

Program EVALPLOT  
(Version 2017-1)

by

Dermott E. Cullen  
(Present Contact Information)

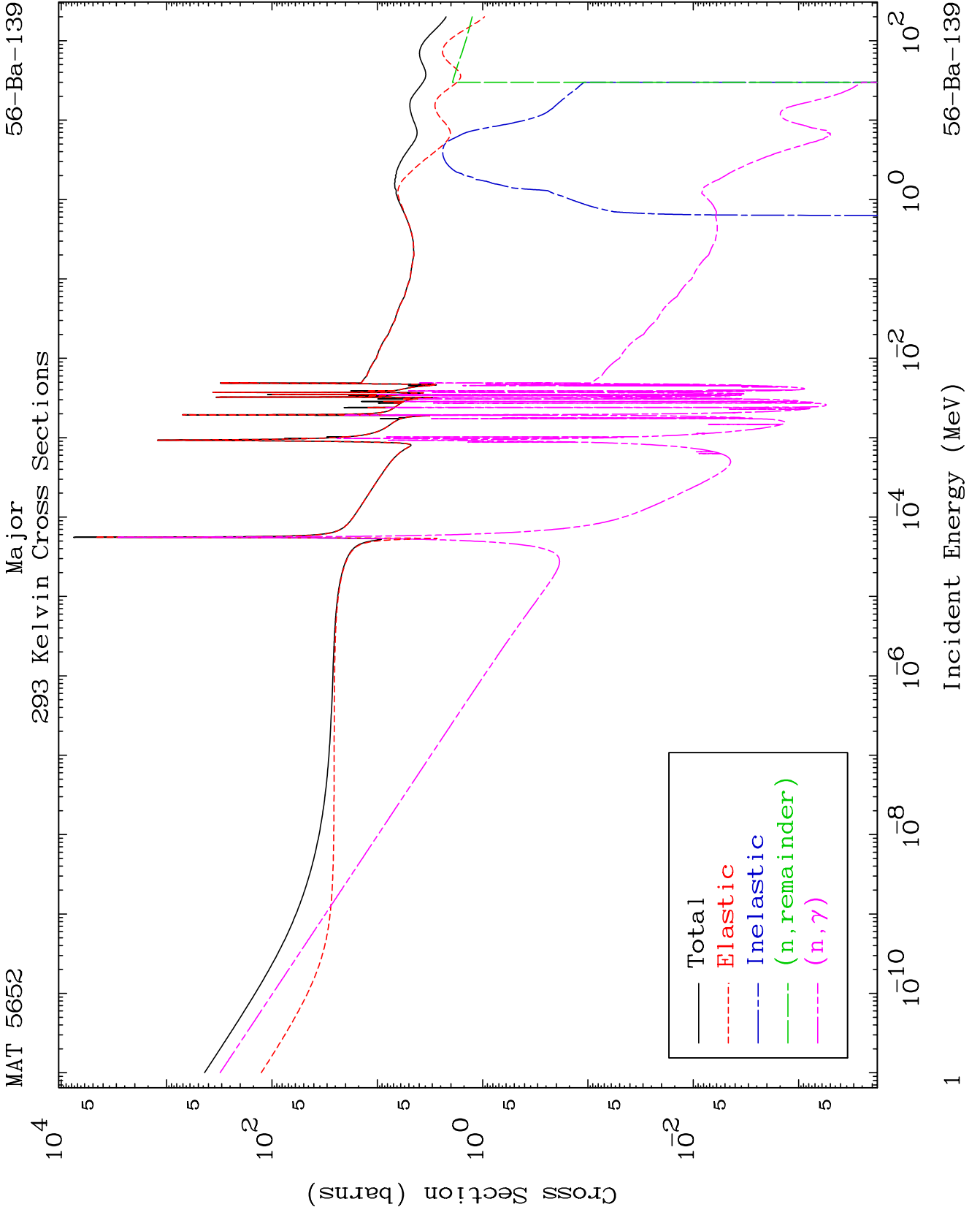
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Livermore, CA 94550  
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Tele: 925-443-1911

E.Mail:redcullen1@comcast.net

Web:redcullen1.net/HOMEPAGE.NEW

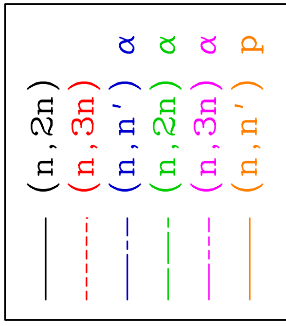
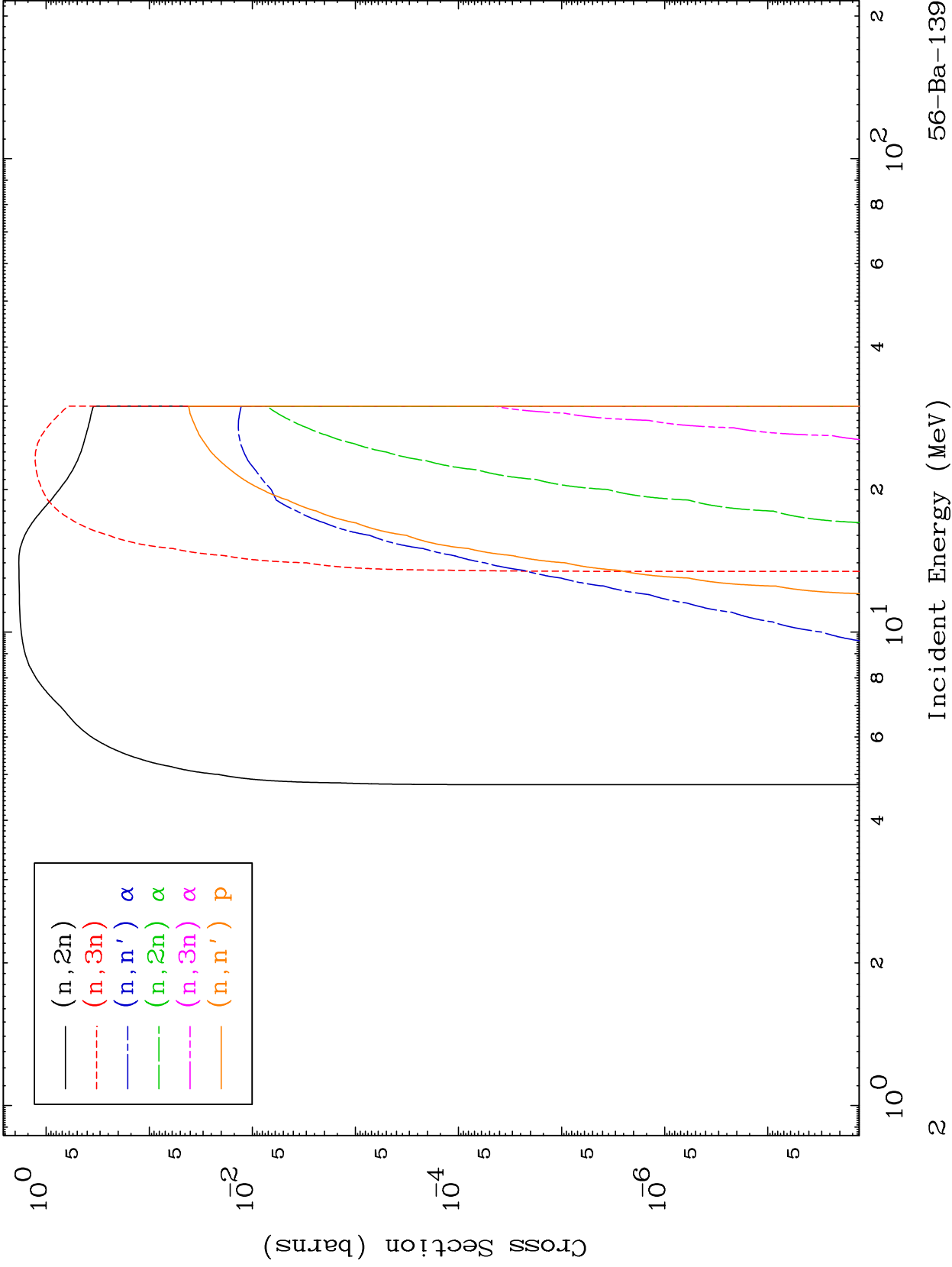
Press Mouse Button to Start



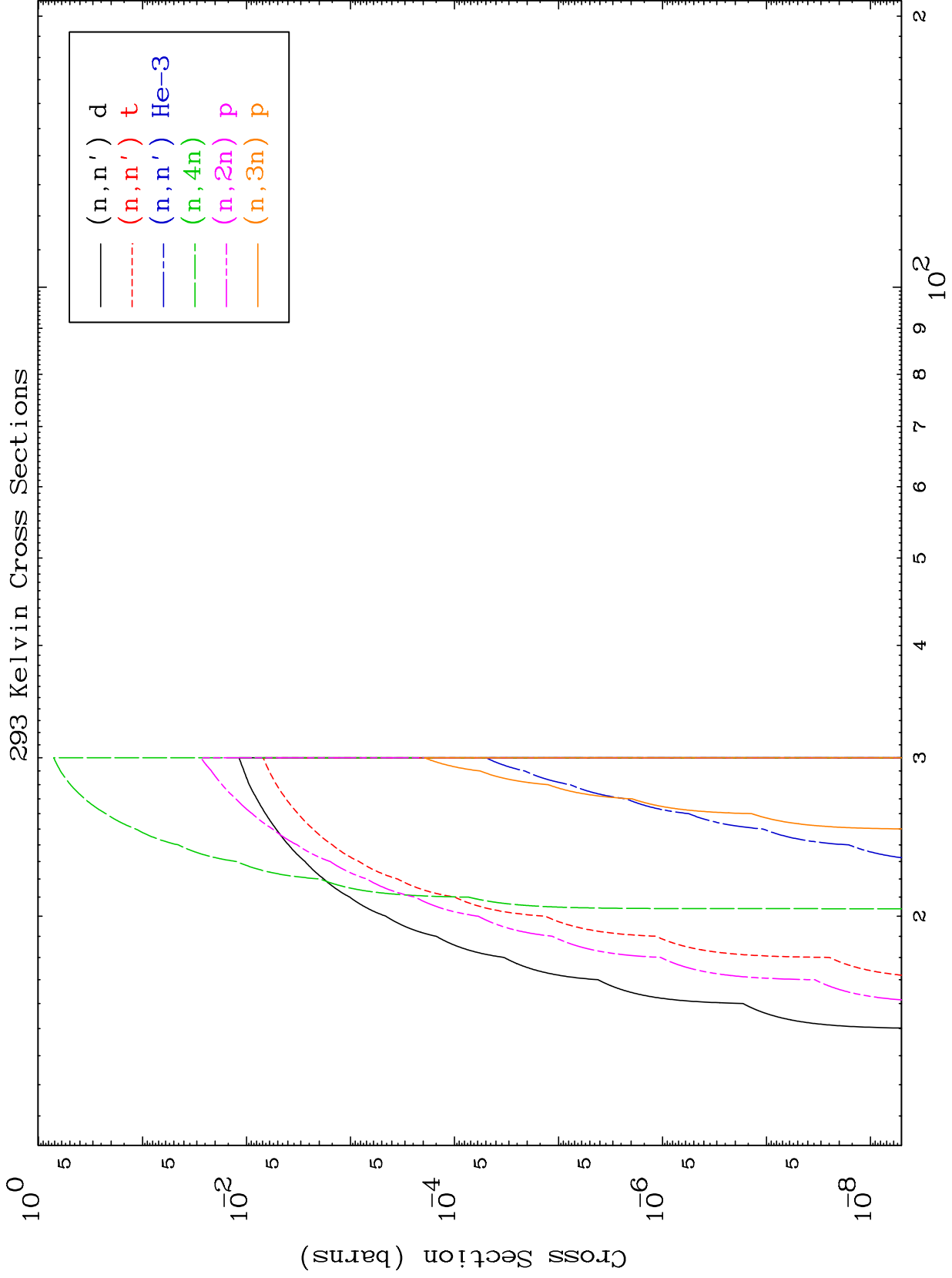
MAT 5652

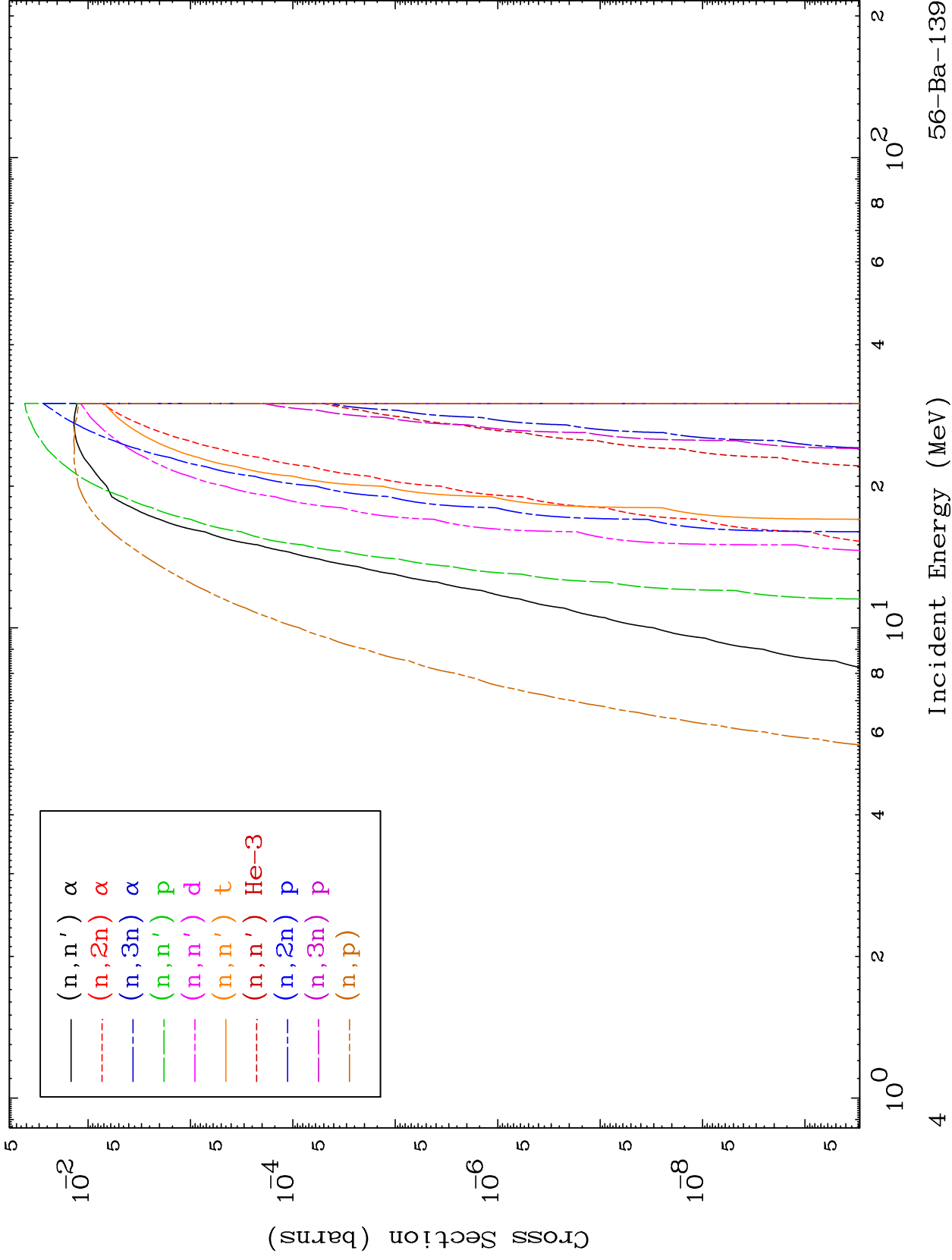
Neutron Production  
293 Kelvin Cross Sections

56-Ba-139



56-Ba-139

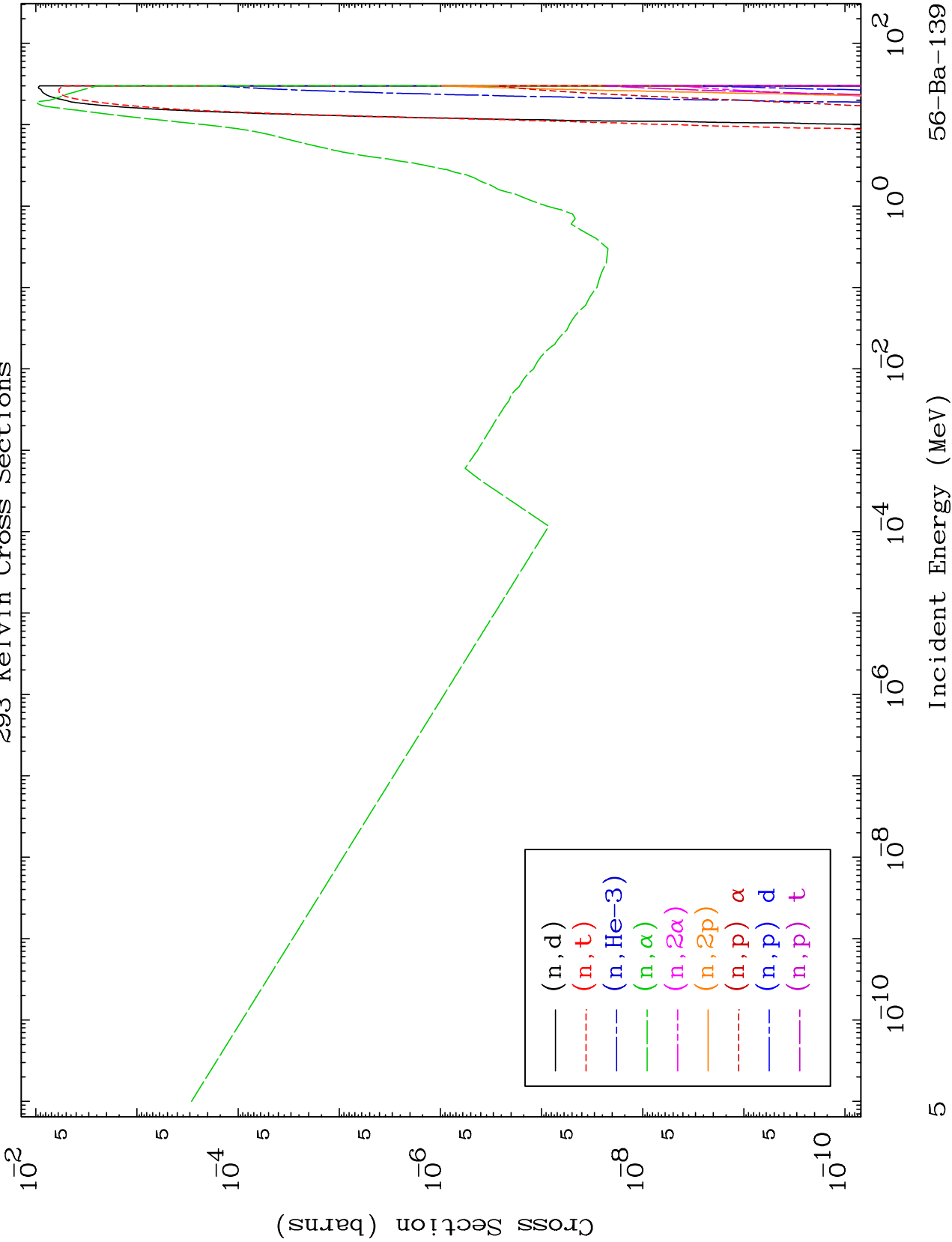




MAT 5652

Charged Particle  
293 Kelvin Cross Sections

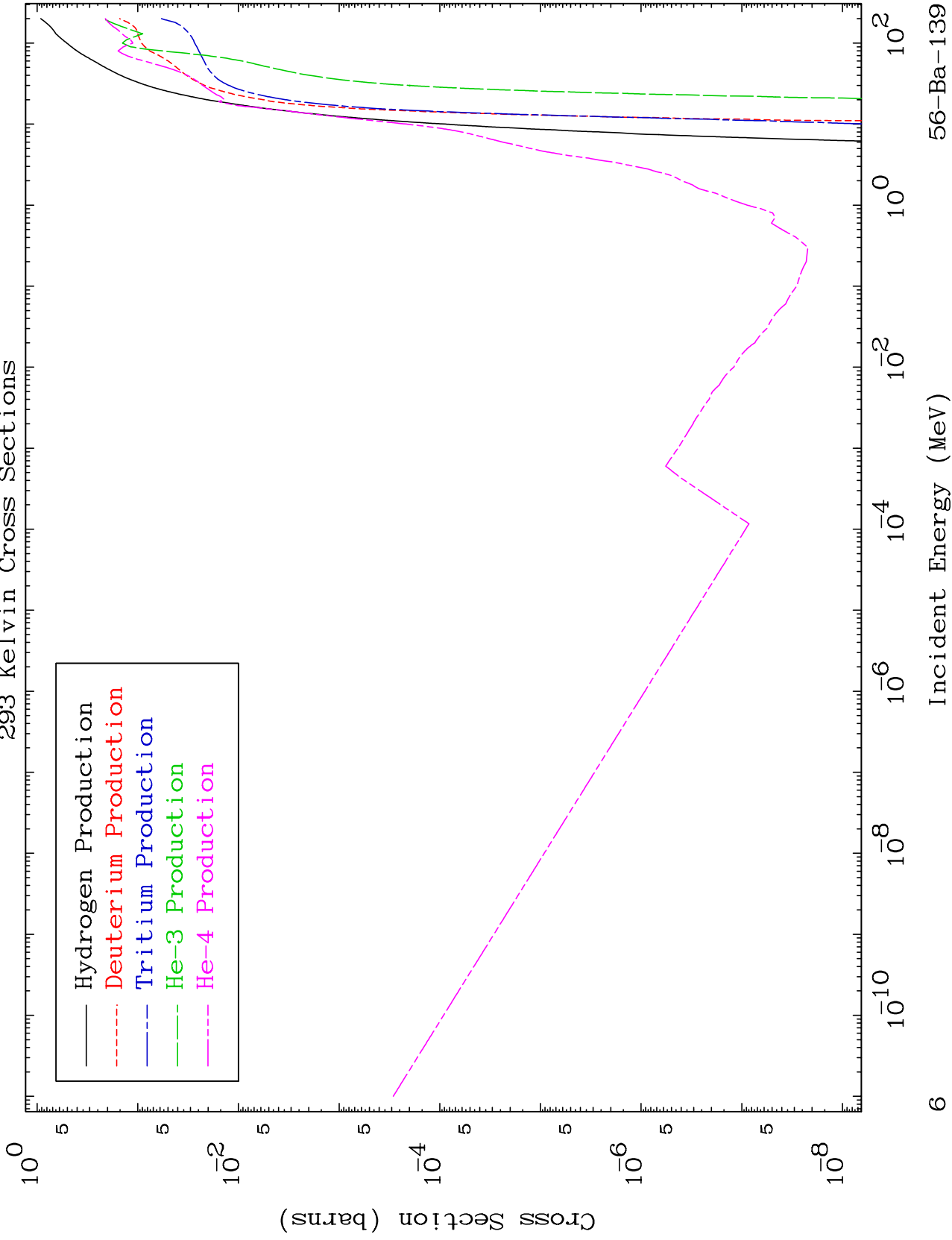
56-Ba-139



MAT 5652

Particle Production  
293 Kelvin Cross Sections

56-Ba-139

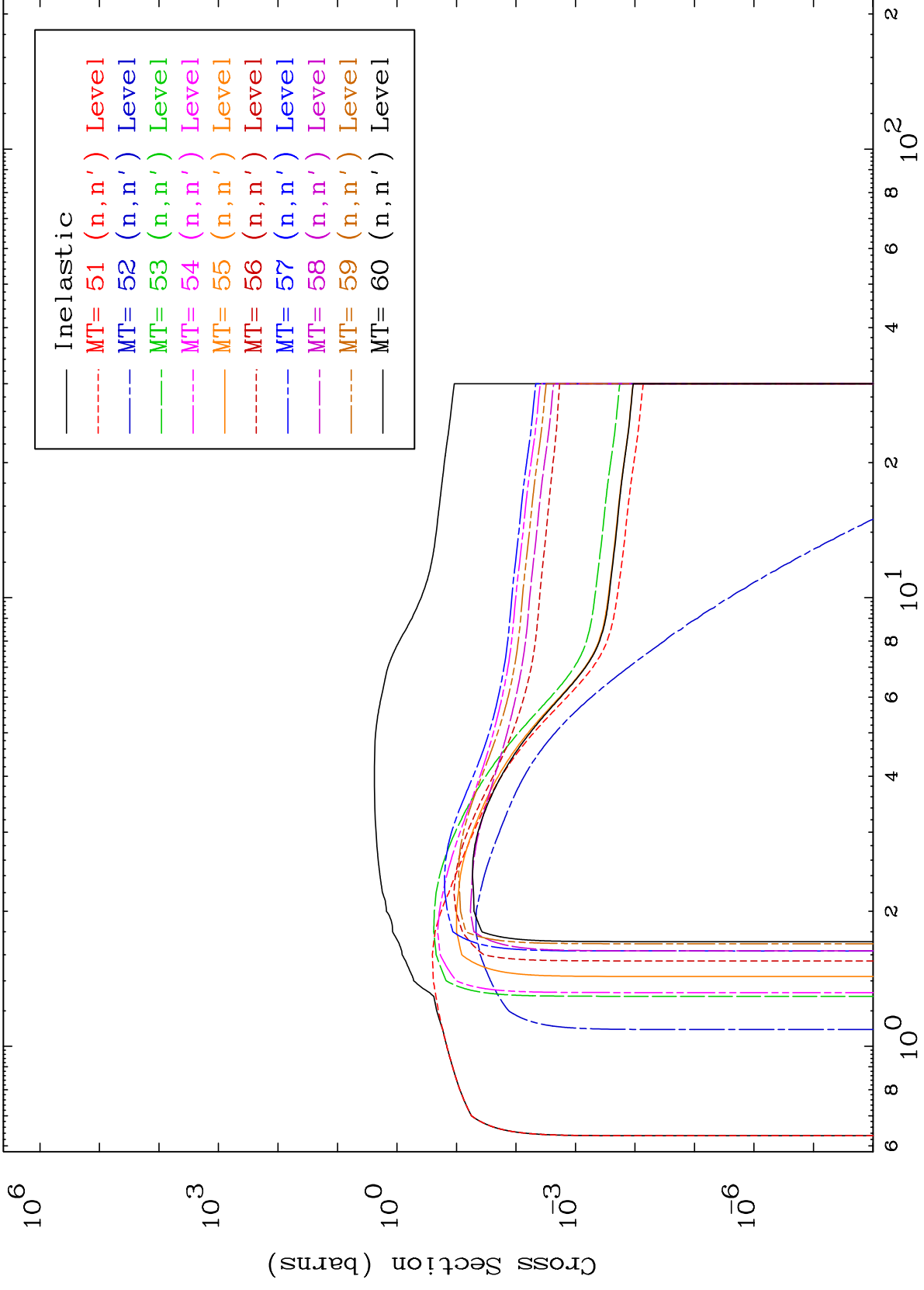


MAT 5652

(n,n') Level

56-Ba-139

293 Kelvin Cross Sections



Incident Energy (MeV)

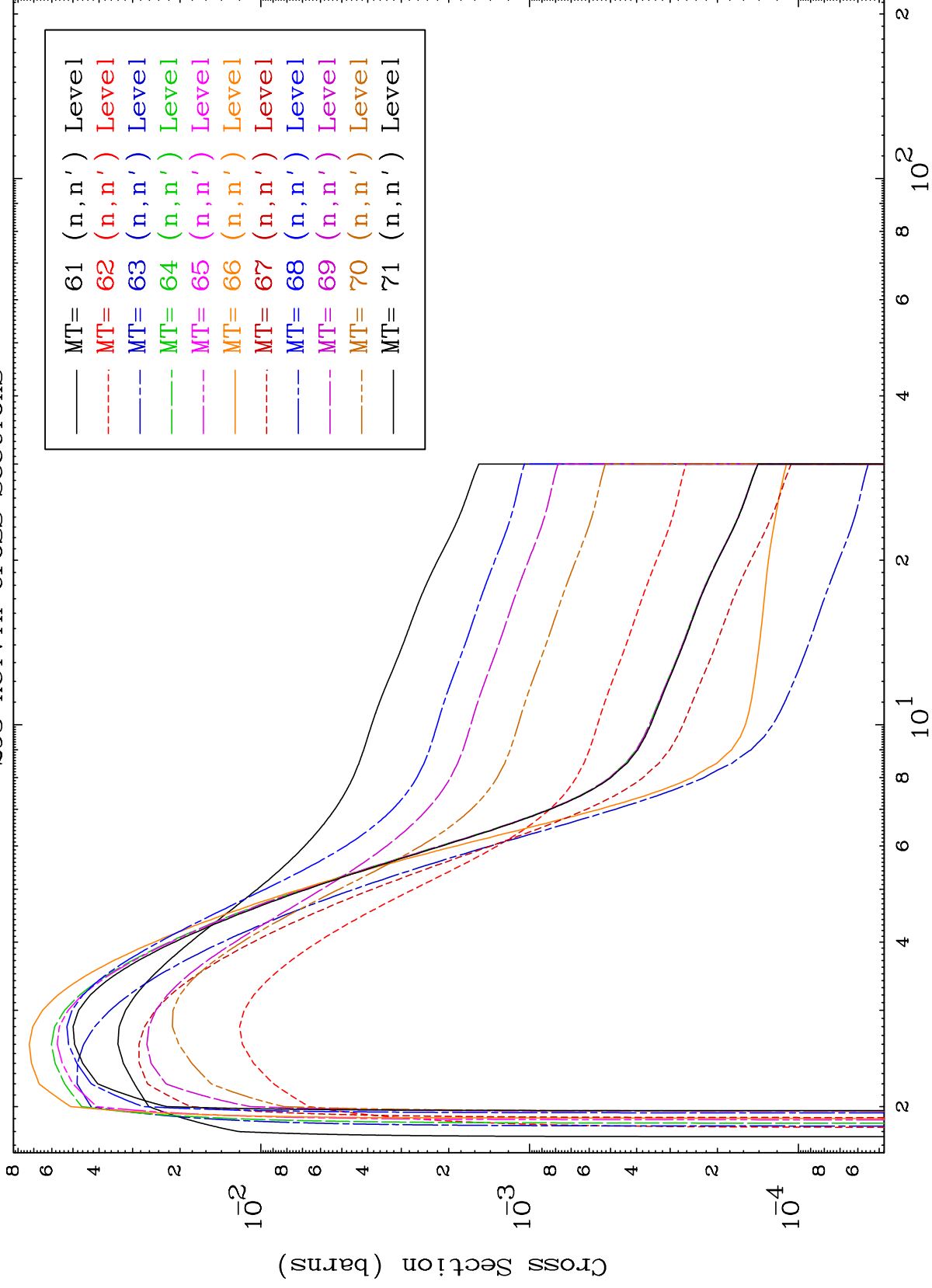
56-Ba-139

MAT 5652

(n,n') Level

56-Ba-139

293 Kelvin Cross Sections



8

Incident Energy (MeV)

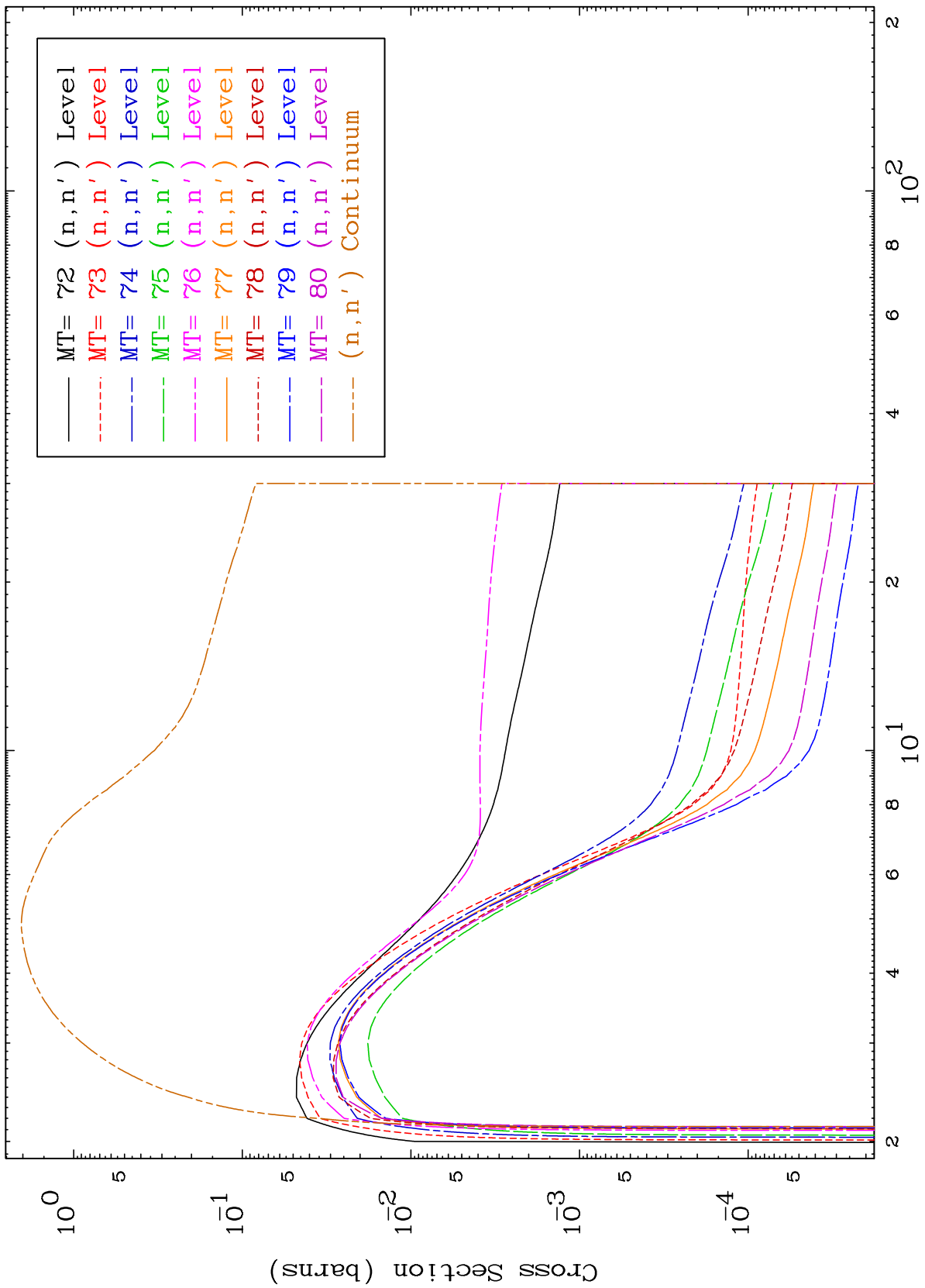
56-Ba-139

MAT 5652

(n,n') Level

56-Ba-139

293 Kelvin Cross Sections



9

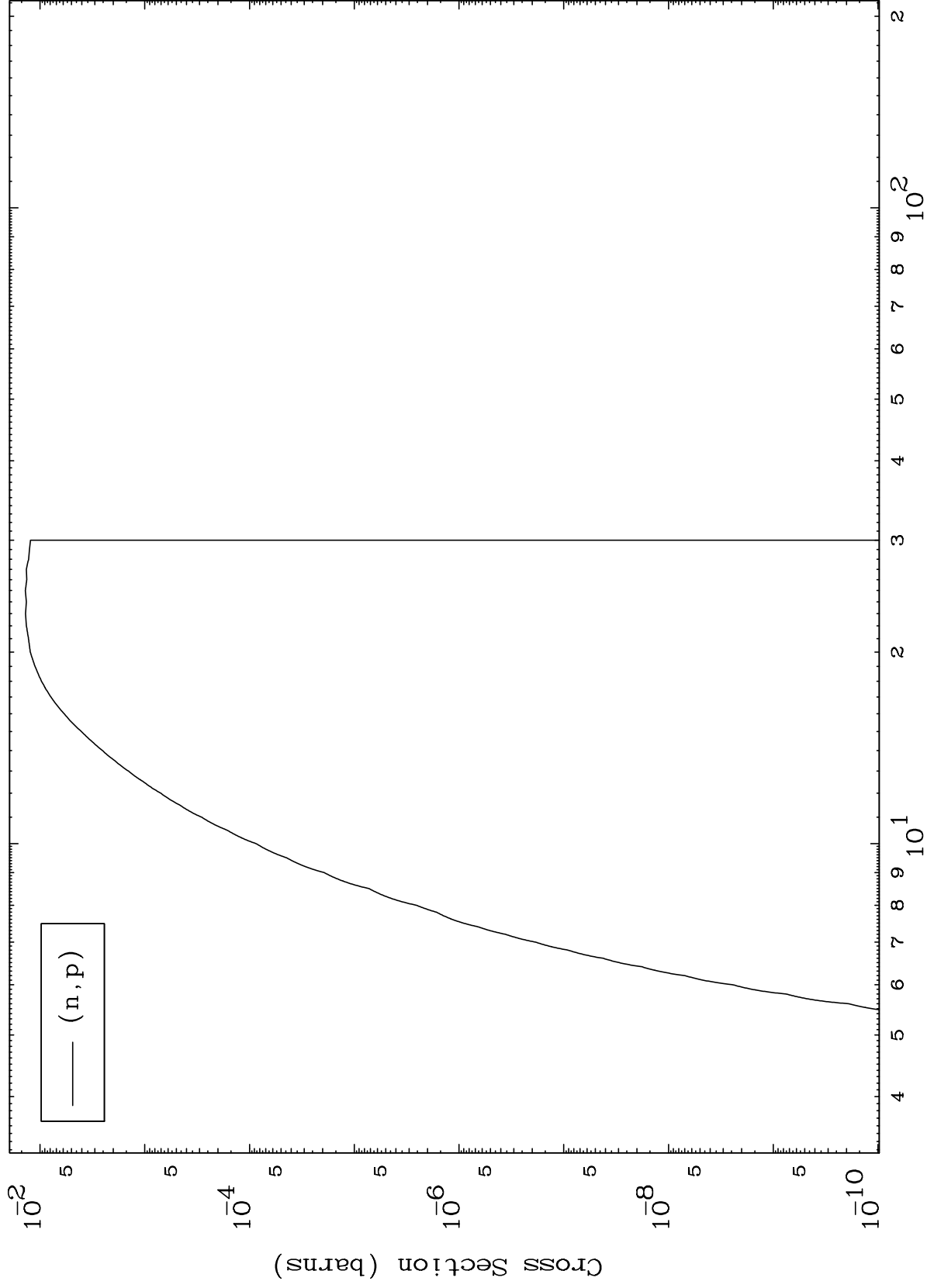
Incident Energy (MeV)

56-Ba-139

MAT 5652

(n,p) Levels  
293 Kelvin Cross Sections

56-Ba-139



10

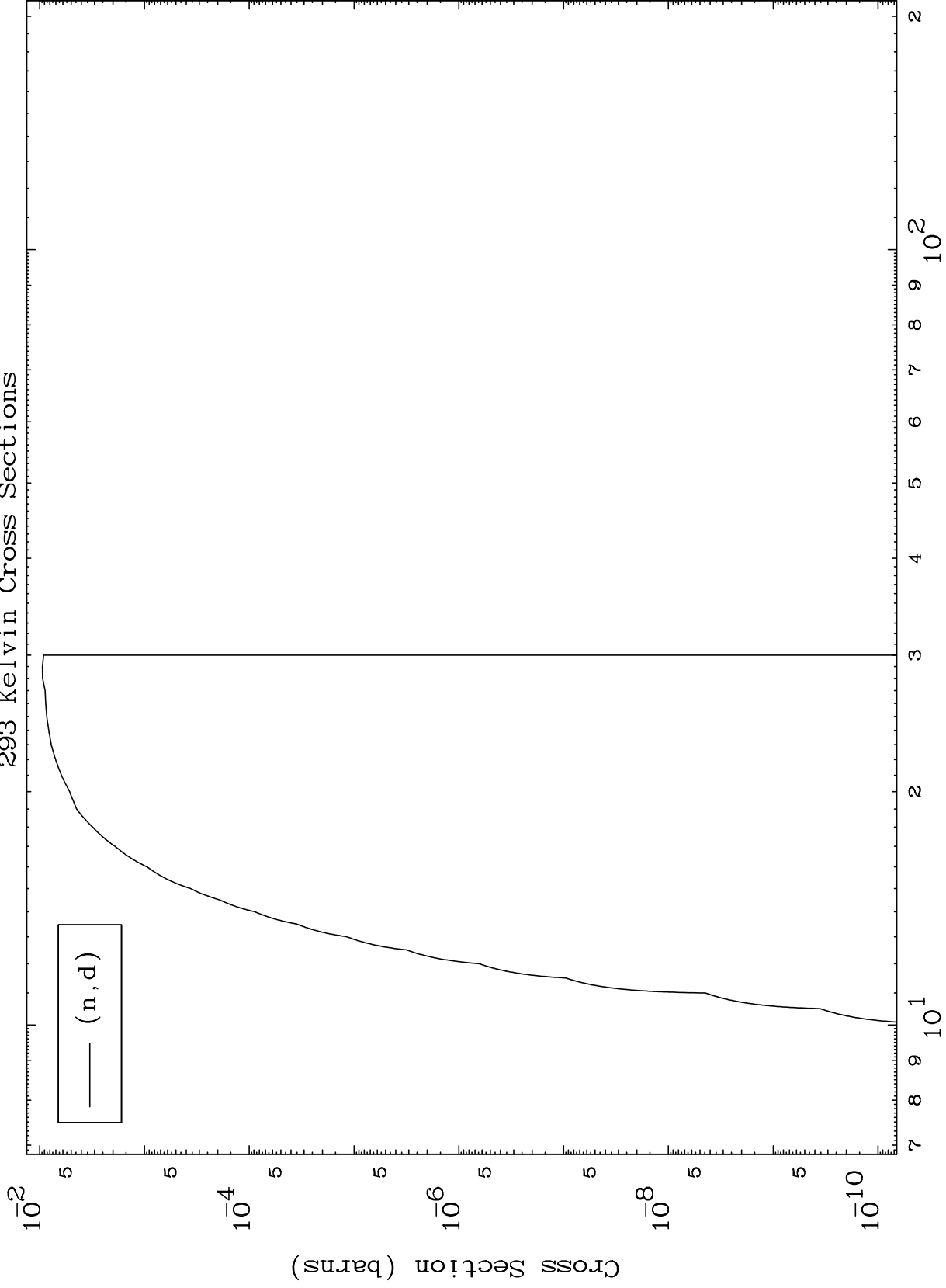
Incident Energy (MeV)

56-Ba-139

MAT 5652

(n,d) Levels  
293 Kelvin Cross Sections

56-Ba-139



11

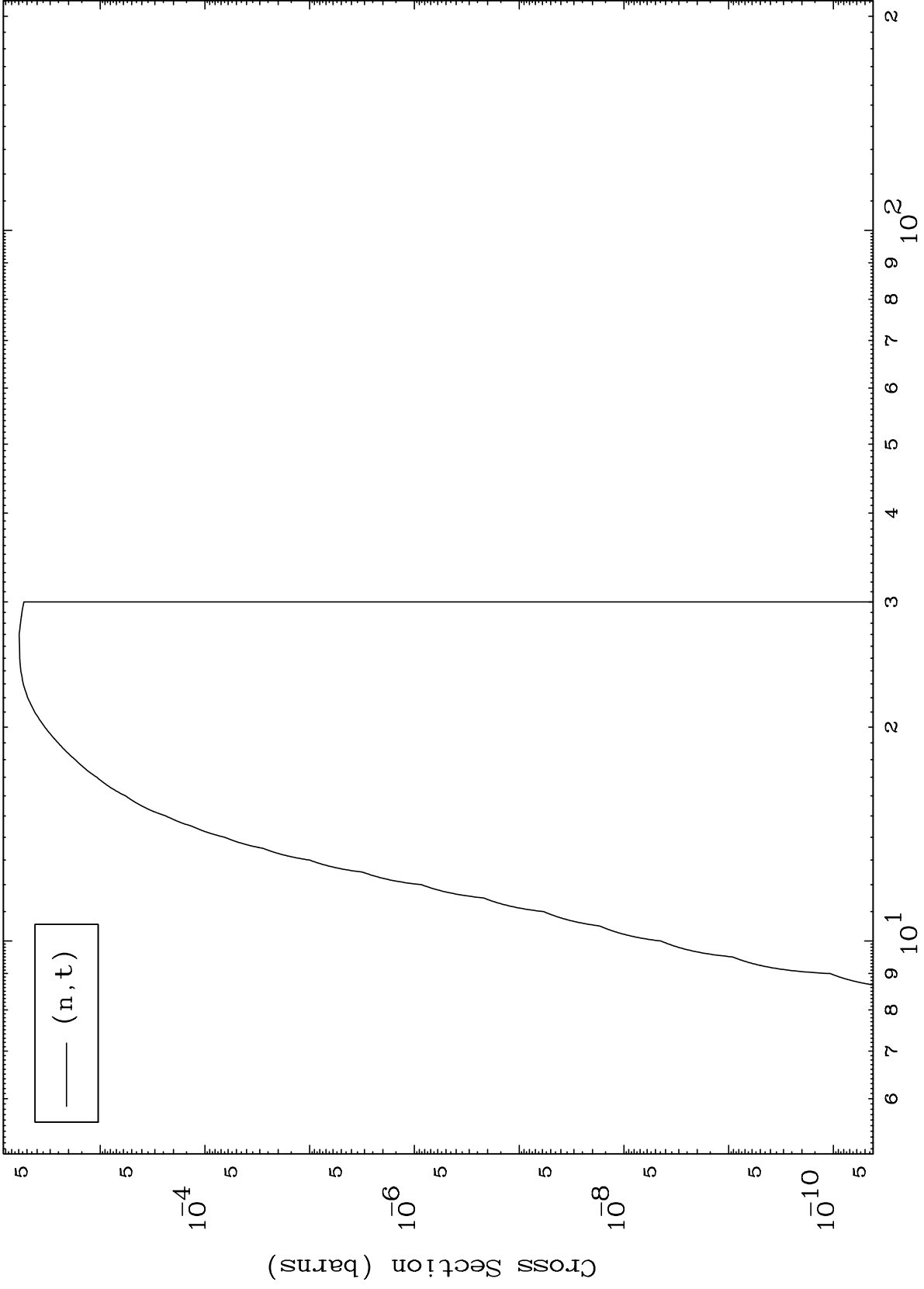
Incident Energy (MeV)

56-Ba-139

MAT 5652

(n,t) Levels  
293 Kelvin Cross Sections

56-Ba-139



12

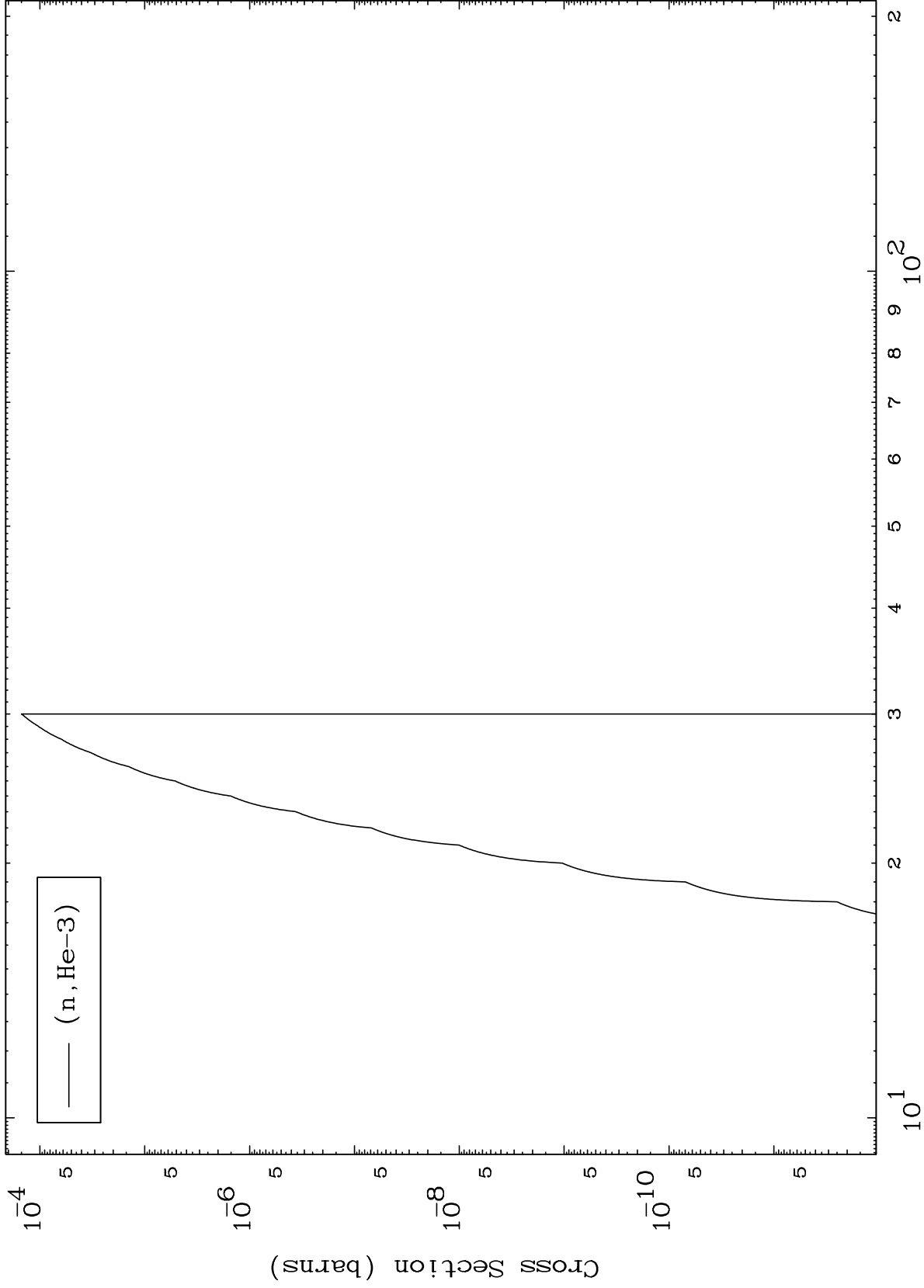
Incident Energy (MeV)

56-Ba-139

MAT 5652

(n,He3) Levels  
293 Kelvin Cross Sections

56-Ba-139



13

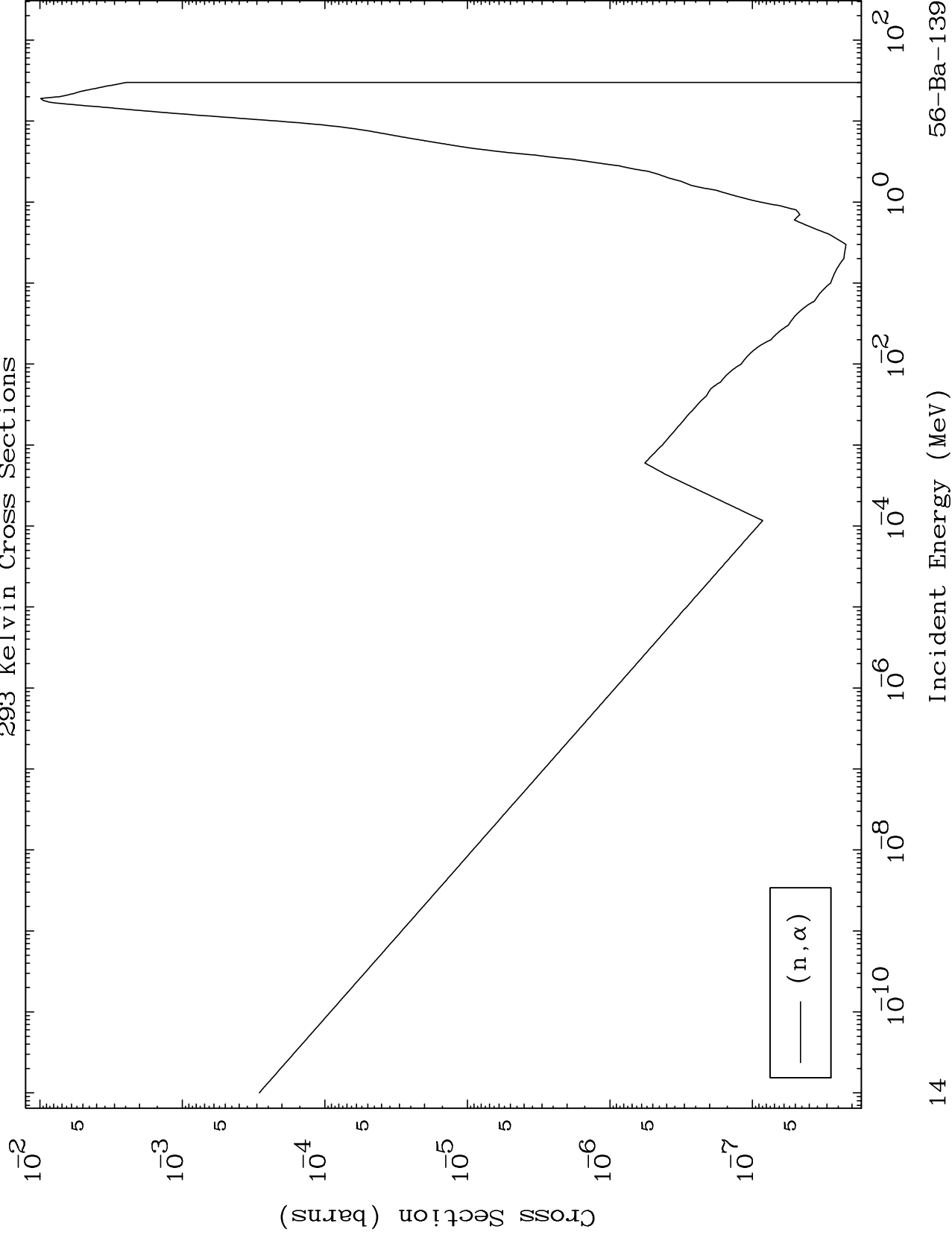
Incident Energy (MeV)

56-Ba-139

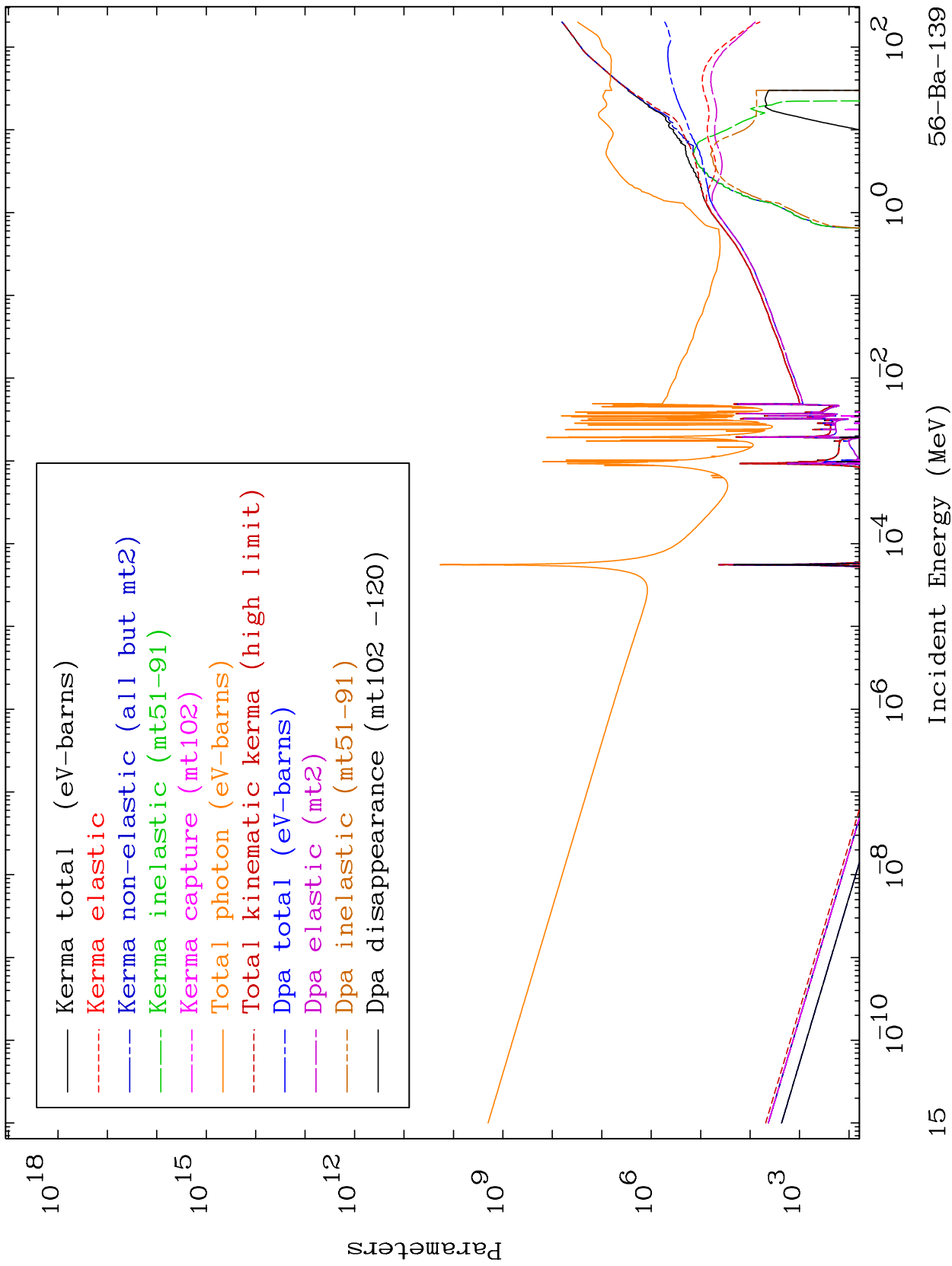
MAT 5652

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

56-Ba-139



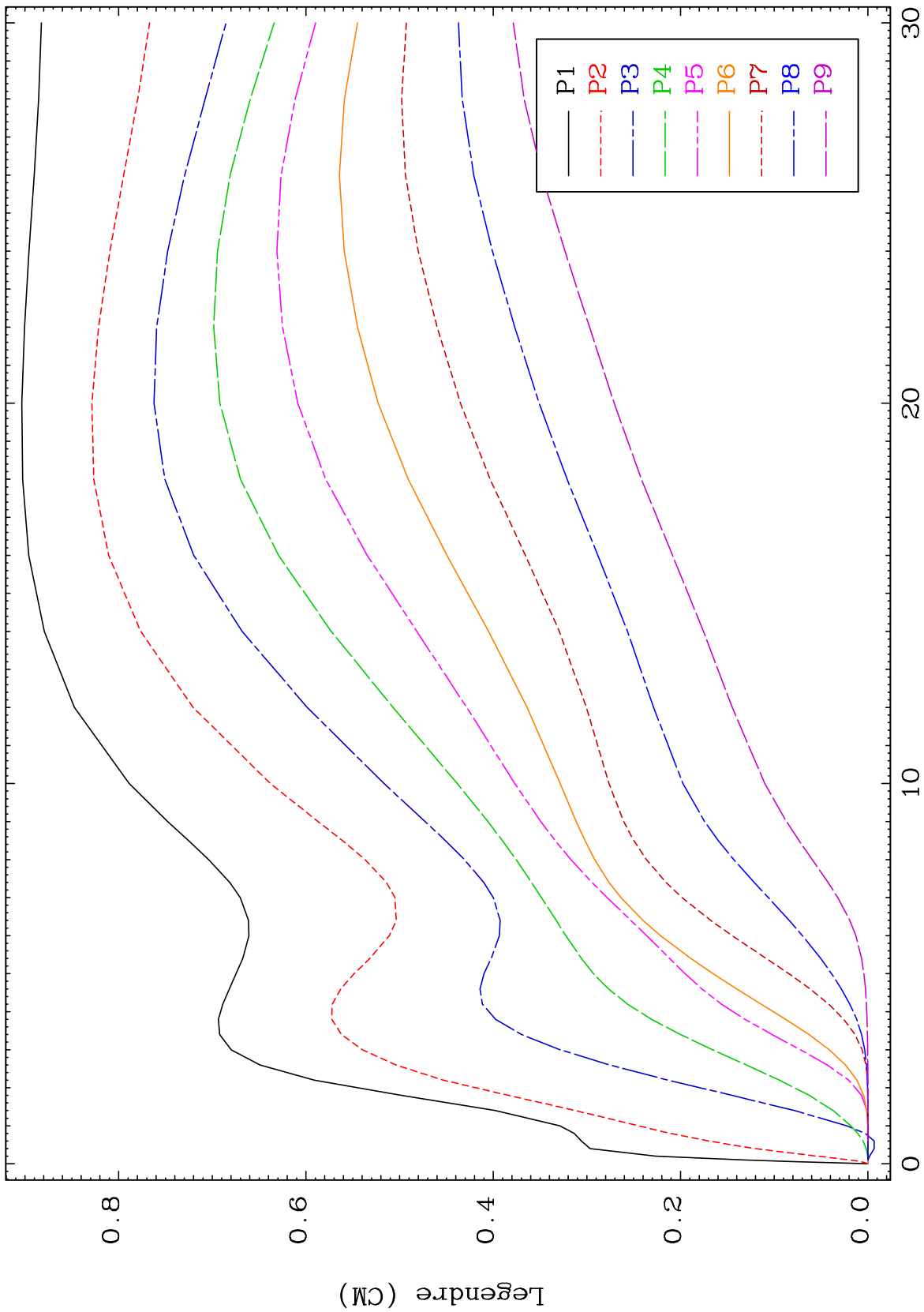
14



MAT 5652

56-Ba-139

Elastic Legendre Coefficients



56-Ba-139

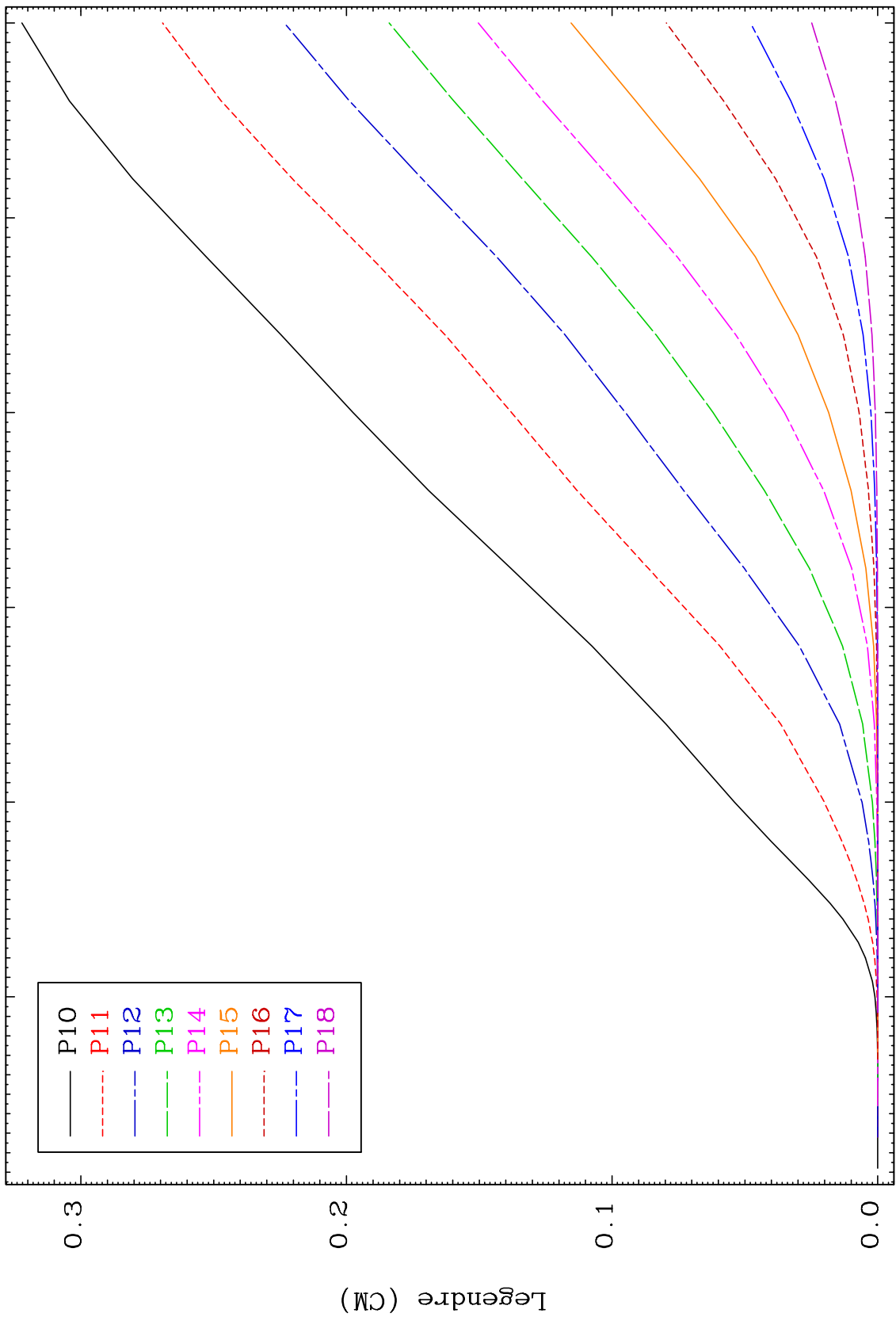
Incident Energy (MeV)

16

MAT 5652

Elastic Legendre Coefficients

56-Ba-139



17

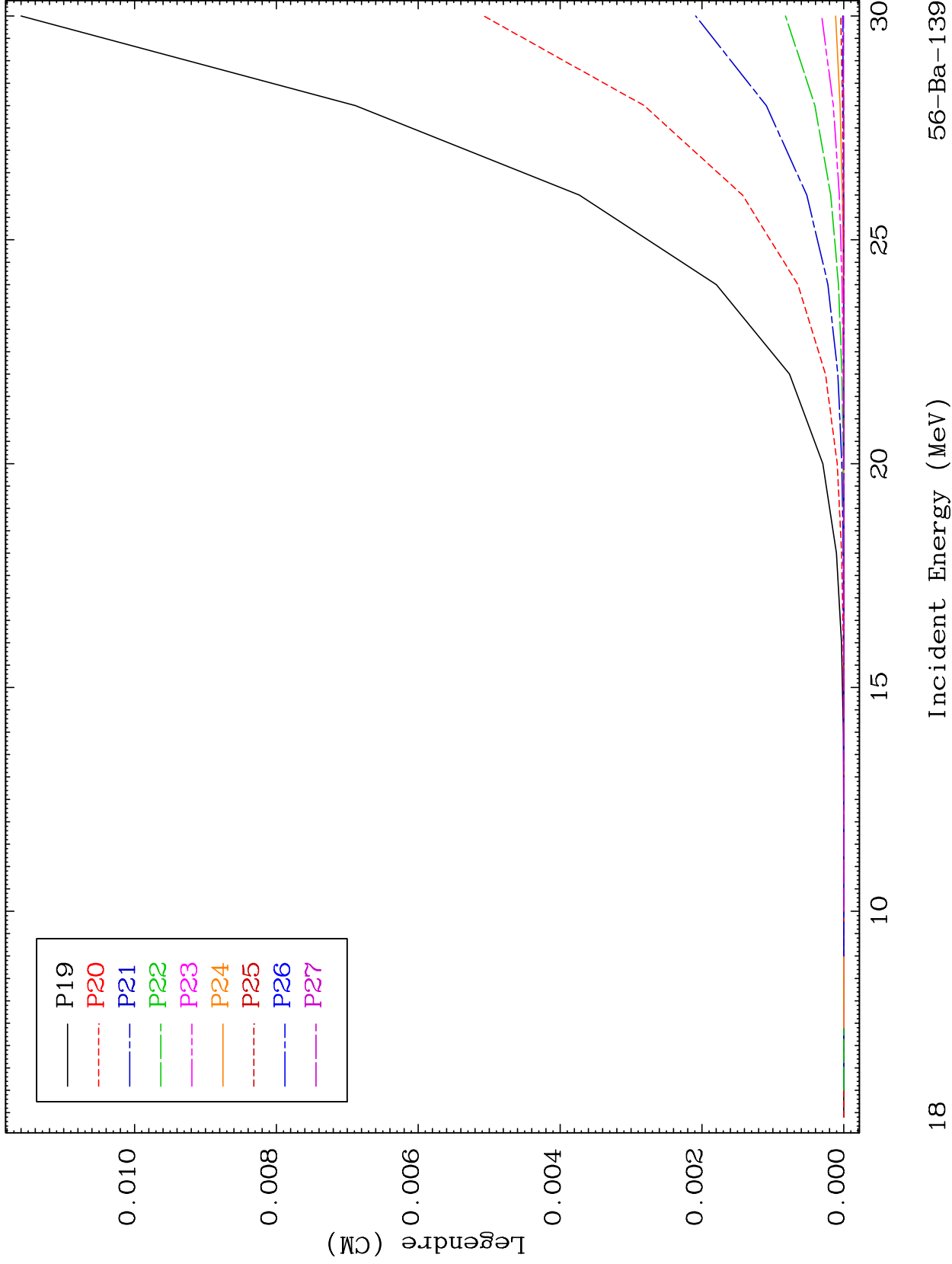
Incident Energy (MeV)

