At-202
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
Incident Energy (MeV)
16
85-At-202

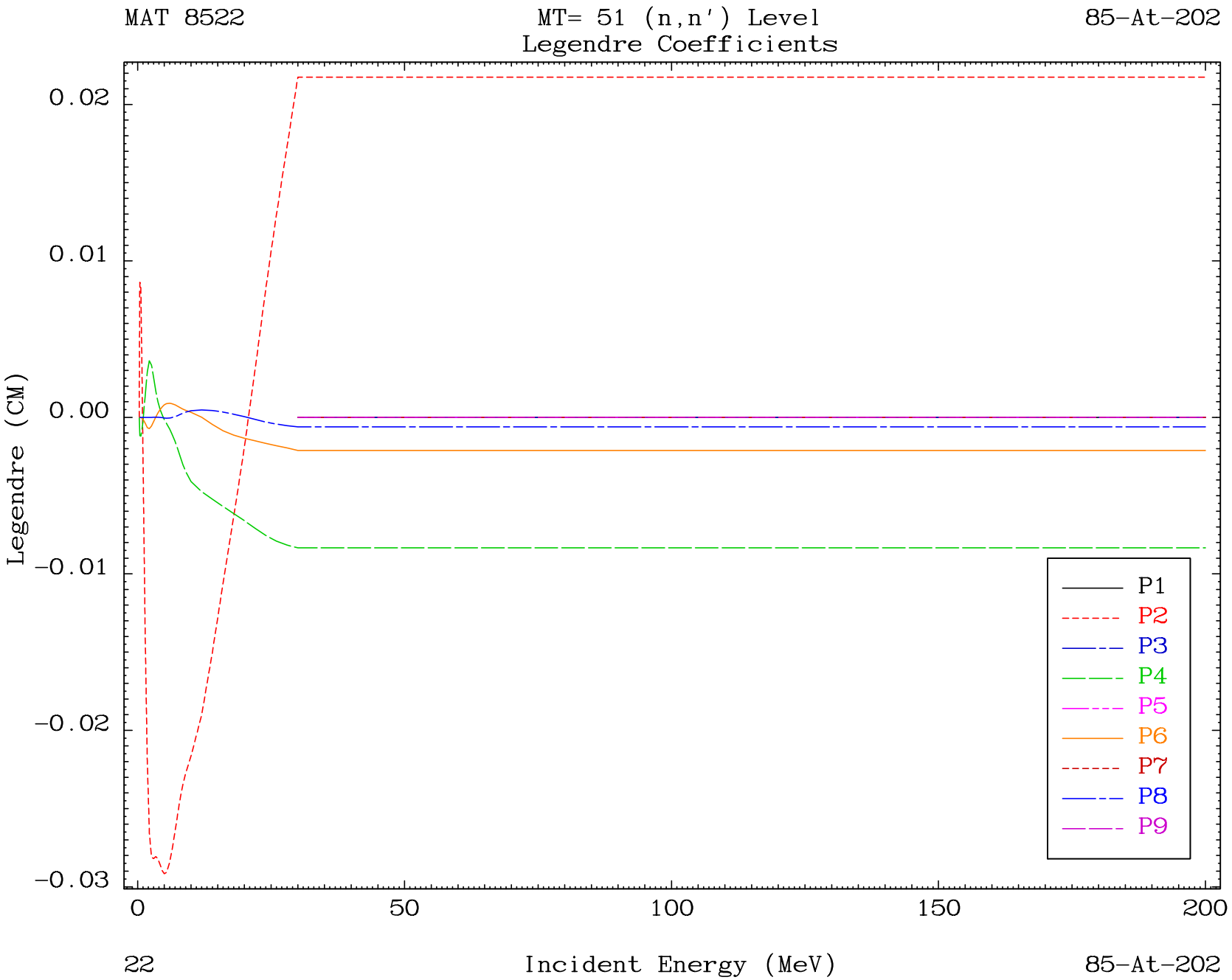

MAT 8522
(n,α) Levels
85-At-202
293 Kelvin Cross Sections
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
5
(n,α)
(n,2α)
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
17
Incident Energy (MeV)
85-At-202

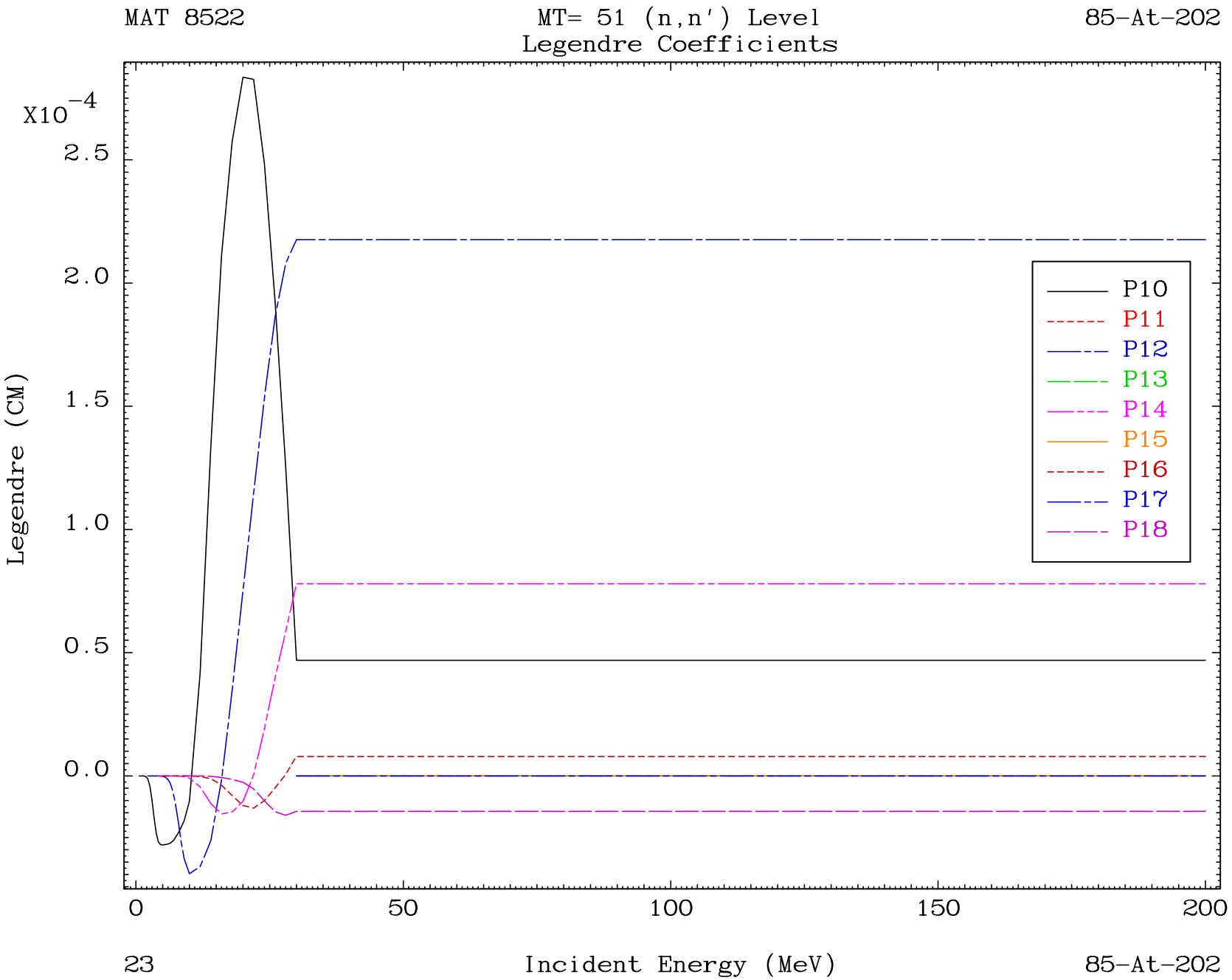

MAT 8522
Elastic
Legendre Coefficients
85-At-202
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
18
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9

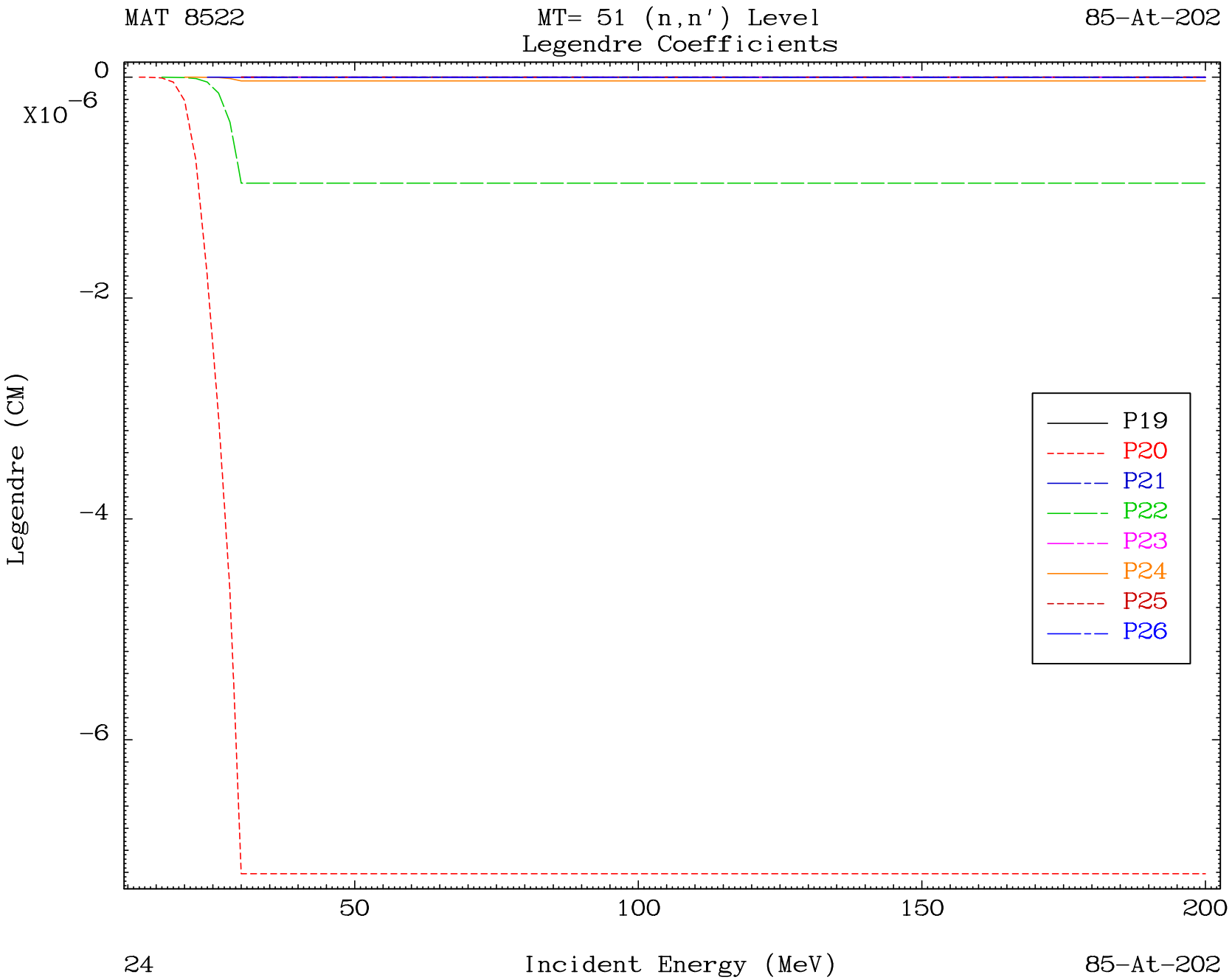

MAT 8522
Elastic
Legendre Coefficients
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
10
20
30
19
Incident Energy (MeV)
85-At-202

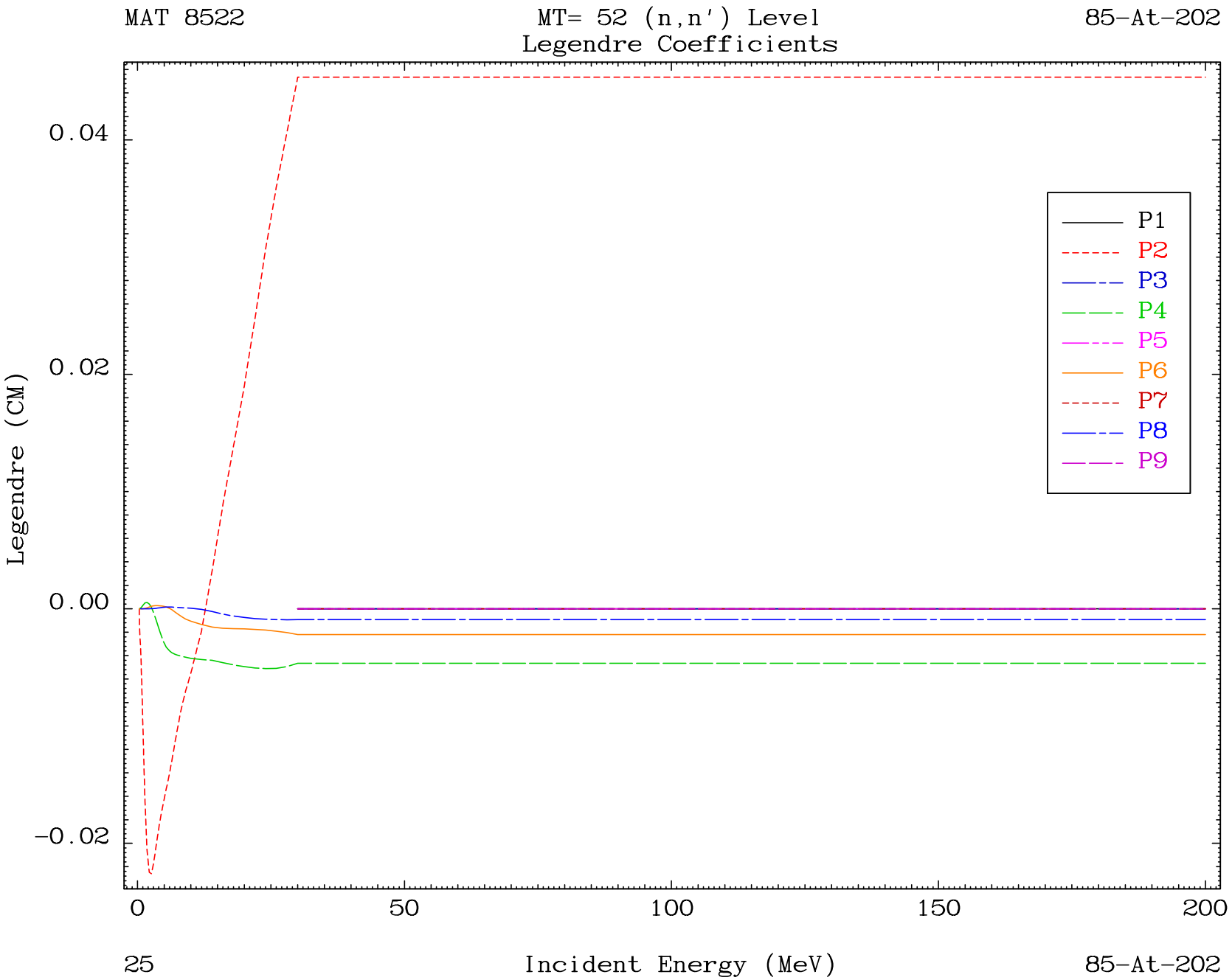

MAT 8522
Elastic
Legendre Coefficients
85-At-202
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.03
0.02
0.01
0.00
Legendre (CM)
10
15
20
25
30
20
Incident Energy (MeV)
85-At-202

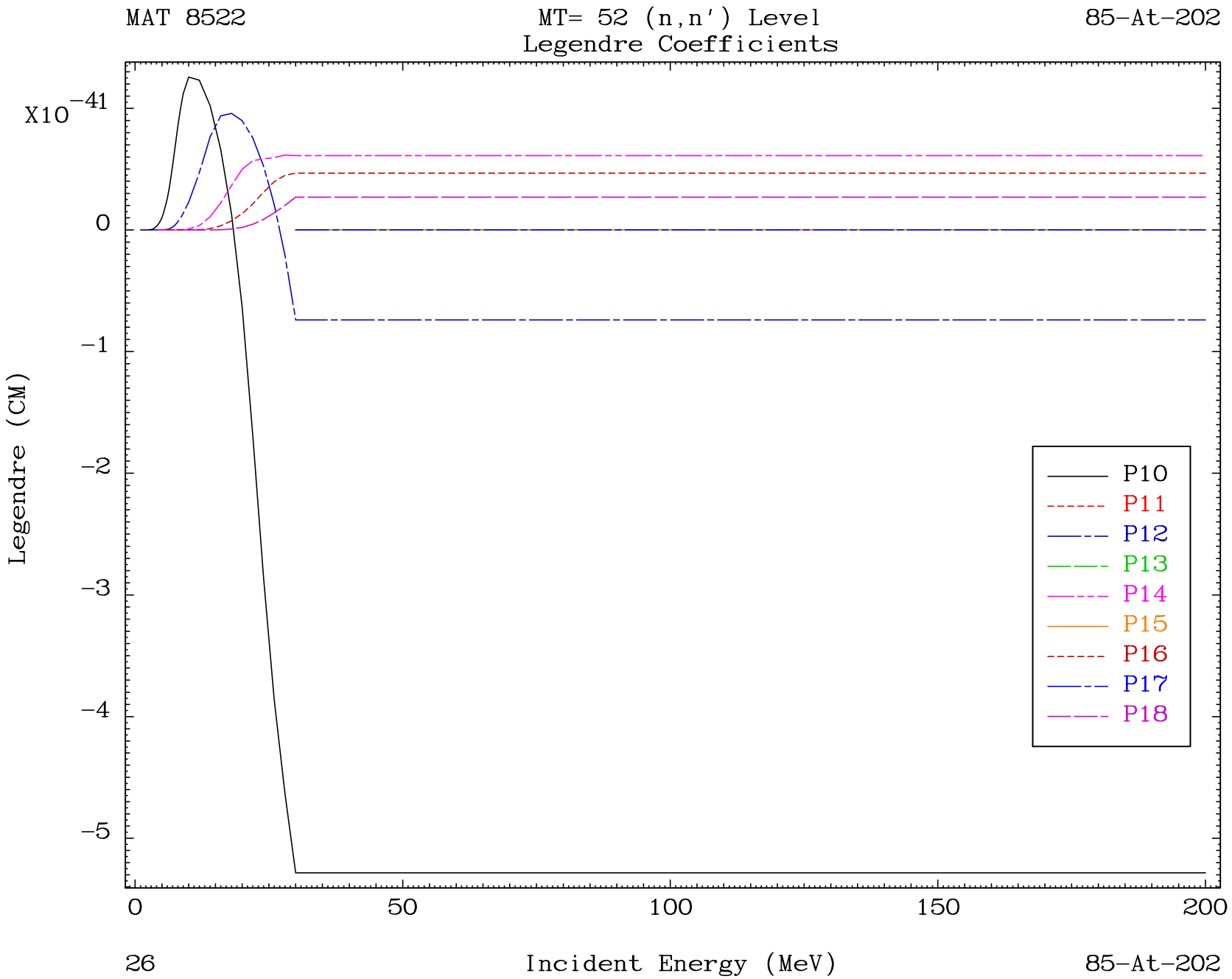

MAT 8522
Elastic
Legendre Coefficients
85-At-202
X10^-5
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
10
15
20
25
30
21
Incident Energy (MeV)
85-At-202

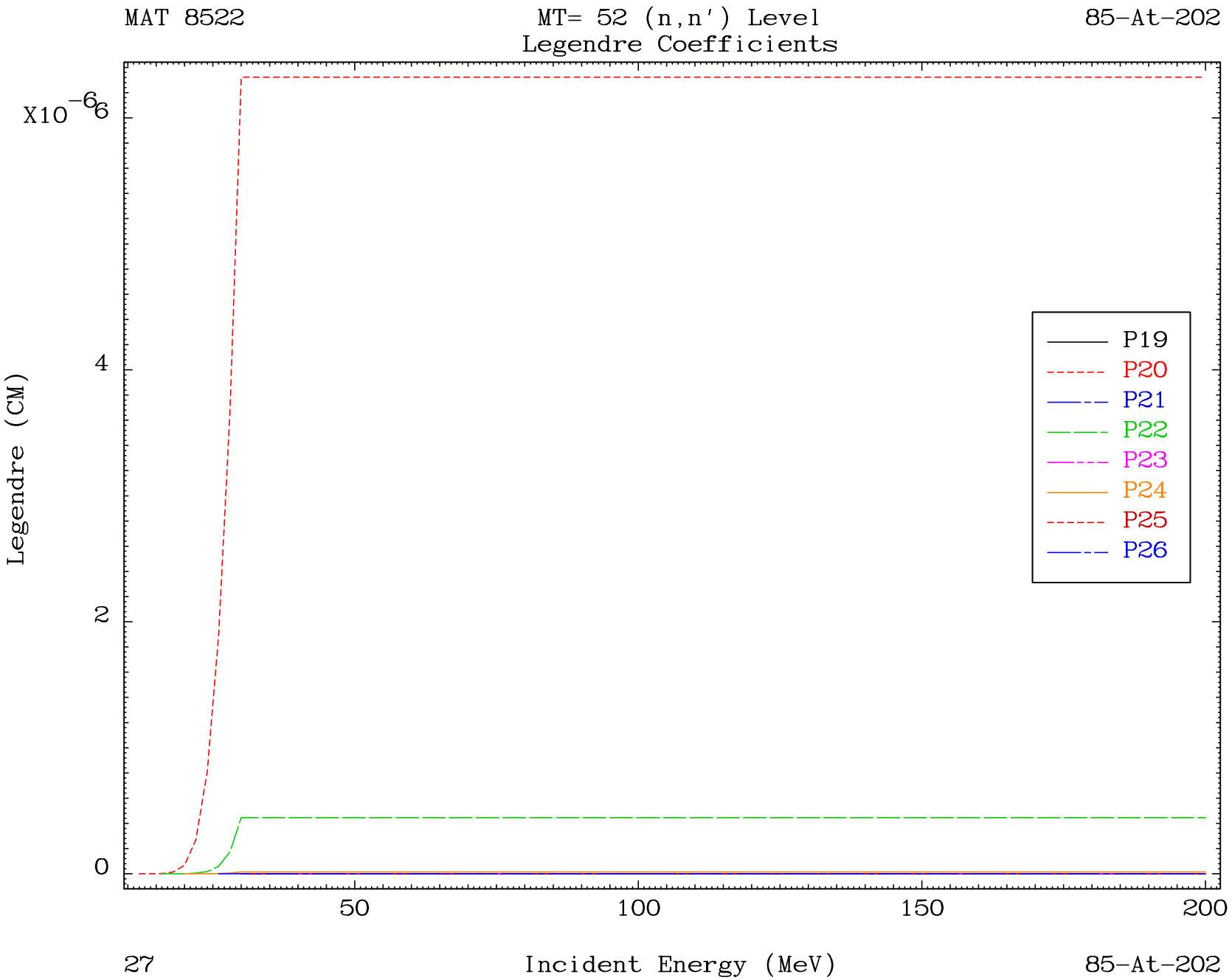

MAT 8522
MT= 51 (n,n') Level
Legendre Coefficients
85-At-202
0.02
0.01
0.00
−0.01
−0.02
−0.03
Legendre (CM)
0
50
100
150
200
22
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9

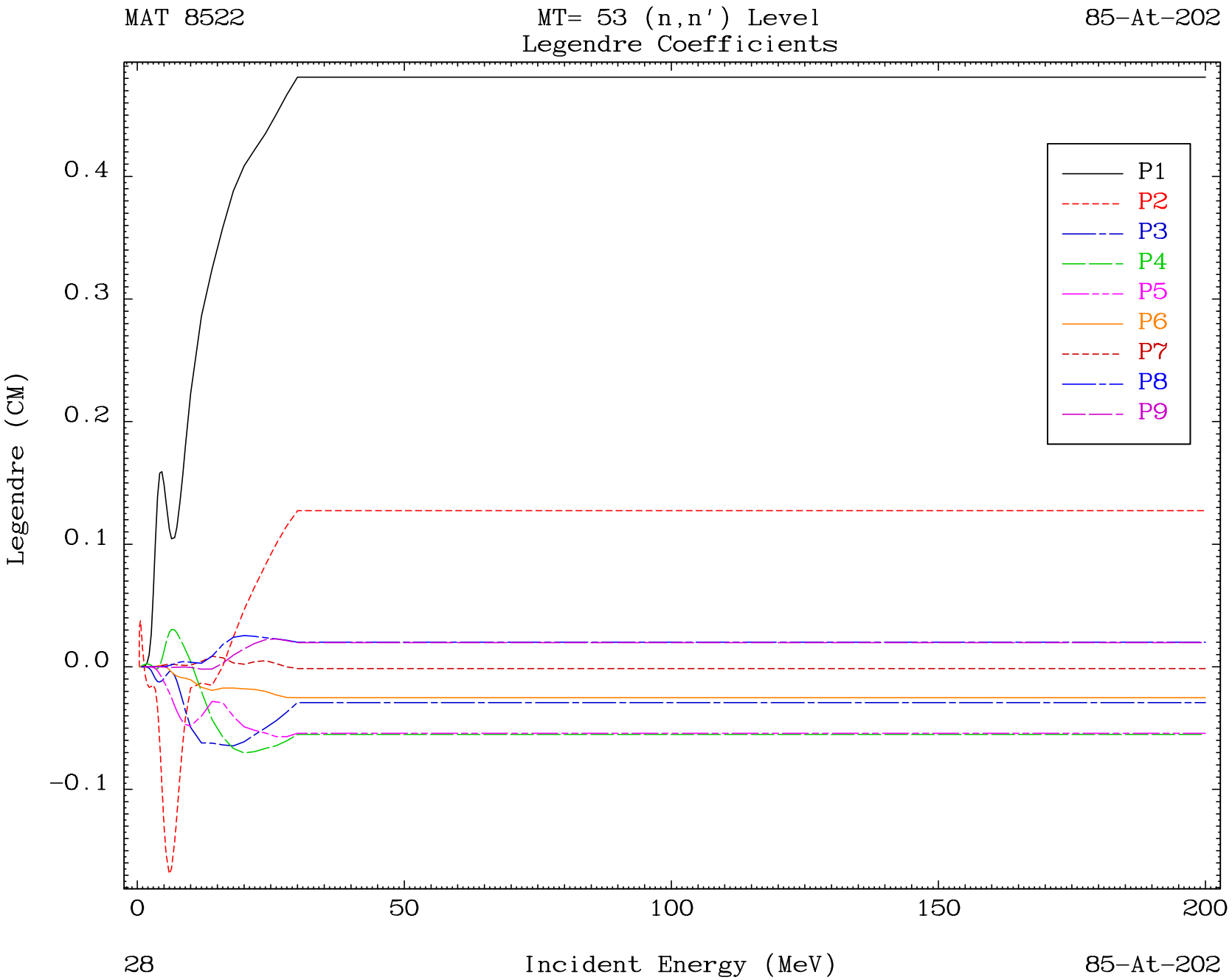

MAT 8522
MT= 51 (n,n') Level
Legendre Coefficients
85-At-202
X10-4
2.5
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
23
Incident Energy (MeV)
85-At-202

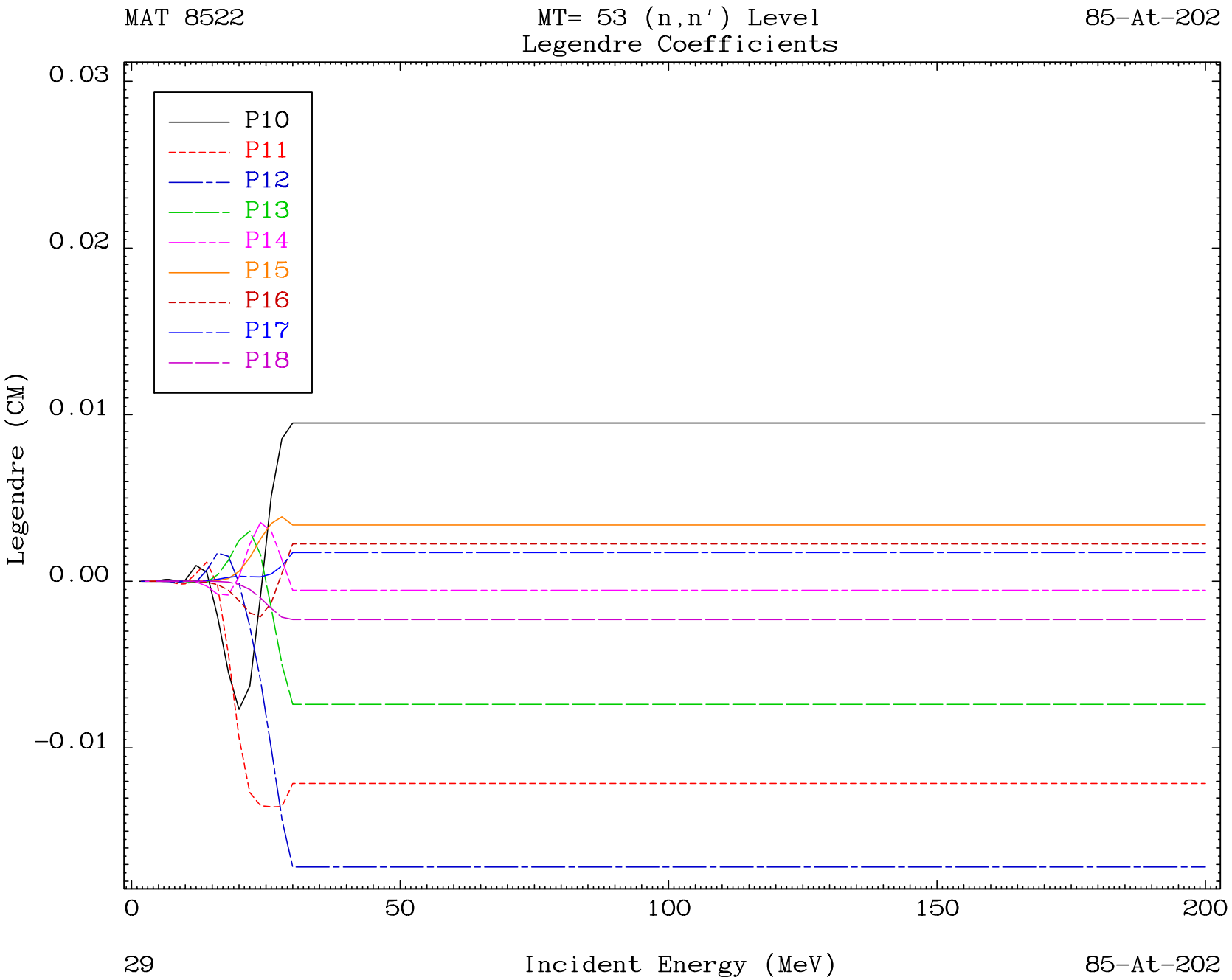

MAT 8522
MT= 51 (n,n') Level
Legendre Coefficients
85-At-202
0
X10 −6
−2
−4
−6
Legendre (CM)
50
100
150
200
24
Incident Energy (MeV)
85-At-202
P19
P20
P21
P22
P23
P24
P25
P26

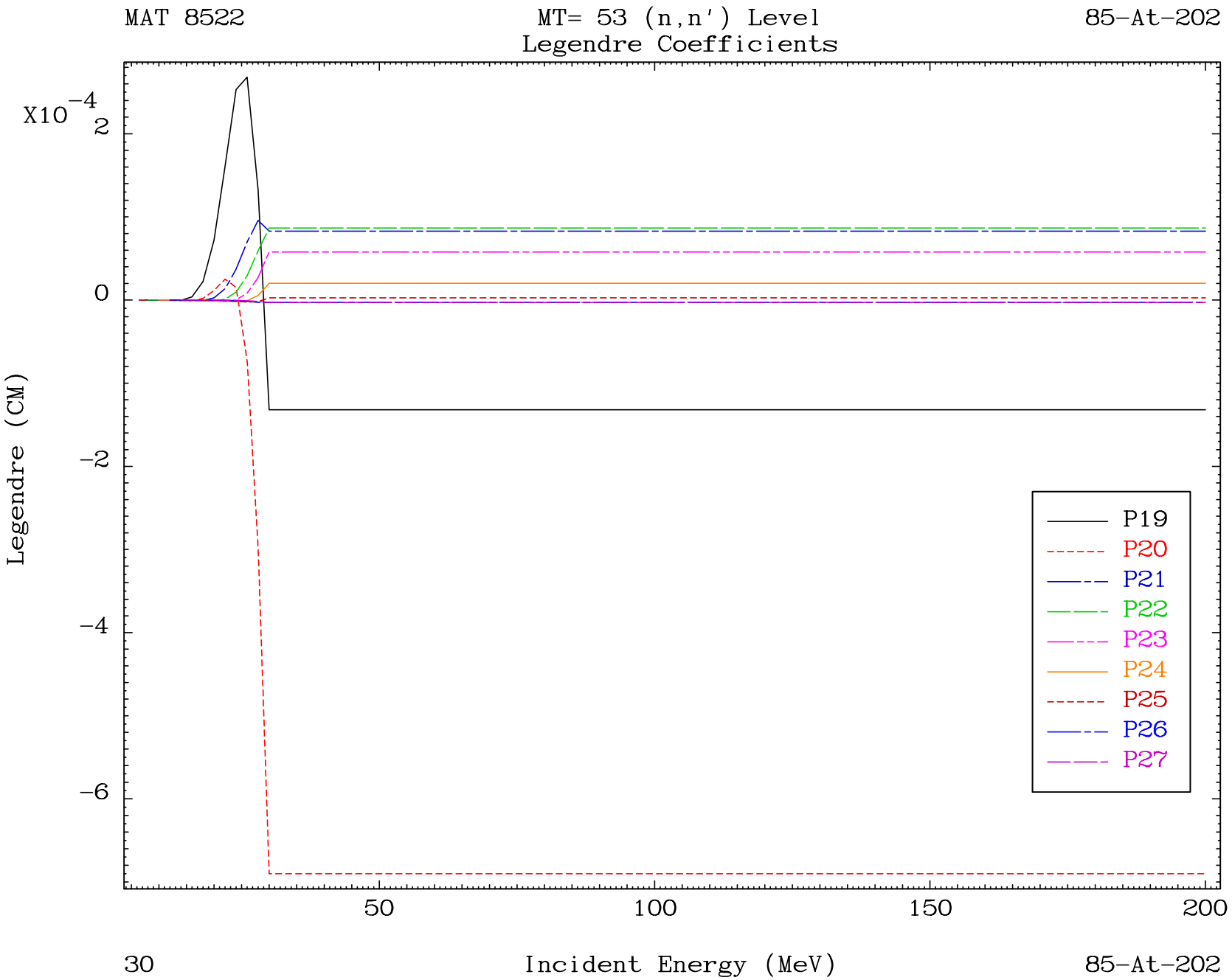

MAT 8522
MT= 52 (n,n') Level
Legendre Coefficients
85-At-202
0.04
0.02
0.00
-0.02
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
25
Incident Energy (MeV)
85-At-202

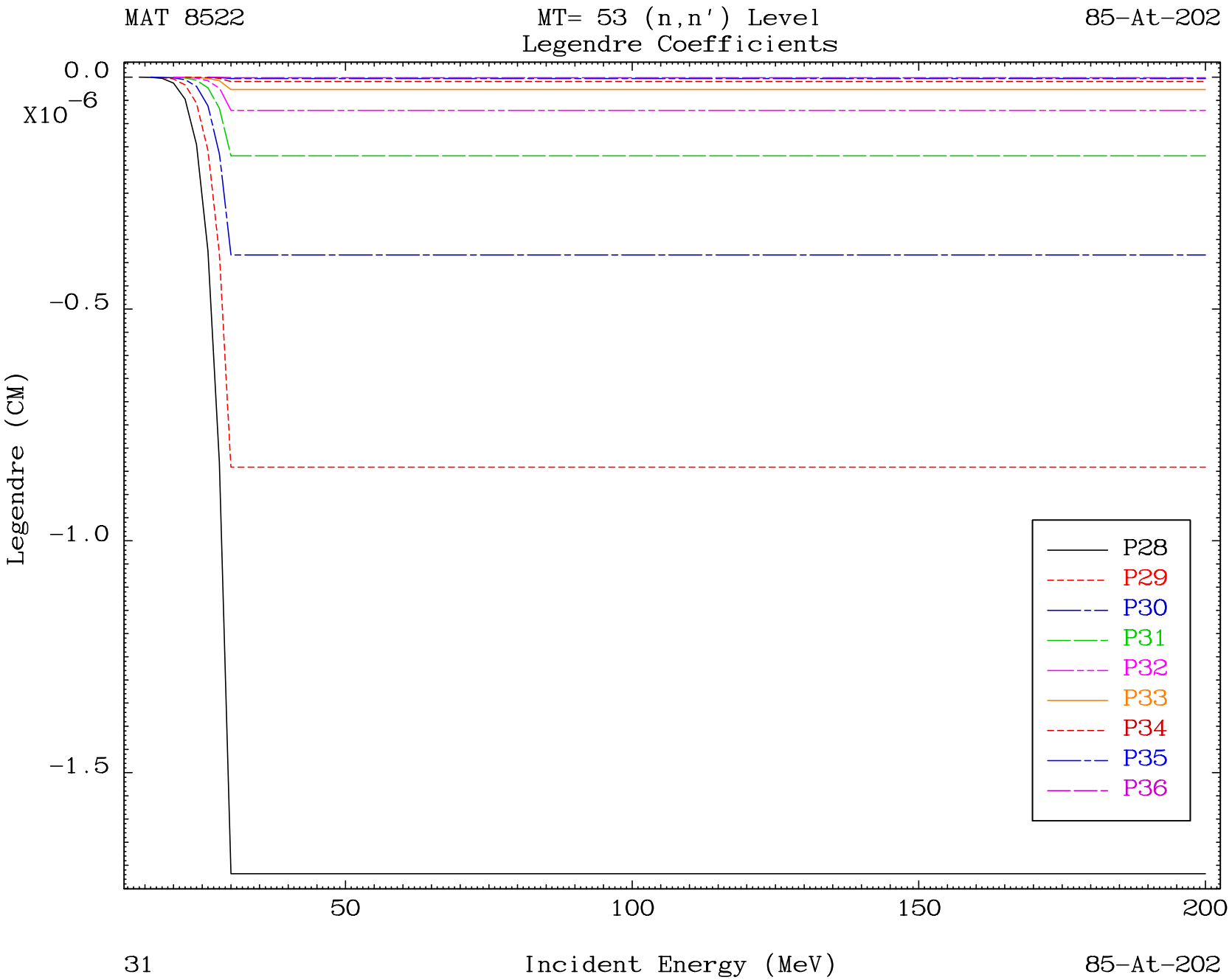

MAT 8522
MT= 52 (n,n') Level
Legendre Coefficients
85-At-202
X10^-41
0
-1
-2
-3
-4
-5
Legendre (CM)
0
50
100
150
200
26
Incident Energy (MeV)
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18

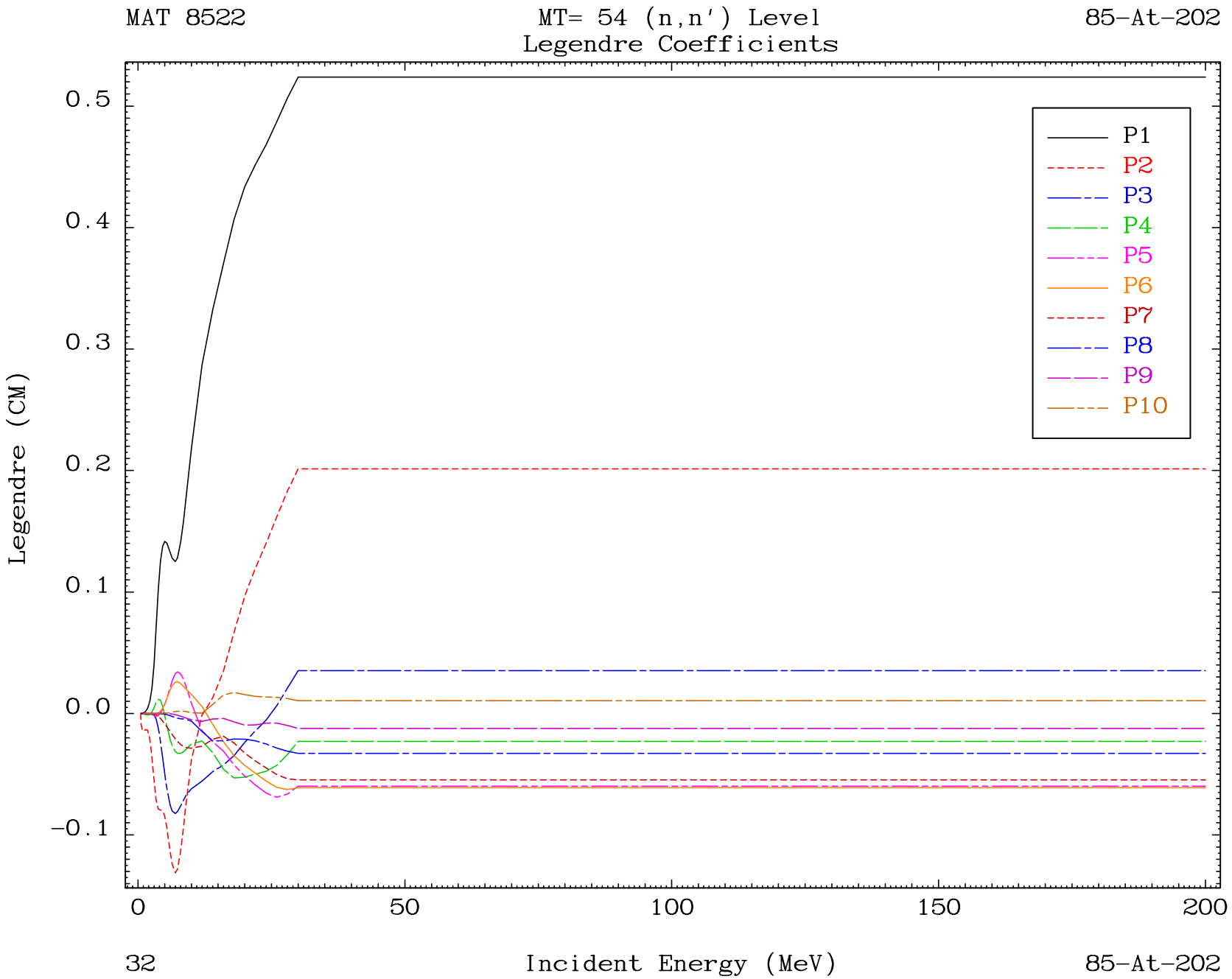

MAT 8522
MT= 52 (n,n') Level
Legendre Coefficients
85-At-202
X10 -6
6
4
2
0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
27
Incident Energy (MeV)
85-At-202

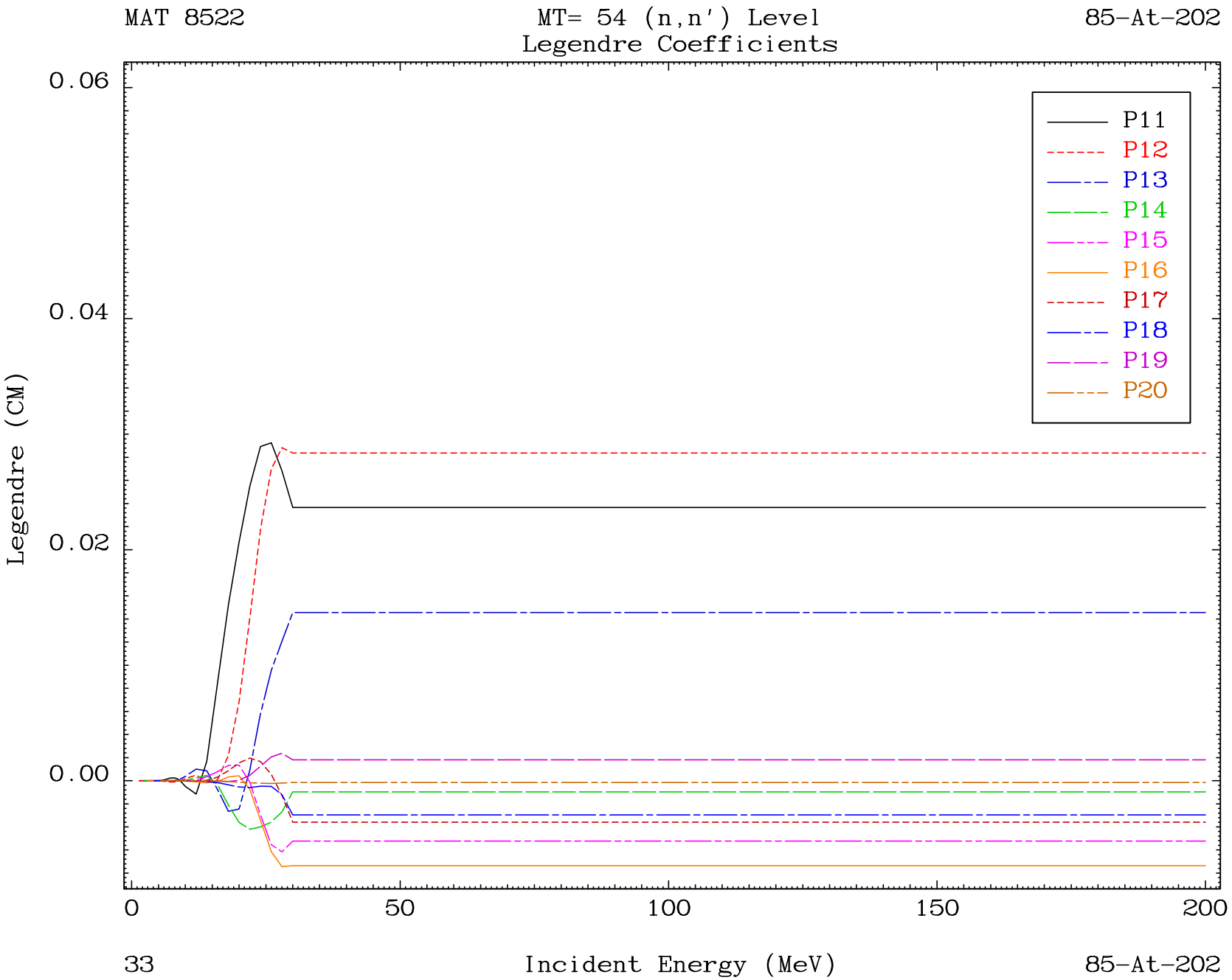

MAT 8522
MT= 53 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
28
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9

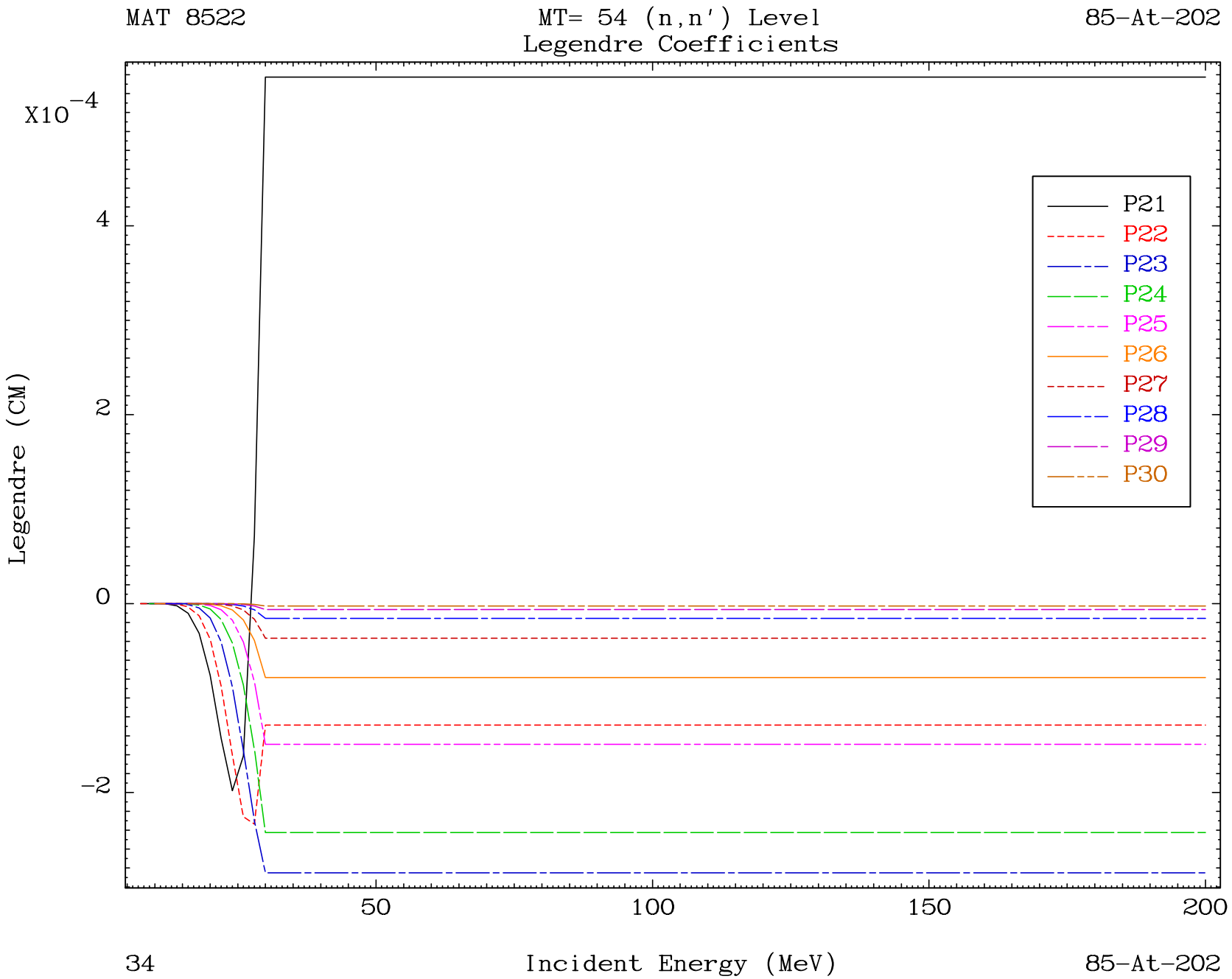

MAT 8522
MT= 53 (n,n') Level
Legendre Coefficients
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
29
Incident Energy (MeV)
85-At-202

