

Program Complot
(Version 2021-1)

by

Dermott E. Cullen
(Present Contact Information)

Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550

U.S.A.

Tele: 925-443-1911

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

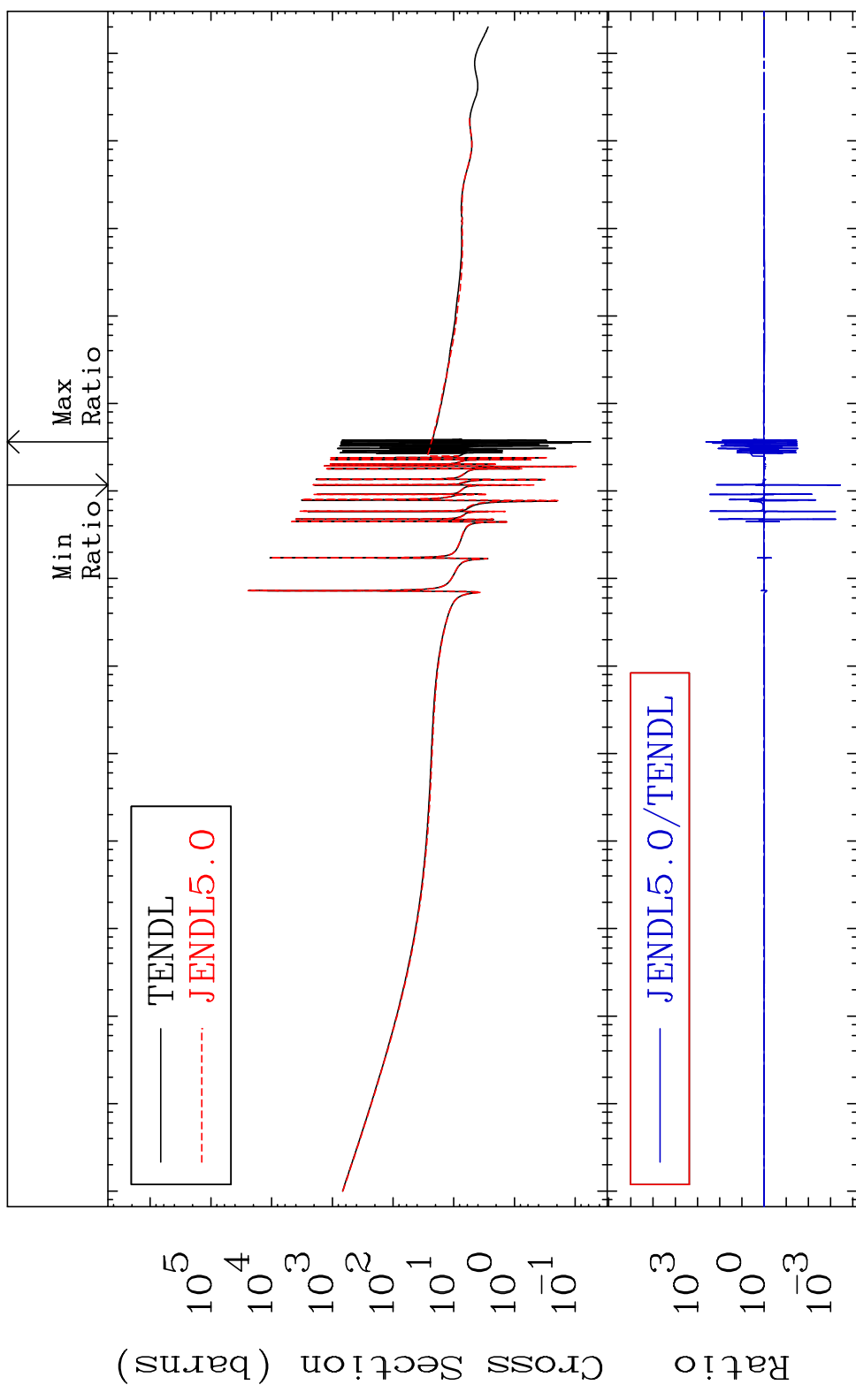
Press Mouse Button to Start

MAT 7243

Total

72-Hf-180

Cross Section -99.96 To 9999. %



1

Incident Energy (eV)

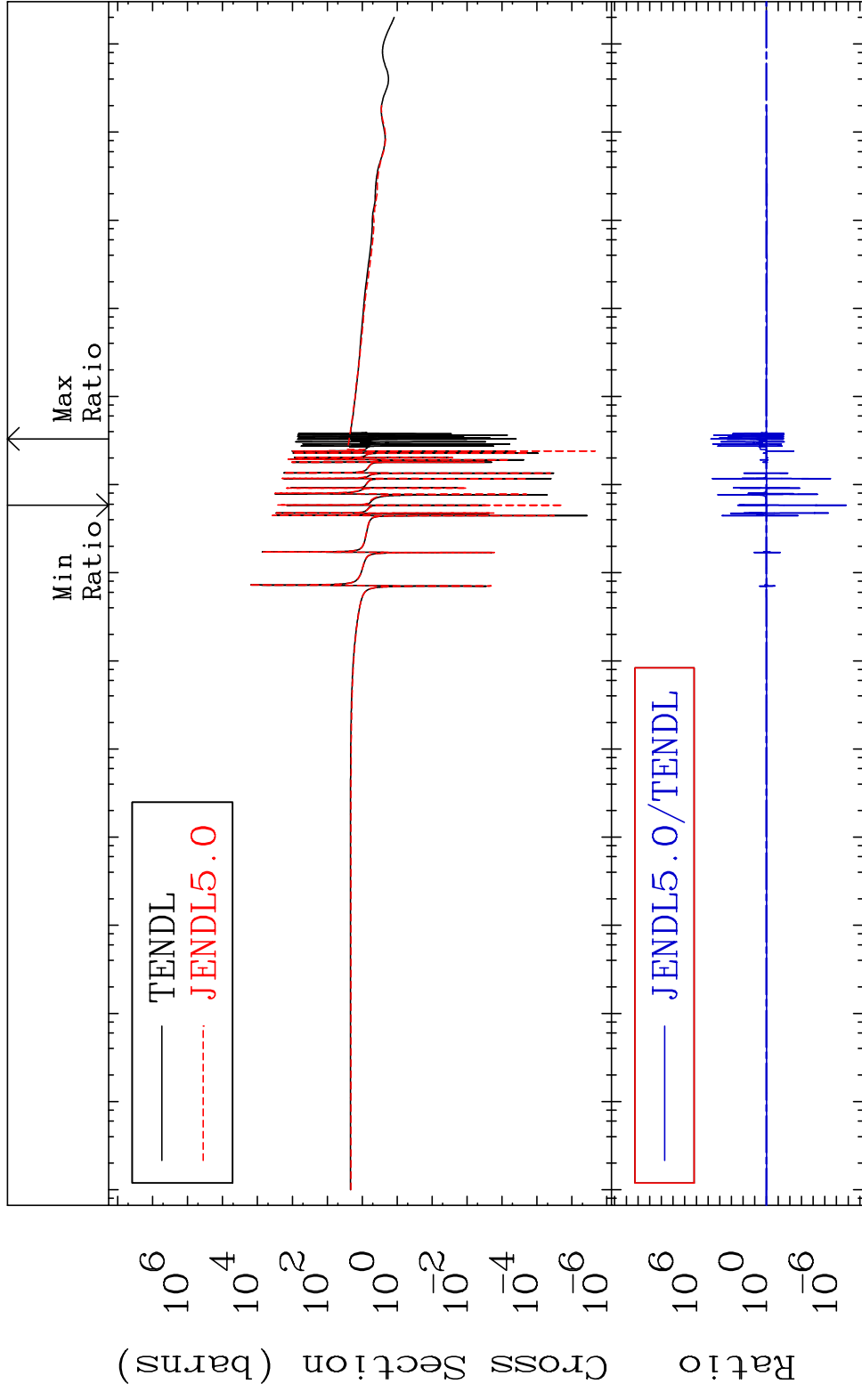
72-Hf-180

MAT 7243

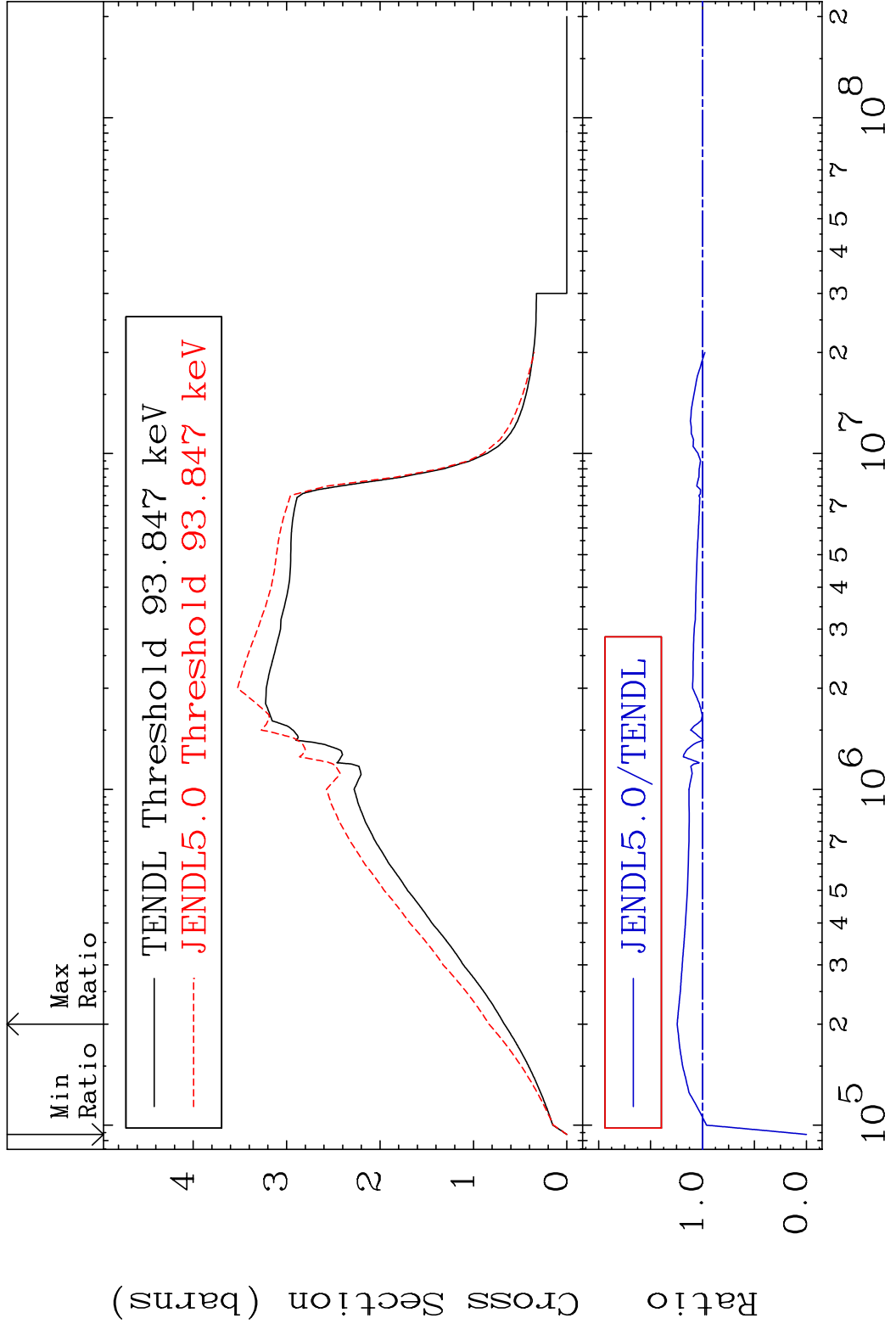
Elastic

72-Hf-180

Cross Section -100.0 To 9999. %



MAT 7243 Inelastic 72-Hf-180
 Cross Section -100.0 To 24.40 %



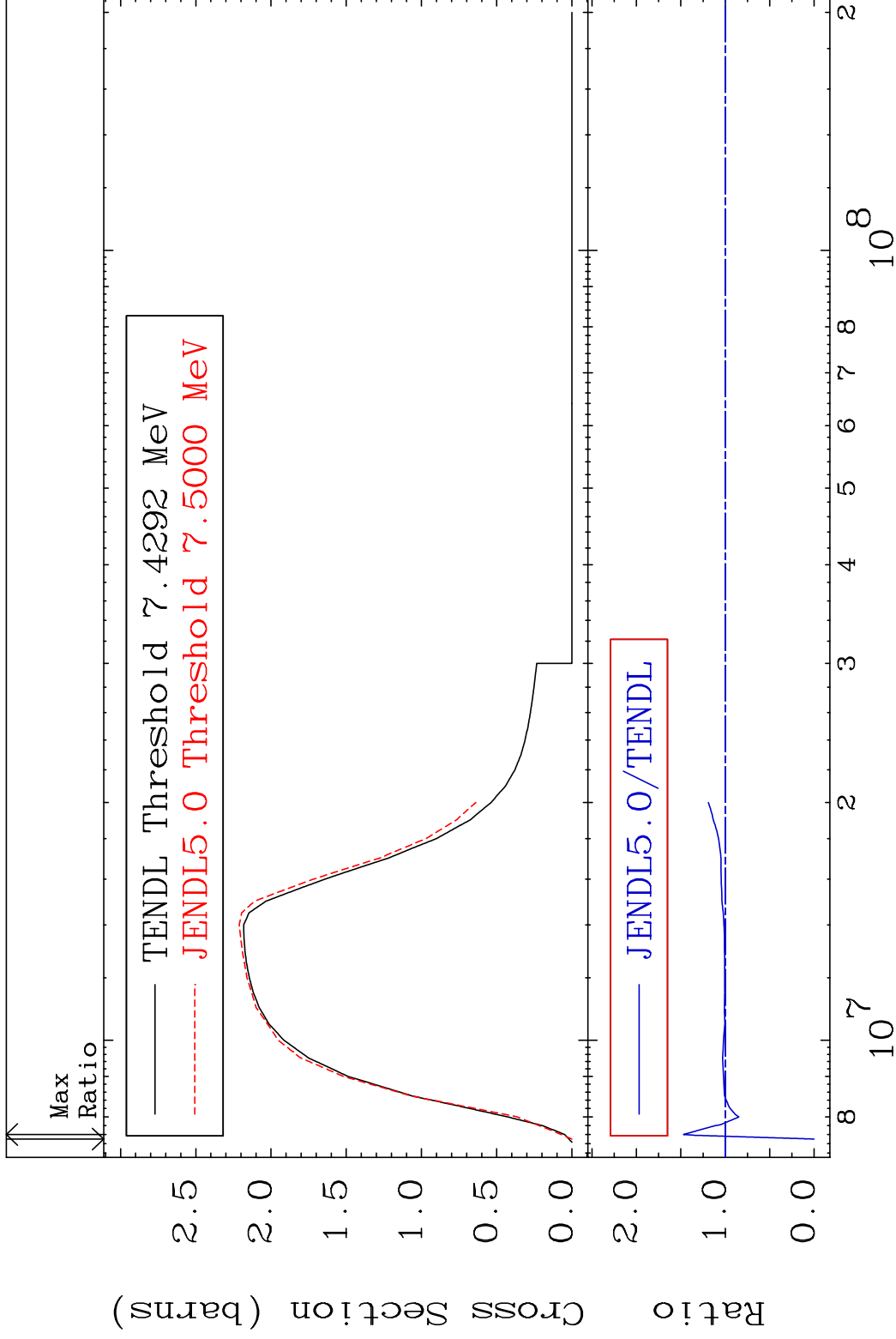
3 Incident Energy (eV) 72-Hf-180

MAT 7243

(n,2n)

72-Hf-180

Cross Section -100.0 To 47.07 %



4

Incident Energy (eV)

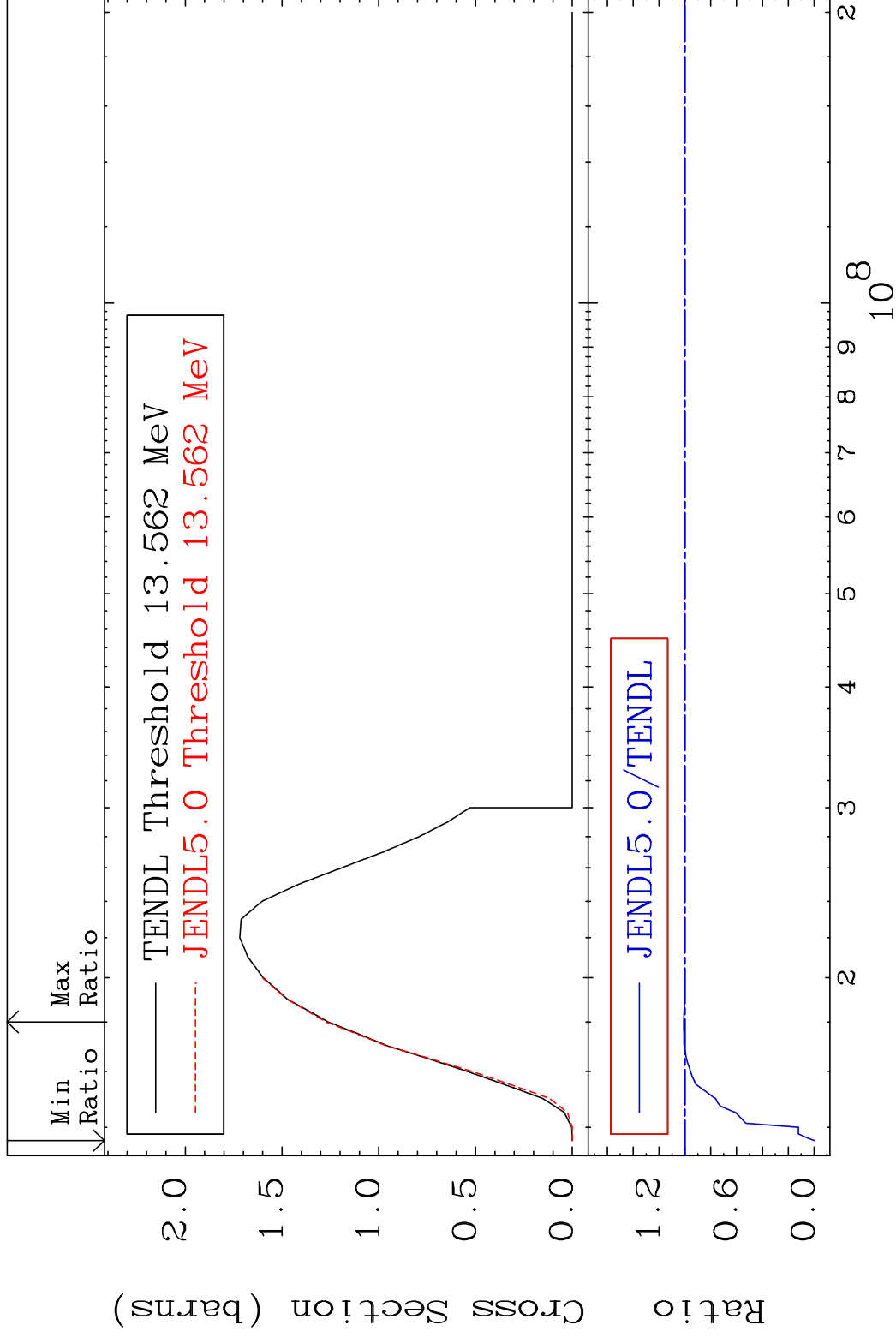
72-Hf-180

MAT 7243

(n,3n)

72-Hf-180

Cross Section -100.0 To 0.946 %



5

Incident Energy (eV)

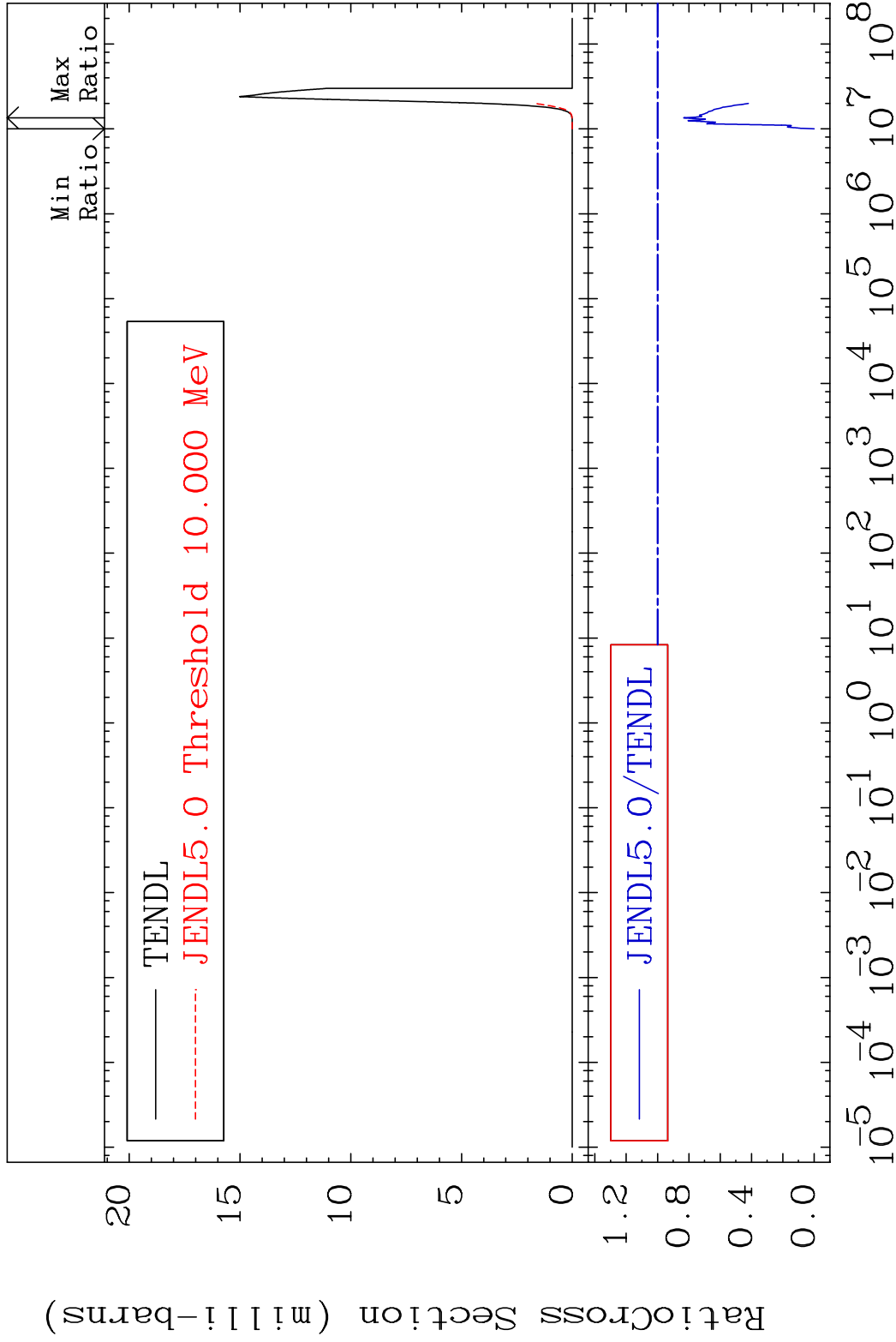
72-Hf-180

MAT 7243

(n, n') α

72-Hf-180

Cross Section -100.0 To -16.69%



6

Incident Energy (eV)

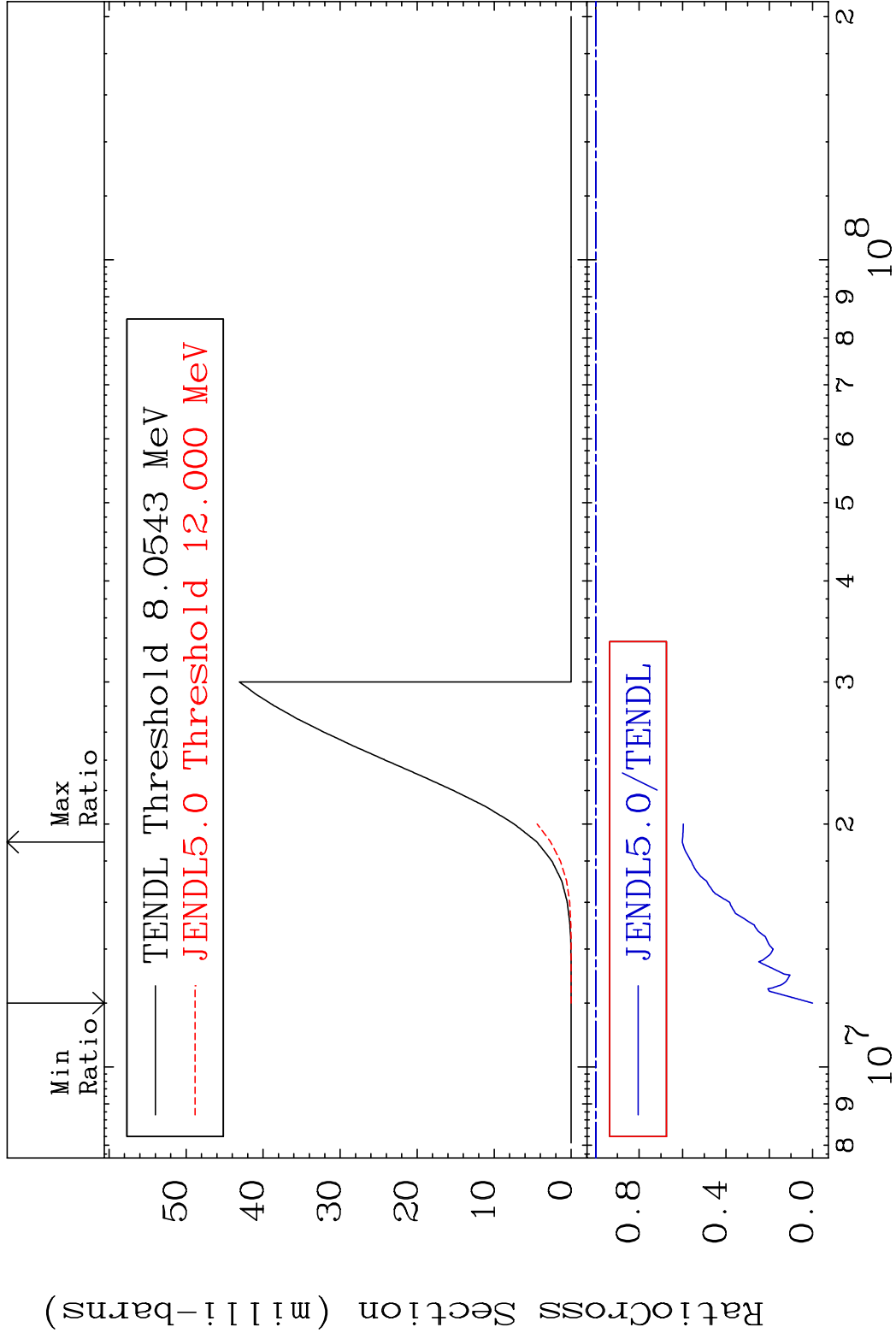
72-Hf-180

MAT 7243

(n, n') p

72-Hf-180

Cross Section -100.0 To -39.93%



7

Incident Energy (eV)

