

Program EVALPLOT
(Version 2018-1)

by

Dermott E. Cullen
(Present Contact Information)

Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550

U.S.A.

Tele: 925-443-1911

E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

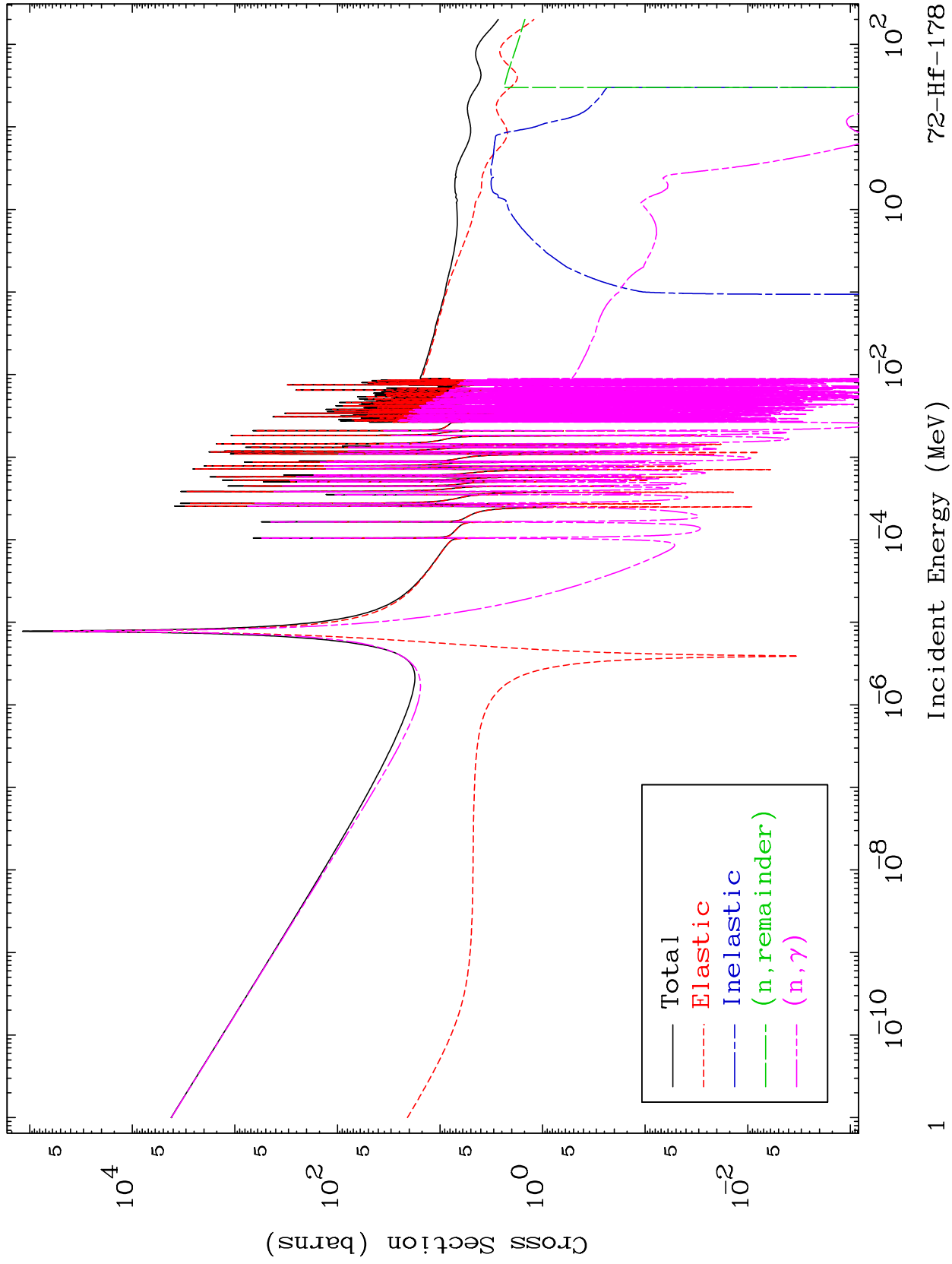
Press Mouse Button to Start

MAT 7237

Major

293 Kelvin Cross Sections

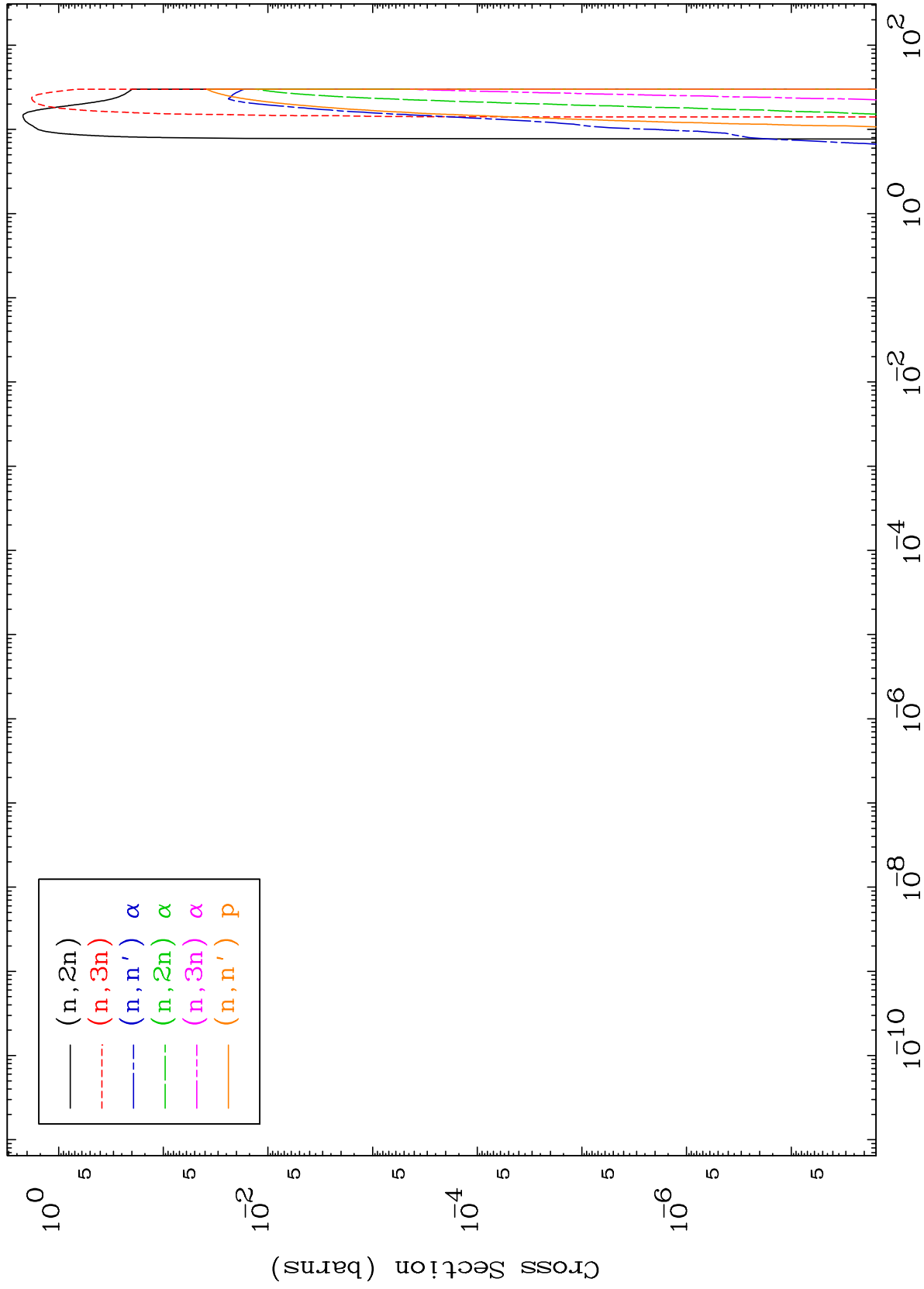
72-Hf-178



MAT 7237

Neutron Production
293 Kelvin Cross Sections

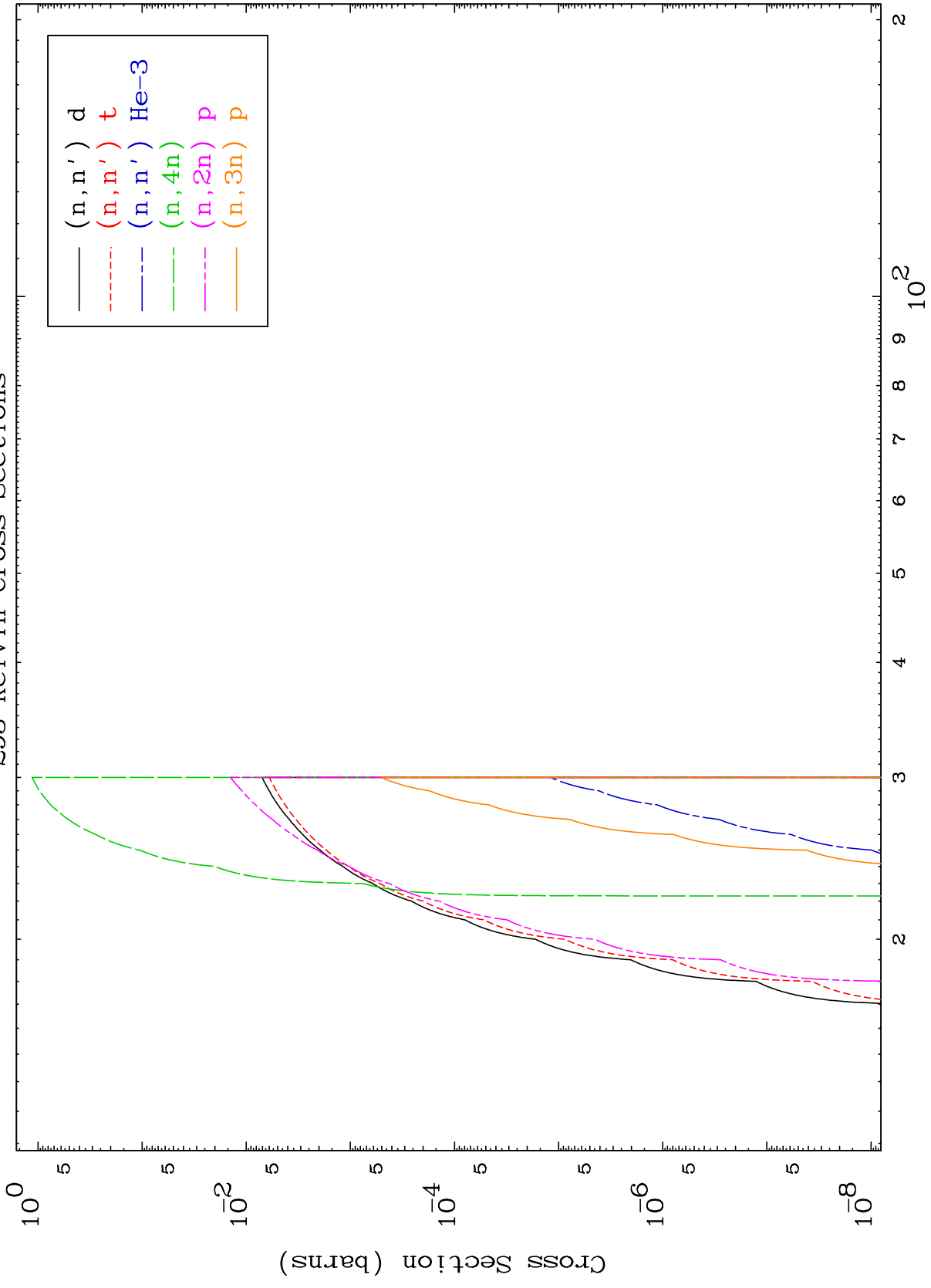
72-Hf-178



2

Incident Energy (MeV)

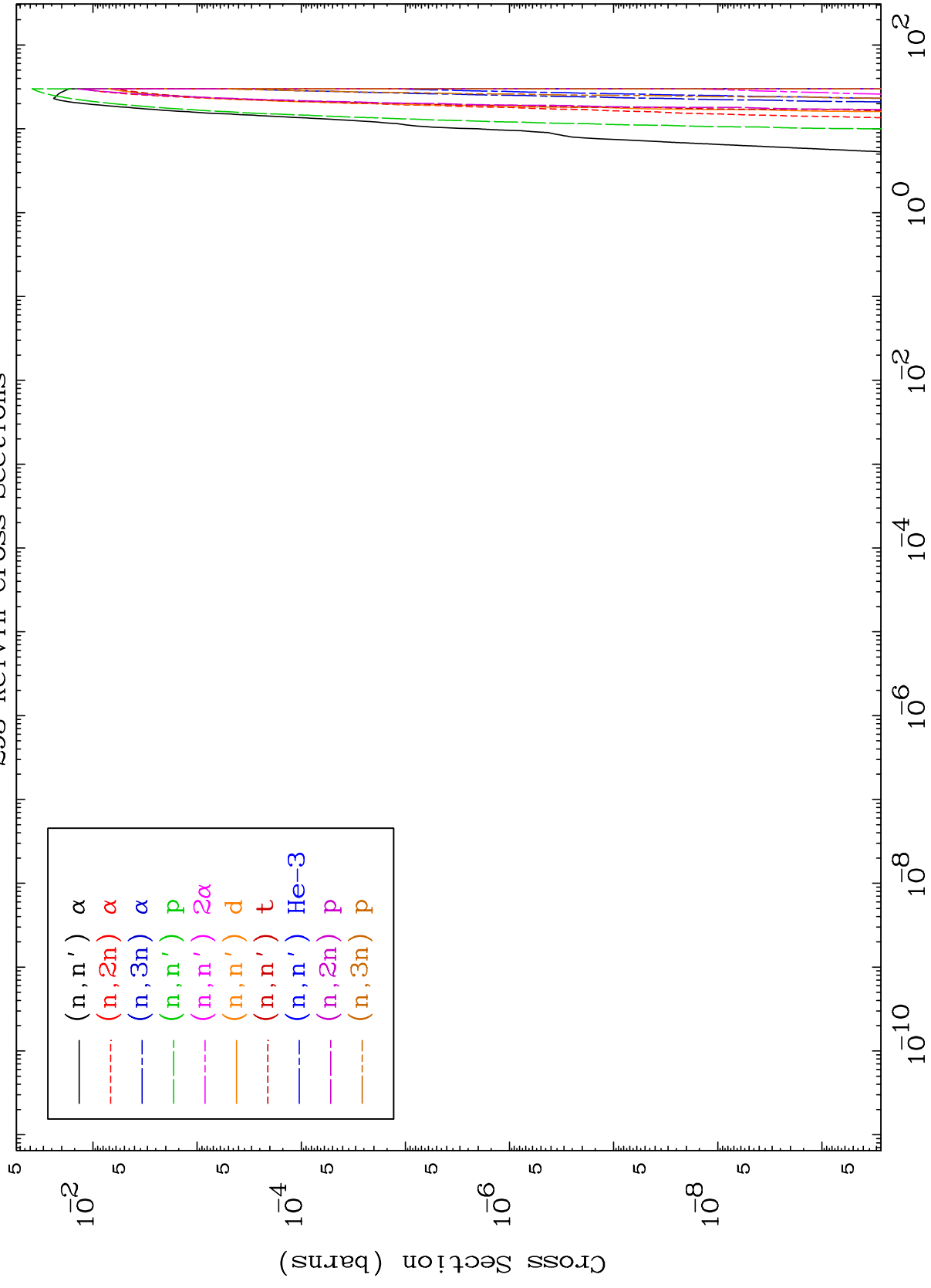
72-Hf-178



MAT 7237

293 Kelvin Cross Sections
Charged Particle

72-Hf-178



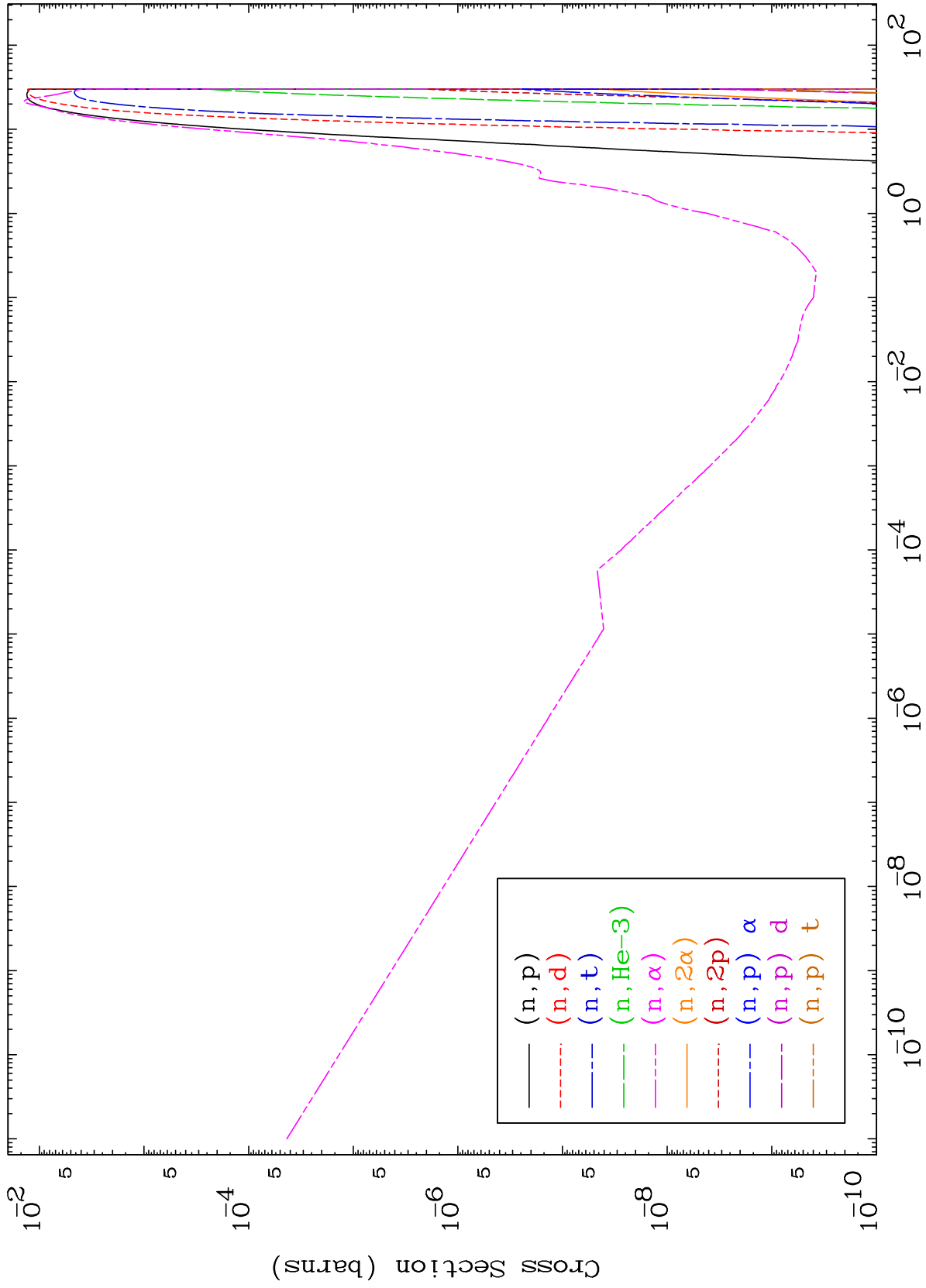
72-Hf-178

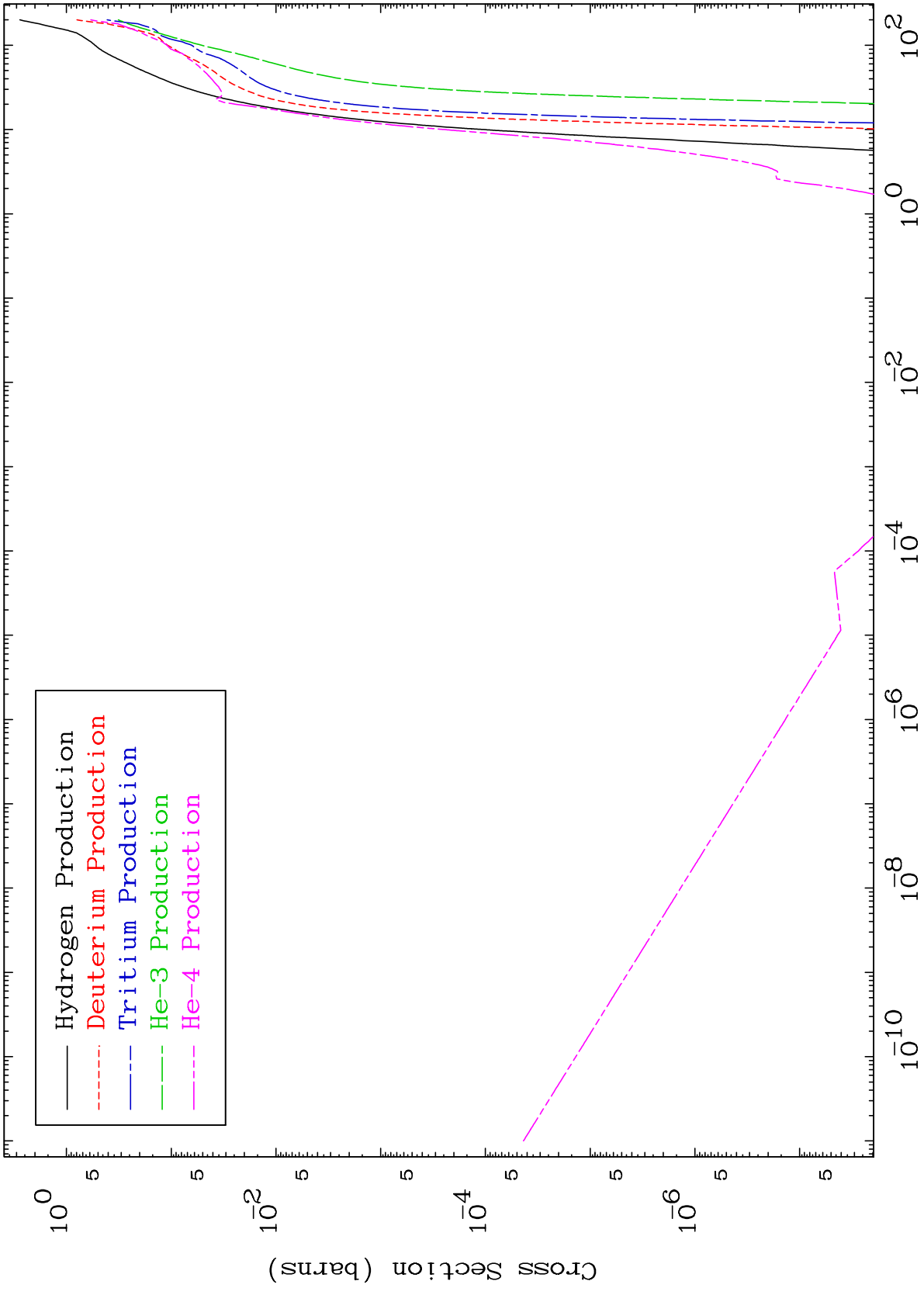
Incident Energy (MeV)

MAT 7237

293 Kelvin Cross Sections

72-Hf-178



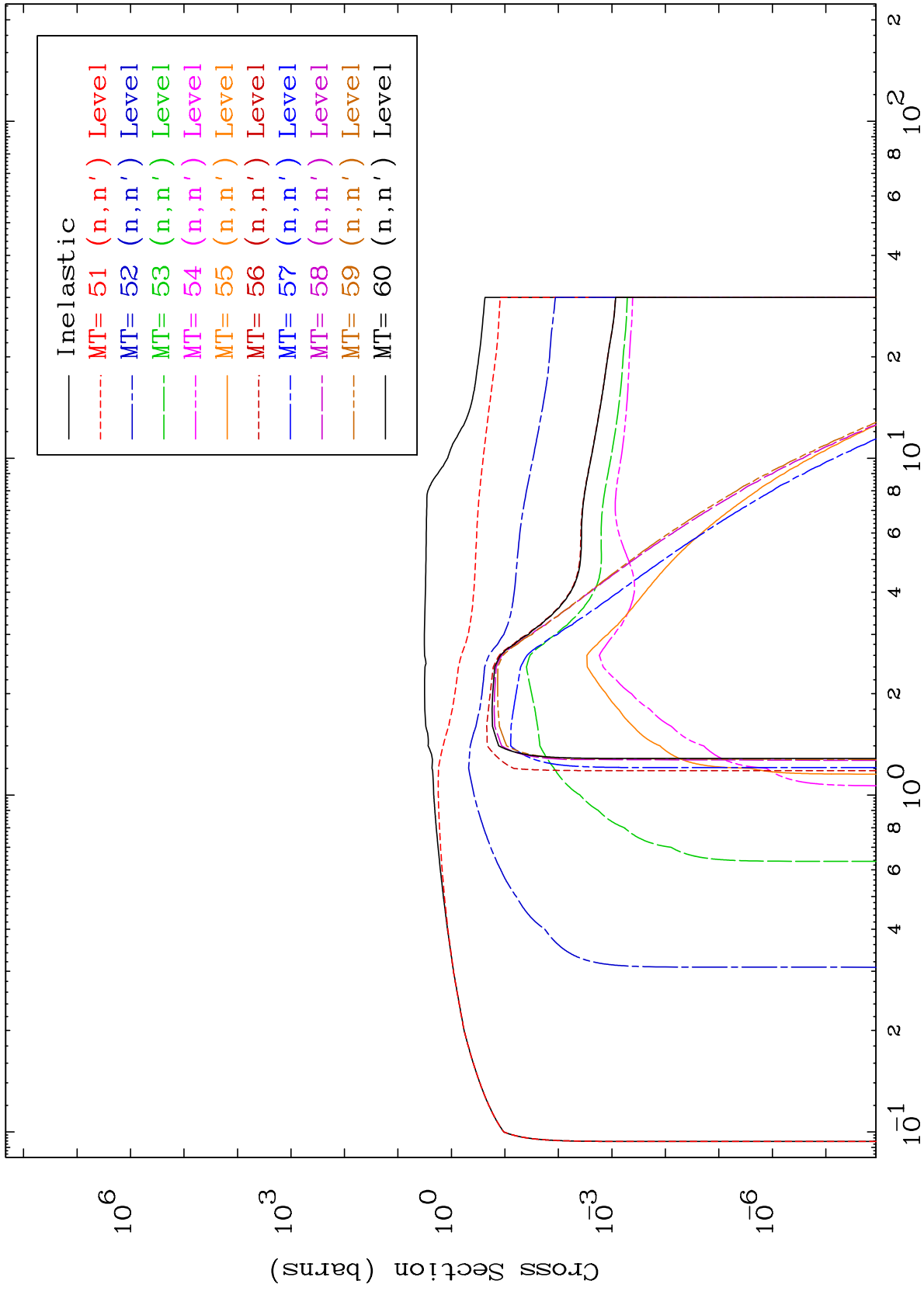


MAT 7237

(n,n') Level

293 Kelvin Cross Sections

72-Hf-178



7

Incident Energy (MeV)

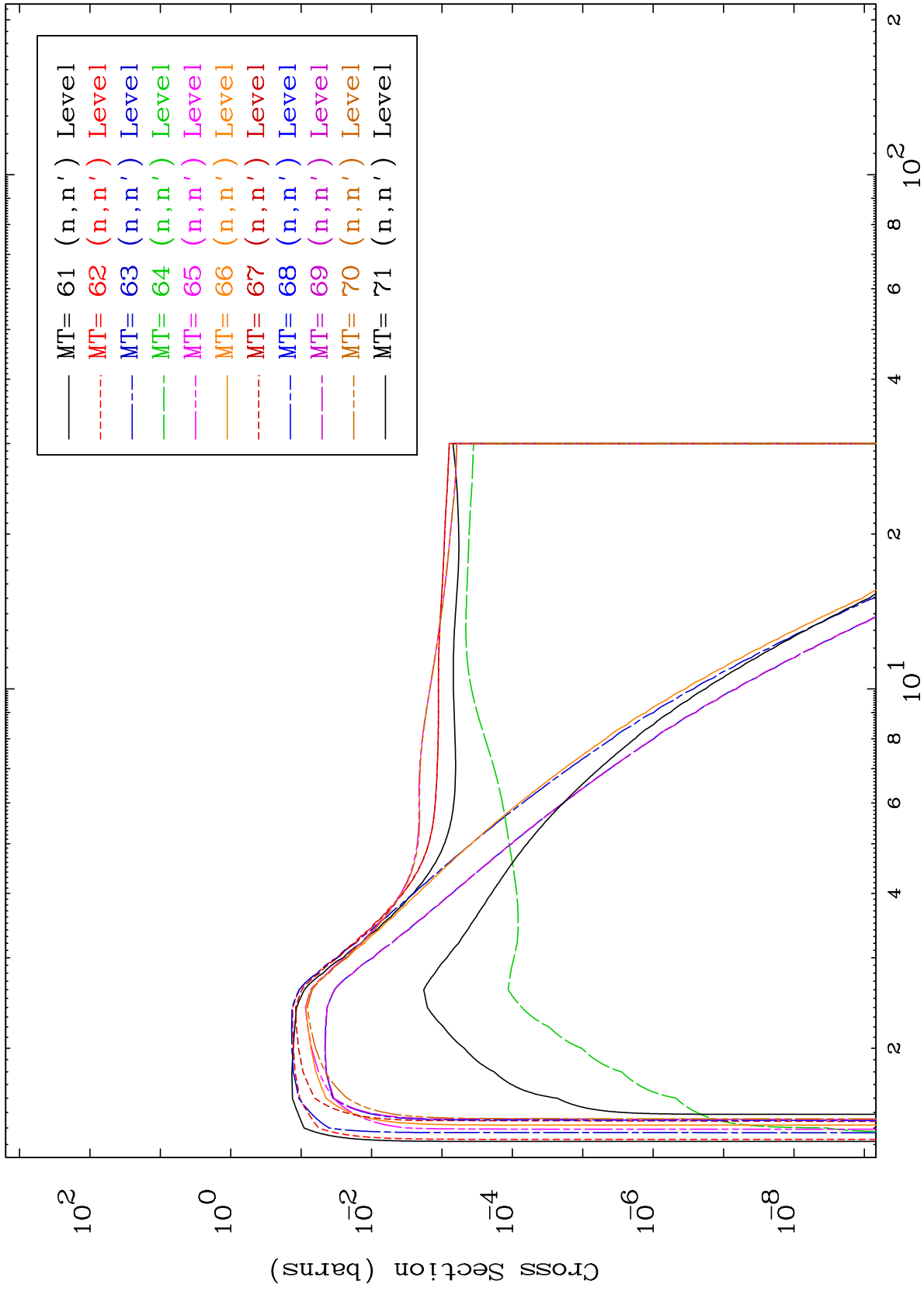
72-Hf-178

MAT 7237

(n,n') Level

293 Kelvin Cross Sections

72-Hf-178



8

Incident Energy (MeV)

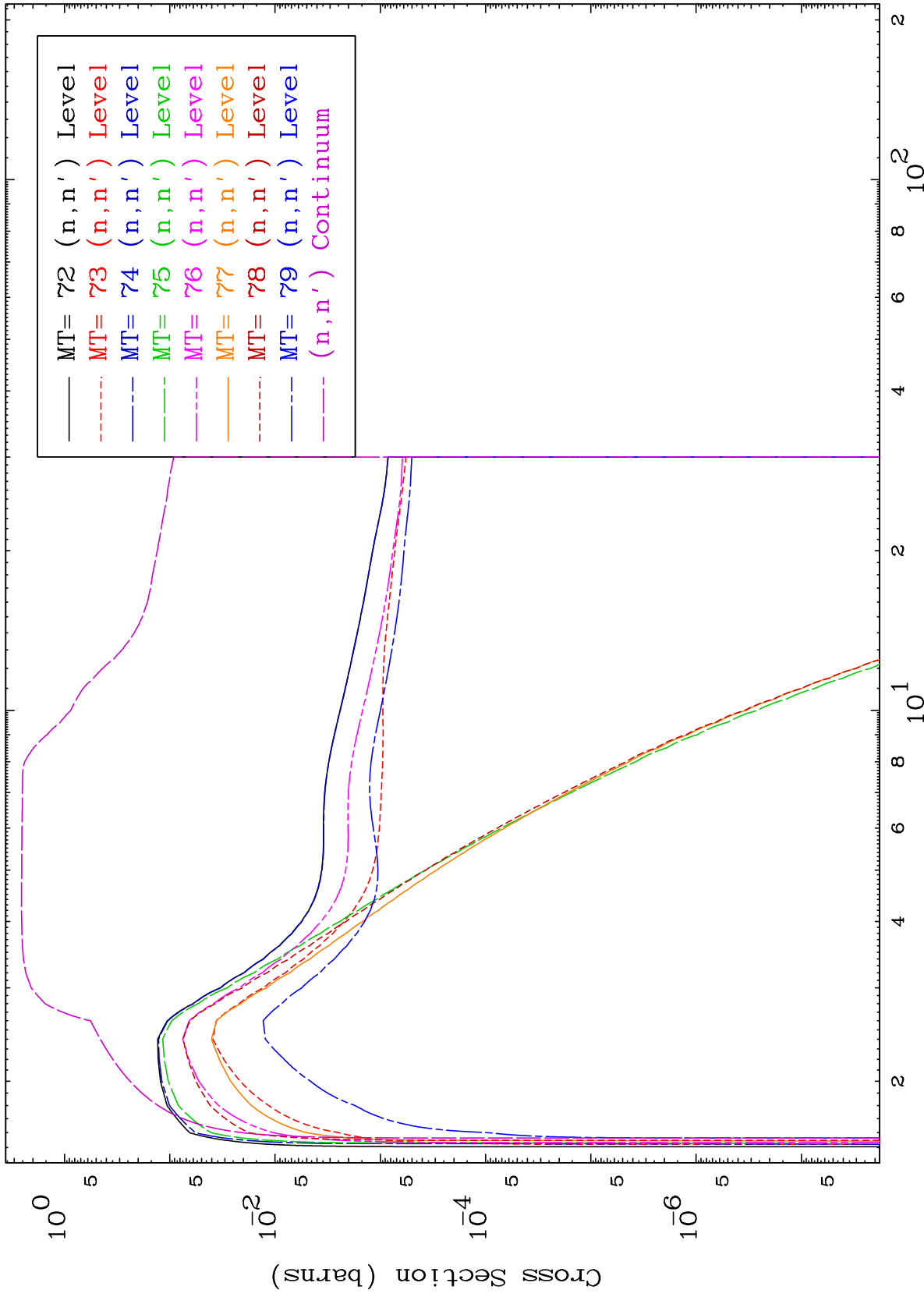
72-Hf-178

MAT 7237

(n,n') Level

293 Kelvin Cross Sections

72-Hf-178



9

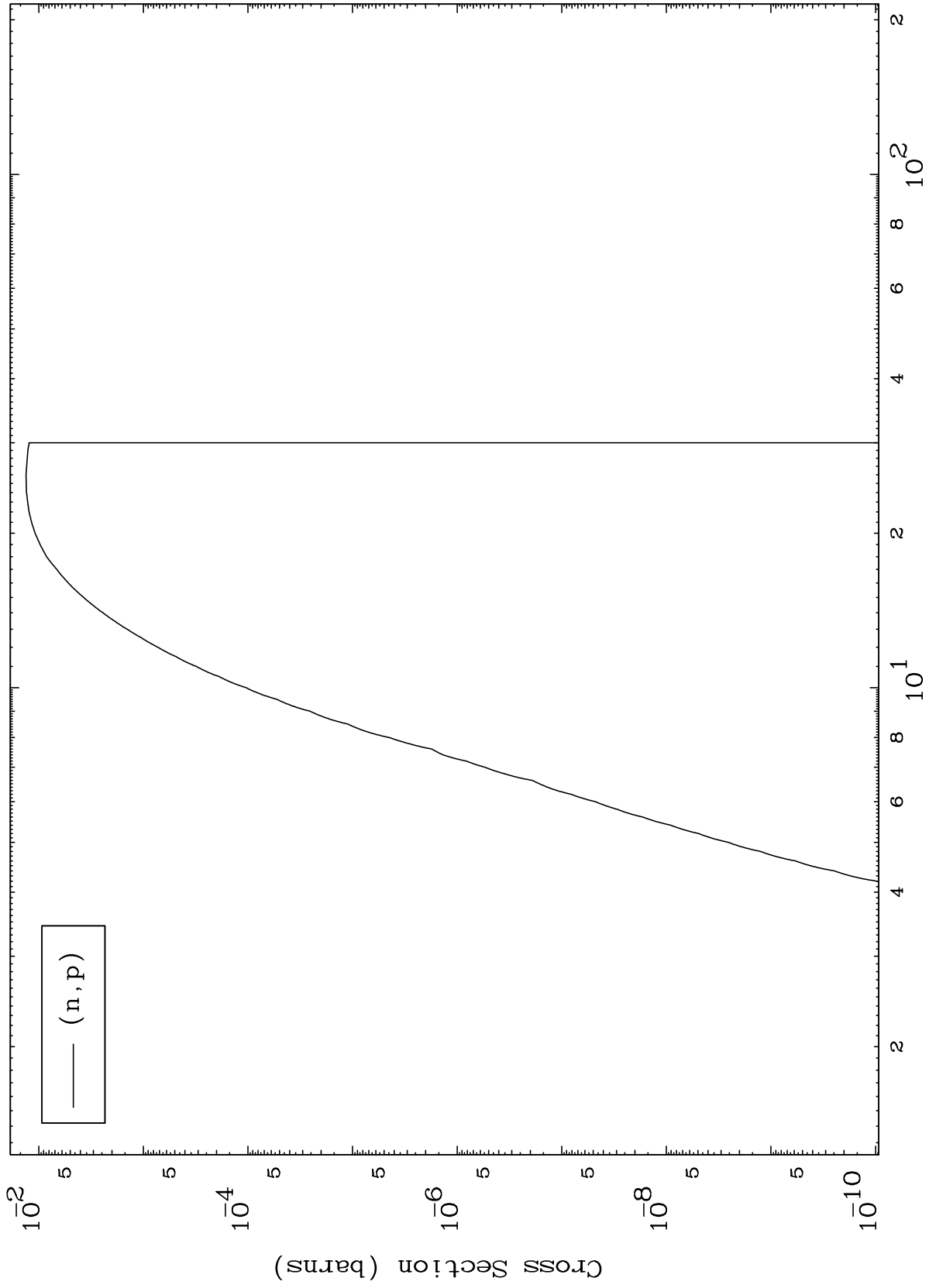
Incident Energy (MeV)

72-Hf-178

MAT 7237

(n,p) Levels
293 Kelvin Cross Sections

72-Hf-178



10

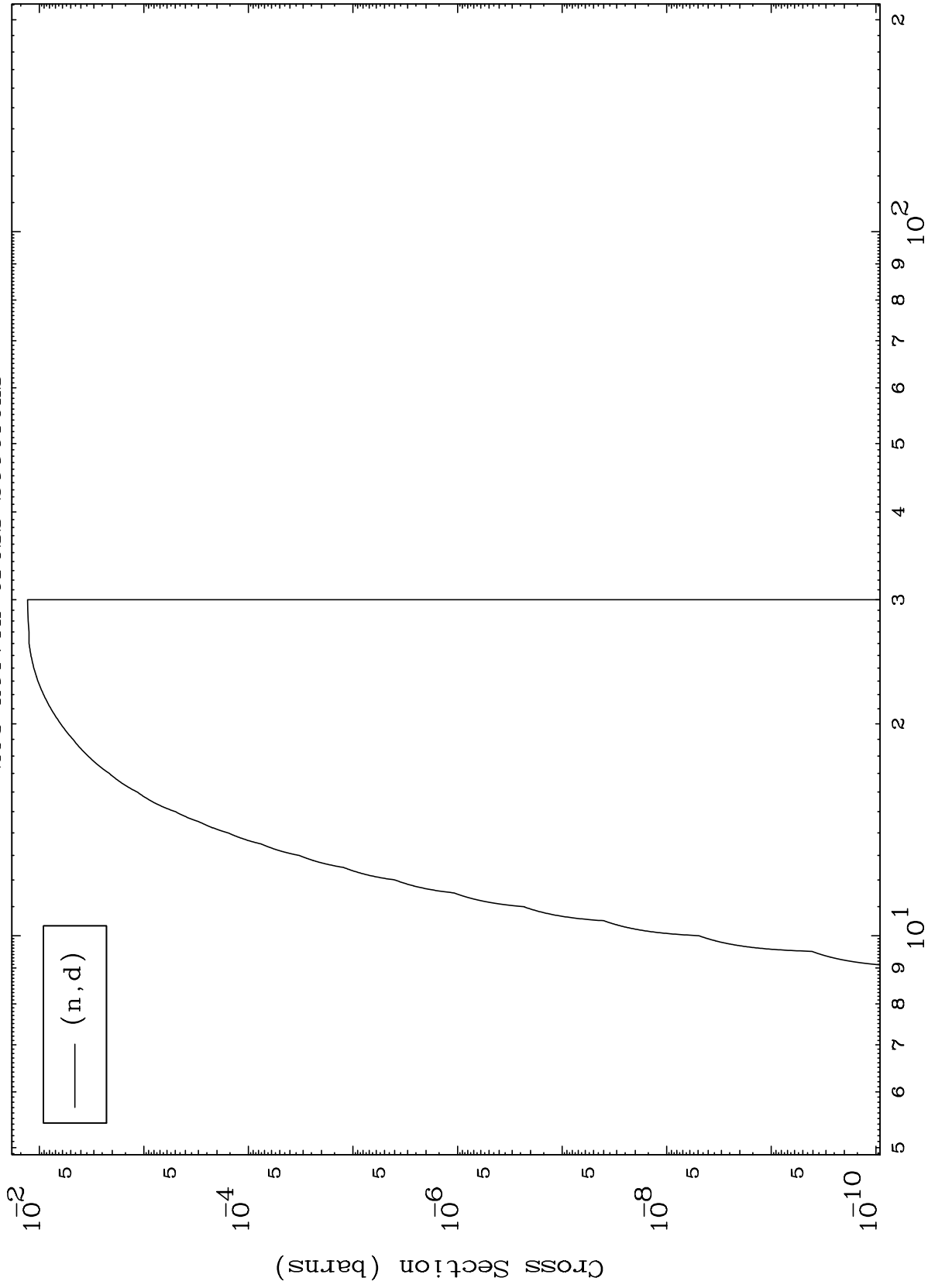
Incident Energy (MeV)

72-Hf-178

MAT 7237

(n,d) Levels
293 Kelvin Cross Sections

72-Hf-178



11

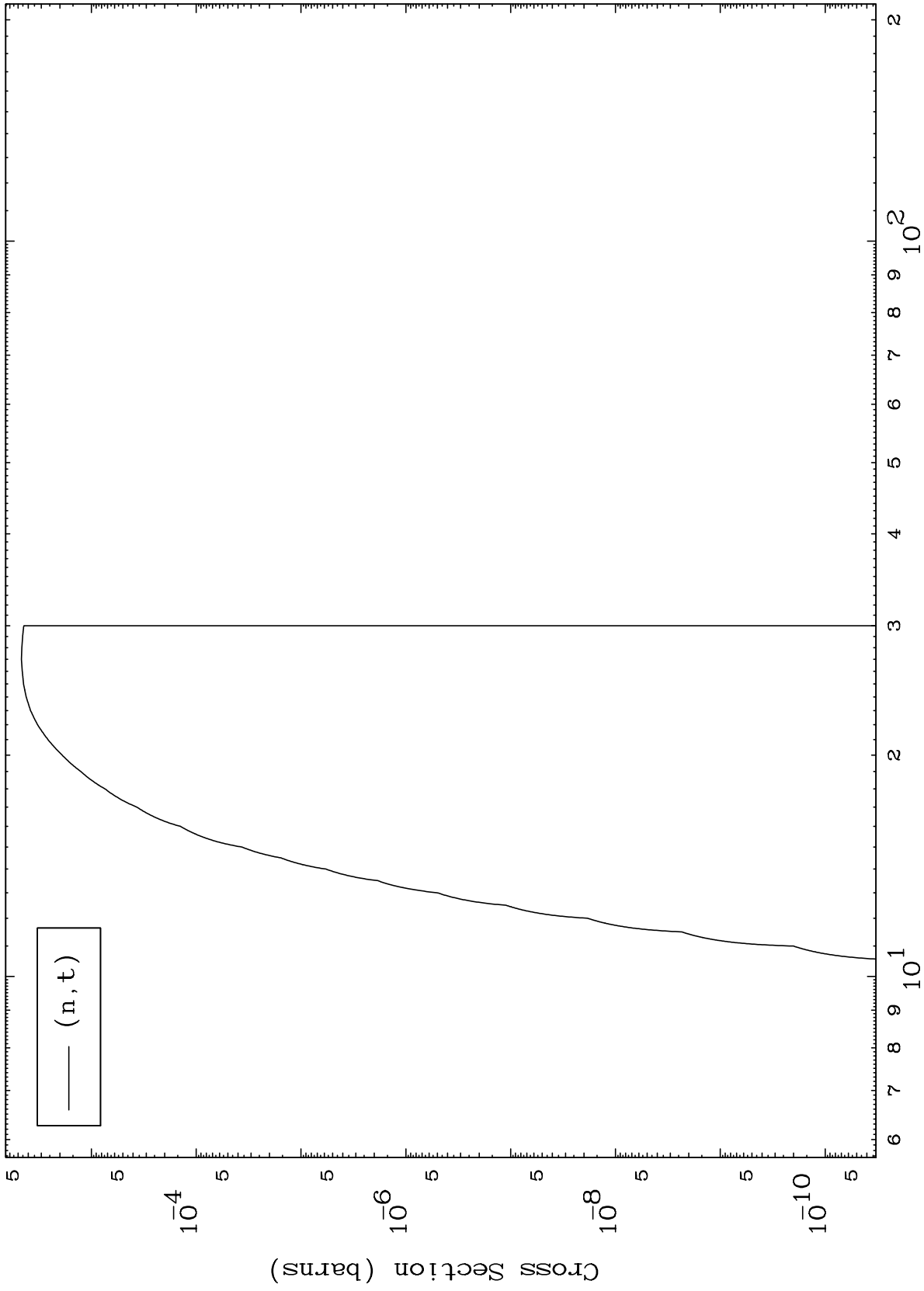
Incident Energy (MeV)

72-Hf-178

MAT 7237

(n,t) Levels
293 Kelvin Cross Sections

72-Hf-178



12

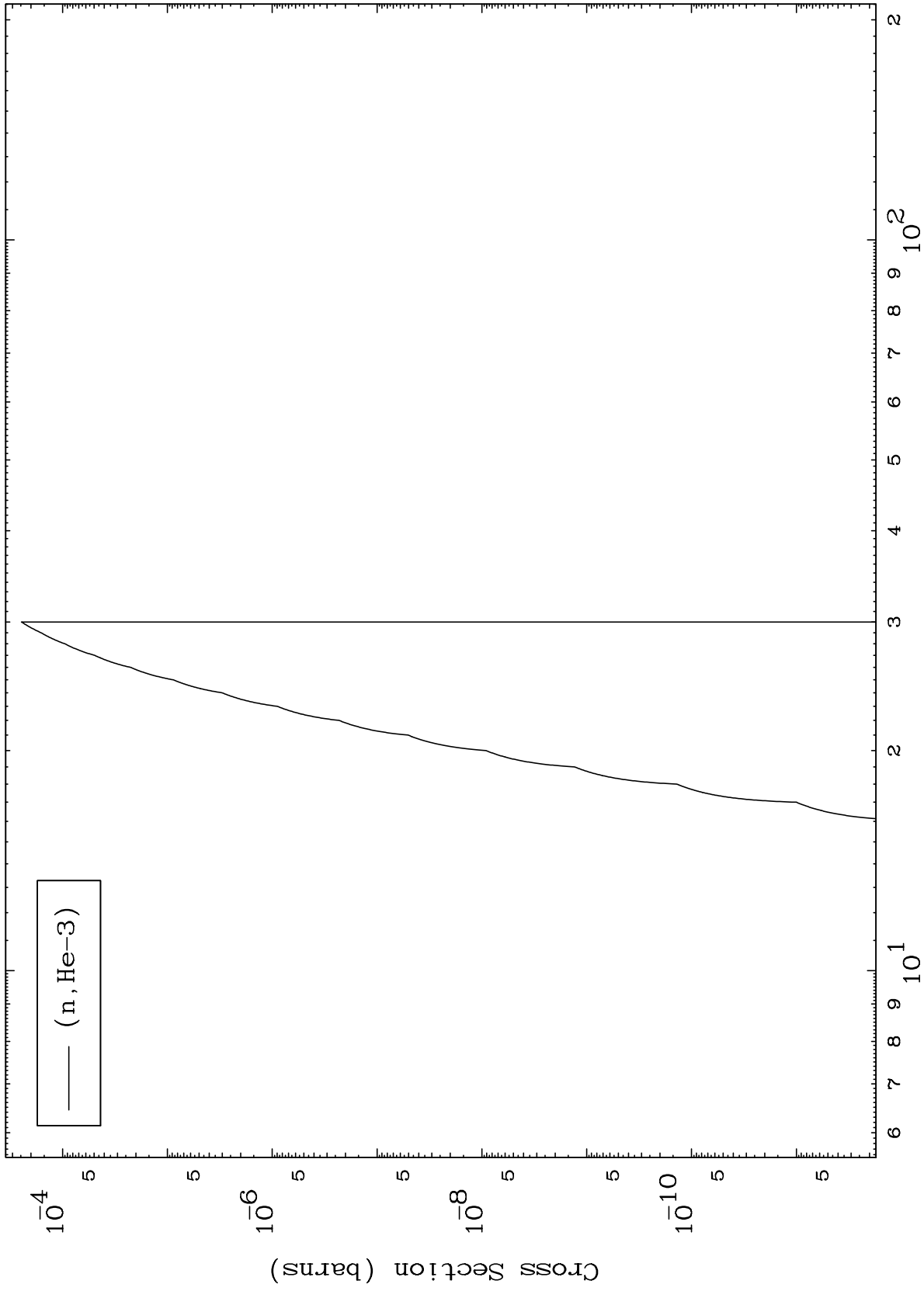
Incident Energy (MeV)

72-Hf-178

MAT 7237

(n,He3) Levels
293 Kelvin Cross Sections

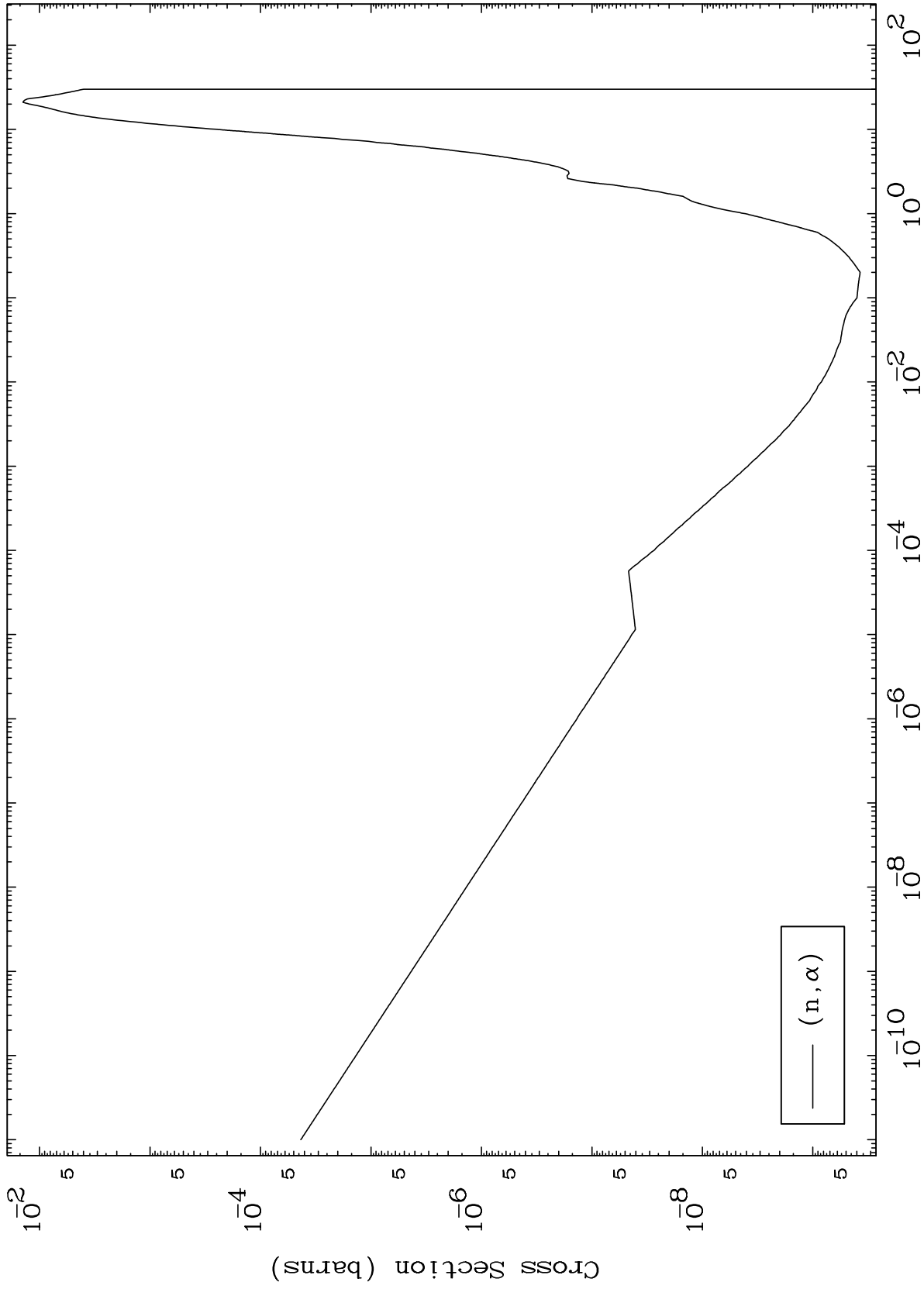
72-Hf-178

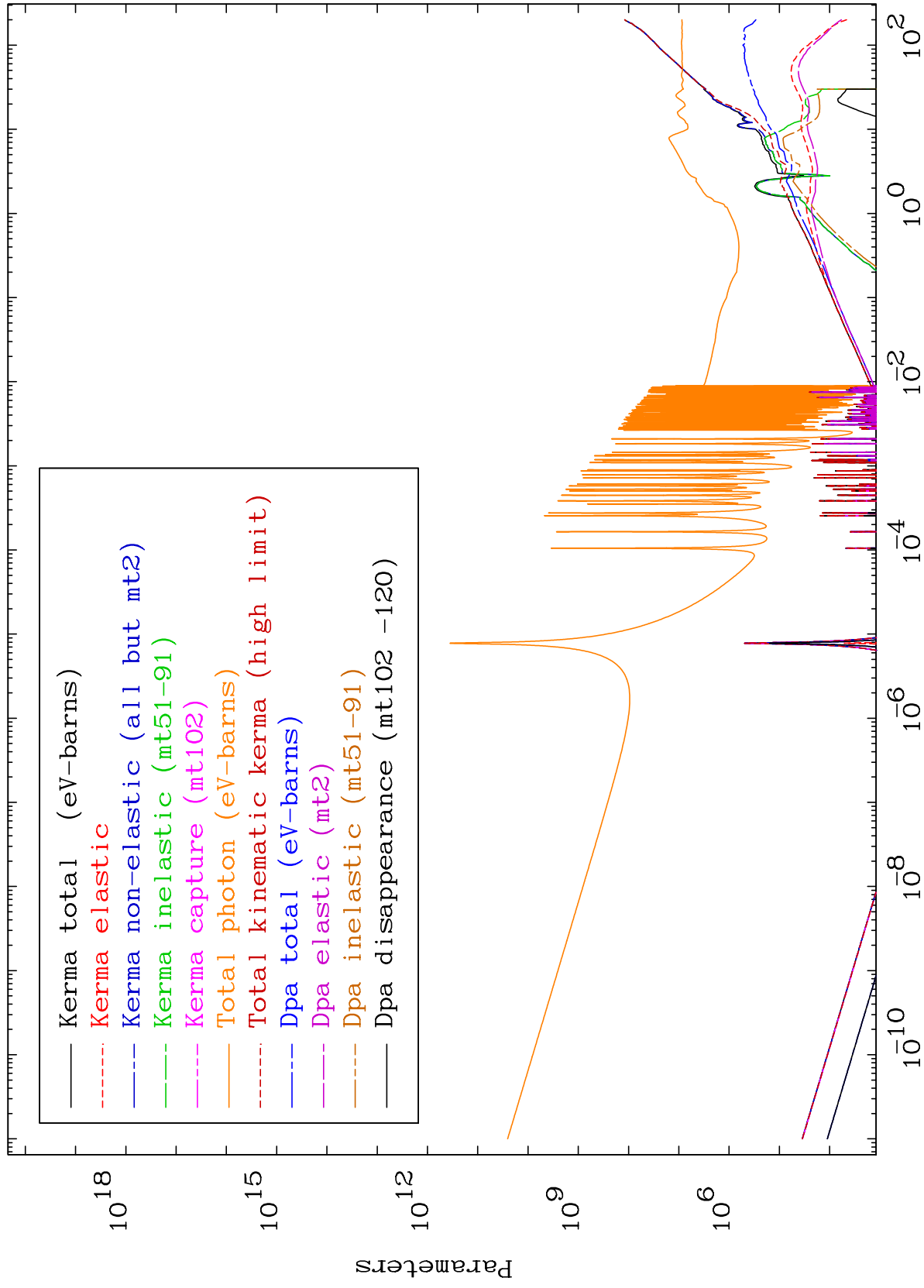


MAT 7237

(n,α) Levels
293 Kelvin Cross Sections

72-Hf-178

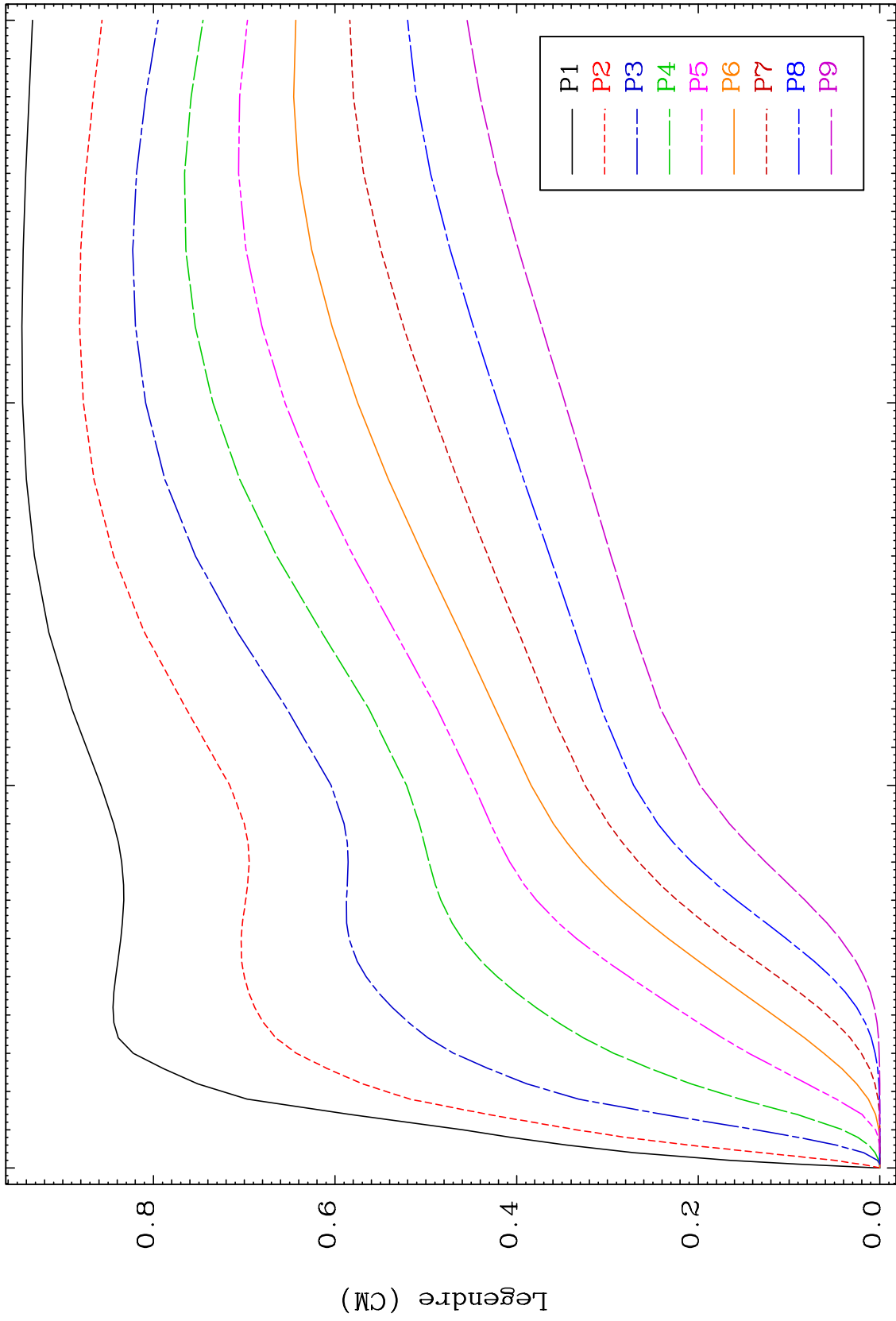




MAT 7237

Elastic Legendre Coefficients

72-Hf-178



0

16

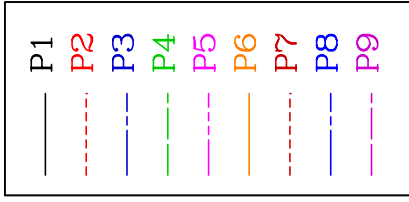
10

20

30

Incident Energy (MeV)

