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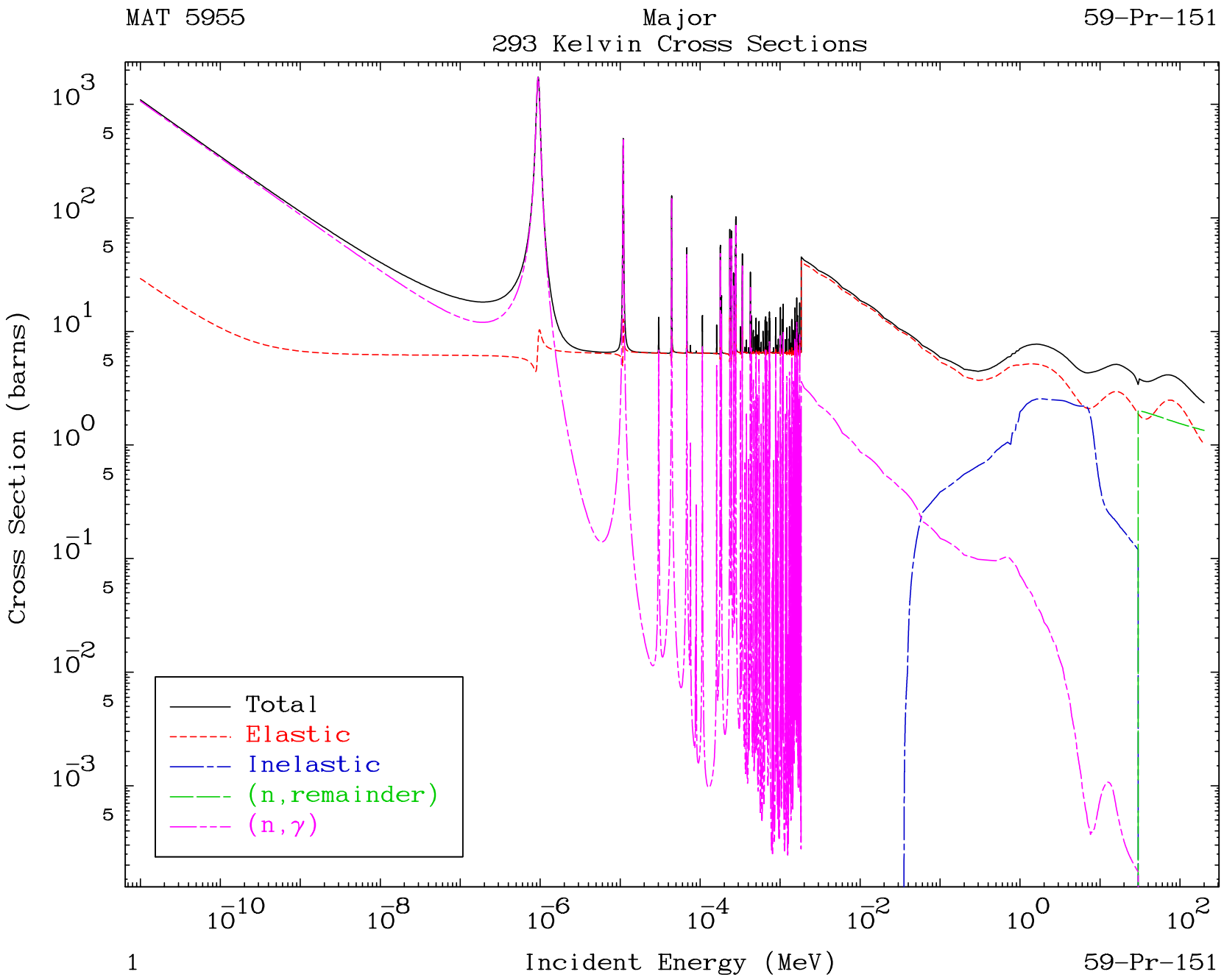
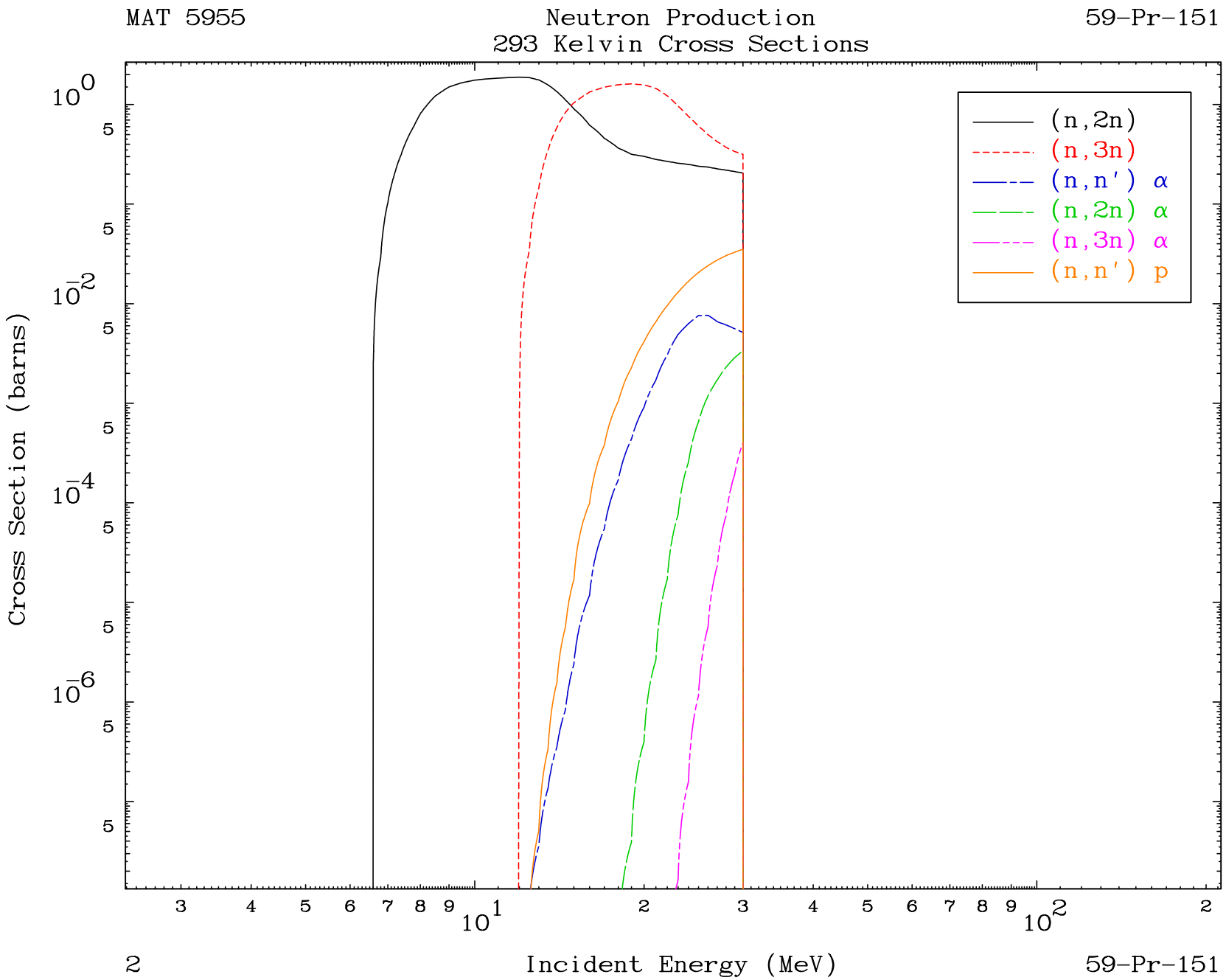
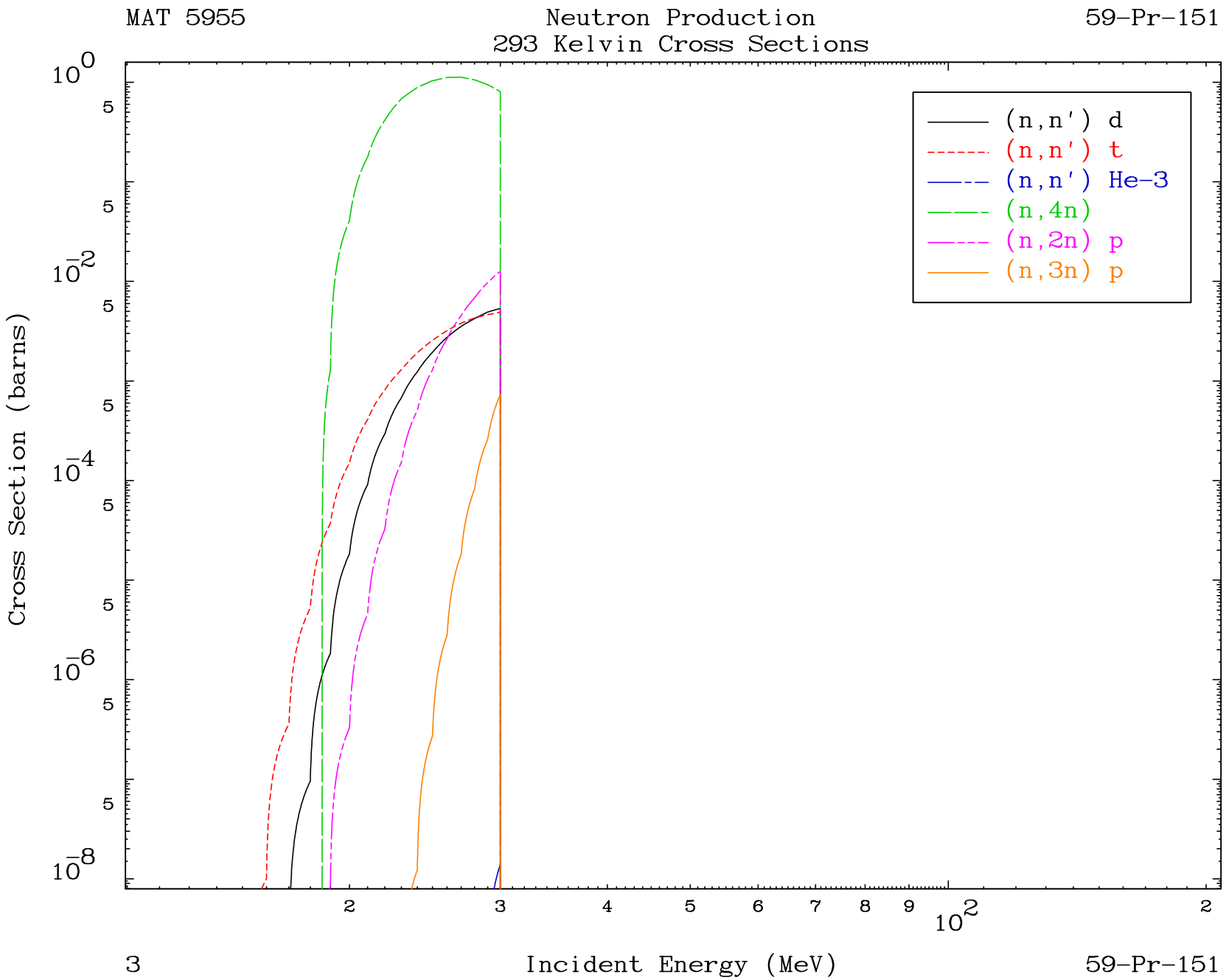
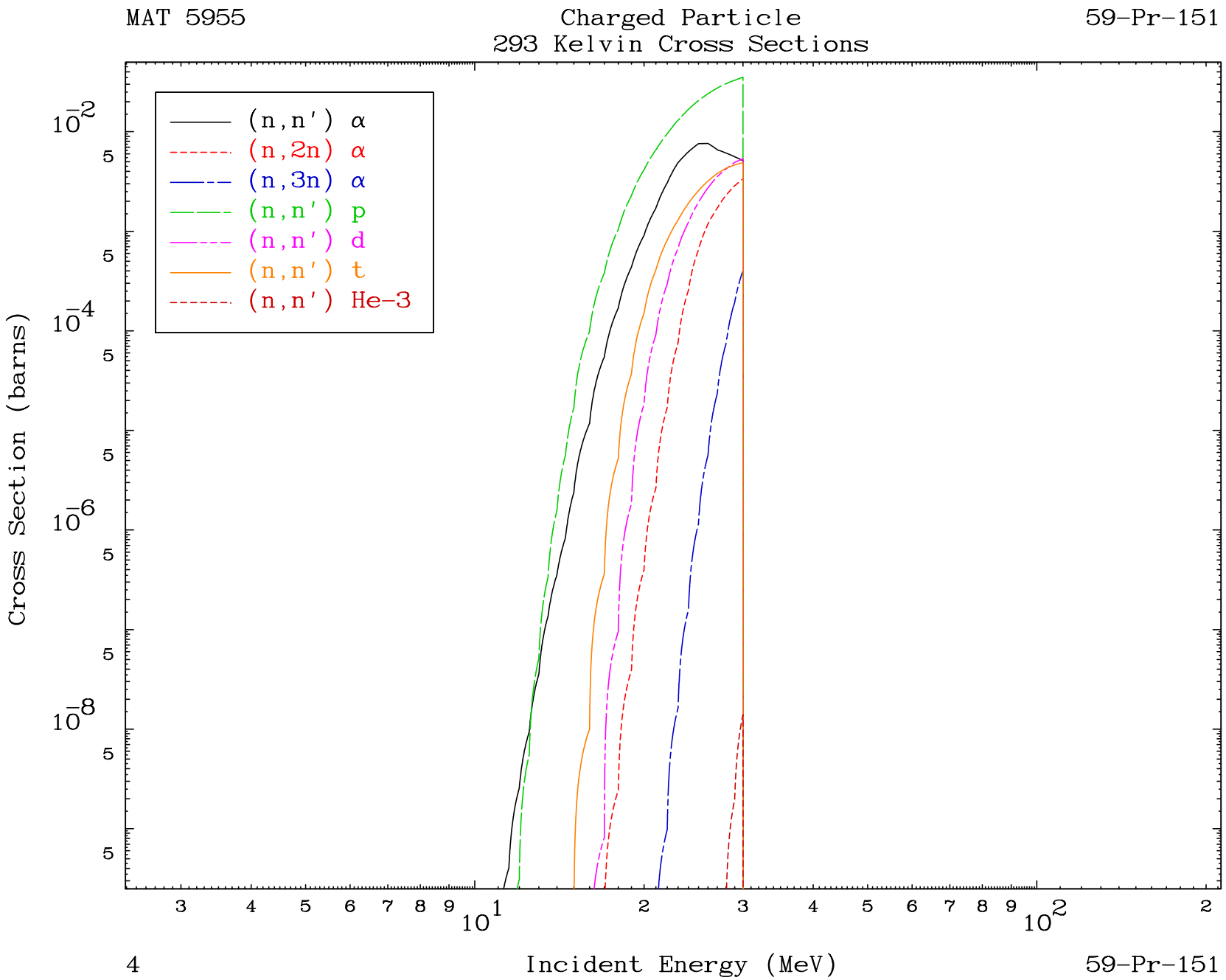
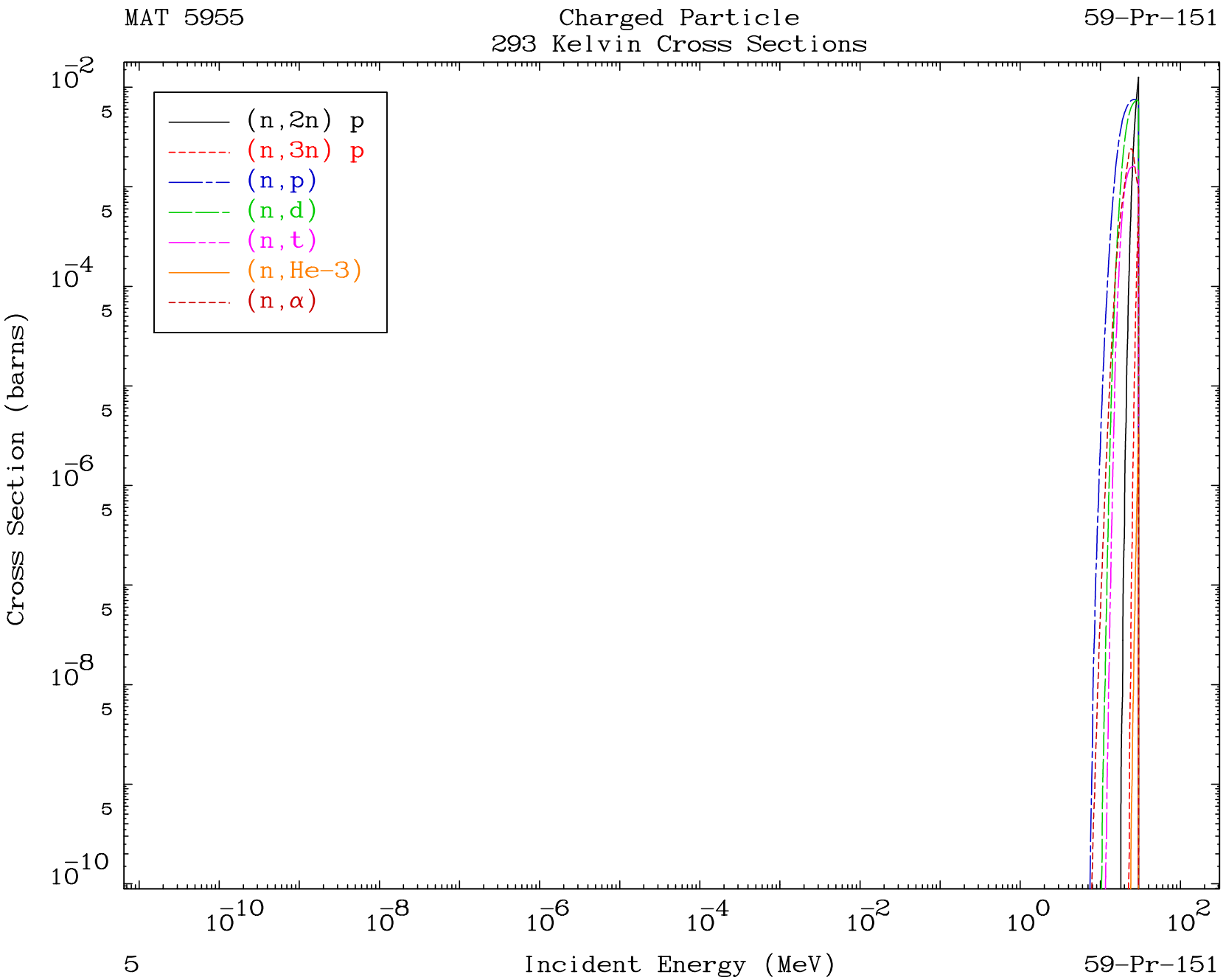
Press Mouse Button to Start

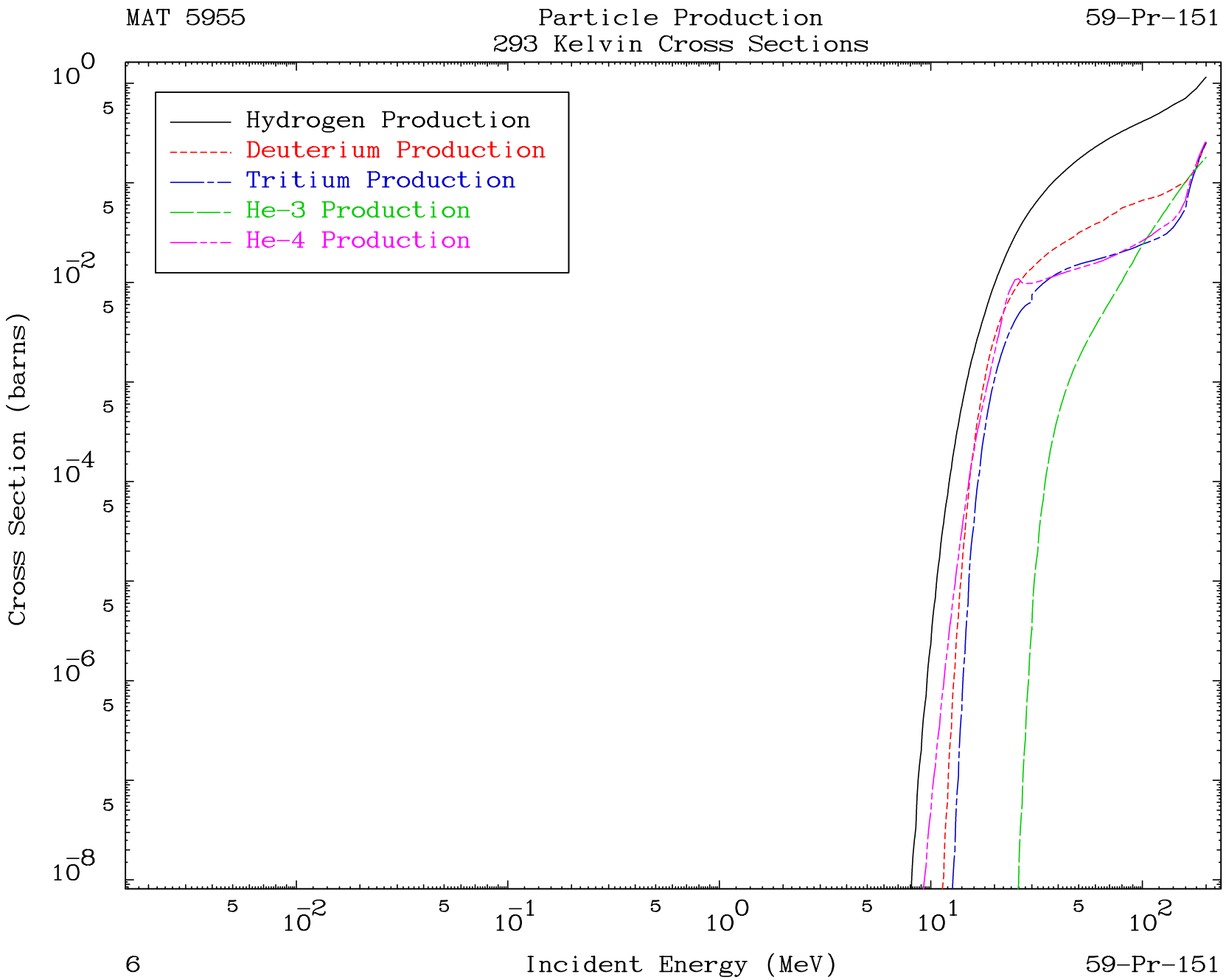

MAT 5955
Major
59-Pr-151
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,remainder)
(n,γ)
1
59-Pr-151

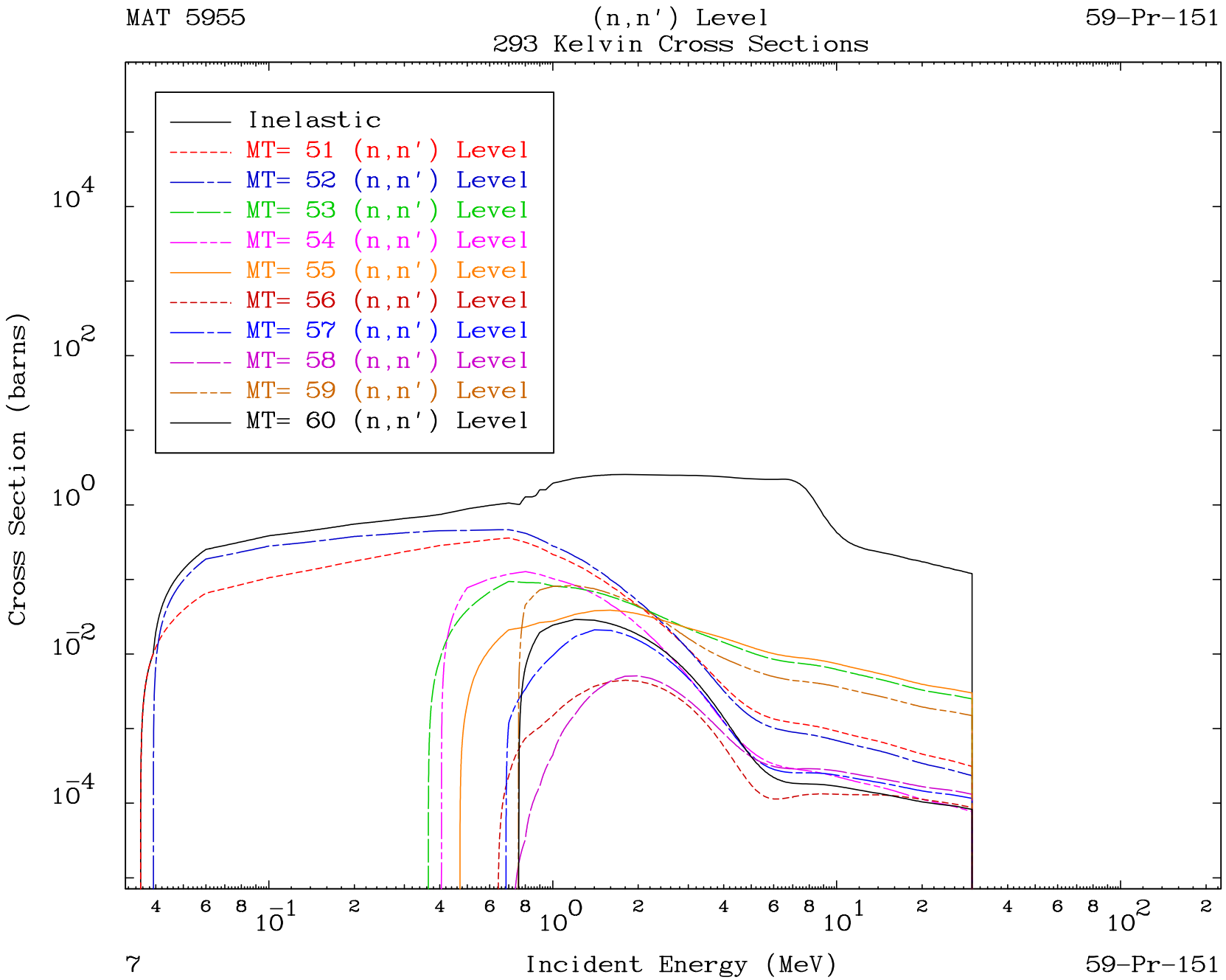

MAT 5955
Neutron Production
293 Kelvin Cross Sections
59-Pr-151
Cross Section (barns)
Incident Energy (MeV)
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
2
59-Pr-151

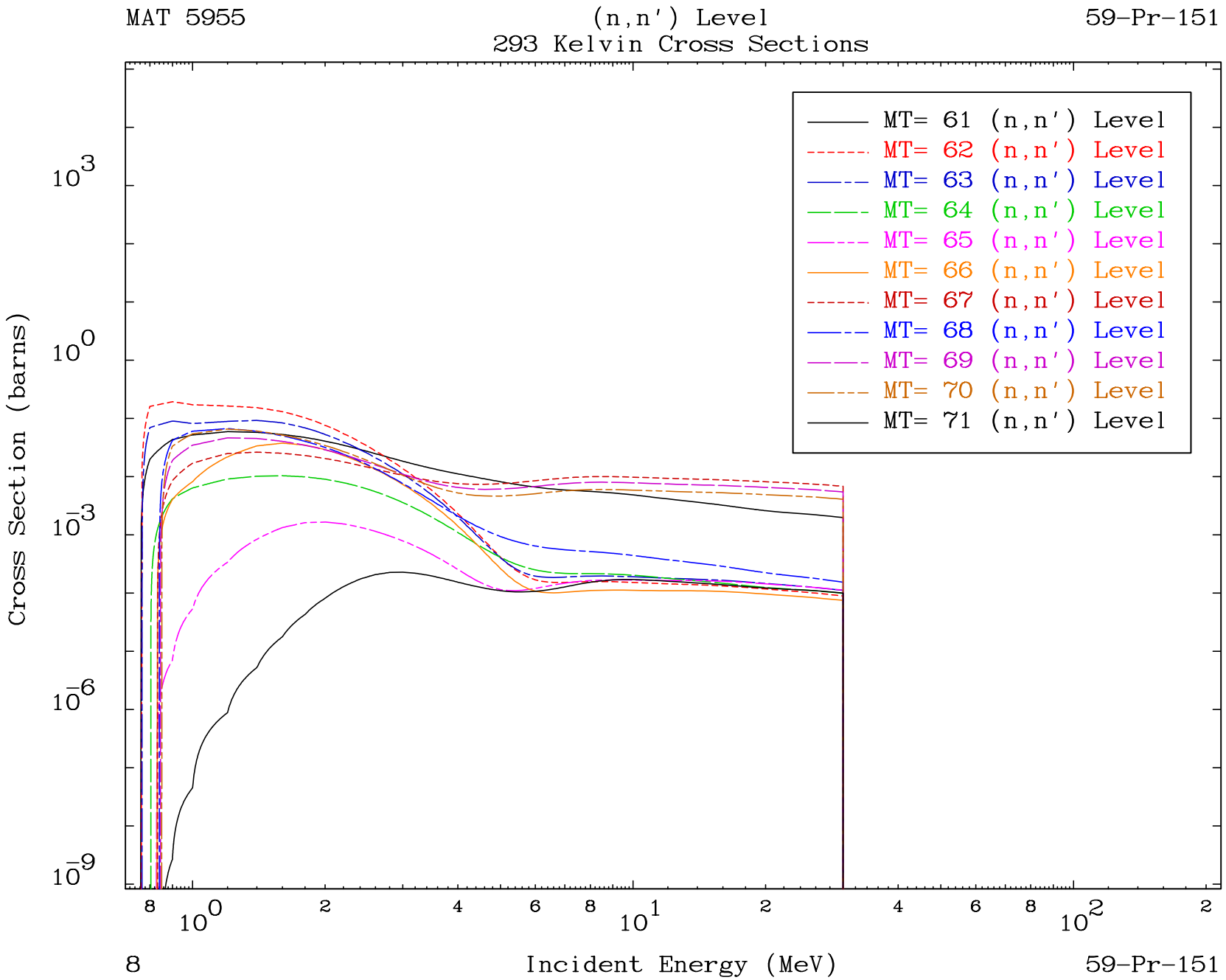

MAT 5955
Neutron Production
293 Kelvin Cross Sections
59-Pr-151
Cross Section (barns)
Incident Energy (MeV)
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
3
59-Pr-151

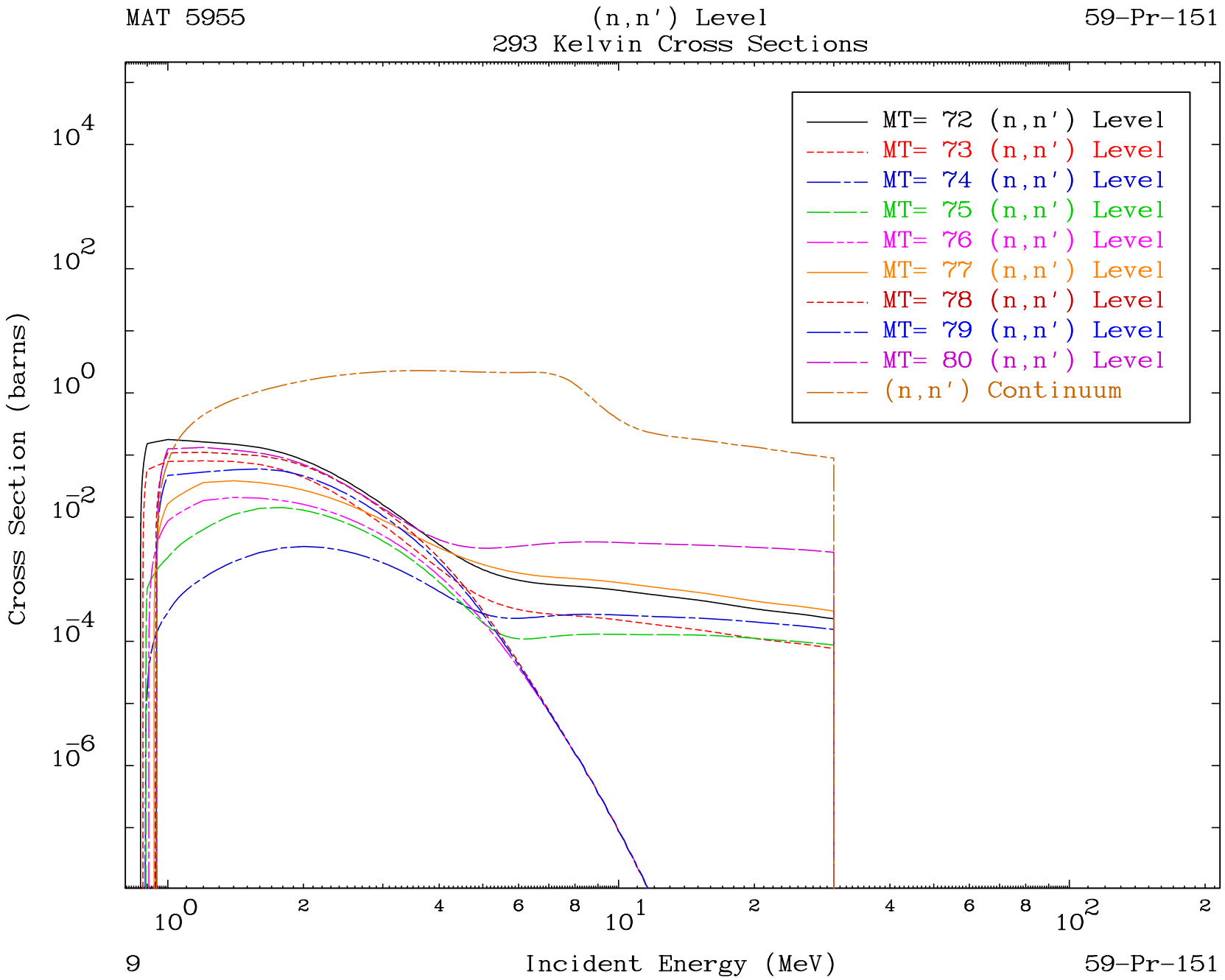

MAT 5955
Charged Particle
293 Kelvin Cross Sections
59-Pr-151
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') d
(n,n') t
(n,n') He-3
Cross Section (barns)
Incident Energy (MeV)
4
59-Pr-151

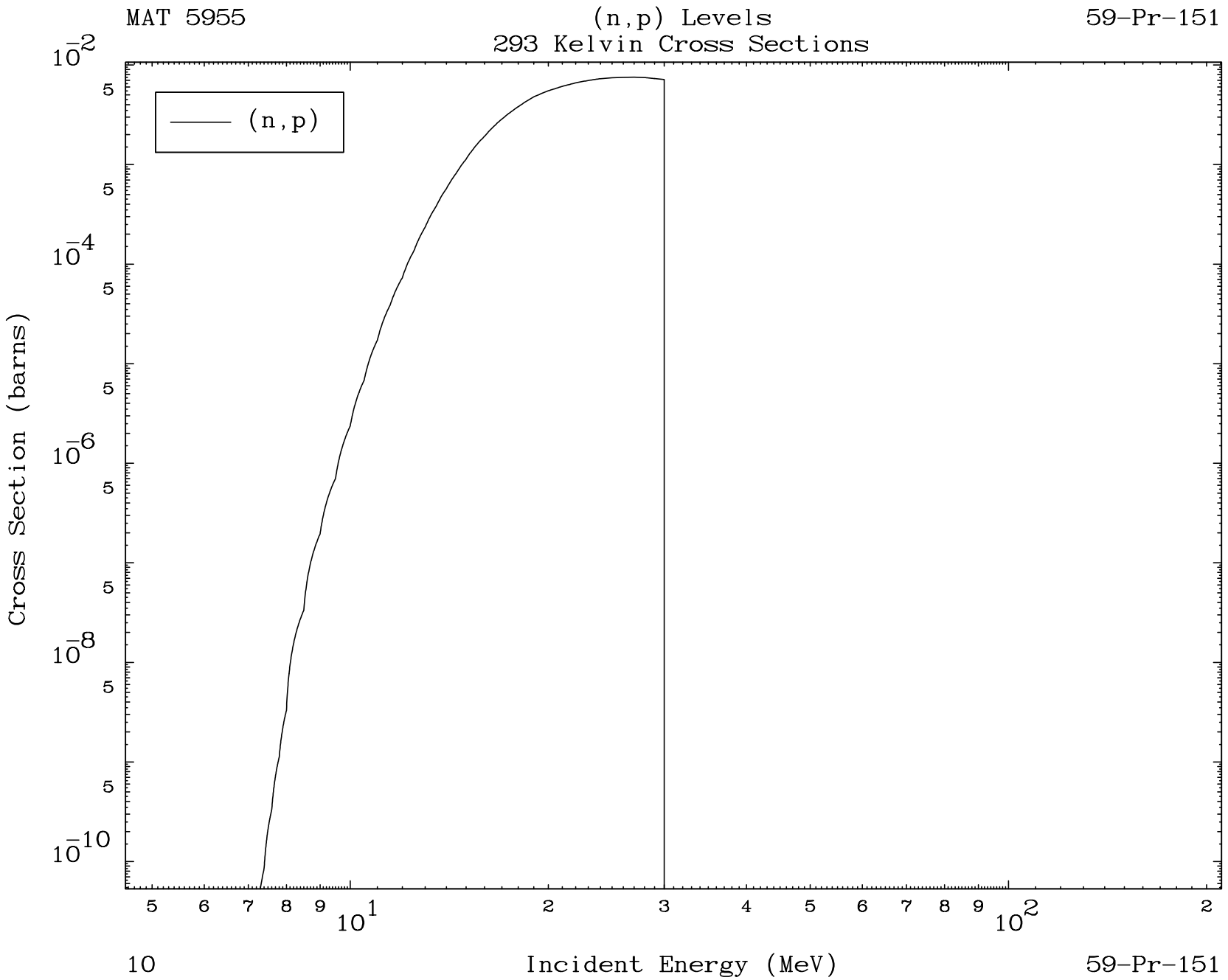

MAT 5955
Charged Particle
293 Kelvin Cross Sections
59-Pr-151
(n,2n) p
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
Cross Section (barns)
Incident Energy (MeV)
59-Pr-151
5

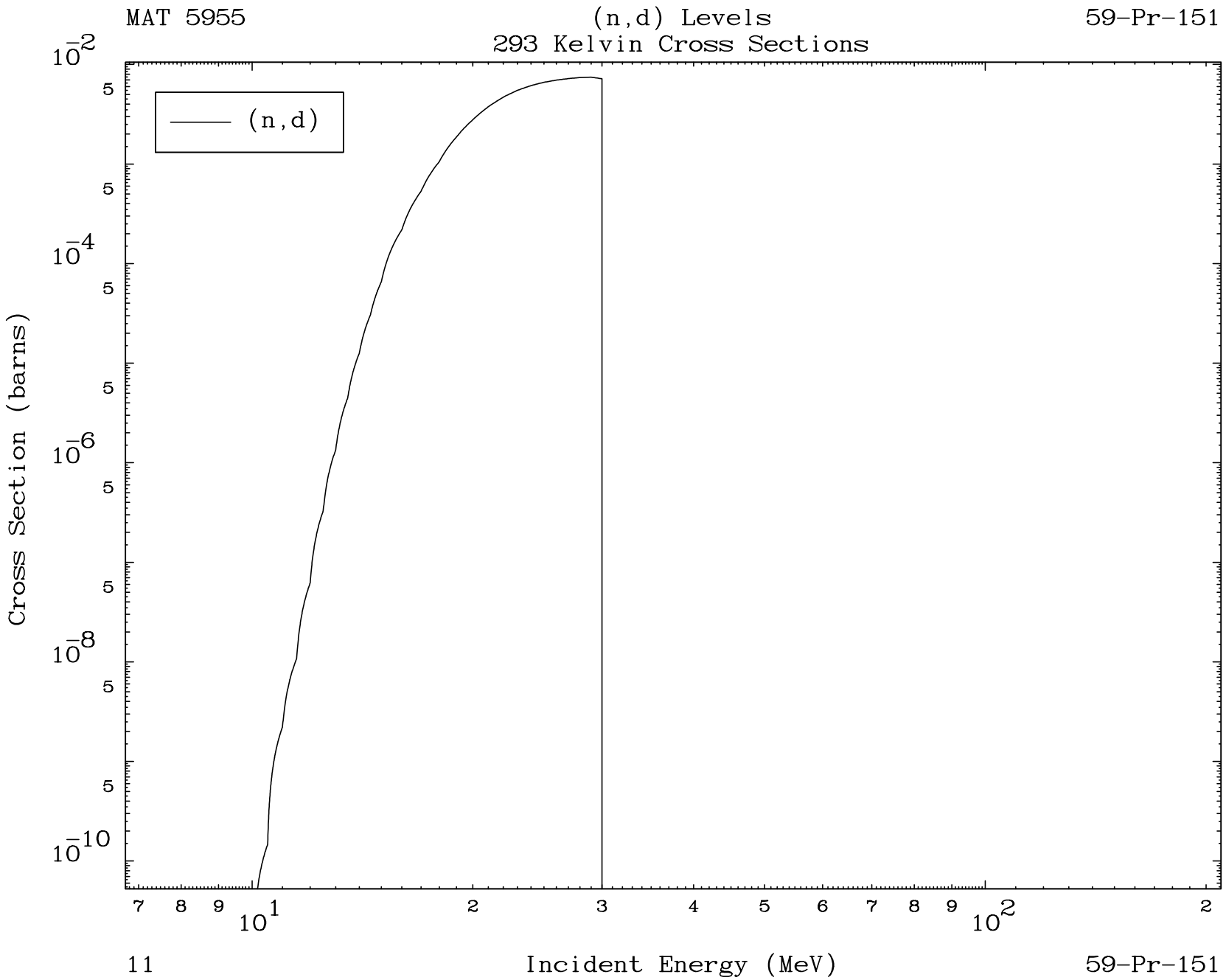

MAT 5955
Particle Production
59-Pr-151
293 Kelvin Cross Sections
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
Cross Section (barns)
Incident Energy (MeV)
59-Pr-151
6


MAT 5955
(n,n') Level
59-Pr-151
293 Kelvin Cross Sections
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
MT= 59 (n,n') Level
MT= 60 (n,n') Level
Cross Section (barns)
10^4
10^2
10^0
10^-2
10^-4
10^-1
10^0
10^1
10^2
Incident Energy (MeV)
7
59-Pr-151


MAT 5955
(n,n') Level
293 Kelvin Cross Sections
59-Pr-151
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
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
Cross Section (barns)
10^3
10^0
10^-3
10^-6
10^-9
8
10^0
2
4
6
8
10^1
2
4
6
8
10^2
2
Incident Energy (MeV)
8
59-Pr-151


MAT 5955
(n,n') Level
293 Kelvin Cross Sections
59-Pr-151
MT= 72 (n,n') Level
MT= 73 (n,n') Level
MT= 74 (n,n') Level
MT= 75 (n,n') Level
MT= 76 (n,n') Level
MT= 77 (n,n') Level
MT= 78 (n,n') Level
MT= 79 (n,n') Level
MT= 80 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
9
59-Pr-151


MAT 5955
(n,p) Levels
59-Pr-151
293 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
59-Pr-151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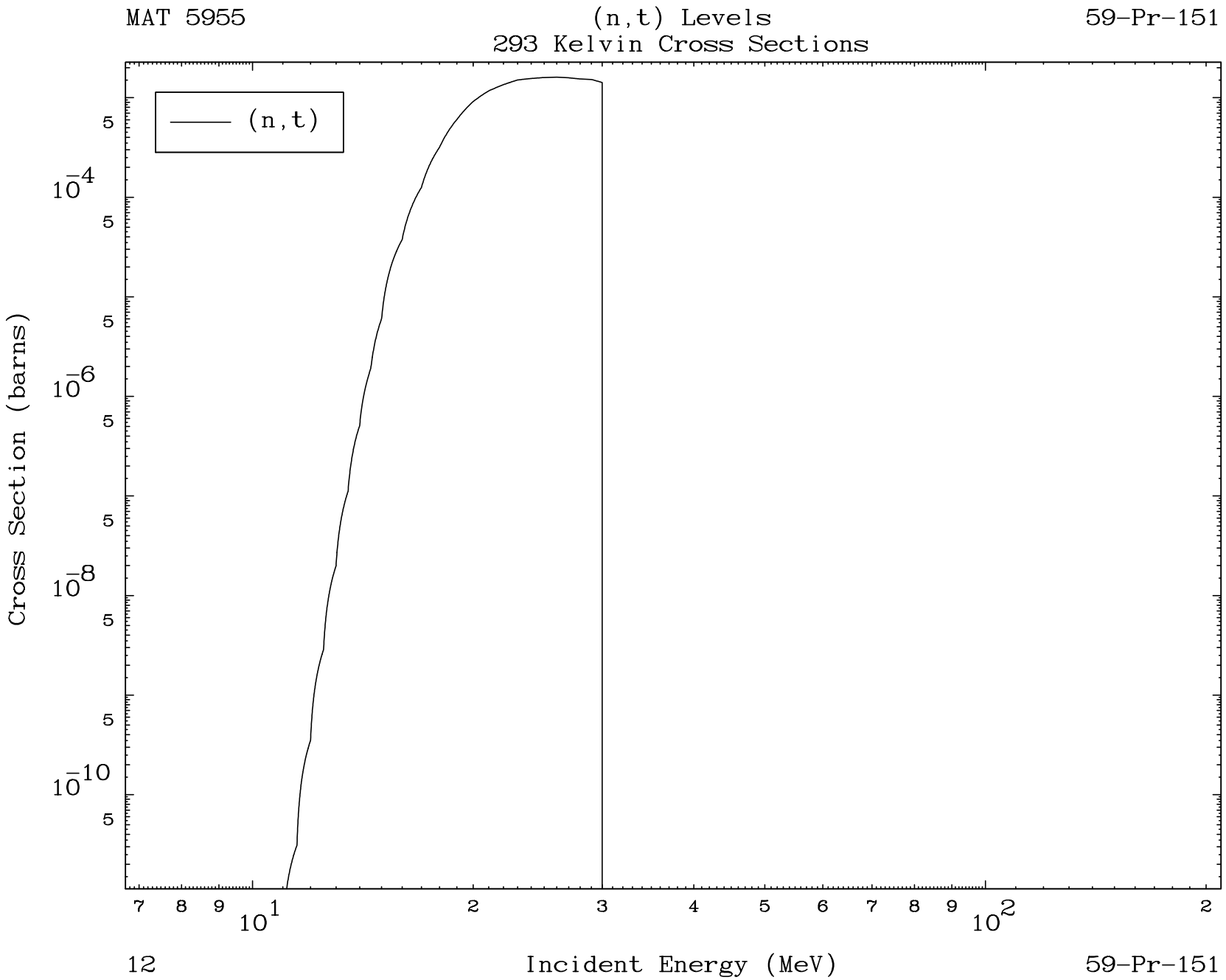
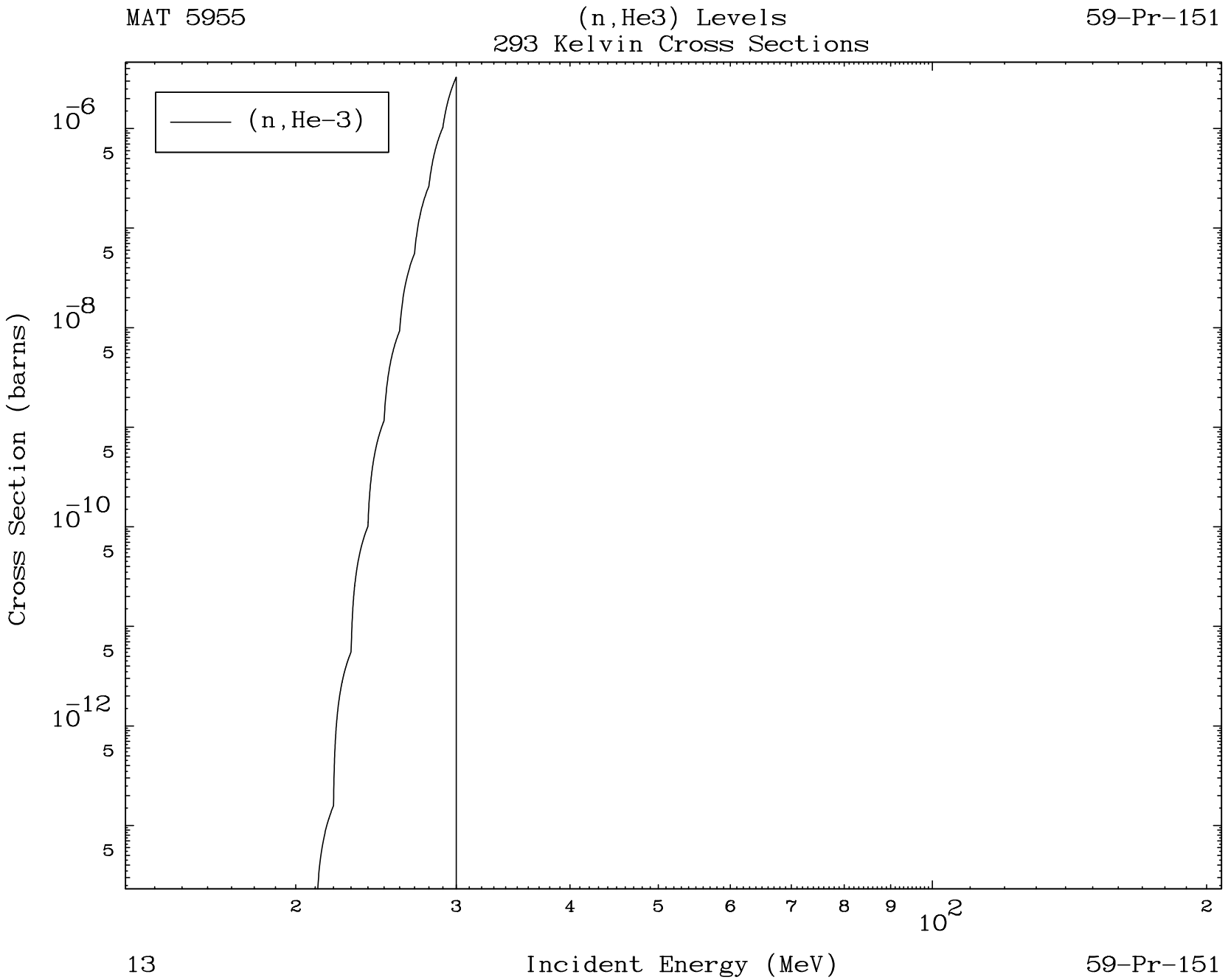
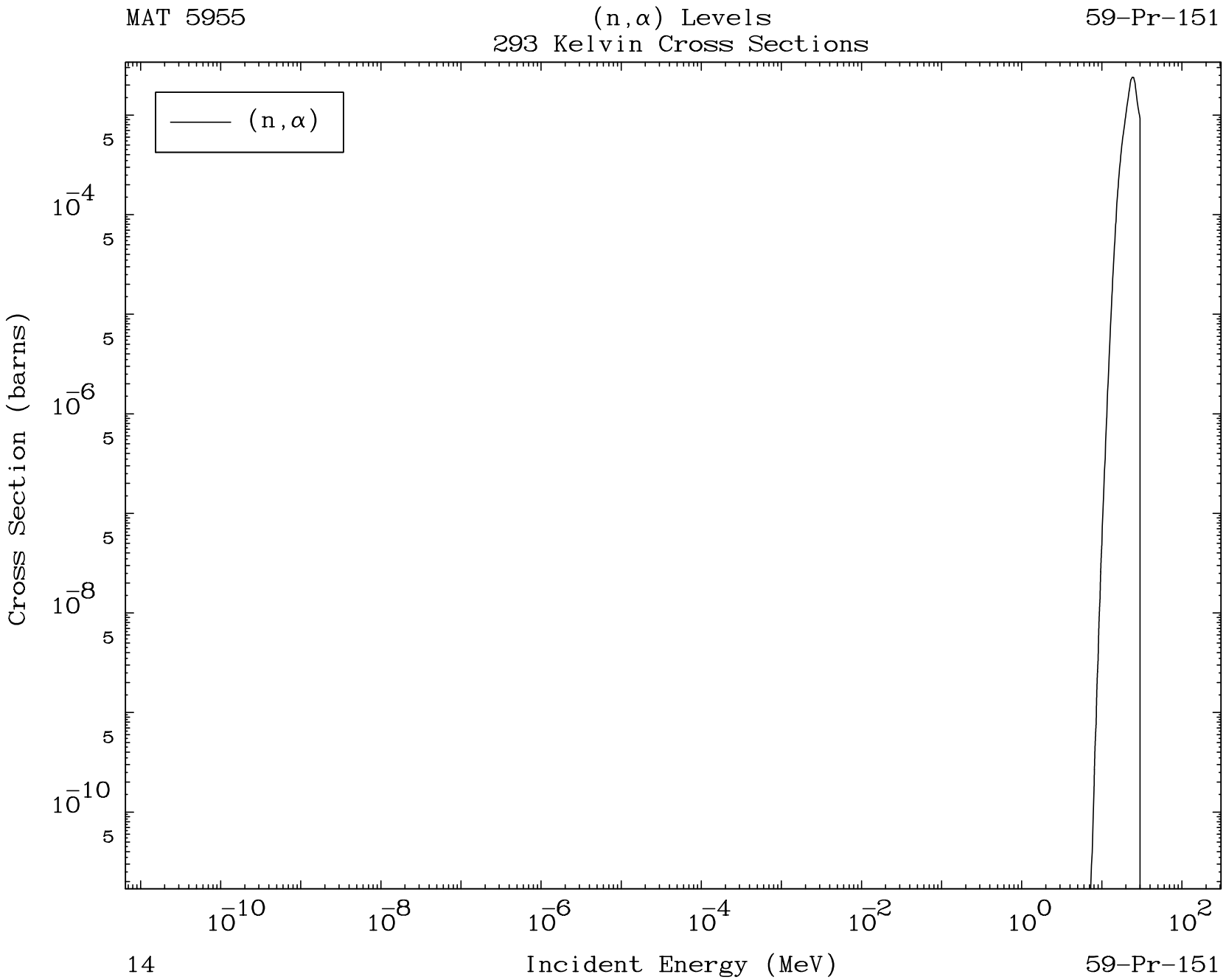
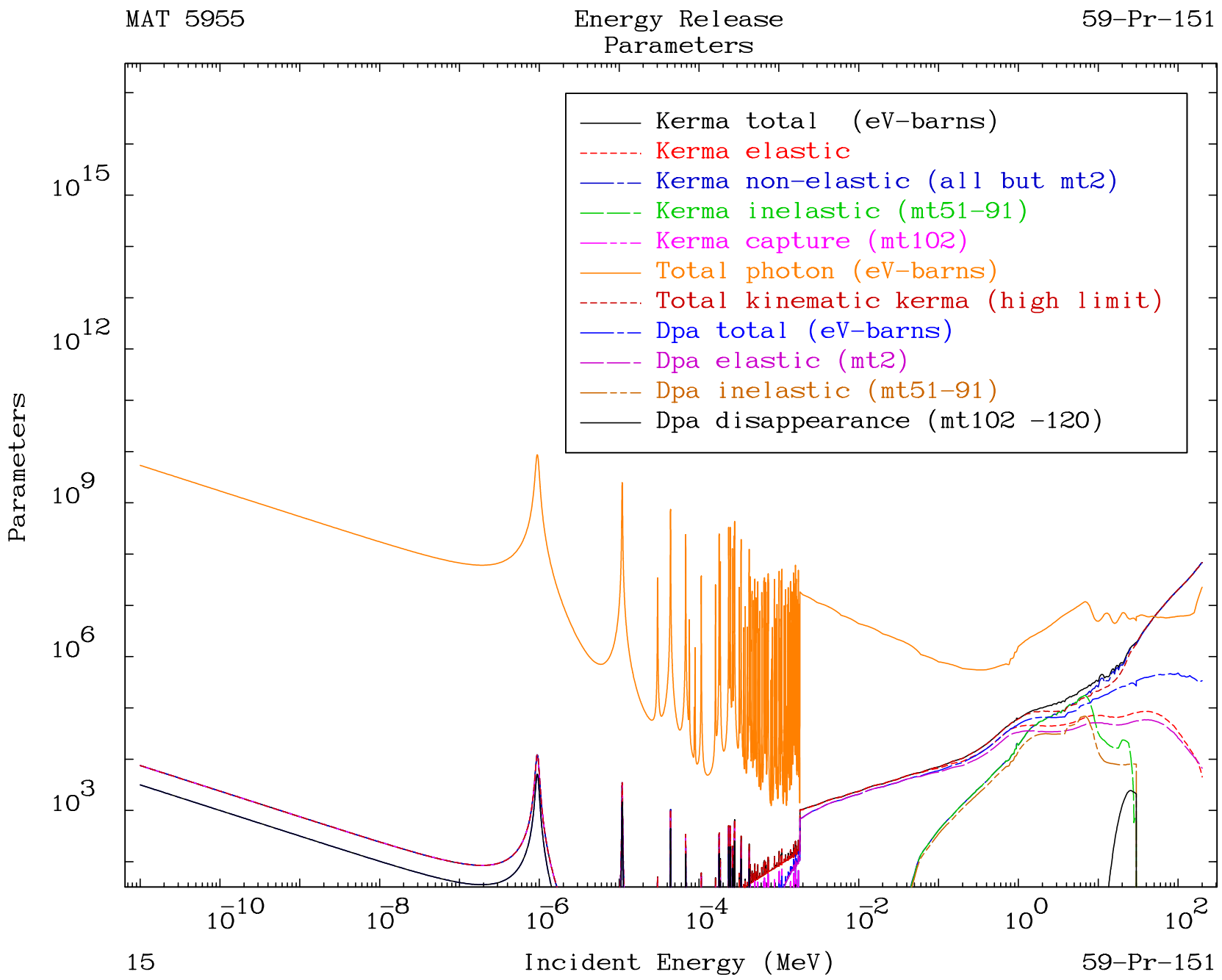
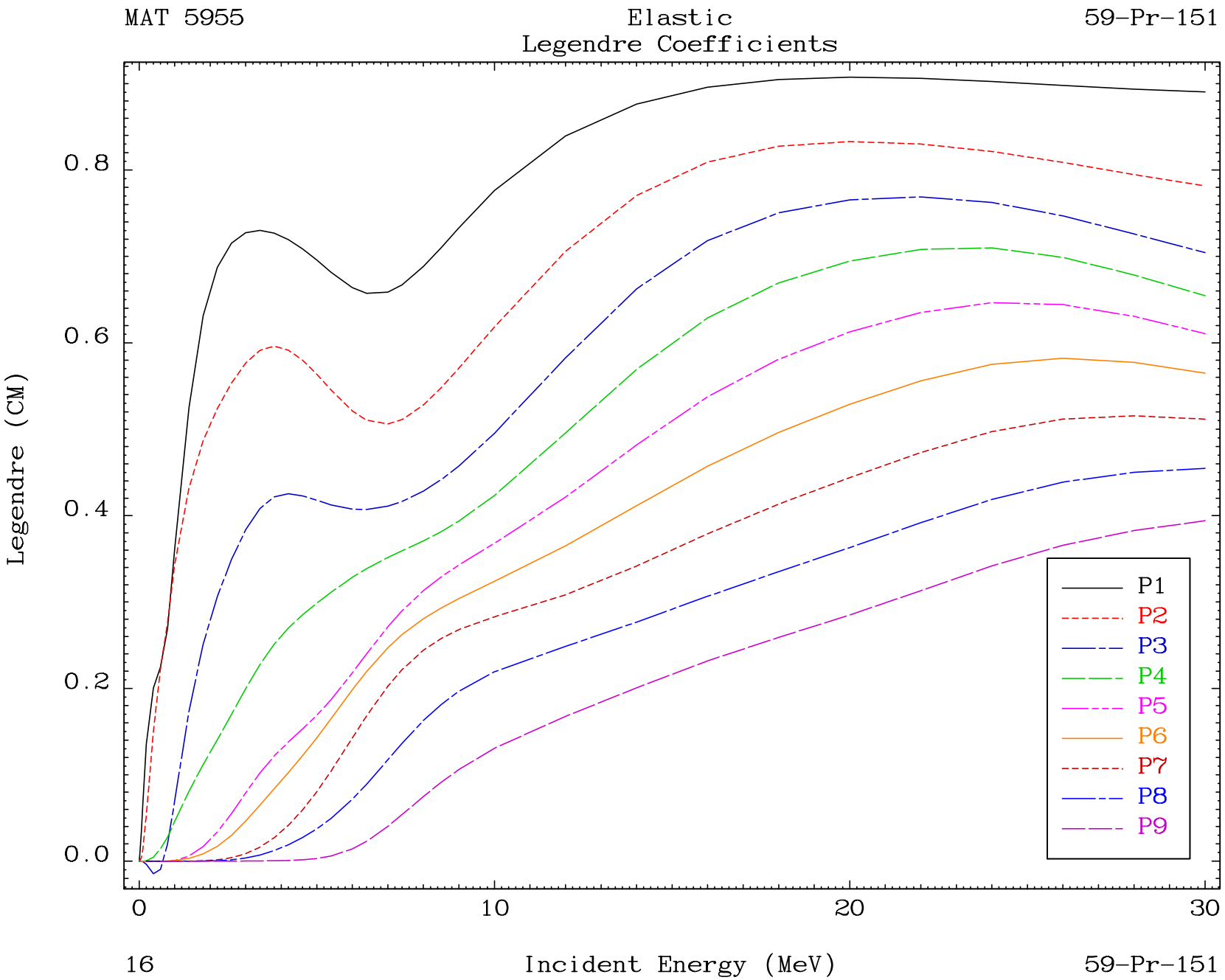
(n,d) Levels
59-Pr-151
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
11
59-Pr-151

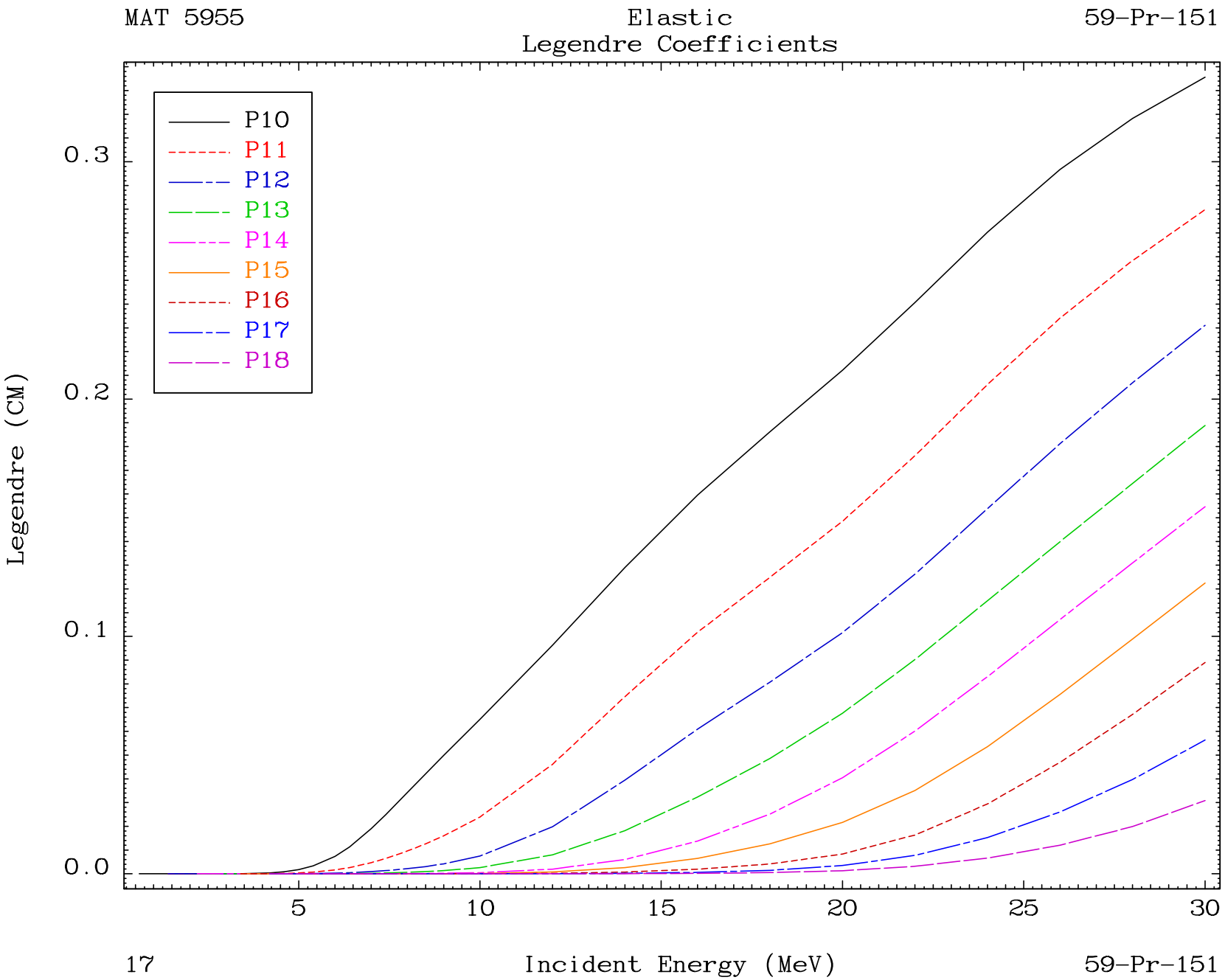

MAT 5955
(n,t) Levels
59-Pr-151
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
7 8 9 10^1 2 3 4 5 6 7 8 9 10^2 2
Incident Energy (MeV)
12
59-Pr-151

