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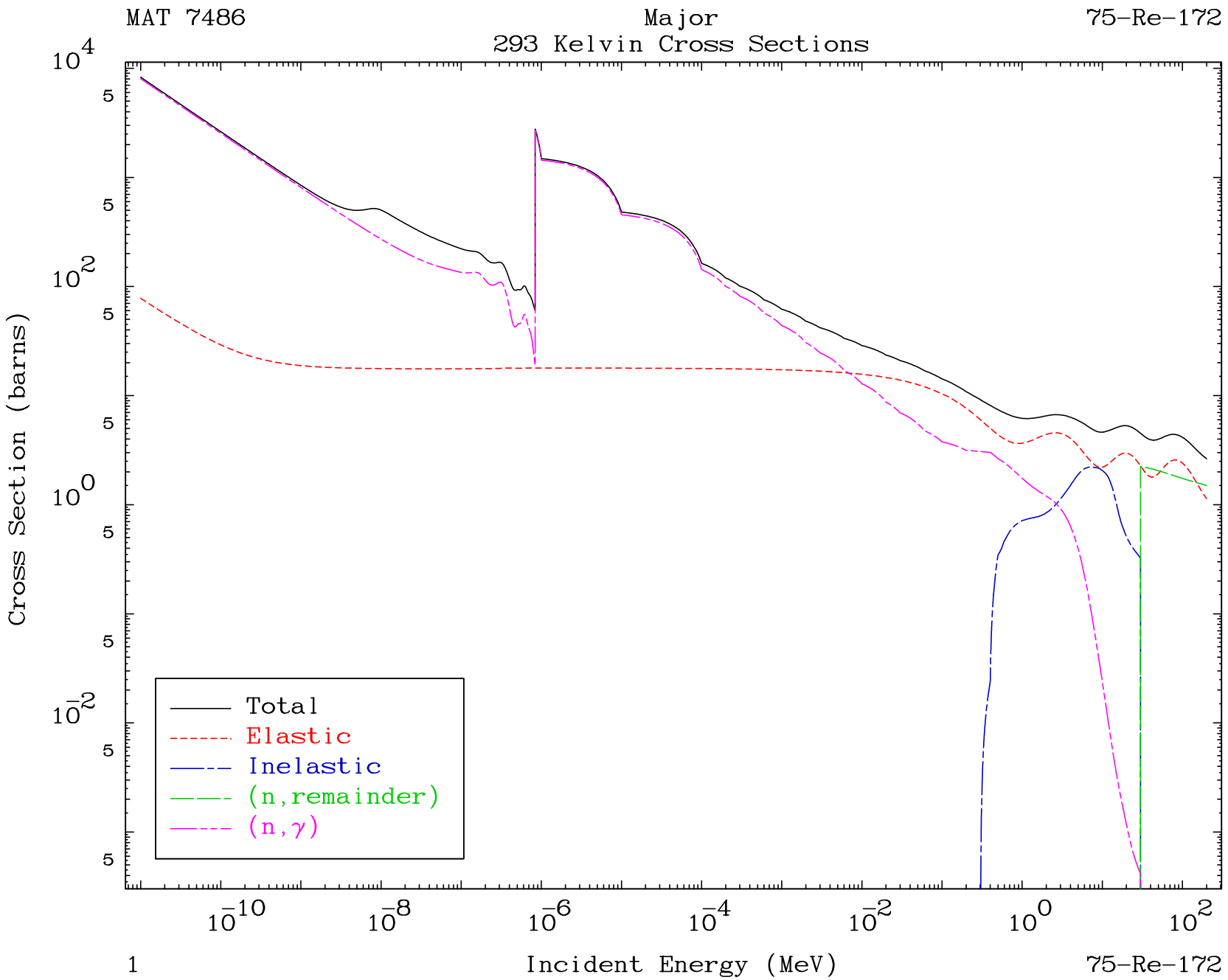
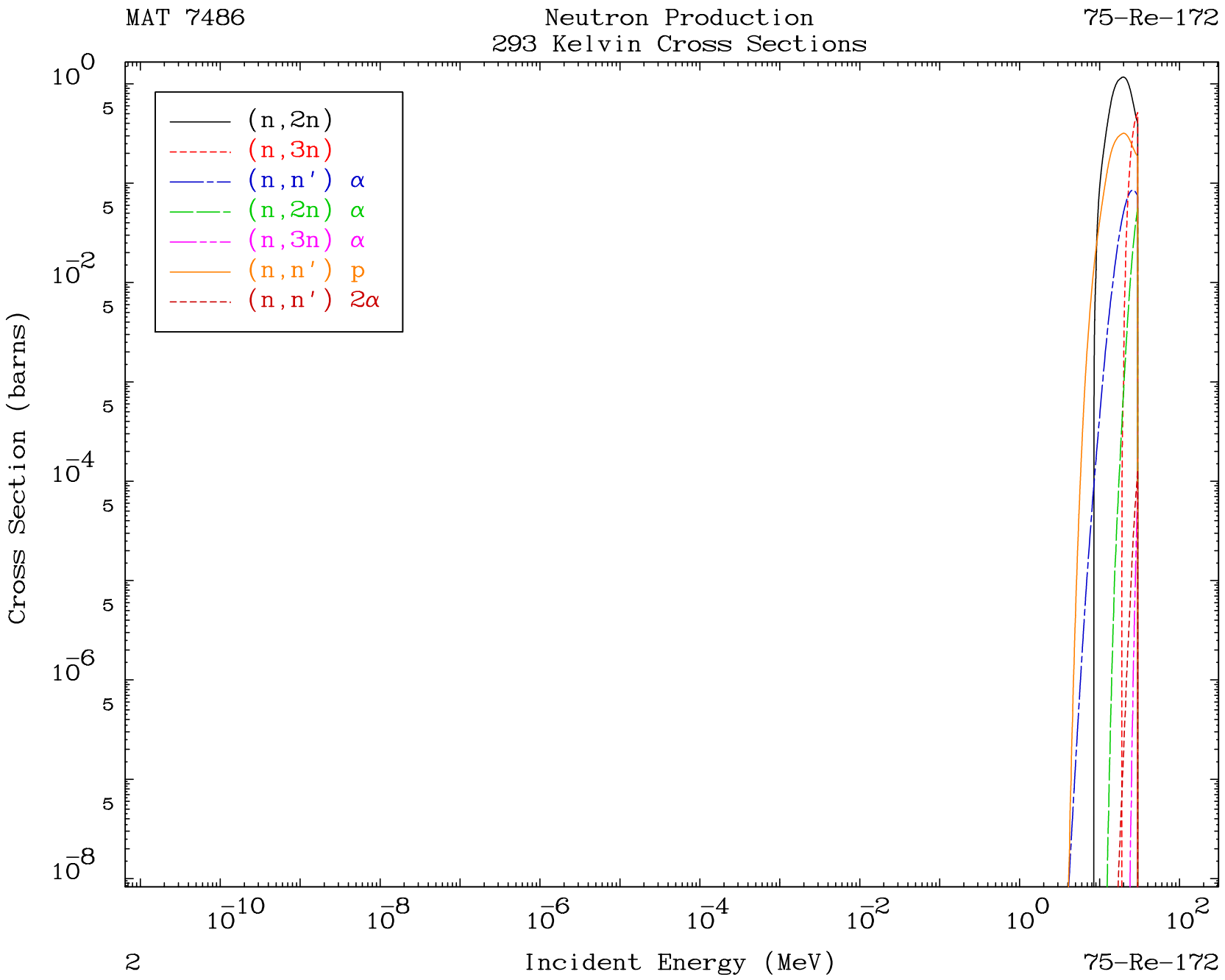
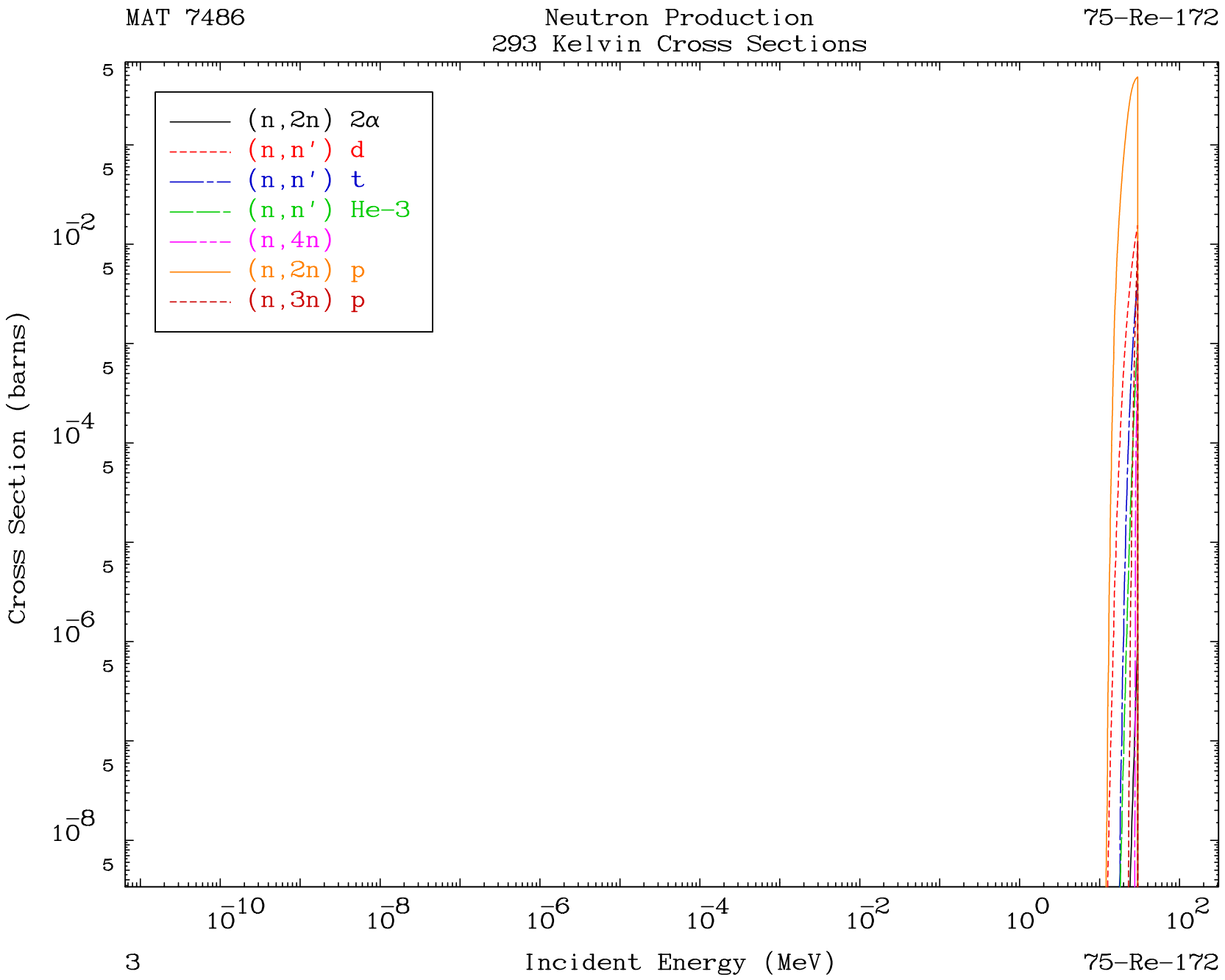
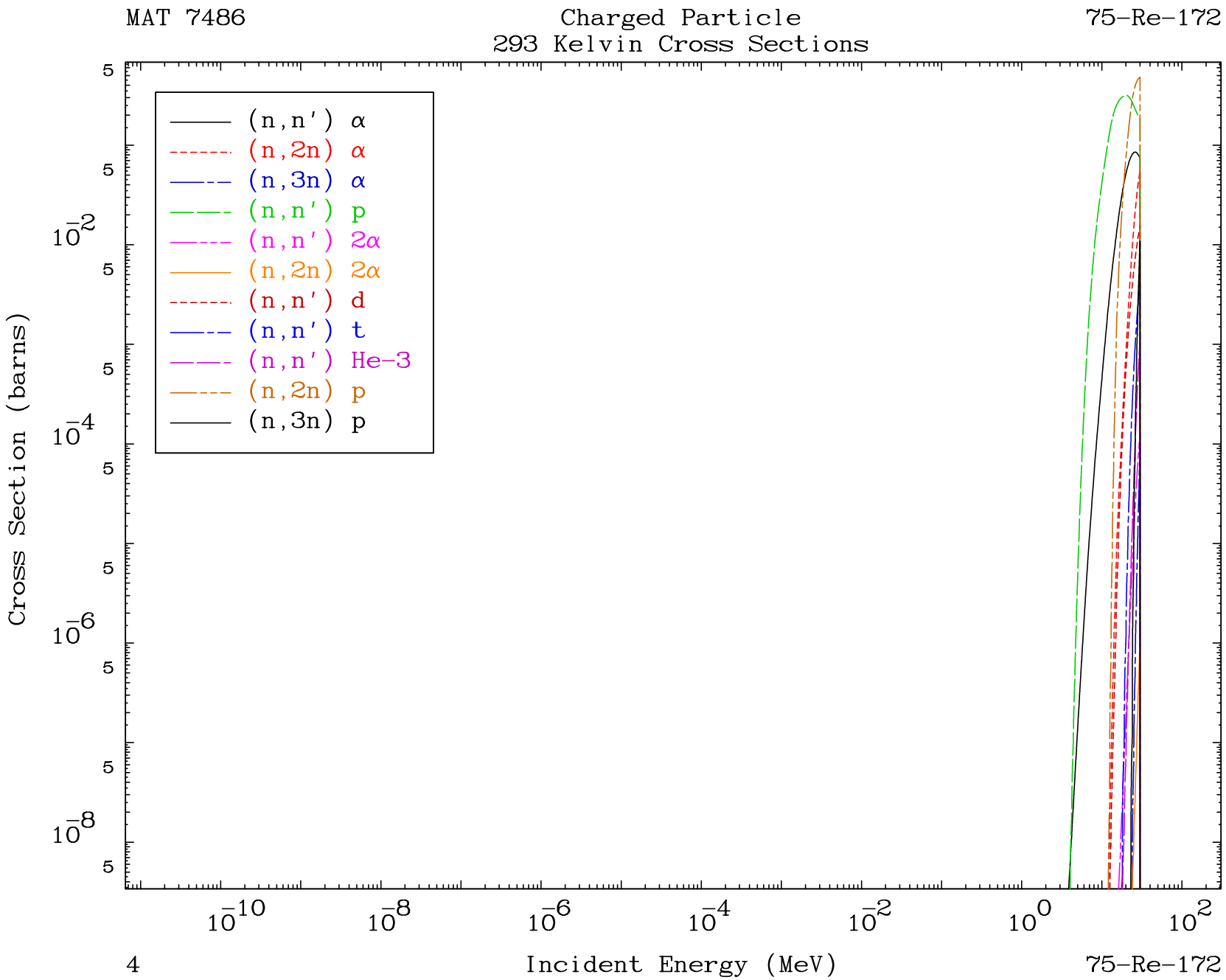
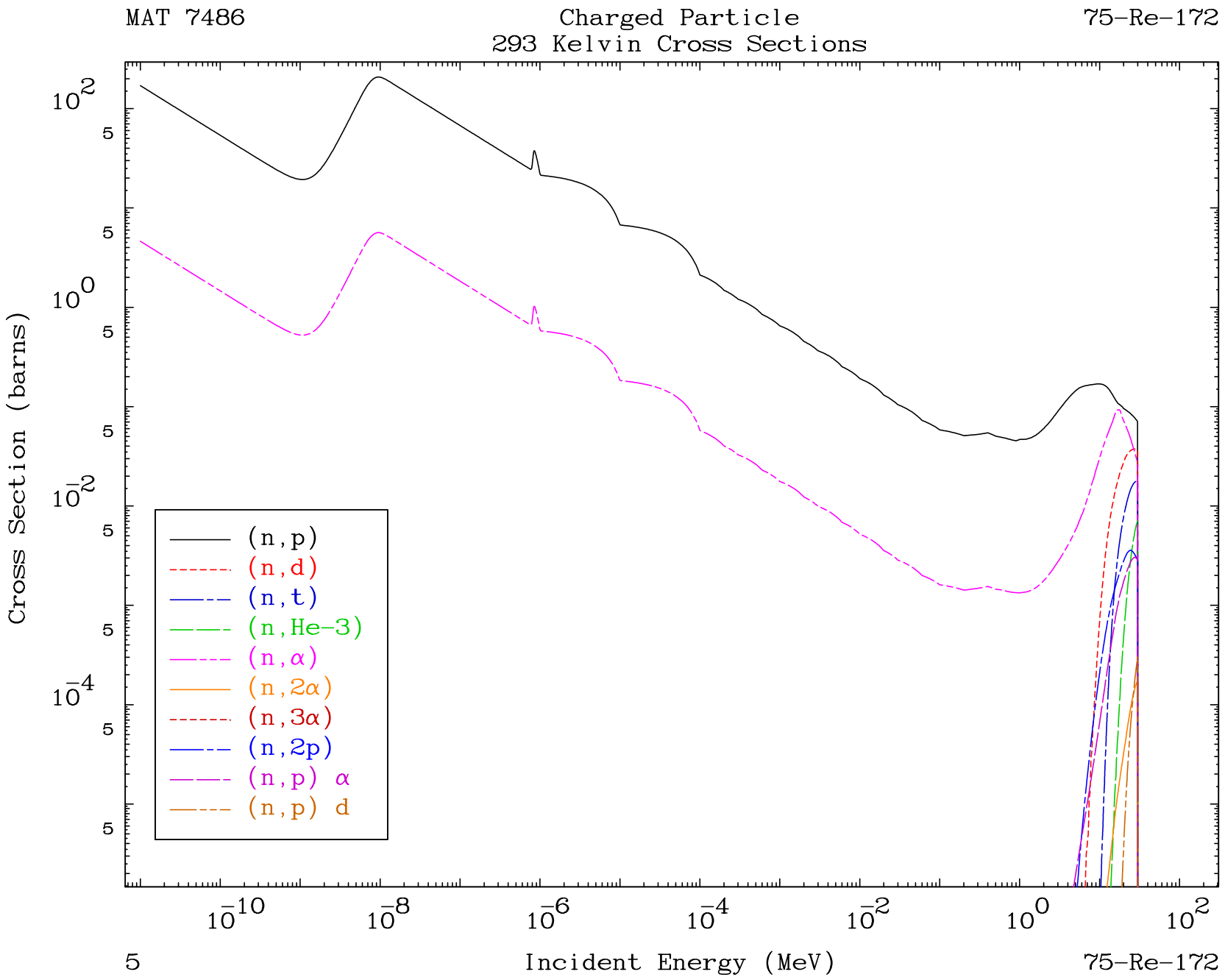
Press Mouse Button to Start

