

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](mailto:redcullen1@comcast.net)

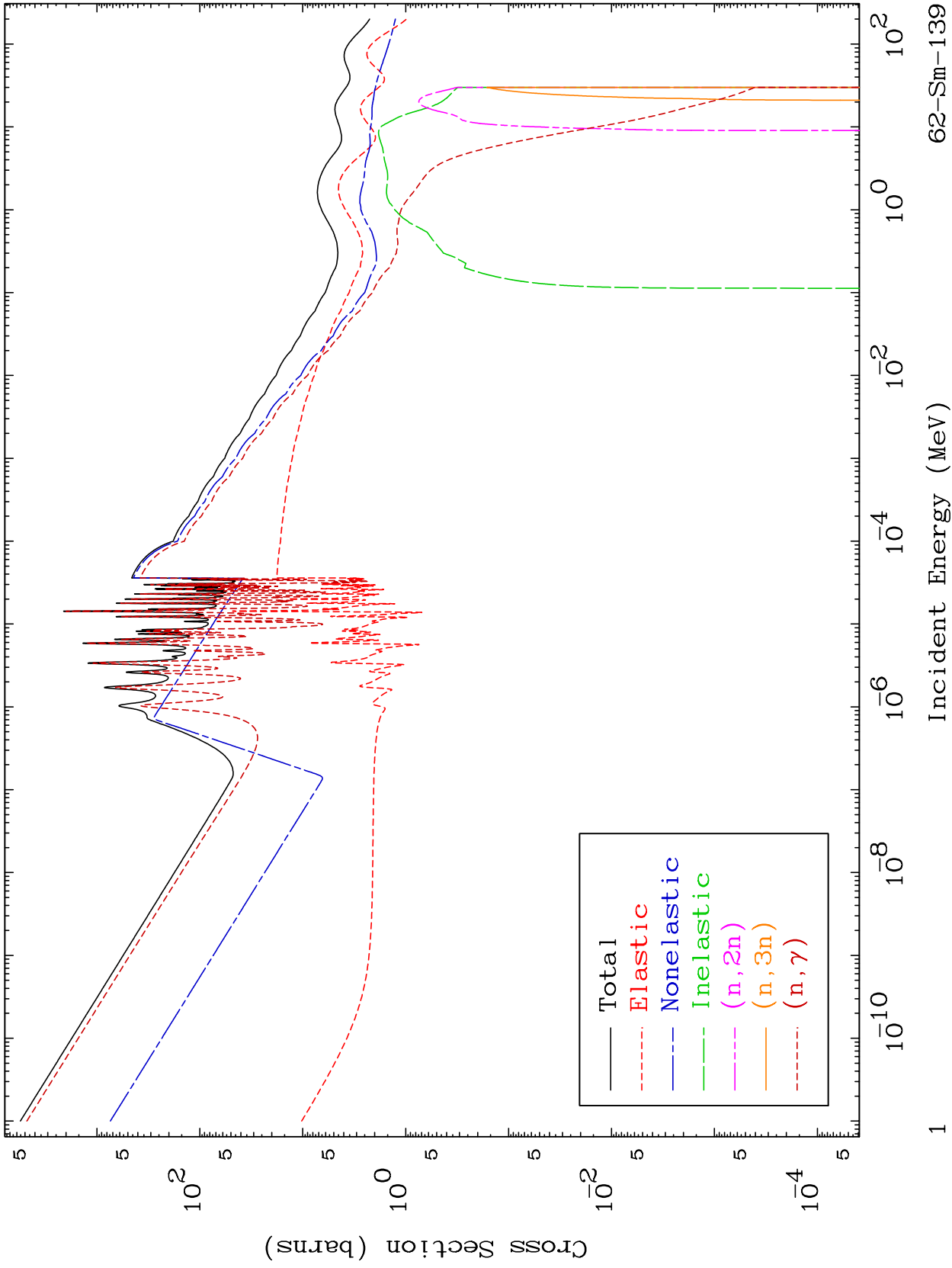
Web: [redcullen1.net/HOMEPAGE.NEW](http://redcullen1.net/HOMEPAGE.NEW)

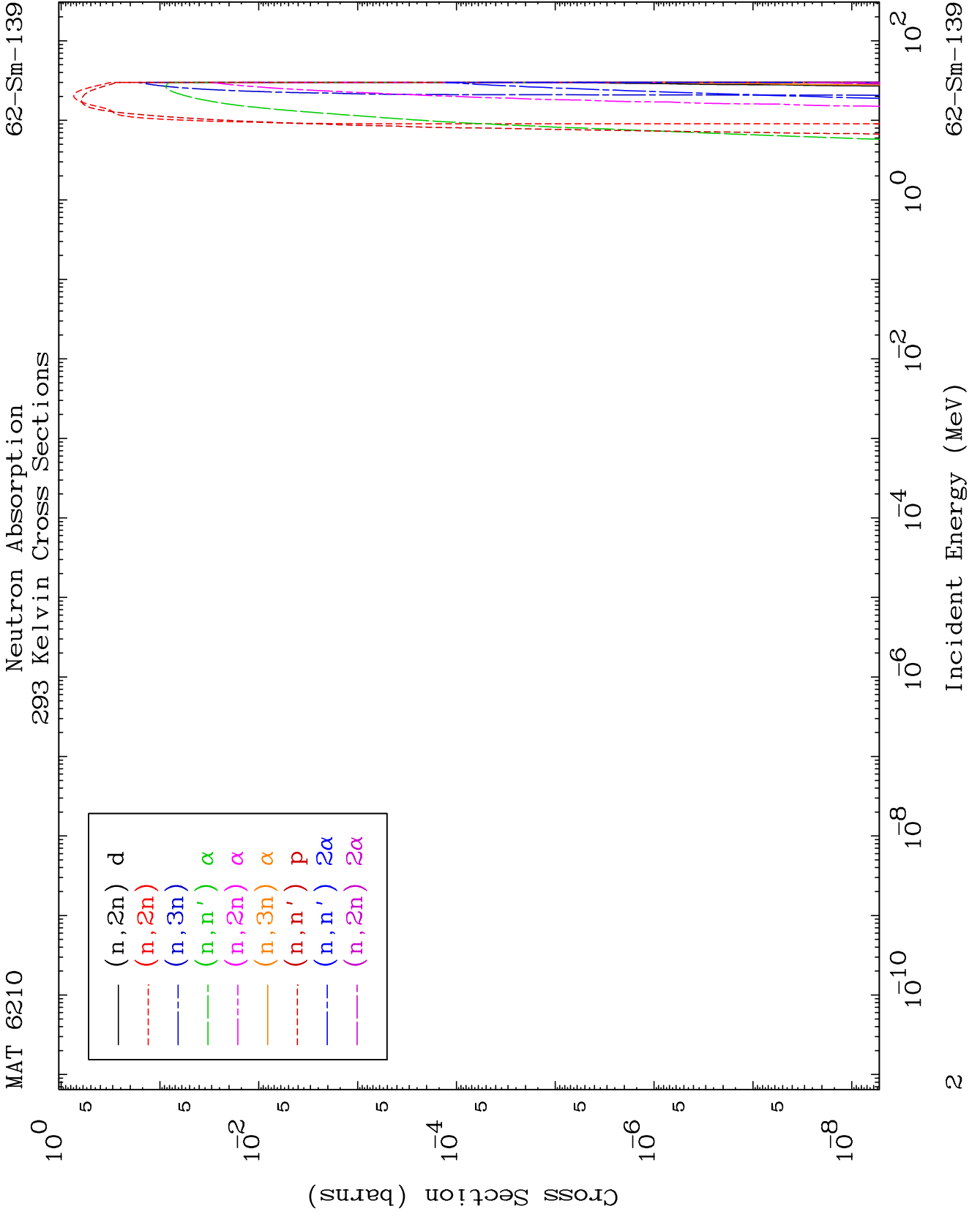
Press Mouse Button to Start

MAT 6210

Neutron Major  
293 Kelvin Cross Sections

62-Sm-139

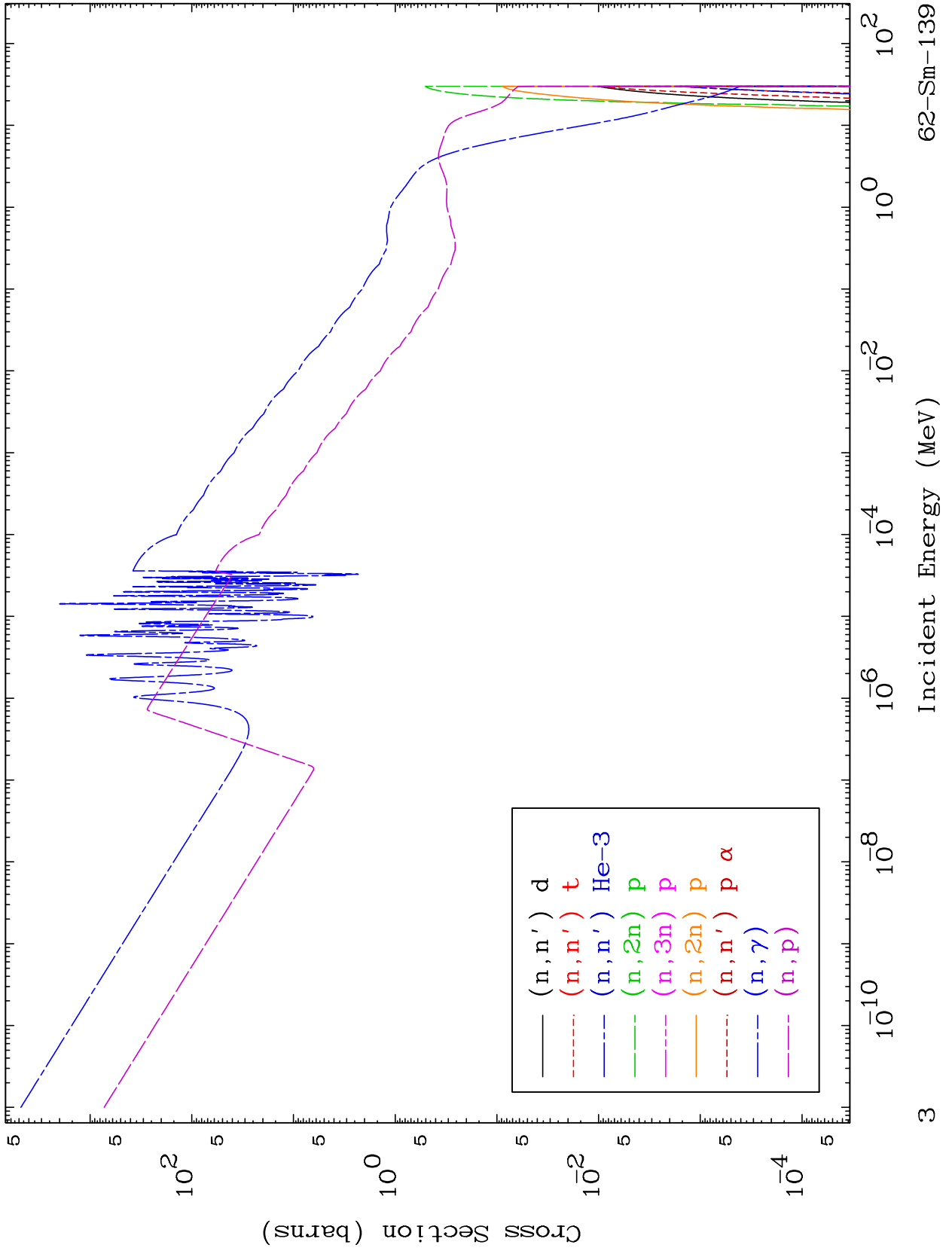




MAT 6210

Neutron Absorption  
293 Kelvin Cross Sections

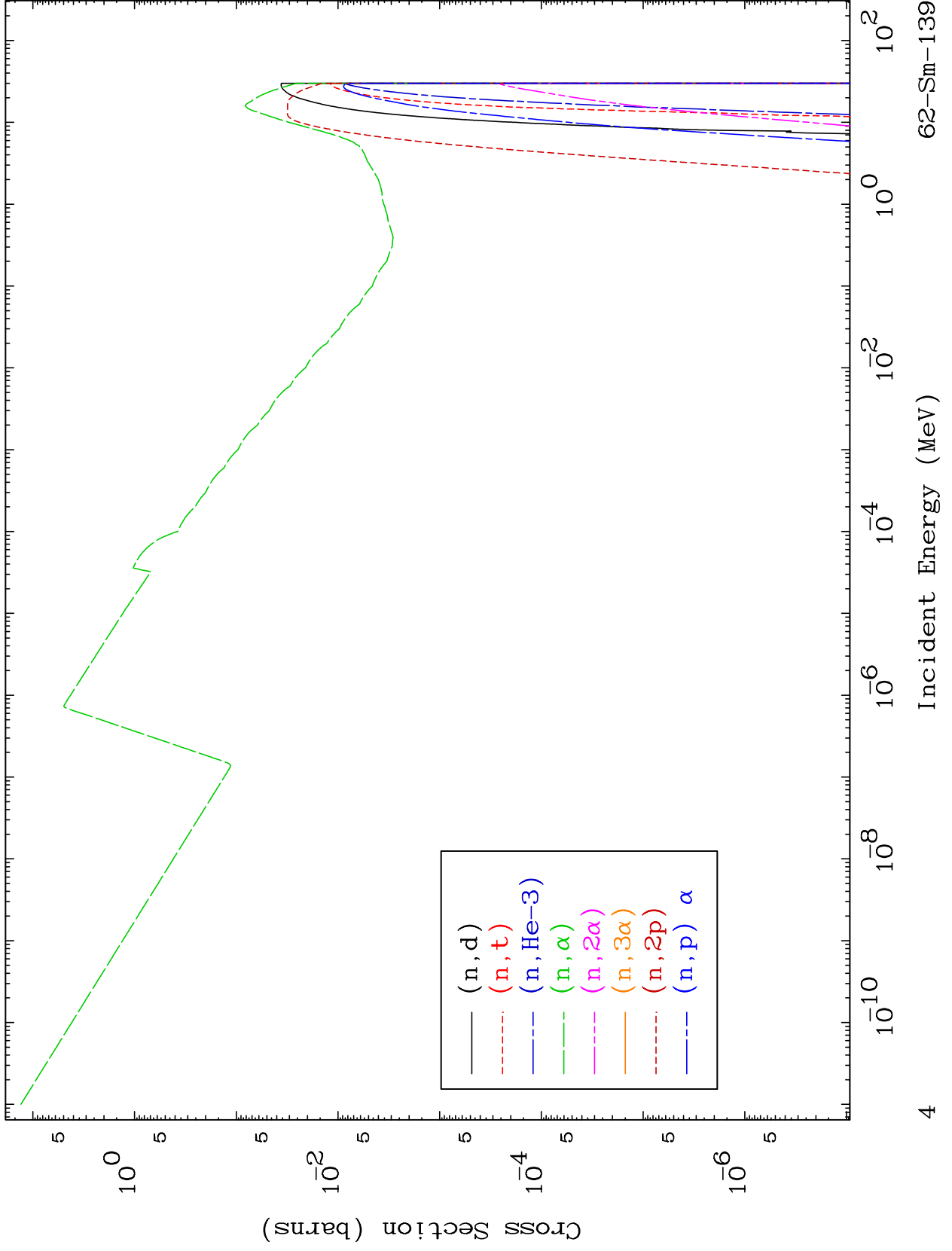
62-Sm-139

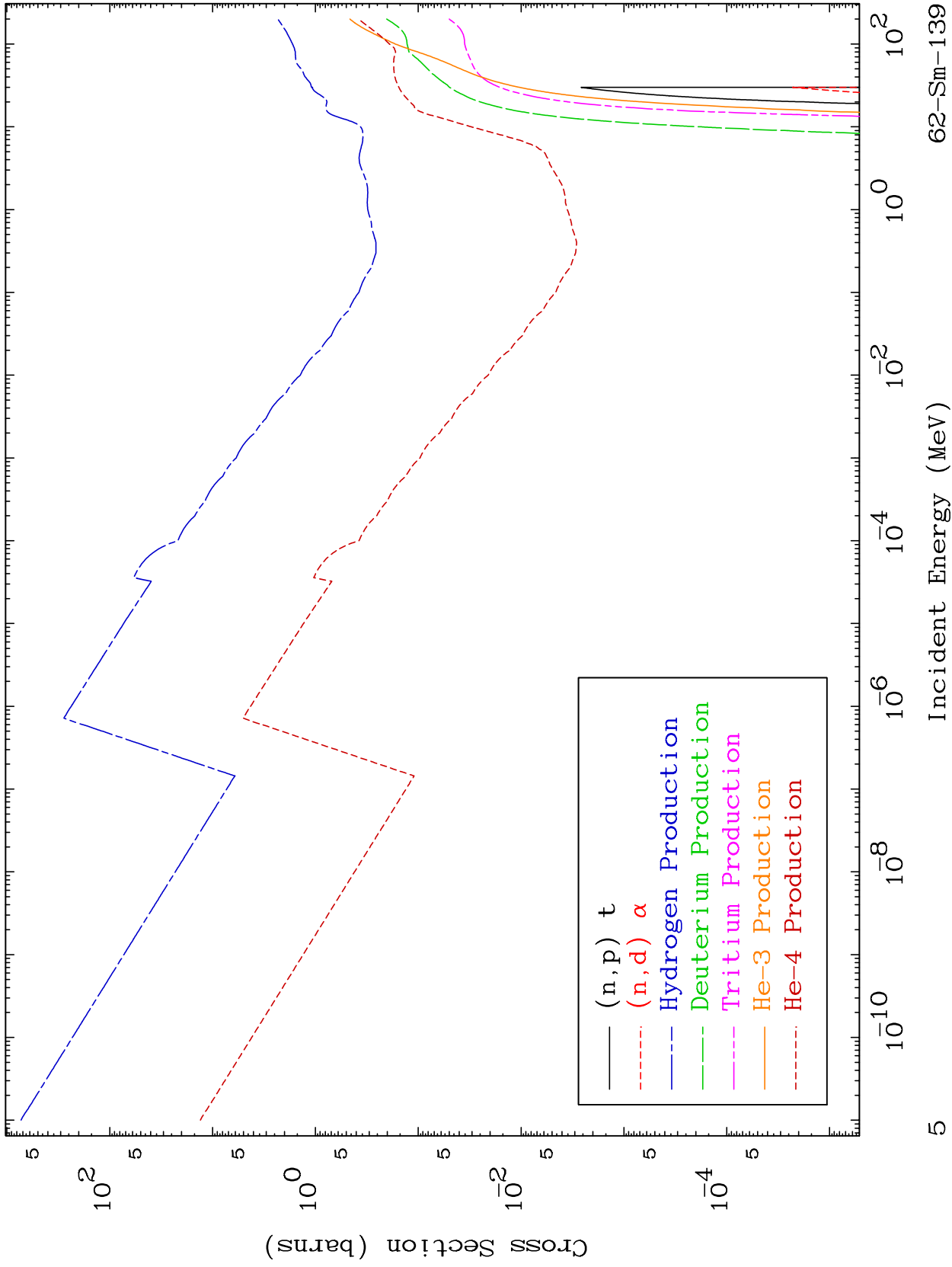


MAT 6210

Neutron Absorption  
293 Kelvin Cross Sections

62-Sm-139

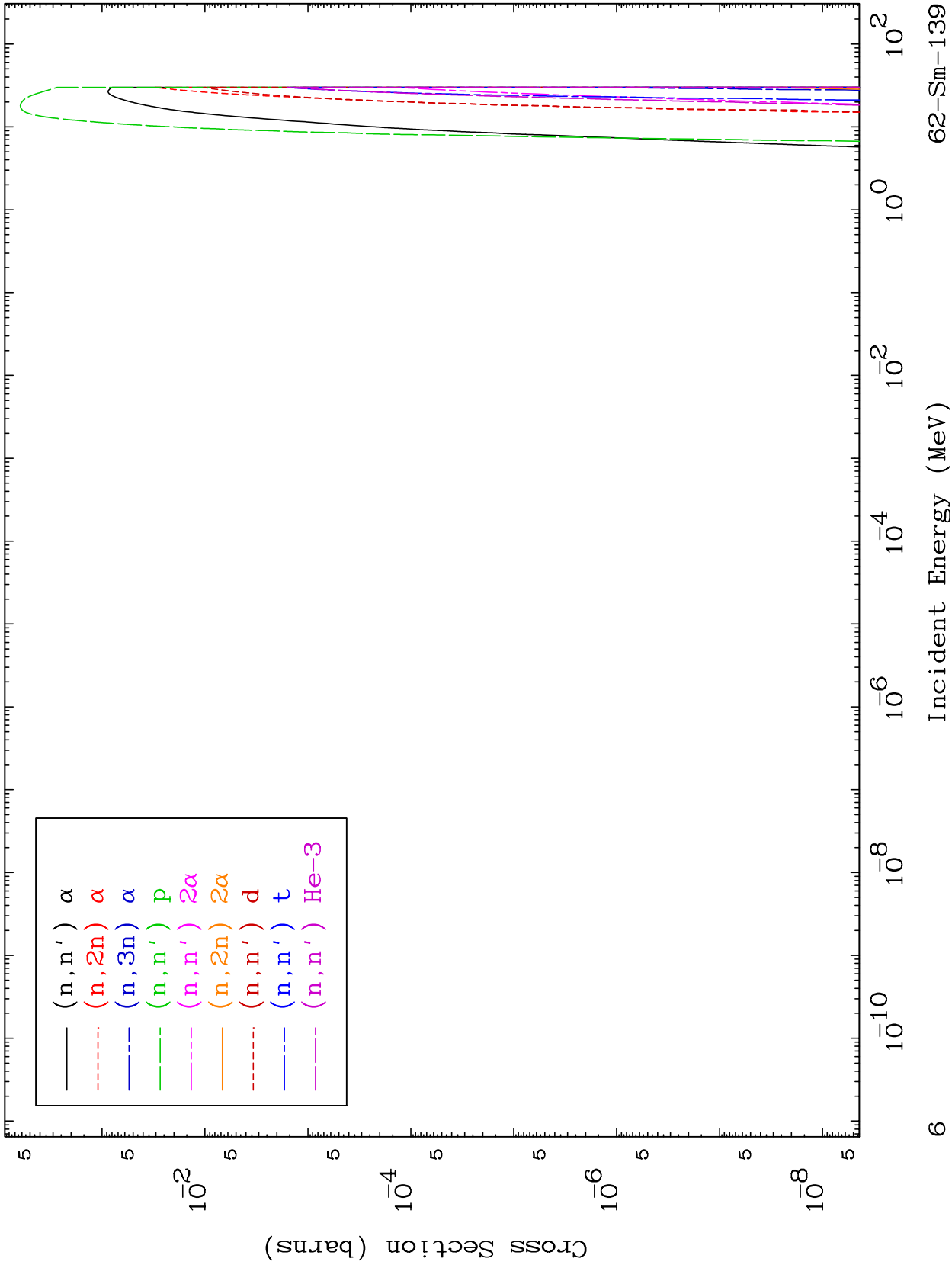




MAT 6210

Charged Particle  
293 Kelvin Cross Sections

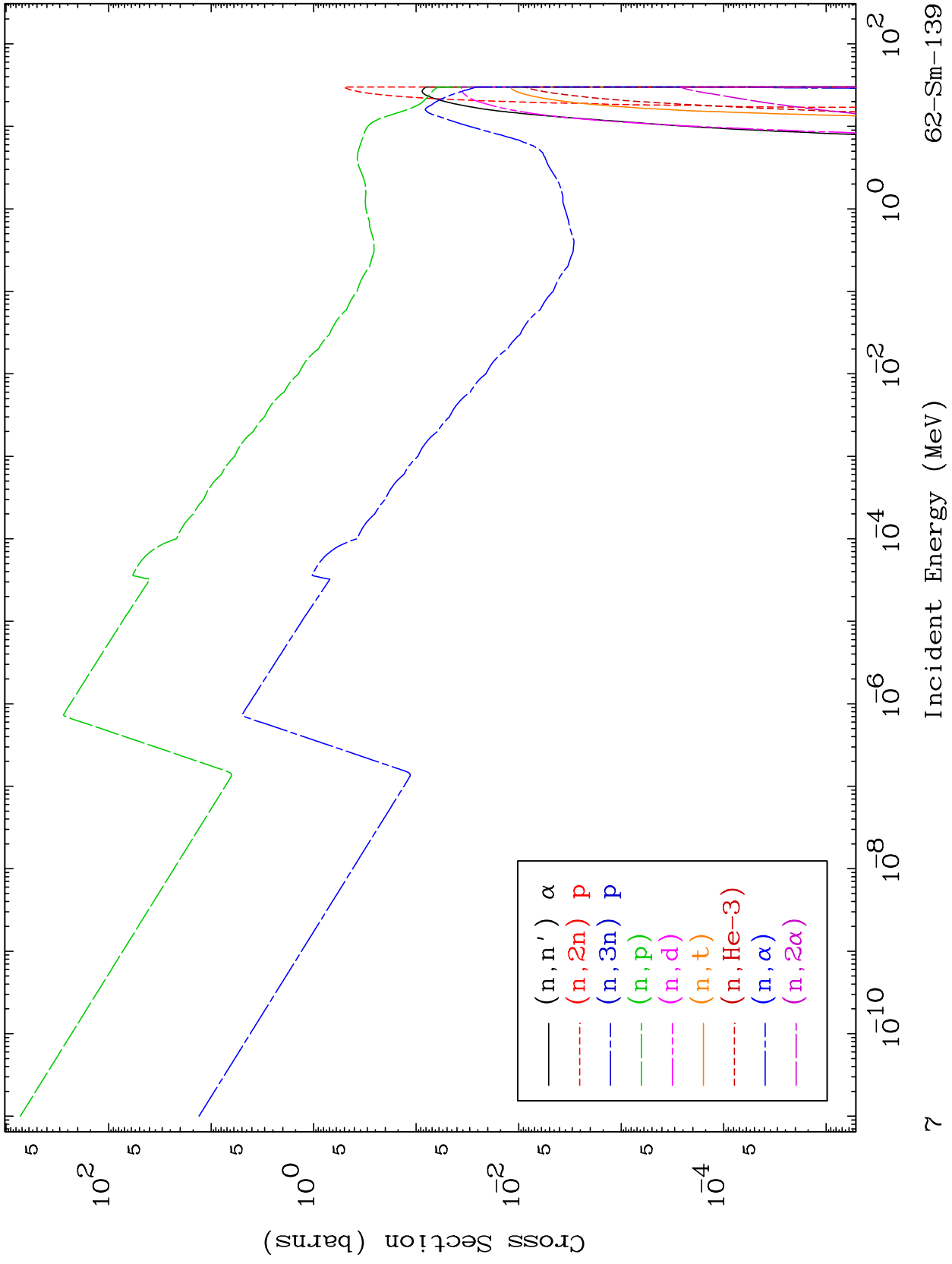
62-Sm-139



MAT 6210

Charged Particle  
293 Kelvin Cross Sections

62-Sm-139

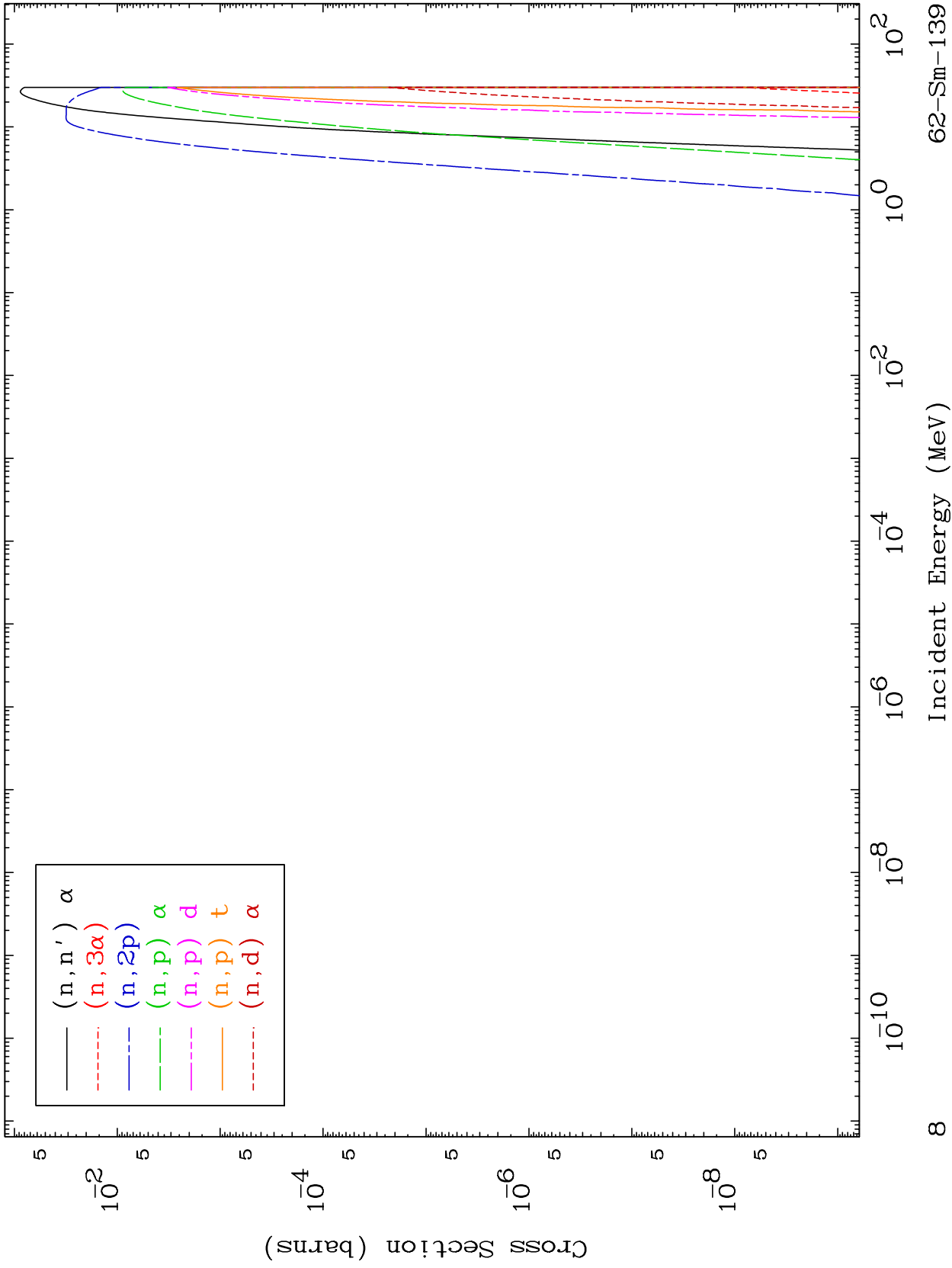


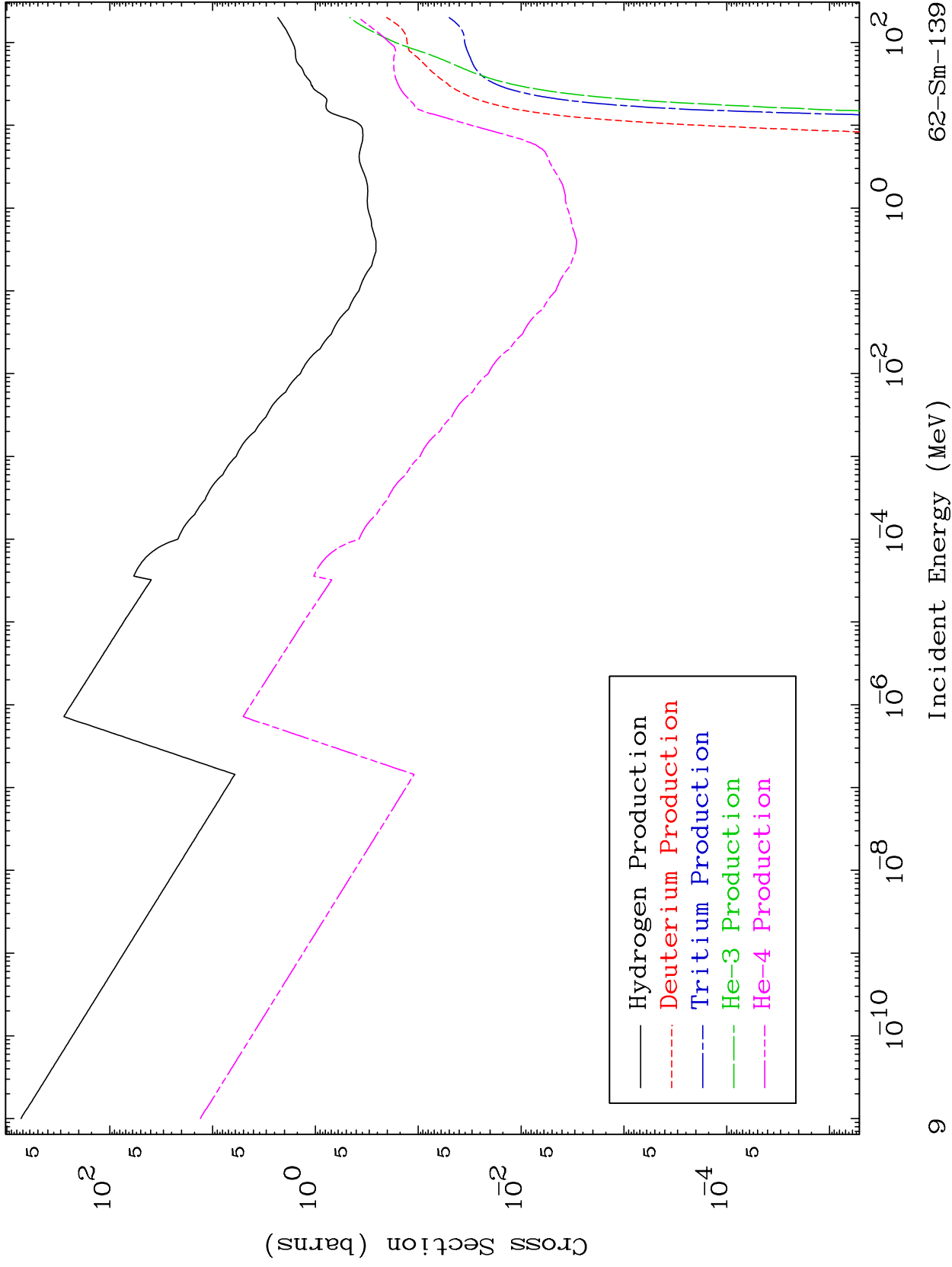


MAT 6210

Charged Particle  
293 Kelvin Cross Sections

62-Sm-139

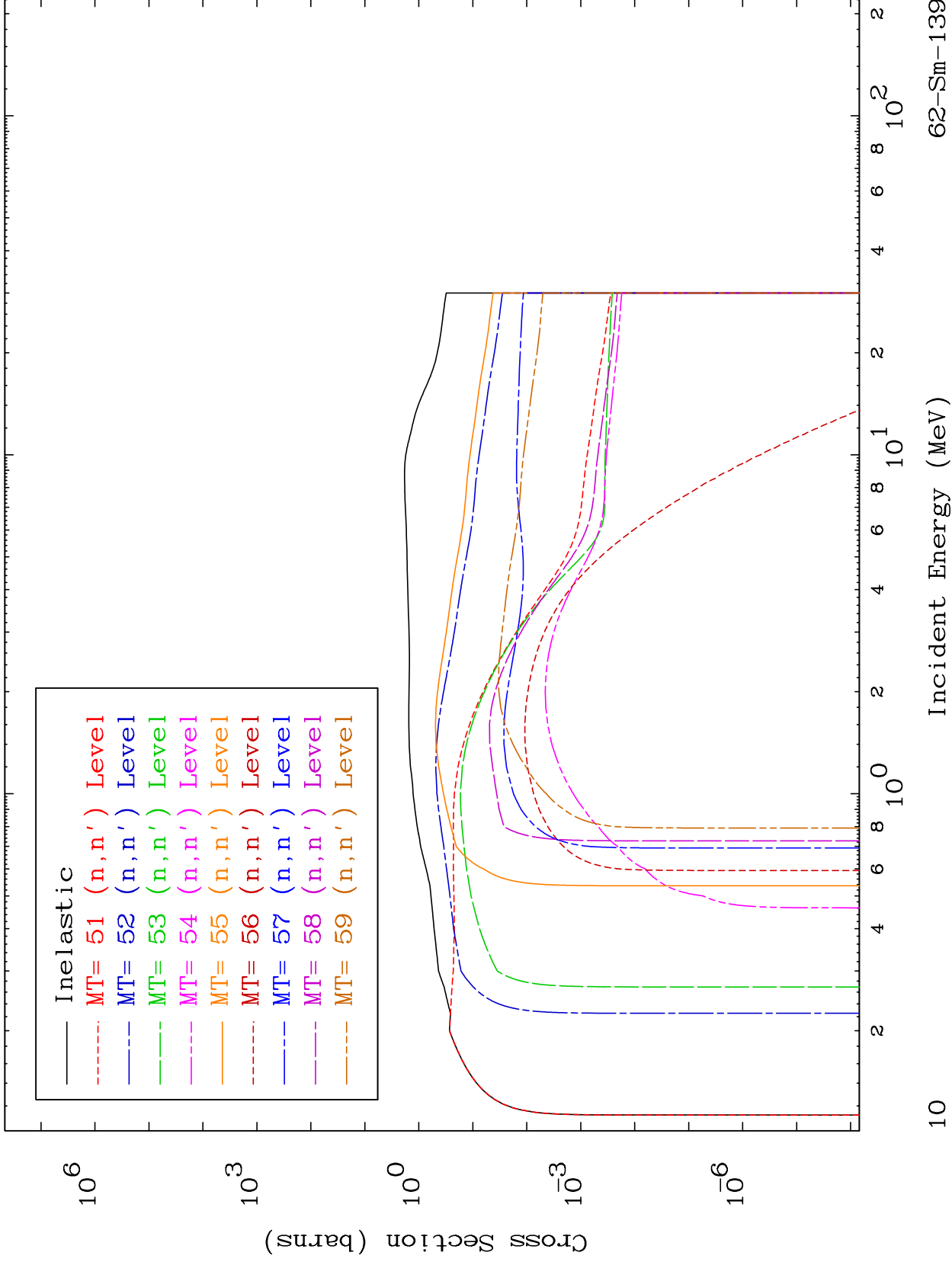




MAT 6210

(n,n') Levels  
293 Kelvin Cross Sections

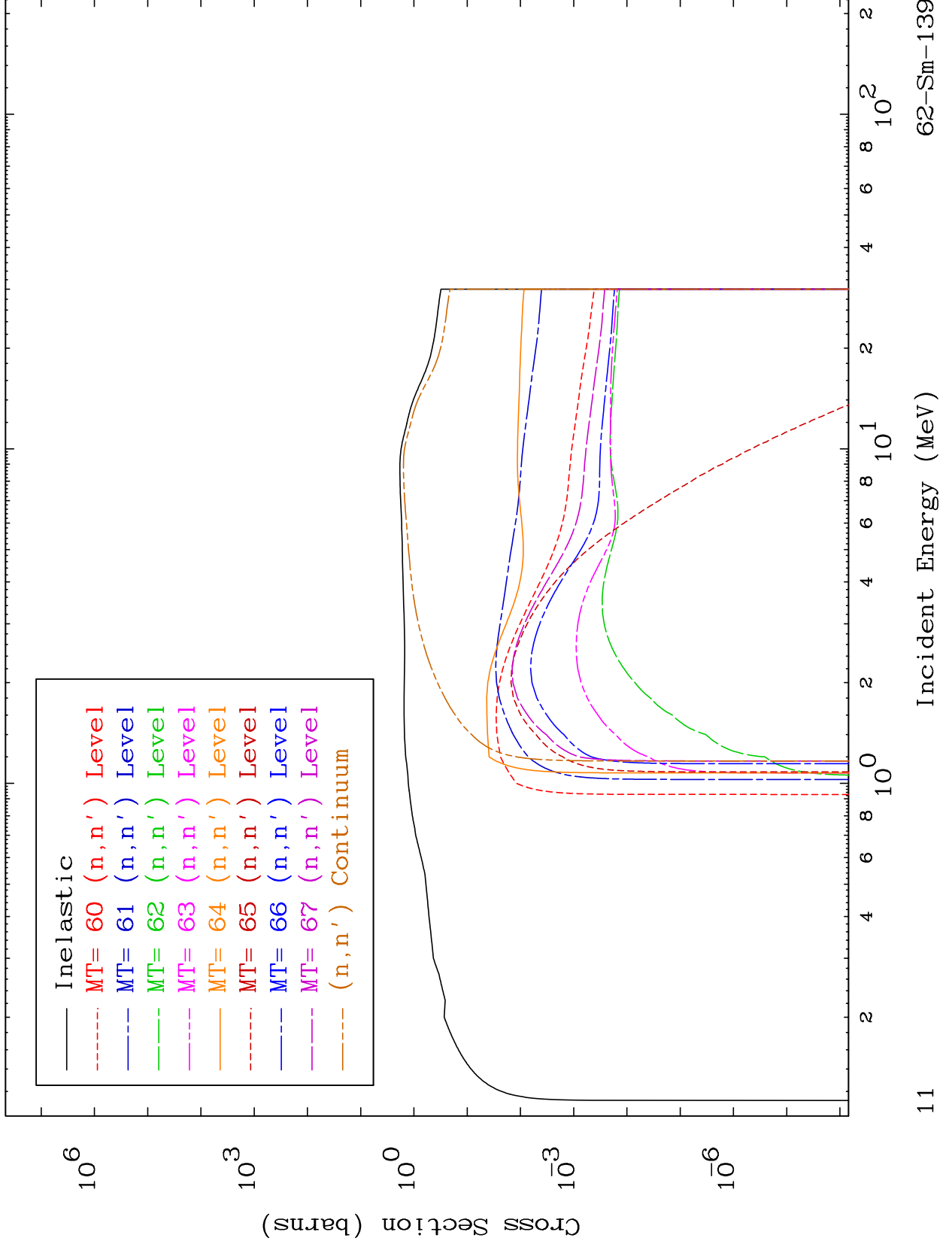
62-Sm-139



10

Incident Energy (MeV)