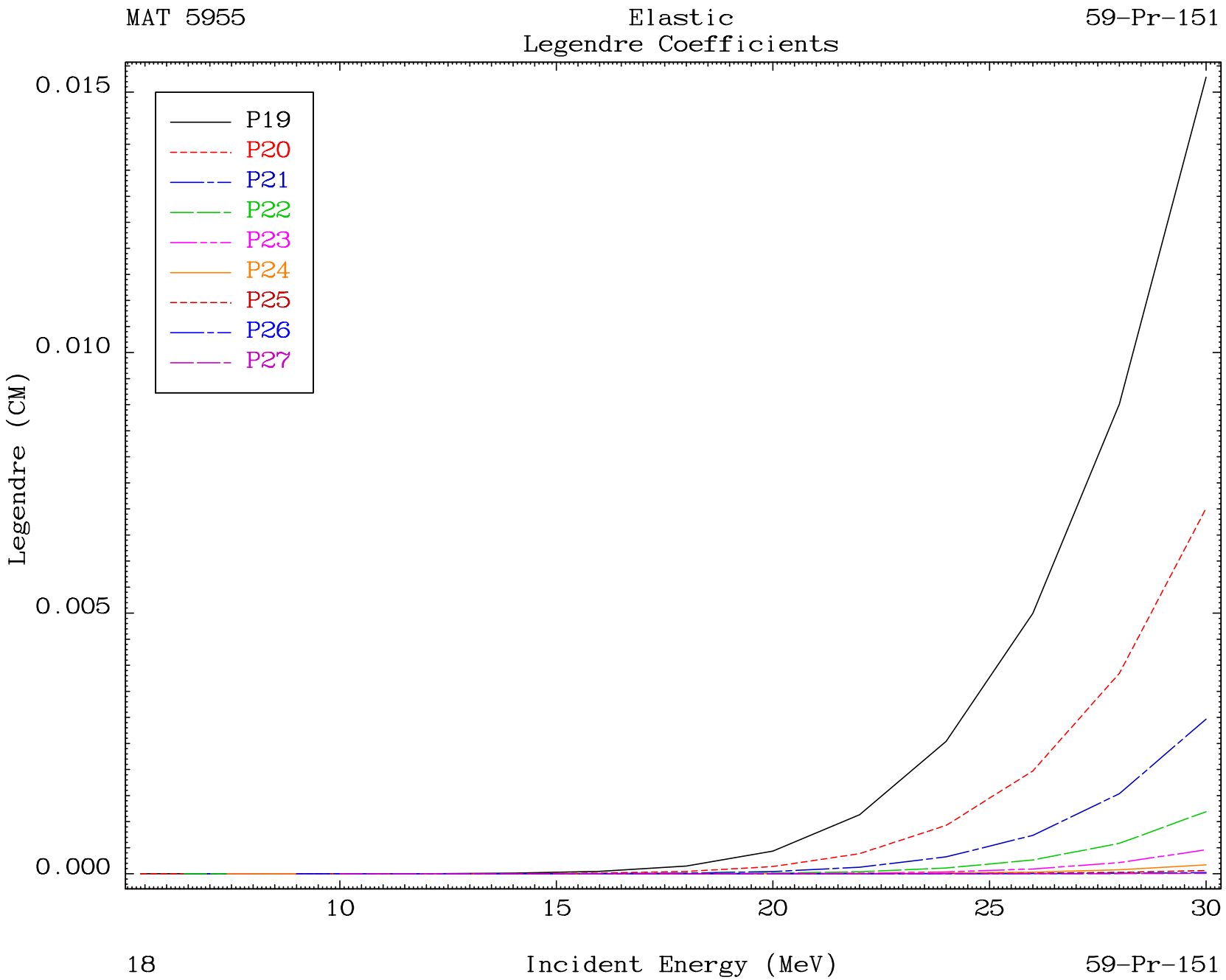

MAT 5955
(n,He3) Levels
59-Pr-151
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
2
3
4
5
6
7
8
9
10^2
2
13
Incident Energy (MeV)
59-Pr-151

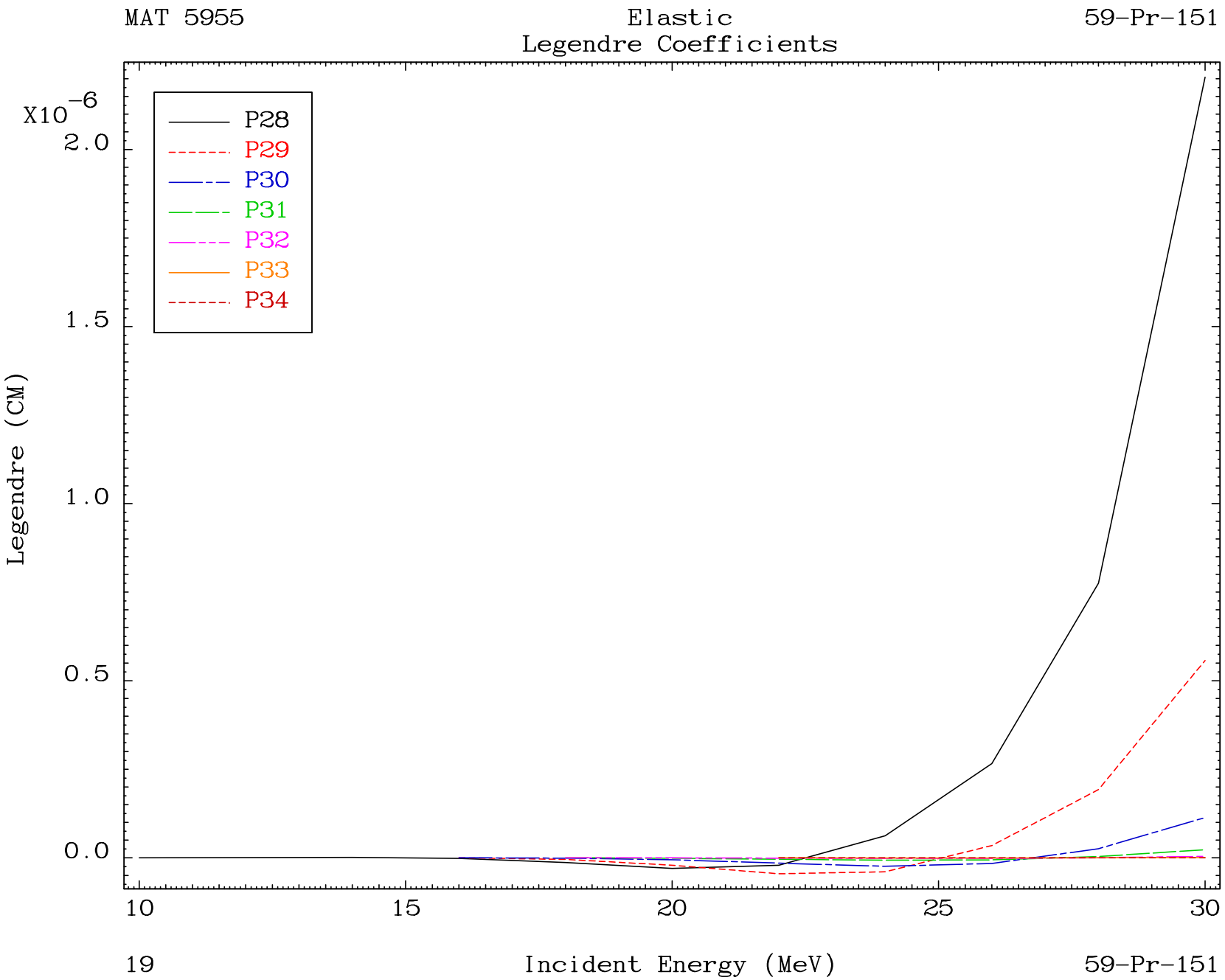

MAT 5955
(n,α) Levels
59-Pr-151
293 Kelvin Cross Sections
(n,α)
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
5
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
14
Incident Energy (MeV)
59-Pr-151

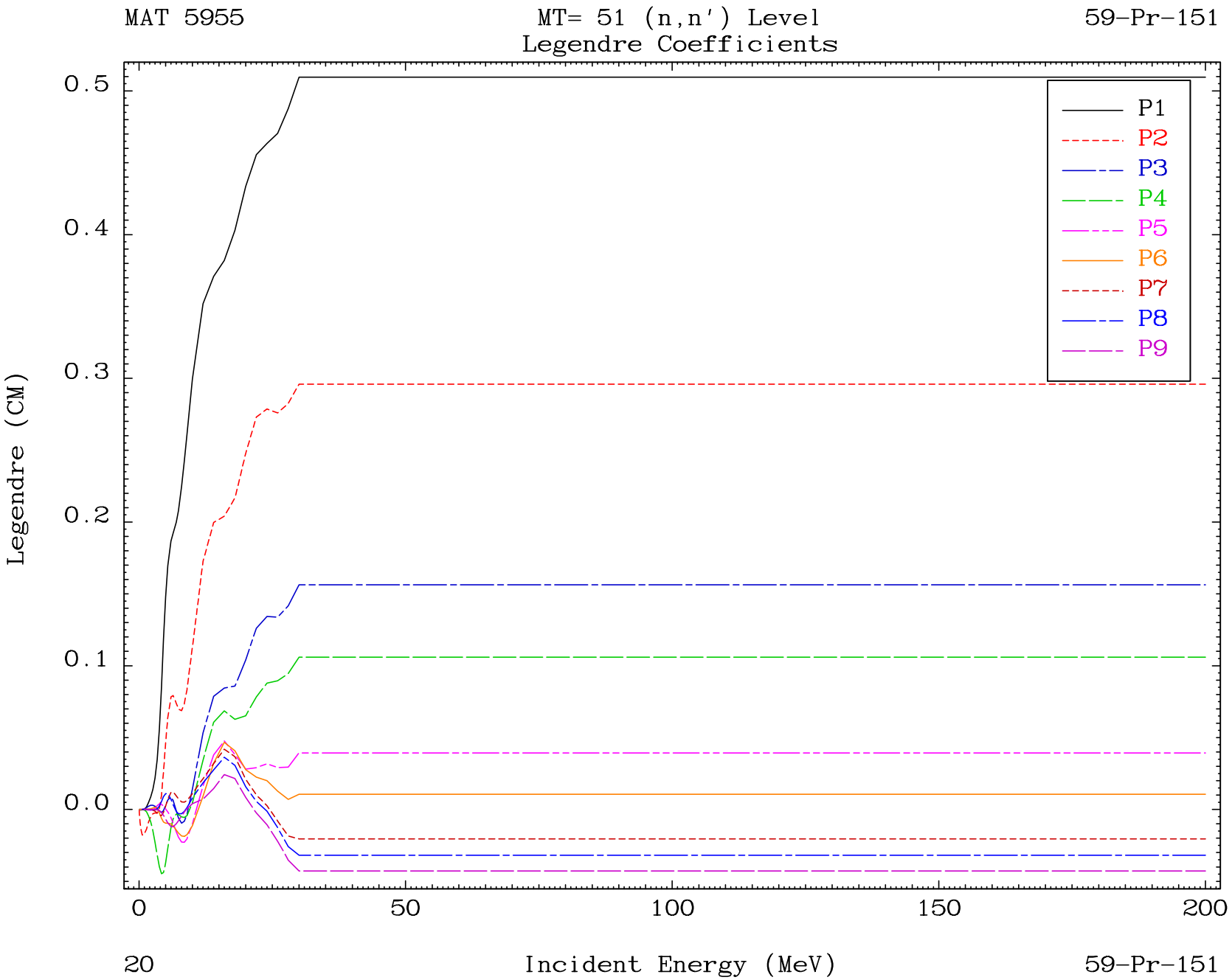

MAT 5955
Energy Release
Parameters
59-Pr-151
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma capture (mt102)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
Parameters
10^15
10^12
10^9
10^6
10^3
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
15
Incident Energy (MeV)
59-Pr-151

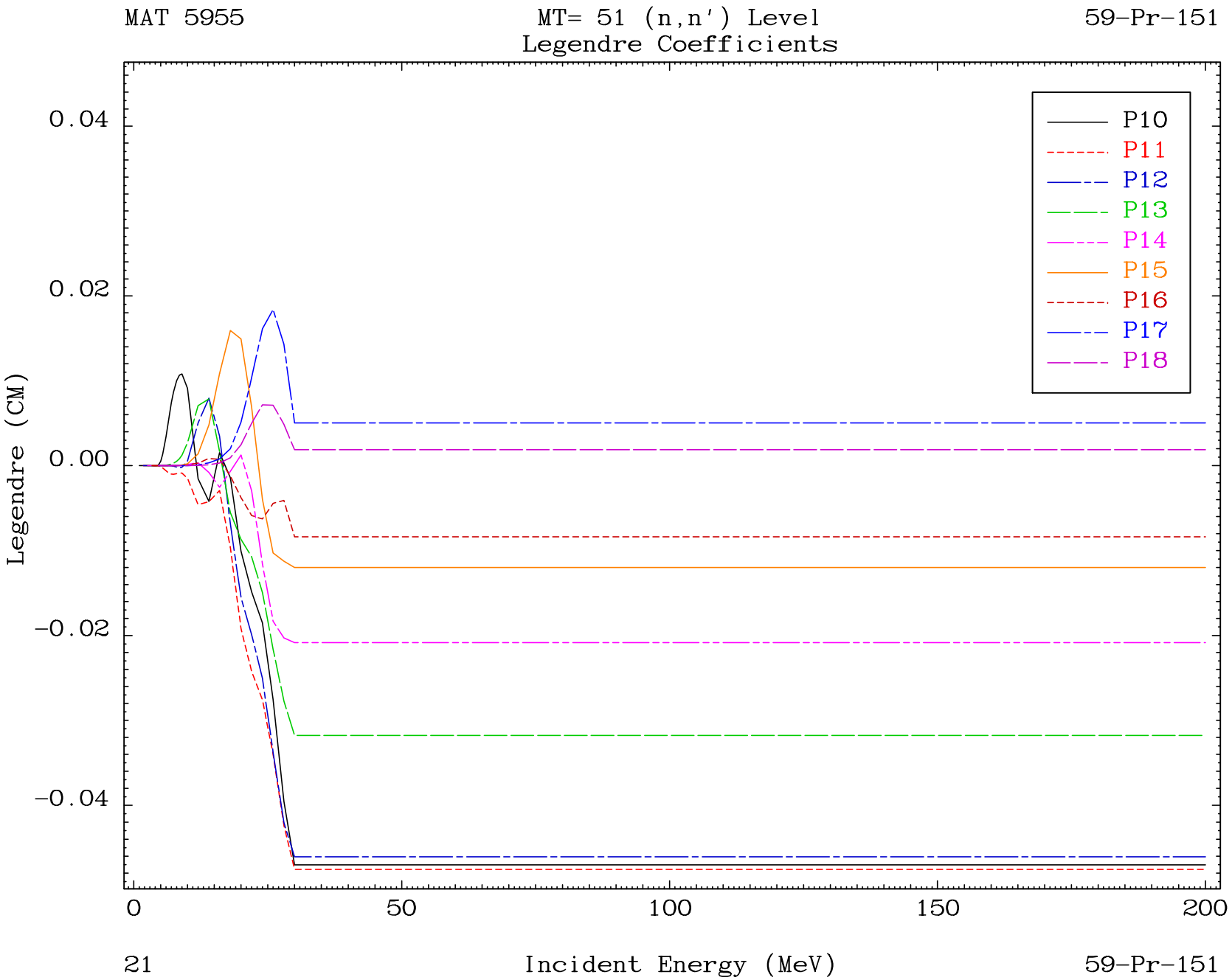

MAT 5955
Elastic
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
16
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

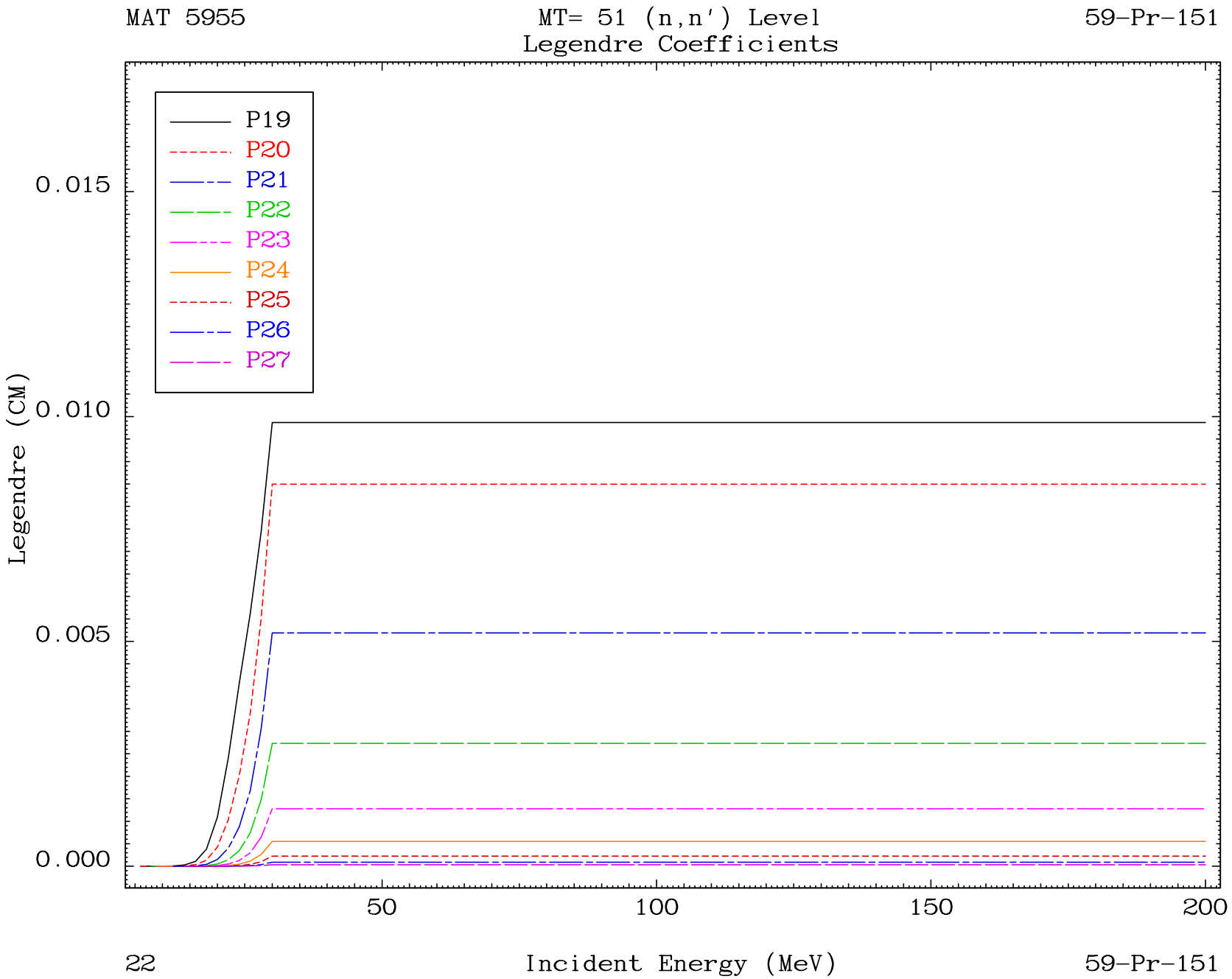

MAT 5955
Elastic
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.0
0.1
0.2
0.3
5
10
15
20
25
30
17
Incident Energy (MeV)
59-Pr-151

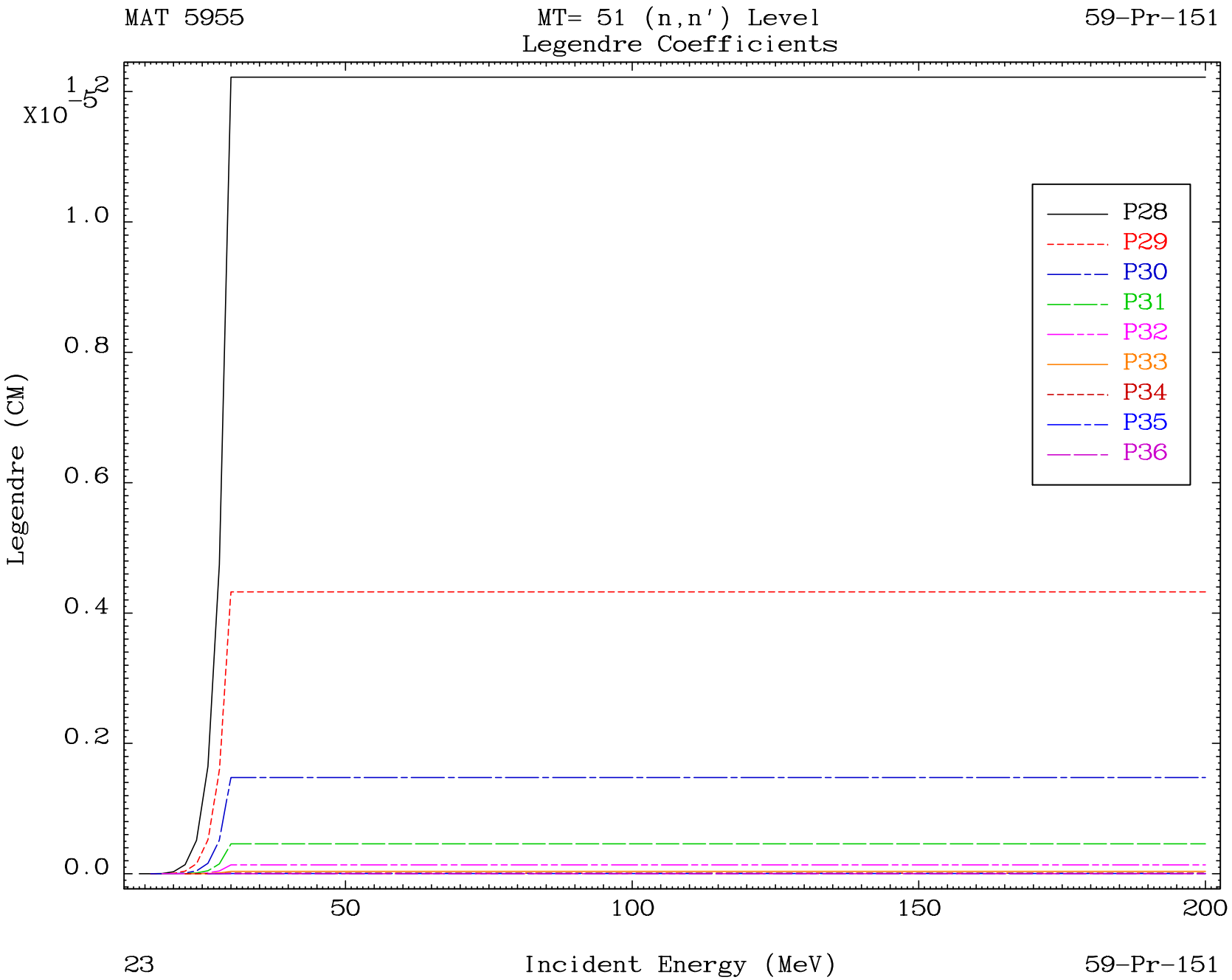

MAT 5955
Elastic
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
10
15
20
25
30
18
Incident Energy (MeV)
59-Pr-151

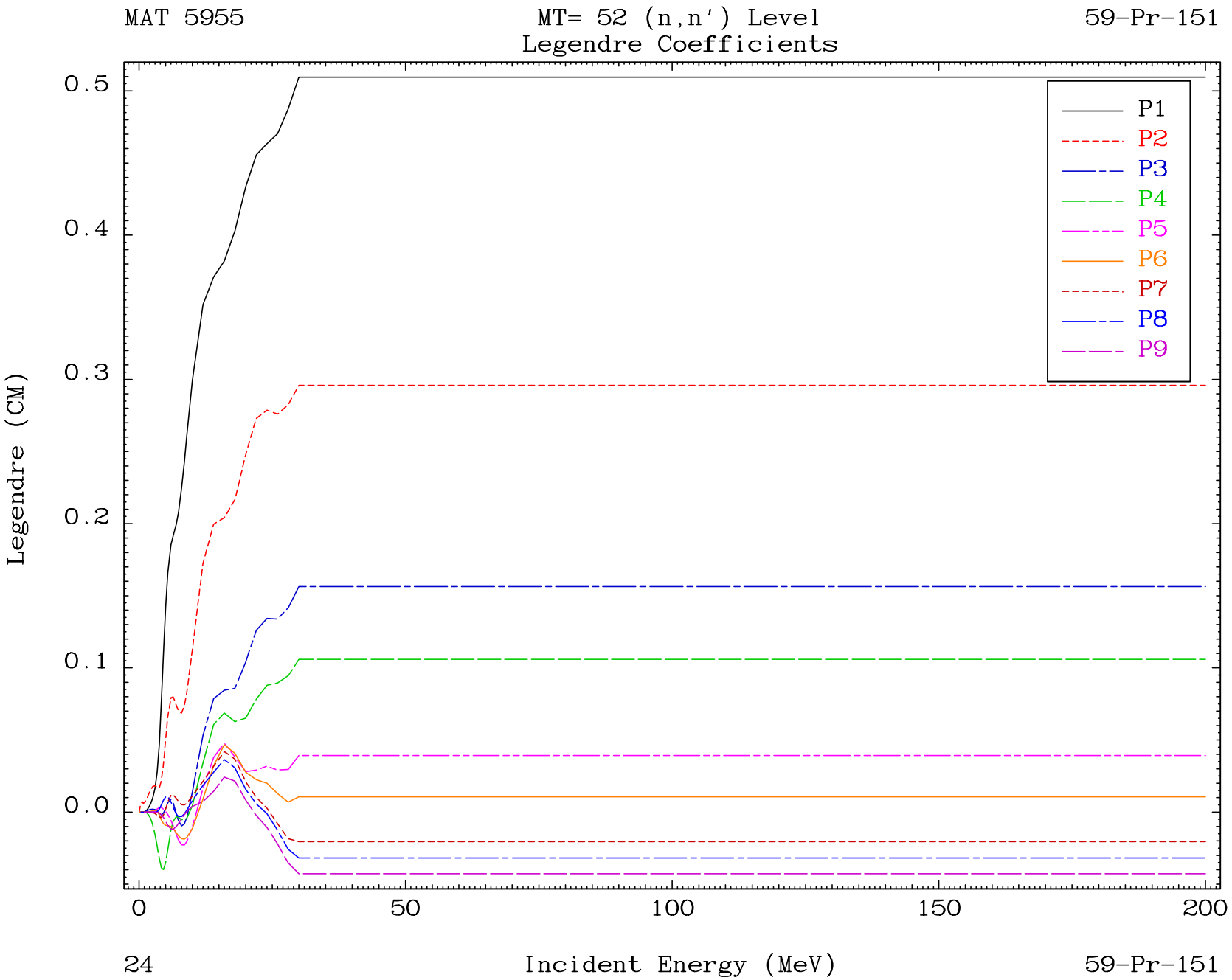

MAT 5955
Elastic
Legendre Coefficients
59-Pr-151
X10 −6
2.0
1.5
1.0
0.5
0.0
P28
P29
P30
P31
P32
P33
P34
Legendre (CM)
10
15
20
25
30
19
Incident Energy (MeV)
59-Pr-151

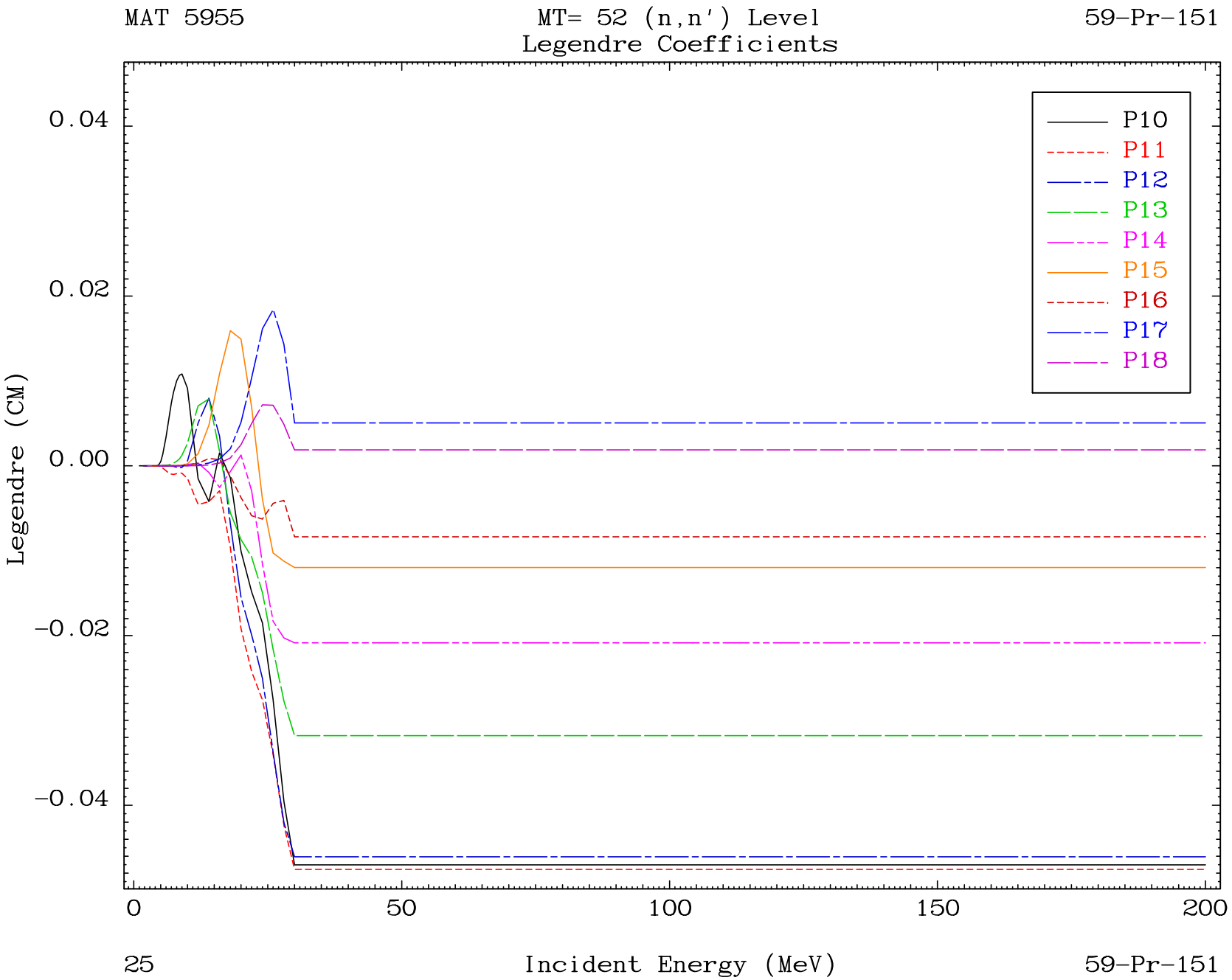

MAT 5955
MT= 51 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
20
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

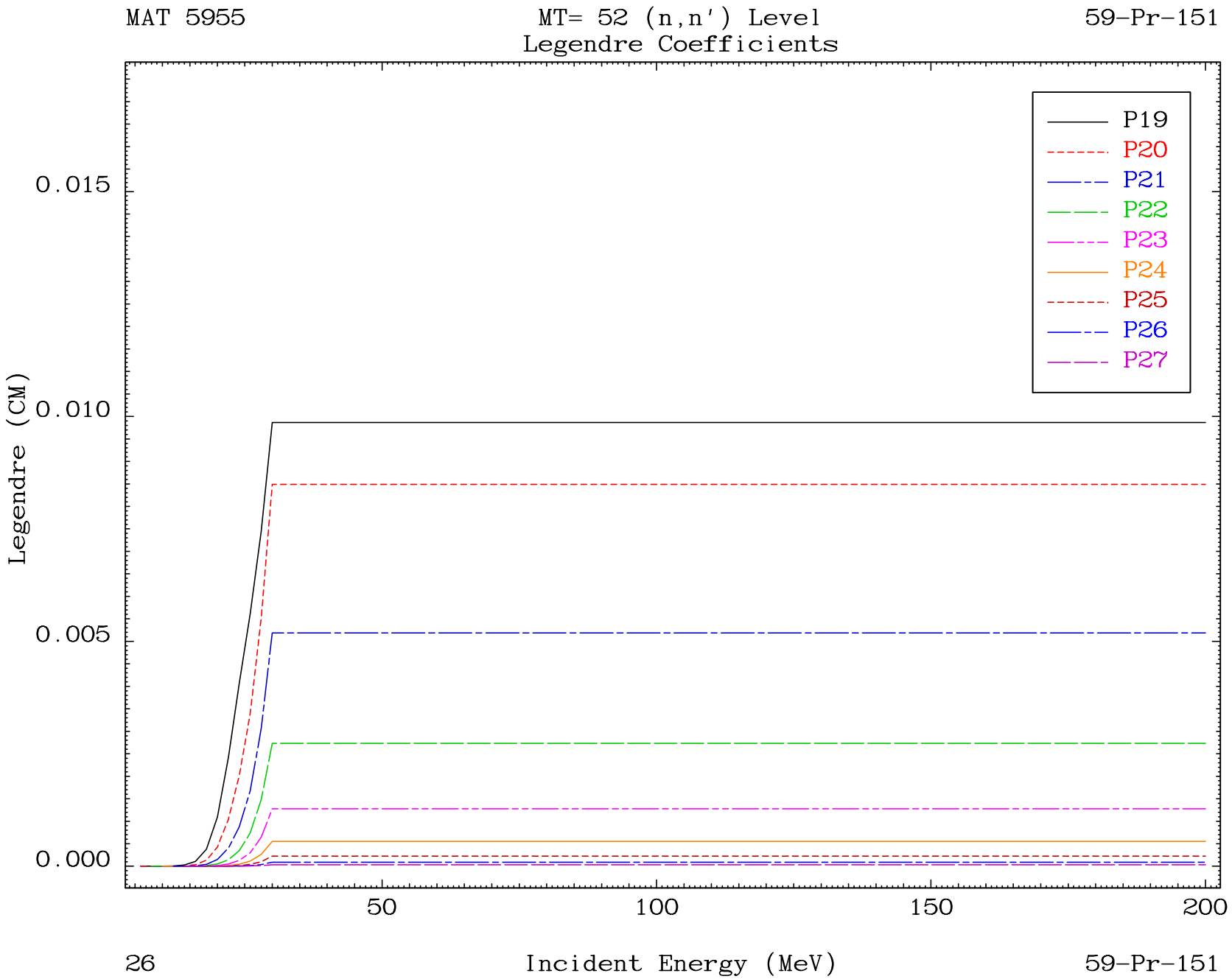

MAT 5955
MT= 51 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
21
Incident Energy (MeV)
59-Pr-151

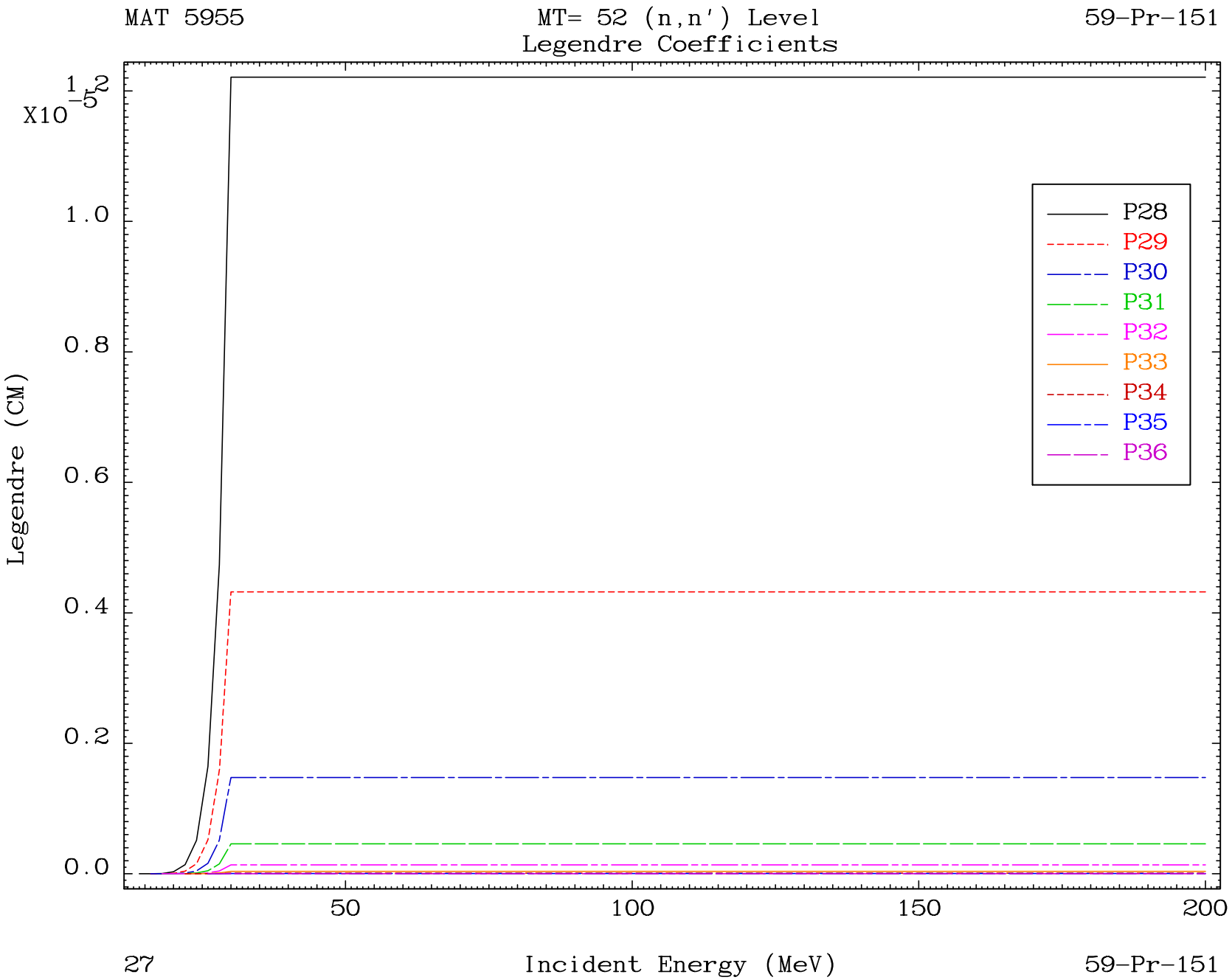

MAT 5955
MT= 51 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
22
Incident Energy (MeV)
59-Pr-151

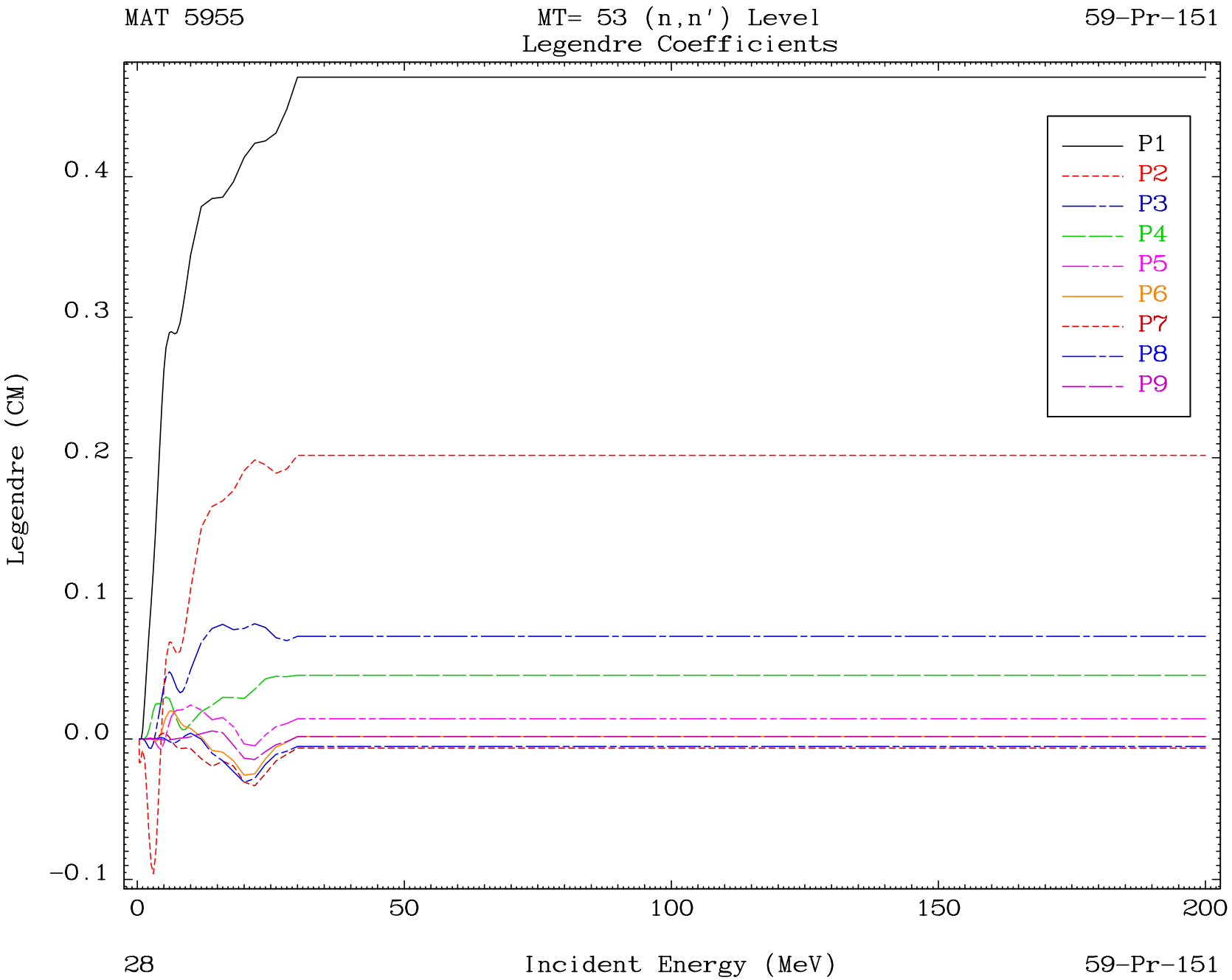

MAT 5955
MT= 51 (n,n') Level
Legendre Coefficients
59-Pr-151
X10-5
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P28
P29
P30
P31
P32
P33
P34
P35
P36
23
59-Pr-151

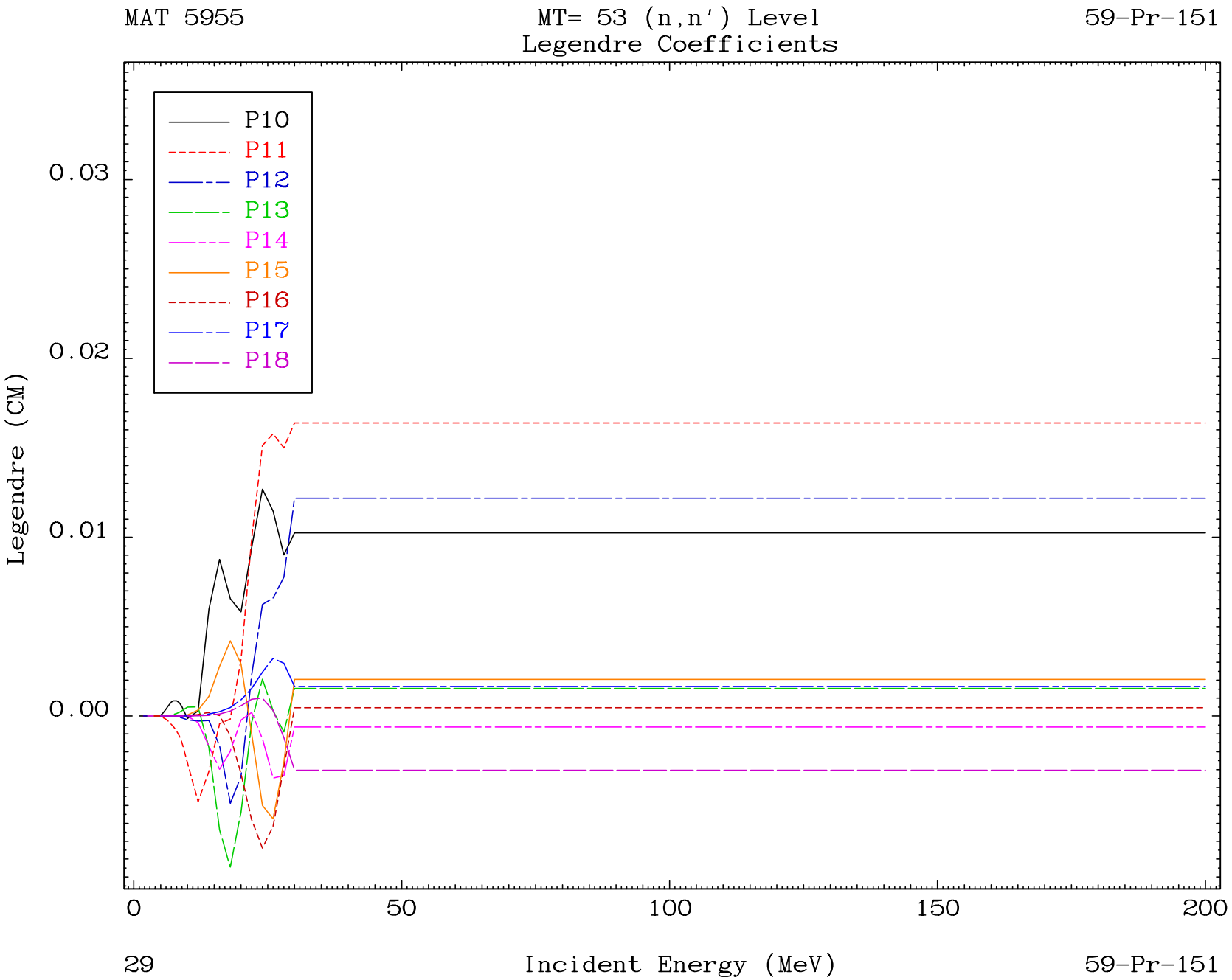

MAT 5955
MT= 52 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
24
Incident Energy (MeV)
59-Pr-151

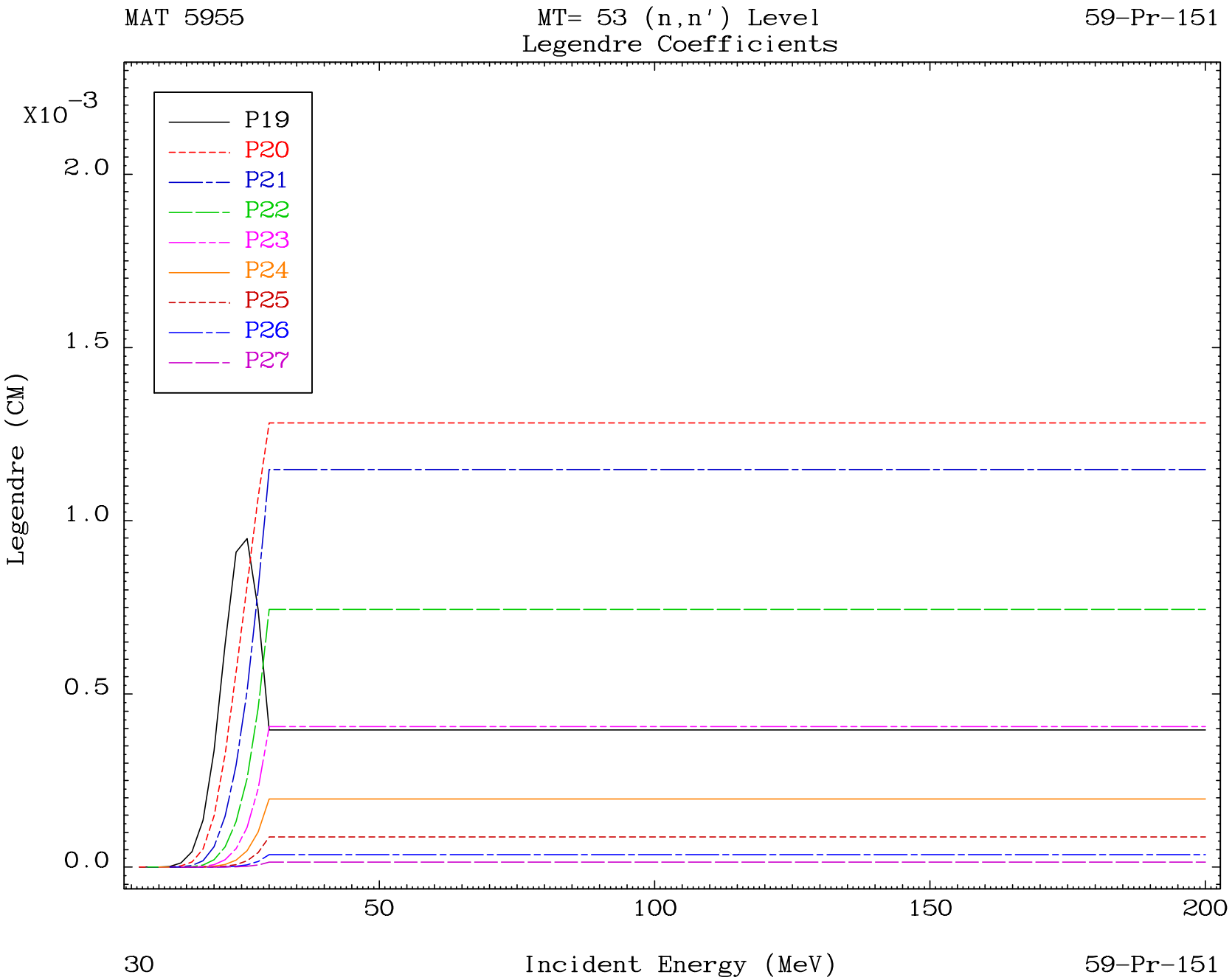

MAT 5955
MT= 52 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
25
Incident Energy (MeV)
59-Pr-151

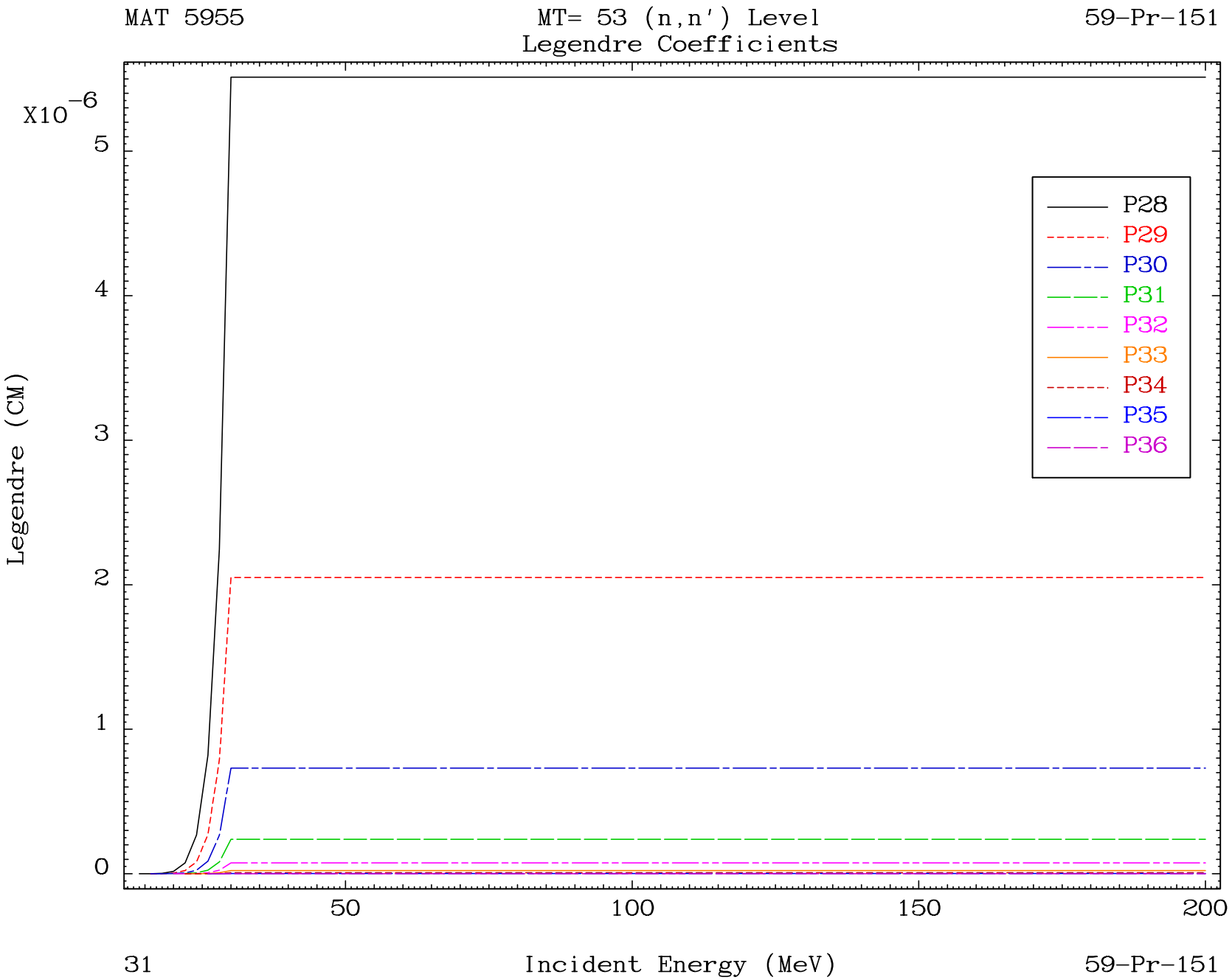

MAT 5955
MT= 52 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
26
59-Pr-151

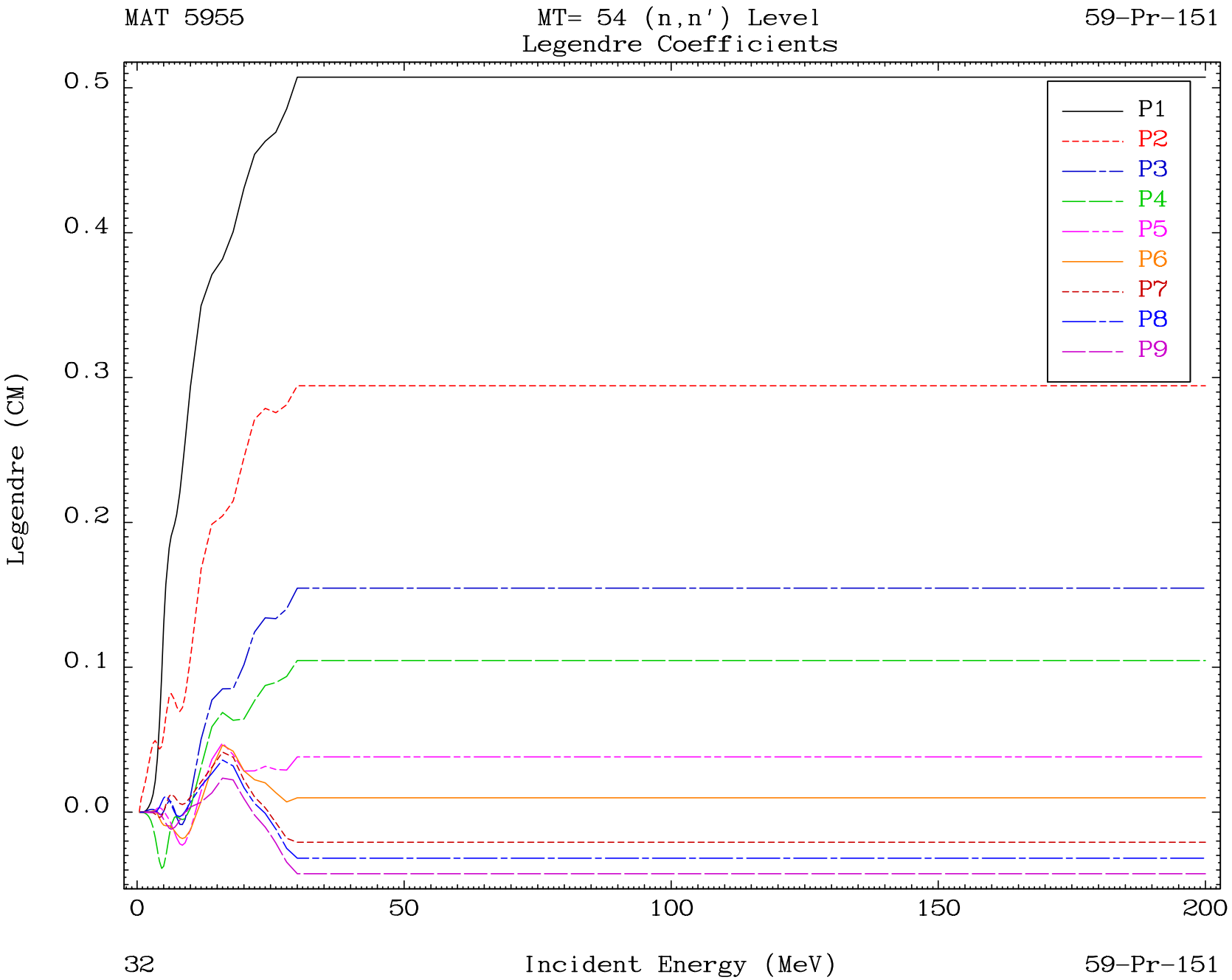

MAT 5955
MT= 52 (n,n') Level
Legendre Coefficients
59-Pr-151
X10-5
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
27
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

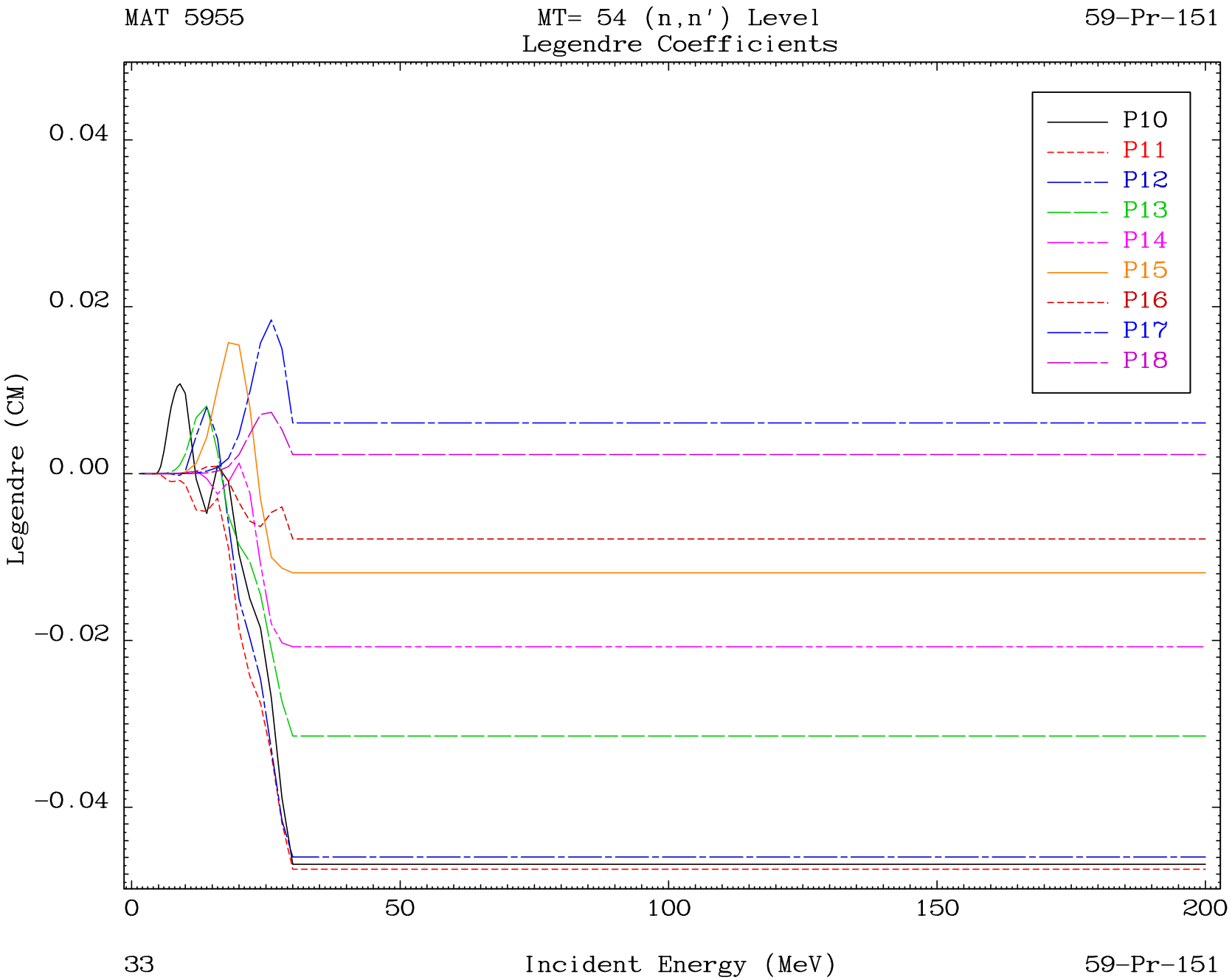

MAT 5955
MT= 53 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
Incident Energy (MeV)
28
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

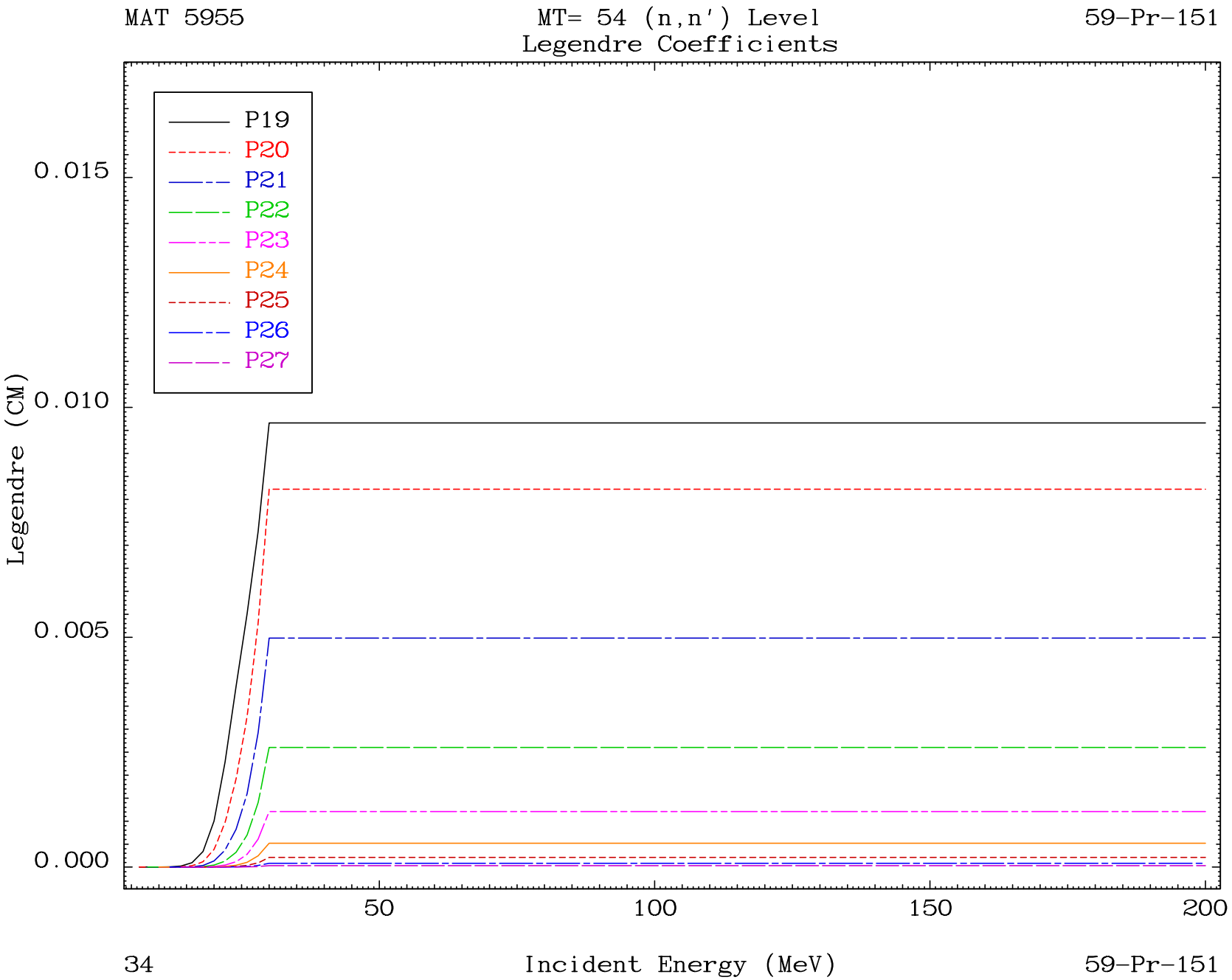

MAT 5955
MT= 53 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.03
0.02
0.01
0.00
Legendre (CM)
0
50
100
150
200
29
Incident Energy (MeV)
59-Pr-151

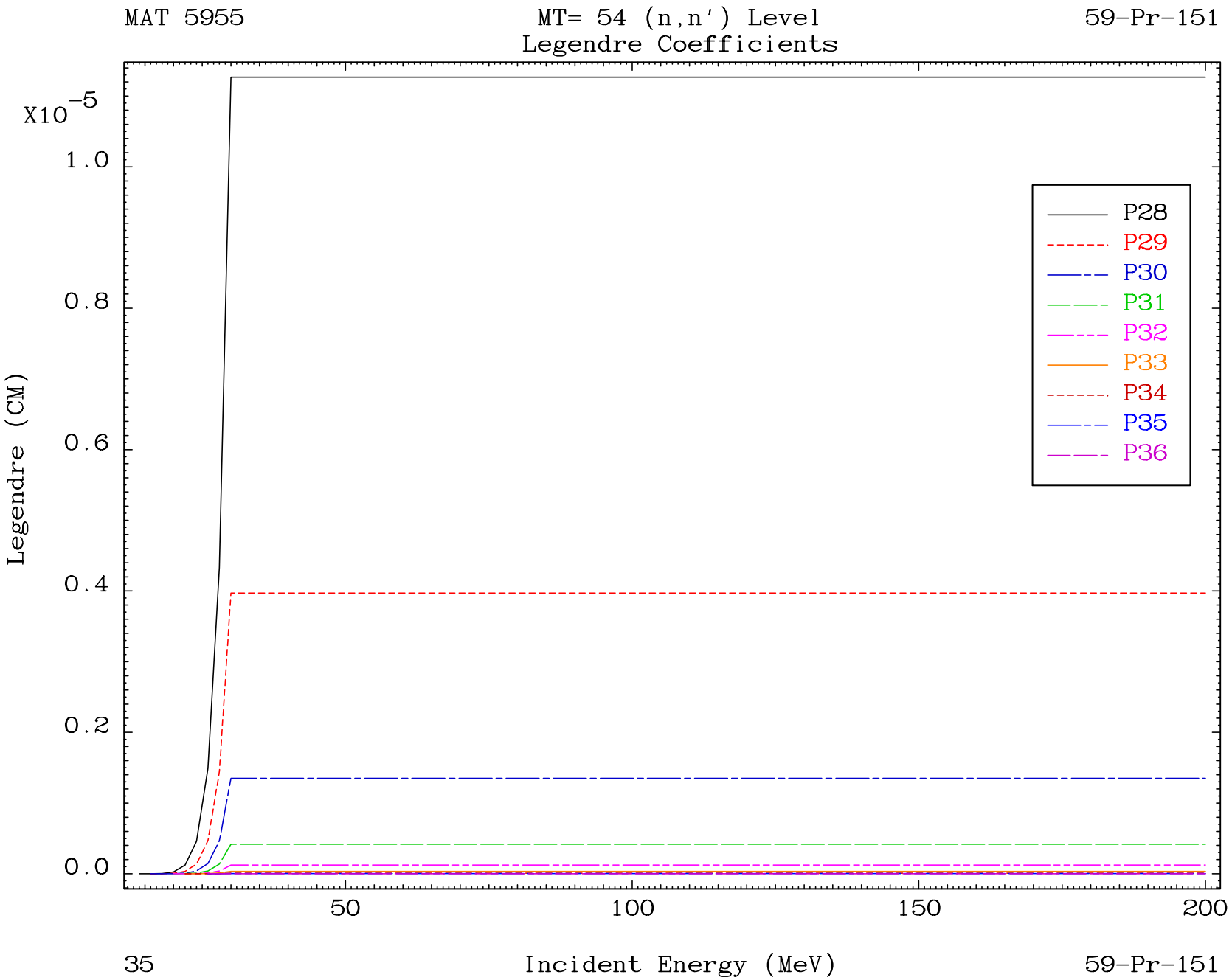

MAT 5955
MT= 53 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-3
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
30
Incident Energy (MeV)
59-Pr-151