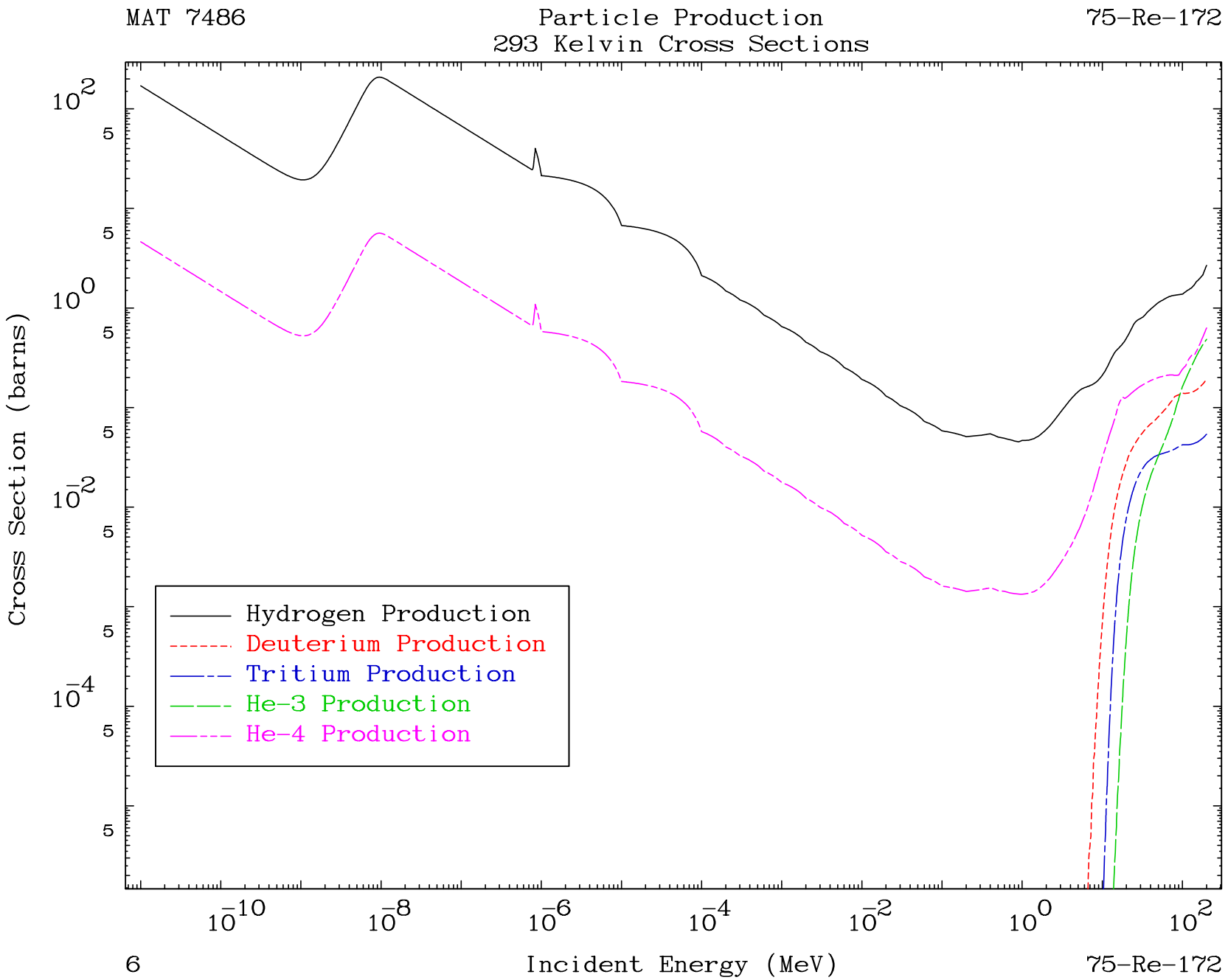

MAT 7486
Major
75-Re-172
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
Total
Elastic
Inelastic
(n,remainder)
(n,γ)
1
75-Re-172

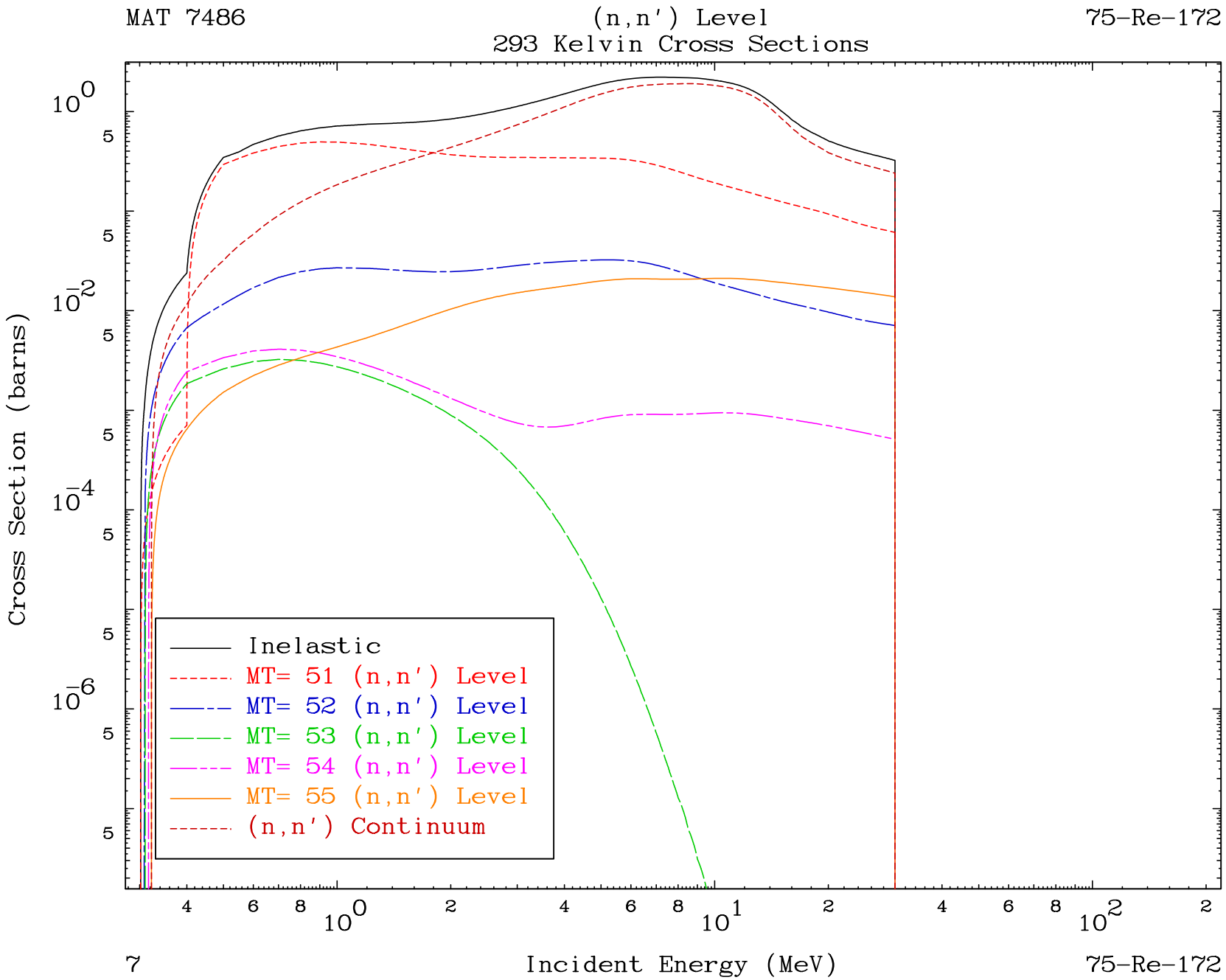

MAT 7486
Neutron Production
293 Kelvin Cross Sections
75-Re-172
(n,2n)
(n,3n)
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
Cross Section (barns)
Incident Energy (MeV)
2
75-Re-172

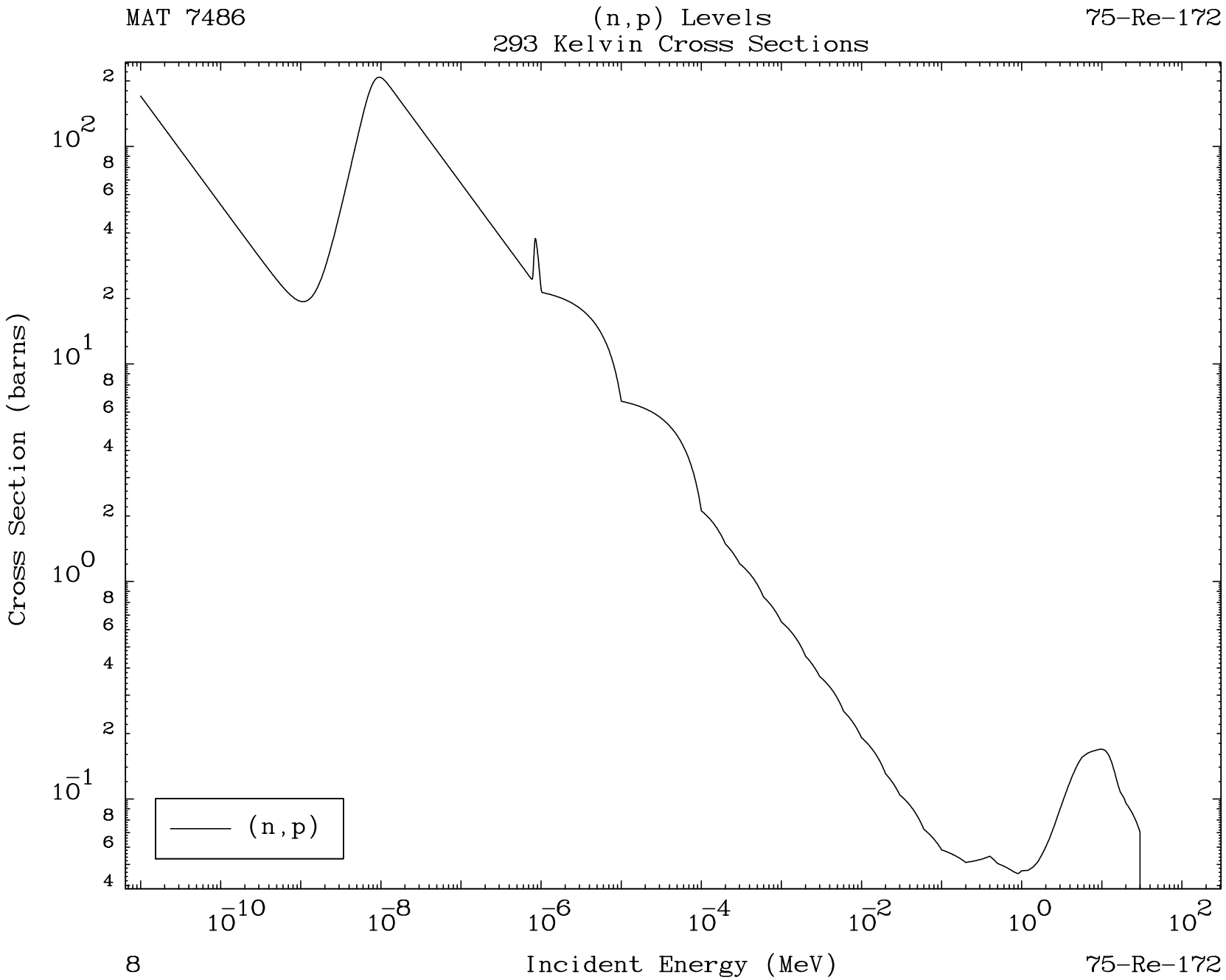

MAT 7486
Neutron Production
293 Kelvin Cross Sections
75-Re-172
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,4n)
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
3
75-Re-172

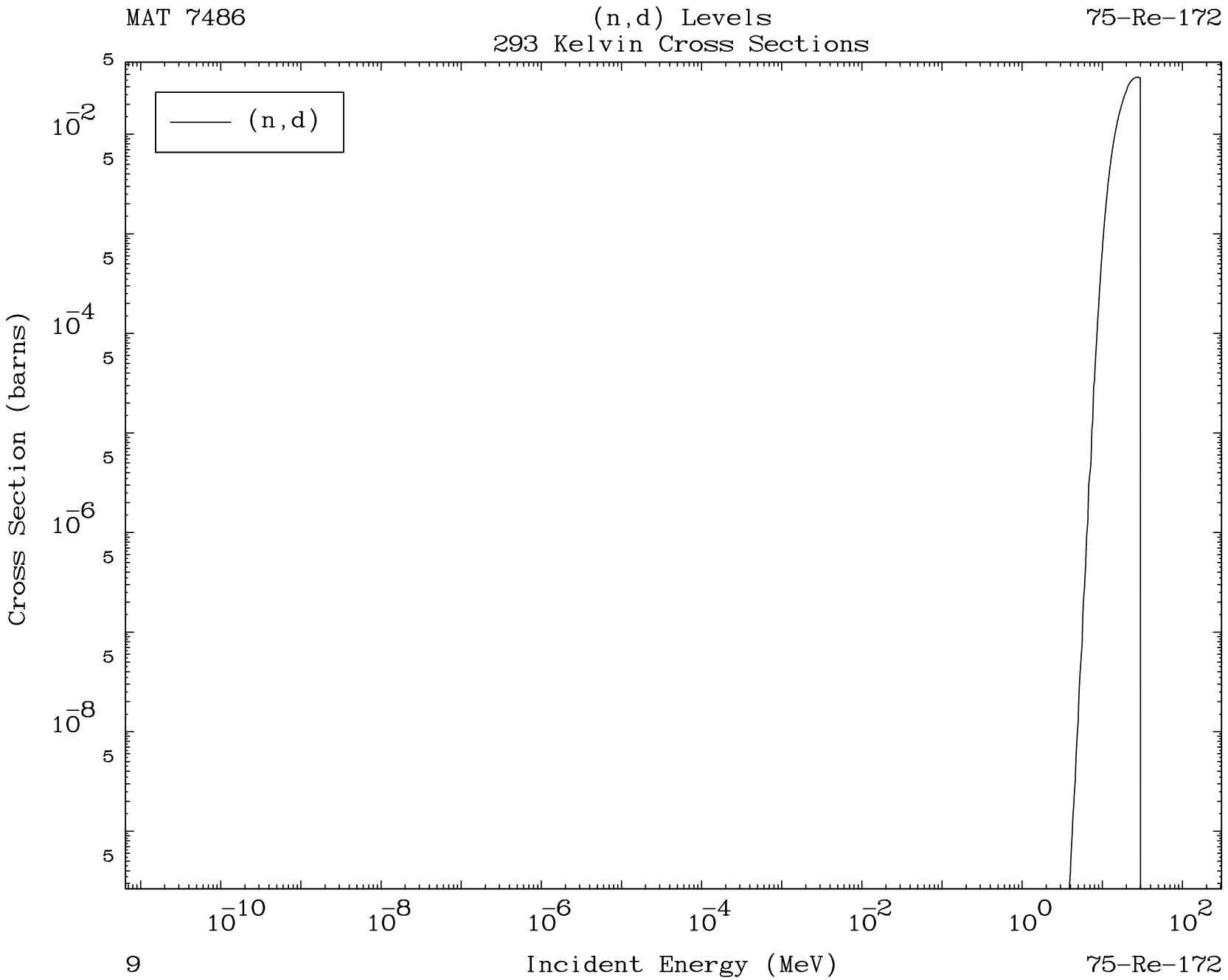

MAT 7486
Charged Particle
75-Re-172
293 Kelvin Cross Sections
(n,n') α
(n,2n) α
(n,3n) α
(n,n') p
(n,n') 2α
(n,2n) 2α
(n,n') d
(n,n') t
(n,n') He-3
(n,2n) p
(n,3n) p
Cross Section (barns)
Incident Energy (MeV)
4
75-Re-172

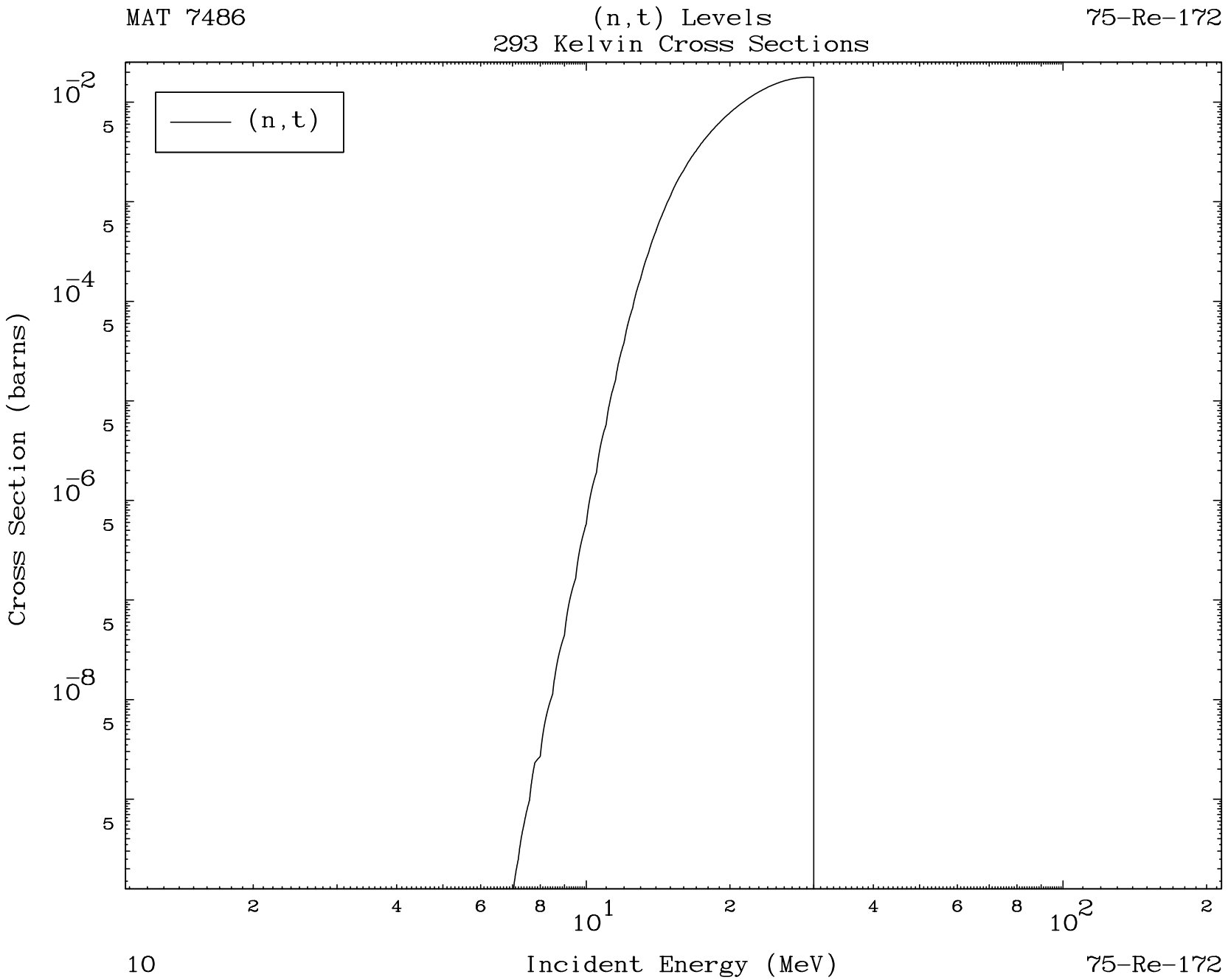

MAT 7486
Charged Particle
293 Kelvin Cross Sections
75-Re-172
Cross Section (barns)
Incident Energy (MeV)
(n,p)
(n,d)
(n,t)
(n,He-3)
(n,α)
(n,2α)
(n,3α)
(n,2p)
(n,p) α
(n,p) d