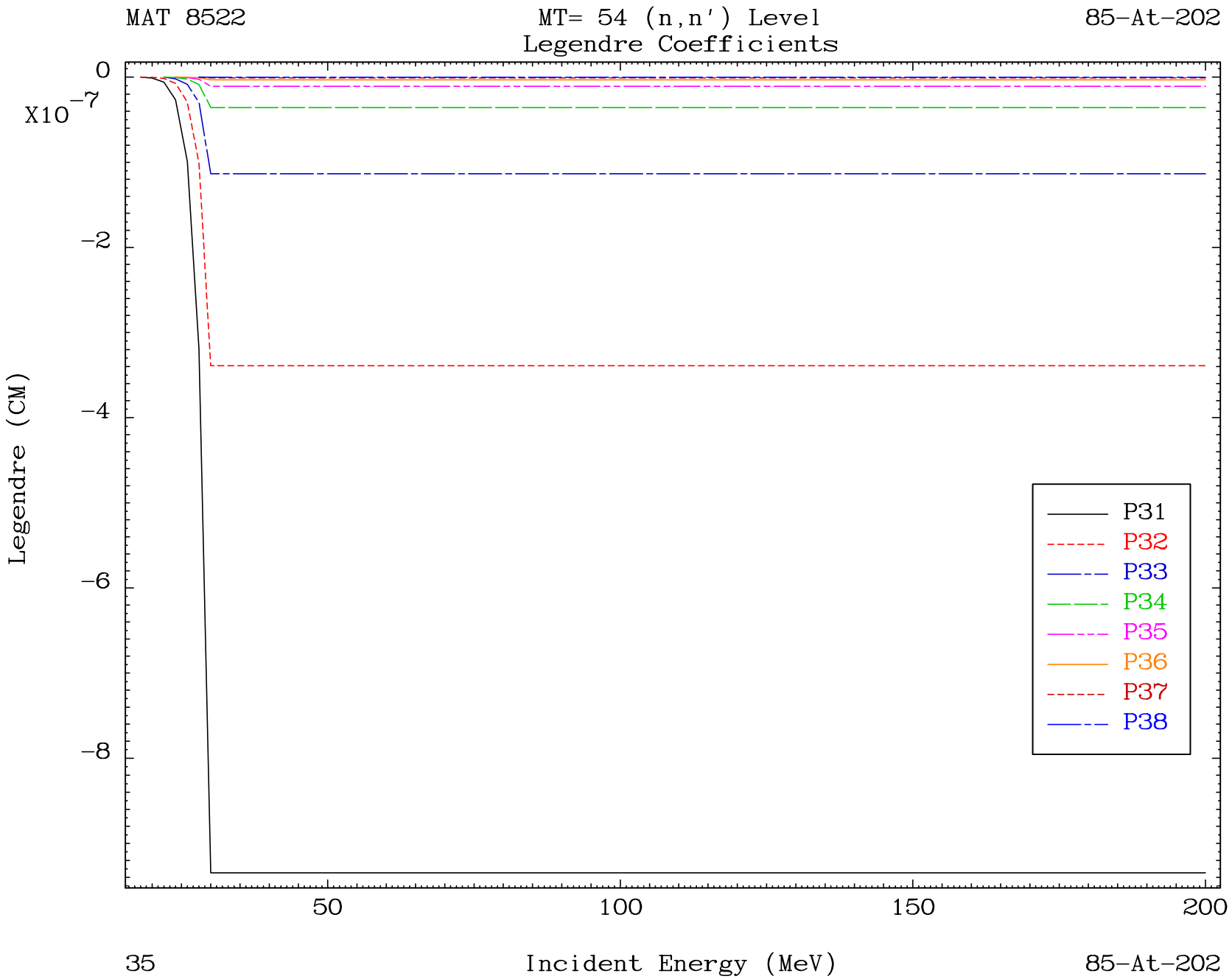

MAT 8522
MT= 53 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
2
0
-2
-4
-6
Legendre (CM)
50
100
150
200
30
Incident Energy (MeV)
85-At-202
P19
P20
P21
P22
P23
P24
P25
P26
P27

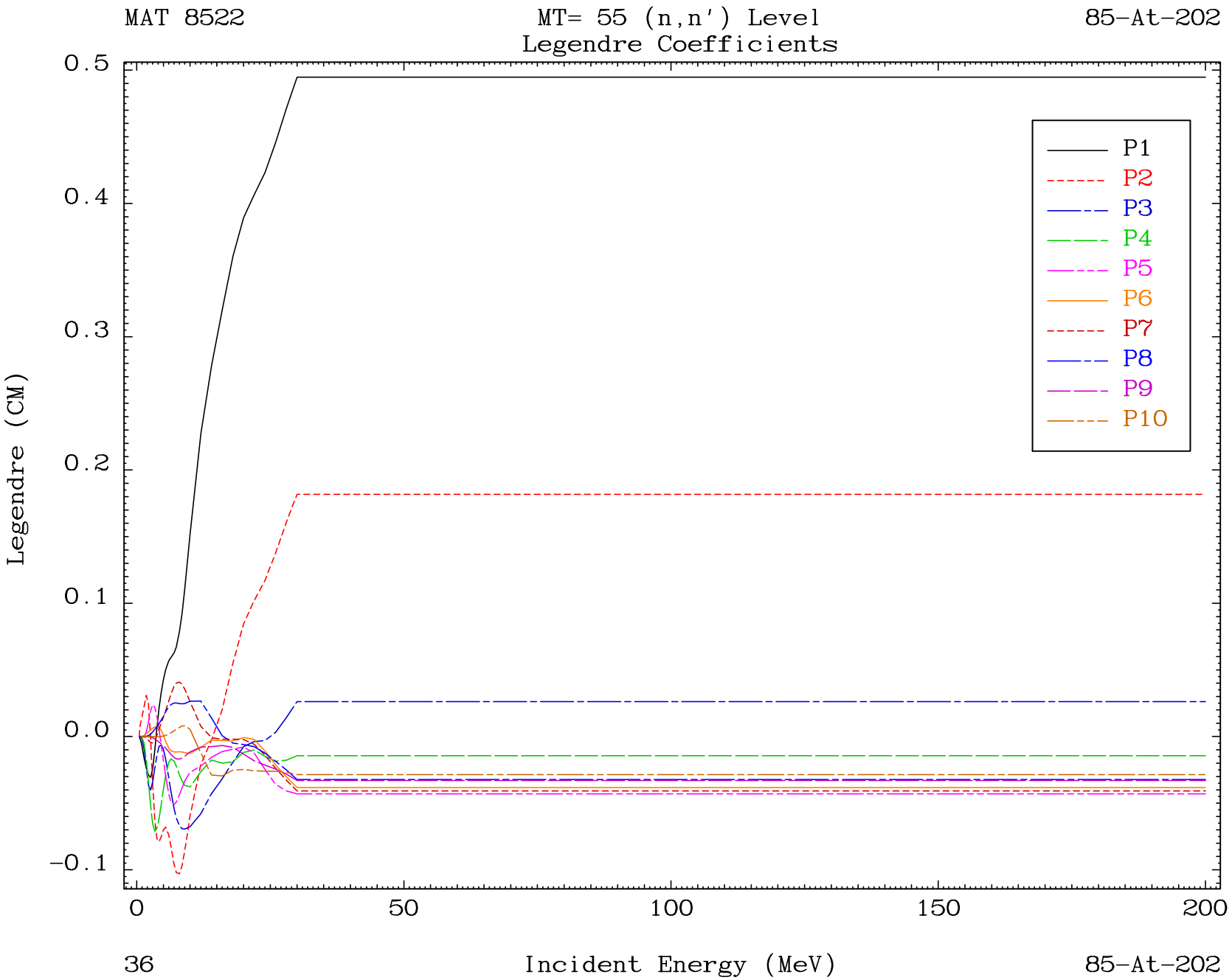

MAT 8522
MT= 53 (n,n') Level
Legendre Coefficients
85-At-202
0.0
X10^-6
-0.5
-1.0
-1.5
Legendre (CM)
50
100
150
200
31
Incident Energy (MeV)
85-At-202
P28
P29
P30
P31
P32
P33
P34
P35
P36

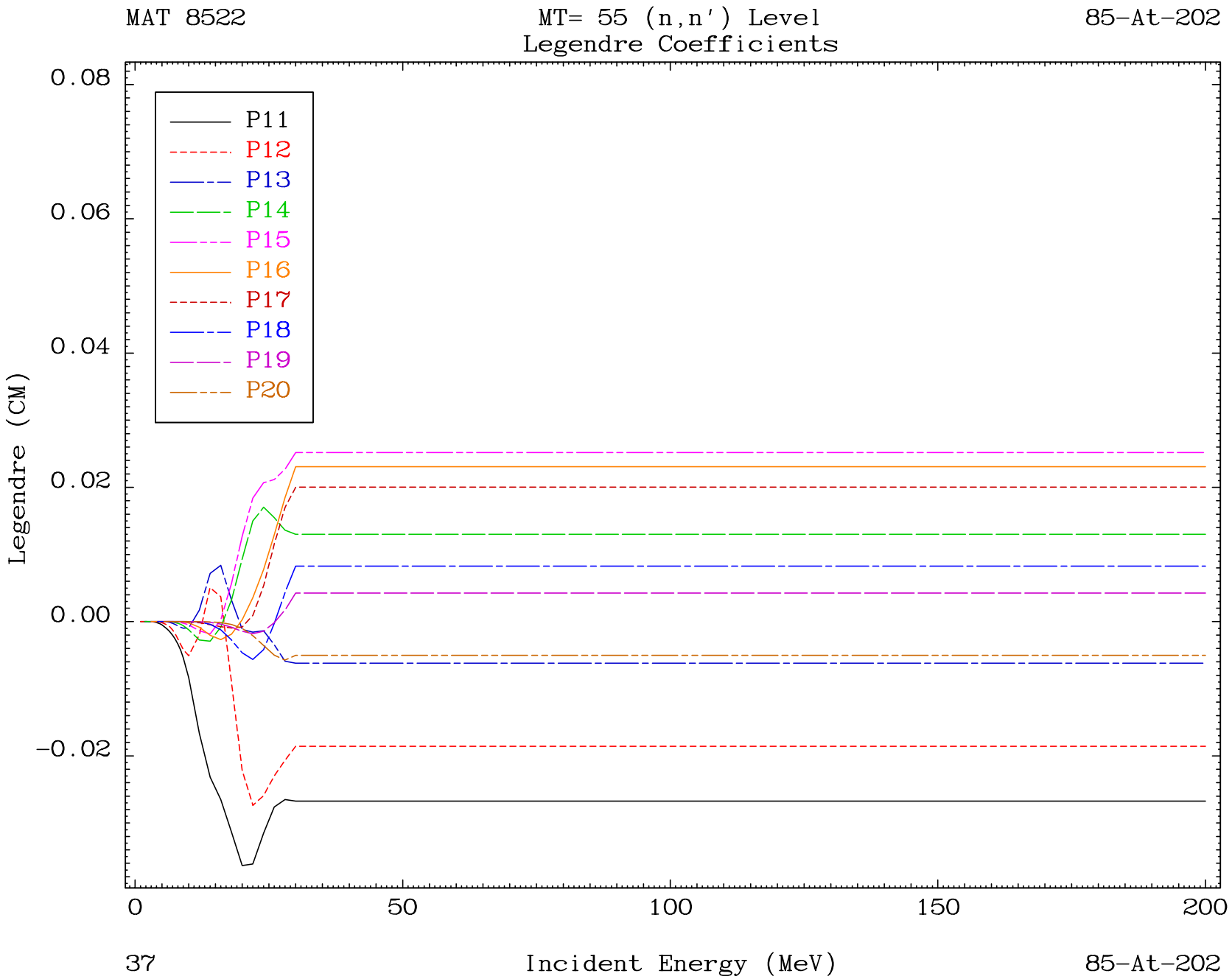

MAT 8522
MT= 54 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
32
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

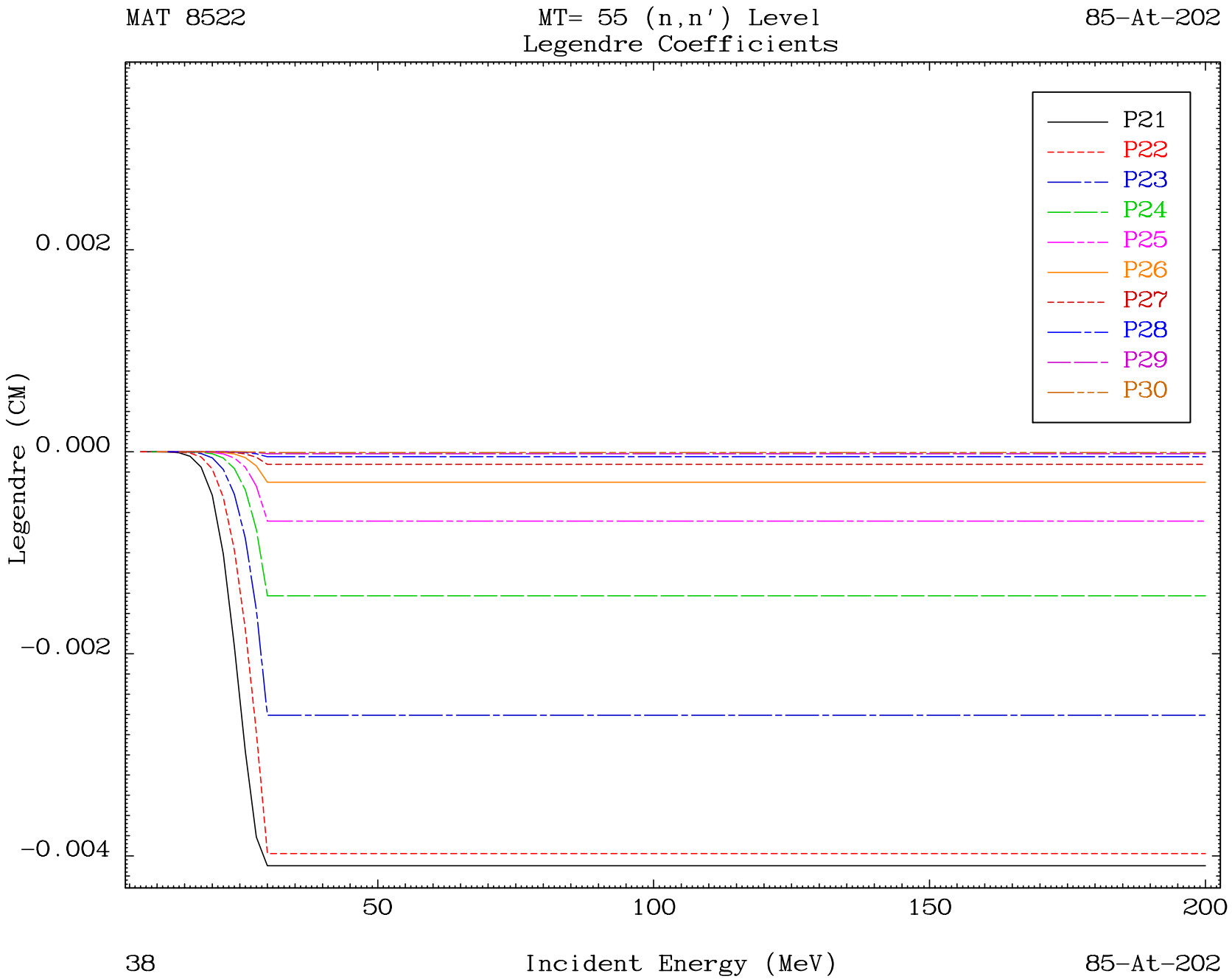

MAT 8522
MT= 54 (n,n') Level
Legendre Coefficients
85-At-202
0.06
0.04
0.02
0.00
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
33
Incident Energy (MeV)
85-At-202

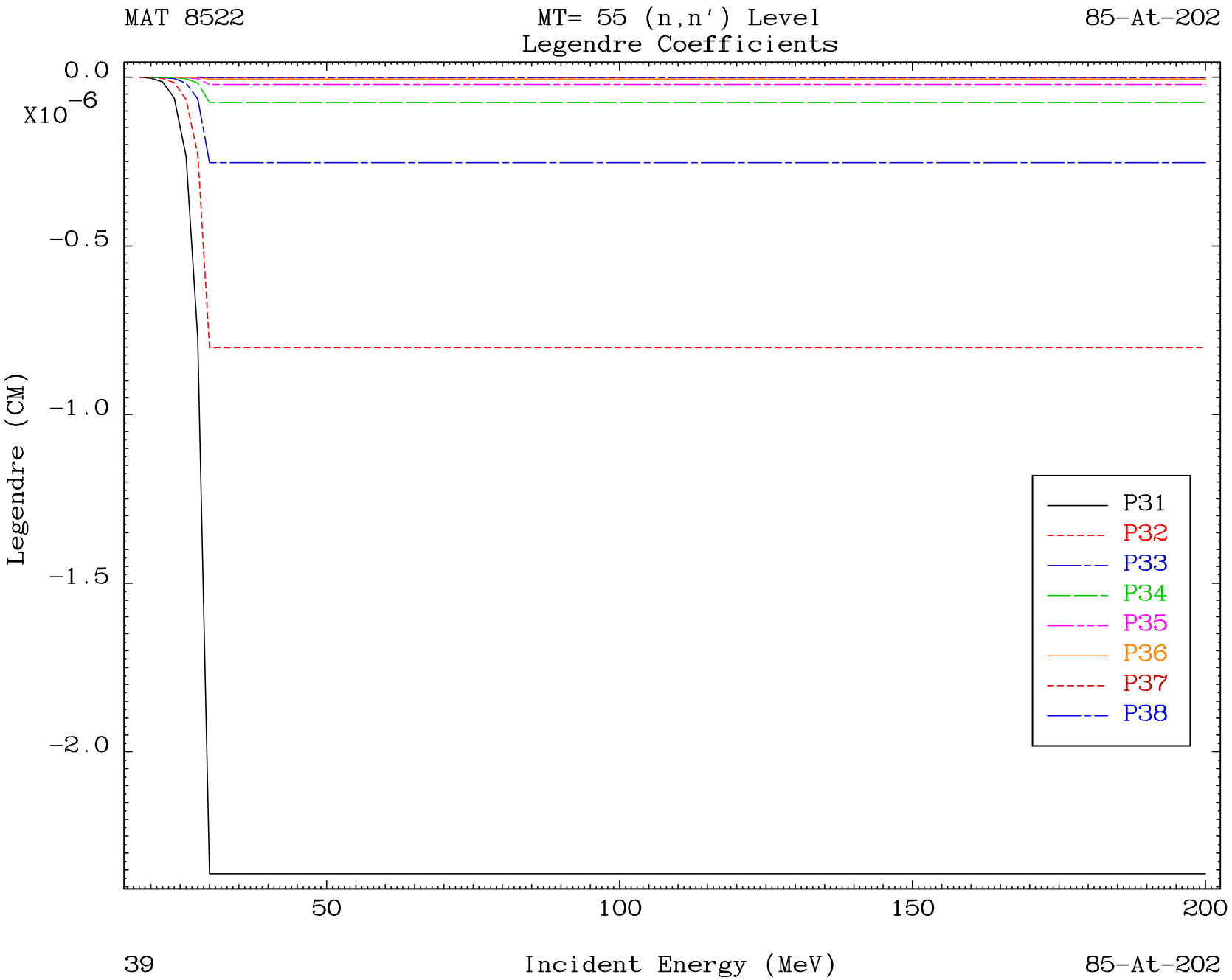

MAT 8522
MT= 54 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
4
2
0
-2
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
34
Incident Energy (MeV)
85-At-202

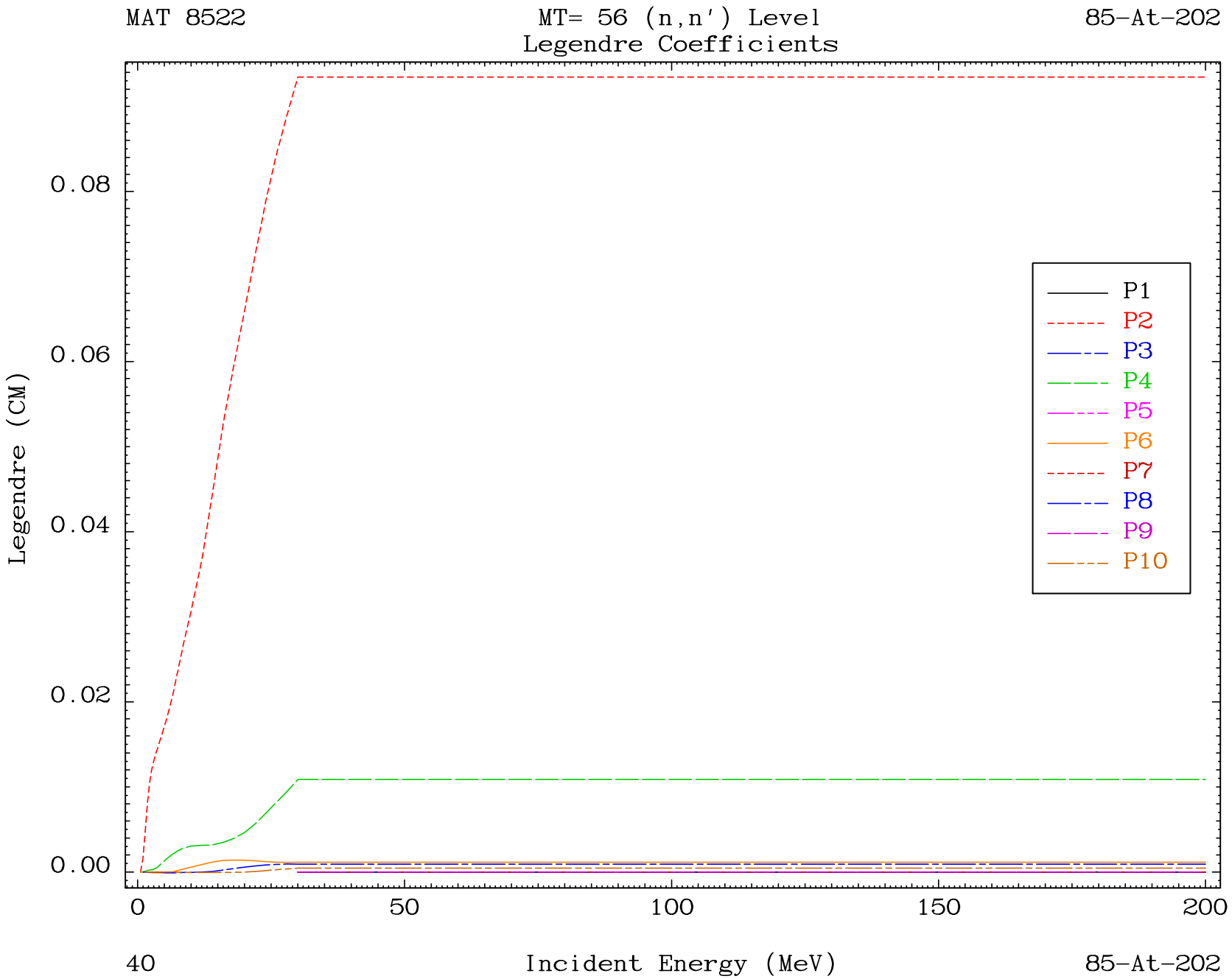

MAT 8522
MT= 54 (n,n') Level
Legendre Coefficients
85-At-202
X10^-7
0
-2
-4
-6
-8
Legendre (CM)
50
100
150
200
35
Incident Energy (MeV)
85-At-202
P31
P32
P33
P34
P35
P36
P37
P38

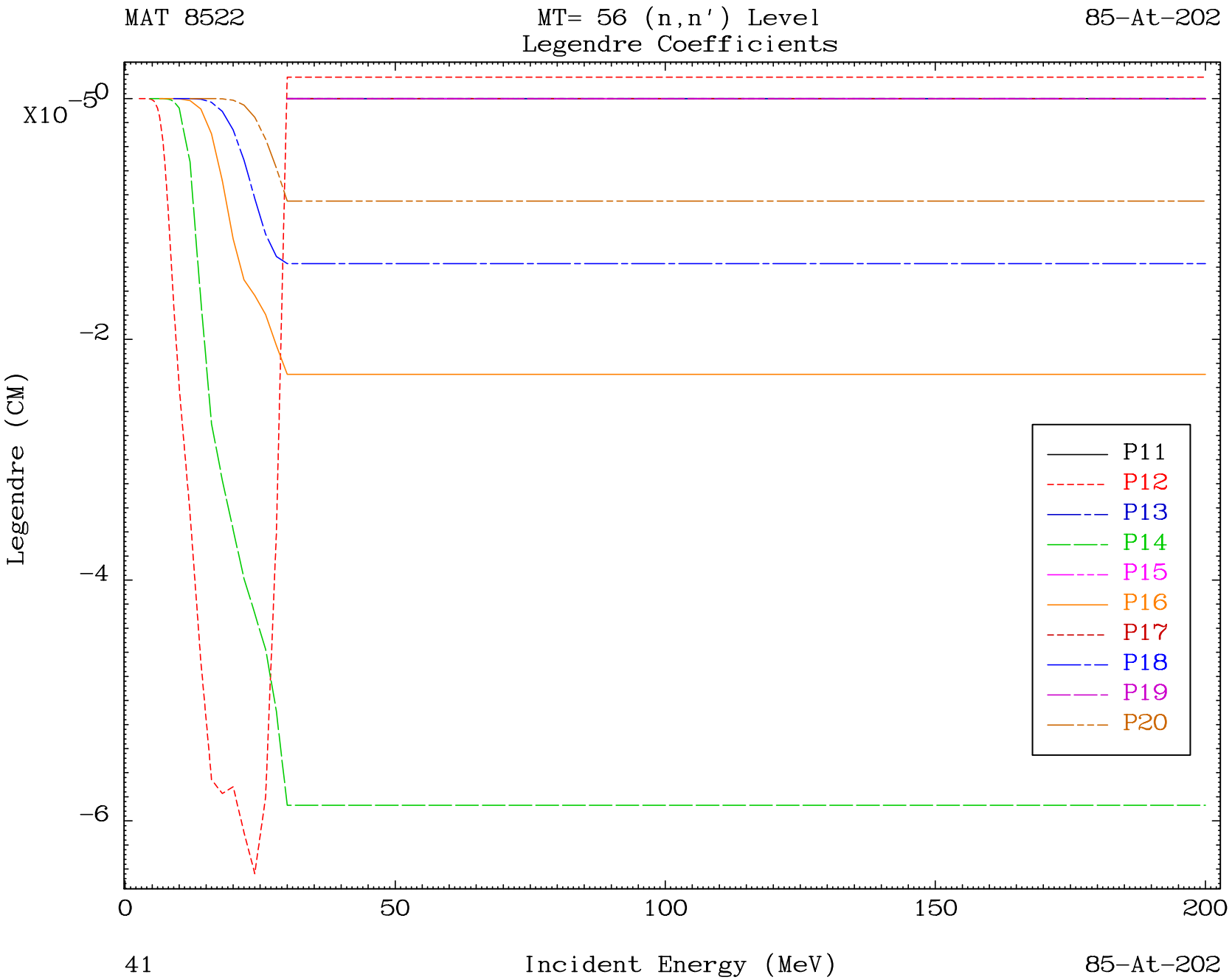

MAT 8522
MT= 55 (n,n') Level
Legendre Coefficients
85-At-202
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
Legendre (CM)
0
50
100
150
200
36
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

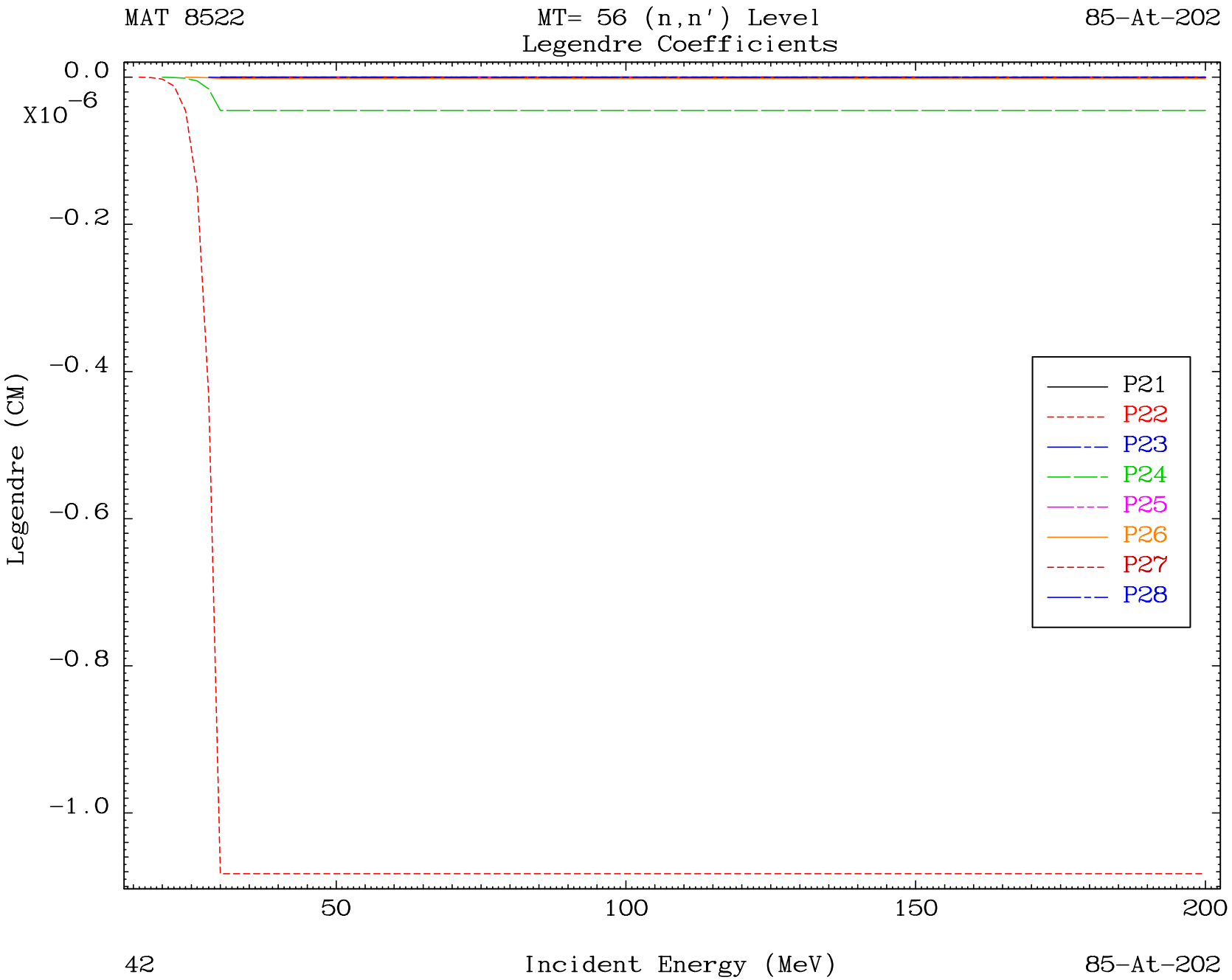

MAT 8522
MT= 55 (n,n') Level
Legendre Coefficients
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
37
Incident Energy (MeV)
85-At-202

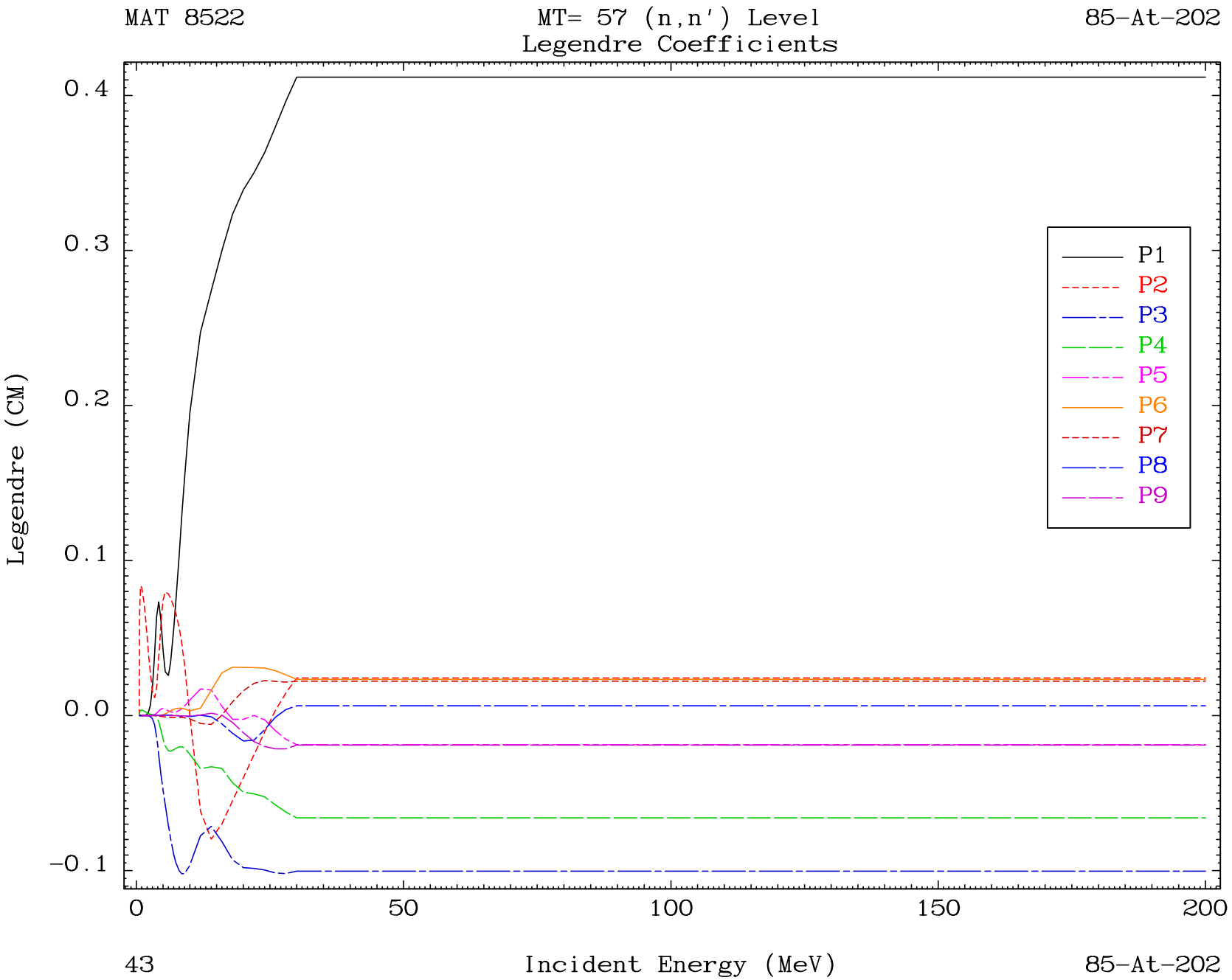

MAT 8522
MT= 55 (n,n') Level
Legendre Coefficients
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
38
Incident Energy (MeV)
85-At-202

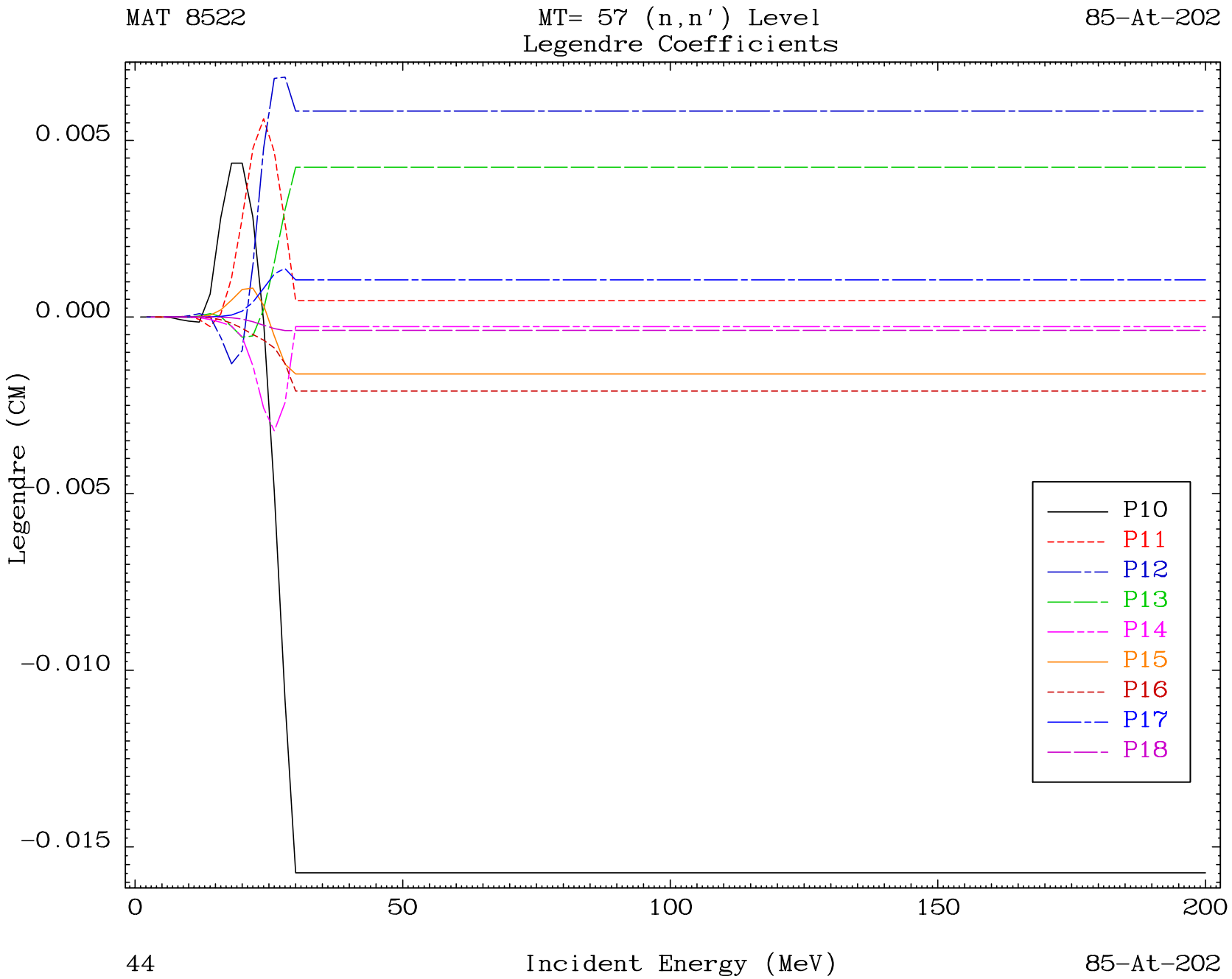

MAT 8522
MT= 55 (n,n') Level
Legendre Coefficients
85-At-202
0.0
X10 −6
−0.5
−1.0
−1.5
−2.0
Legendre (CM)
50
100
150
200
39
Incident Energy (MeV)
85-At-202
P31
P32
P33
P34
P35
P36
P37
P38

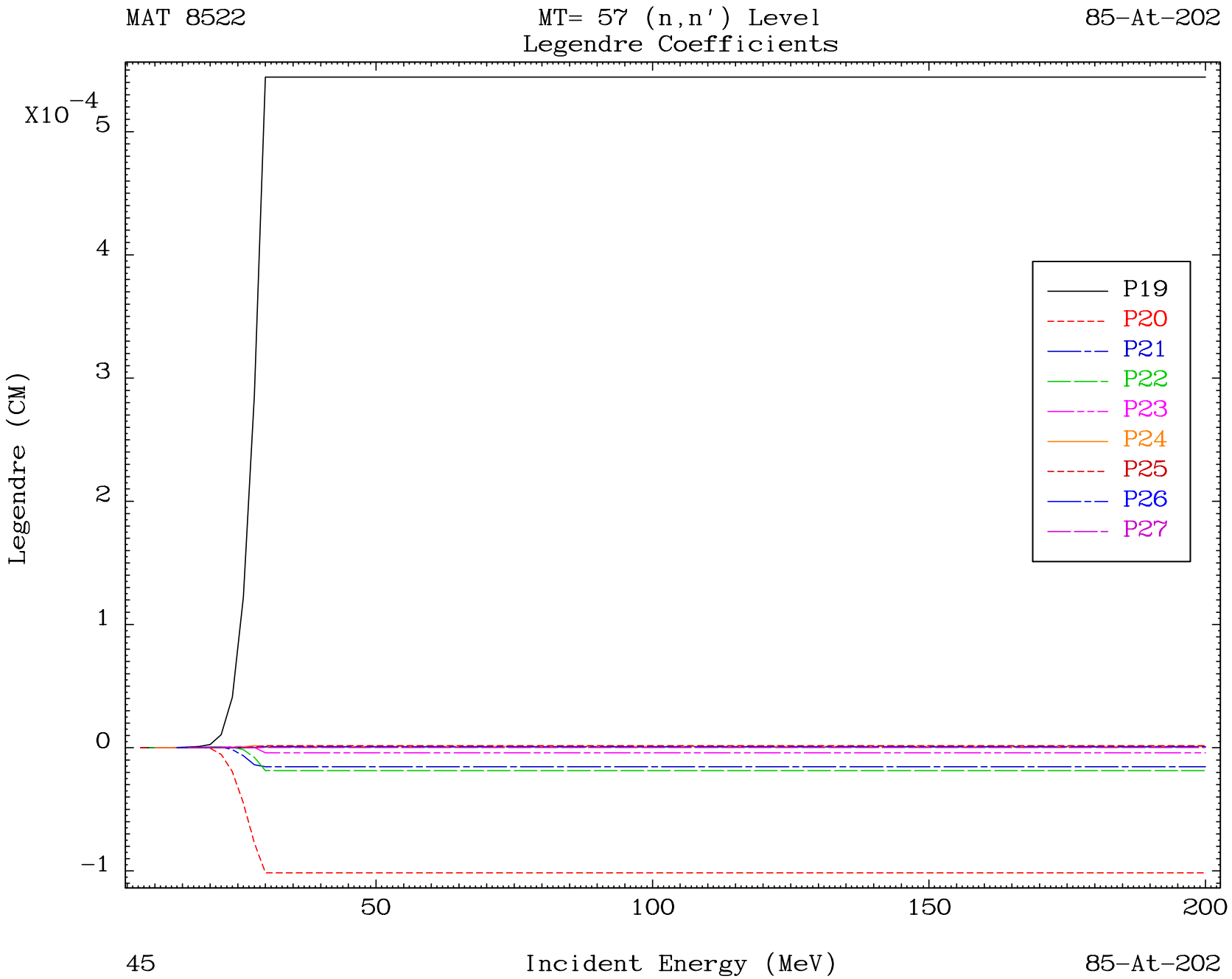

MAT 8522
MT= 56 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.08
0.06
0.04
0.02
0.00
0
50
100
150
200
40
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

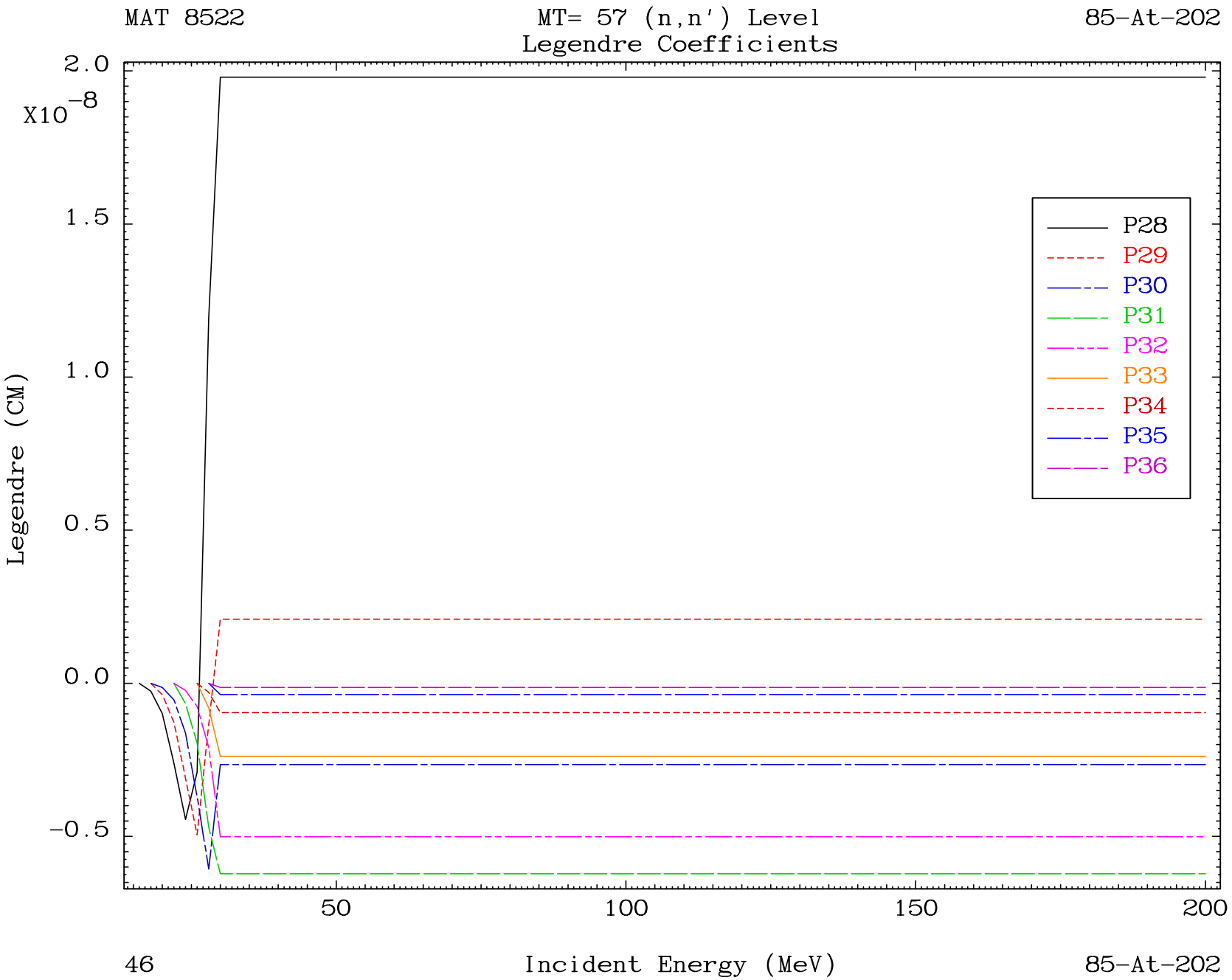

MAT 8522
MT= 56 (n,n') Level
Legendre Coefficients
85-At-202
X10-5
0
-2
-4
-6
Legendre (CM)
0
50
100
150
200
41
Incident Energy (MeV)
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

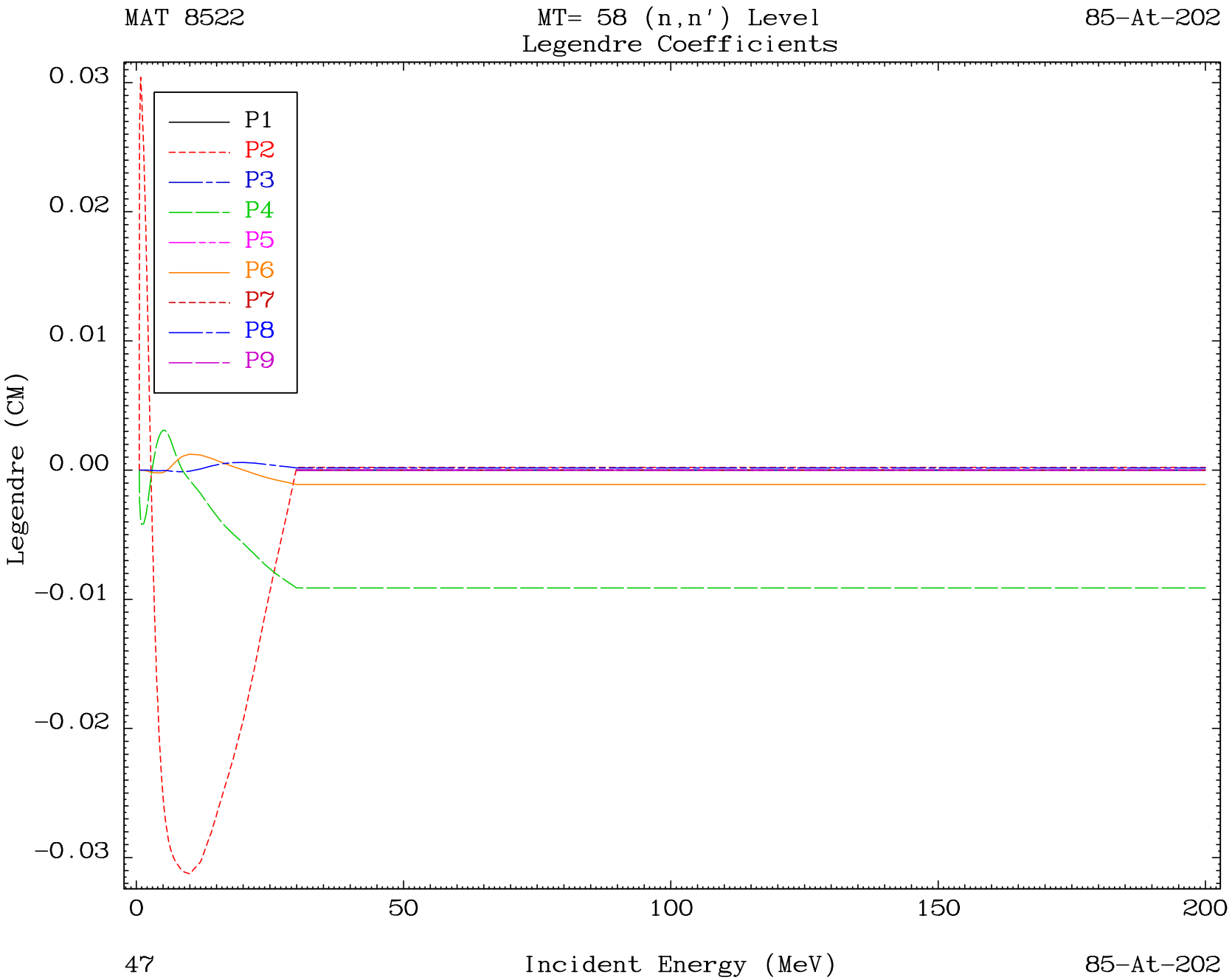

MAT 8522
MT= 56 (n,n') Level
Legendre Coefficients
85-At-202
0.0
X10^-6
-0.2
-0.4
-0.6
-0.8
-1.0
Legendre (CM)
50
100
150
200
P21
P22
P23
P24
P25
P26
P27
P28
42
Incident Energy (MeV)
85-At-202

