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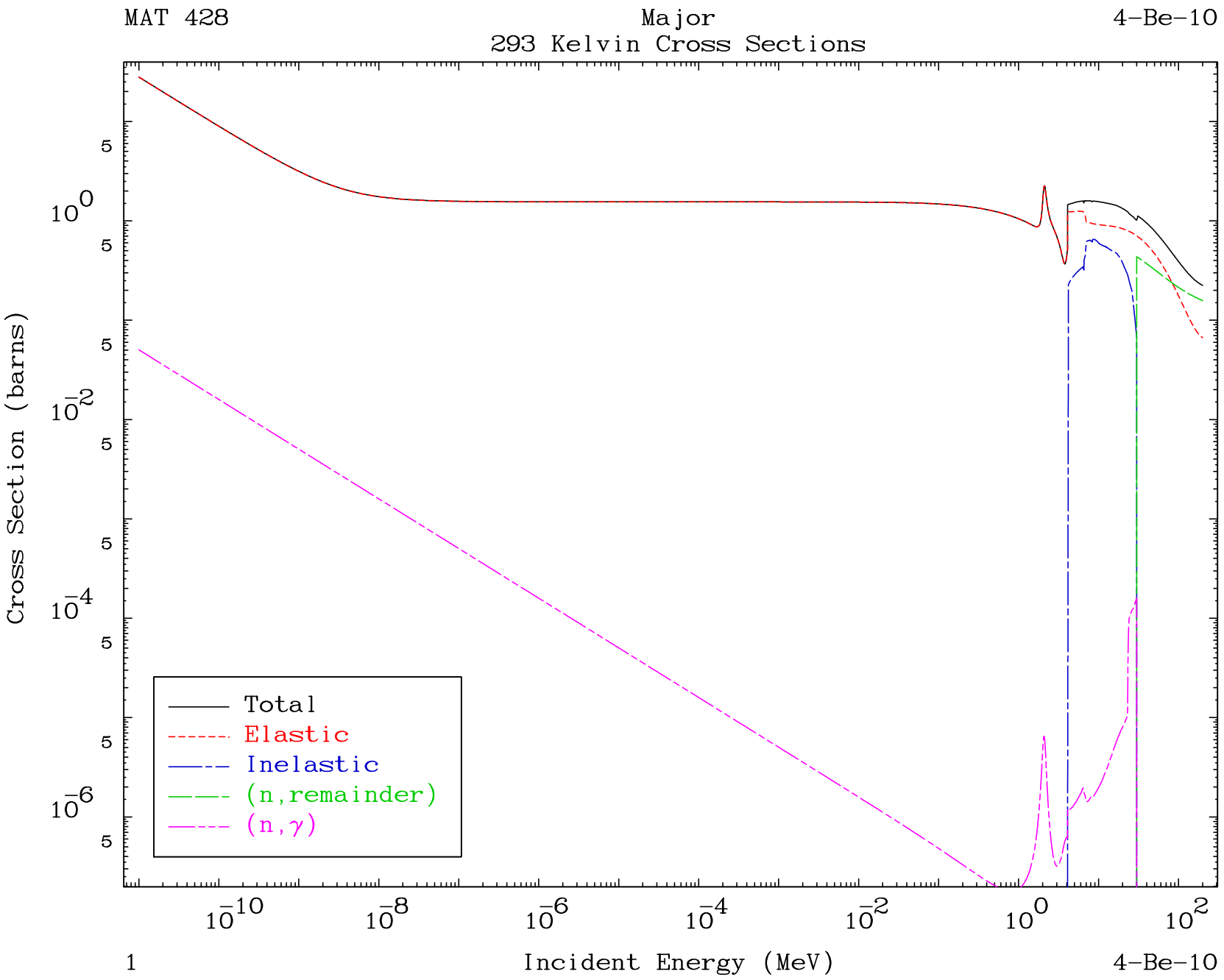
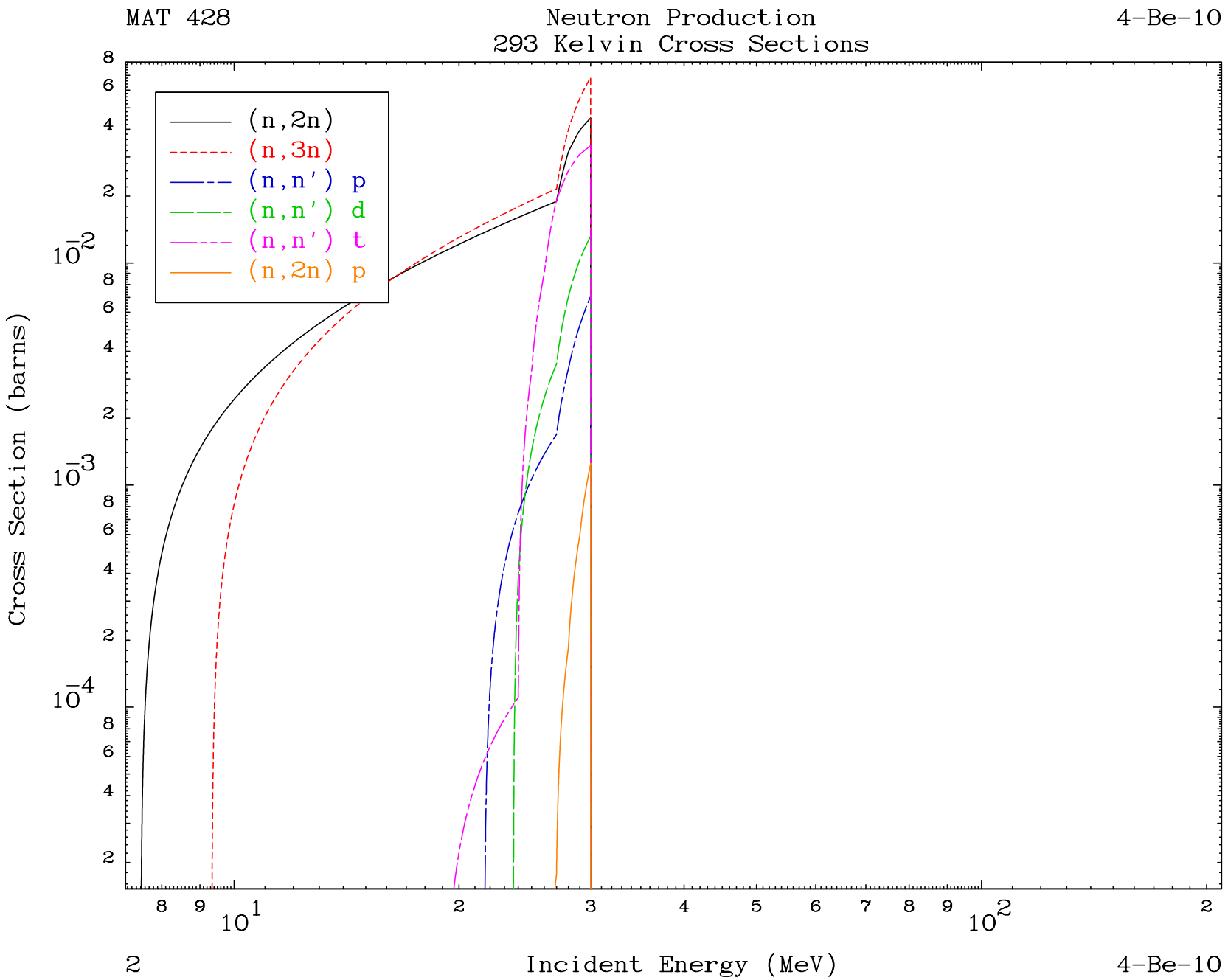
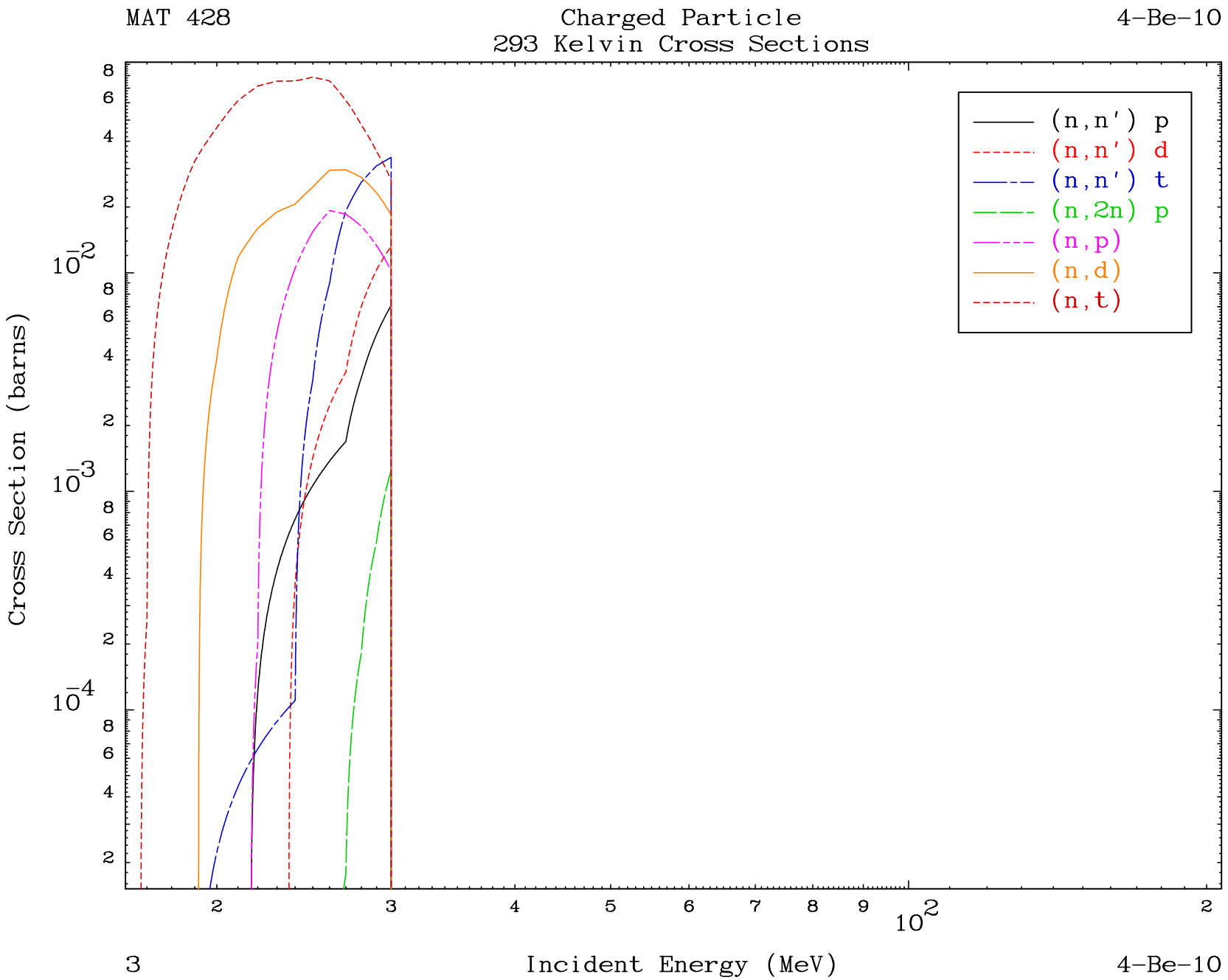
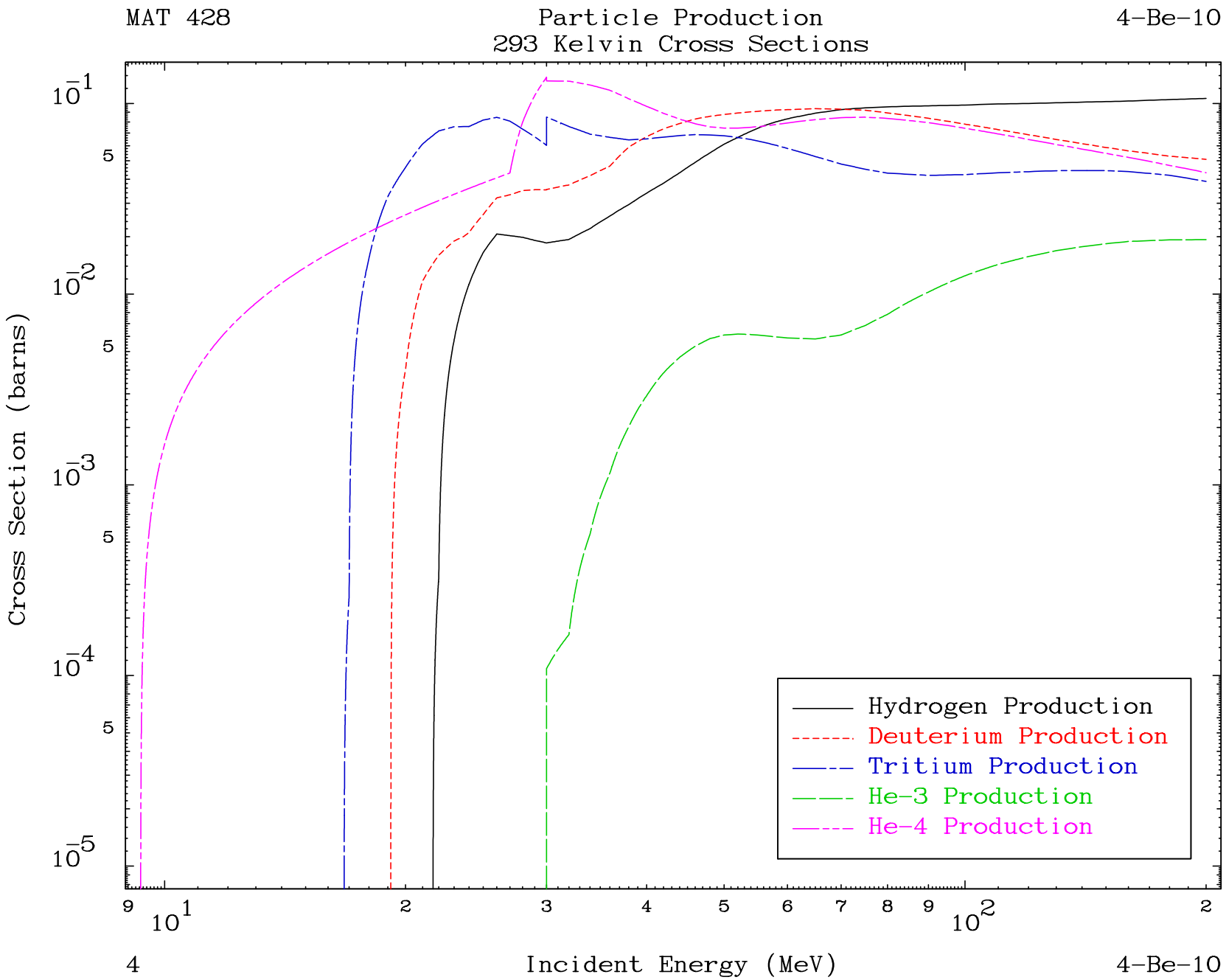
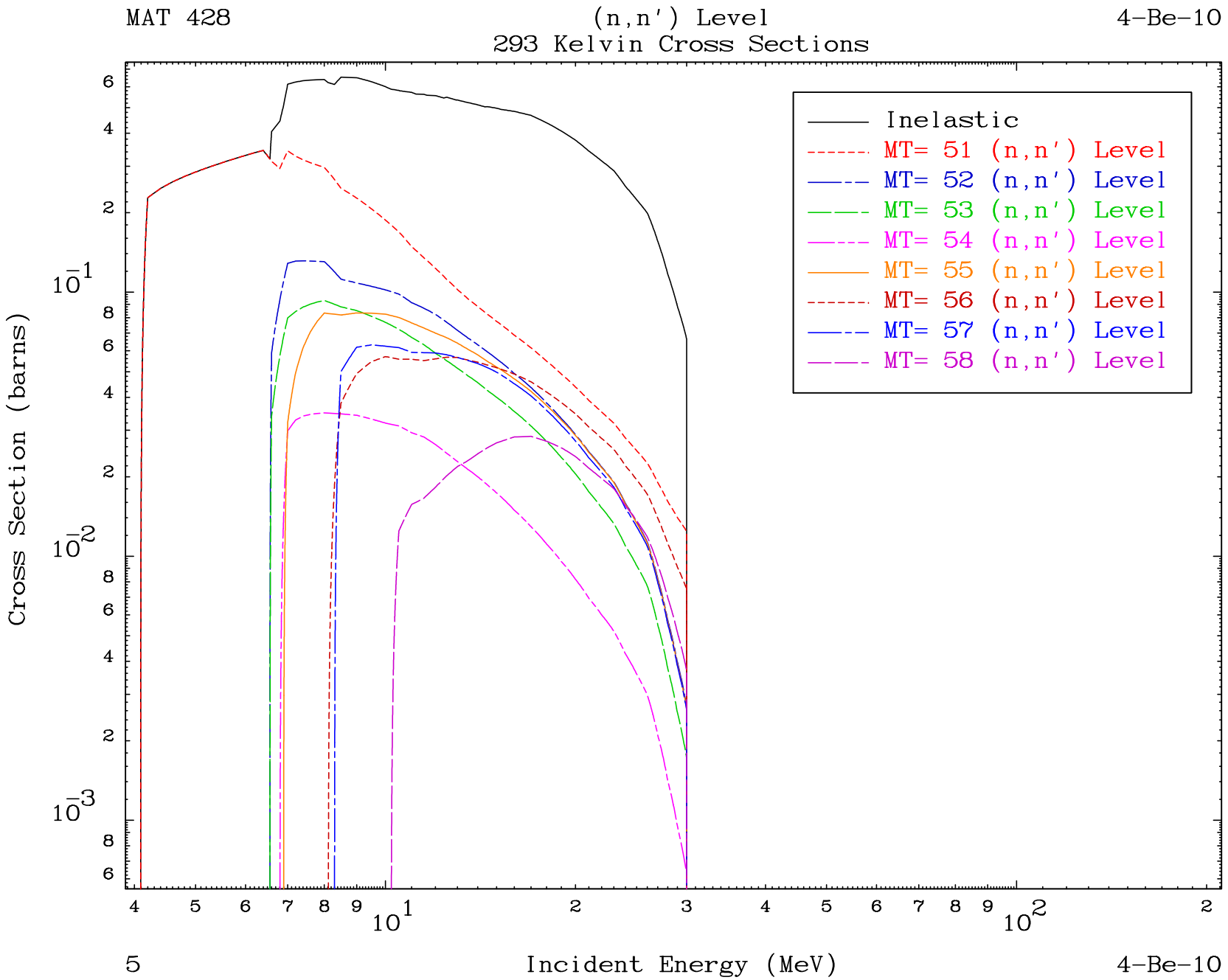
Press Mouse Button to Start

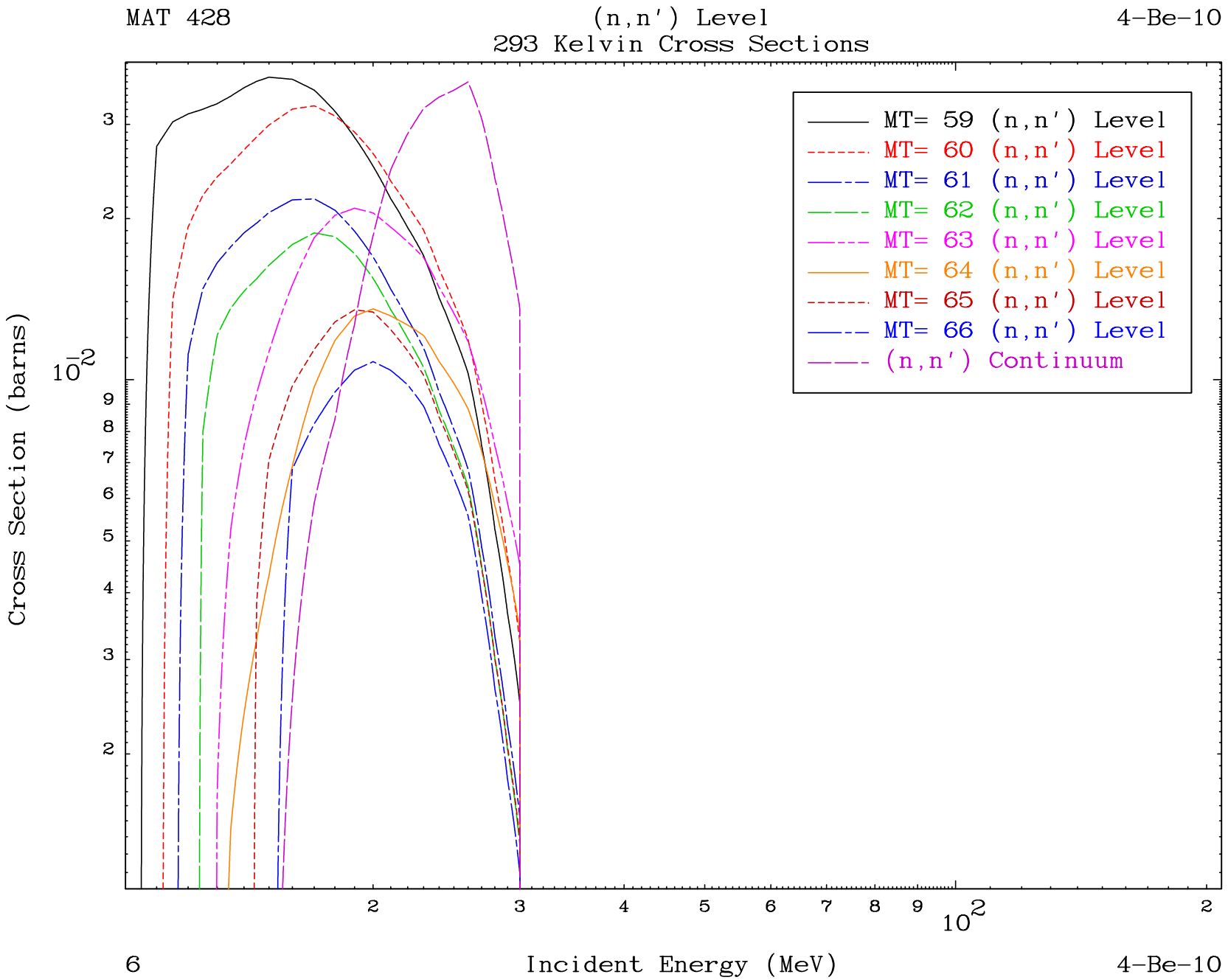

MAT 428
Major
4-Be-10
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,remainder)
(n,γ)
1
4-Be-10

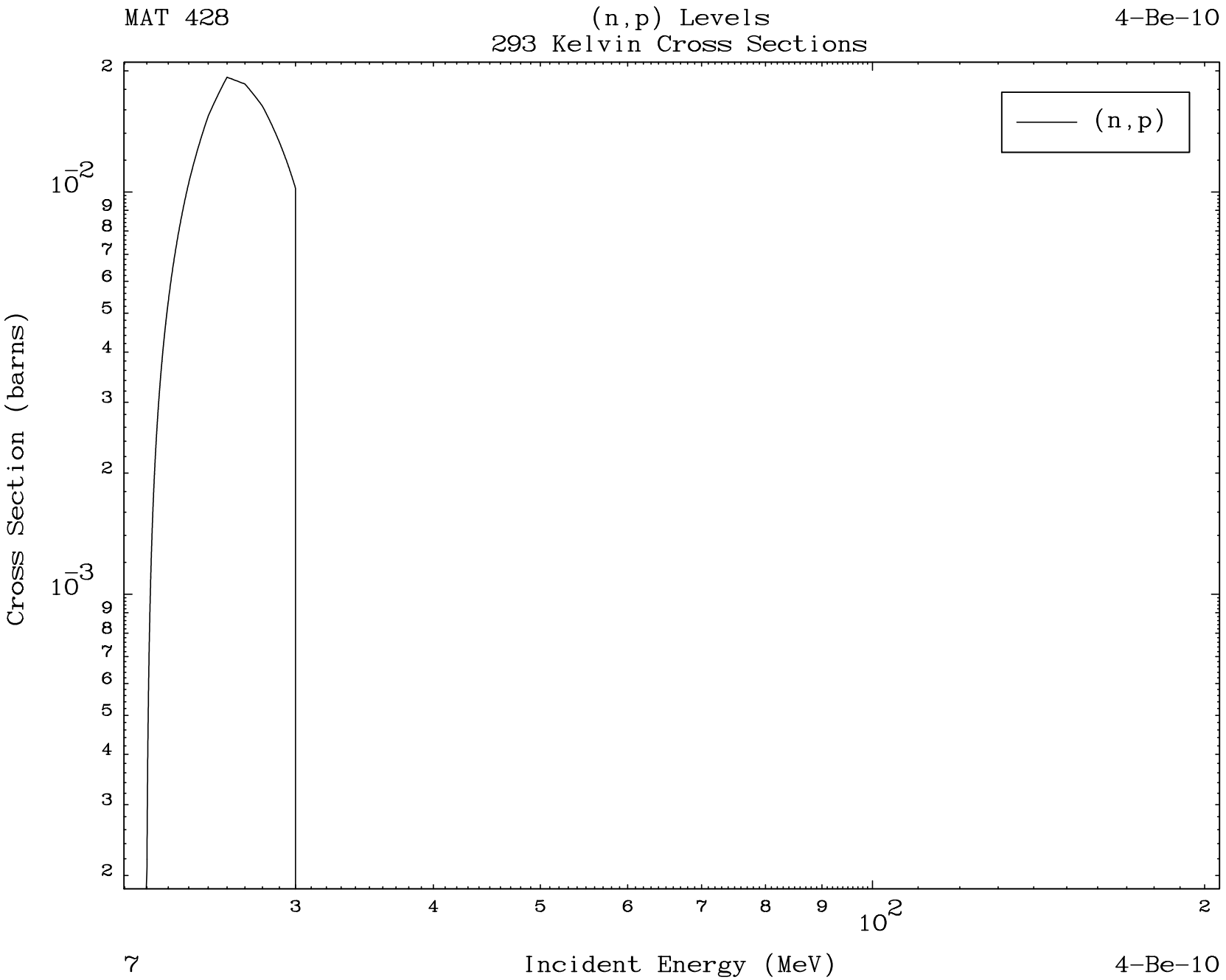

MAT 428
Neutron Production
293 Kelvin Cross Sections
4-Be-10
(n,2n)
(n,3n)
(n,n') p
(n,n') d
(n,n') t
(n,2n) p
Cross Section (barns)
Incident Energy (MeV)
4-Be-10