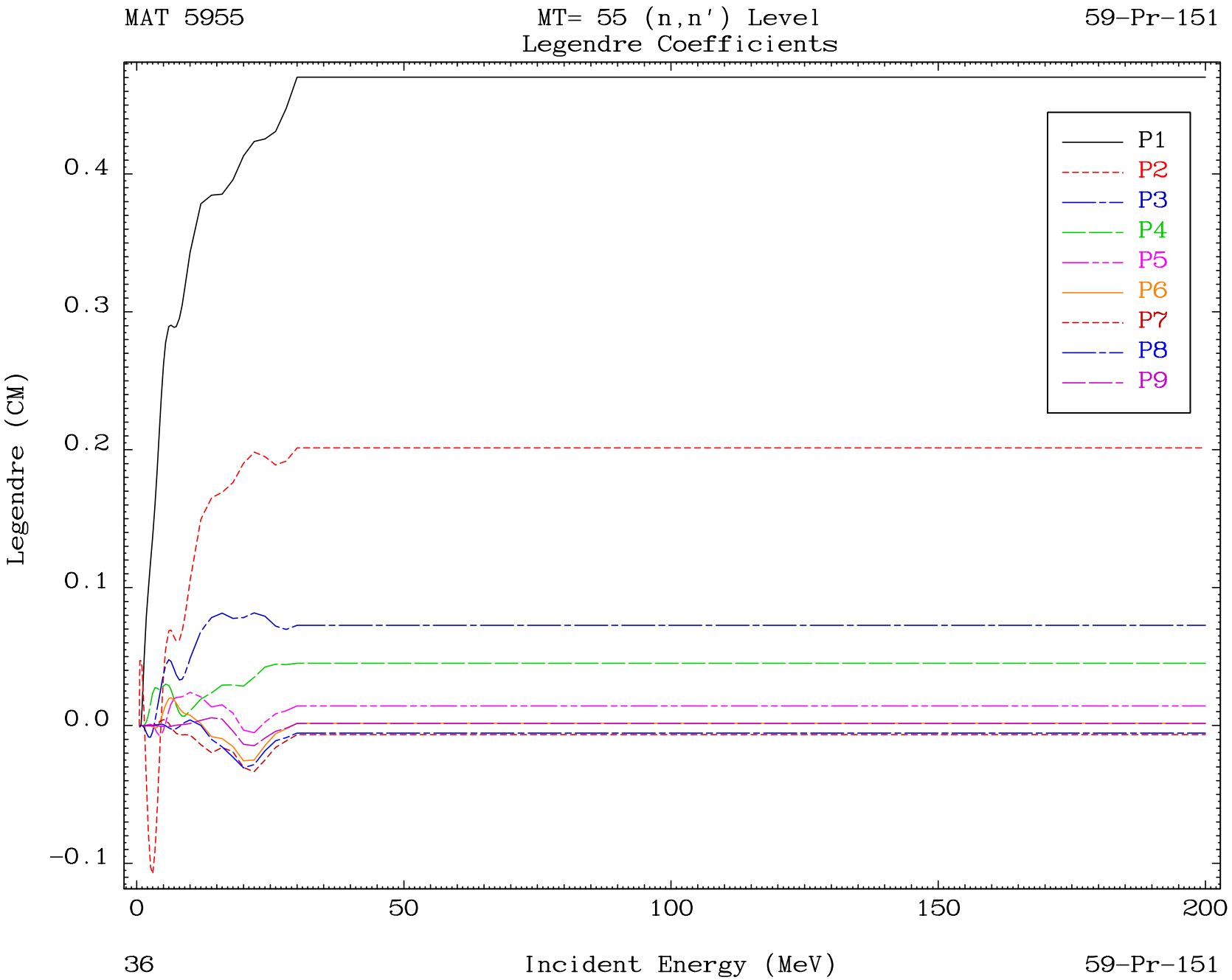

MAT 5955
MT= 53 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 −6
5
4
3
2
1
0
Legendre (CM)
50
100
150
200
P28
P29
P30
P31
P32
P33
P34
P35
P36
31
Incident Energy (MeV)
59-Pr-151

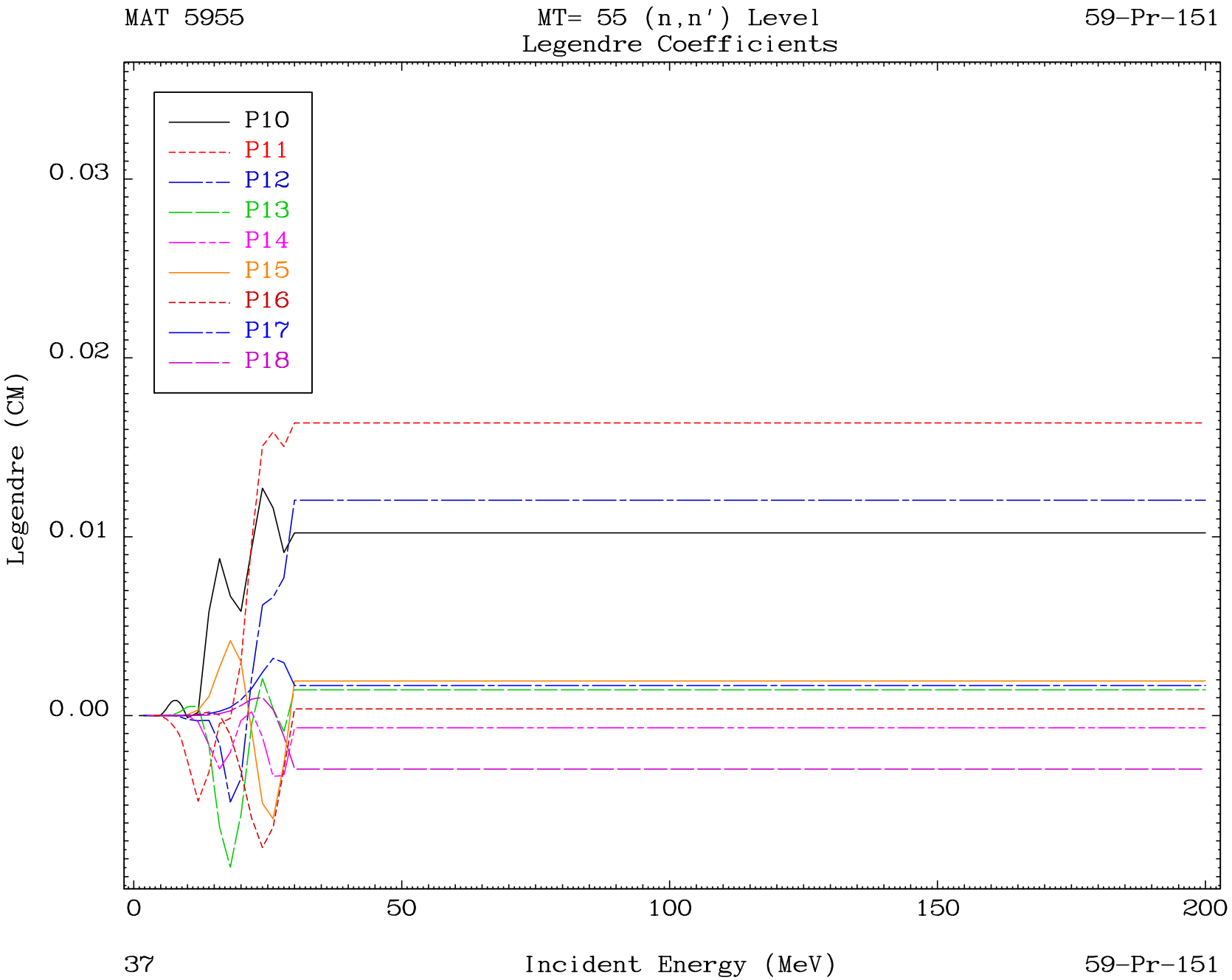

MAT 5955
MT= 54 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
32
Incident Energy (MeV)
59-Pr-151

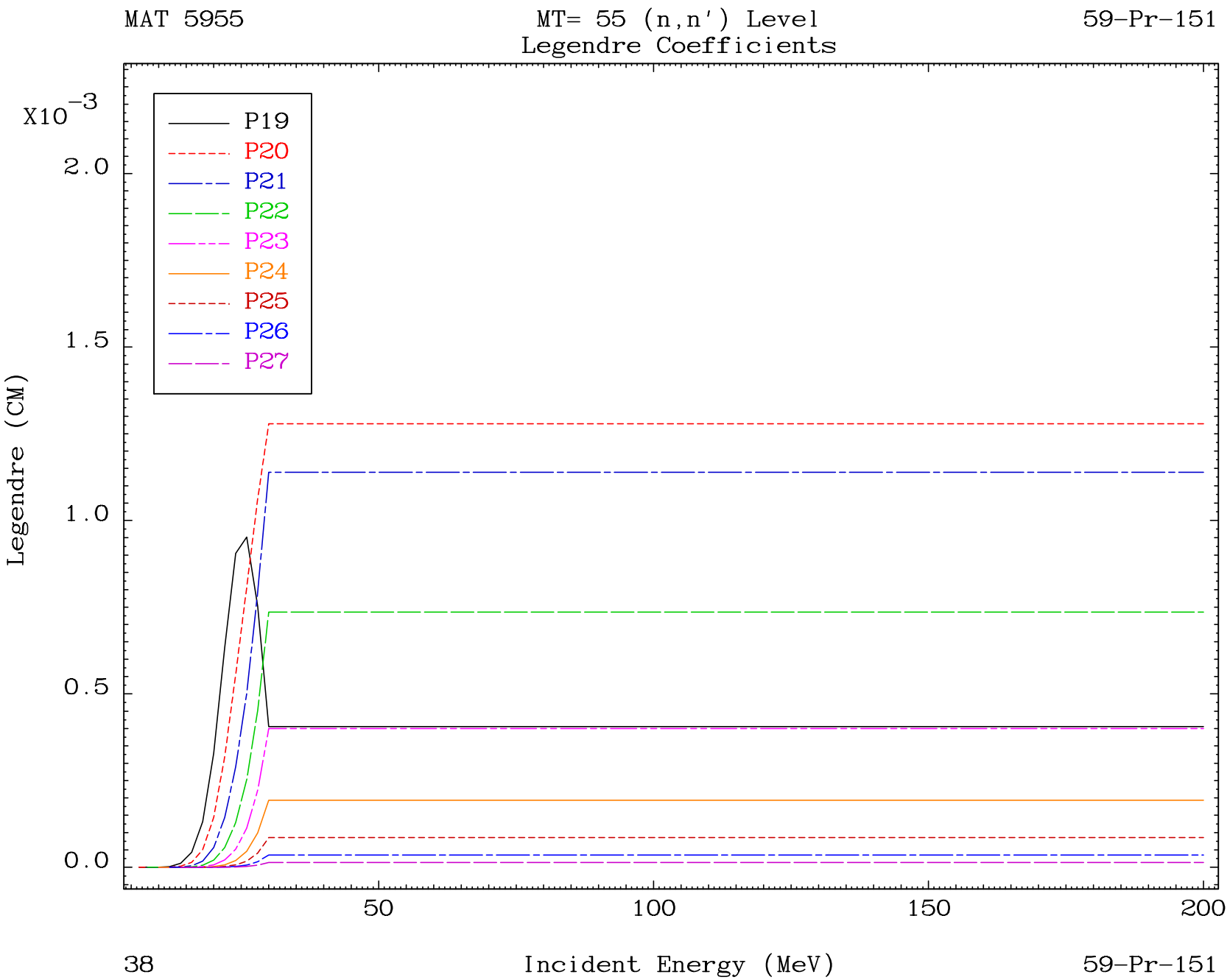

MAT 5955
MT= 54 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
33
Incident Energy (MeV)
59-Pr-151

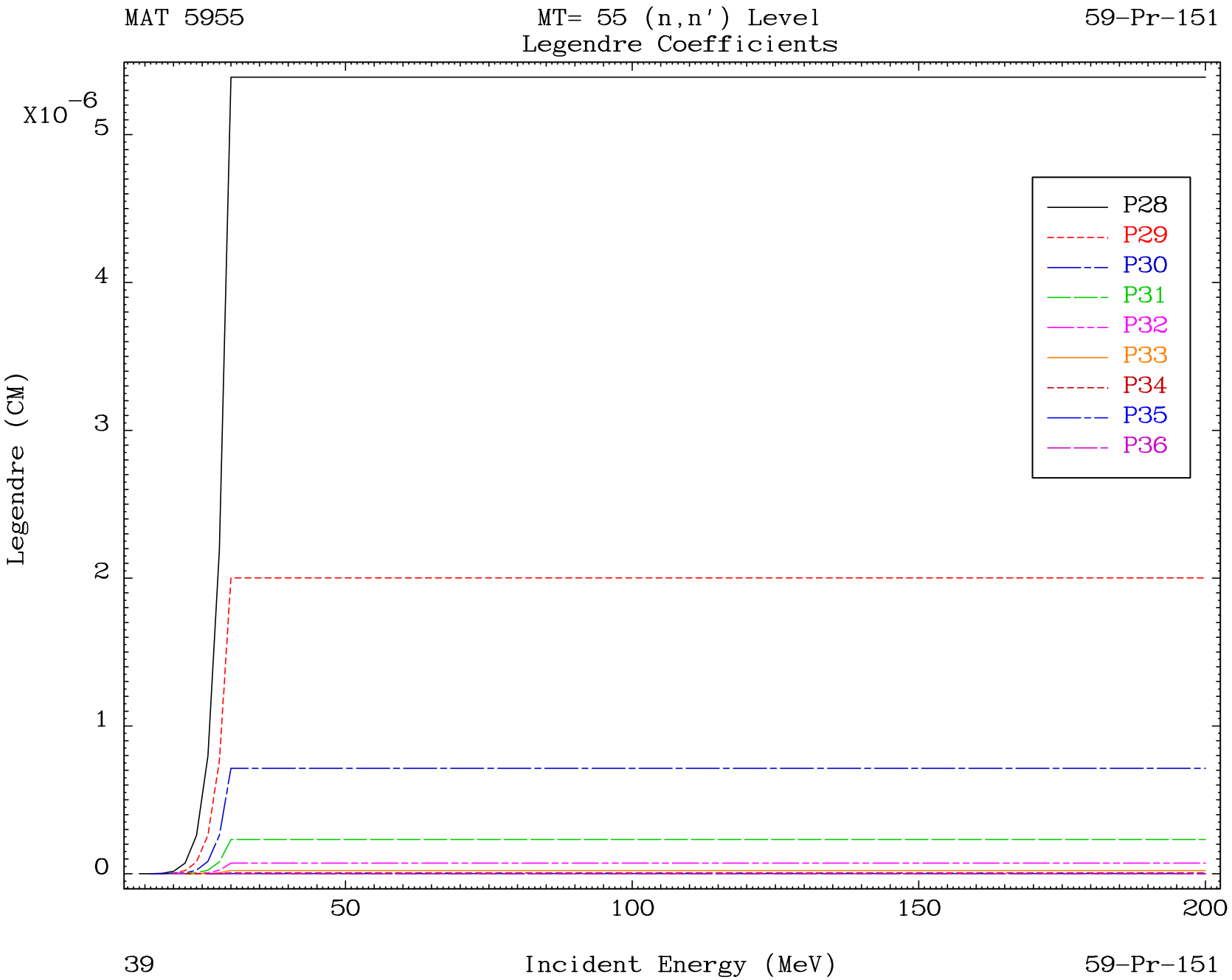

MAT 5955
MT= 54 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
34
Incident Energy (MeV)
59-Pr-151

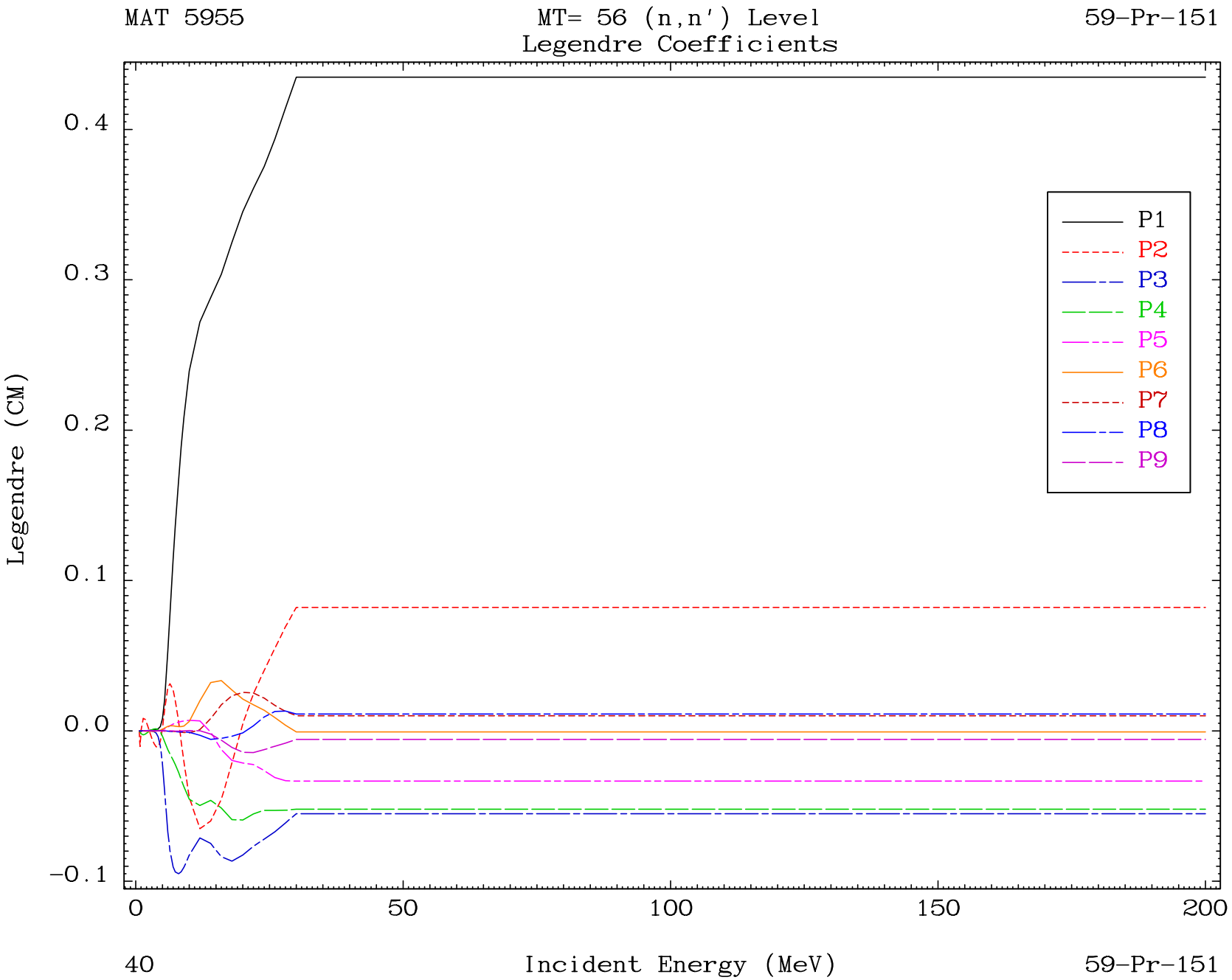

MAT 5955
MT= 54 (n,n') Level
Legendre Coefficients
59-Pr-151
X10-5
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
35
Incident Energy (MeV)
59-Pr-151

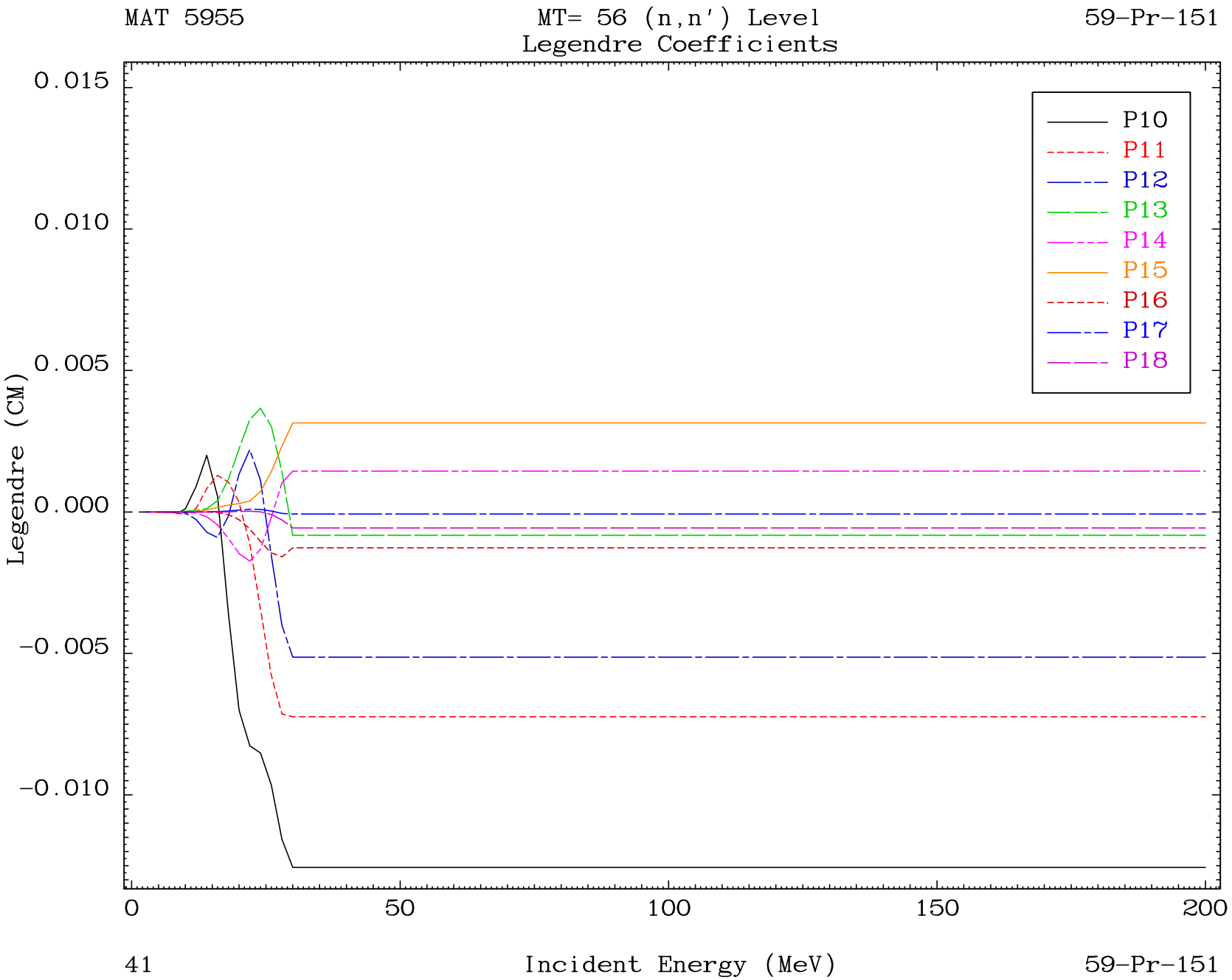

MAT 5955
MT= 55 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
36
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

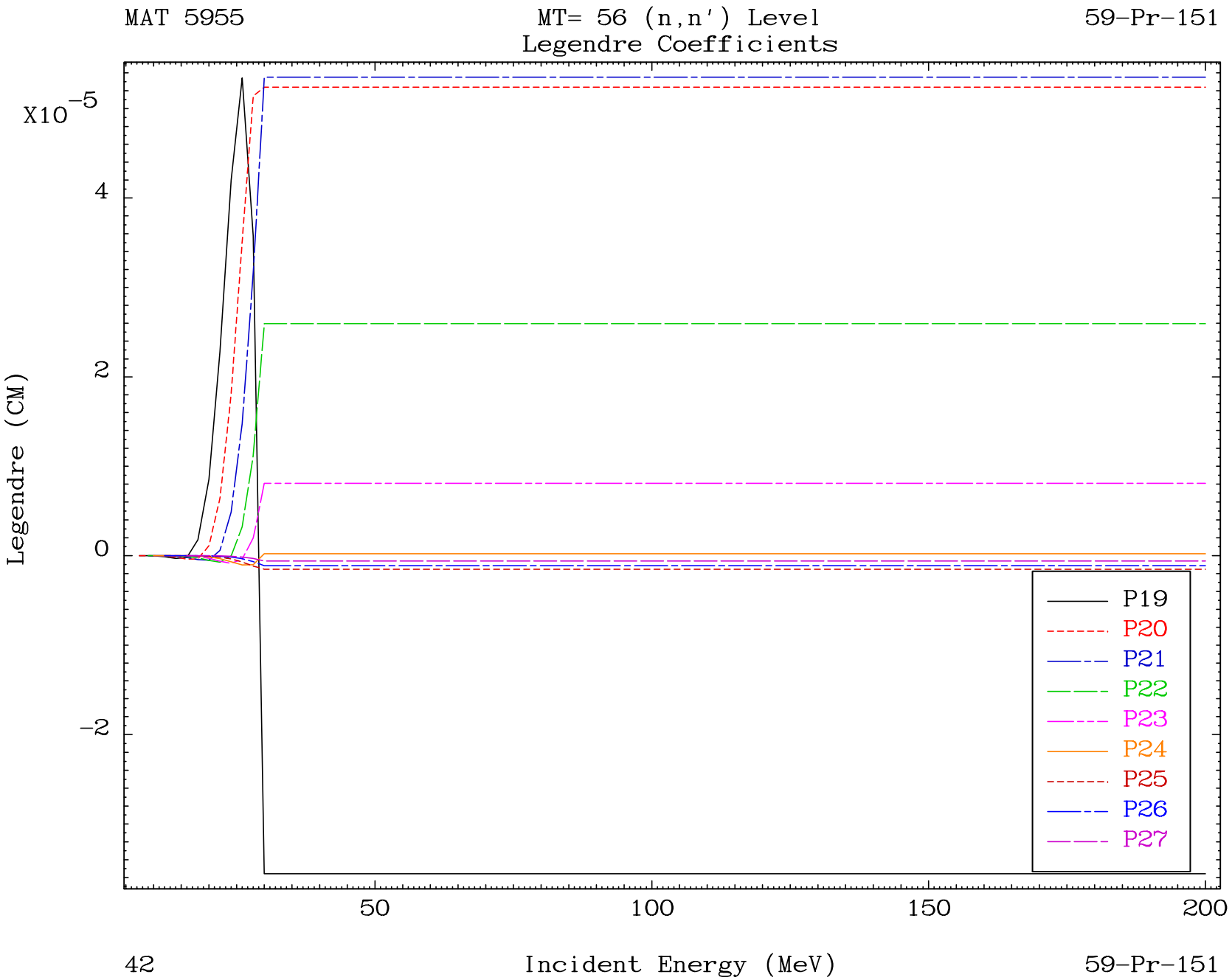

MAT 5955
MT= 55 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.03
0.02
0.01
0.00
Legendre (CM)
0
50
100
150
200
37
Incident Energy (MeV)
59-Pr-151

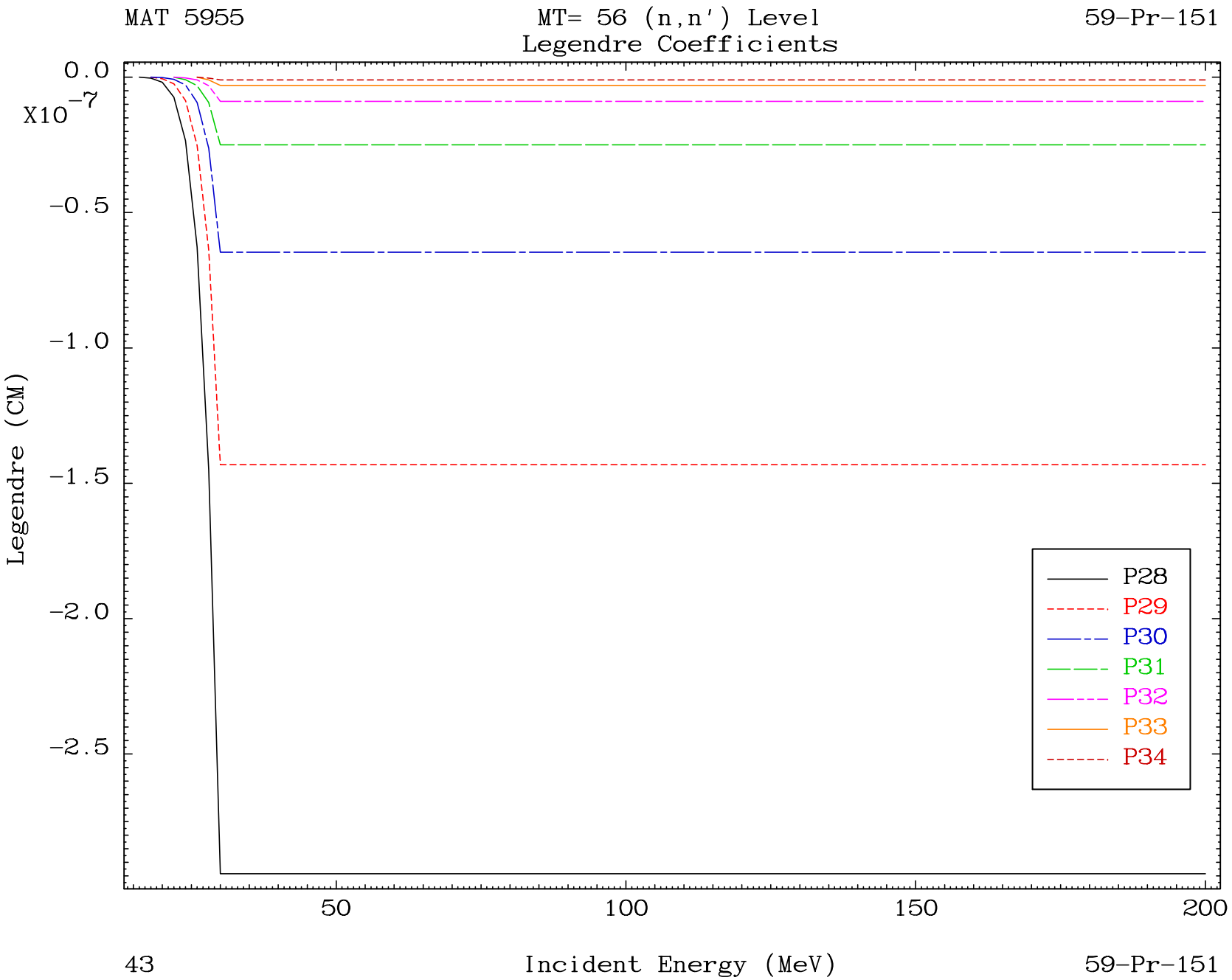

MAT 5955
MT= 55 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-3
2.0
1.5
1.0
0.5
0.0
P19
P20
P21
P22
P23
P24
P25
P26
P27
Legendre (CM)
50
100
150
200
38
Incident Energy (MeV)
59-Pr-151

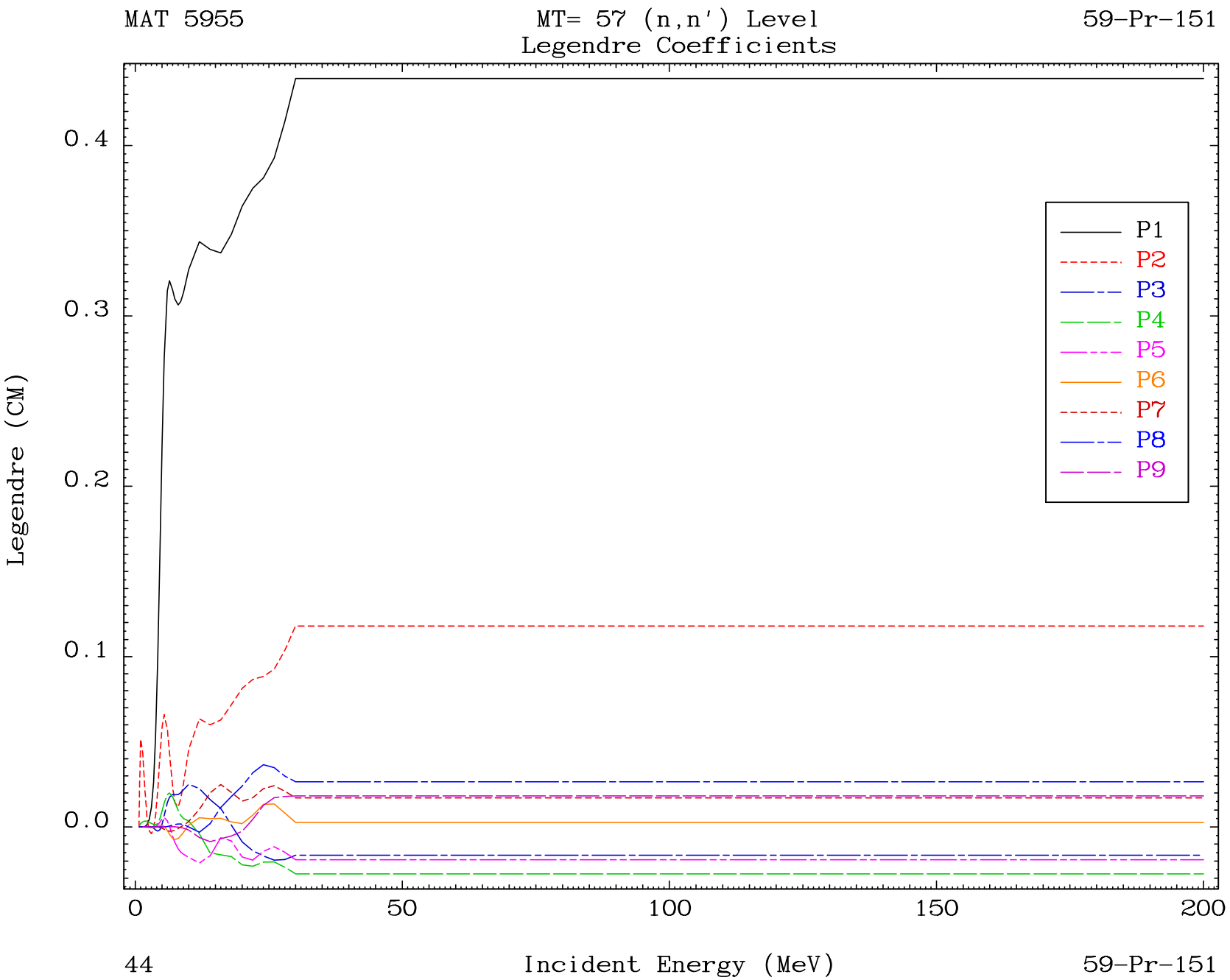

MAT 5955
MT= 55 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 −6
5
4
3
2
1
0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
39
Incident Energy (MeV)
59-Pr-151

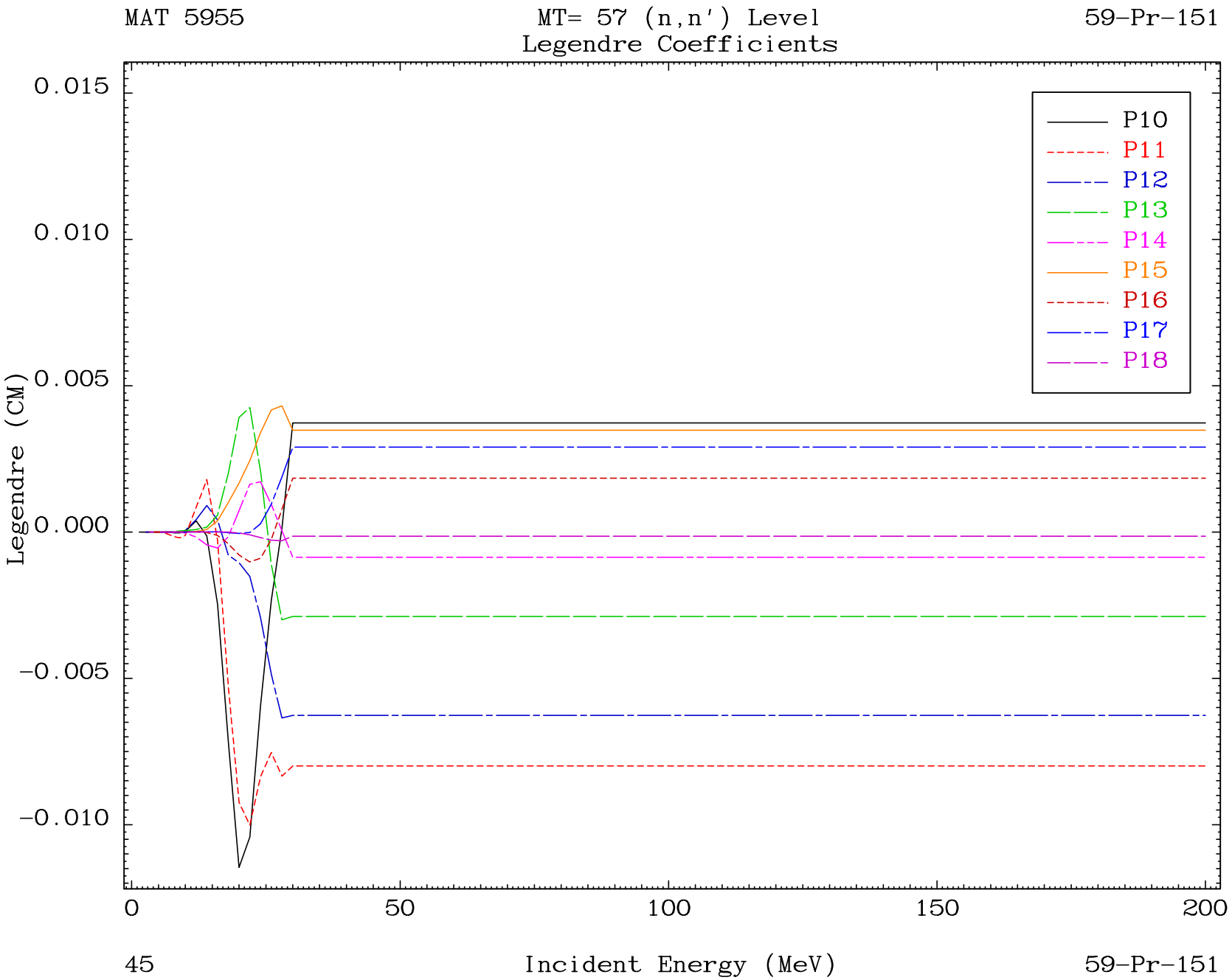

MAT 5955
MT= 56 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
40
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

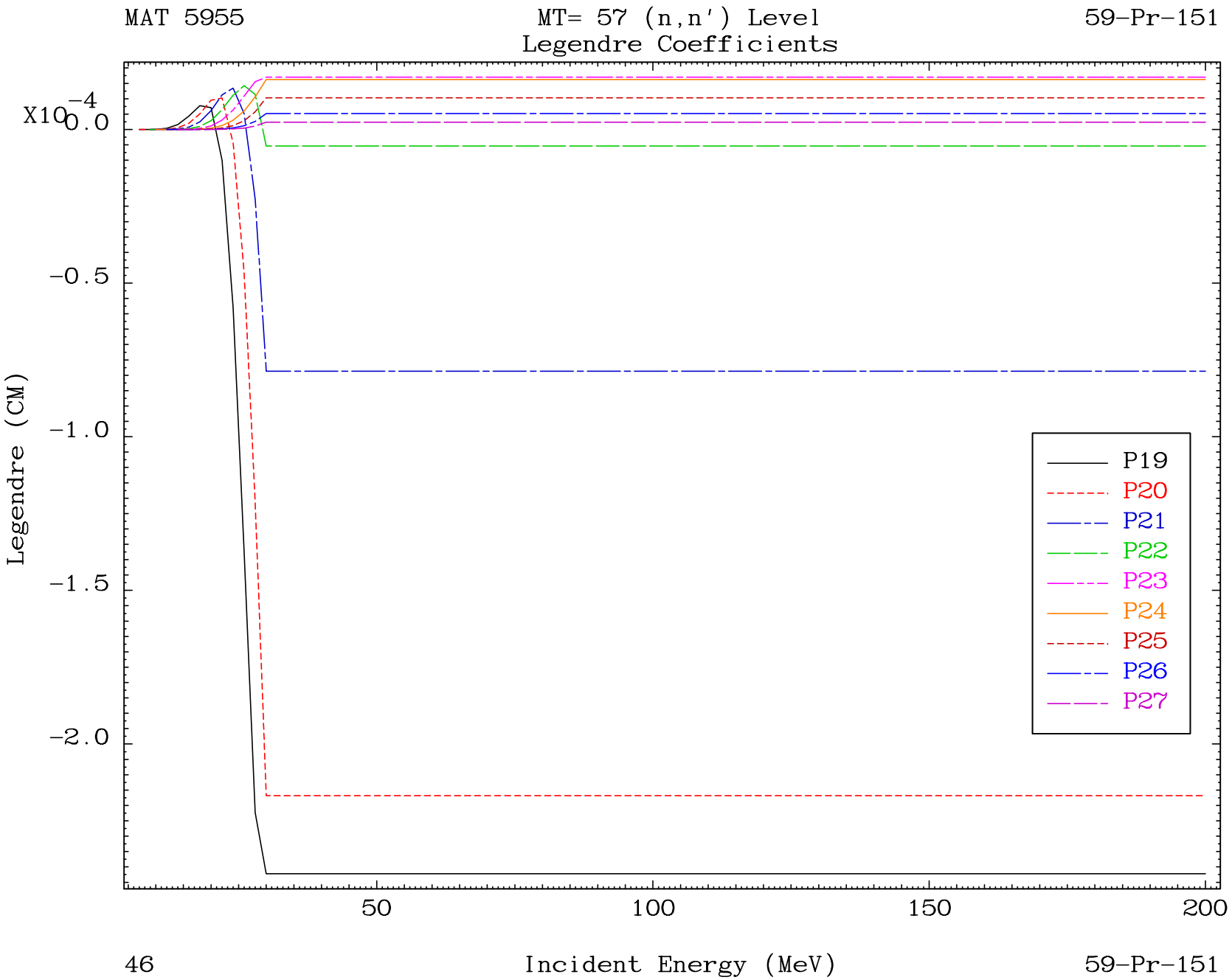

MAT 5955
MT= 56 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
41
Incident Energy (MeV)
59-Pr-151

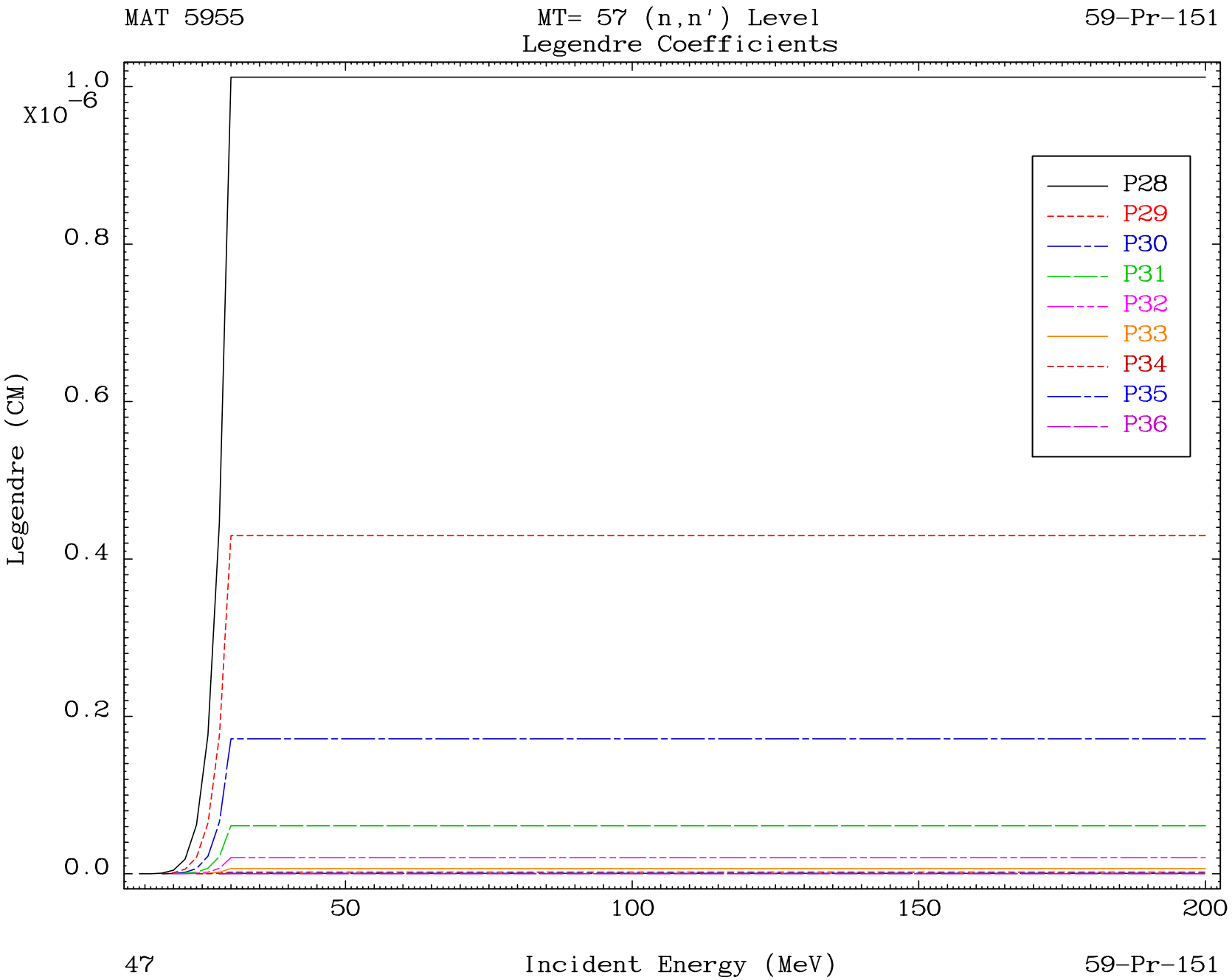

MAT 5955
MT= 56 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 −5
4
2
0
−2
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
P19
P20
P21
P22
P23
P24
P25
P26
P27

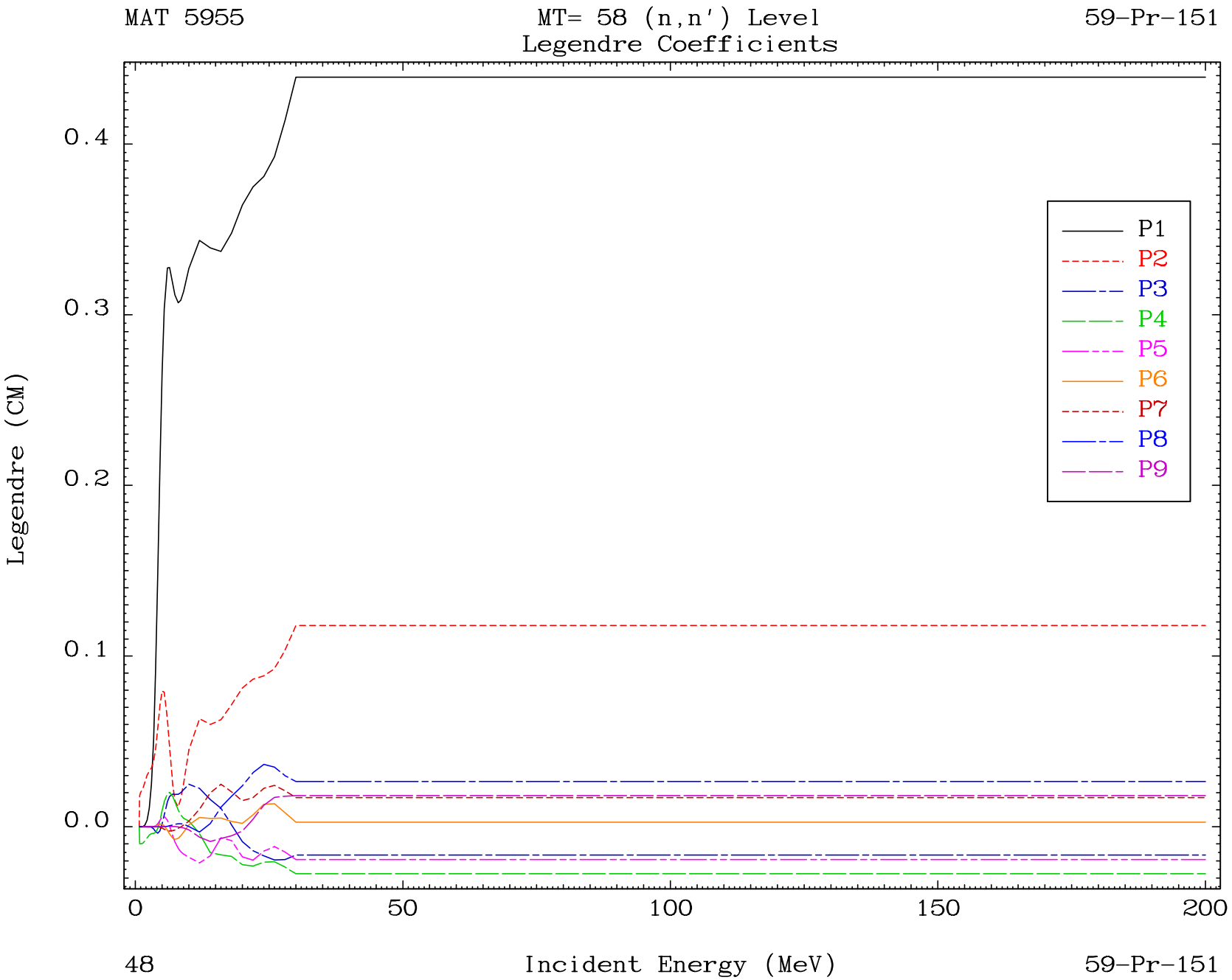

MAT 5955
MT= 56 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10^-7
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
P28
P29
P30
P31
P32
P33
P34
43
Incident Energy (MeV)
59-Pr-151

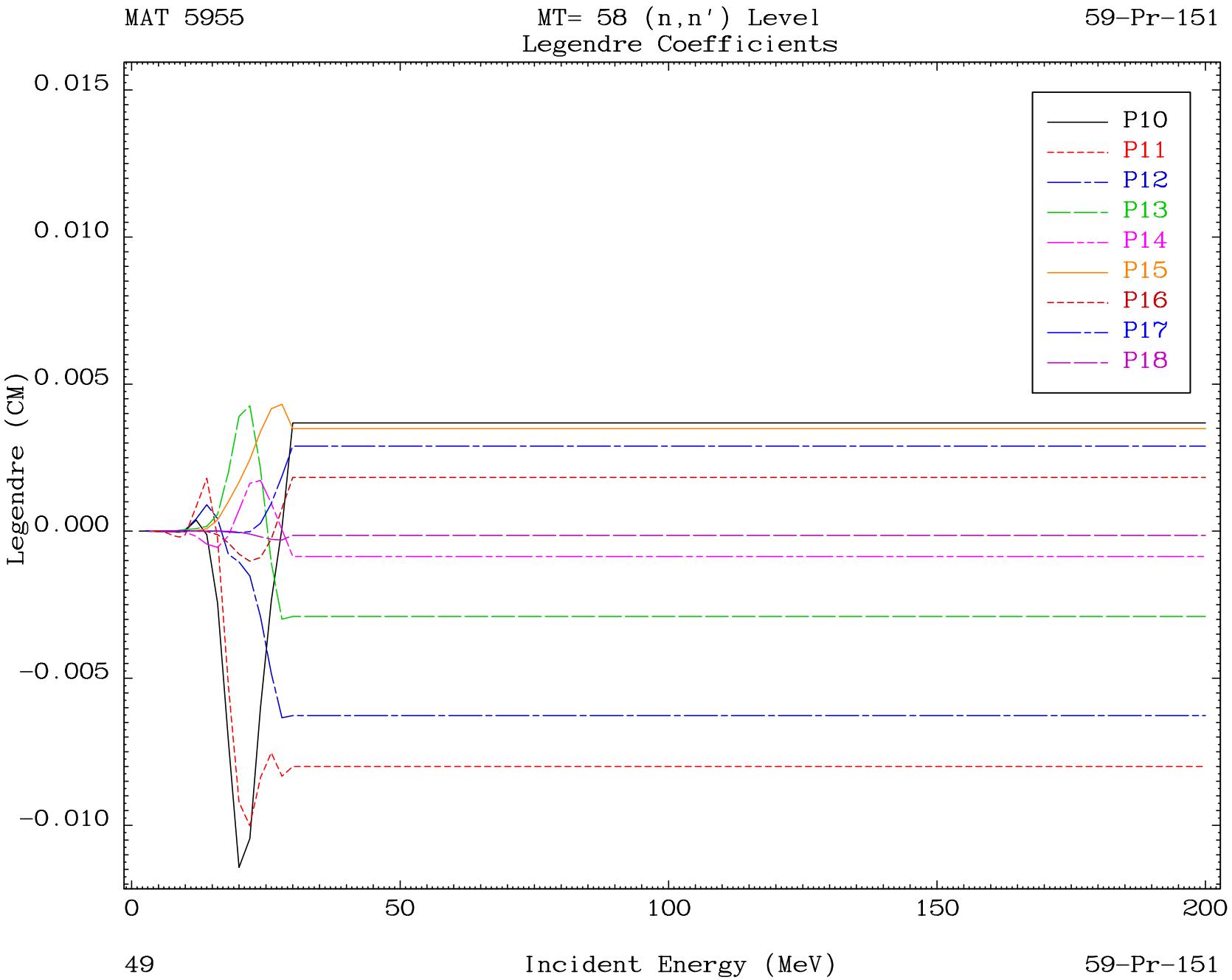

MAT 5955
MT= 57 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
44
Incident Energy (MeV)
59-Pr-151

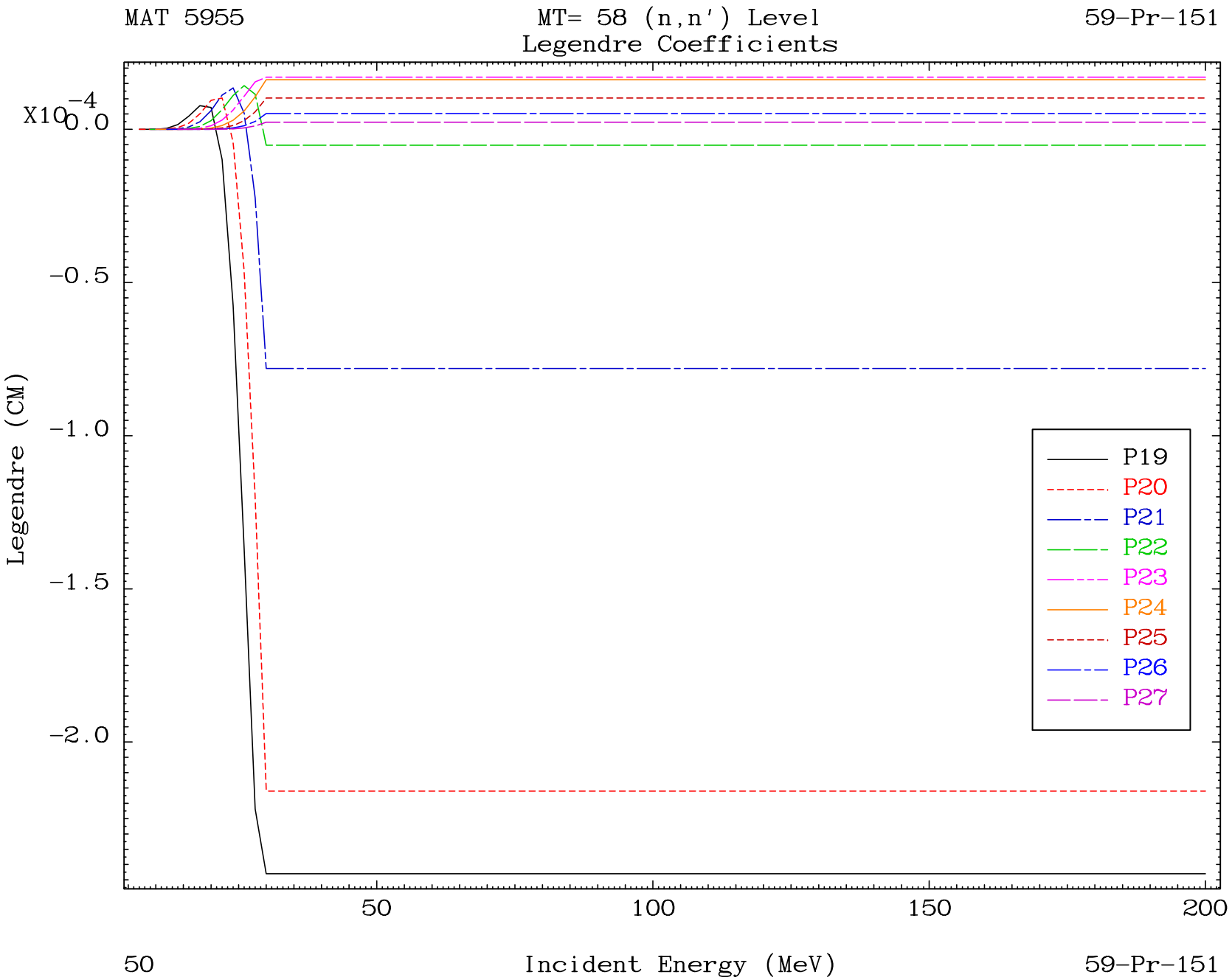

MAT 5955
MT= 57 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
45
Incident Energy (MeV)
59-Pr-151

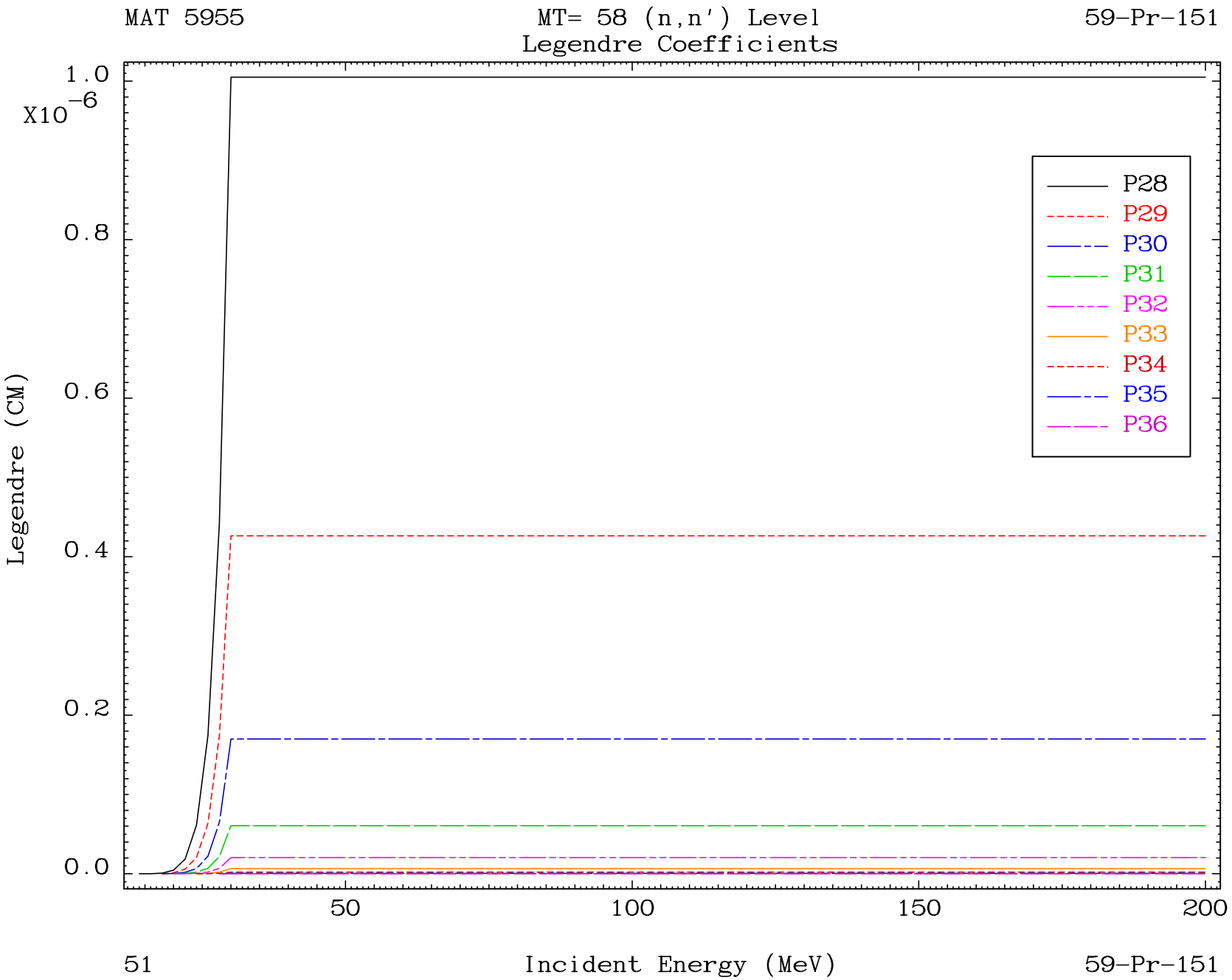

MAT 5955
MT= 57 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
46
Incident Energy (MeV)
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27

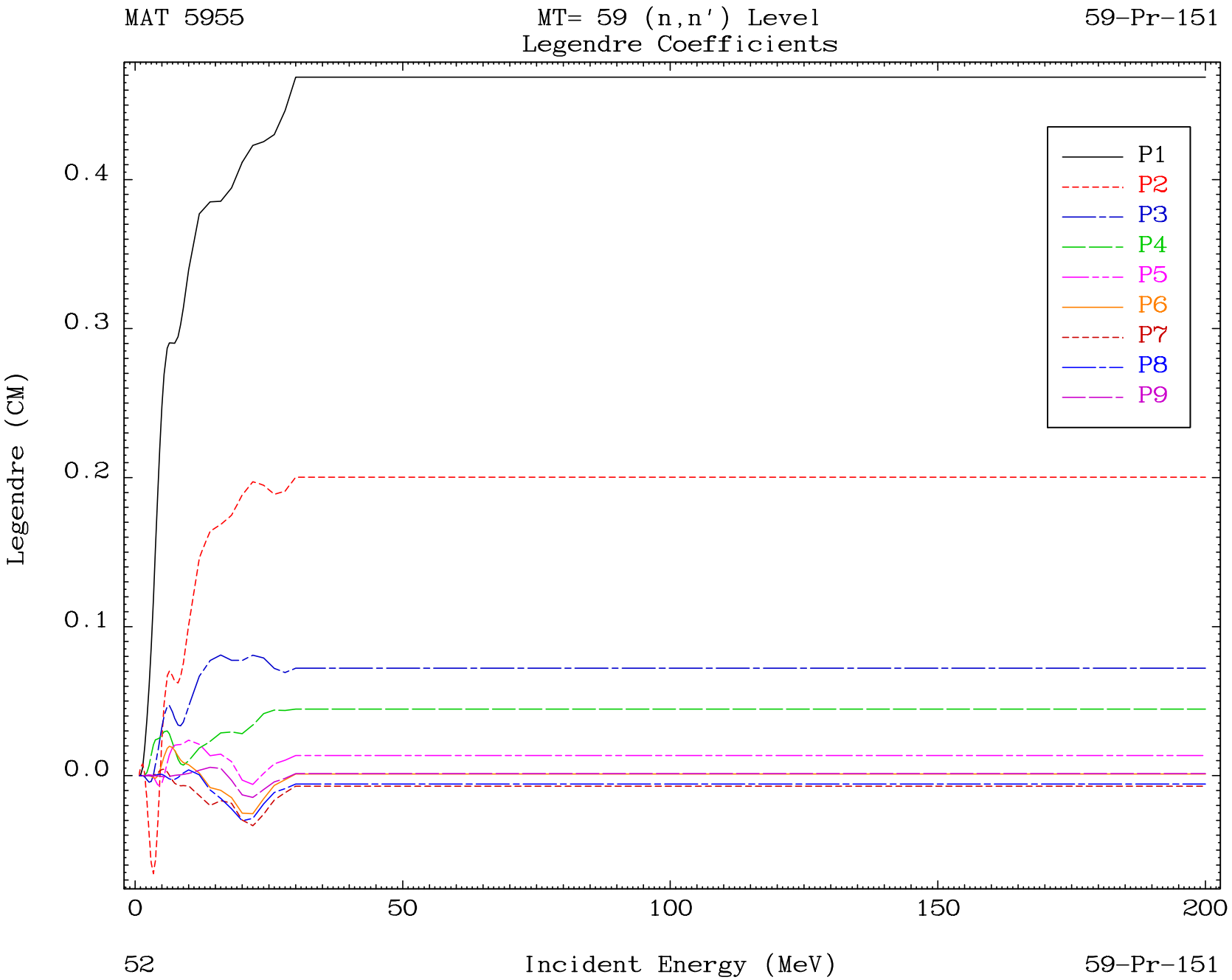

MAT 5955
MT= 57 (n,n') Level
Legendre Coefficients
59-Pr-151
1.0
X10 -6
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
47
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

