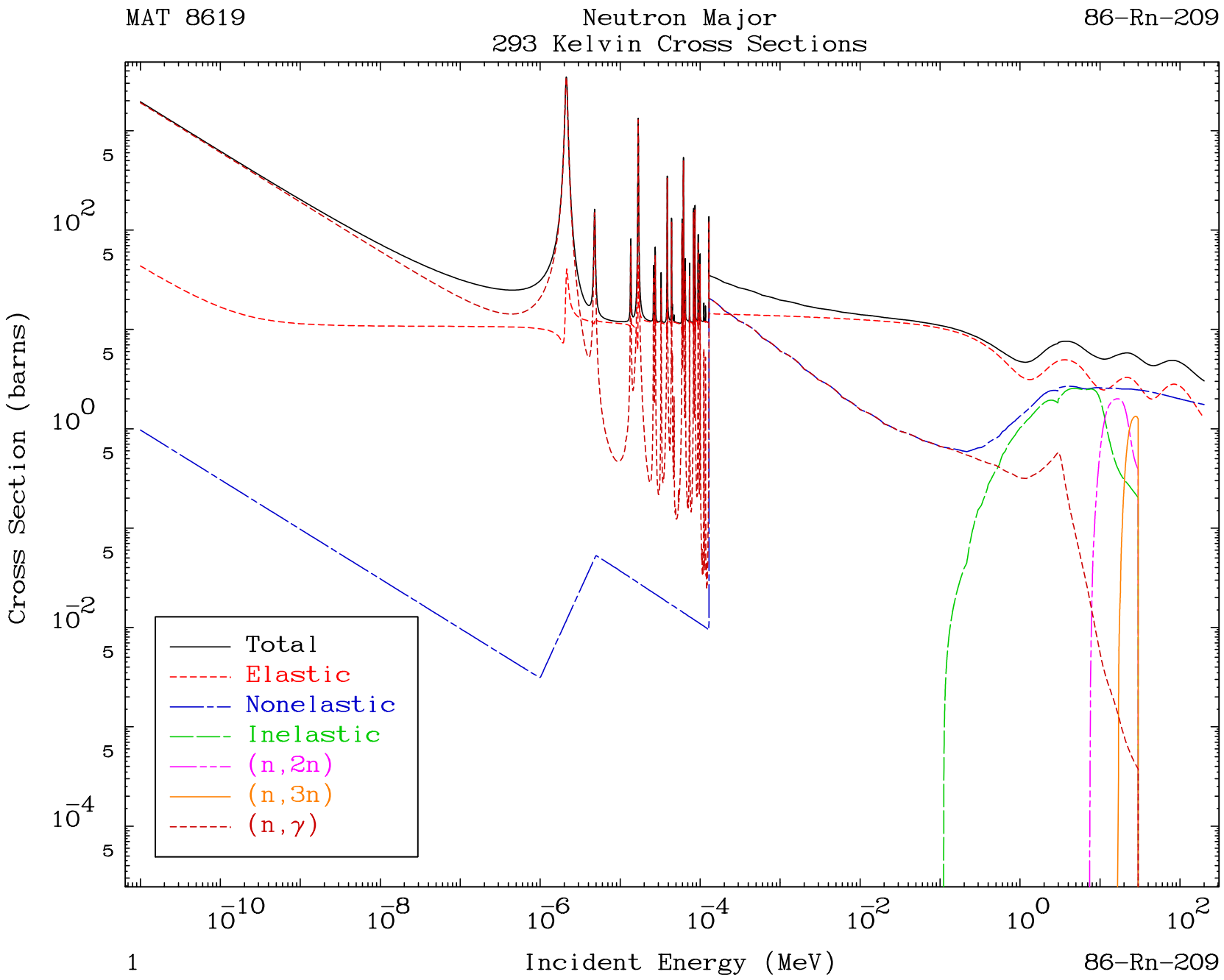
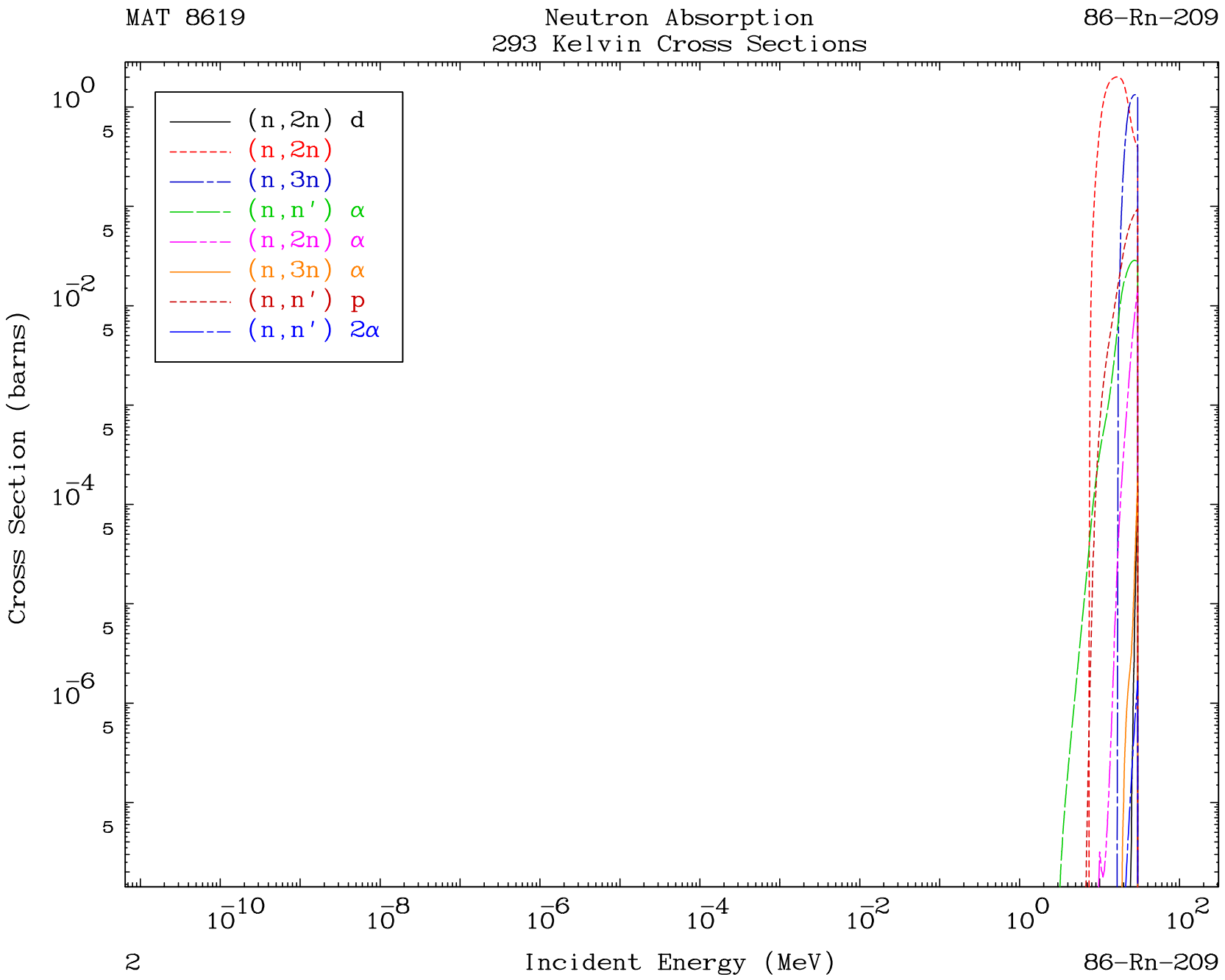
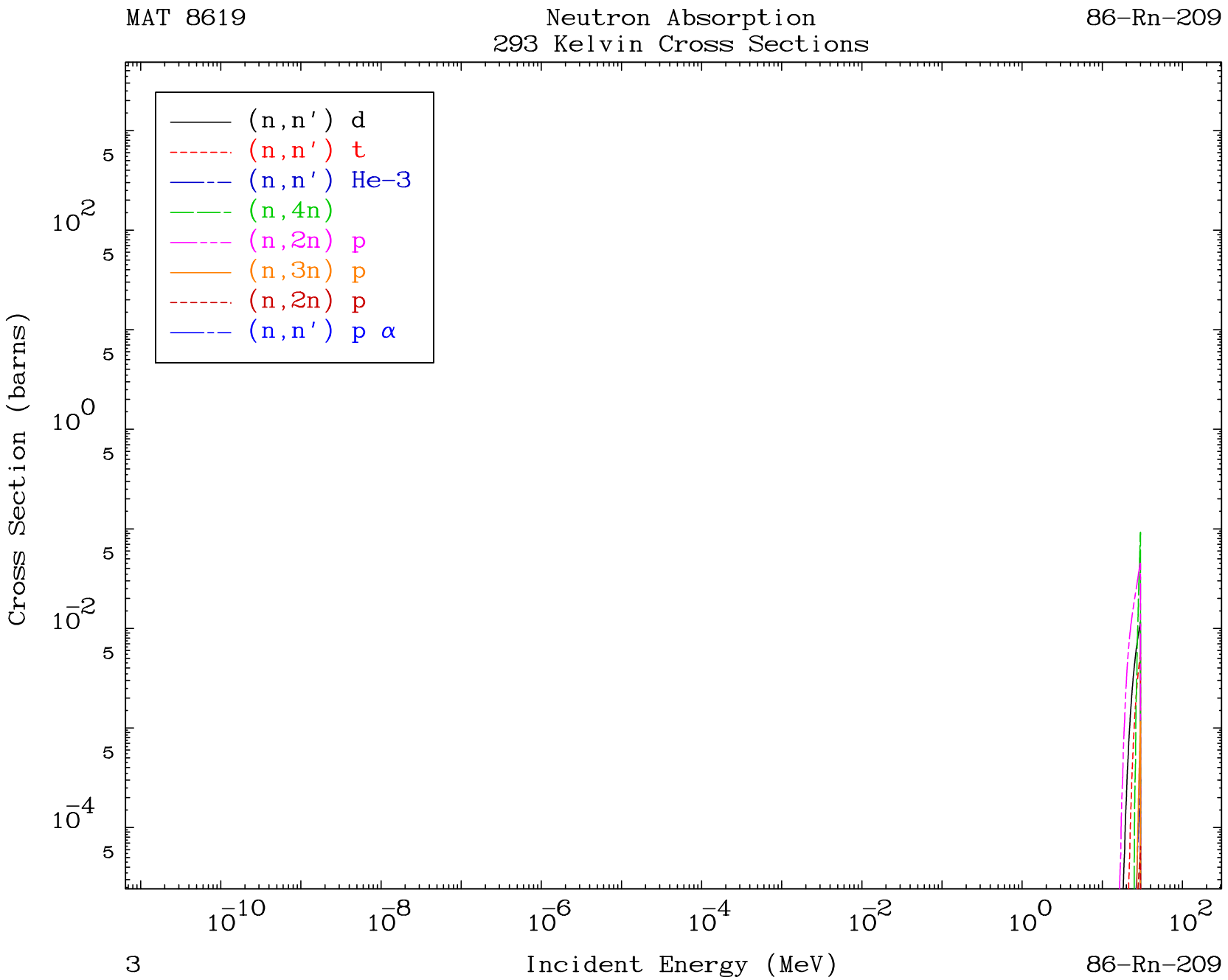
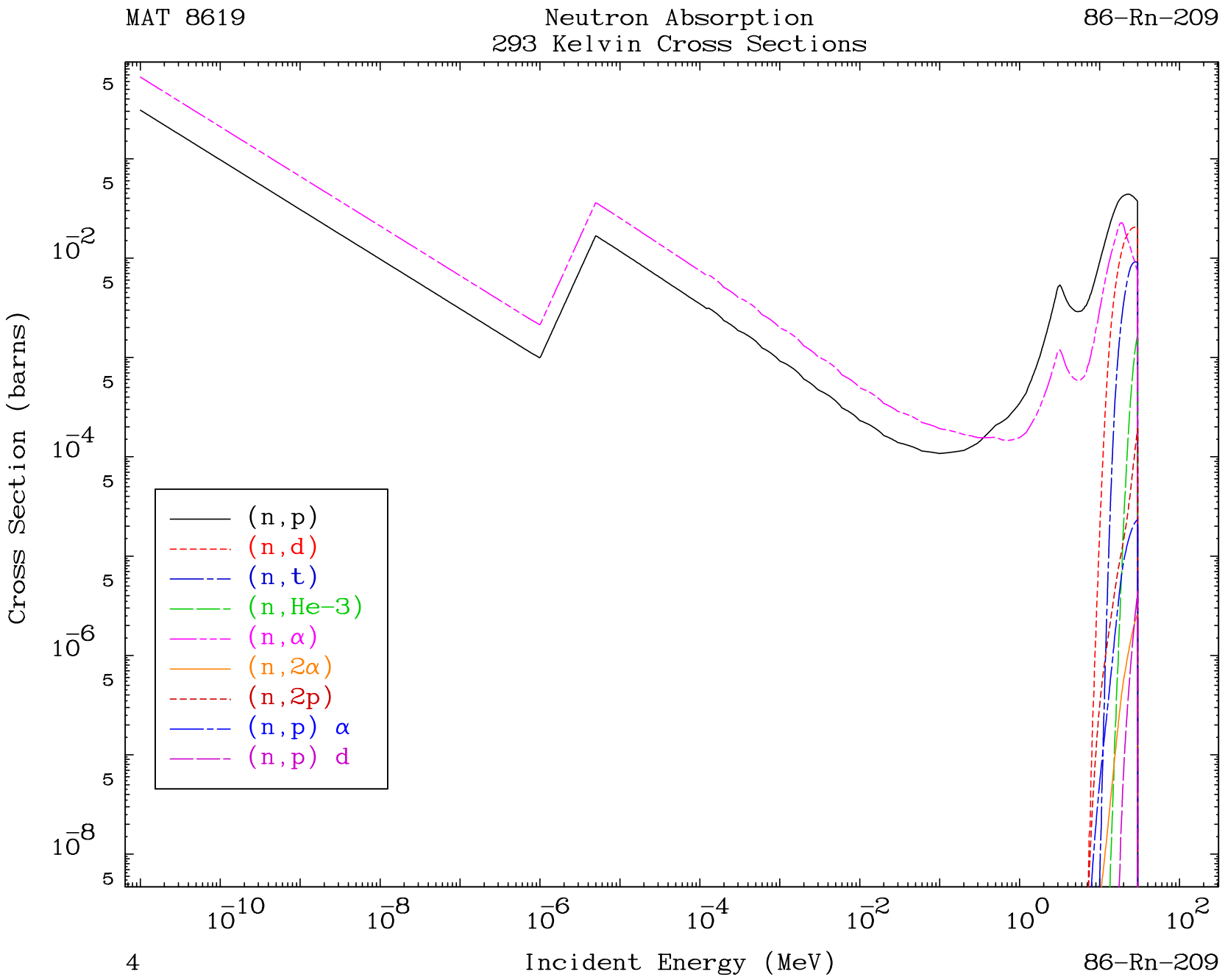
Program EVALPLOT
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

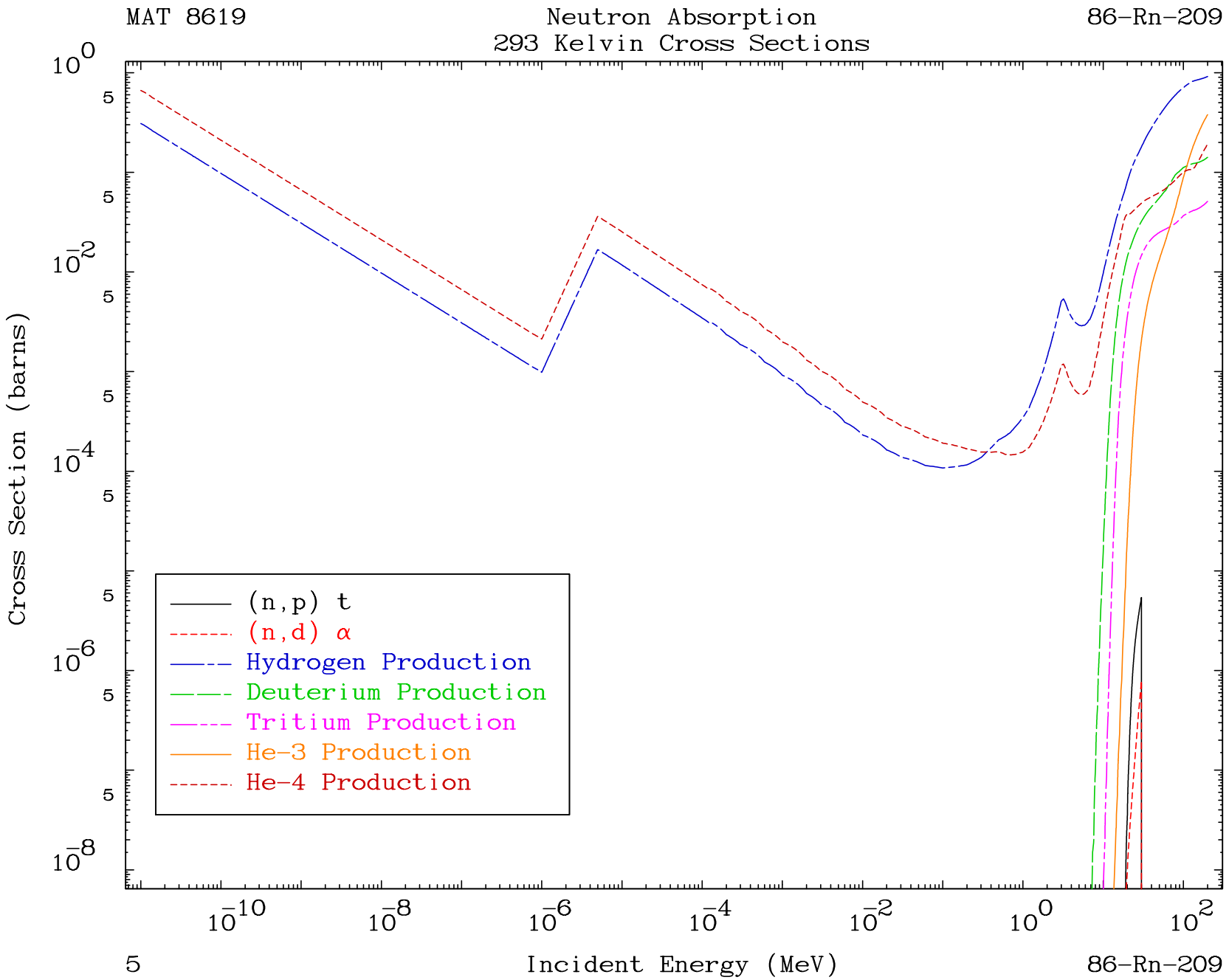
Press Mouse Button to Start

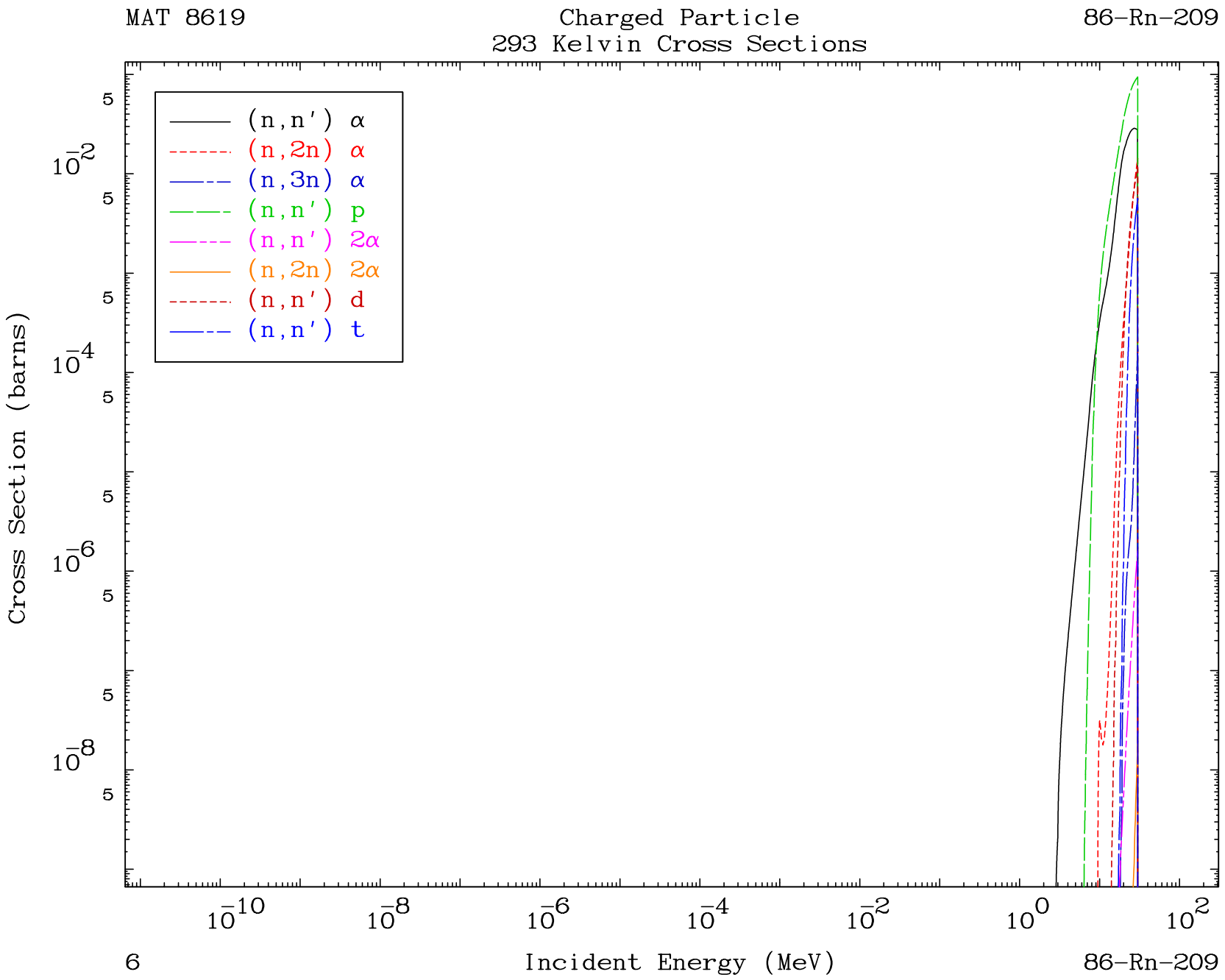

MAT 8619
Neutron Major
293 Kelvin Cross Sections
86-Rn-209
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Nonelastic
Inelastic
(n,2n)
(n,3n)
(n,γ)
1
86-Rn-209

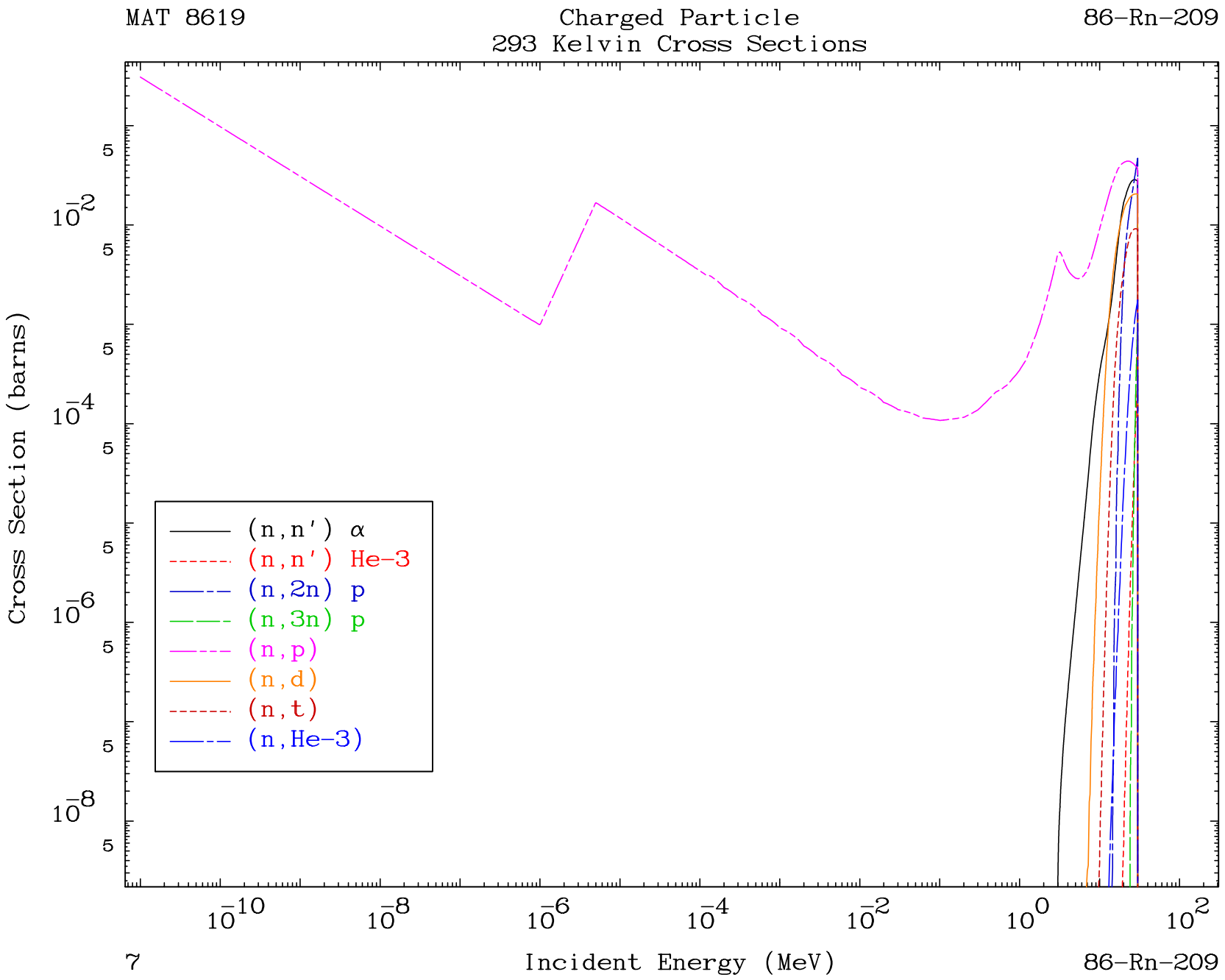

MAT 8619
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-209
(n,2n) d
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
Cross Section (barns)
Incident Energy (MeV)
2
86-Rn-209

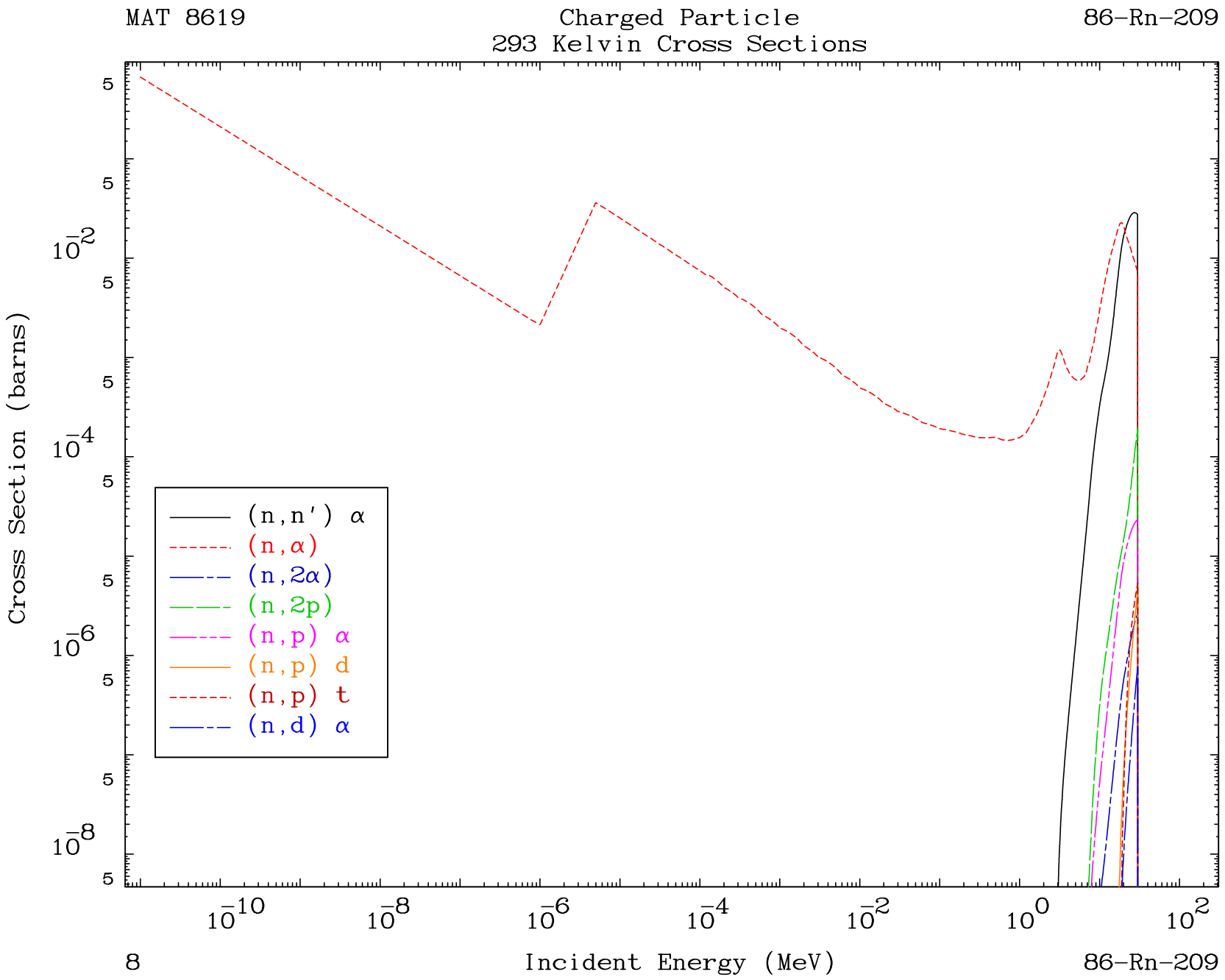

MAT 8619
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-209
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
(n,2n) p
(n,n') p α
Cross Section (barns)
10^2
10^0
10^-2
10^-4
10^-10
10^-8
10^-6
10^-4
10^-2
10^0
10^2
Incident Energy (MeV)
3
86-Rn-209

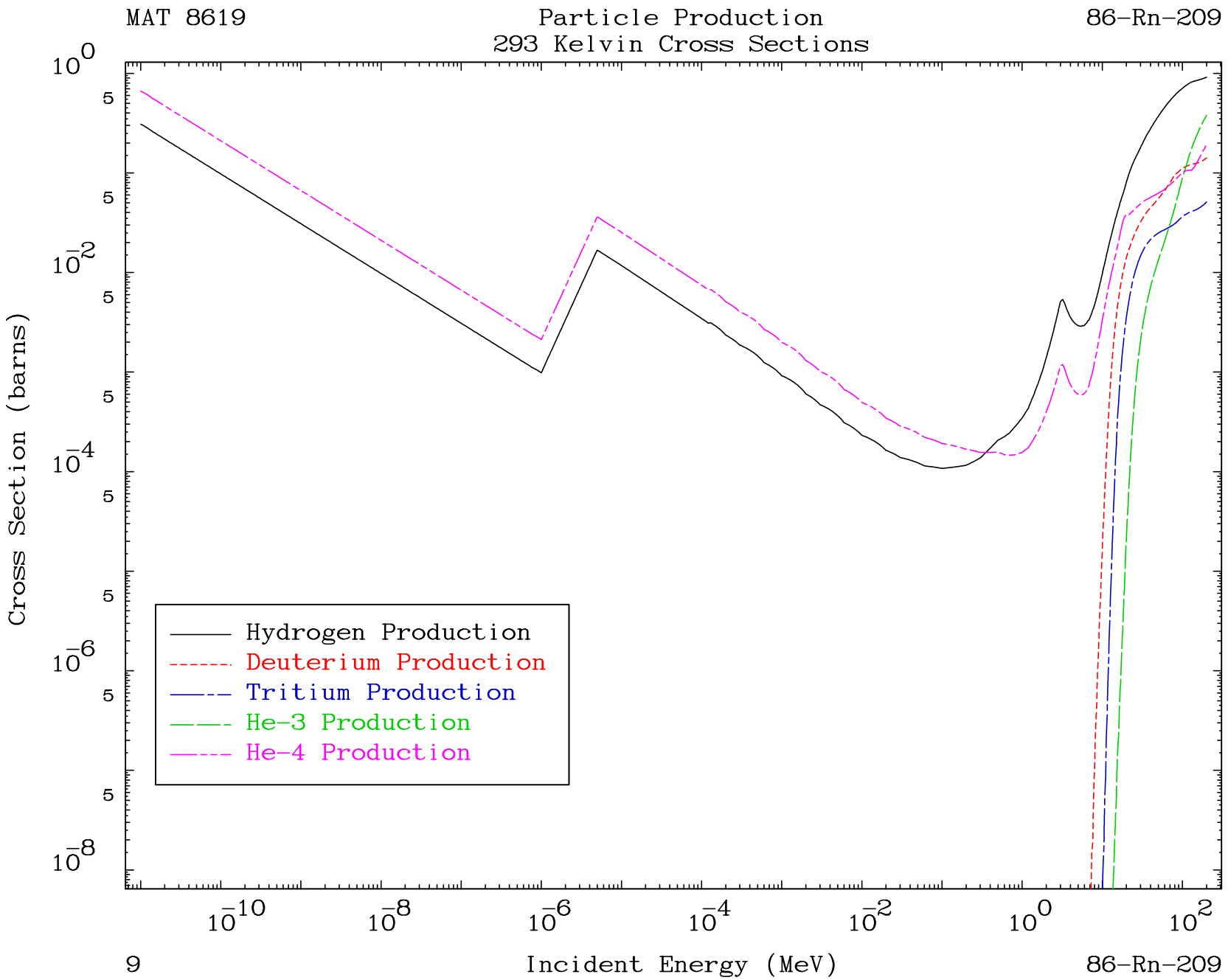

MAT 8619
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-209
Cross Section (barns)
Incident Energy (MeV)
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
4
86-Rn-209

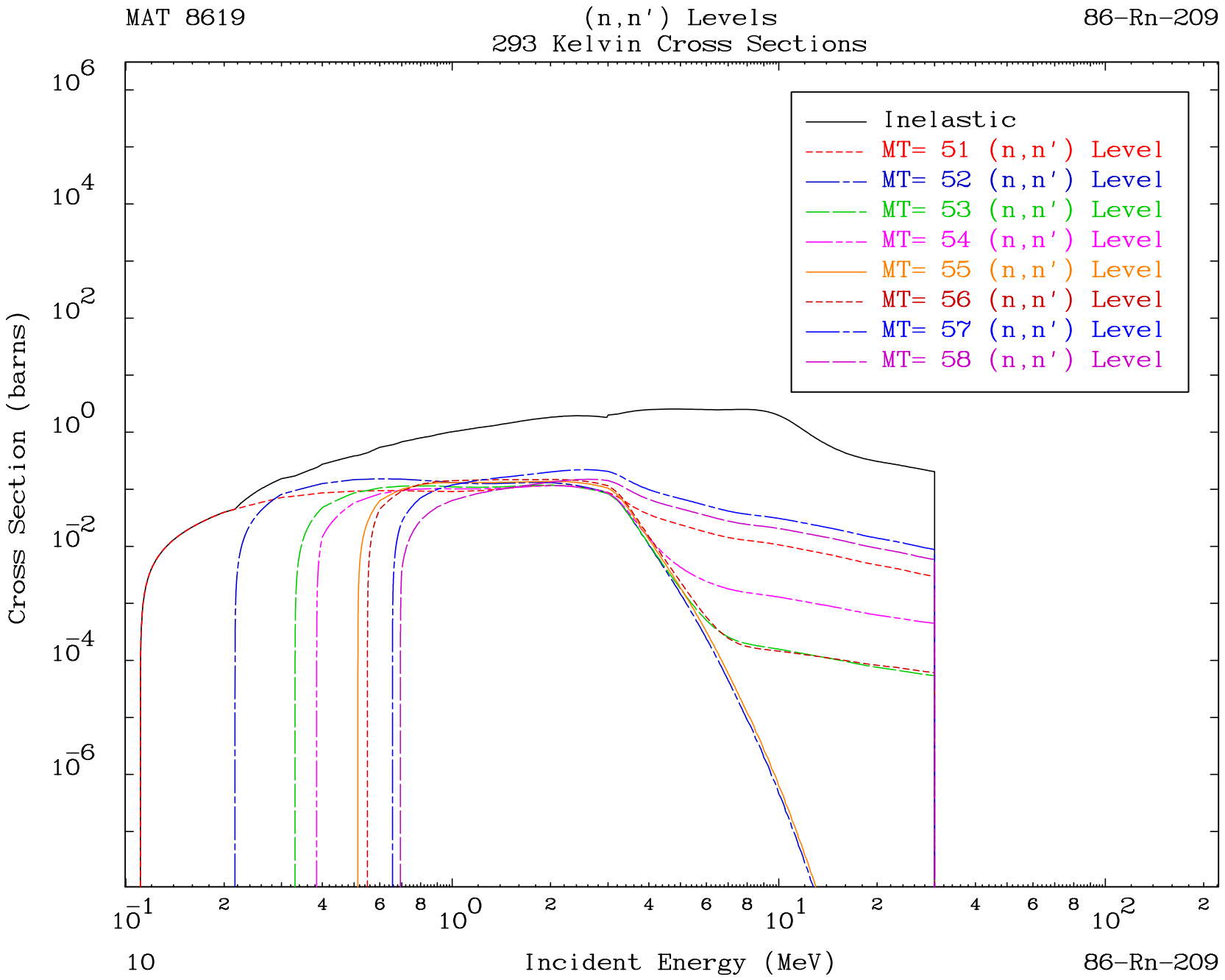

MAT 8619
Neutron Absorption
293 Kelvin Cross Sections
86-Rn-209
Cross Section (barns)
Incident Energy (MeV)
86-Rn-209
(n,p) t
(n,d) α
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production

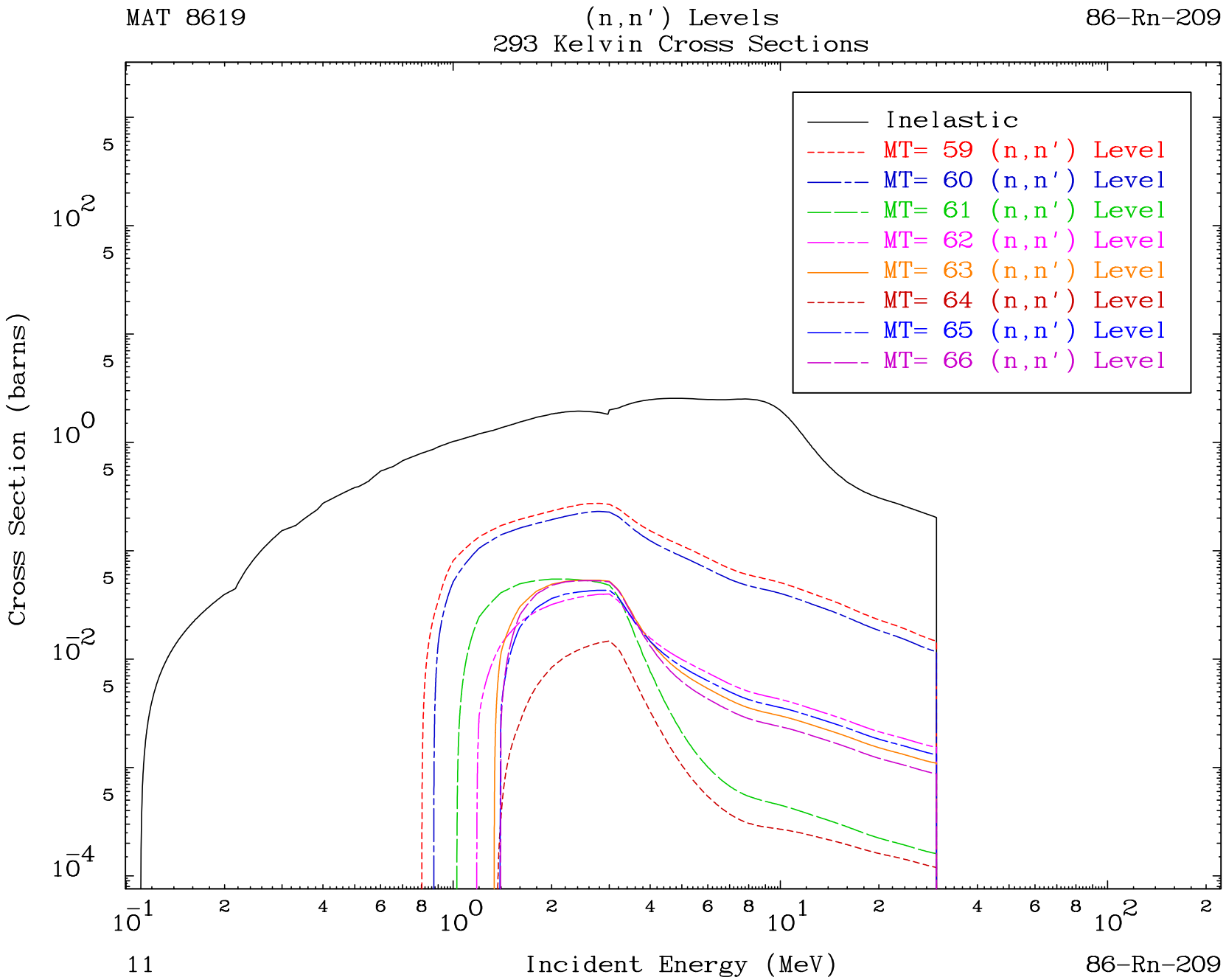

MAT 8619
Charged Particle
86-Rn-209
293 Kelvin Cross Sections
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
Cross Section (barns)
Incident Energy (MeV)
6
86-Rn-209

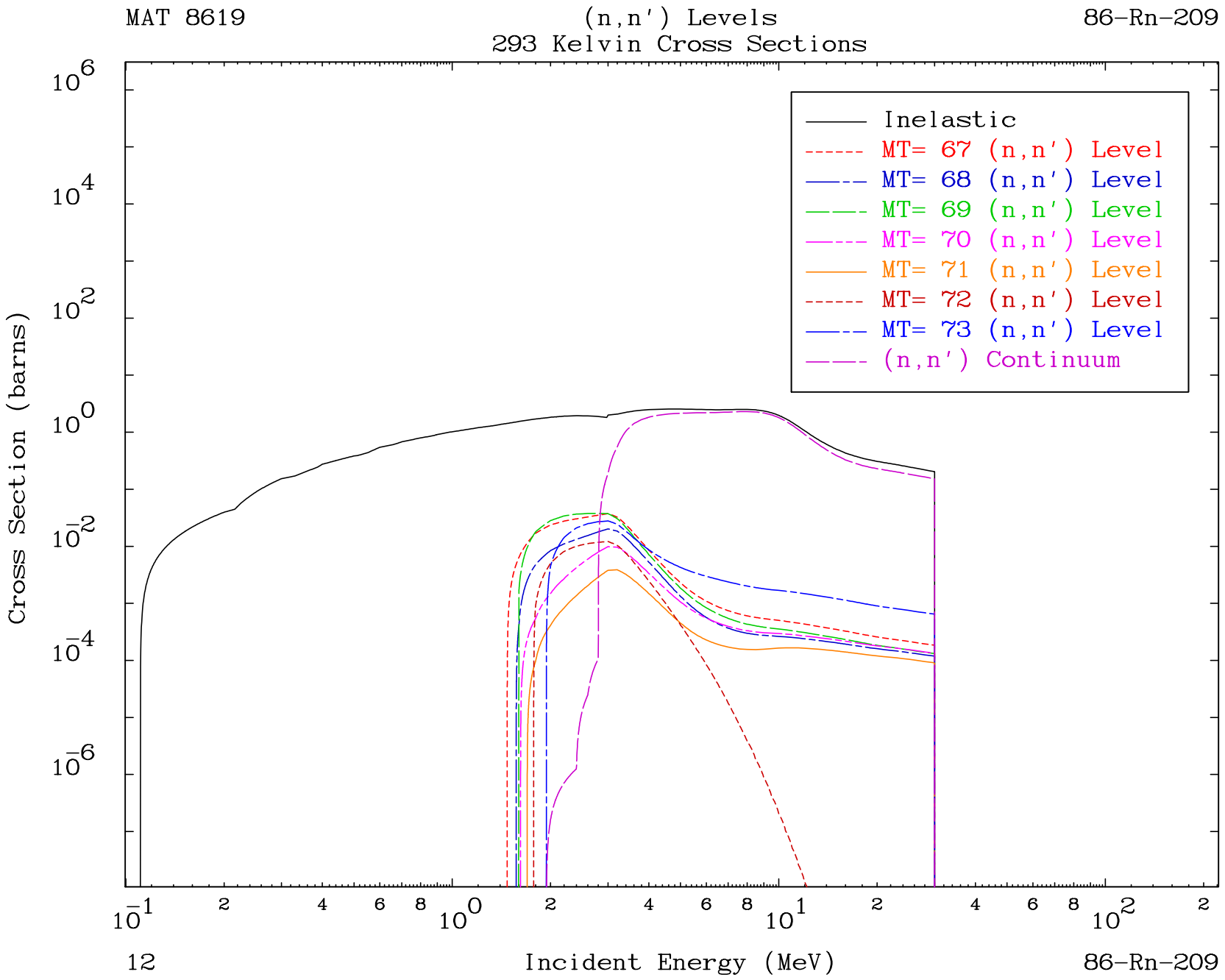

MAT 8619
Charged Particle
293 Kelvin Cross Sections
86-Rn-209
Cross Section (barns)
Incident Energy (MeV)
(n,n') α
(n,n') He-3
(n,2n) p
(n,3n) p
(n,p)
(n,d)
(n,t)
(n,He-3)
7
86-Rn-209

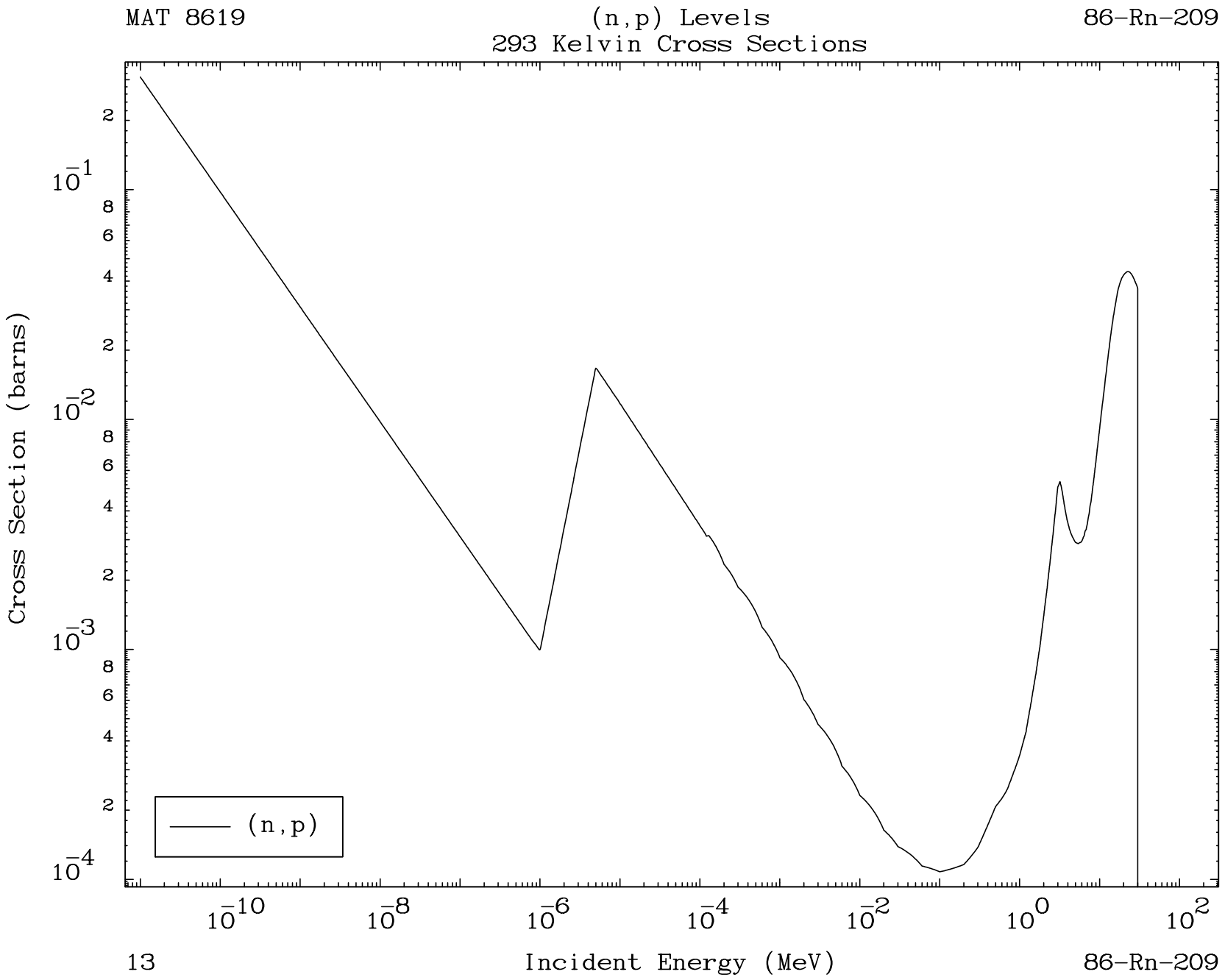

MAT 8619
Charged Particle
293 Kelvin Cross Sections
86-Rn-209
Cross Section (barns)
Incident Energy (MeV)
(n,n') α
(n,α)
(n,2α)
(n,2p)
(n,p) α
(n,p) d
(n,p) t
(n,d) α
8
86-Rn-209

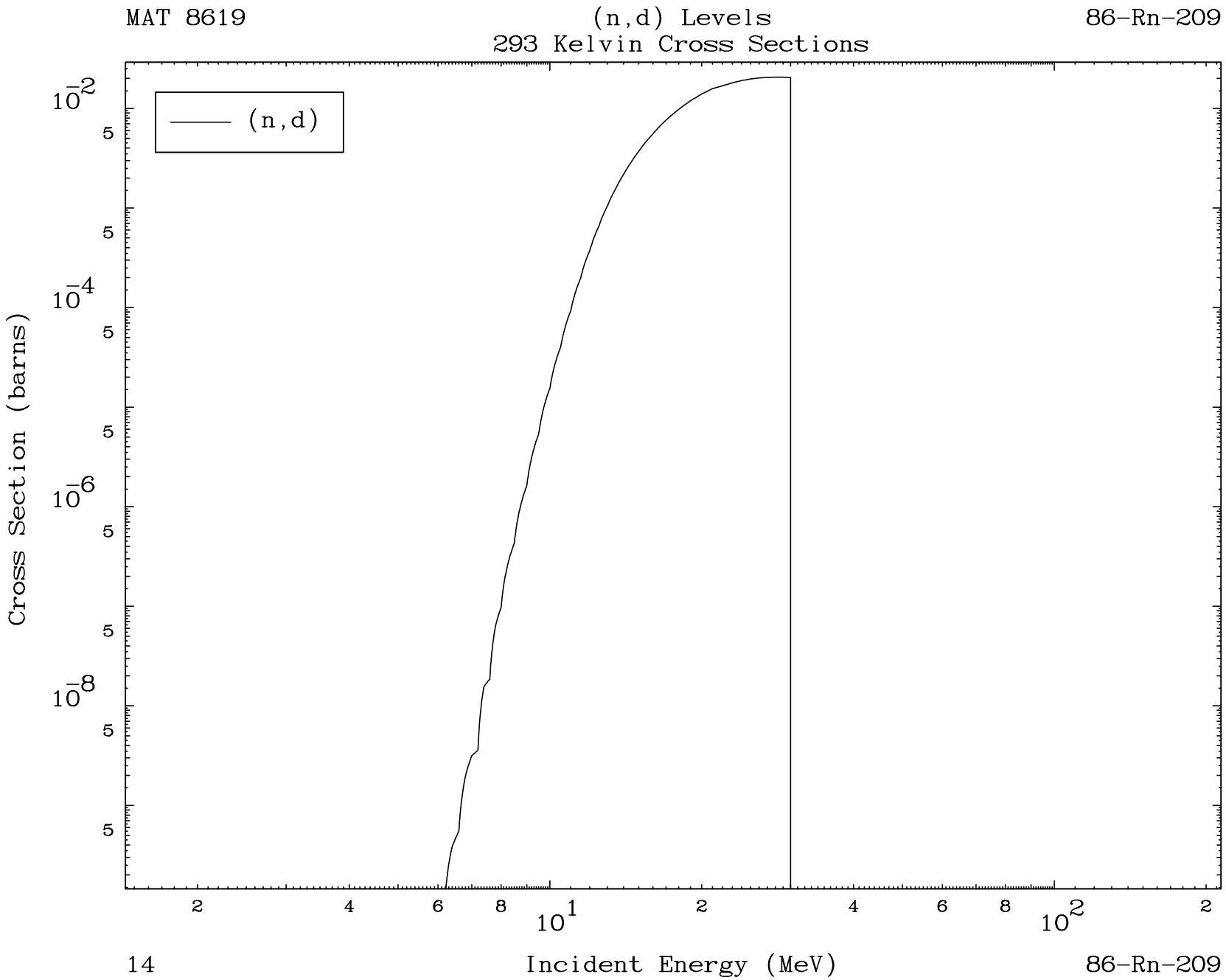

MAT 8619
Particle Production
293 Kelvin Cross Sections
86-Rn-209
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
9
86-Rn-209

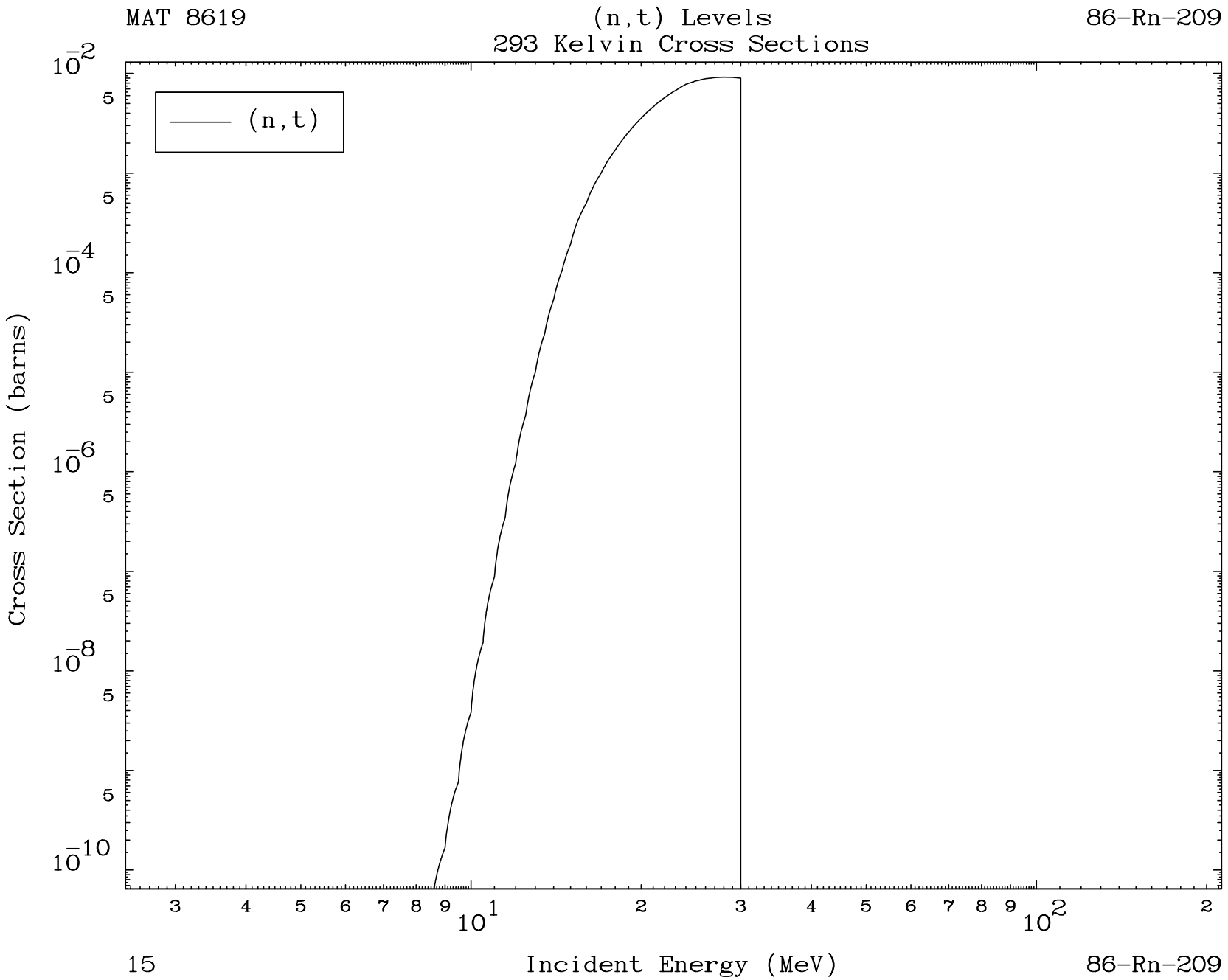

MAT 8619
(n,n') Levels
293 Kelvin Cross Sections
86-Rn-209
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
MT= 56 (n,n') Level
MT= 57 (n,n') Level
MT= 58 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
86-Rn-209