56-Ba-139

MAT 5652

### Elastic Legendre Coefficients

56-Ba-139



18

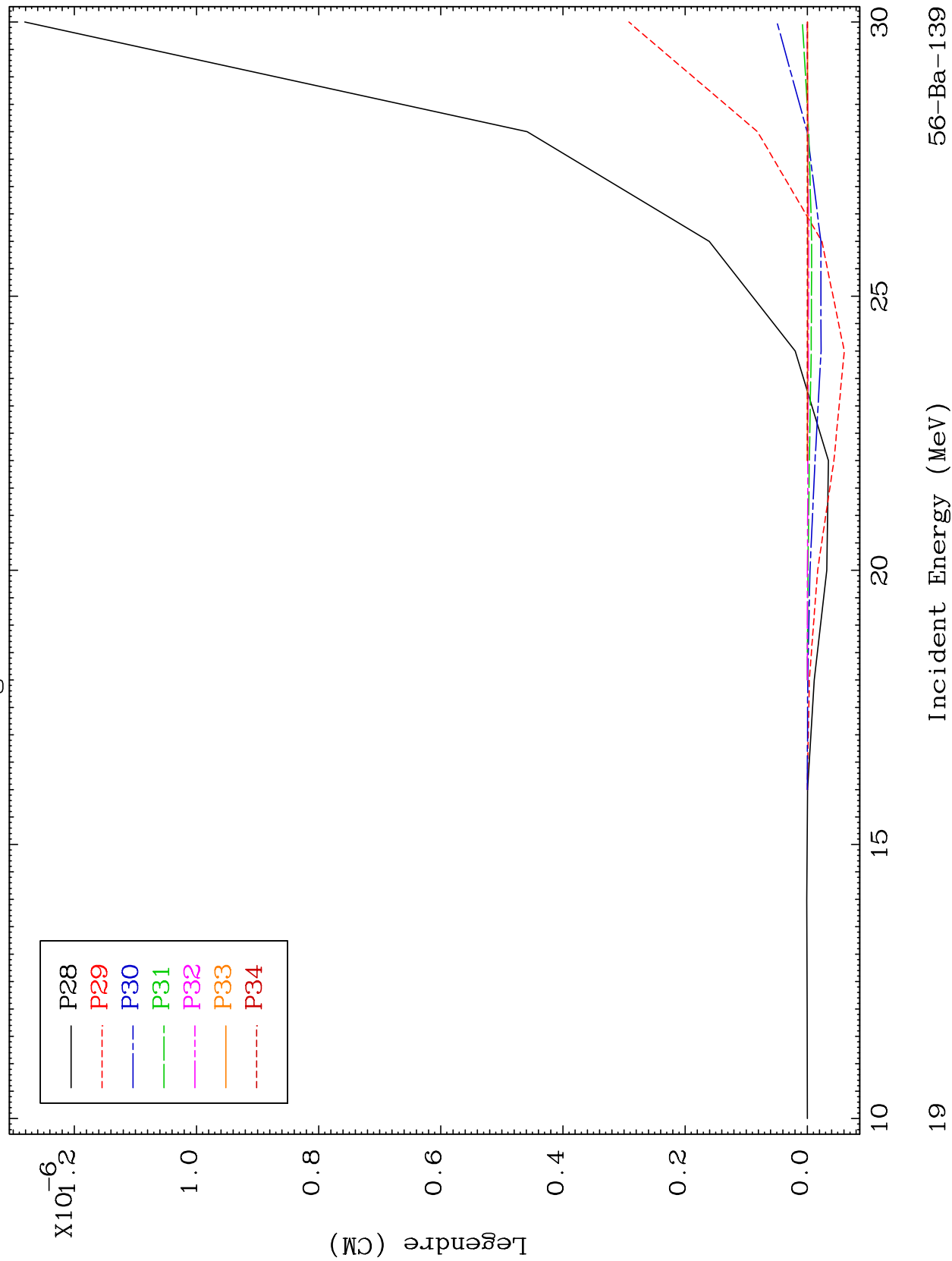
Incident Energy (MeV)

56-Ba-139

MAT 5652

Elastic Legendre Coefficients

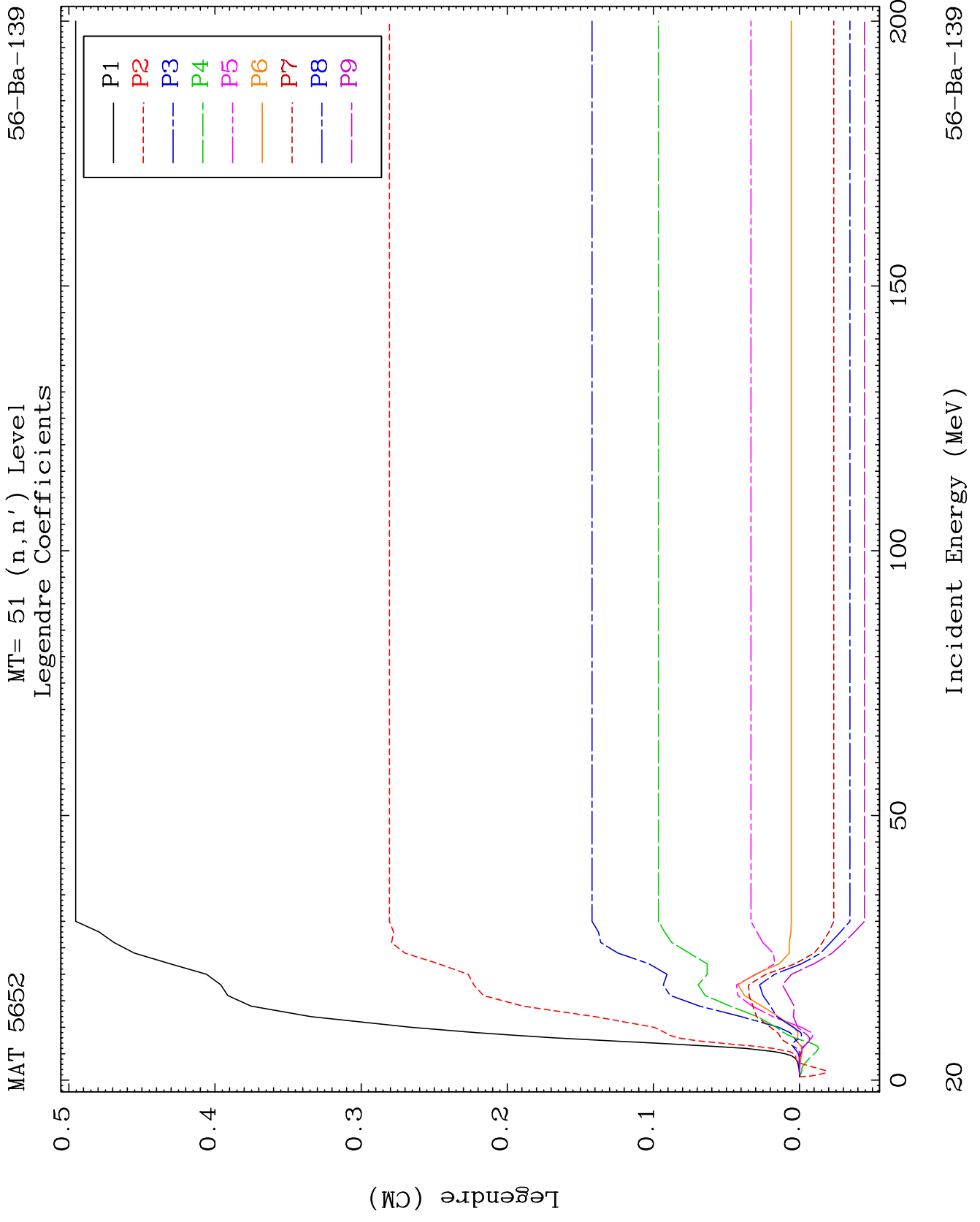
56-Ba-139



19

Incident Energy (MeV)

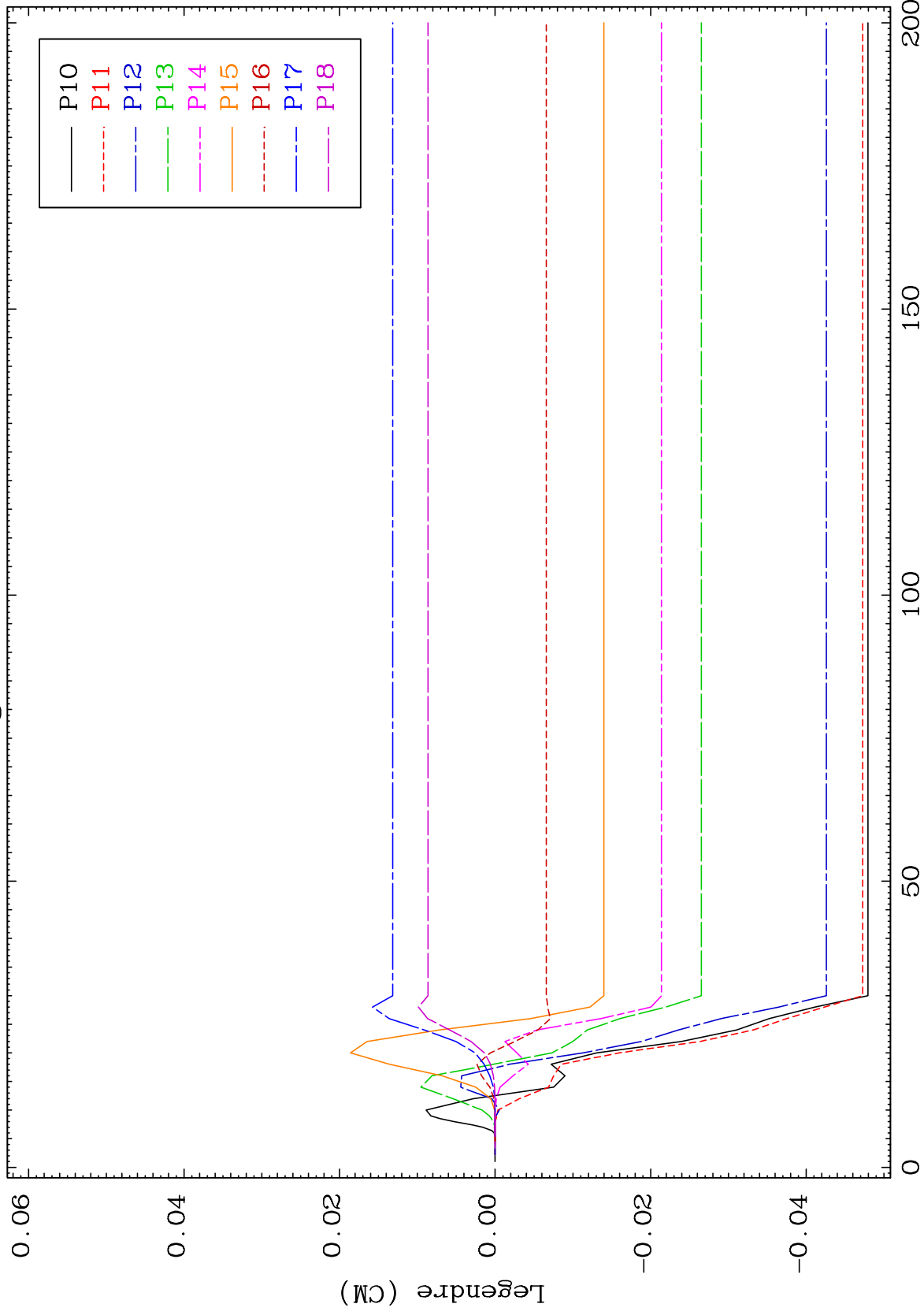
56-Ba-139



MAT 5652

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

56-Ba-139



21

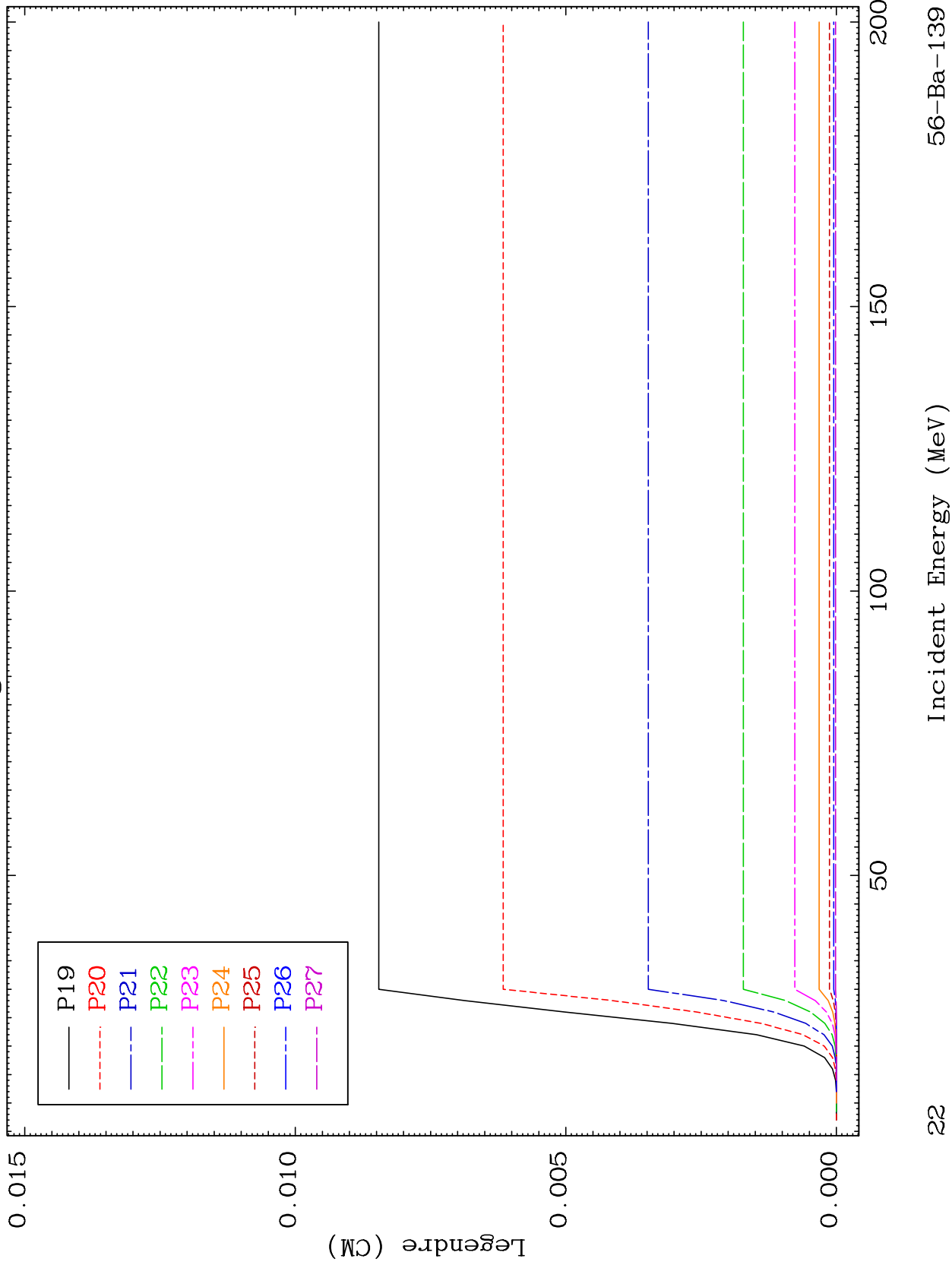
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



22

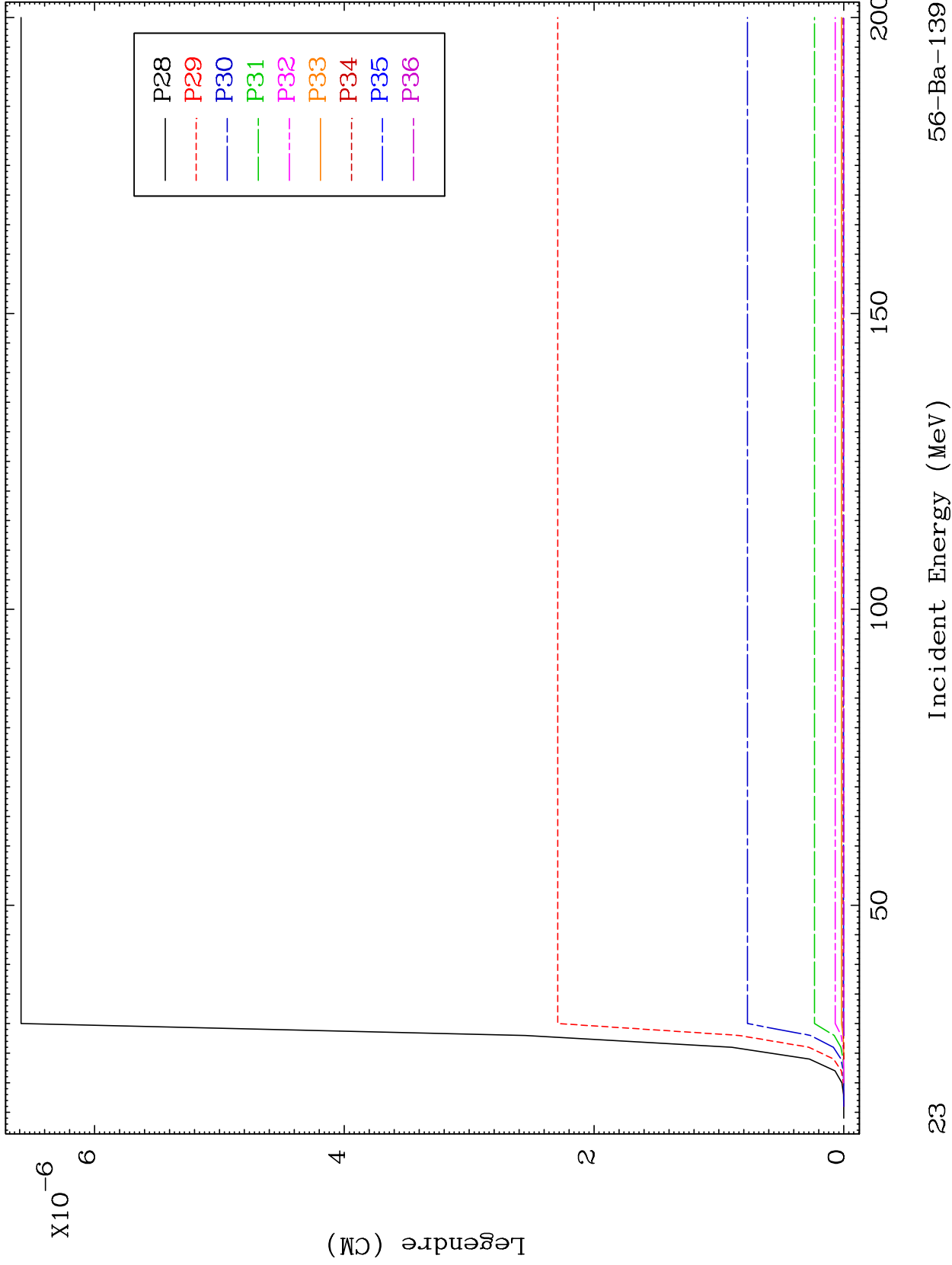
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

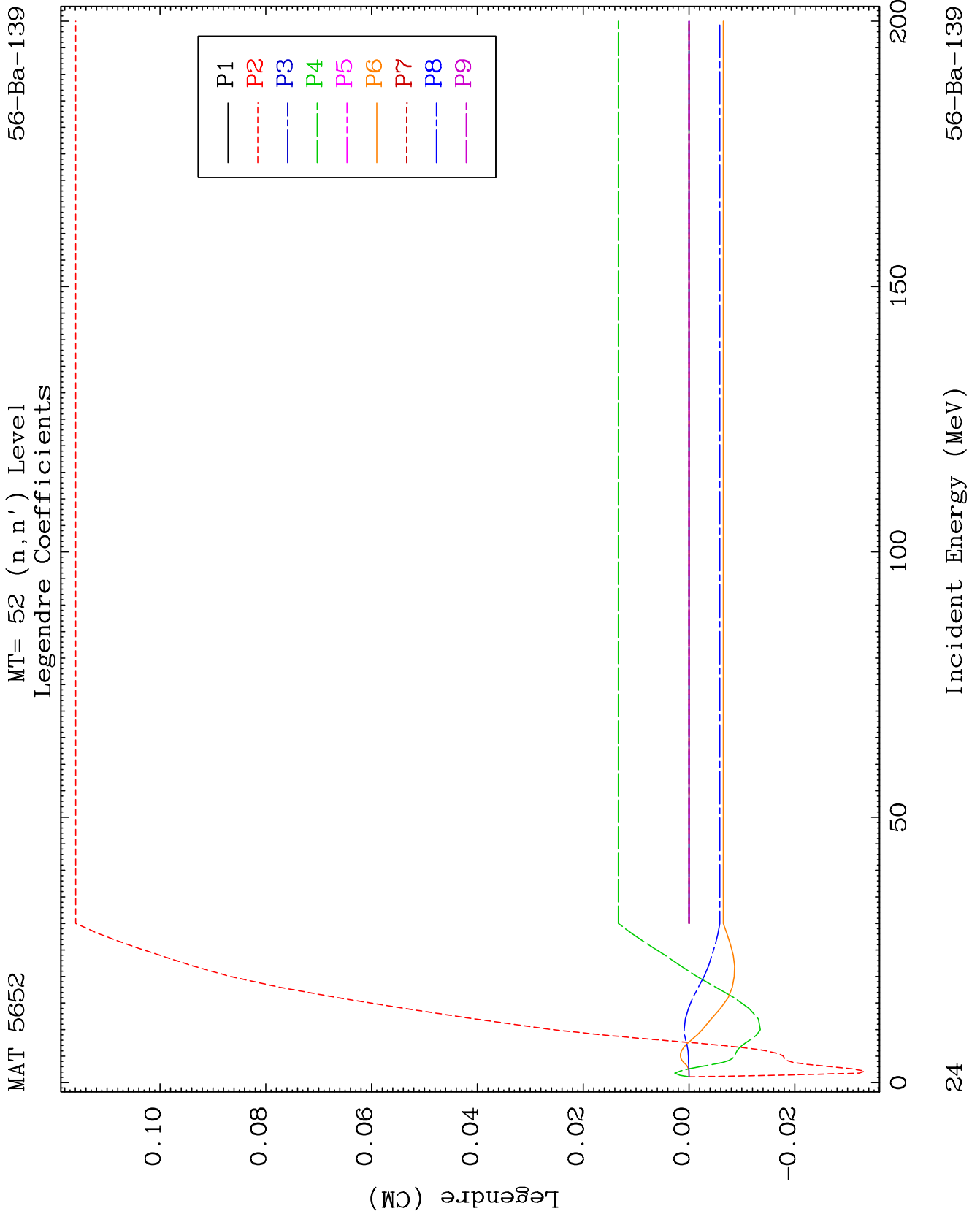
56-Ba-139



23

Incident Energy (MeV)

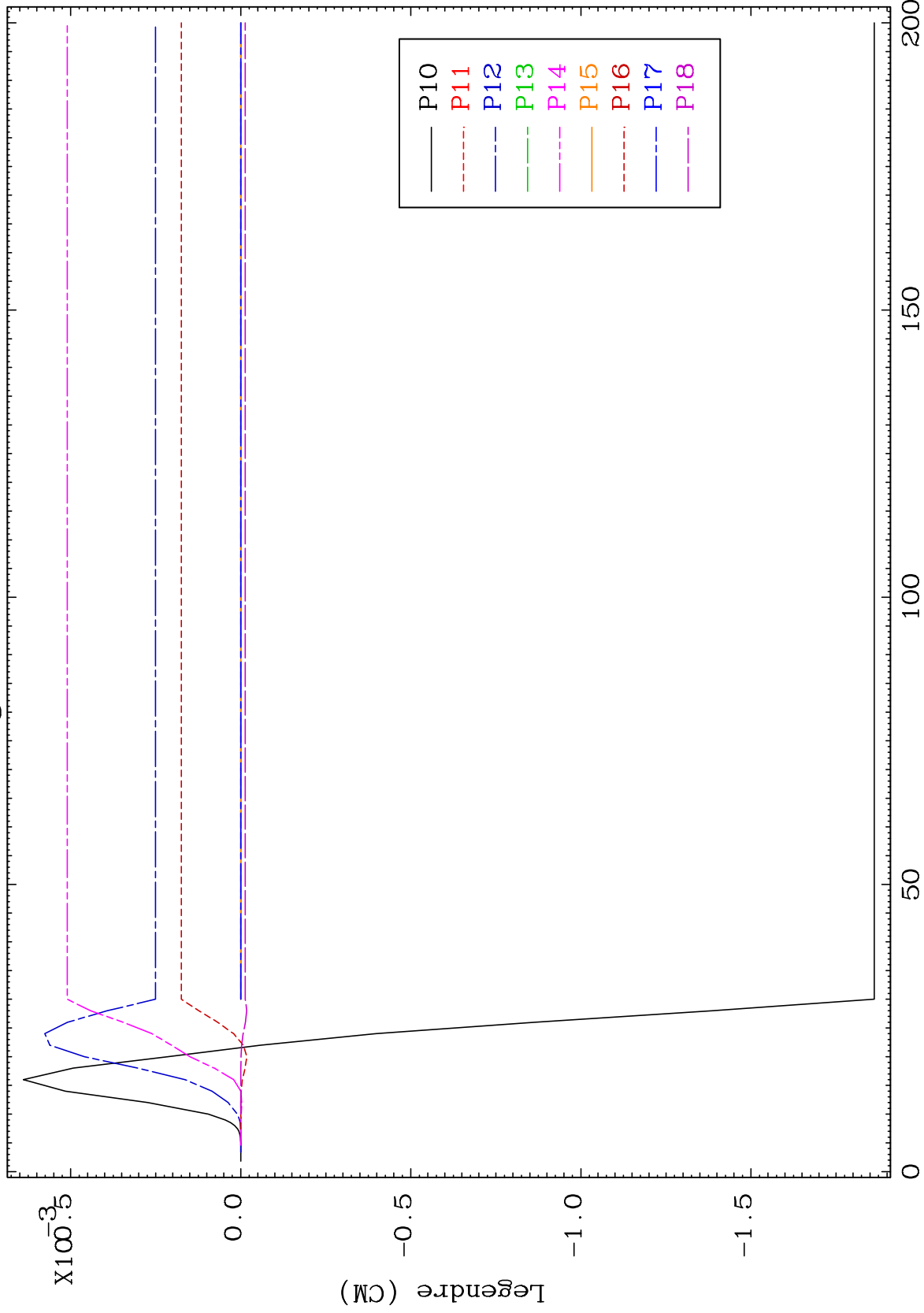
56-Ba-139



MAT 5652

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

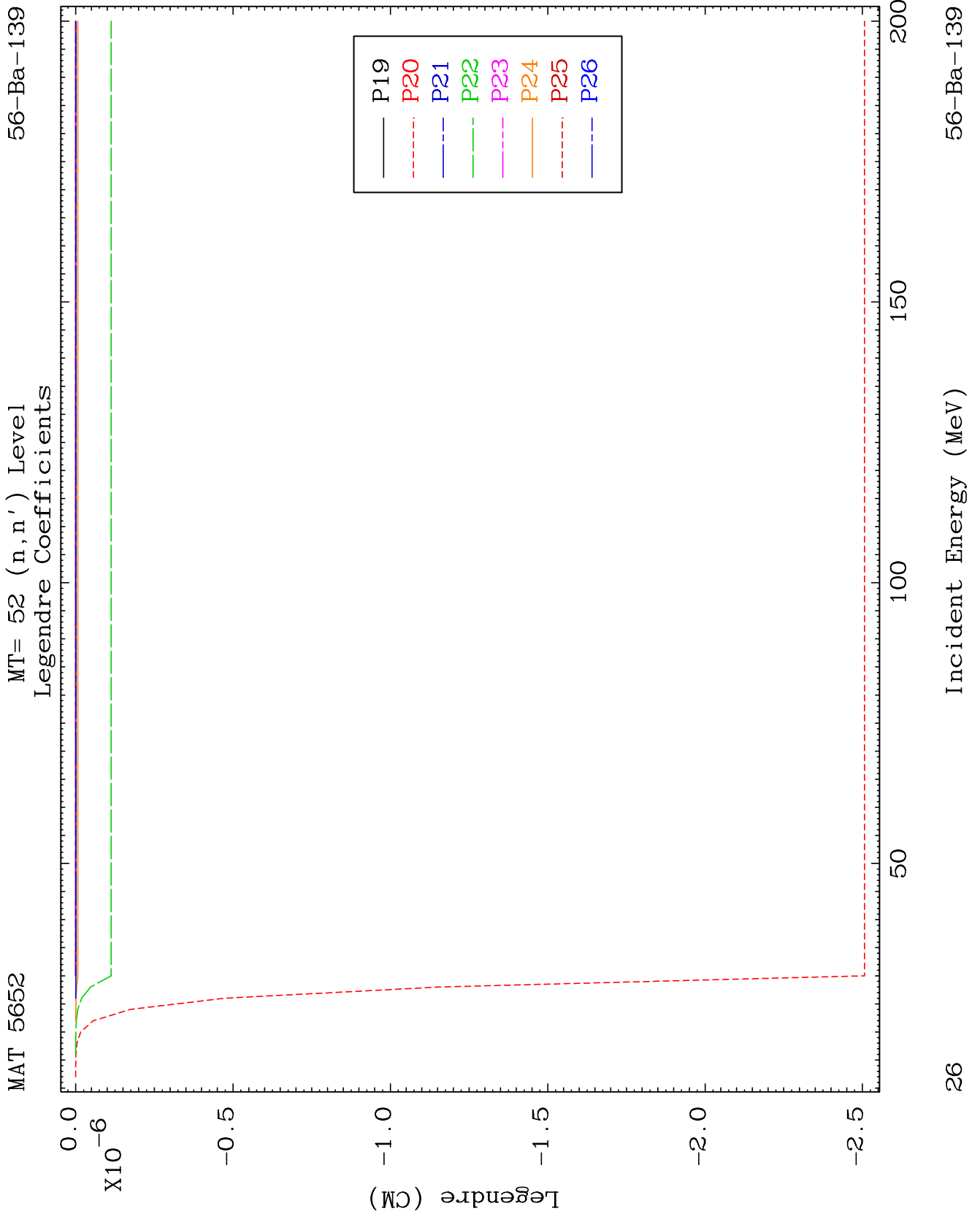
56-Ba-139

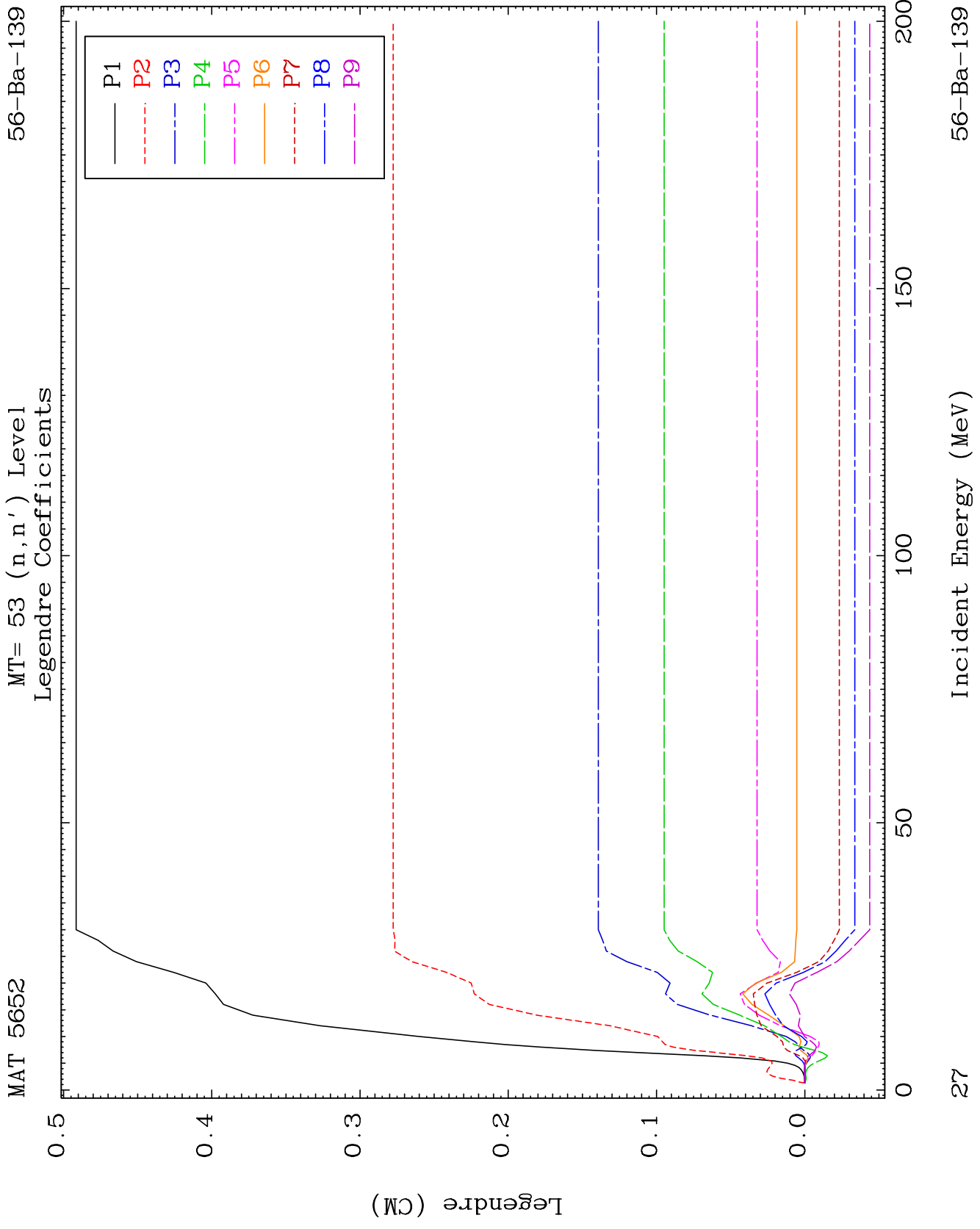


25

Incident Energy (MeV)

56-Ba-139

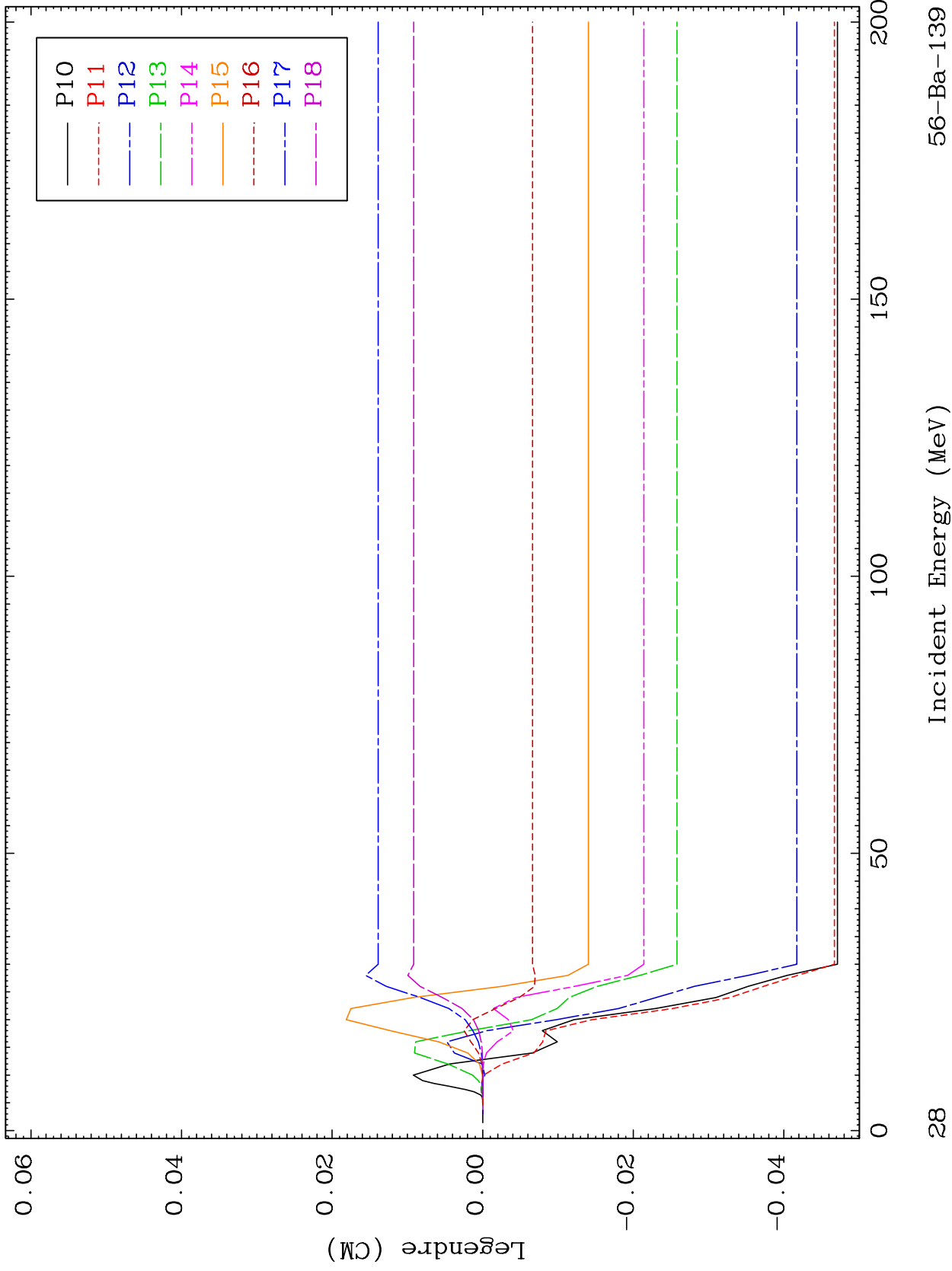




MAT 5652

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

56-Ba-139



56-Ba-139

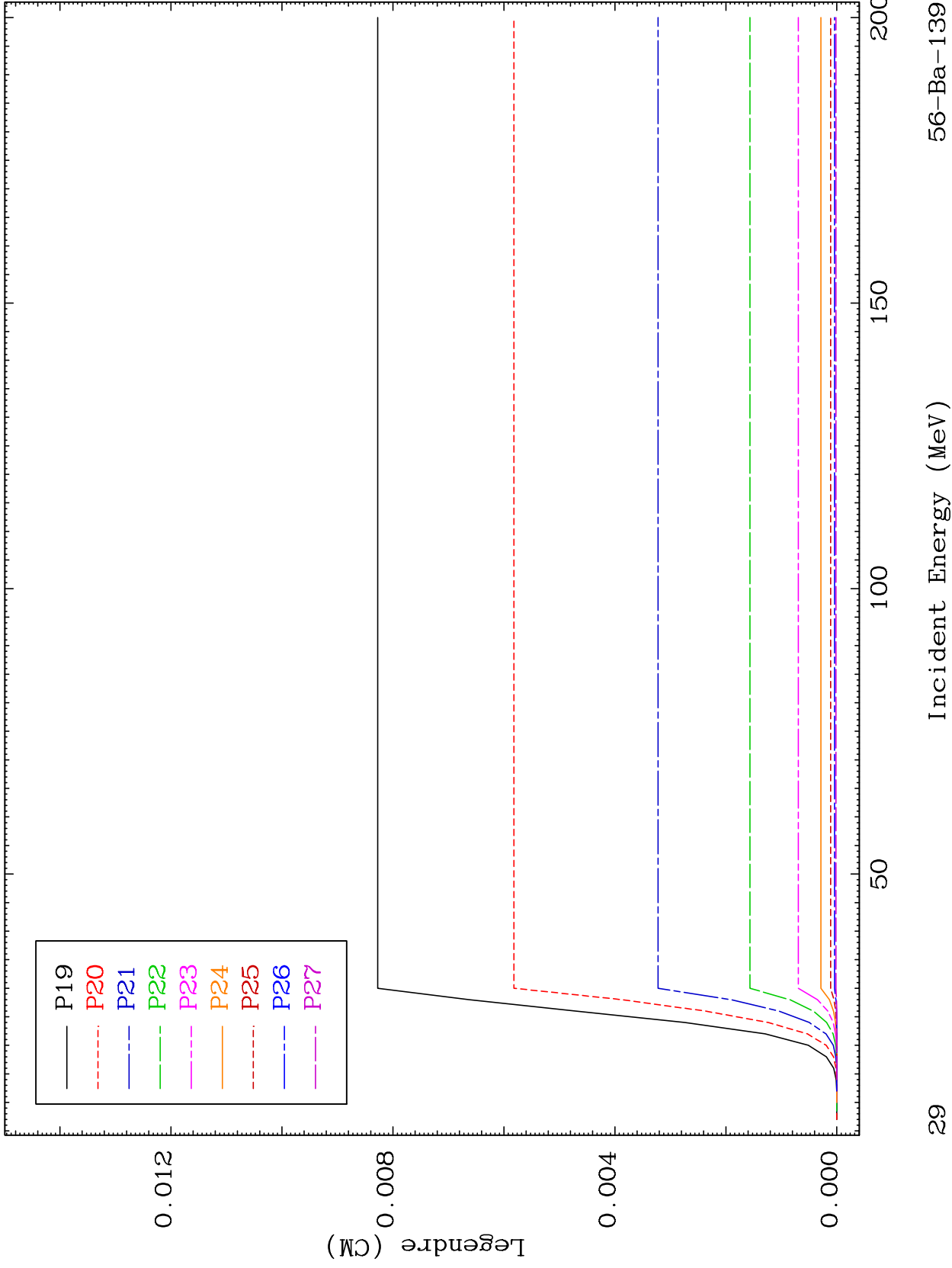
Incident Energy (MeV)

28

MAT 5652

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

56-Ba-139



29

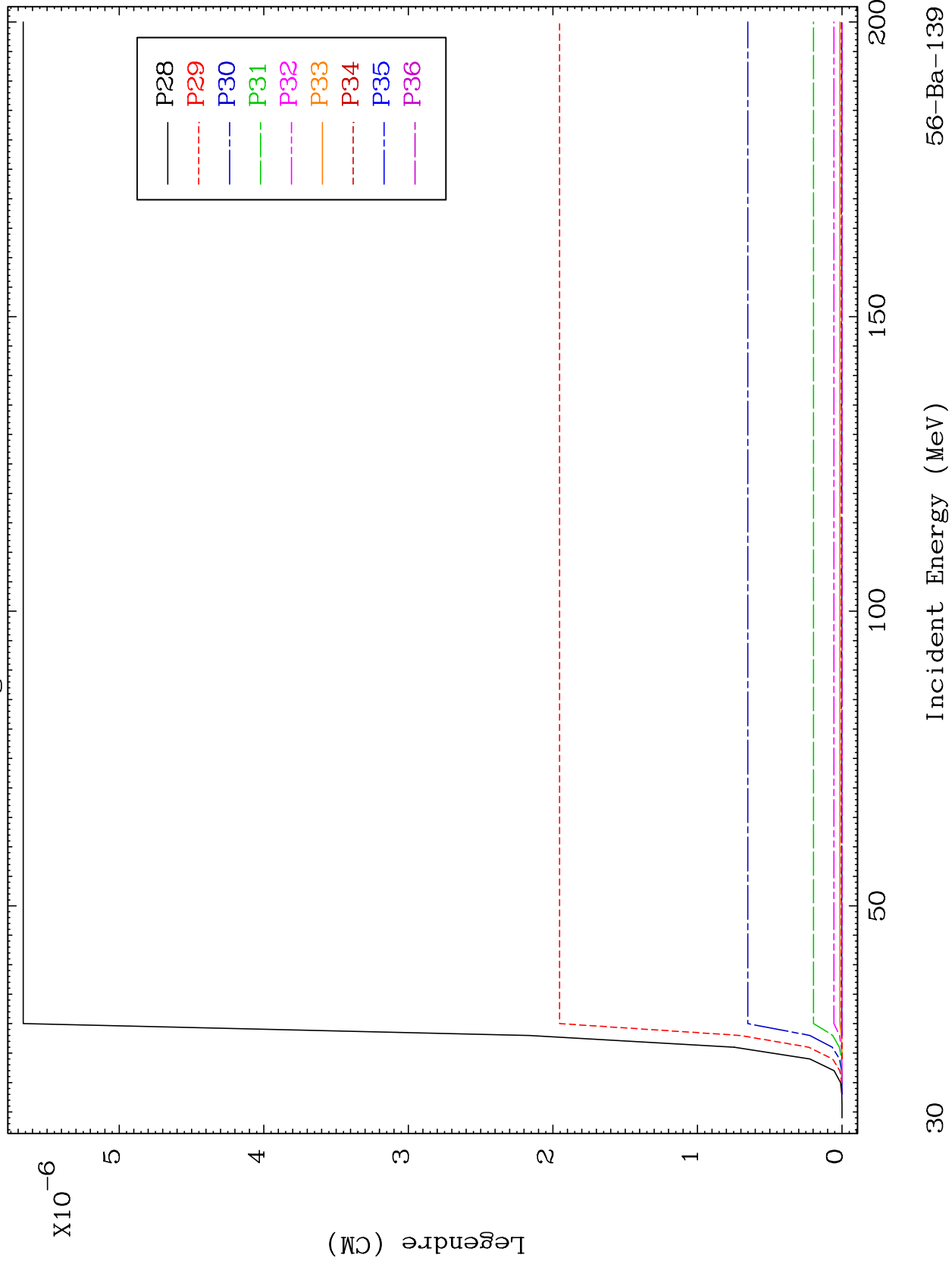
Incident Energy (MeV)

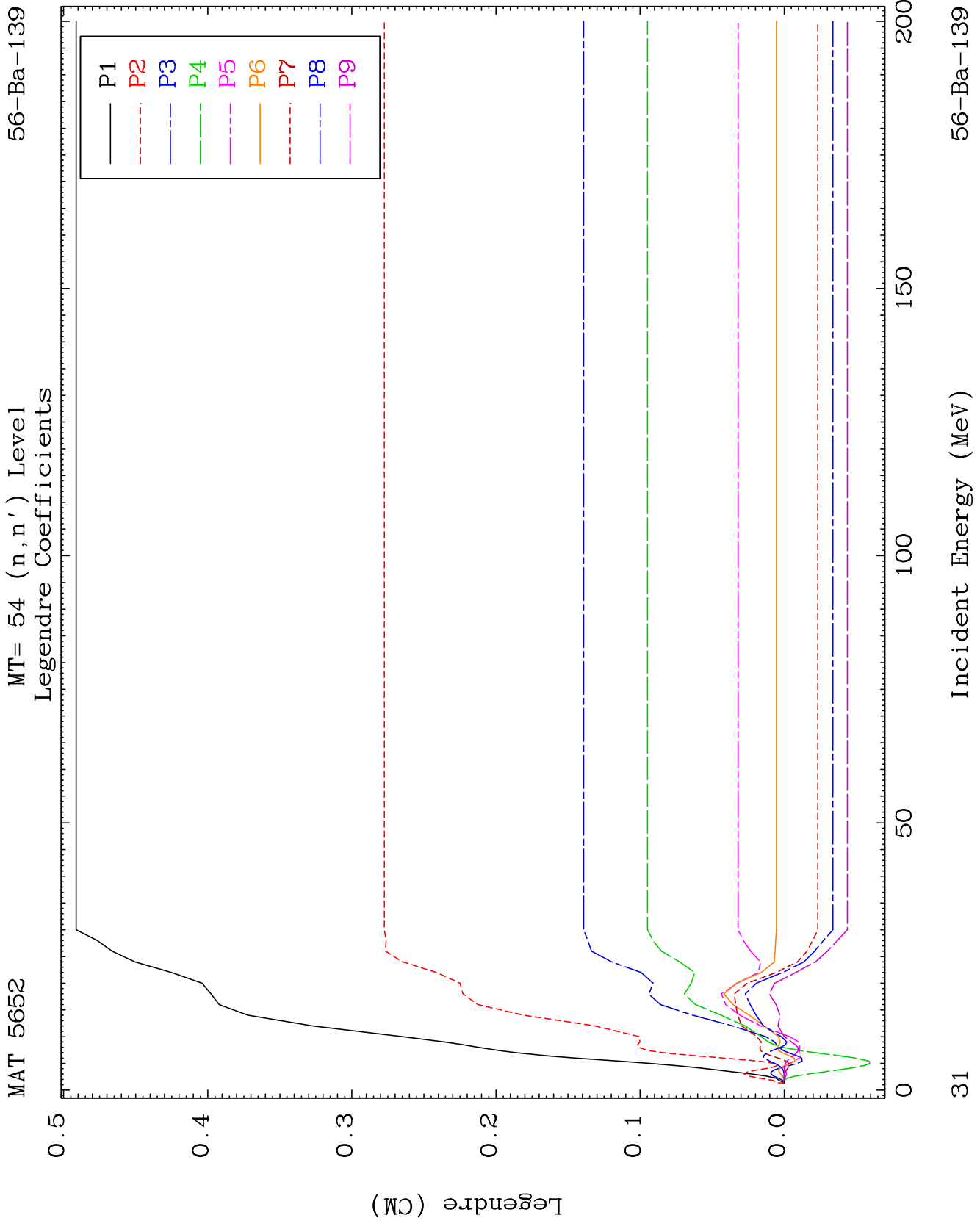
56-Ba-139

MAT 5652

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

56-Ba-139

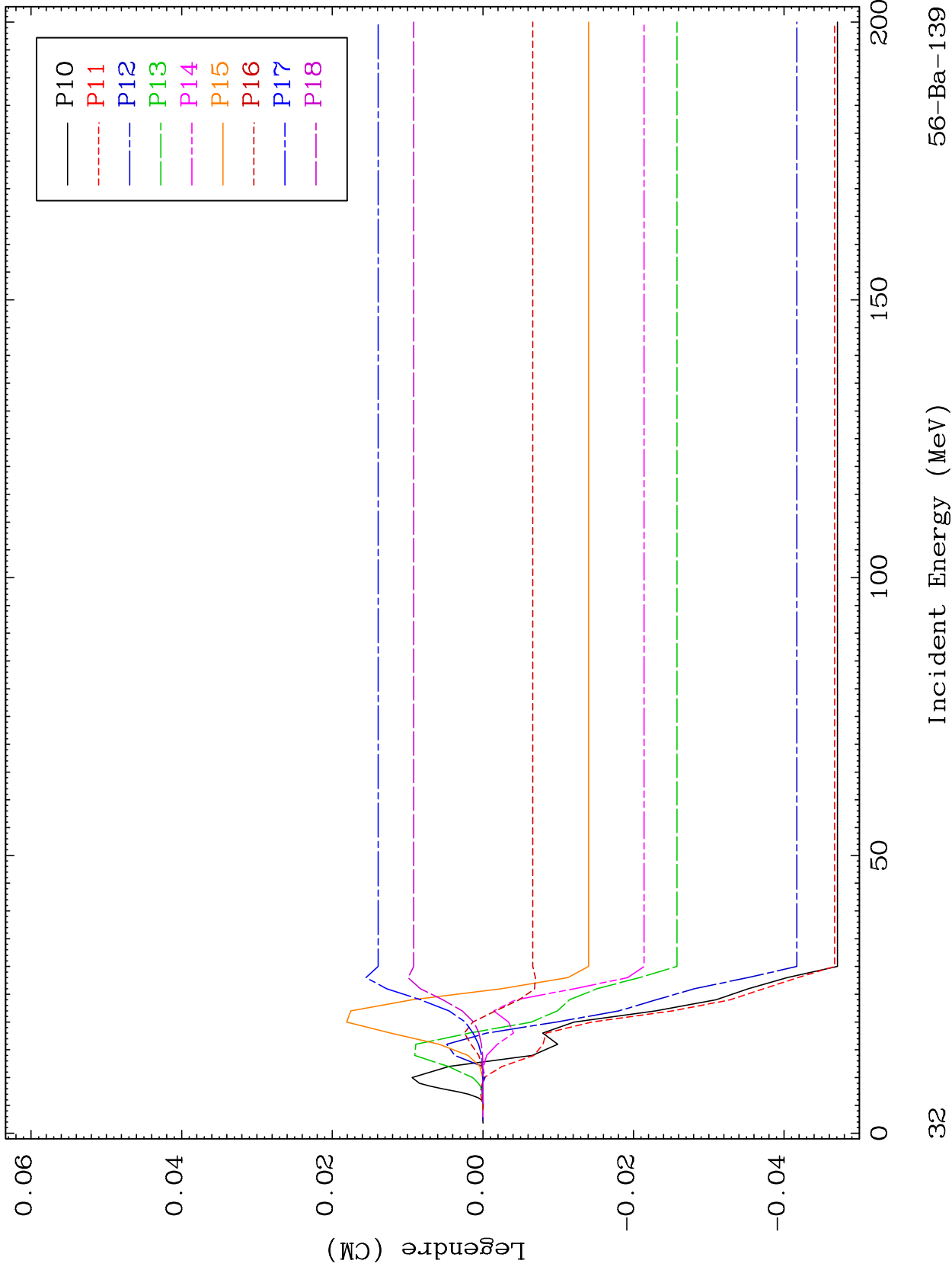




MAT 5652

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

56-Ba-139



32

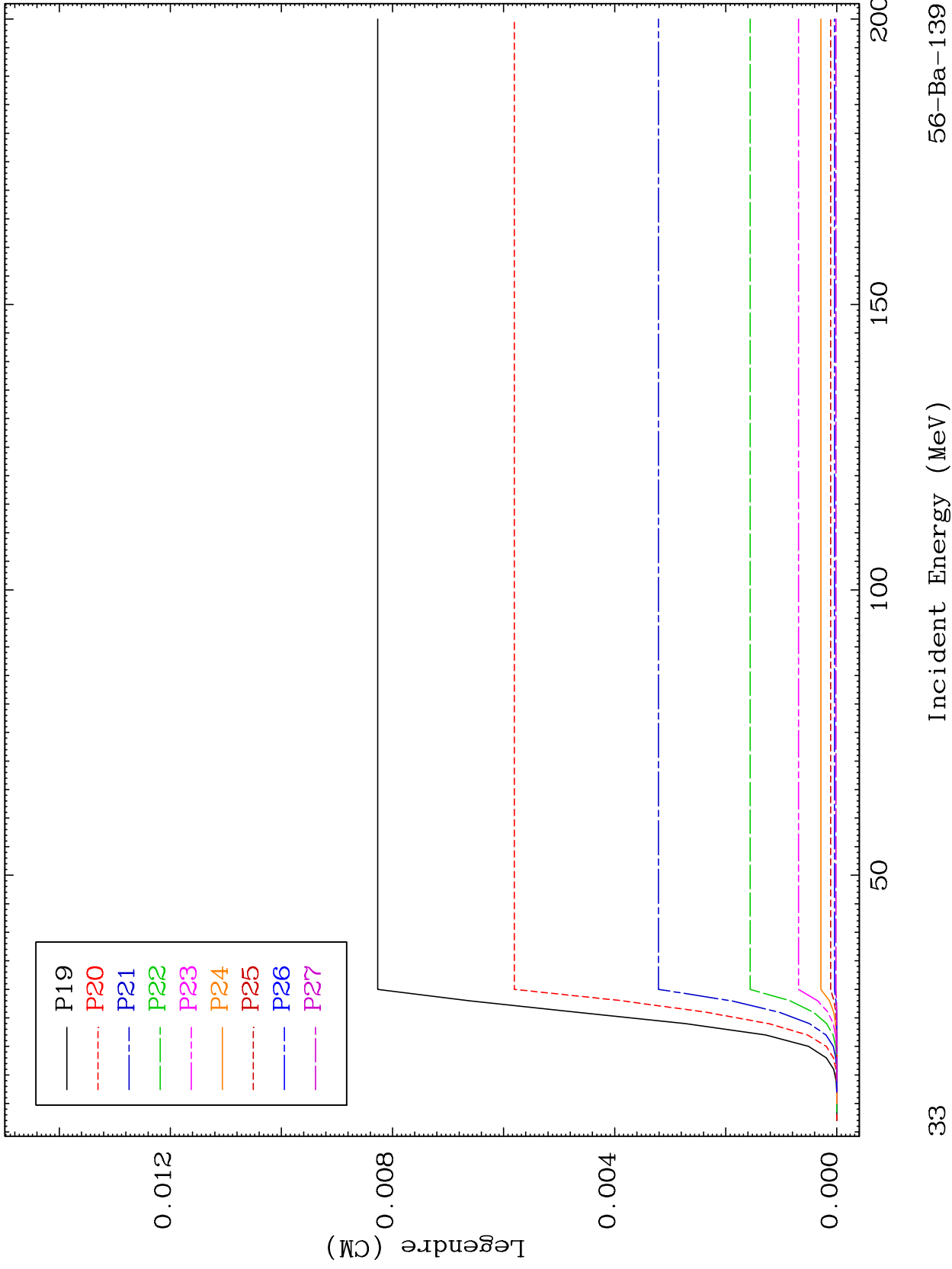
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

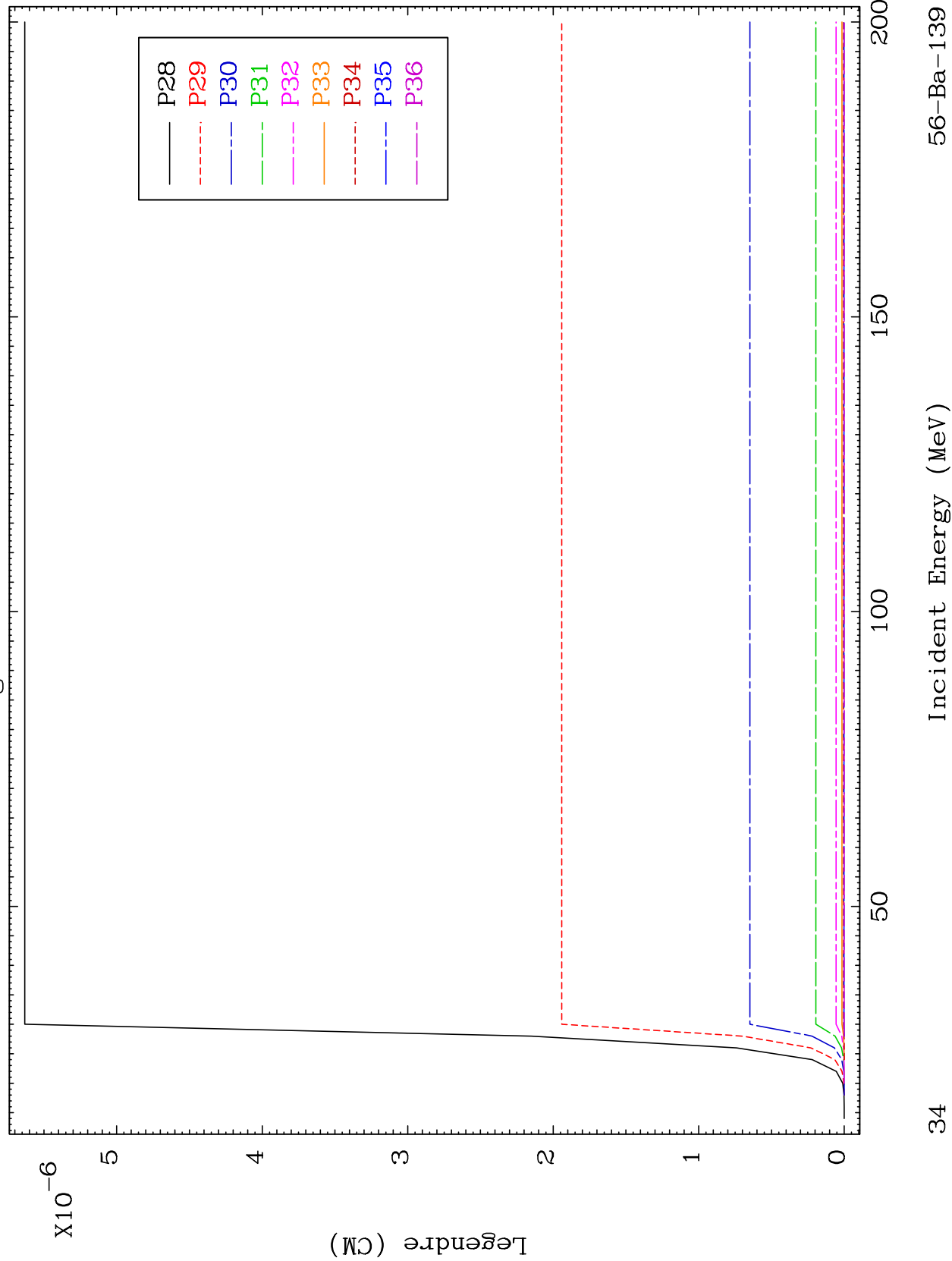
56-Ba-139



MAT 5652

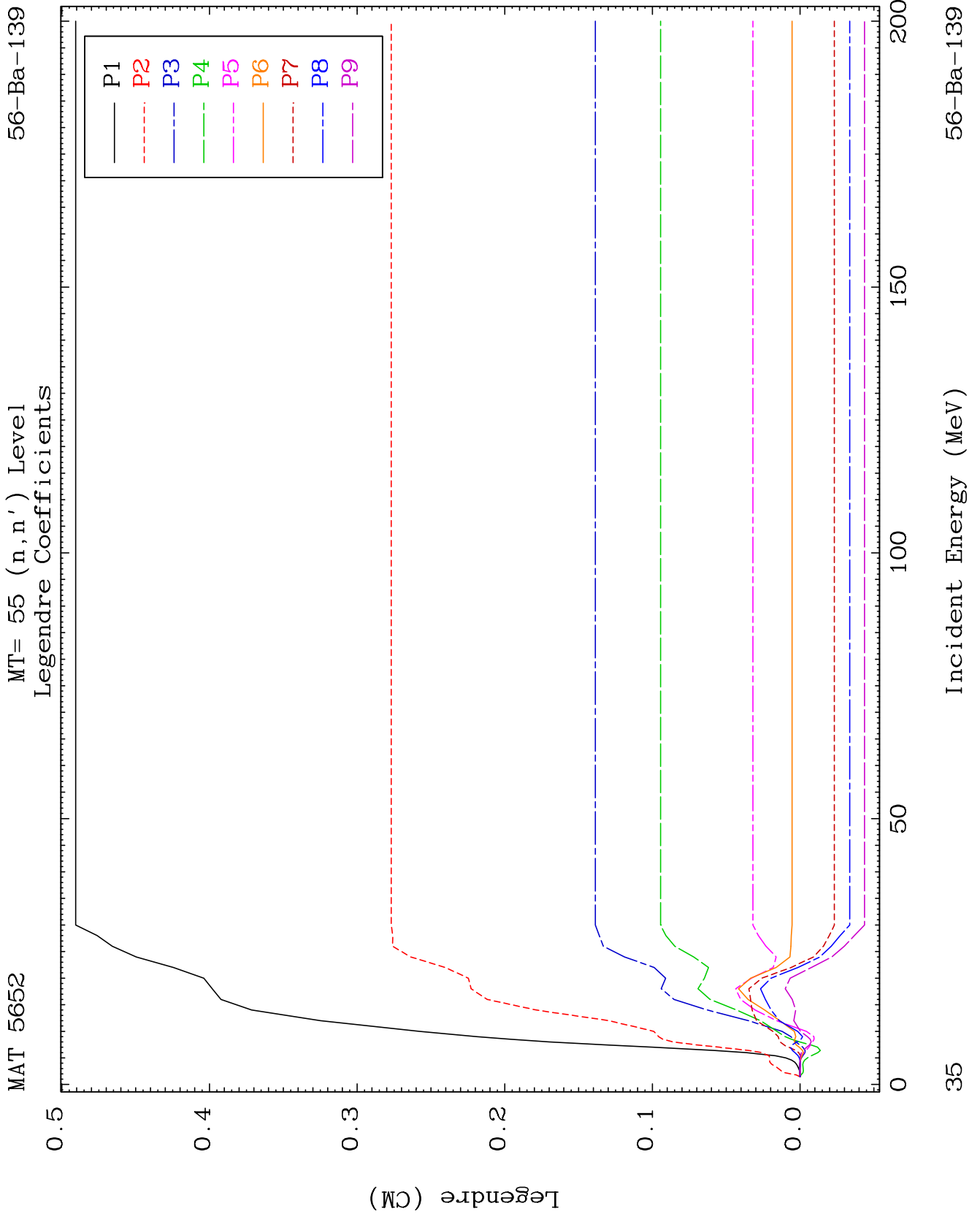
MT= 54 (n,n') Level  
Legendre Coefficients

56-Ba-139



34

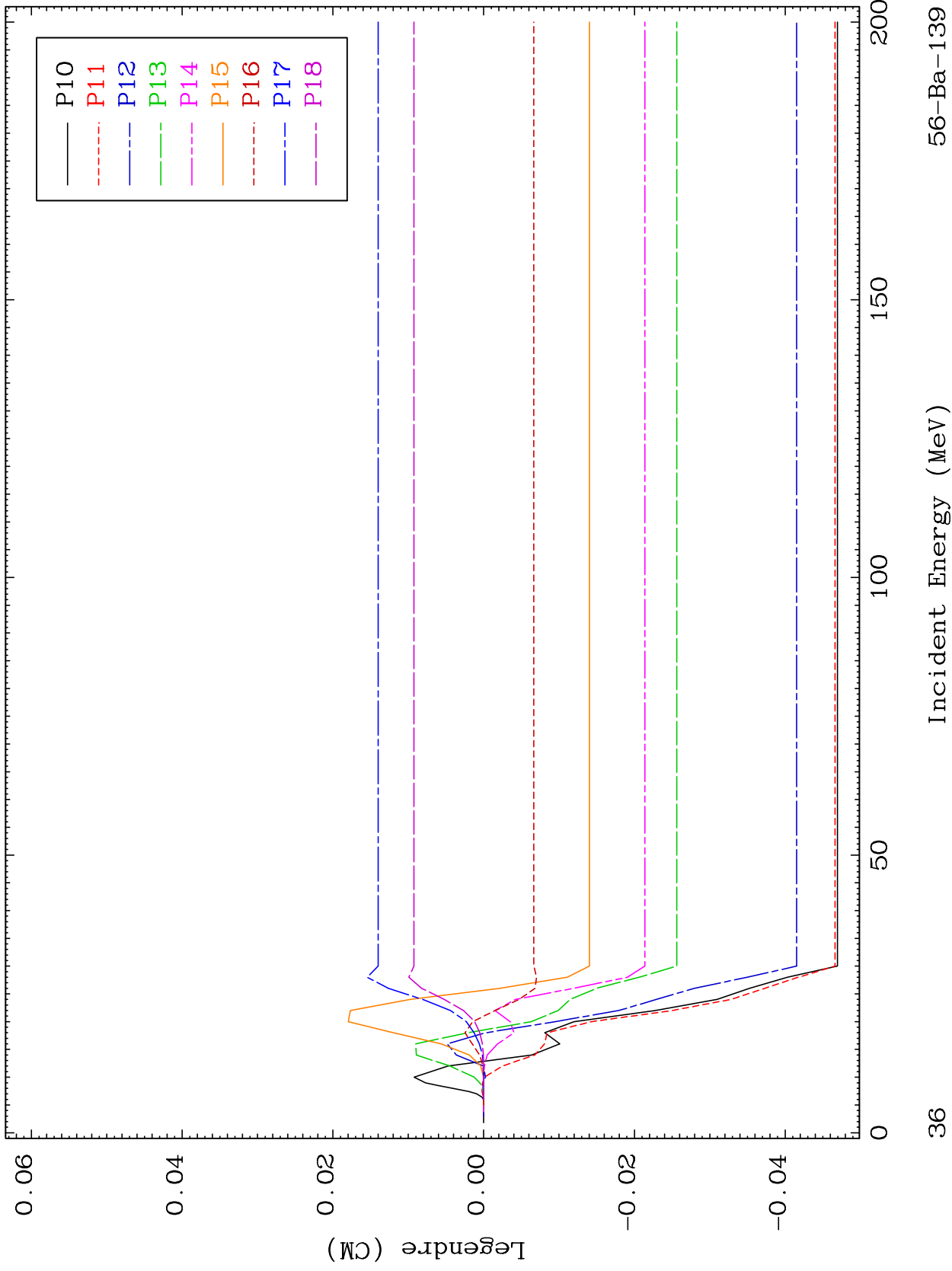
56-Ba-139



MAT 5652

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

56-Ba-139



36

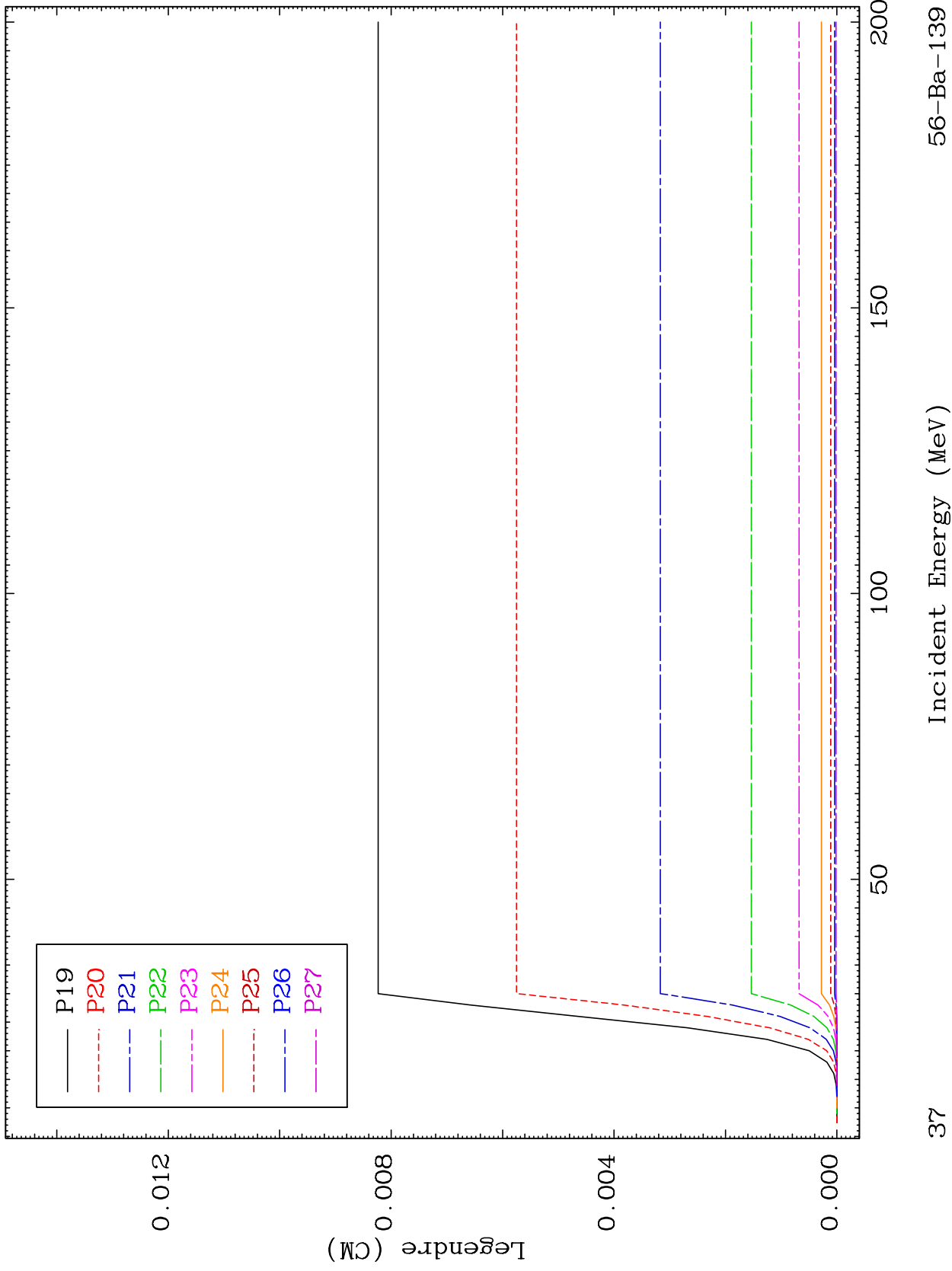
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