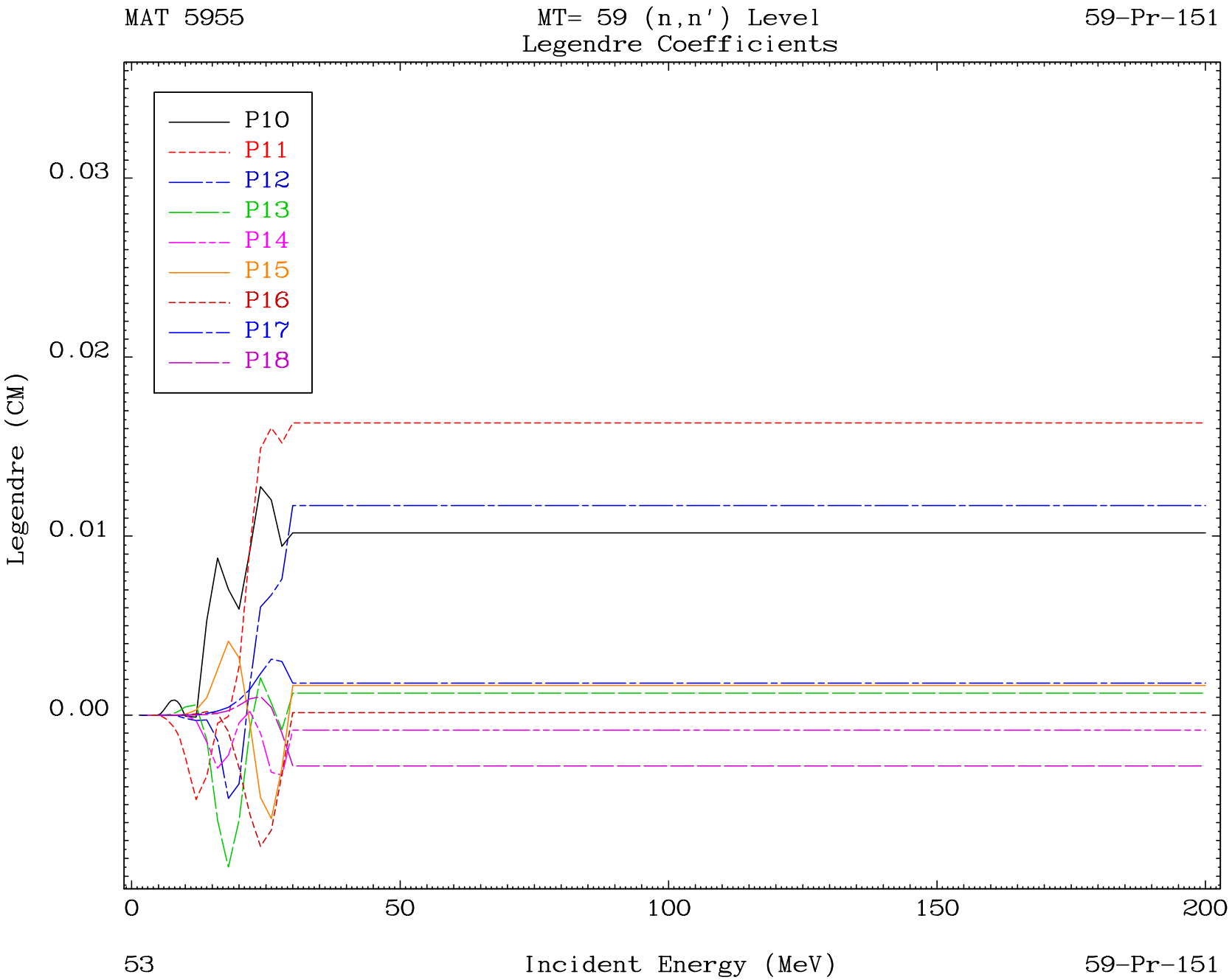

MAT 5955
MT= 58 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
48
Incident Energy (MeV)
59-Pr-151

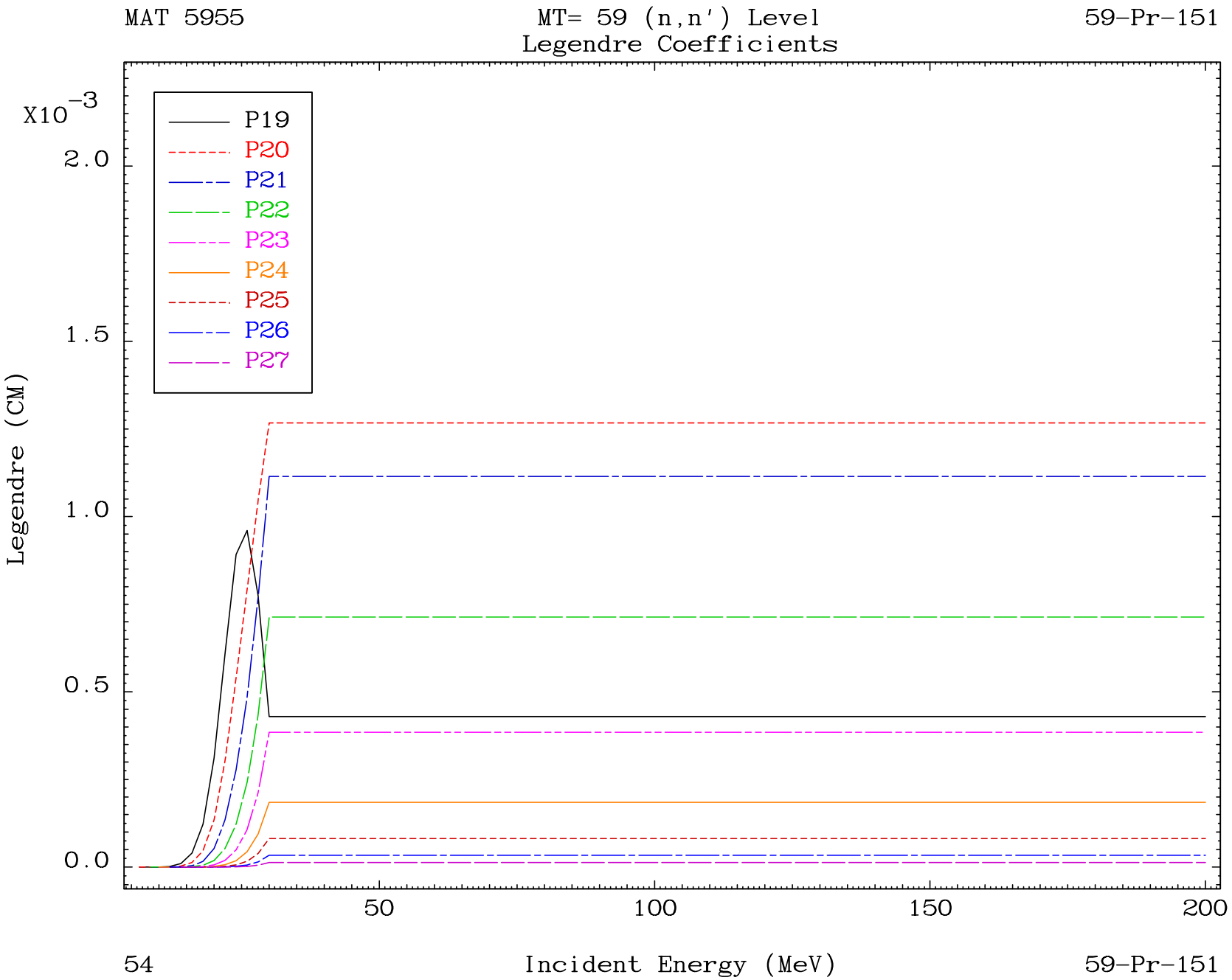

MAT 5955
MT= 58 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
49
Incident Energy (MeV)
59-Pr-151

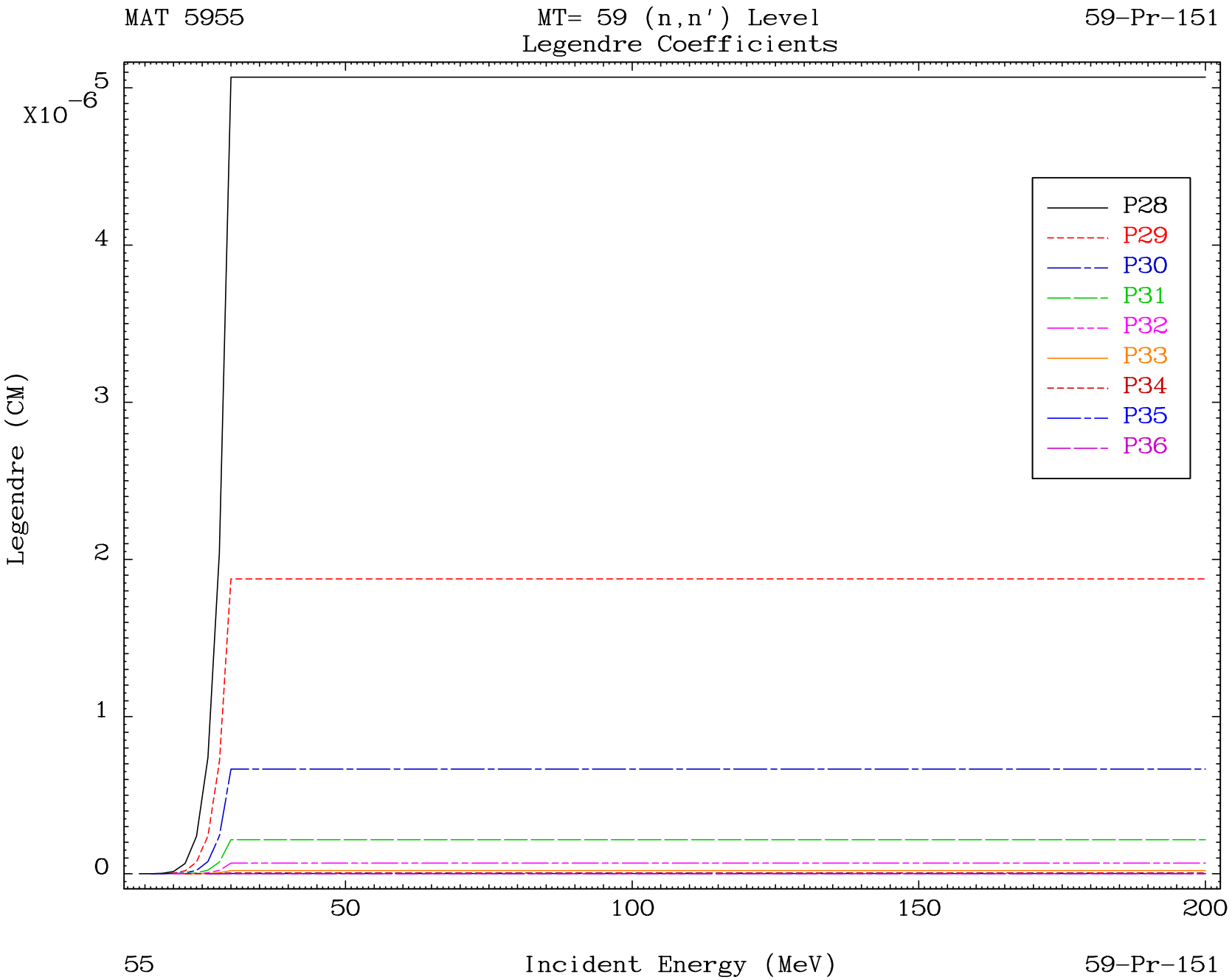

MAT 5955
MT= 58 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
50
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27

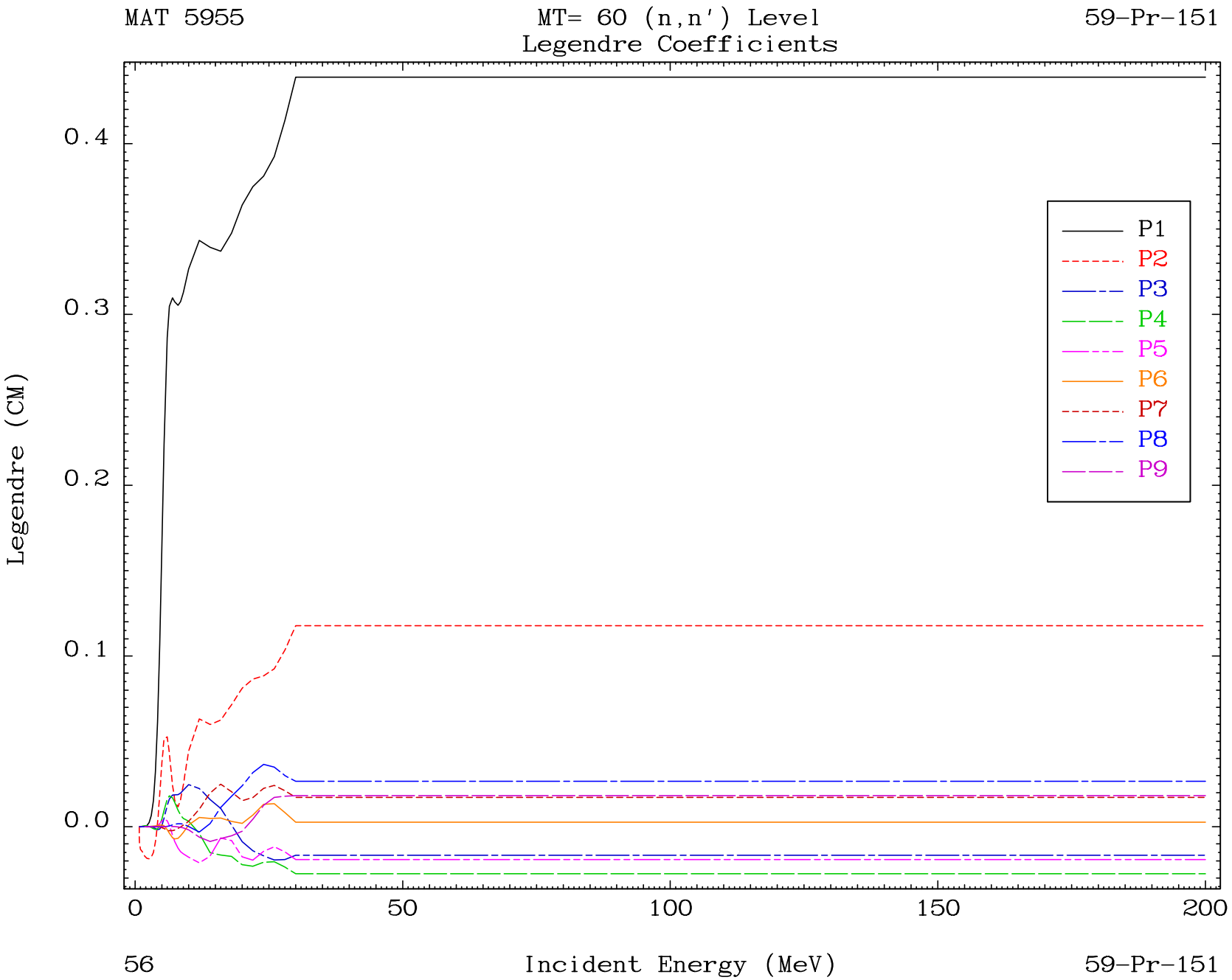

MAT 5955
MT= 58 (n,n') Level
Legendre Coefficients
59-Pr-151
1.0
X10 -6
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
51
Incident Energy (MeV)
59-Pr-151

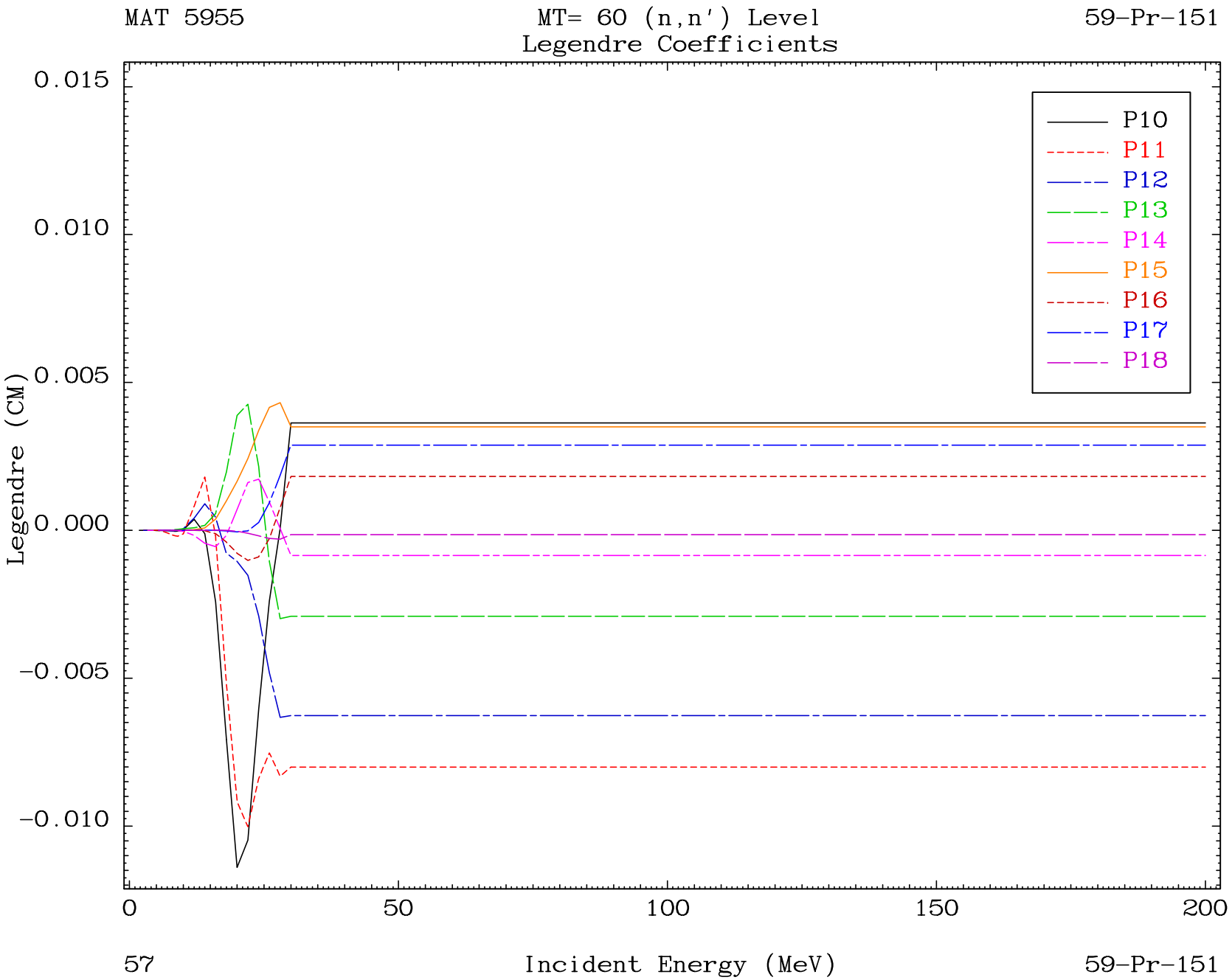

MAT 5955
MT= 59 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
52
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

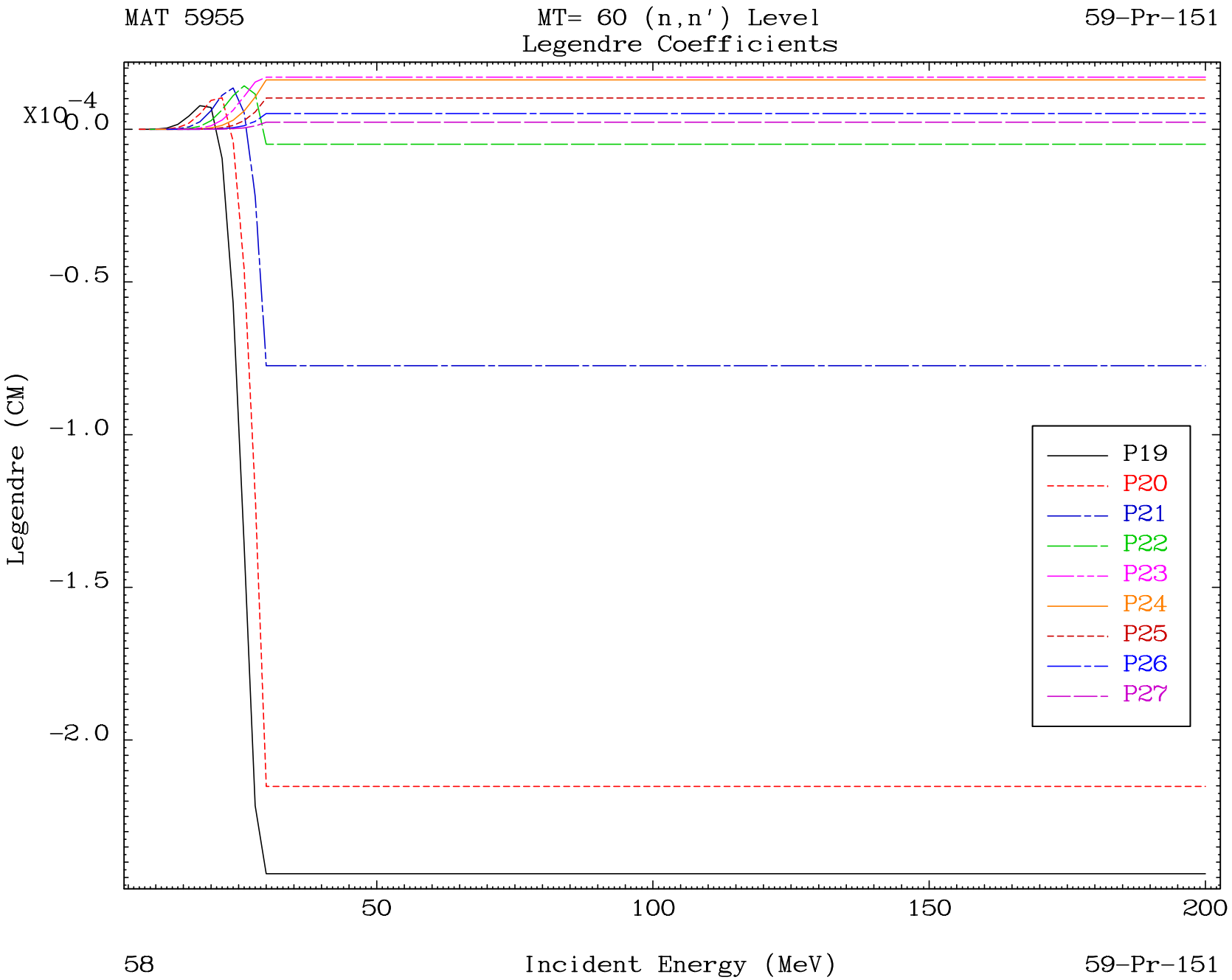

MAT 5955
MT= 59 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.03
0.02
0.01
0.00
Legendre (CM)
0
50
100
150
200
53
Incident Energy (MeV)
59-Pr-151

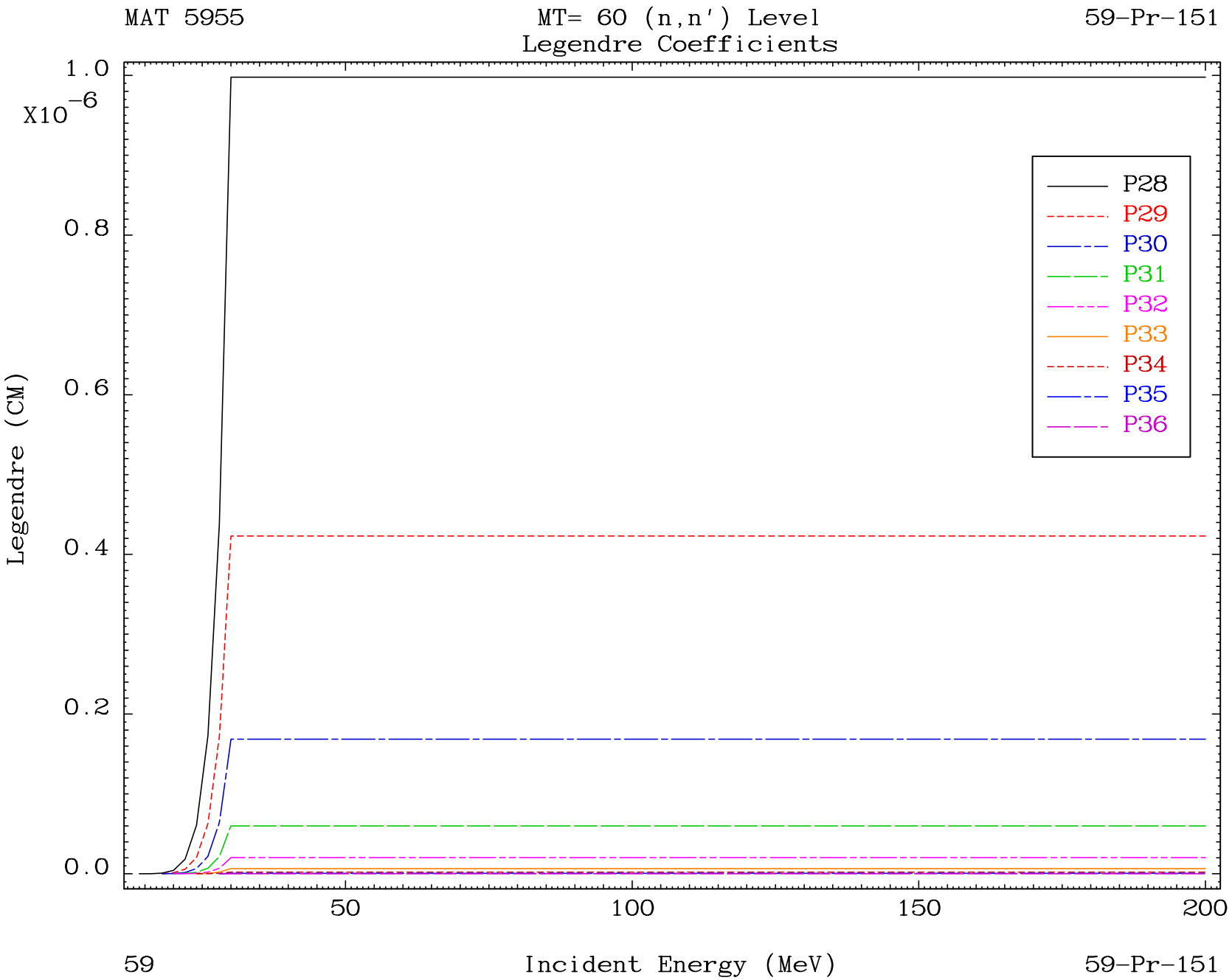

MAT 5955
MT= 59 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-3
2.0
1.5
1.0
0.5
0.0
P19
P20
P21
P22
P23
P24
P25
P26
P27
Legendre (CM)
50
100
150
200
54
Incident Energy (MeV)
59-Pr-151

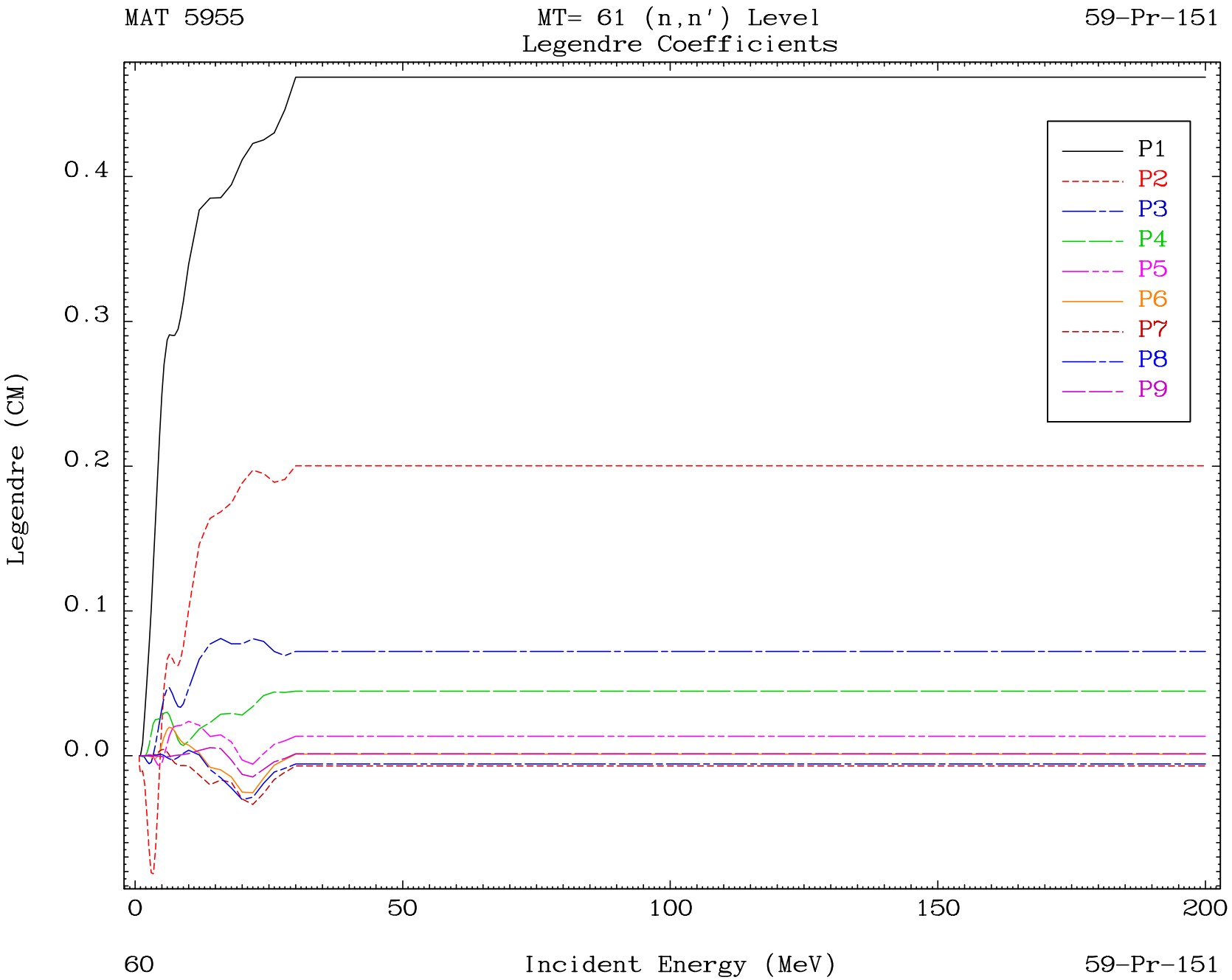

MAT 5955
MT= 59 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 -6
5
4
3
2
1
0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
55
Incident Energy (MeV)
59-Pr-151

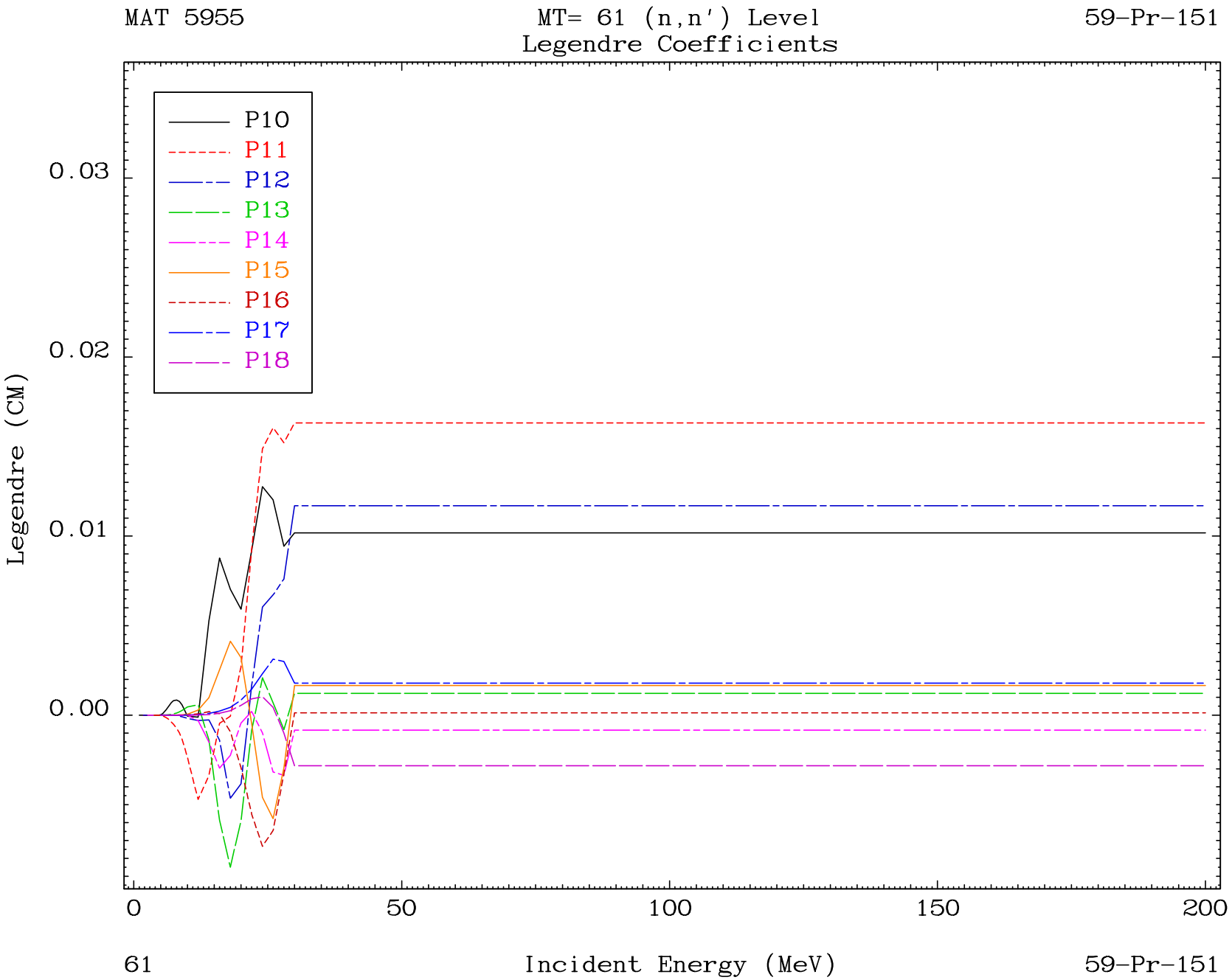

MAT 5955
MT= 60 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
Incident Energy (MeV)
56
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

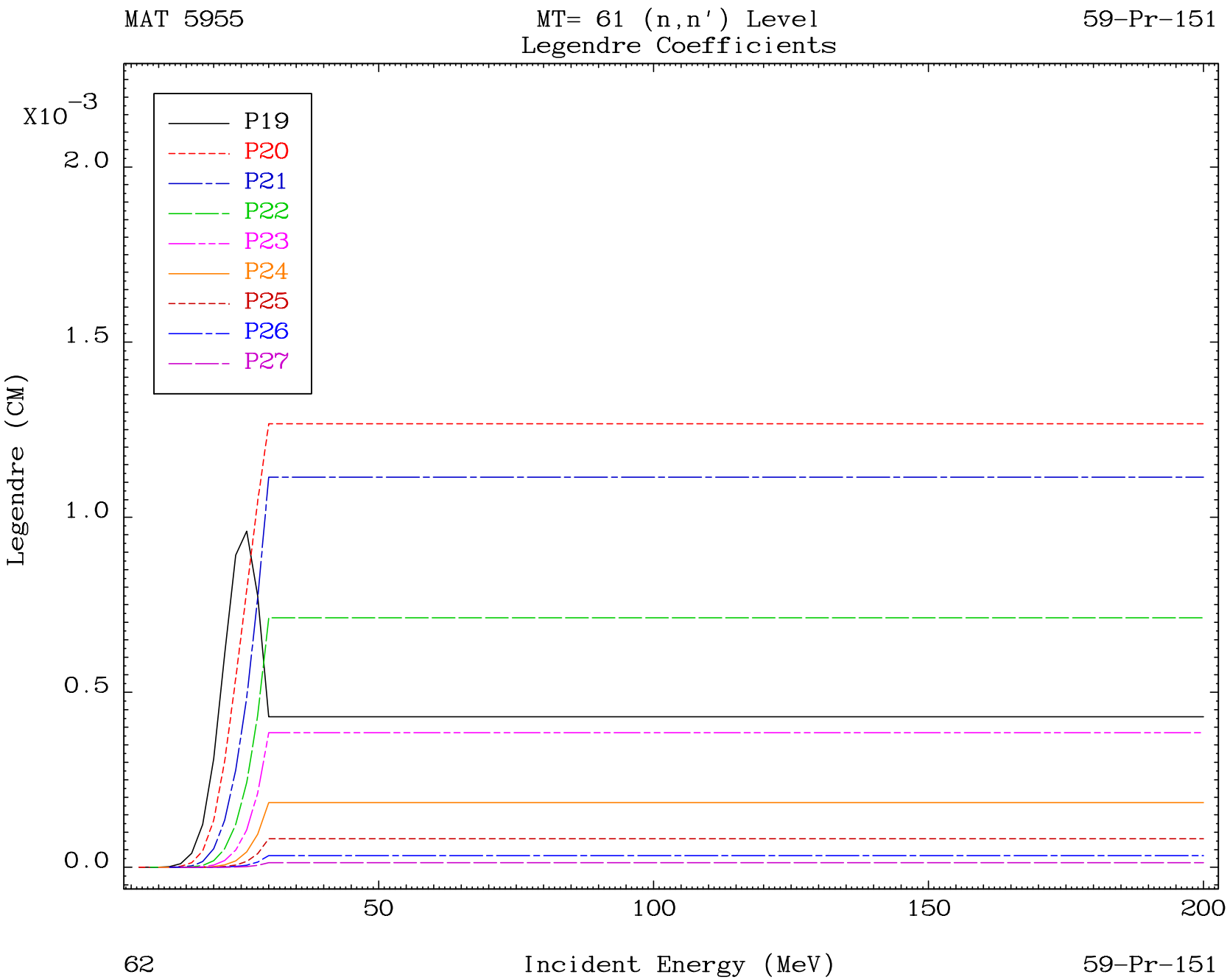

MAT 5955
MT= 60 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
57
Incident Energy (MeV)
59-Pr-151

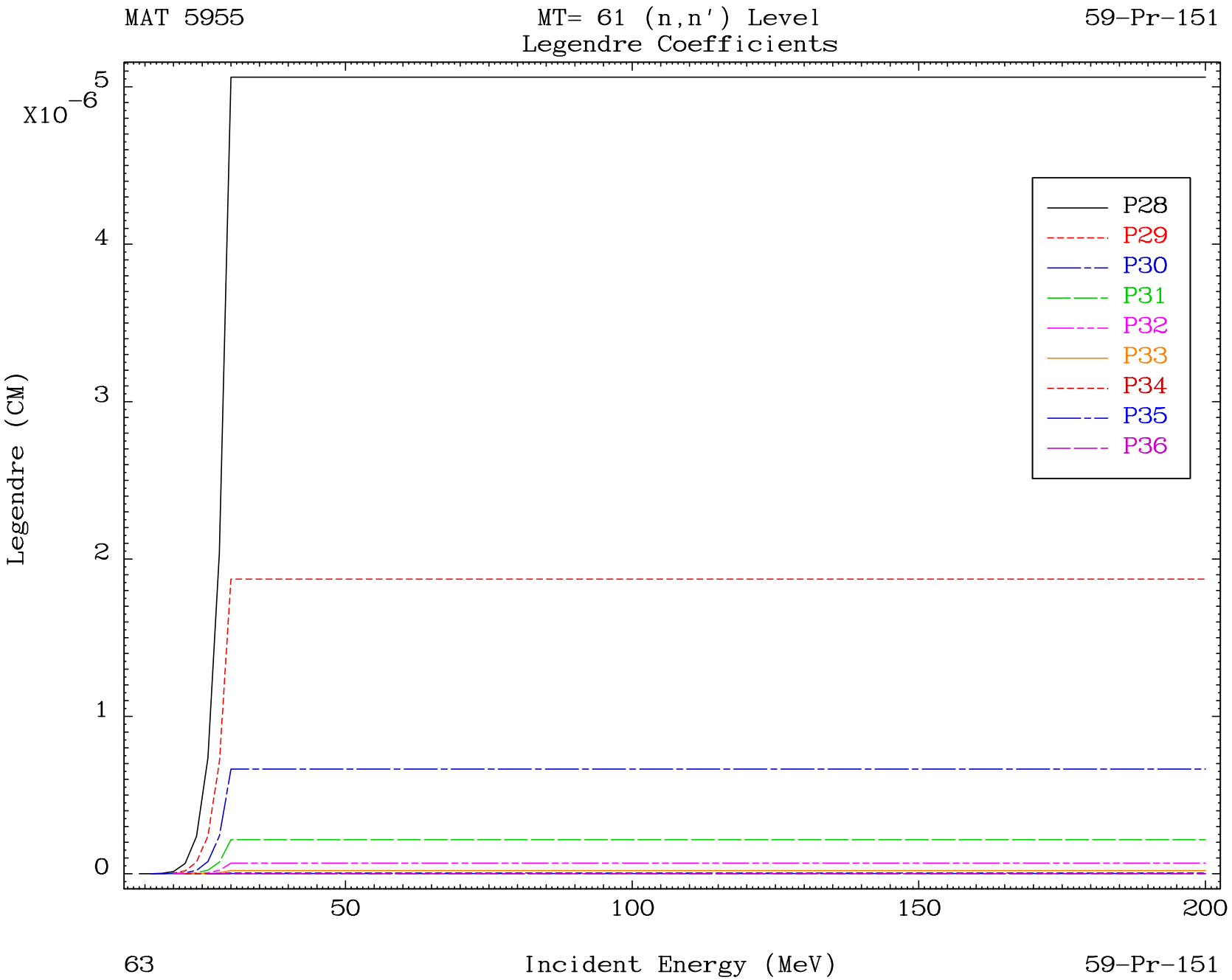

MAT 5955
MT= 60 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
58
Incident Energy (MeV)
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27

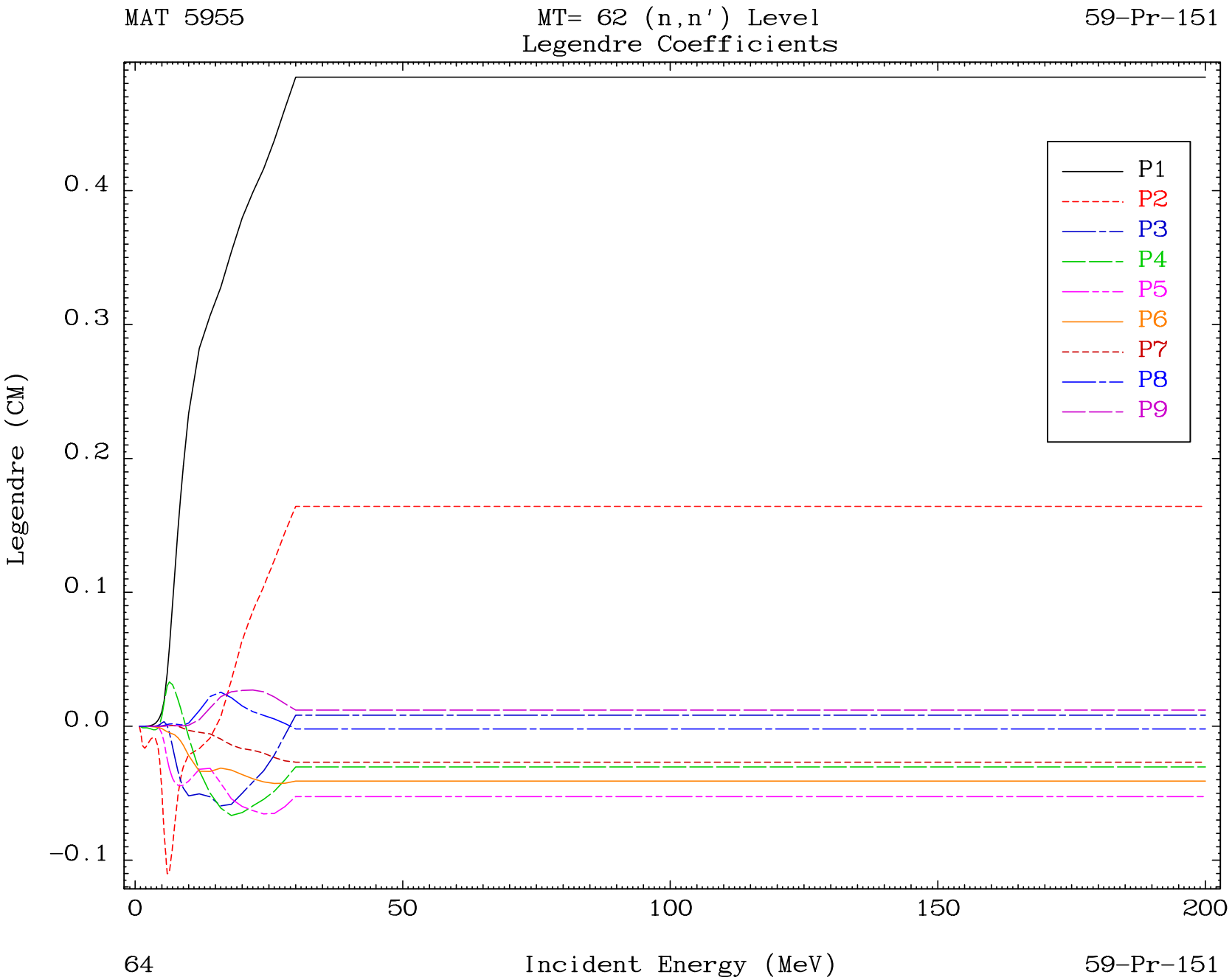

MAT 5955
MT= 60 (n,n') Level
Legendre Coefficients
59-Pr-151
1.0
X10^-6
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
59
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

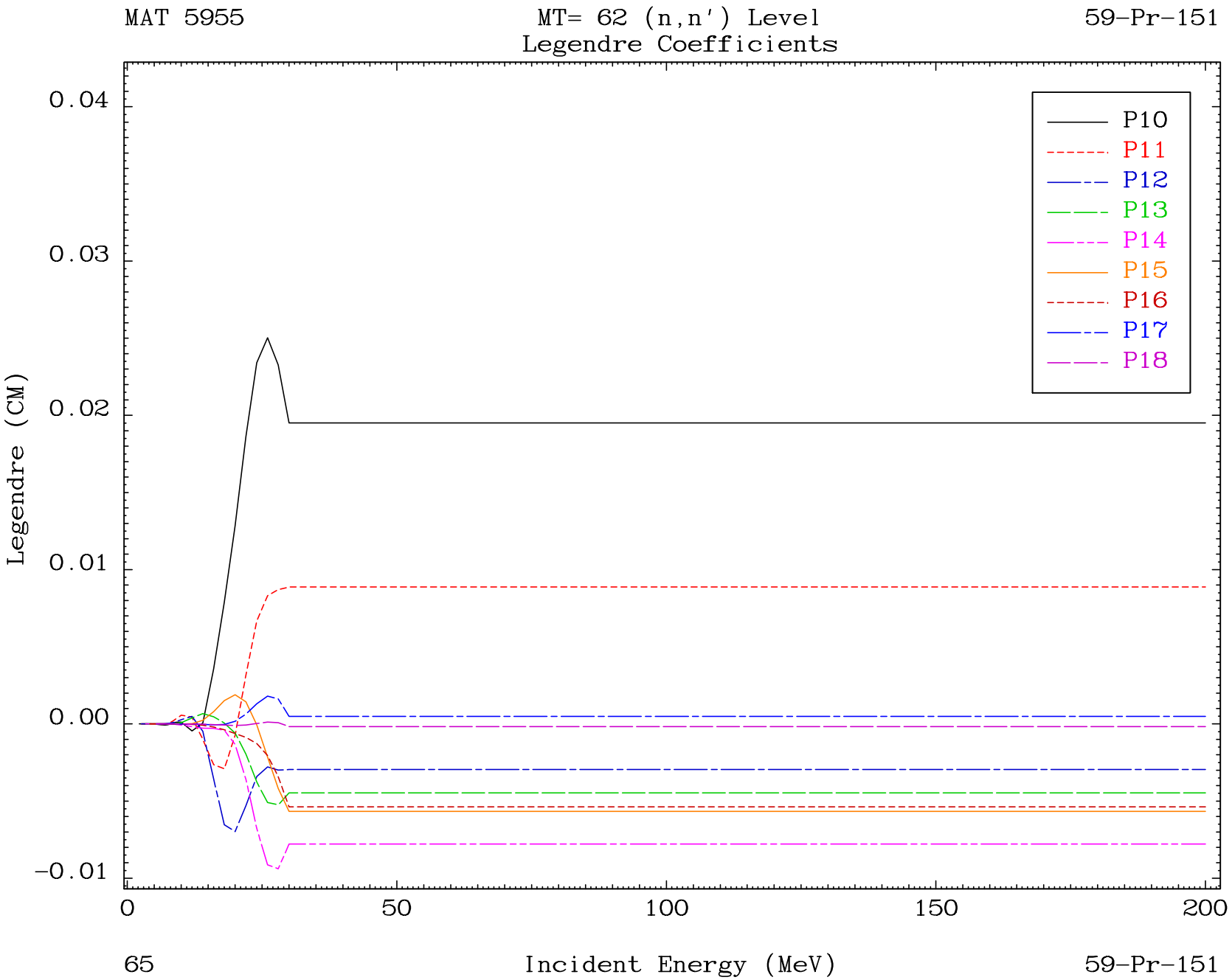

MAT 5955
MT= 61 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
60
Incident Energy (MeV)
59-Pr-151

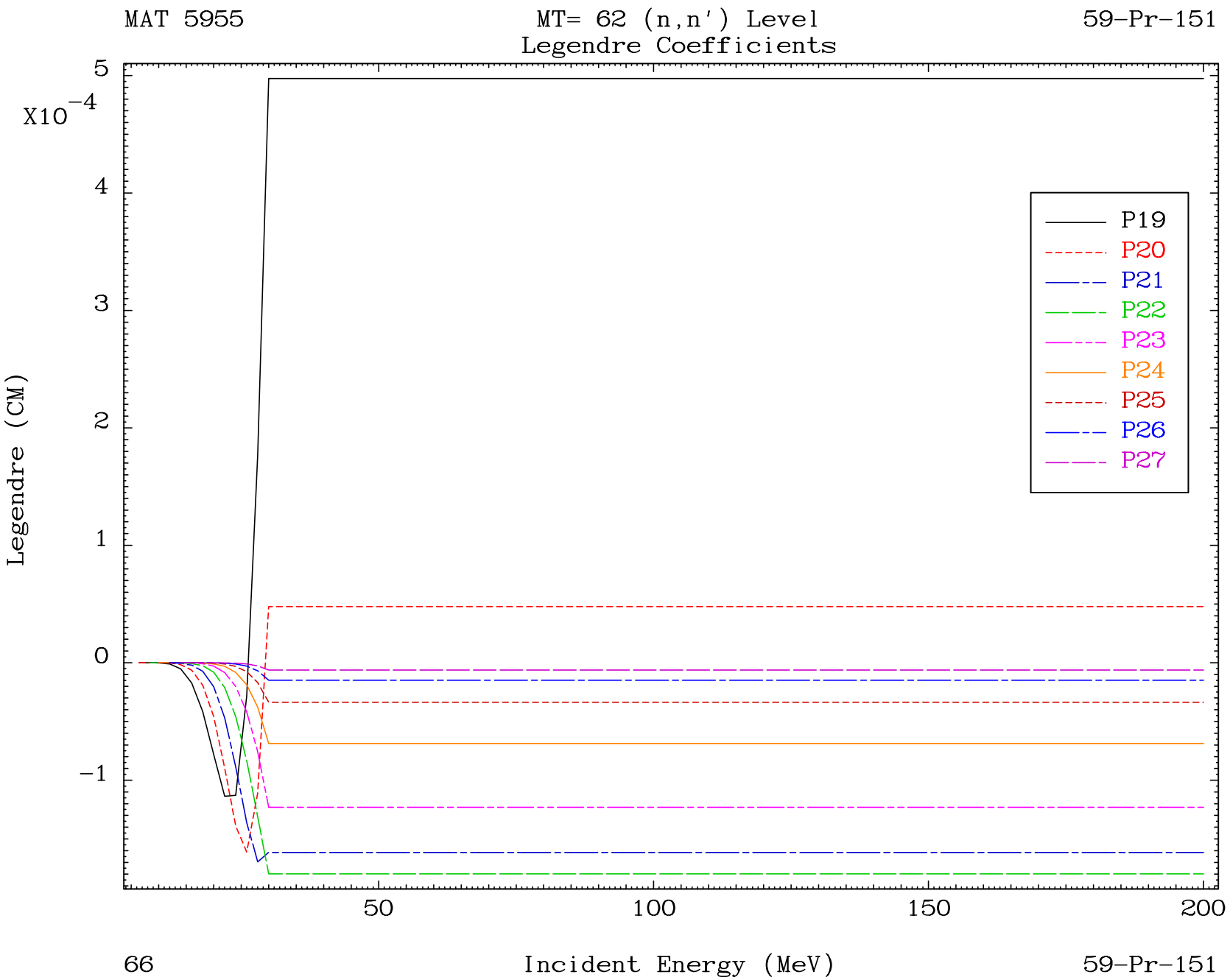

MAT 5955
MT= 61 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.03
0.02
0.01
0.00
Legendre (CM)
0
50
100
150
200
61
Incident Energy (MeV)
59-Pr-151

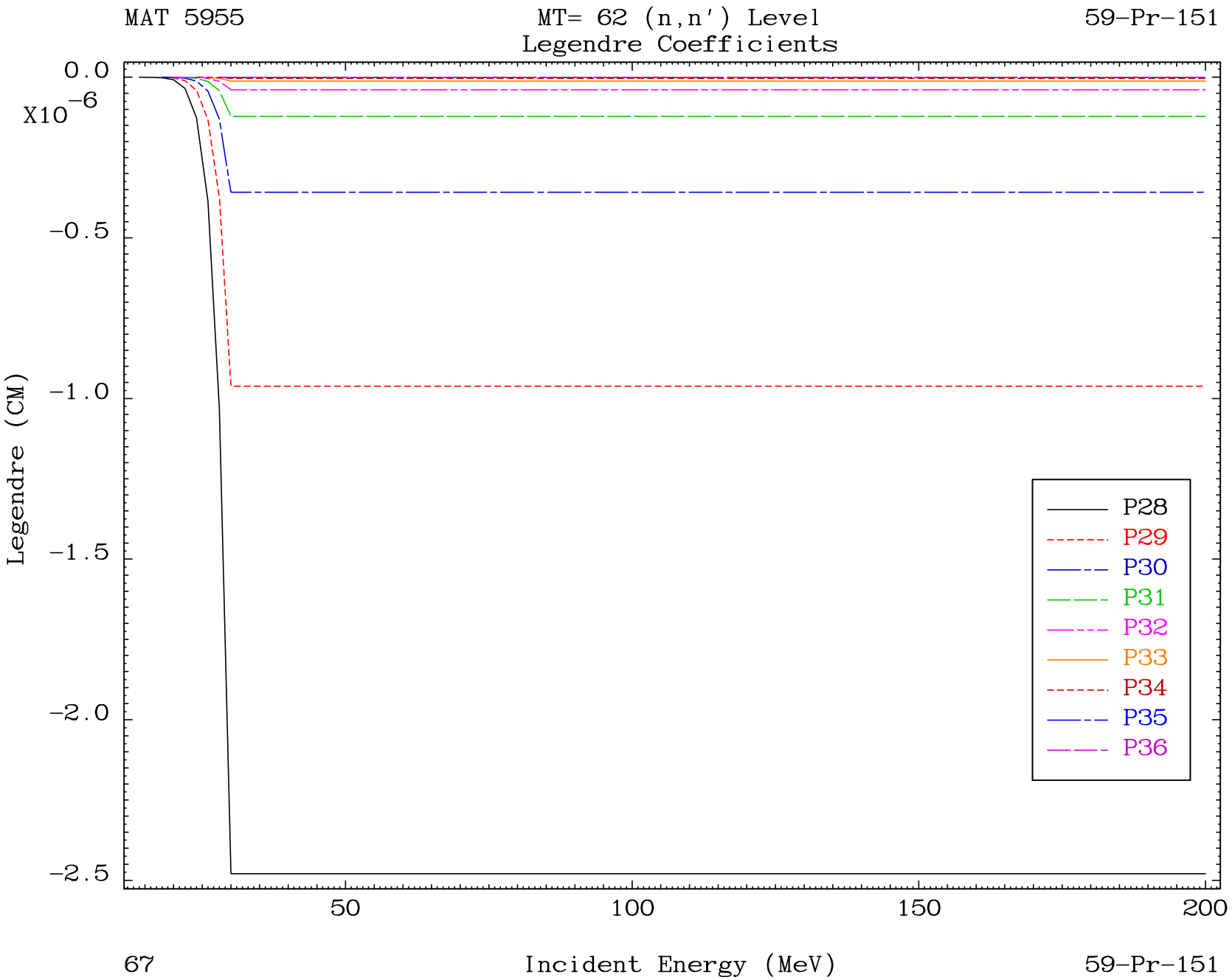

MAT 5955
MT= 61 (n,n') Level
Legendre Coefficients
59-Pr-151
X10-3
2.0
1.5
1.0
0.5
0.0
P19
P20
P21
P22
P23
P24
P25
P26
P27
Legendre (CM)
50
100
150
200
62
Incident Energy (MeV)
59-Pr-151

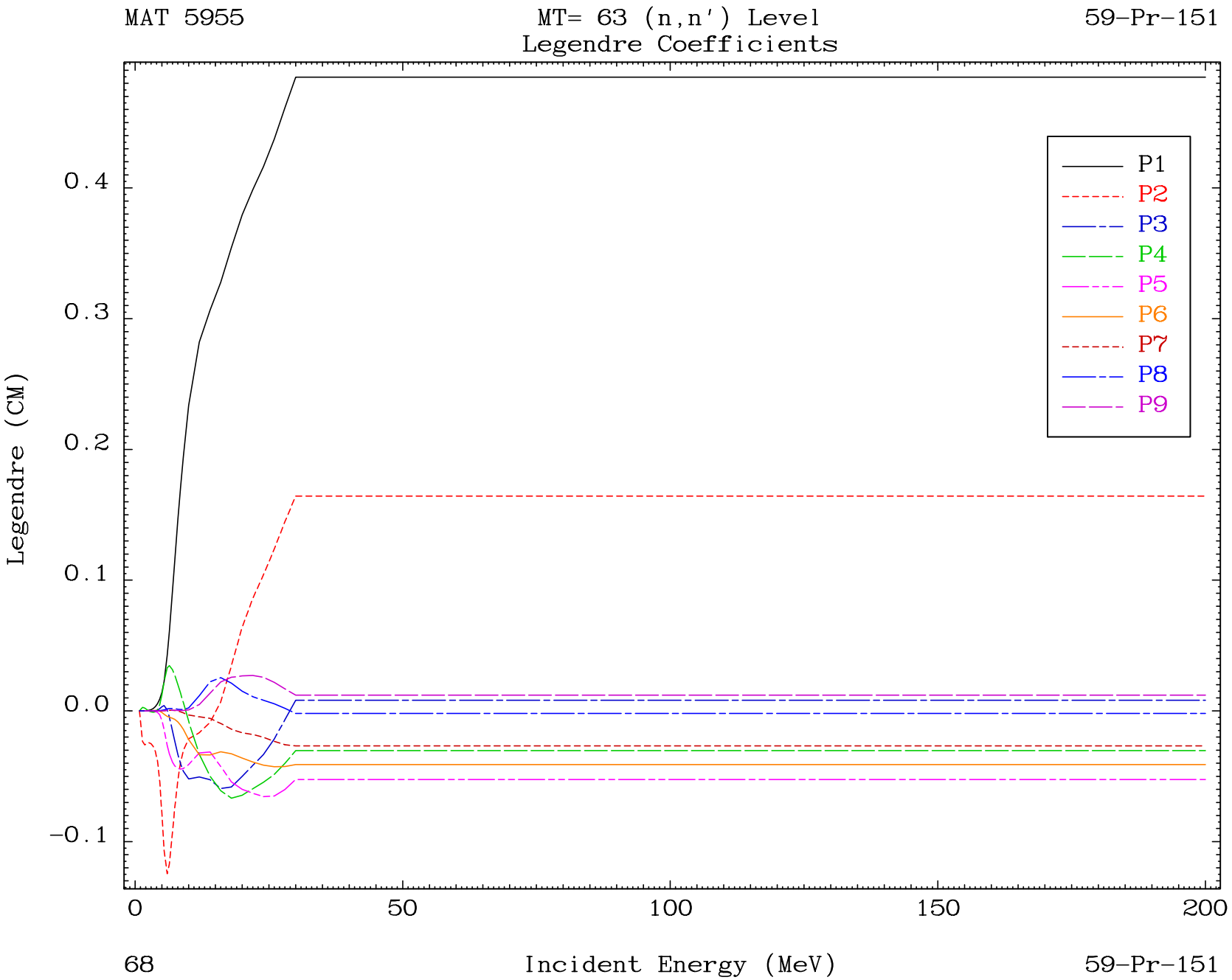

MAT 5955
MT= 61 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 -6
5
4
3
2
1
0
Legendre (CM)
50
100
150
200
63
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

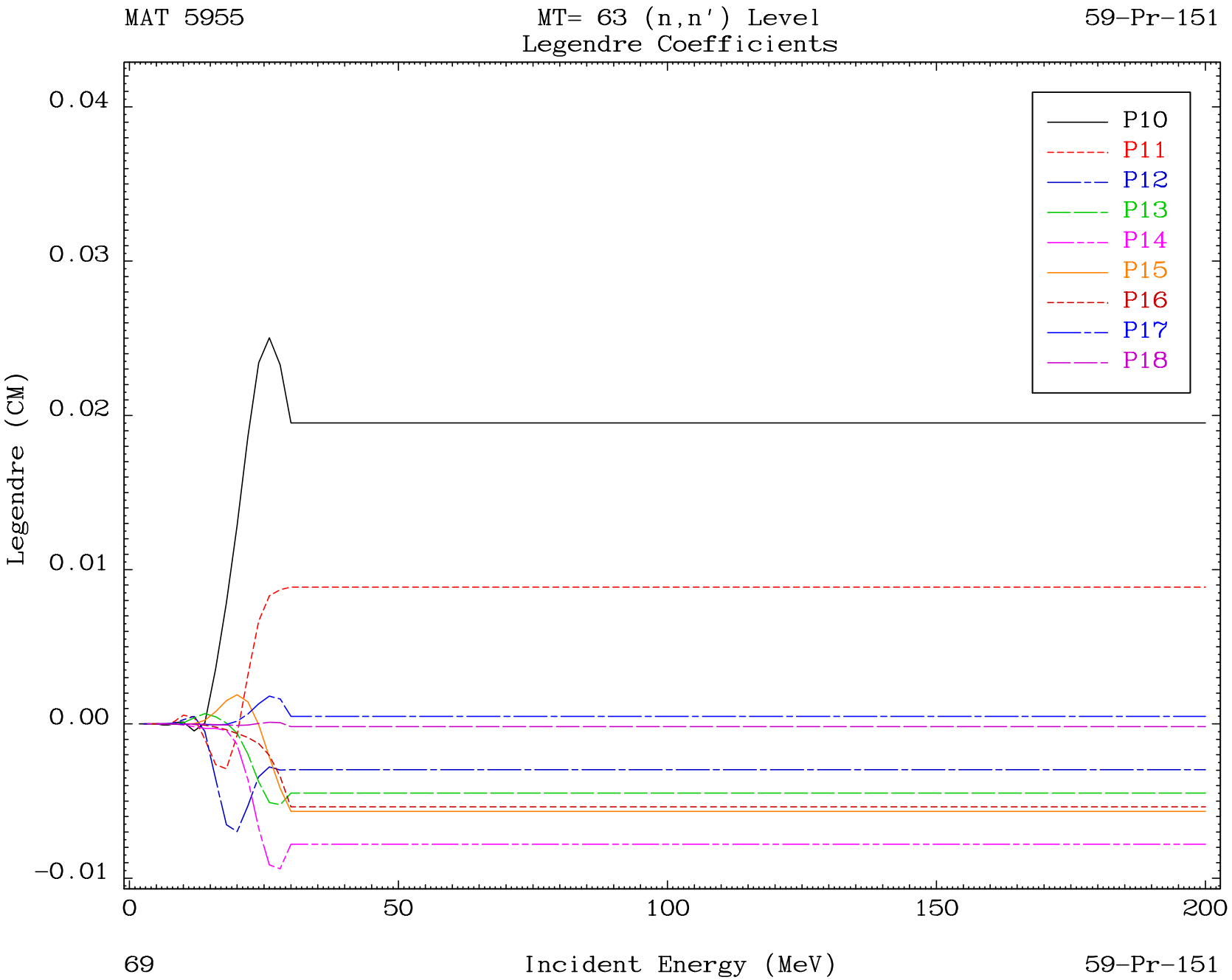

MAT 5955
MT= 62 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
Incident Energy (MeV)
64
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