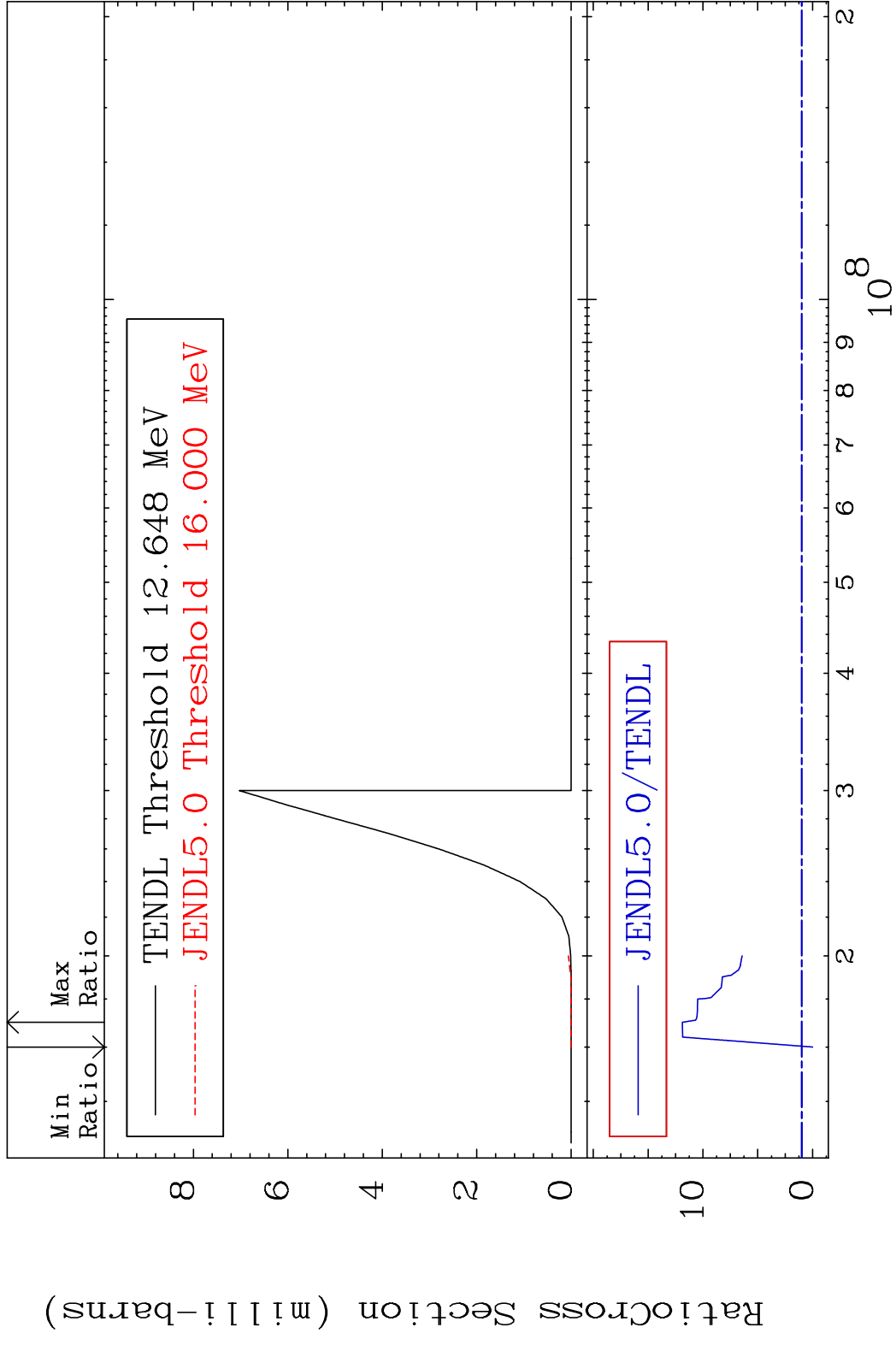
72-Hf-180

MAT 7243

(n, n') d

72-Hf-180

Cross Section -100.0 To 1088. %

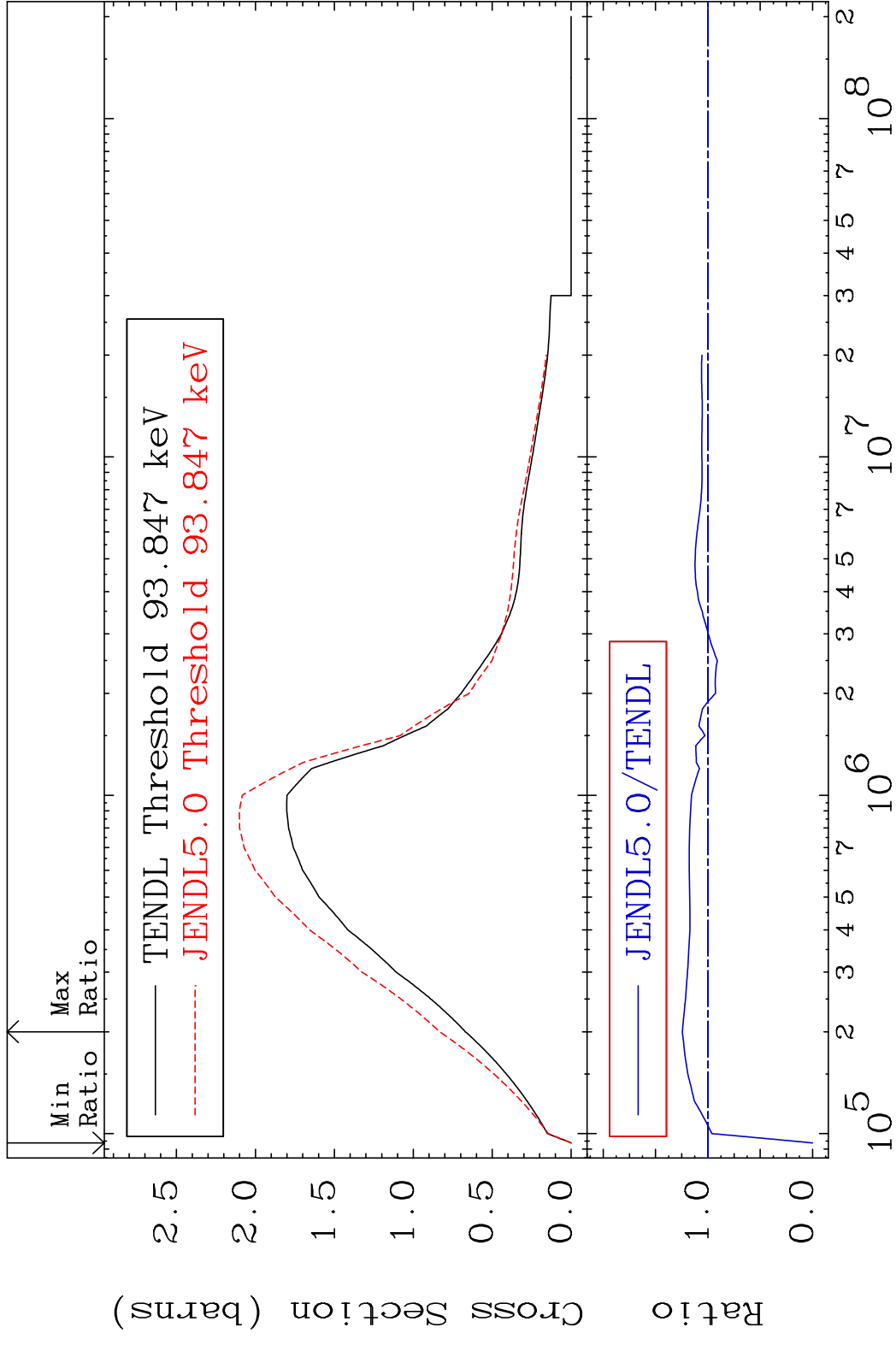


8

Incident Energy (eV)

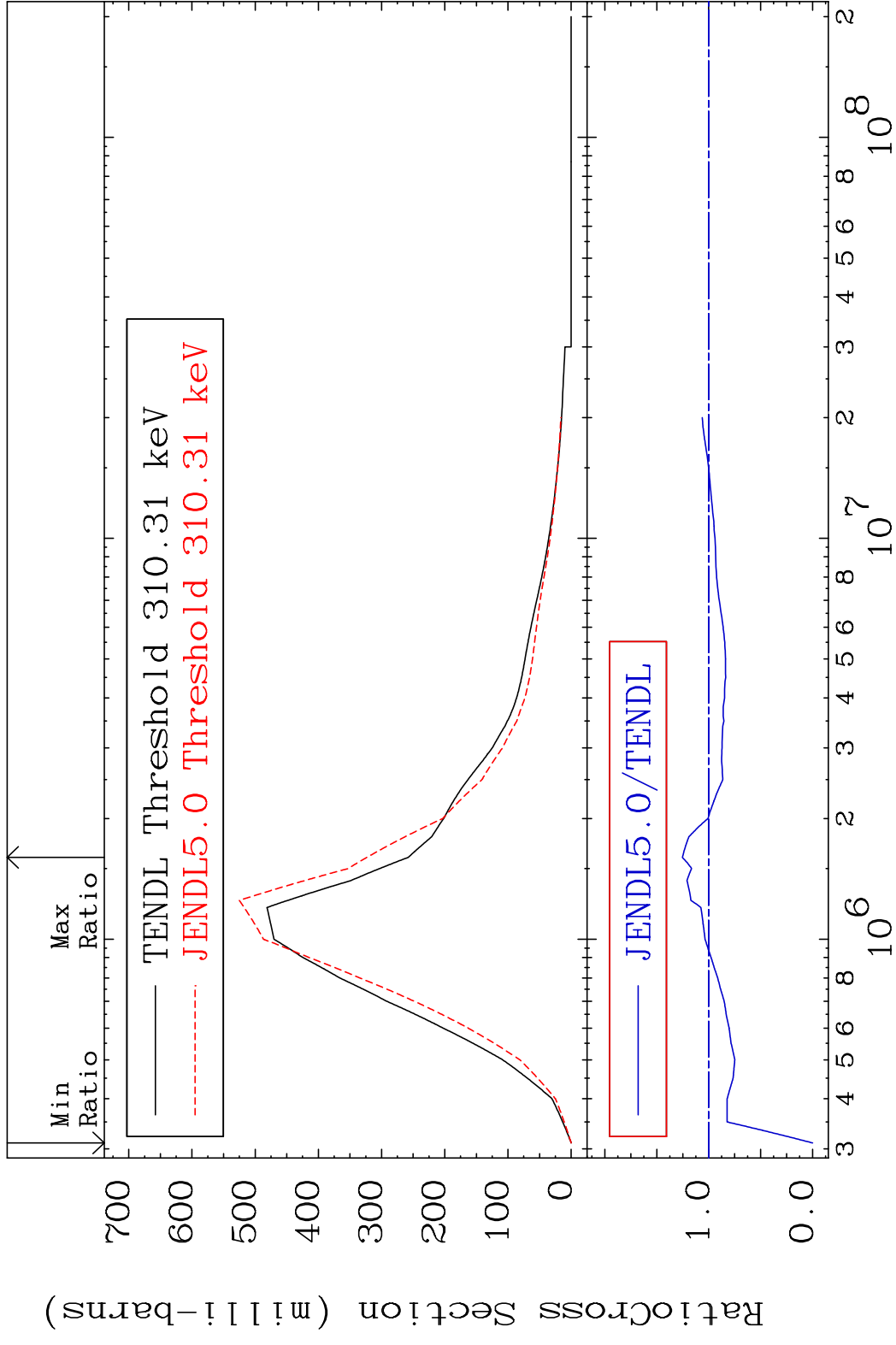
72-Hf-180

MAT 7243 MT= 51 (n,n') Level 72-Hf-180
 Cross Section -100.0 To 24.40 %



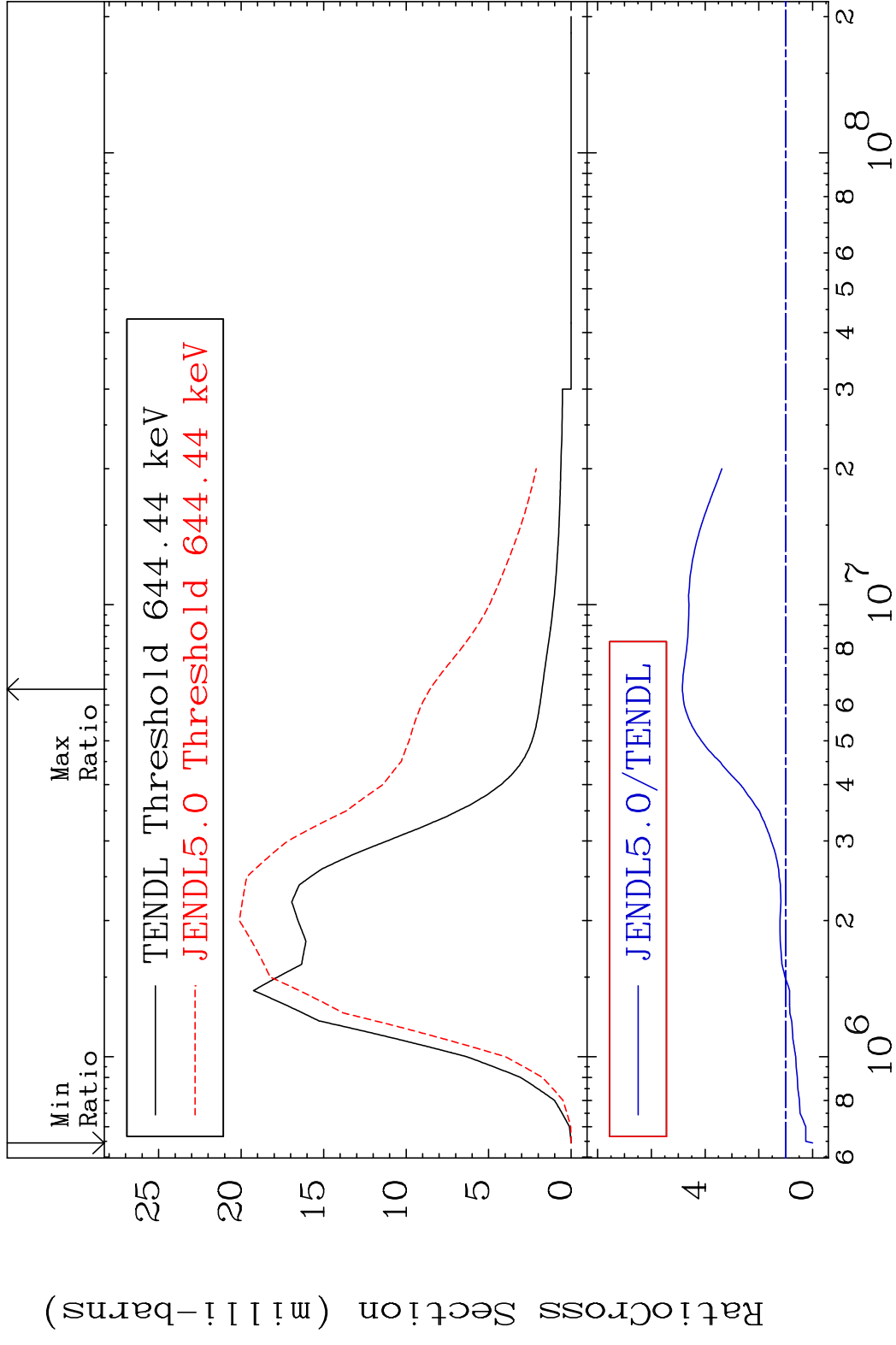
9 Incident Energy (eV) 72-Hf-180

MAT 7243 MT= 52 (n, n') Level 72-Hf-180
 Cross Section -100.0 To 25.38 %

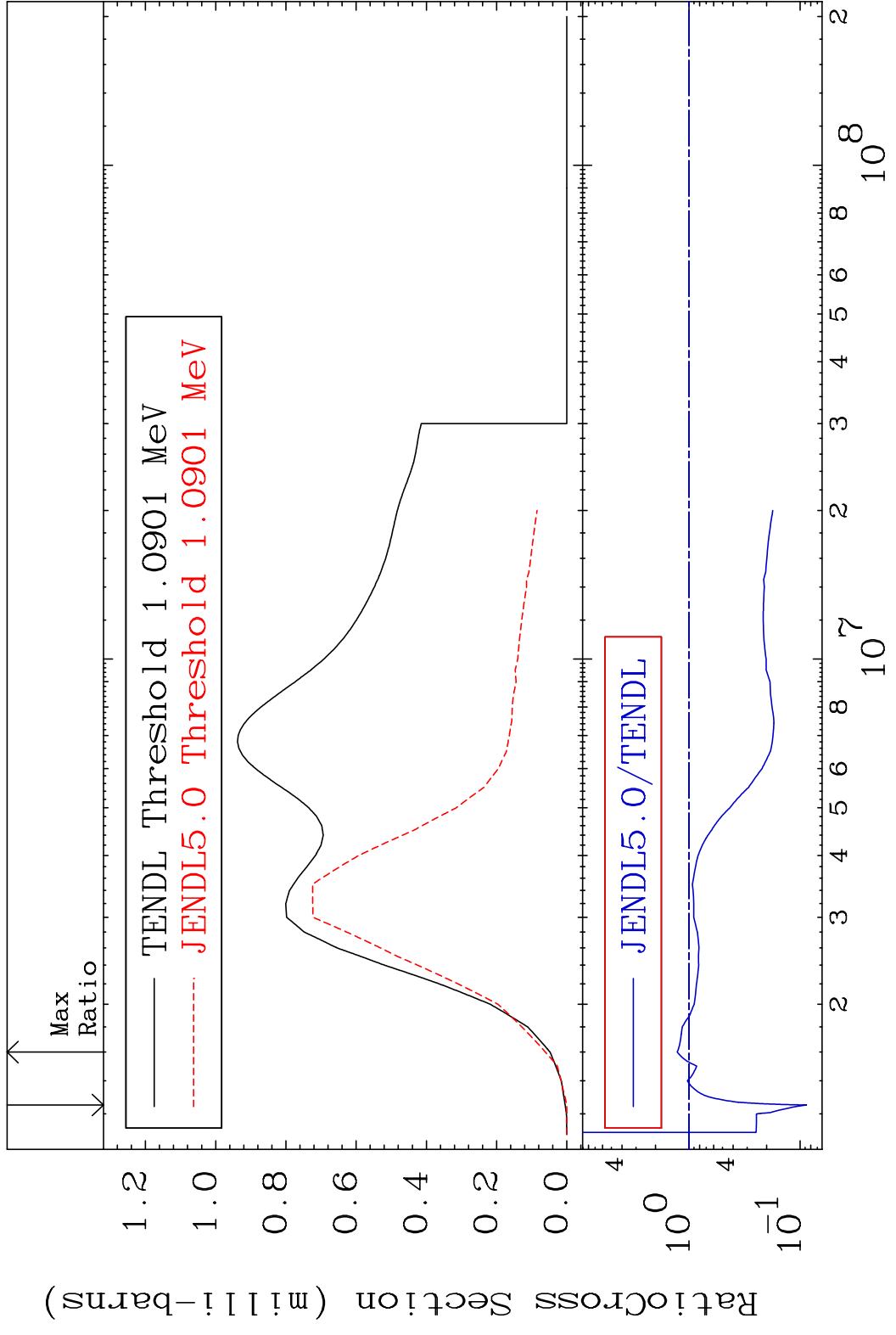


10 Incident Energy (eV) 72-Hf-180

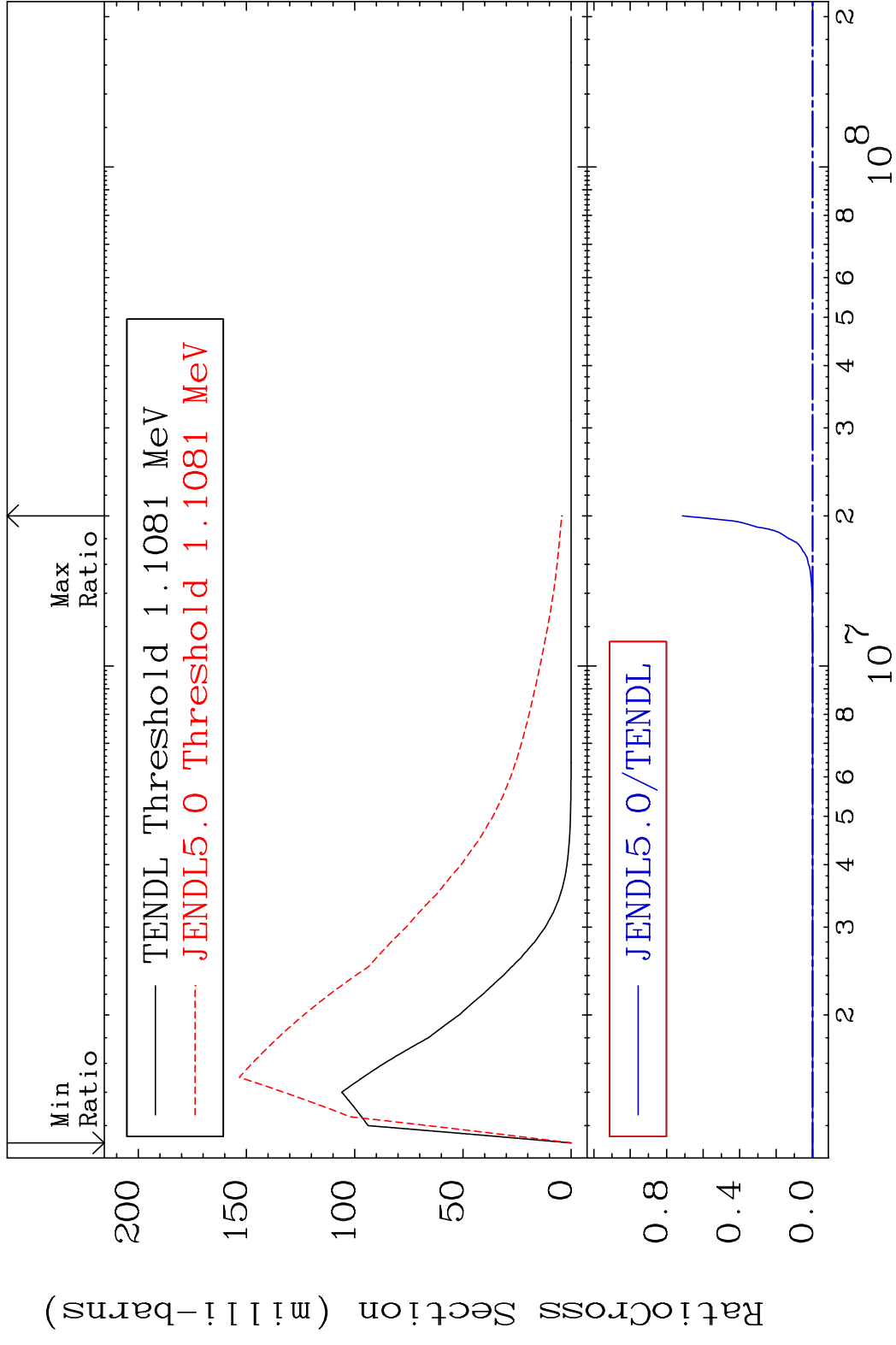
MAT 7243 MT= 53 (n, n') Level 72-Hf-180
 Cross Section -100.0 To 384.6 %



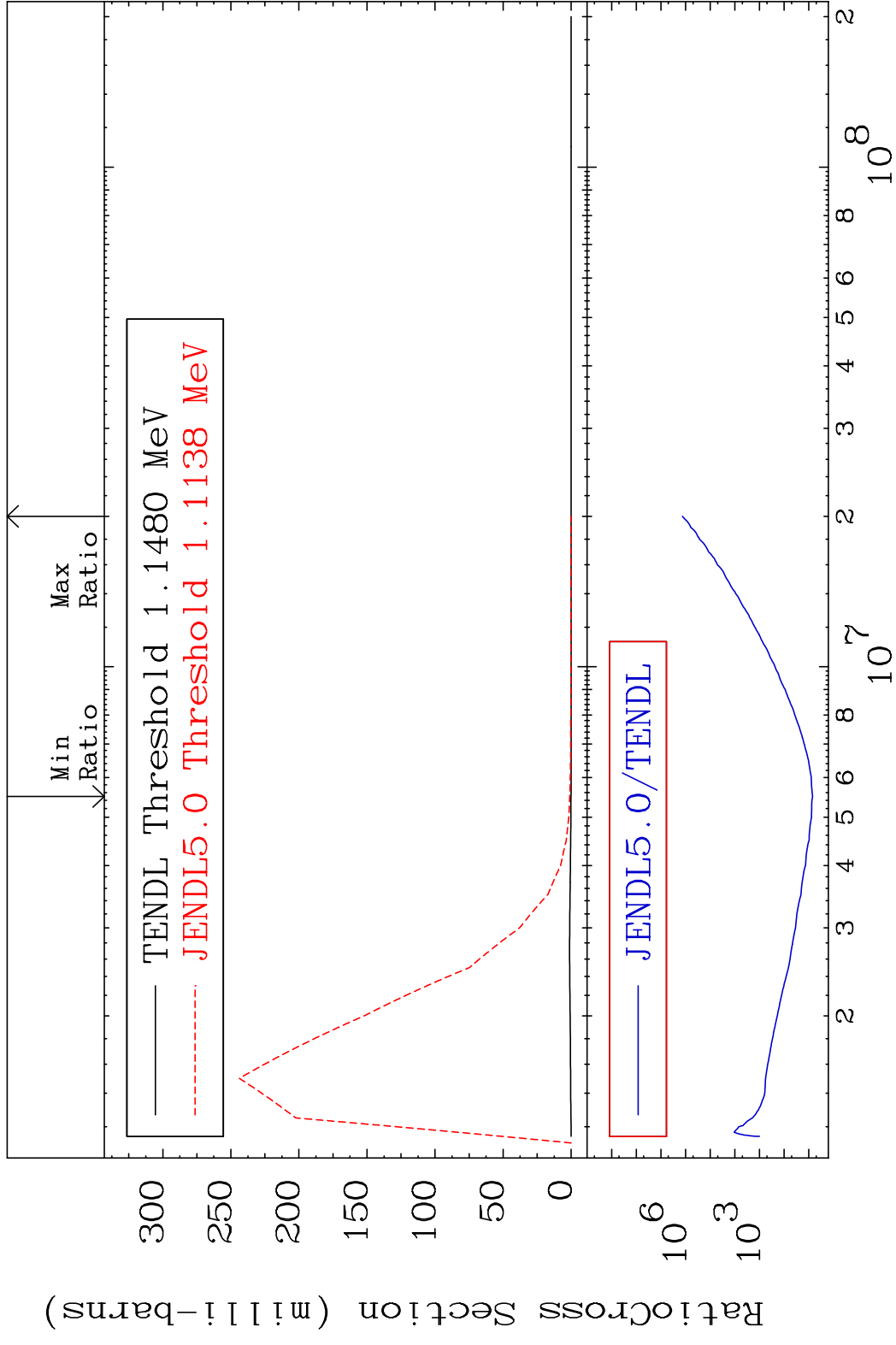
MAT 7243 MT= 54 (n, n') Level 72-Hf-180
 Cross Section -91.23 To 27.59 %



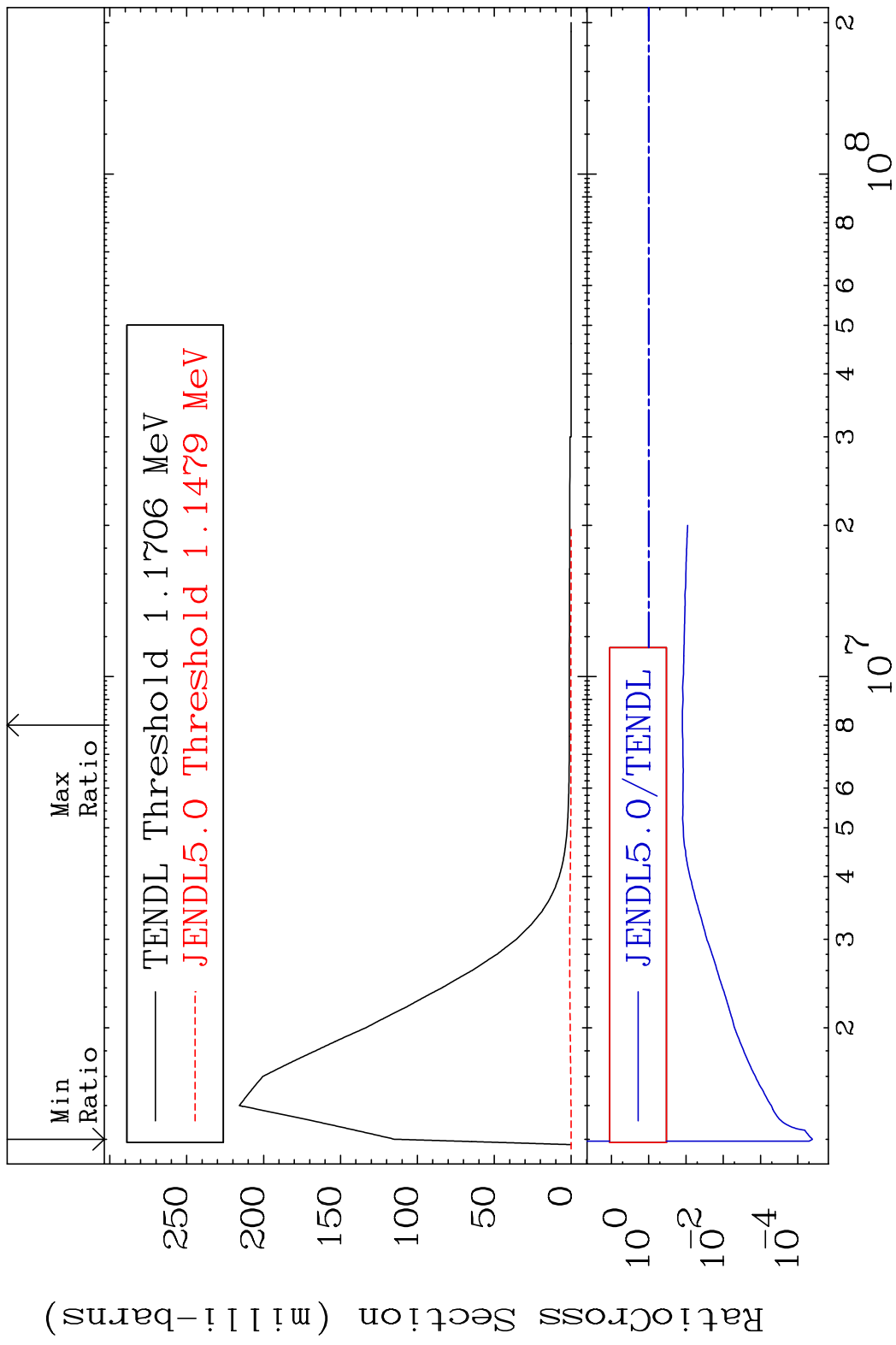
MAT 7243 MT= 55 (n, n') Level 72-Hf-180
 Cross Section -100.0 To 9999. %