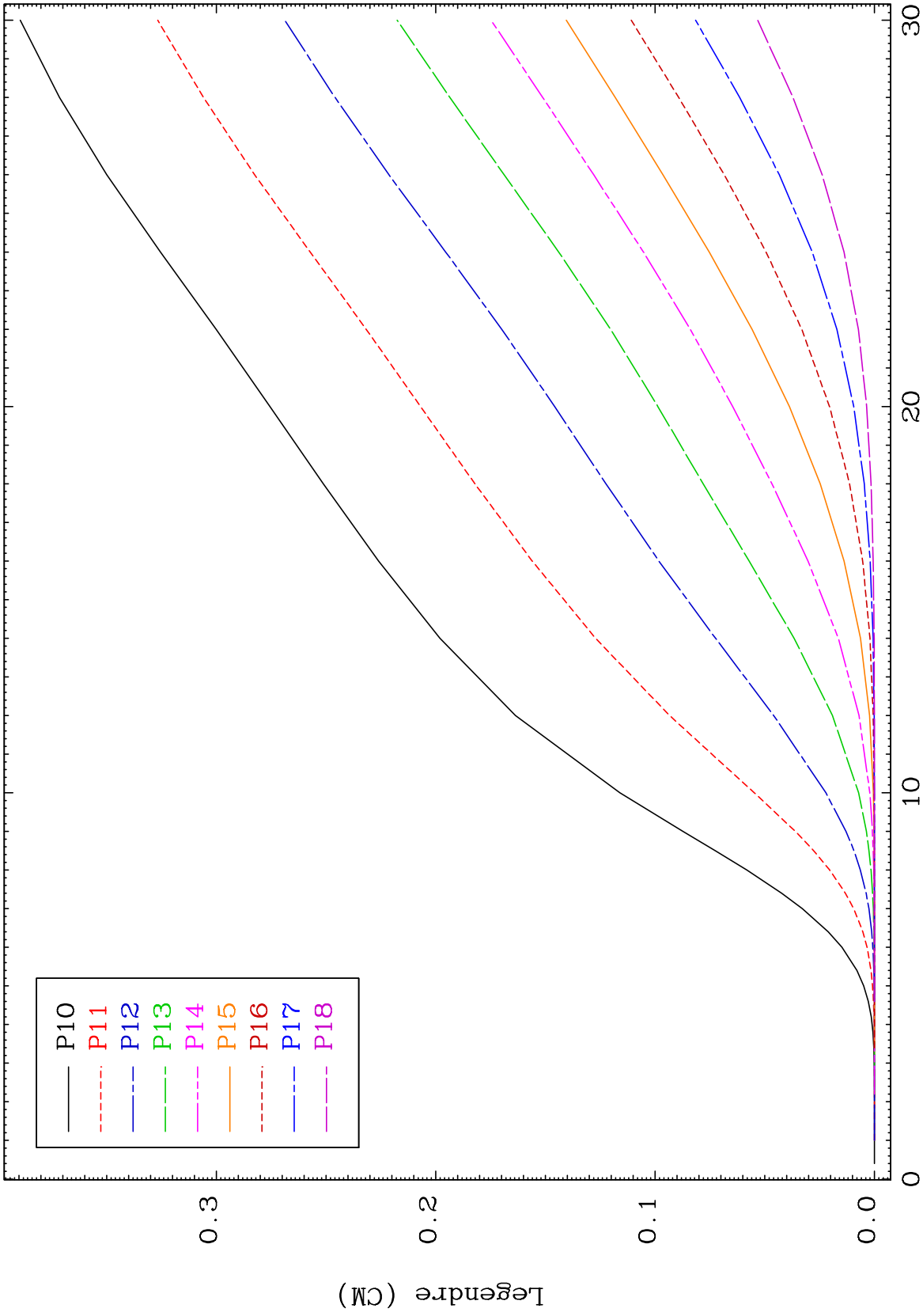
72-Hf-178



MAT 7237

Elastic Legendre Coefficients

72-Hf-178



17

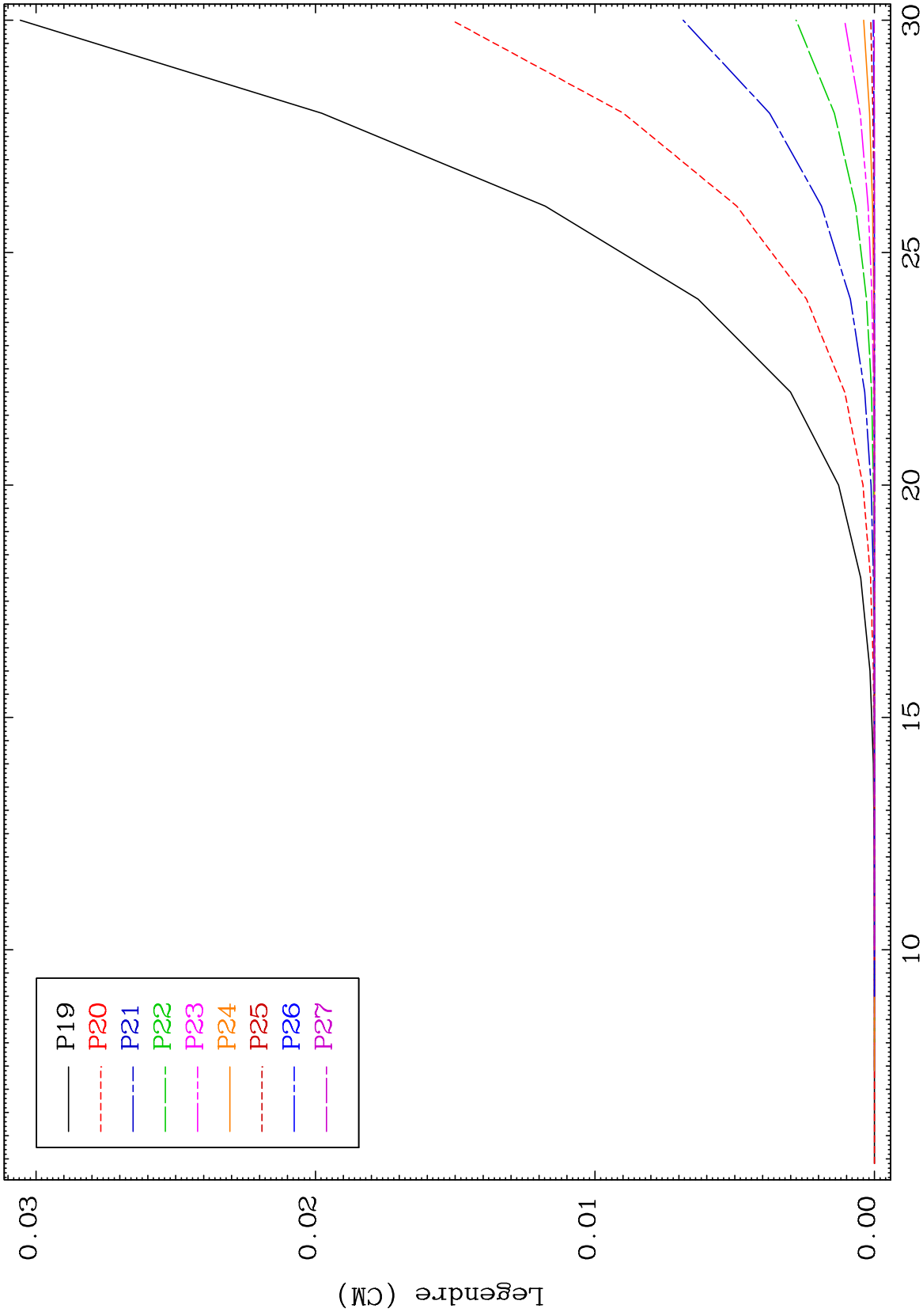
Incident Energy (MeV)

72-Hf-178

MAT 7237

Elastic Legendre Coefficients

72-Hf-178



18

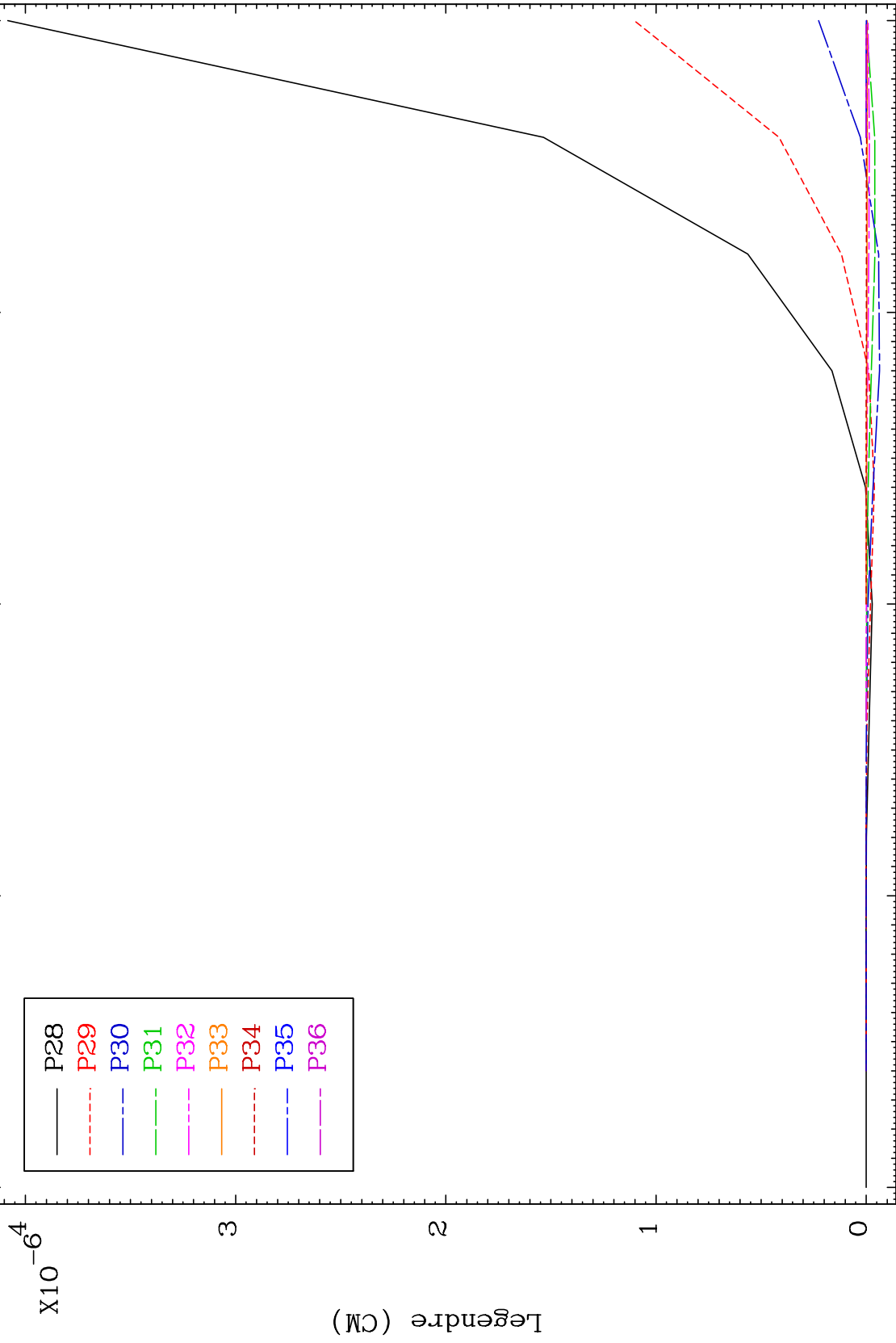
Incident Energy (MeV)

72-Hf-178

MAT 7237

Elastic Legendre Coefficients

72-Hf-178



19

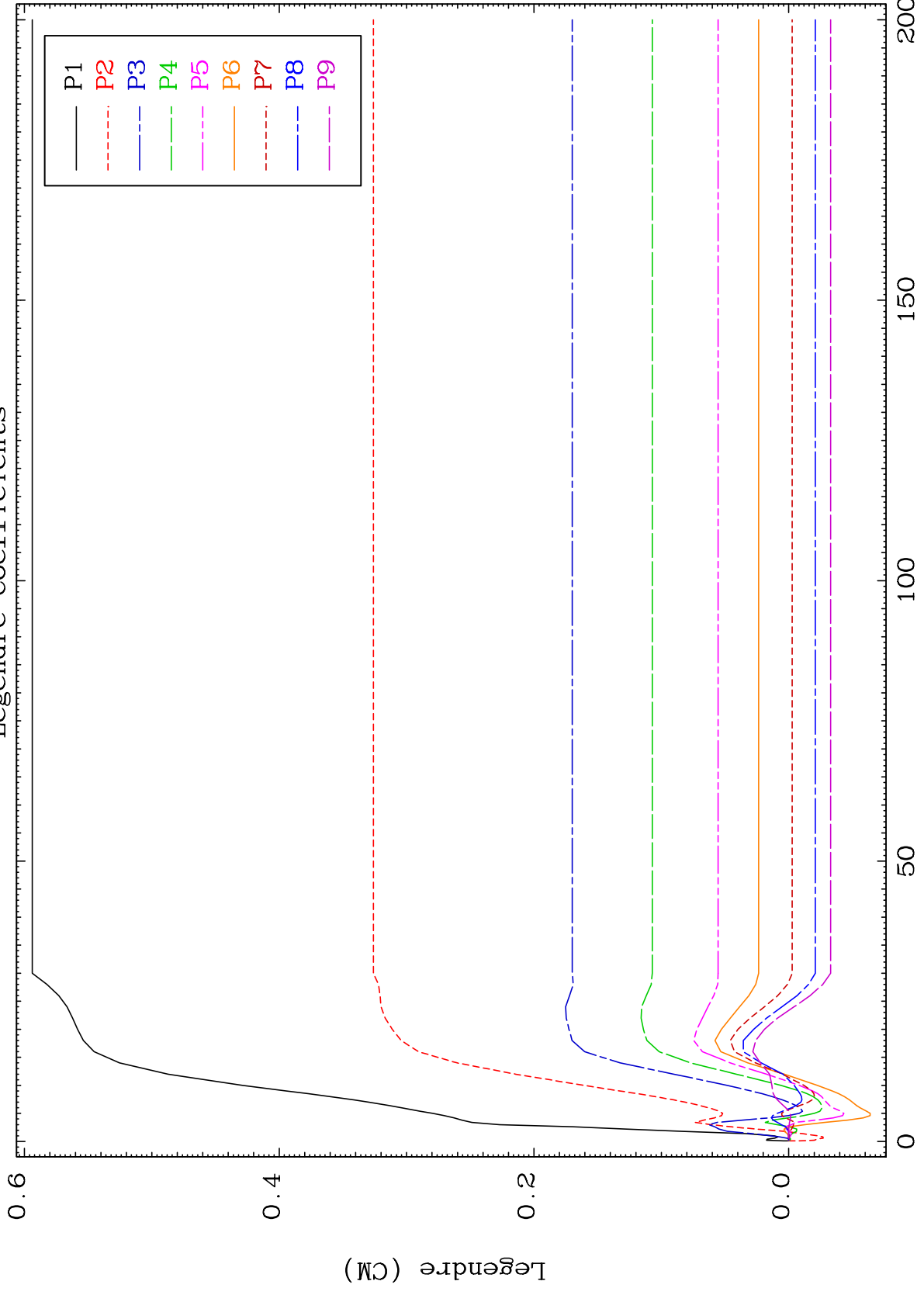
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



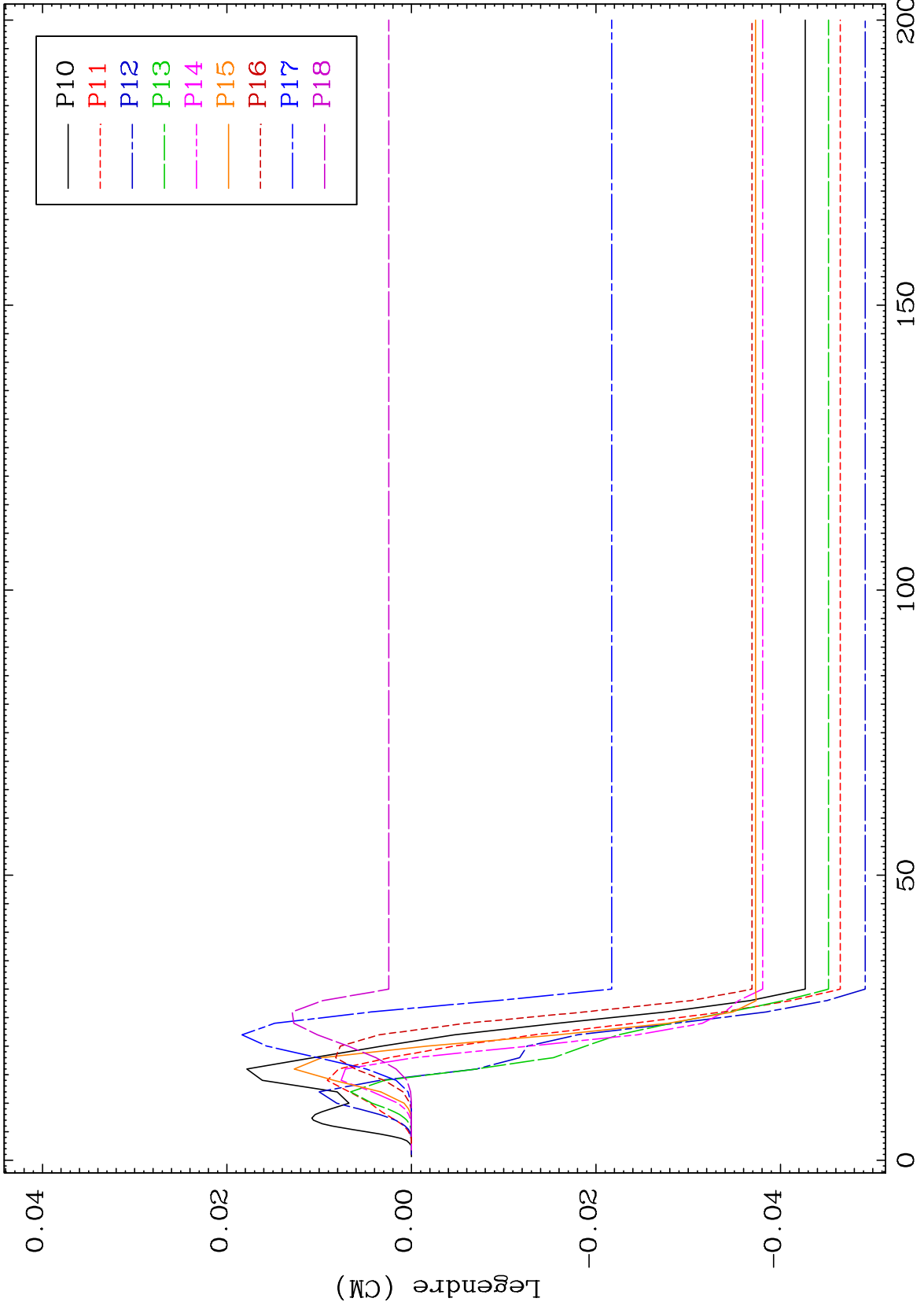
72-Hf-178

Incident Energy (MeV)

MAT 7237

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

72-Hf-178



21

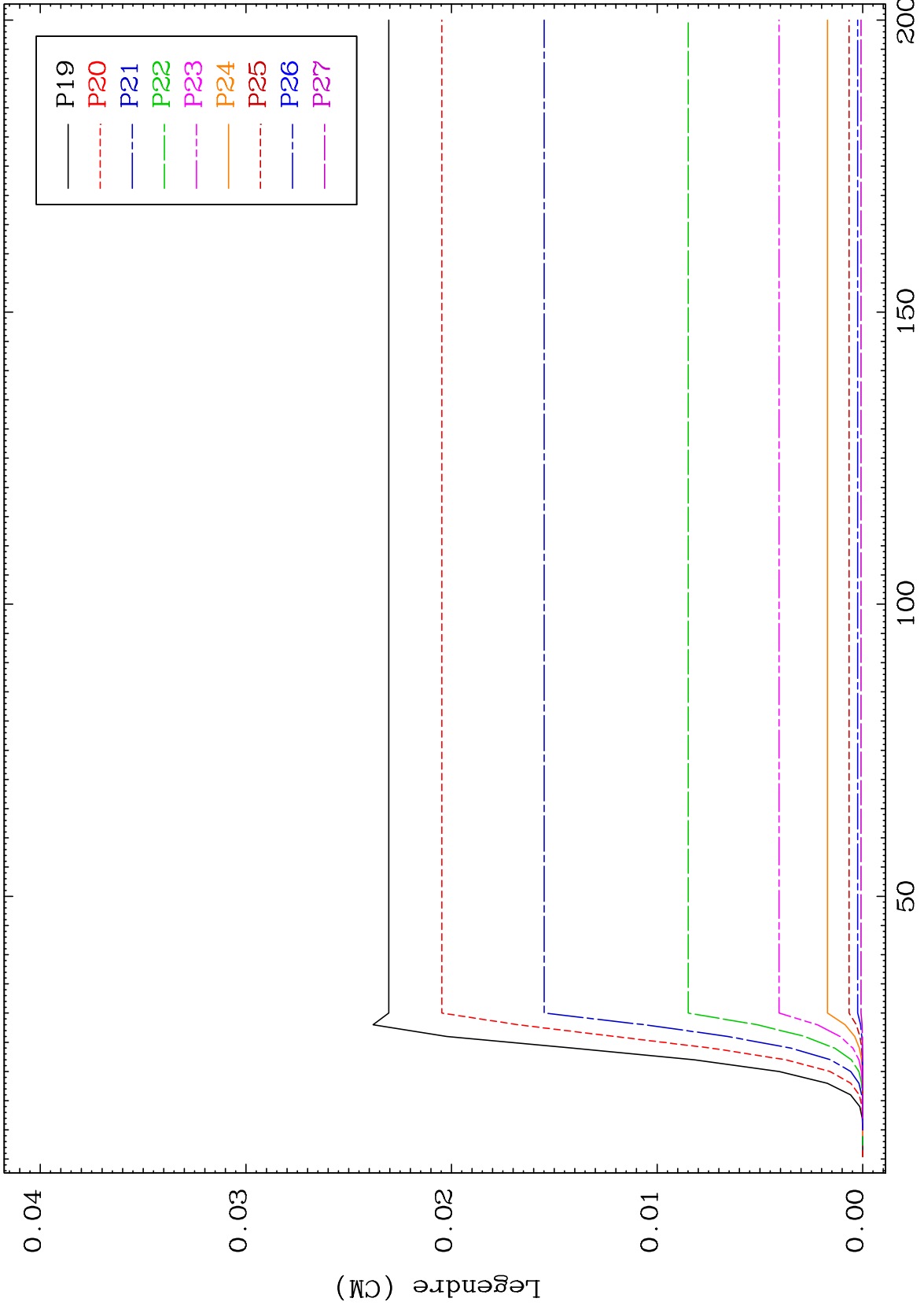
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



22

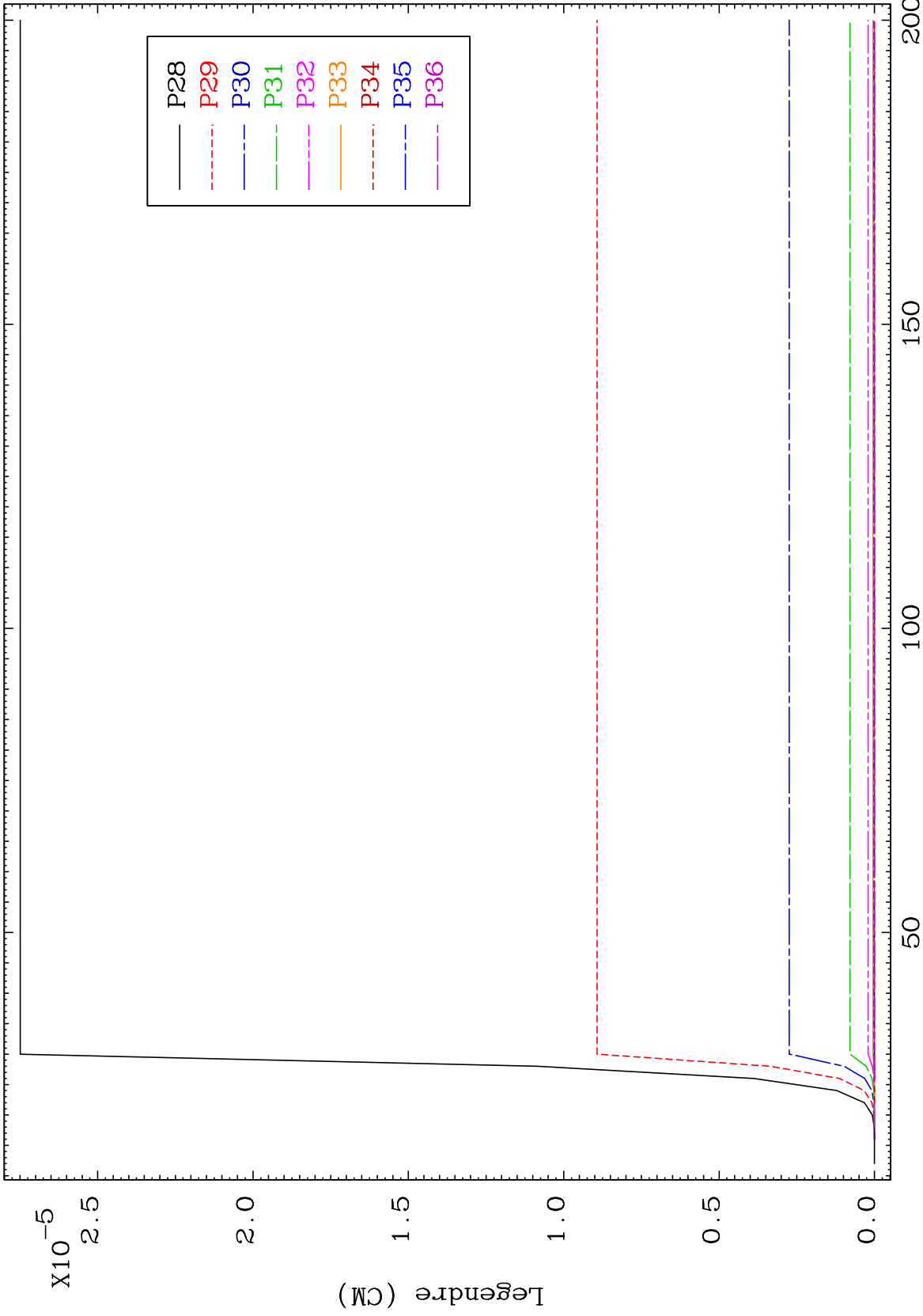
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



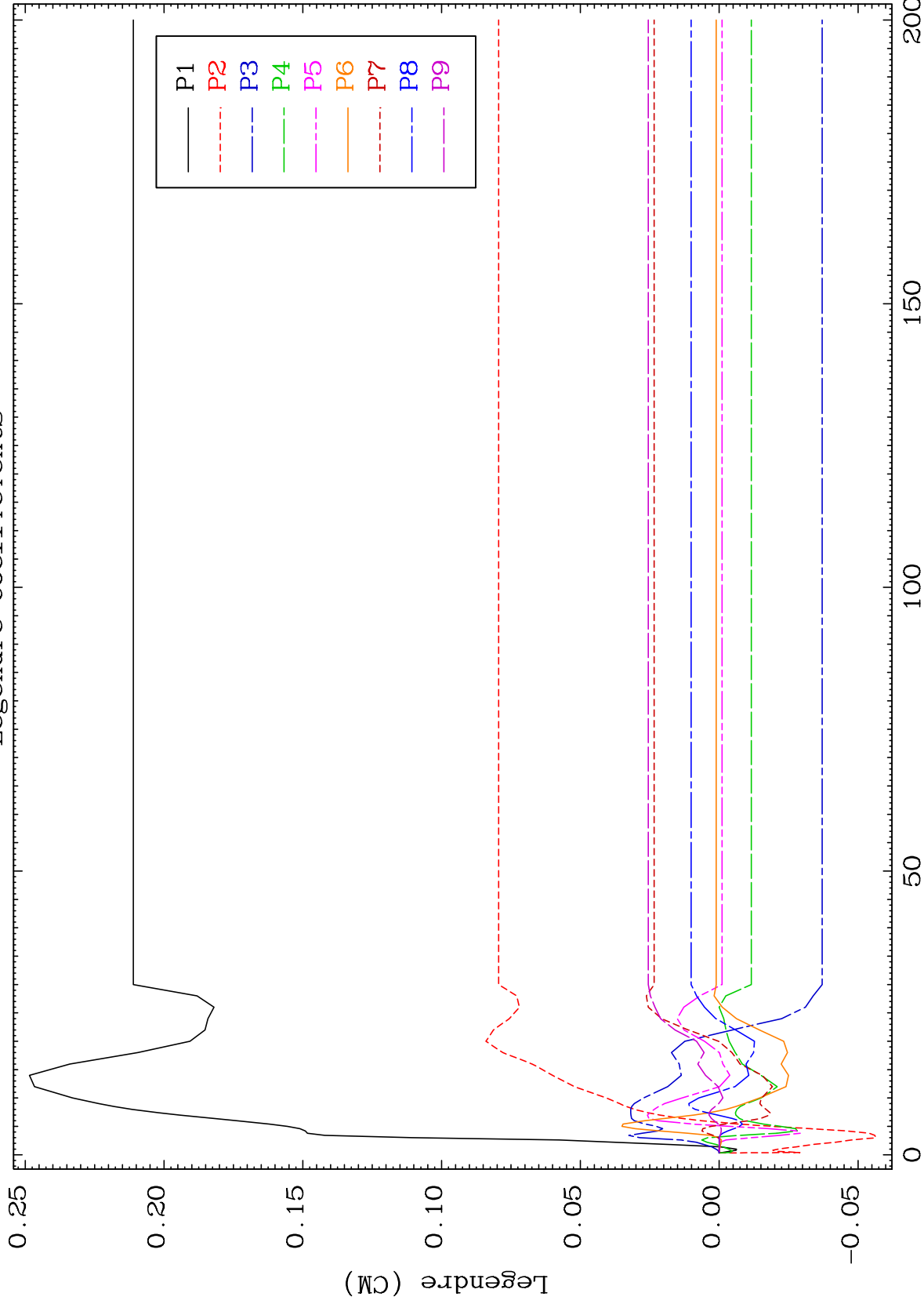
23

72-Hf-178

MAT 7237

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

72-Hf-178



24

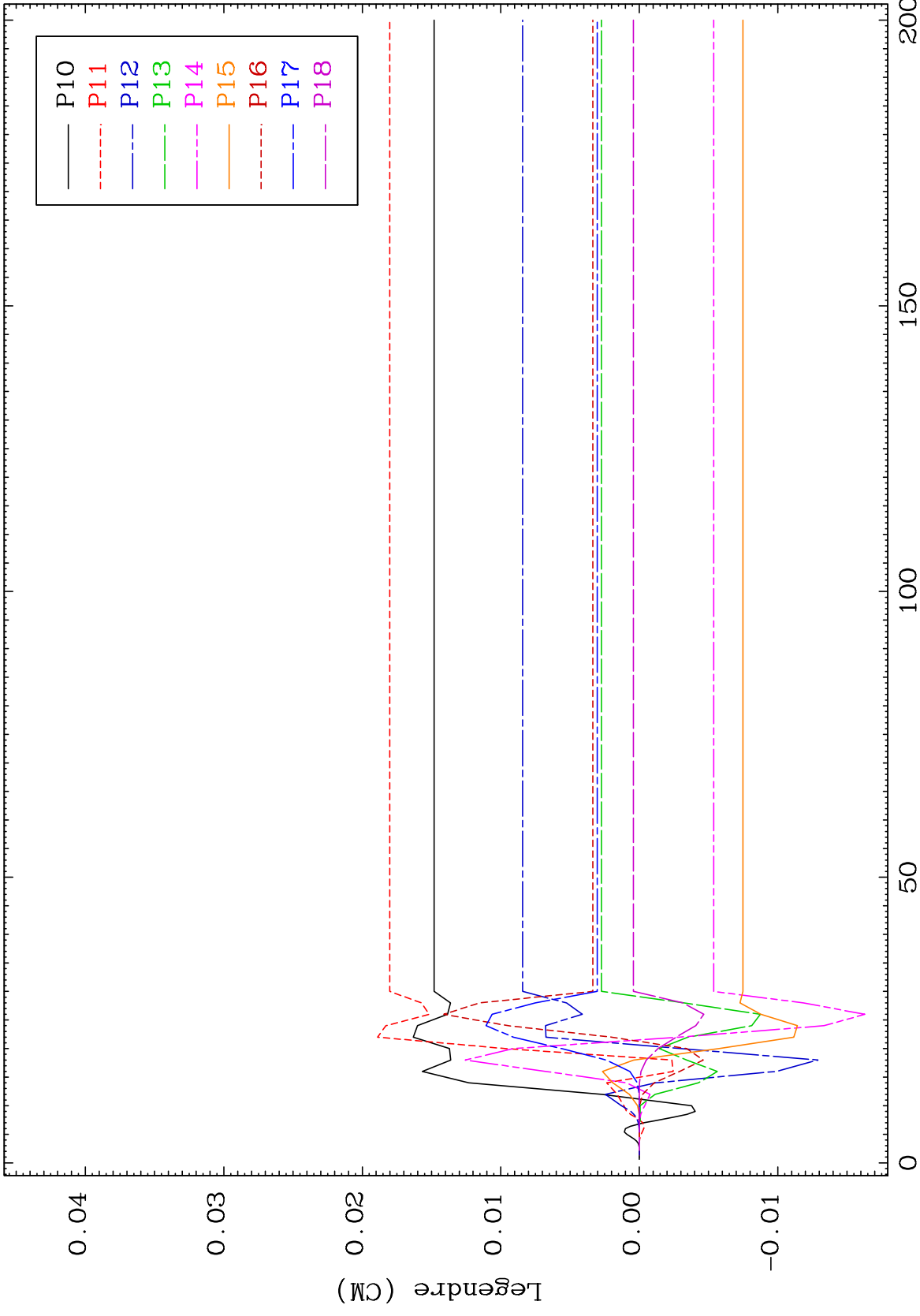
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



25

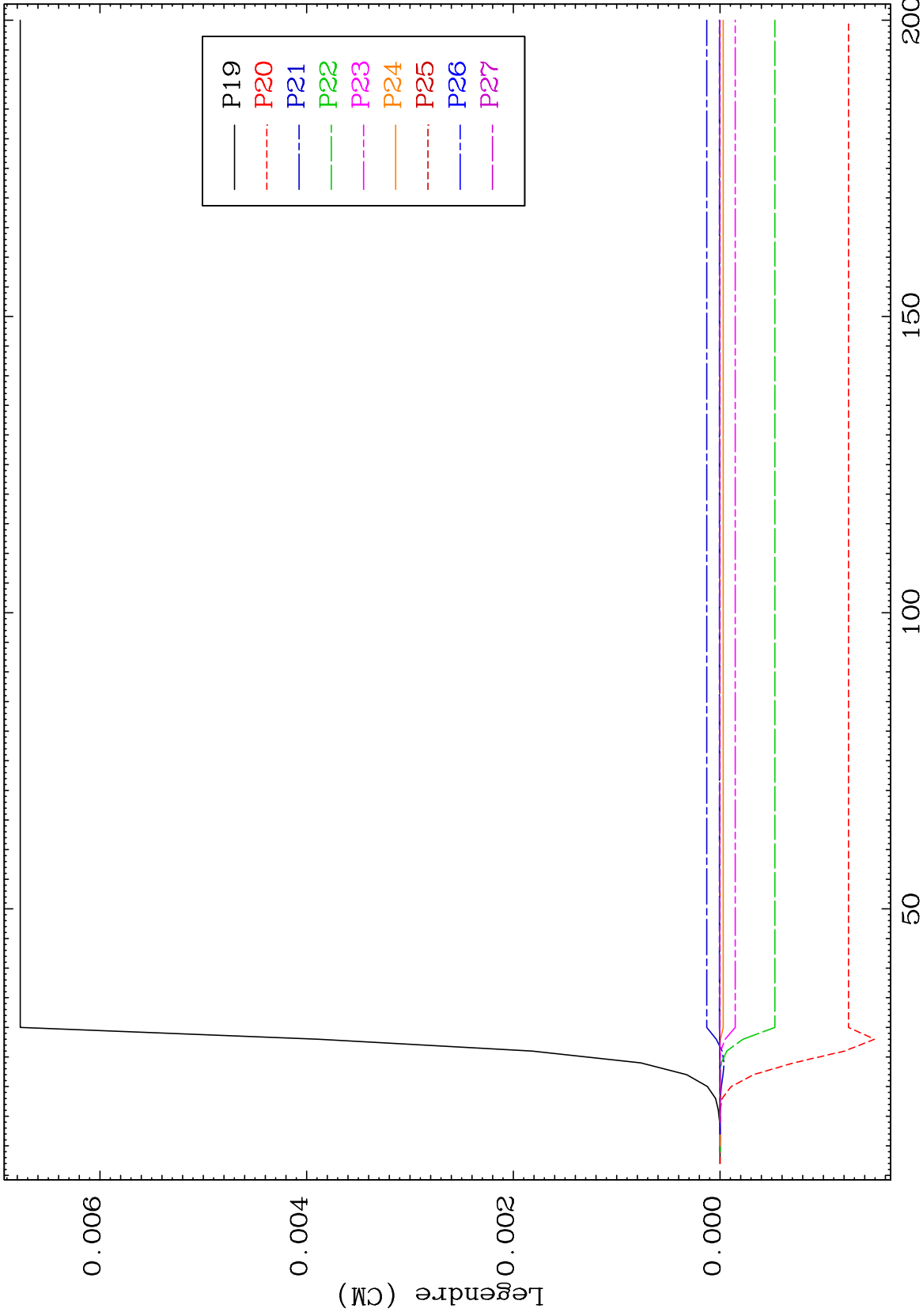
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



26

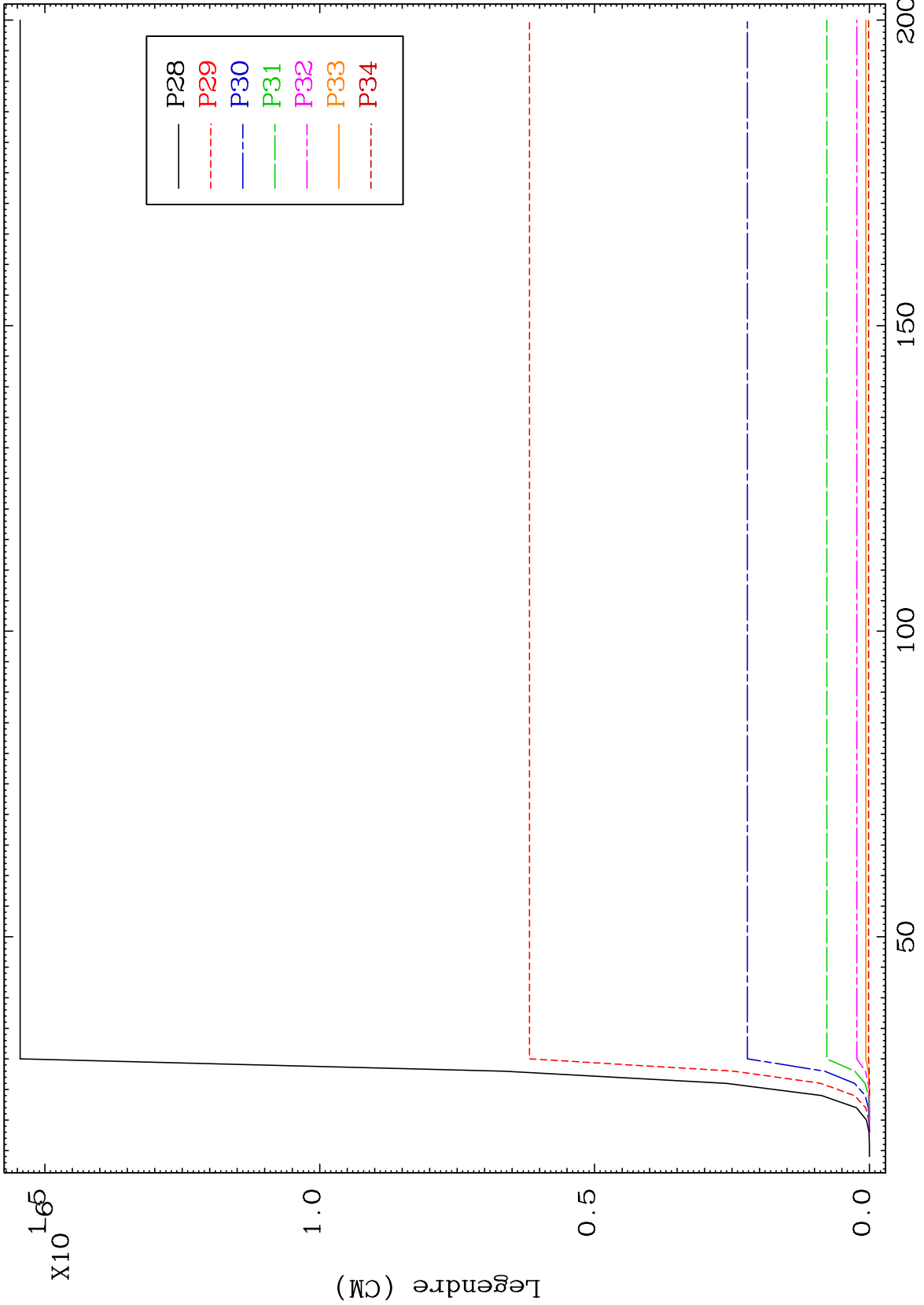
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



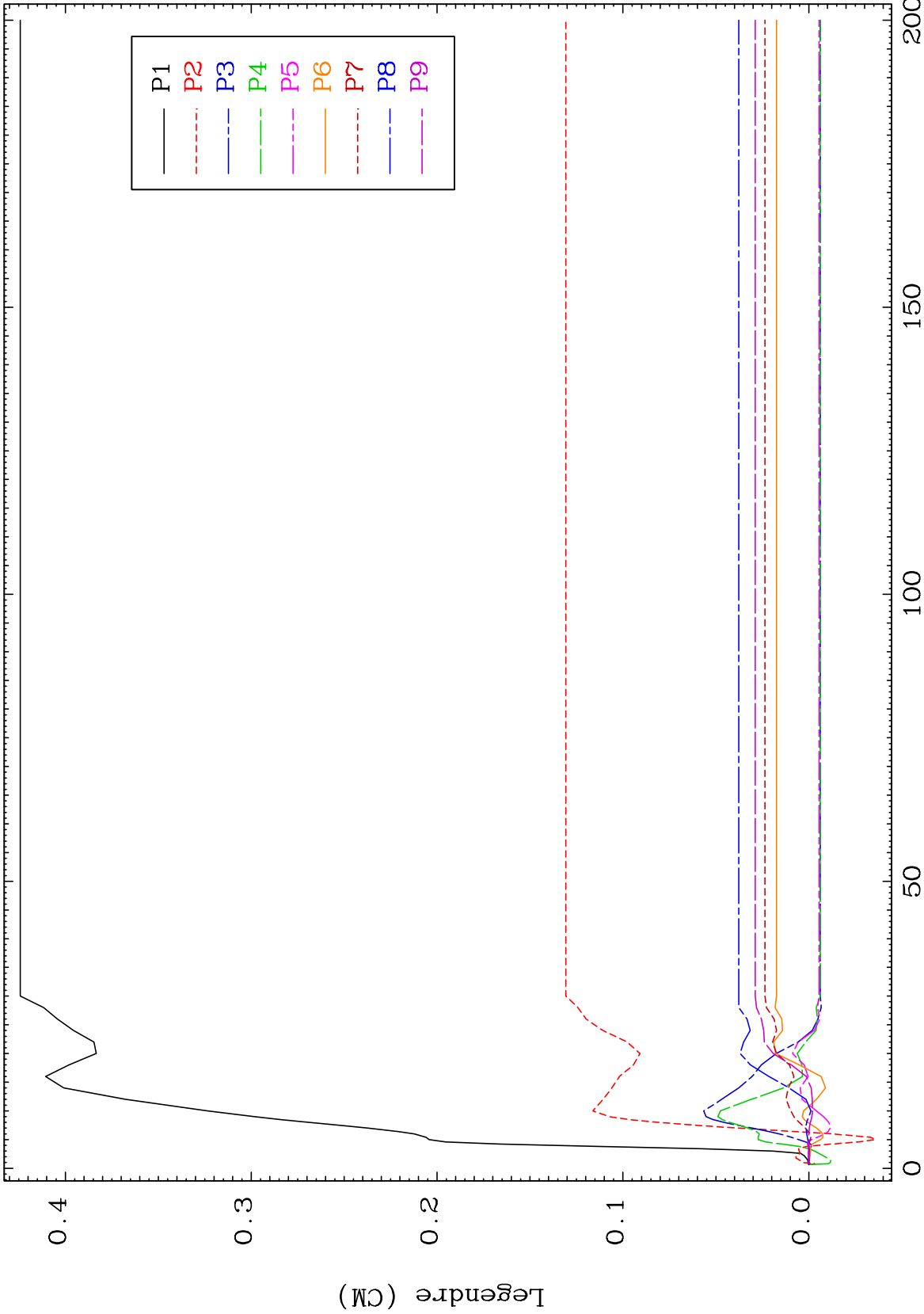
27

72-Hf-178

MAT 7237

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

72-Hf-178



28

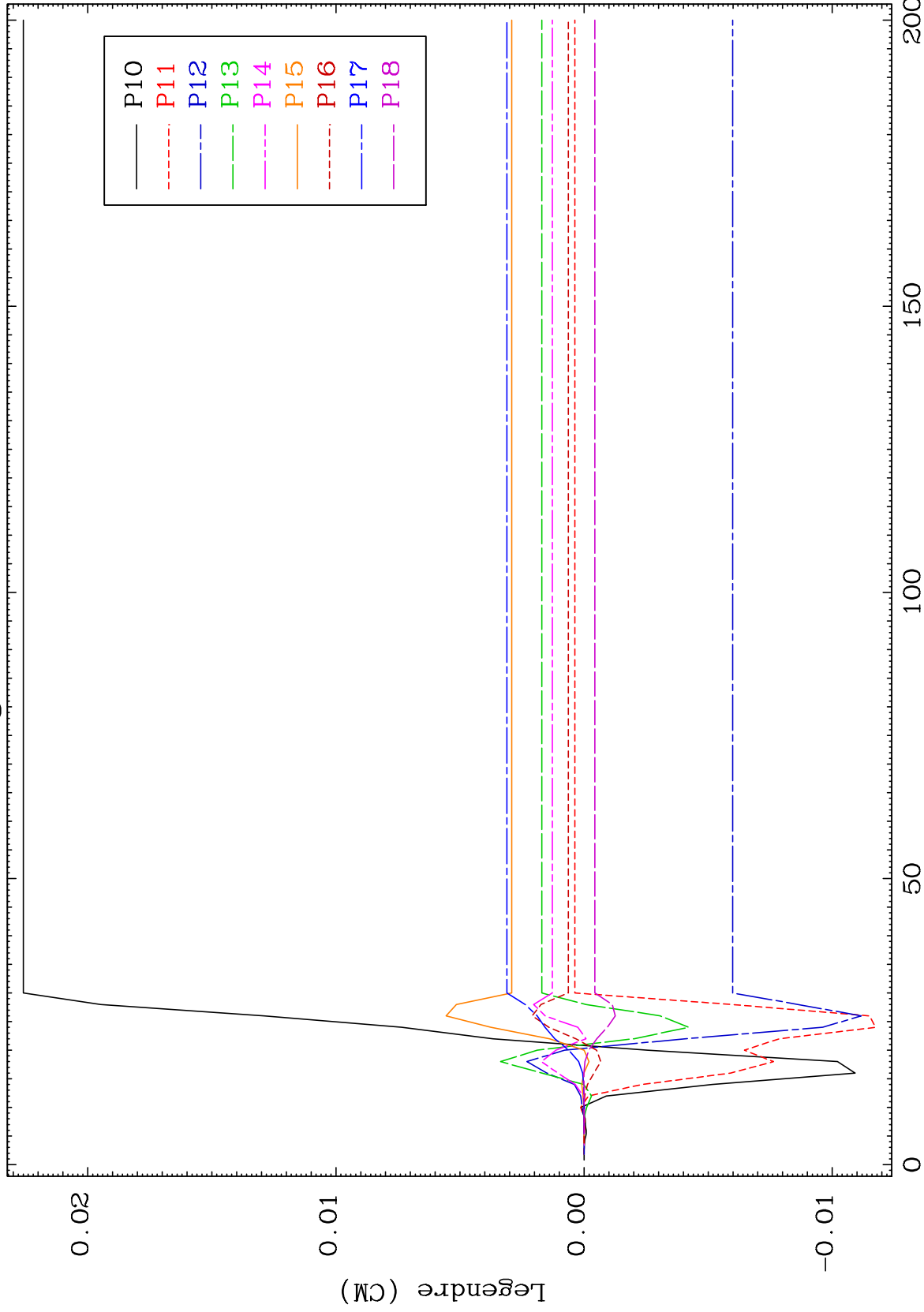
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



29

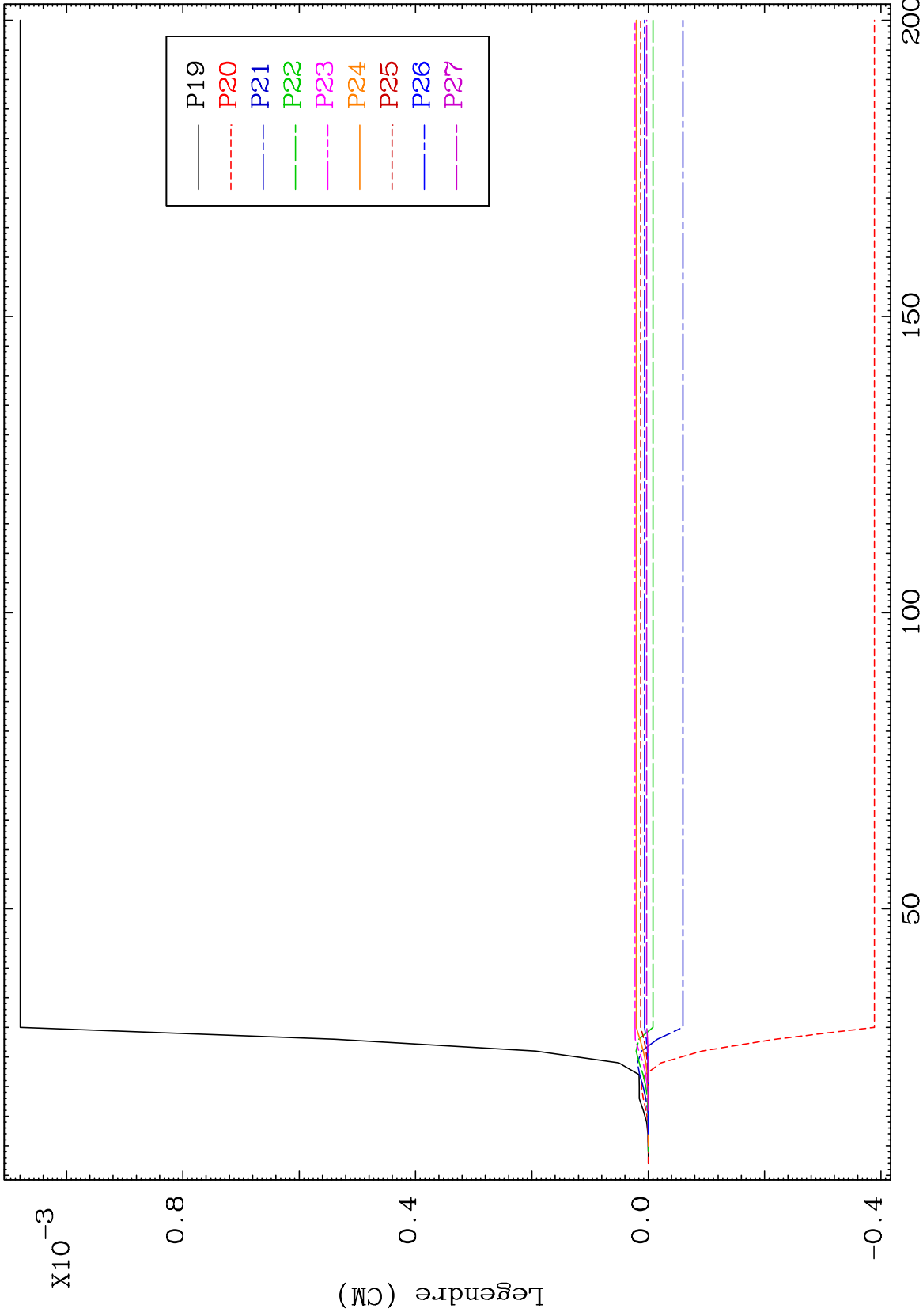
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

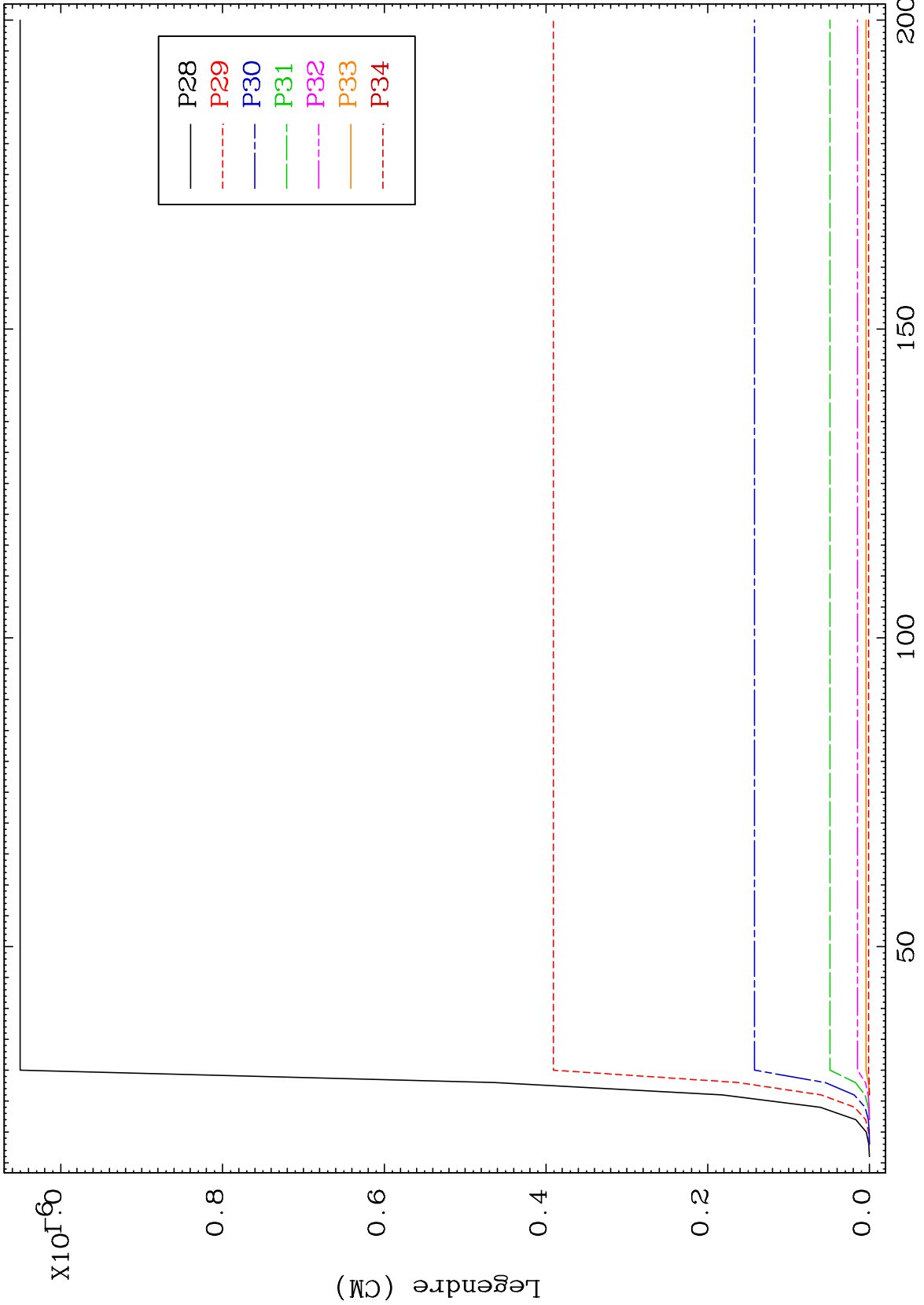
72-Hf-178



30

Incident Energy (MeV)

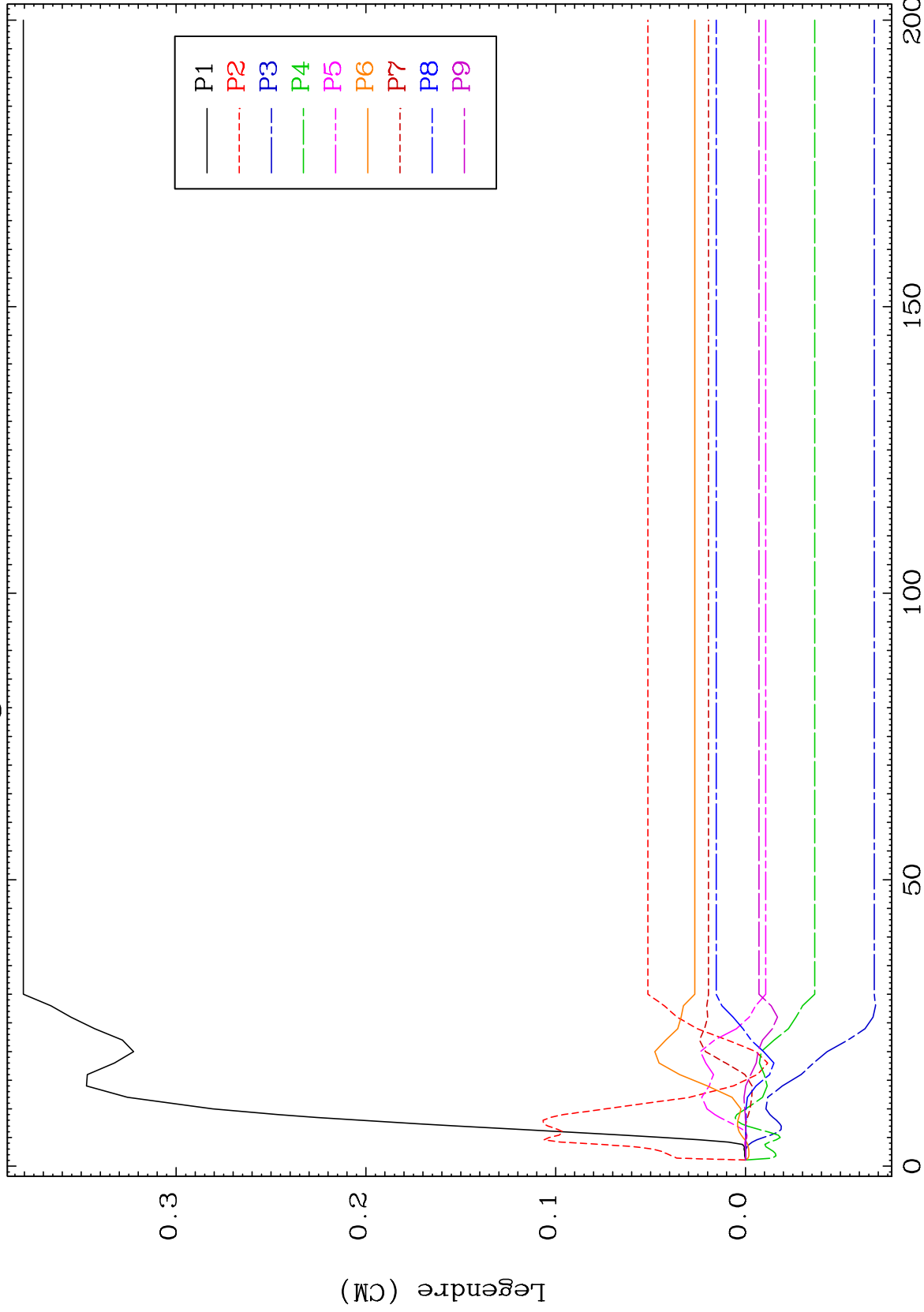
72-Hf-178



MAT 7237

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

72-Hf-178



32

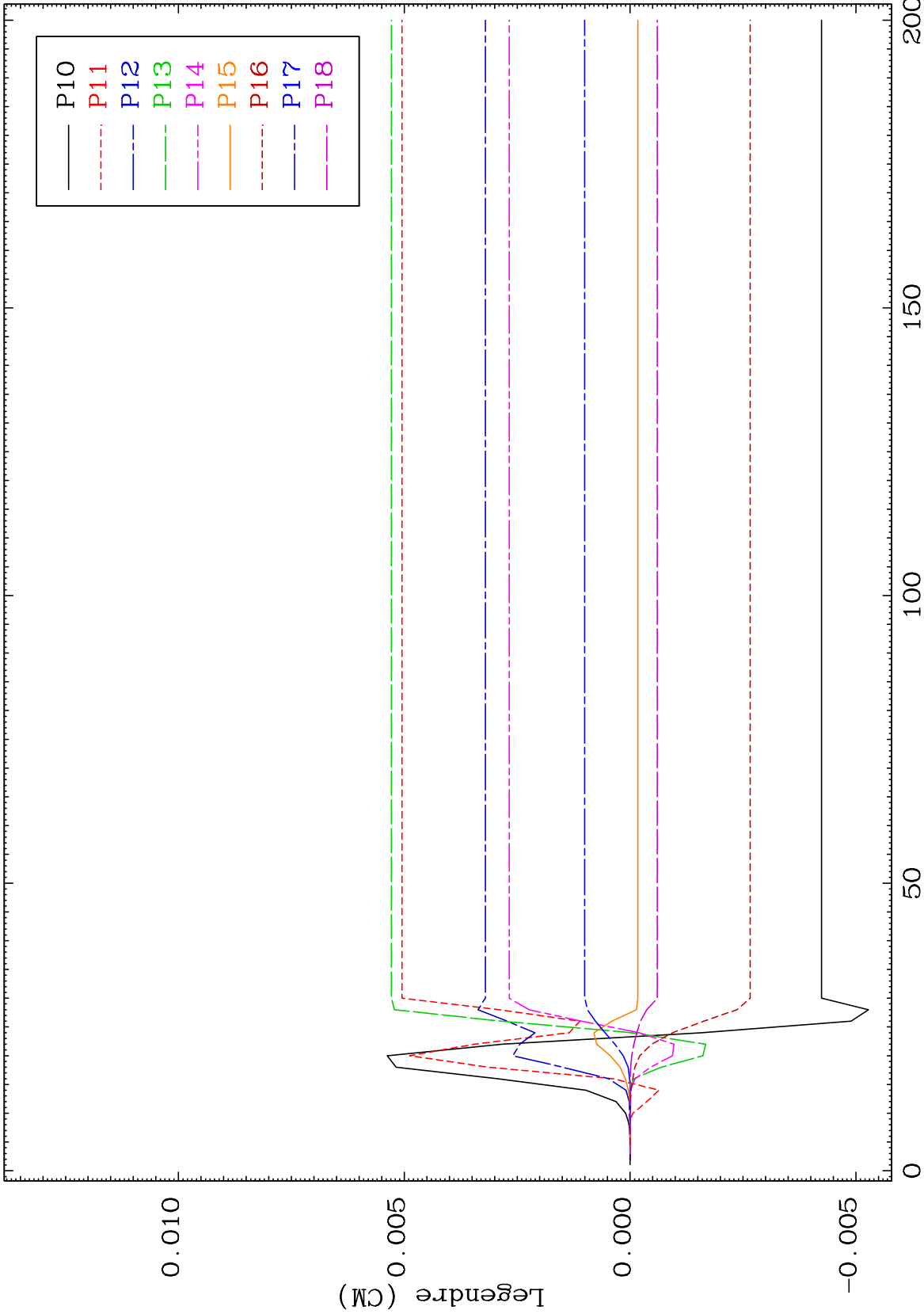
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



