Program EVALPLOT
(Version 2018-1)
by
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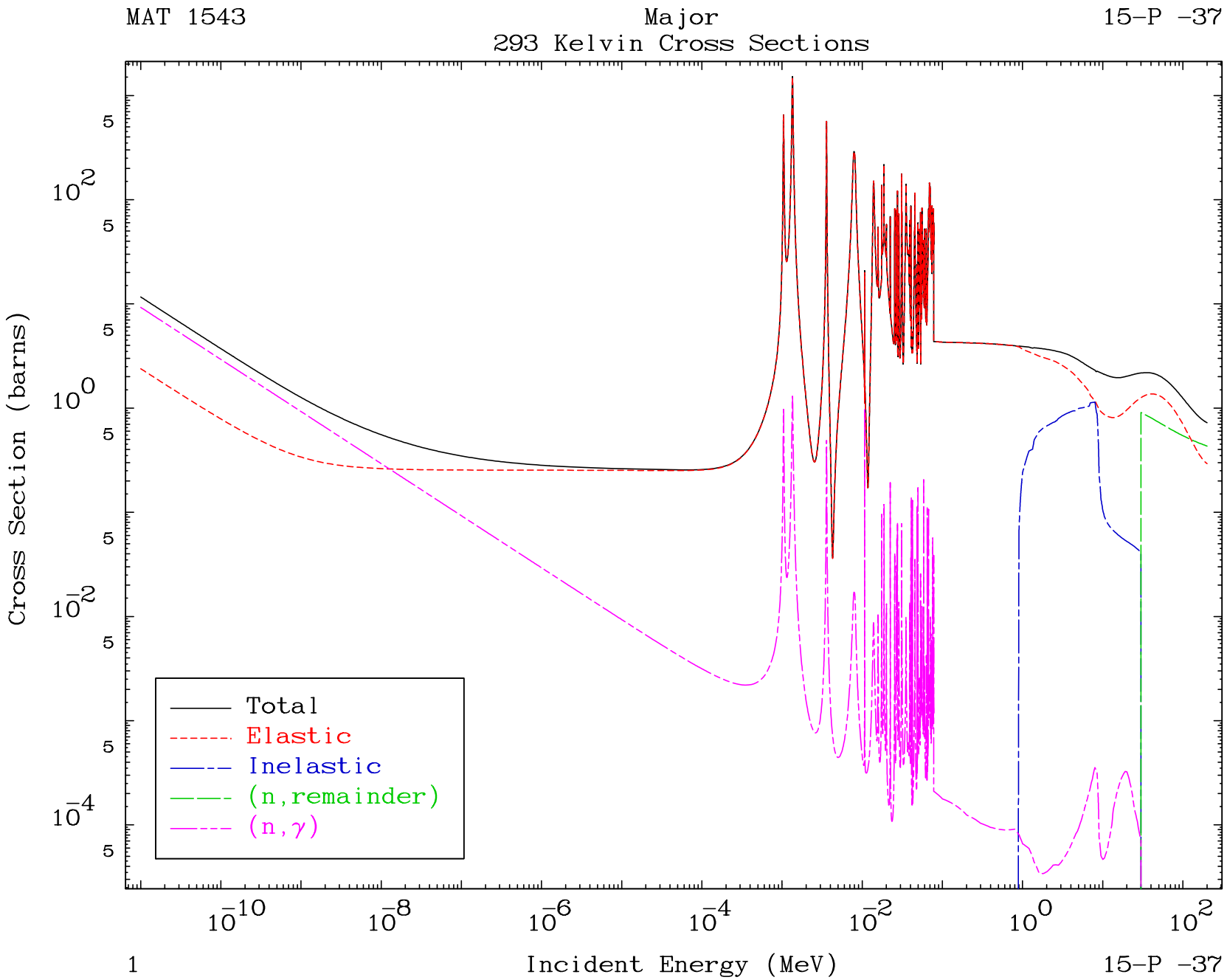
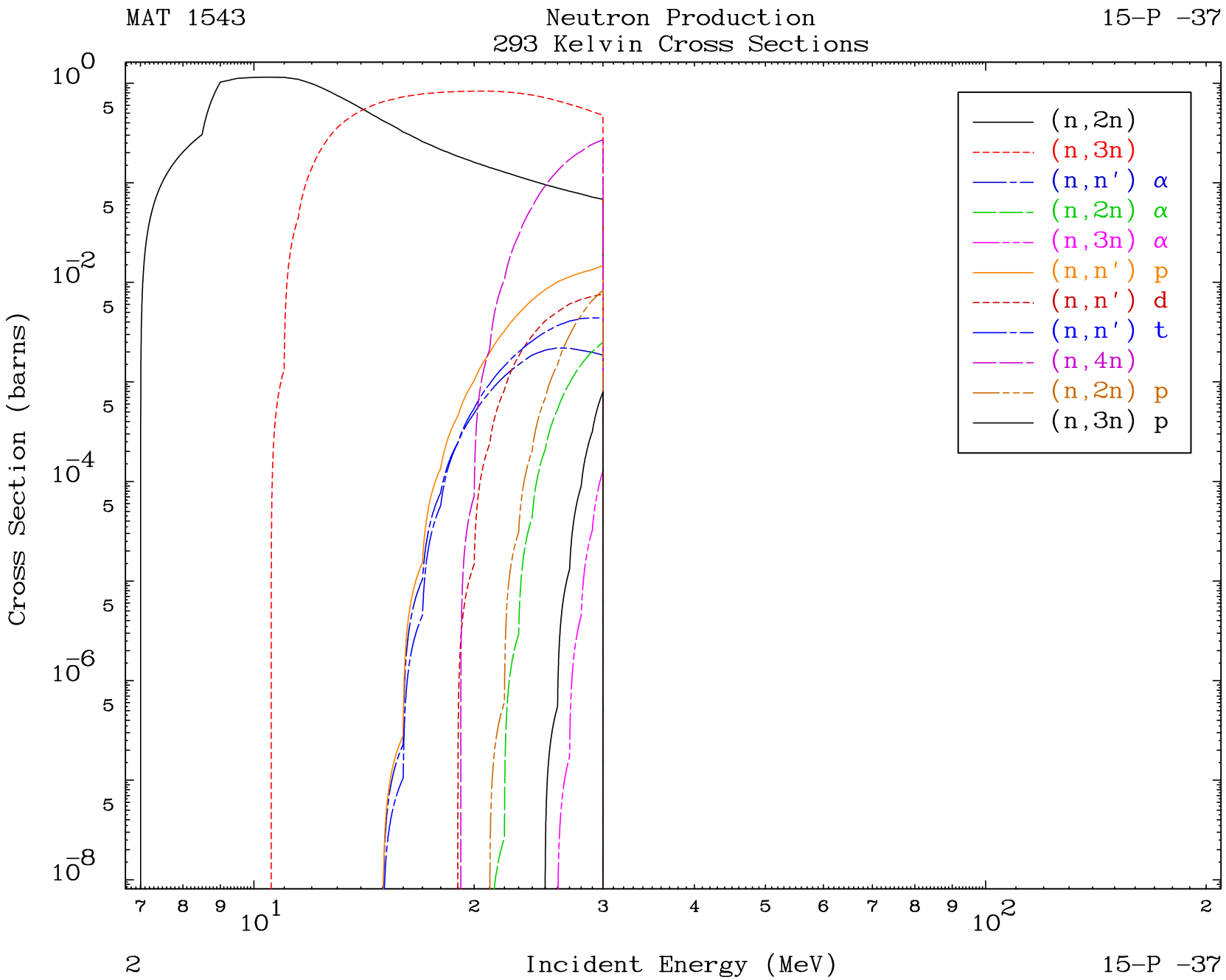
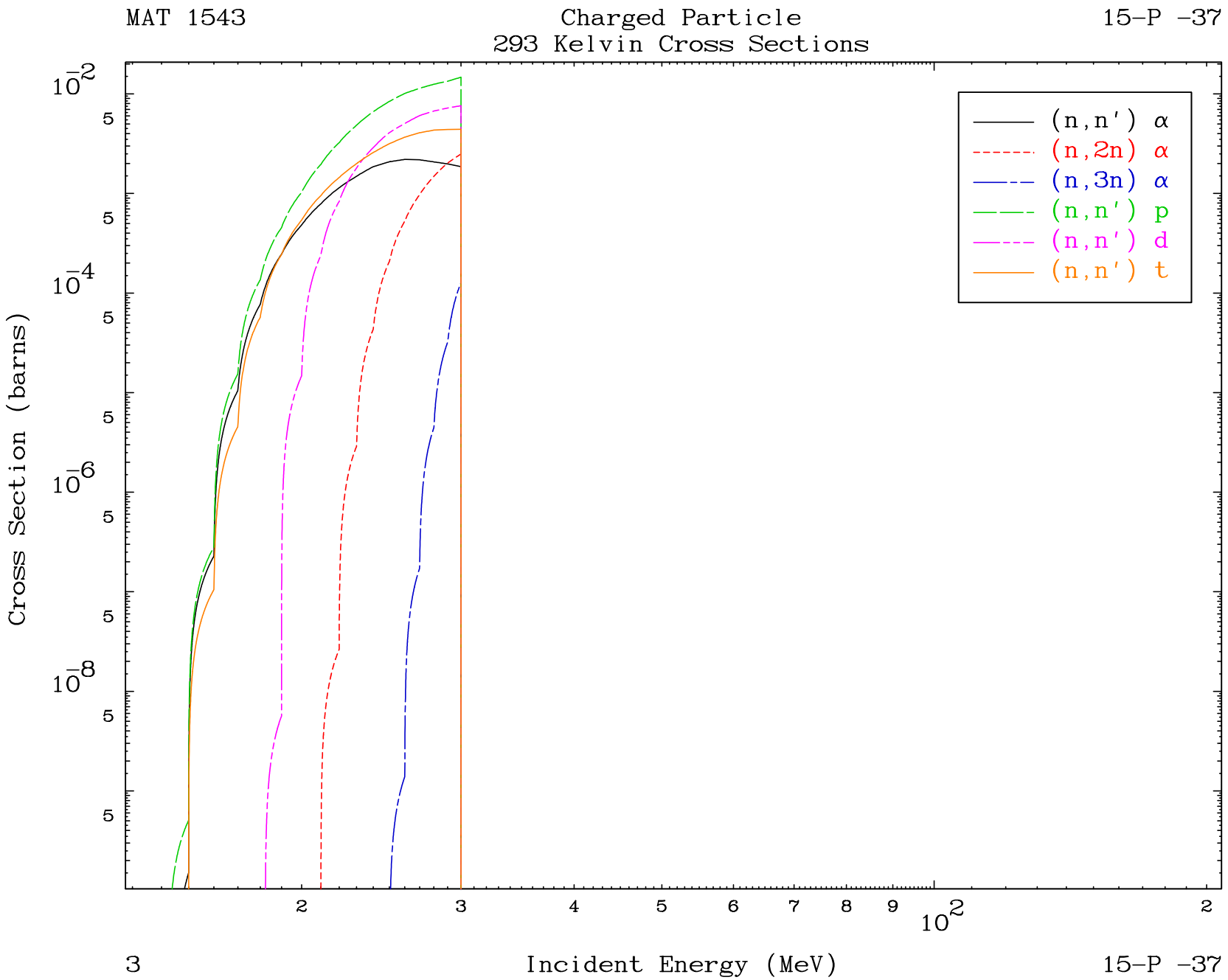
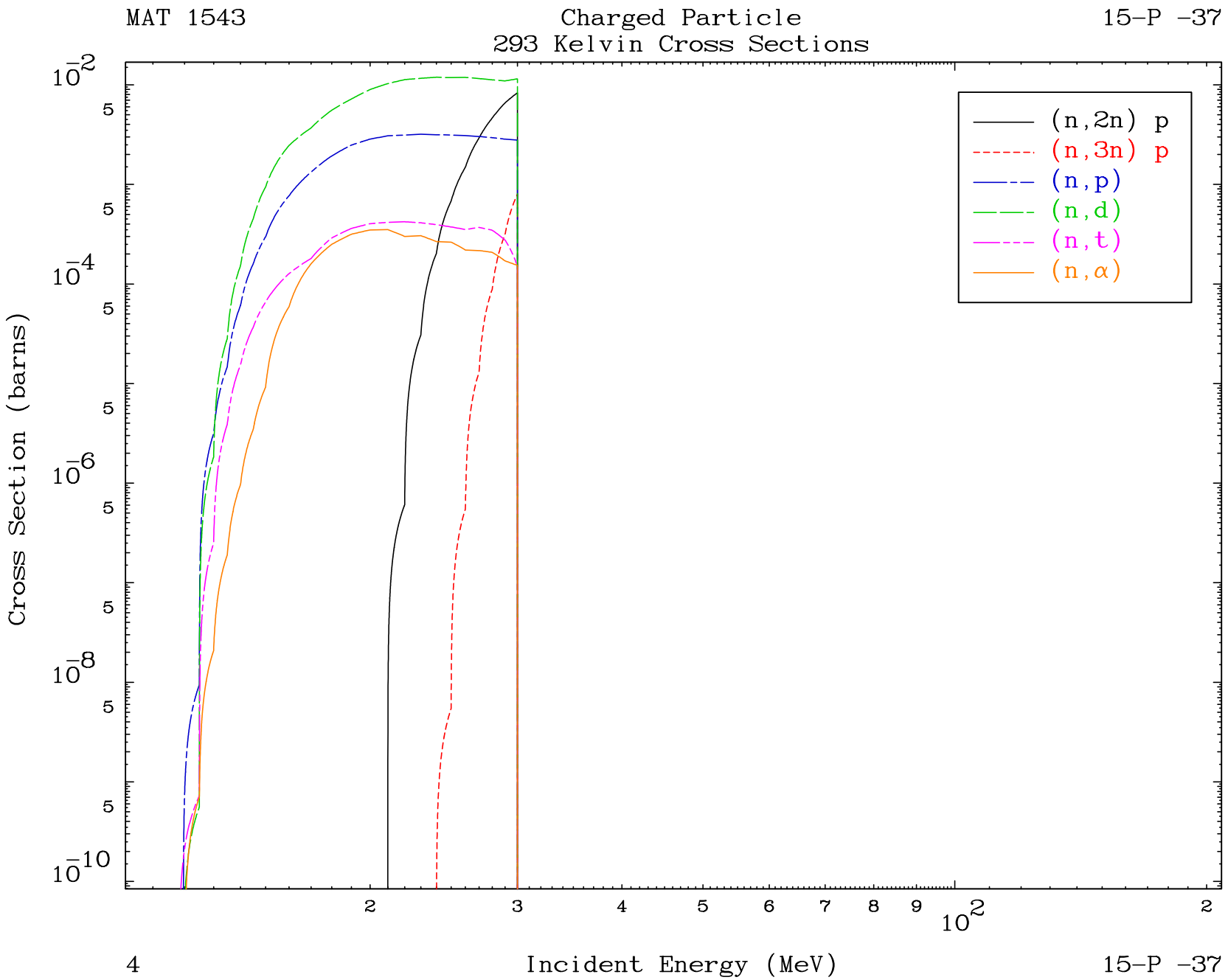
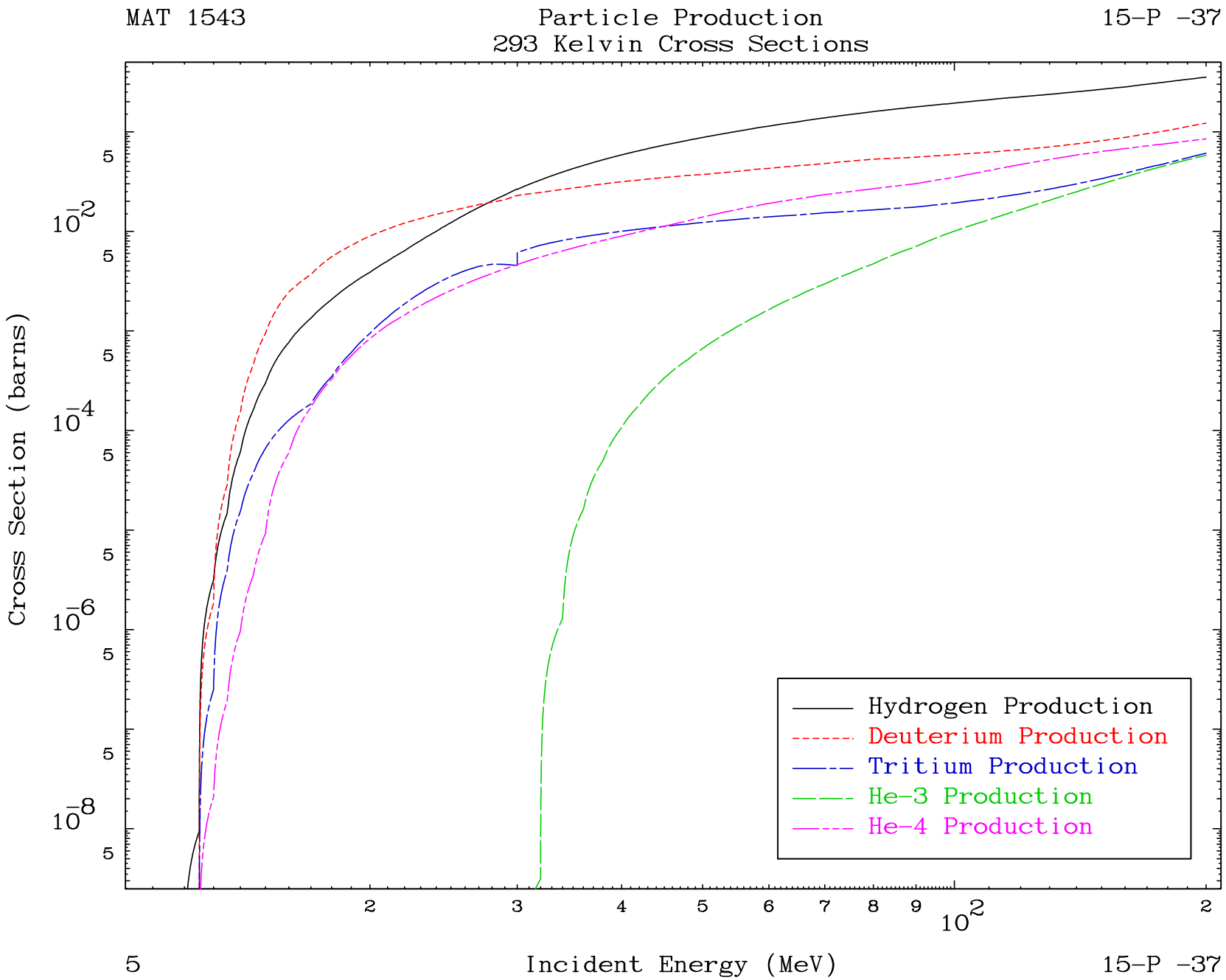
Press Mouse Button to Start

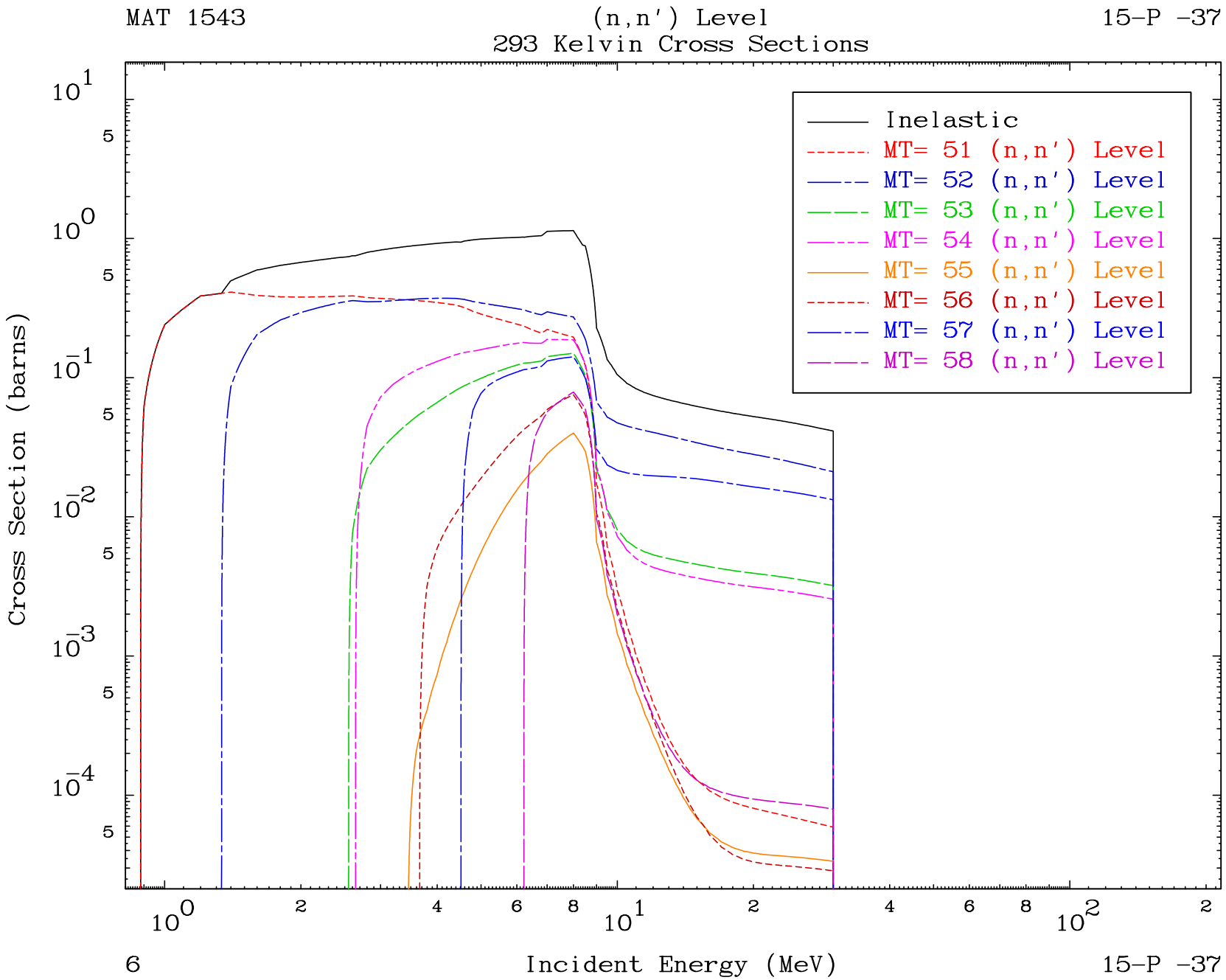

MAT 1543
Major
15-P -37
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,remainder)
(n,γ)
1
15-P -37

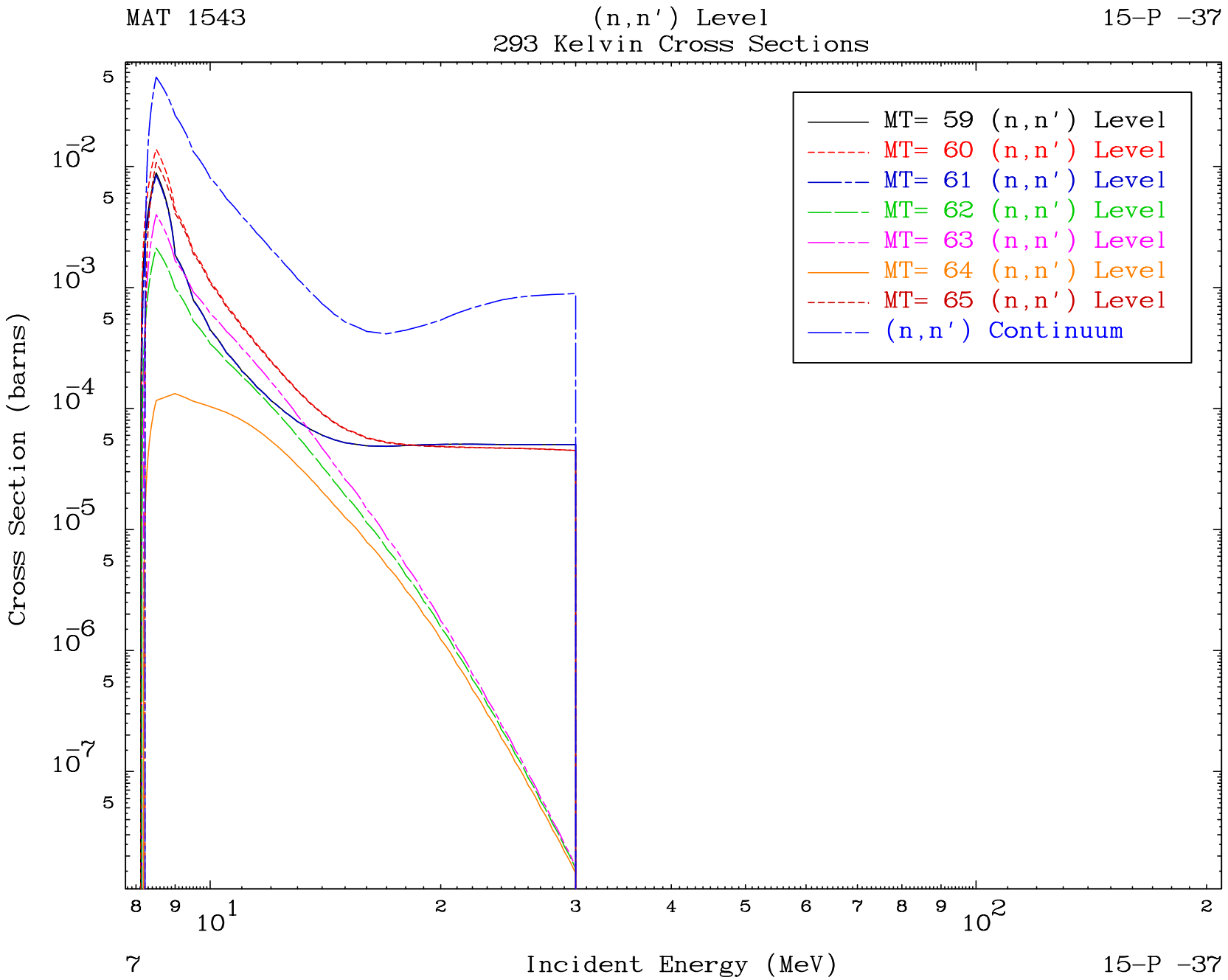

MAT 1543
Neutron Production
293 Kelvin Cross Sections
15-P -37
Cross Section (barns)
Incident Energy (MeV)
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t
(n,4n)
(n,2n) p
(n,3n) p


MAT 1543
Charged Particle
293 Kelvin Cross Sections
15-P -37
Cross Section (barns)
Incident Energy (MeV)
3
15-P -37
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t

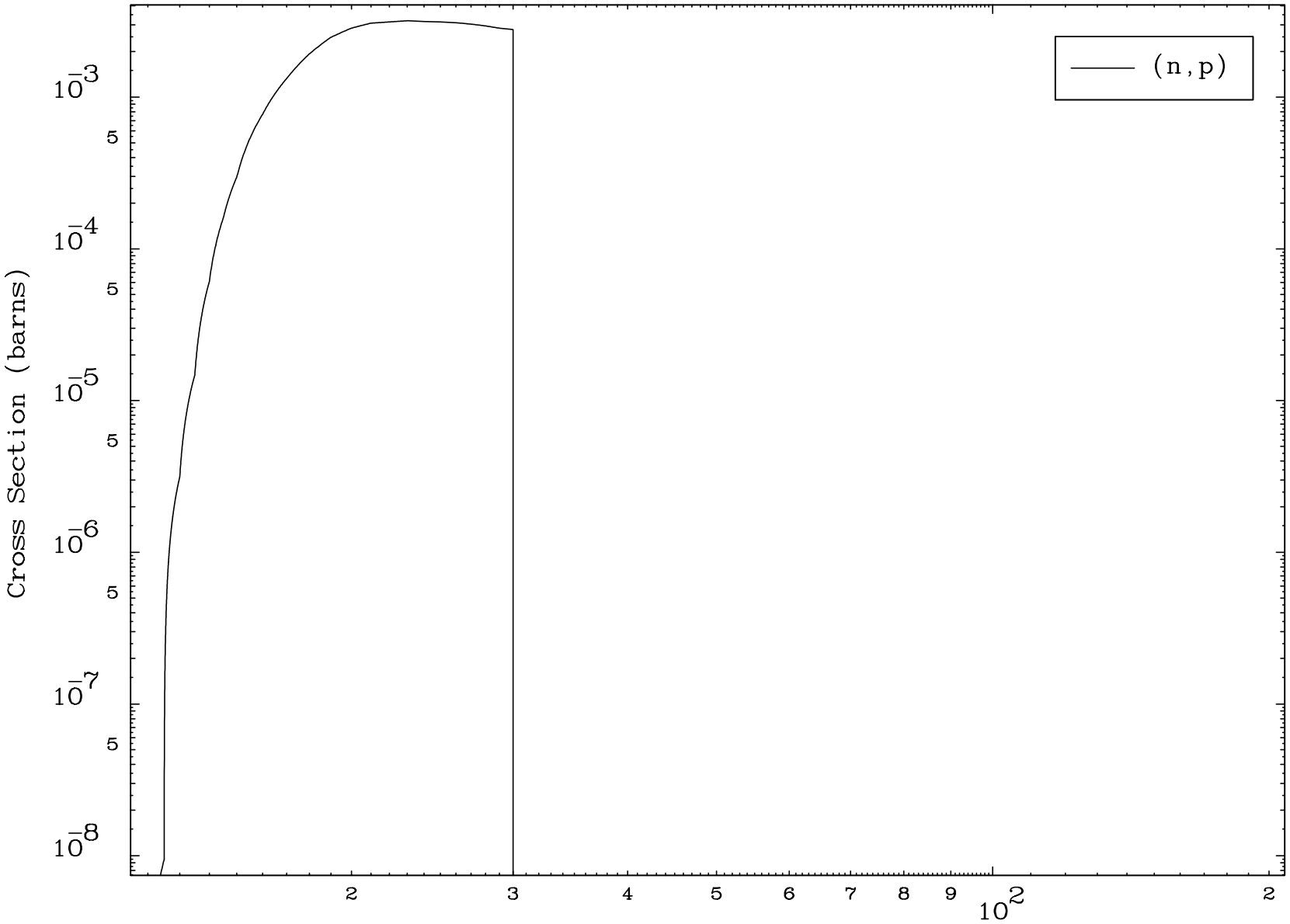

MAT 1543
Charged Particle
15-P -37
293 Kelvin Cross Sections
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
10^-10
(n,2n) p
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,α)
2
3
4
5
6
7
8
9
10^2
2
Incident Energy (MeV)
4
15-P -37