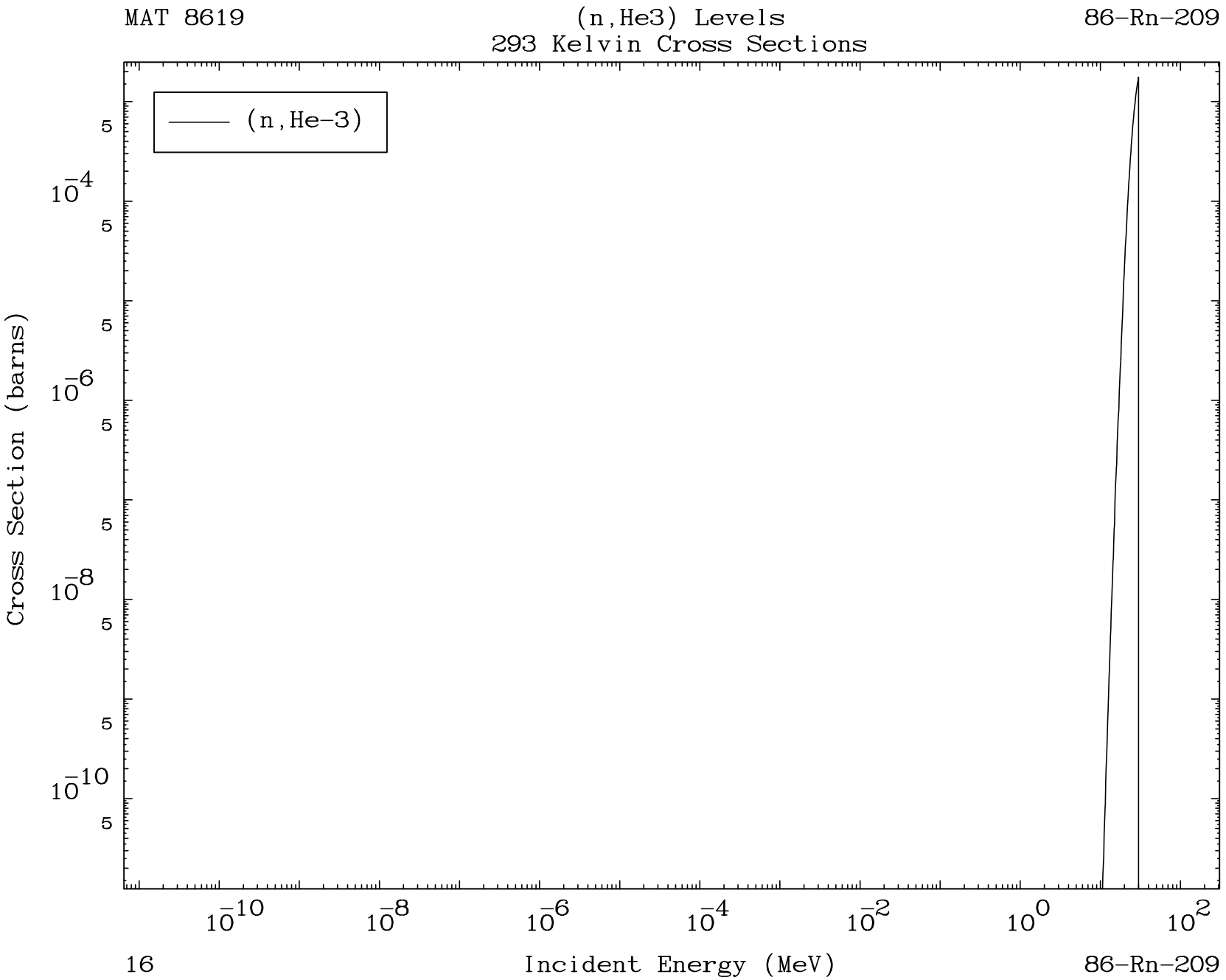

MAT 8619
(n,n') Levels
293 Kelvin Cross Sections
86-Rn-209
Inelastic
MT= 59 (n,n') Level
MT= 60 (n,n') Level
MT= 61 (n,n') Level
MT= 62 (n,n') Level
MT= 63 (n,n') Level
MT= 64 (n,n') Level
MT= 65 (n,n') Level
MT= 66 (n,n') Level
Cross Section (barns)
Incident Energy (MeV)
11
86-Rn-209

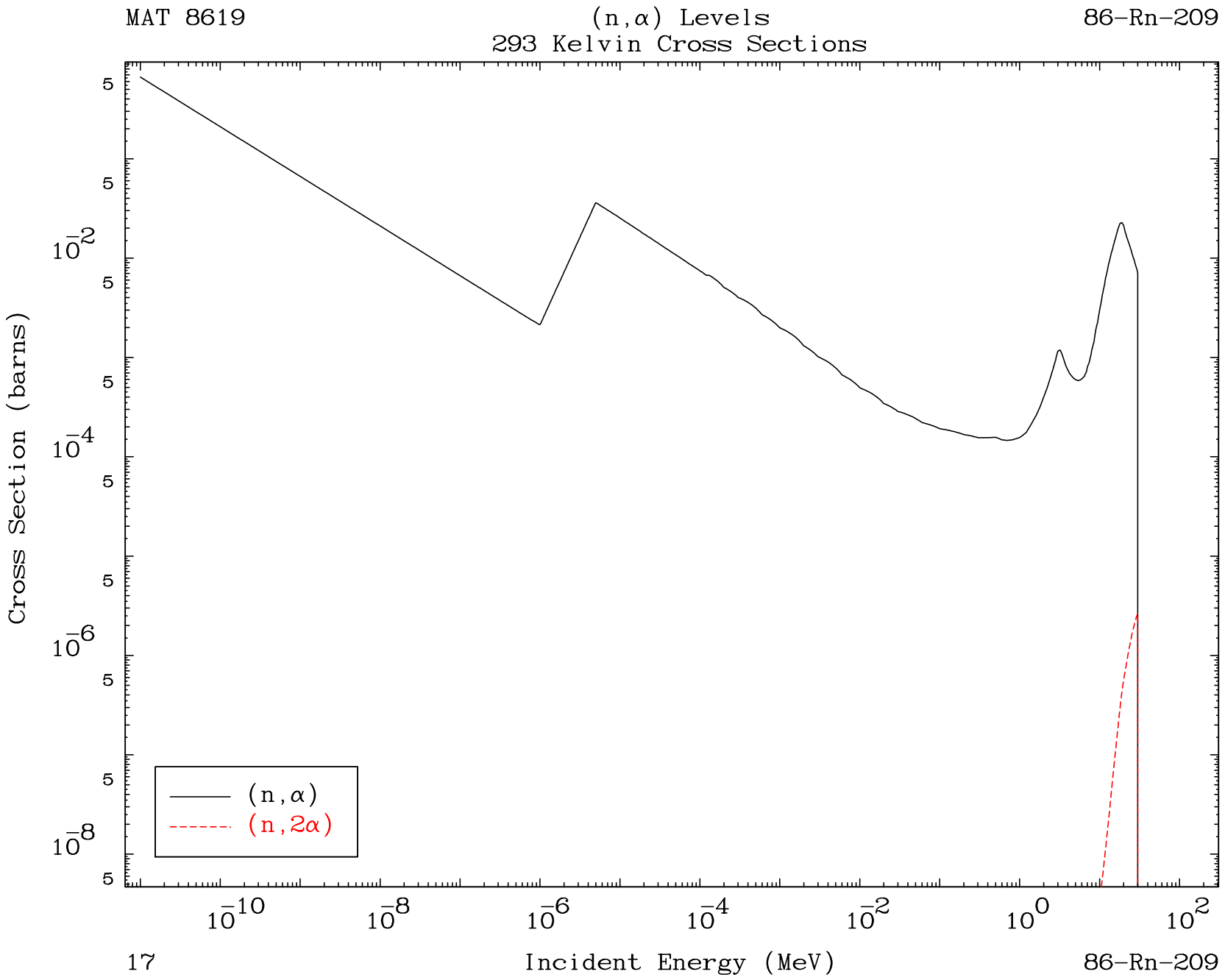

MAT 8619
(n,n') Levels
293 Kelvin Cross Sections
86-Rn-209
Inelastic
MT= 67 (n,n') Level
MT= 68 (n,n') Level
MT= 69 (n,n') Level
MT= 70 (n,n') Level
MT= 71 (n,n') Level
MT= 72 (n,n') Level
MT= 73 (n,n') Level
(n,n') Continuum
Cross Section (barns)
Incident Energy (MeV)
12
86-Rn-209

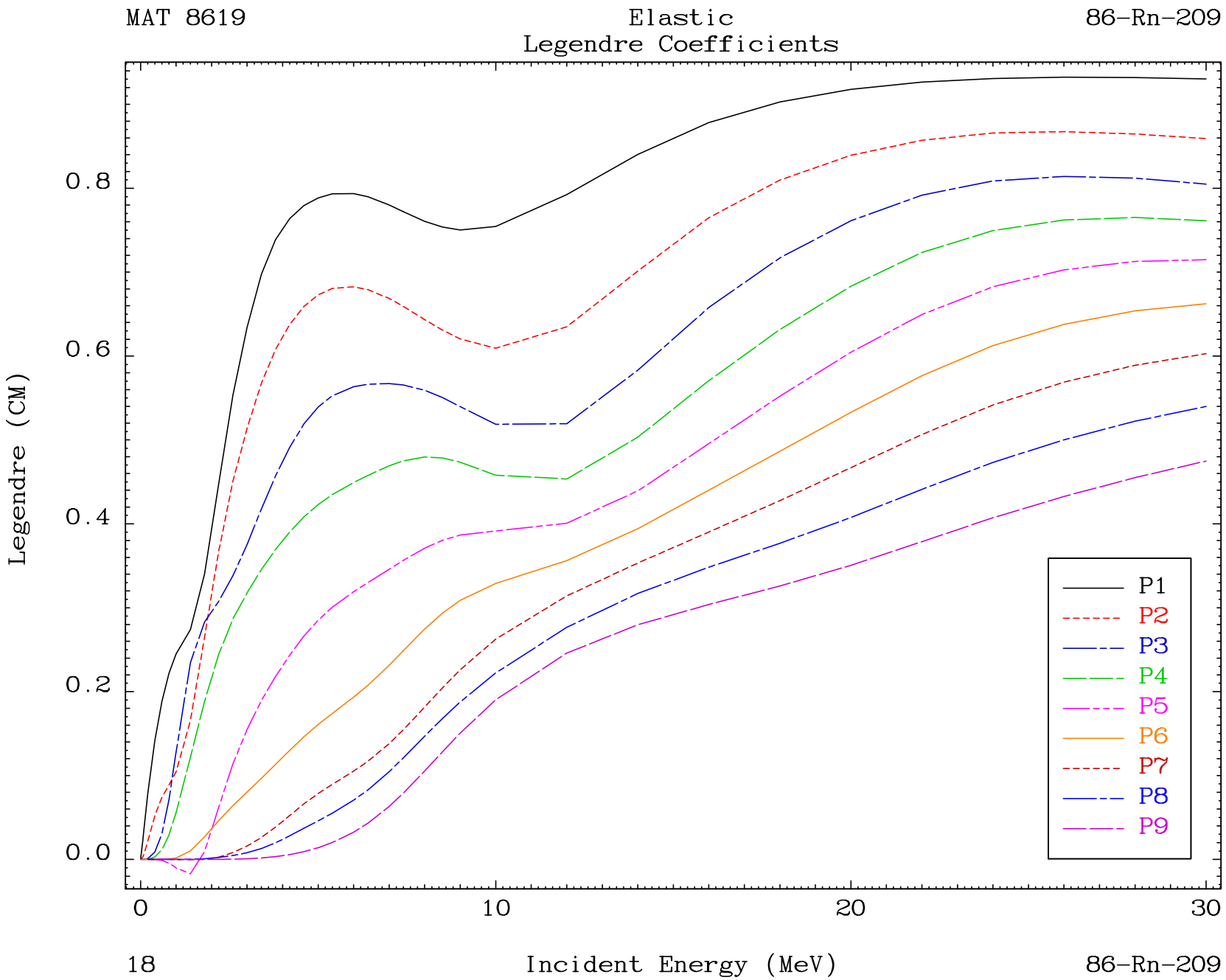

MAT 8619
(n,p) Levels
86-Rn-209
293 Kelvin Cross Sections
Cross Section (barns)
(n,p)
13
Incident Energy (MeV)
86-Rn-209

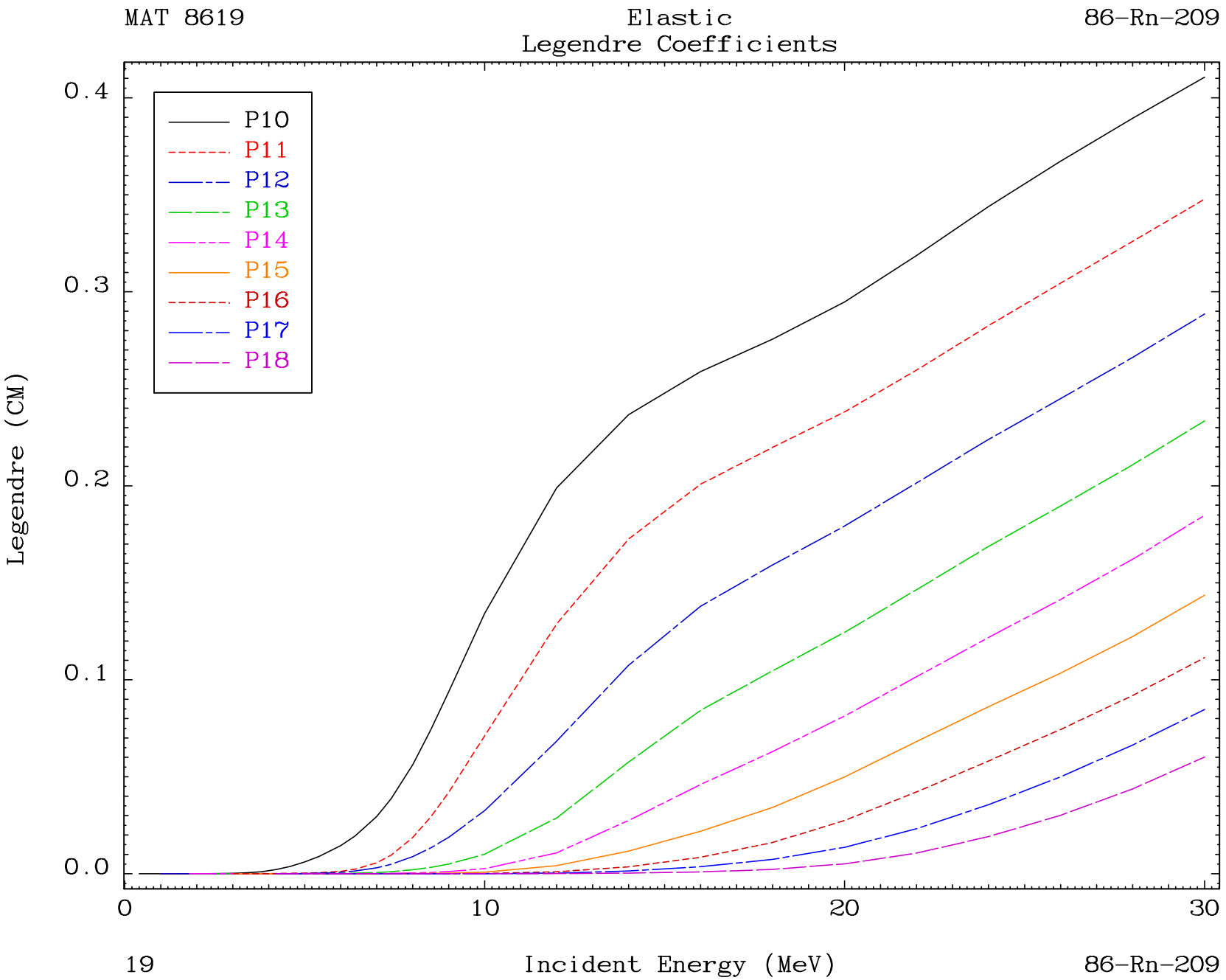

MAT 8619
(n,d) Levels
86-Rn-209
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
14
86-Rn-209

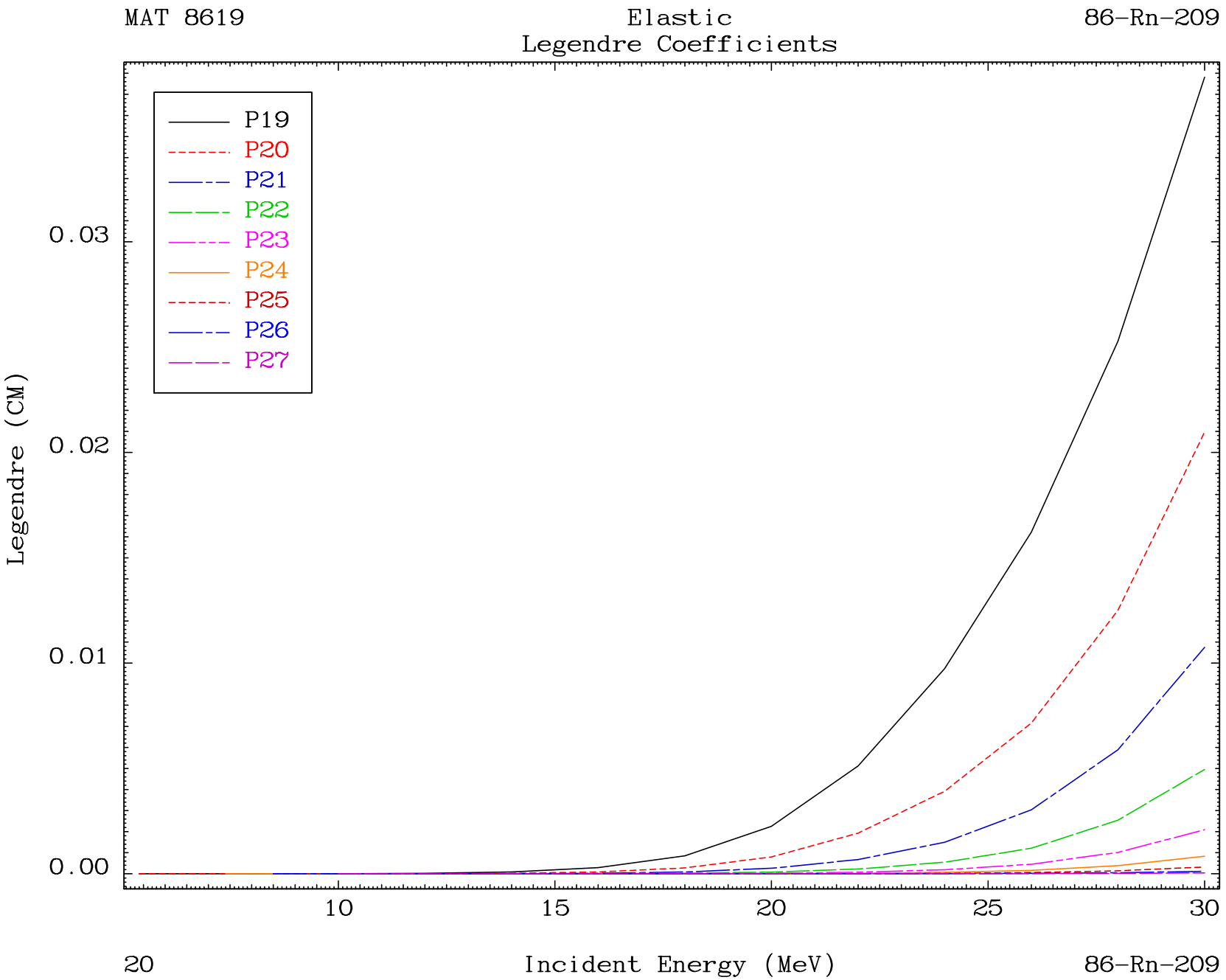

MAT 8619
(n,t) Levels
86-Rn-209
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
Incident Energy (MeV)
15
86-Rn-209

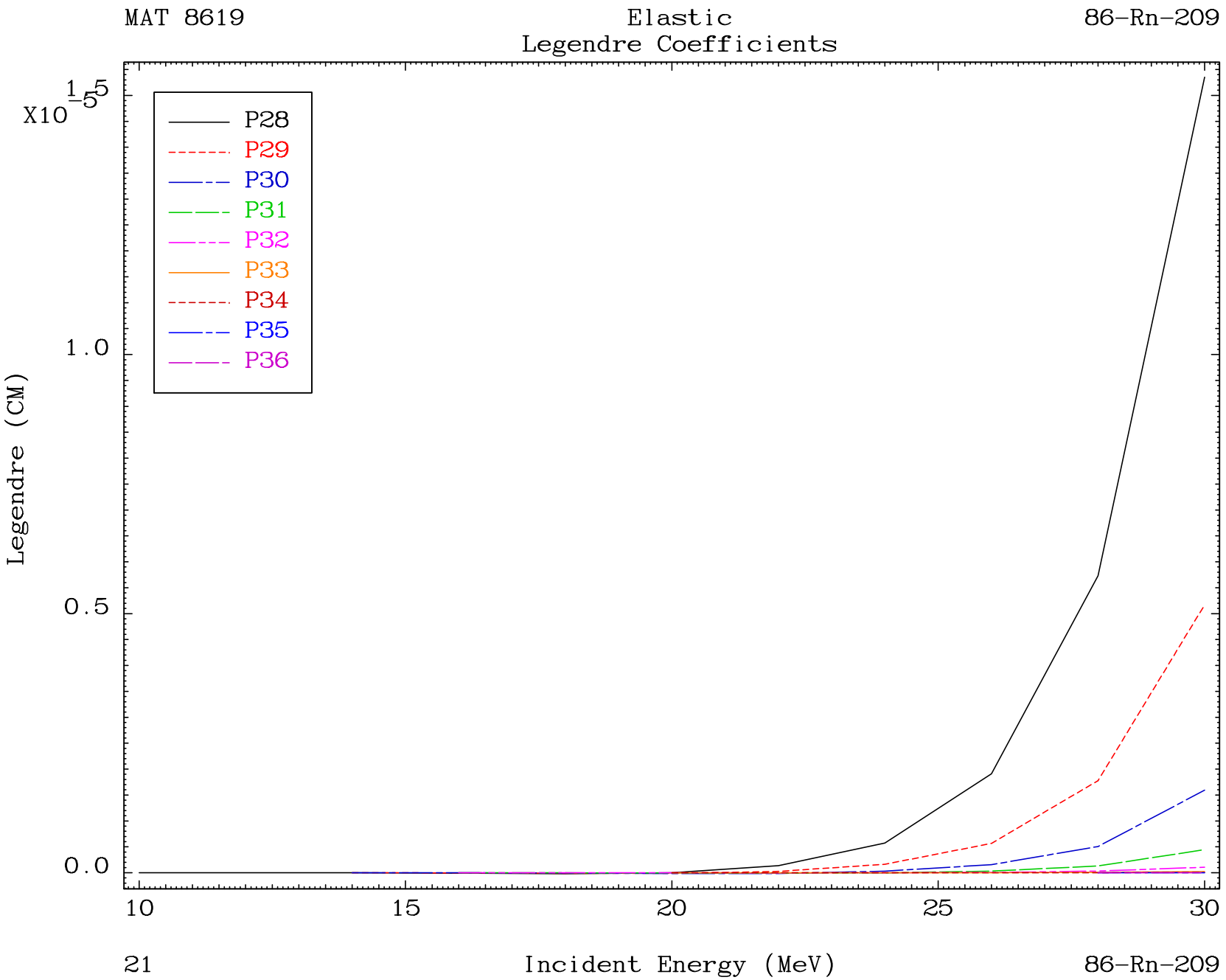

MAT 8619
(n,He3) Levels
86-Rn-209
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
Incident Energy (MeV)
16
86-Rn-209

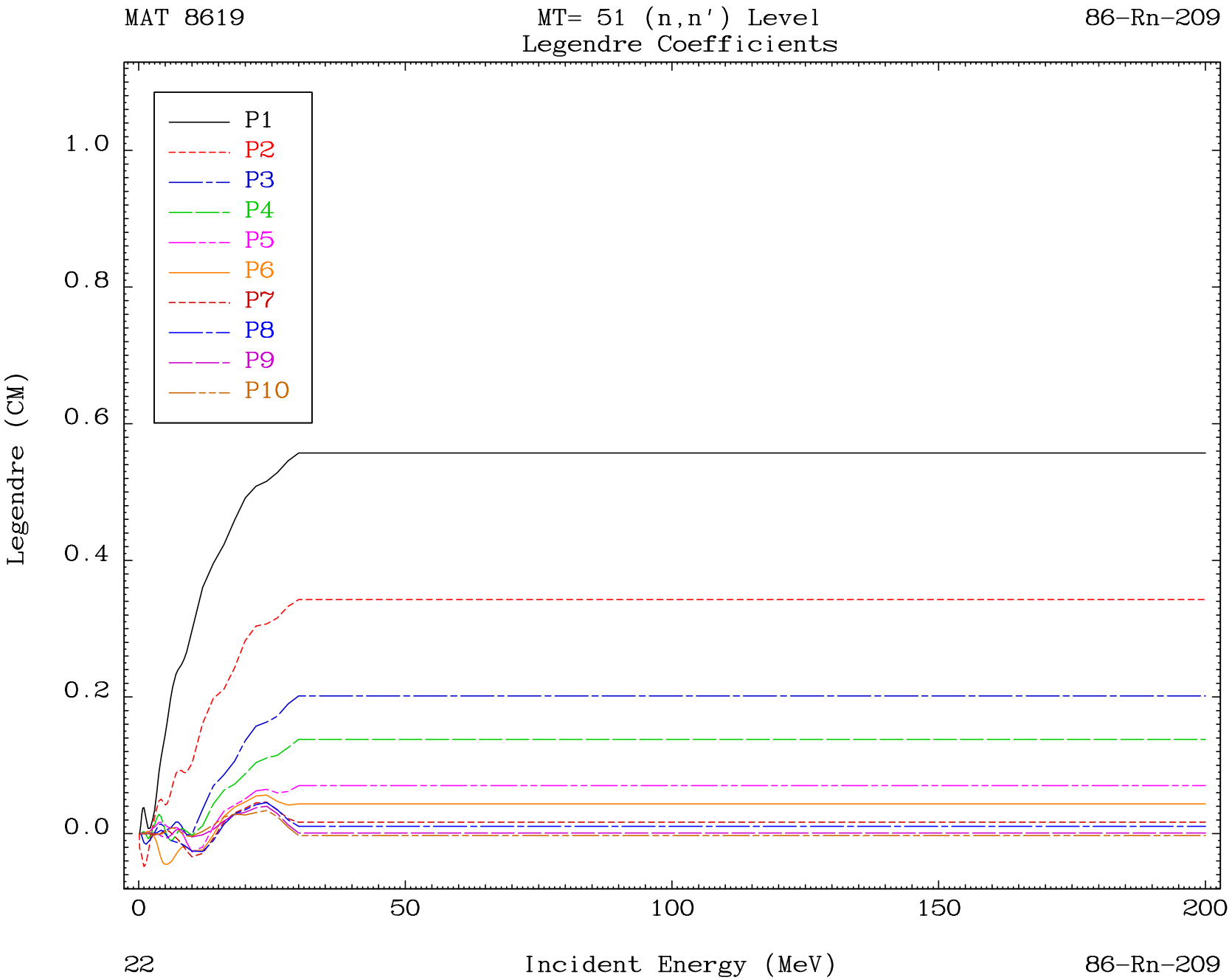

MAT 8619
(n,α) Levels
86-Rn-209
293 Kelvin Cross Sections
Cross Section (barns)
5
5
10-2
5
5
10-4
5
5
10-6
5
5
10-8
5
(n,α)
(n,2α)
10-10
10-8
10-6
10-4
10-2
100
102
17
Incident Energy (MeV)
86-Rn-209

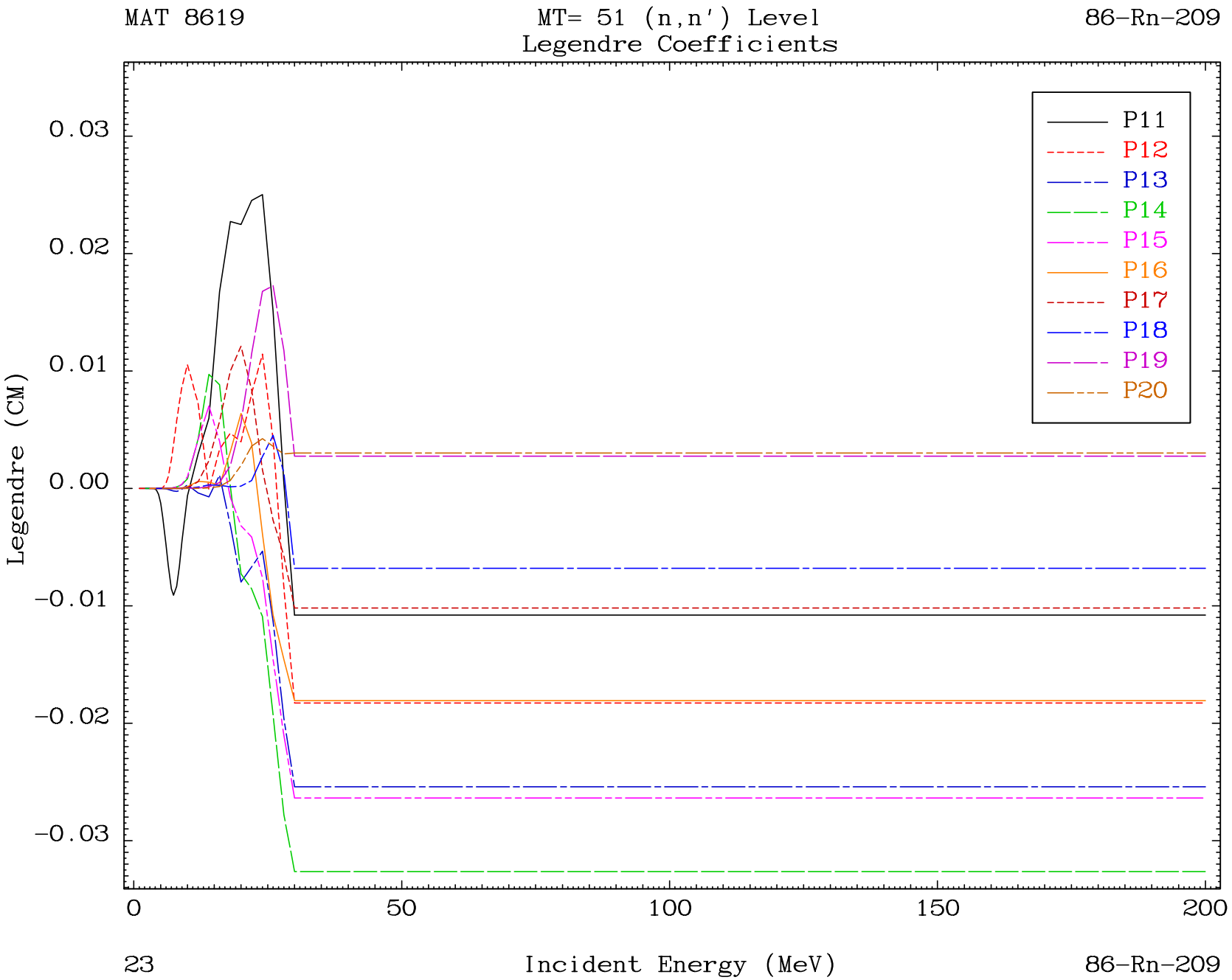

MAT 8619
Elastic
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
18
Incident Energy (MeV)
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9

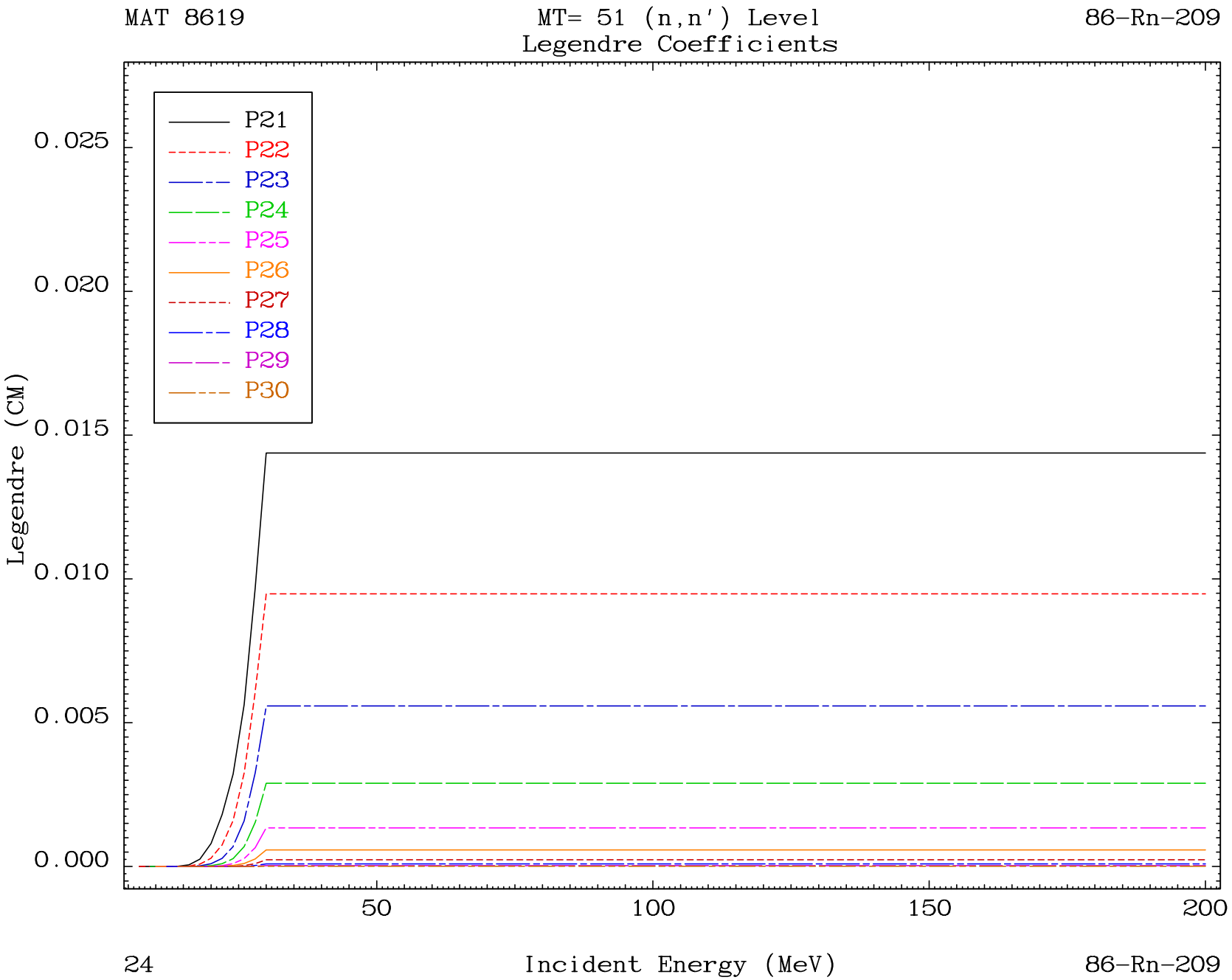

MAT 8619
Elastic
Legendre Coefficients
86-Rn-209
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
10
20
30
19
Incident Energy (MeV)
86-Rn-209

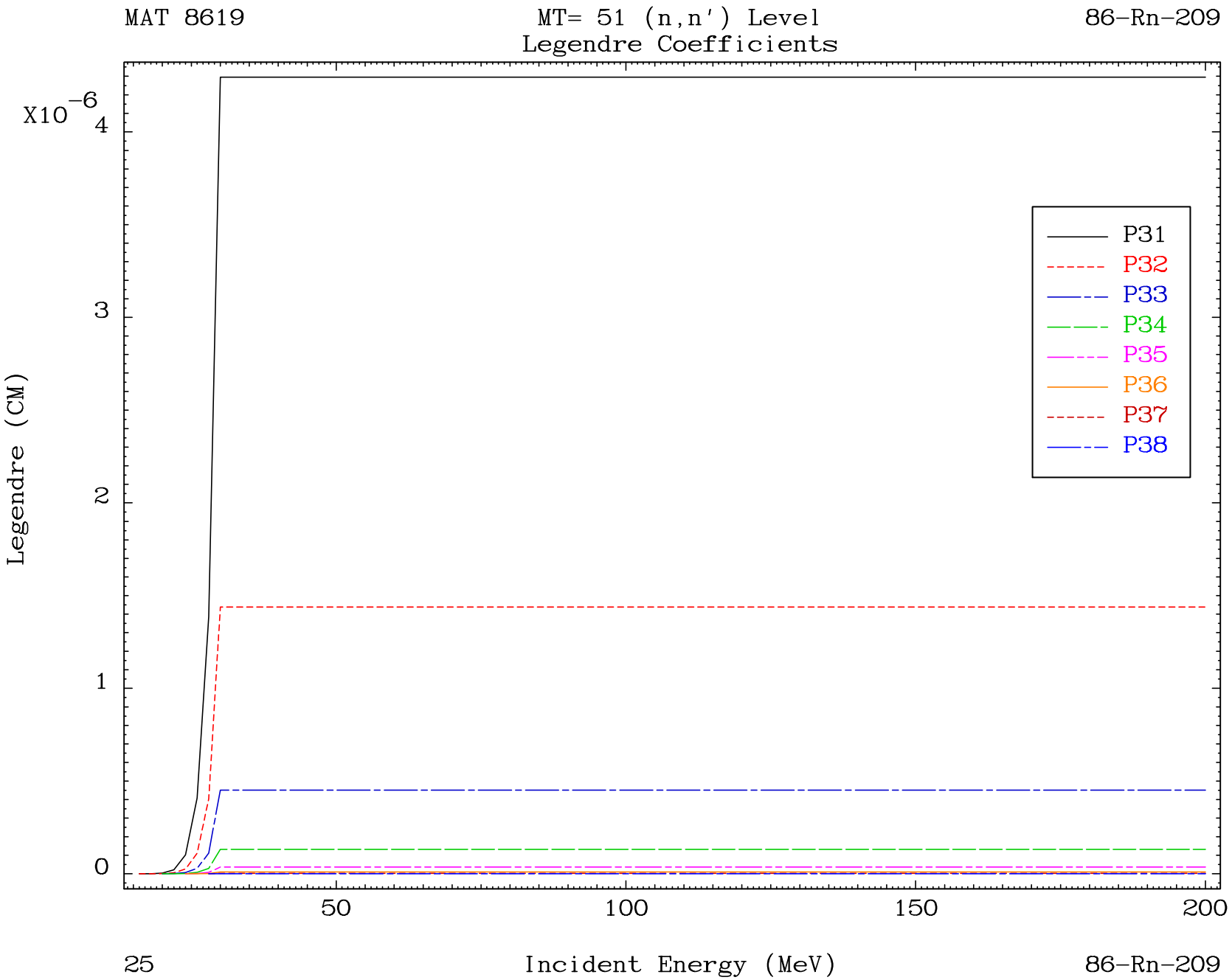

MAT 8619
Elastic
Legendre Coefficients
86-Rn-209
P19
P20
P21
P22
P23
P24
P25
P26
P27
Legendre (CM)
0.00
0.01
0.02
0.03
10
15
20
25
30
20
Incident Energy (MeV)
86-Rn-209

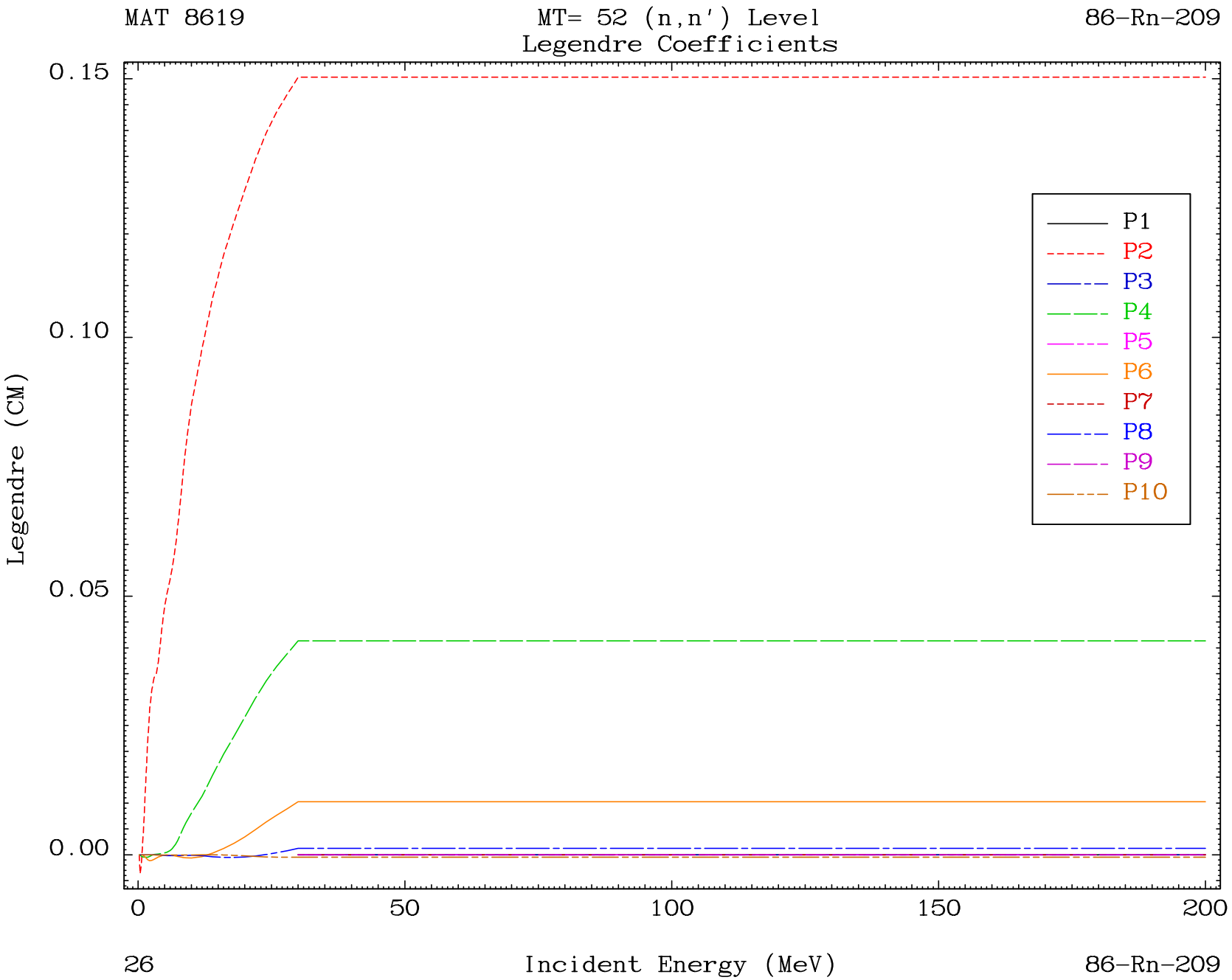

MAT 8619
Elastic
Legendre Coefficients
86-Rn-209
X10-5
1.5
1.0
0.5
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
10
15
20
25
30
21
Incident Energy (MeV)
86-Rn-209

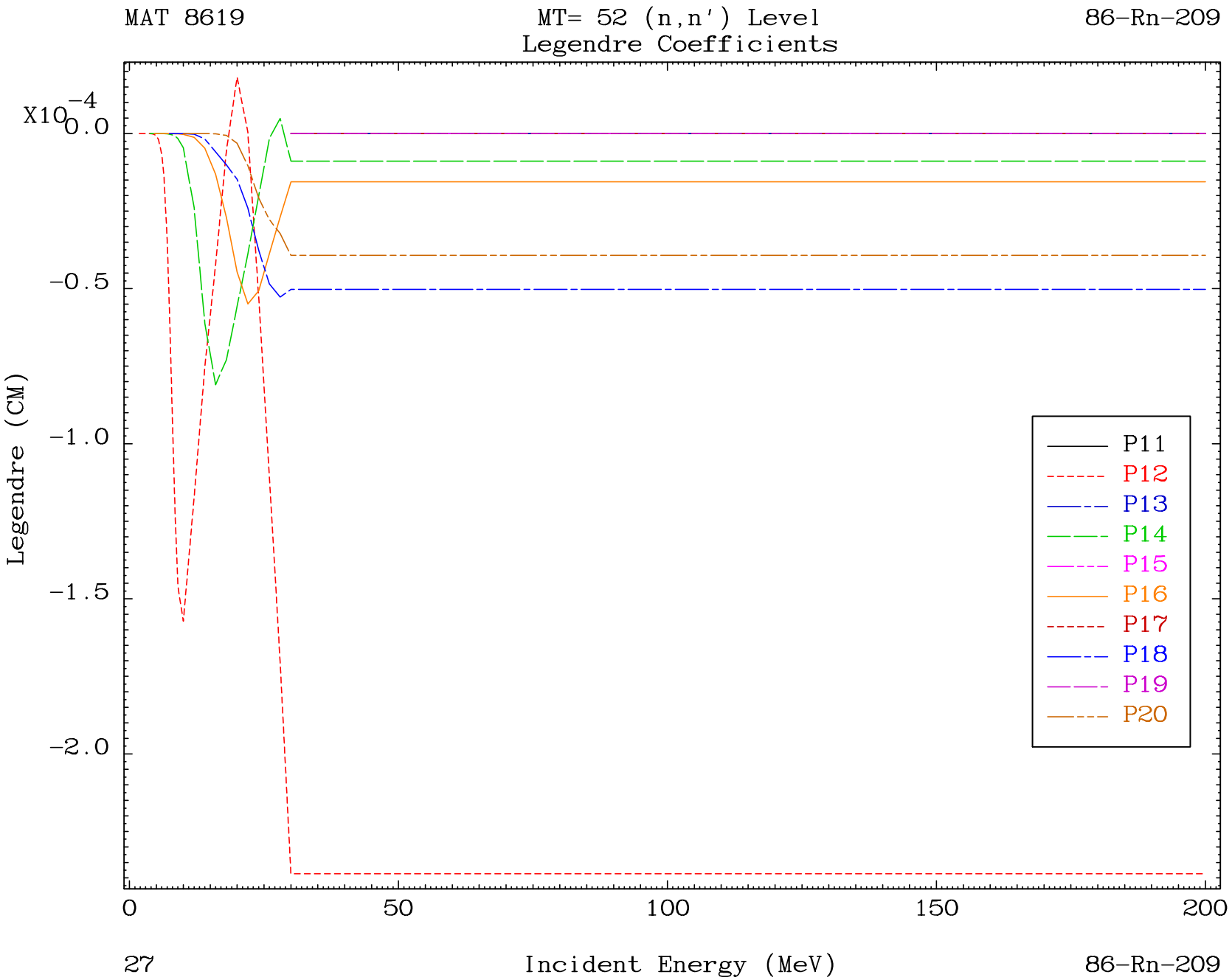

MAT 8619
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
22
Incident Energy (MeV)
86-Rn-209

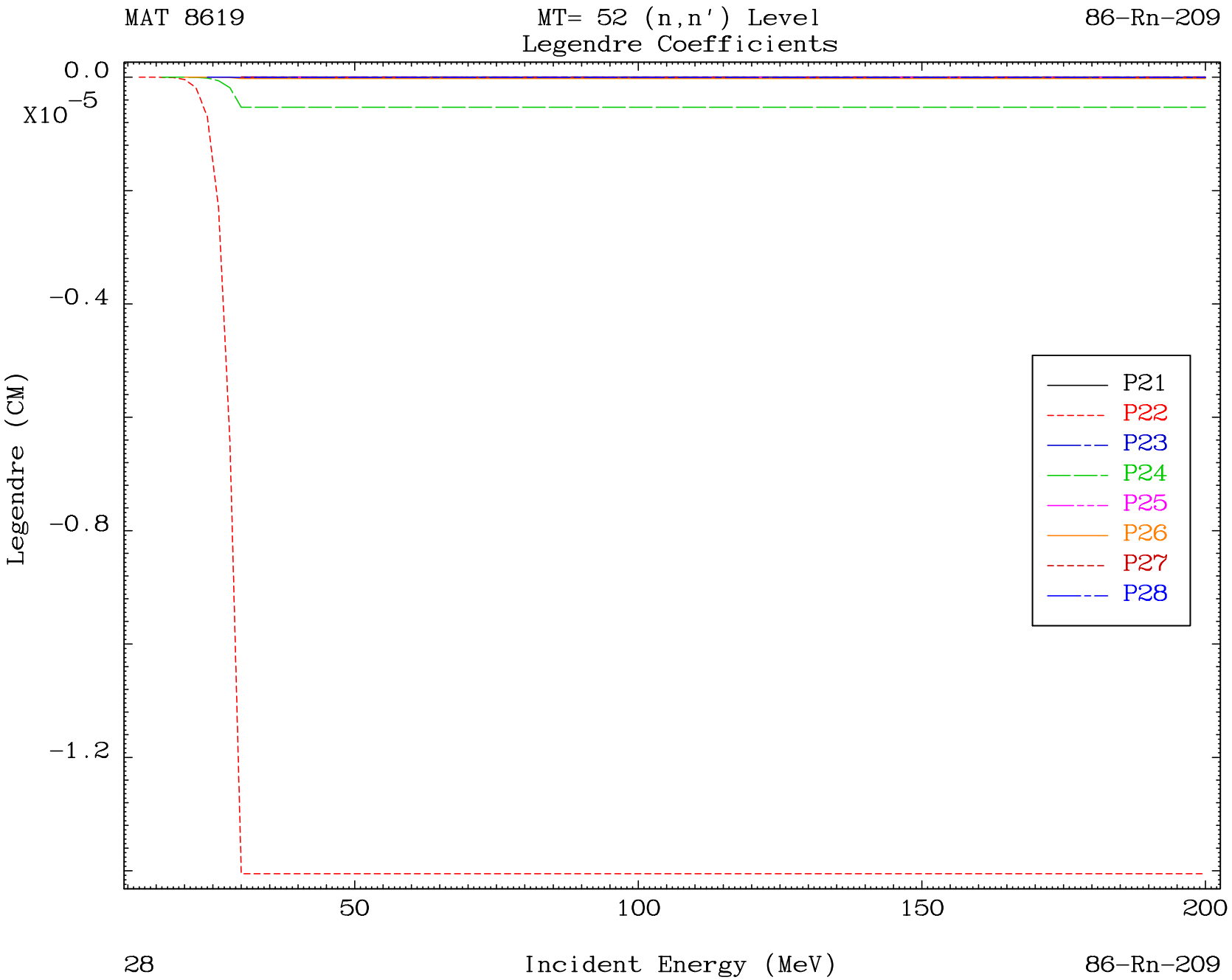

MAT 8619
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
23
Incident Energy (MeV)
86-Rn-209

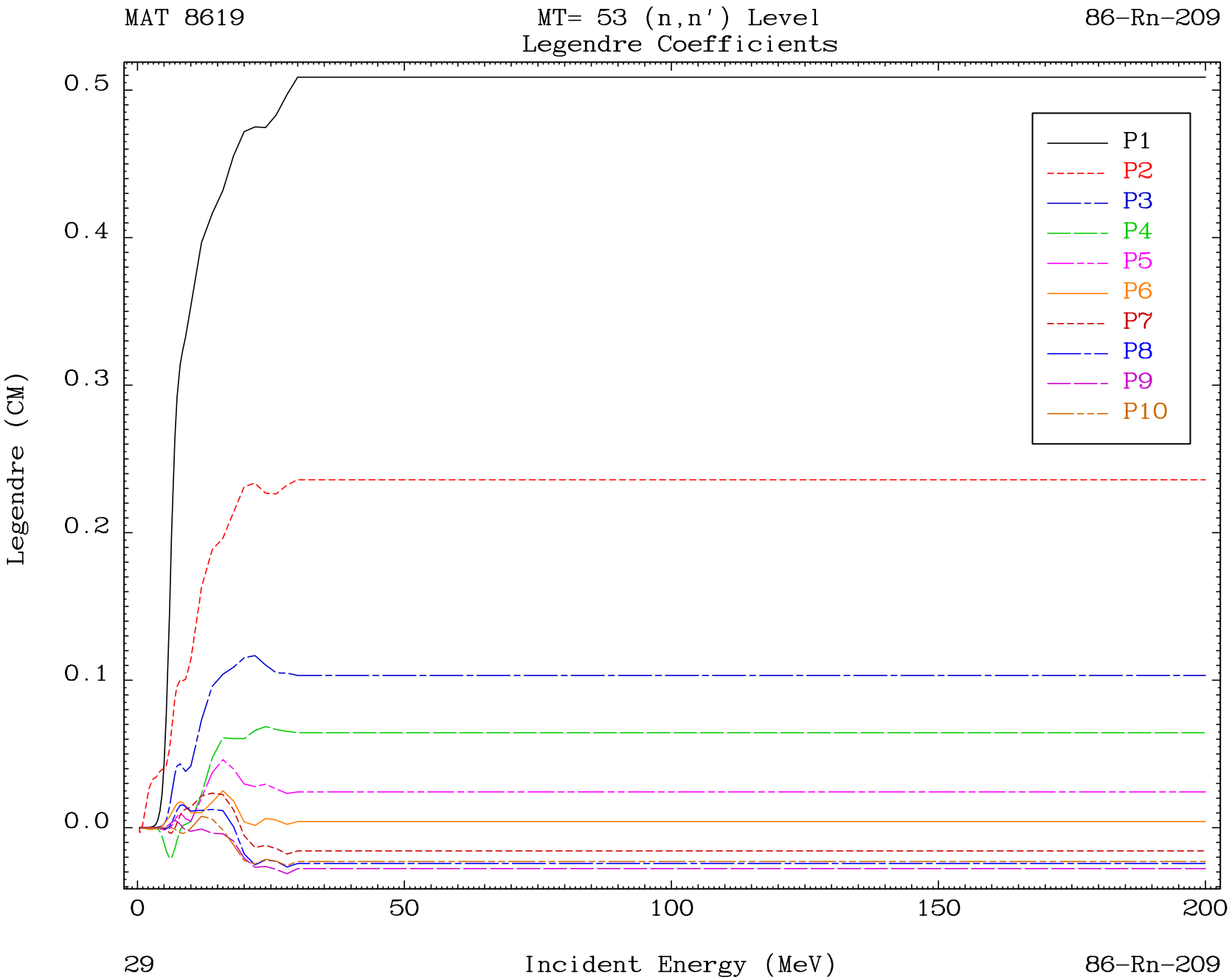

MAT 8619
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
24
Incident Energy (MeV)
86-Rn-209