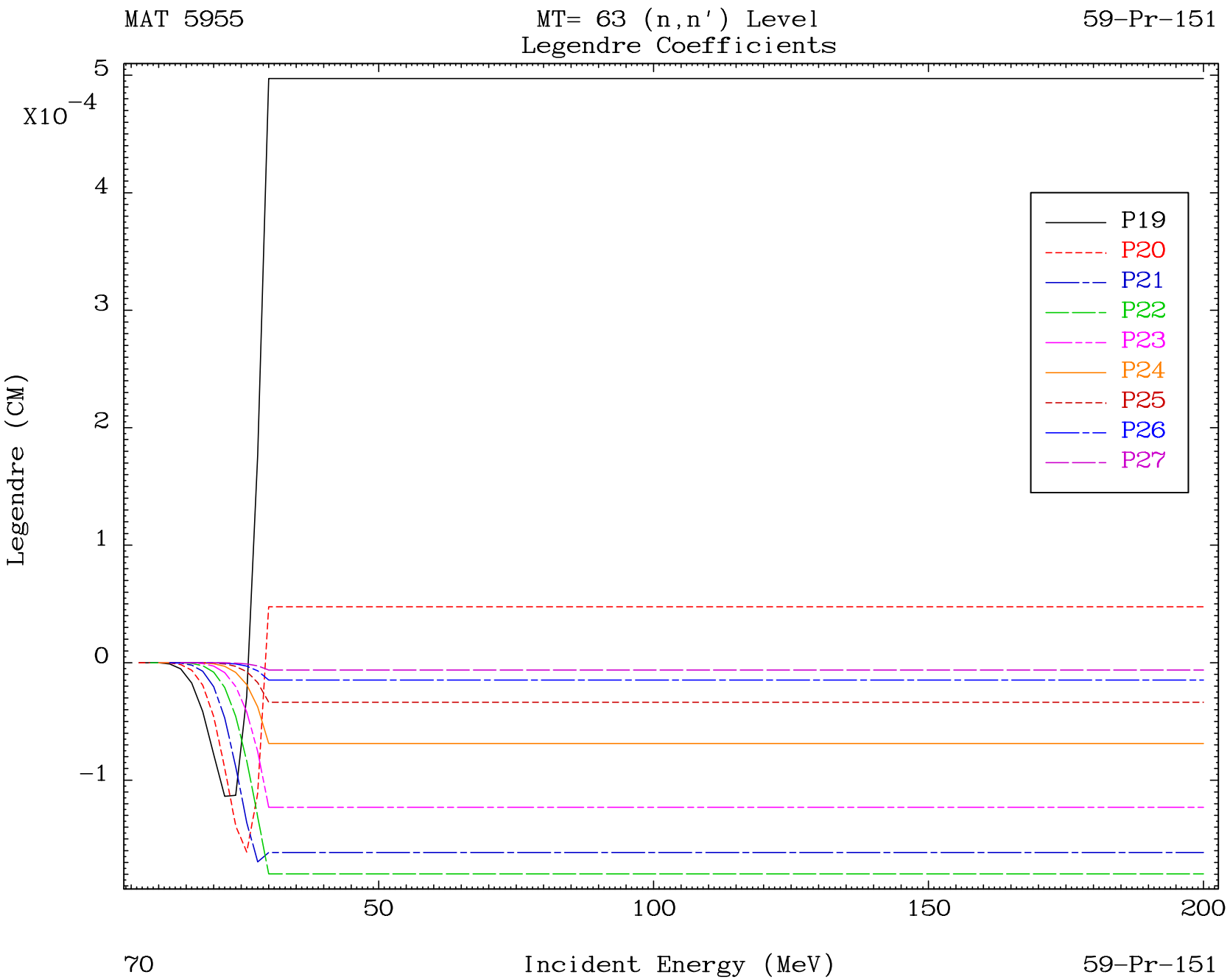

MAT 5955
MT= 62 (n,n') Level
Legendre Coefficients
59-Pr-151
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
65
Incident Energy (MeV)
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18

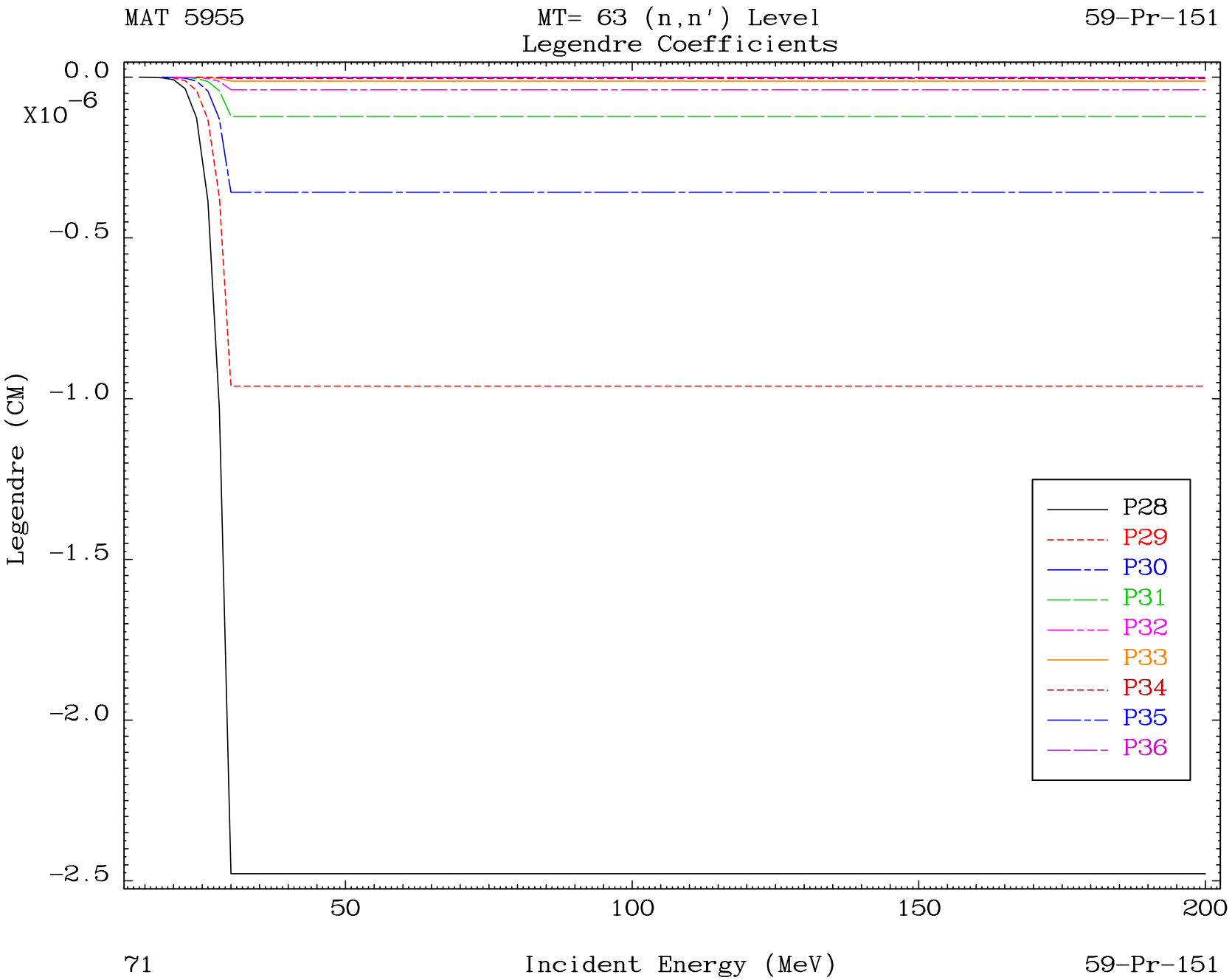

MAT 5955
MT= 62 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
5
4
3
2
1
0
-1
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
66
Incident Energy (MeV)
59-Pr-151

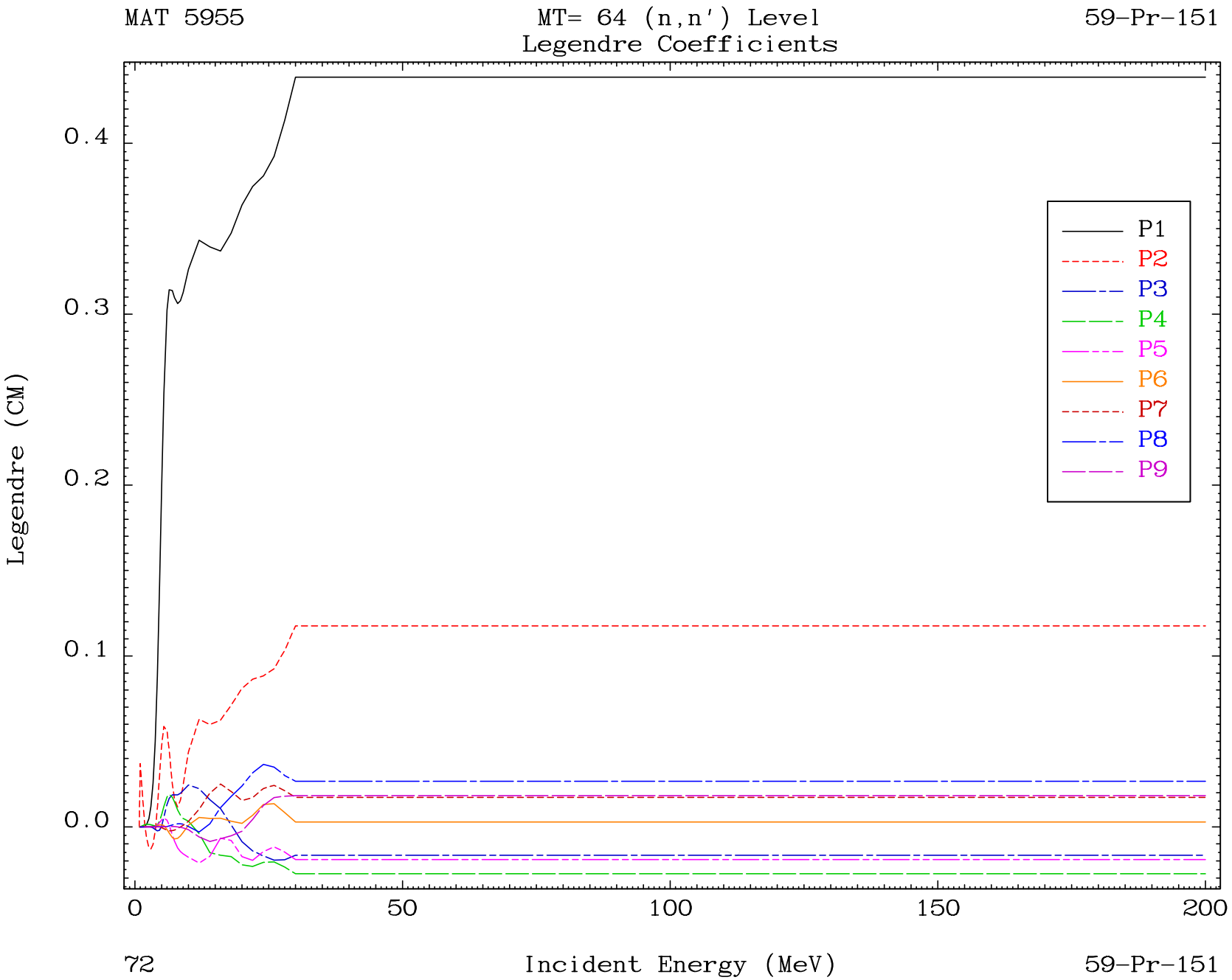

MAT 5955
MT= 62 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10^-6
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
67
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

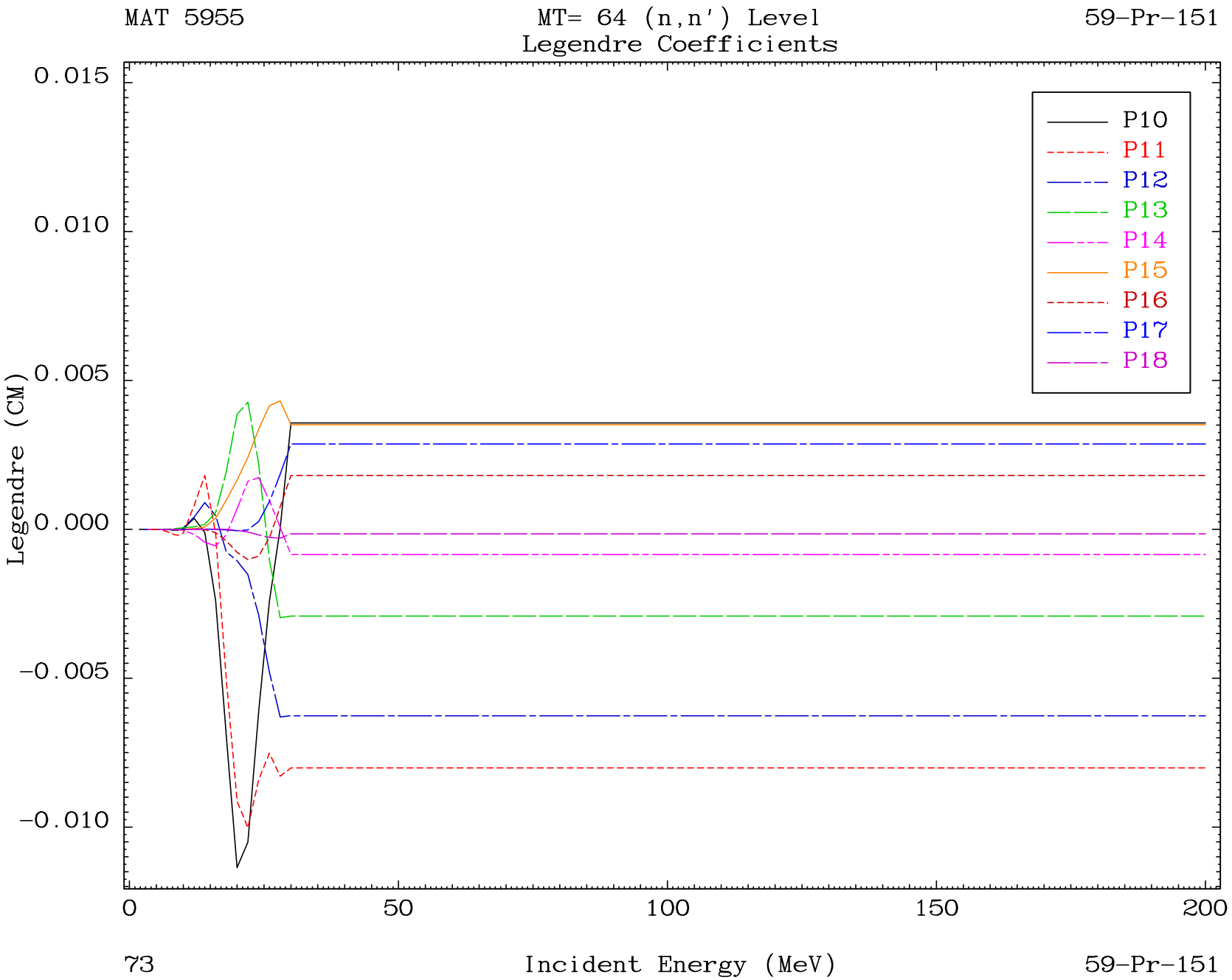

MAT 5955
MT= 63 (n,n') Level
Legendre Coefficients
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
68
Incident Energy (MeV)
59-Pr-151

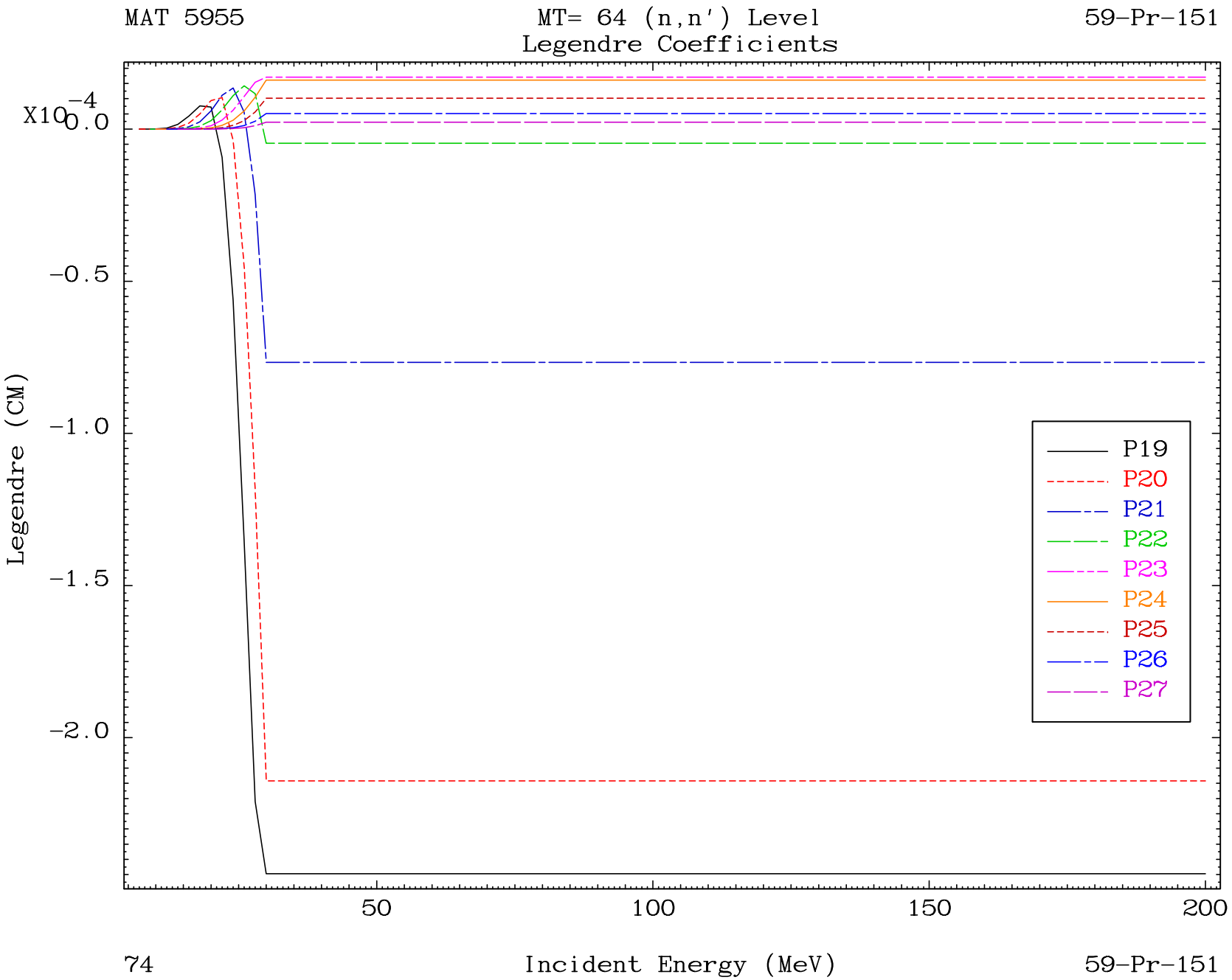

MAT 5955
MT= 63 (n,n') Level
Legendre Coefficients
59-Pr-151
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
69
Incident Energy (MeV)
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18

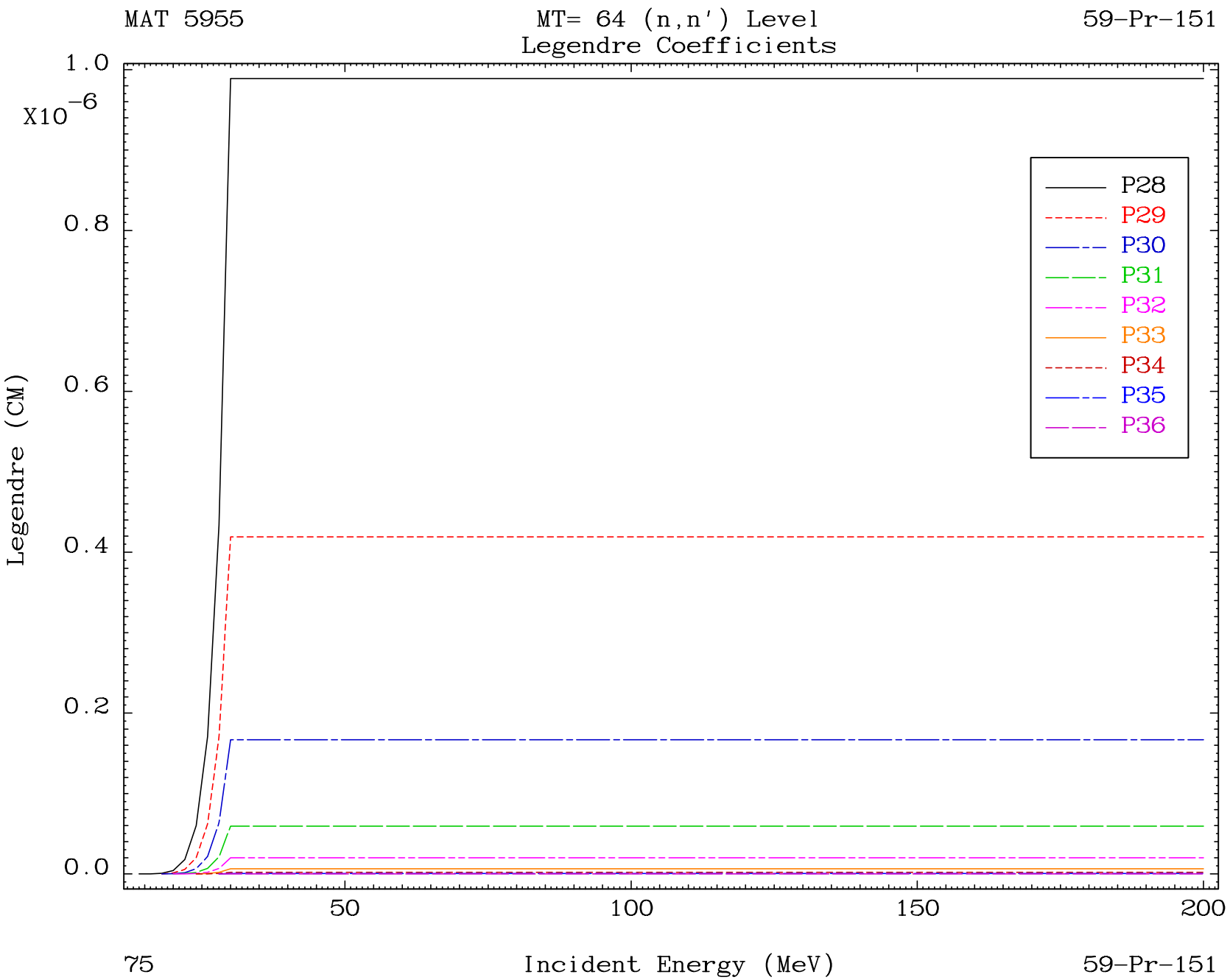

MAT 5955
MT= 63 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
5
4
3
2
1
0
-1
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
70
Incident Energy (MeV)
59-Pr-151

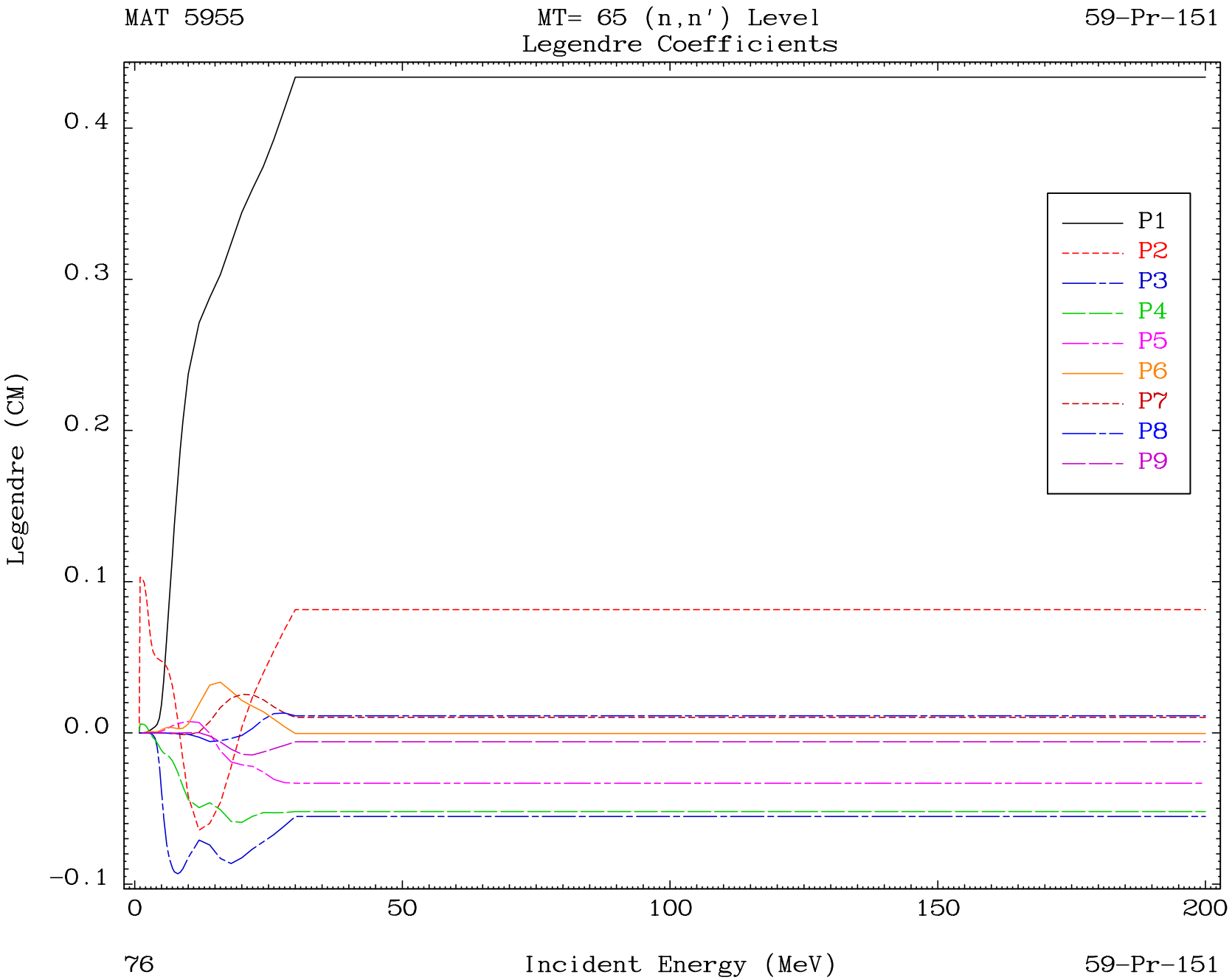

MAT 5955
MT= 63 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10^-6
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
71
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

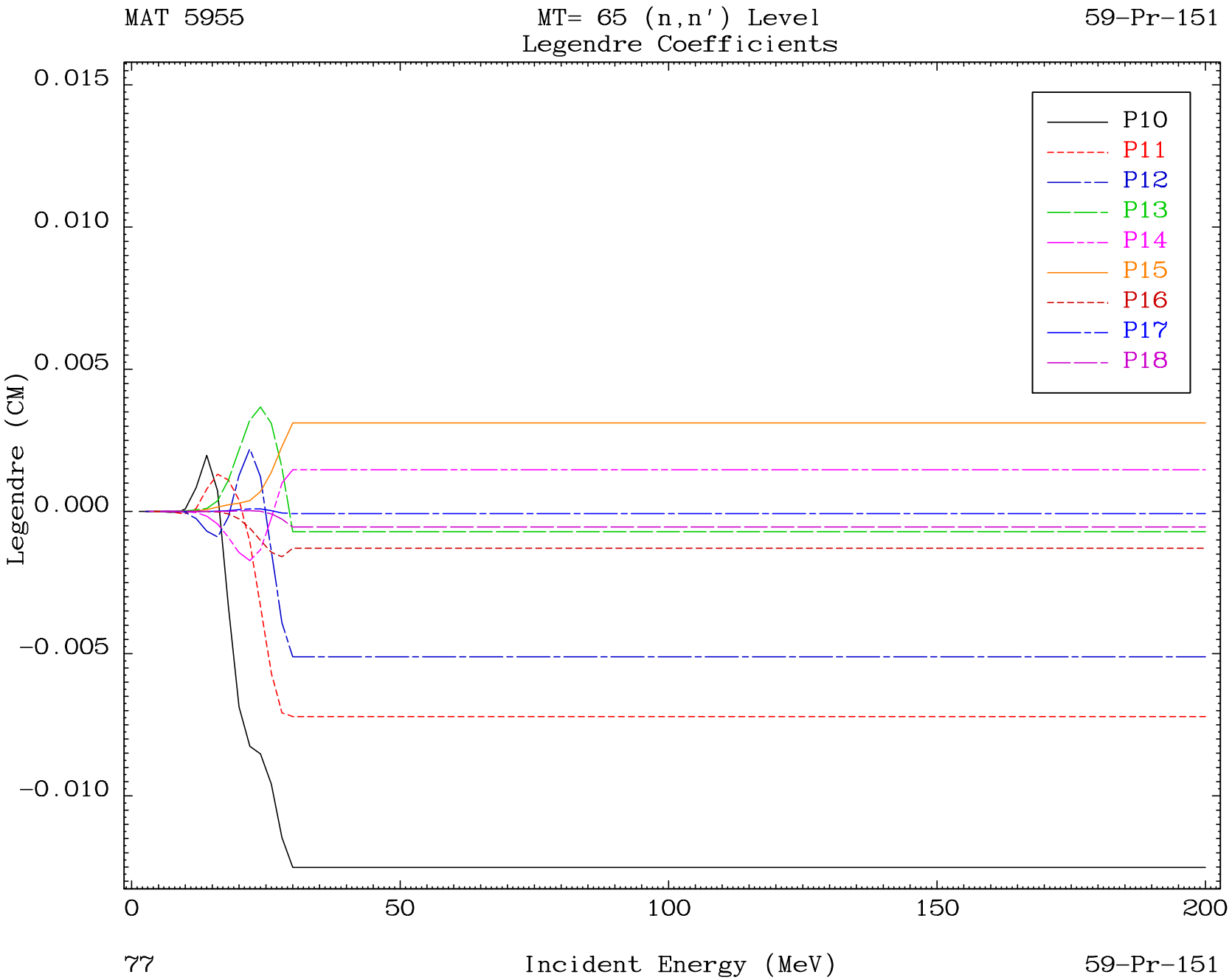

MAT 5955
MT= 64 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
72
Incident Energy (MeV)
59-Pr-151

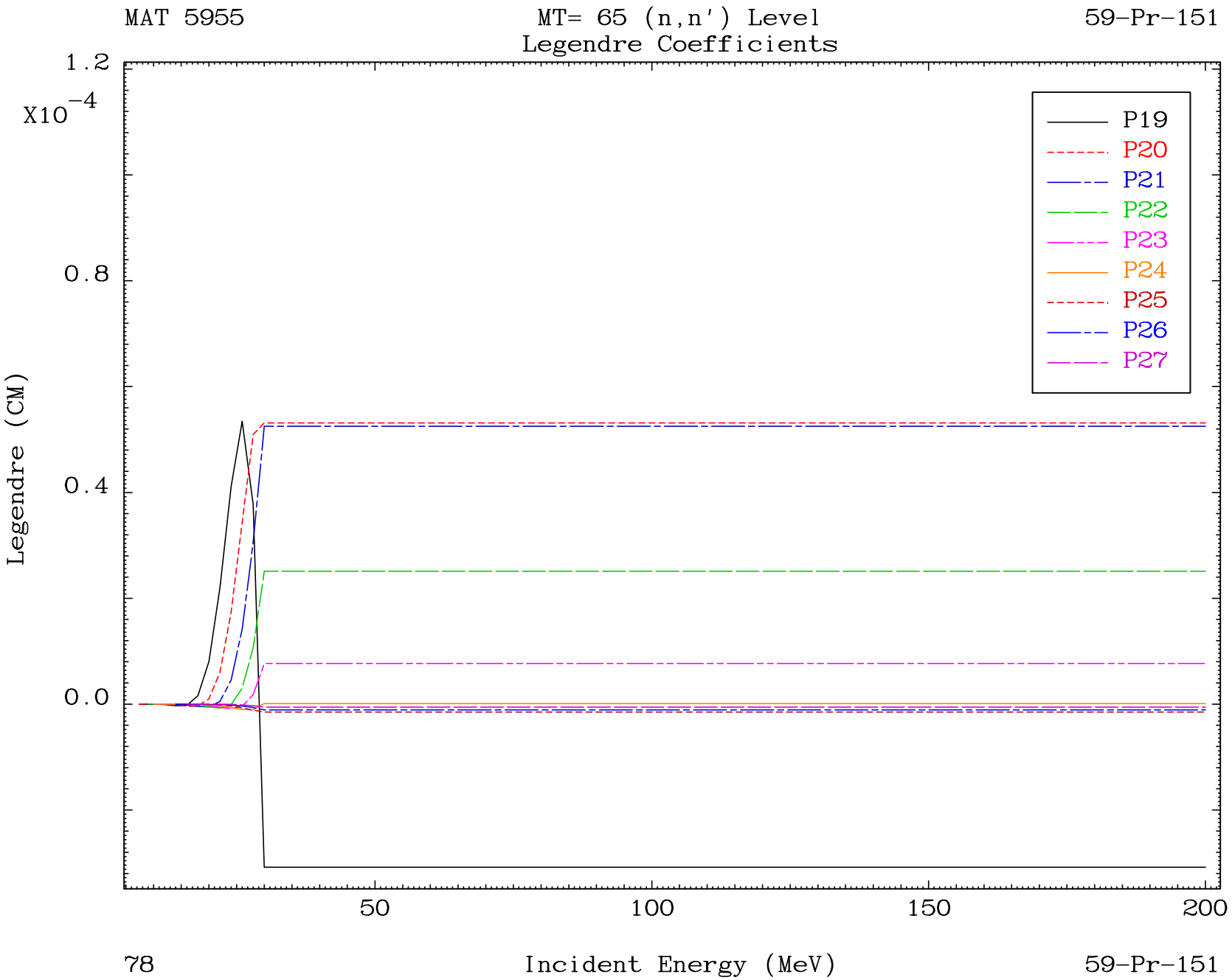

MAT 5955
MT= 64 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
73
Incident Energy (MeV)
59-Pr-151

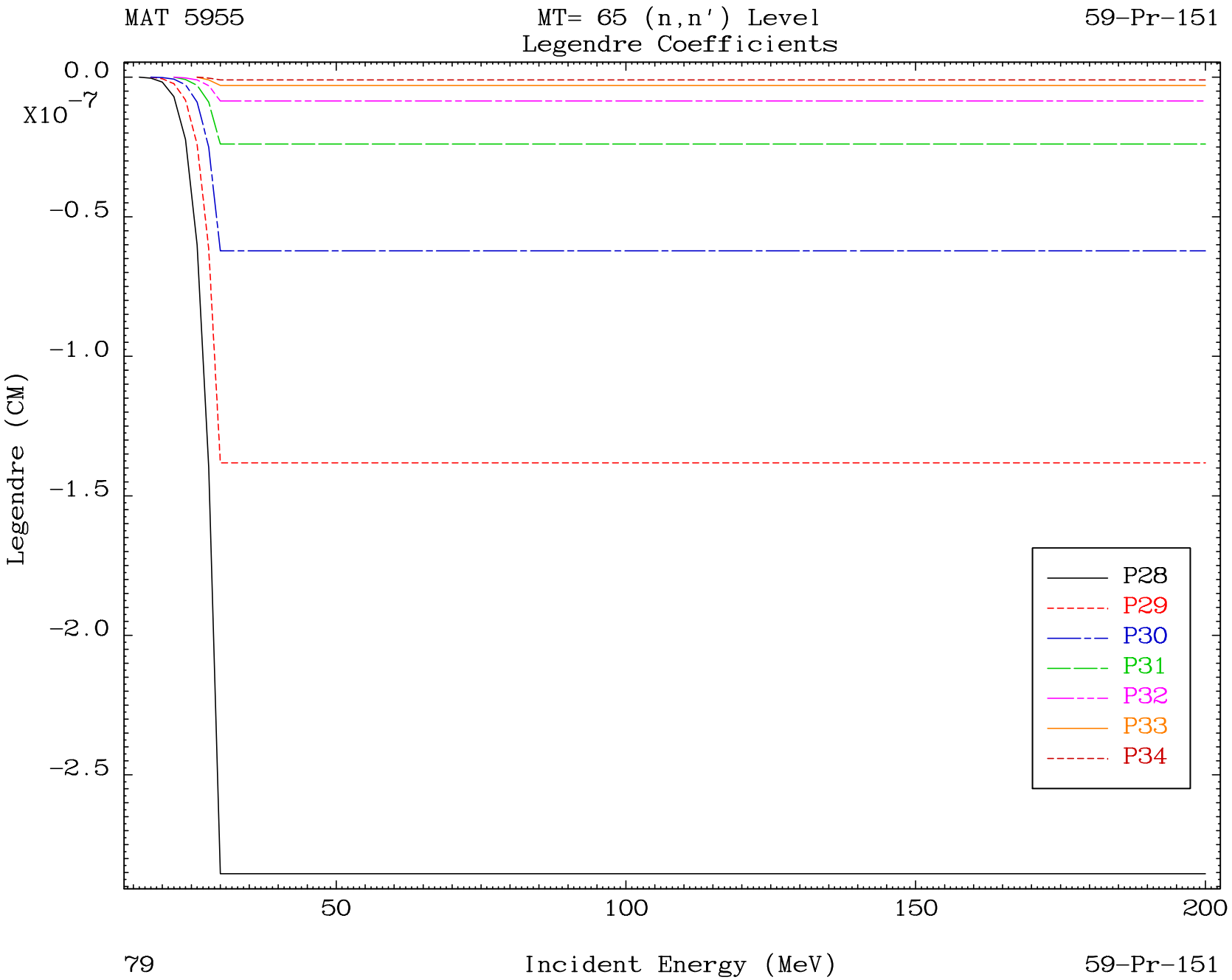

MAT 5955
MT= 64 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
74
Incident Energy (MeV)
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27

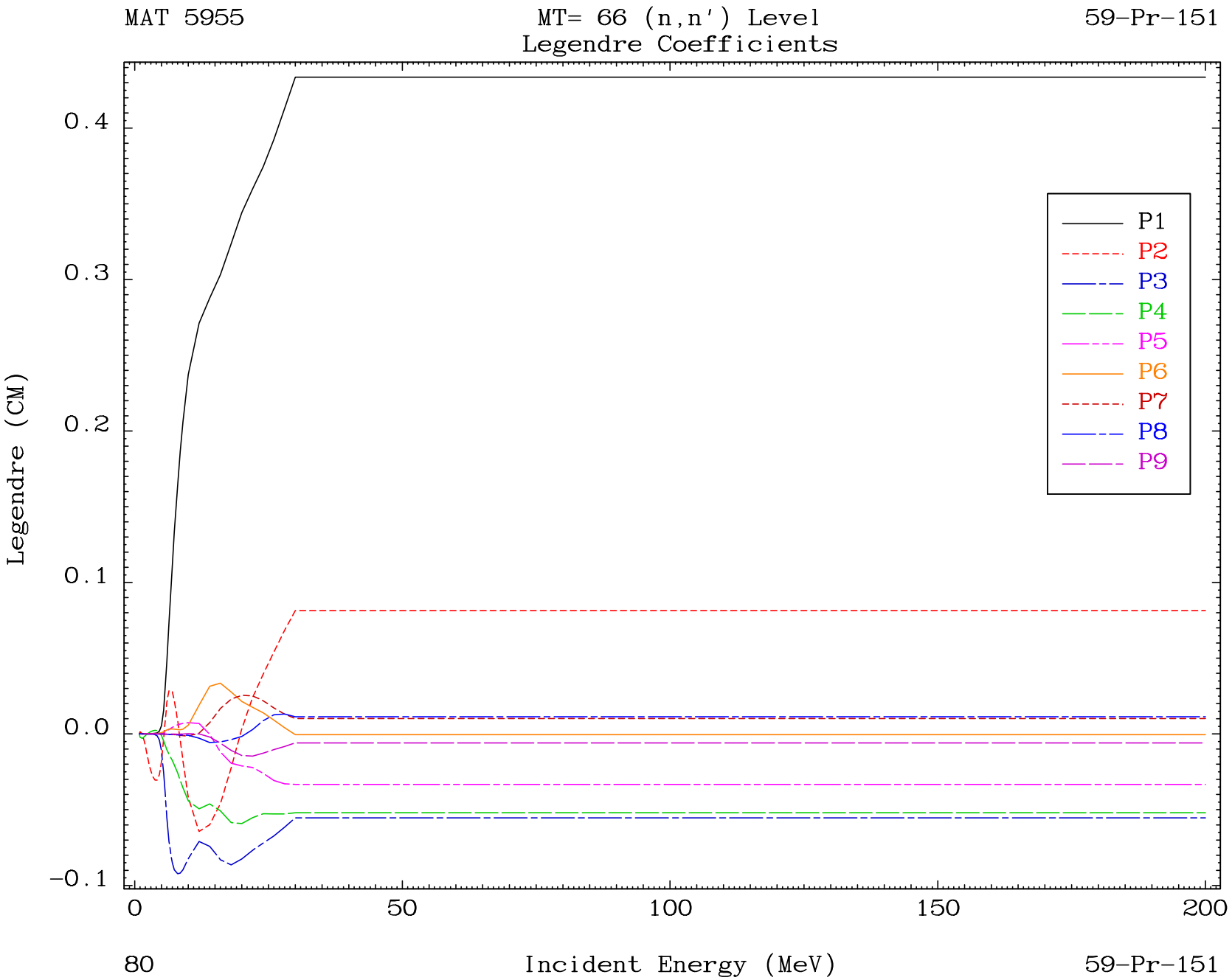

MAT 5955
MT= 64 (n,n') Level
Legendre Coefficients
59-Pr-151
1.0
X10^-6
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
75
Incident Energy (MeV)
59-Pr-151

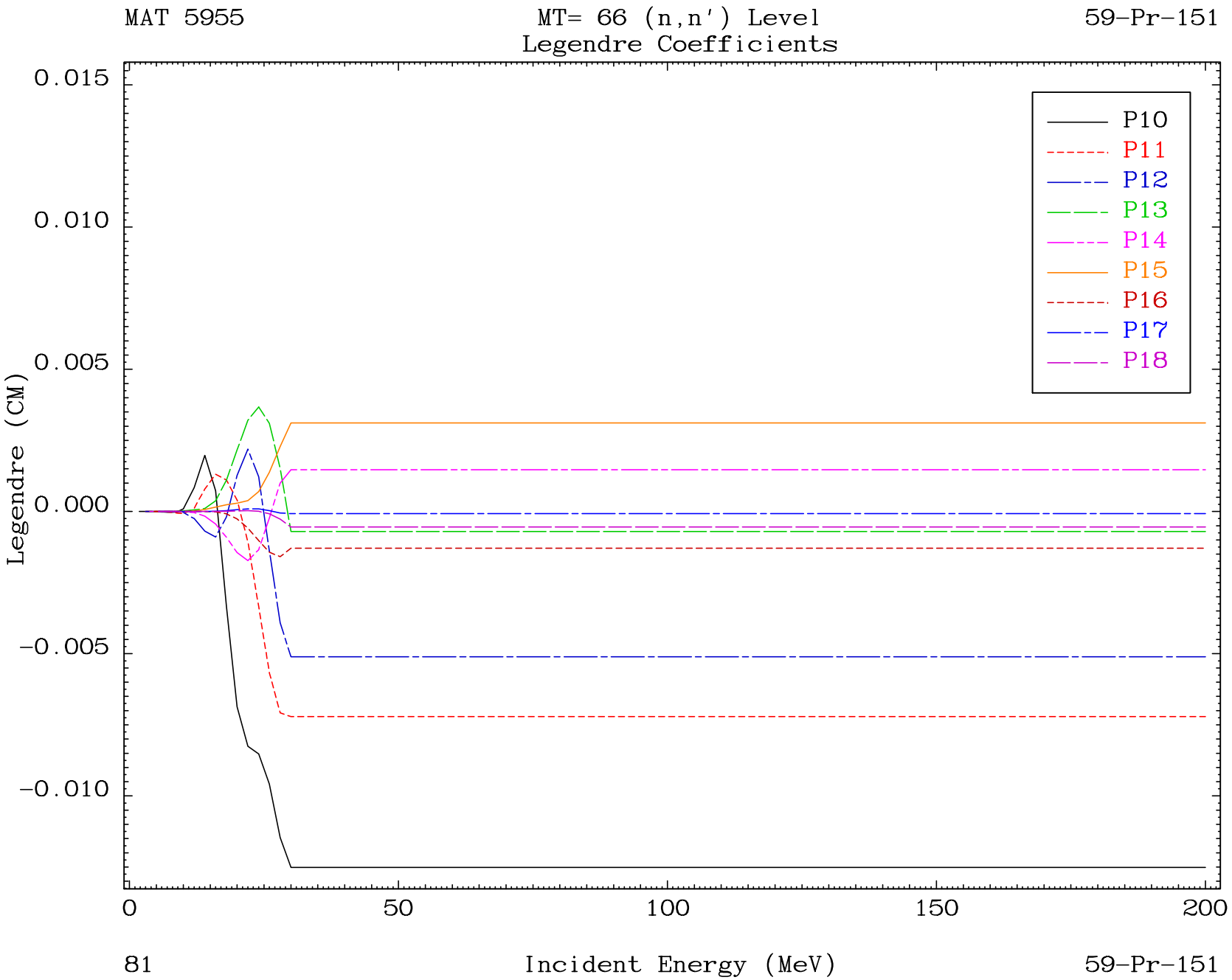

MAT 5955
MT= 65 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
Incident Energy (MeV)
76
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

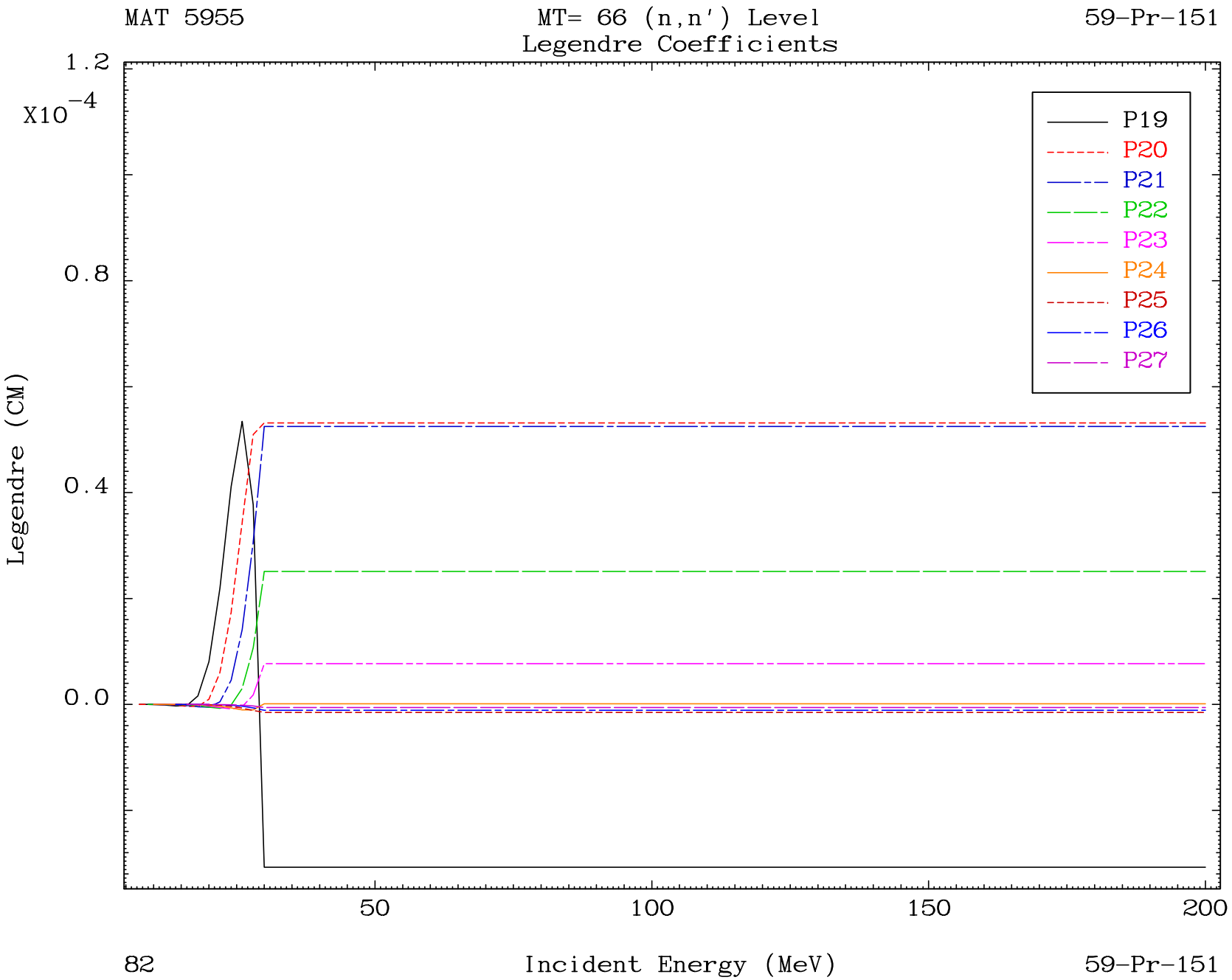

MAT 5955
MT= 65 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
77
Incident Energy (MeV)
59-Pr-151

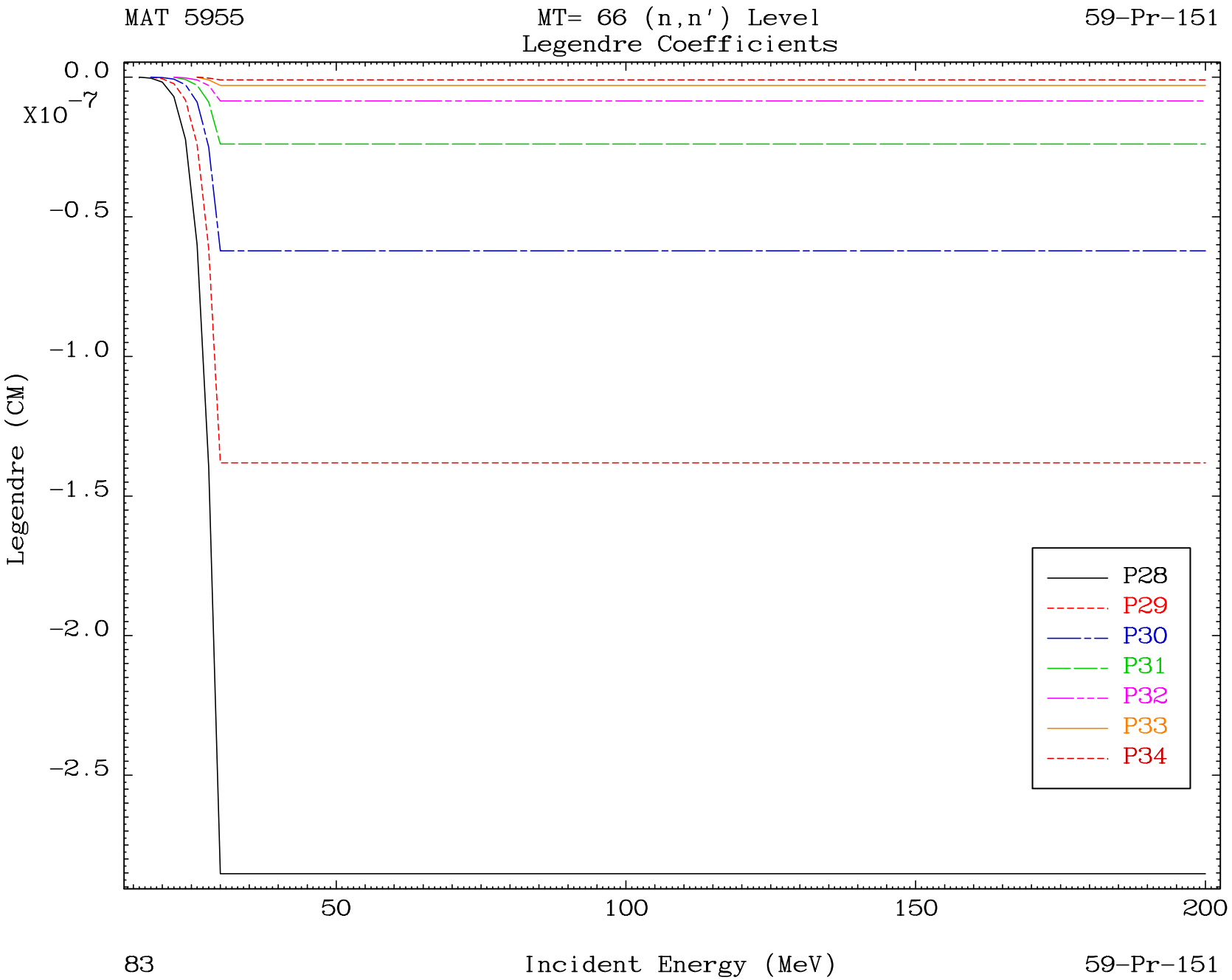

MAT 5955
MT= 65 (n,n') Level
Legendre Coefficients
59-Pr-151
1.2
X10^-4
0.8
0.4
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
78
Incident Energy (MeV)
59-Pr-151

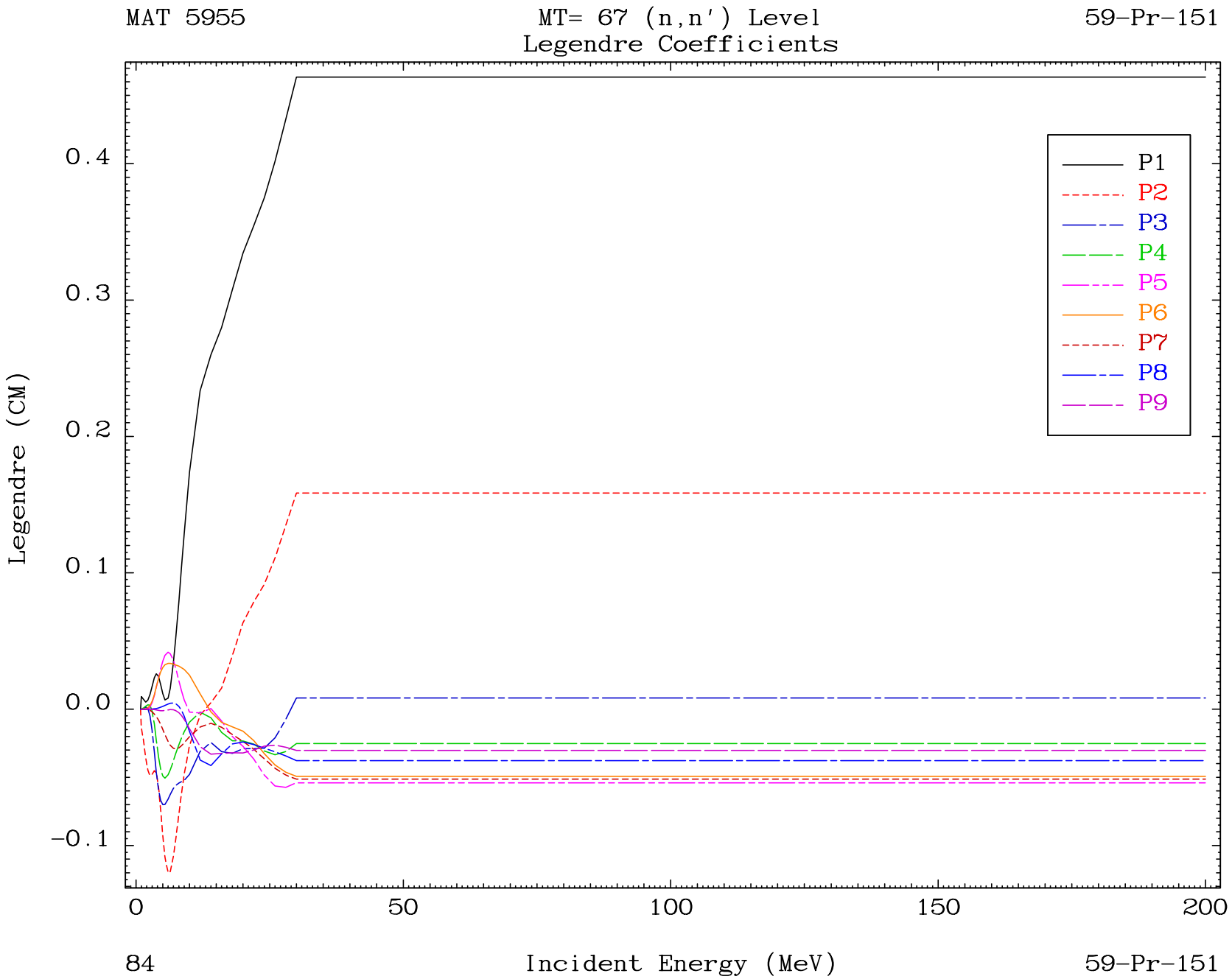

MAT 5955
MT= 65 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10-7
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
79
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34

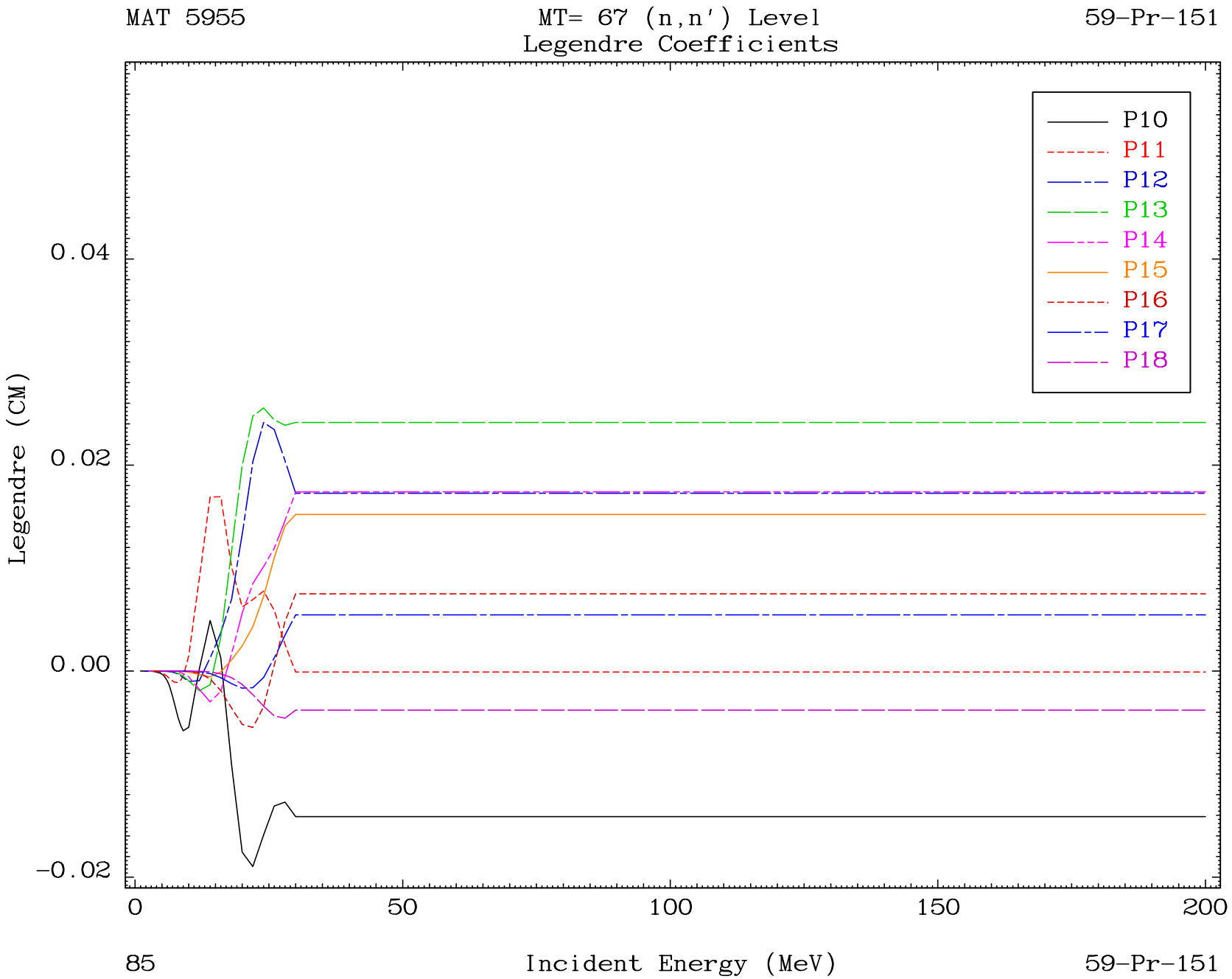

MAT 5955
MT= 66 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
80
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

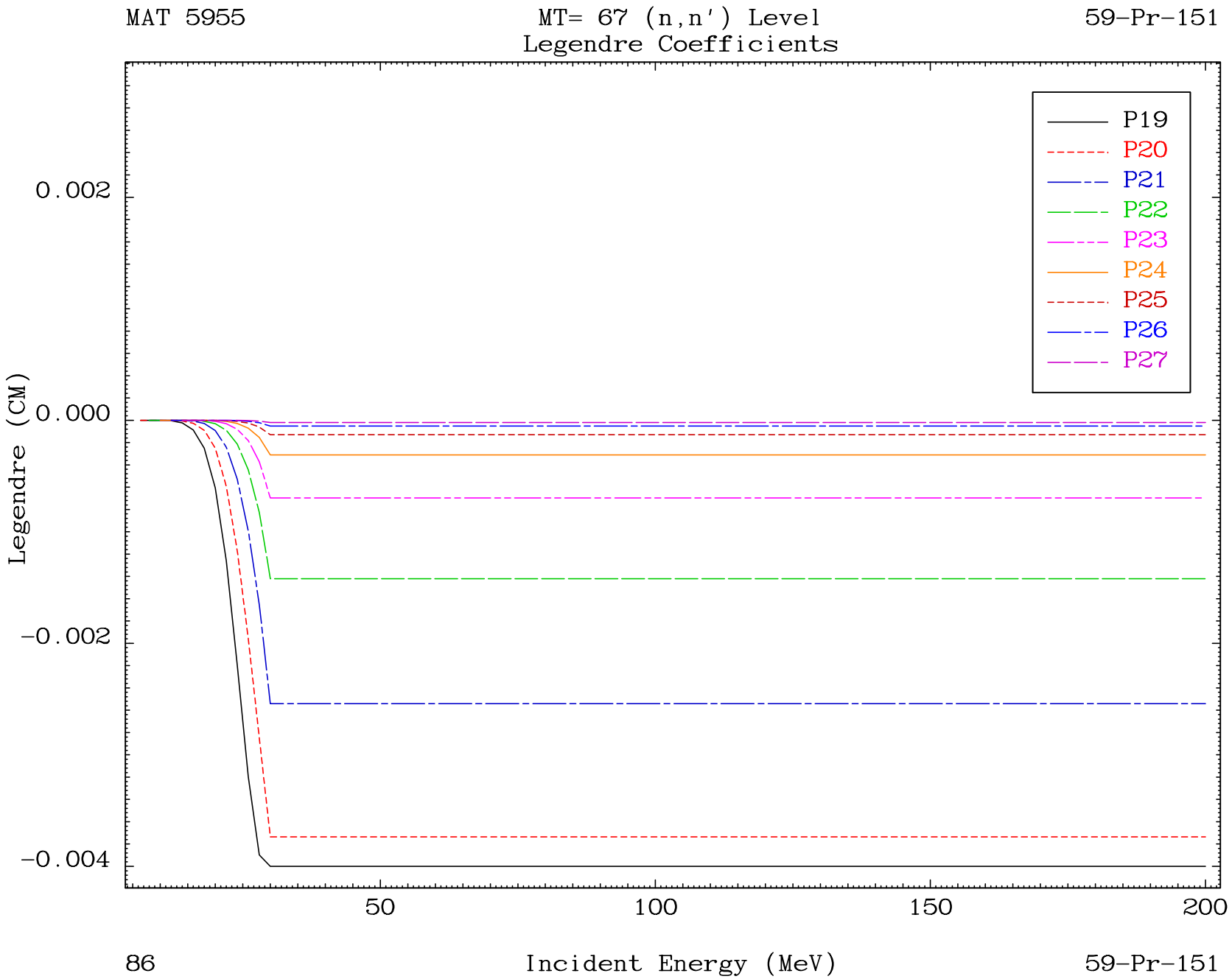

MAT 5955
MT= 66 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
81
Incident Energy (MeV)
59-Pr-151