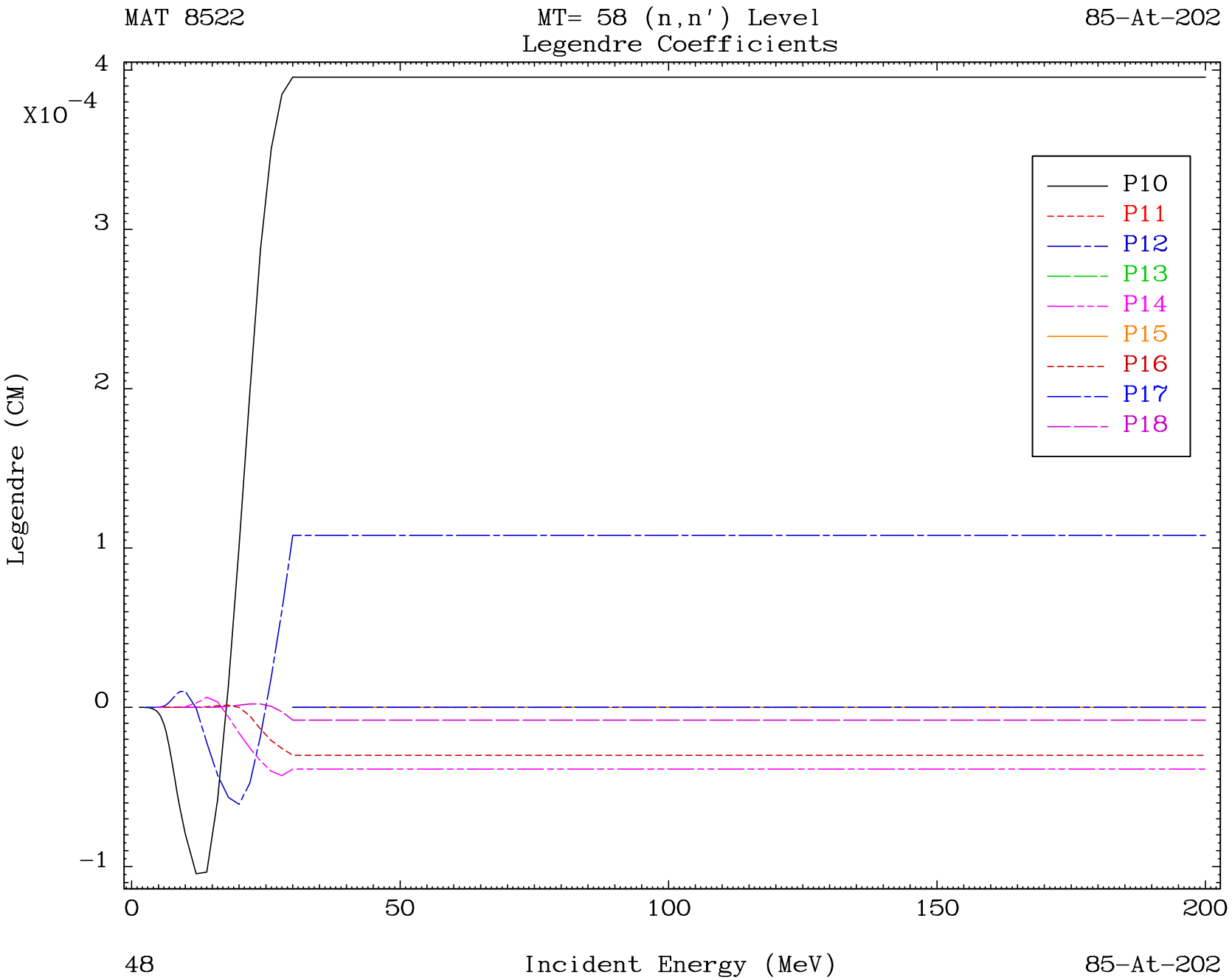

MAT 8522
MT= 57 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
Incident Energy (MeV)
43
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9

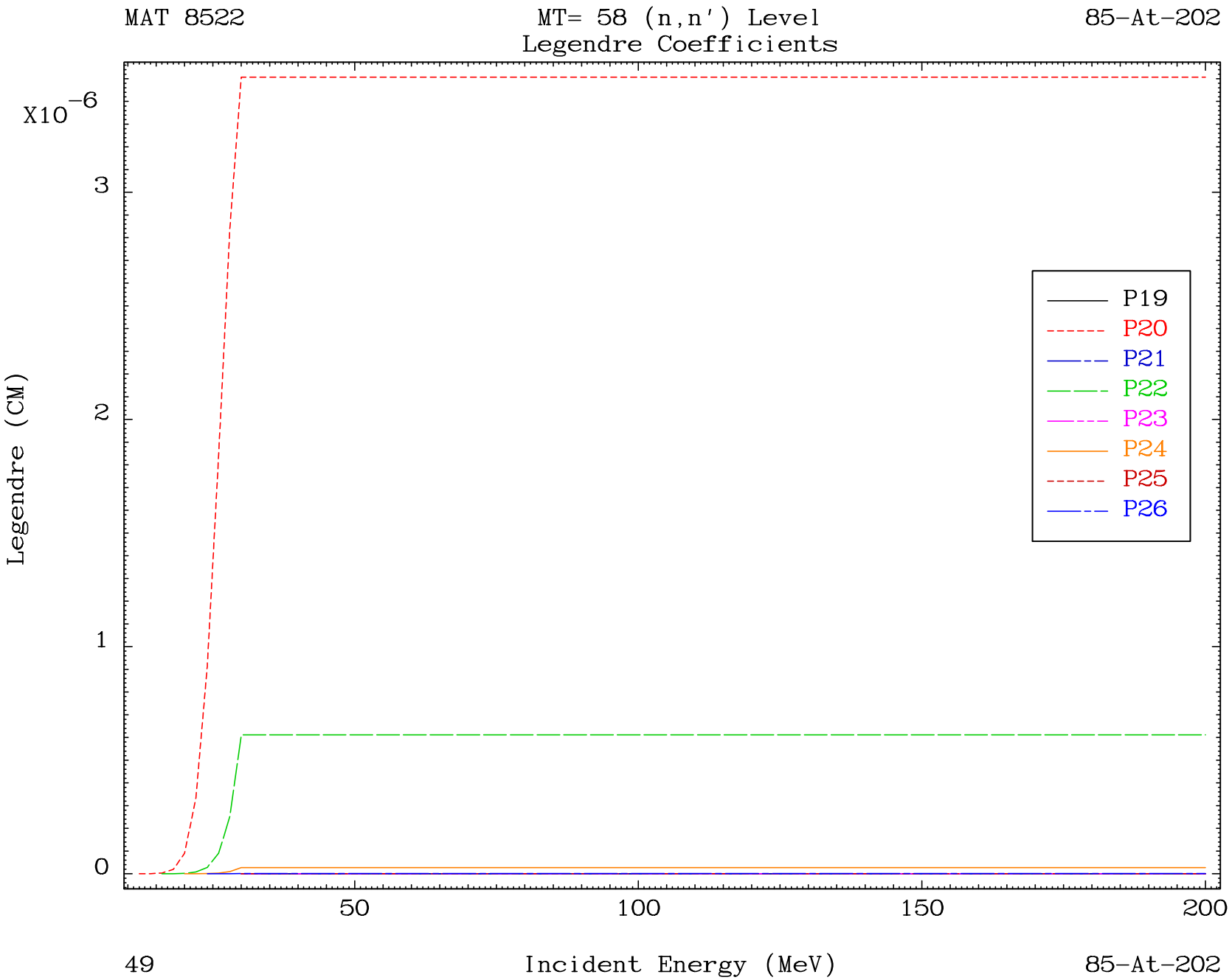

MAT 8522
MT= 57 (n,n') Level
Legendre Coefficients
85-At-202
0.005
0.000
-0.005
-0.010
-0.015
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
44
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18

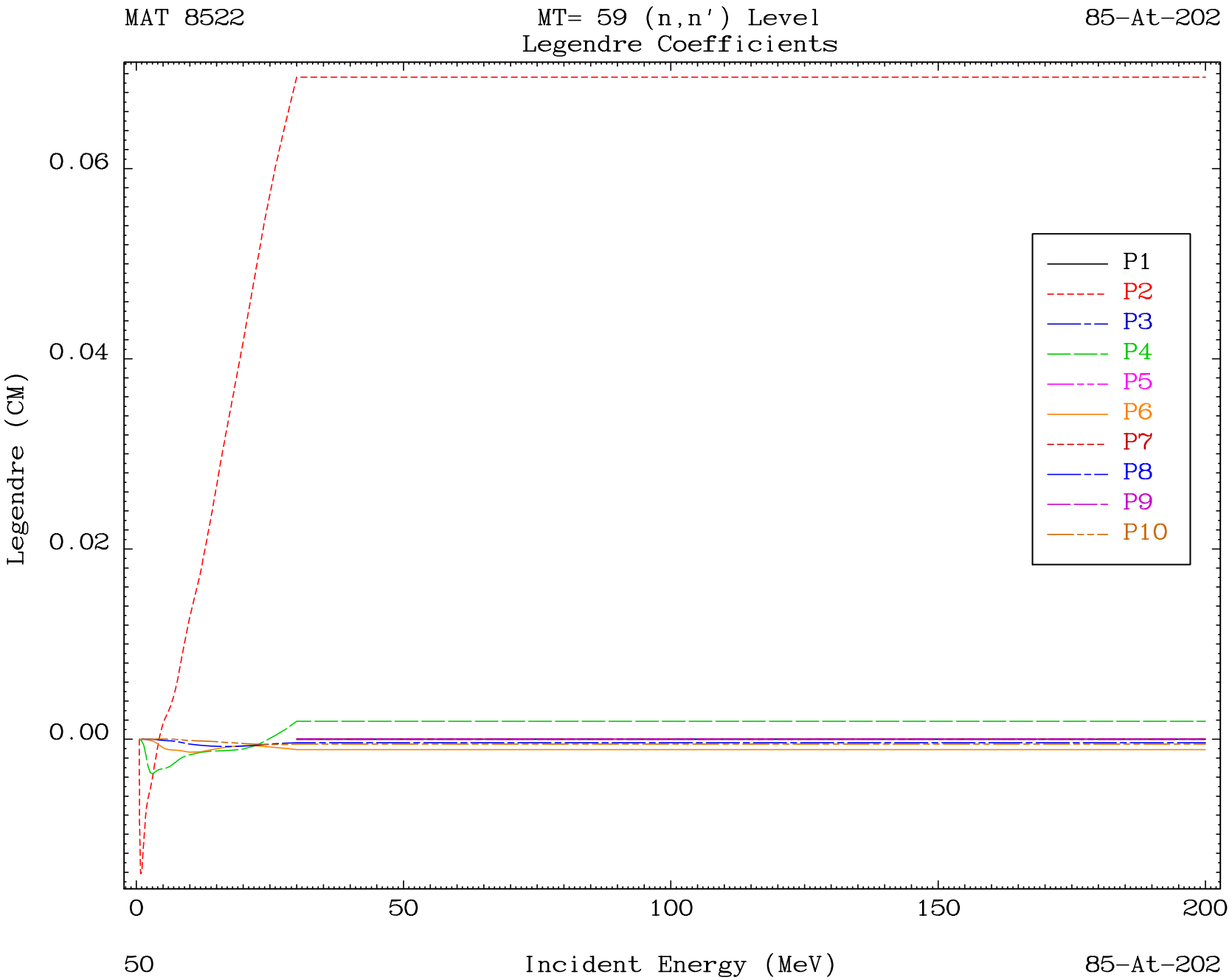

MAT 8522
MT= 57 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
5
4
3
2
1
0
-1
Legendre (CM)
50
100
150
200
45
Incident Energy (MeV)
85-At-202
P19
P20
P21
P22
P23
P24
P25
P26
P27

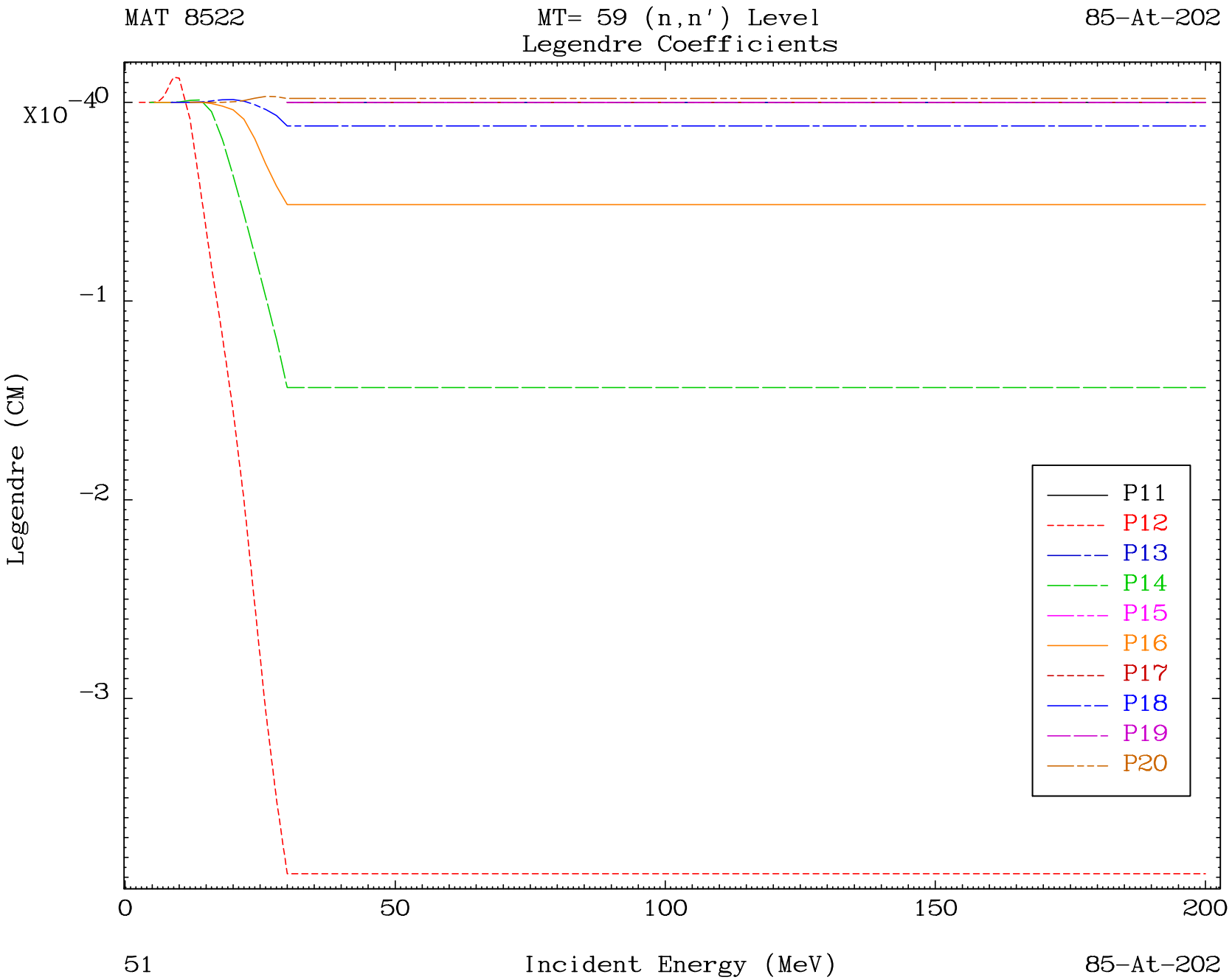

MAT 8522
MT= 57 (n,n') Level
Legendre Coefficients
85-At-202
X10 −8
2.0
1.5
1.0
0.5
0.0
−0.5
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
46
85-At-202
P28
P29
P30
P31
P32
P33
P34
P35
P36

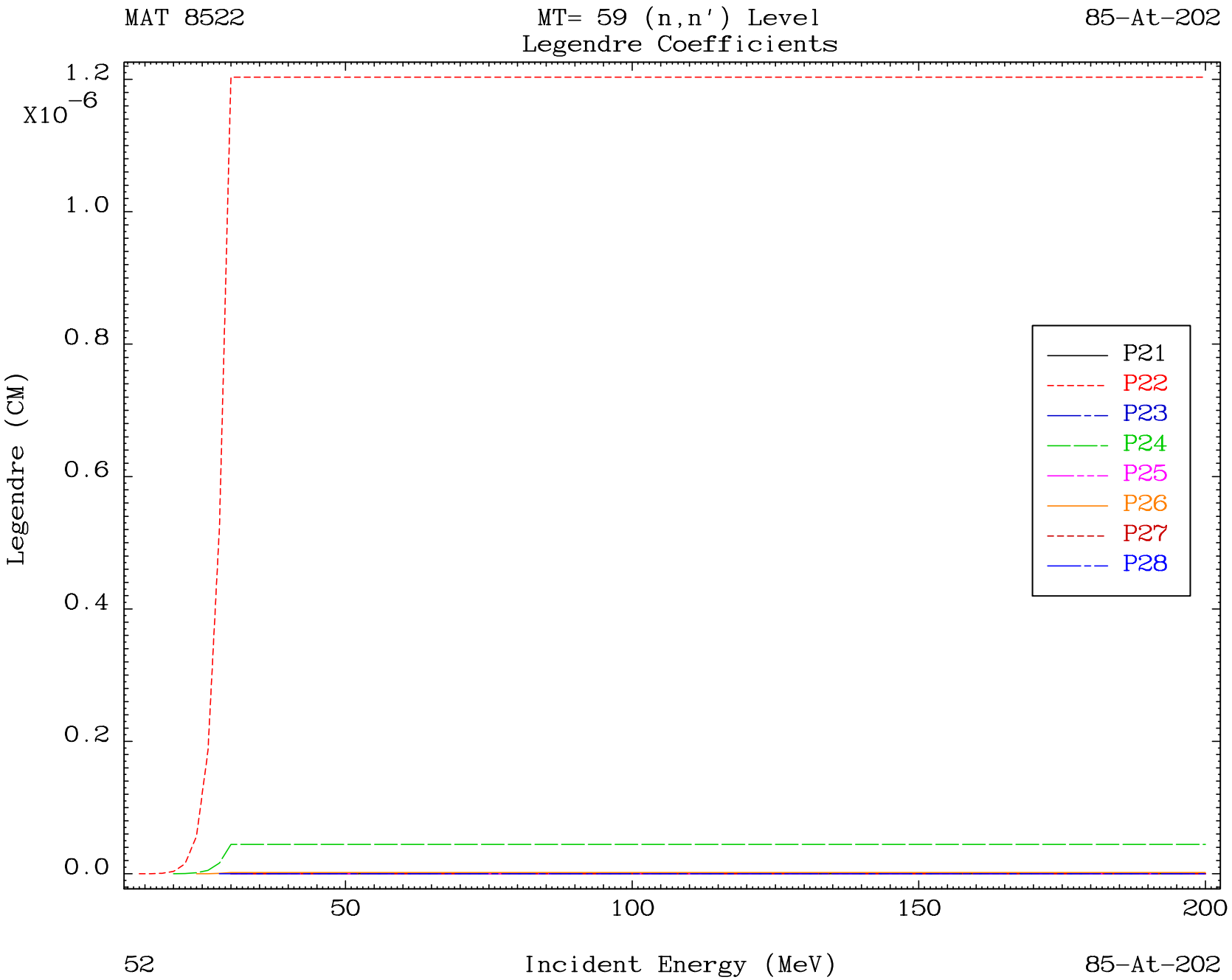

MAT 8522
MT= 58 (n,n') Level
Legendre Coefficients
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
47
Incident Energy (MeV)
85-At-202

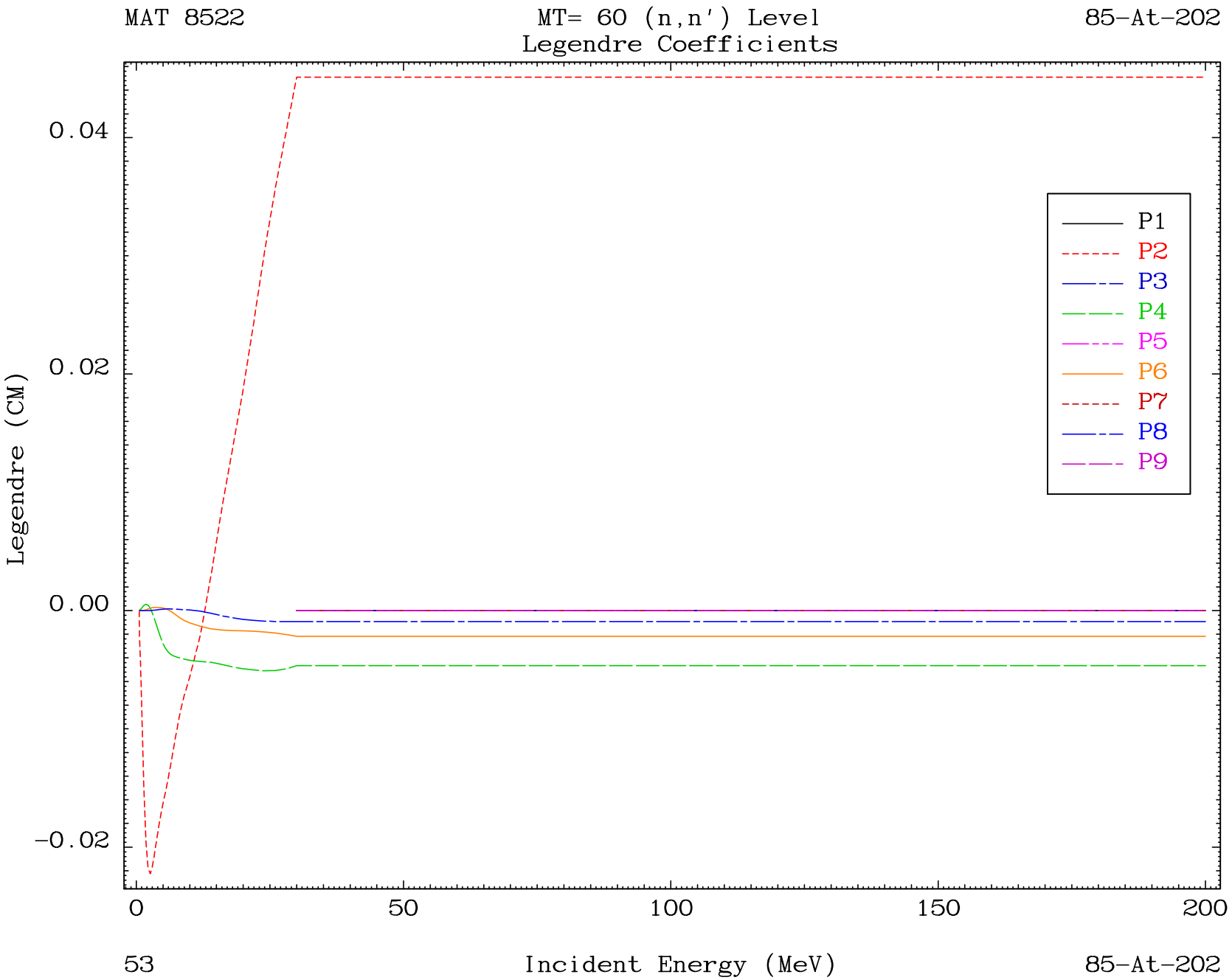

MAT 8522
MT= 58 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
4
3
2
1
0
-1
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
48
Incident Energy (MeV)
85-At-202

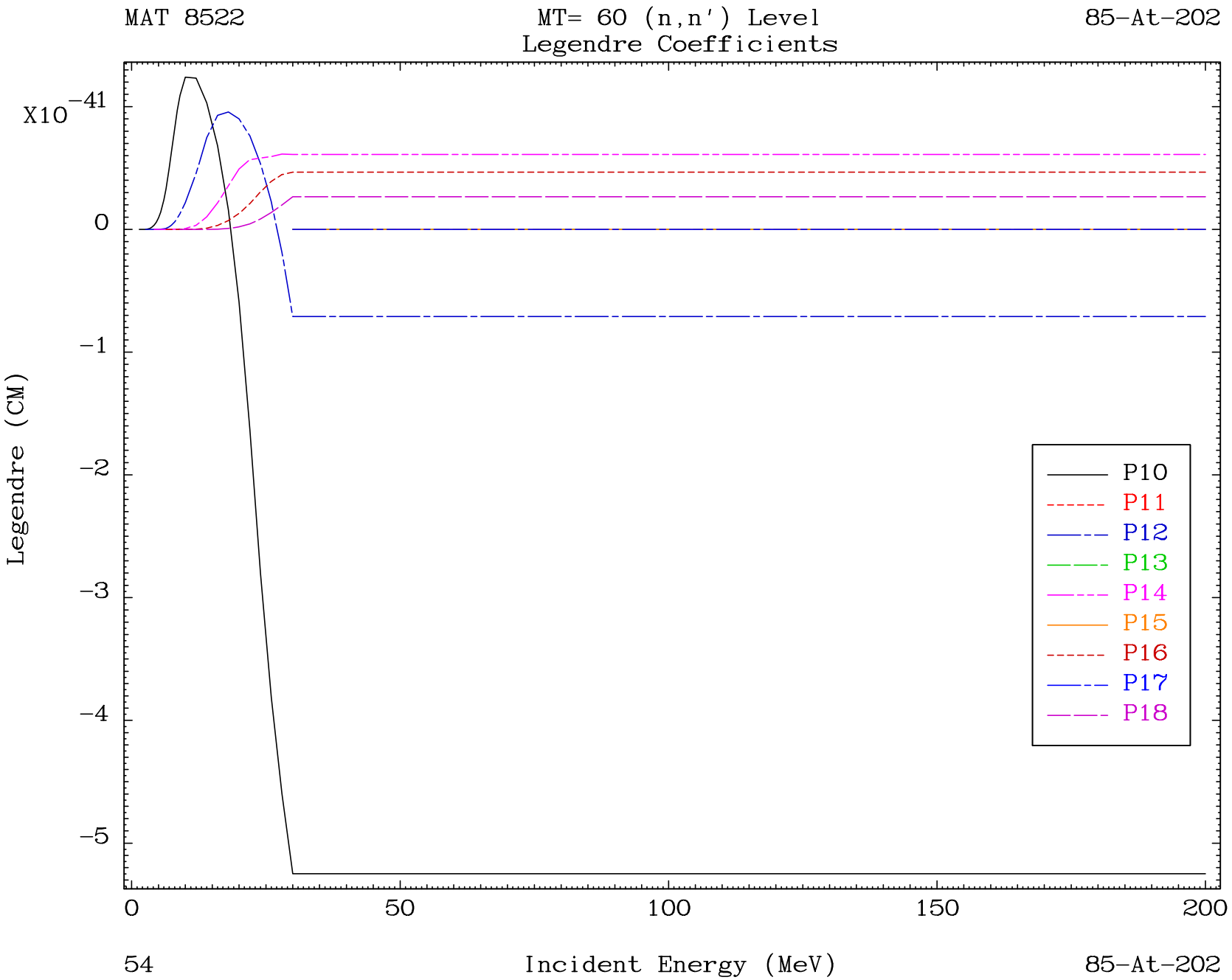

MAT 8522
MT= 58 (n,n') Level
Legendre Coefficients
85-At-202
X10^-6
3
2
1
0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
49
Incident Energy (MeV)
85-At-202

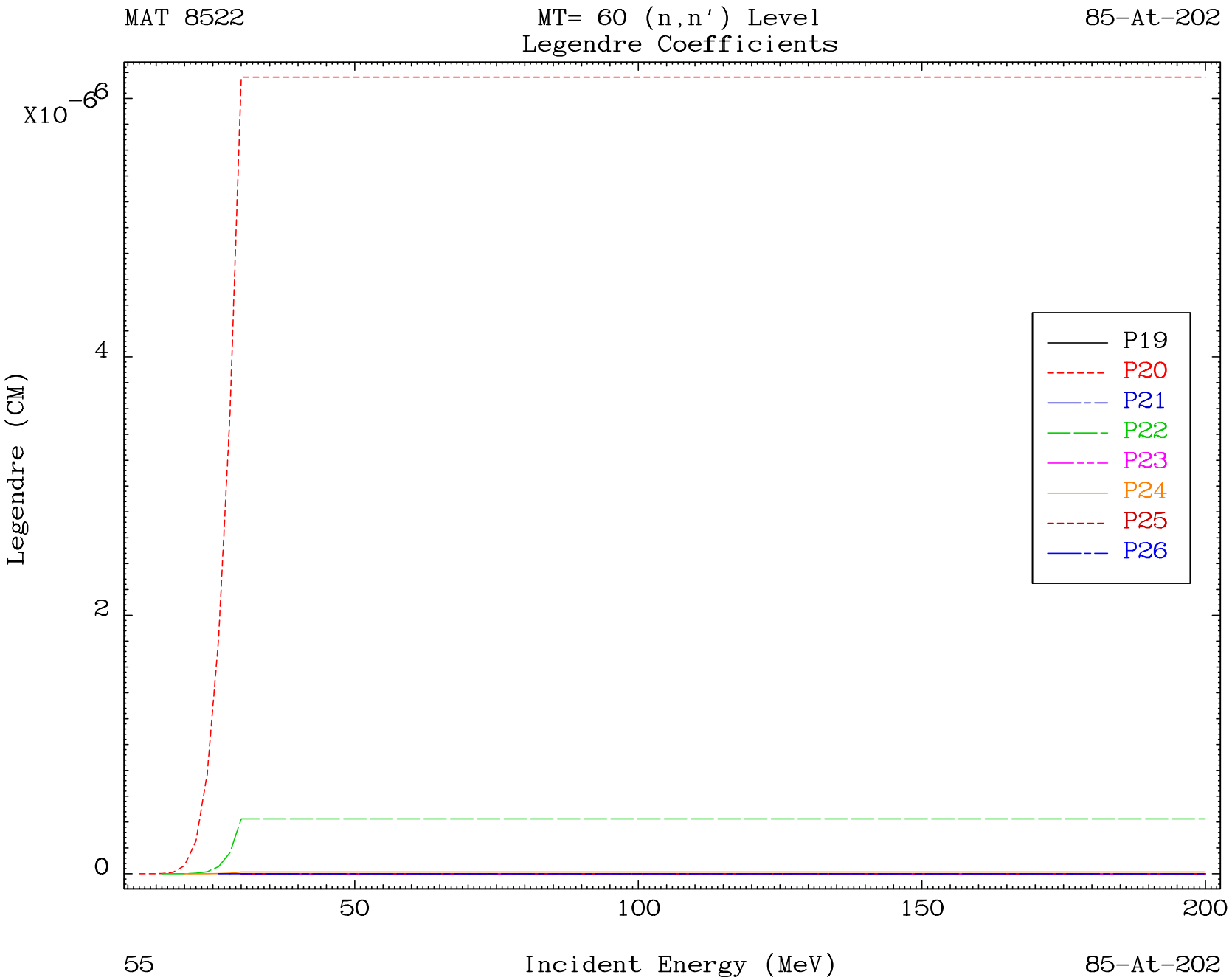

MAT 8522
MT= 59 (n,n') Level
Legendre Coefficients
85-At-202
0.06
0.04
0.02
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
0
50
100
150
200
50
Incident Energy (MeV)
85-At-202

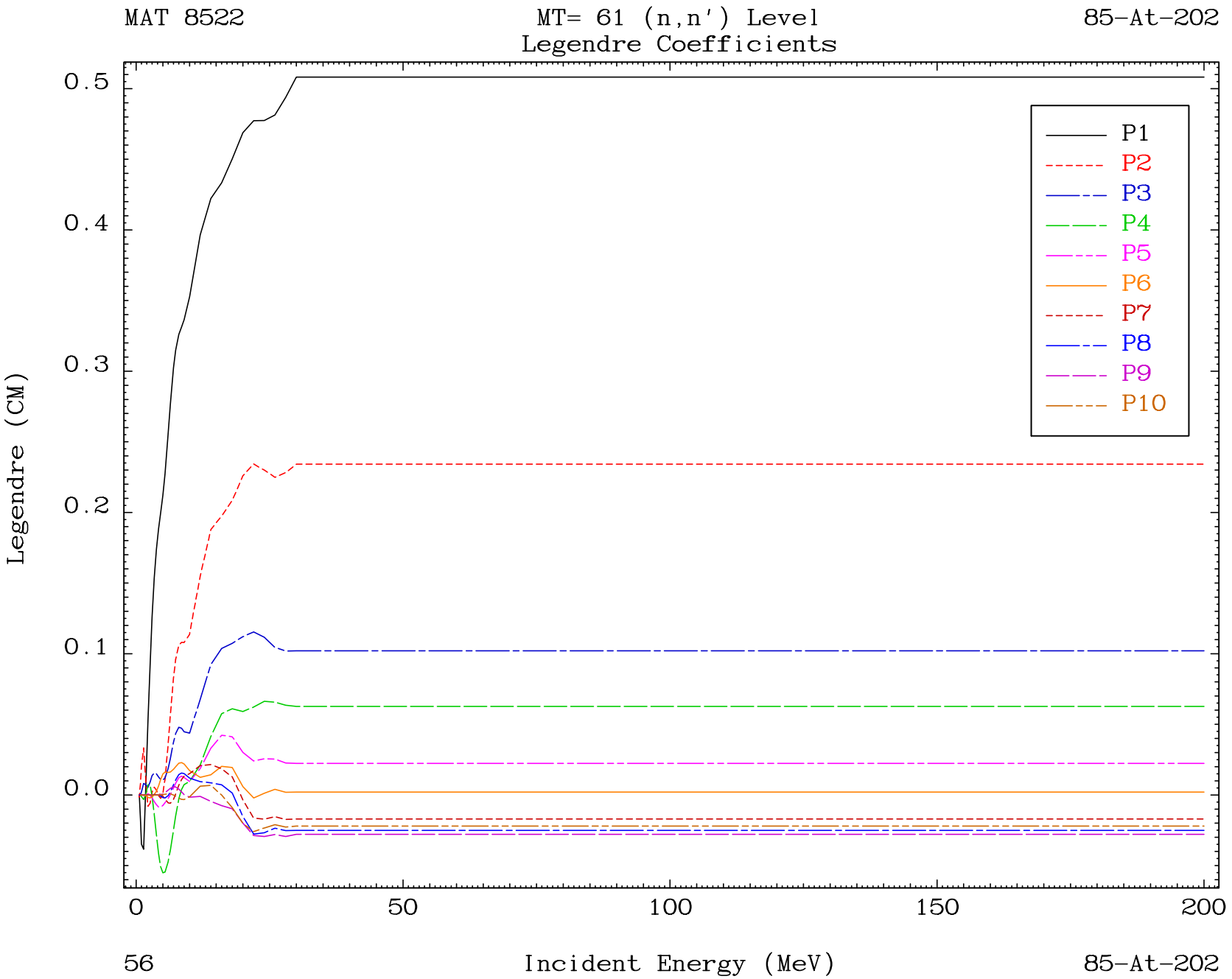

MAT 8522
MT= 59 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
0
-1
-2
-3
Legendre (CM)
0
50
100
150
200
51
Incident Energy (MeV)
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

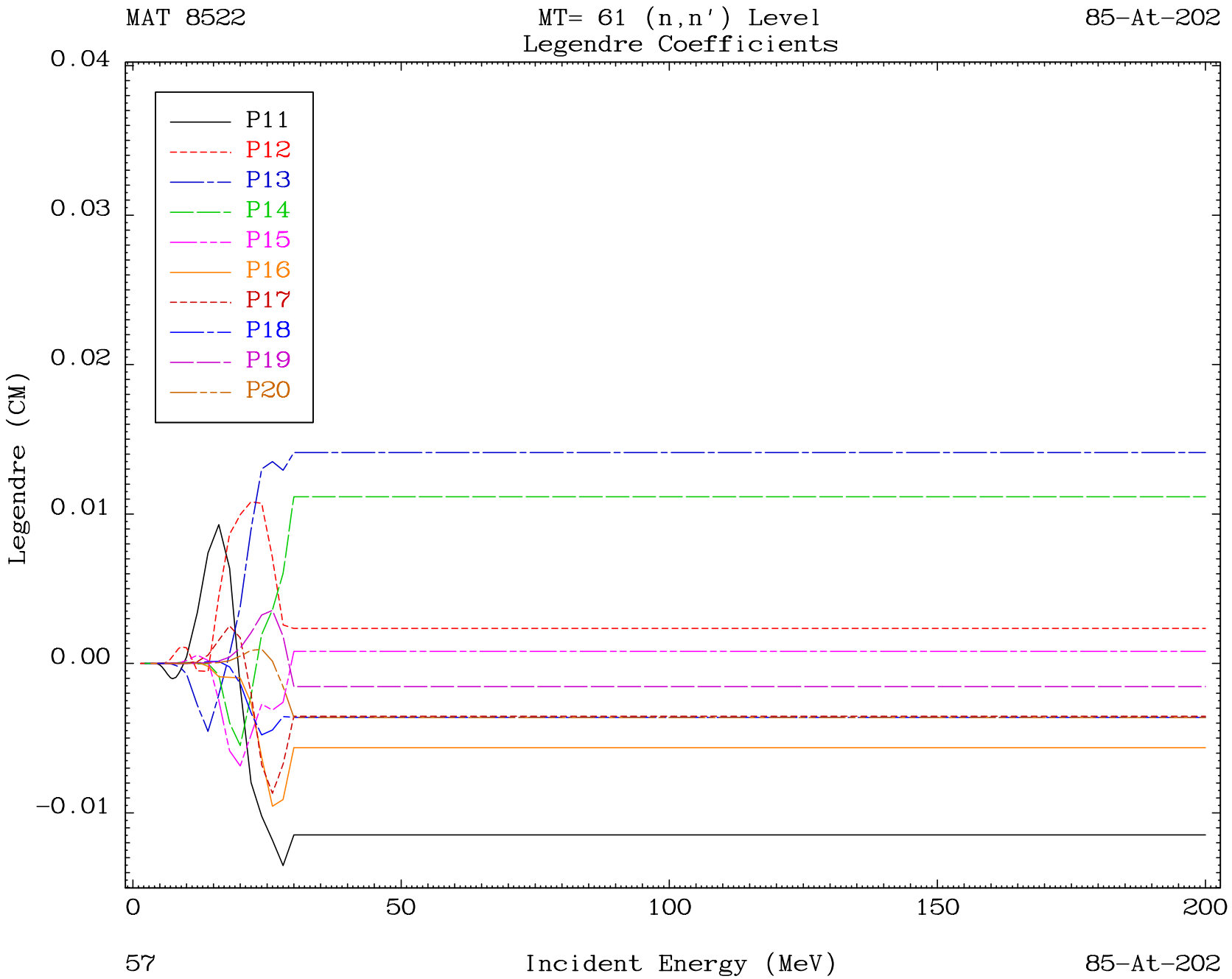

MAT 8522
MT= 59 (n,n') Level
Legendre Coefficients
85-At-202
X10 −6
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
52
Incident Energy (MeV)
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28

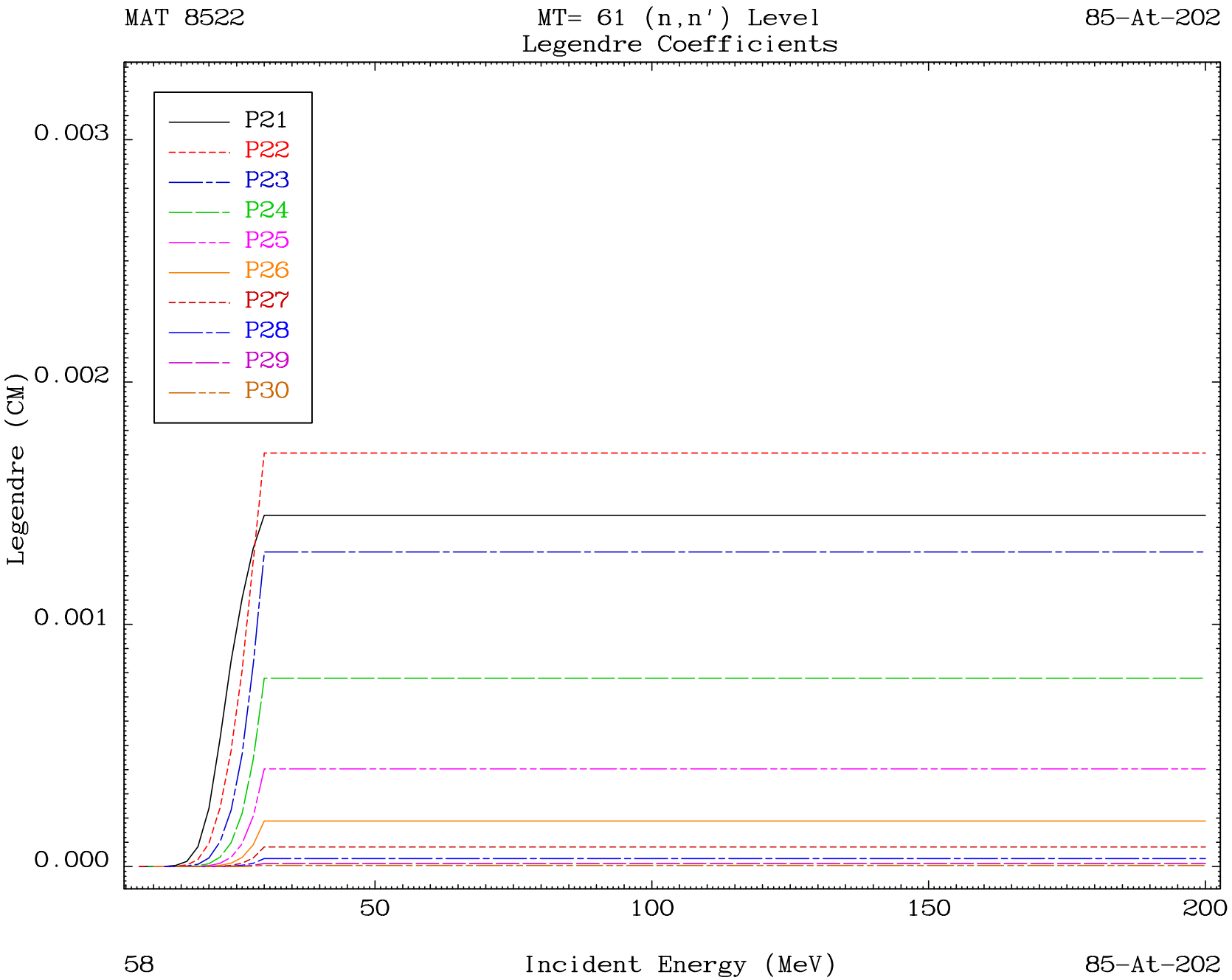

MAT 8522
MT= 60 (n,n') Level
Legendre Coefficients
85-At-202
0.04
0.02
0.00
-0.02
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
53
Incident Energy (MeV)
85-At-202

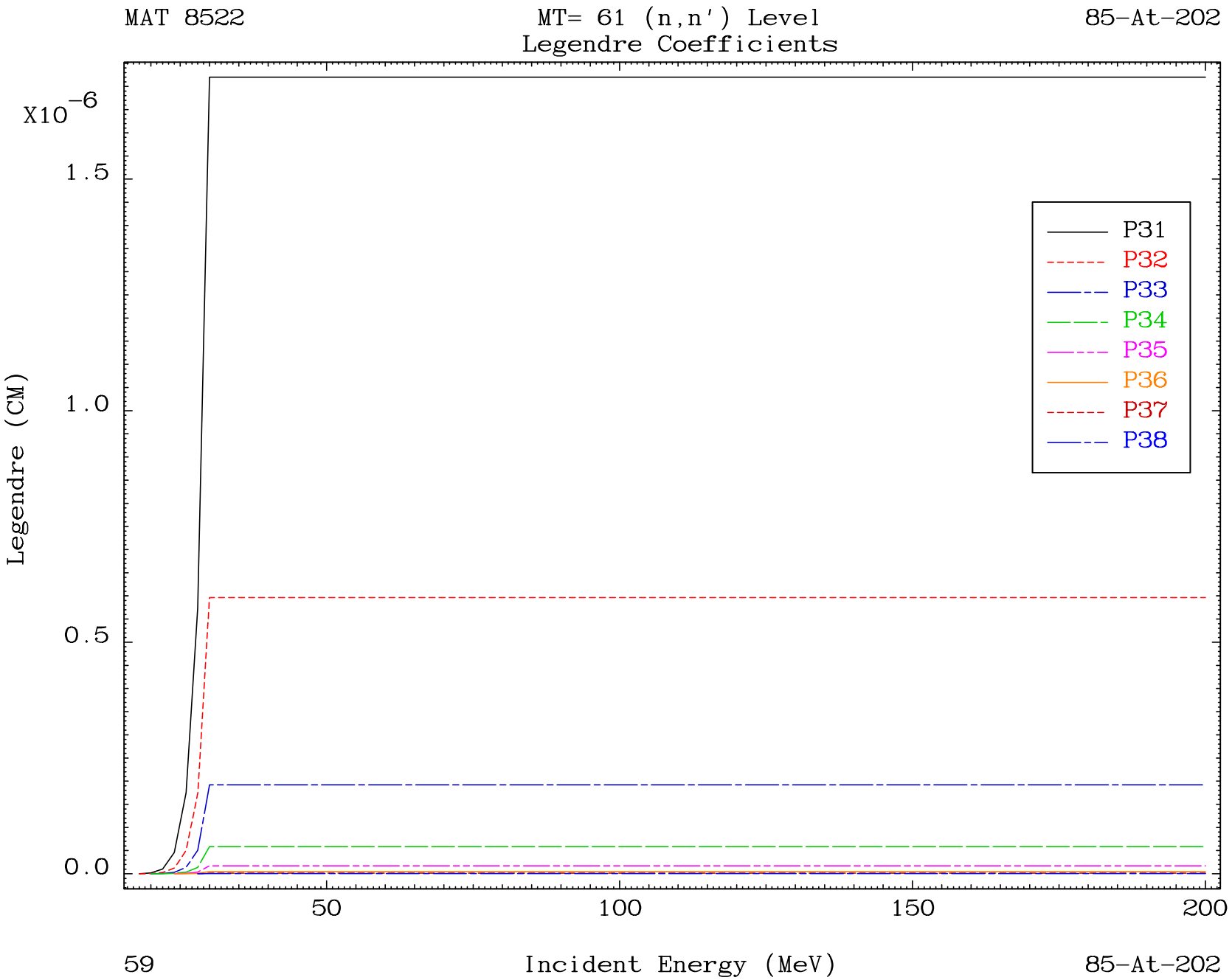

MAT 8522
MT= 60 (n,n') Level
Legendre Coefficients
85-At-202
X10^-41
0
-1
-2
-3
-4
-5
Legendre (CM)
0
50
100
150
200
54
Incident Energy (MeV)
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18

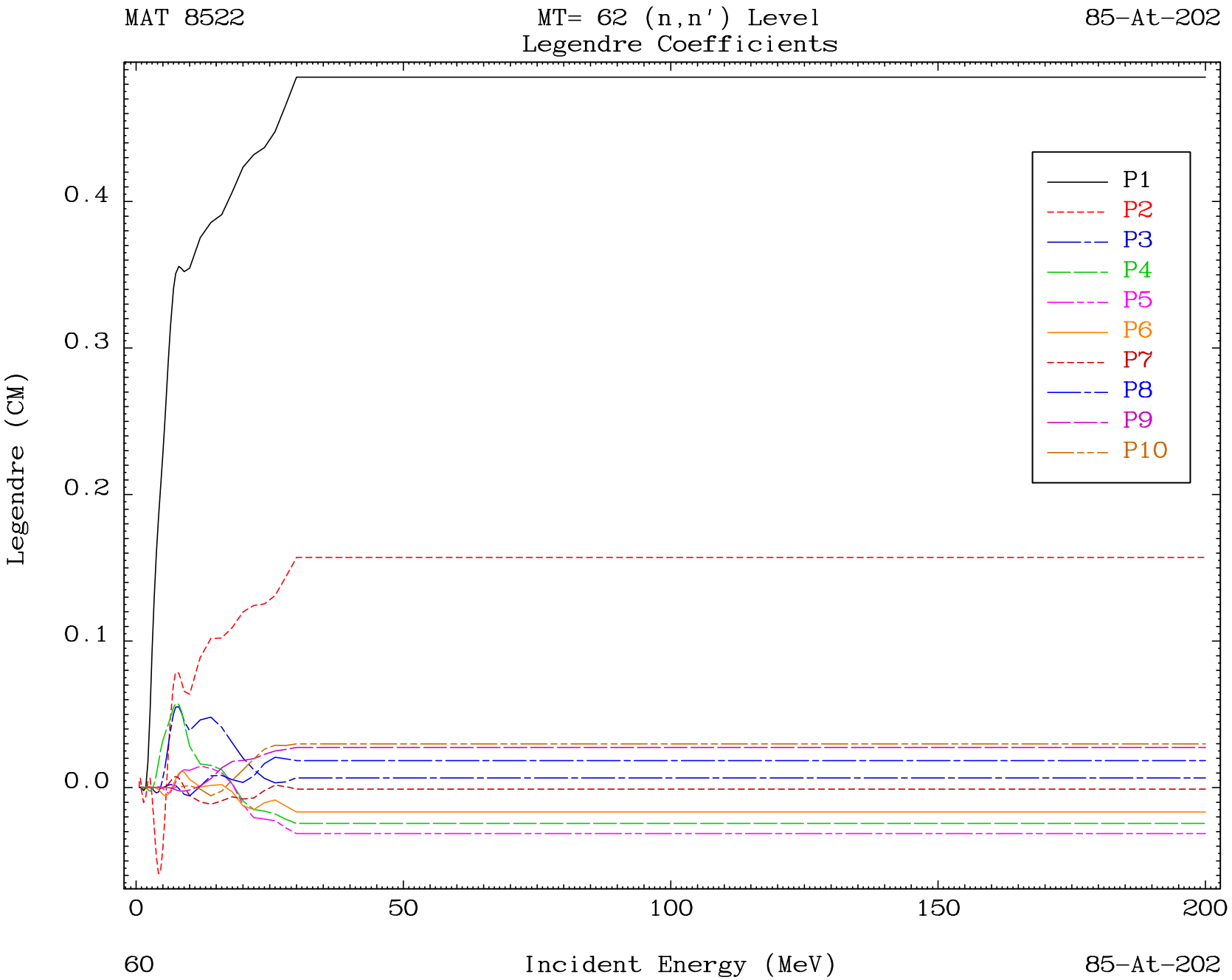

MAT 8522
MT= 60 (n,n') Level
Legendre Coefficients
85-At-202
X10 -6
6
4
2
0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
55
Incident Energy (MeV)
85-At-202