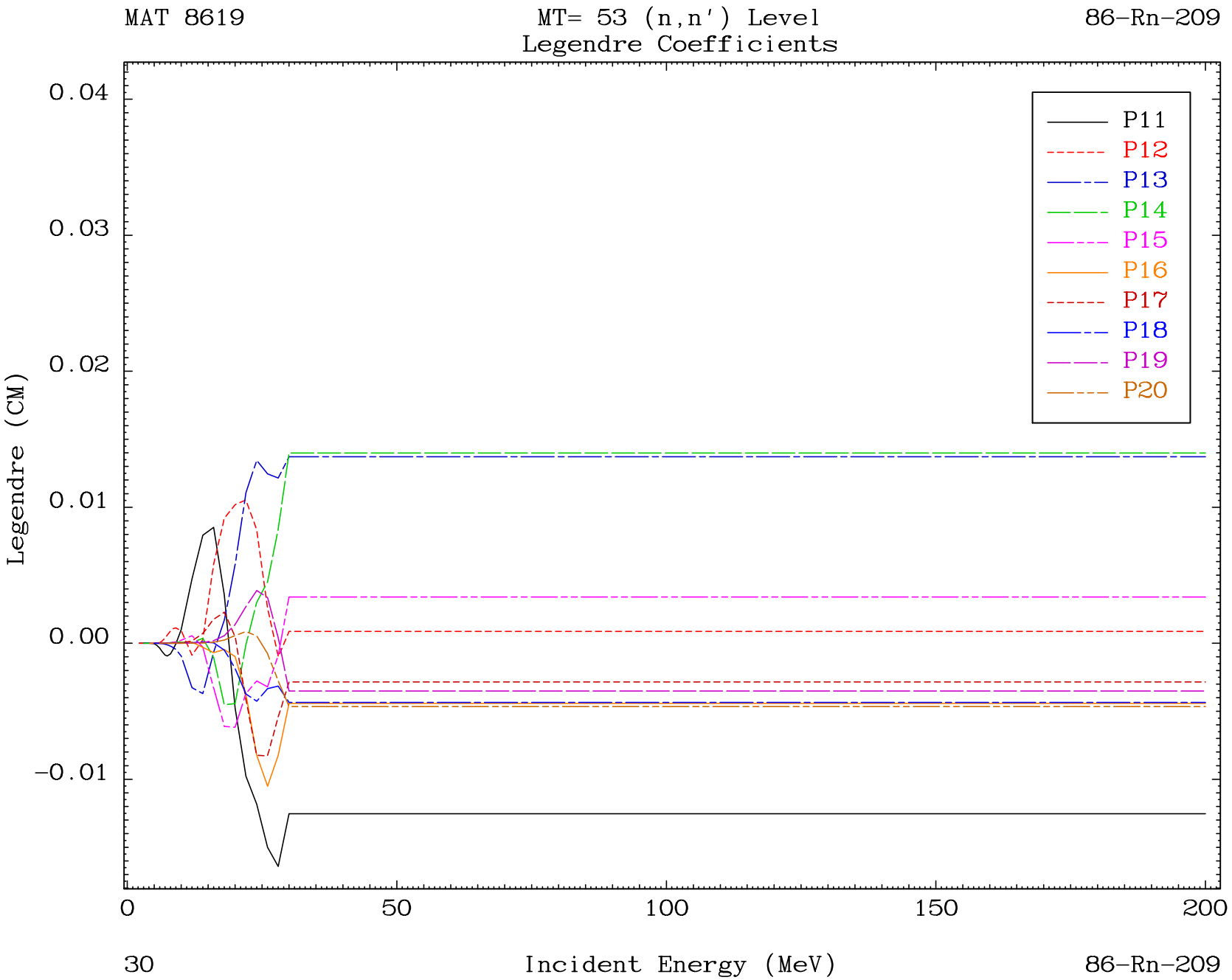

MAT 8619
MT= 51 (n,n') Level
Legendre Coefficients
86-Rn-209
X10 -6
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
25
Incident Energy (MeV)
86-Rn-209

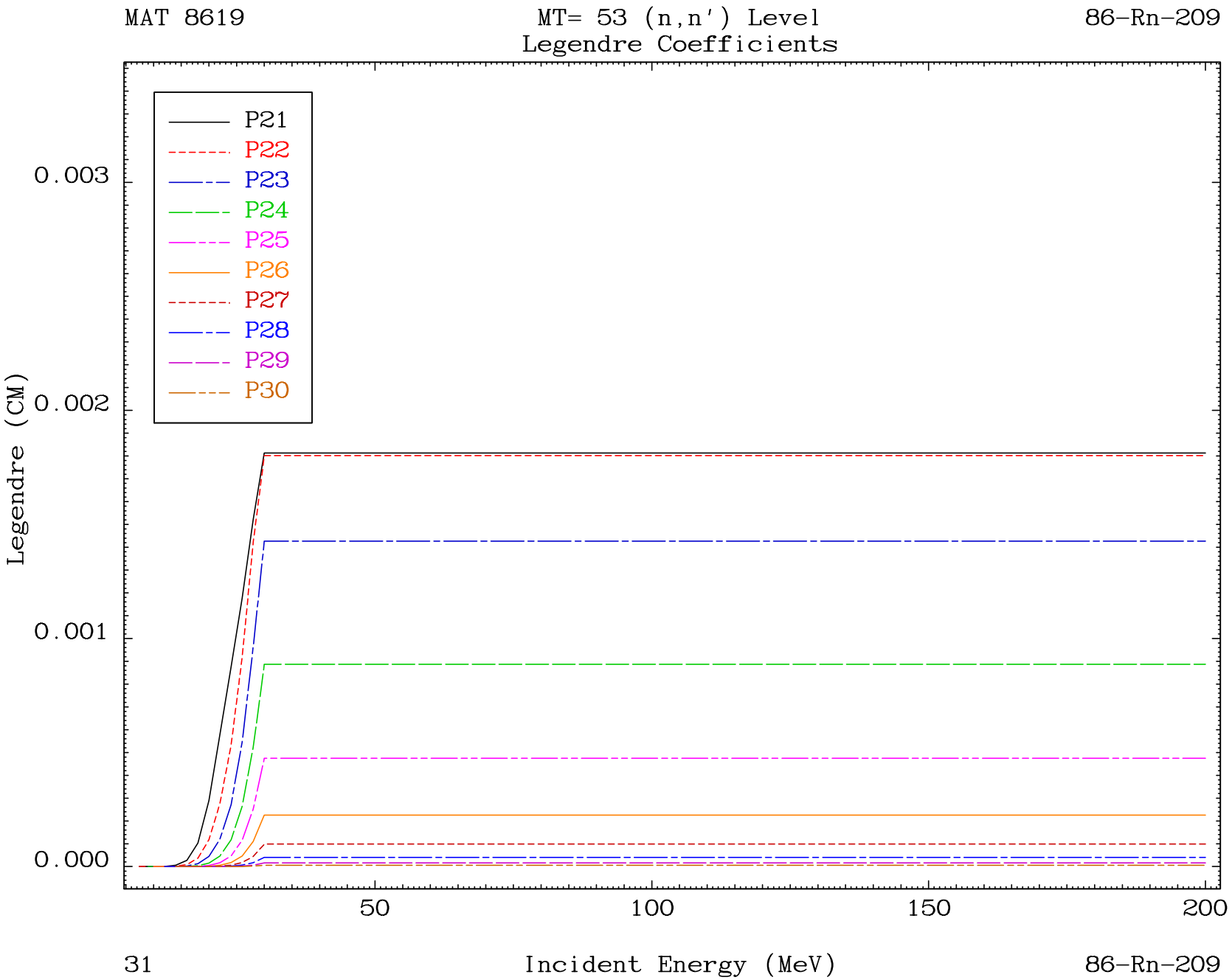

MAT 8619
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-209
0.15
0.10
0.05
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
0
50
100
150
200
26
Incident Energy (MeV)
86-Rn-209

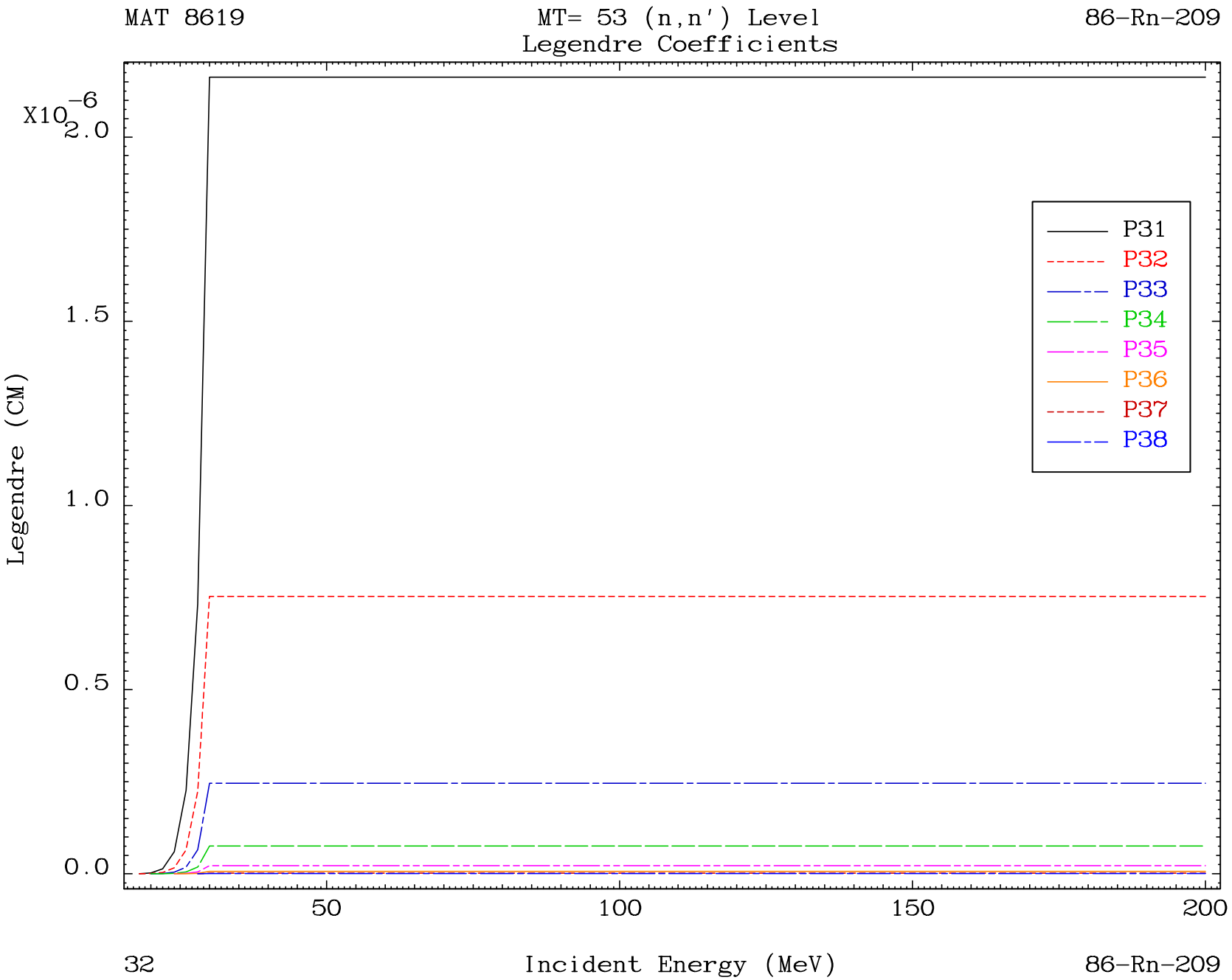

MAT 8619
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
0
50
100
150
200
Incident Energy (MeV)
27
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

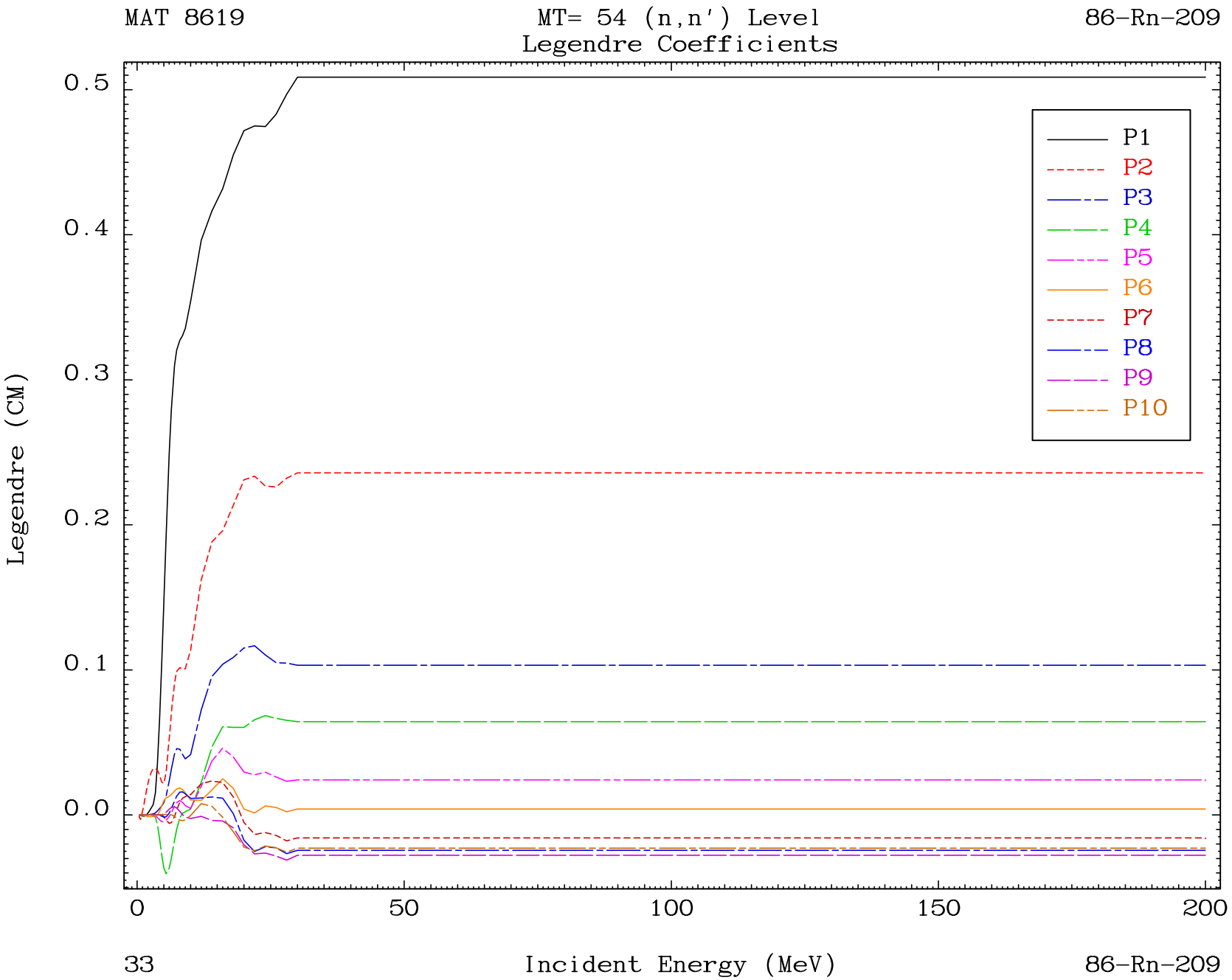

MAT 8619
MT= 52 (n,n') Level
Legendre Coefficients
86-Rn-209
0.0
X10−5
−0.4
−0.8
−1.2
Legendre (CM)
50
100
150
200
28
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28

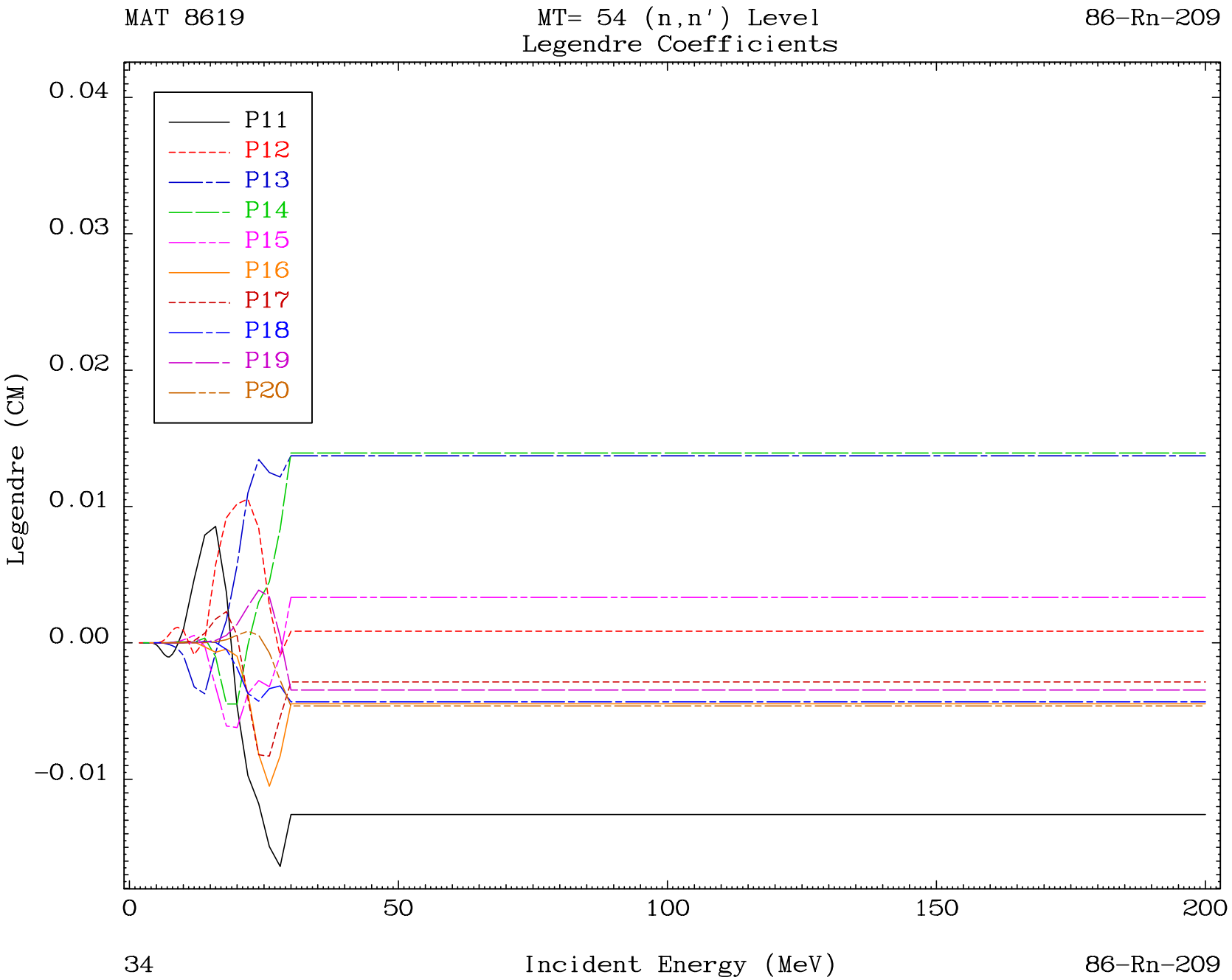

MAT 8619
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
29
Incident Energy (MeV)
86-Rn-209

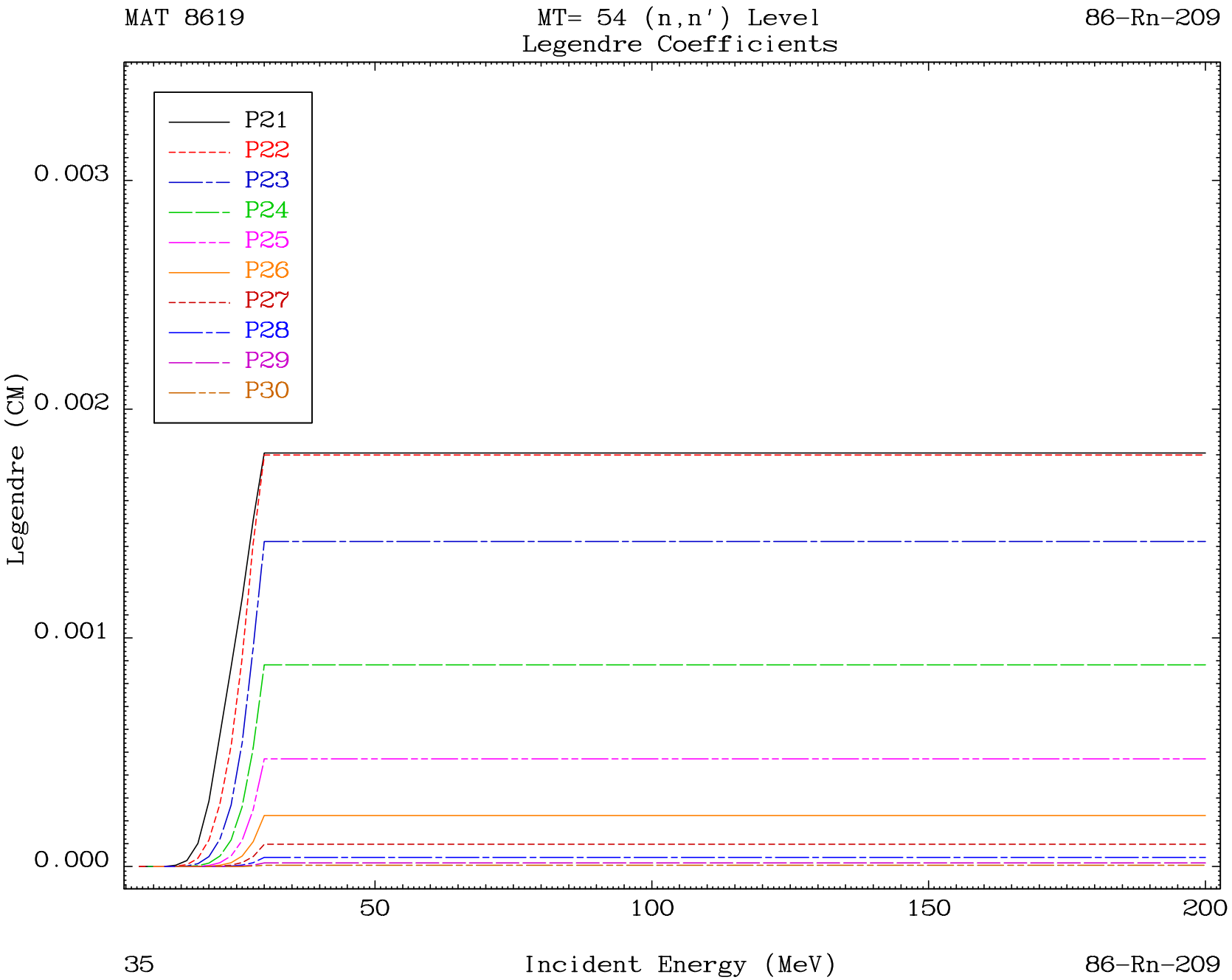

MAT 8619
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-209
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
30
Incident Energy (MeV)
86-Rn-209

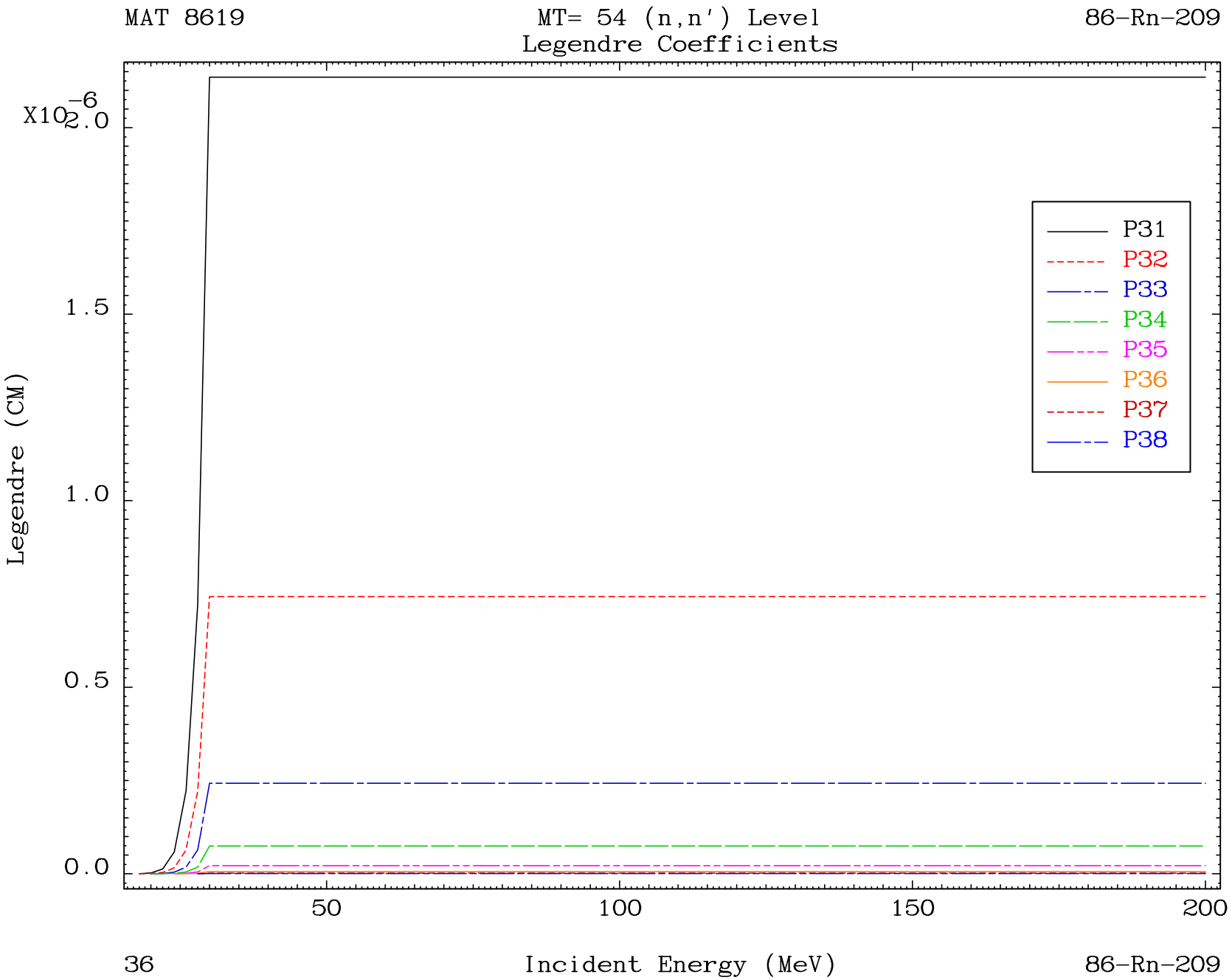

MAT 8619
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
31
Incident Energy (MeV)
86-Rn-209

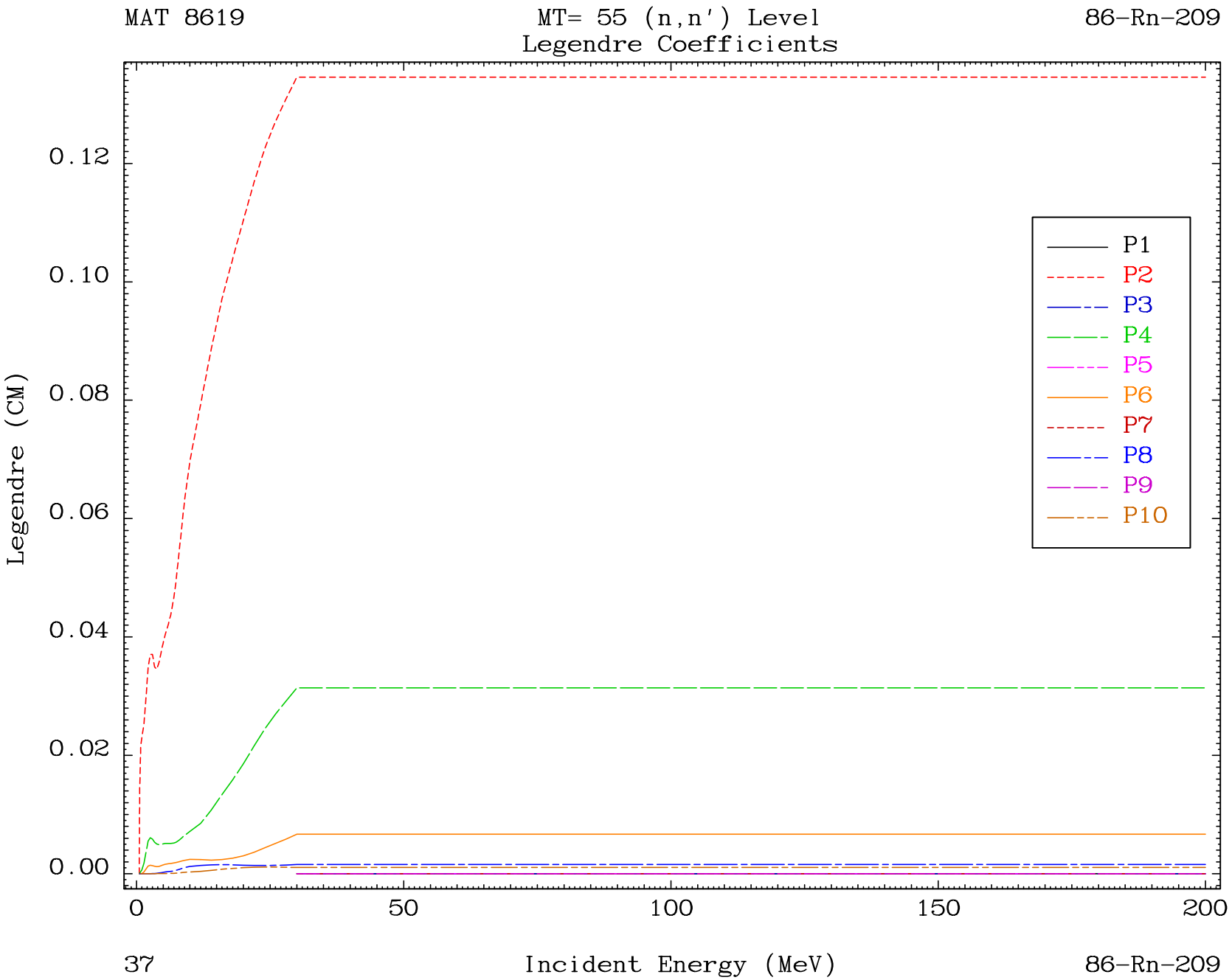

MAT 8619
MT= 53 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-6
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
32
Incident Energy (MeV)
86-Rn-209

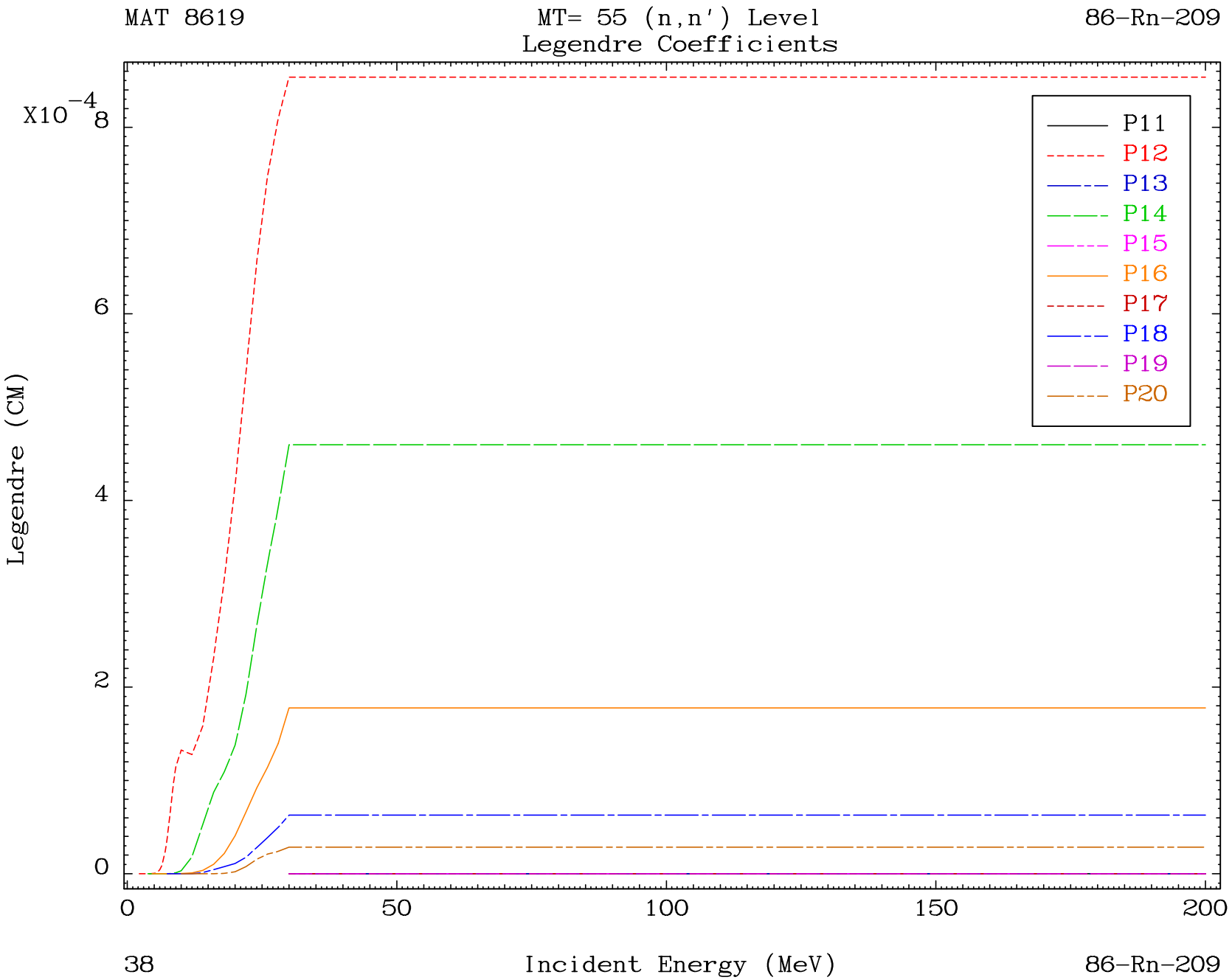

MAT 8619
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
33
Incident Energy (MeV)
86-Rn-209

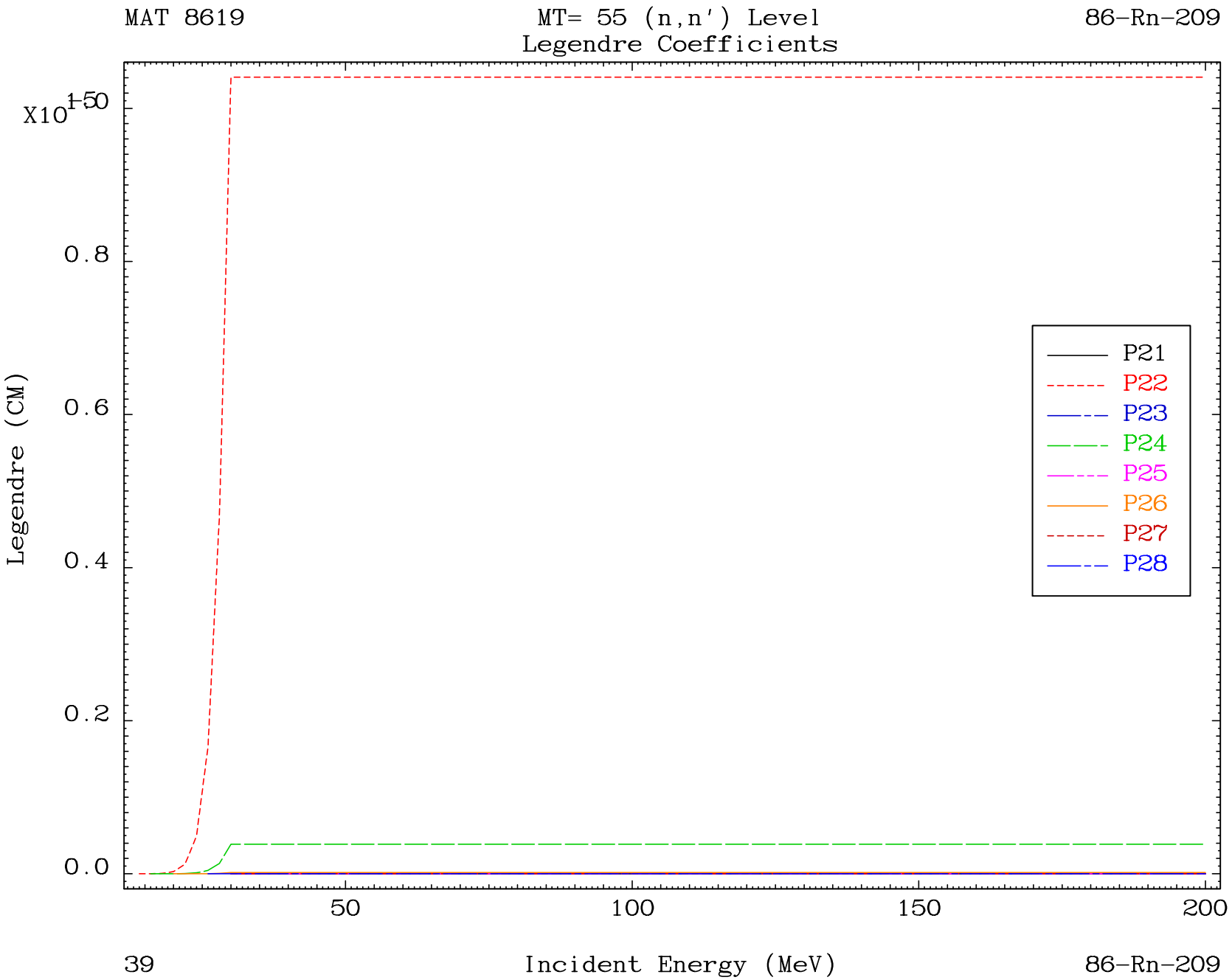

MAT 8619
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
34
Incident Energy (MeV)
86-Rn-209

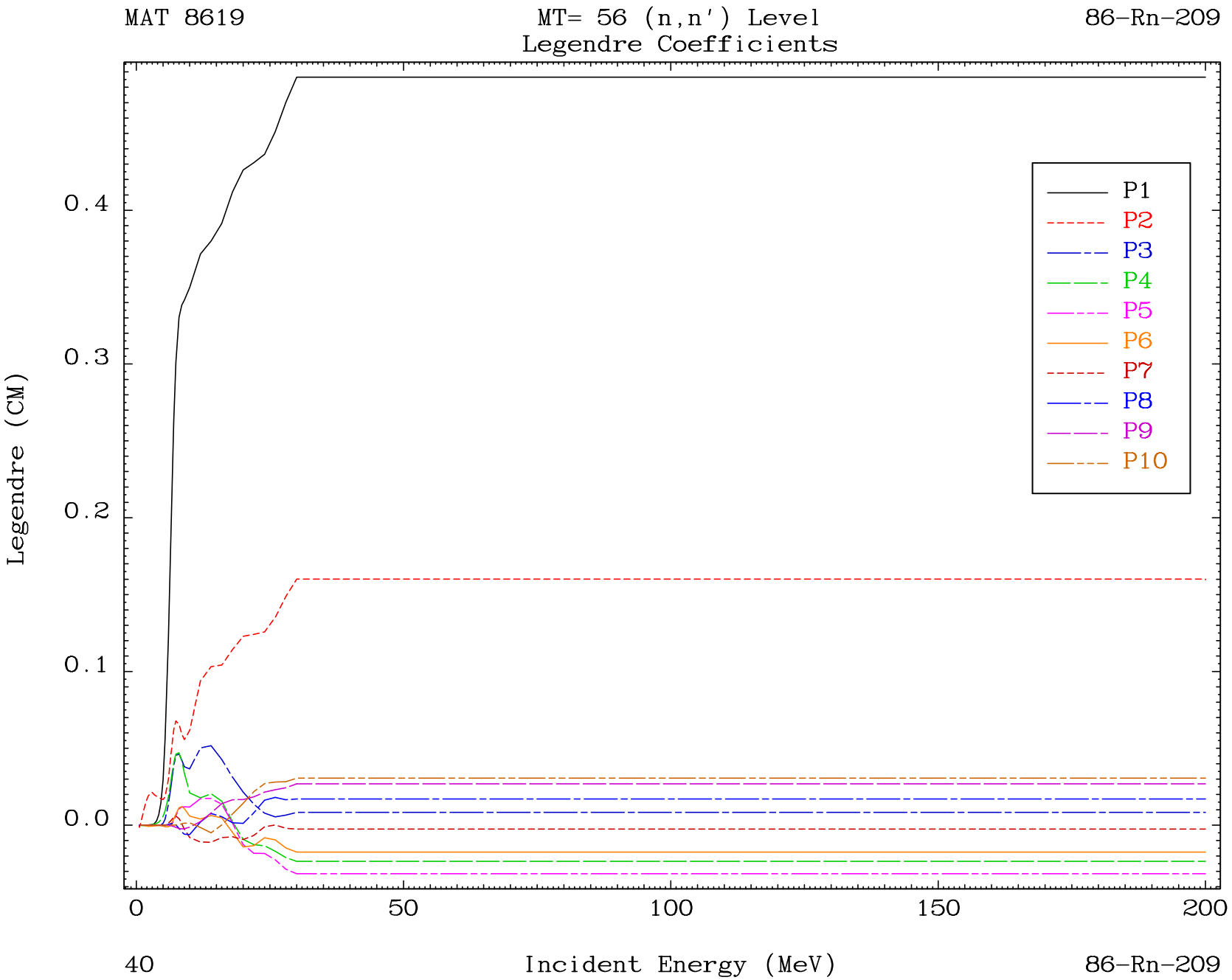

MAT 8619
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
35
Incident Energy (MeV)
86-Rn-209

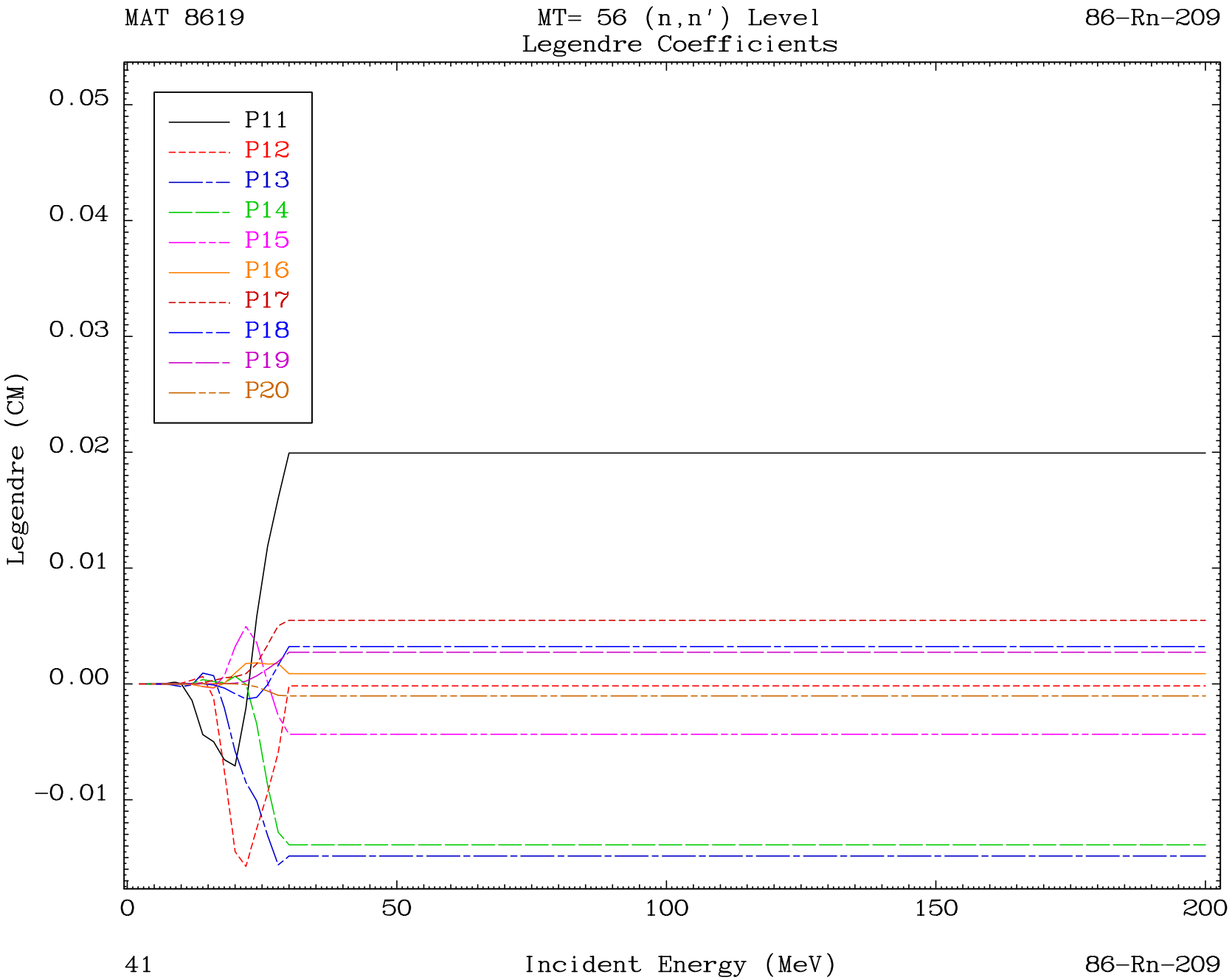

MAT 8619
MT= 54 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
50
100
150
200
36
Incident Energy (MeV)
86-Rn-209
P31
P32
P33
P34
P35
P36
P37
P38

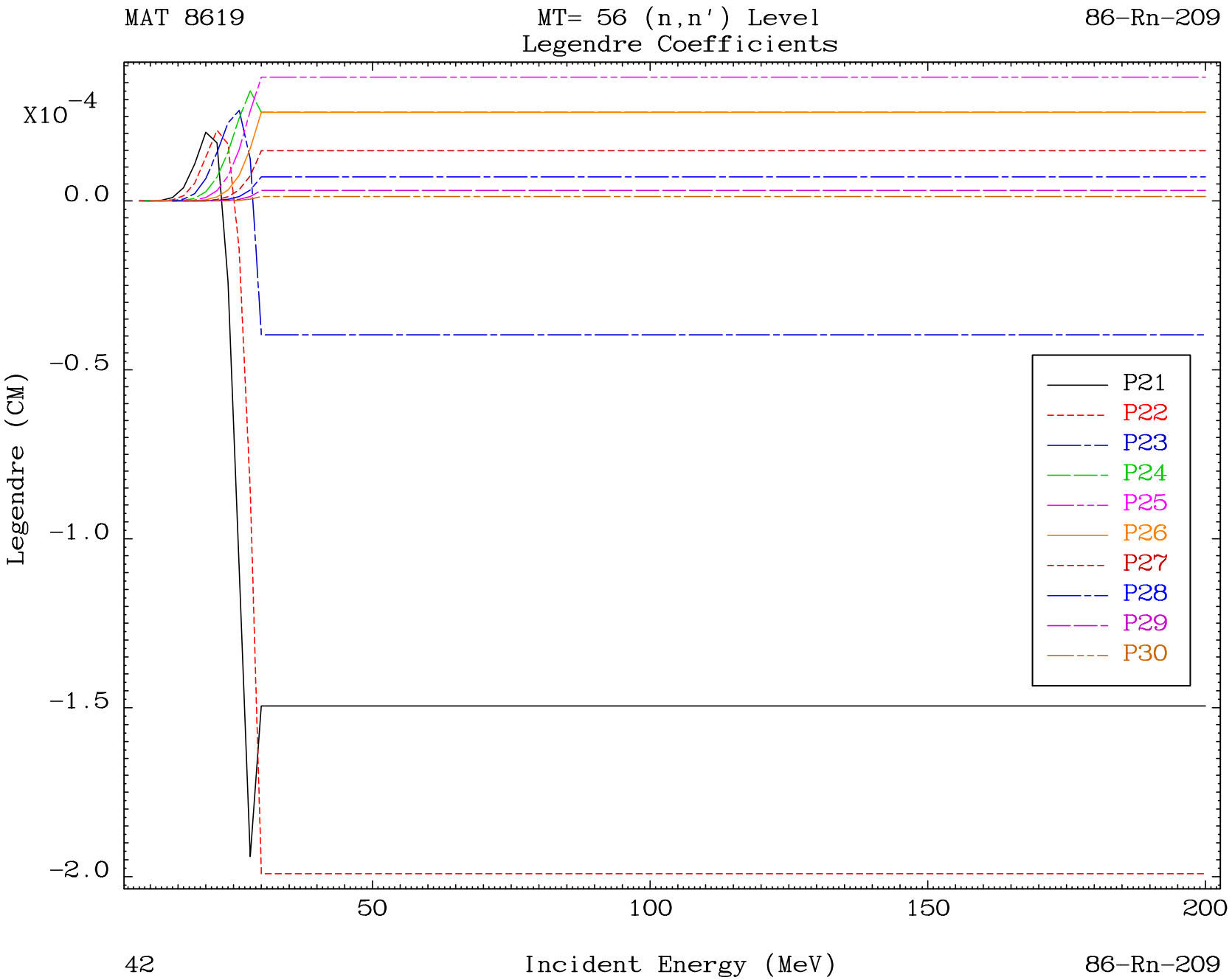

MAT 8619
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
37
Incident Energy (MeV)
86-Rn-209

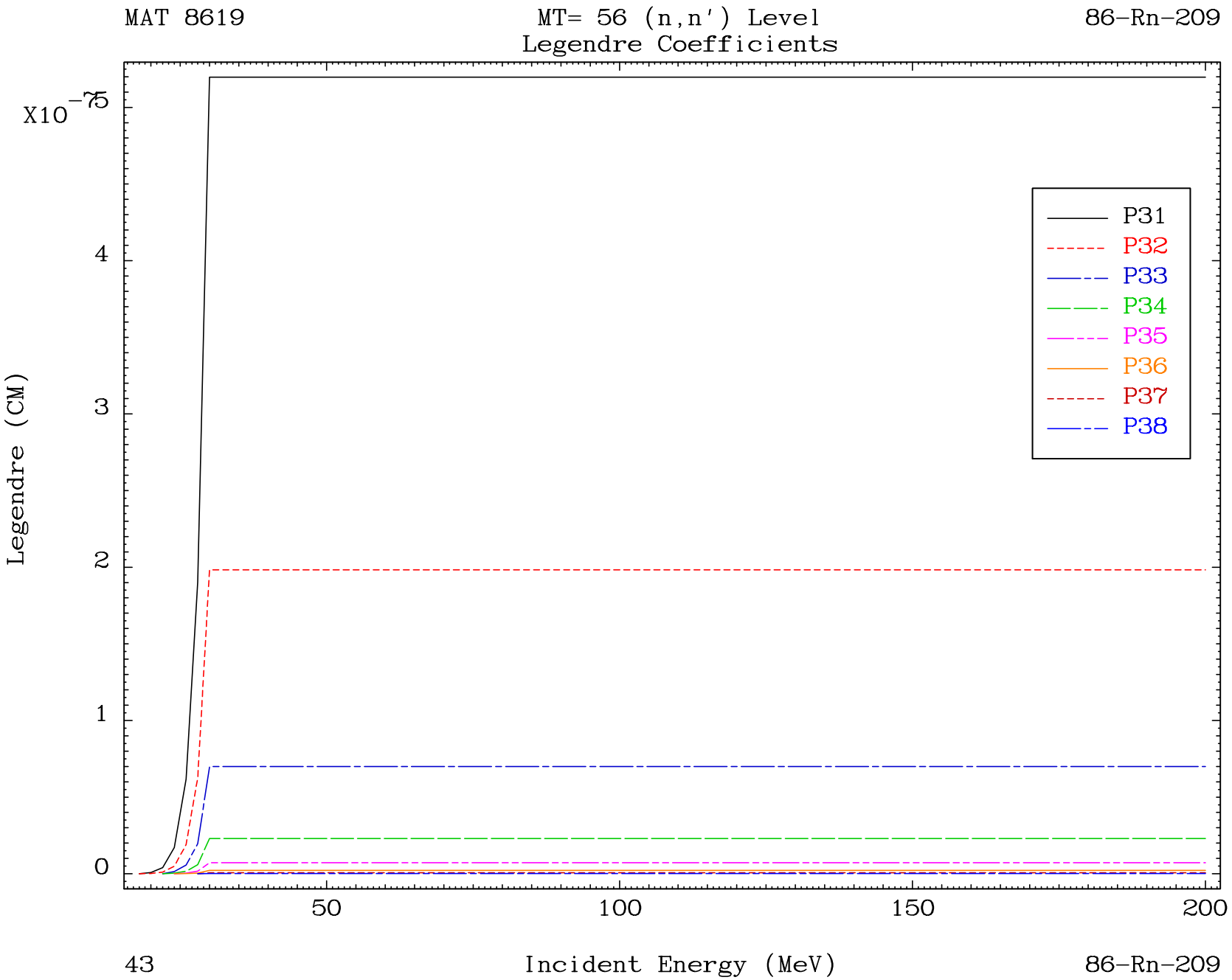

MAT 8619
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-209
X10 -4
8
6
4
2
0
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
38
Incident Energy (MeV)
86-Rn-209

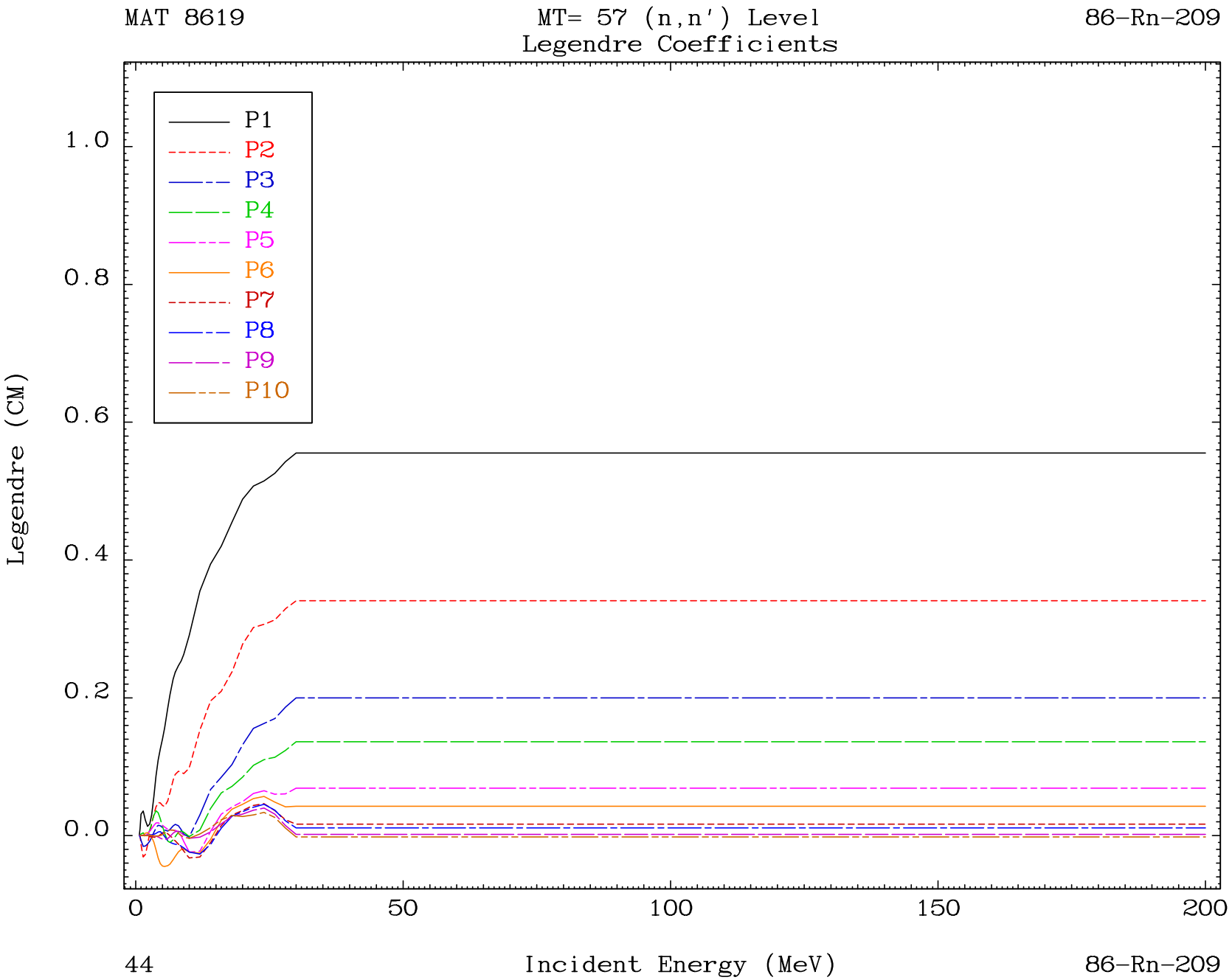

MAT 8619
MT= 55 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-50
1
0.8
0.6
0.4
0.2
0.0
Legendre (CM)
50
100
150
200
39
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28