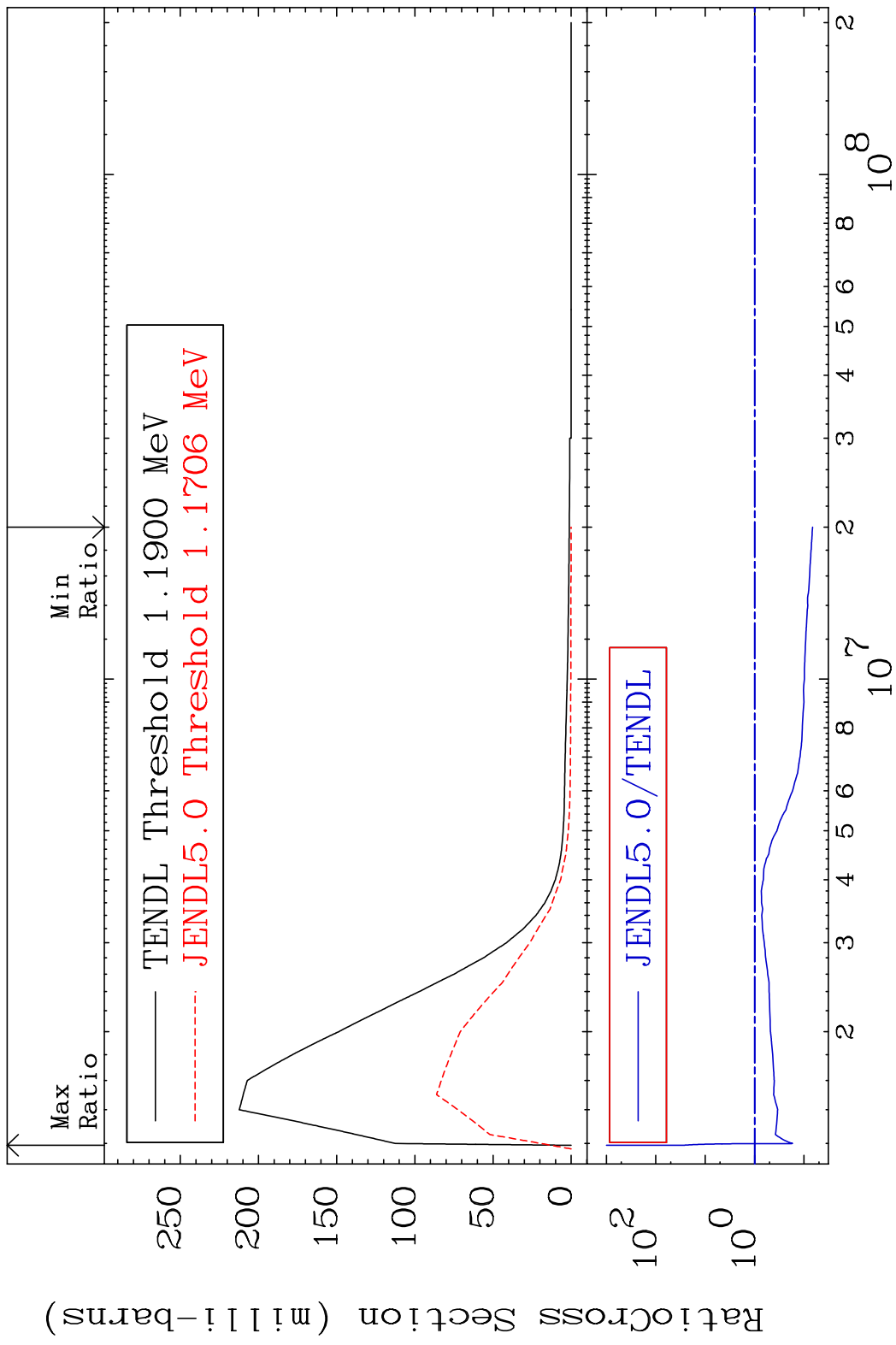
MAT 7243 MT= 56 (n, n') Level 72-Hf-180
 Cross Section 601.6 To 9999. %



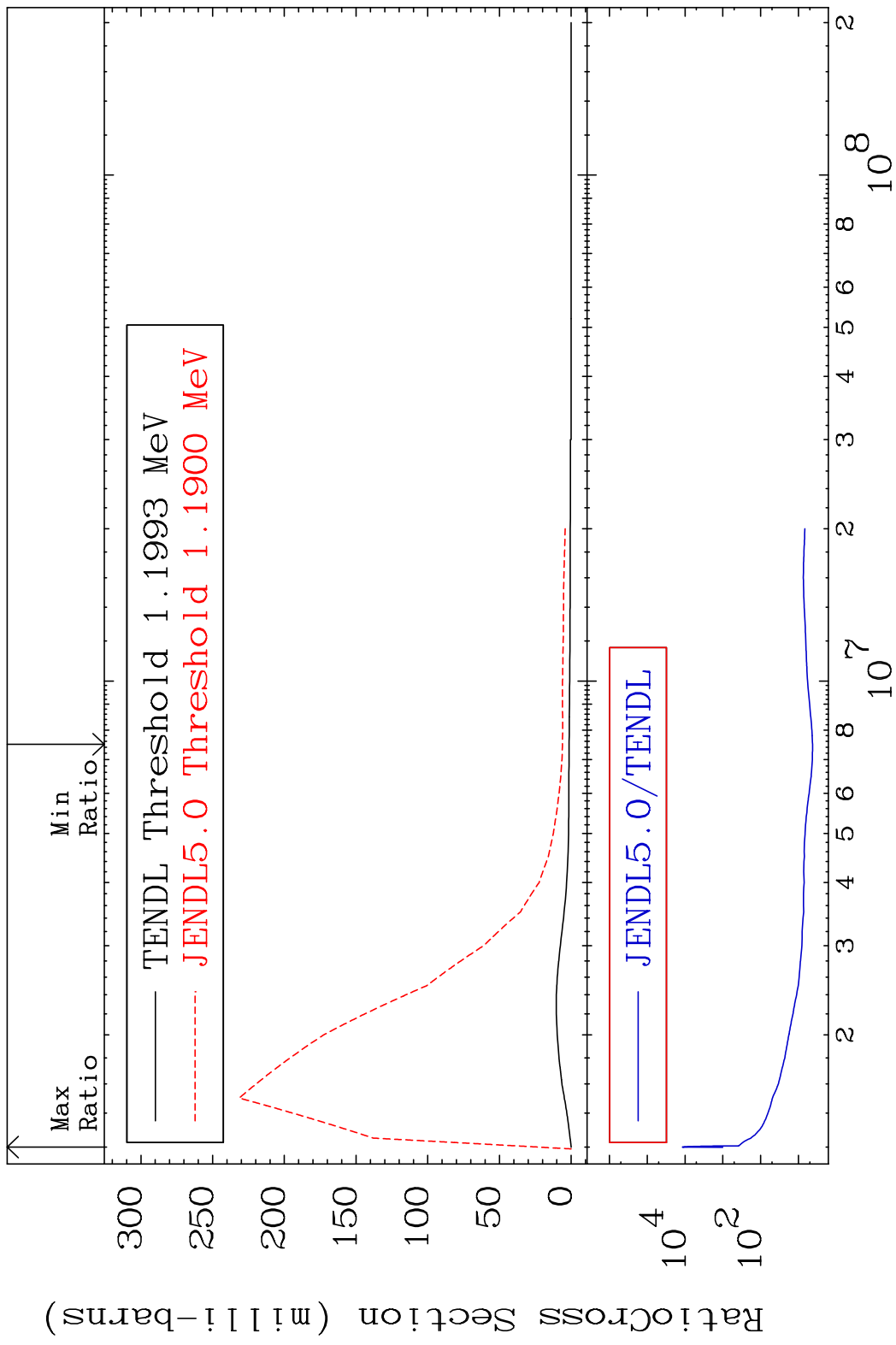
MAT 7243 MT= 57 (n,n') Level 72-Hf-180
 Cross Section -100.0 To -87.50%



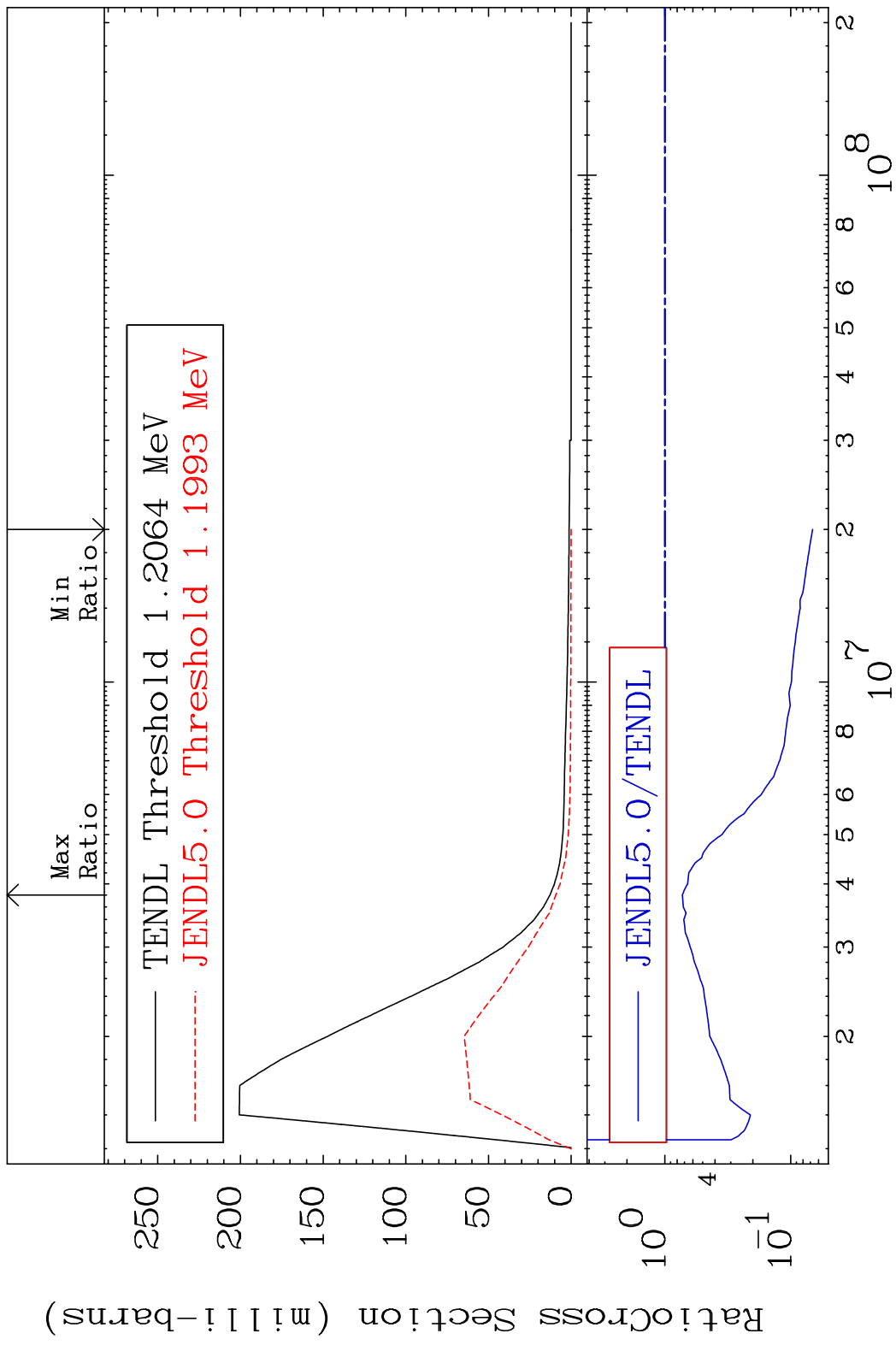
MAT 7243 MT= 58 (n, n') Level 72-Hf-180
 Cross Section -93.28 To 2801. %



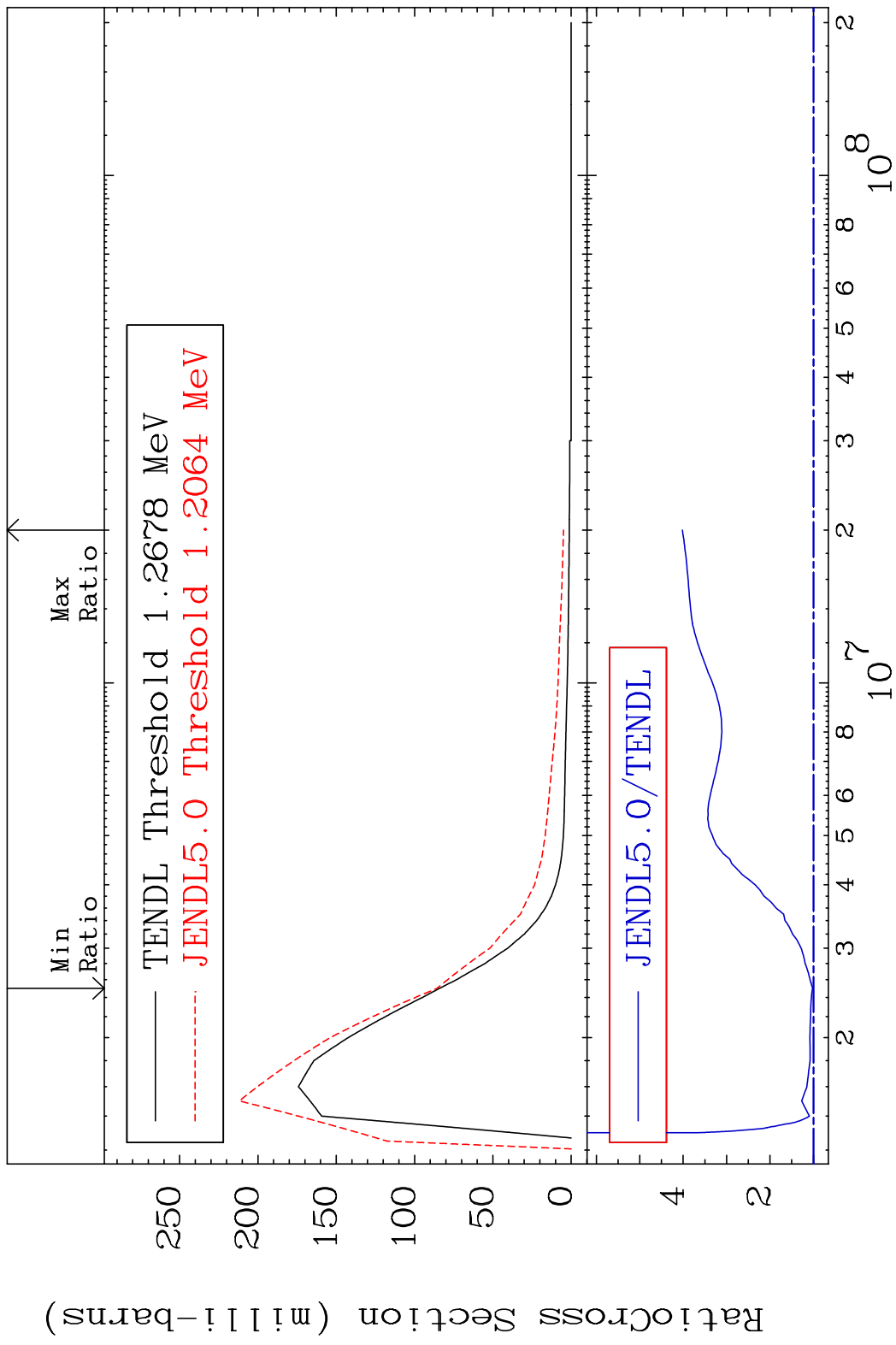
MAT 7243 MT= 59 (n,n') Level 72-Hf-180
 Cross Section 322.8 To 9999. %



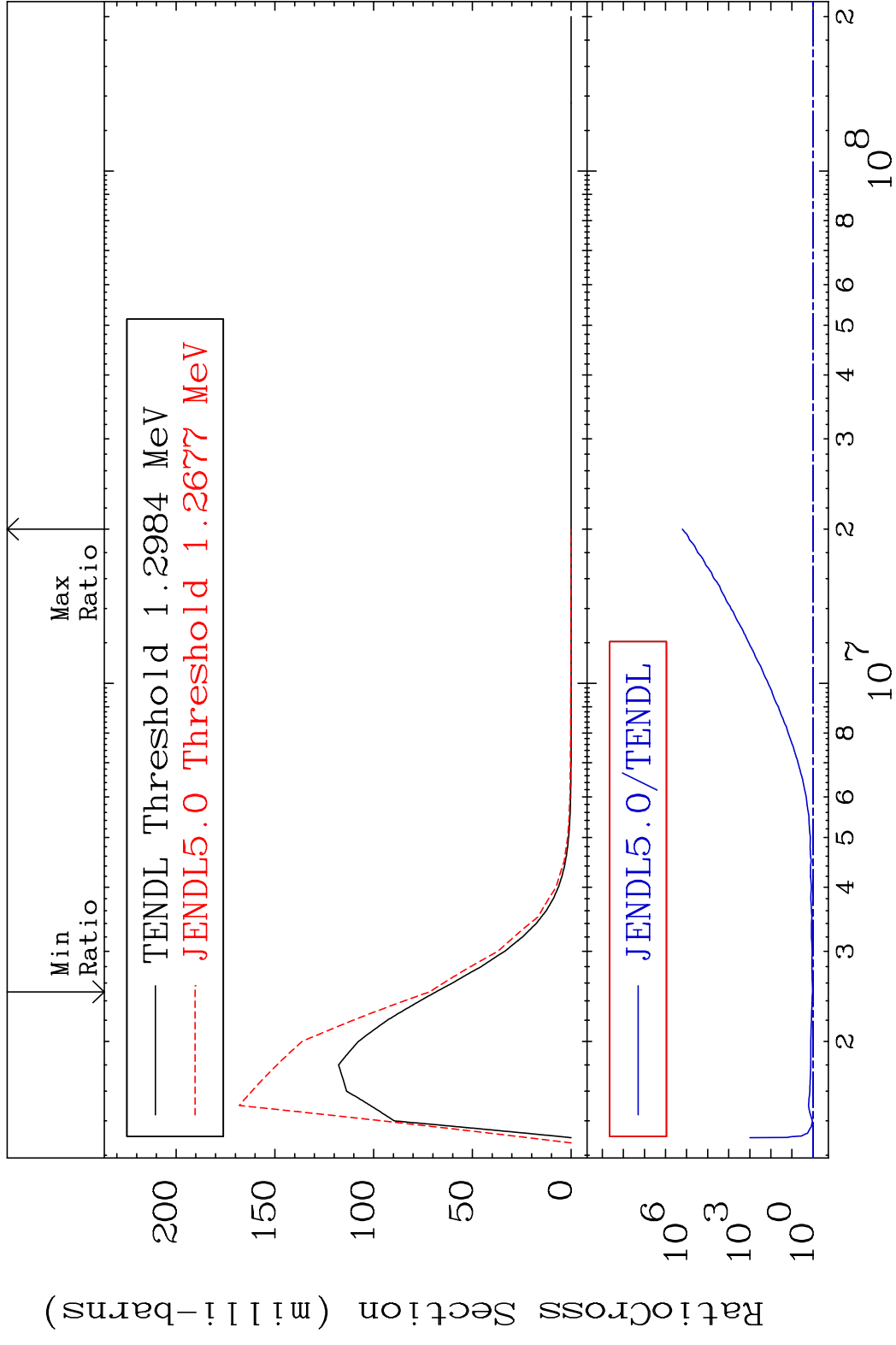
MAT 7243 MT= 60 (n, n') Level 72-Hf-180
 Cross Section -93.29 To -27.37%



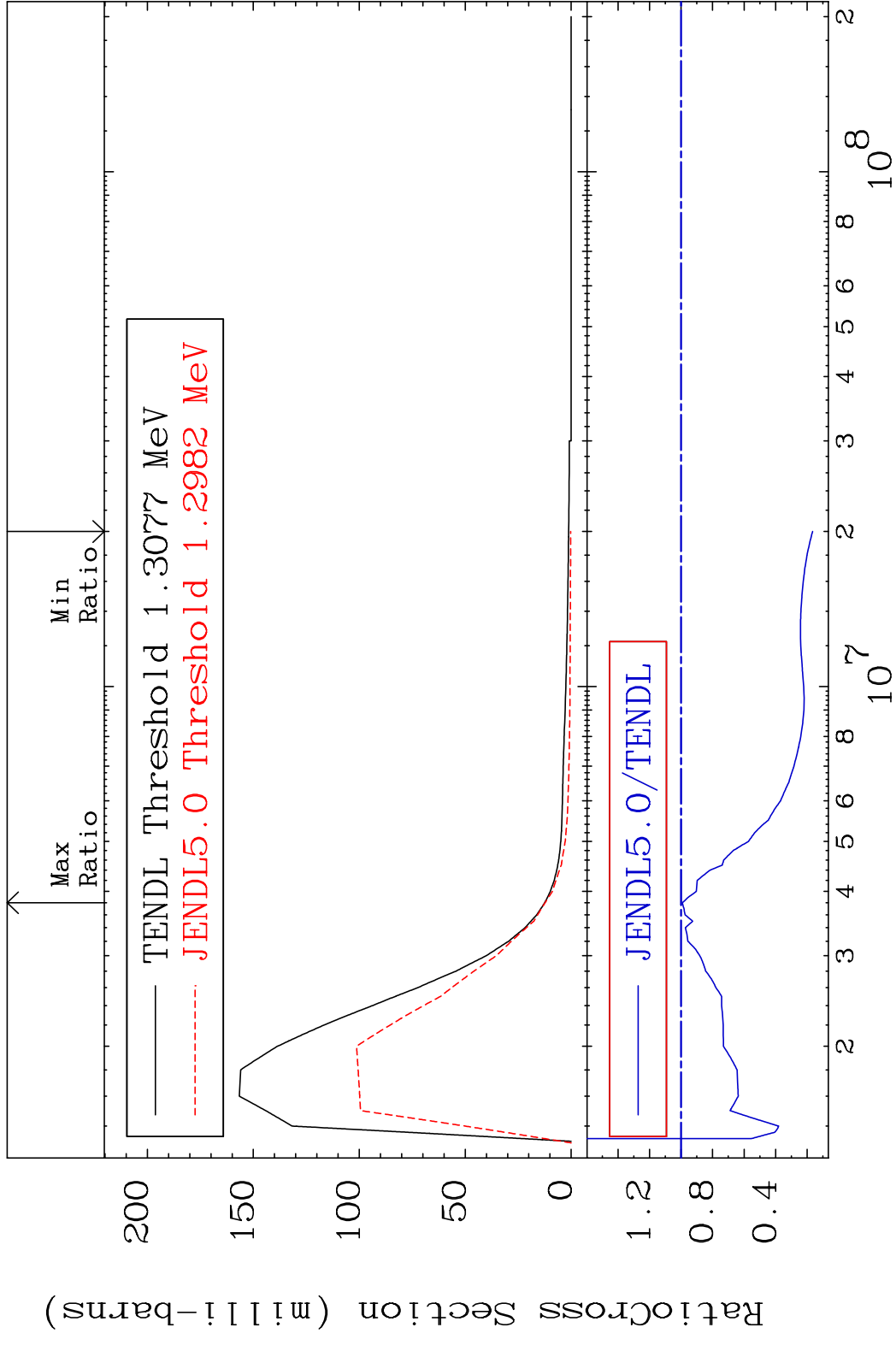
MAT 7243 MT= 61 (n, n') Level 72-Hf-180
 Cross Section 1.979 To 301.9 %



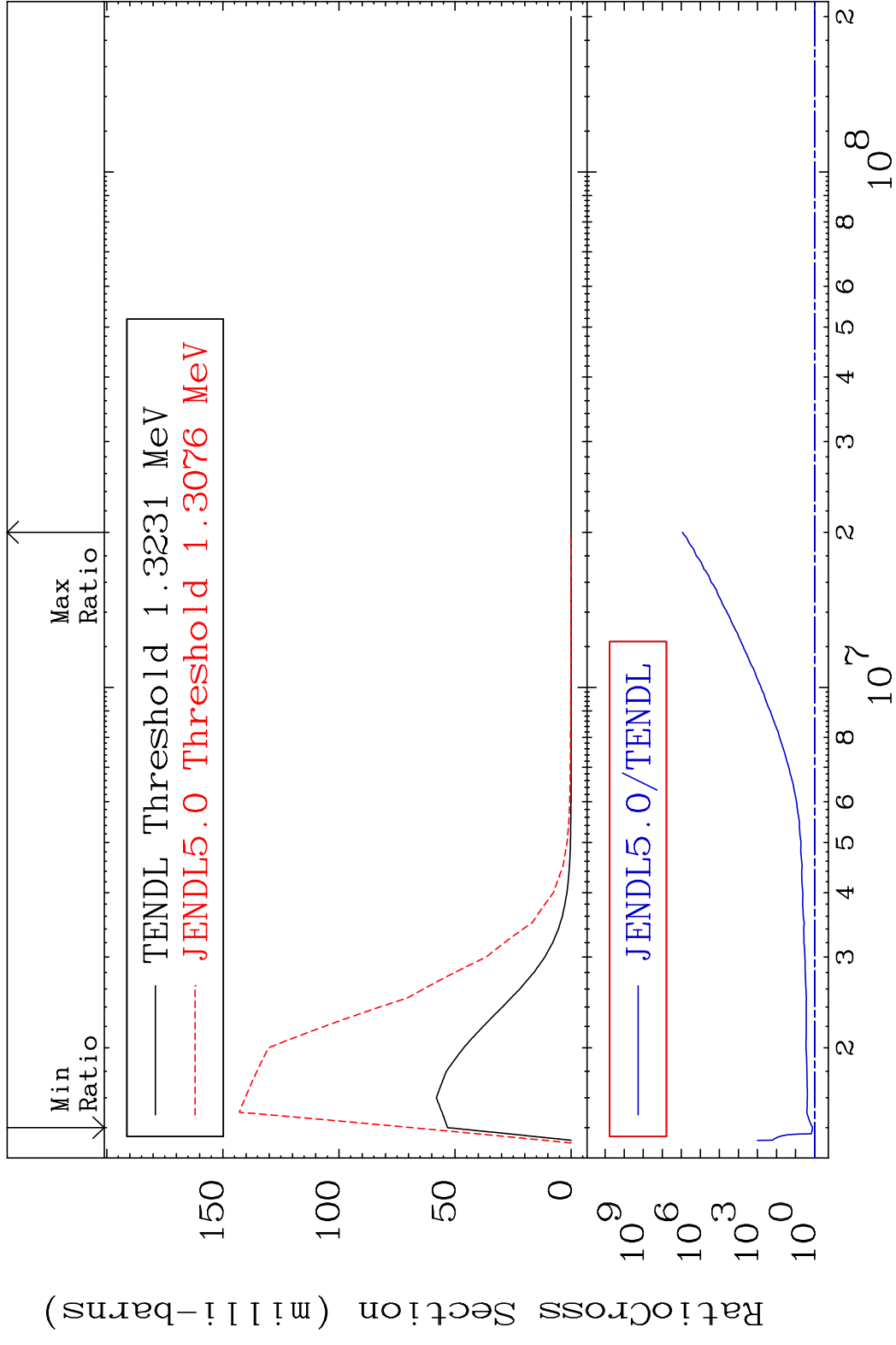
MAT 7243 MT= 62 (n, n') Level 72-Hf-180
 Cross Section 4.786 To 9999. %