33

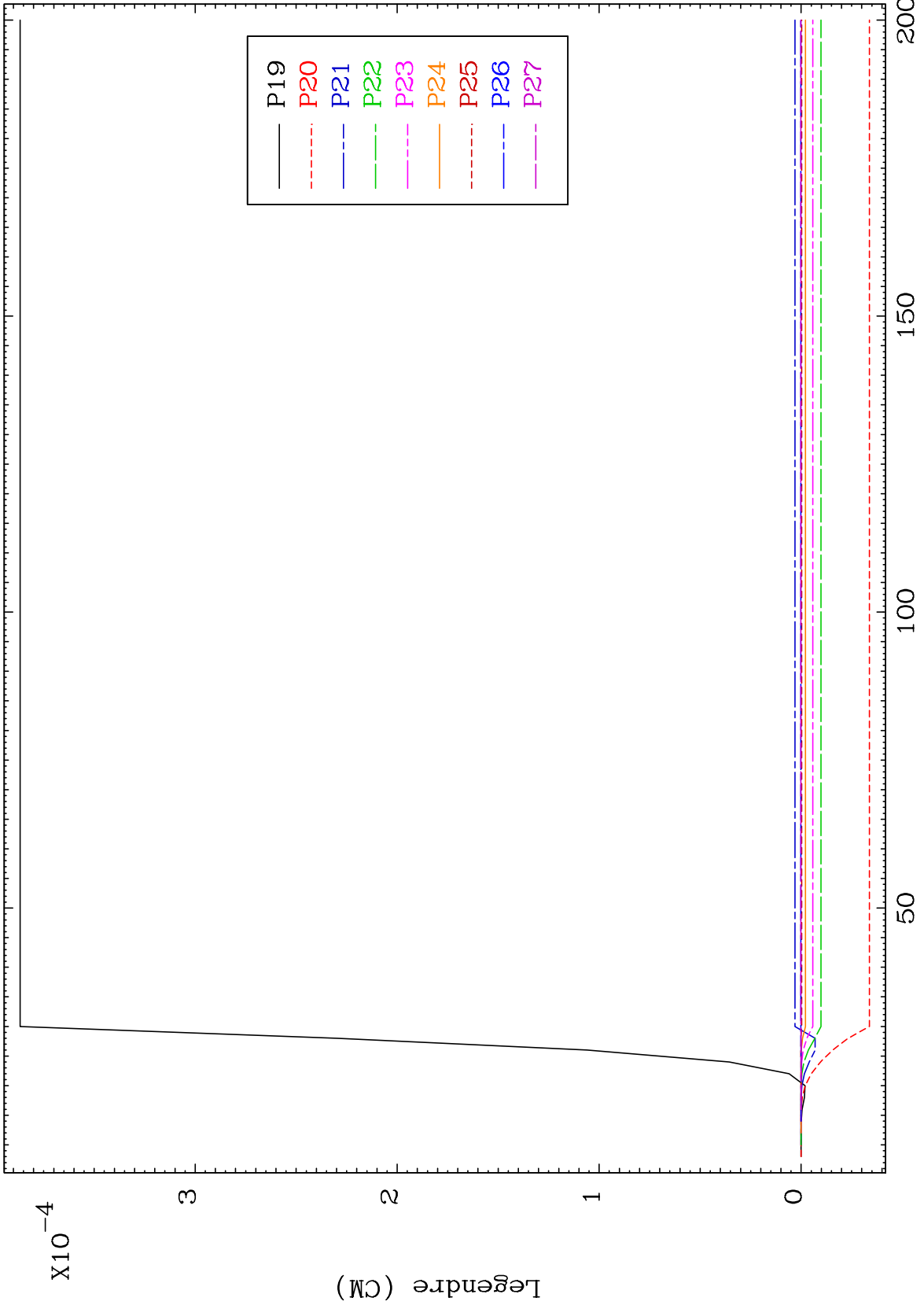
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



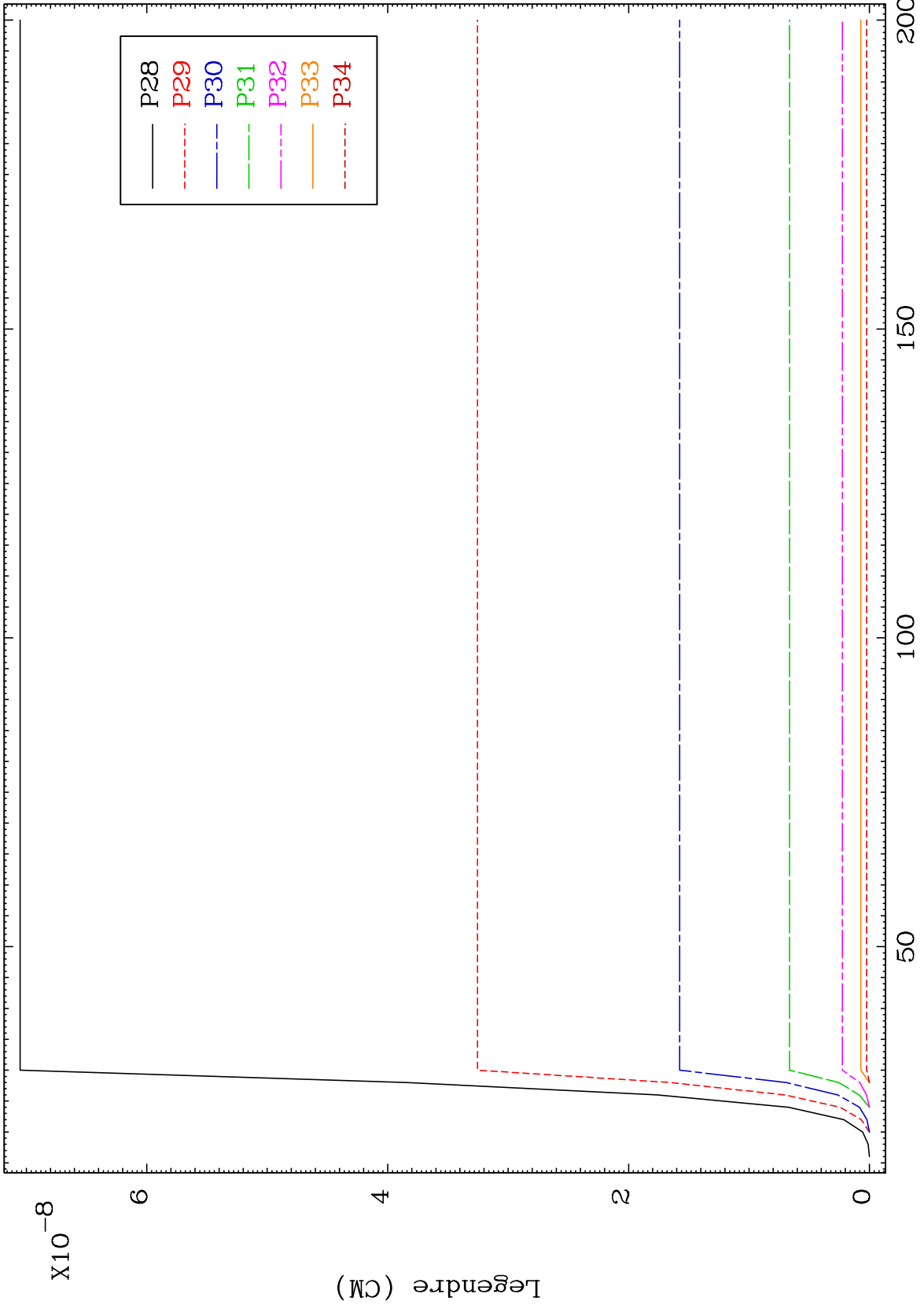
34

72-Hf-178

MAT 7237

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

72-Hf-178



35

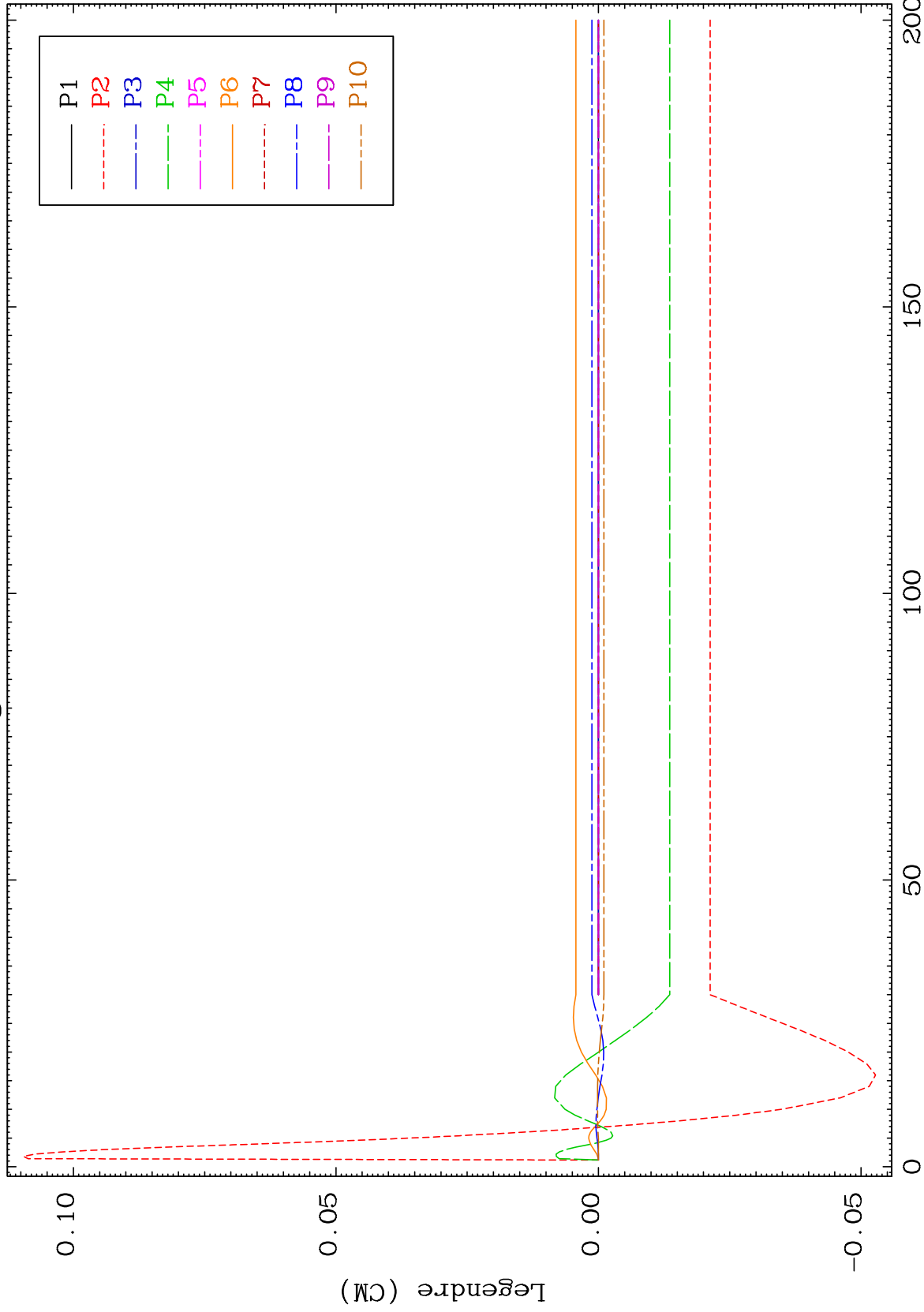
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



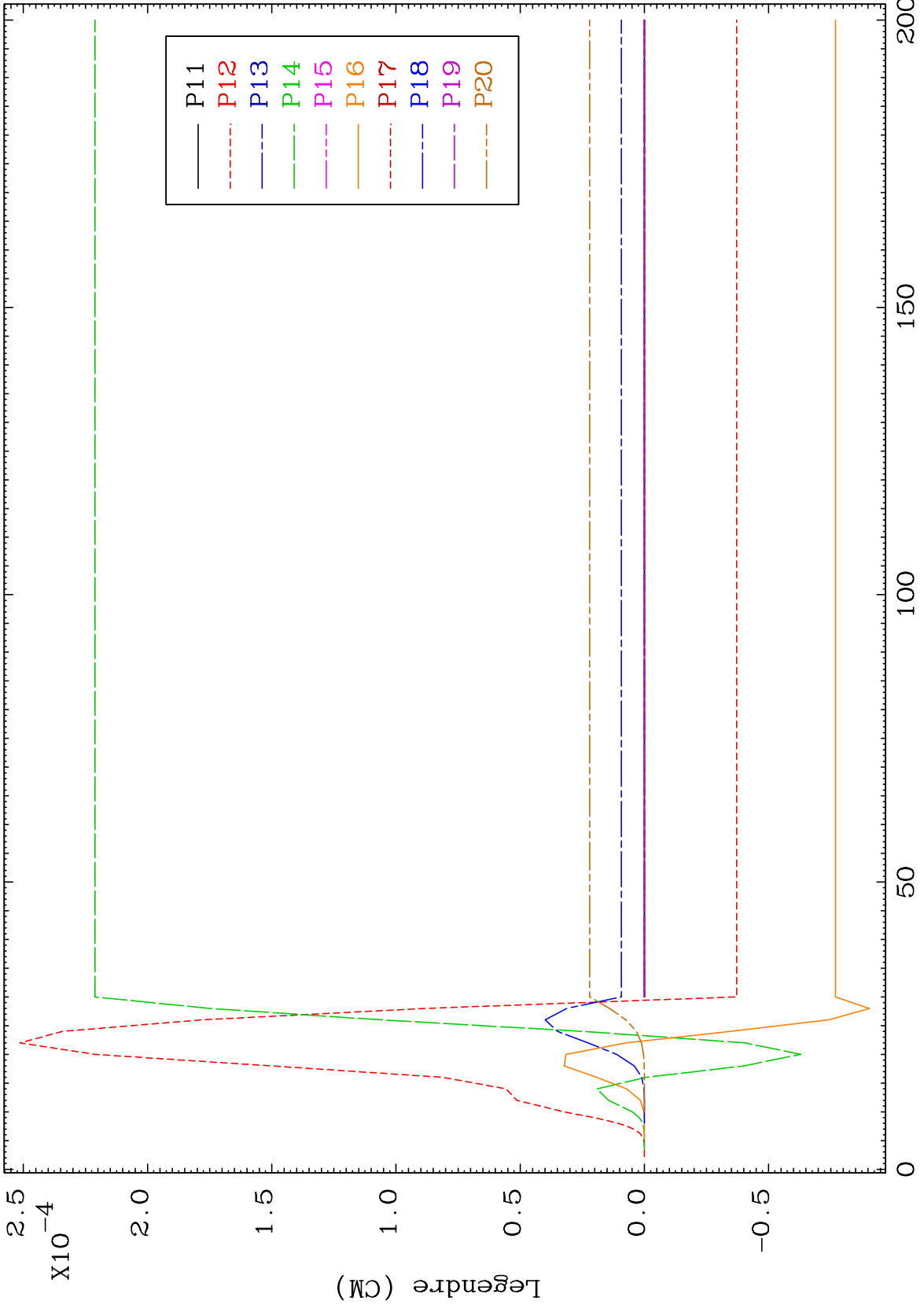
36

72-Hf-178

MAT 7237

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

72-Hf-178



37

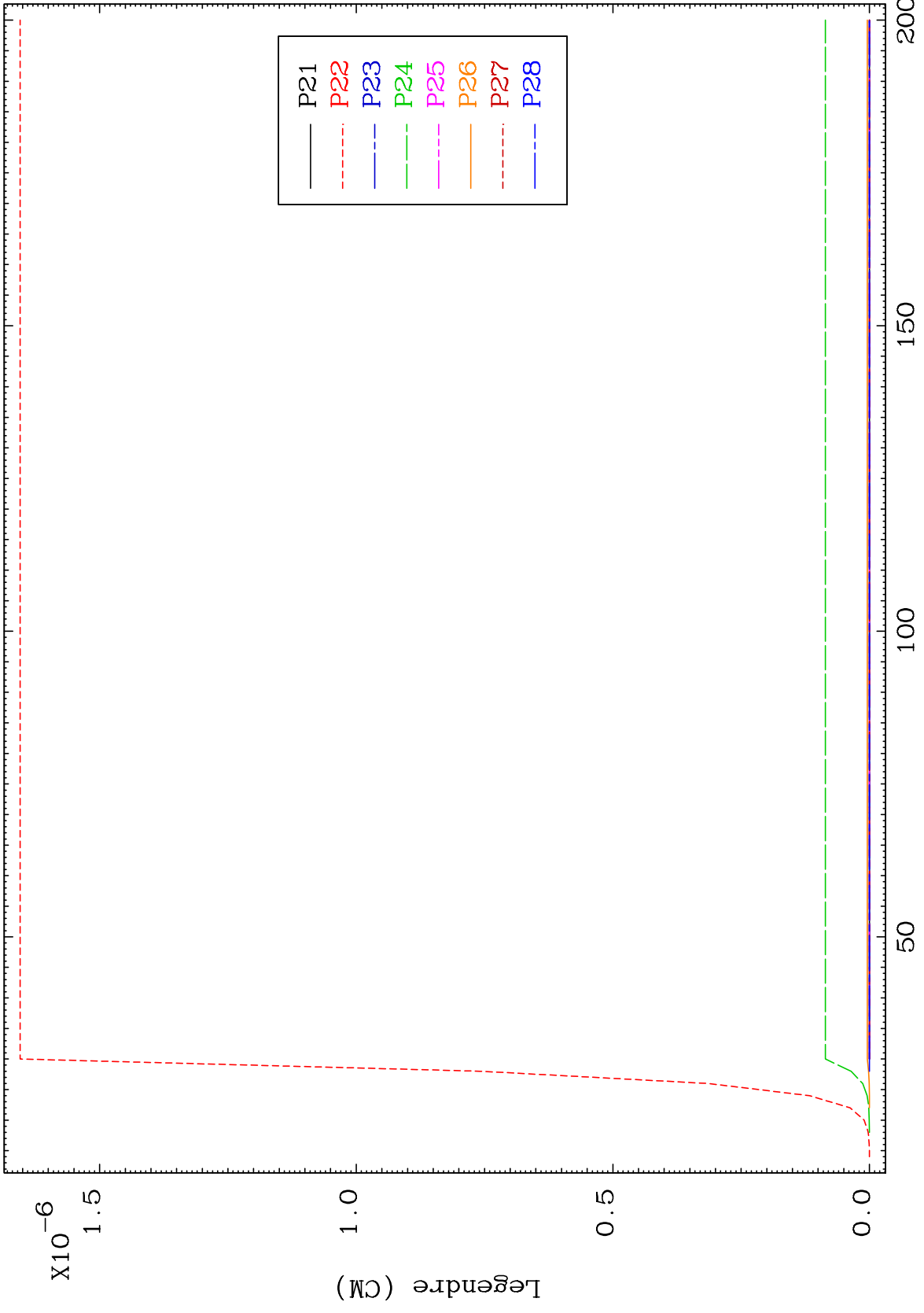
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



38

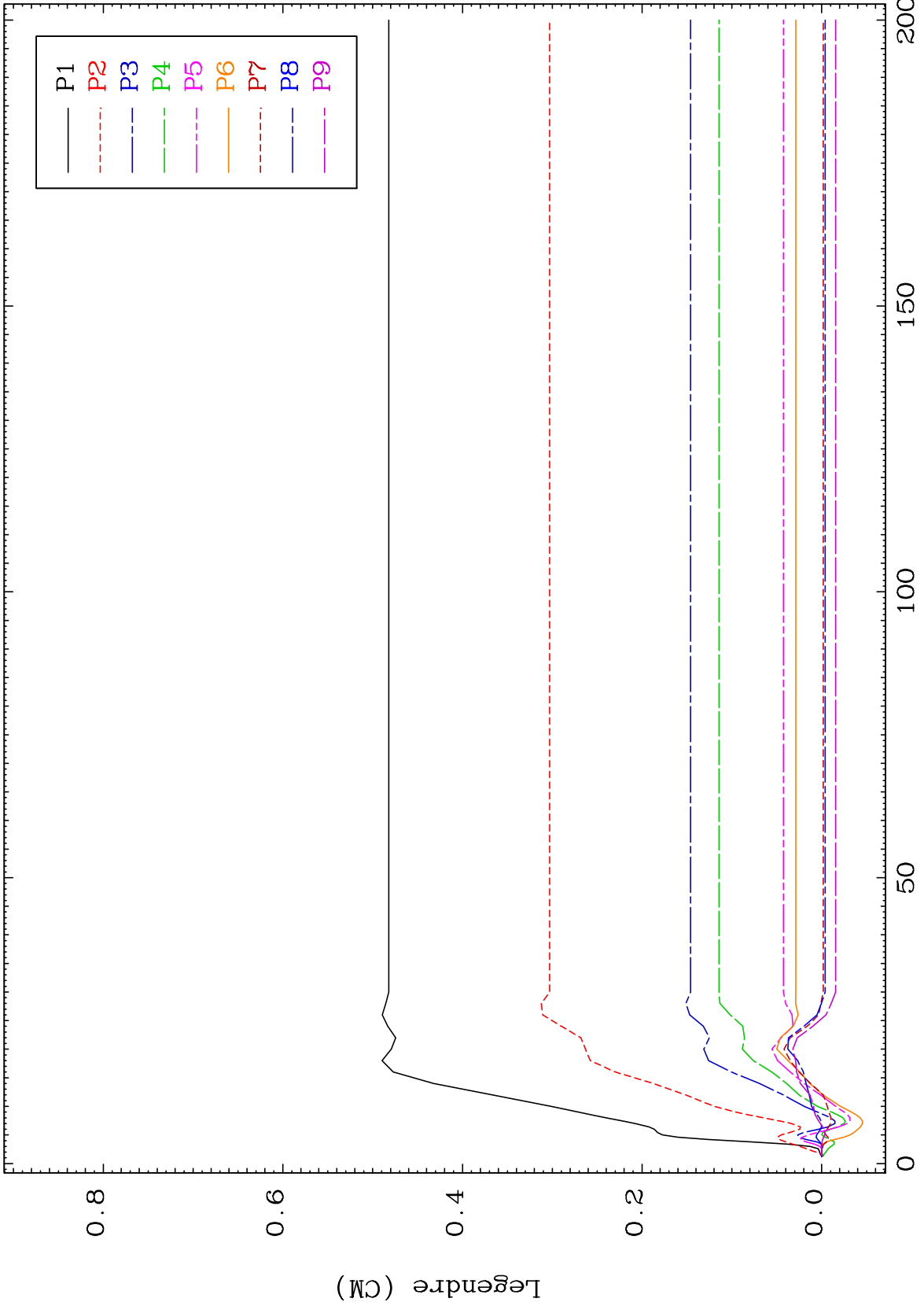
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



39

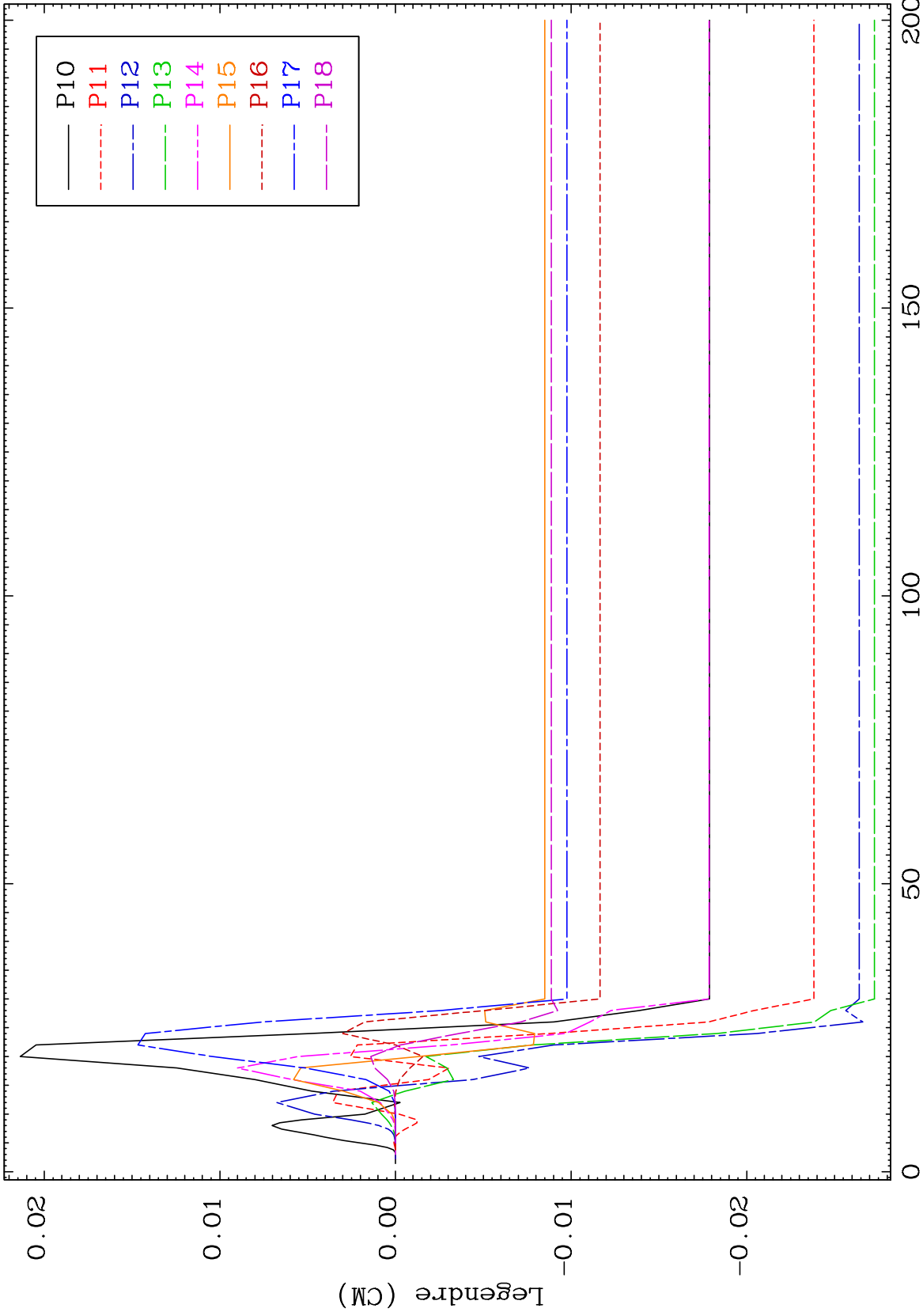
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



40

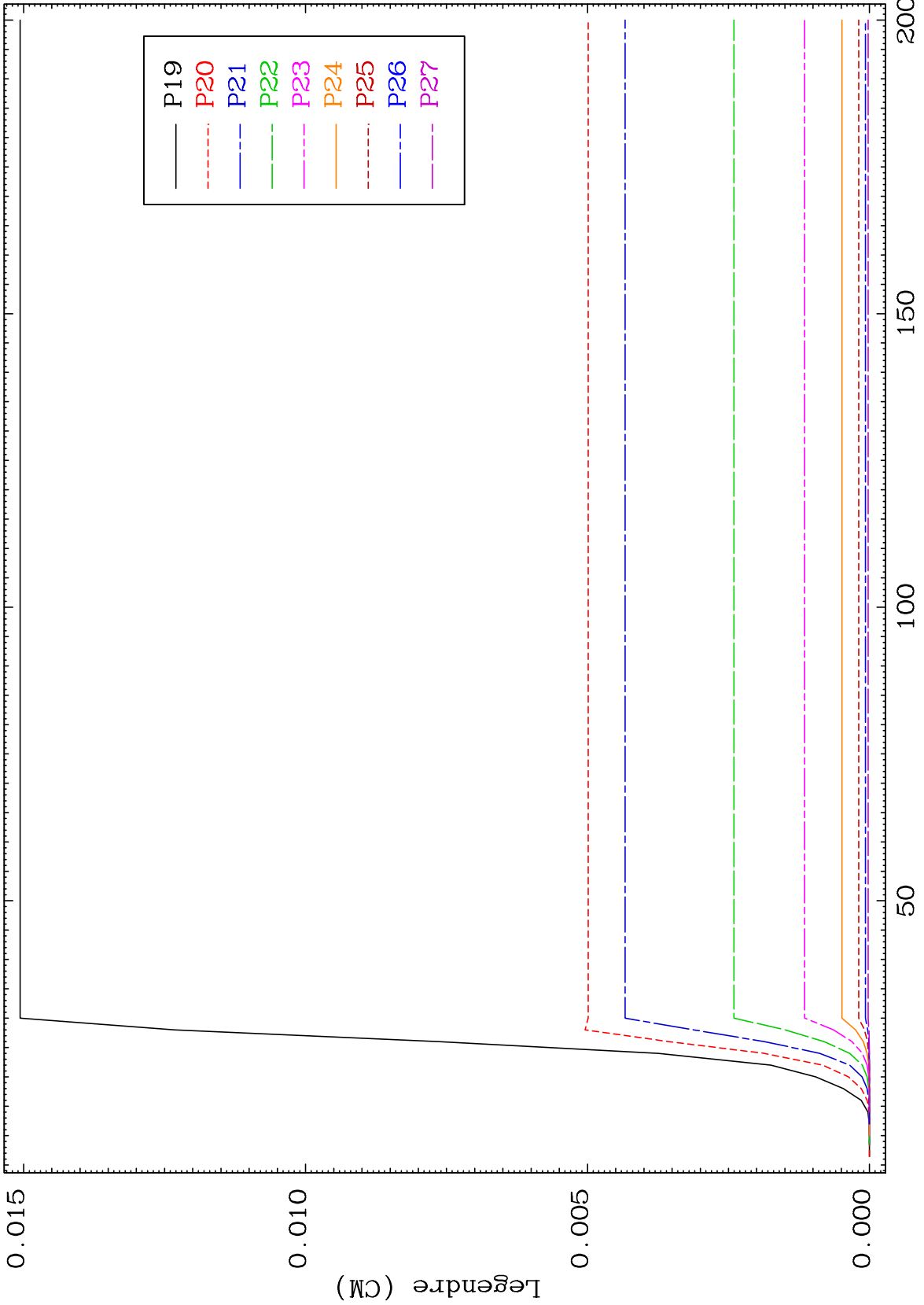
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

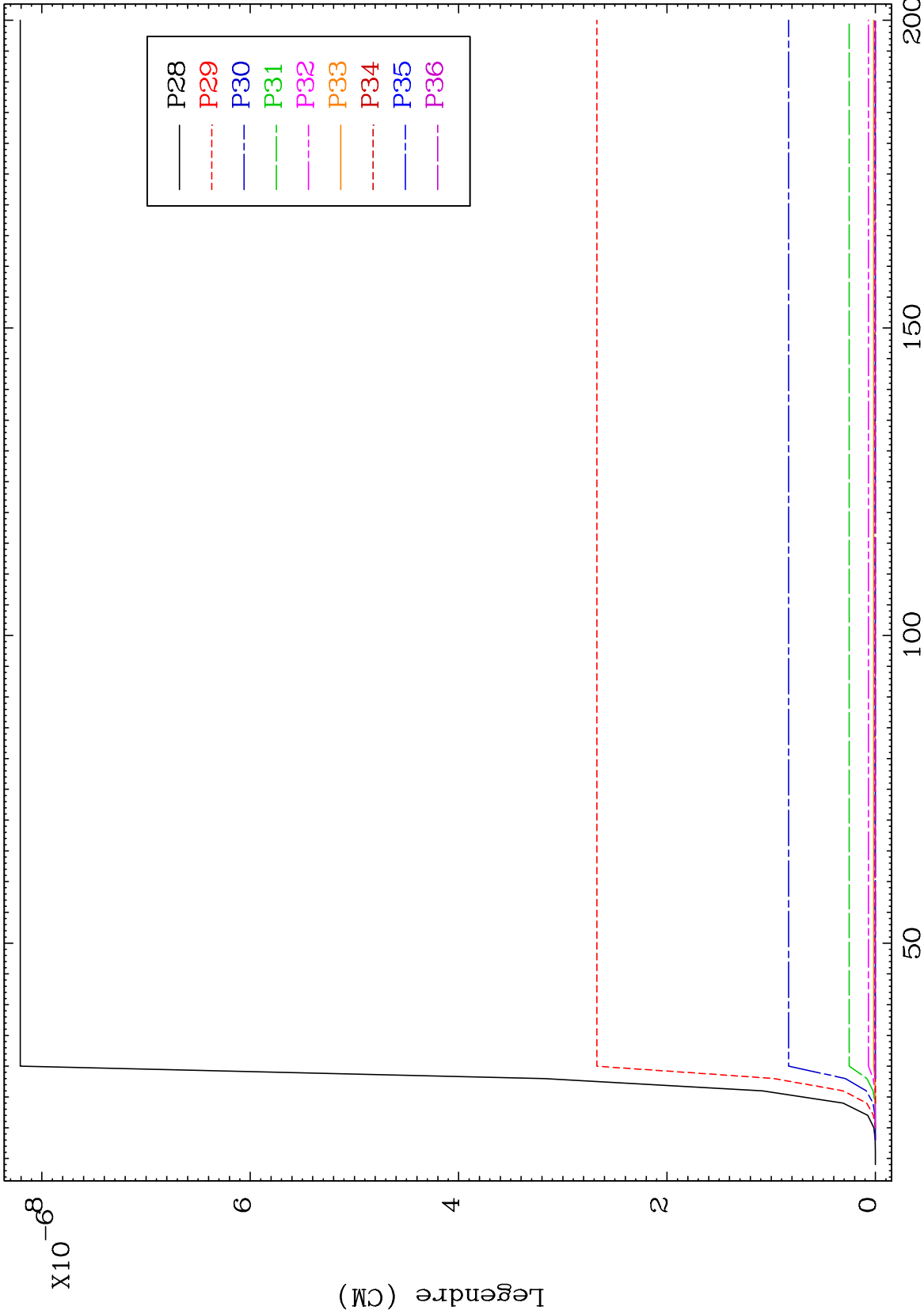
72-Hf-178



MAT 7237

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

72-Hf-178



42

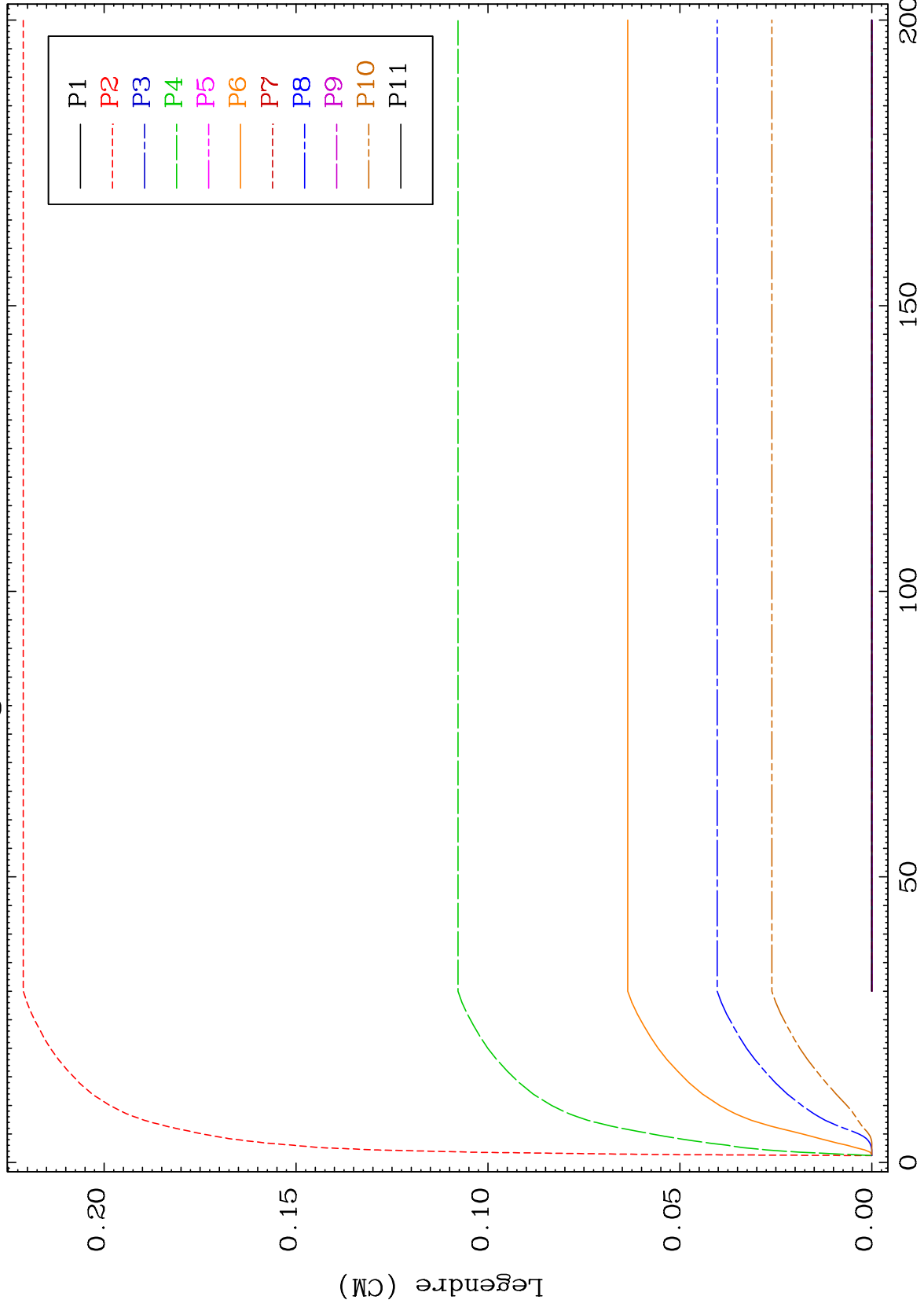
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

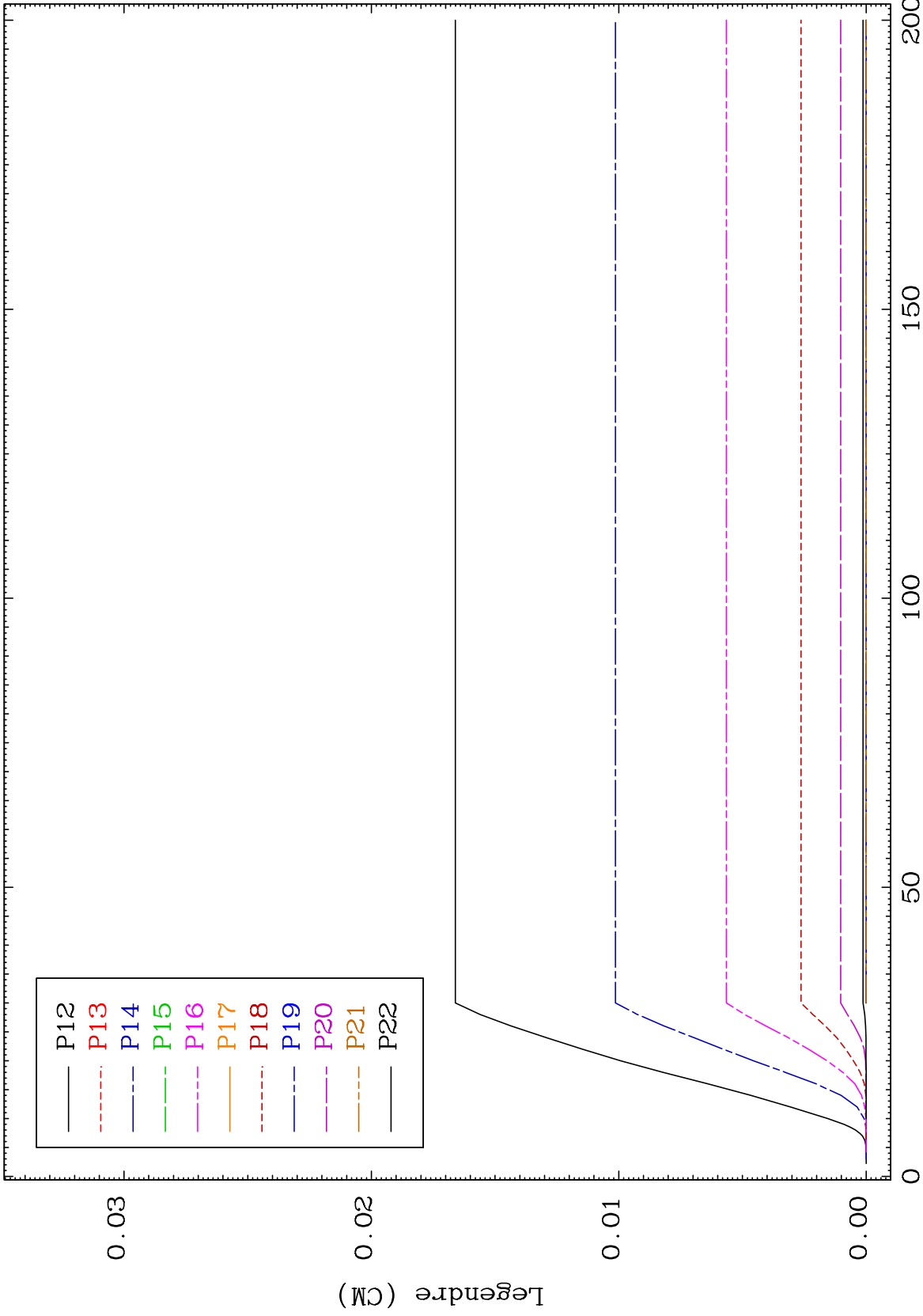
72-Hf-178



43

Incident Energy (MeV)

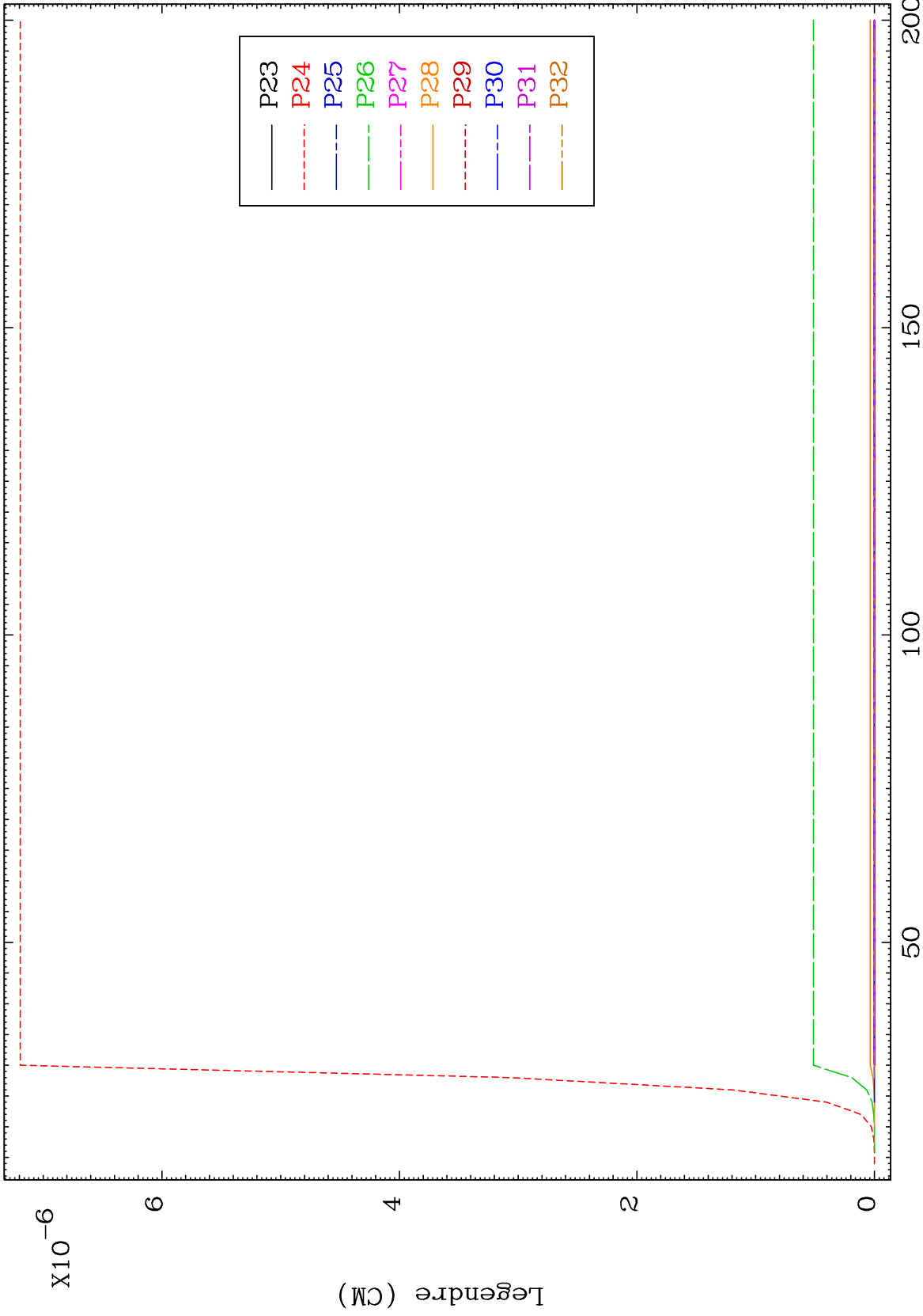
72-Hf-178



MAT 7237

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

72-Hf-178



45

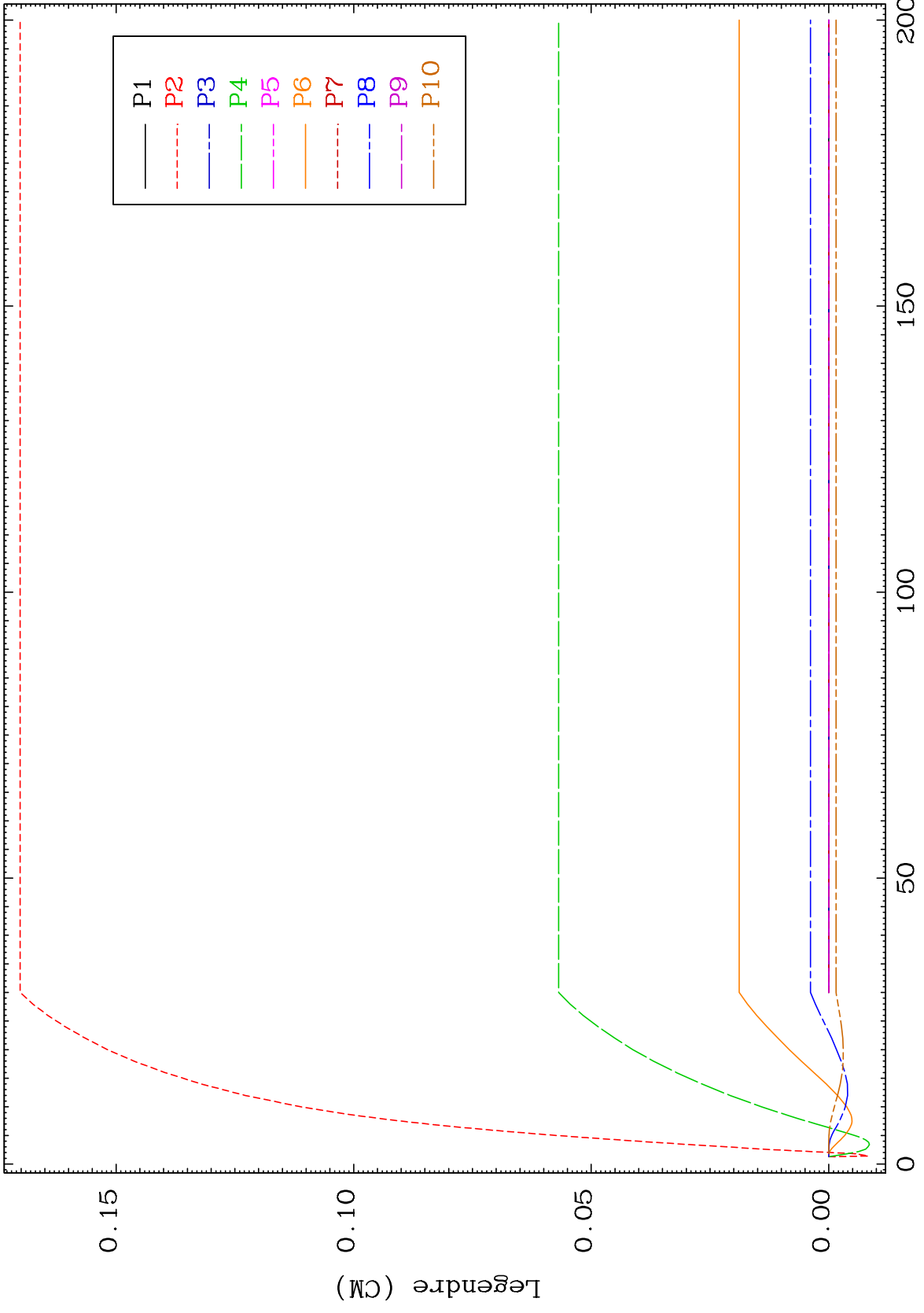
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



46

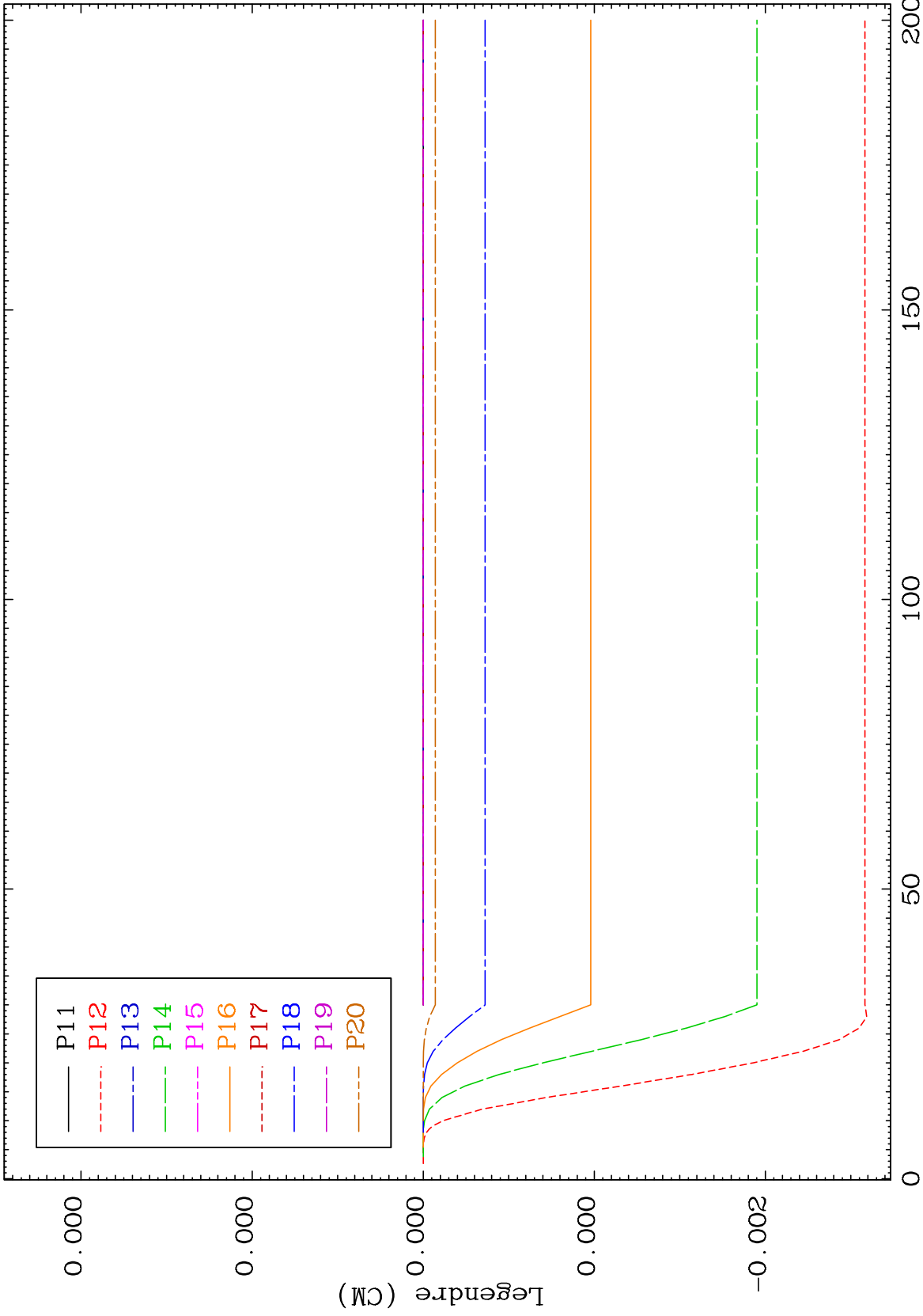
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



47

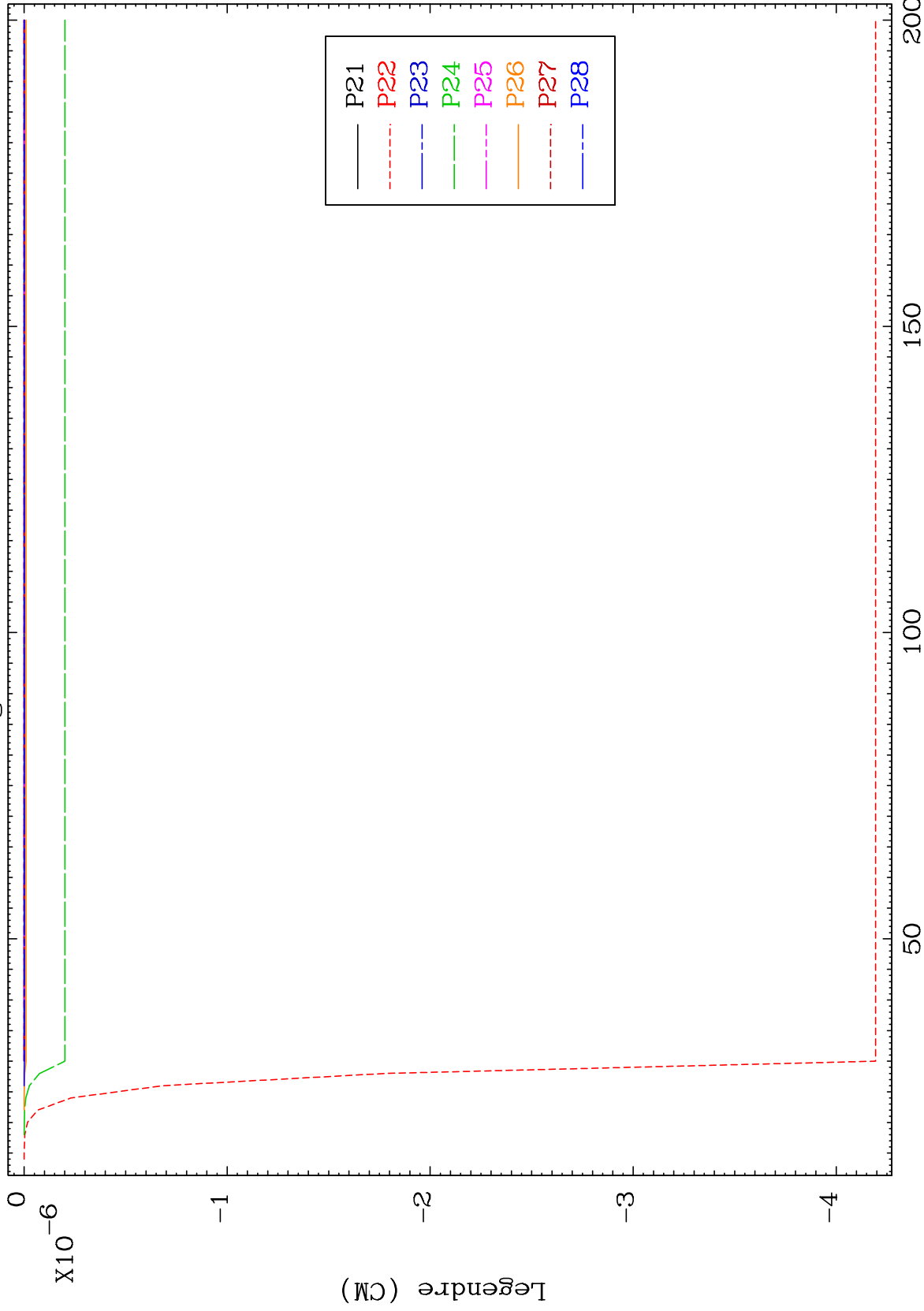
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



48

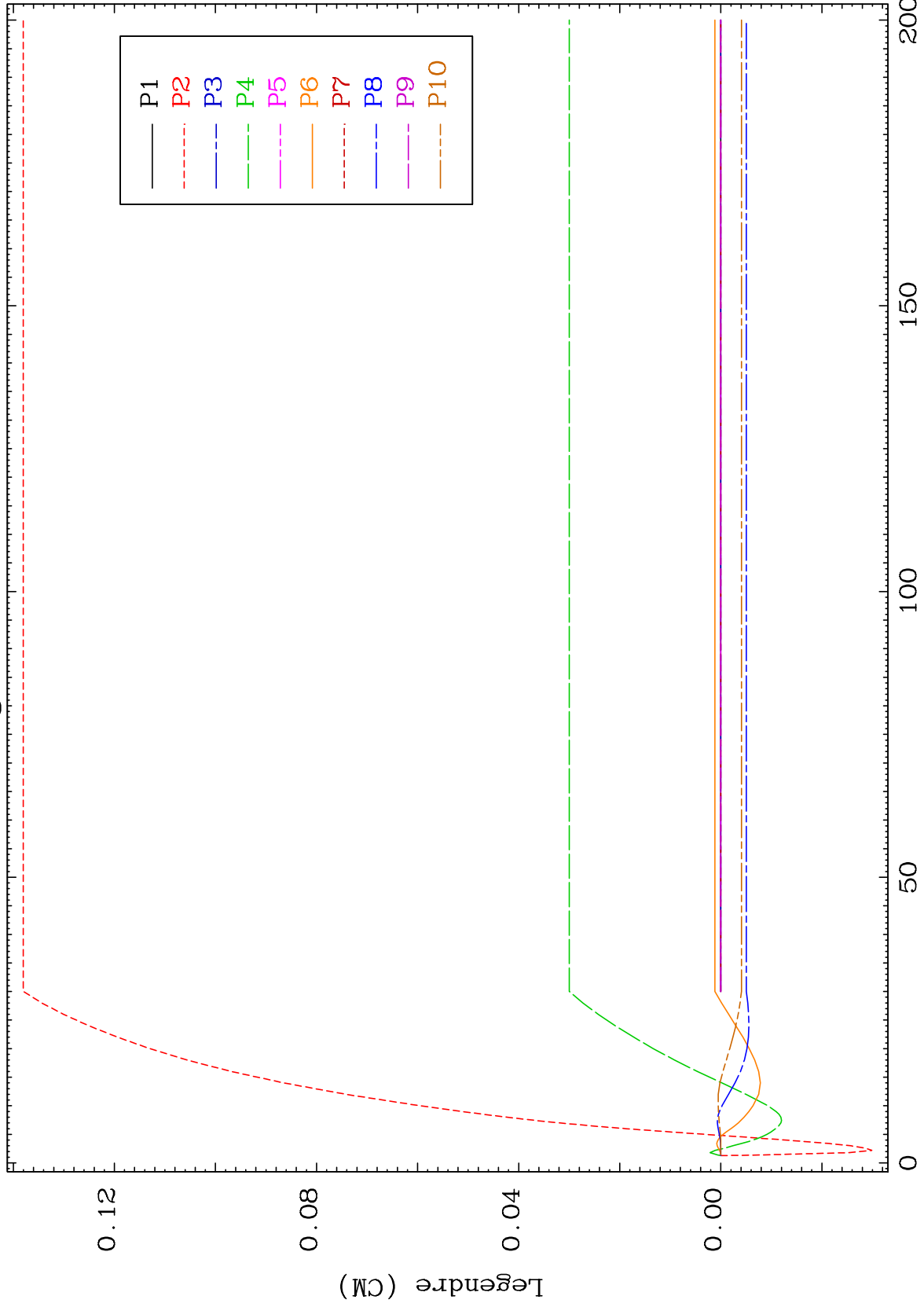
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



49

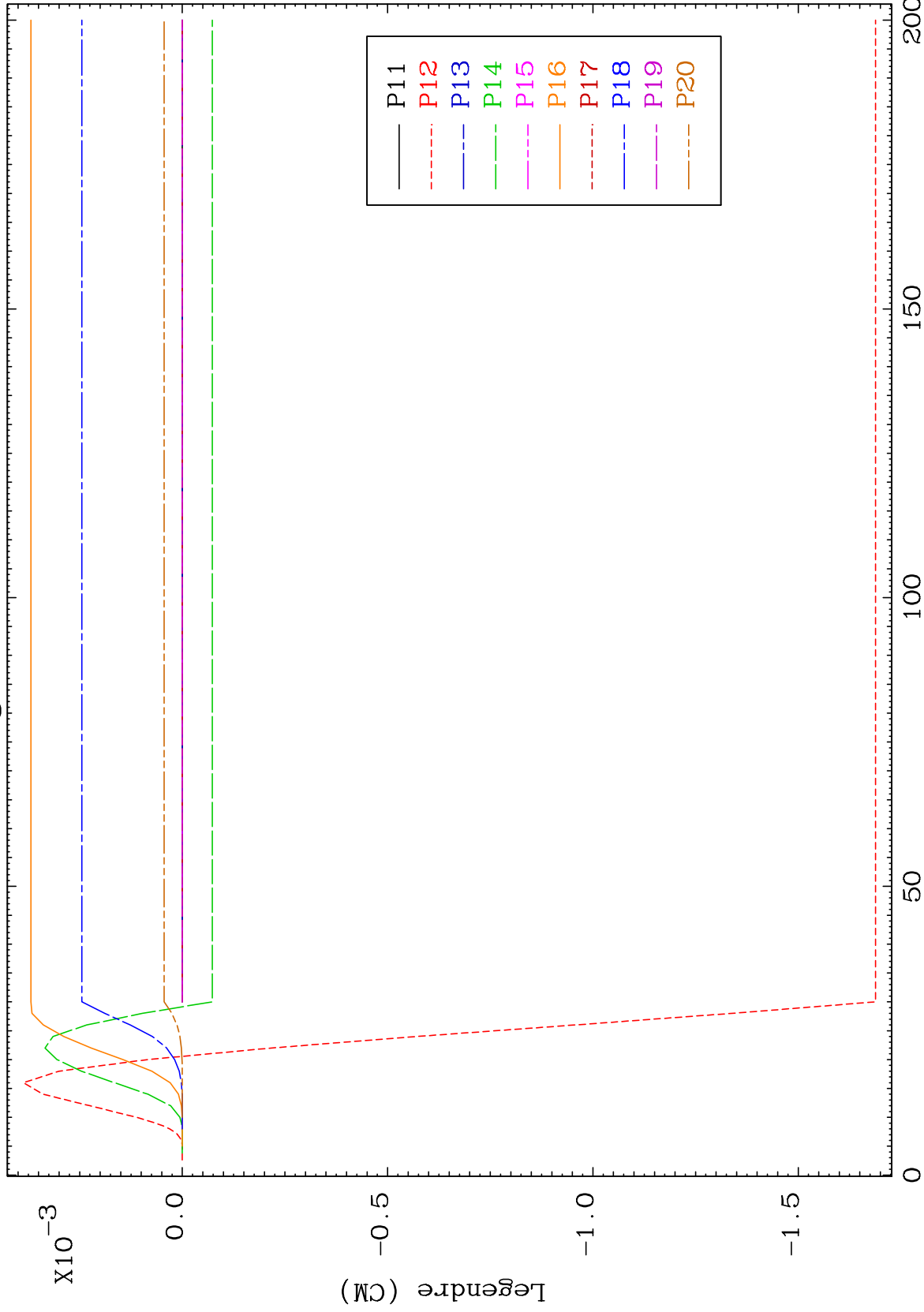
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



50

Incident Energy (MeV)