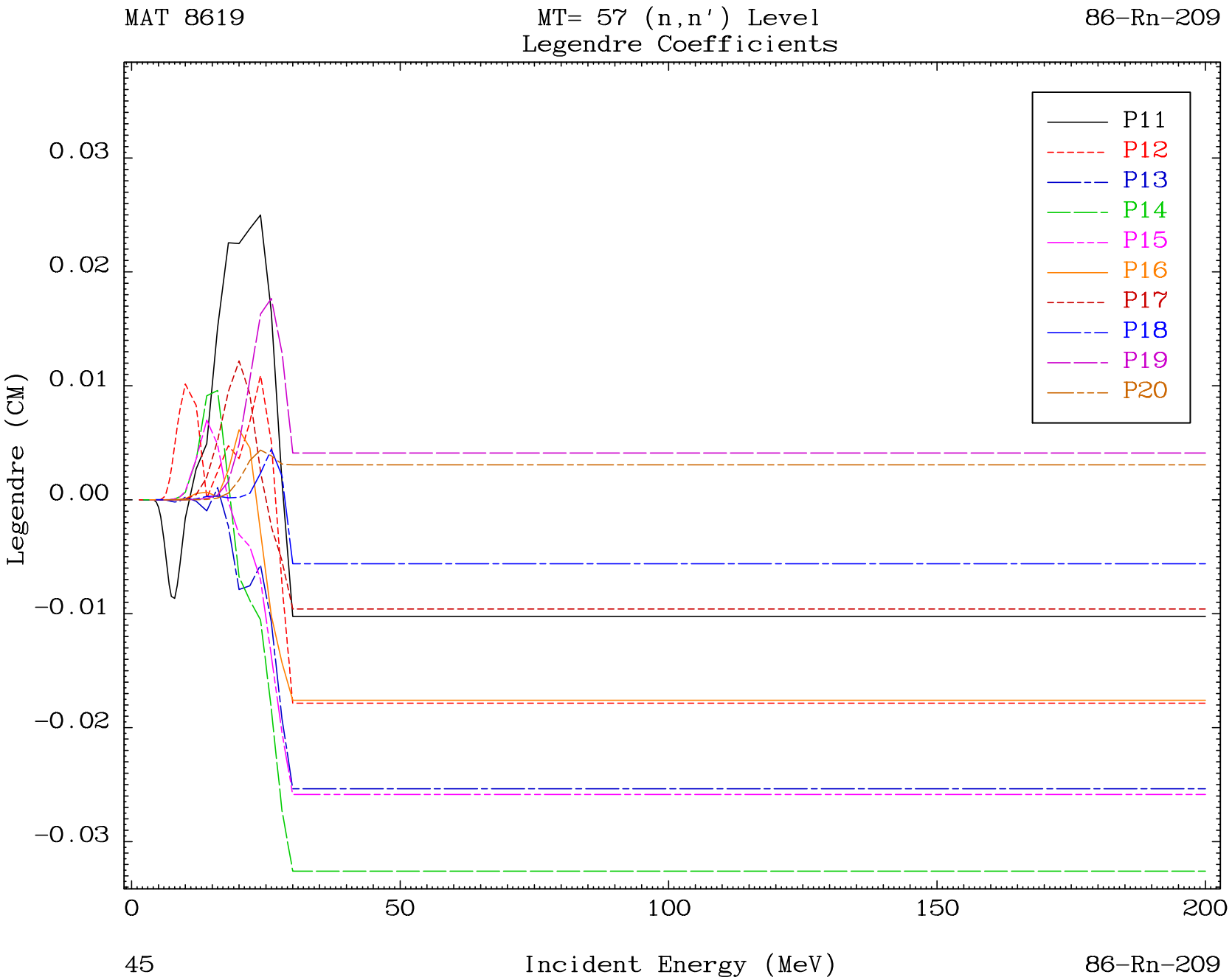

MAT 8619
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
40
Incident Energy (MeV)
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

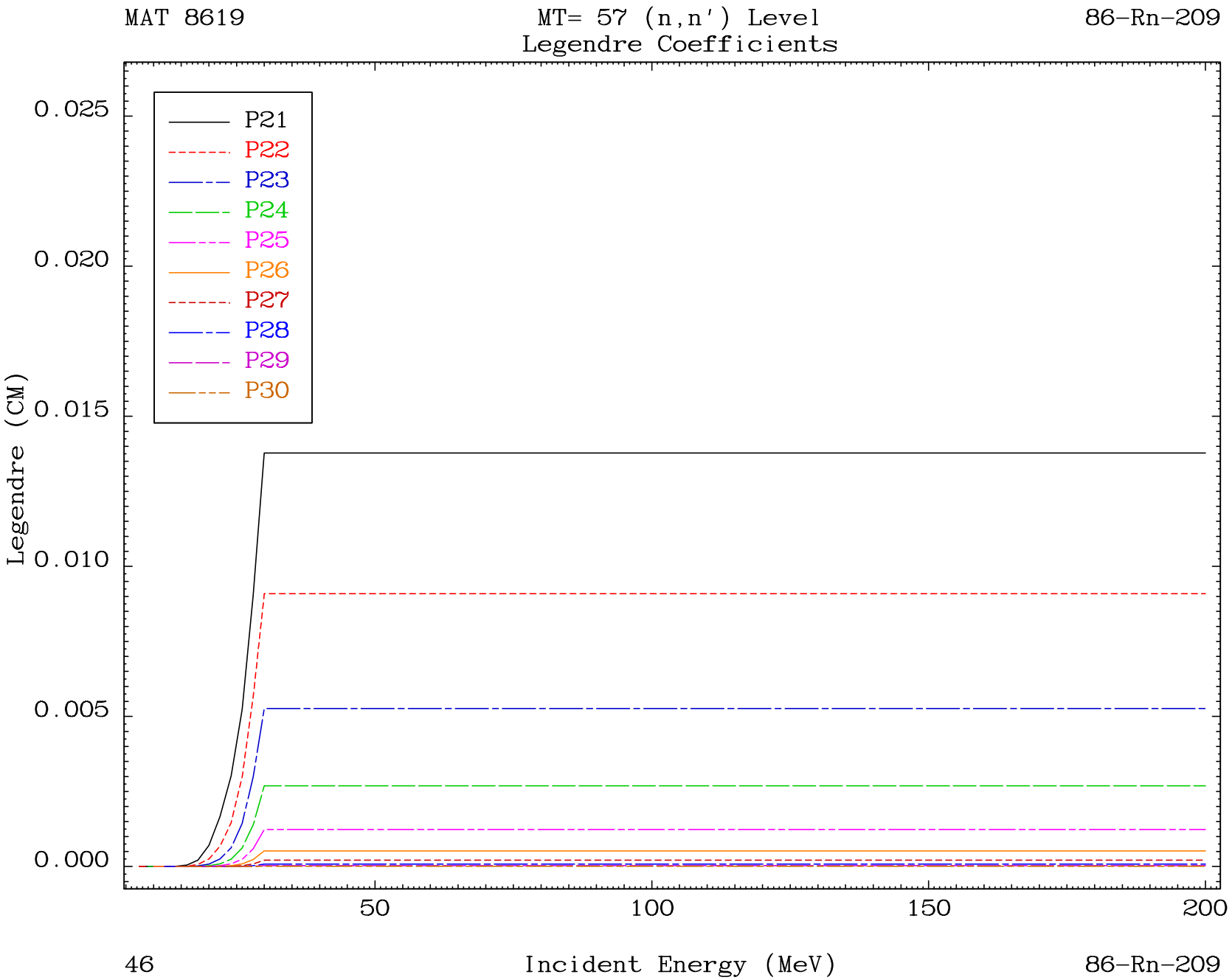

MAT 8619
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
Legendre (CM)
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
0
50
100
150
200
41
Incident Energy (MeV)
86-Rn-209

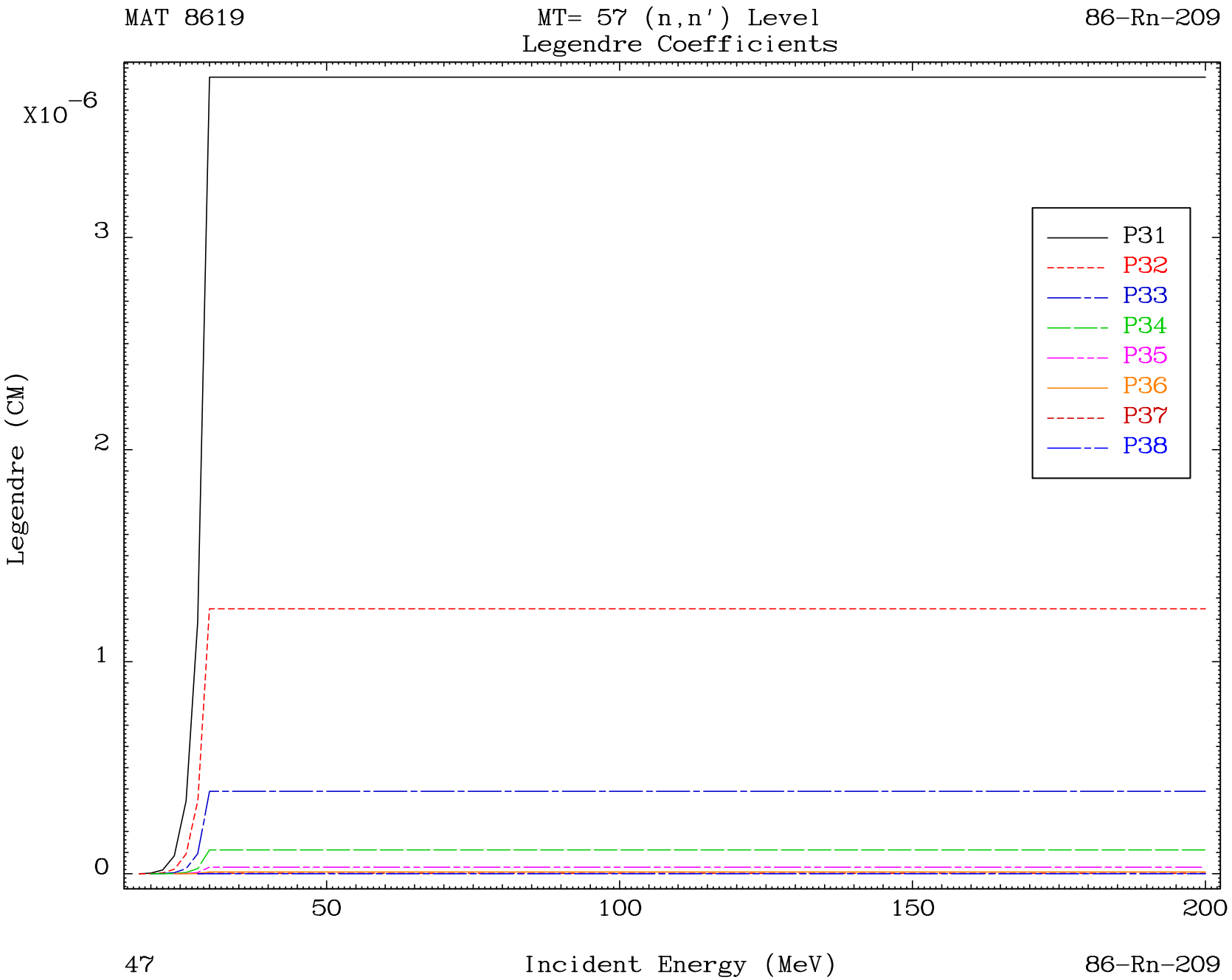

MAT 8619
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
42
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30

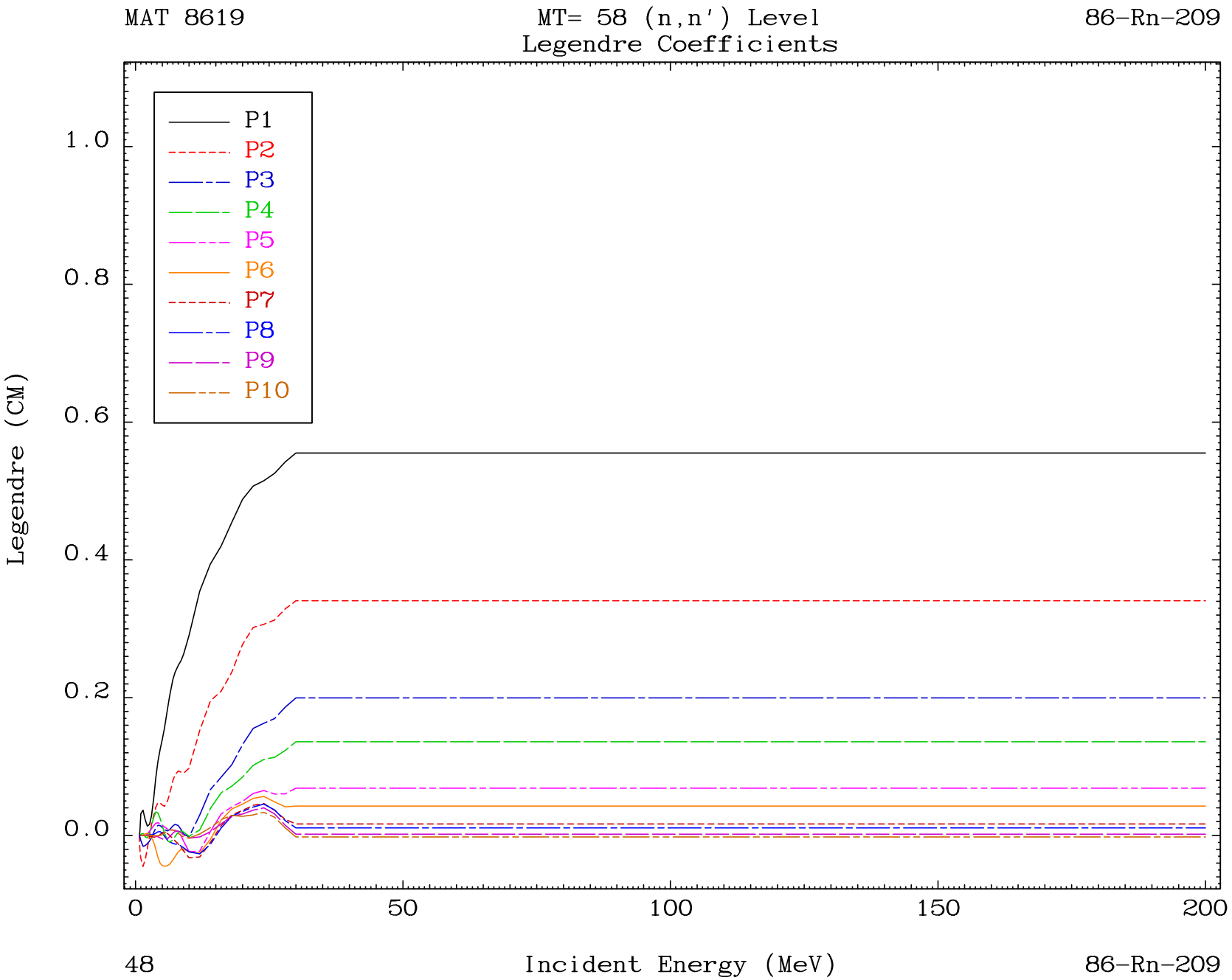

MAT 8619
MT= 56 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-5
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
43
Incident Energy (MeV)
86-Rn-209

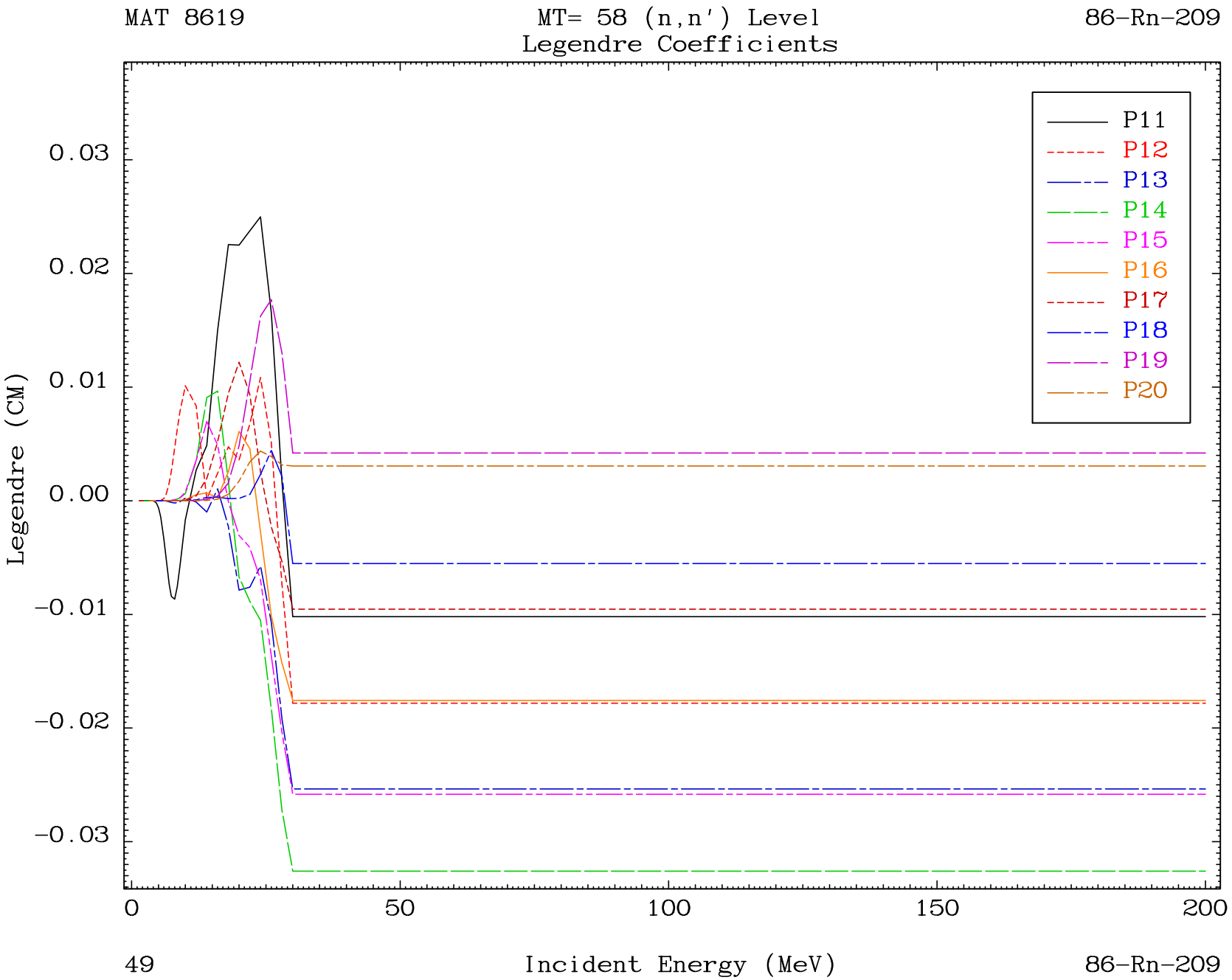

MAT 8619
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
44
Incident Energy (MeV)
86-Rn-209

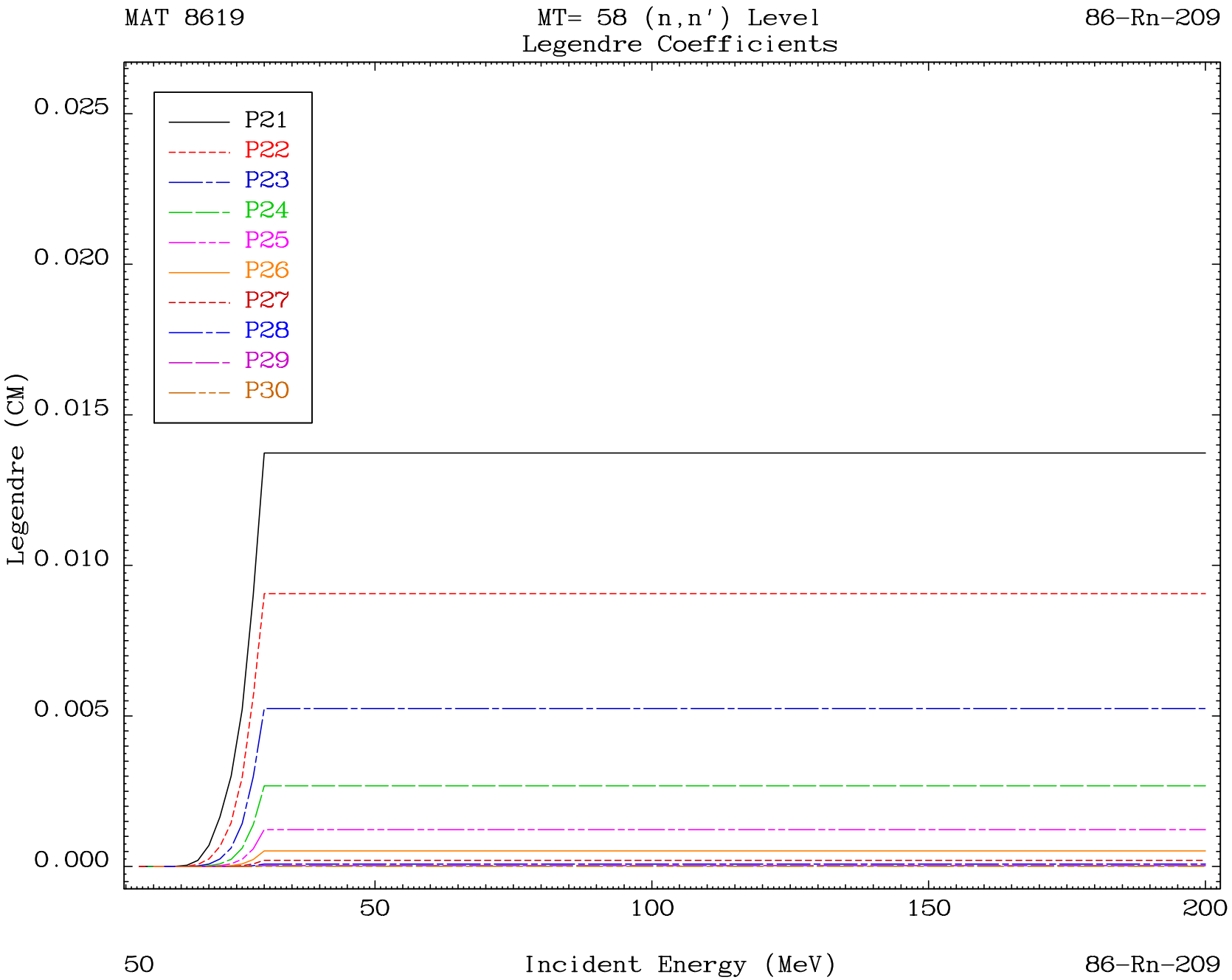

MAT 8619
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
45
Incident Energy (MeV)
86-Rn-209

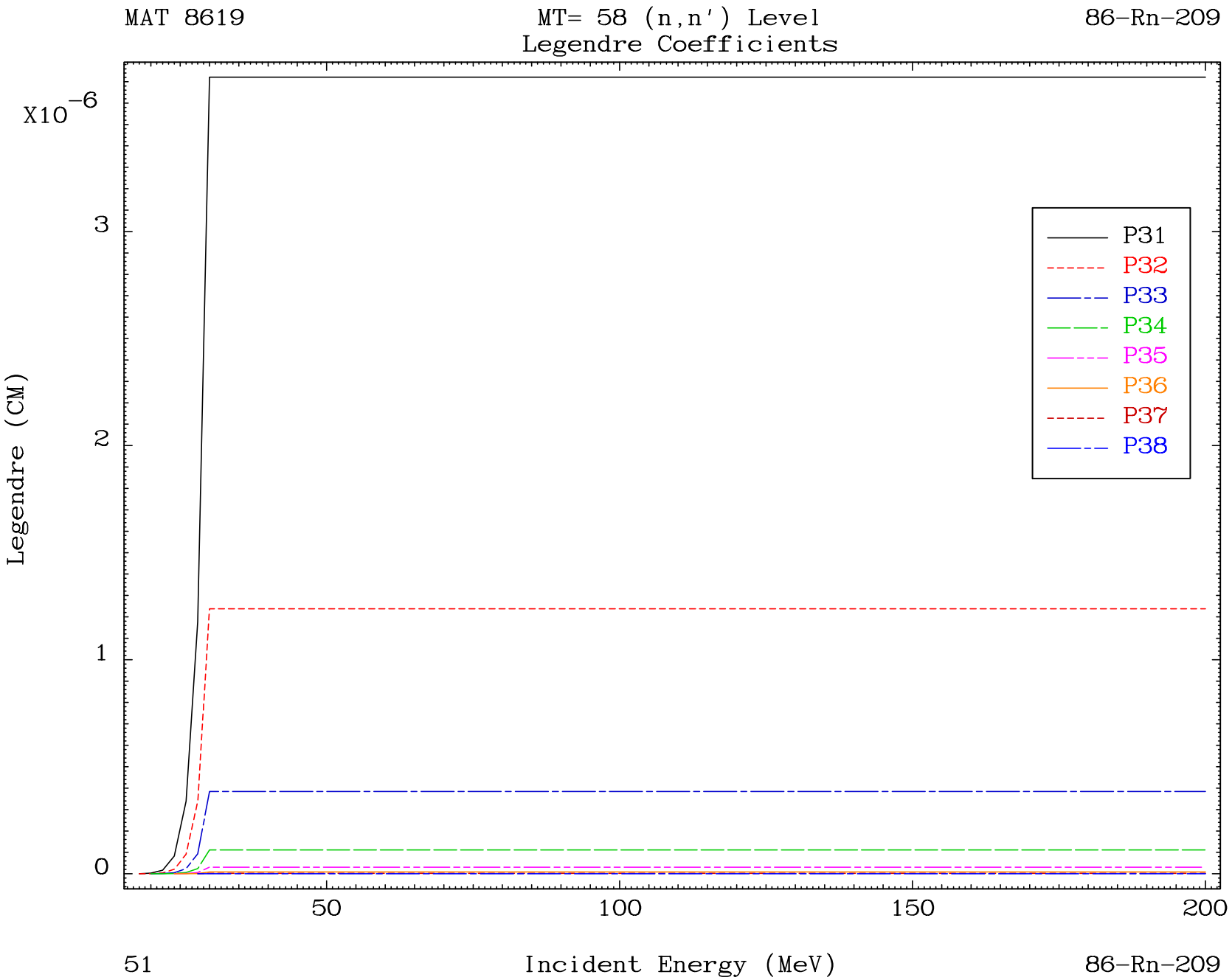

MAT 8619
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
46
Incident Energy (MeV)
86-Rn-209

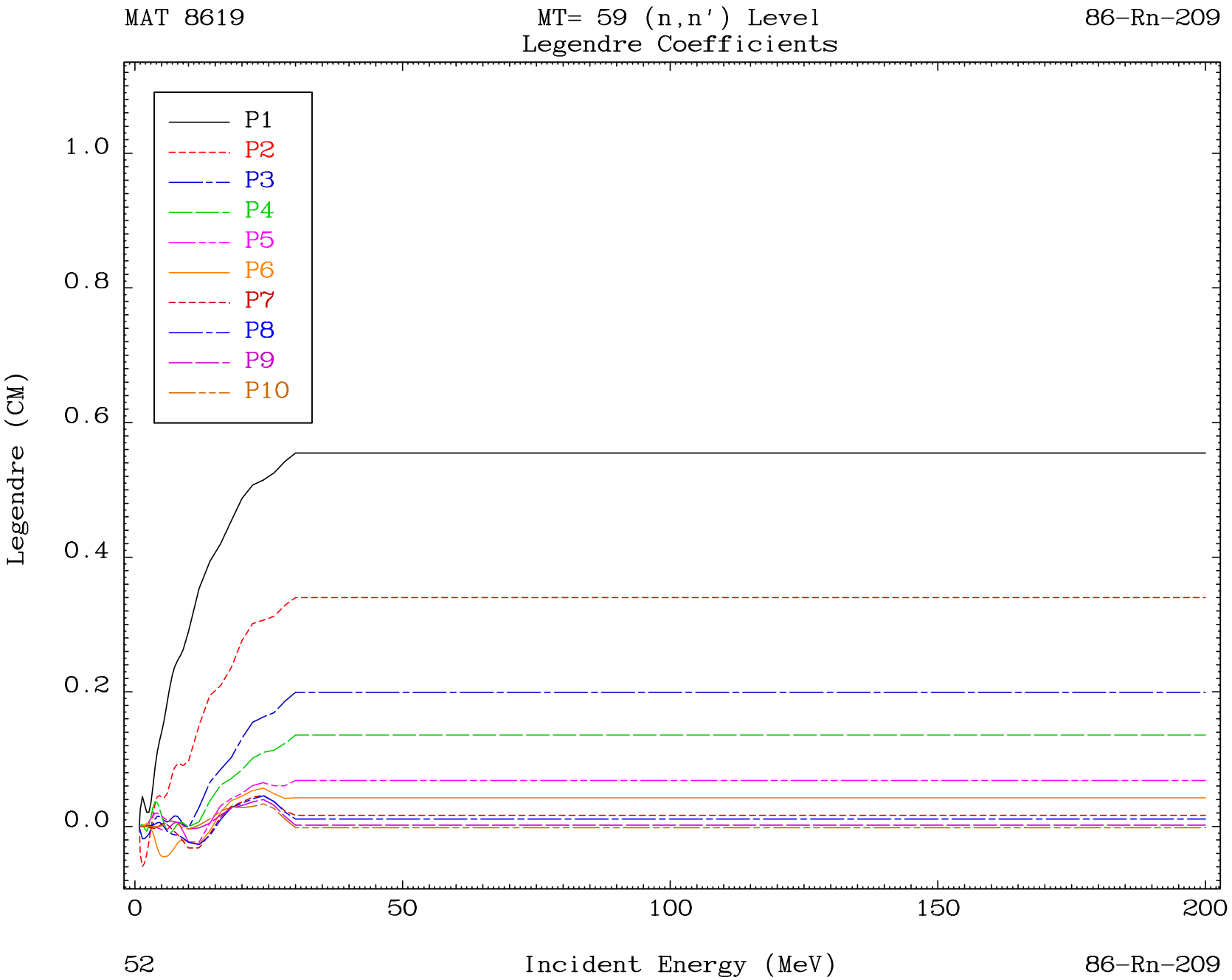

MAT 8619
MT= 57 (n,n') Level
Legendre Coefficients
86-Rn-209
X10 −6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
47
Incident Energy (MeV)
86-Rn-209

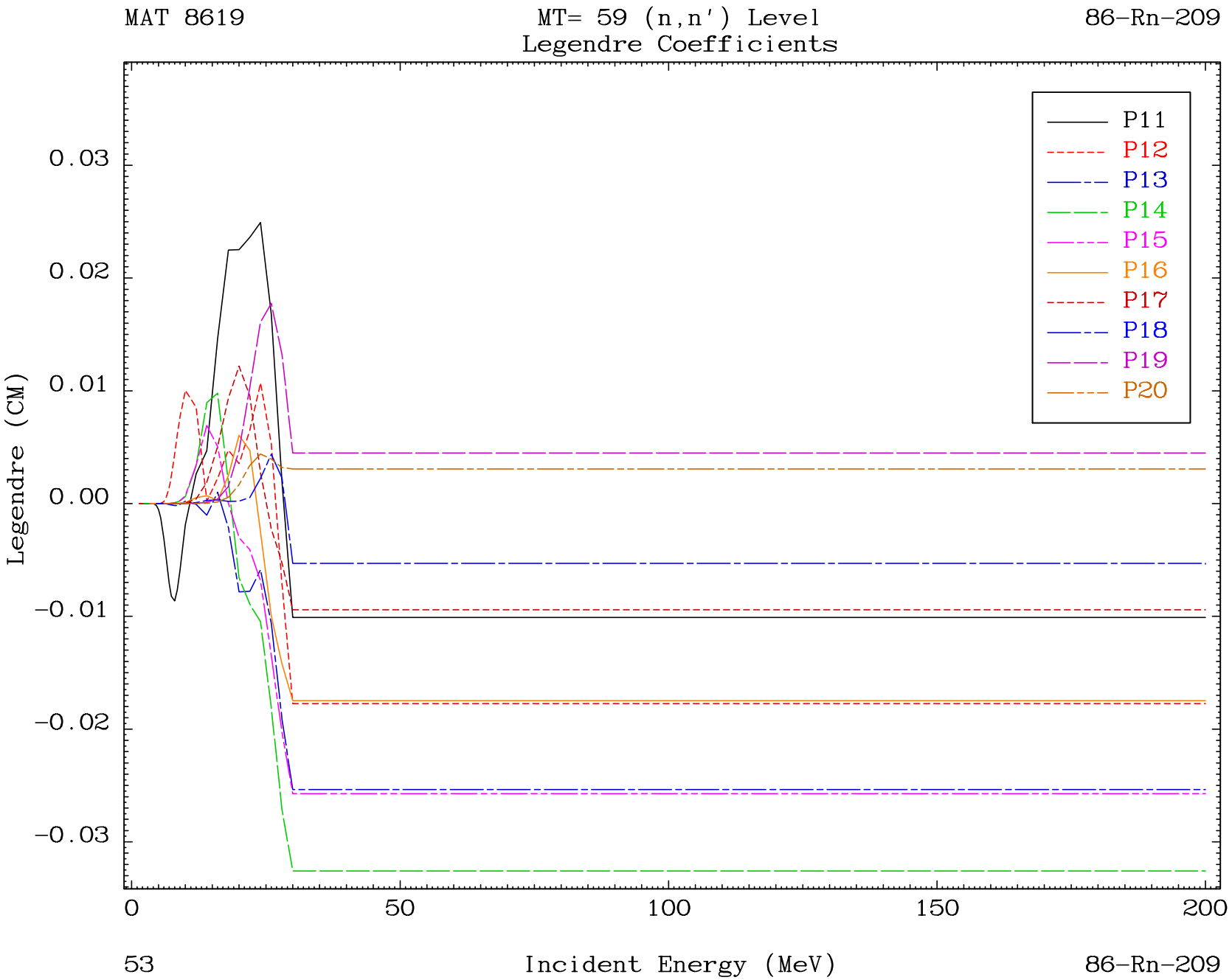

MAT 8619
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
48
Incident Energy (MeV)
86-Rn-209

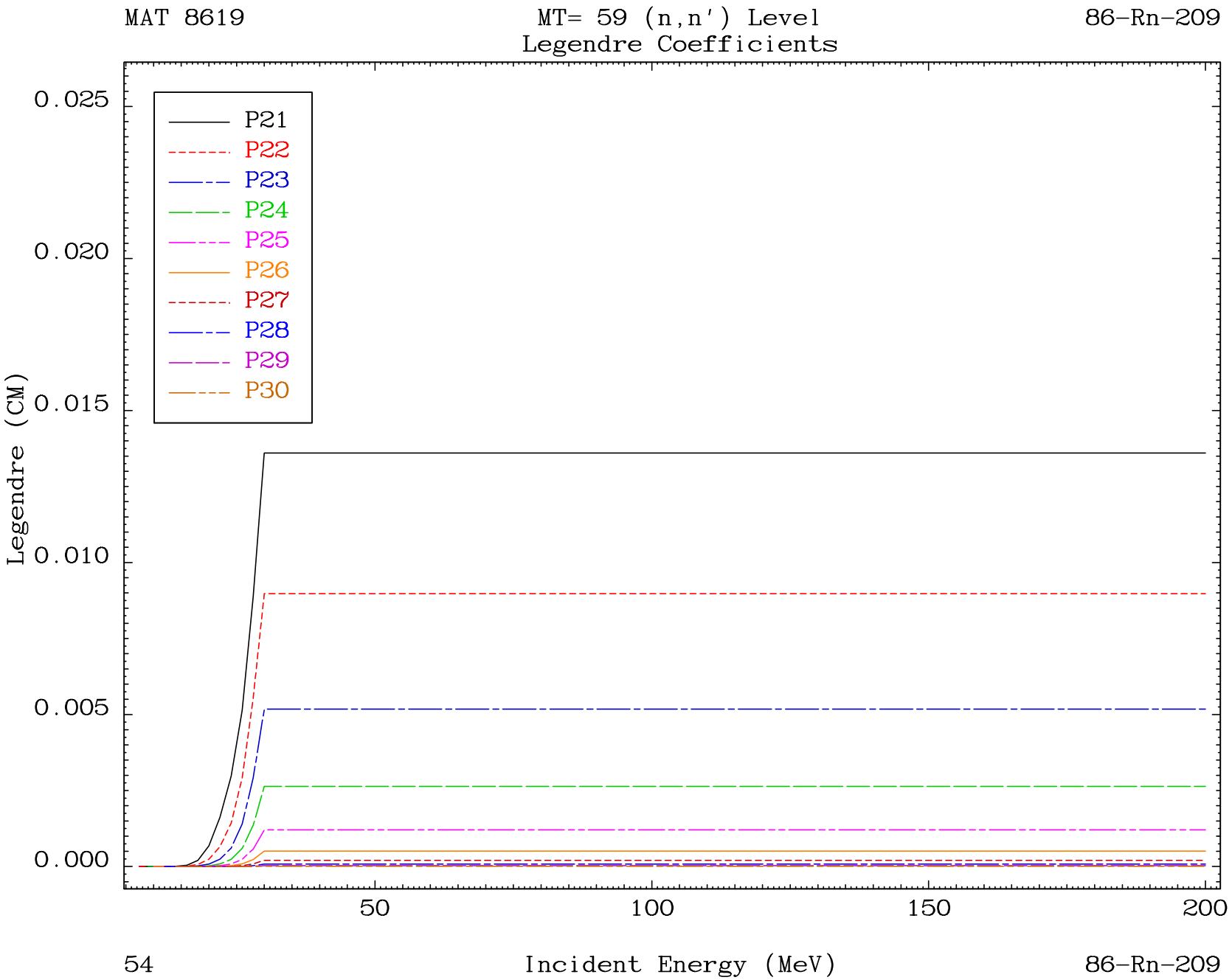

MAT 8619
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
49
Incident Energy (MeV)
86-Rn-209

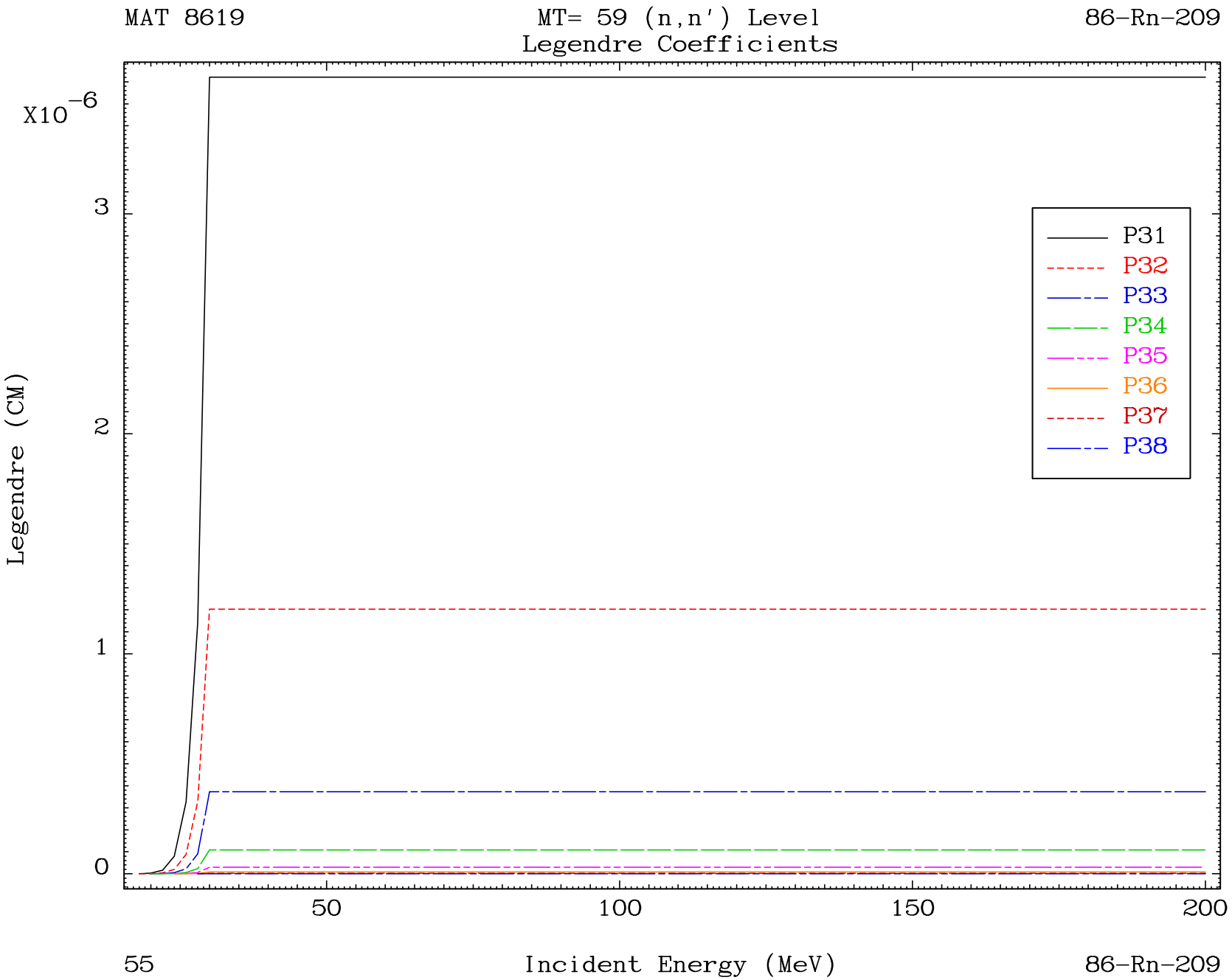

MAT 8619
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
50
Incident Energy (MeV)
86-Rn-209

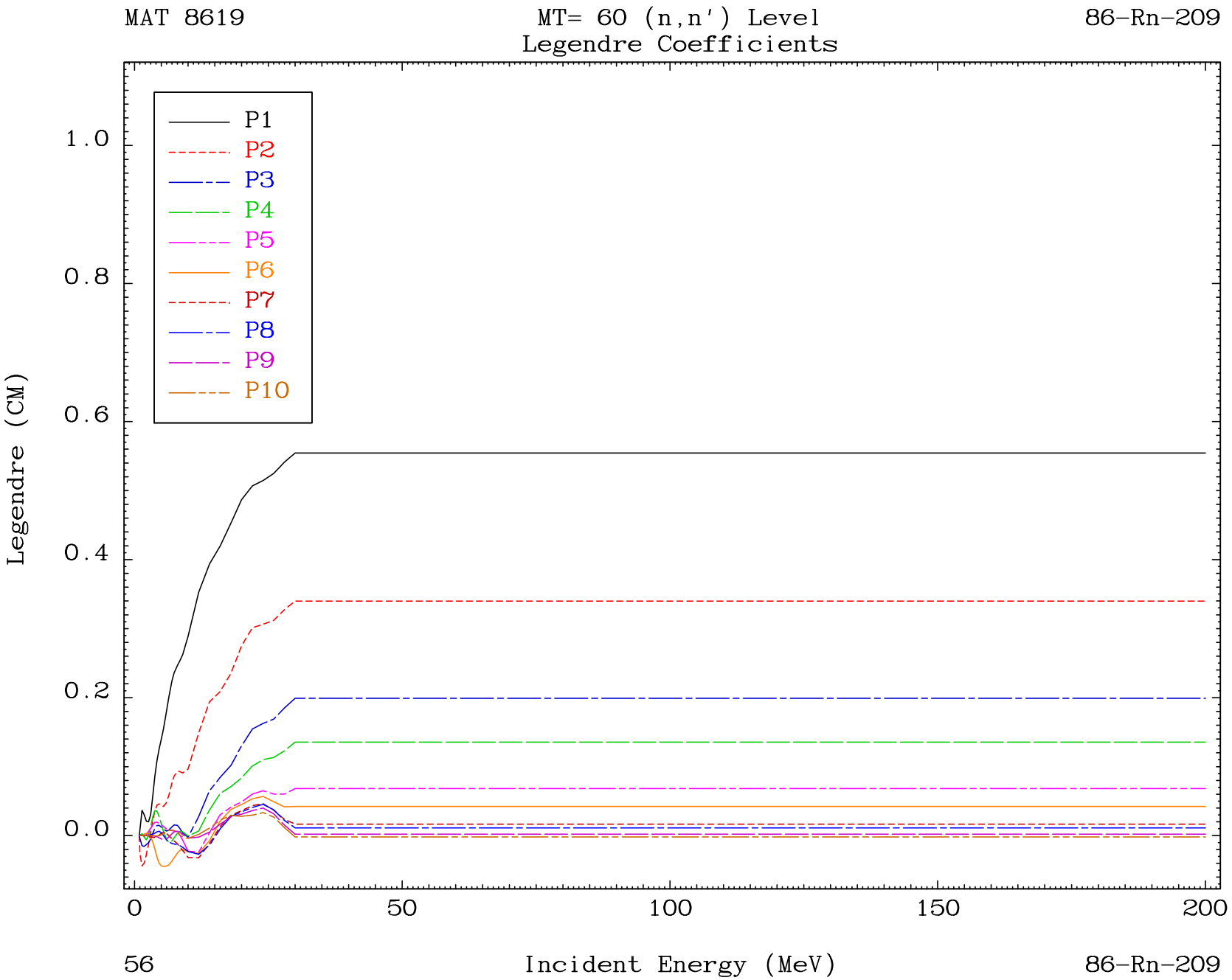

MAT 8619
MT= 58 (n,n') Level
Legendre Coefficients
86-Rn-209
X10 −6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
51
Incident Energy (MeV)
86-Rn-209

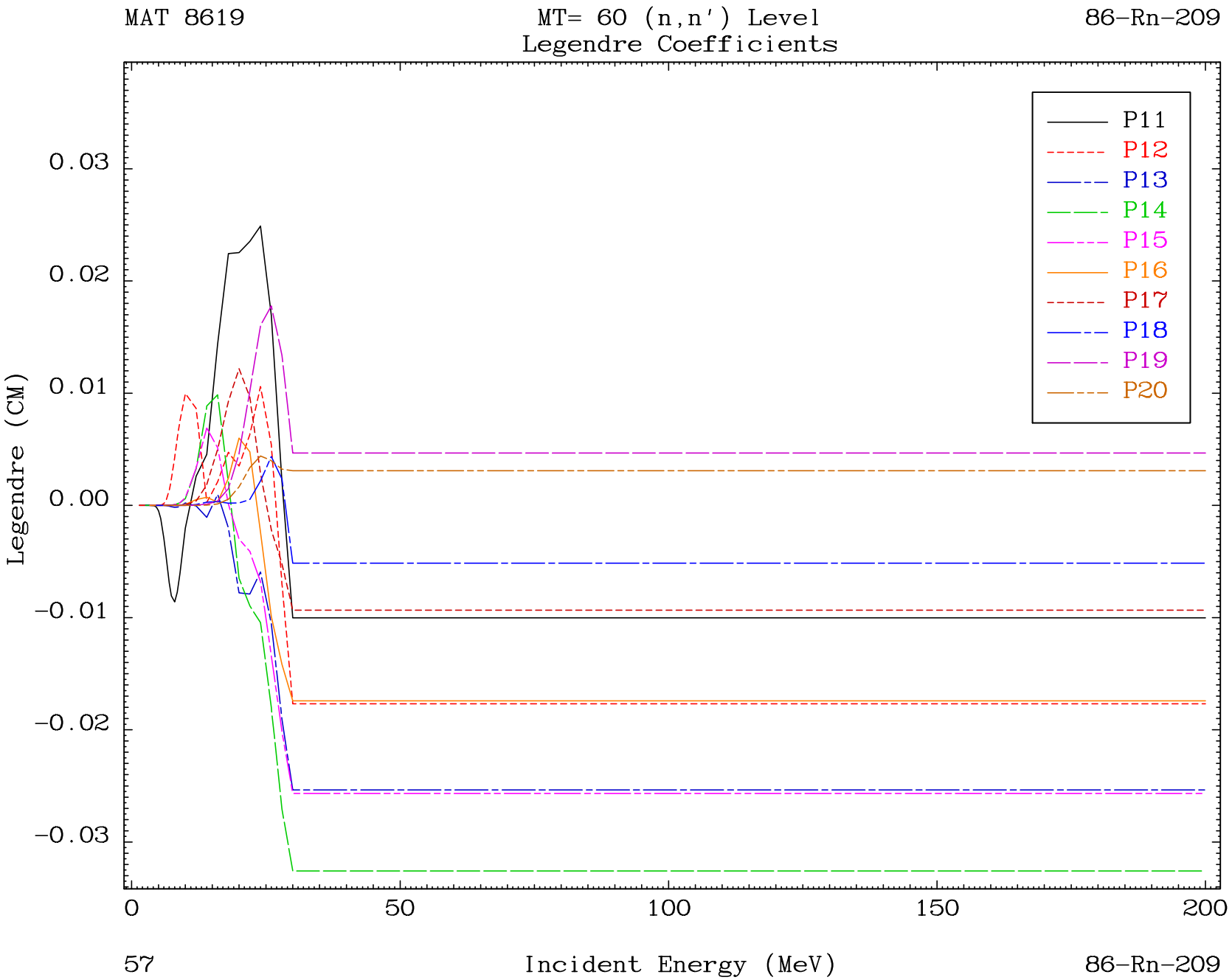

MAT 8619
MT= 59 (n,n') Level
Legendre Coefficients
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
52
Incident Energy (MeV)
86-Rn-209

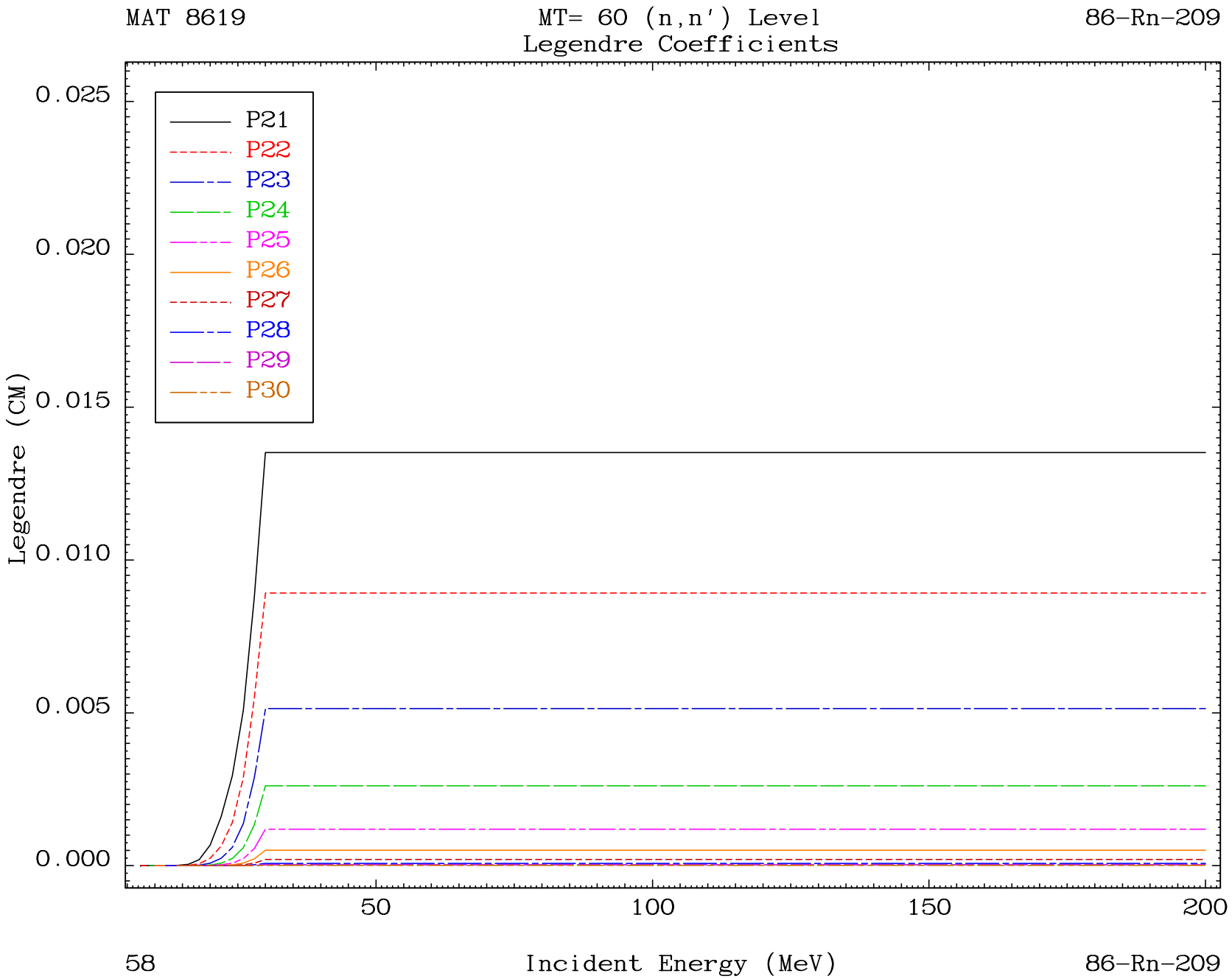

MAT 8619
MT= 59 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
53
Incident Energy (MeV)
86-Rn-209

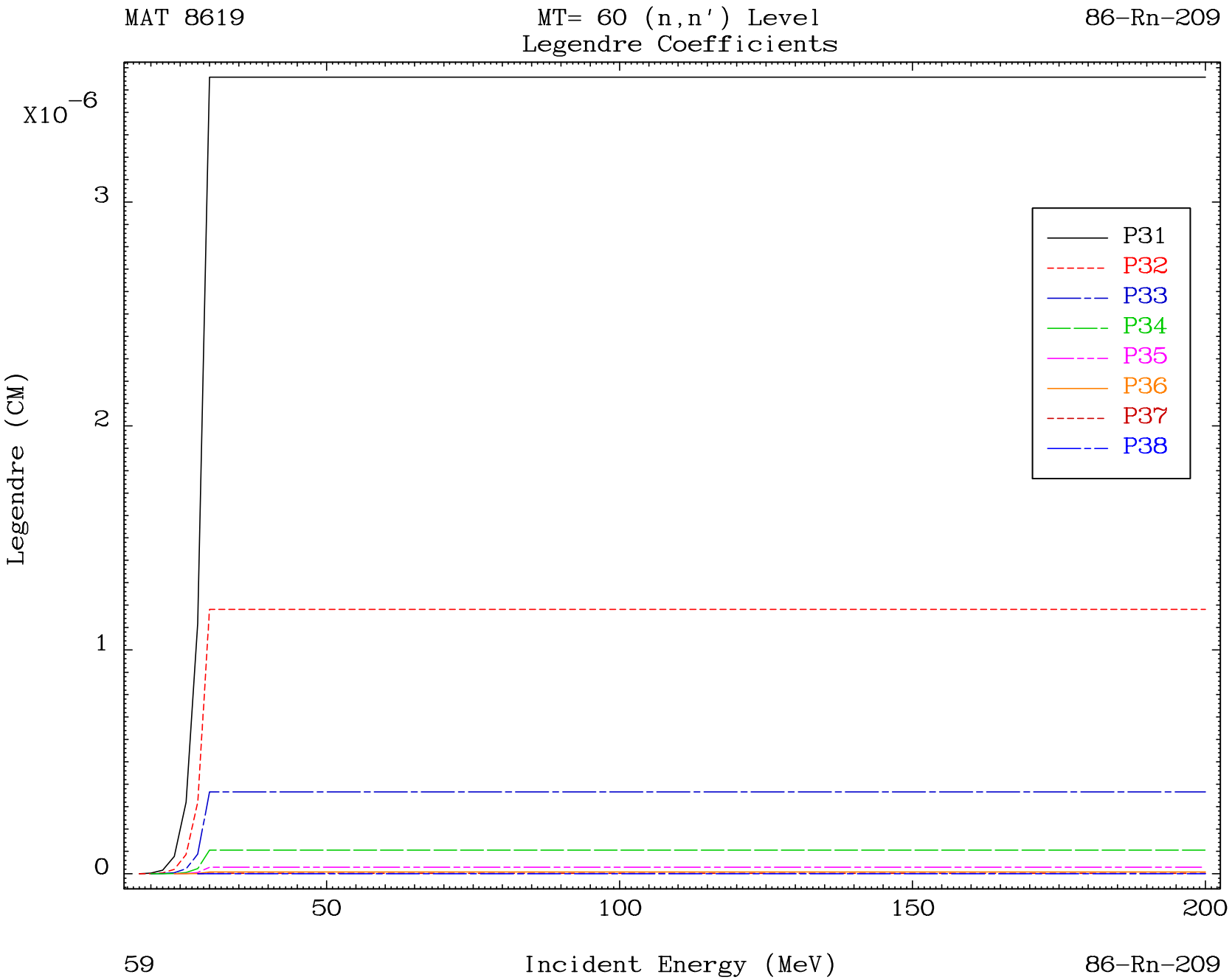

MAT 8619
MT= 59 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
54
Incident Energy (MeV)
86-Rn-209