37

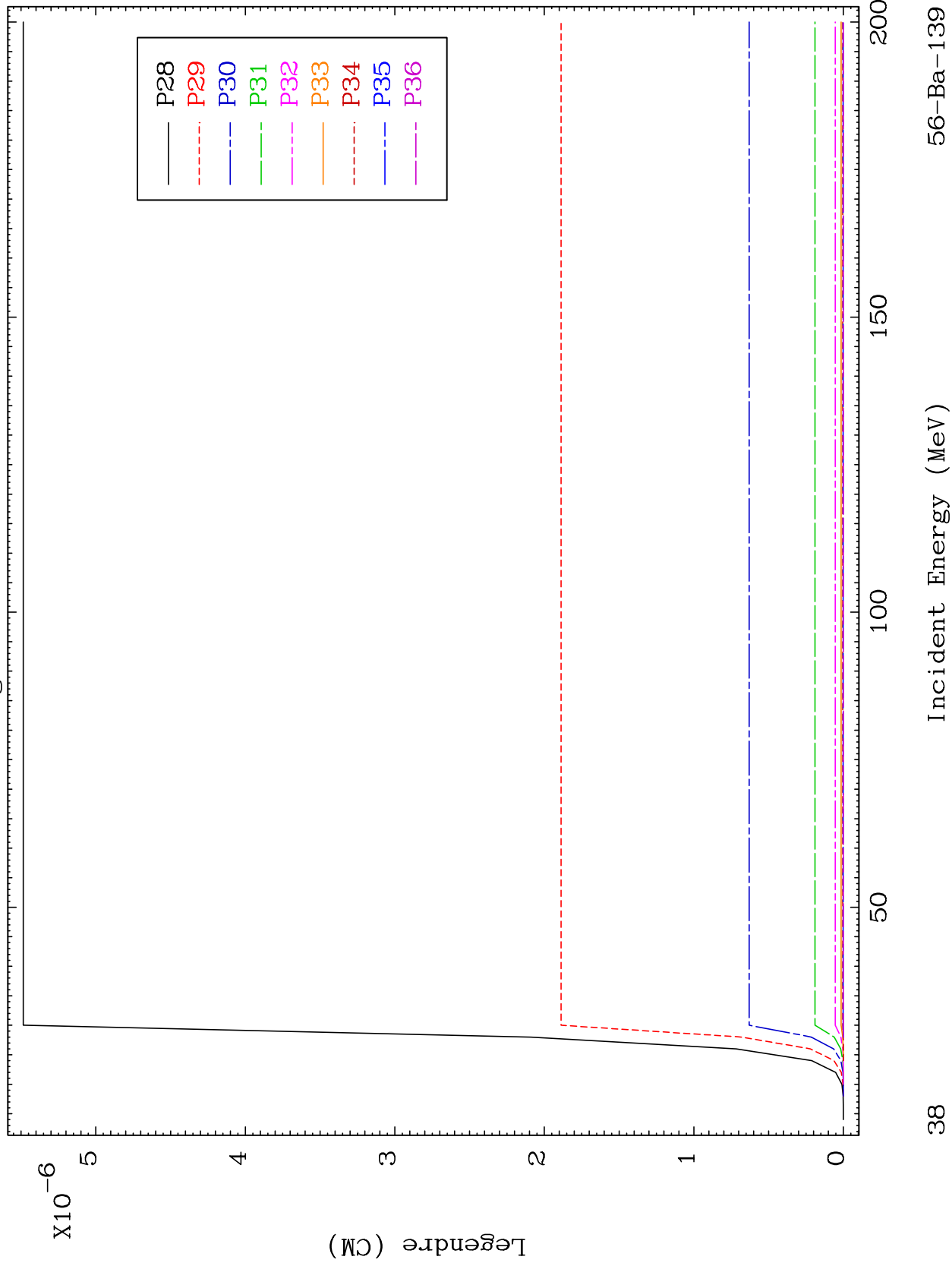
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



38

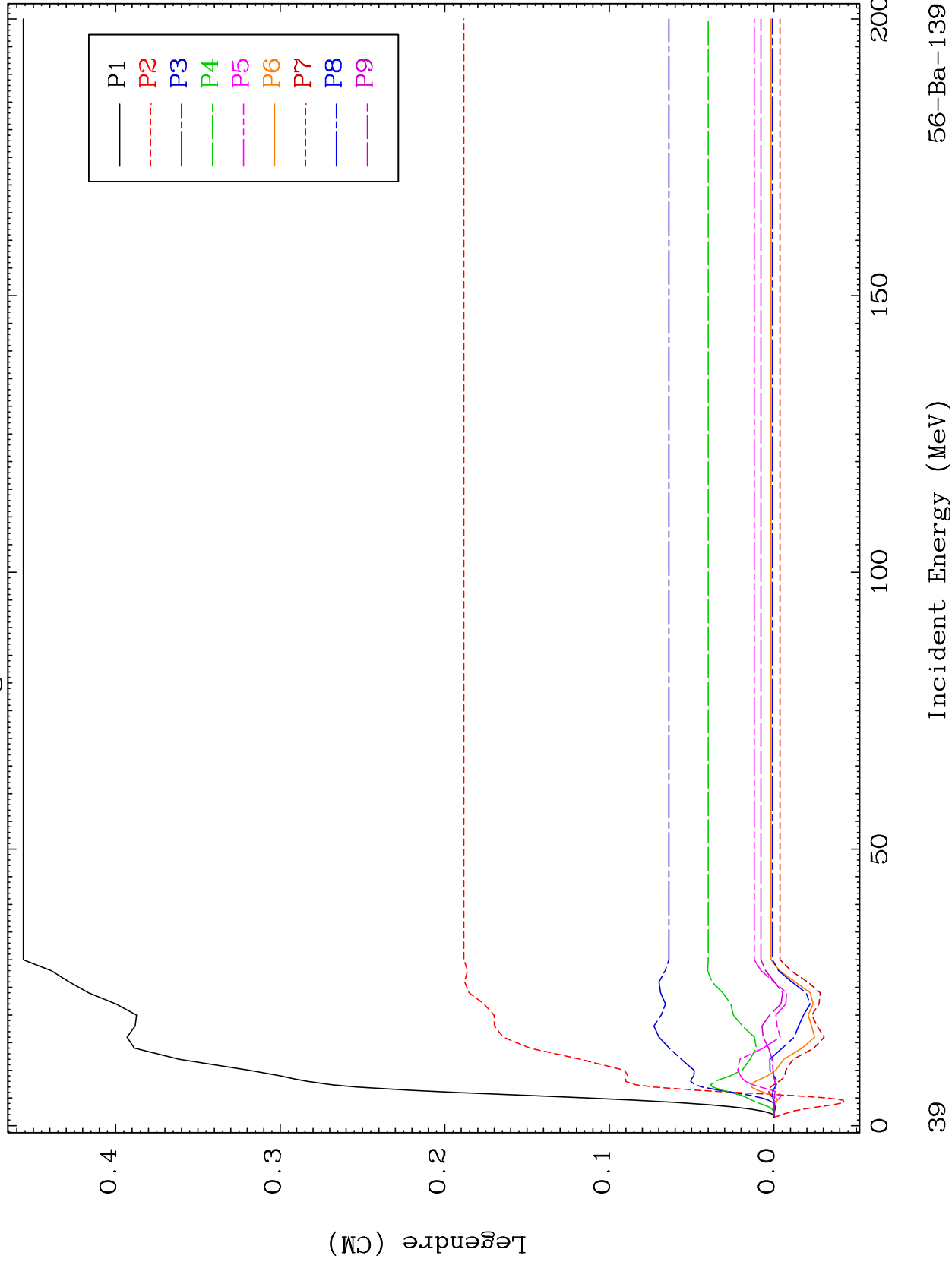
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



56-Ba-139

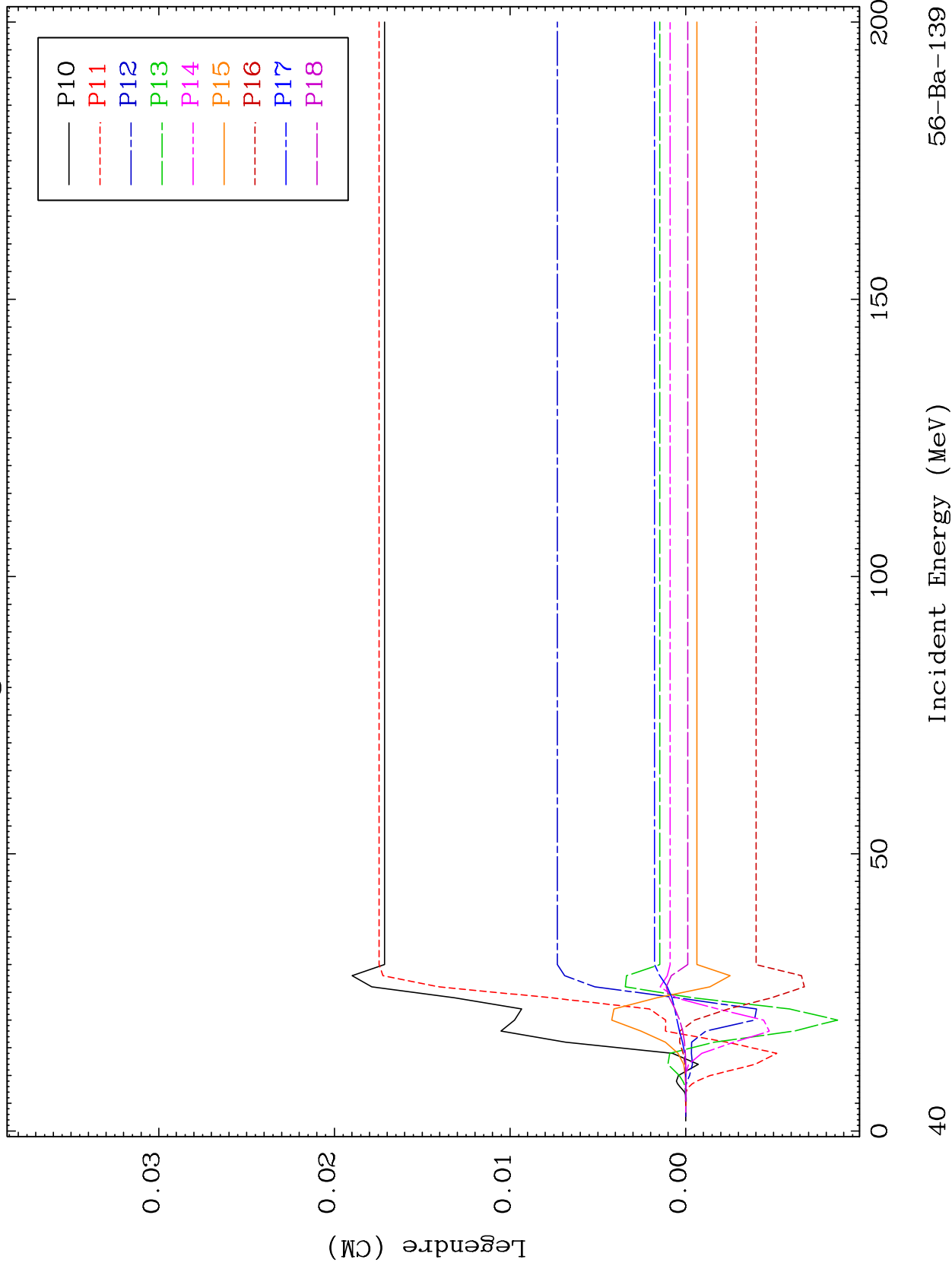
Incident Energy (MeV)

39

MAT 5652

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

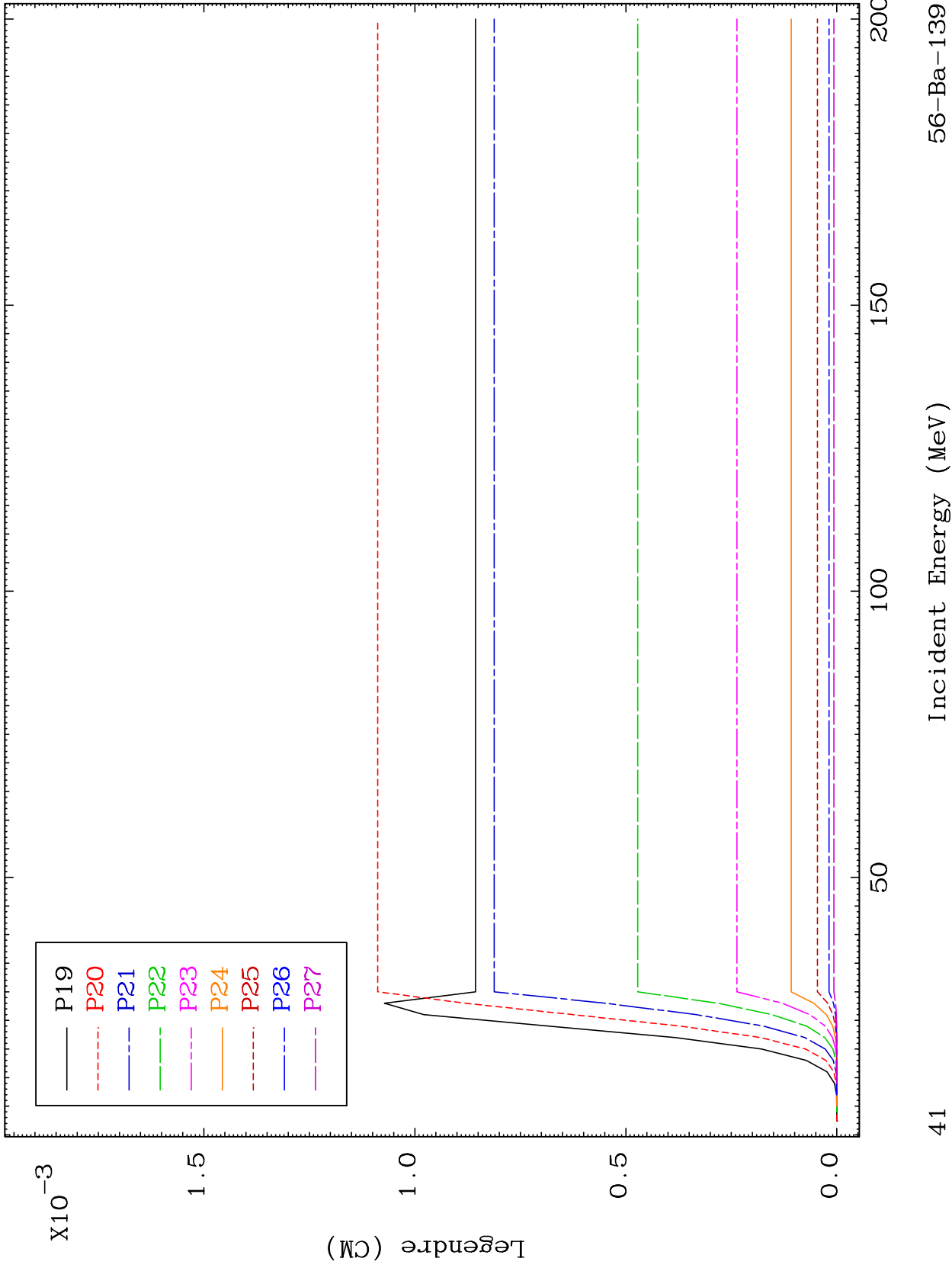
56-Ba-139



56-Ba-139

Incident Energy (MeV)

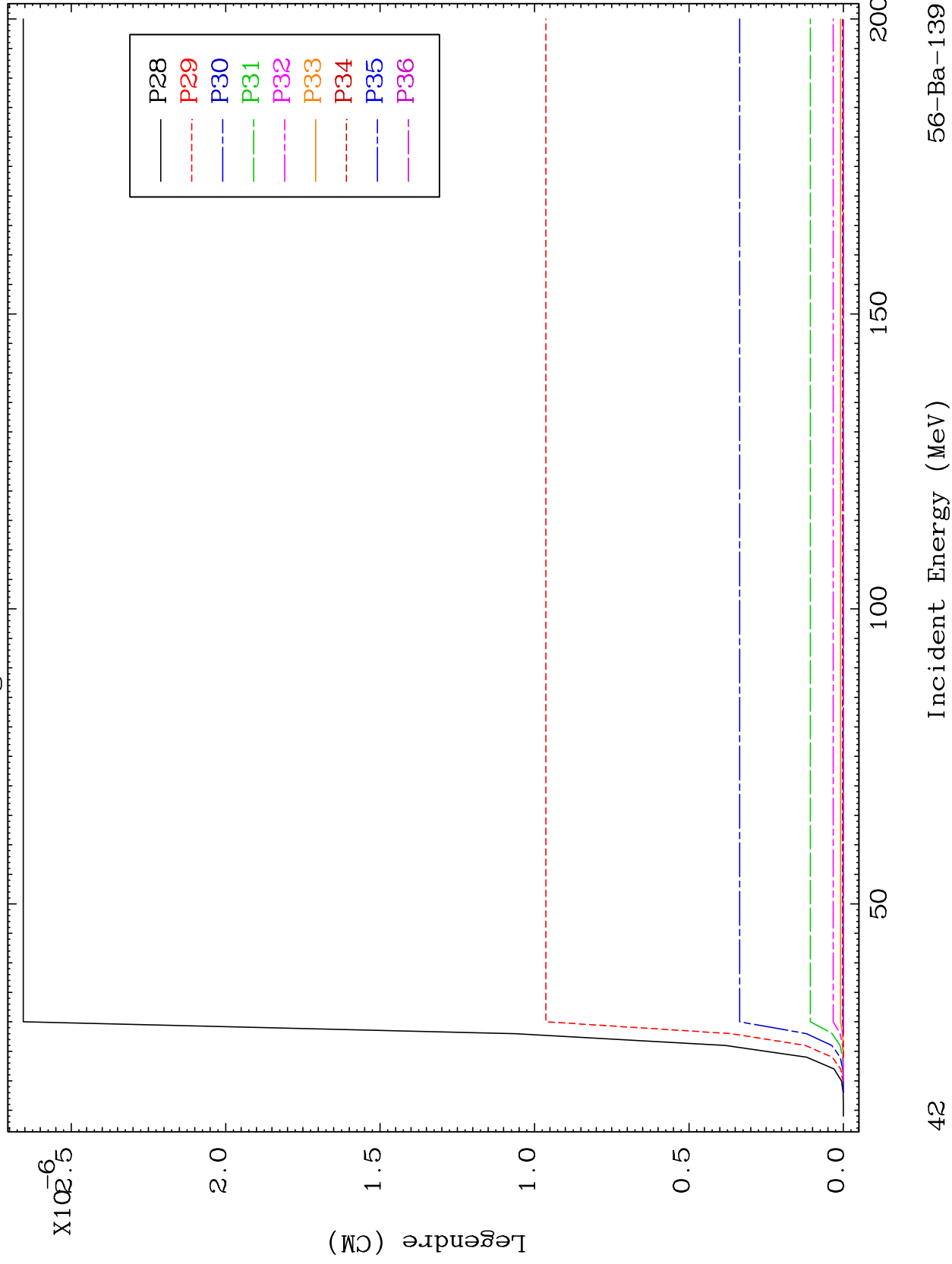
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MAT 5652

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

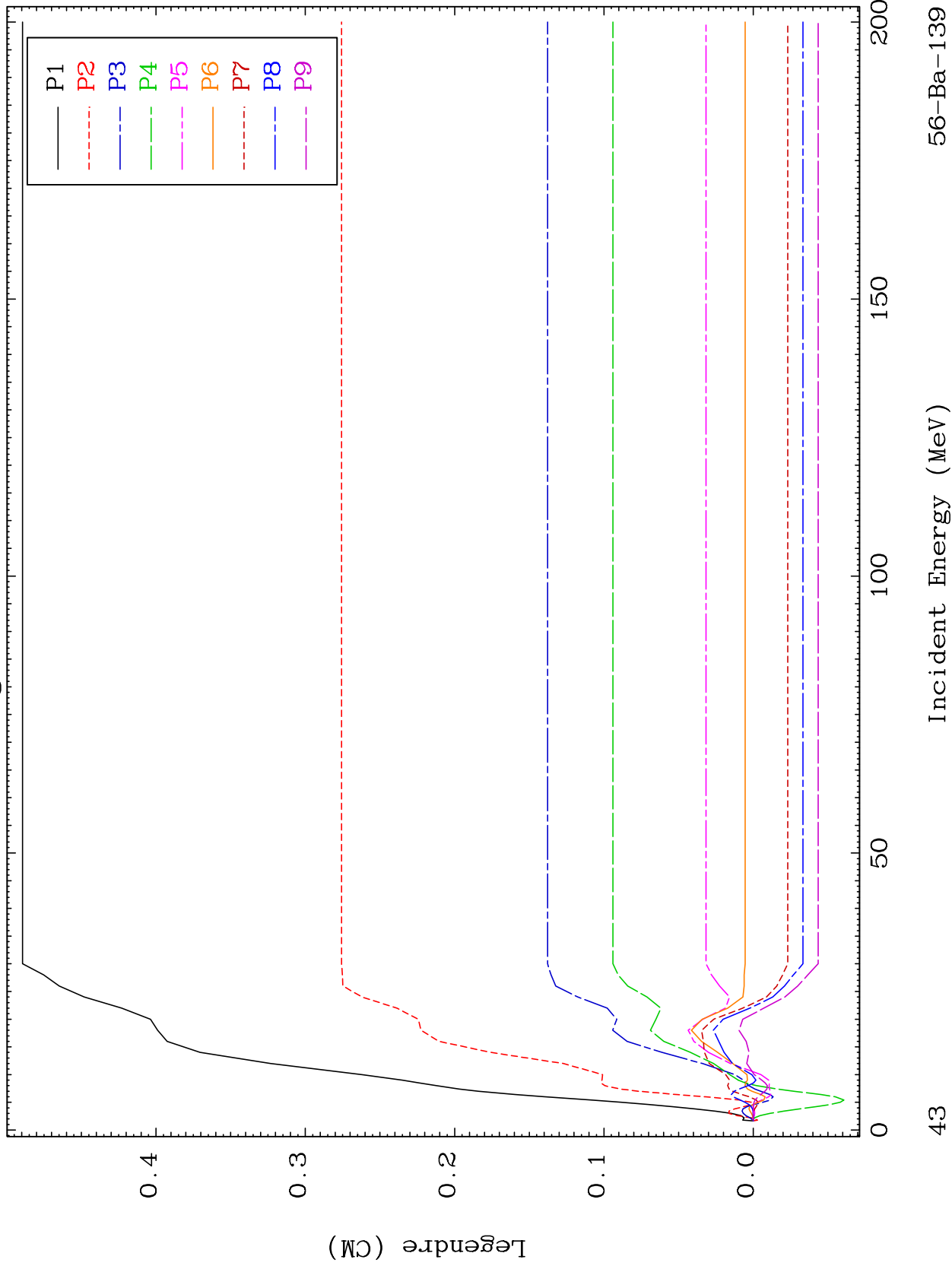
56-Ba-139



MAT 5652

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

56-Ba-139



56-Ba-139

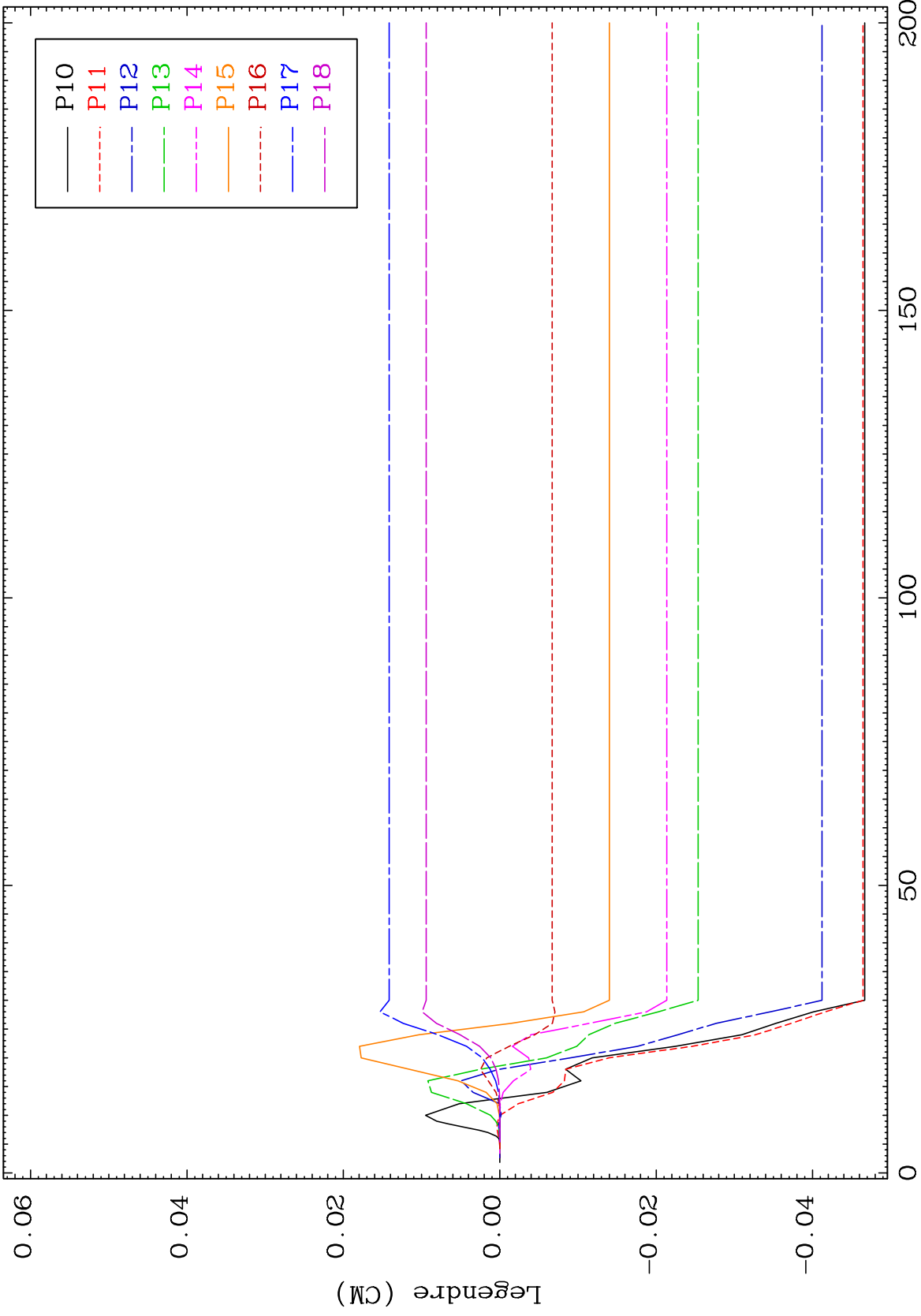
Incident Energy (MeV)

43

MAT 5652

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

56-Ba-139



44

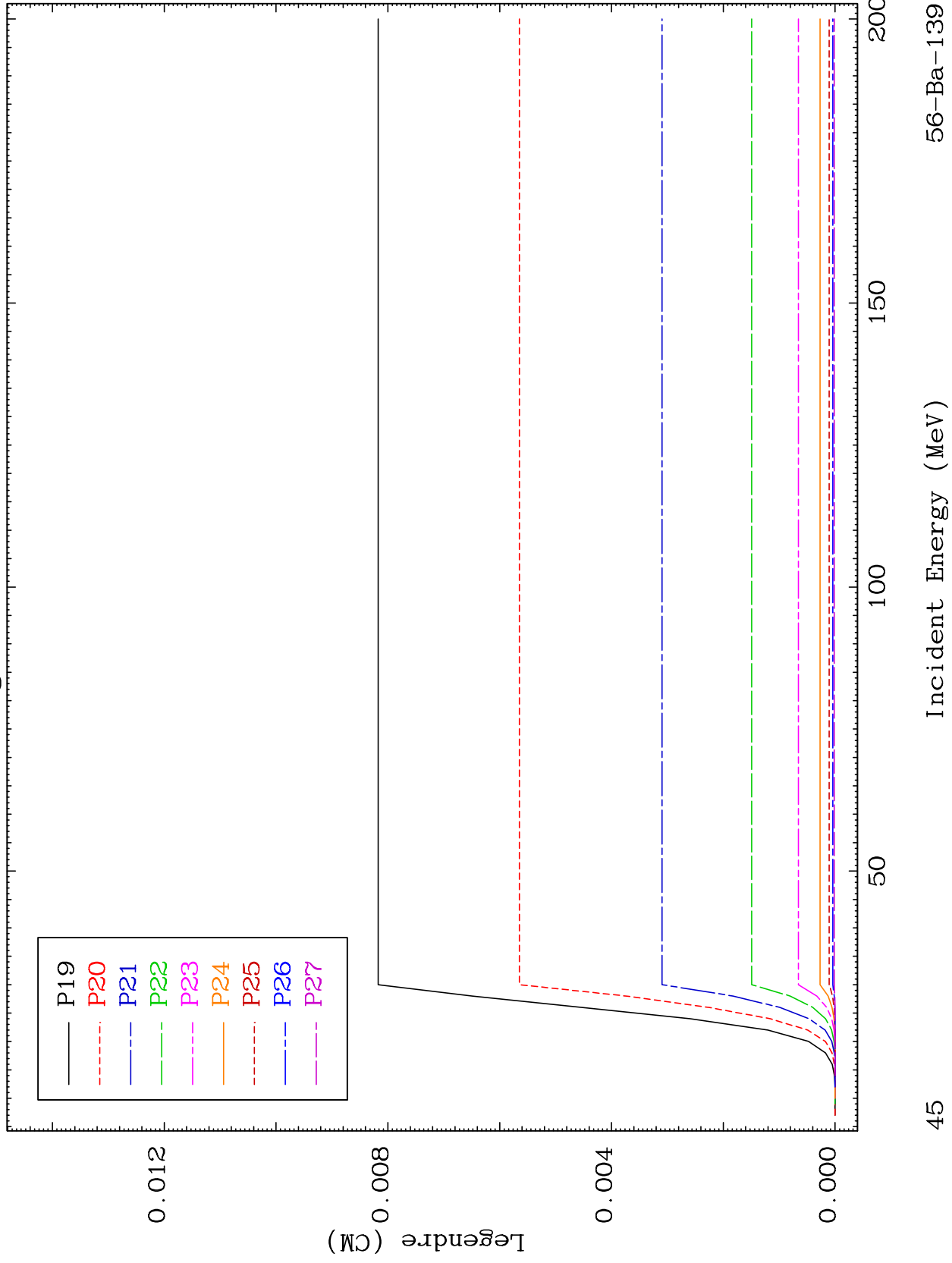
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



56-Ba-139

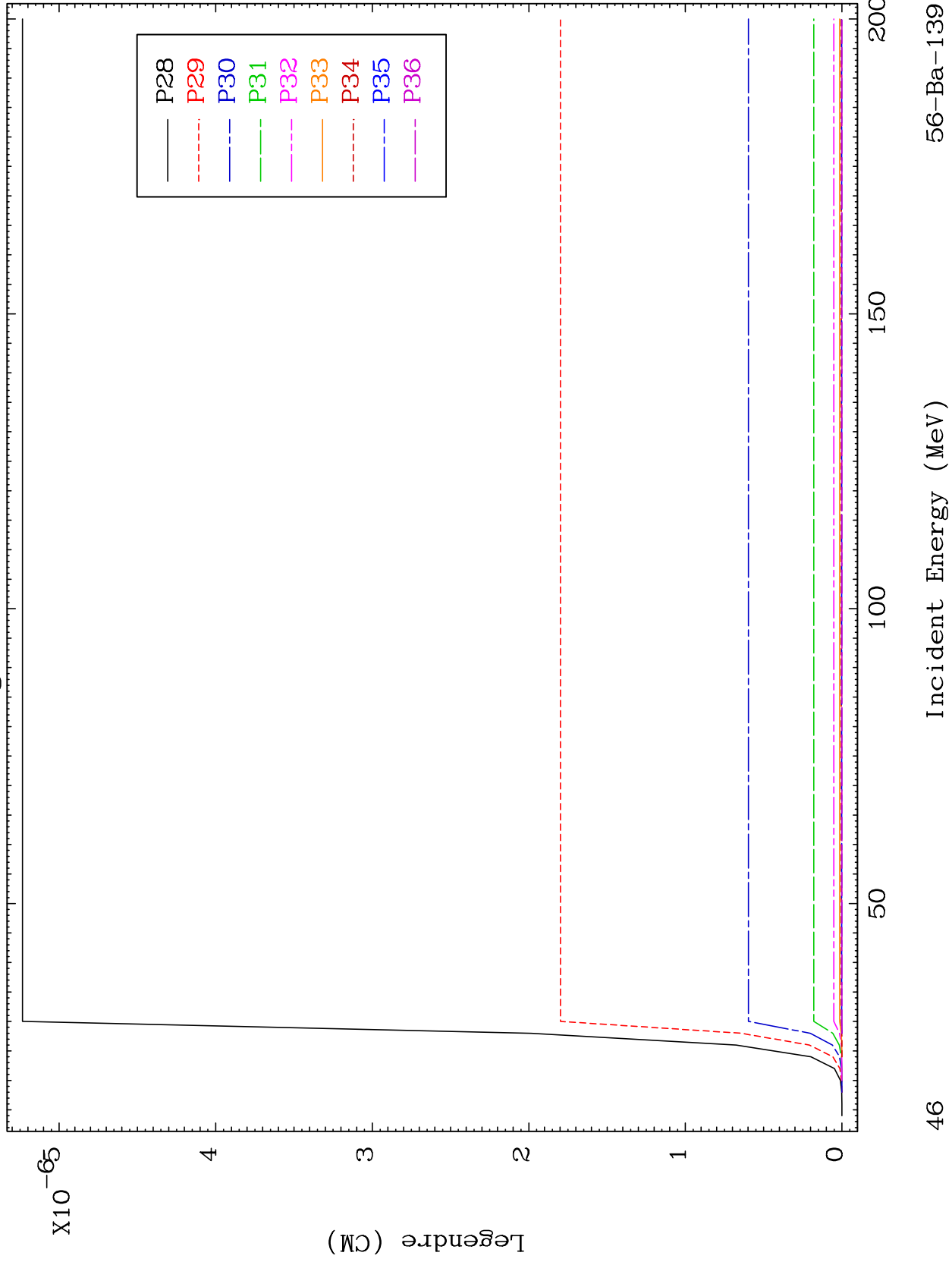
Incident Energy (MeV)

45

MAT 5652

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

56-Ba-139



46

Incident Energy (MeV)

56-Ba-139

200

150

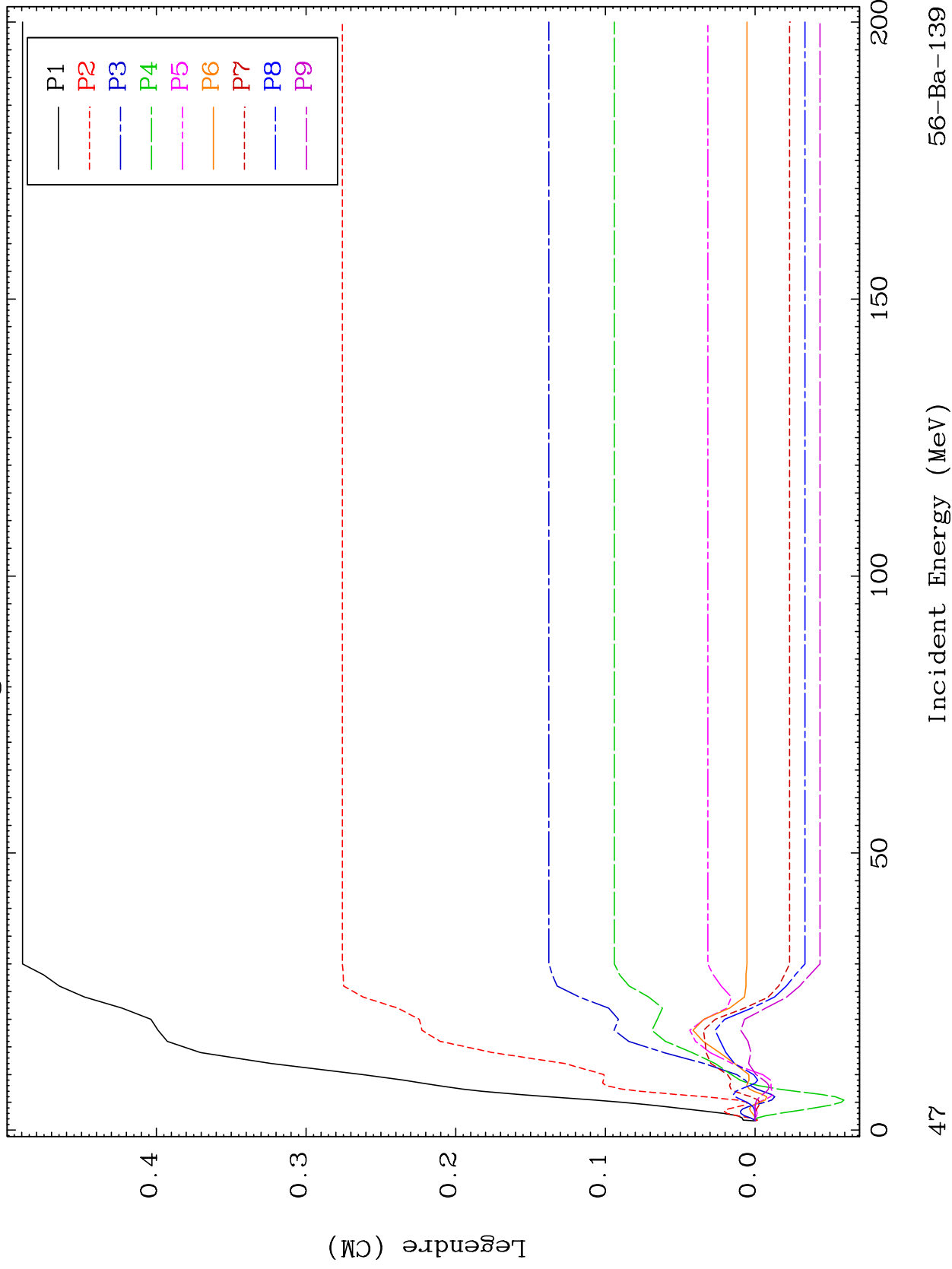
100

50

MAT 5652

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

56-Ba-139



56-Ba-139

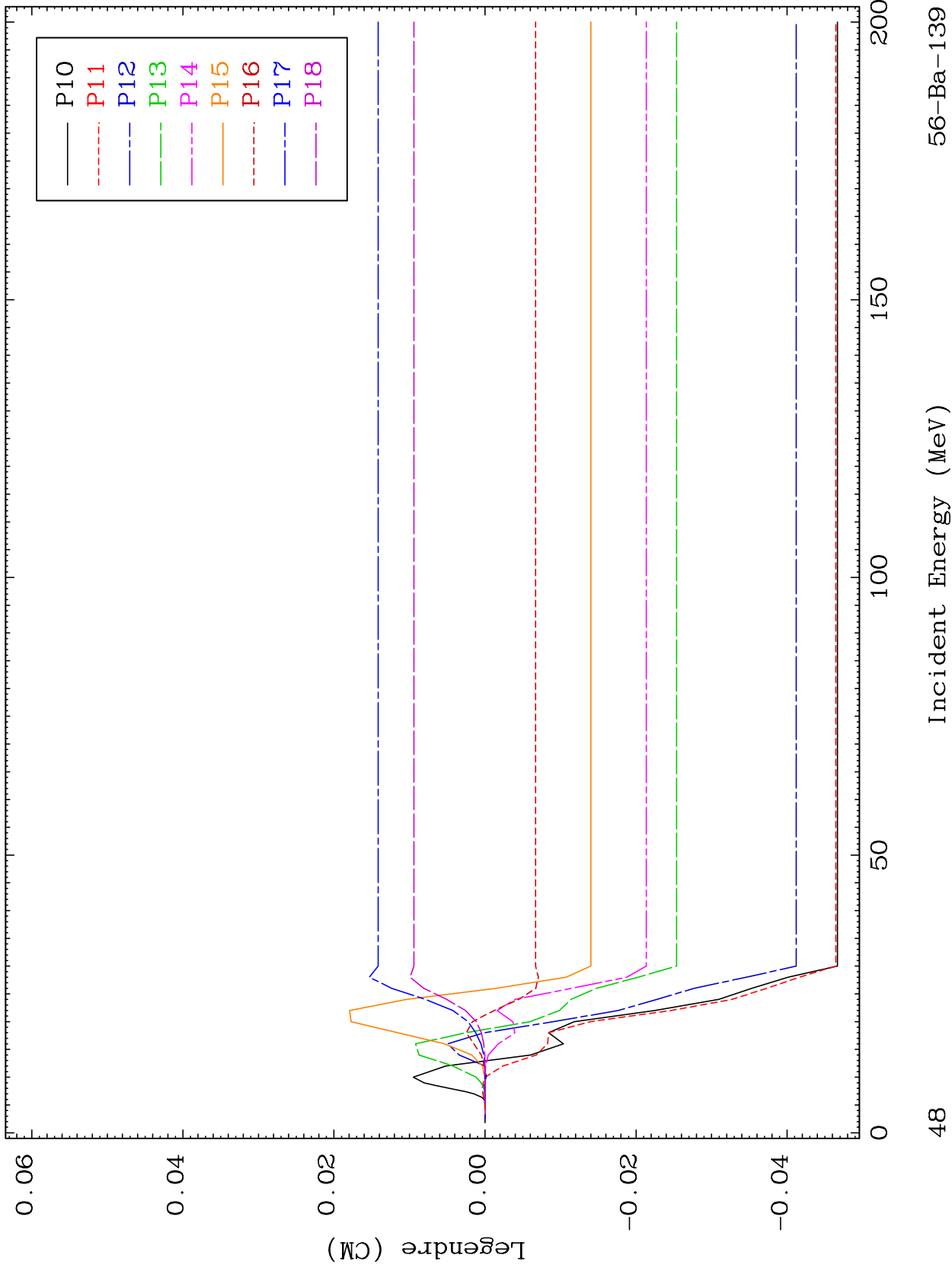
Incident Energy (MeV)

47

MAT 5652

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

56-Ba-139



56-Ba-139

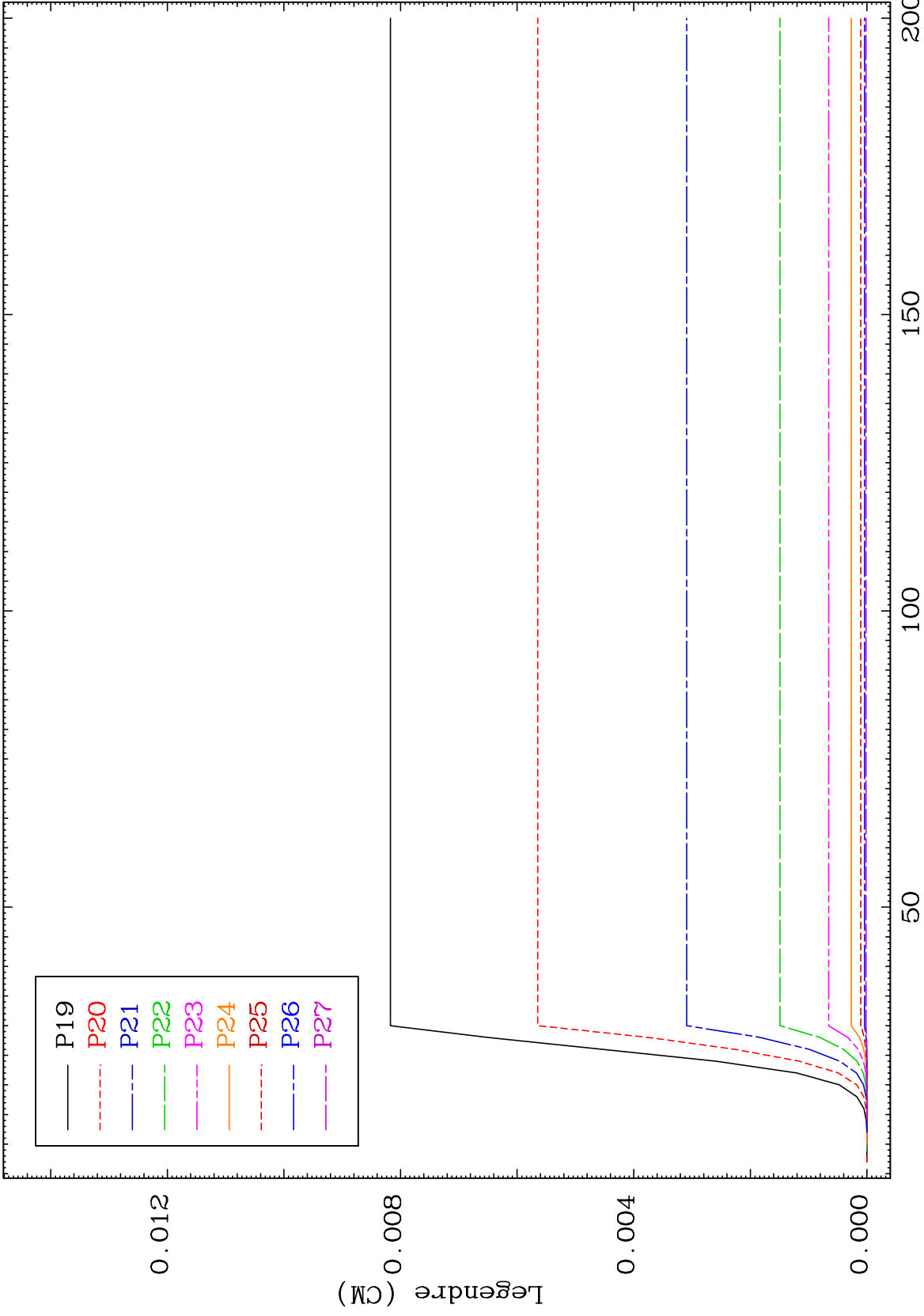
Incident Energy (MeV)

48

MAT 5652

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

56-Ba-139



49

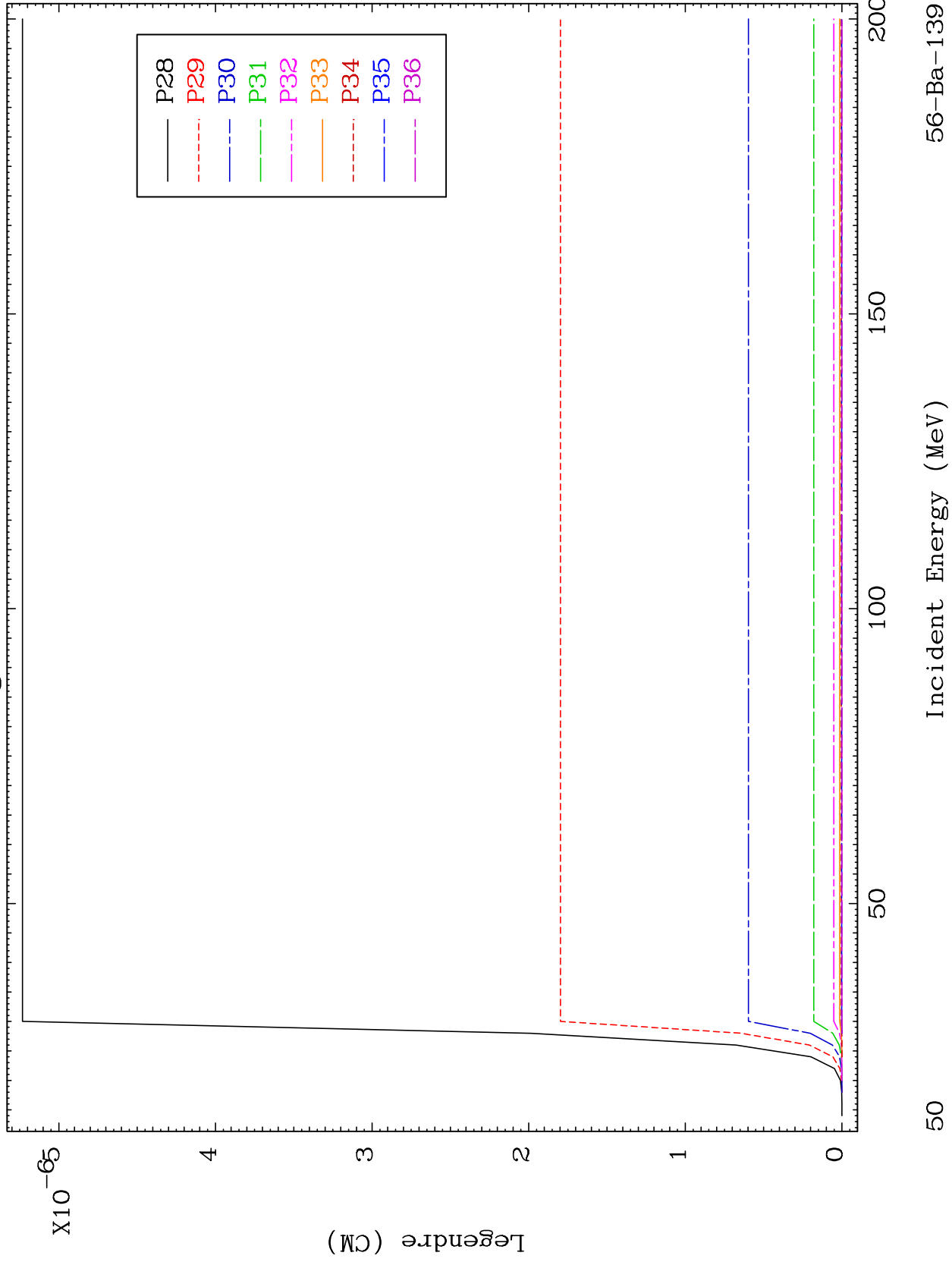
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

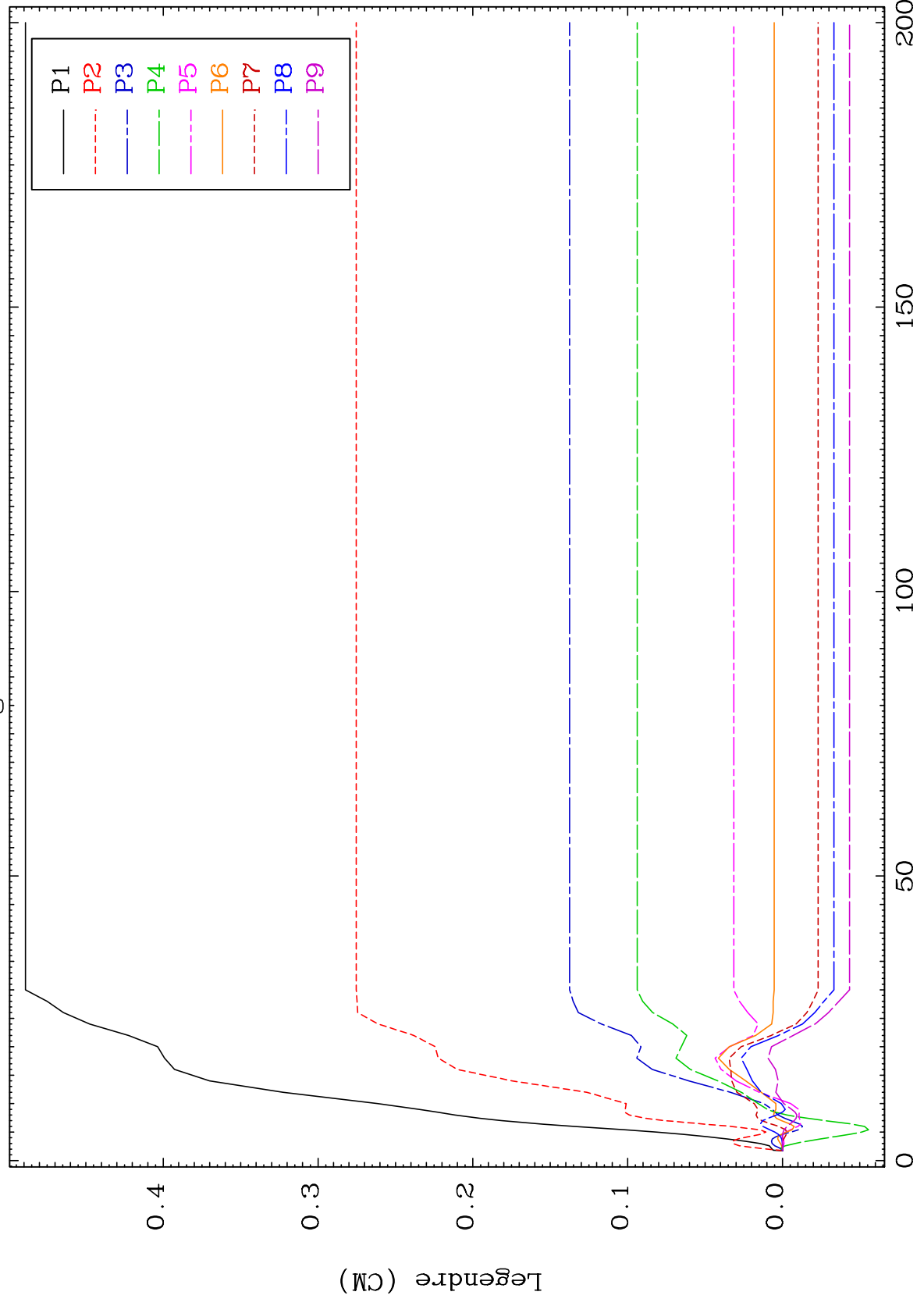
56-Ba-139



MAT 5652

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

56-Ba-139



56-Ba-139

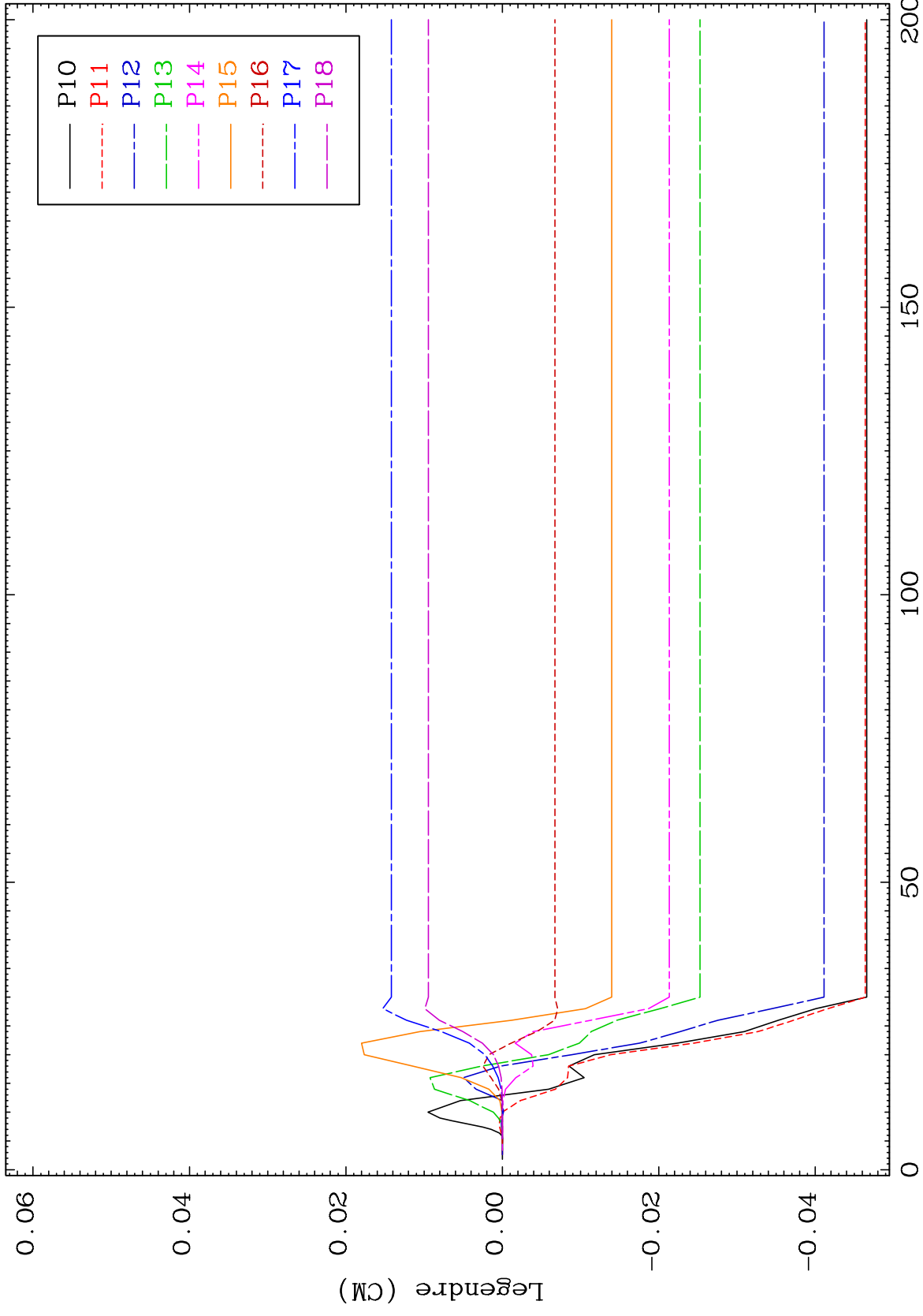
Incident Energy (MeV)

51

MAT 5652

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

56-Ba-139



52

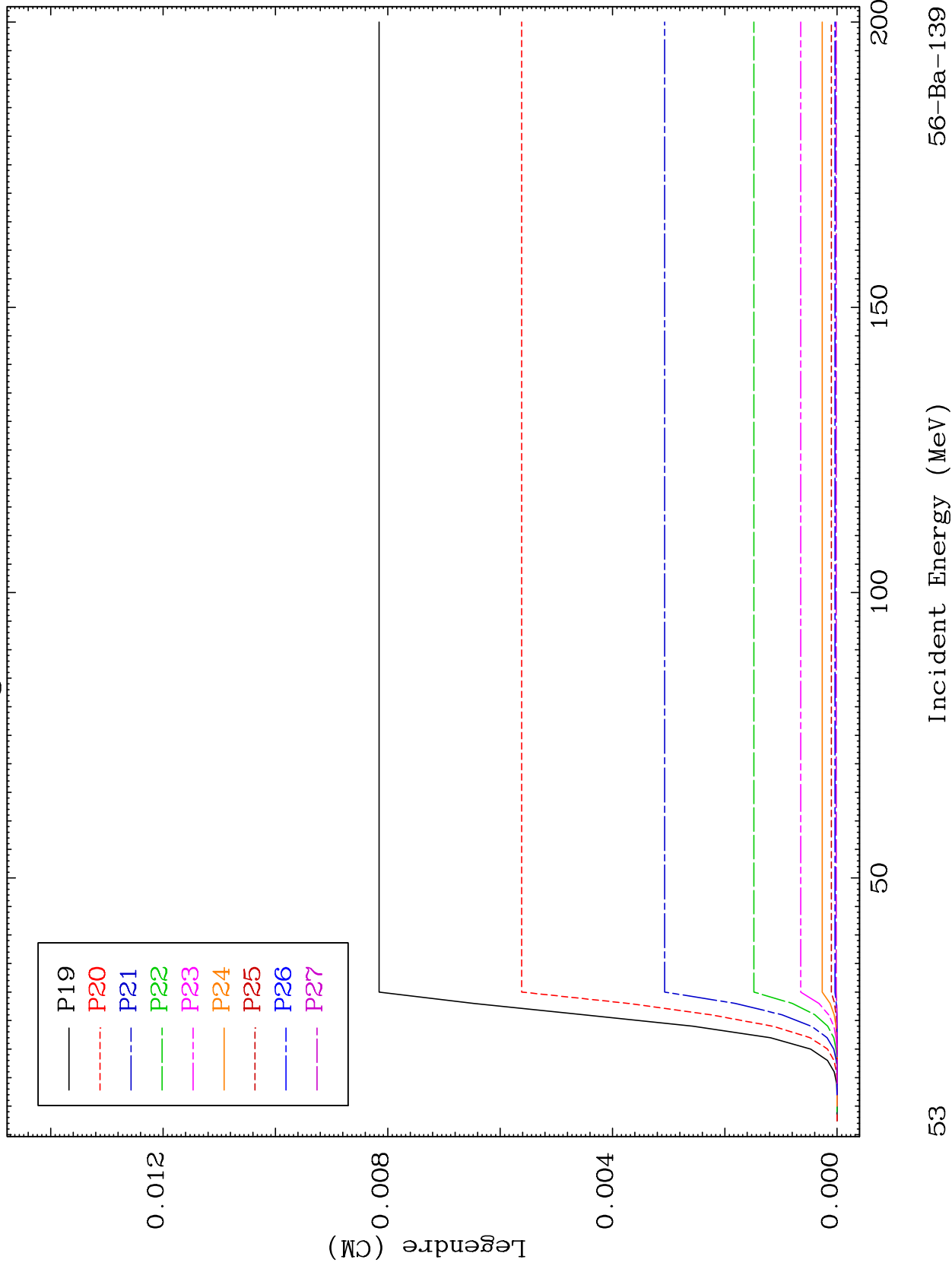
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



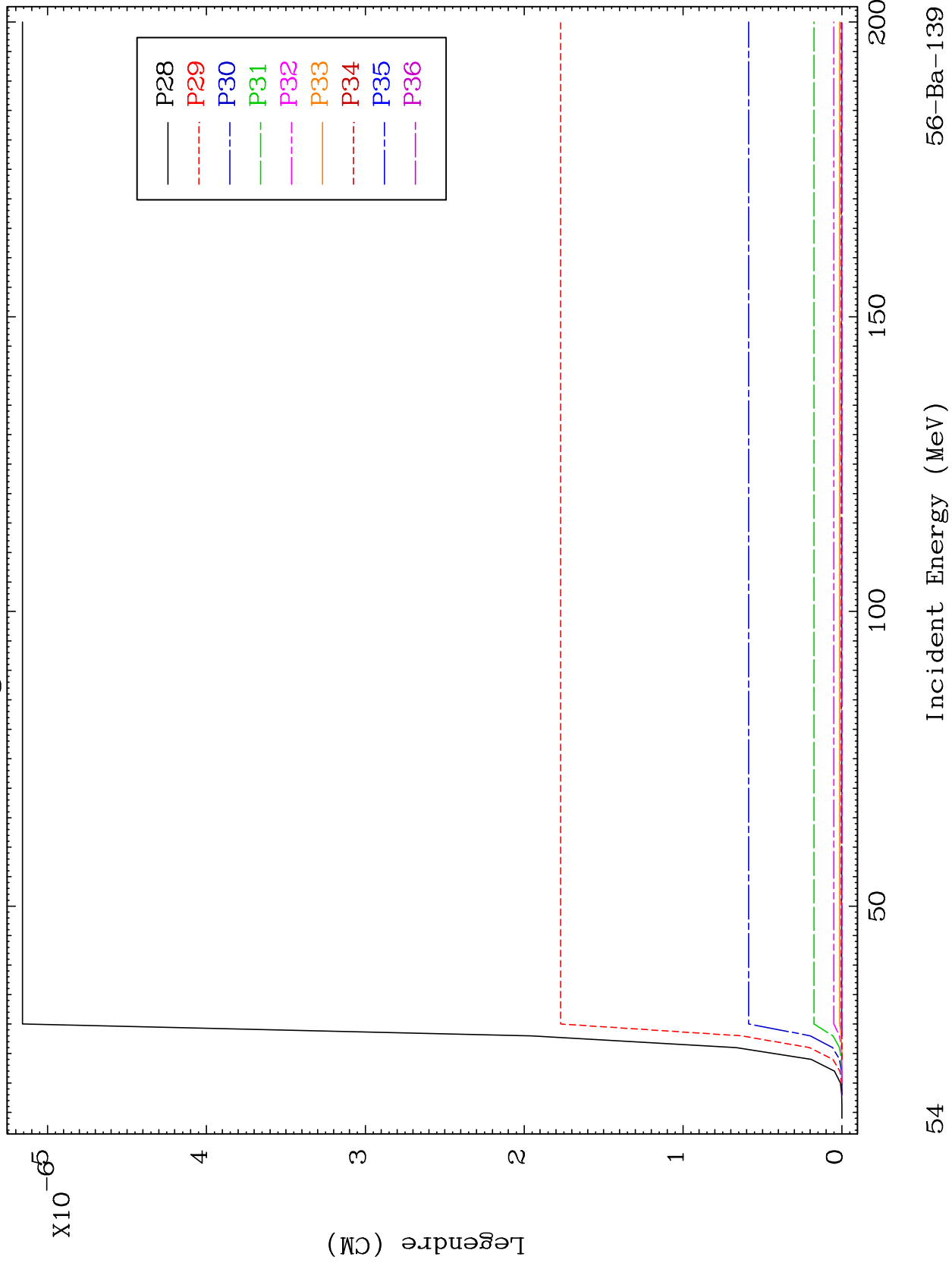
53

56-Ba-139

MAT 5652

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

56-Ba-139



54

Incident Energy (MeV)

56-Ba-139

MAT 5652

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

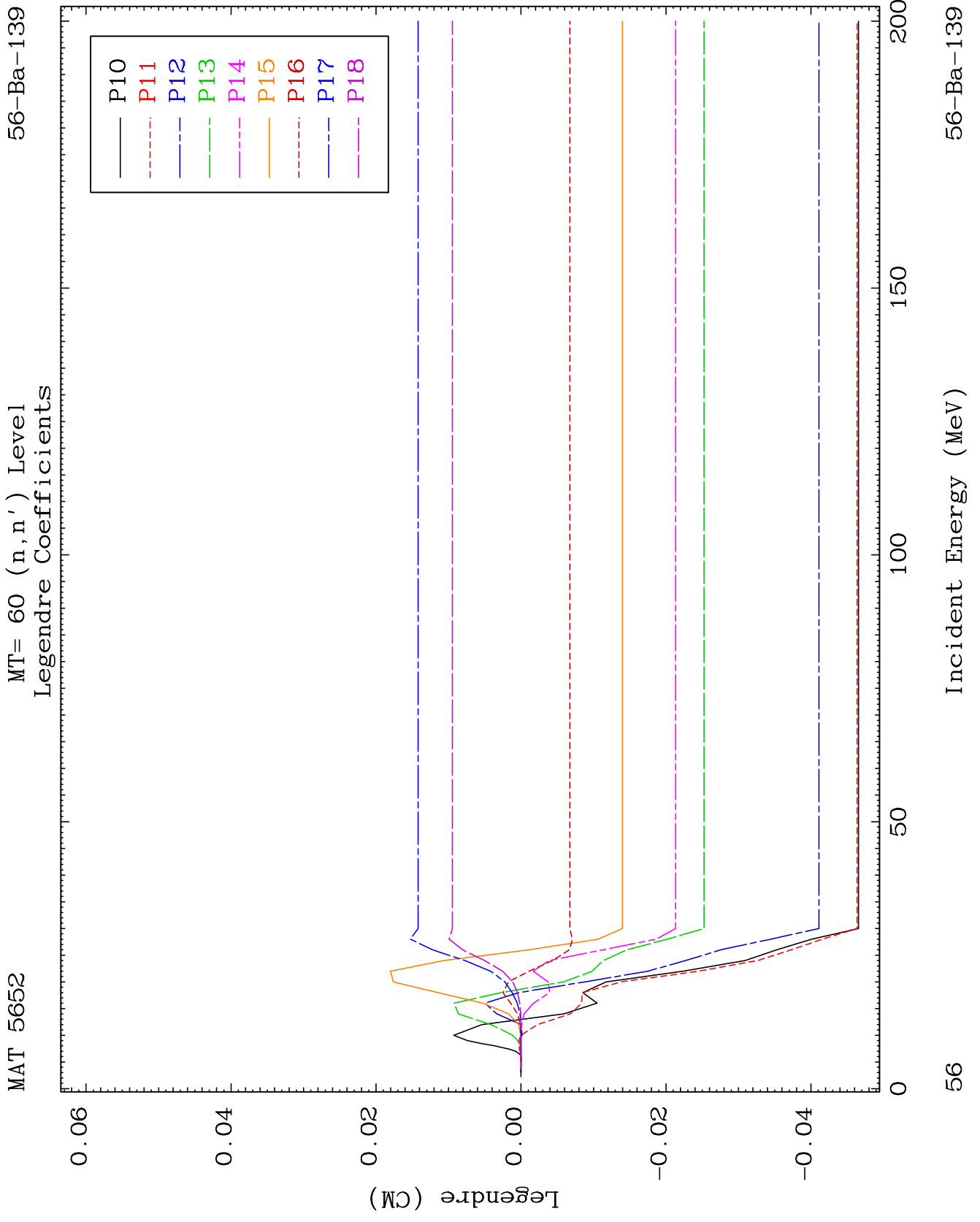
56-Ba-139



56-Ba-139

Incident Energy (MeV)