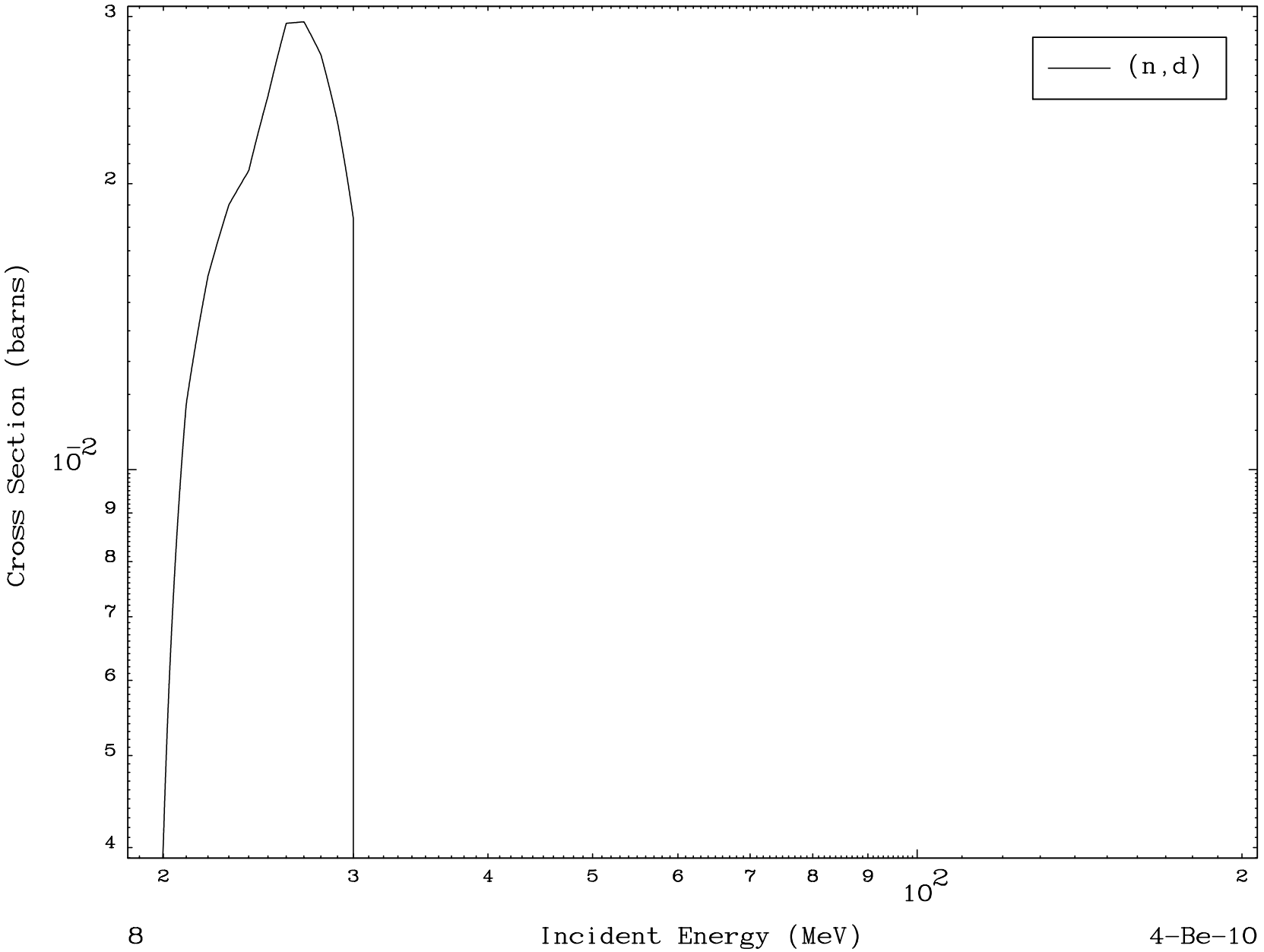

MAT 428
Charged Particle
293 Kelvin Cross Sections
4-Be-10
Cross Section (barns)
Incident Energy (MeV)
(n,n') p
(n,n') d
(n,n') t
(n,2n) p
(n,p)
(n,d)
(n,t)
3
4-Be-10

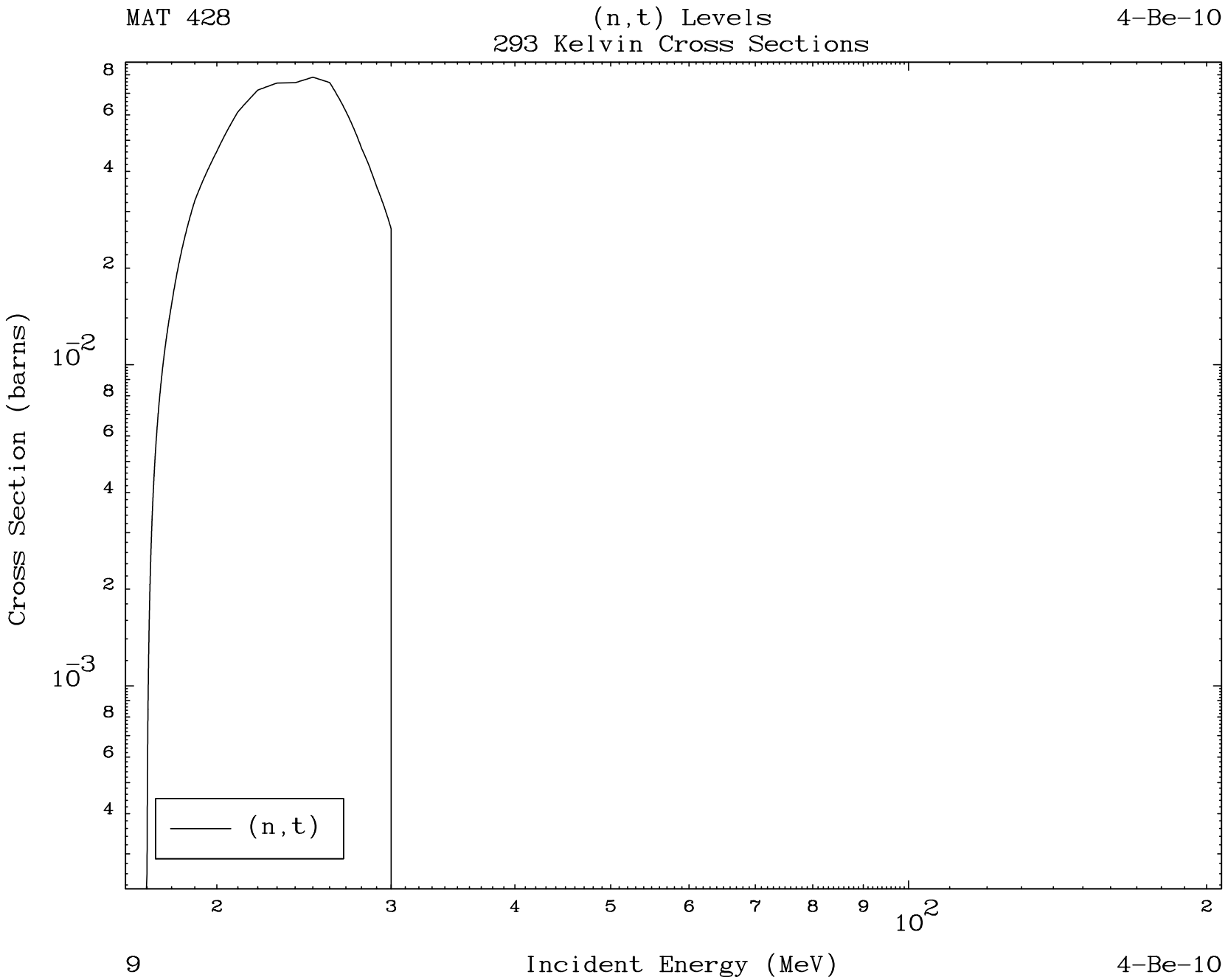

MAT 428
Particle Production
293 Kelvin Cross Sections
4-Be-10
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production

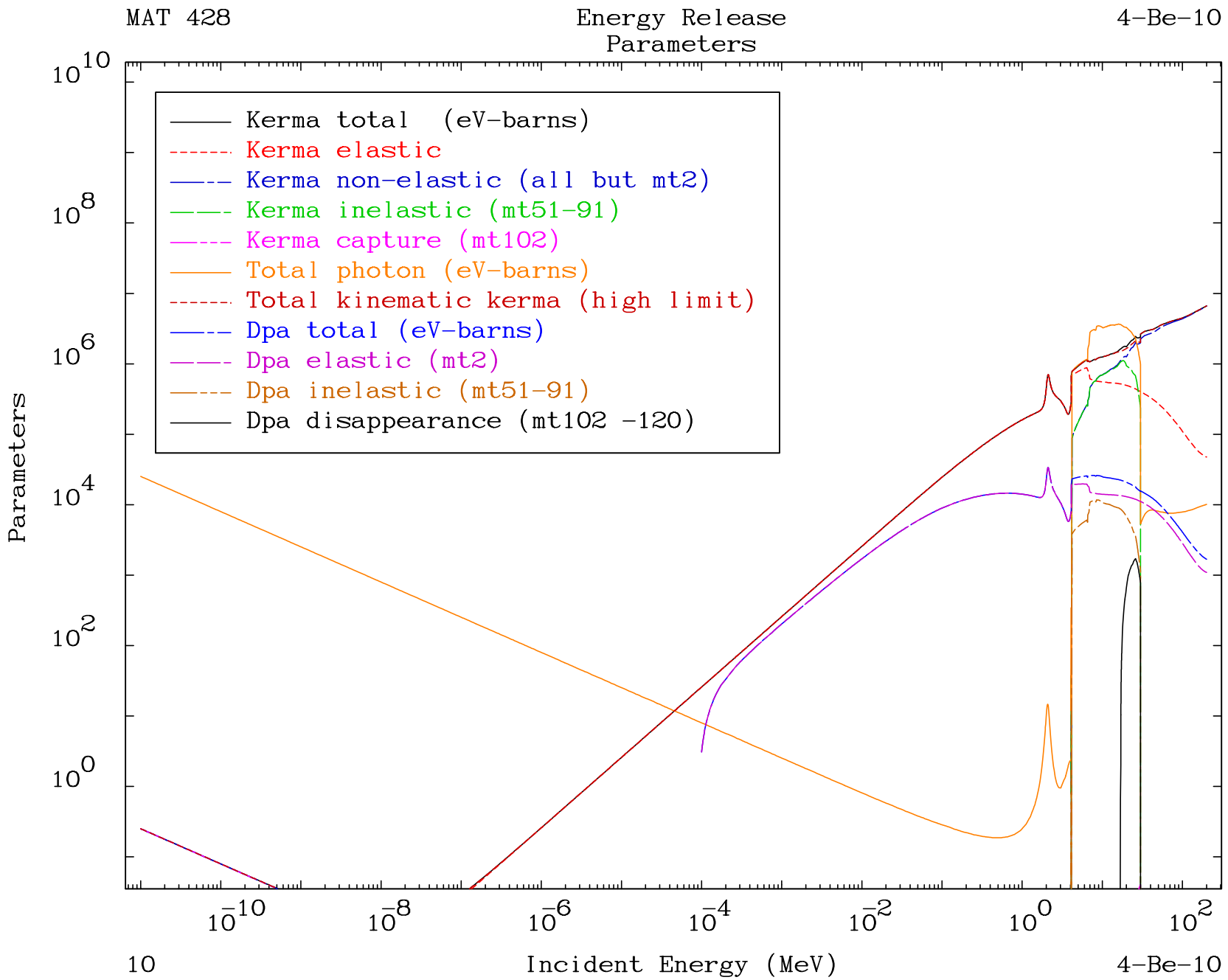

MAT 428
(n,n') Level
293 Kelvin Cross Sections
4-Be-10
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
5
4-Be-10

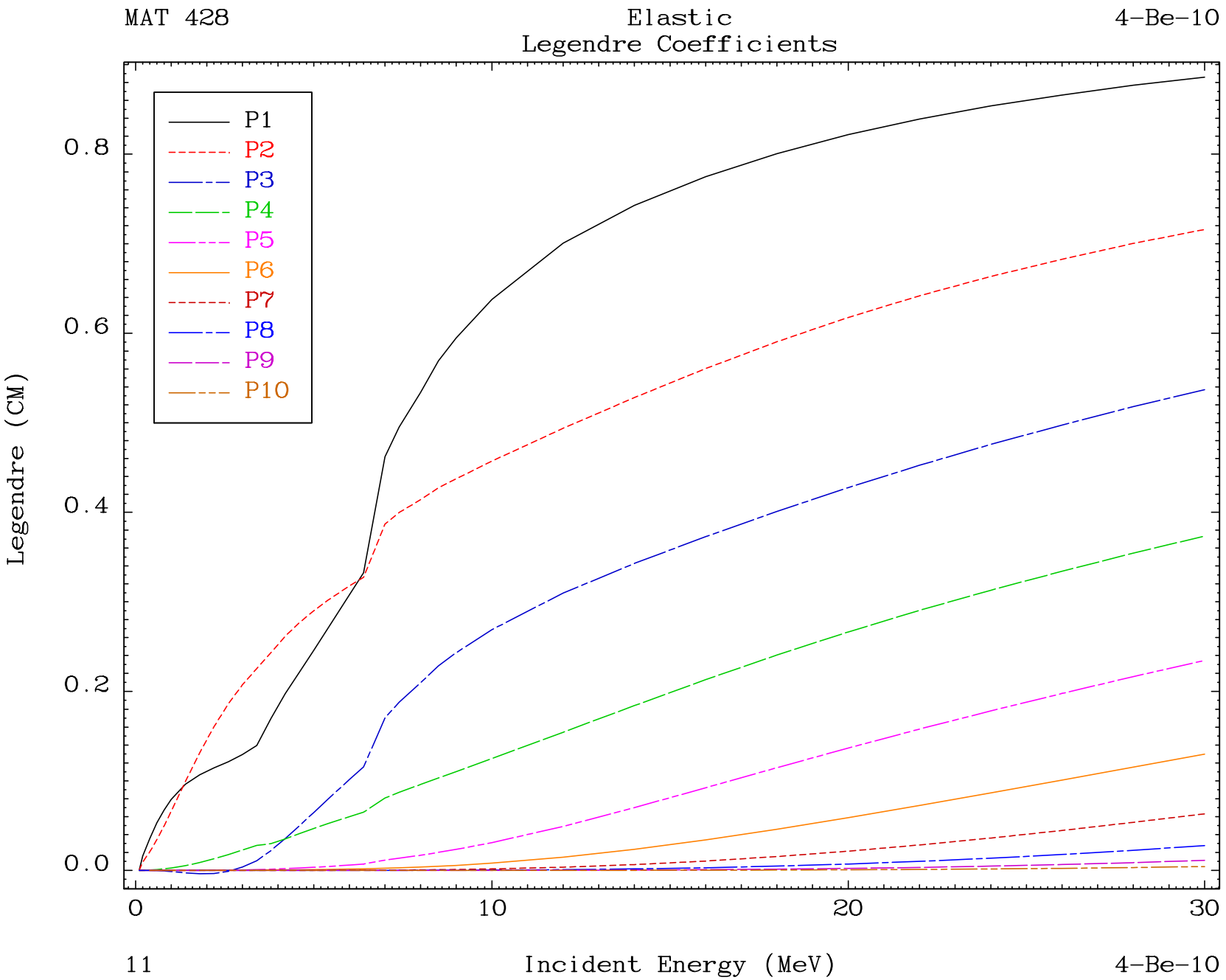

MAT 428
(n,n') Level
4-Be-10
293 Kelvin Cross Sections
MT= 59 (n,n') Level
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
(n,n') Continuum
Cross Section (barns)
10^1
3
2
9
8
7
6
5
4
3
2
2
3
4
5
6
7
8
9
10^2
2
6
Incident Energy (MeV)
4-Be-10

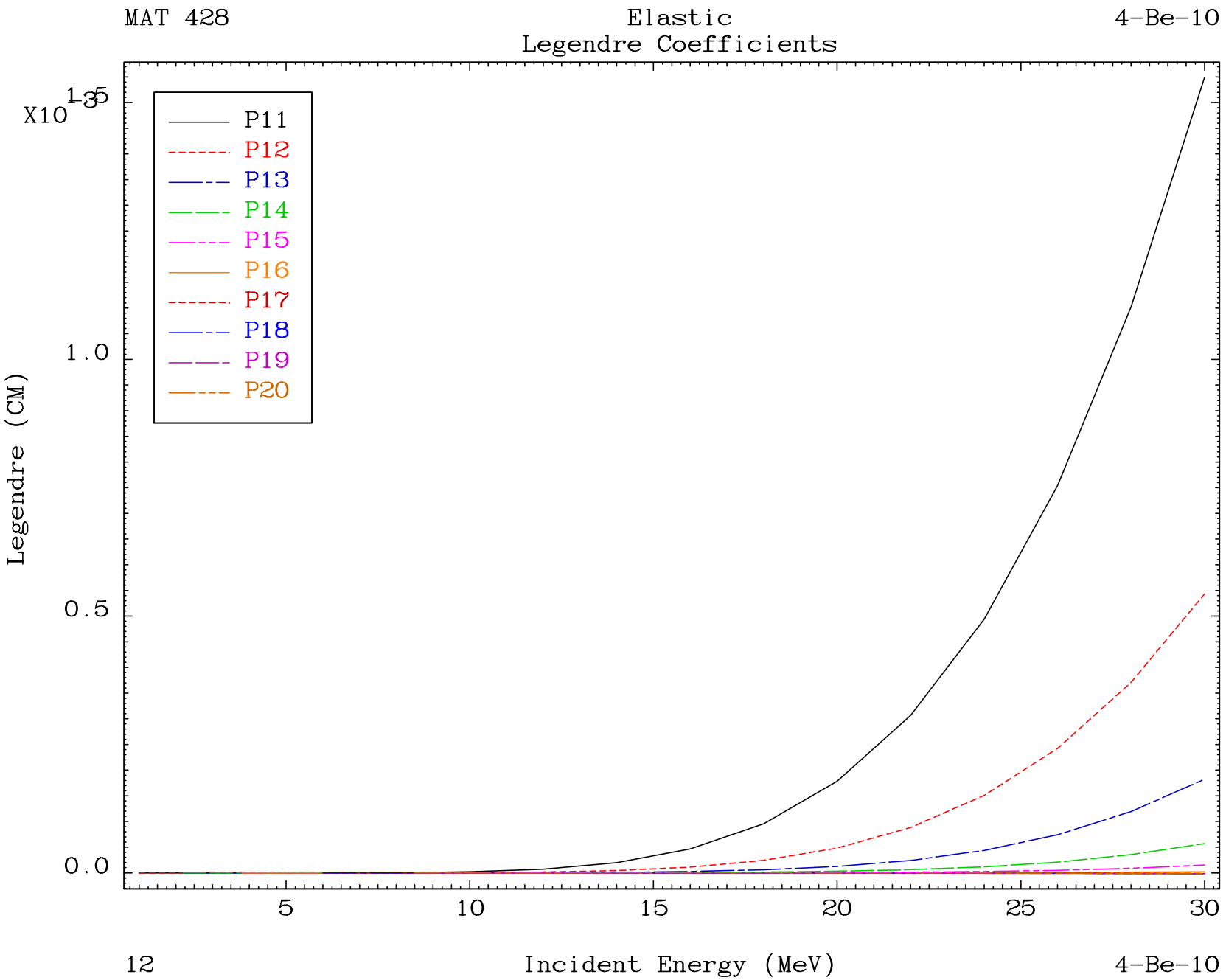

MAT 428
(n,p) Levels
4-Be-10
293 Kelvin Cross Sections
(n,p)
Cross Section (barns)
Incident Energy (MeV)
7
4-Be-10

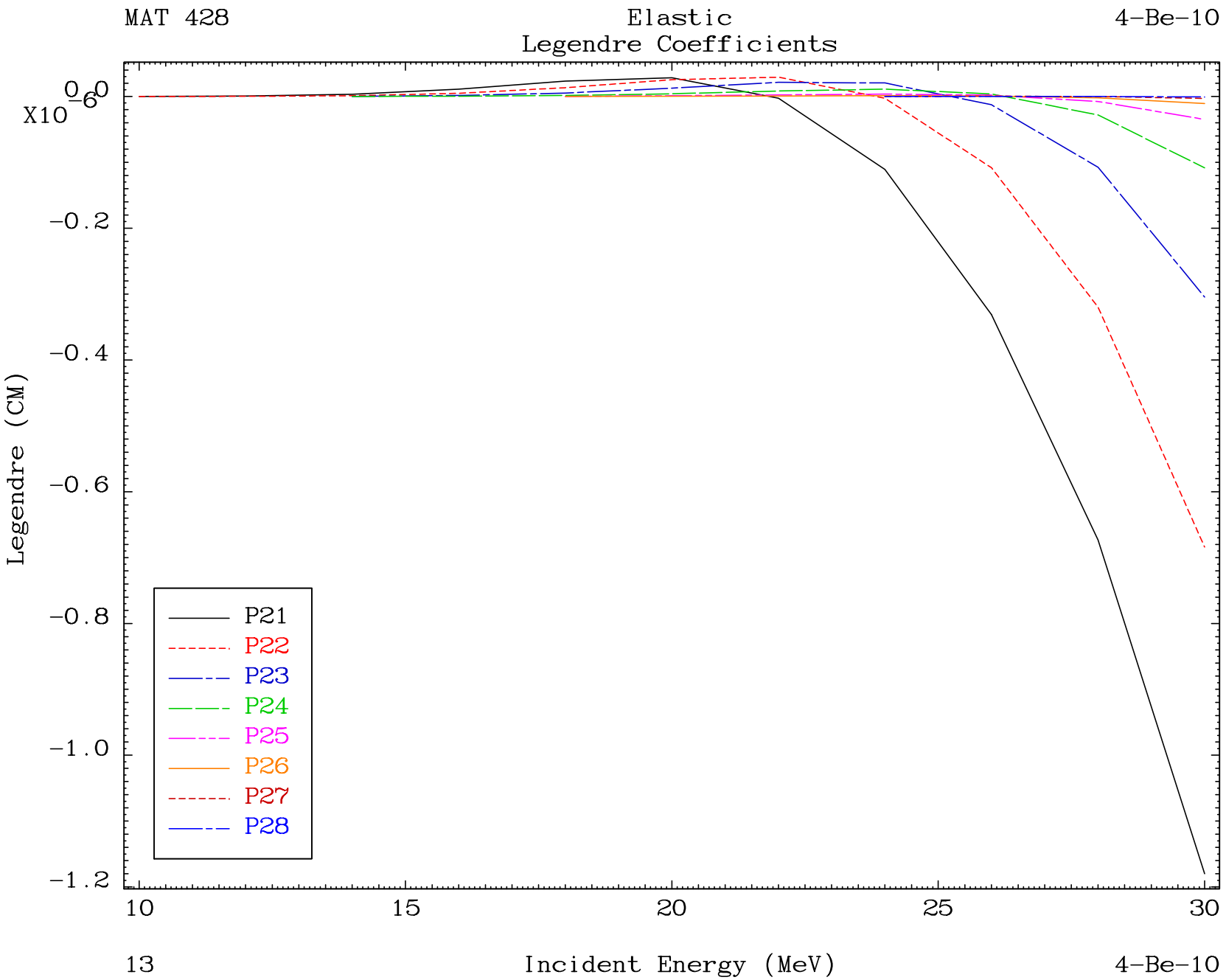

293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
10^{-2}
3
2
9
8
7
6
5
4
2
3
4
5
6
7
8
9
10^{2}
2
Incident Energy (MeV)