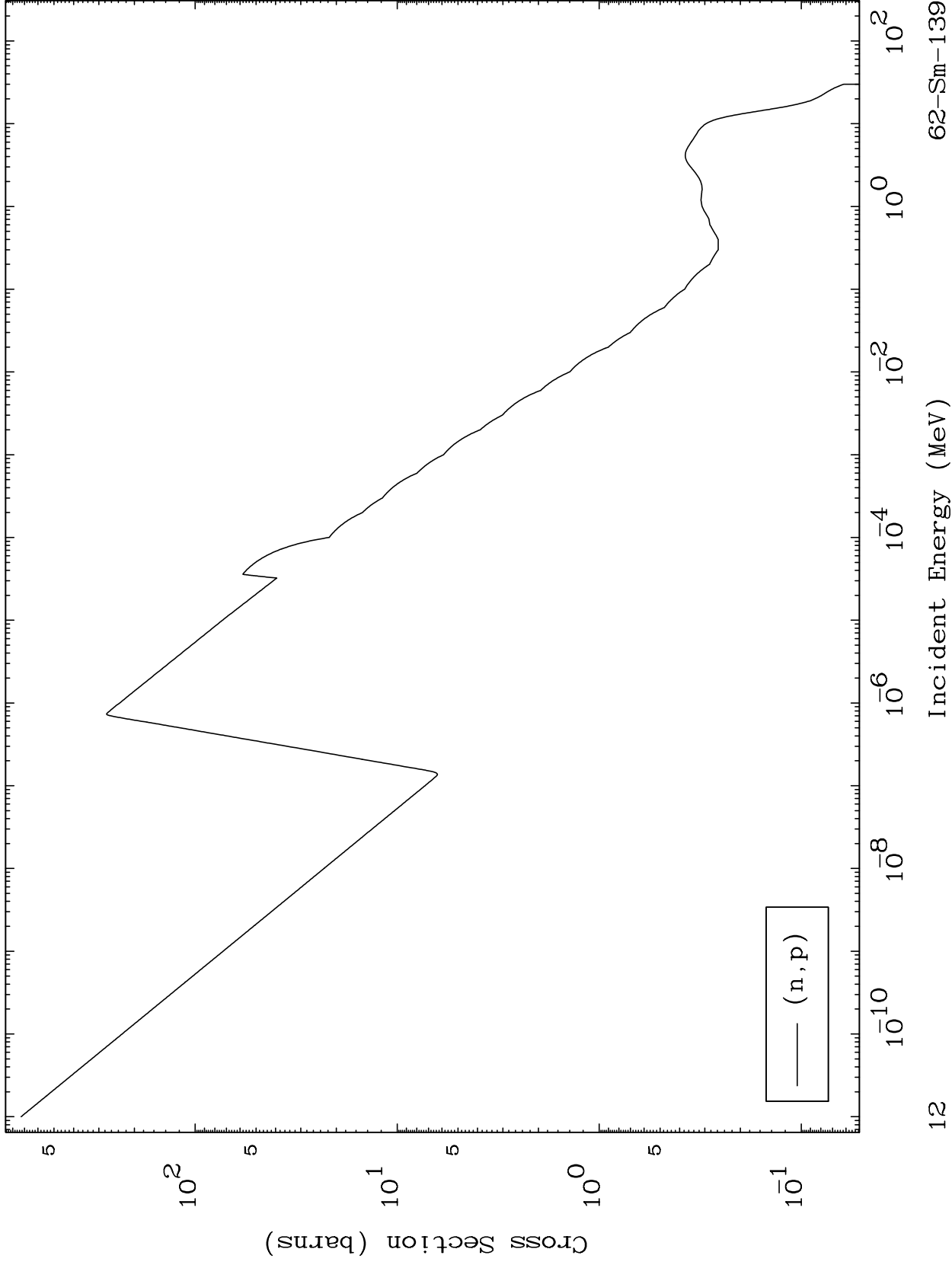
62-Sm-139



MAT 6210

(n,p) Levels  
293 Kelvin Cross Sections

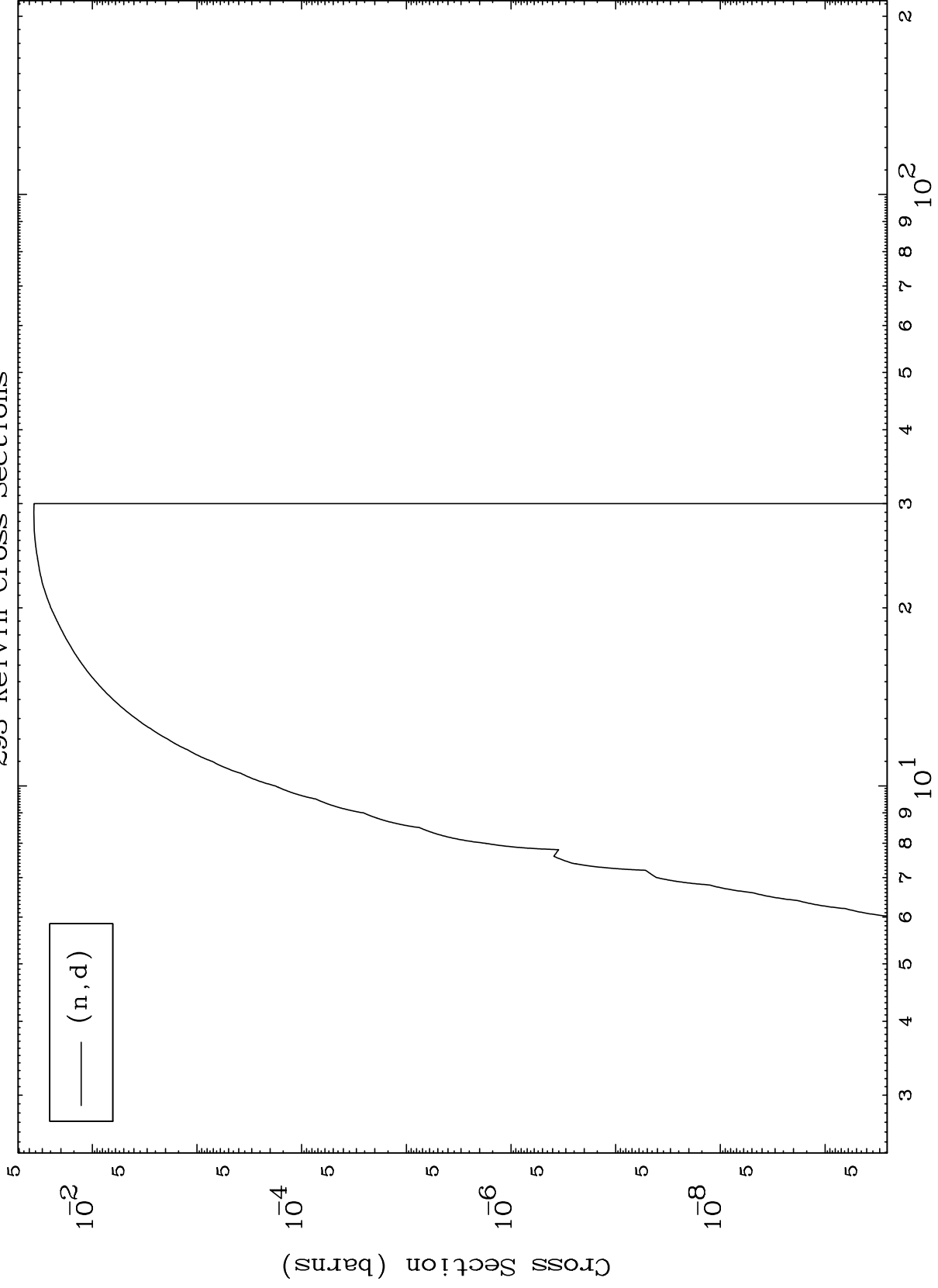
62-Sm-139



MAT 6210

(n,d) Levels  
293 Kelvin Cross Sections

62-Sm-139



13

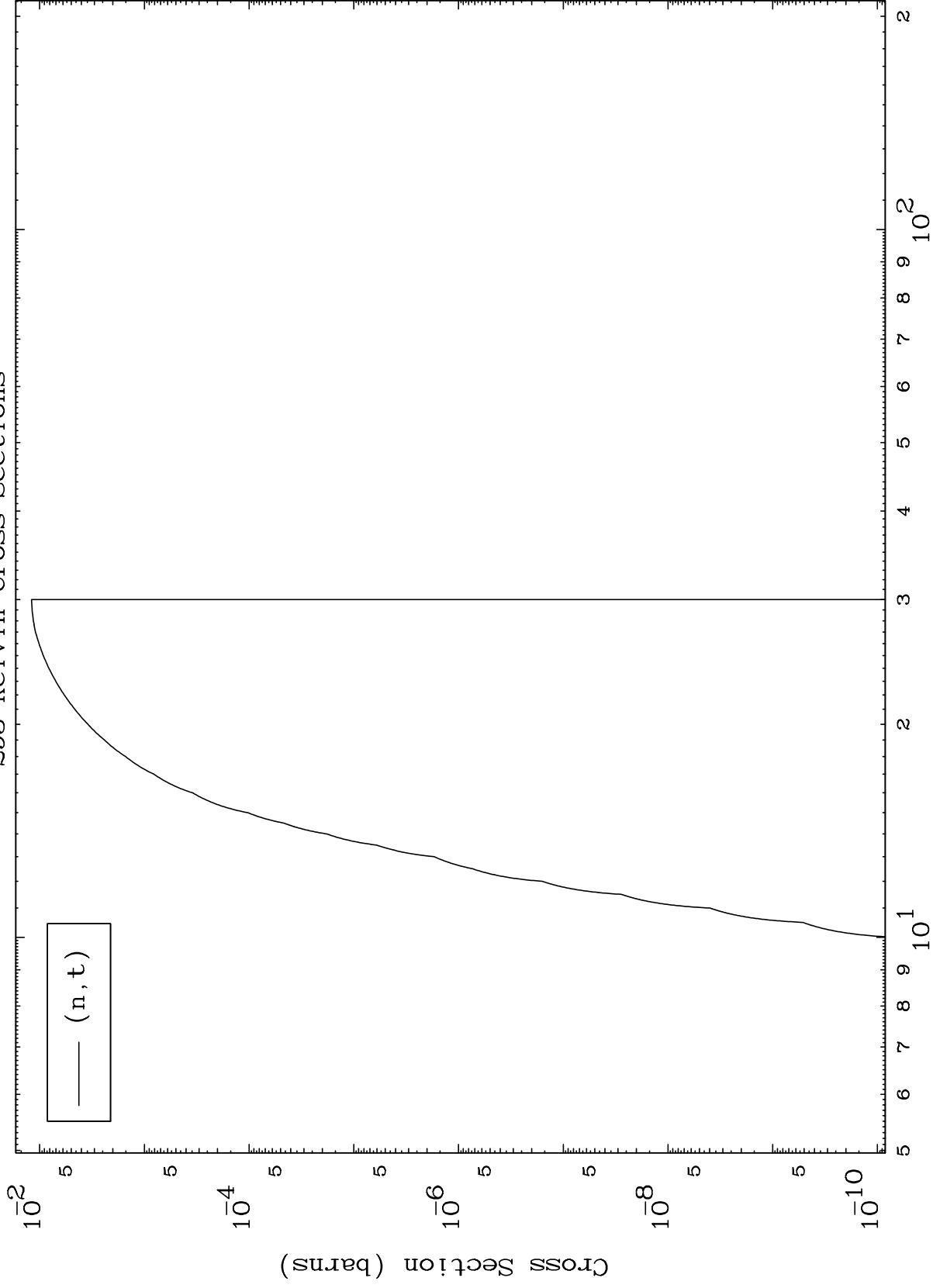
Incident Energy (MeV)

62-Sm-139

MAT 6210

(n,t) Levels  
293 Kelvin Cross Sections

62-Sm-139



14

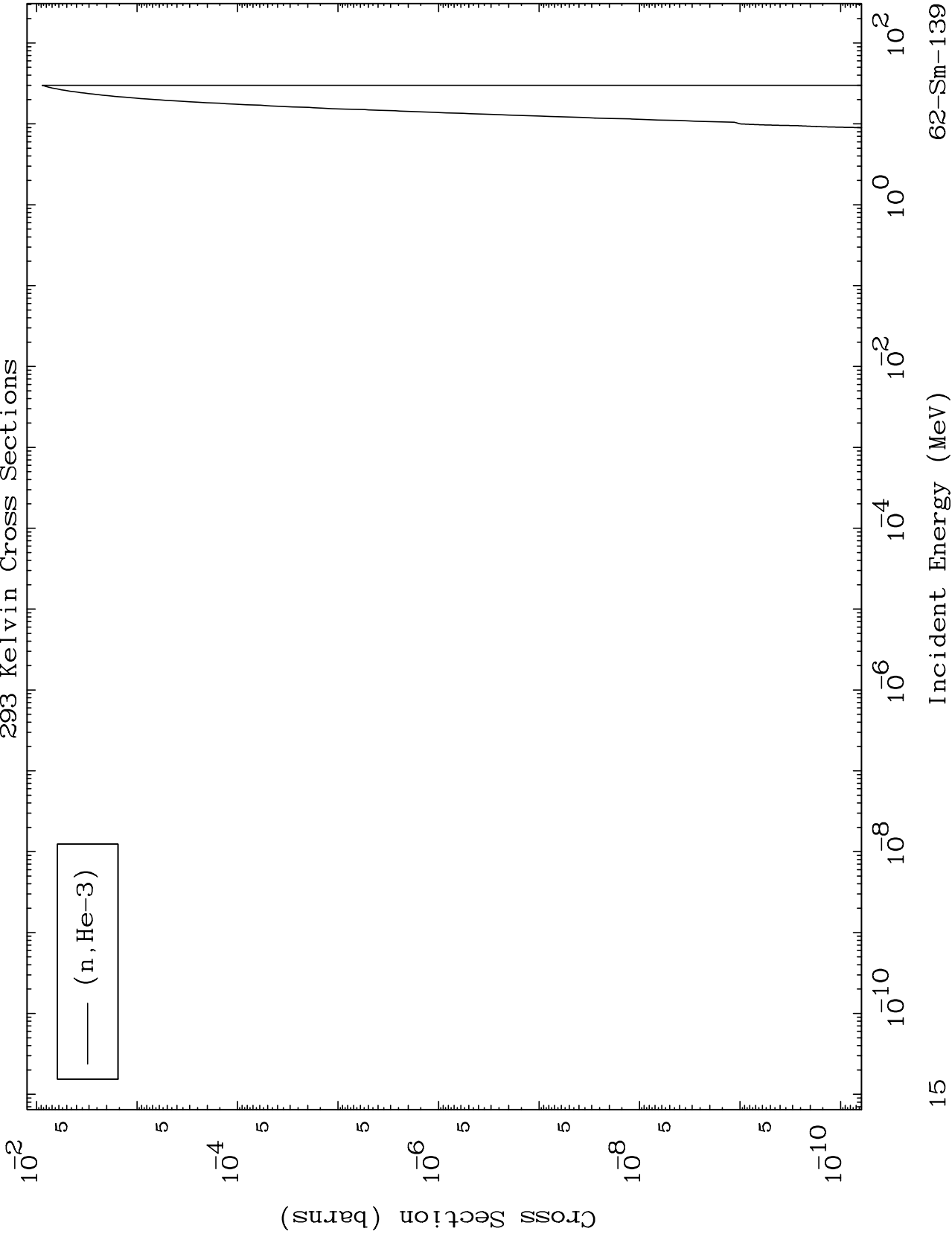
Incident Energy (MeV)

62-Sm-139

MAT 6210

(n,He3) Levels  
293 Kelvin Cross Sections

62-Sm-139



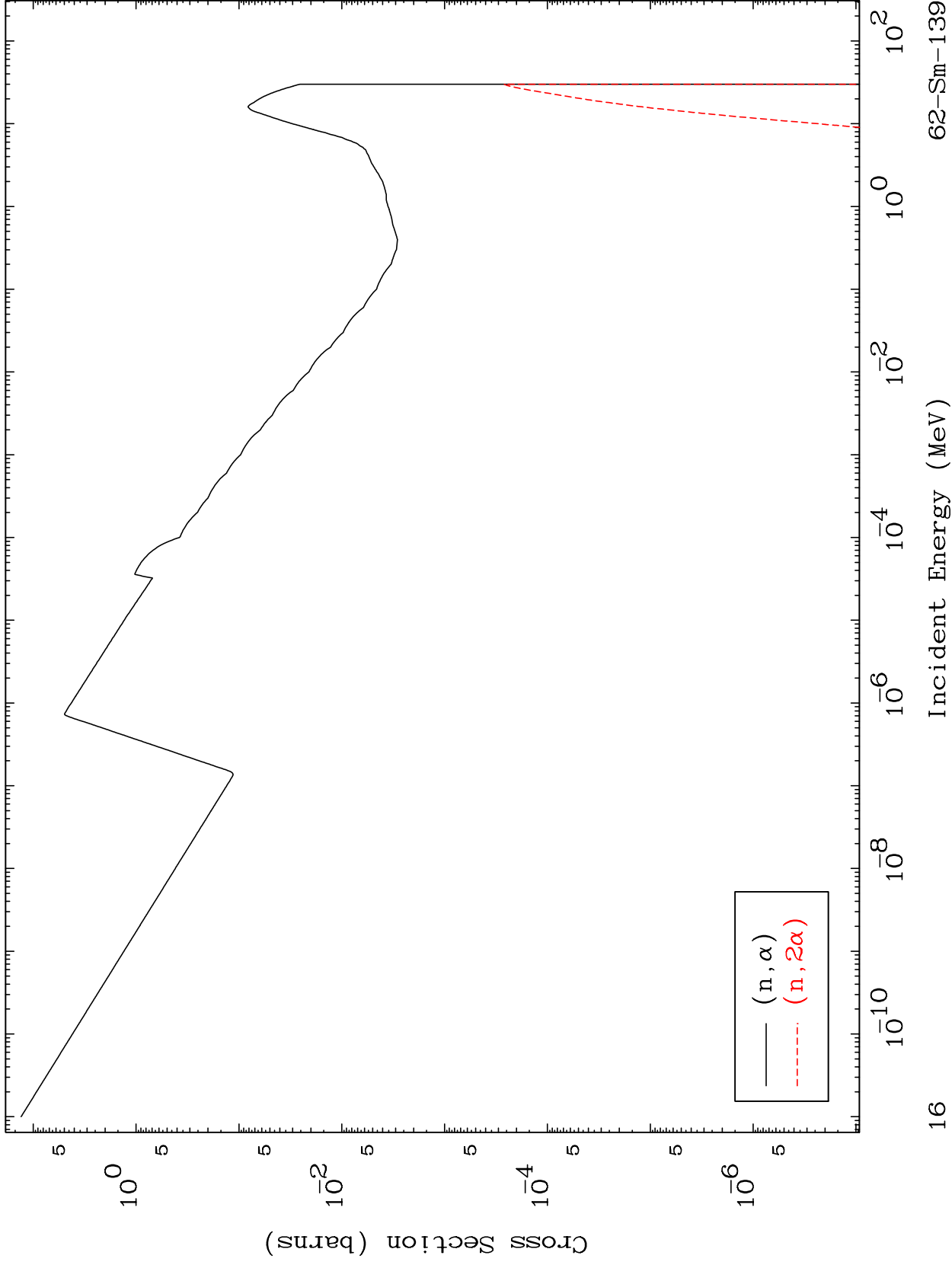
(n, He-3)

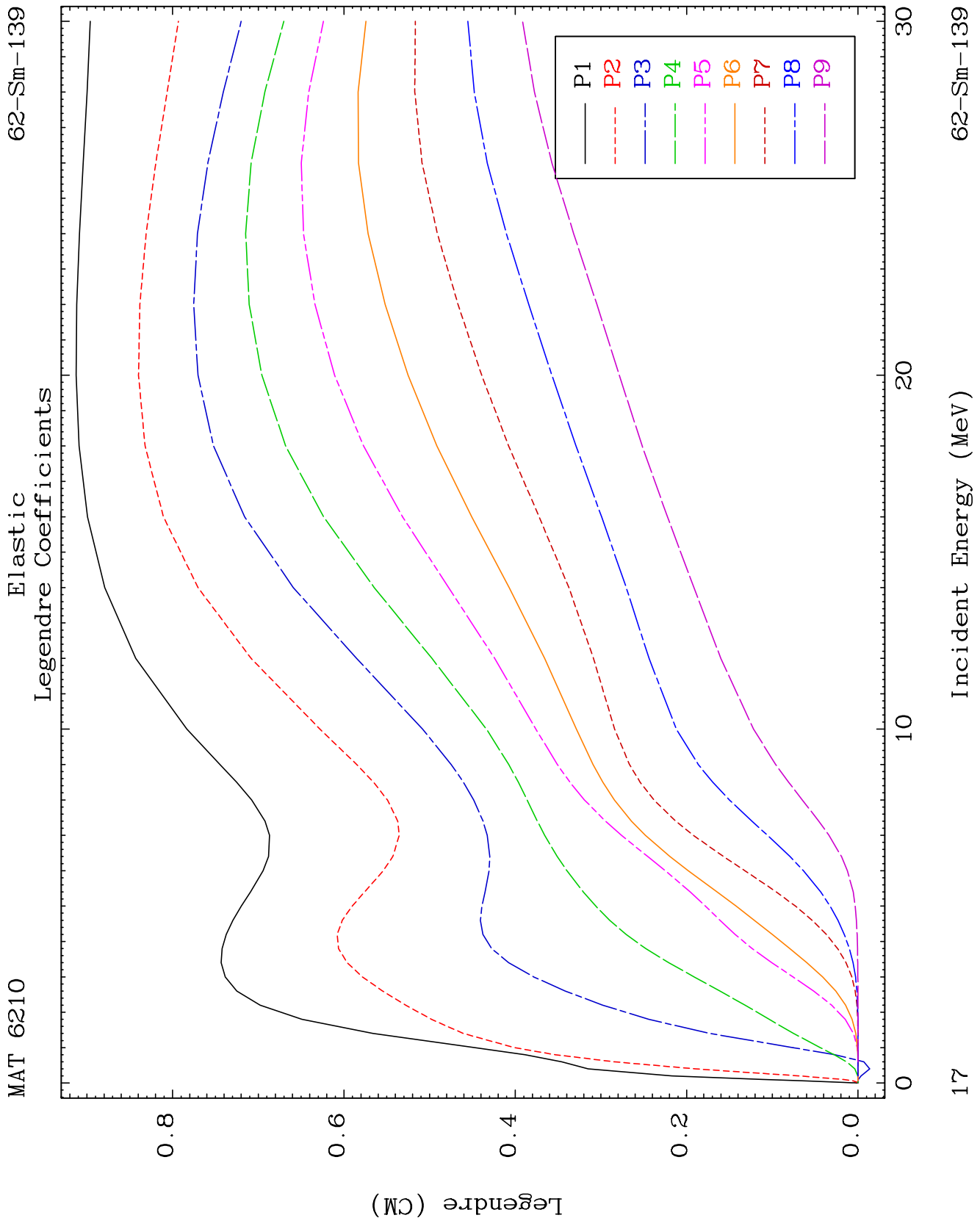


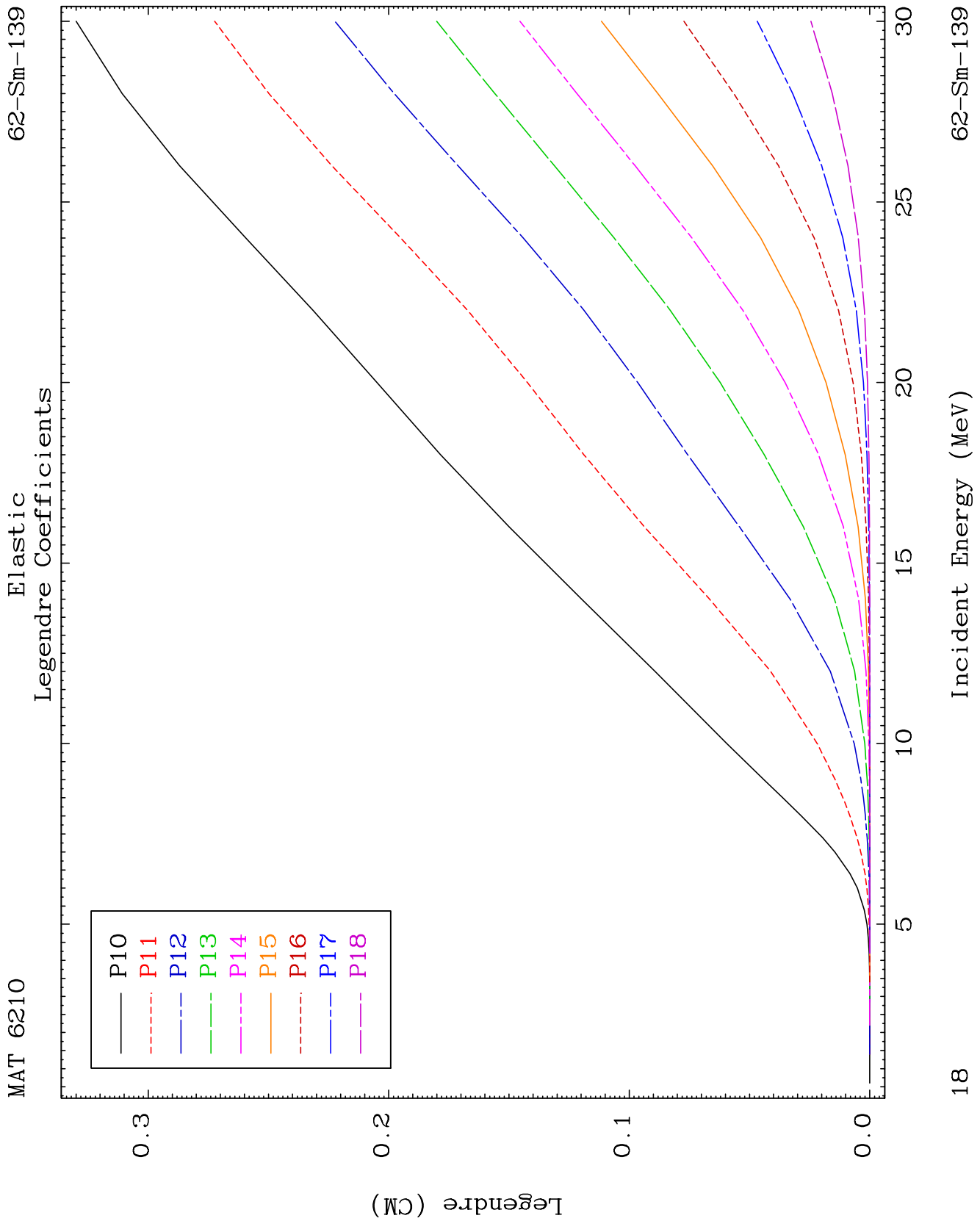
MAT 6210

(n,  $\alpha$ ) Levels  
293 Kelvin Cross Sections

62-Sm-139



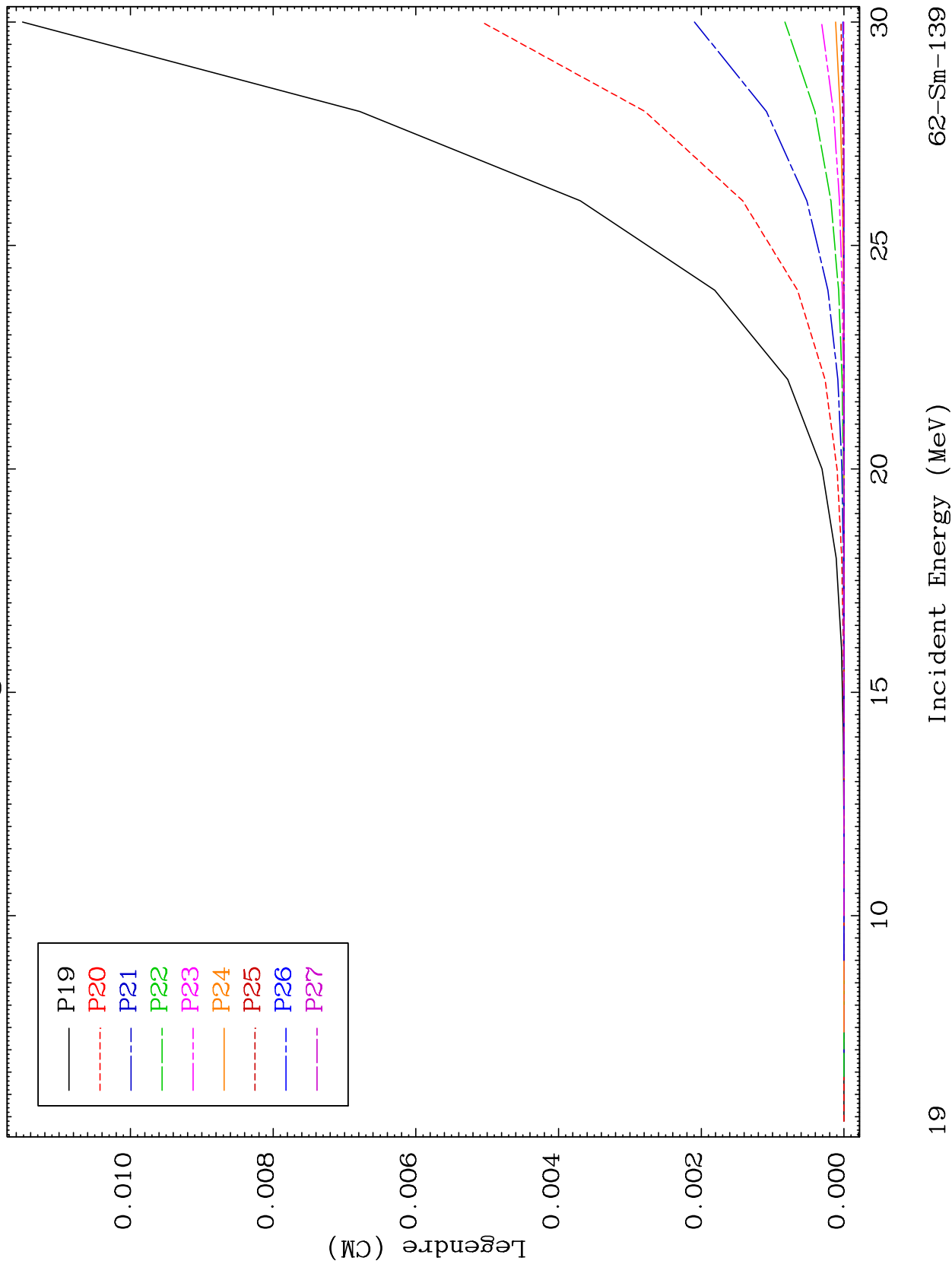




MAT 6210

### Elastic Legendre Coefficients

62-Sm-139



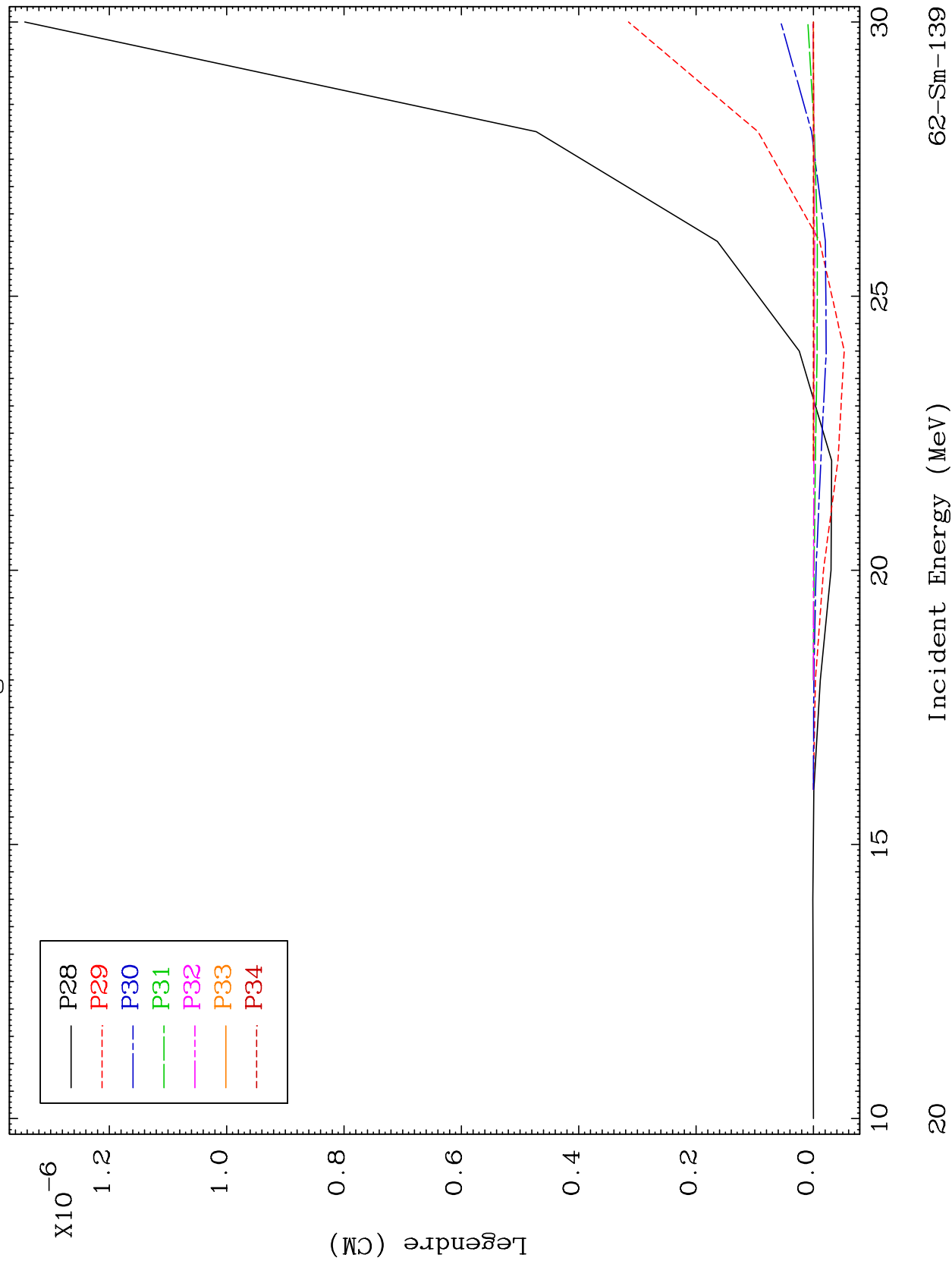
19

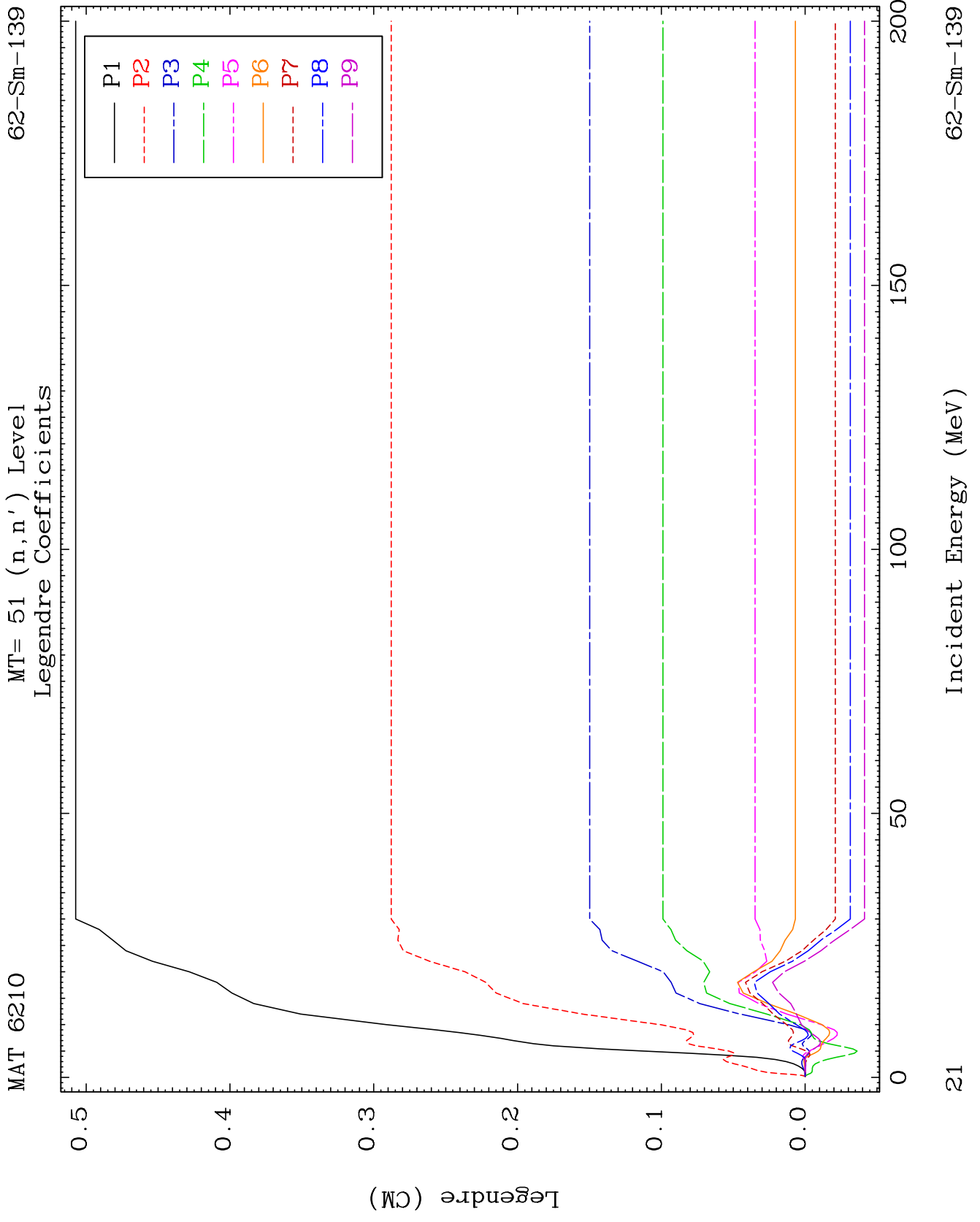
62-Sm-139

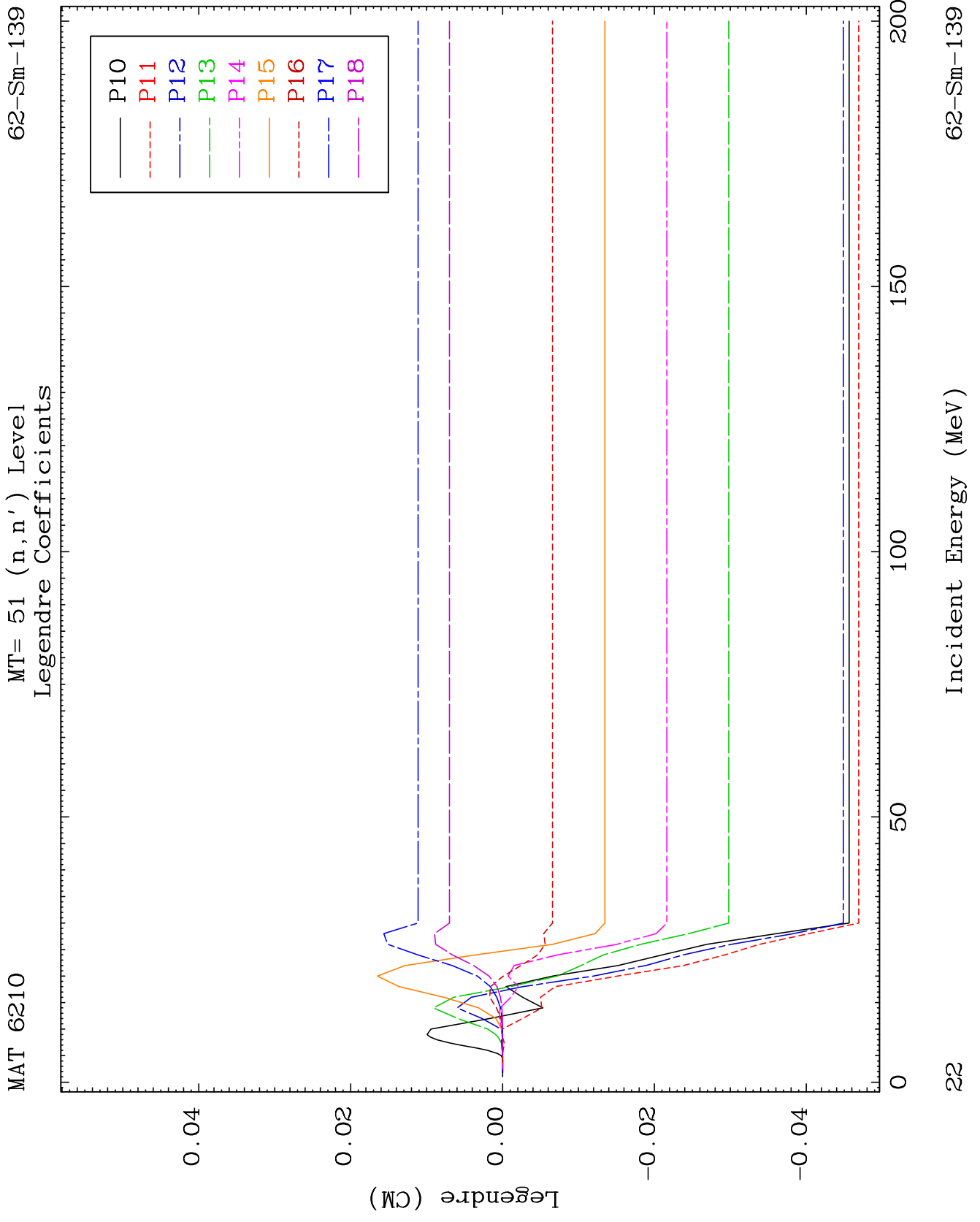
MAT 6210

Elastic Legendre Coefficients

62-Sm-139



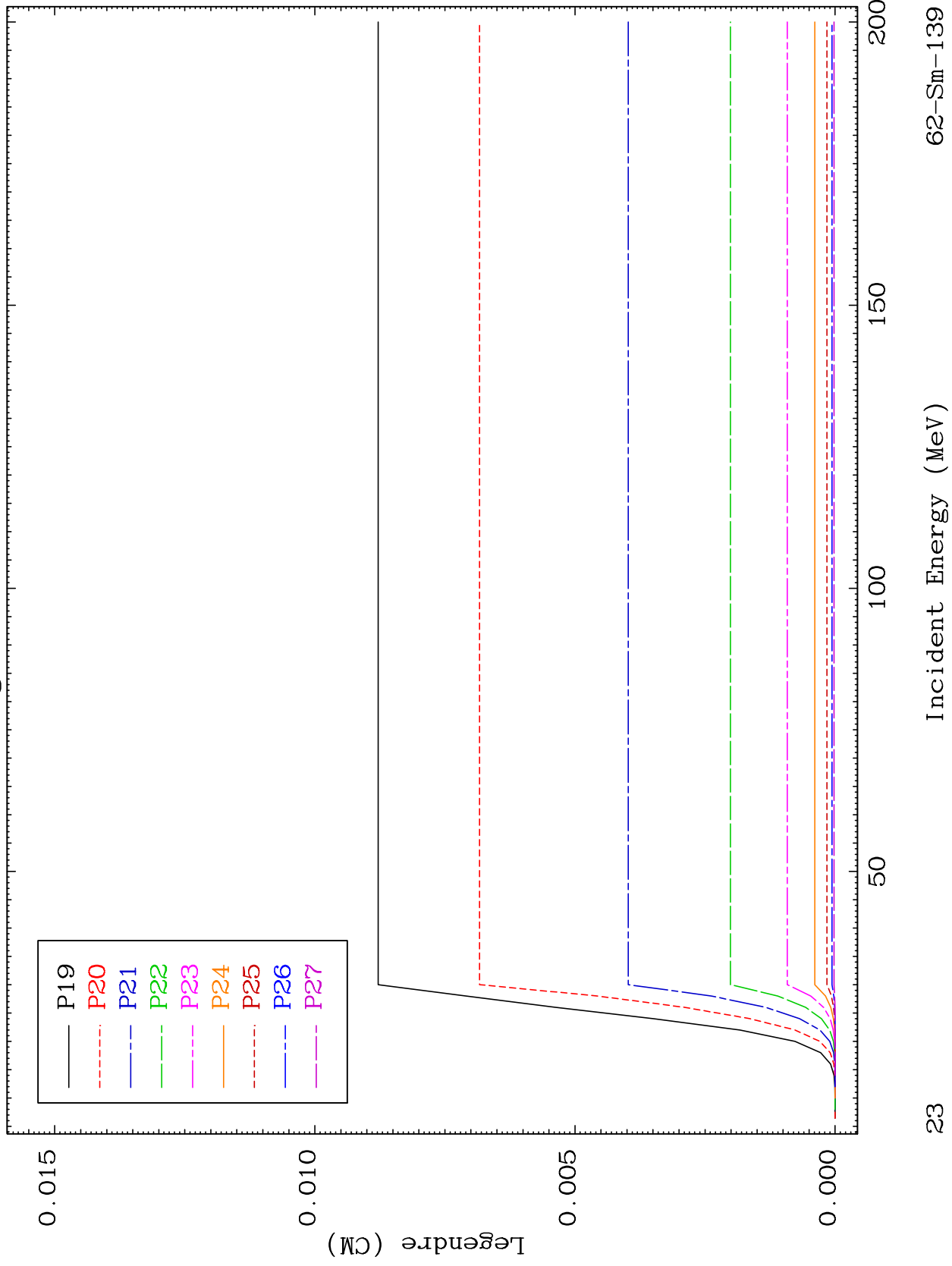




MAT 6210

MT= 51 (n,n') Level  
Legendre Coefficients

62-Sm-139



23

Incident Energy (MeV)