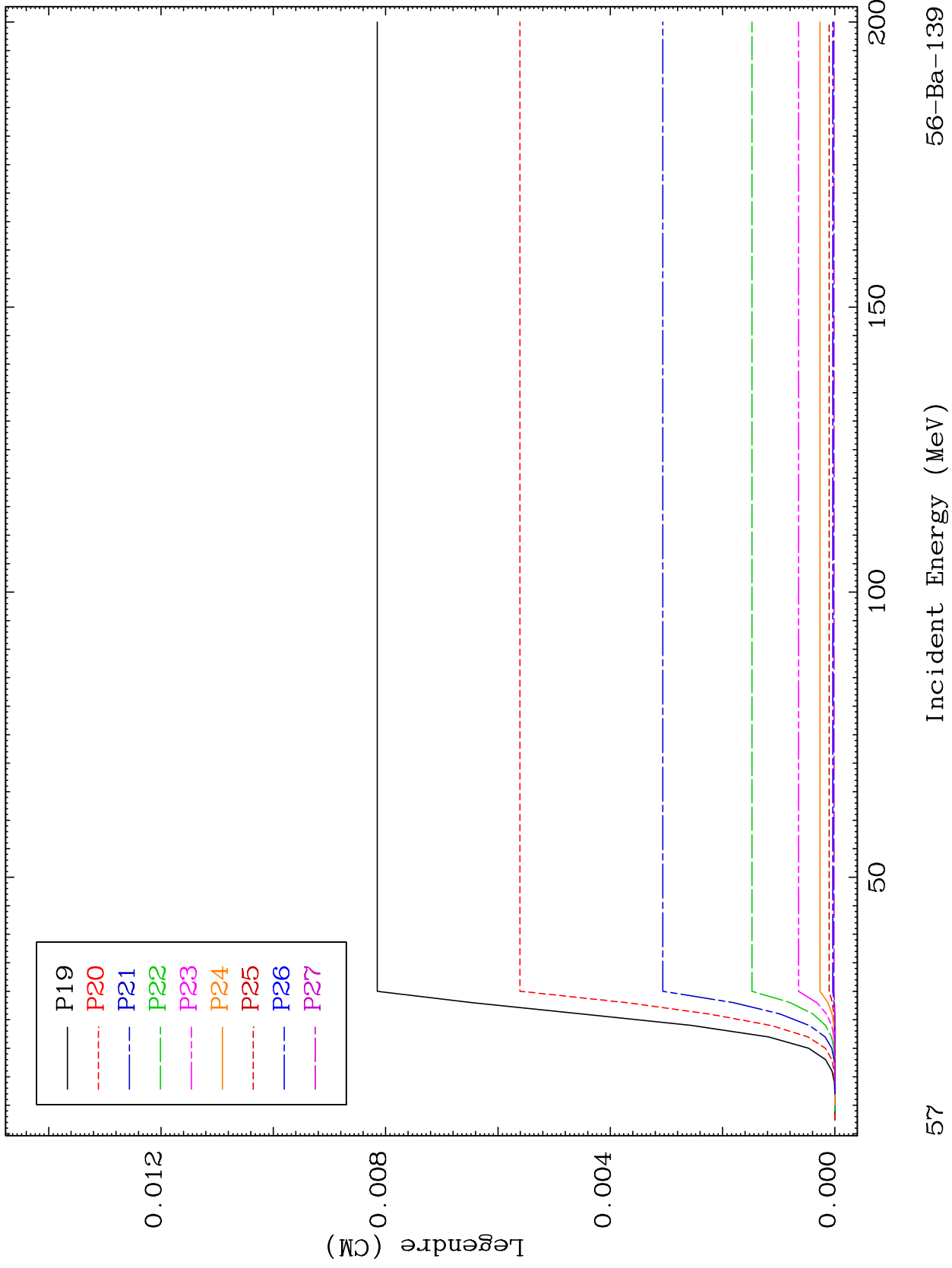
55



MAT 5652

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

56-Ba-139



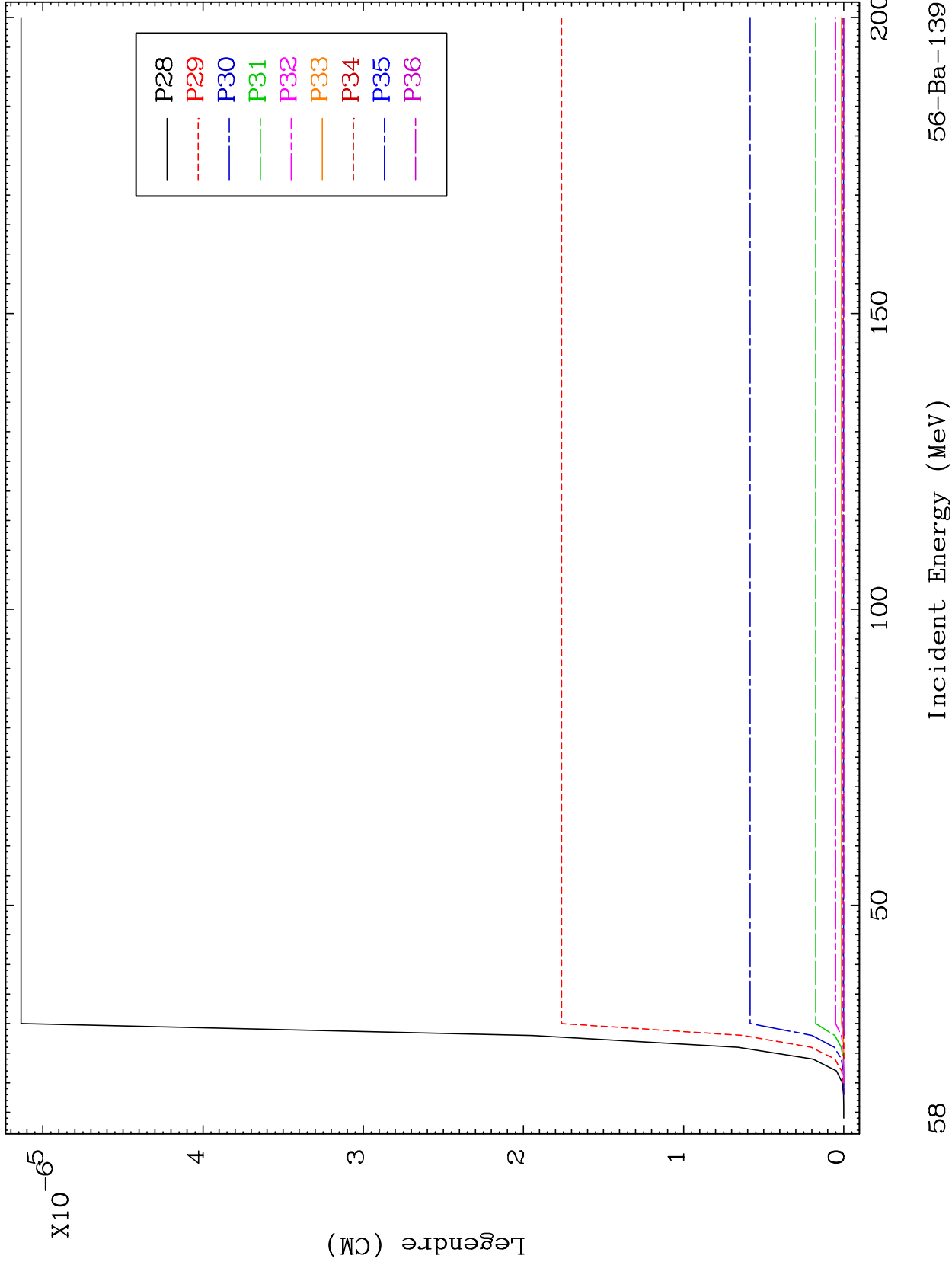
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56-Ba-139

MAT 5652

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

56-Ba-139



58

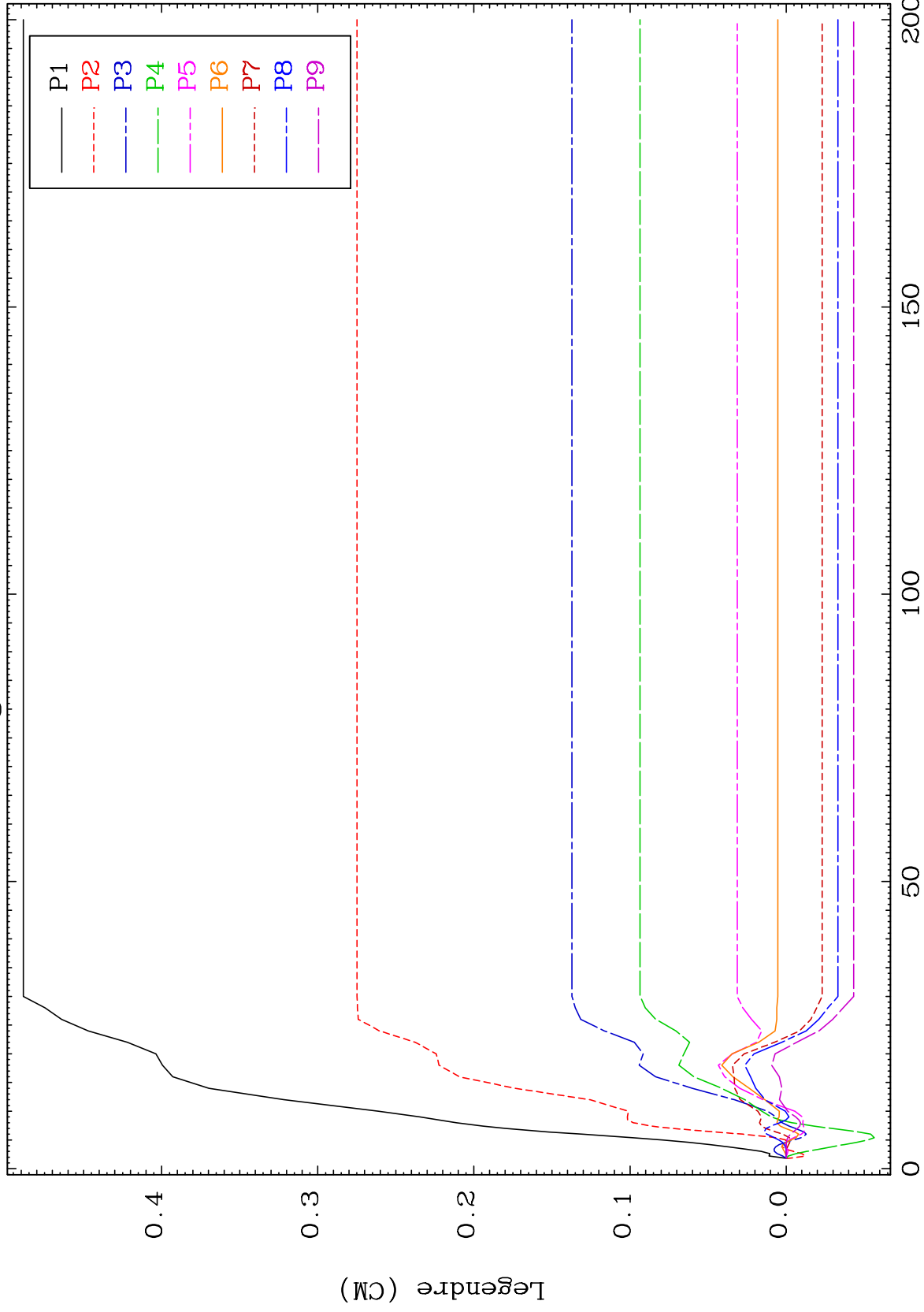
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

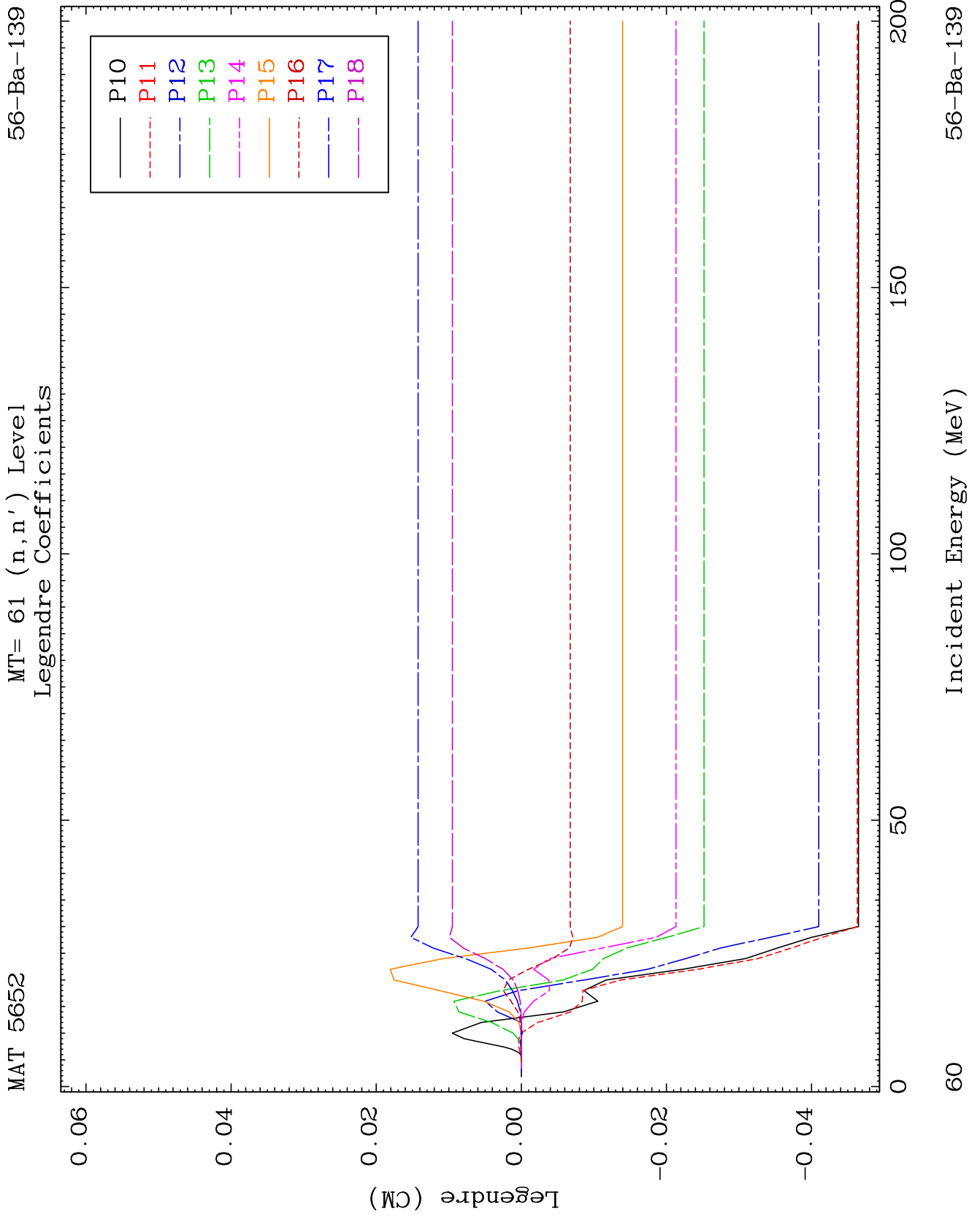
56-Ba-139



59

Incident Energy (MeV)

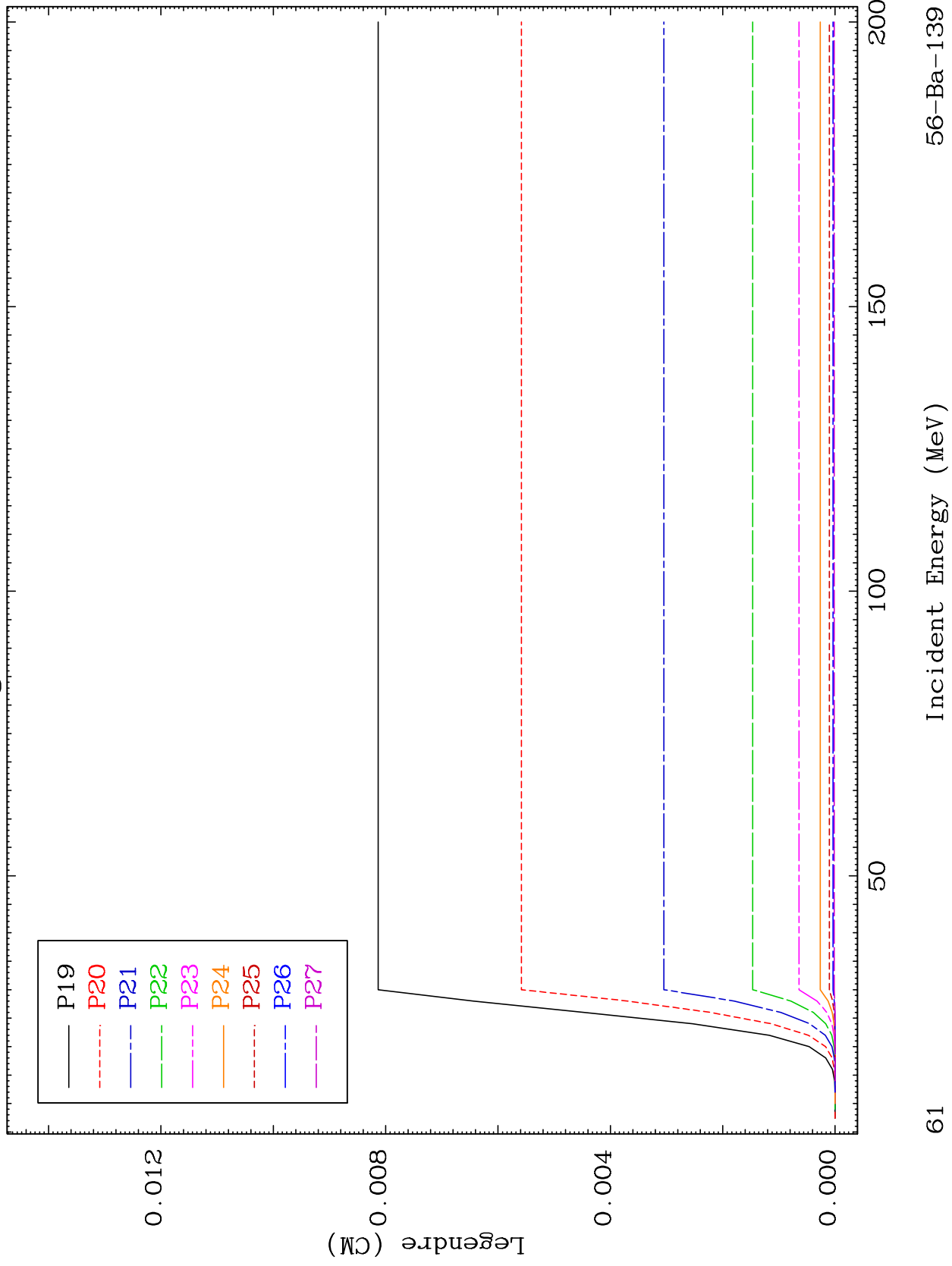
56-Ba-139



MAT 5652

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

56-Ba-139



61

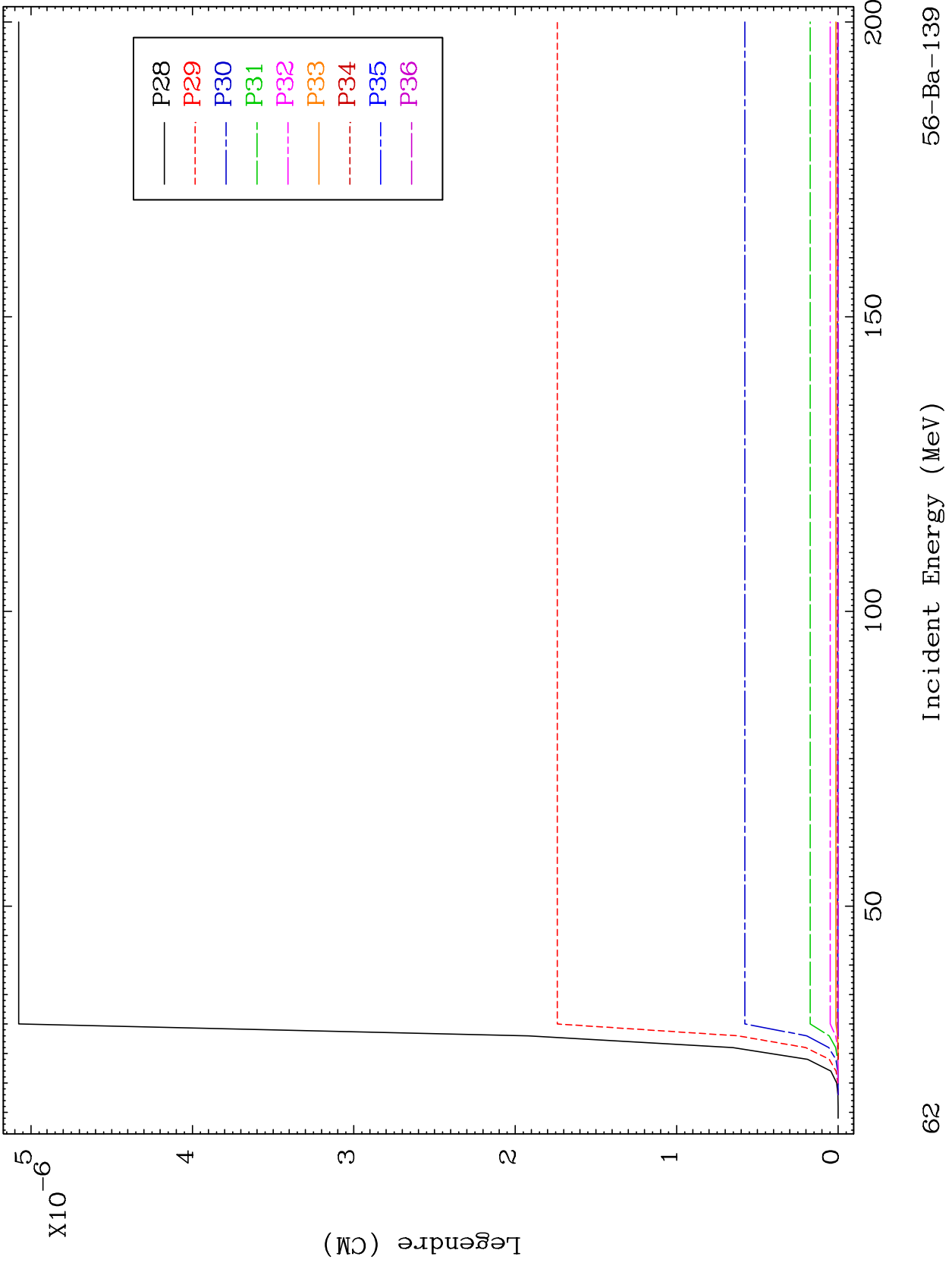
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



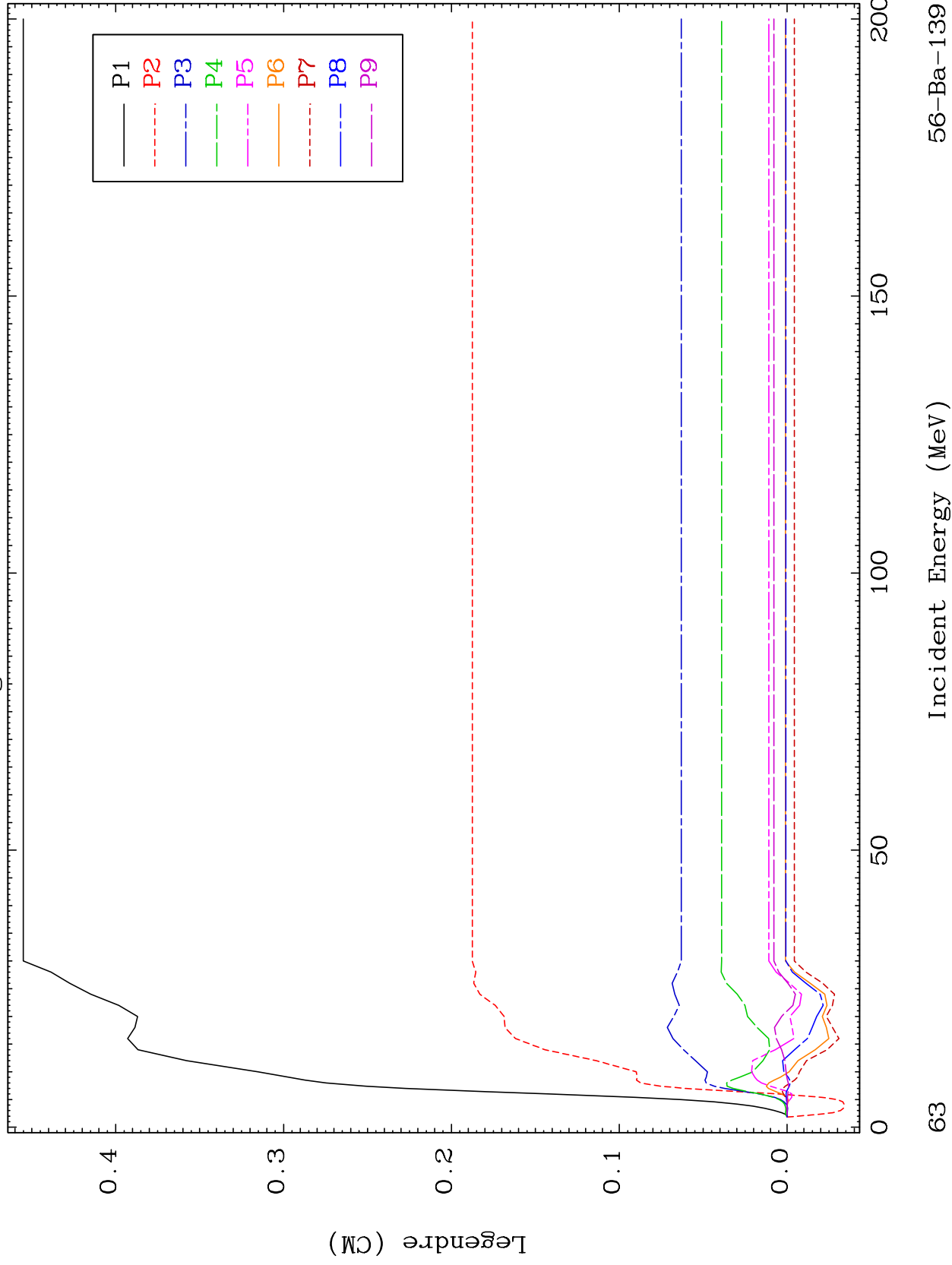
62

56-Ba-139

MAT 5652

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

56-Ba-139



56-Ba-139

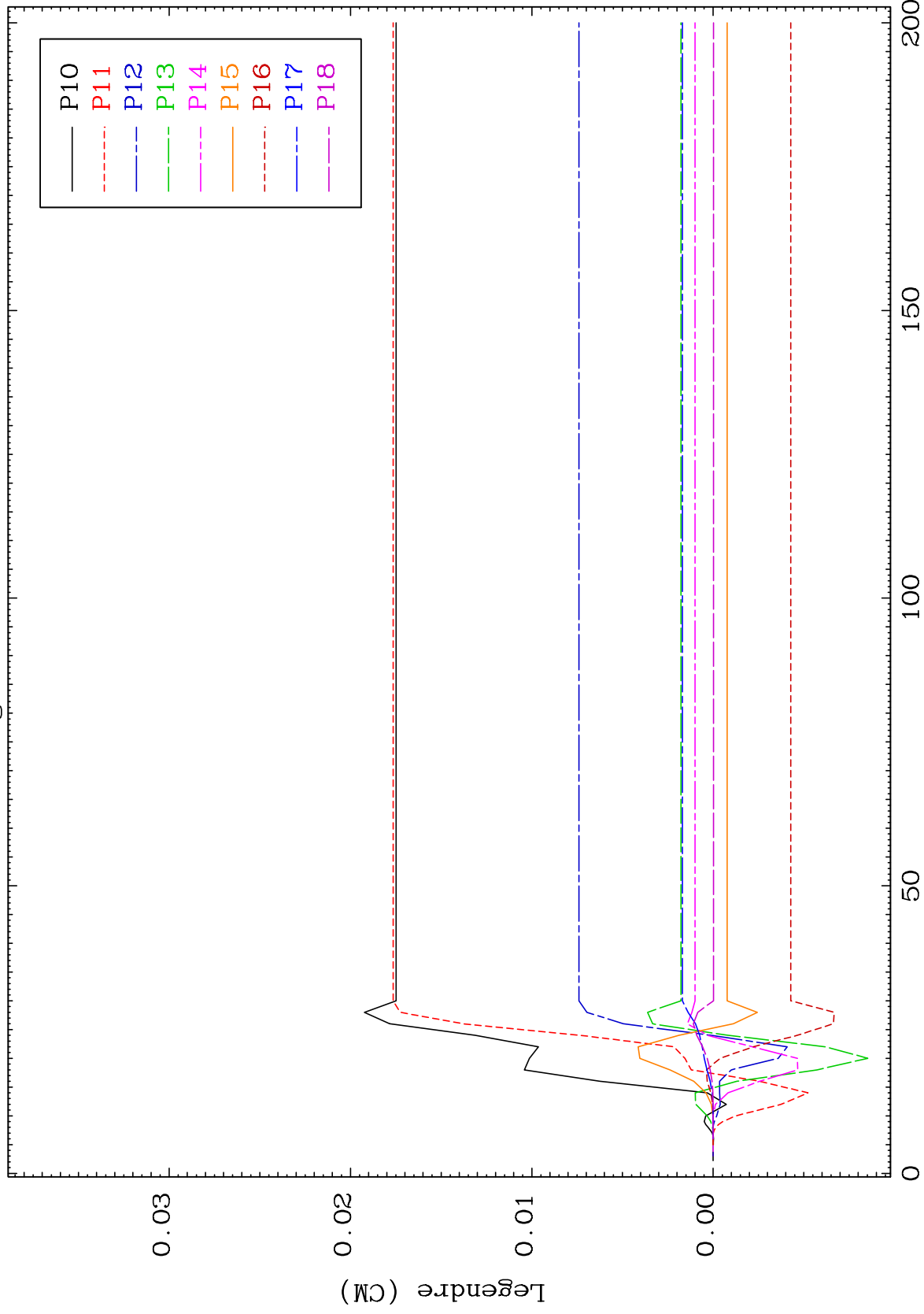
Incident Energy (MeV)

63

MAT 5652

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

56-Ba-139



64

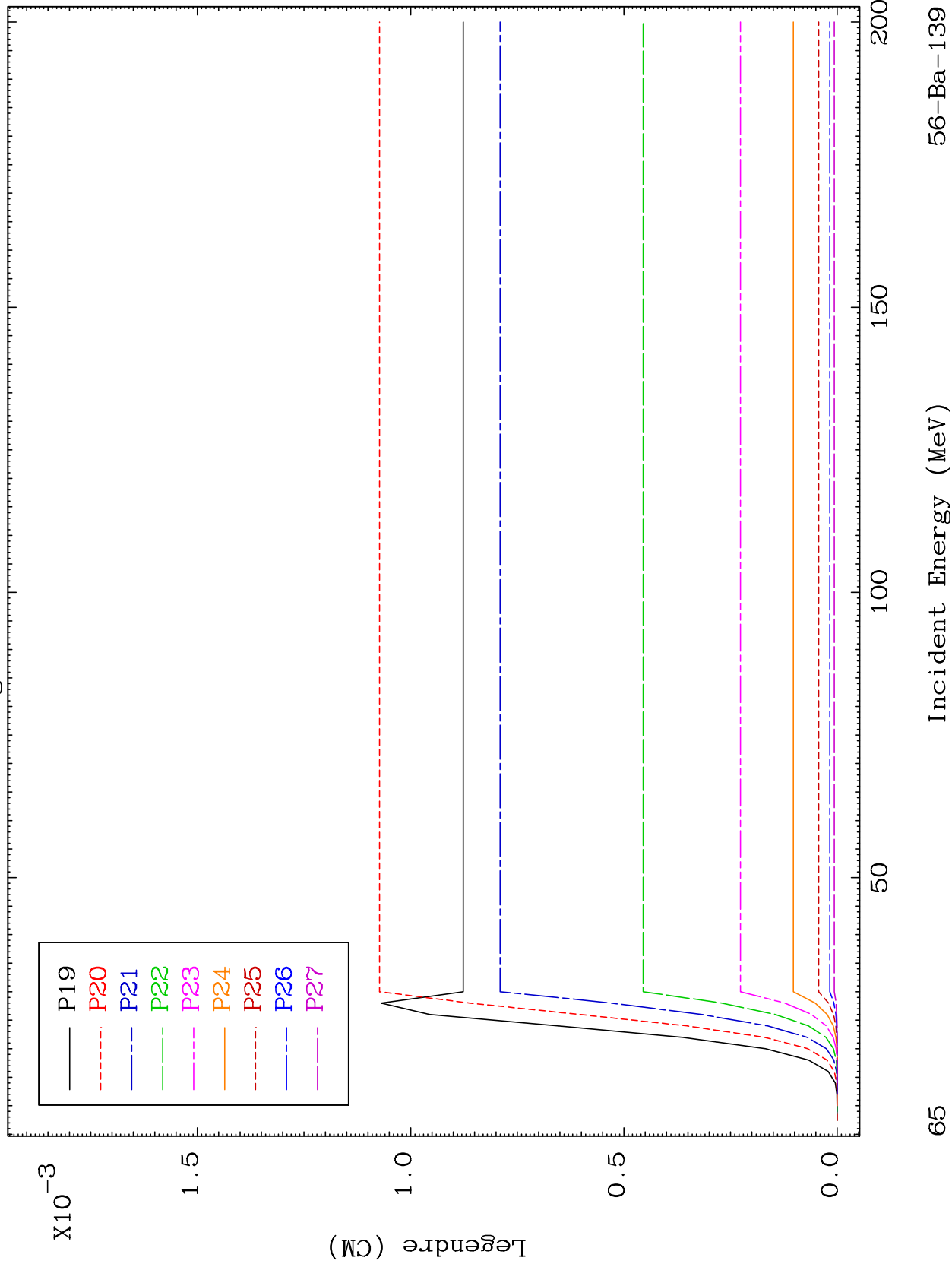
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



65

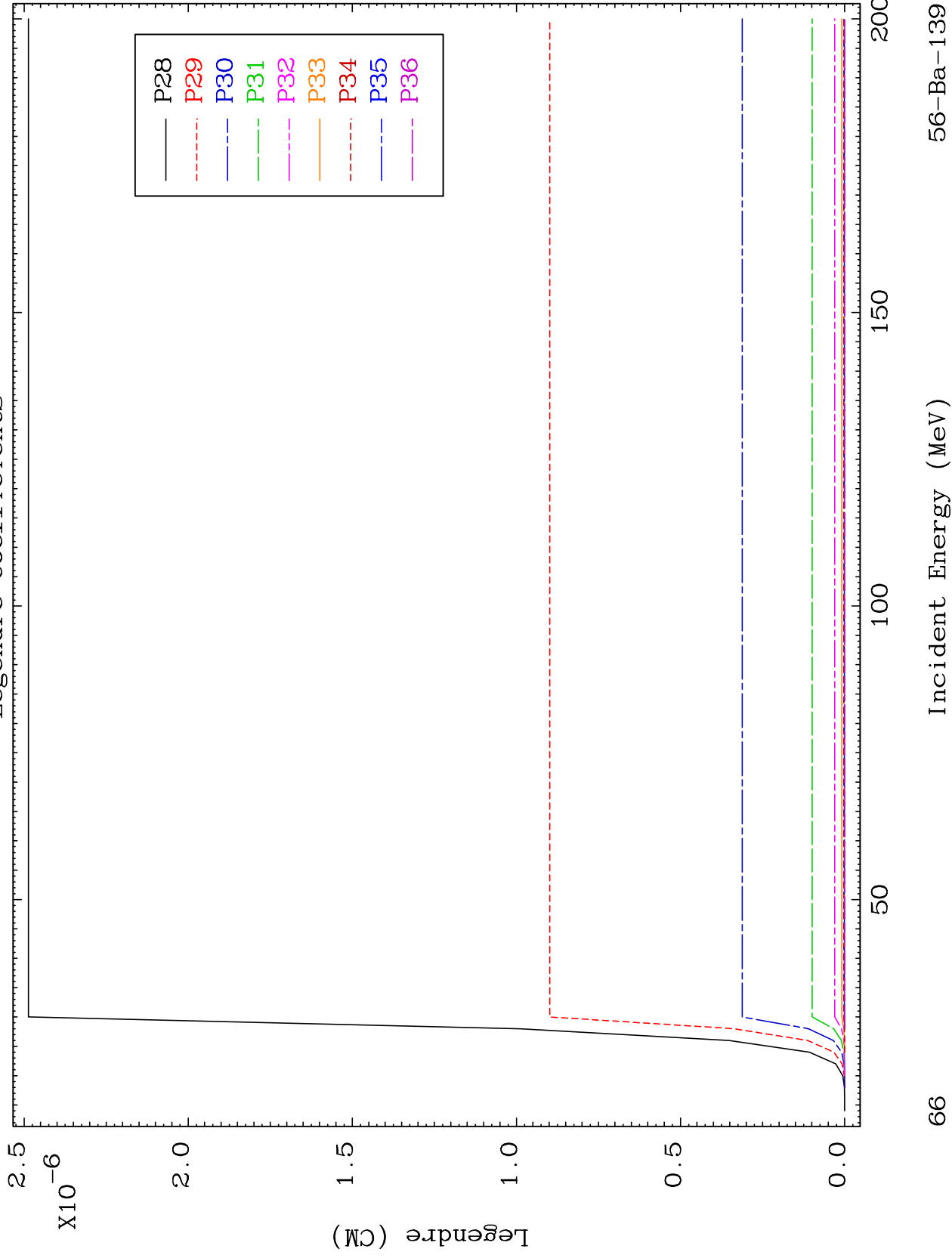
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

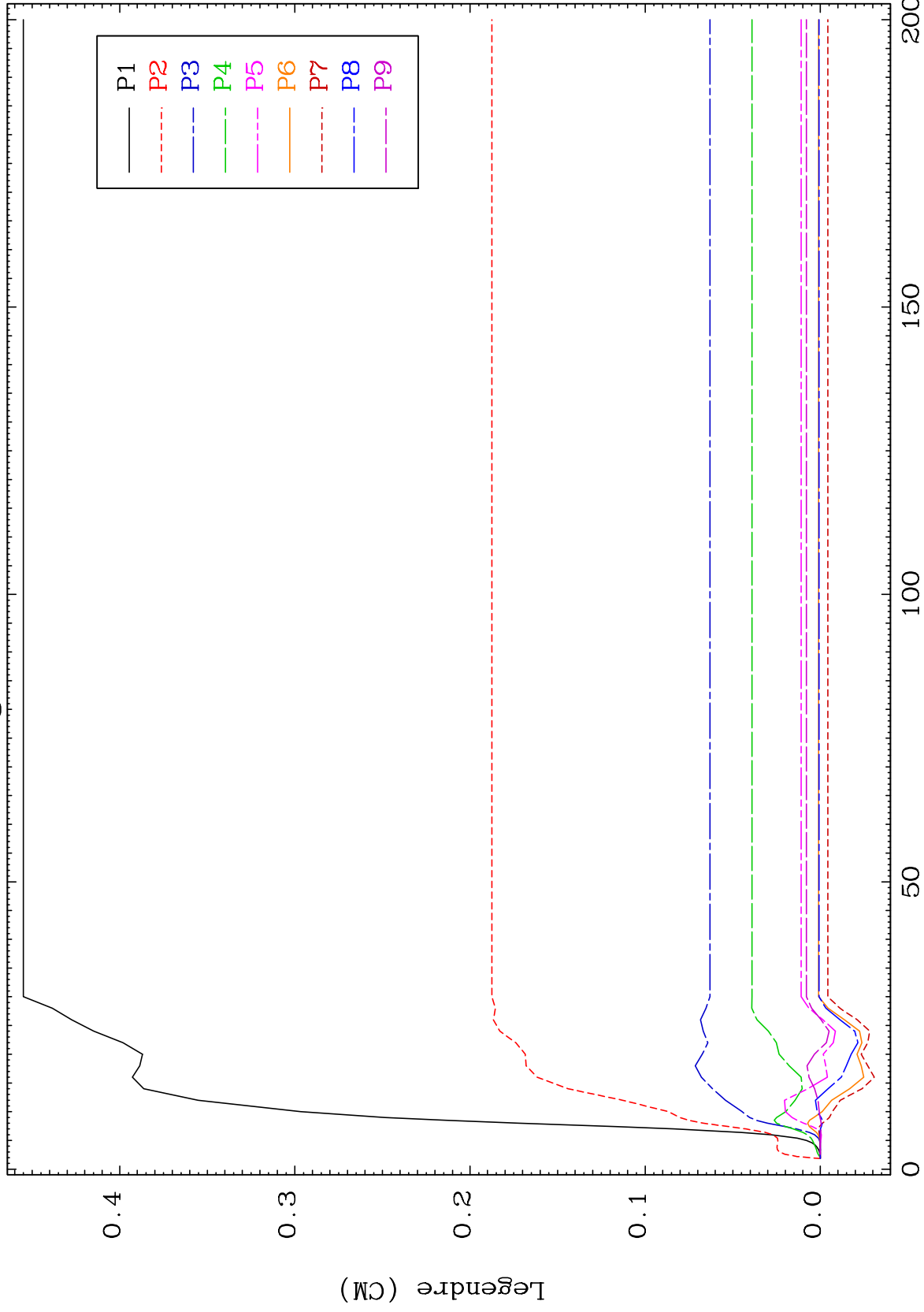
56-Ba-139



MAT 5652

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

56-Ba-139



56-Ba-139

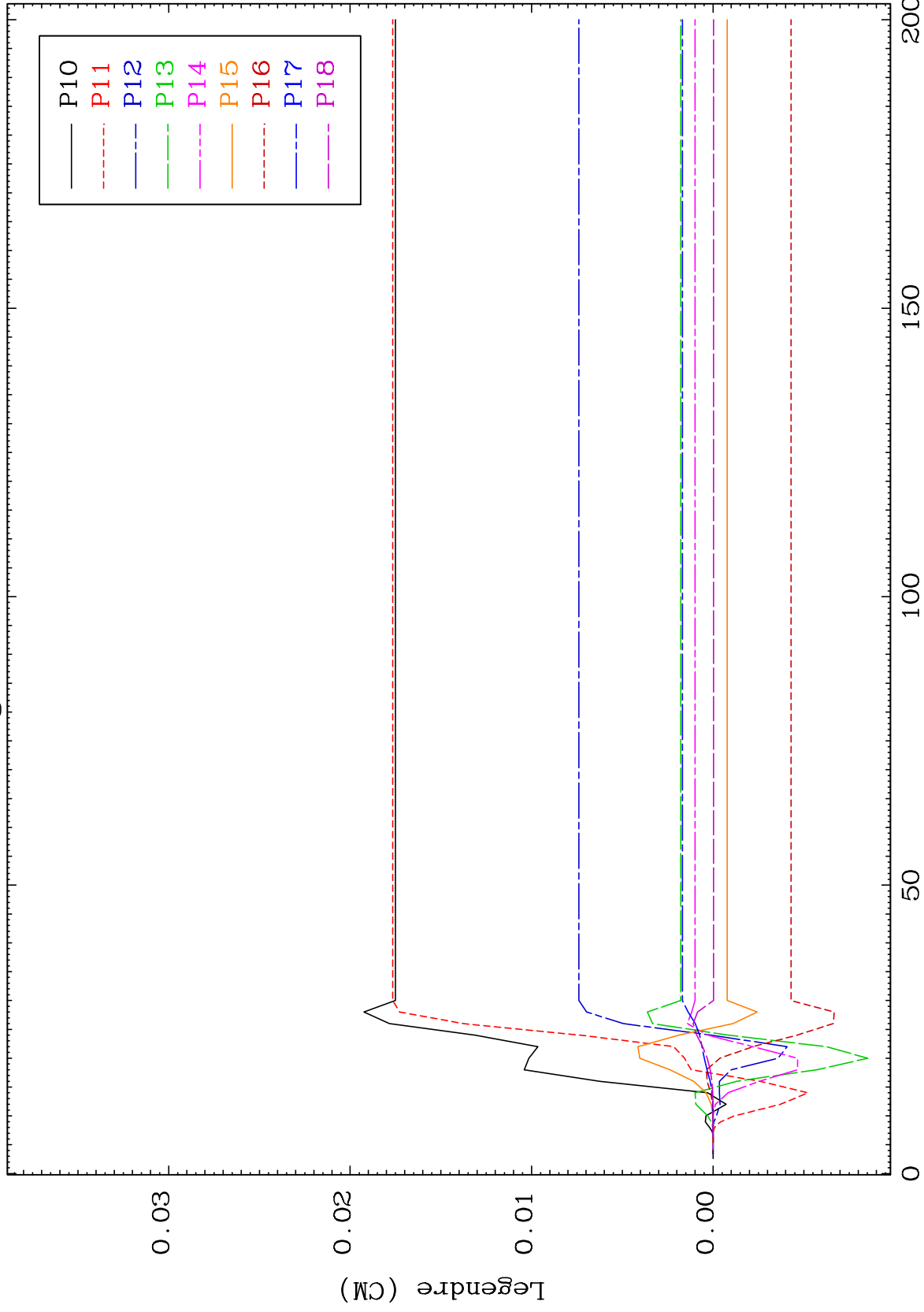
Incident Energy (MeV)

67

MAT 5652

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

56-Ba-139



68

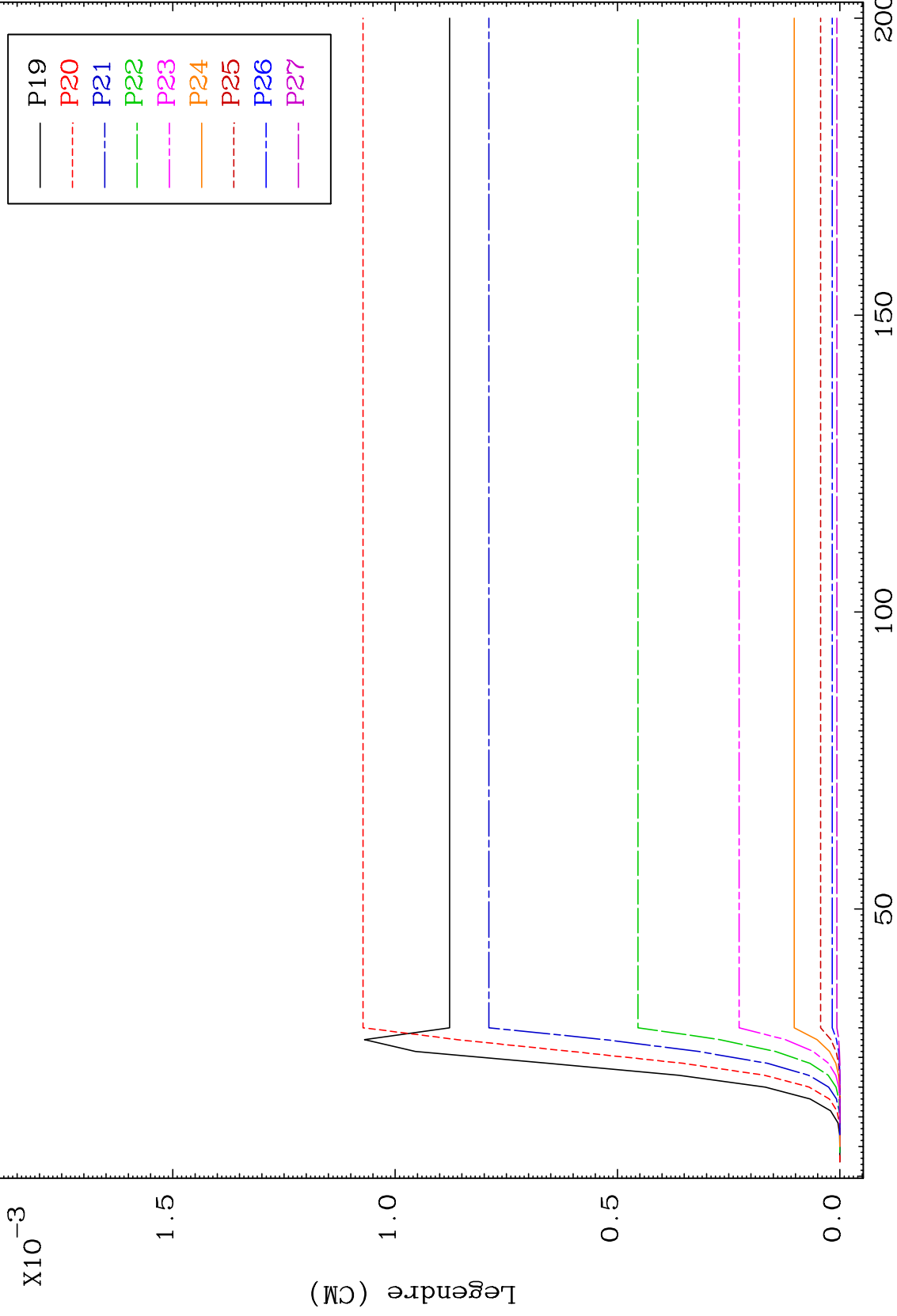
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



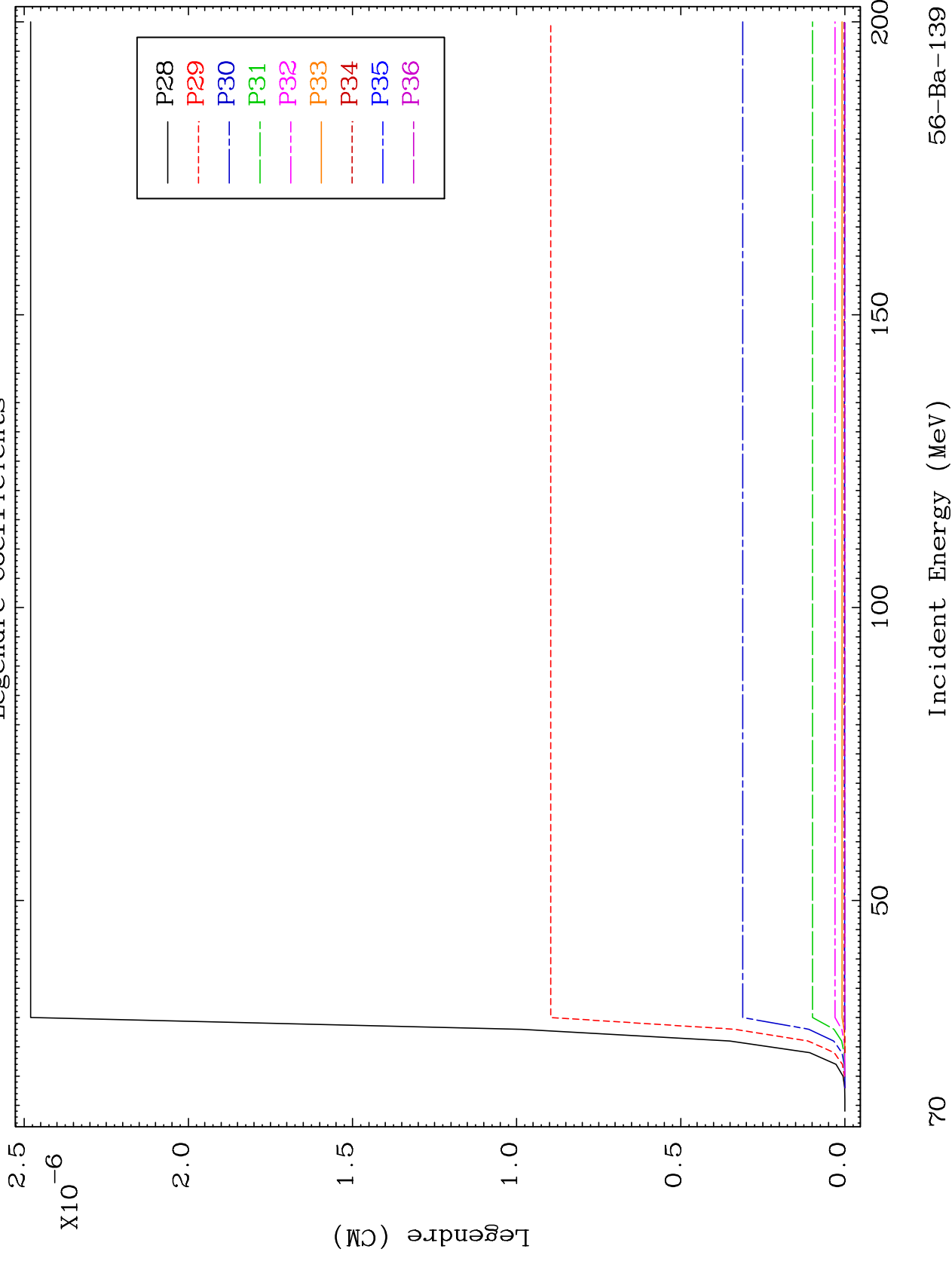
69

56-Ba-139

MAT 5652

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

56-Ba-139



56-Ba-139

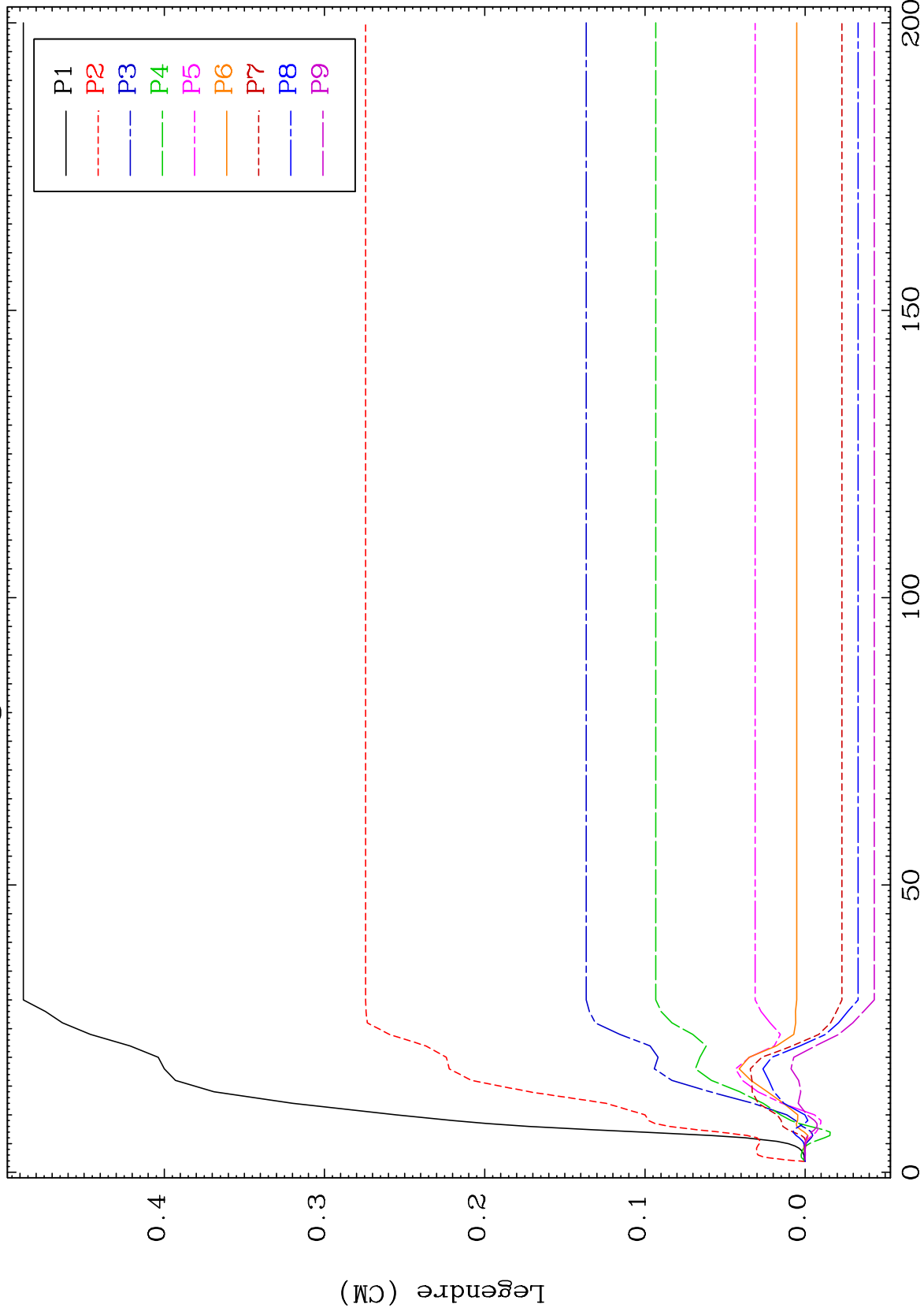
Incident Energy (MeV)

70

MAT 5652

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

56-Ba-139



71

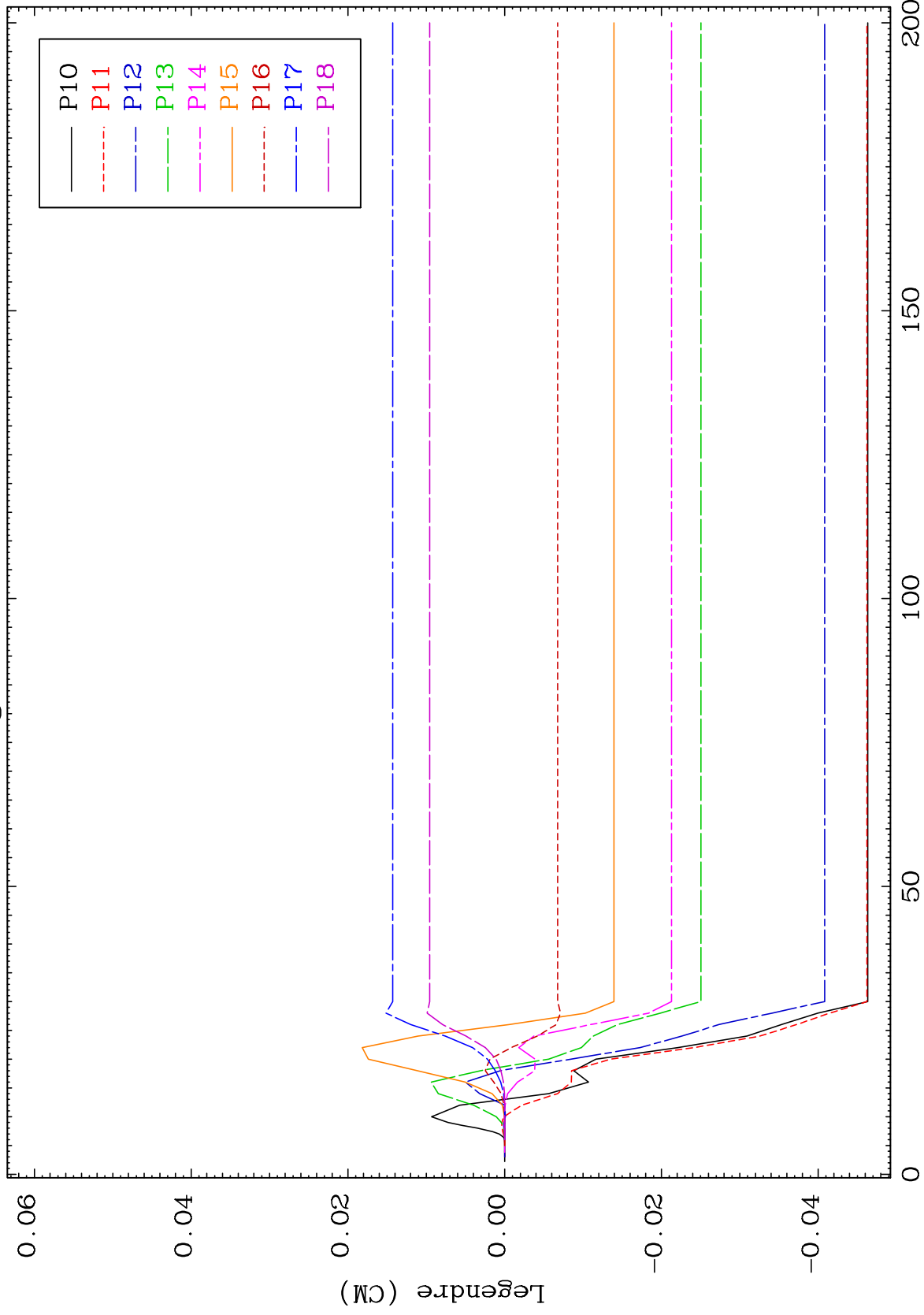
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



72

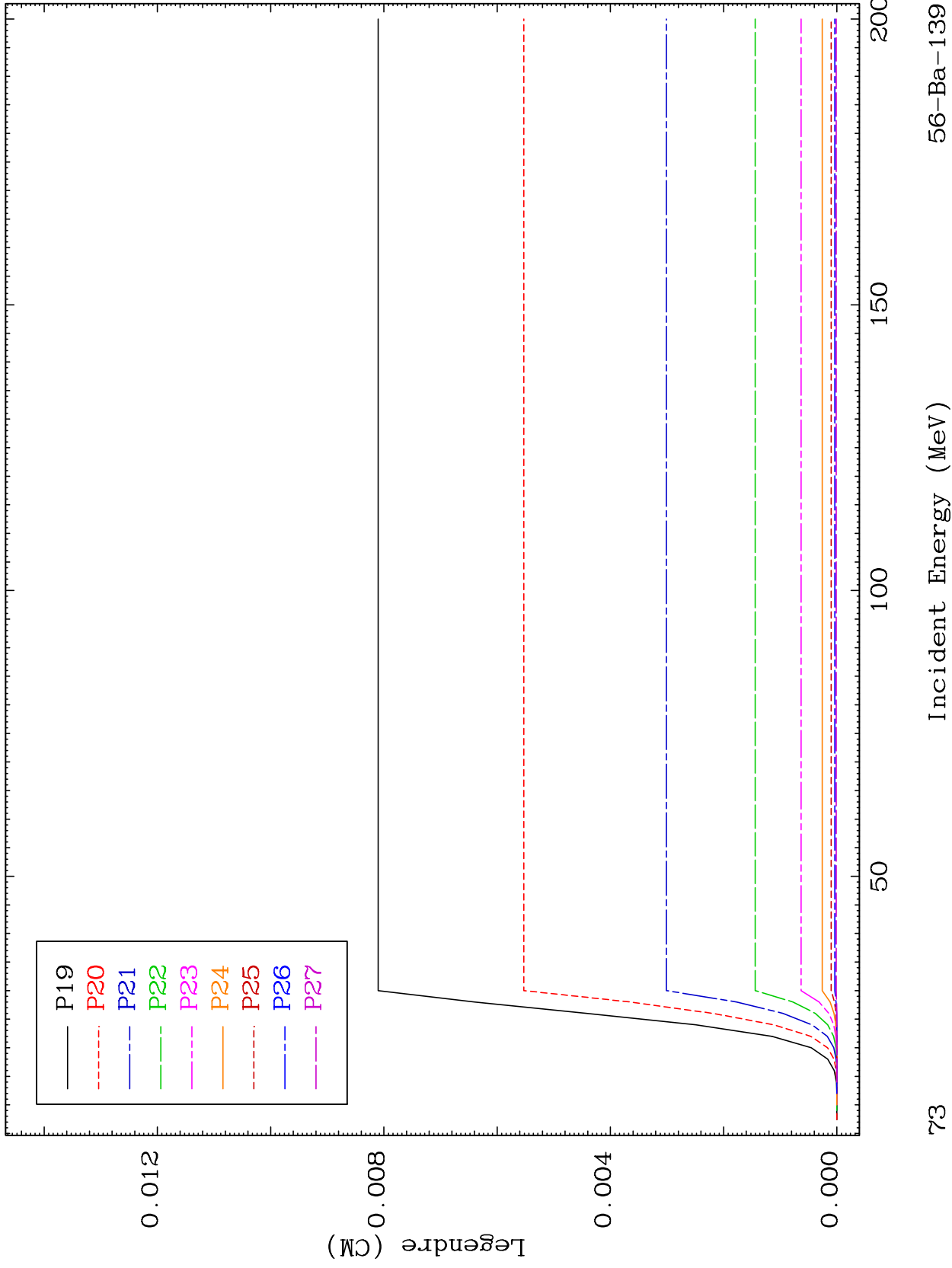
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



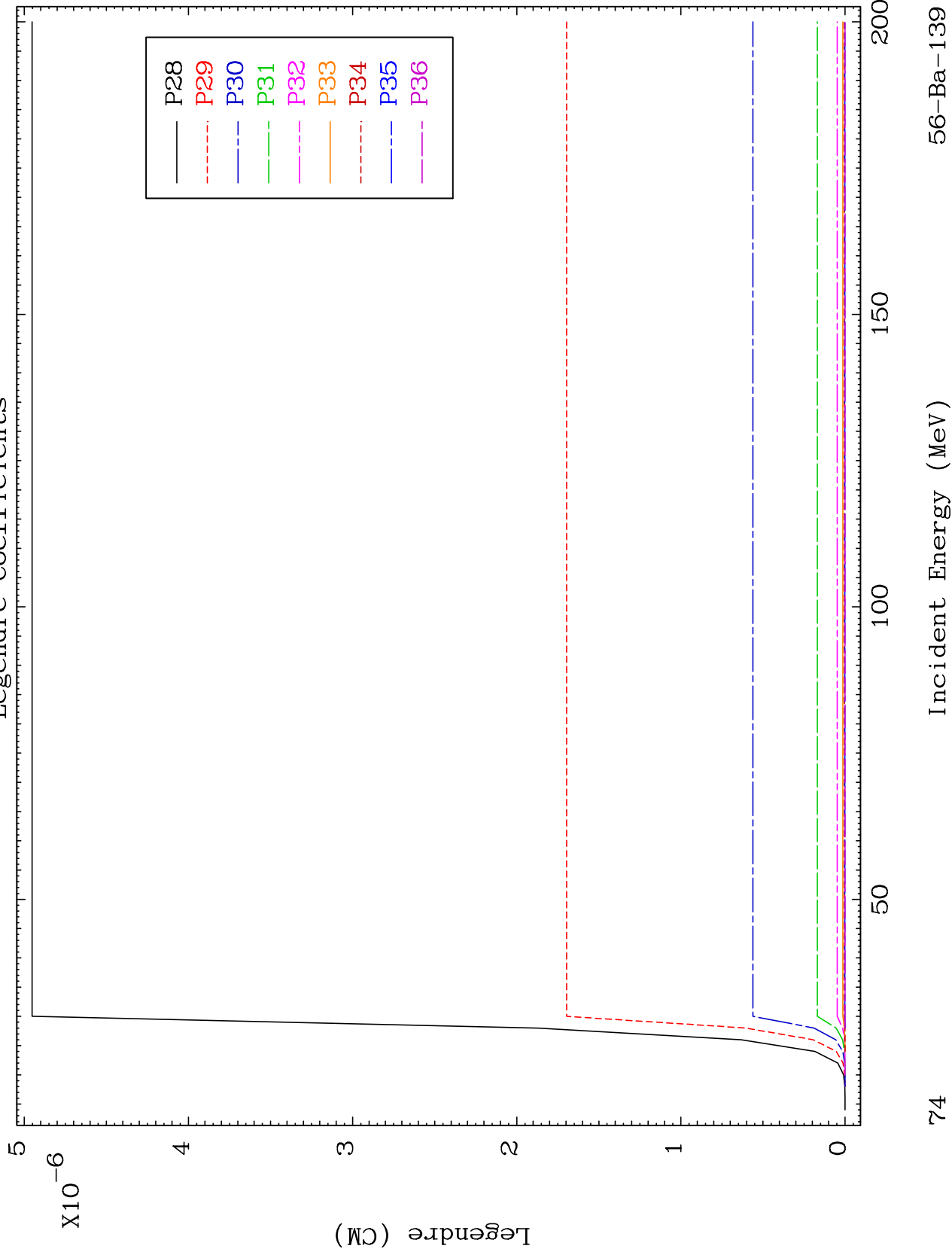
73

56-Ba-139

MAT 5652

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

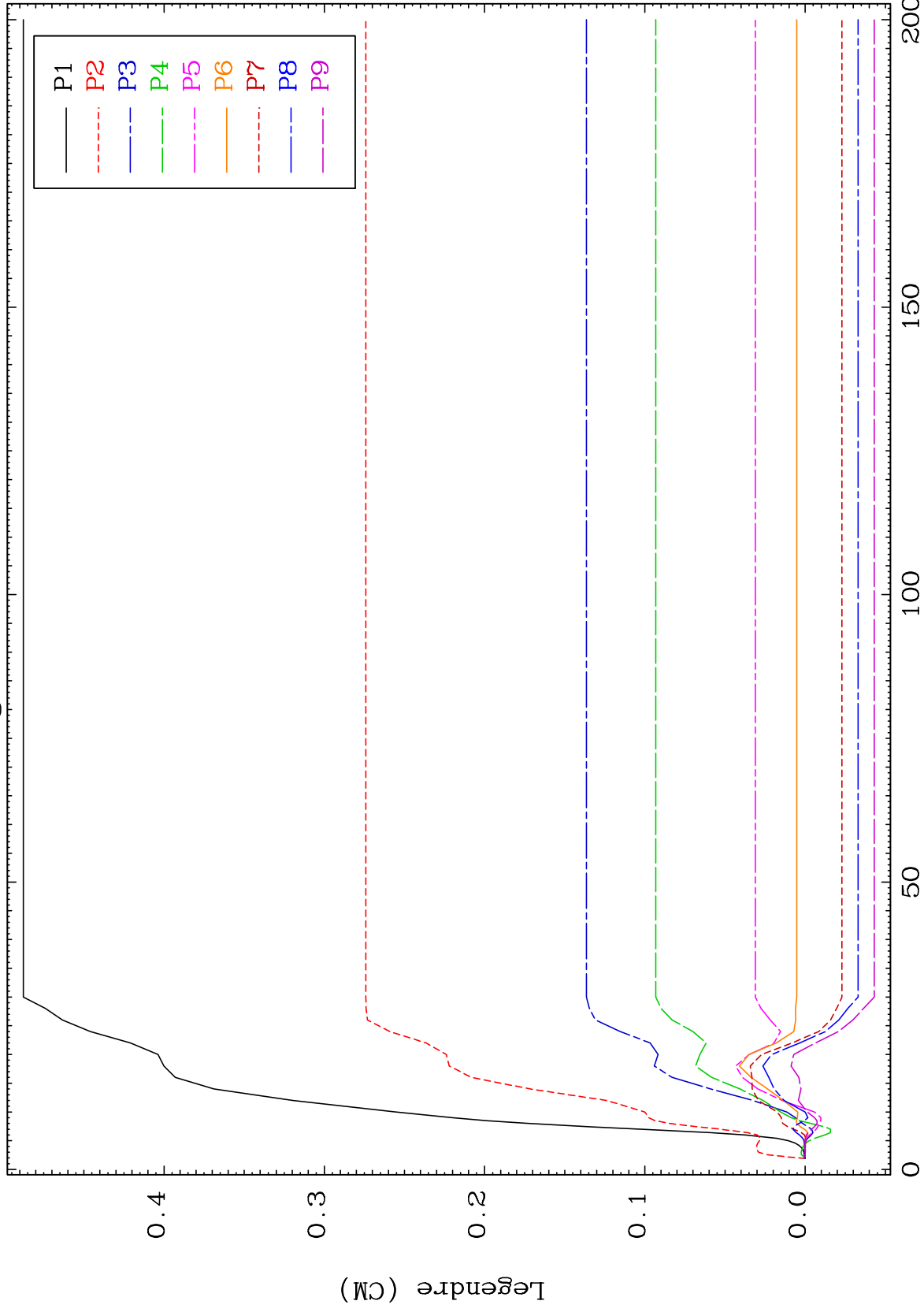
56-Ba-139



MAT 5652

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

56-Ba-139



75

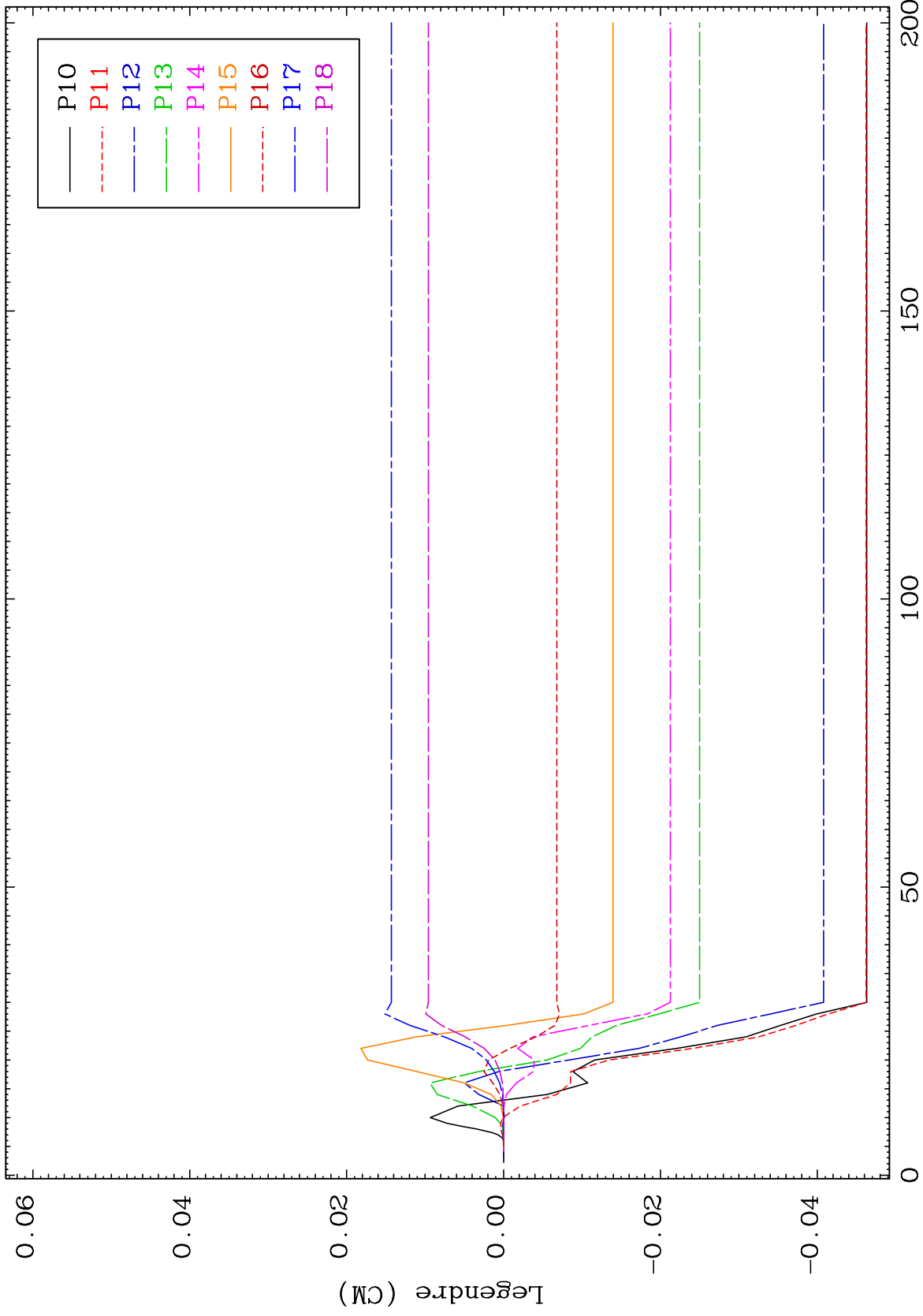
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