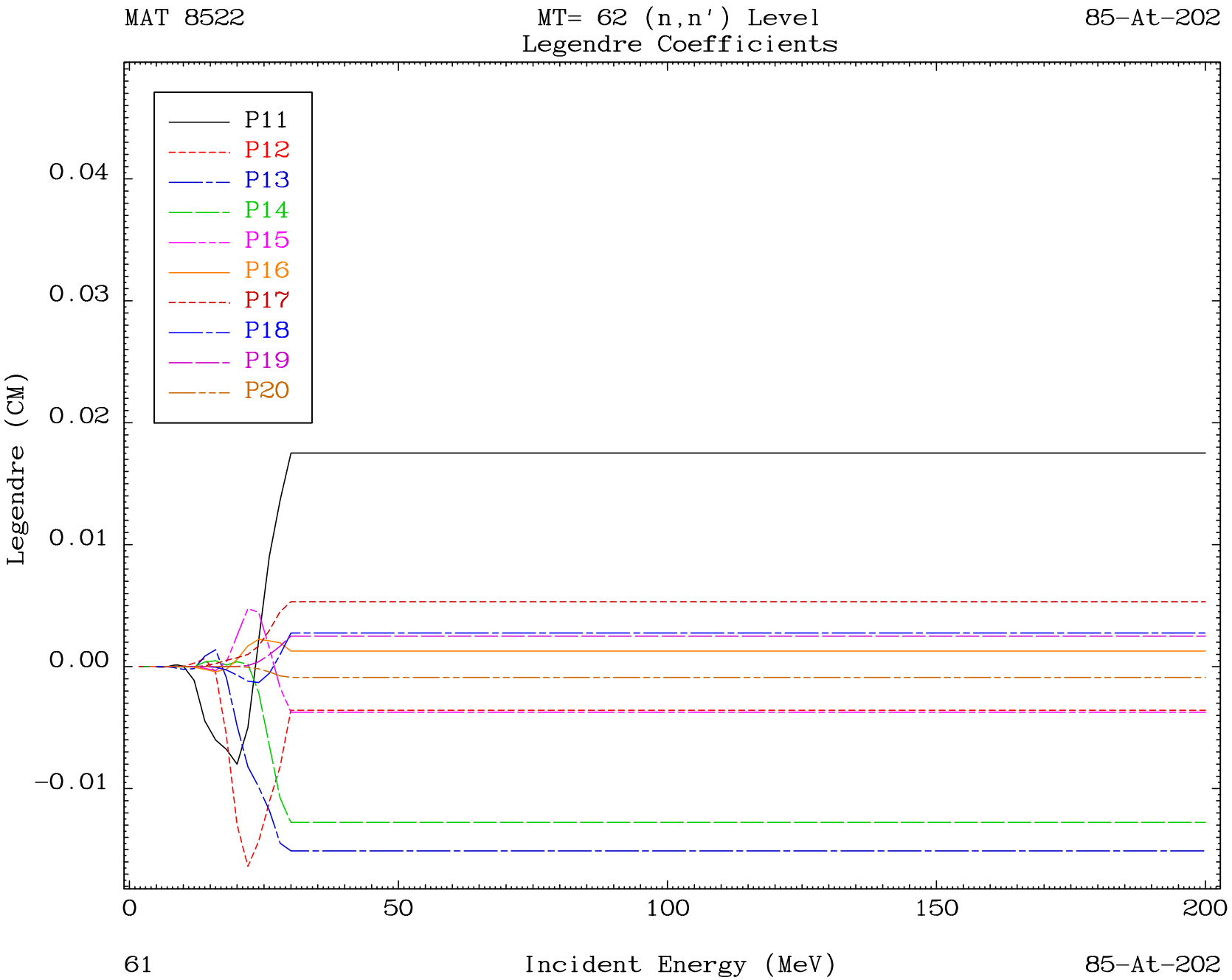

MAT 8522
MT= 61 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
56
Incident Energy (MeV)
85-At-202

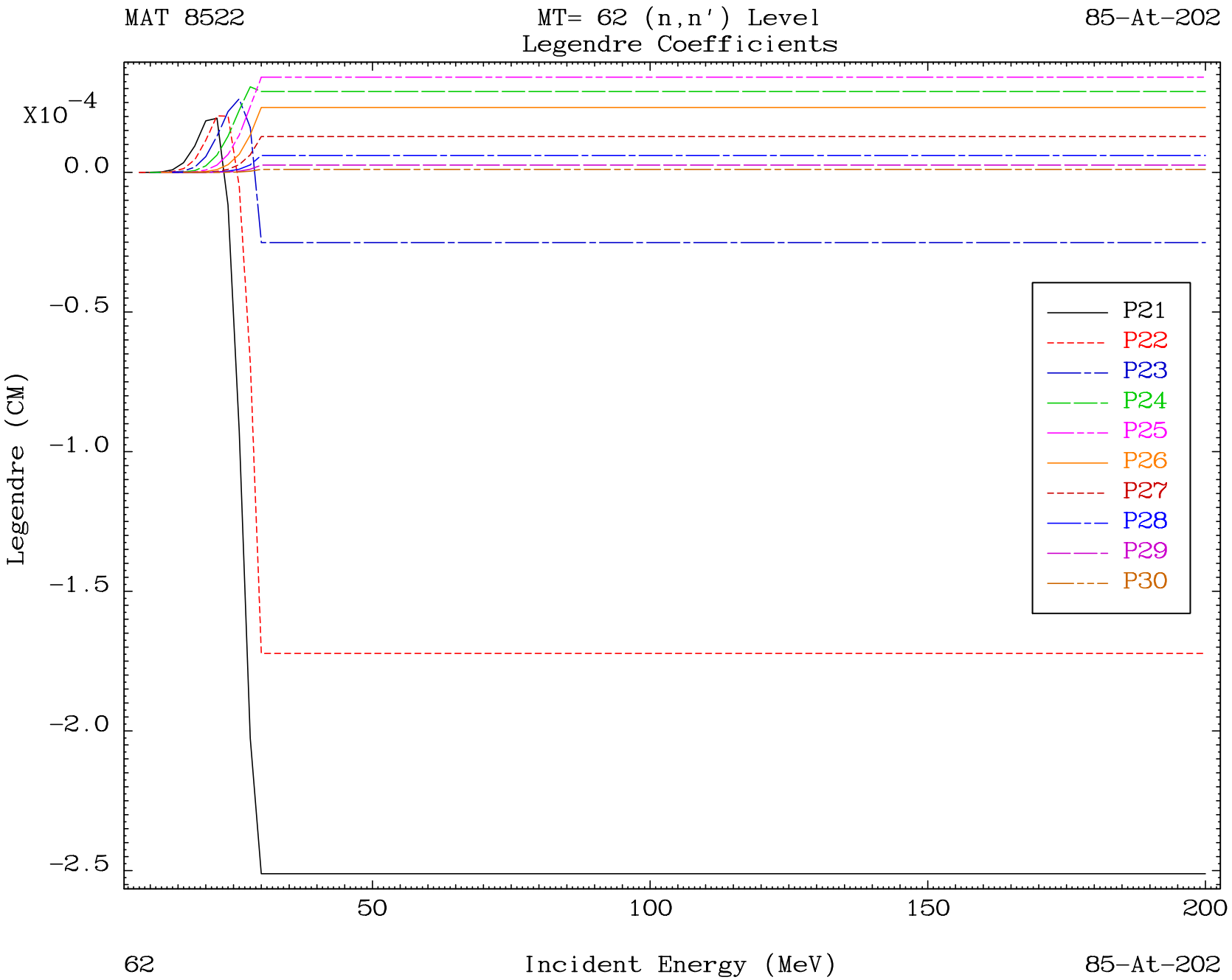

MAT 8522
MT= 61 (n,n') Level
Legendre Coefficients
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
57
Incident Energy (MeV)
85-At-202

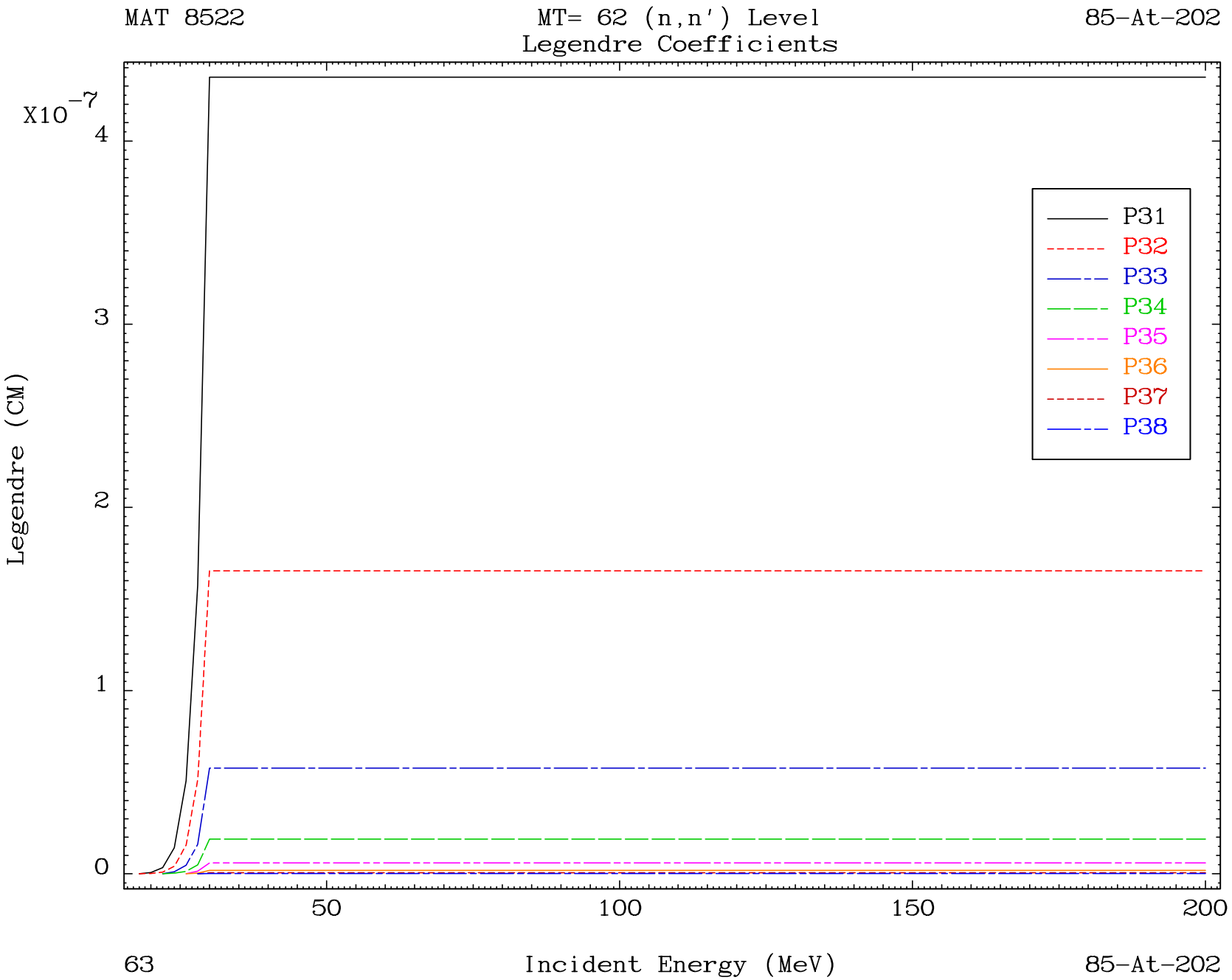

MAT 8522
MT= 61 (n,n') Level
Legendre Coefficients
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
58
Incident Energy (MeV)
85-At-202

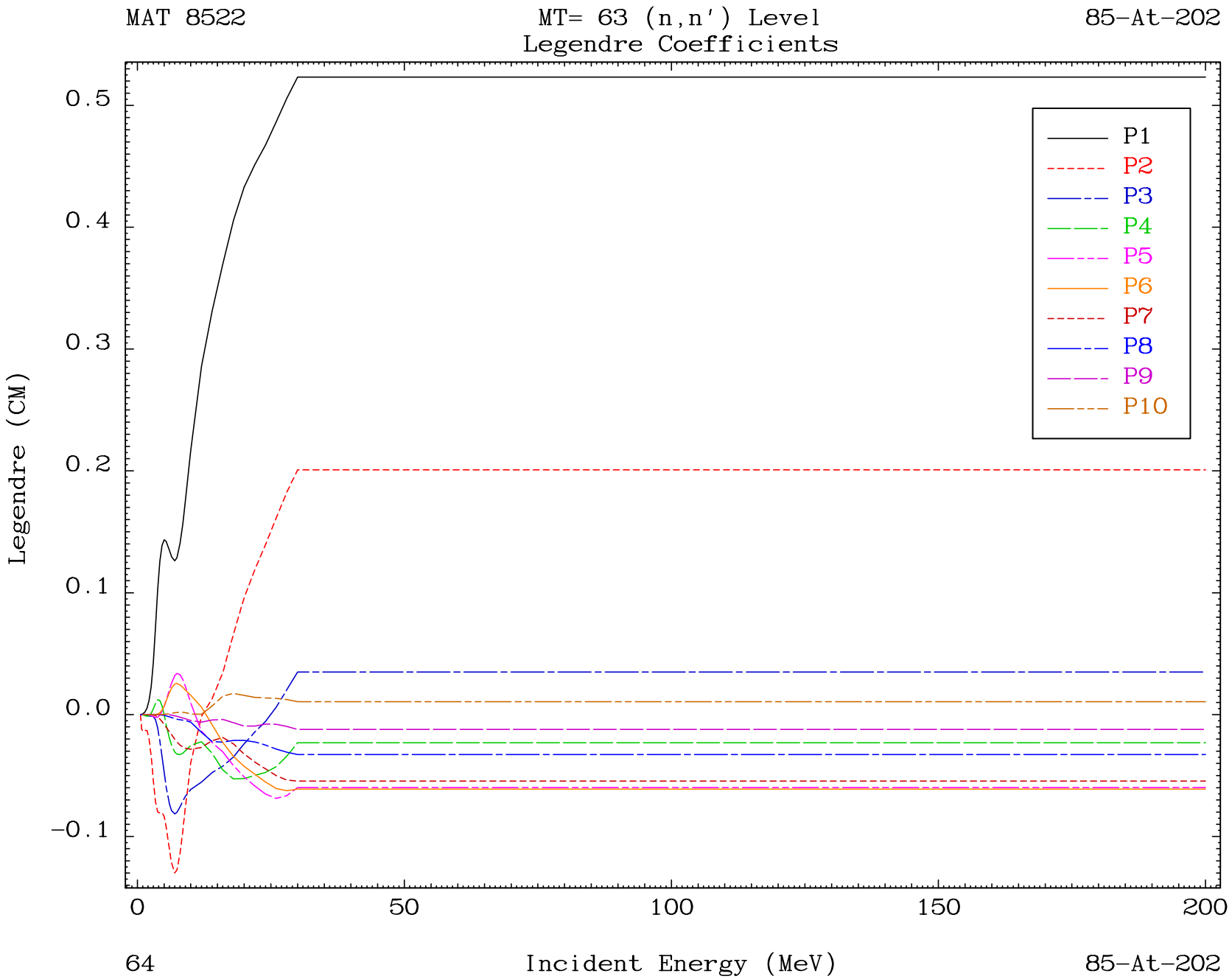

MAT 8522
MT= 61 (n,n') Level
Legendre Coefficients
85-At-202
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
59
Incident Energy (MeV)
85-At-202

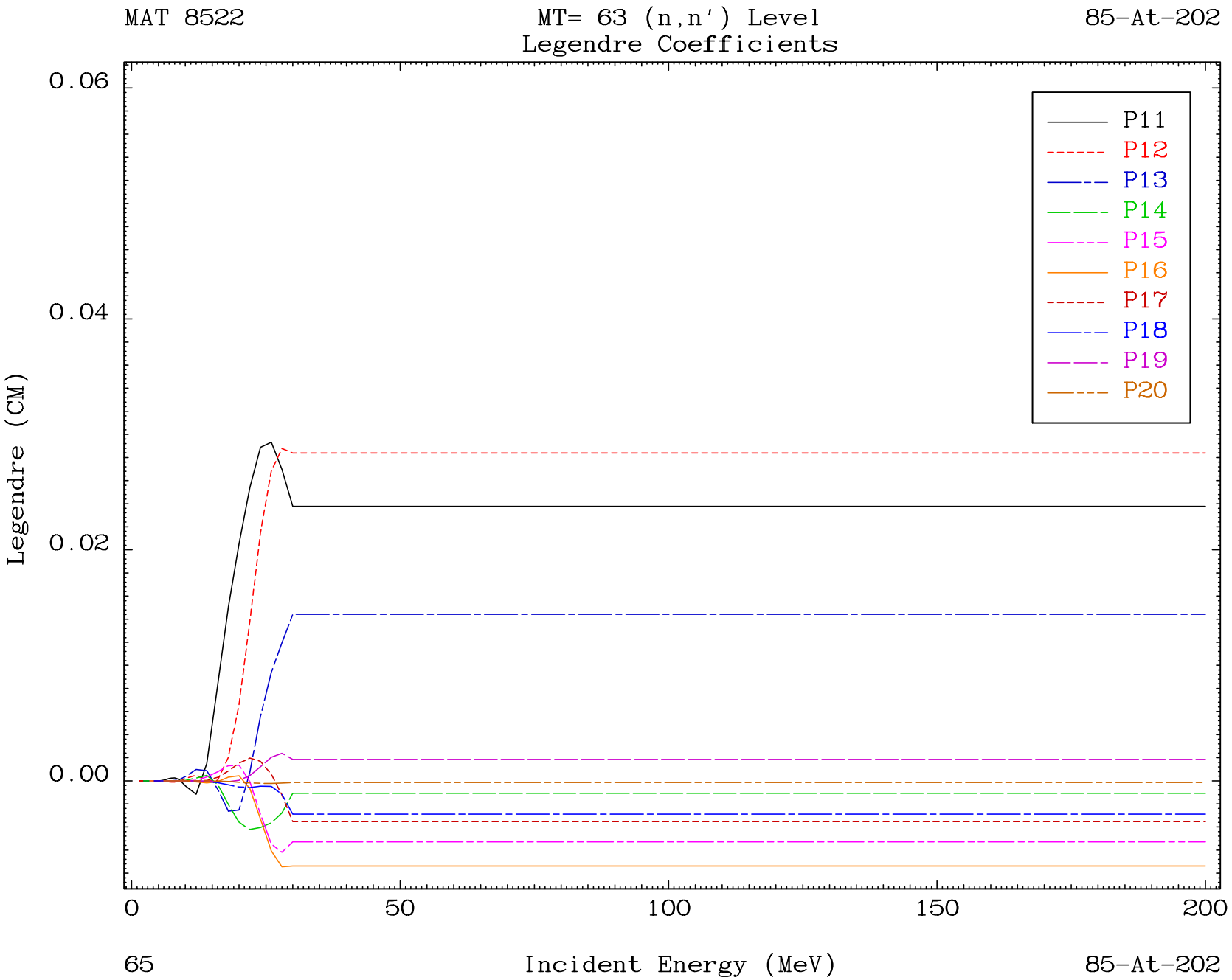

MAT 8522
MT= 62 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
60
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

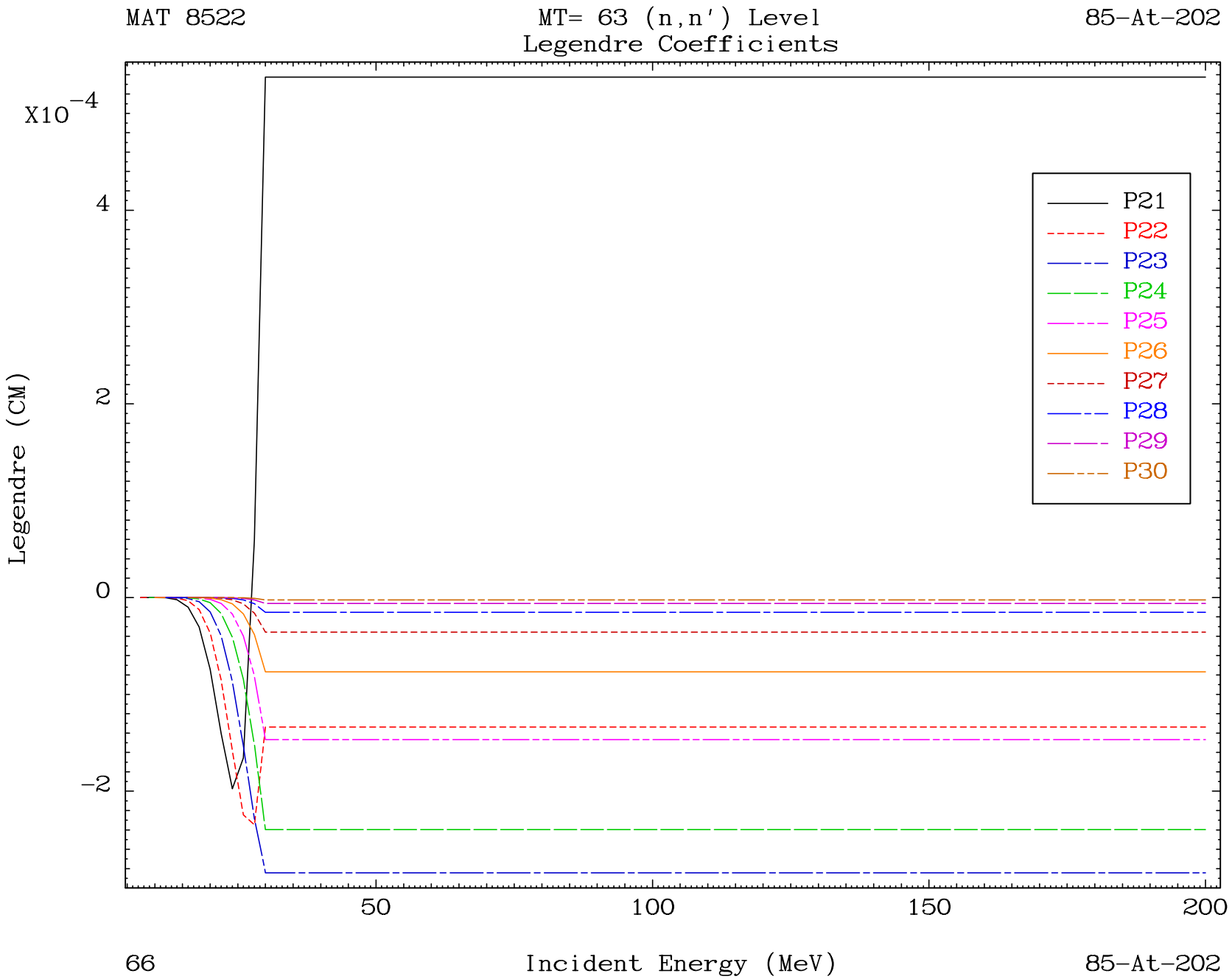

MAT 8522
MT= 62 (n,n') Level
Legendre Coefficients
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
61
Incident Energy (MeV)
85-At-202

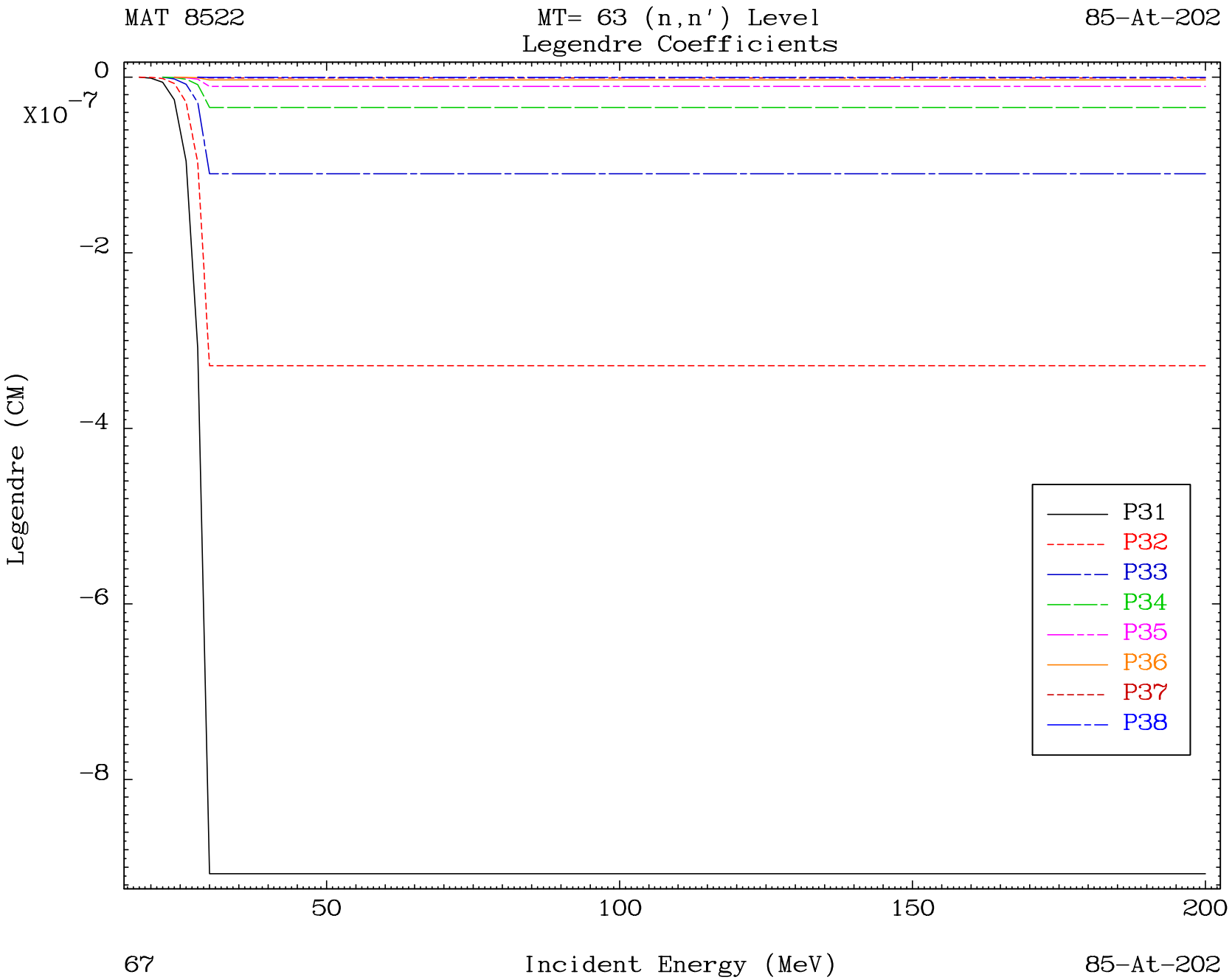

MAT 8522
MT= 62 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
62
Incident Energy (MeV)
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30

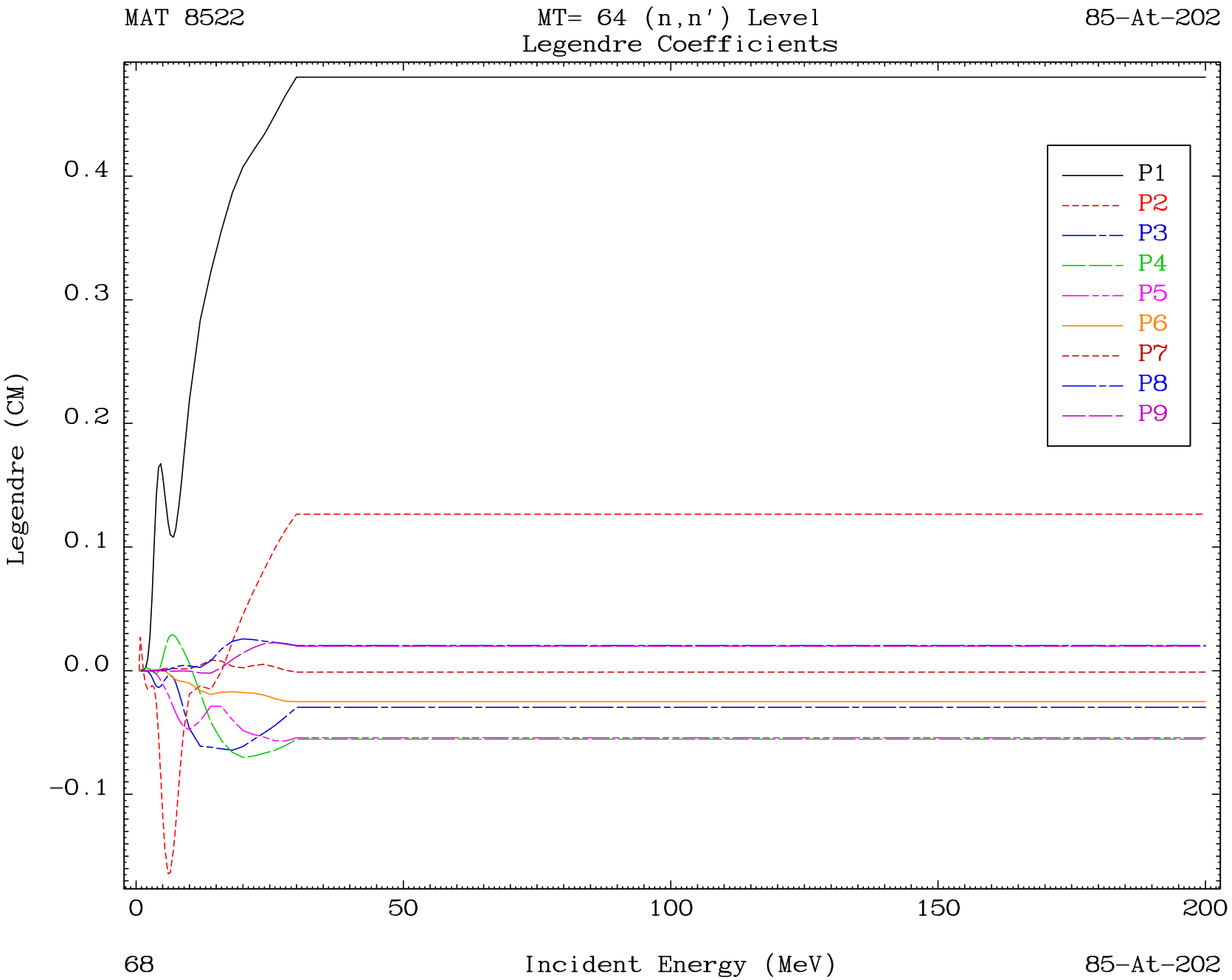

MAT 8522
MT= 62 (n,n') Level
Legendre Coefficients
85-At-202
X10^-7
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
63
Incident Energy (MeV)
85-At-202

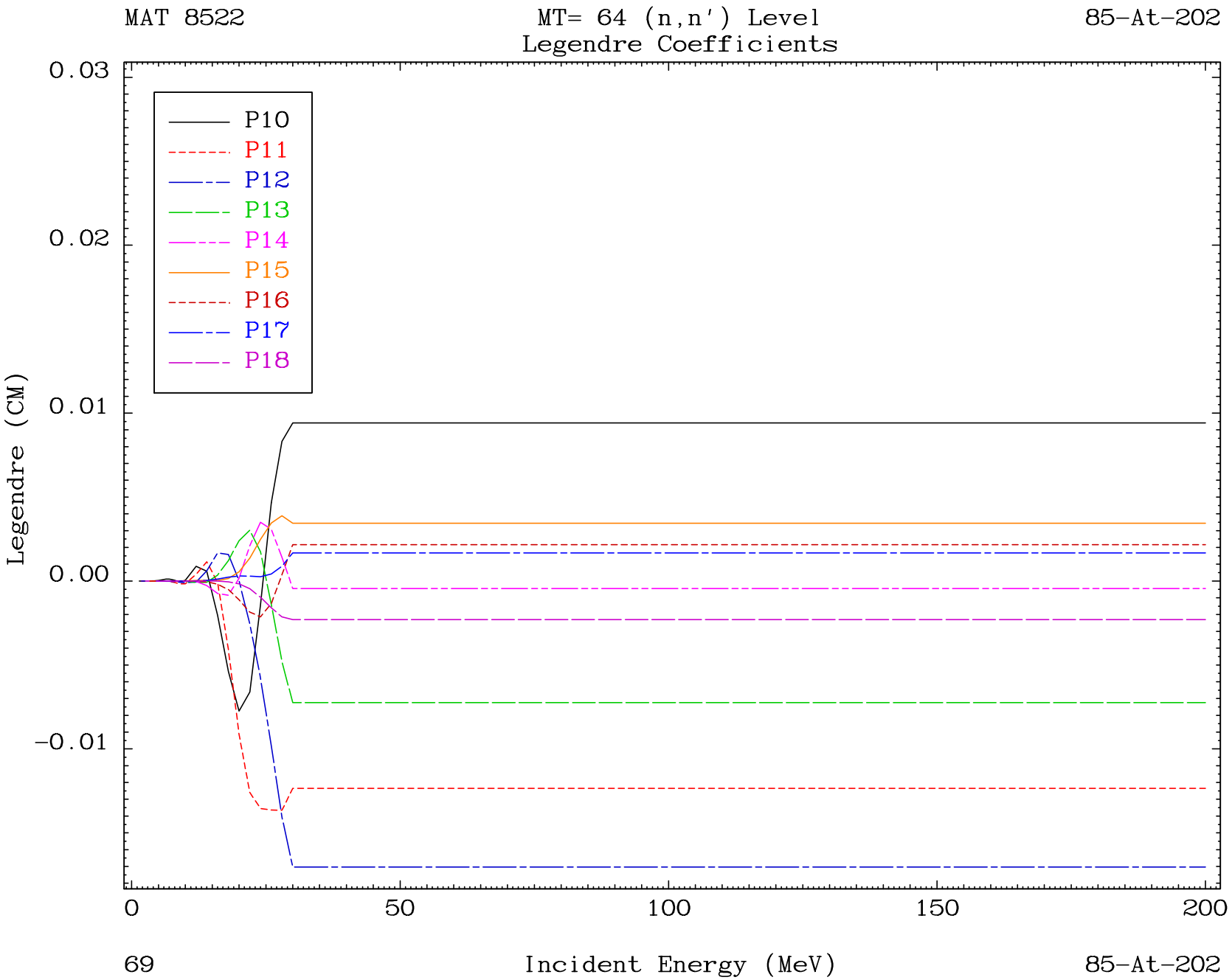

MAT 8522
MT= 63 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
64
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

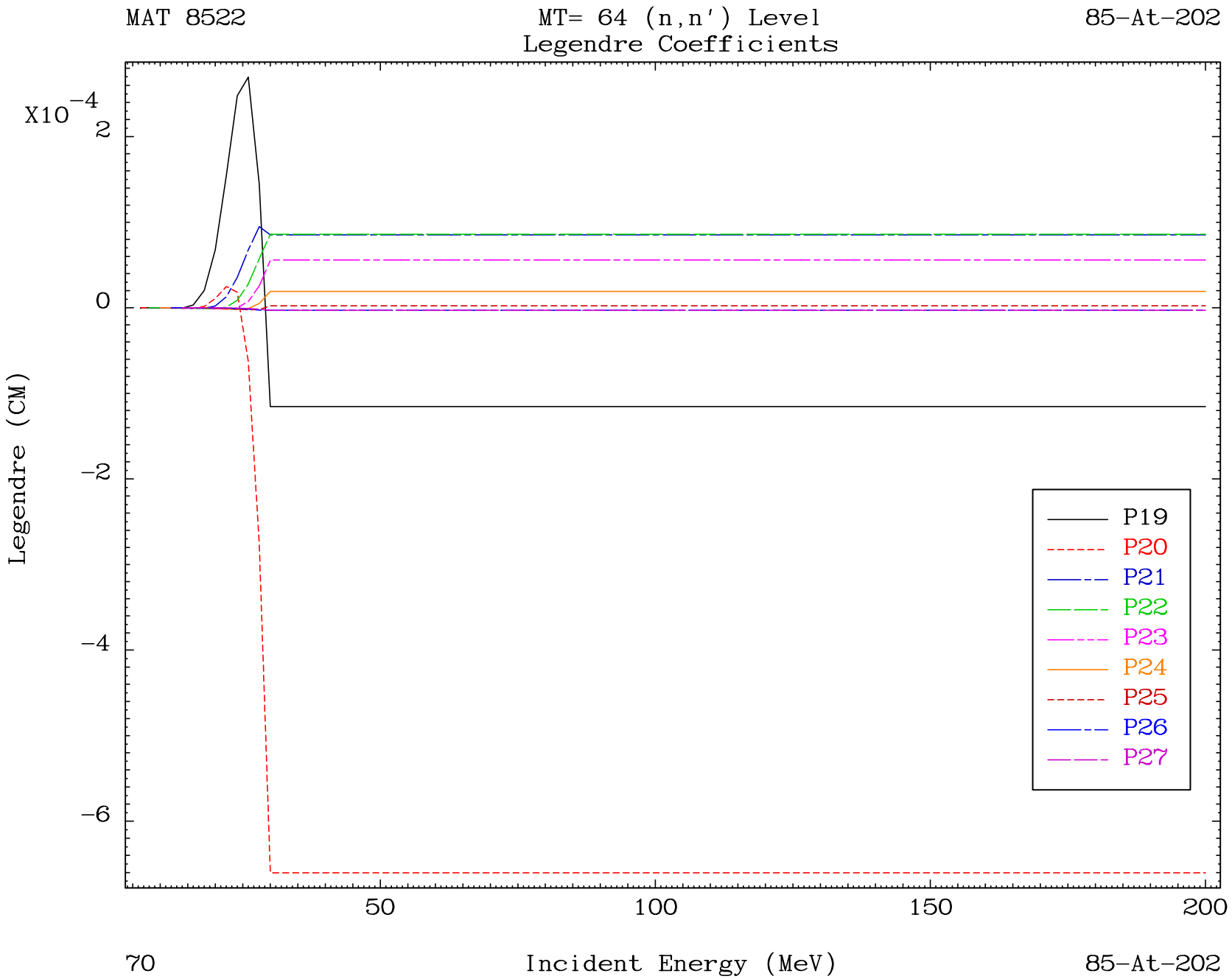

MAT 8522
MT= 63 (n,n') Level
Legendre Coefficients
85-At-202
0.06
0.04
0.02
0.00
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
65
Incident Energy (MeV)
85-At-202

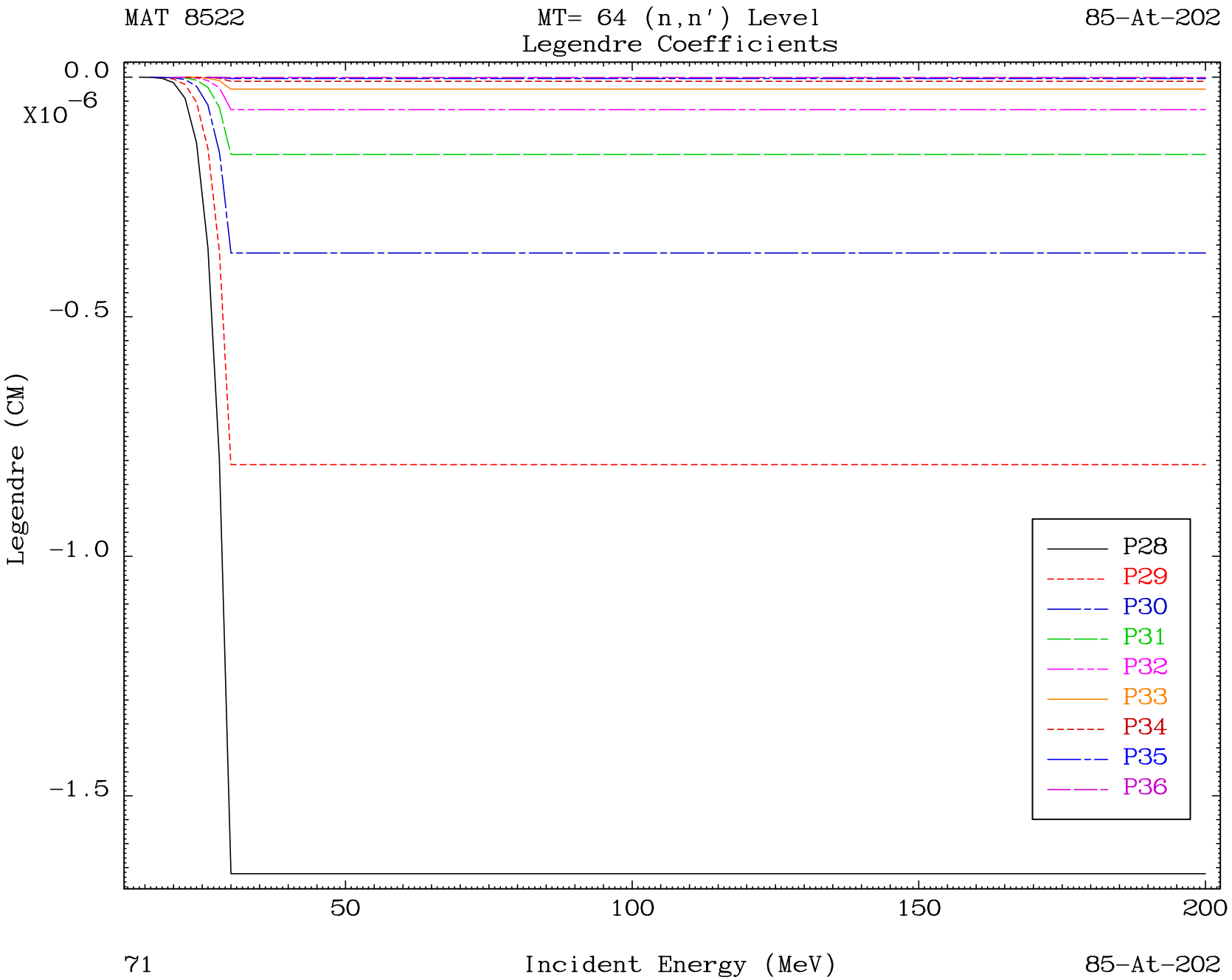

MAT 8522
MT= 63 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
4
2
0
-2
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
66
Incident Energy (MeV)
85-At-202

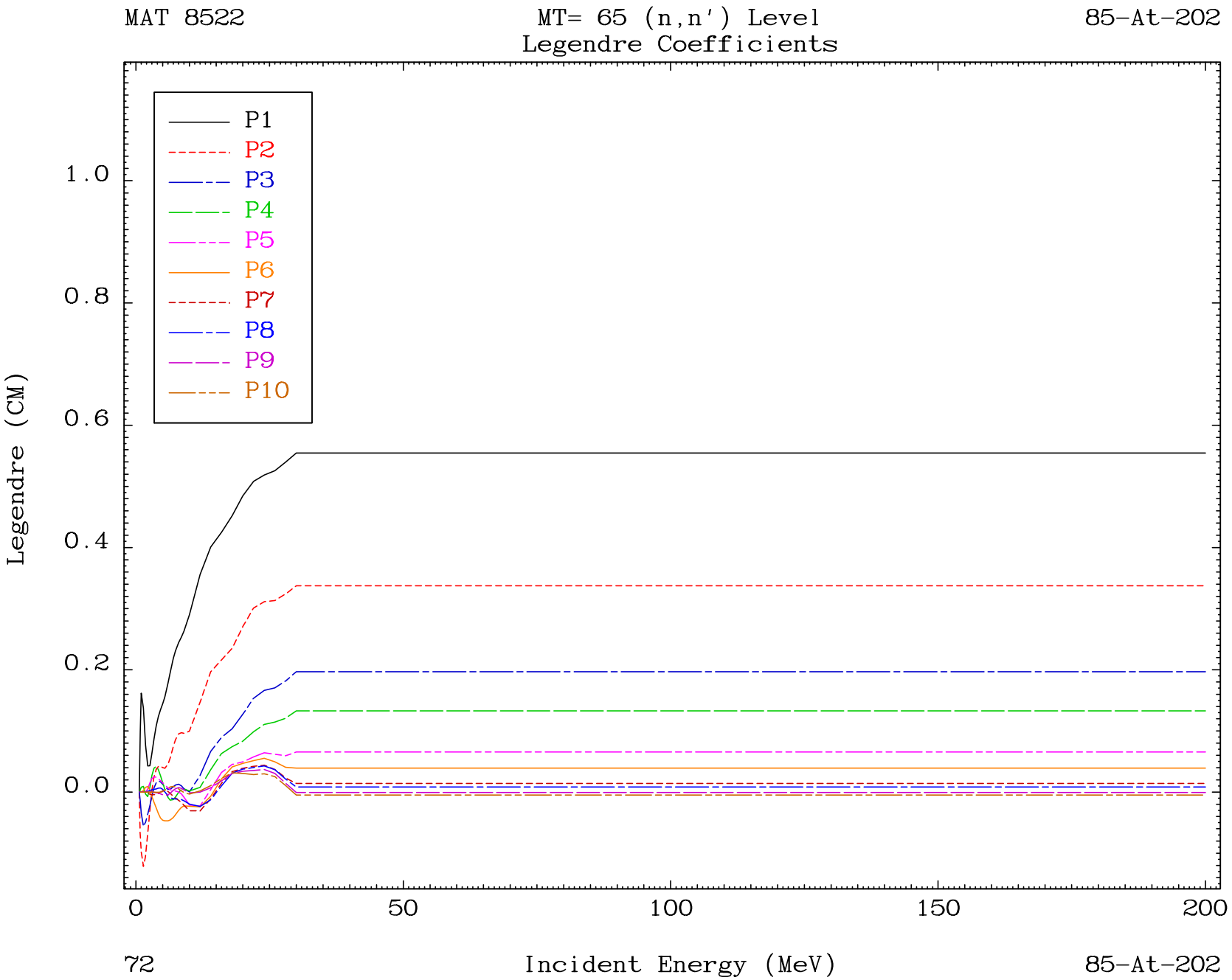

MAT 8522
MT= 63 (n,n') Level
Legendre Coefficients
85-At-202
X10^-7
0
-2
-4
-6
-8
Legendre (CM)
50
100
150
200
67
Incident Energy (MeV)
85-At-202
P31
P32
P33
P34
P35
P36
P37
P38

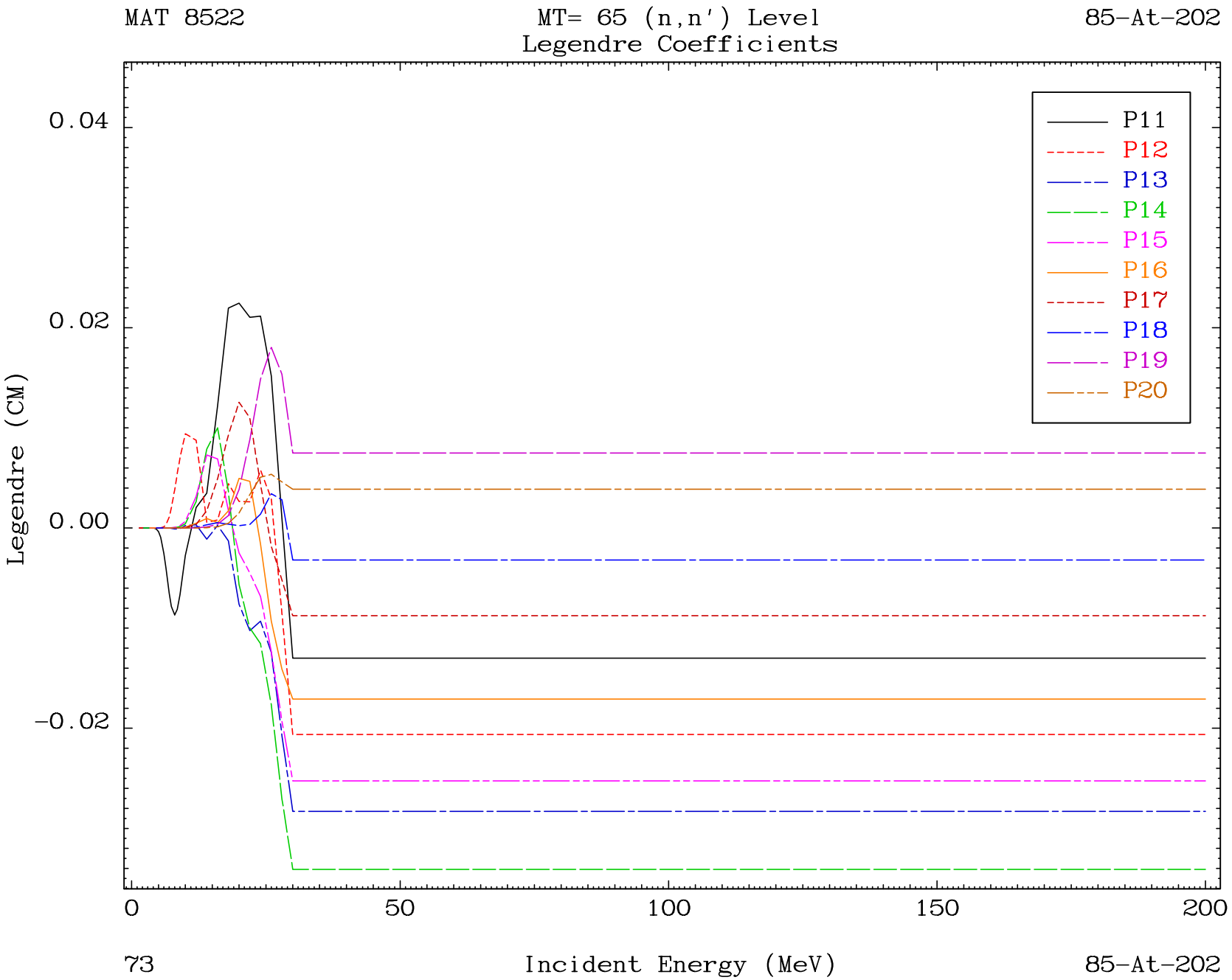

MAT 8522
MT= 64 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
68
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9