MAT 1543
Particle Production
293 Kelvin Cross Sections
15-P -37
Cross Section (barns)
10-2
10-4
10-6
10-8
5
2
3
4
5
6
7
8
9
10 2
2
Incident Energy (MeV)
15-P -37
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production

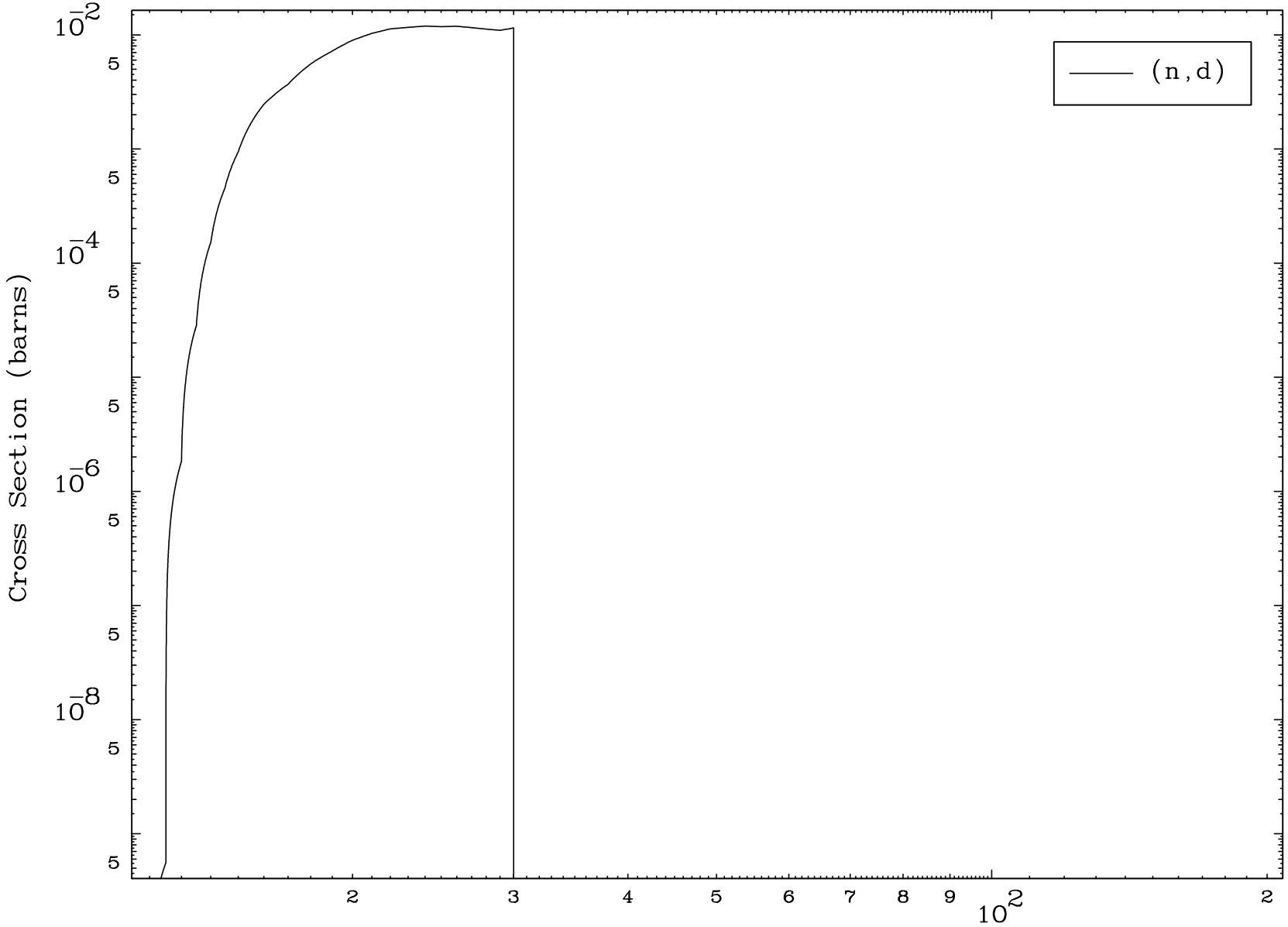

MAT 1543
(n,n') Level
293 Kelvin Cross Sections
15-P -37
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
6
15-P -37

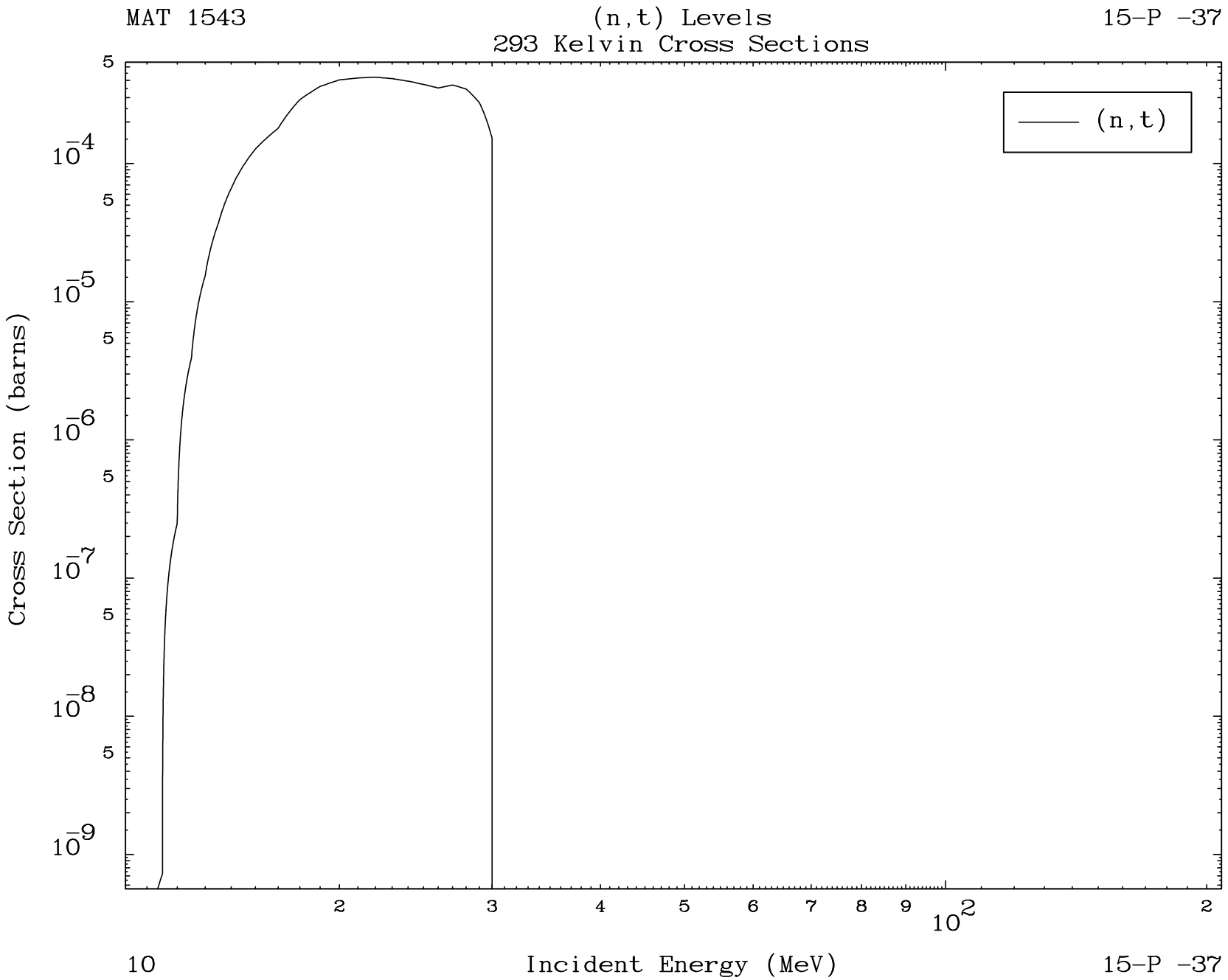

MAT 1543
(n,n') Level
293 Kelvin Cross Sections
15-P -37
MT= 59 (n,n') Level
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
15-P -37

293 Kelvin Cross Sections

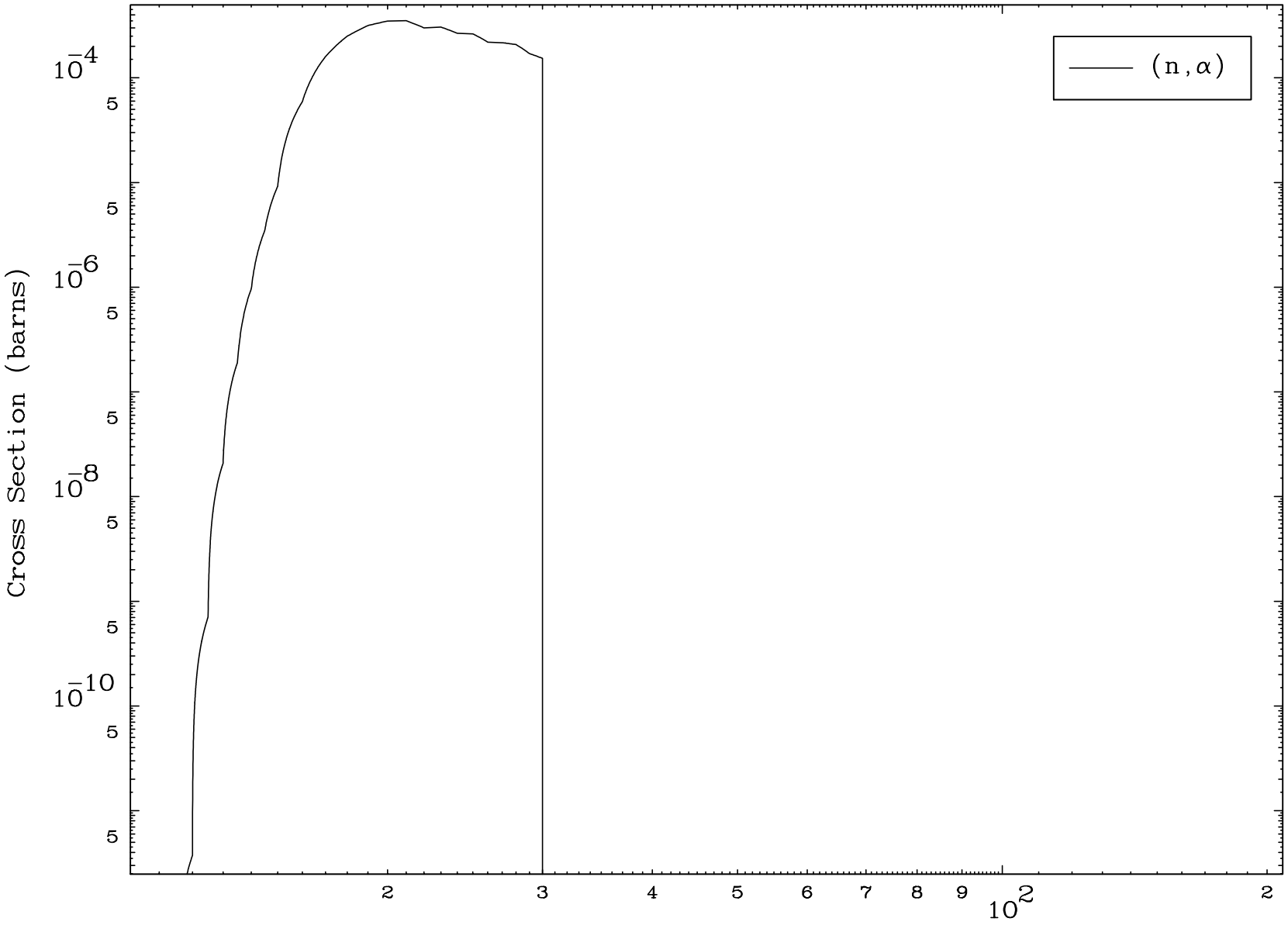


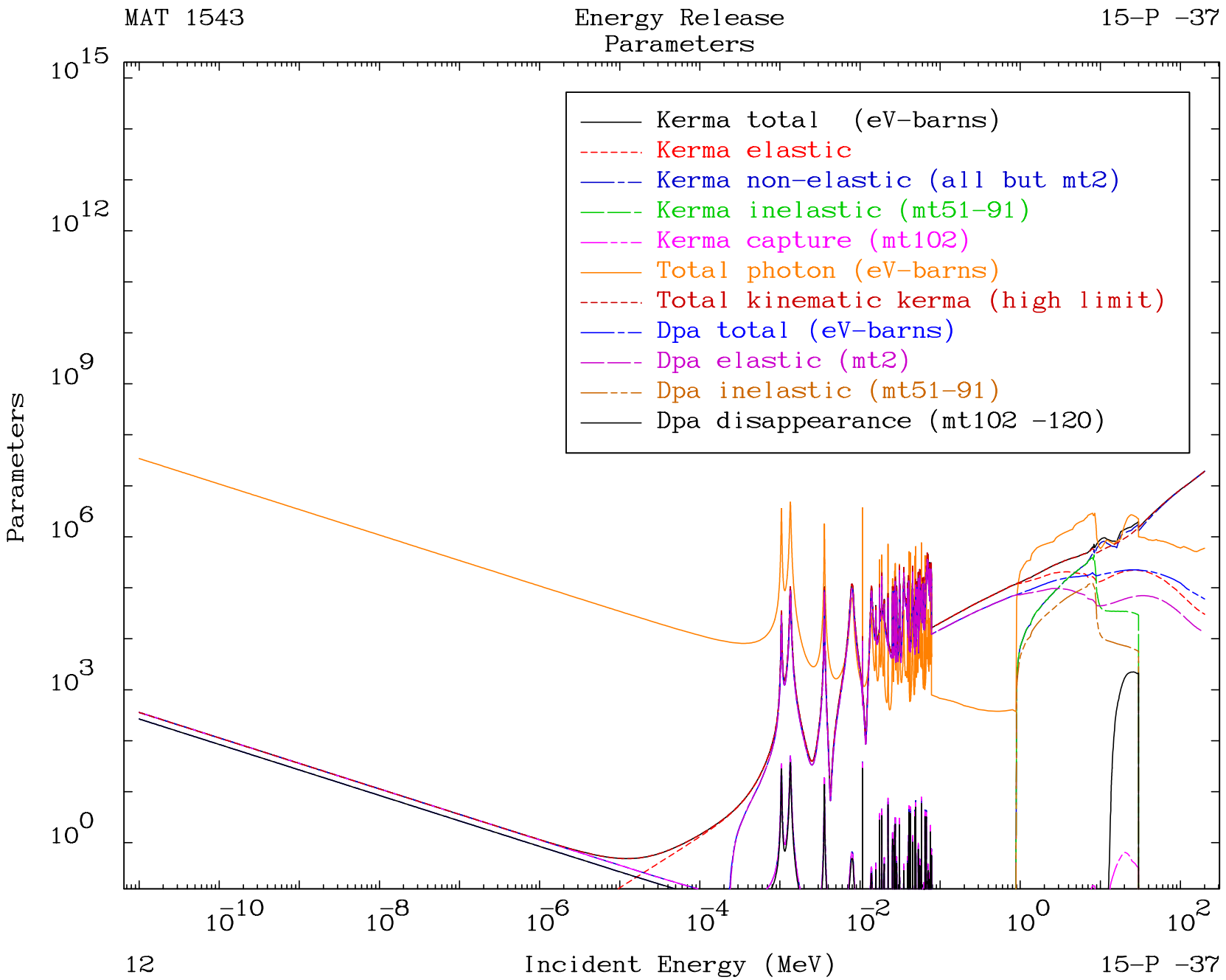
293 Kelvin Cross Sections

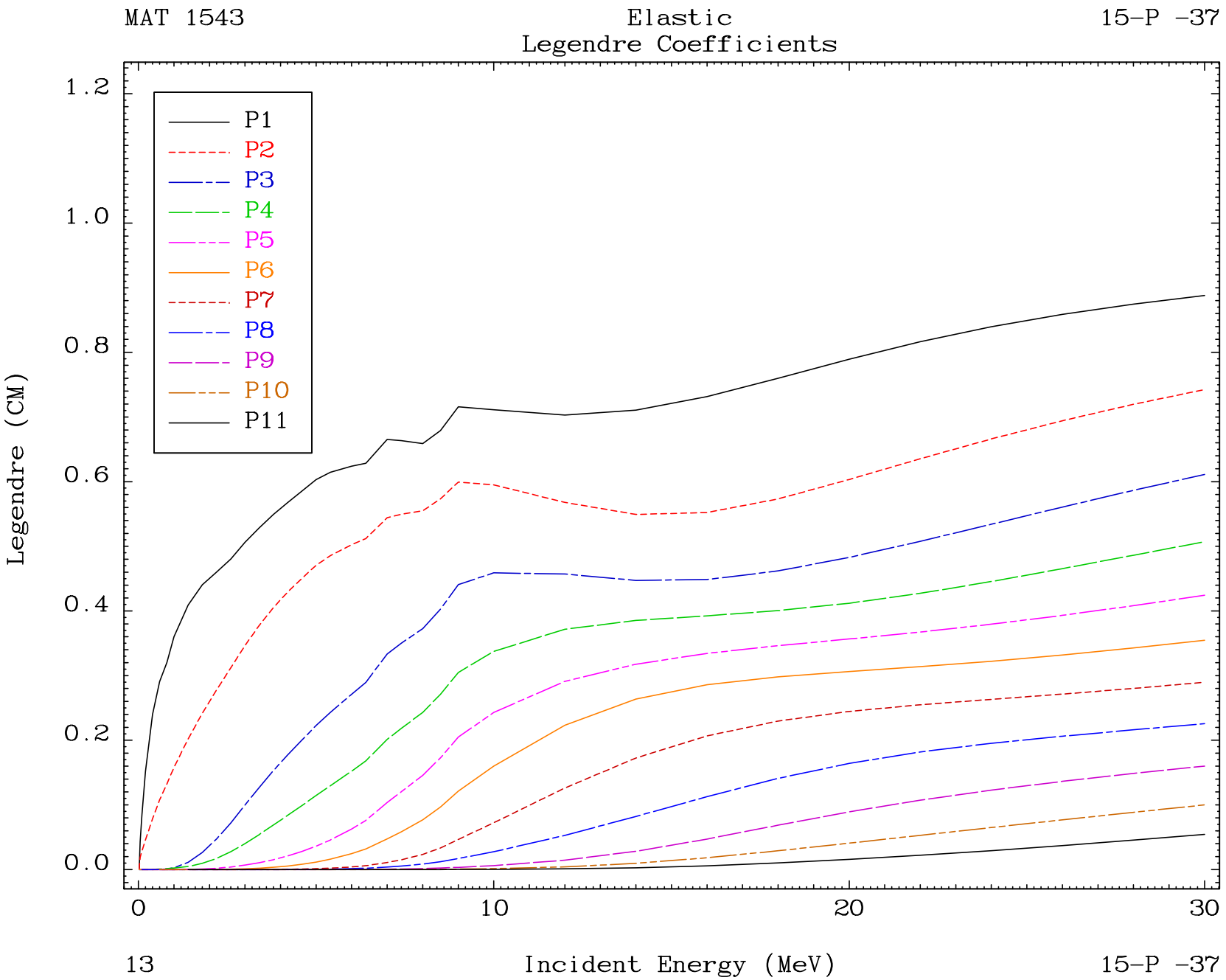


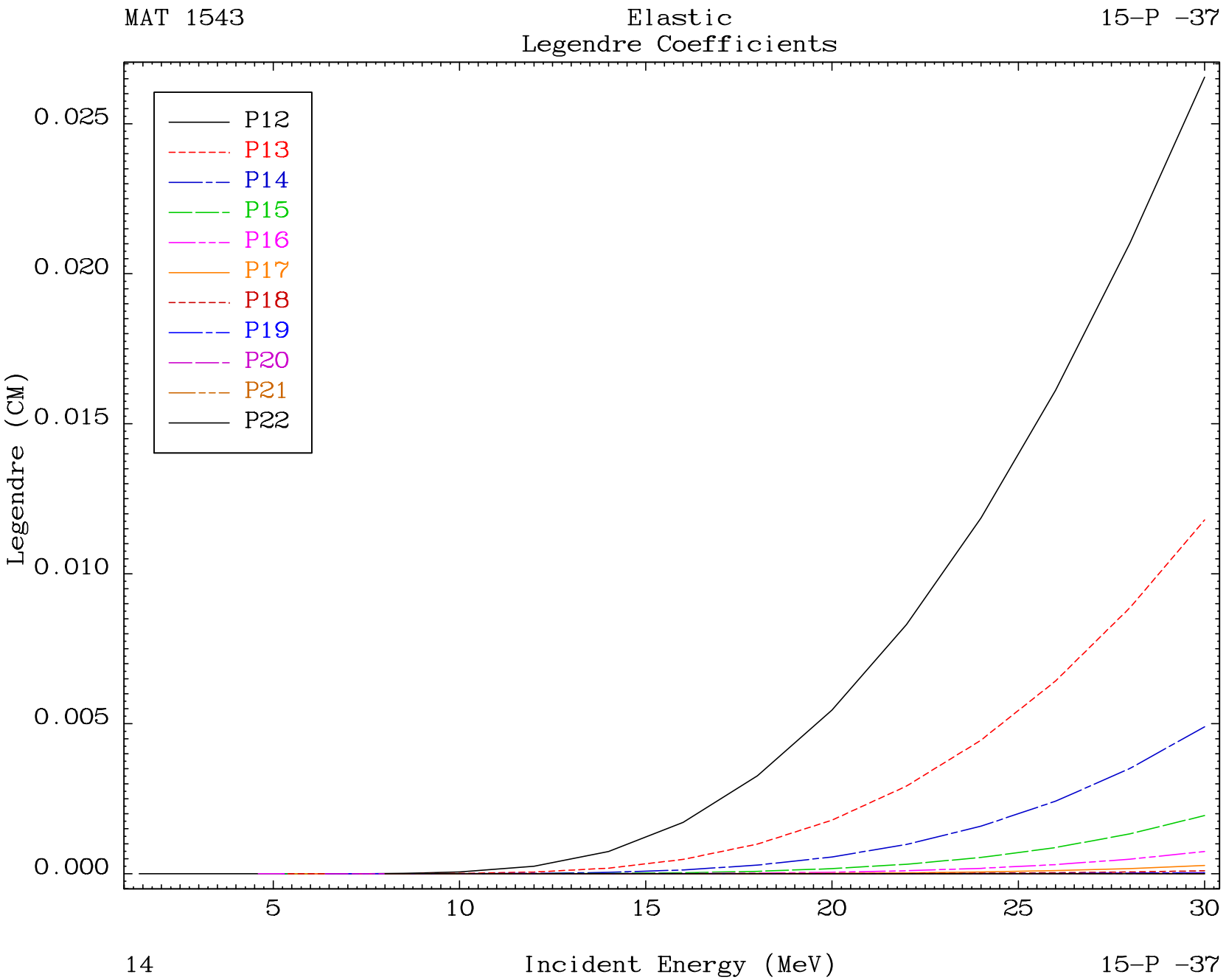

MAT 1543
(n,t) Levels
15-P -37
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
15-P -37