76

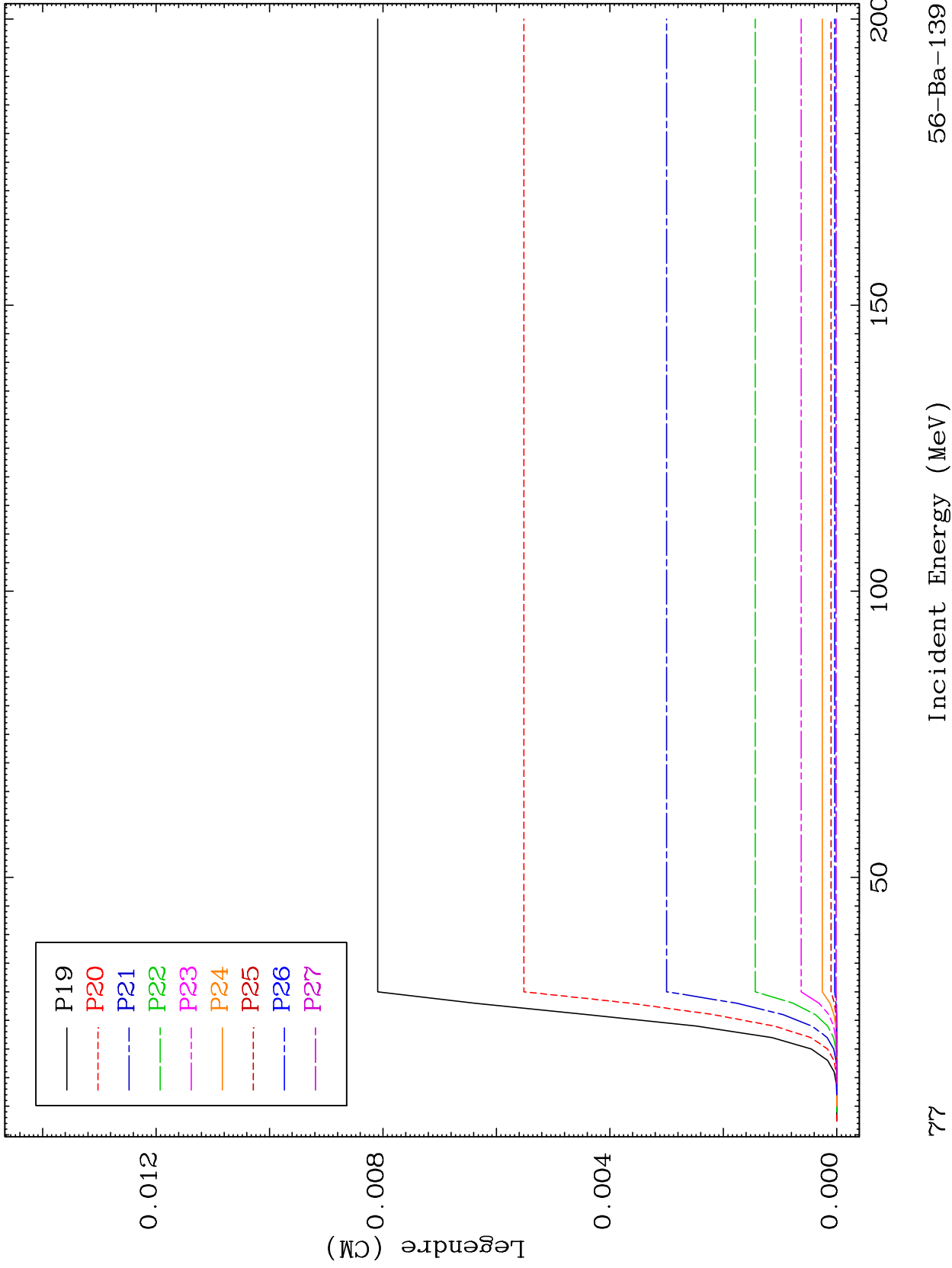
Incident Energy (MeV)

56-Ba-139

MAT 5652

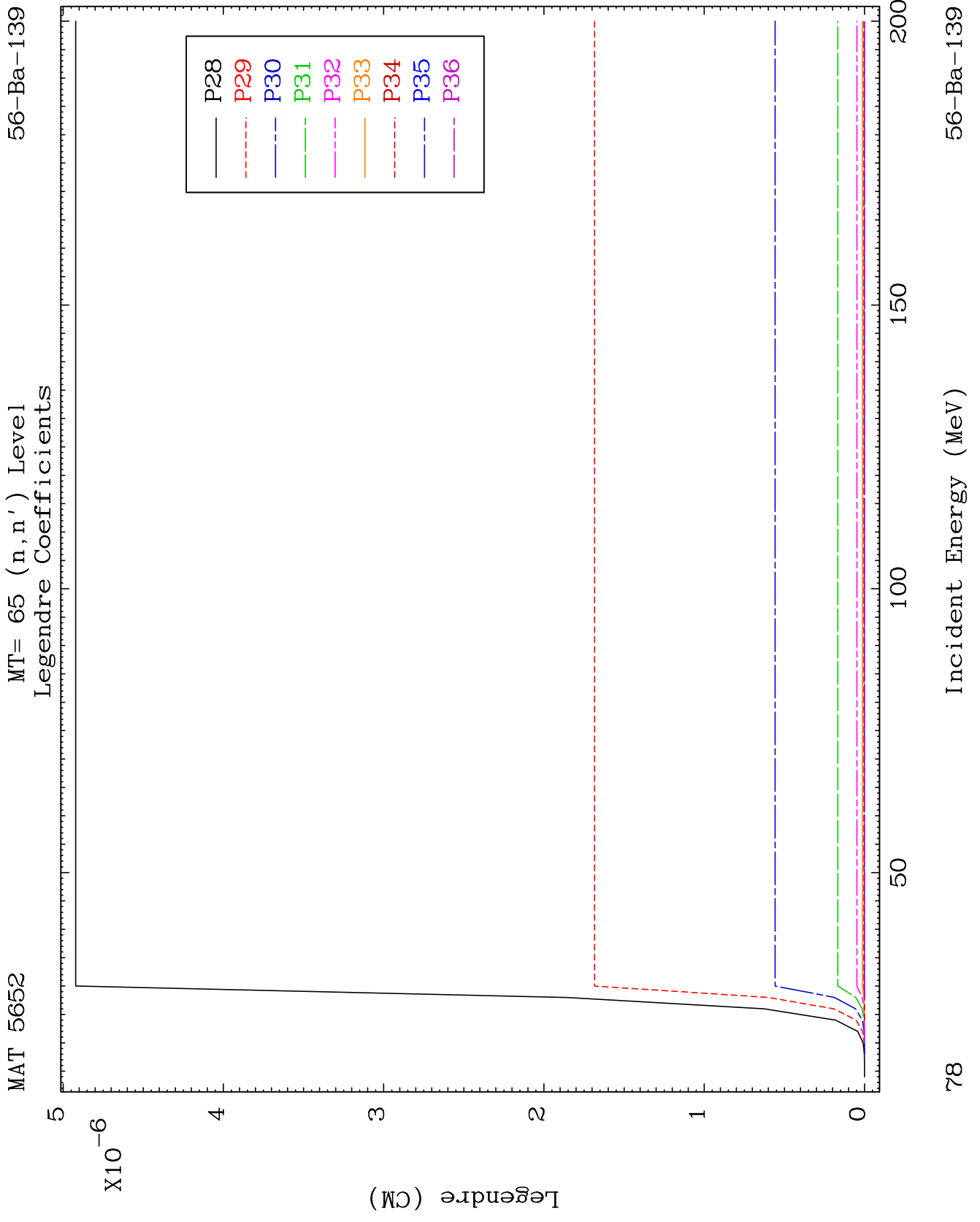
MT= 65 (n,n') Level  
Legendre Coefficients

56-Ba-139



77

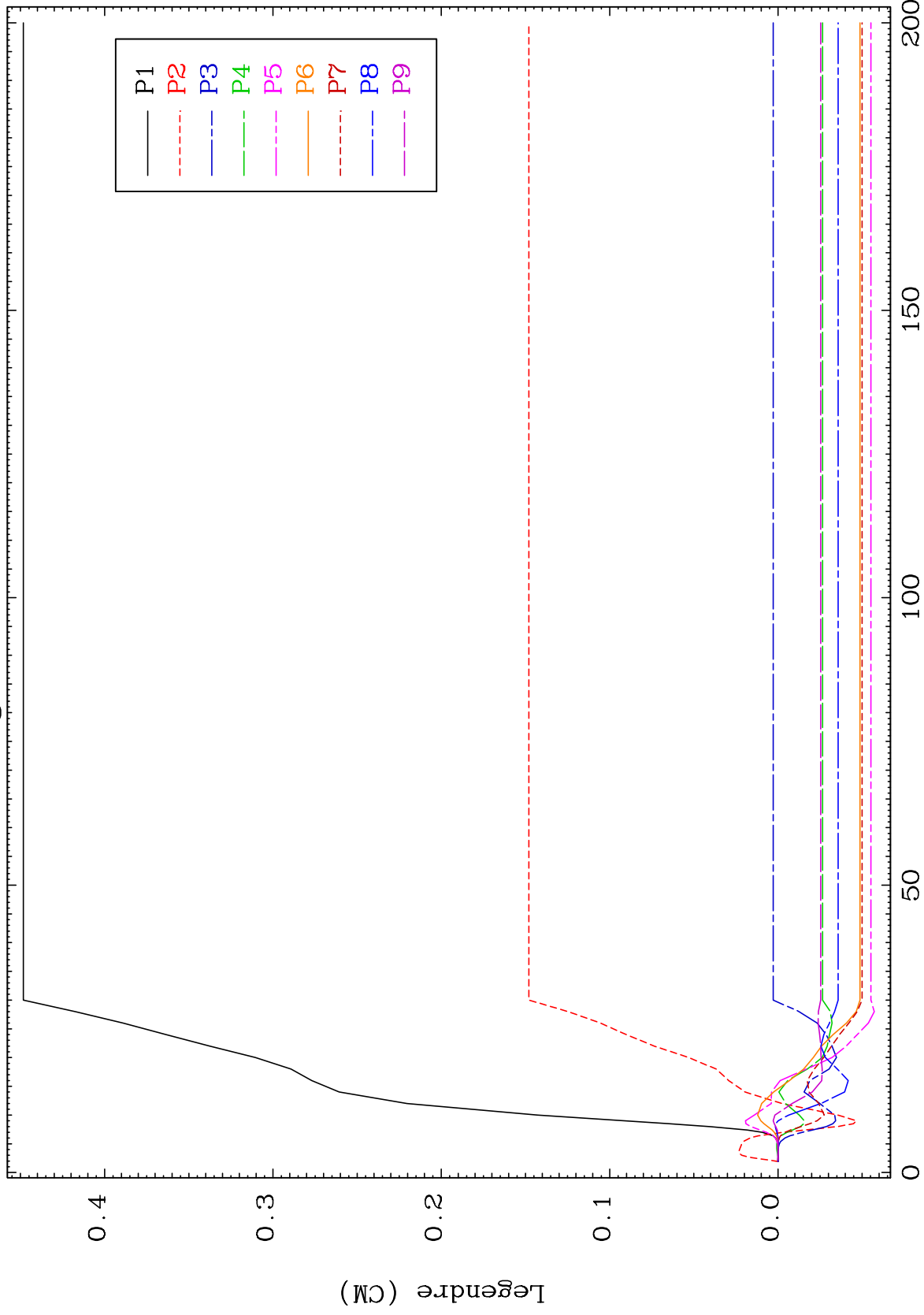
56-Ba-139



MAT 5652

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

56-Ba-139



79

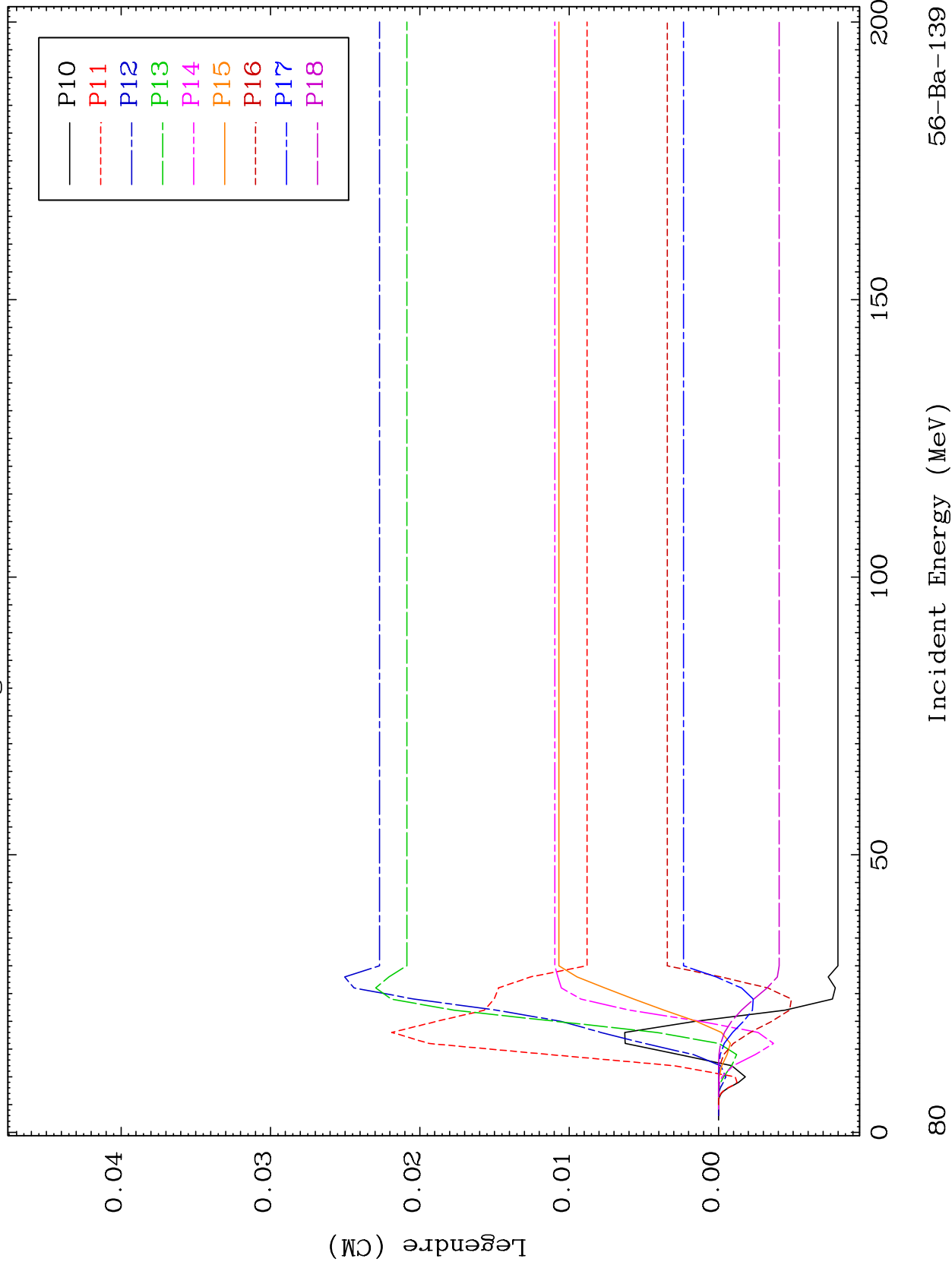
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139

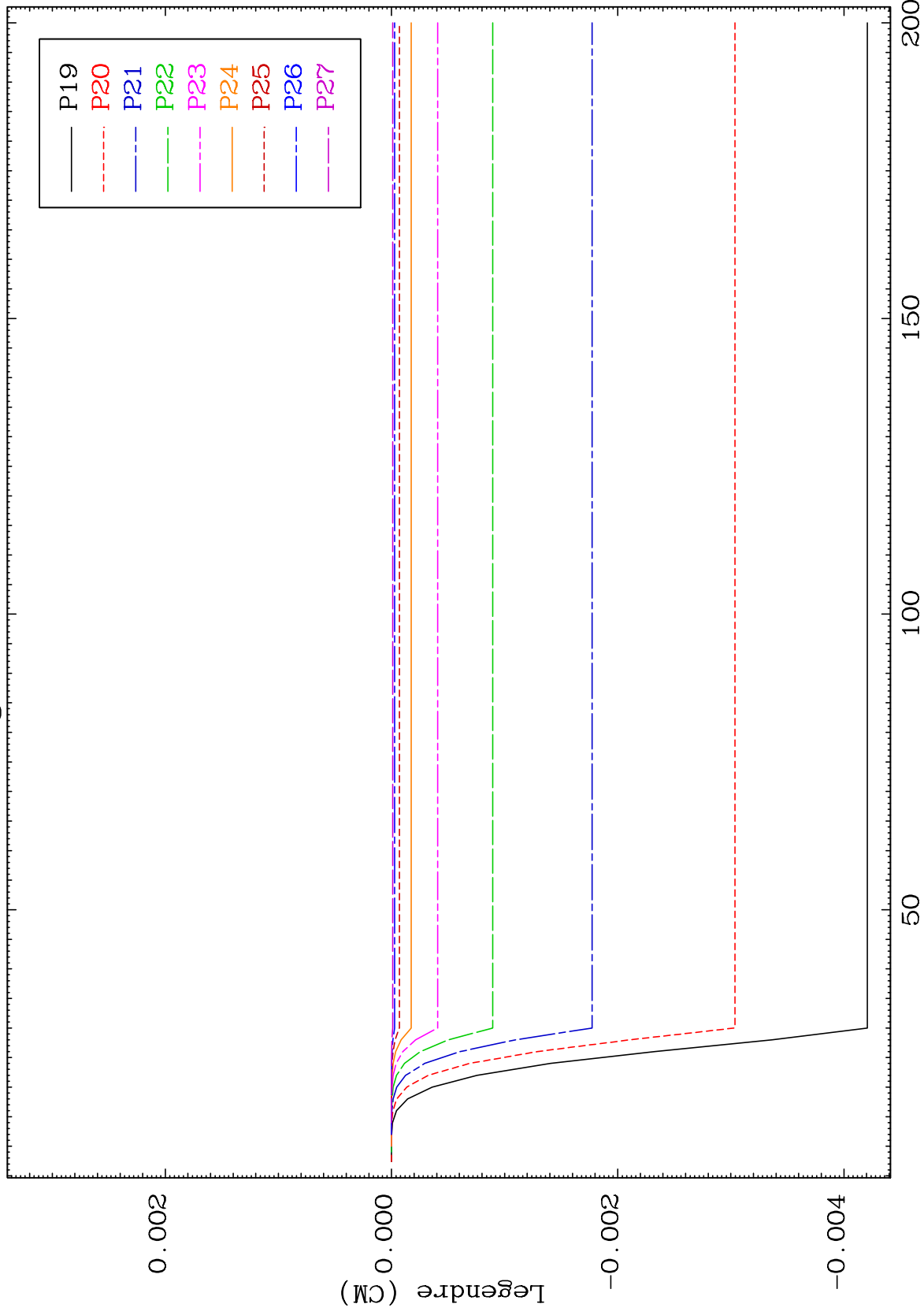


56-Ba-139

MAT 5652

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

56-Ba-139

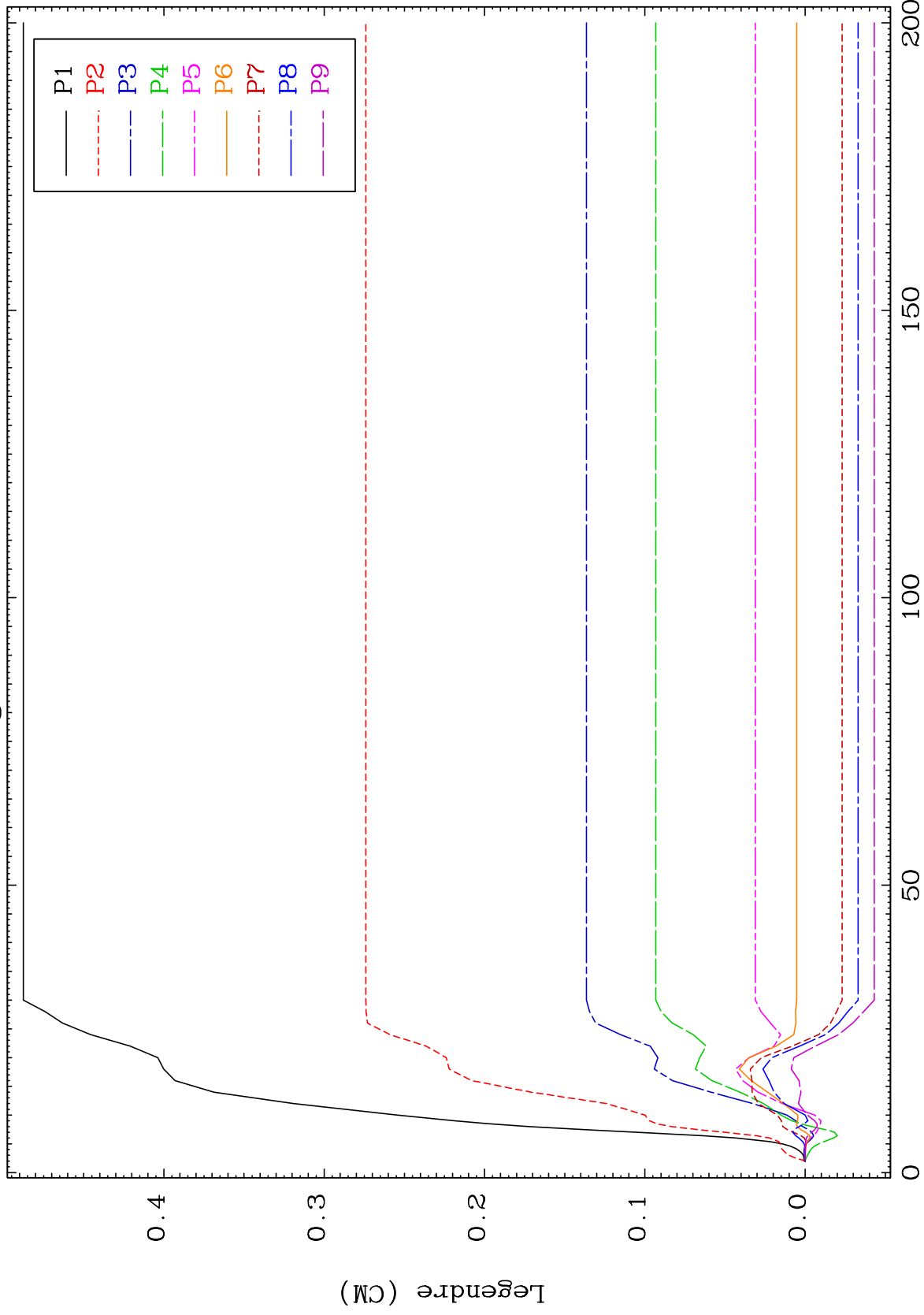




MAT 5652

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

56-Ba-139



56-Ba-139

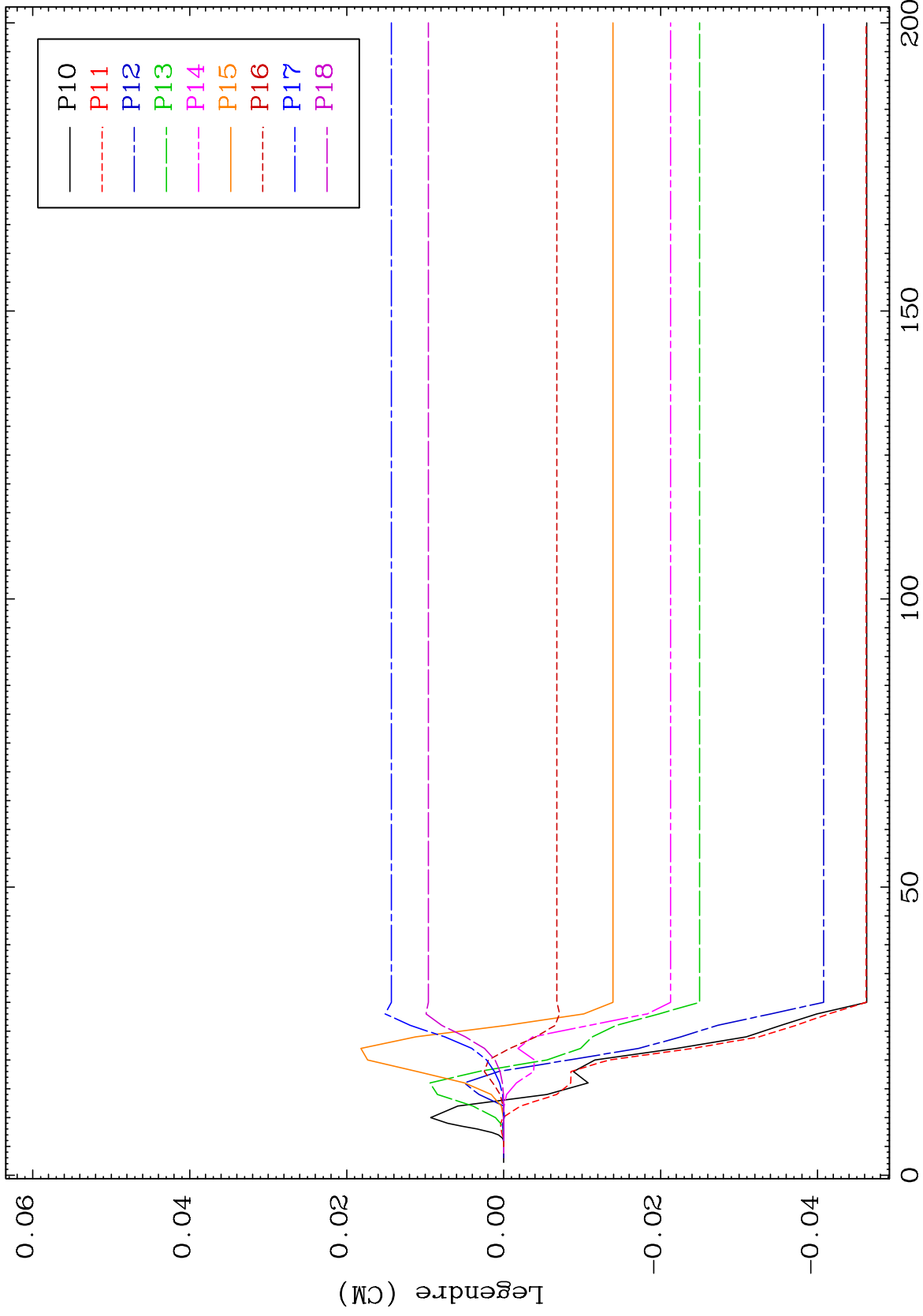
Incident Energy (MeV)

83

MAT 5652

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

56-Ba-139



84

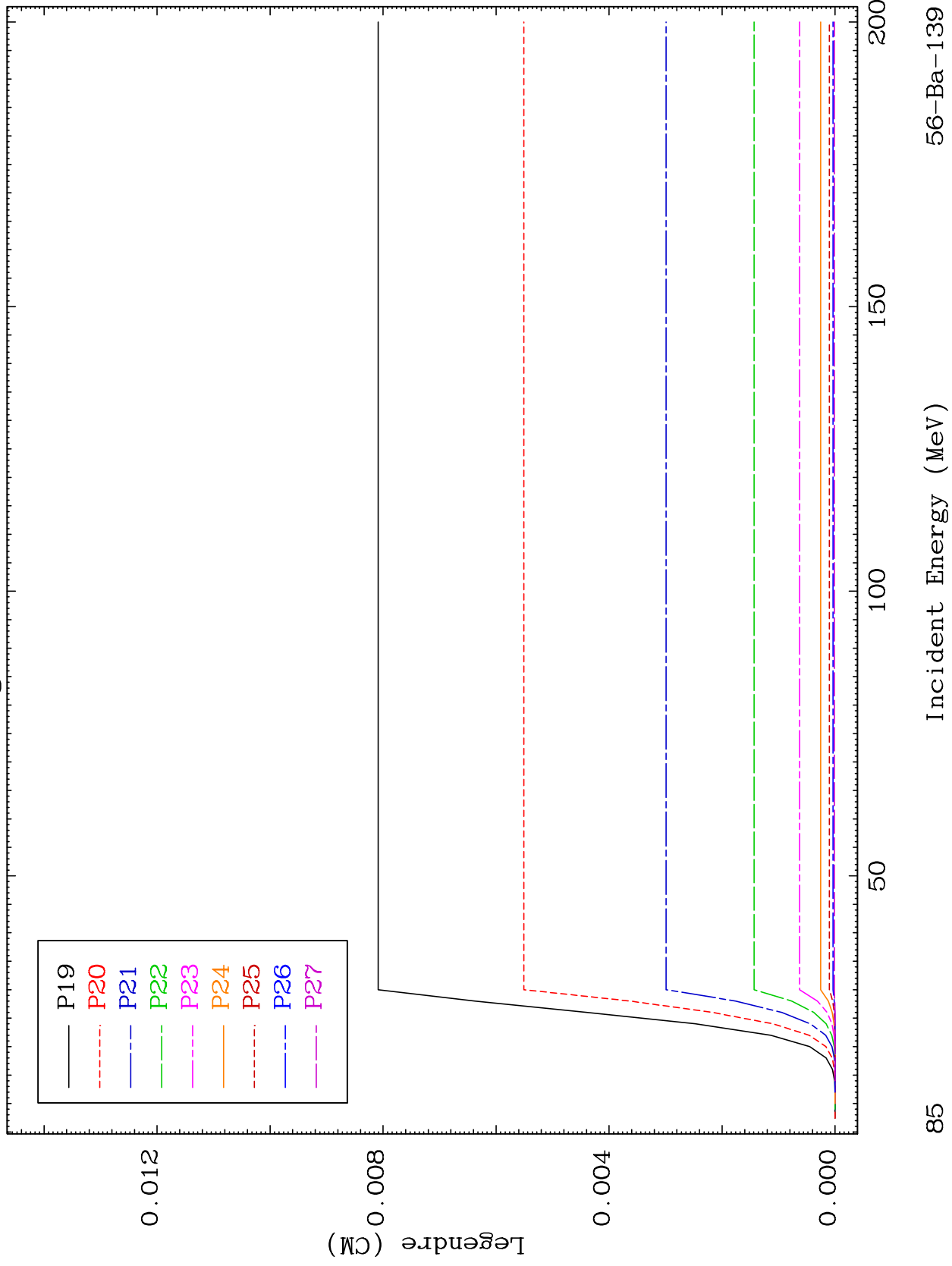
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

56-Ba-139



85

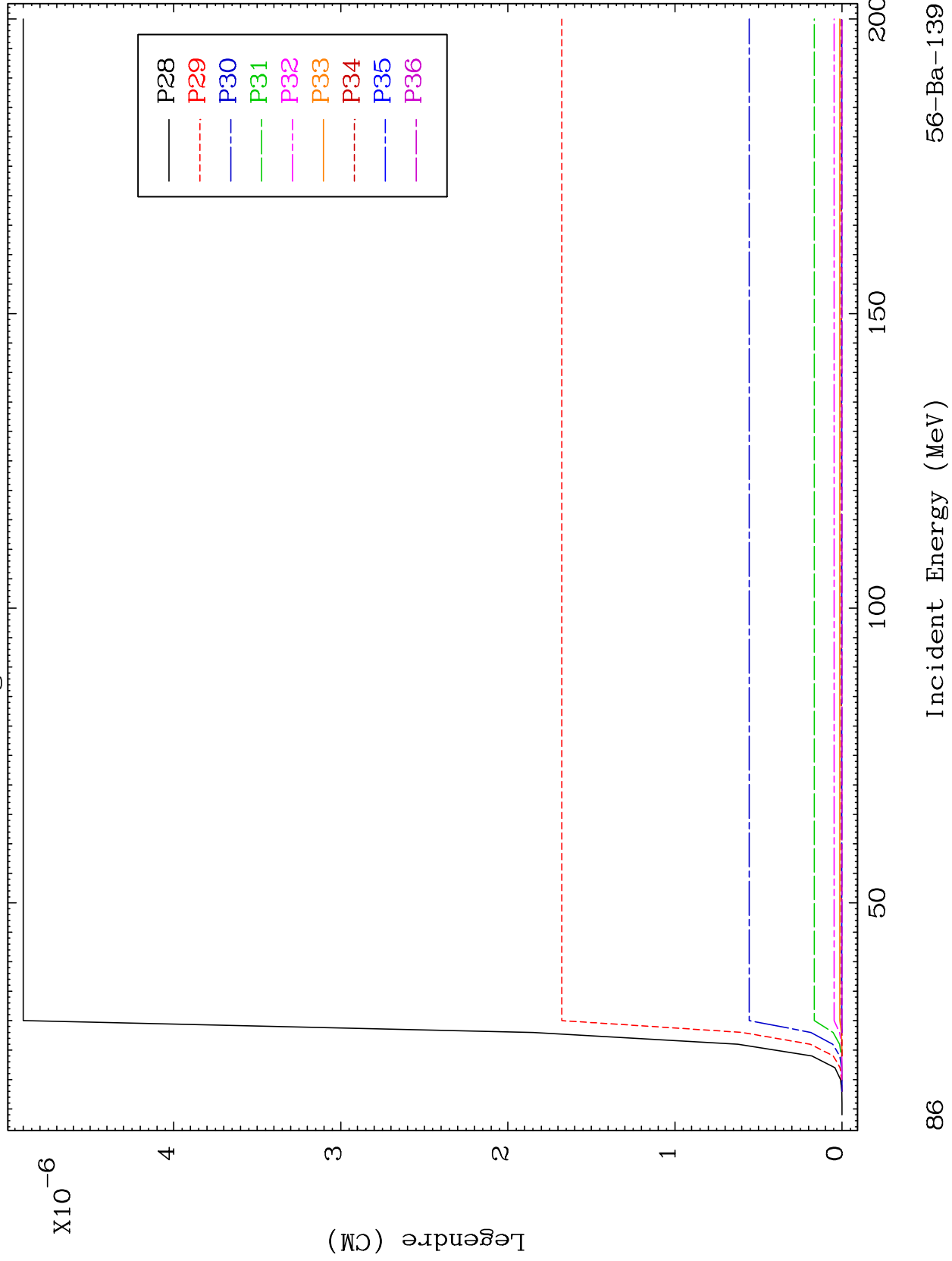
Incident Energy (MeV)

56-Ba-139

MAT 5652

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

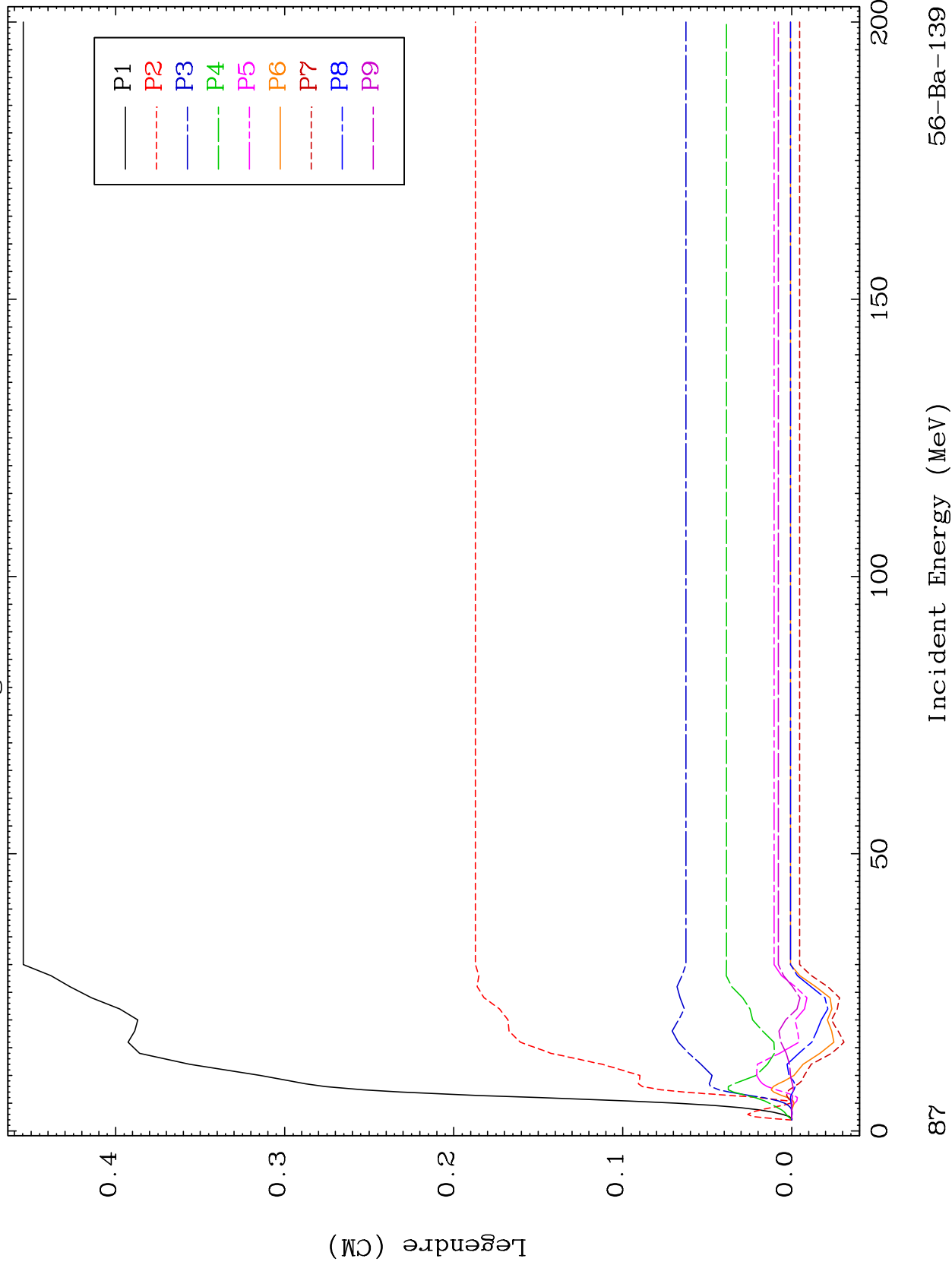
56-Ba-139



MAT 5652

MT= 68 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

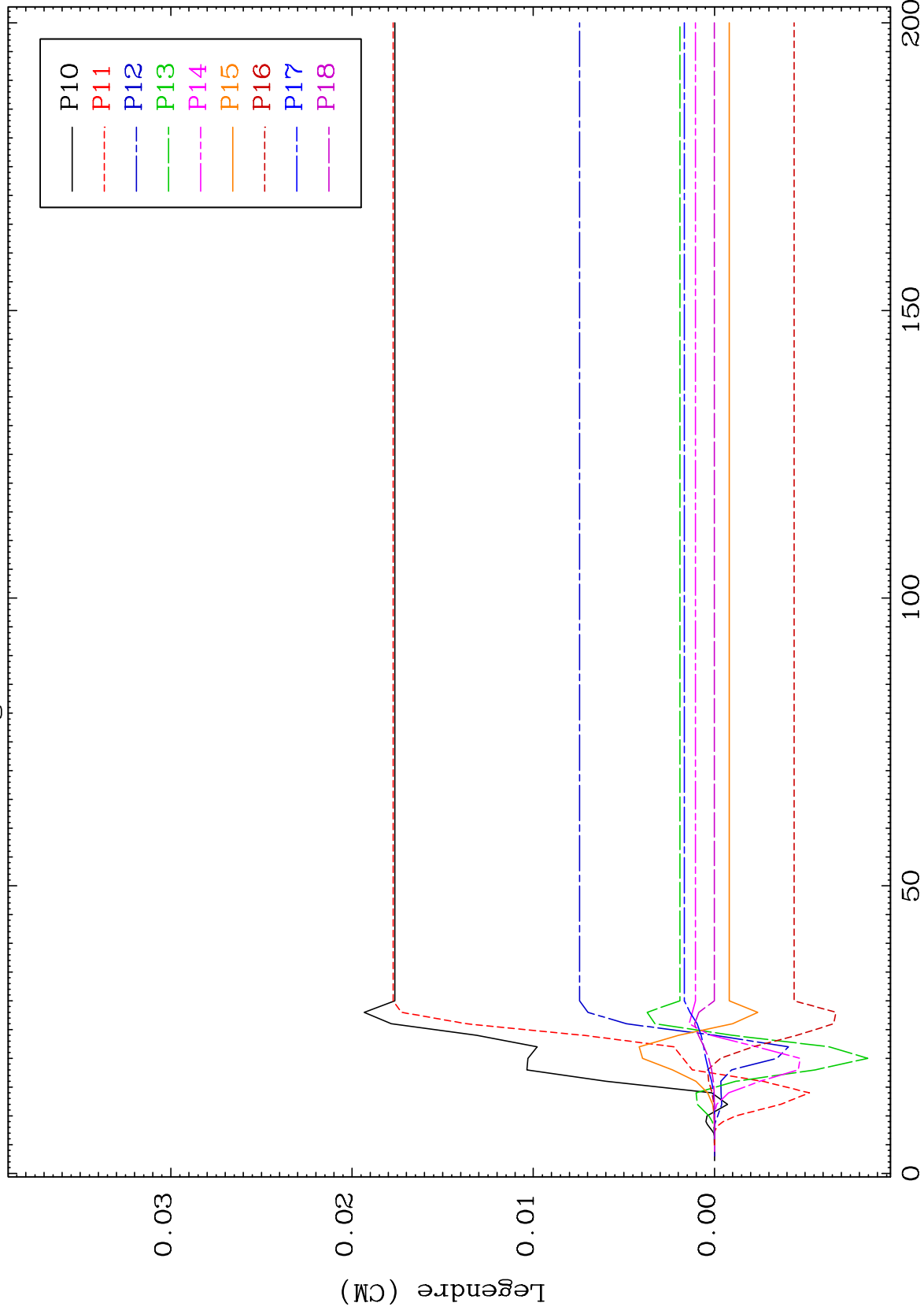
Incident Energy (MeV)

87

MAT 5652

MT= 68 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

Incident Energy (MeV)

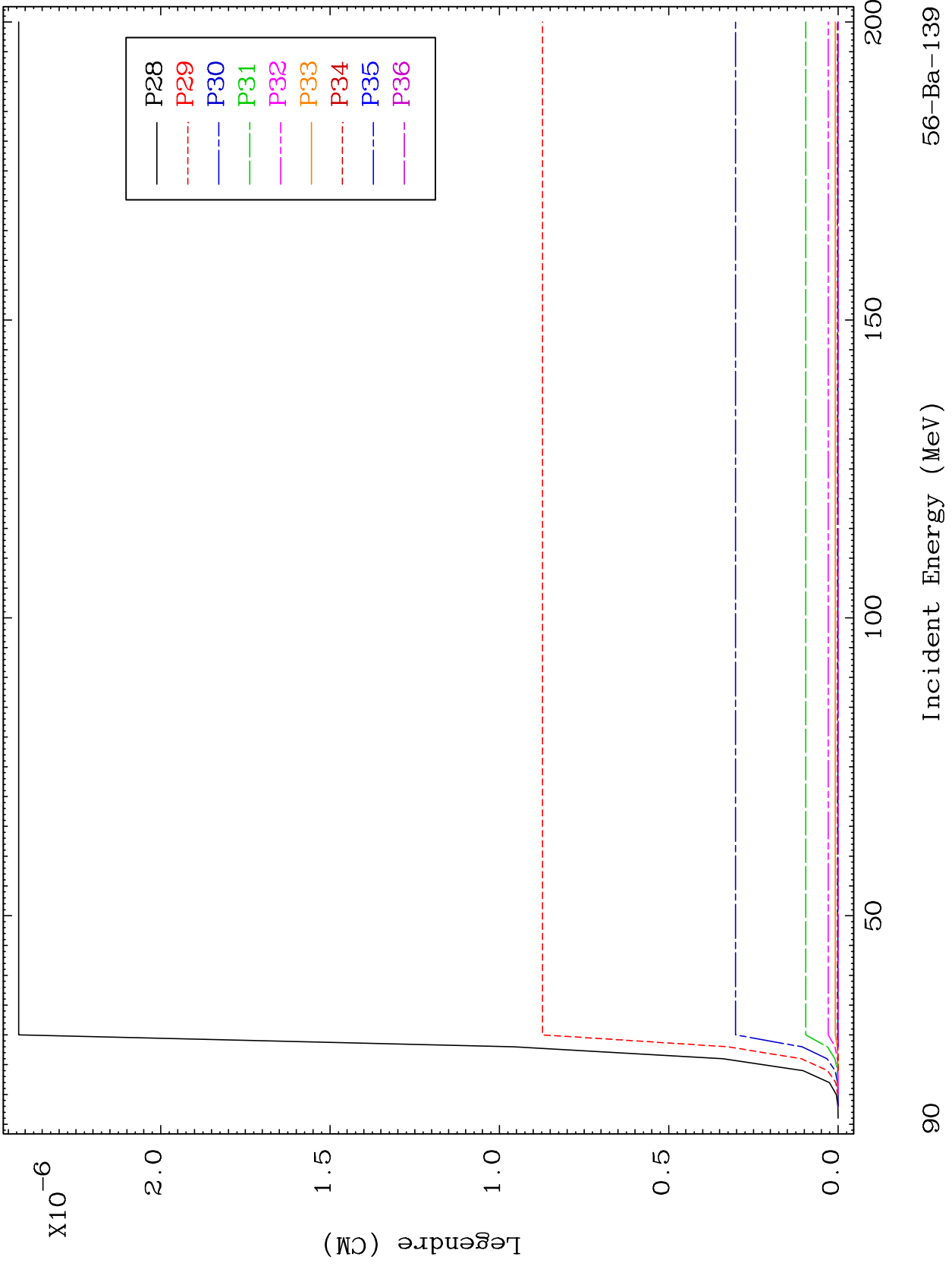
88



MAT 5652

MT= 68 (n,n') Level  
Legendre Coefficients

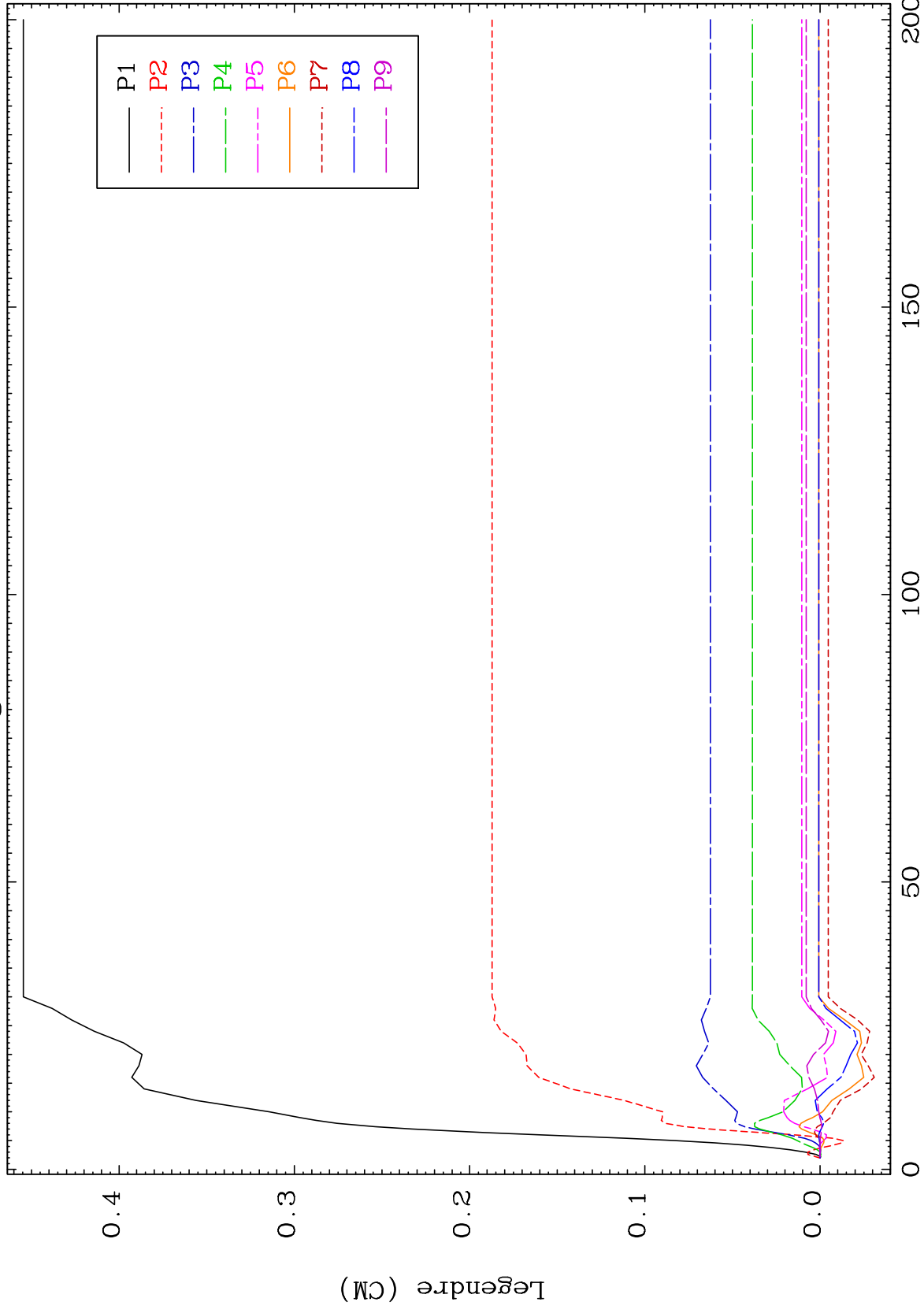
56-Ba-139



MAT 5652

MT= 69 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

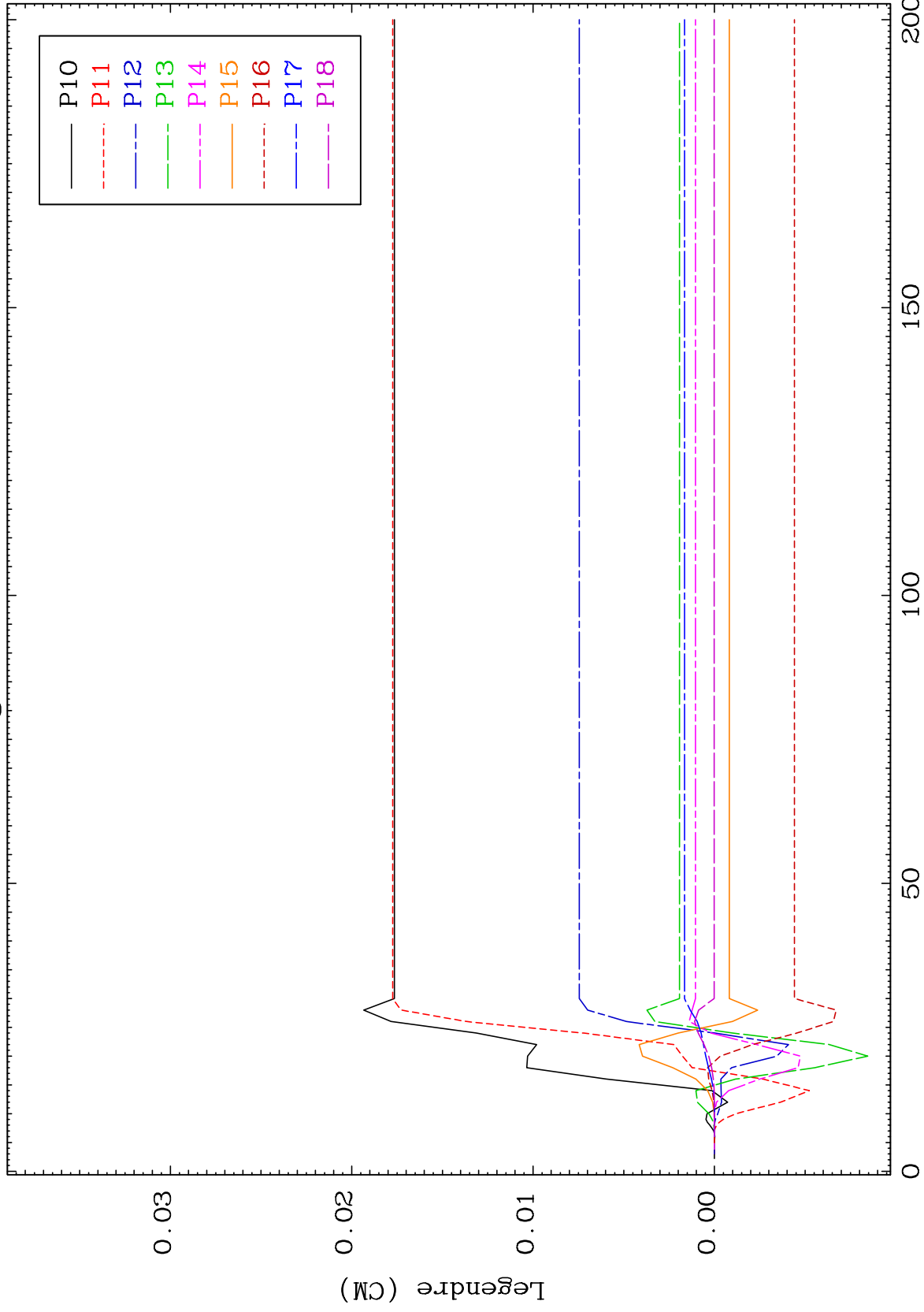
Incident Energy (MeV)

91

MAT 5652

MT= 69 (n,n') Level  
Legendre Coefficients

56-Ba-139



92

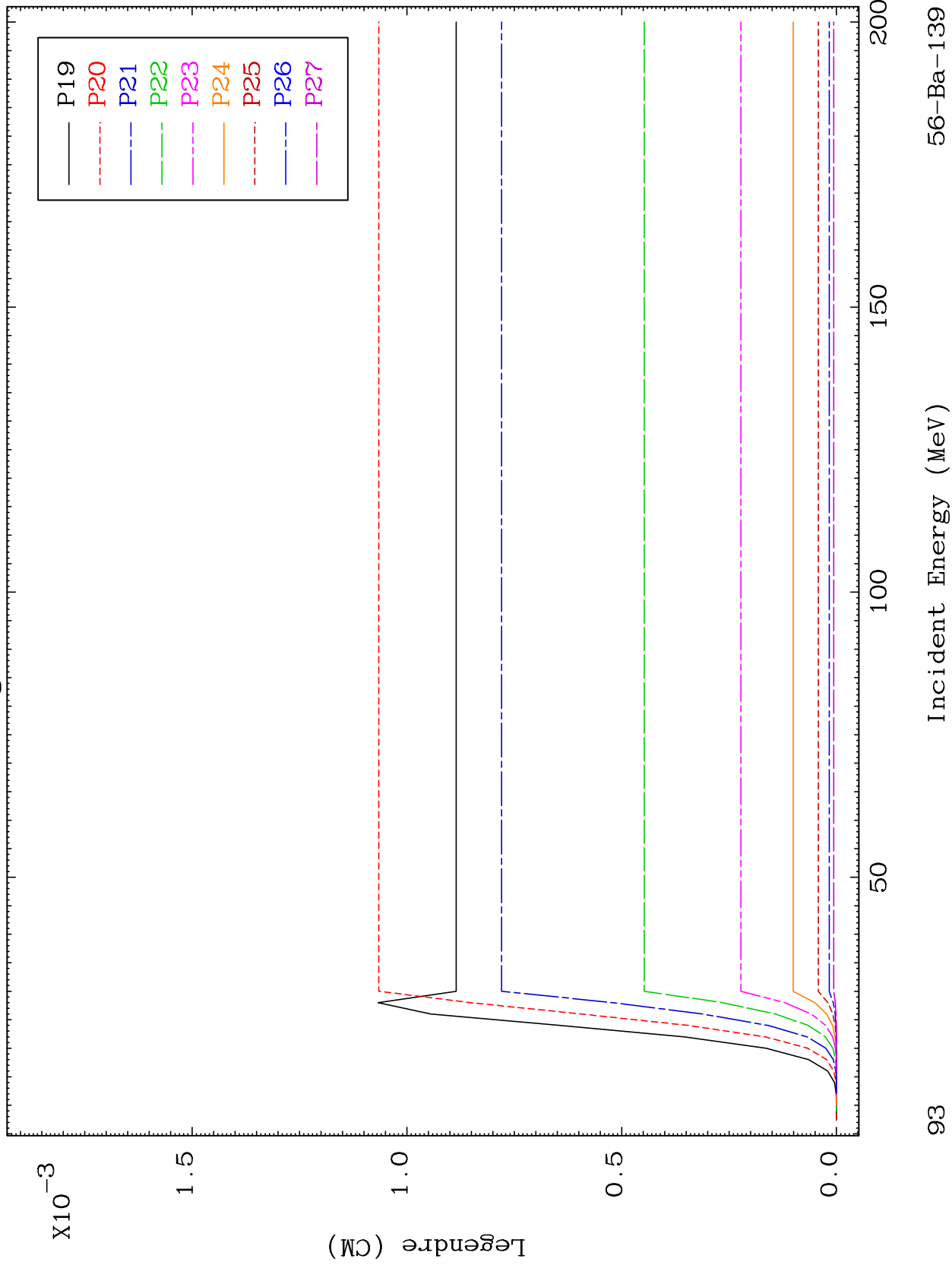
Incident Energy (MeV)

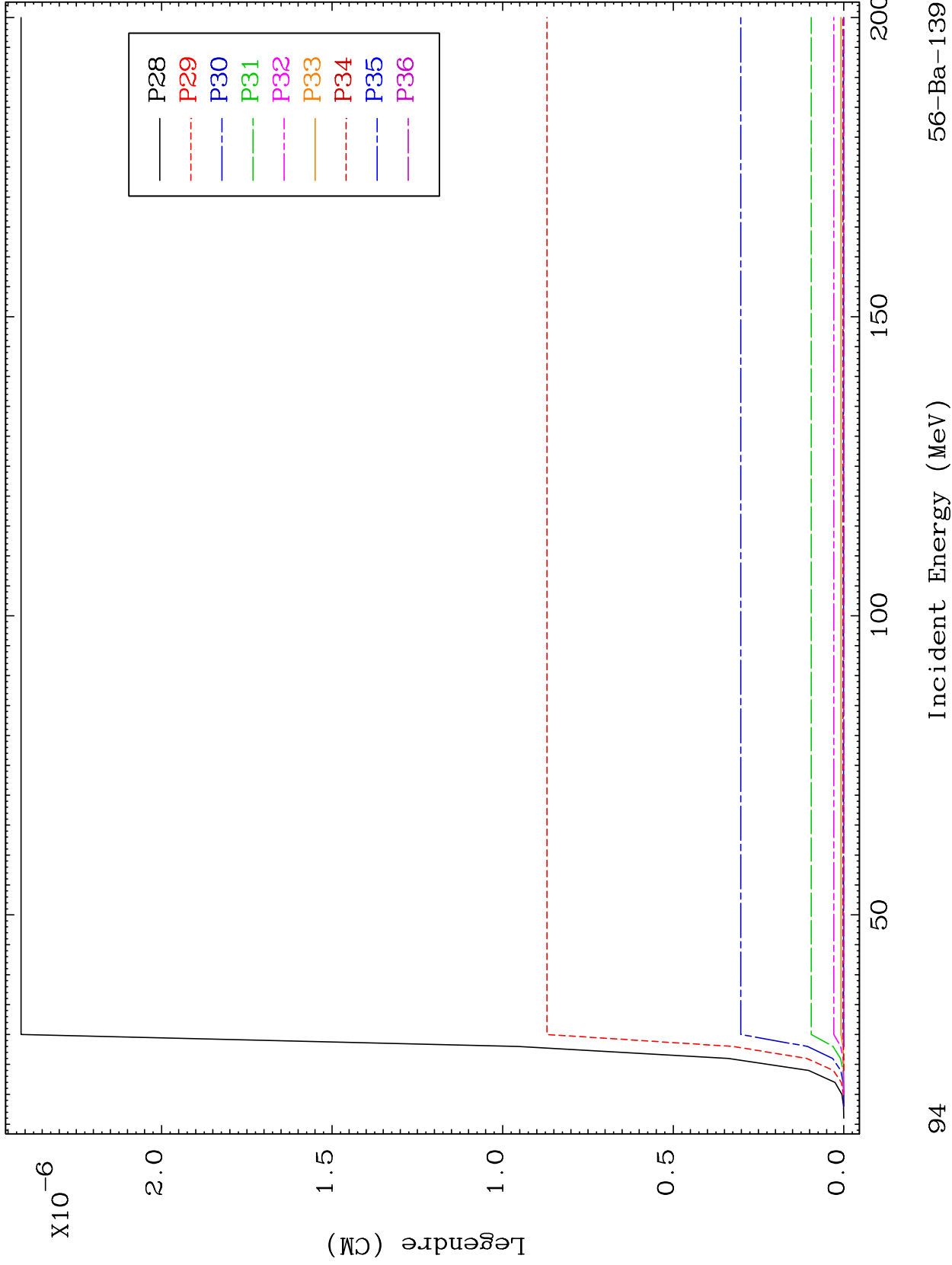
56-Ba-139

MAT 5652

MT= 69 (n,n') Level  
Legendre Coefficients

56-Ba-139

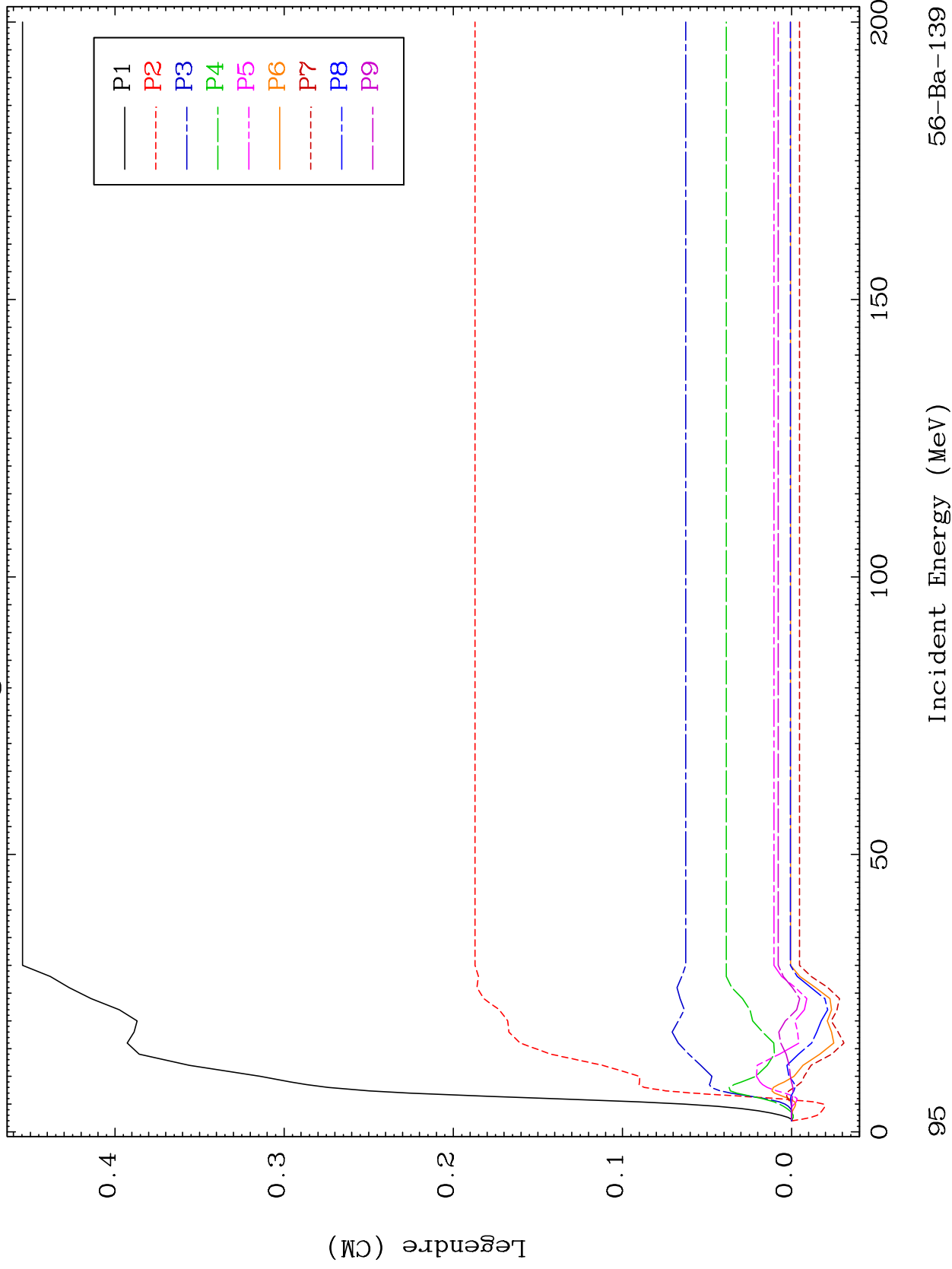




MAT 5652

MT= 70 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

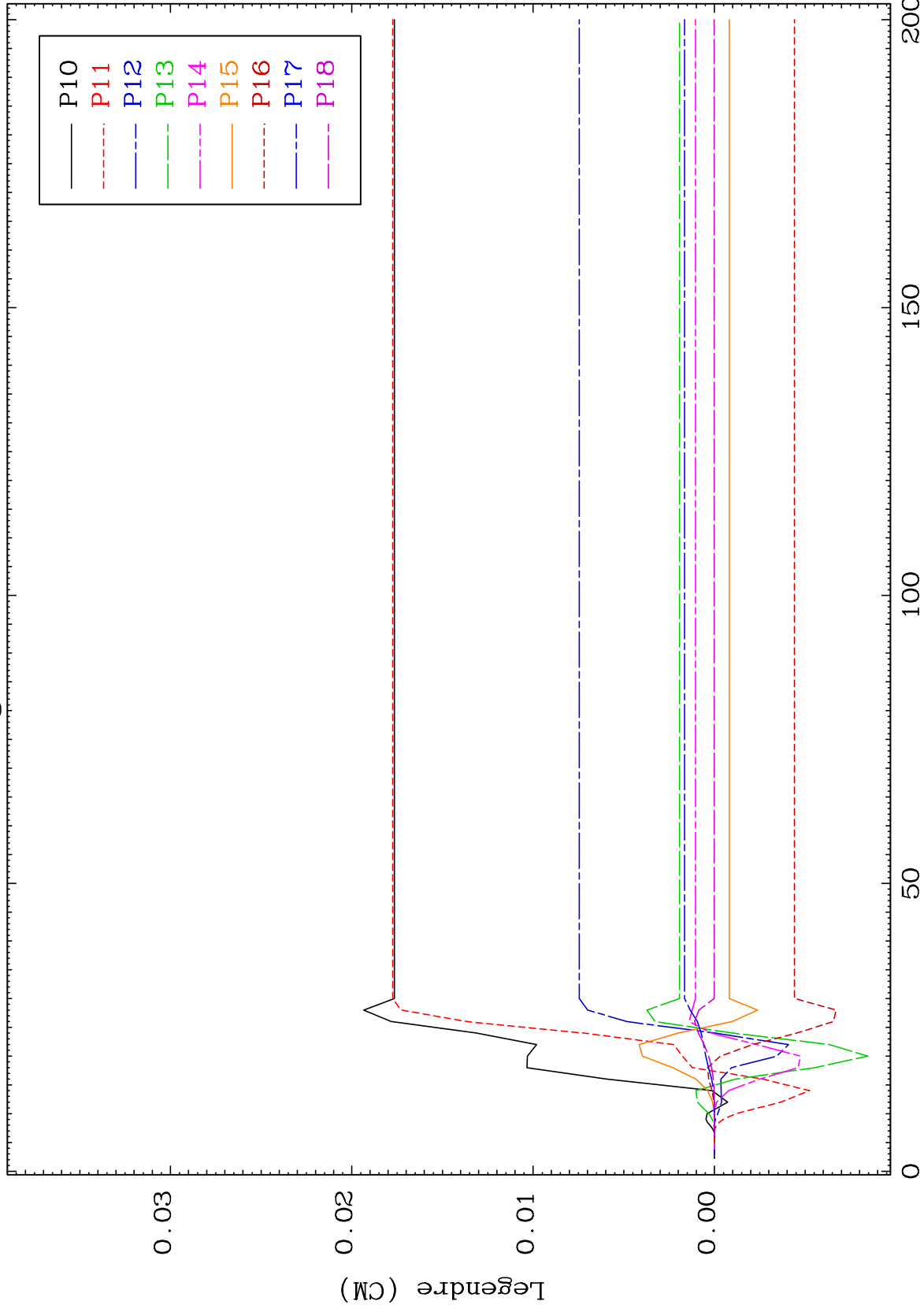
Incident Energy (MeV)