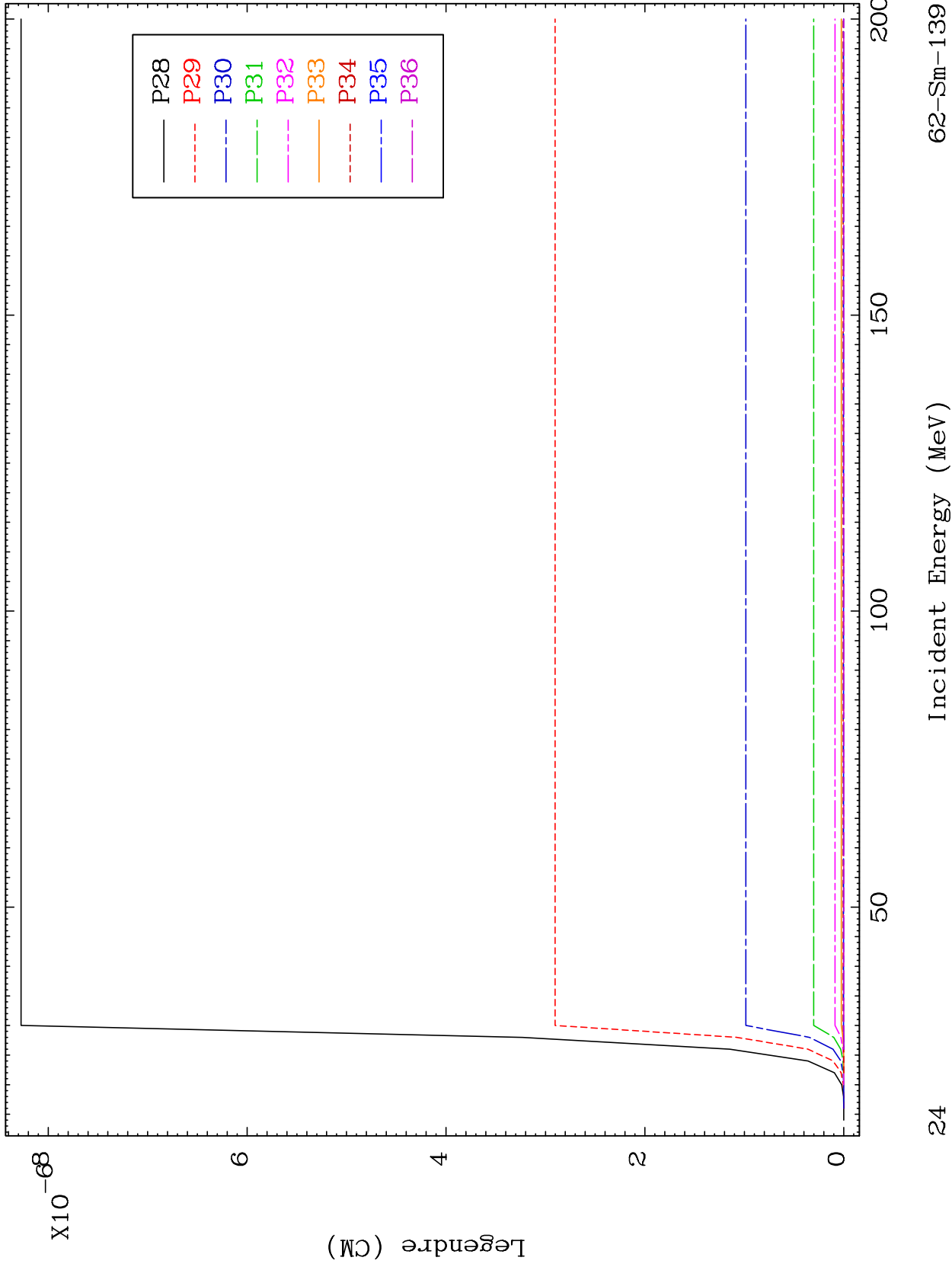
62-Sm-139



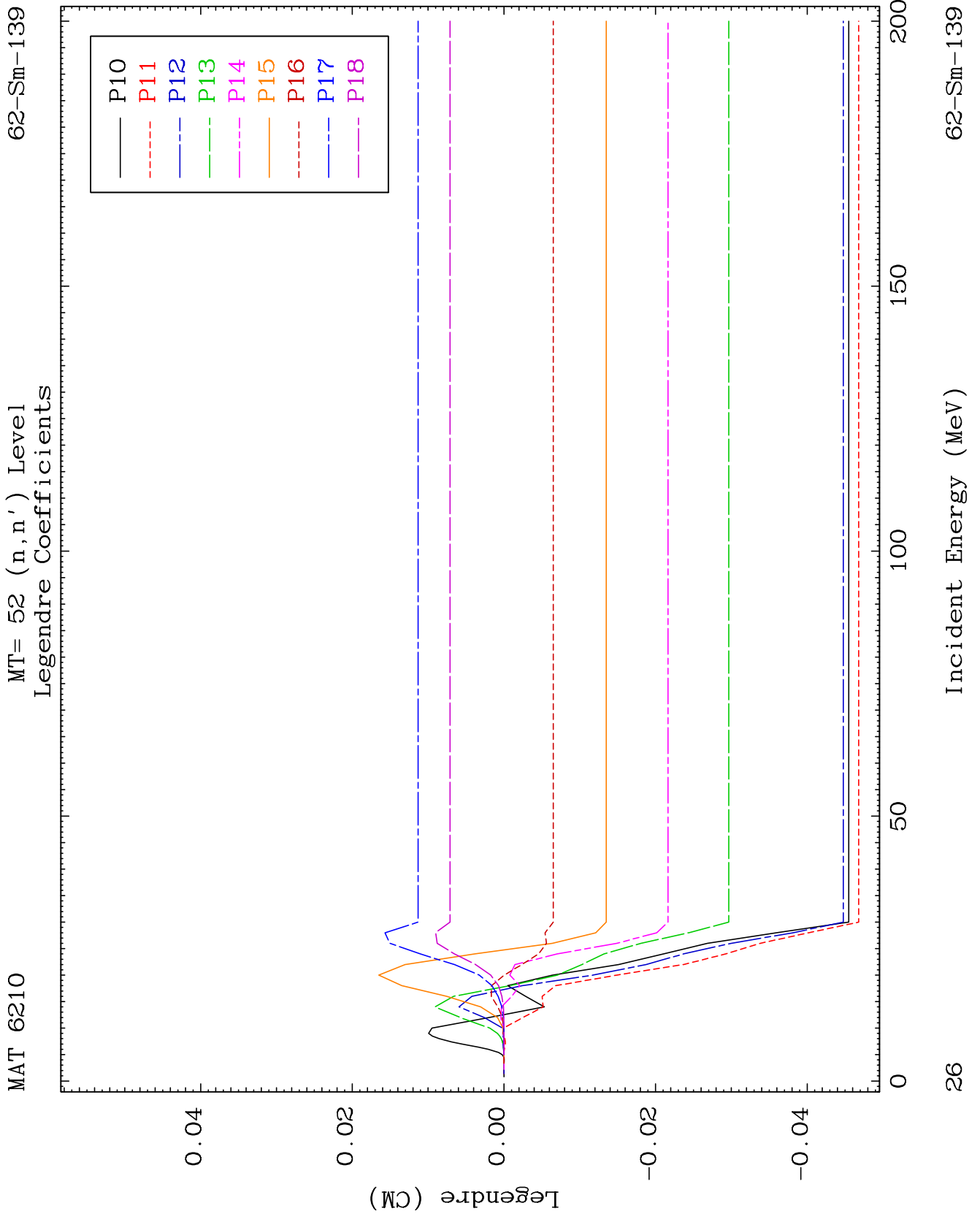
MAT 6210

MT= 51 (n,n') Level  
Legendre Coefficients

62-Sm-139



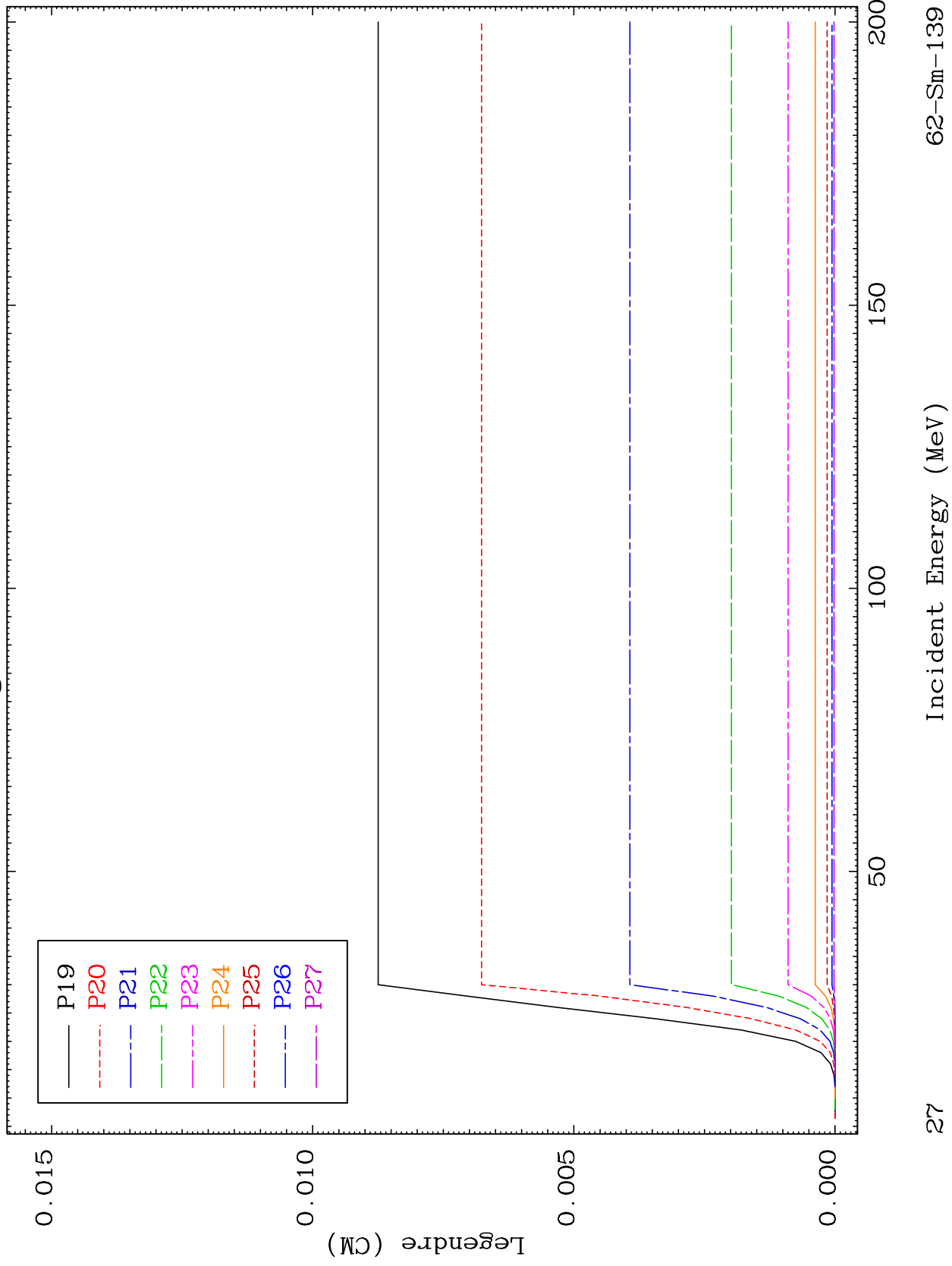




MAT 6210

MT= 52 (n,n') Level  
Legendre Coefficients

62-Sm-139



27

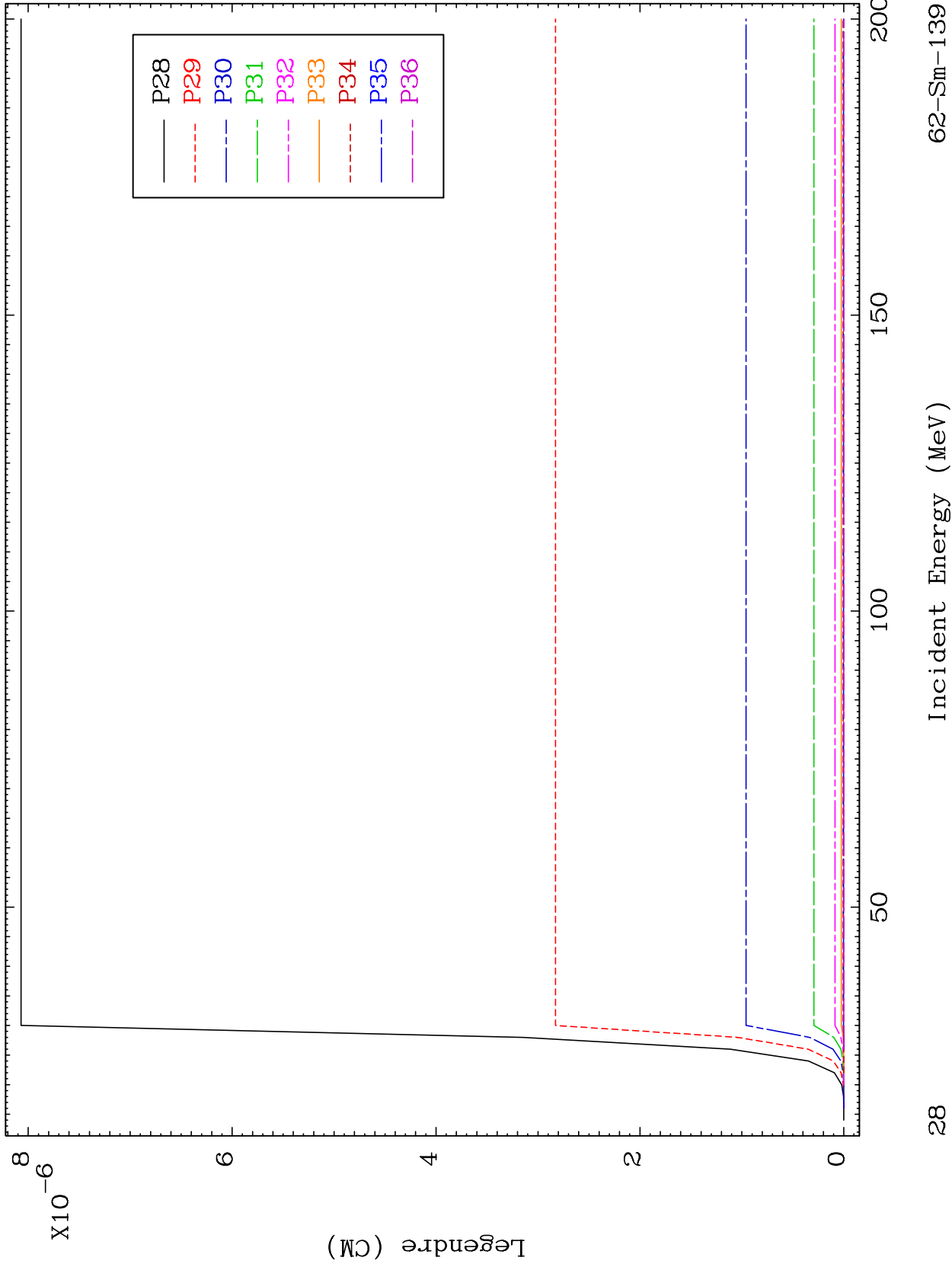
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 52 (n,n') Level  
Legendre Coefficients

62-Sm-139



28

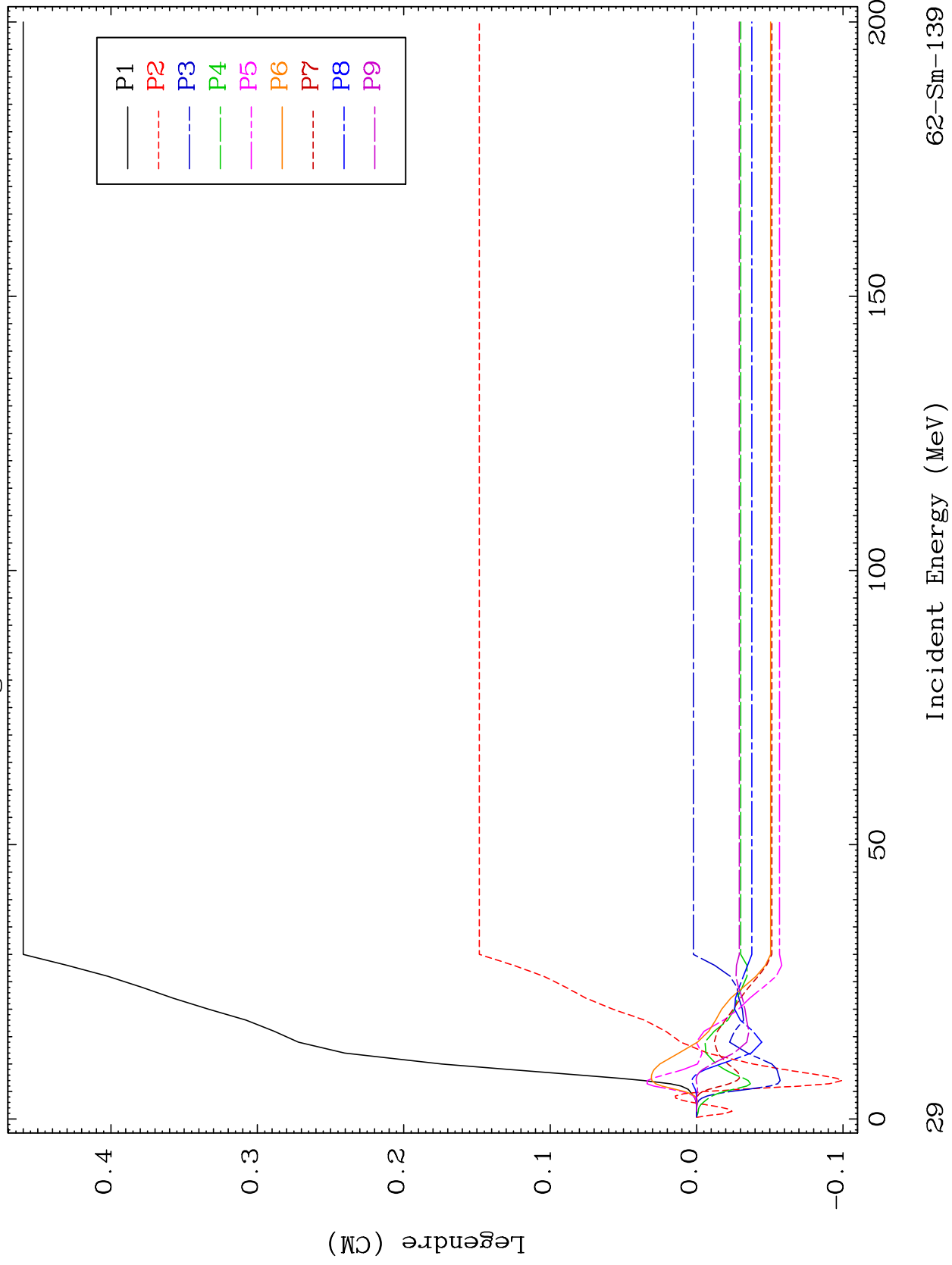
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 53 (n,n') Level  
Legendre Coefficients

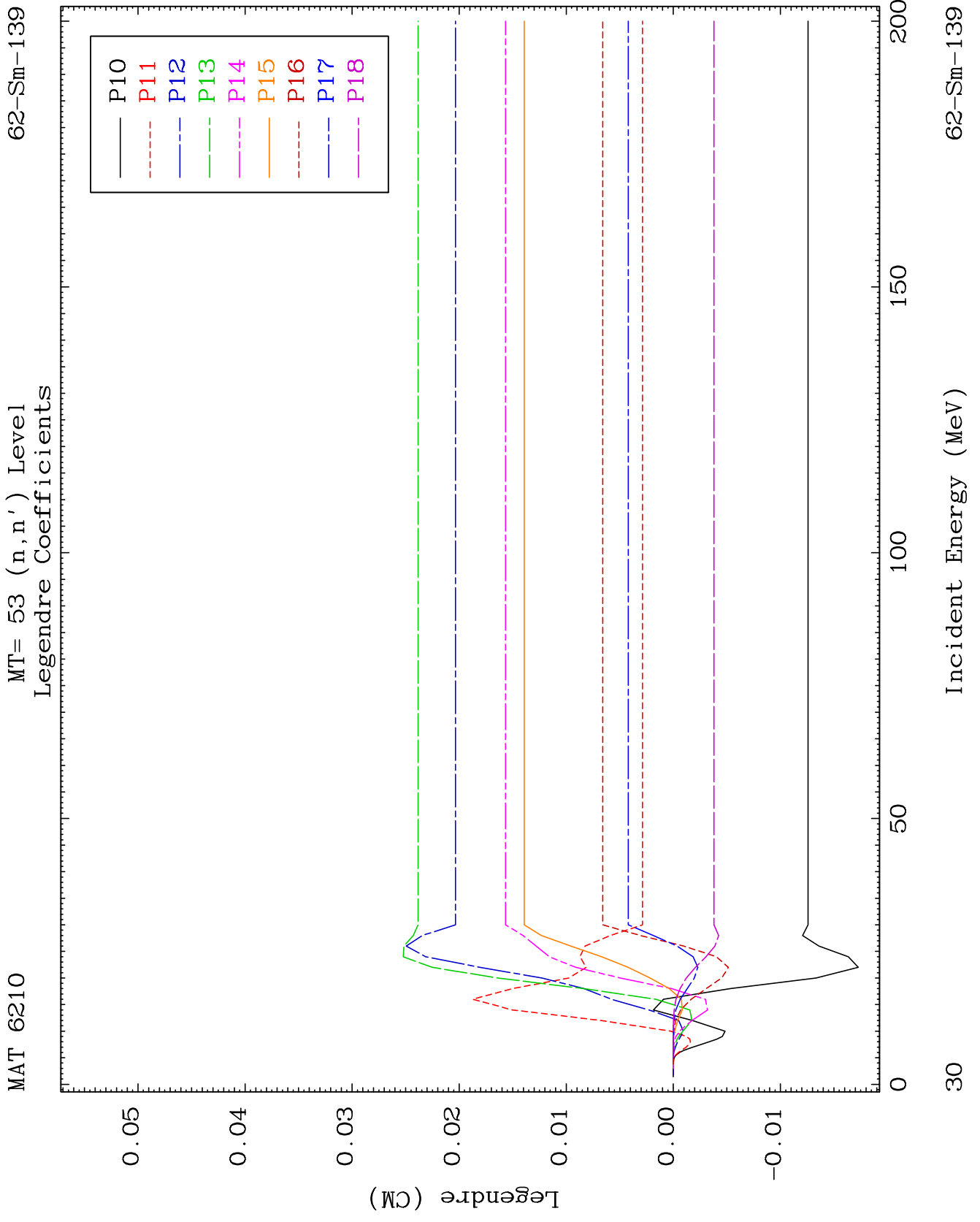
62-Sm-139



62-Sm-139

Incident Energy (MeV)

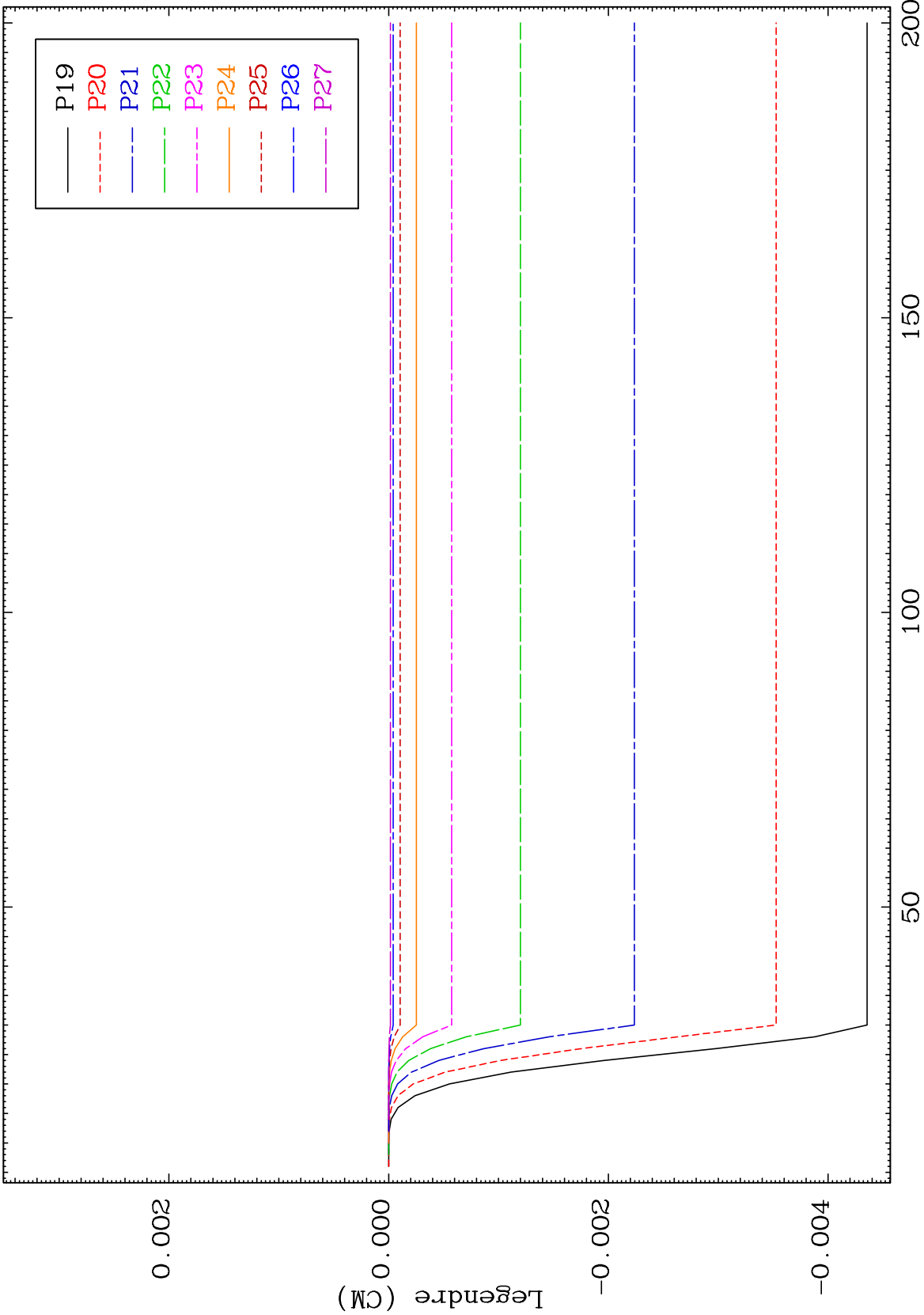
29



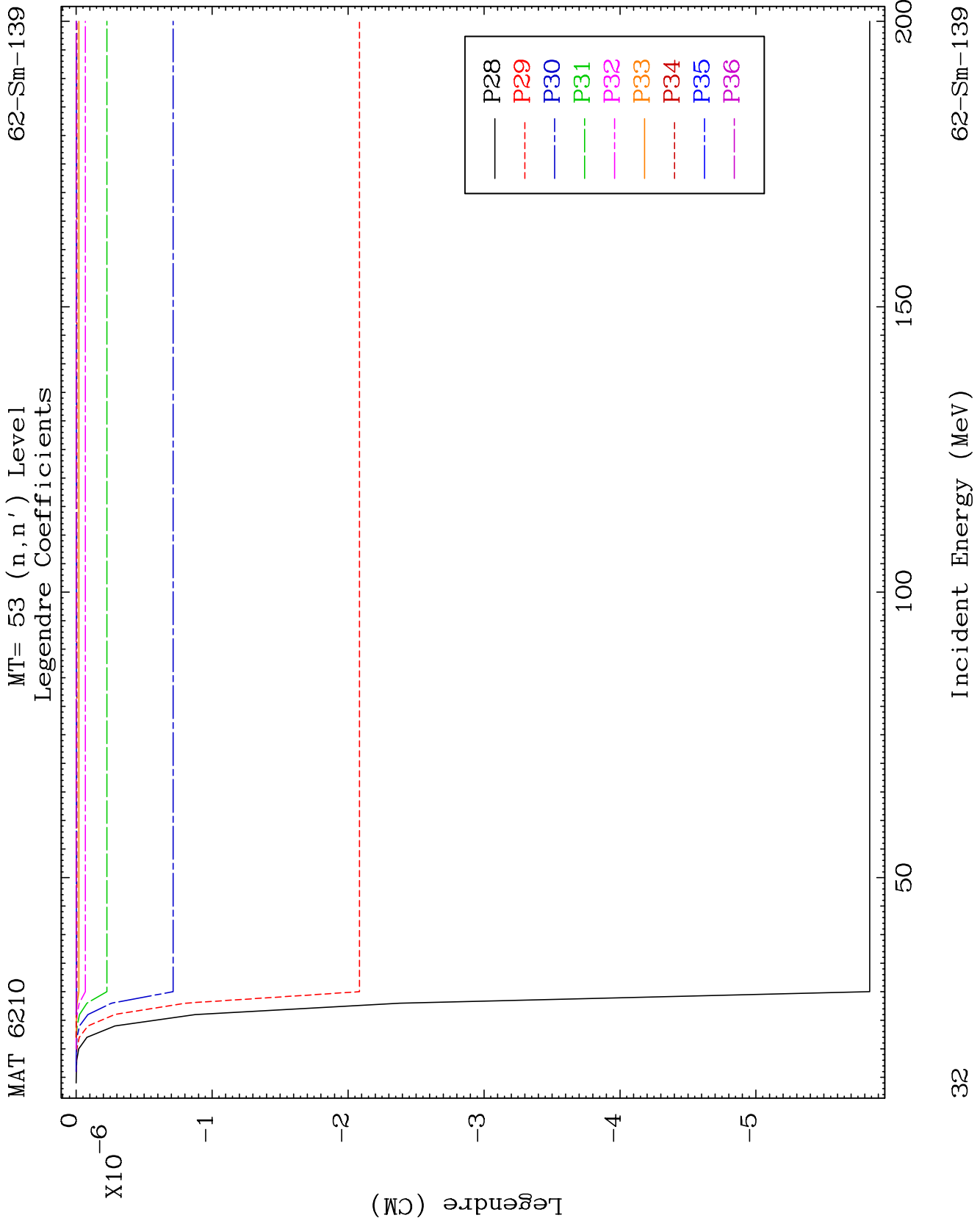
MAT 6210

MT= 53 (n,n') Level  
Legendre Coefficients

62-Sm-139



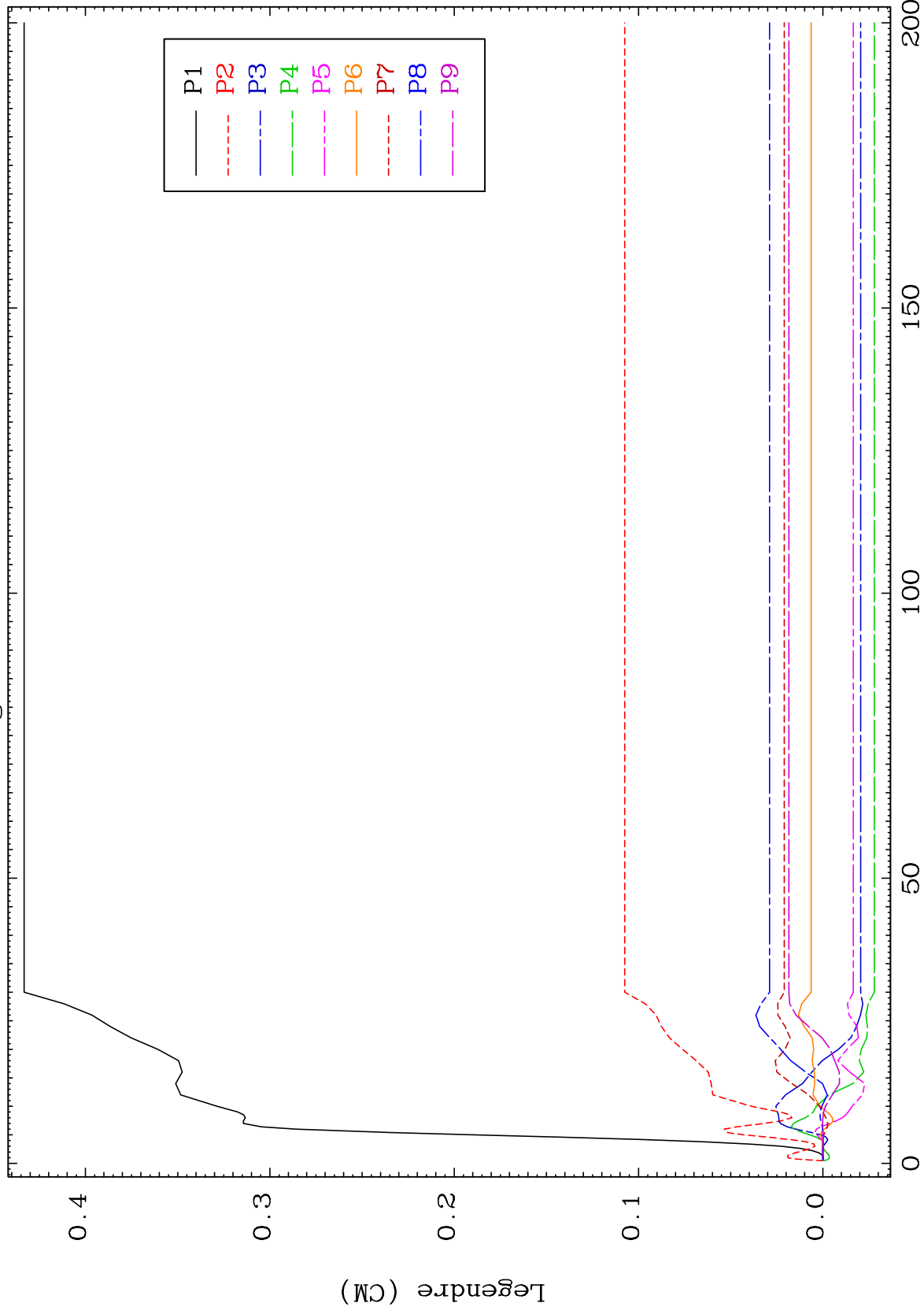




MAT 6210

MT= 54 (n,n') Level  
Legendre Coefficients

62-Sm-139



33

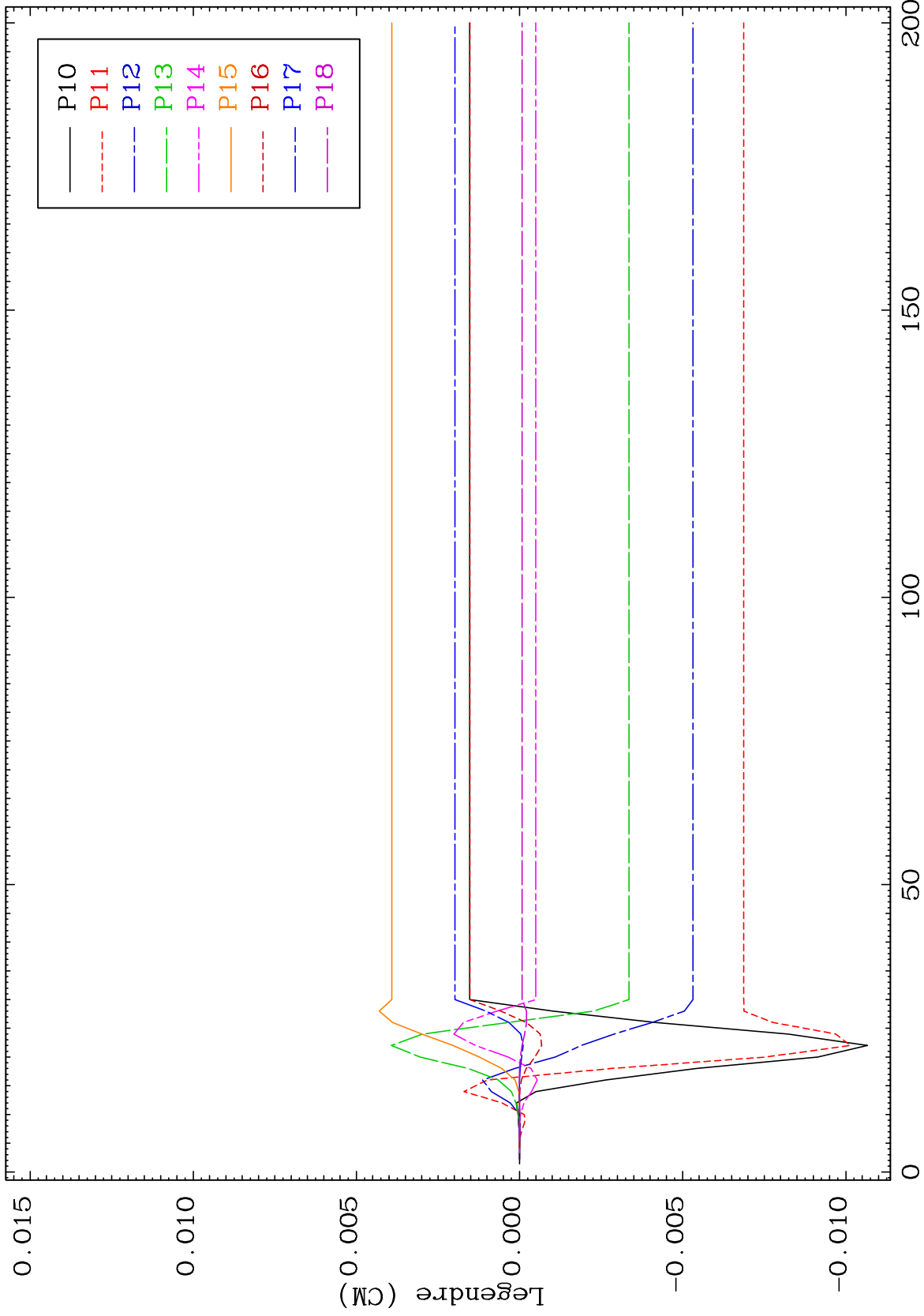
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 54 (n,n') Level  
Legendre Coefficients

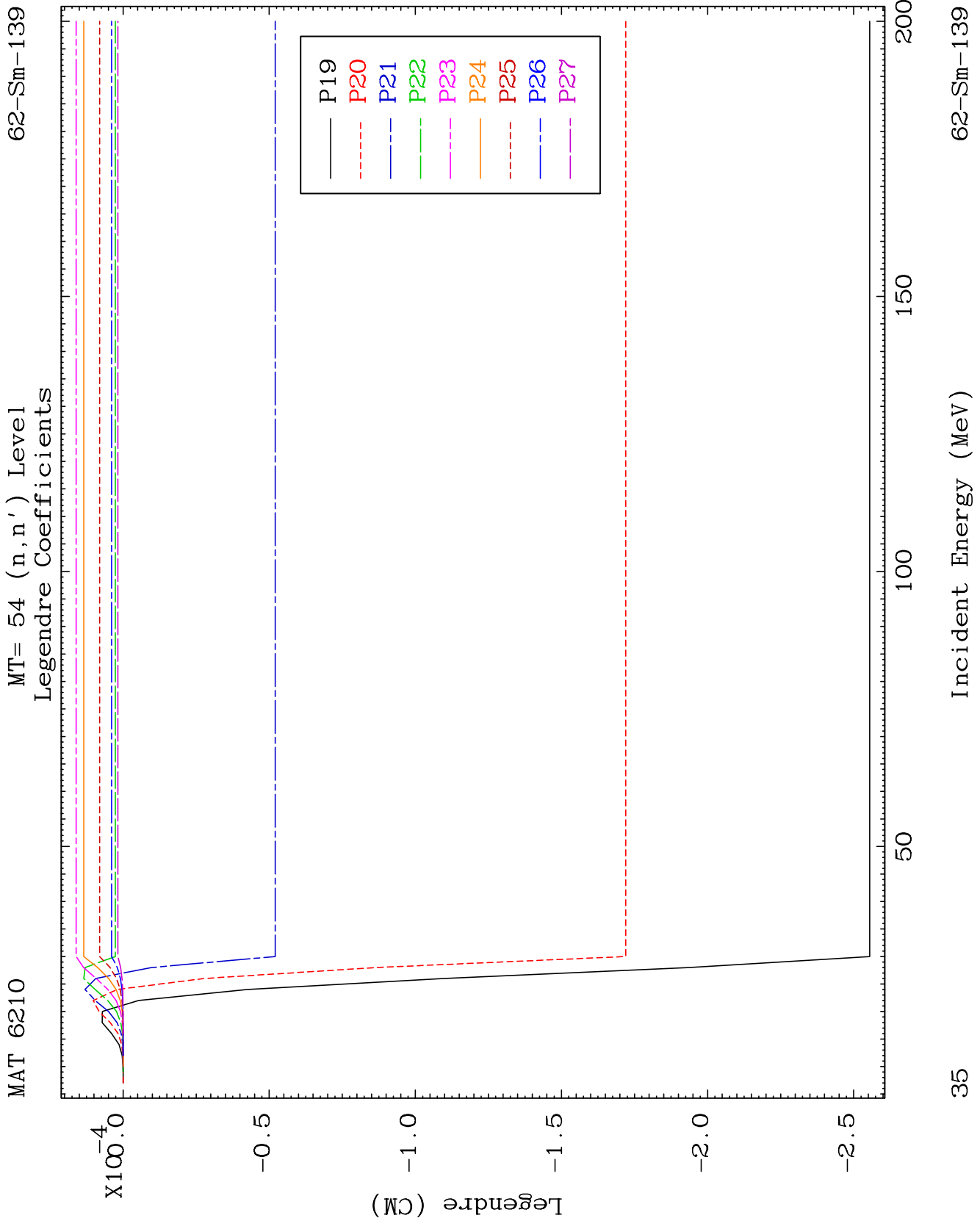
62-Sm-139



34

Incident Energy (MeV)