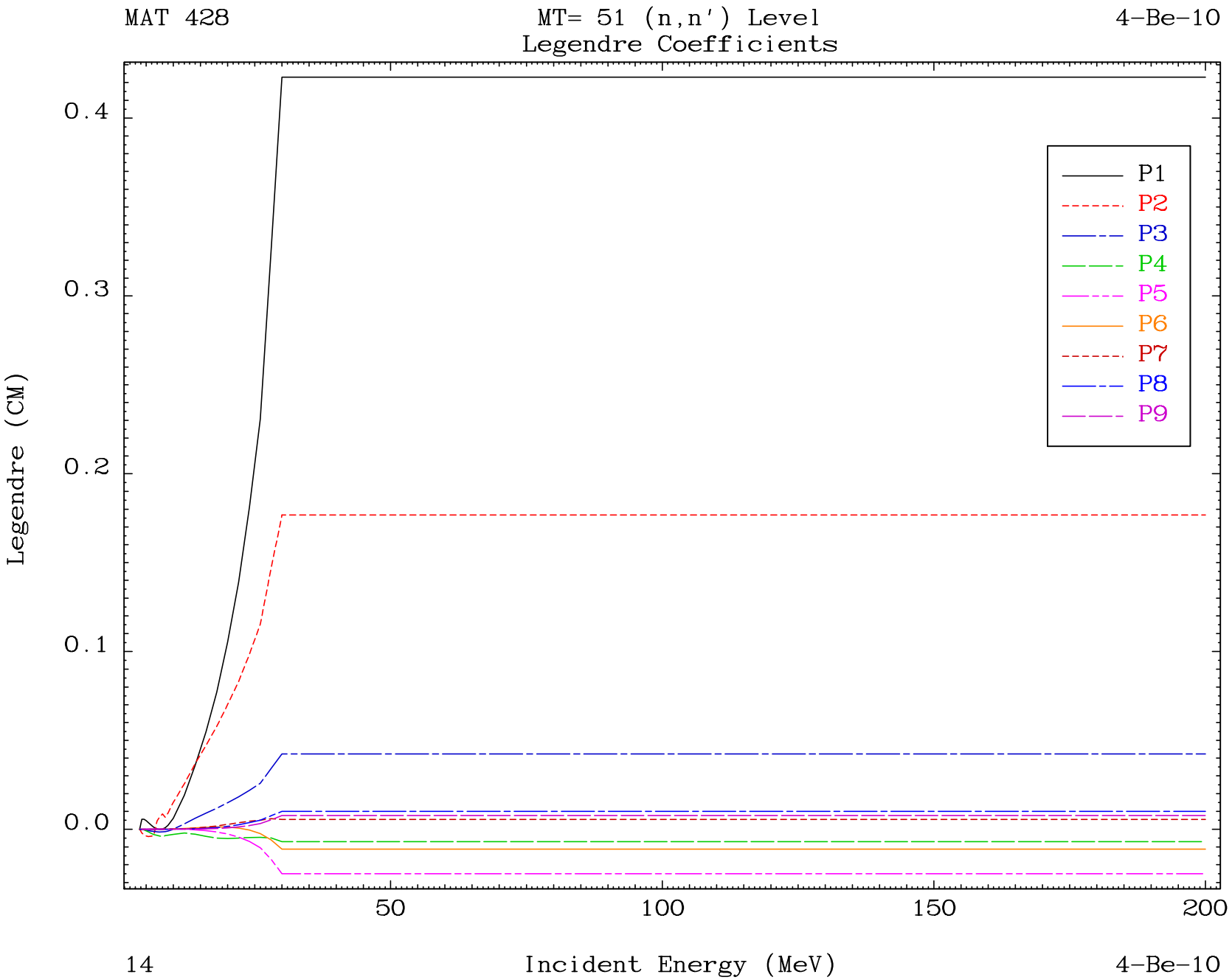

MAT 428
(n,t) Levels
293 Kelvin Cross Sections
4-Be-10
Cross Section (barns)
Incident Energy (MeV)
(n,t)
9
4-Be-10

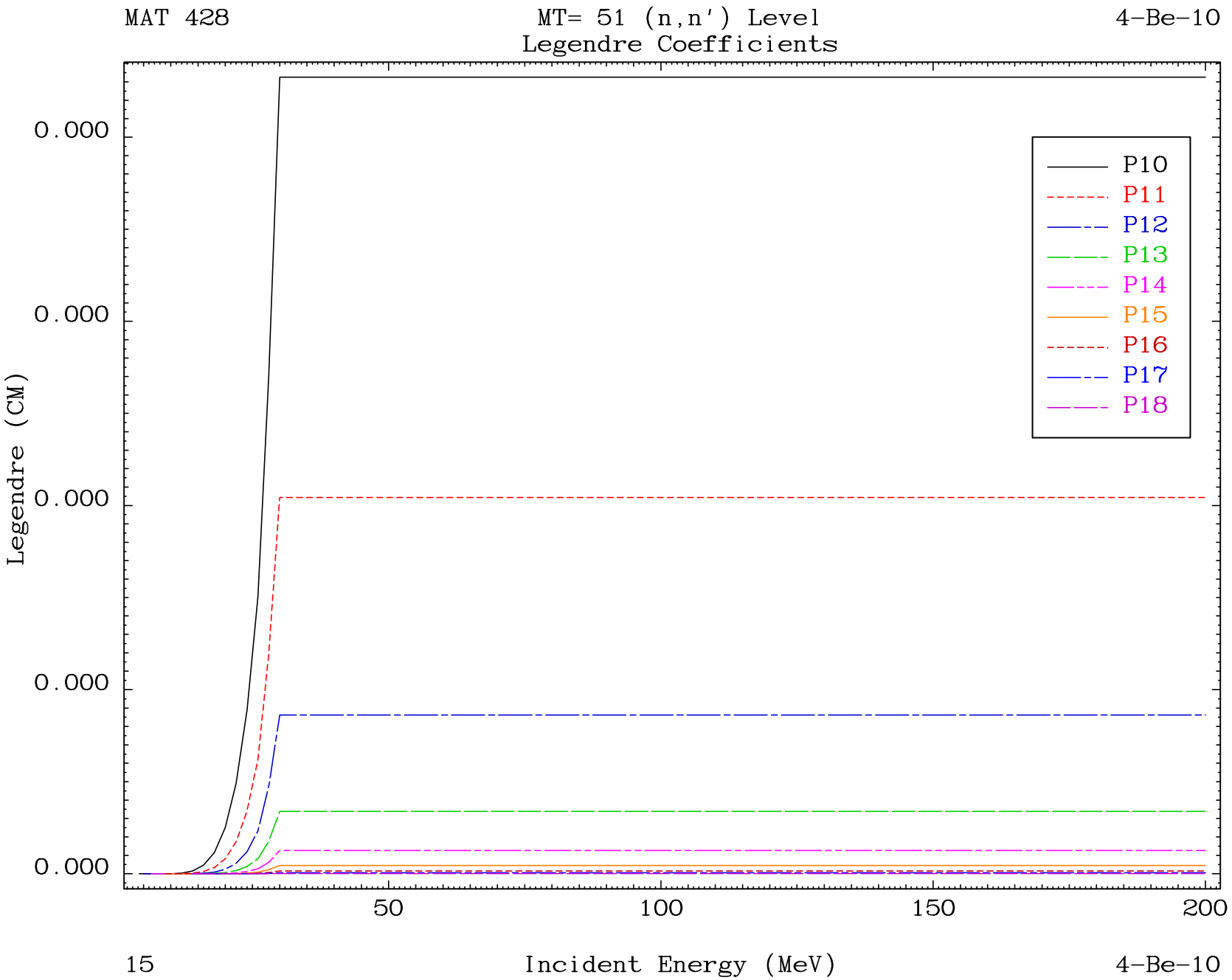

MAT 428
Energy Release
Parameters
4-Be-10
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma capture (mt102)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
Parameters
Incident Energy (MeV)
10
4-Be-10

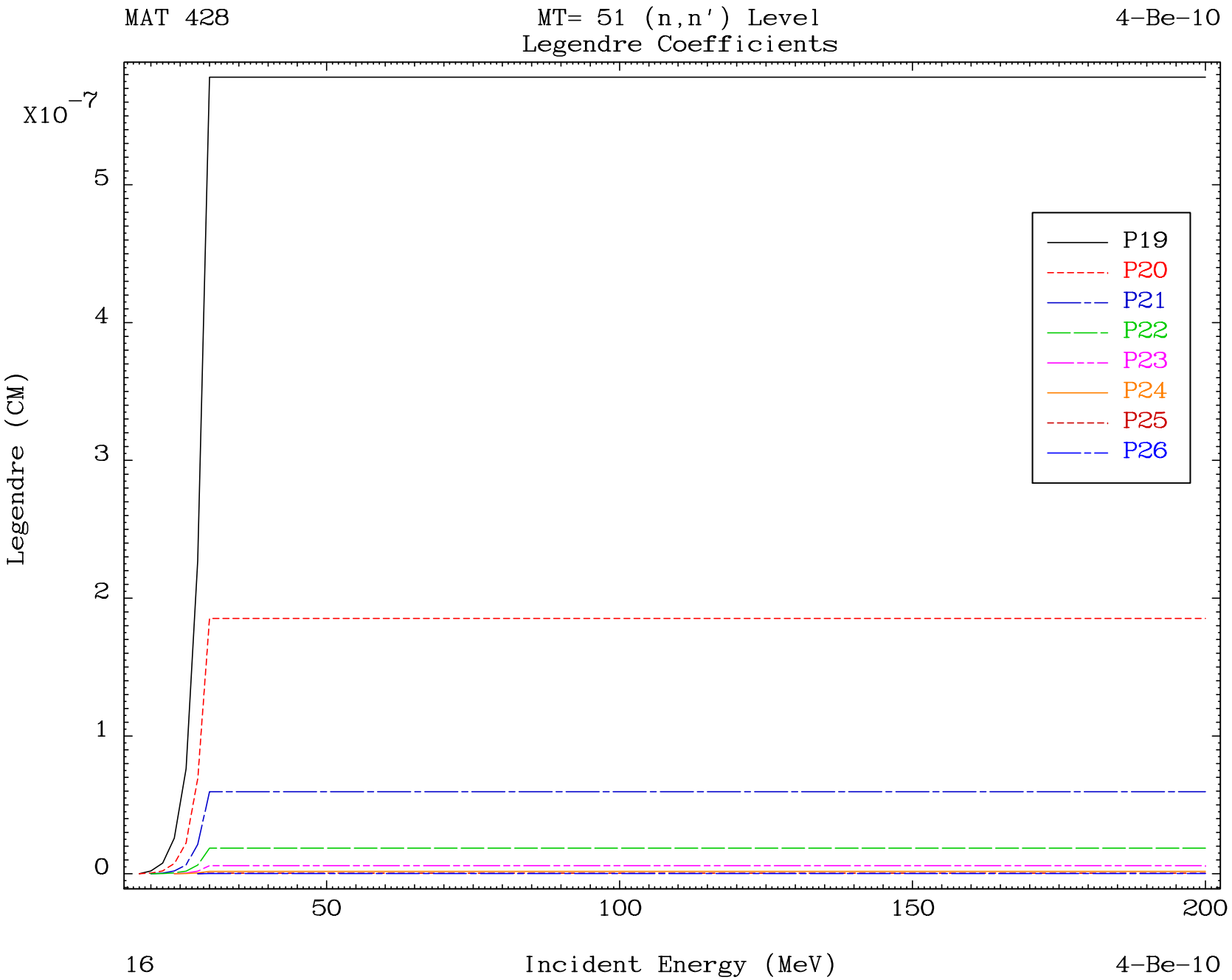

MAT 428
Elastic
Legendre Coefficients
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
11
Incident Energy (MeV)
4-Be-10

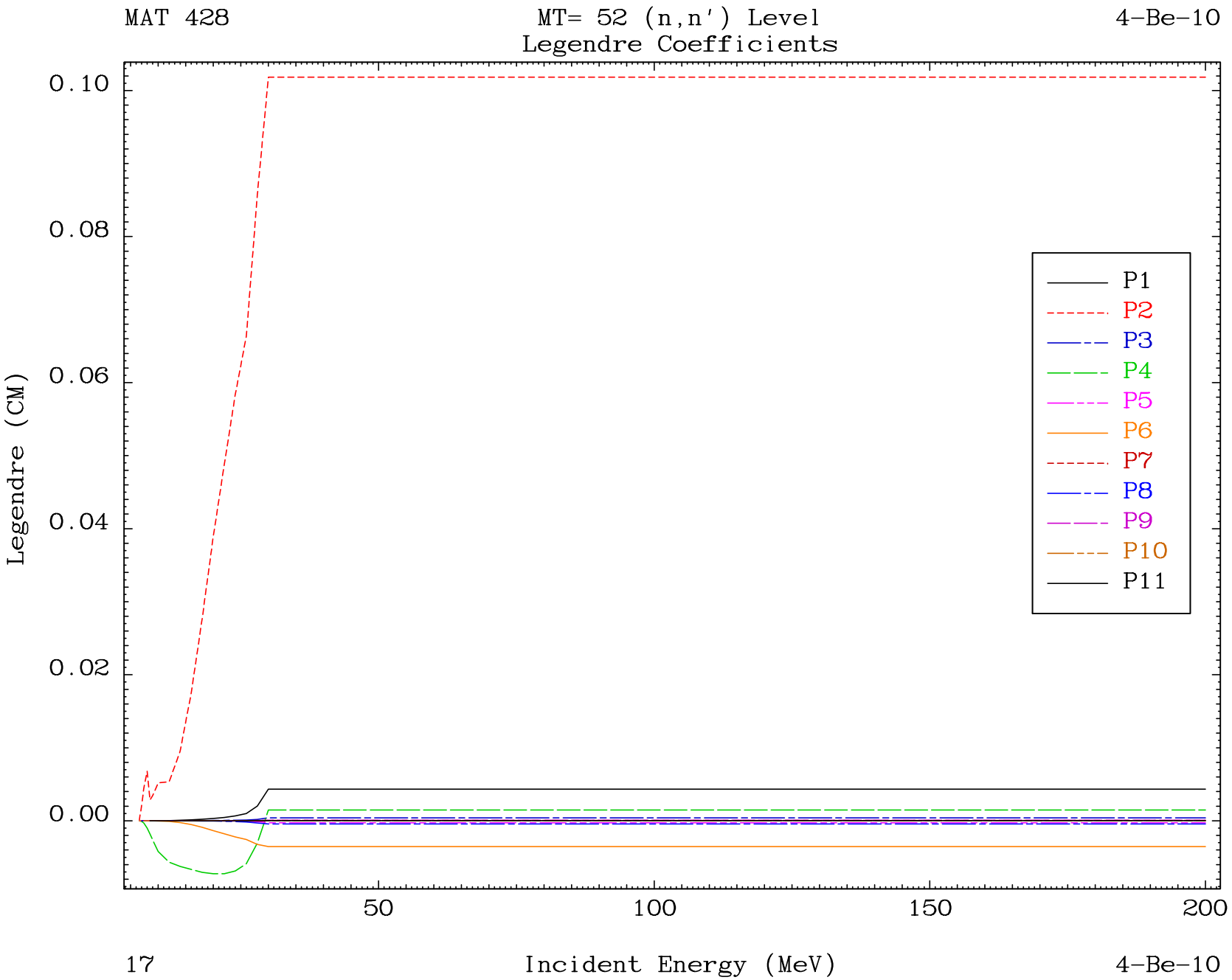

MAT 428
Elastic
Legendre Coefficients
4-Be-10
X10-5
1.5
1.0
0.5
0.0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
5
10
15
20
25
30
12
Incident Energy (MeV)
4-Be-10

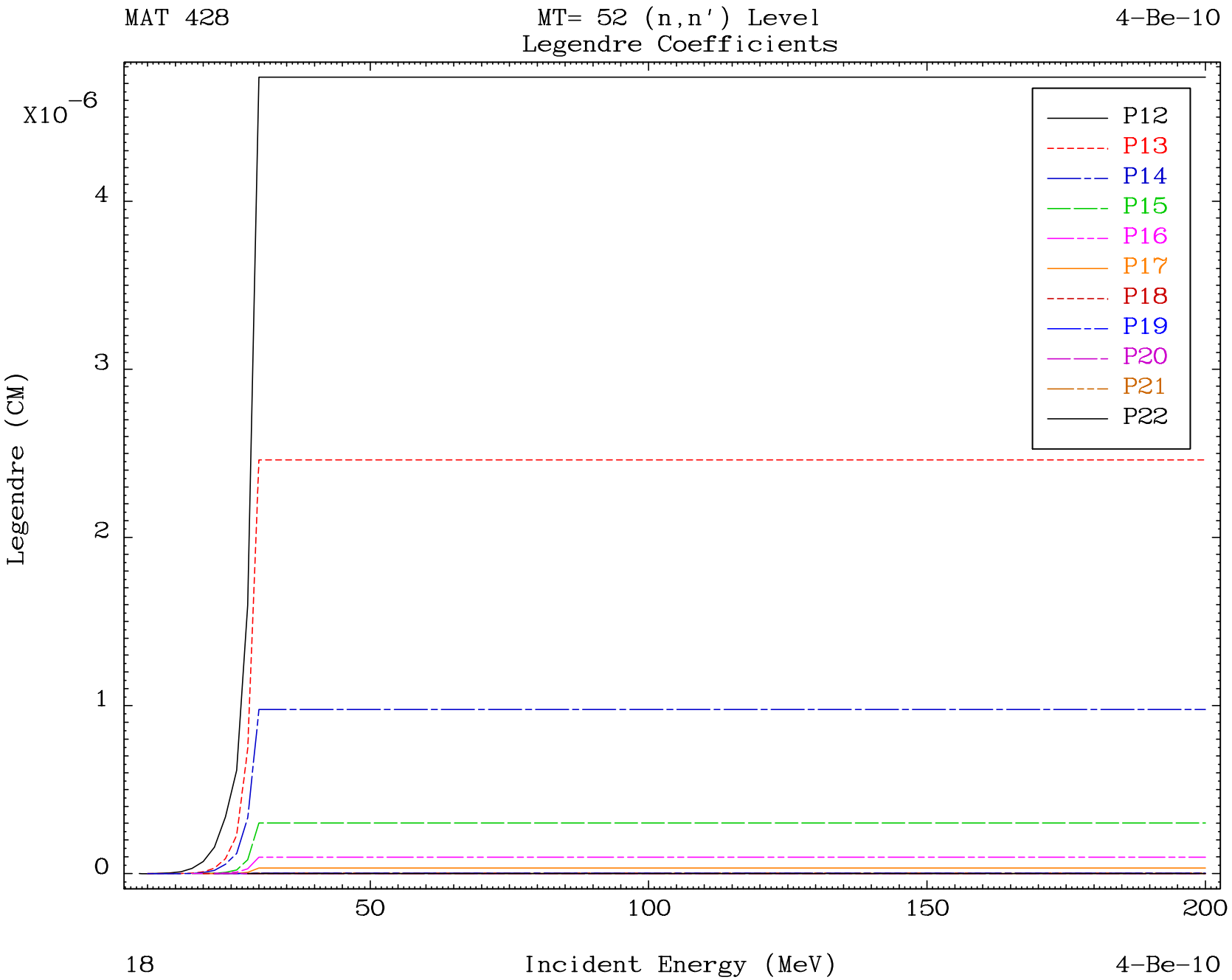

MAT 428
Elastic
Legendre Coefficients
4-Be-10
X10^-6
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
10
15
20
25
30
13
Incident Energy (MeV)
4-Be-10

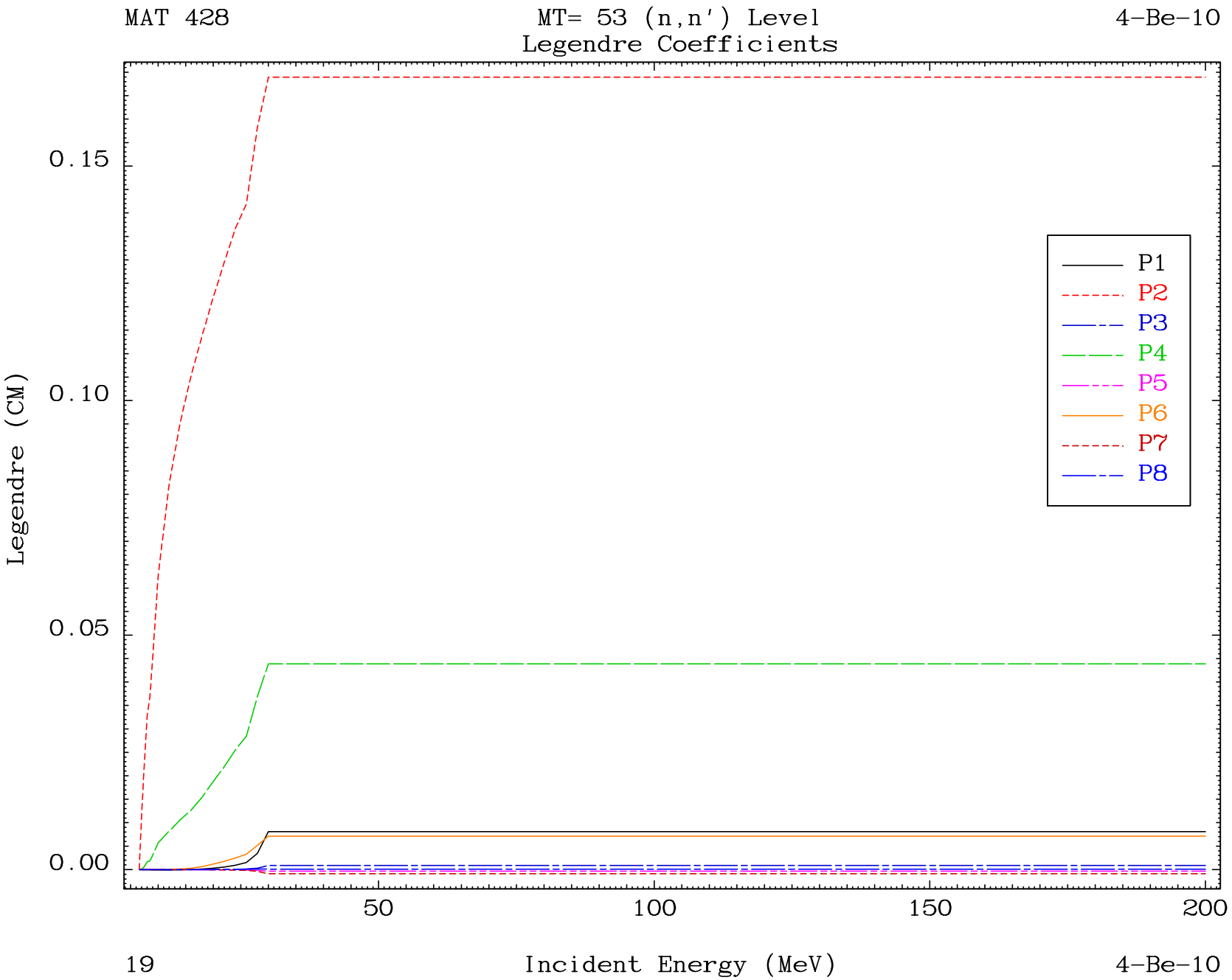

MAT 428
MT= 51 (n,n') Level
Legendre Coefficients
4-Be-10
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
50
100
150
200
Incident Energy (MeV)
P1
P2
P3
P4
P5
P6
P7
P8
P9
14
4-Be-10

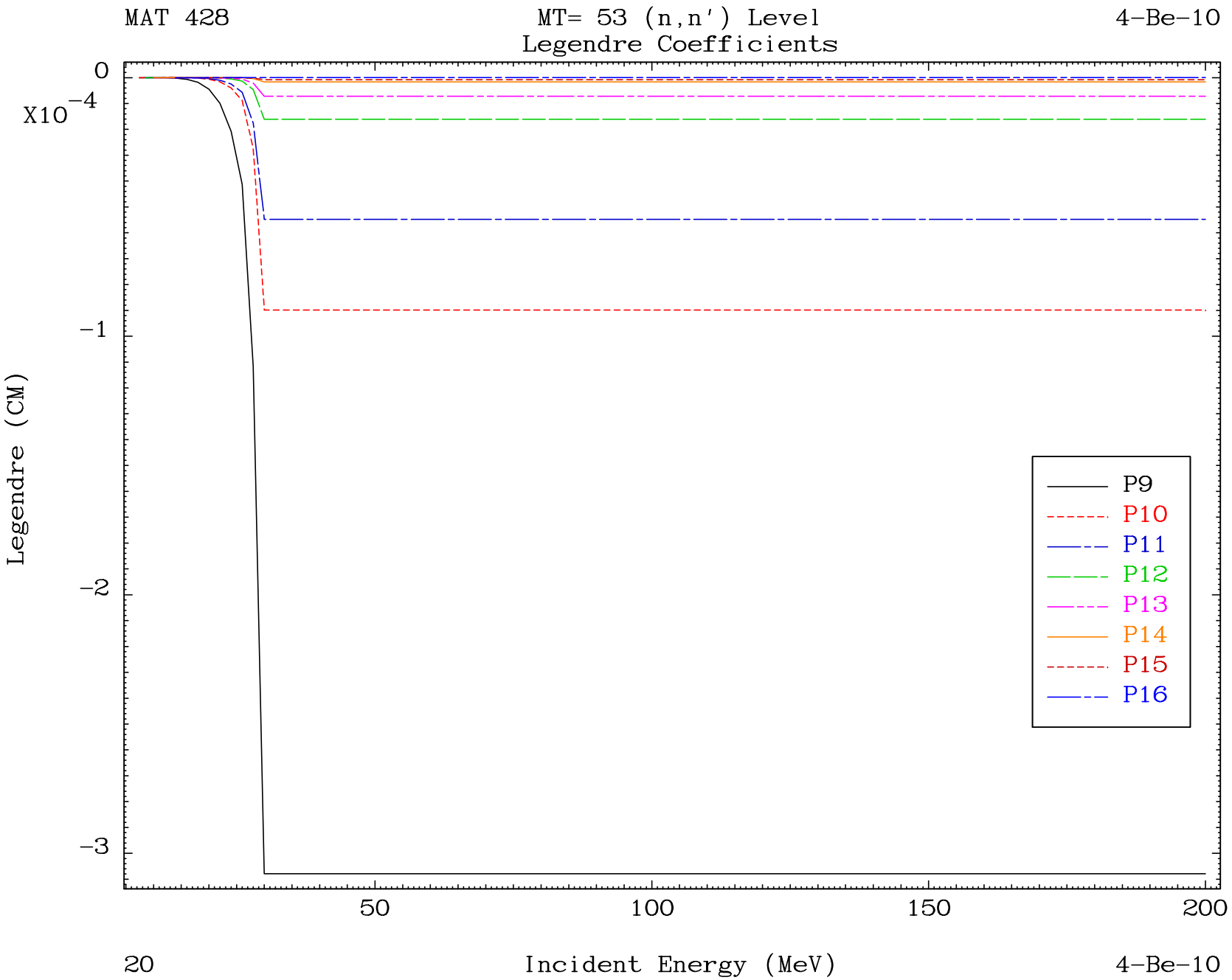

MAT 428
MT= 51 (n,n') Level
Legendre Coefficients
4-Be-10
0.000
0.000
0.000
0.000
Legendre (CM)
P10
P11
P12
P13
P14
P15
P16
P17
P18
50
100
150
200
15
Incident Energy (MeV)
4-Be-10