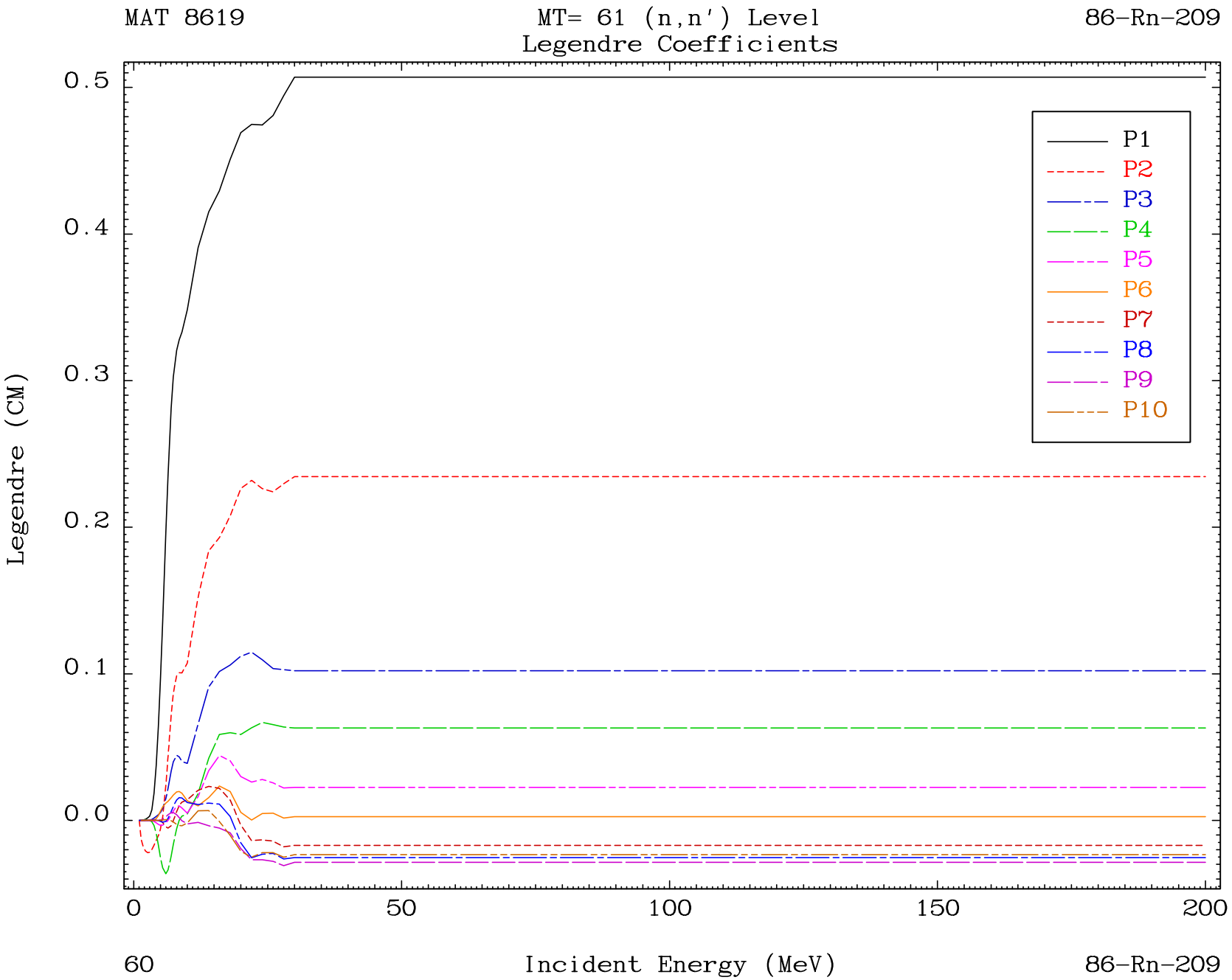

MAT 8619
MT= 59 (n,n') Level
Legendre Coefficients
86-Rn-209
X10 −6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
55
Incident Energy (MeV)
86-Rn-209

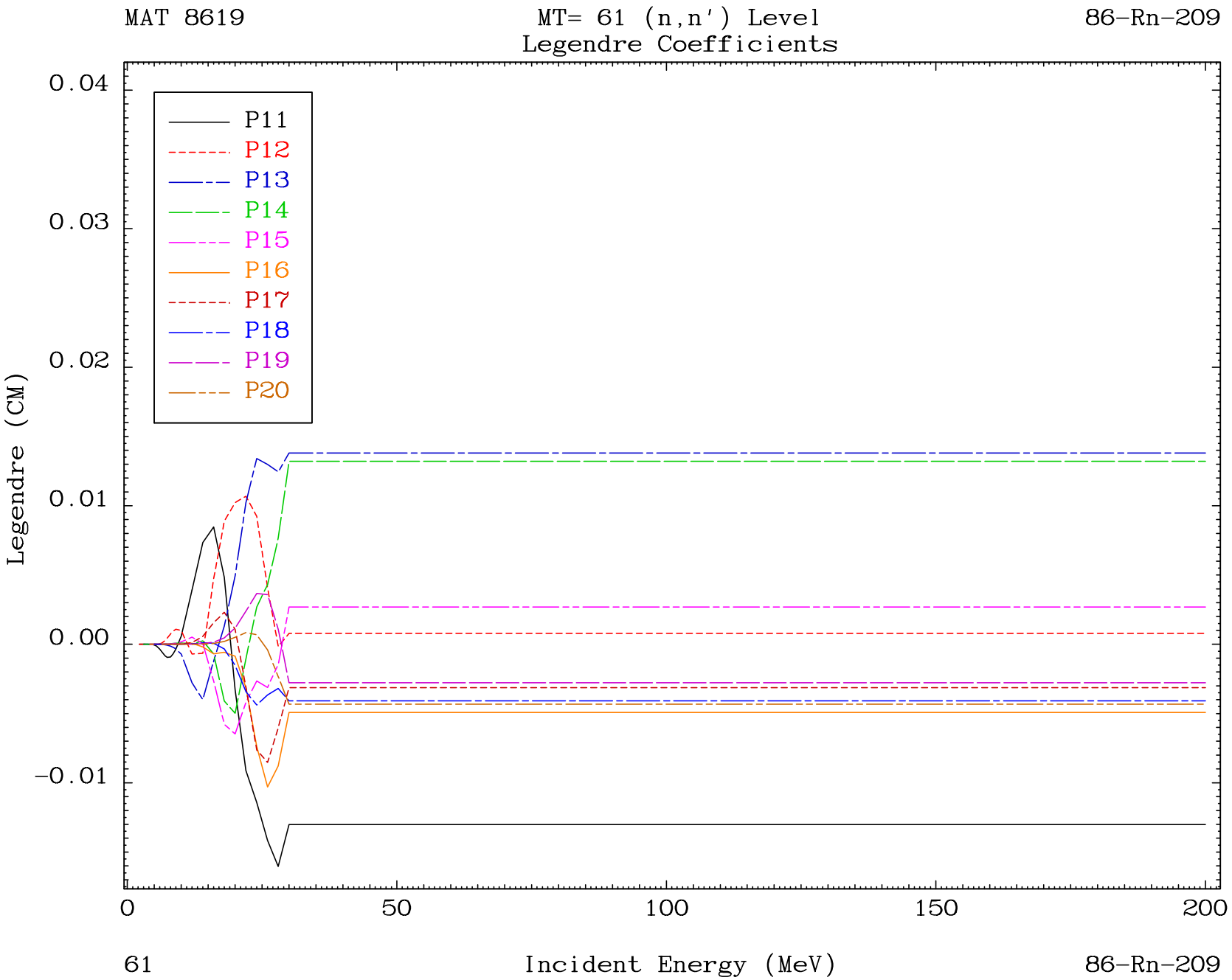

MAT 8619
MT= 60 (n,n') Level
Legendre Coefficients
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
56
Incident Energy (MeV)
86-Rn-209

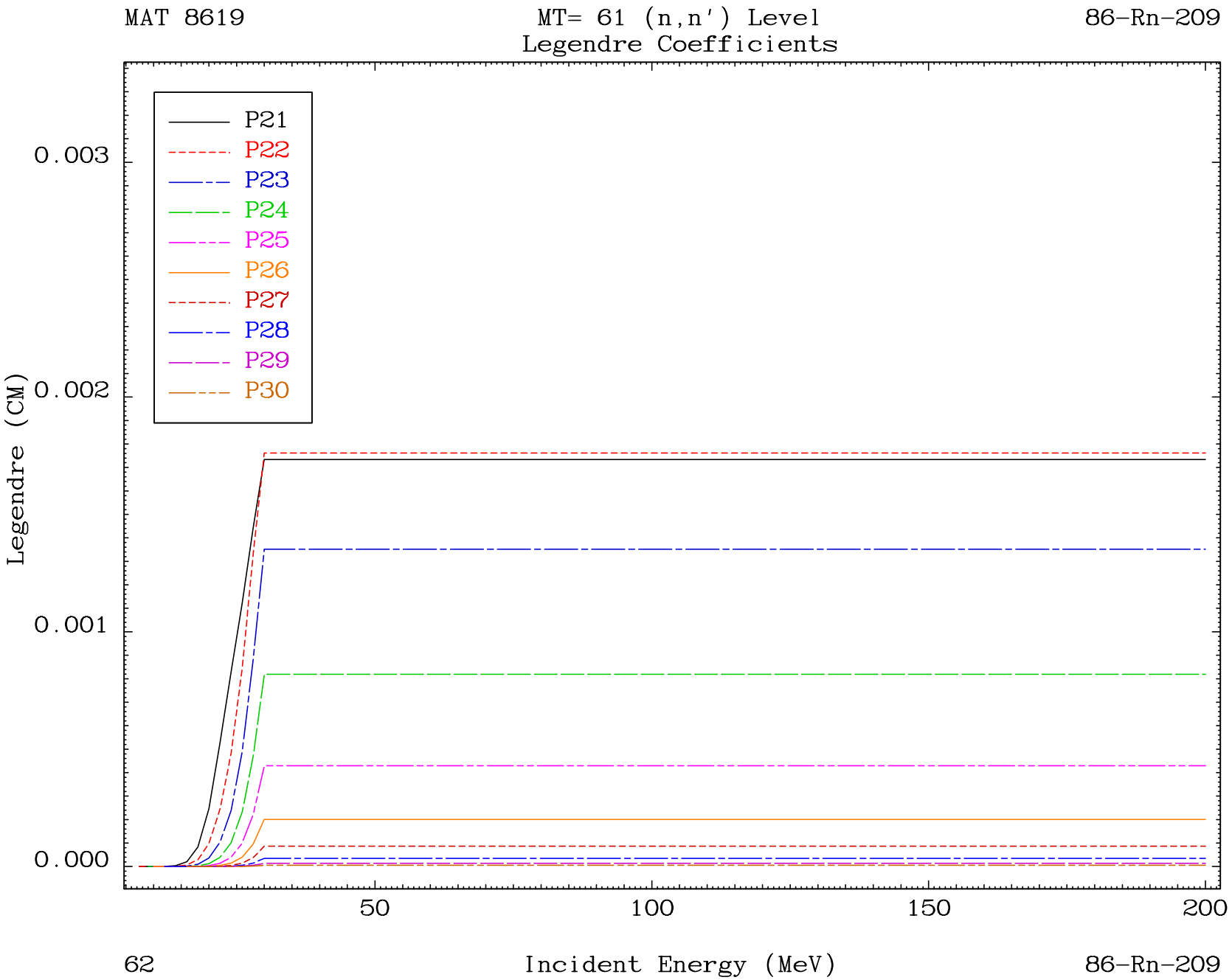

MAT 8619
MT= 60 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
57
Incident Energy (MeV)
86-Rn-209

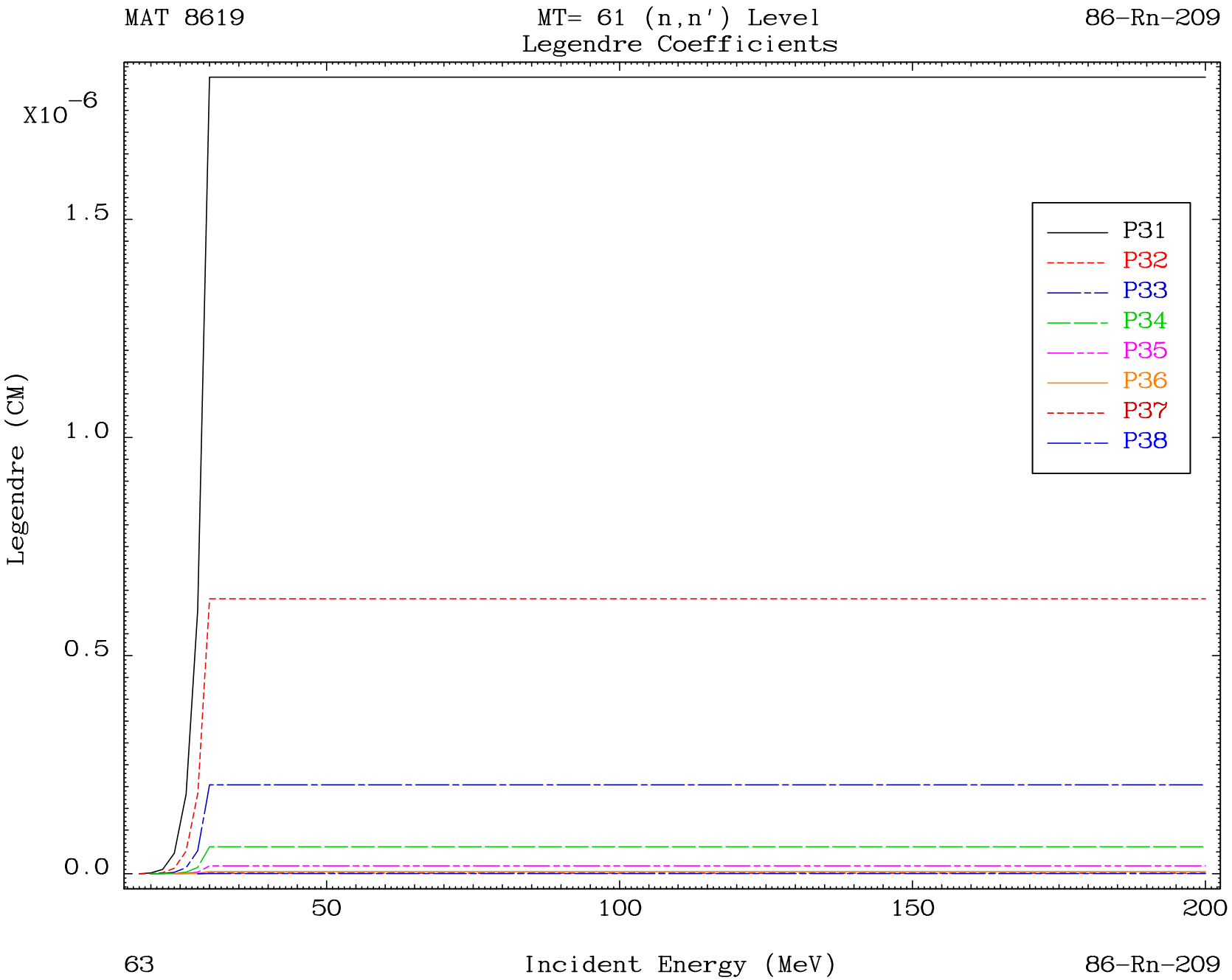

MAT 8619
MT= 60 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
58
Incident Energy (MeV)
86-Rn-209

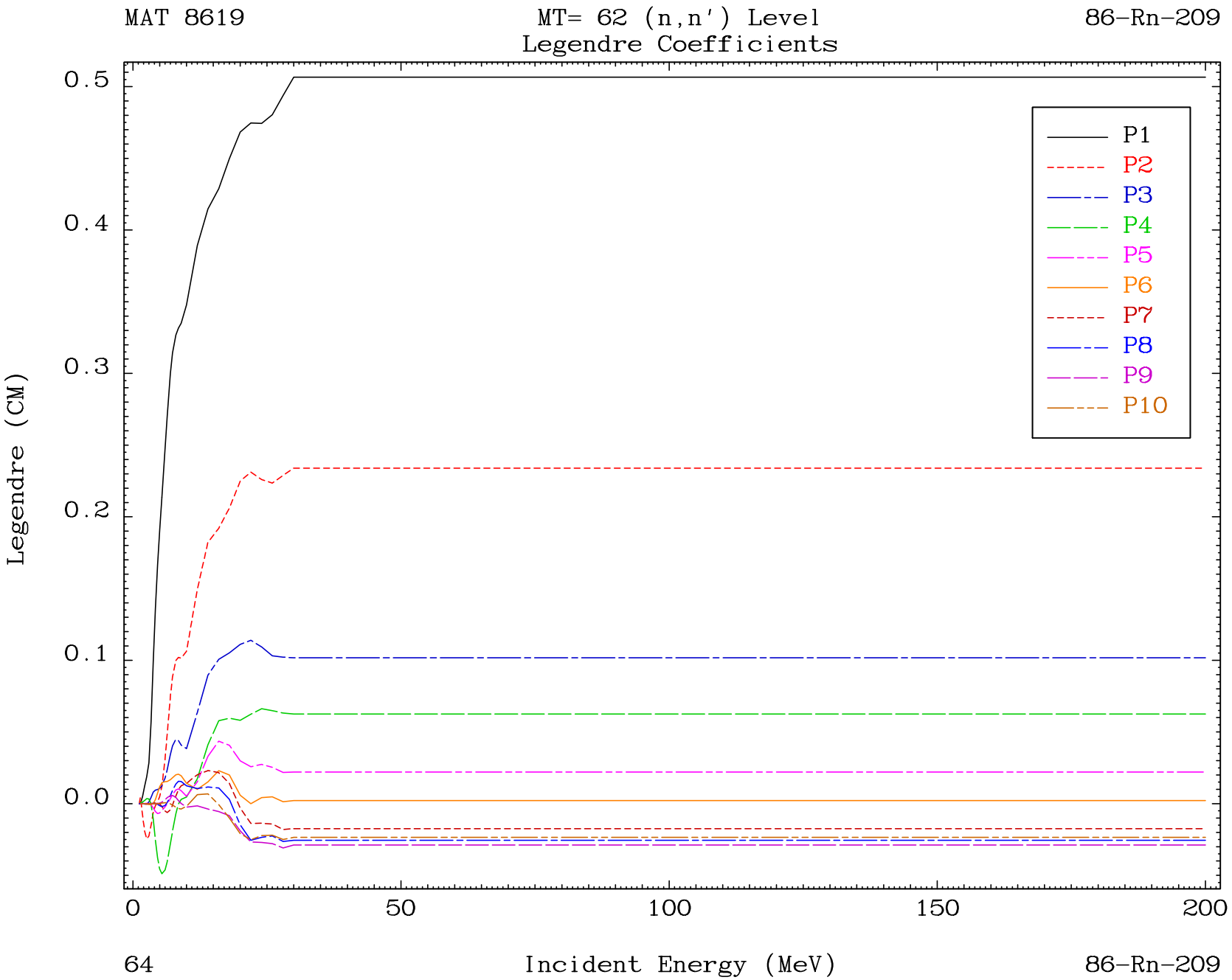

MAT 8619
MT= 60 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
59
Incident Energy (MeV)
86-Rn-209

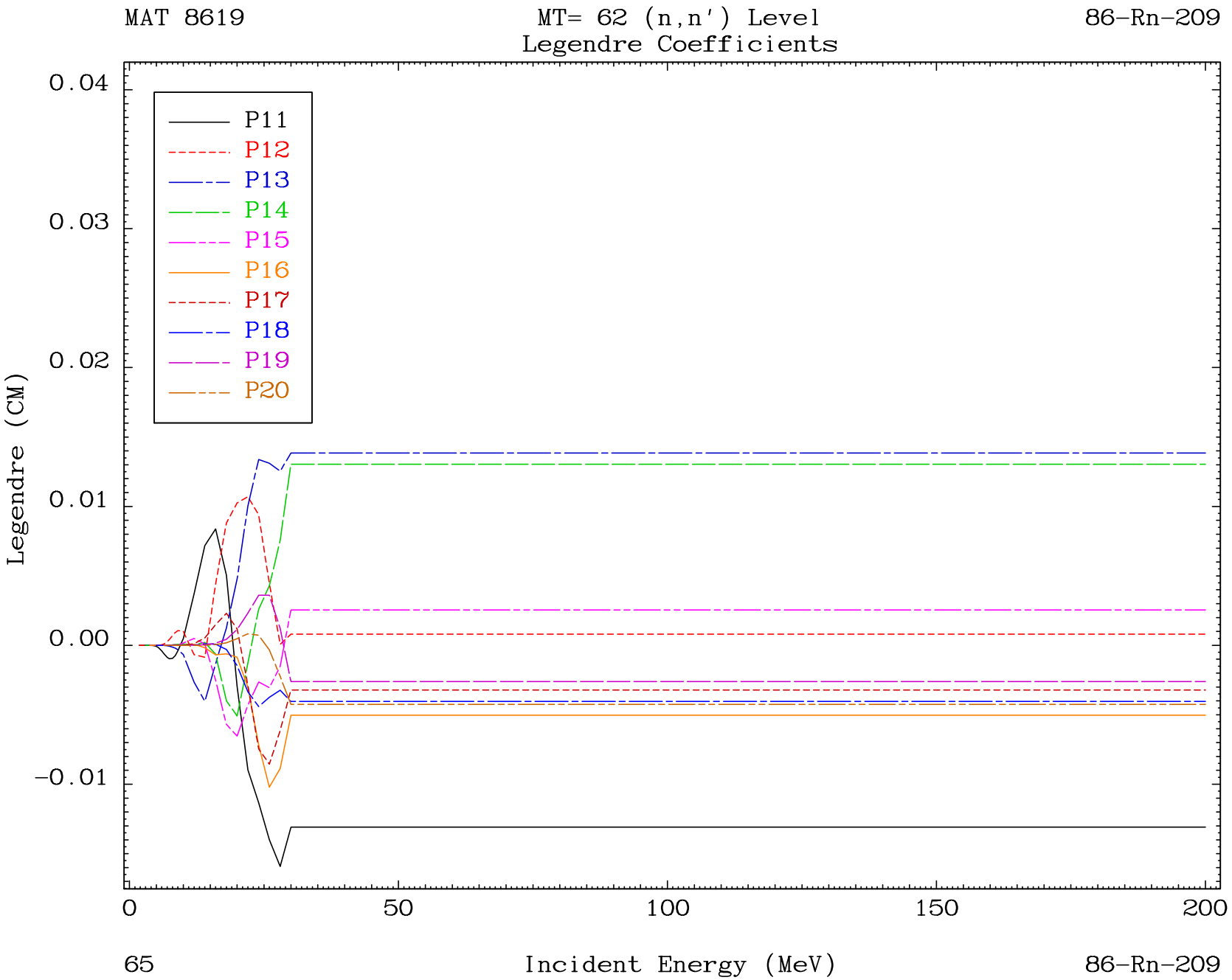

MAT 8619
MT= 61 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
60
Incident Energy (MeV)
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

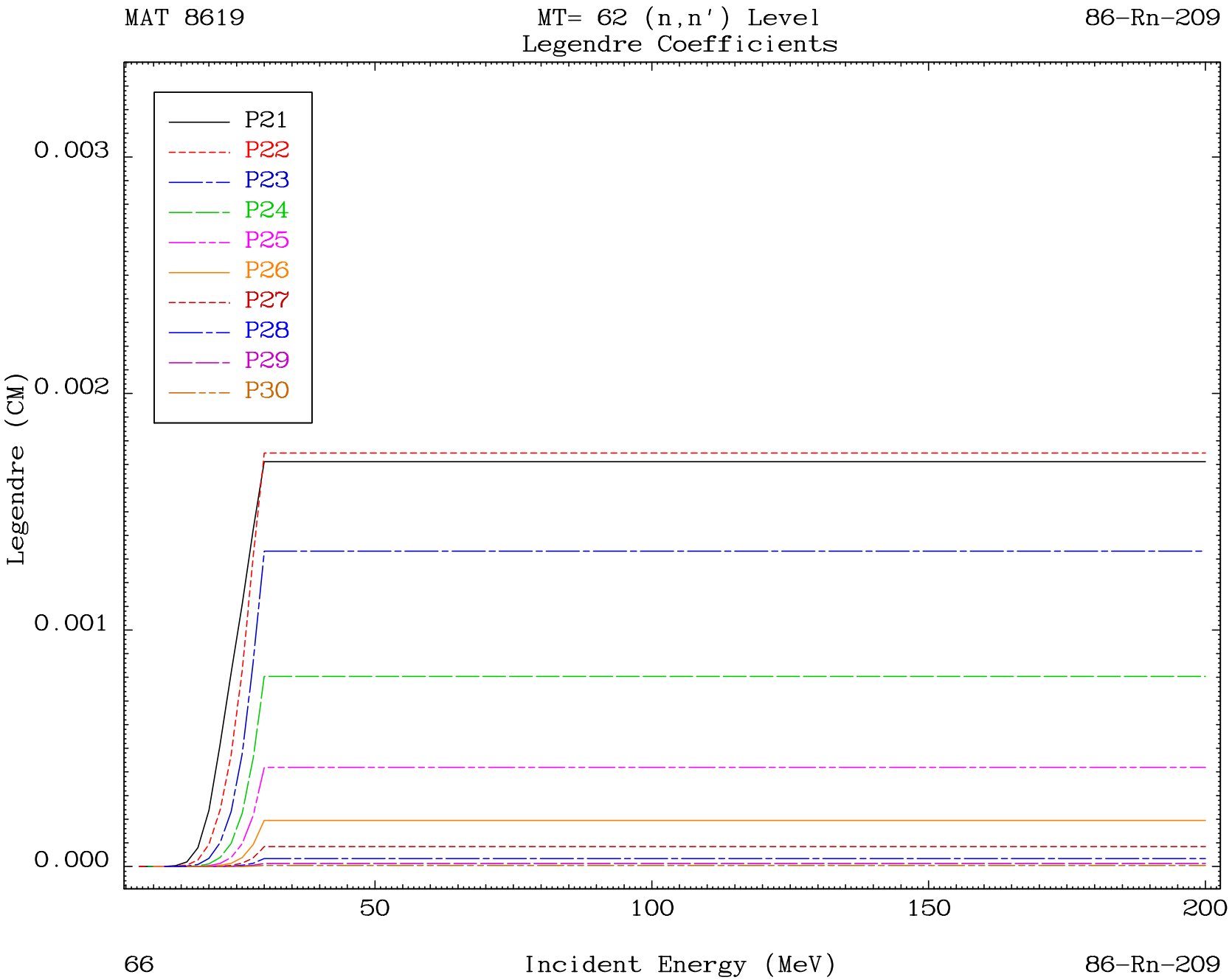

MAT 8619
MT= 61 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
61
Incident Energy (MeV)
86-Rn-209

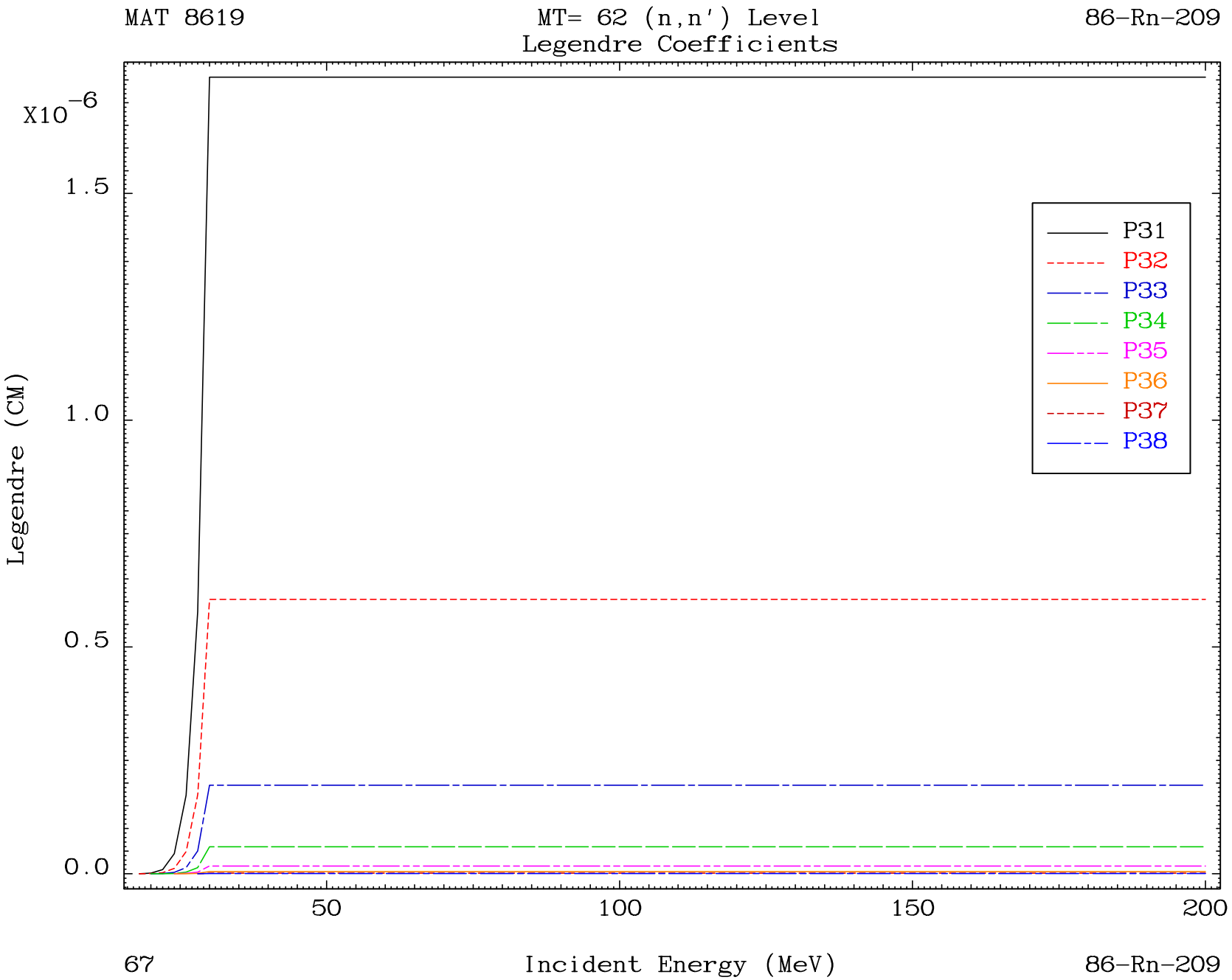

MAT 8619
MT= 61 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
62
Incident Energy (MeV)
86-Rn-209

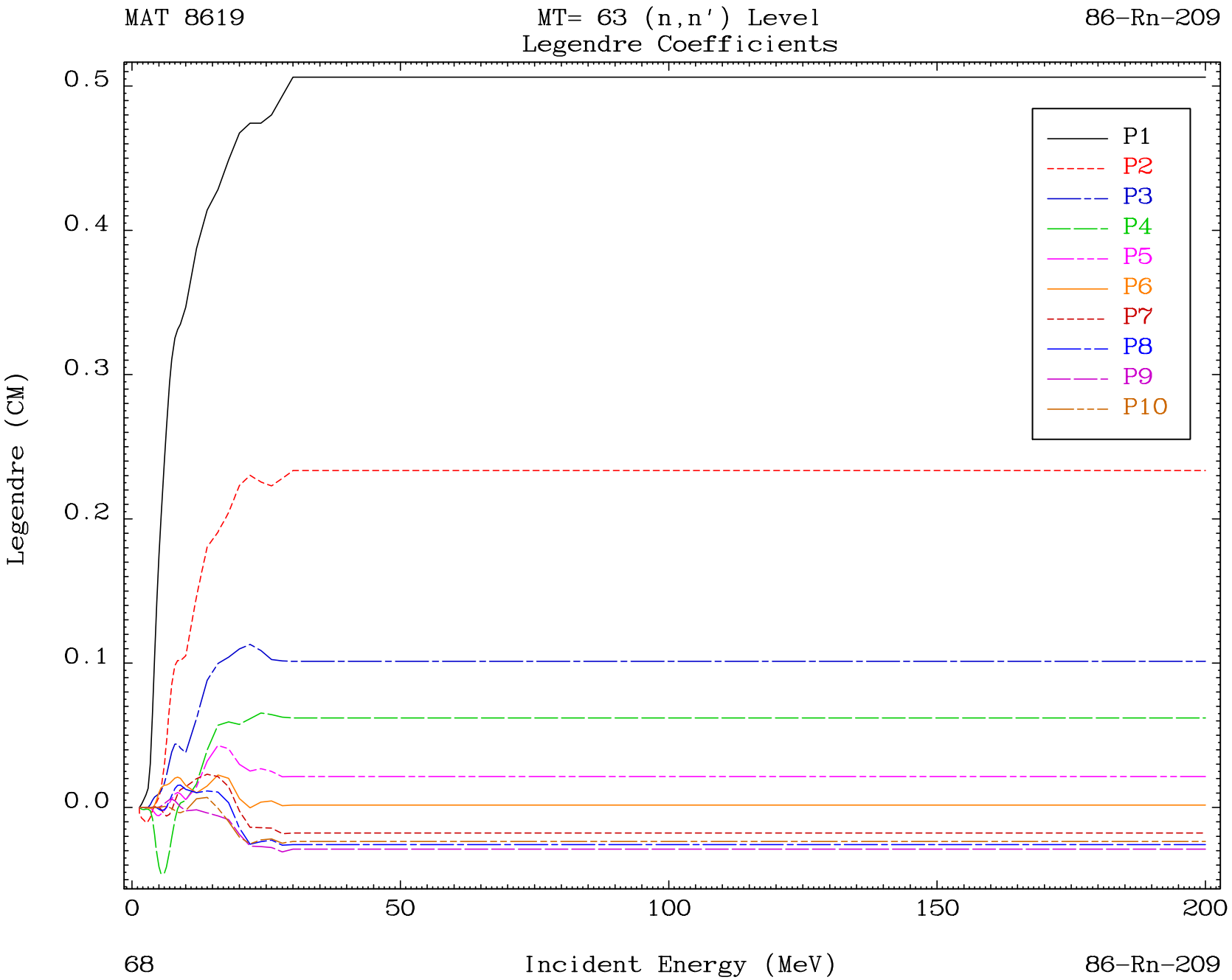

MAT 8619
MT= 61 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
63
Incident Energy (MeV)
86-Rn-209

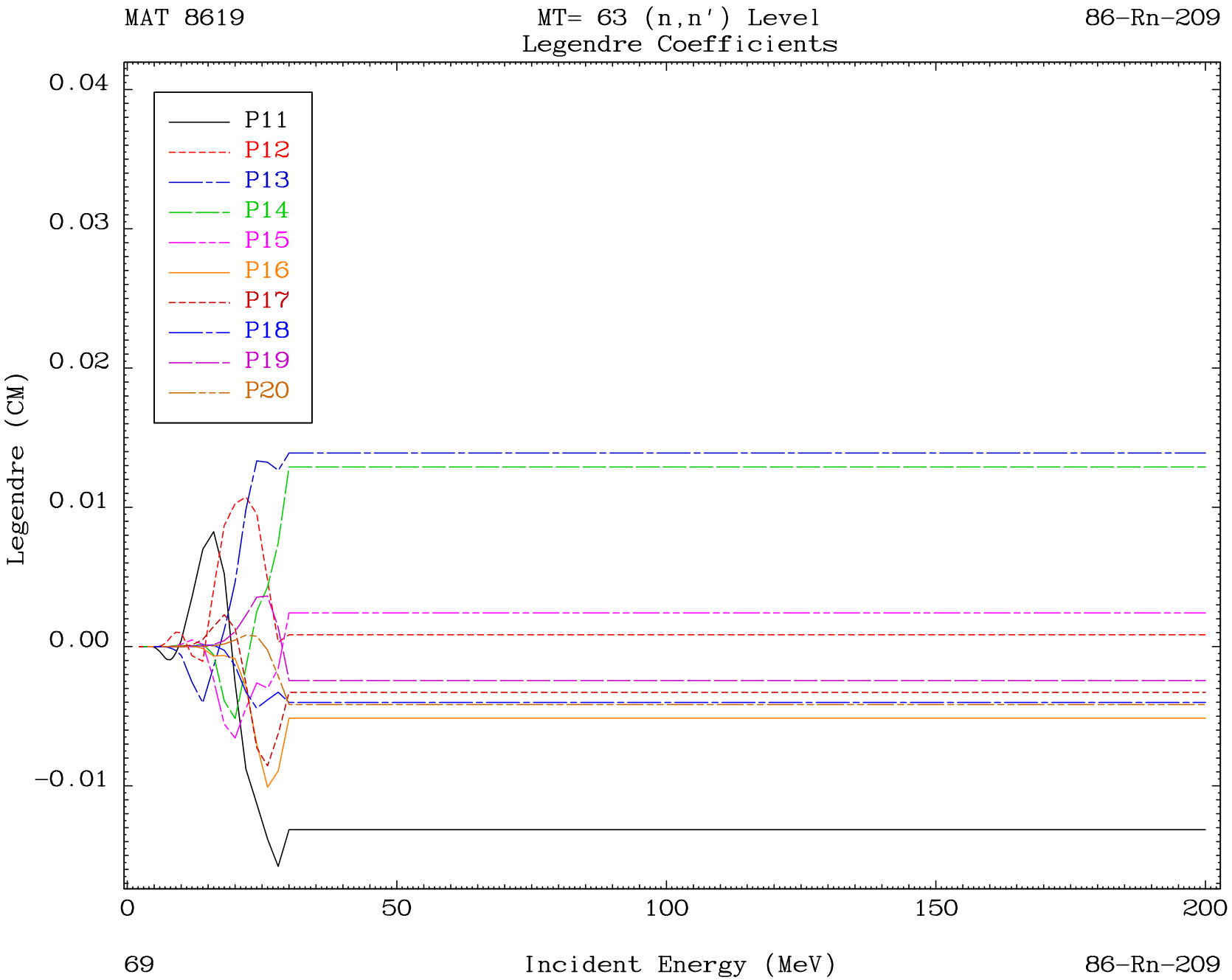

MAT 8619
MT= 62 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
64
Incident Energy (MeV)
86-Rn-209

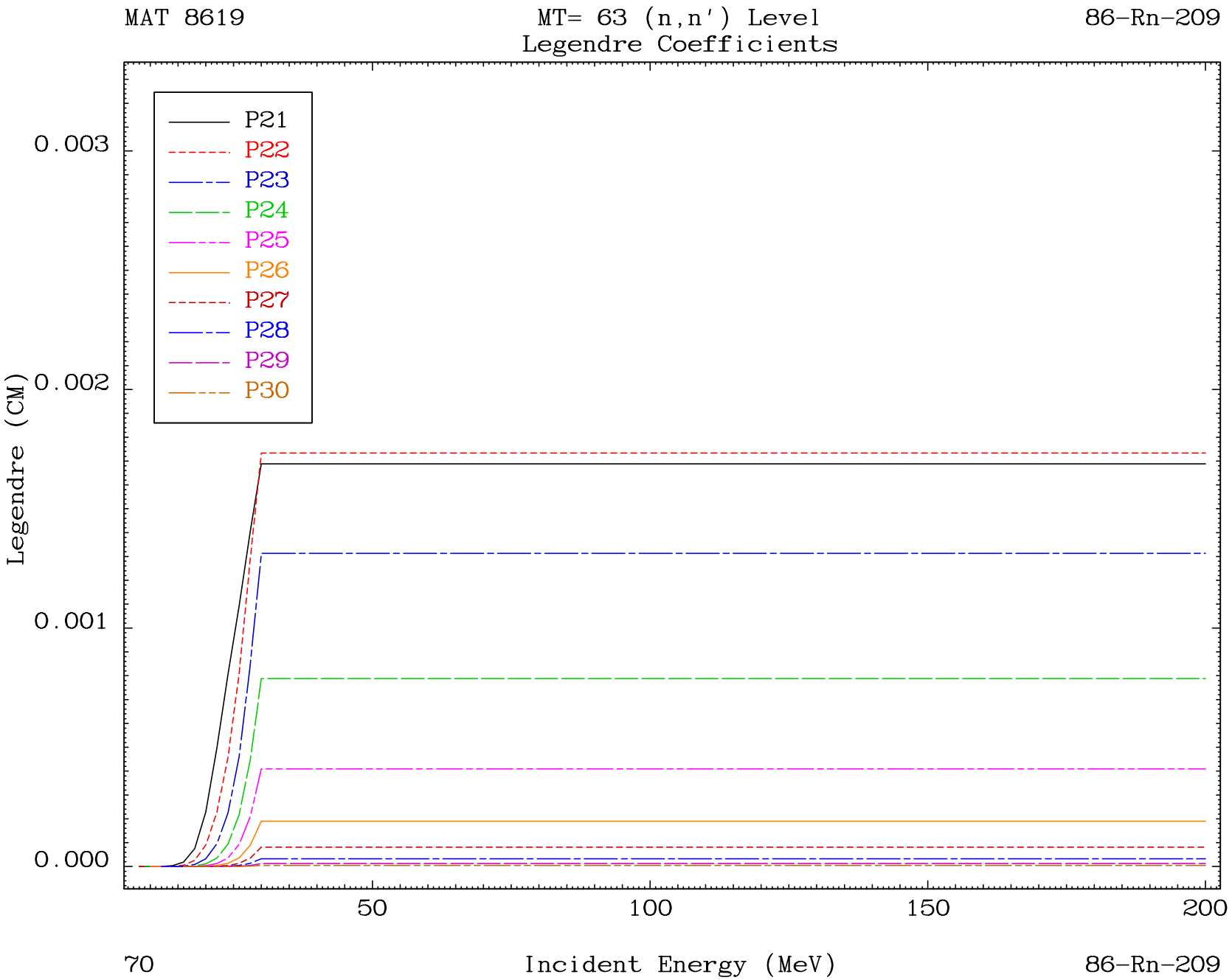

MAT 8619
MT= 62 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
65
Incident Energy (MeV)
86-Rn-209

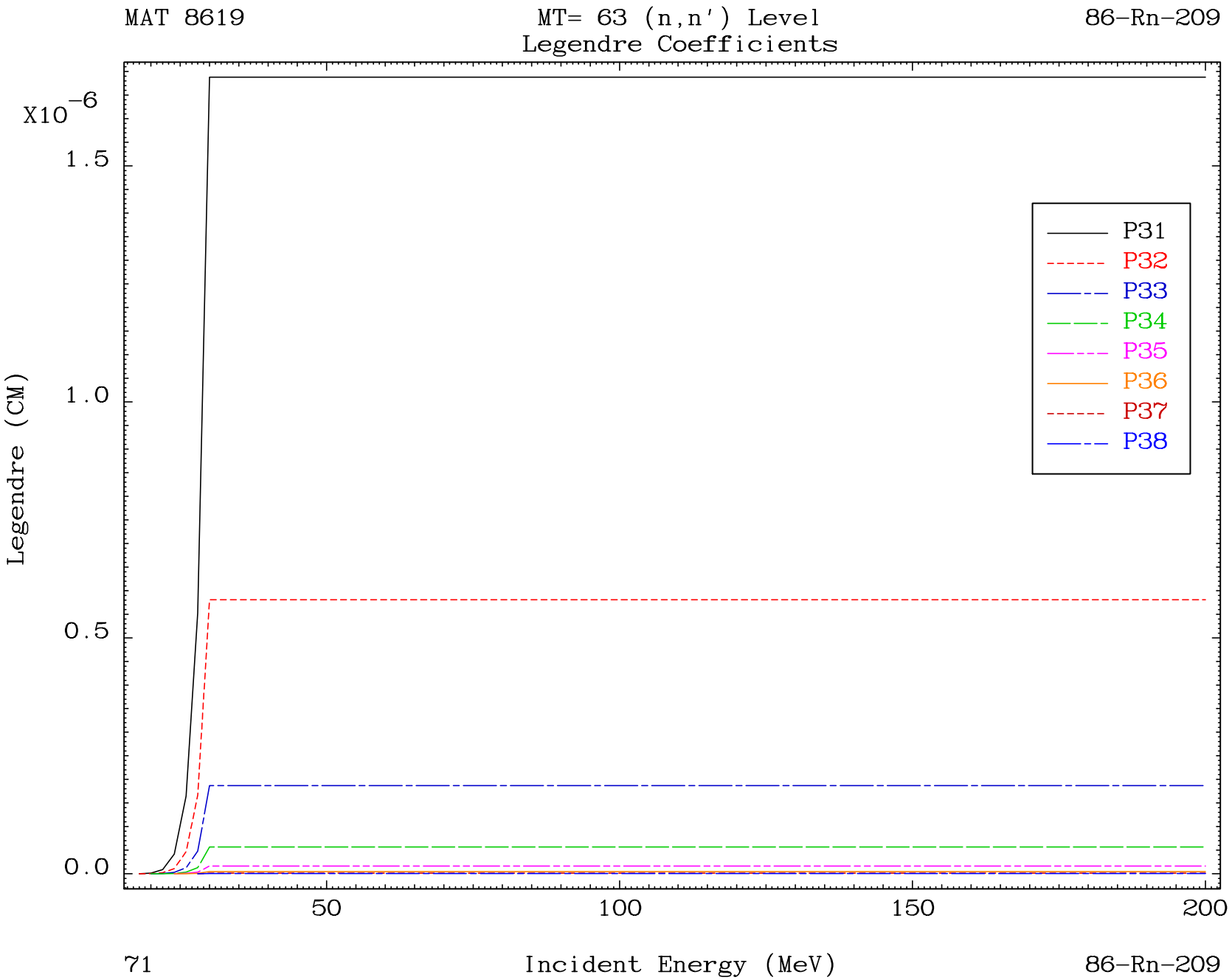

MAT 8619
MT= 62 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
66
Incident Energy (MeV)
86-Rn-209

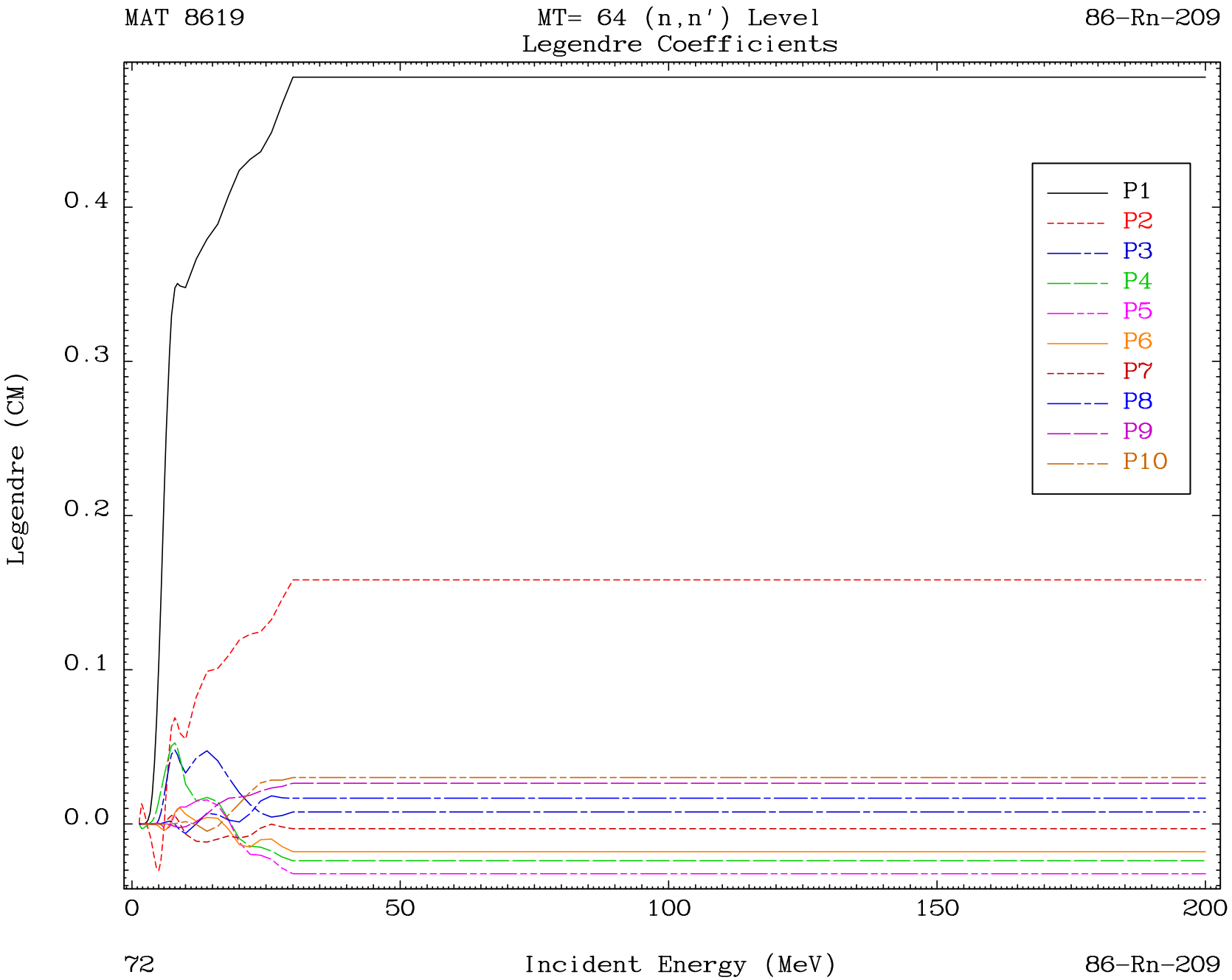

MAT 8619
MT= 62 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
67
Incident Energy (MeV)
86-Rn-209

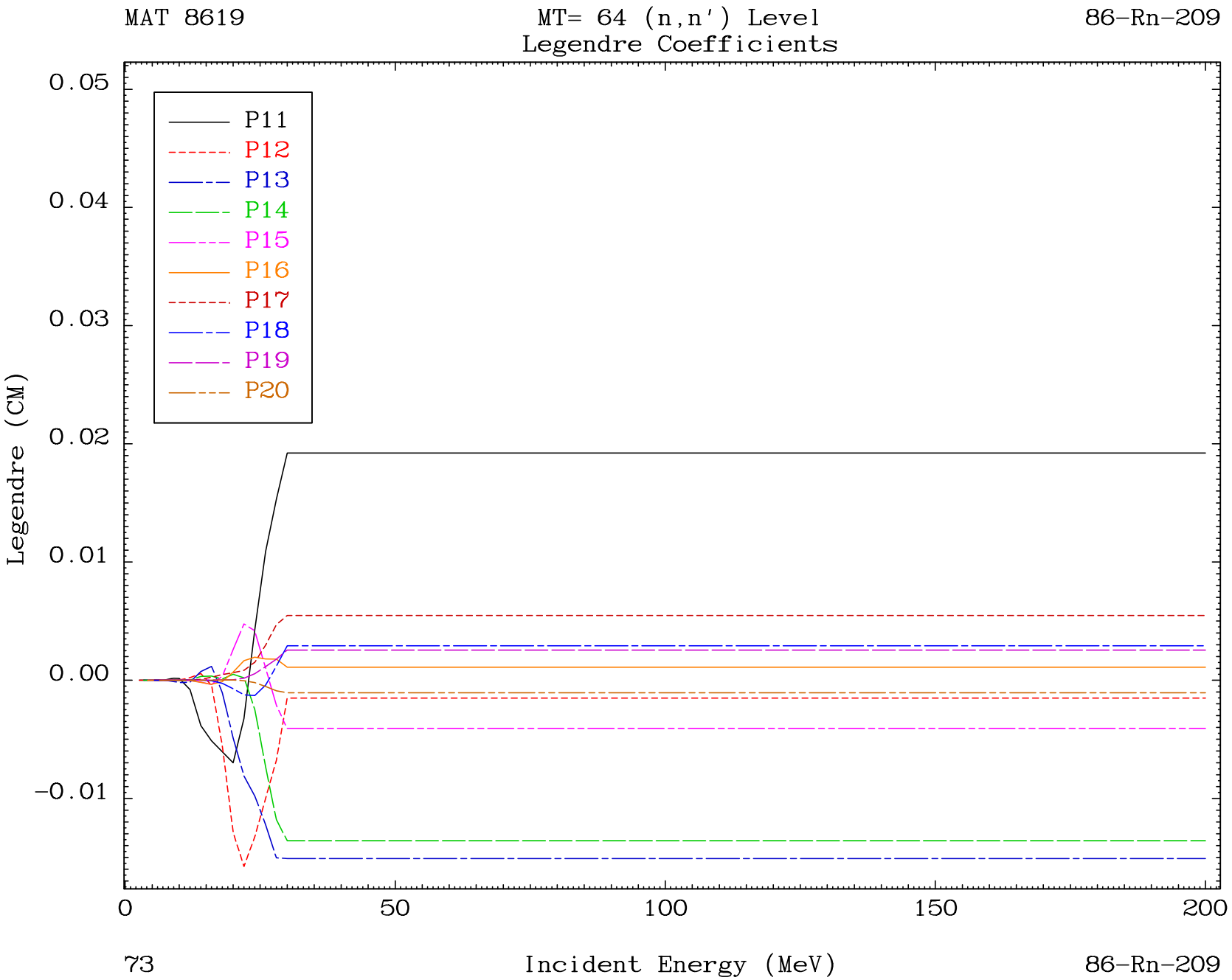

MAT 8619
MT= 63 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
68
Incident Energy (MeV)
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