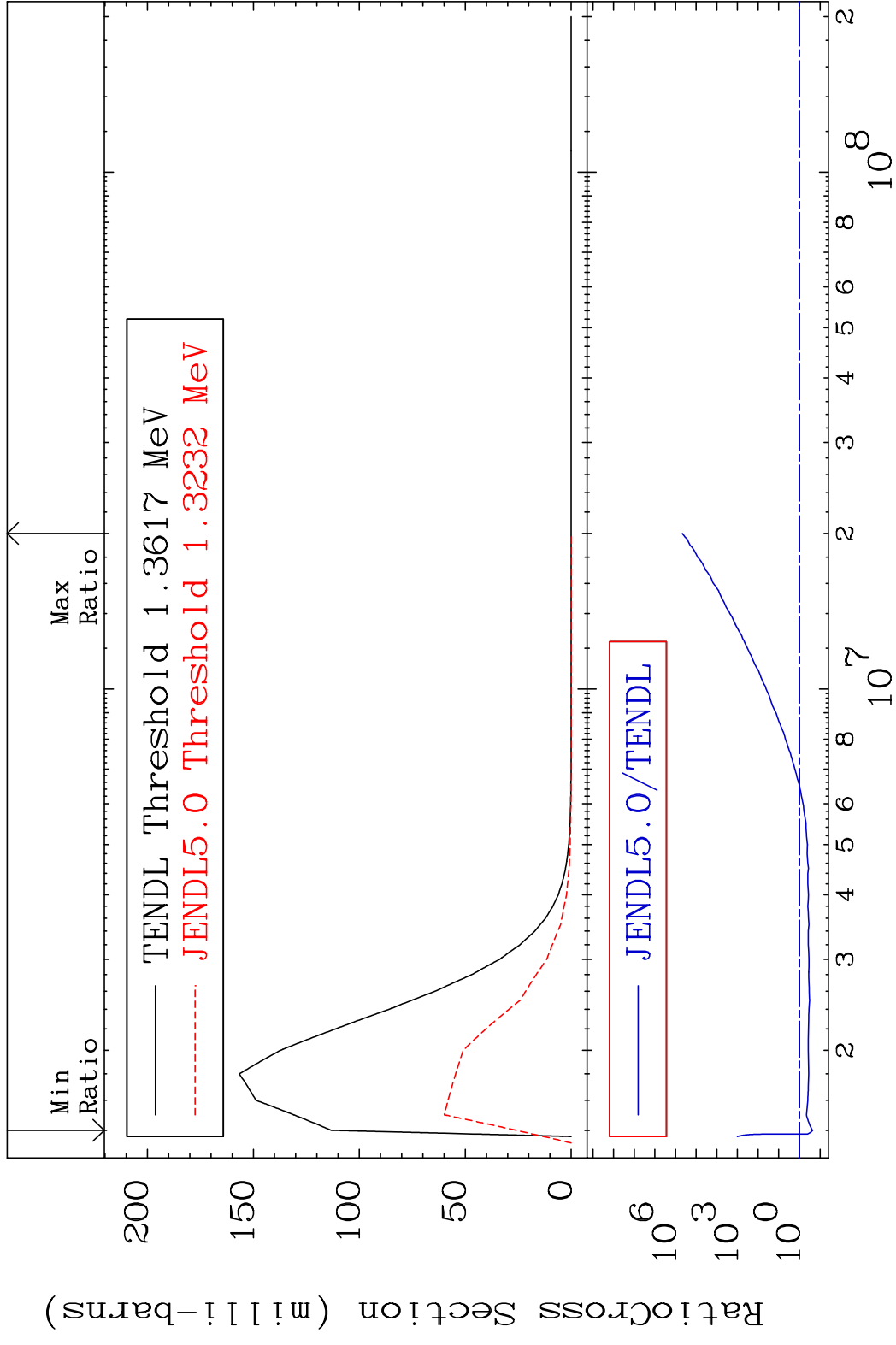
MAT 7243 MT= 63 (n, n') Level 72-Hf-180
 Cross Section -83.48 To -0.803%



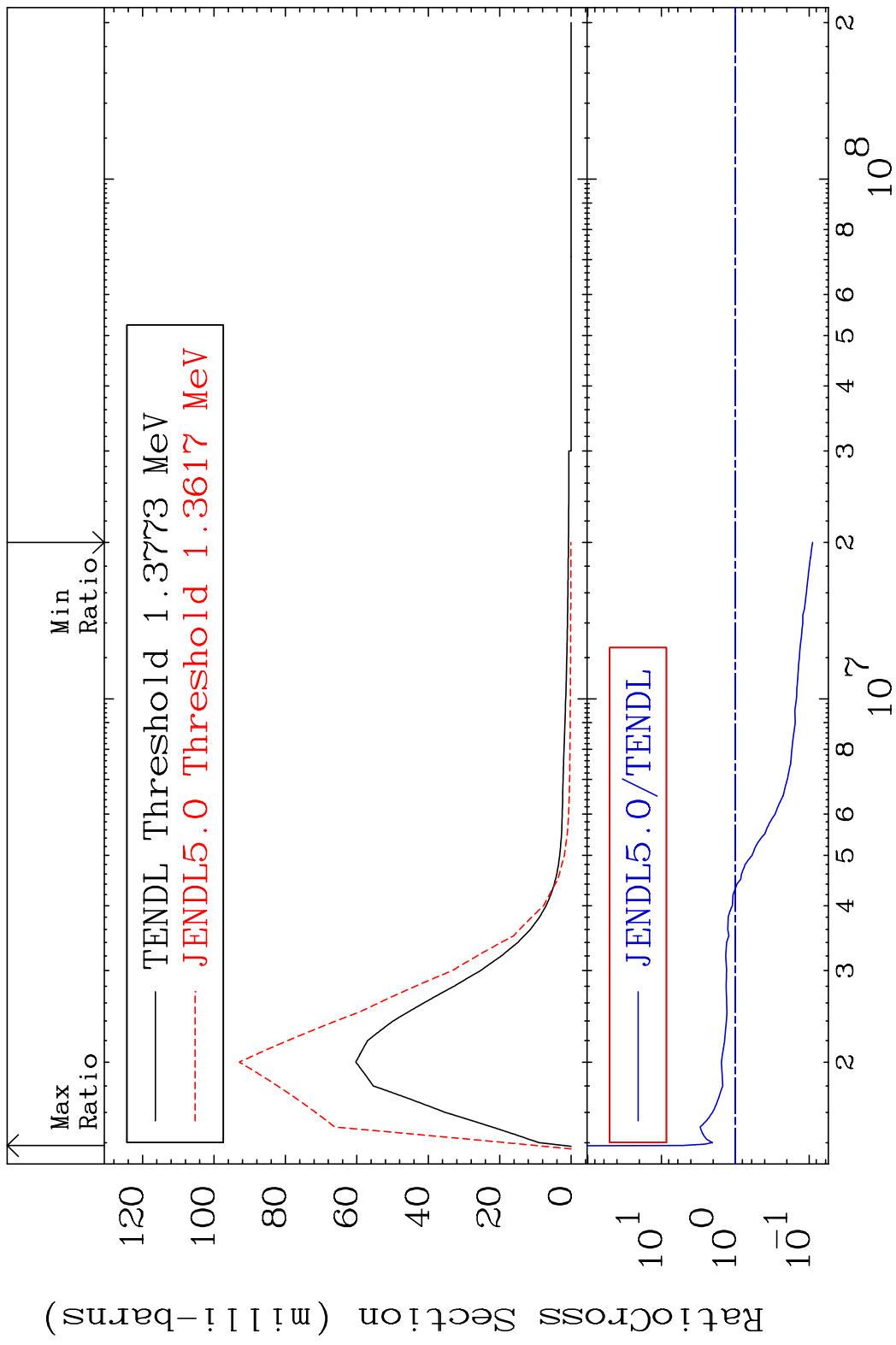
MAT 7243 MT= 64 (n, n') Level 72-Hf-180
 Cross Section 28.88 To 9999. %



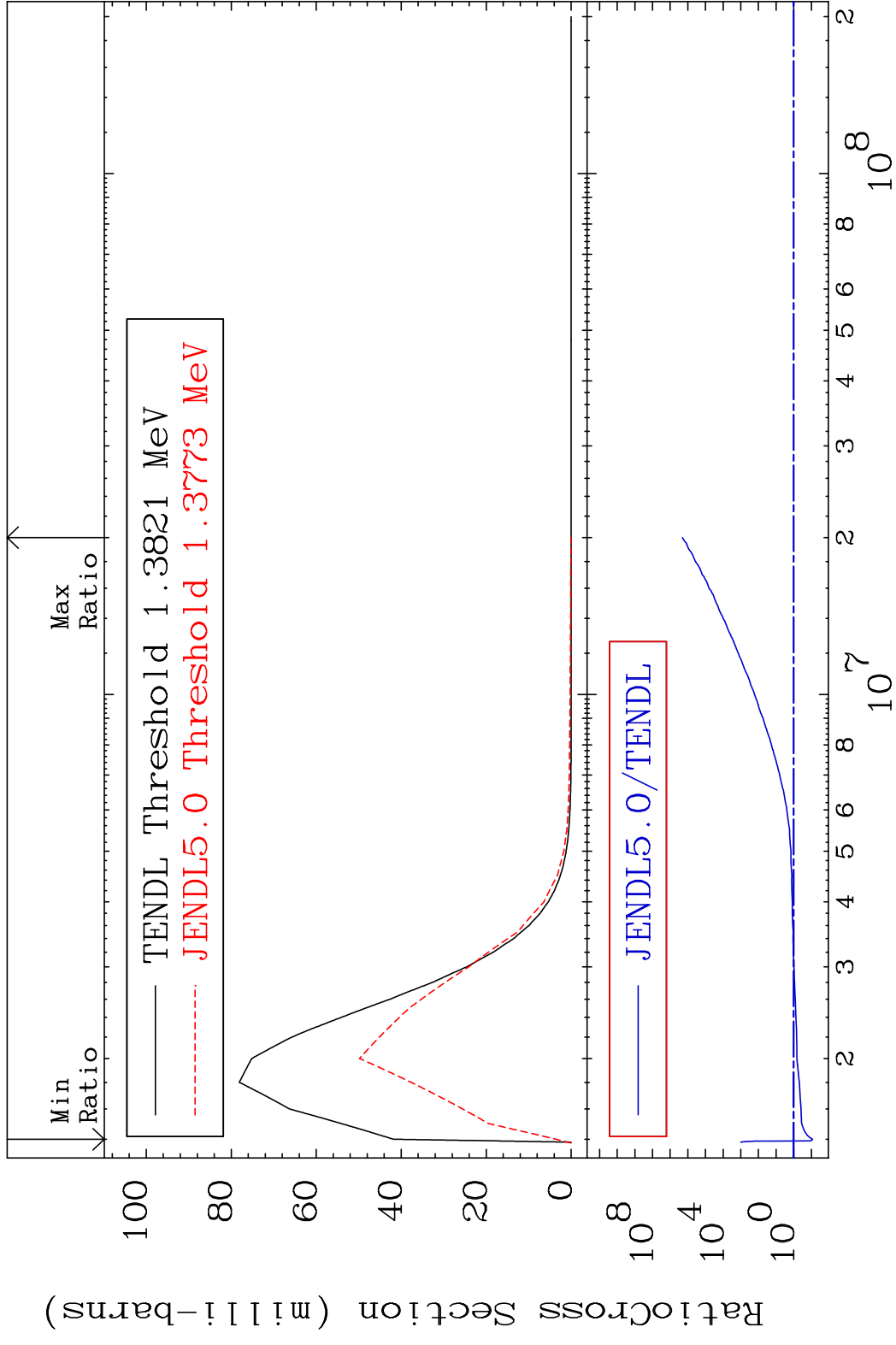
MAT 7243 MT= 65 (n, n') Level 72-Hf-180
 Cross Section -76.99 To 9999. %



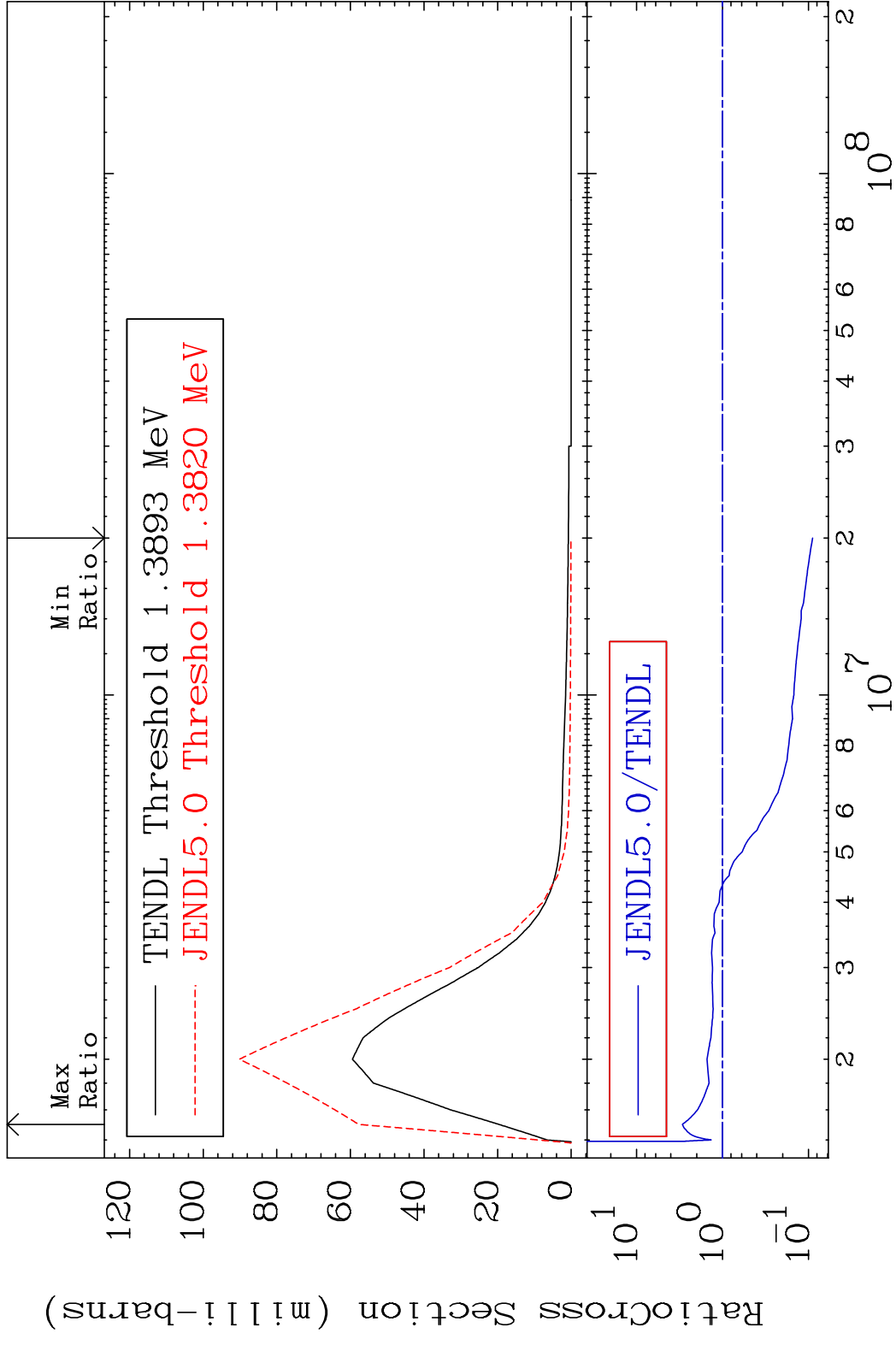
MAT 7243 MT= 66 (n, n') Level 72-Hf-180
 Cross Section -91.01 To 421.5 %



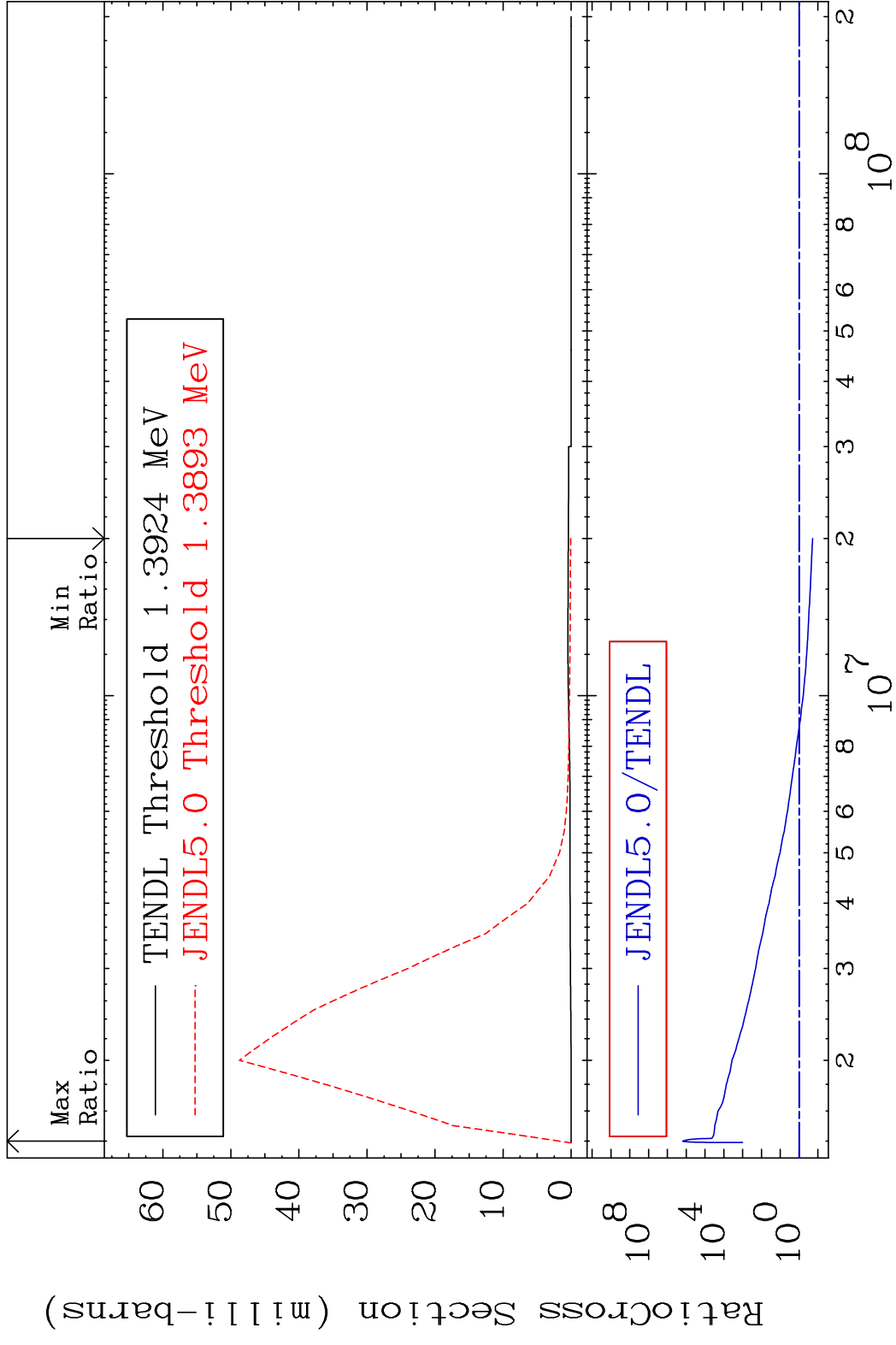
MAT 7243 MT= 67 (n, n') Level 72-Hf-180
 Cross Section -91.39 To 9999. %



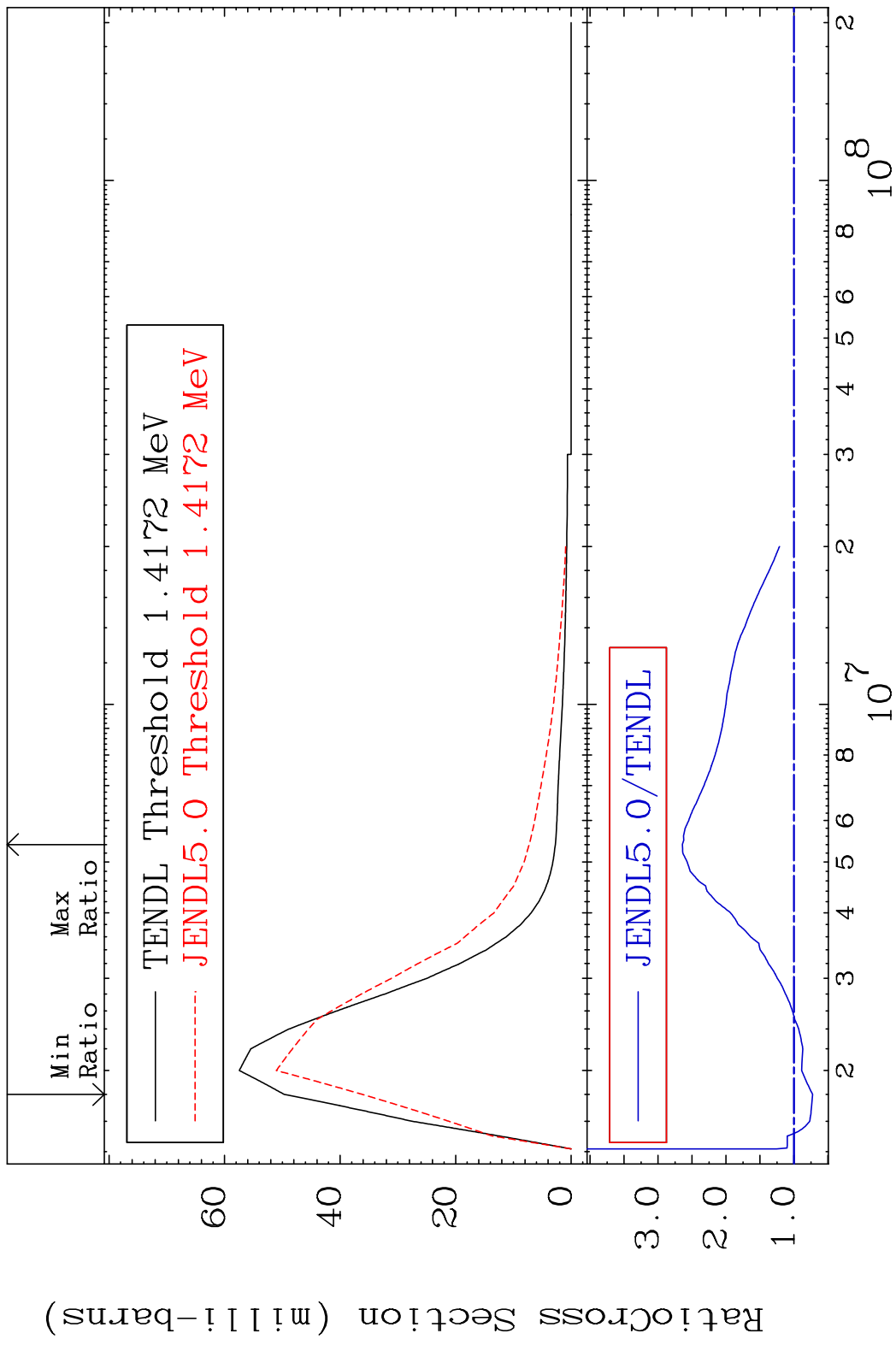
MAT 7243 MT= 68 (n, n') Level 72-Hf-180
 Cross Section -91.02 To 193.9 %



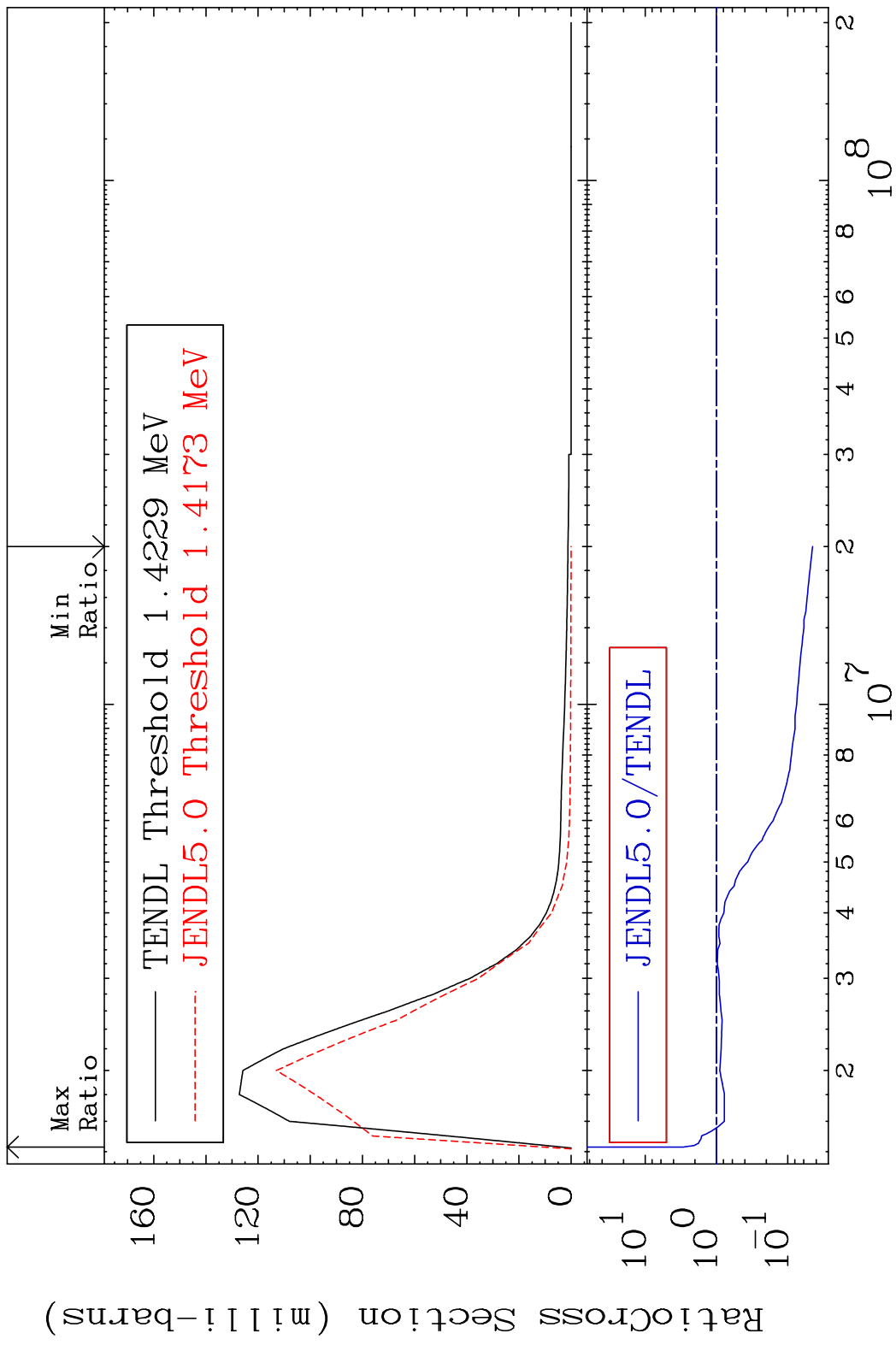
MAT 7243 MT= 69 (n, n') Level 72-Hf-180
 Cross Section -80.68 To 9999. %