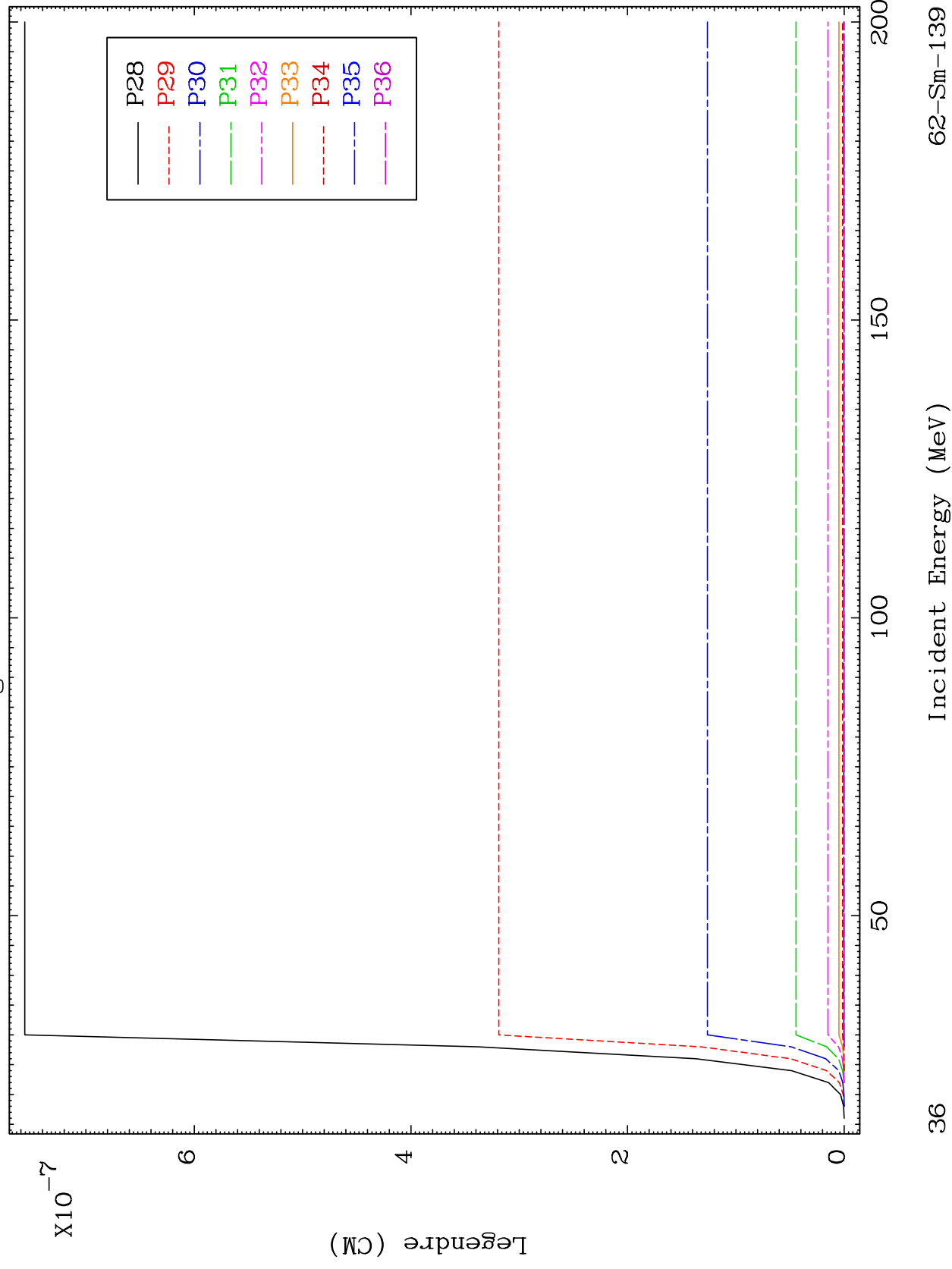
62-Sm-139



MAT 6210

MT= 54 (n,n') Level  
Legendre Coefficients

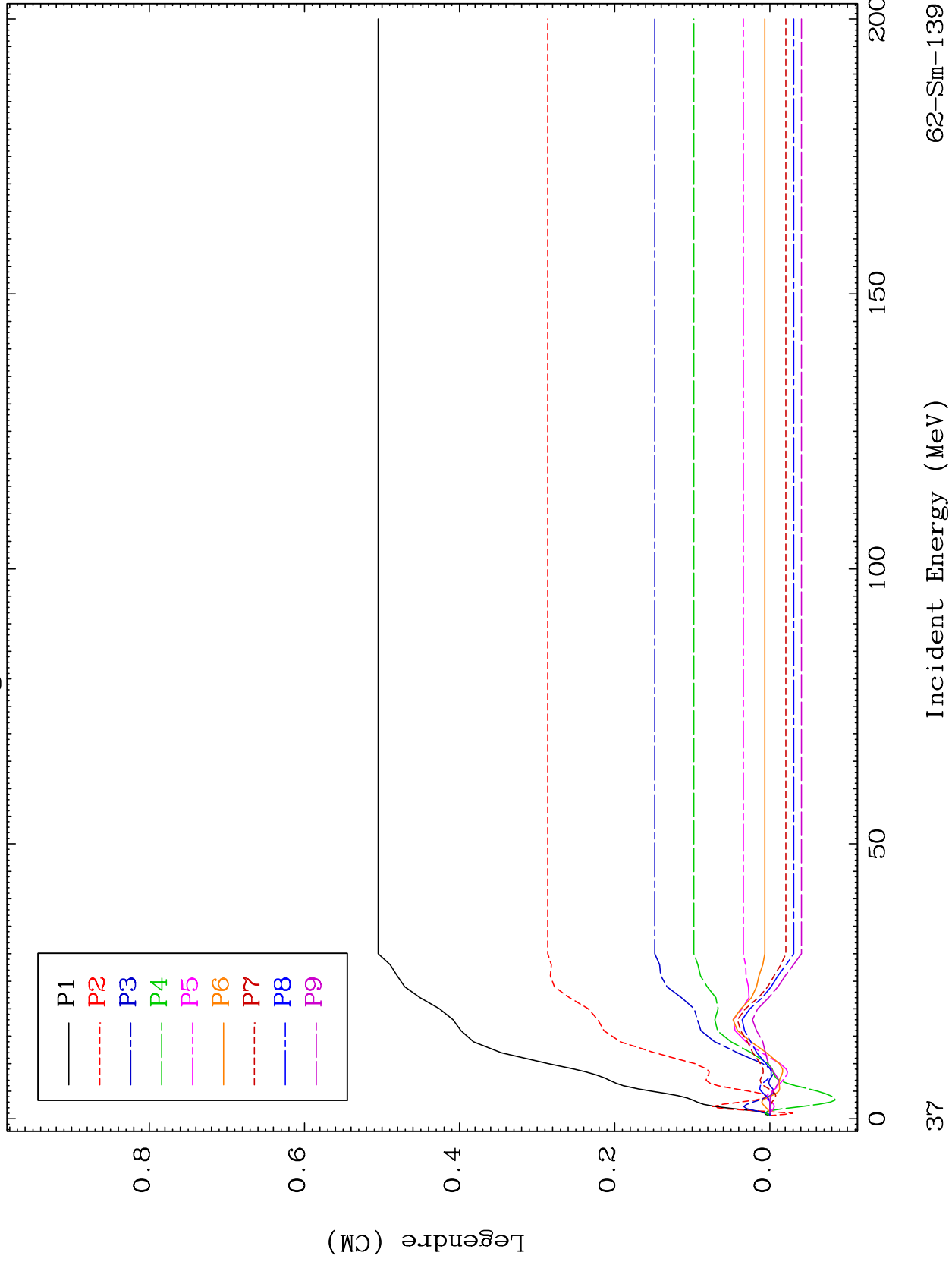
62-Sm-139



MAT 6210

MT= 55 (n,n') Level  
Legendre Coefficients

62-Sm-139



37

Incident Energy (MeV)

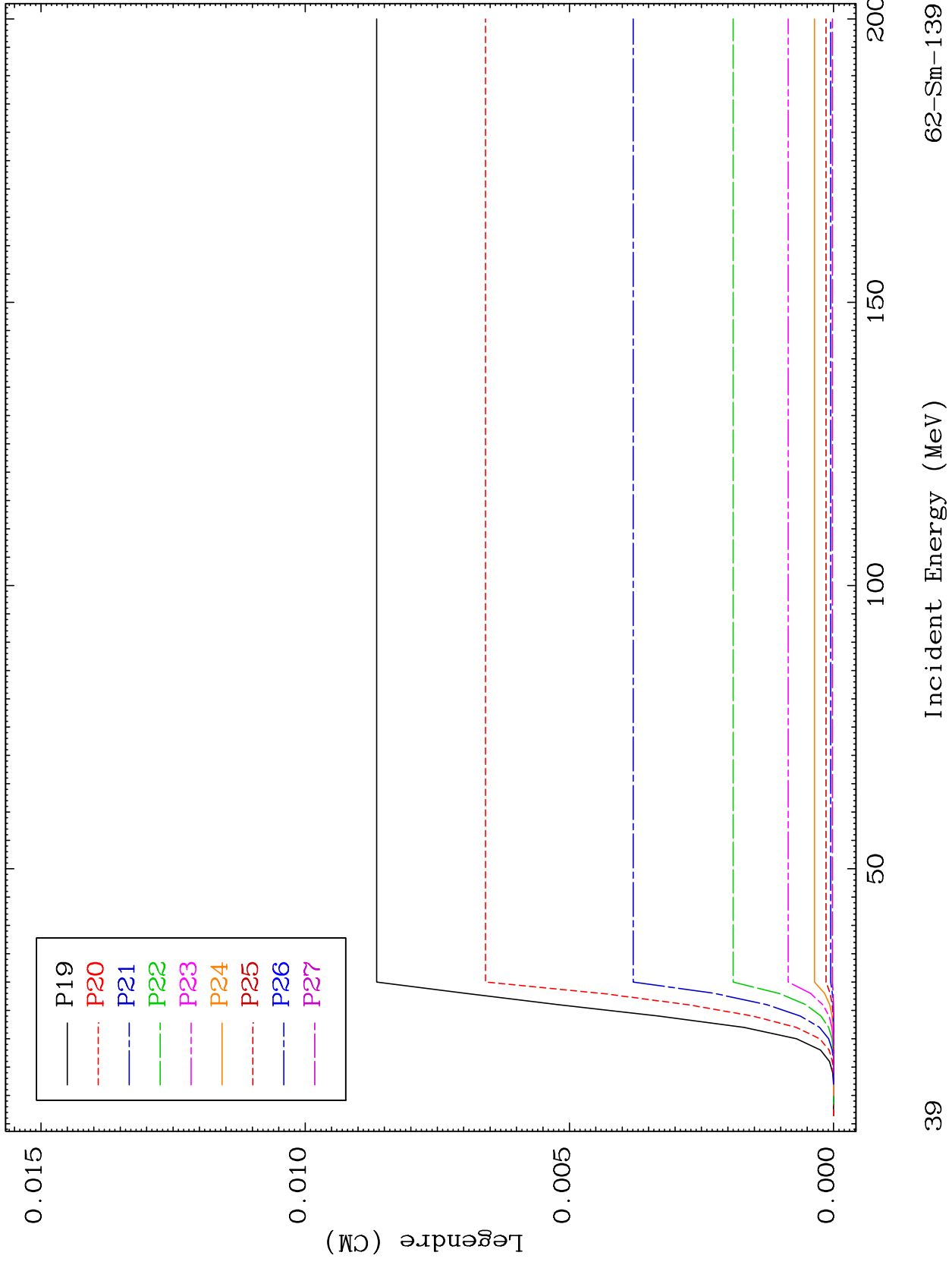
62-Sm-139



MAT 6210

MT= 55 (n,n') Level  
Legendre Coefficients

62-Sm-139



39

Incident Energy (MeV)

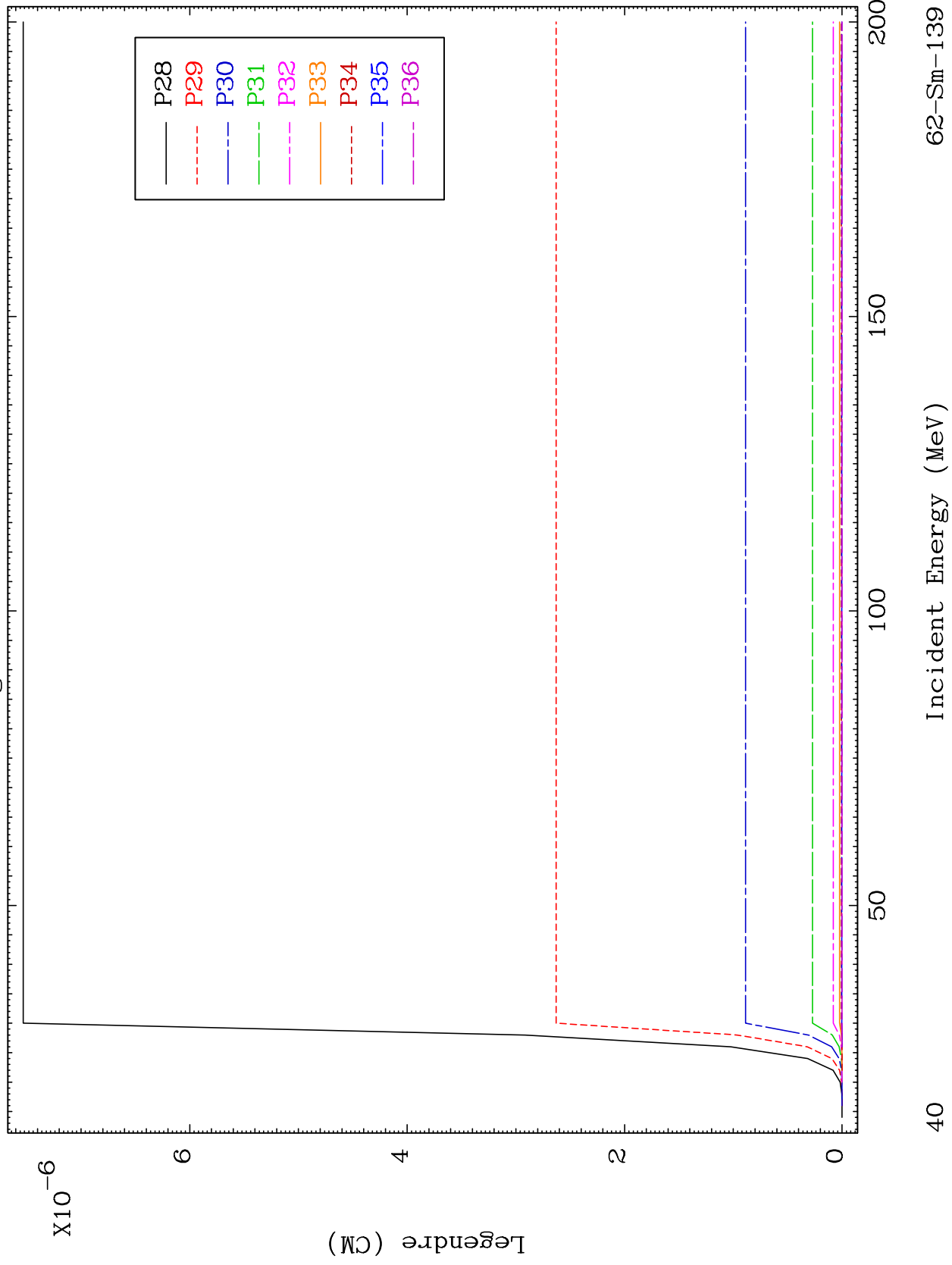
62-Sm-139



MAT 6210

MT= 55 (n,n') Level  
Legendre Coefficients

62-Sm-139



62-Sm-139

Incident Energy (MeV)

40

50

100

150

200

Legendre (CM)

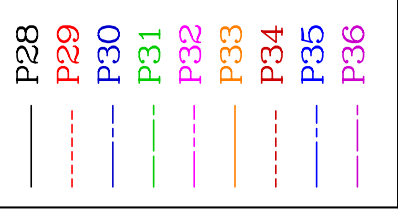
$10^{-6}$

6

4

2

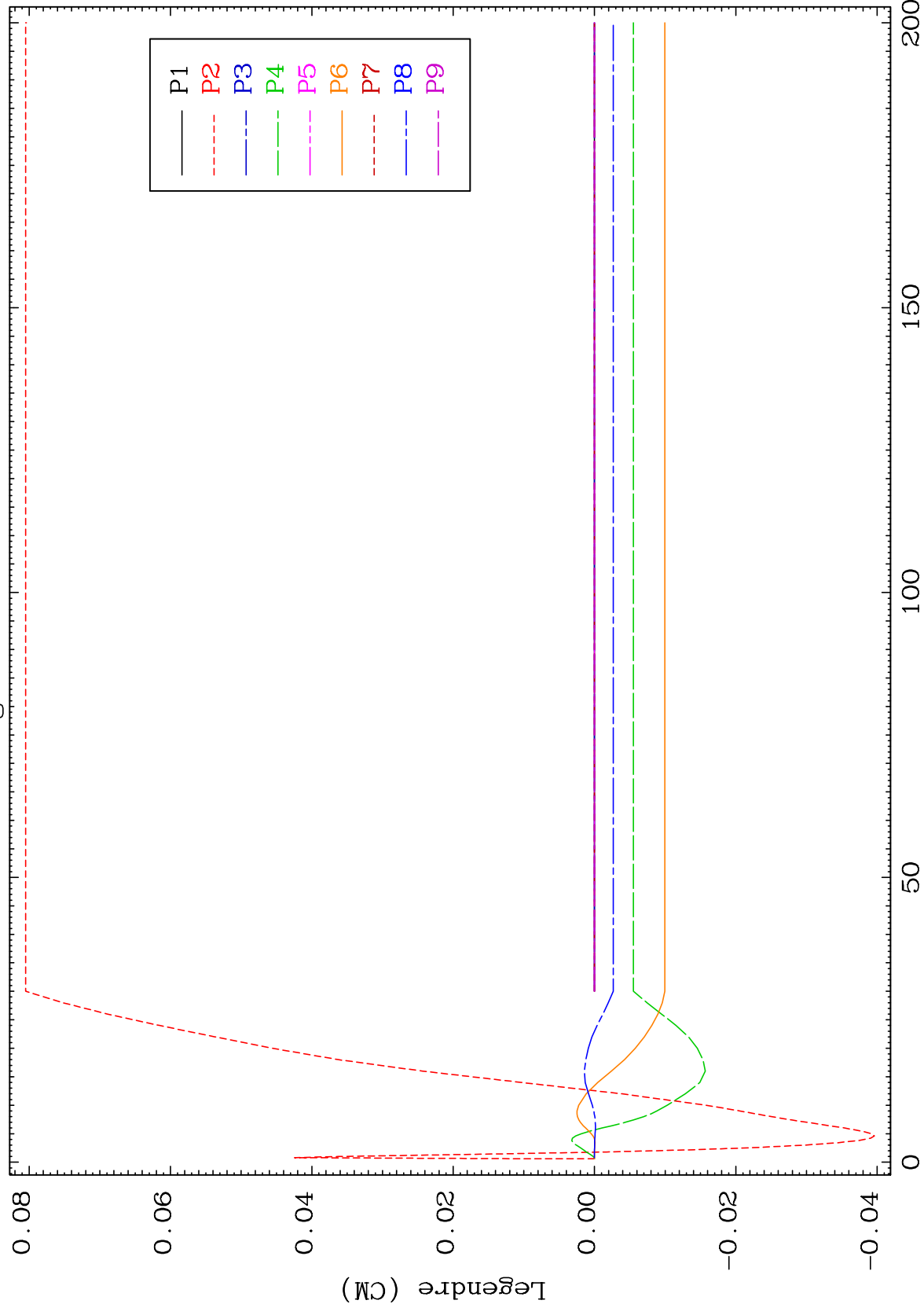
0



MAT 6210

MT= 56 (n,n') Level  
Legendre Coefficients

62-Sm-139



41

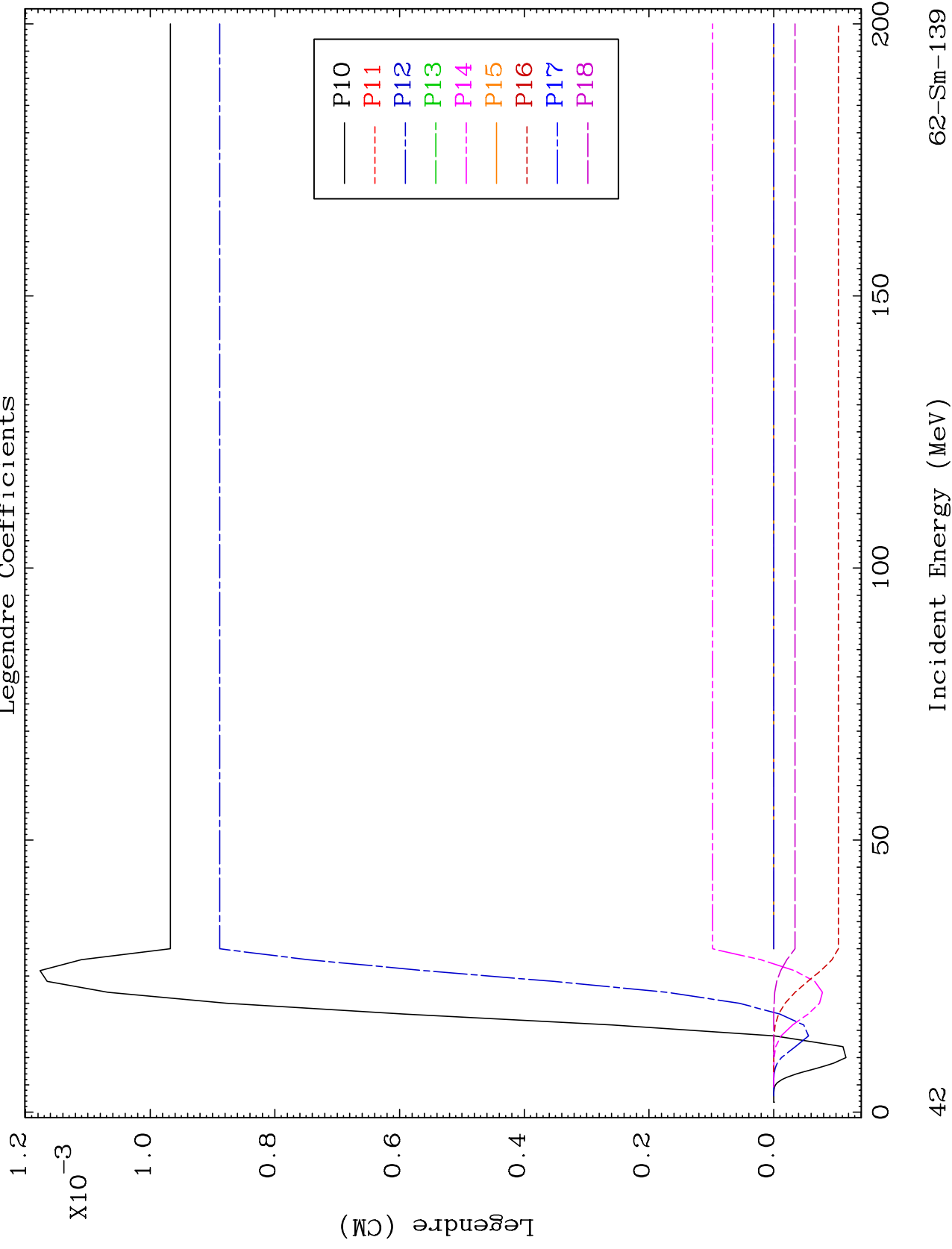
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 56 (n,n') Level  
Legendre Coefficients

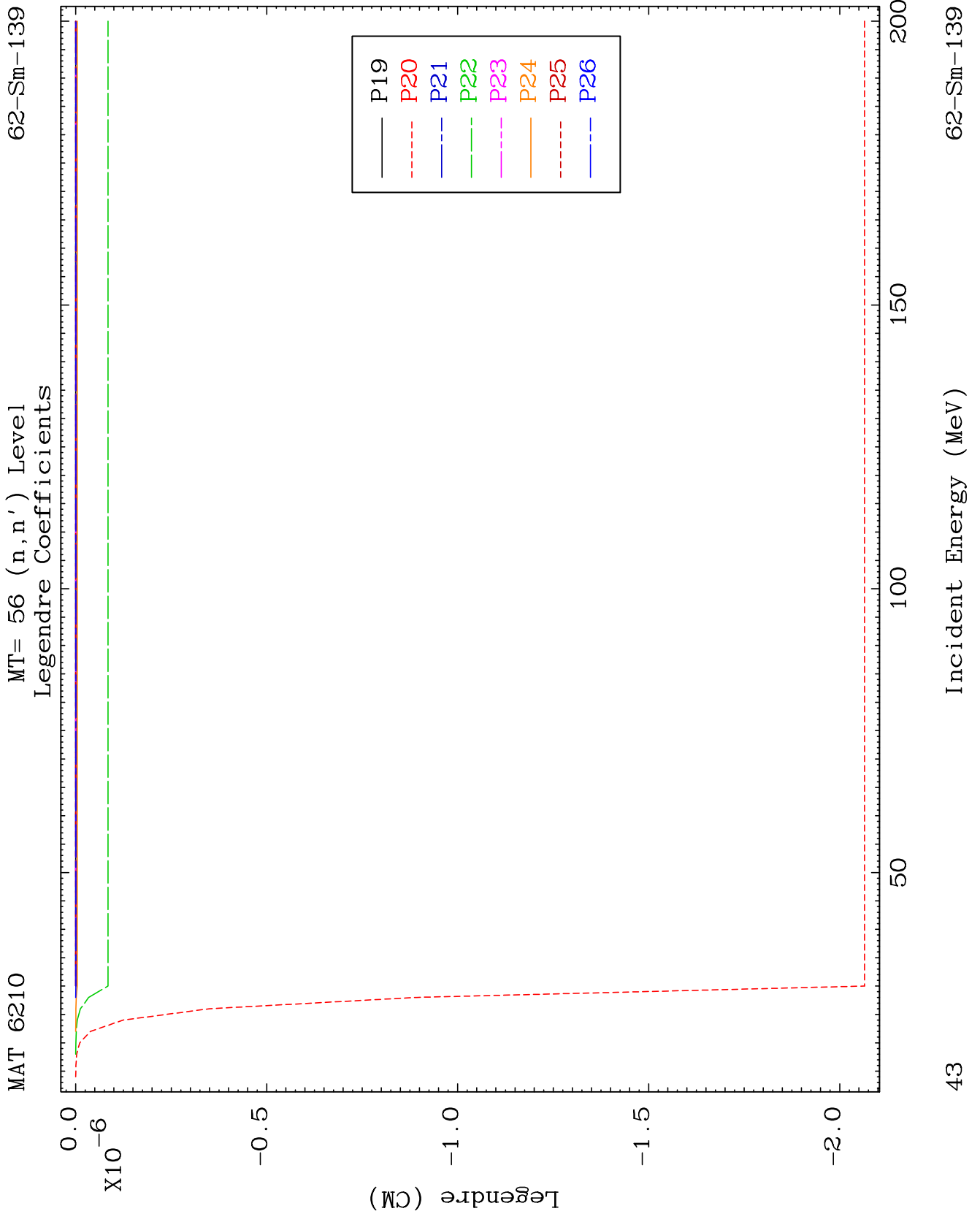
62-Sm-139



62-Sm-139

Incident Energy (MeV)

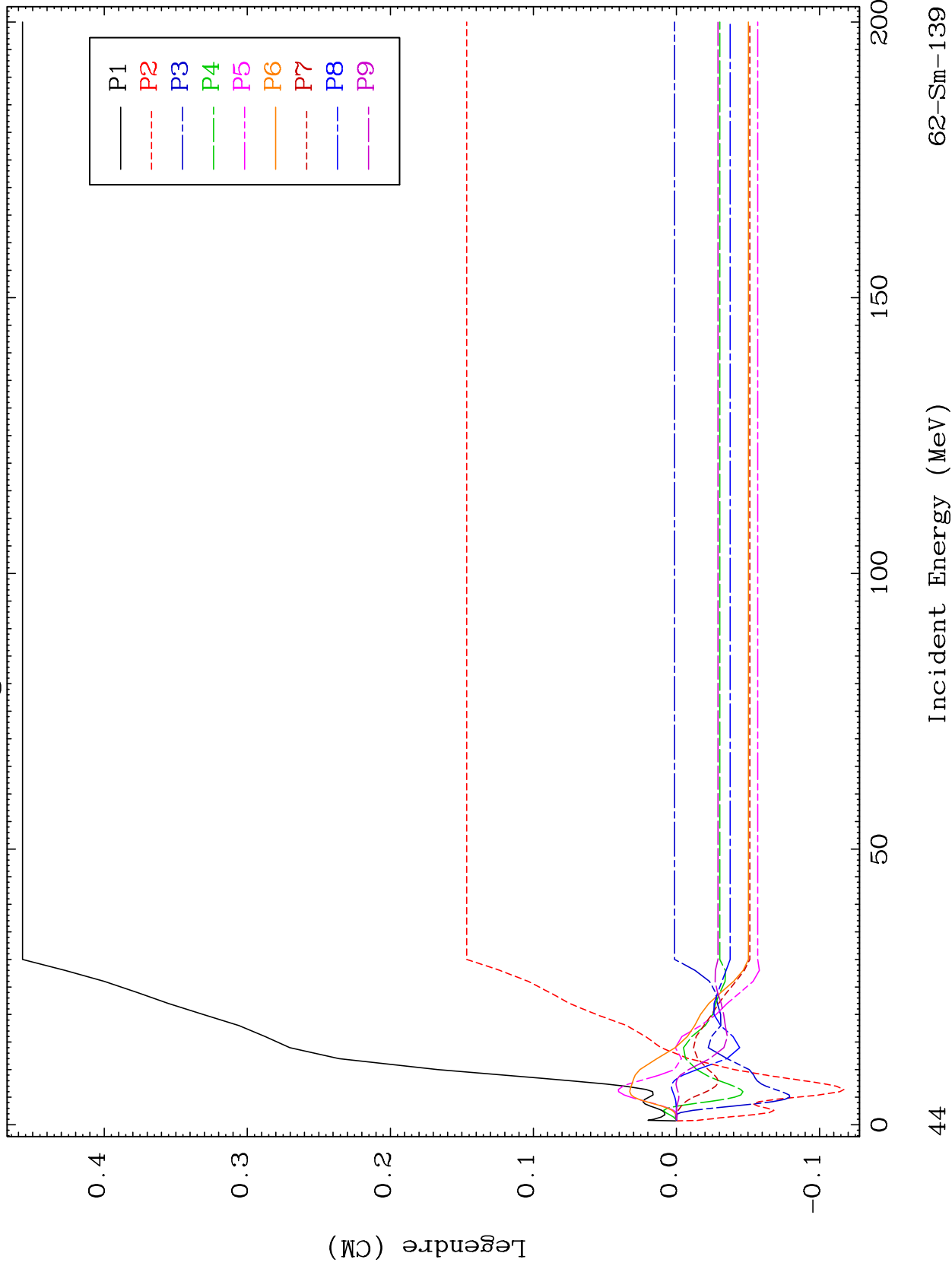
42



MAT 6210

MT= 57 (n,n') Level  
Legendre Coefficients

62-Sm-139



62-Sm-139

Incident Energy (MeV)

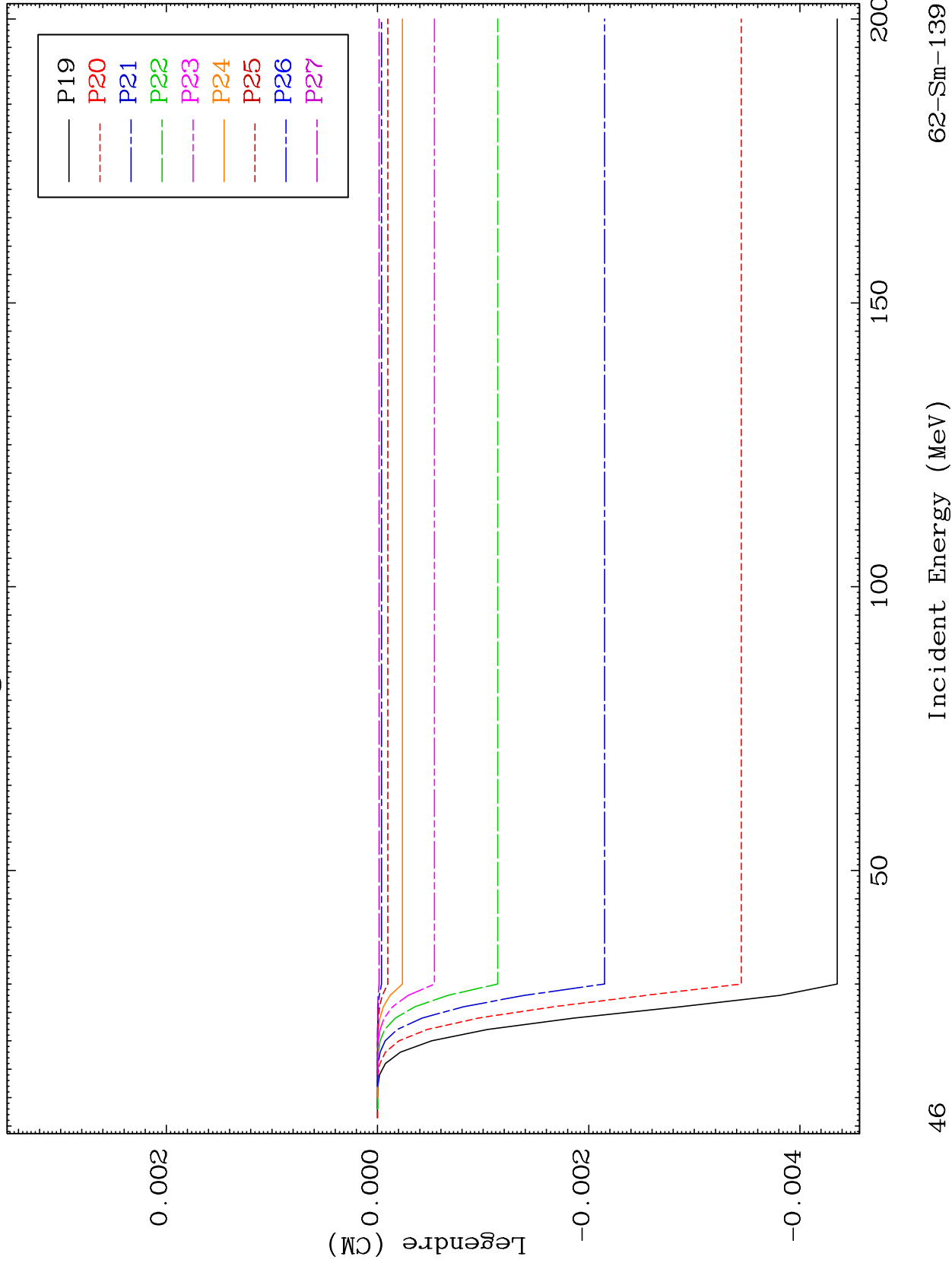
44



MAT 6210

MT= 57 (n,n') Level  
Legendre Coefficients

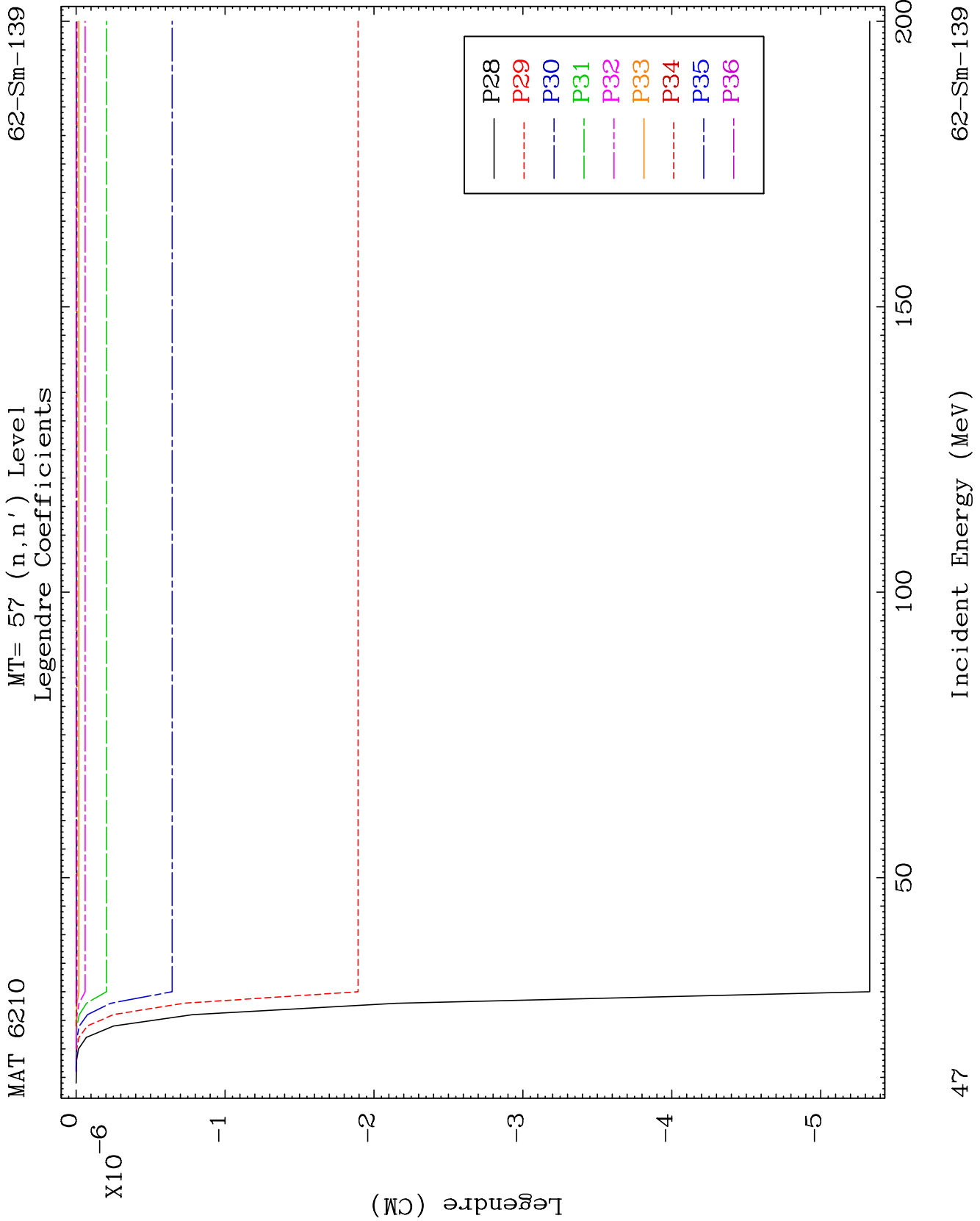
62-Sm-139



46

Incident Energy (MeV)