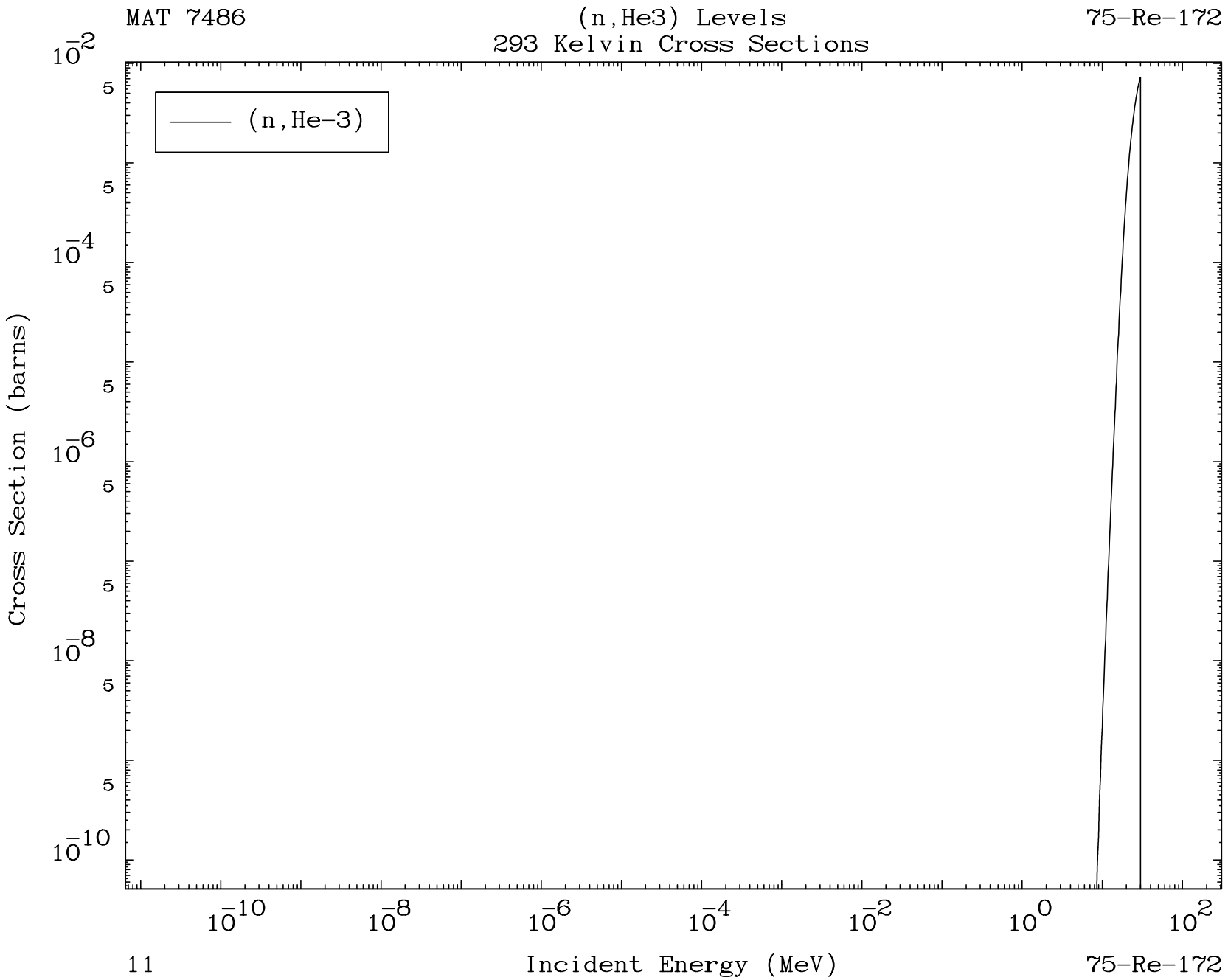

MAT 7486
Particle Production
293 Kelvin Cross Sections
75-Re-172
Cross Section (barns)
Incident Energy (MeV)
Hydrogen Production
Deuterium Production
Tritium Production
He-3 Production
He-4 Production
6
75-Re-172

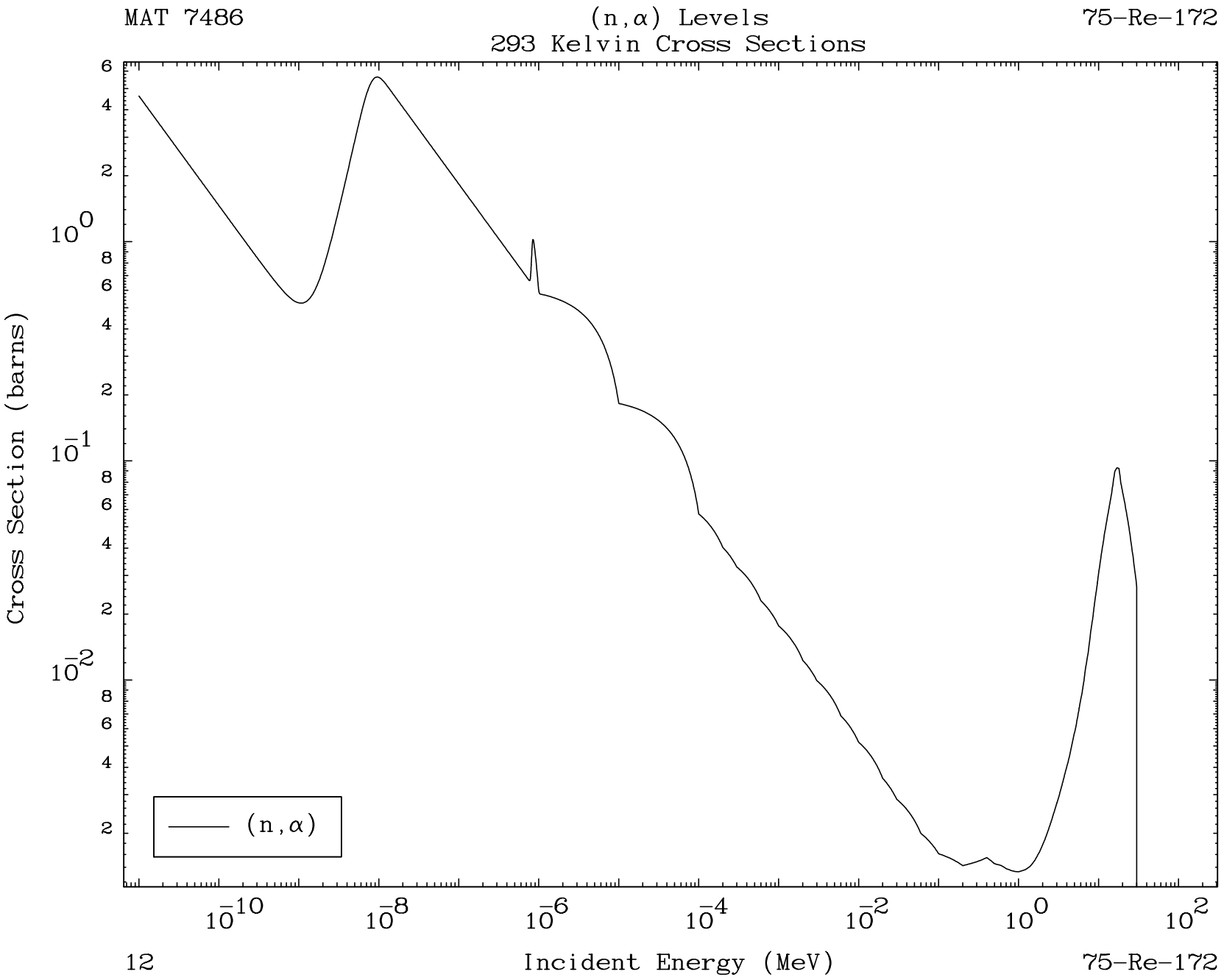

MAT 7486
(n,n') Level
75-Re-172
293 Kelvin Cross Sections
Cross Section (barns)
Incident Energy (MeV)
7
75-Re-172
Inelastic
MT= 51 (n,n') Level
MT= 52 (n,n') Level
MT= 53 (n,n') Level
MT= 54 (n,n') Level
MT= 55 (n,n') Level
(n,n') Continuum

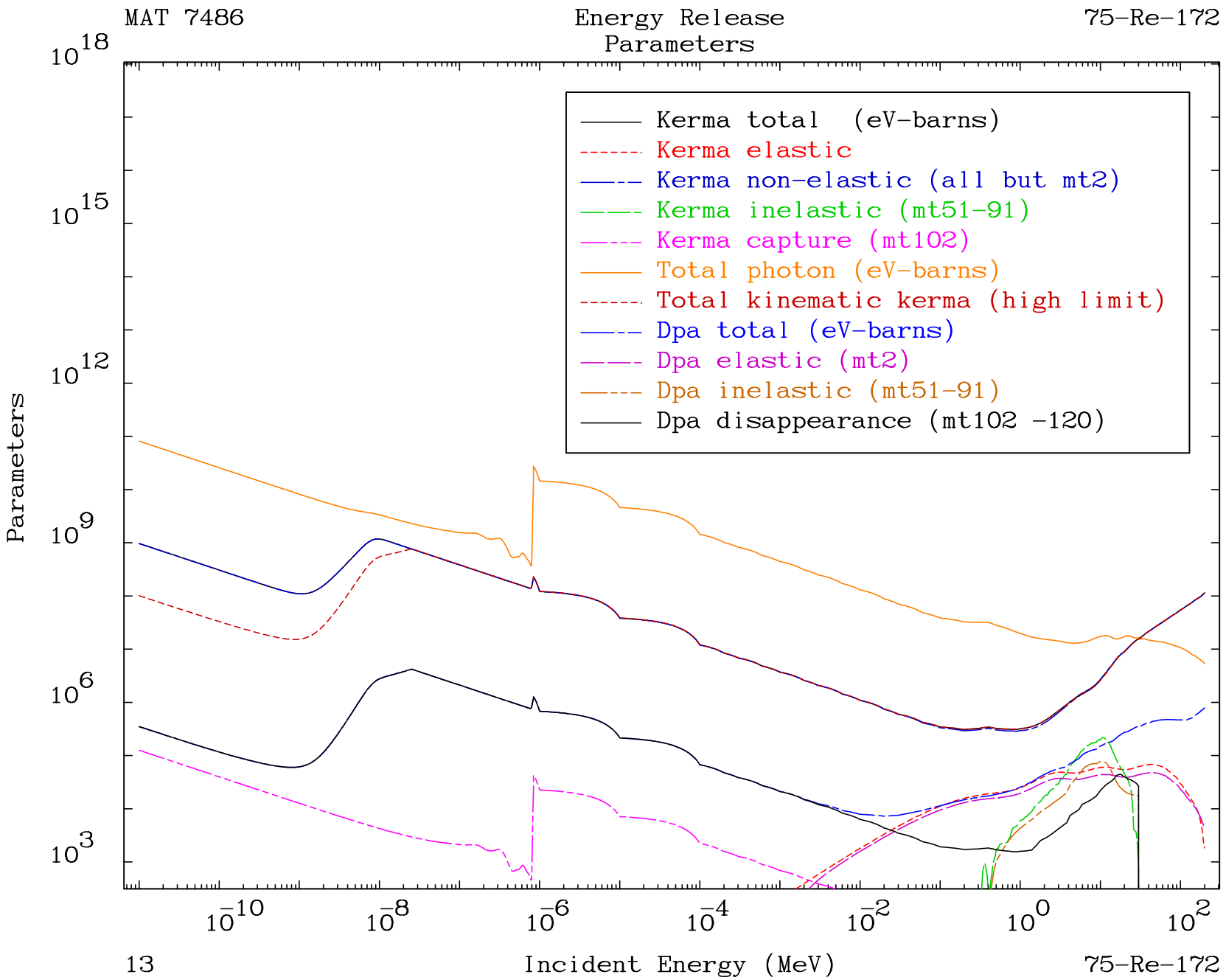

MAT 7486
(n,p) Levels
75-Re-172
293 Kelvin Cross Sections
Cross Section (barns)
(n,p)
Incident Energy (MeV)
8
75-Re-172

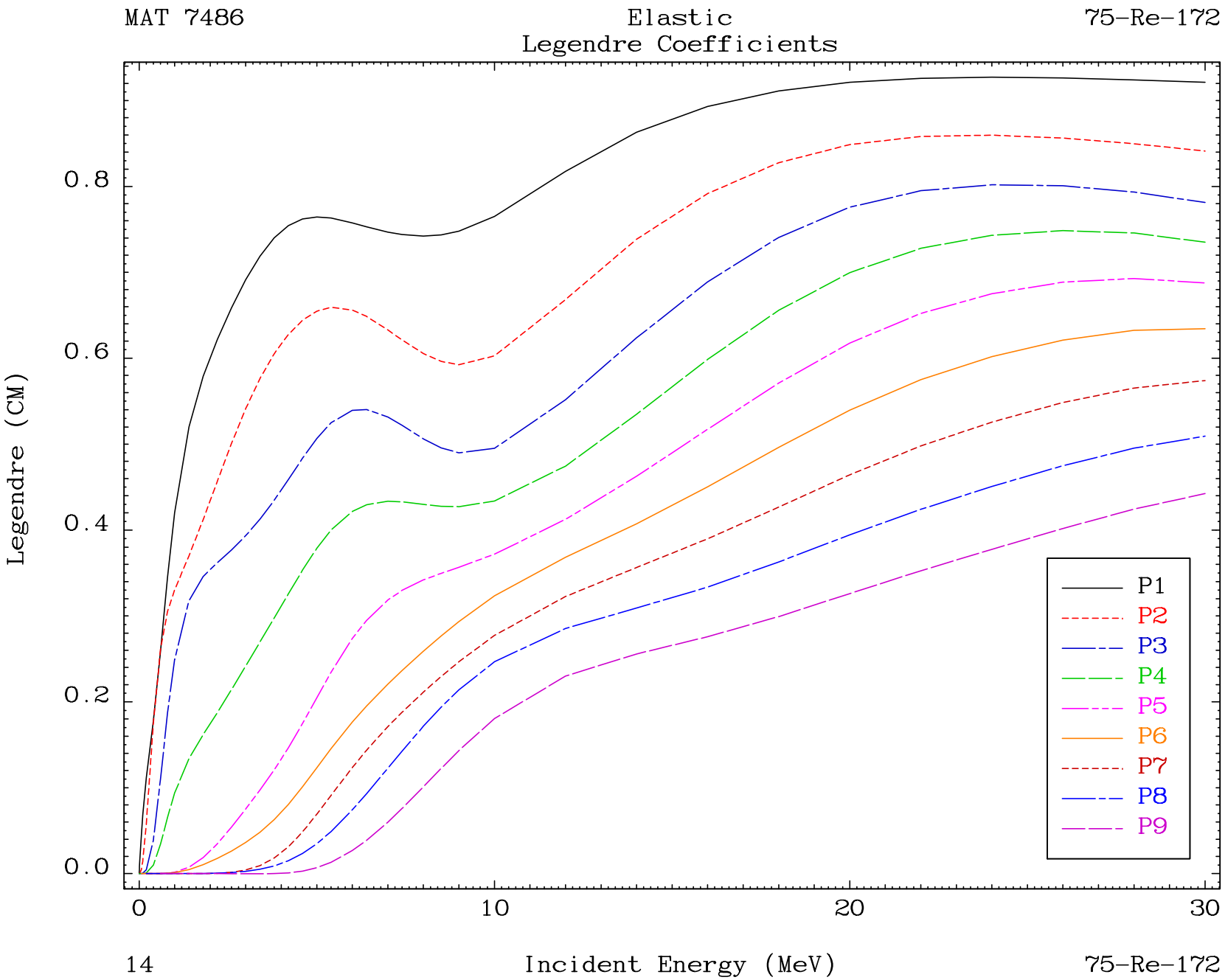

MAT 7486
(n,d) Levels
75-Re-172
293 Kelvin Cross Sections
(n,d)
Cross Section (barns)
Incident Energy (MeV)
9
75-Re-172

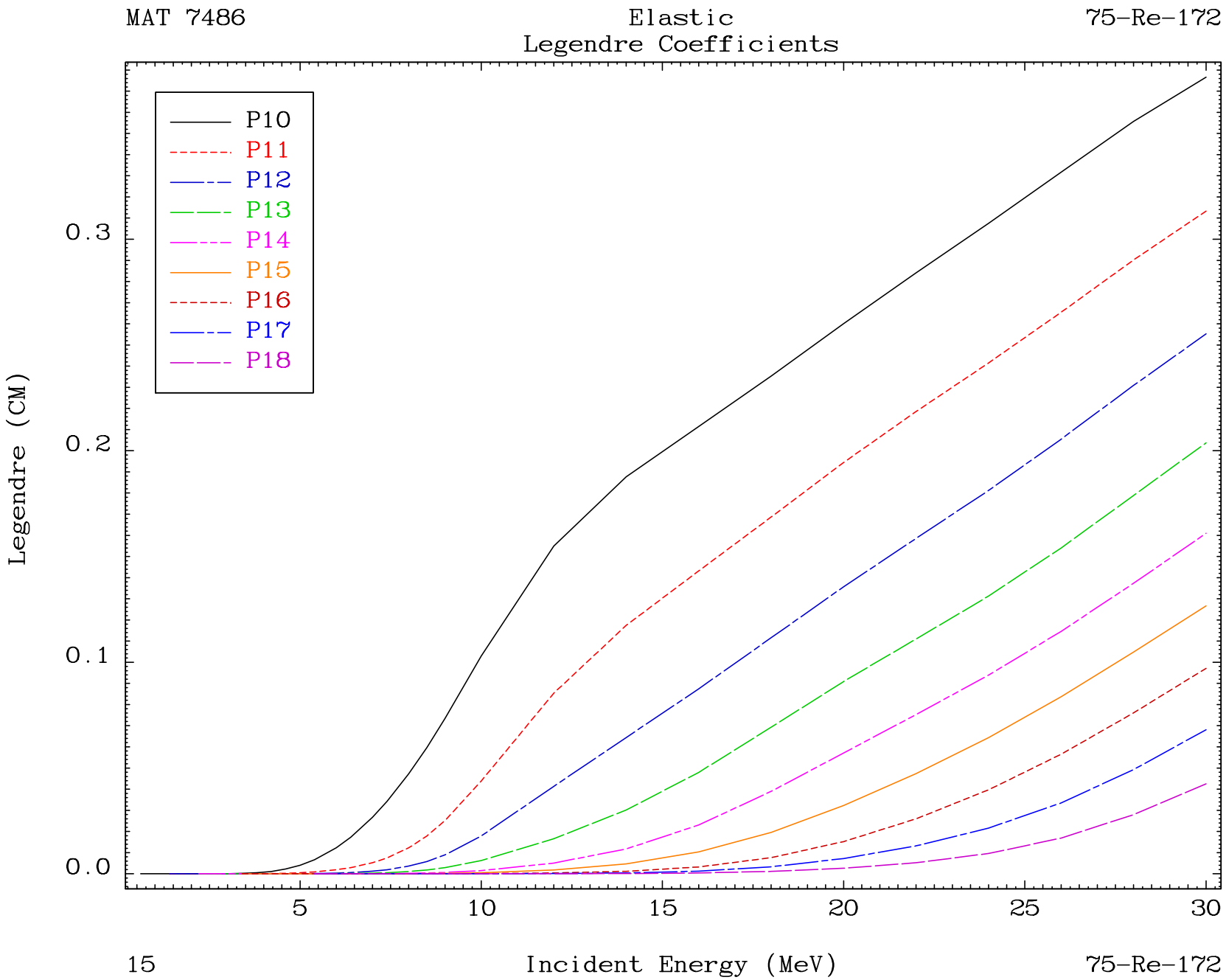

MAT 7486
(n,t) Levels
75-Re-172
293 Kelvin Cross Sections
(n,t)
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
10^1
10^2
Incident Energy (MeV)
10
75-Re-172