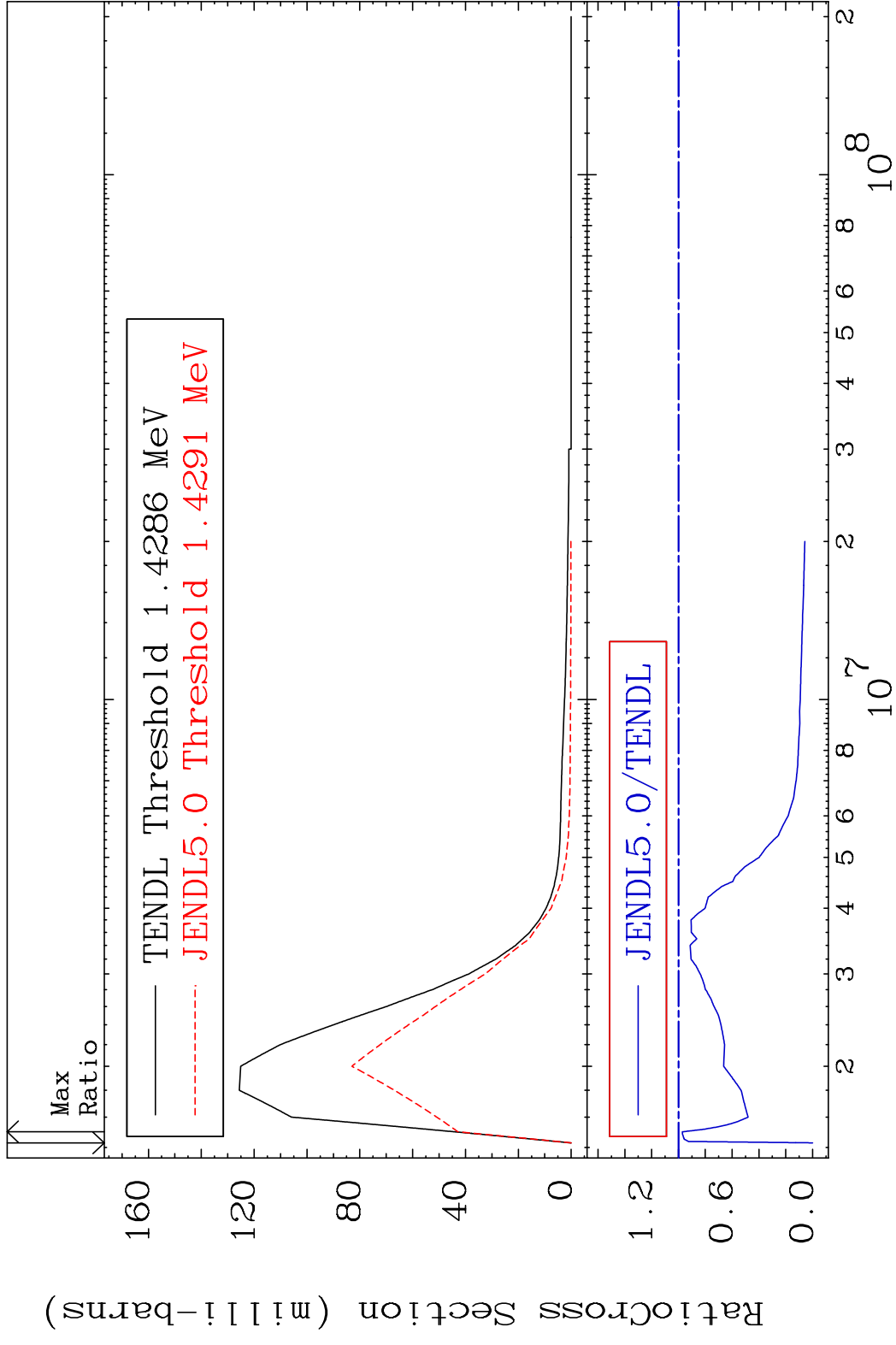
MAT 7243 MT= 70 (n,n') Level 72-Hf-180
 Cross Section -27.30 To 164.3 %



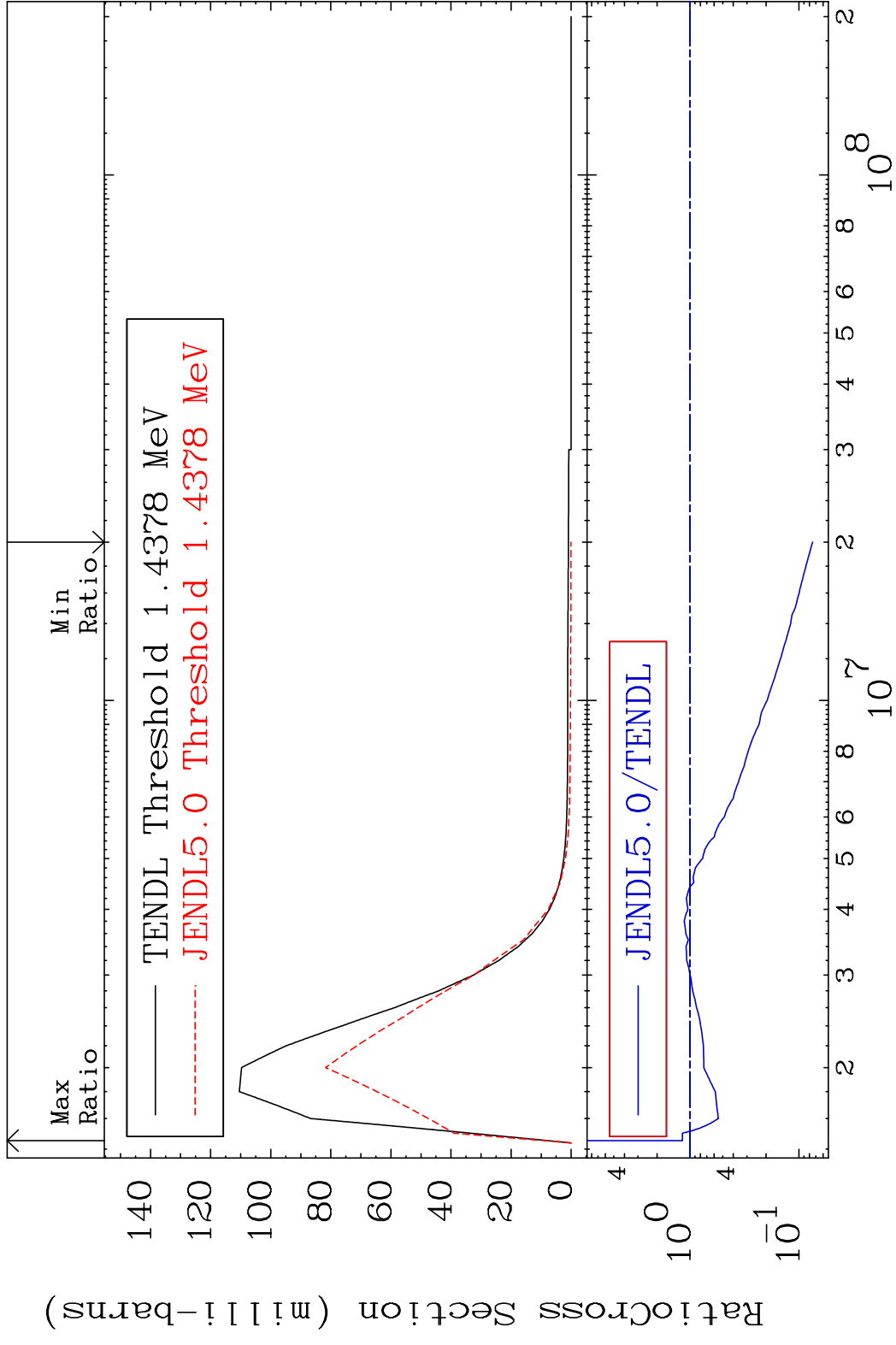
MAT 7243 MT= 71 (n,n') Level 72-Hf-180
 Cross Section -95.50 To 200.6 %



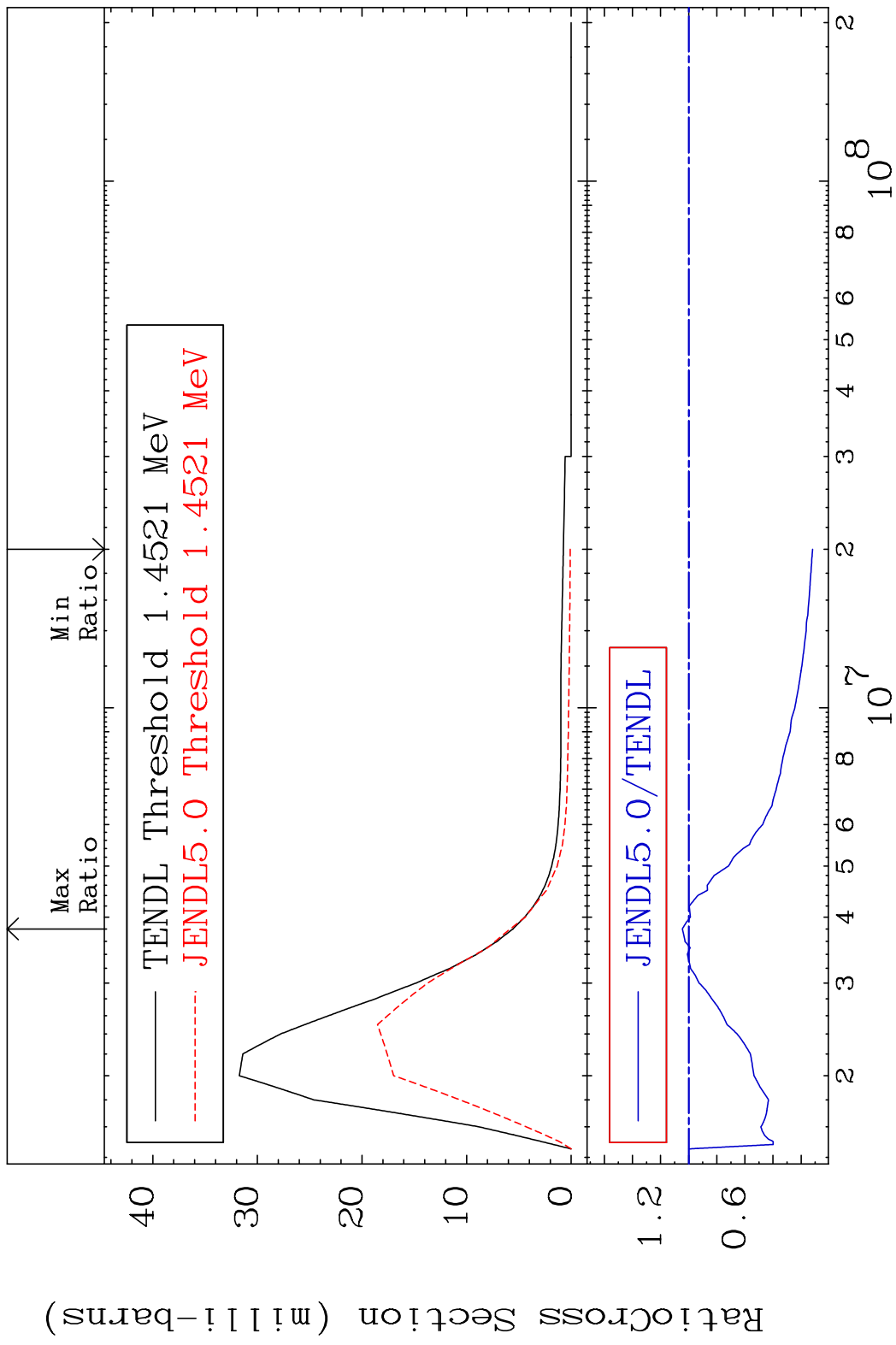
MAT 7243 MT= 72 (n, n') Level 72-Hf-180
 Cross Section -100.0 To -2.893%



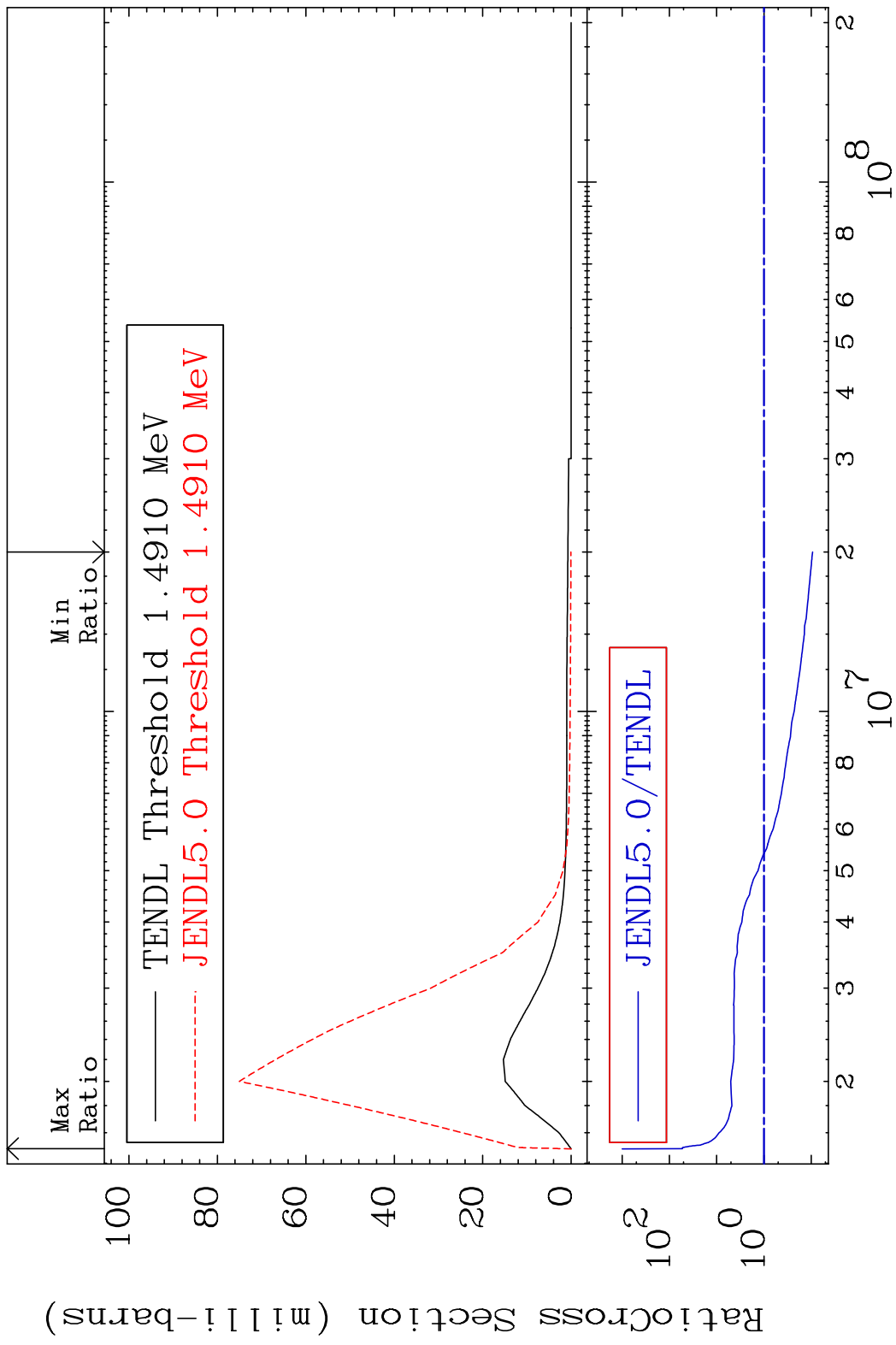
MAT 7243 MT= 73 (n, n') Level 72-Hf-180
 Cross Section -92.52 To 17.40 %



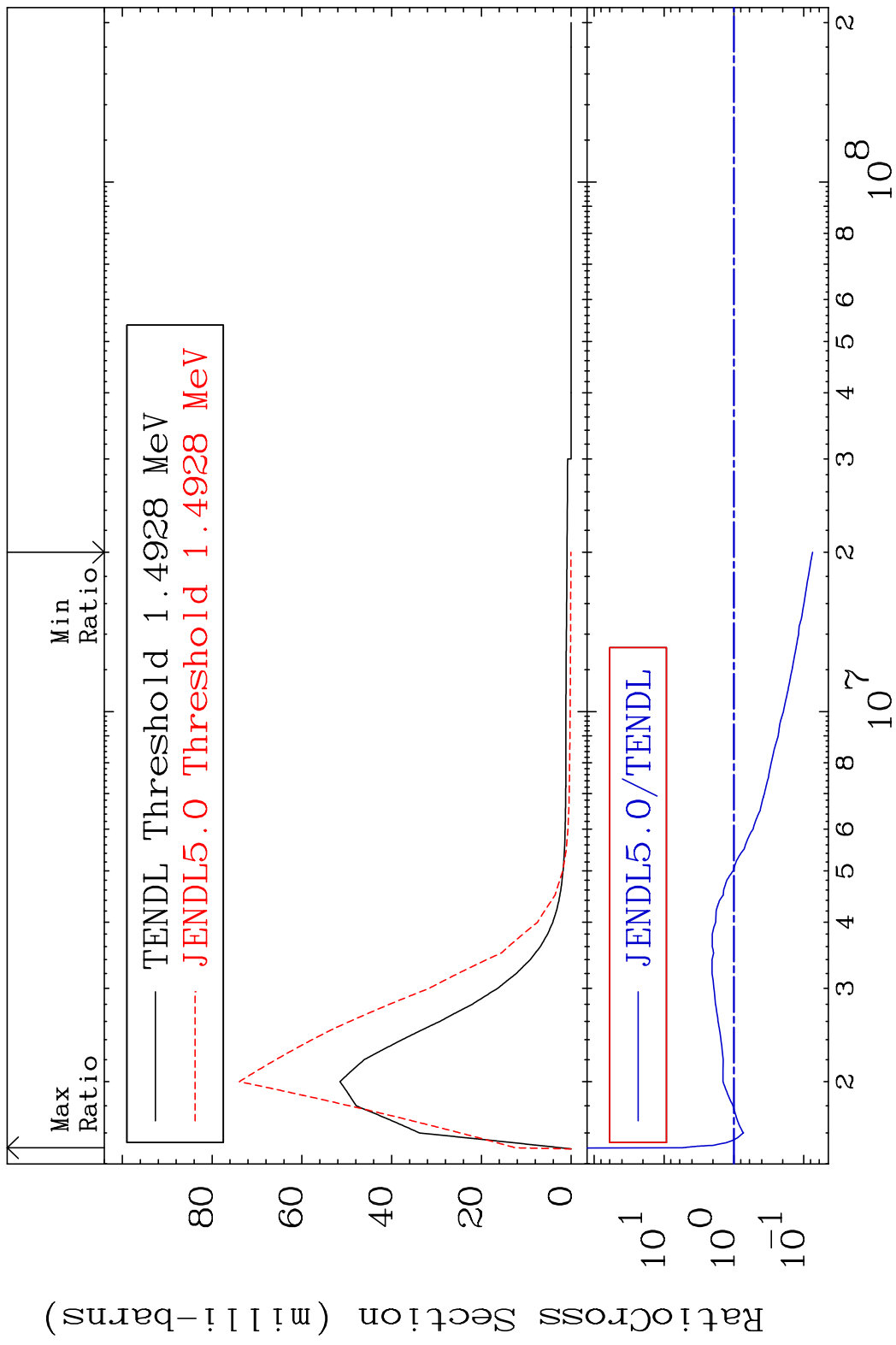
MAT 7243 MT= 74 (n,n') Level 72-Hf-180
 Cross Section -88.14 To 4.508 %



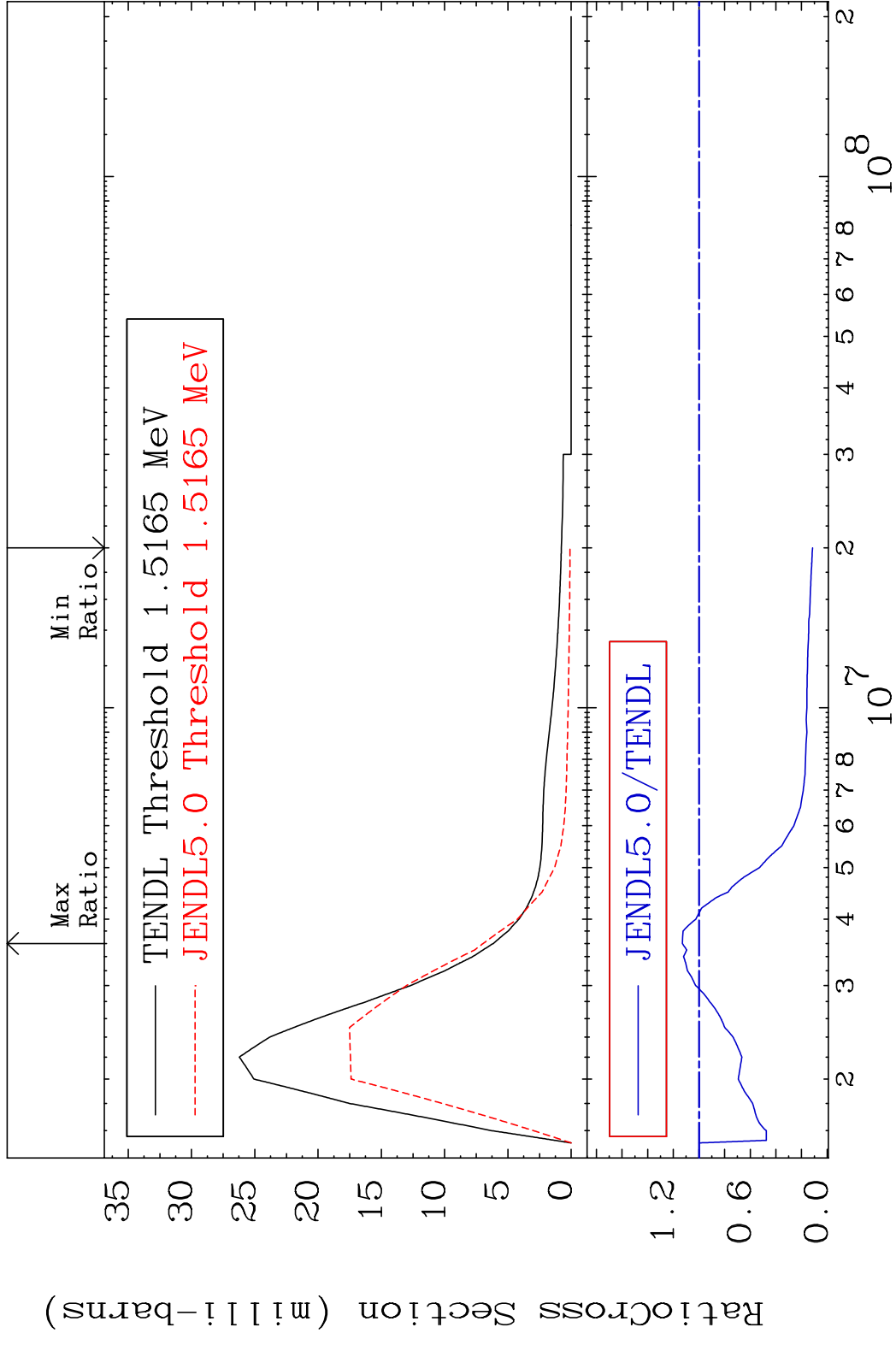
MAT 7243 MT= 76 (n, n') Level 72-Hf-180
 Cross Section -90.65 To 5221. %



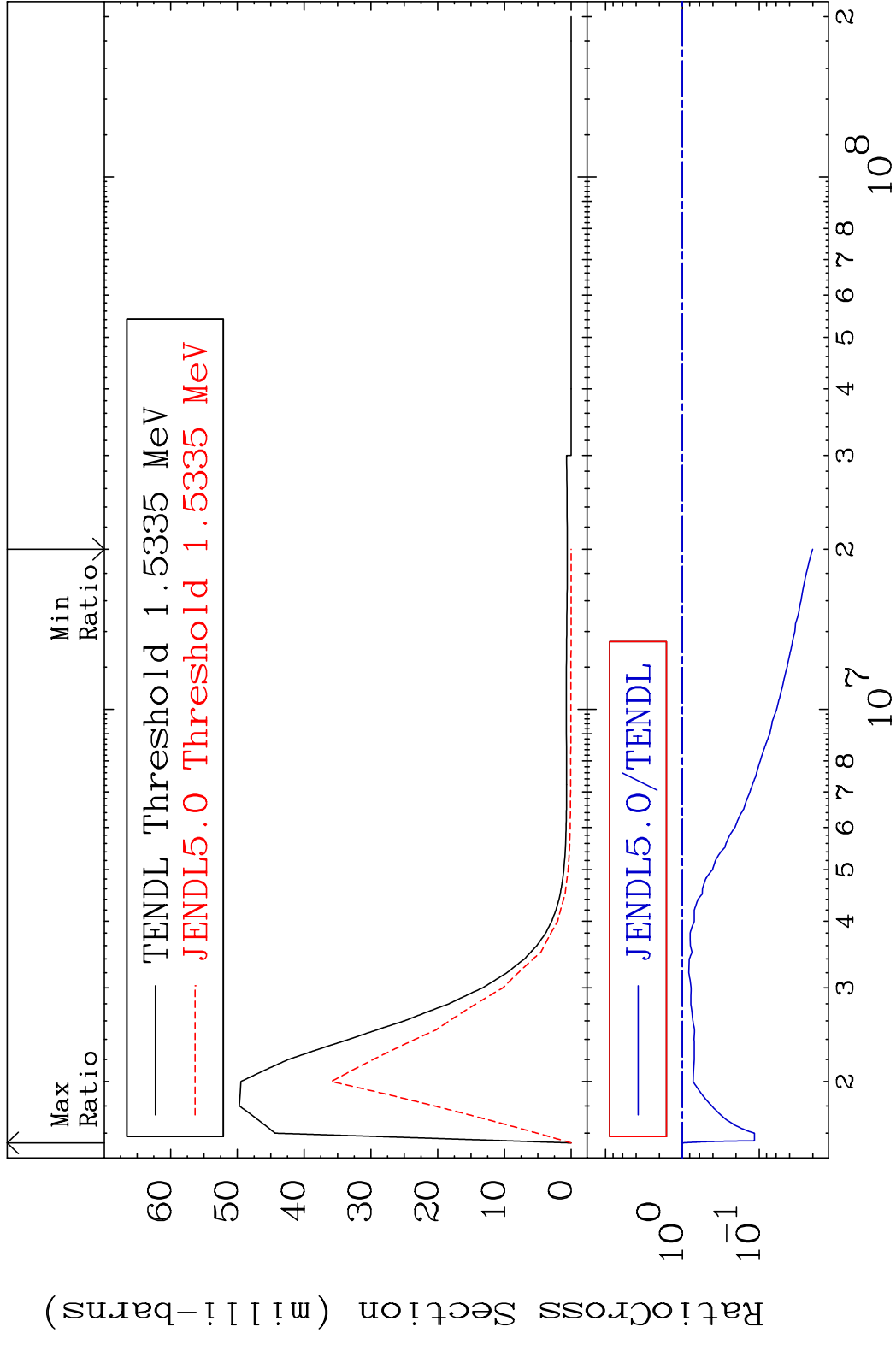
MAT 7243 MT= 77 (n,n') Level 72-Hf-180
 Cross Section -92.51 To 447.4 %