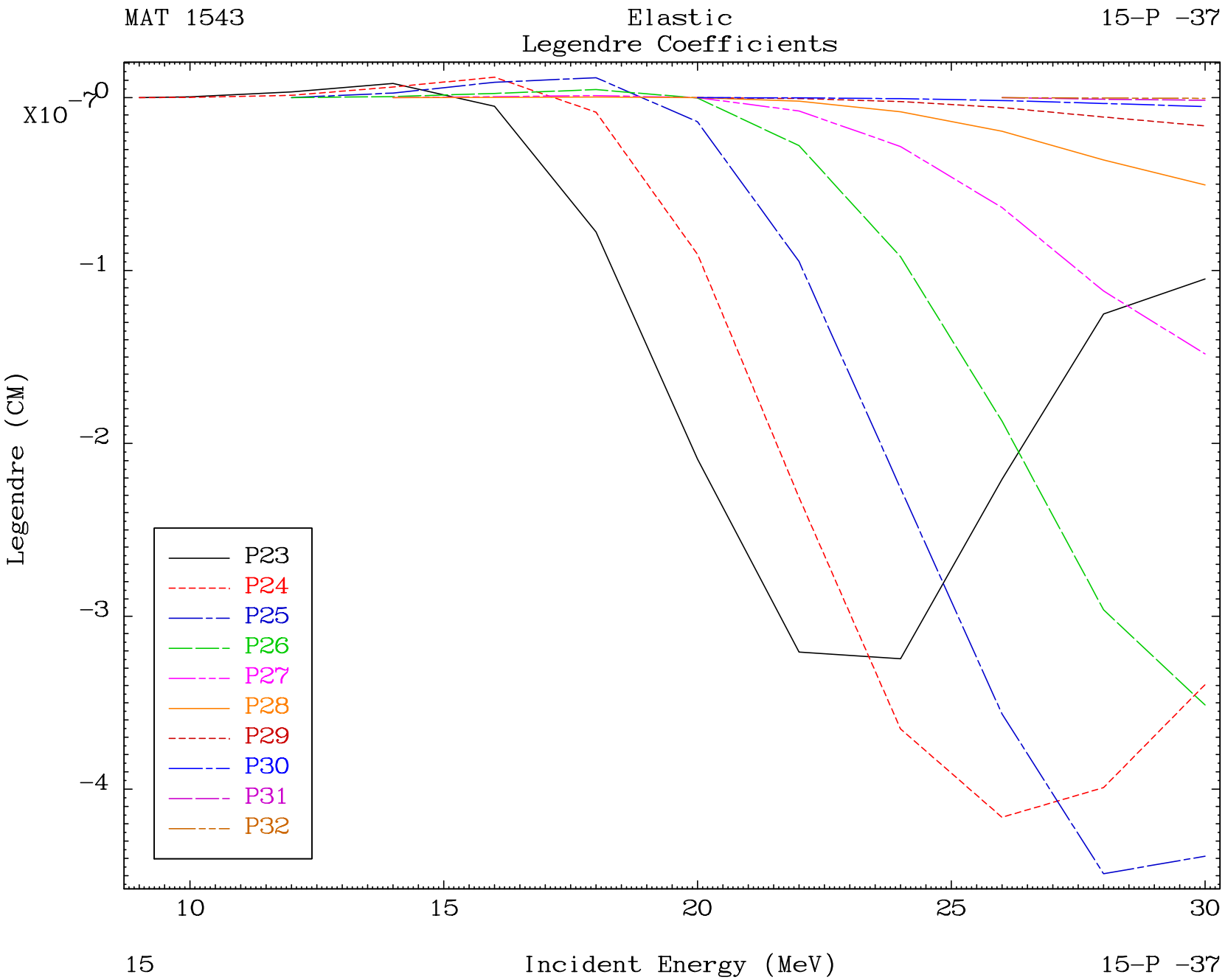
293 Kelvin Cross Sections

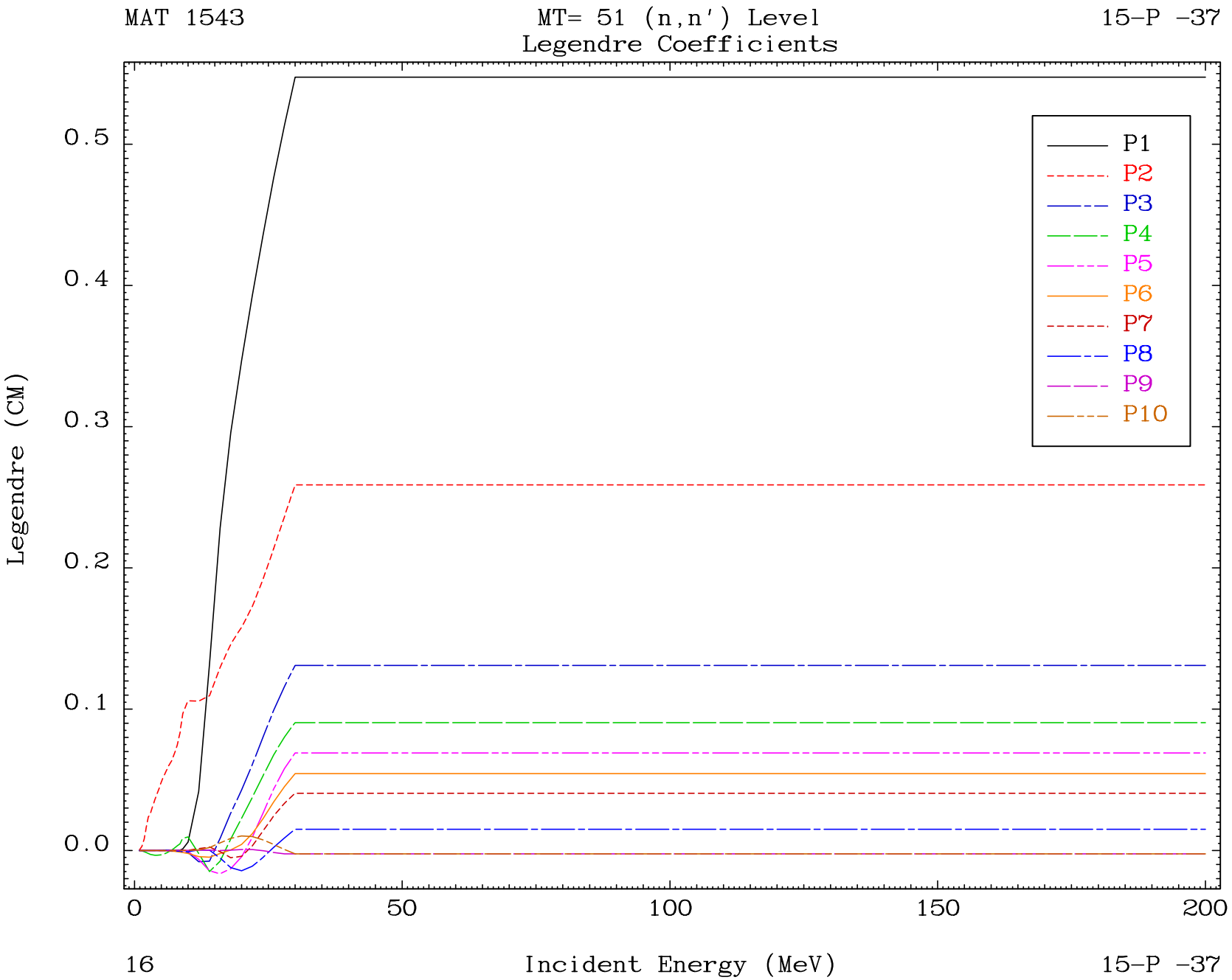


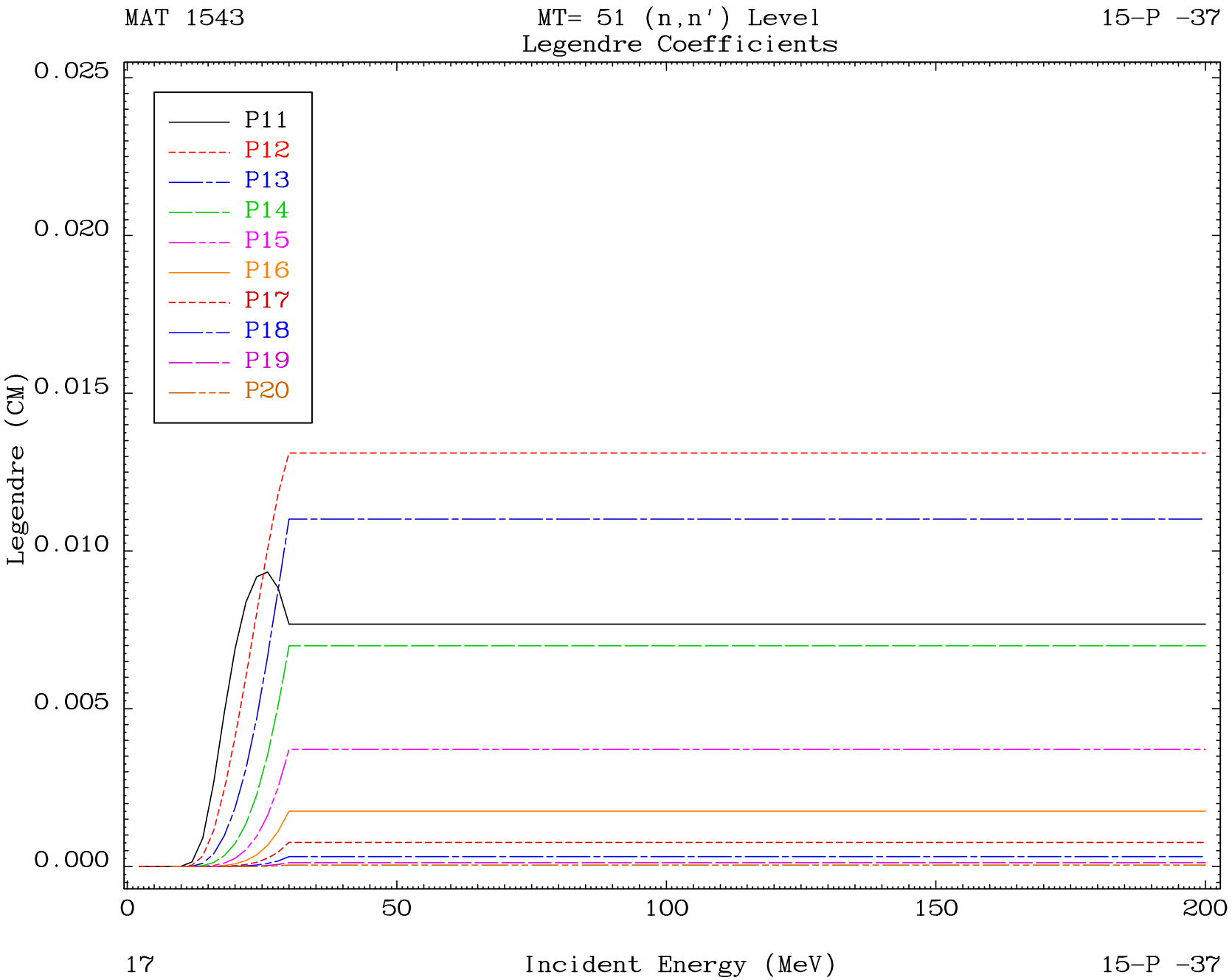

MAT 1543
Energy Release
Parameters
15-P -37
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma capture (mt102)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
Parameters
Incident Energy (MeV)
12
15-P -37

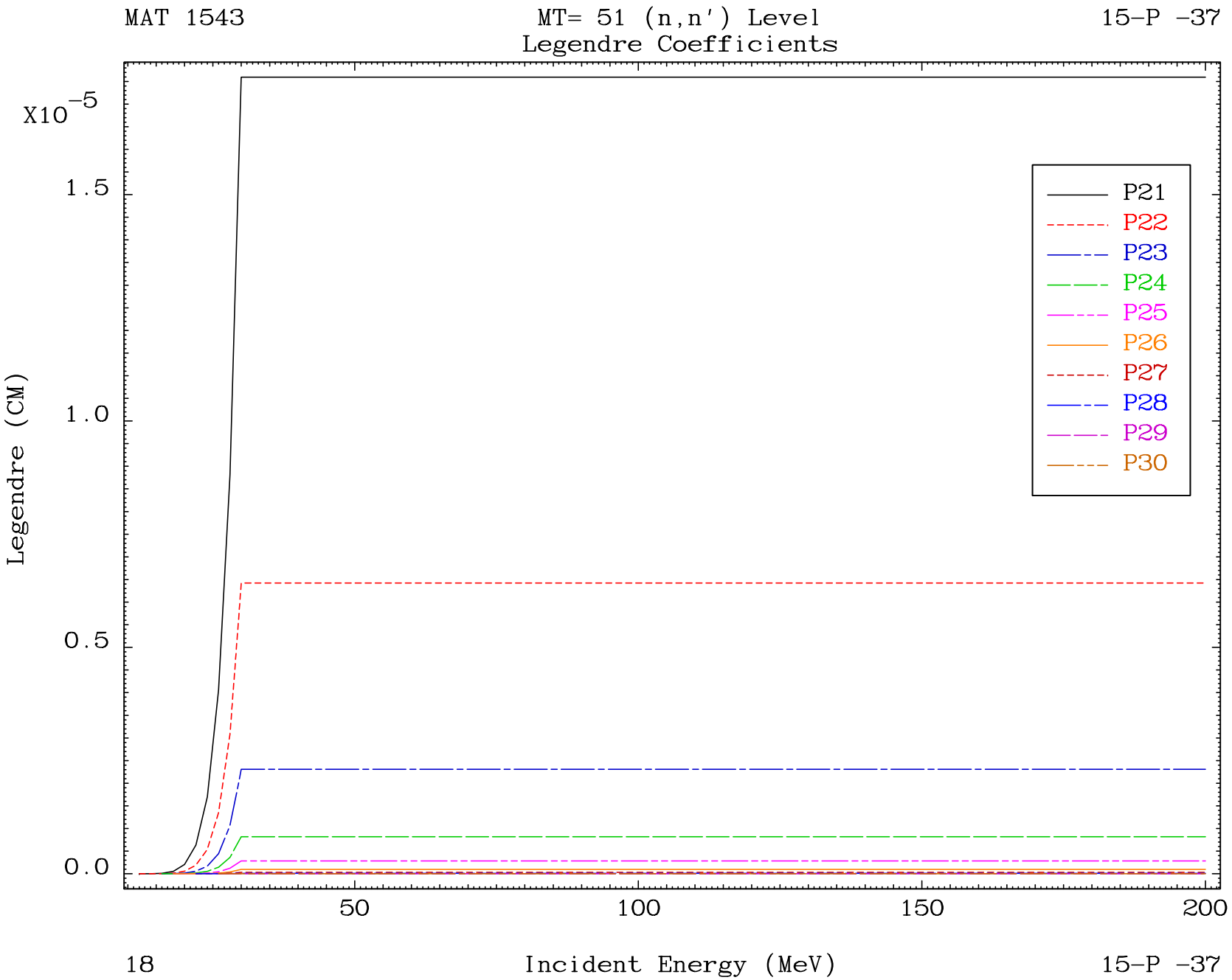

MAT 1543
Elastic
Legendre Coefficients
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
Legendre (CM)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
10
20
30
13
Incident Energy (MeV)
15-P -37

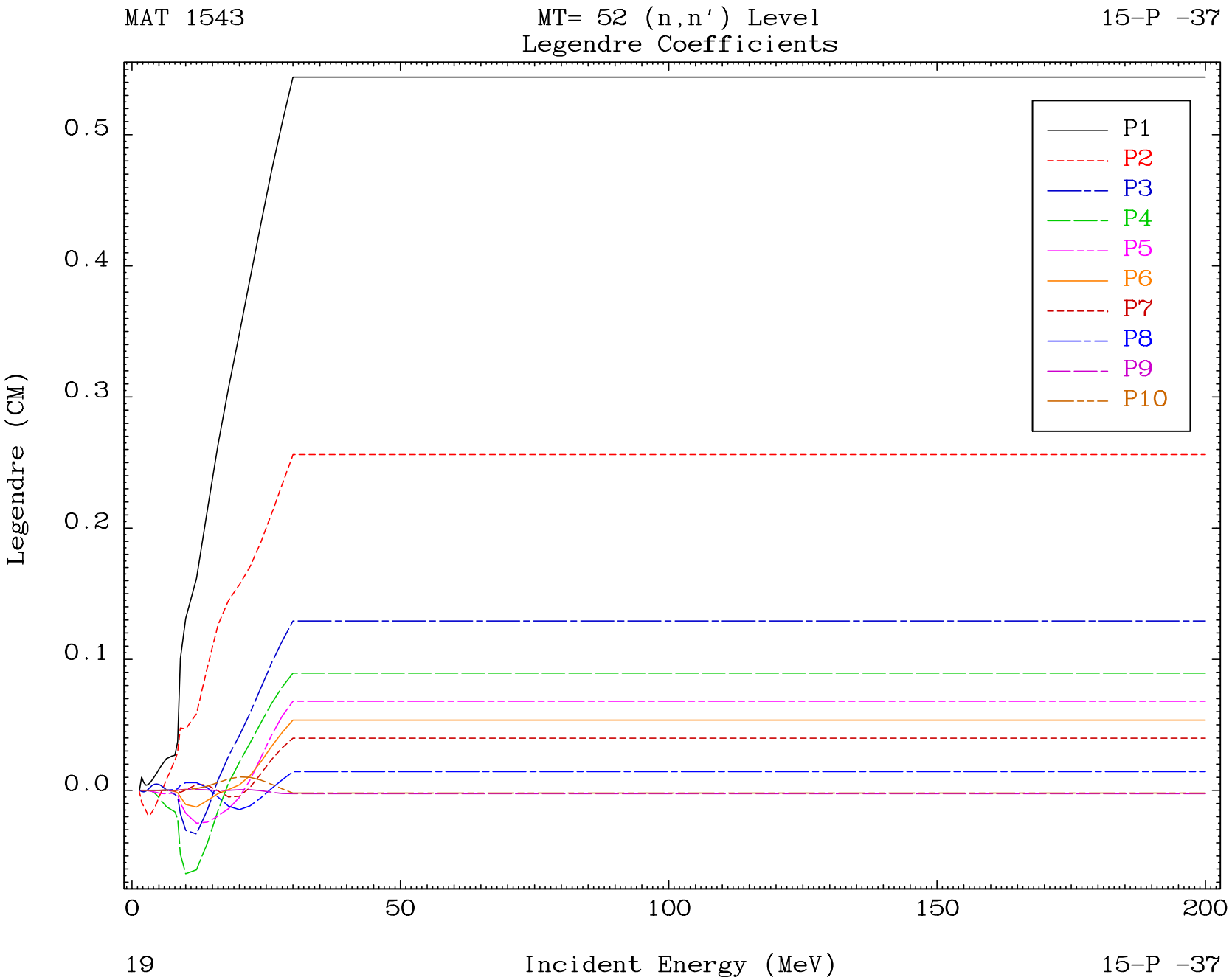

MAT 1543
Elastic
Legendre Coefficients
15-P -37
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
5
10
15
20
25
30
14
Incident Energy (MeV)
15-P -37

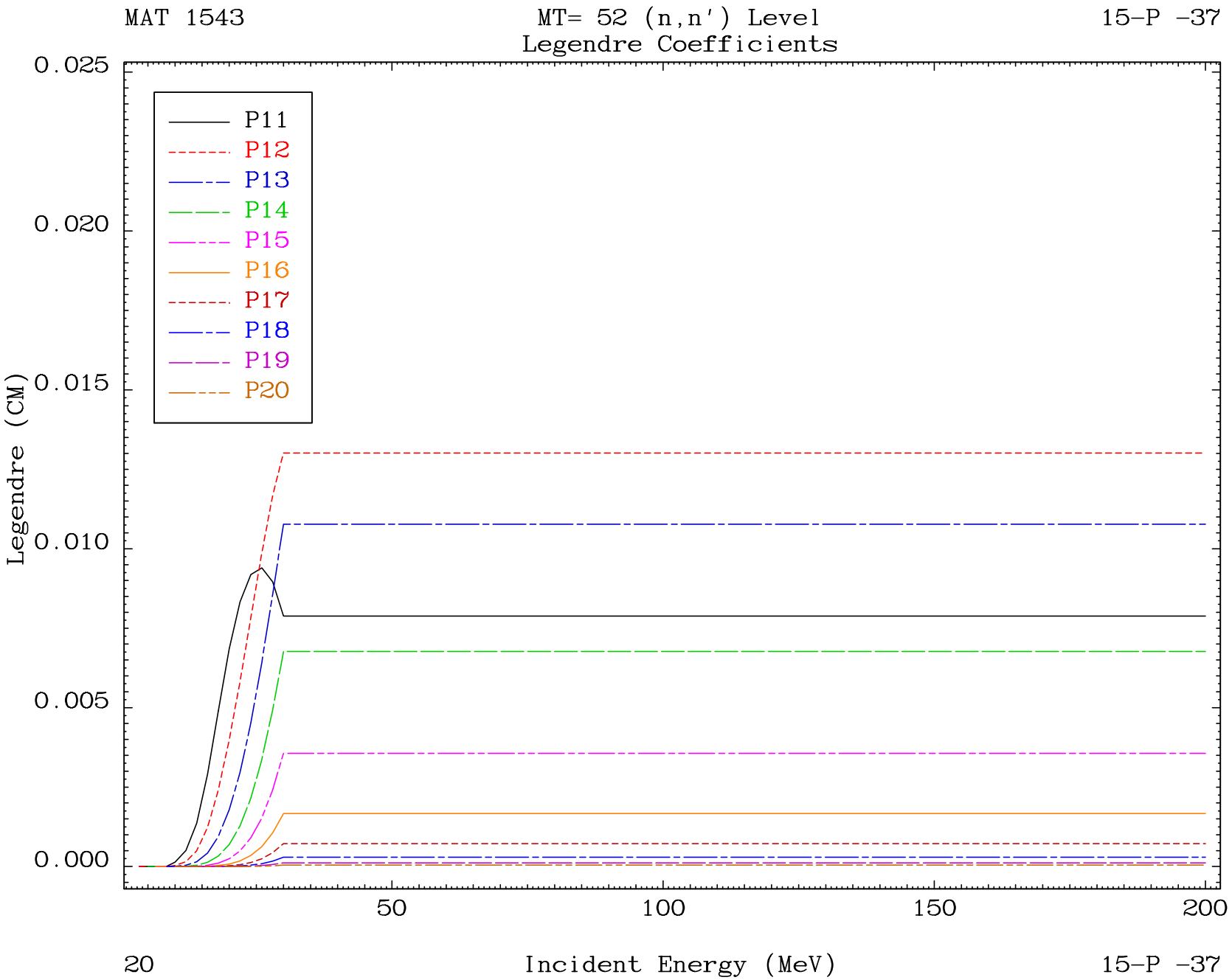

MAT 1543
Elastic
Legendre Coefficients
15-P -37
X10^-0
-1
-2
-3
-4
Legendre (CM)
P23
P24
P25
P26
P27
P28
P29
P30
P31
P32
10
15
20
25
30
15
Incident Energy (MeV)
15-P -37

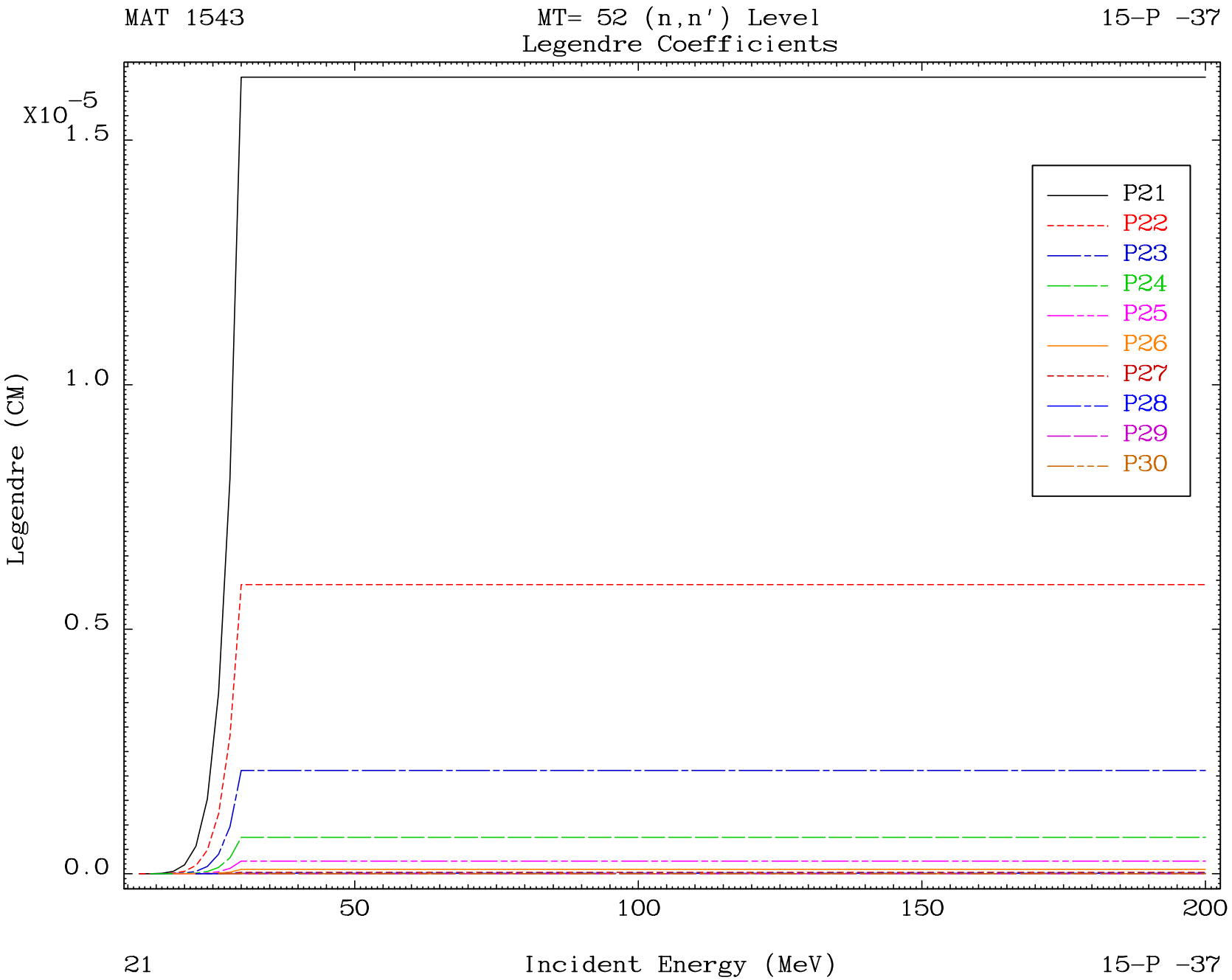

MAT 1543
MT= 51 (n,n') Level
Legendre Coefficients
15-P -37
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
Incident Energy (MeV)
16
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

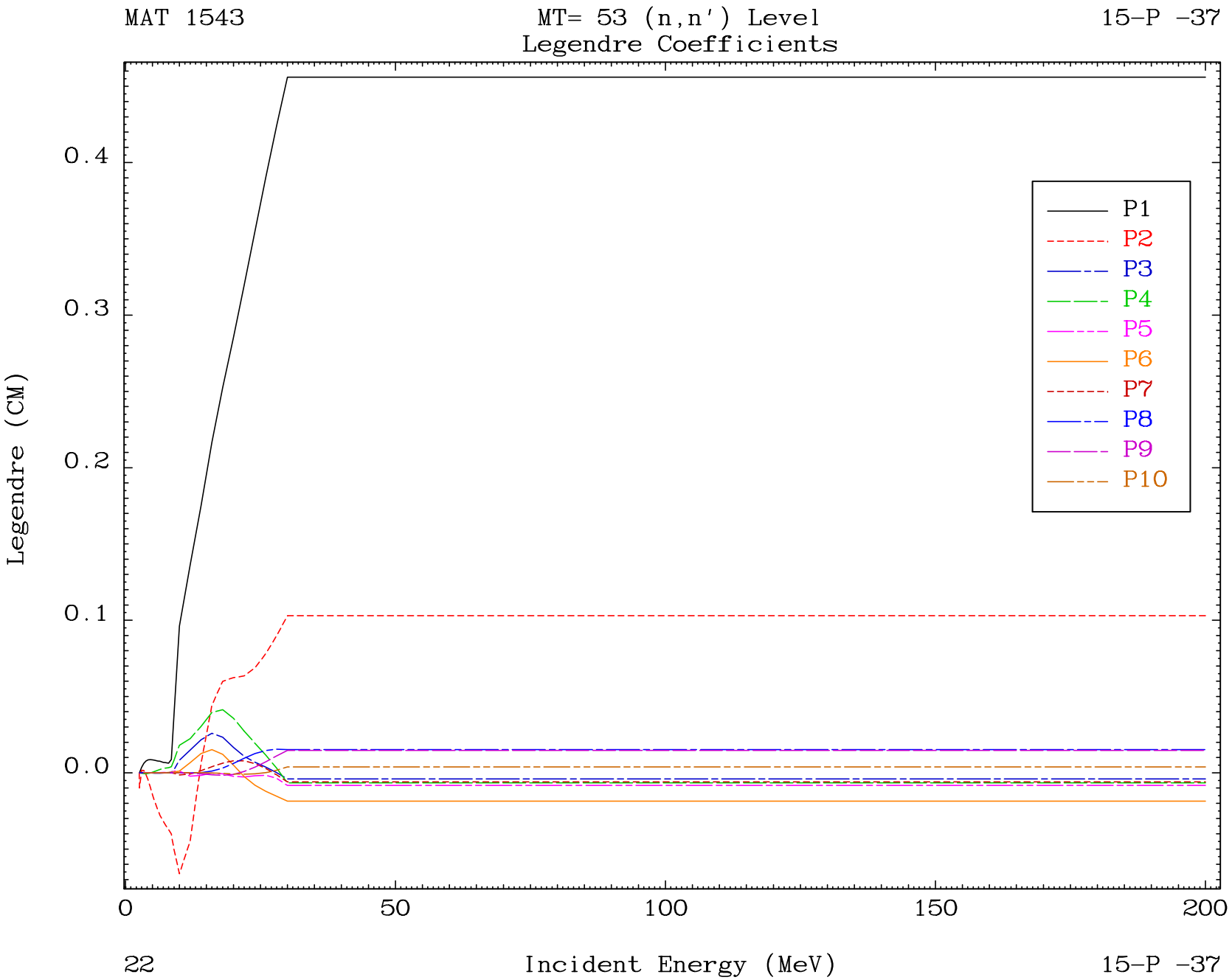

MAT 1543
MT= 51 (n,n') Level
Legendre Coefficients
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
0
50
100
150
200
17
Incident Energy (MeV)
15-P -37

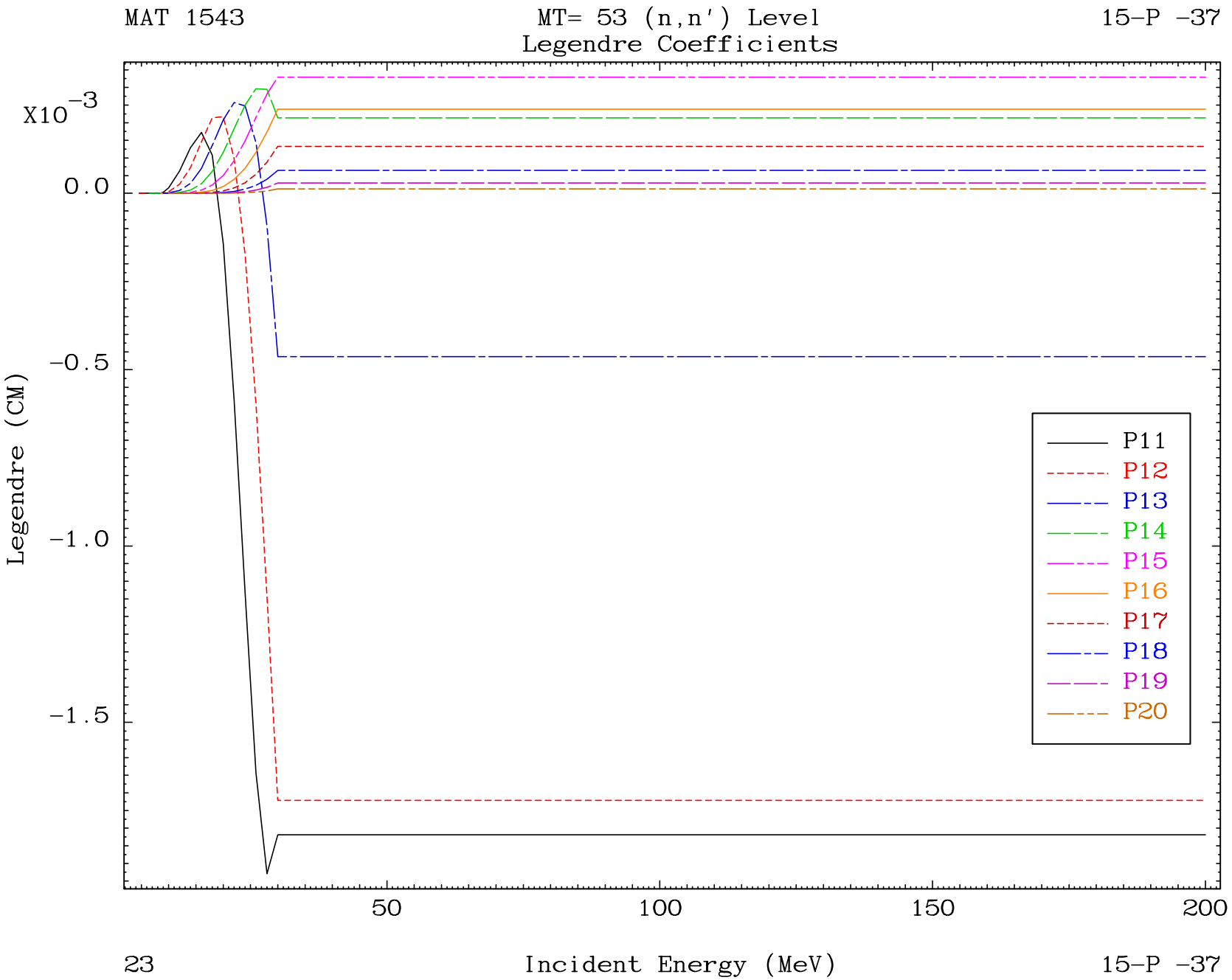

MAT 1543
MT= 51 (n,n') Level
Legendre Coefficients
15-P -37
X10-5
1.5
1.0
0.5
0.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
18
Incident Energy (MeV)
15-P -37