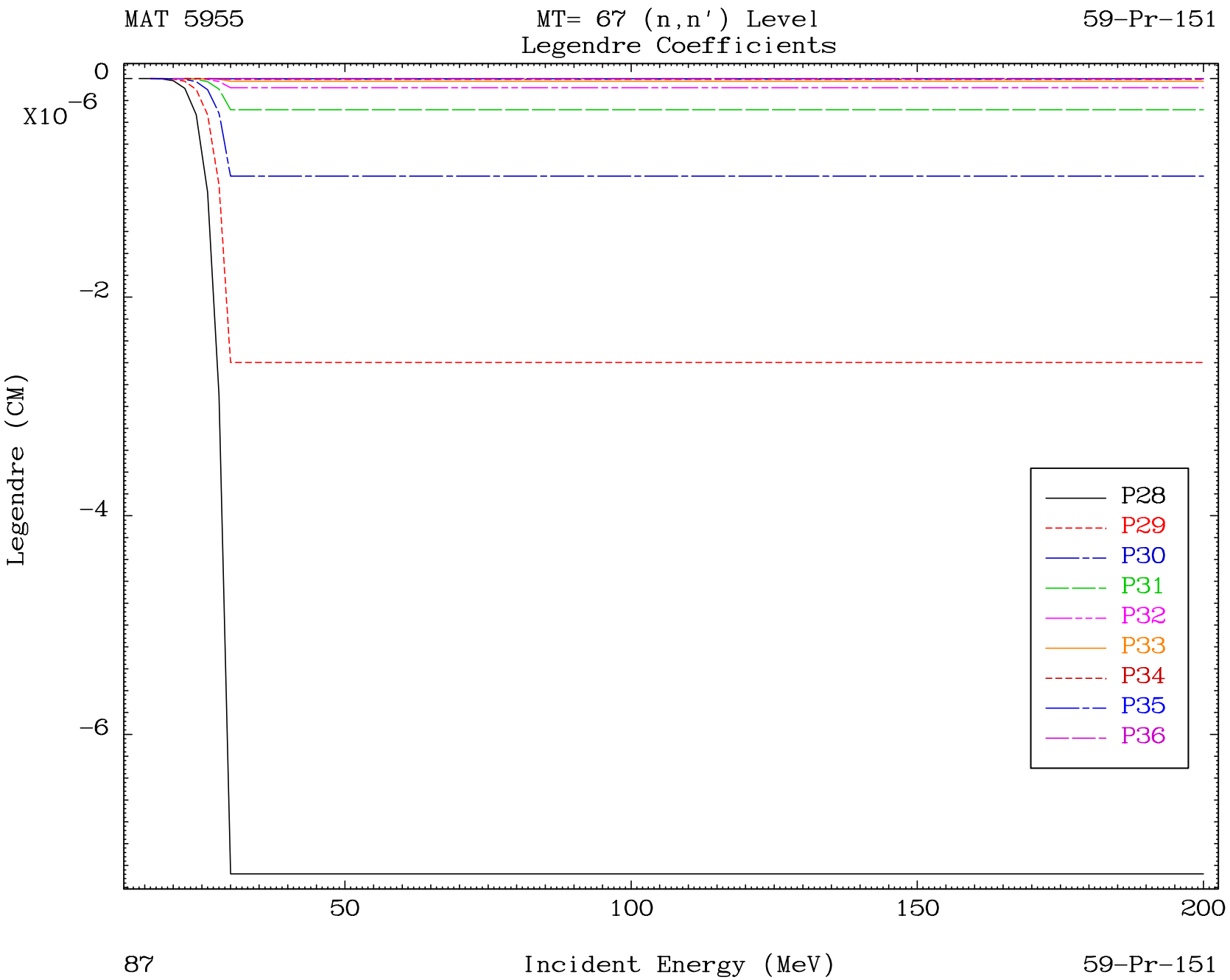

MAT 5955
MT= 66 (n,n') Level
Legendre Coefficients
59-Pr-151
1.2
X10^-4
0.8
0.4
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
82
Incident Energy (MeV)
59-Pr-151

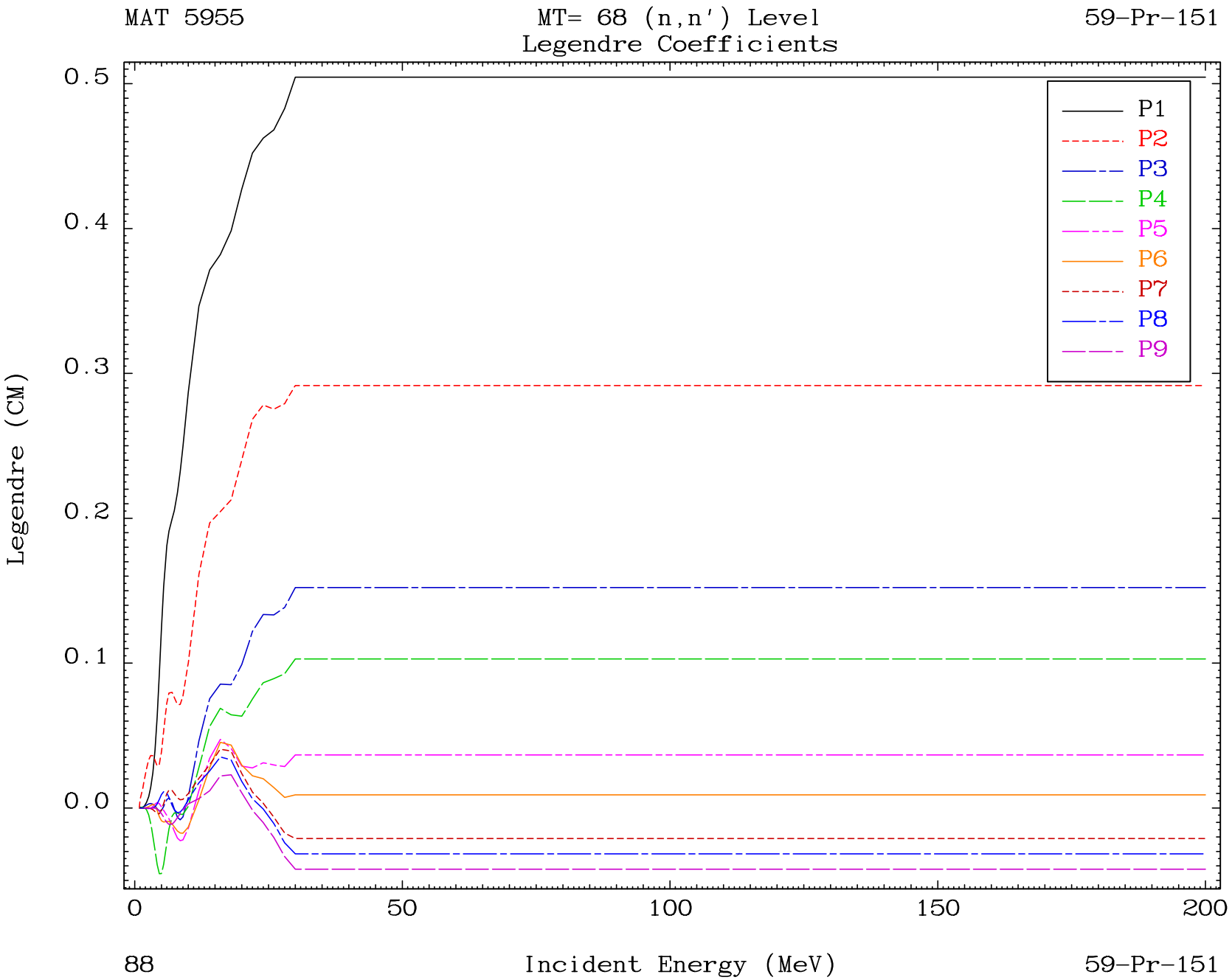

MAT 5955
MT= 66 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10-7
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
P28
P29
P30
P31
P32
P33
P34
83
Incident Energy (MeV)
59-Pr-151

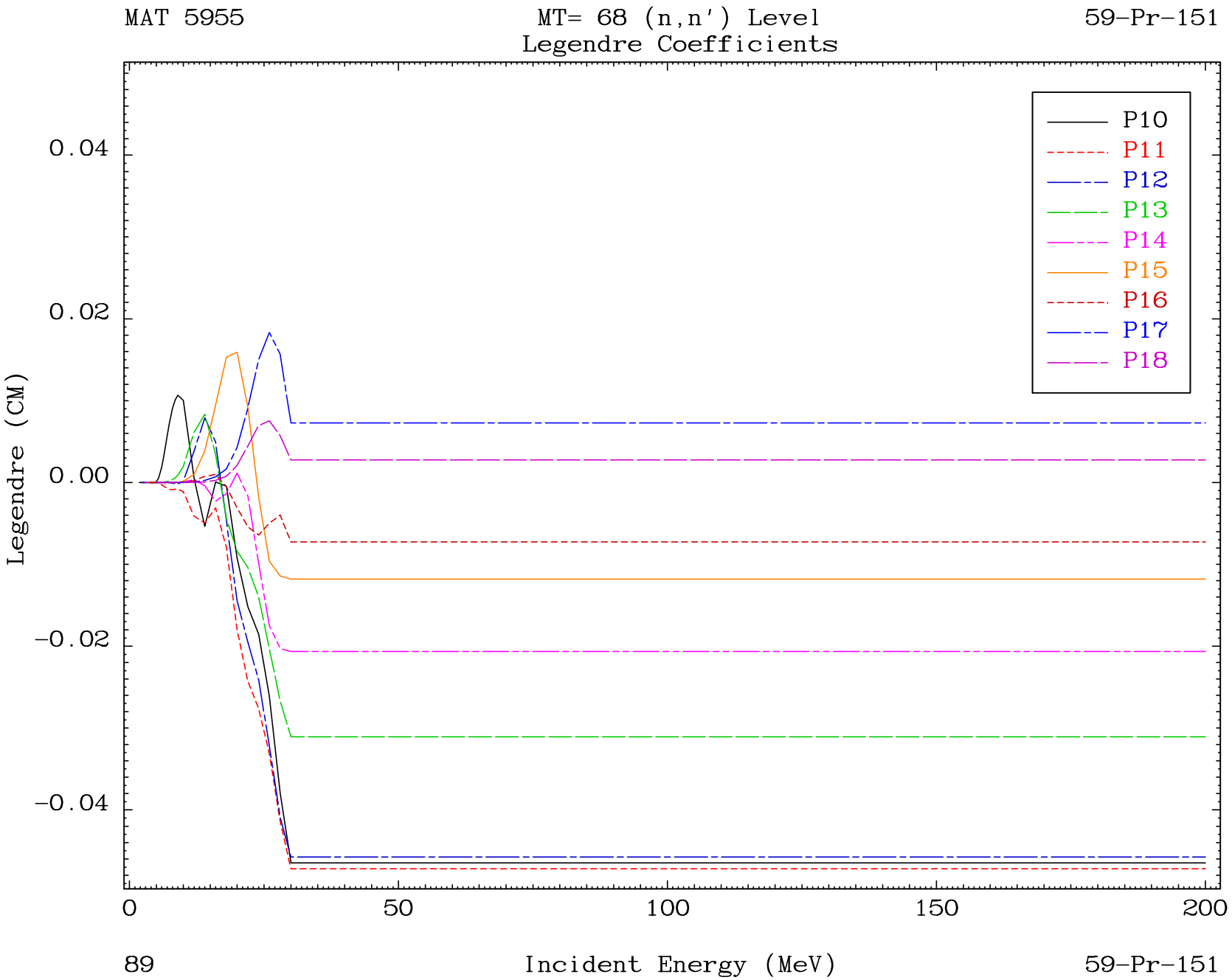

MAT 5955
MT= 67 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
Incident Energy (MeV)
84
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

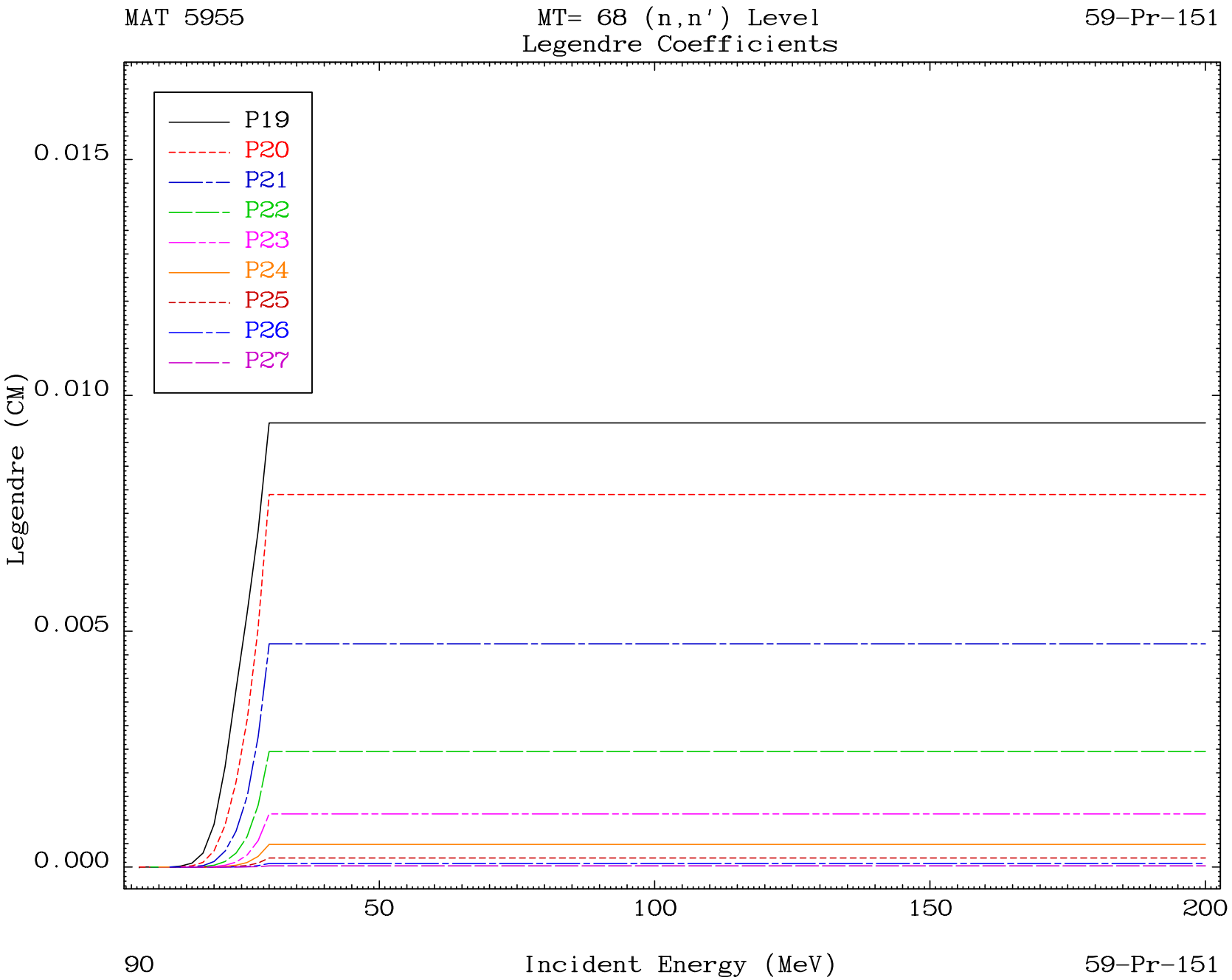

MAT 5955
MT= 67 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
85
Incident Energy (MeV)
59-Pr-151

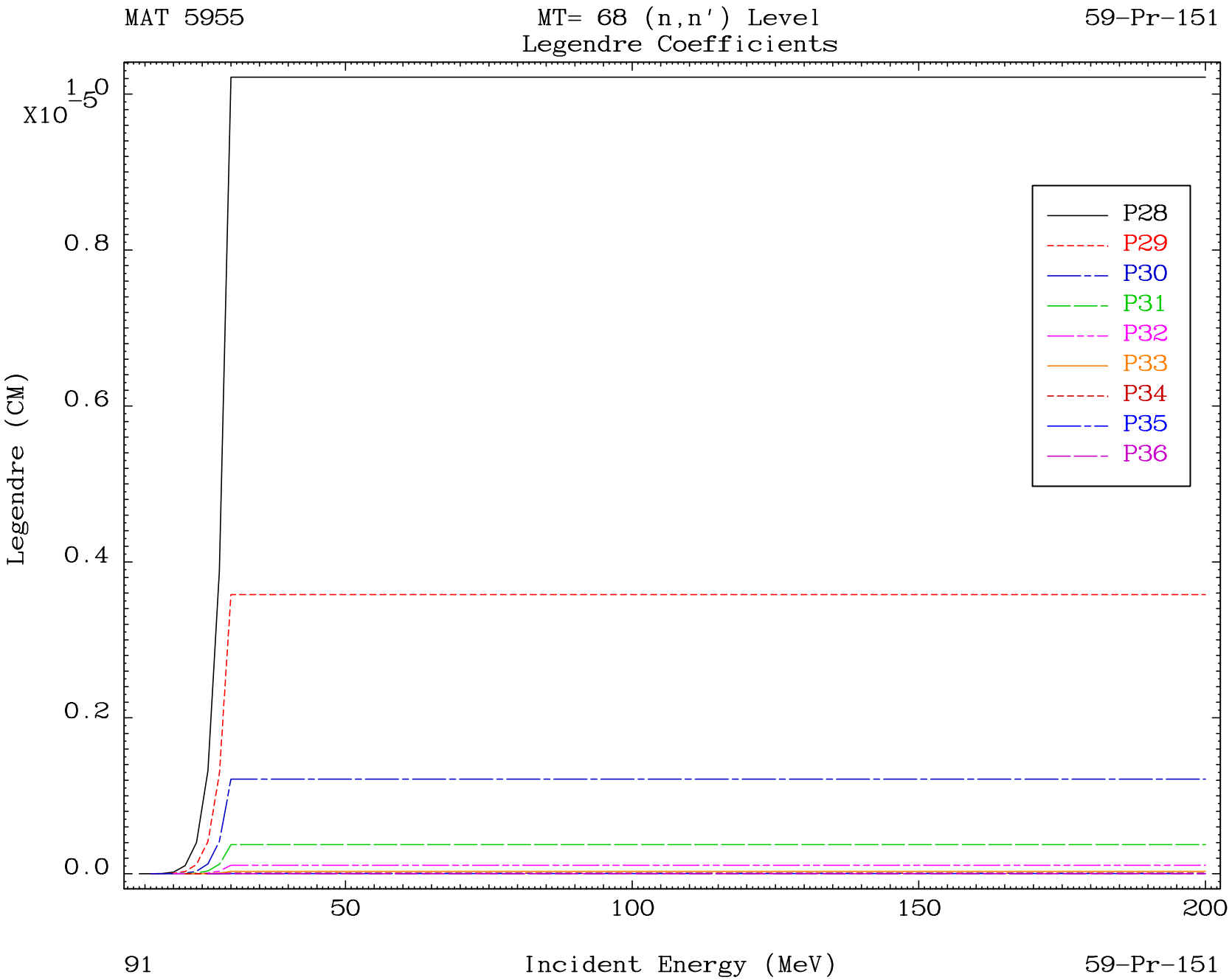

MAT 5955
MT= 67 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
86
Incident Energy (MeV)
59-Pr-151

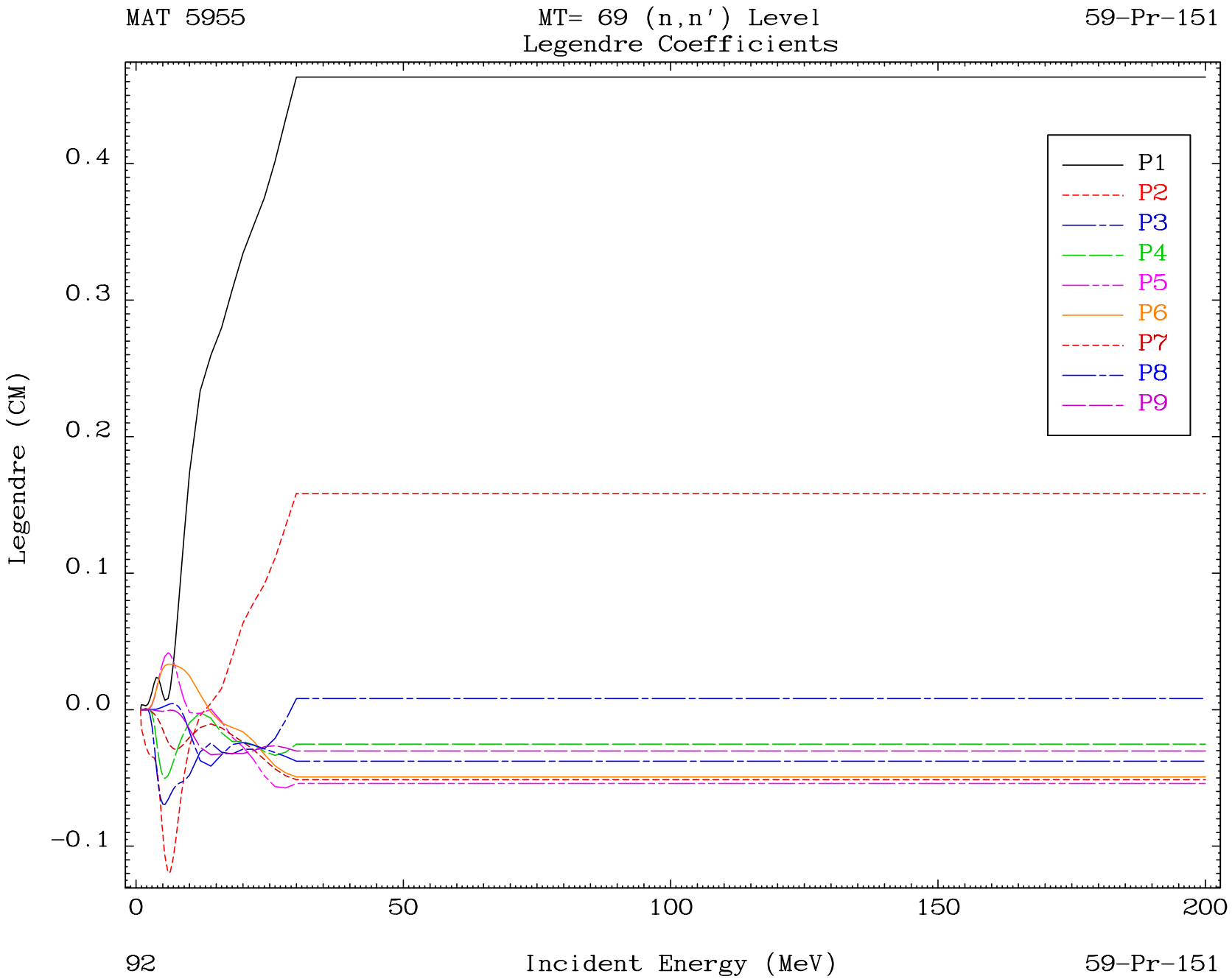

MAT 5955
MT= 67 (n,n') Level
Legendre Coefficients
59-Pr-151
0
X10^-6
-2
-4
-6
Legendre (CM)
50
100
150
200
87
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

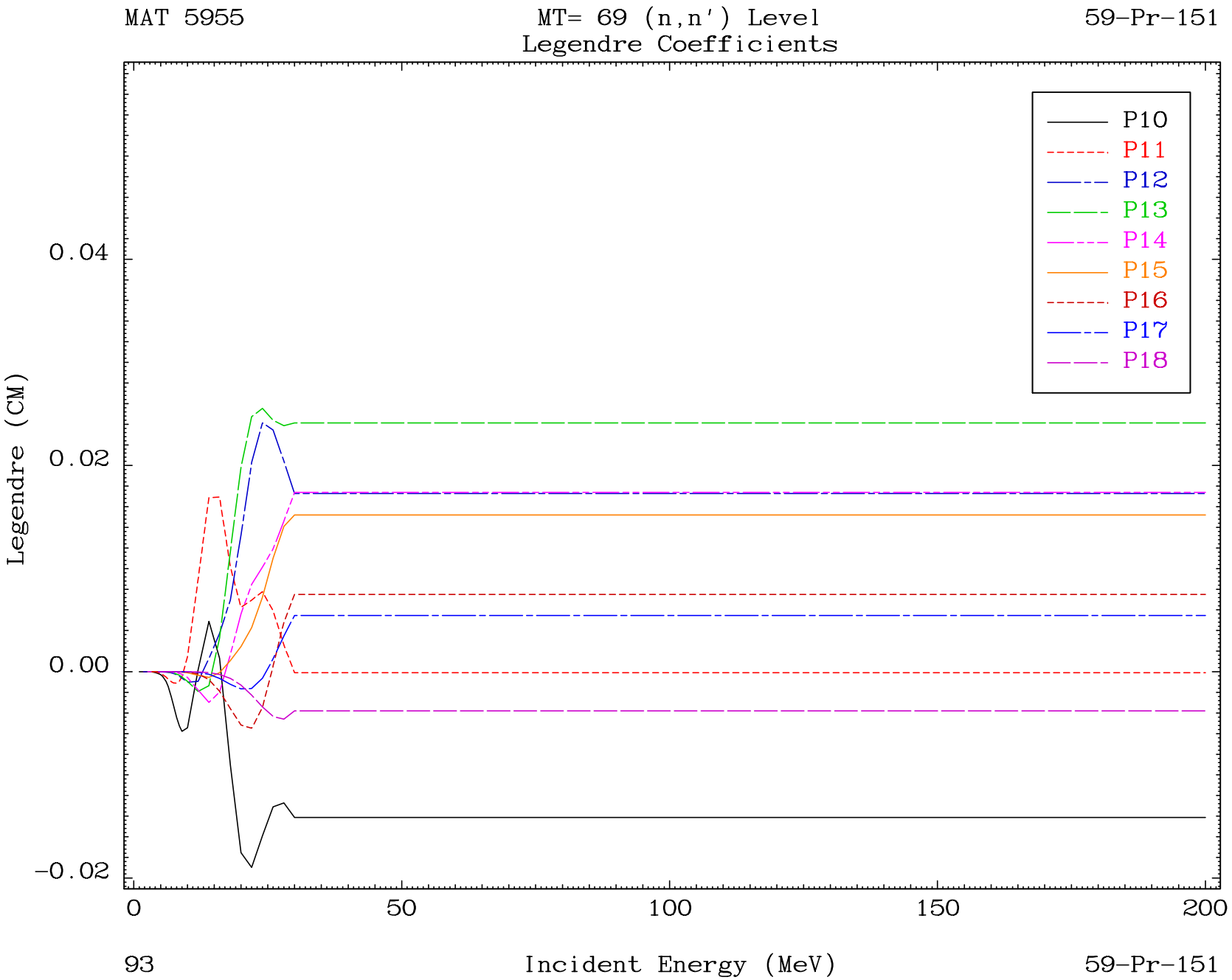

MAT 5955
MT= 68 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
88
Incident Energy (MeV)
59-Pr-151

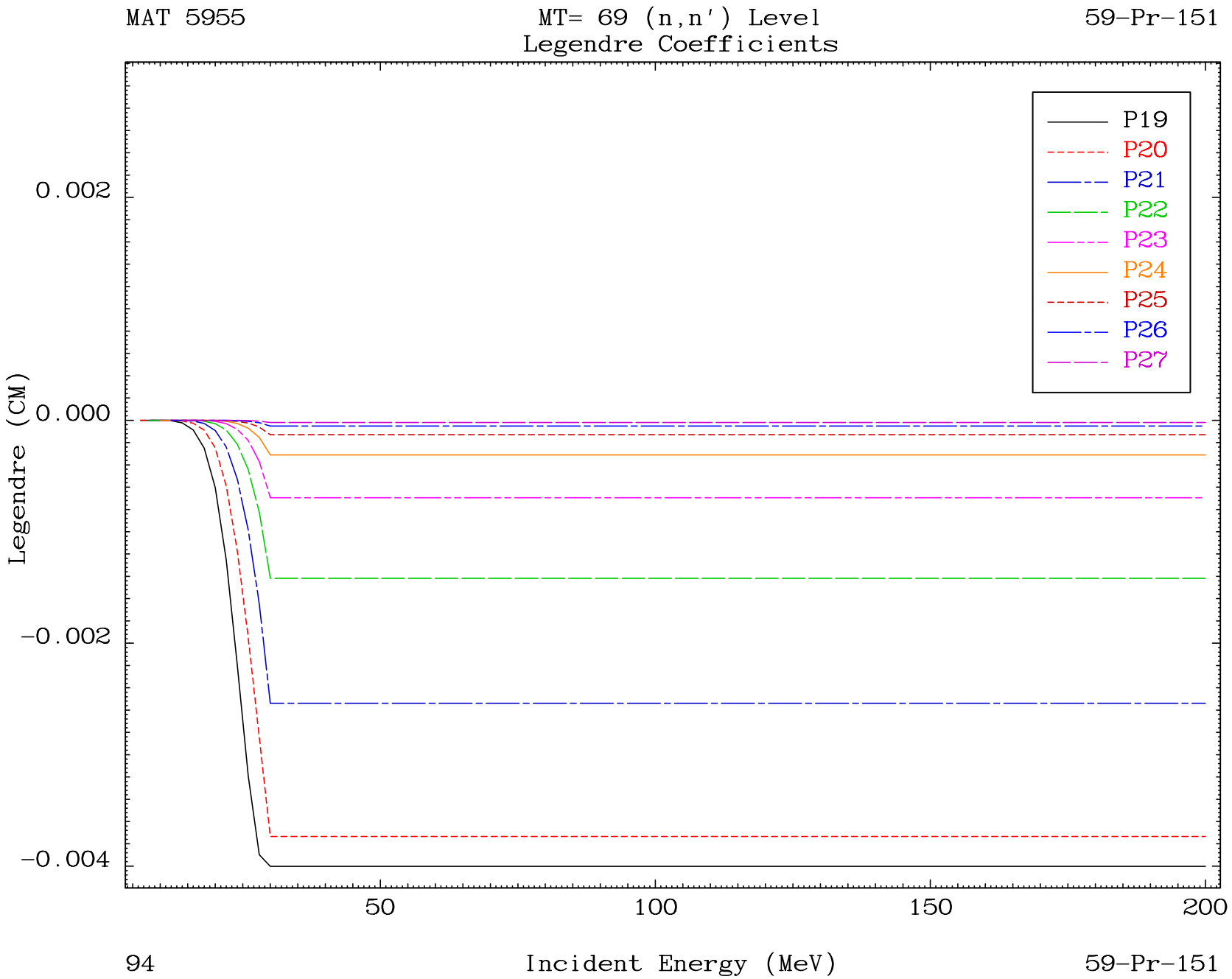

MAT 5955
MT= 68 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
89
Incident Energy (MeV)
59-Pr-151

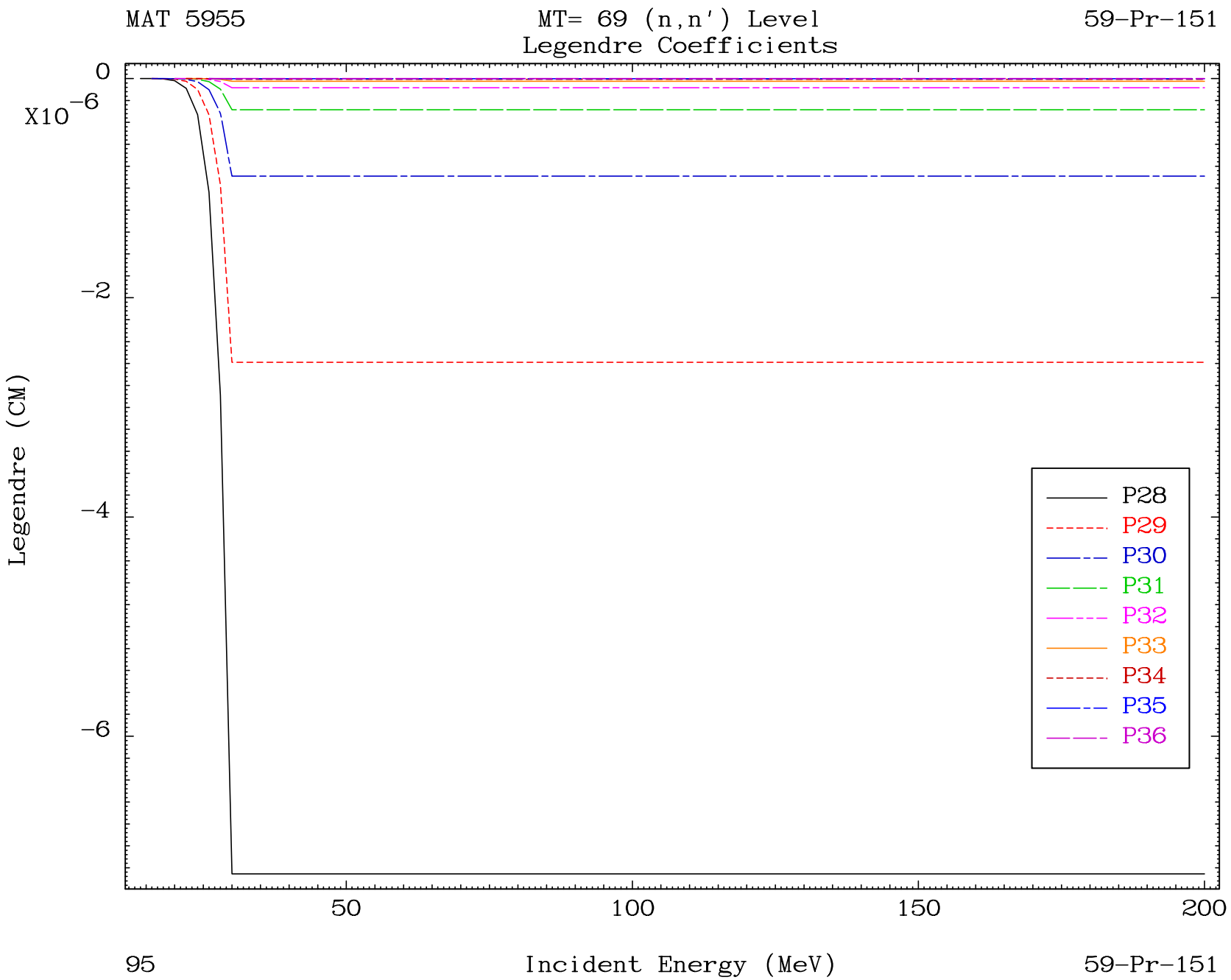

MAT 5955
MT= 68 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
90
Incident Energy (MeV)
59-Pr-151

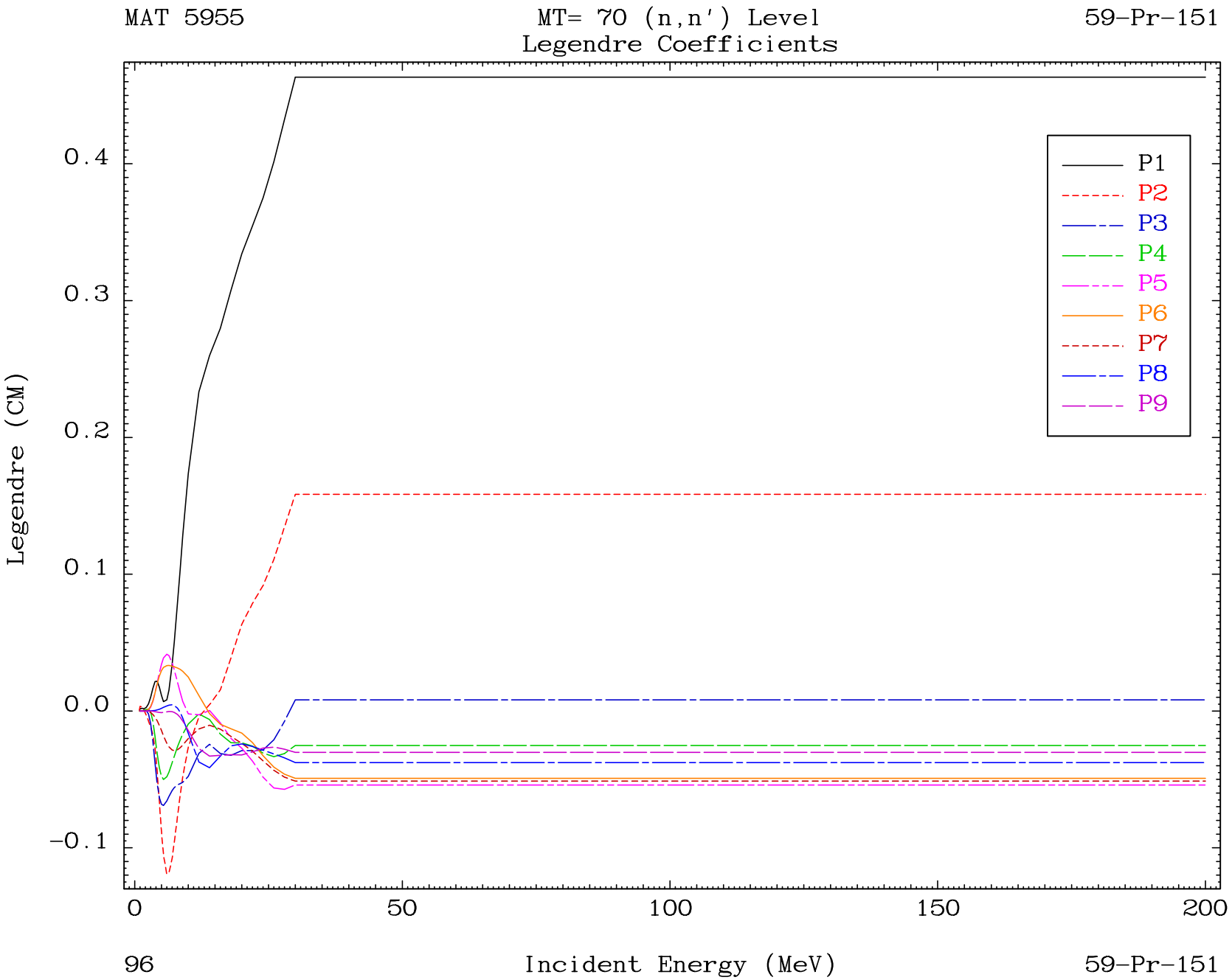

MAT 5955
MT= 68 (n,n') Level
Legendre Coefficients
59-Pr-151
X10-5
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
Incident Energy (MeV)
91
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

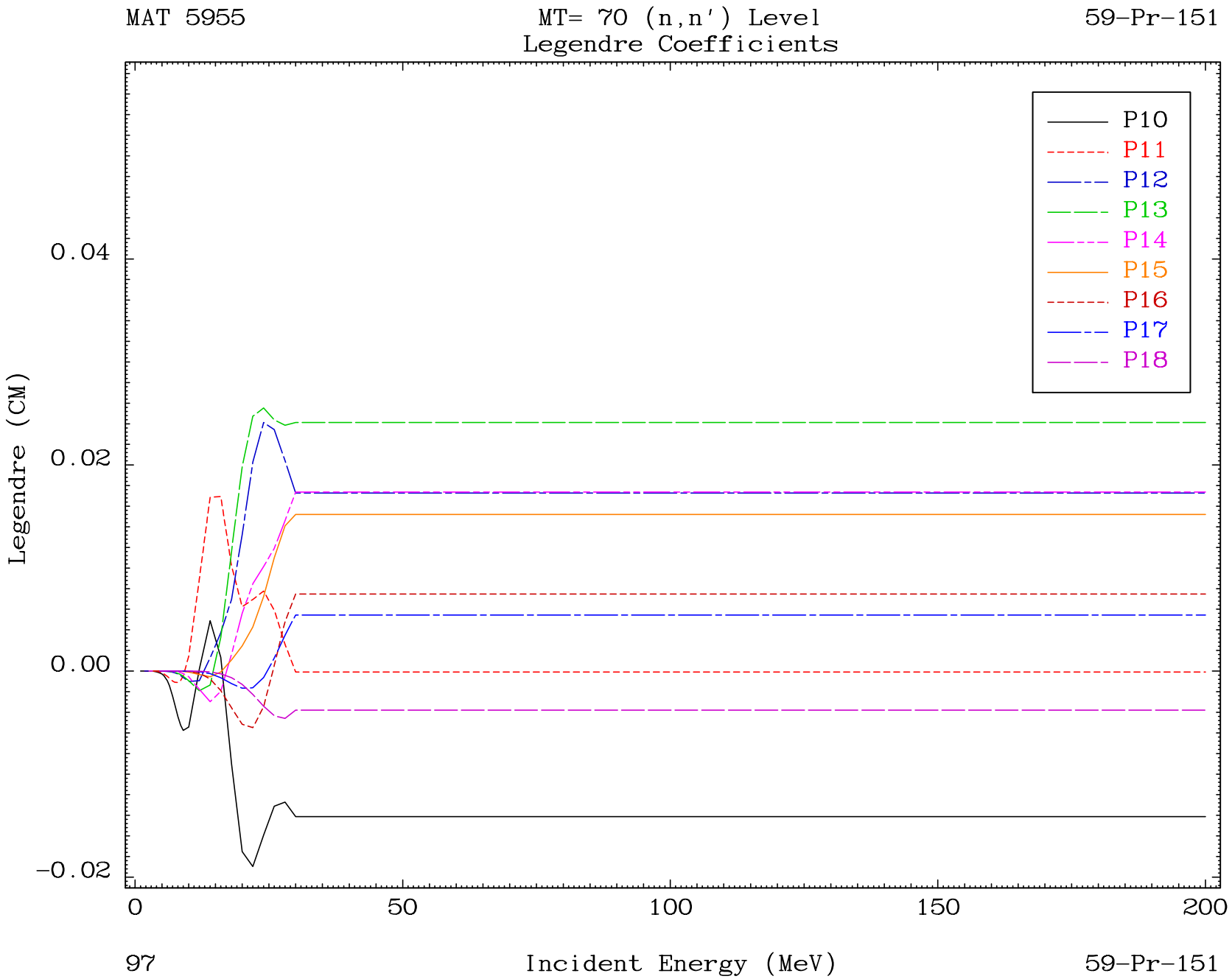

MAT 5955
MT= 69 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
92
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

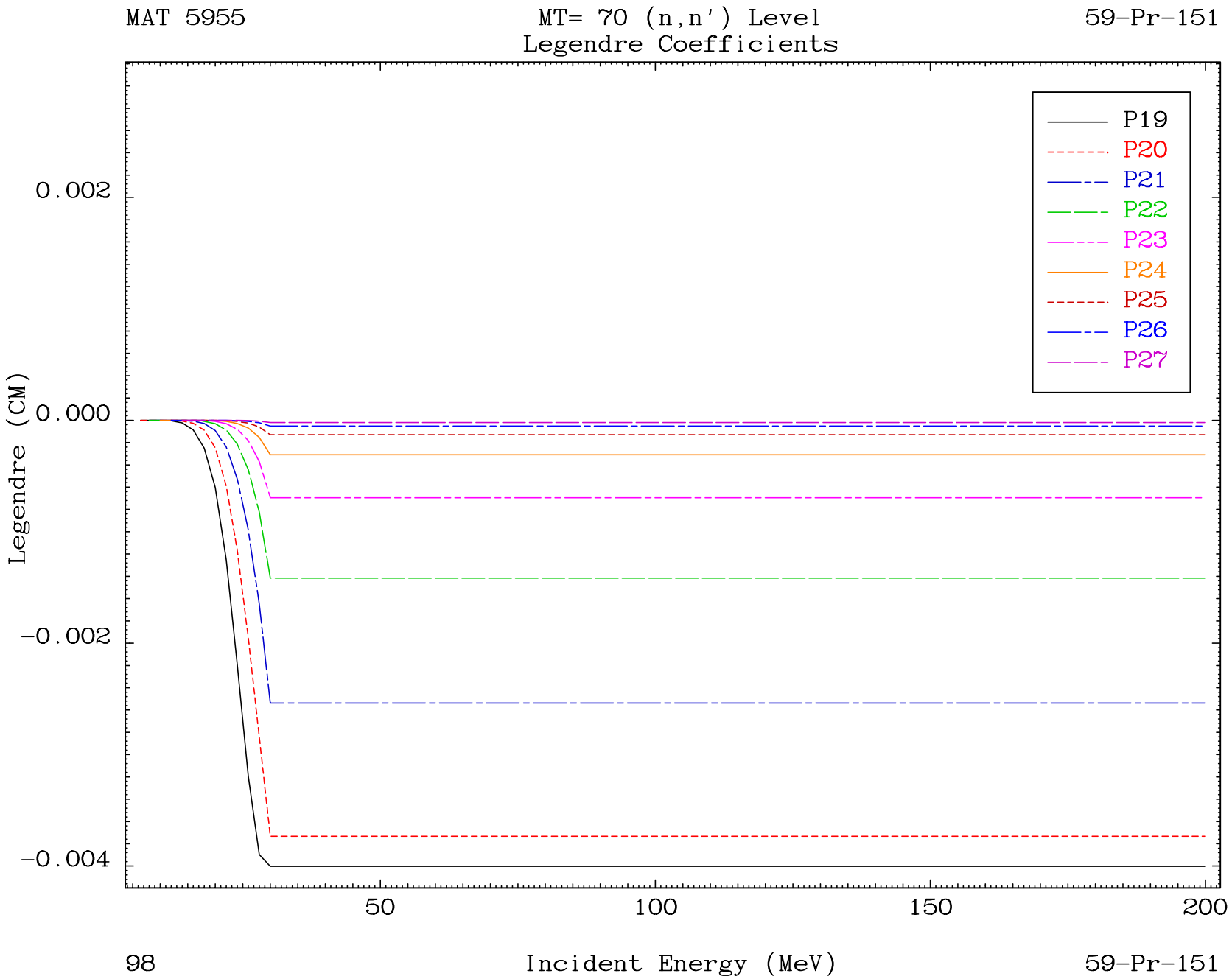

MAT 5955
MT= 69 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
93
Incident Energy (MeV)
59-Pr-151

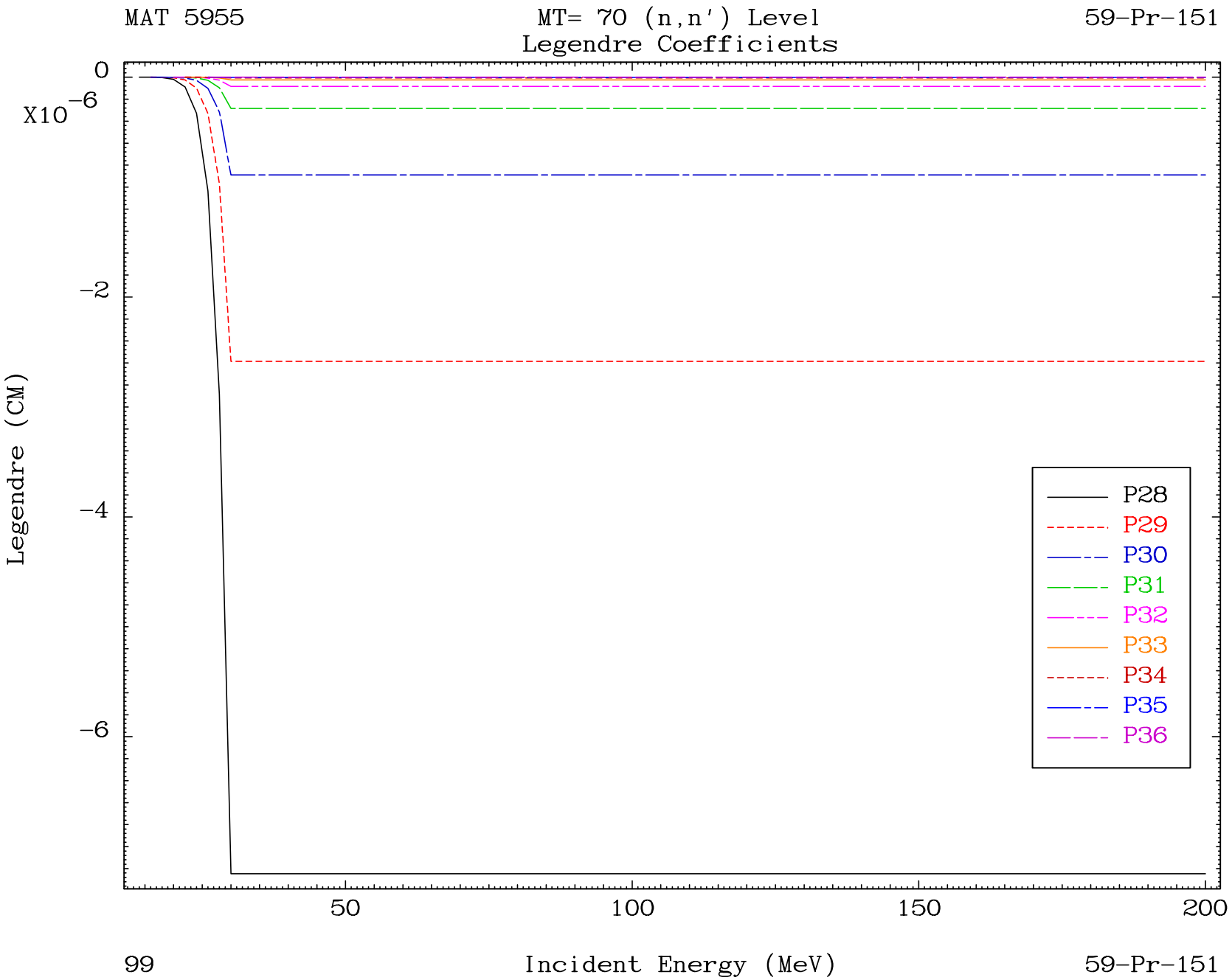

MAT 5955
MT= 69 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
94
Incident Energy (MeV)
59-Pr-151

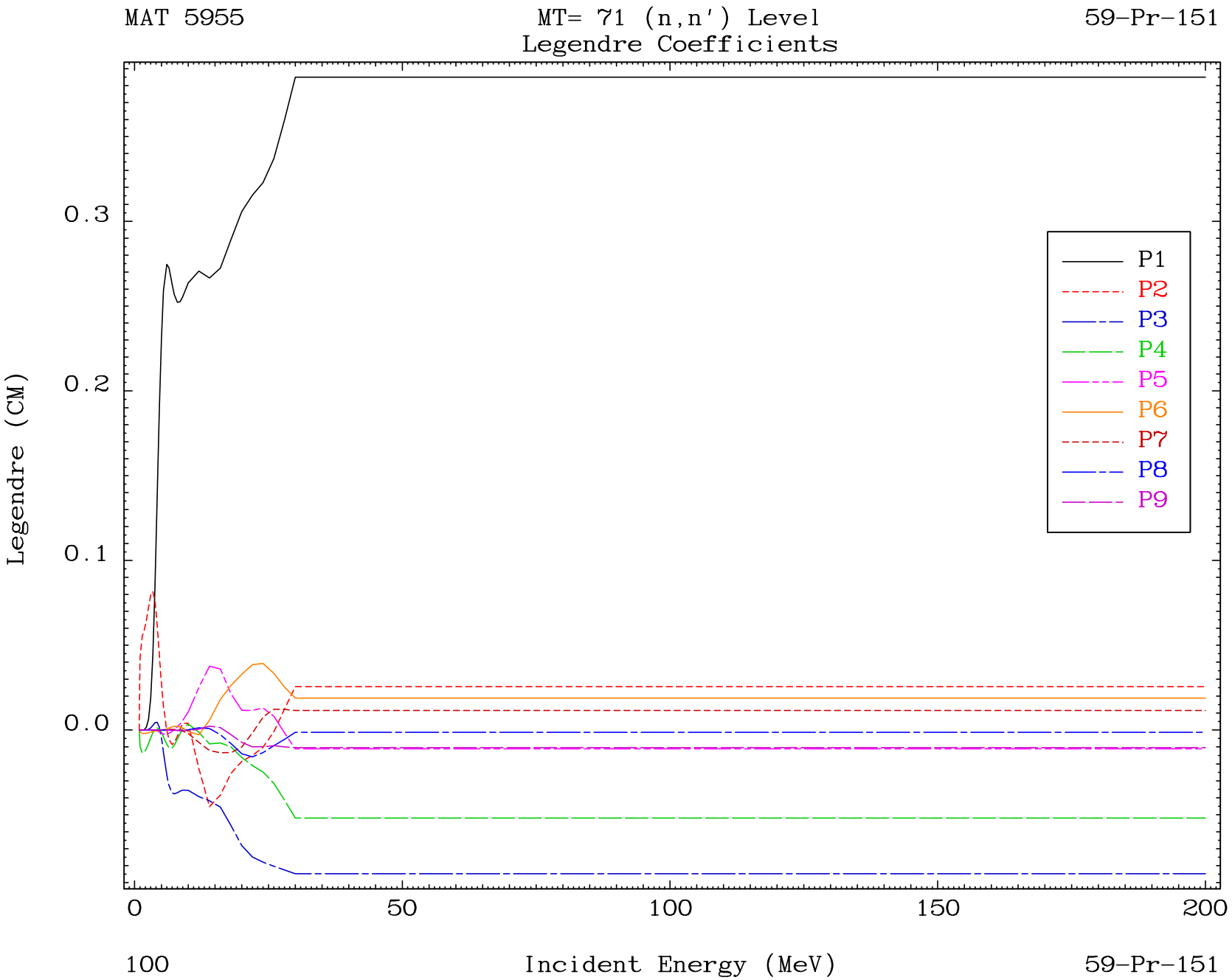

MAT 5955
MT= 69 (n,n') Level
Legendre Coefficients
59-Pr-151
0
X10−6
−2
−4
−6
Legendre (CM)
50
100
150
200
95
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

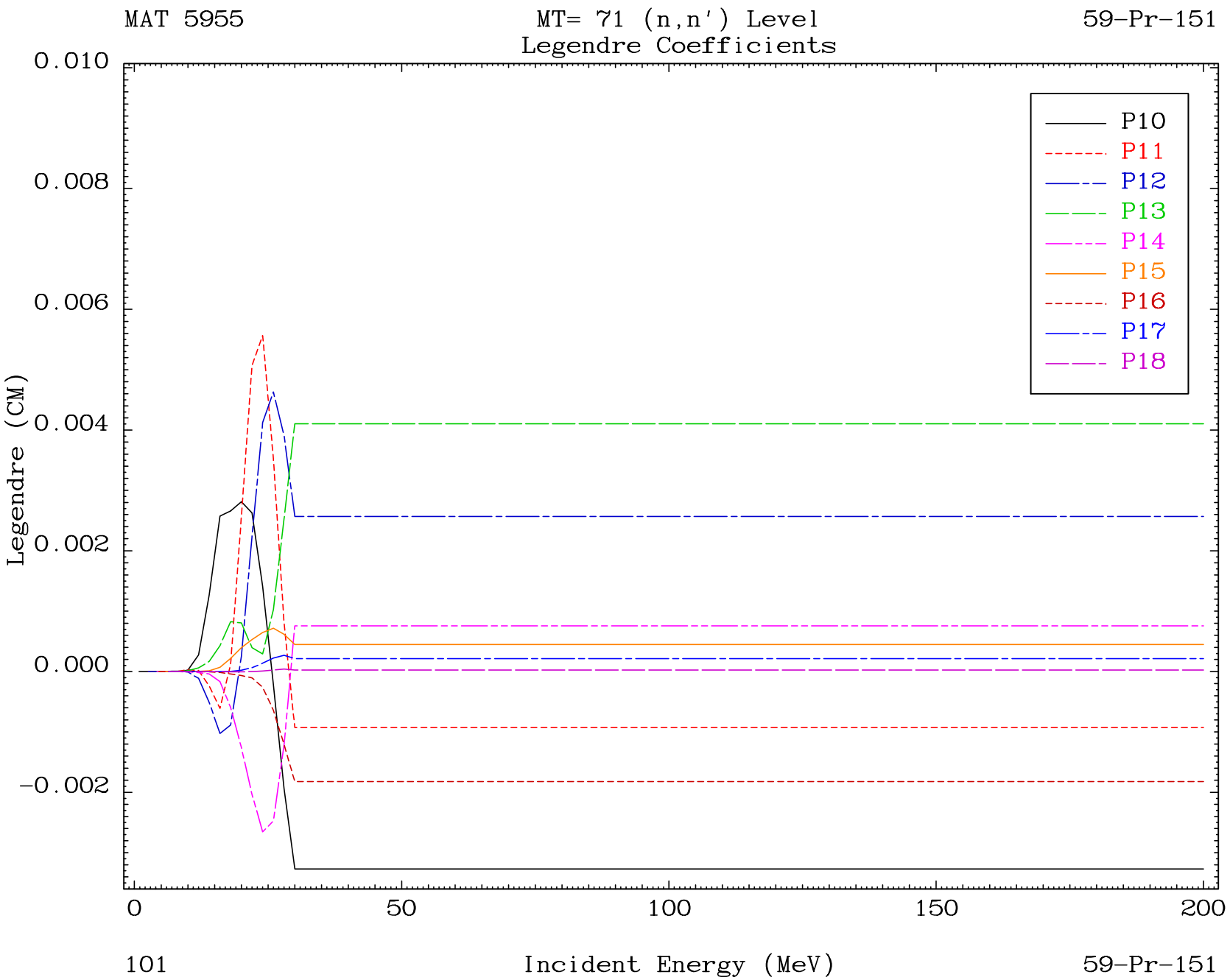

MAT 5955
MT= 70 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
96
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

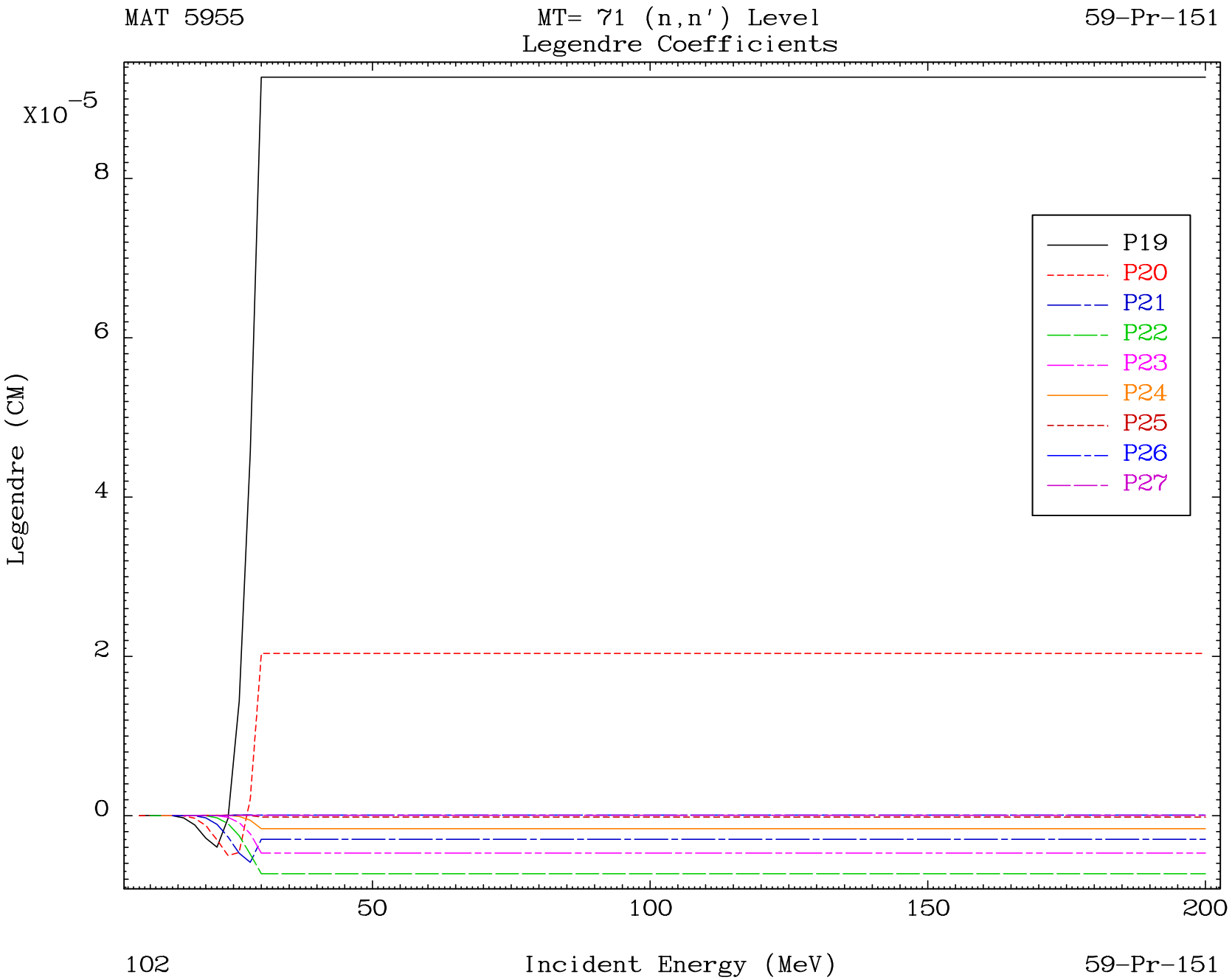

MAT 5955
MT= 70 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
97
Incident Energy (MeV)
59-Pr-151

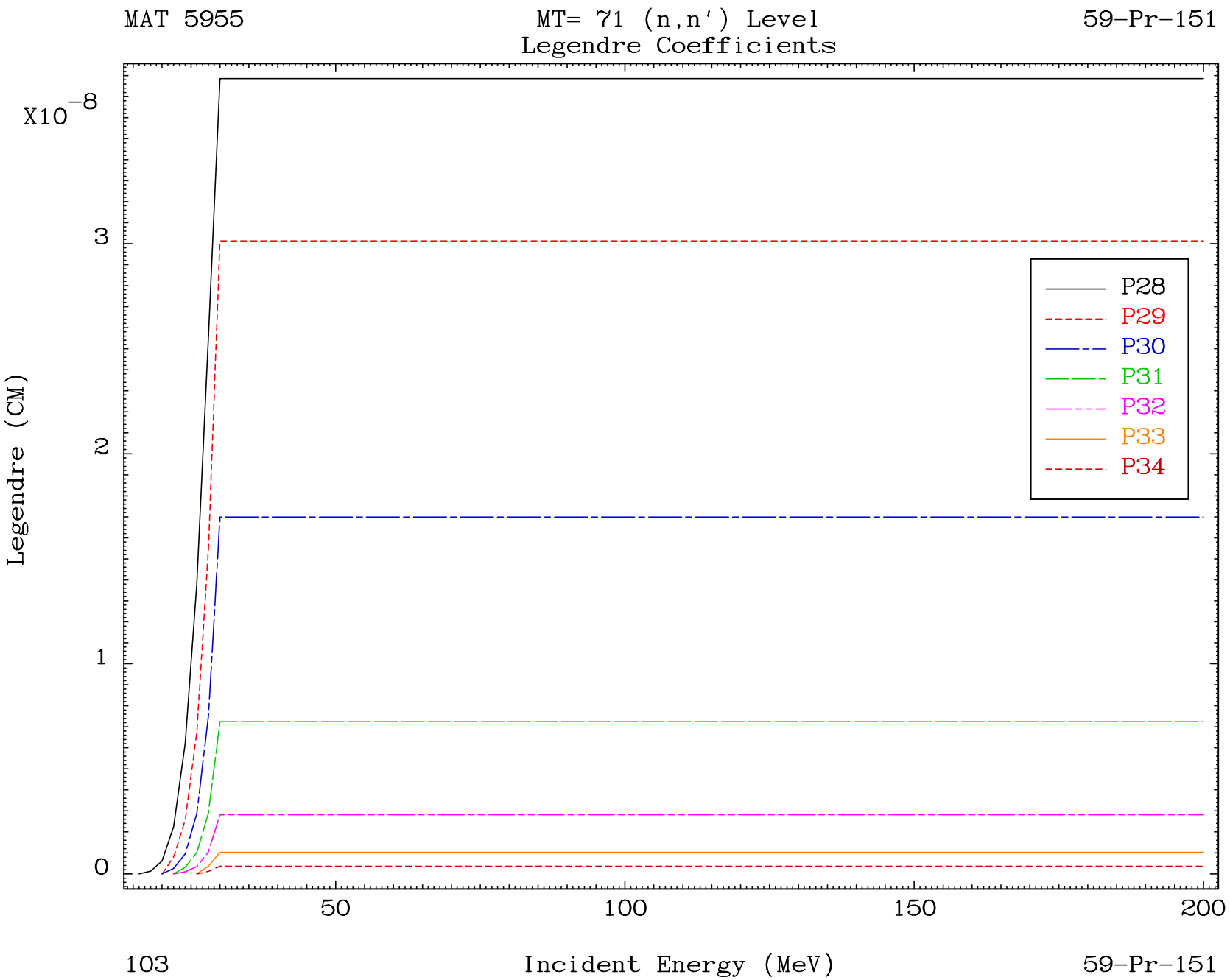

MAT 5955
MT= 70 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
98
Incident Energy (MeV)
59-Pr-151

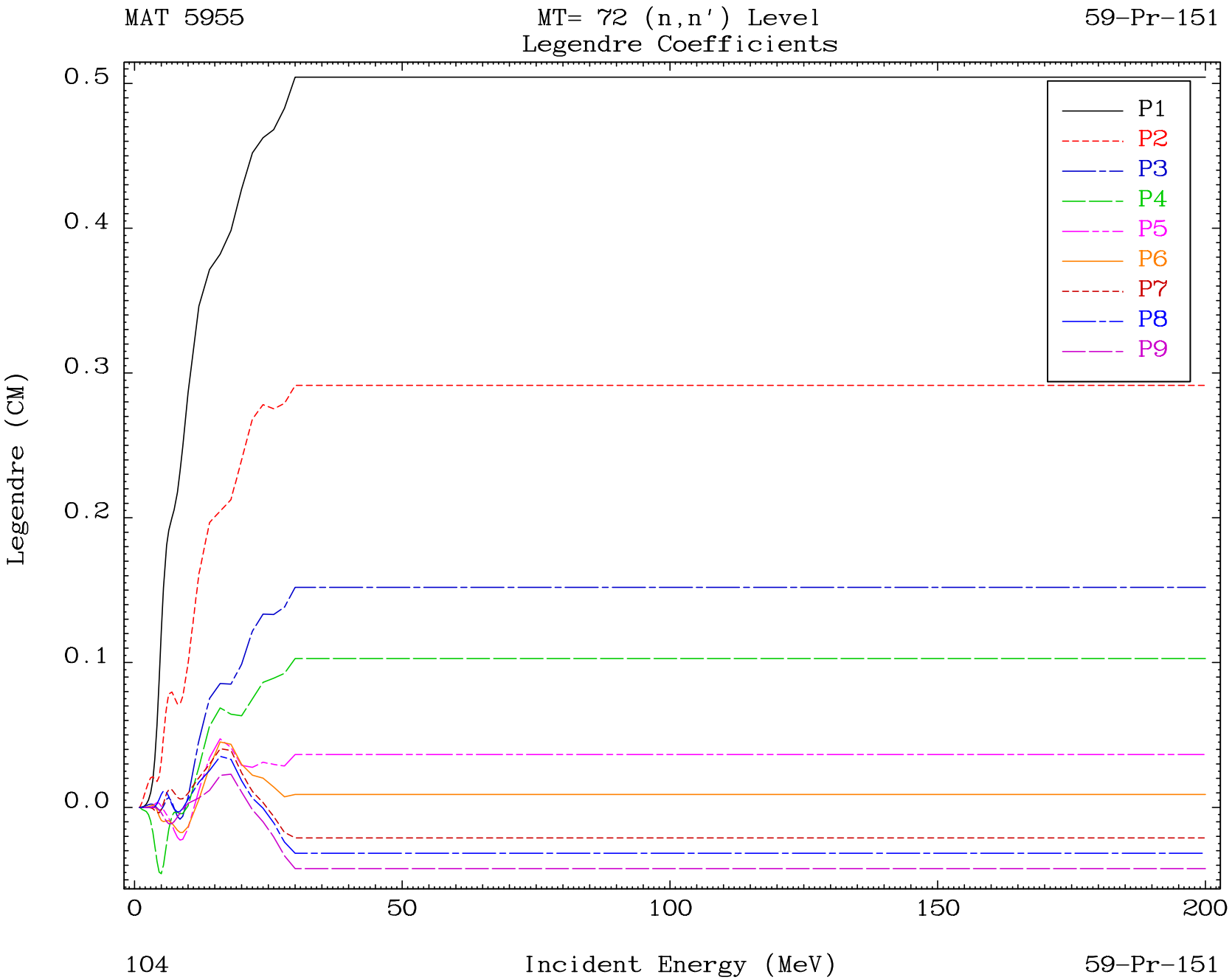

MAT 5955
MT= 70 (n,n') Level
Legendre Coefficients
59-Pr-151
0
X10−6
−2
−4
−6
Legendre (CM)
50
100
150
200
99
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