62-Sm-139

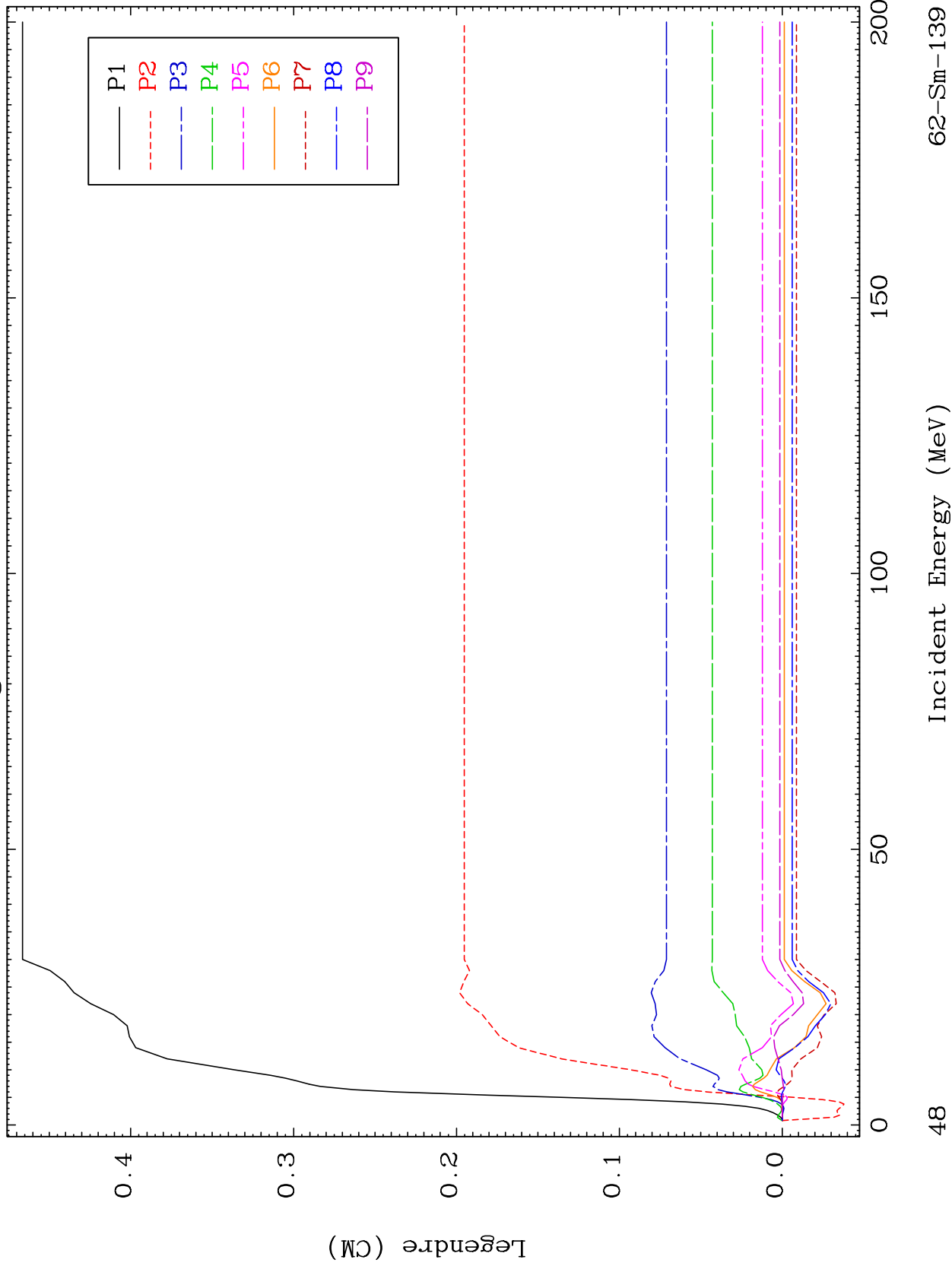




MAT 6210

MT= 58 (n,n') Level  
Legendre Coefficients

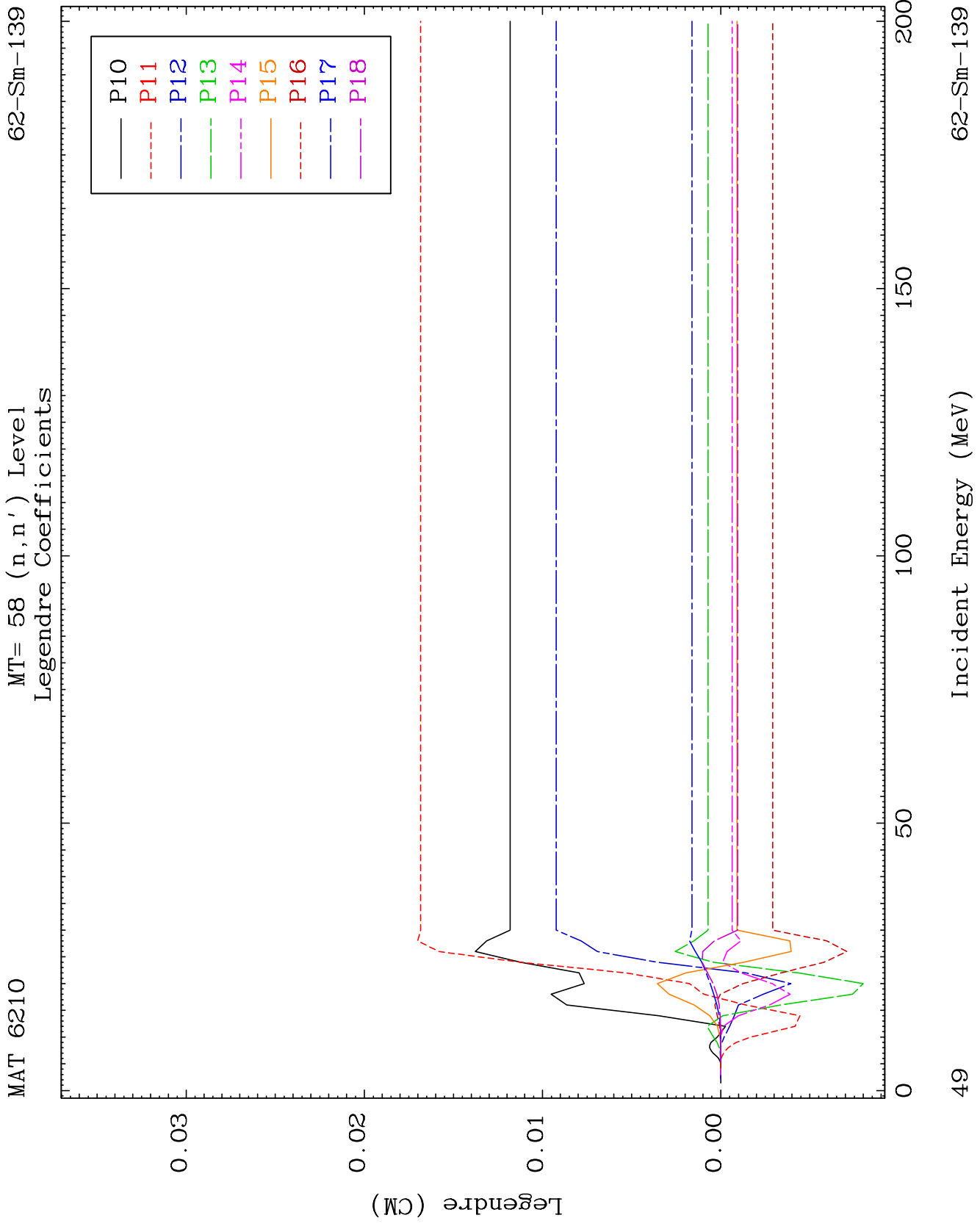
62-Sm-139



62-Sm-139

Incident Energy (MeV)

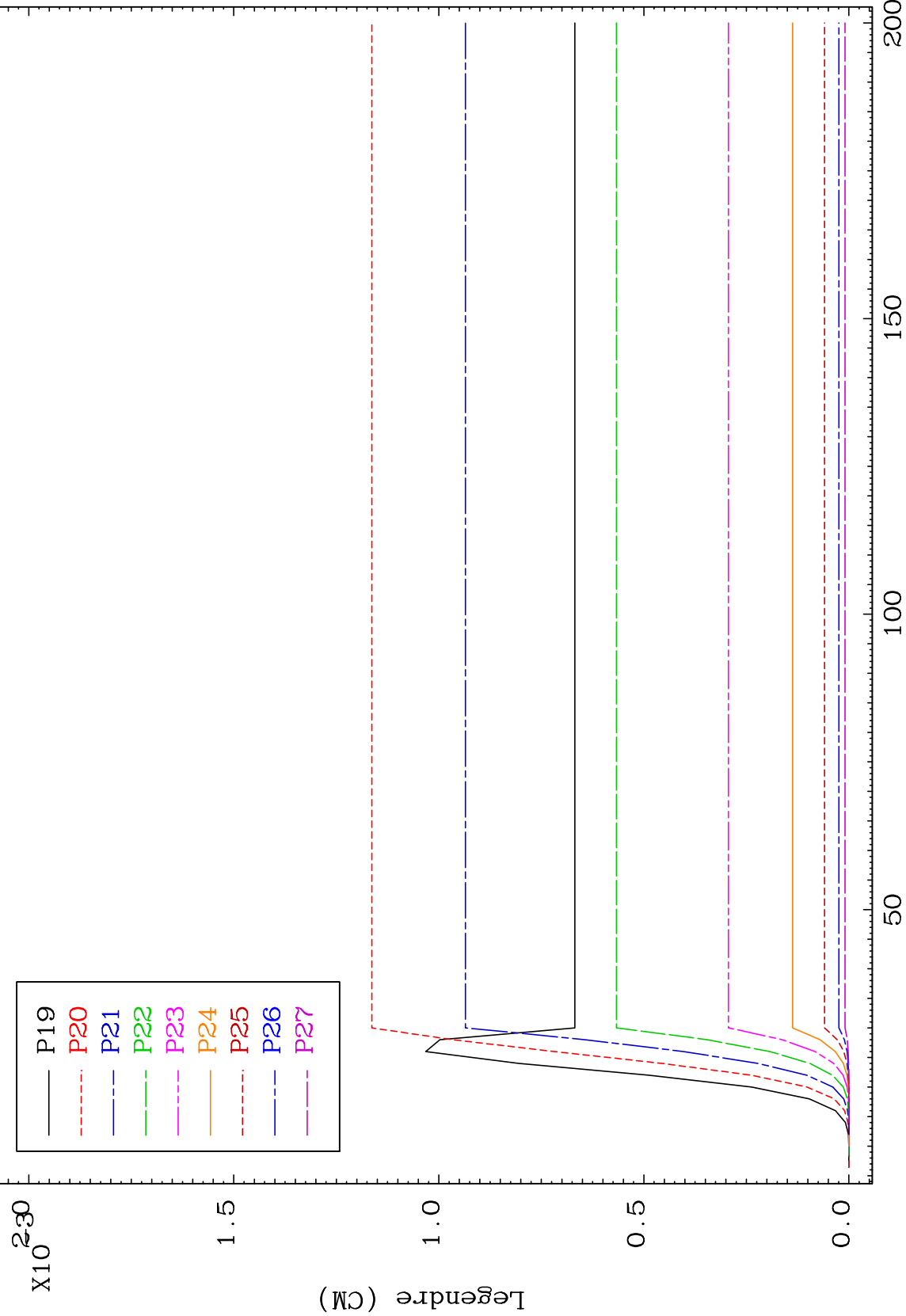
48



MAT 6210

MT= 58 (n,n') Level  
Legendre Coefficients

62-Sm-139



50

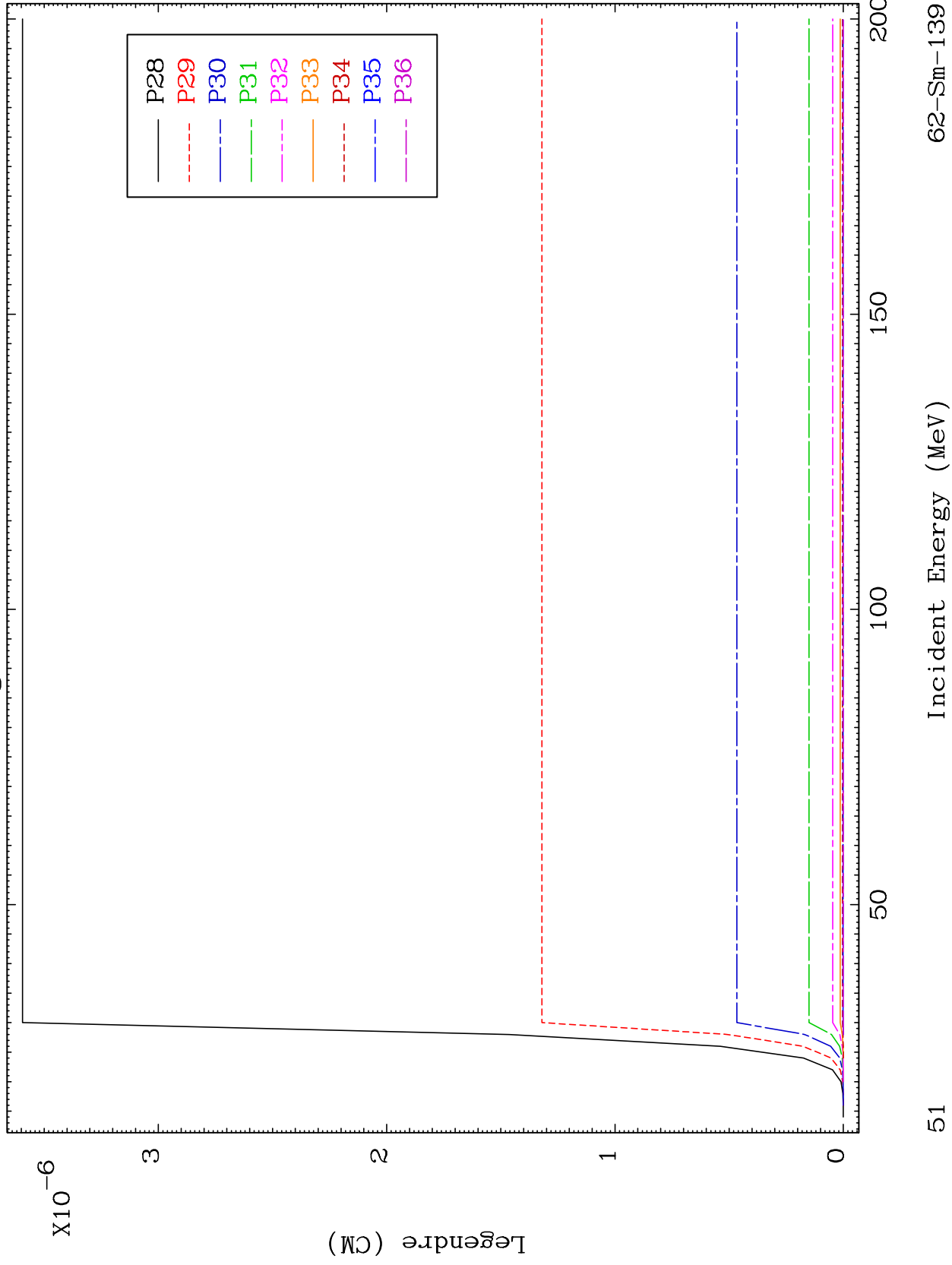
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 58 (n,n') Level  
Legendre Coefficients

62-Sm-139



51

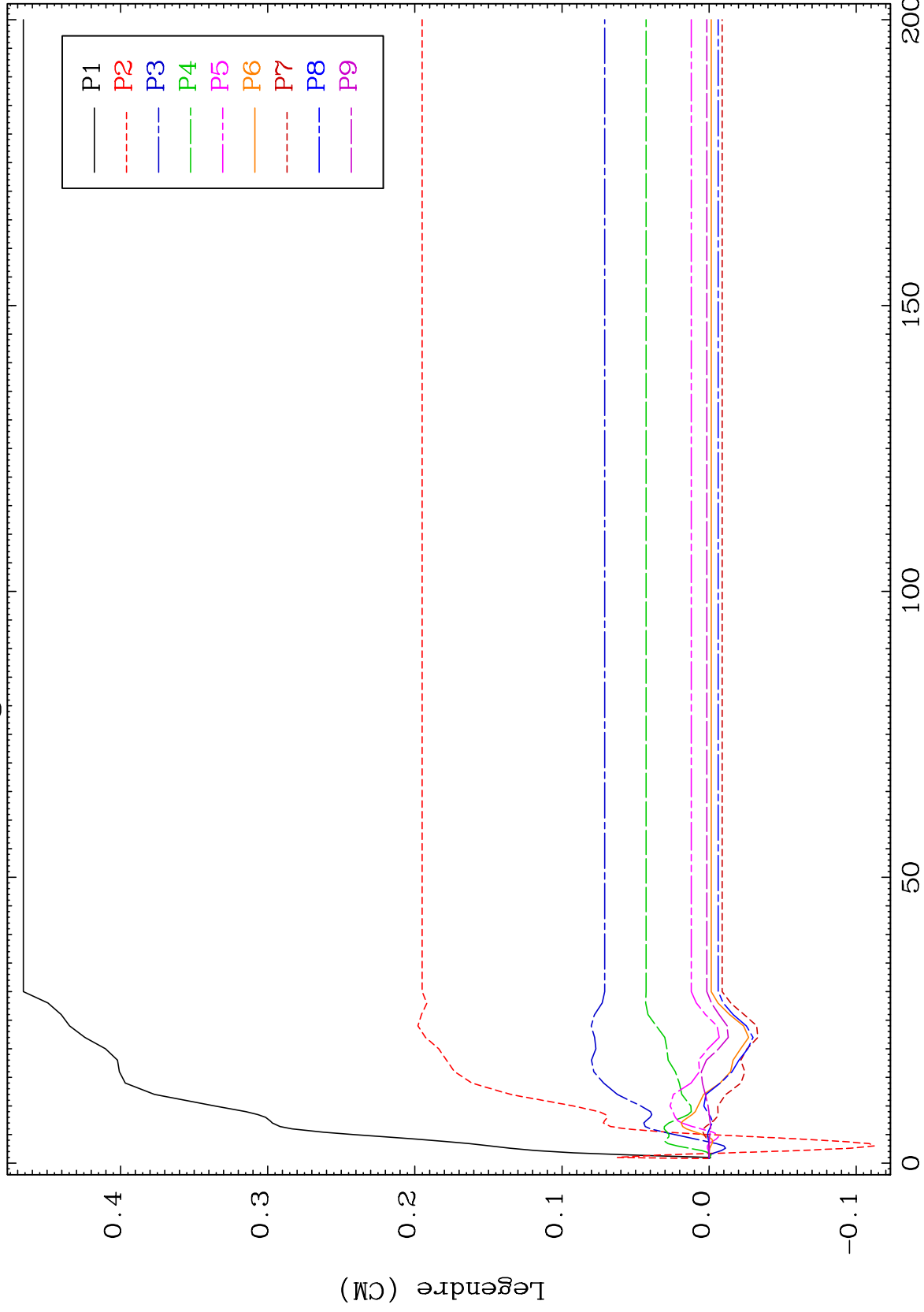
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 59 (n,n') Level  
Legendre Coefficients

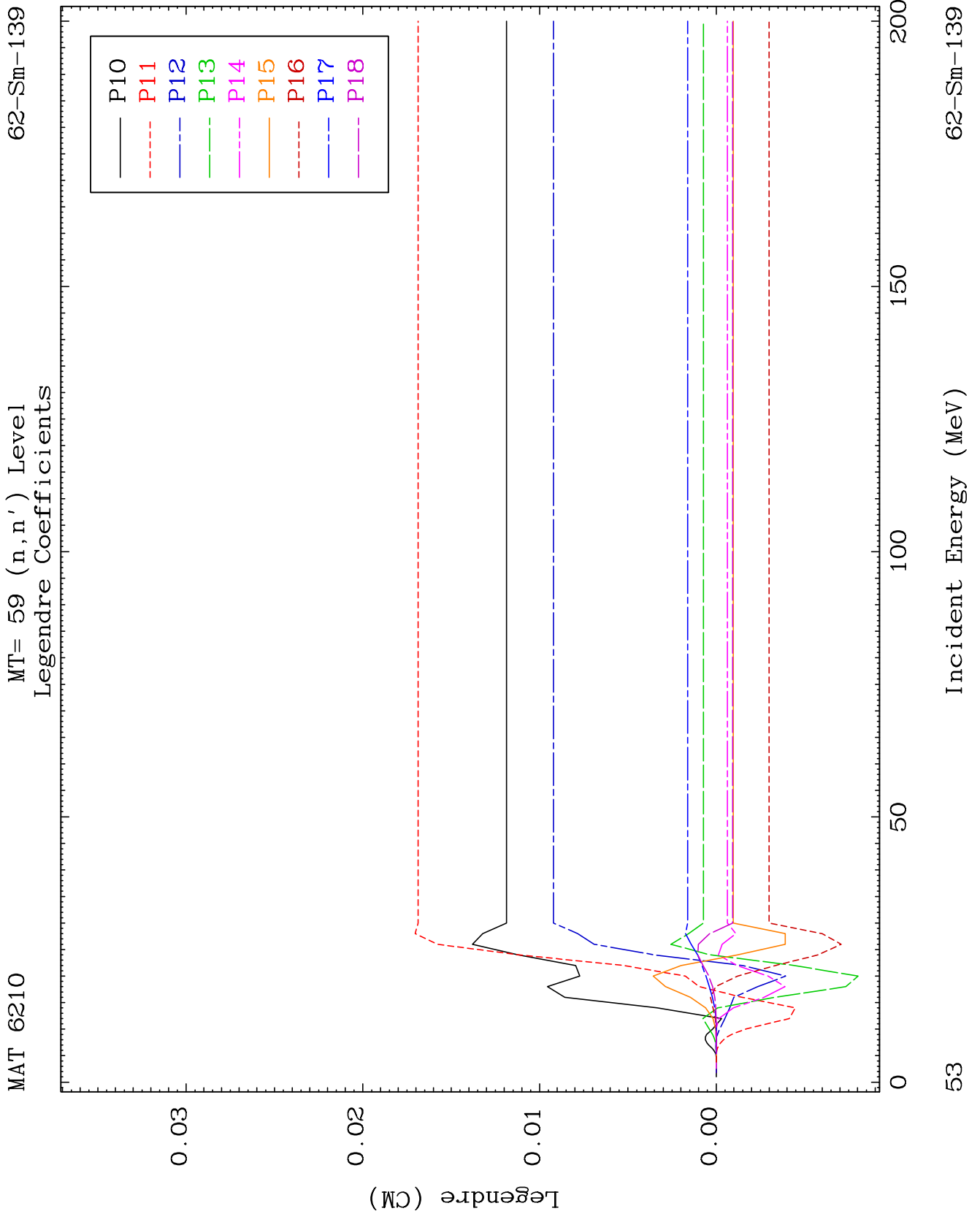
62-Sm-139

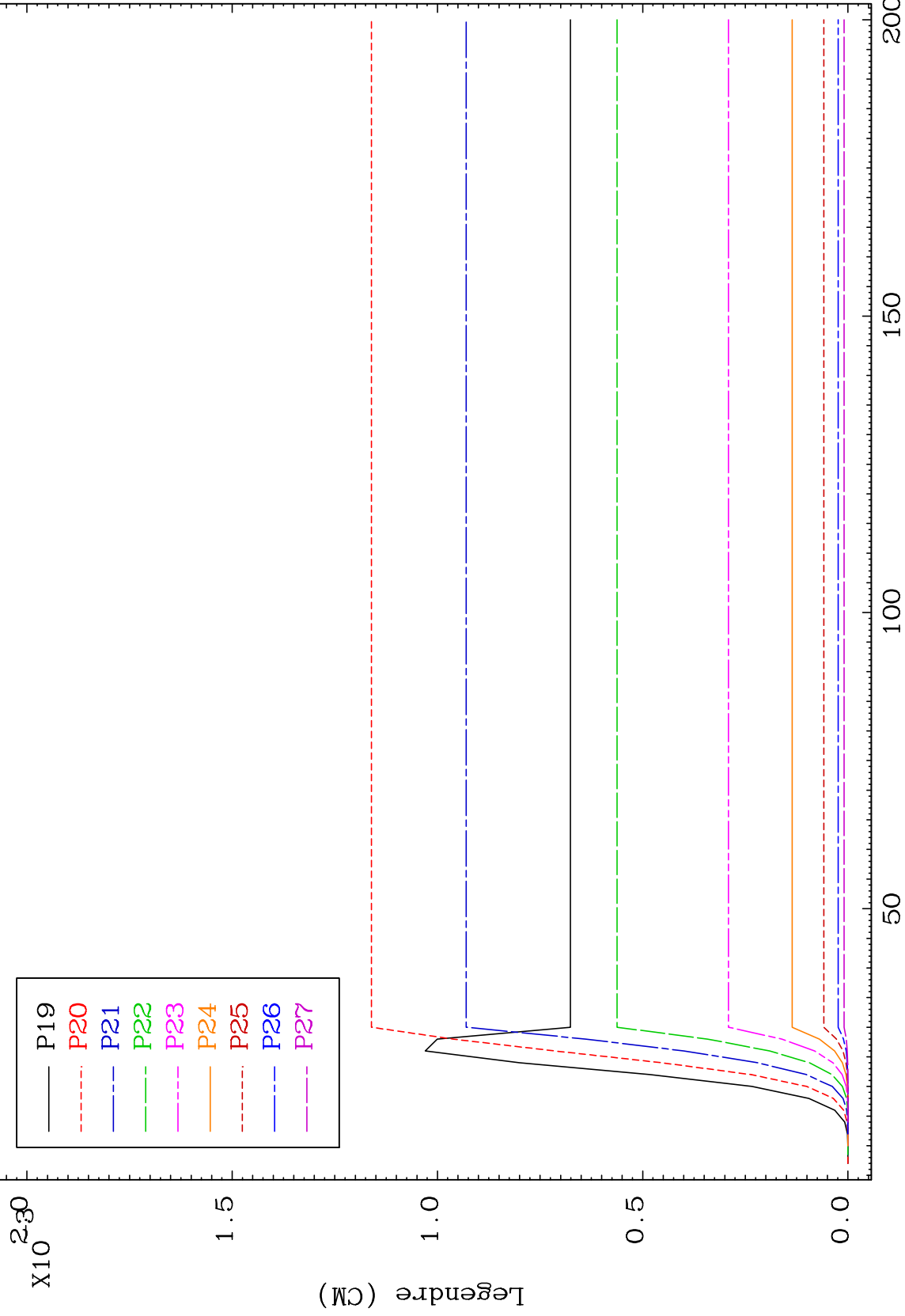


62-Sm-139

Incident Energy (MeV)

52

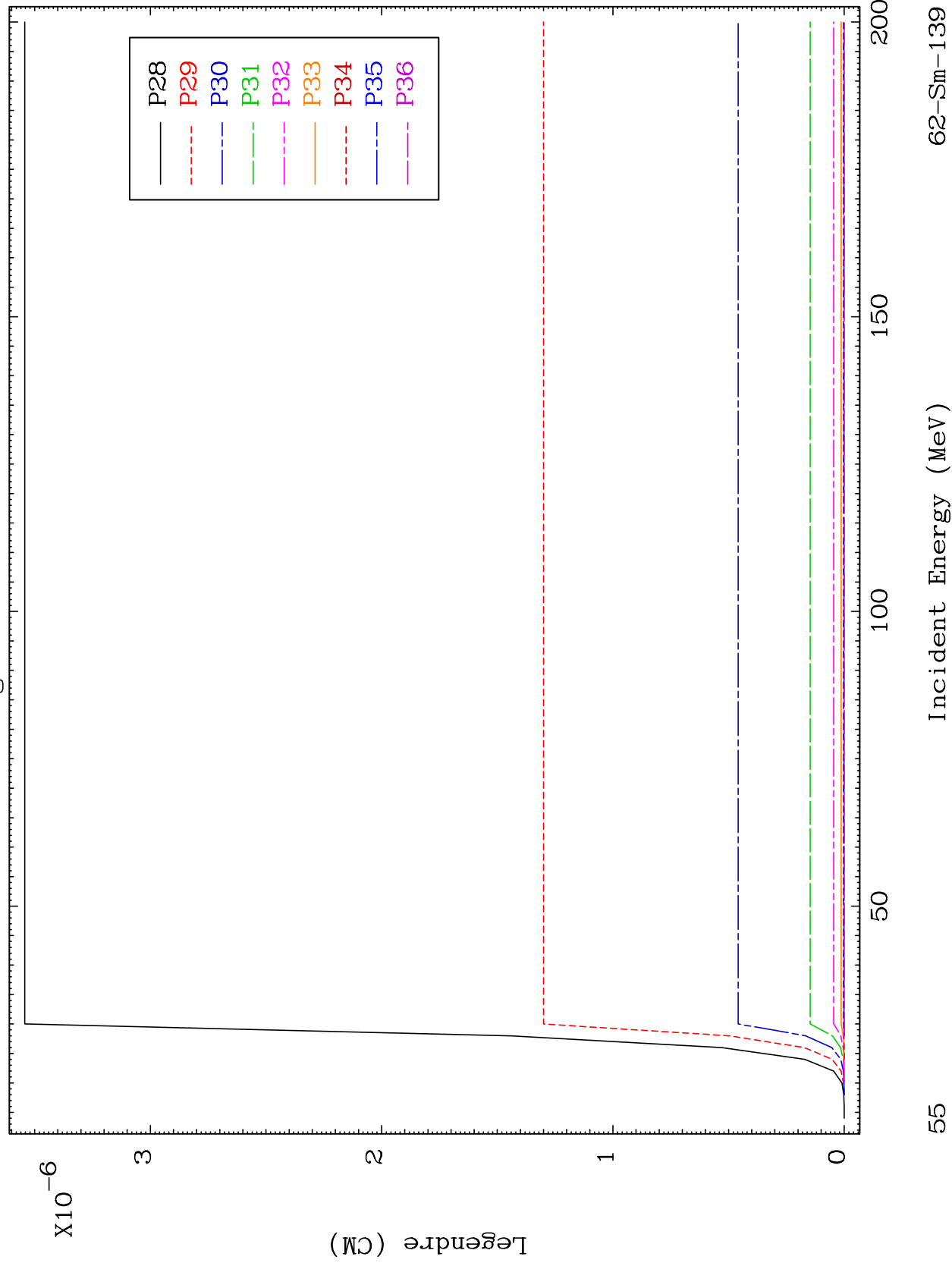




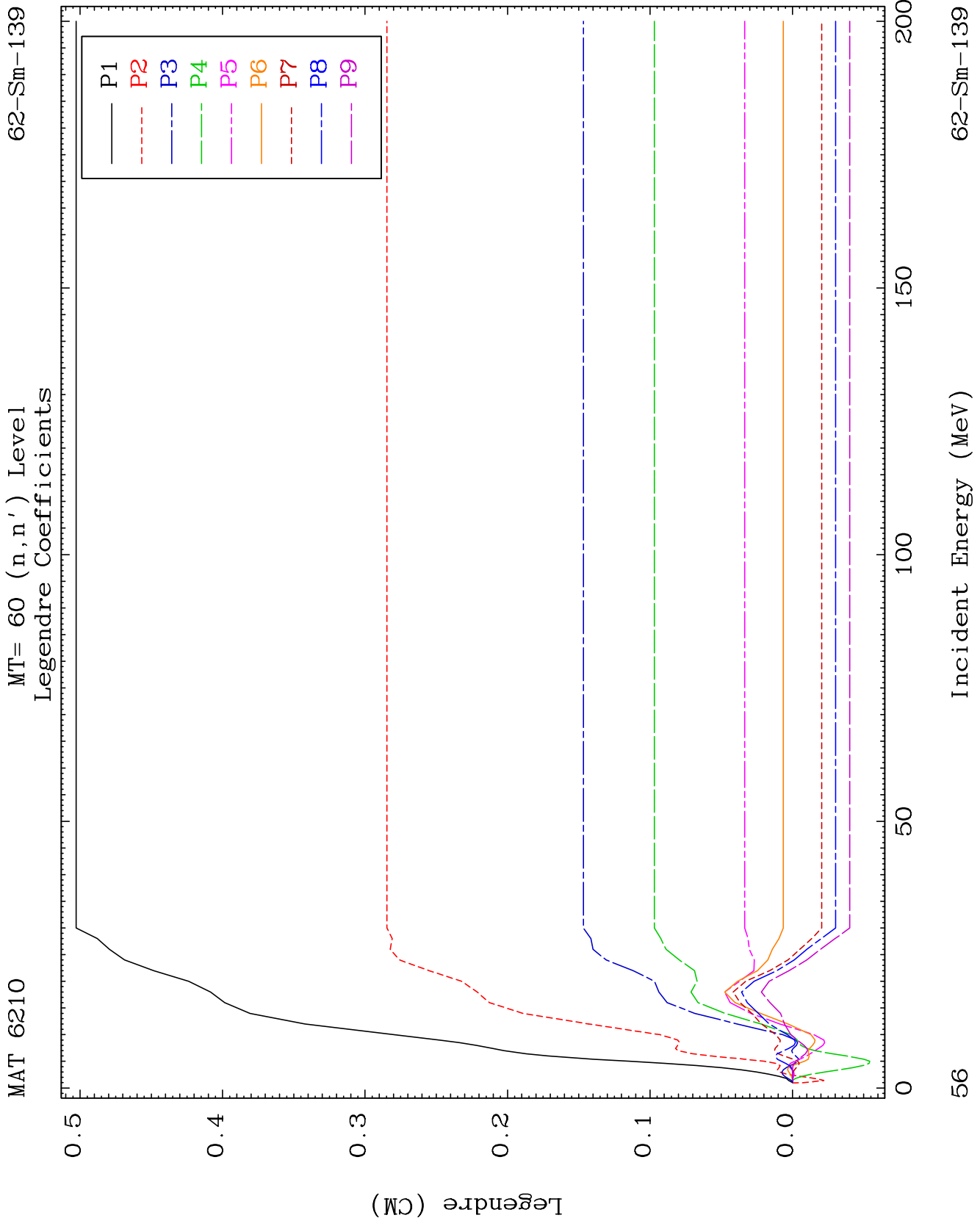
MAT 6210

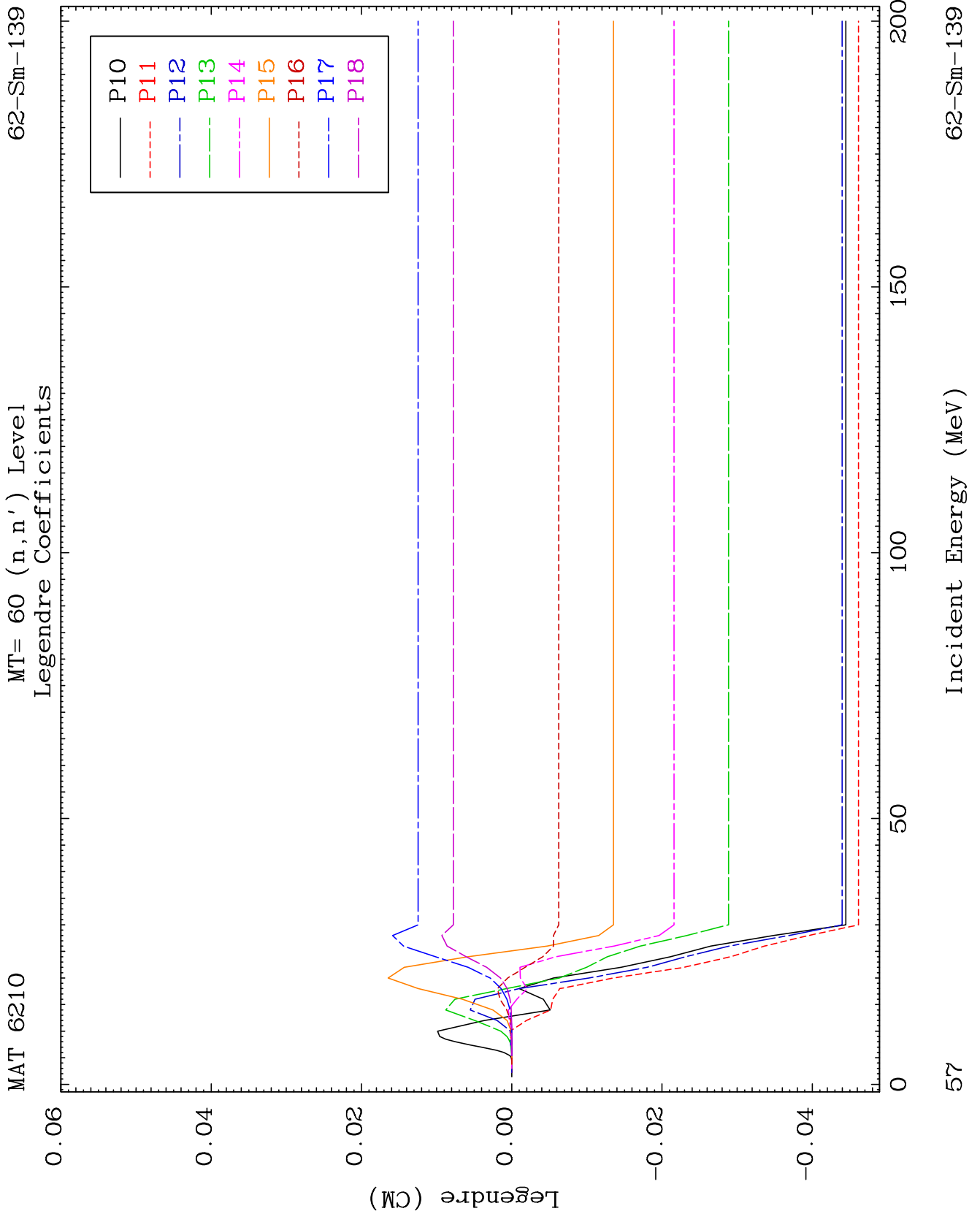
MT= 59 (n,n') Level  
Legendre Coefficients

62-Sm-139





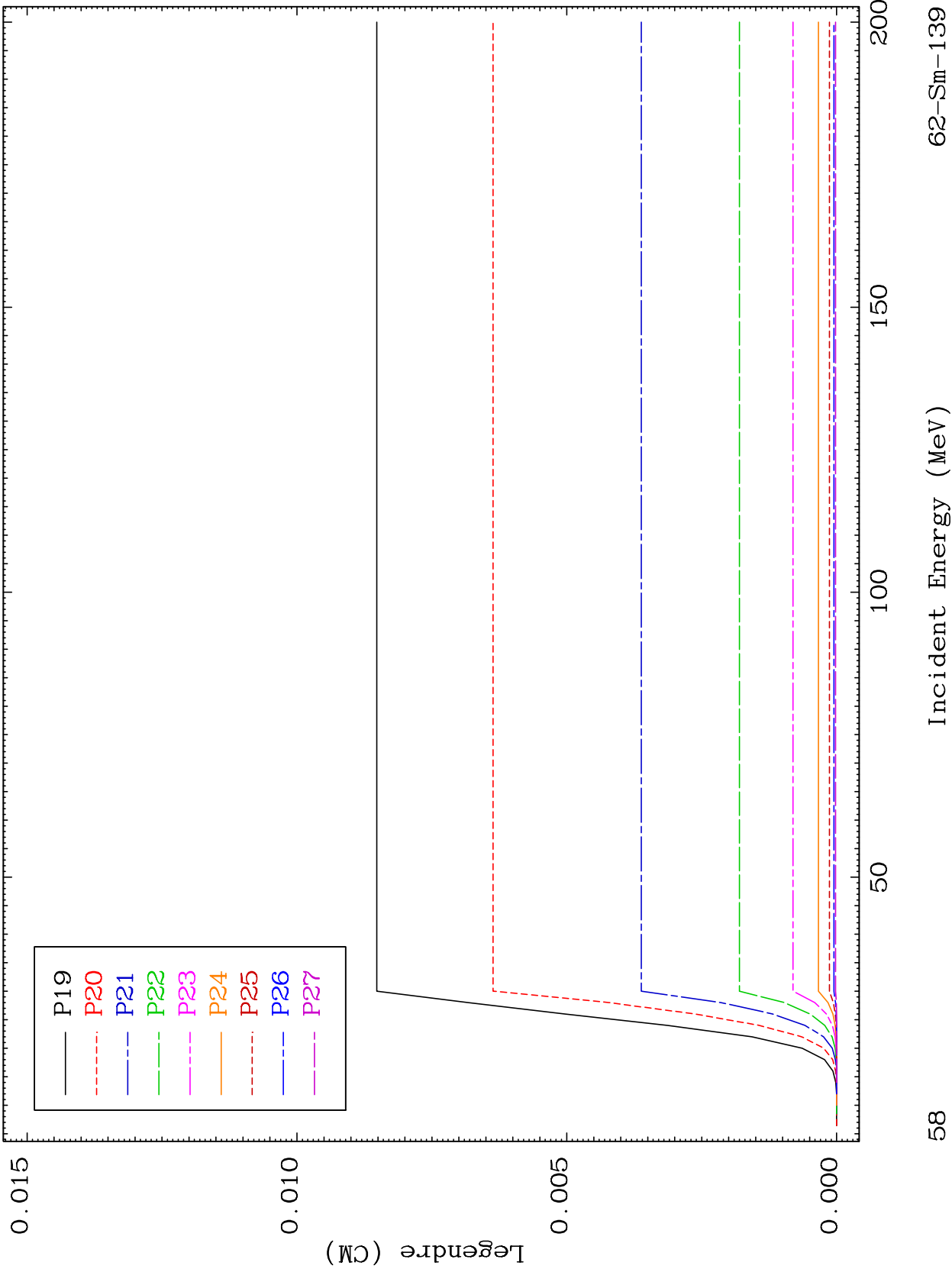




MAT 6210

MT= 60 (n,n') Level  
Legendre Coefficients

62-Sm-139



58

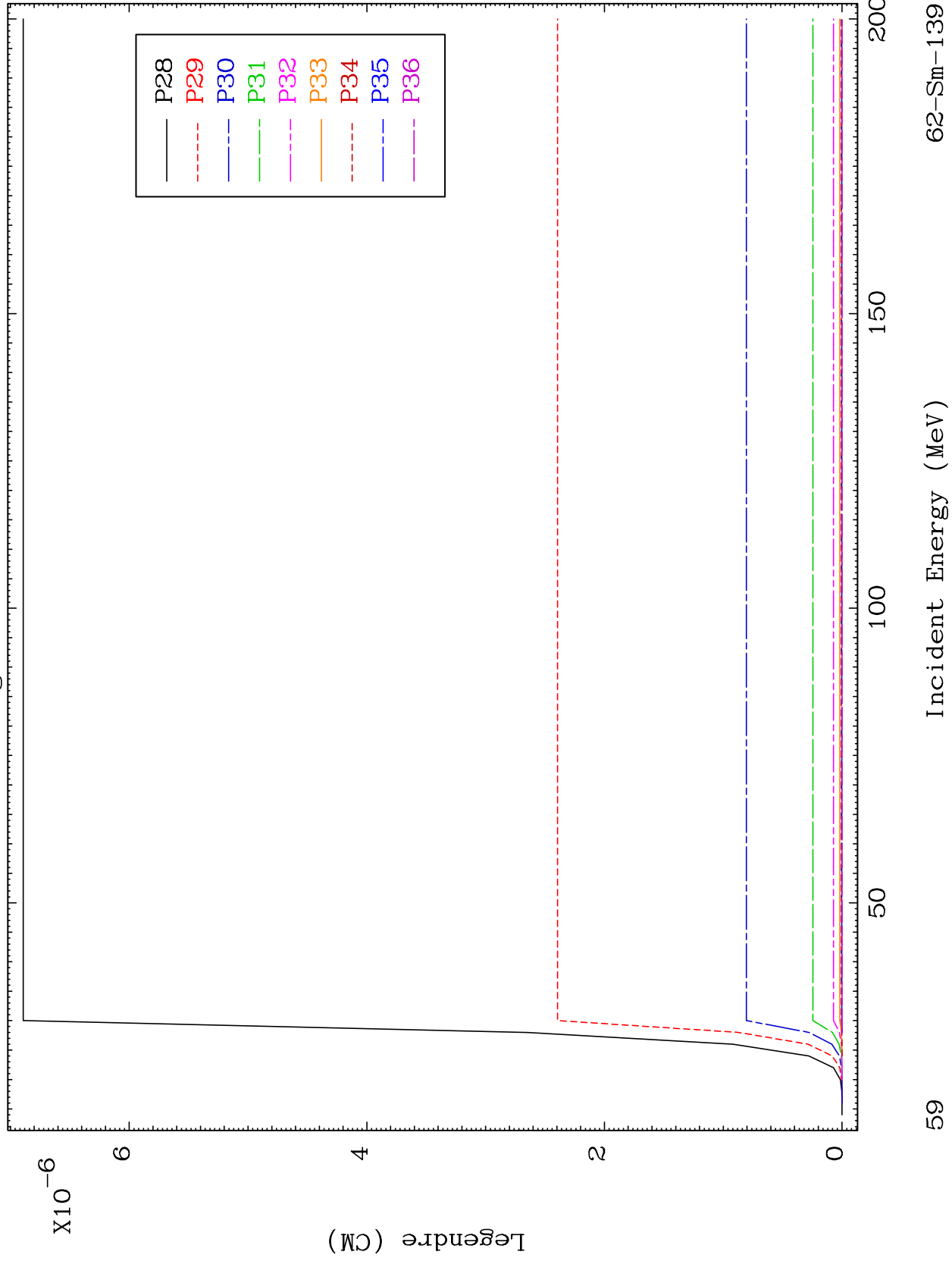
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 60 (n,n') Level  
Legendre Coefficients