100

150

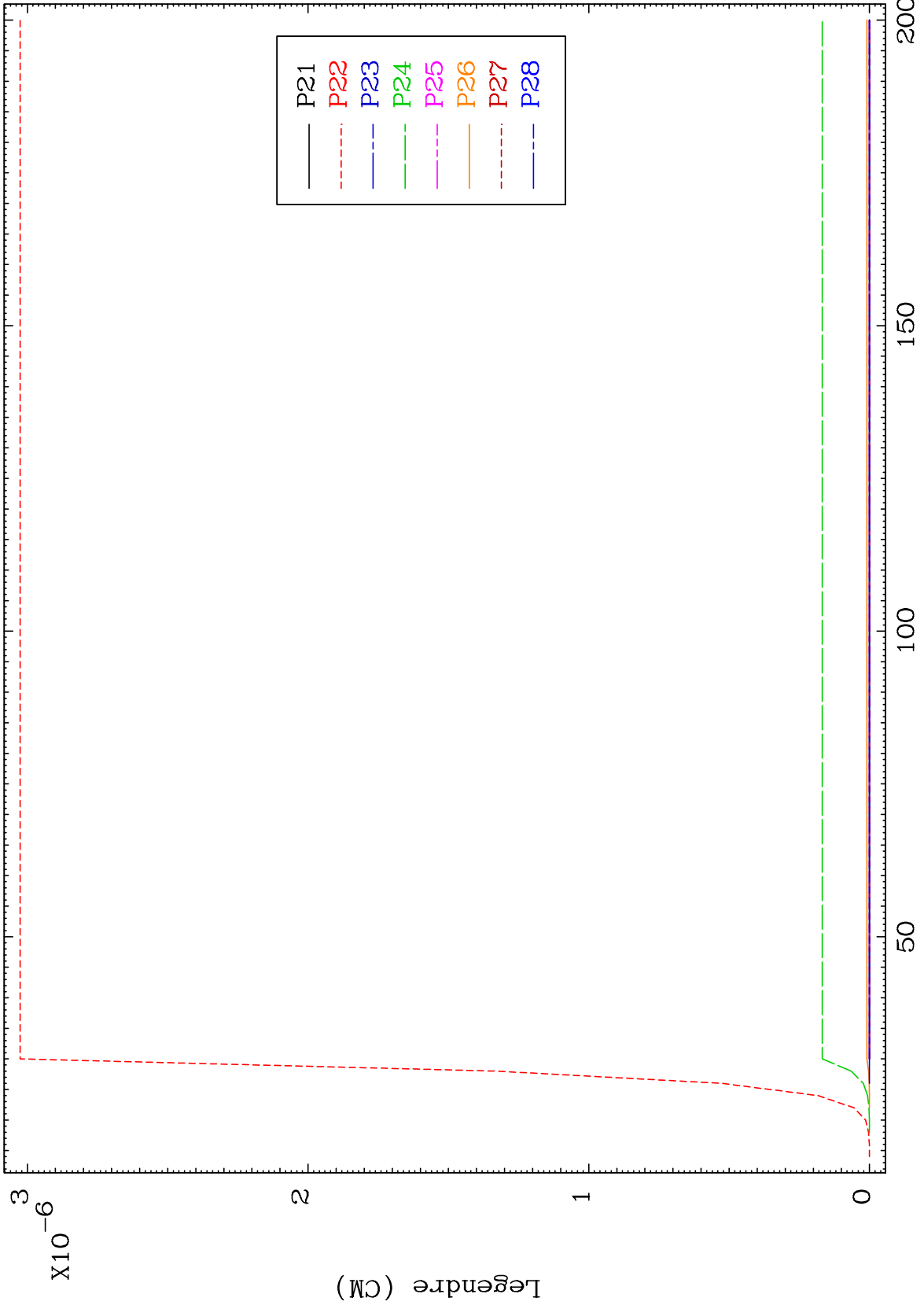
72-Hf-178

200

MAT 7237

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

72-Hf-178



51

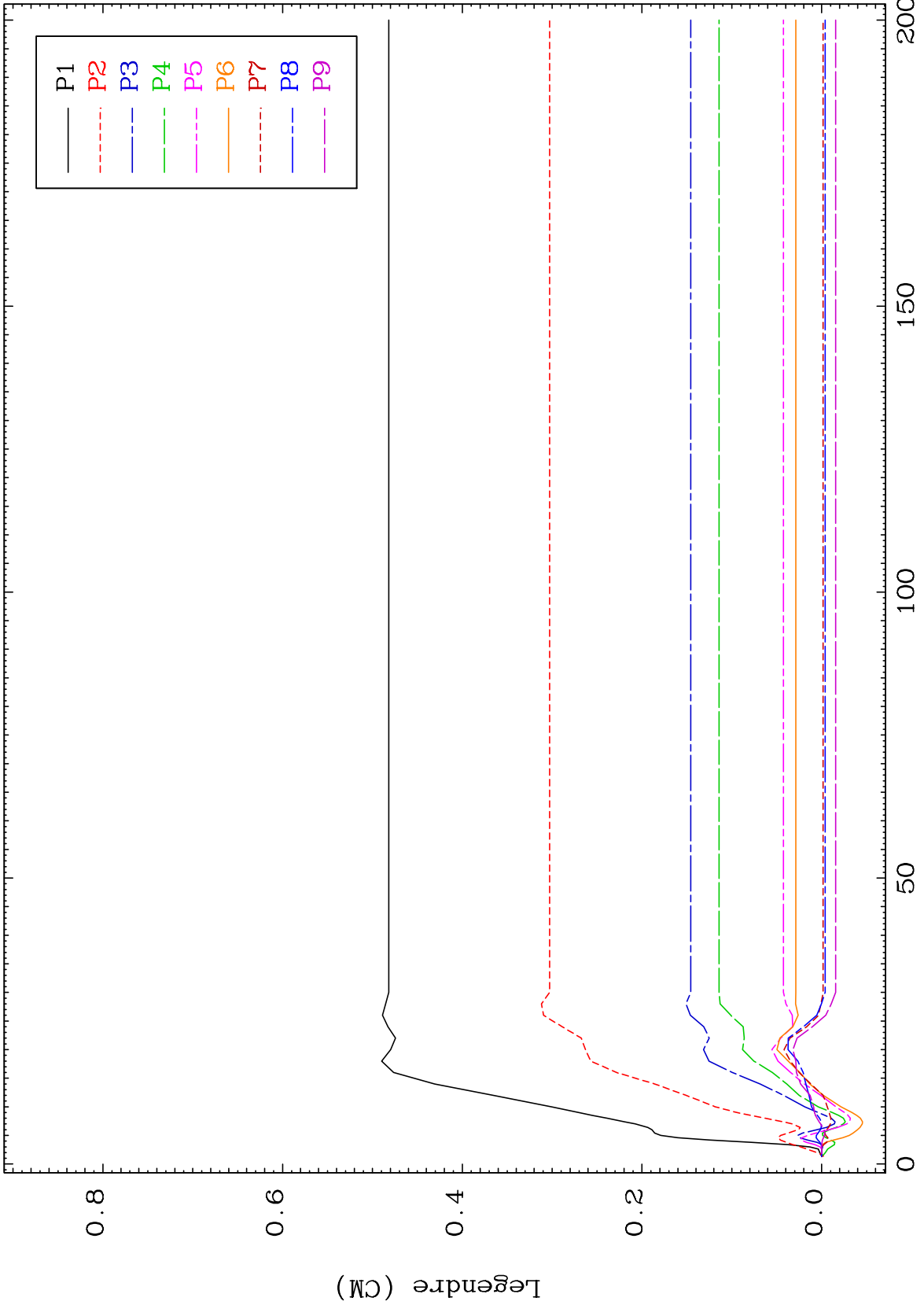
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



52

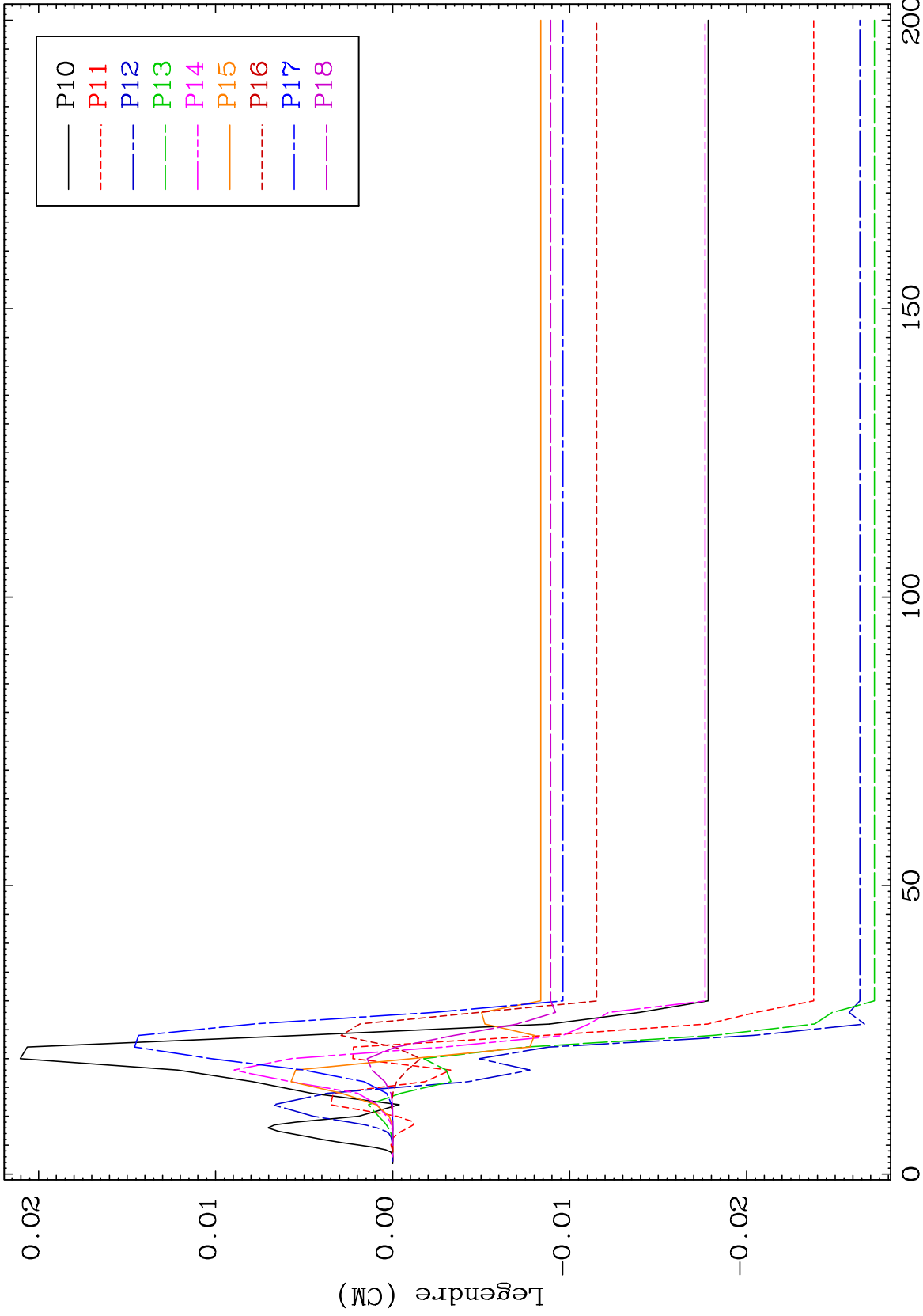
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



53

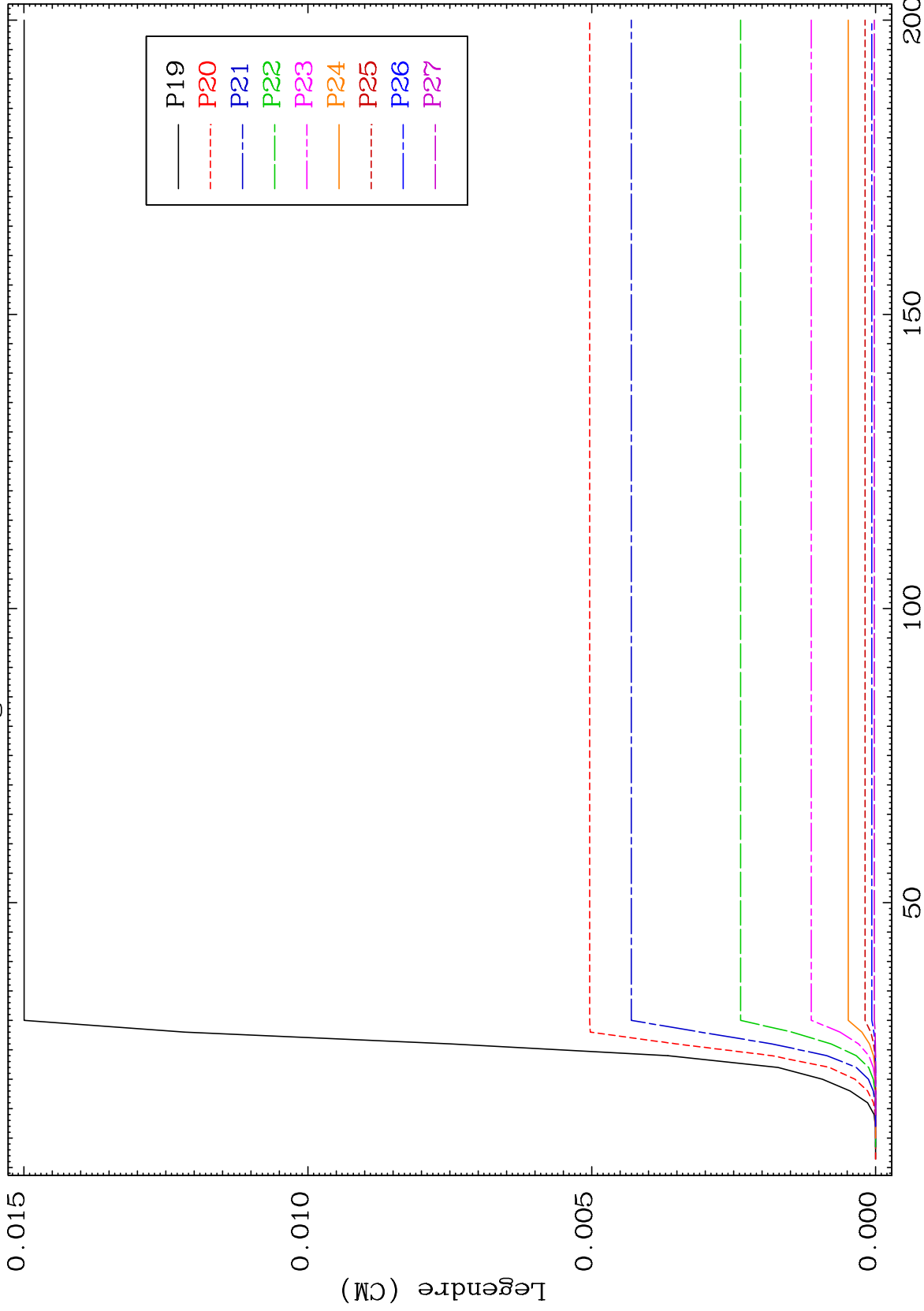
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



54

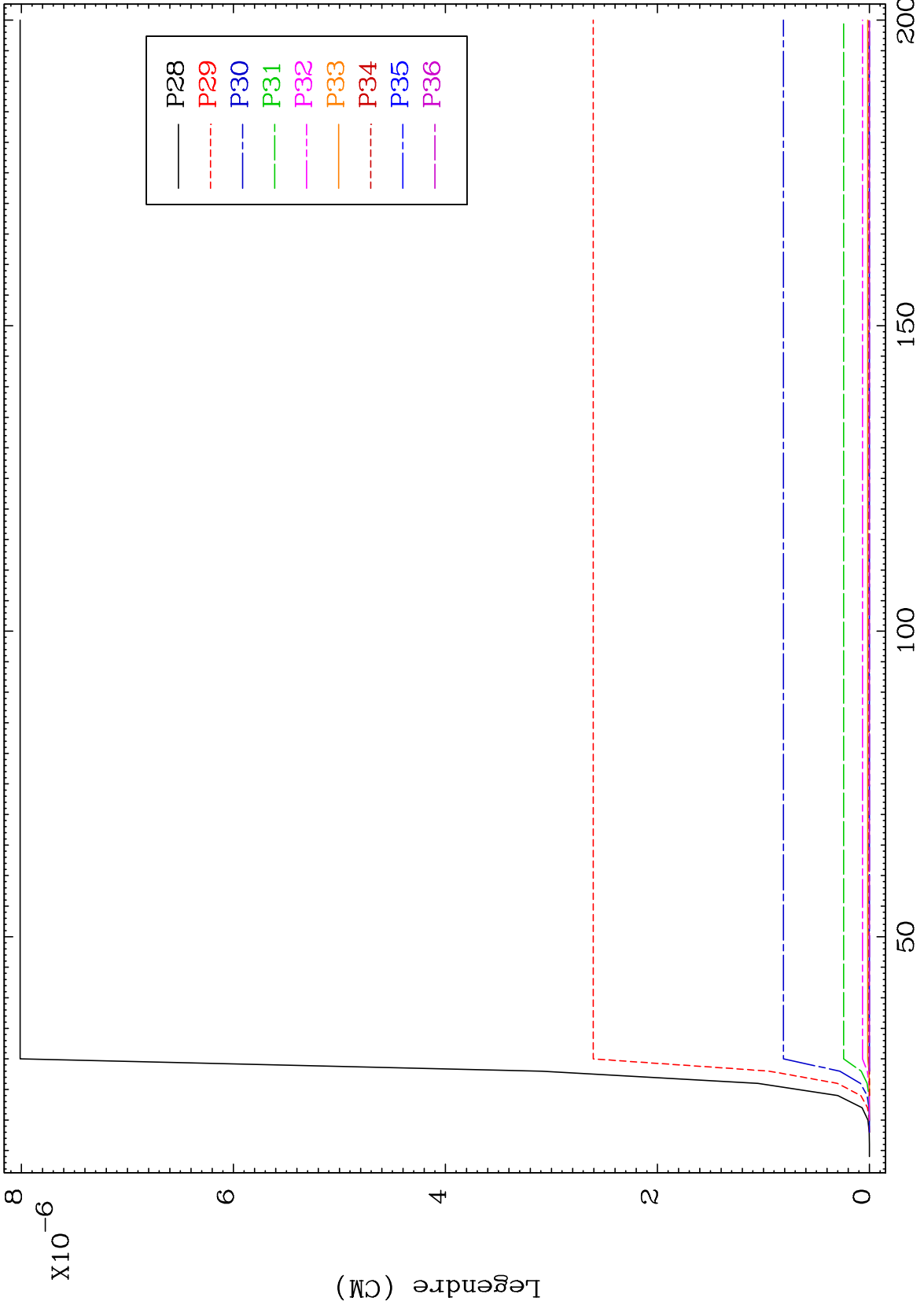
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



55

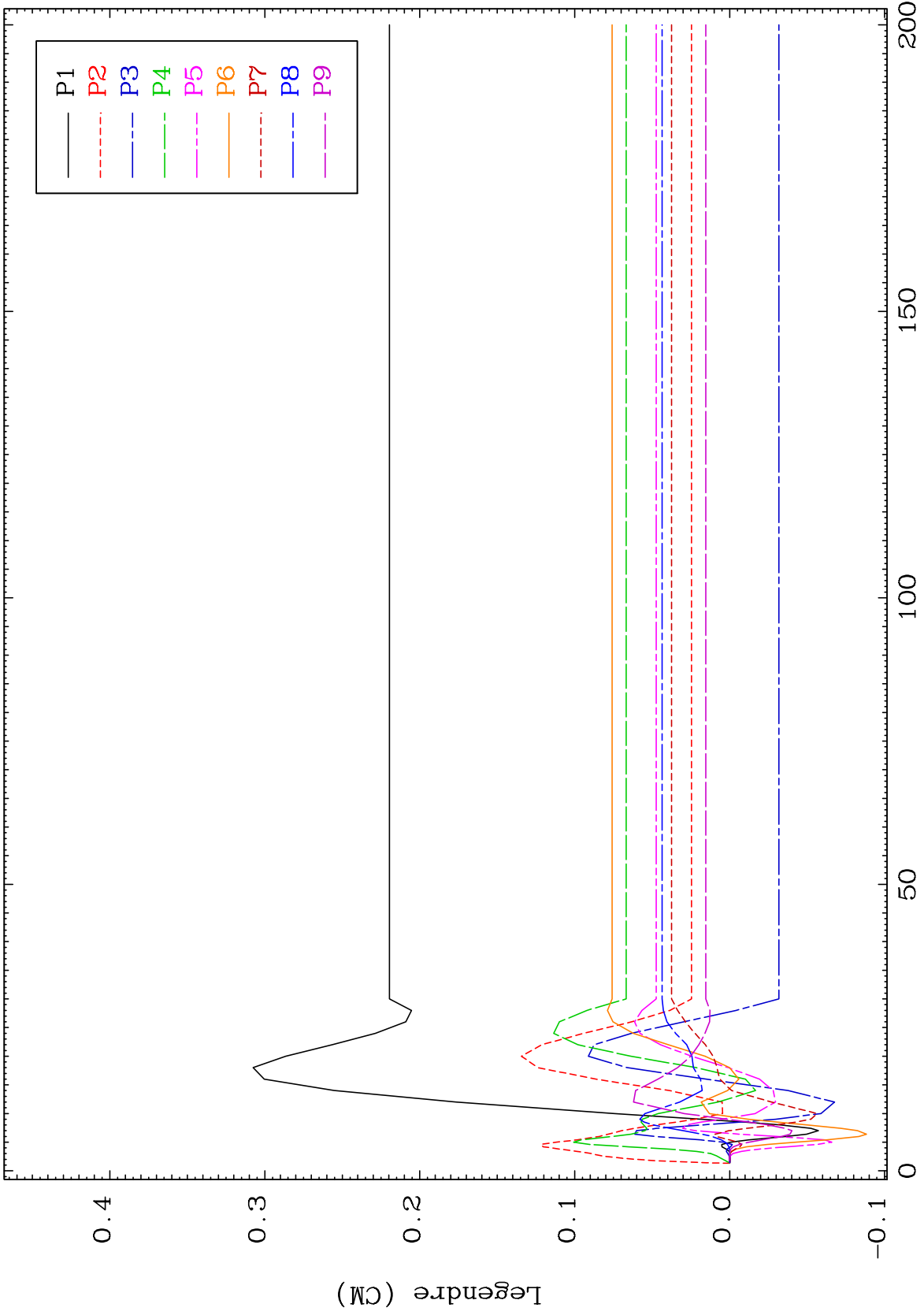
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



56

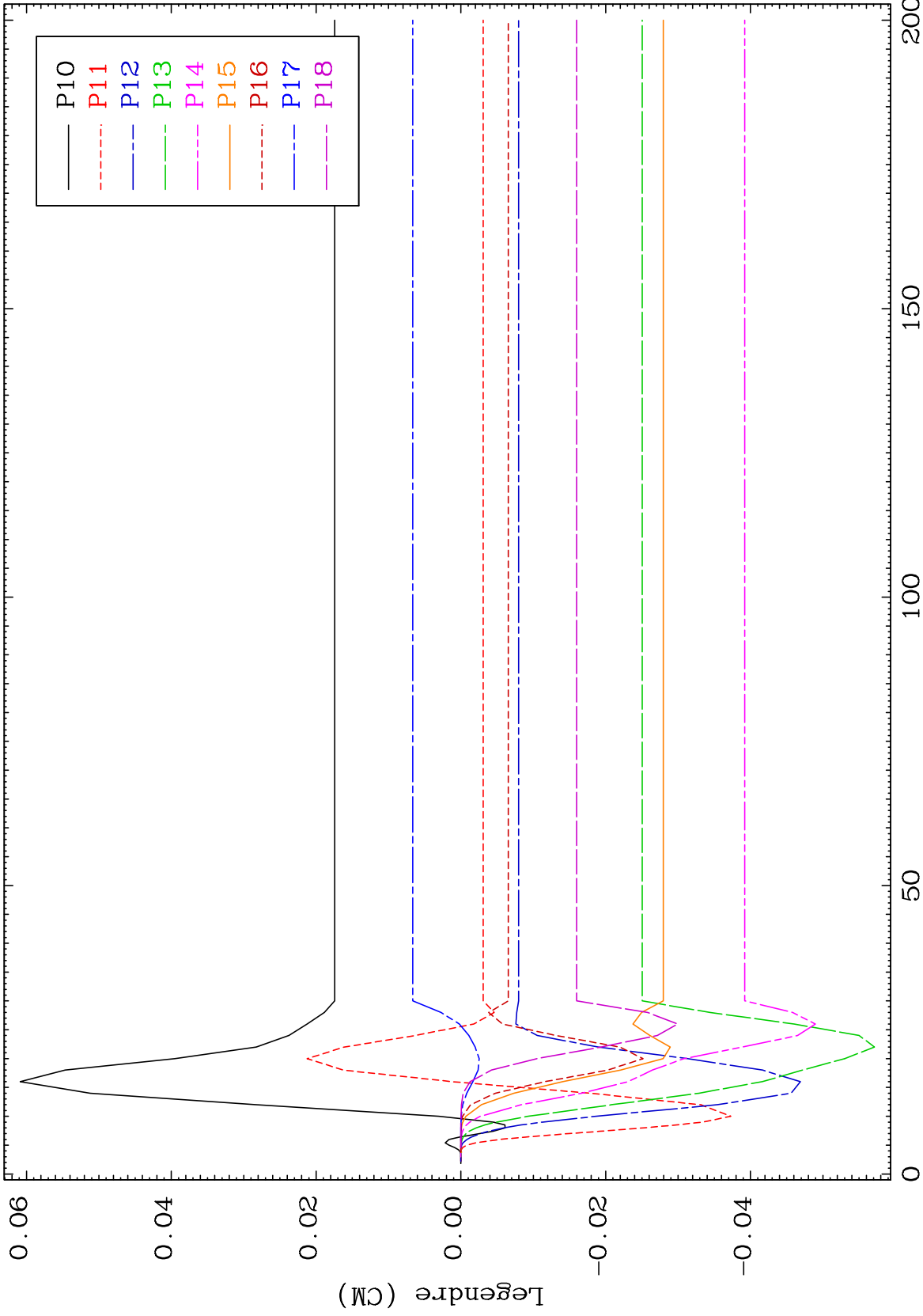
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



57

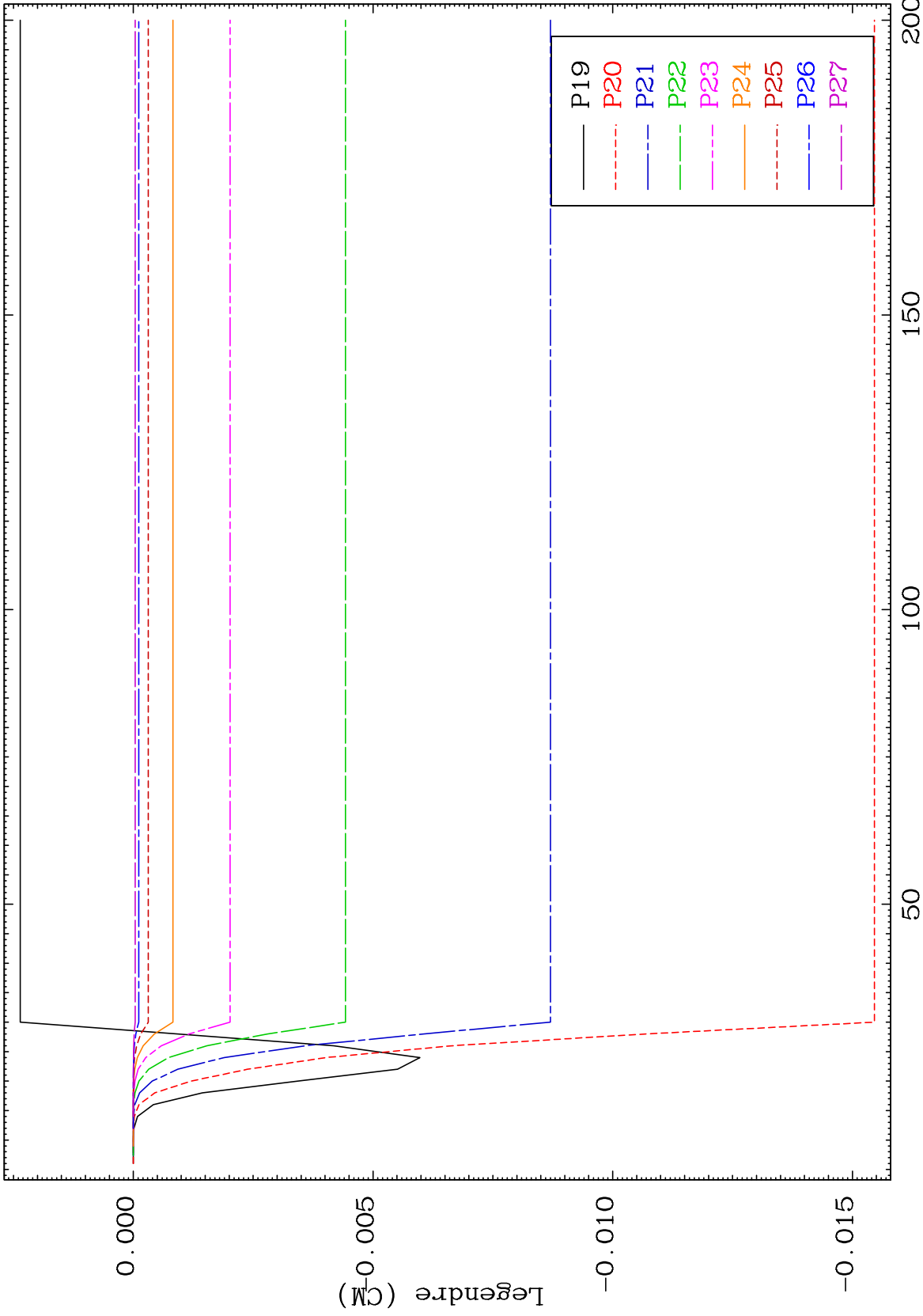
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



58

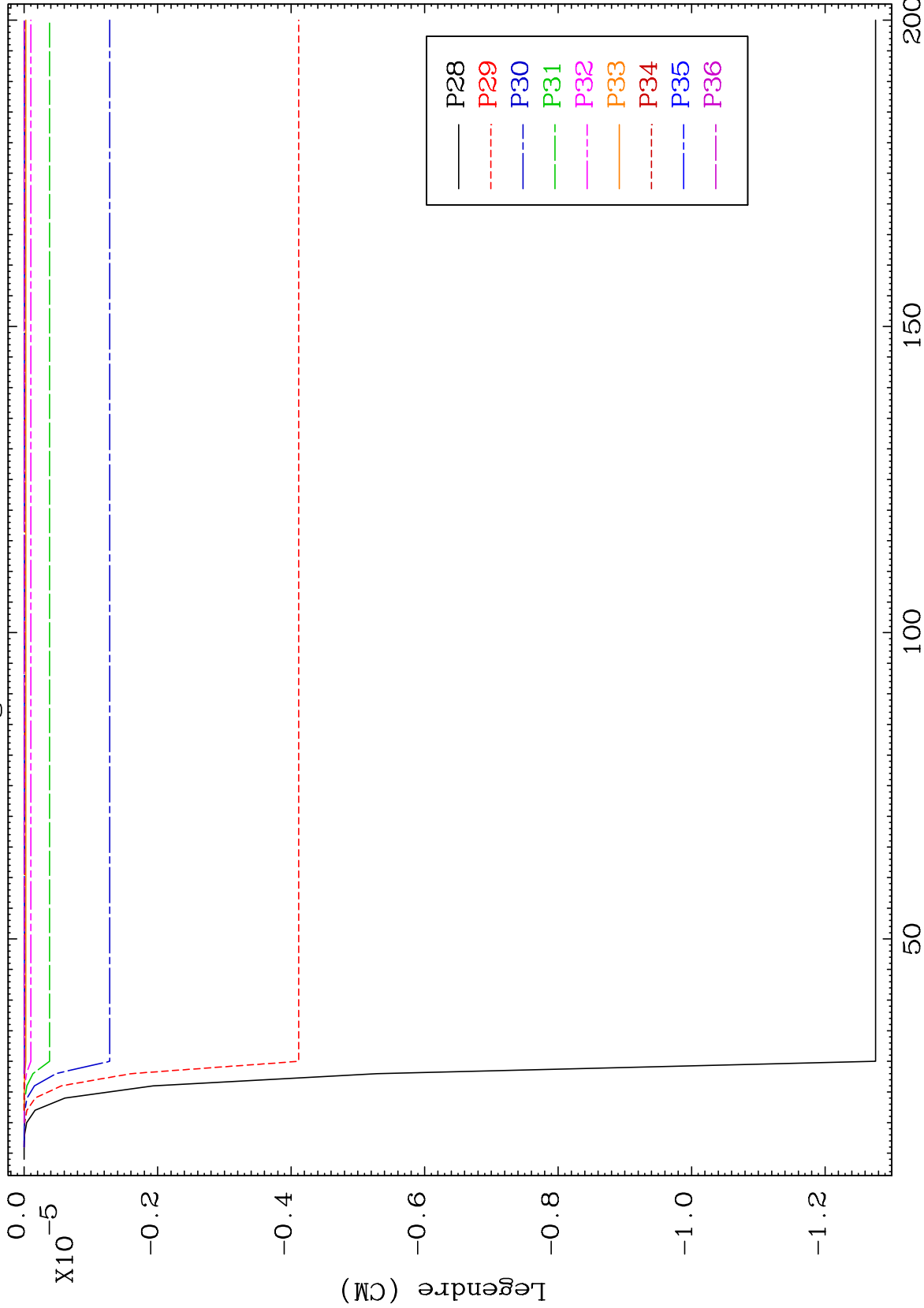
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



59

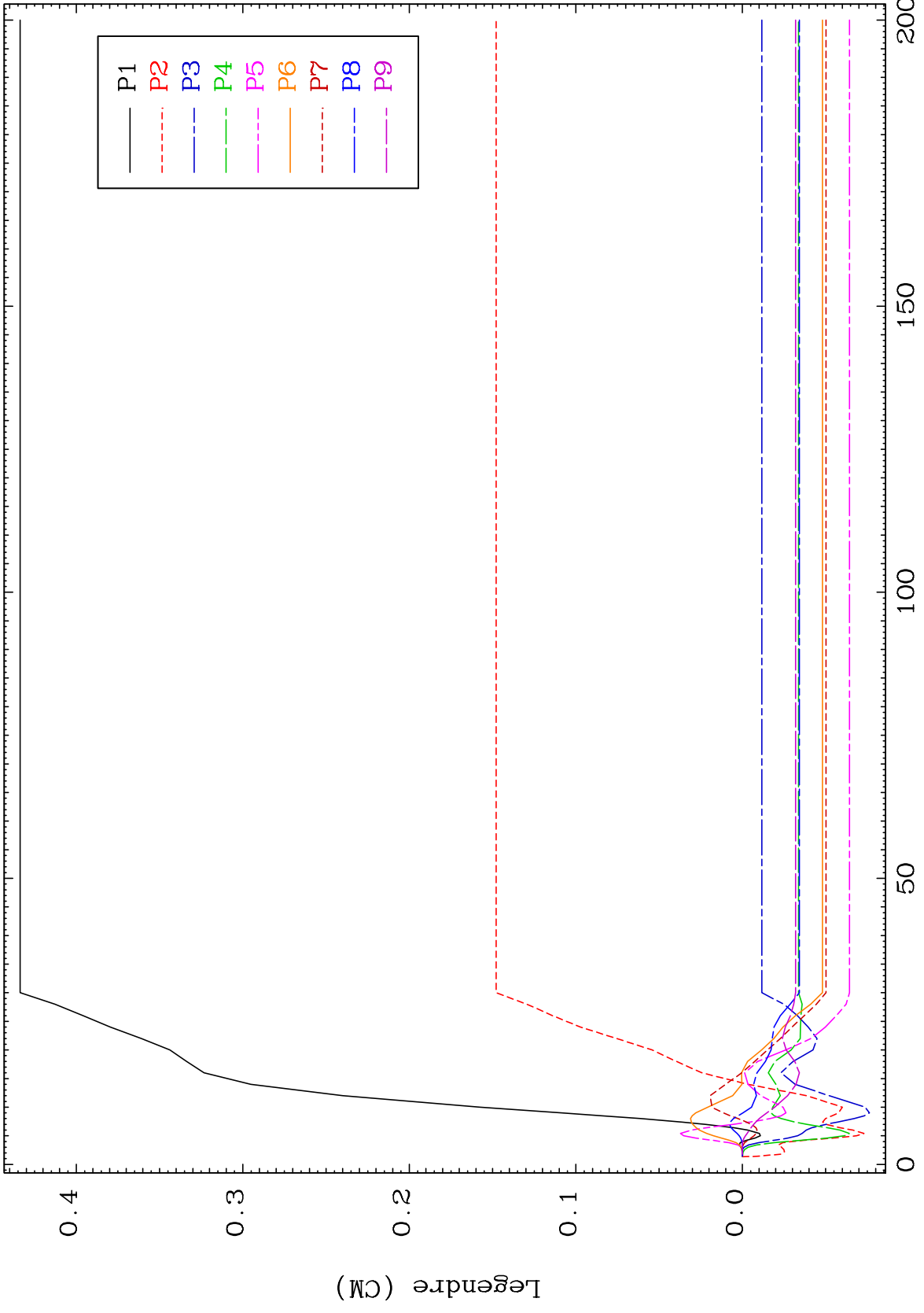
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



72-Hf-178

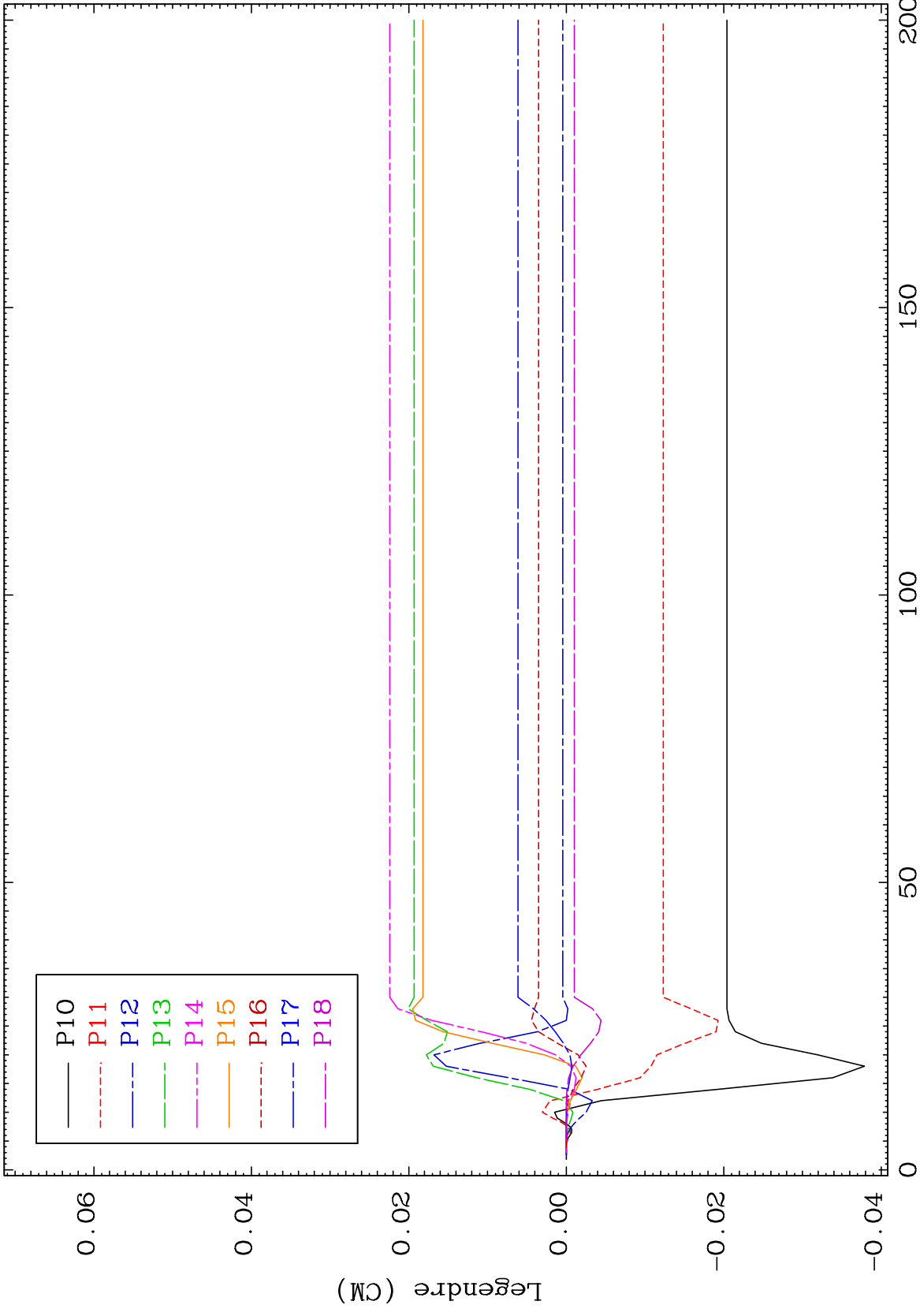
Incident Energy (MeV)

60

MAT 7237

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

72-Hf-178



61

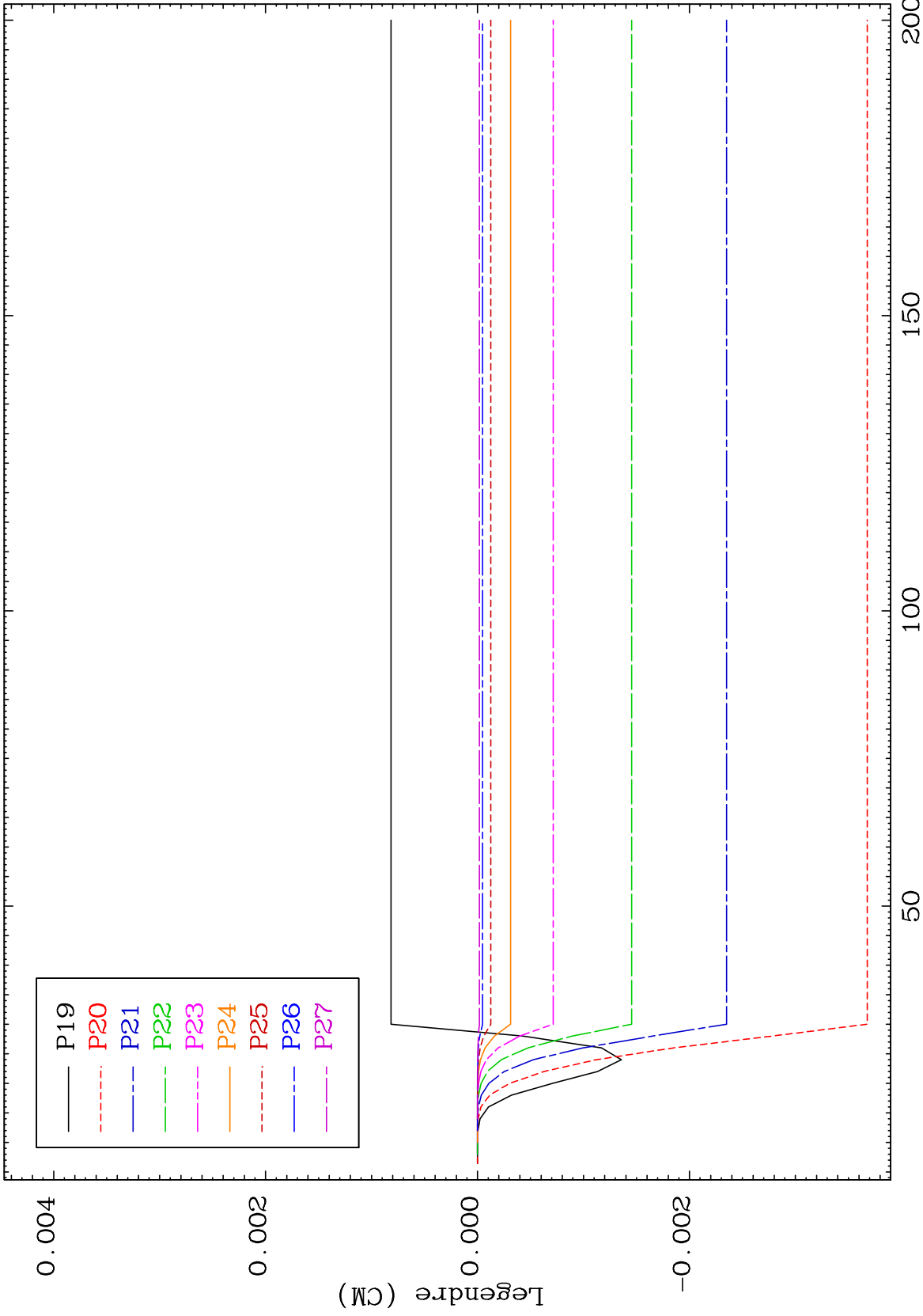
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



62

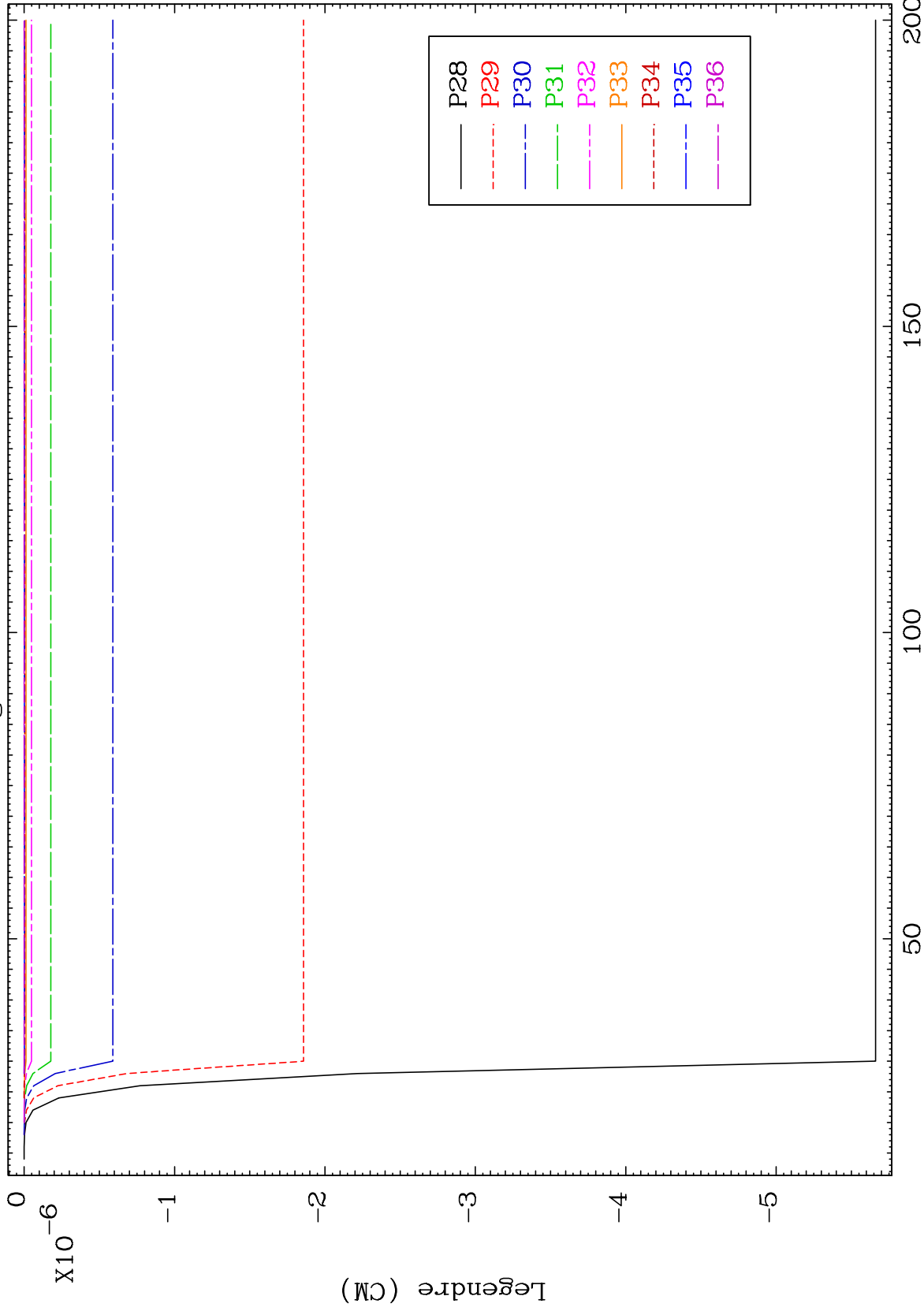
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



63

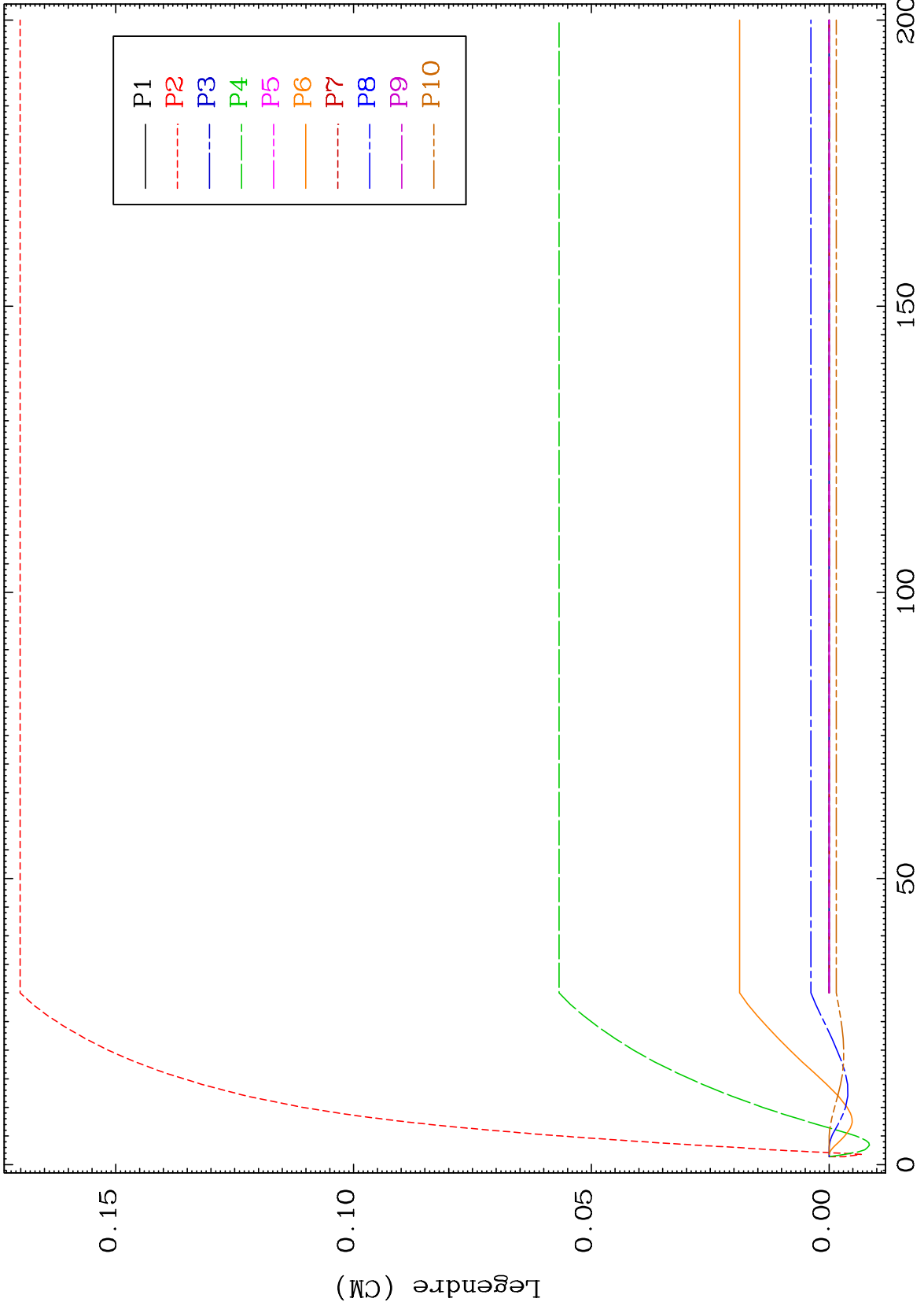
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



64

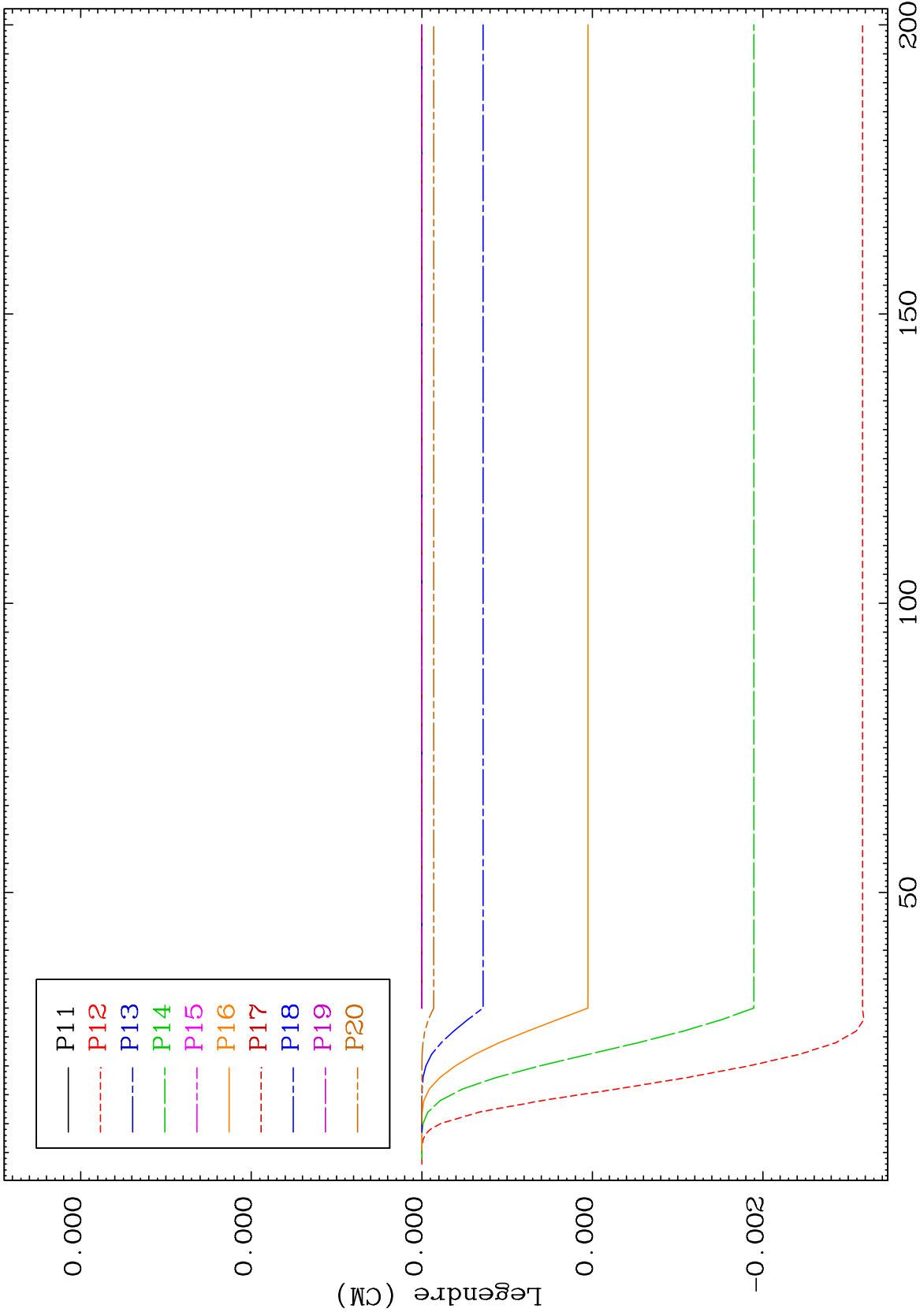
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



65

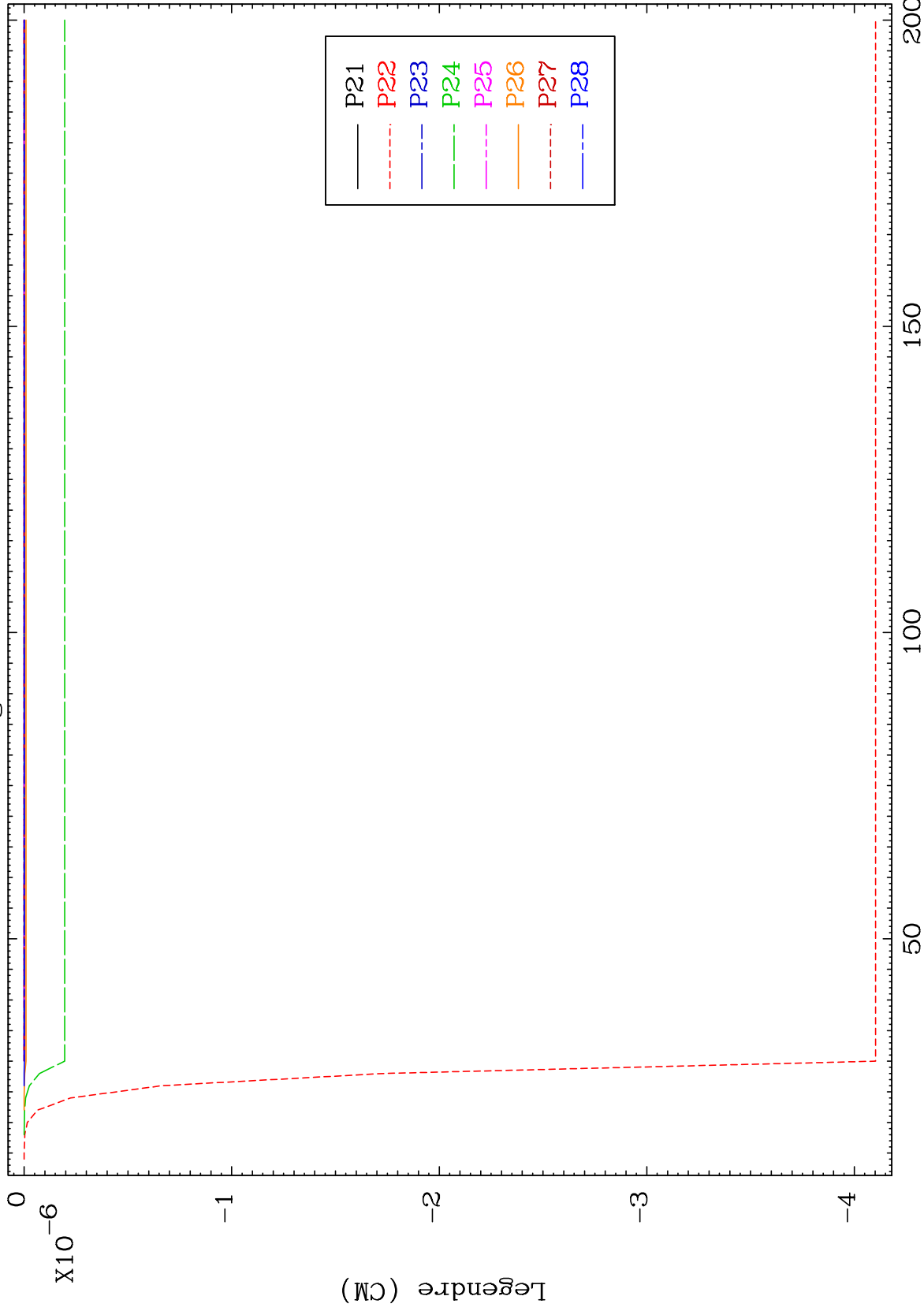
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



66

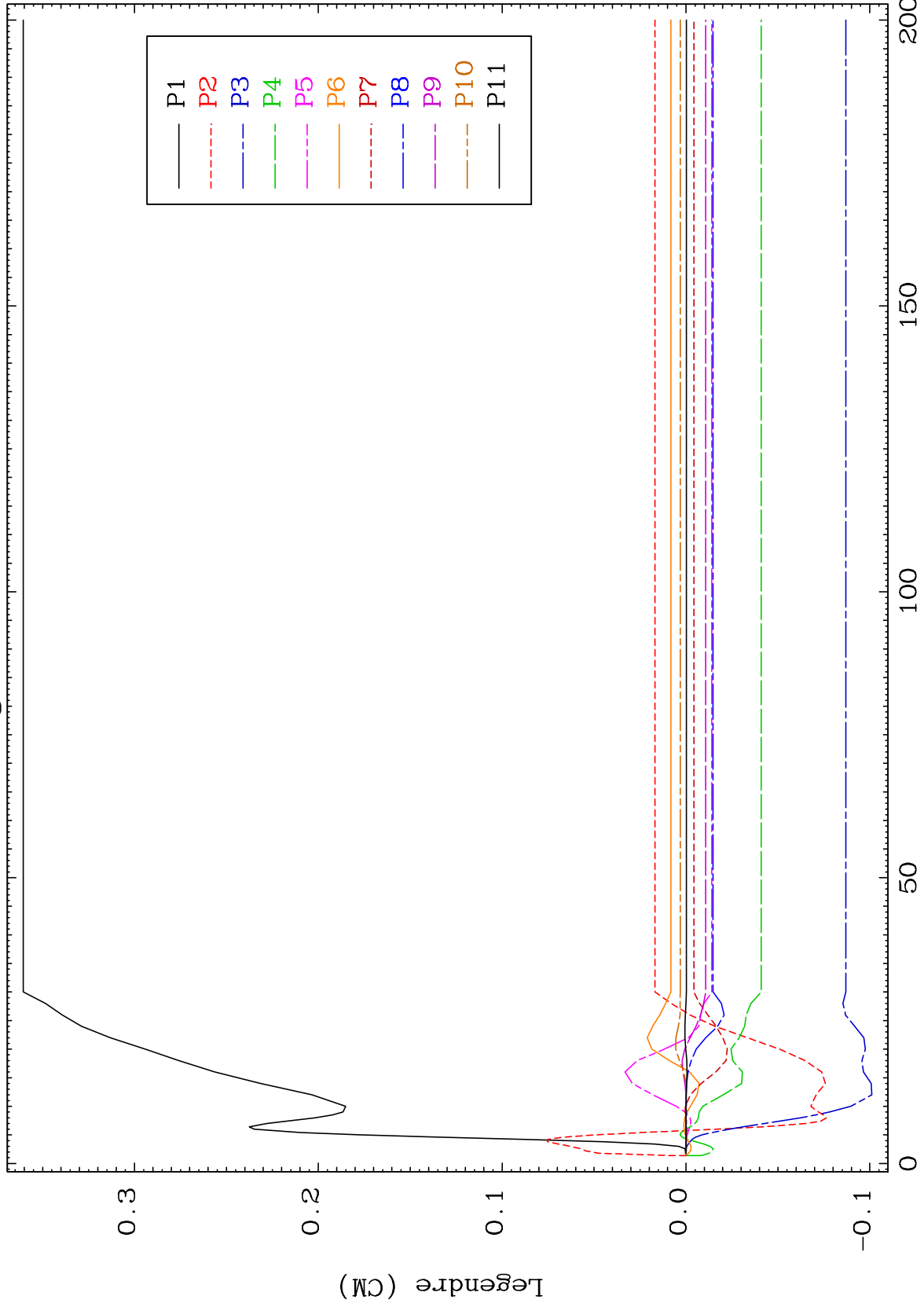
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