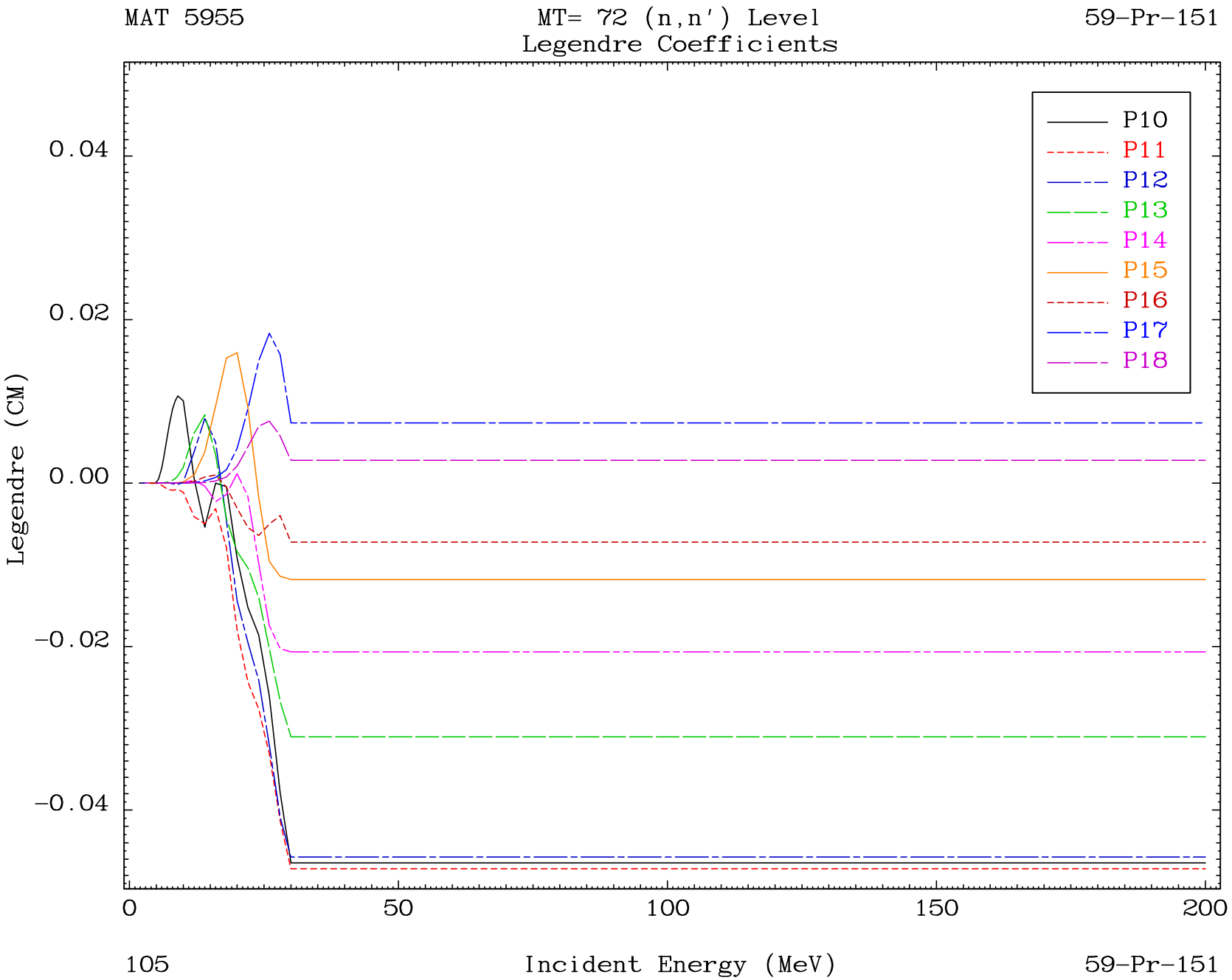

MAT 5955
MT= 71 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.3
0.2
0.1
0.0
0
50
100
150
200
100
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

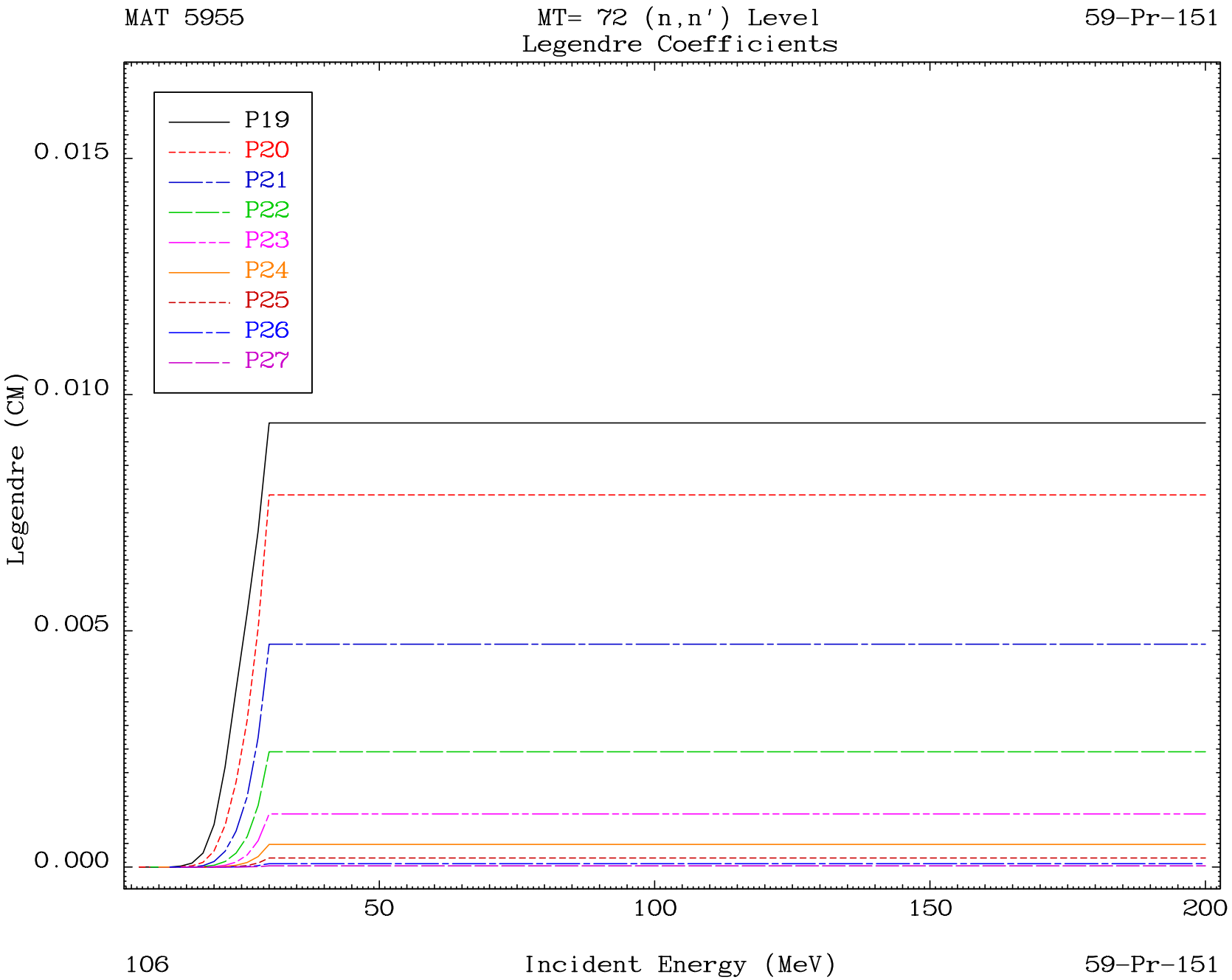

MAT 5955
MT= 71 (n,n') Level
Legendre Coefficients
59-Pr-151
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
101
Incident Energy (MeV)
59-Pr-151

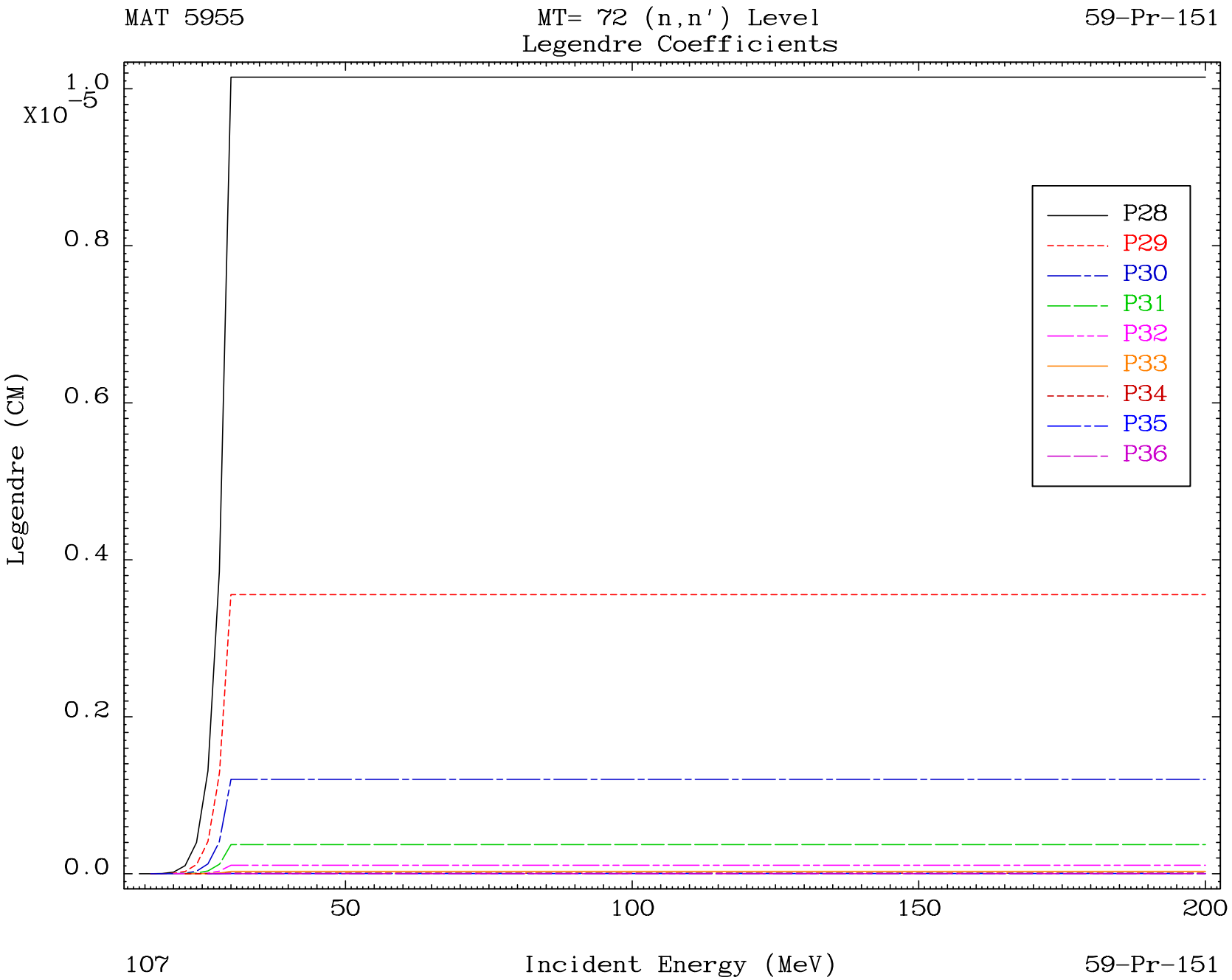

MAT 5955
MT= 71 (n,n') Level
Legendre Coefficients
59-Pr-151
X10-5
8
6
4
2
0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
102
Incident Energy (MeV)
59-Pr-151

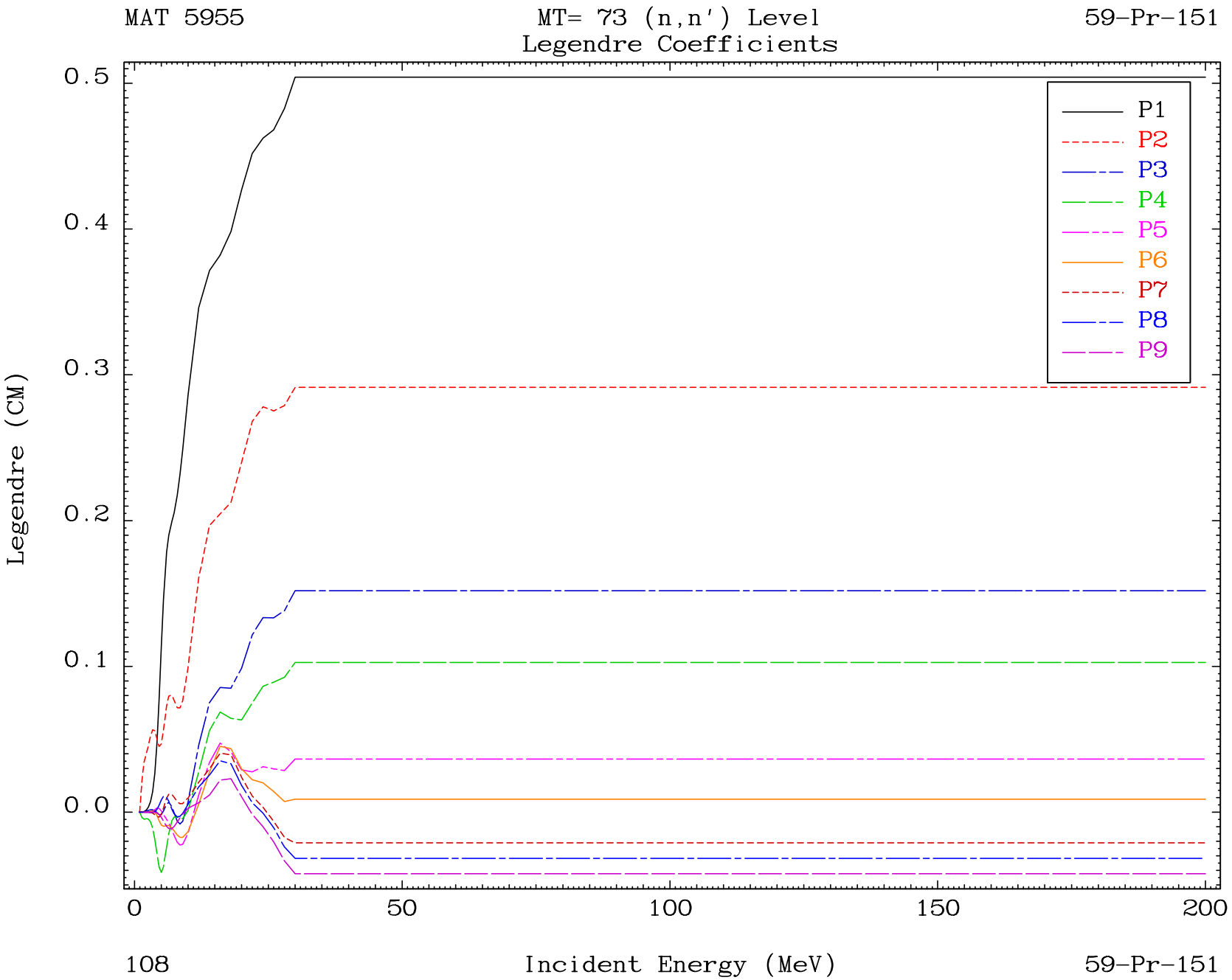

MAT 5955
MT= 71 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-8
3
2
1
0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
50
100
150
200
103
Incident Energy (MeV)
59-Pr-151

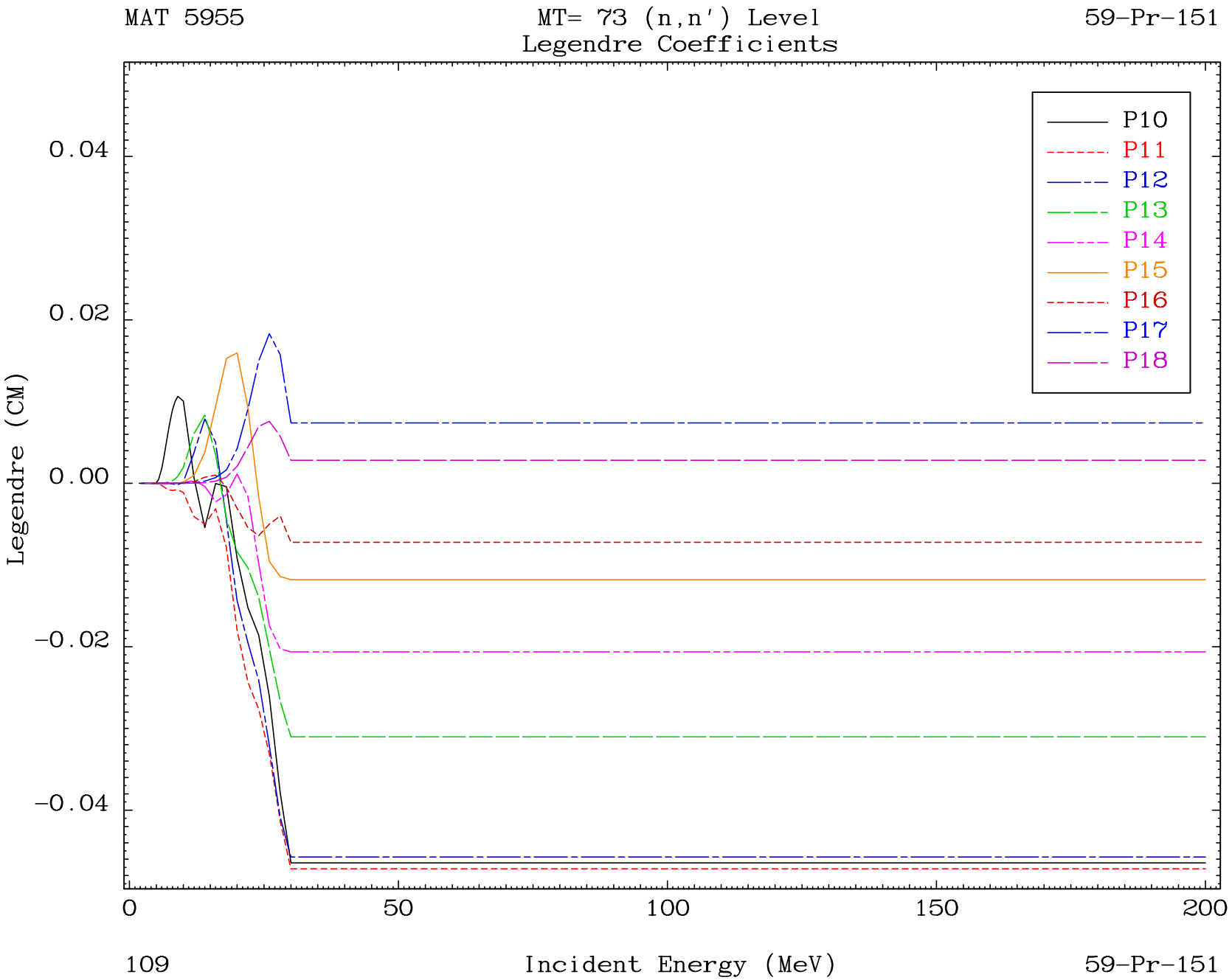

MAT 5955
MT= 72 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
104
Incident Energy (MeV)
59-Pr-151

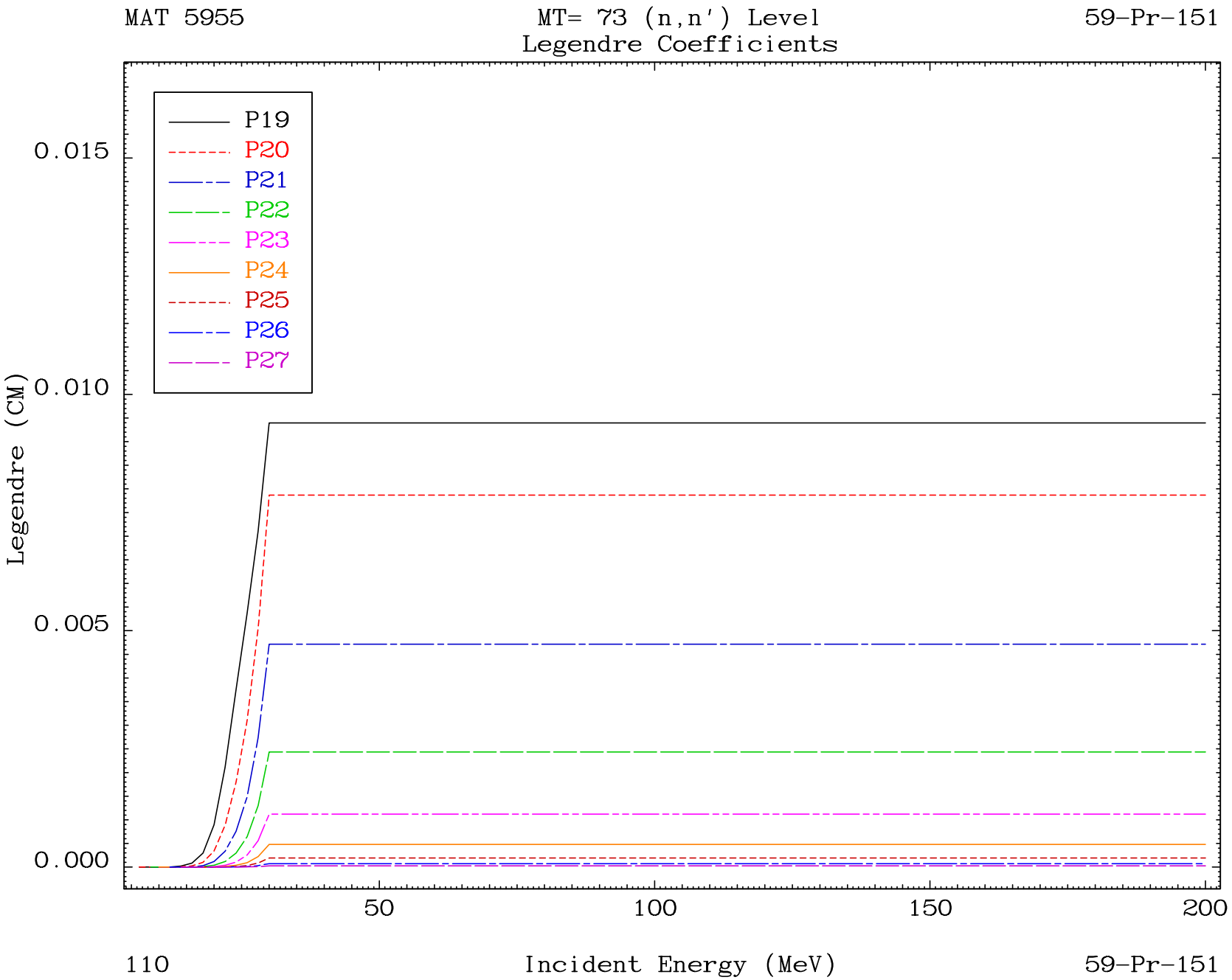

MAT 5955
MT= 72 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
105
Incident Energy (MeV)
59-Pr-151

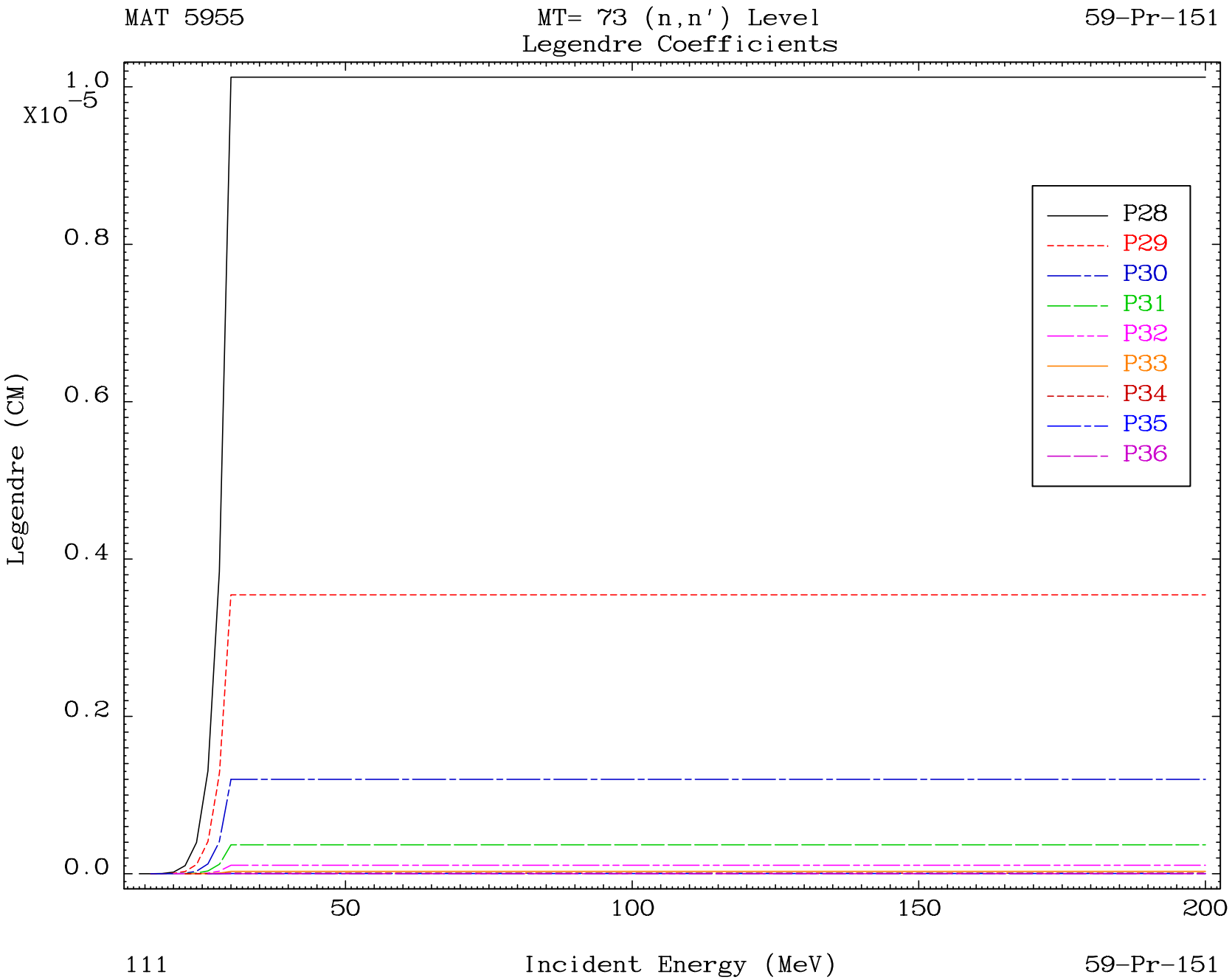

MAT 5955
MT= 72 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
106
Incident Energy (MeV)
59-Pr-151

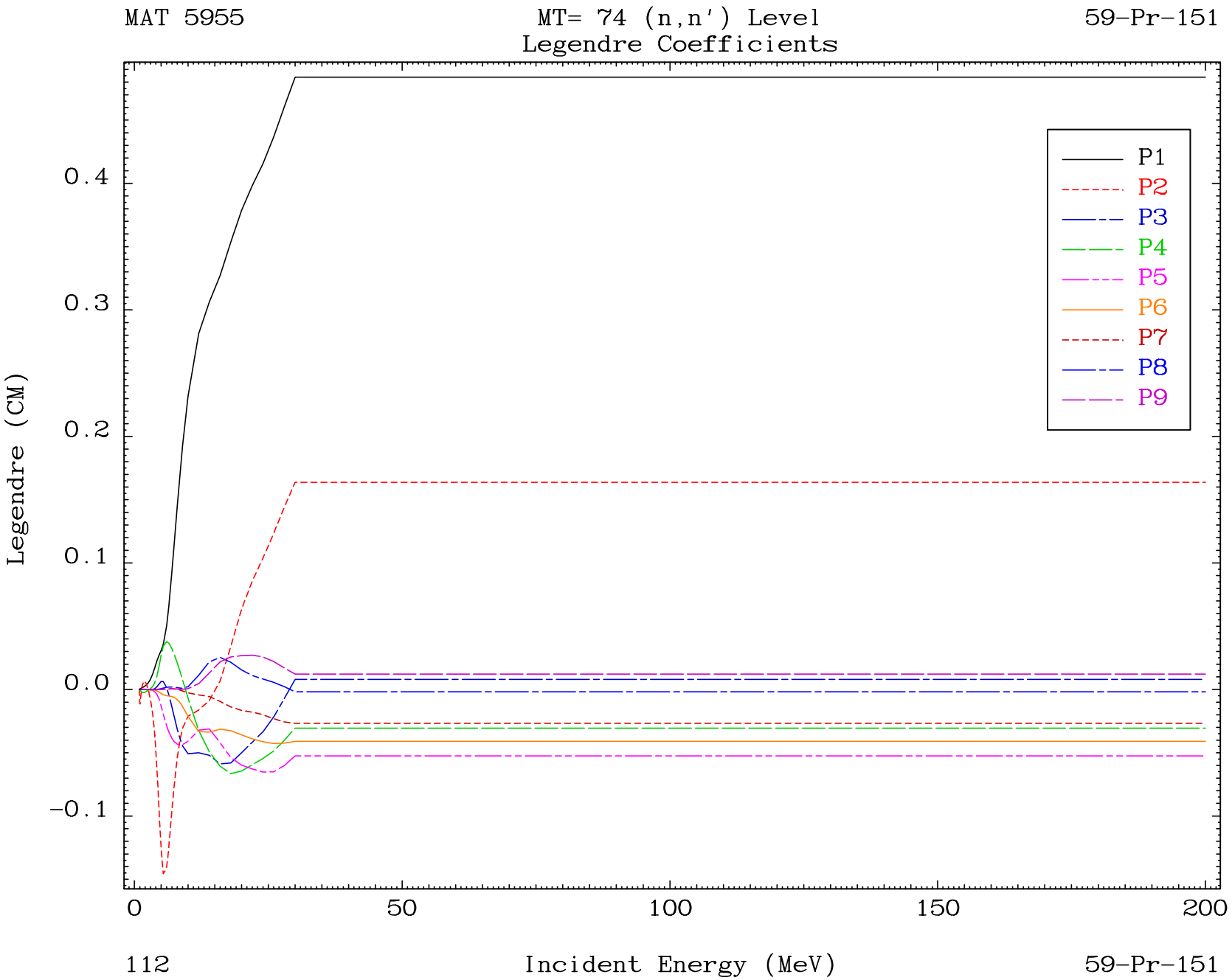

MAT 5955
MT= 72 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 -5
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
107
Incident Energy (MeV)
59-Pr-151

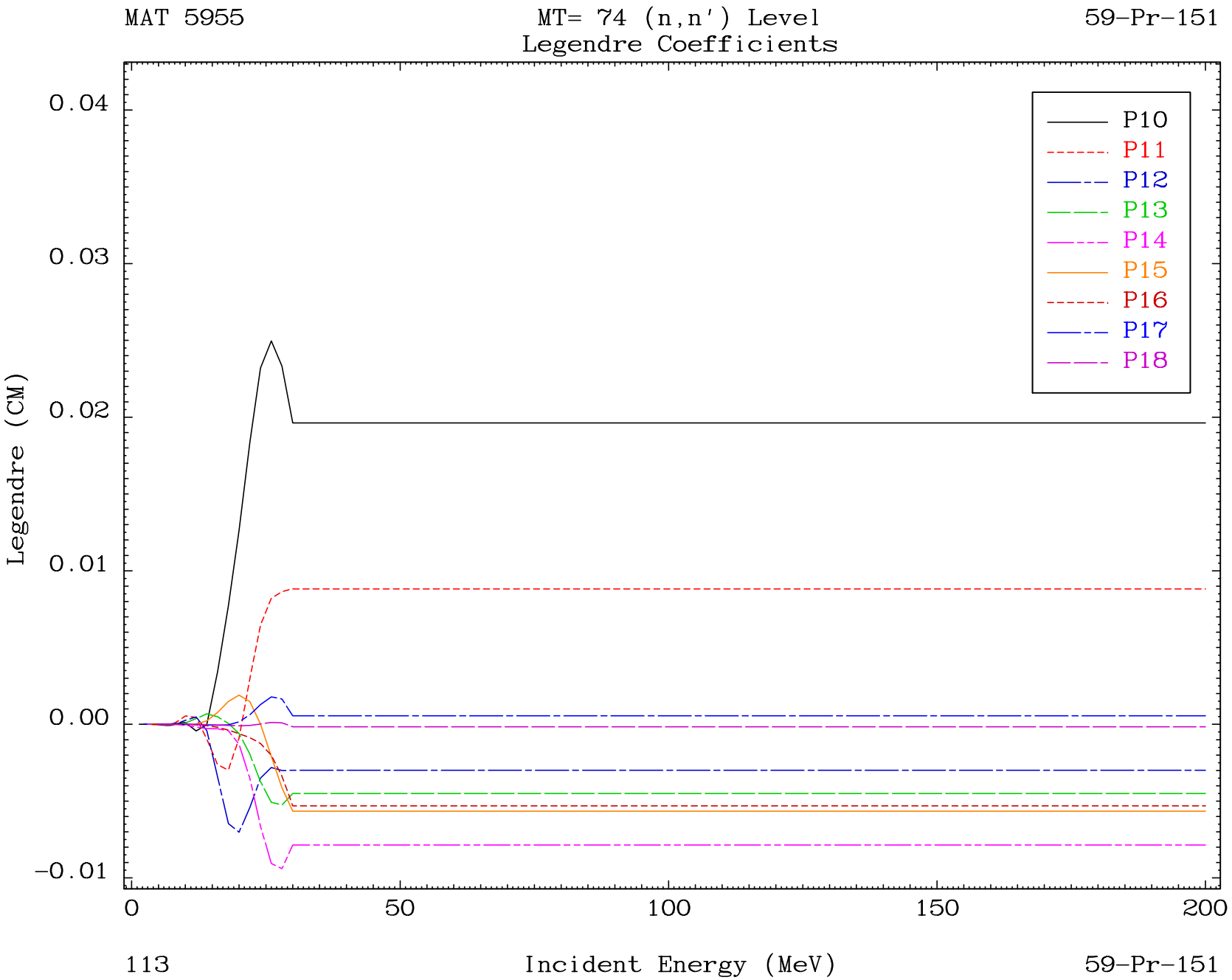

MAT 5955
MT= 73 (n,n') Level
Legendre Coefficients
59-Pr-151
0.5
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
108
Incident Energy (MeV)
59-Pr-151

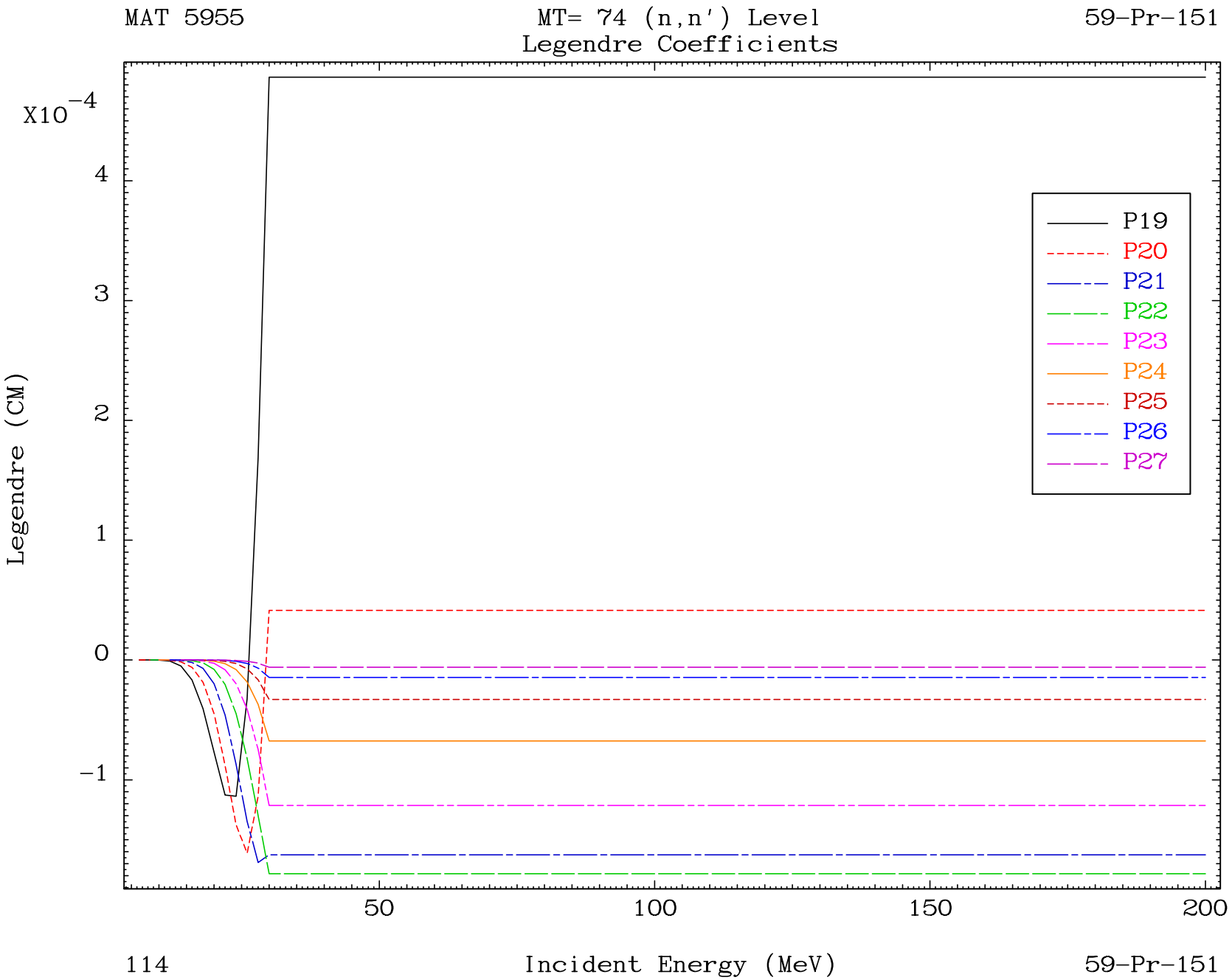

MAT 5955
MT= 73 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
109
Incident Energy (MeV)
59-Pr-151

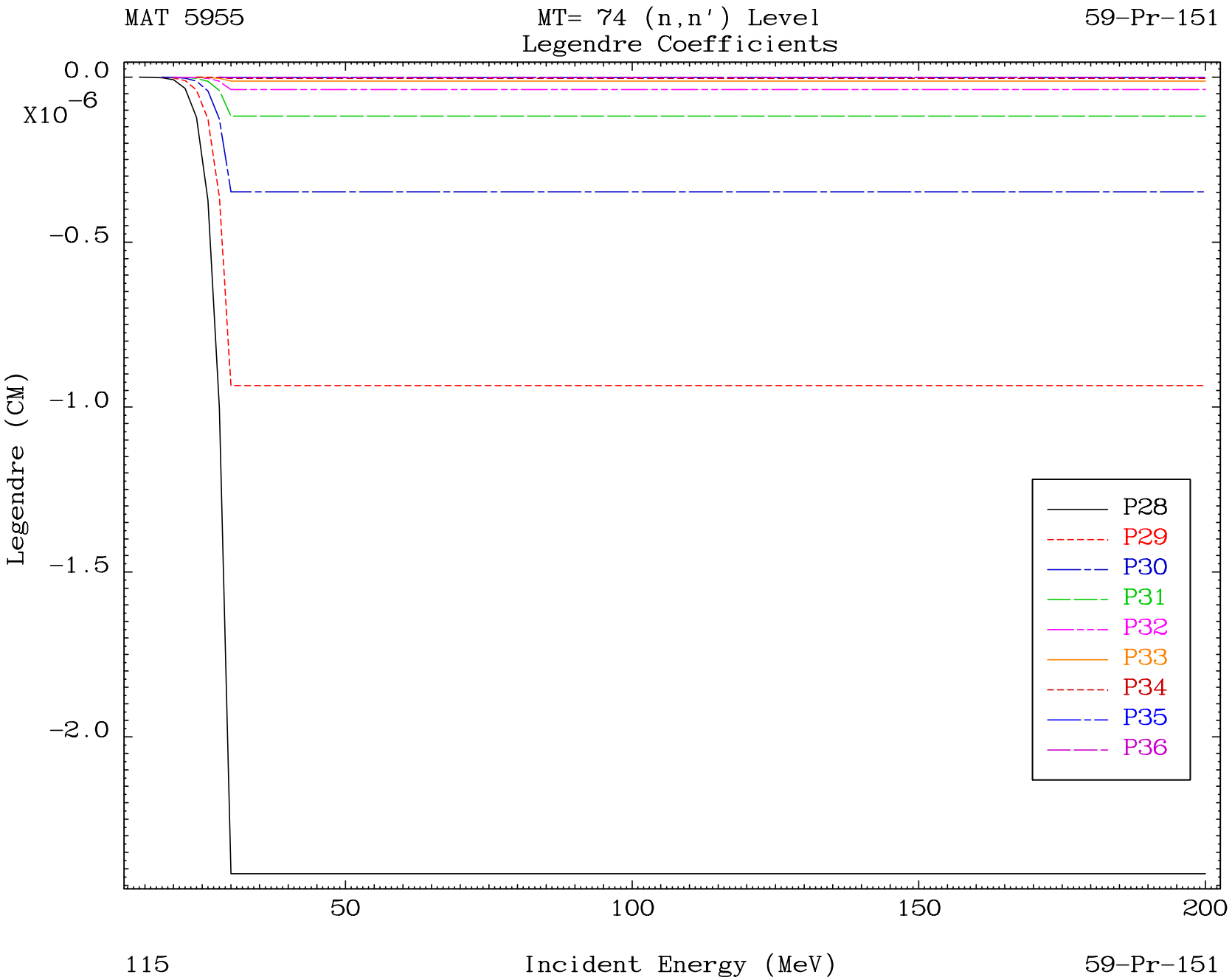

MAT 5955
MT= 73 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
110
Incident Energy (MeV)
59-Pr-151

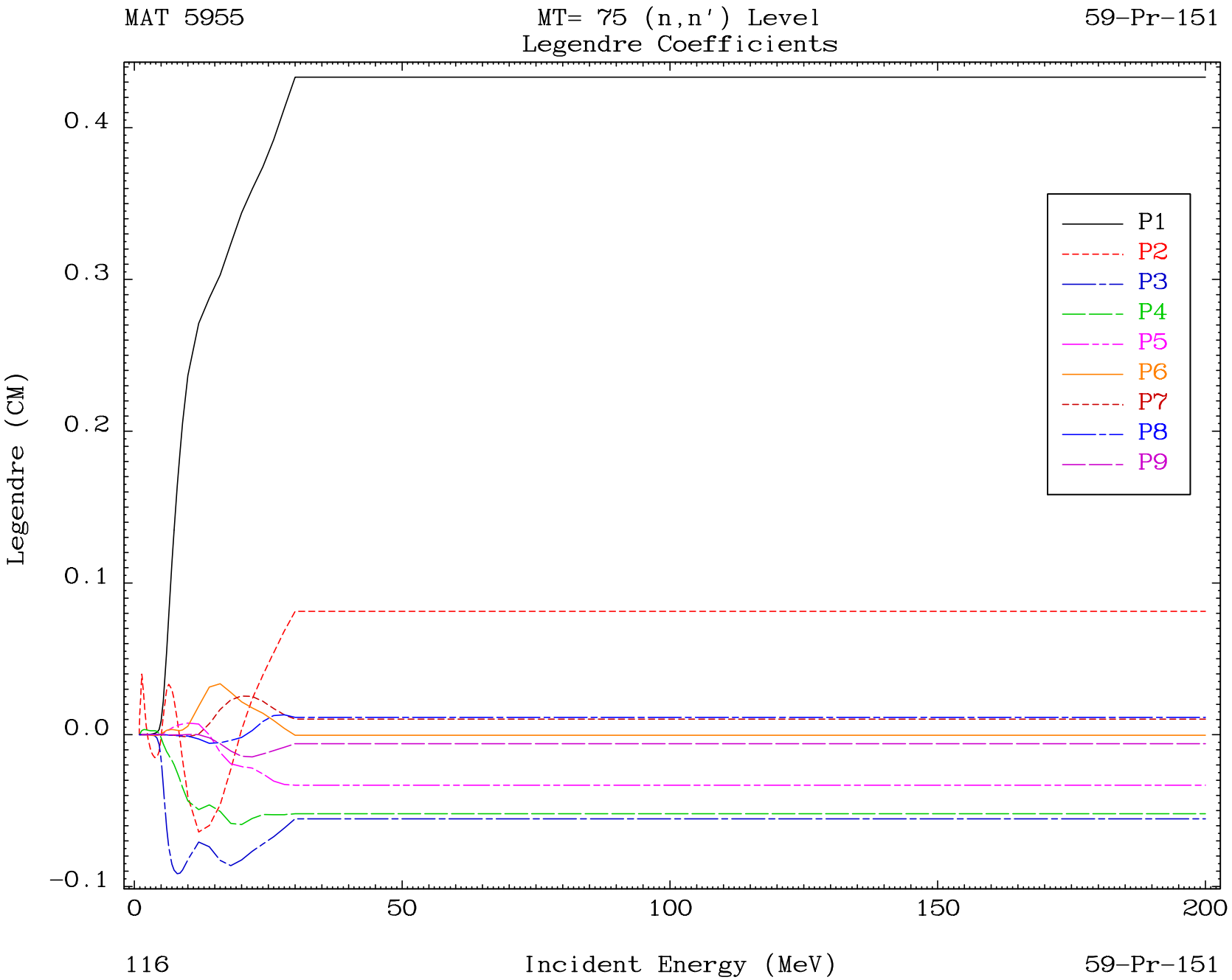

MAT 5955
MT= 73 (n,n') Level
Legendre Coefficients
59-Pr-151
X10 -5
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
111
Incident Energy (MeV)
59-Pr-151

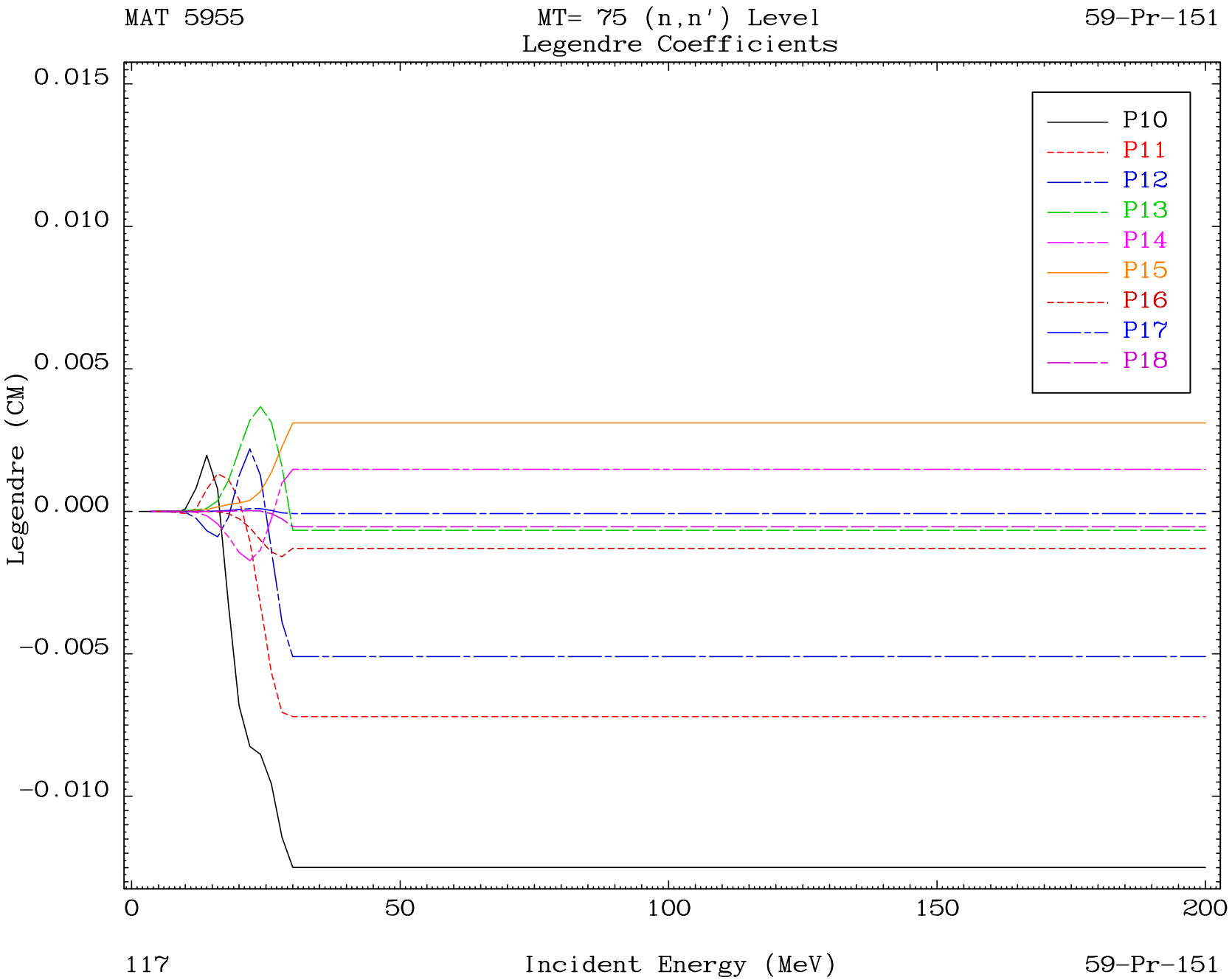

MAT 5955
MT= 74 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
112
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

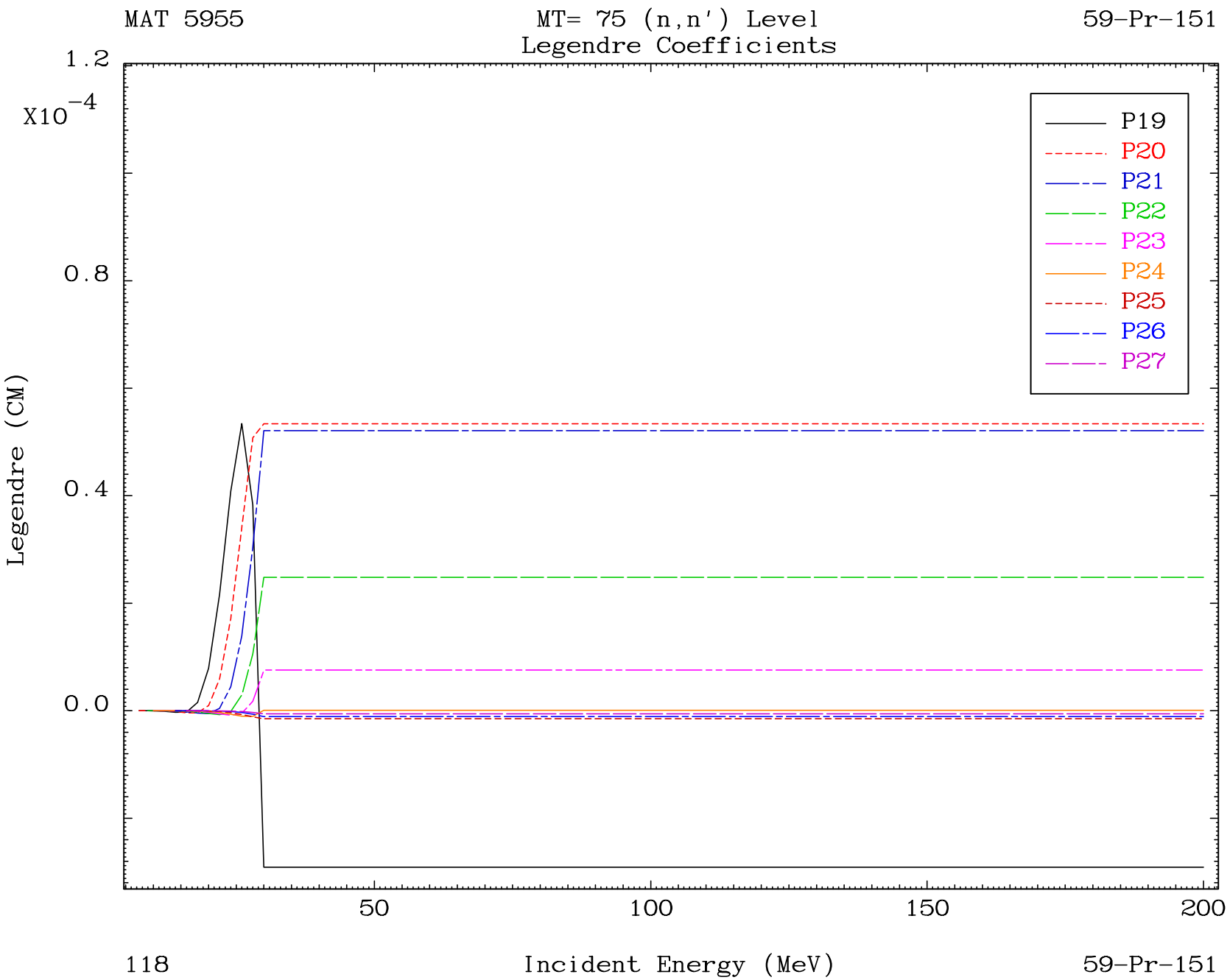

MAT 5955
MT= 74 (n,n') Level
Legendre Coefficients
59-Pr-151
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
113
Incident Energy (MeV)
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18

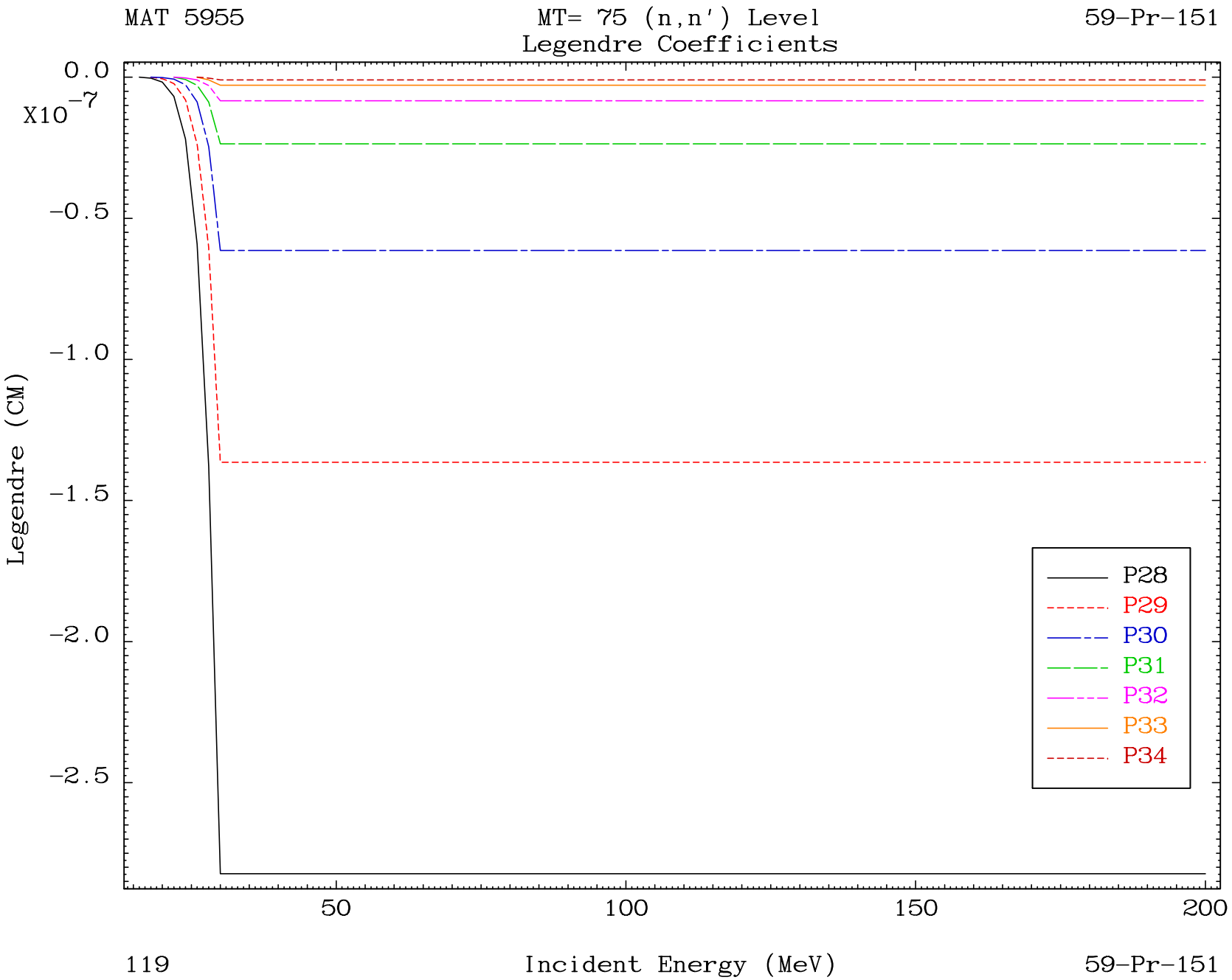

MAT 5955
MT= 74 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
4
3
2
1
0
-1
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
114
Incident Energy (MeV)
59-Pr-151

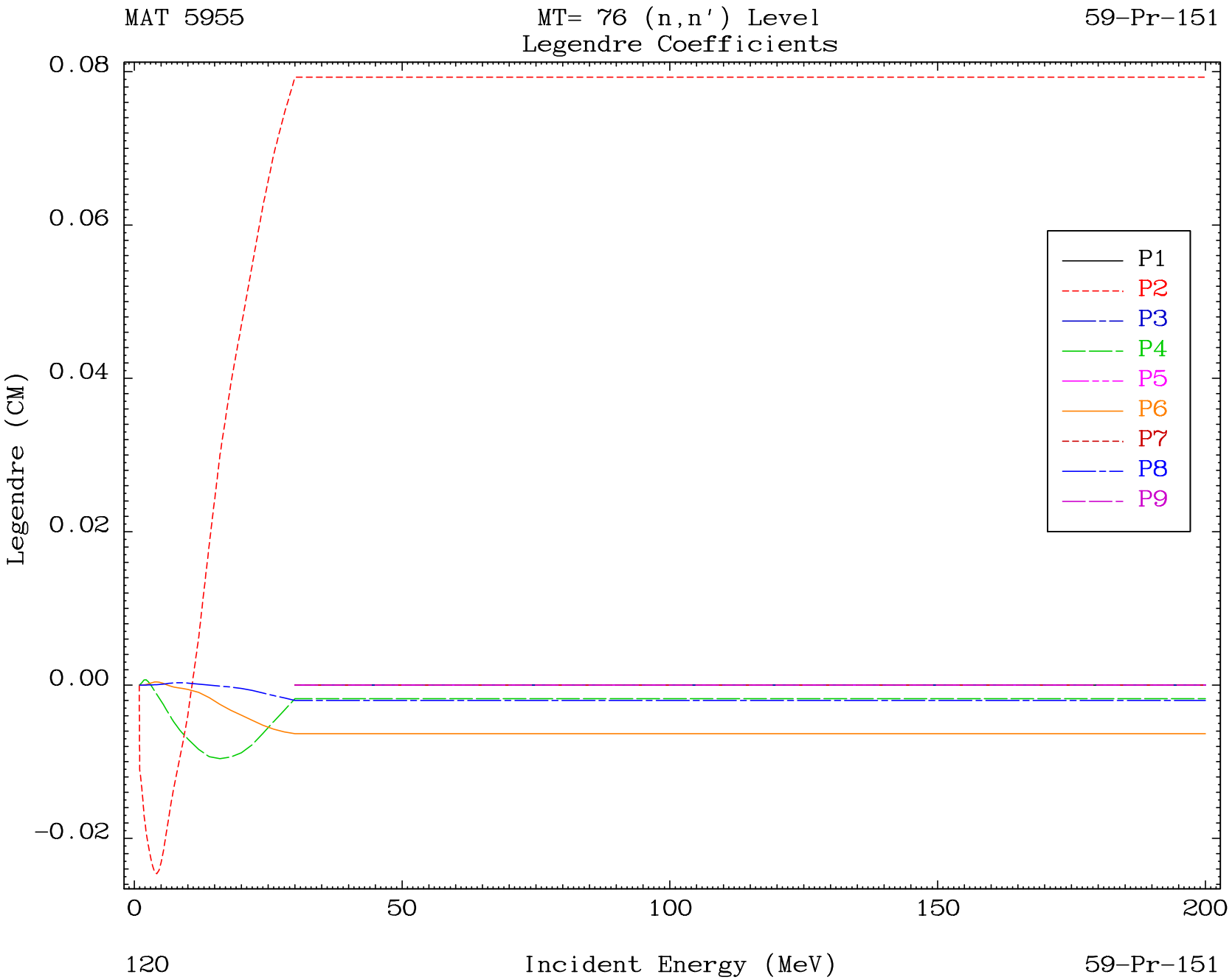

MAT 5955
MT= 74 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10^-6
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
115
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36

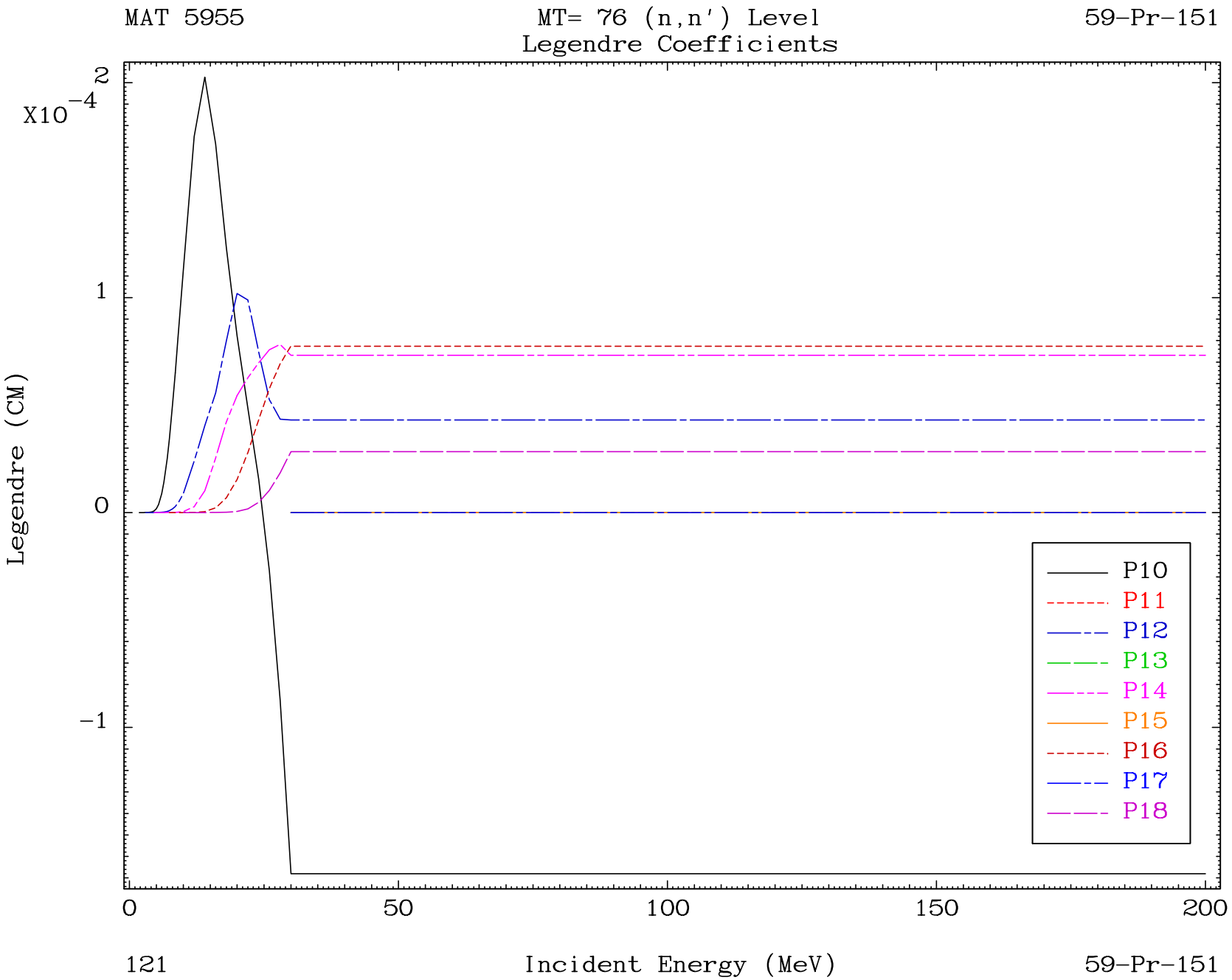

MAT 5955
MT= 75 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
116
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9