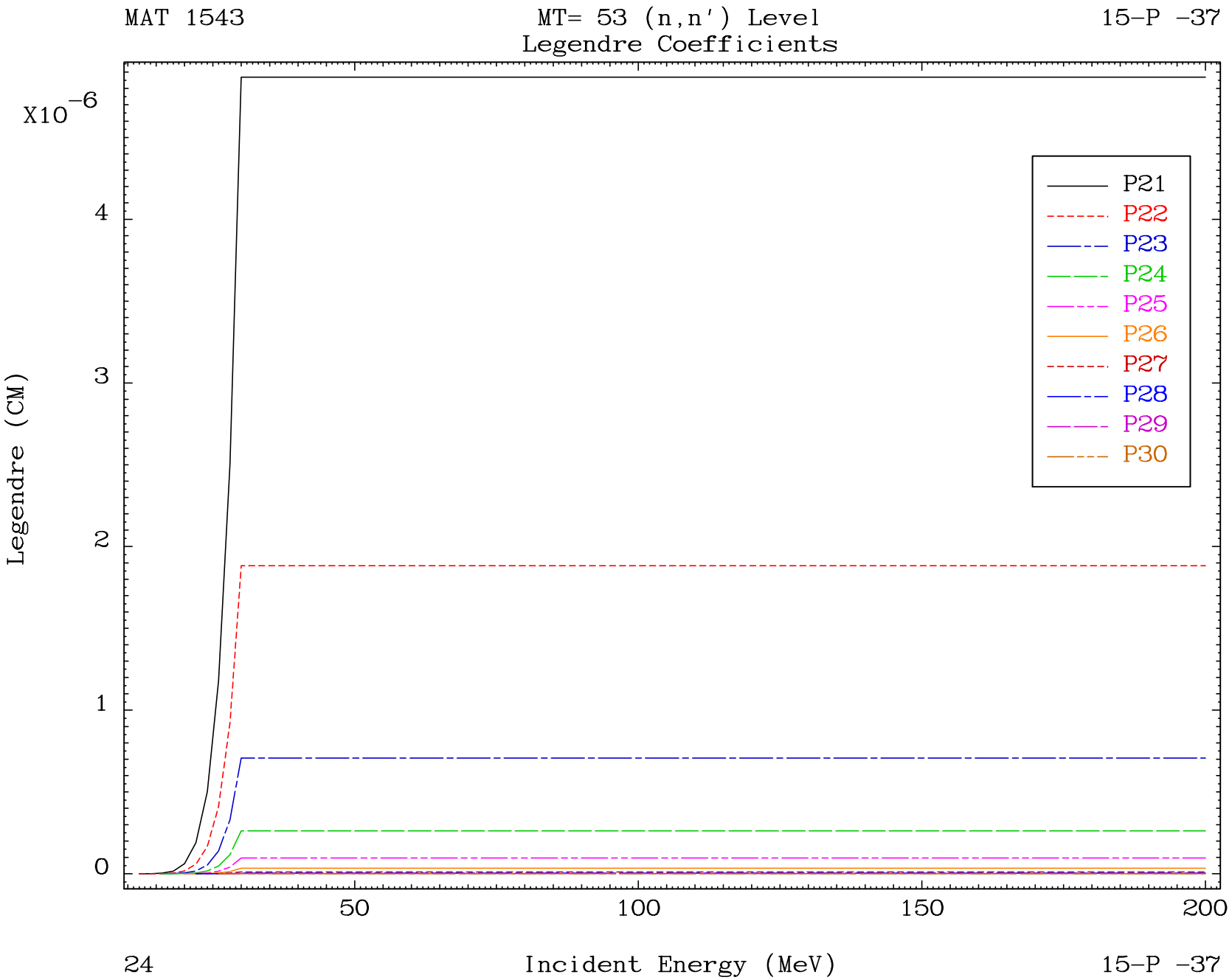

MAT 1543
MT= 52 (n,n') Level
Legendre Coefficients
15-P -37
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
19
Incident Energy (MeV)
15-P -37

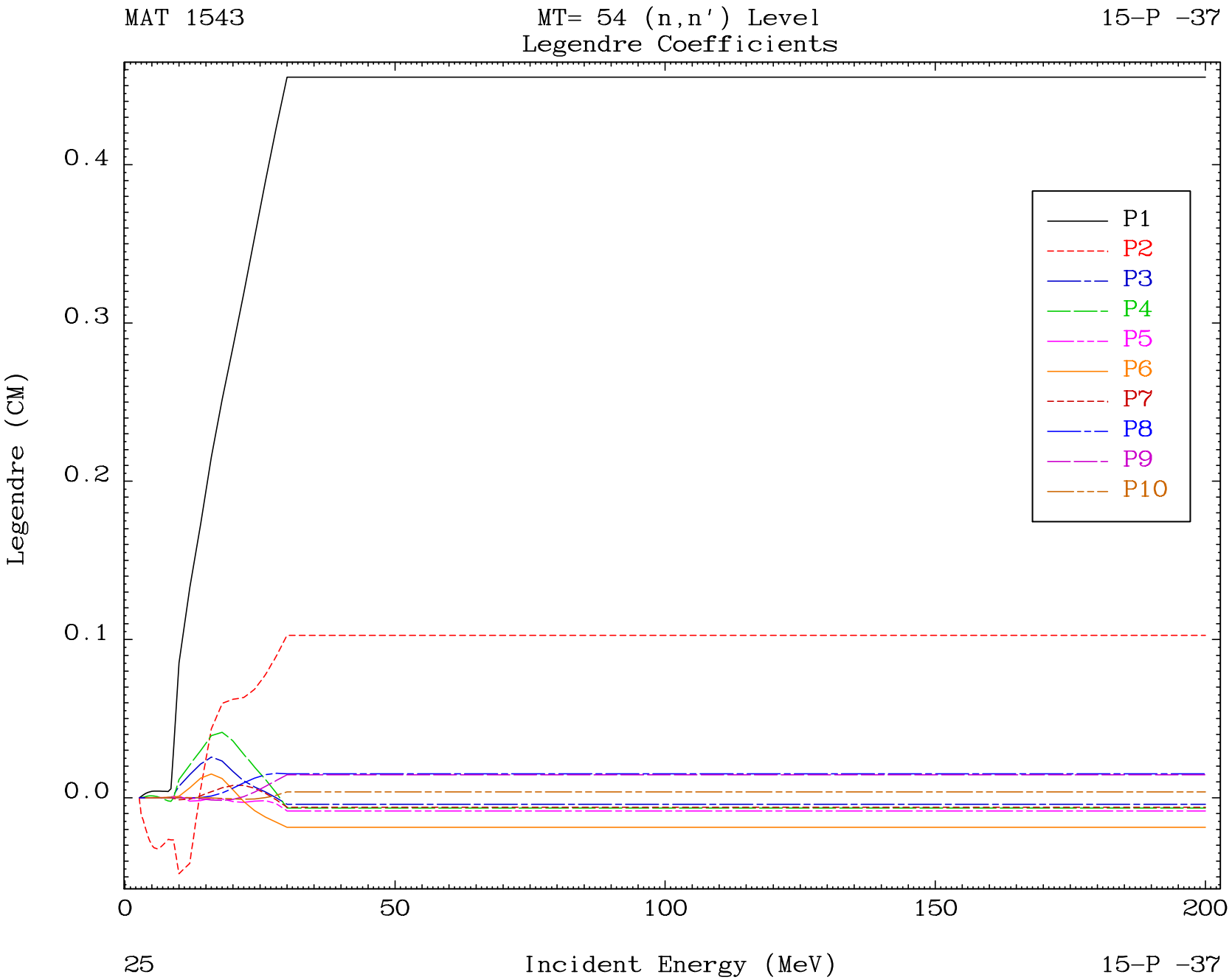

MAT 1543
MT= 52 (n,n') Level
Legendre Coefficients
15-P -37
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
20
Incident Energy (MeV)
15-P -37

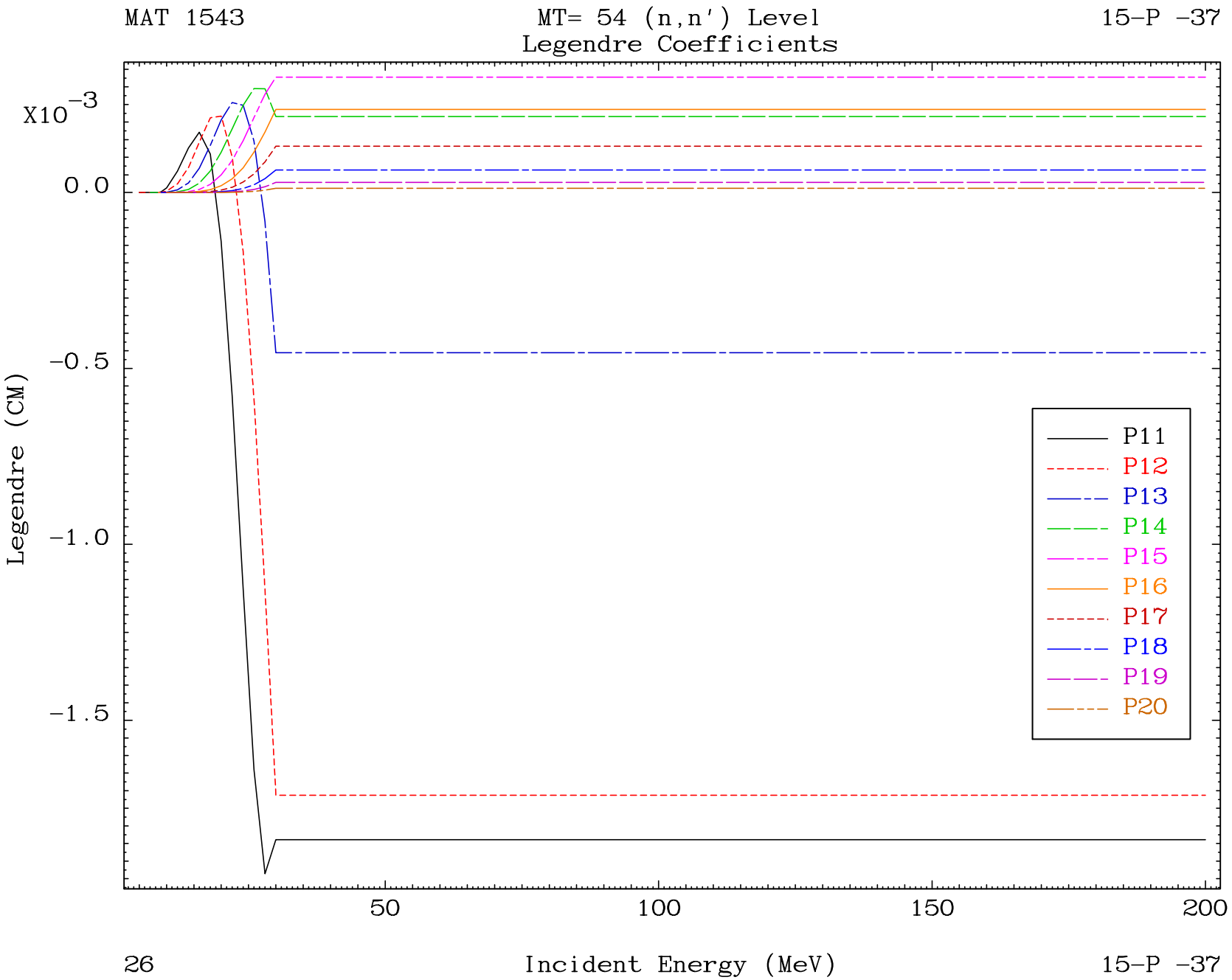

MAT 1543
MT= 52 (n,n') Level
Legendre Coefficients
15-P -37
X10-5
1.5
1.0
0.5
0.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
21
Incident Energy (MeV)
15-P -37

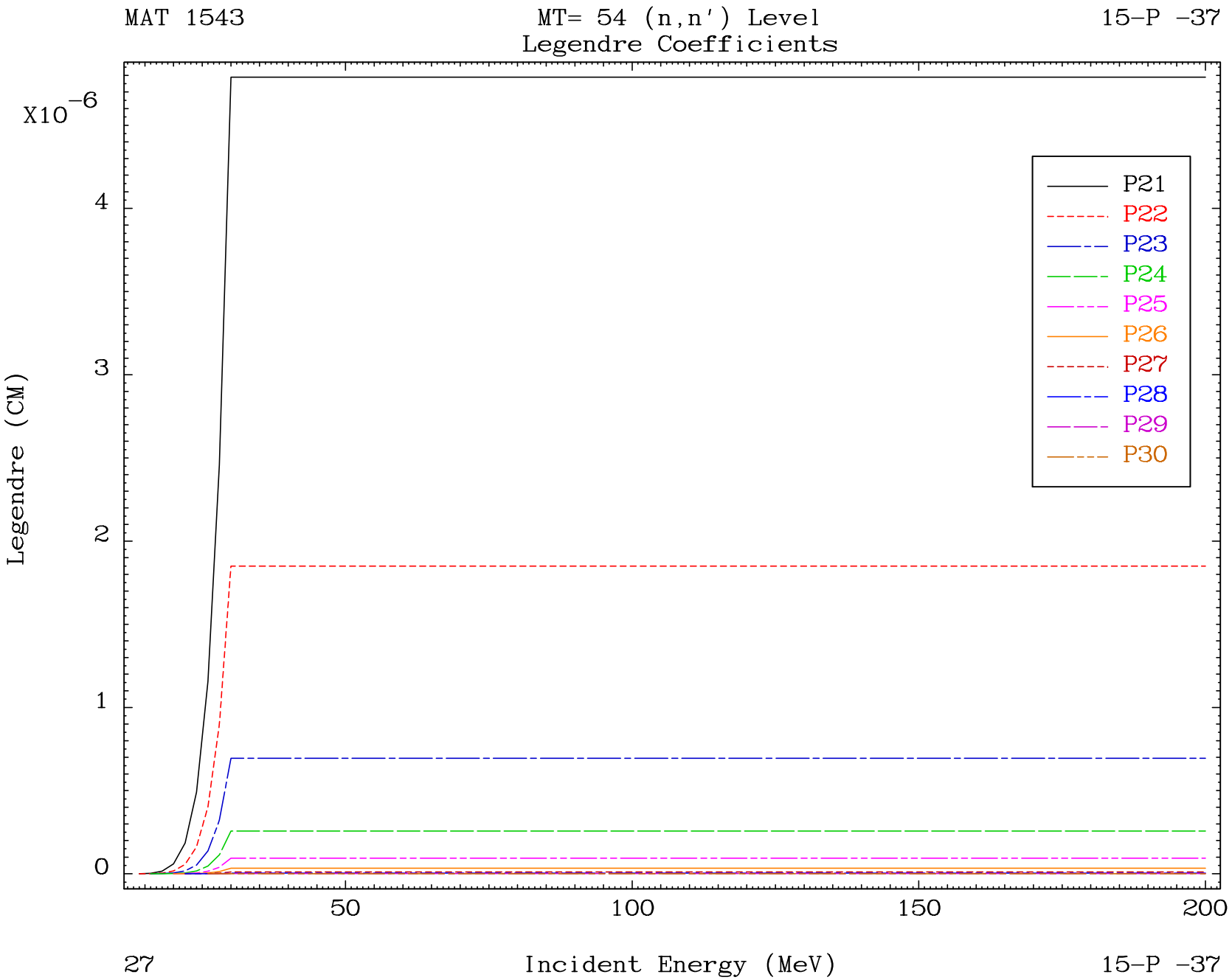

MAT 1543
MT= 53 (n,n') Level
Legendre Coefficients
15-P -37
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
22
Incident Energy (MeV)
15-P -37

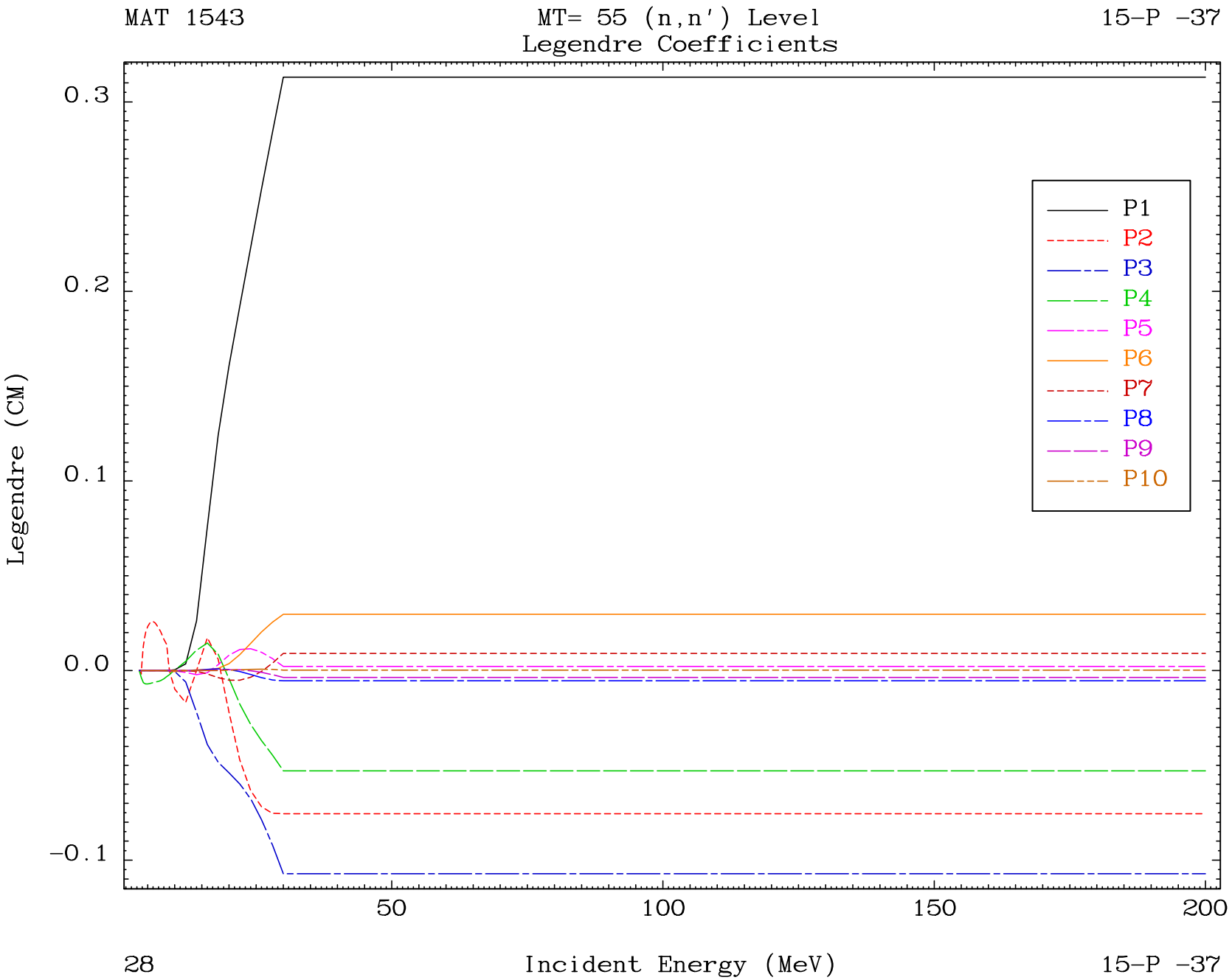

MAT 1543
MT= 53 (n,n') Level
Legendre Coefficients
15-P -37
X10-3
0.0
-0.5
-1.0
-1.5
Legendre (CM)
50
100
150
200
23
Incident Energy (MeV)
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

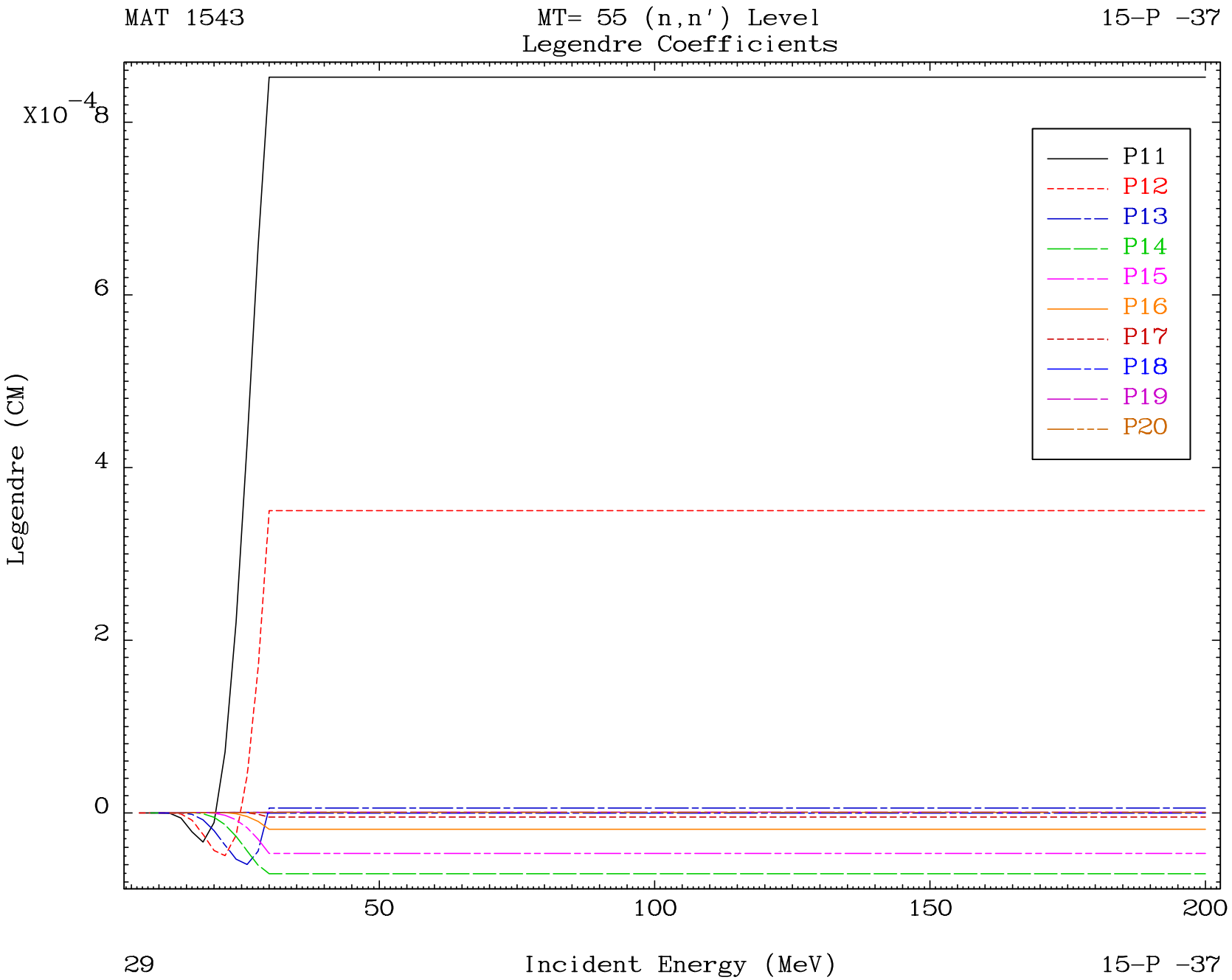

MAT 1543
MT= 53 (n,n') Level
Legendre Coefficients
15-P -37
X10-6
4
3
2
1
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
24
Incident Energy (MeV)
15-P -37

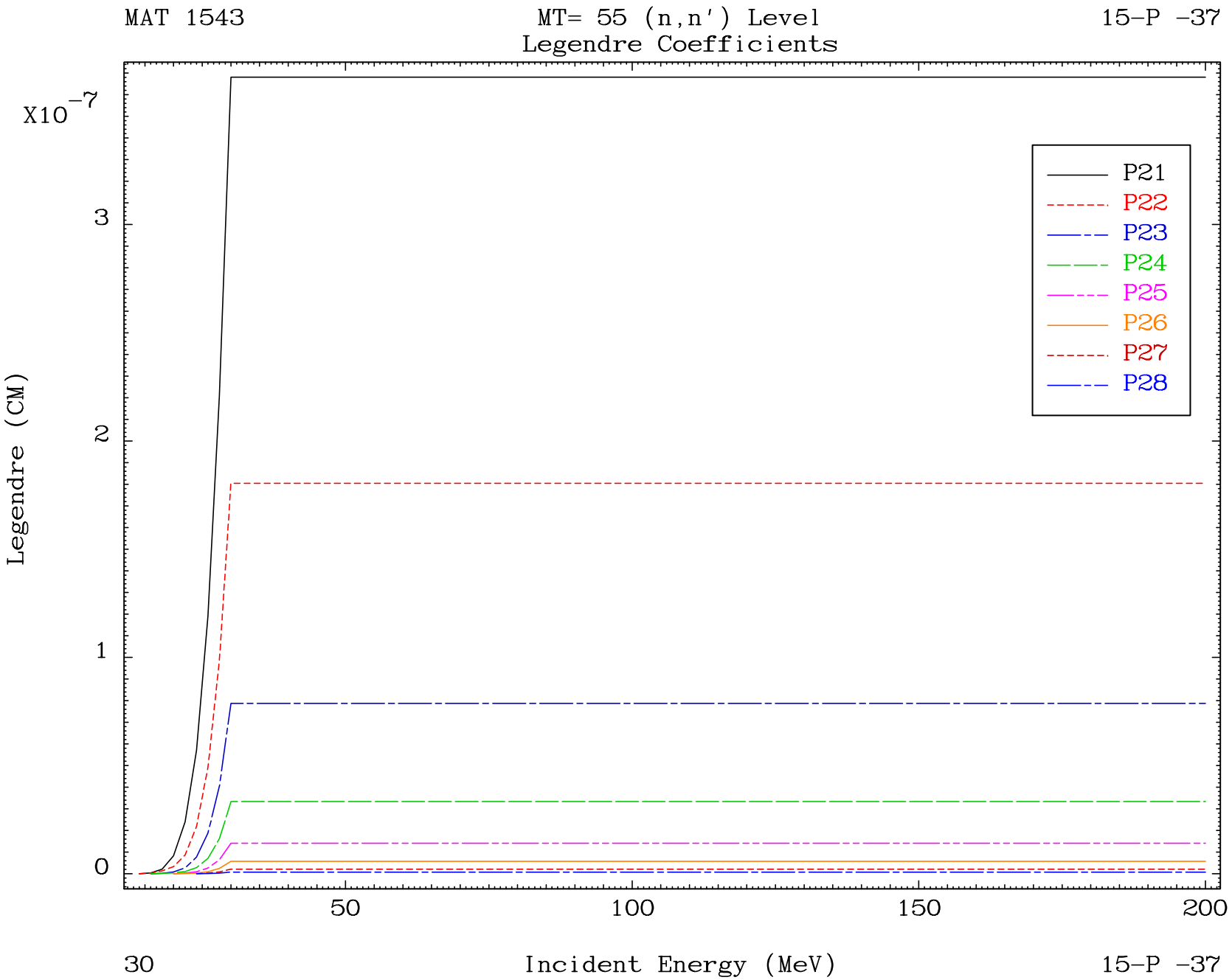

MAT 1543
MT= 54 (n,n') Level
Legendre Coefficients
15-P -37
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
25
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