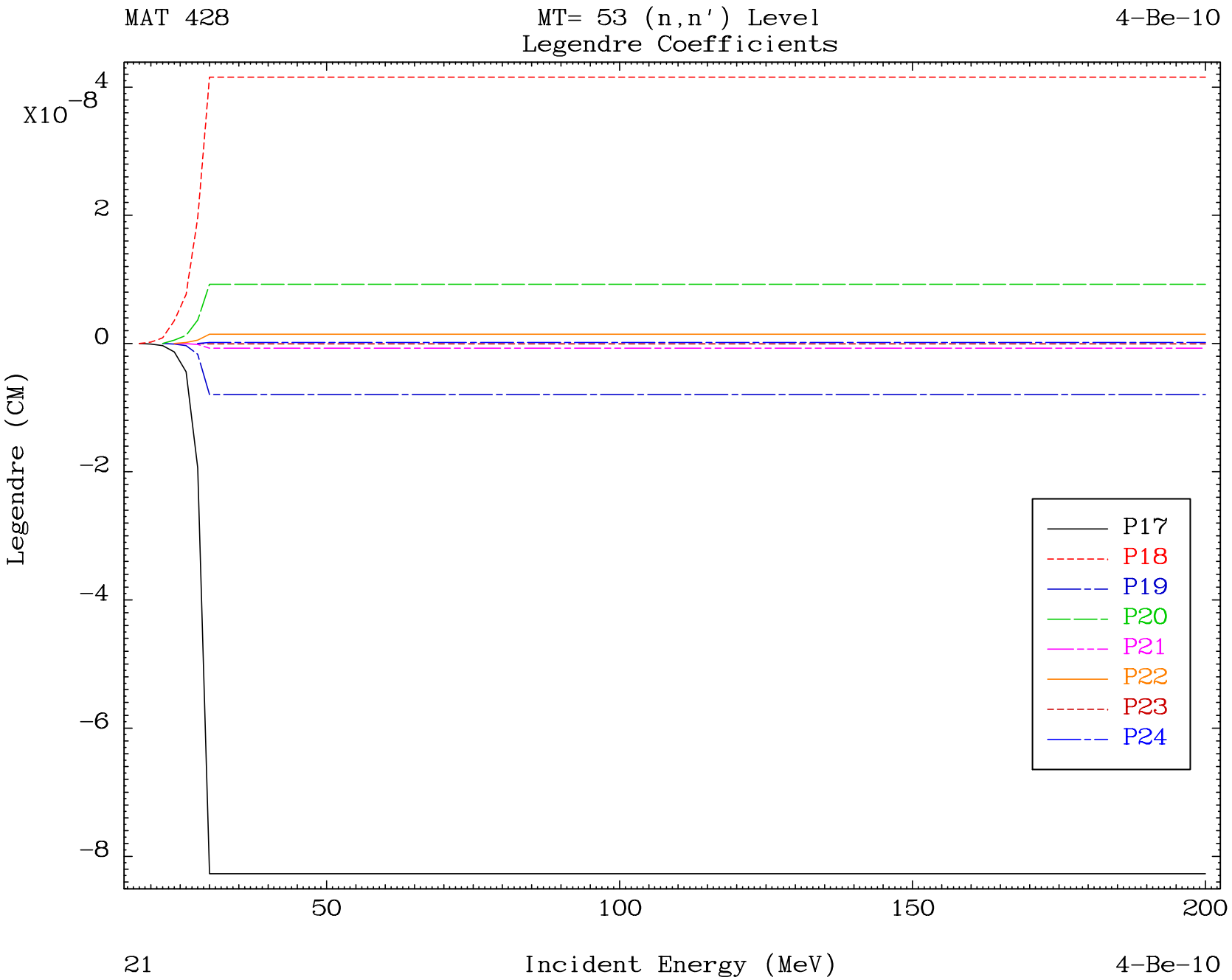

MAT 428
MT= 51 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-7
5
4
3
2
1
0
Legendre (CM)
50
100
150
200
P19
P20
P21
P22
P23
P24
P25
P26
16
Incident Energy (MeV)
4-Be-10

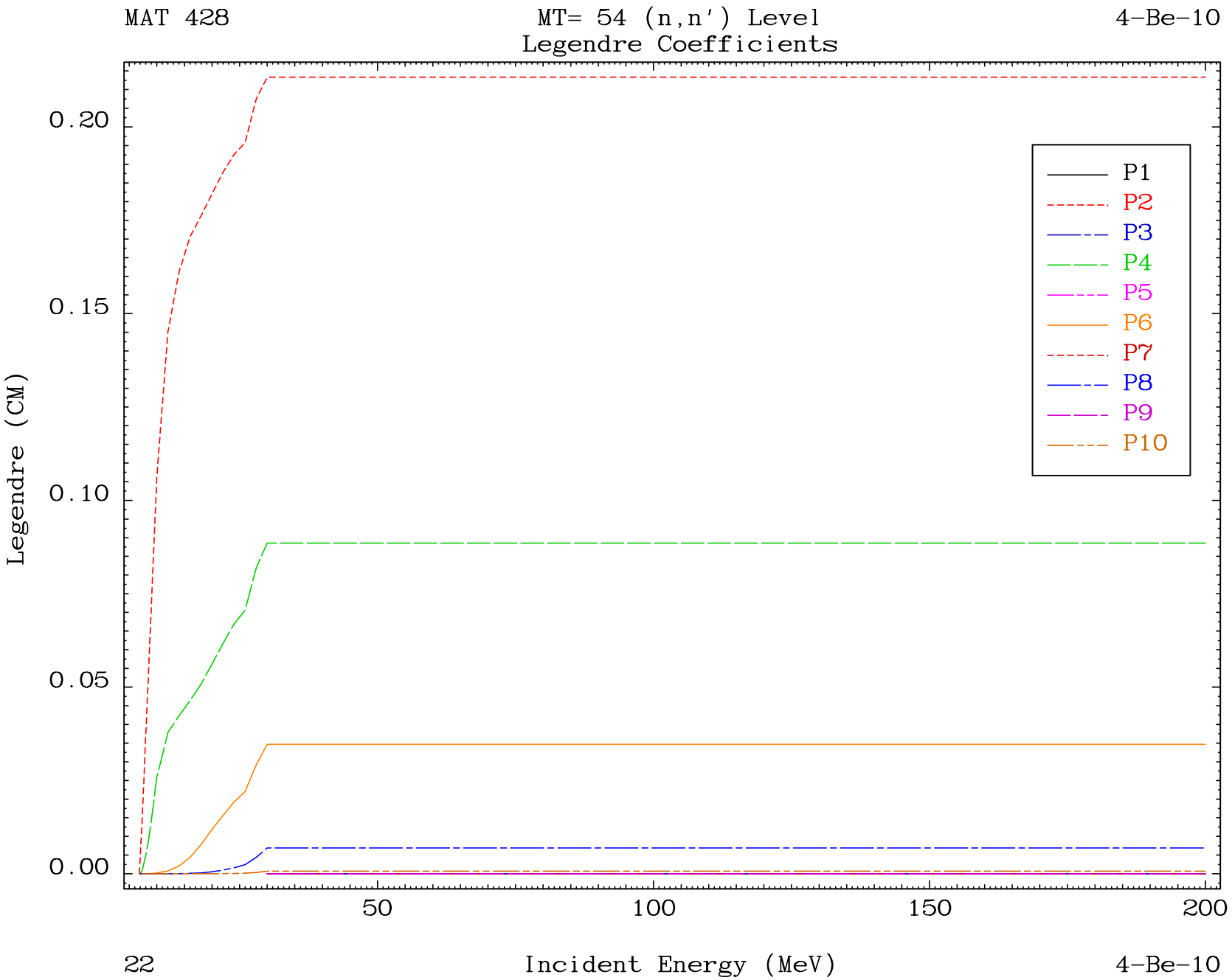

MAT 428
MT= 52 (n,n') Level
Legendre Coefficients
4-Be-10
0.10
0.08
0.06
0.04
0.02
0.00
Legendre (CM)
50
100
150
200
17
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11

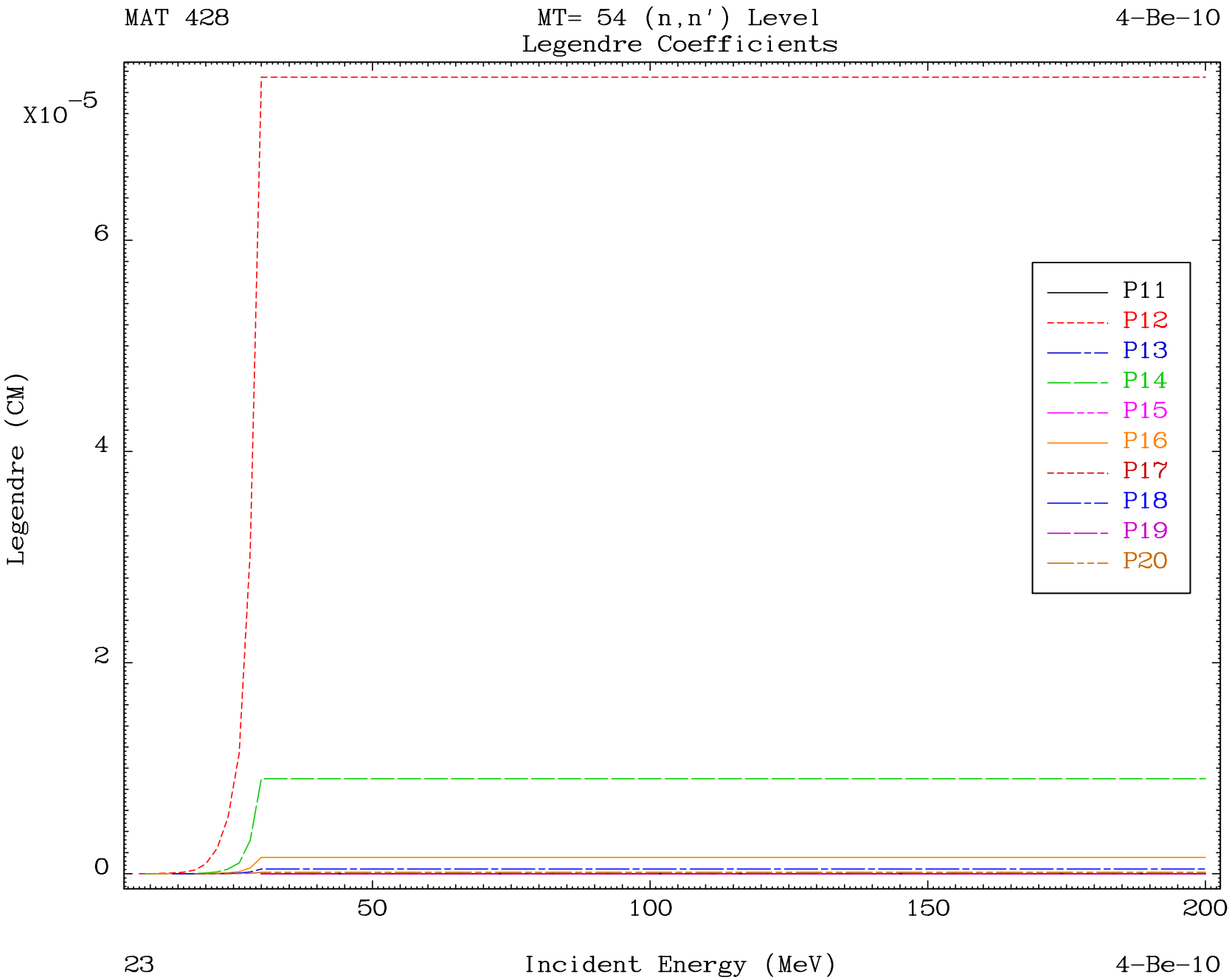

MAT 428
MT= 52 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-6
4
3
2
1
0
Legendre (CM)
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22
50
100
150
200
18
Incident Energy (MeV)
4-Be-10

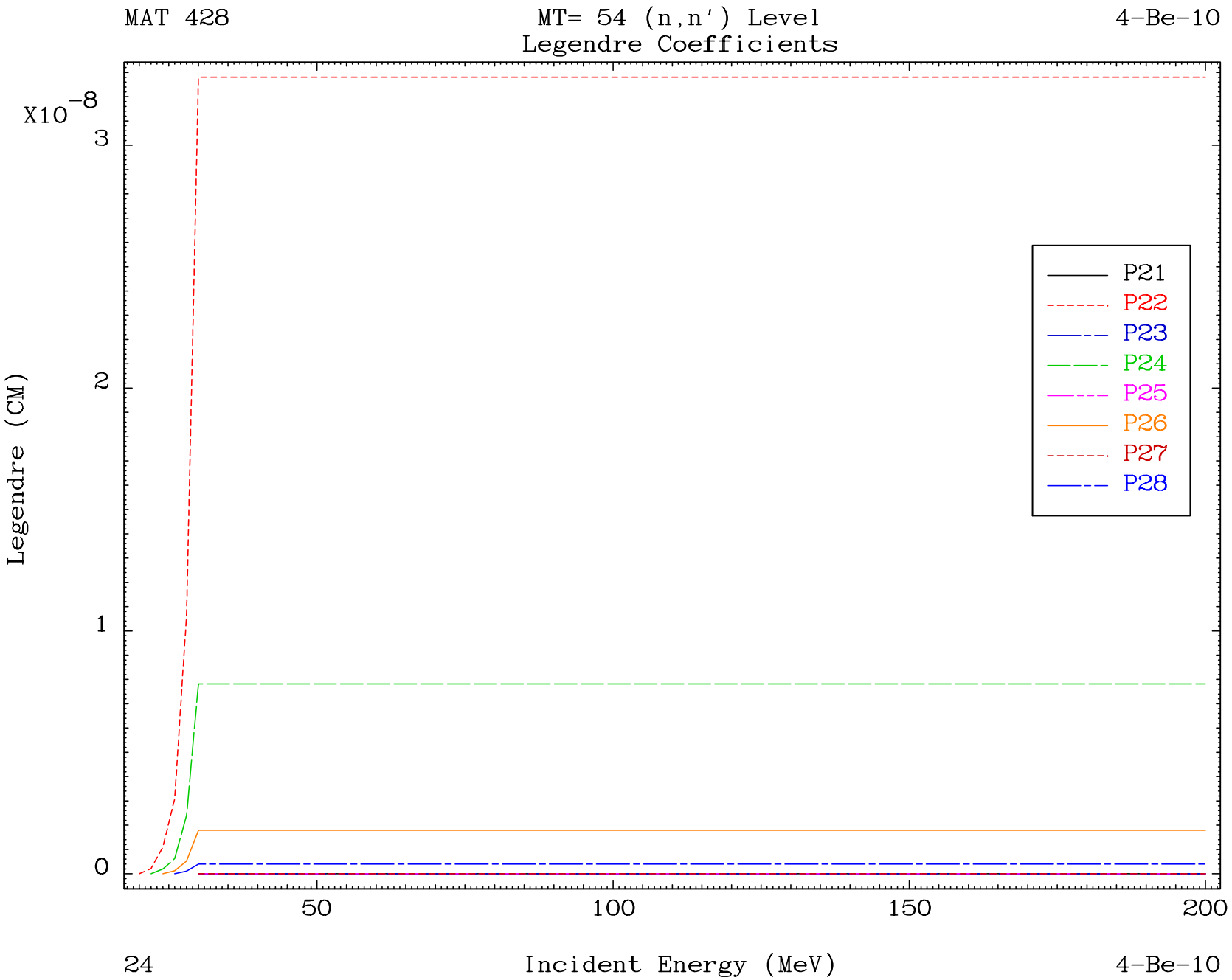

MAT 428
MT= 53 (n,n') Level
Legendre Coefficients
4-Be-10
0.15
0.10
0.05
0.00
Legendre (CM)
50
100
150
200
19
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8

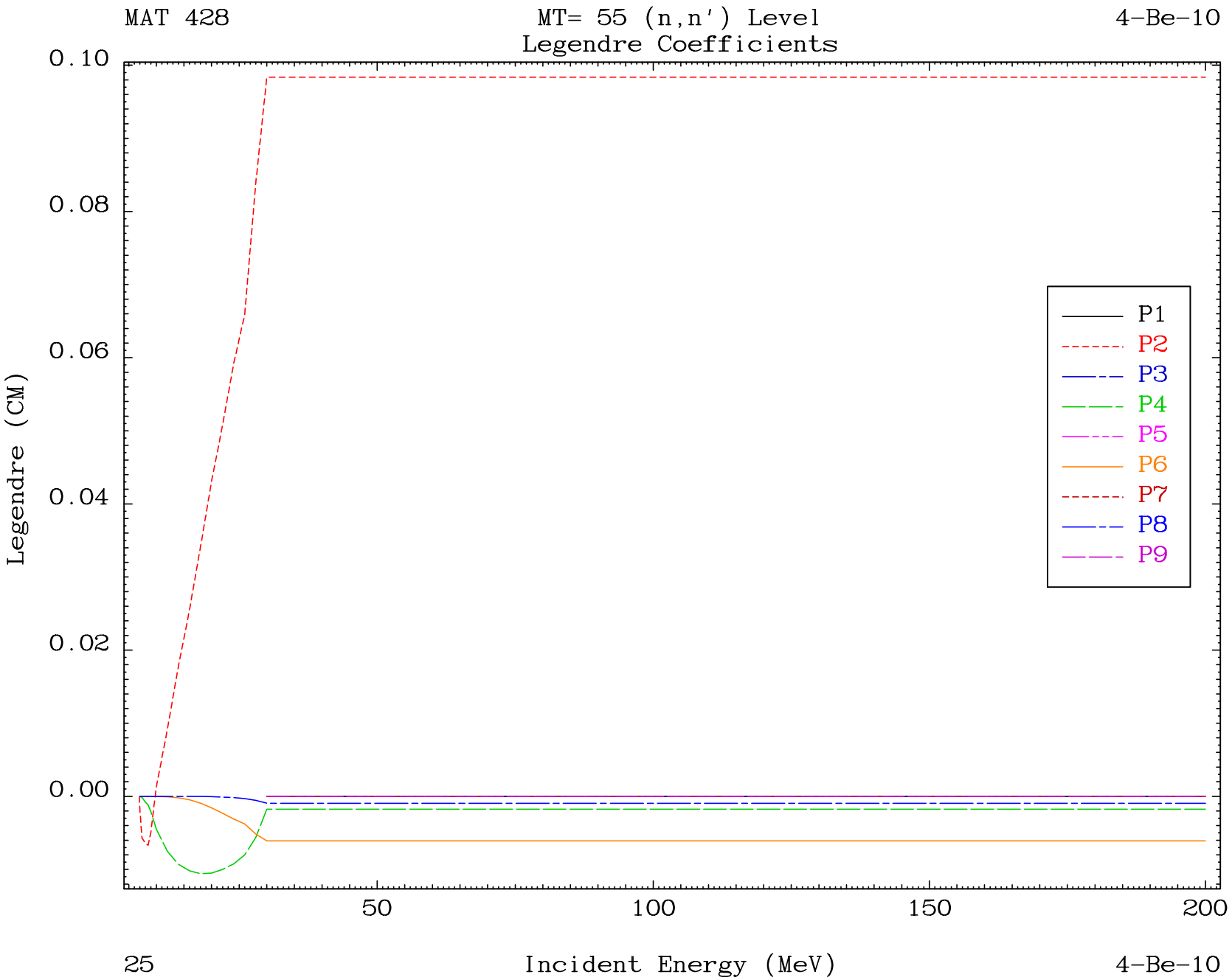

MAT 428
MT= 53 (n,n') Level
Legendre Coefficients
4-Be-10
0
X10^-4
-1
-2
-3
Legendre (CM)
50
100
150
200
20
Incident Energy (MeV)
4-Be-10
P9
P10
P11
P12
P13
P14
P15
P16

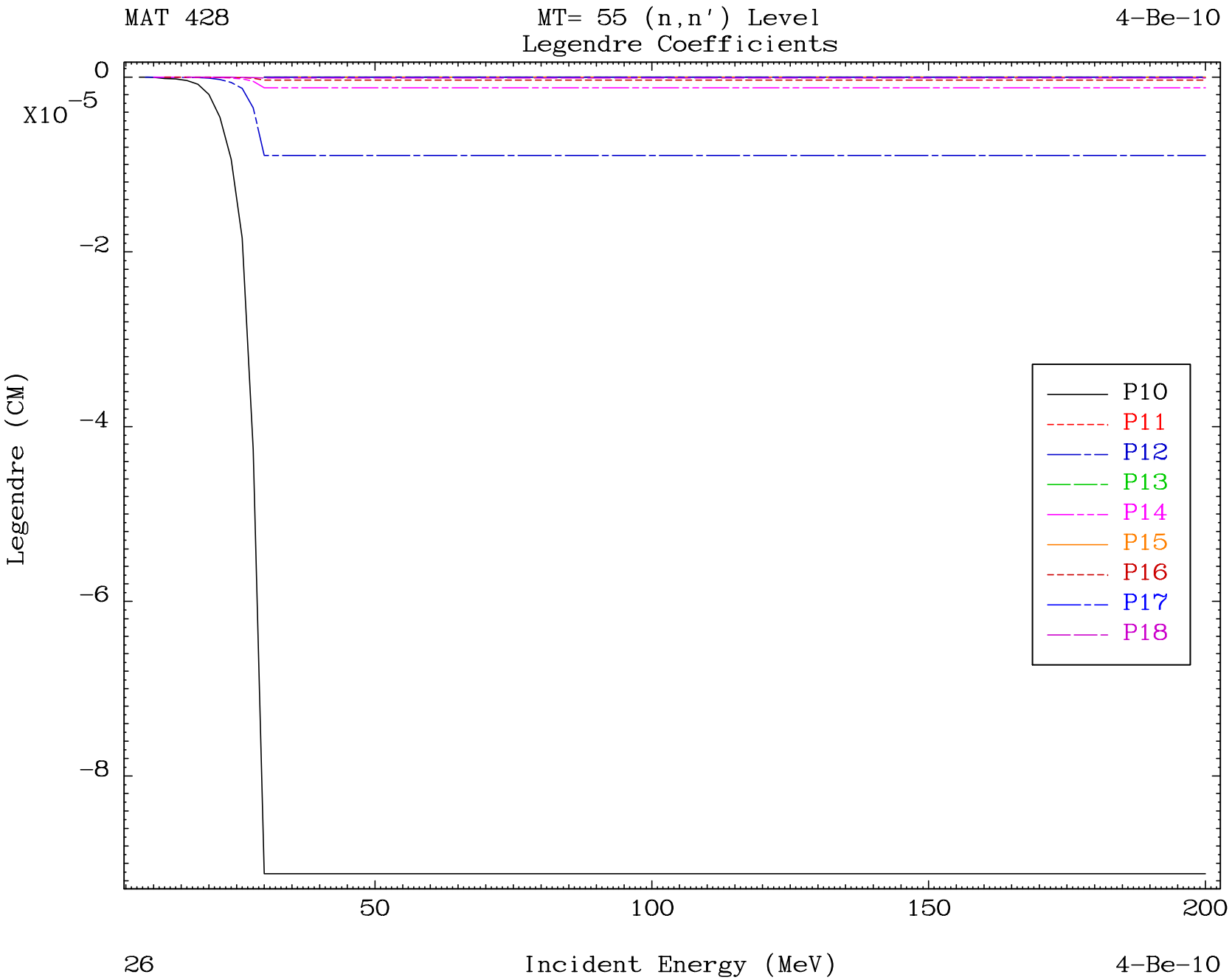

MAT 428
MT= 53 (n,n') Level
Legendre Coefficients
4-Be-10
X10 −8
4
2
0
−2
−4
−6
−8
Legendre (CM)
50
100
150
200
P17
P18
P19
P20
P21
P22
P23
P24
21
Incident Energy (MeV)
4-Be-10