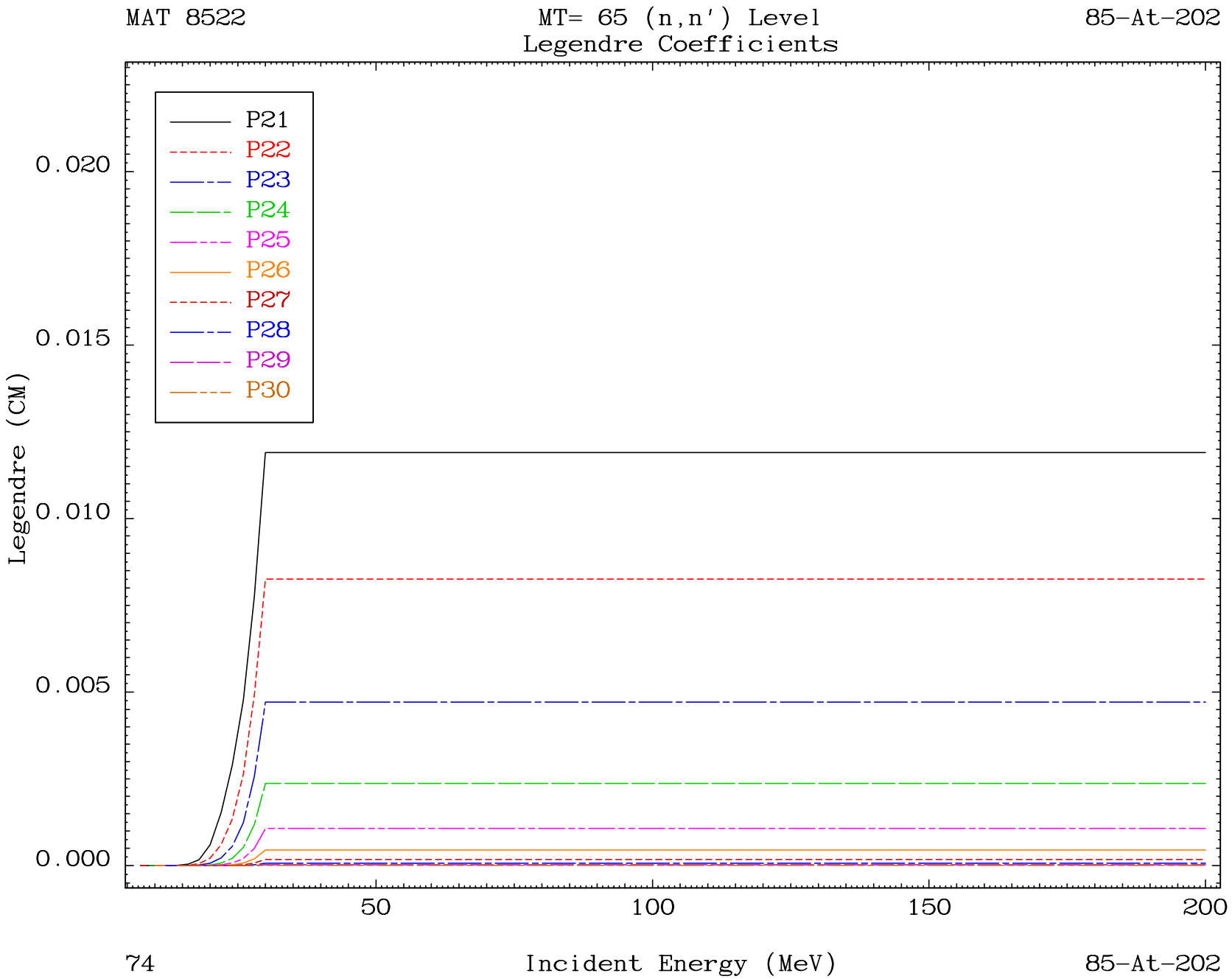

MAT 8522
MT= 64 (n,n') Level
Legendre Coefficients
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
69
Incident Energy (MeV)
85-At-202

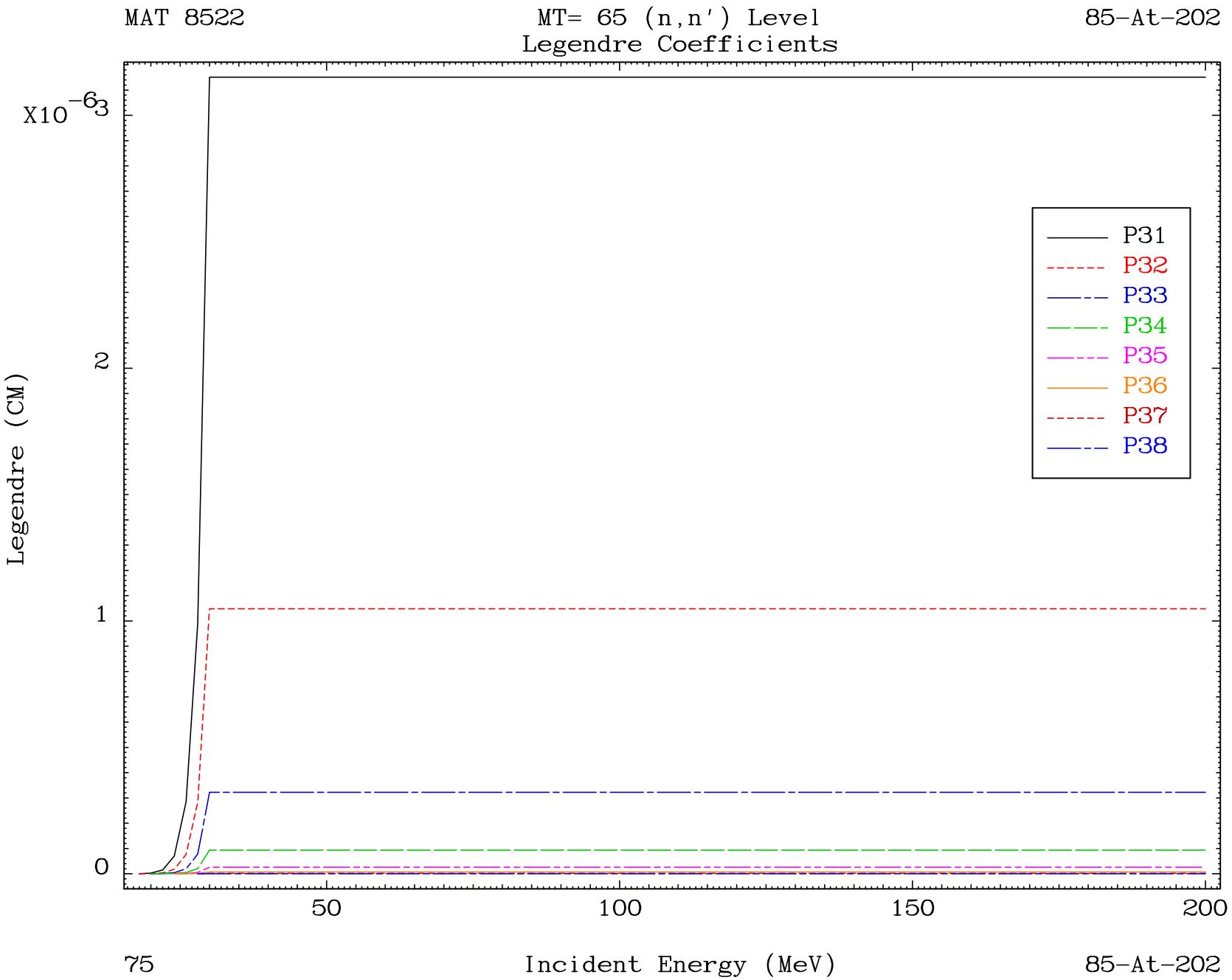

MAT 8522
MT= 64 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
2
0
-2
-4
-6
Legendre (CM)
50
100
150
200
70
Incident Energy (MeV)
85-At-202
P19
P20
P21
P22
P23
P24
P25
P26
P27

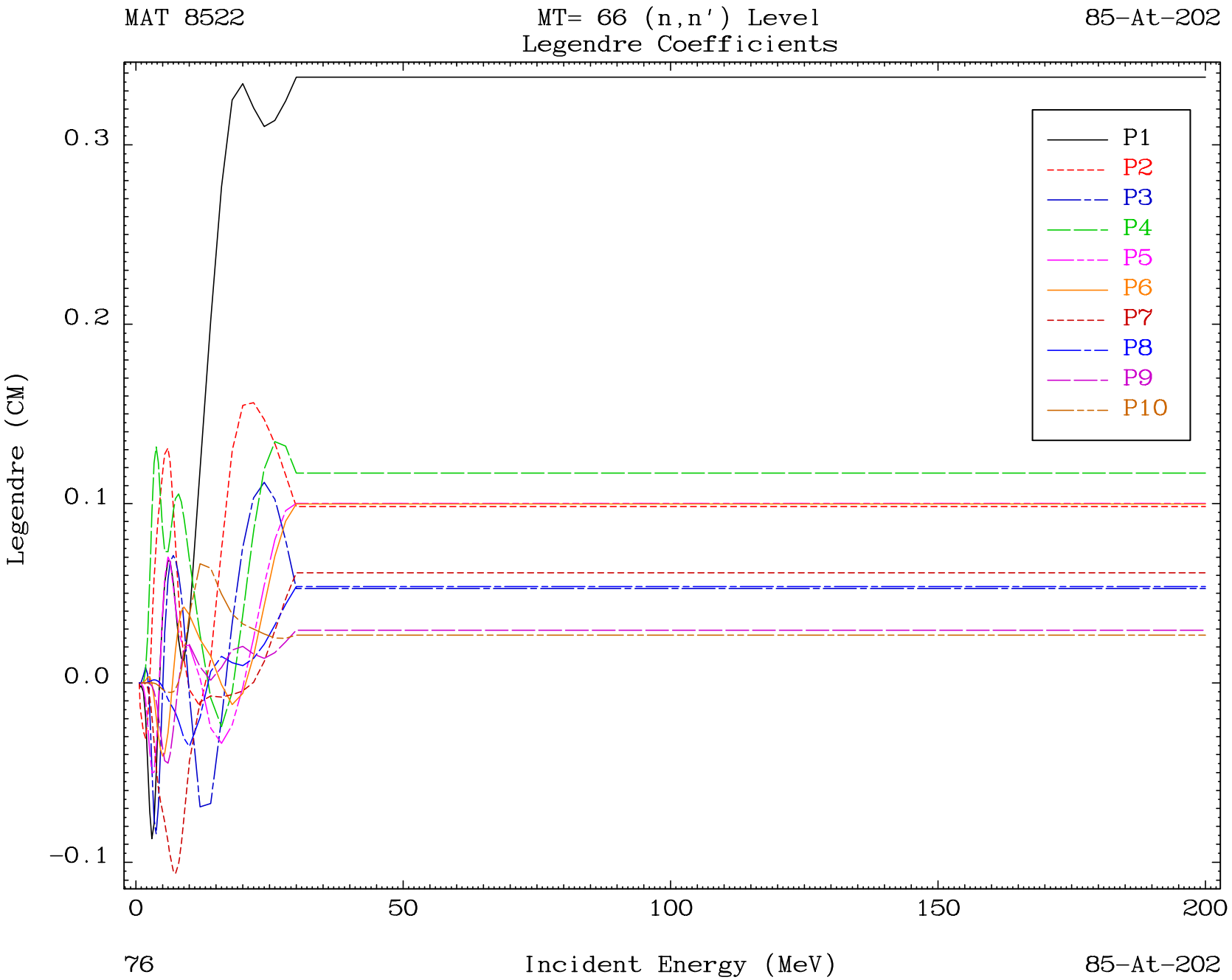

MAT 8522
MT= 64 (n,n') Level
Legendre Coefficients
85-At-202
0.0
X10^-6
-0.5
-1.0
-1.5
Legendre (CM)
50
100
150
200
71
Incident Energy (MeV)
85-At-202
P28
P29
P30
P31
P32
P33
P34
P35
P36

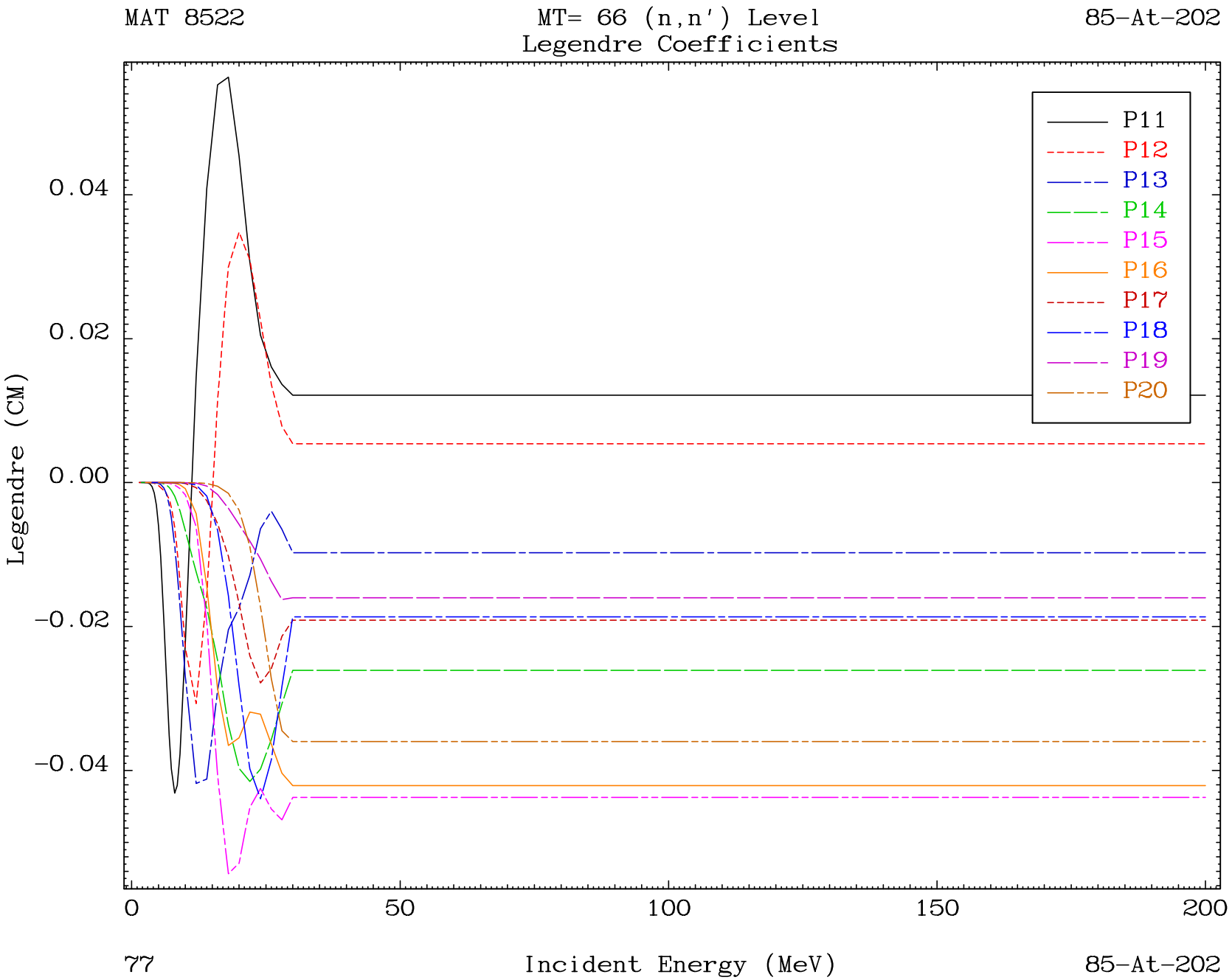

MAT 8522
MT= 65 (n,n') Level
Legendre Coefficients
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
72
Incident Energy (MeV)
85-At-202

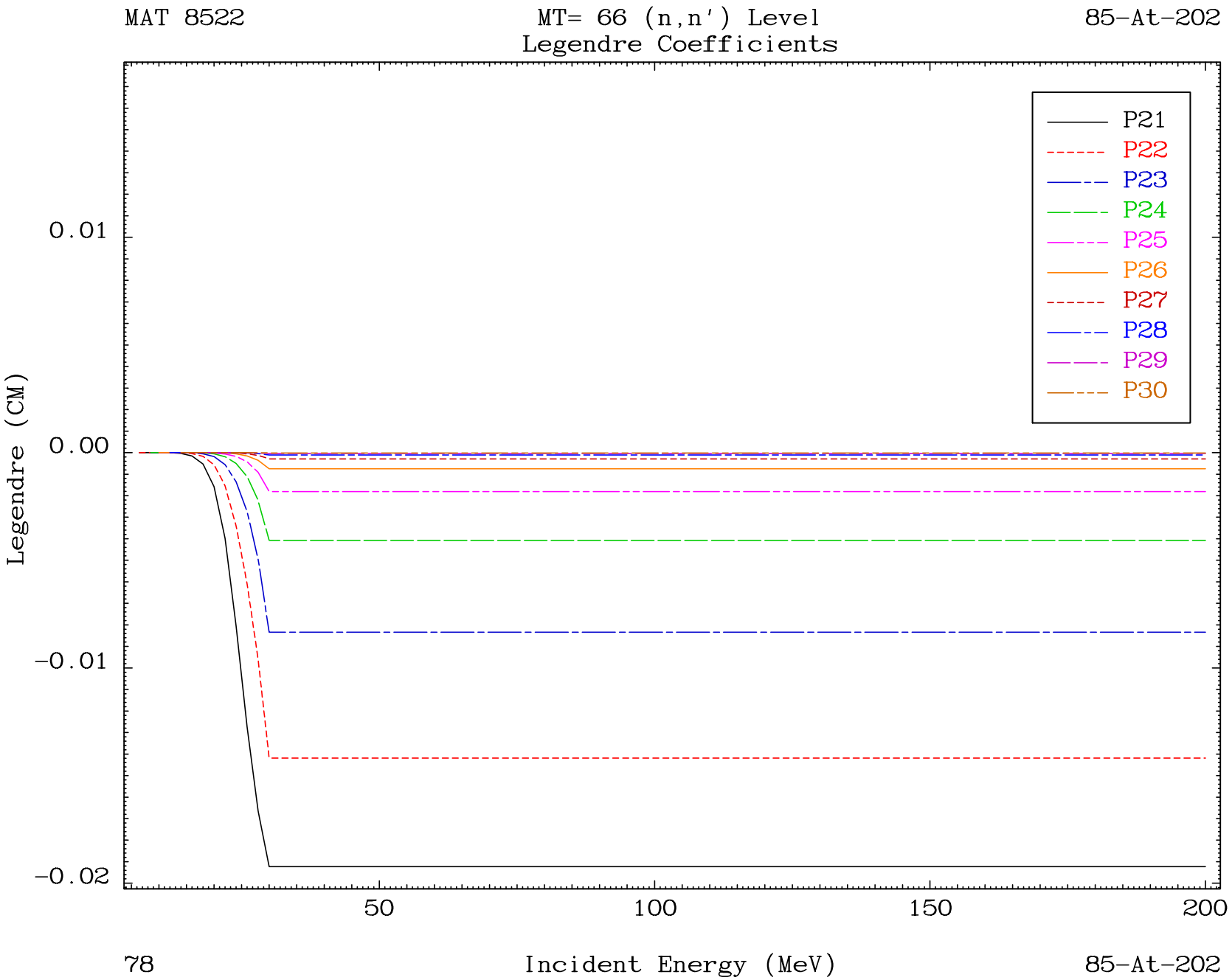

MAT 8522
MT= 65 (n,n') Level
Legendre Coefficients
85-At-202
0.04
0.02
0.00
-0.02
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
73
Incident Energy (MeV)
85-At-202

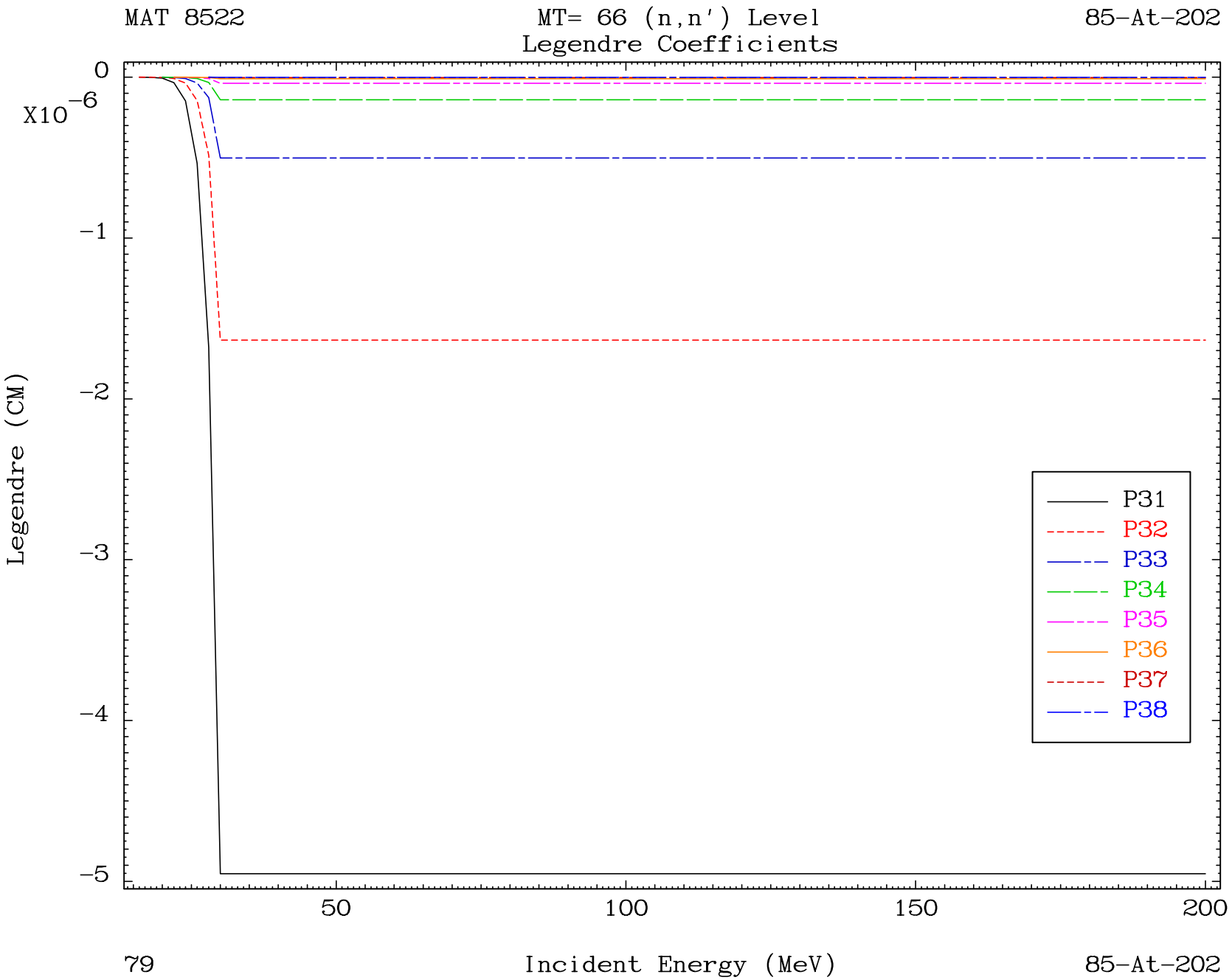

MAT 8522
MT= 65 (n,n') Level
Legendre Coefficients
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
74
Incident Energy (MeV)
85-At-202

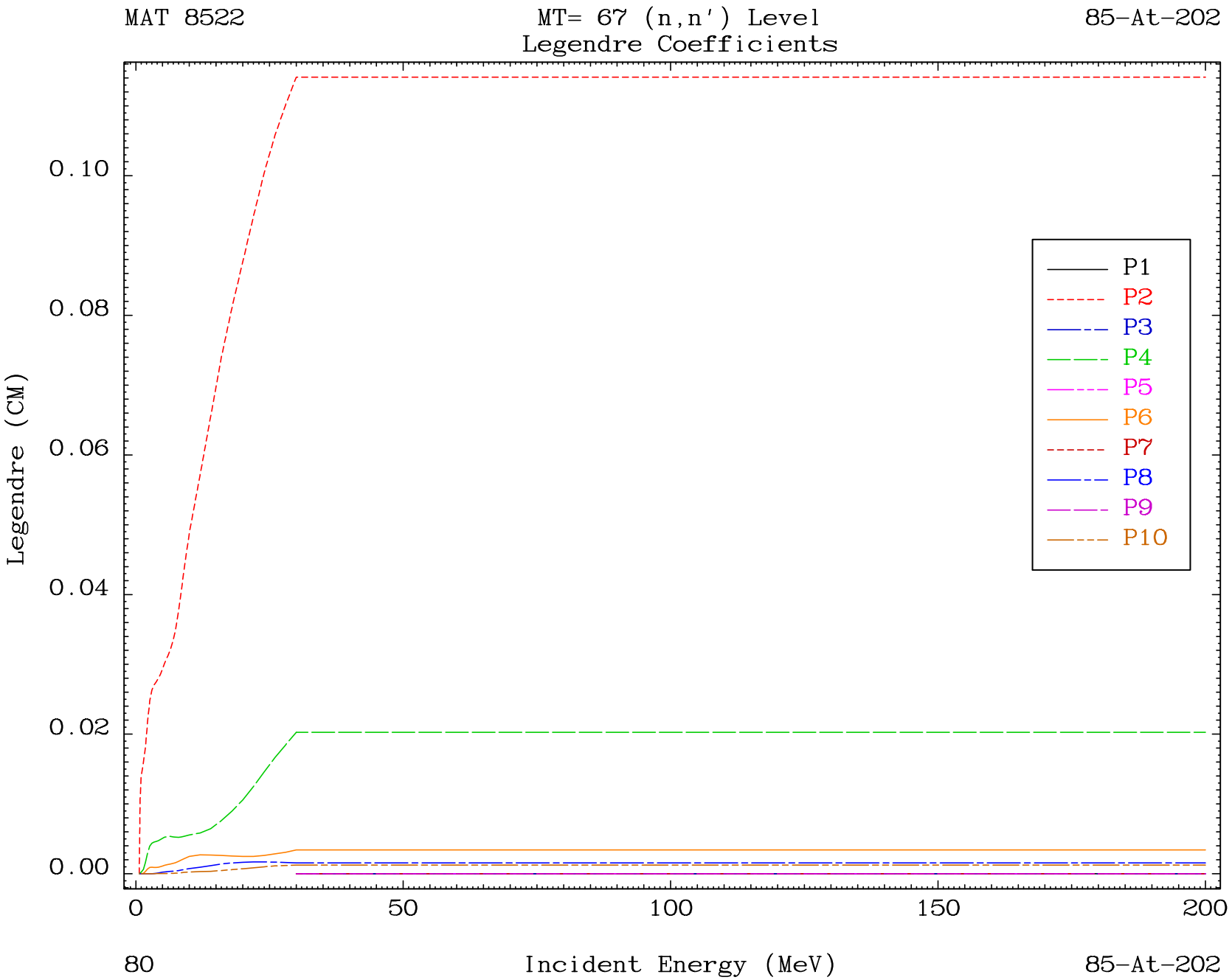

MAT 8522
MT= 65 (n,n') Level
Legendre Coefficients
85-At-202
X10 -6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
75
Incident Energy (MeV)
85-At-202

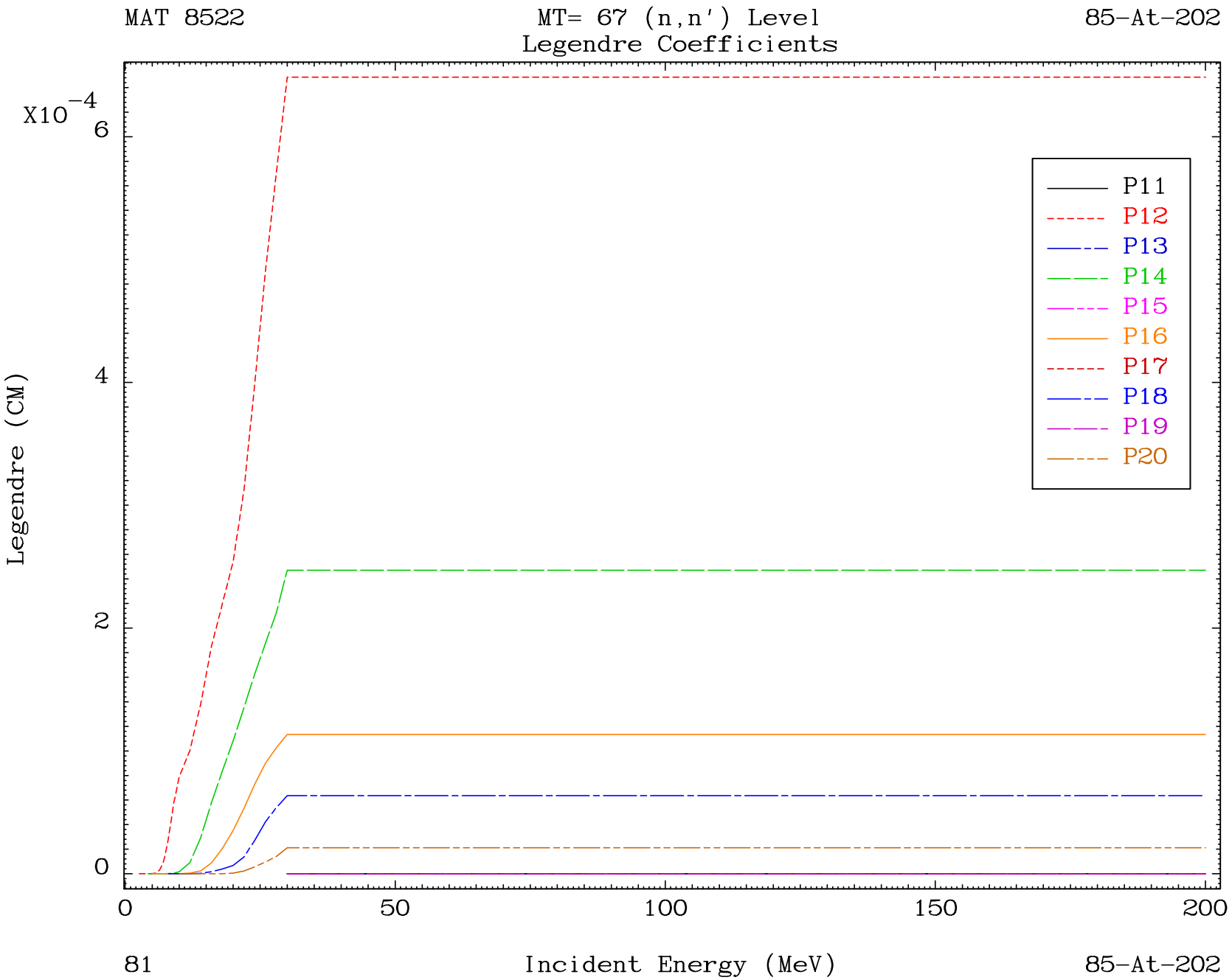

MAT 8522
MT= 66 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
76
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

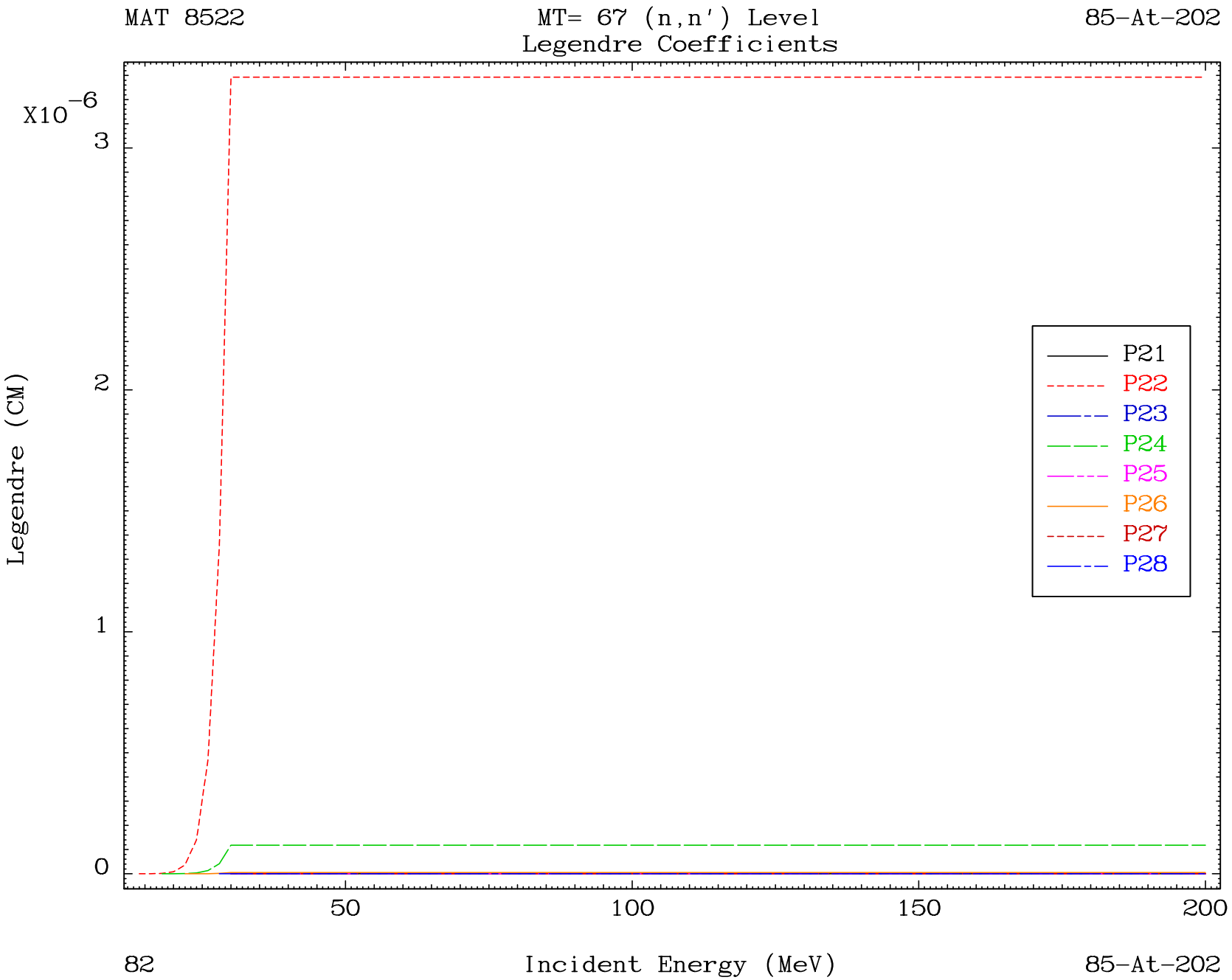

MAT 8522
MT= 66 (n,n') Level
Legendre Coefficients
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
77
Incident Energy (MeV)
85-At-202

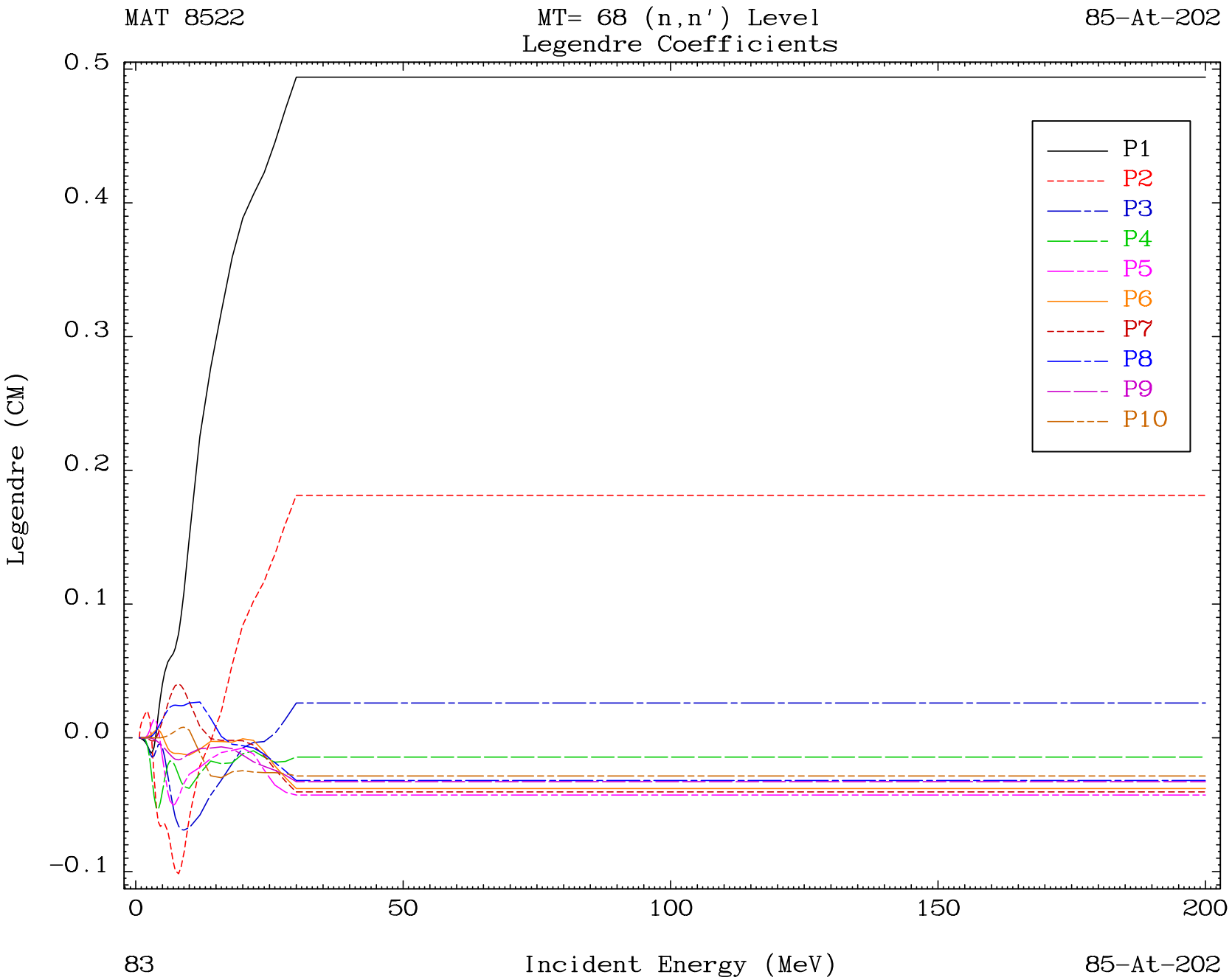

MAT 8522
MT= 66 (n,n') Level
Legendre Coefficients
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.01
0.00
-0.01
-0.02
Legendre (CM)
50
100
150
200
78
Incident Energy (MeV)
85-At-202

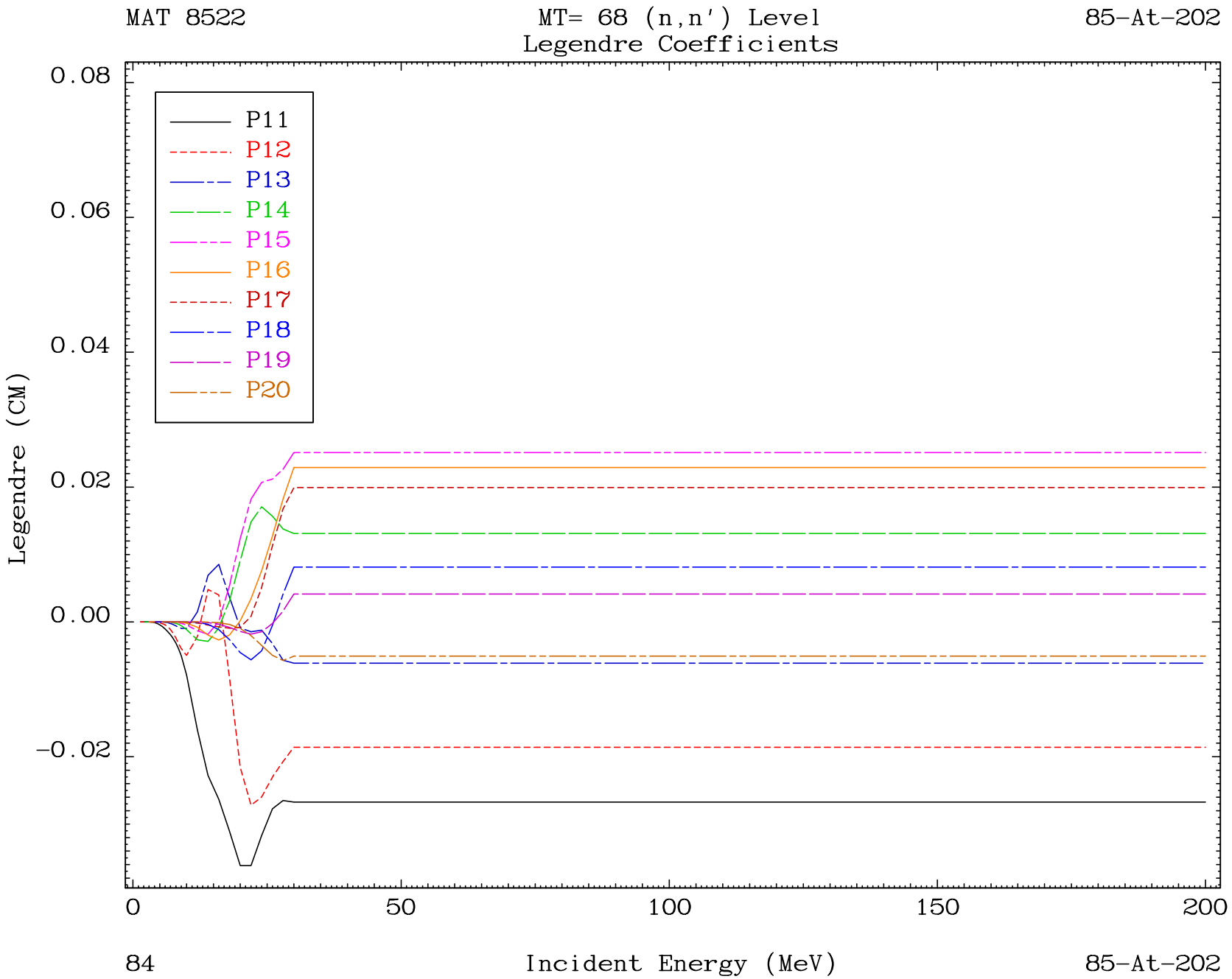

MAT 8522
MT= 66 (n,n') Level
Legendre Coefficients
85-At-202
0
X10 −6
−1
−2
−3
−4
−5
Legendre (CM)
50
100
150
200
79
Incident Energy (MeV)
85-At-202
P31
P32
P33
P34
P35
P36
P37
P38

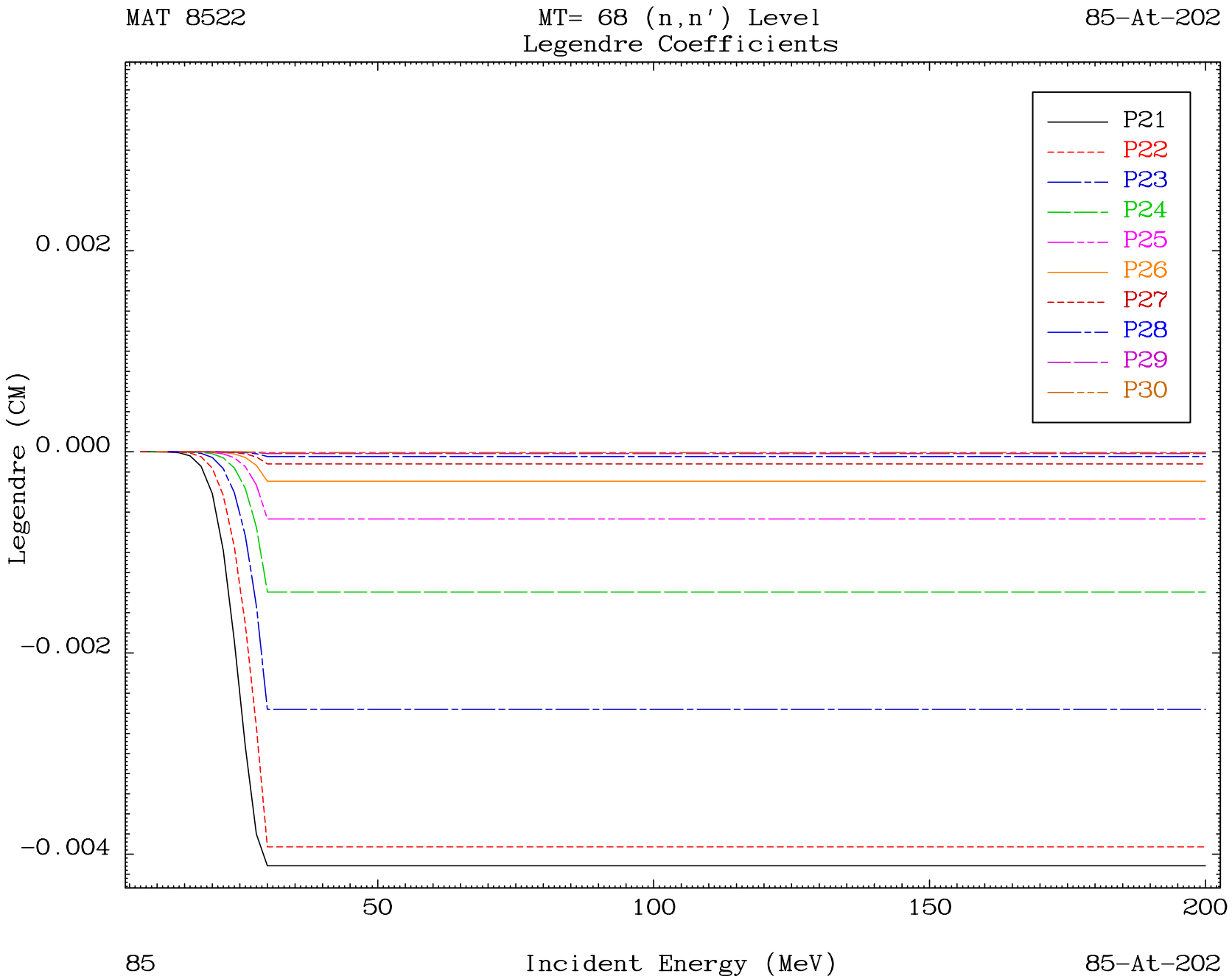

MAT 8522
MT= 67 (n,n') Level
Legendre Coefficients
85-At-202
0.10
0.08
0.06
0.04
0.02
0.00
Legendre (CM)
0
50
100
150
200
80
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

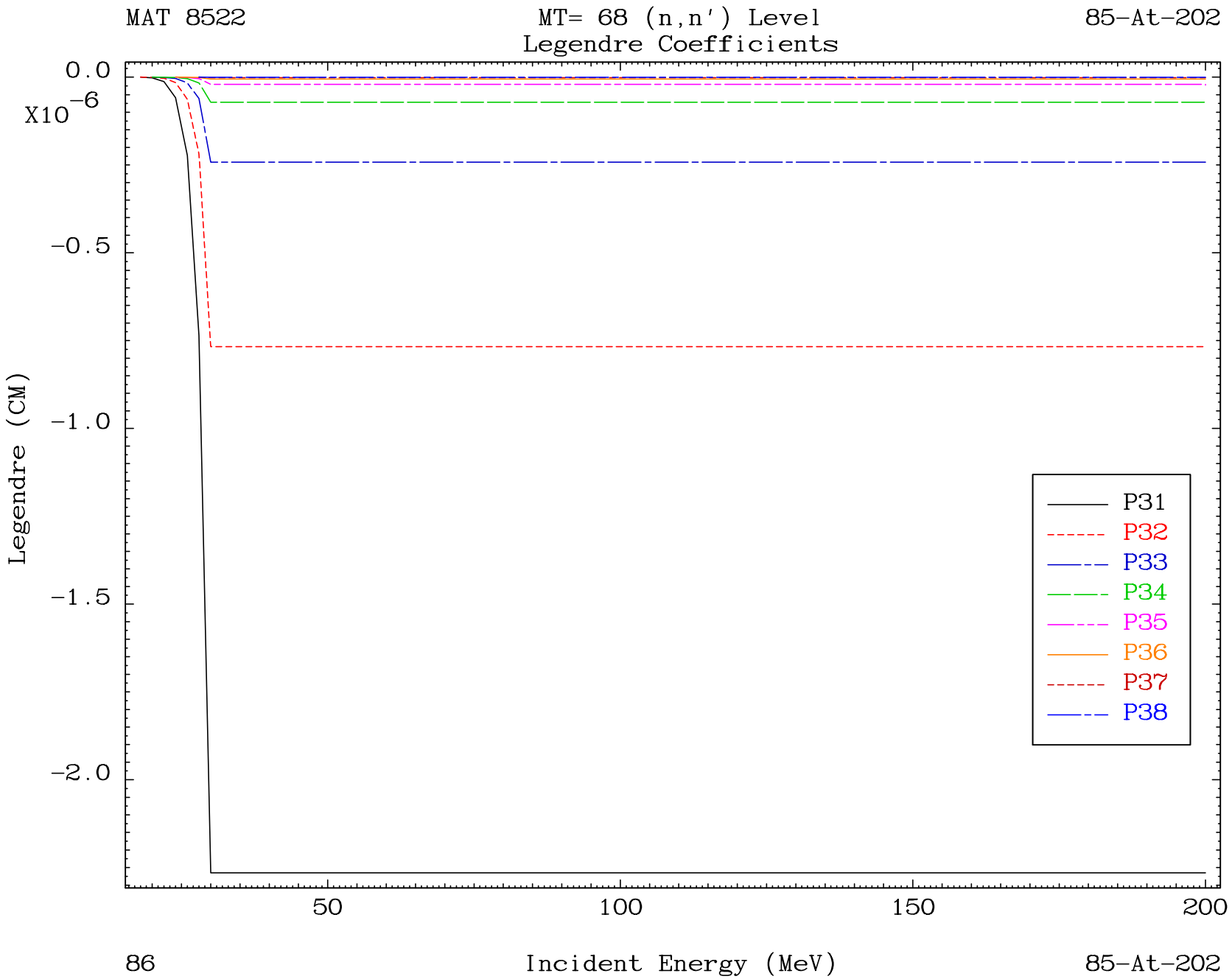

MAT 8522
MT= 67 (n,n') Level
Legendre Coefficients
85-At-202
X10 -4
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
81
Incident Energy (MeV)
85-At-202