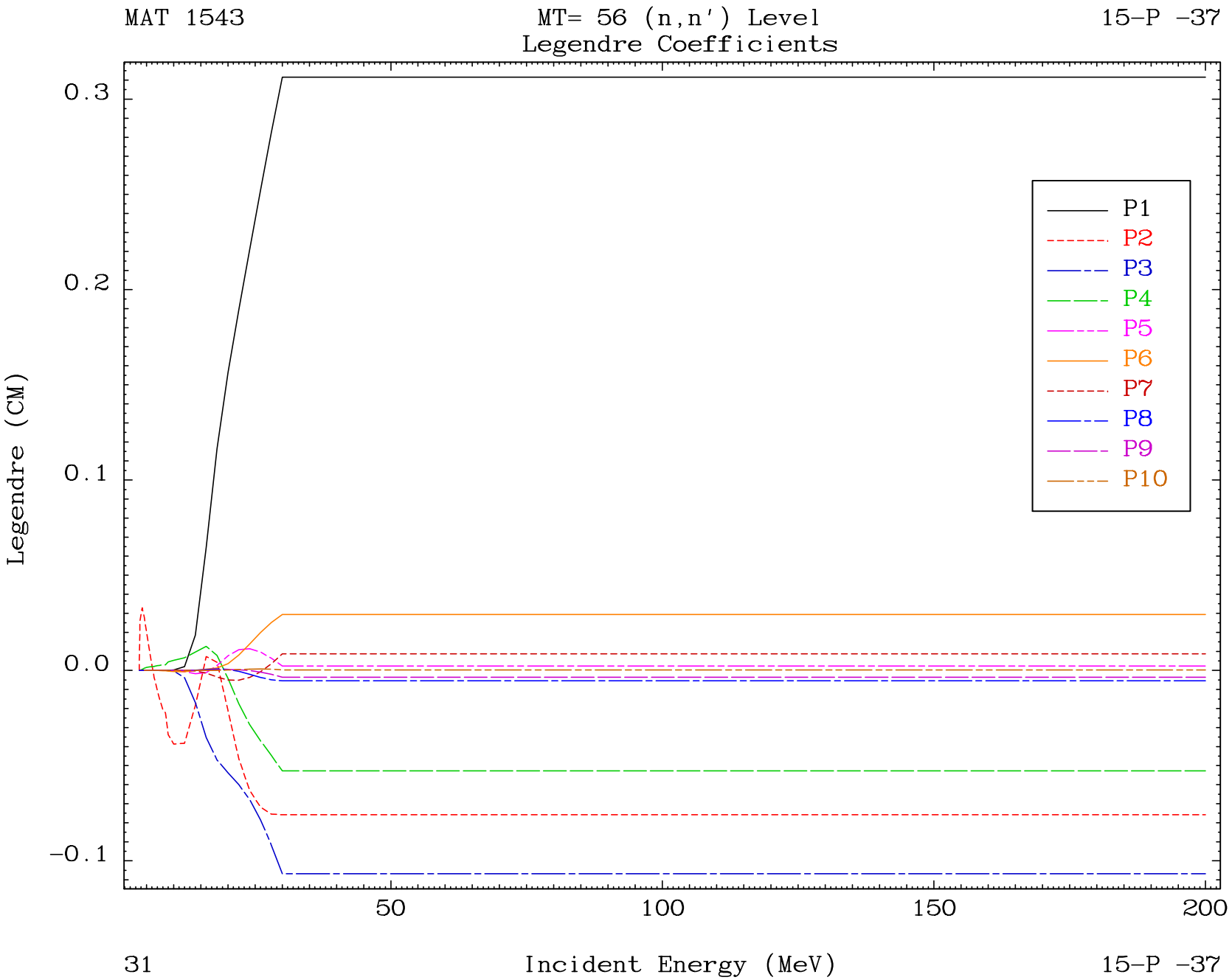

MAT 1543
MT= 54 (n,n') Level
Legendre Coefficients
15-P -37
X10-3
0.0
-0.5
-1.0
-1.5
Legendre (CM)
50
100
150
200
26
Incident Energy (MeV)
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

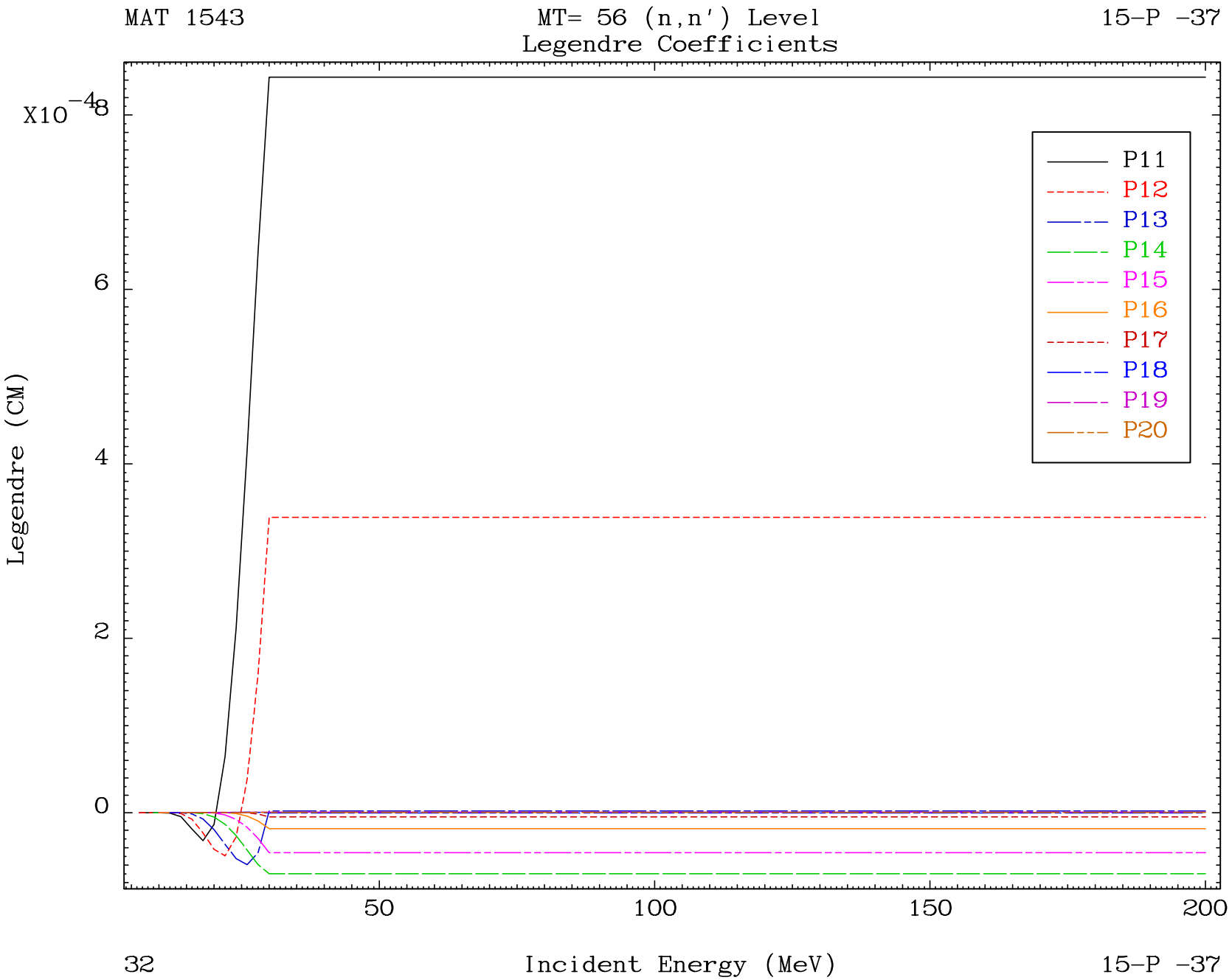

MAT 1543
MT= 54 (n,n') Level
Legendre Coefficients
15-P -37
X10-6
4
3
2
1
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
27
Incident Energy (MeV)
15-P -37

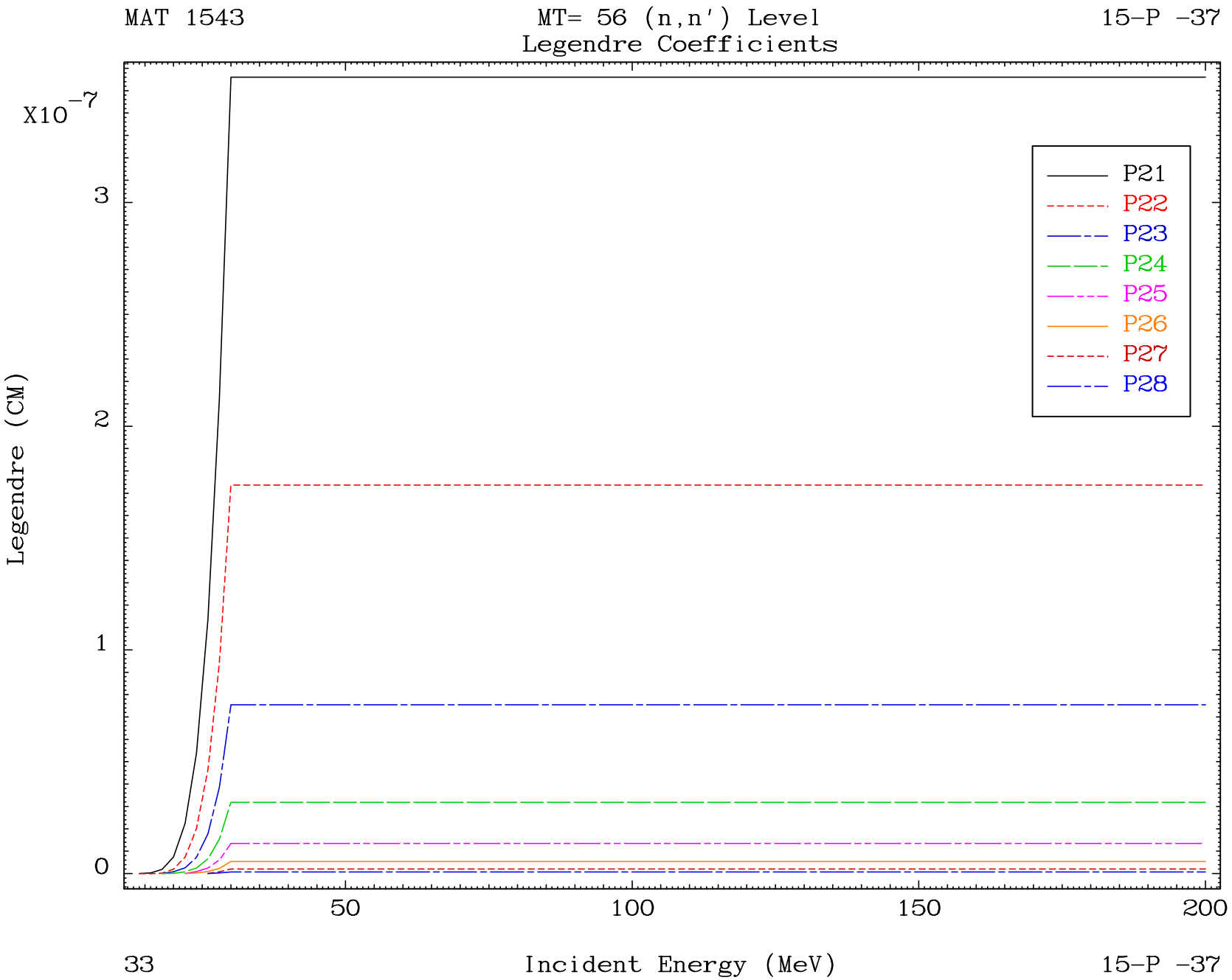

MAT 1543
MT= 55 (n,n') Level
Legendre Coefficients
15-P -37
0.3
0.2
0.1
0.0
-0.1
Legendre (CM)
50
100
150
200
28
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

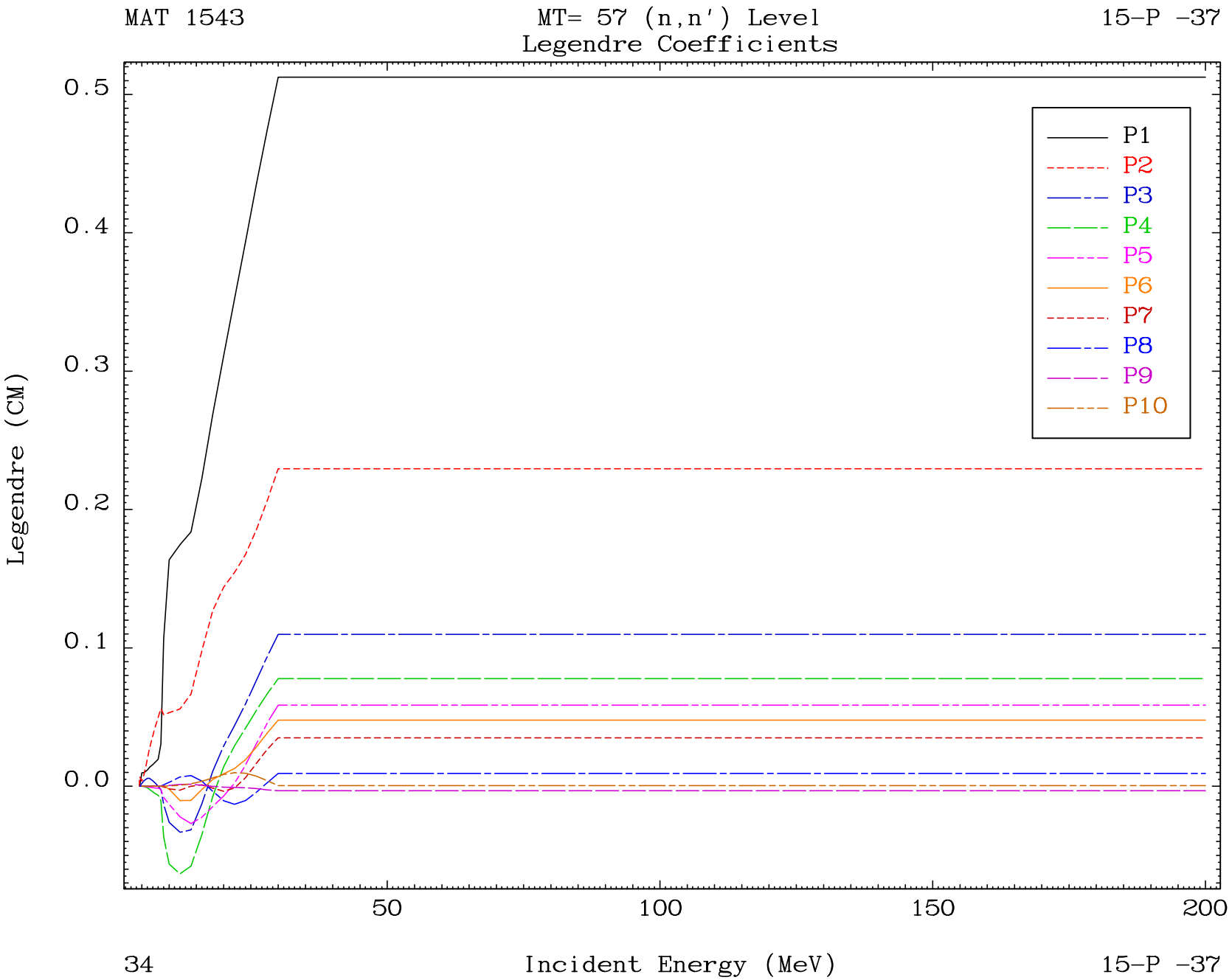

MAT 1543
MT= 55 (n,n') Level
Legendre Coefficients
15-P -37
X10 -4
8
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
29
Incident Energy (MeV)
15-P -37

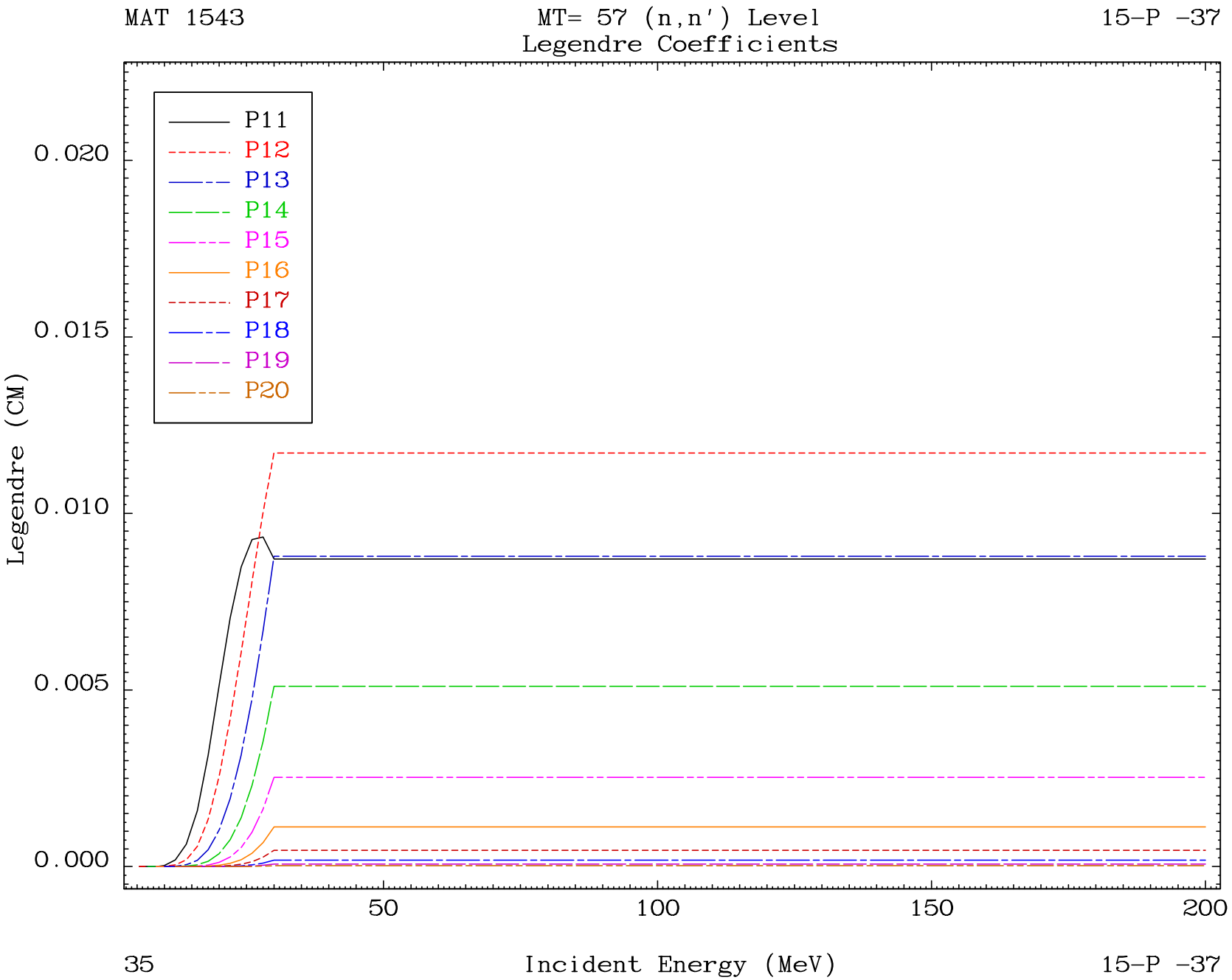

MAT 1543
MT= 55 (n,n') Level
Legendre Coefficients
15-P -37
X10-7
3
2
1
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
50
100
150
200
30
Incident Energy (MeV)
15-P -37

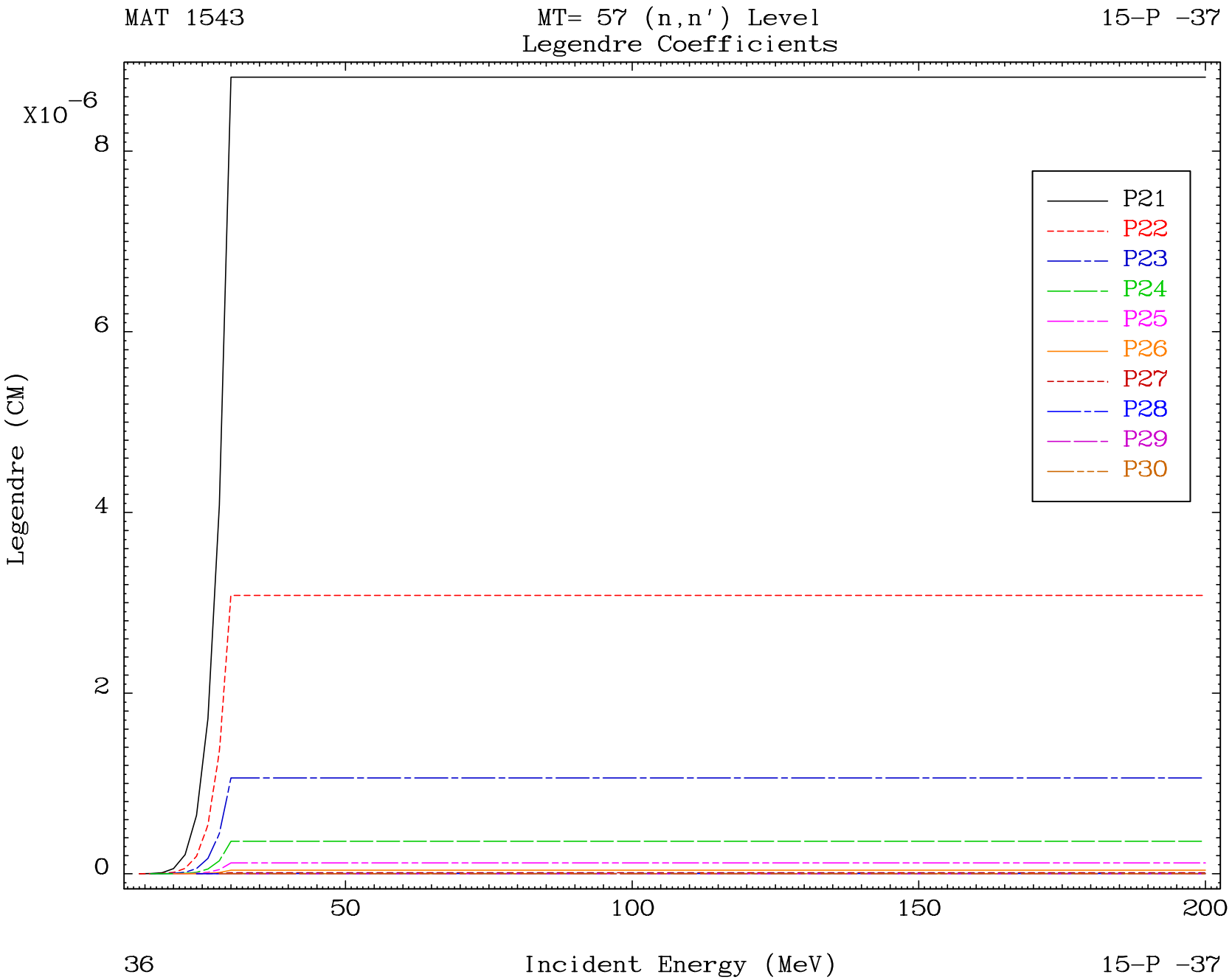

MAT 1543
MT= 56 (n,n') Level
Legendre Coefficients
15-P -37
0.3
0.2
0.1
0.0
-0.1
Legendre (CM)
50
100
150
200
31
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

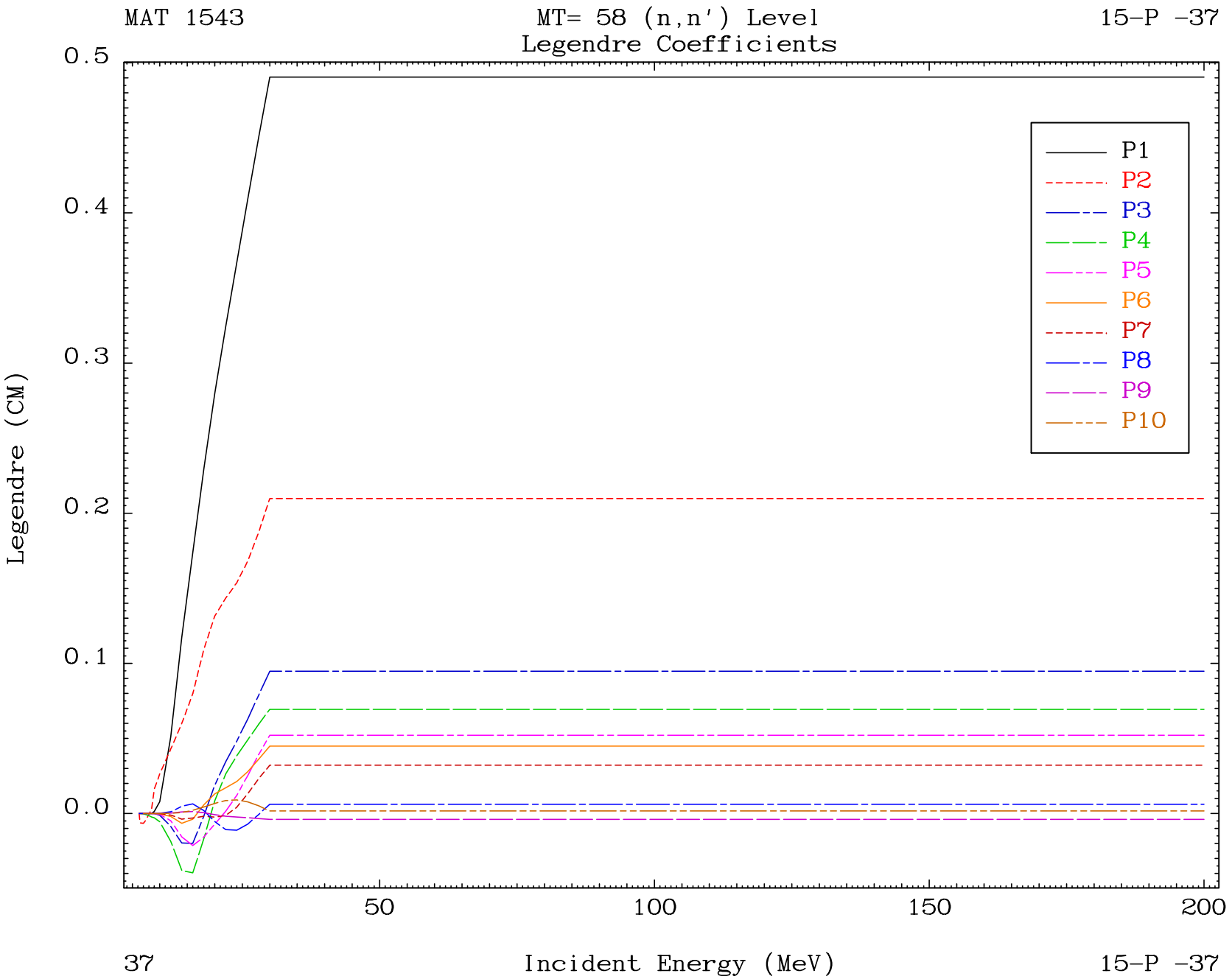

MAT 1543
MT= 56 (n,n') Level
Legendre Coefficients
15-P -37
X10^-4
8
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
32
Incident Energy (MeV)
15-P -37

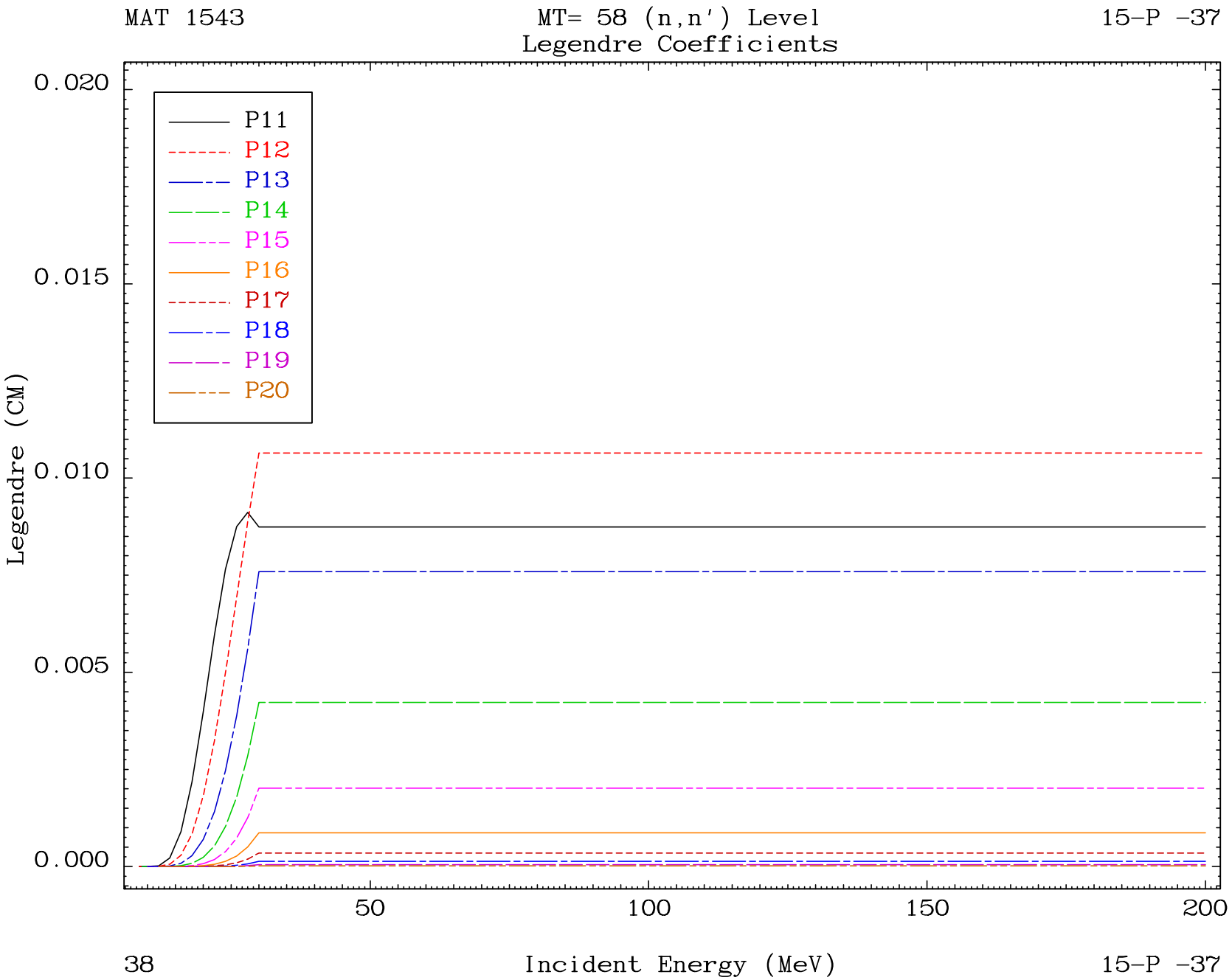

MAT 1543
MT= 56 (n,n') Level
Legendre Coefficients
15-P -37
X10-7
3
2
1
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
50
100
150
200
33
Incident Energy (MeV)
15-P -37