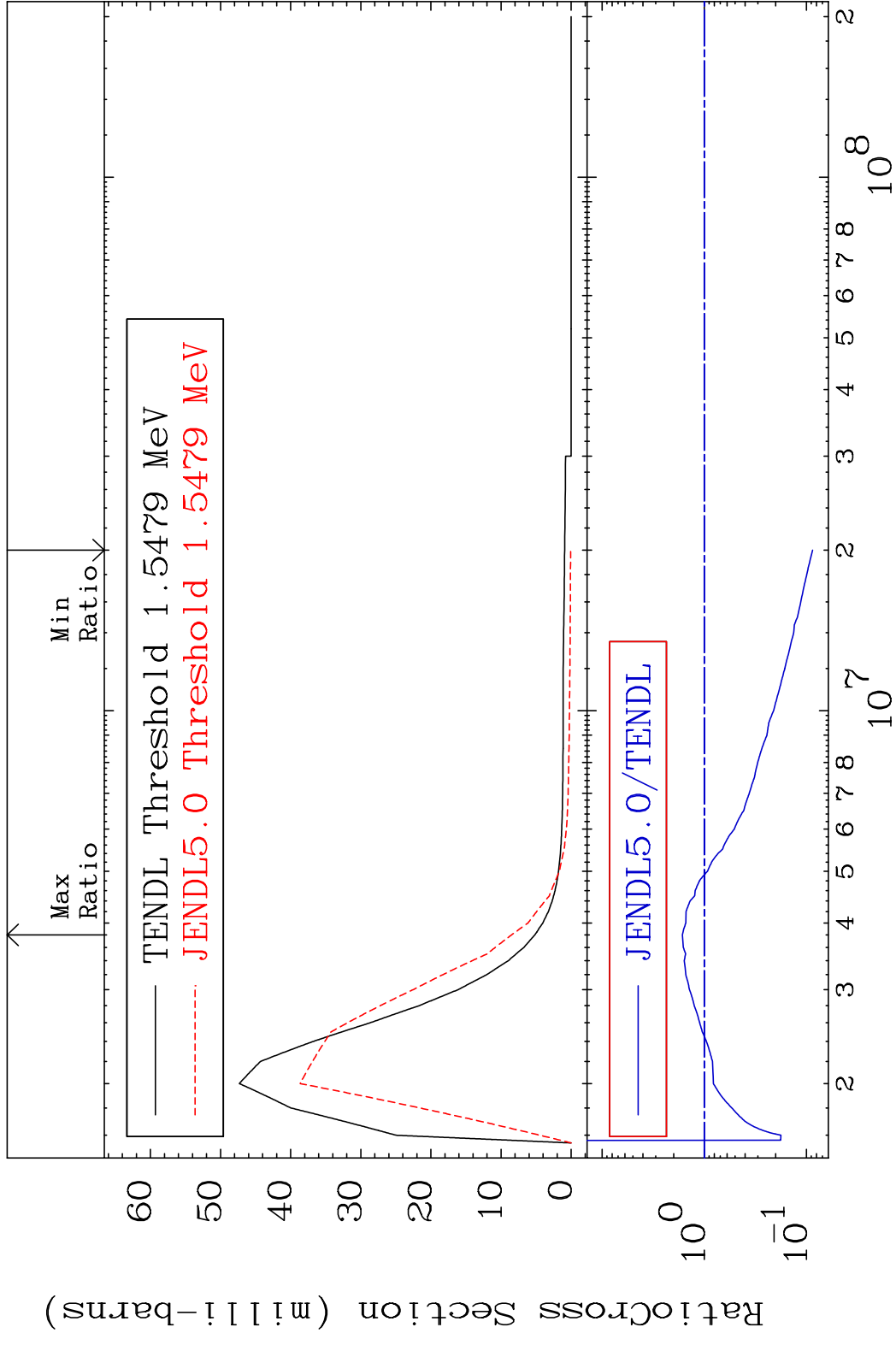
MAT 7243 MT= 78 (n, n') Level 72-Hf-180
 Cross Section -88.60 To 12.95 %



MAT 7243 MT= 79 (n,n') Level 72-Hf-180
 Cross Section -97.99 To 0.000 %



MAT 7243 MT= 80 (n,n') Level 72-Hf-180
 Cross Section -91.27 To 64.22 %

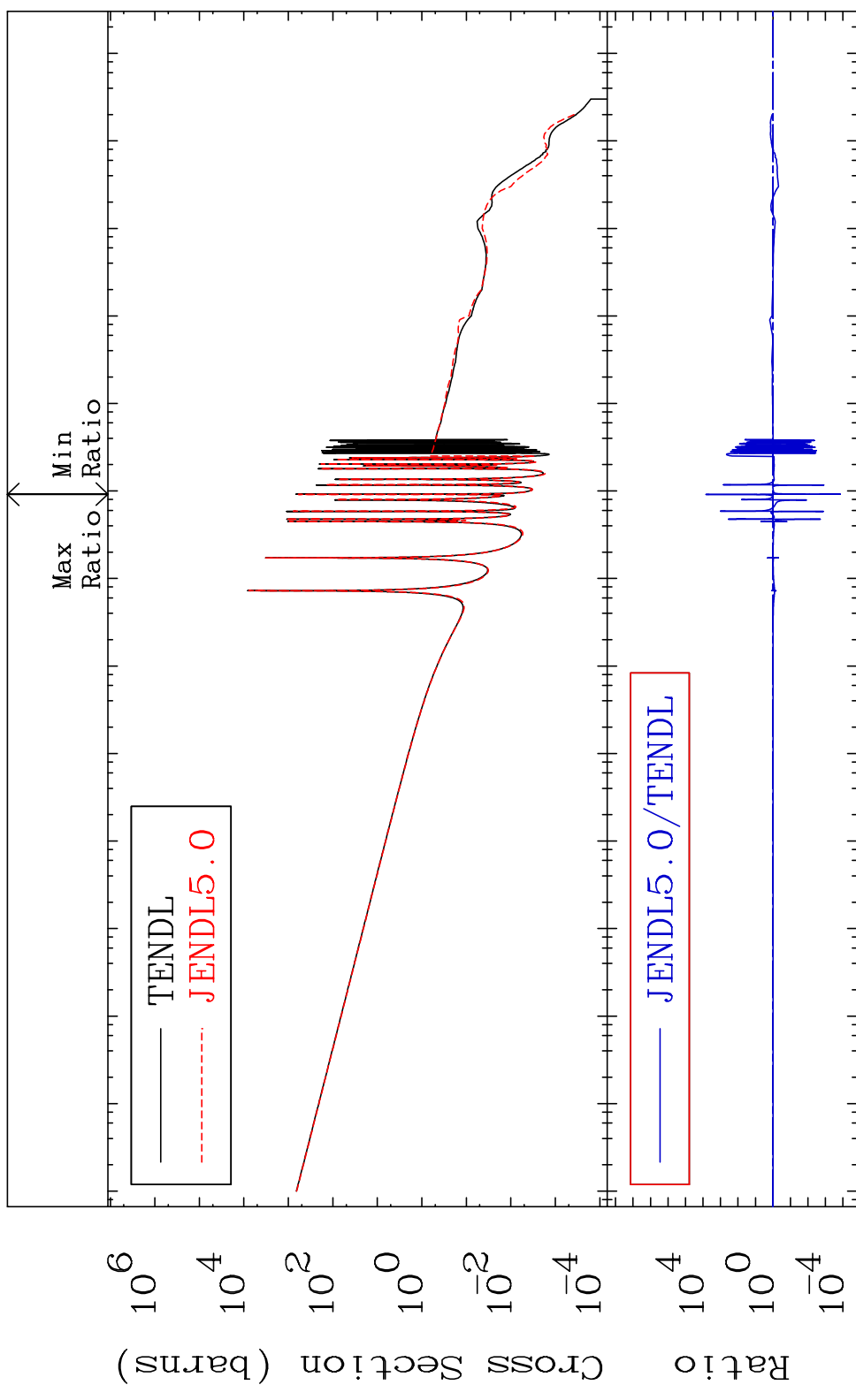


MAT 7243

(n, γ)

72-Hf-180

Cross Section -99.99 To 9999. %



40

Incident Energy (eV)

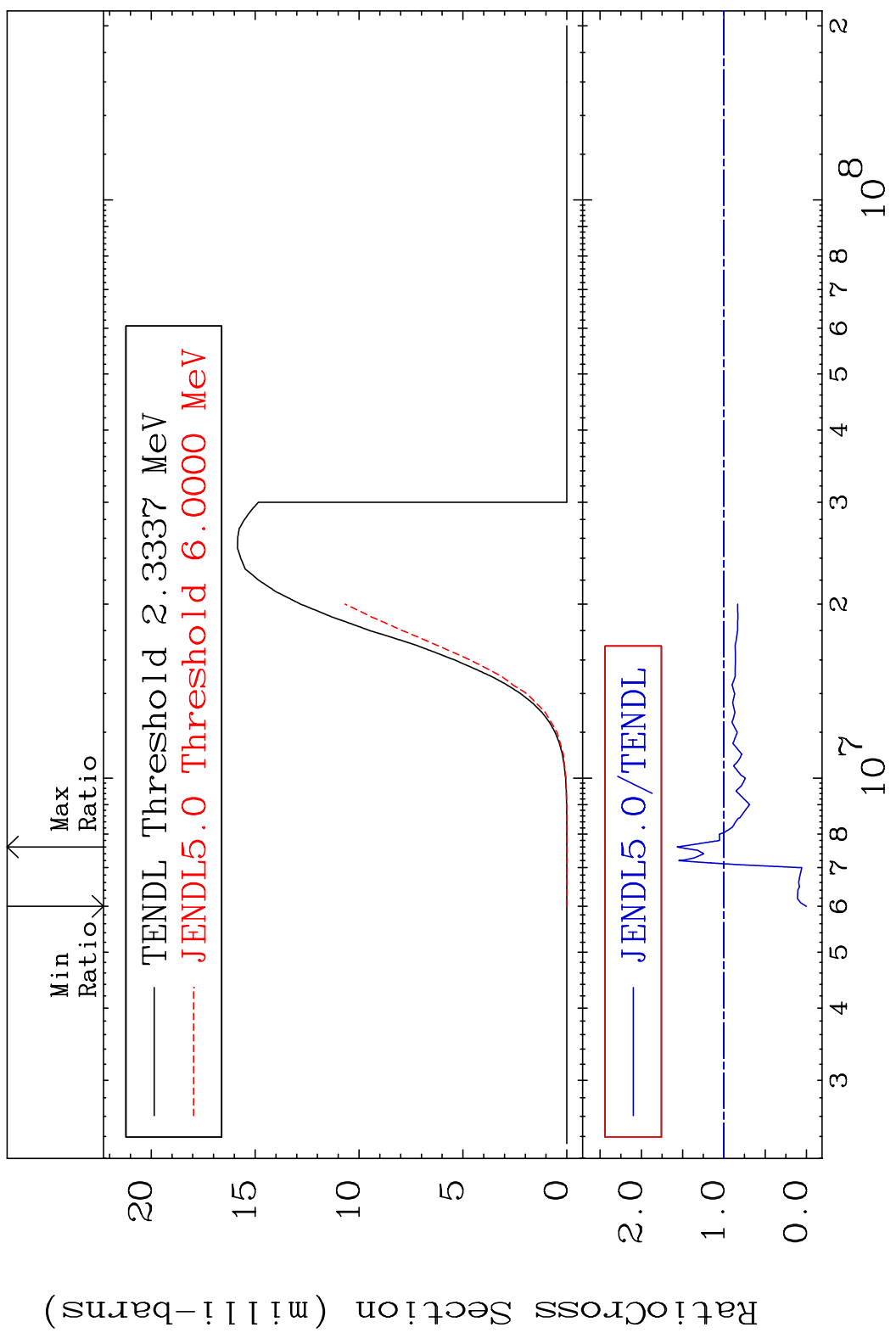
72-Hf-180

MAT 7243

(n,p)

72-Hf-180

Cross Section -100.0 To 56.61 %

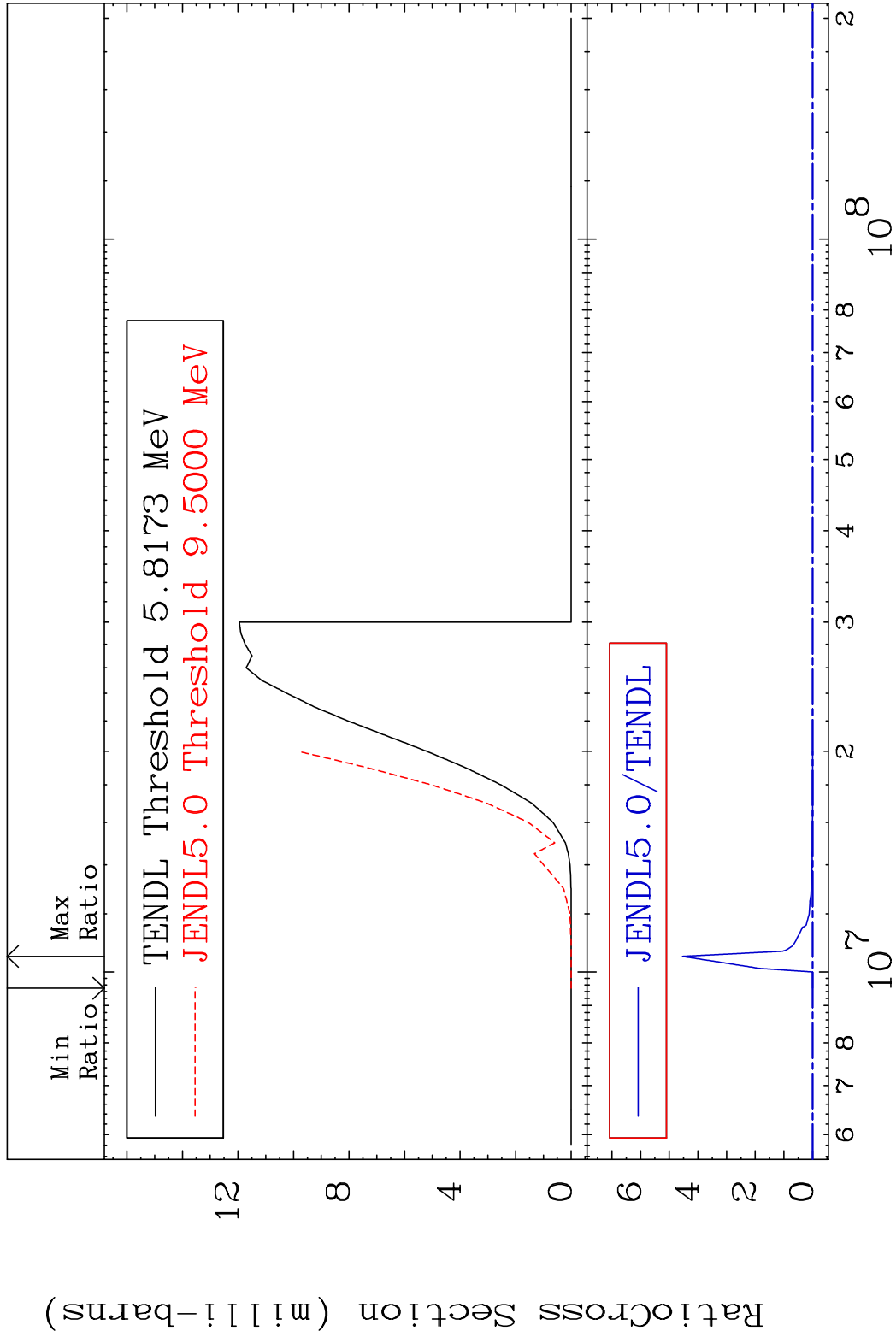


MAT 7243

(n,d)

72-Hf-180

Cross Section -100.0 To 9999. %



42

Incident Energy (eV)

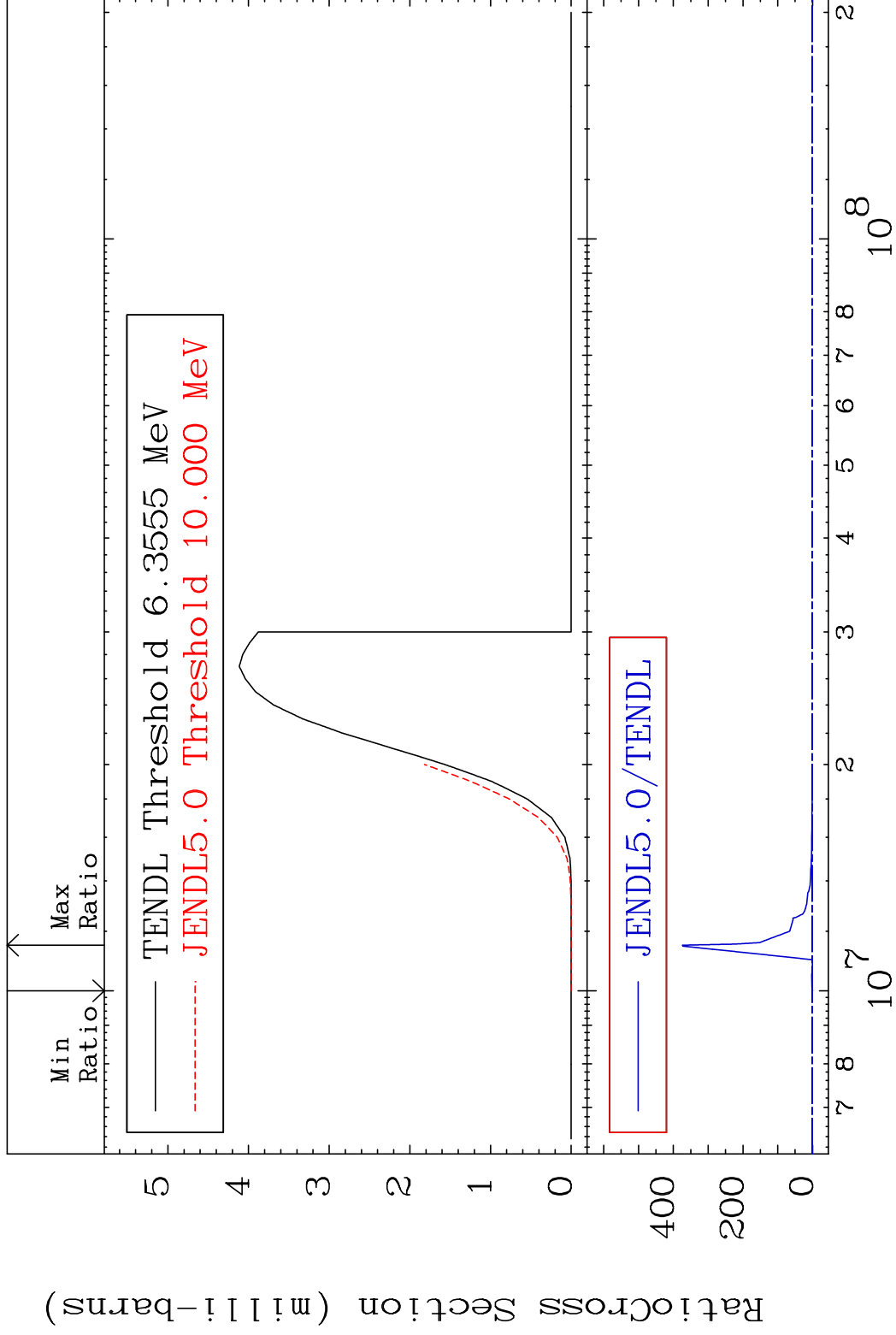
72-Hf-180

MAT 7243

(n, t)

72-Hf-180

Cross Section -100.0 To 9999. %



43

Incident Energy (eV)

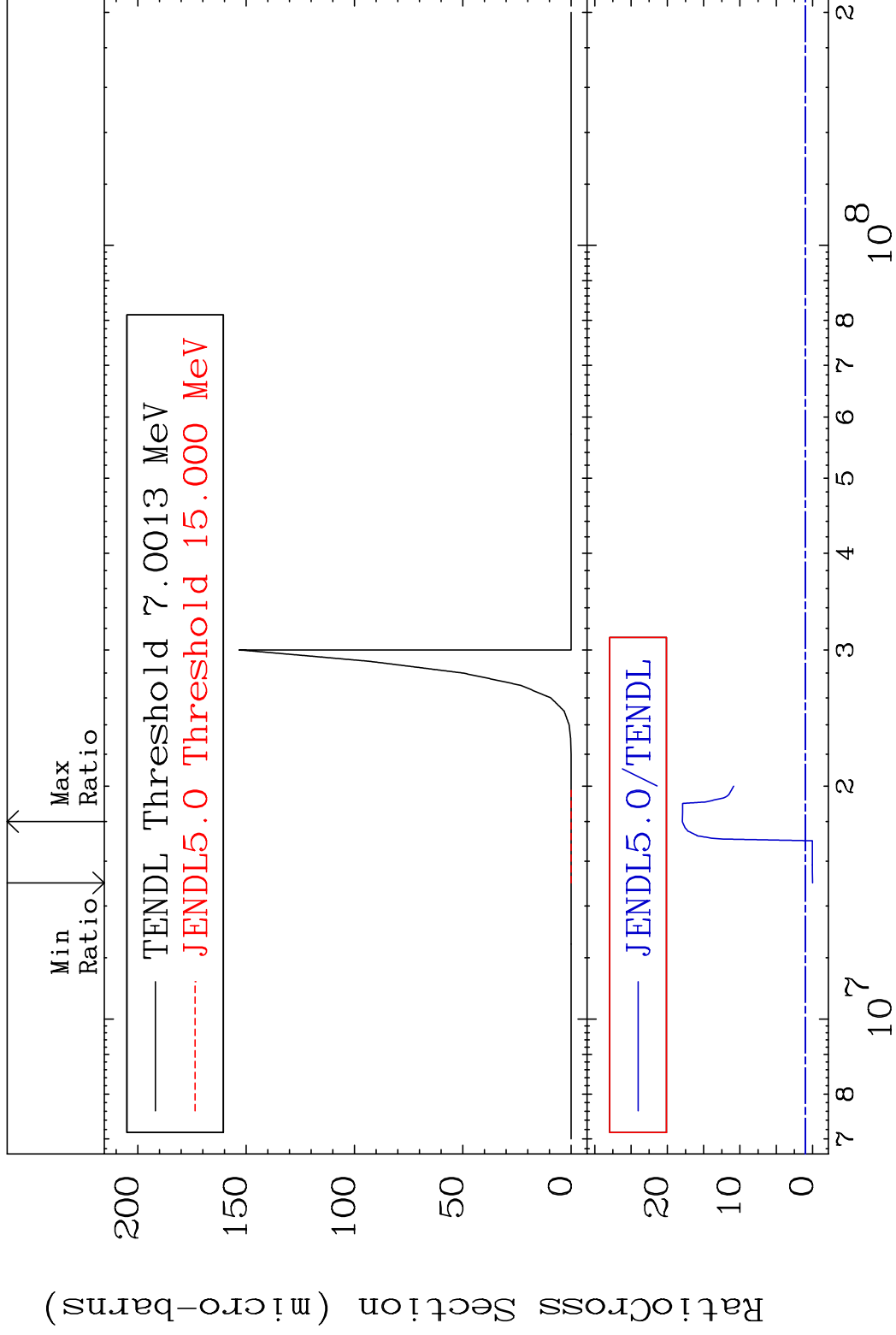
72-Hf-180

MAT 7243

(n, He-3)

72-Hf-180

Cross Section -100.0 To 1693. %



44

Incident Energy (eV)

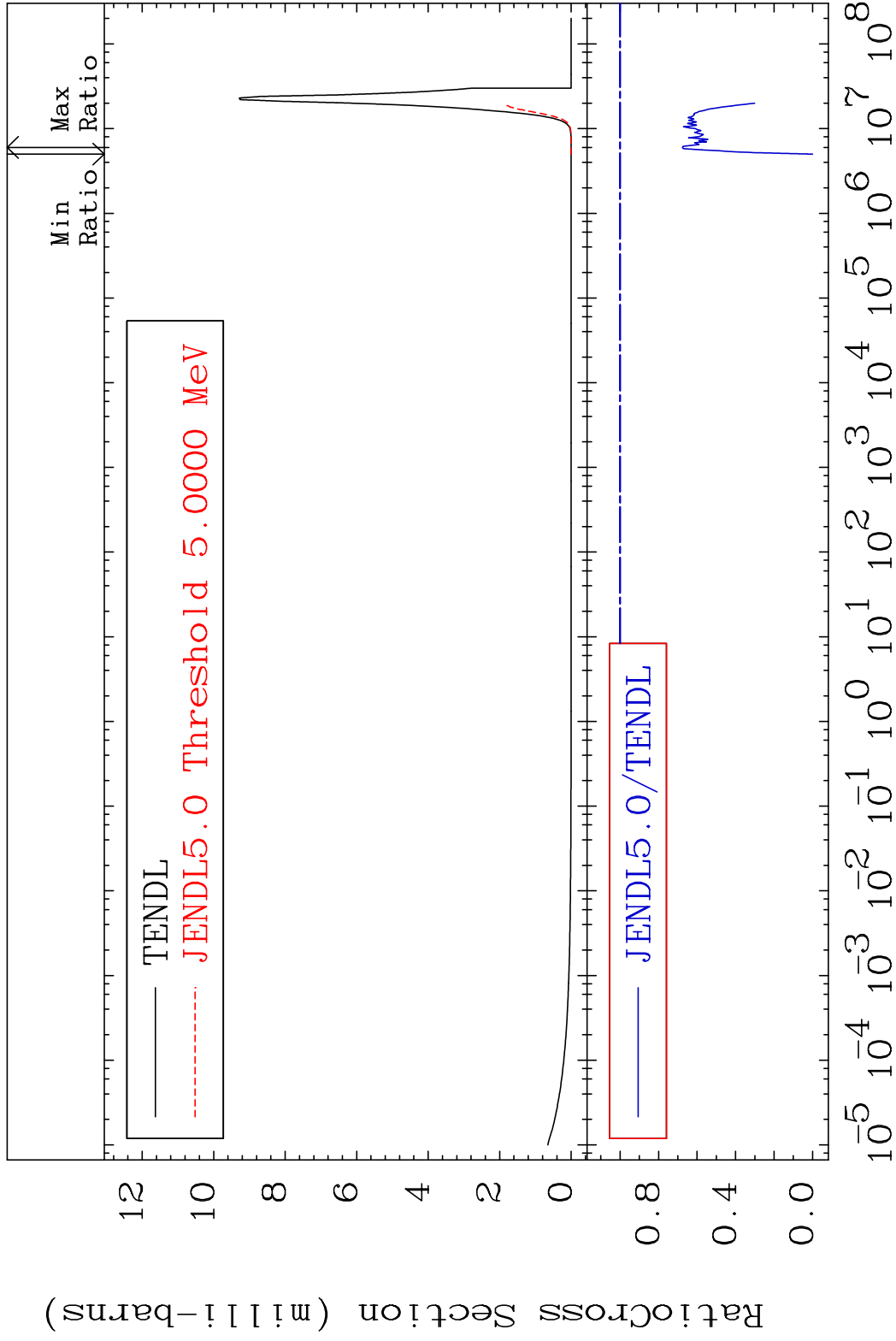
72-Hf-180

MAT 7243

(n, α)

72-Hf-180

Cross Section -100.0 To -32.35%



45

Incident Energy (eV)