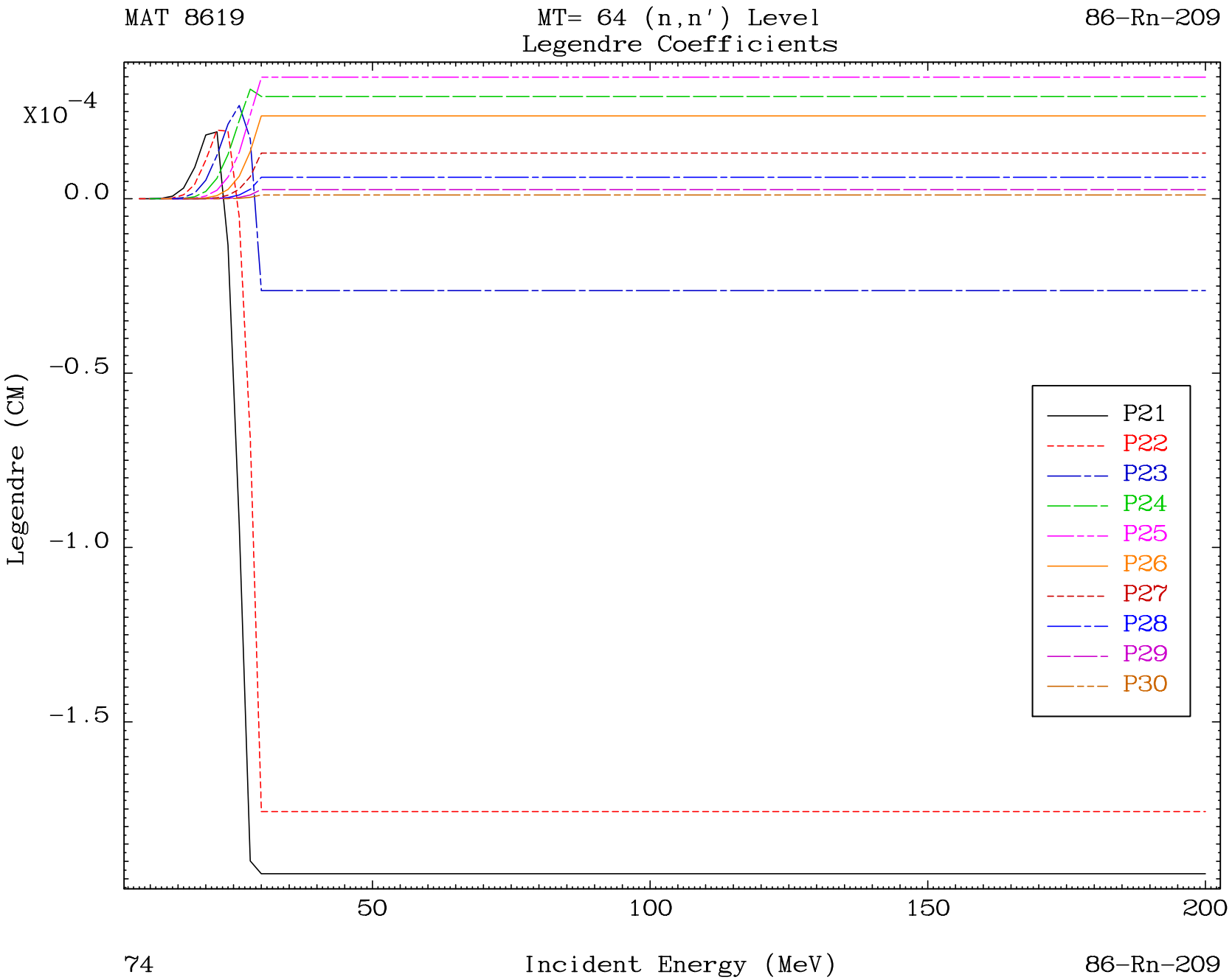

MAT 8619
MT= 63 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
69
Incident Energy (MeV)
86-Rn-209

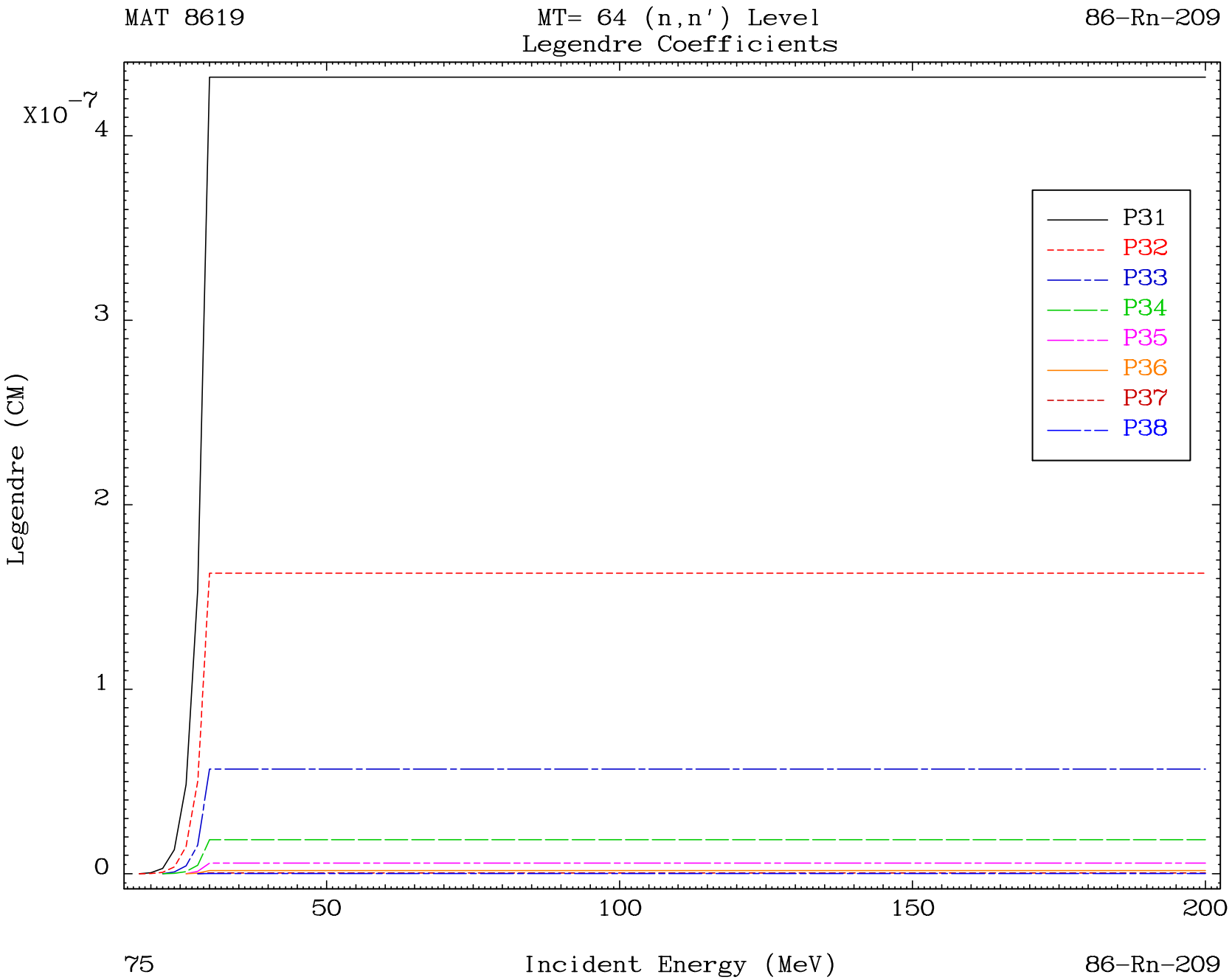

MAT 8619
MT= 63 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
70
50
100
150
200
Incident Energy (MeV)
86-Rn-209

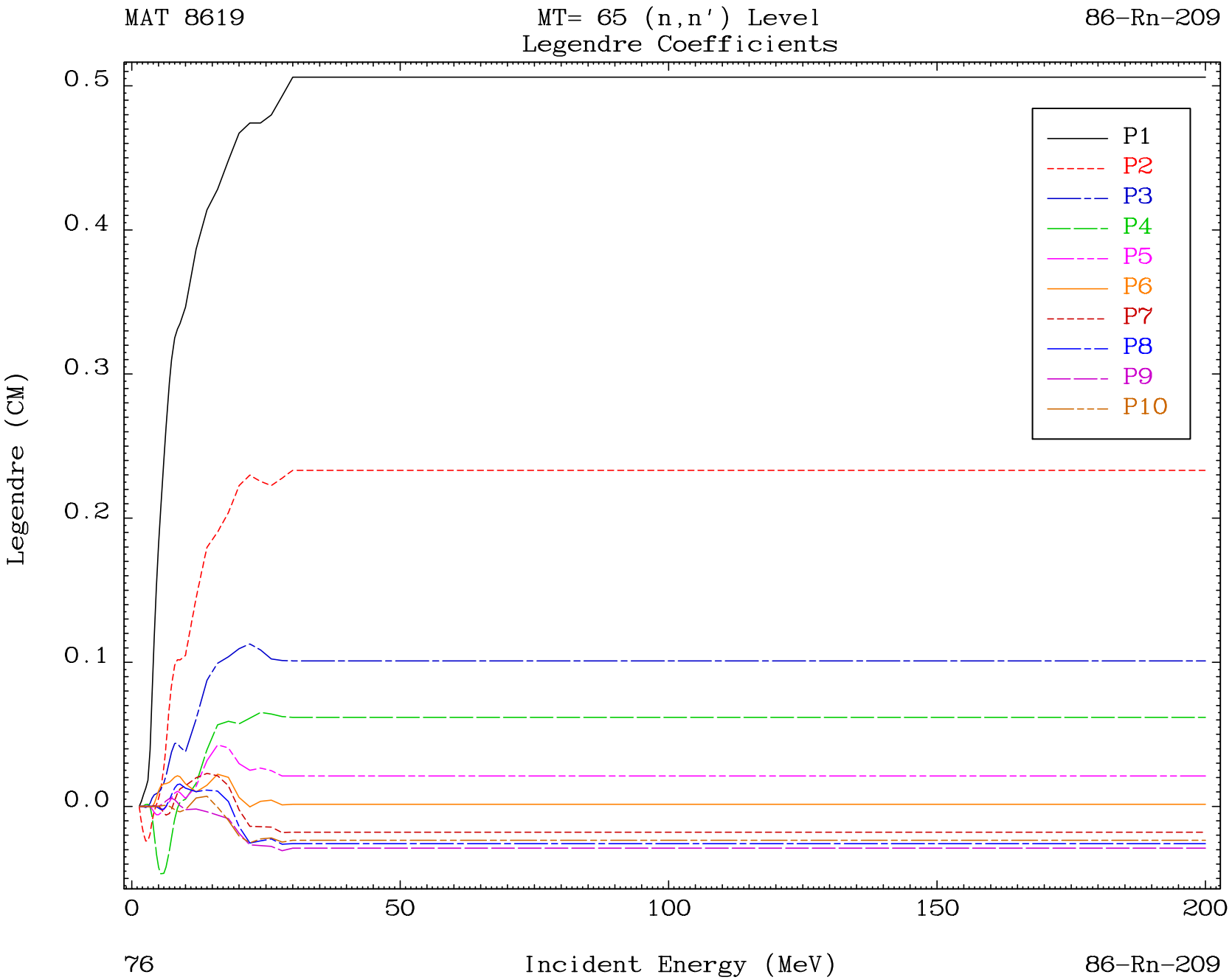

MAT 8619
MT= 63 (n,n') Level
Legendre Coefficients
86-Rn-209
X10−6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
71
Incident Energy (MeV)
86-Rn-209

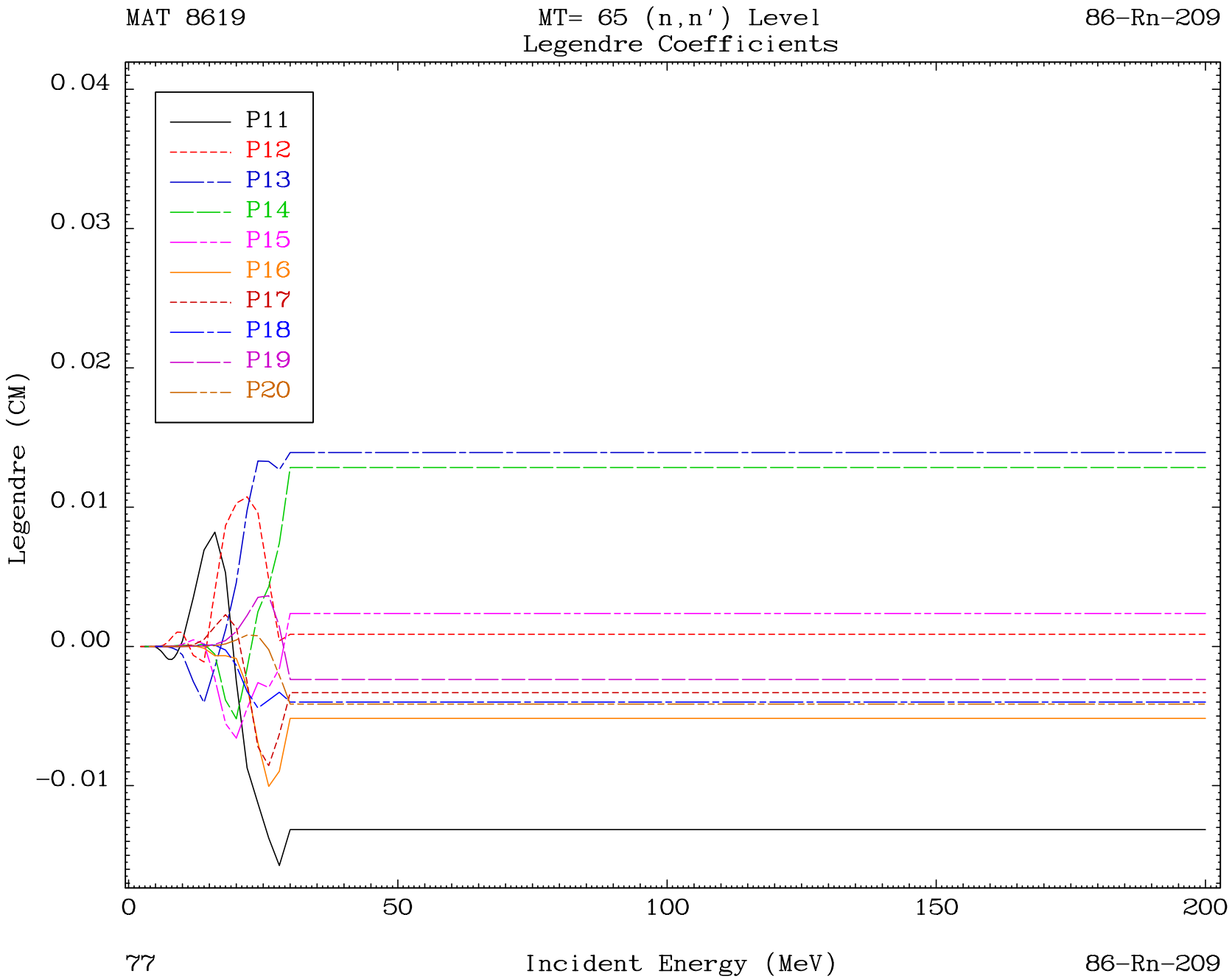

MAT 8619
MT= 64 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
72
Incident Energy (MeV)
86-Rn-209

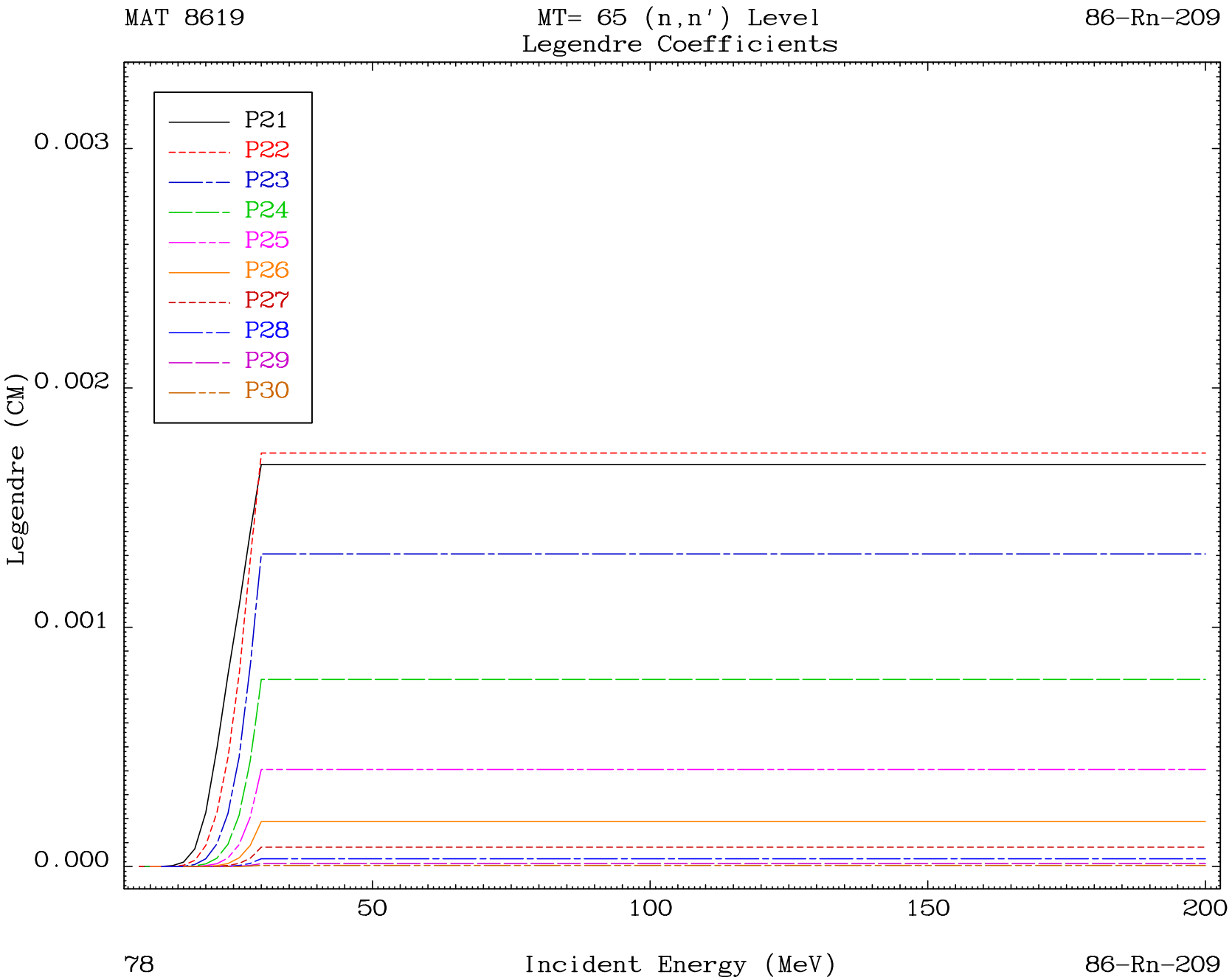

MAT 8619
MT= 64 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
73
Incident Energy (MeV)
86-Rn-209

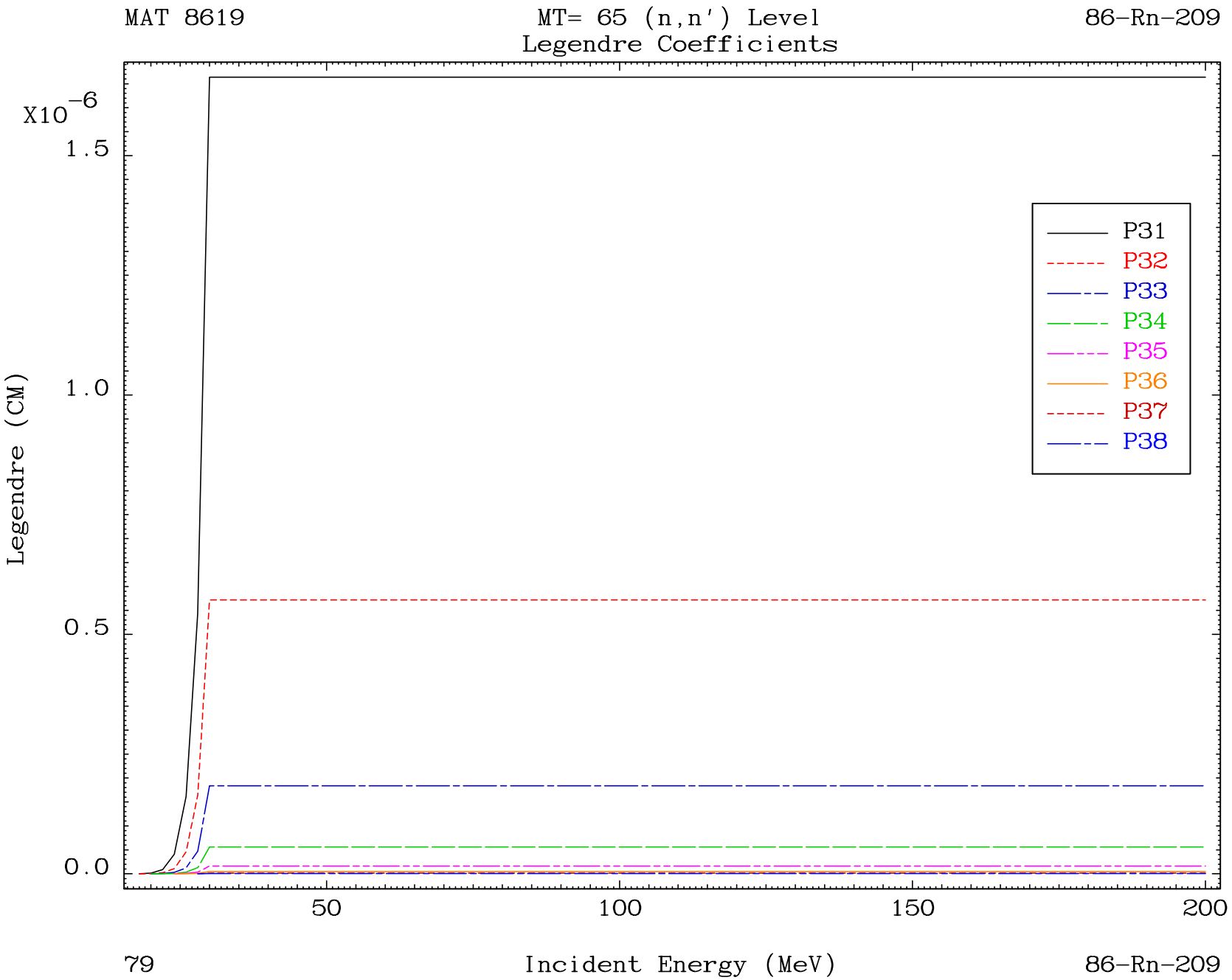

MAT 8619
MT= 64 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-4
0.0
-0.5
-1.0
-1.5
Legendre (CM)
50
100
150
200
74
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30

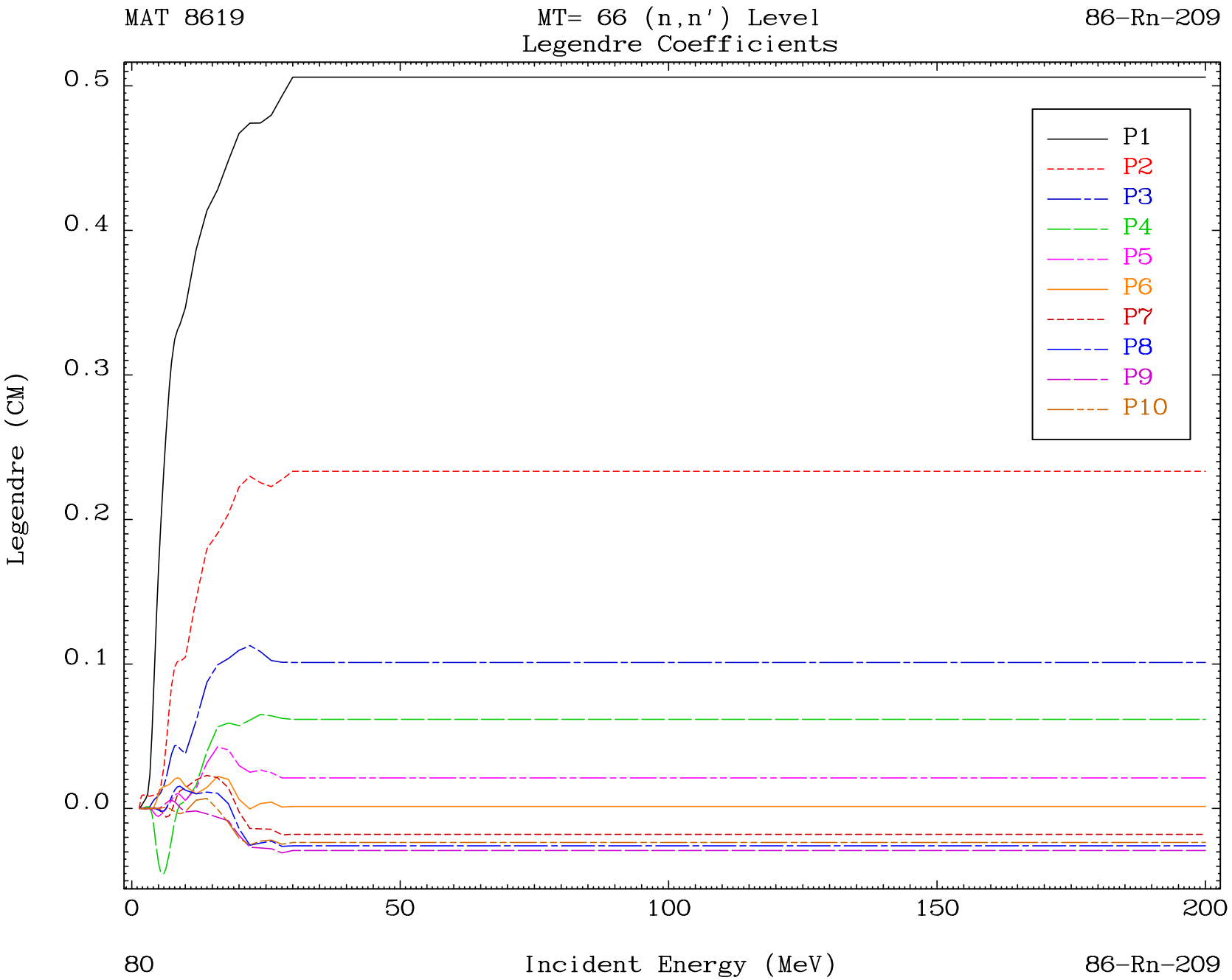

MAT 8619
MT= 64 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-7
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
75
Incident Energy (MeV)
86-Rn-209

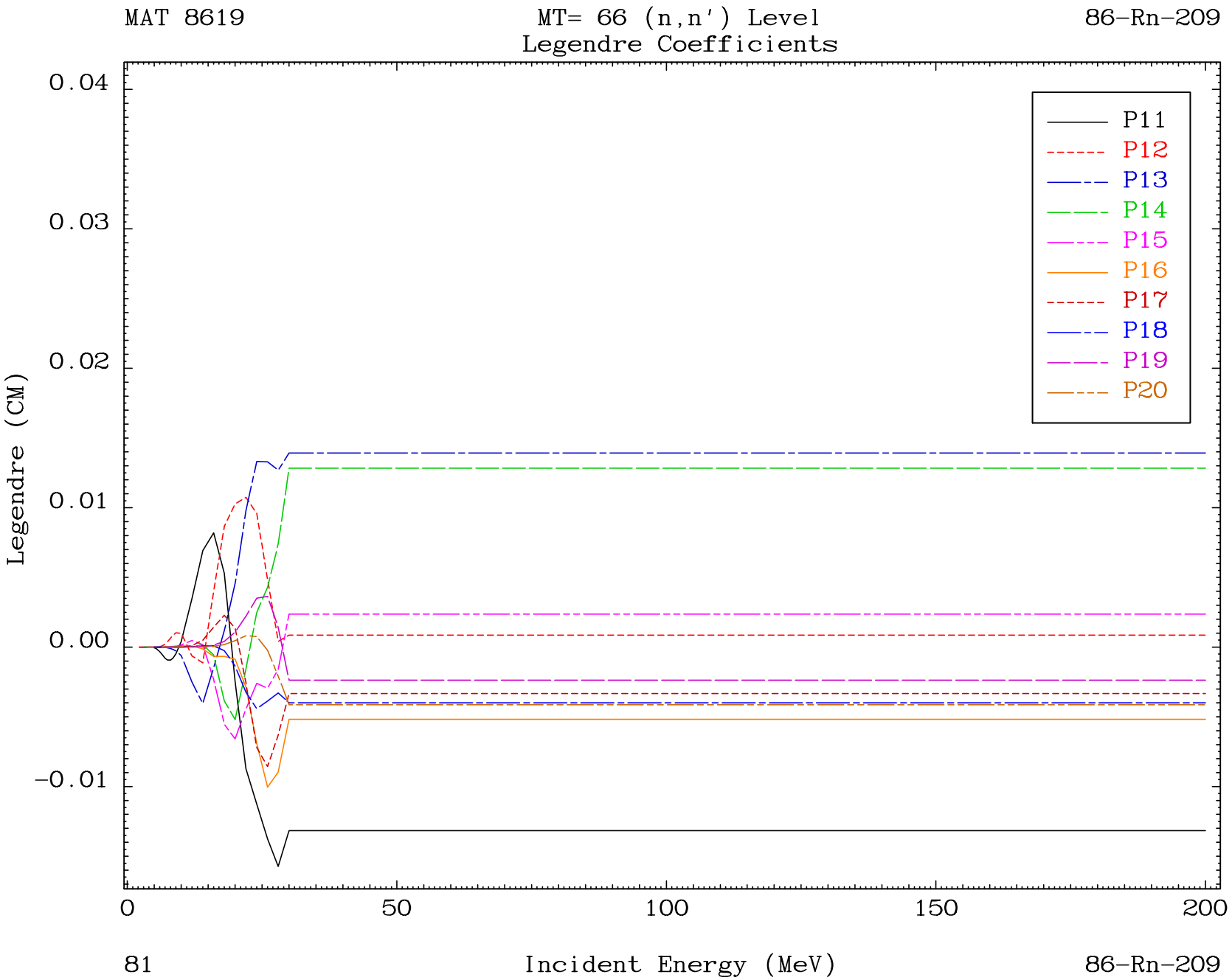

MAT 8619
MT= 65 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
76
Incident Energy (MeV)
86-Rn-209

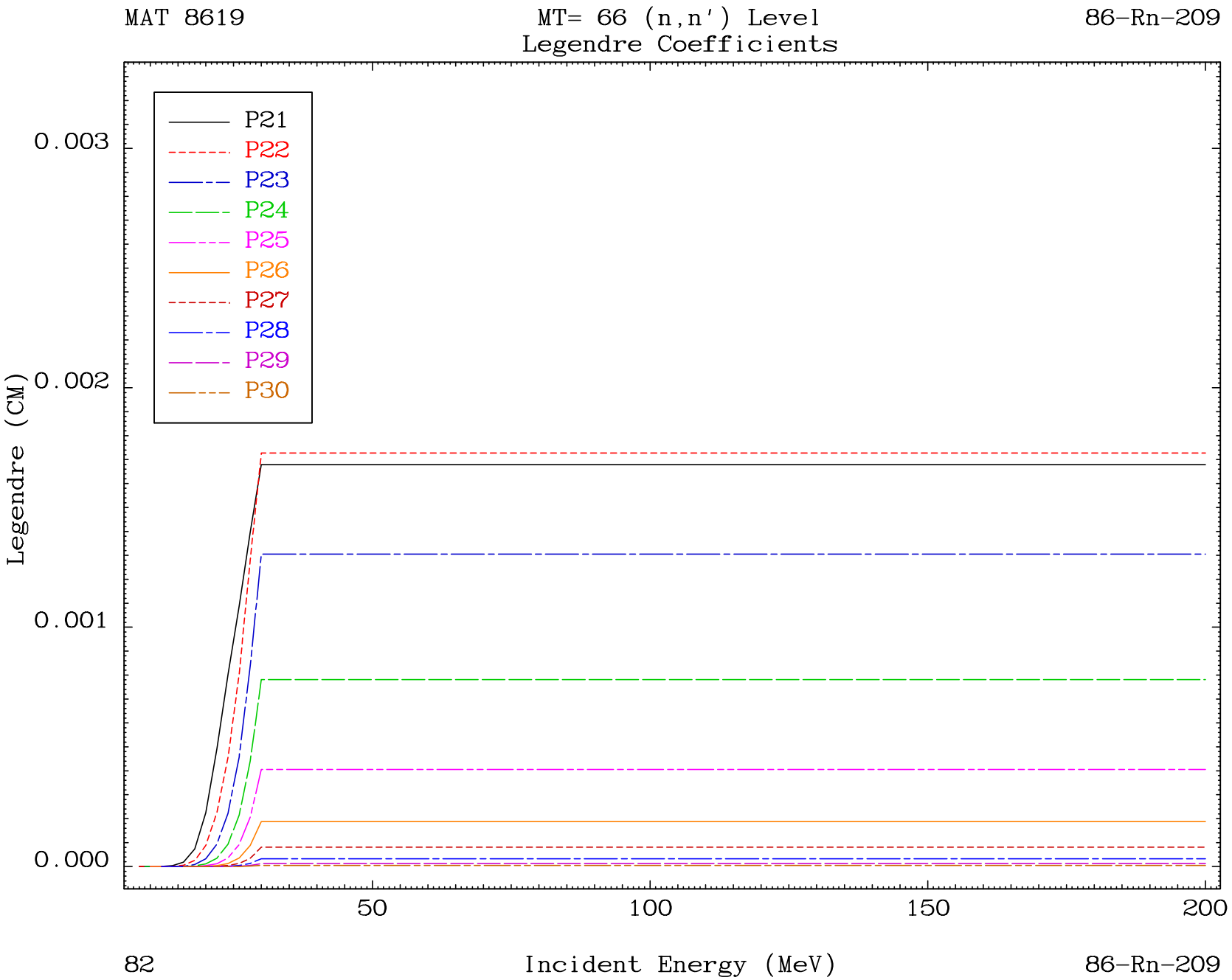

MAT 8619
MT= 65 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
77
Incident Energy (MeV)
86-Rn-209

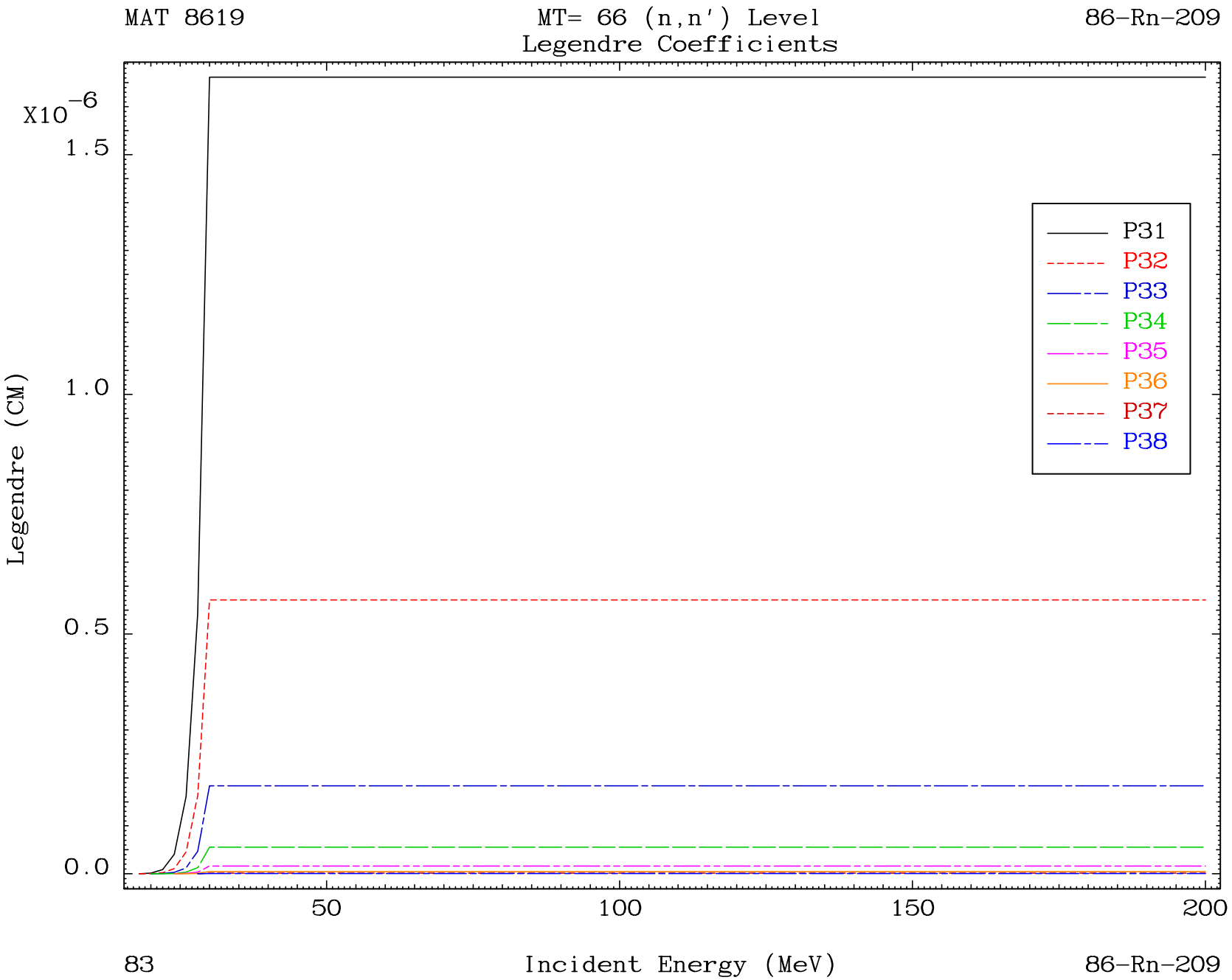

MAT 8619
MT= 65 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
78
Incident Energy (MeV)
86-Rn-209

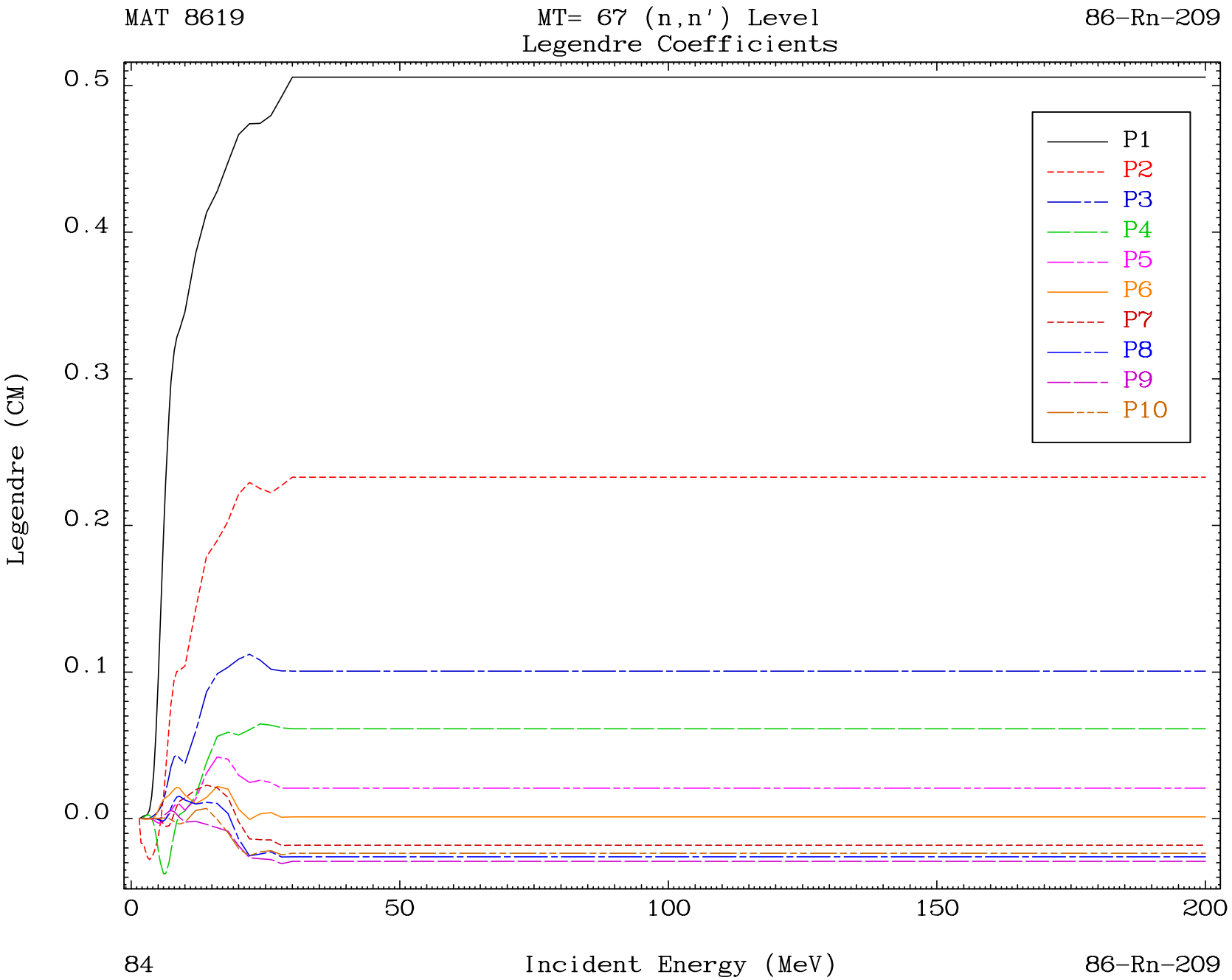

MAT 8619
MT= 65 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
79
Incident Energy (MeV)
86-Rn-209

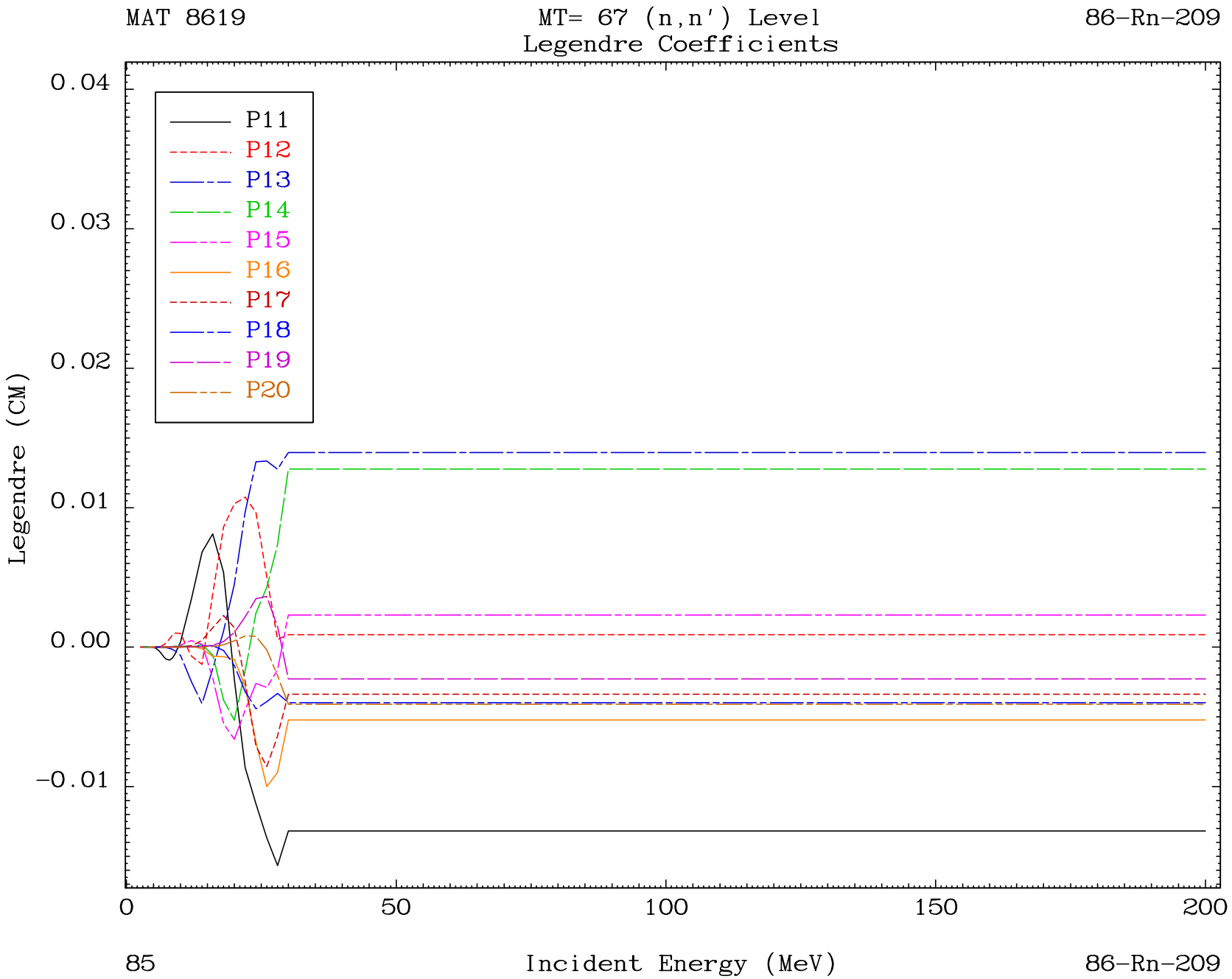

MAT 8619
MT= 66 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
0
50
100
150
200
80
Incident Energy (MeV)
86-Rn-209

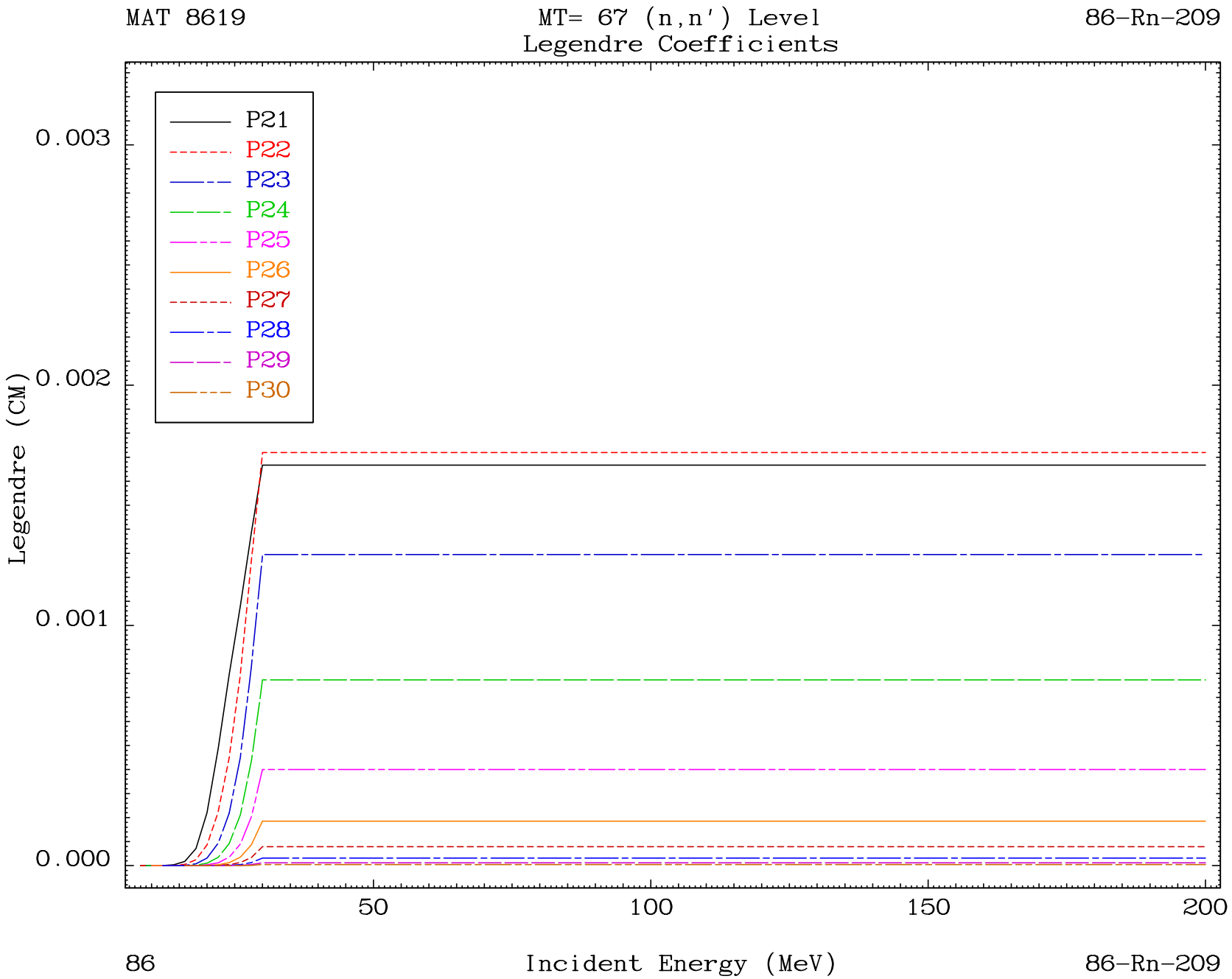

MAT 8619
MT= 66 (n,n') Level
Legendre Coefficients
86-Rn-209
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0
50
100
150
200
81
Incident Energy (MeV)
86-Rn-209

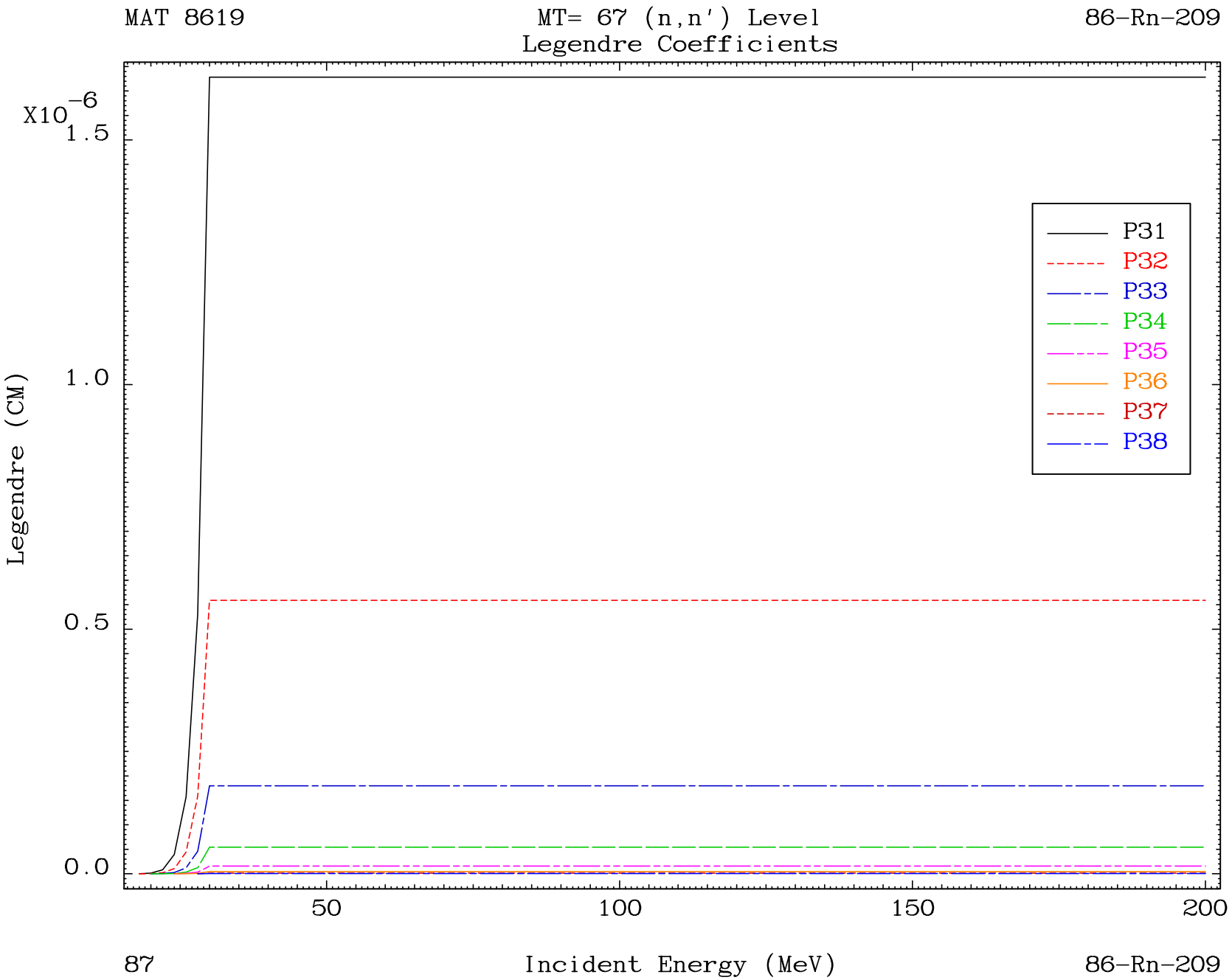

MAT 8619
MT= 66 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
82
Incident Energy (MeV)
86-Rn-209

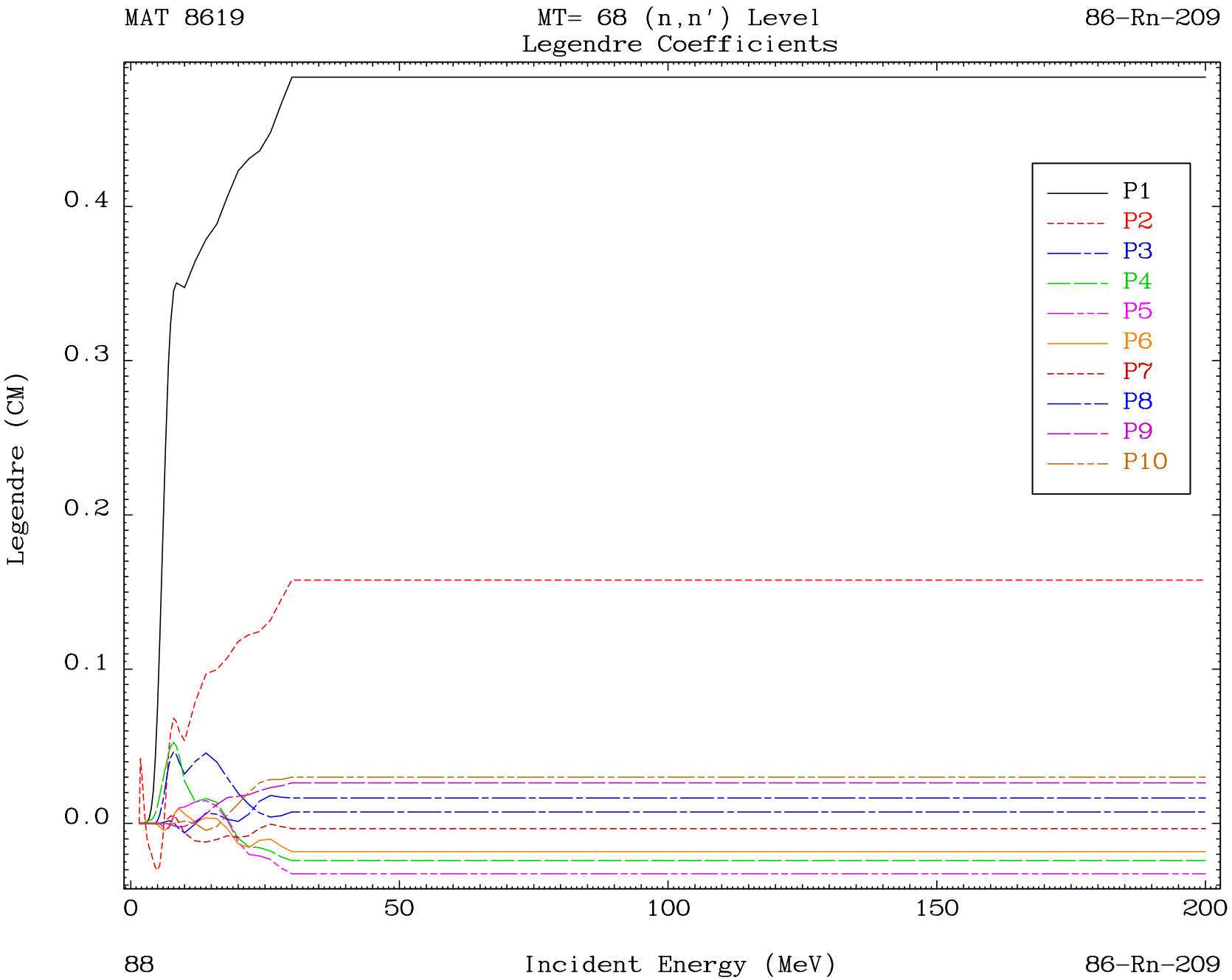

MAT 8619
MT= 66 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
83
Incident Energy (MeV)
86-Rn-209