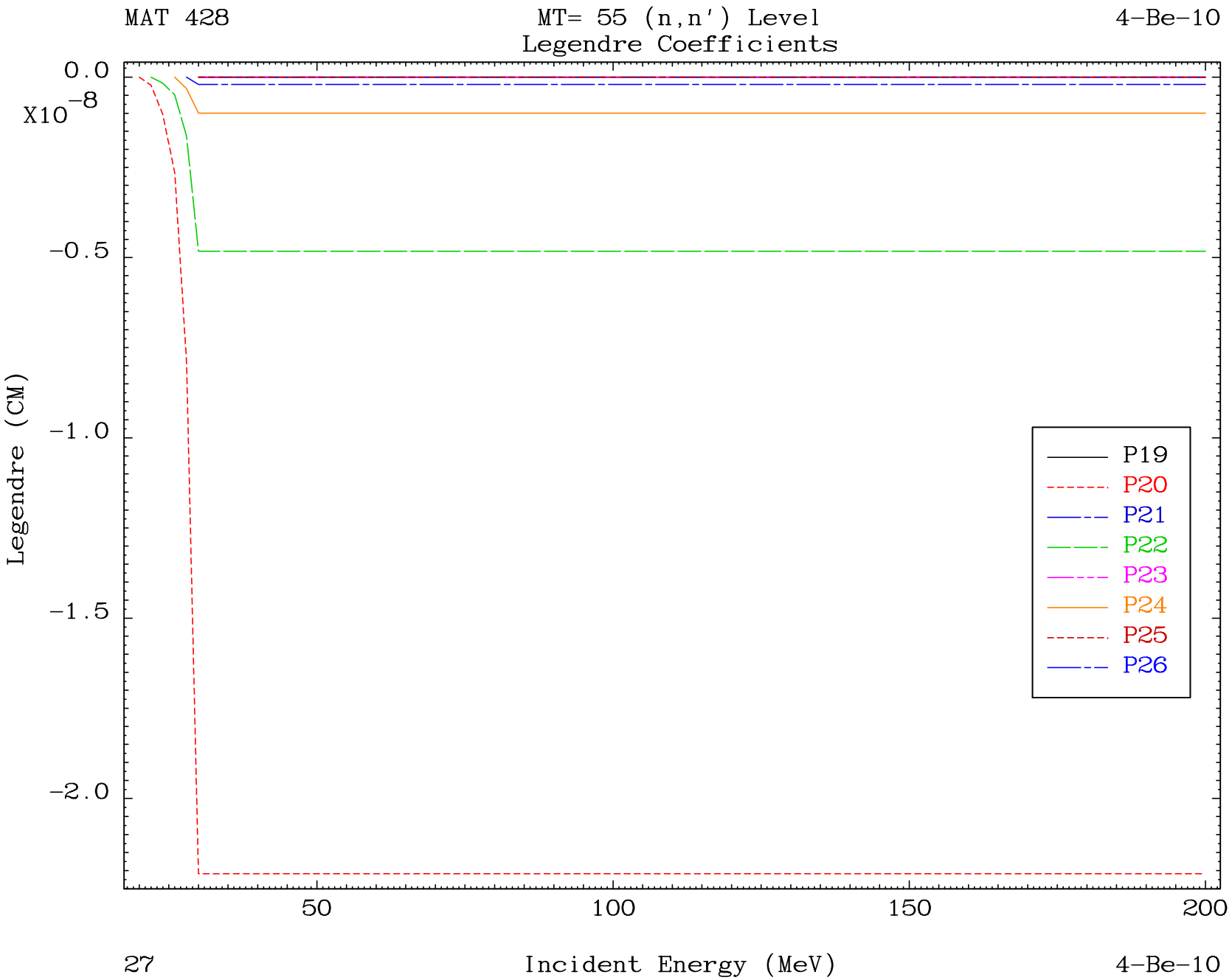

MAT 428
MT= 54 (n,n') Level
Legendre Coefficients
4-Be-10
0.20
0.15
0.10
0.05
0.00
Legendre (CM)
50
100
150
200
22
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

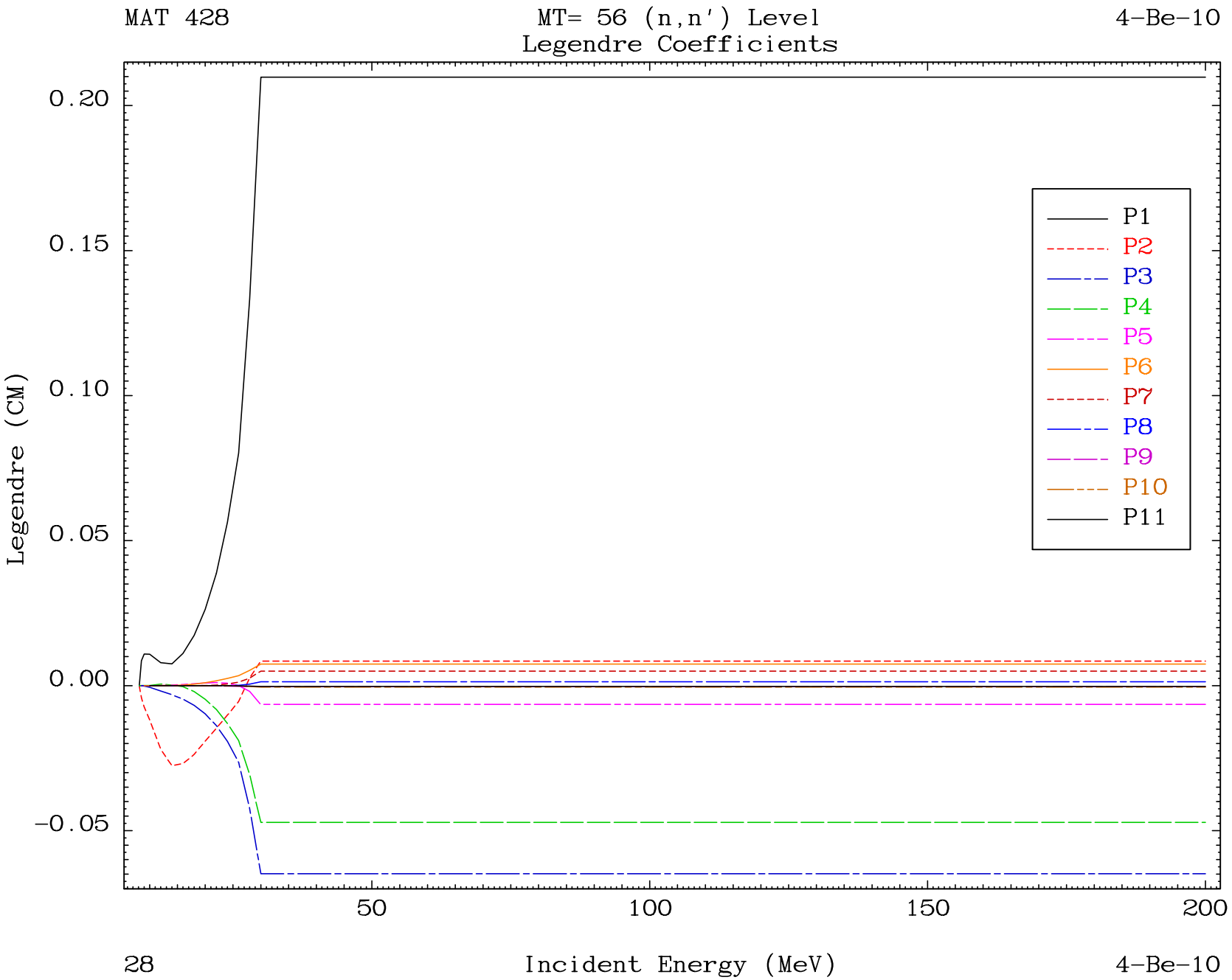

MAT 428
MT= 54 (n,n') Level
Legendre Coefficients
4-Be-10
X10-5
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
23
Incident Energy (MeV)
4-Be-10

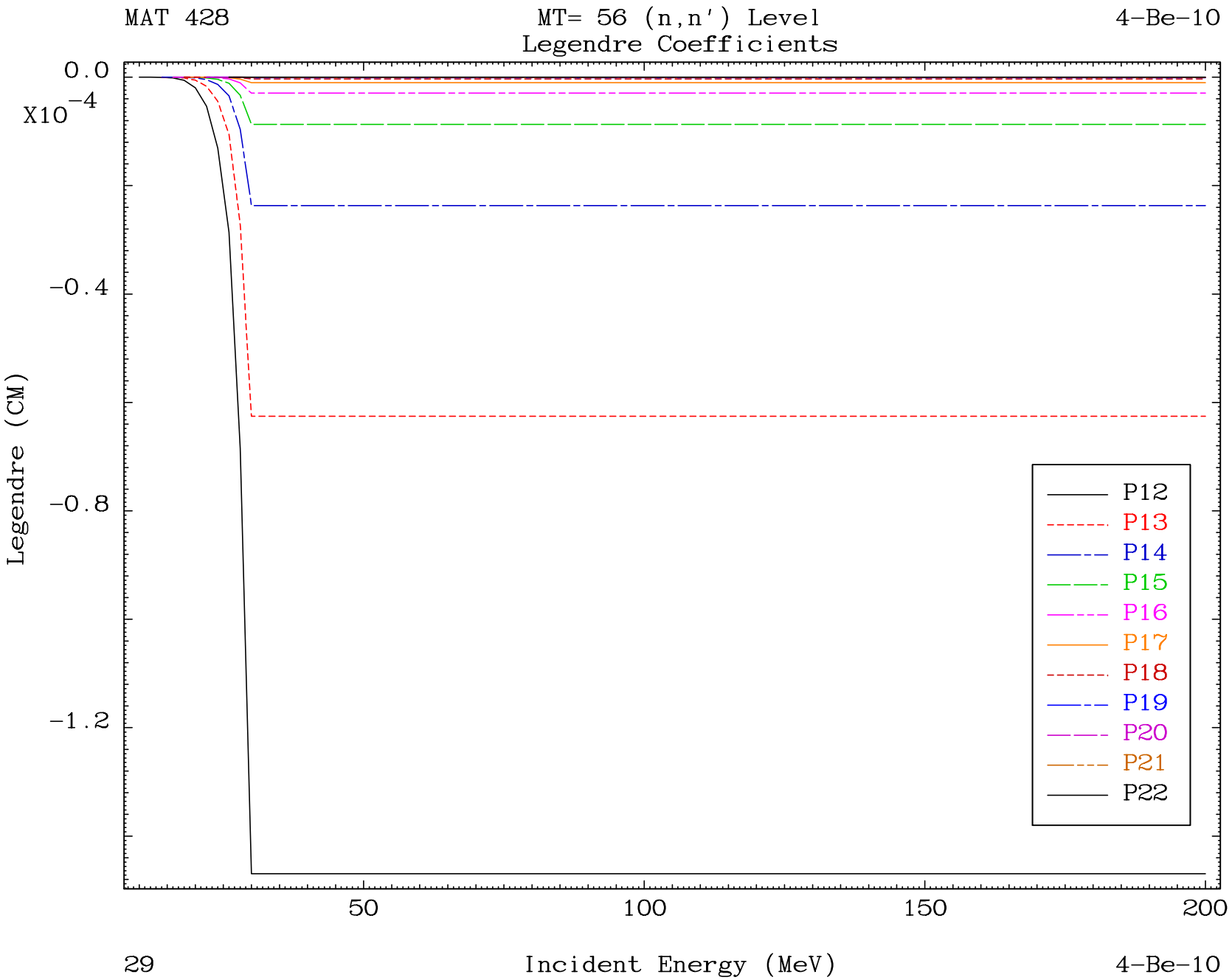

MAT 428
MT= 54 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-8
3
2
1
0
Legendre (CM)
50
100
150
200
24
Incident Energy (MeV)
4-Be-10
P21
P22
P23
P24
P25
P26
P27
P28

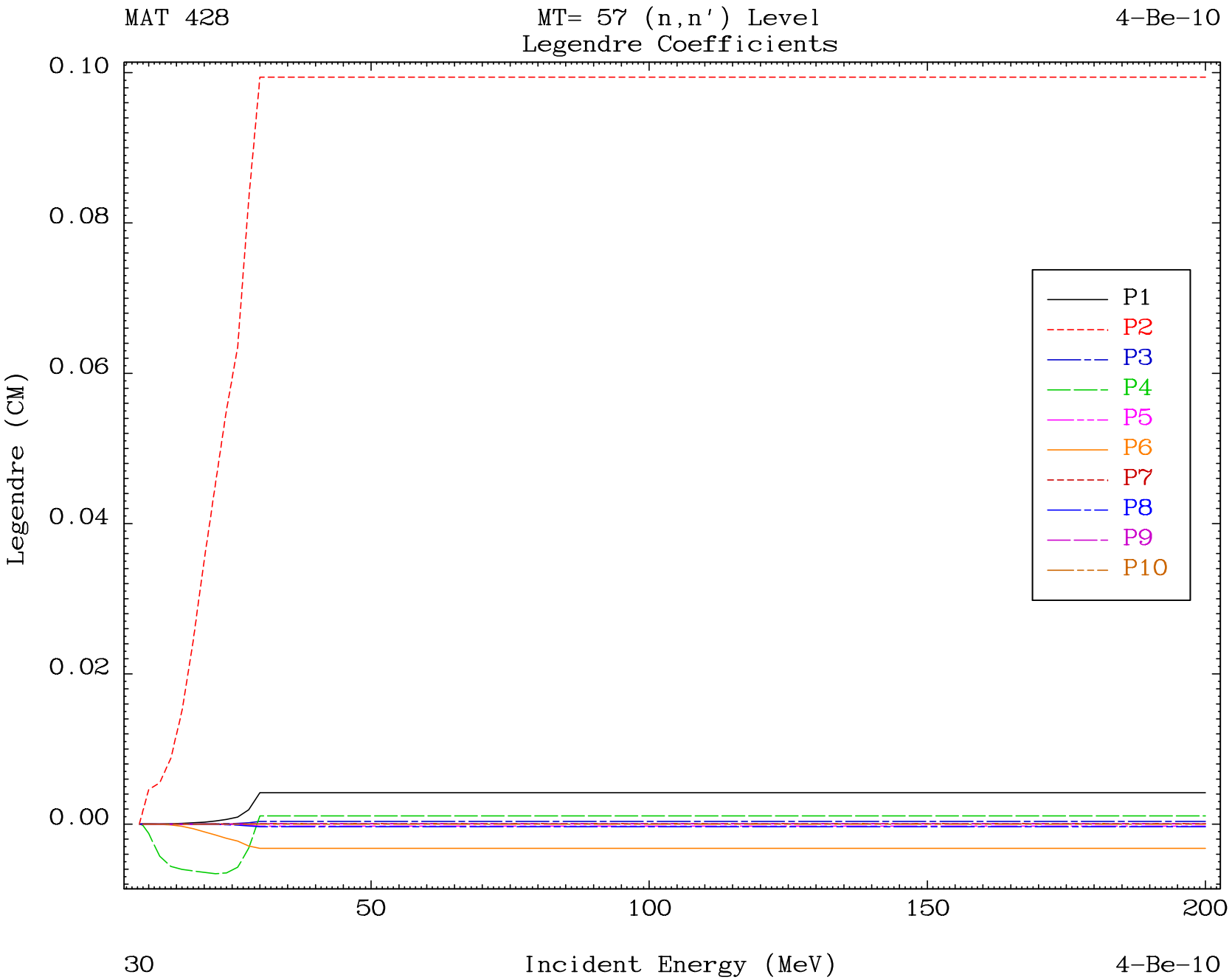

MAT 428
MT= 55 (n,n') Level
Legendre Coefficients
4-Be-10
0.10
0.08
0.06
0.04
0.02
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
50
100
150
200
25
Incident Energy (MeV)
4-Be-10

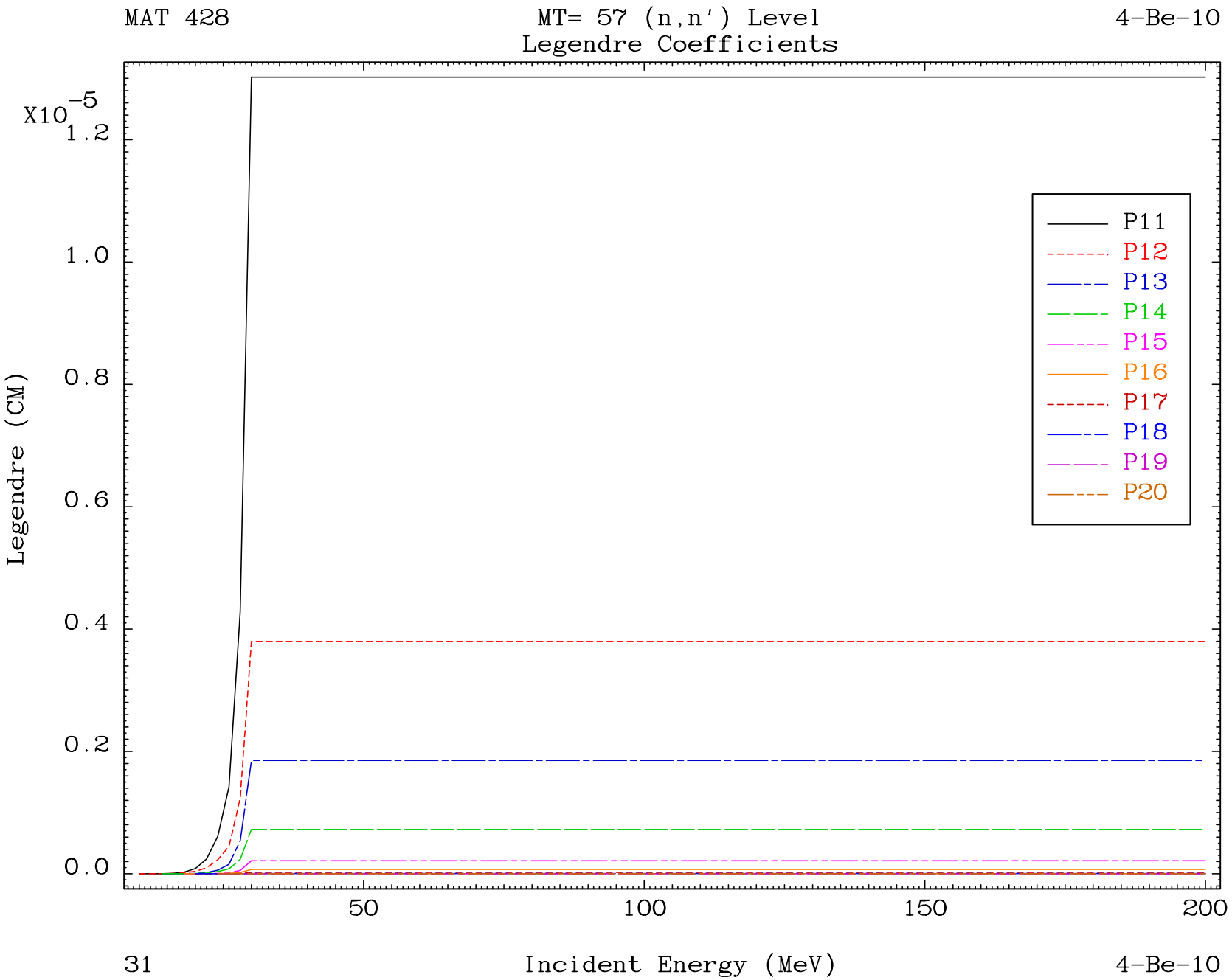

MAT 428
MT= 55 (n,n') Level
Legendre Coefficients
4-Be-10
0
X10 −5
−2
−4
−6
−8
Legendre (CM)
50
100
150
200
26
Incident Energy (MeV)
4-Be-10
P10
P11
P12
P13
P14
P15
P16
P17
P18

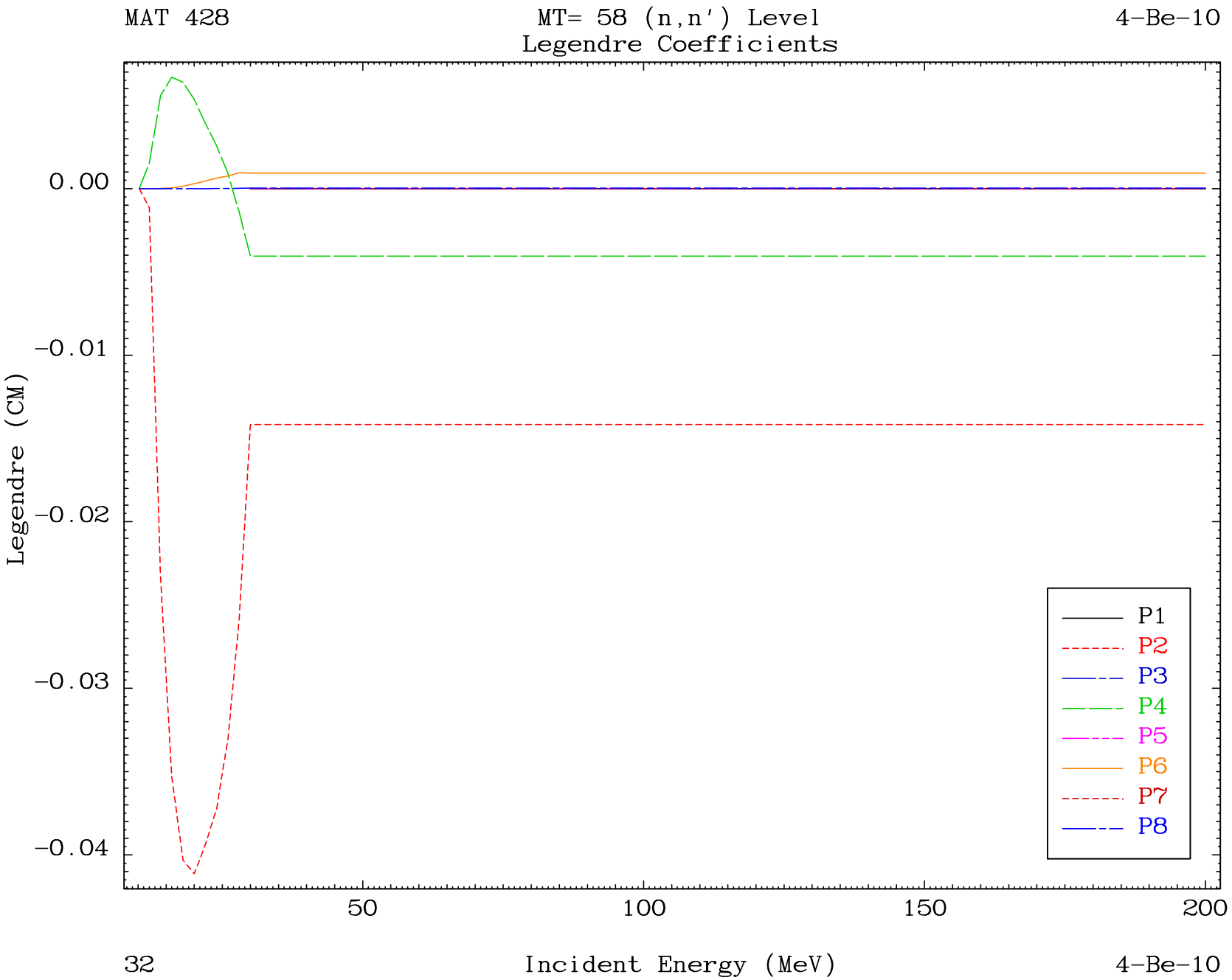

MAT 428
MT= 55 (n,n') Level
Legendre Coefficients
4-Be-10
0.0
X10^-8
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
27
Incident Energy (MeV)
4-Be-10
P19
P20
P21
P22
P23
P24
P25
P26

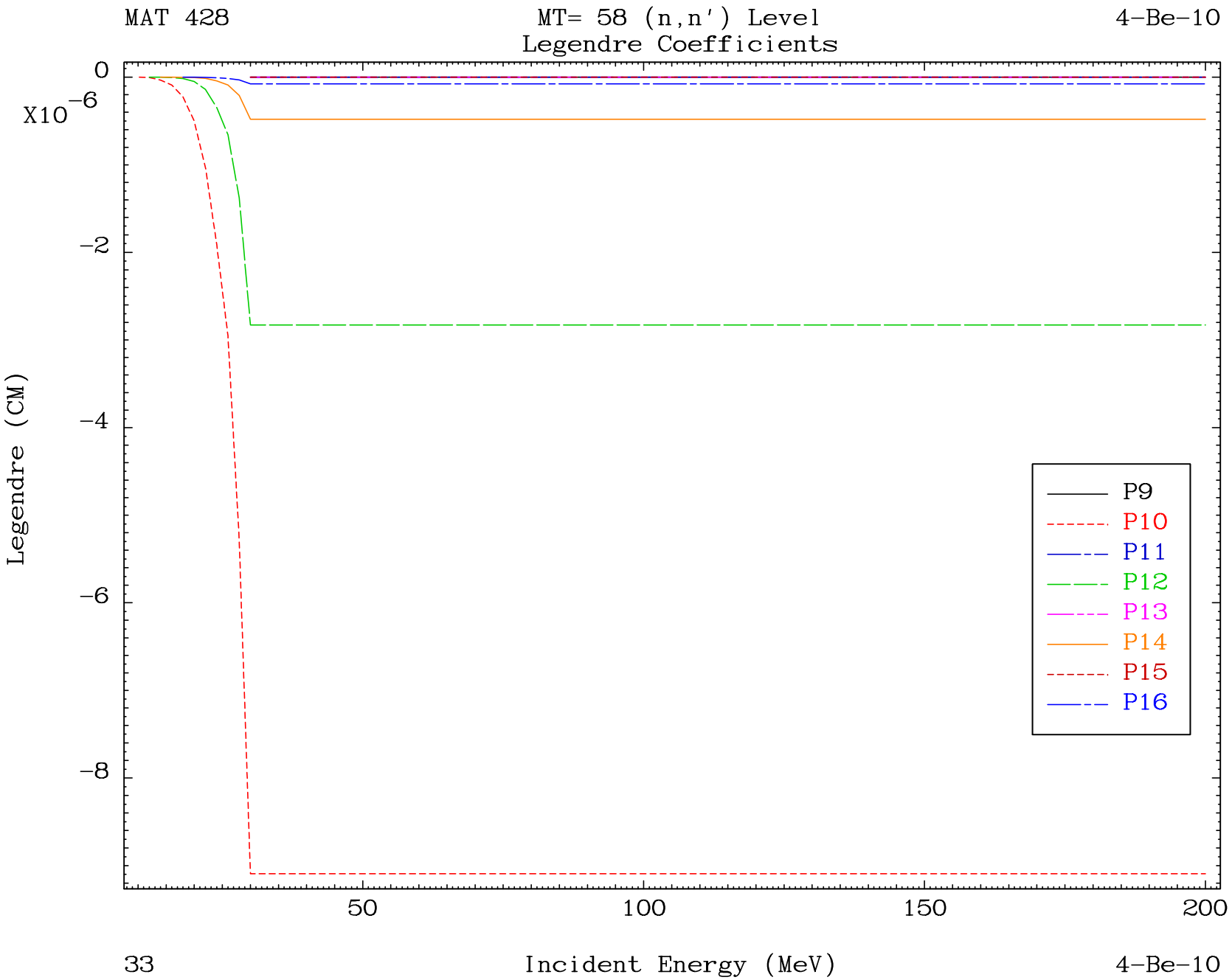

MAT 428
MT= 56 (n,n') Level
Legendre Coefficients
4-Be-10
0.20
0.15
0.10
0.05
0.00
-0.05
Legendre (CM)
50
100
150
200
28
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11