67

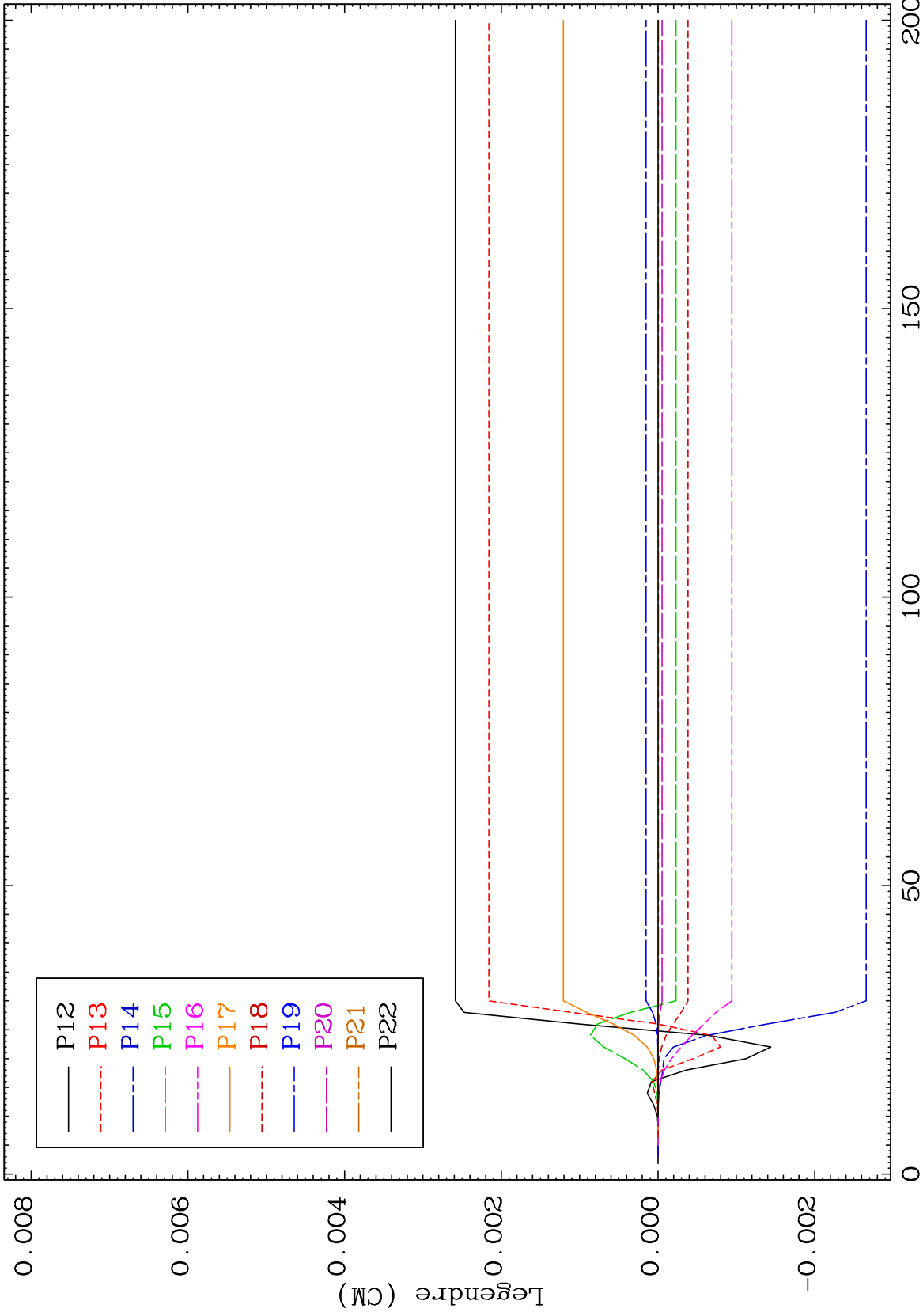
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



68

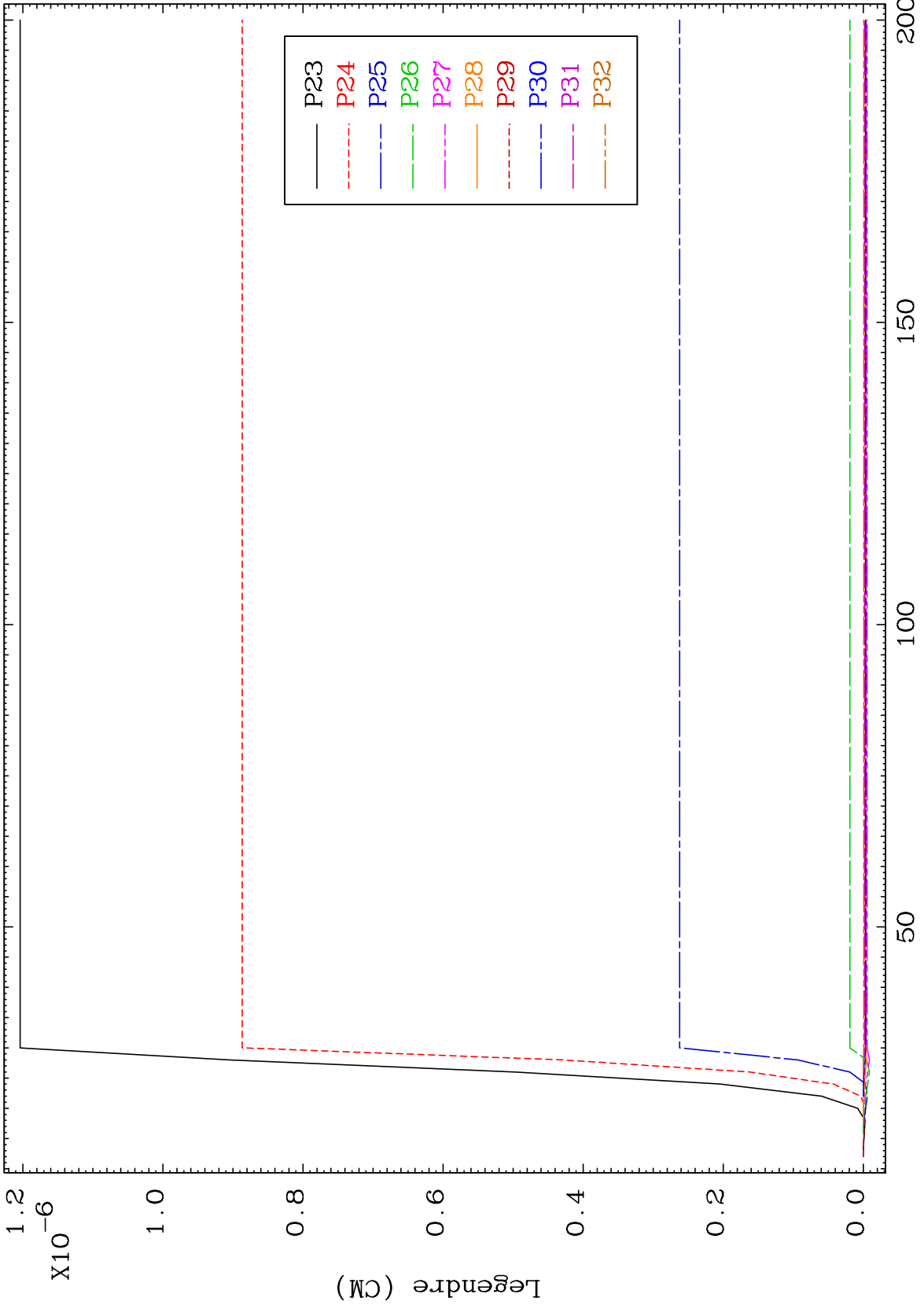
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



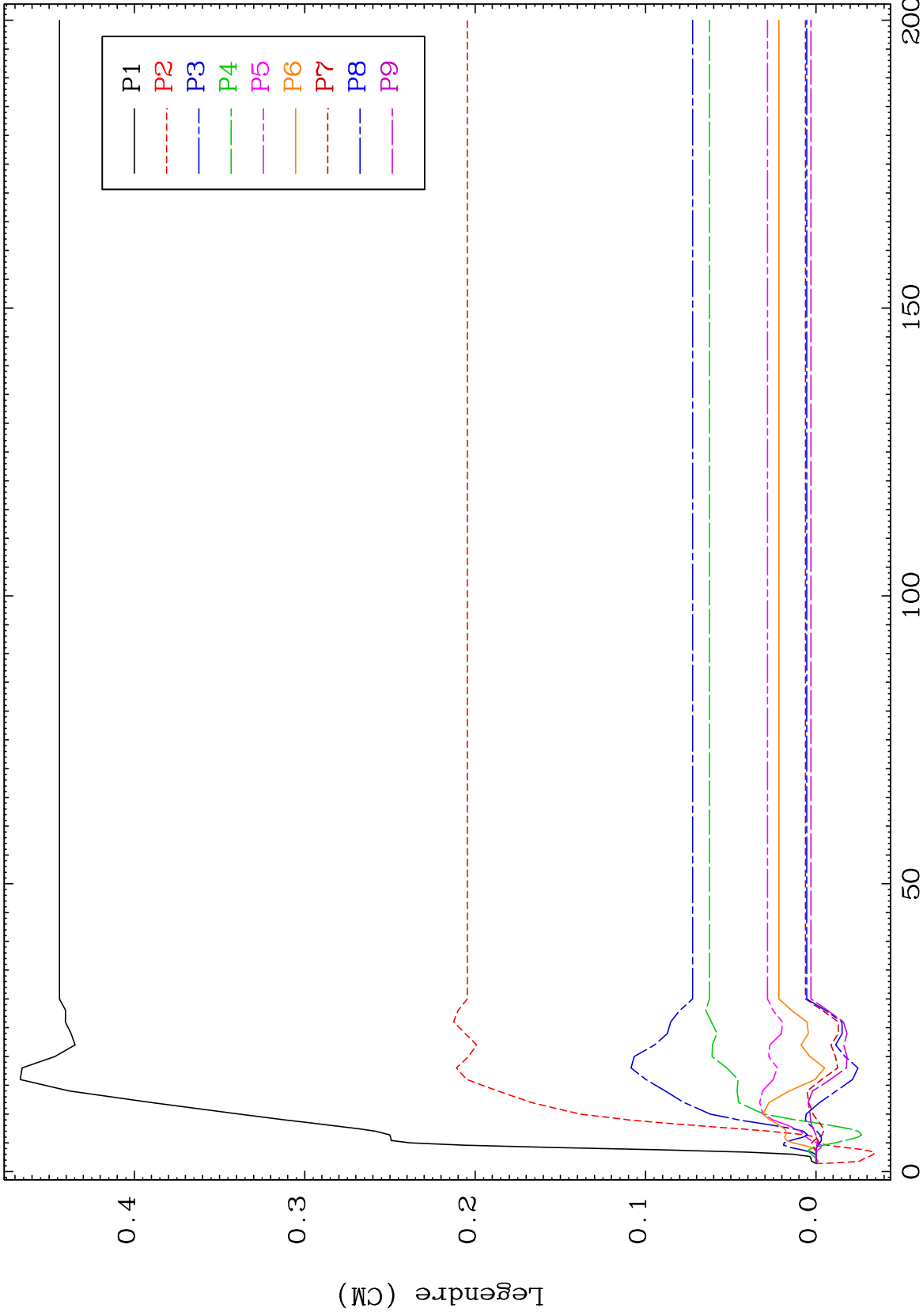
69

72-Hf-178

MAT 7237

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

72-Hf-178



70

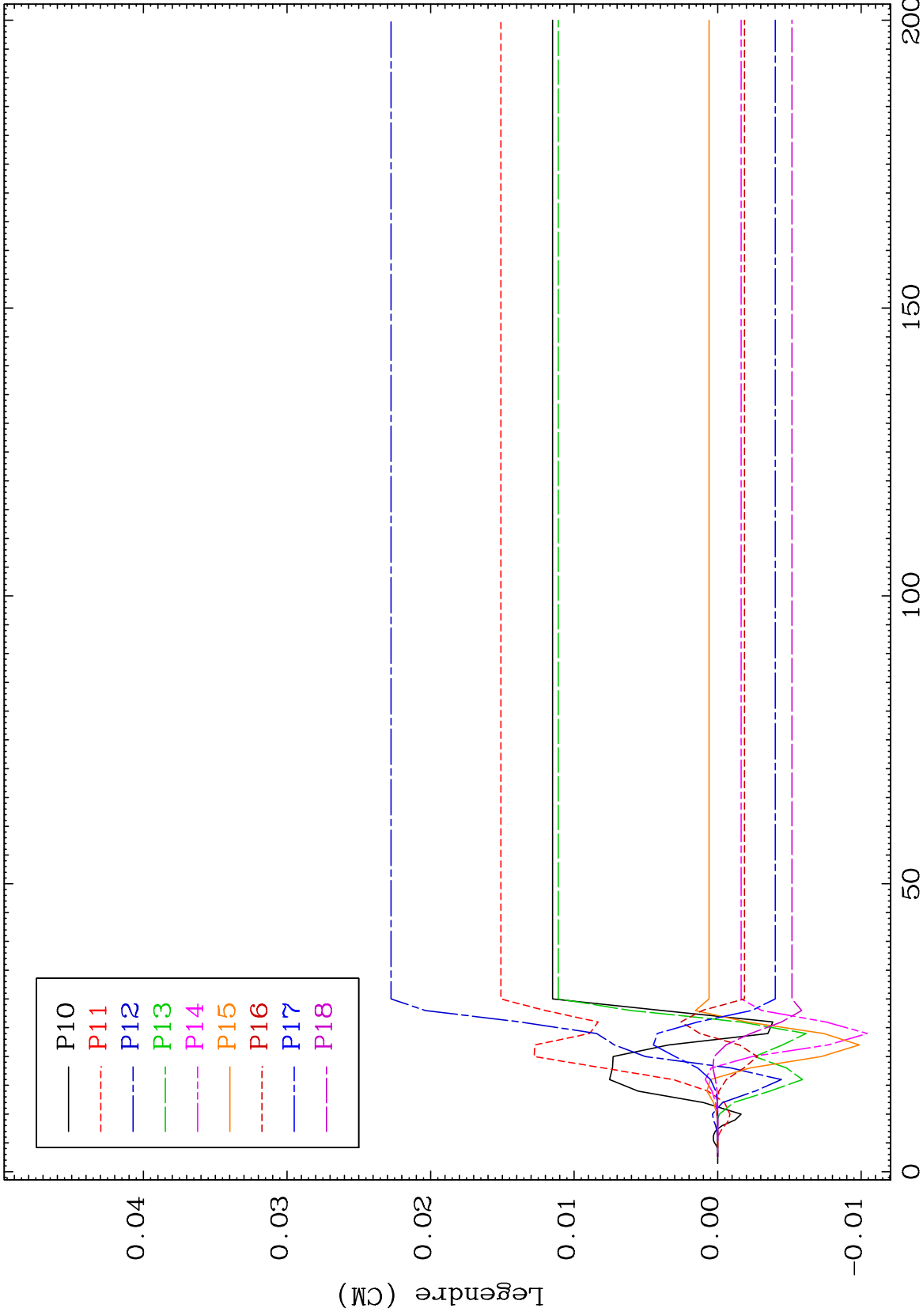
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



71

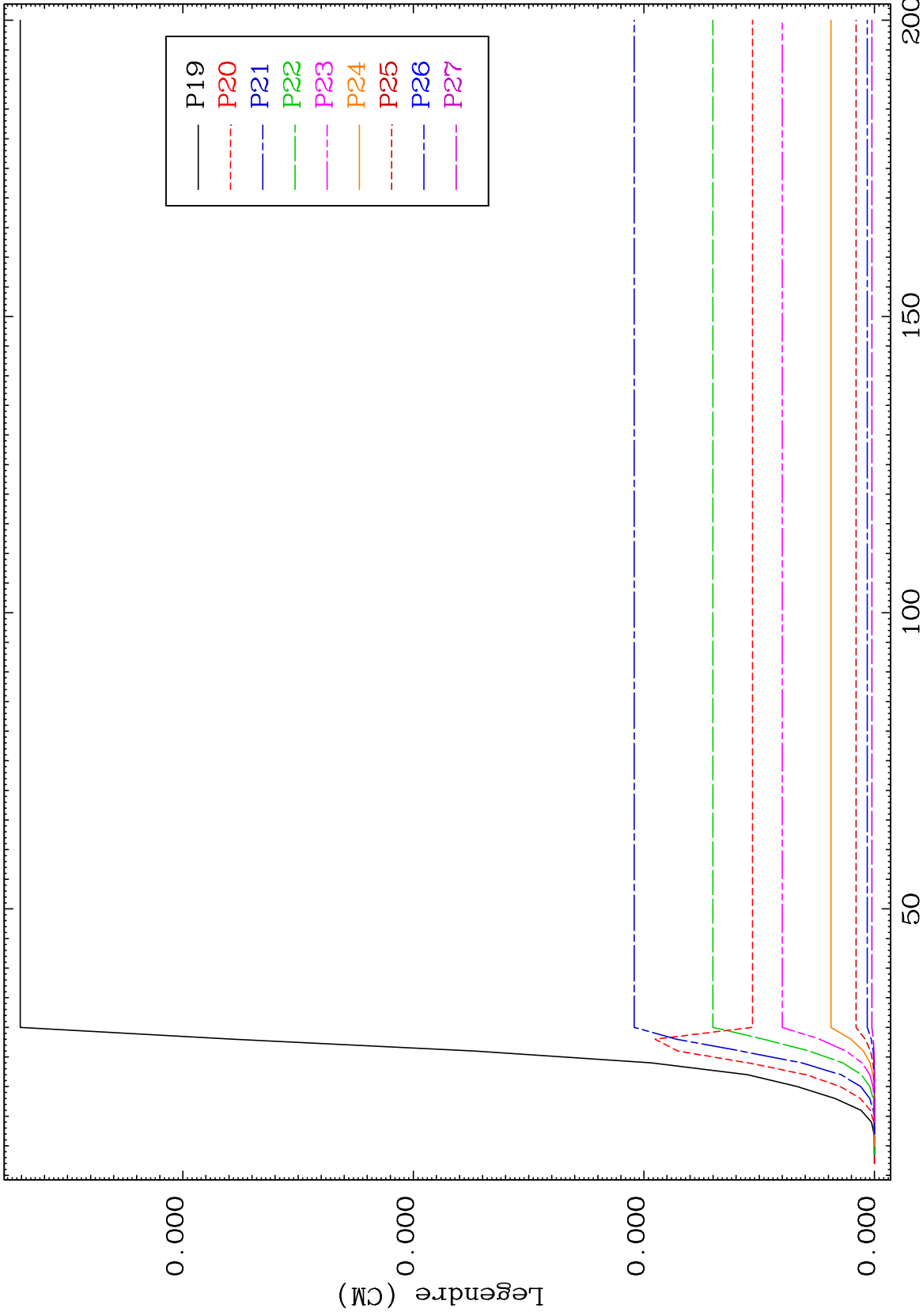
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



72

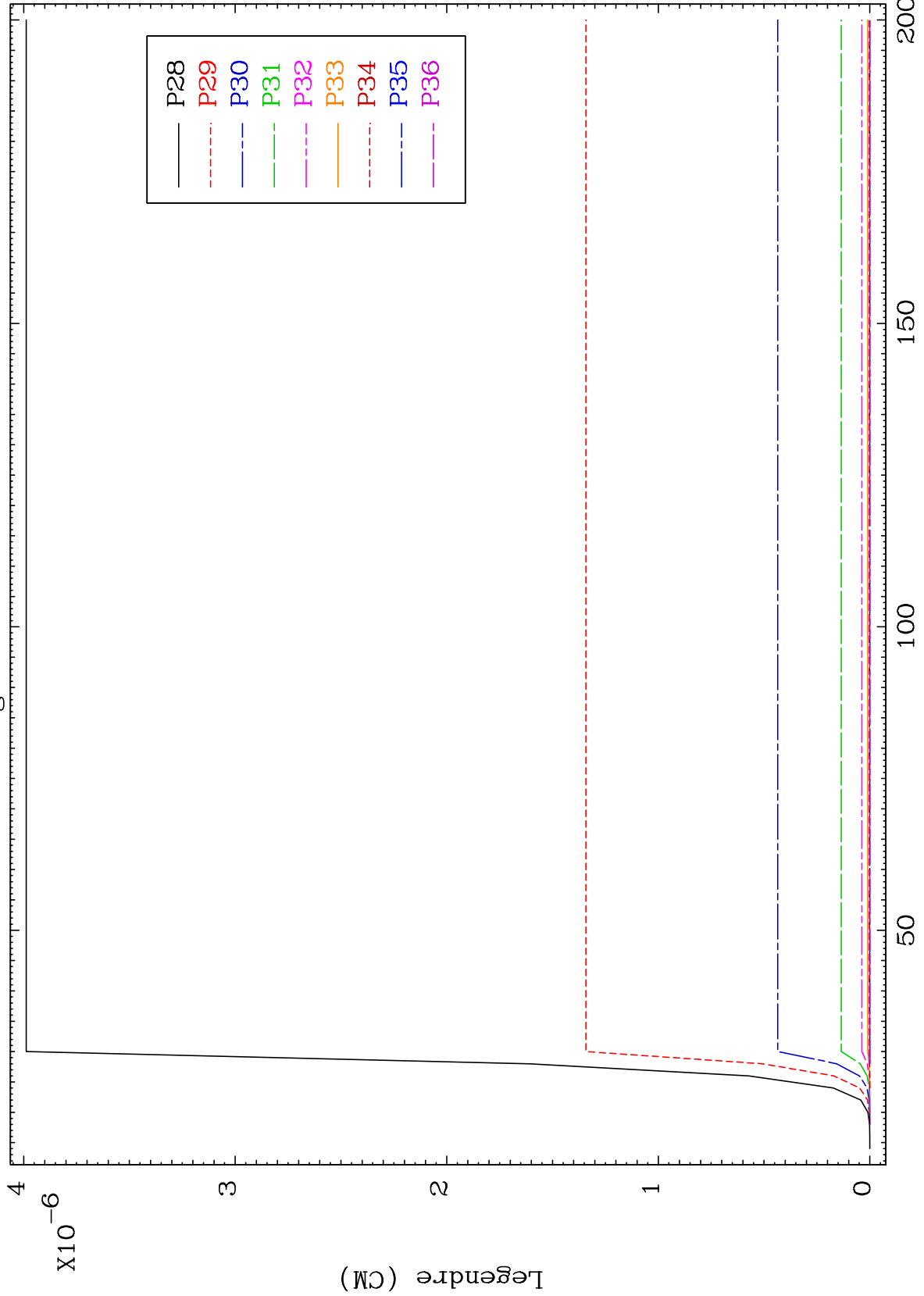
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



73

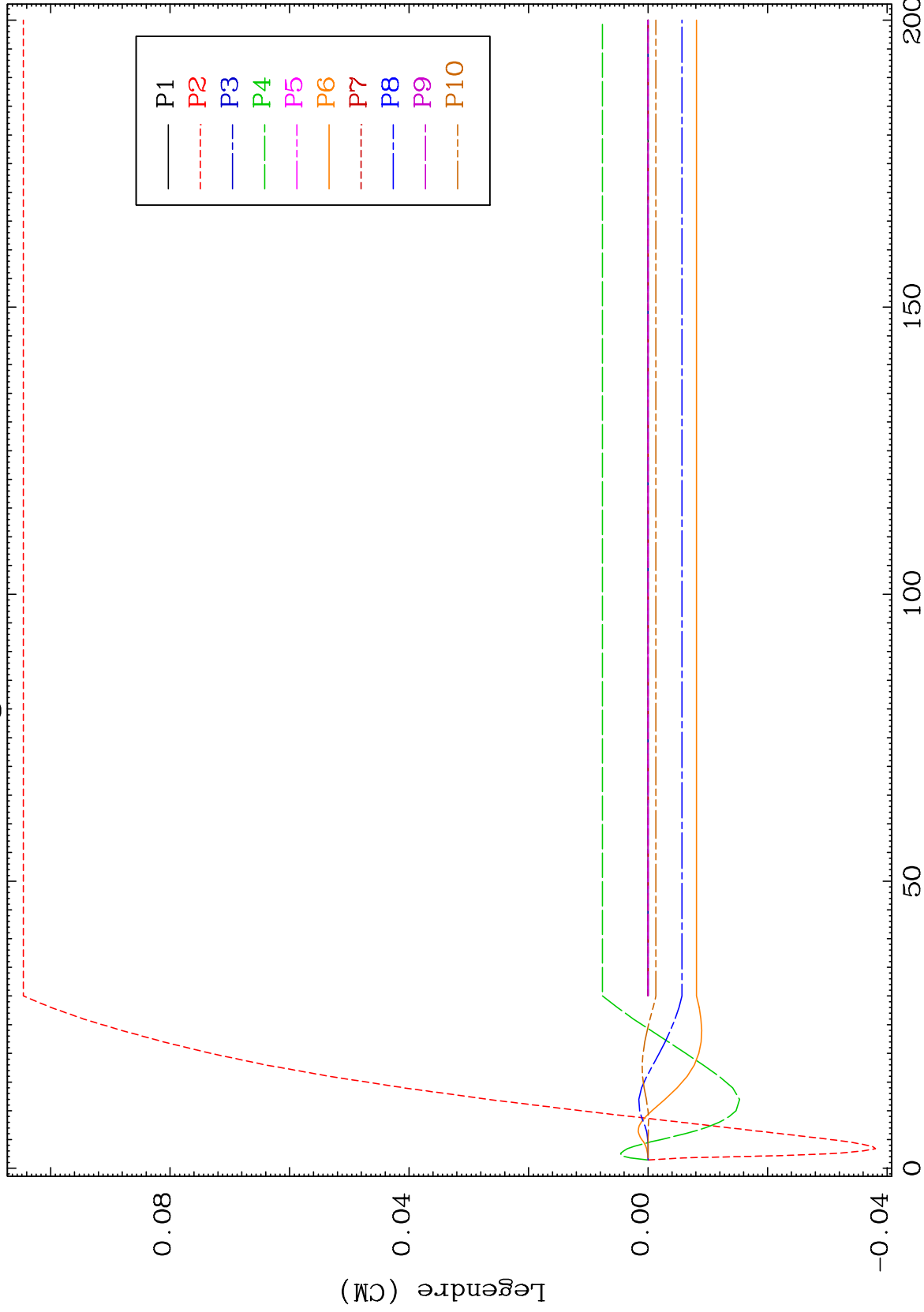
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



74

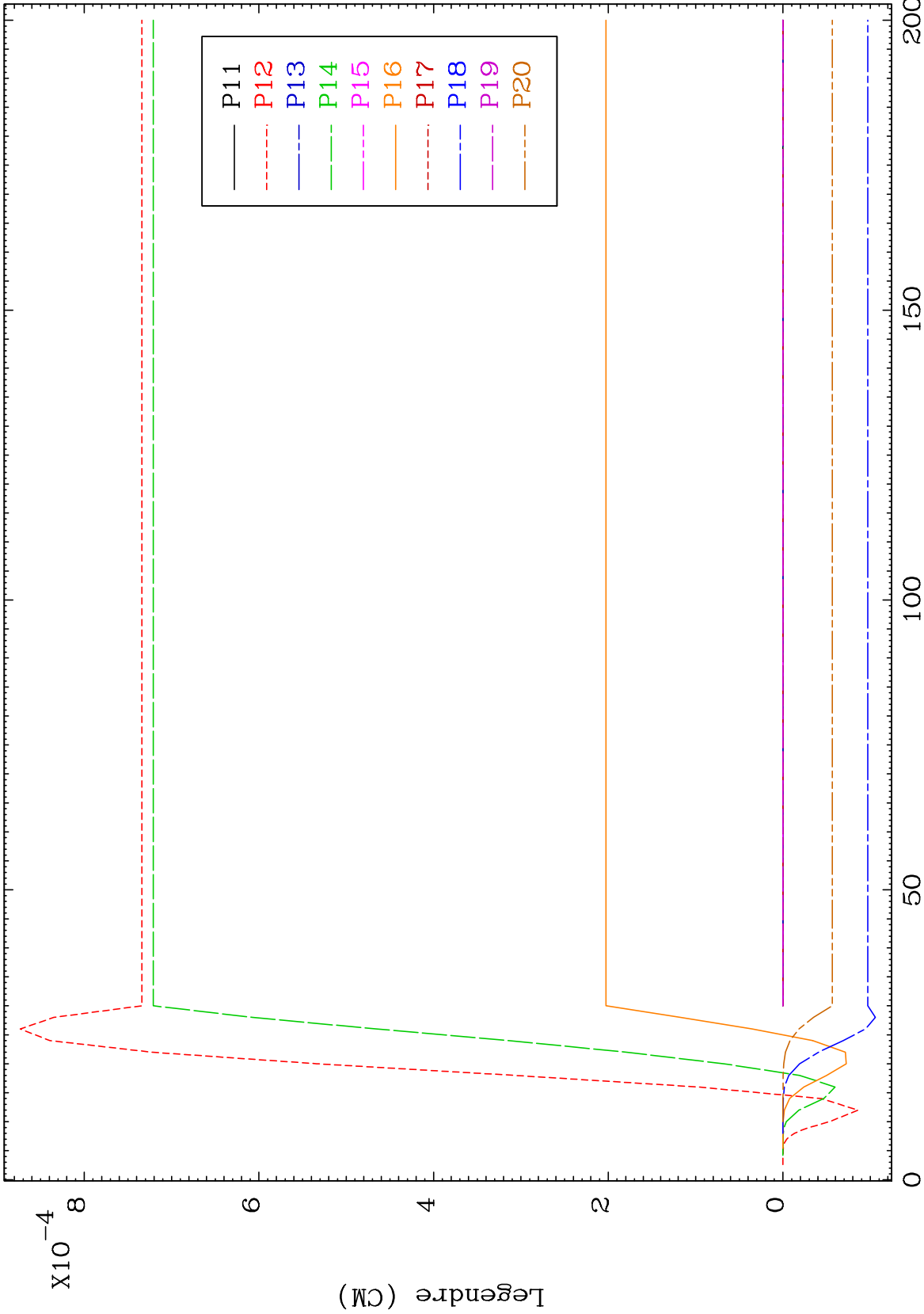
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



75

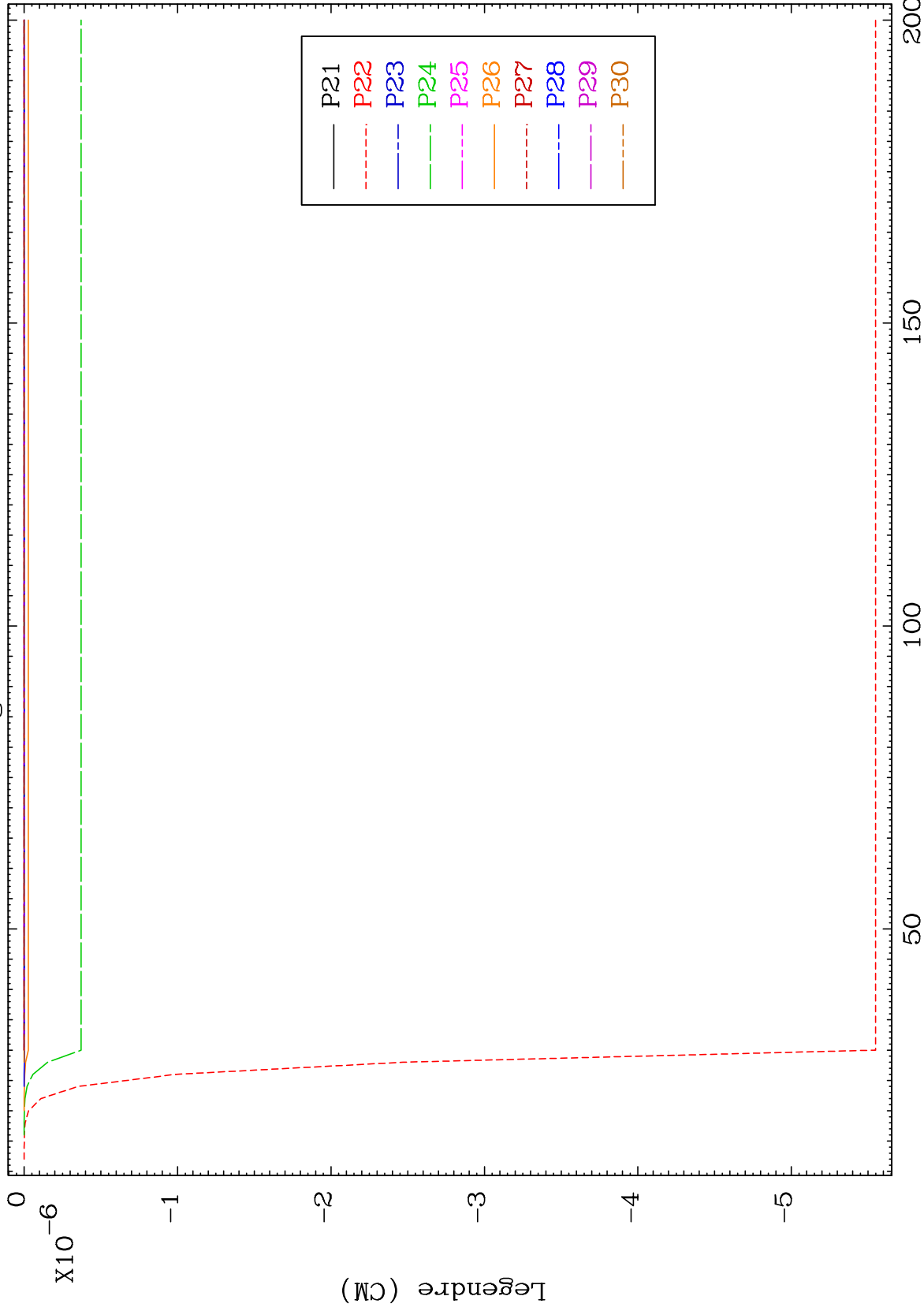
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



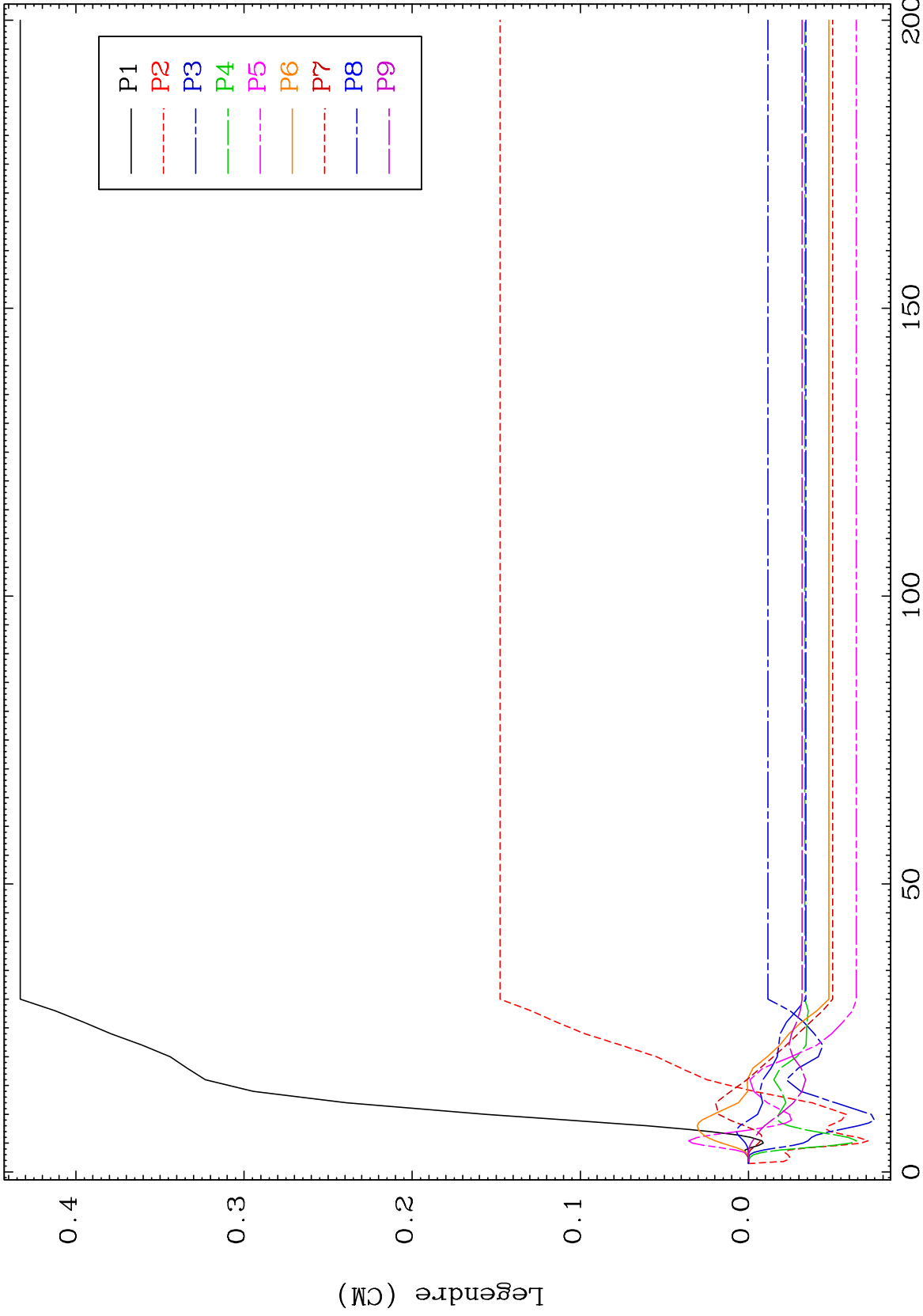
76

72-Hf-178

MAT 7237

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

72-Hf-178



77

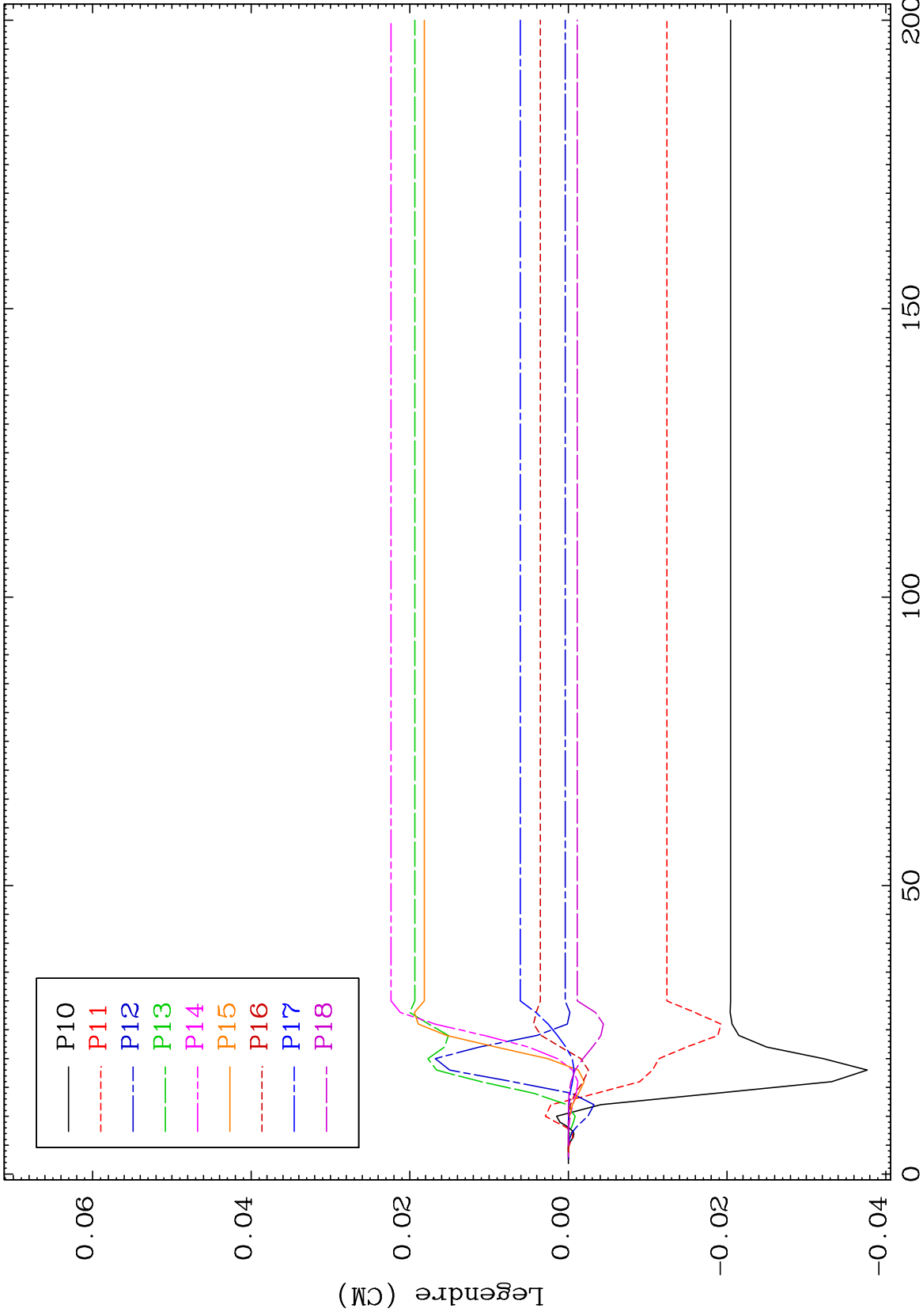
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

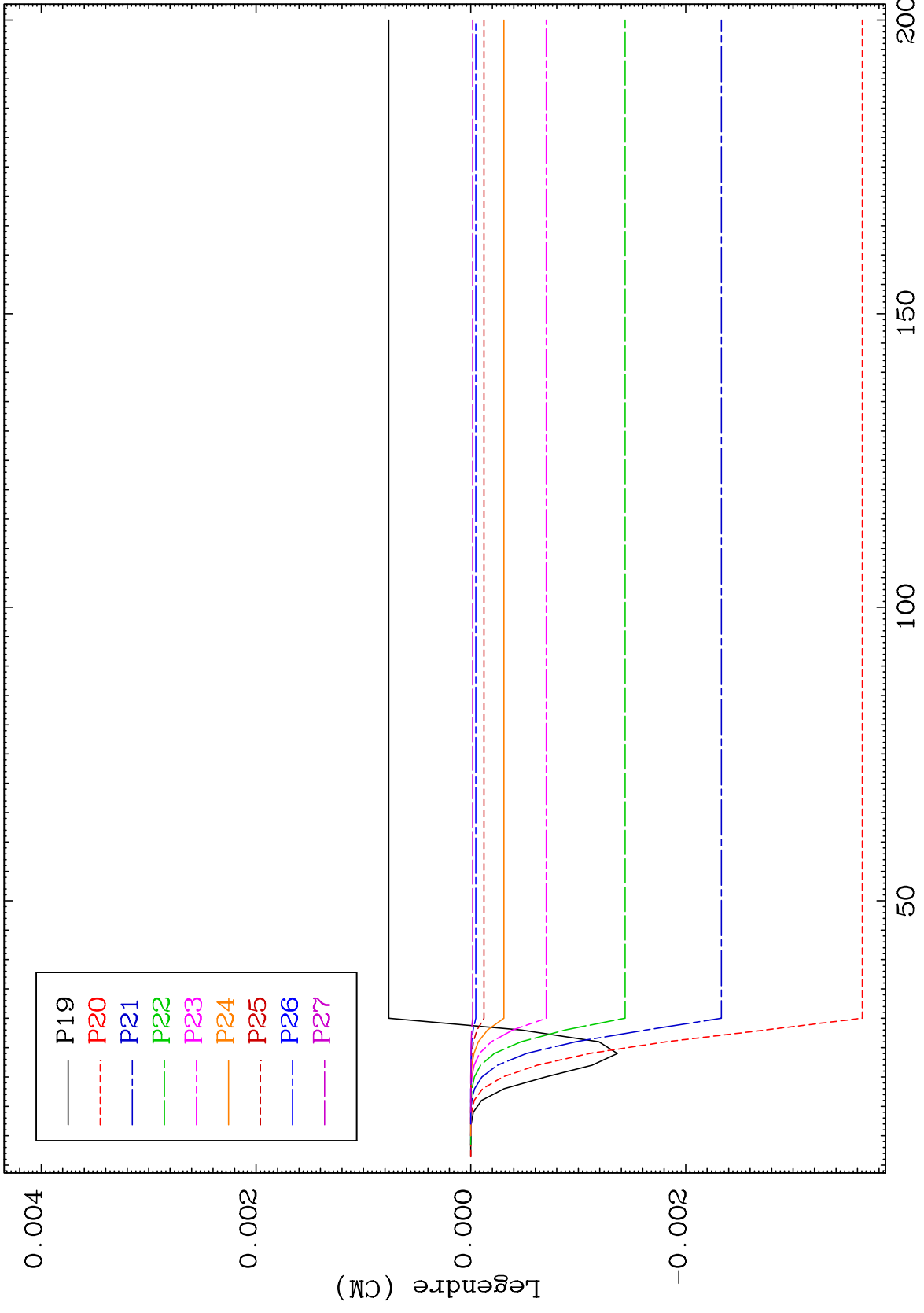
72-Hf-178



78

Incident Energy (MeV)

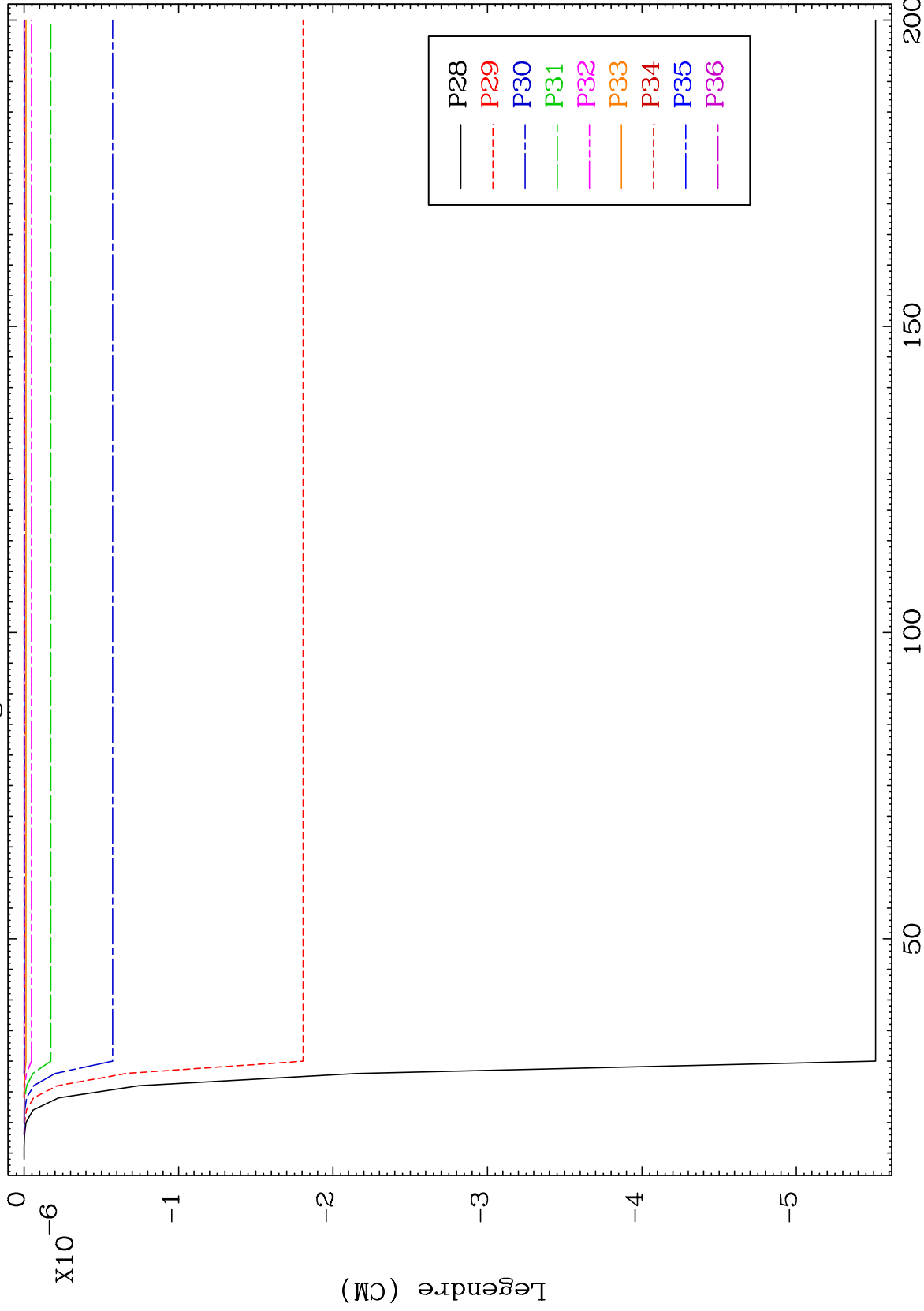
72-Hf-178



MAT 7237

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

72-Hf-178



80

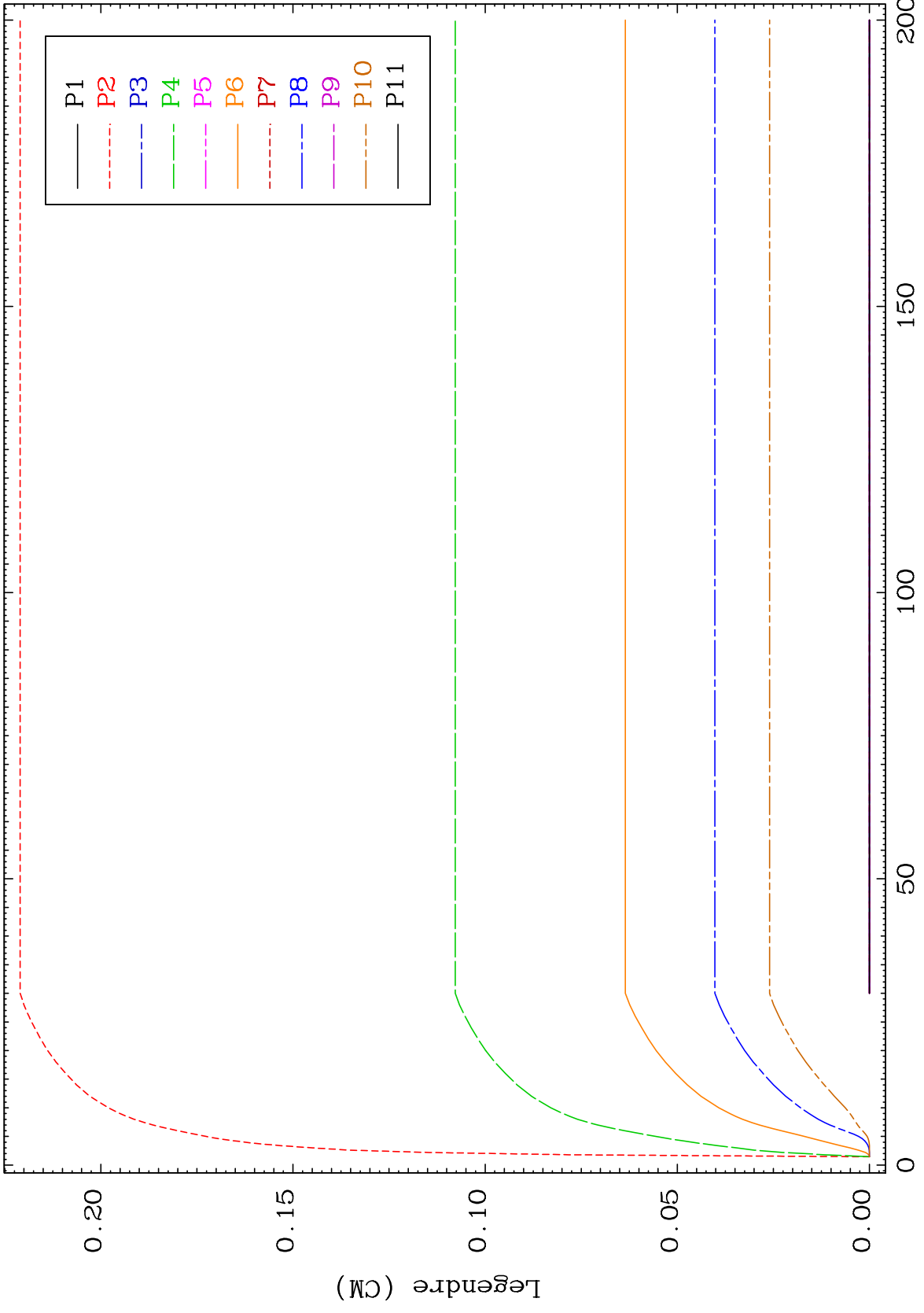
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



81

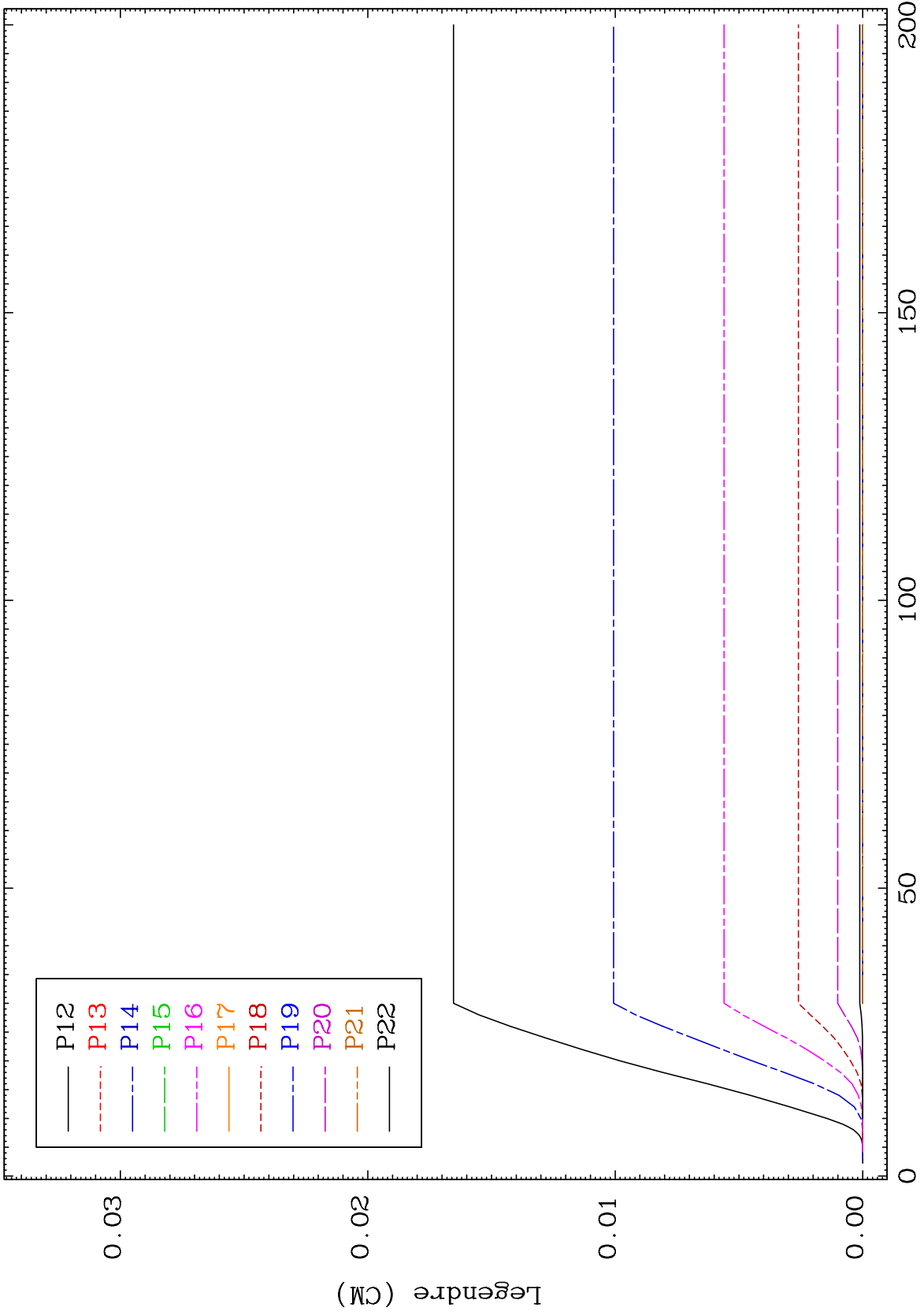
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



82

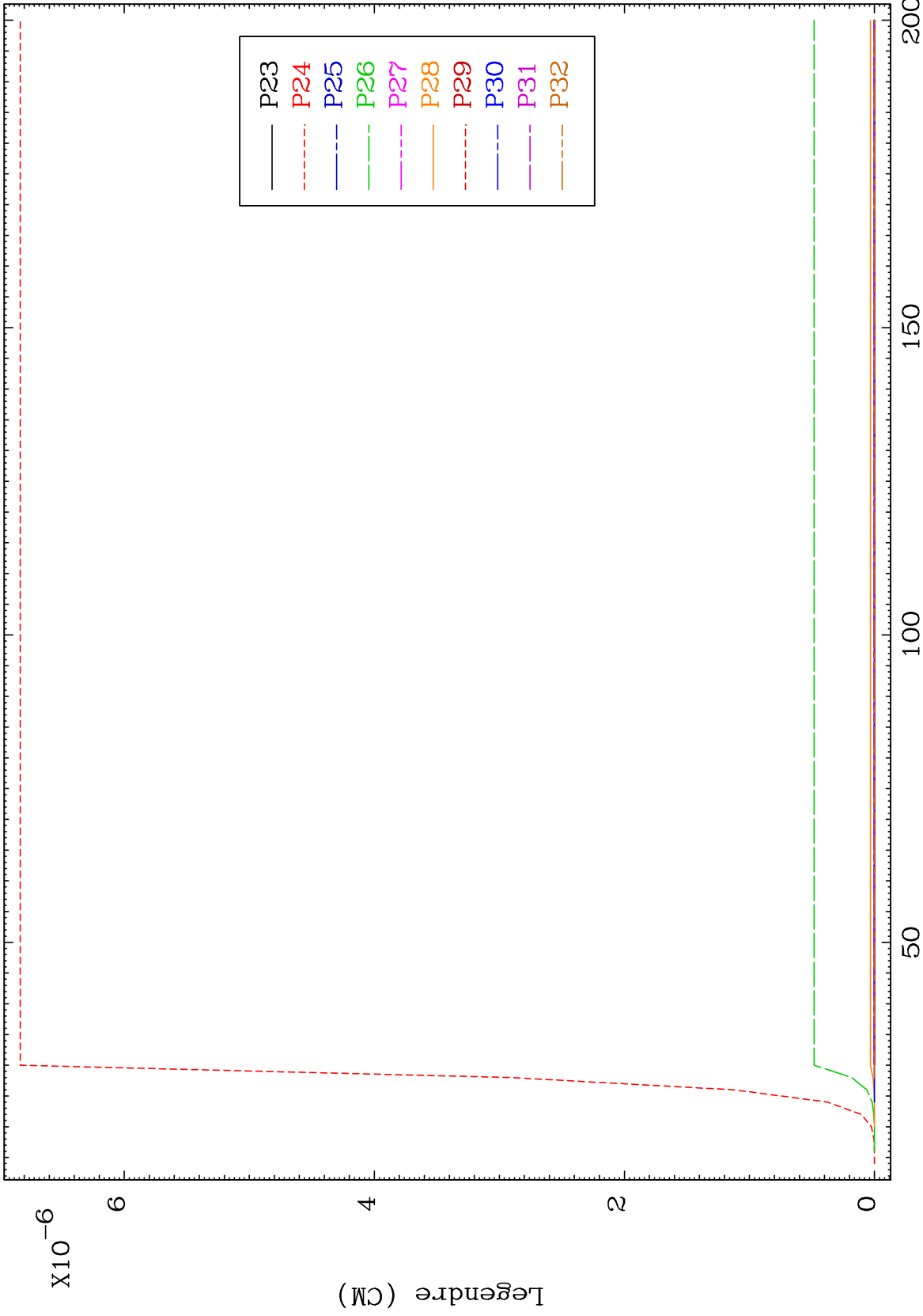
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



83

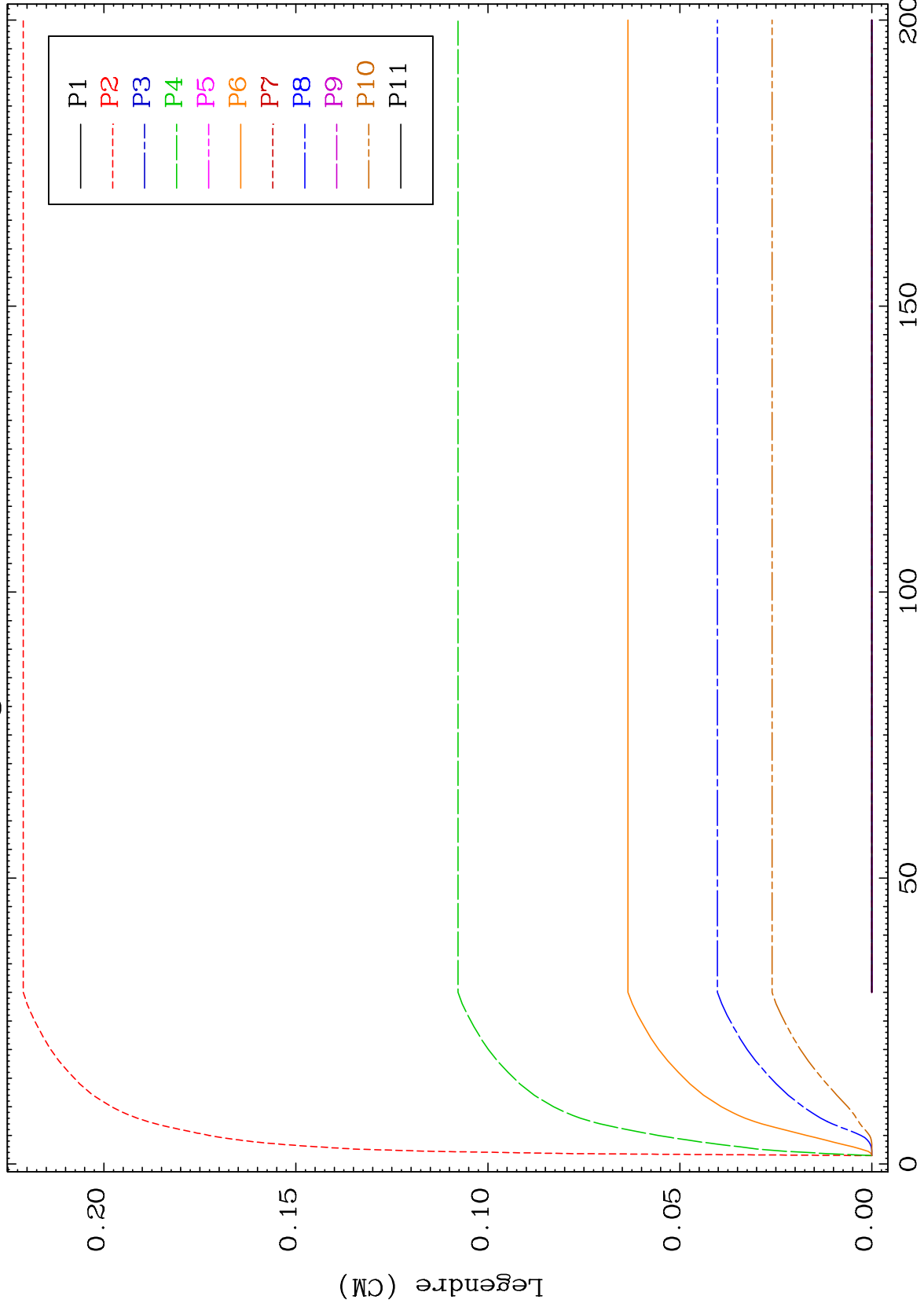
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