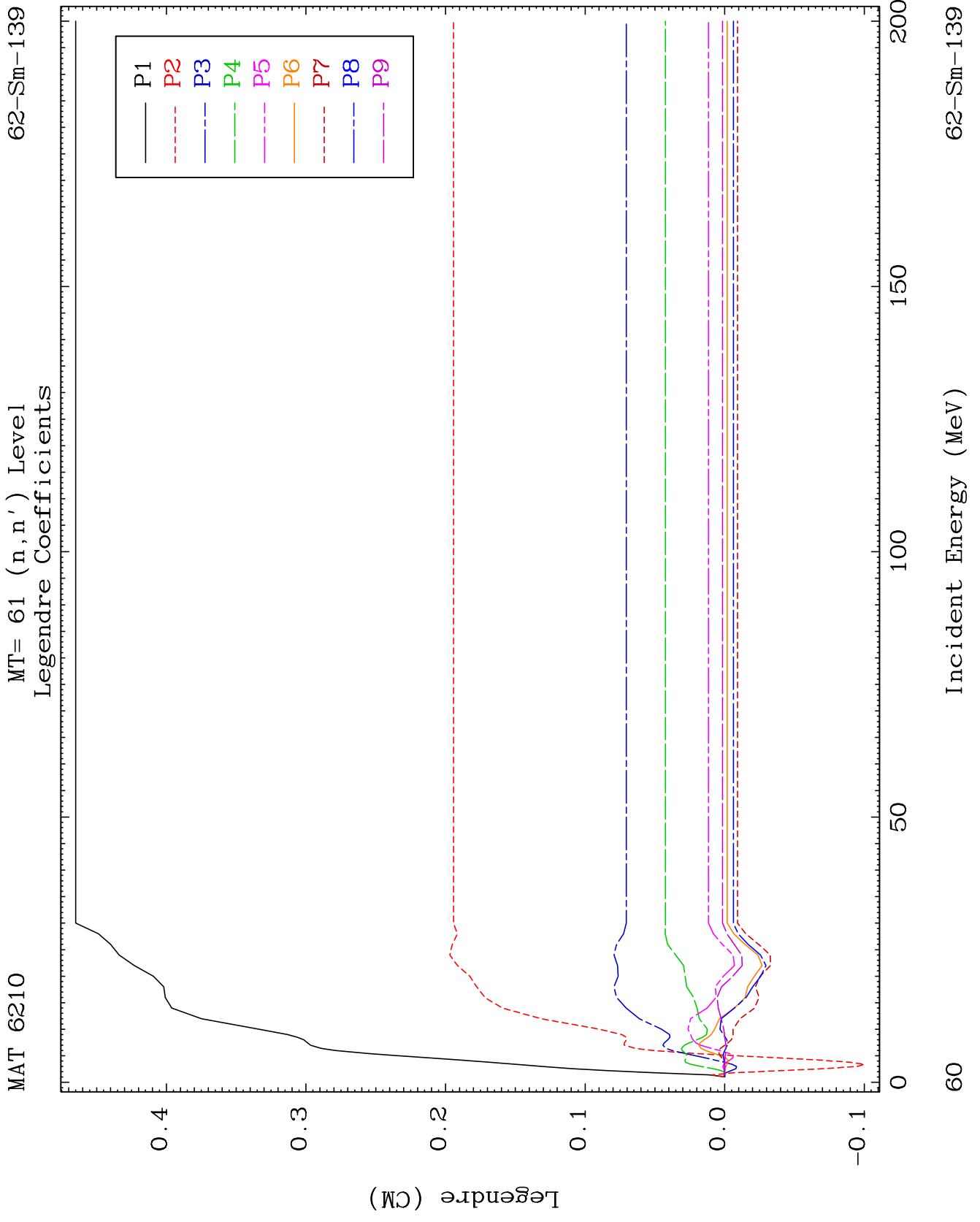
62-Sm-139



59

Incident Energy (MeV)

62-Sm-139

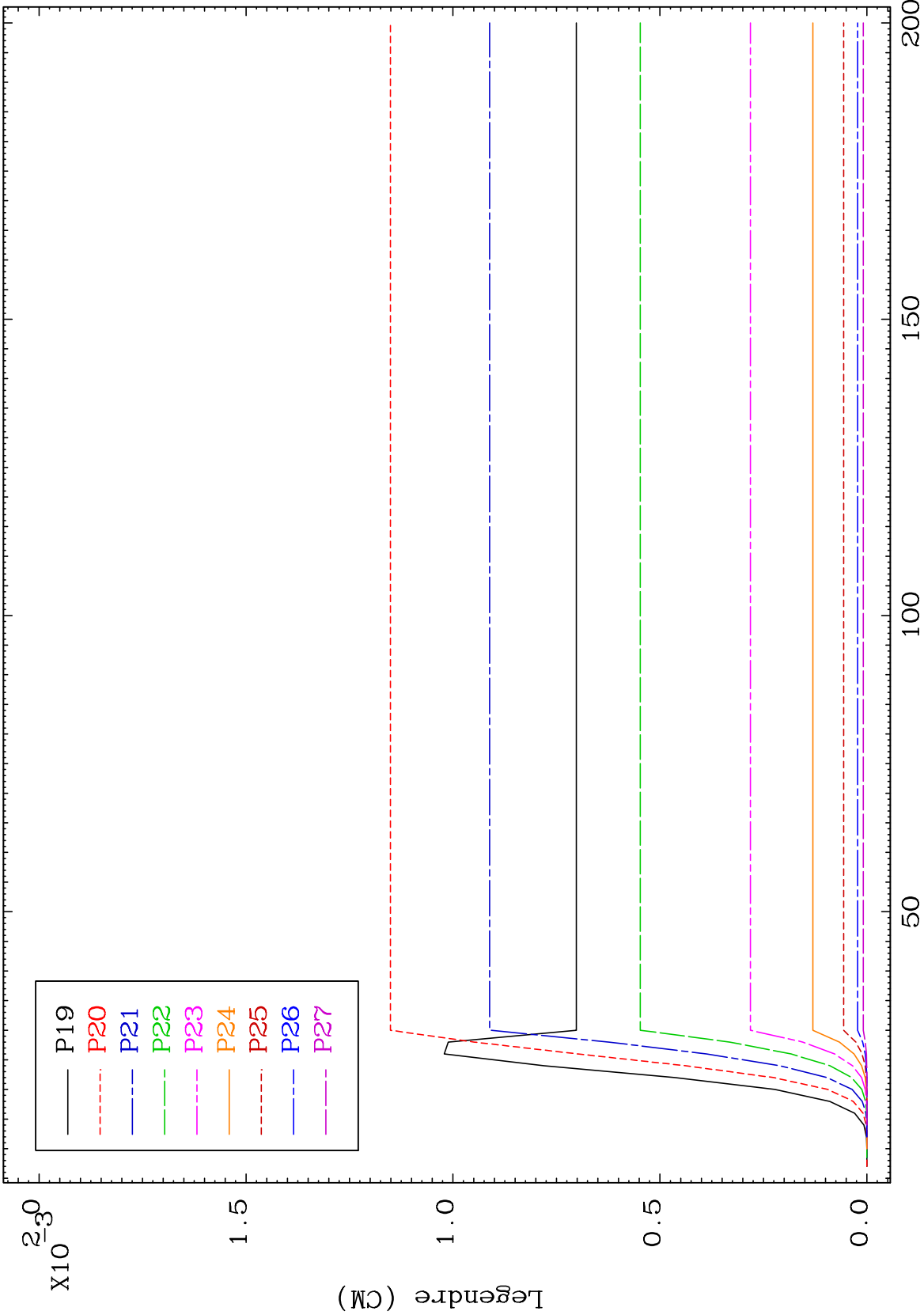




MAT 6210

MT= 61 (n,n') Level  
Legendre Coefficients

62-Sm-139



62

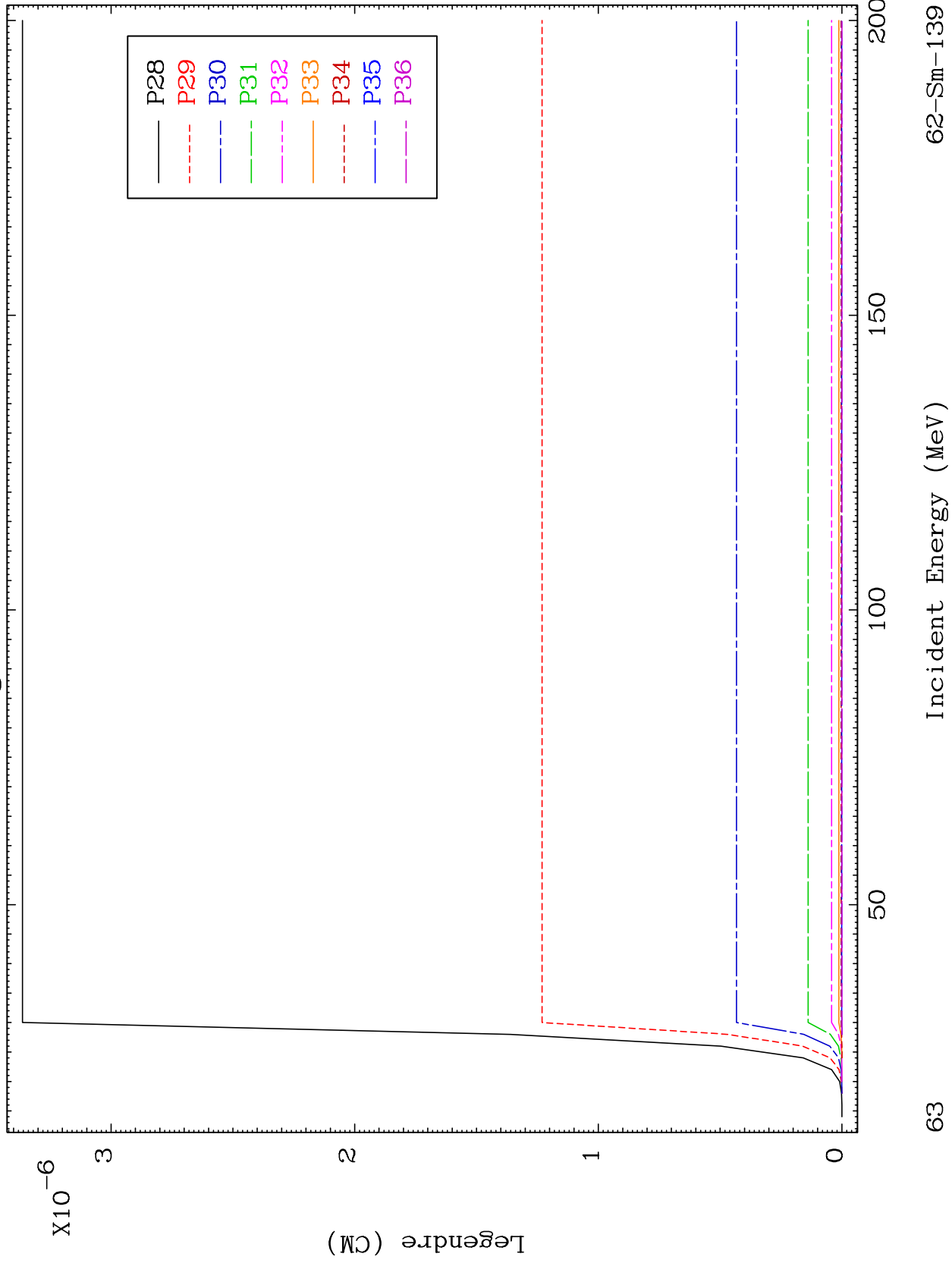
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 61 (n,n') Level  
Legendre Coefficients

62-Sm-139



63

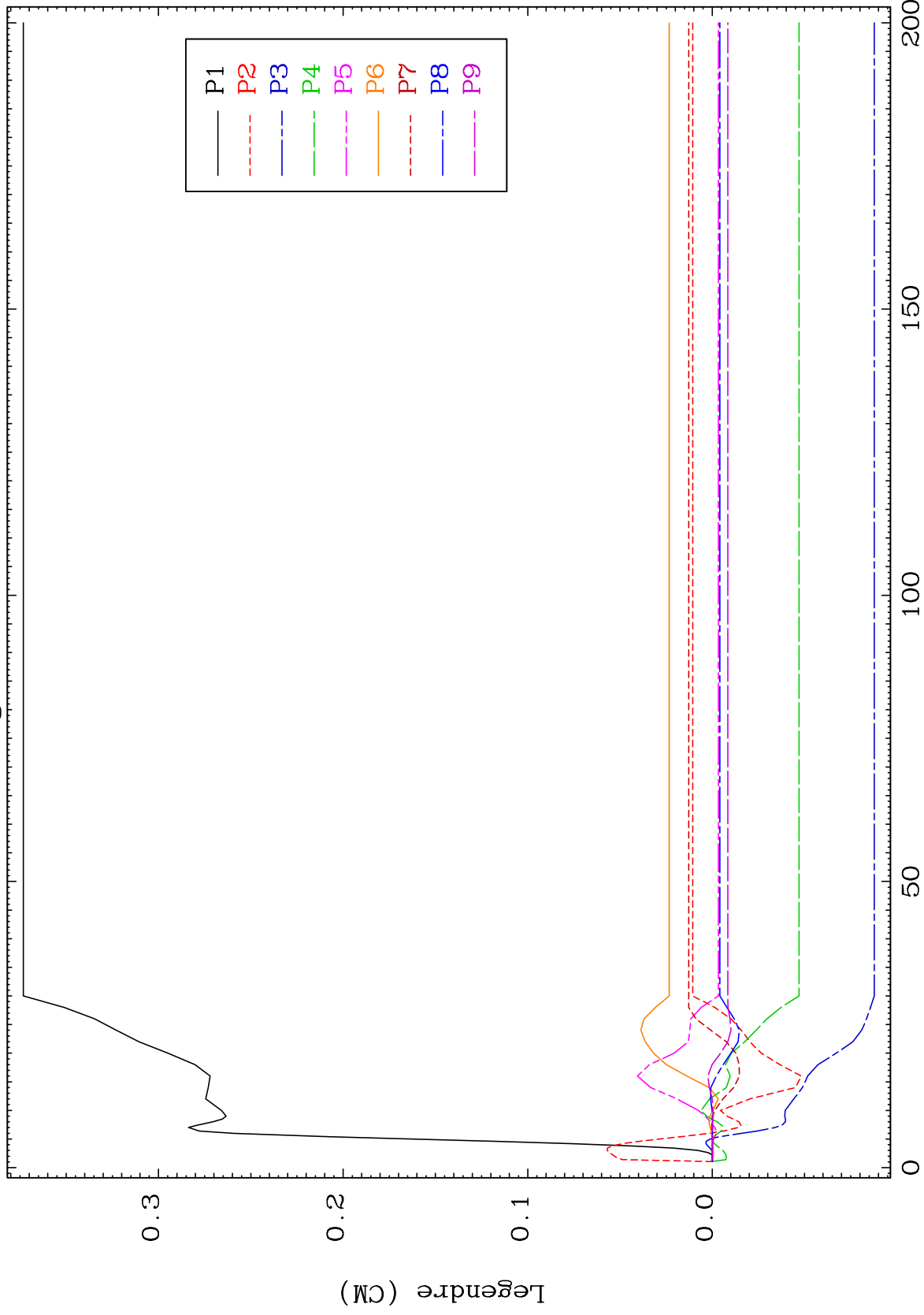
62-Sm-139



MAT 6210

MT= 62 (n,n') Level  
Legendre Coefficients

62-Sm-139



64

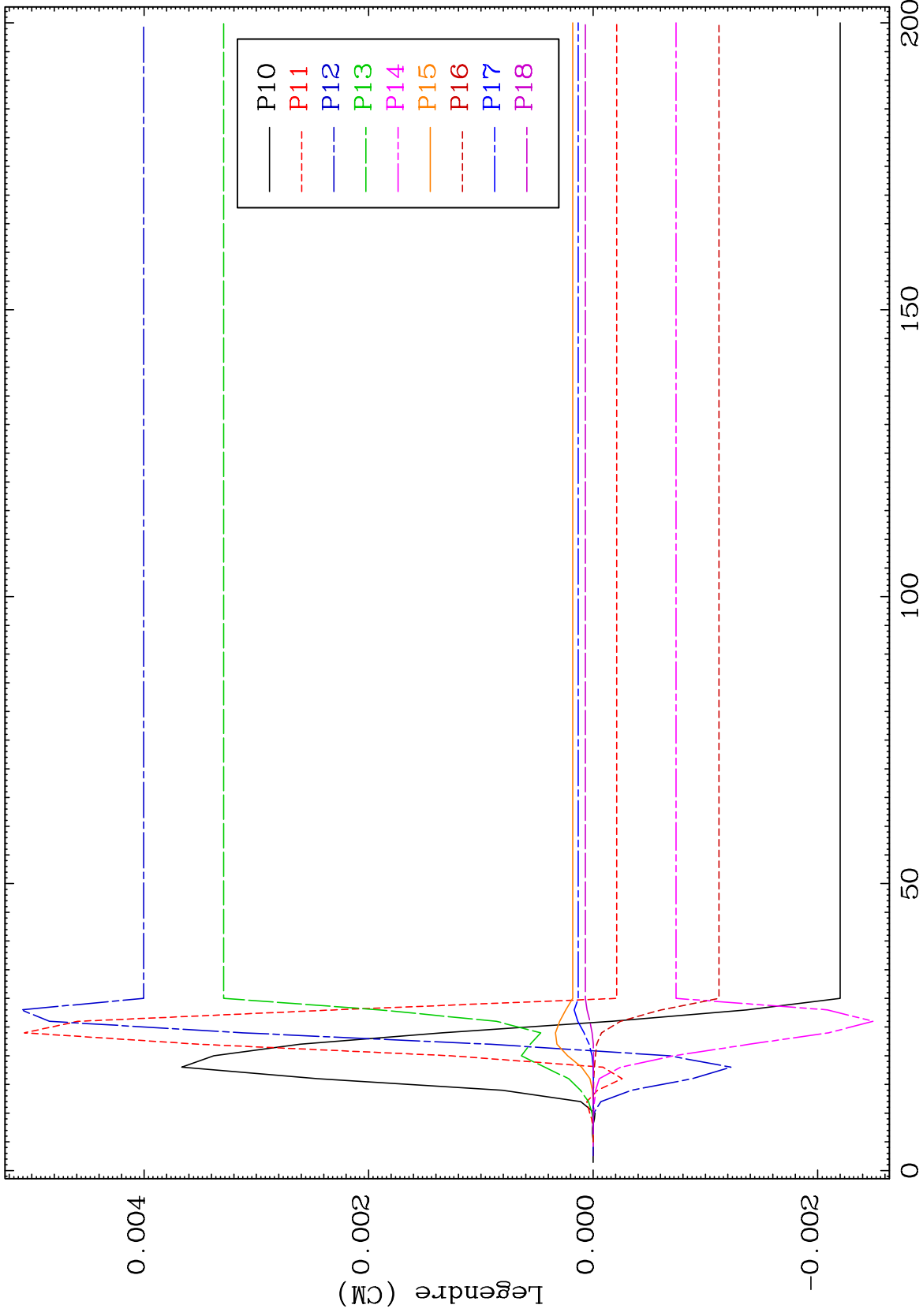
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 62 (n,n') Level  
Legendre Coefficients

62-Sm-139



65

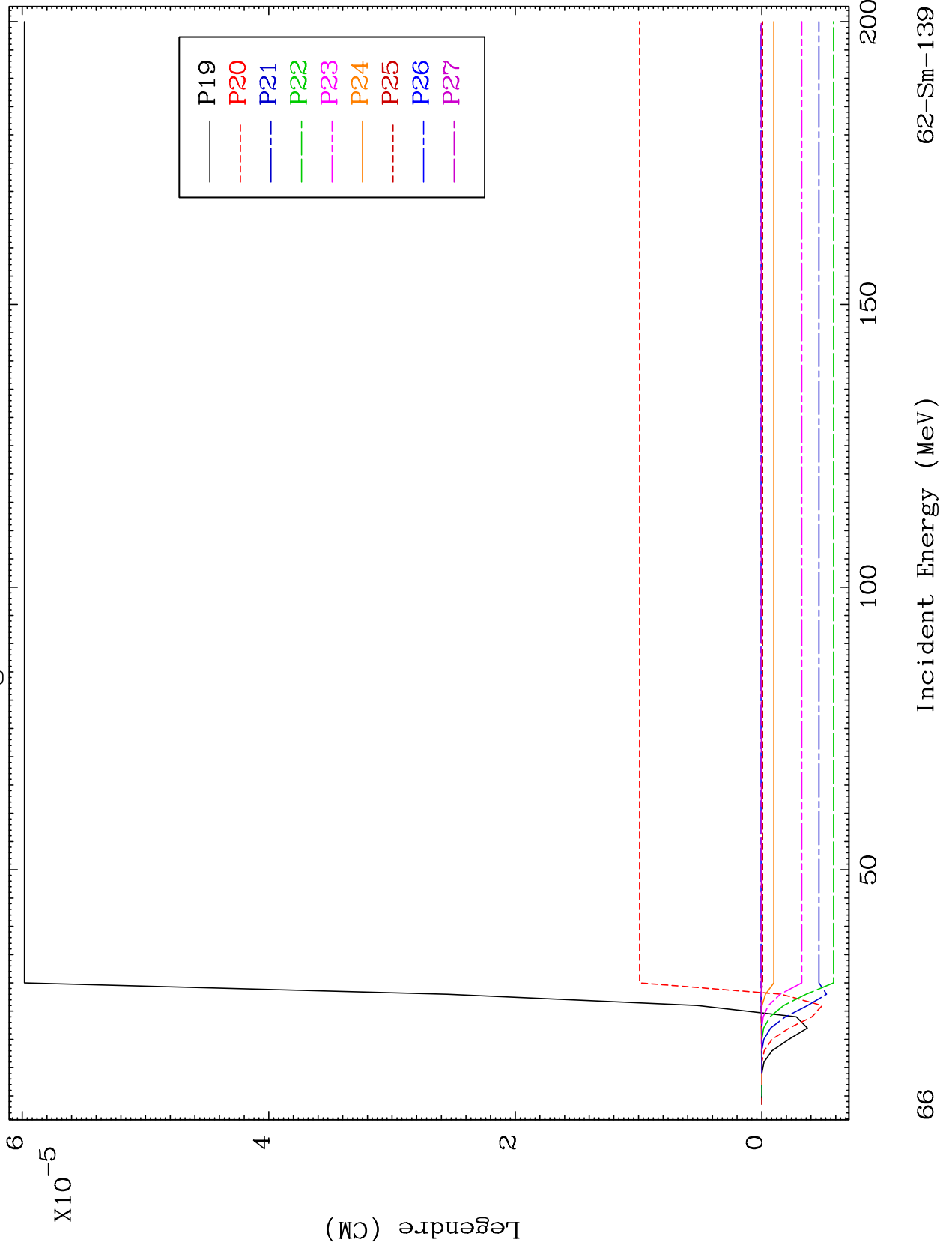
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 62 (n,n') Level  
Legendre Coefficients

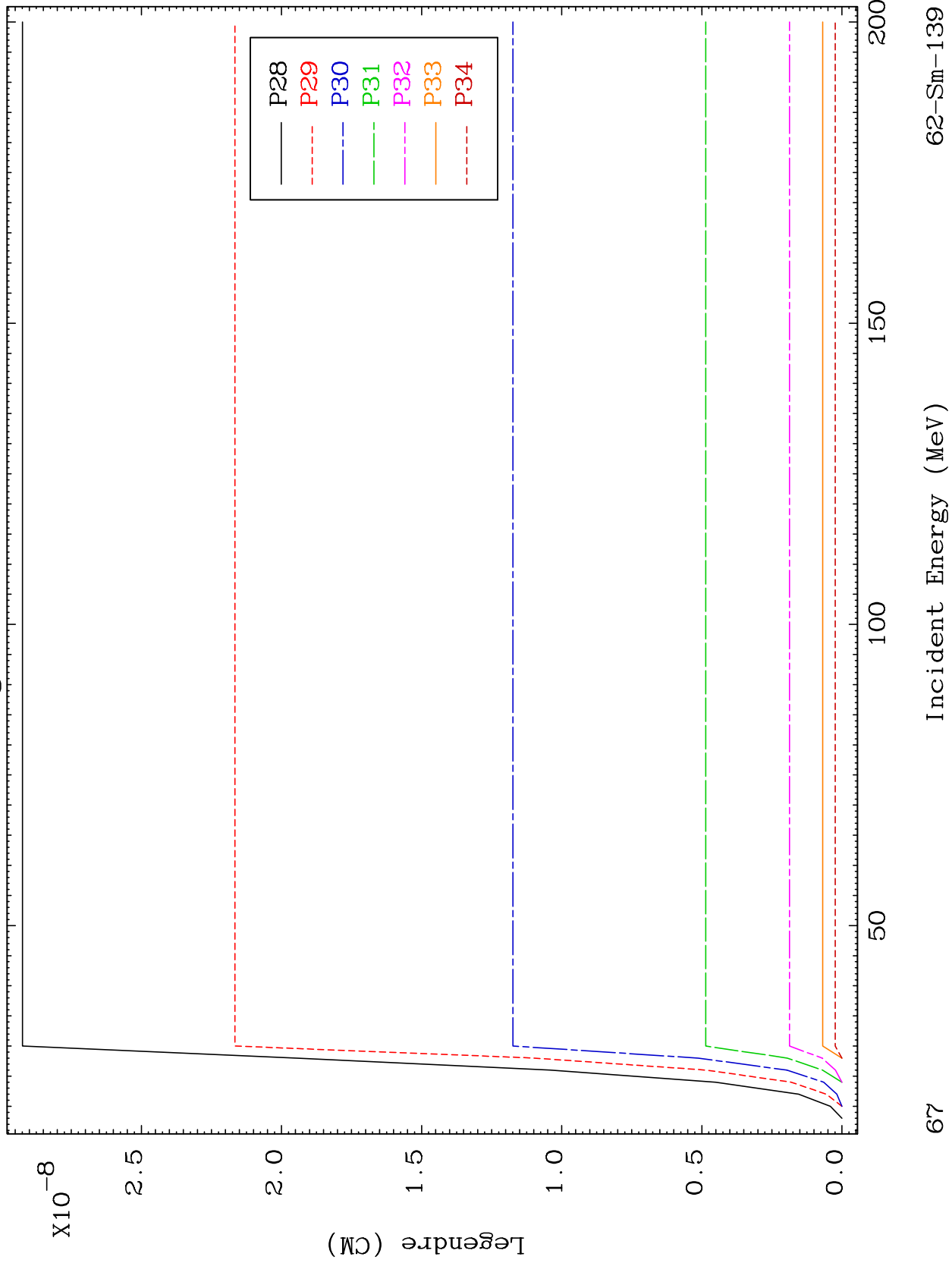
62-Sm-139



MAT 6210

MT= 62 (n,n') Level  
Legendre Coefficients

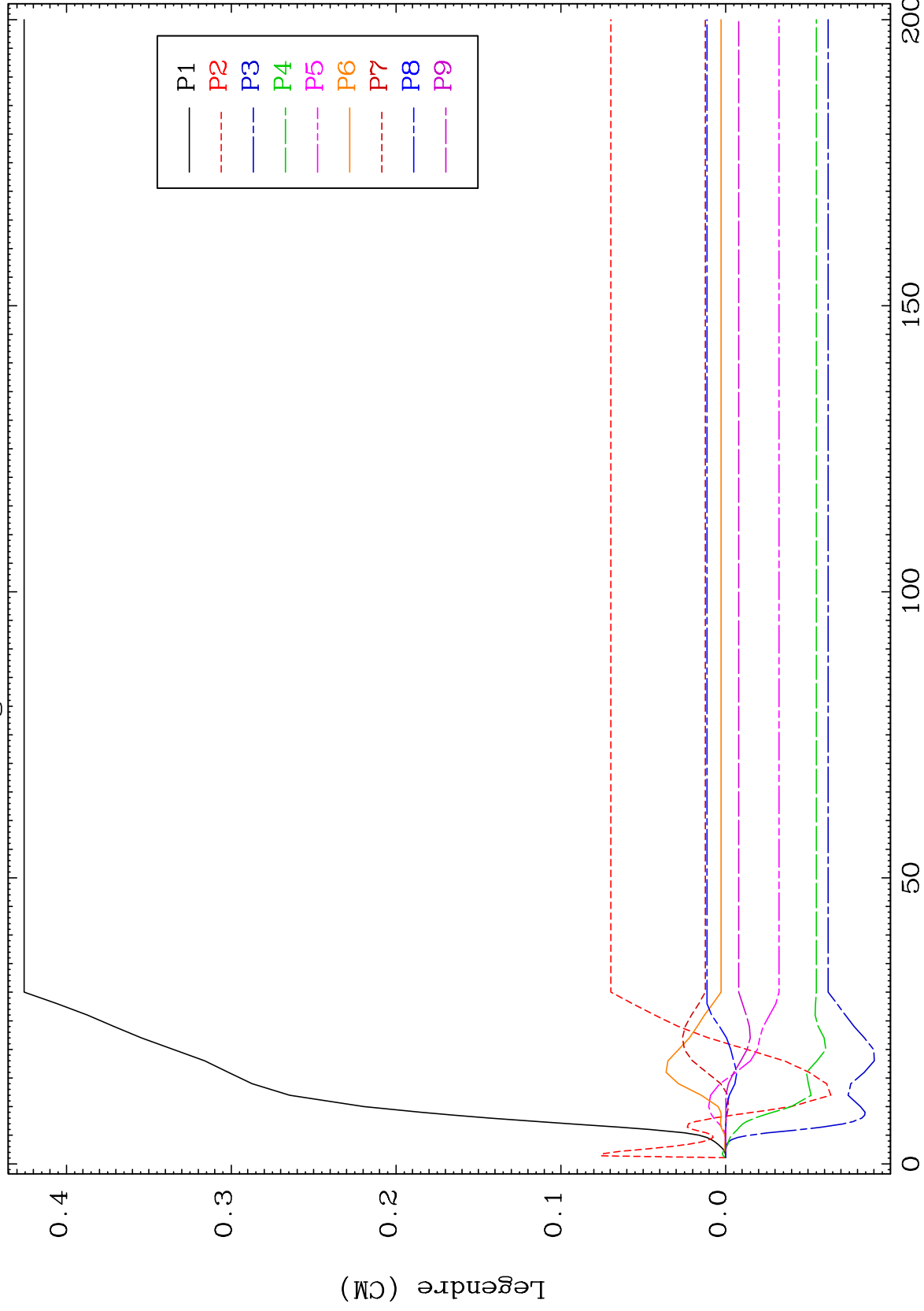
62-Sm-139



MAT 6210

MT= 63 (n,n') Level  
Legendre Coefficients

62-Sm-139

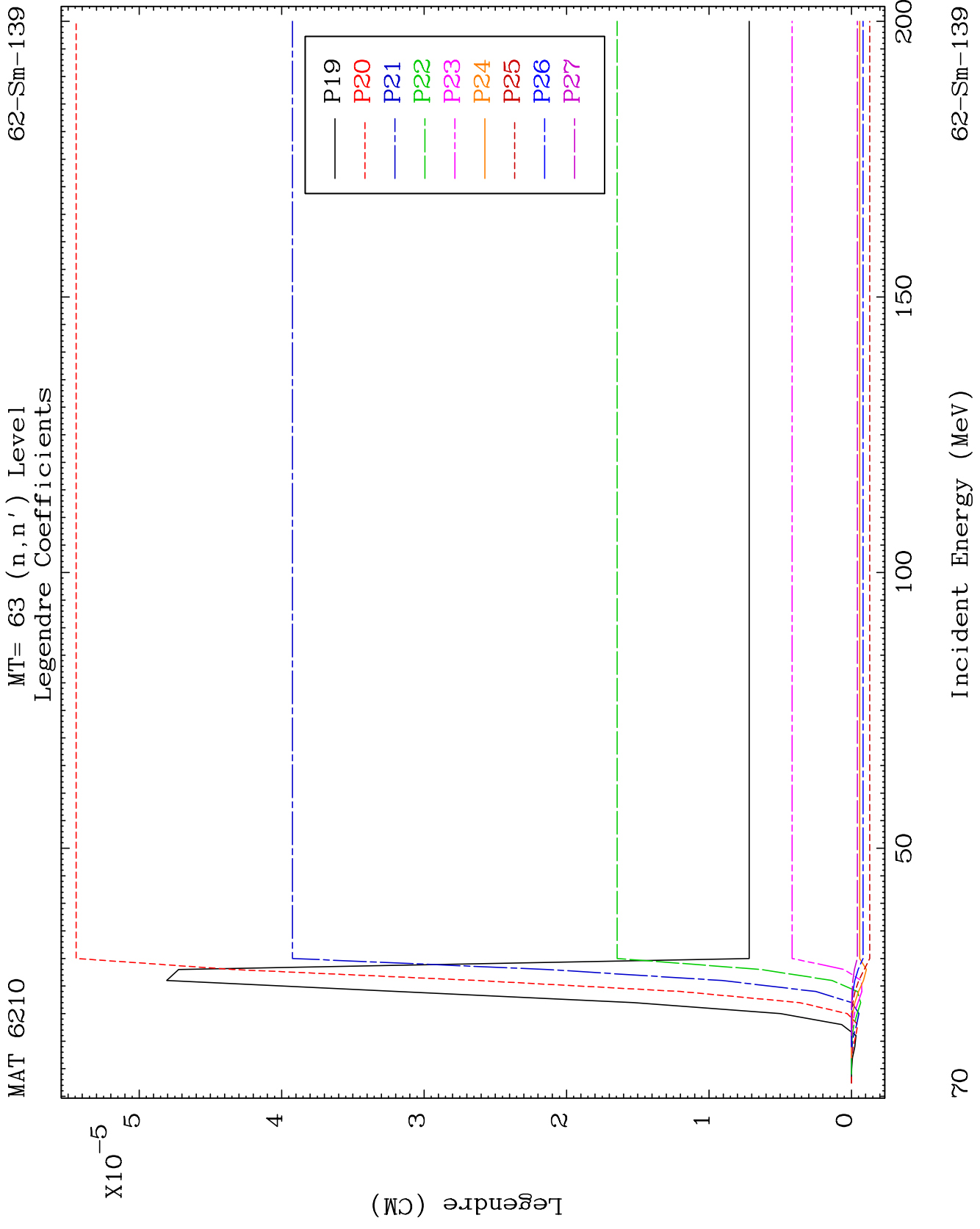


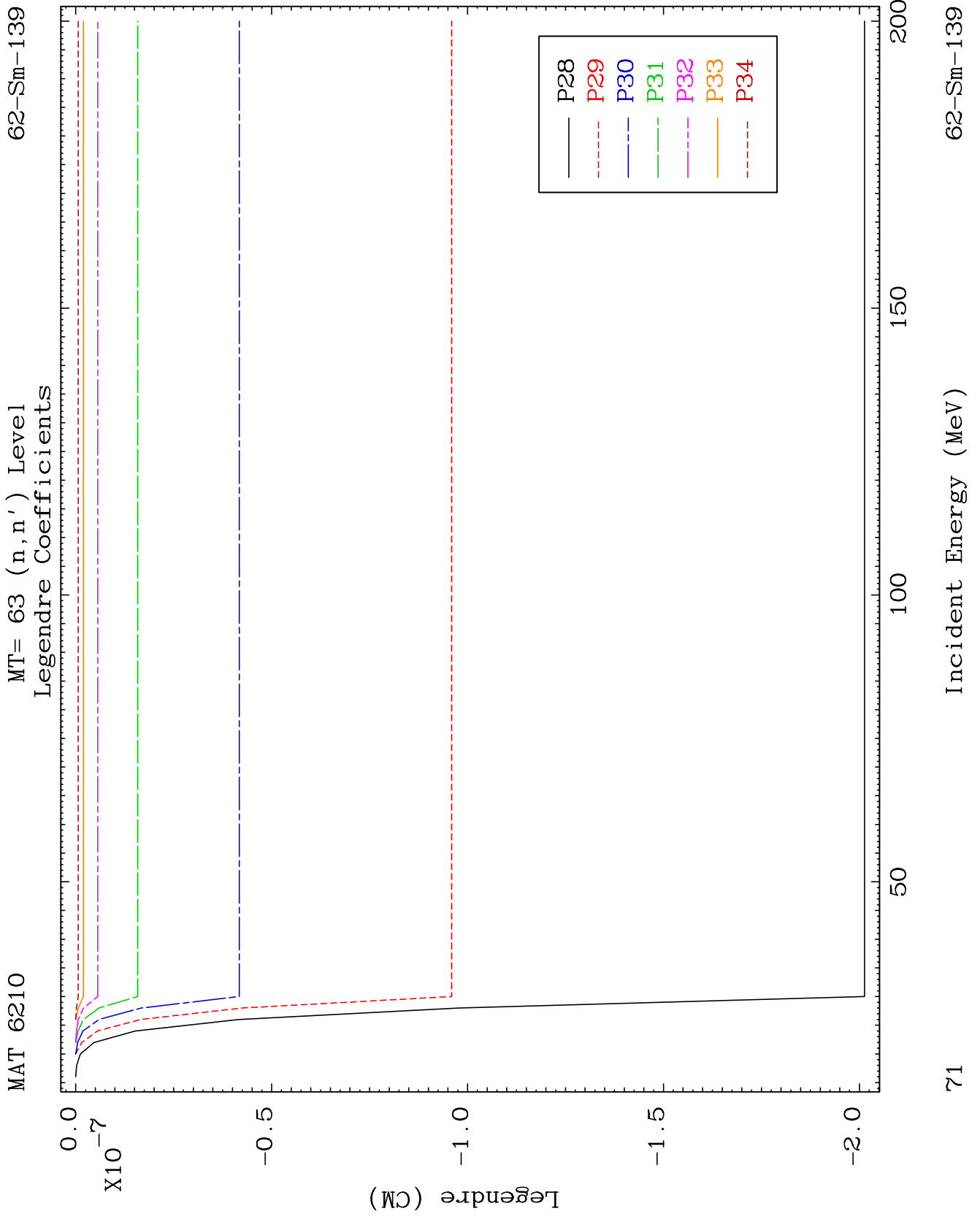
62-Sm-139

Incident Energy (MeV)