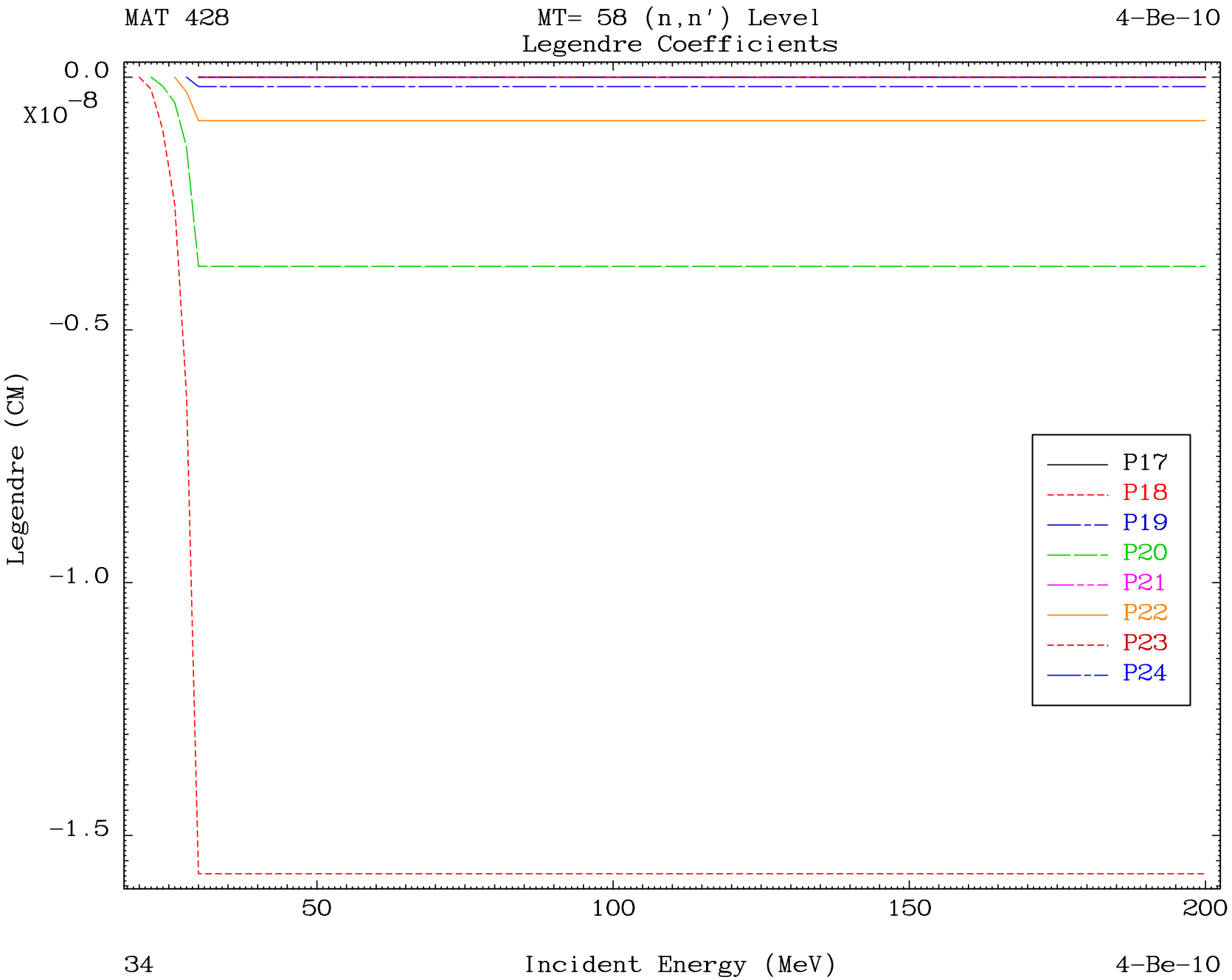

MAT 428
MT= 56 (n,n') Level
Legendre Coefficients
4-Be-10
0.0
X10^-4
-0.4
-0.8
-1.2
Legendre (CM)
50
100
150
200
29
Incident Energy (MeV)
4-Be-10
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22

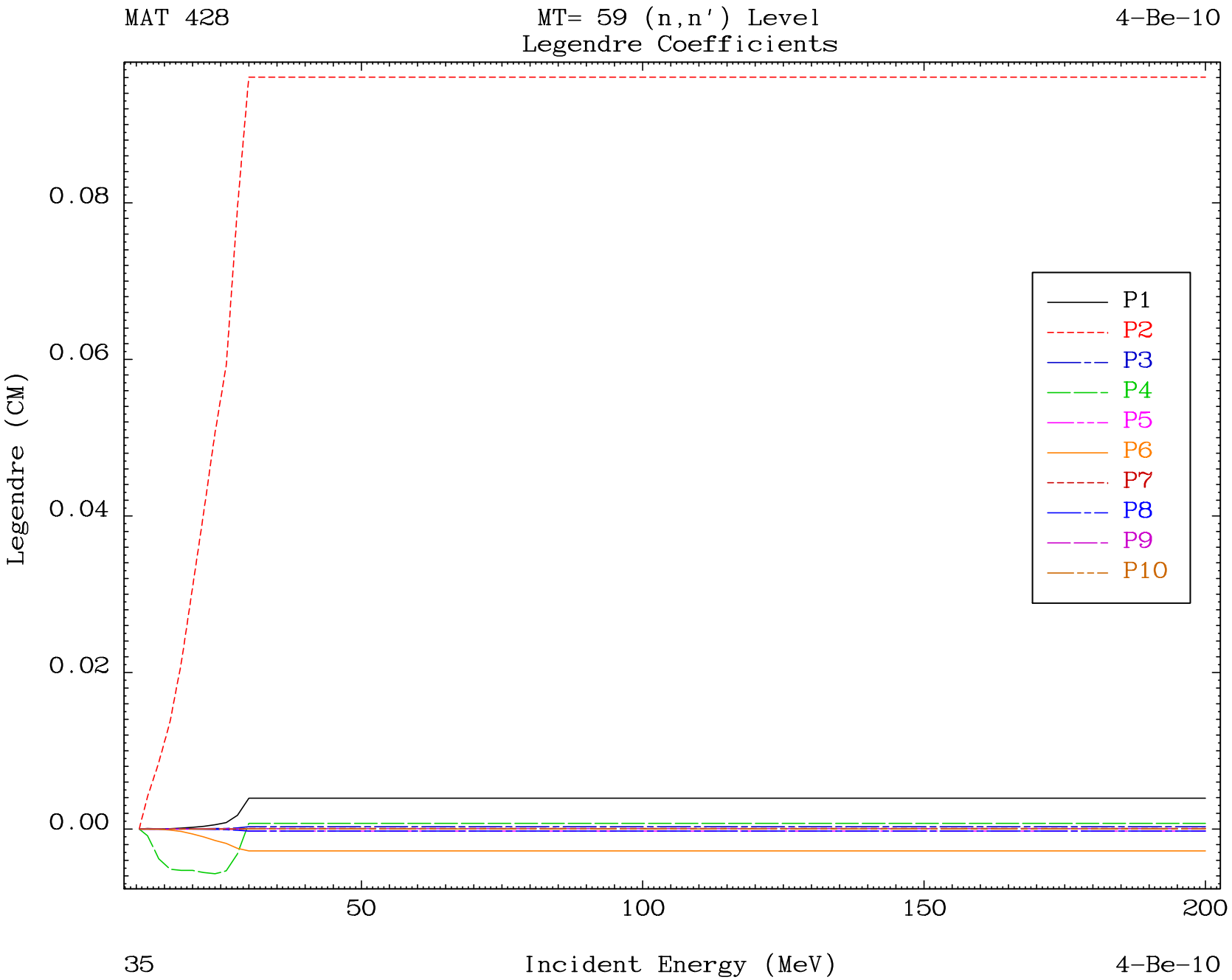

MAT 428
MT= 57 (n,n') Level
Legendre Coefficients
4-Be-10
0.10
0.08
0.06
0.04
0.02
0.00
Legendre (CM)
50
100
150
200
30
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

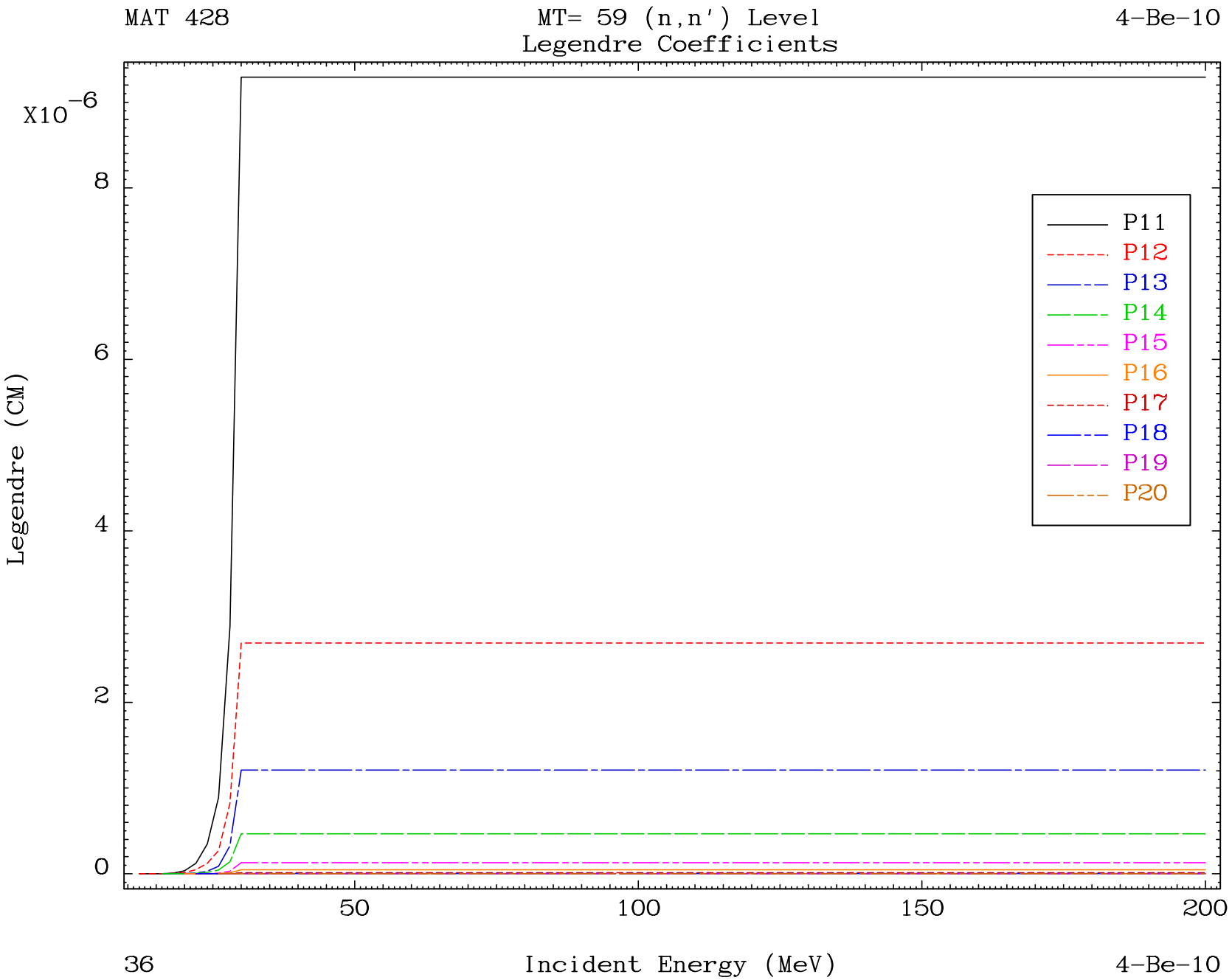

MAT 428
MT= 57 (n,n') Level
Legendre Coefficients
4-Be-10
X10-5
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
31
Incident Energy (MeV)
4-Be-10

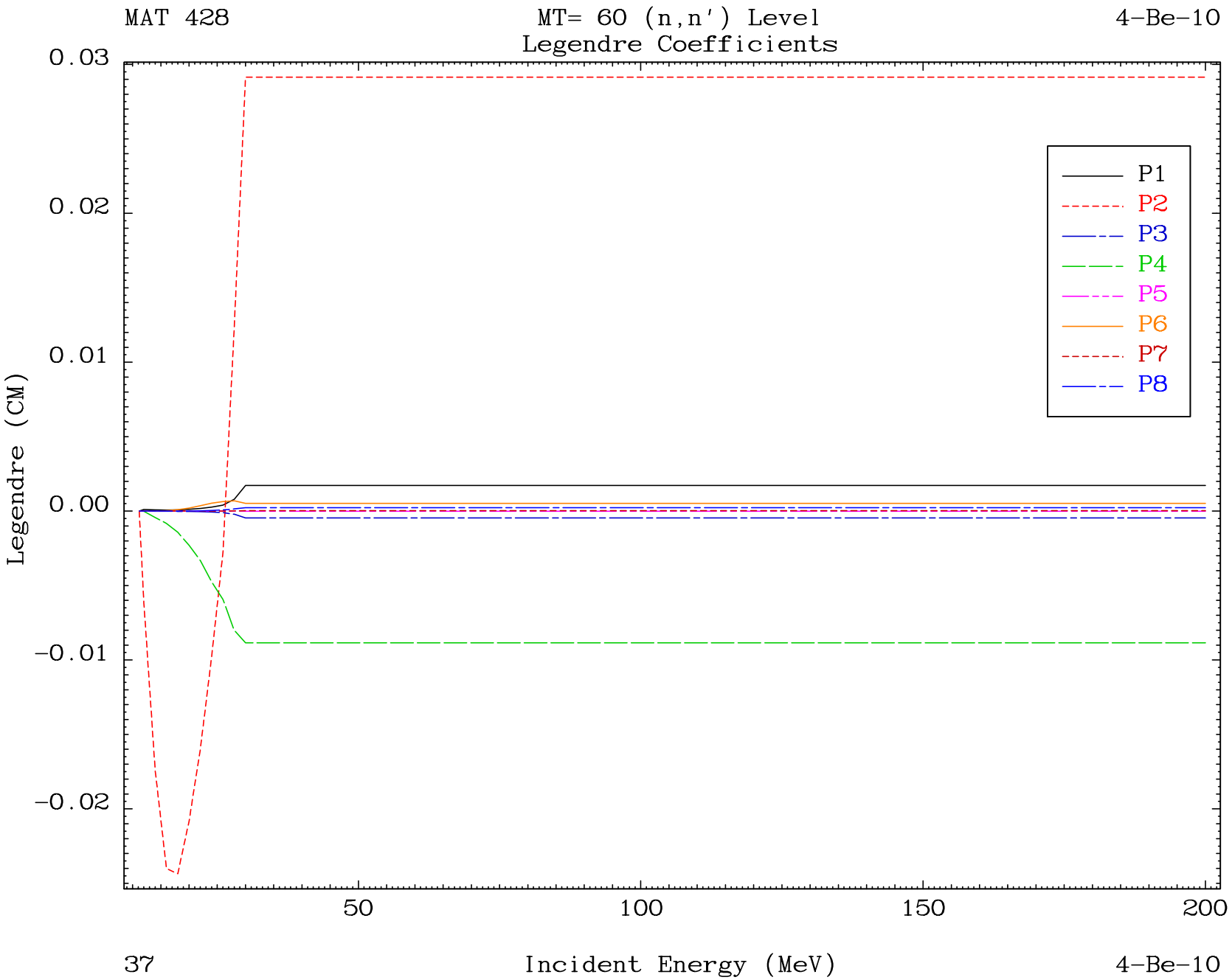

MAT 428
MT= 58 (n,n') Level
Legendre Coefficients
4-Be-10
0.00
-0.01
-0.02
-0.03
-0.04
Legendre (CM)
50
100
150
200
32
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8

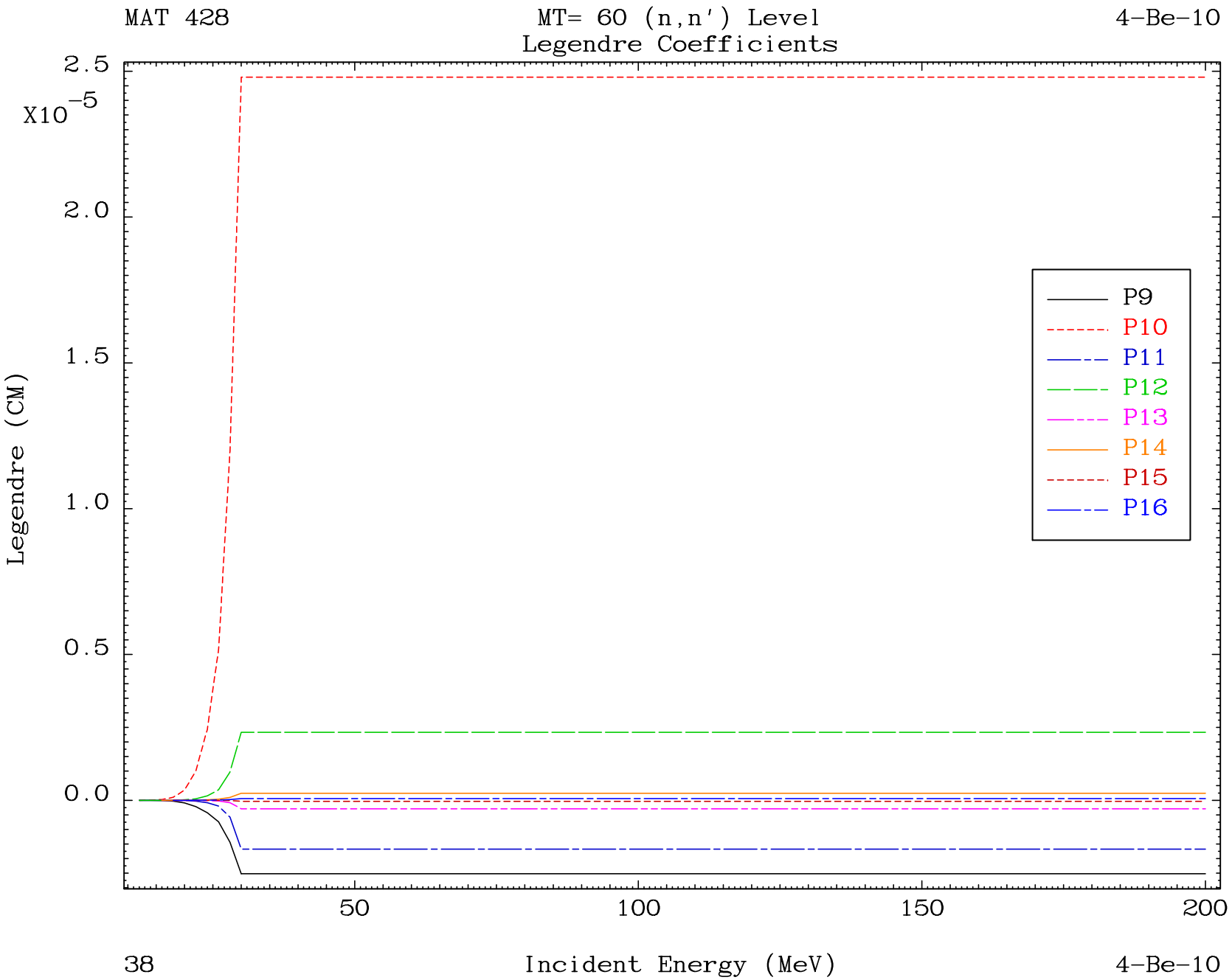

MAT 428
MT= 58 (n,n') Level
Legendre Coefficients
4-Be-10
0
X10 −6
−2
−4
−6
−8
Legendre (CM)
50
100
150
200
33
Incident Energy (MeV)
4-Be-10
P9
P10
P11
P12
P13
P14
P15
P16

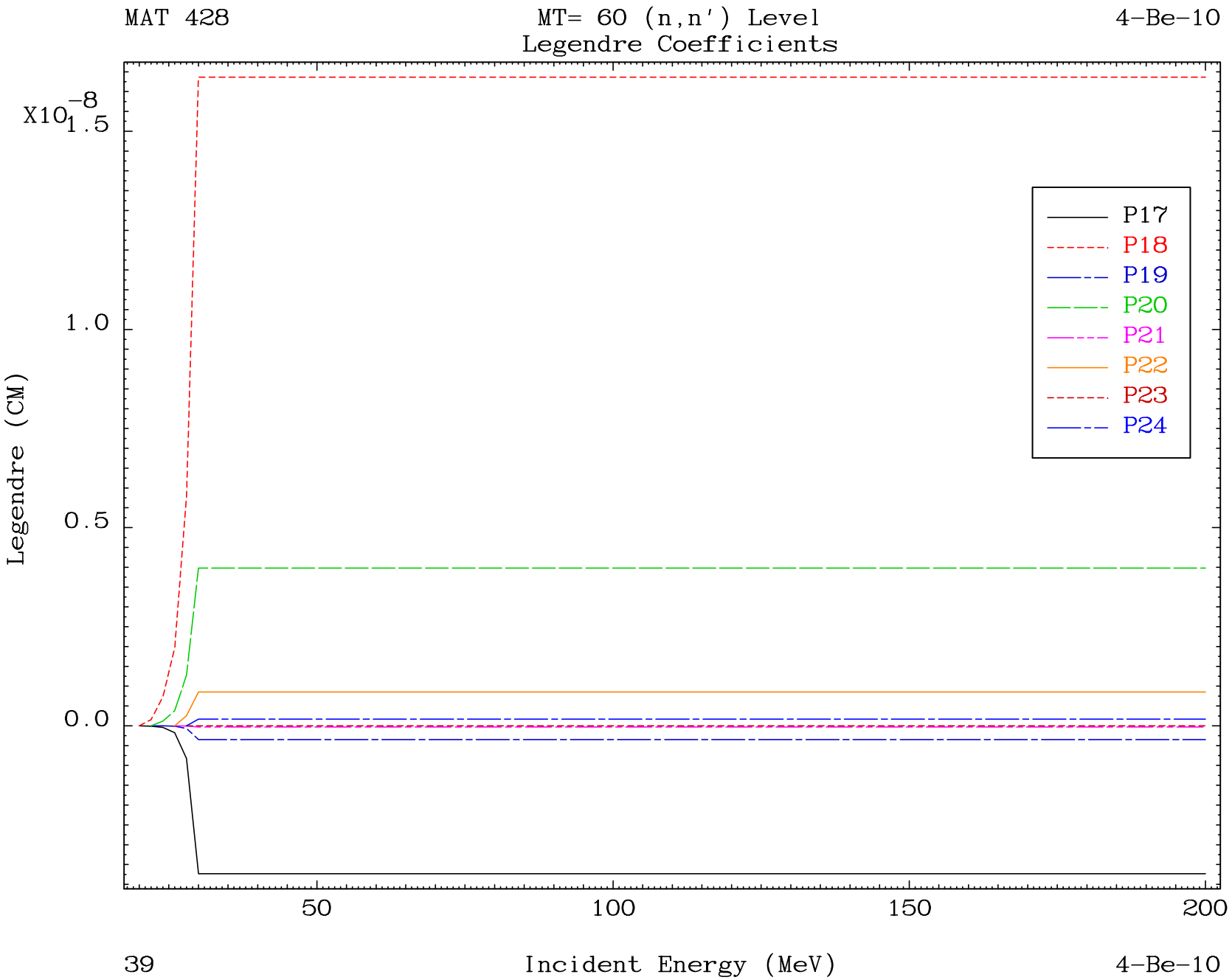

MAT 428
MT= 58 (n,n') Level
Legendre Coefficients
4-Be-10
0.0
X10^-8
-0.5
-1.0
-1.5
Legendre (CM)
50
100
150
200
34
Incident Energy (MeV)
4-Be-10
P17
P18
P19
P20
P21
P22
P23
P24