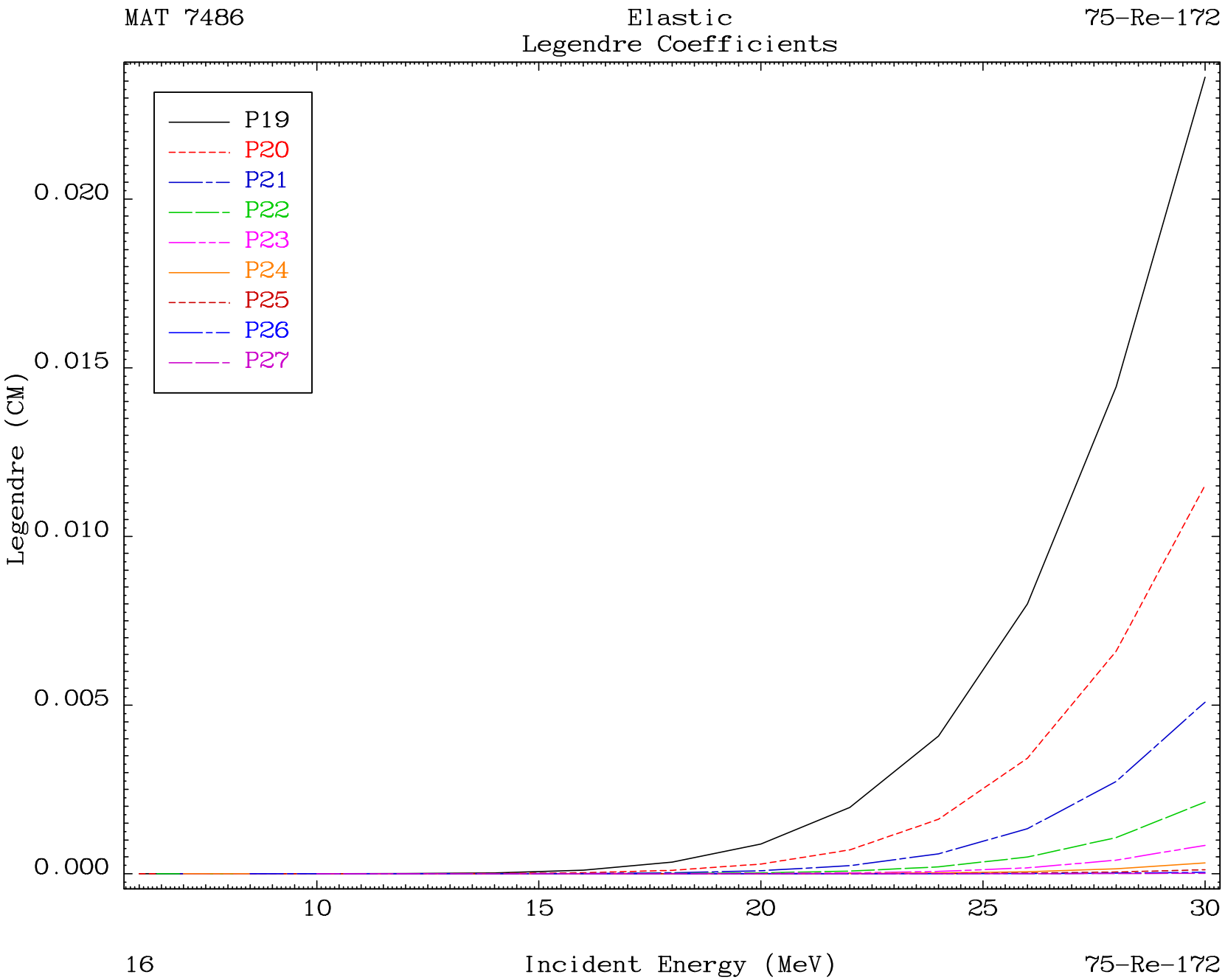

MAT 7486
(n,He3) Levels
75-Re-172
293 Kelvin Cross Sections
(n,He-3)
Cross Section (barns)
Incident Energy (MeV)
11
75-Re-172

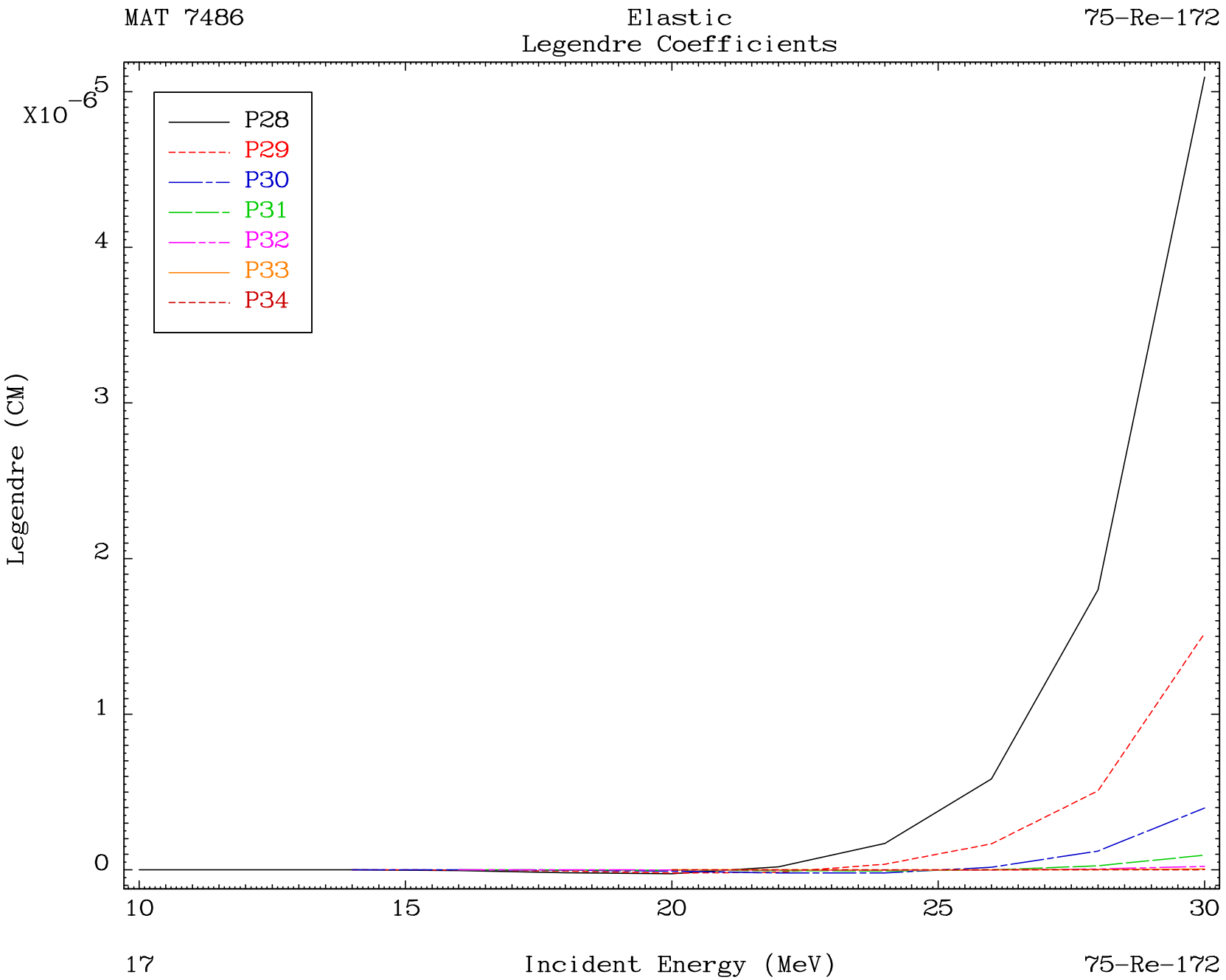

MAT 7486
(n,α) Levels
75-Re-172
293 Kelvin Cross Sections
Cross Section (barns)
(n,α)
Incident Energy (MeV)
12
75-Re-172

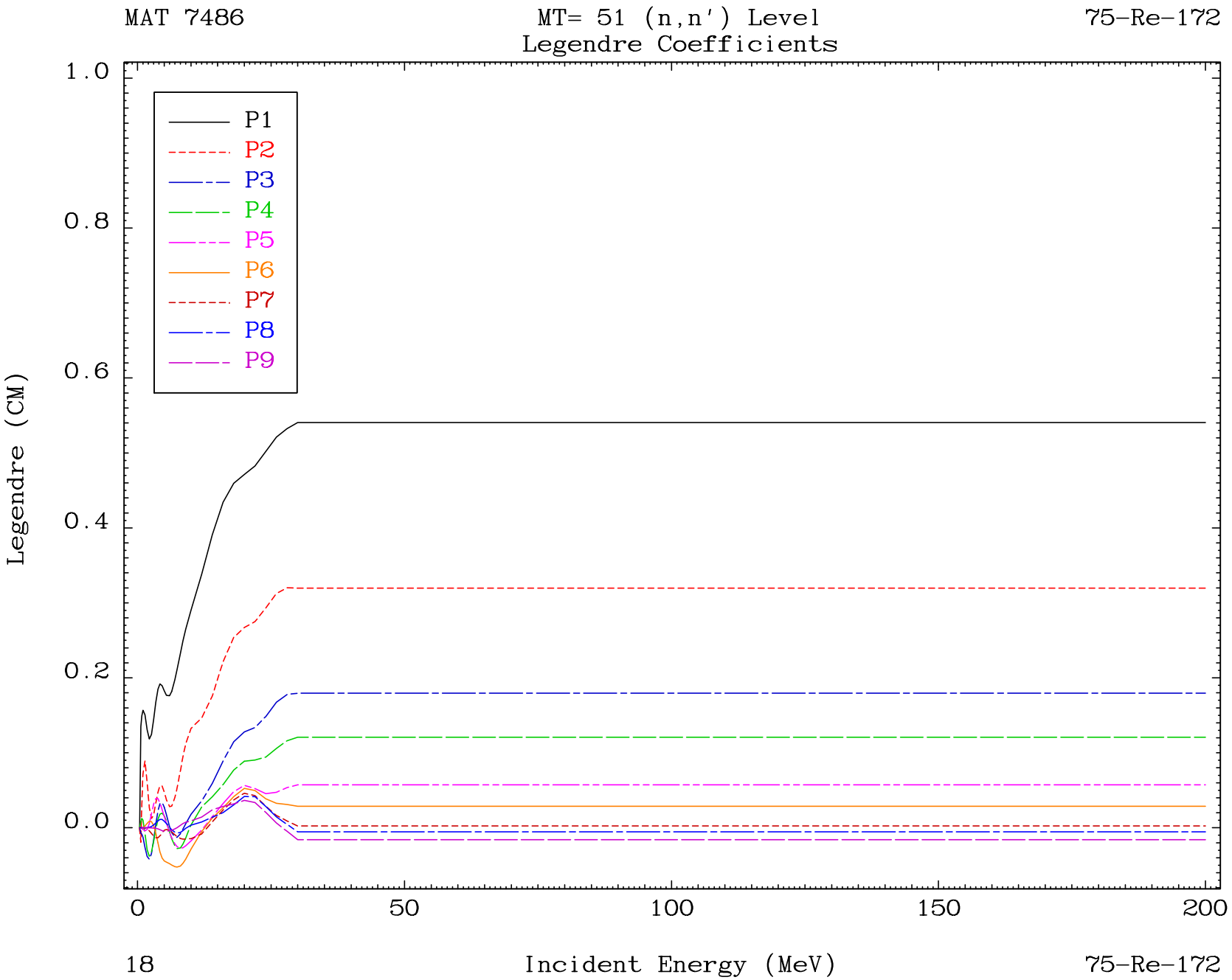

MAT 7486
Energy Release Parameters
75-Re-172
Kerma total (eV-barns)
Kerma elastic
Kerma non-elastic (all but mt2)
Kerma inelastic (mt51-91)
Kerma capture (mt102)
Total photon (eV-barns)
Total kinematic kerma (high limit)
Dpa total (eV-barns)
Dpa elastic (mt2)
Dpa inelastic (mt51-91)
Dpa disappearance (mt102 -120)
Parameters
Incident Energy (MeV)
13
75-Re-172

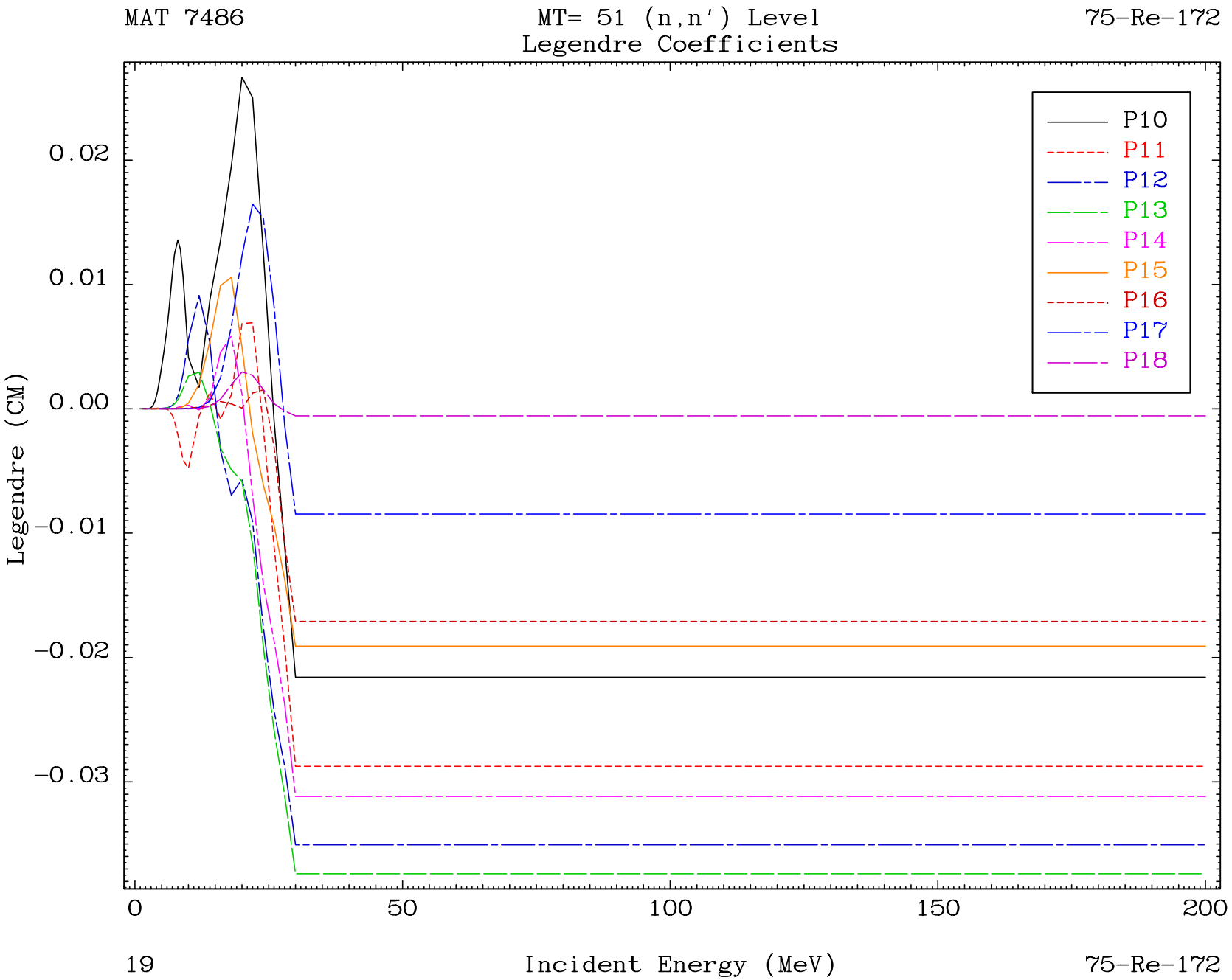

MAT 7486
Elastic
Legendre Coefficients
75-Re-172
Legendre (CM)
0.0
0.2
0.4
0.6
0.8
0
10
20
30
14
Incident Energy (MeV)
75-Re-172
P1
P2
P3
P4
P5
P6
P7
P8
P9