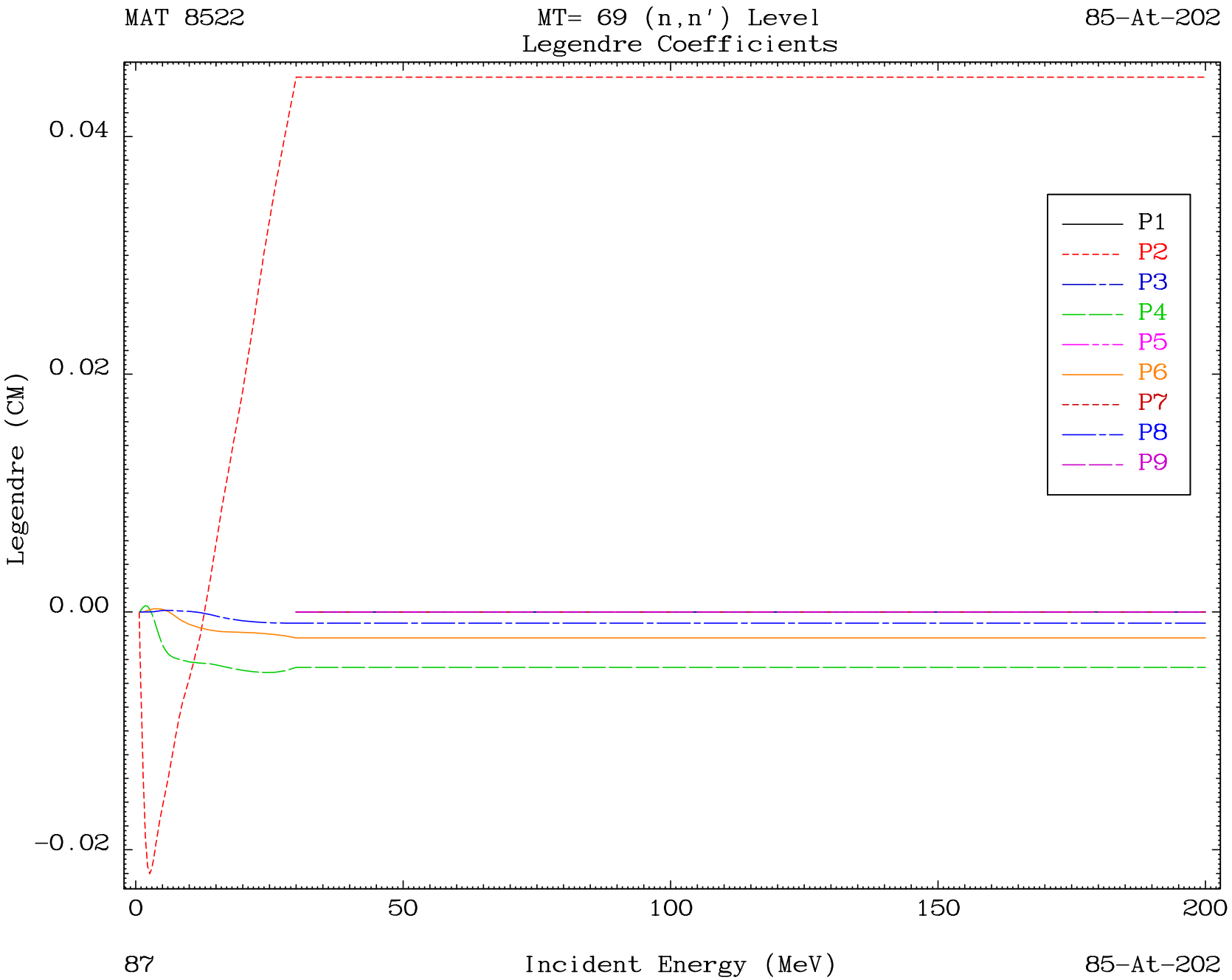

MAT 8522
MT= 67 (n,n') Level
Legendre Coefficients
85-At-202
X10 −6
3
2
1
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
50
100
150
200
82
Incident Energy (MeV)
85-At-202

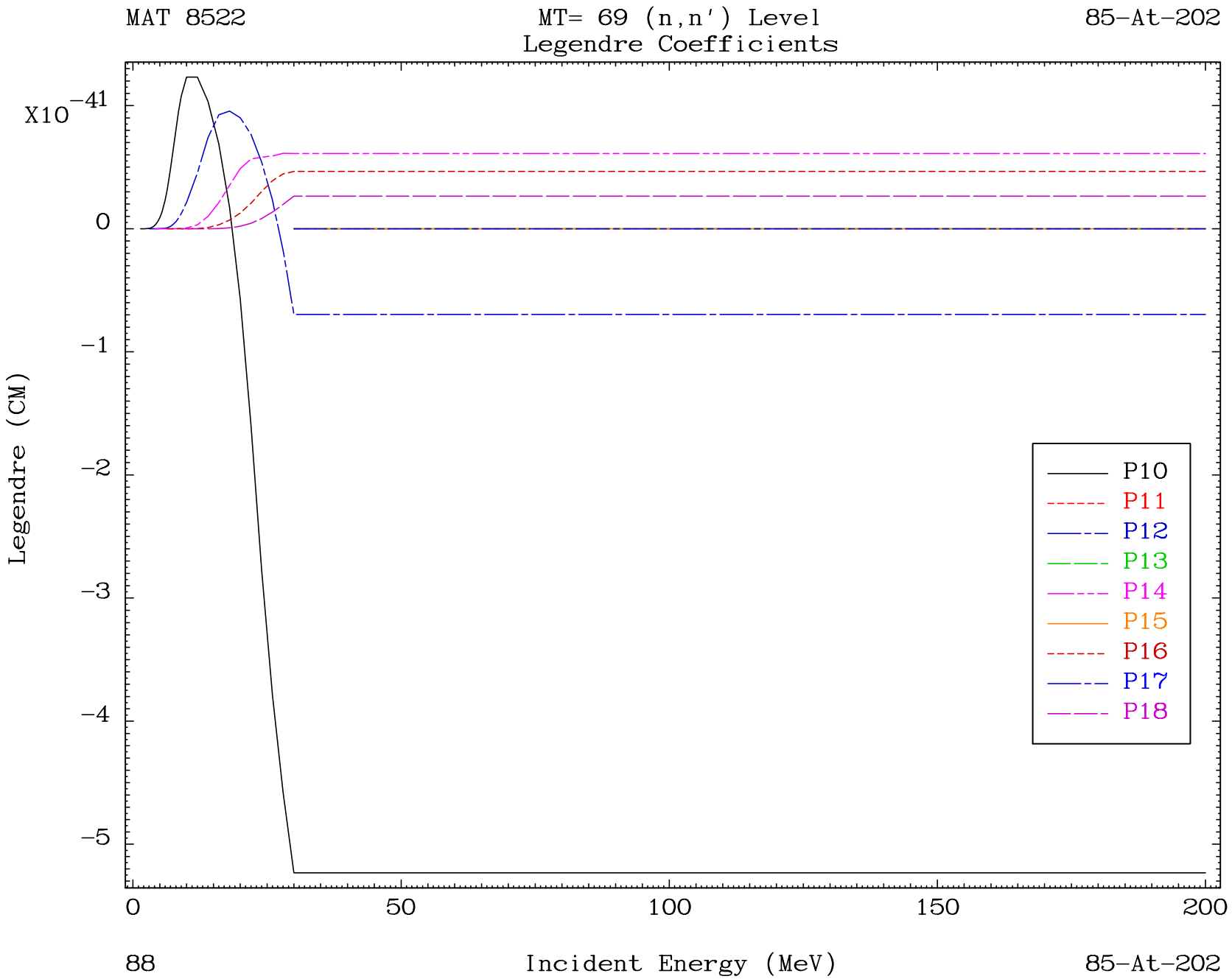

MAT 8522
MT= 68 (n,n') Level
Legendre Coefficients
85-At-202
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
Legendre (CM)
0
50
100
150
200
83
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

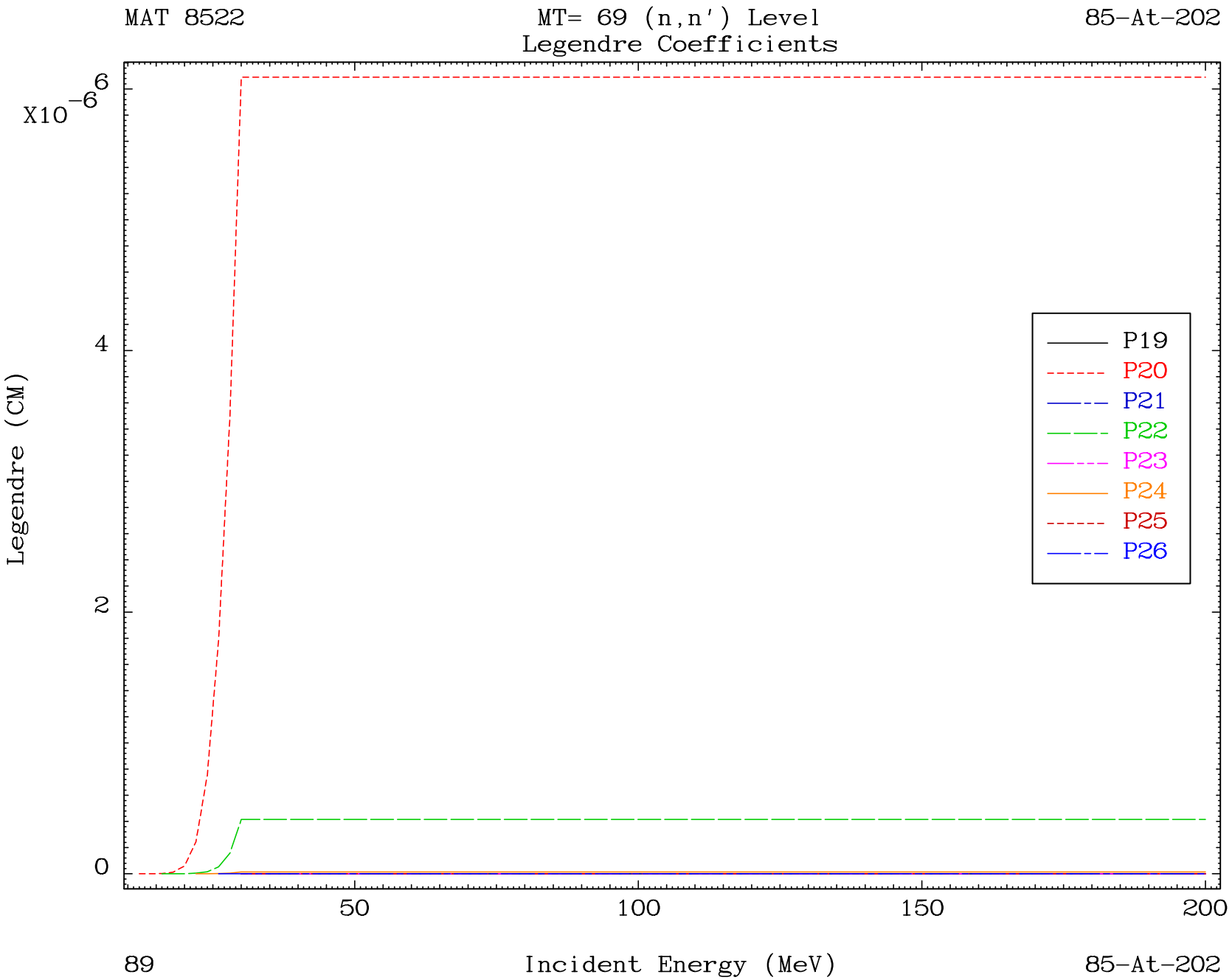

MAT 8522
MT= 68 (n,n') Level
Legendre Coefficients
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
84
Incident Energy (MeV)
85-At-202

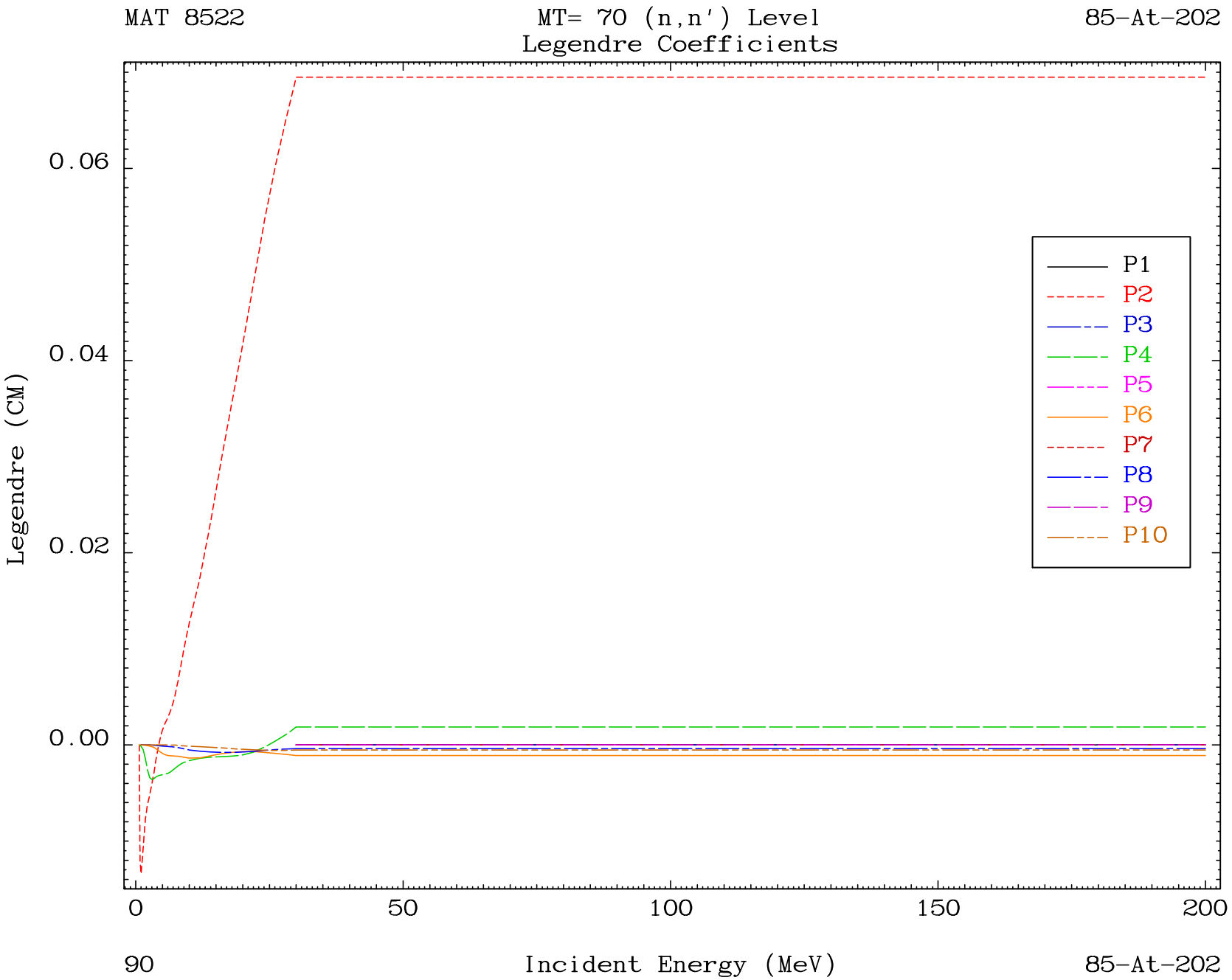

MAT 8522
MT= 68 (n,n') Level
Legendre Coefficients
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
85
Incident Energy (MeV)
85-At-202

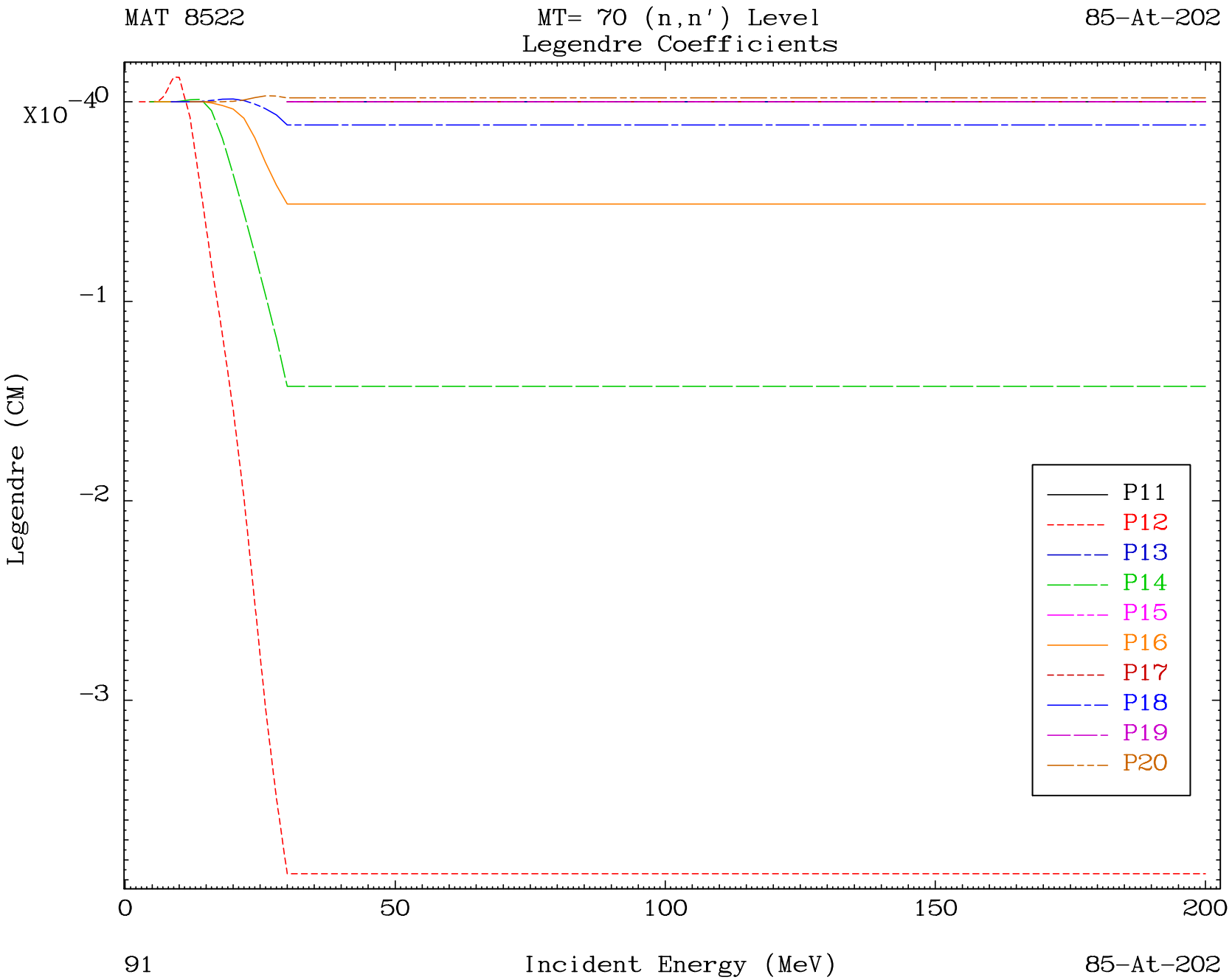

MAT 8522
MT= 68 (n,n') Level
Legendre Coefficients
85-At-202
0.0
X10^-6
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
86
Incident Energy (MeV)
85-At-202
P31
P32
P33
P34
P35
P36
P37
P38

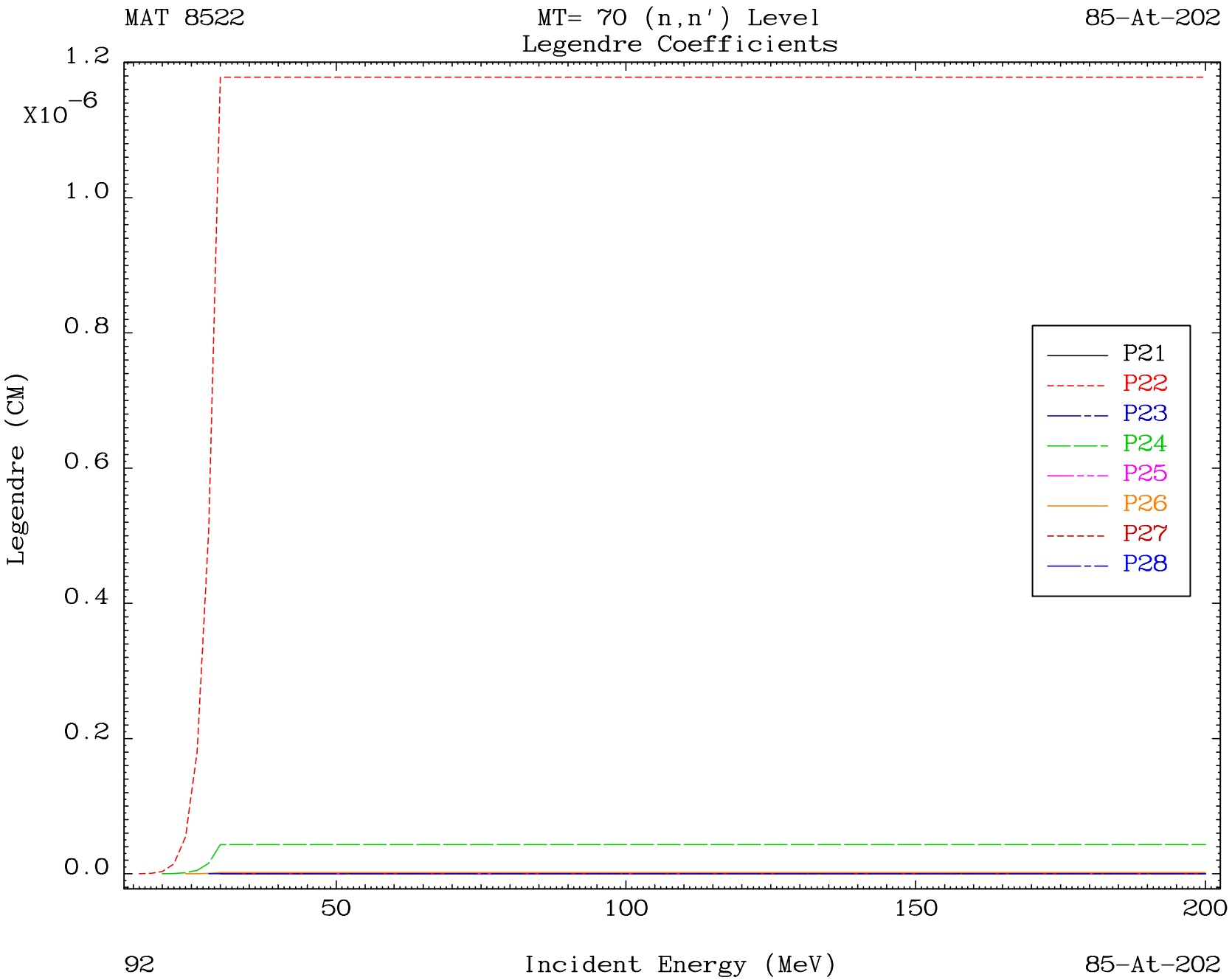

MAT 8522
MT= 69 (n,n') Level
Legendre Coefficients
85-At-202
0.04
0.02
0.00
-0.02
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
87
Incident Energy (MeV)
85-At-202

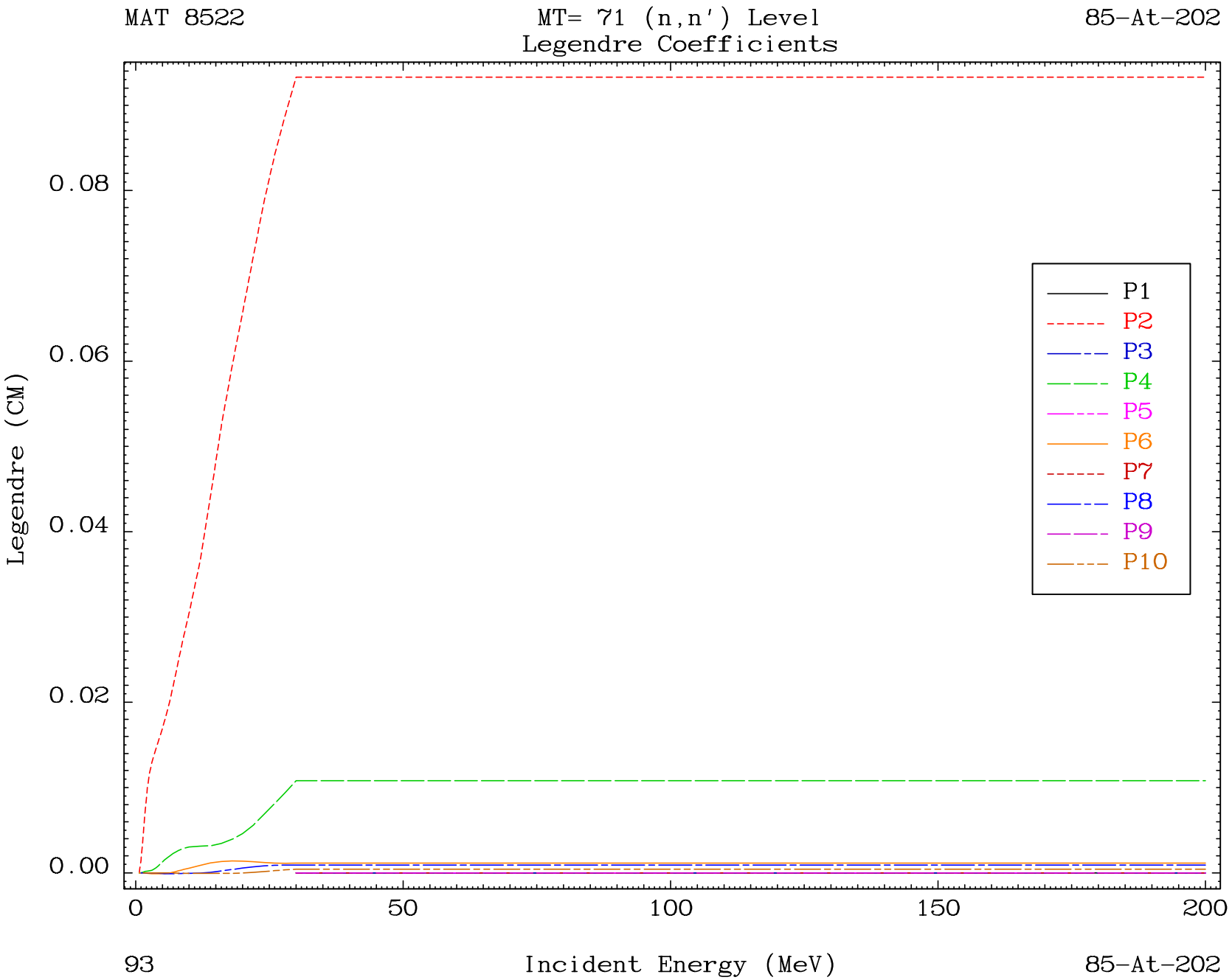

MAT 8522
MT= 69 (n,n') Level
Legendre Coefficients
85-At-202
X10^-41
0
-1
-2
-3
-4
-5
Legendre (CM)
0
50
100
150
200
88
Incident Energy (MeV)
85-At-202
P10
P11
P12
P13
P14
P15
P16
P17
P18

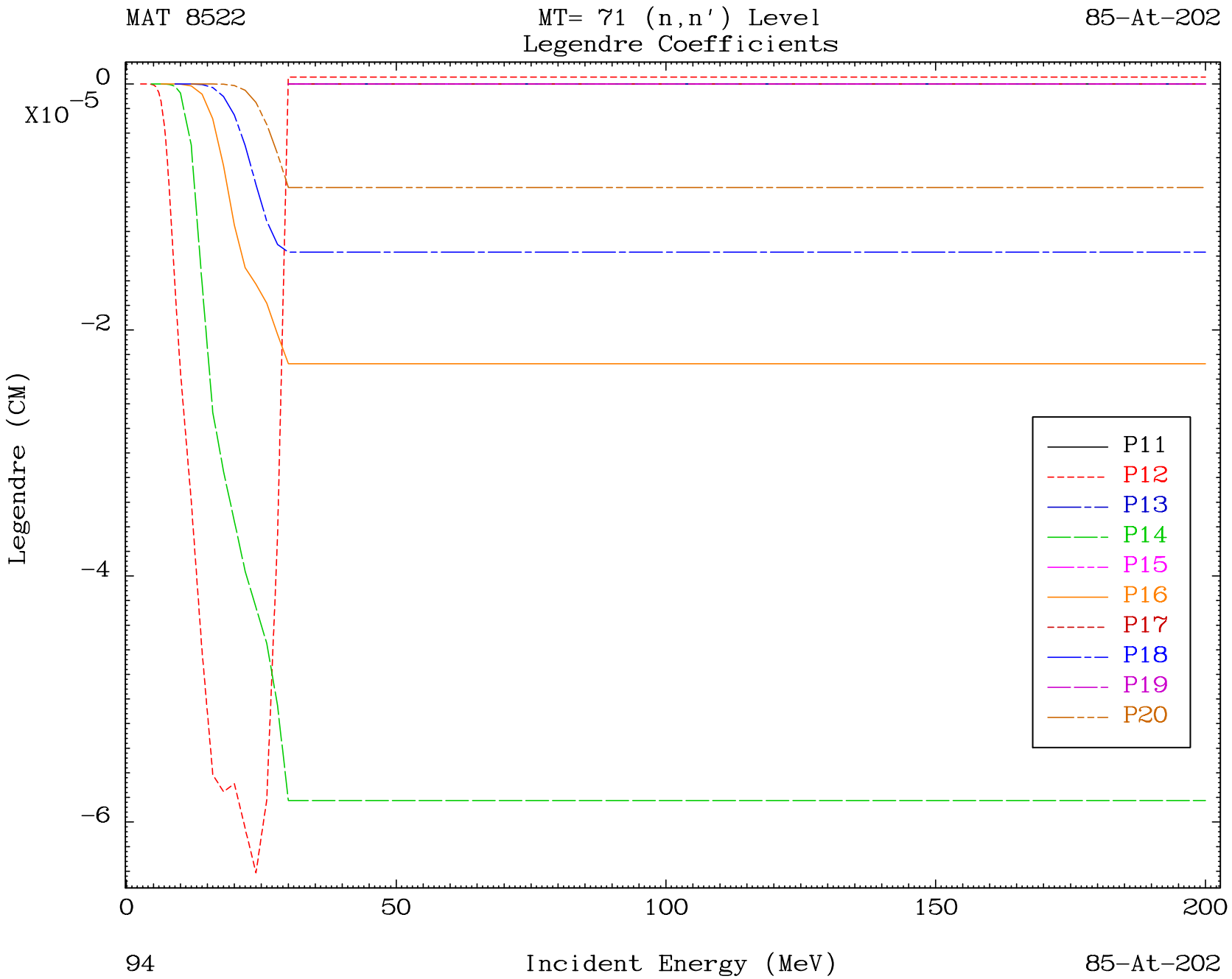

MAT 8522
MT= 69 (n,n') Level
Legendre Coefficients
85-At-202
X10 -6
6
4
2
0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
89
Incident Energy (MeV)
85-At-202

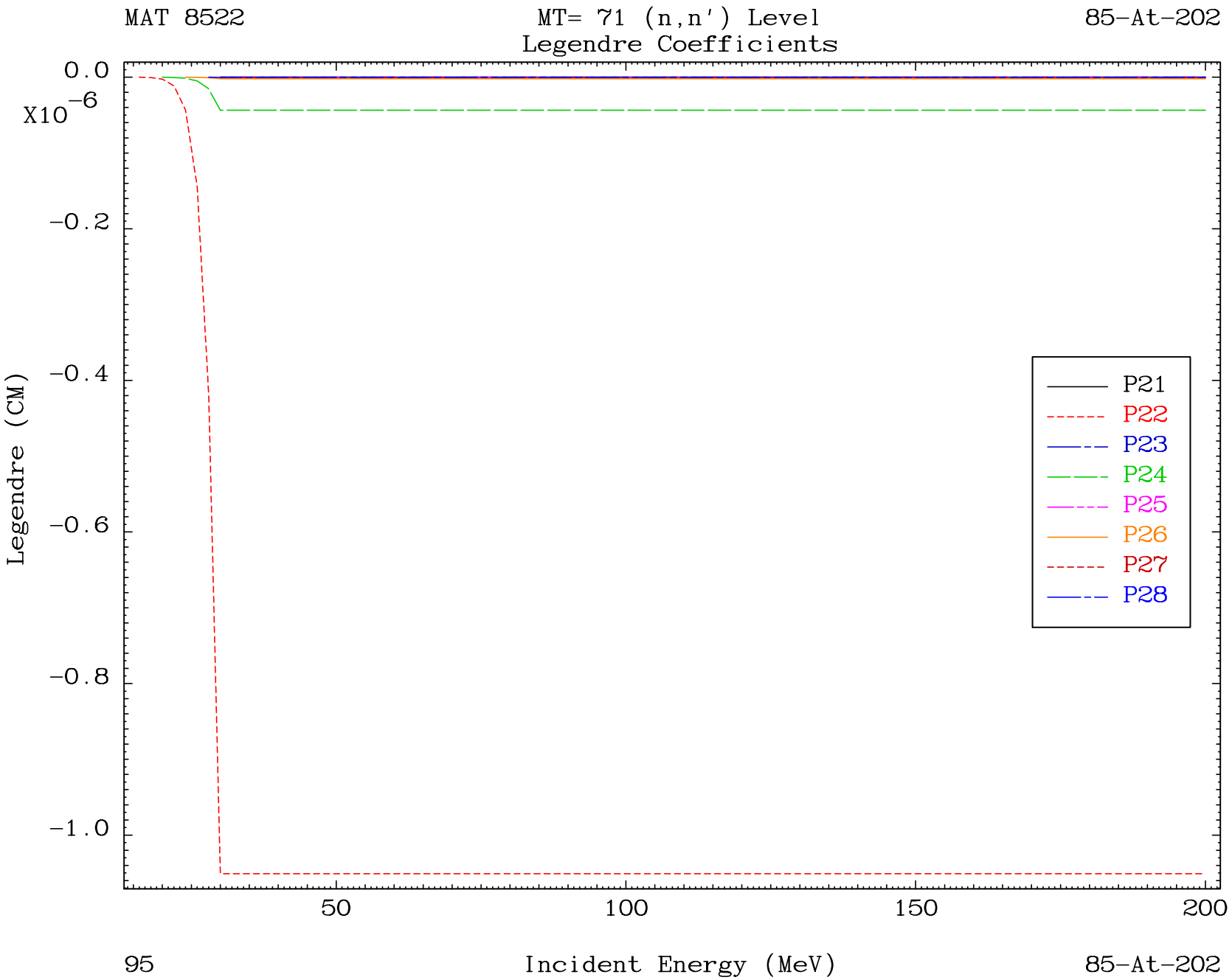

MAT 8522
MT= 70 (n,n') Level
Legendre Coefficients
85-At-202
0.06
0.04
0.02
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
0
50
100
150
200
90
Incident Energy (MeV)
85-At-202

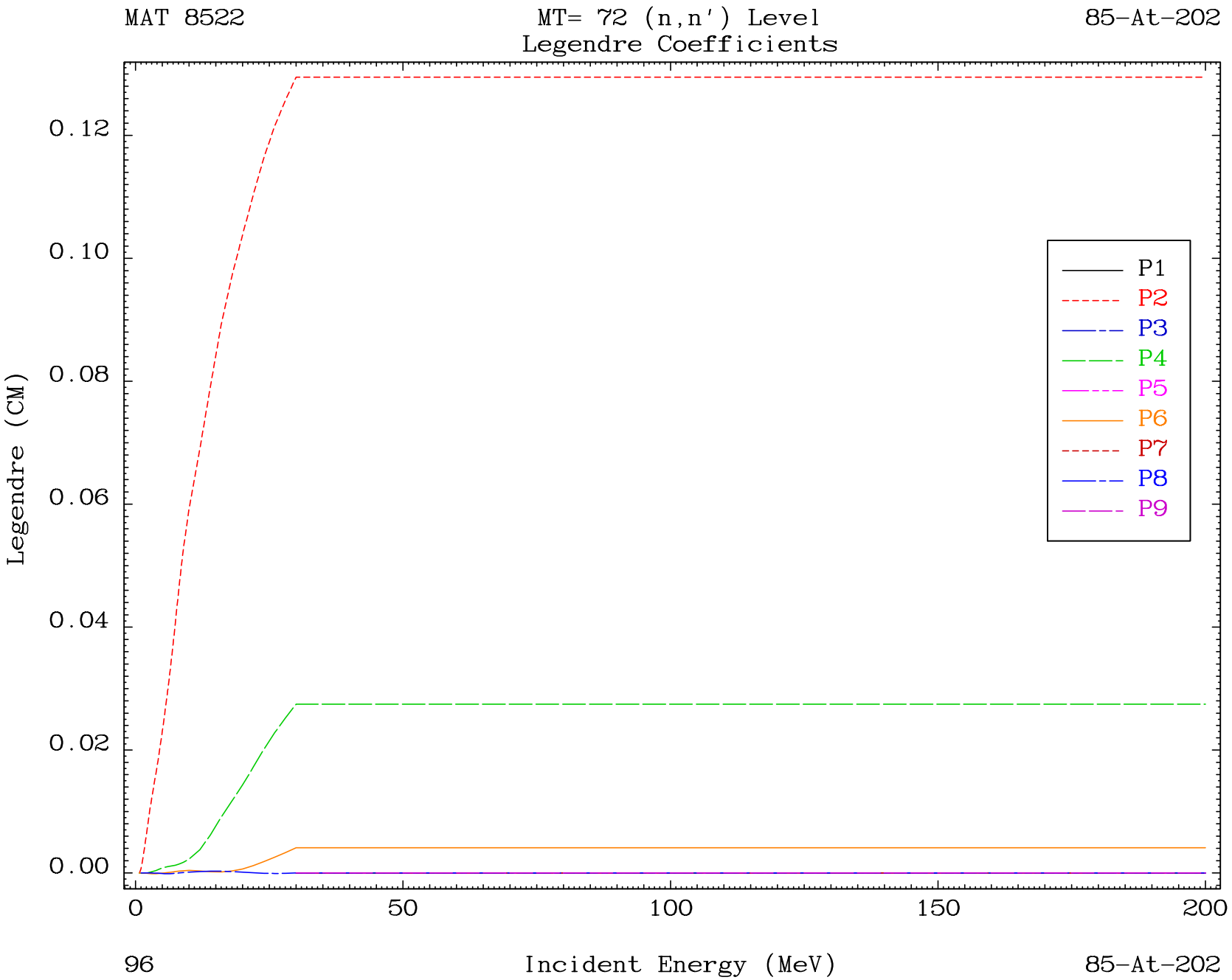

MAT 8522
MT= 70 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
0
-1
-2
-3
Legendre (CM)
0
50
100
150
200
91
Incident Energy (MeV)
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

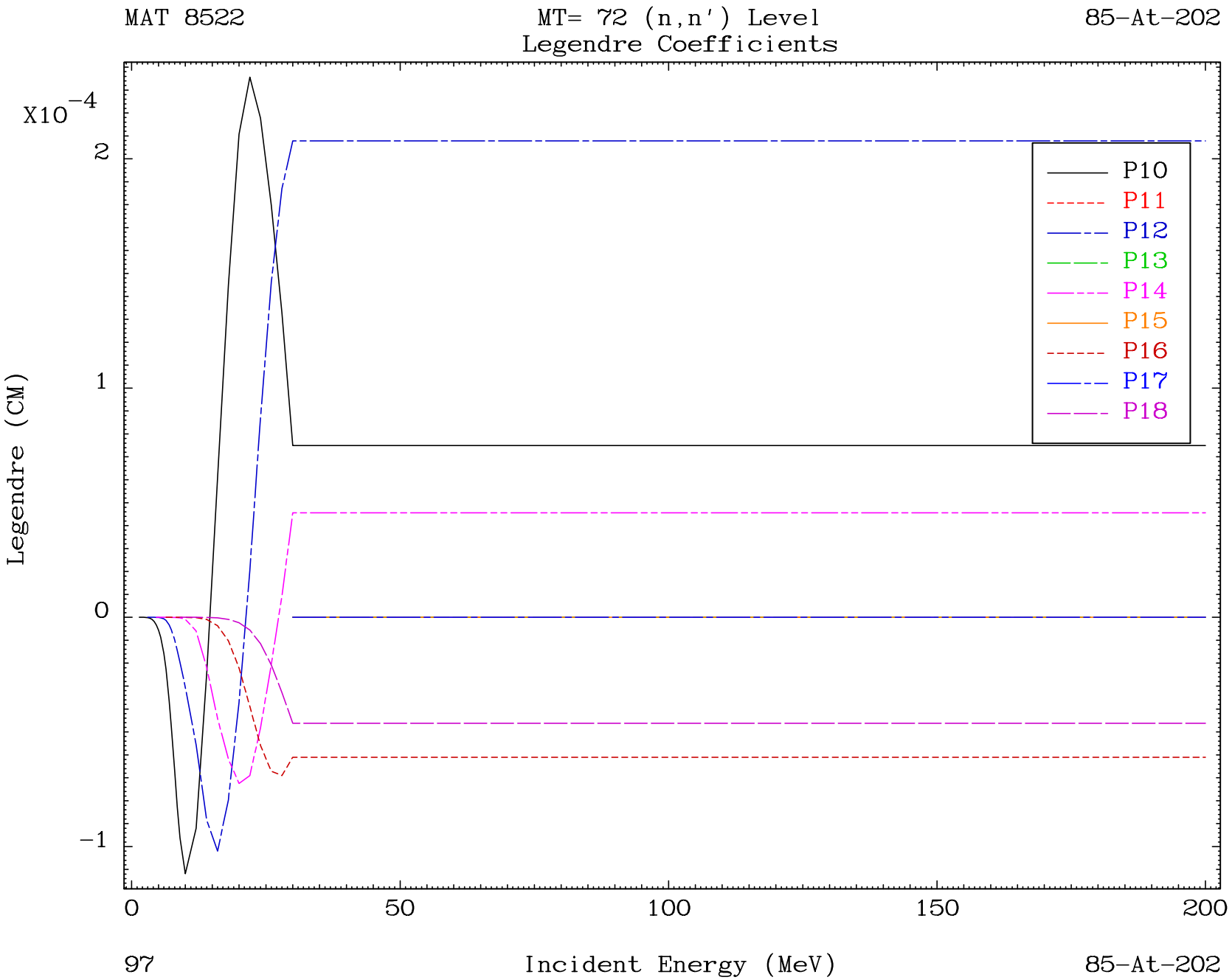

MAT 8522
MT= 70 (n,n') Level
Legendre Coefficients
85-At-202
X10^-6
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
92
Incident Energy (MeV)
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28

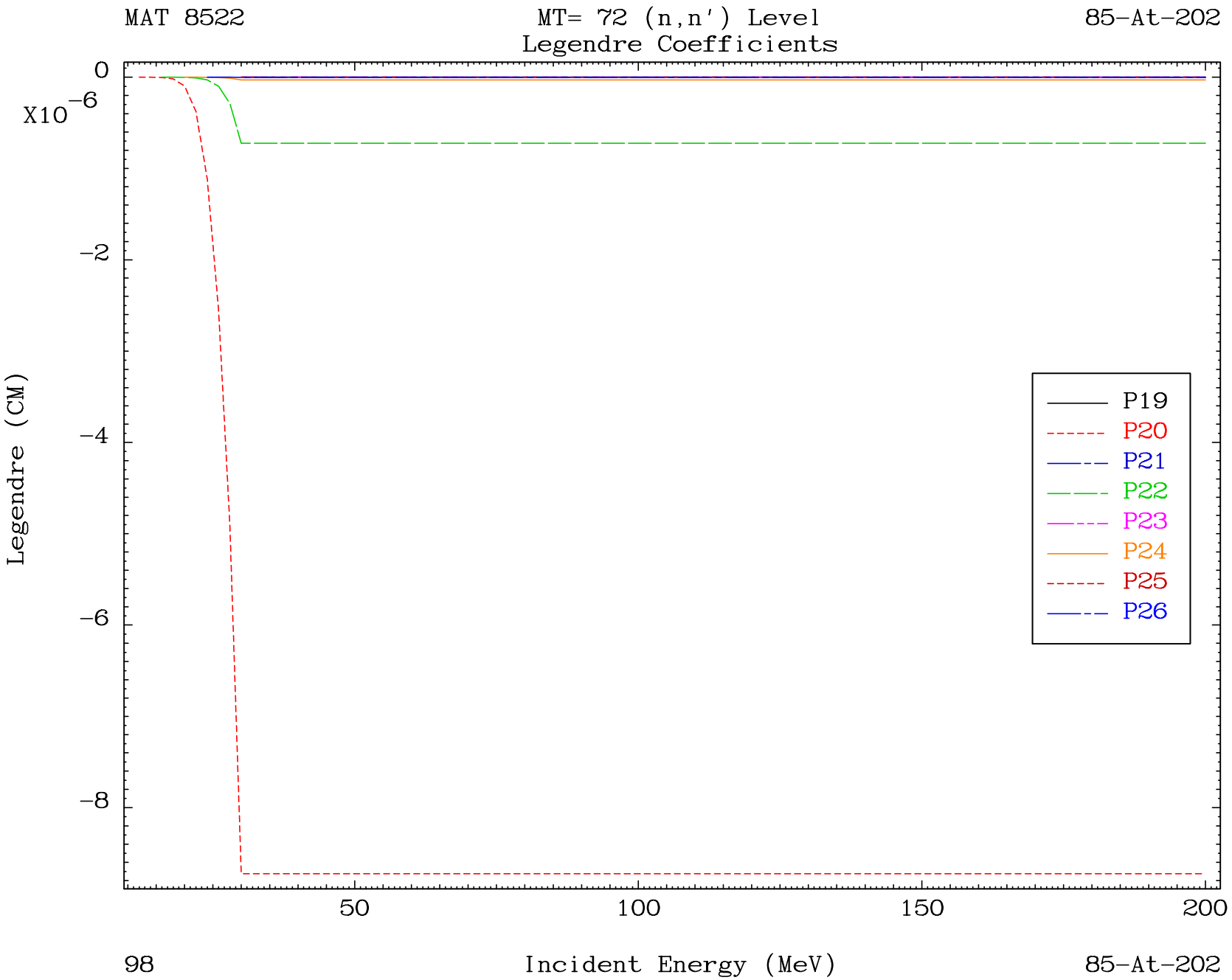

MAT 8522
MT= 71 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.08
0.06
0.04
0.02
0.00
0
50
100
150
200
93
Incident Energy (MeV)
85-At-202
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

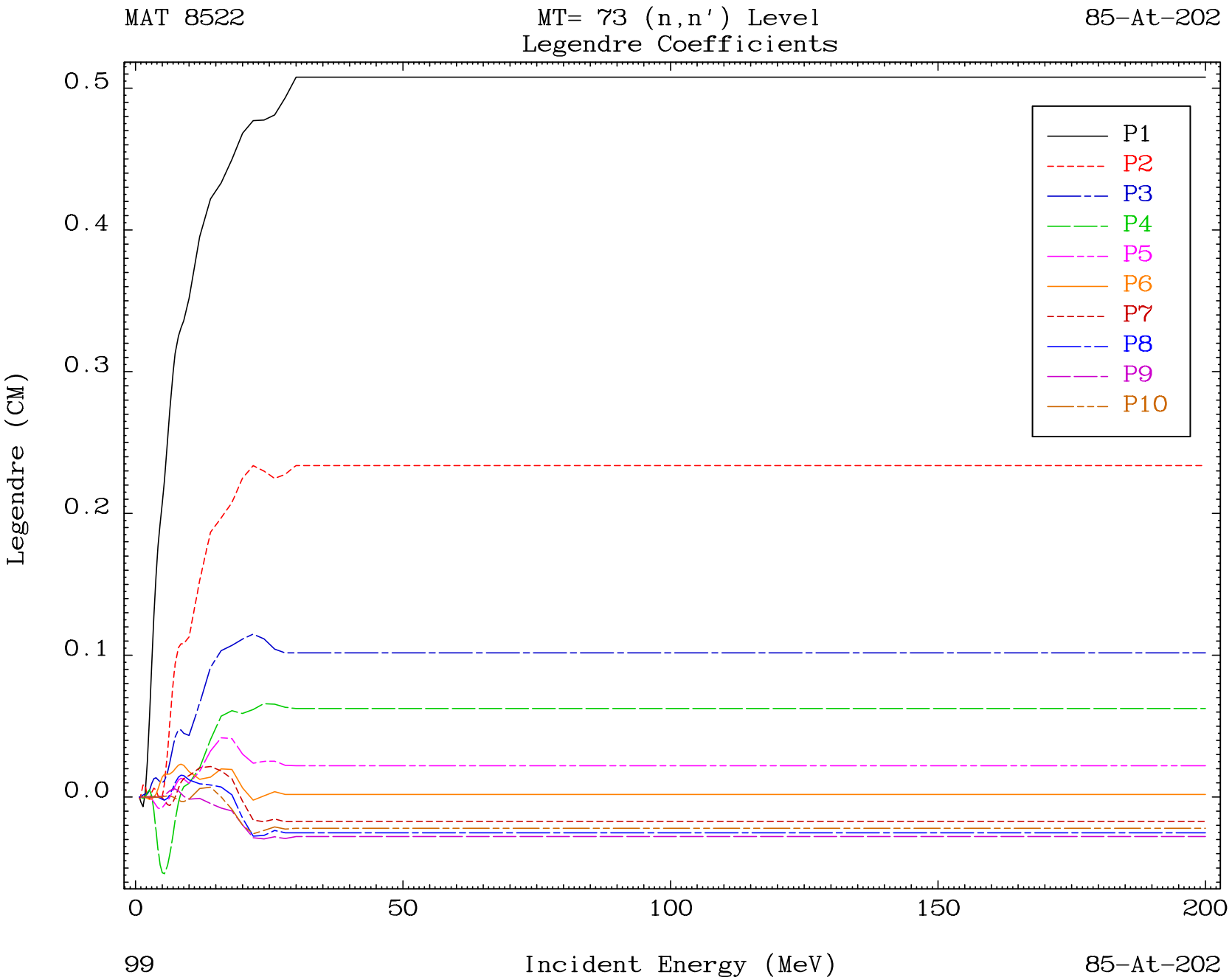

MAT 8522
MT= 71 (n,n') Level
Legendre Coefficients
85-At-202
X10^-5
0
-2
-4
-6
Legendre (CM)
0
50
100
150
200
94
Incident Energy (MeV)
85-At-202
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