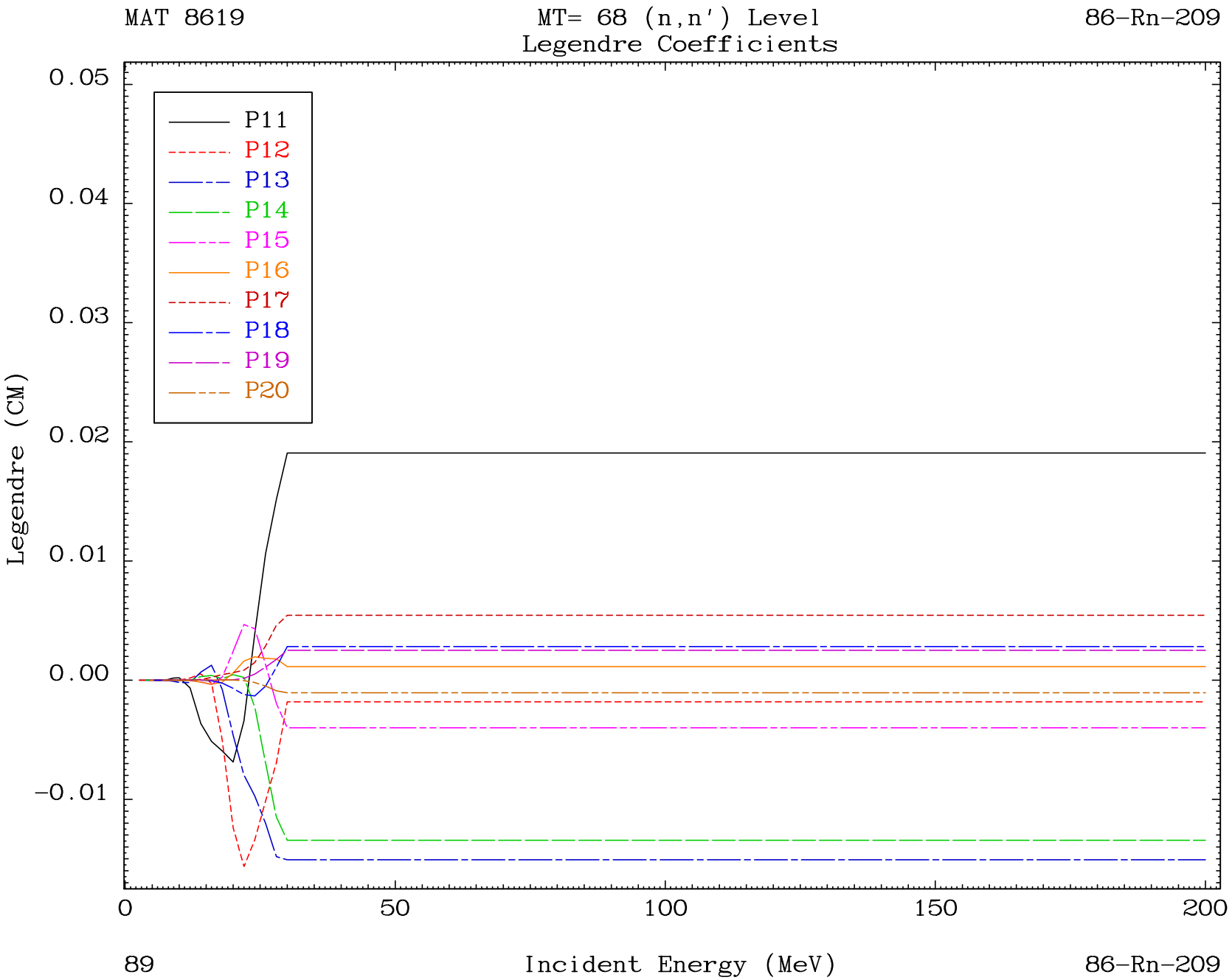

MAT 8619
MT= 67 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
84
Incident Energy (MeV)
86-Rn-209

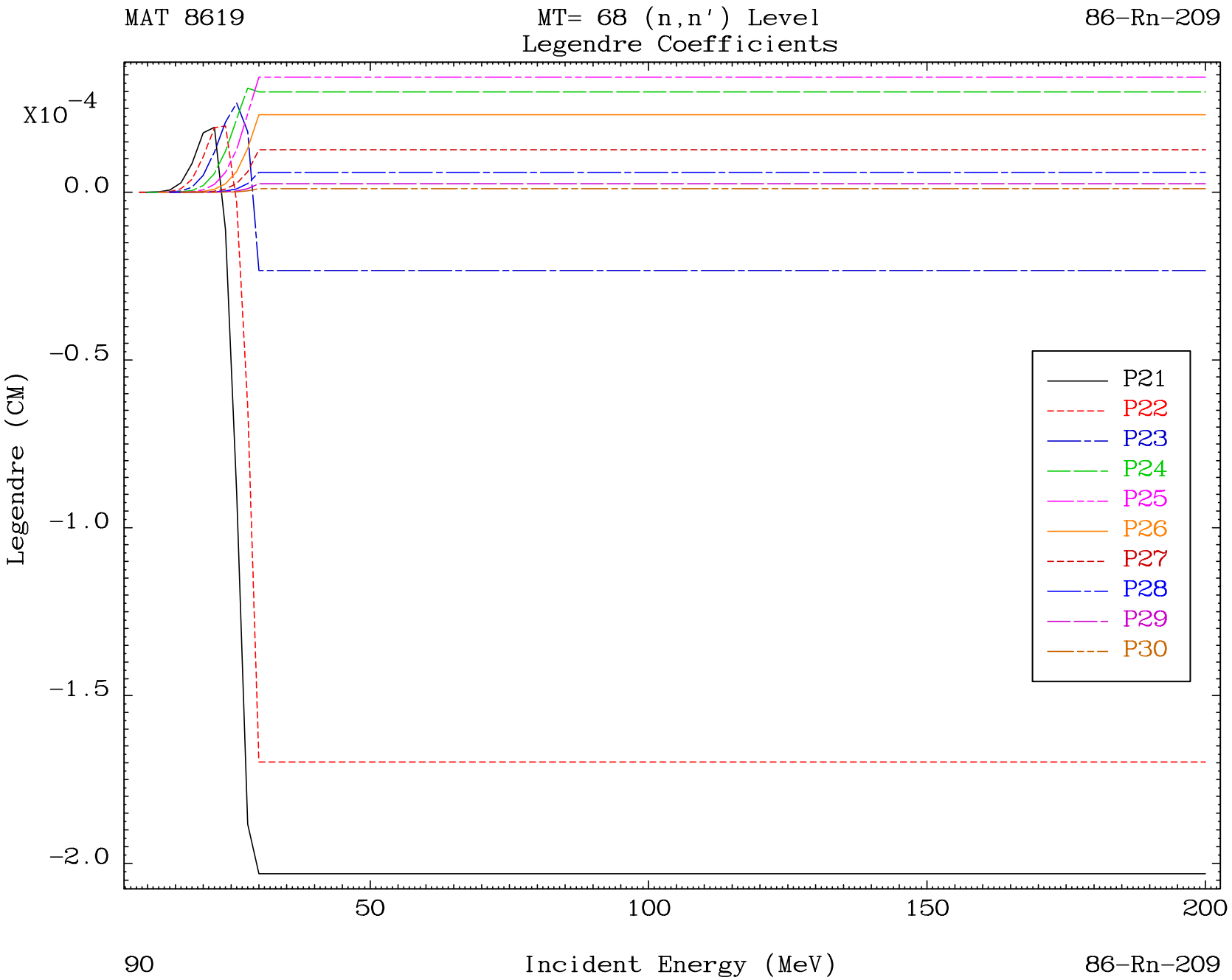

MAT 8619
MT= 67 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
85
Incident Energy (MeV)
86-Rn-209

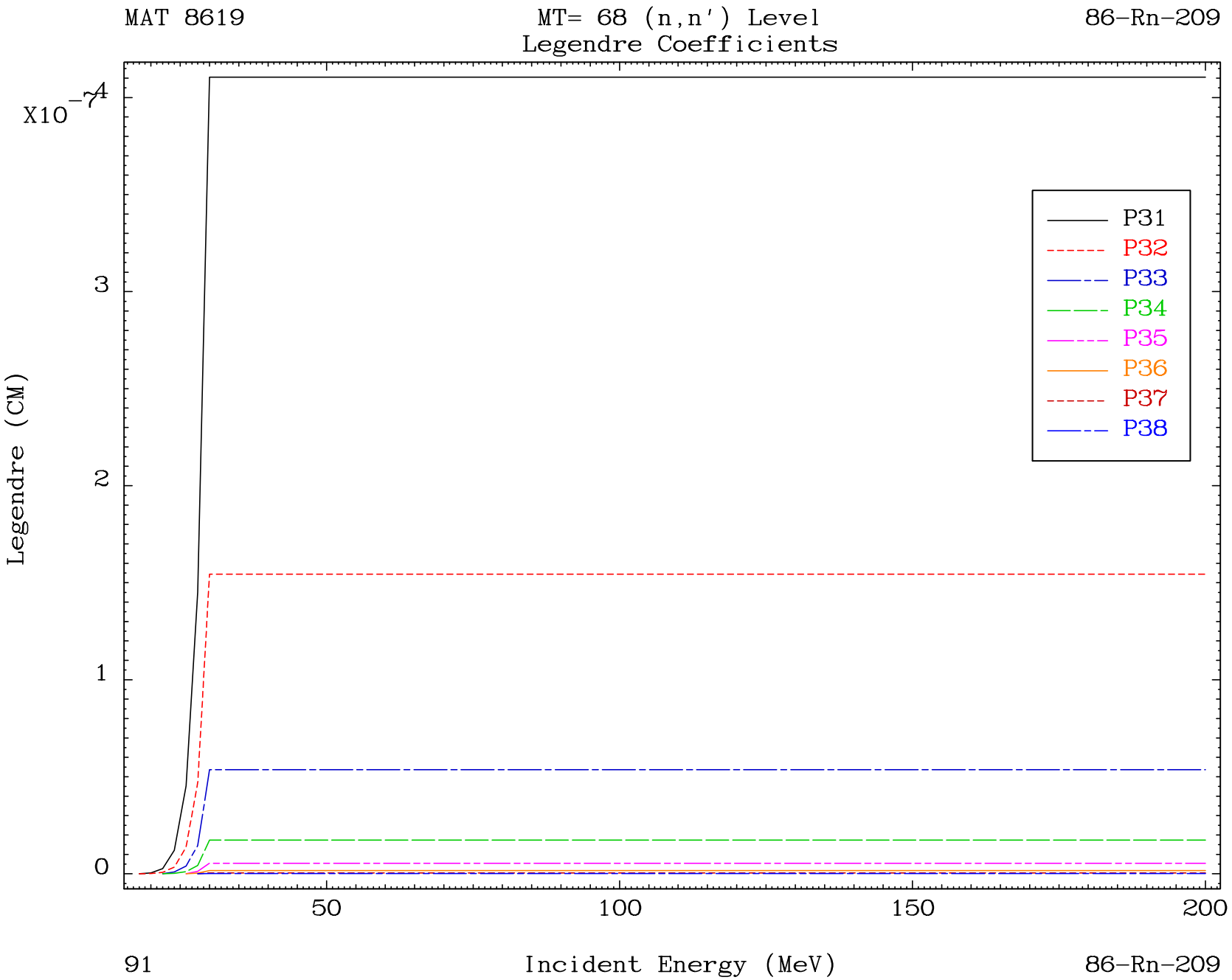

MAT 8619
MT= 67 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
86
Incident Energy (MeV)
86-Rn-209

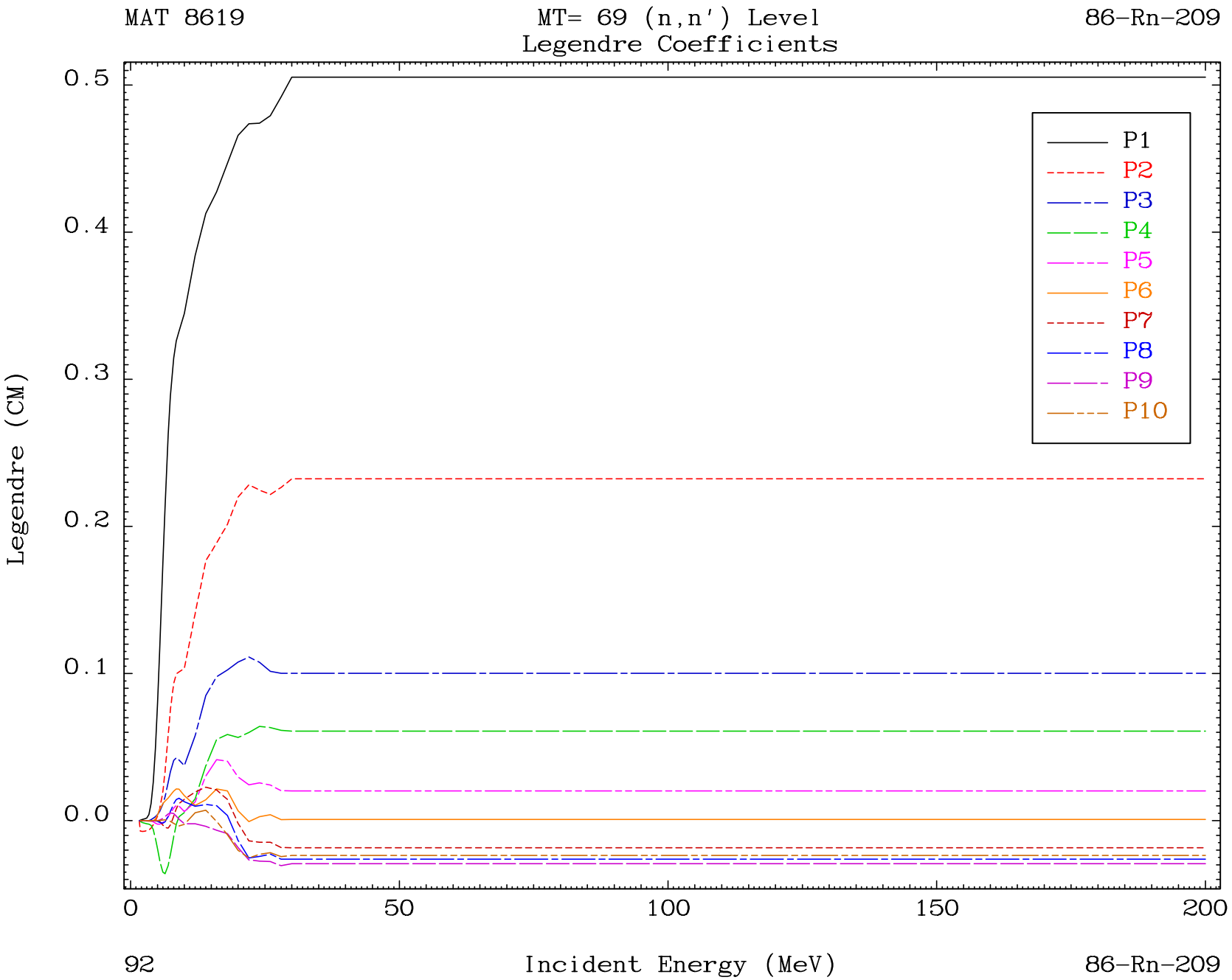

MAT 8619
MT= 67 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
87
Incident Energy (MeV)
86-Rn-209

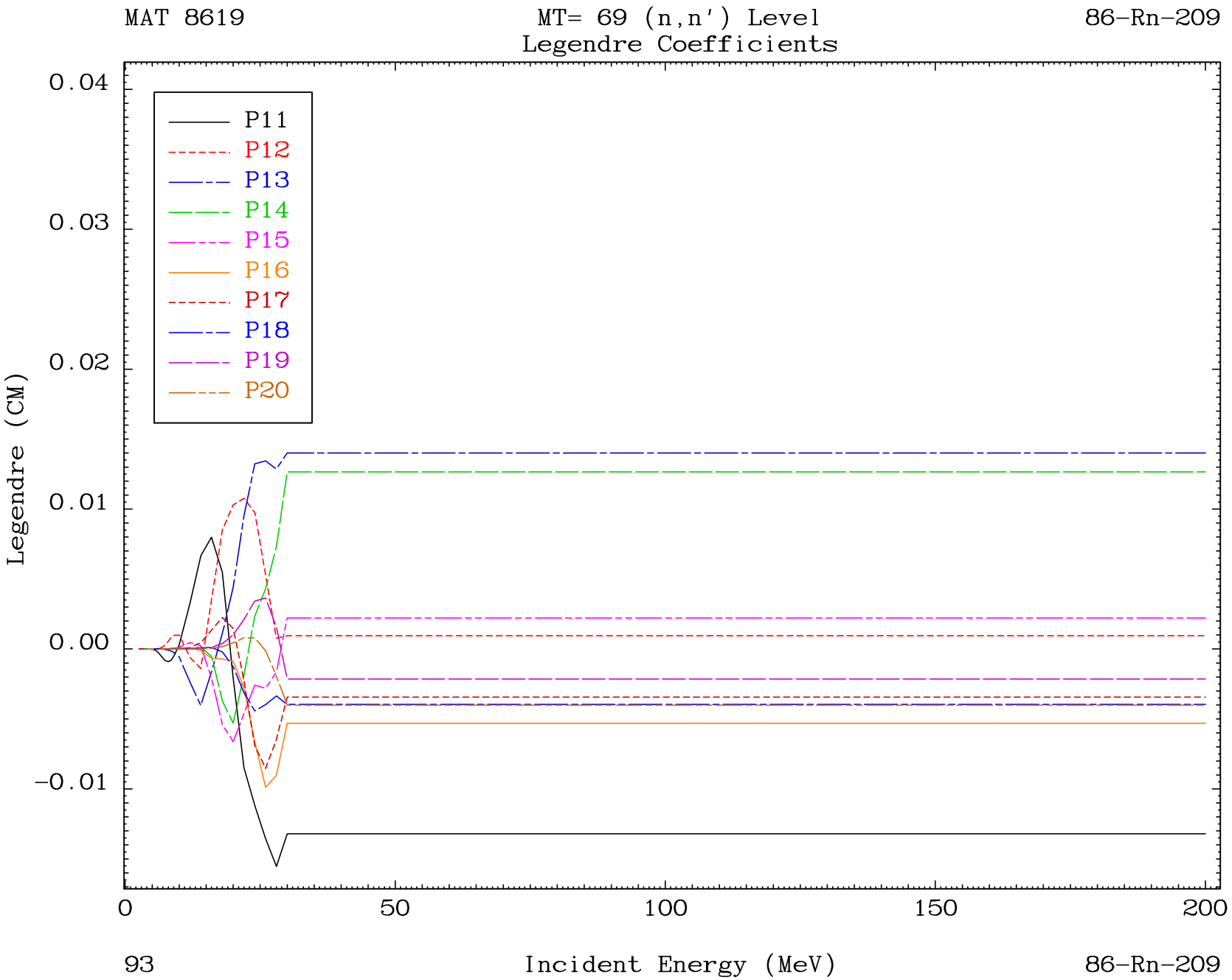

MAT 8619
MT= 68 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
88
Incident Energy (MeV)
86-Rn-209

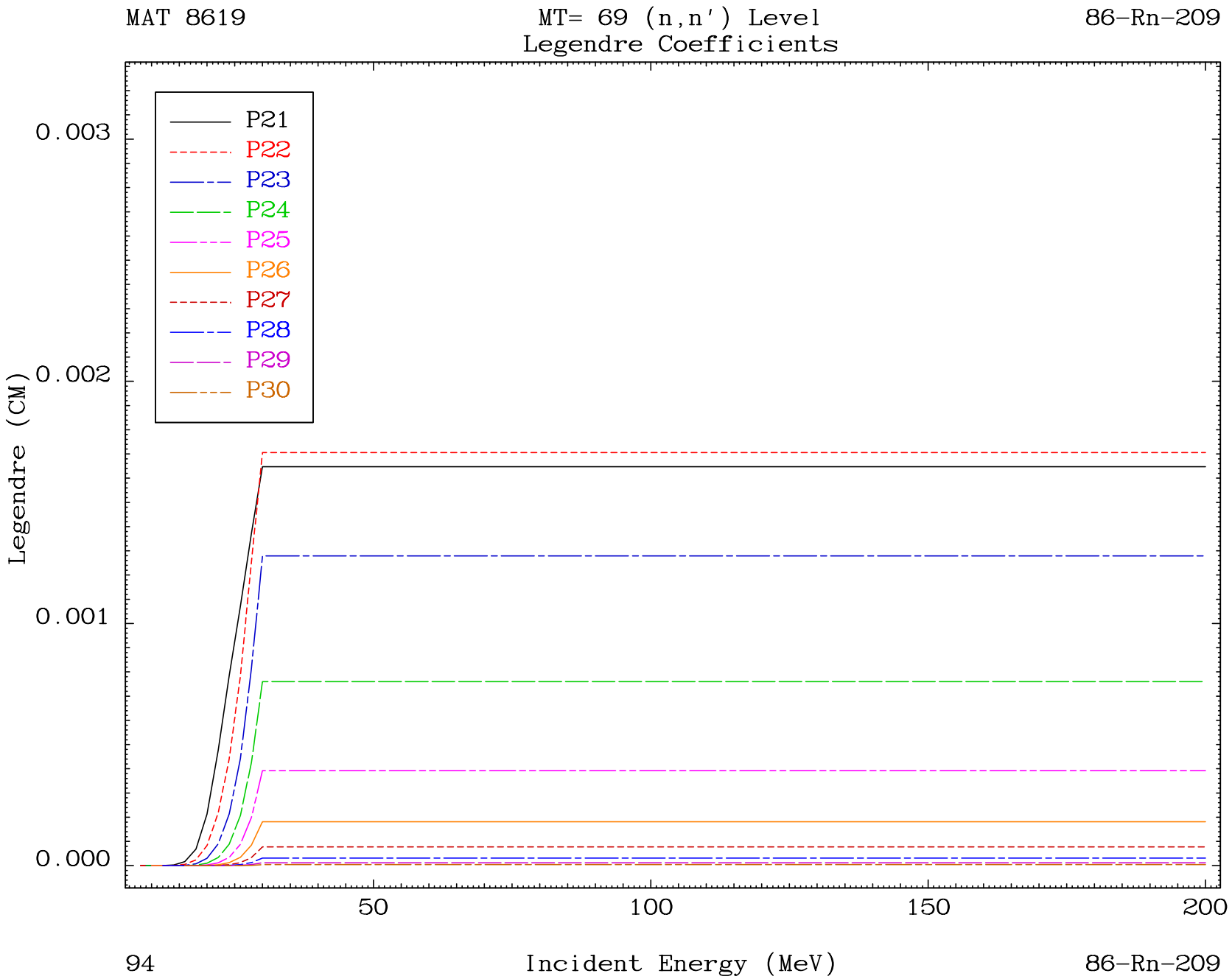

MAT 8619
MT= 68 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
89
Incident Energy (MeV)
86-Rn-209

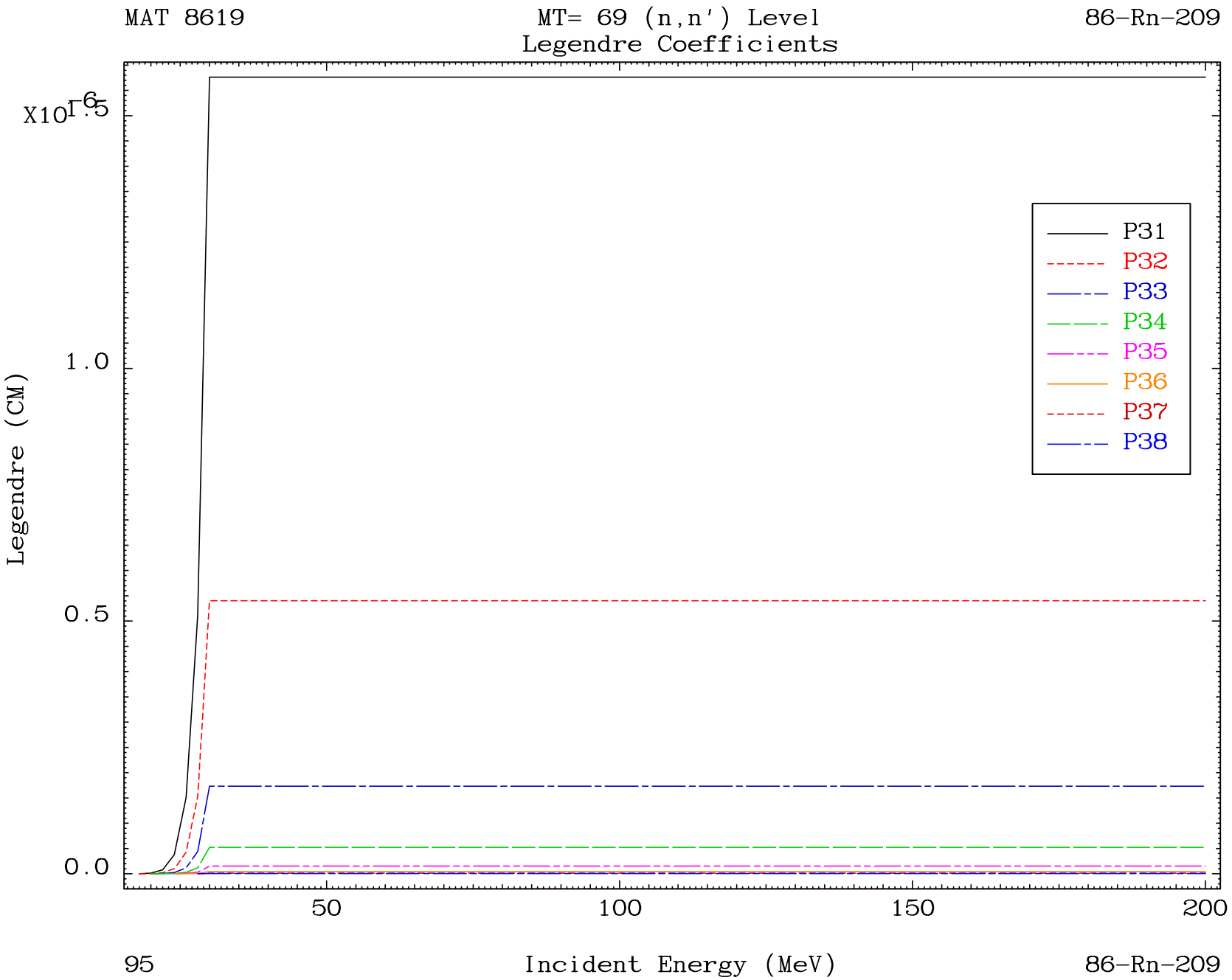

MAT 8619
MT= 68 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
50
100
150
200
90
Incident Energy (MeV)
86-Rn-209

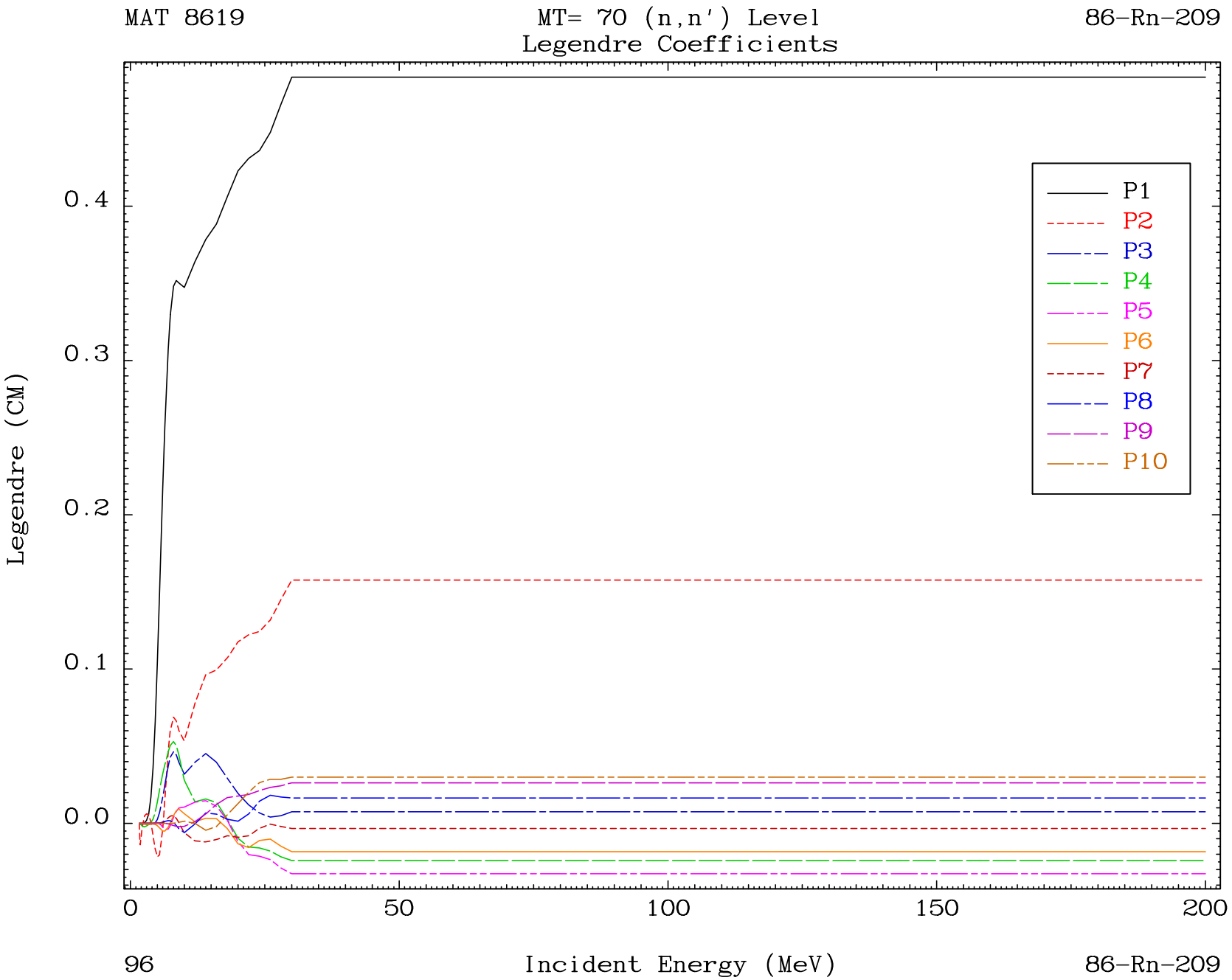

MAT 8619
MT= 68 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
91
Incident Energy (MeV)
86-Rn-209

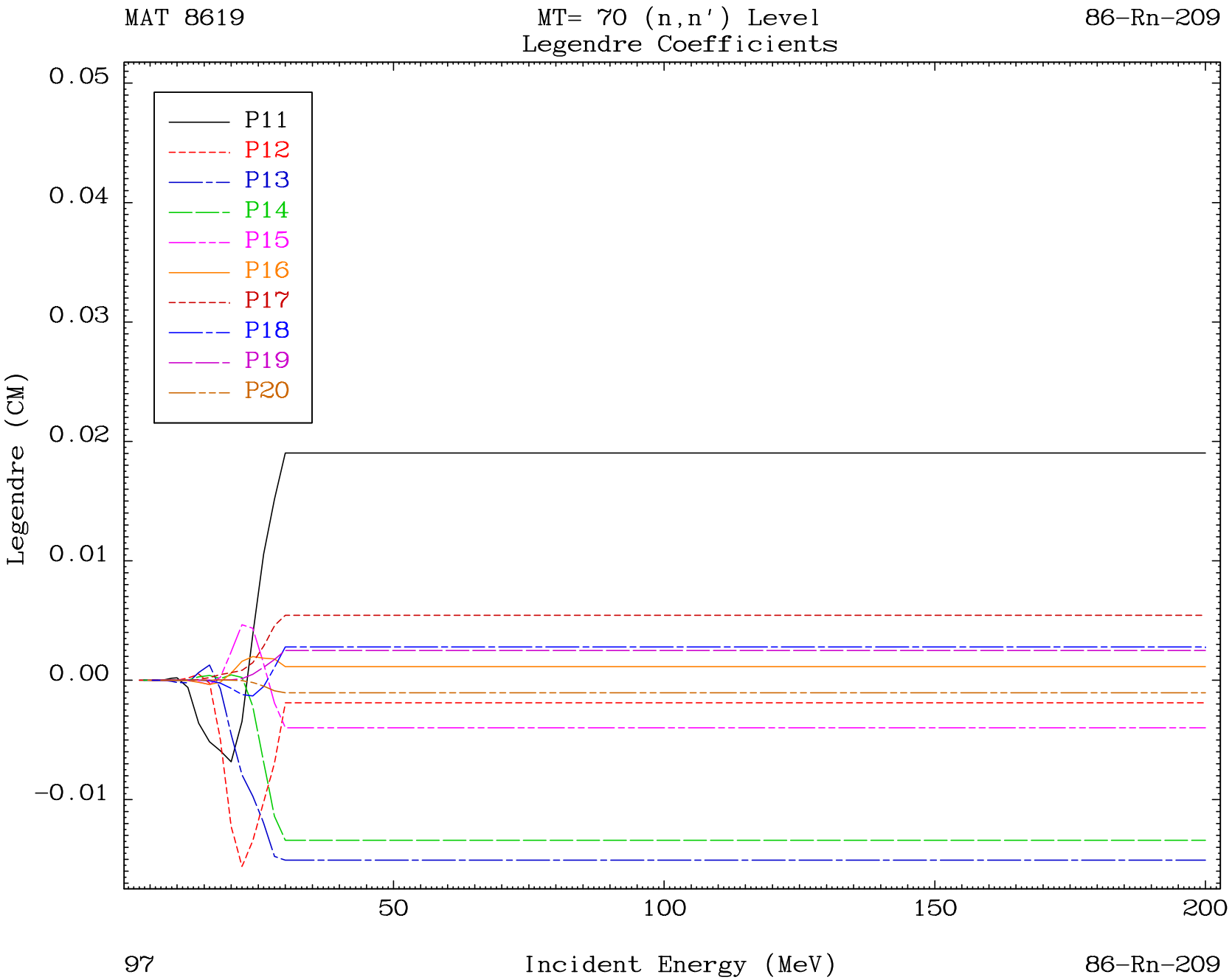

MAT 8619
MT= 69 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
92
Incident Energy (MeV)
86-Rn-209
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10

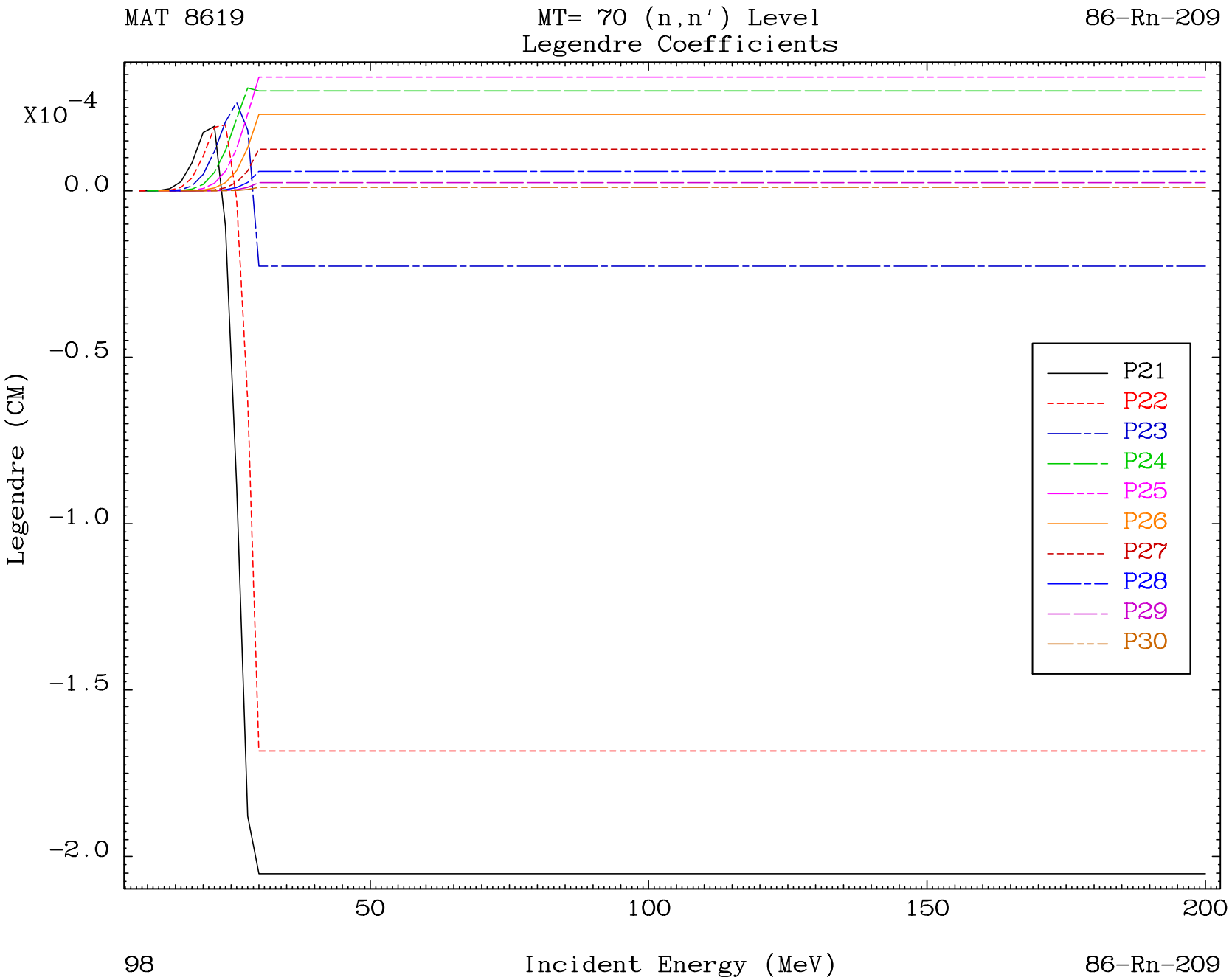

MAT 8619
MT= 69 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
93
Incident Energy (MeV)
86-Rn-209

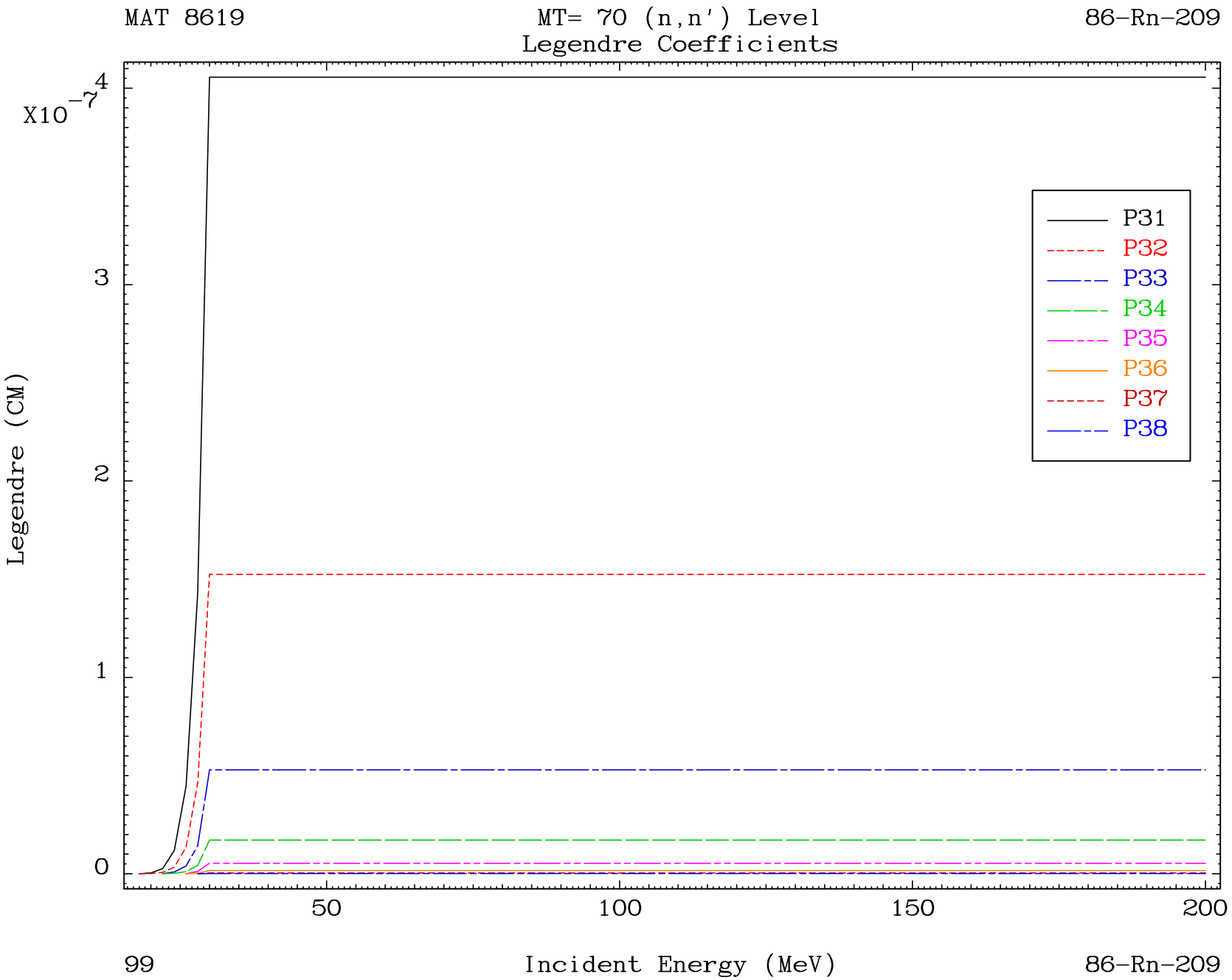

MAT 8619
MT= 69 (n,n') Level
Legendre Coefficients
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
94
Incident Energy (MeV)
86-Rn-209

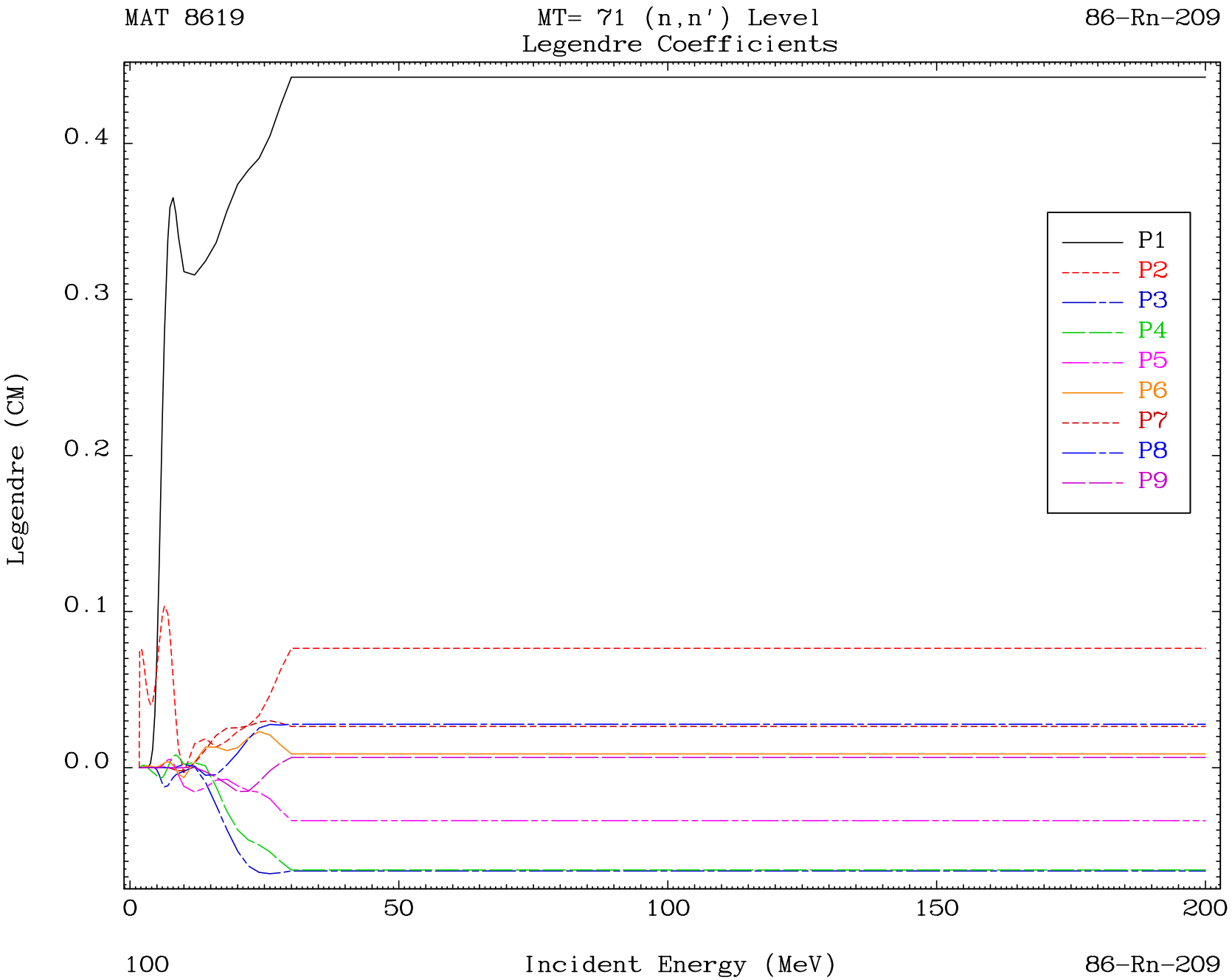

MAT 8619
MT= 69 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-6
1.5
1.0
0.5
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
95
Incident Energy (MeV)
86-Rn-209

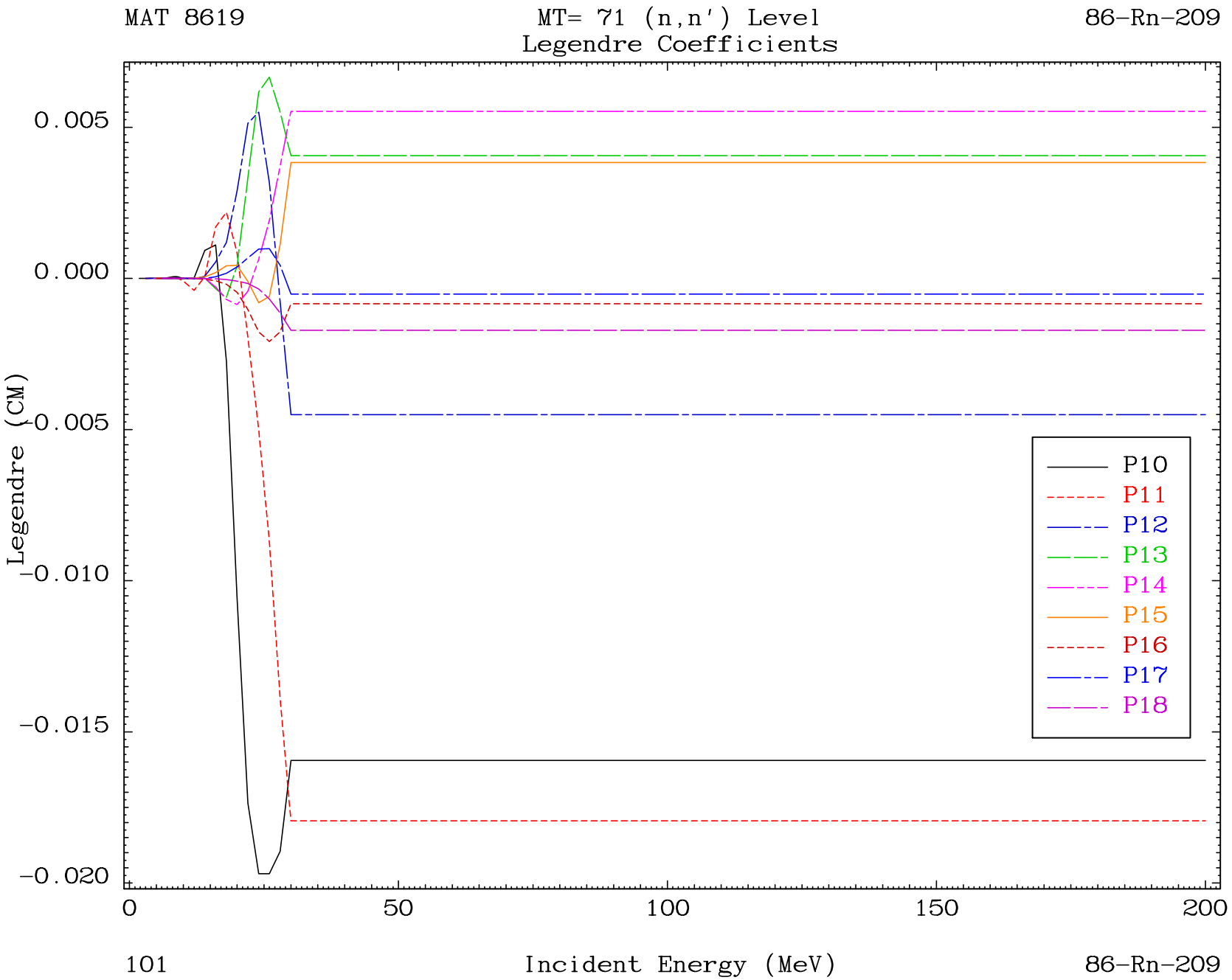

MAT 8619
MT= 70 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
96
Incident Energy (MeV)
86-Rn-209

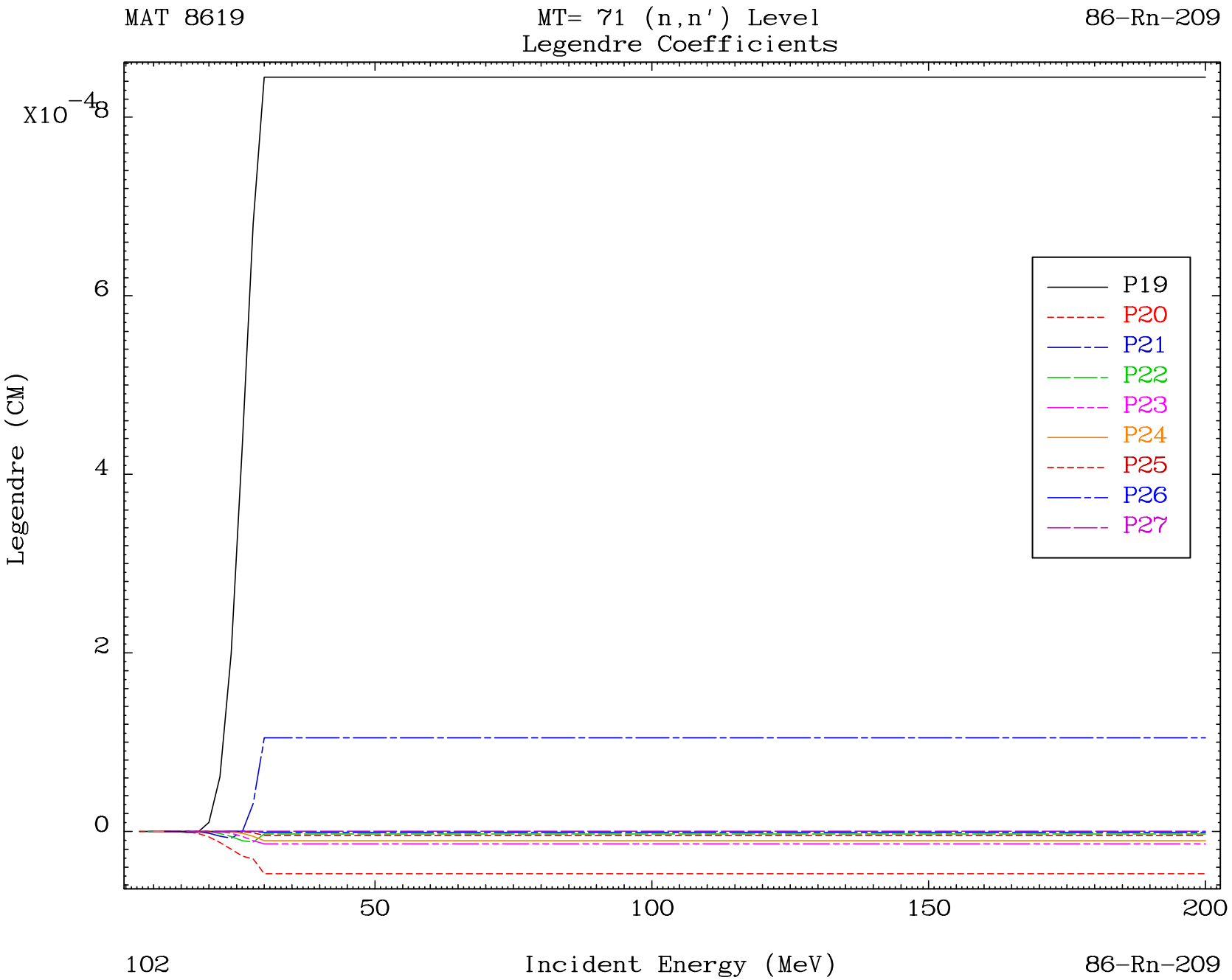

MAT 8619
MT= 70 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
50
100
150
200
97
Incident Energy (MeV)
86-Rn-209

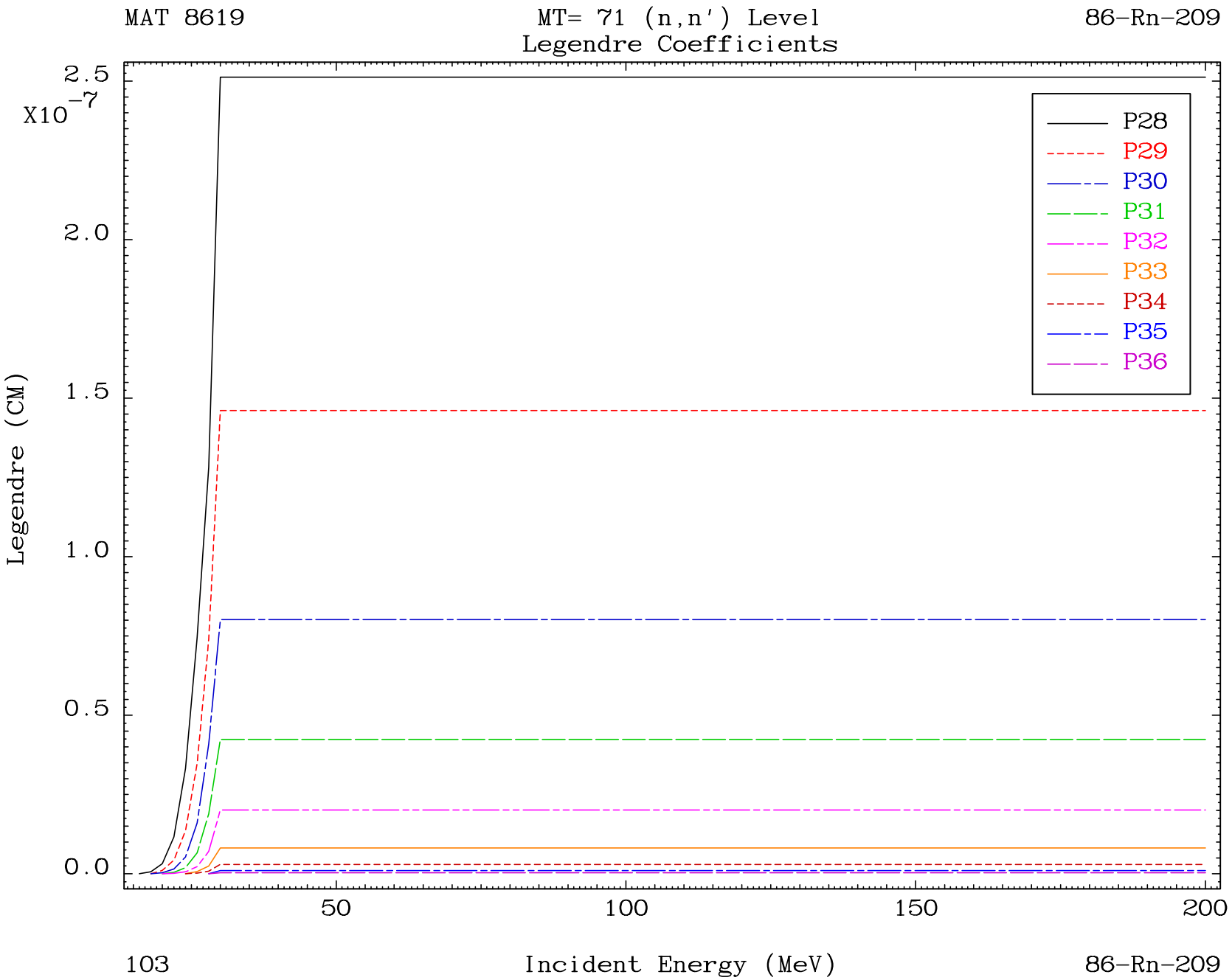

MAT 8619
MT= 70 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-4
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
98
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30