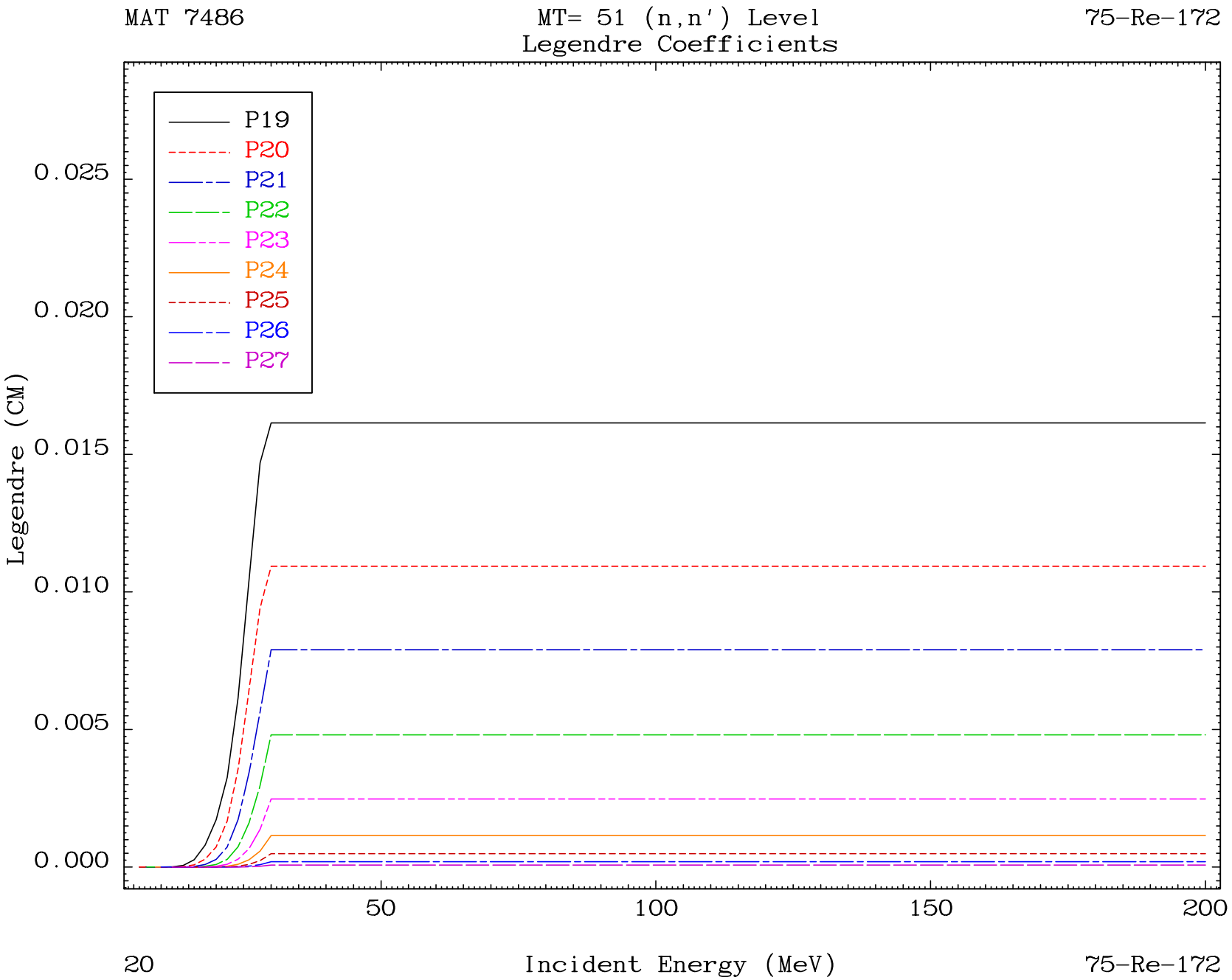

MAT 7486
Elastic
Legendre Coefficients
75-Re-172
P10
P11
P12
P13
P14
P15
P16
P17
P18
Legendre (CM)
0.0
0.1
0.2
0.3
5
10
15
20
25
30
15
Incident Energy (MeV)
75-Re-172

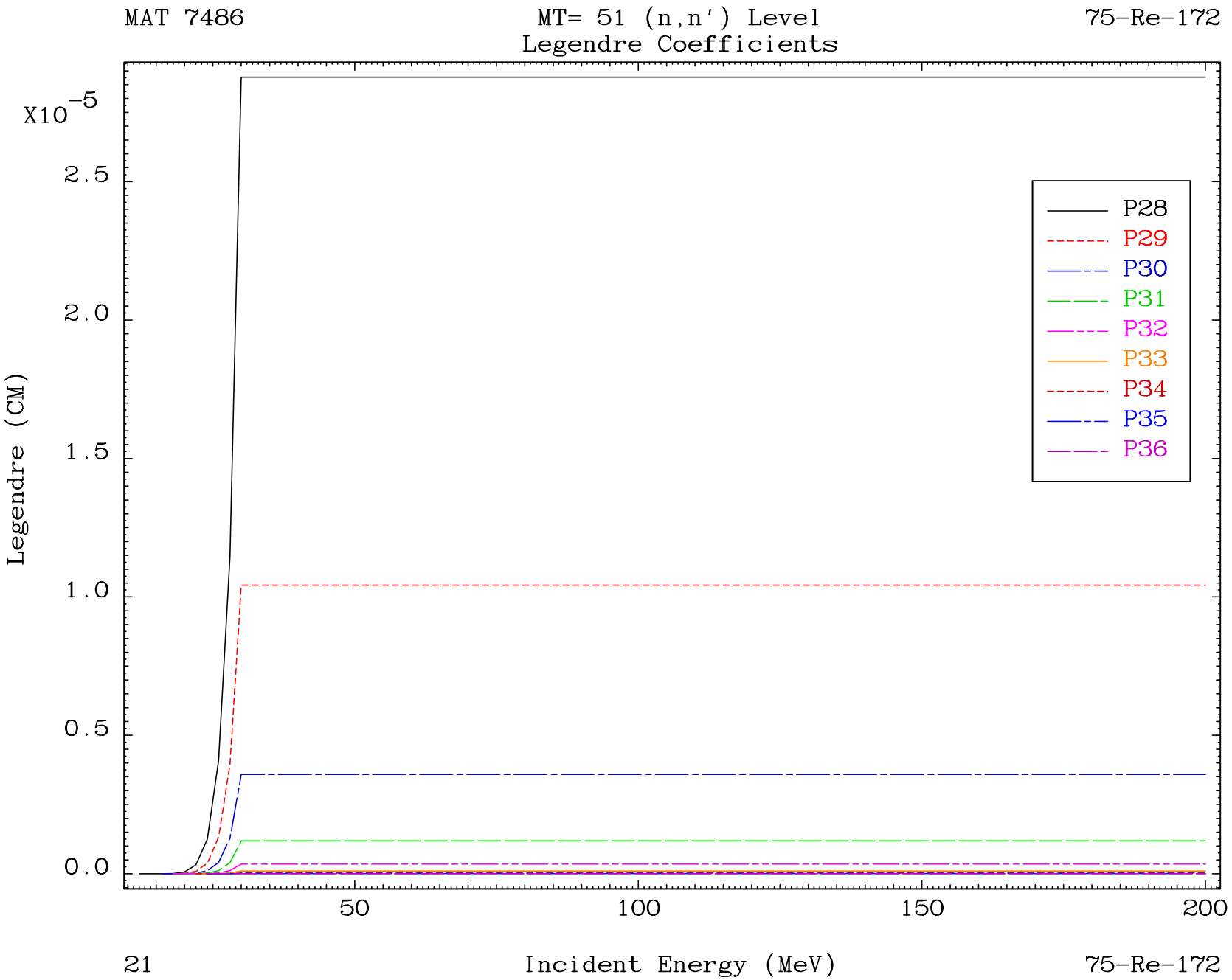

MAT 7486
Elastic
Legendre Coefficients
75-Re-172
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
10
15
20
25
30
16
Incident Energy (MeV)
75-Re-172

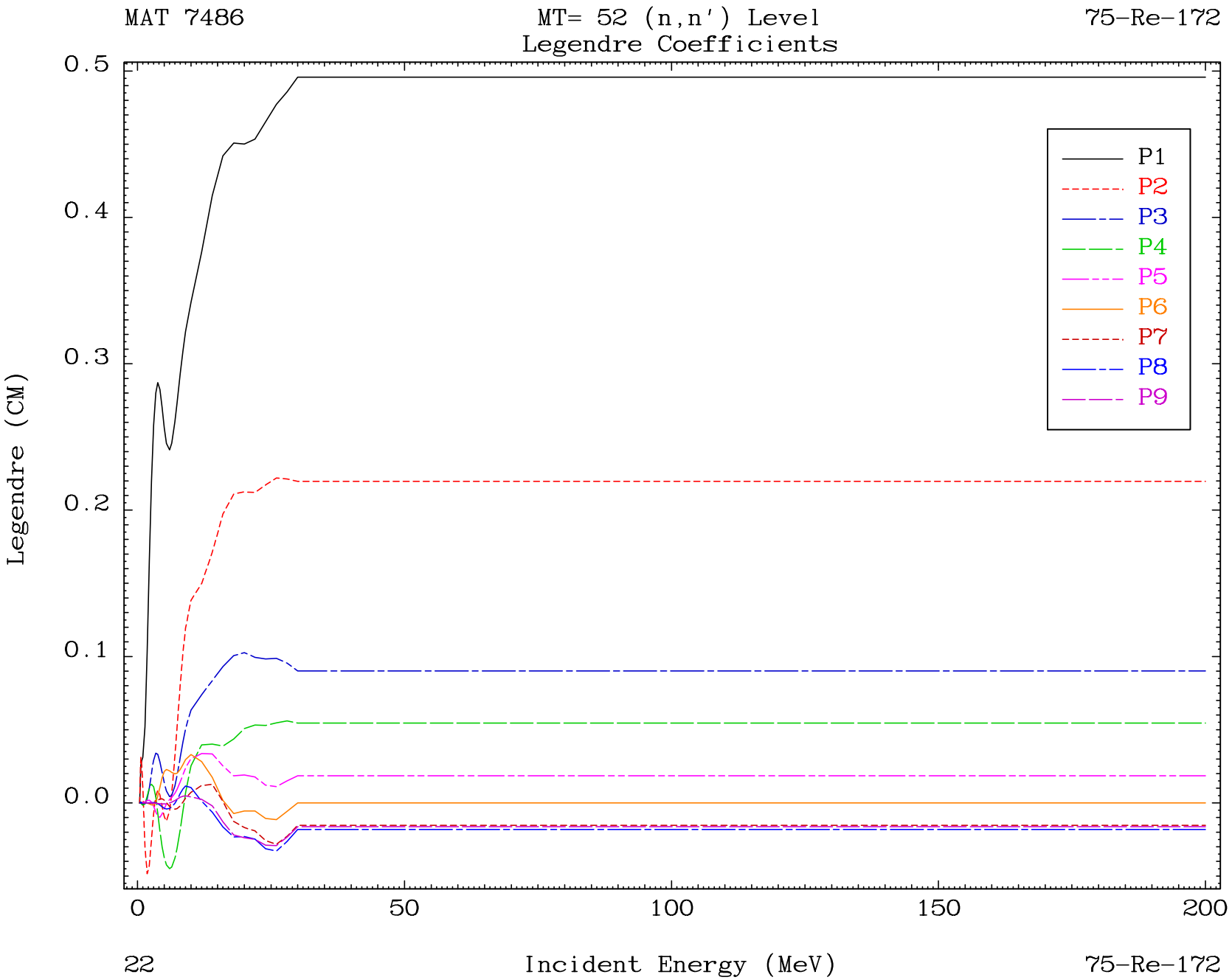

MAT 7486
Elastic
Legendre Coefficients
75-Re-172
X10 -6
5
4
3
2
1
0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
10
15
20
25
30
17
Incident Energy (MeV)
75-Re-172

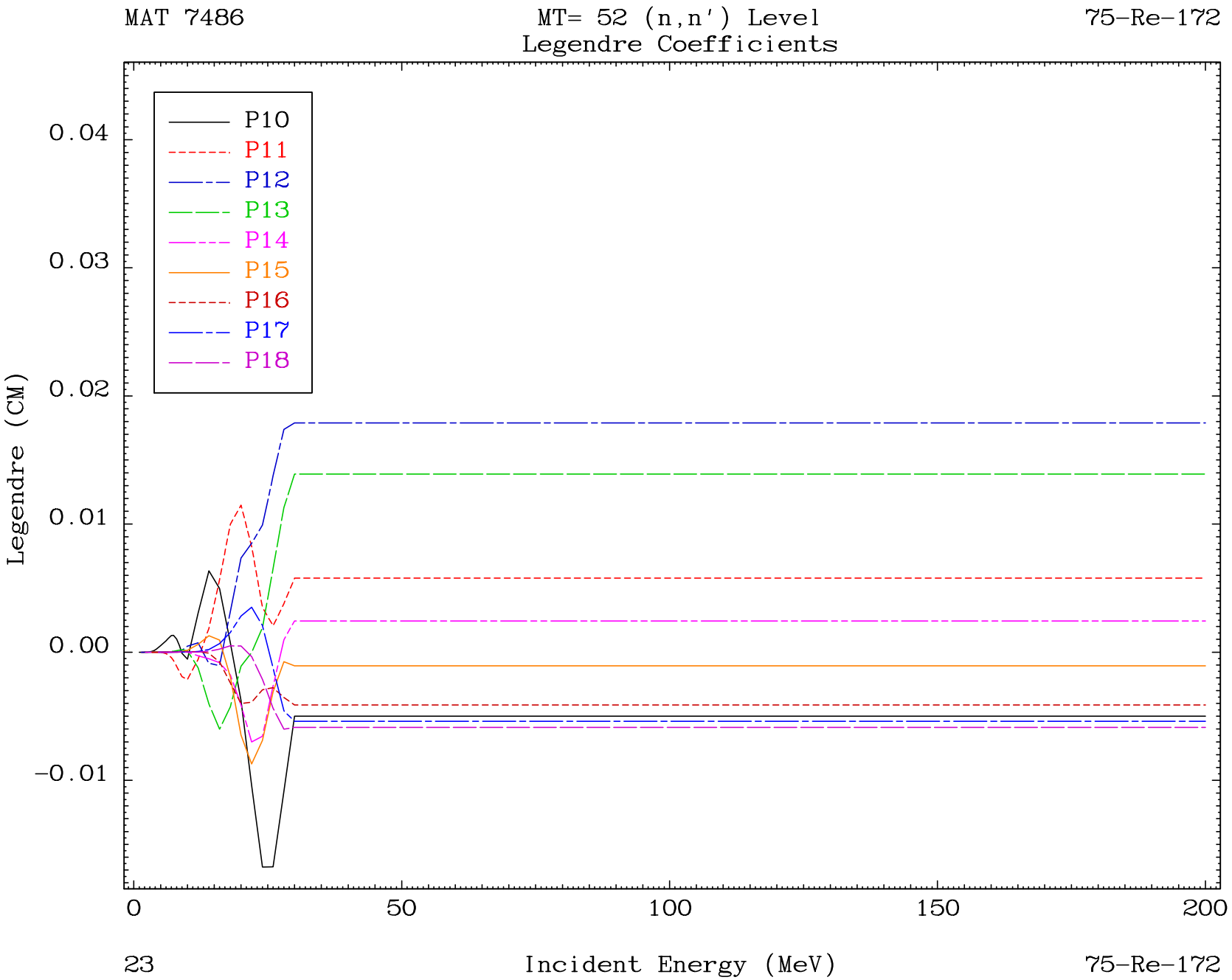

MAT 7486
MT= 51 (n,n') Level
Legendre Coefficients
75-Re-172
P1
P2
P3
P4
P5
P6
P7
P8
P9
Legendre (CM)
1.0
0.8
0.6
0.4
0.2
0.0
0
50
100
150
200
18
Incident Energy (MeV)
75-Re-172

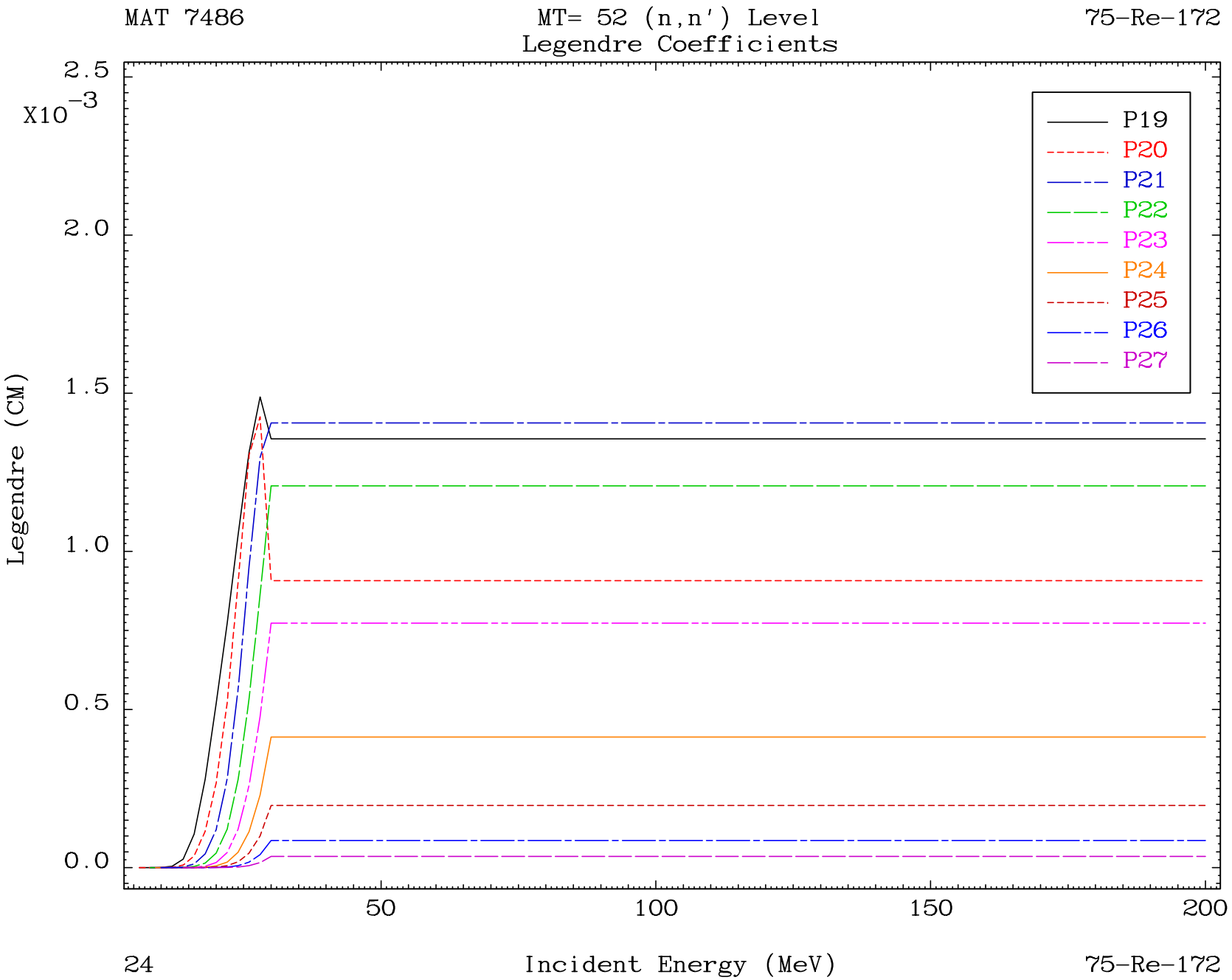

MAT 7486
MT= 51 (n,n') Level
Legendre Coefficients
75-Re-172
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.02
0.01
0.00
-0.01
-0.02
-0.03
Legendre (CM)
0
50
100
150
200
19
Incident Energy (MeV)
75-Re-172