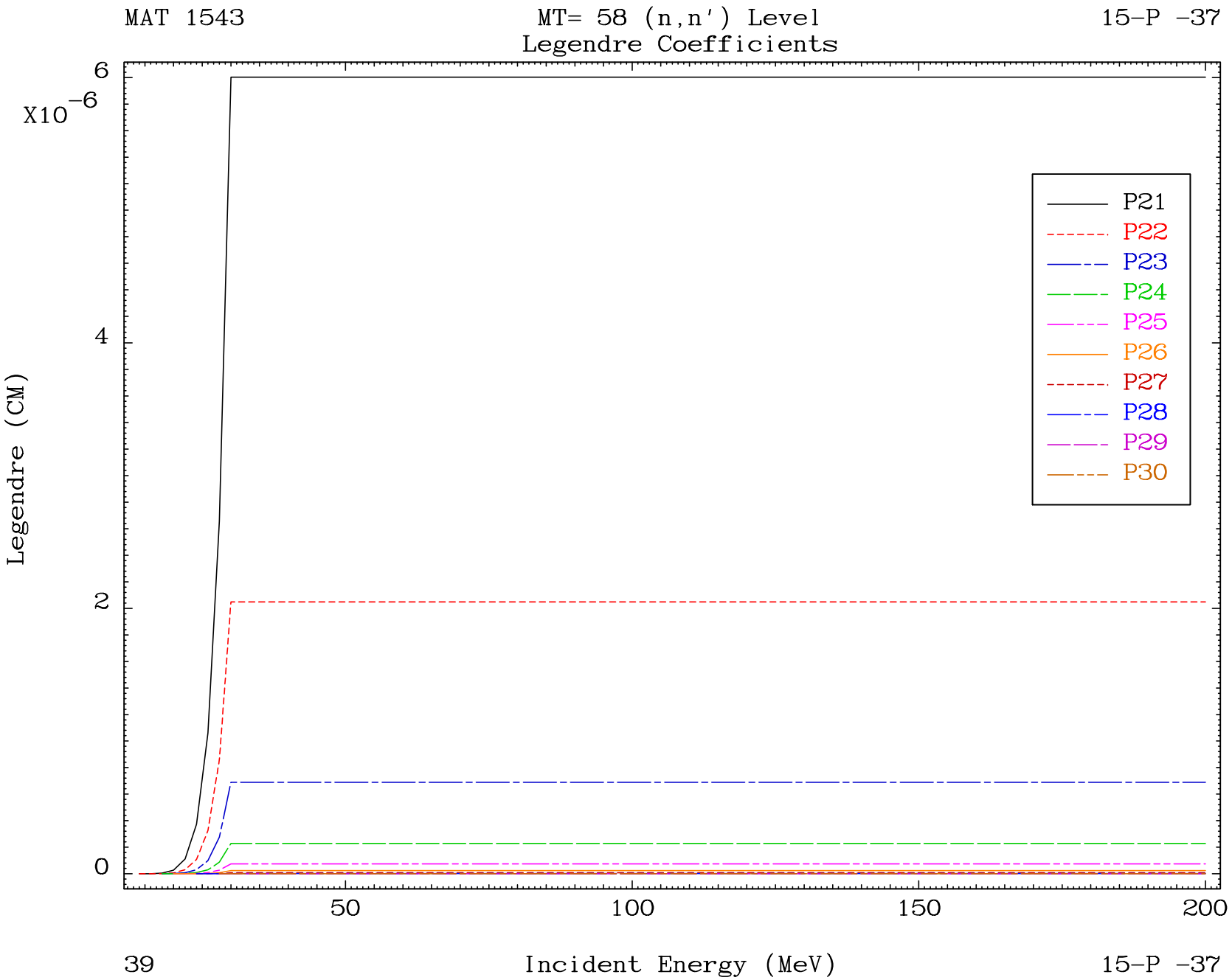

MAT 1543
MT= 57 (n,n') Level
Legendre Coefficients
15-P -37
0.5
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
50
100
150
200
34
Incident Energy (MeV)
15-P -37

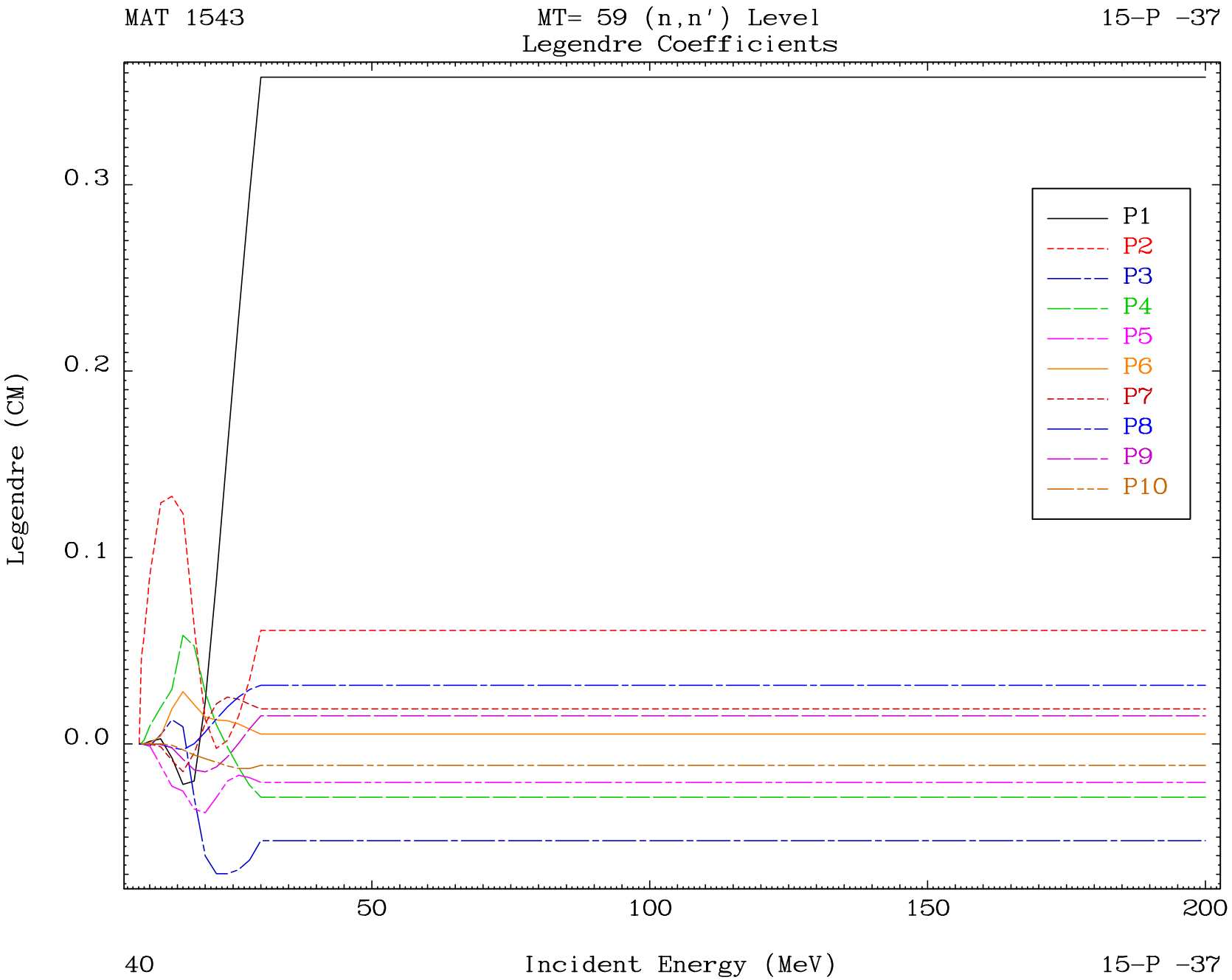

MAT 1543
MT= 57 (n,n') Level
Legendre Coefficients
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
35
Incident Energy (MeV)
15-P -37

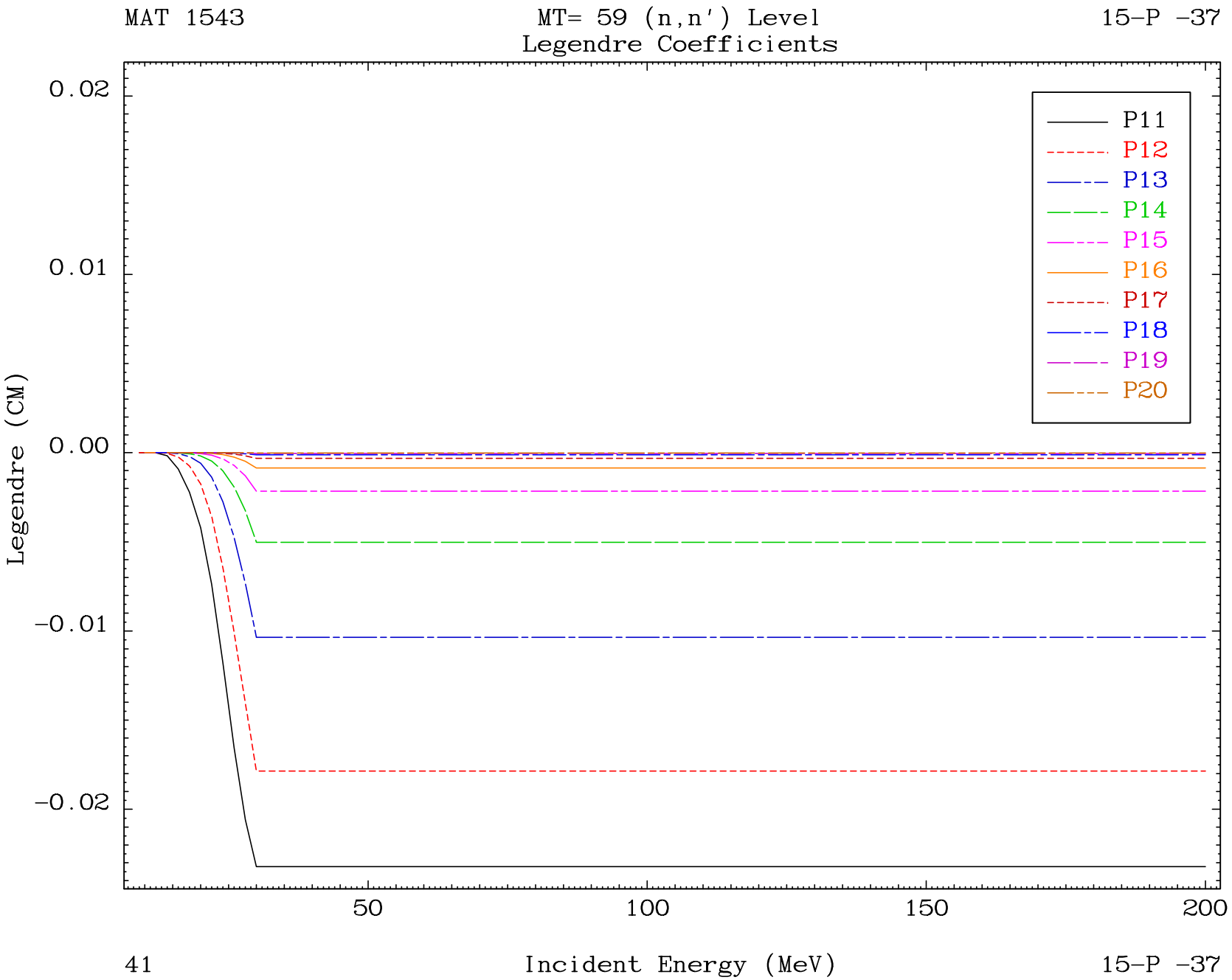

MAT 1543
MT= 57 (n,n') Level
Legendre Coefficients
15-P -37
X10 -6
8
6
4
2
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
36
Incident Energy (MeV)
15-P -37

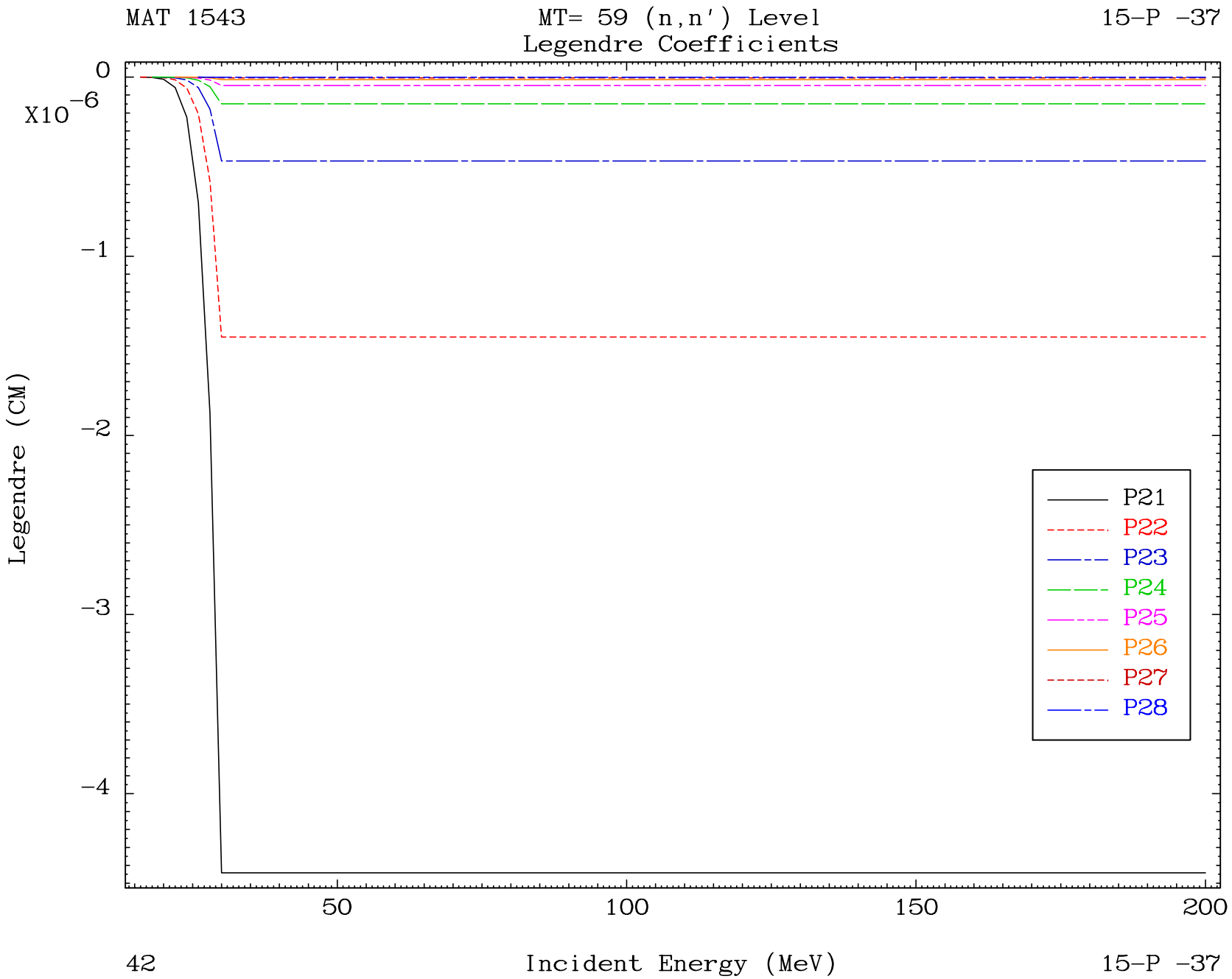

MAT 1543
MT= 58 (n,n') Level
Legendre Coefficients
15-P -37
0.5
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
50
100
150
200
37
Incident Energy (MeV)
15-P -37

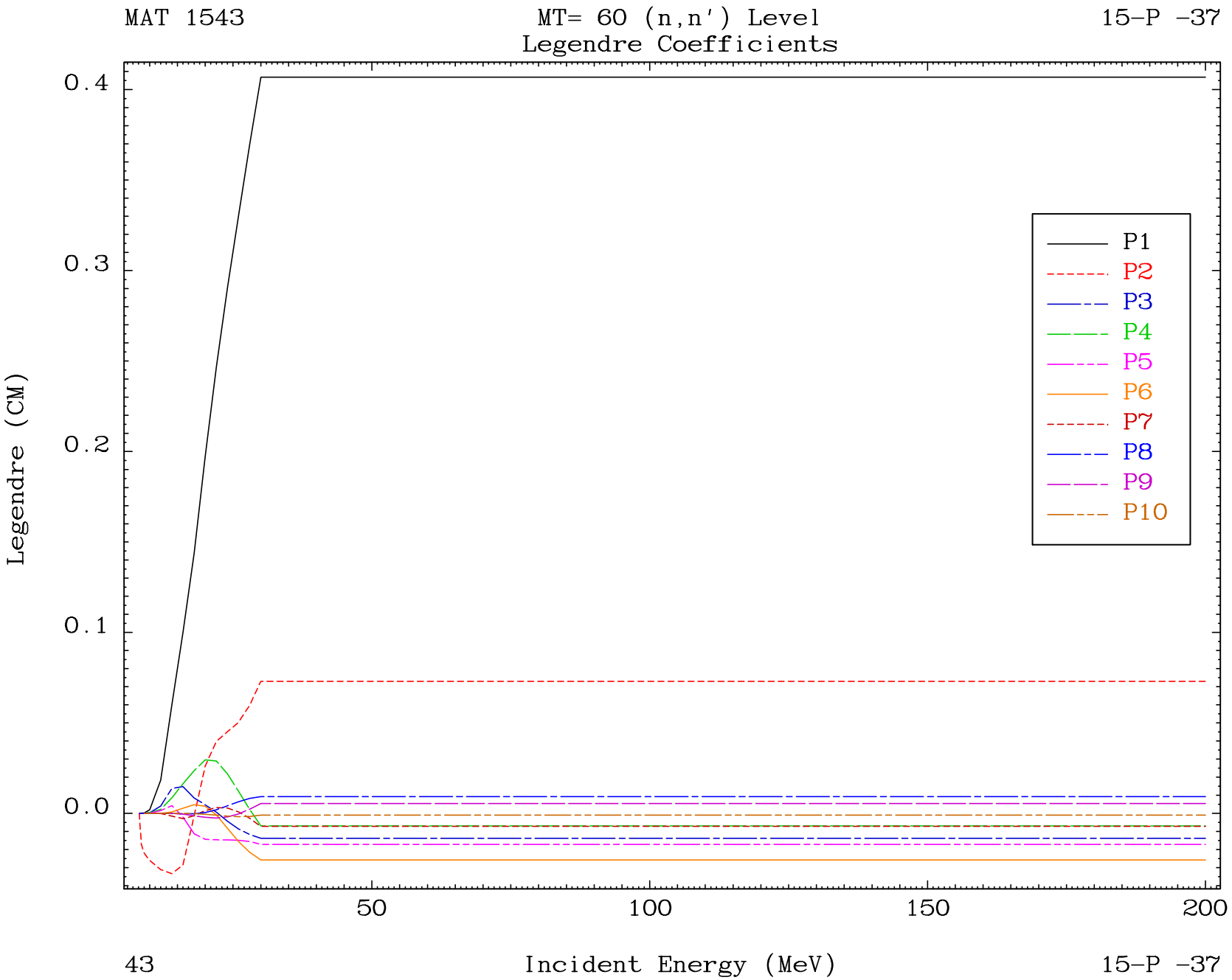

MAT 1543
MT= 58 (n,n') Level
Legendre Coefficients
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
38
Incident Energy (MeV)
15-P -37

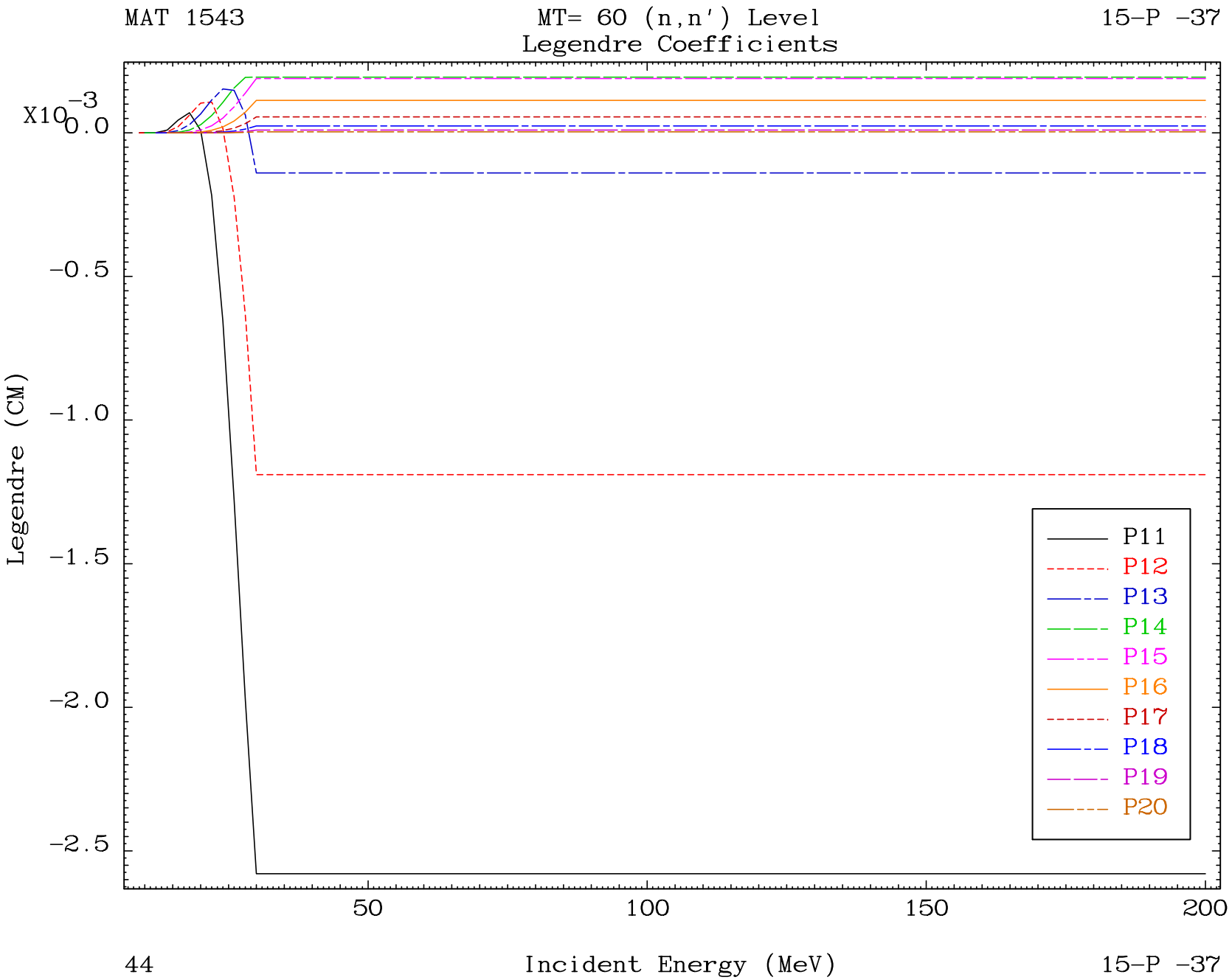

MAT 1543
MT= 58 (n,n') Level
Legendre Coefficients
15-P -37
X10 -6
6
4
2
0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
39
Incident Energy (MeV)
15-P -37

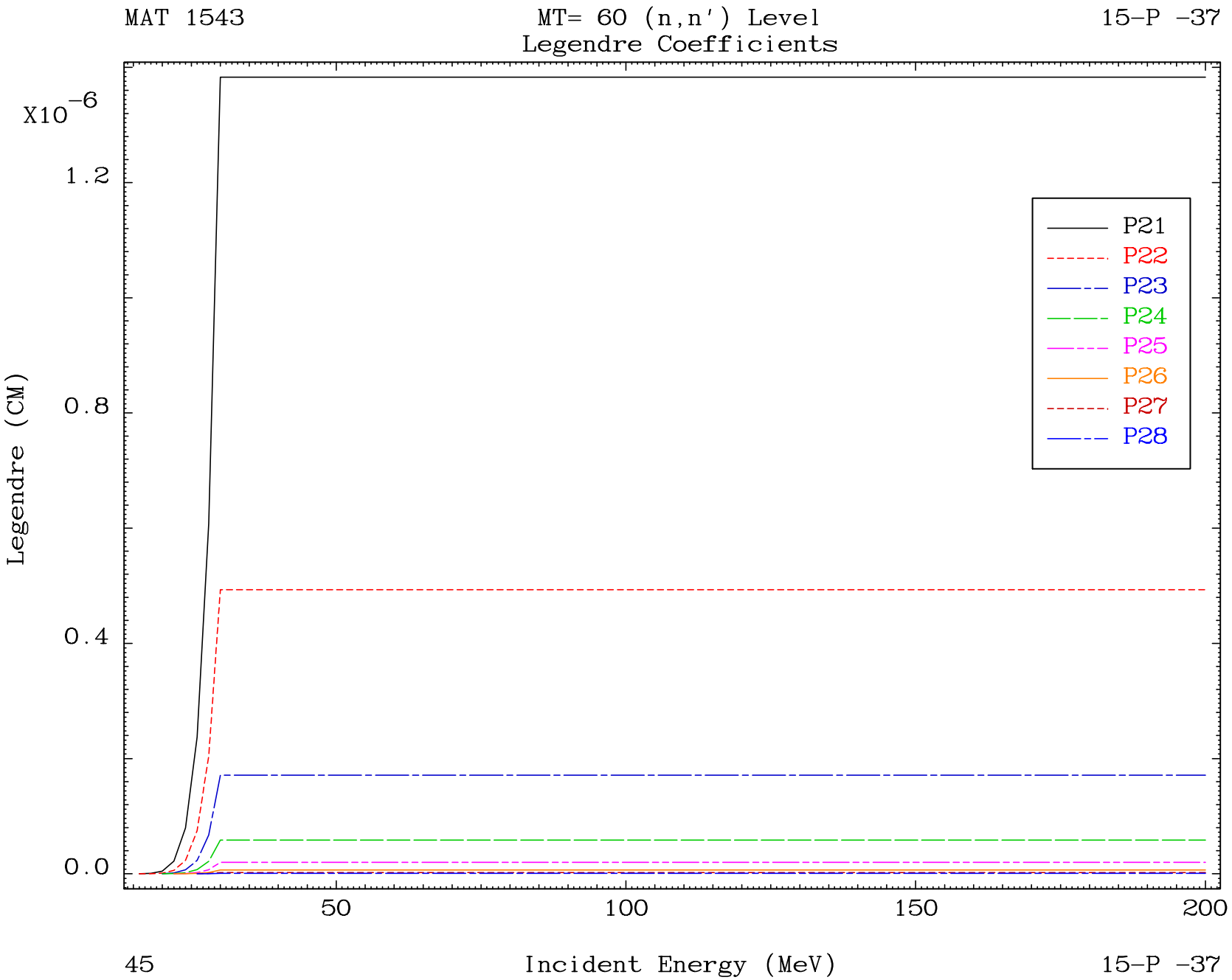

MAT 1543
MT= 59 (n,n') Level
Legendre Coefficients
15-P -37
0.3
0.2
0.1
0.0
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
40
50
100
150
200
Incident Energy (MeV)
15-P -37