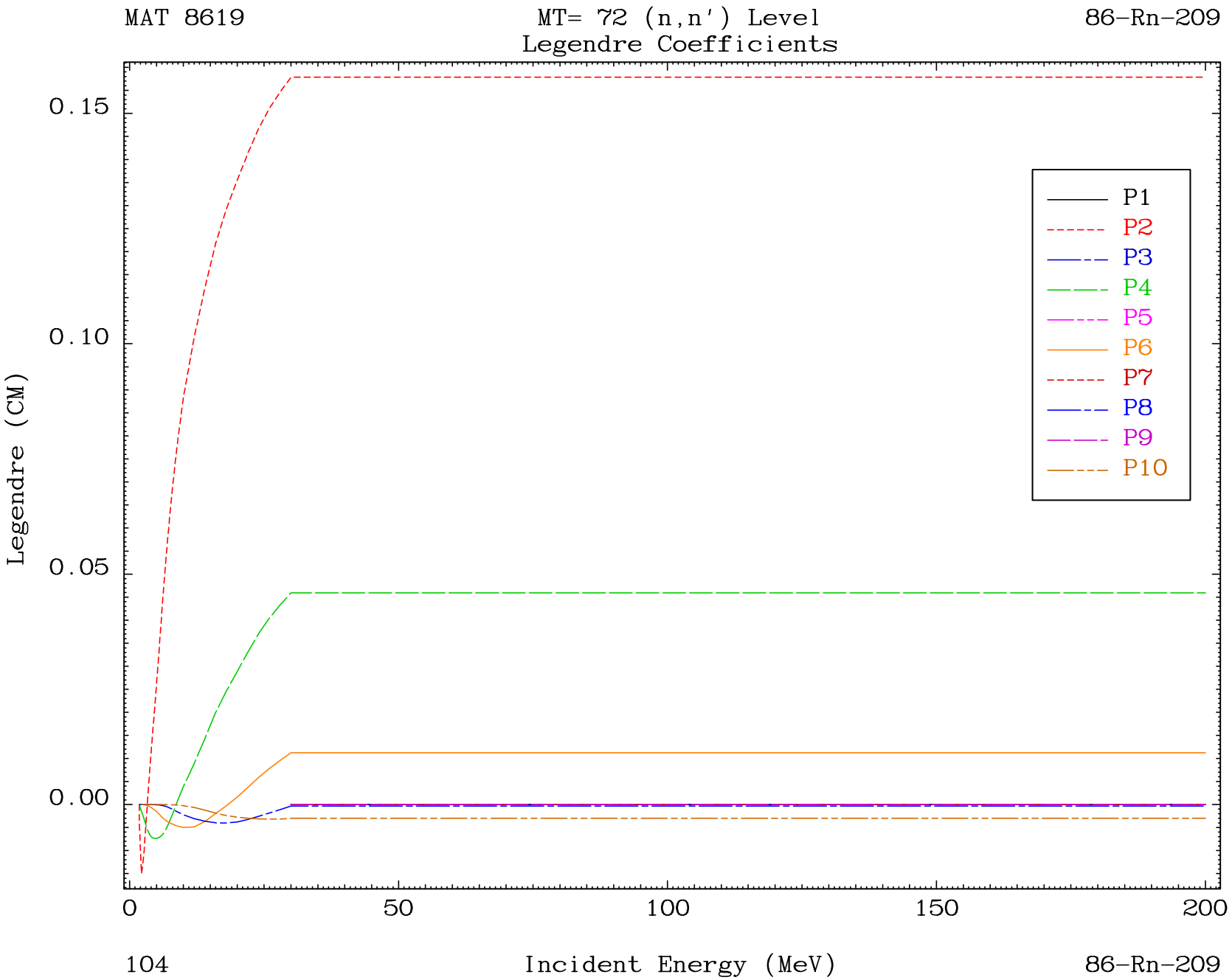

MAT 8619
MT= 70 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-4
4
3
2
1
0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
99
Incident Energy (MeV)
86-Rn-209

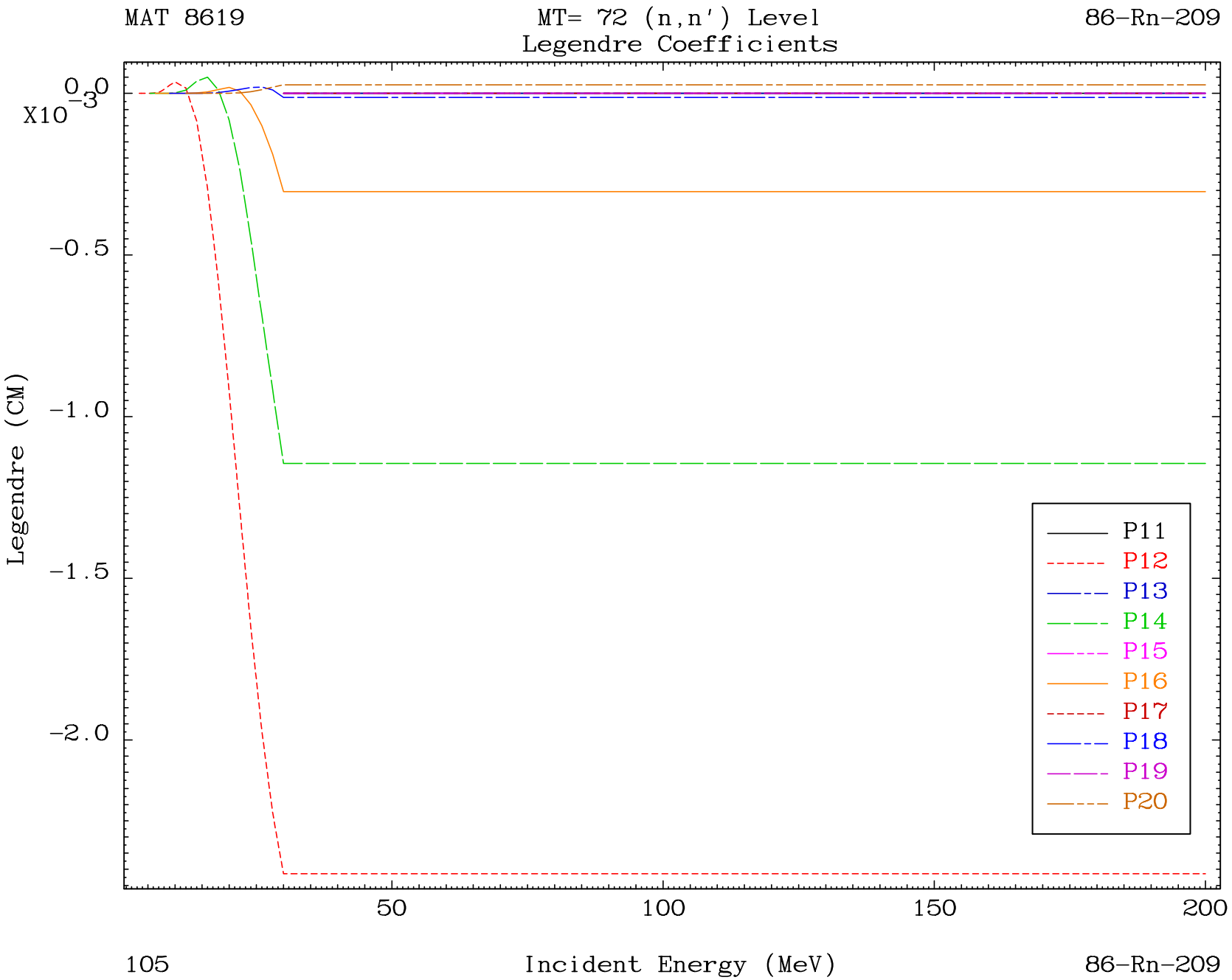

MAT 8619
MT= 71 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
100
Incident Energy (MeV)
86-Rn-209

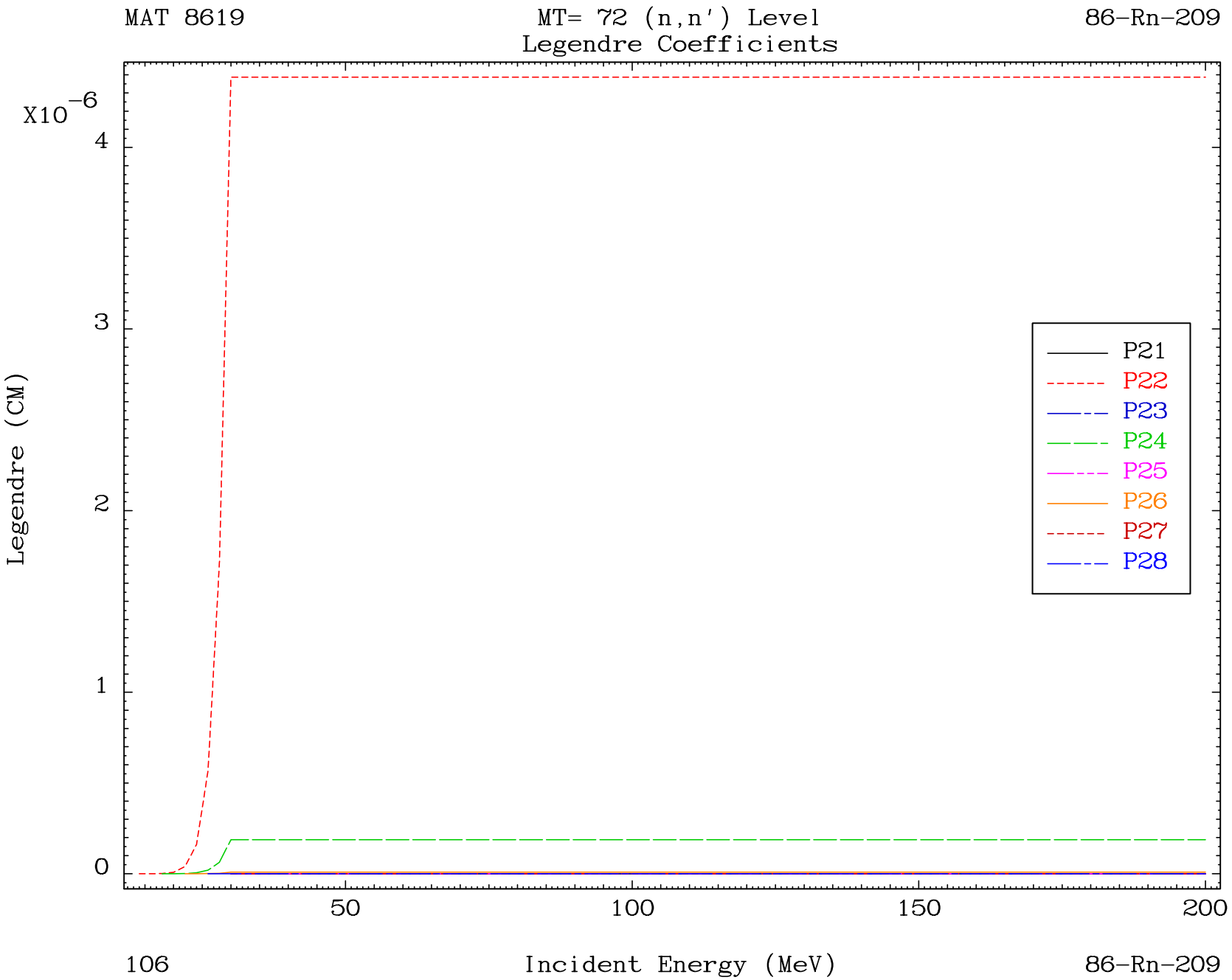

MAT 8619
MT= 71 (n,n') Level
Legendre Coefficients
86-Rn-209
0.005
0.000
-0.005
-0.010
-0.015
-0.020
Legendre (CM)
0
50
100
150
200
101
Incident Energy (MeV)
86-Rn-209
P10
P11
P12
P13
P14
P15
P16
P17
P18

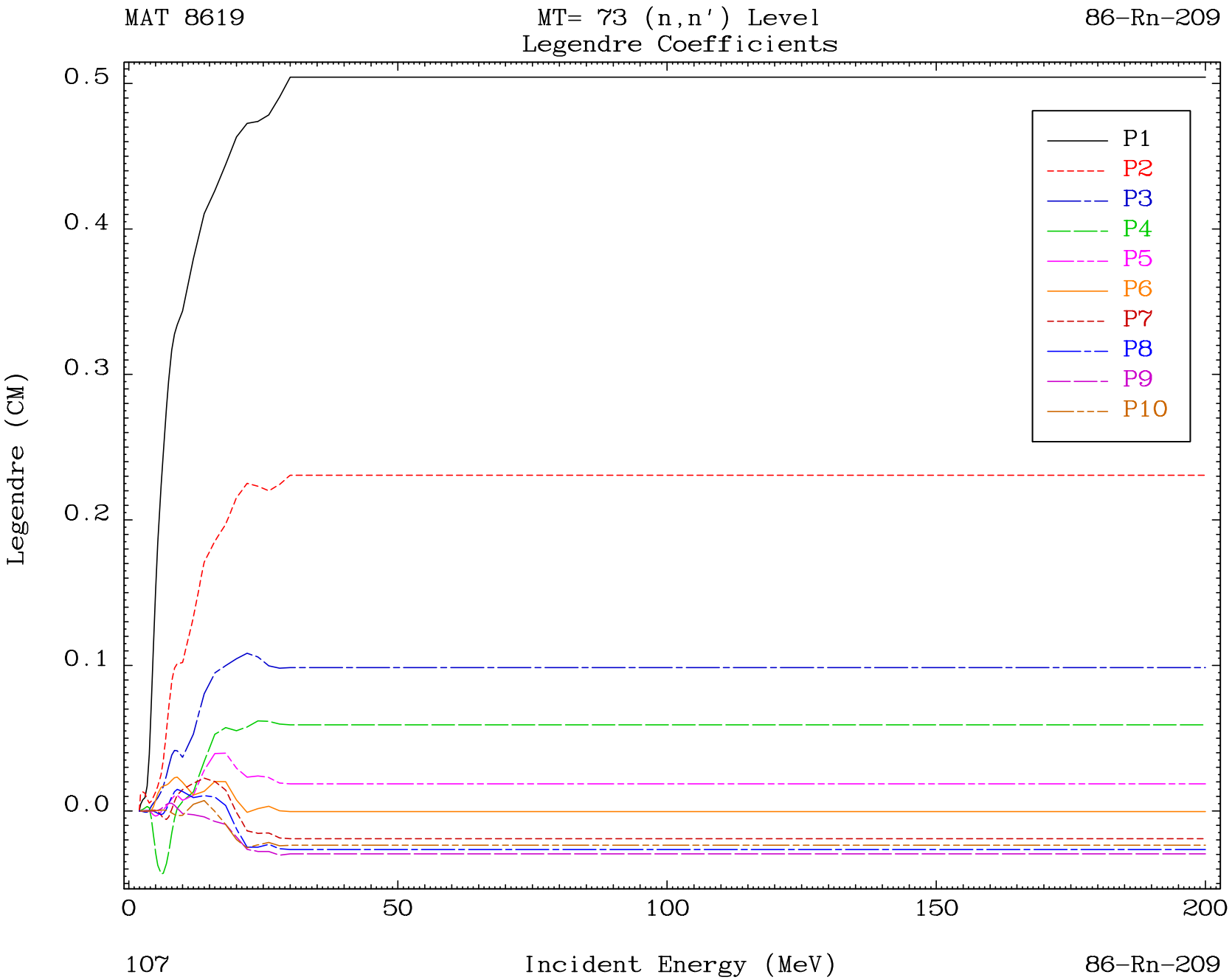

MAT 8619
MT= 71 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-4
8
6
4
2
0
Legendre (CM)
50
100
150
200
102
Incident Energy (MeV)
86-Rn-209
P19
P20
P21
P22
P23
P24
P25
P26
P27

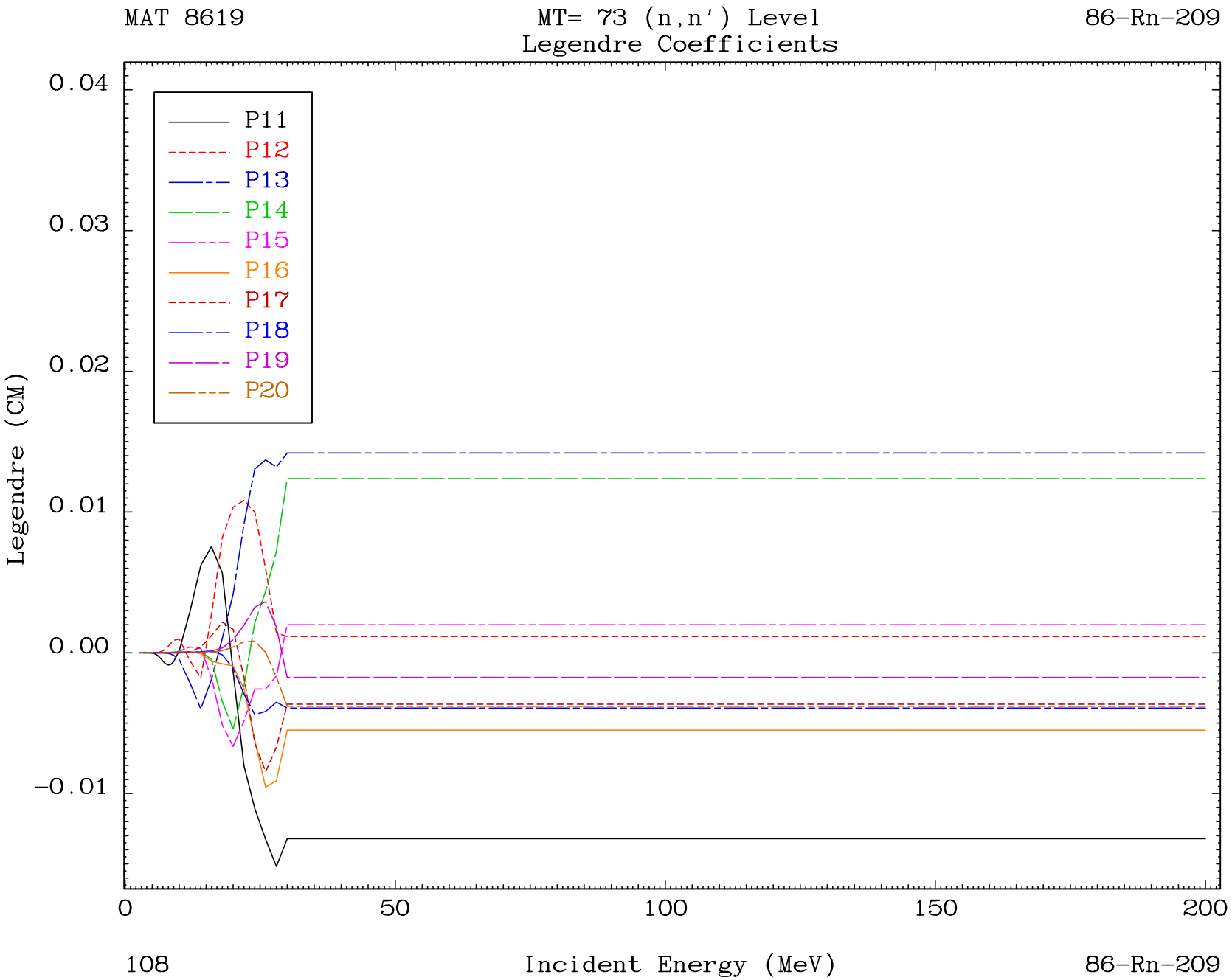

MAT 8619
MT= 71 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-7
2.5
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
103
Incident Energy (MeV)
86-Rn-209

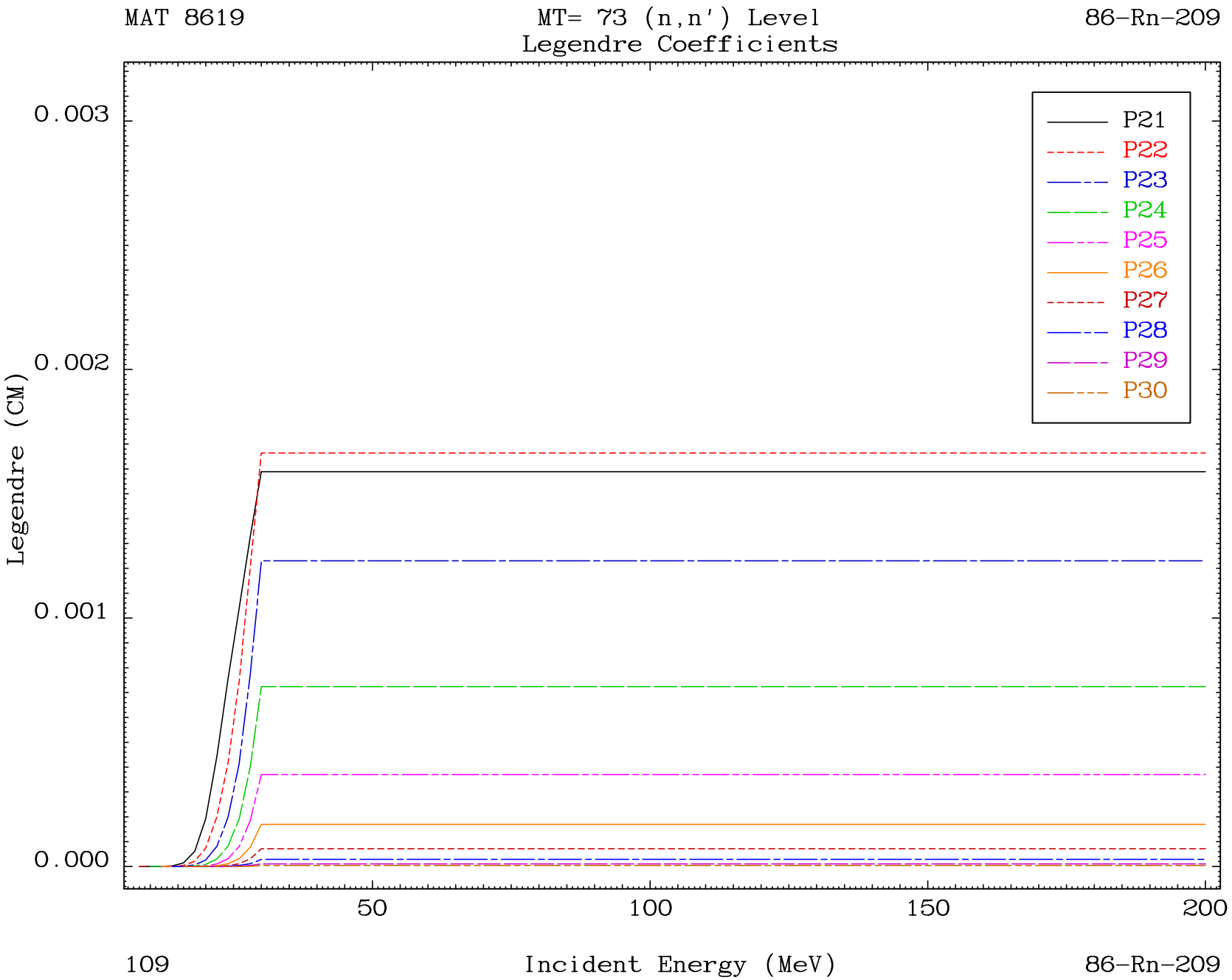

MAT 8619
MT= 72 (n,n') Level
Legendre Coefficients
86-Rn-209
0.15
0.10
0.05
0.00
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
0
50
100
150
200
104
Incident Energy (MeV)
86-Rn-209

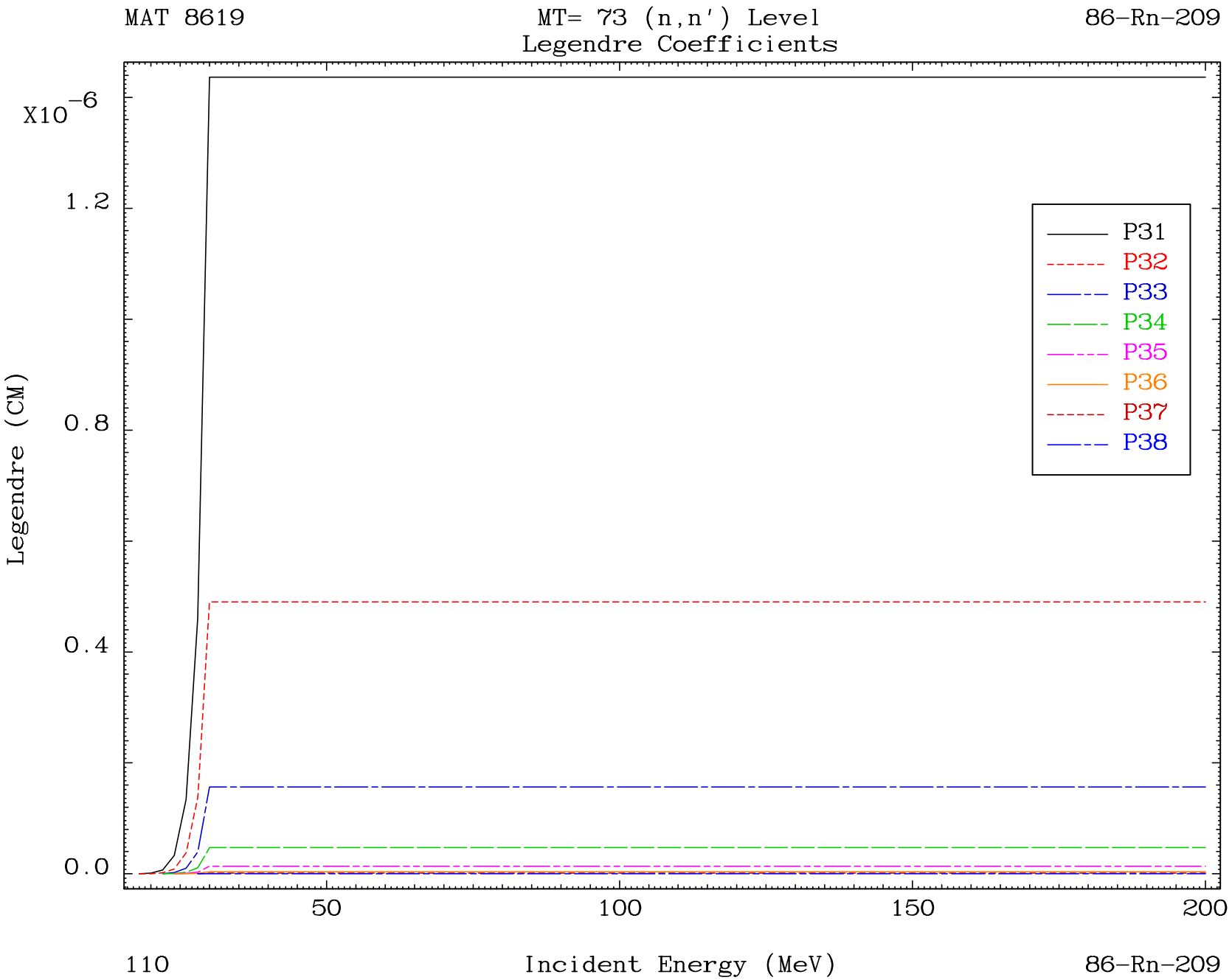

MAT 8619
MT= 72 (n,n') Level
Legendre Coefficients
86-Rn-209
X10-3
0.0
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
105
Incident Energy (MeV)
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20

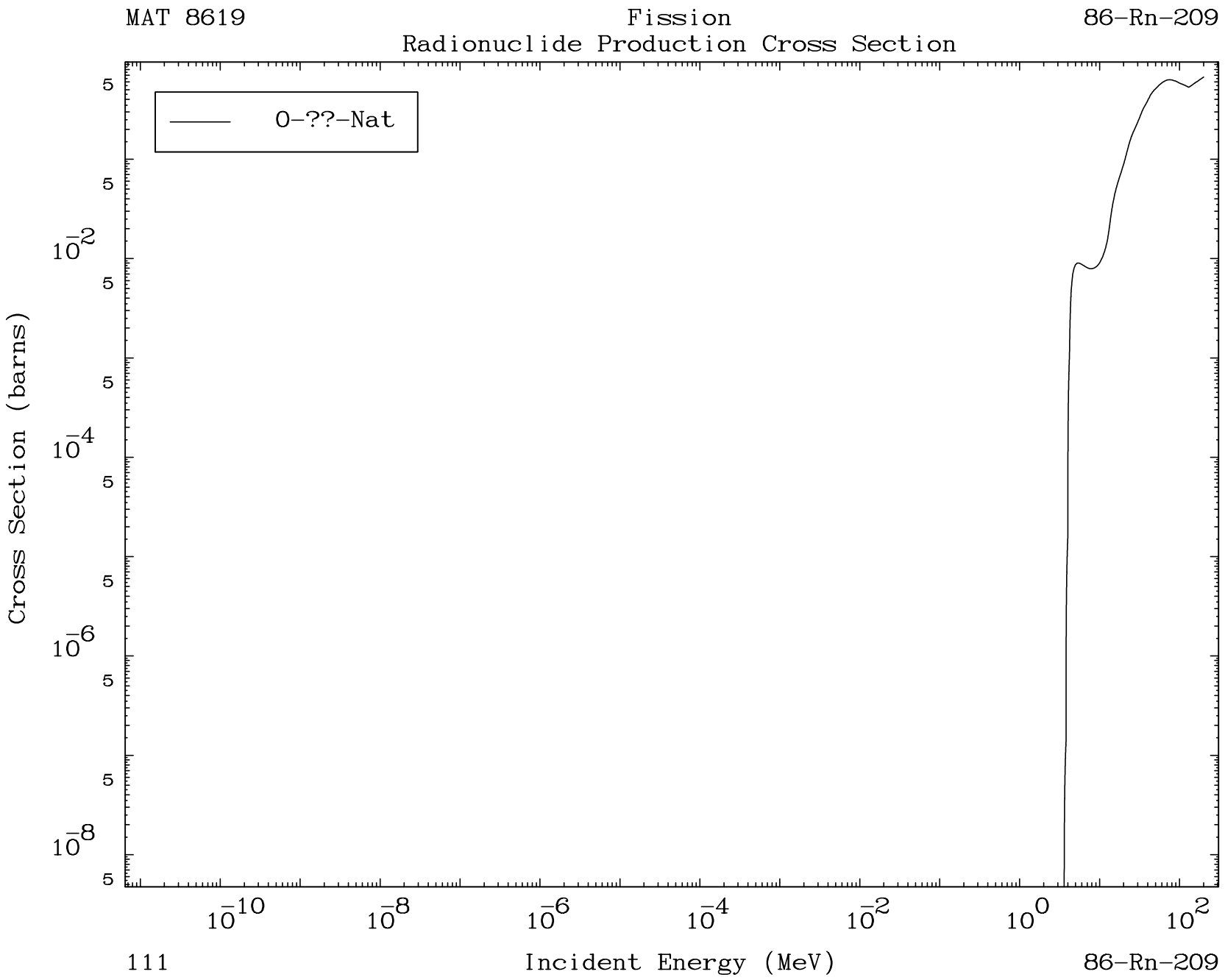

MAT 8619
MT= 72 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
4
3
2
1
0
Legendre (CM)
50
100
150
200
106
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28

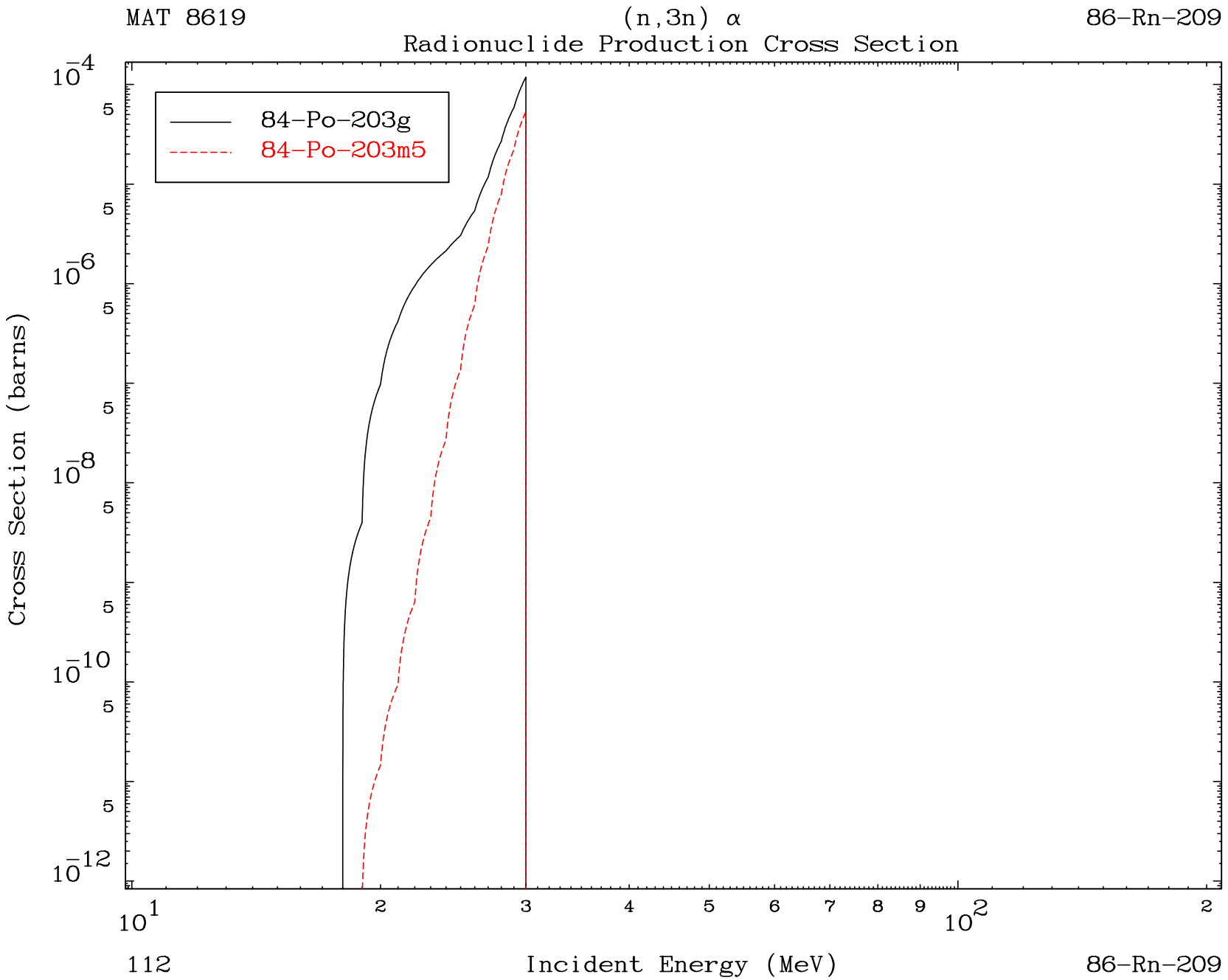

MAT 8619
MT= 73 (n,n') Level
Legendre Coefficients
86-Rn-209
Legendre (CM)
0.5
0.4
0.3
0.2
0.1
0.0
0
50
100
150
200
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
107
Incident Energy (MeV)
86-Rn-209

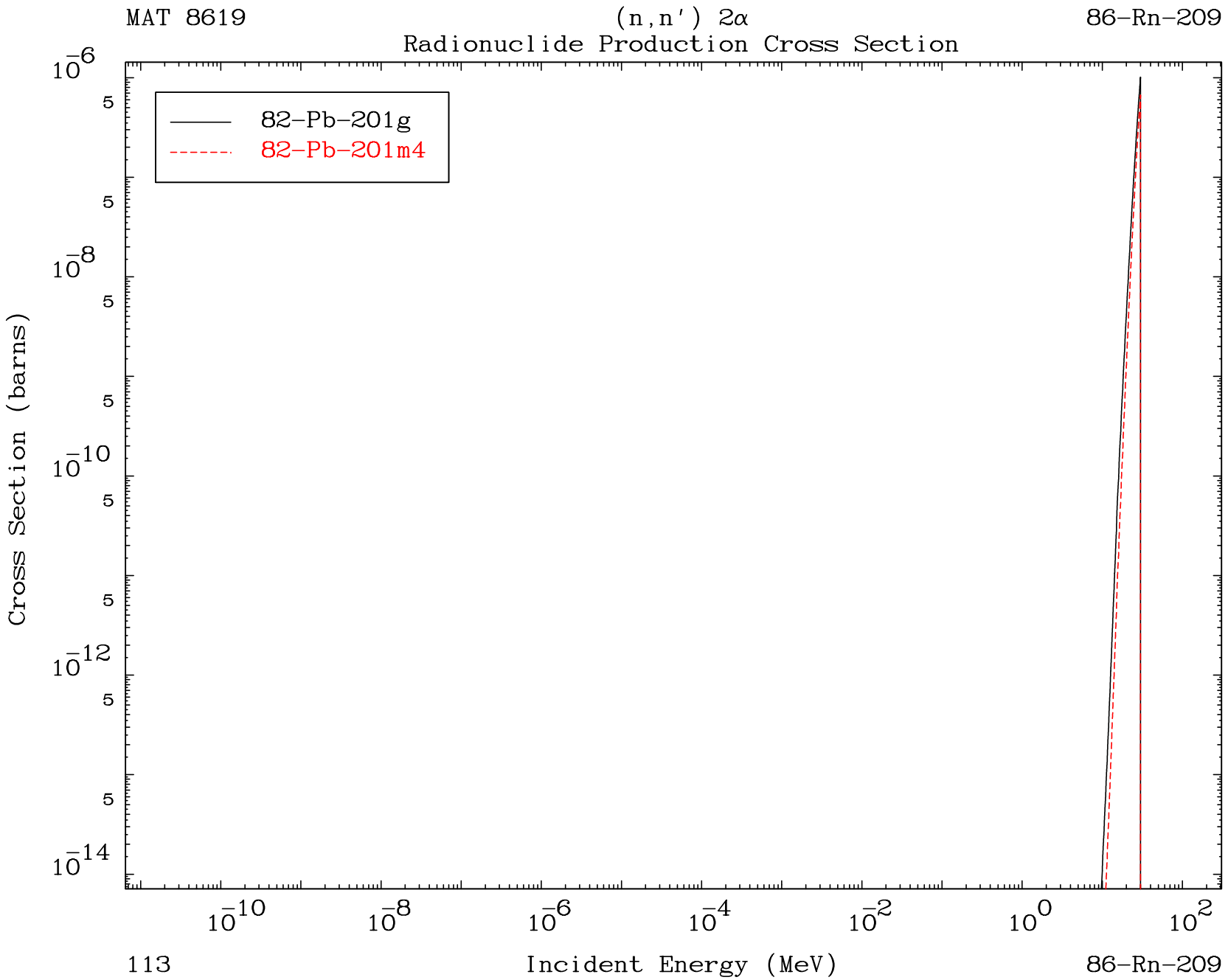

MAT 8619
MT= 73 (n,n') Level
Legendre Coefficients
86-Rn-209
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
108
Incident Energy (MeV)
86-Rn-209

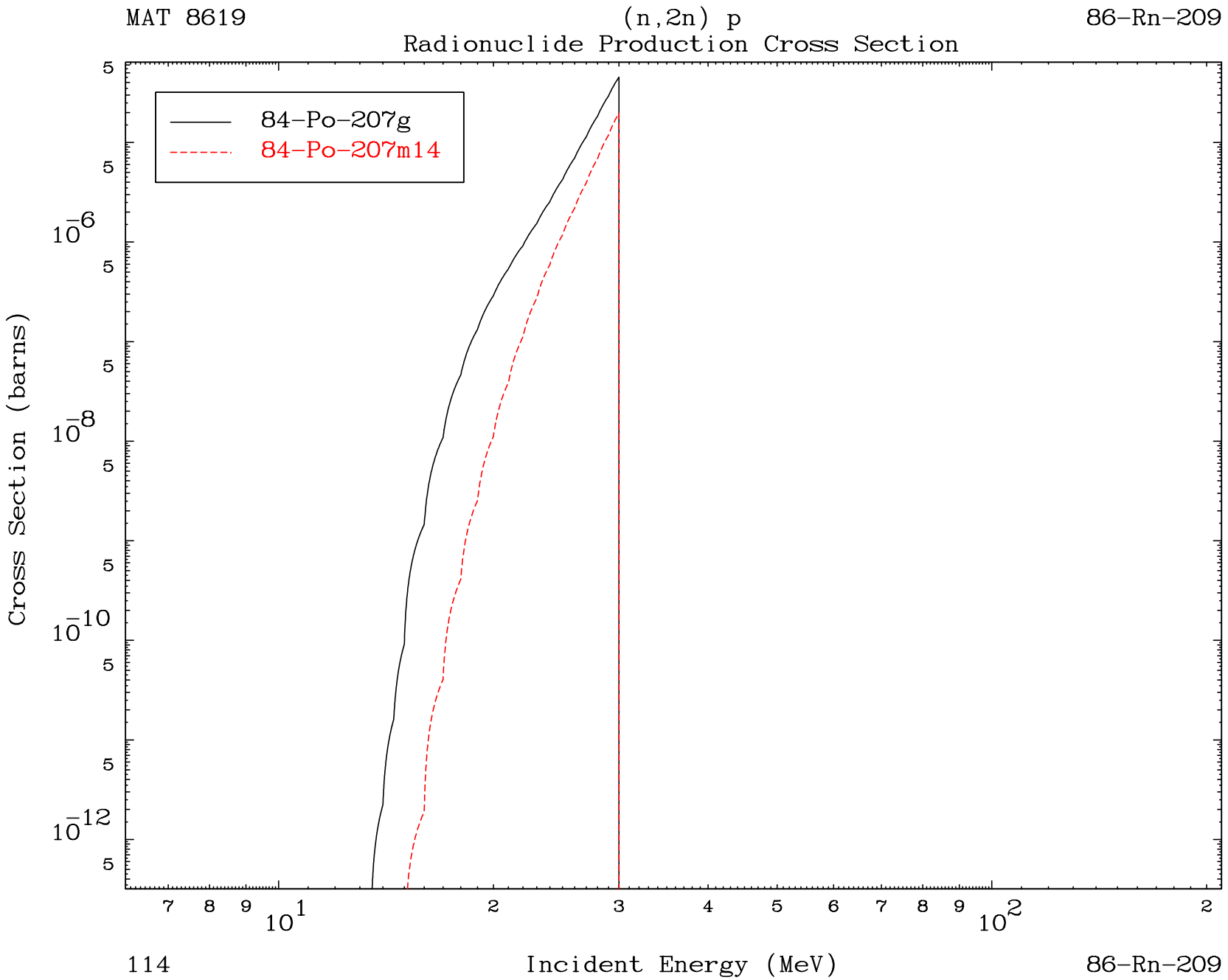

MAT 8619
MT= 73 (n,n') Level
Legendre Coefficients
86-Rn-209
0.003
0.002
0.001
0.000
Legendre (CM)
50
100
150
200
109
Incident Energy (MeV)
86-Rn-209
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30

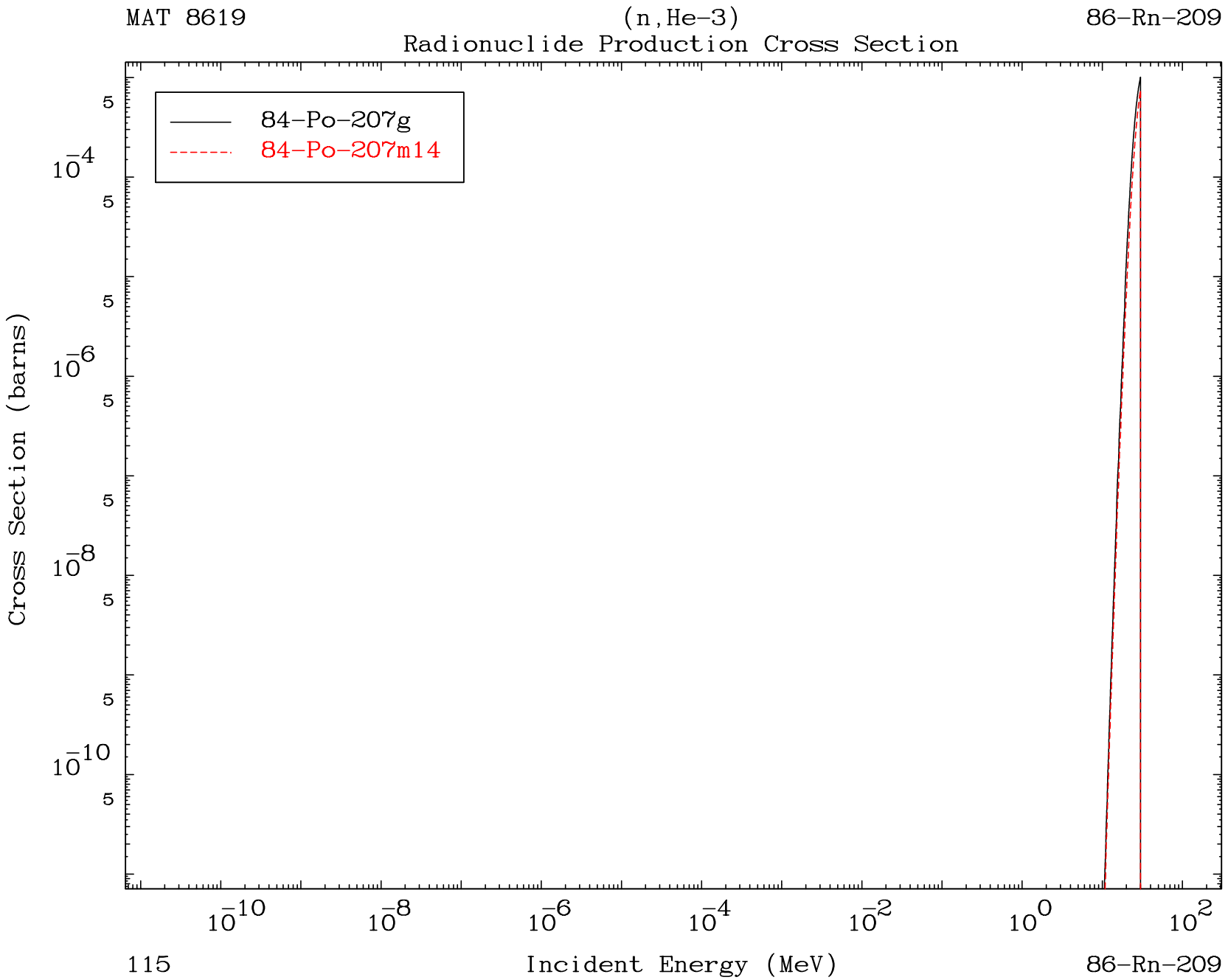

MAT 8619
MT= 73 (n,n') Level
Legendre Coefficients
86-Rn-209
X10^-6
1.2
0.8
0.4
0.0
Legendre (CM)
P31
P32
P33
P34
P35
P36
P37
P38
50
100
150
200
110
Incident Energy (MeV)
86-Rn-209

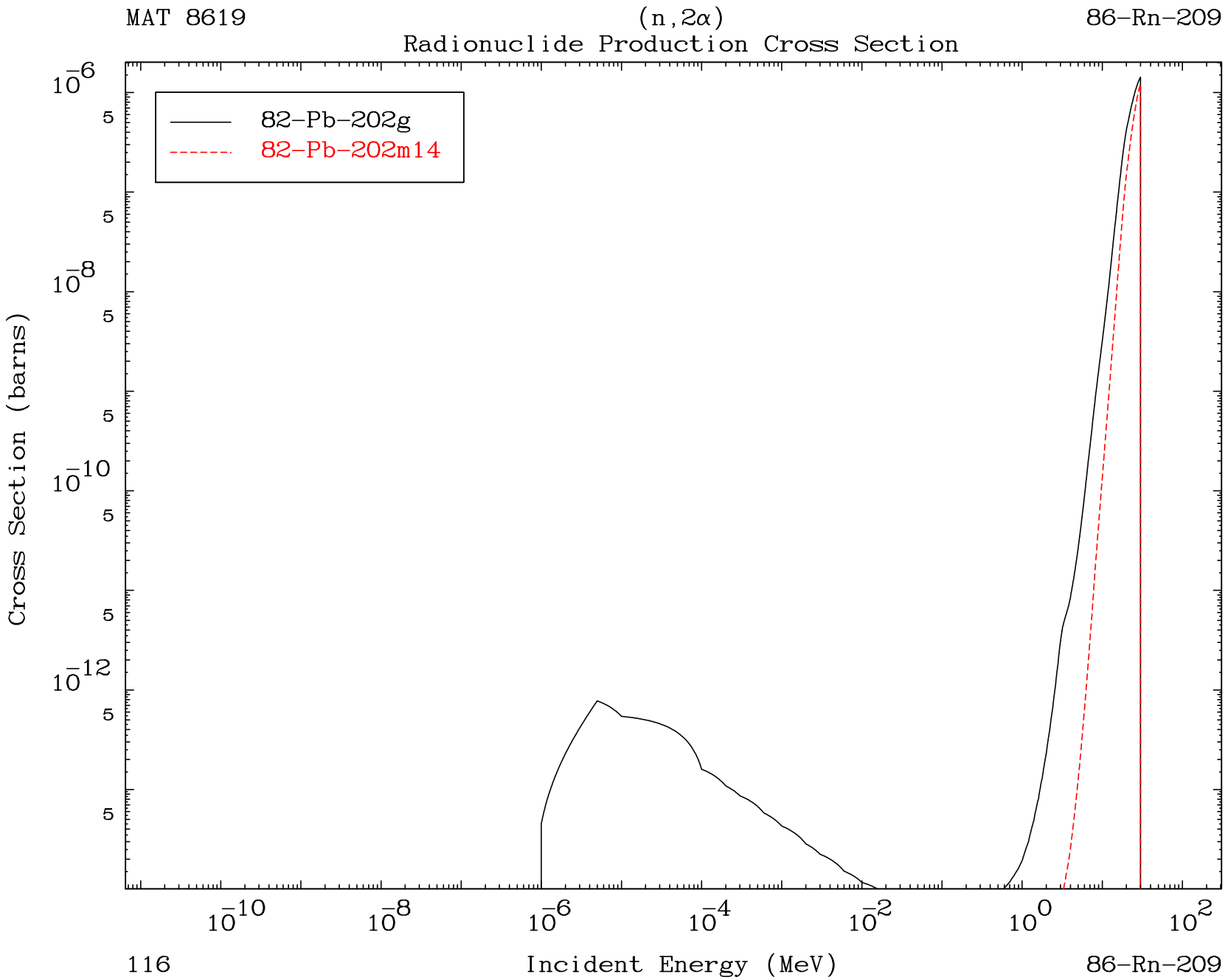

MAT 8619
Fission
86-Rn-209
Radionuclide Production Cross Section
0-??-Nat
Cross Section (barns)
Incident Energy (MeV)
111
86-Rn-209

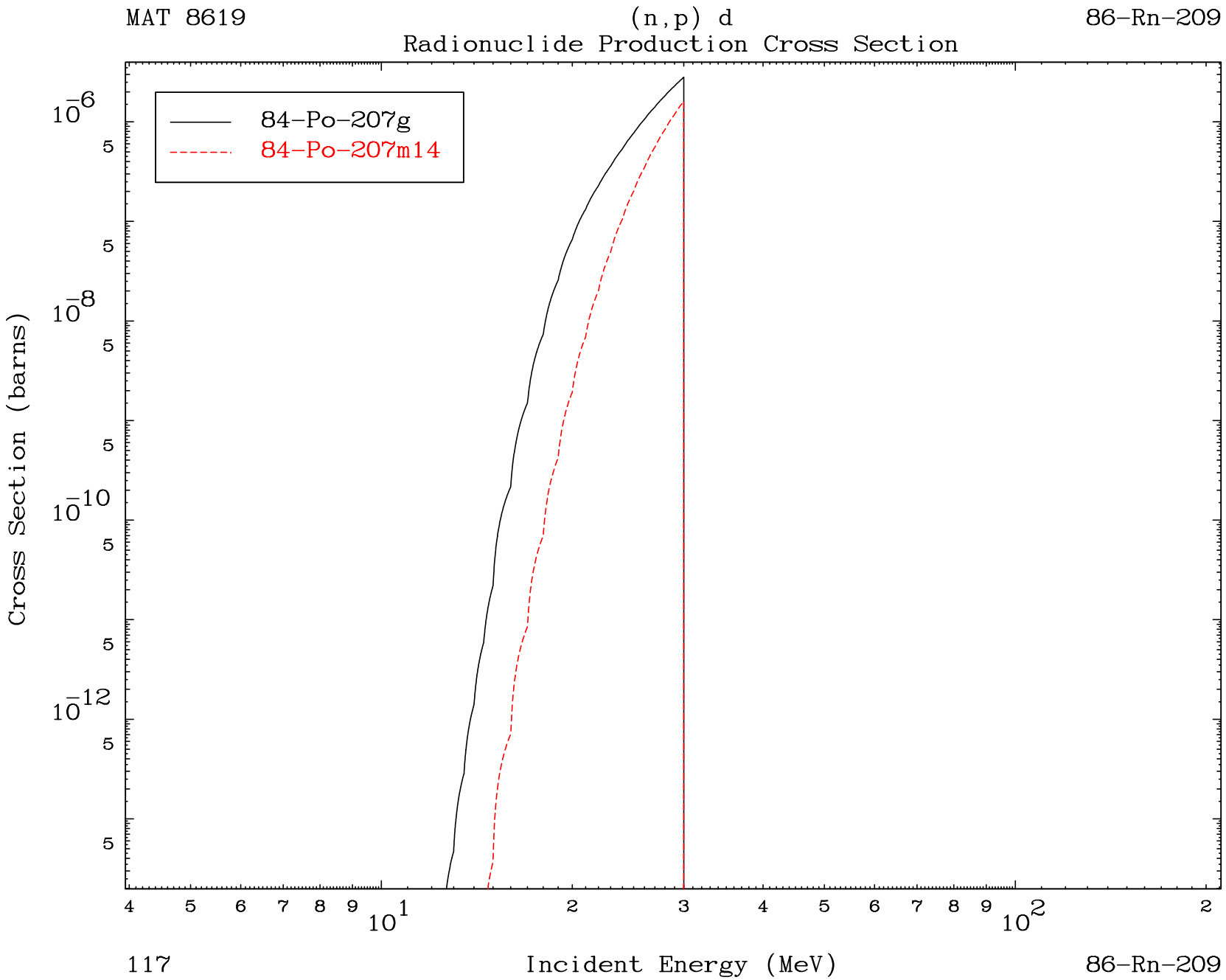

MAT 8619
(n,3n) α
86-Rn-209
Radionuclide Production Cross Section
84-Po-203g
84-Po-203m5
Cross Section (barns)
10^-4
10^-6
10^-8
10^-10
10^-12
5
10^1
2
3
4
5
6
7
8
9
10^2
2
112
Incident Energy (MeV)
86-Rn-209


MAT 8619
(n,n') 2α
86-Rn-209
Radionuclide Production Cross Section
82-Pb-201g
82-Pb-201m4
Cross Section (barns)
Incident Energy (MeV)
113
86-Rn-209


MAT 8619
(n,2n) p
86-Rn-209
Radionuclide Production Cross Section
84-Po-207g
84-Po-207m14
Cross Section (barns)
Incident Energy (MeV)
114
86-Rn-209


MAT 8619
(n,He-3)
86-Rn-209
Radionuclide Production Cross Section
84-Po-207g
84-Po-207m14
Cross Section (barns)
Incident Energy (MeV)
115
86-Rn-209


MAT 8619
(n,2α)
86-Rn-209
Radionuclide Production Cross Section
82-Pb-202g
82-Pb-202m14
Cross Section (barns)
Incident Energy (MeV)
116
86-Rn-209


MAT 8619
(n,p) d
86-Rn-209
Radionuclide Production Cross Section
84-Po-207g
84-Po-207m14
Cross Section (barns)
10^-6
10^-8
10^-10
10^-12
5
4 5 6 7 8 9 10^1 2 3 4 5 6 7 8 9 10^2 2
117
Incident Energy (MeV)
86-Rn-209