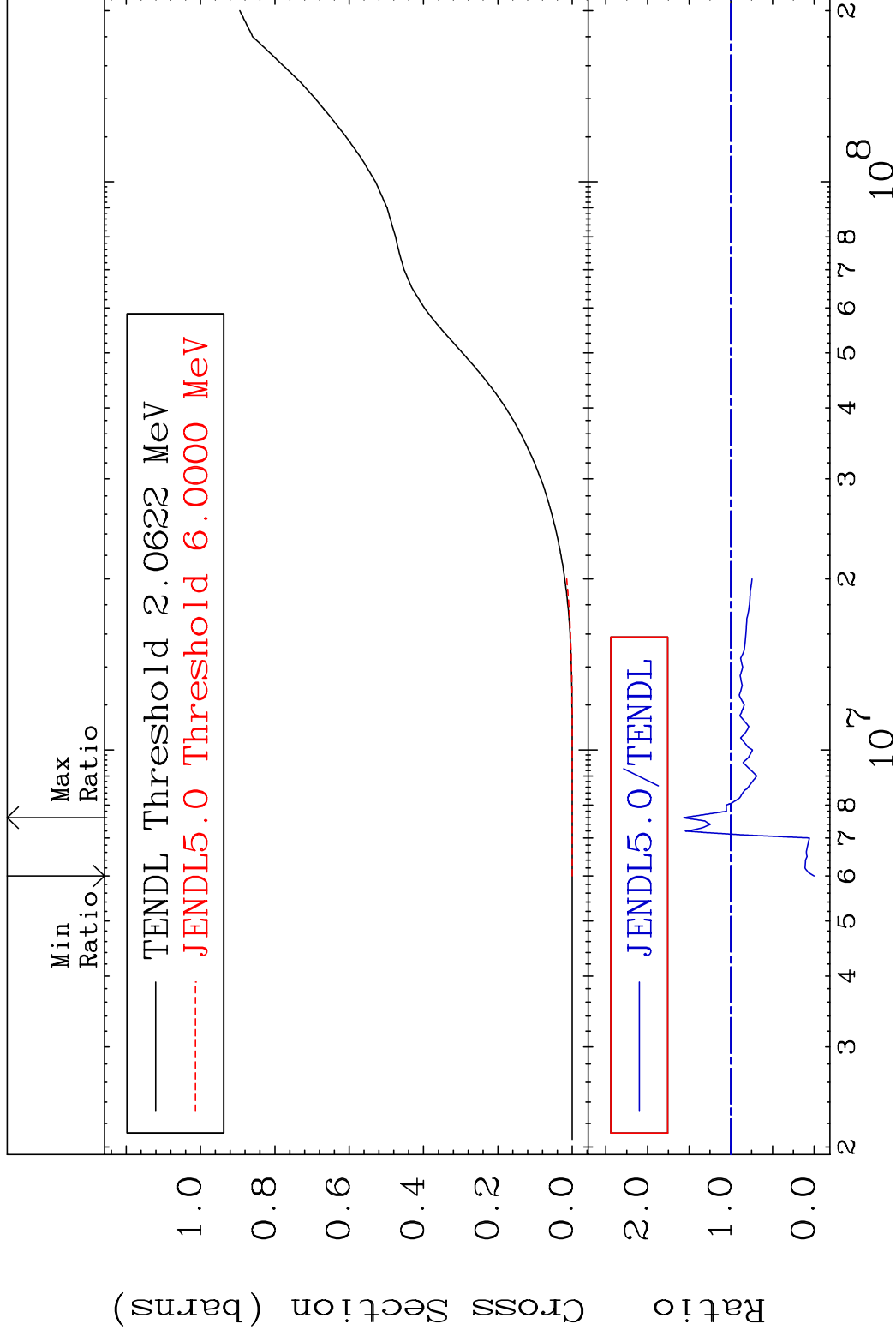
72-Hf-180

MAT 7243

Hydrogen Production

72-Hf-180

Cross Section -100.0 To 56.61 %



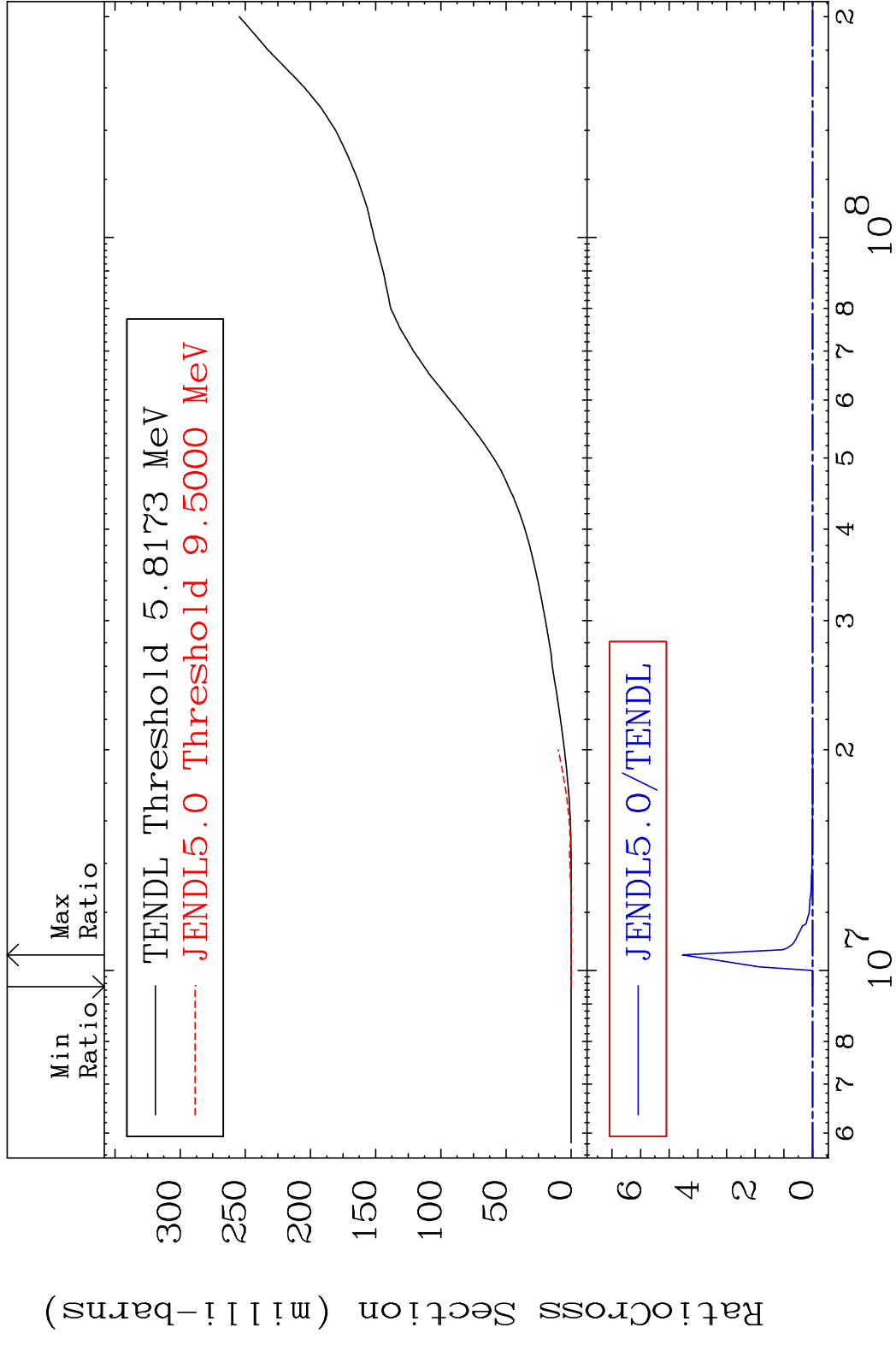
46

Incident Energy (eV)

72-Hf-180

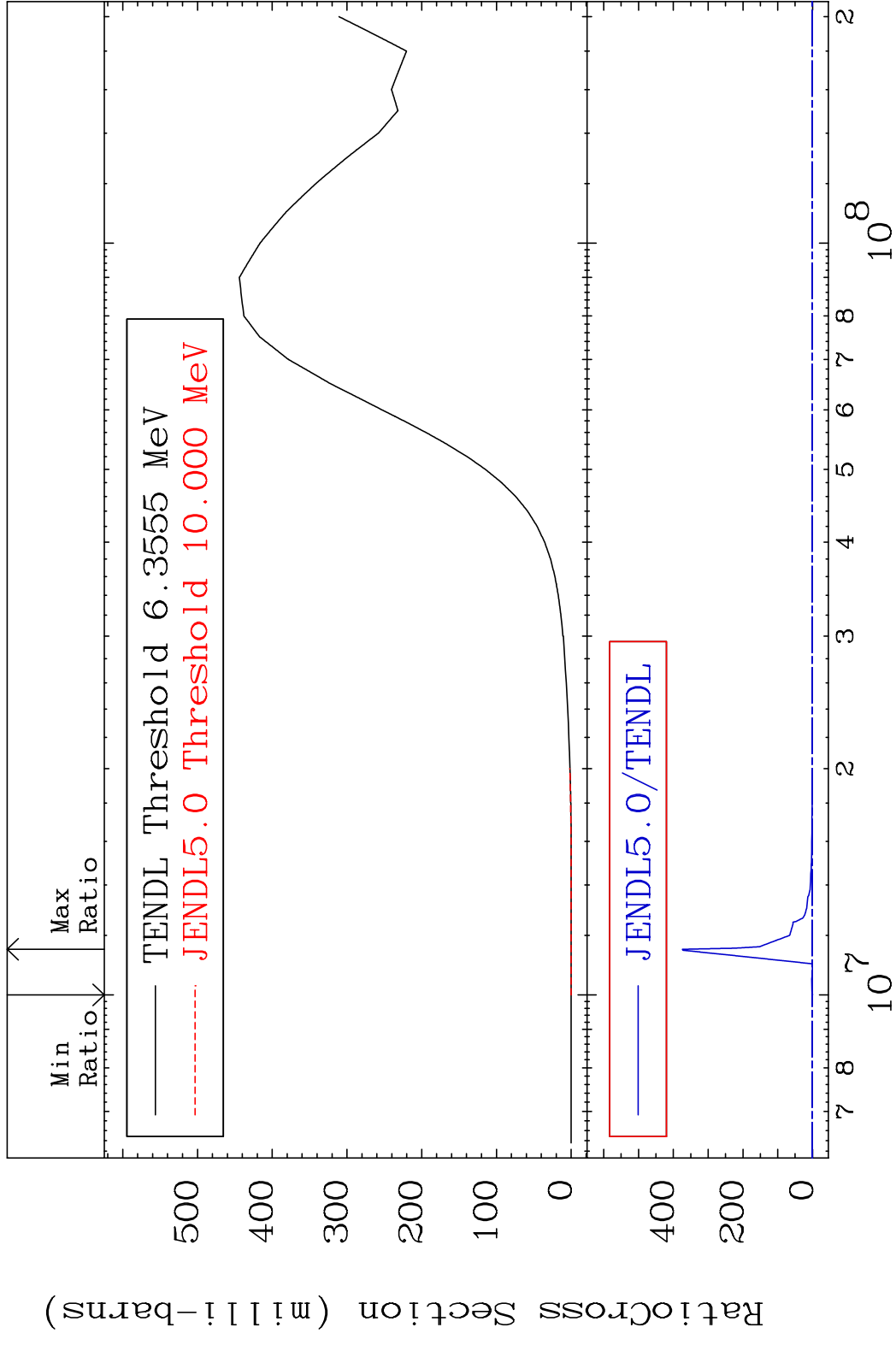
MAT 7243

Deuterium Production 72-Hf-180
Cross Section -100.0 To 9999. %



MAT 7243

Tritium Production 72-Hf-180
Cross Section -100.0 To 9999. %

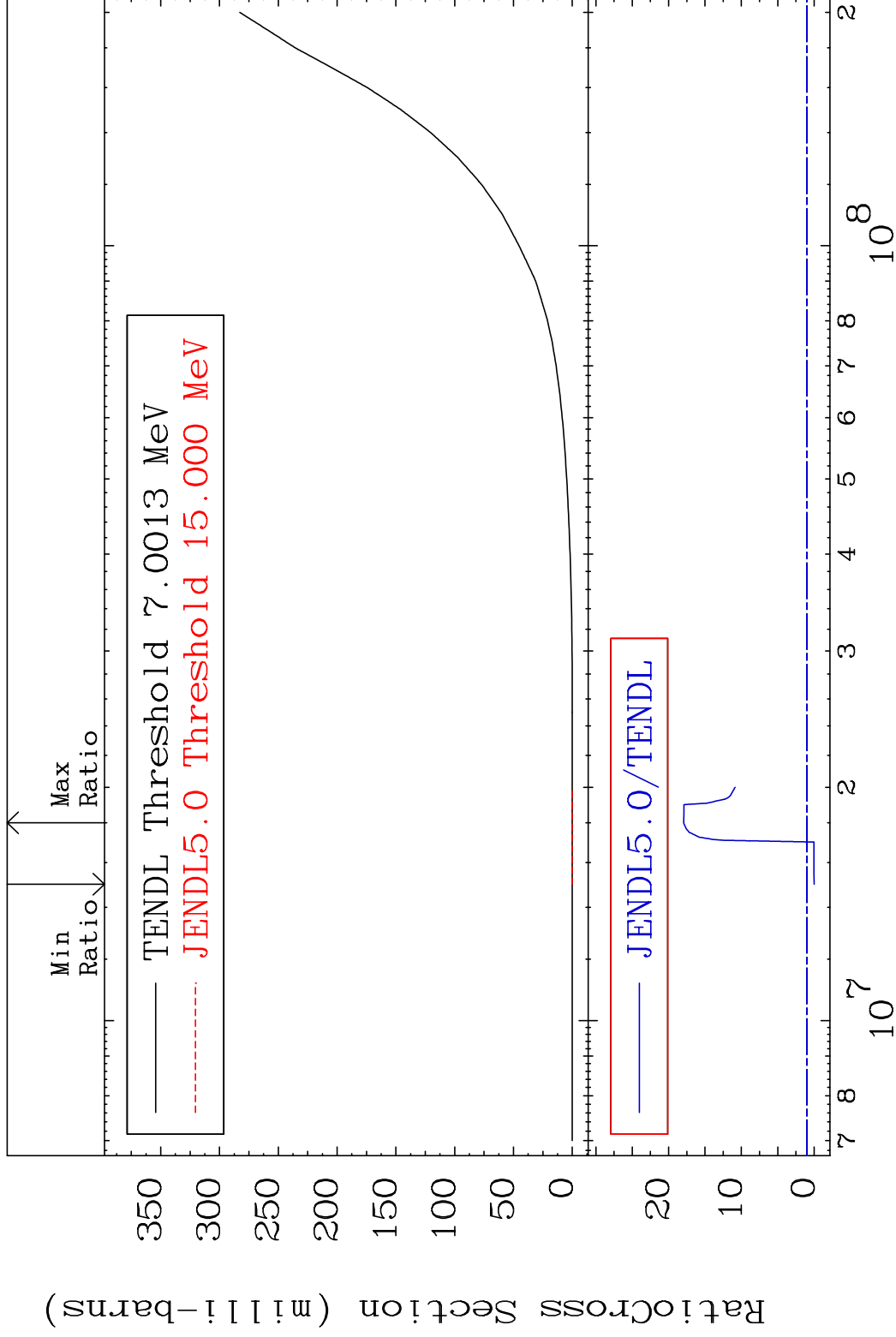


MAT 7243

He-3 Production

72-Hf-180

Cross Section -100.0 To 1693. %



49

Incident Energy (eV)

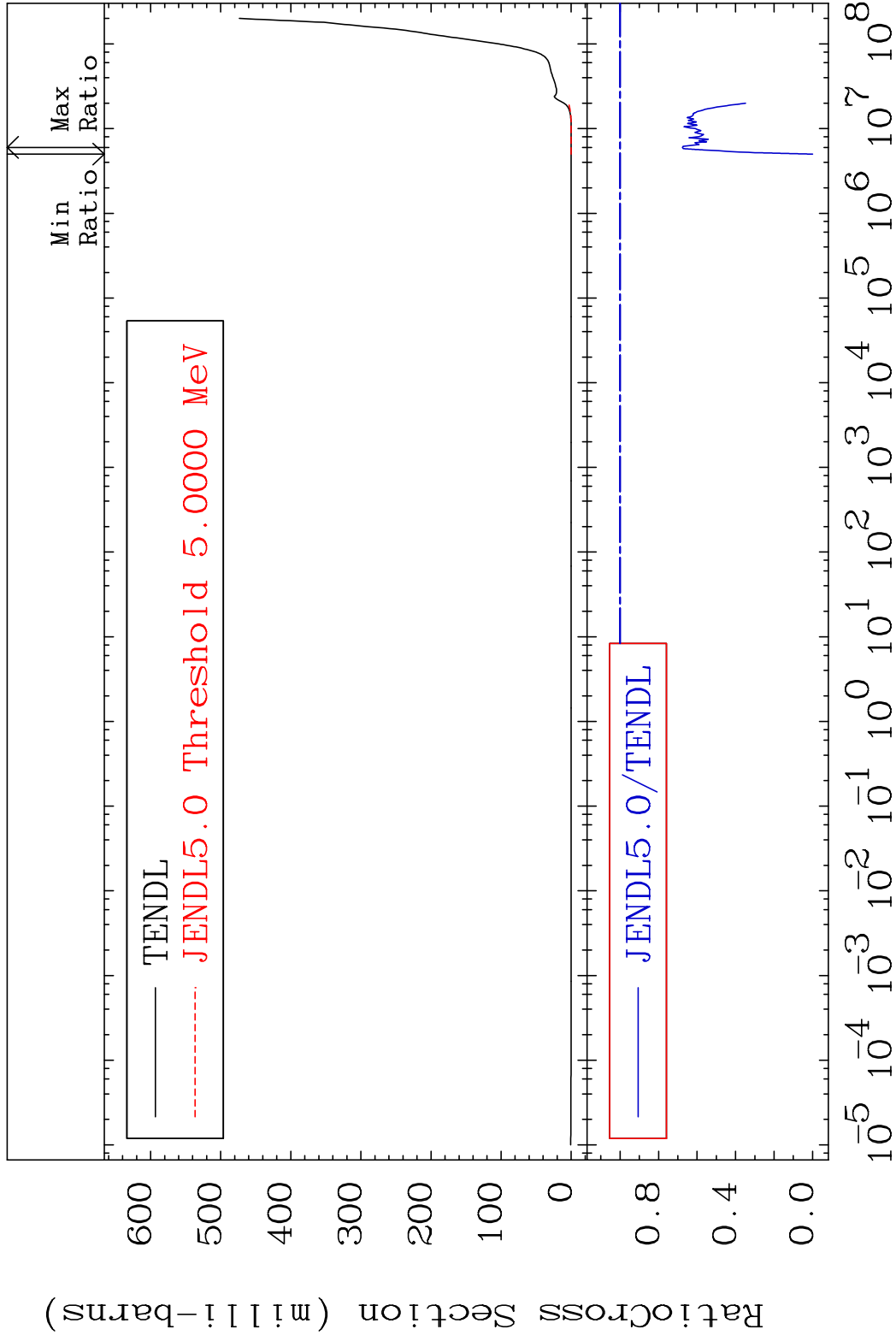
72-Hf-180

MAT 7243

He-4 Production

72-Hf-180

Cross Section -100.0 To -32.35%

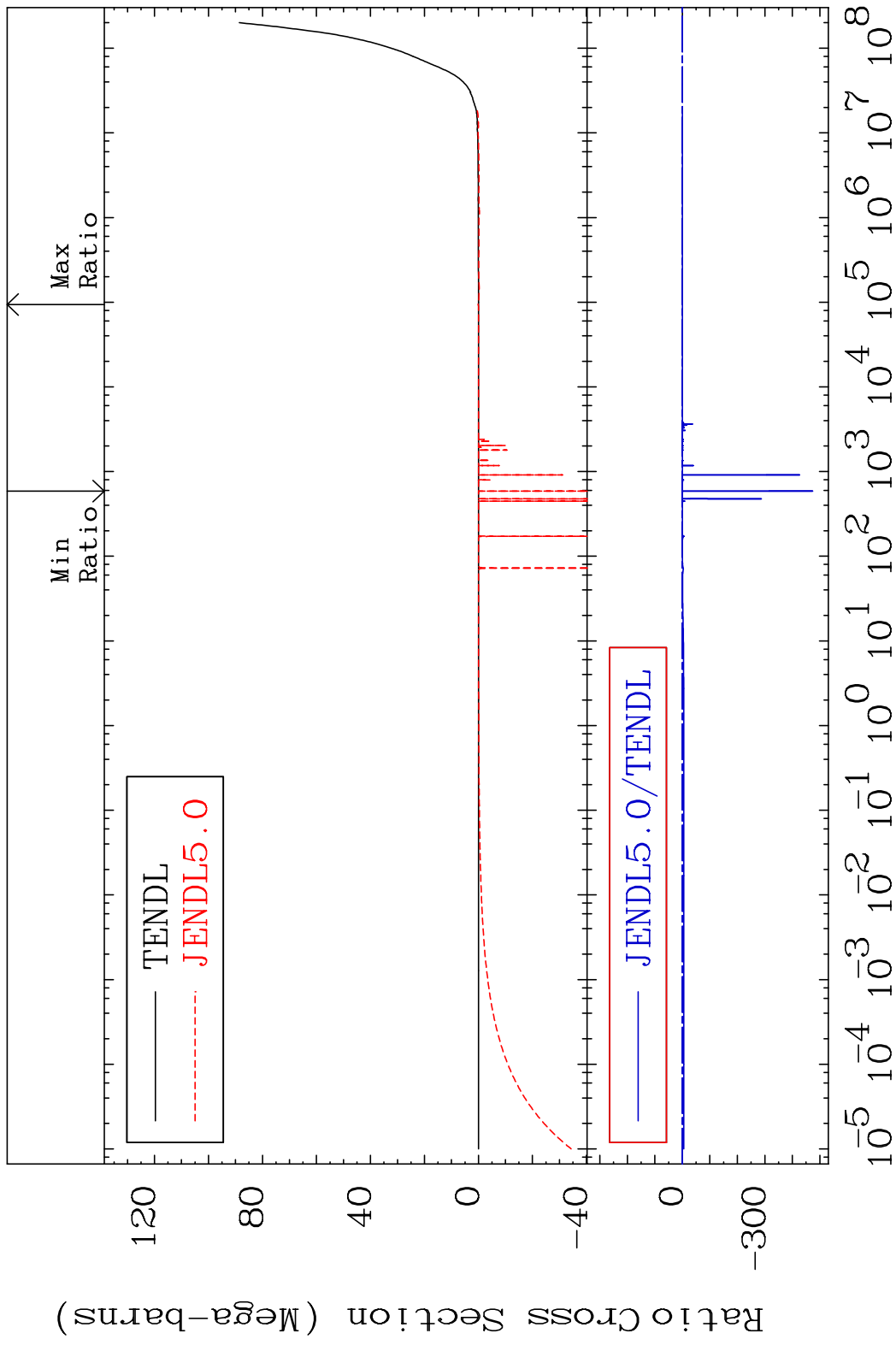


50

Incident Energy (eV)