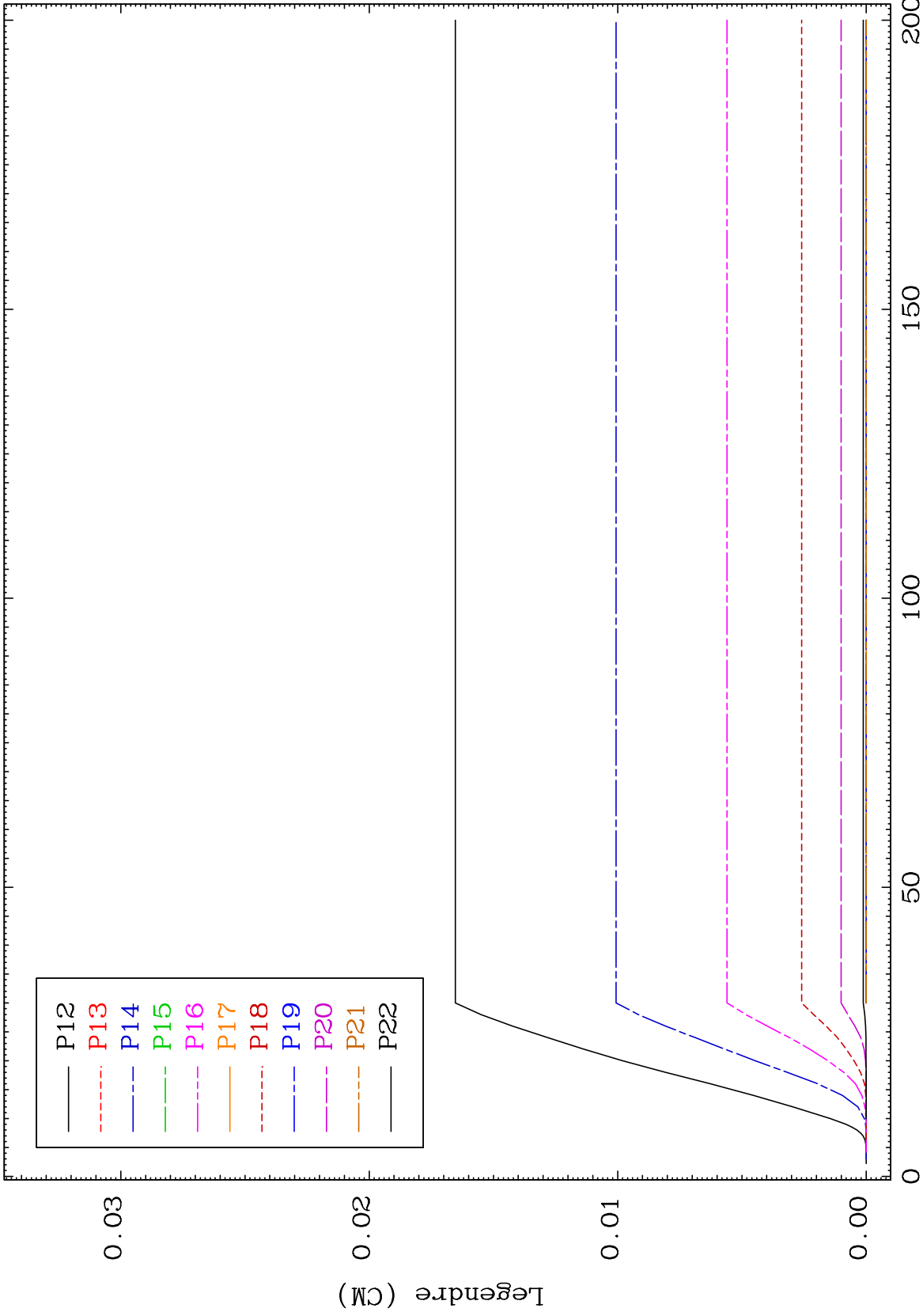
84

72-Hf-178

MAT 7237

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

72-Hf-178



85

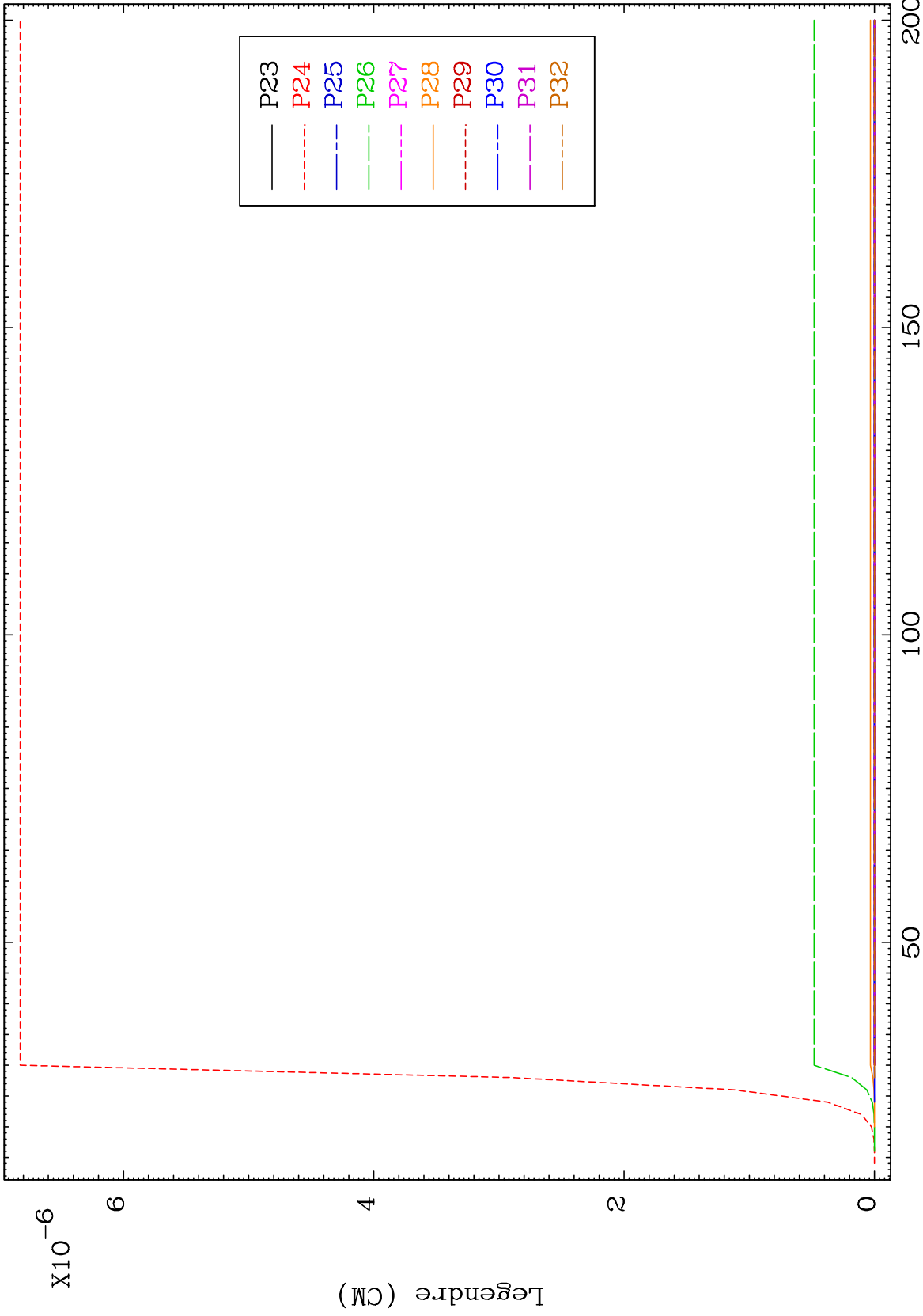
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



86

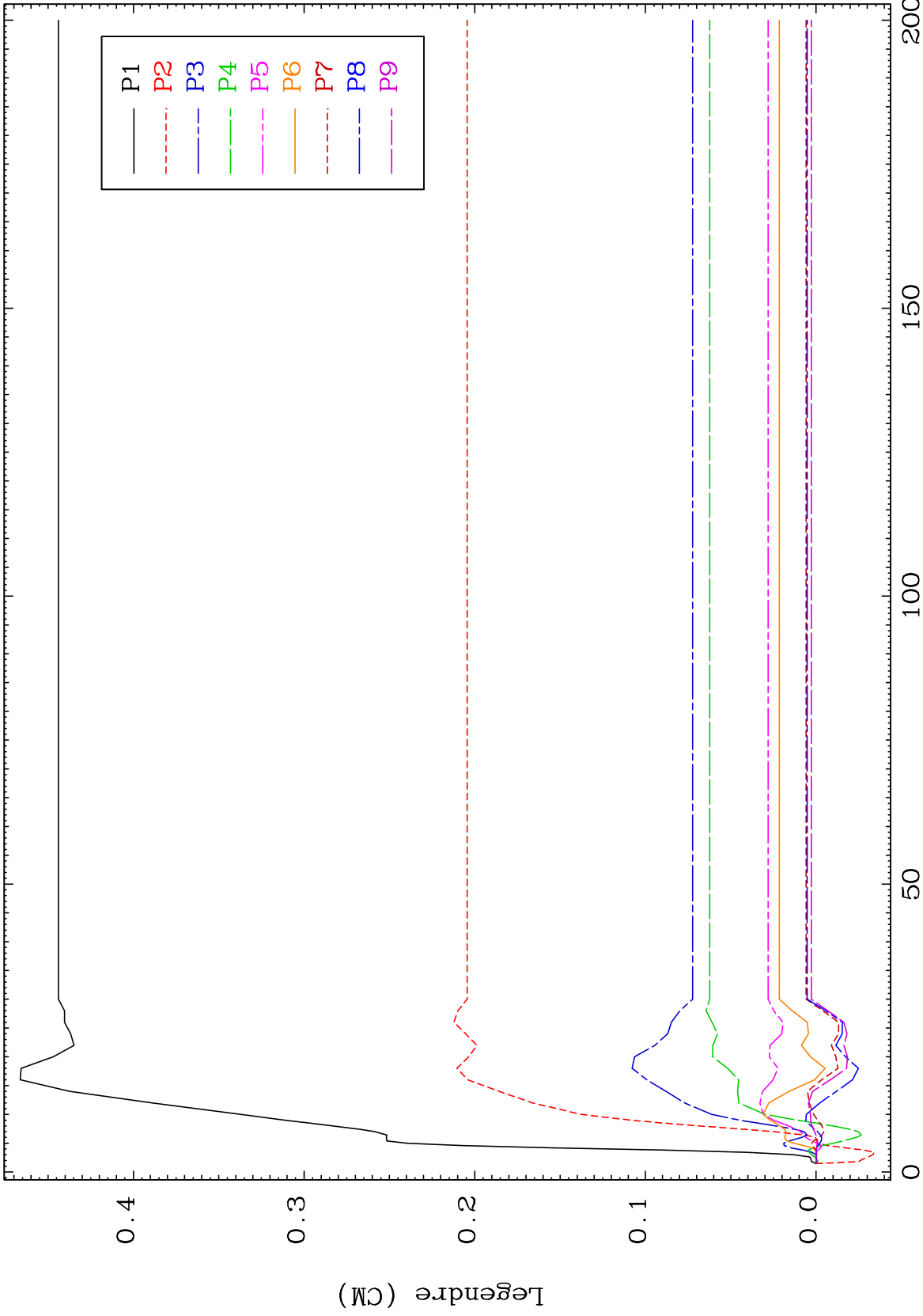
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



87

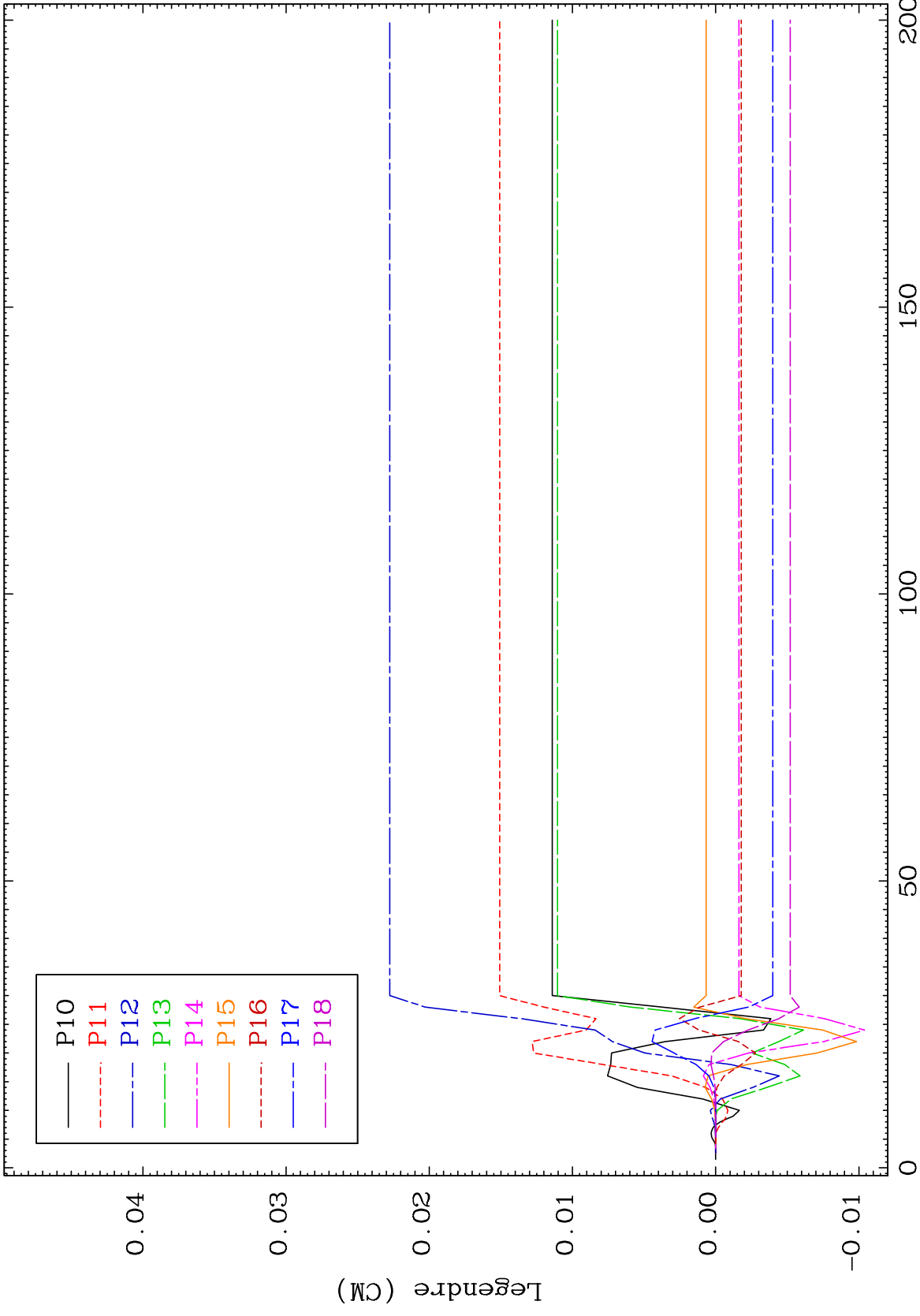
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



88

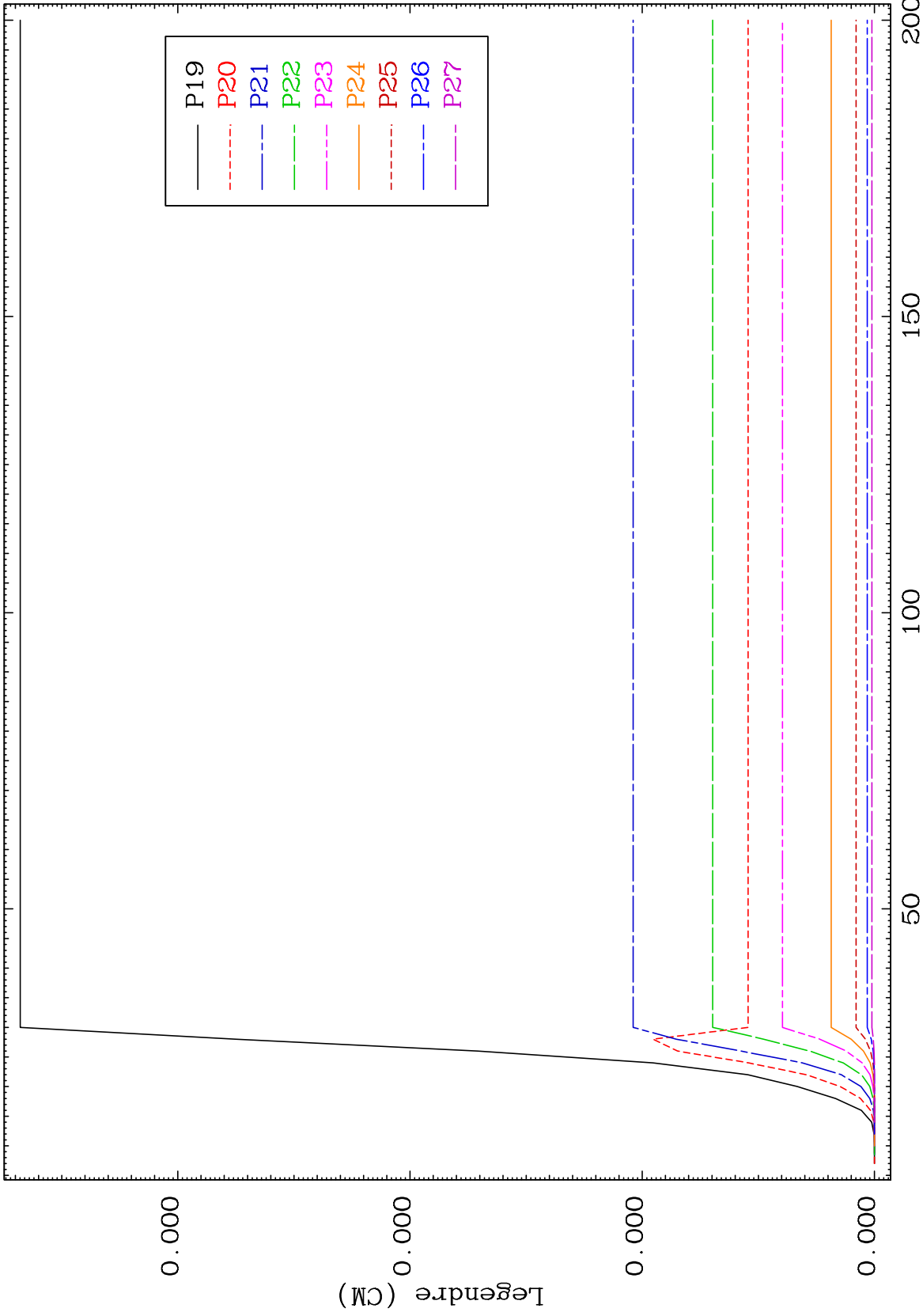
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



89

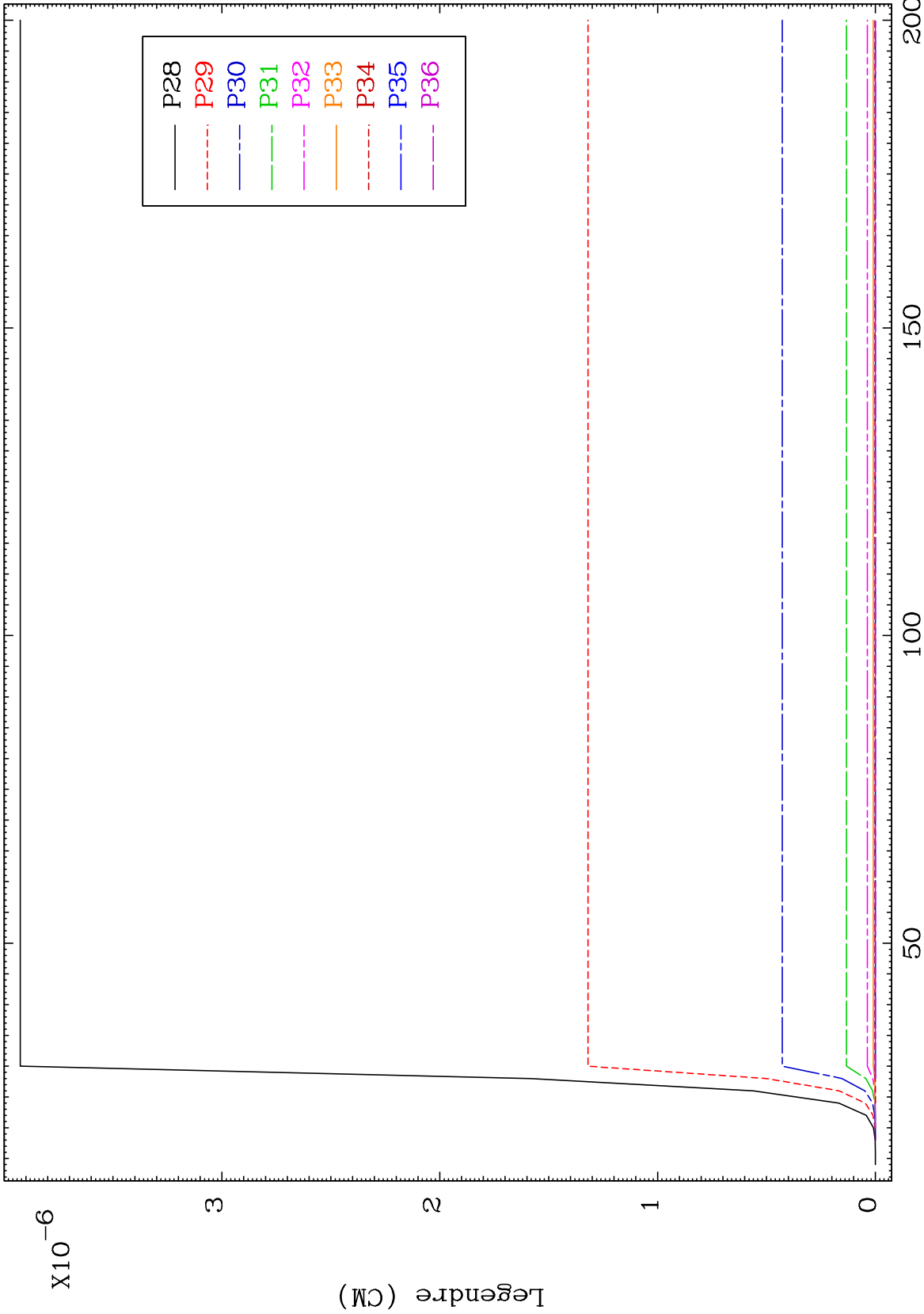
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



90

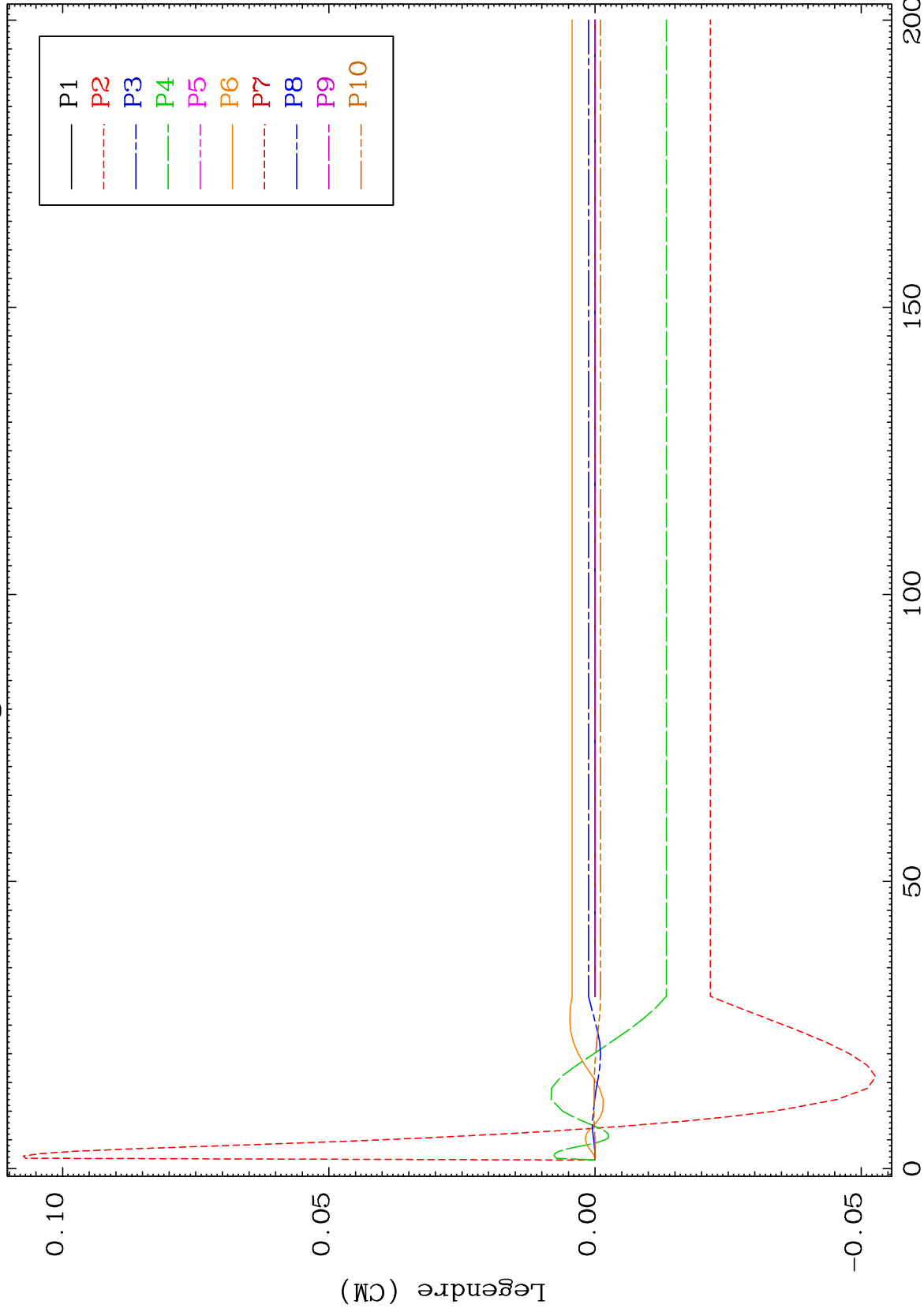
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



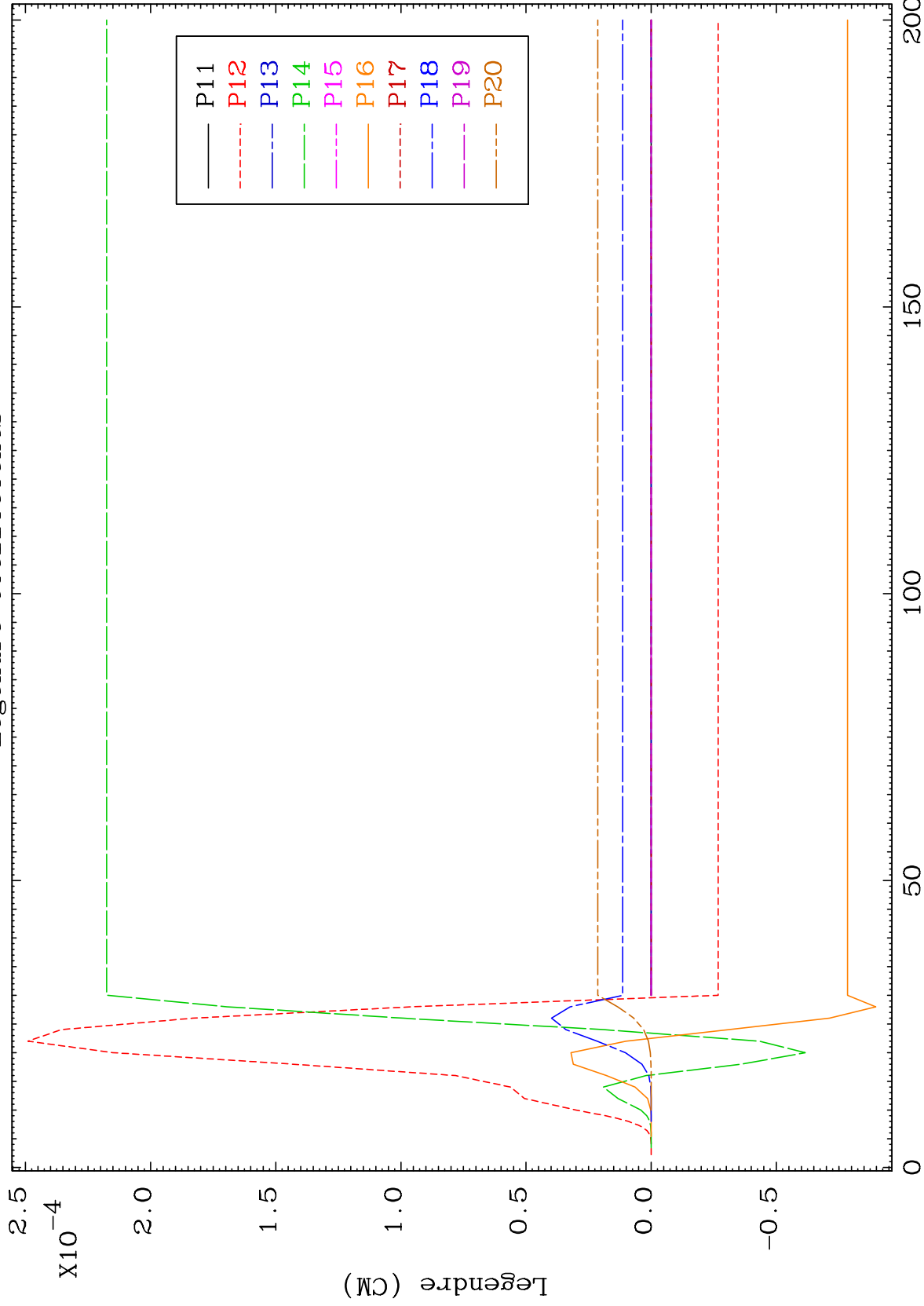
91

72-Hf-178

MAT 7237

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

72-Hf-178



92

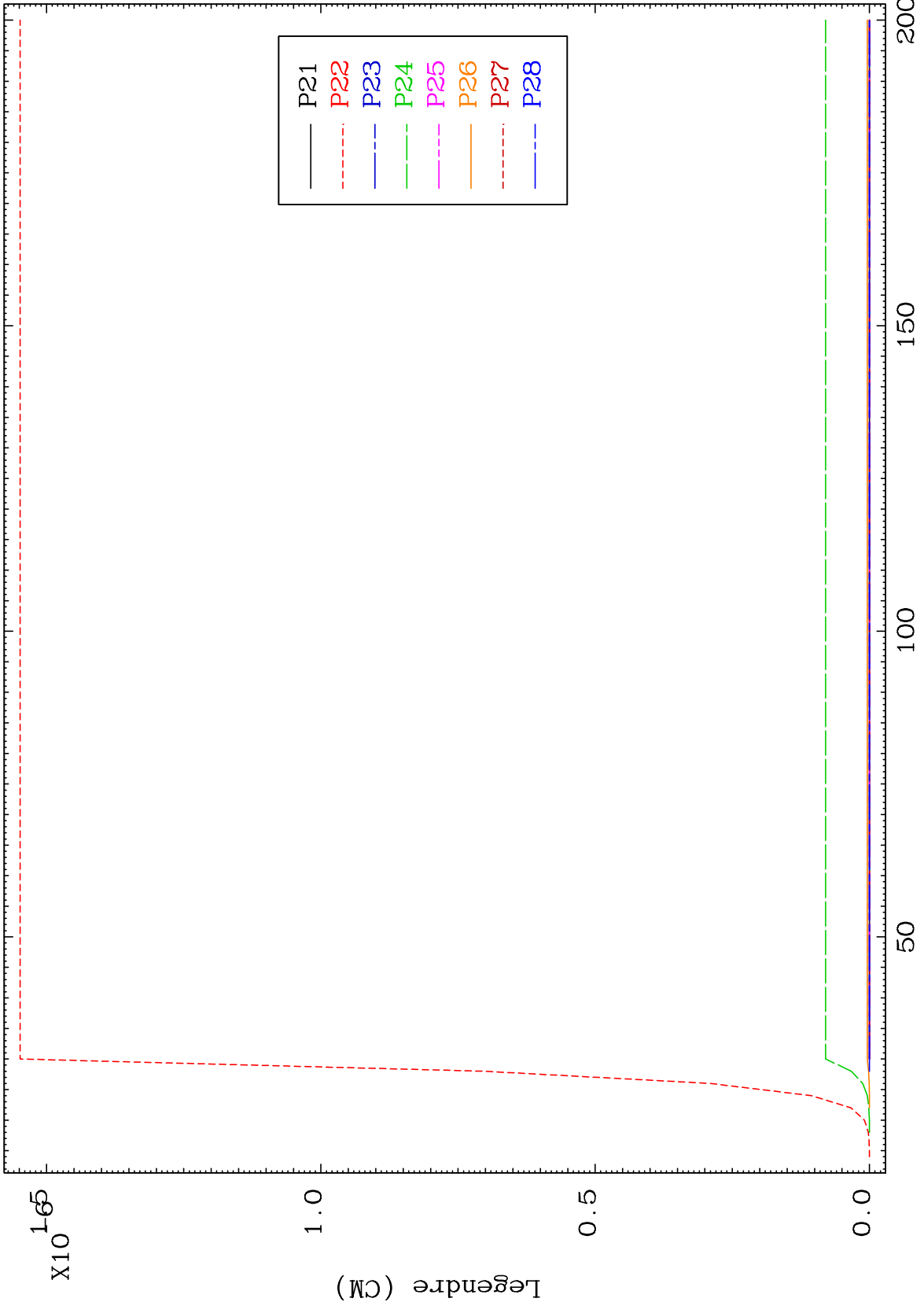
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



93

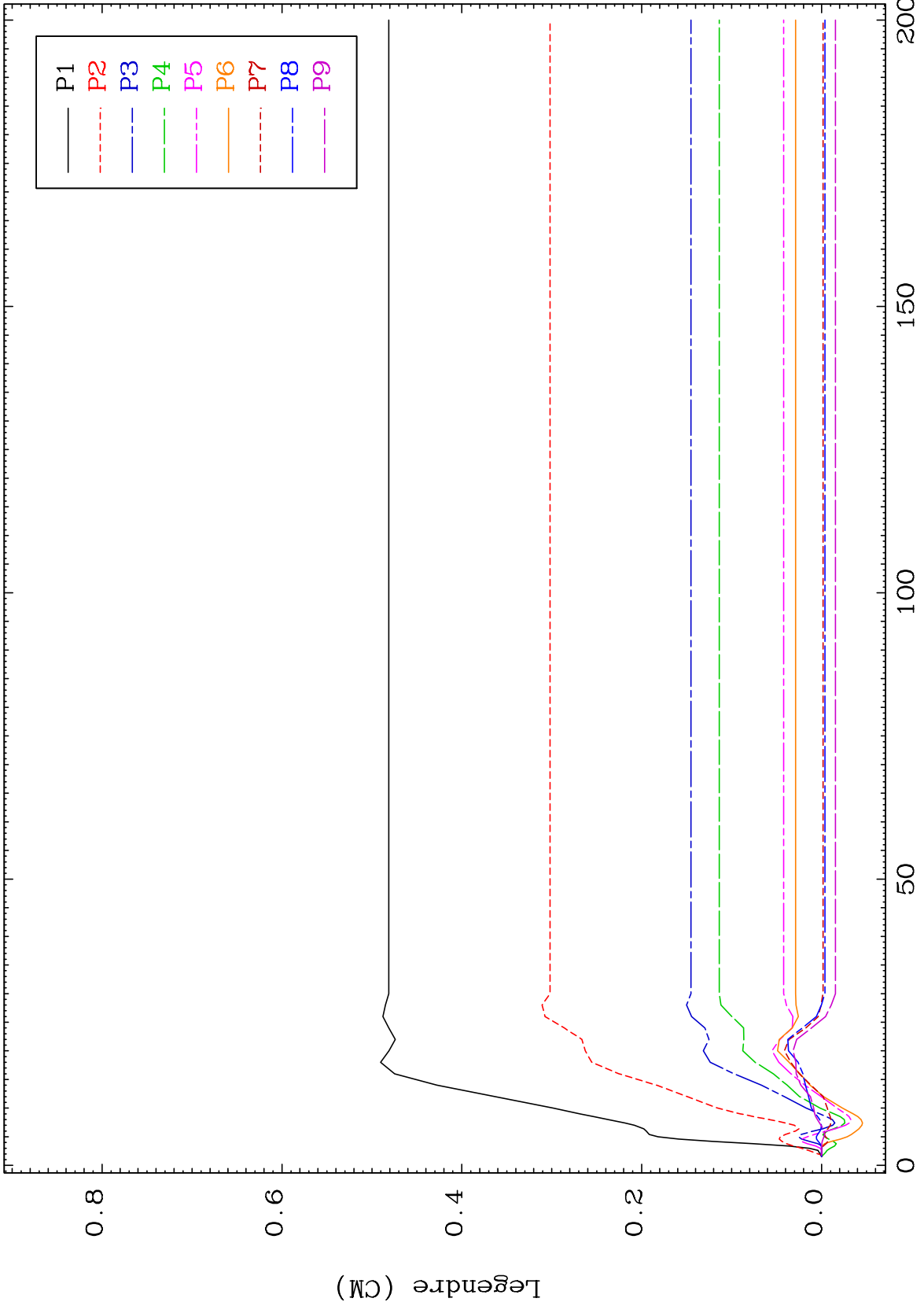
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



94

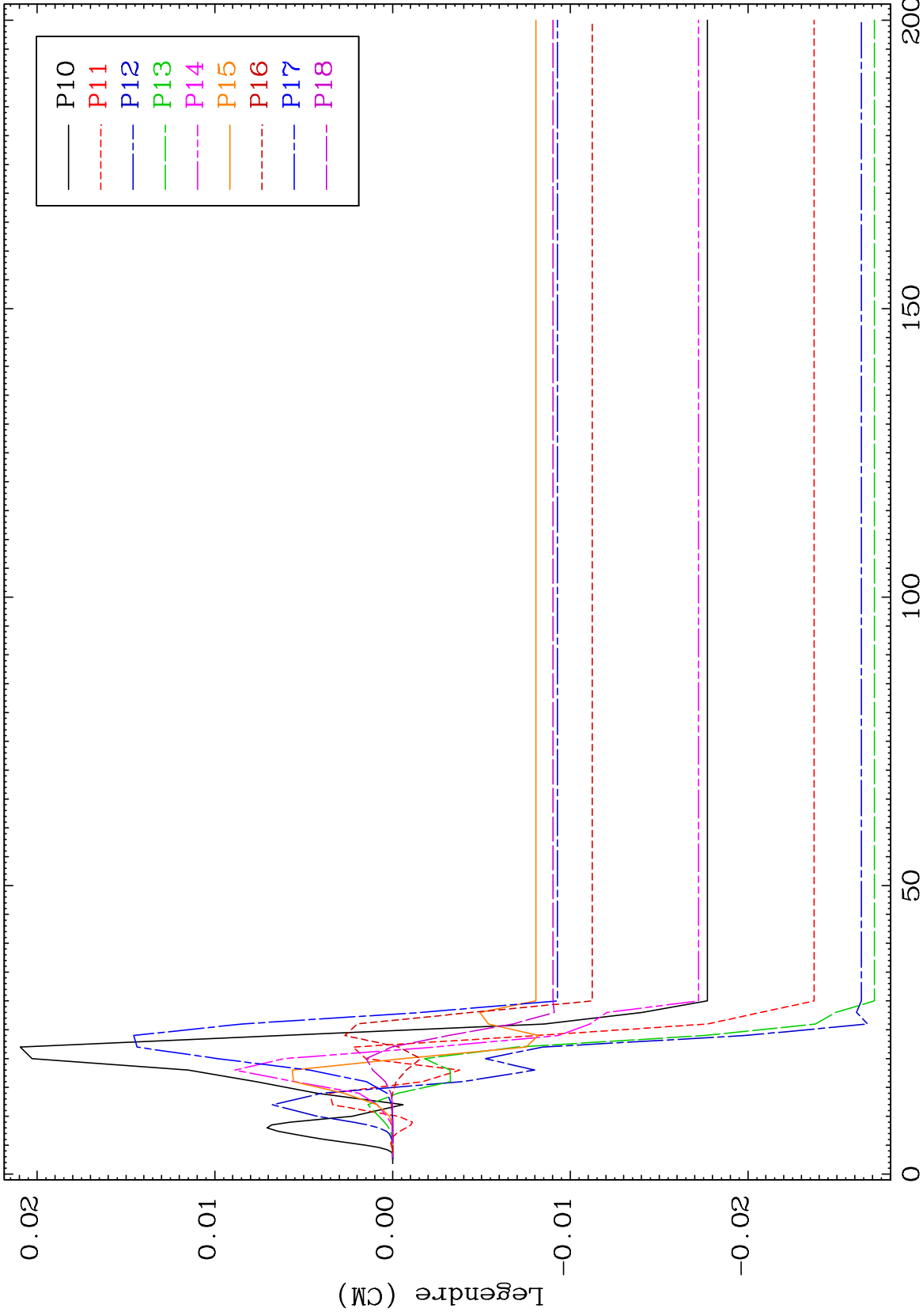
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



95

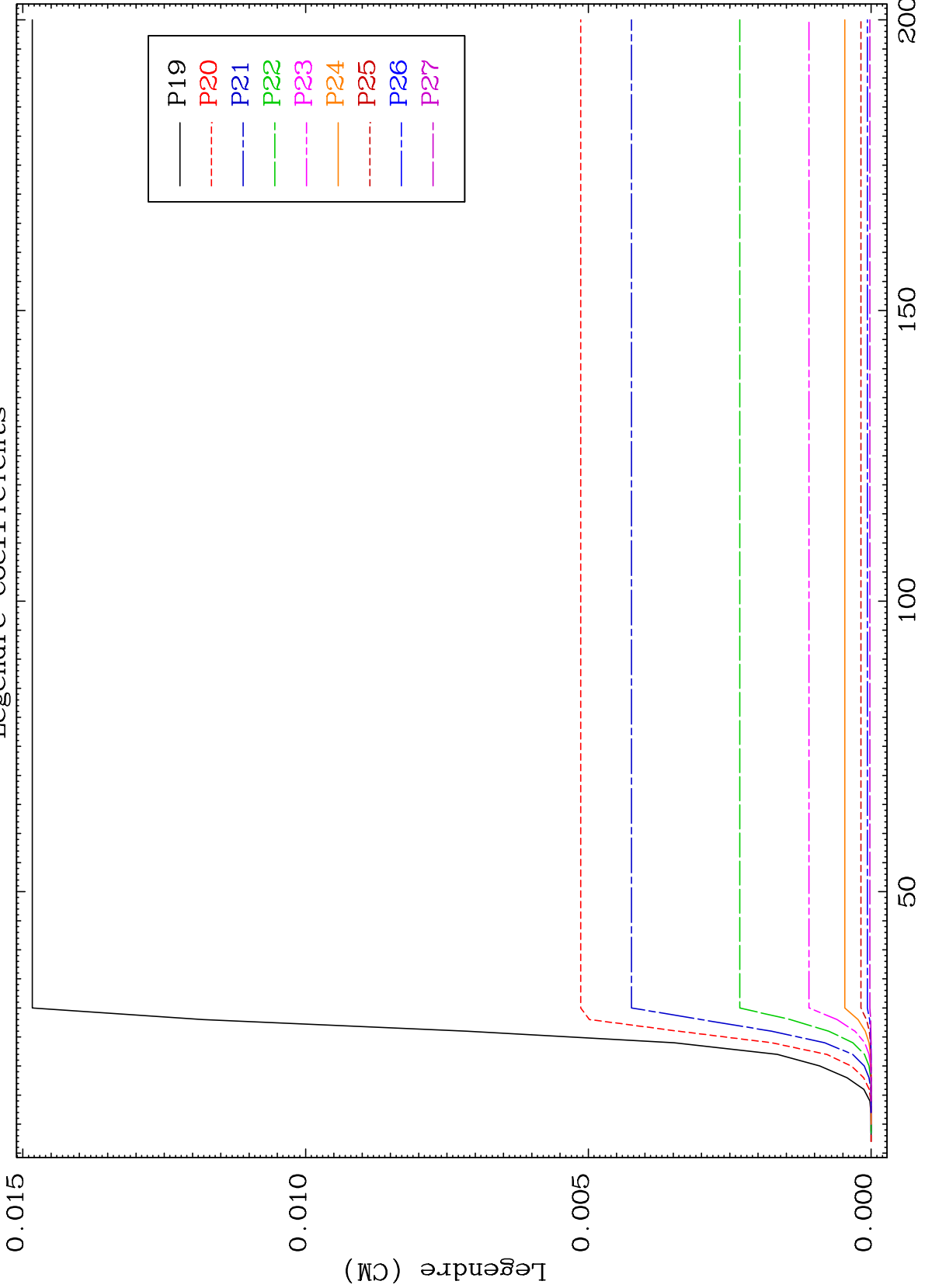
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



96

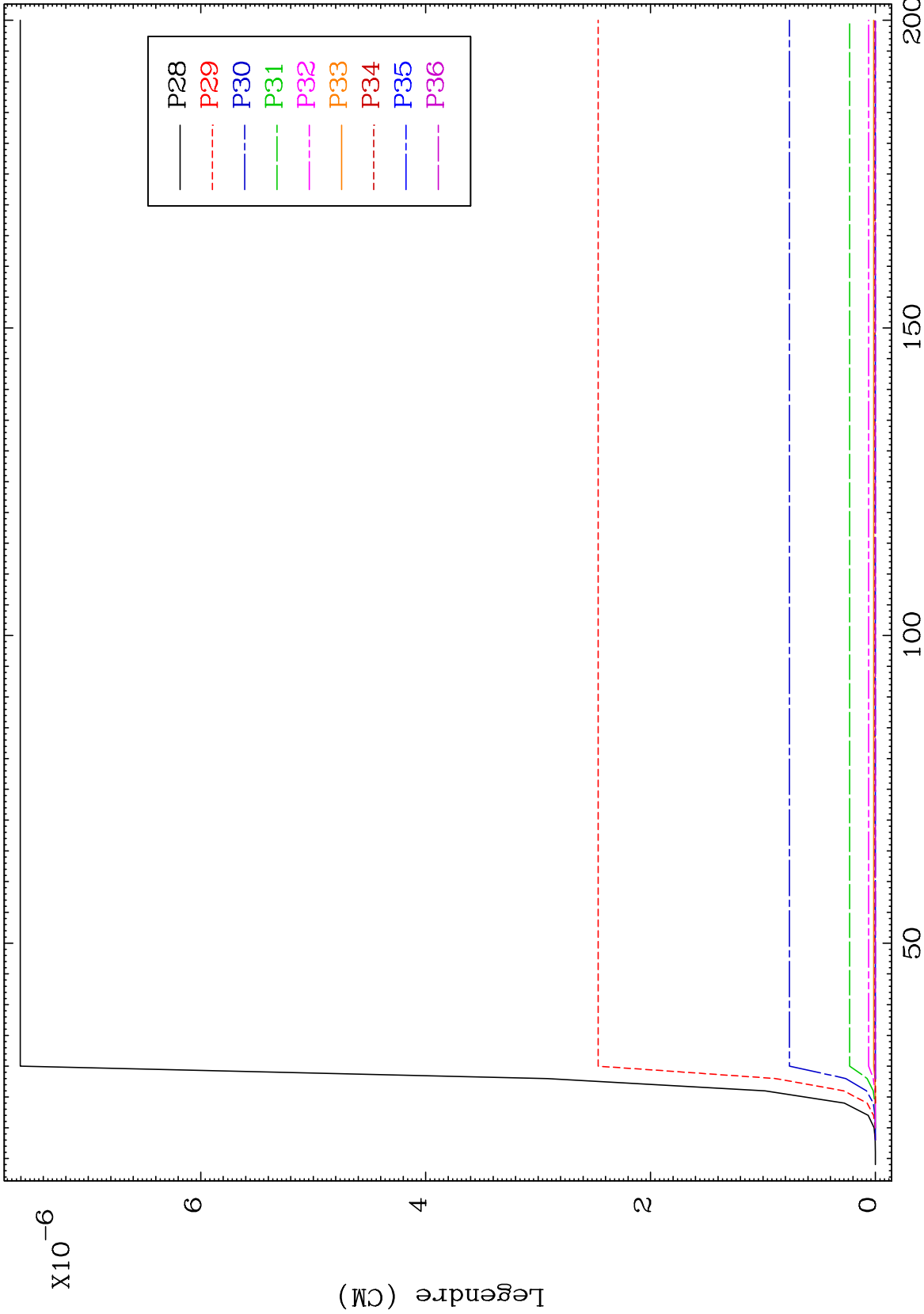
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



97

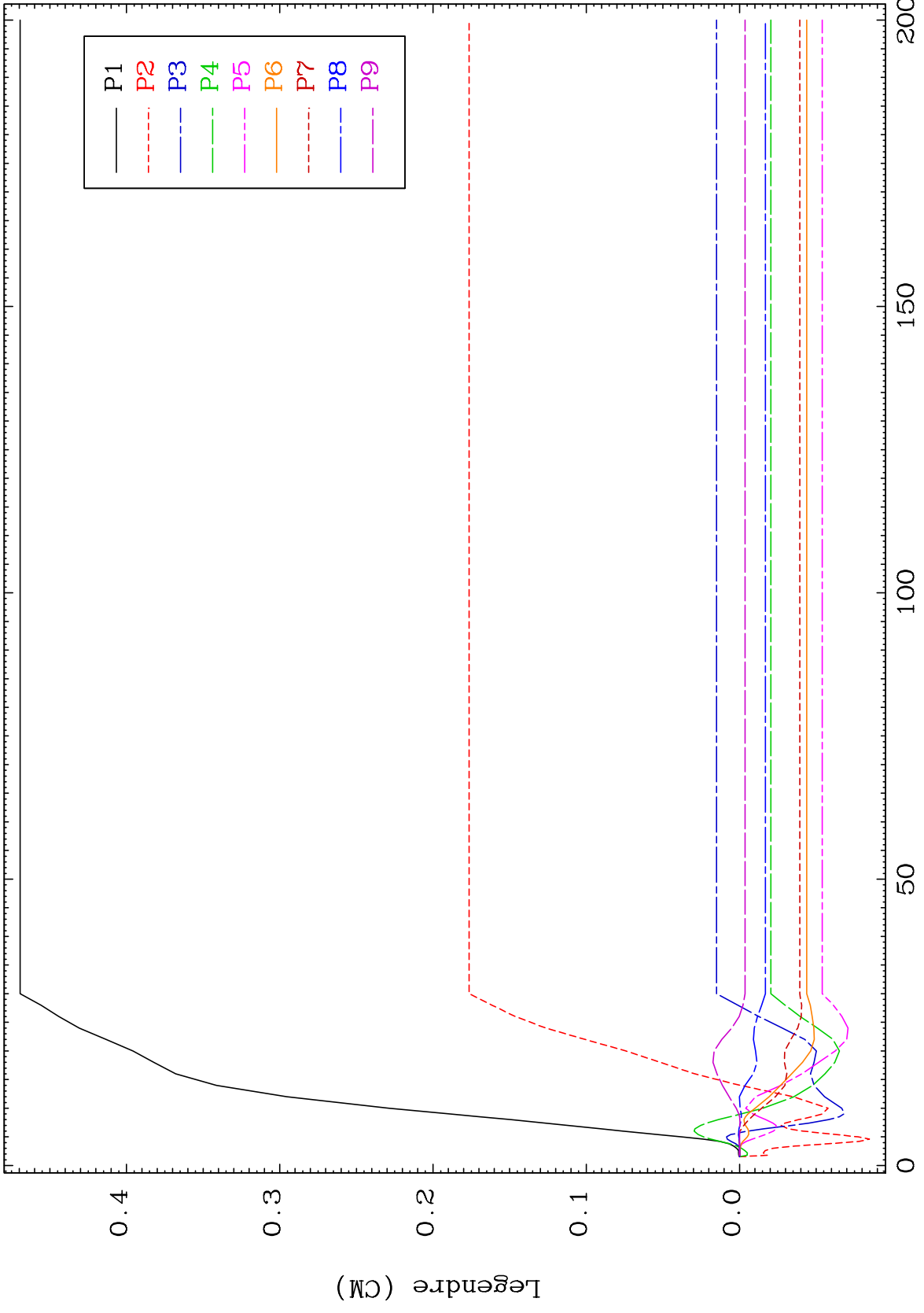
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



98

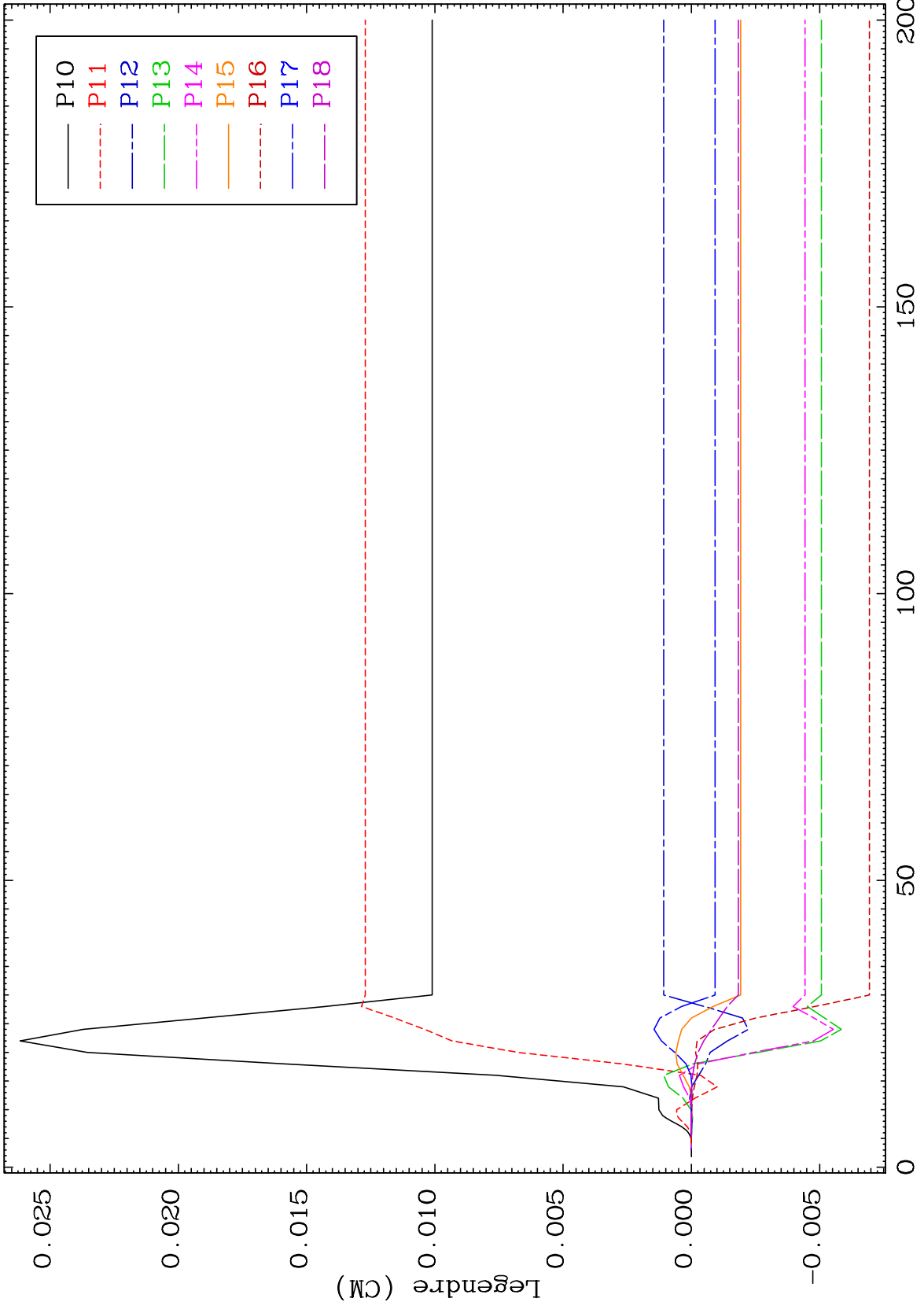
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



99

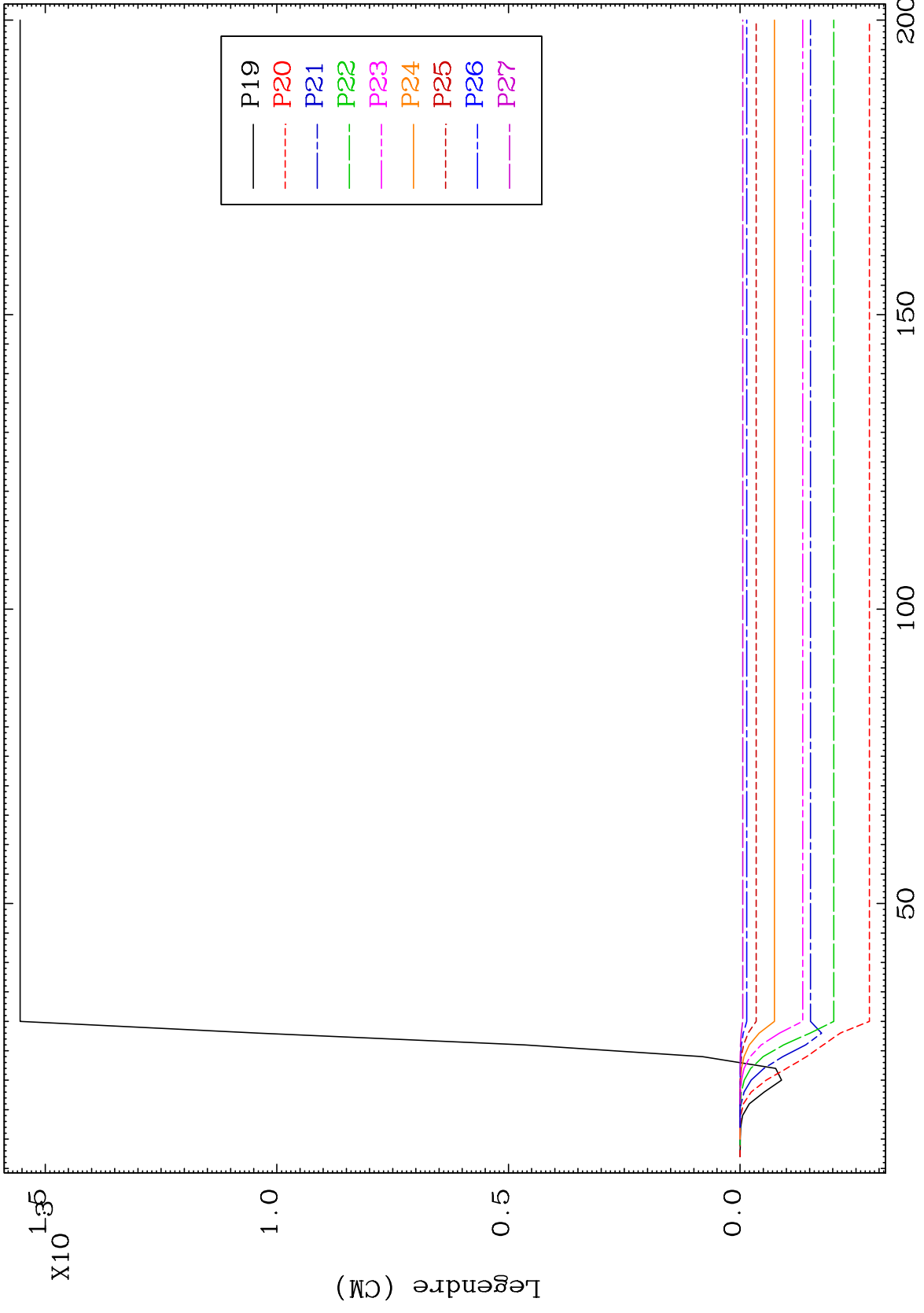
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



72-Hf-178

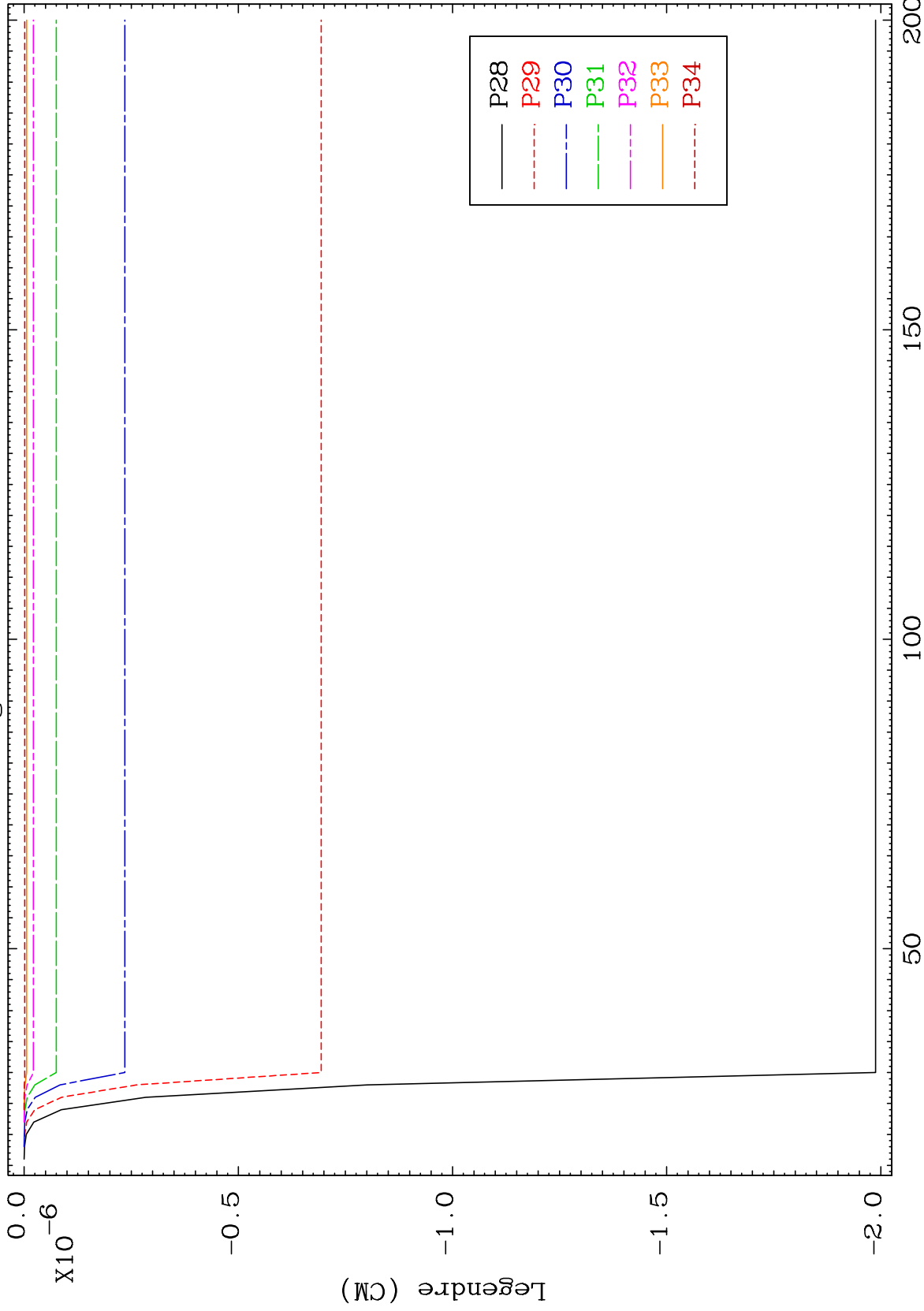
Incident Energy (MeV)