95

MAT 5652

MT= 70 (n,n') Level  
Legendre Coefficients

56-Ba-139



96

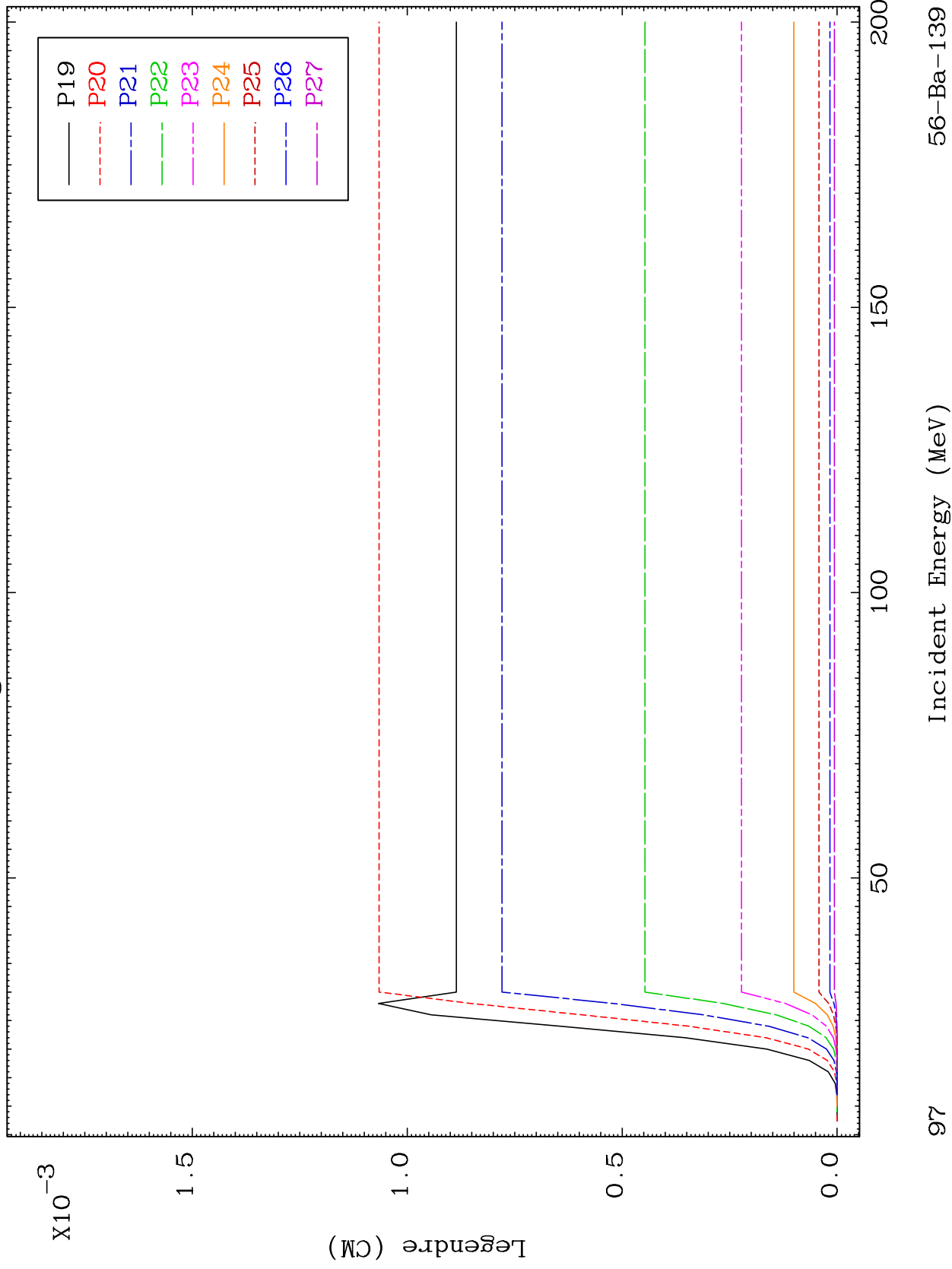
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 70 (n,n') Level  
Legendre Coefficients

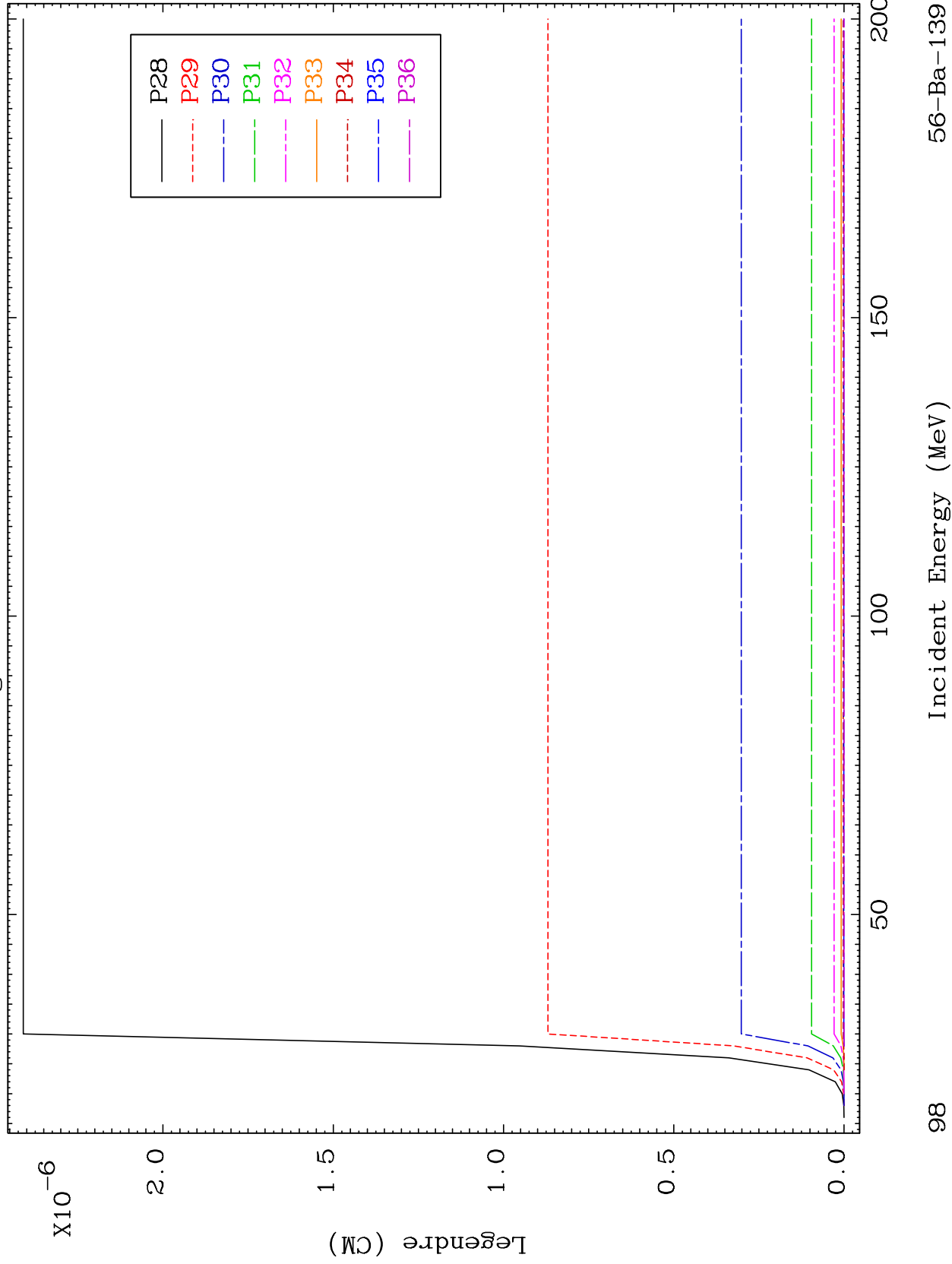
56-Ba-139



MAT 5652

MT= 70 (n,n') Level  
Legendre Coefficients

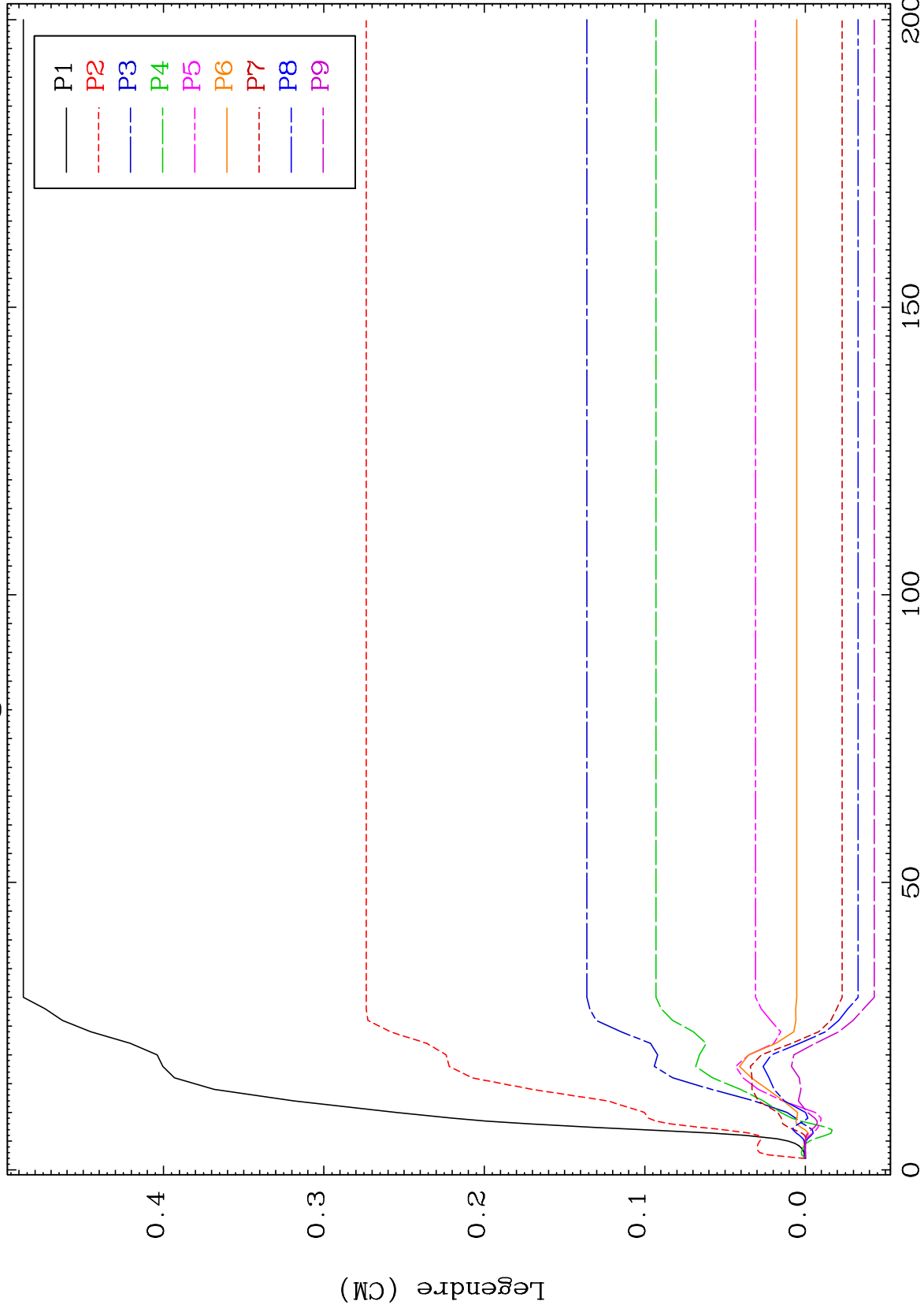
56-Ba-139



MAT 5652

MT= 71 (n,n') Level  
Legendre Coefficients

56-Ba-139



99

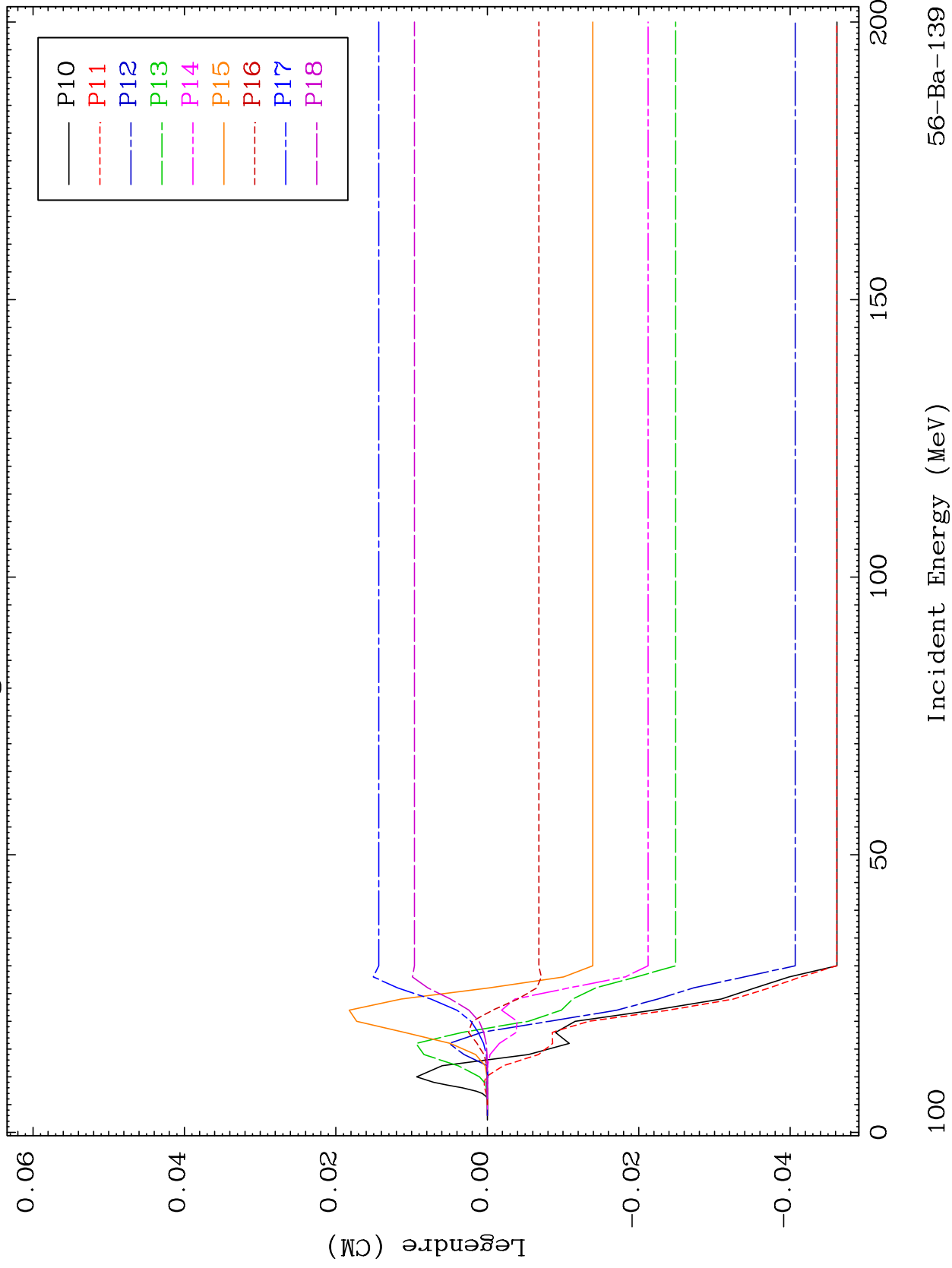
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 71 (n,n') Level  
Legendre Coefficients

56-Ba-139

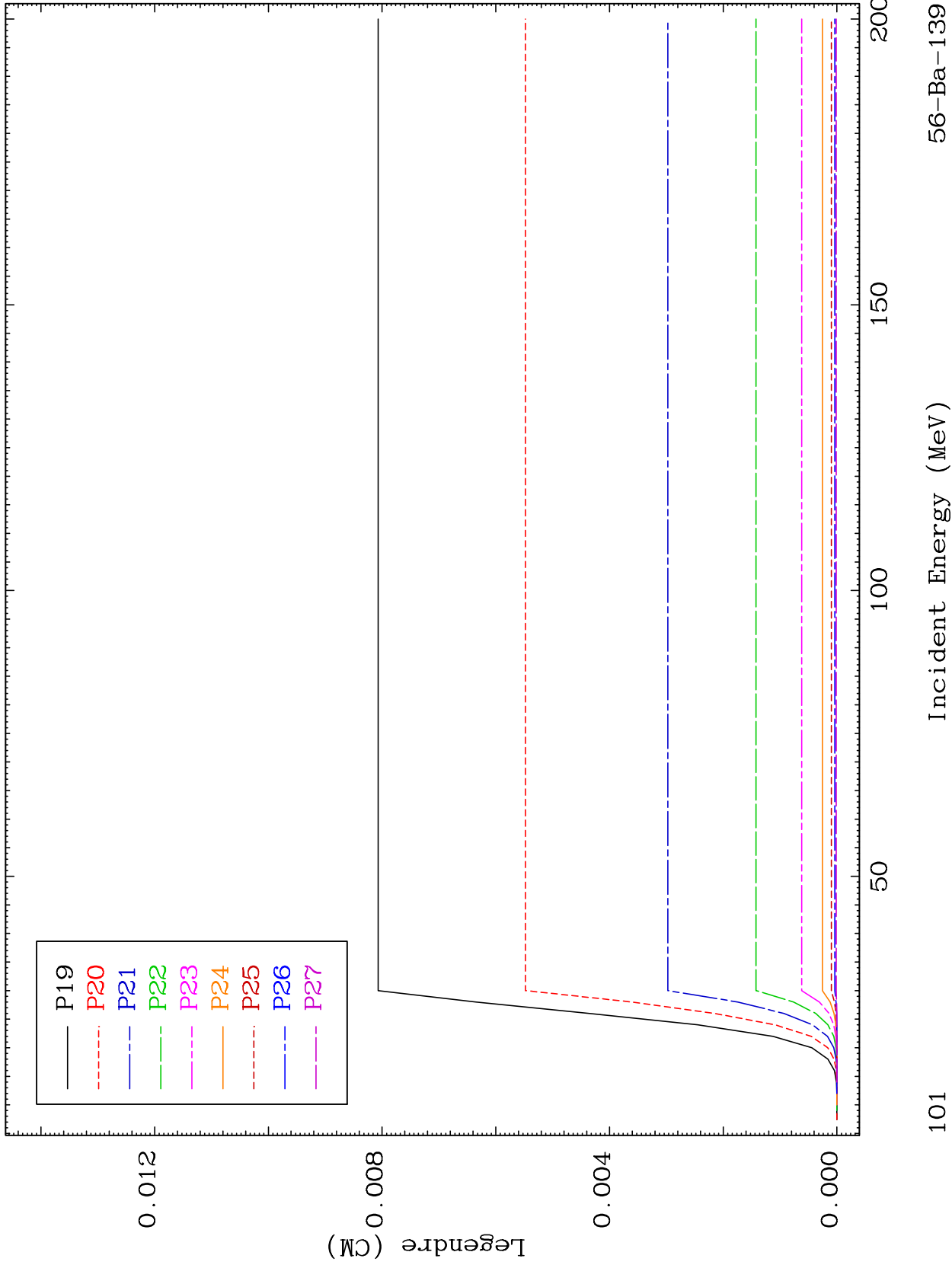


56-Ba-139

MAT 5652

MT= 71 (n,n') Level  
Legendre Coefficients

56-Ba-139



101

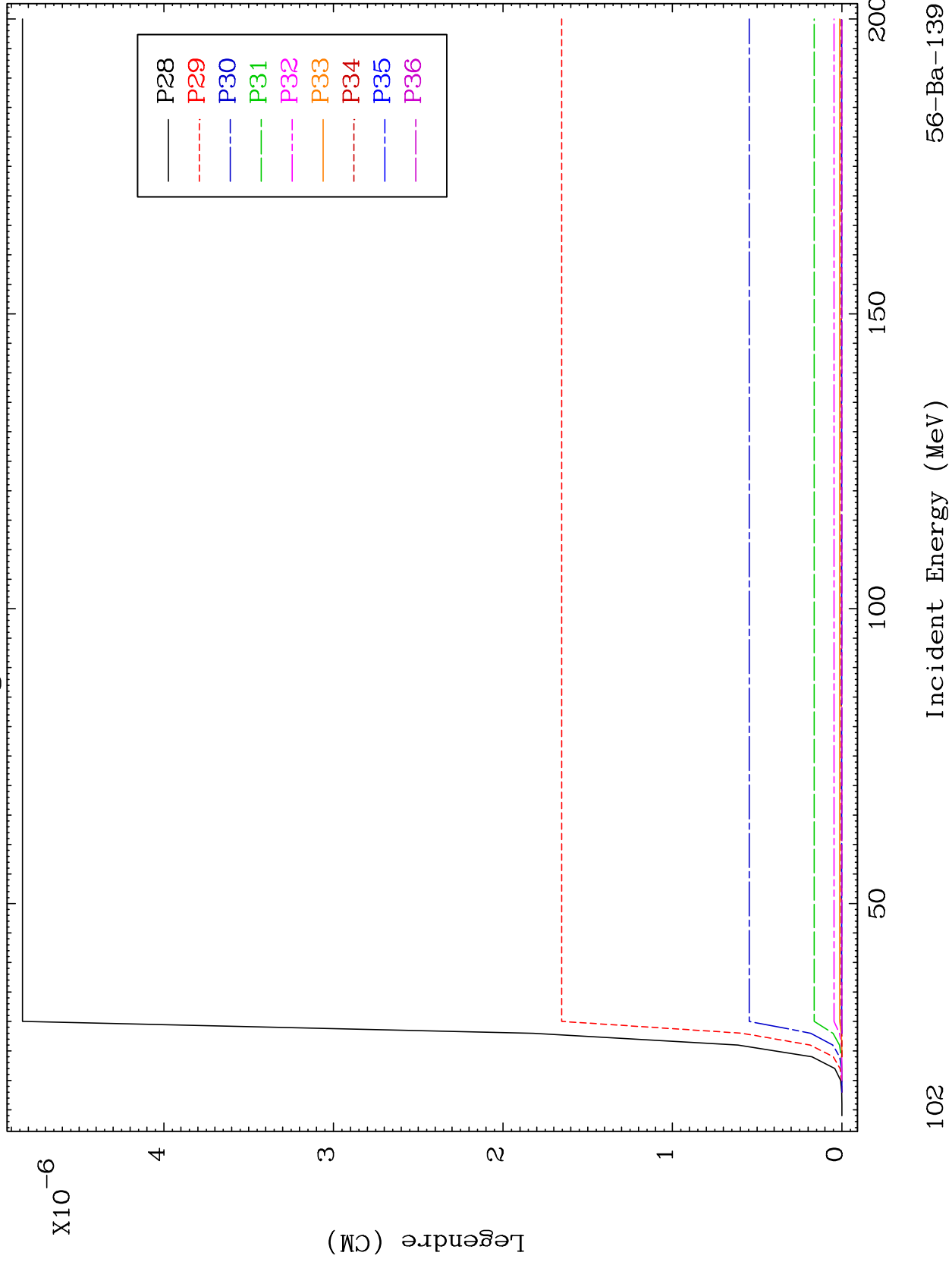
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 71 (n,n') Level  
Legendre Coefficients

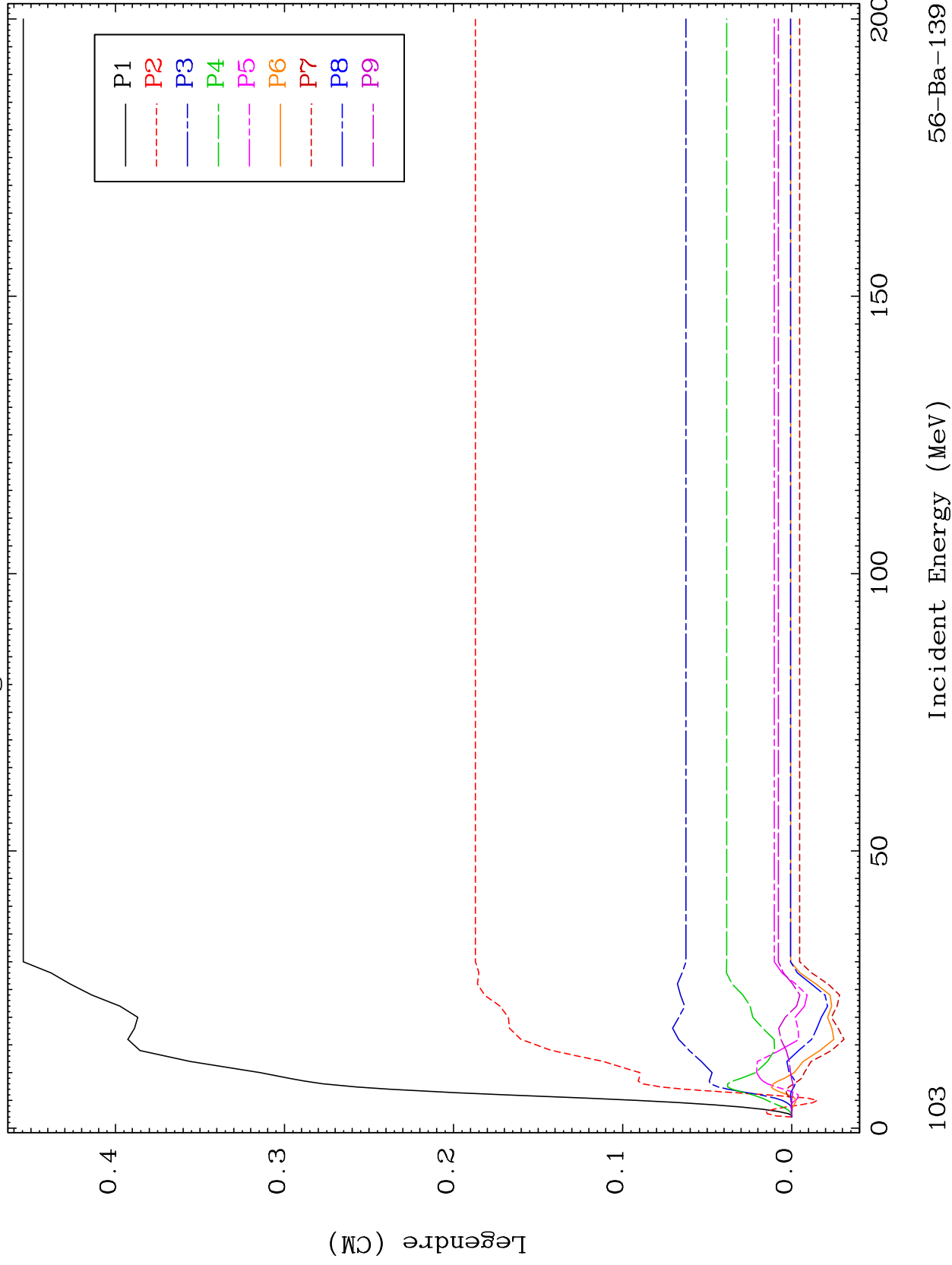
56-Ba-139



MAT 5652

MT= 72 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

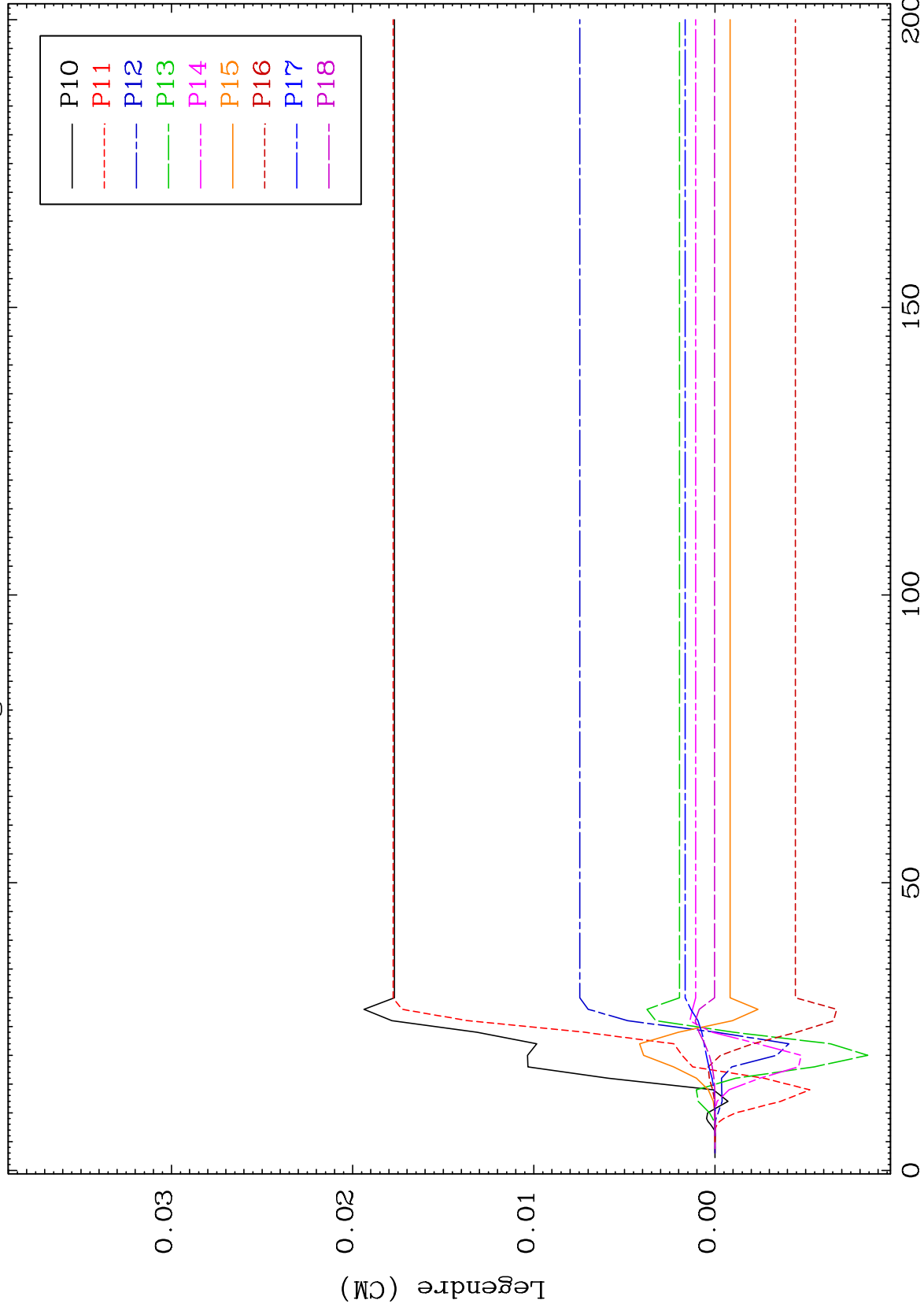
Incident Energy (MeV)

103

MAT 5652

MT= 72 (n,n') Level  
Legendre Coefficients

56-Ba-139



104

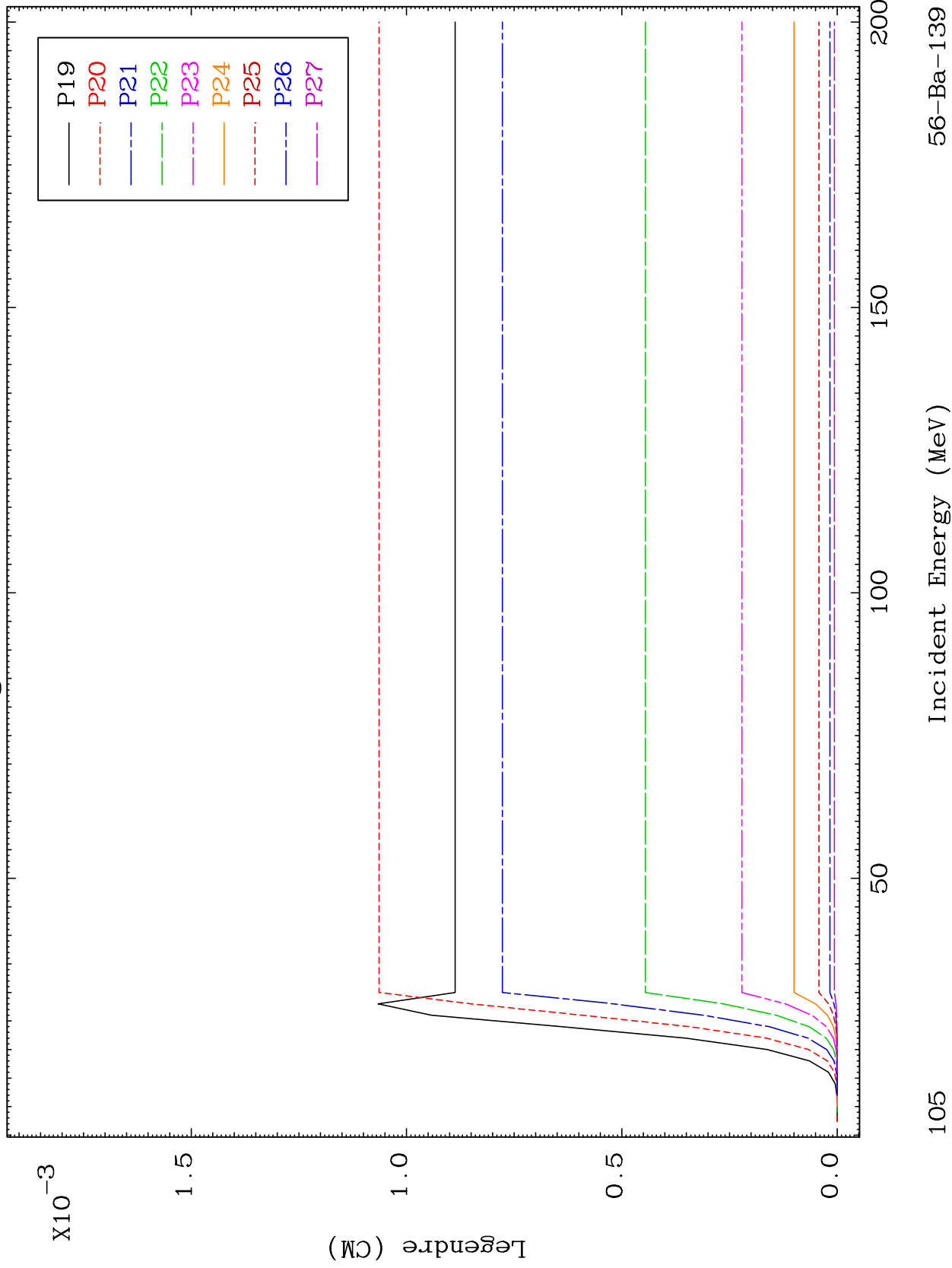
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 72 (n,n') Level  
Legendre Coefficients

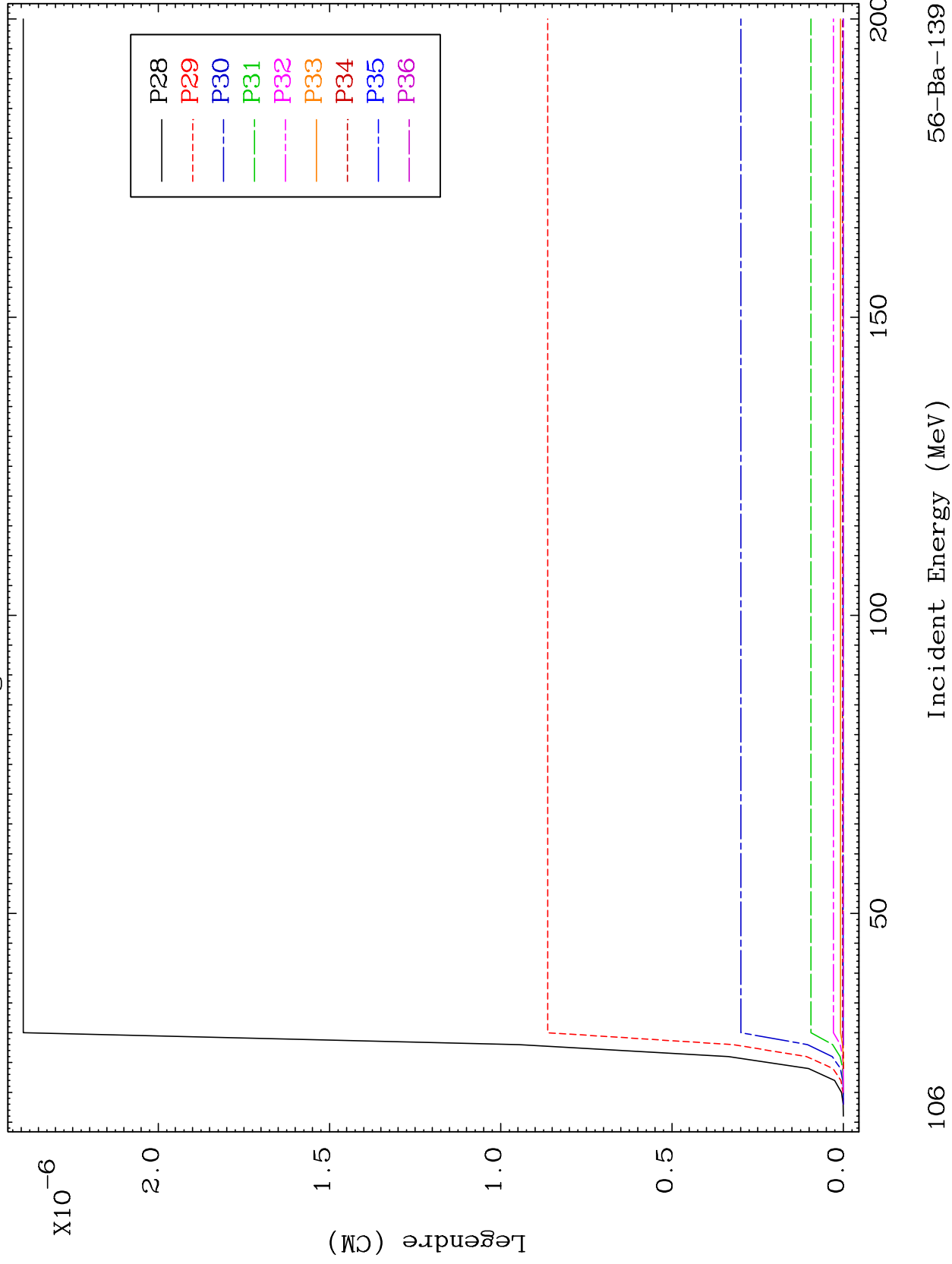
56-Ba-139



MAT 5652

MT= 72 (n,n') Level  
Legendre Coefficients

56-Ba-139



106

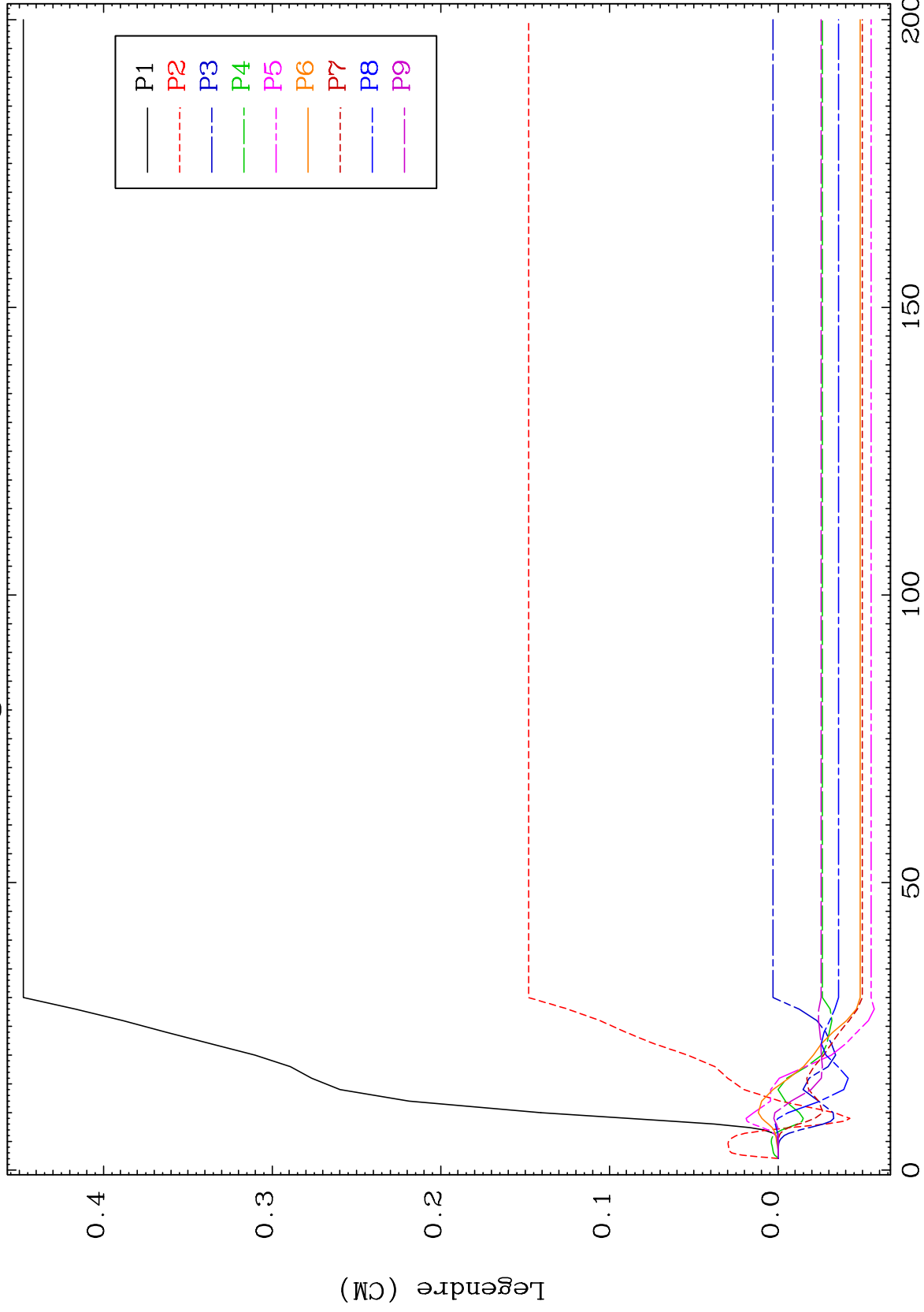
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 73 (n,n') Level  
Legendre Coefficients

56-Ba-139



107

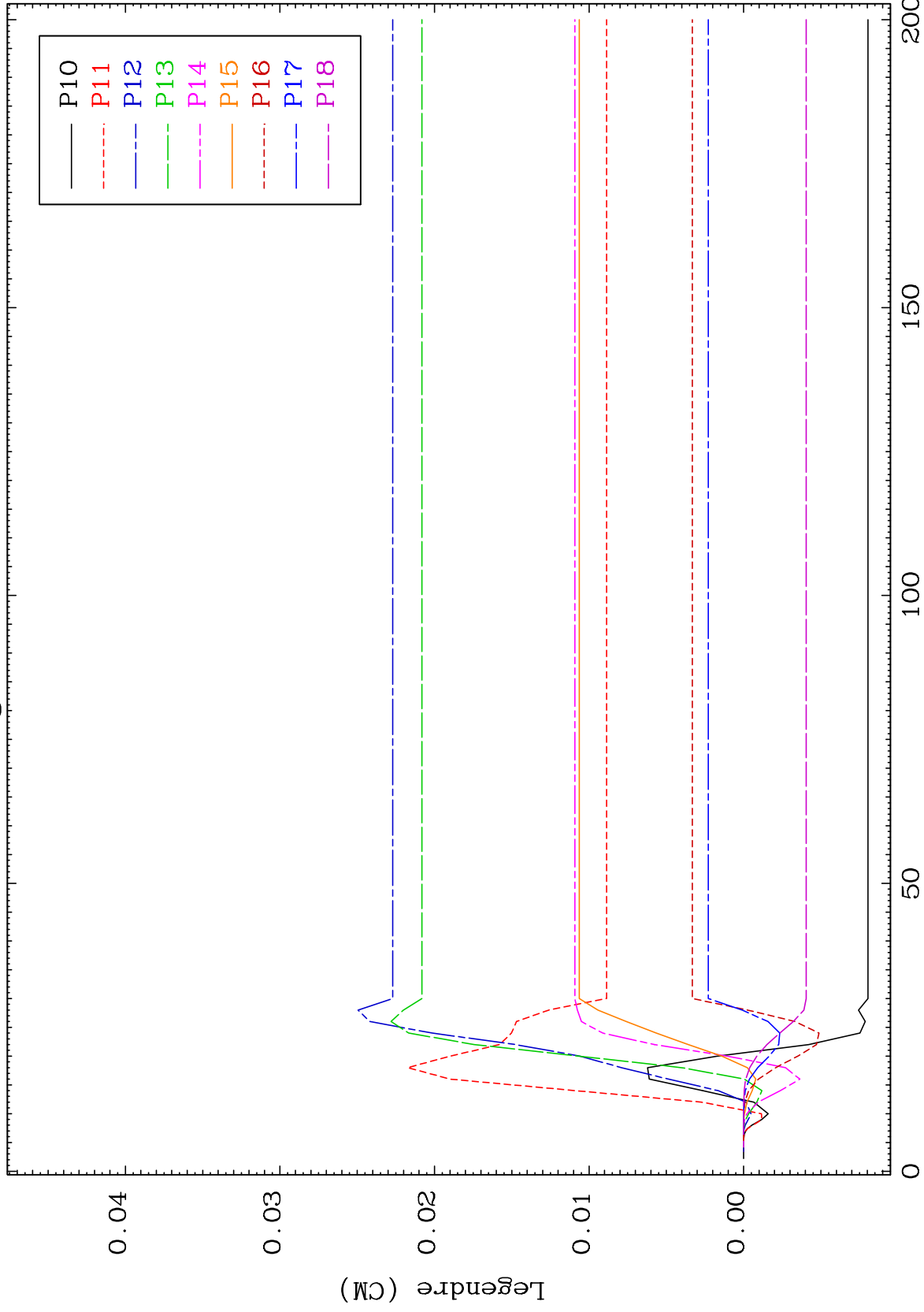
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 73 (n,n') Level  
Legendre Coefficients

56-Ba-139



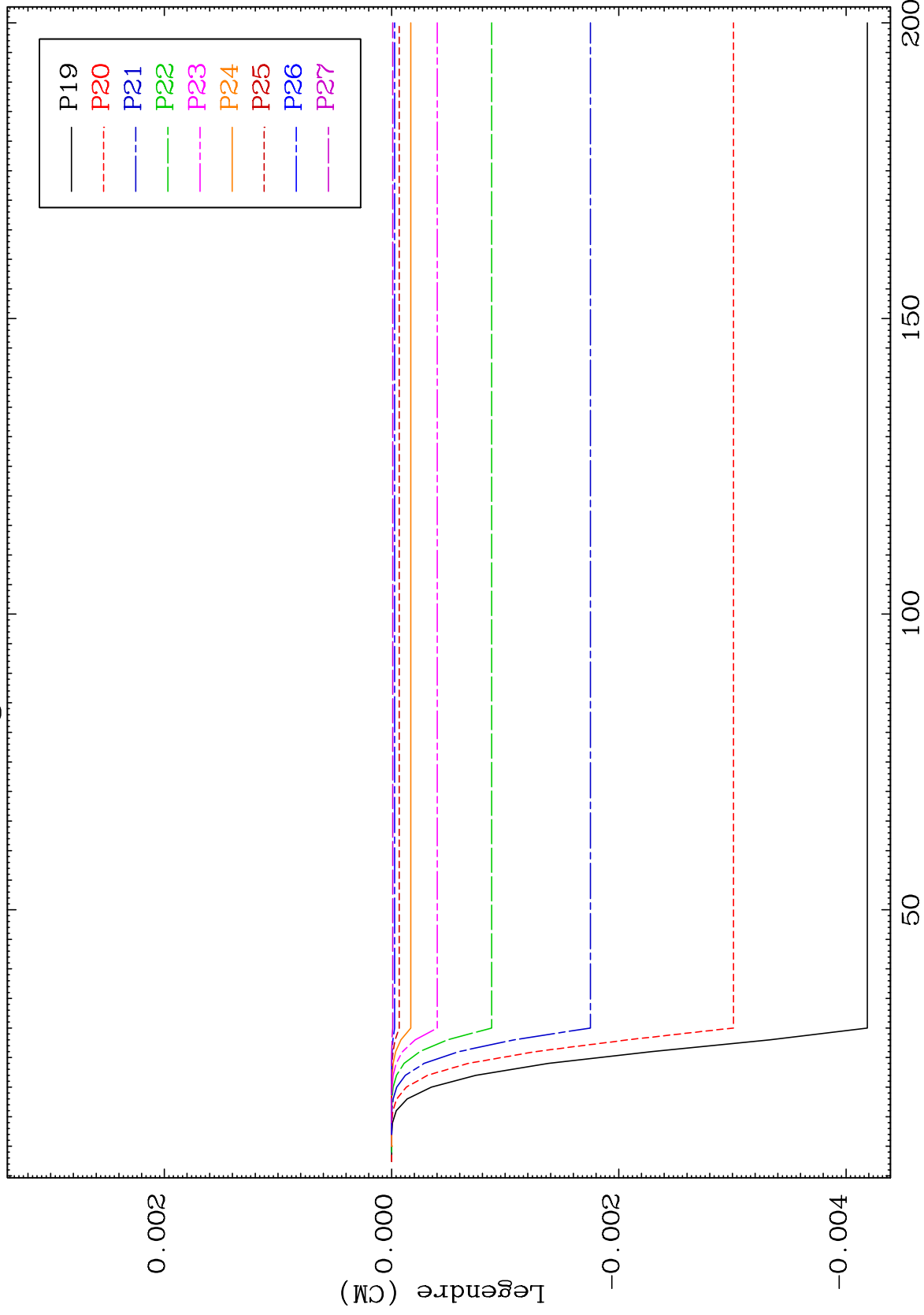
108

56-Ba-139

MAT 5652

MT= 73 (n,n') Level  
Legendre Coefficients

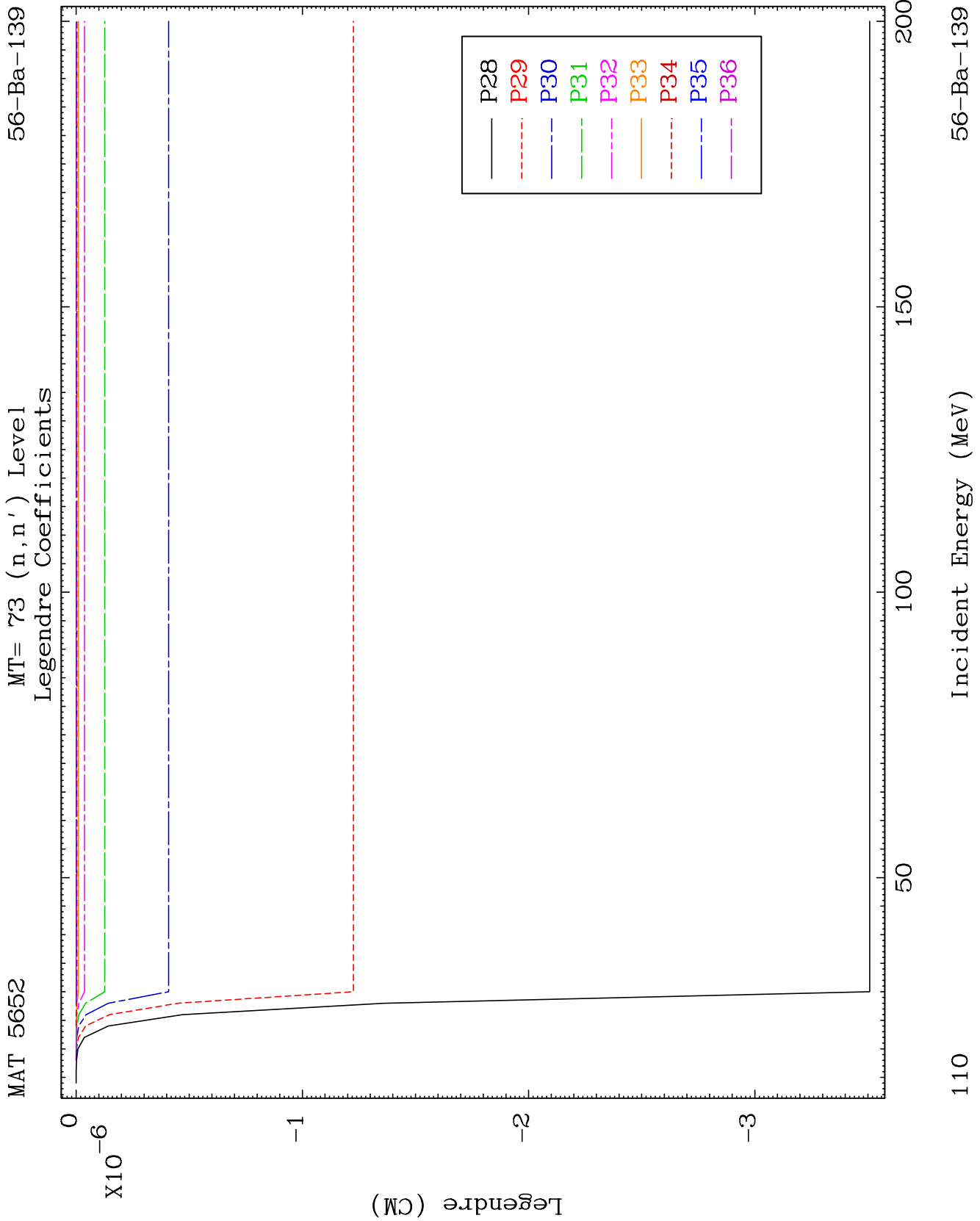
56-Ba-139



109

Incident Energy (MeV)

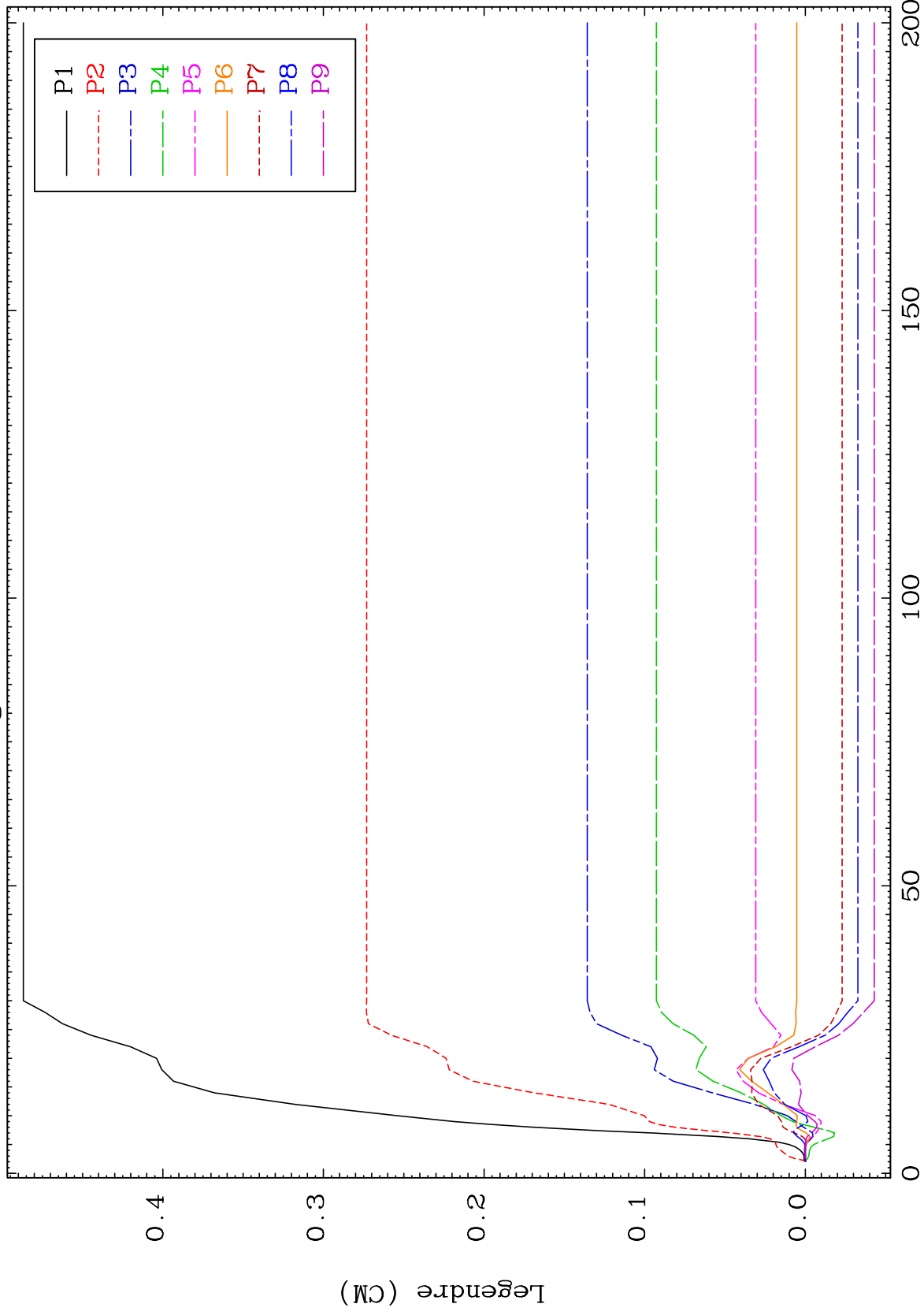
56-Ba-139



MAT 5652

MT= 74 (n,n') Level  
Legendre Coefficients

56-Ba-139



111

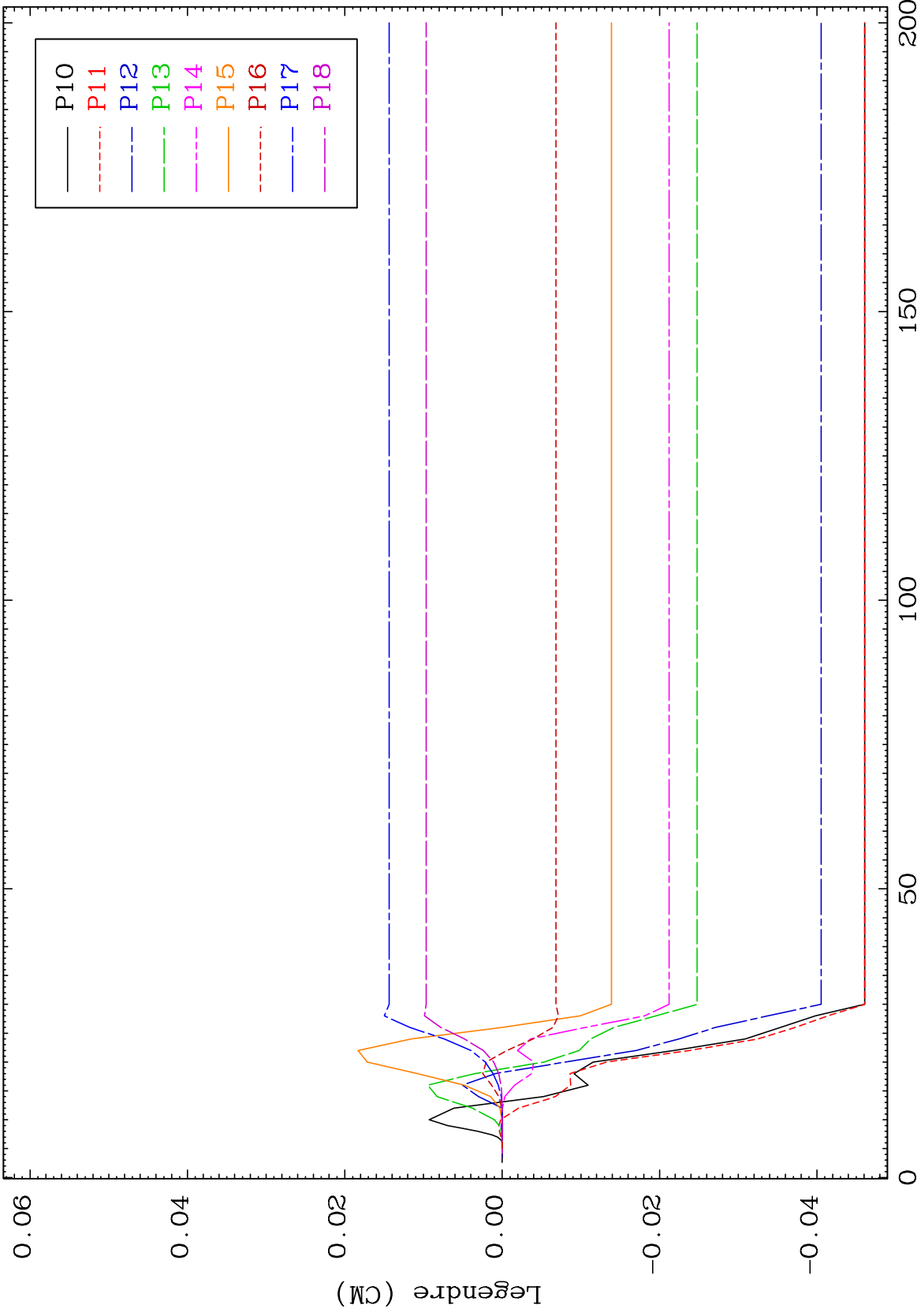
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 74 (n,n') Level  
Legendre Coefficients

56-Ba-139



112

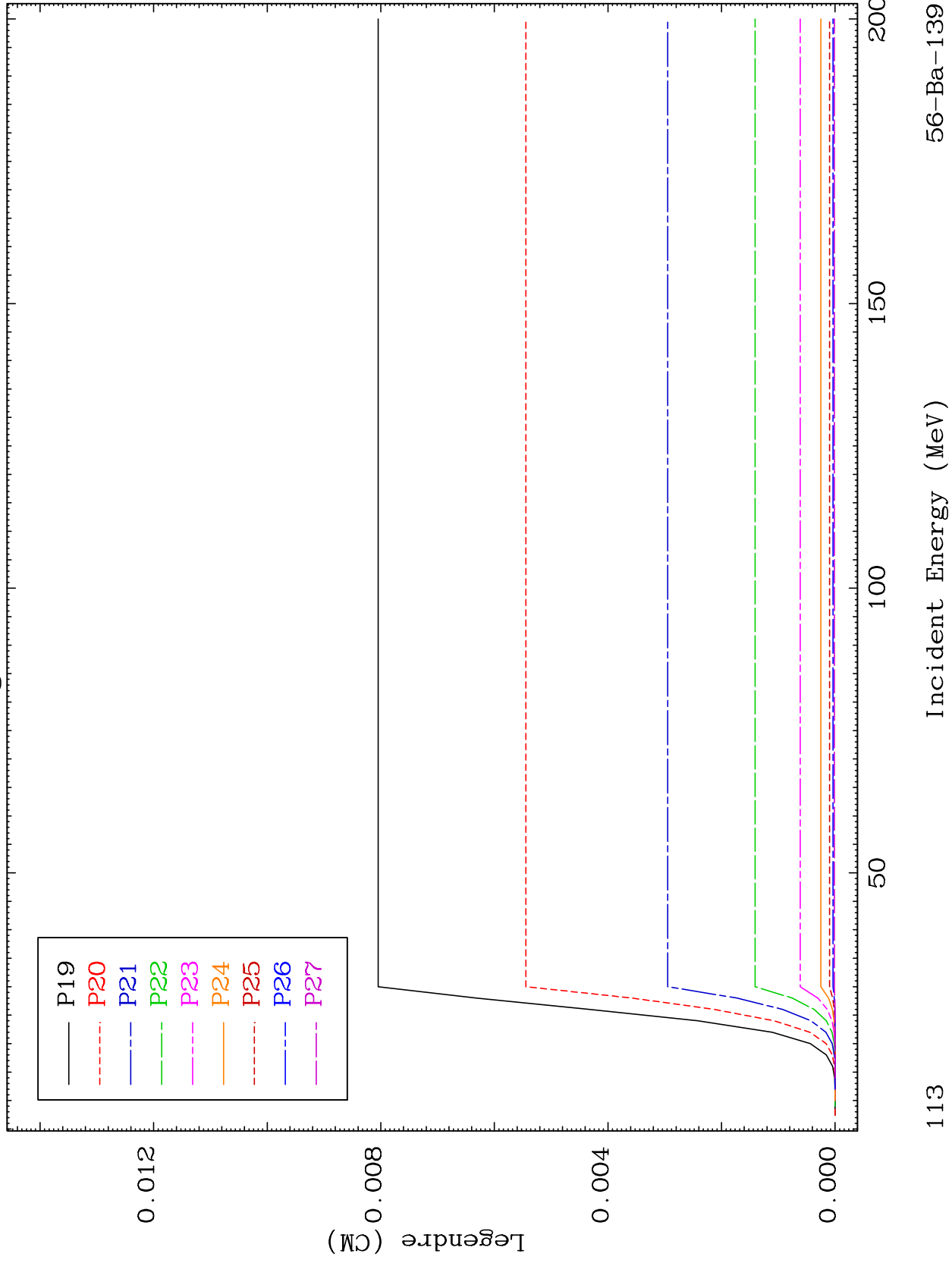
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 74 (n,n') Level  
Legendre Coefficients