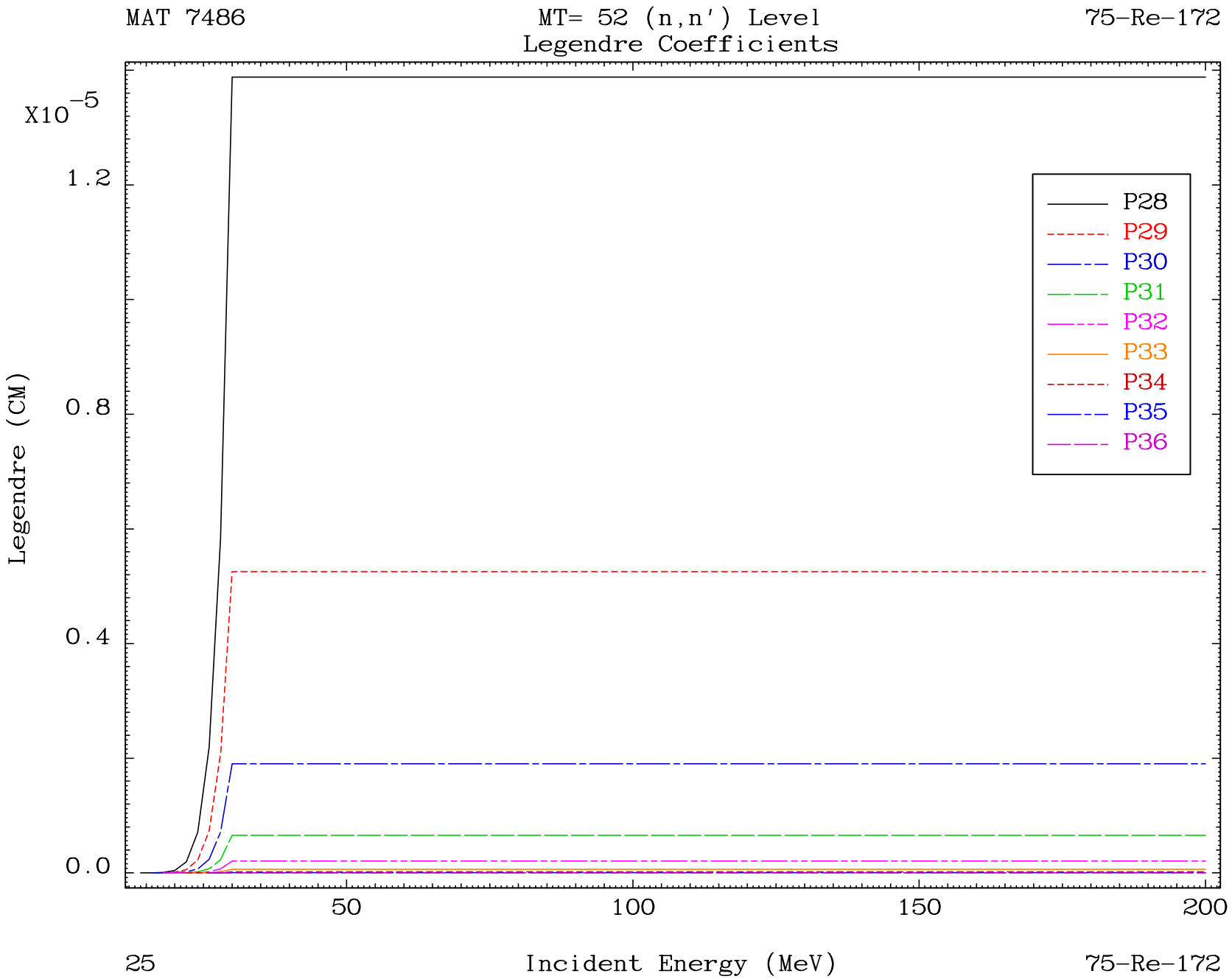

MAT 7486
MT= 51 (n,n') Level
Legendre Coefficients
75-Re-172
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.025
0.020
0.015
0.010
0.005
0.000
Legendre (CM)
50
100
150
200
20
Incident Energy (MeV)
75-Re-172

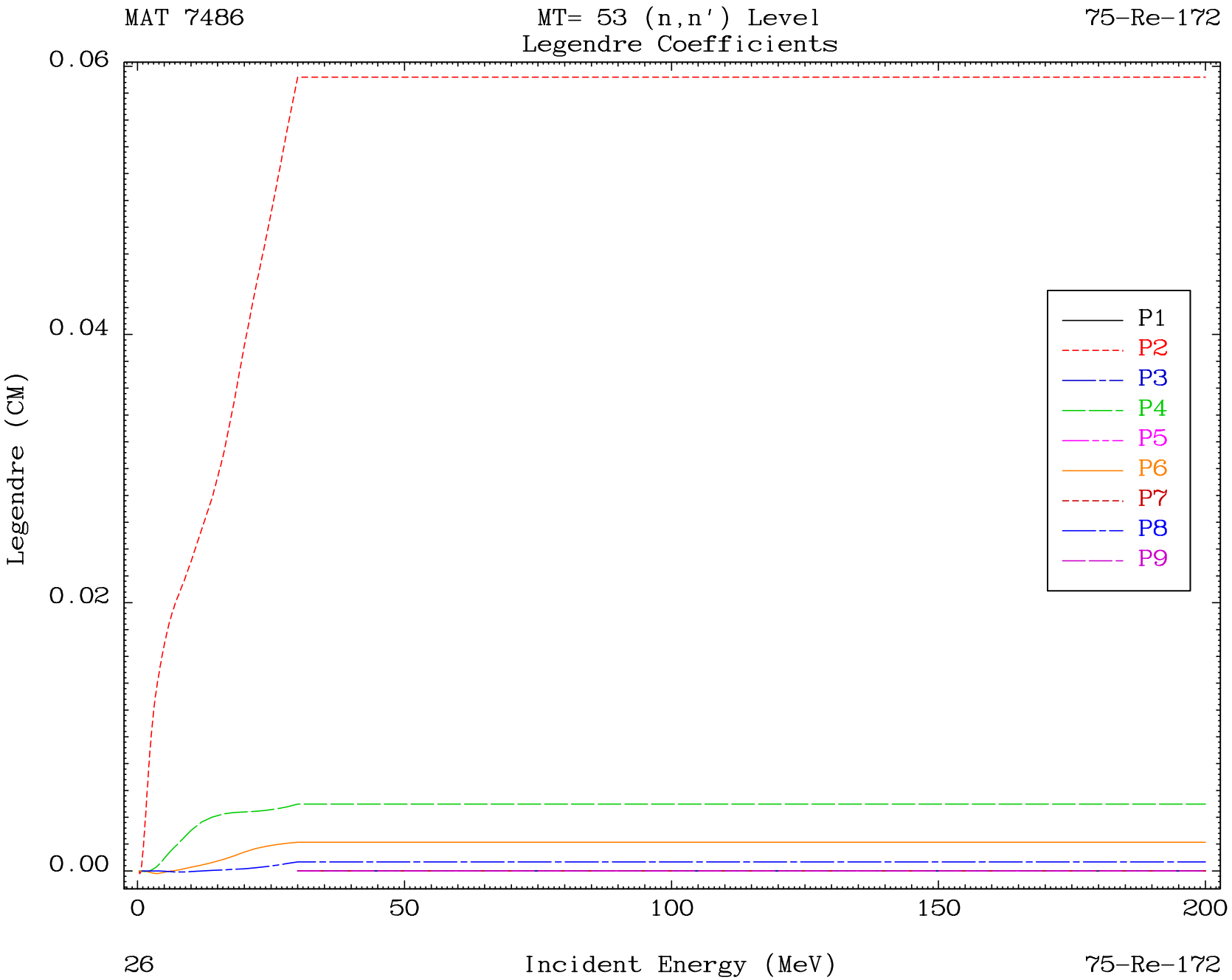

MAT 7486
MT= 51 (n,n') Level
Legendre Coefficients
75-Re-172
X10^-5
2.5
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
50
100
150
200
21
Incident Energy (MeV)
75-Re-172

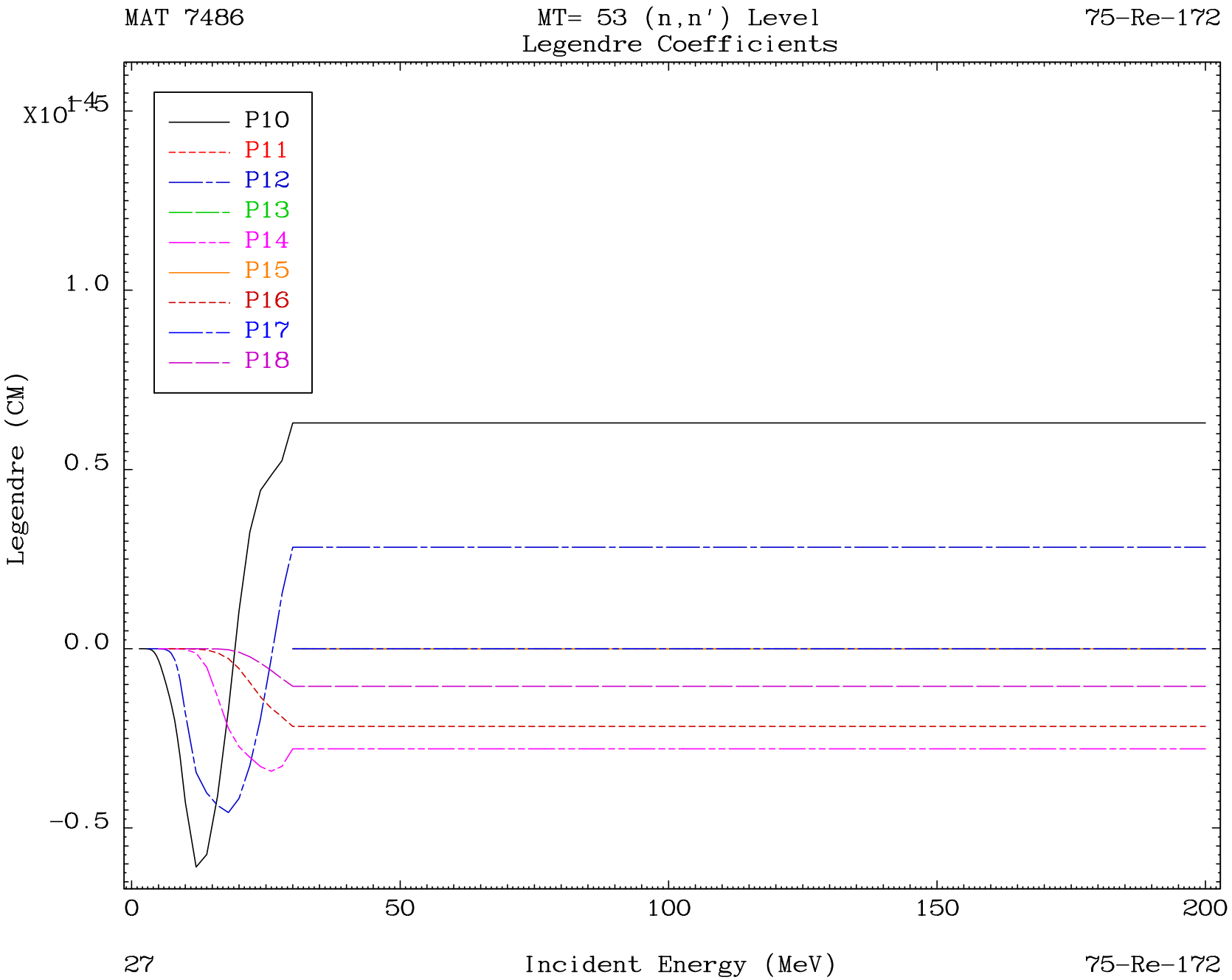

MAT 7486
MT= 52 (n,n') Level
Legendre Coefficients
75-Re-172
0.5
0.4
0.3
0.2
0.1
0.0
Legendre (CM)
P1
P2
P3
P4
P5
P6
P7
P8
P9
0
50
100
150
200
22
Incident Energy (MeV)
75-Re-172

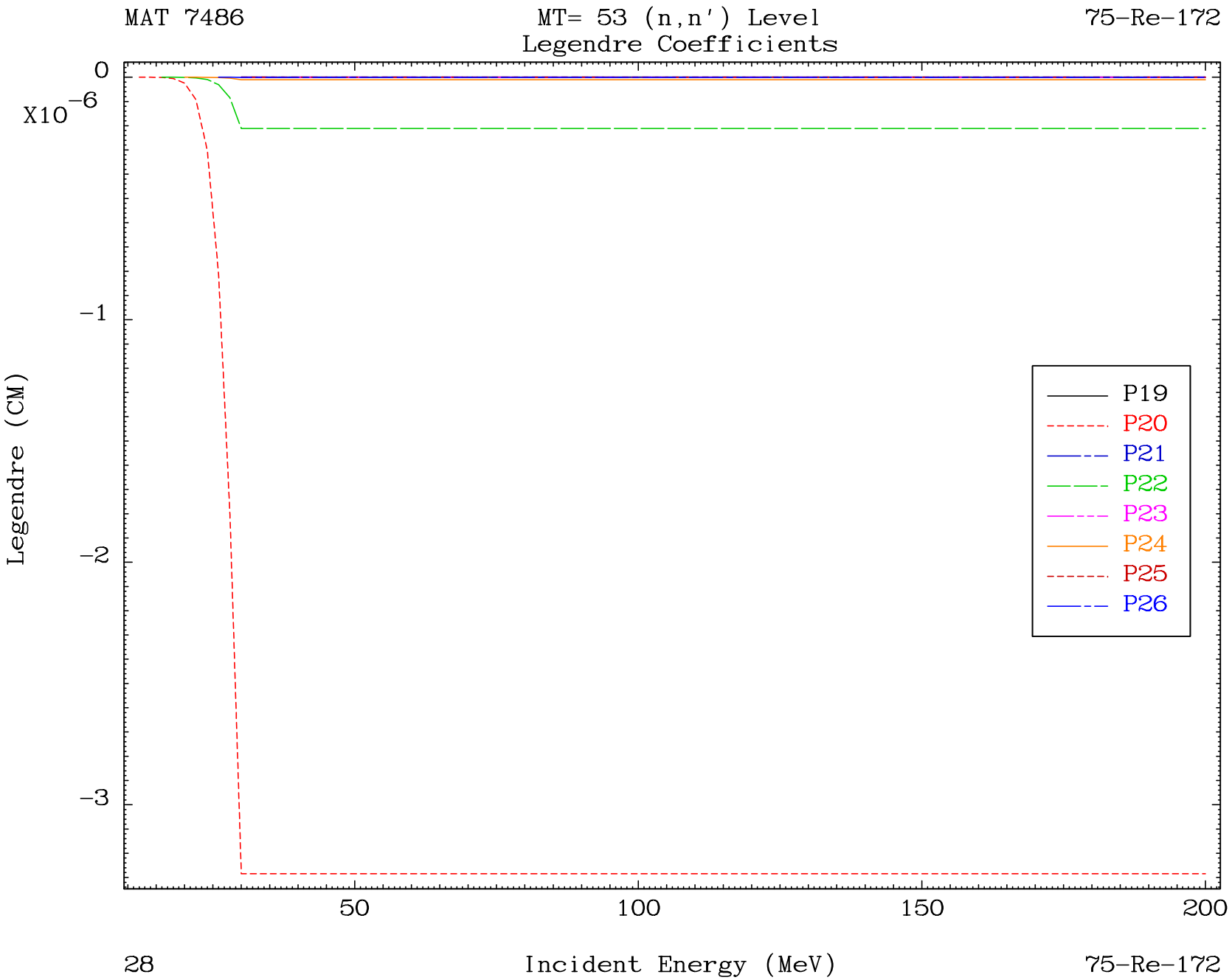

MAT 7486
MT= 52 (n,n') Level
Legendre Coefficients
75-Re-172
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.04
0.03
0.02
0.01
0.00
-0.01
Legendre (CM)
0
50
100
150
200
23
Incident Energy (MeV)
75-Re-172

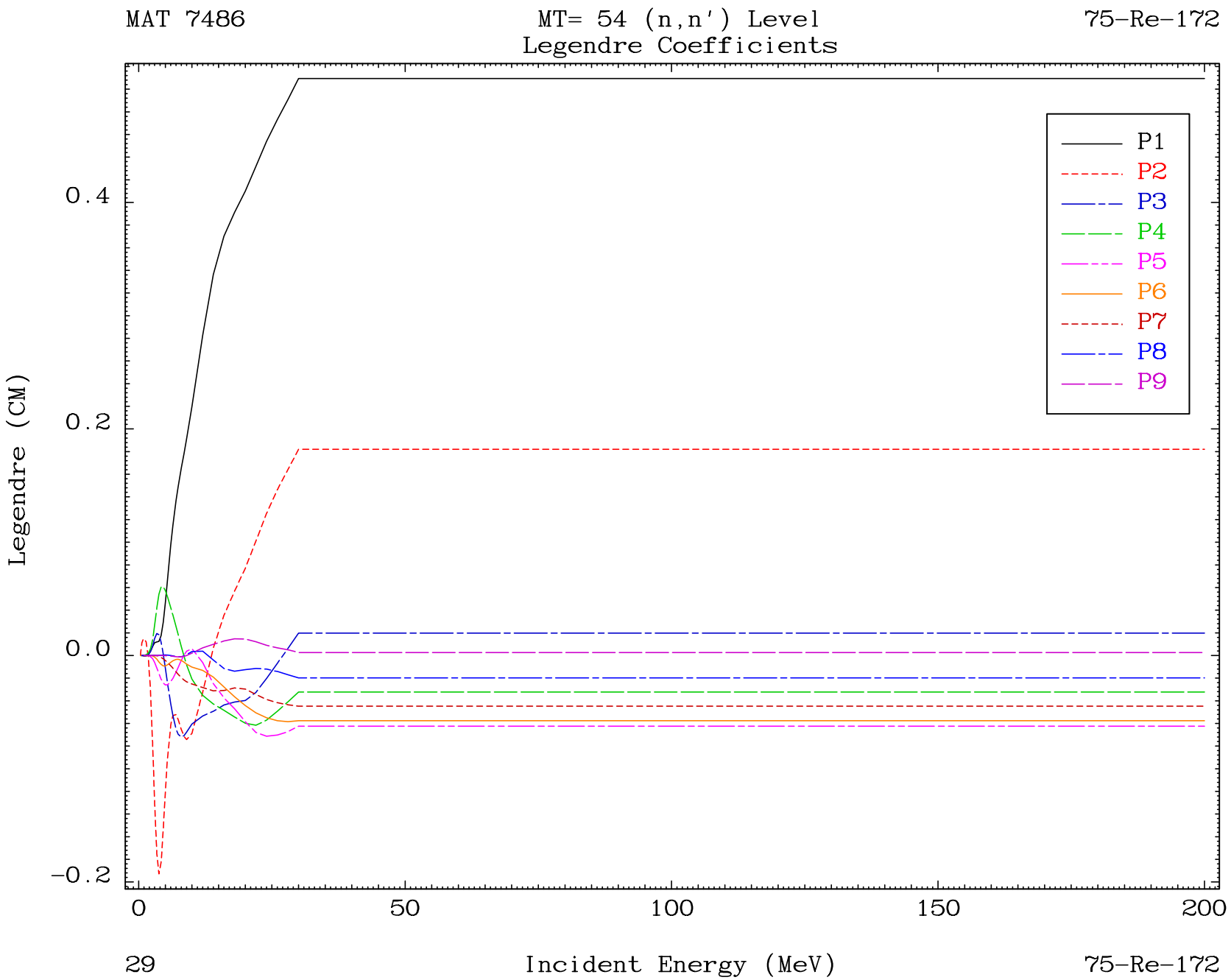

MAT 7486
MT= 52 (n,n') Level
Legendre Coefficients
75-Re-172
X10^-3
2.5
2.0
1.5
1.0
0.5
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
24
Incident Energy (MeV)
75-Re-172