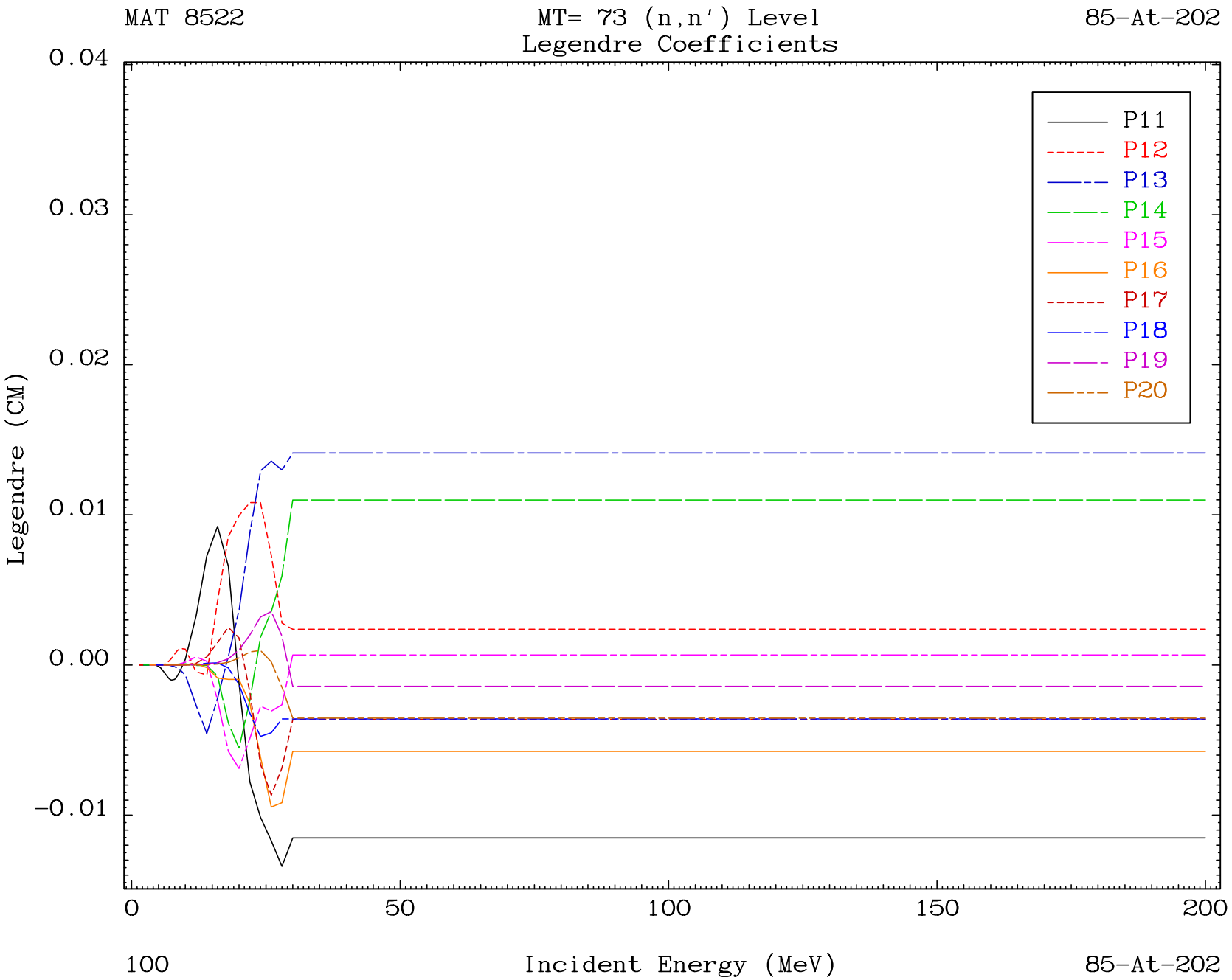

MAT 8522
MT= 71 (n,n') Level
Legendre Coefficients
85-At-202
0.0
X10^-6
-0.2
-0.4
-0.6
-0.8
-1.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
50
100
150
200
95
Incident Energy (MeV)
85-At-202

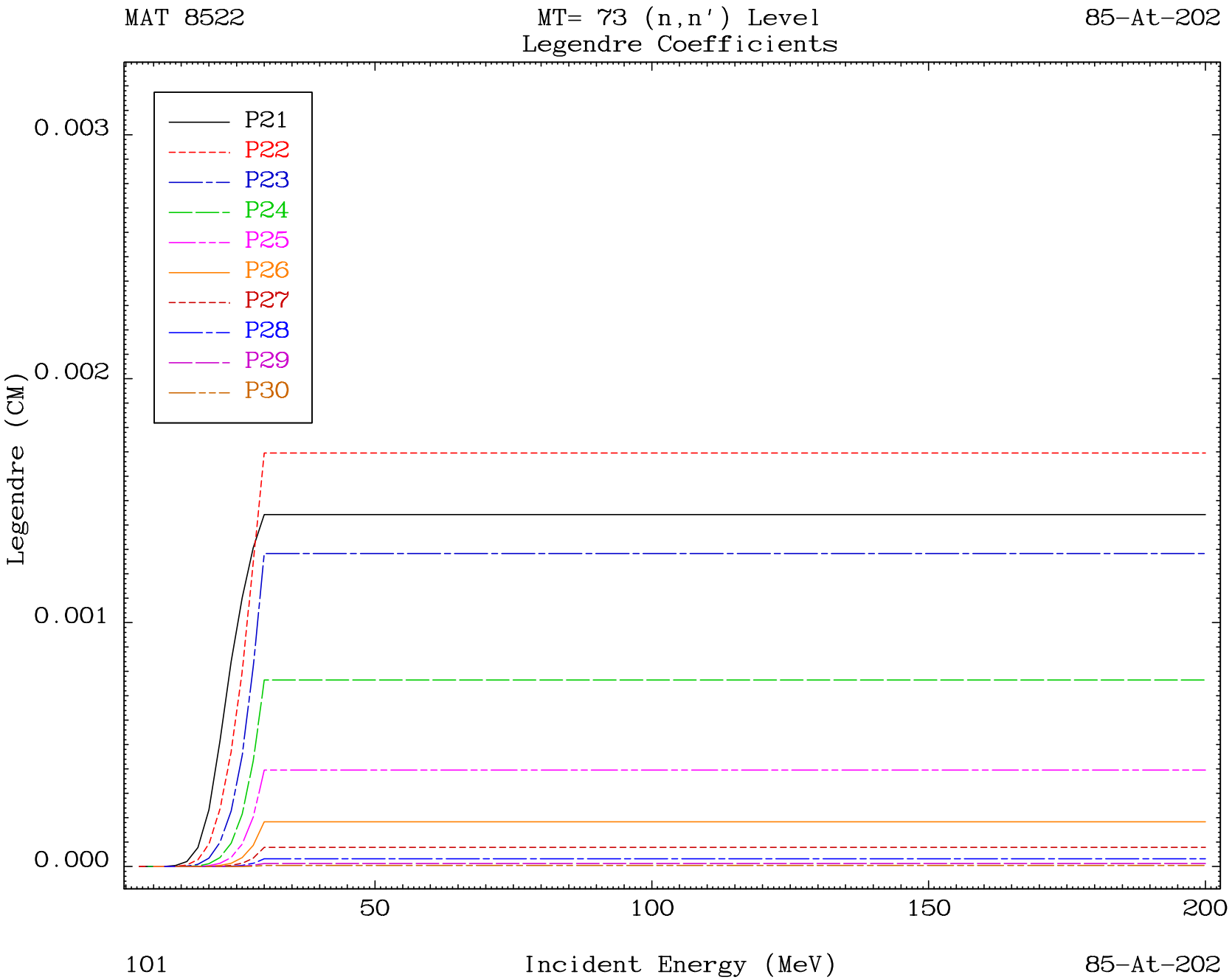

MAT 8522
MT= 72 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
96
Incident Energy (MeV)
85-At-202

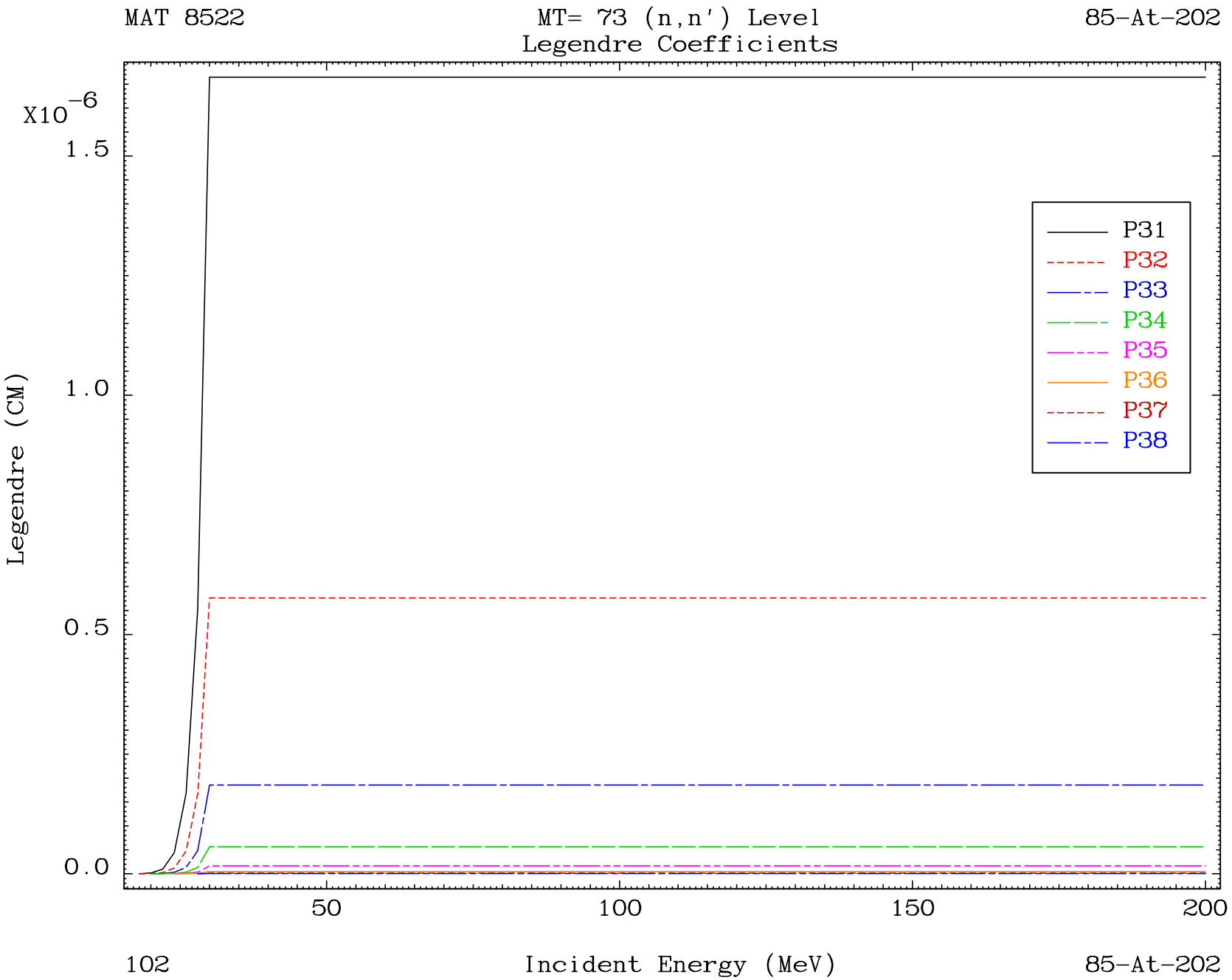

MAT 8522
MT= 72 (n,n') Level
Legendre Coefficients
85-At-202
X10^-4
2
1
0
-1
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
97
Incident Energy (MeV)
85-At-202

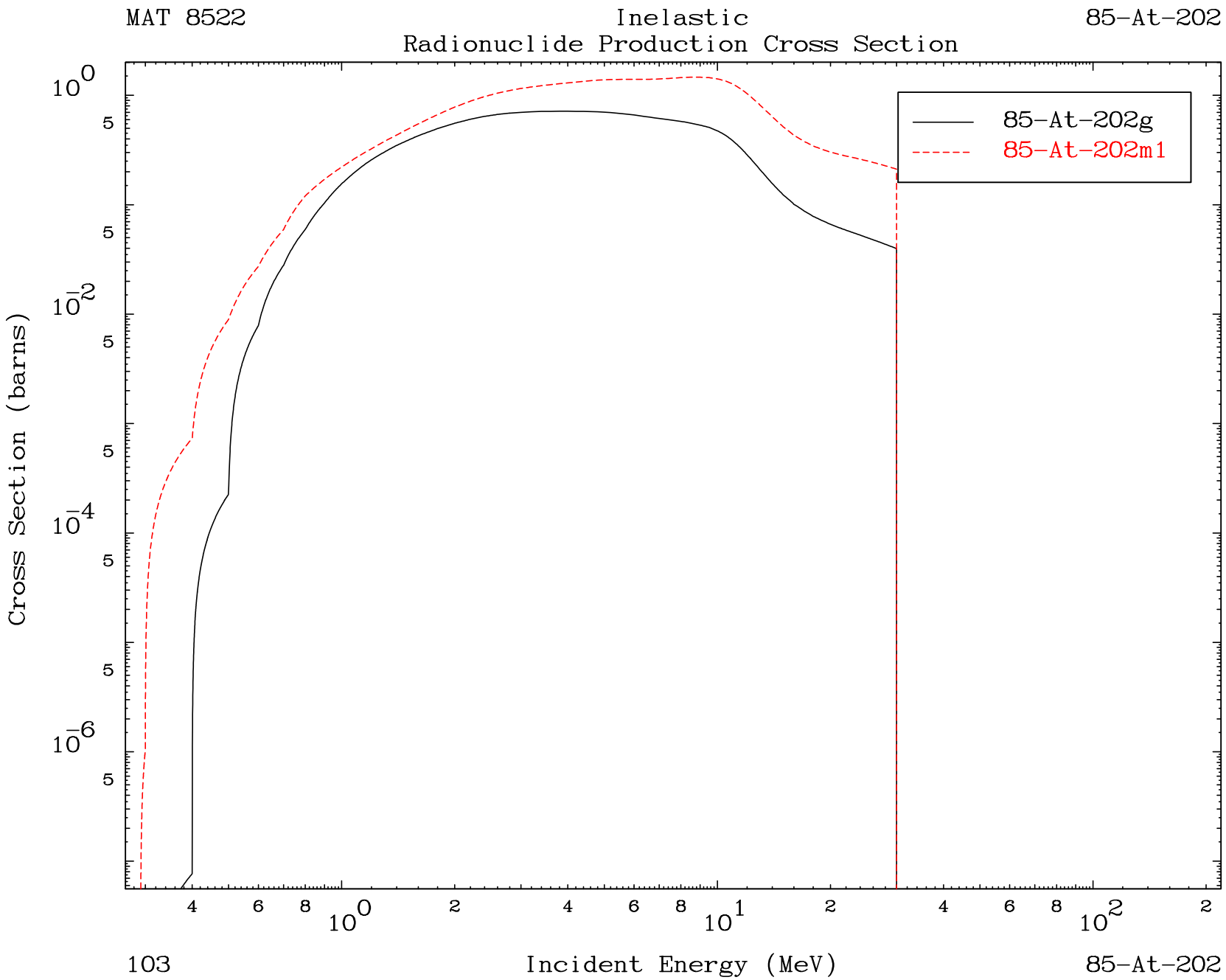

MAT 8522
MT= 72 (n,n') Level
Legendre Coefficients
85-At-202
0
X10 −6
−2
−4
−6
−8
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
98
Incident Energy (MeV)
85-At-202

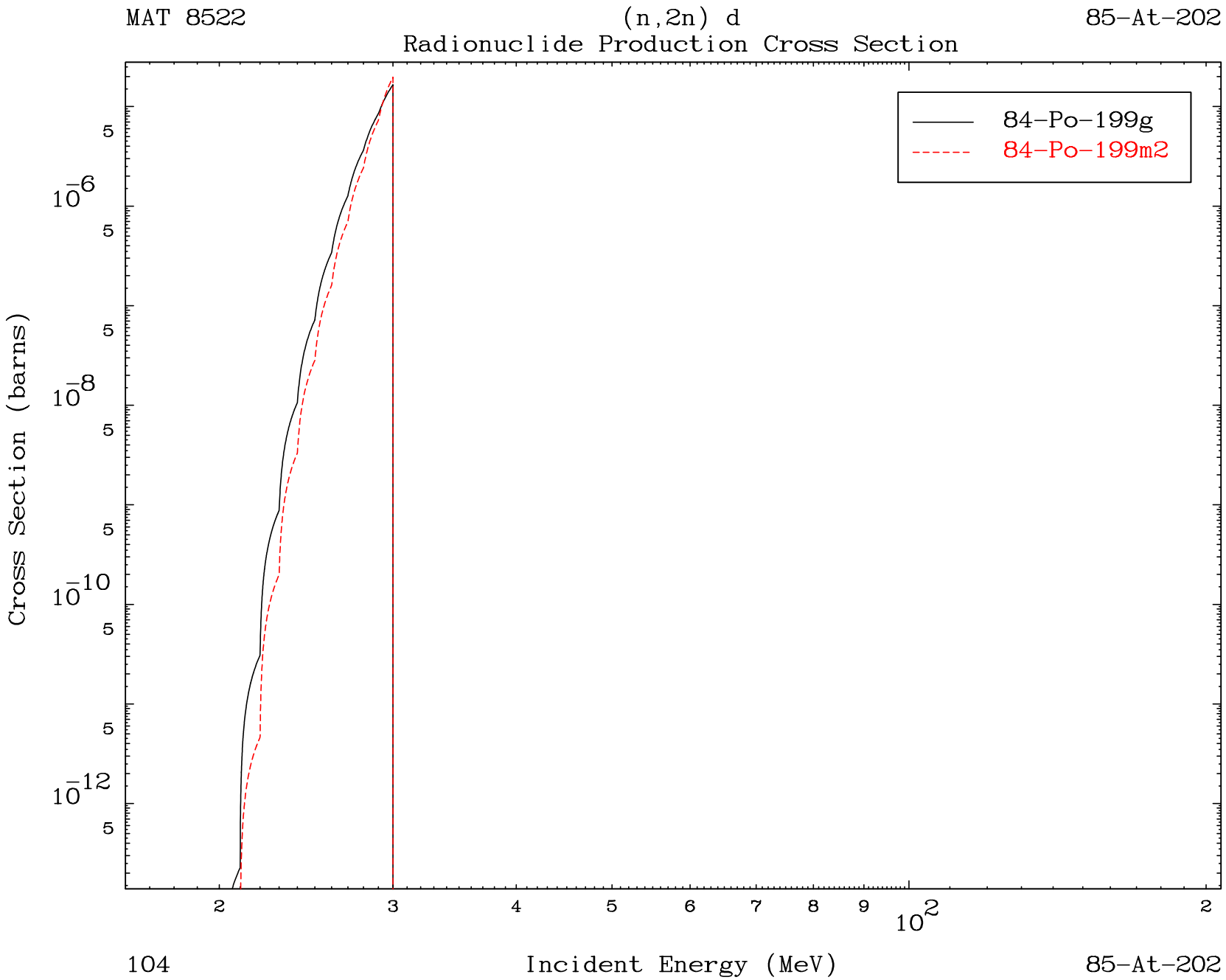

MAT 8522
MT= 73 (n,n') Level
Legendre Coefficients
85-At-202
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
99
Incident Energy (MeV)
85-At-202

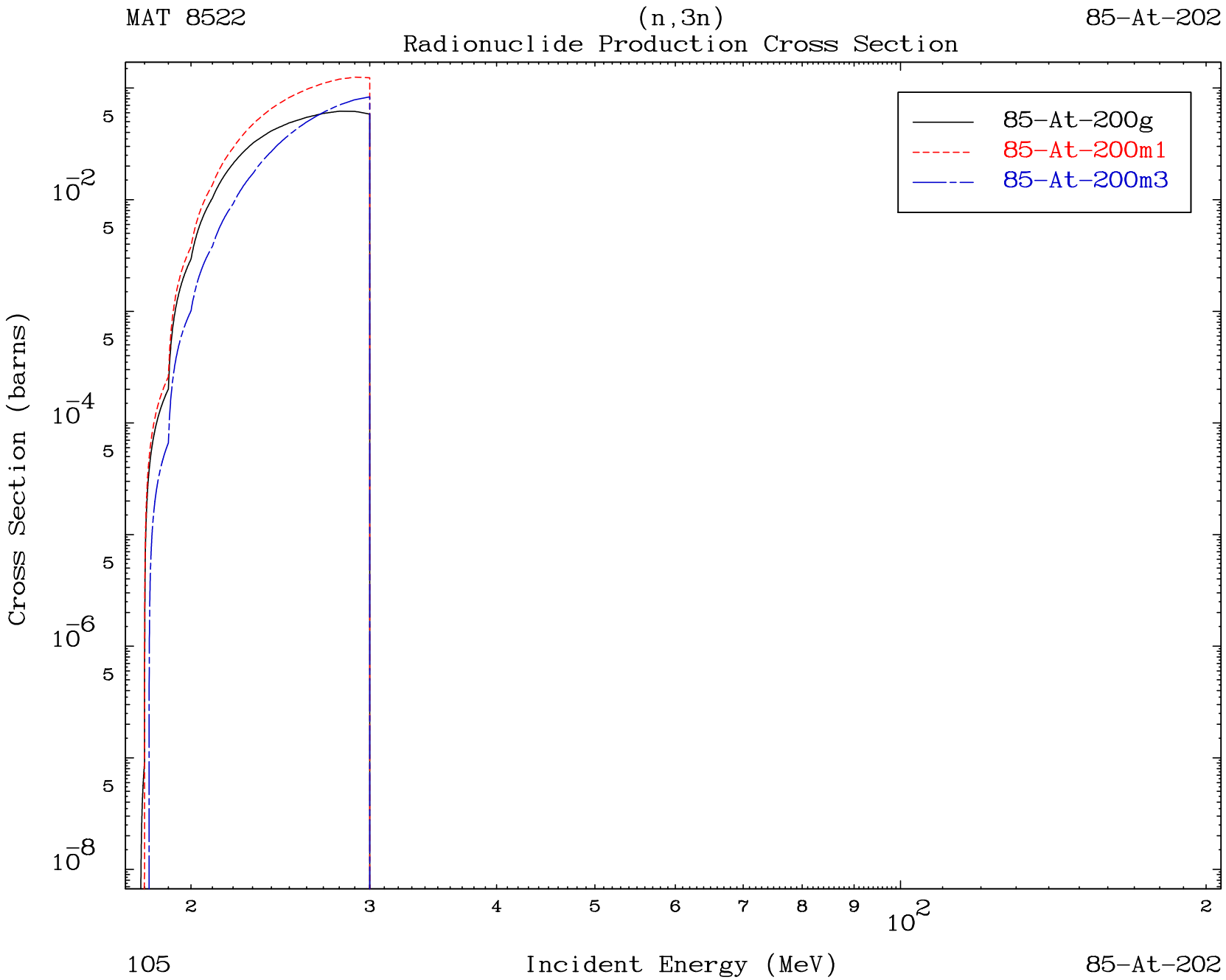

MAT 8522
MT= 73 (n,n') Level
Legendre Coefficients
85-At-202
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
100
Incident Energy (MeV)
85-At-202

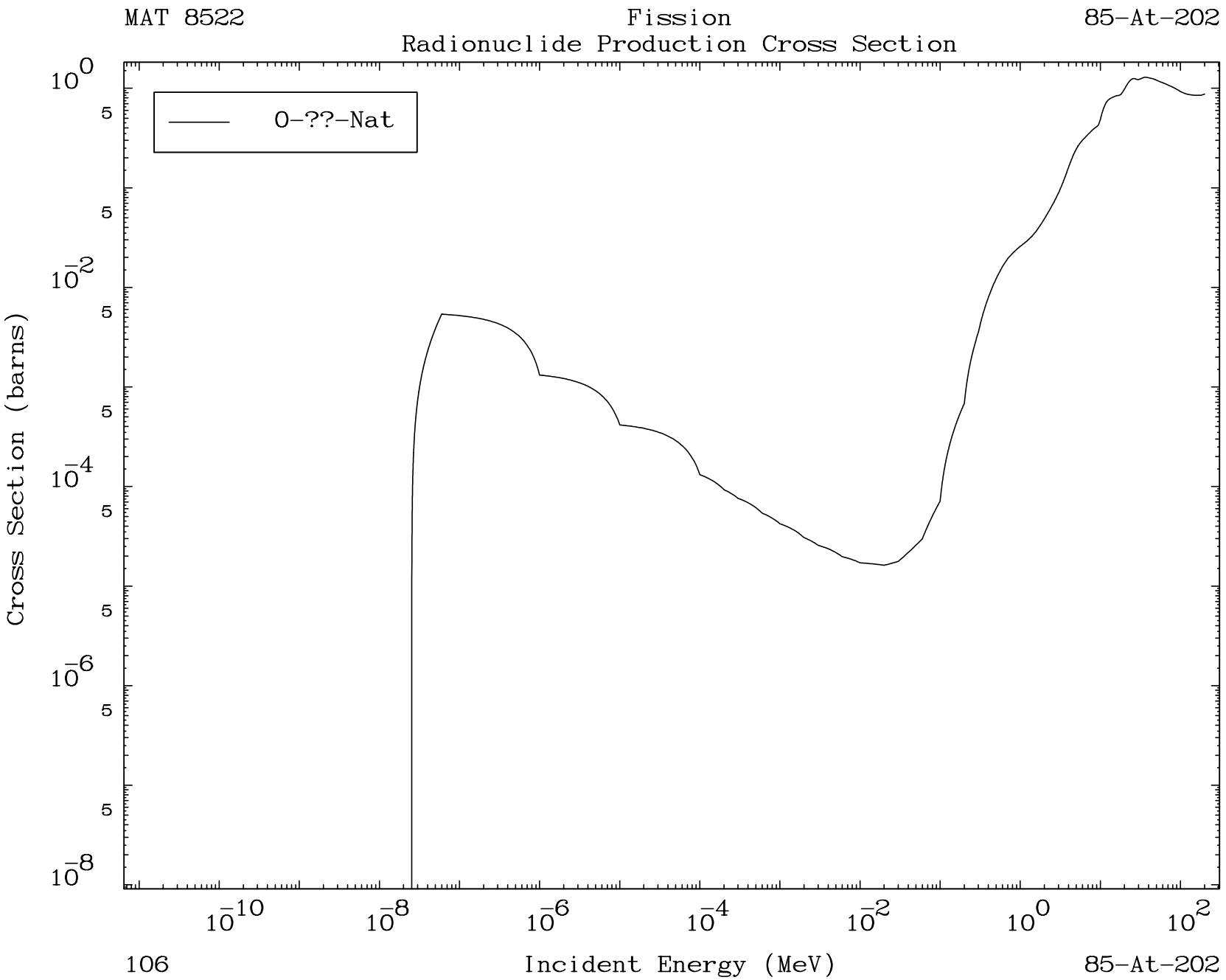

MAT 8522
MT= 73 (n,n') Level
Legendre Coefficients
85-At-202
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
101
Incident Energy (MeV)
85-At-202

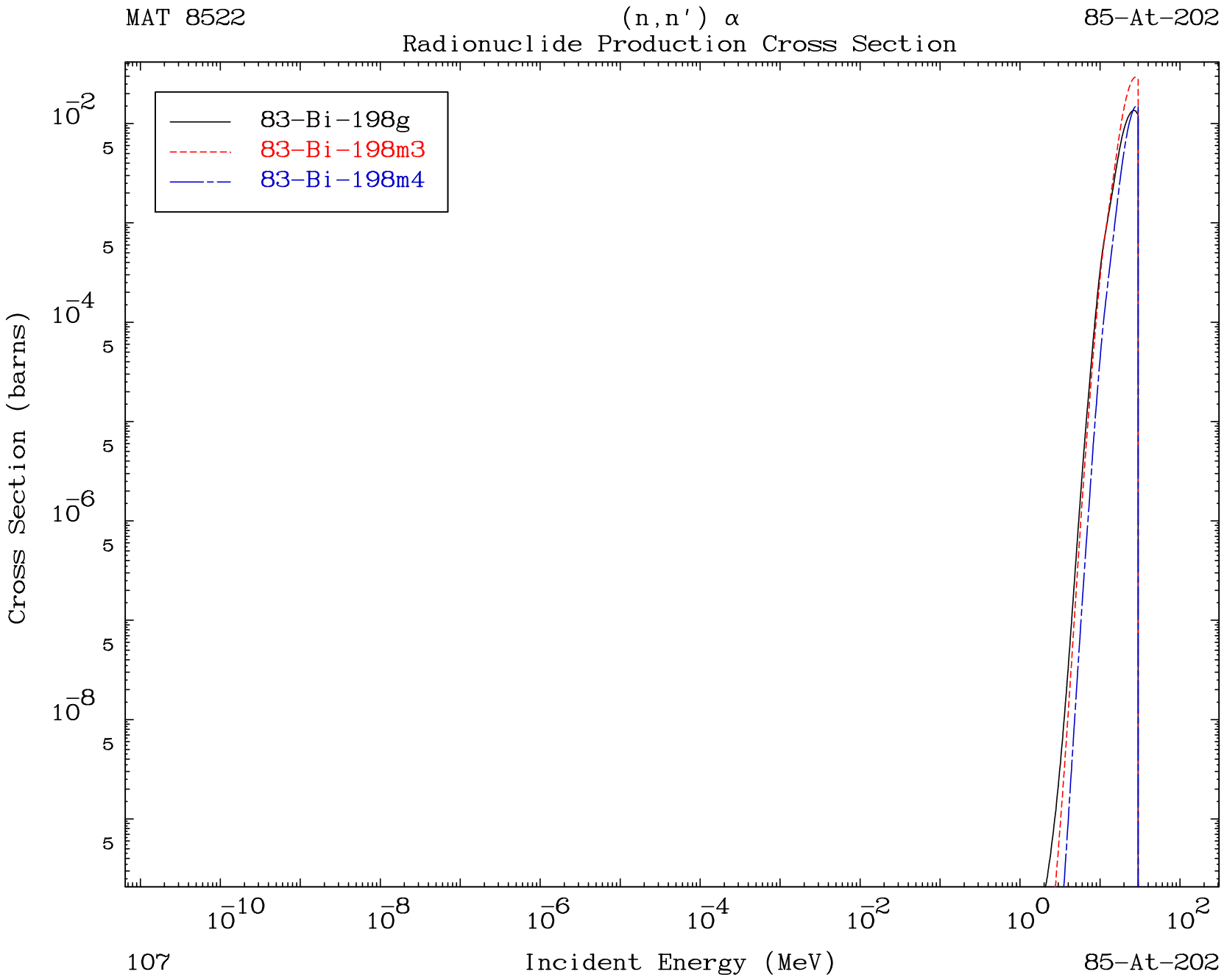

MAT 8522
MT= 73 (n,n') Level
Legendre Coefficients
85-At-202
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
102
Incident Energy (MeV)
85-At-202

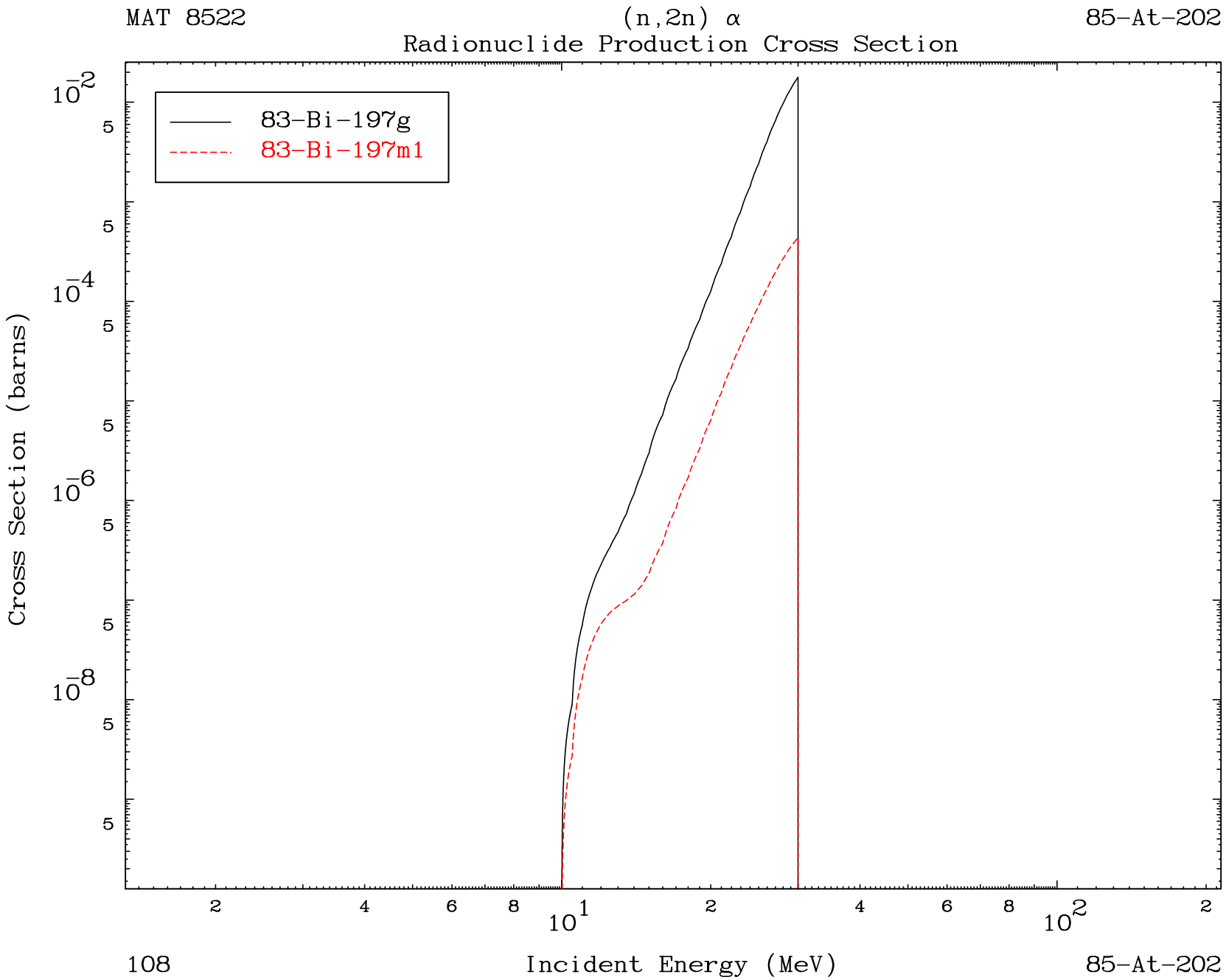

MAT 8522
Inelastic
85-At-202
Radionuclide Production Cross Section
85-At-202g
85-At-202m1
Cross Section (barns)
Incident Energy (MeV)
103
85-At-202

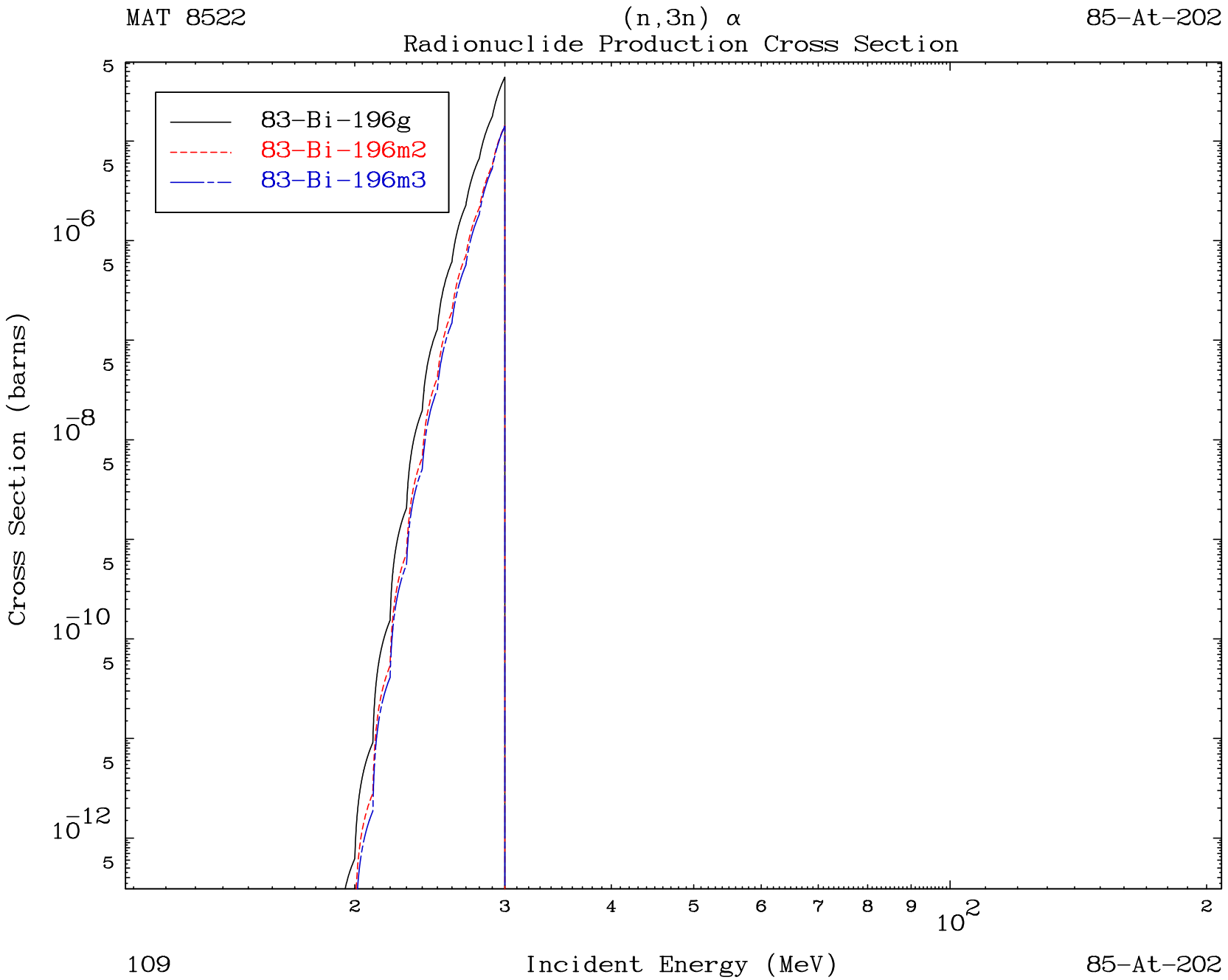

MAT 8522
(n,2n) d
85-At-202
Radionuclide Production Cross Section
84-Po-199g
84-Po-199m2
Cross Section (barns)
Incident Energy (MeV)
104
85-At-202

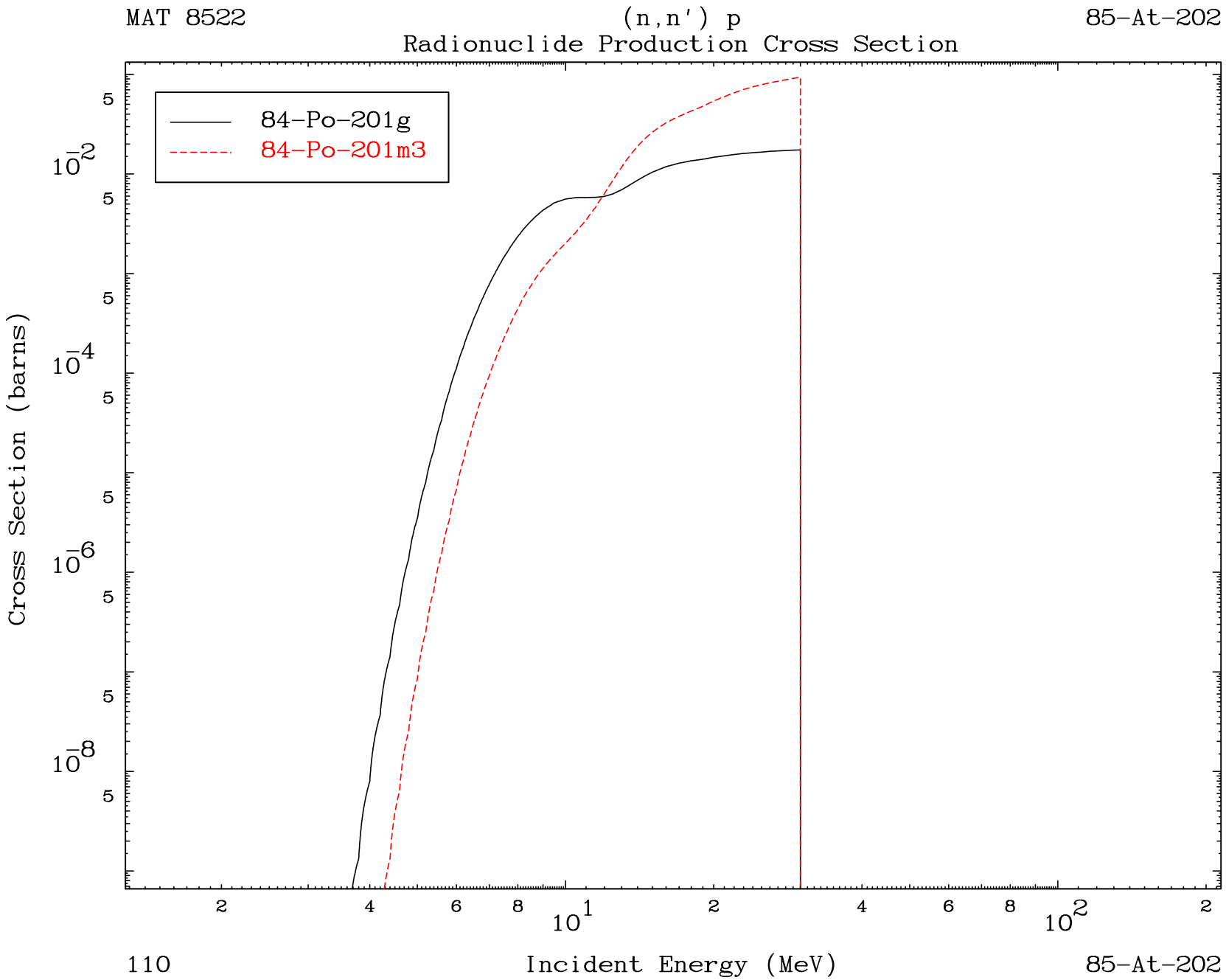

MAT 8522
(n,3n)
85-At-202
Radionuclide Production Cross Section
85-At-200g
85-At-200m1
85-At-200m3
Cross Section (barns)
10-2
10-4
10-6
10-8
5
2
3
4
6
7
8
9
10 2
Incident Energy (MeV)
105
85-At-202

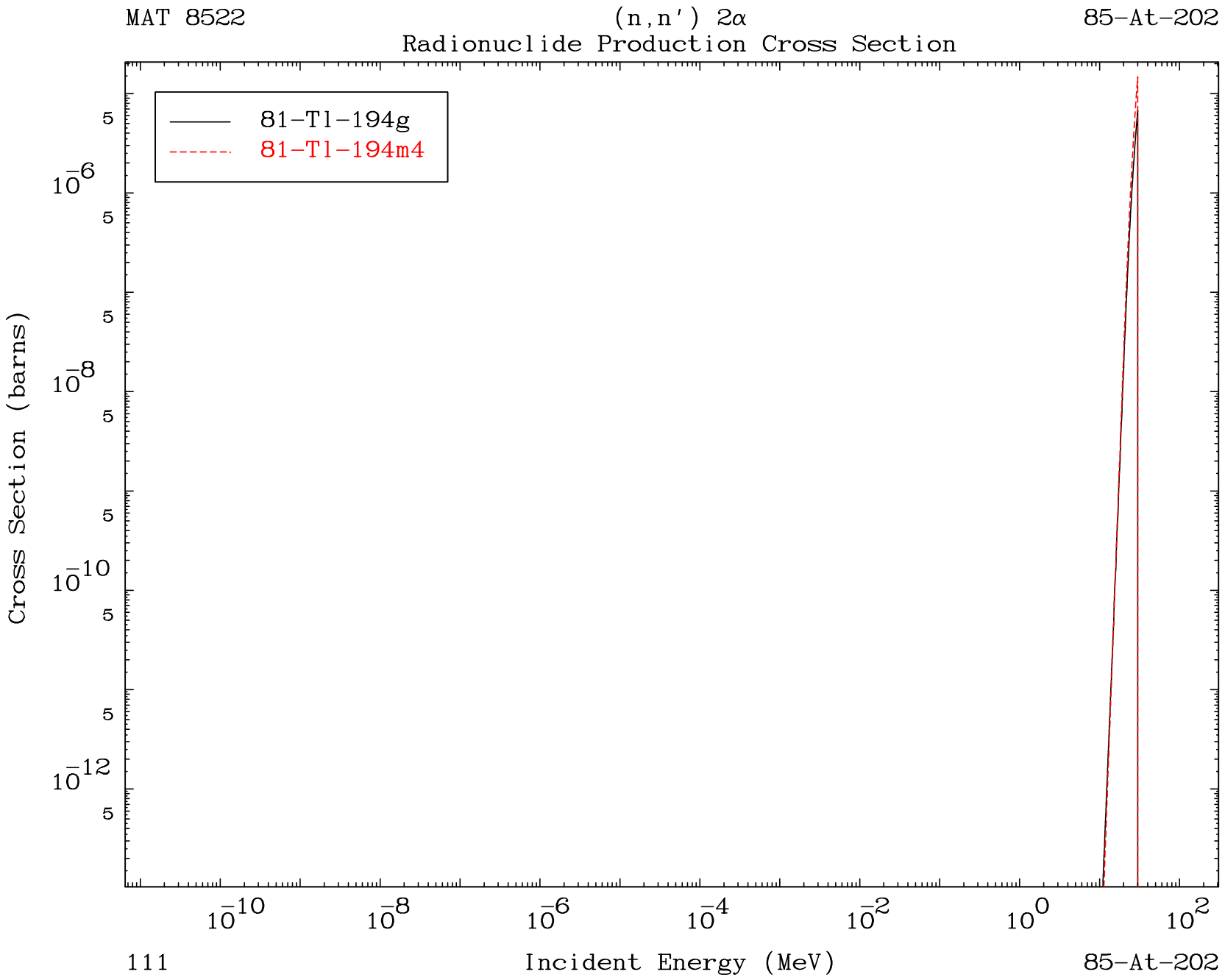

MAT 8522
Fission
85-At-202
Radionuclide Production Cross Section
0-??-Nat
Cross Section (barns)
Incident Energy (MeV)
106
85-At-202

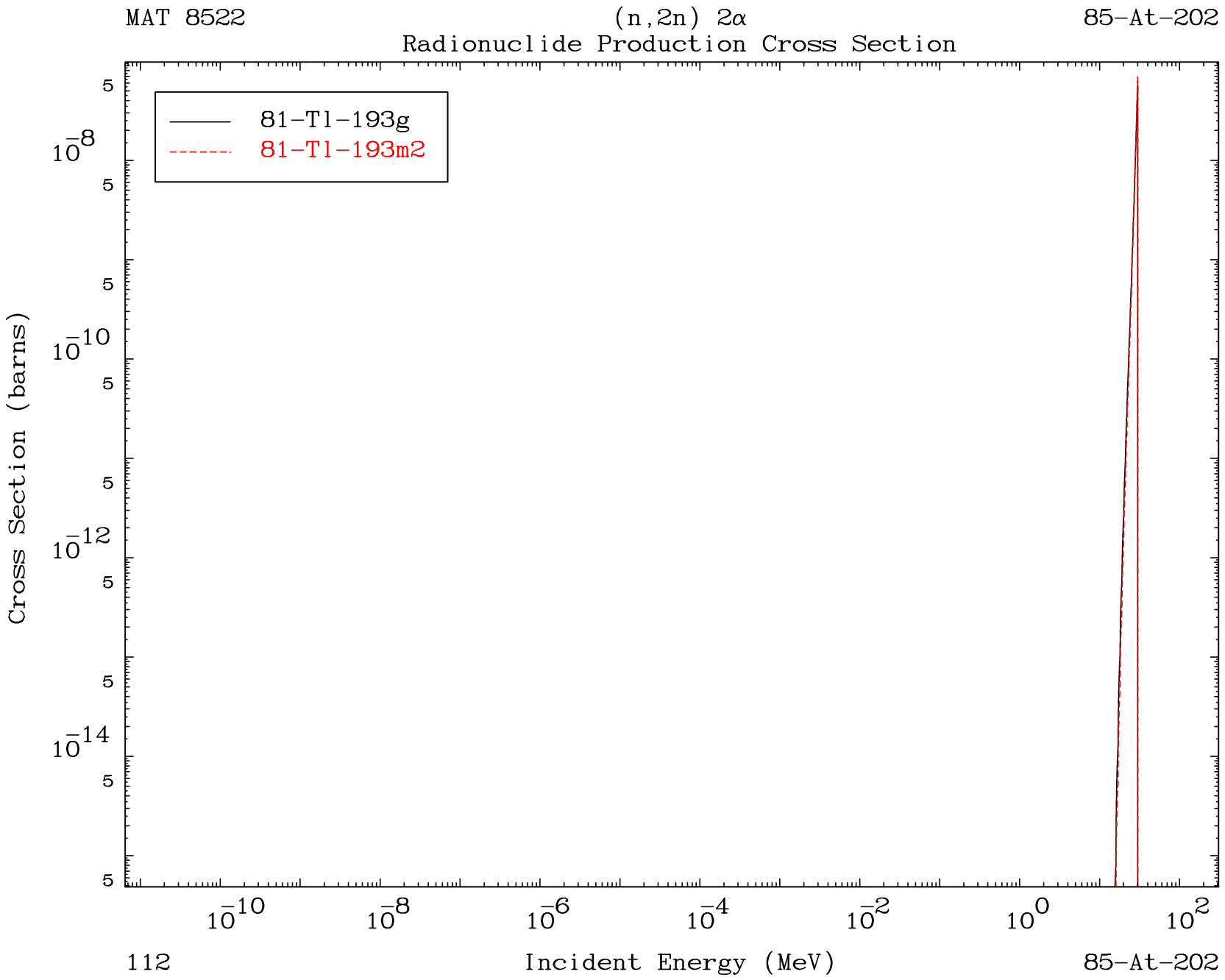

MAT 8522
(n,n') α
85-At-202
Radionuclide Production Cross Section
83-Bi-198g
83-Bi-198m3
83-Bi-198m4
Cross Section (barns)
Incident Energy (MeV)
107
85-At-202