56-Ba-139



113

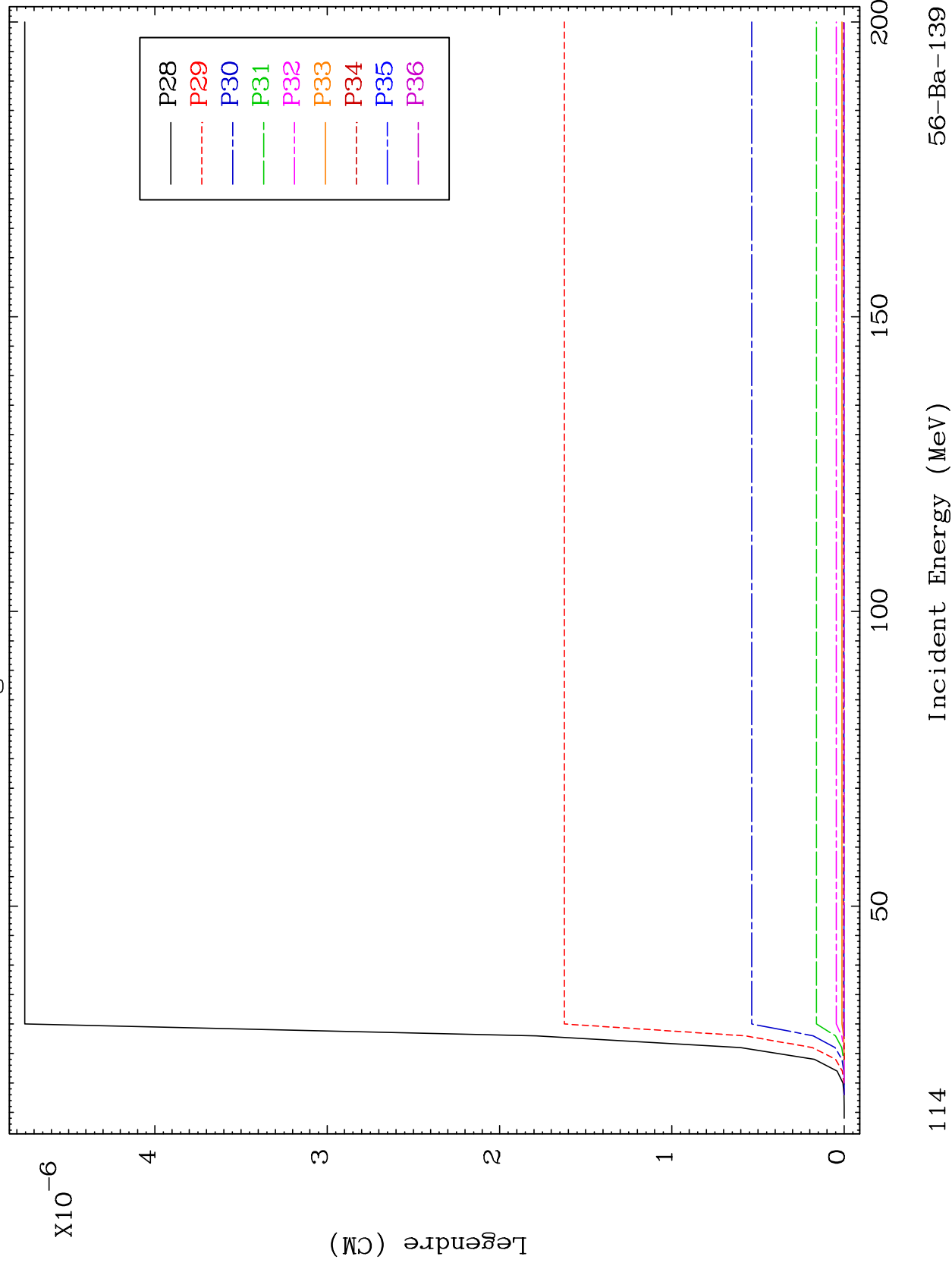
Incident Energy (MeV)

56-Ba-139

MAT 5652

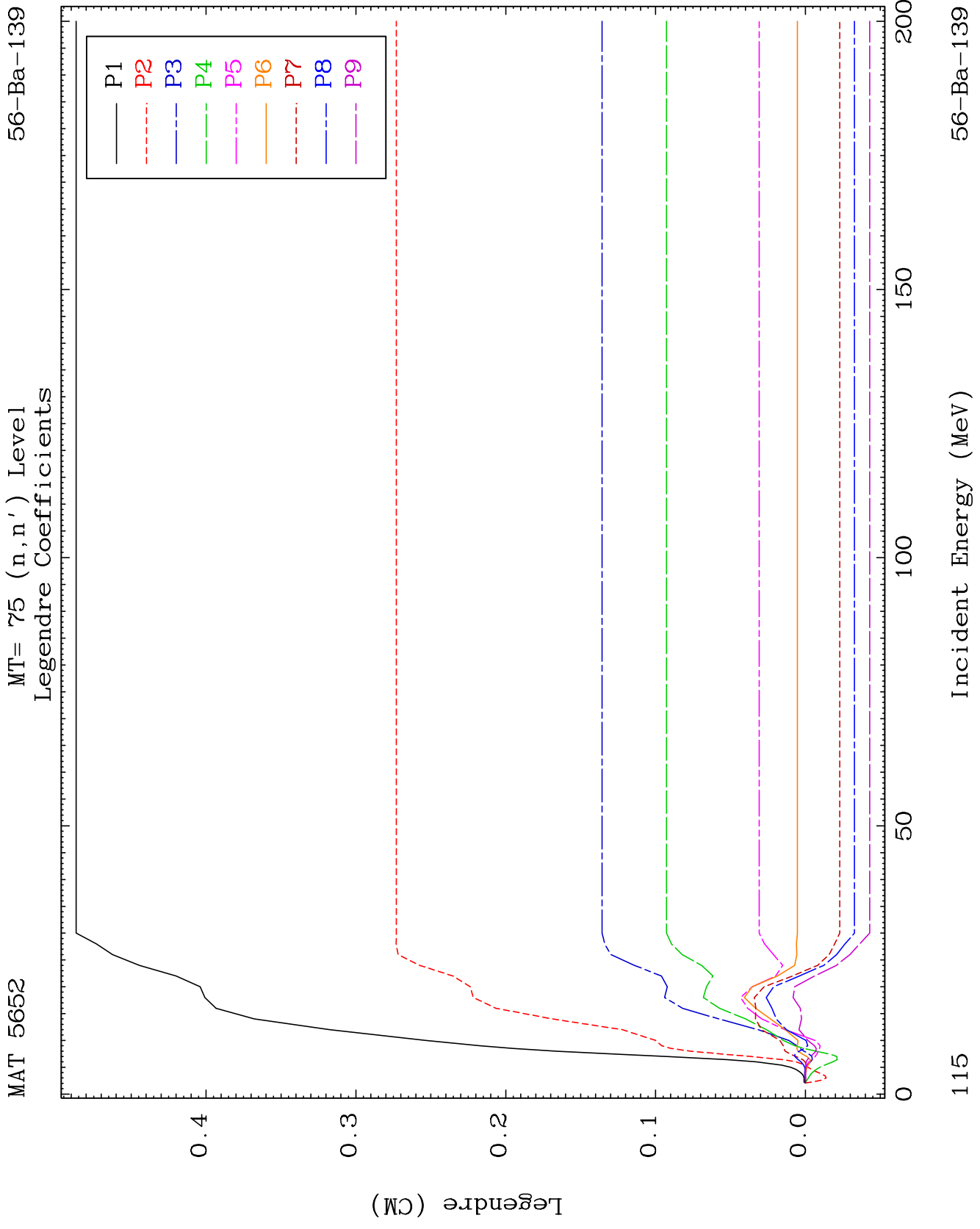
MT= 74 (n,n') Level  
Legendre Coefficients

56-Ba-139



114

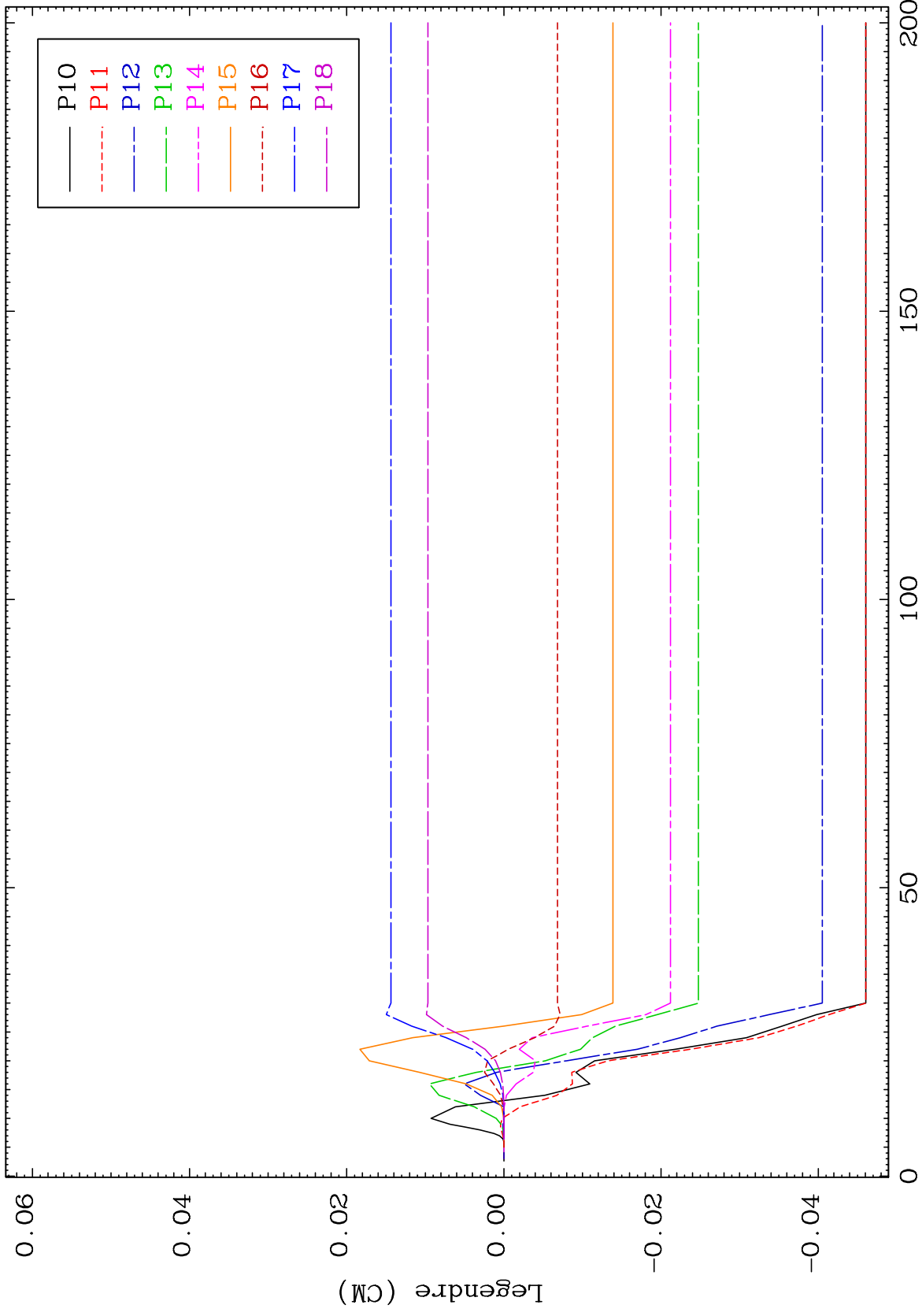
56-Ba-139



MAT 5652

MT= 75 (n,n') Level  
Legendre Coefficients

56-Ba-139



116

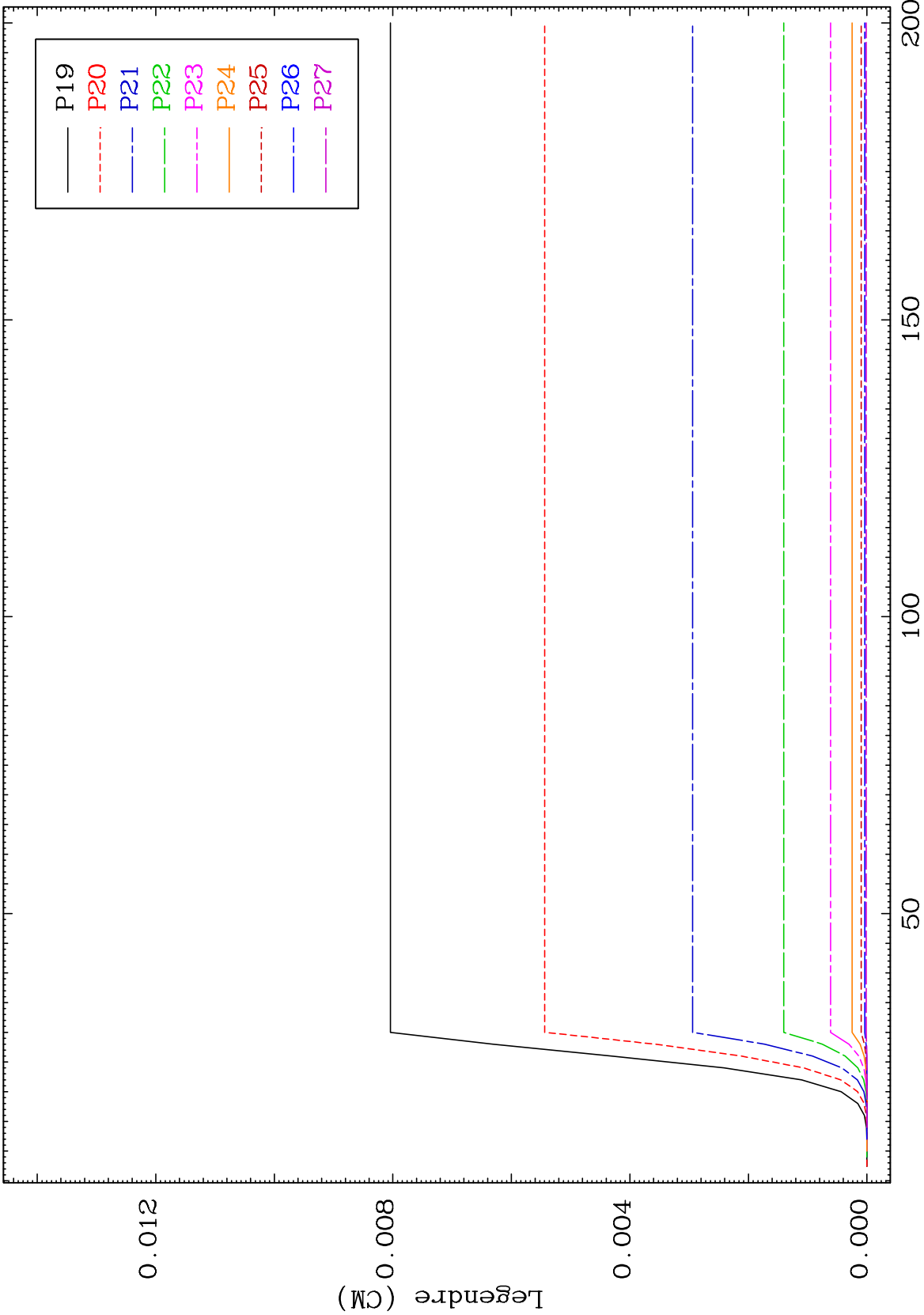
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 75 (n,n') Level  
Legendre Coefficients

56-Ba-139



117

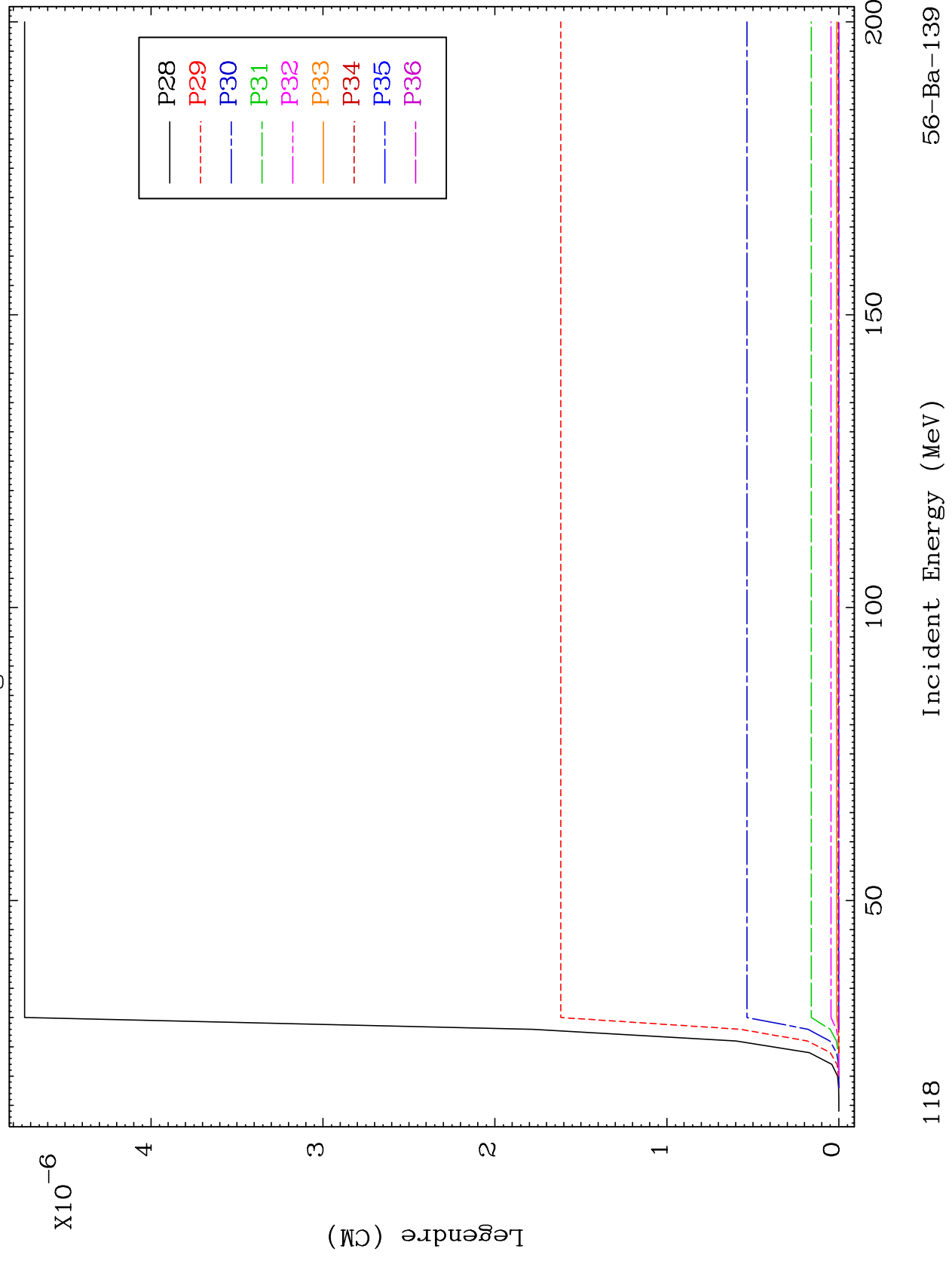
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 75 (n,n') Level  
Legendre Coefficients

56-Ba-139



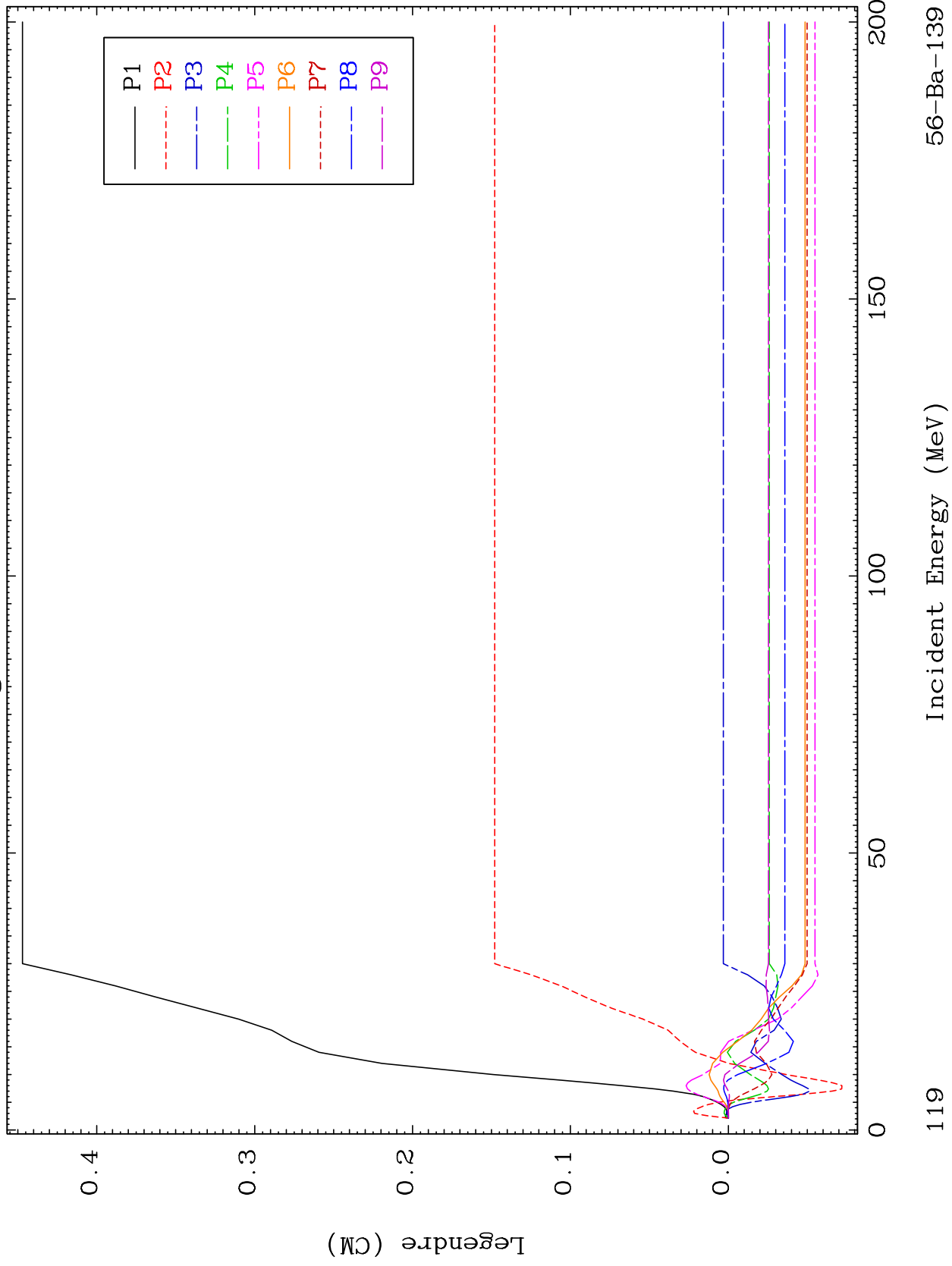
118

56-Ba-139

MAT 5652

MT= 76 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

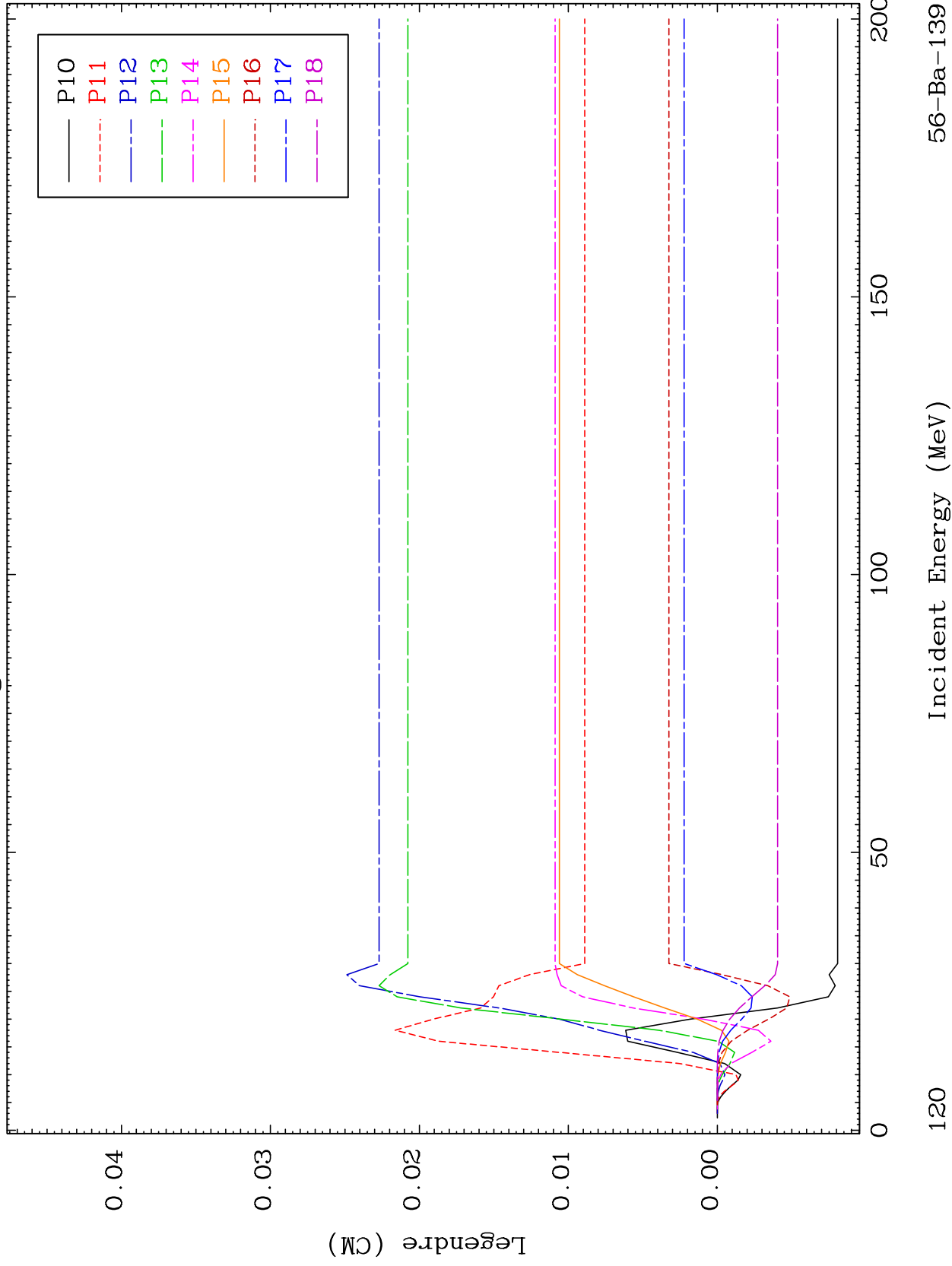
Incident Energy (MeV)

119

MAT 5652

MT= 76 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

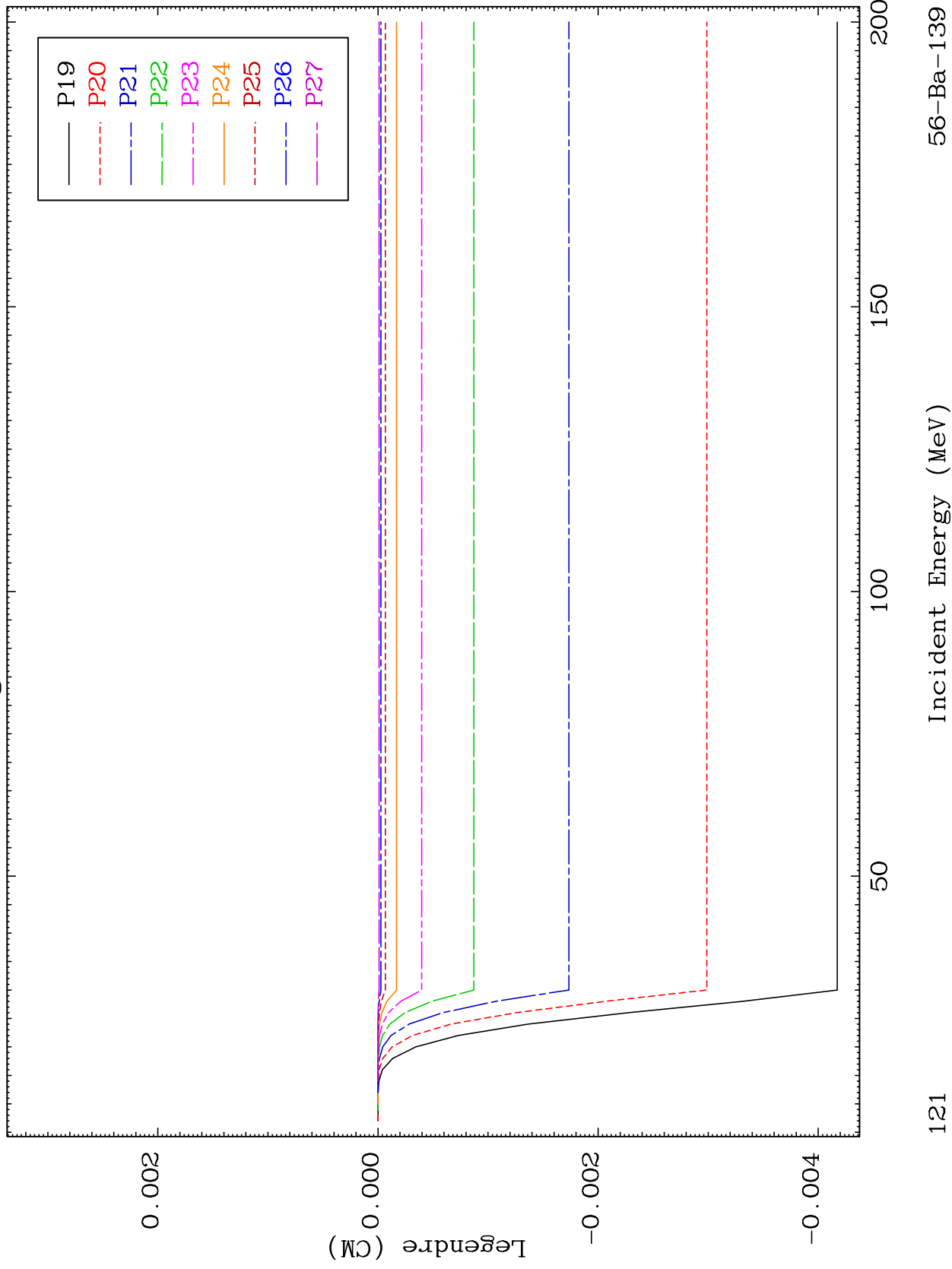
Incident Energy (MeV)

120

MAT 5652

MT= 76 (n,n') Level  
Legendre Coefficients

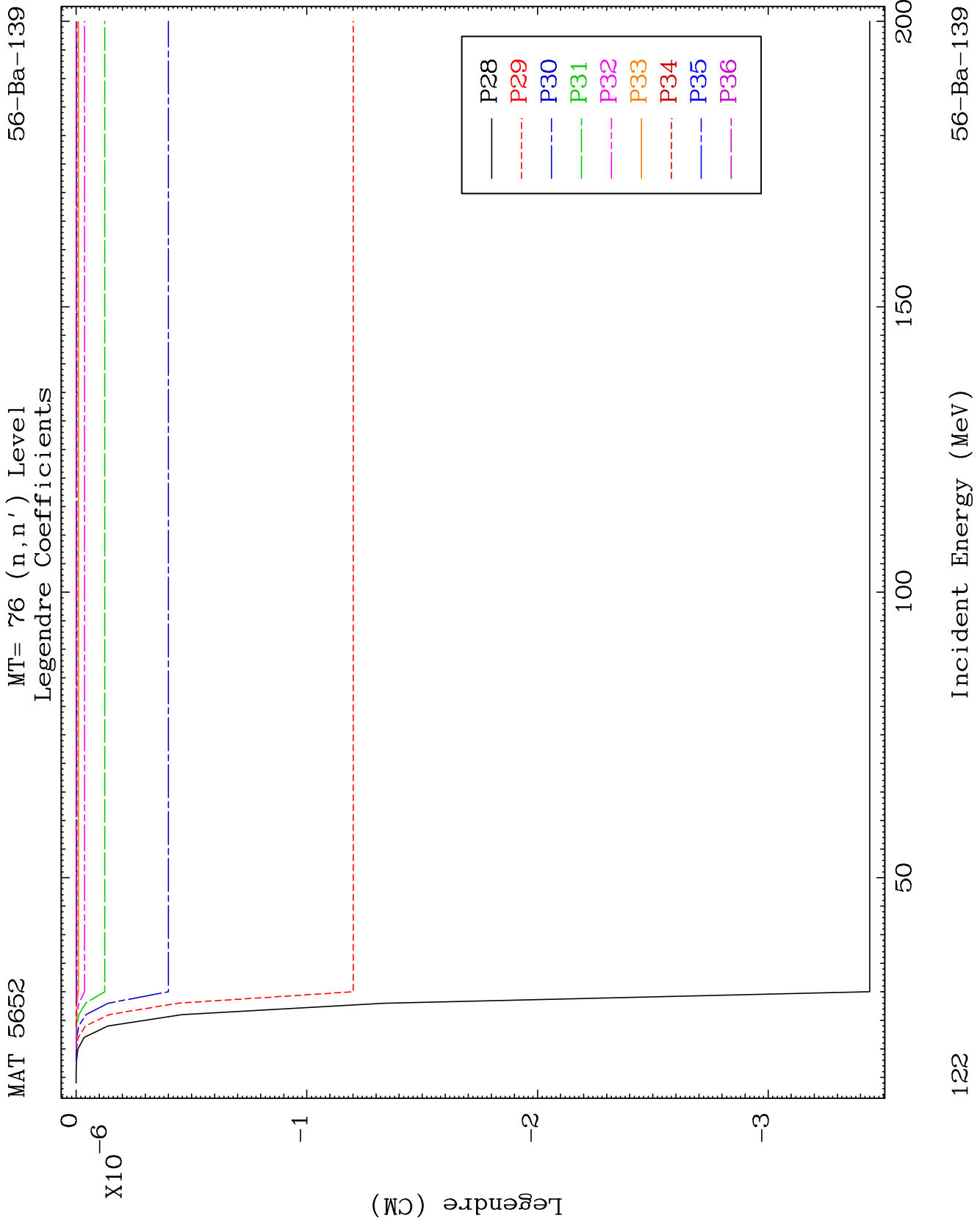
56-Ba-139



121

Incident Energy (MeV)

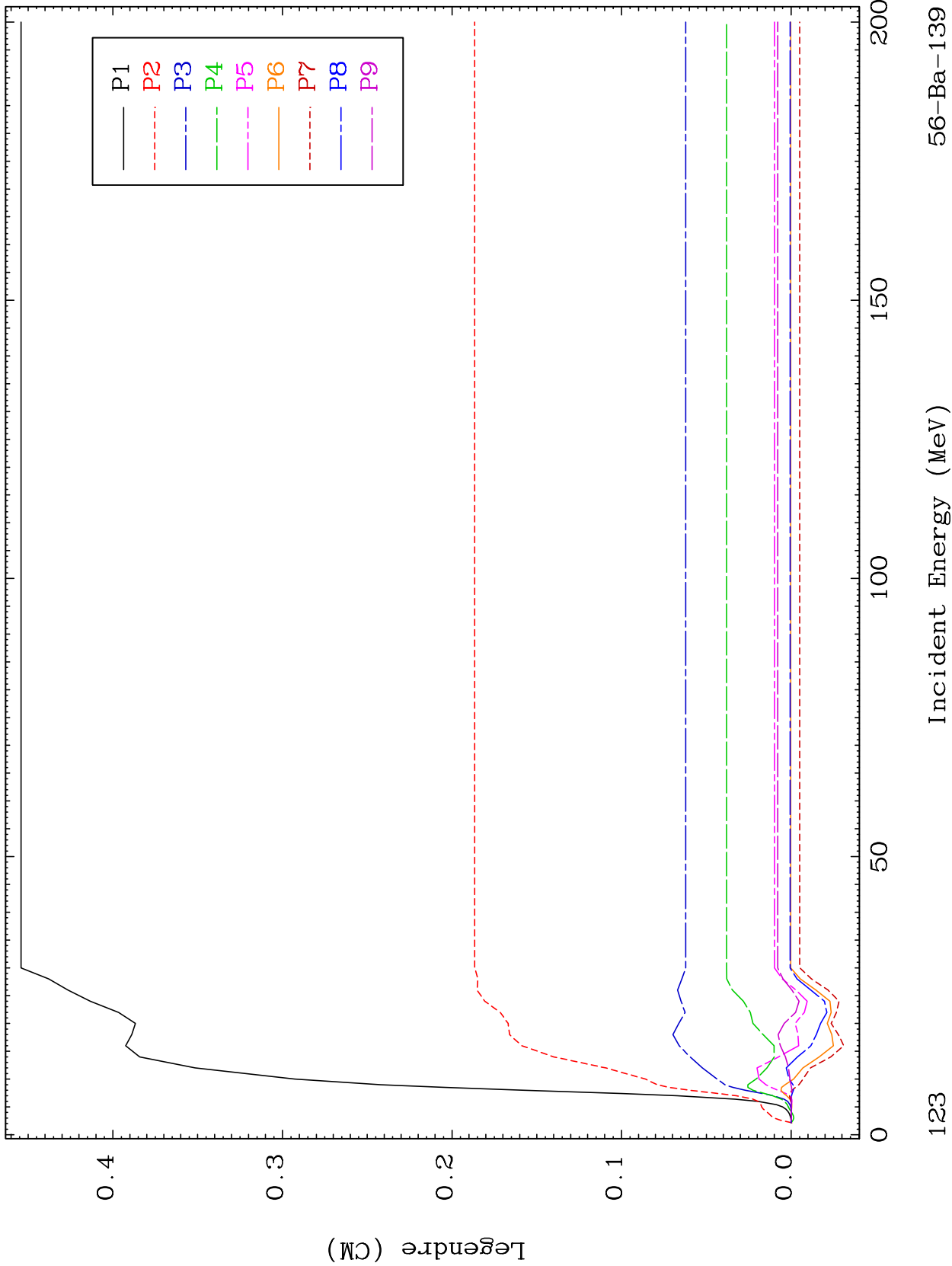
56-Ba-139



MAT 5652

MT= 77 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

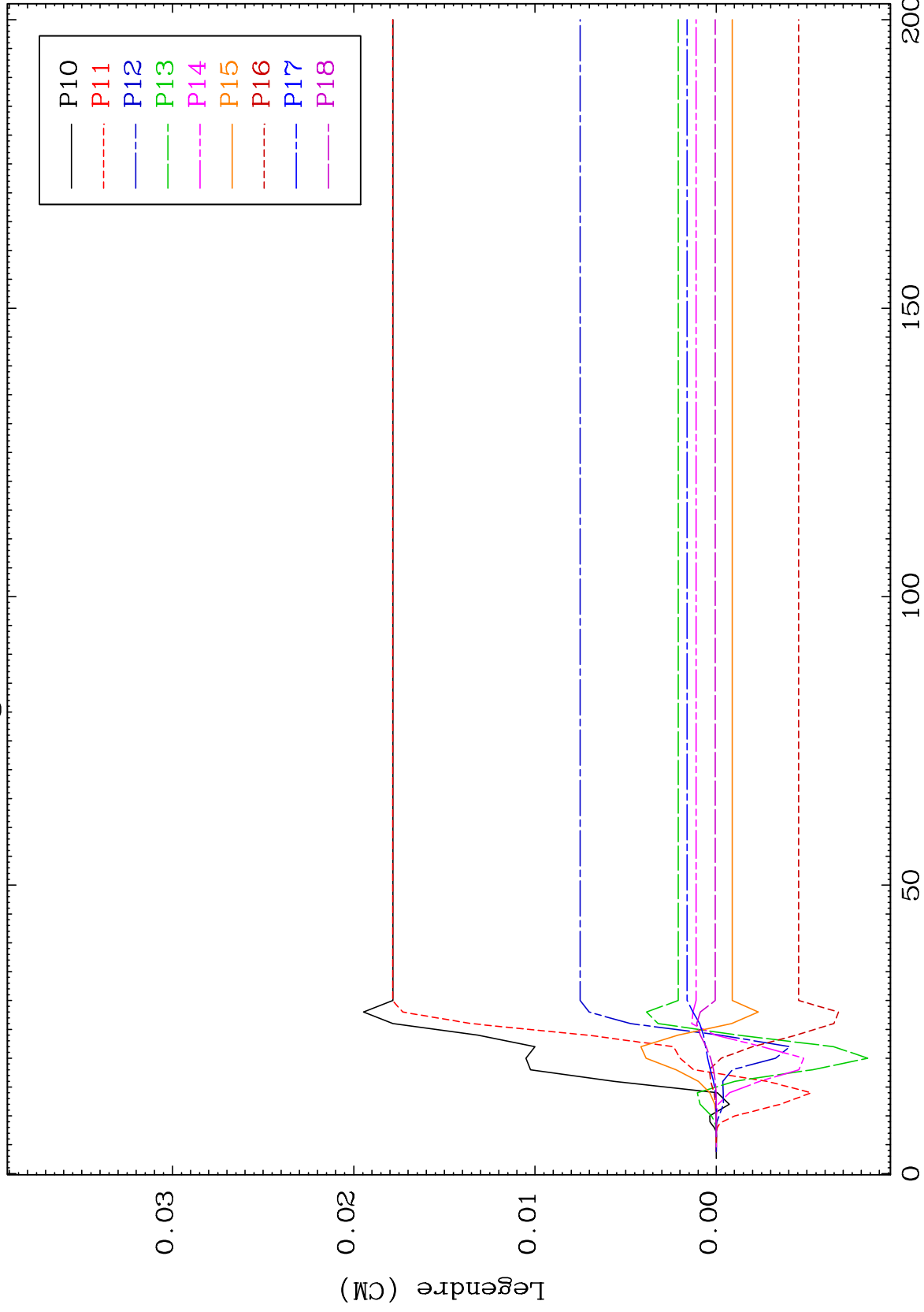
Incident Energy (MeV)

123

MAT 5652

MT= 77 (n,n') Level  
Legendre Coefficients

56-Ba-139



124

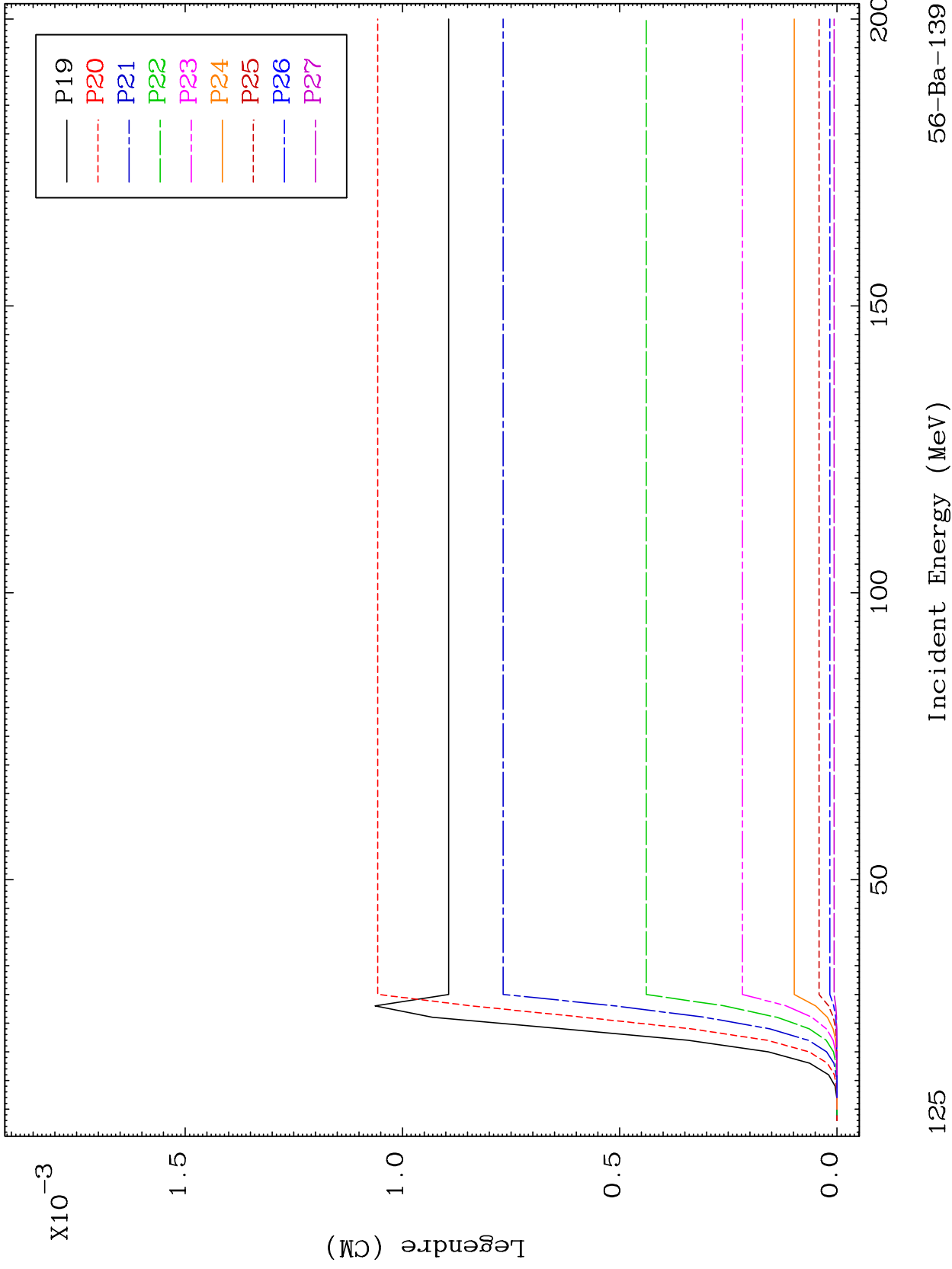
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 77 (n,n') Level  
Legendre Coefficients

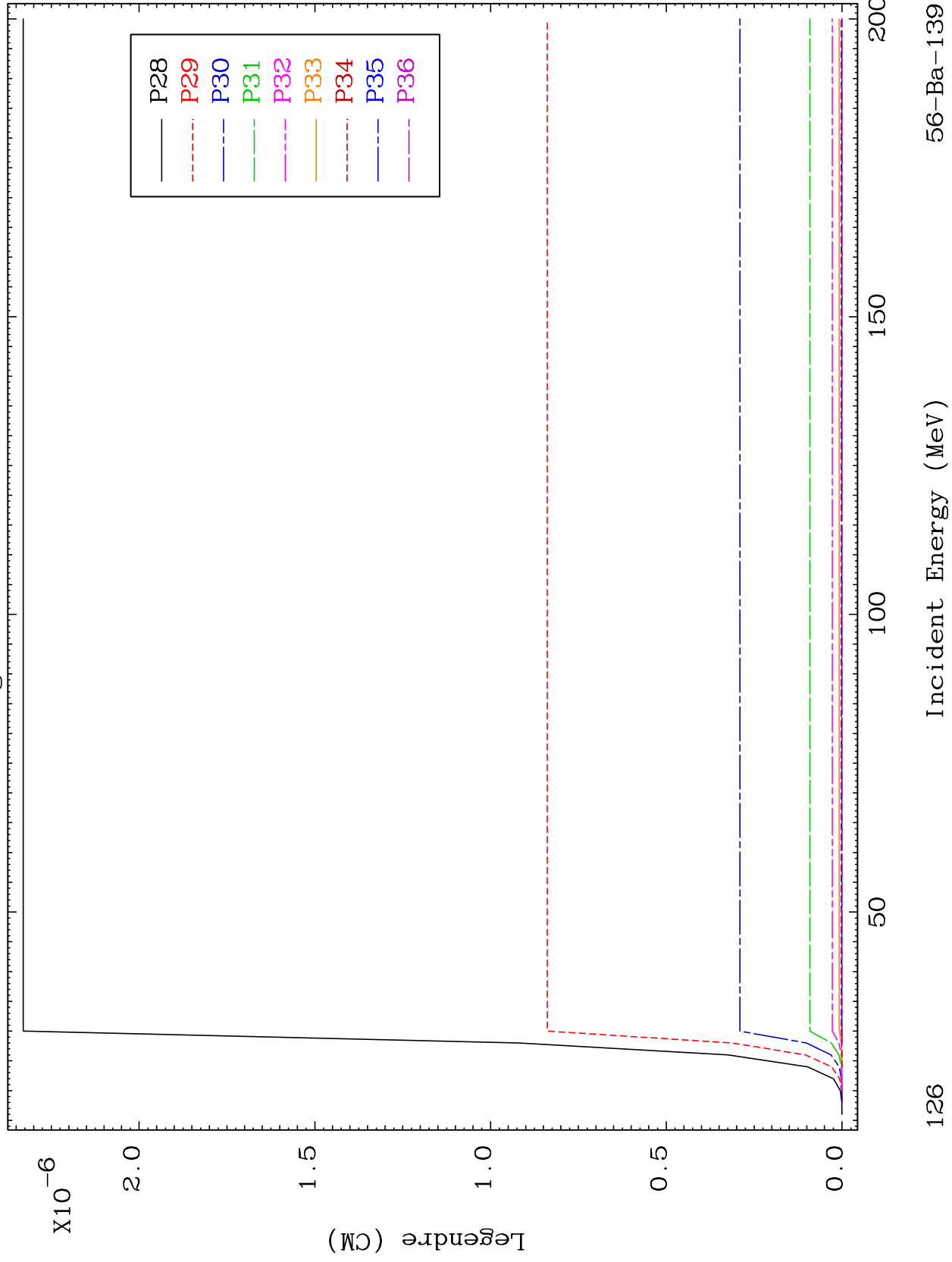
56-Ba-139



MAT 5652

MT= 77 (n,n') Level  
Legendre Coefficients

56-Ba-139



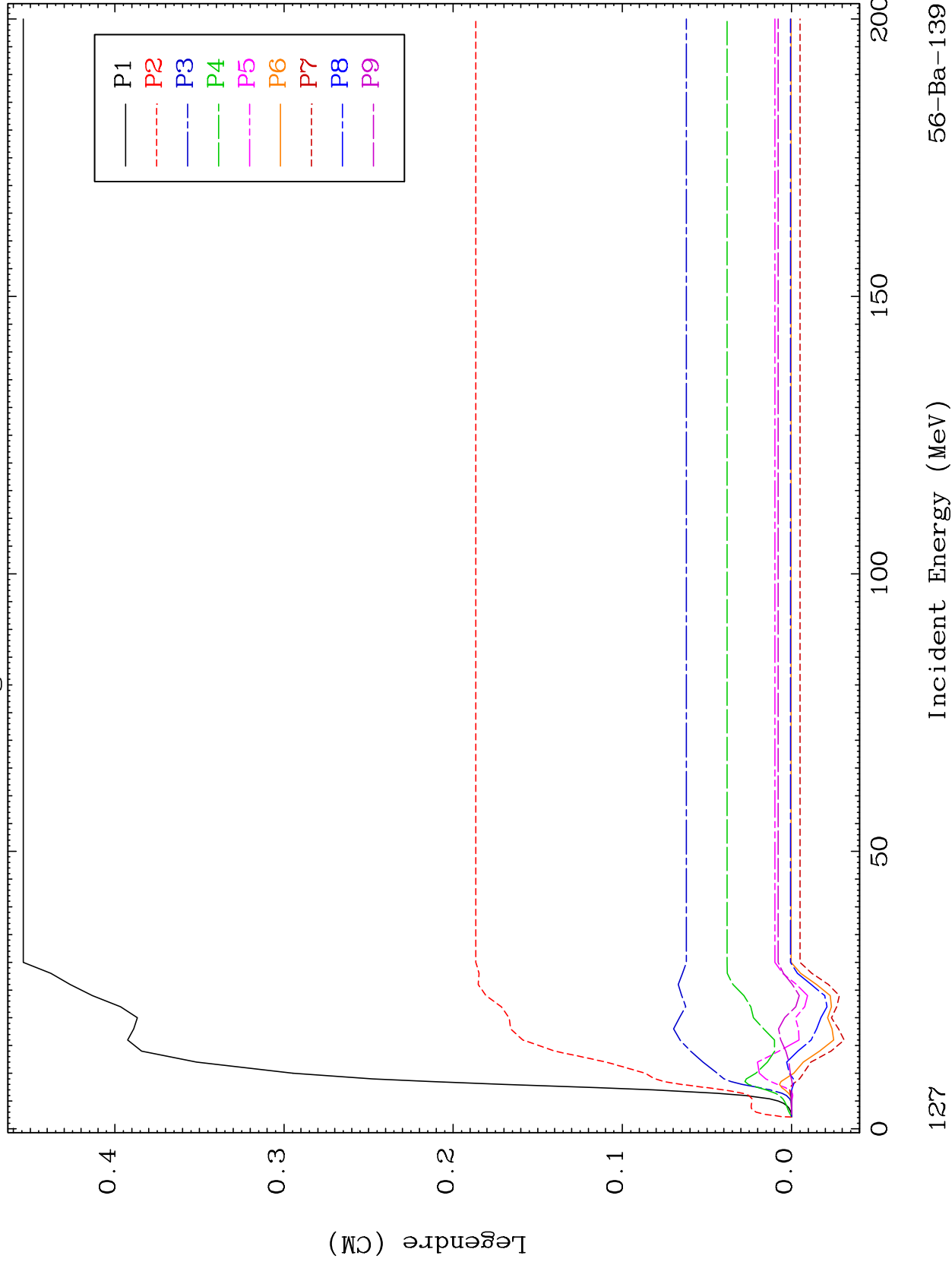
126

56-Ba-139

MAT 5652

MT= 78 (n,n') Level  
Legendre Coefficients

56-Ba-139



56-Ba-139

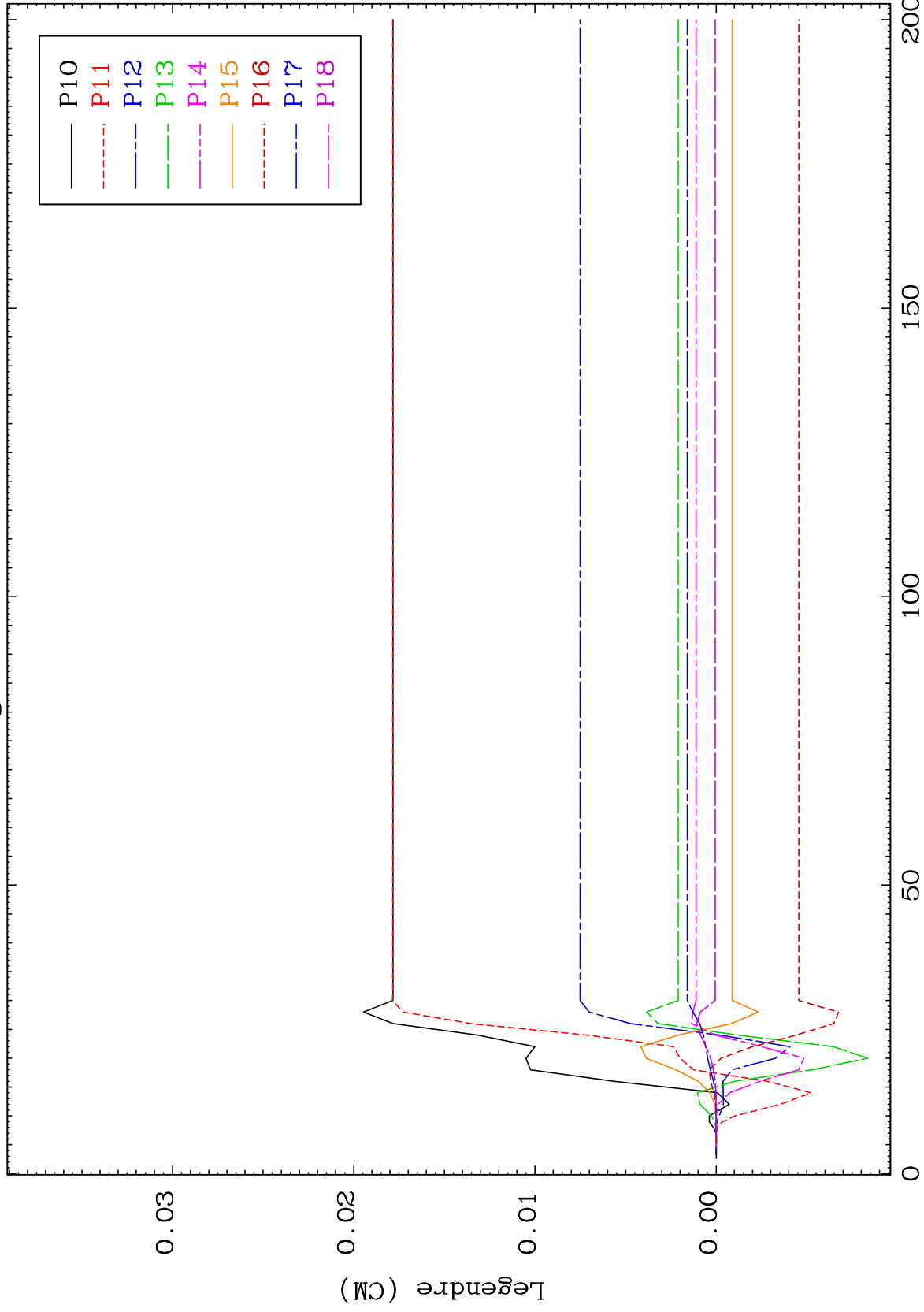
Incident Energy (MeV)

127

MAT 5652

MT= 78 (n,n') Level  
Legendre Coefficients

56-Ba-139



128

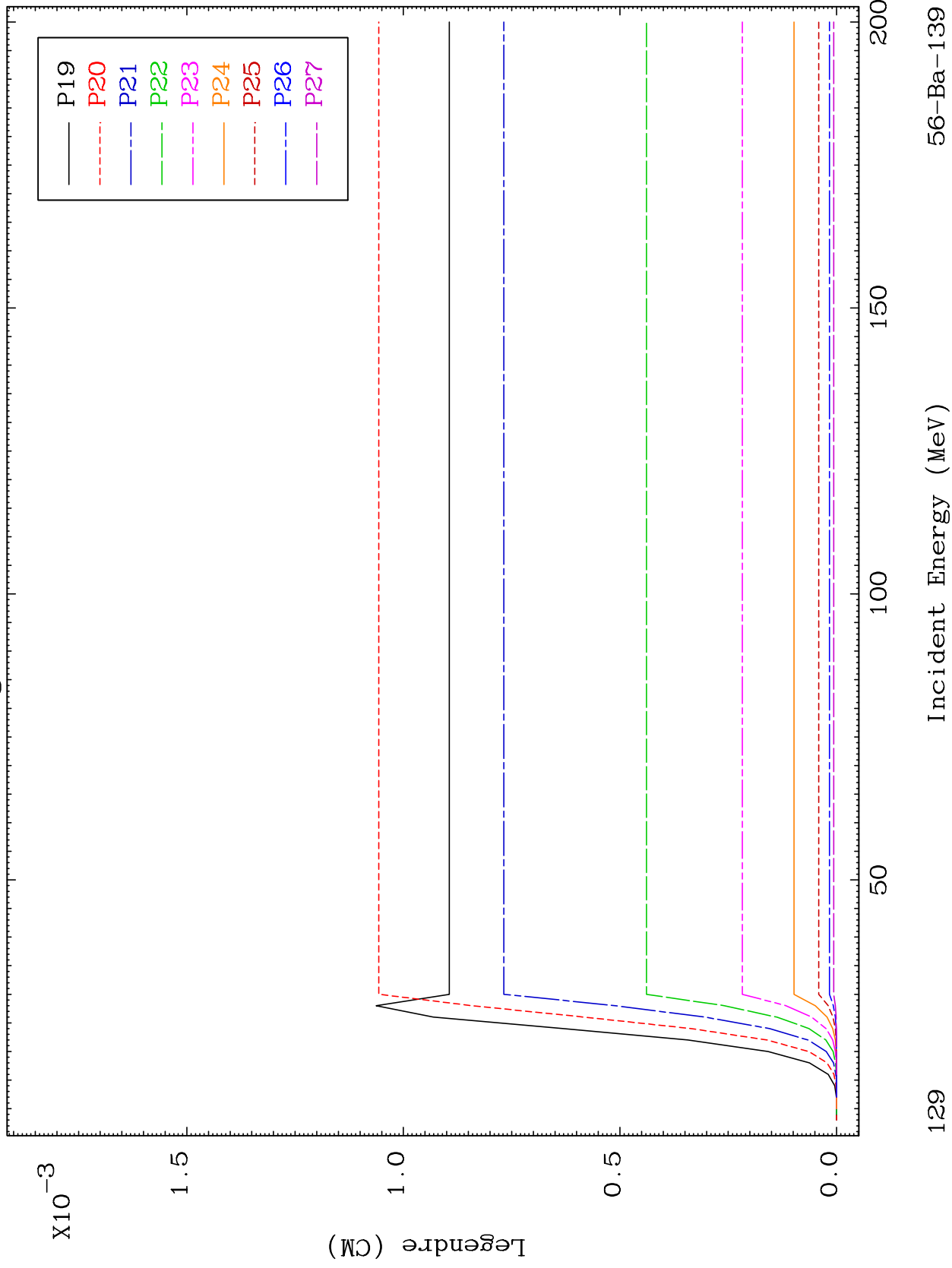
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 78 (n,n') Level  
Legendre Coefficients

56-Ba-139

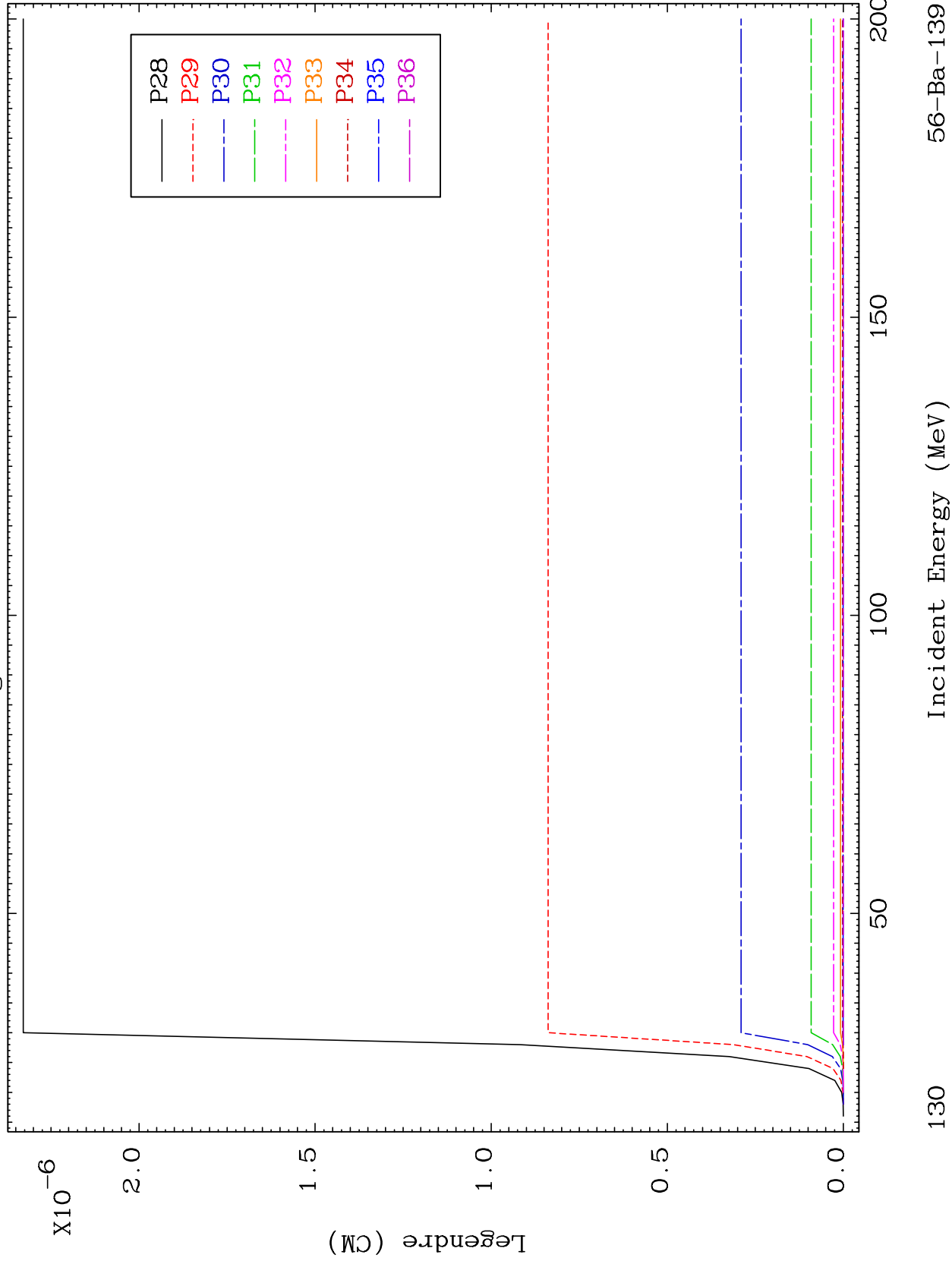


129

MAT 5652

MT= 78 (n,n') Level  
Legendre Coefficients

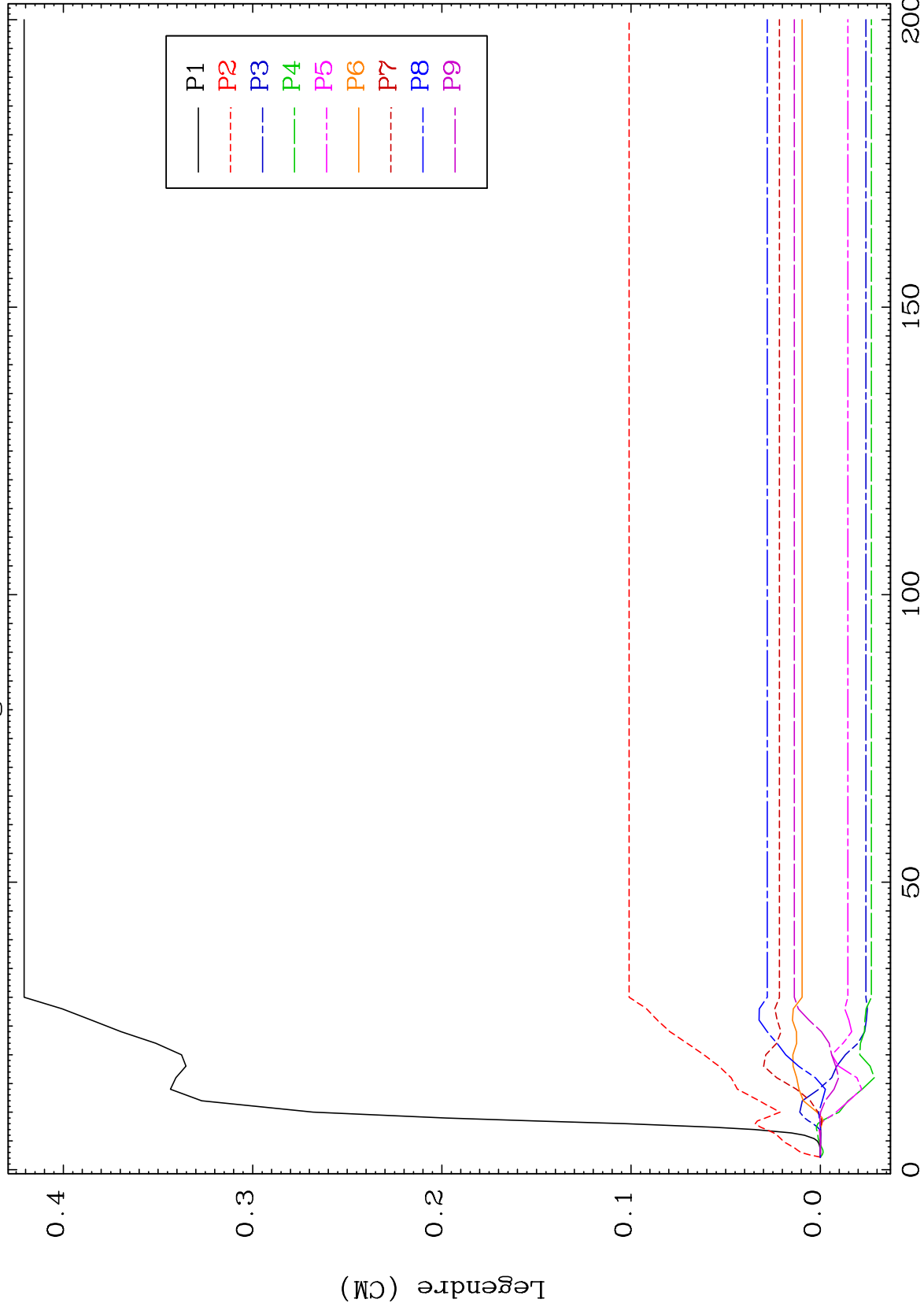
56-Ba-139



MAT 5652

MT= 79 (n,n') Level  
Legendre Coefficients

56-Ba-139



131

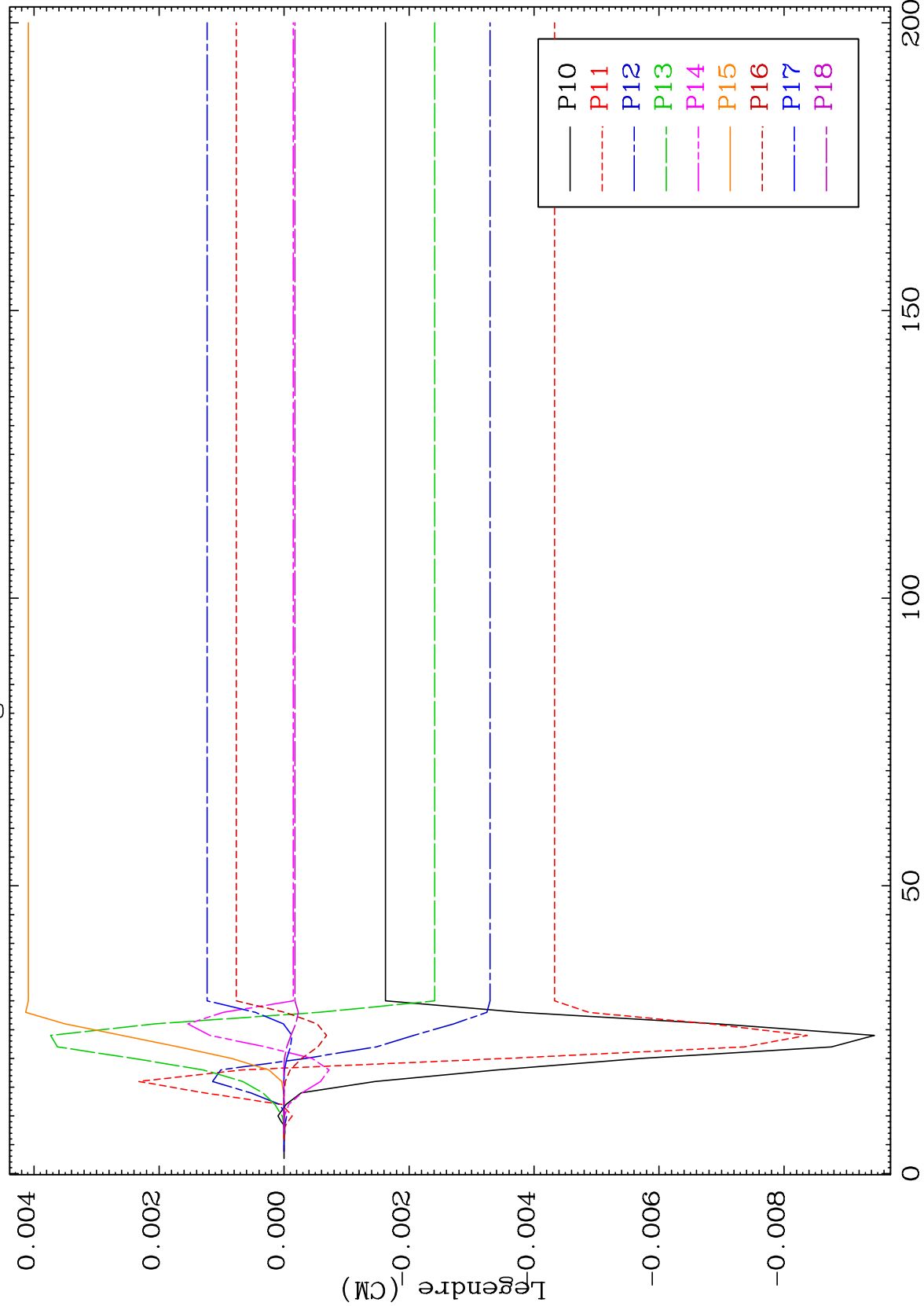
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 79 (n,n') Level  
Legendre Coefficients