100

MAT 7237

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

72-Hf-178



101

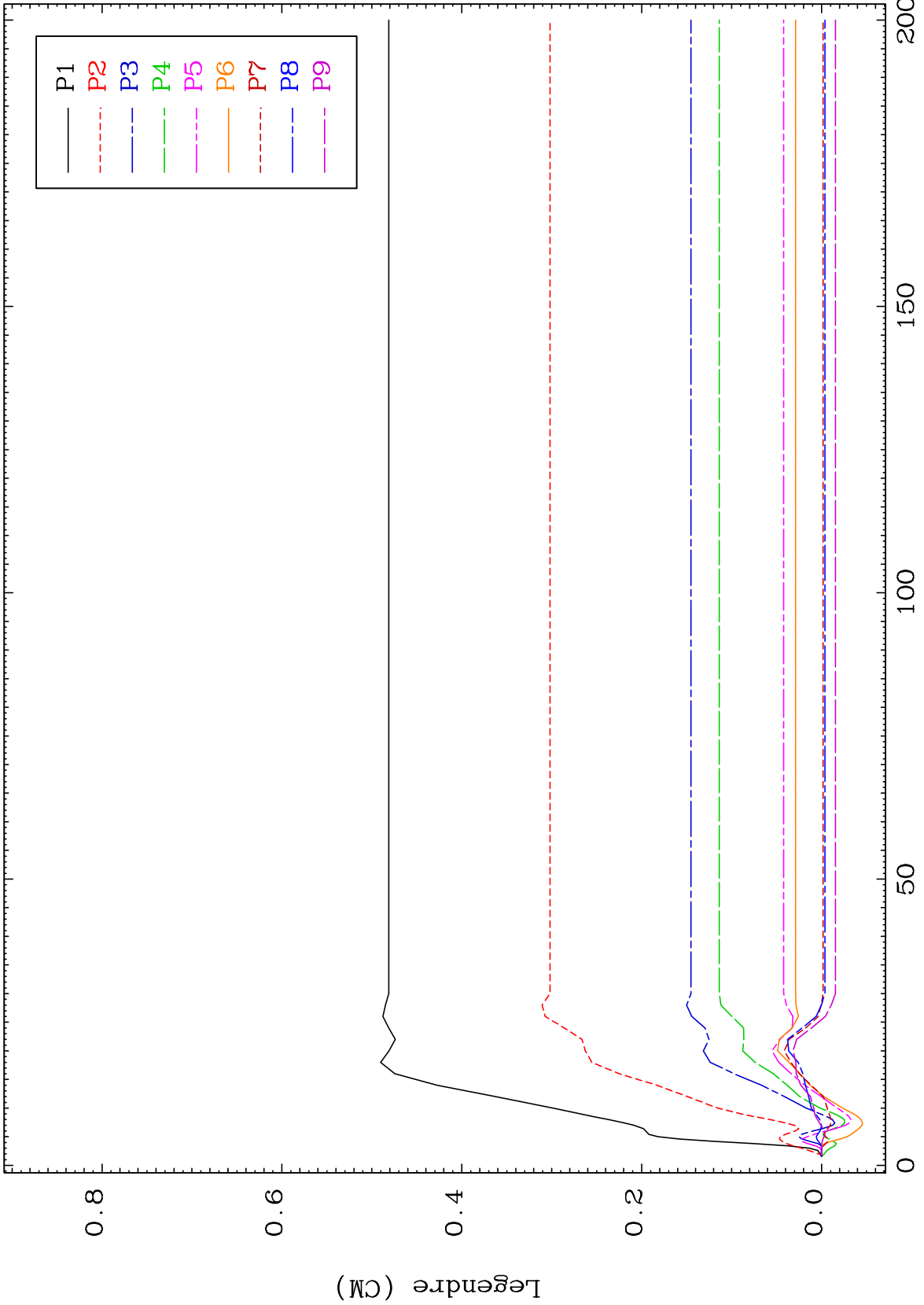
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



72-Hf-178

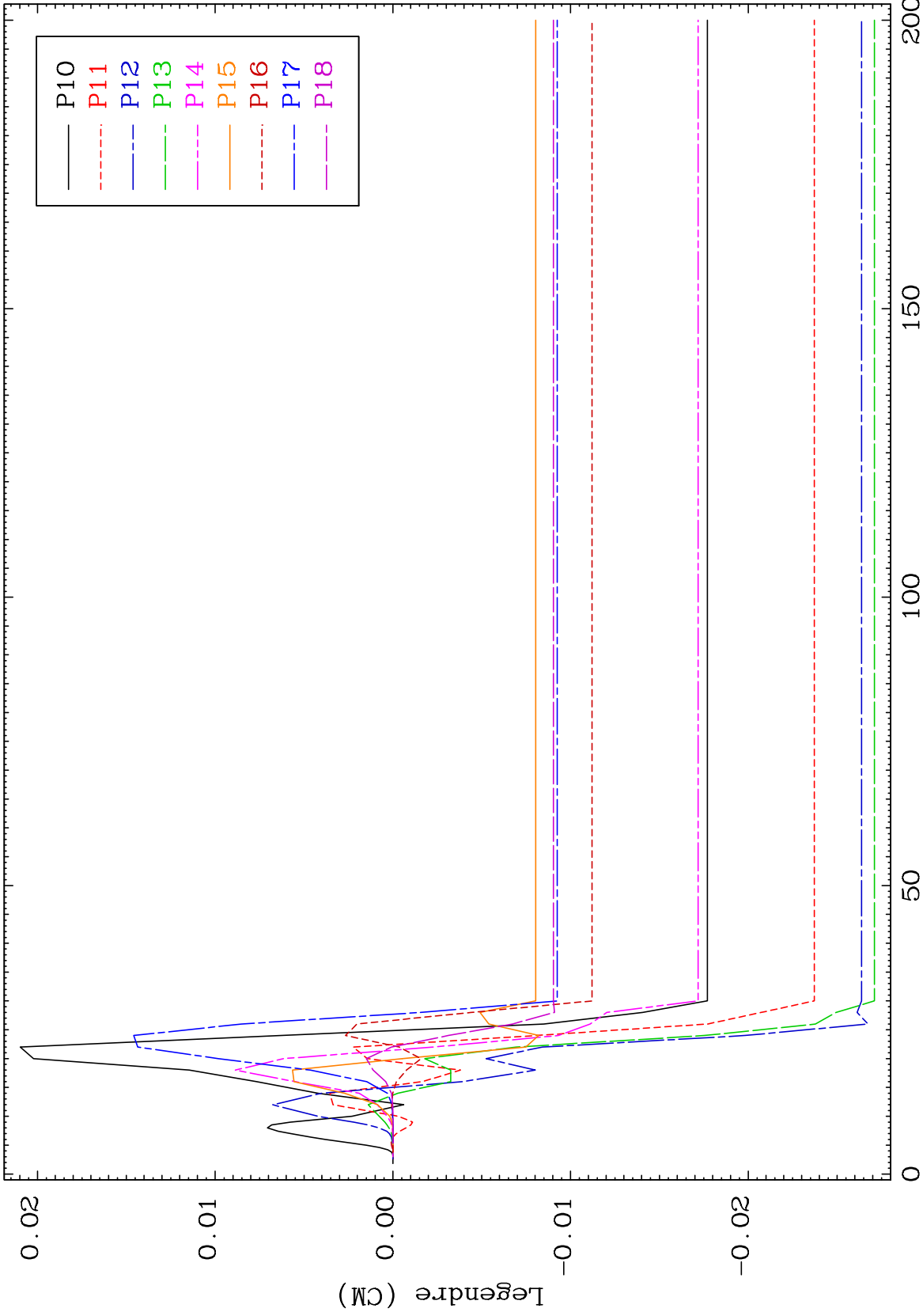
Incident Energy (MeV)

102

MAT 7237

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

72-Hf-178



103

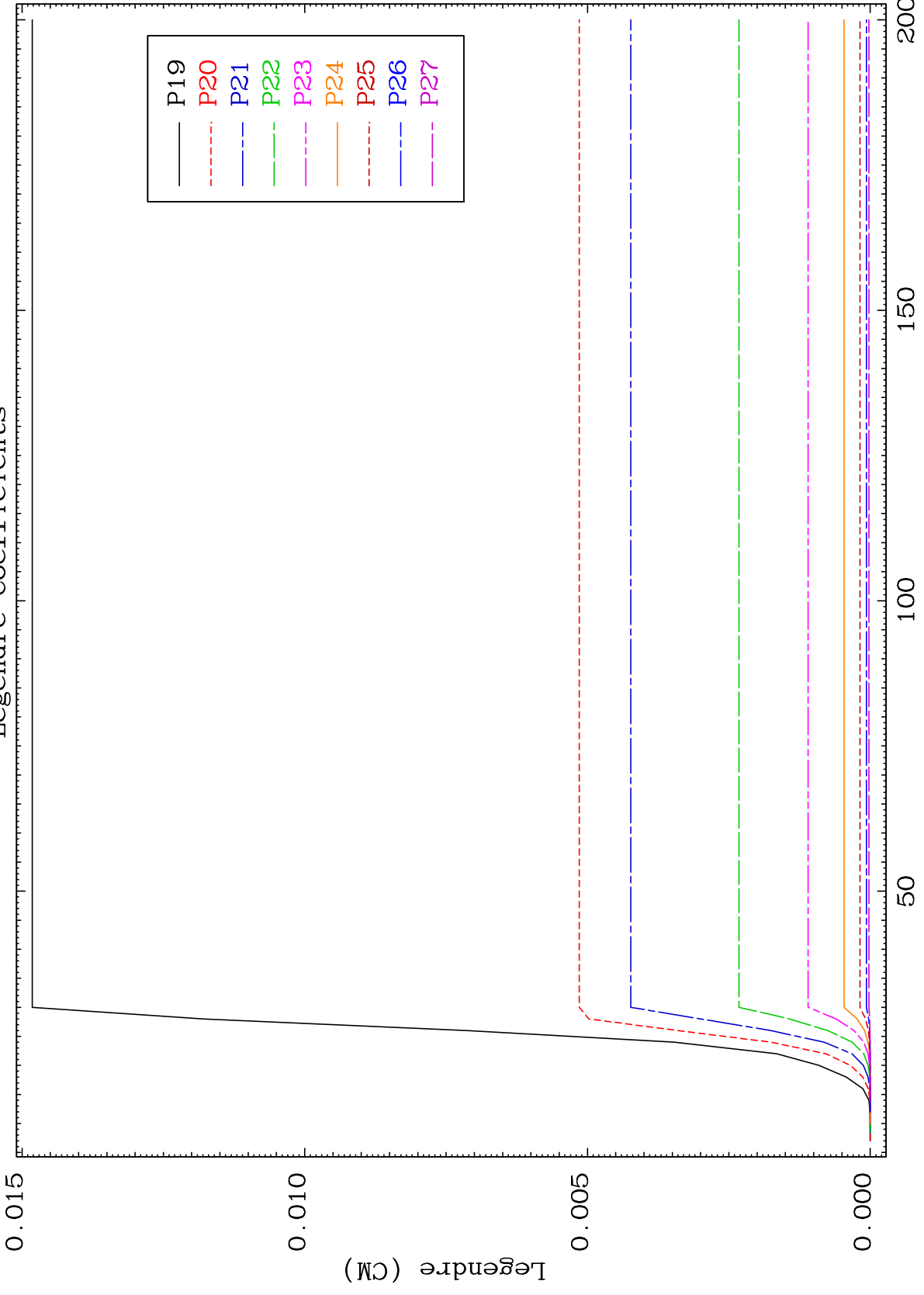
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



104

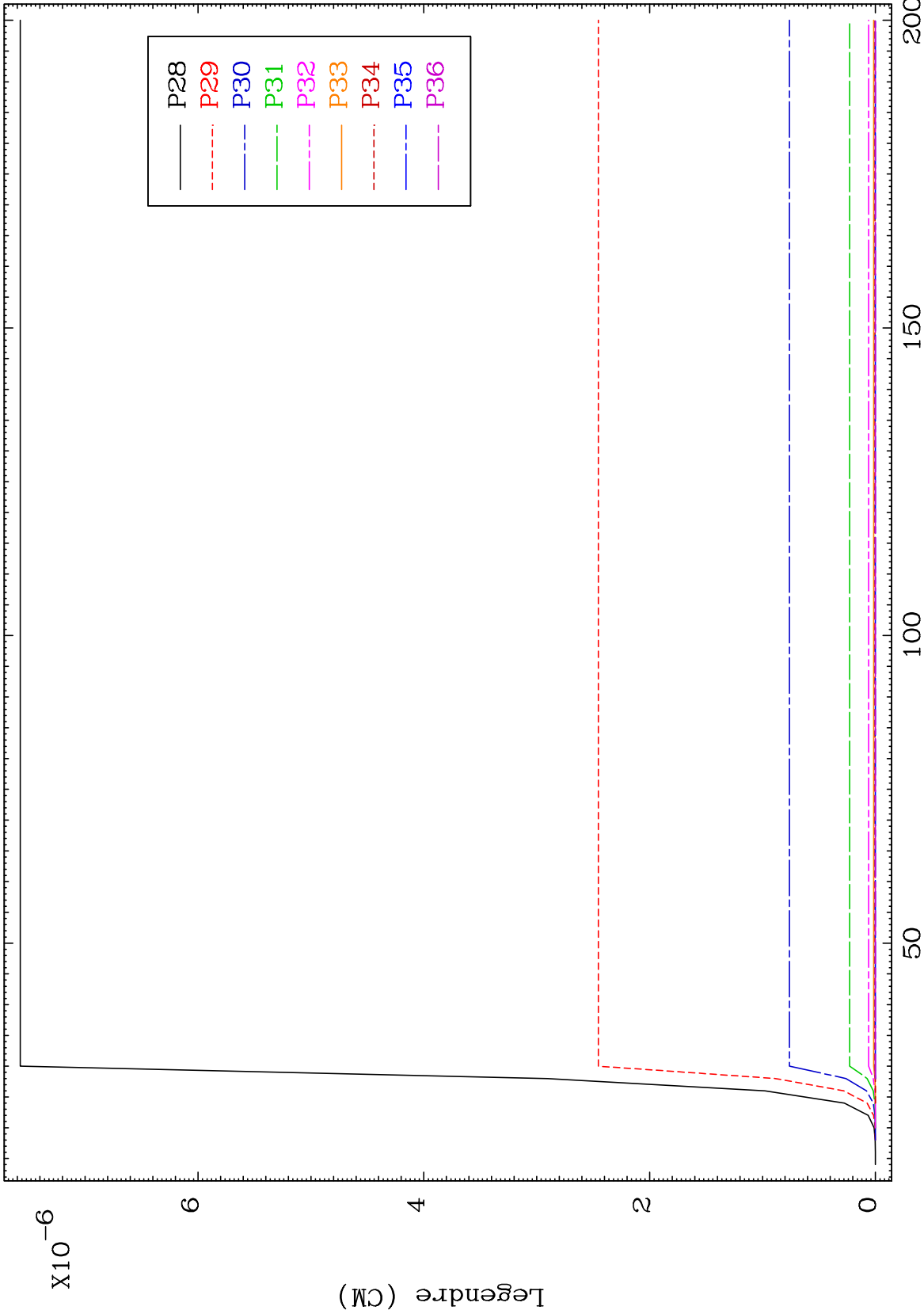
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



105

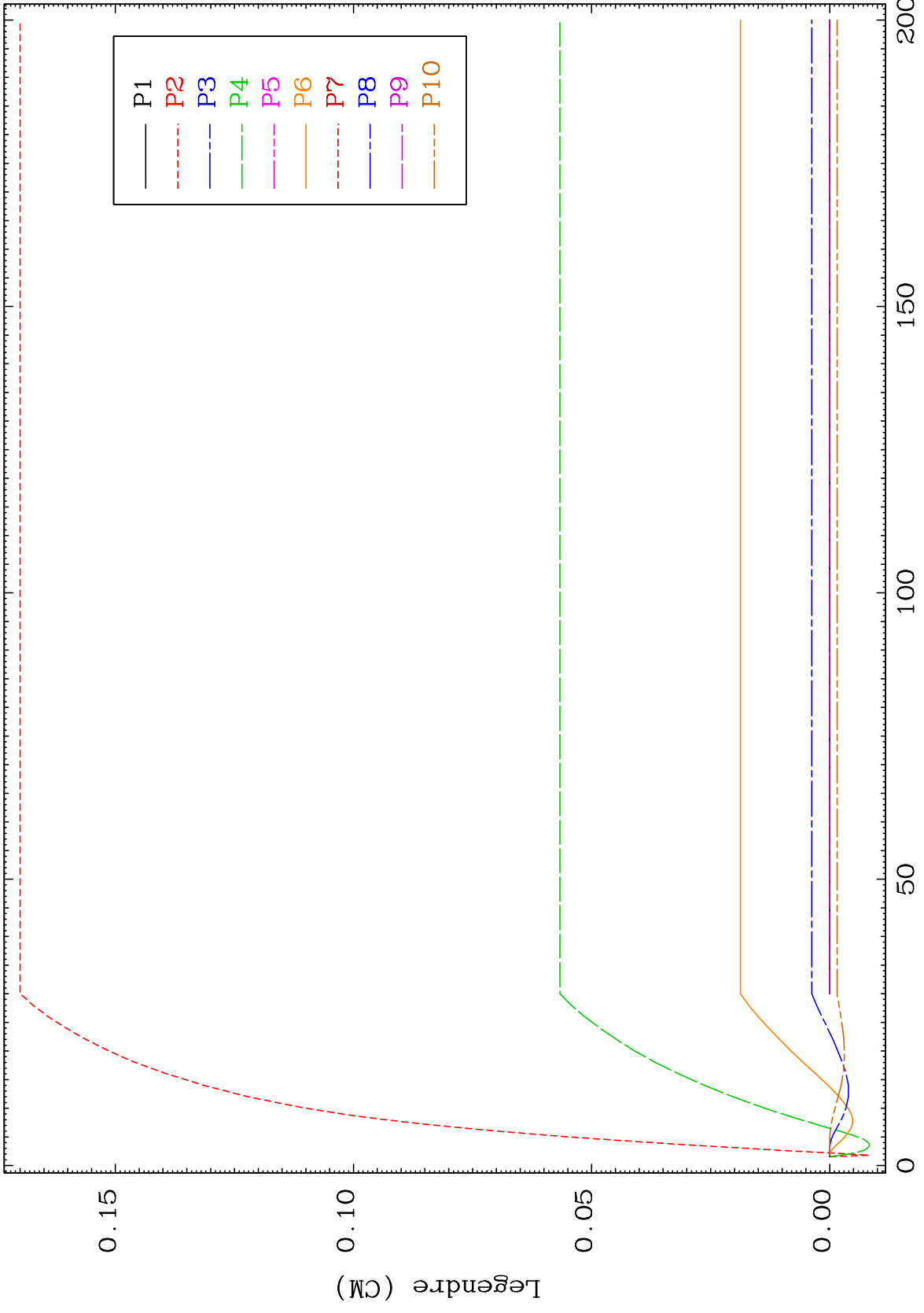
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

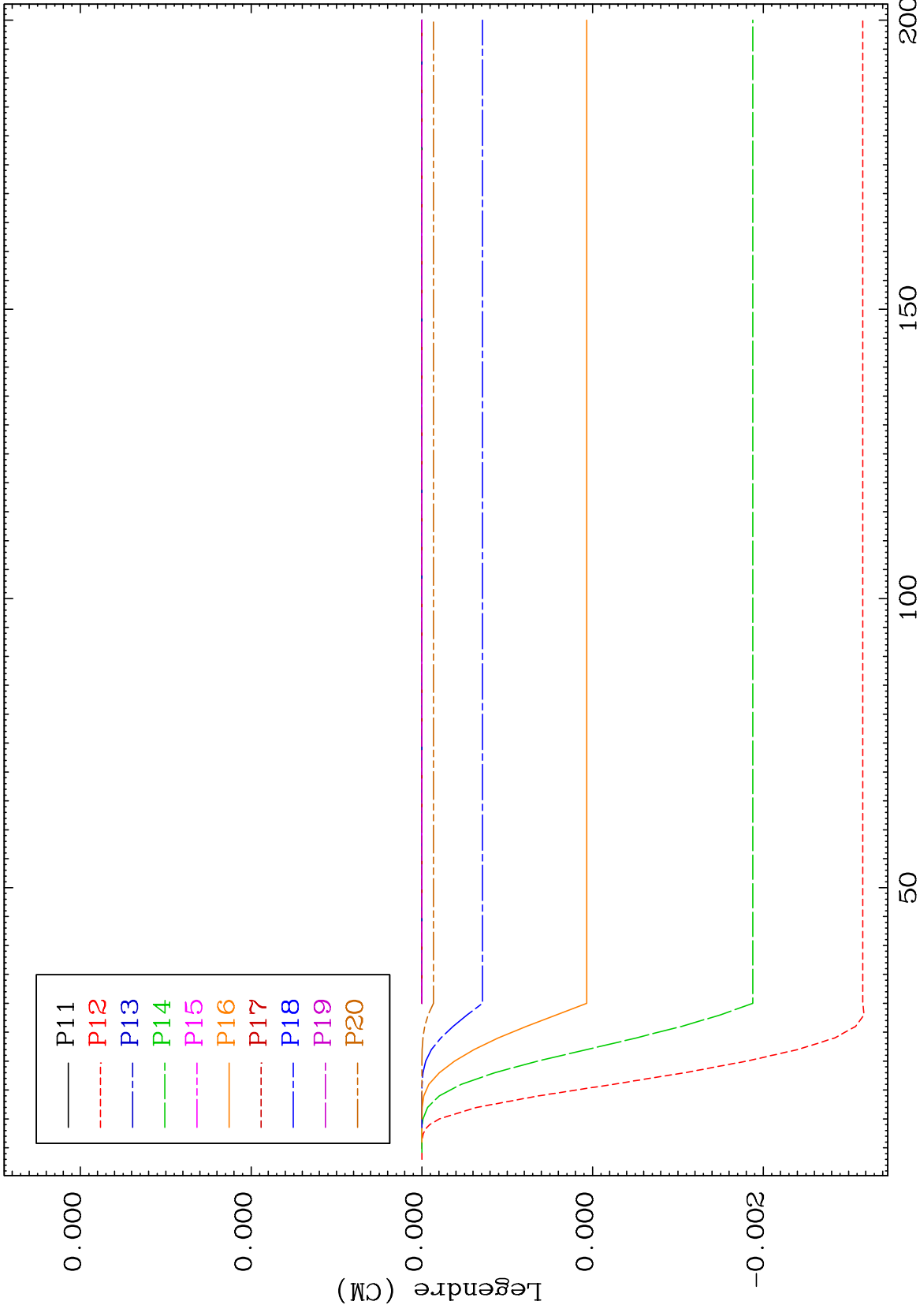
72-Hf-178



106

Incident Energy (MeV)

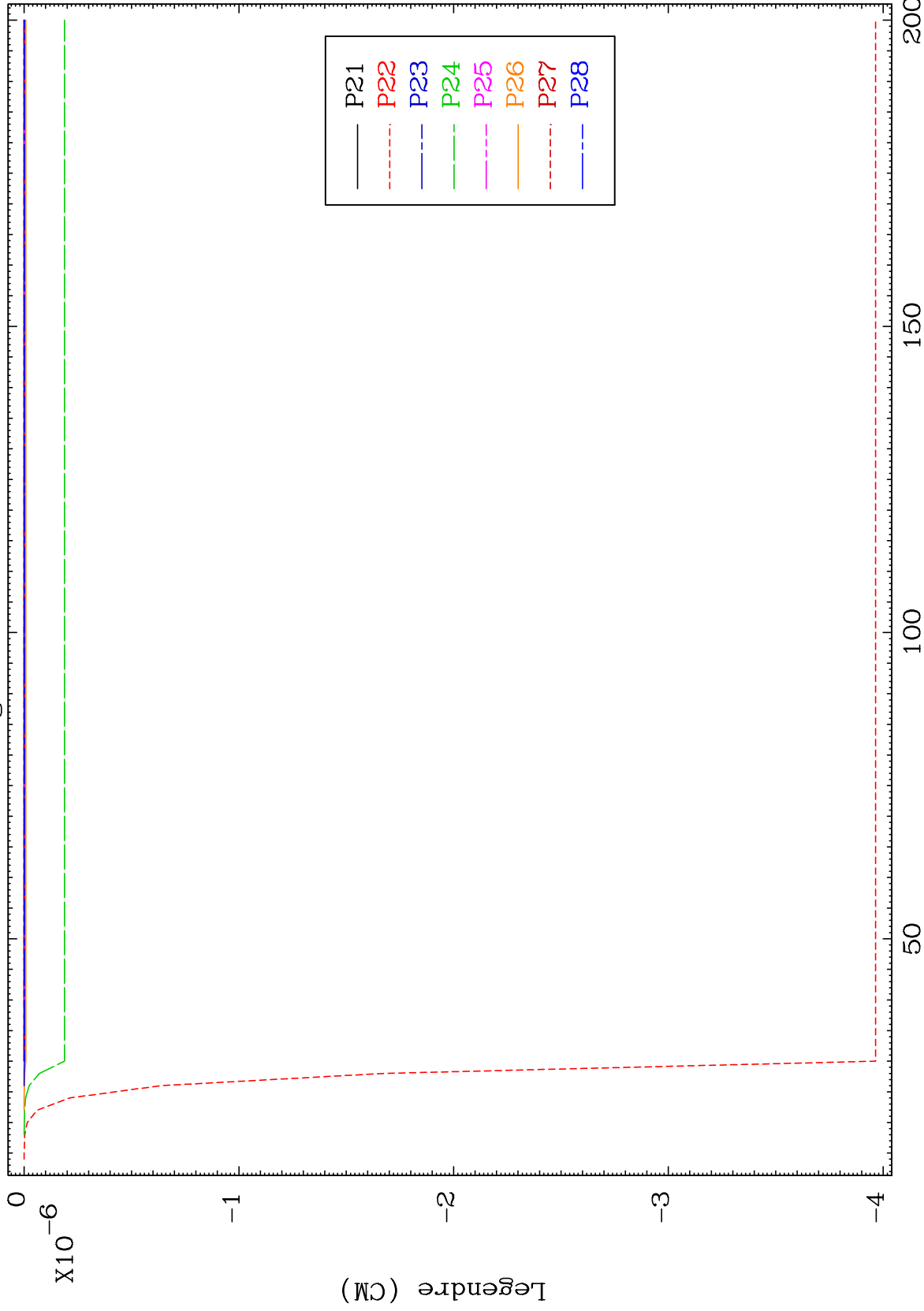
72-Hf-178



MAT 7237

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

72-Hf-178



108

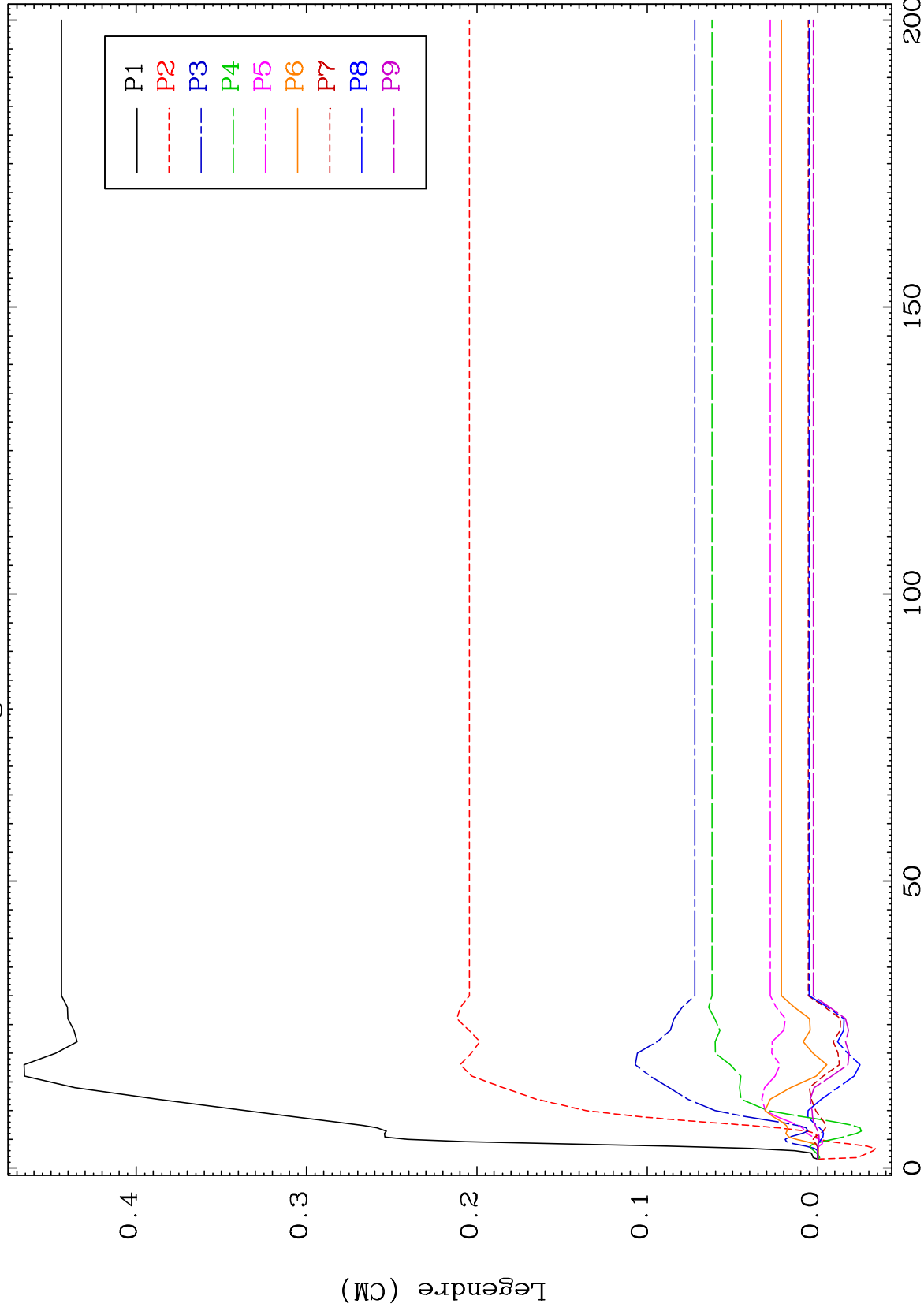
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



109

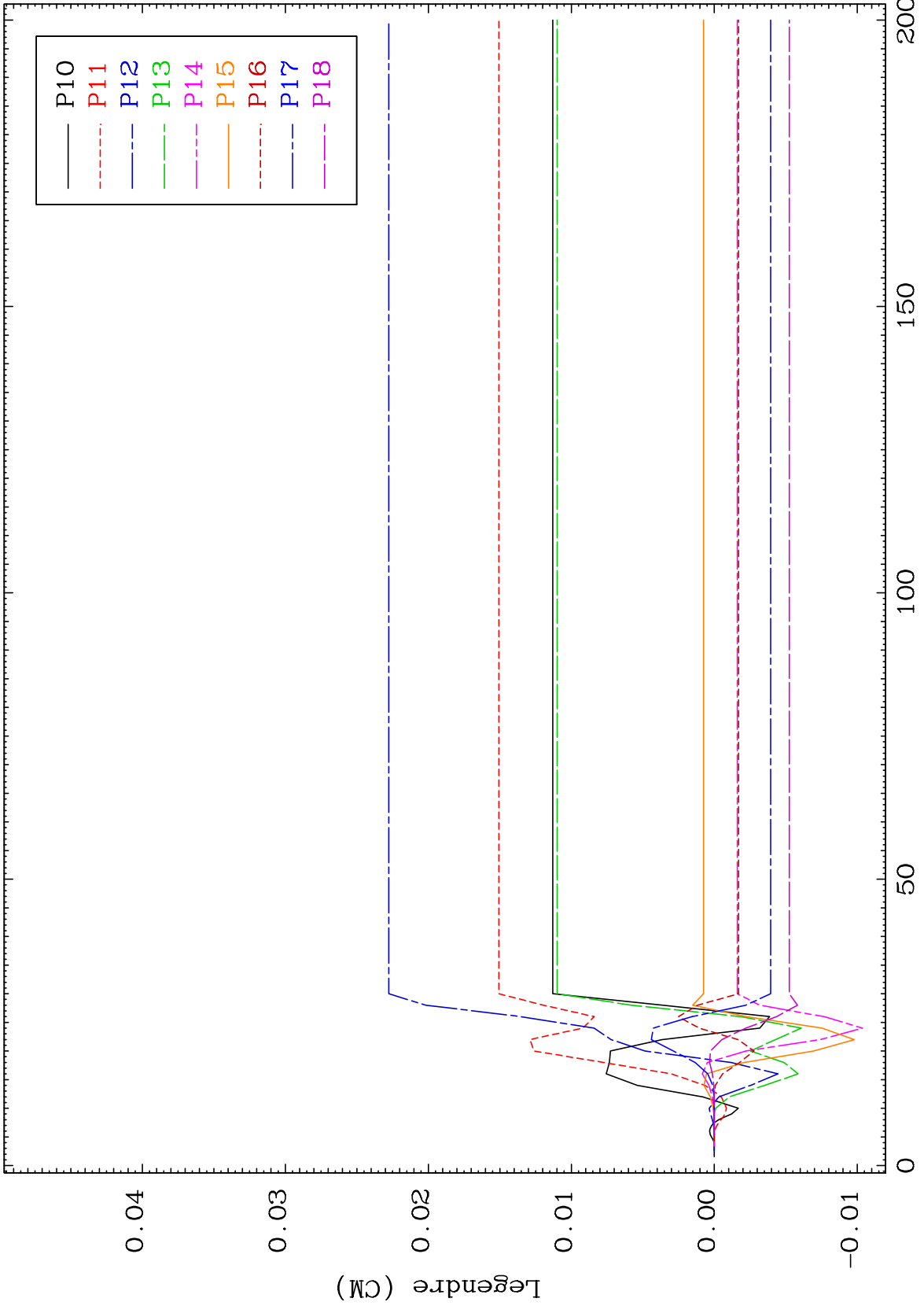
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



110

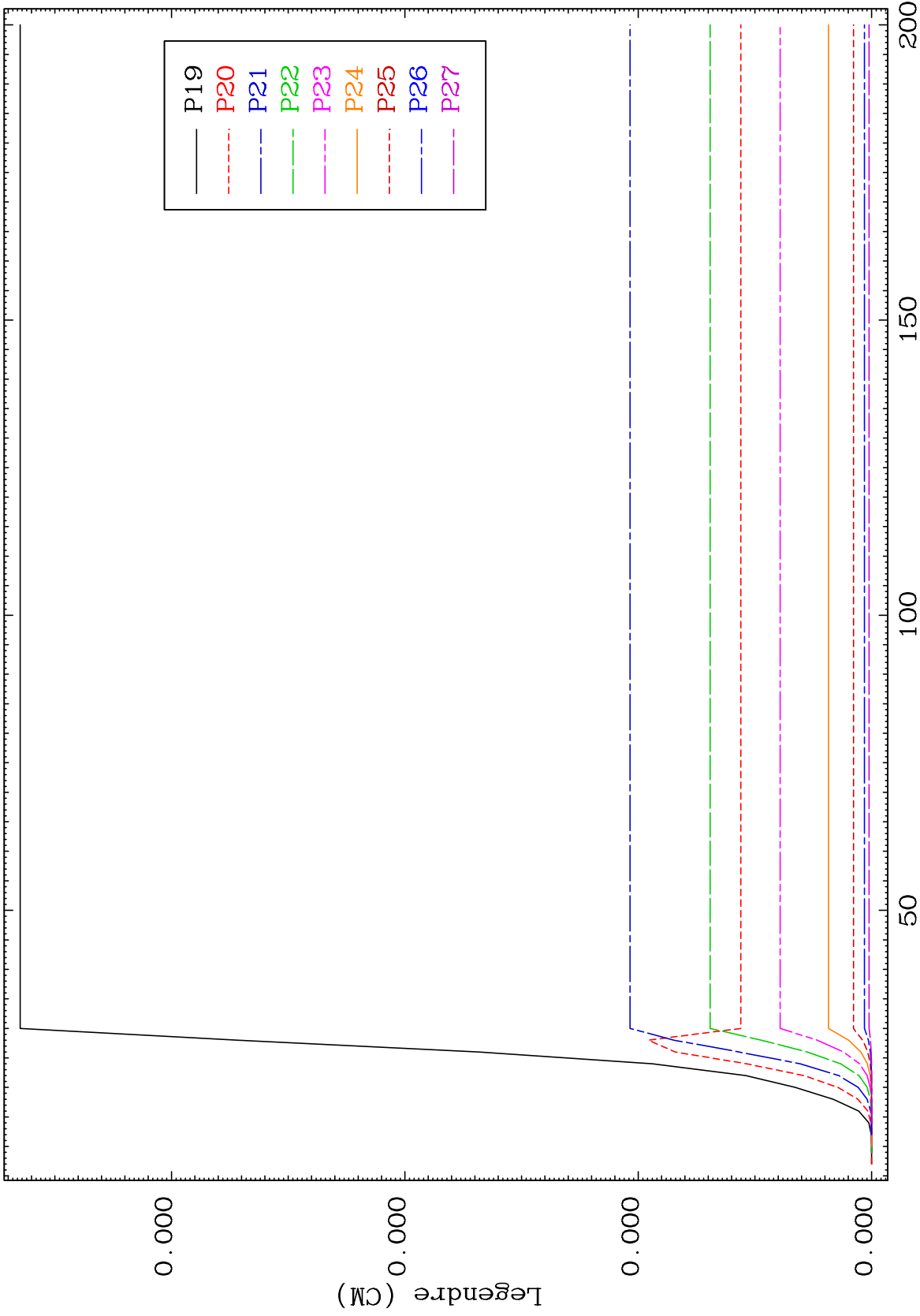
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



111

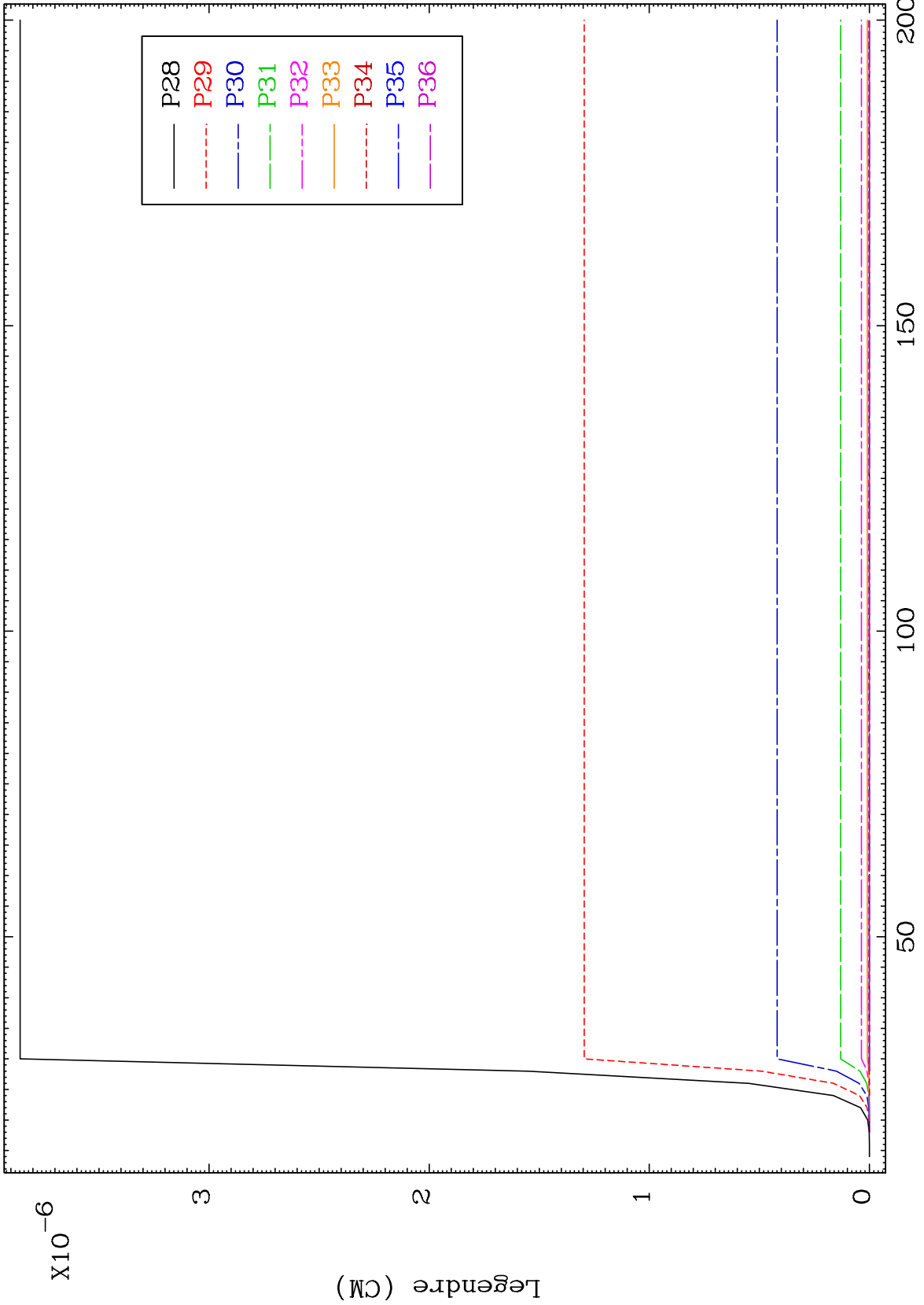
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



112

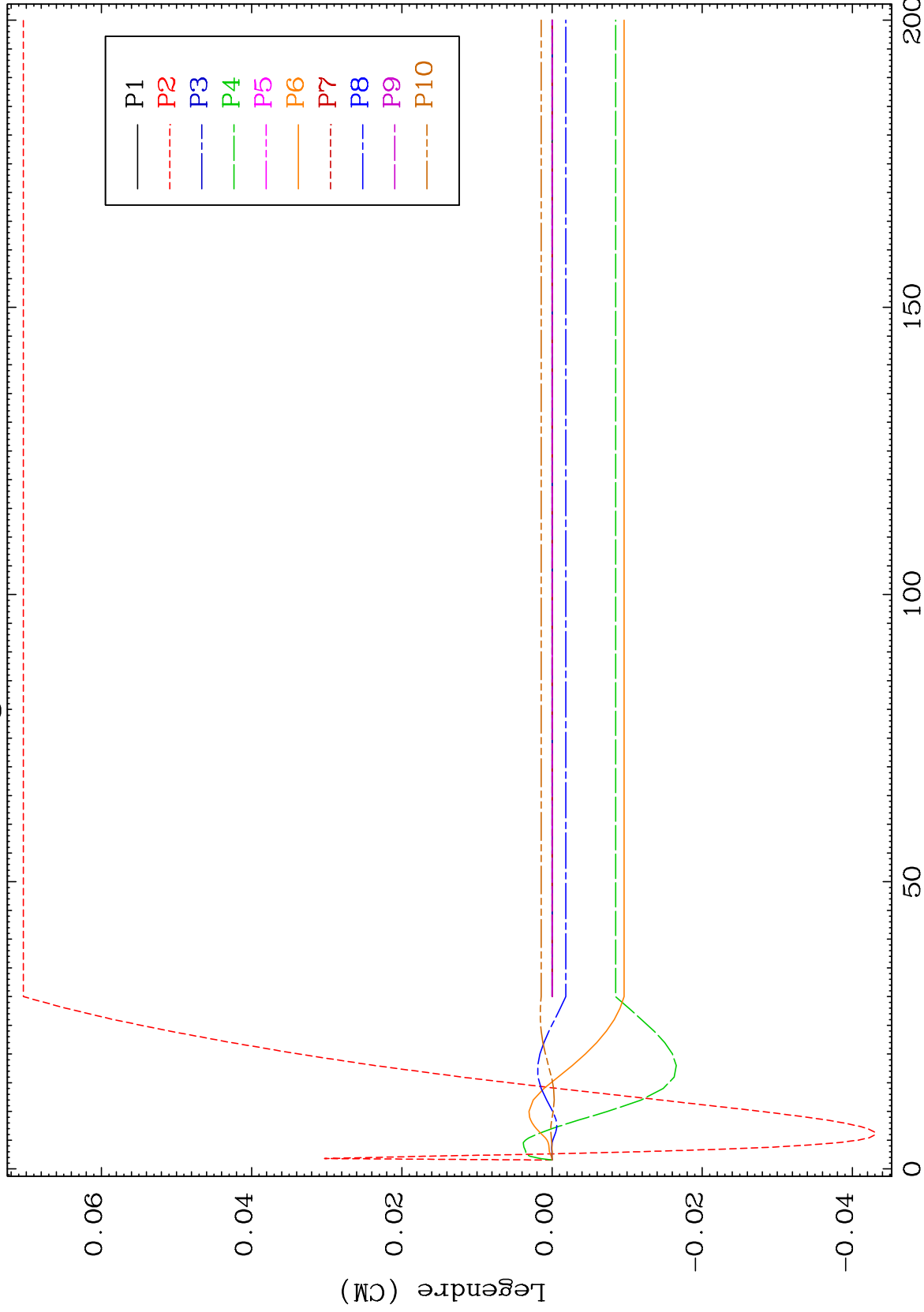
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



113

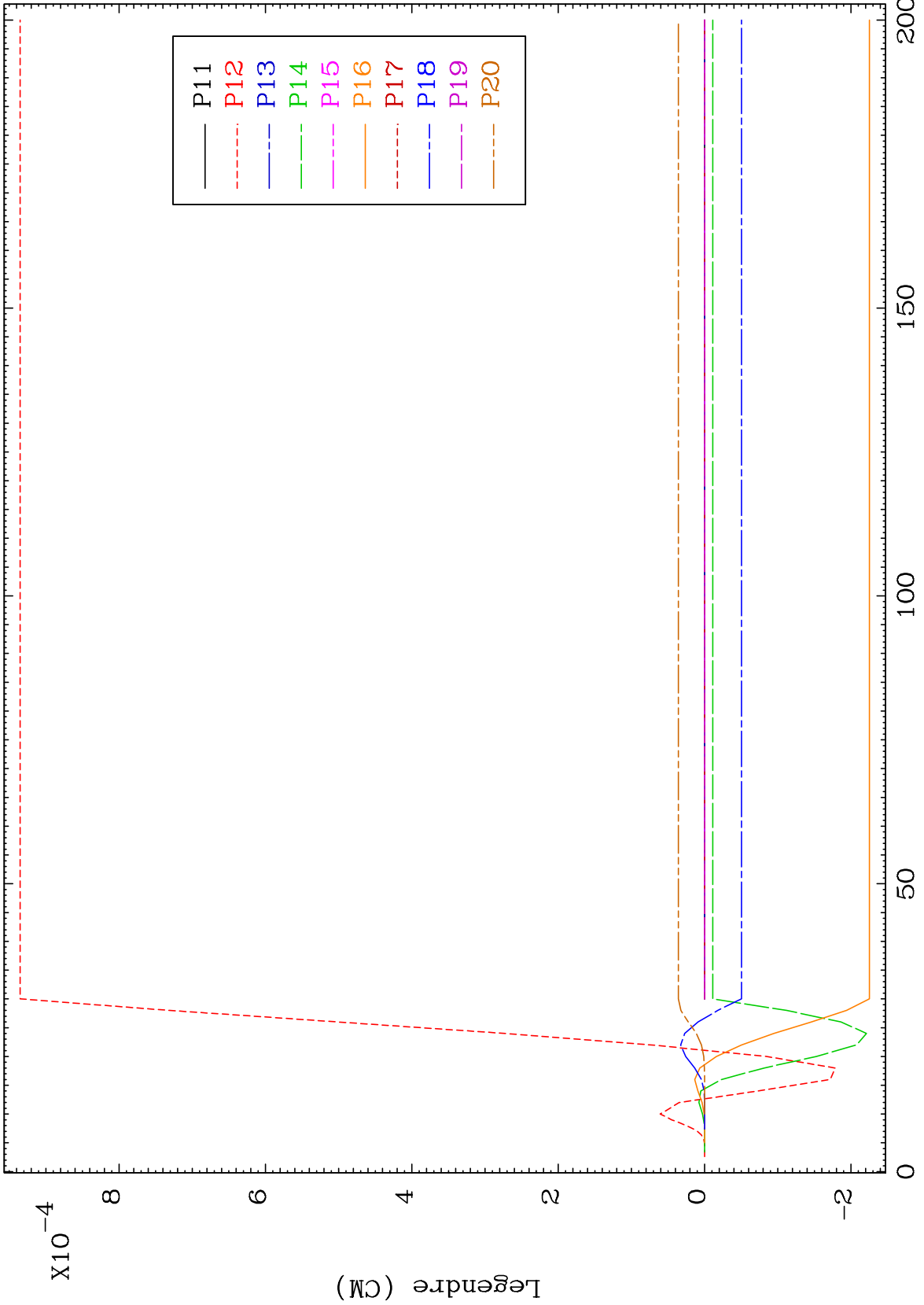
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



114

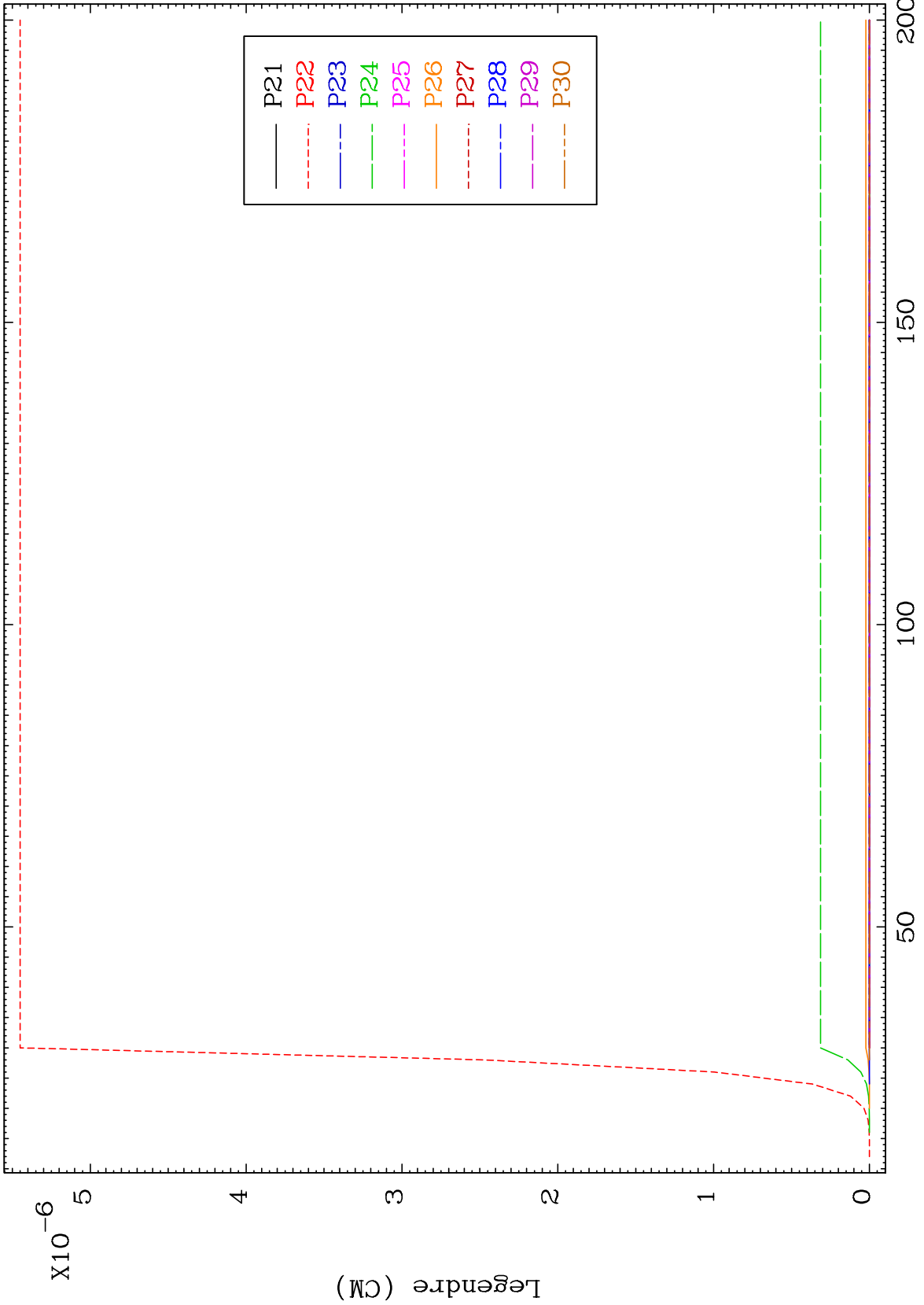
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



115

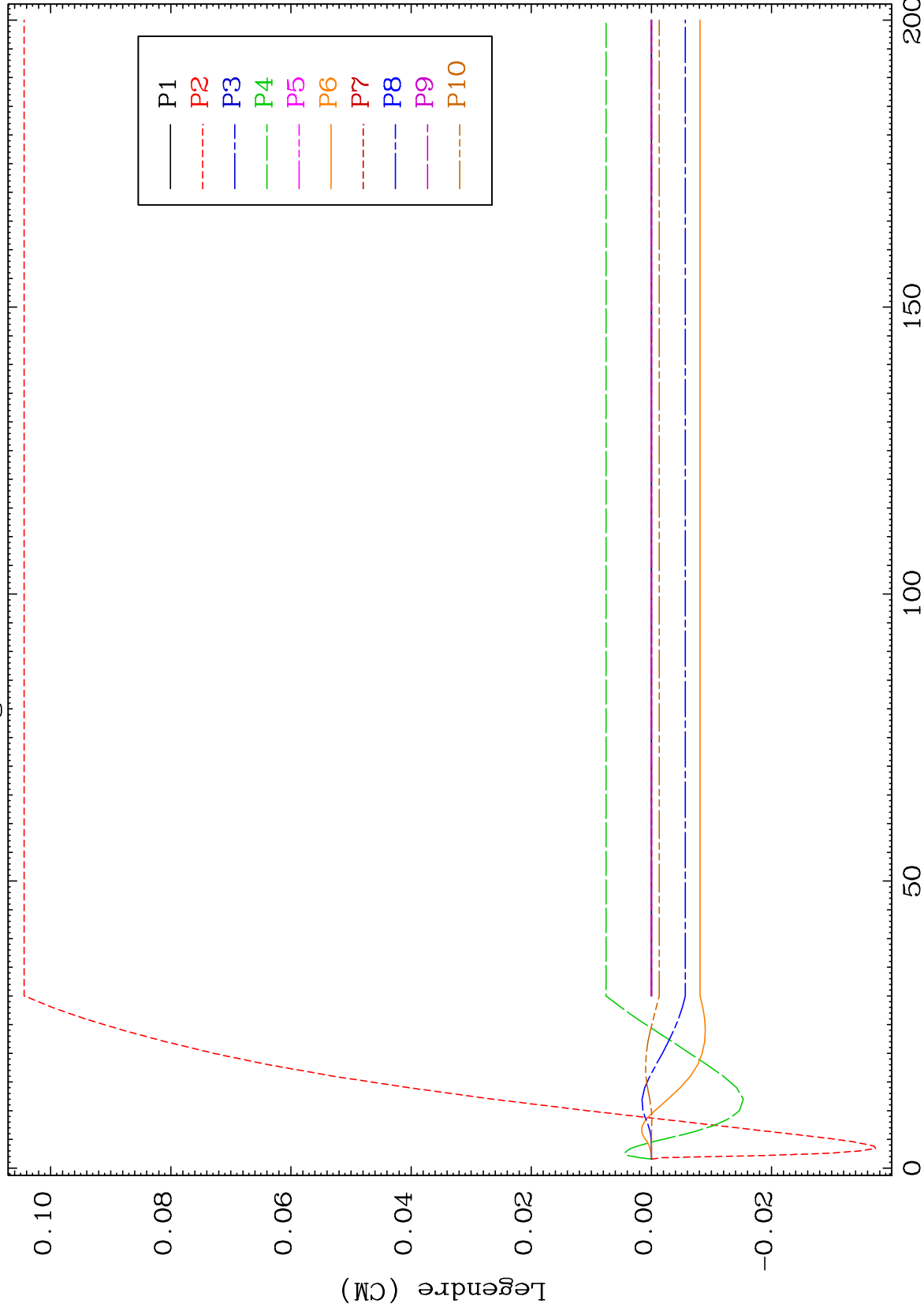
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



116

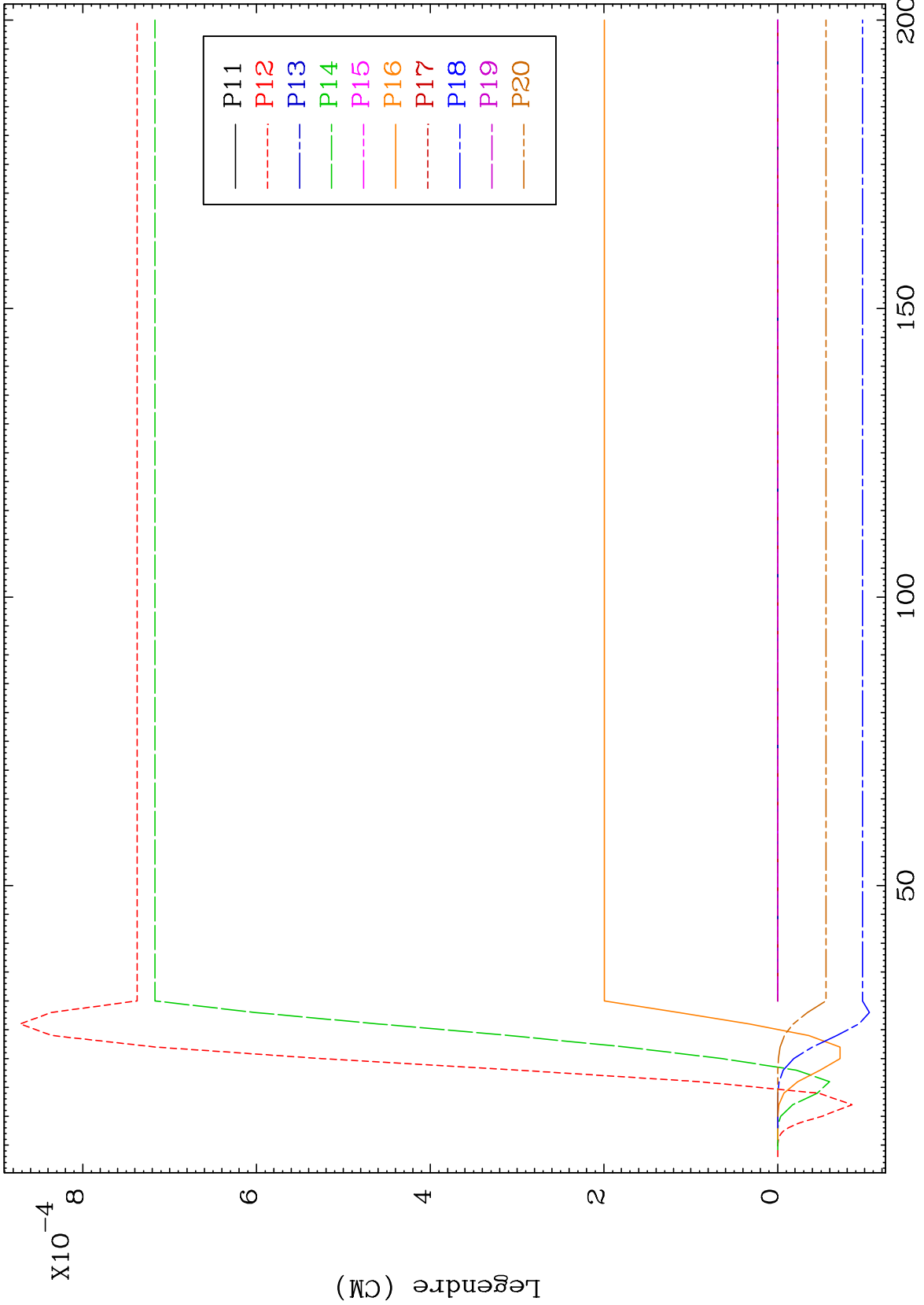
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