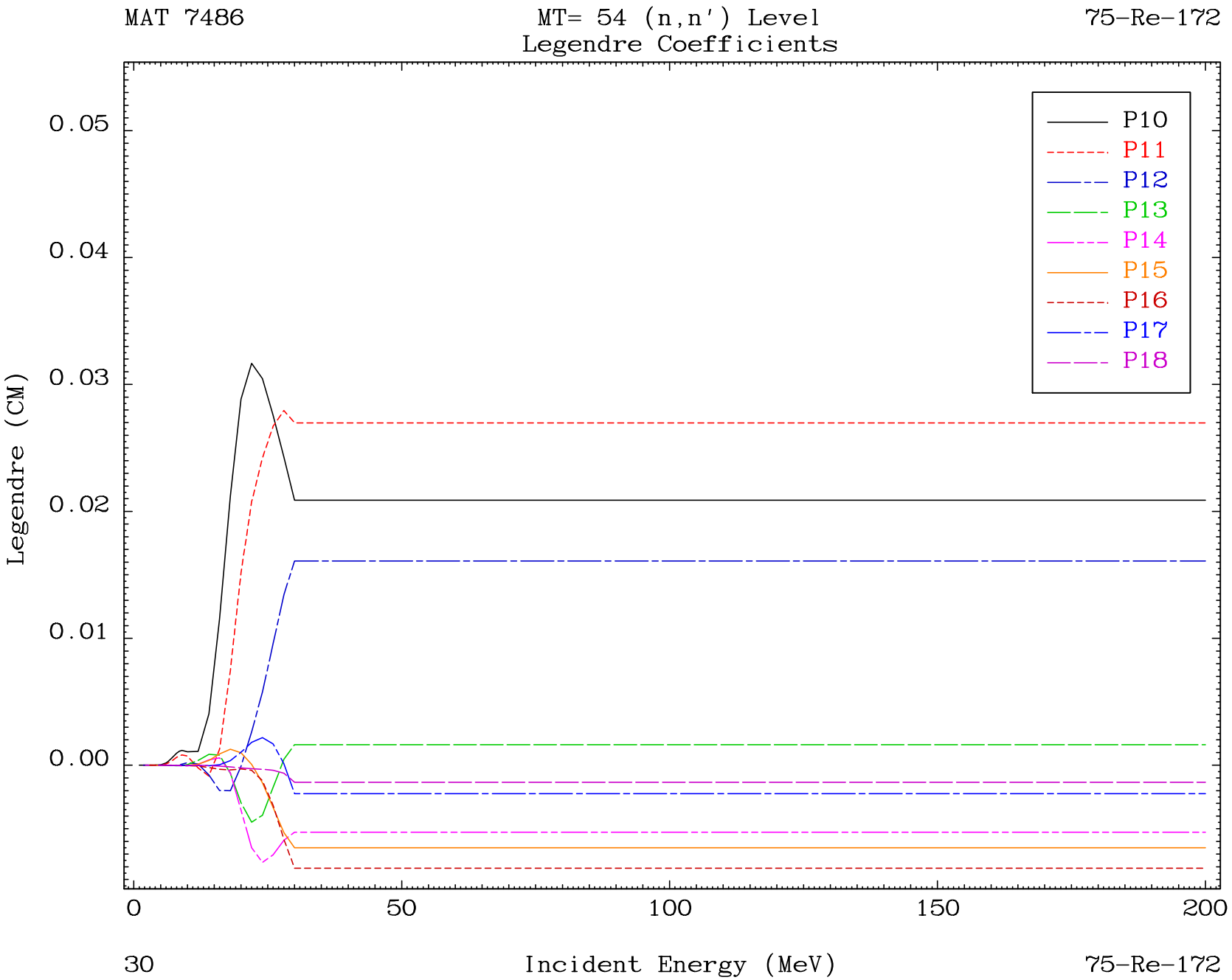

MAT 7486
MT= 52 (n,n') Level
Legendre Coefficients
75-Re-172
X10^-5
1.2
0.8
0.4
0.0
Legendre (CM)
P28
P29
P30
P31
P32
P33
P34
P35
P36
25
50
100
150
200
Incident Energy (MeV)
75-Re-172

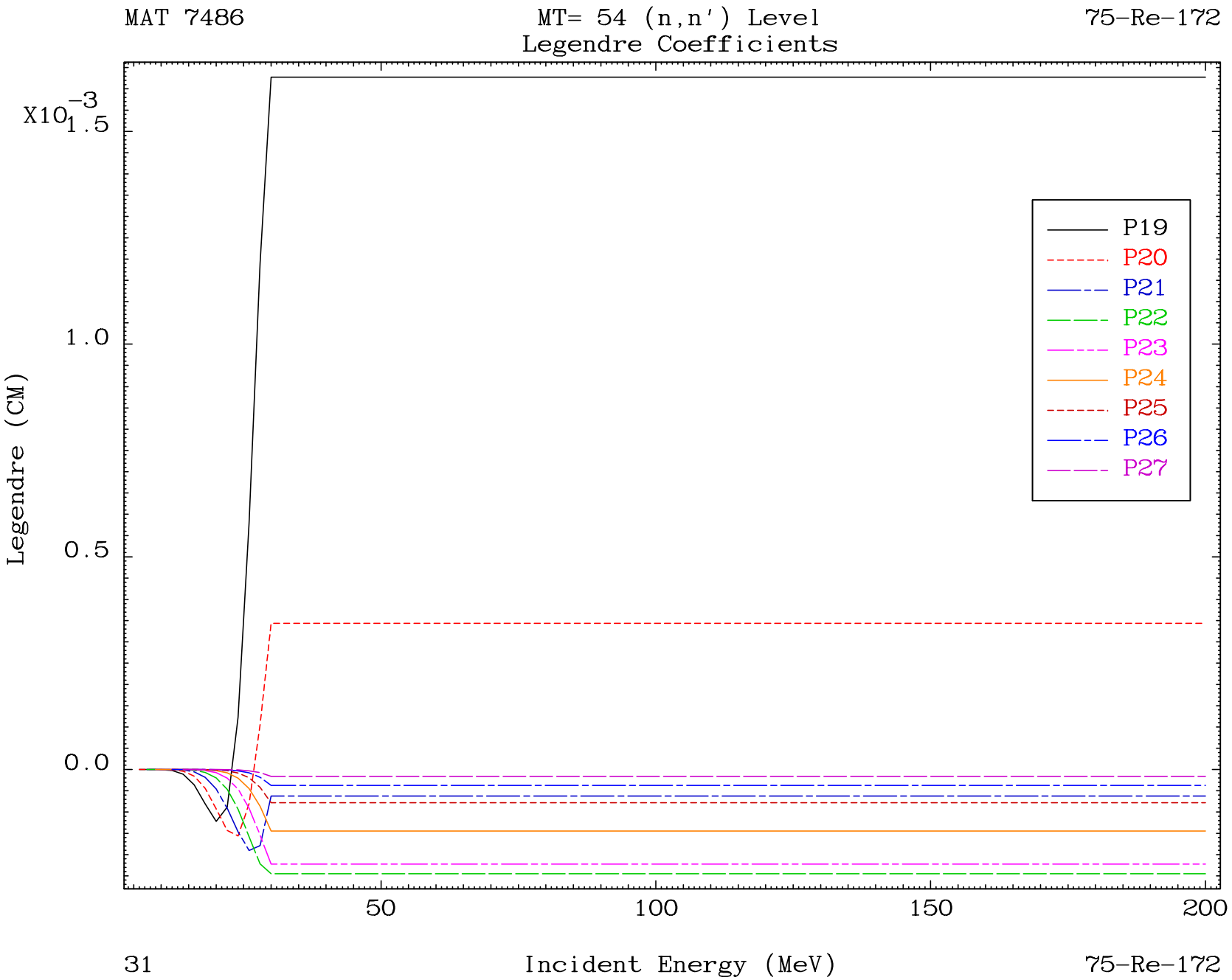

MAT 7486
MT= 53 (n,n') Level
Legendre Coefficients
75-Re-172
0.06
0.04
0.02
0.00
Legendre (CM)
0
50
100
150
200
26
Incident Energy (MeV)
75-Re-172
P1
P2
P3
P4
P5
P6
P7
P8
P9

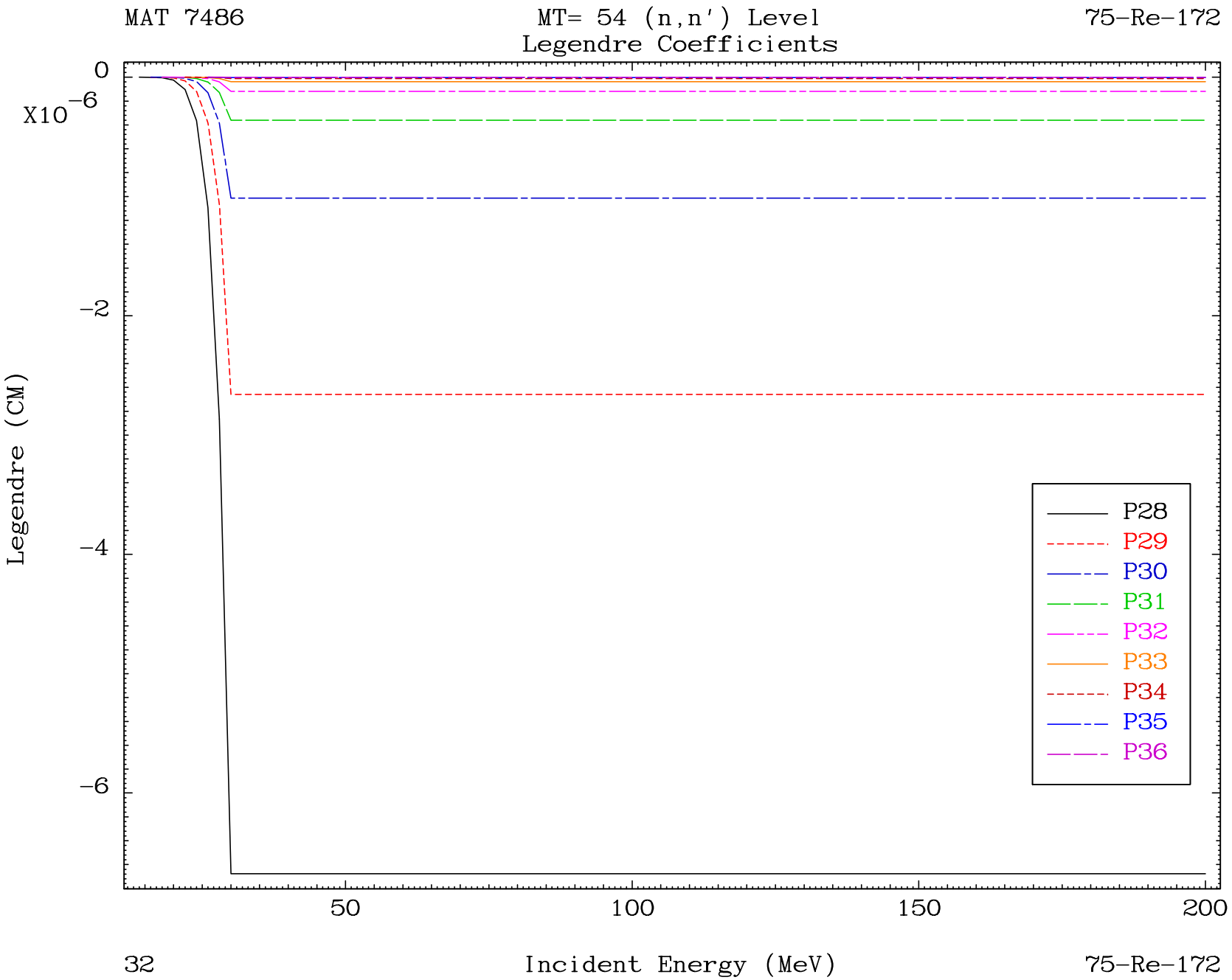

MAT 7486
MT= 53 (n,n') Level
Legendre Coefficients
75-Re-172
X10-45
P10
P11
P12
P13
P14
P15
P16
P17
P18
1.0
0.5
0.0
-0.5
Legendre (CM)
0
50
100
150
200
27
Incident Energy (MeV)
75-Re-172

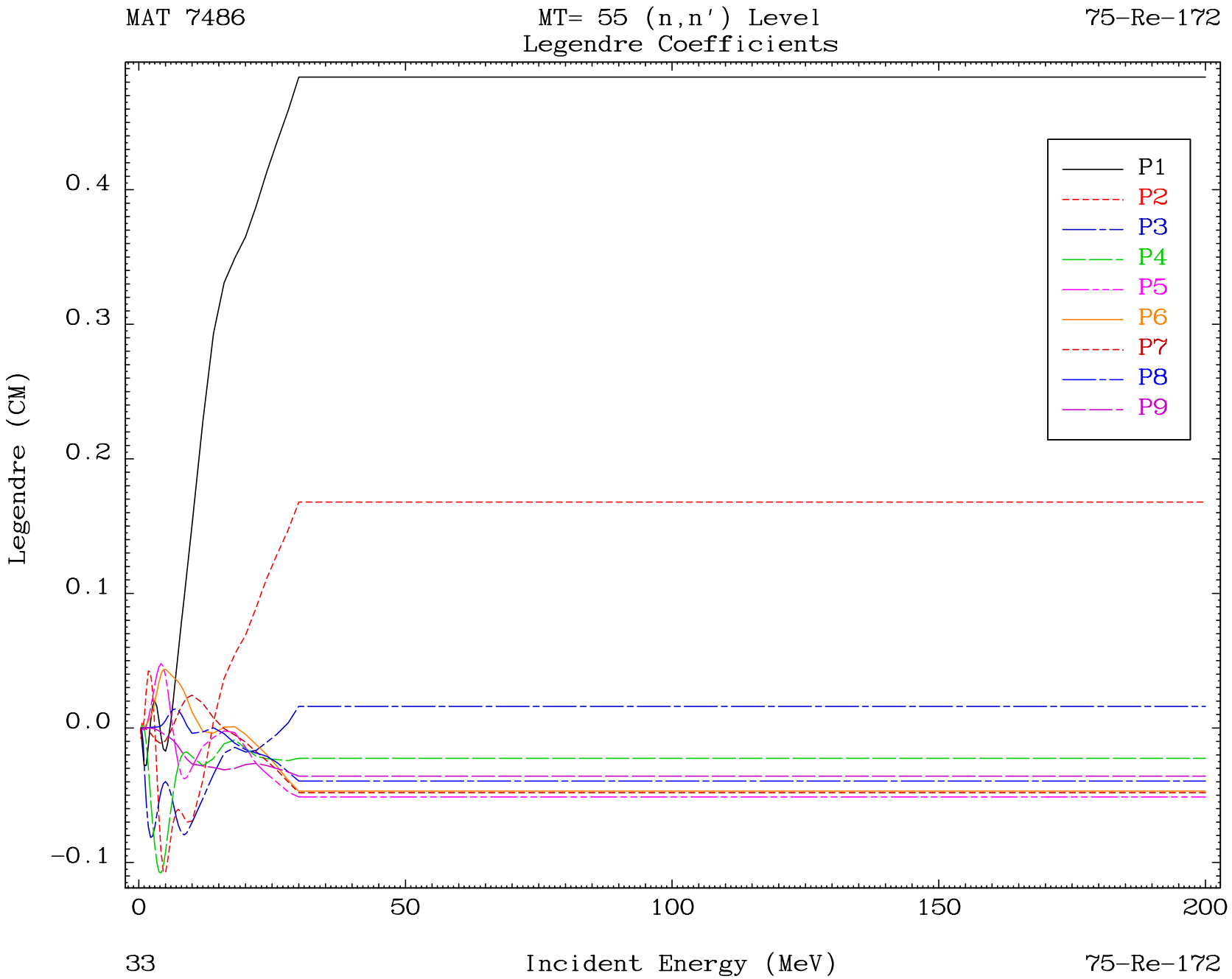

MAT 7486
MT= 53 (n,n') Level
Legendre Coefficients
75-Re-172
0
X10^-6
-1
-2
-3
Legendre (CM)
50
100
150
200
28
Incident Energy (MeV)
75-Re-172
P19
P20
P21
P22
P23
P24
P25
P26

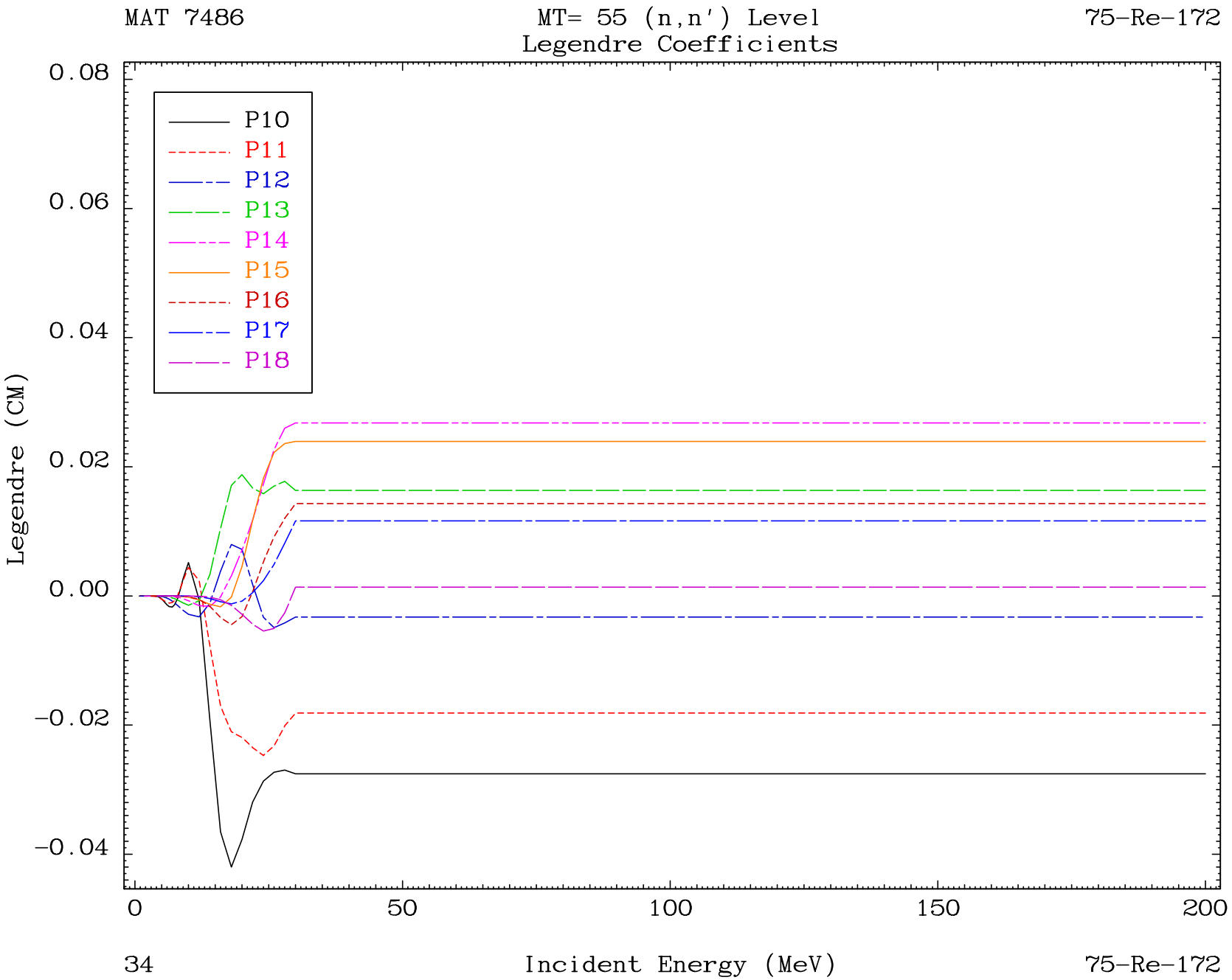

MAT 7486
MT= 54 (n,n') Level
Legendre Coefficients
75-Re-172
P1
P2
P3
P4
P5
P6
P7
P8
P9
Legendre (CM)
0.4
0.2
0.0
-0.2
0
50
100
150
200
29
Incident Energy (MeV)
75-Re-172