56-Ba-139



132

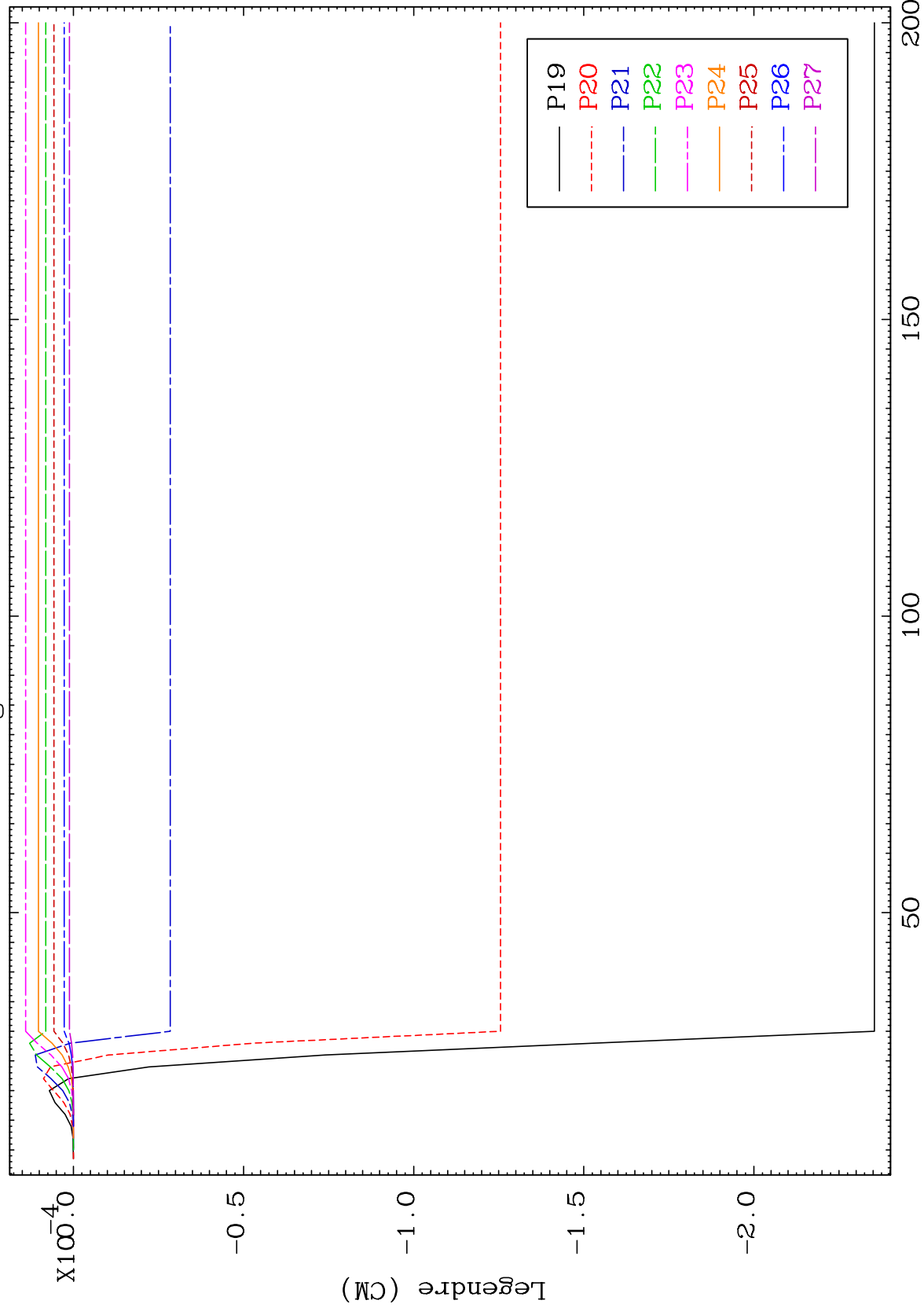
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 79 (n,n') Level  
Legendre Coefficients

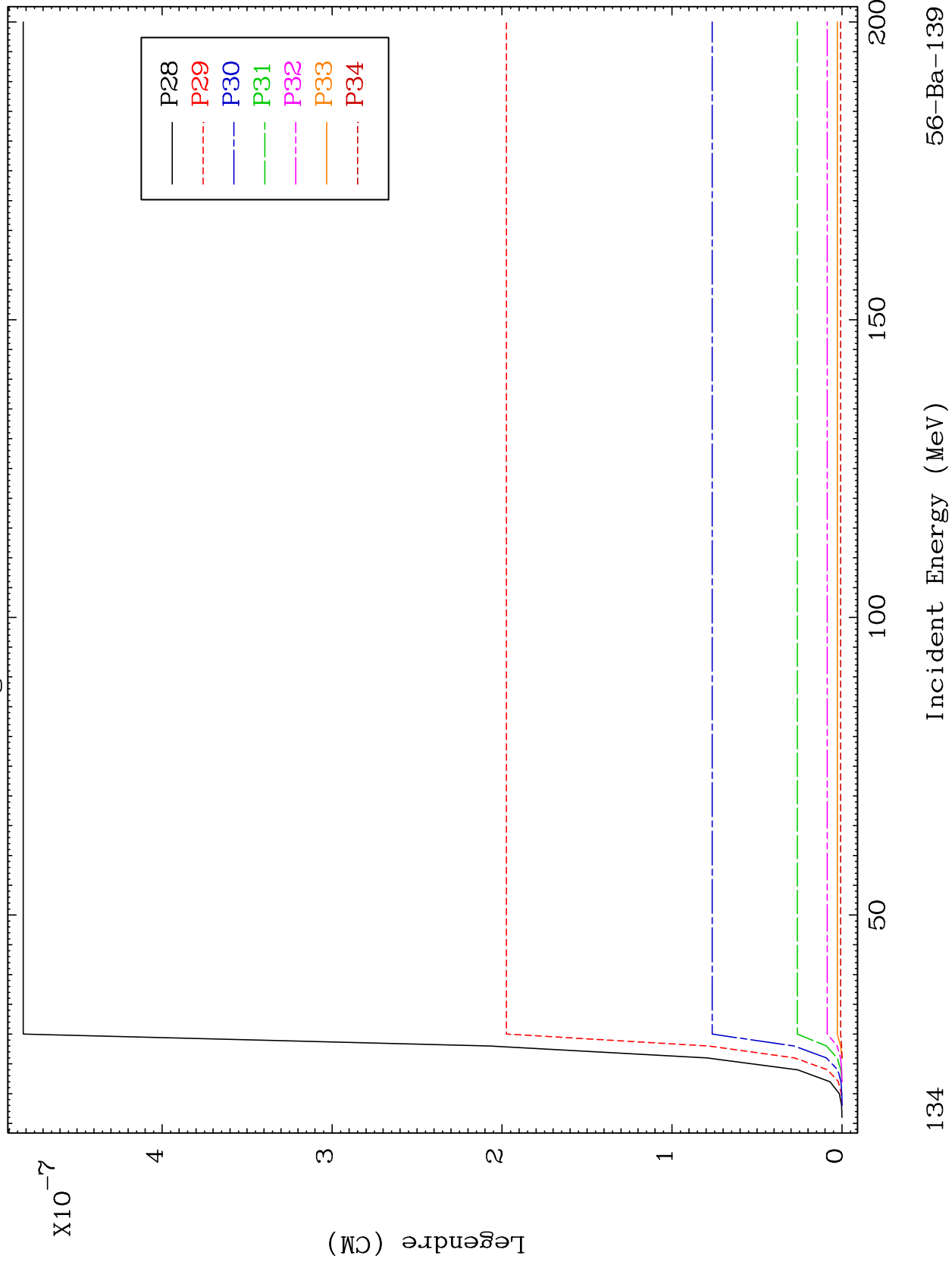
56-Ba-139



MAT 5652

MT= 79 (n,n') Level  
Legendre Coefficients

56-Ba-139

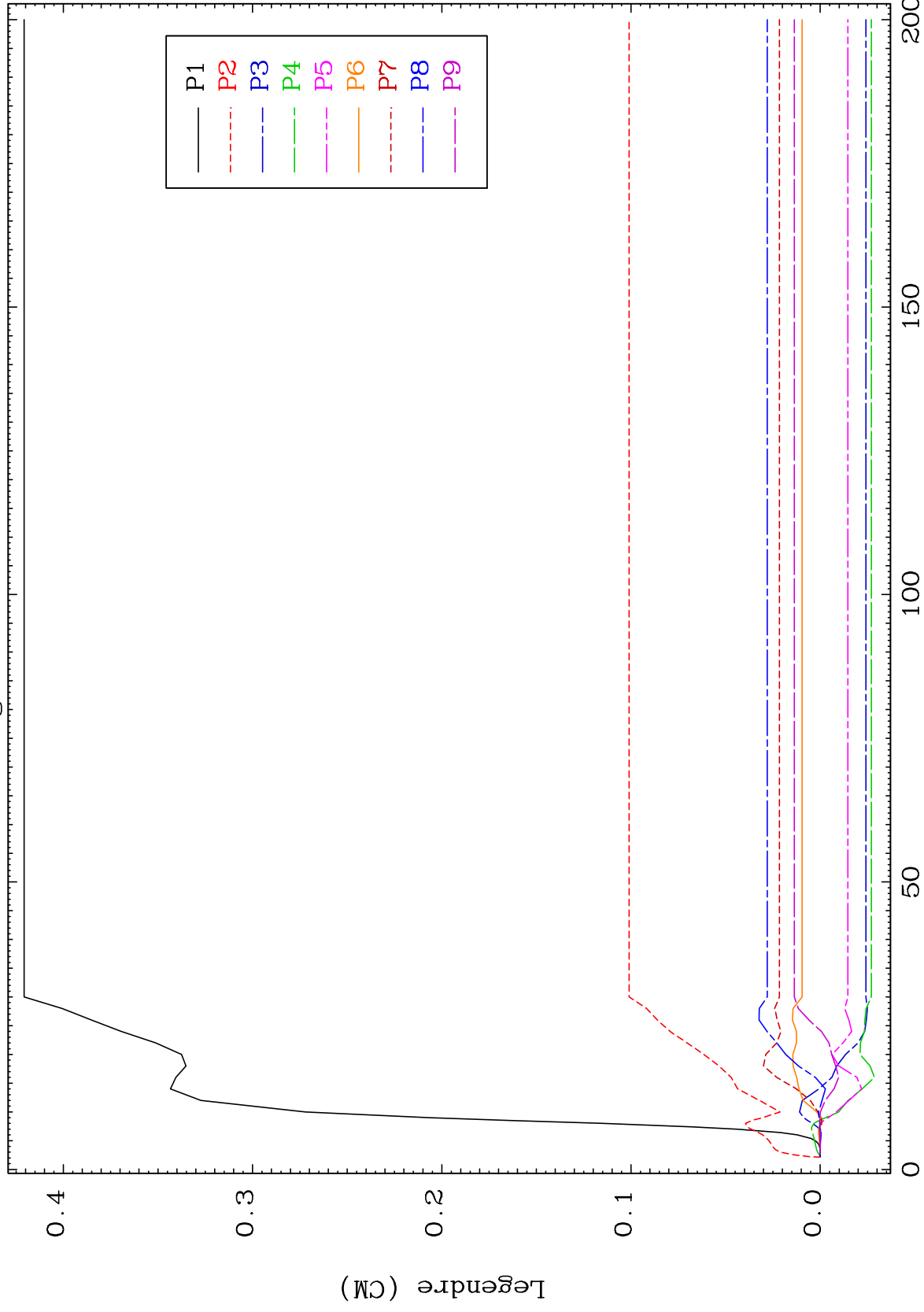


134

MAT 5652

MT= 80 (n,n') Level  
Legendre Coefficients

56-Ba-139



135

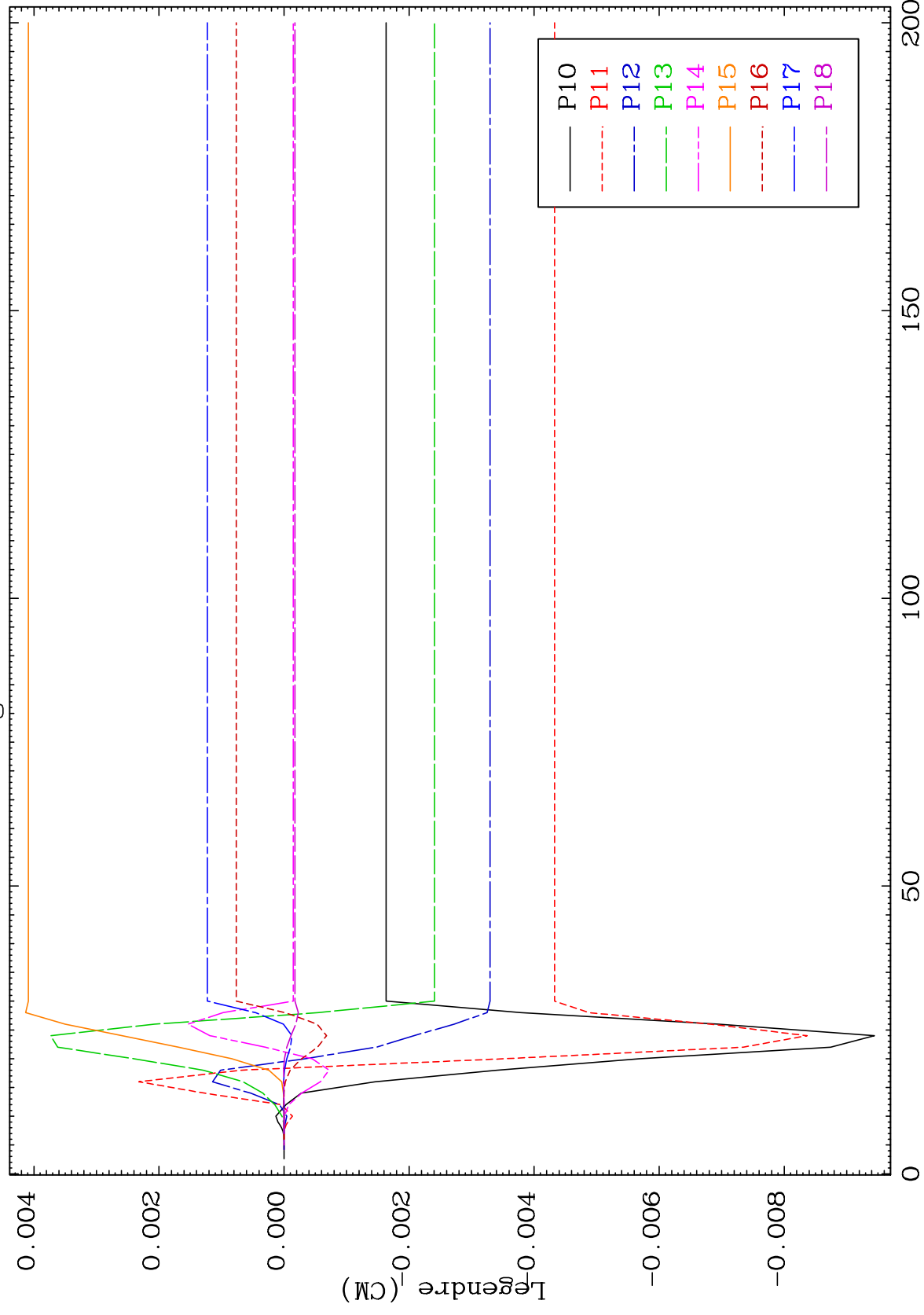
Incident Energy (MeV)

56-Ba-139

MAT 5652

MT= 80 (n,n') Level  
Legendre Coefficients

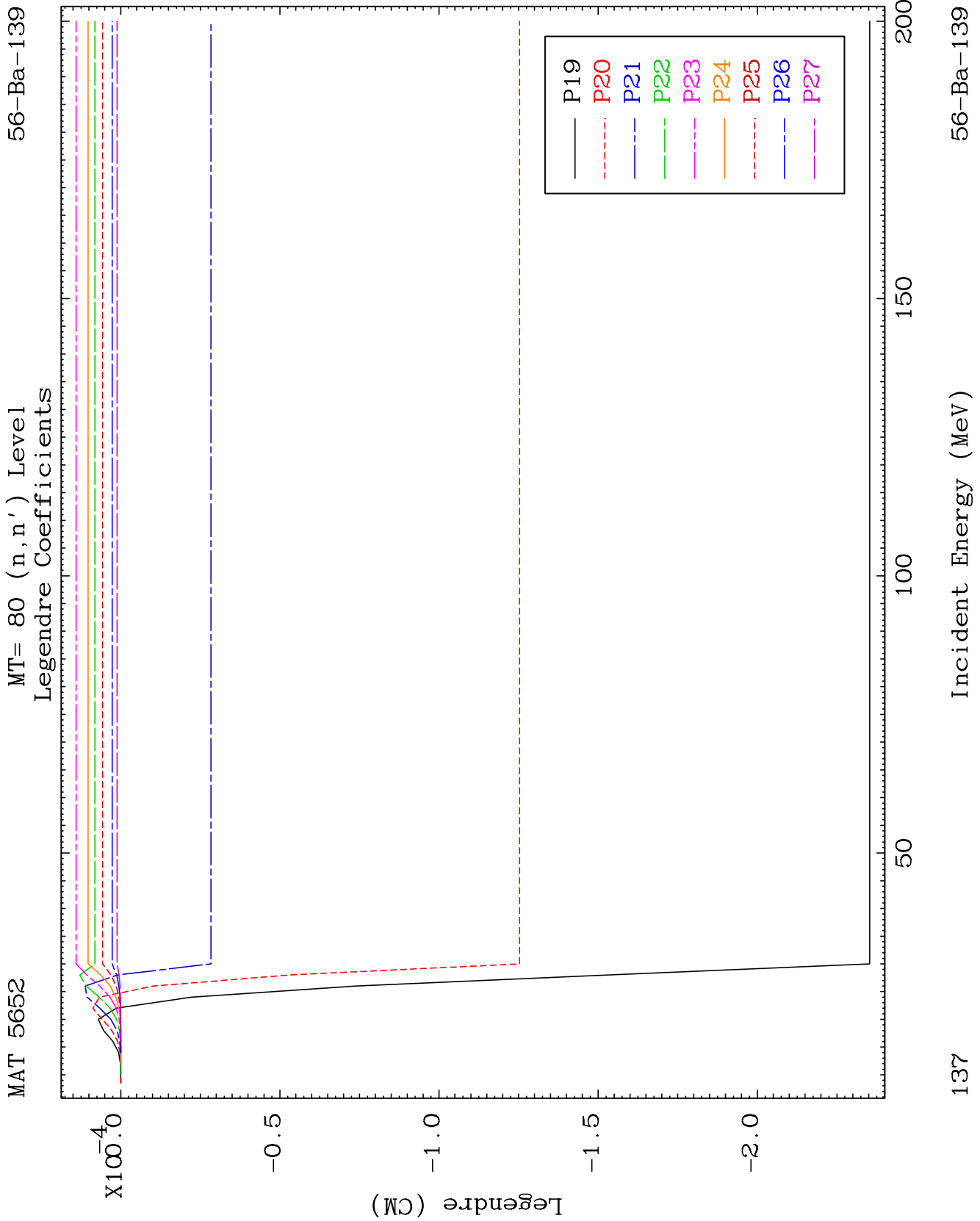
56-Ba-139



136

Incident Energy (MeV)

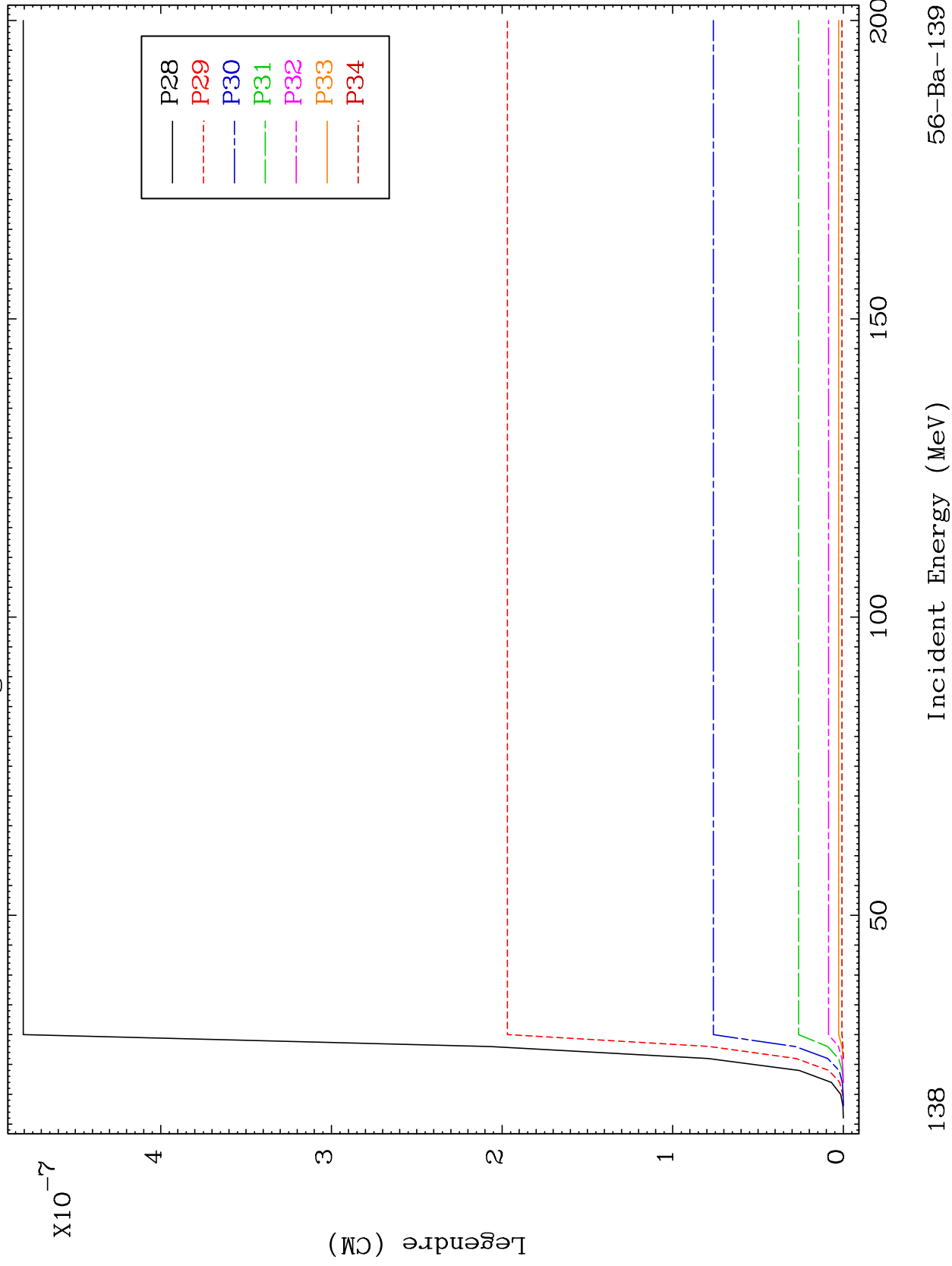
56-Ba-139



MAT 5652

MT= 80 (n,n') Level  
Legendre Coefficients

56-Ba-139



138

Incident Energy (MeV)

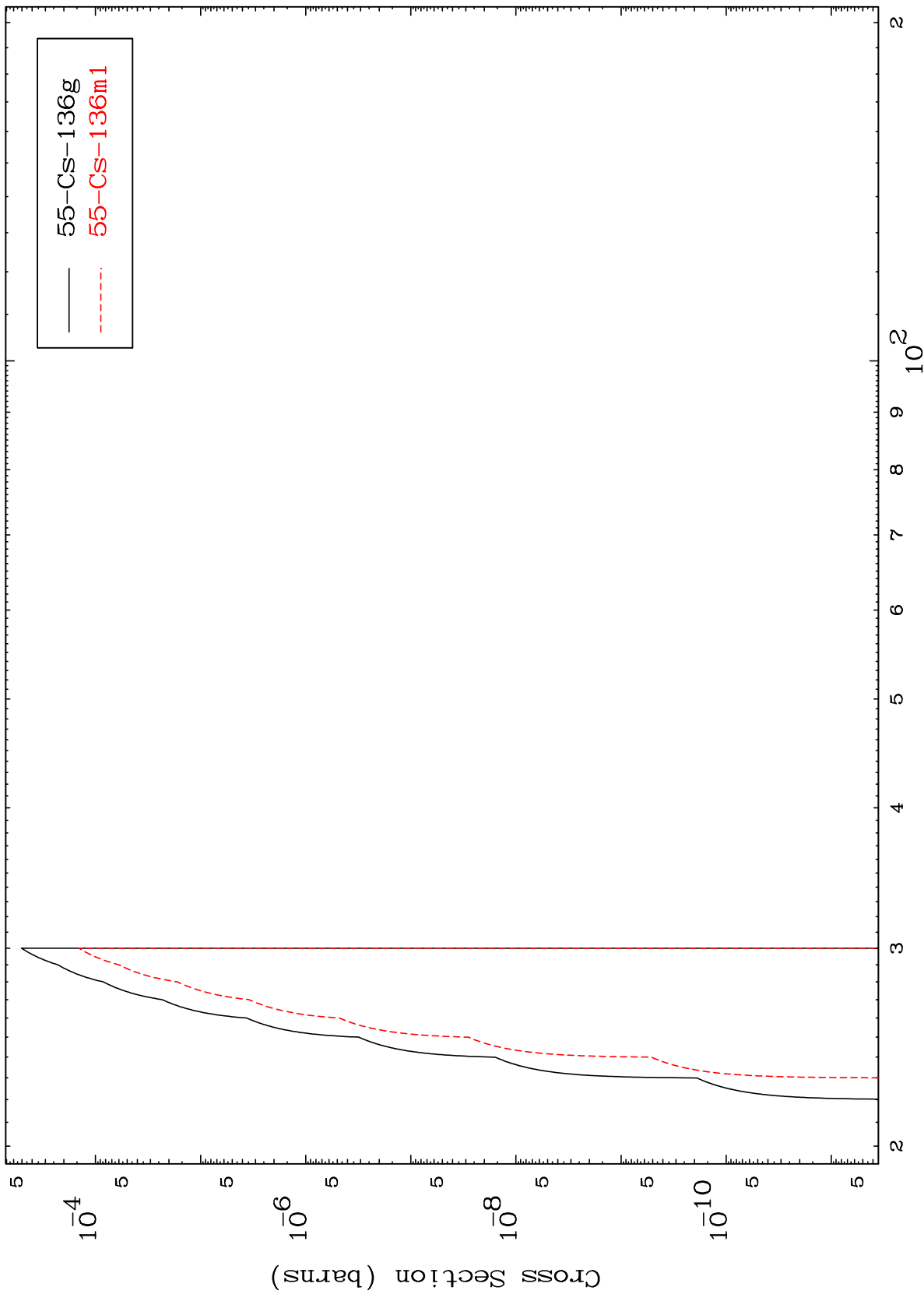
56-Ba-139

MAT 5652

(n,2n) d

56-Ba-139

Radionuclide Production Cross Section

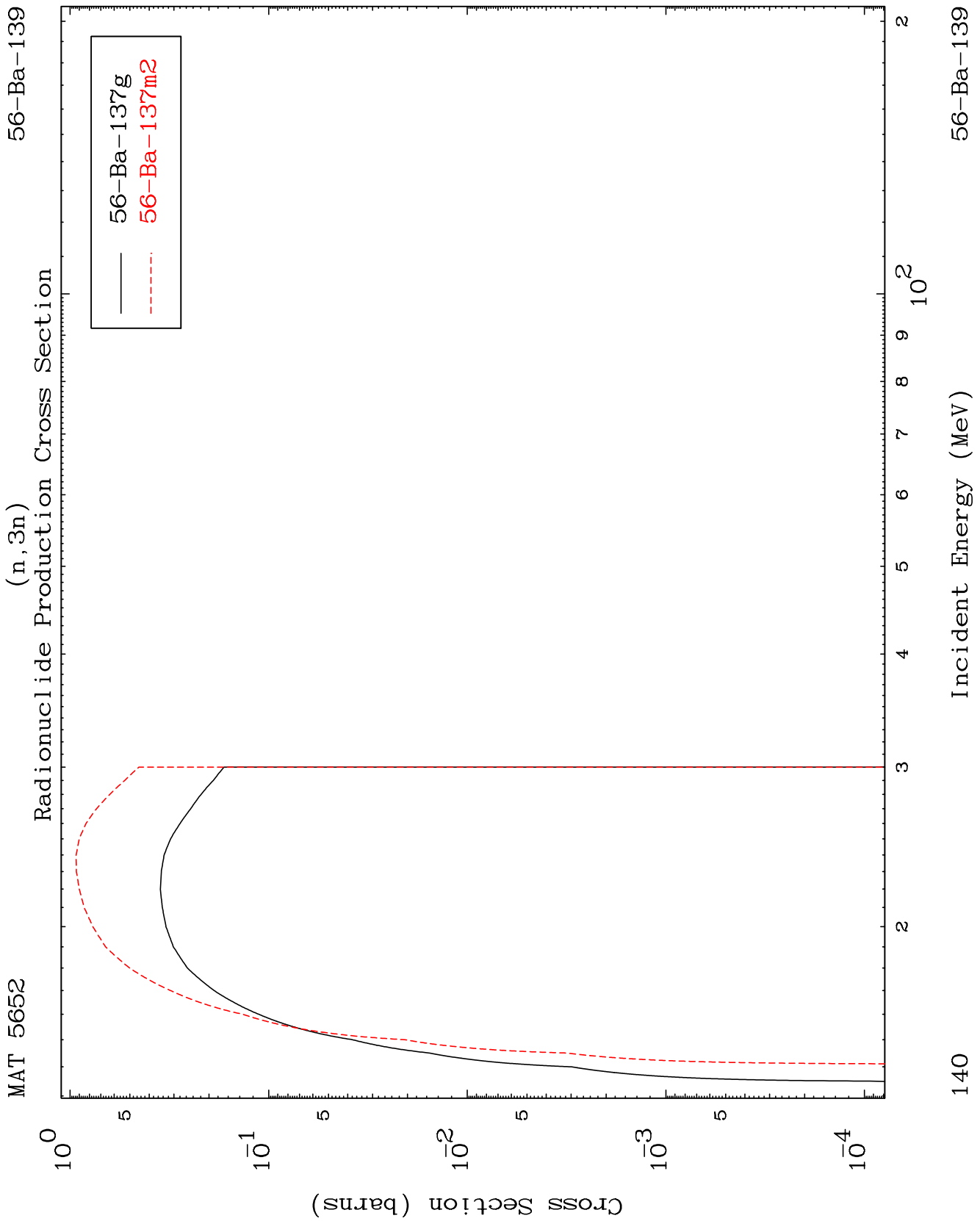


55-Cs-136g  
55-Cs-136m1

139

Incident Energy (MeV)

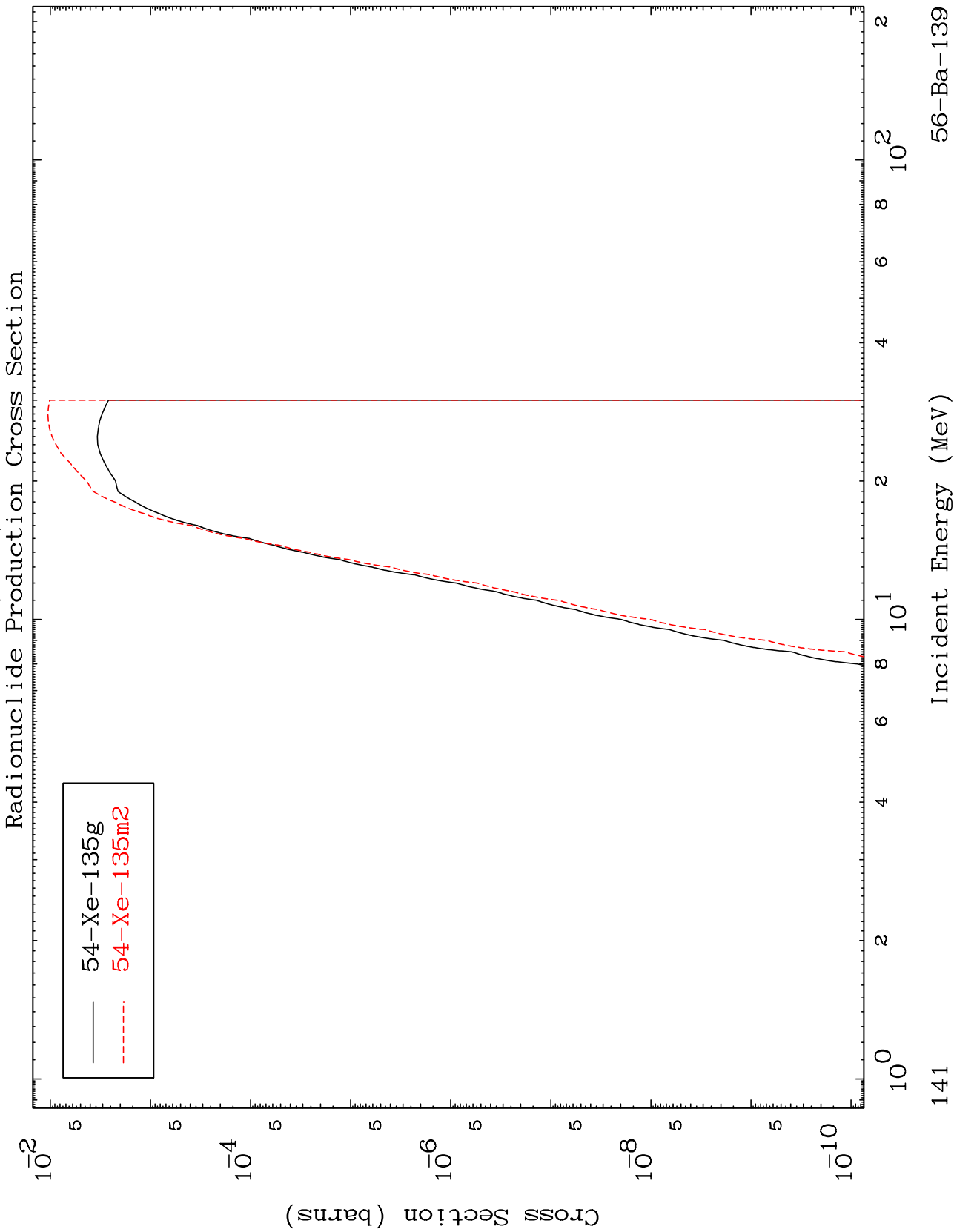
56-Ba-139



MAT 5652

(n,n')  $\alpha$

56-Ba-139

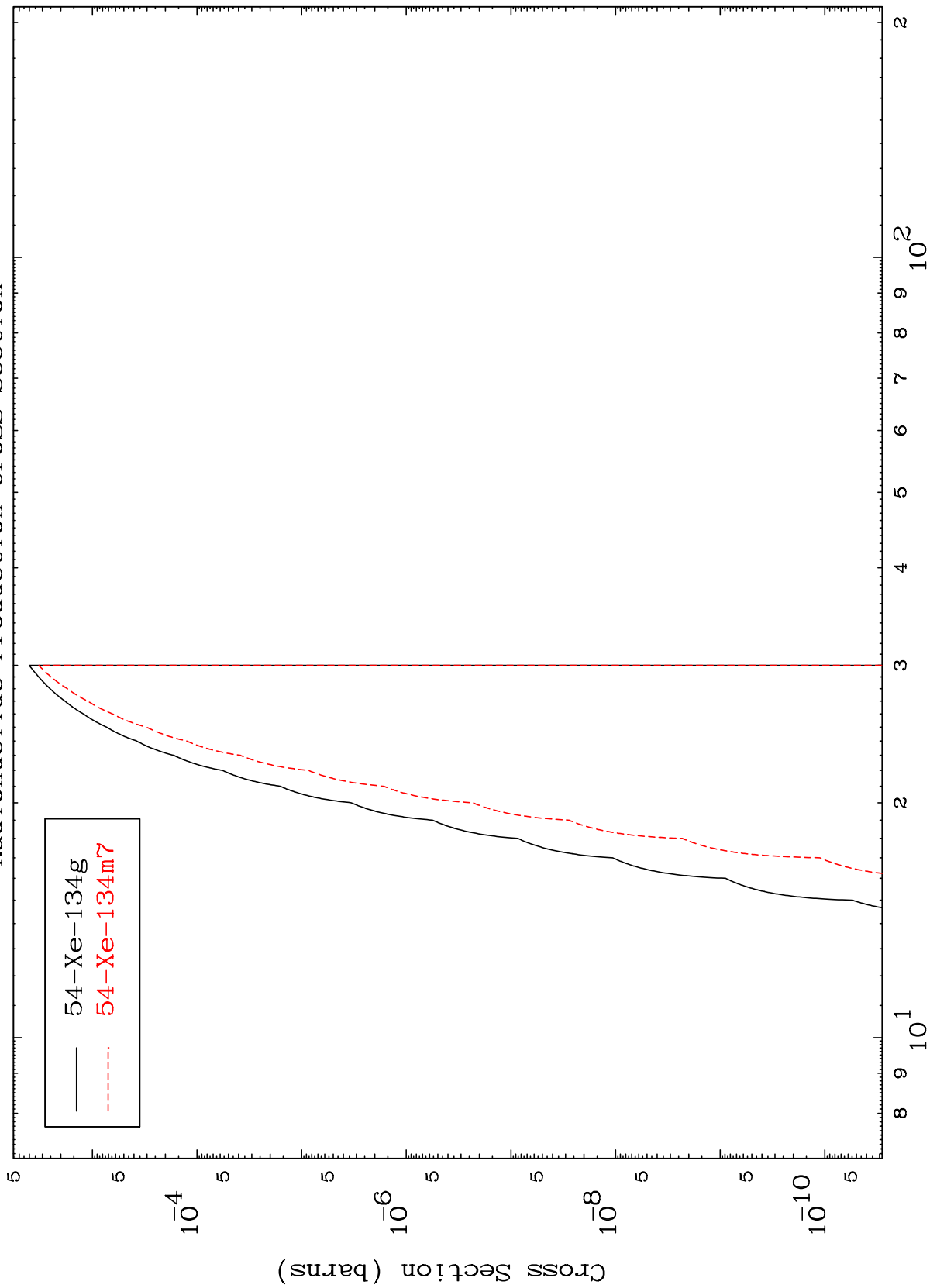


MAT 5652

56-Ba-139

(n,2n)  $\alpha$

Radionuclide Production Cross Section



56-Ba-139

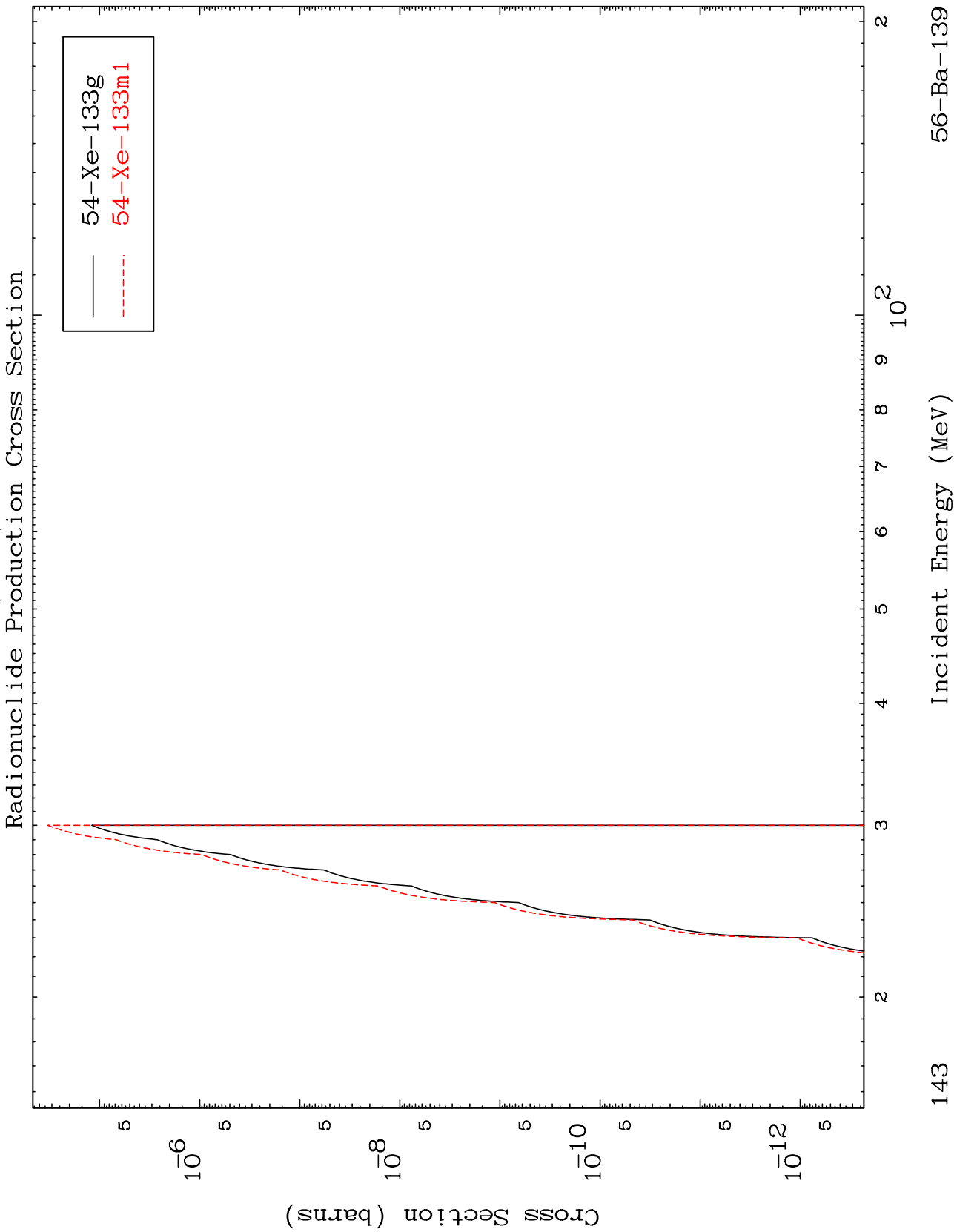
Incident Energy (MeV)

142

MAT 5652

(n,3n)  $\alpha$

56-Ba-139



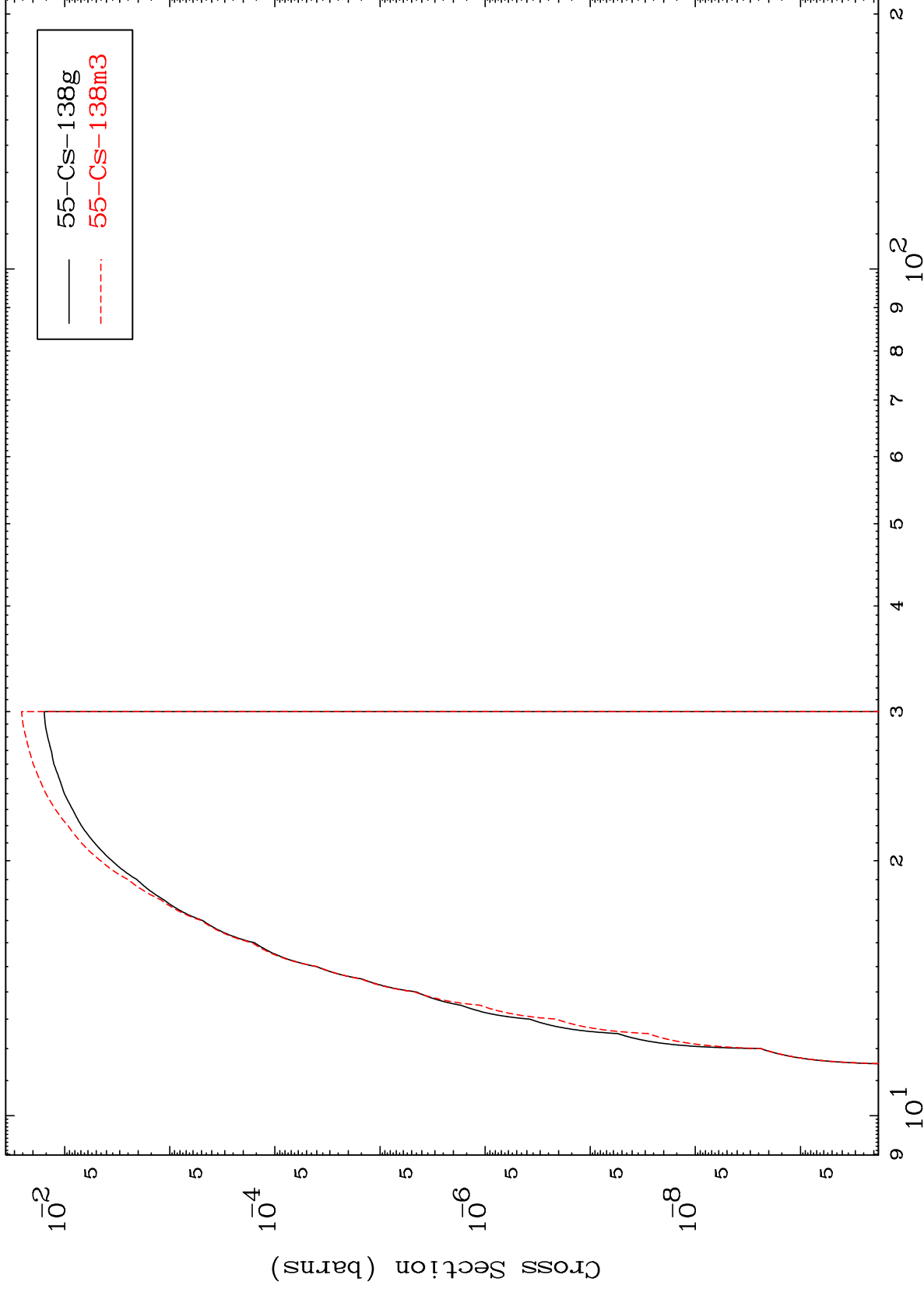
143

56-Ba-139

MAT 5652

56-Ba-139

(n,n') p  
Radionuclide Production Cross Section



56-Ba-139

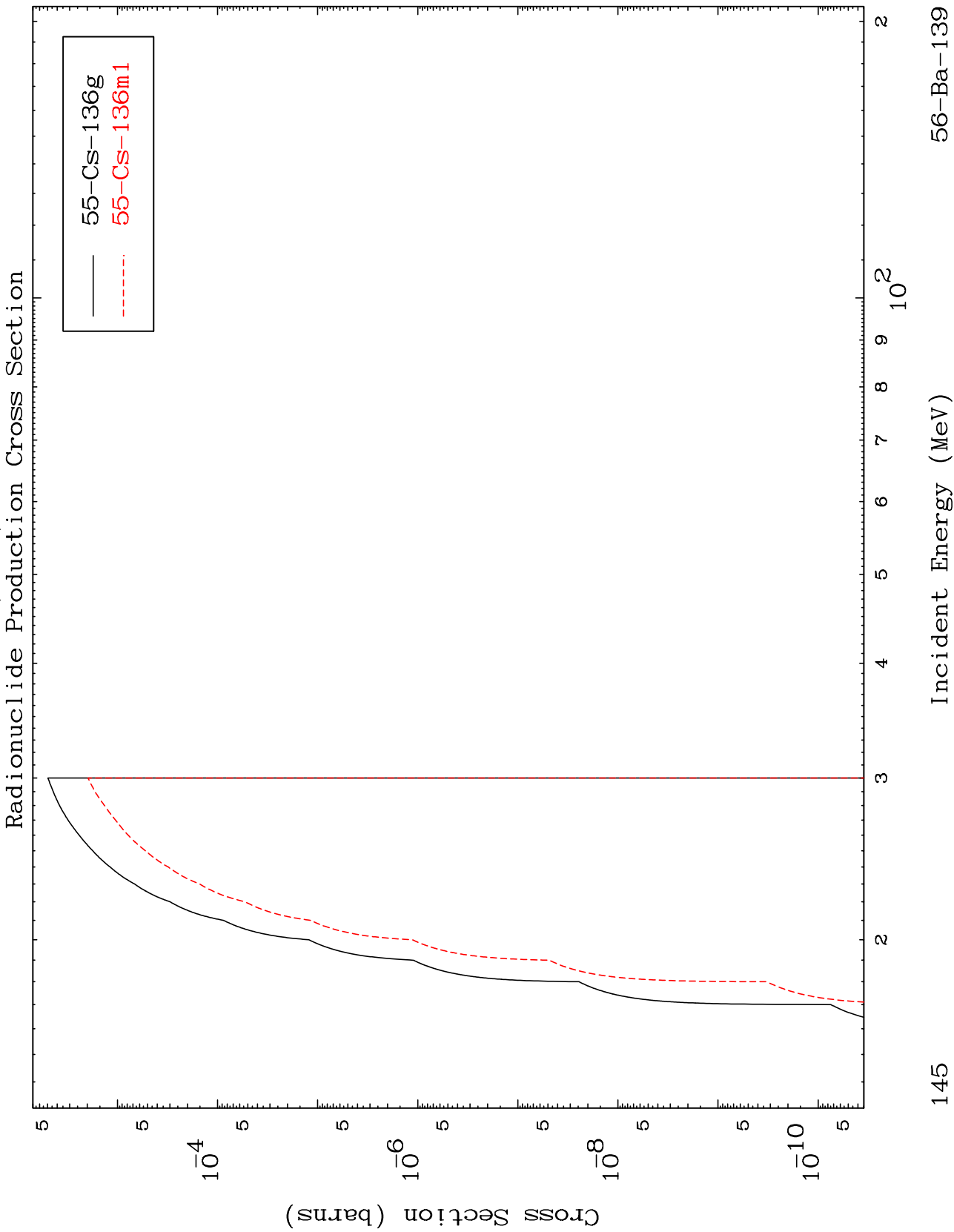
Incident Energy (MeV)

144

MAT 5652

(n,n') t

56-Ba-139



145

Incident Energy (MeV)

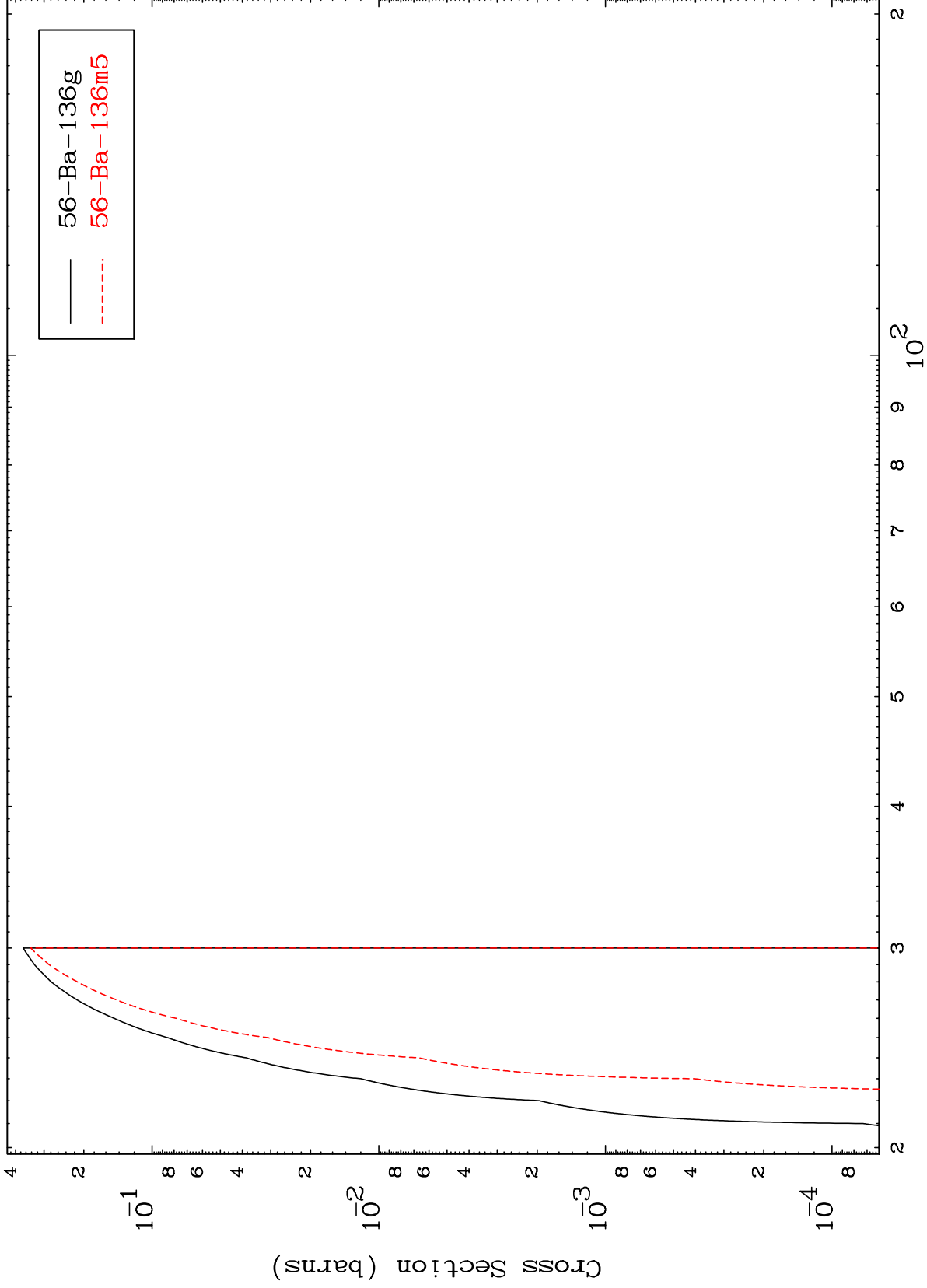
56-Ba-139

MAT 5652

(n,4n)

56-Ba-139

Radionuclide Production Cross Section



146

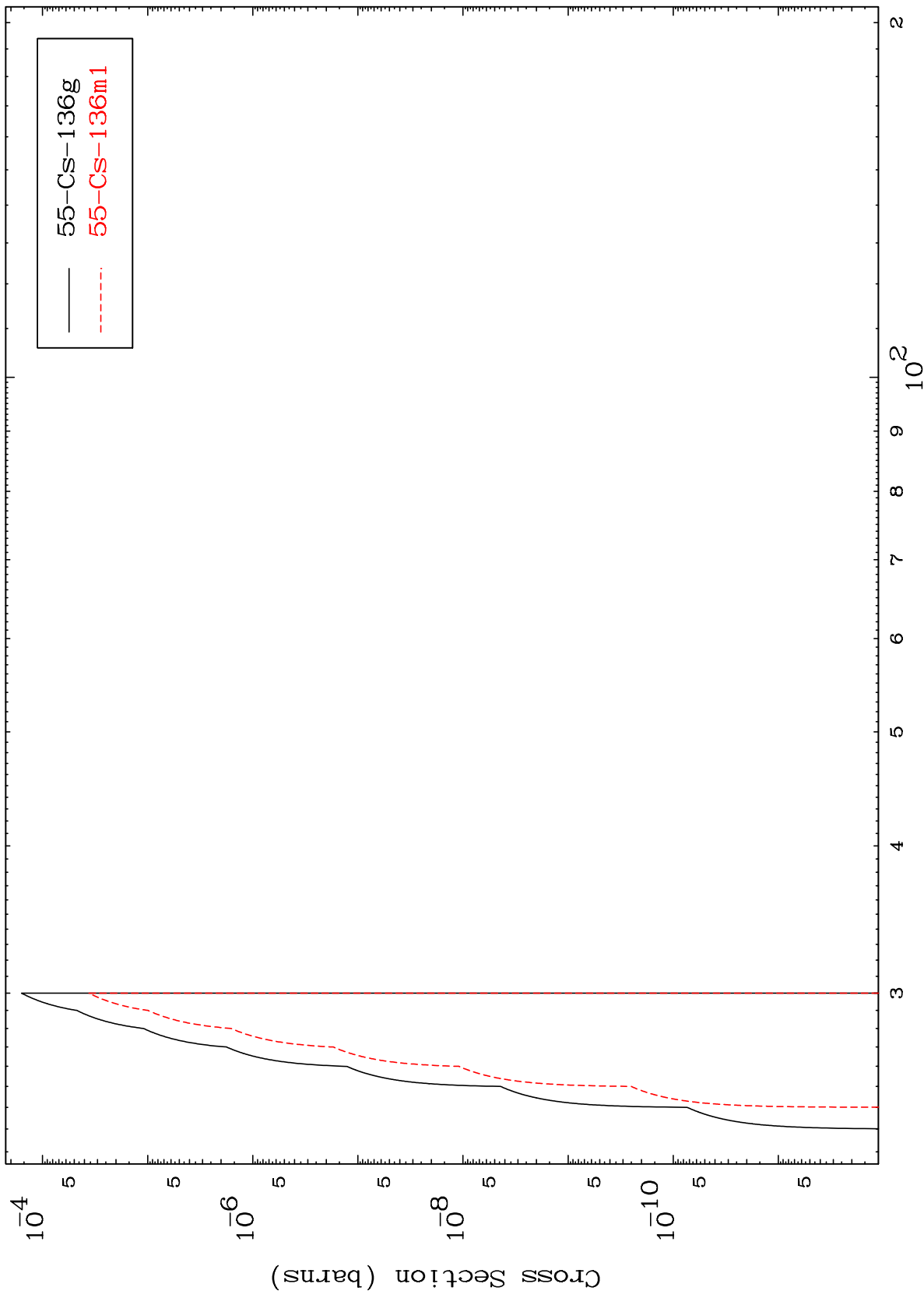
Incident Energy (MeV)

56-Ba-139

MAT 5652

56-Ba-139

(n,3n) p  
Radionuclide Production Cross Section



147

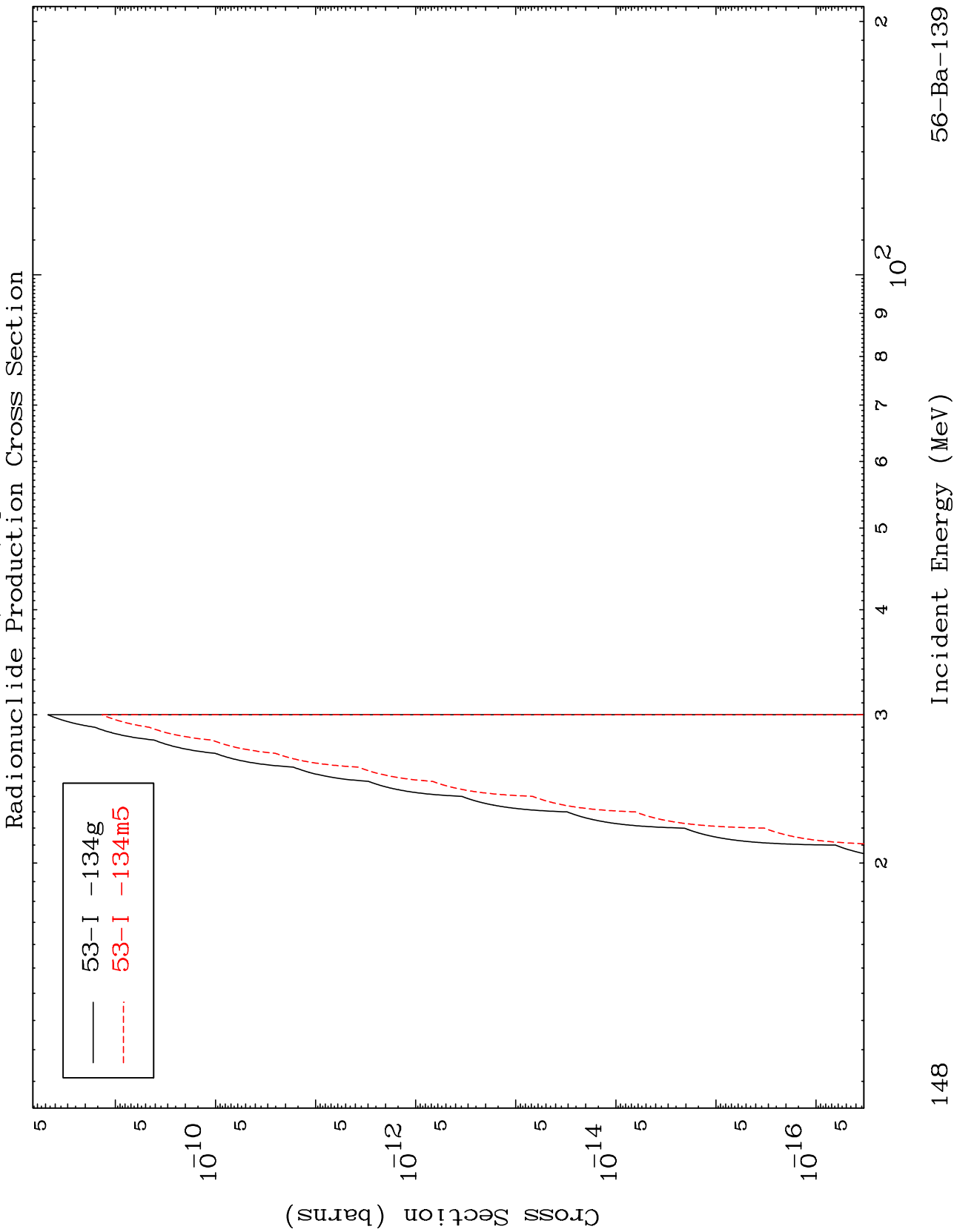
56-Ba-139

Incident Energy (MeV)

MAT 5652

(n,n') p  $\alpha$

56-Ba-139



148

Incident Energy (MeV)

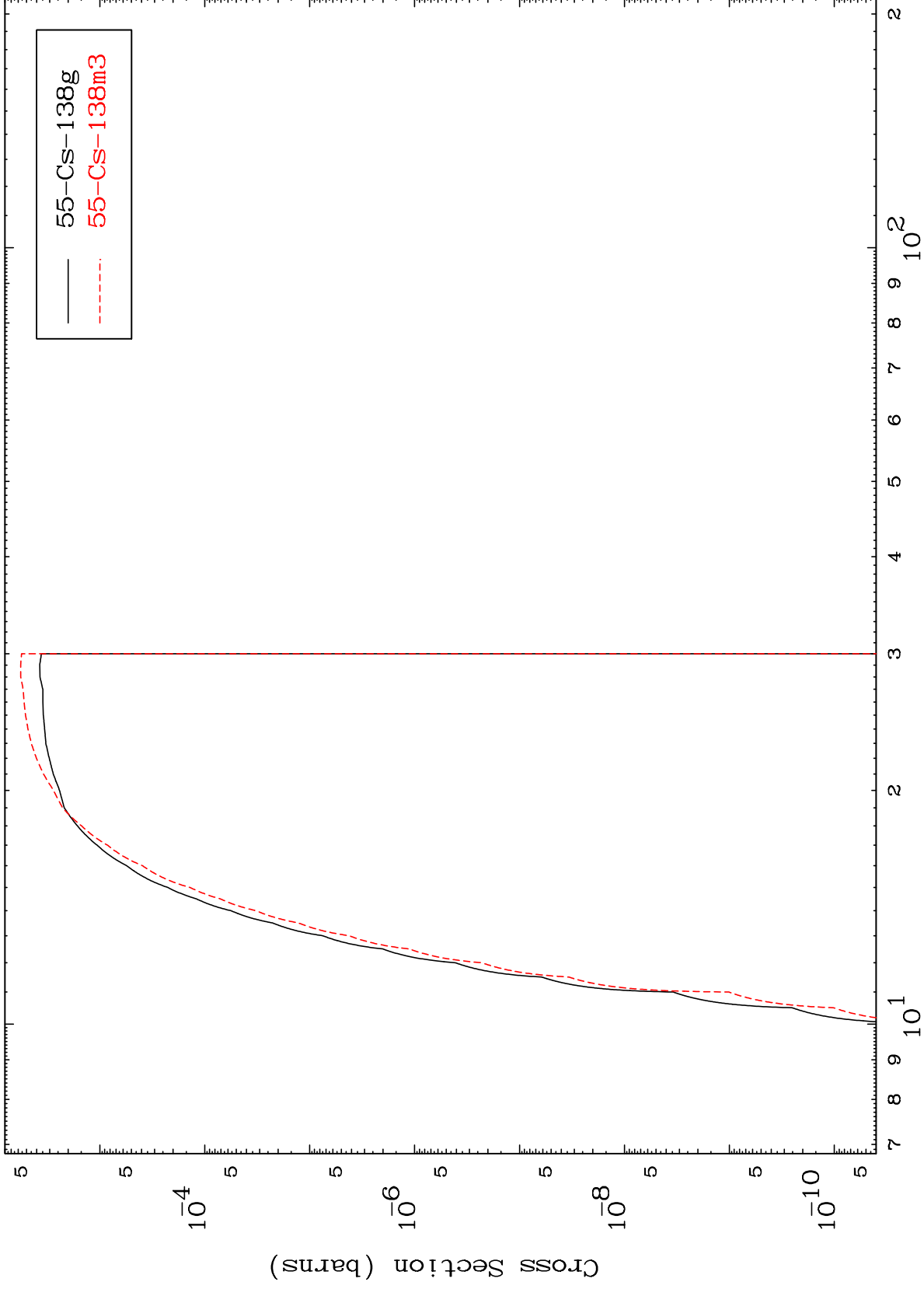
56-Ba-139

MAT 5652

(n,d)

56-Ba-139

Radionuclide Production Cross Section



149

Incident Energy (MeV)

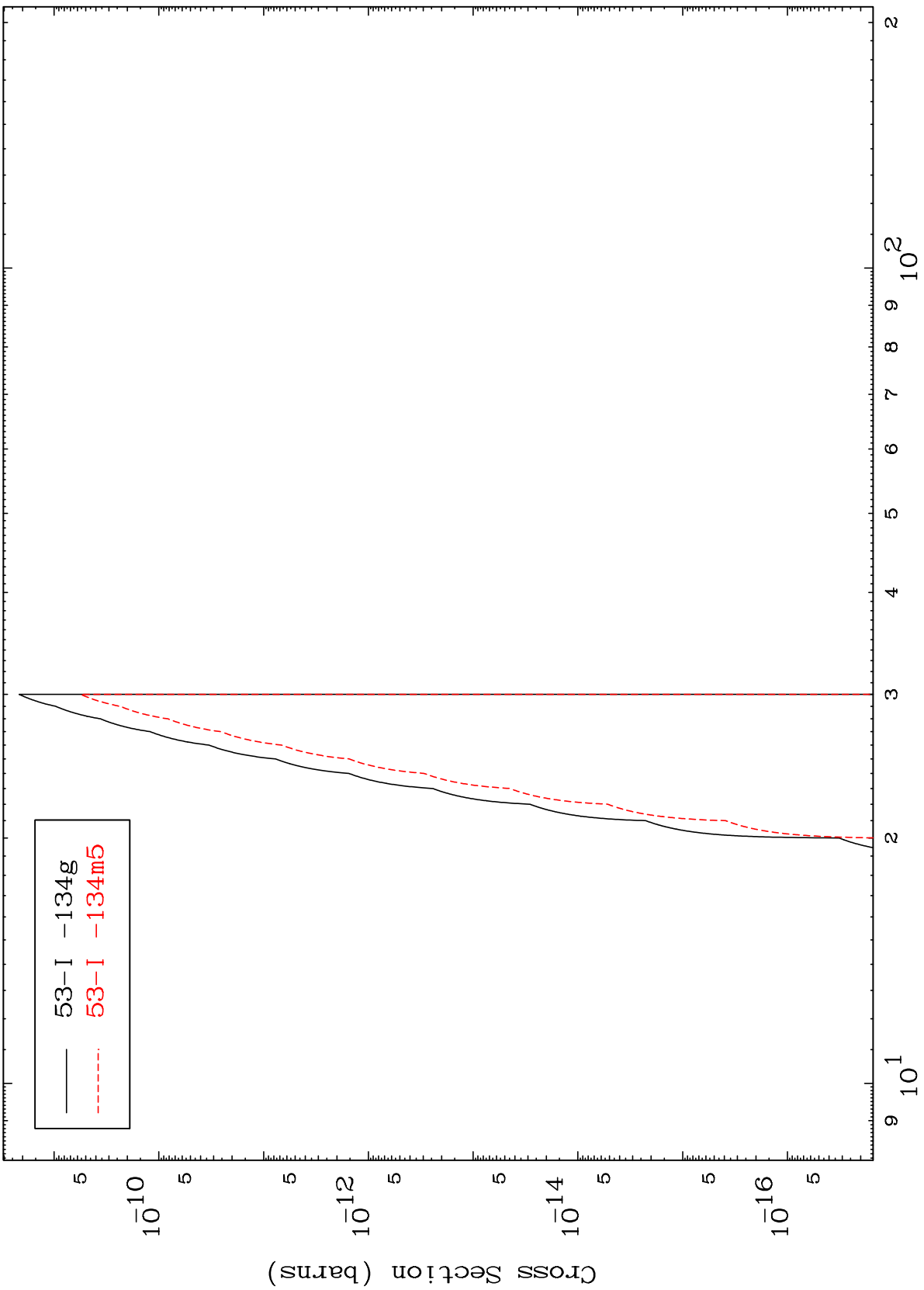
56-Ba-139

MAT 5652

(n,d)  $\alpha$

56-Ba-139

Radionuclide Production Cross Section



150

Incident Energy (MeV)

56-Ba-139