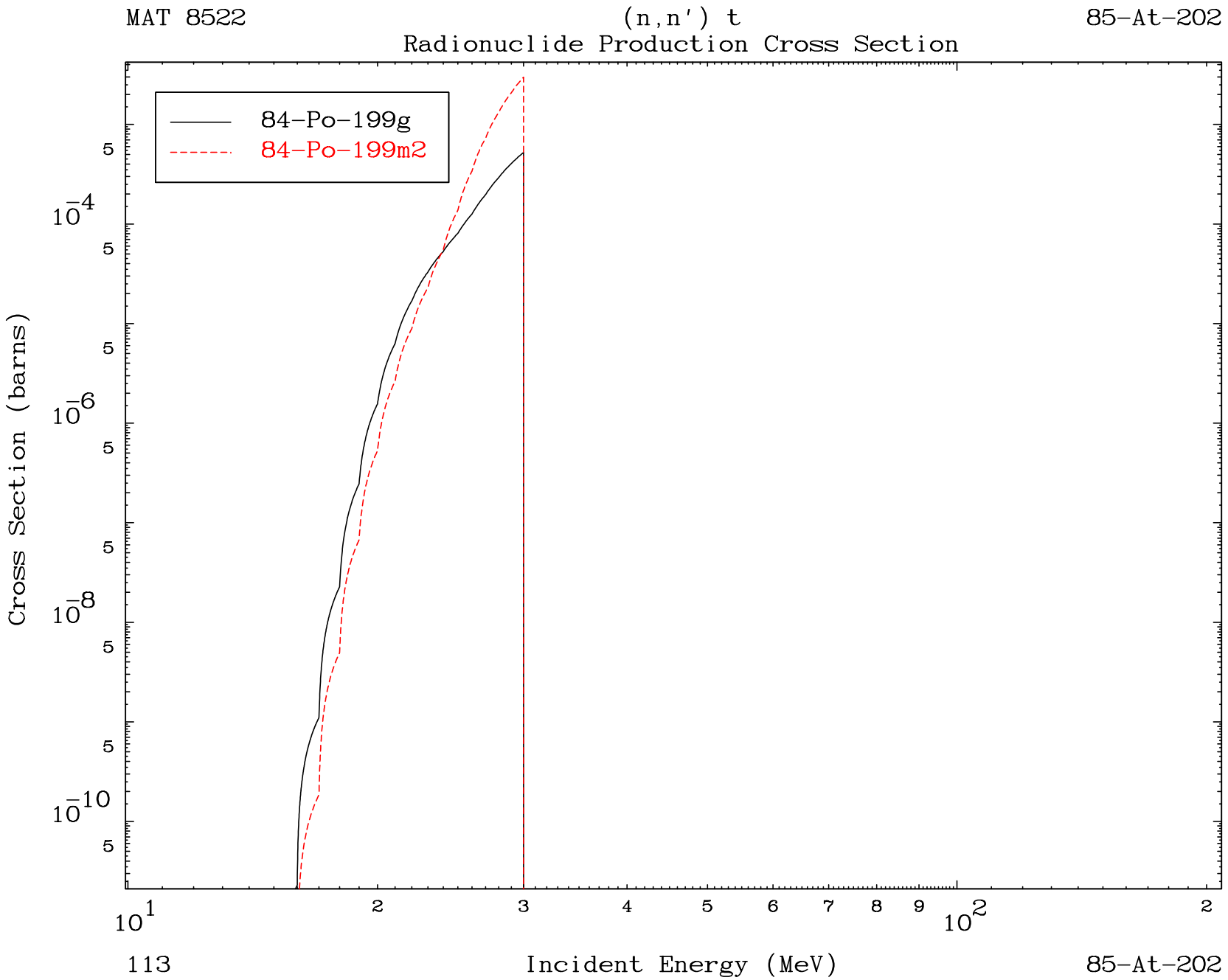

MAT 8522
(n,2n) α
85-At-202
Radionuclide Production Cross Section
83-Bi-197g
83-Bi-197m1
Cross Section (barns)
Incident Energy (MeV)
108
85-At-202

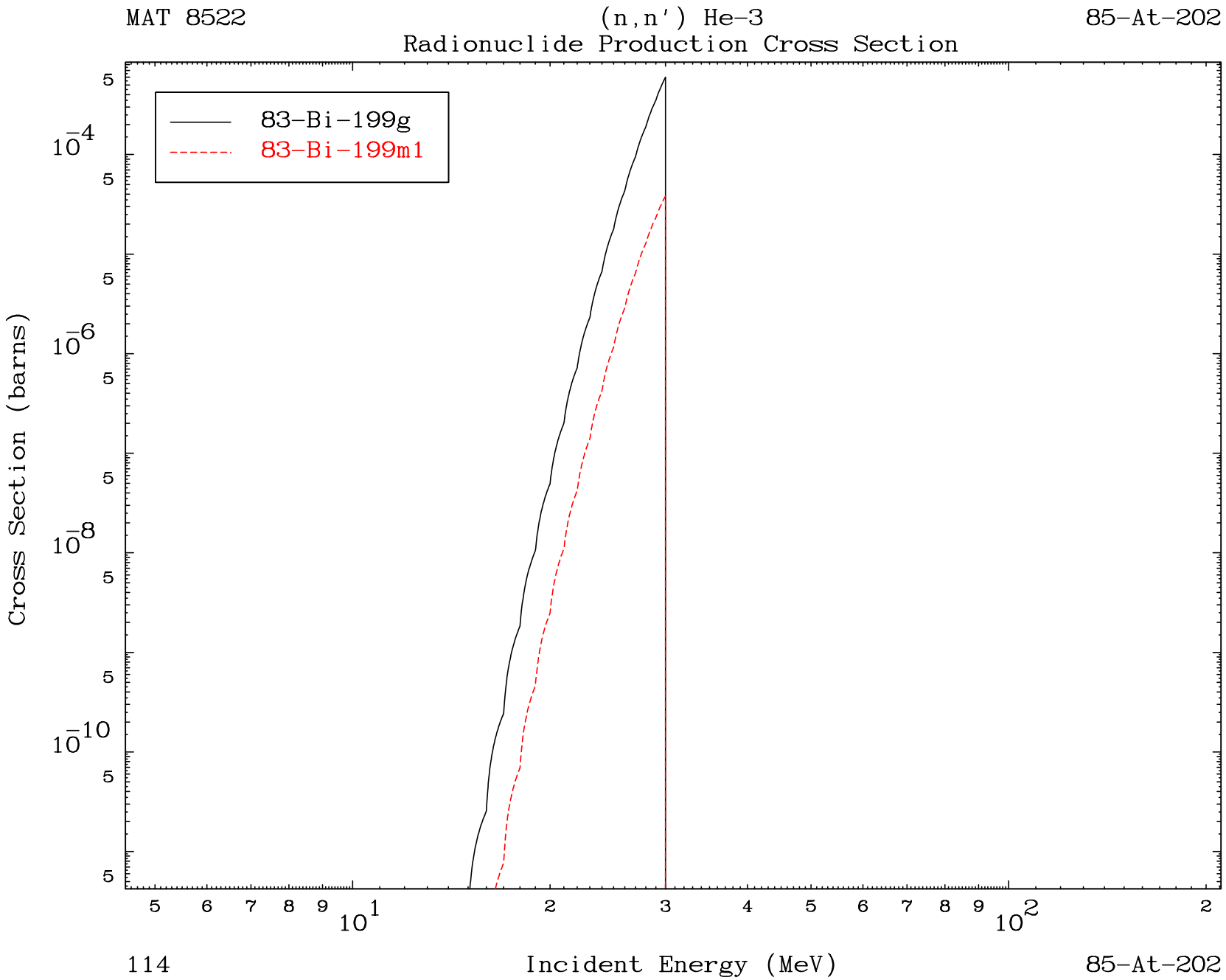

MAT 8522
(n,3n) α
85-At-202
Radionuclide Production Cross Section
83-Bi-196g
83-Bi-196m2
83-Bi-196m3
Cross Section (barns)
Incident Energy (MeV)
109
85-At-202

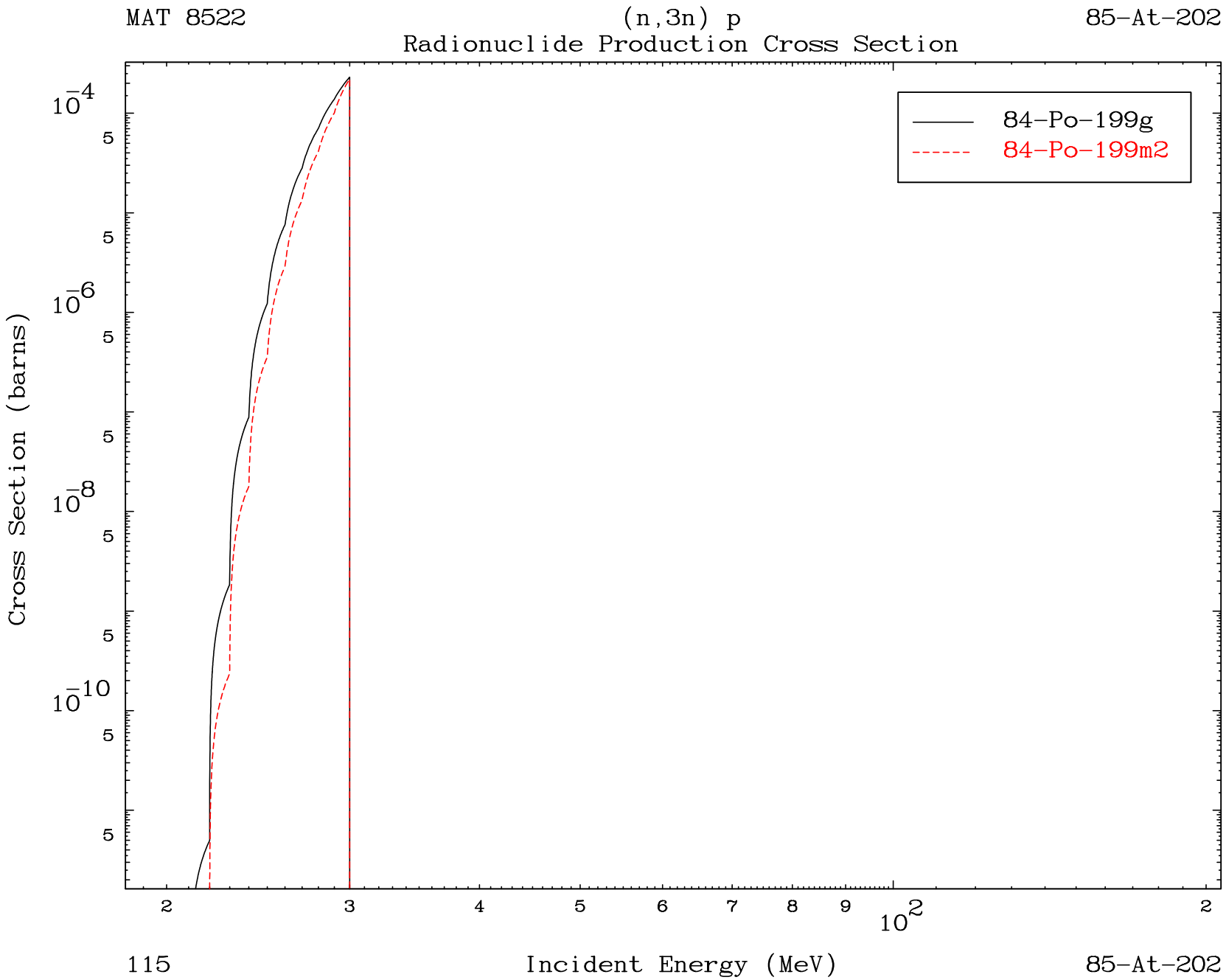

MAT 8522
(n,n') p
85-At-202
Radionuclide Production Cross Section
84-Po-201g
84-Po-201m3
Cross Section (barns)
Incident Energy (MeV)
110
85-At-202

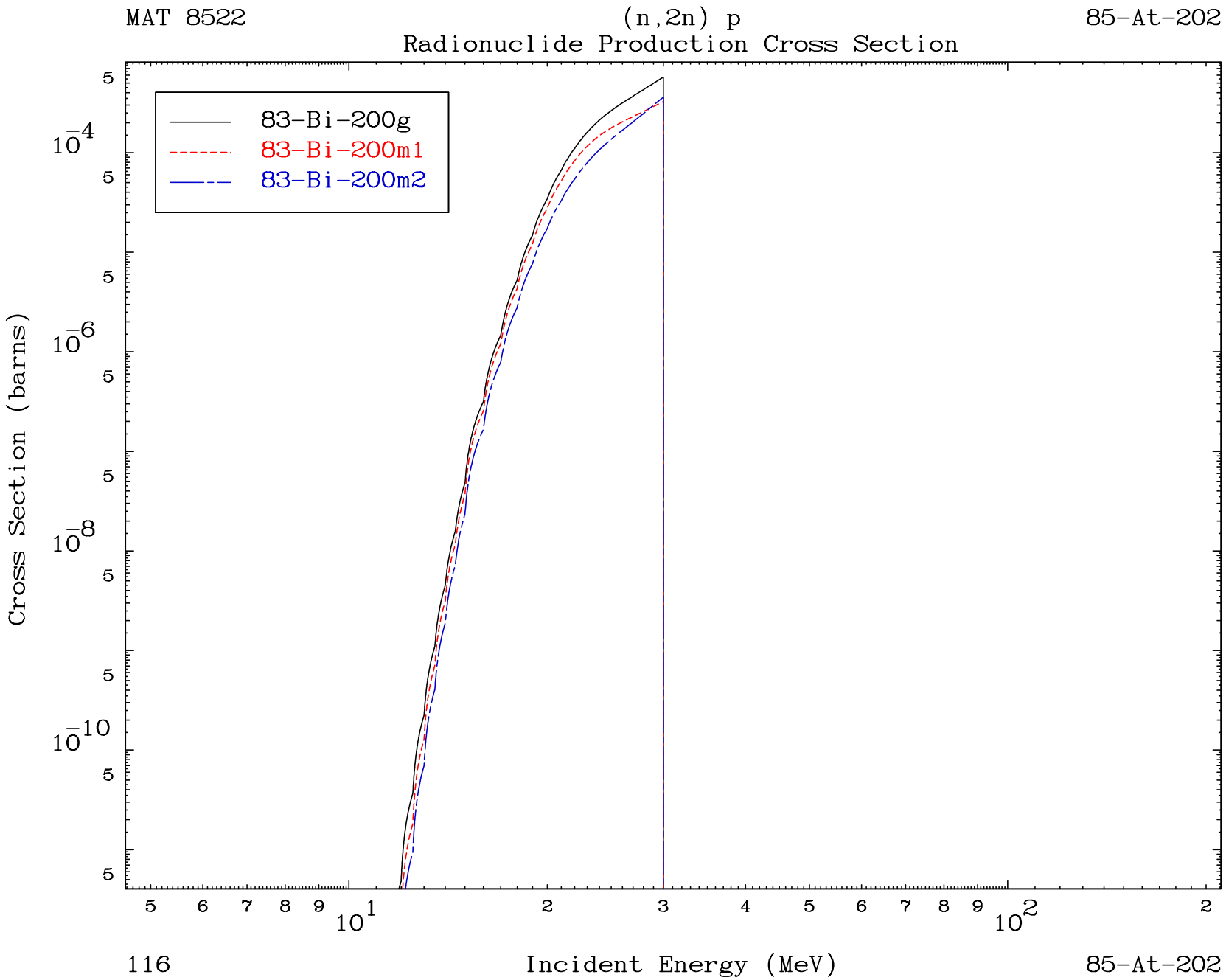

MAT 8522
(n,n') 2α
85-At-202
Radionuclide Production Cross Section
81-Tl-194g
81-Tl-194m4
Cross Section (barns)
Incident Energy (MeV)
111
85-At-202

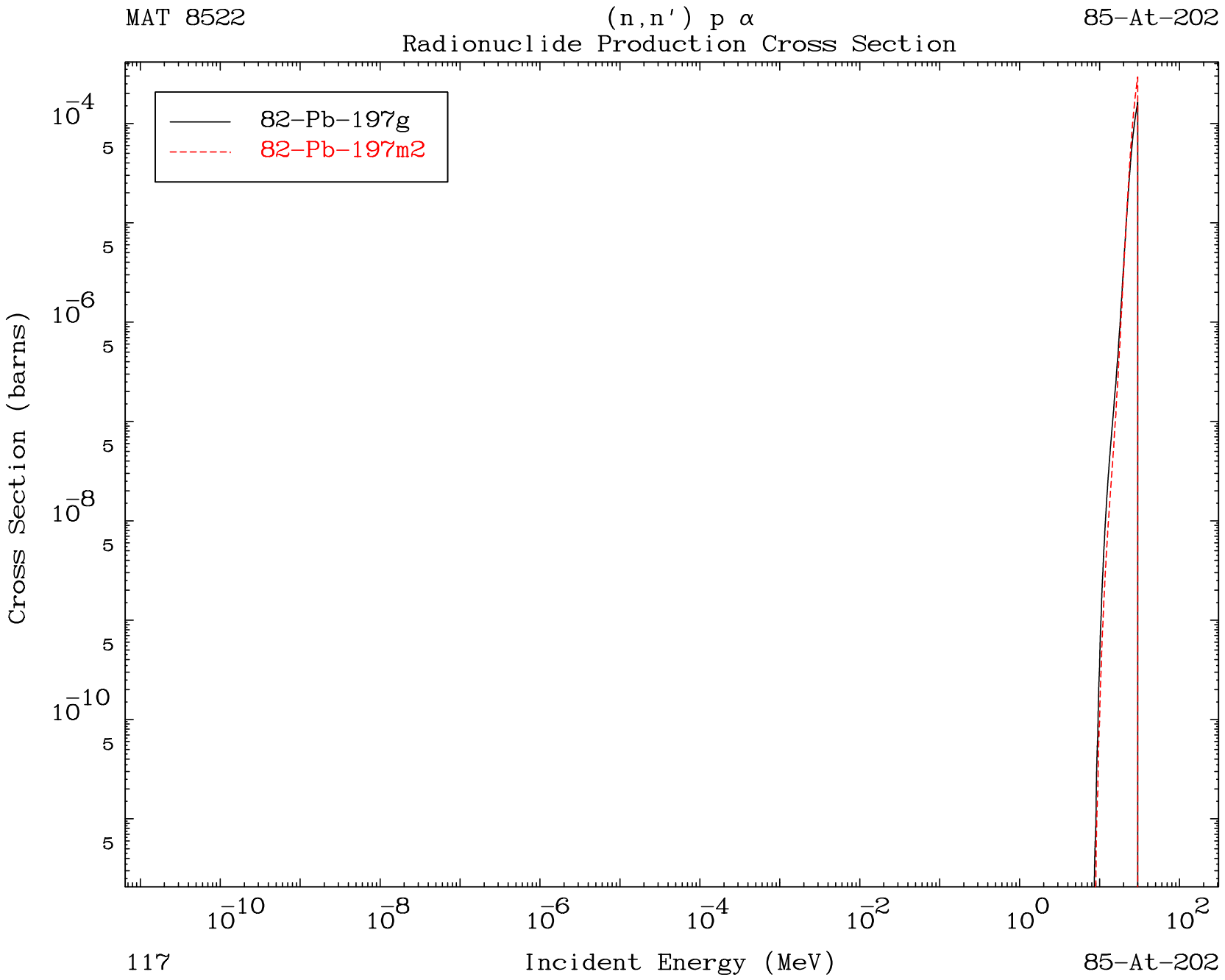

MAT 8522
(n,2n) 2α
85-At-202
Radionuclide Production Cross Section
81-Tl-193g
81-Tl-193m2
Cross Section (barns)
Incident Energy (MeV)
112
85-At-202

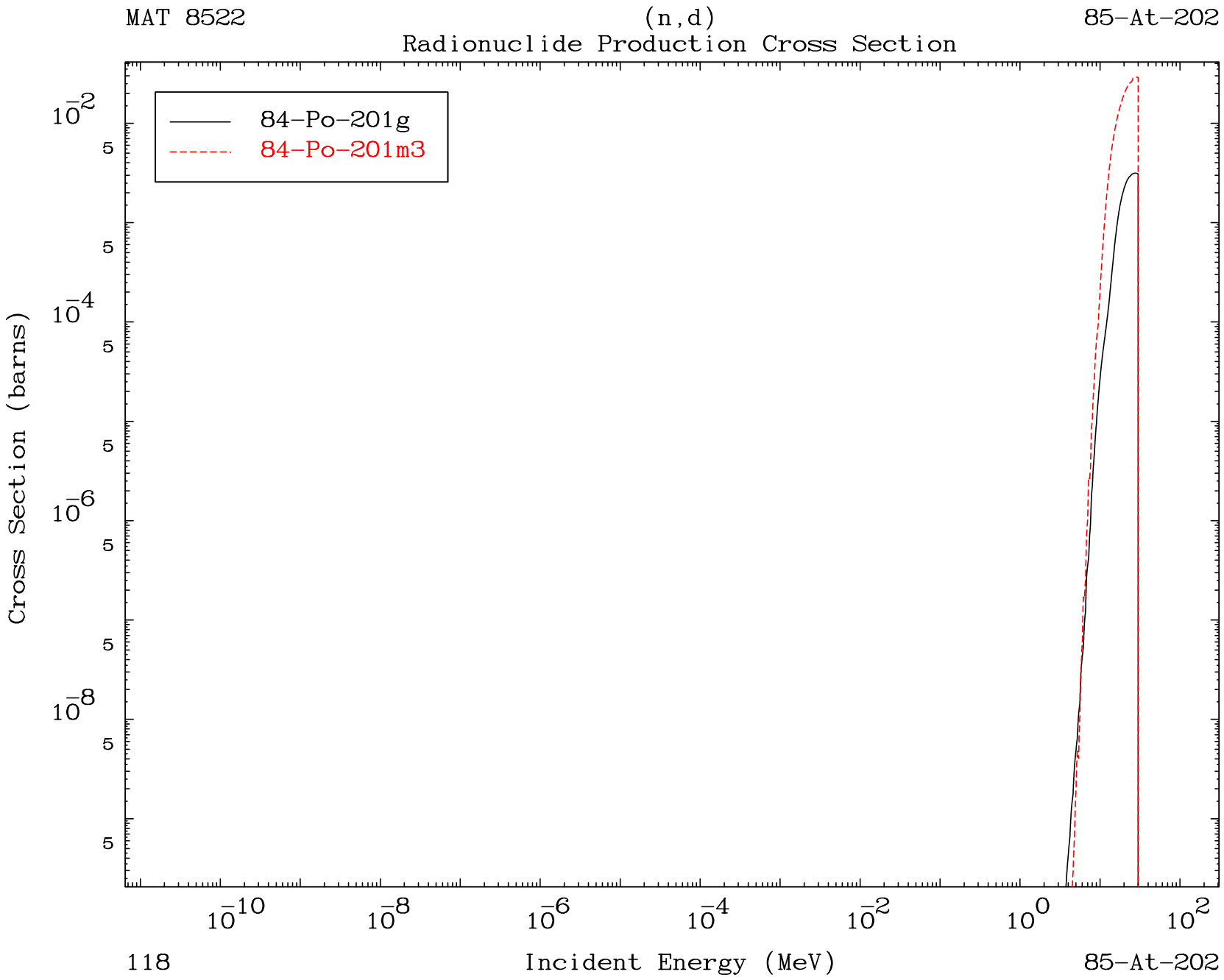

MAT 8522
(n,n') t
85-At-202
Radionuclide Production Cross Section
84-Po-199g
84-Po-199m2
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
10^1
2
3
4
5
6
7
8
9
10^2
2
113
Incident Energy (MeV)
85-At-202

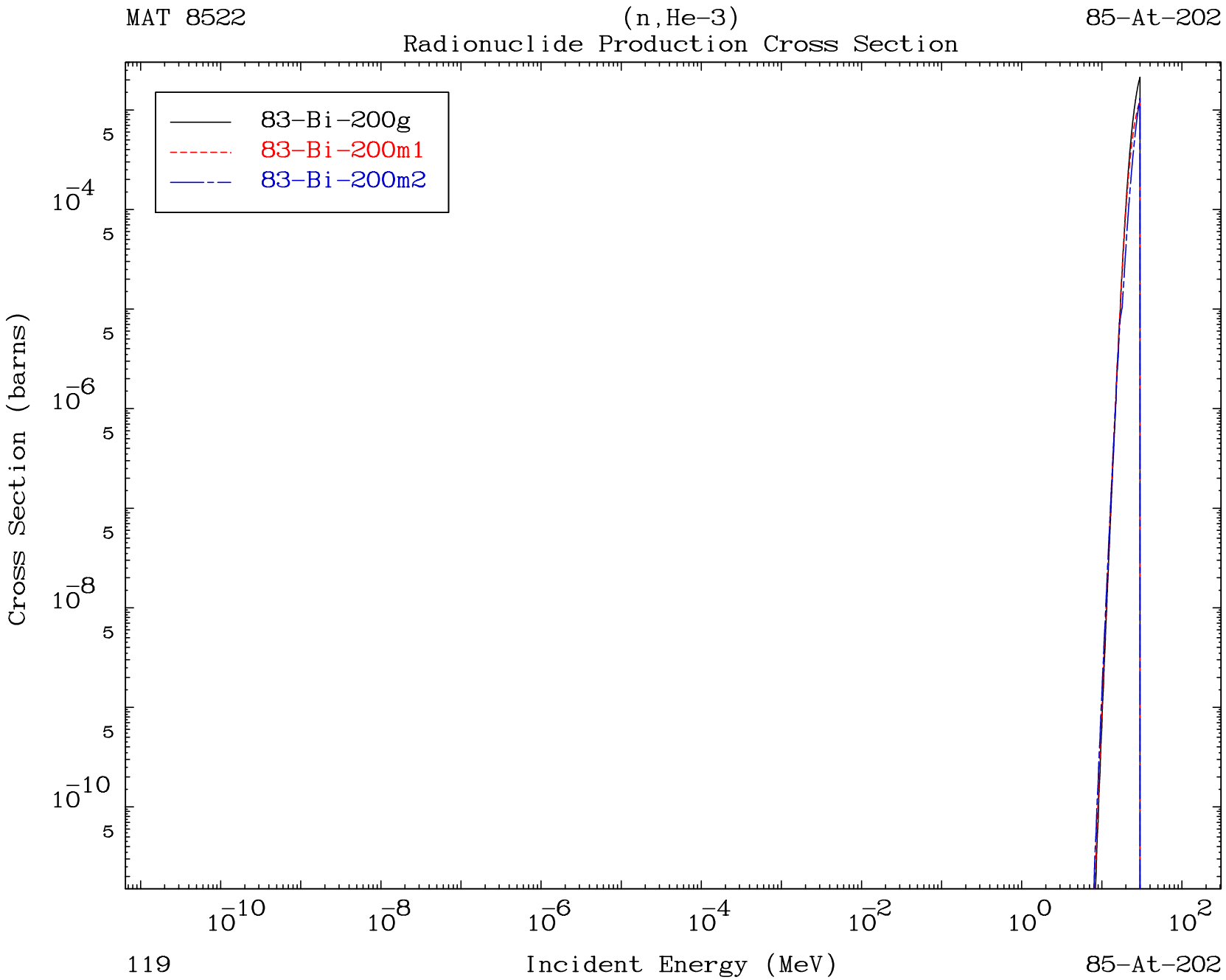

MAT 8522
(n,n') He-3
85-At-202
Radionuclide Production Cross Section
83-Bi-199g
83-Bi-199m1
Cross Section (barns)
Incident Energy (MeV)
114
85-At-202

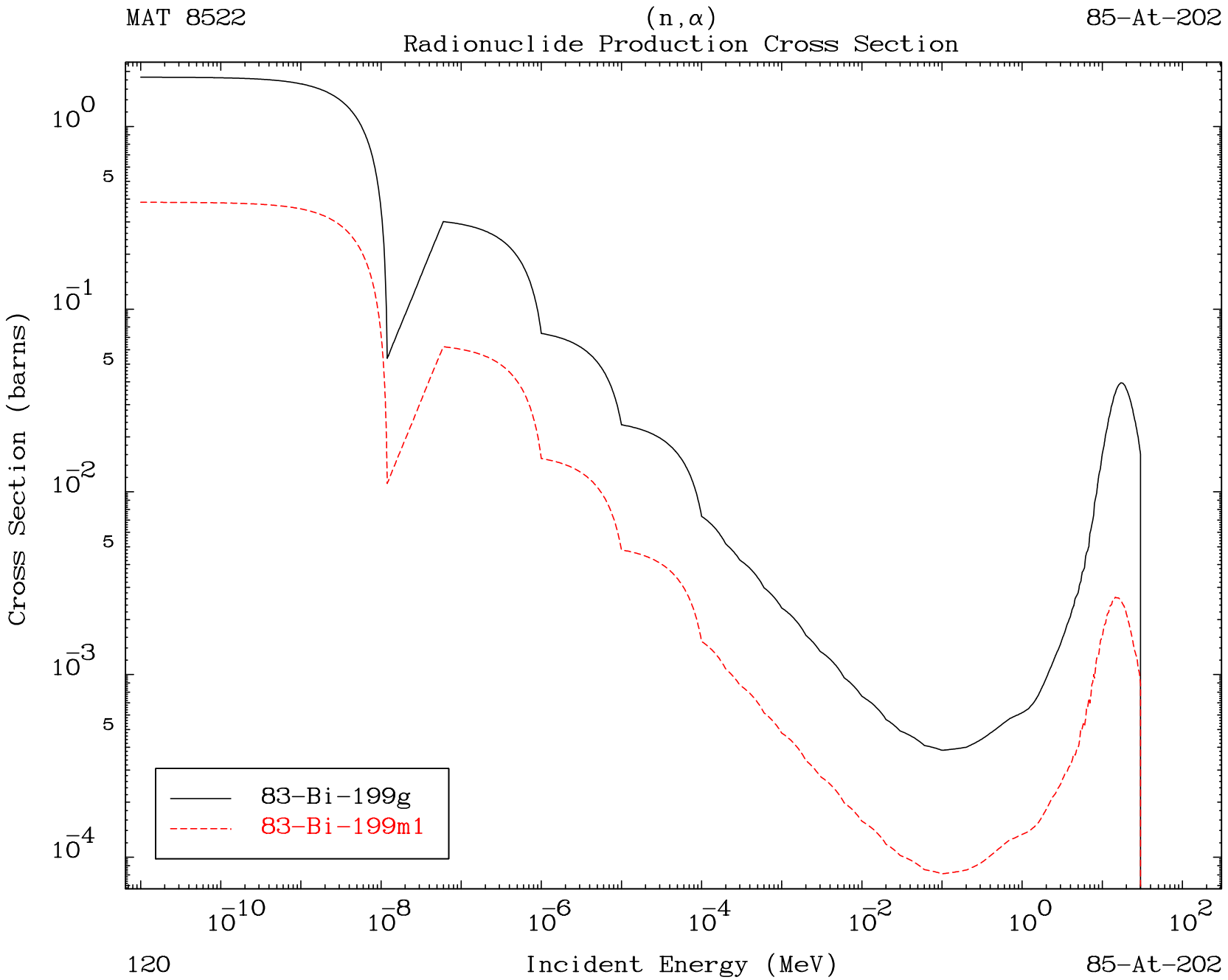

MAT 8522
(n,3n) p
85-At-202
Radionuclide Production Cross Section
84-Po-199g
84-Po-199m2
Cross Section (barns)
Incident Energy (MeV)
115
85-At-202

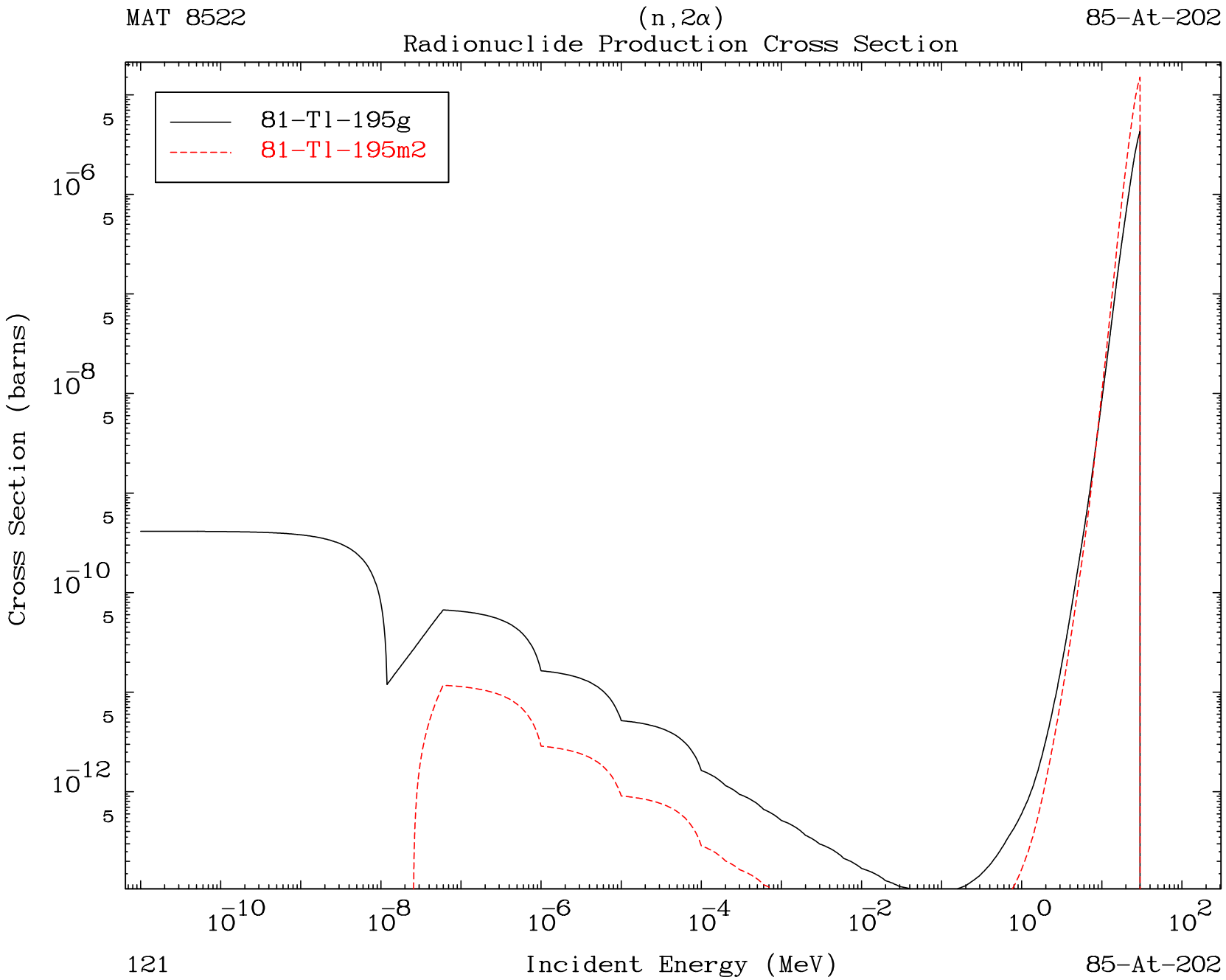

MAT 8522
(n,2n) p
85-At-202
Radionuclide Production Cross Section
83-Bi-200g
83-Bi-200m1
83-Bi-200m2
Cross Section (barns)
Incident Energy (MeV)
116
85-At-202

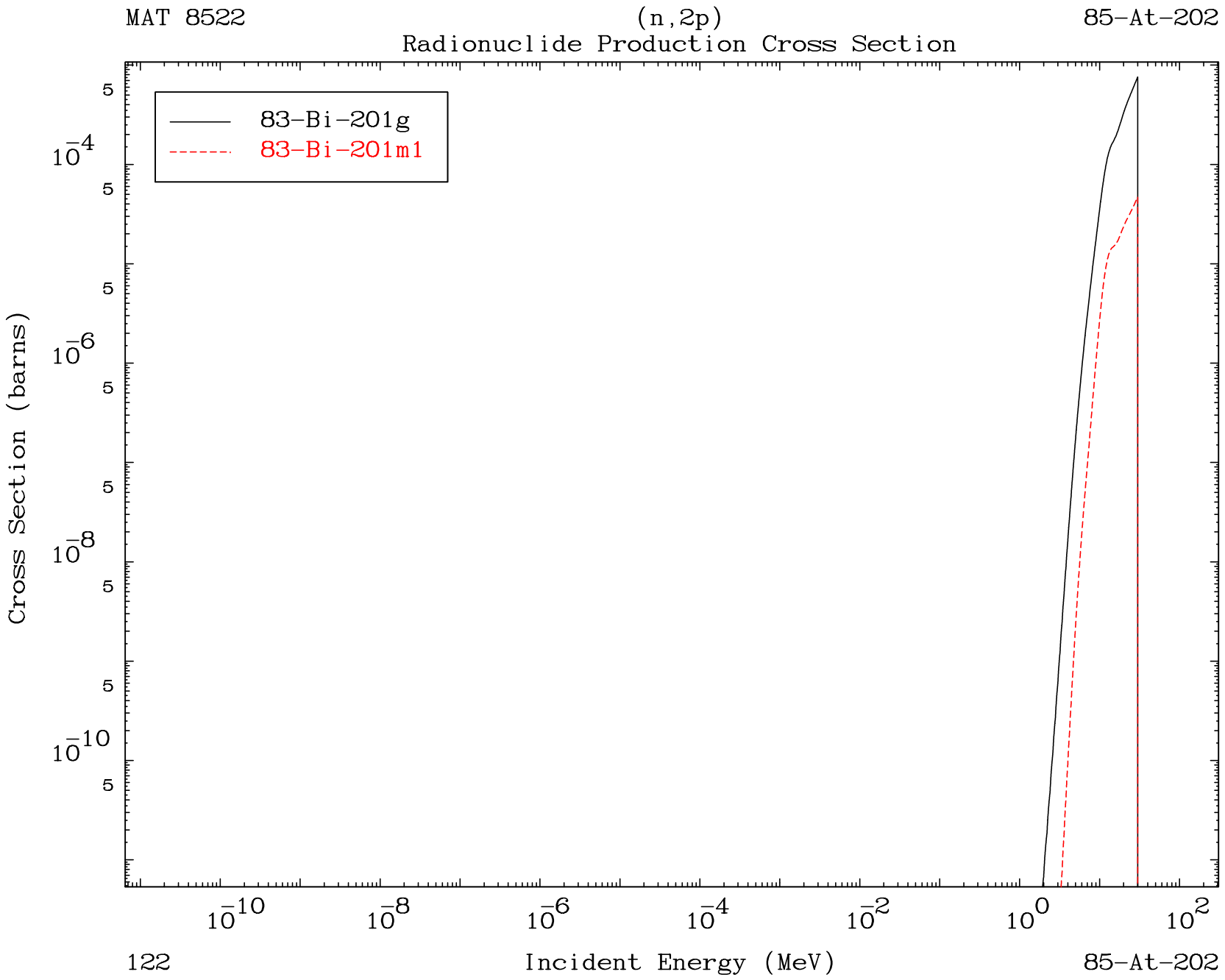

MAT 8522
(n,n') p α
85-At-202
Radionuclide Production Cross Section
82-Pb-197g
82-Pb-197m2
Cross Section (barns)
Incident Energy (MeV)
117
85-At-202

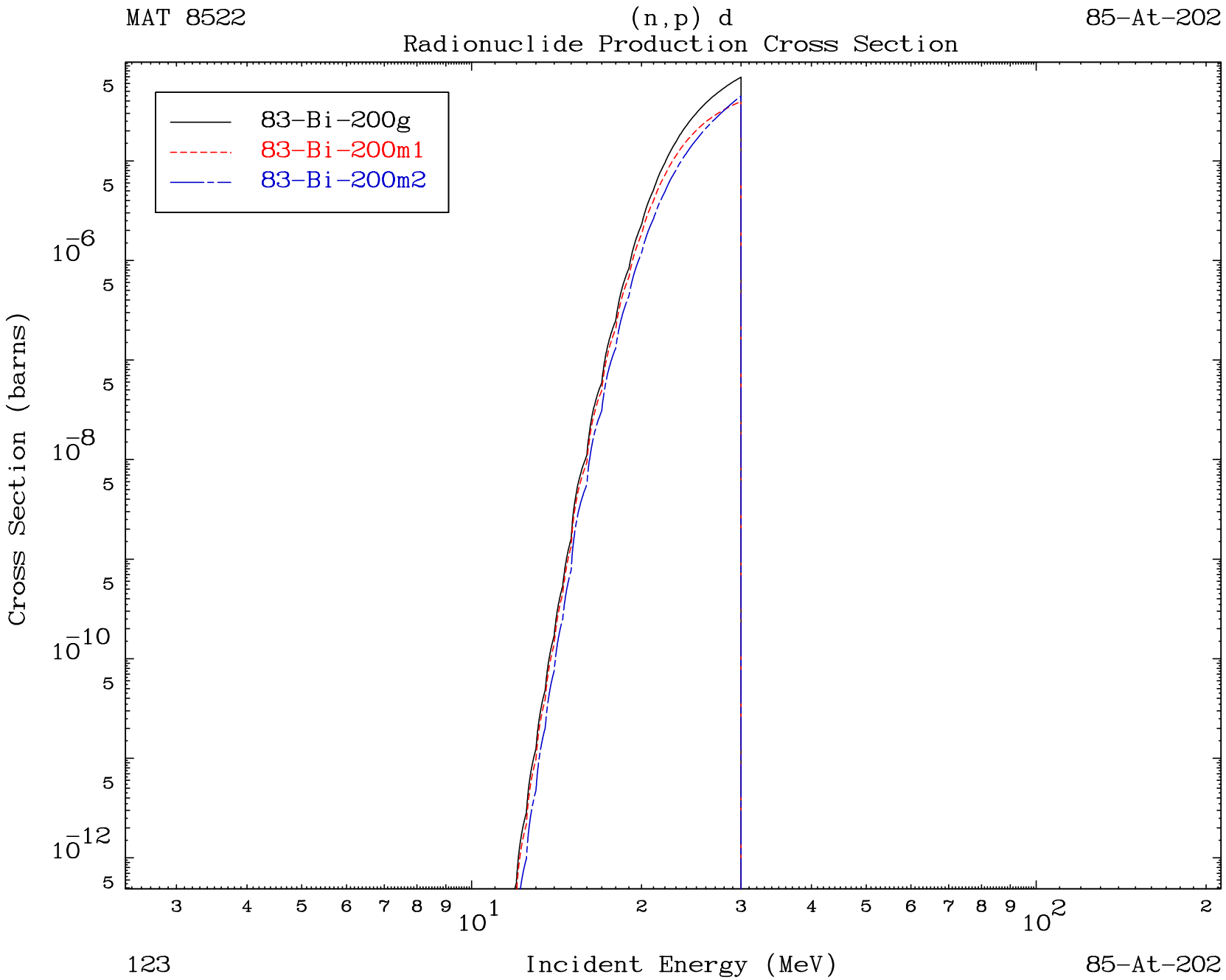

MAT 8522
(n,d)
85-At-202
Radionuclide Production Cross Section
84-Po-201g
84-Po-201m3
Cross Section (barns)
Incident Energy (MeV)
118
85-At-202

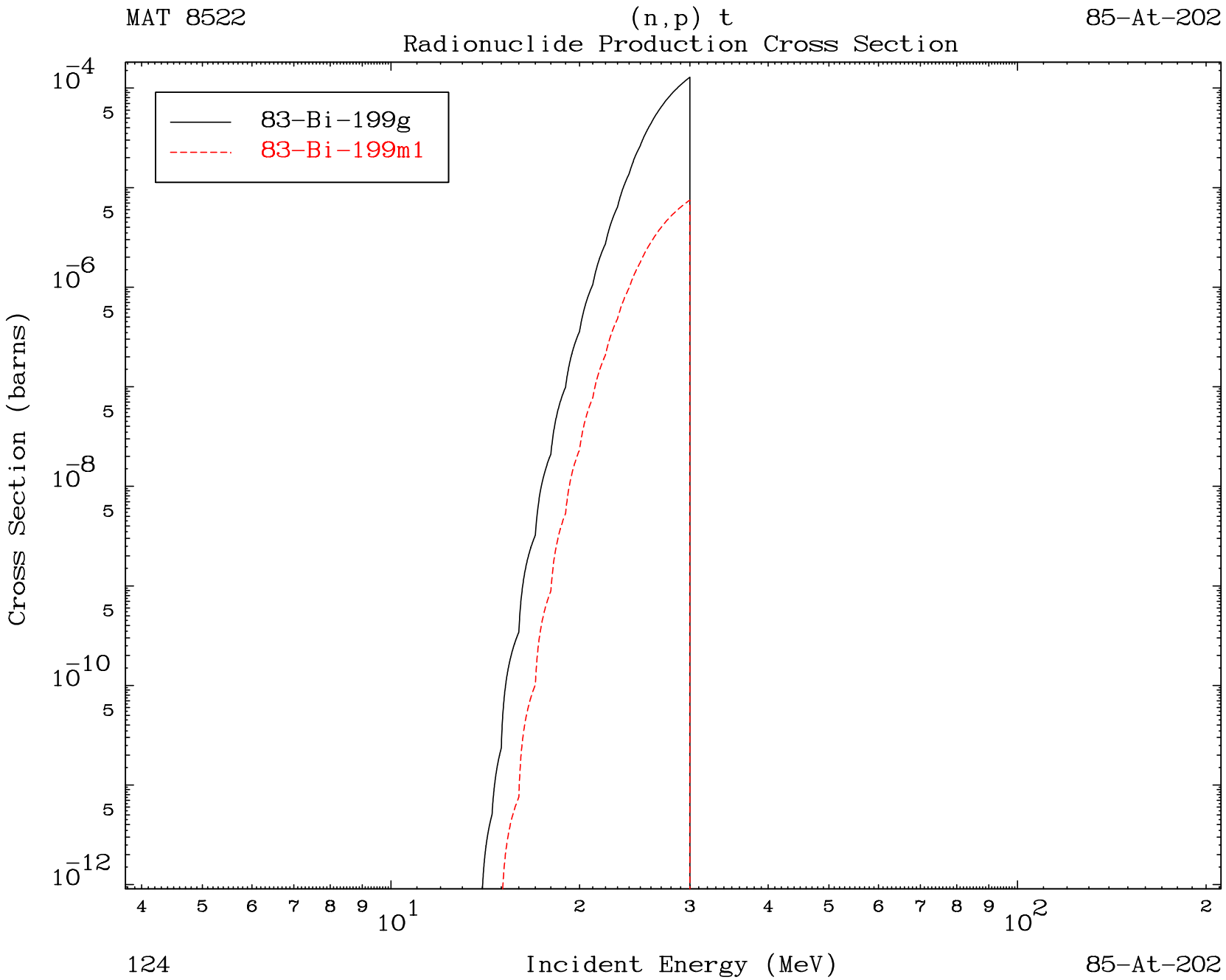

MAT 8522
(n,He-3)
85-At-202
Radionuclide Production Cross Section
83-Bi-200g
83-Bi-200m1
83-Bi-200m2
Cross Section (barns)
Incident Energy (MeV)
119
85-At-202

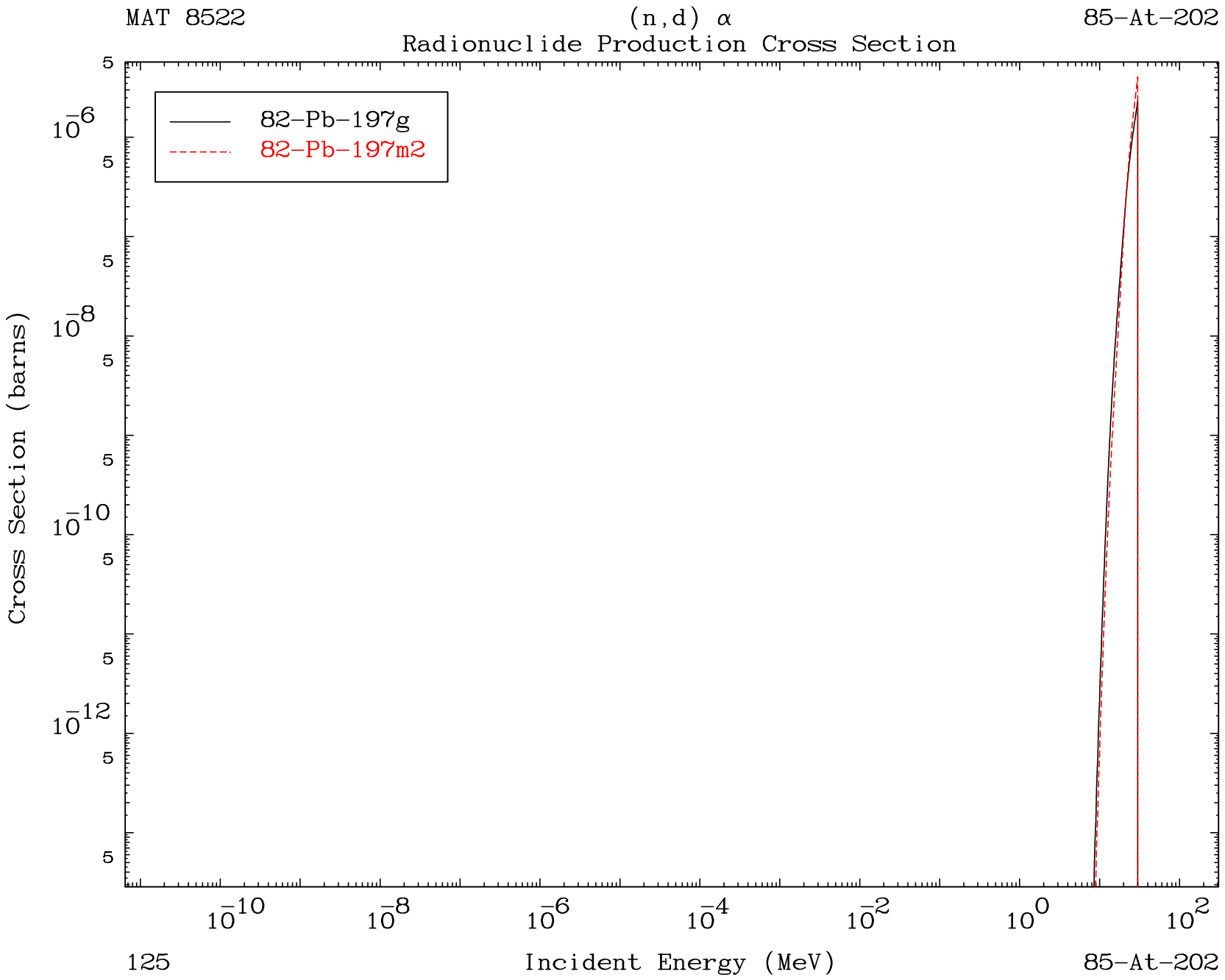

MAT 8522
(n,α)
85-At-202
Radionuclide Production Cross Section
Cross Section (barns)
10^0
5
10^-1
5
10^-2
5
10^-3
5
10^-4
83-Bi-199g
83-Bi-199m1
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
120
Incident Energy (MeV)
85-At-202


MAT 8522
(n,2α)
85-At-202
Radionuclide Production Cross Section
81-Tl-195g
81-Tl-195m2
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
121
Incident Energy (MeV)
85-At-202


MAT 8522
(n,2p)
85-At-202
Radionuclide Production Cross Section
83-Bi-201g
83-Bi-201m1
Cross Section (barns)
Incident Energy (MeV)
122
85-At-202


MAT 8522
(n,p) d
85-At-202
Radionuclide Production Cross Section
83-Bi-200g
83-Bi-200m1
83-Bi-200m2
Cross Section (barns)
Incident Energy (MeV)
123
85-At-202


MAT 8522
(n,p) t
85-At-202
Radionuclide Production Cross Section
83-Bi-199g
83-Bi-199m1
Cross Section (barns)
Incident Energy (MeV)
124
85-At-202


MAT 8522
(n,d) α
85-At-202
Radionuclide Production Cross Section
82-Pb-197g
82-Pb-197m2
Cross Section (barns)
Incident Energy (MeV)
125
85-At-202