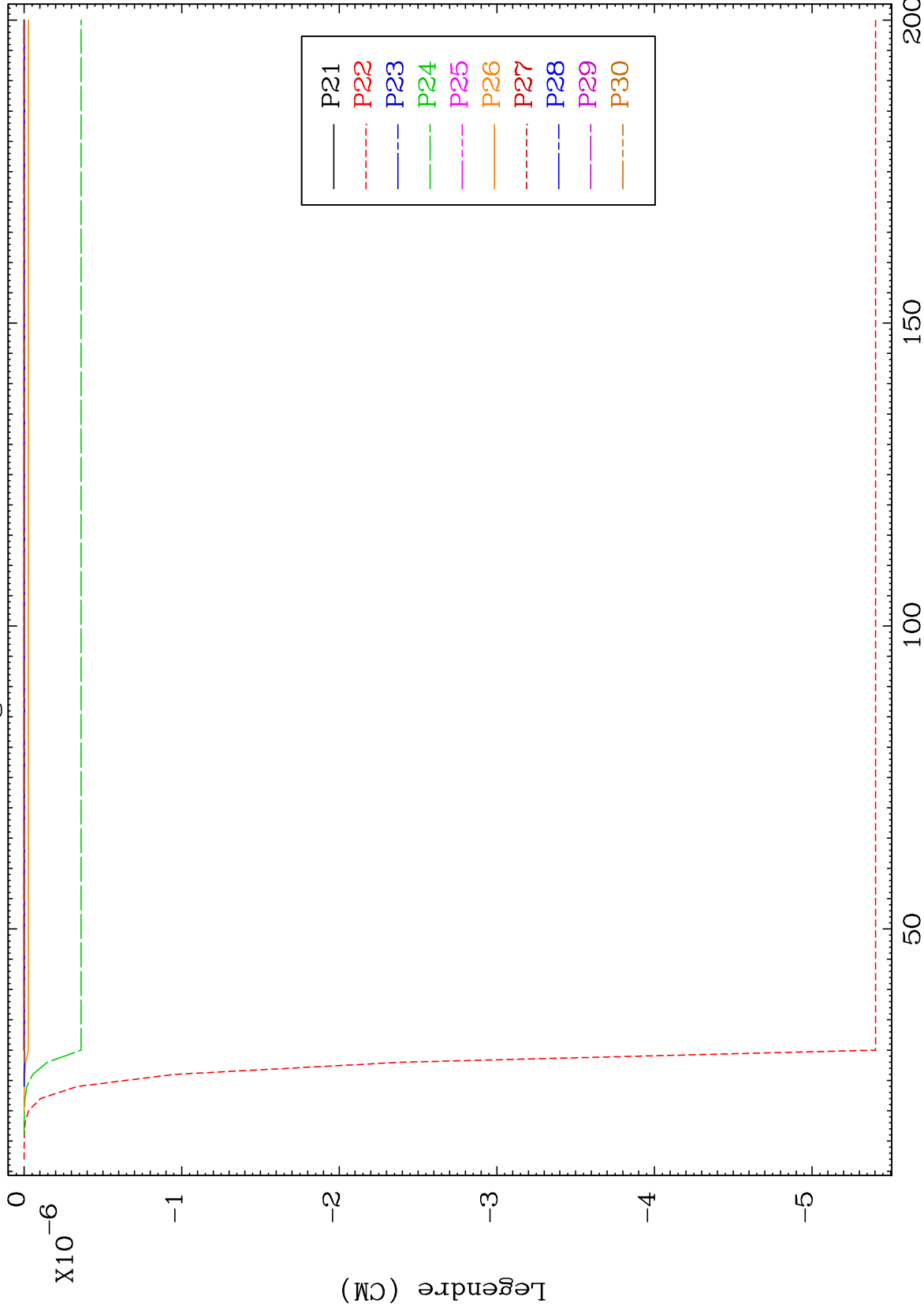
117

72-Hf-178

MAT 7237

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

72-Hf-178



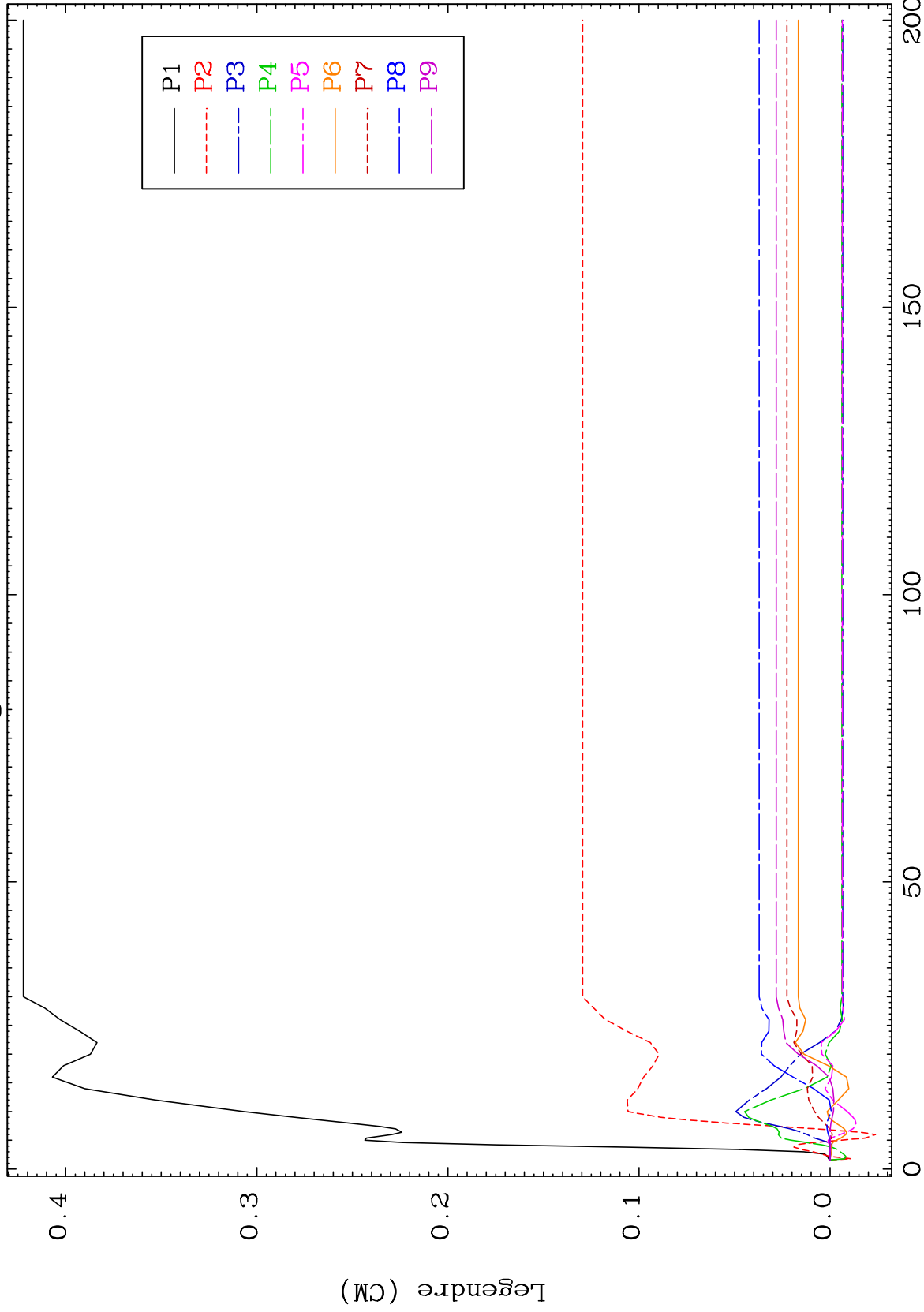
118

72-Hf-178

MAT 7237

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

72-Hf-178



119

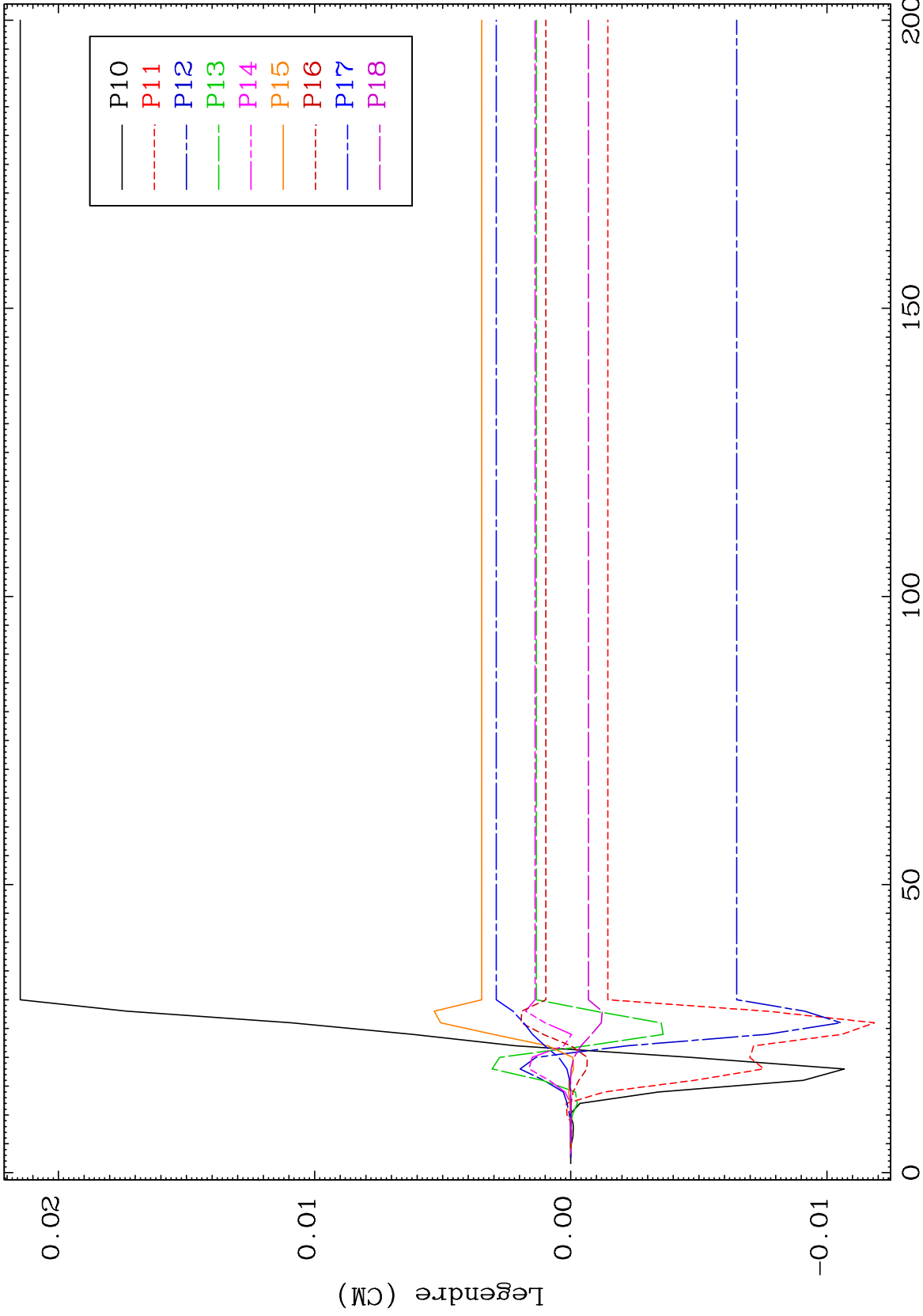
Incident Energy (MeV)

72-Hf-178

MAT 7237

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

72-Hf-178



72-Hf-178

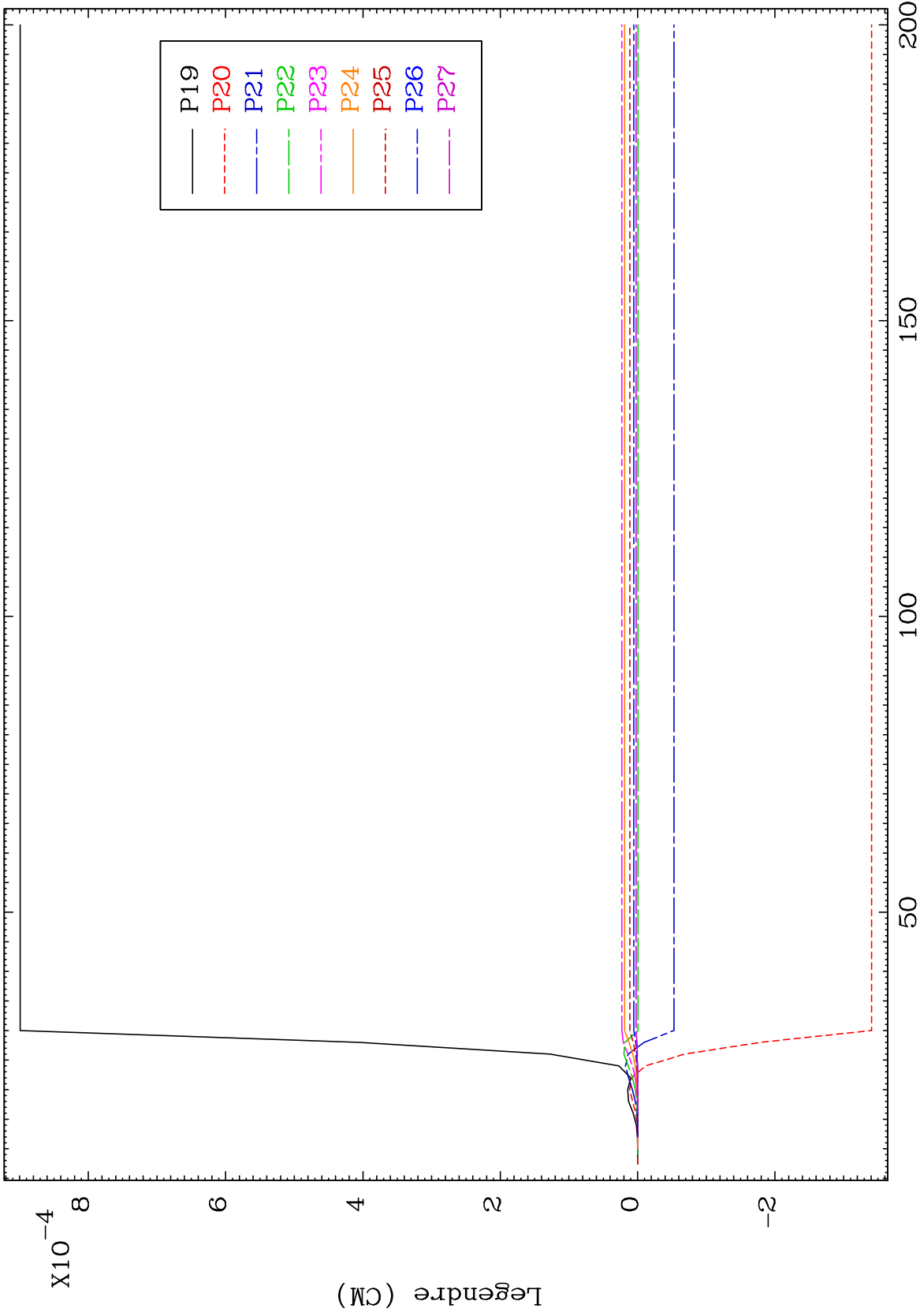
Incident Energy (MeV)

120

MAT 7237

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

72-Hf-178



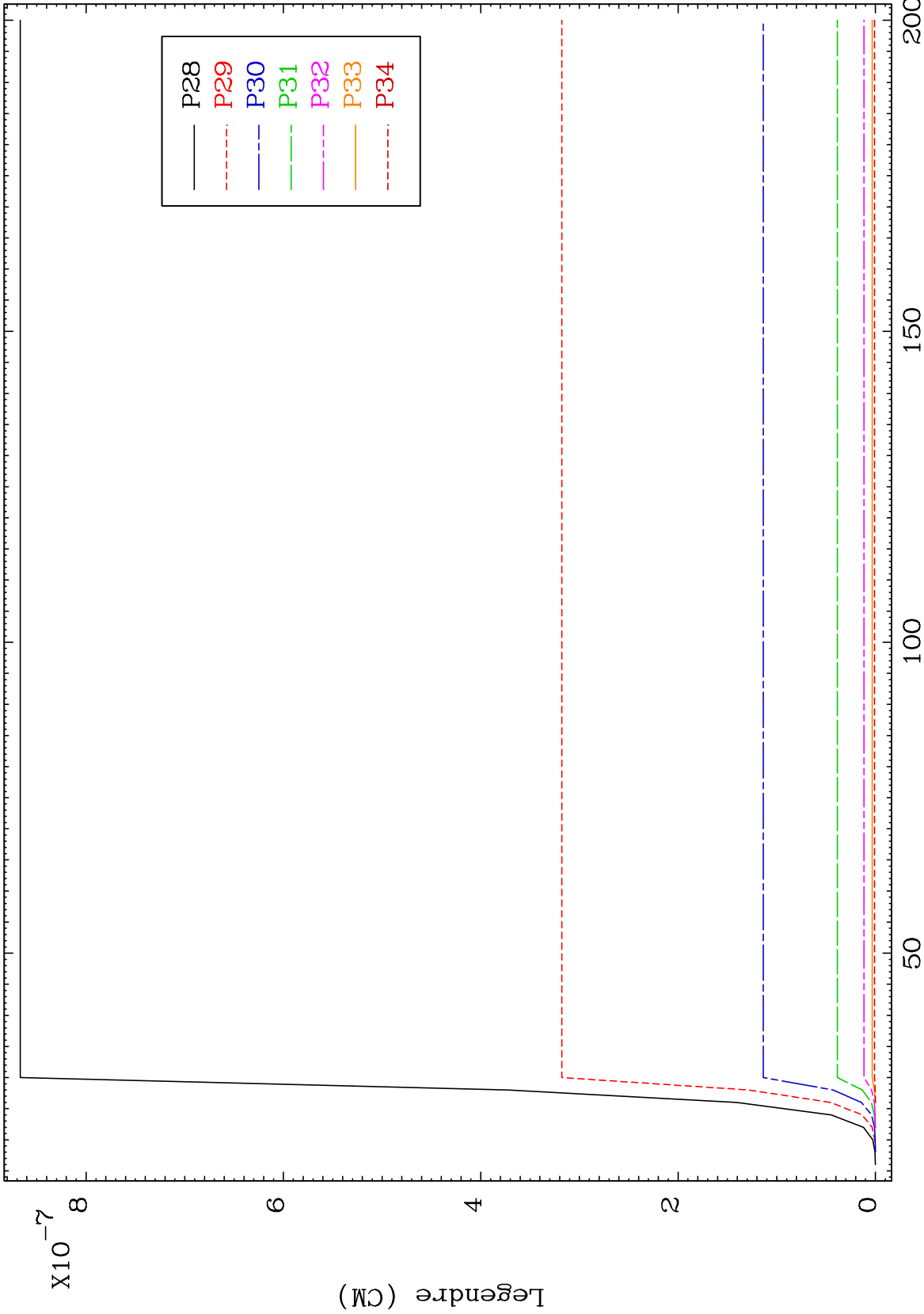
121

72-Hf-178

MAT 7237

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

72-Hf-178



122

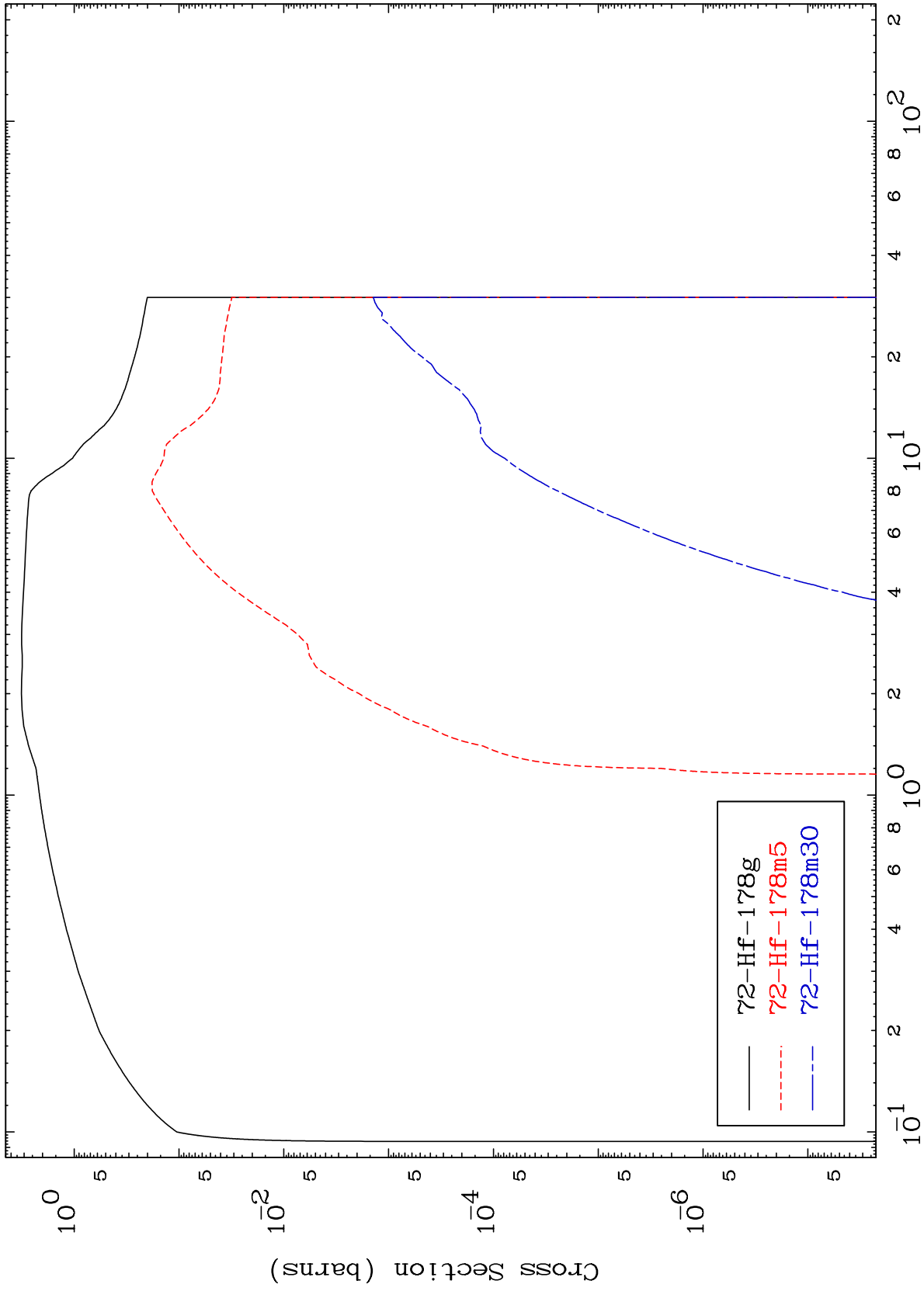
Incident Energy (MeV)

72-Hf-178

MAT 7237

72-Hf-178

Inelastic Radionuclide Production Cross Section



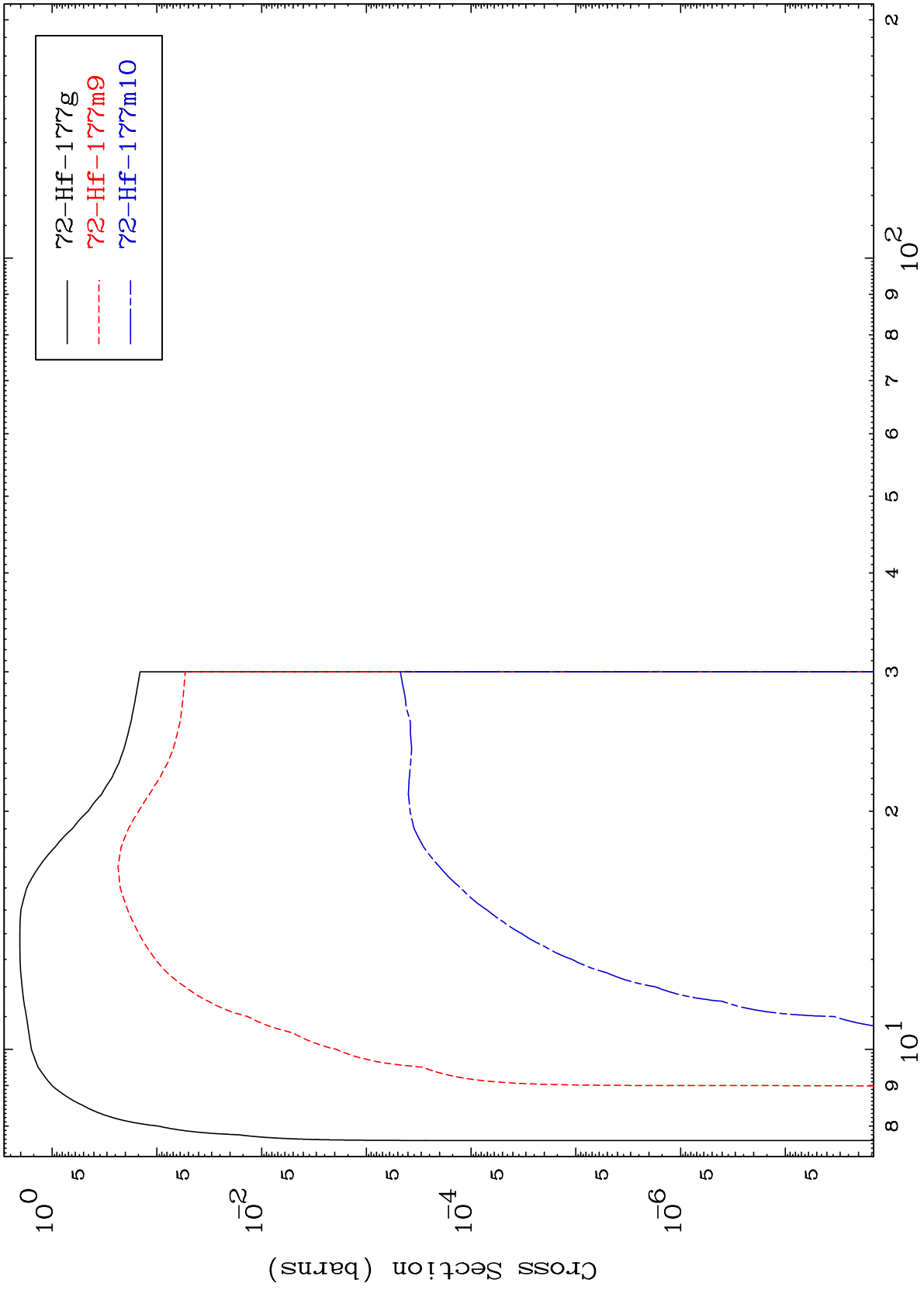
123

72-Hf-178

MAT 7237

72-Hf-178

(n,2n)
Radionuclide Production Cross Section



72-Hf-177g
72-Hf-177m9
72-Hf-177m10

124

Incident Energy (MeV)

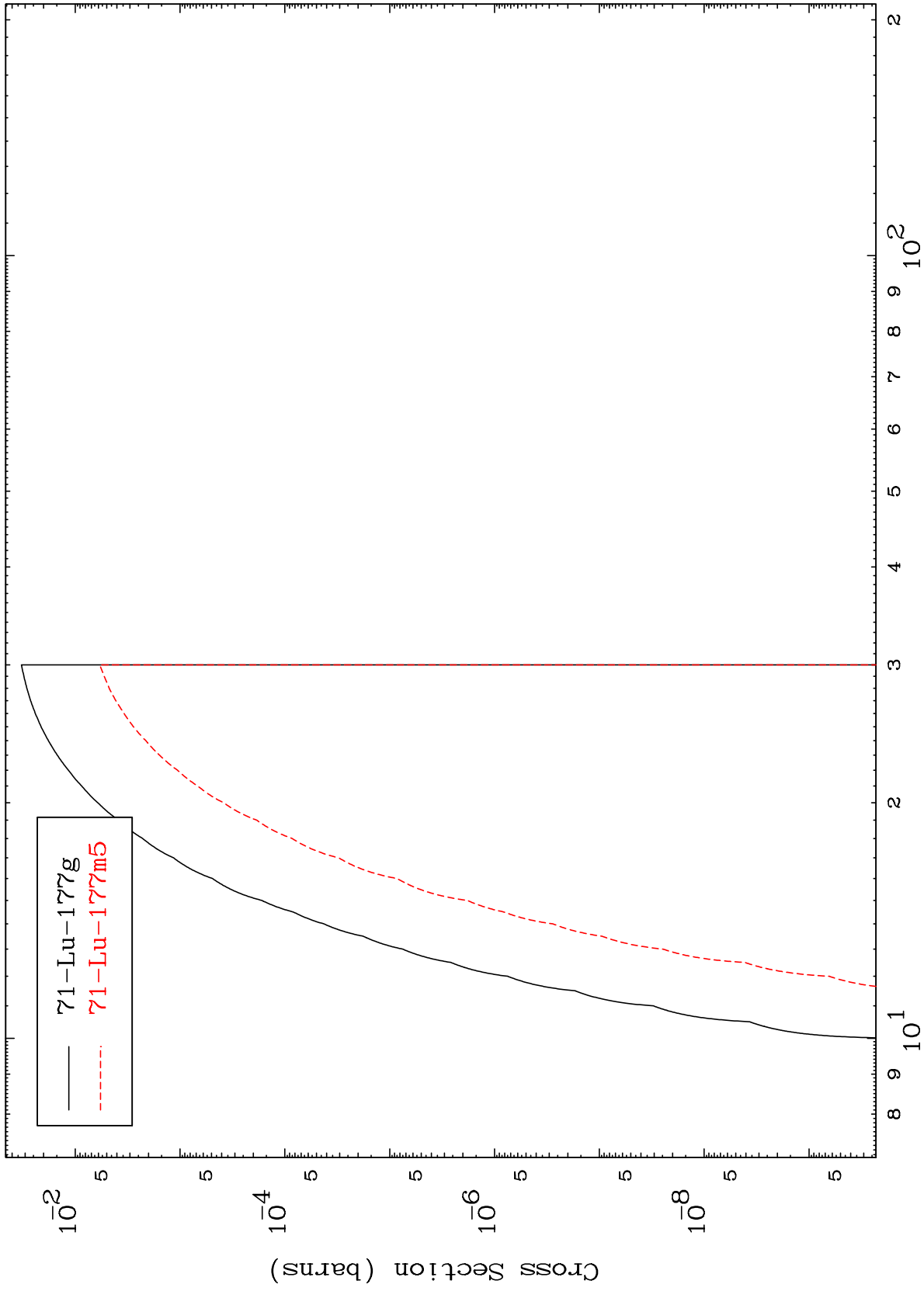
72-Hf-178

MAT 7237

(n,n') p

72-Hf-178

Radionuclide Production Cross Section



125

Incident Energy (MeV)

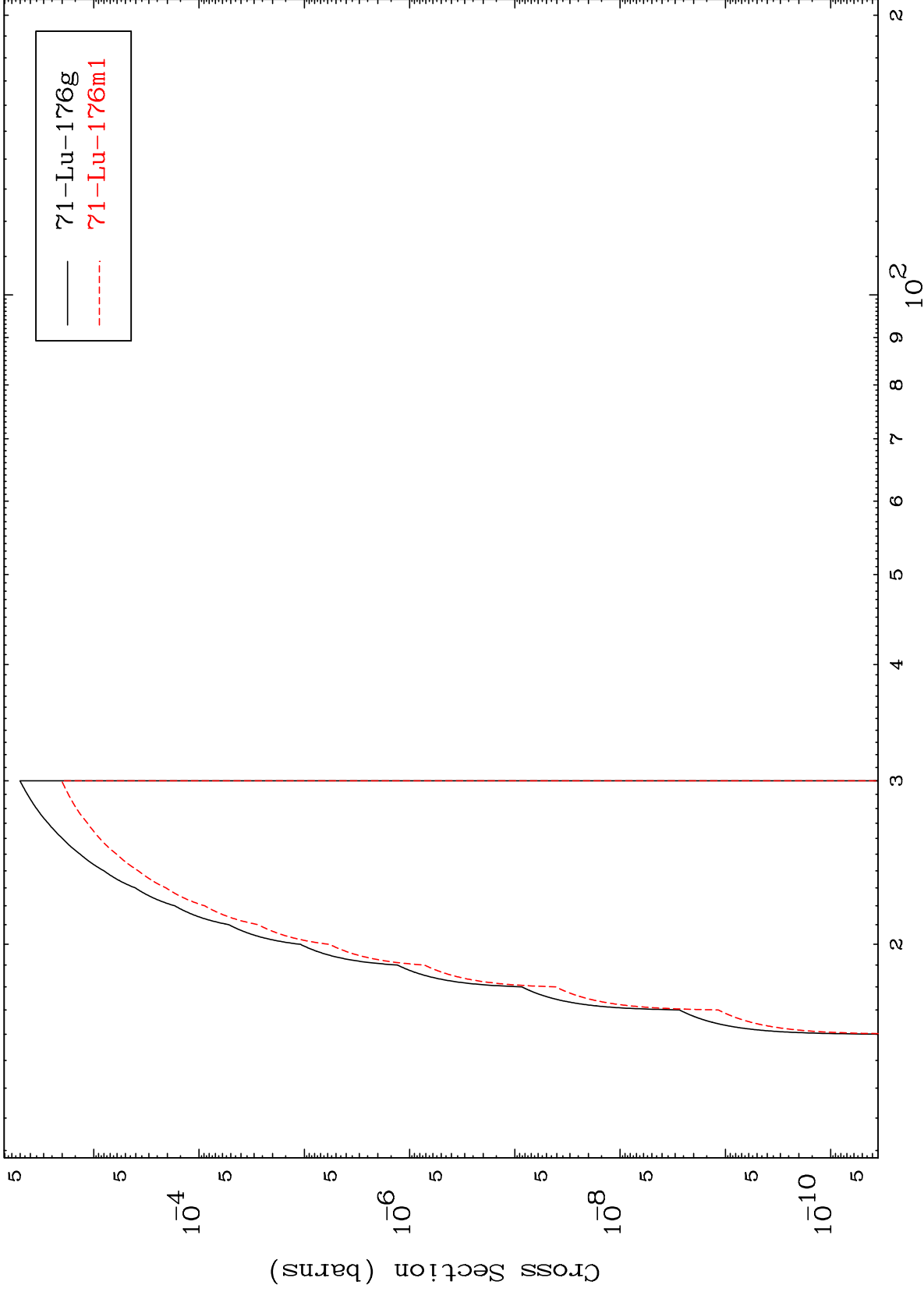
72-Hf-178

MAT 7237

(n,n') d

72-Hf-178

Radionuclide Production Cross Section



126

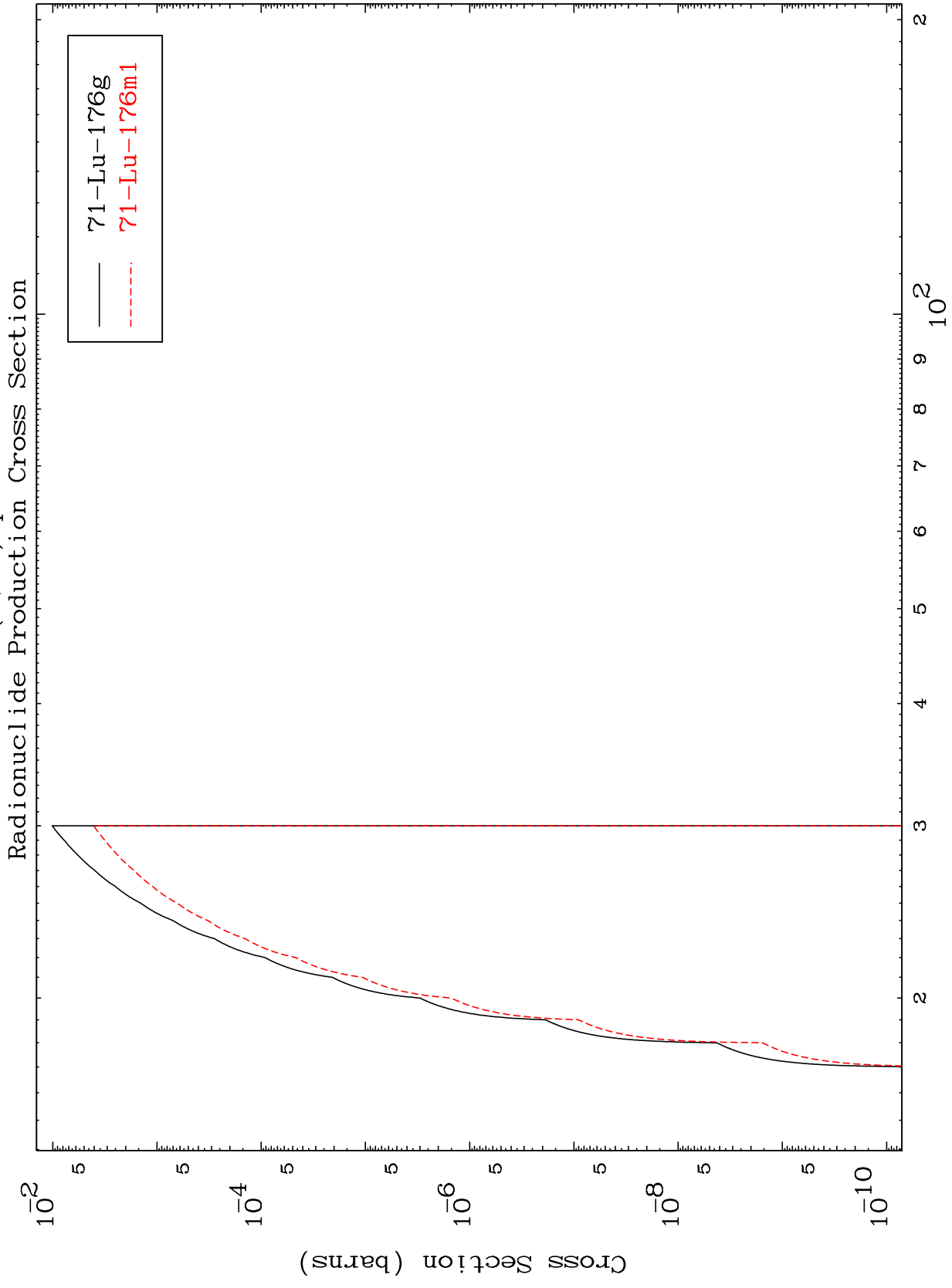
Incident Energy (MeV)

72-Hf-178

MAT 7237

(n,2n) p

72-Hf-178



127

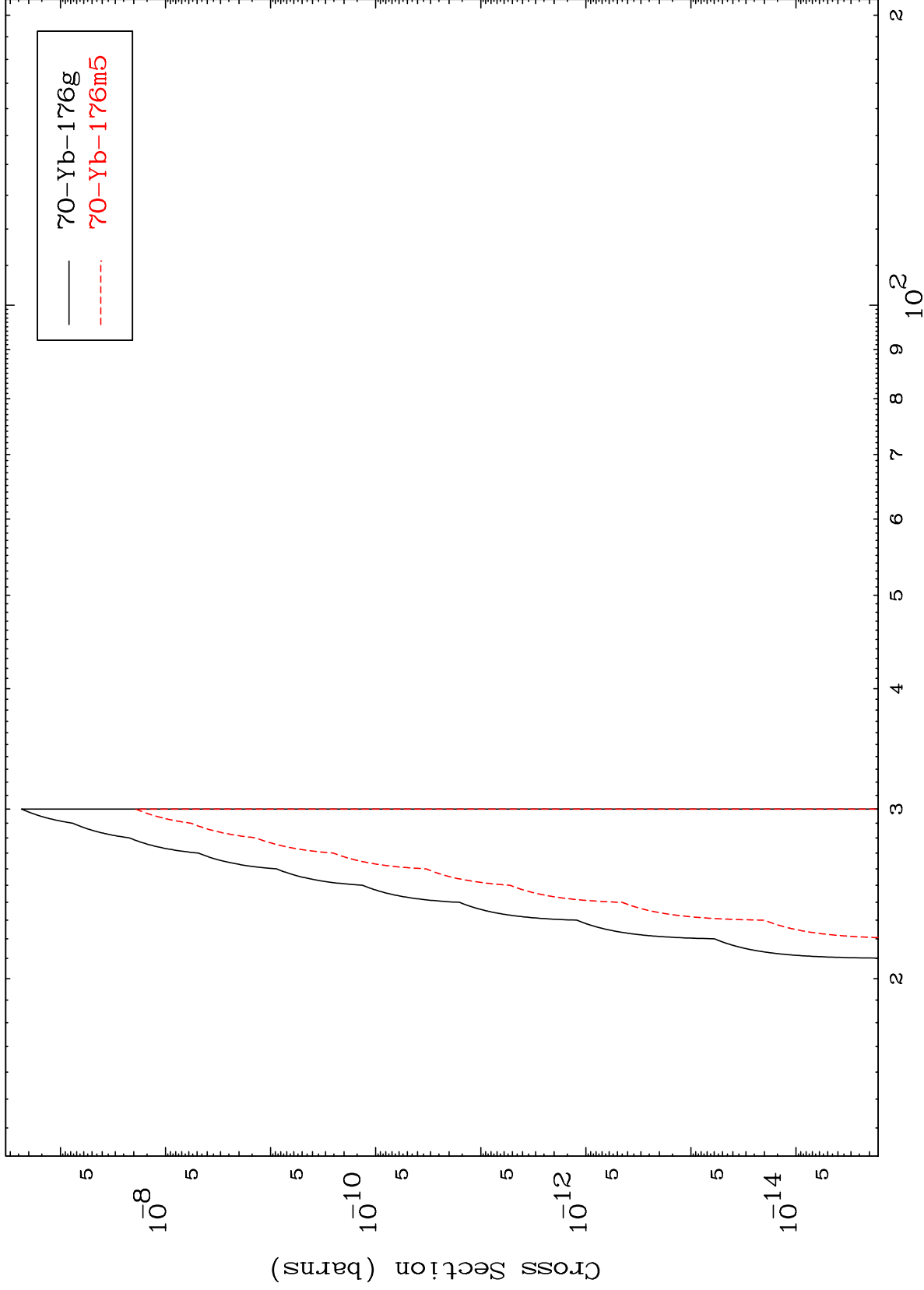
72-Hf-178

MAT 7237

(n,2n) p

72-Hf-178

Radionuclide Production Cross Section



128

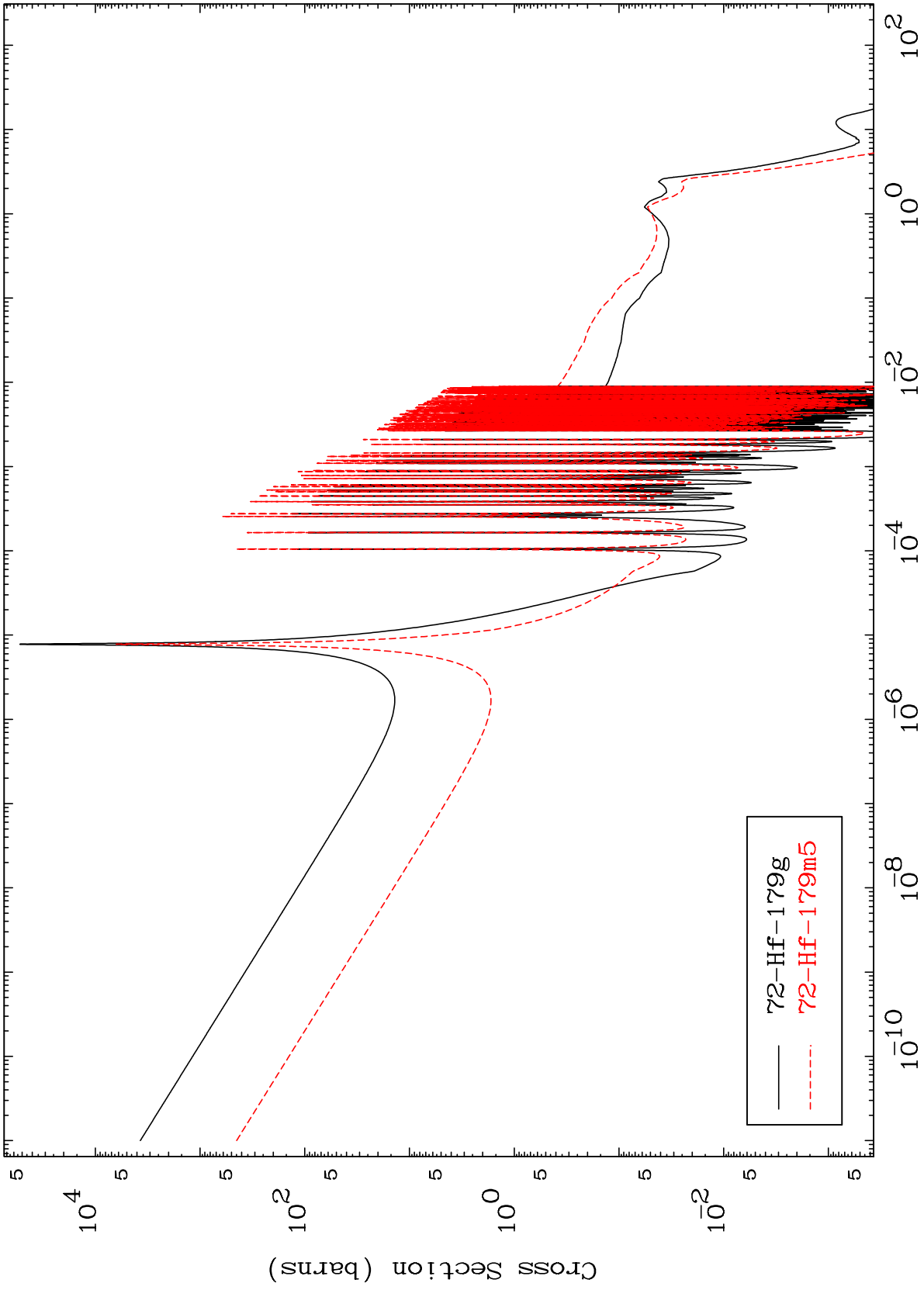
Incident Energy (MeV)

72-Hf-178

MAT 7237

72-Hf-178

(n,γ)
Radionuclide Production Cross Section



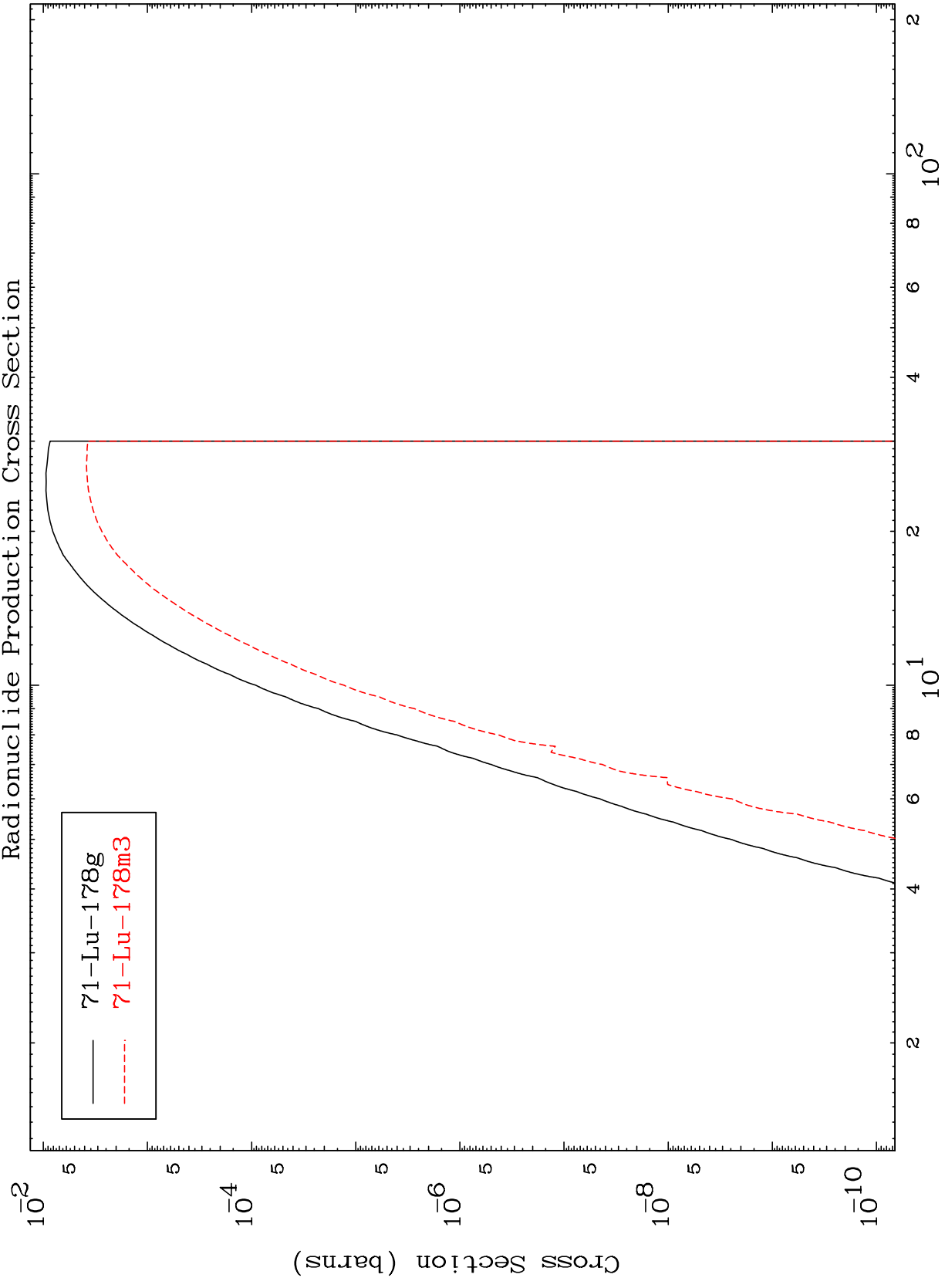
129

72-Hf-178

MAT 7237

72-Hf-178

Radionuclide Production Cross Section (n,p)



71-Lu-178g
71-Lu-178m3

130

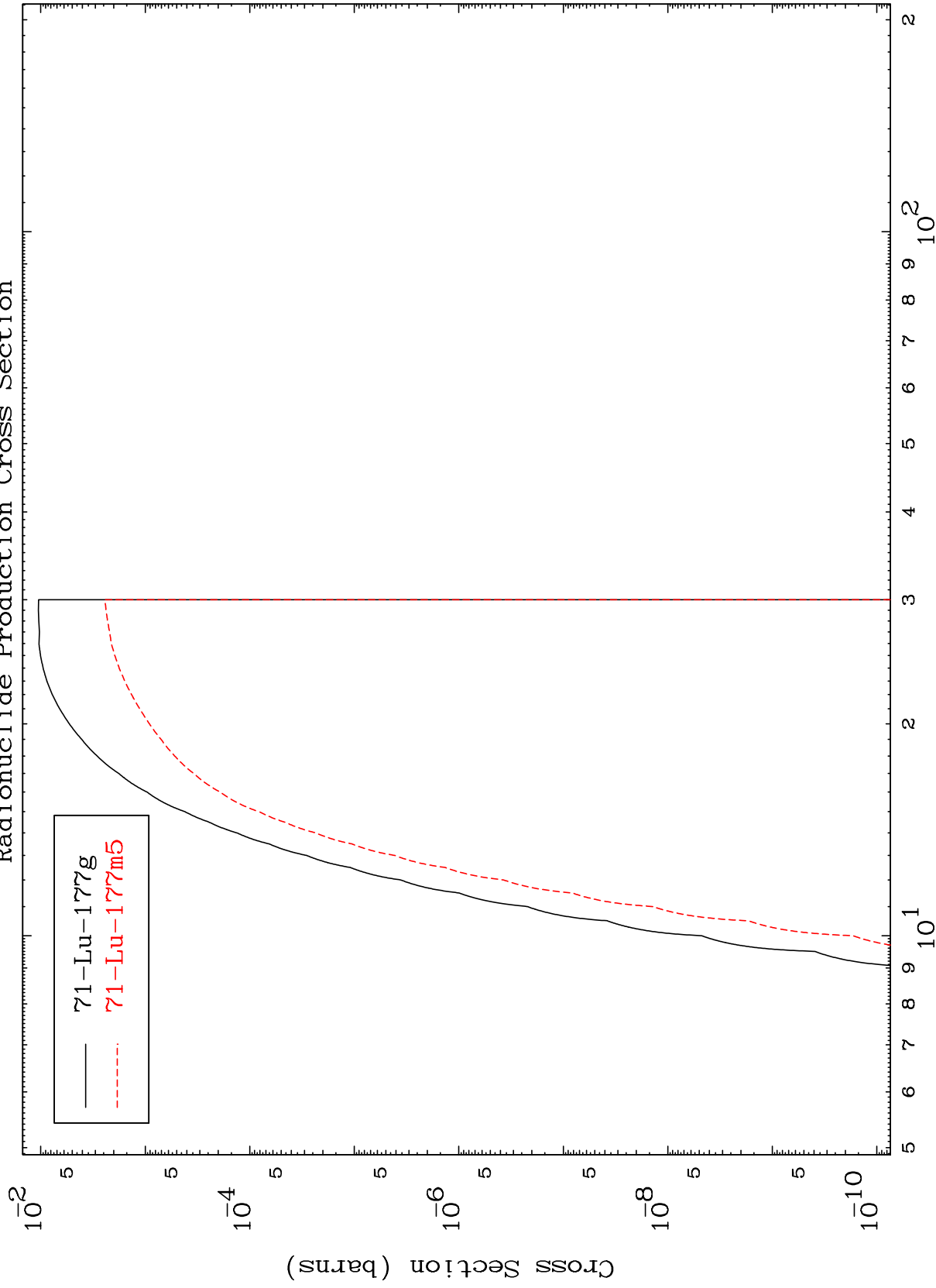
72-Hf-178

MAT 7237

(n,d)

72-Hf-178

Radionuclide Production Cross Section



131

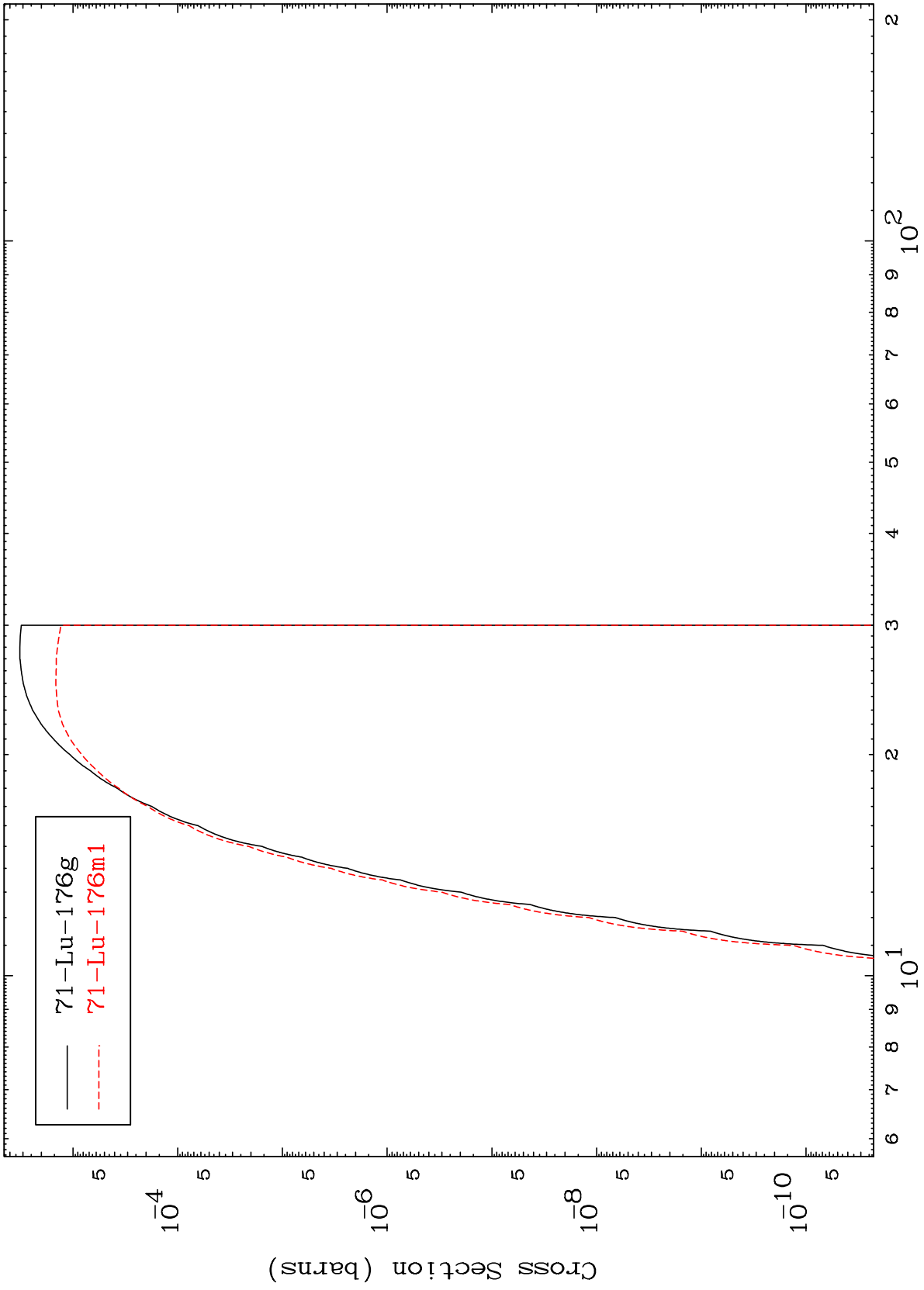
Incident Energy (MeV)

72-Hf-178

MAT 7237

72-Hf-178

(n, t)
Radionuclide Production Cross Section



132

72-Hf-178

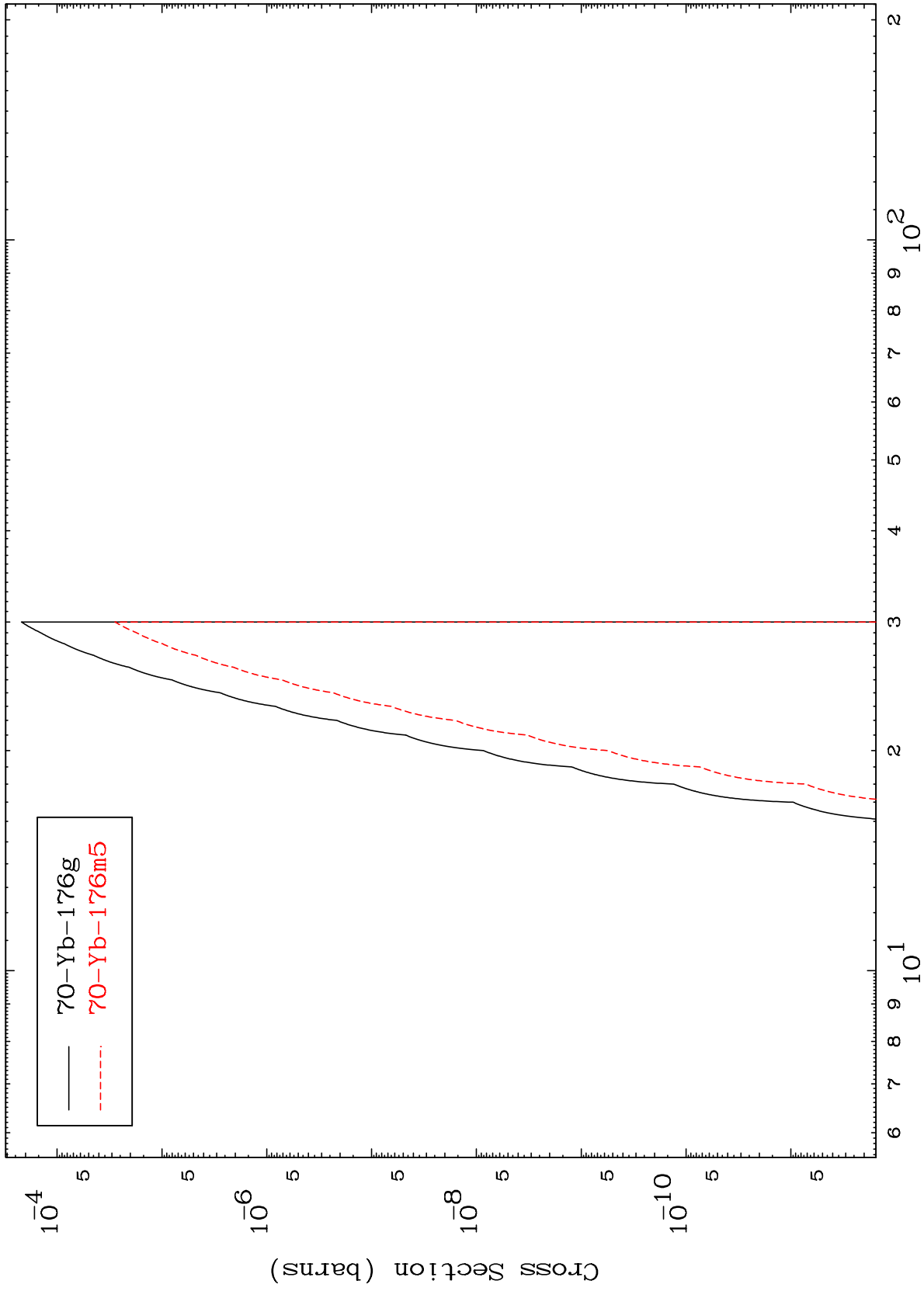
Incident Energy (MeV)

MAT 7237

(n,He-3)

72-Hf-178

Radionuclide Production Cross Section



133

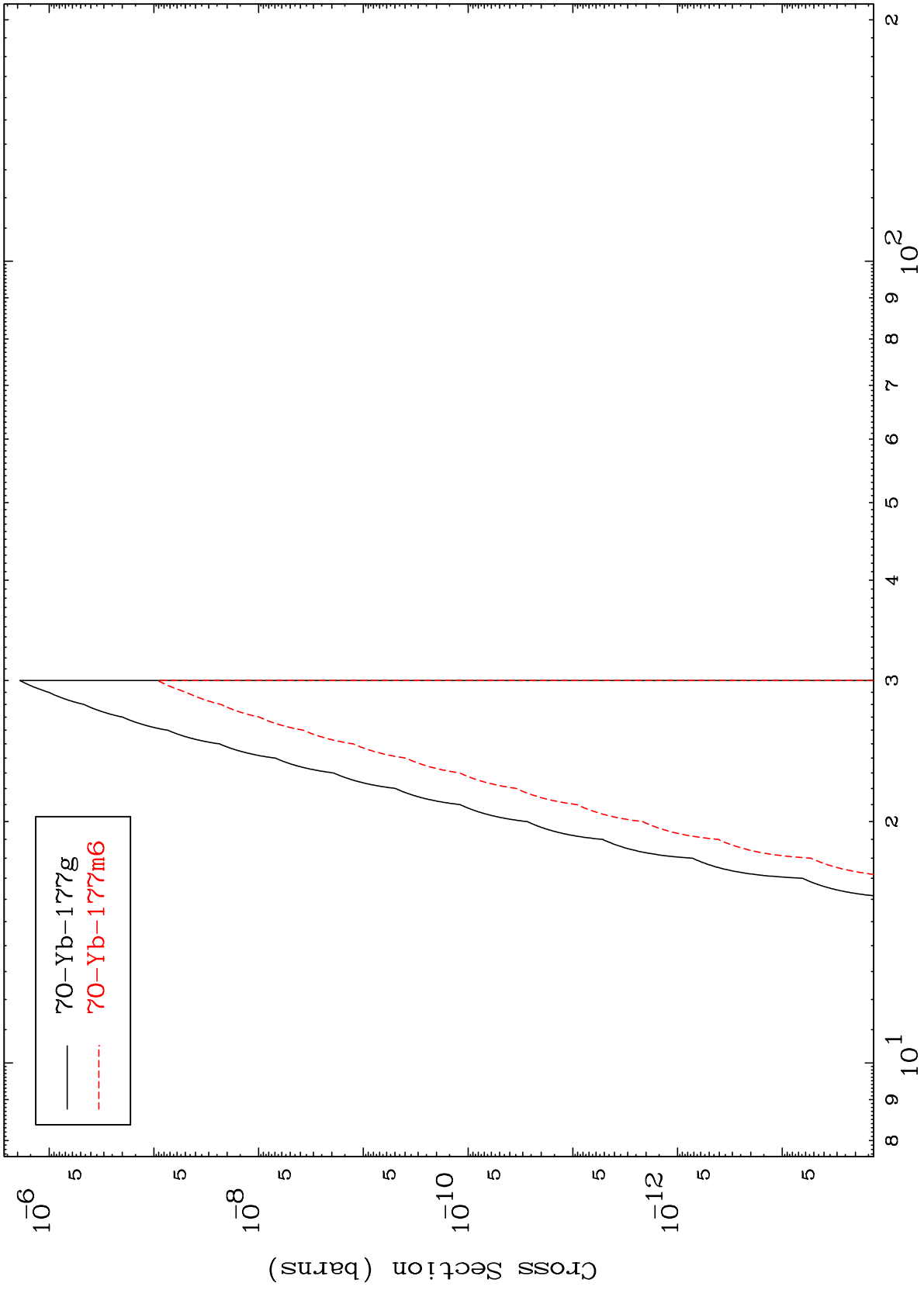
Incident Energy (MeV)

72-Hf-178

MAT 7237

72-Hf-178

(n,2p)
Radionuclide Production Cross Section



70-Yb-177g
70-Yb-177m6

134

72-Hf-178

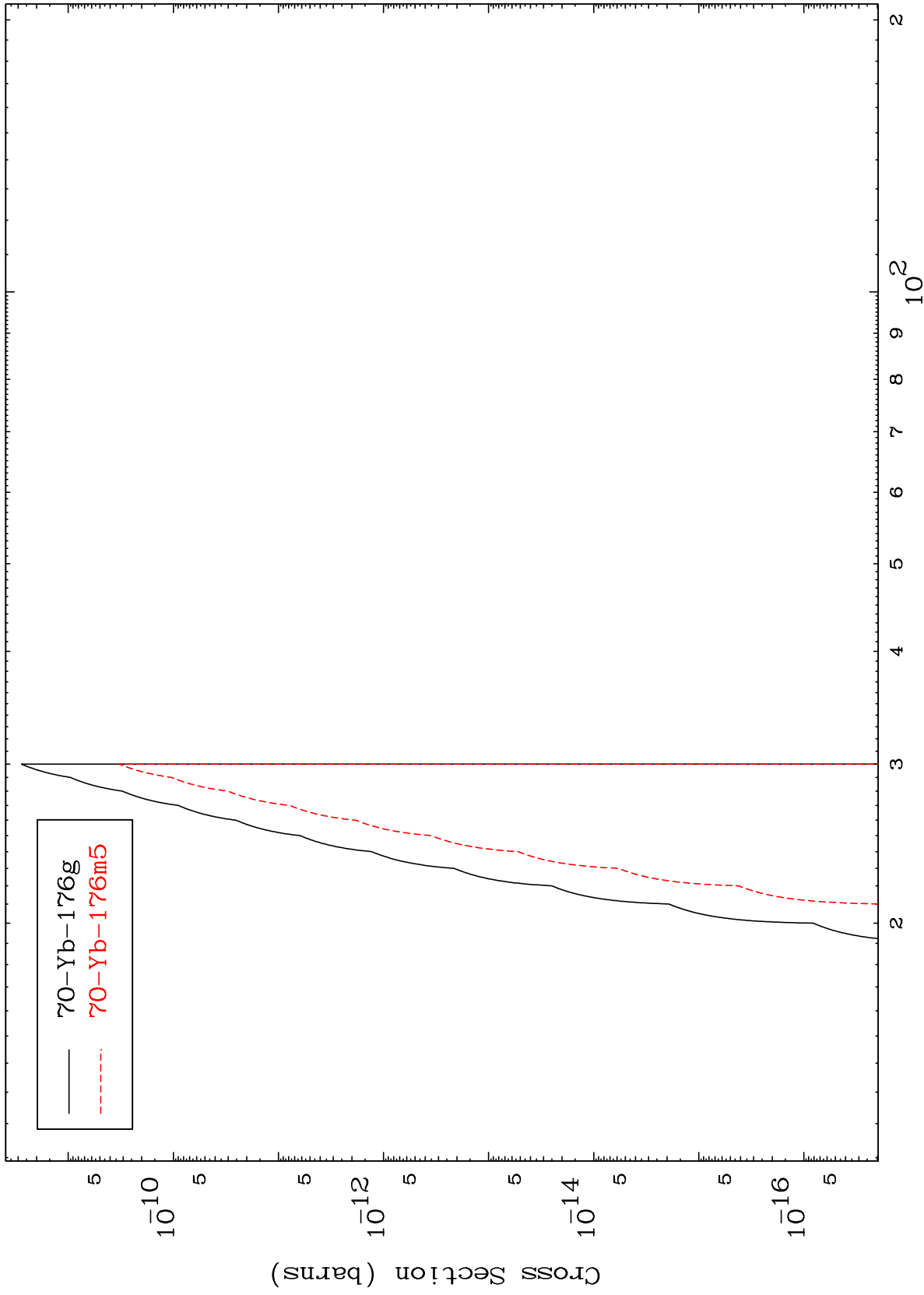
Incident Energy (MeV)

MAT 7237

(n,p) d

72-Hf-178

Radionuclide Production Cross Section



135

Incident Energy (MeV)

72-Hf-178