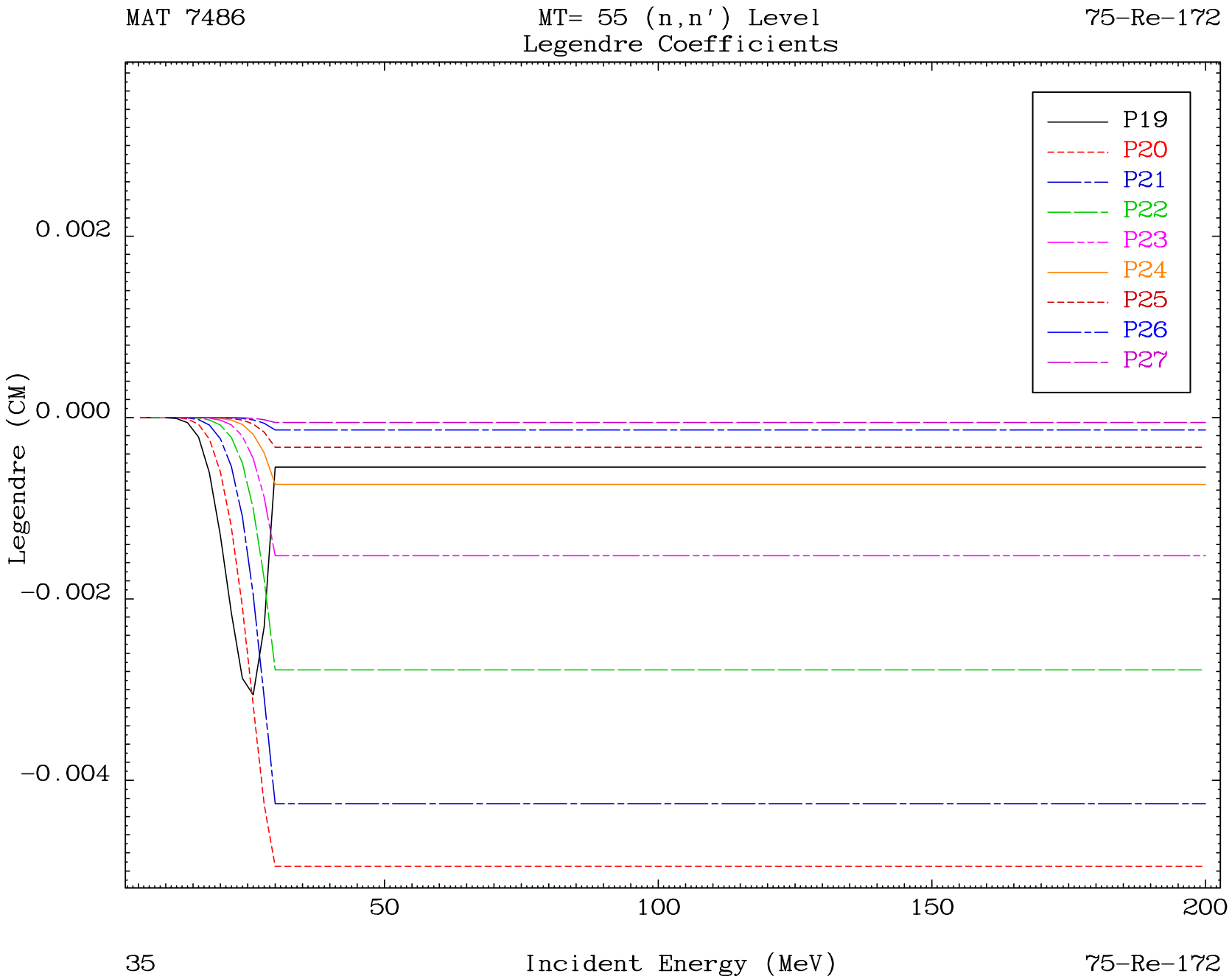

MAT 7486
MT= 54 (n,n') Level
Legendre Coefficients
75-Re-172
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.05
0.04
0.03
0.02
0.01
0.00
Legendre (CM)
0
50
100
150
200
30
Incident Energy (MeV)
75-Re-172

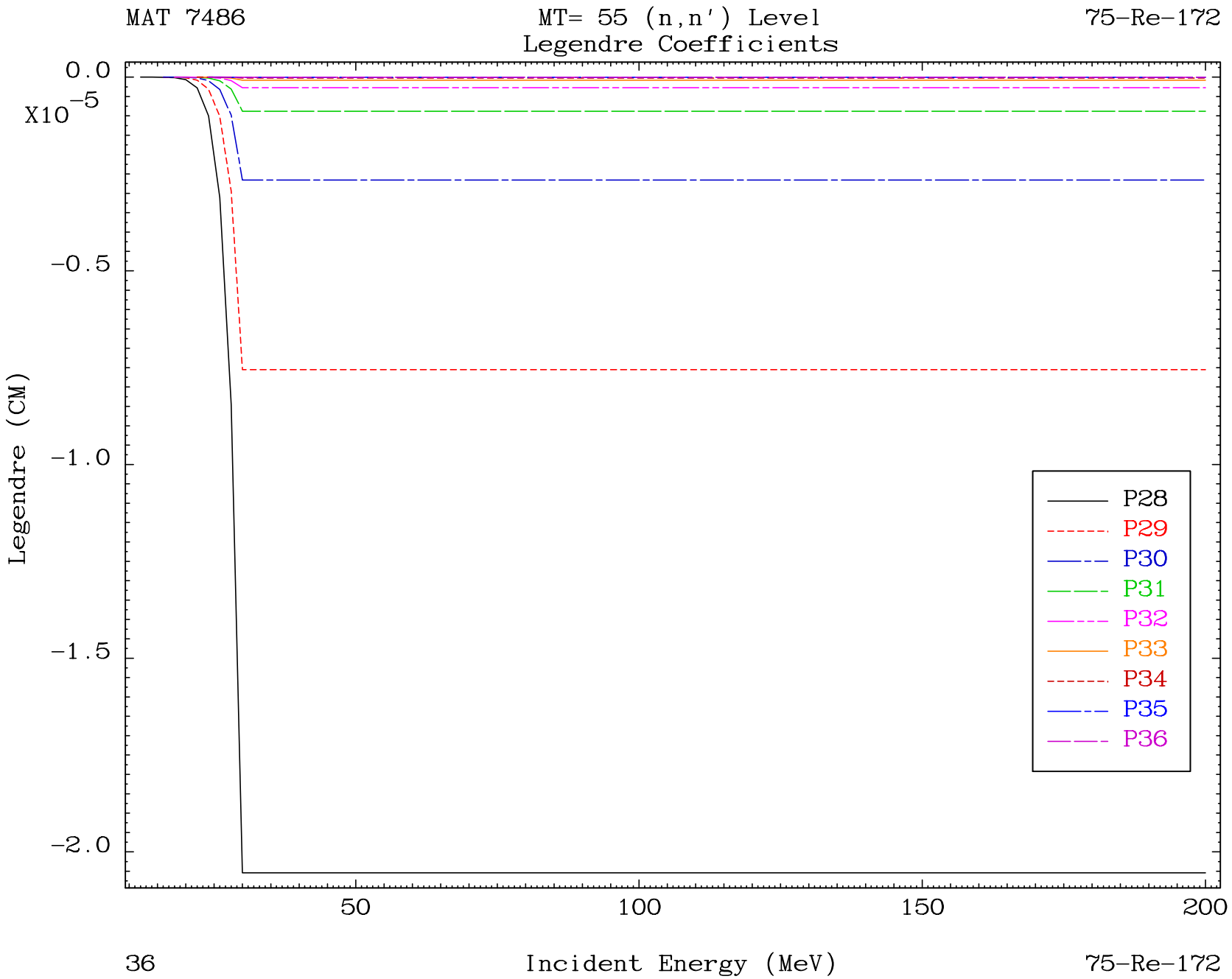

MAT 7486
MT= 54 (n,n') Level
Legendre Coefficients
75-Re-172
X10-3
1.5
1.0
0.5
0.0
Legendre (CM)
P19
P20
P21
P22
P23
P24
P25
P26
P27
50
100
150
200
31
Incident Energy (MeV)
75-Re-172

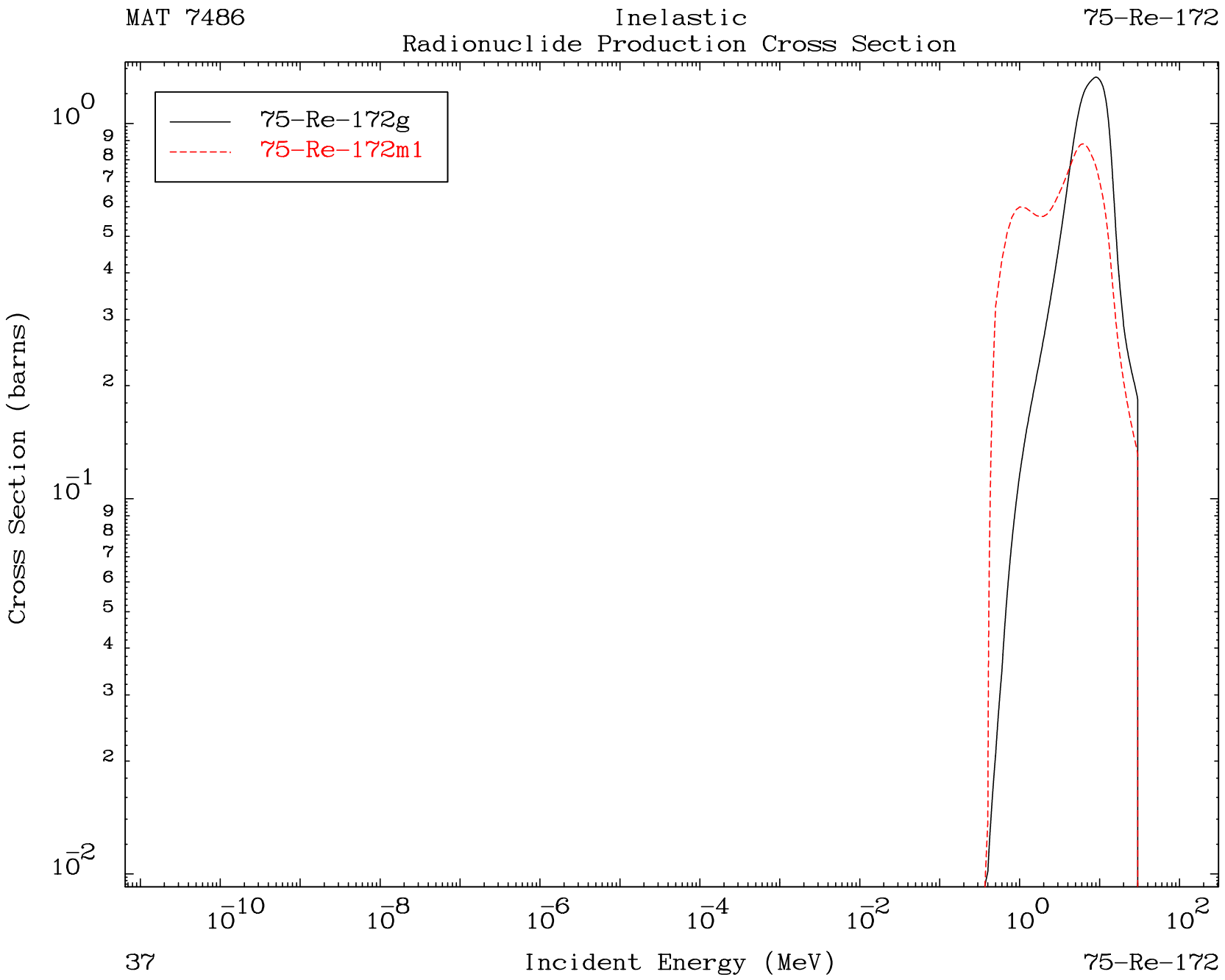

MAT 7486
MT= 54 (n,n') Level
Legendre Coefficients
75-Re-172
0
X10^-6
-2
-4
-6
Legendre (CM)
50
100
150
200
32
Incident Energy (MeV)
75-Re-172
P28
P29
P30
P31
P32
P33
P34
P35
P36

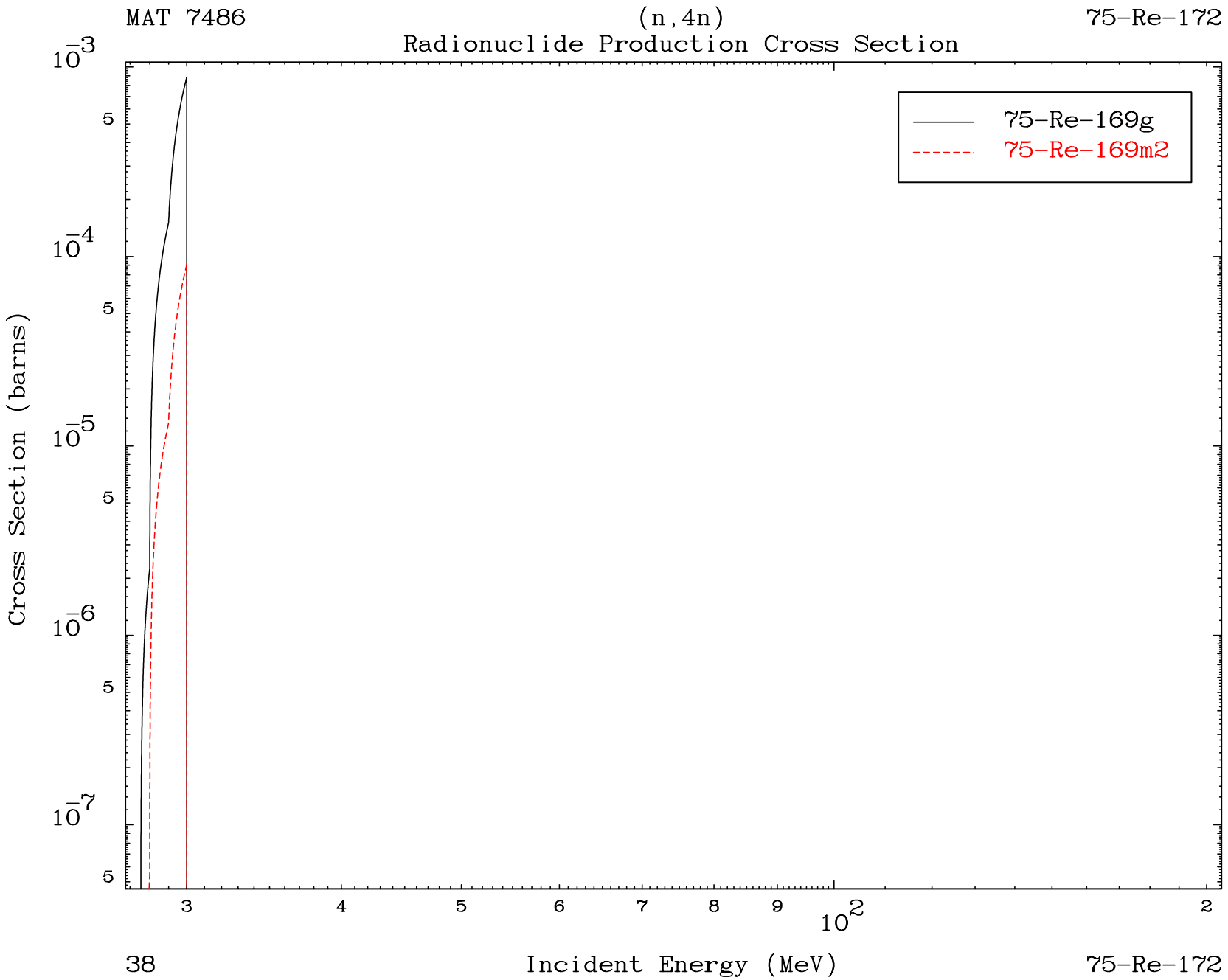

MAT 7486
MT= 55 (n,n') Level
Legendre Coefficients
75-Re-172
Legendre (CM)
0.4
0.3
0.2
0.1
0.0
-0.1
0
50
100
150
200
33
Incident Energy (MeV)
75-Re-172
P1
P2
P3
P4
P5
P6
P7
P8
P9


MAT 7486
MT= 55 (n,n') Level
Legendre Coefficients
75-Re-172
P10
P11
P12
P13
P14
P15
P16
P17
P18
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
Legendre (CM)
0
50
100
150
200
34
Incident Energy (MeV)
75-Re-172


MAT 7486
MT= 55 (n,n') Level
Legendre Coefficients
75-Re-172
P19
P20
P21
P22
P23
P24
P25
P26
P27
0.002
0.000
-0.002
-0.004
Legendre (CM)
50
100
150
200
35
Incident Energy (MeV)
75-Re-172


MAT 7486
MT= 55 (n,n') Level
Legendre Coefficients
75-Re-172
0.0
X10^-5
-0.5
-1.0
-1.5
-2.0
Legendre (CM)
50
100
150
200
36
Incident Energy (MeV)
75-Re-172
P28
P29
P30
P31
P32
P33
P34
P35
P36


MAT 7486
Inelastic
75-Re-172
Radionuclide Production Cross Section
75-Re-172g
75-Re-172m1
Cross Section (barns)
Incident Energy (MeV)
37
75-Re-172


MAT 7486
(n,4n)
75-Re-172
Radionuclide Production Cross Section
75-Re-169g
75-Re-169m2
Cross Section (barns)
10-3
10-4
10-5
10-6
10-7
5
3
4
5
6
7
8
9
10 2
2
38
Incident Energy (MeV)
75-Re-172