68





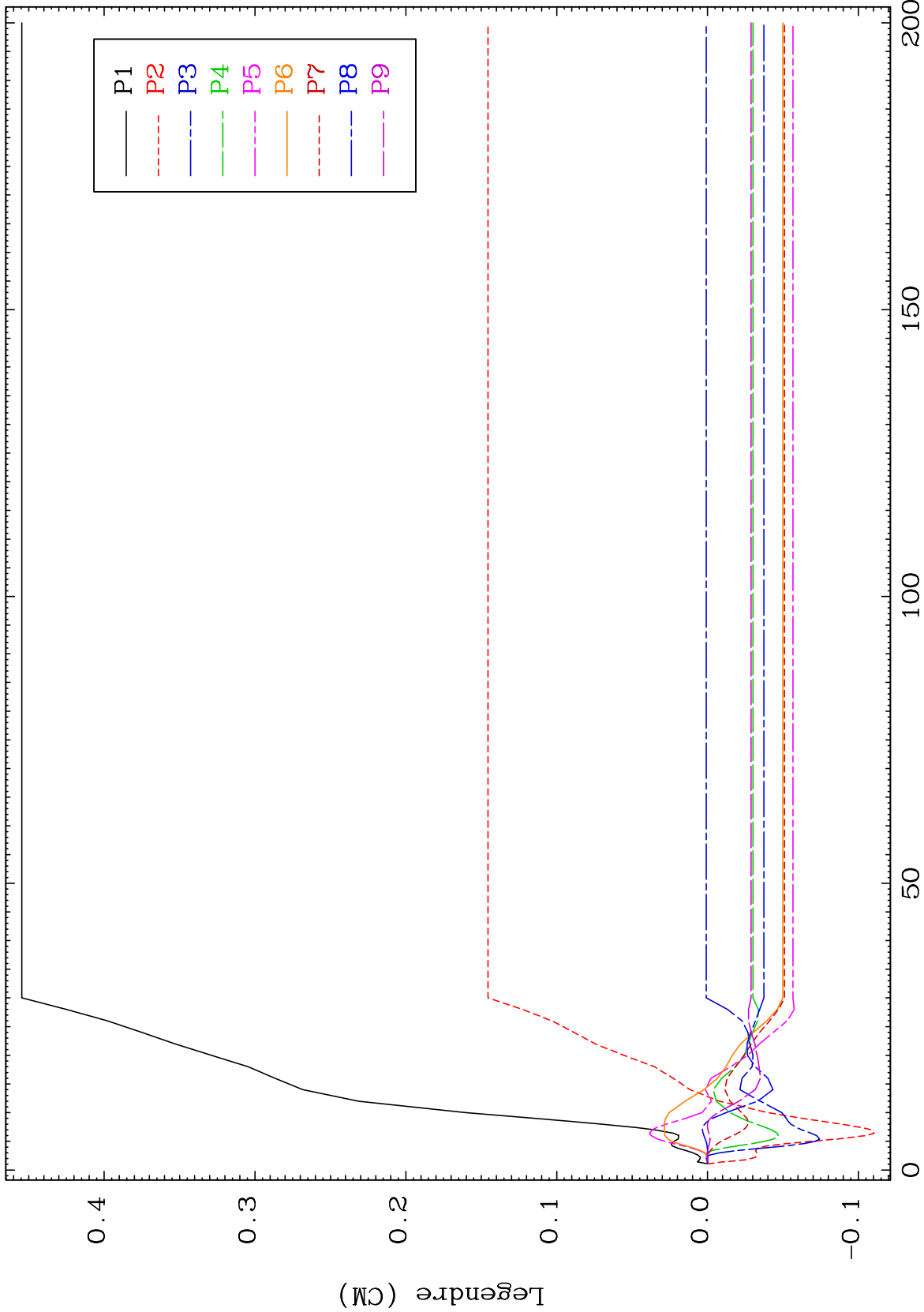




MAT 6210

MT= 64 (n,n') Level  
Legendre Coefficients

62-Sm-139



72

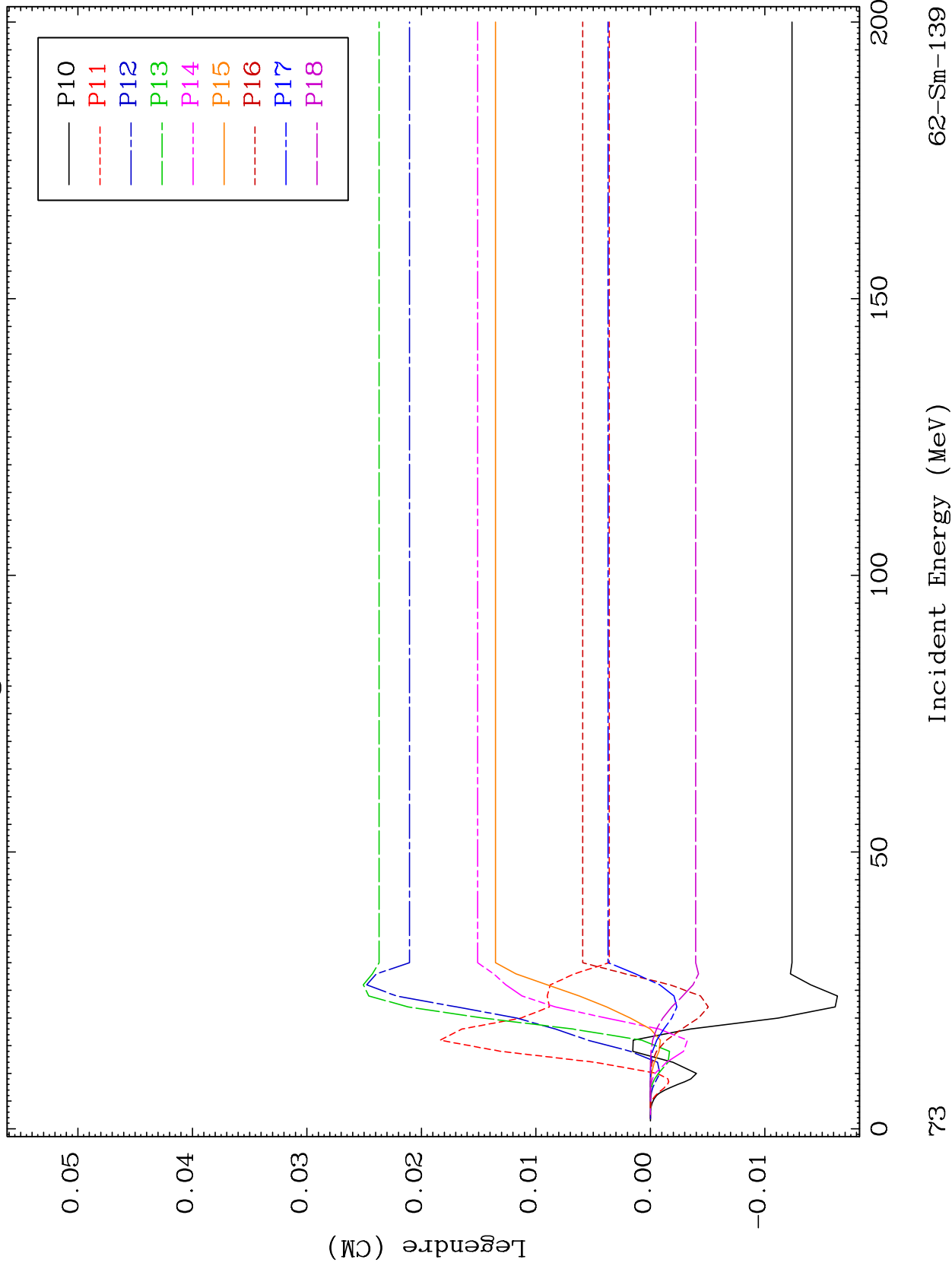
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 64 (n,n') Level  
Legendre Coefficients

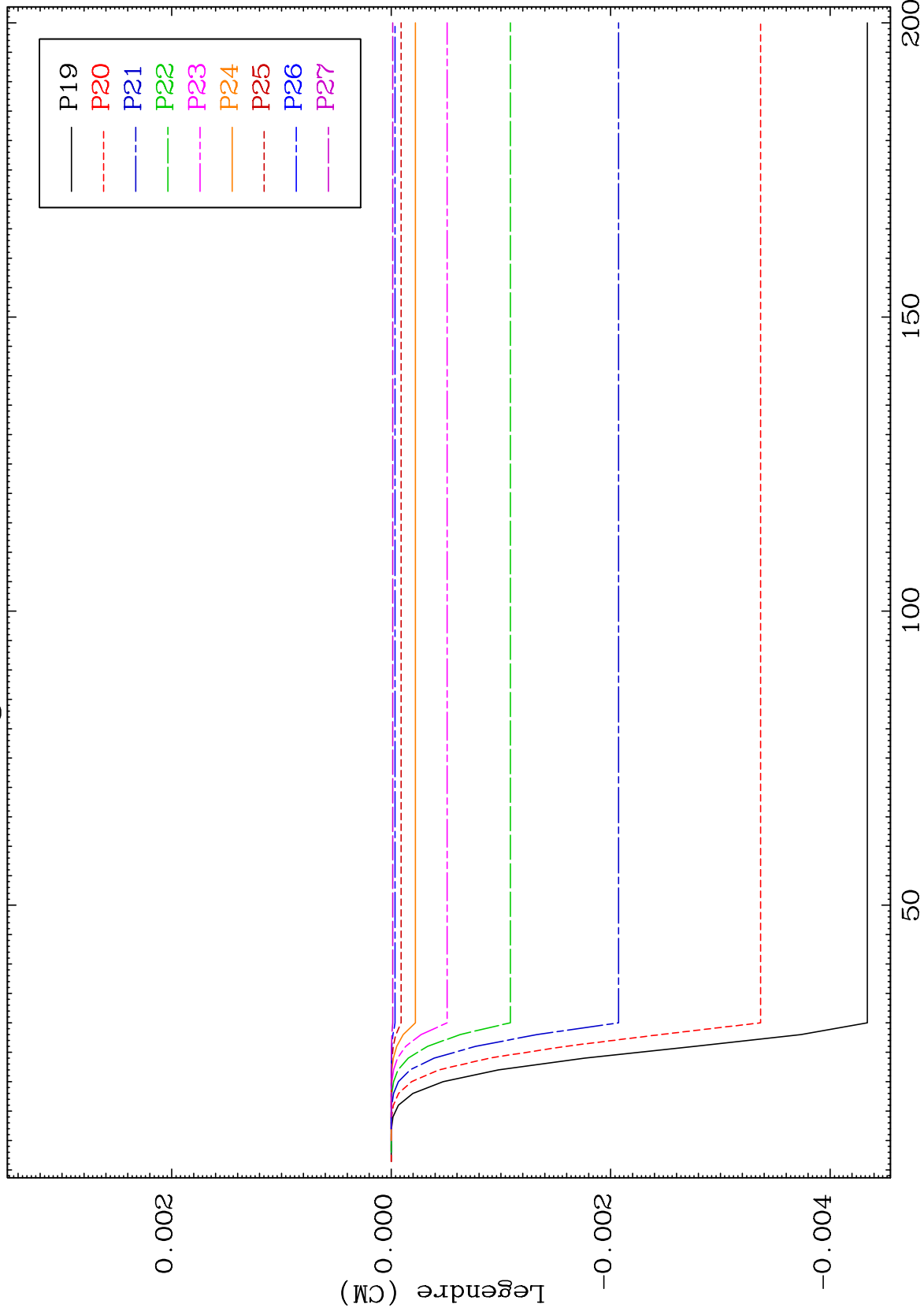
62-Sm-139



MAT 6210

MT= 64 (n,n') Level  
Legendre Coefficients

62-Sm-139



74

Incident Energy (MeV)

62-Sm-139

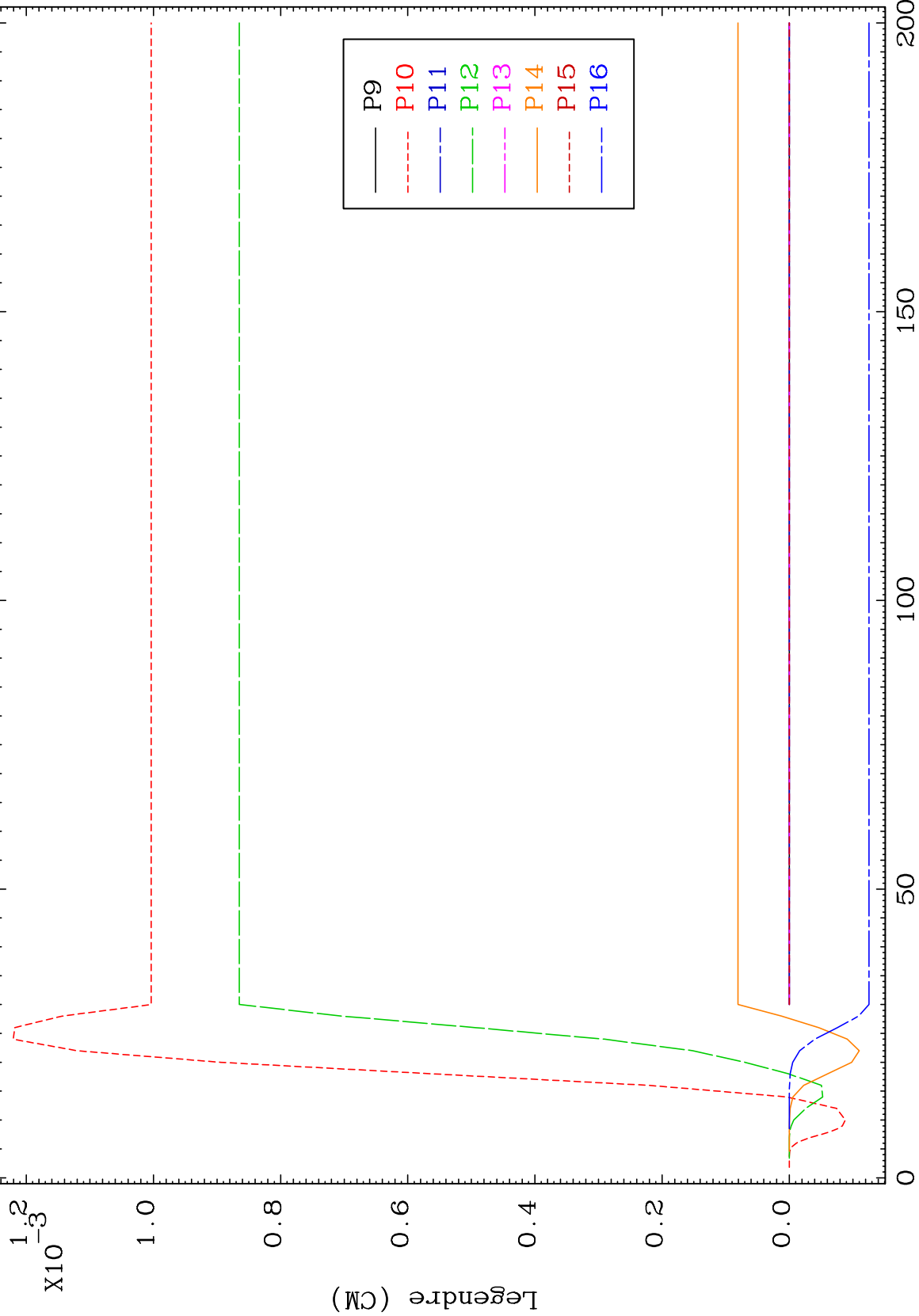




MAT 6210

MT= 65 (n,n') Level  
Legendre Coefficients

62-Sm-139



77

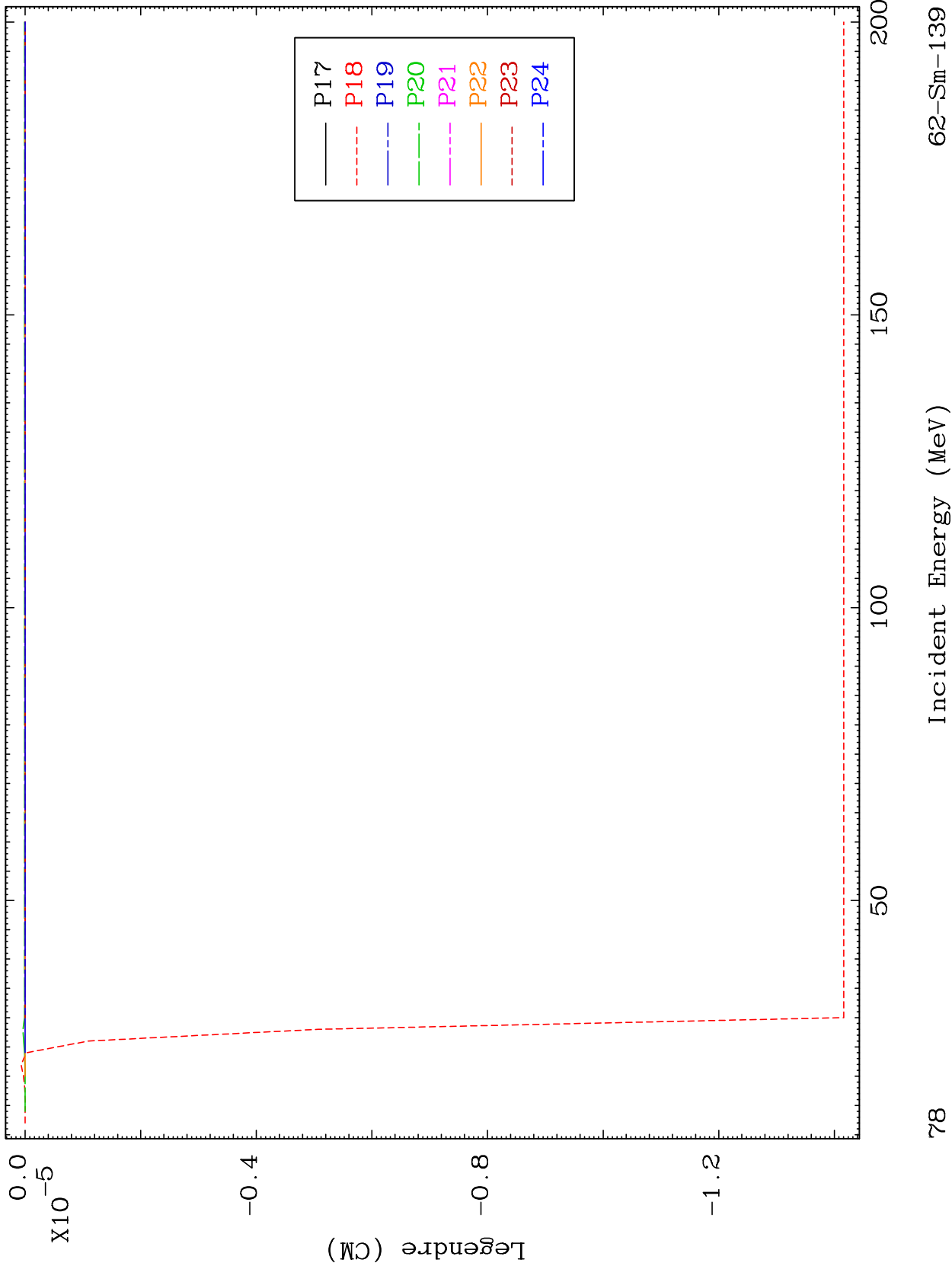
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 65 (n,n') Level  
Legendre Coefficients

62-Sm-139



78

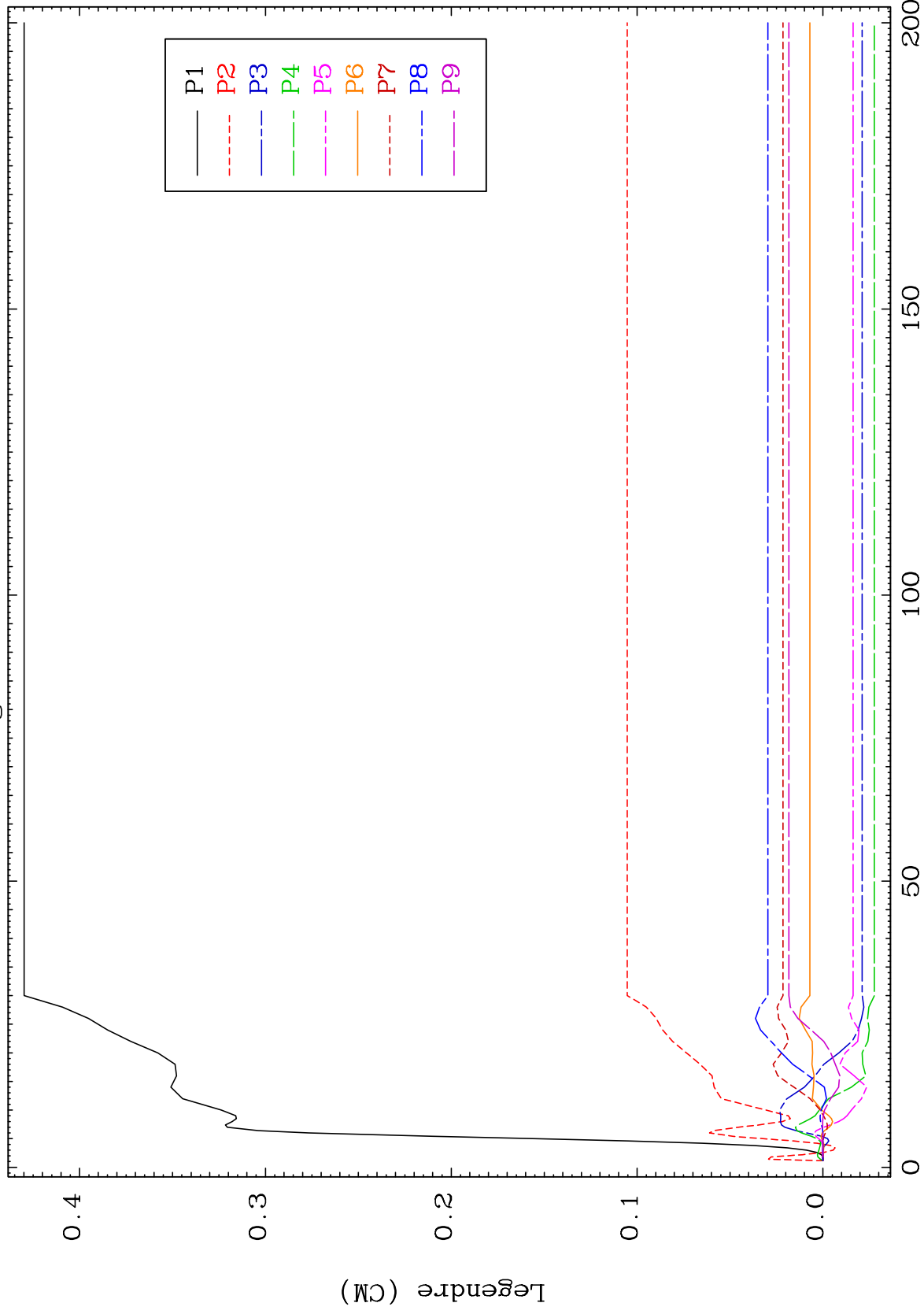
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 66 (n,n') Level  
Legendre Coefficients

62-Sm-139

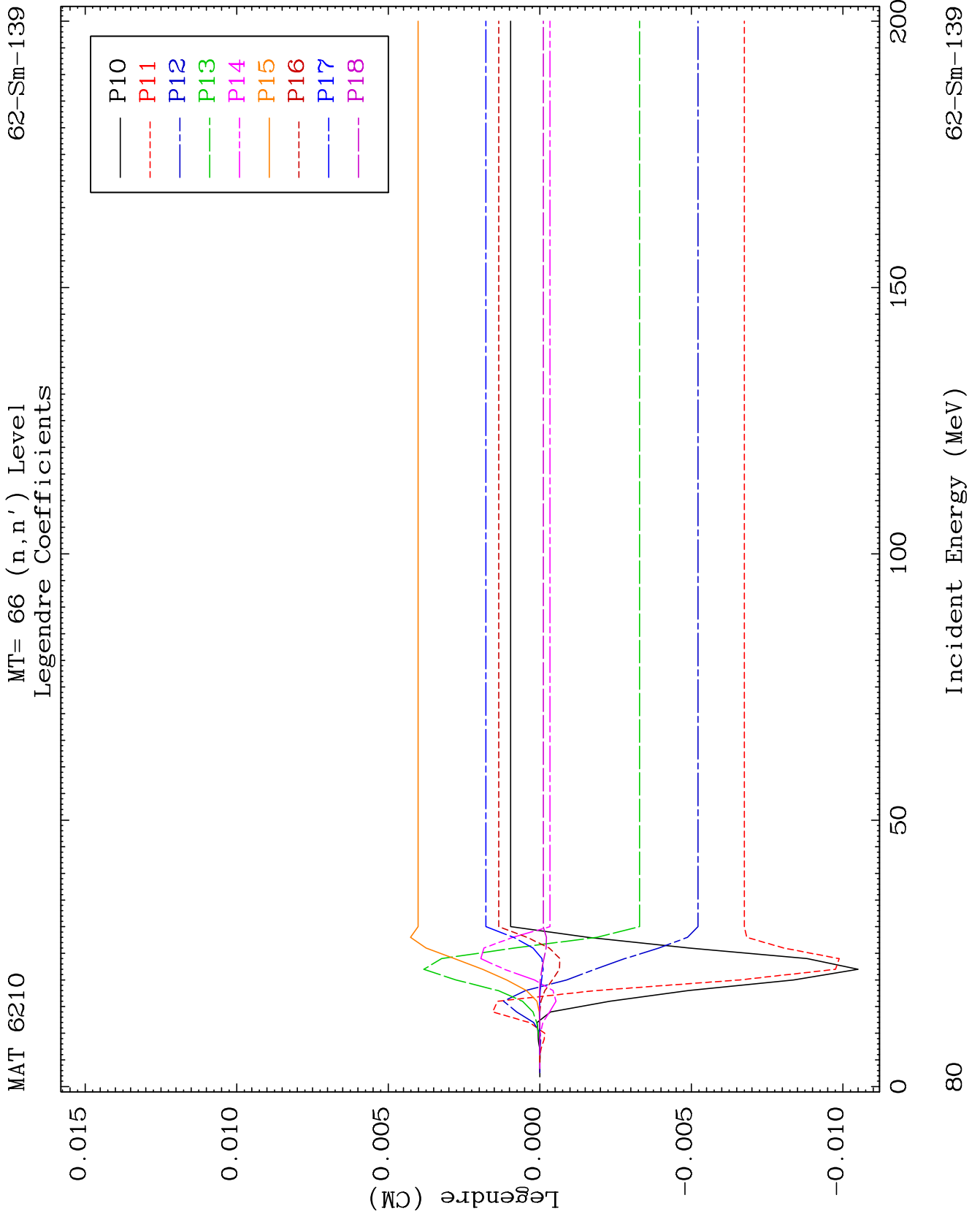


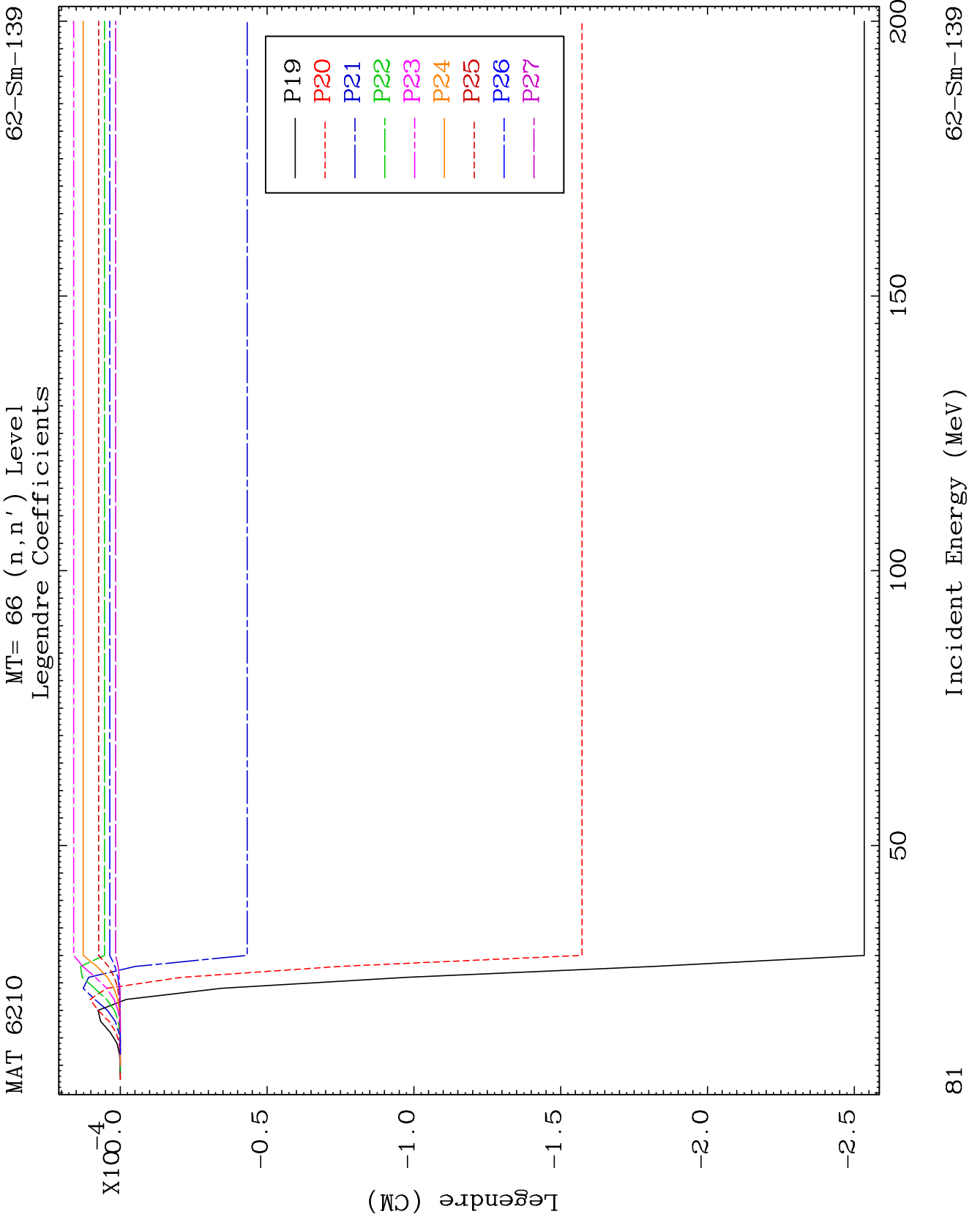
79

Incident Energy (MeV)

62-Sm-139



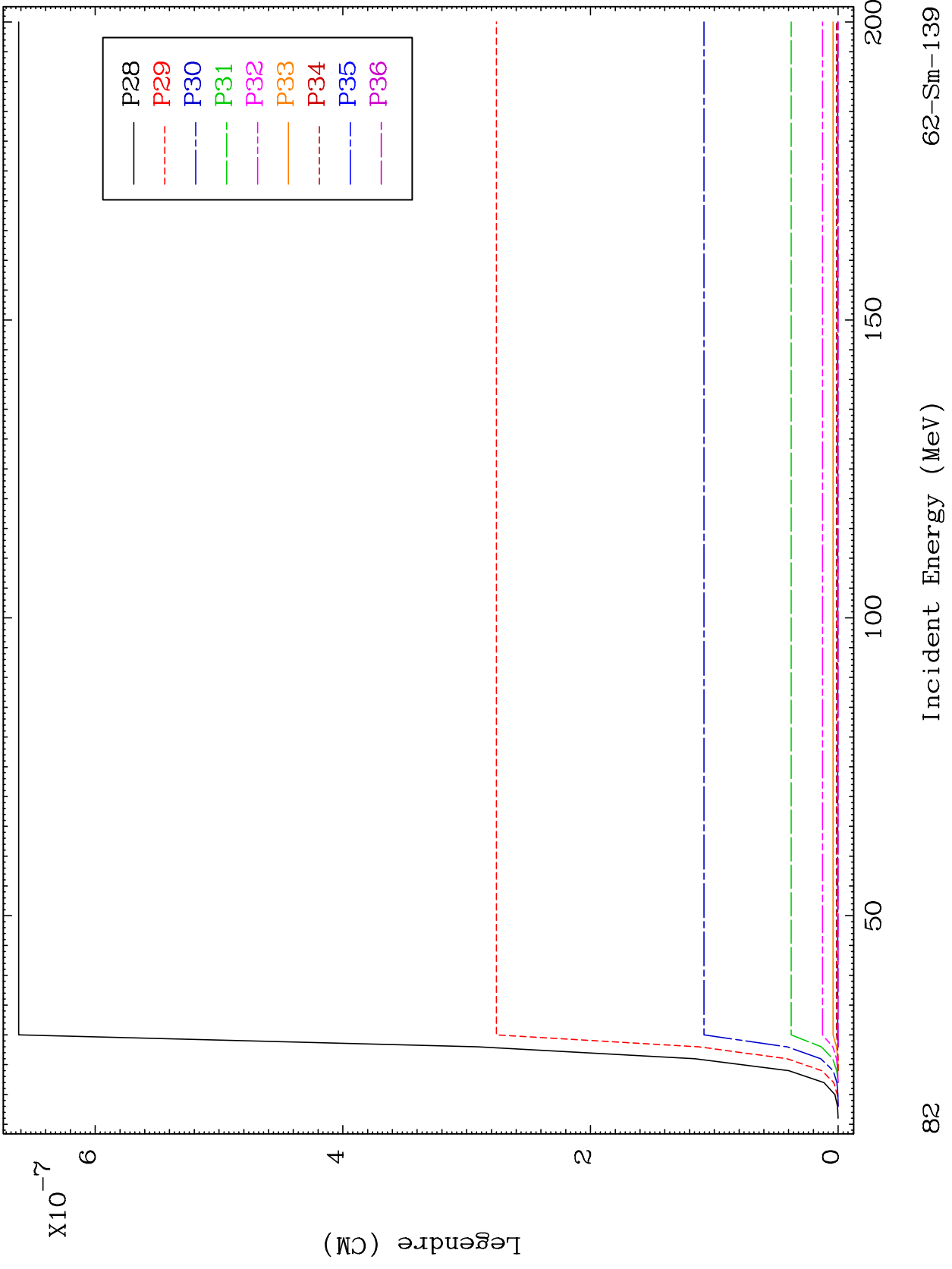




MAT 6210

MT= 66 (n,n') Level  
Legendre Coefficients

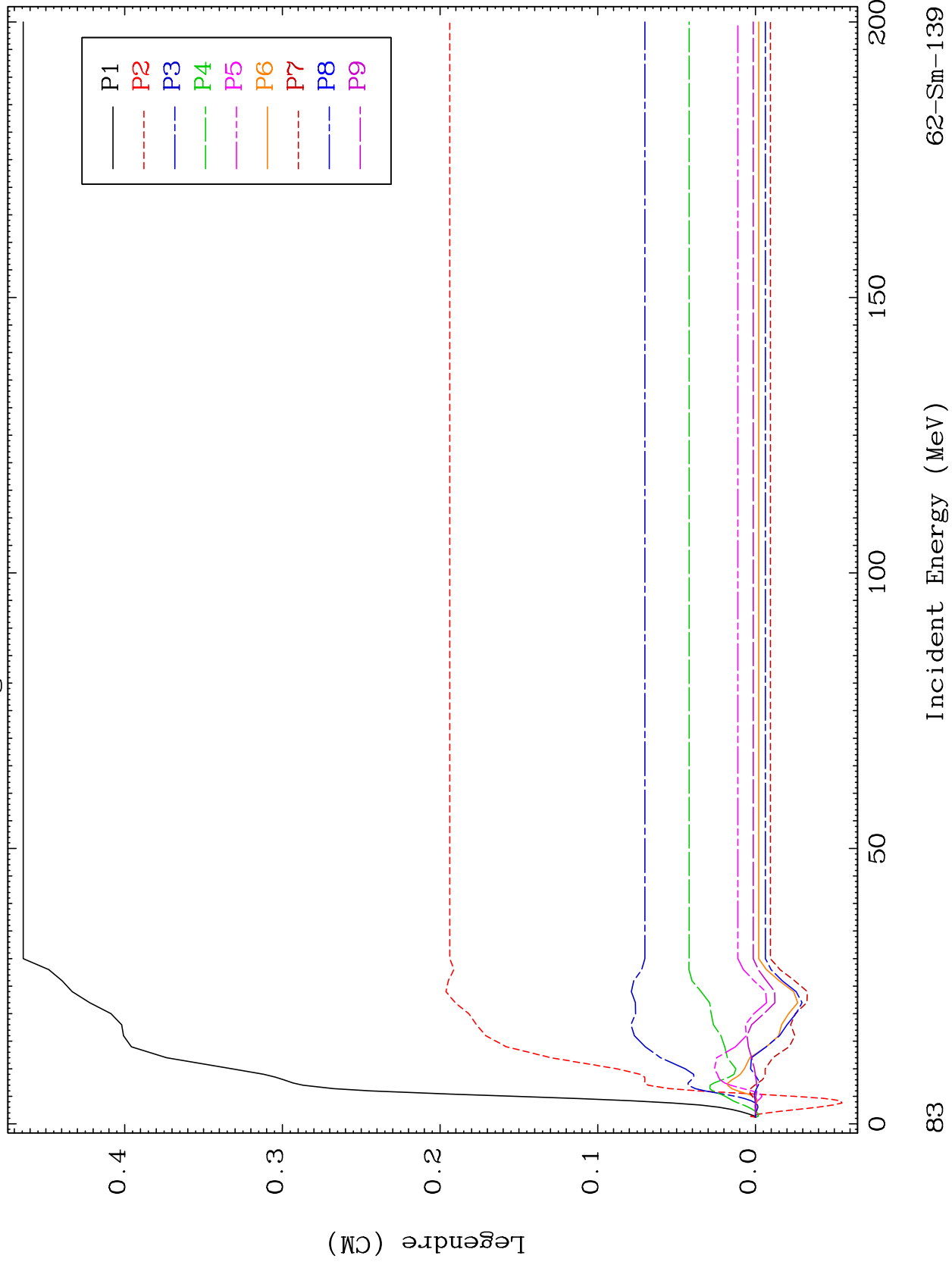
62-Sm-139



MAT 6210

MT= 67 (n,n') Level  
Legendre Coefficients

62-Sm-139



83

Incident Energy (MeV)

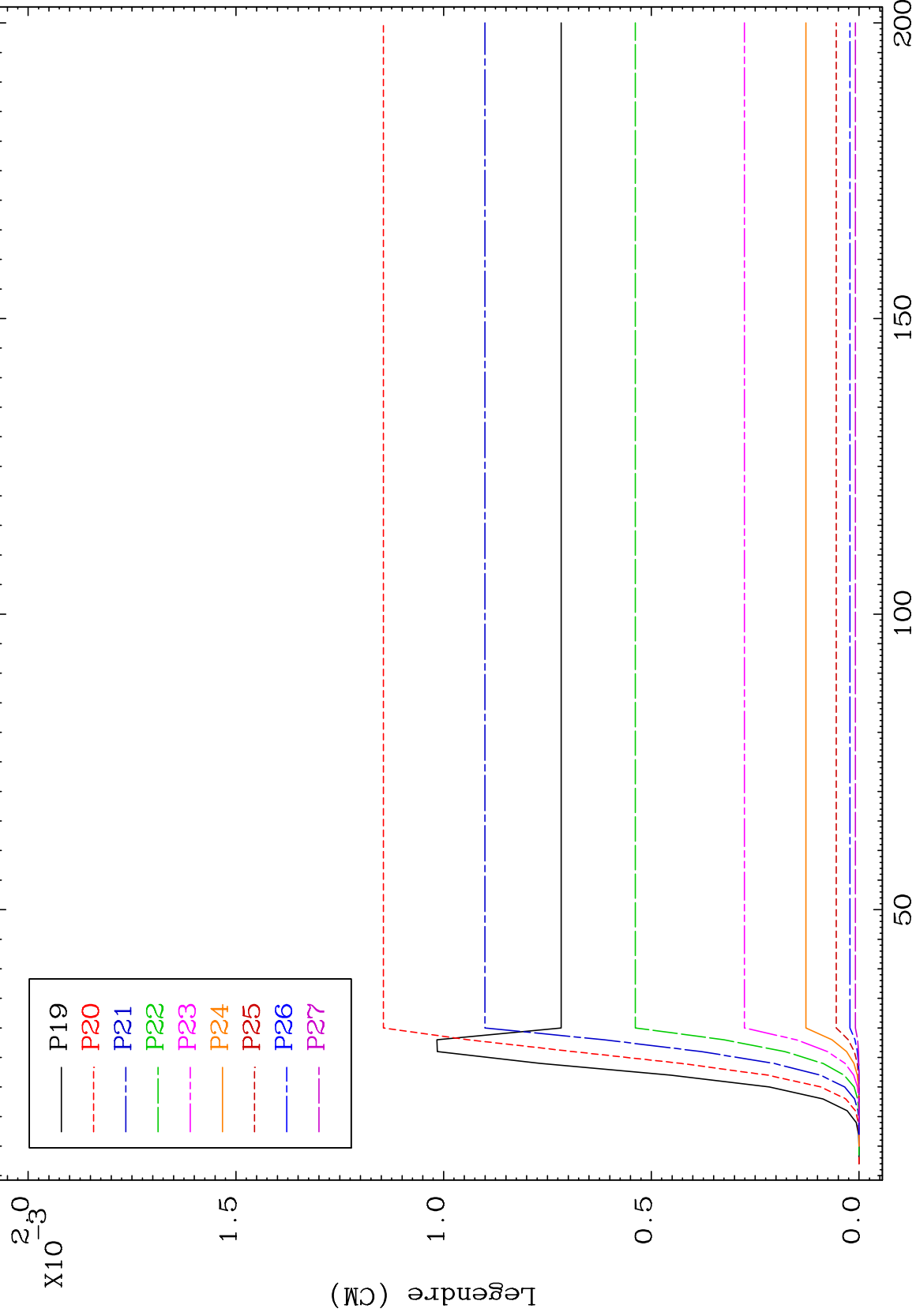
62-Sm-139



MAT 6210

MT= 67 (n,n') Level  
Legendre Coefficients

62-Sm-139



85

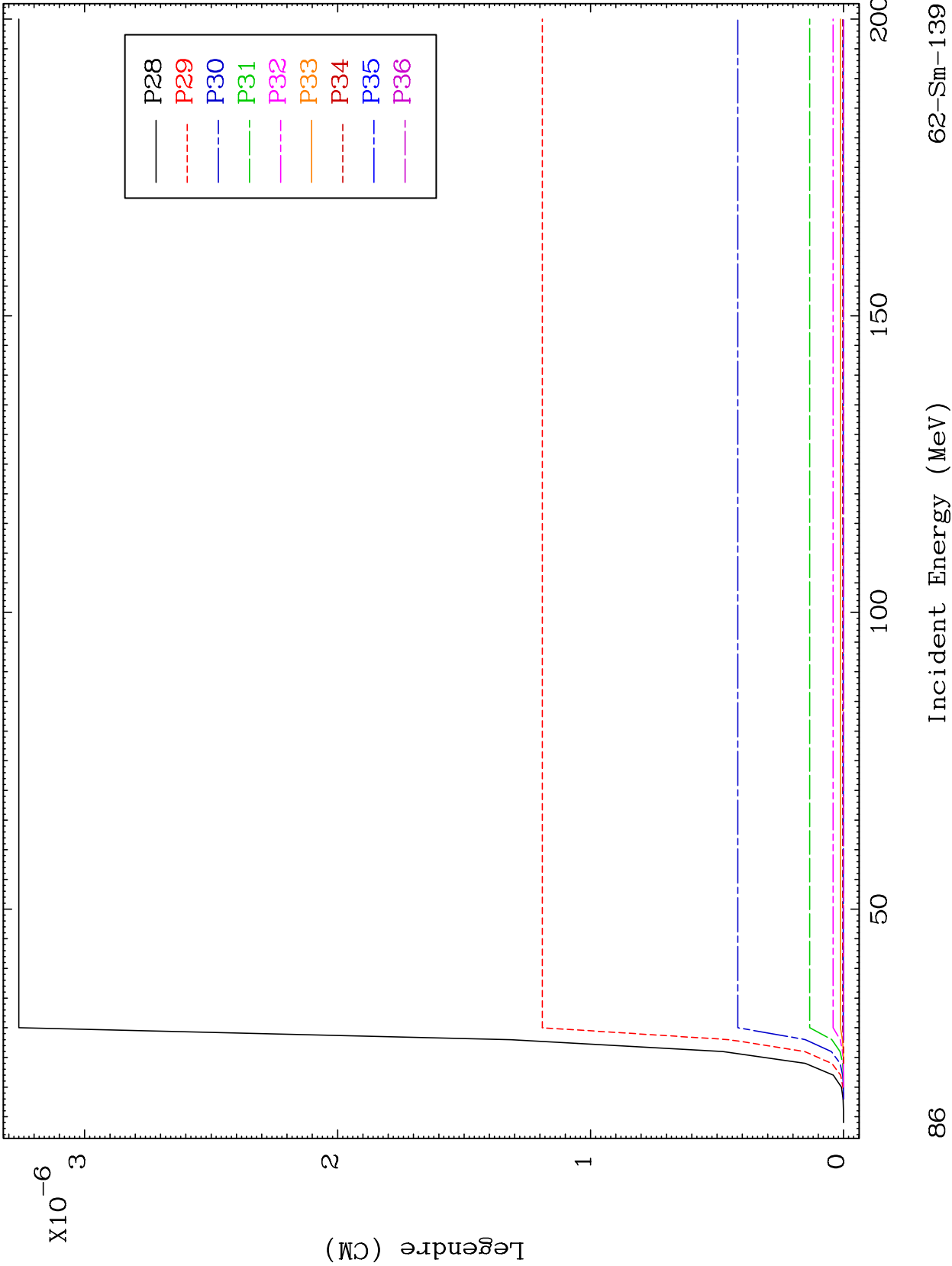
Incident Energy (MeV)