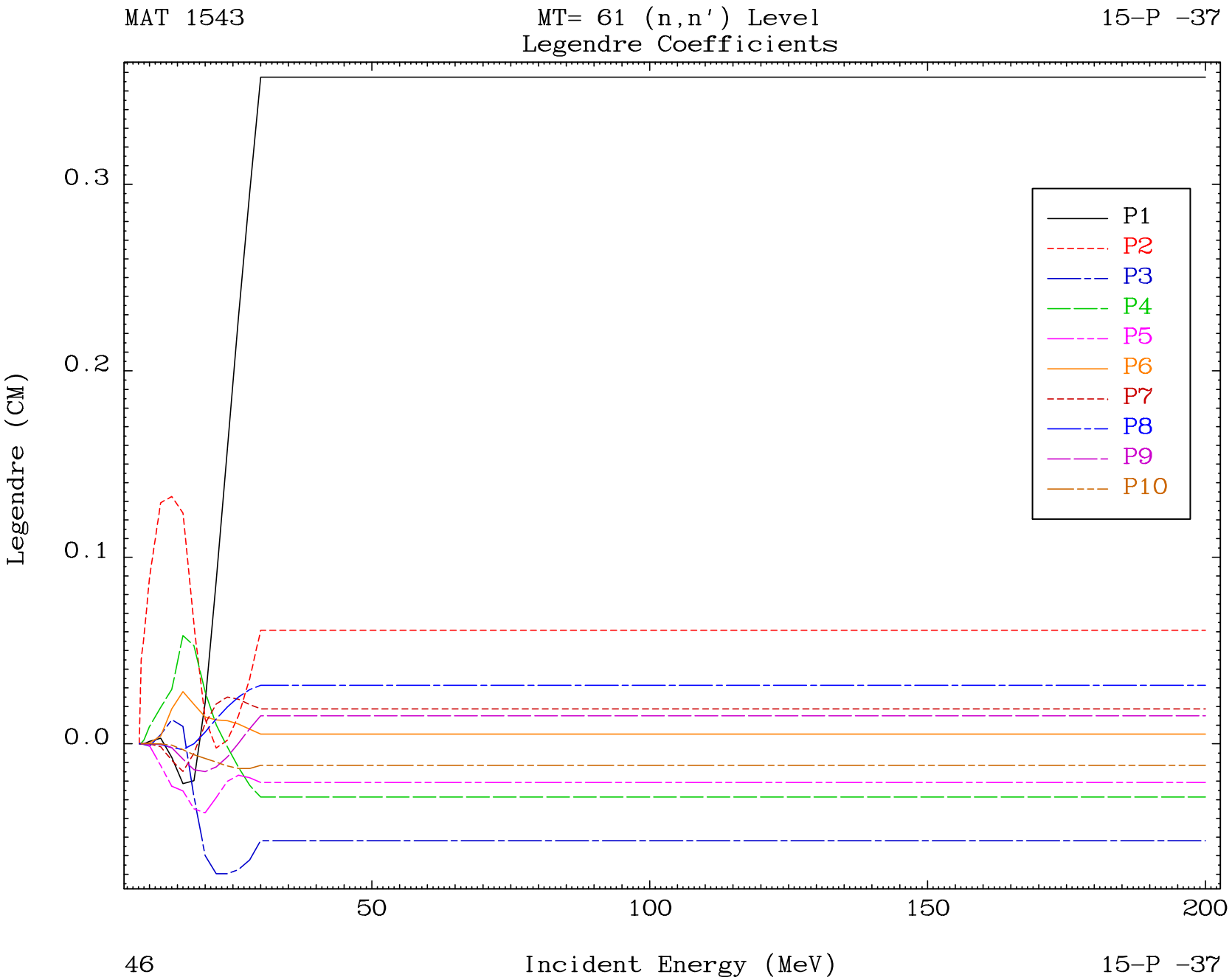

MAT 1543
MT= 59 (n,n') Level
Legendre Coefficients
15-P -37
0.02
0.01
0.00
-0.01
-0.02
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
41
Incident Energy (MeV)
15-P -37

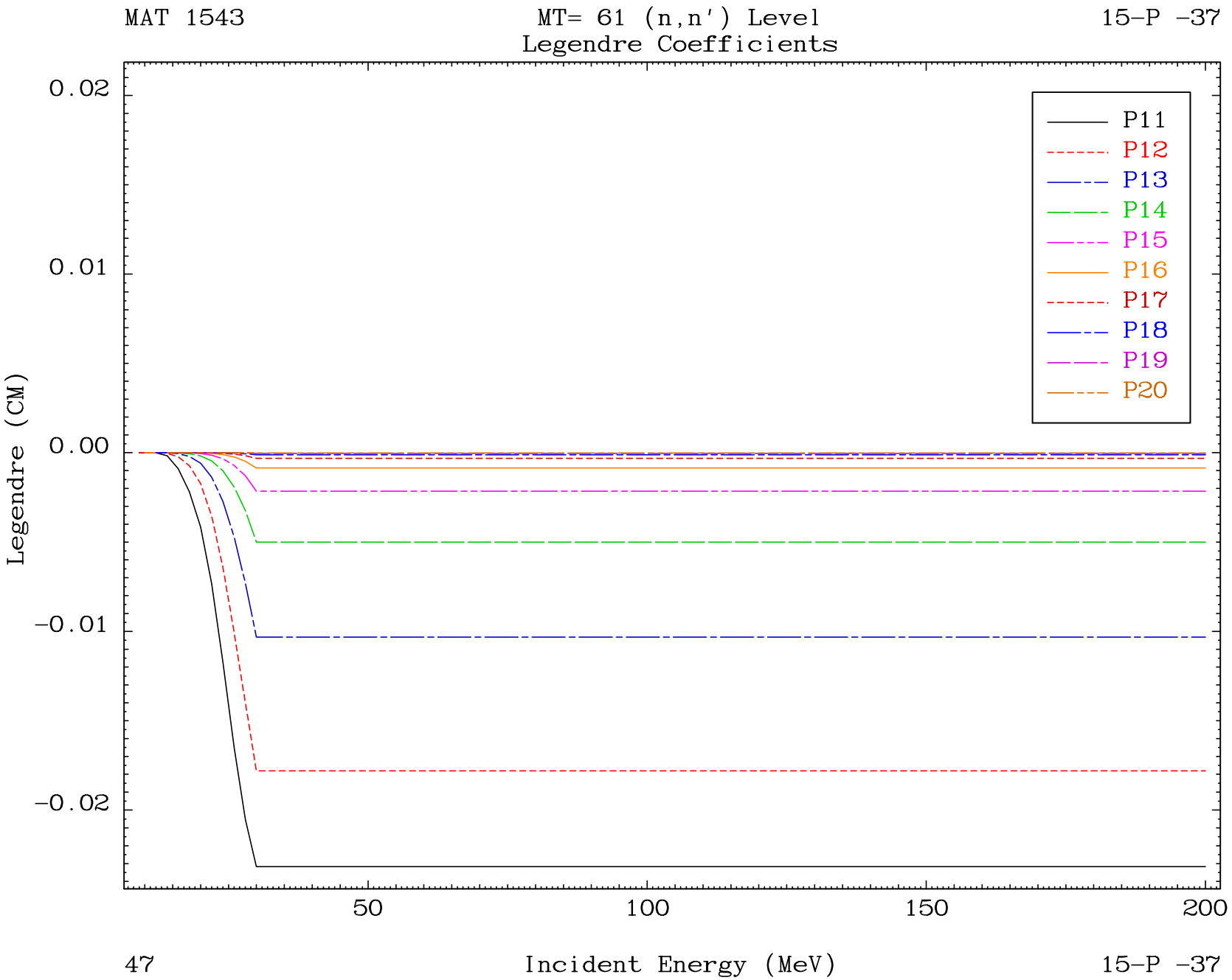

MAT 1543
MT= 59 (n,n') Level
Legendre Coefficients
15-P -37
0
X10-6
-1
-2
-3
-4
Legendre (CM)
50
100
150
200
42
Incident Energy (MeV)
15-P -37
P21
P22
P23
P24
P25
P26
P27
P28

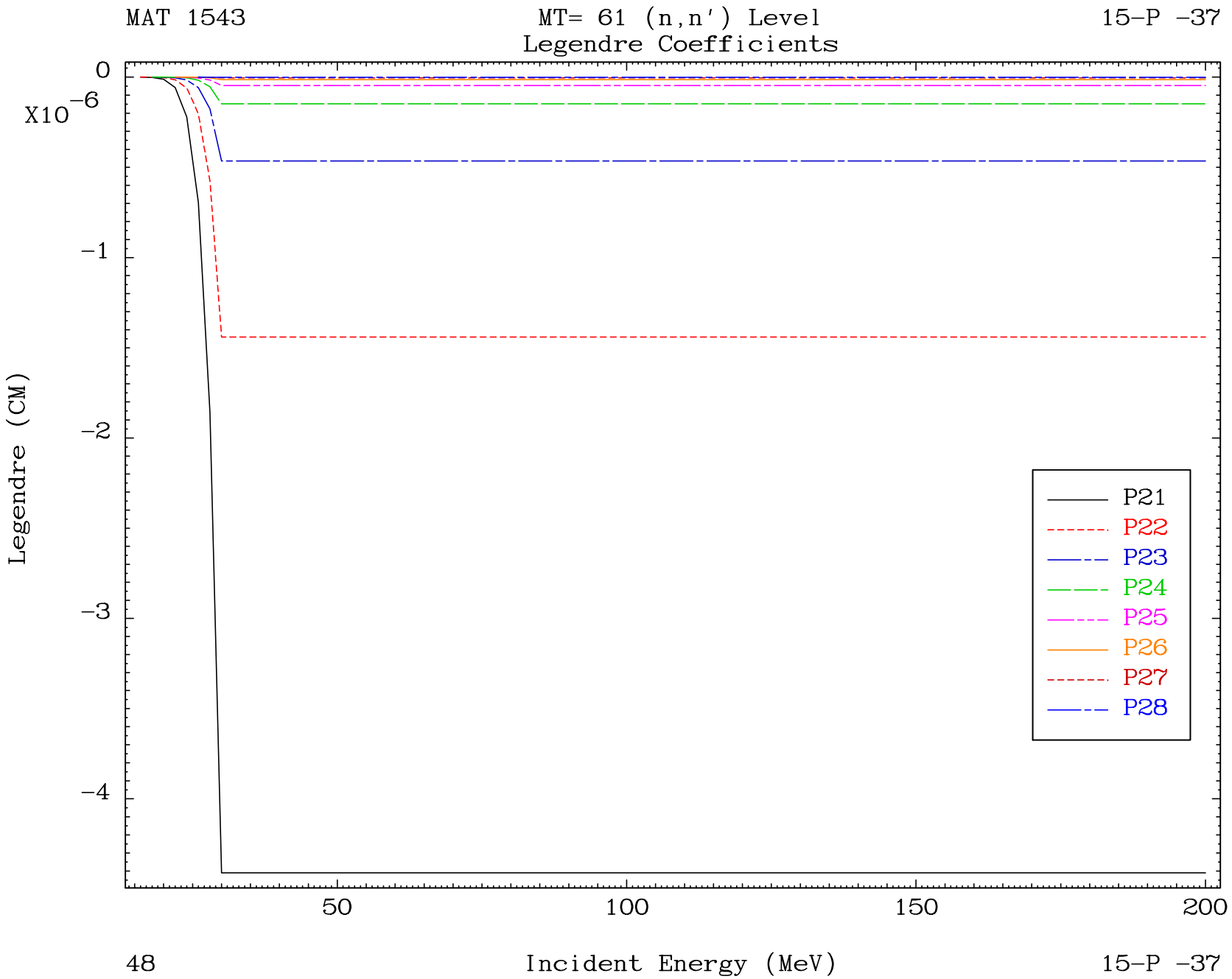

MAT 1543
MT= 60 (n,n') Level
Legendre Coefficients
15-P -37
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
50
100
150
200
43
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

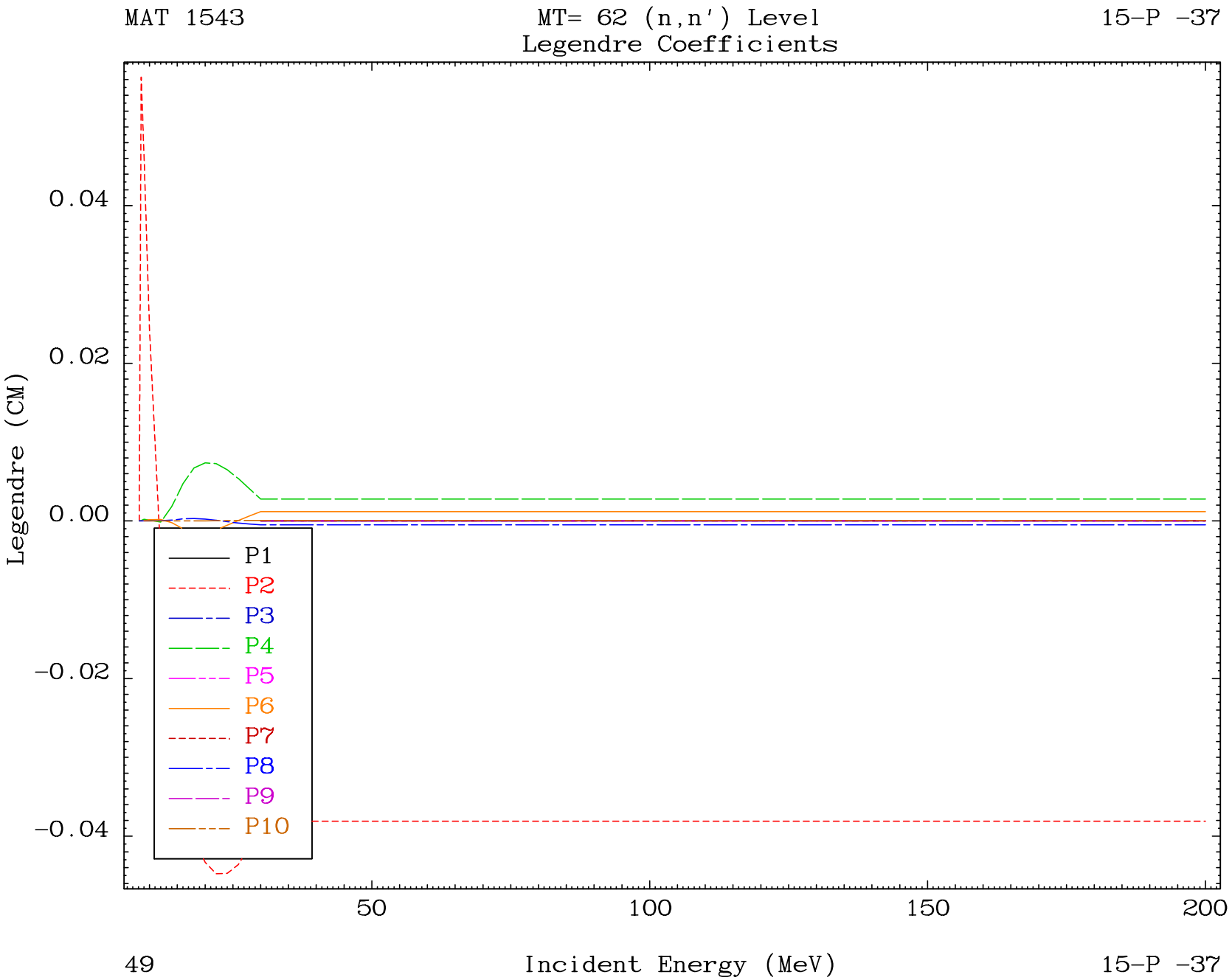

MAT 1543
MT= 60 (n,n') Level
Legendre Coefficients
15-P -37
X10-3
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

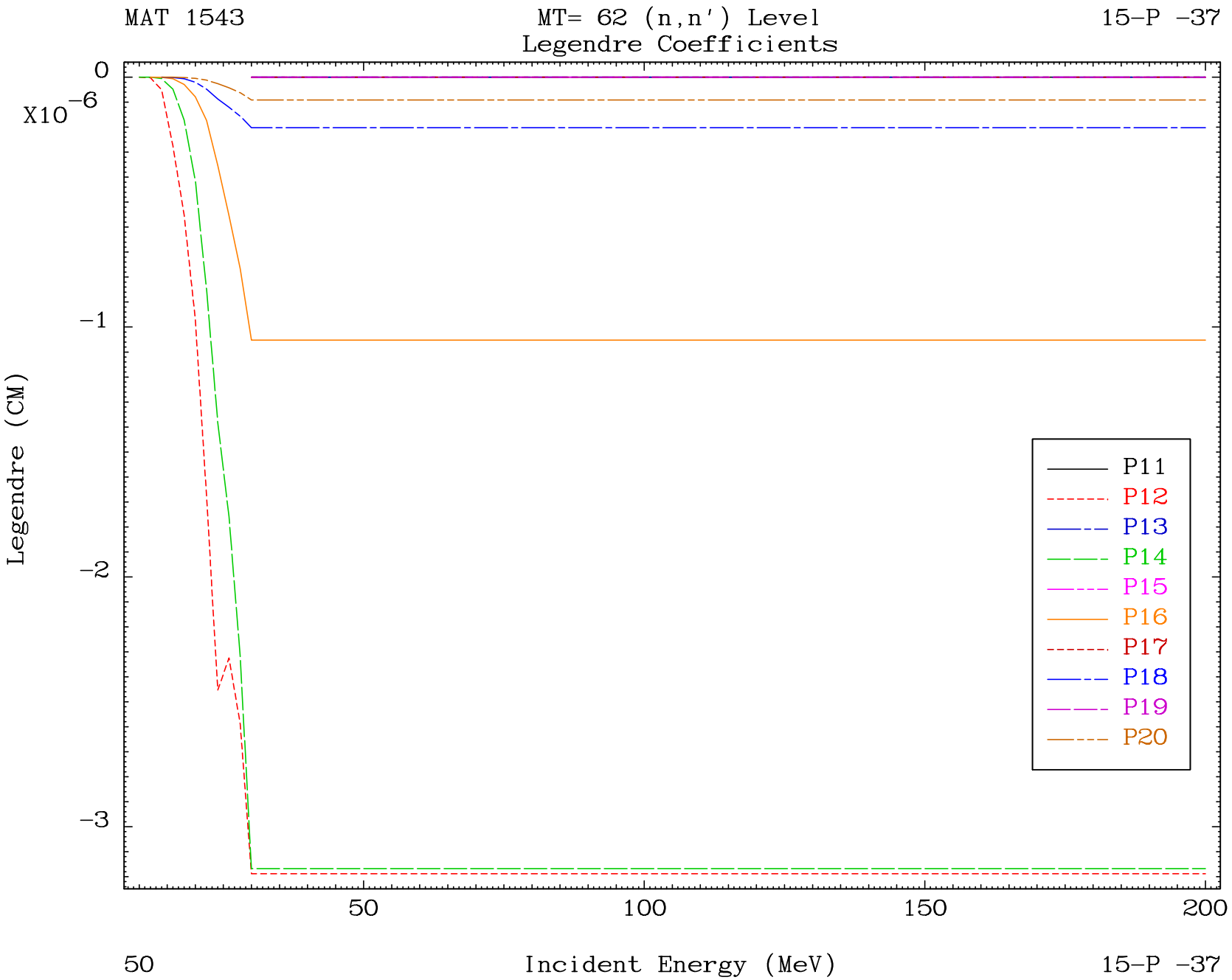

MAT 1543
MT= 60 (n,n') Level
Legendre Coefficients
15-P -37
X10-6
1.2
0.8
0.4
0.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
50
100
150
200
45
Incident Energy (MeV)
15-P -37

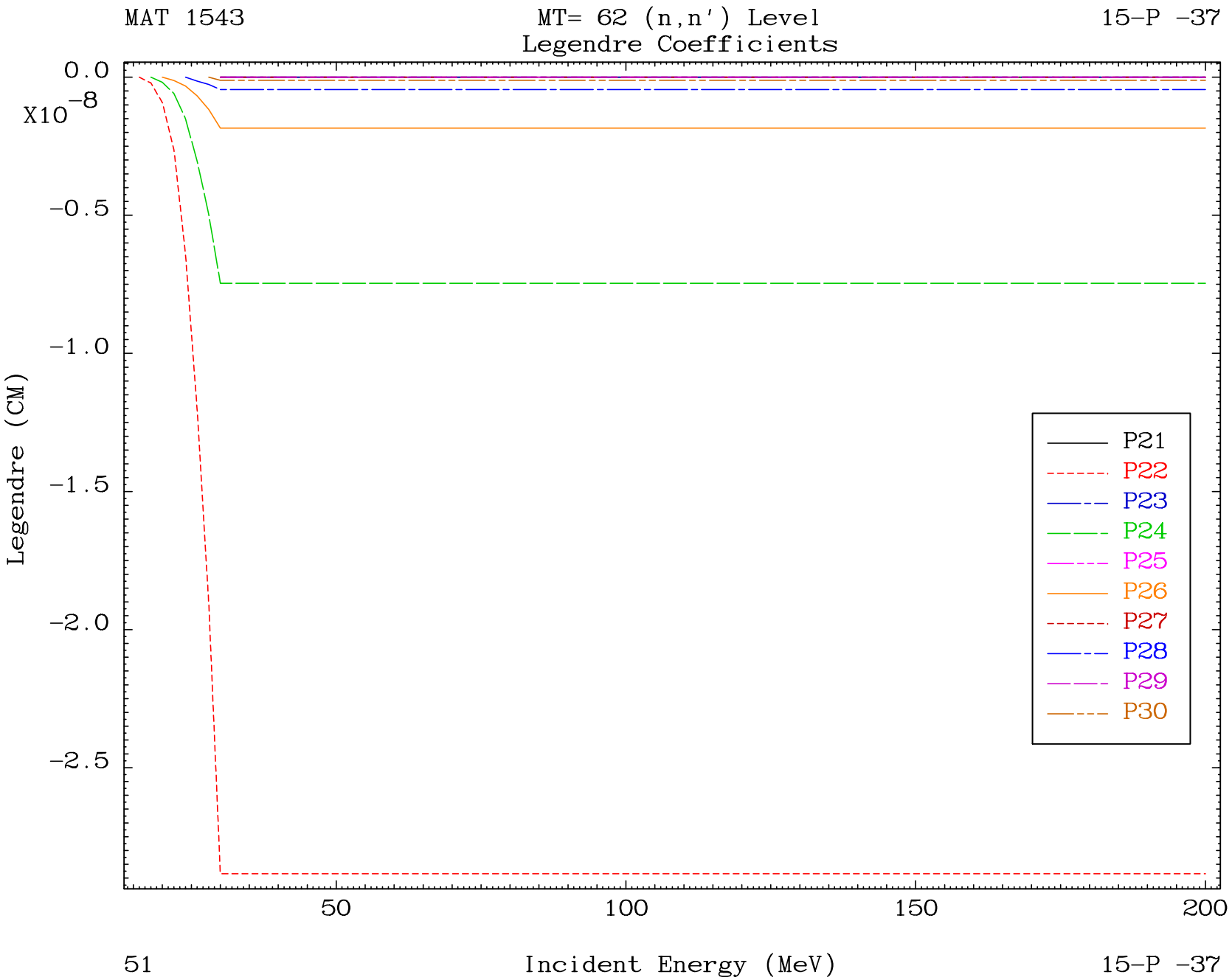

MAT 1543
MT= 61 (n,n') Level
Legendre Coefficients
15-P -37
Legendre (CM)
0.3
0.2
0.1
0.0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
46
Incident Energy (MeV)
15-P -37

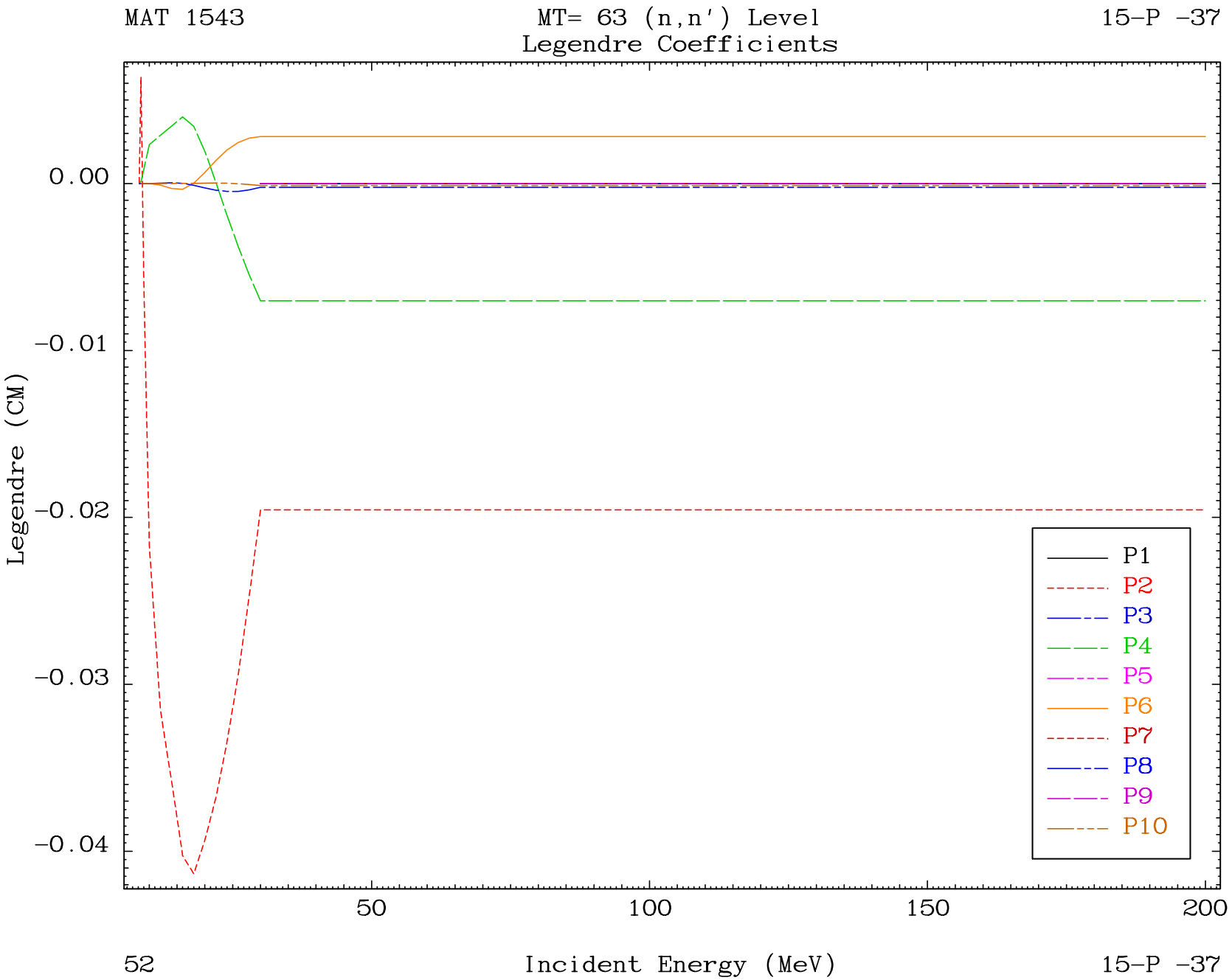

MAT 1543
MT= 61 (n,n') Level
Legendre Coefficients
15-P -37
0.02
0.01
0.00
-0.01
-0.02
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
47
Incident Energy (MeV)
15-P -37

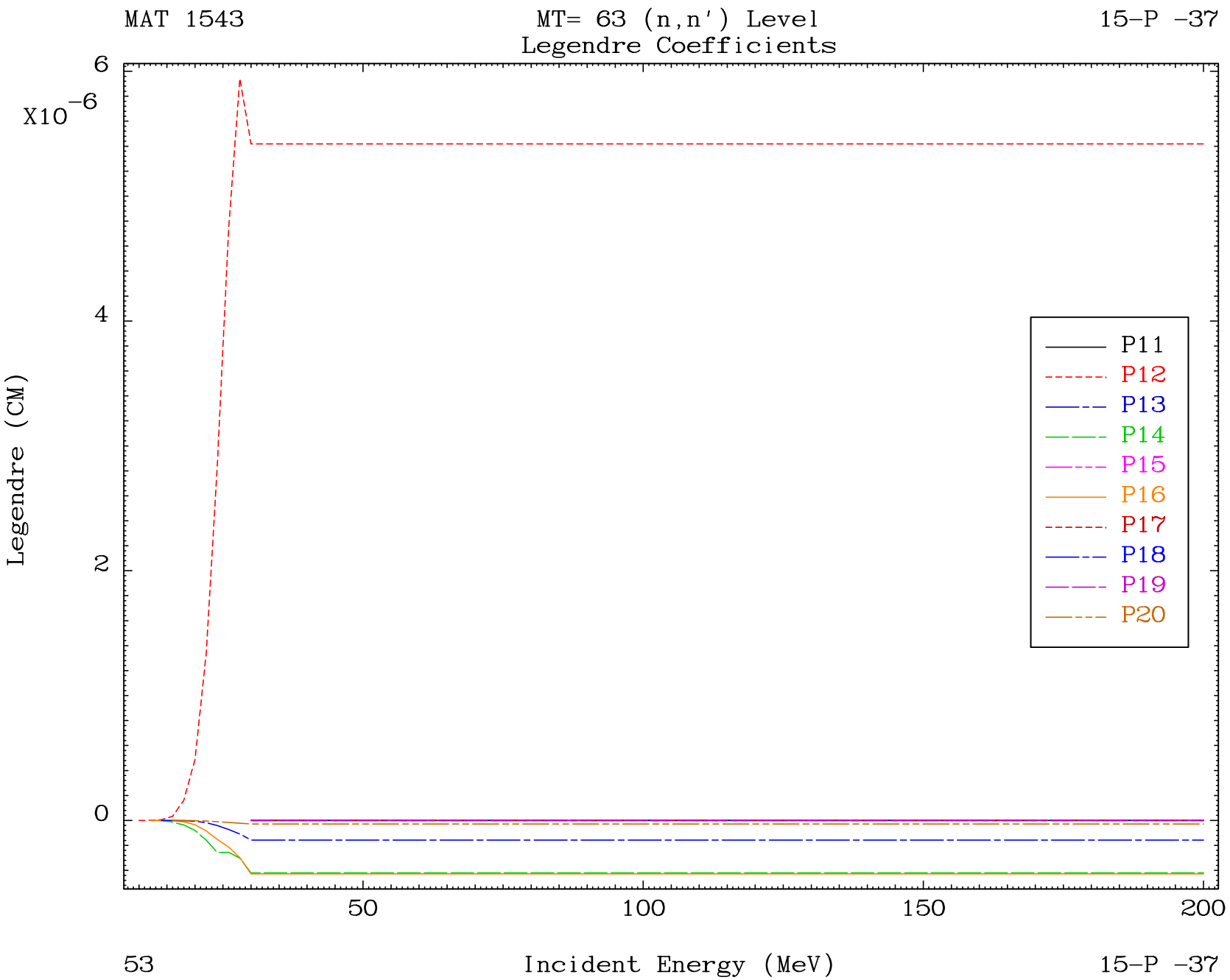

MAT 1543
MT= 61 (n,n') Level
Legendre Coefficients
15-P -37
0
X10 -6
-1
-2
-3
-4
Legendre (CM)
50
100
150
200
P21
P22
P23
P24
P25
P26
P27
P28
48
Incident Energy (MeV)
15-P -37