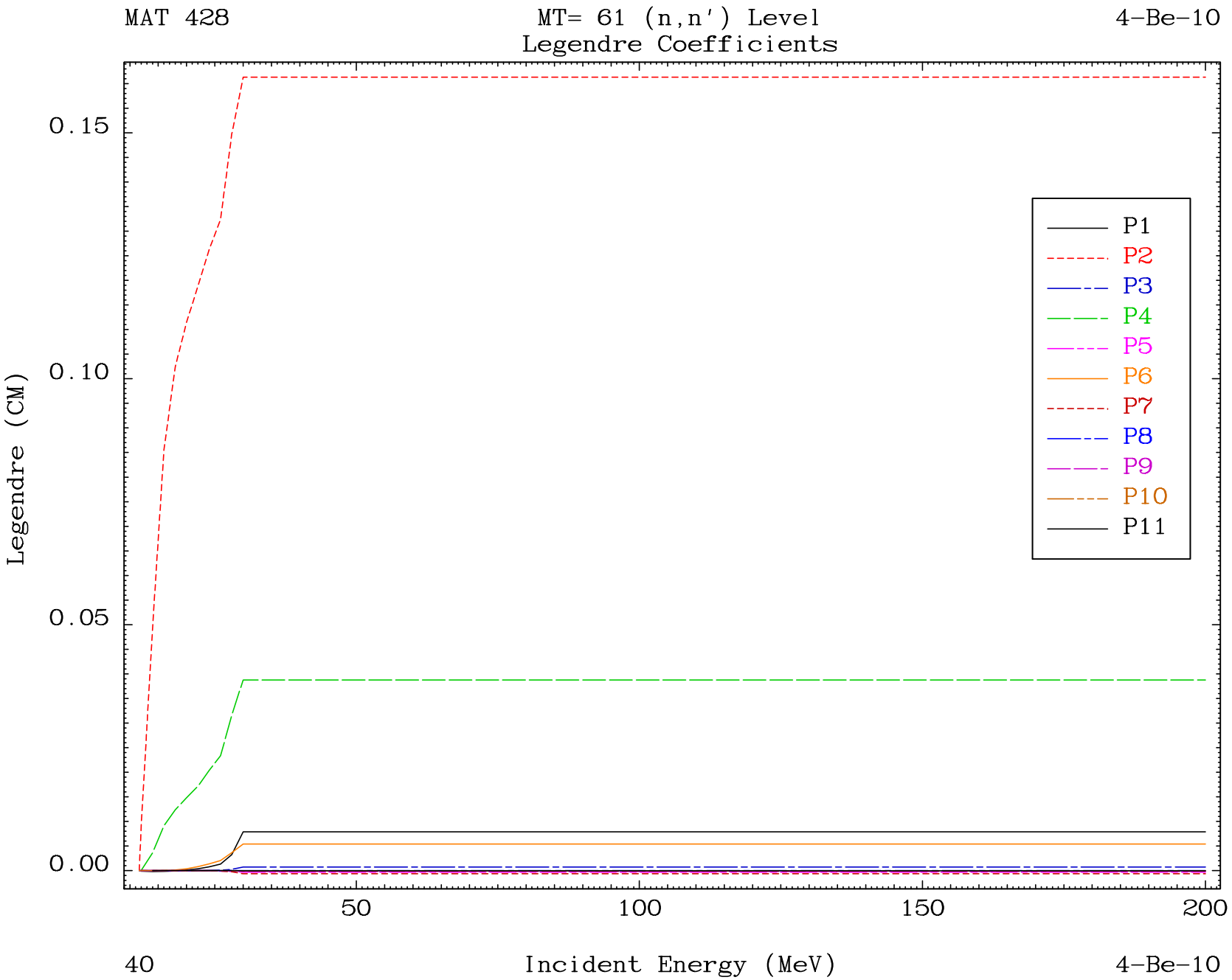

MAT 428
MT= 59 (n,n') Level
Legendre Coefficients
4-Be-10
Legendre (CM)
0.08
0.06
0.04
0.02
0.00
50
100
150
200
35
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

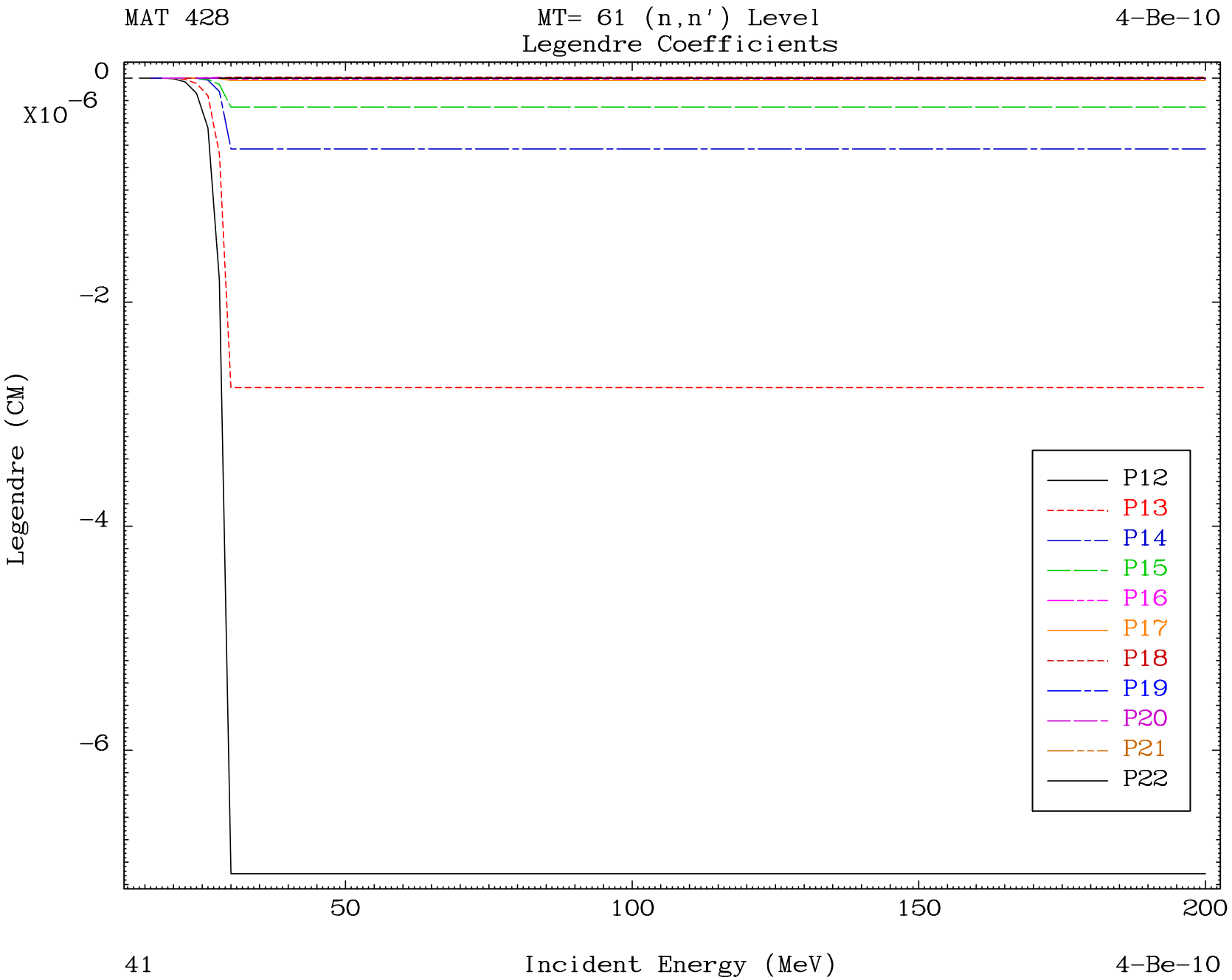

MAT 428
MT= 59 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-6
8
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
50
100
150
200
36
Incident Energy (MeV)
4-Be-10

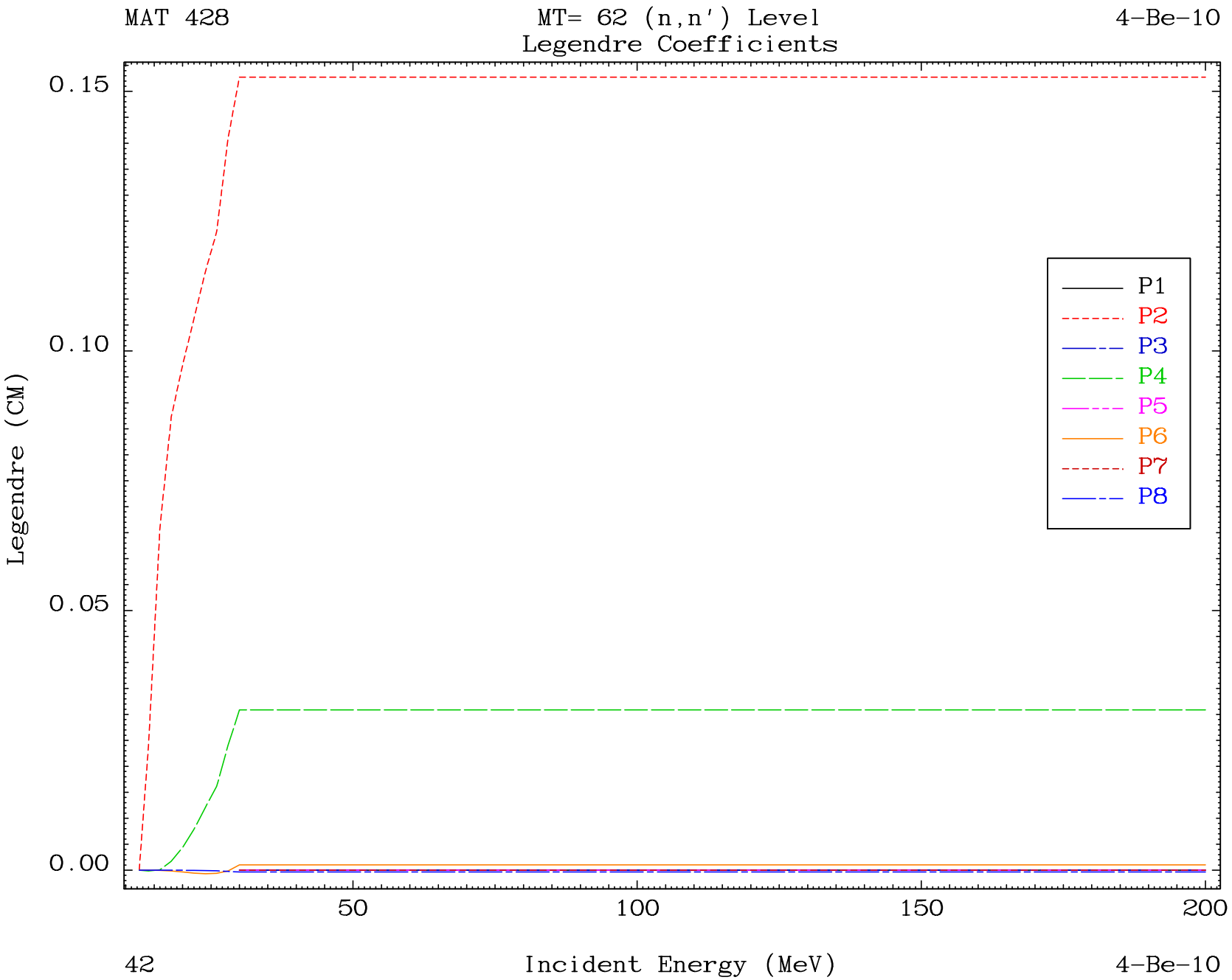

MAT 428
MT= 60 (n,n') Level
Legendre Coefficients
4-Be-10
0.03
0.02
0.01
0.00
-0.01
-0.02
Legendre (CM)
50
100
150
200
37
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8

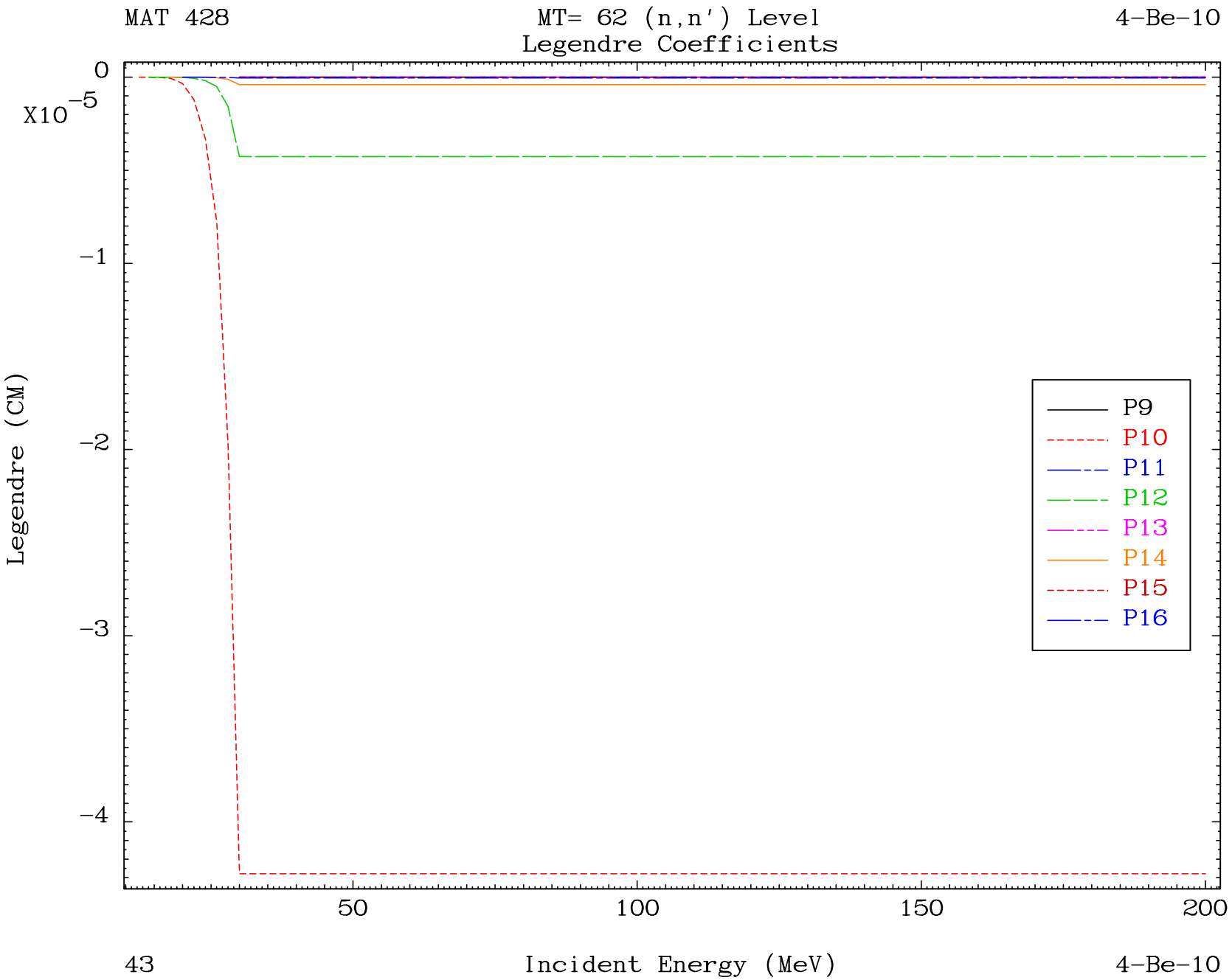

MAT 428
MT= 60 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-5
2.5
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P9
P10
P11
P12
P13
P14
P15
P16
50
100
150
200
38
Incident Energy (MeV)
4-Be-10

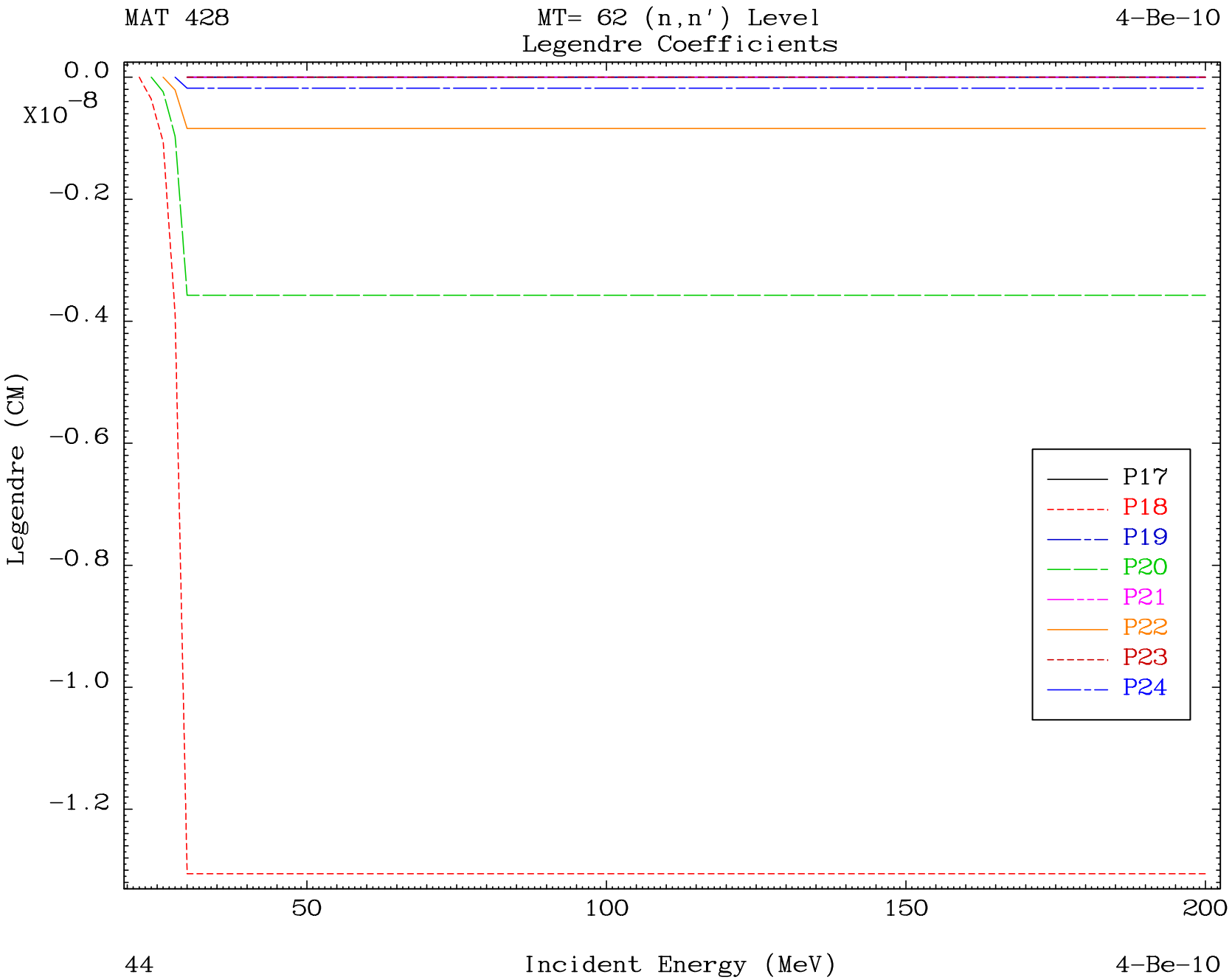

MAT 428
MT= 60 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-8
1.5
1.0
0.5
0.0
Legendre (CM)
P17
P18
P19
P20
P21
P22
P23
P24
50
100
150
200
39
Incident Energy (MeV)
4-Be-10

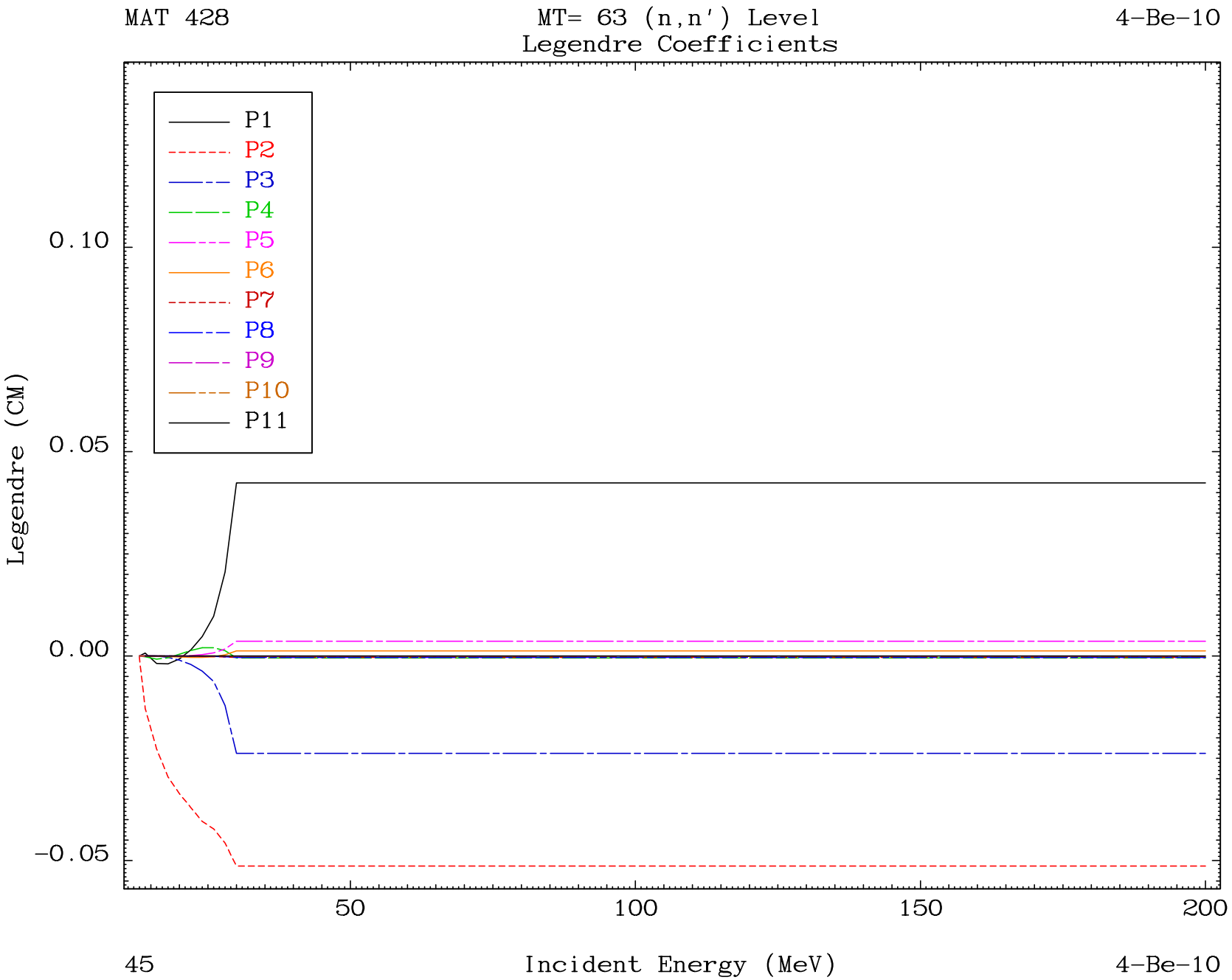

MAT 428
MT= 61 (n,n') Level
Legendre Coefficients
4-Be-10
0.15
0.10
0.05
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
40
50
100
150
200
Incident Energy (MeV)
4-Be-10

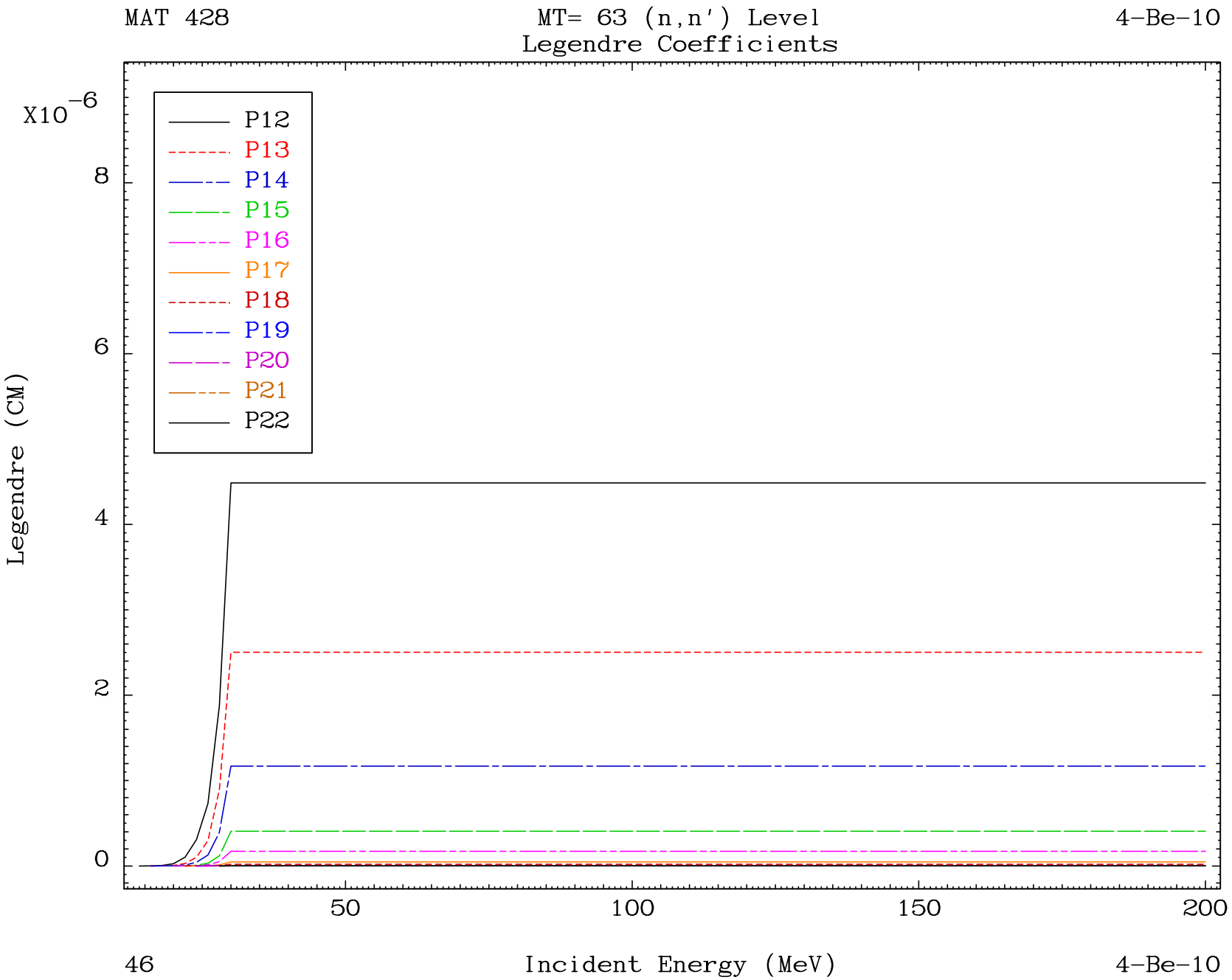

MAT 428
MT= 61 (n,n') Level
Legendre Coefficients
4-Be-10
0
X10 −6
−2
−4
−6
Legendre (CM)
50
100
150
200
41
Incident Energy (MeV)
4-Be-10
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22