62-Sm-139

MAT 6210

MT= 67 (n,n') Level  
Legendre Coefficients

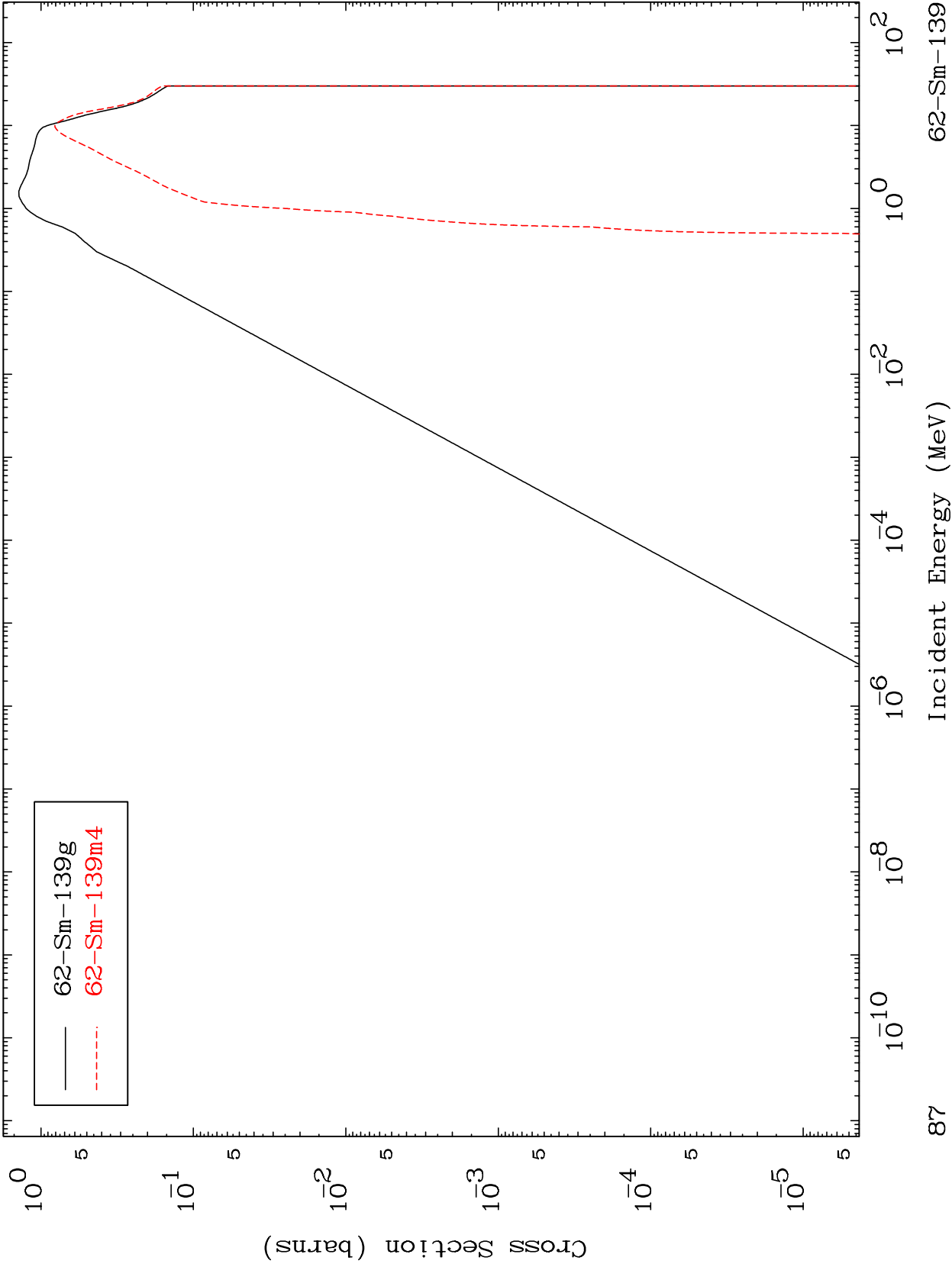
62-Sm-139



MAT 6210

Inelastic  
Radionuclide Production Cross Section

62-Sm-139



62-Sm-139g  
62-Sm-139m4

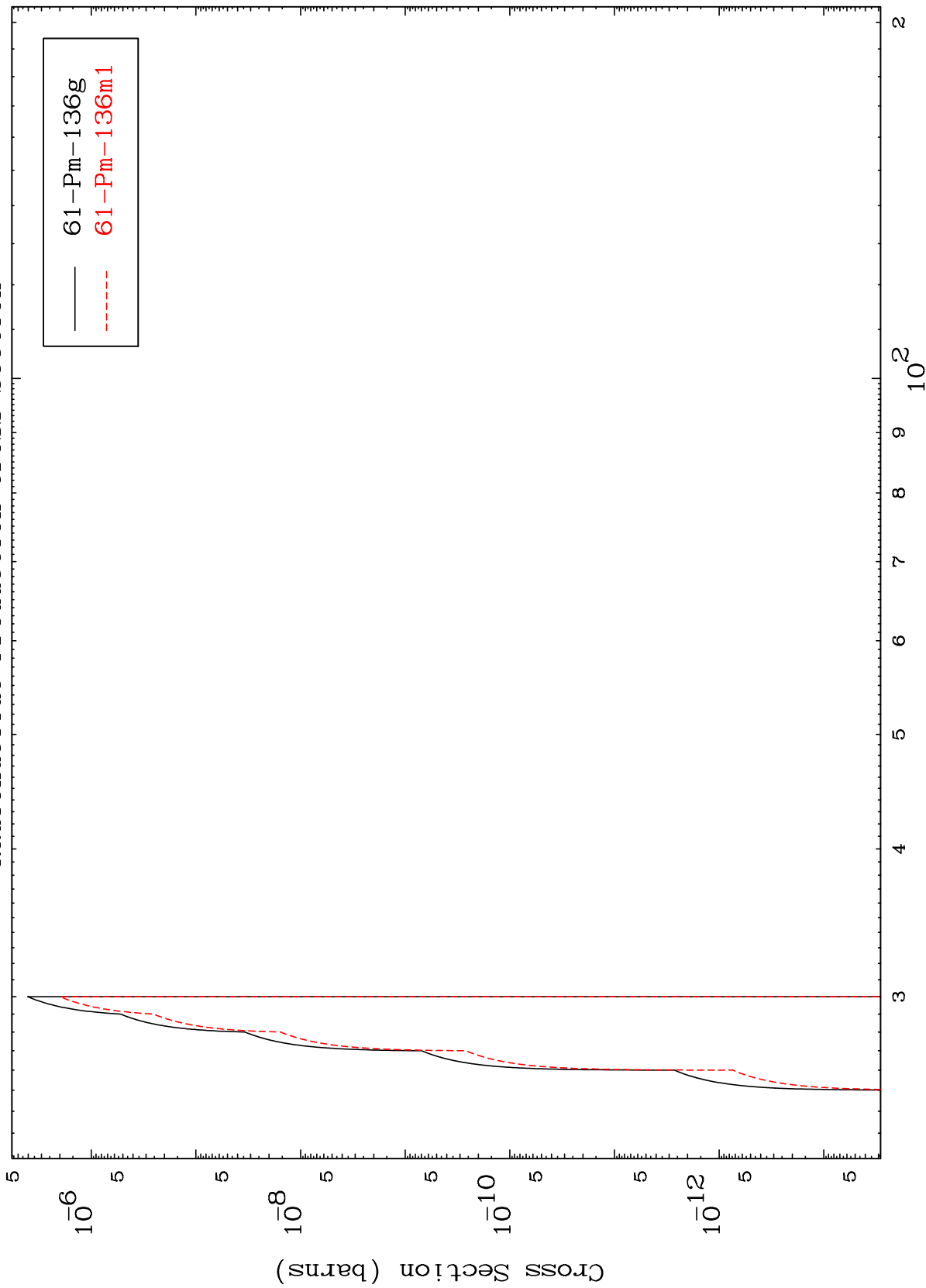


MAT 6210

(n,2n) d

62-Sm-139

Radionuclide Production Cross Section



88

Incident Energy (MeV)

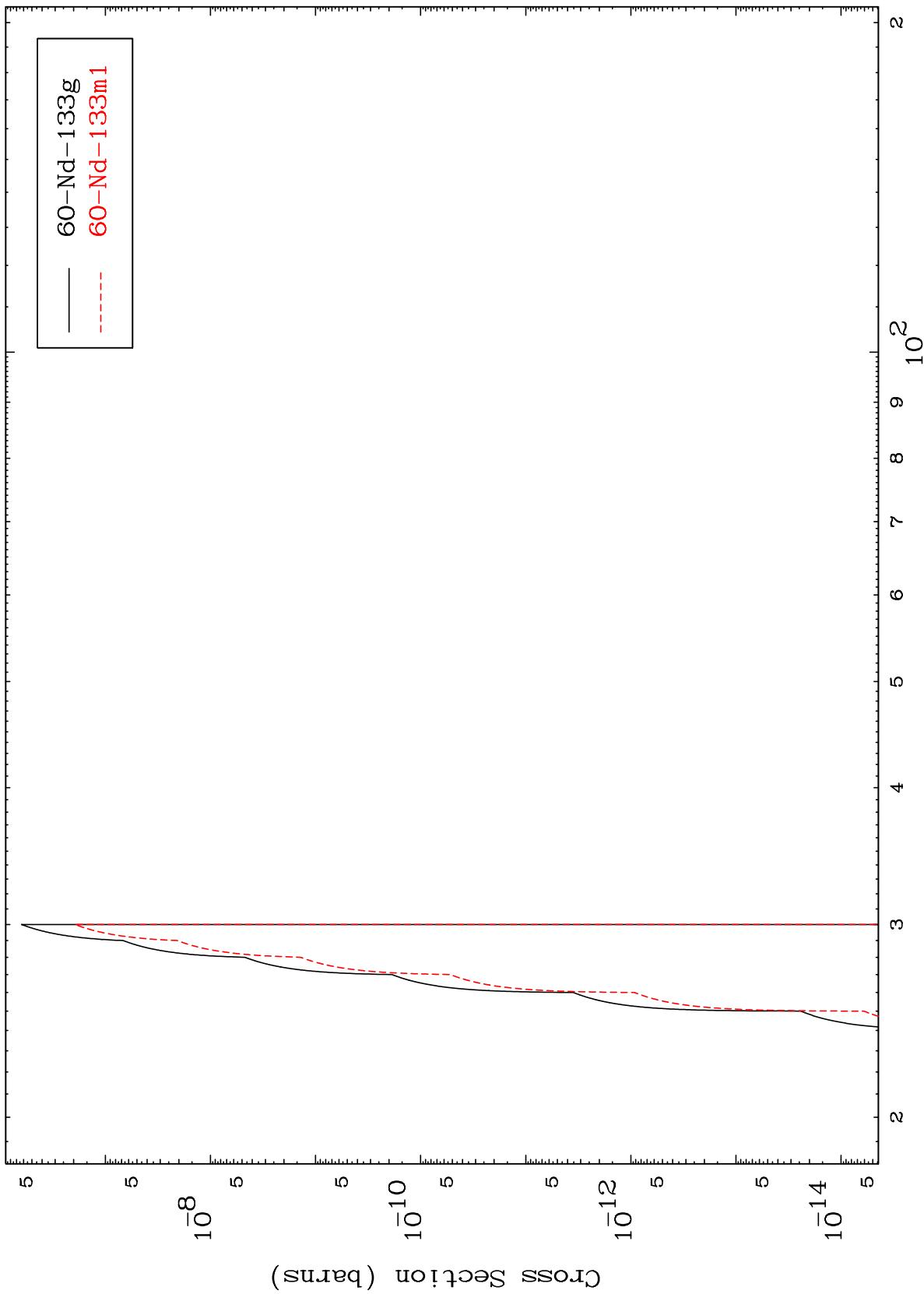
62-Sm-139

MAT 6210

$(n,3n) \alpha$

62-Sm-139

Radionuclide Production Cross Section



89

Incident Energy (MeV)

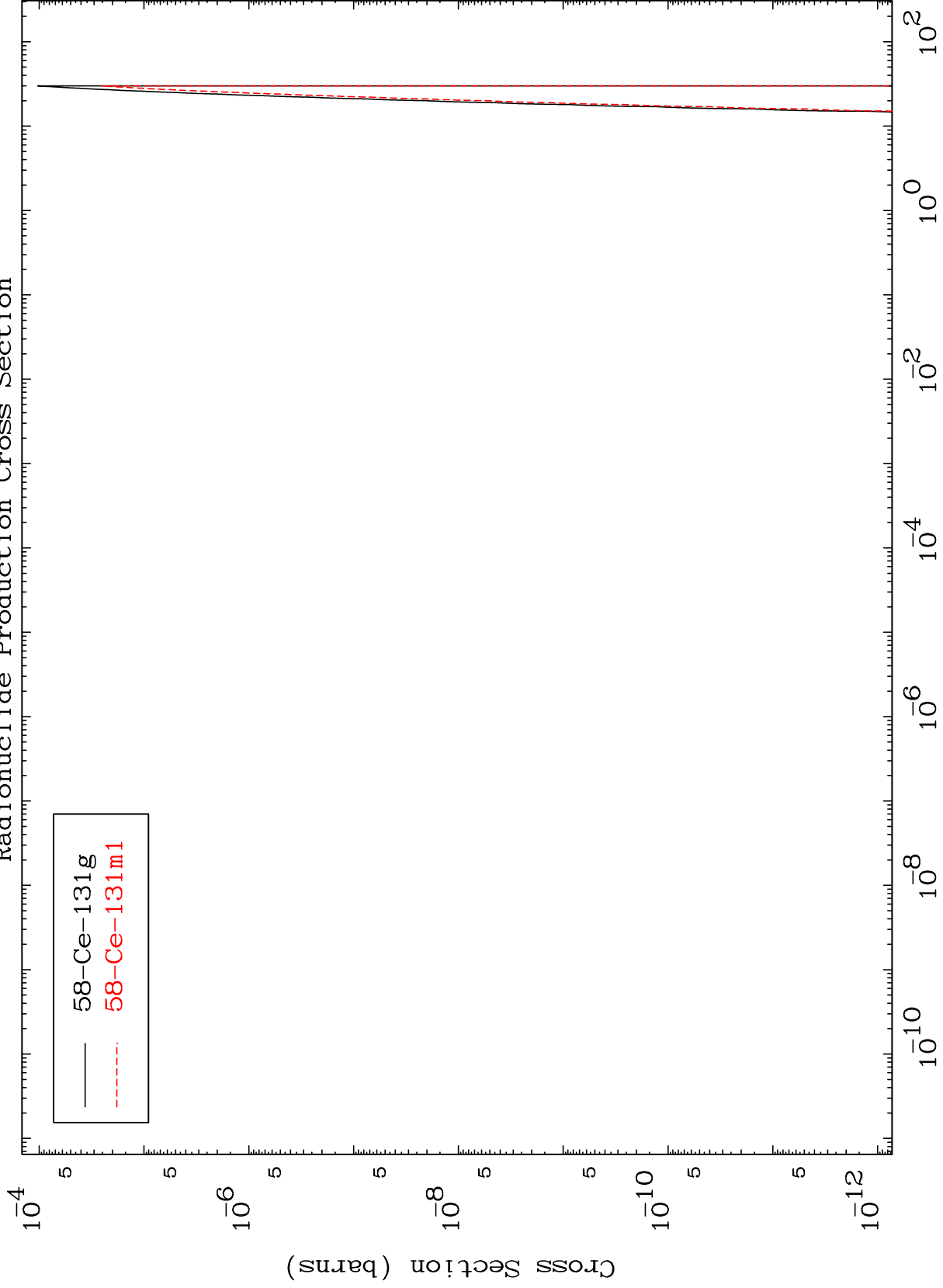
62-Sm-139

MAT 6210

(n,n') 2 $\alpha$

62-Sm-139

Radionuclide Production Cross Section



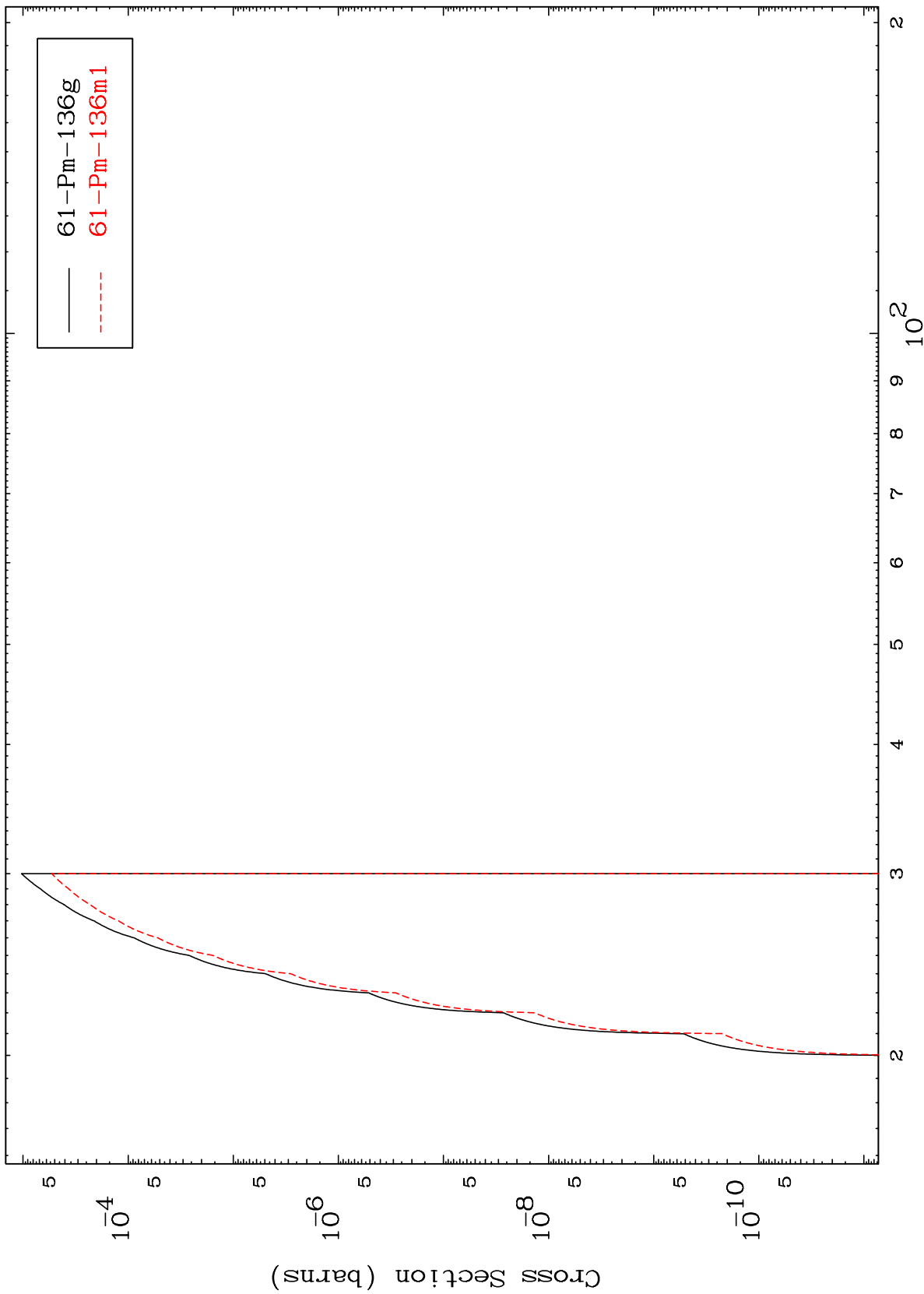
58-Ce-131g  
58-Ce-131m1

90

Incident Energy (MeV)

62-Sm-139

Radionuclide Production Cross Section

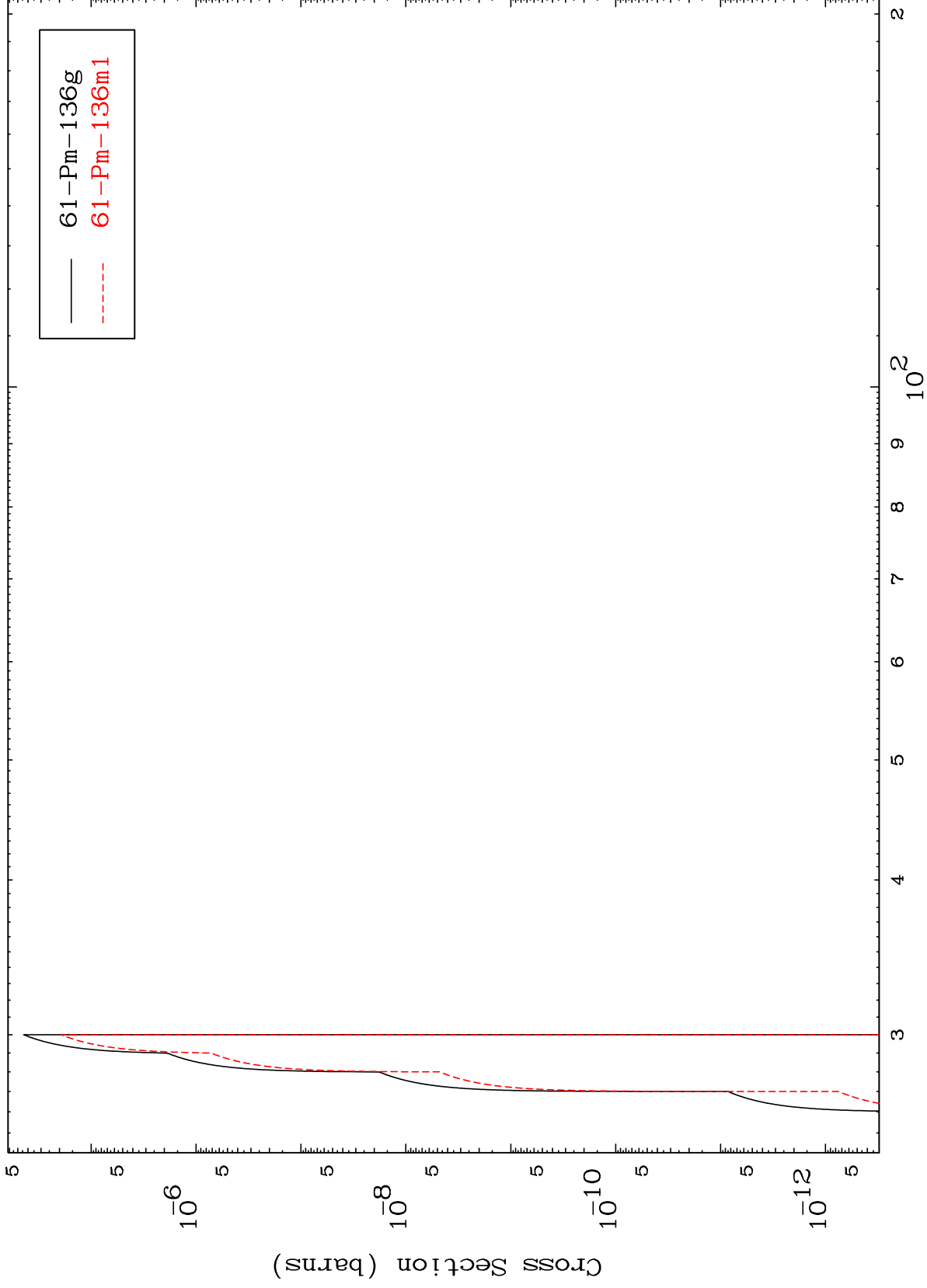


MAT 6210

(n,3n) p

62-Sm-139

Radionuclide Production Cross Section



92

Incident Energy (MeV)

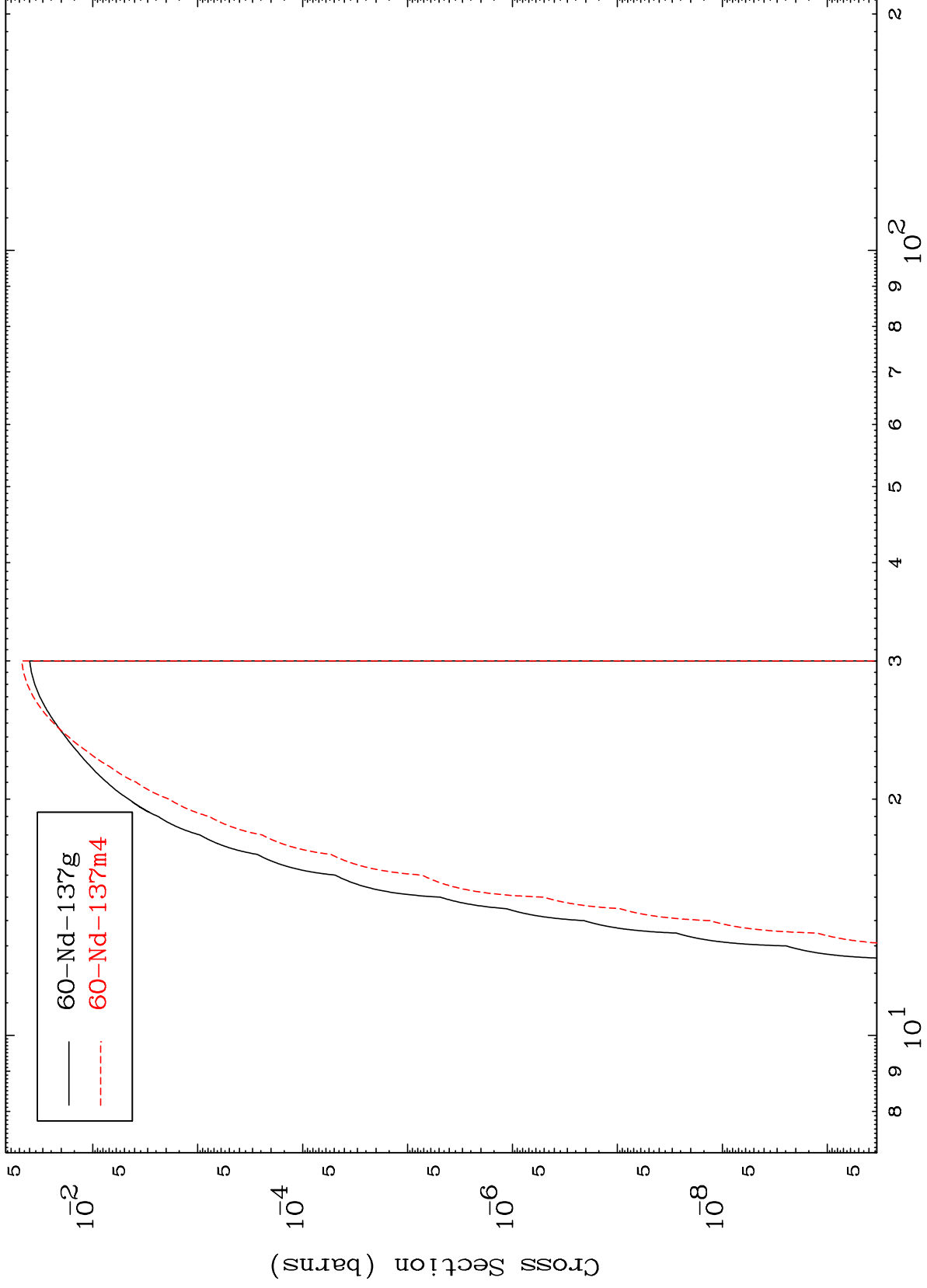
62-Sm-139

MAT 6210

(n,2n) p

62-Sm-139

Radionuclide Production Cross Section



93

Incident Energy (MeV)

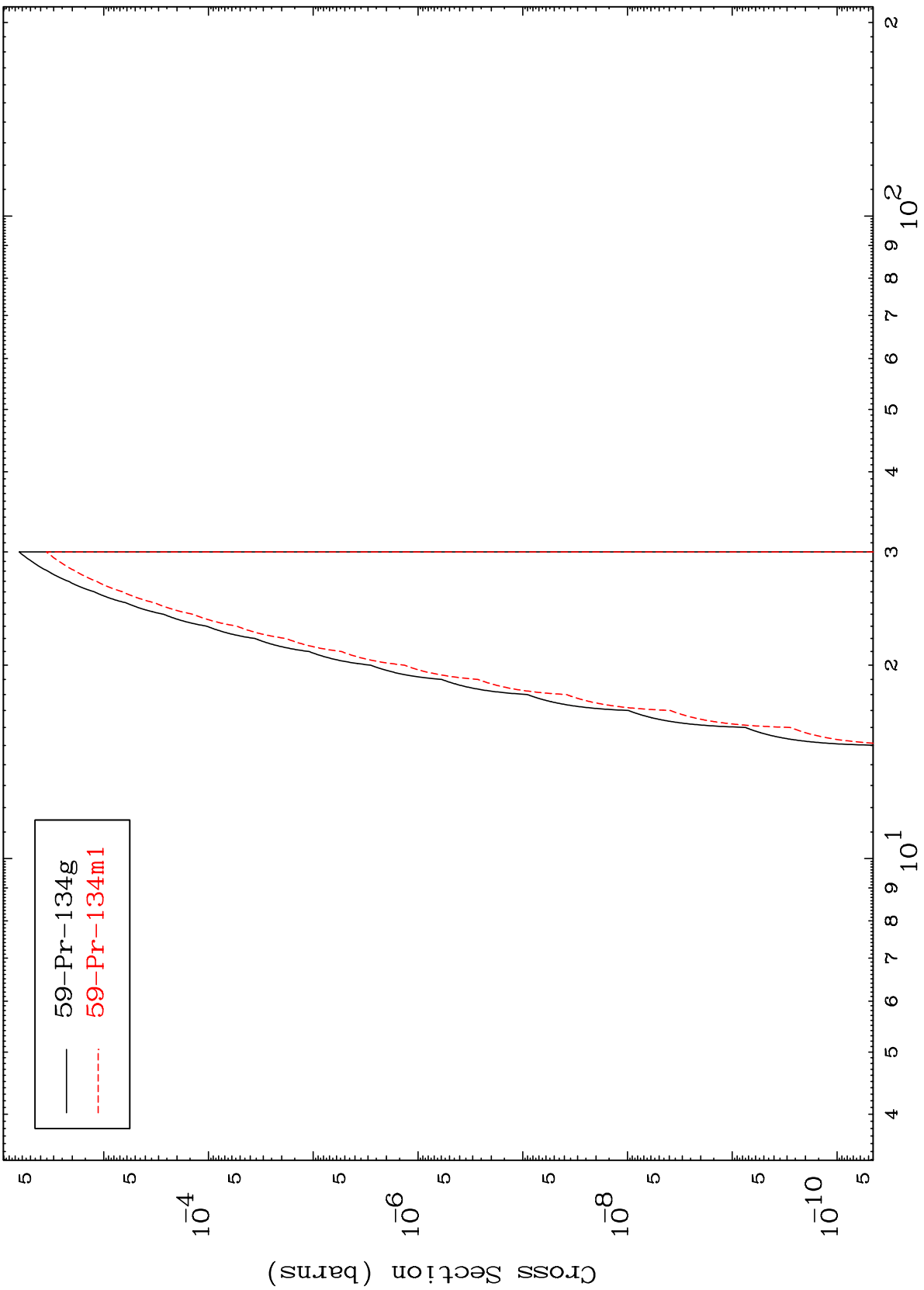
62-Sm-139

MAT 6210

(n,n') p  $\alpha$

62-Sm-139

Radionuclide Production Cross Section



94

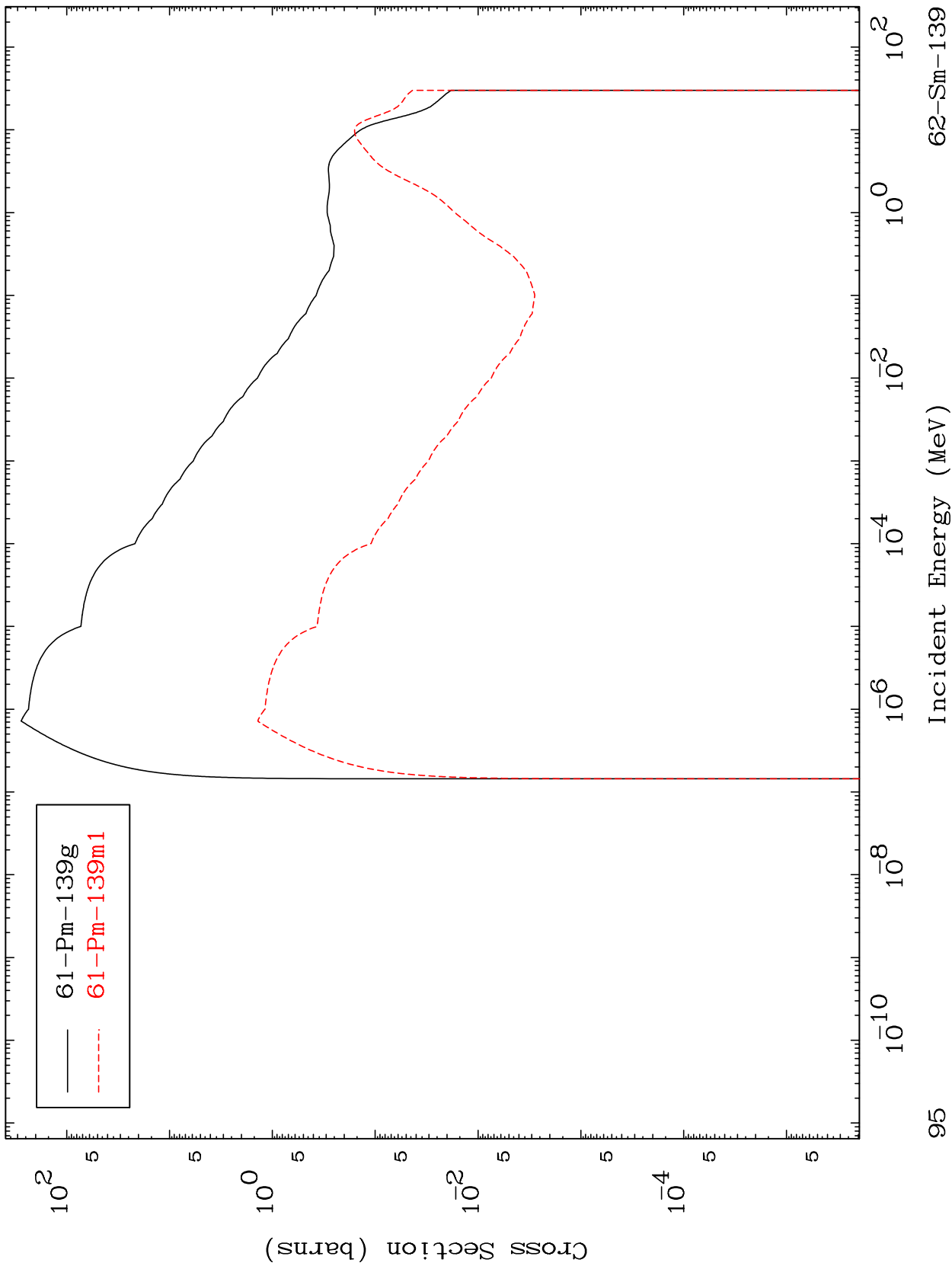
Incident Energy (MeV)

62-Sm-139

MAT 6210

62-Sm-139

(n,p)  
Radionuclide Production Cross Section



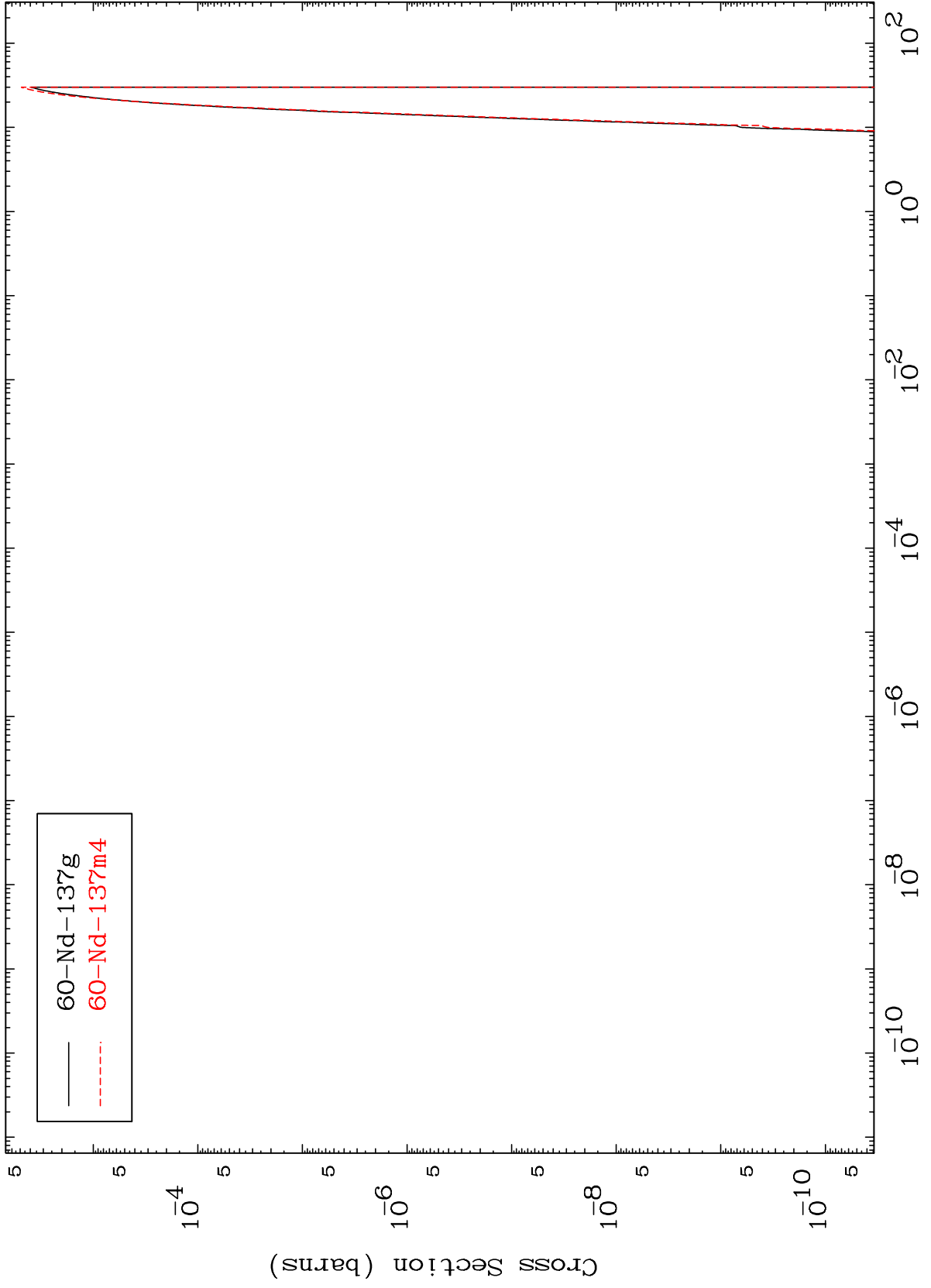


MAT 6210

(n,He-3)

62-Sm-139

Radionuclide Production Cross Section



96

Incident Energy (MeV)

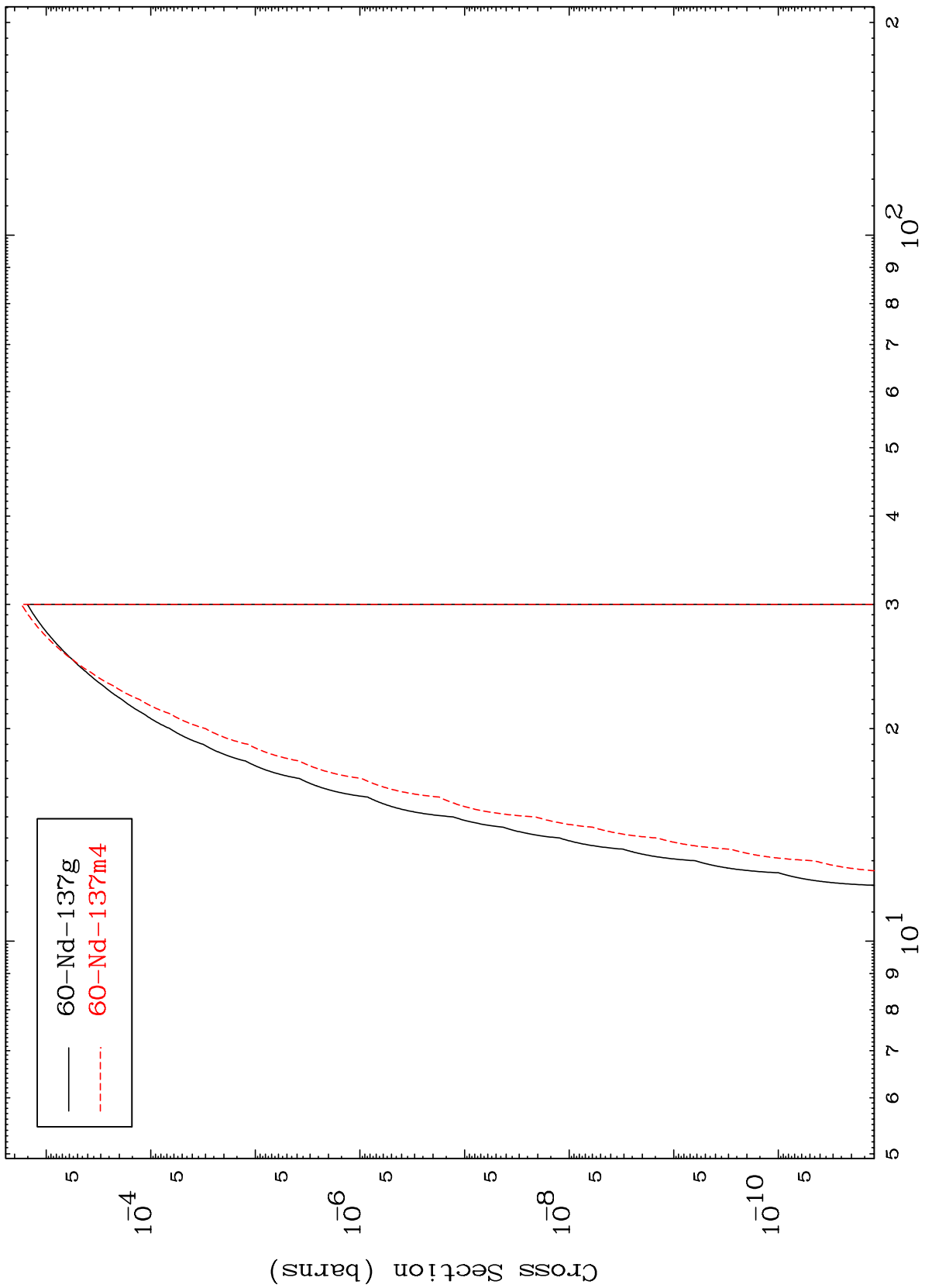
62-Sm-139

MAT 6210

(n,p) d

<sup>62</sup>Sm-139

Radionuclide Production Cross Section



97

Incident Energy (MeV)

<sup>62</sup>Sm-139

MAT 6210

(n,d)  $\alpha$

$^{62}\text{Sm}-139$

Radionuclide Production Cross Section