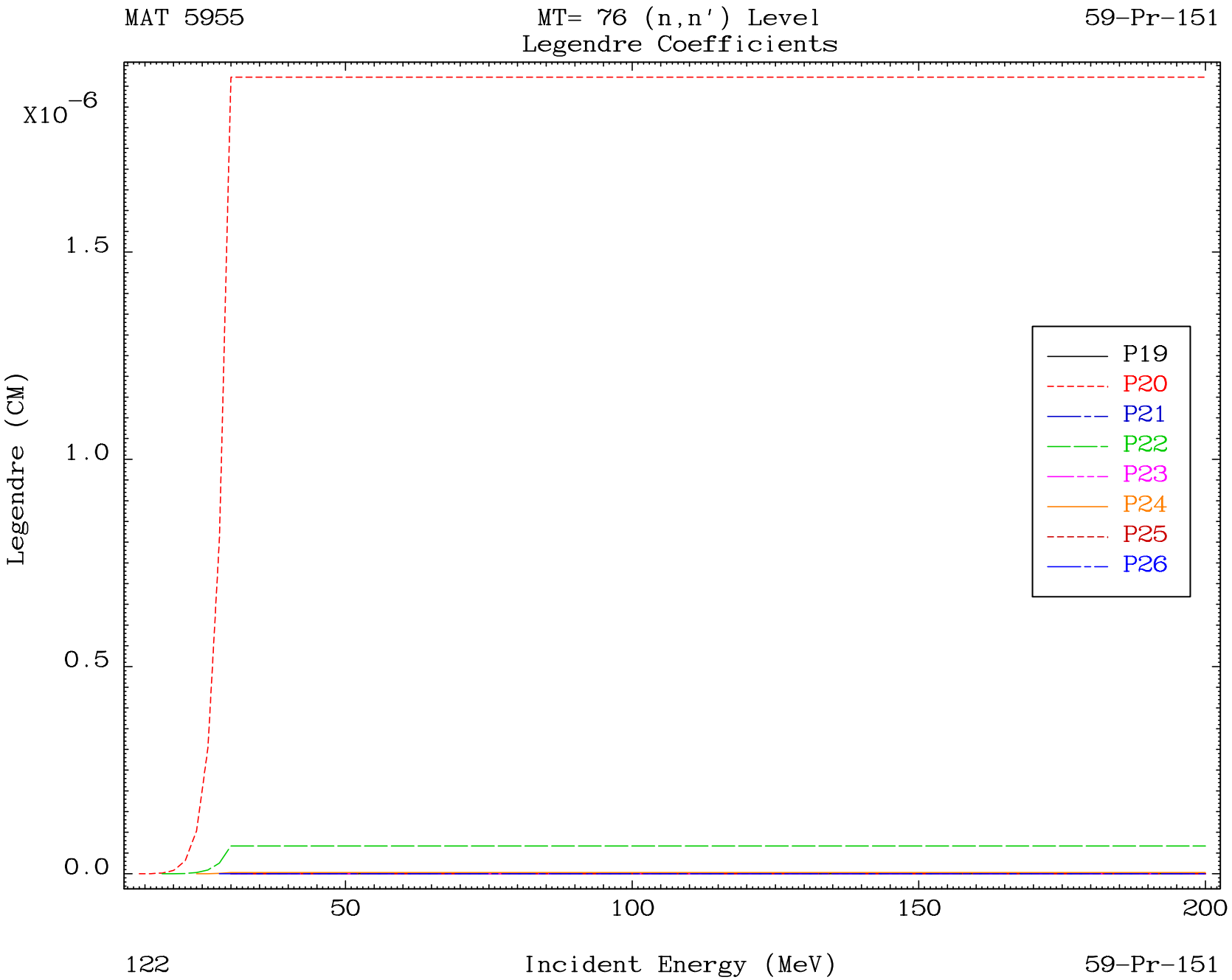

MAT 5955
MT= 75 (n,n') Level
Legendre Coefficients
59-Pr-151
0.015
0.010
0.005
0.000
-0.005
-0.010
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
117
Incident Energy (MeV)
59-Pr-151

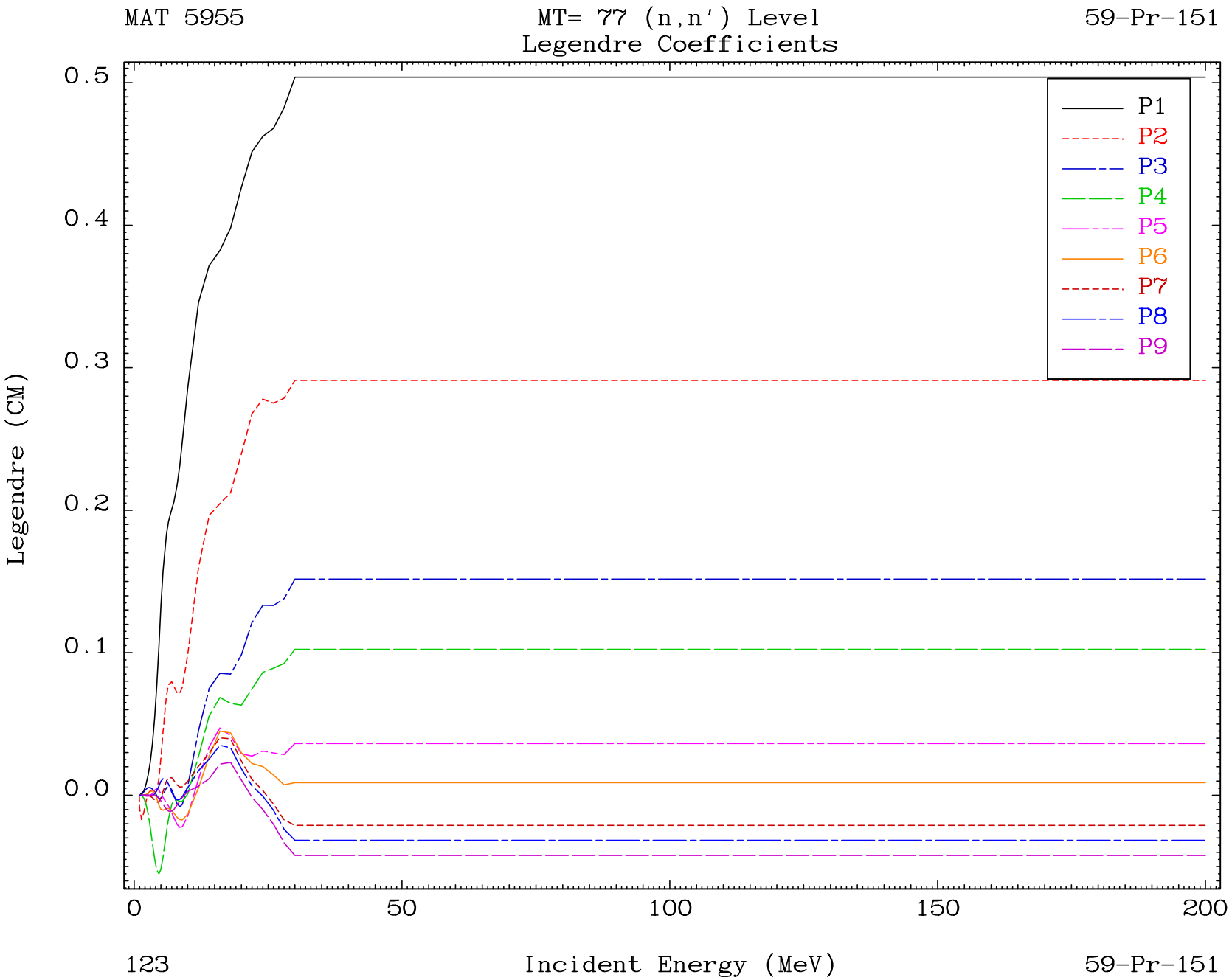

MAT 5955
MT= 75 (n,n') Level
Legendre Coefficients
59-Pr-151
1.2
X10^-4
0.8
0.4
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
118
Incident Energy (MeV)
59-Pr-151

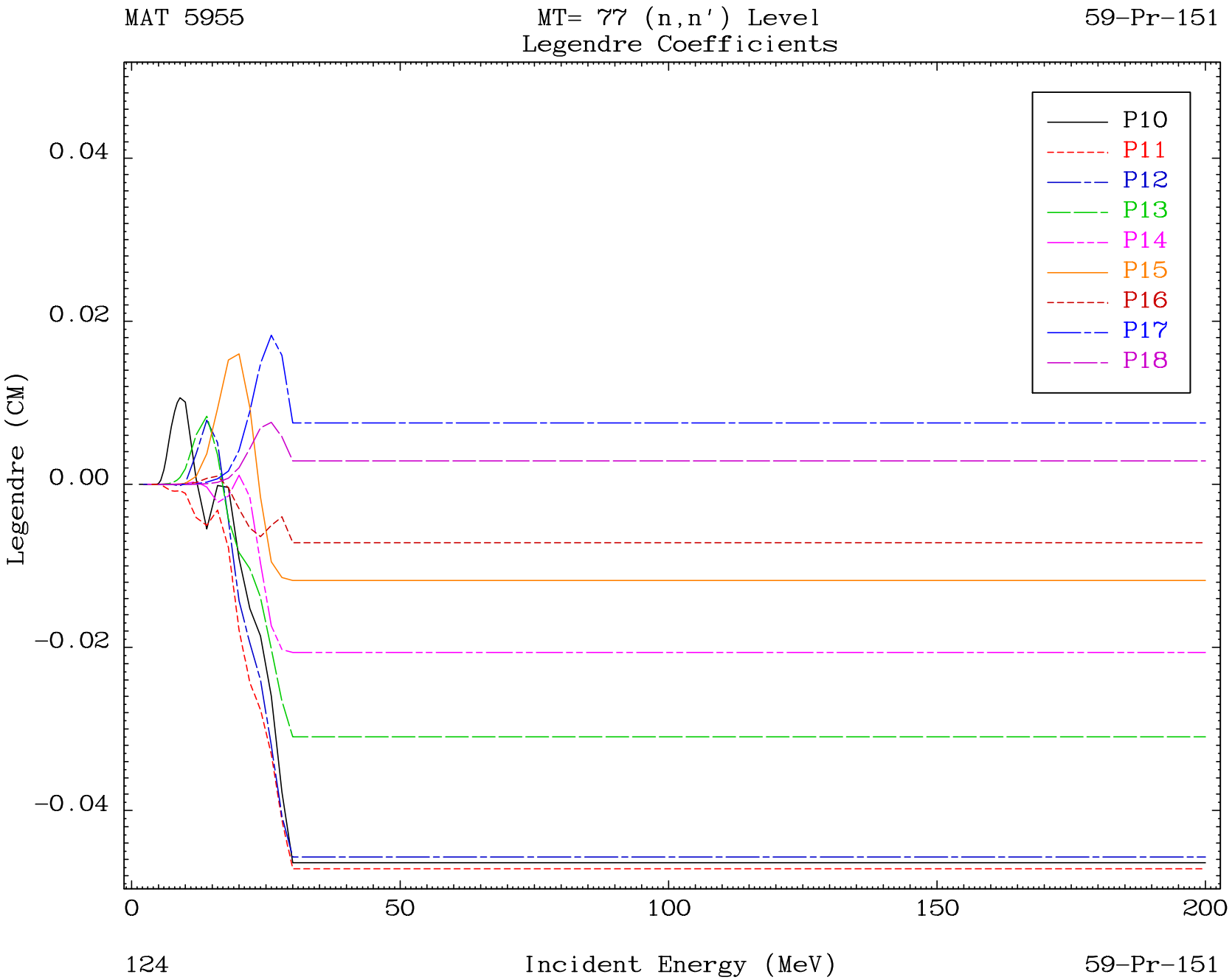

MAT 5955
MT= 75 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10^-7
-0.5
-1.0
-1.5
-2.0
-2.5
Legendre (CM)
50
100
150
200
P28
P29
P30
P31
P32
P33
P34
119
Incident Energy (MeV)
59-Pr-151

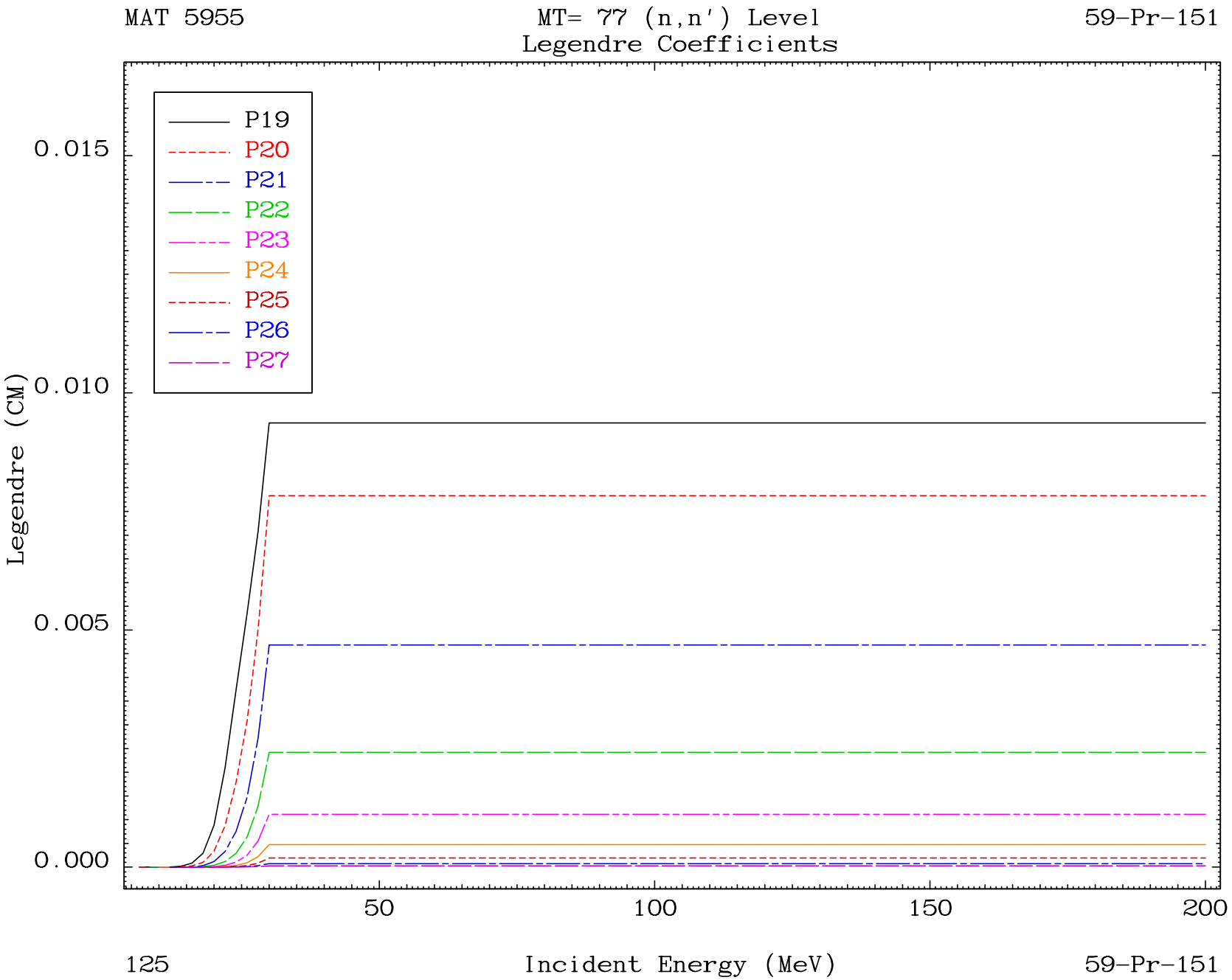

MAT 5955
MT= 76 (n,n') Level
Legendre Coefficients
59-Pr-151
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
120
Incident Energy (MeV)
59-Pr-151

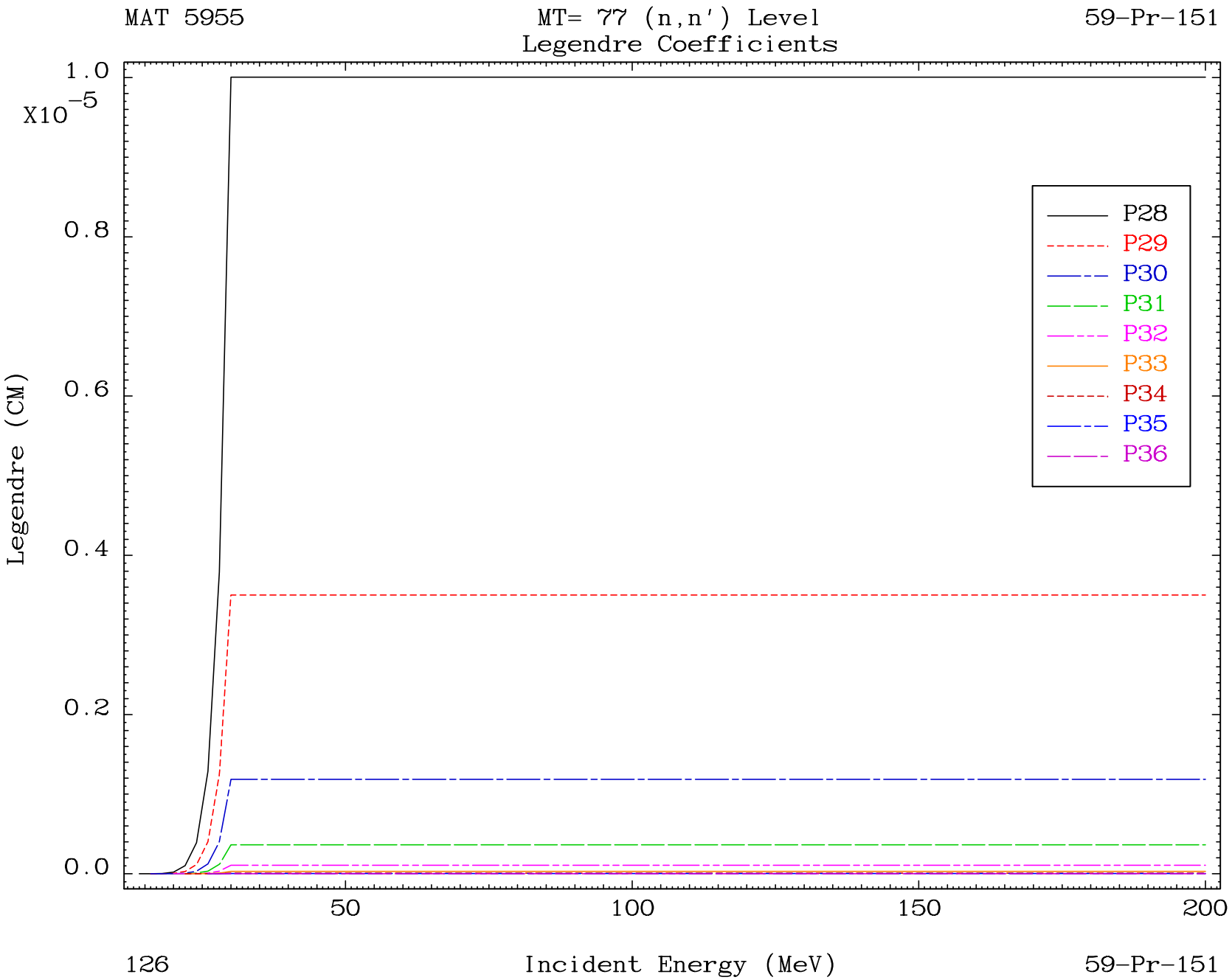

MAT 5955
MT= 76 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
2
1
0
-1
Legendre (CM)
0
50
100
150
200
121
Incident Energy (MeV)
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18

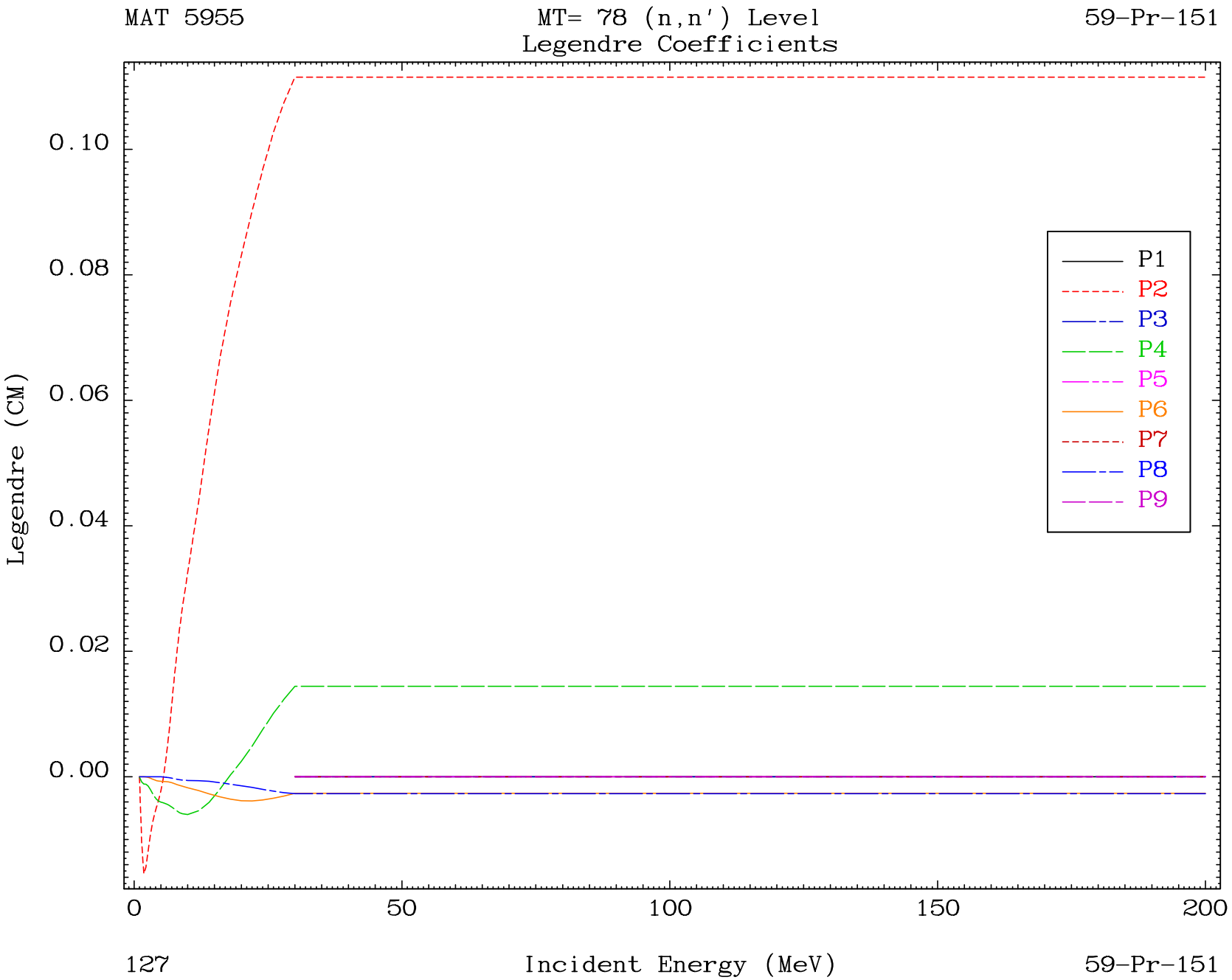

MAT 5955
MT= 76 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
122
Incident Energy (MeV)
59-Pr-151

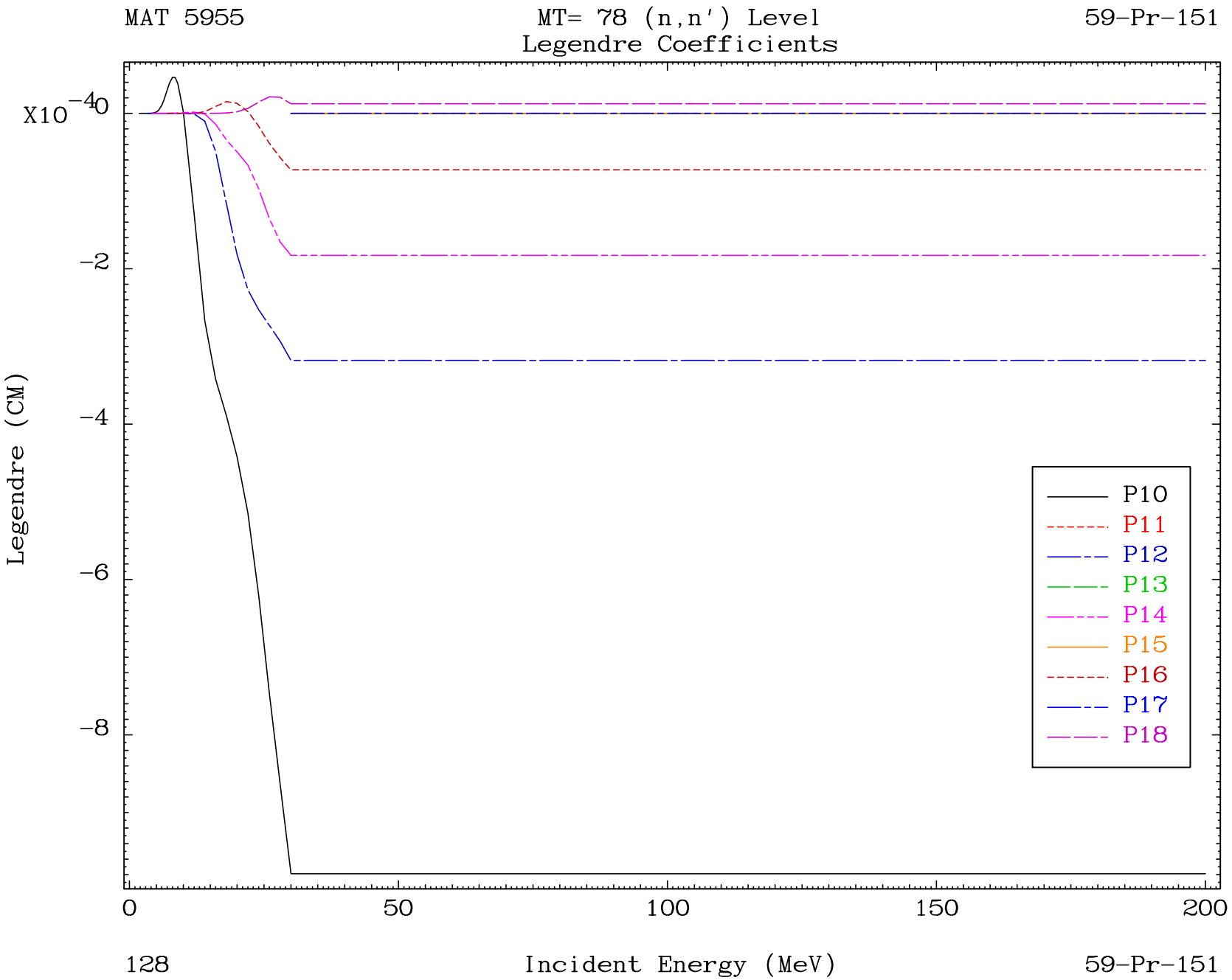

MAT 5955
MT= 77 (n,n') Level
Legendre Coefficients
59-Pr-151
0.5
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
123
Incident Energy (MeV)
59-Pr-151

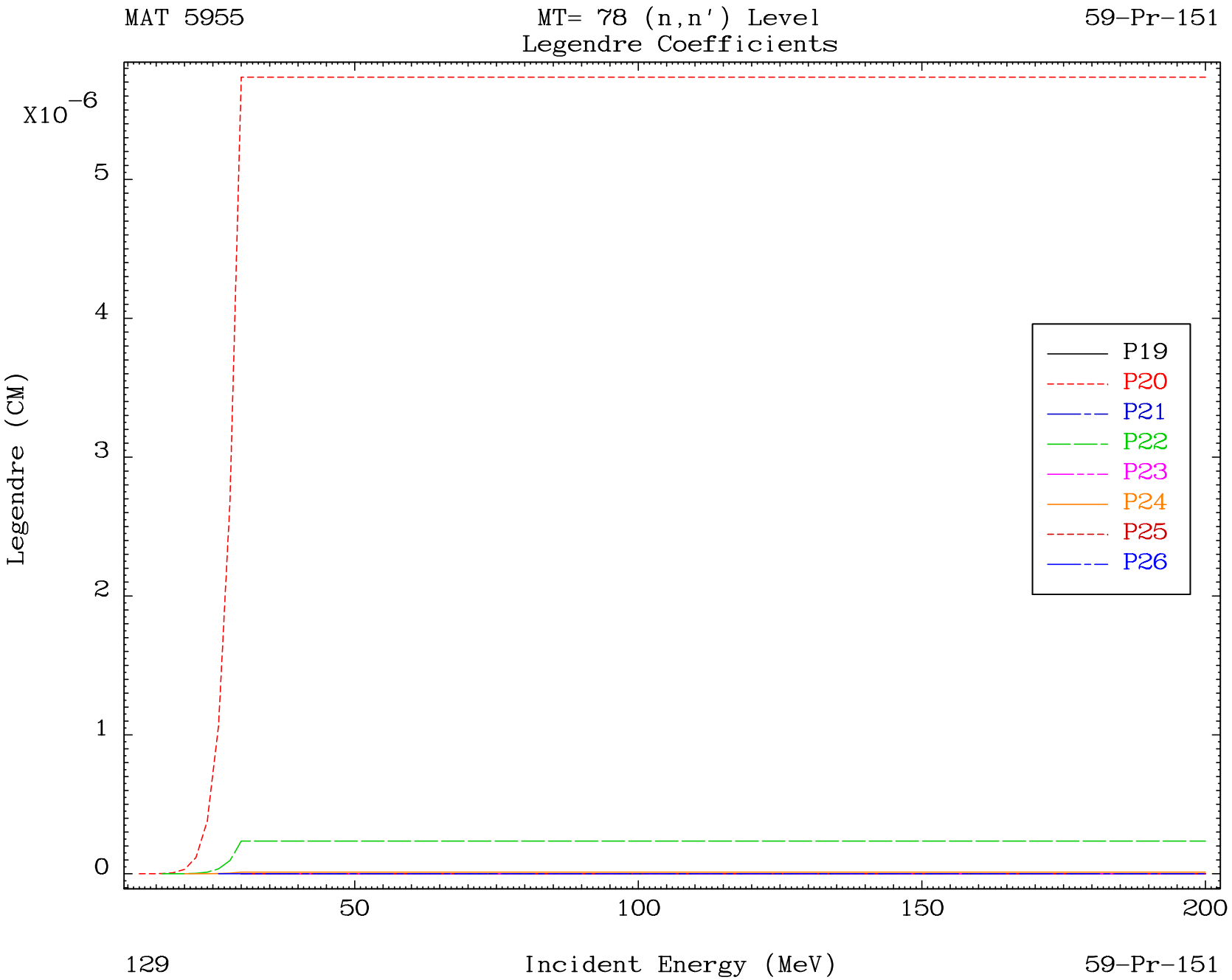

MAT 5955
MT= 77 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
124
Incident Energy (MeV)
59-Pr-151

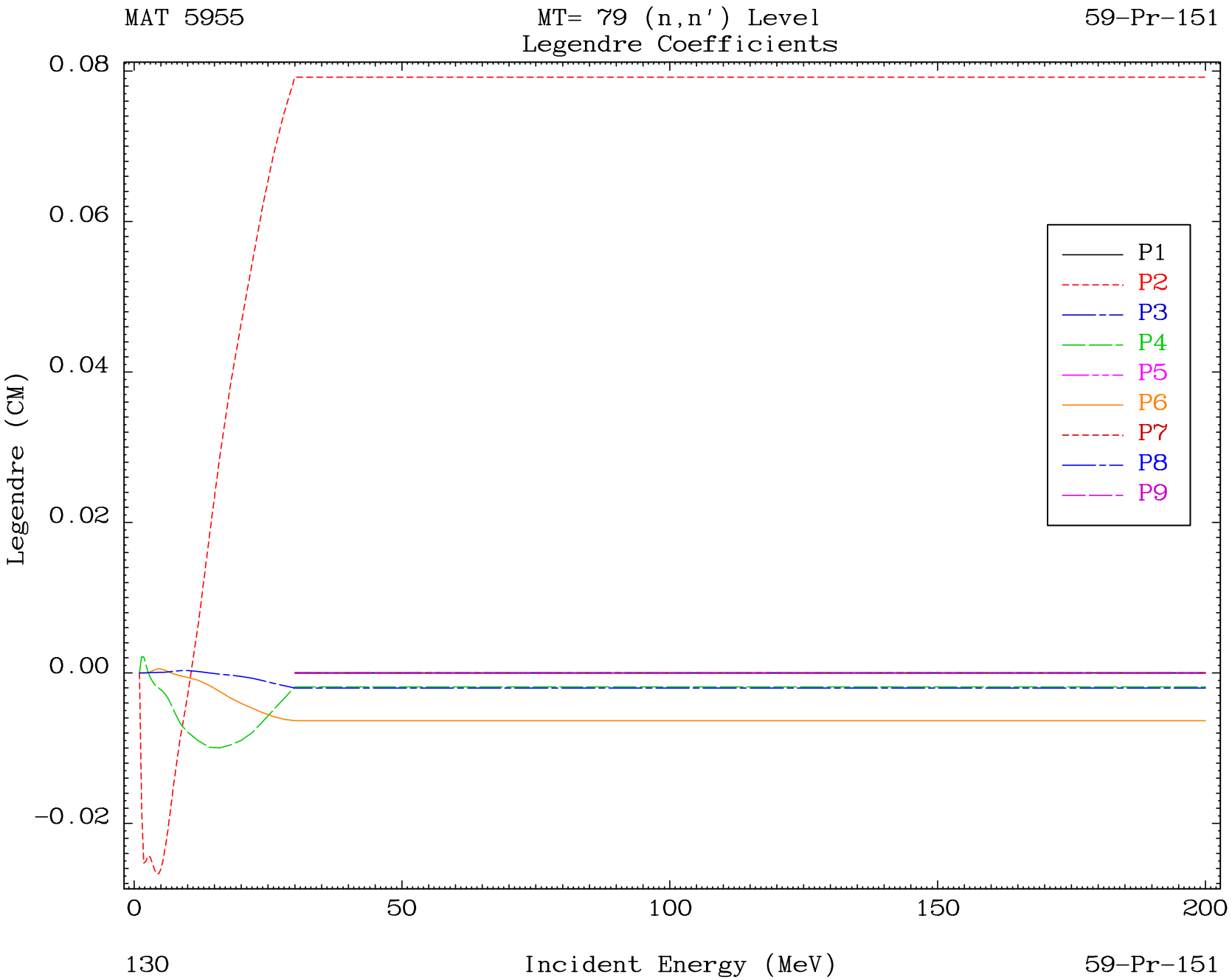

MAT 5955
MT= 77 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
125
Incident Energy (MeV)
59-Pr-151

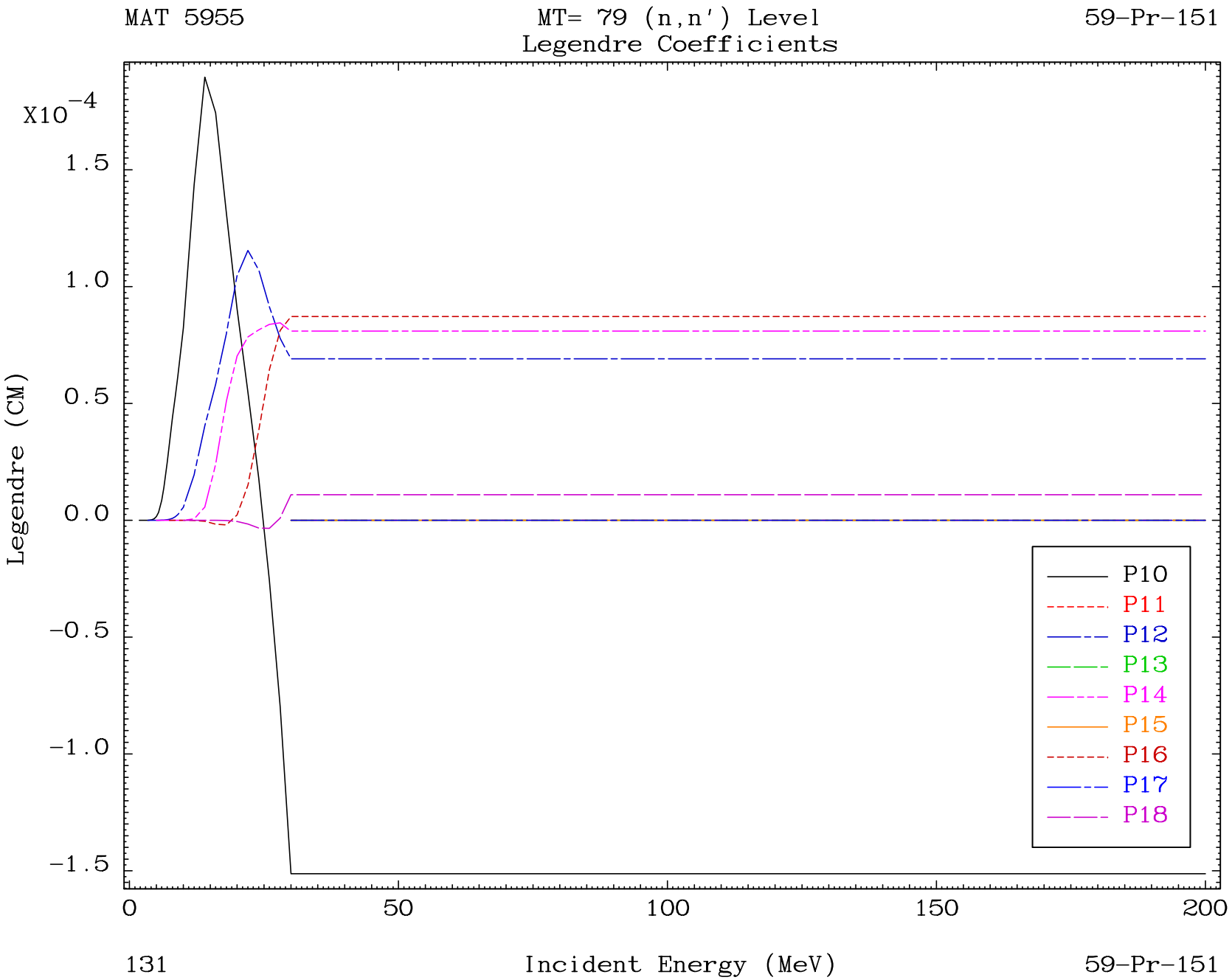

MAT 5955
MT= 77 (n,n') Level
Legendre Coefficients
59-Pr-151
1.0
X10^-5
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
126
Incident Energy (MeV)
59-Pr-151

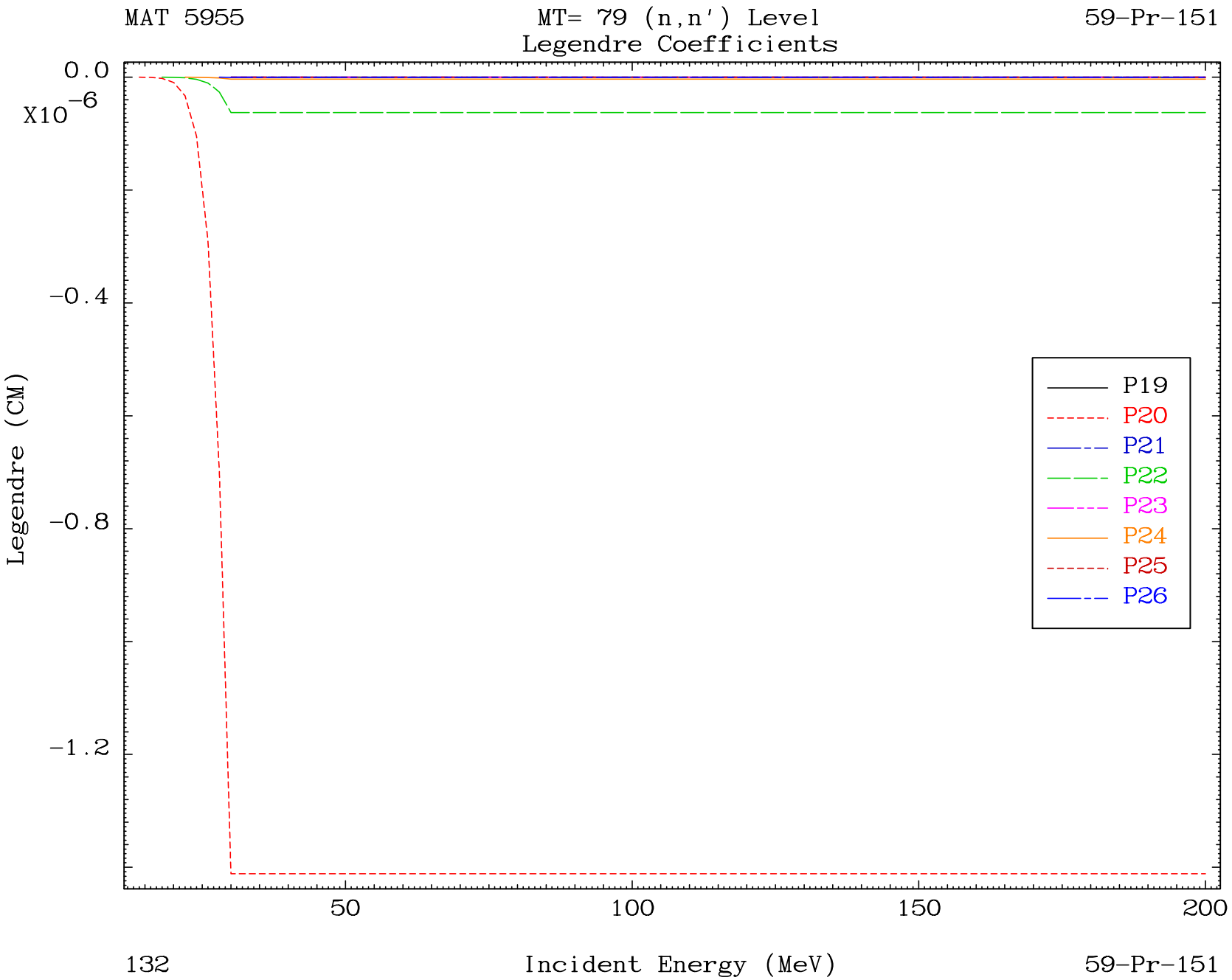

MAT 5955
MT= 78 (n,n') Level
Legendre Coefficients
59-Pr-151
0.10
0.08
0.06
0.04
0.02
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
127
Incident Energy (MeV)
59-Pr-151

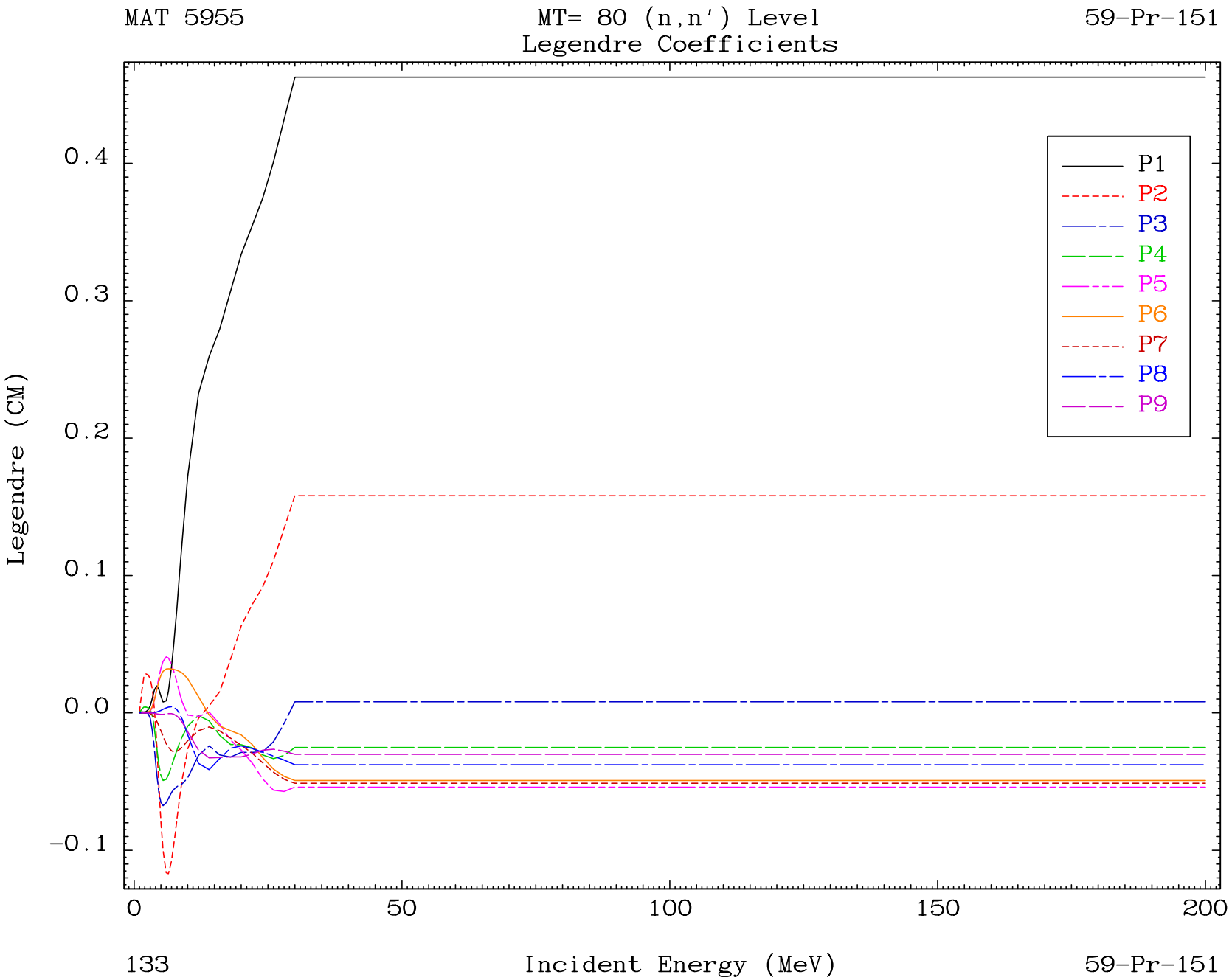

MAT 5955
MT= 78 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
0
-2
-4
-6
-8
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
0
50
100
150
200
128
Incident Energy (MeV)
59-Pr-151

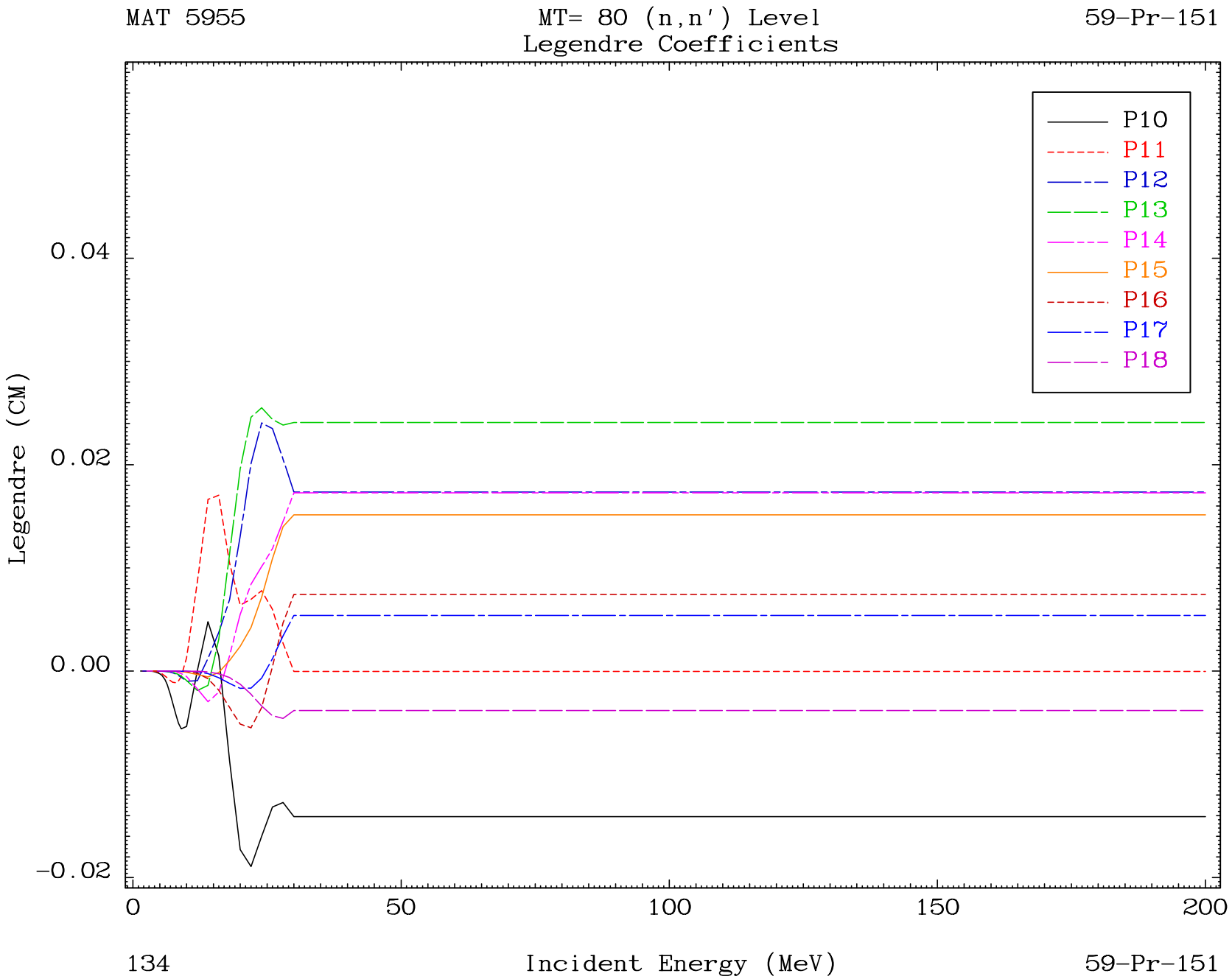

MAT 5955
MT= 78 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-6
5
4
3
2
1
0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
50
100
150
200
129
Incident Energy (MeV)
59-Pr-151

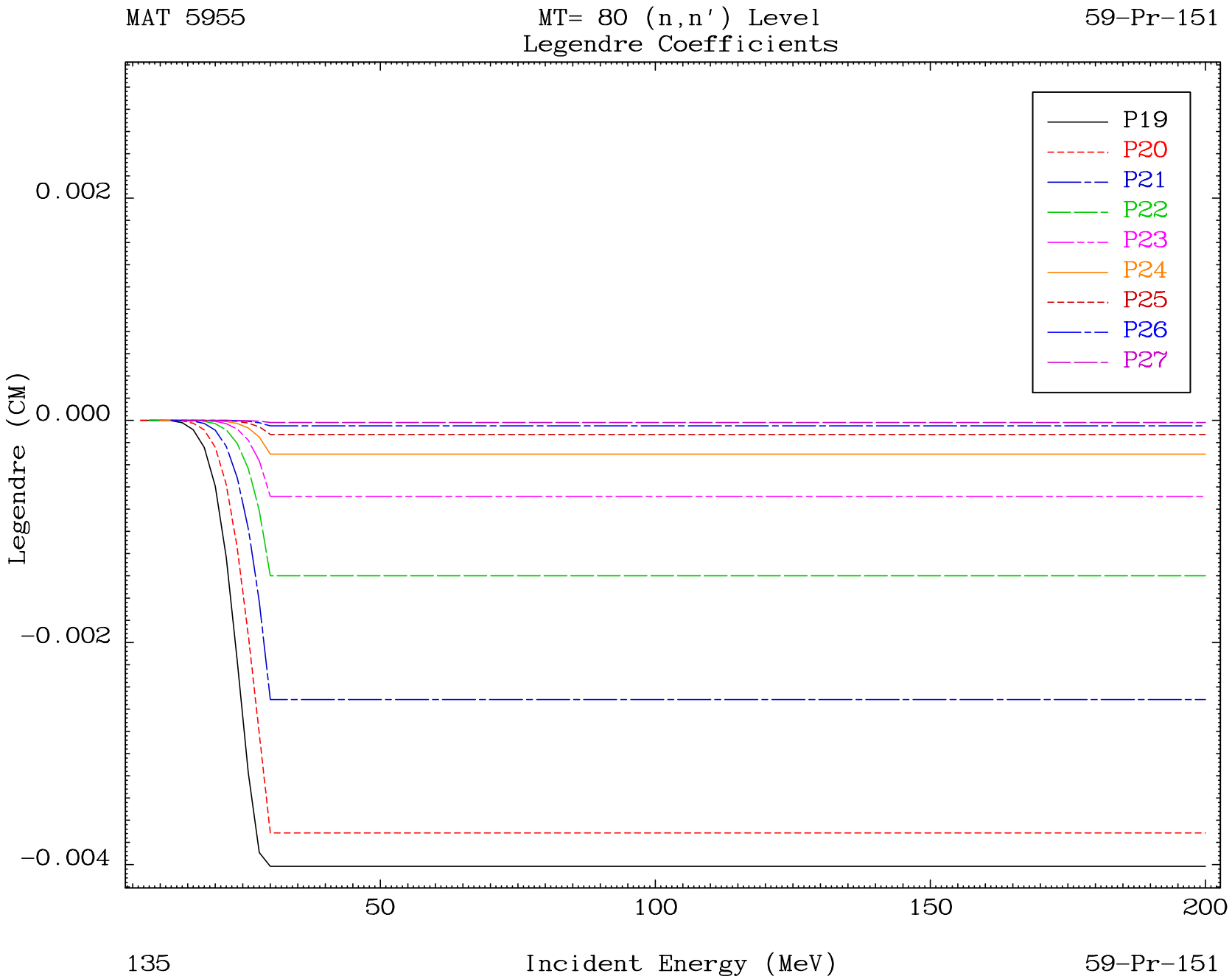

MAT 5955
MT= 79 (n,n') Level
Legendre Coefficients
59-Pr-151
0.08
0.06
0.04
0.02
0.00
-0.02
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
130
Incident Energy (MeV)
59-Pr-151

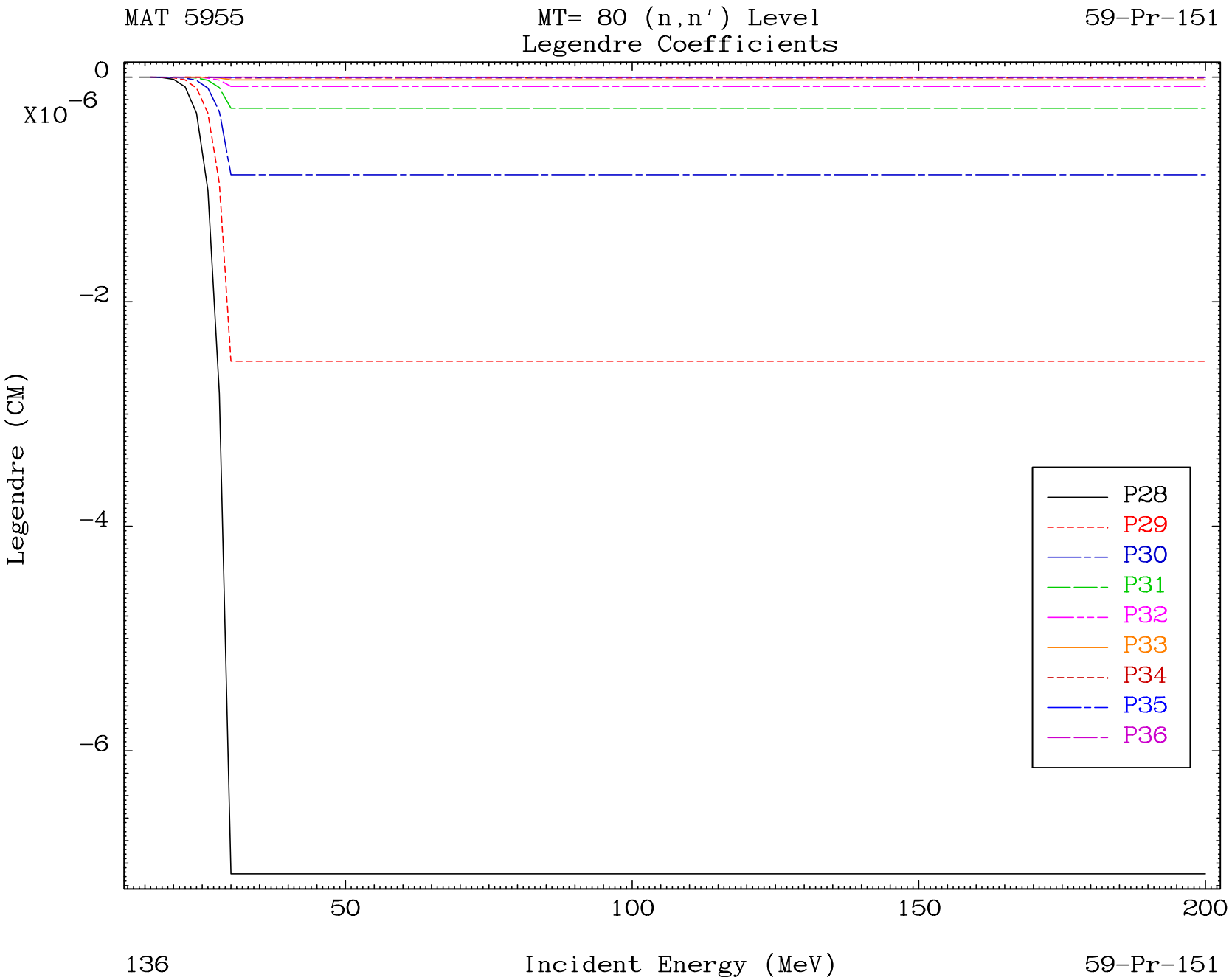

MAT 5955
MT= 79 (n,n') Level
Legendre Coefficients
59-Pr-151
X10^-4
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
Legendre (CM)
0
50
100
150
200
131
Incident Energy (MeV)
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18

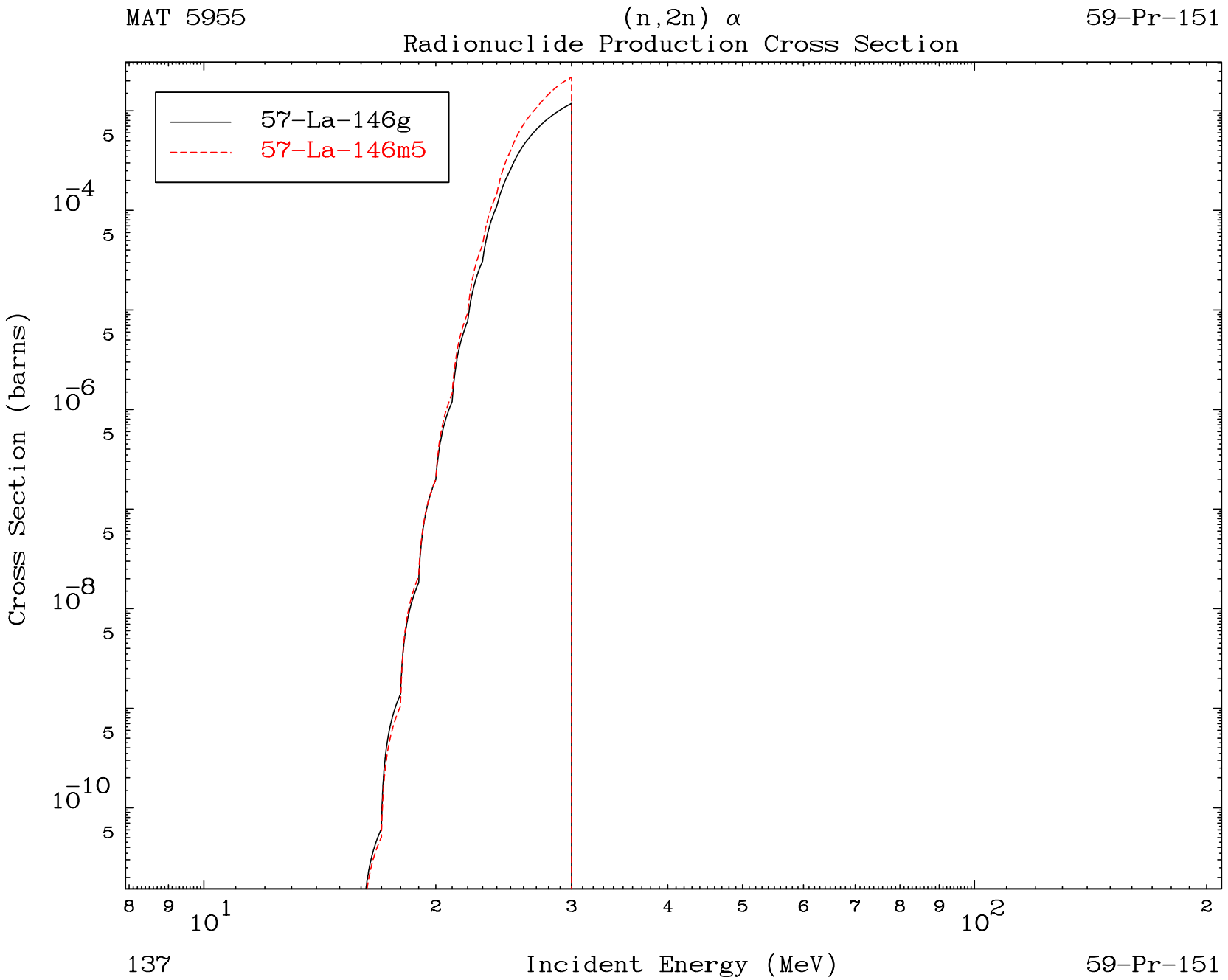

MAT 5955
MT= 79 (n,n') Level
Legendre Coefficients
59-Pr-151
0.0
X10−6
−0.4
−0.8
−1.2
Legendre (CM)
50
100
150
200
132
Incident Energy (MeV)
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26

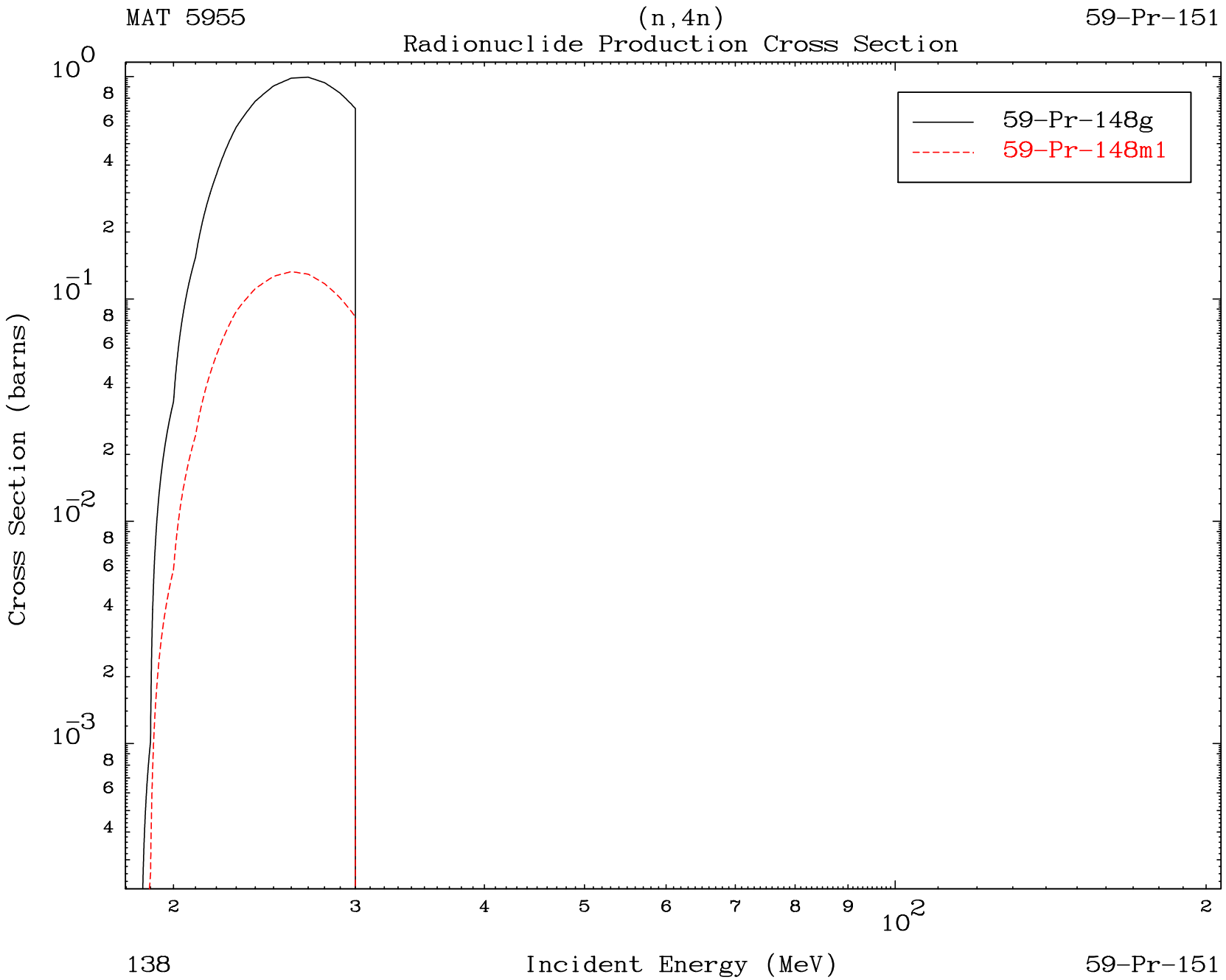

MAT 5955
MT= 80 (n,n') Level
Legendre Coefficients
59-Pr-151
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
133
Incident Energy (MeV)
59-Pr-151
P1
P2
P3
P4
P5
P6
P7
P8
P9


MAT 5955
MT= 80 (n,n') Level
Legendre Coefficients
59-Pr-151
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.02
0.00
-0.02
Legendre (CM)
0
50
100
150
200
134
Incident Energy (MeV)
59-Pr-151


MAT 5955
MT= 80 (n,n') Level
Legendre Coefficients
59-Pr-151
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
135
Incident Energy (MeV)
59-Pr-151


MAT 5955
MT= 80 (n,n') Level
Legendre Coefficients
59-Pr-151
0
X10^-6
-2
-4
-6
Legendre (CM)
50
100
150
200
136
Incident Energy (MeV)
59-Pr-151
P28
P29
P30
P31
P32
P33
P34
P35
P36


MAT 5955
(n,2n) α
59-Pr-151
Radionuclide Production Cross Section
57-La-146g
57-La-146m5
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
8 9 10^1 2 3 4 5 6 7 8 9 10^2 2
Incident Energy (MeV)
137
59-Pr-151


MAT 5955
(n,4n)
59-Pr-151
Radionuclide Production Cross Section
59-Pr-148g
59-Pr-148m1
Cross Section (barns)
Incident Energy (MeV)
138
59-Pr-151