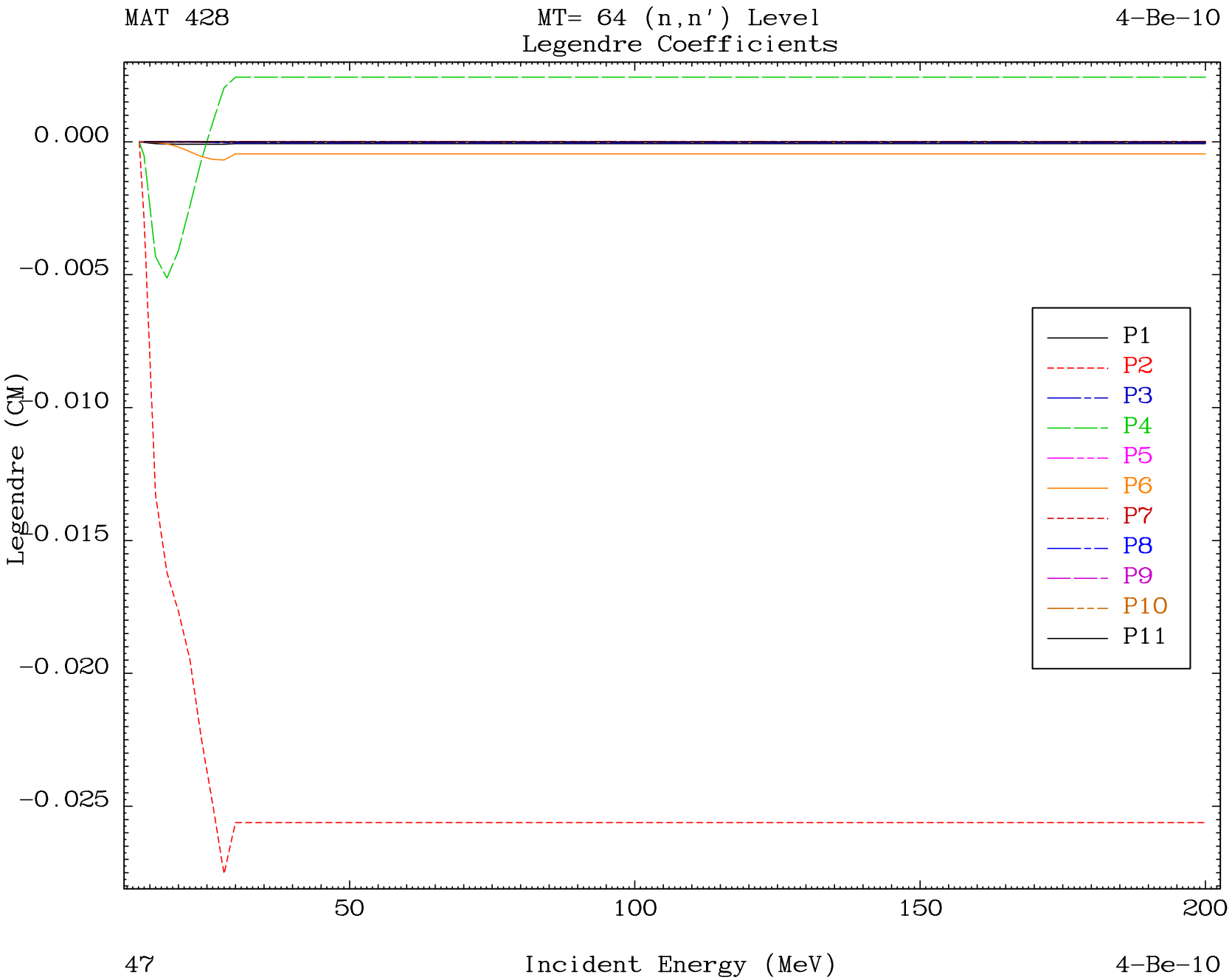

MAT 428
MT= 62 (n,n') Level
Legendre Coefficients
4-Be-10
0.15
0.10
0.05
0.00
Legendre (CM)
50
100
150
200
42
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8

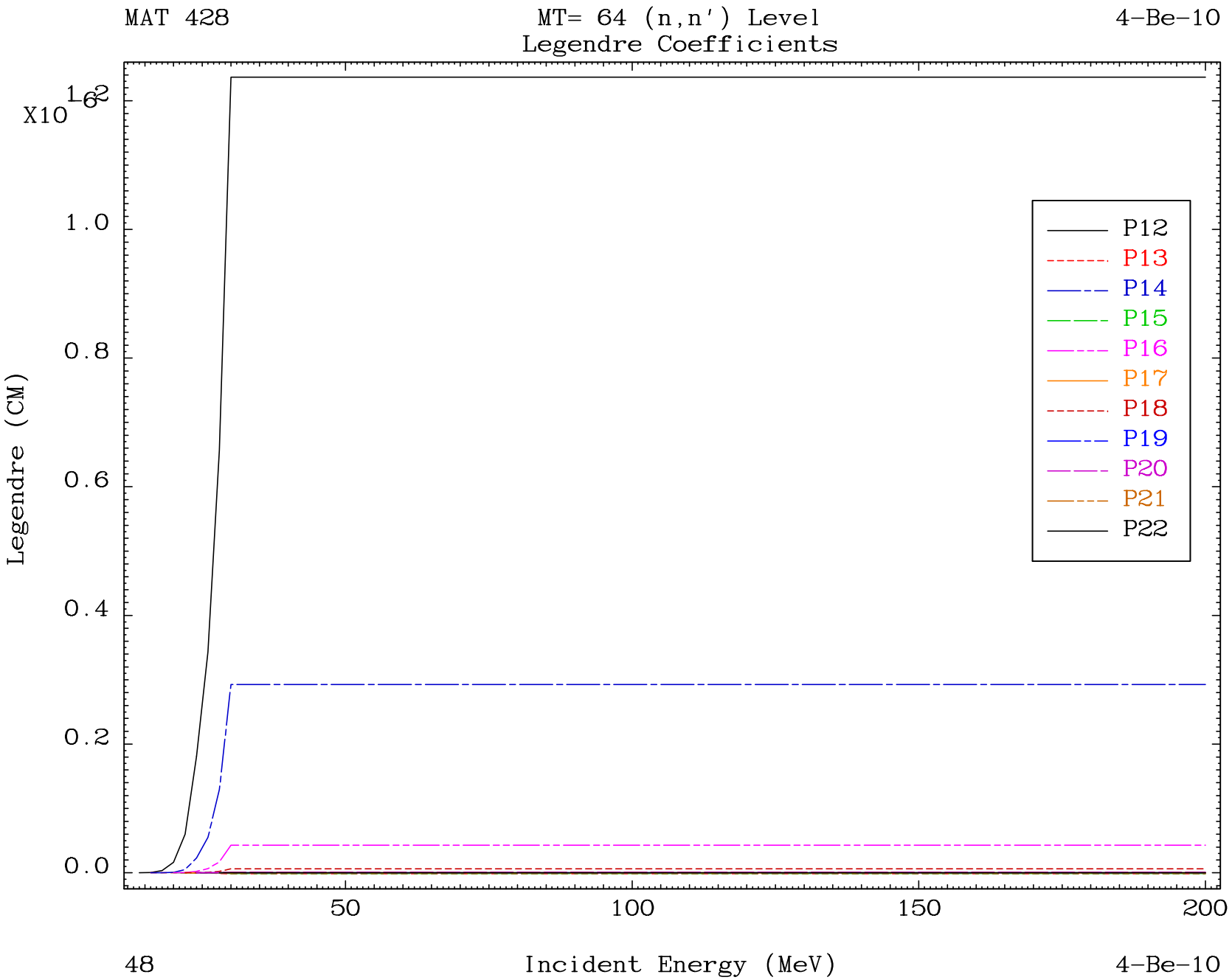

MAT 428
MT= 62 (n,n') Level
Legendre Coefficients
4-Be-10
0
X10^-5
-1
-2
-3
-4
Legendre (CM)
50
100
150
200
P9
P10
P11
P12
P13
P14
P15
P16
43
Incident Energy (MeV)
4-Be-10

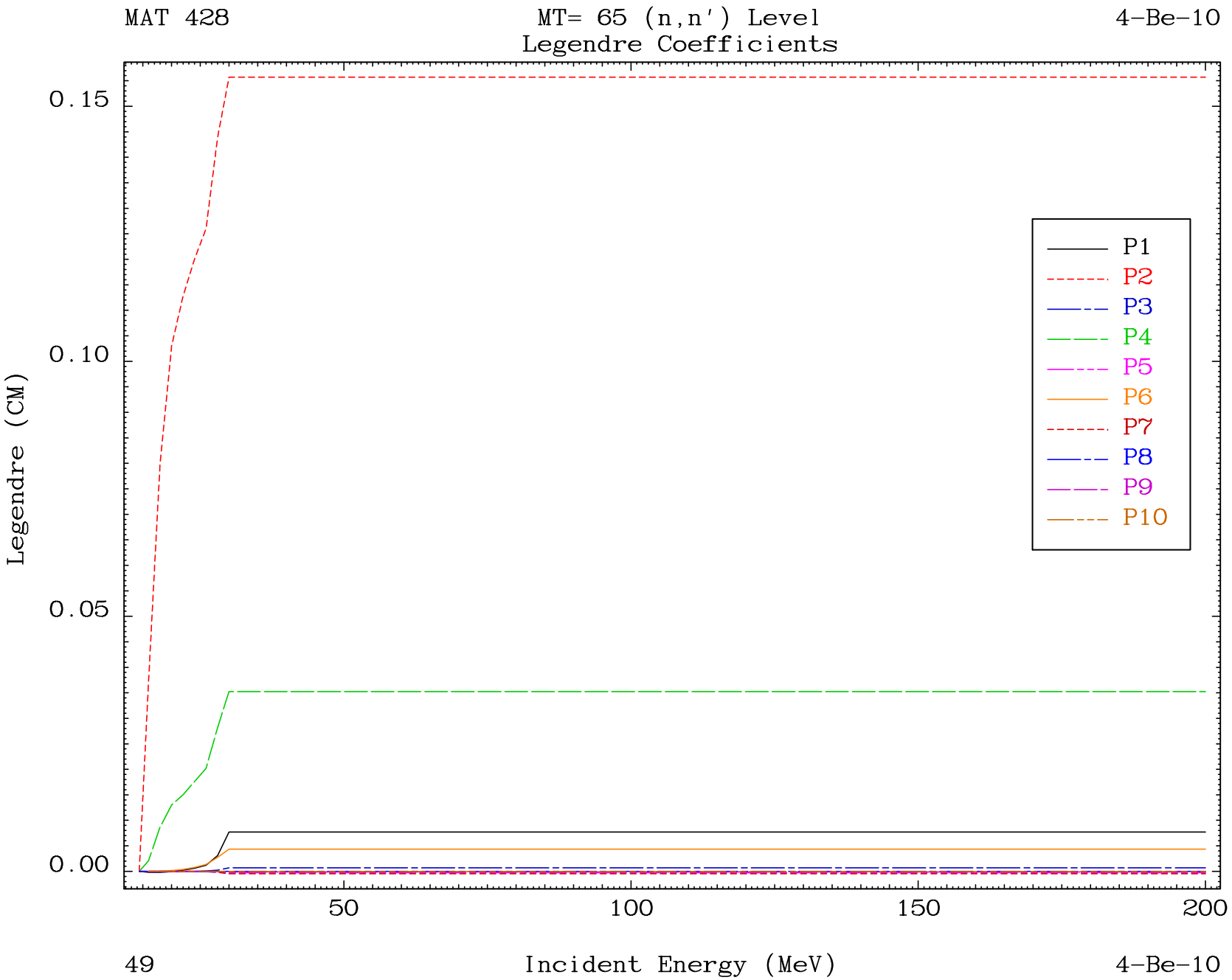

MAT 428
MT= 62 (n,n') Level
Legendre Coefficients
4-Be-10
0.0
X10^-8
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
Legendre (CM)
50
100
150
200
P17
P18
P19
P20
P21
P22
P23
P24
44
Incident Energy (MeV)
4-Be-10

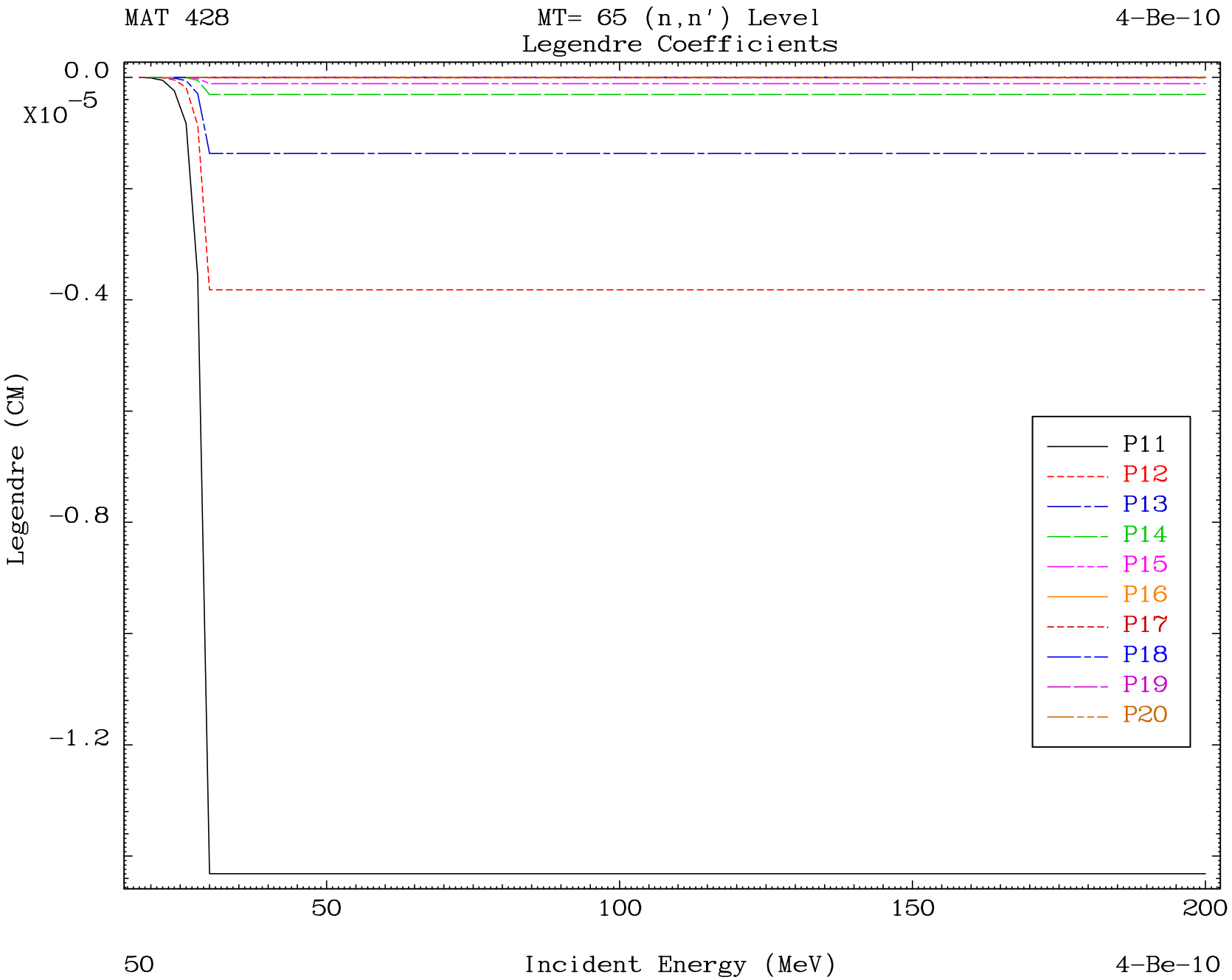

MAT 428
MT= 63 (n,n') Level
Legendre Coefficients
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
0.10
0.05
0.00
-0.05
Legendre (CM)
50
100
150
200
45
Incident Energy (MeV)
4-Be-10

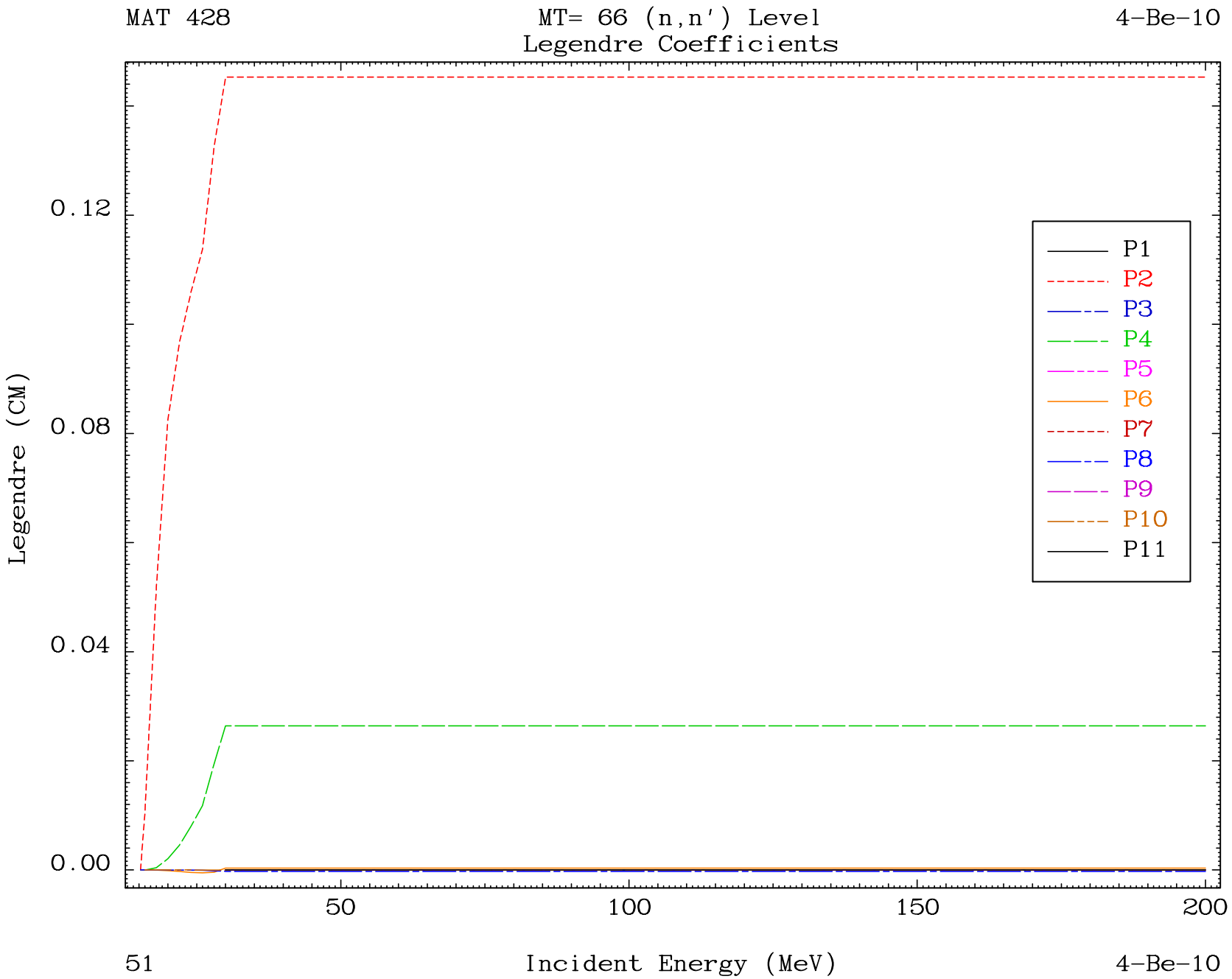

MAT 428
MT= 63 (n,n') Level
Legendre Coefficients
4-Be-10
X10^-6
8
6
4
2
0
Legendre (CM)
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22
50
100
150
200
46
Incident Energy (MeV)
4-Be-10

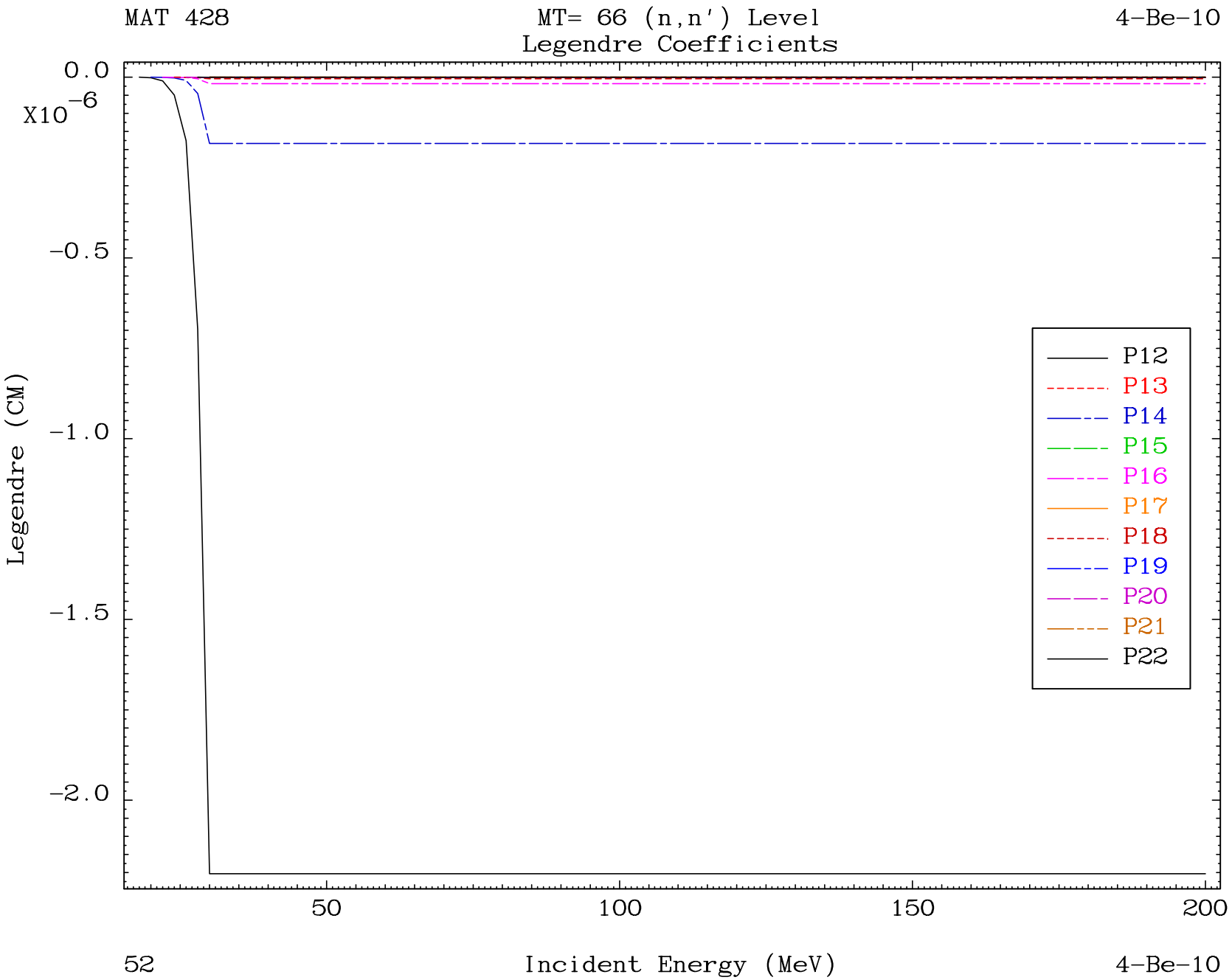

MAT 428
MT= 64 (n,n') Level
Legendre Coefficients
4-Be-10
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
Legendre (CM)
50
100
150
200
47
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11


MAT 428
MT= 64 (n,n') Level
Legendre Coefficients
4-Be-10
X10
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
48
Incident Energy (MeV)
4-Be-10
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22


MAT 428
MT= 65 (n,n') Level
Legendre Coefficients
4-Be-10
0.15
0.10
0.05
0.00
Legendre (CM)
50
100
150
200
49
Incident Energy (MeV)
4-Be-10
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10


MAT 428
MT= 65 (n,n') Level
Legendre Coefficients
4-Be-10
0.0
X10^-5
-0.4
-0.8
-1.2
Legendre (CM)
50
100
150
200
50
Incident Energy (MeV)
4-Be-10
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20


MAT 428
MT= 66 (n,n') Level
Legendre Coefficients
4-Be-10
Legendre (CM)
0.12
0.08
0.04
0.00
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
51
Incident Energy (MeV)
4-Be-10


MAT 428
MT= 66 (n,n') Level
Legendre Coefficients
4-Be-10
0.0
X10^-6
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
52
Incident Energy (MeV)
4-Be-10
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22