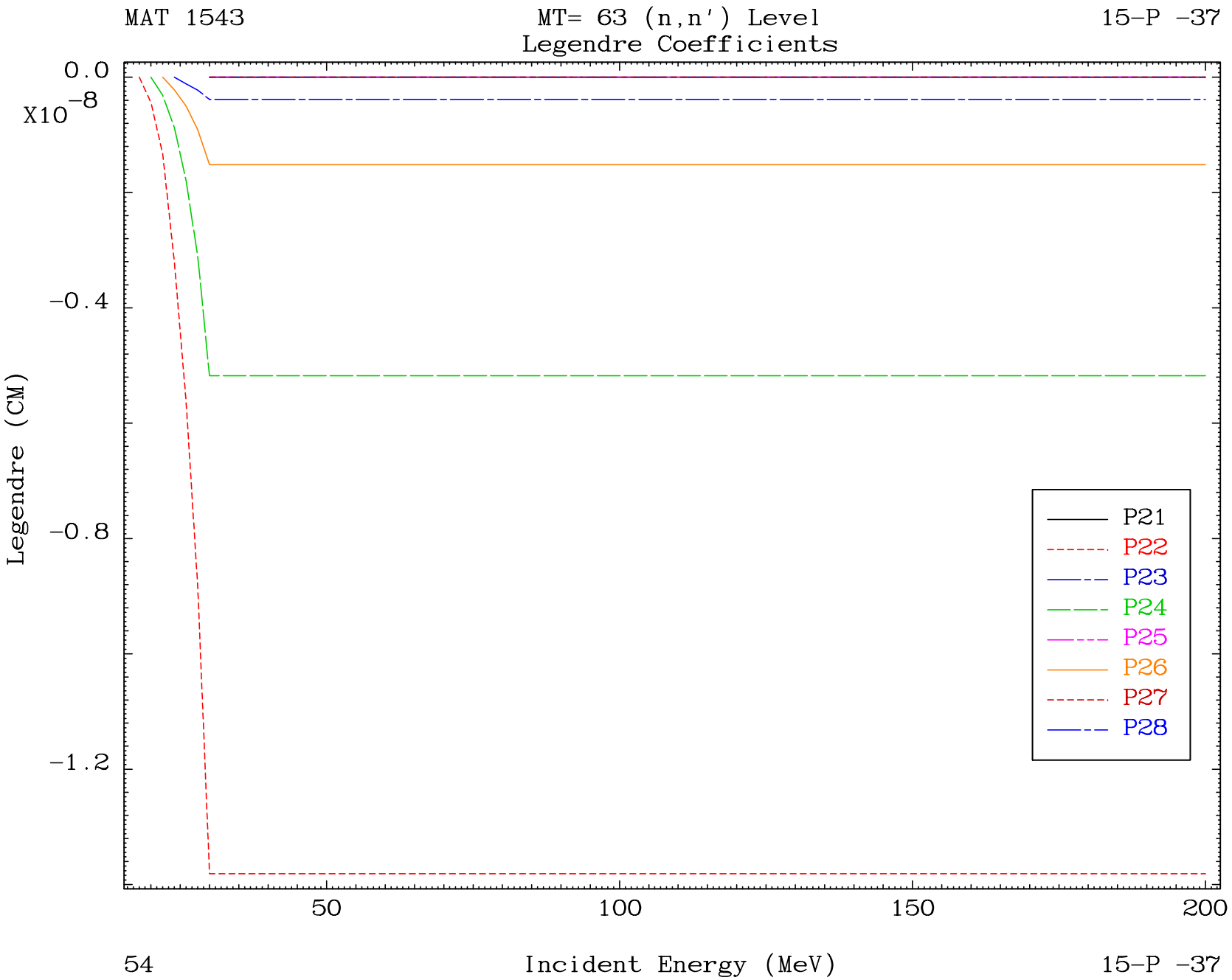

MAT 1543
MT= 62 (n,n') Level
Legendre Coefficients
15-P -37
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
50
100
150
200
49
Incident Energy (MeV)
15-P -37

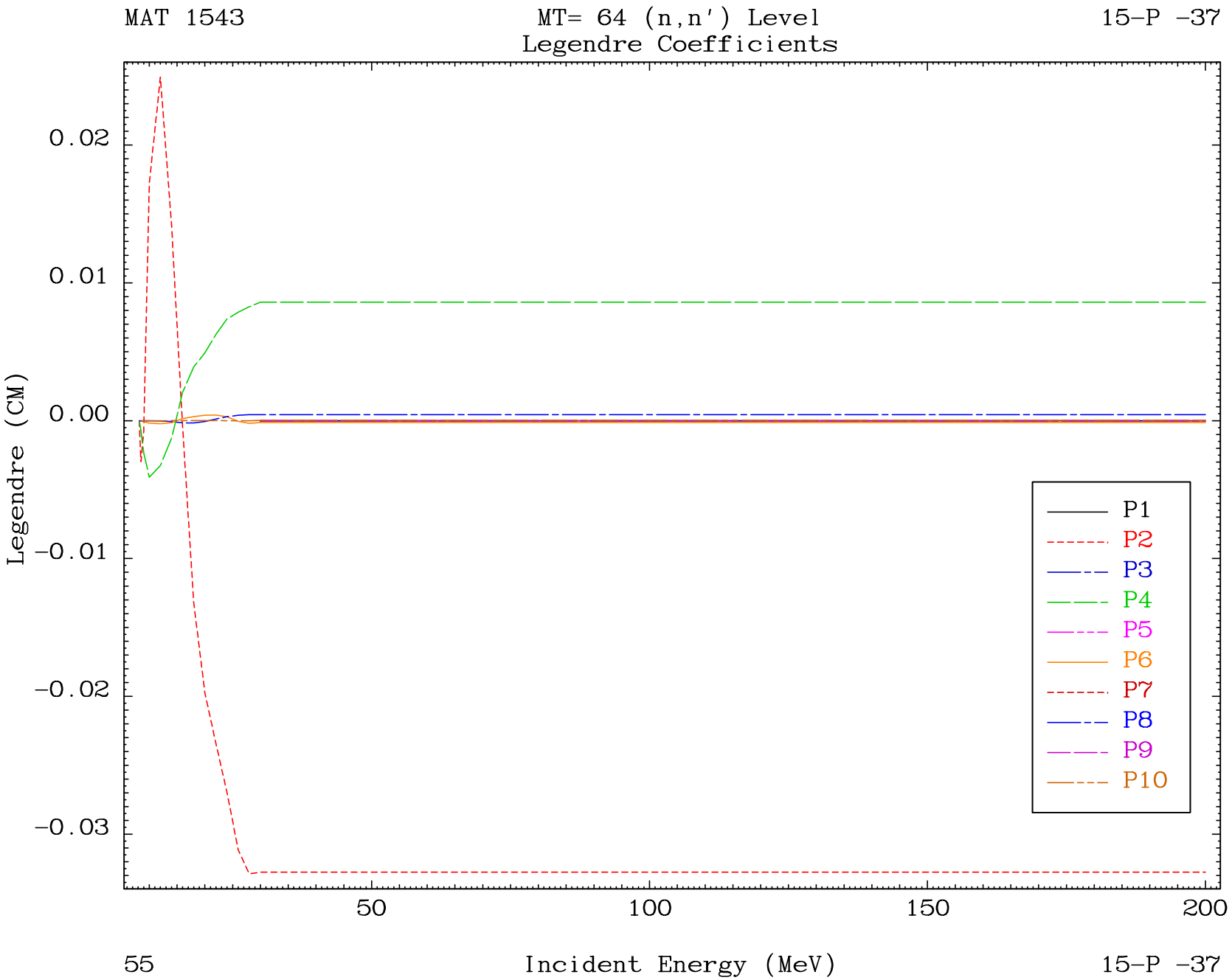

MAT 1543
MT= 62 (n,n') Level
Legendre Coefficients
15-P -37
0
X10-6
-1
-2
-3
Legendre (CM)
50
100
150
200
50
Incident Energy (MeV)
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

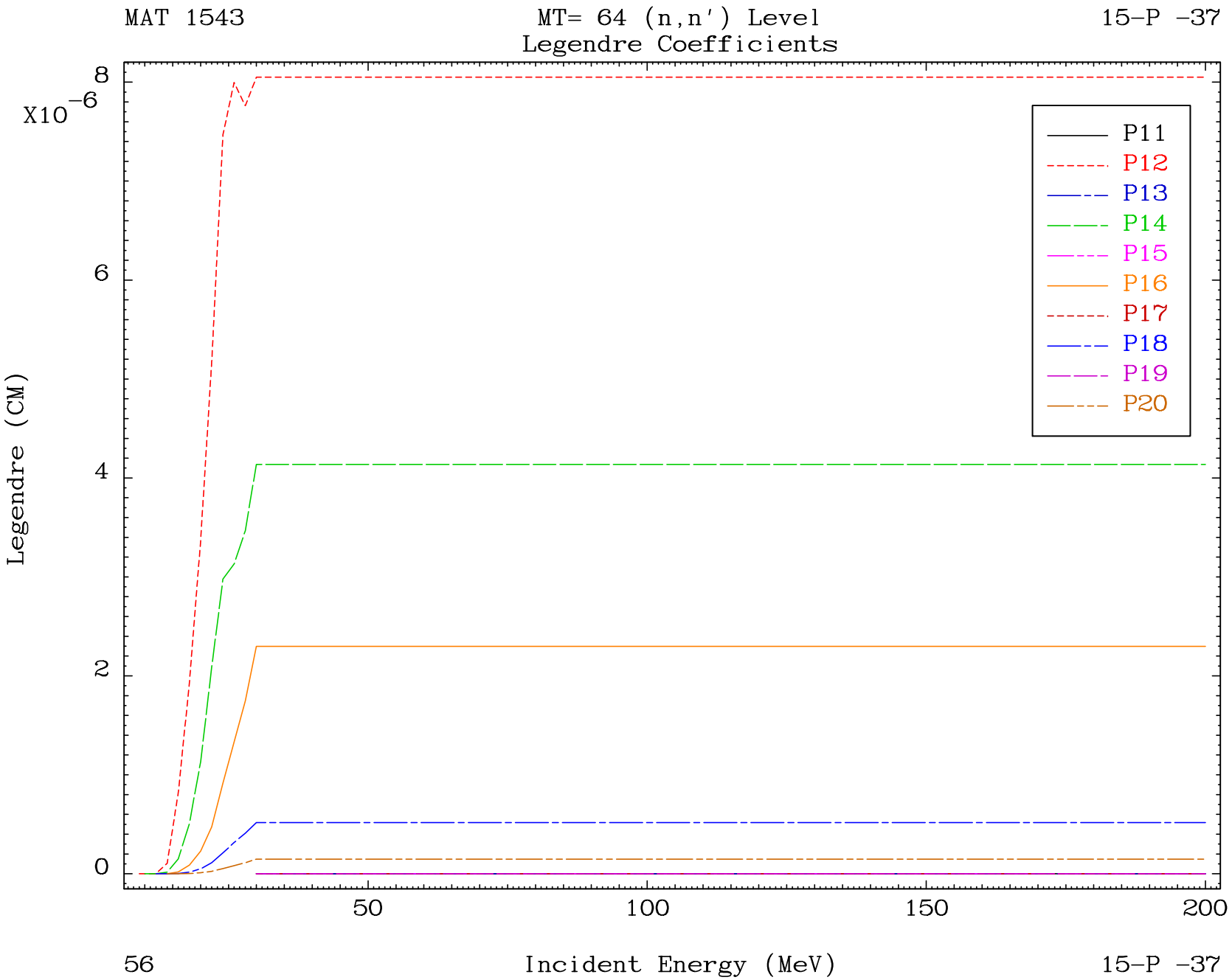

MAT 1543
MT= 62 (n,n') Level
Legendre Coefficients
15-P -37
0.0
X10^-8
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
51
Incident Energy (MeV)
15-P -37

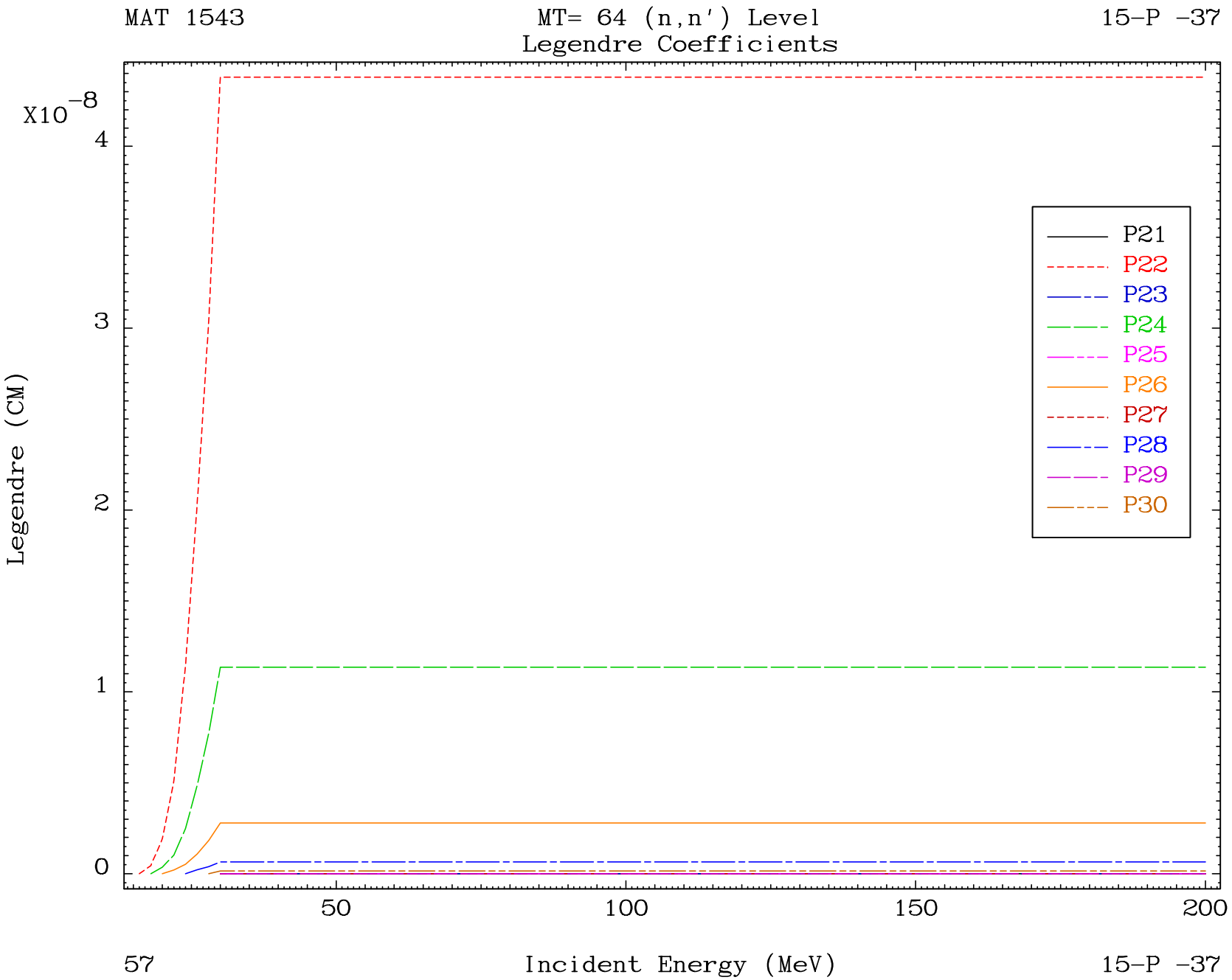

MAT 1543
MT= 63 (n,n') Level
Legendre Coefficients
15-P -37
0.00
-0.01
-0.02
-0.03
-0.04
Legendre (CM)
50
100
150
200
52
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

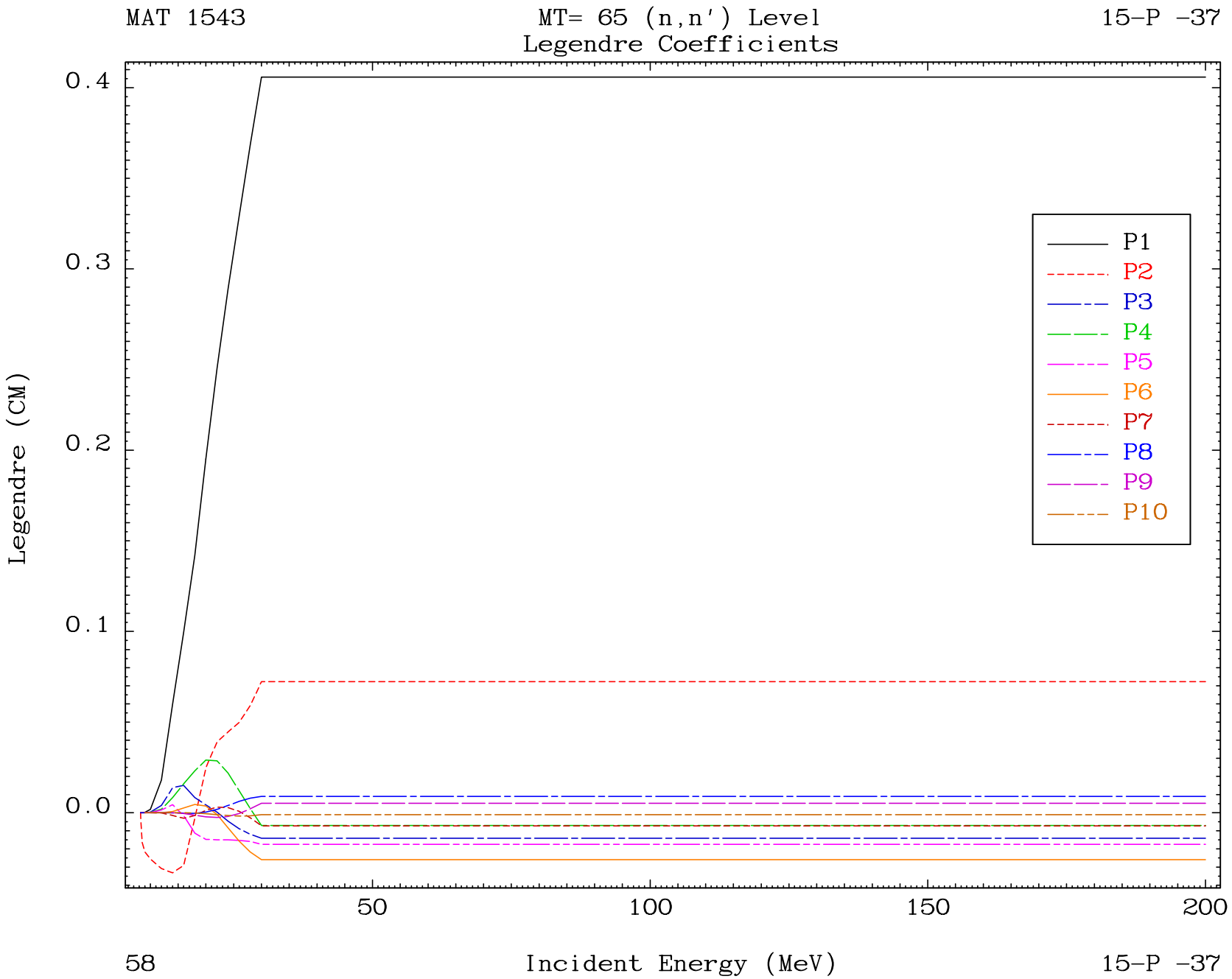

MAT 1543
MT= 63 (n,n') Level
Legendre Coefficients
15-P -37
X10^-6
6
4
2
0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
53
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

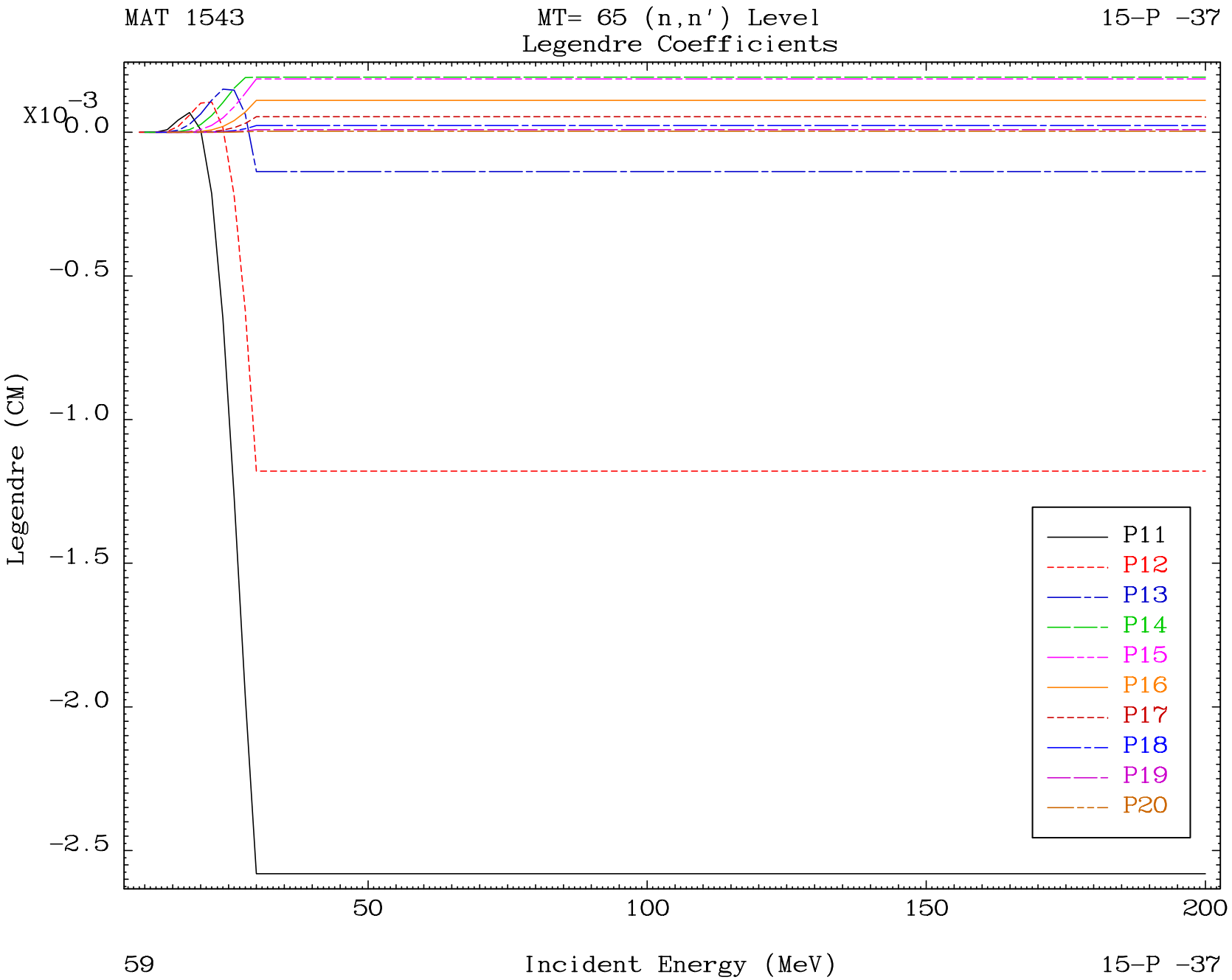

MAT 1543
MT= 63 (n,n') Level
Legendre Coefficients
15-P -37
0.0
X10-8
-0.4
-0.8
-1.2
Legendre (CM)
50
100
150
200
54
Incident Energy (MeV)
15-P -37
P21
P22
P23
P24
P25
P26
P27
P28

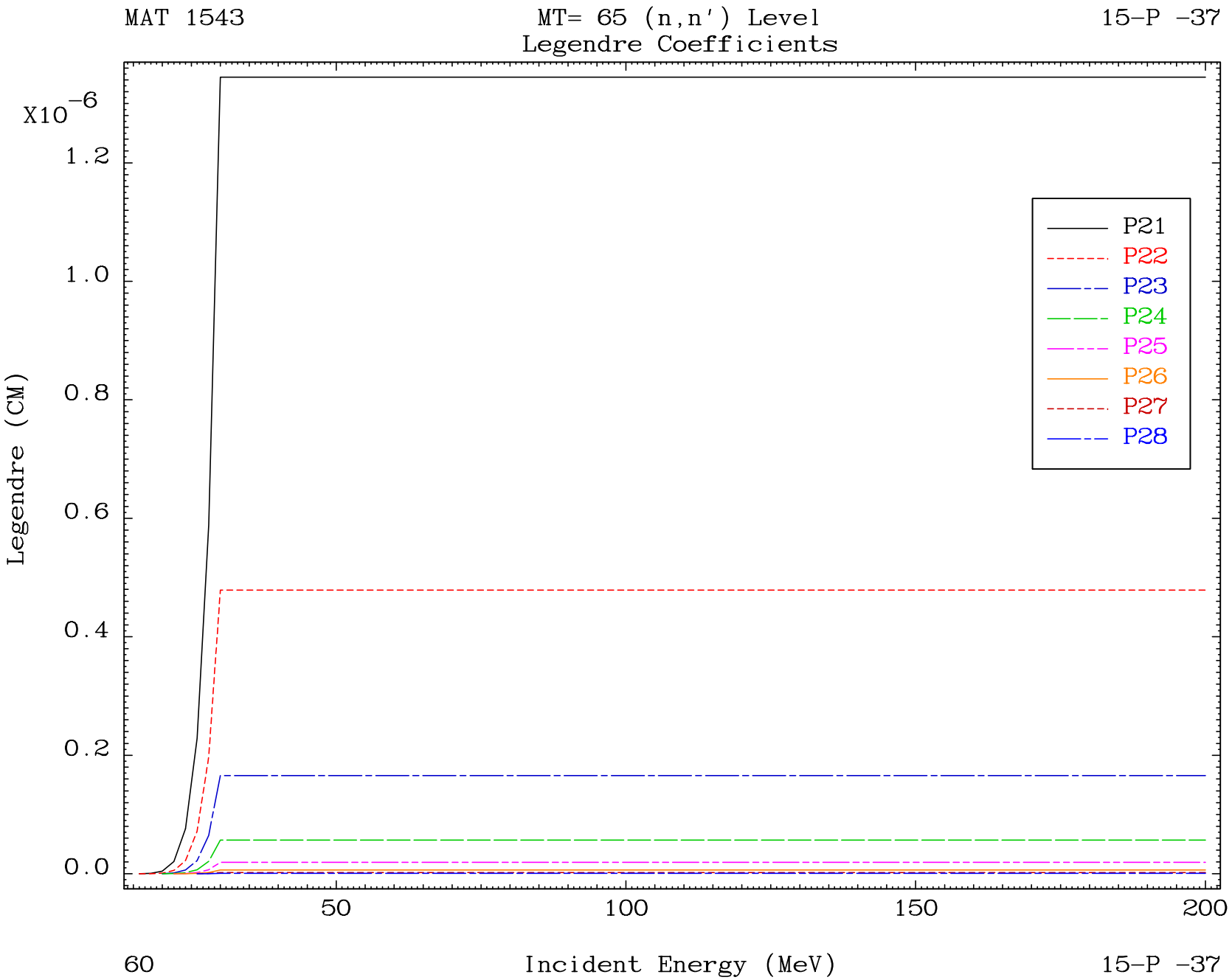

MAT 1543
MT= 64 (n,n') Level
Legendre Coefficients
15-P -37
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
50
100
150
200
55
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10


MAT 1543
MT= 64 (n,n') Level
Legendre Coefficients
15-P -37
X10 -6
8
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
56
Incident Energy (MeV)
15-P -37


MAT 1543
MT= 64 (n,n') Level
Legendre Coefficients
15-P -37
X10-8
4
3
2
1
0
Legendre (CM)
50
100
150
200
57
Incident Energy (MeV)
15-P -37
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30


MAT 1543
MT= 65 (n,n') Level
Legendre Coefficients
15-P -37
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
50
100
150
200
58
Incident Energy (MeV)
15-P -37
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10


MAT 1543
MT= 65 (n,n') Level
Legendre Coefficients
15-P -37
X10-3
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
59
Incident Energy (MeV)
15-P -37
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20


MAT 1543
MT= 65 (n,n') Level
Legendre Coefficients
15-P -37
X10-6
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
50
100
150
200
60
Incident Energy (MeV)
15-P -37