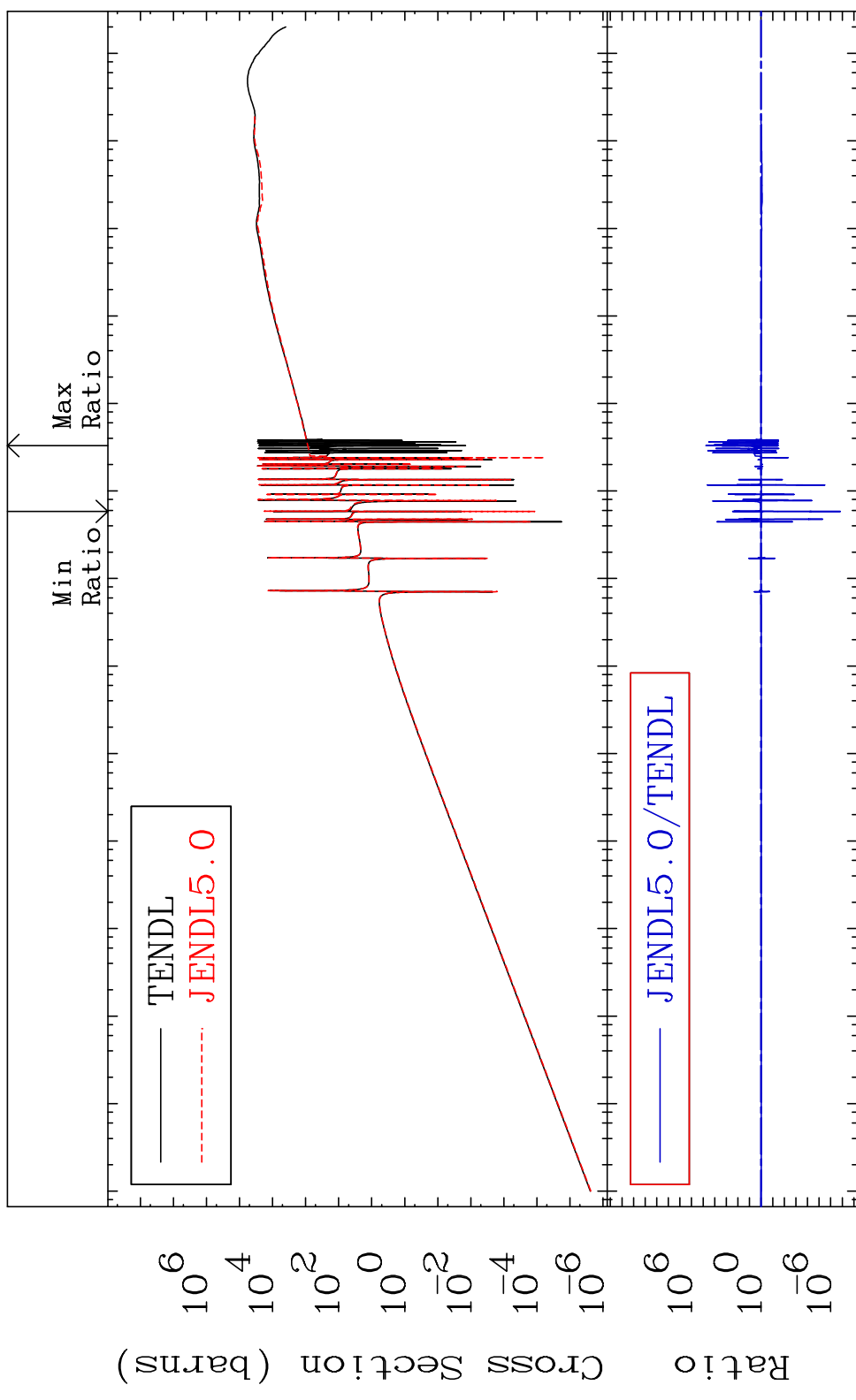
72-Hf-180

MAT 7243 Kerma total (eV-barns) 72-Hf-180
 Cross Section -9999. To 1928. %

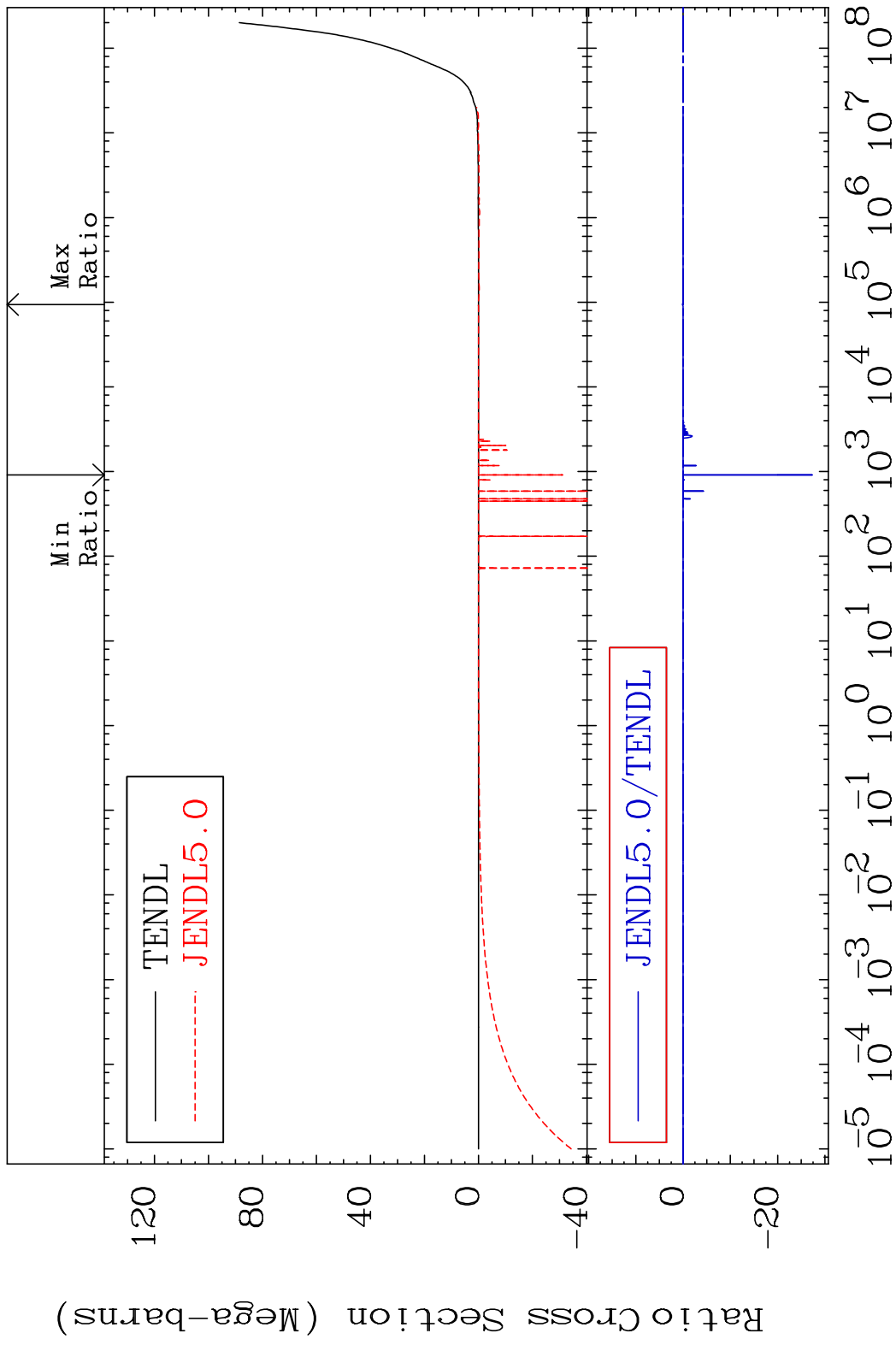


MAT 7243

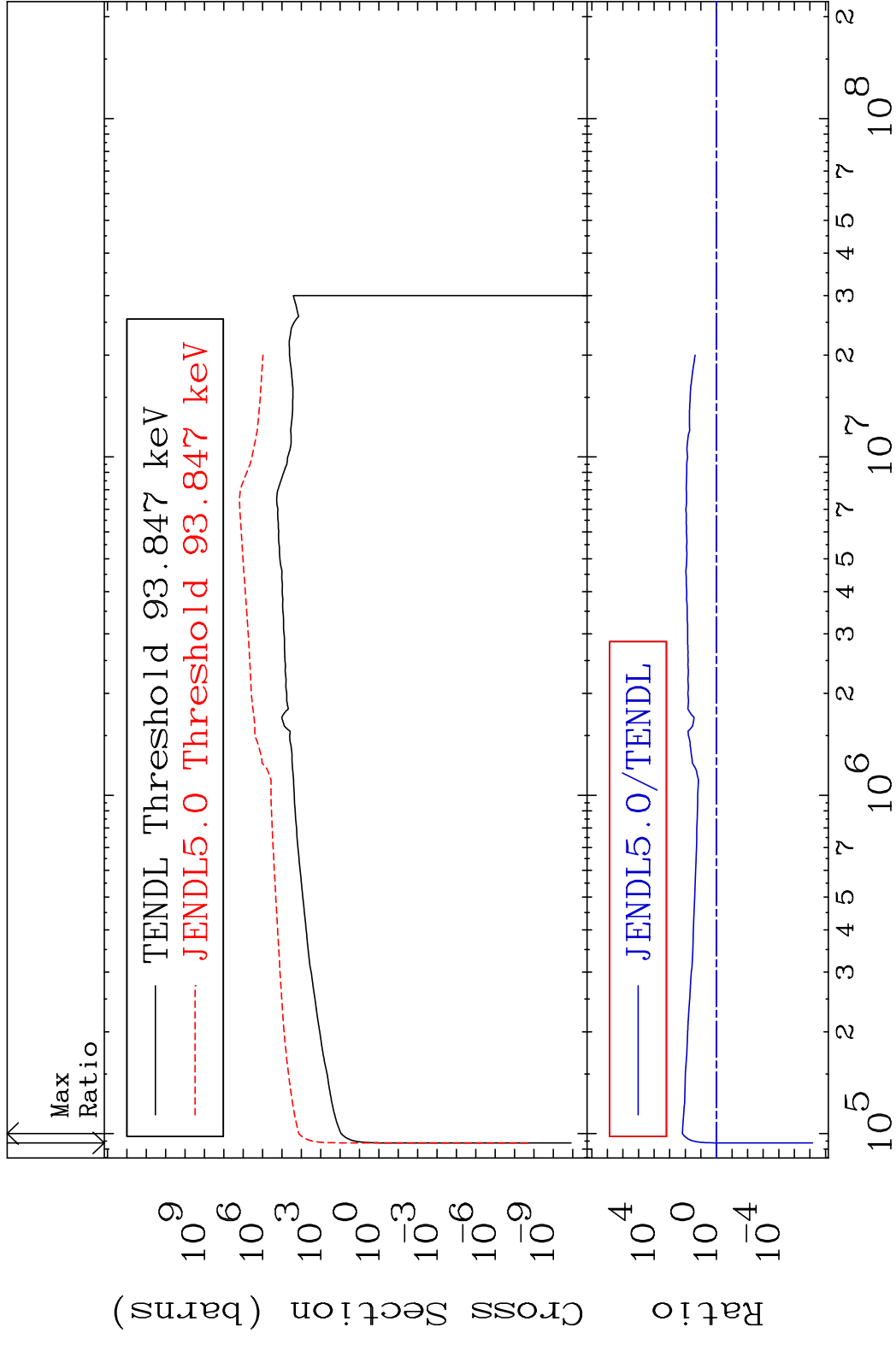
Kerma elastic Cross Section -100.0 To 9999. %
72-Hf-180



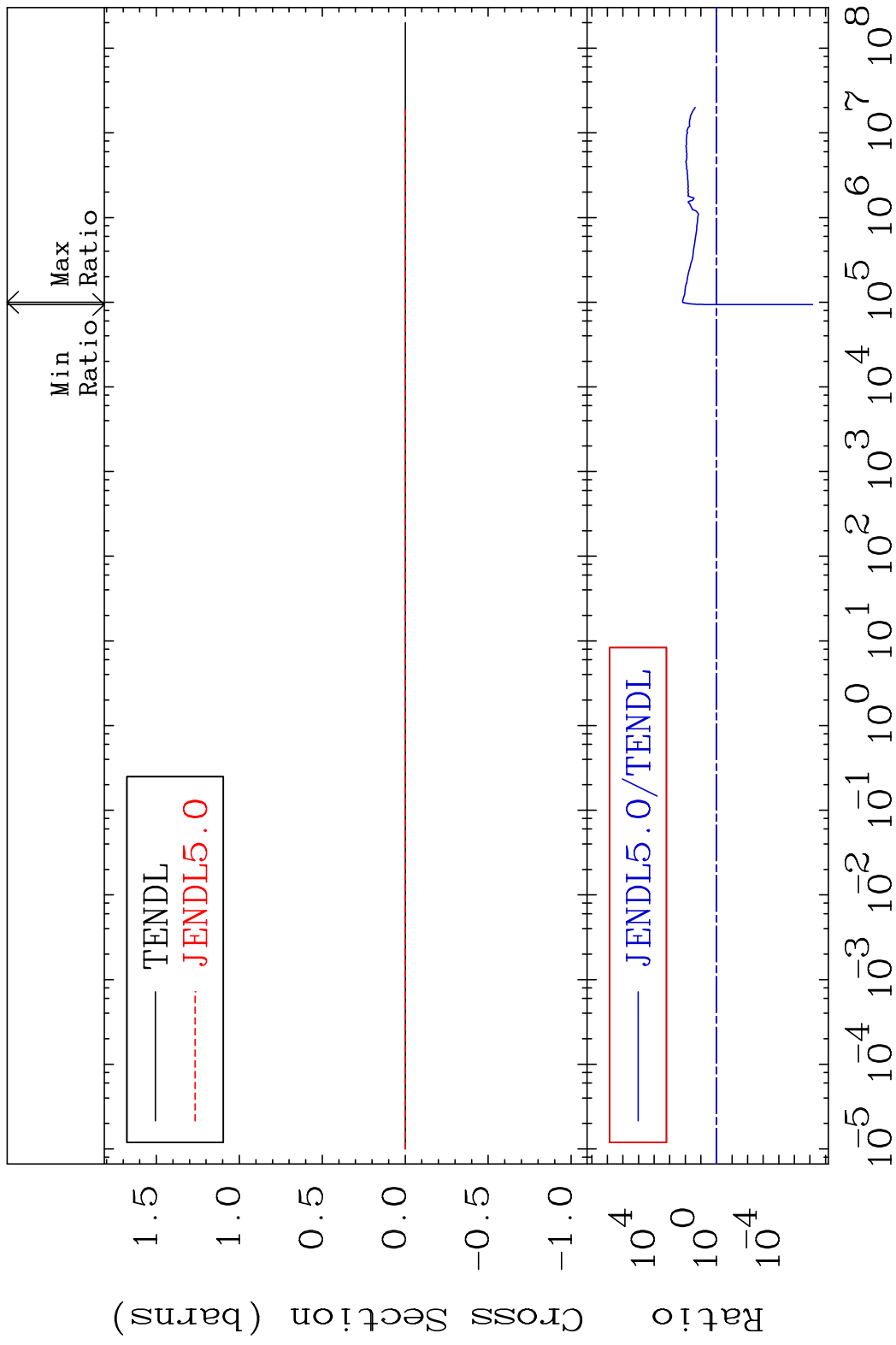
MAT 7243 Kerma non-elastic (all but mt2) 72-Hf-180
Cross Section -9999. To 9999. %



MAT 7243 Kerma inelastic (mt51-91) 72-Hf-180
 Cross Section -100.0 To 9999. %

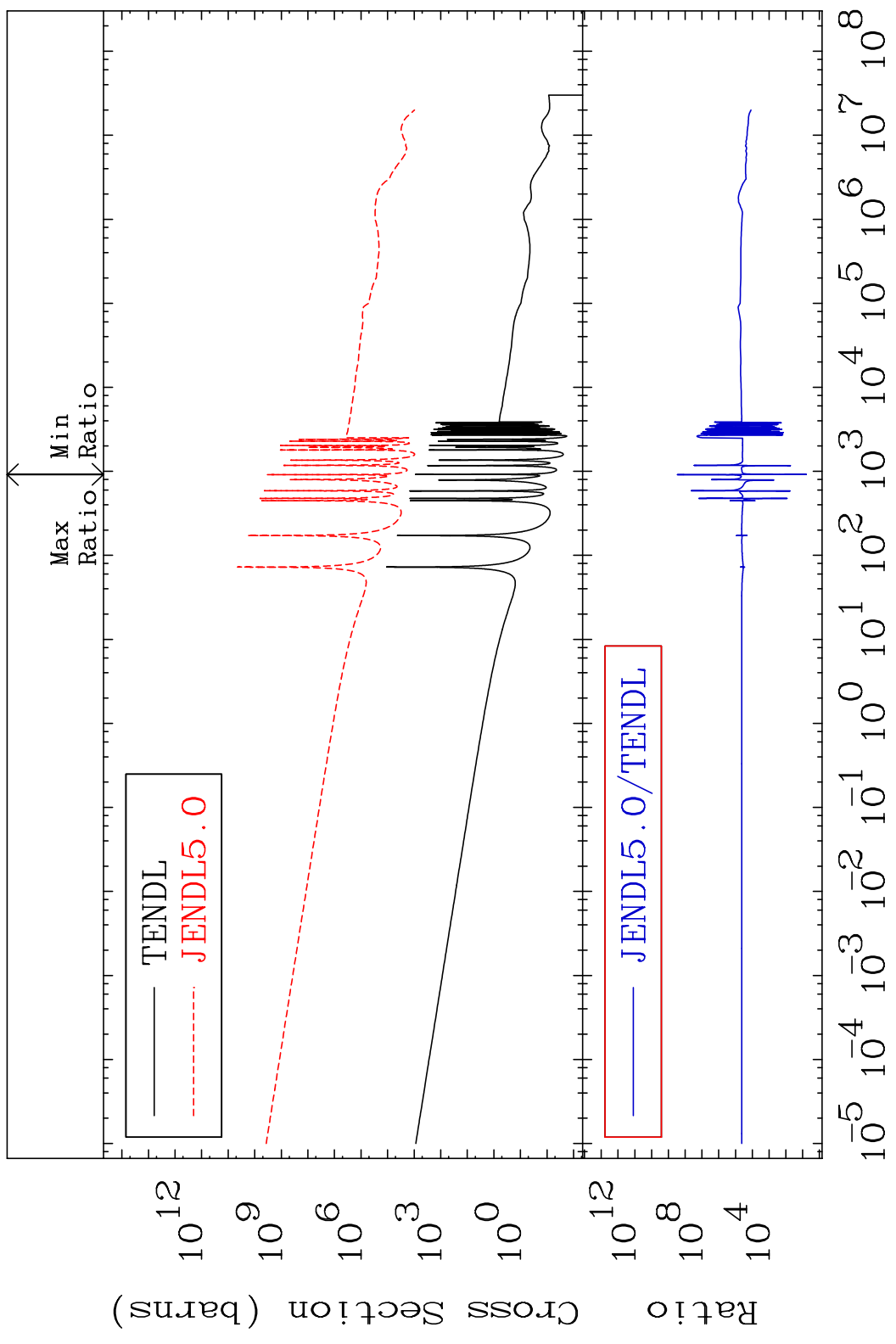


MAT 7243 Kerma fission (mt18 or mt19-20-21-38) 72-Hf-180
 Cross Section -100.0 To 9999. %



MAT 7243

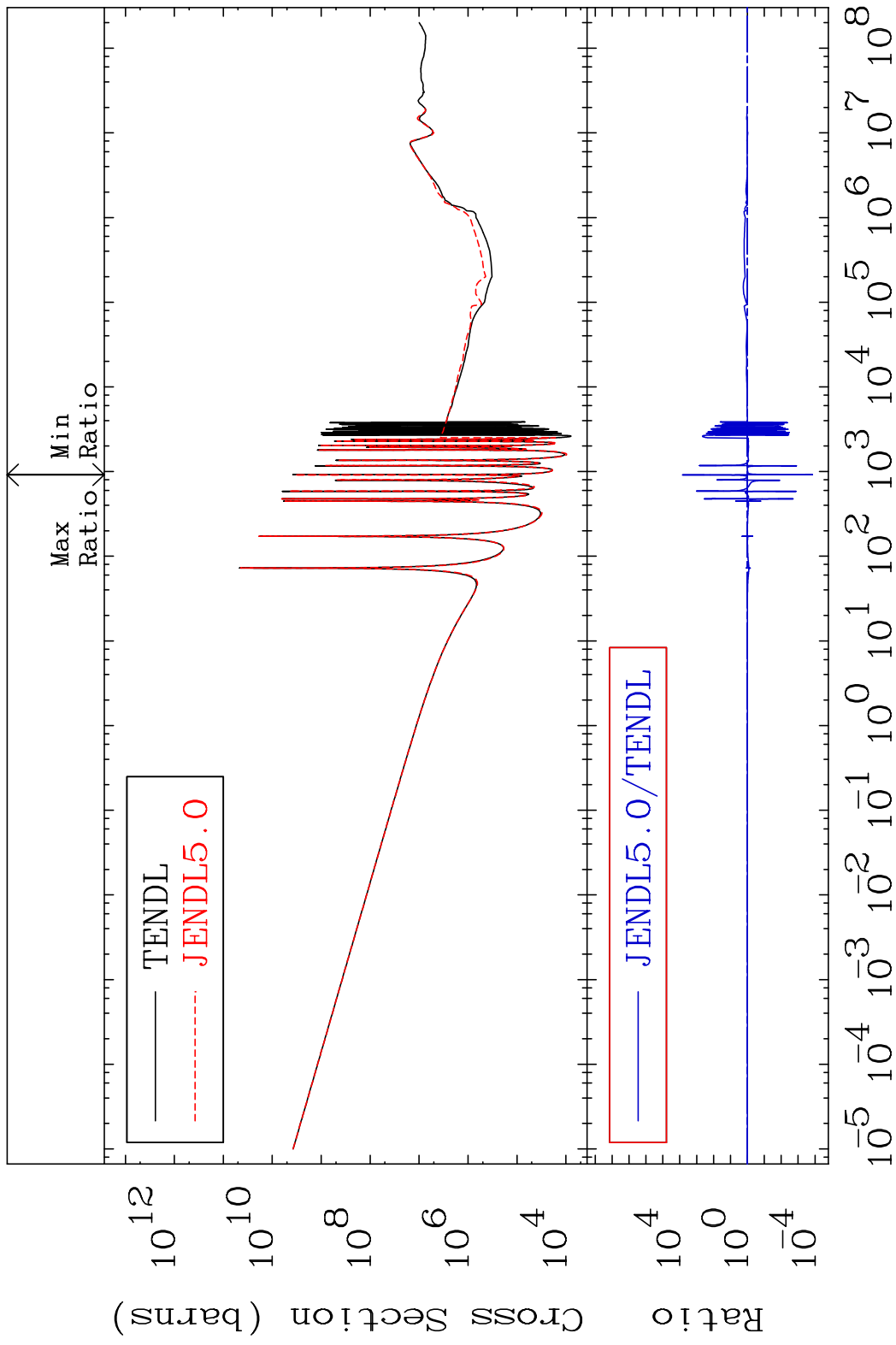
Kerma capture (mt102) 72-Hf-180
Cross Section 5897. To 9999. %



56

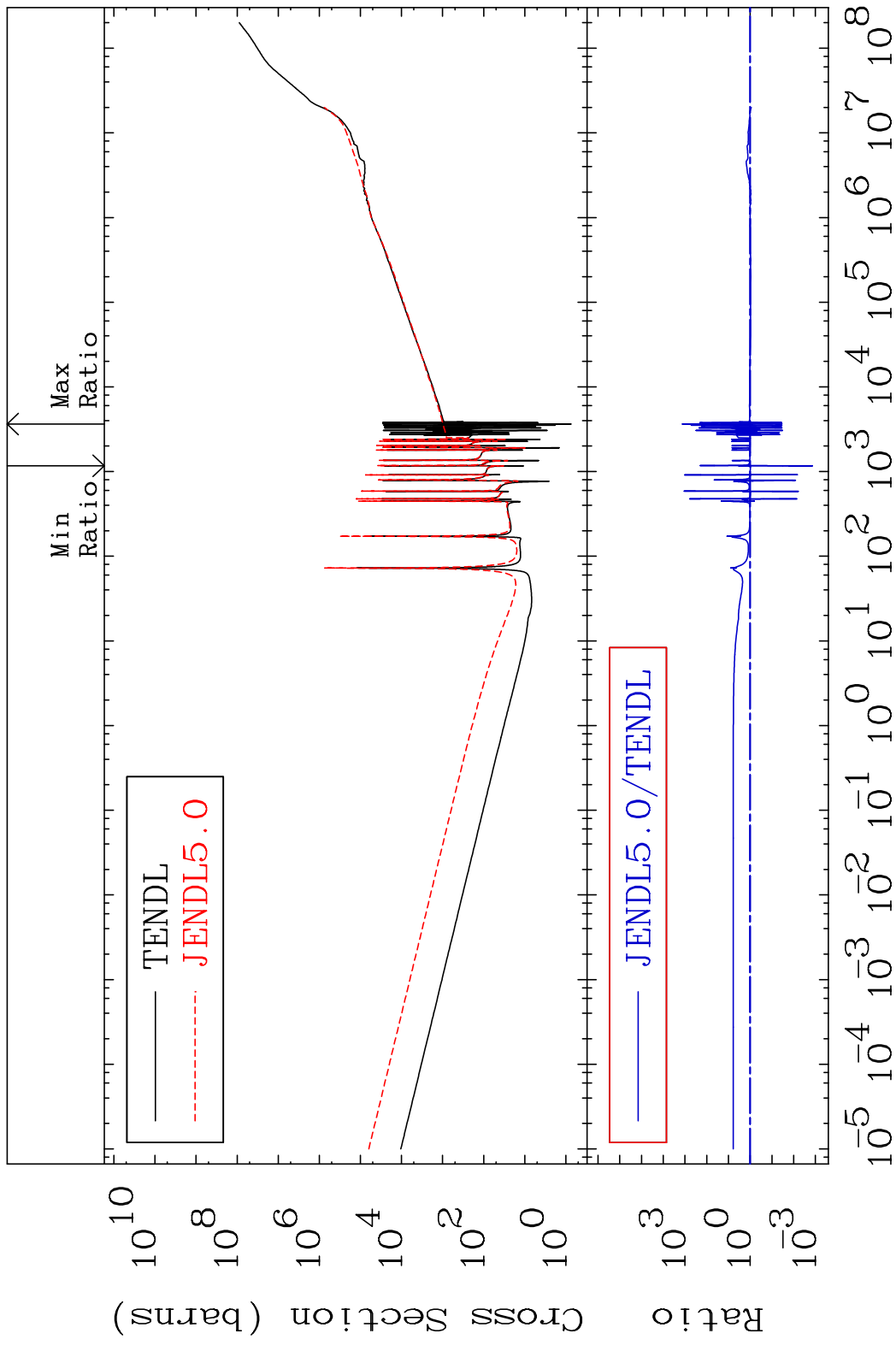
Incident Energy (eV) 72-Hf-180

MAT 7243 Total photon (eV-barns) 72-Hf-180
 Cross Section -99.99 To 9999. %

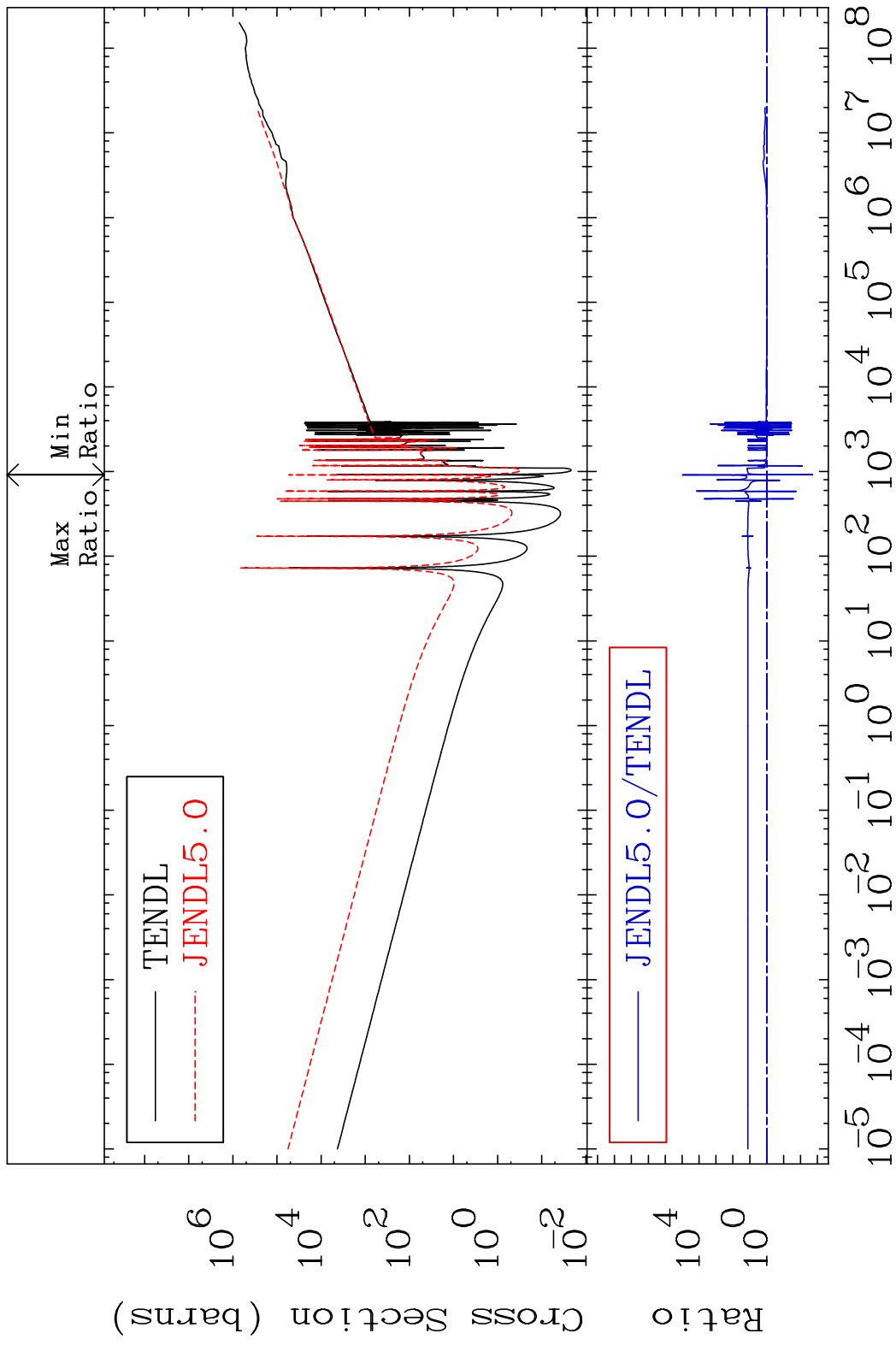


57 Incident Energy (eV) 72-Hf-180

MAT 7243 Total kinematic kerma (high limit) 72-Hf-180
 Cross Section -99.86 To 9999. %



MAT 7243 Dpa total (eV-barns) 72-Hf-180
 Cross Section -99.80 To 9999. %



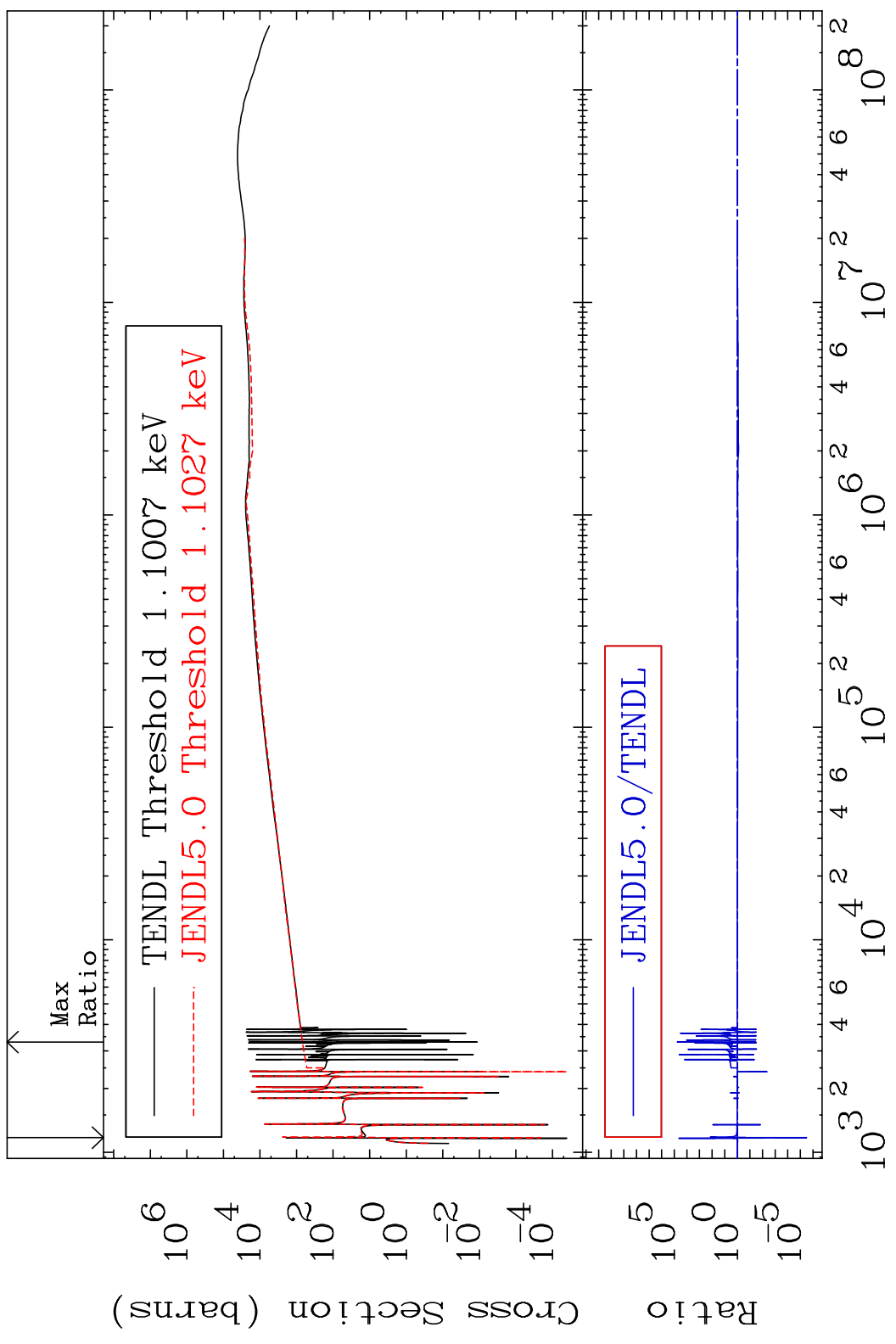
59 Incident Energy (eV) 72-Hf-180

MAT 7243

Dpa elastic (mt2)

72-Hf-180

Cross Section -100.0 To 9999. %

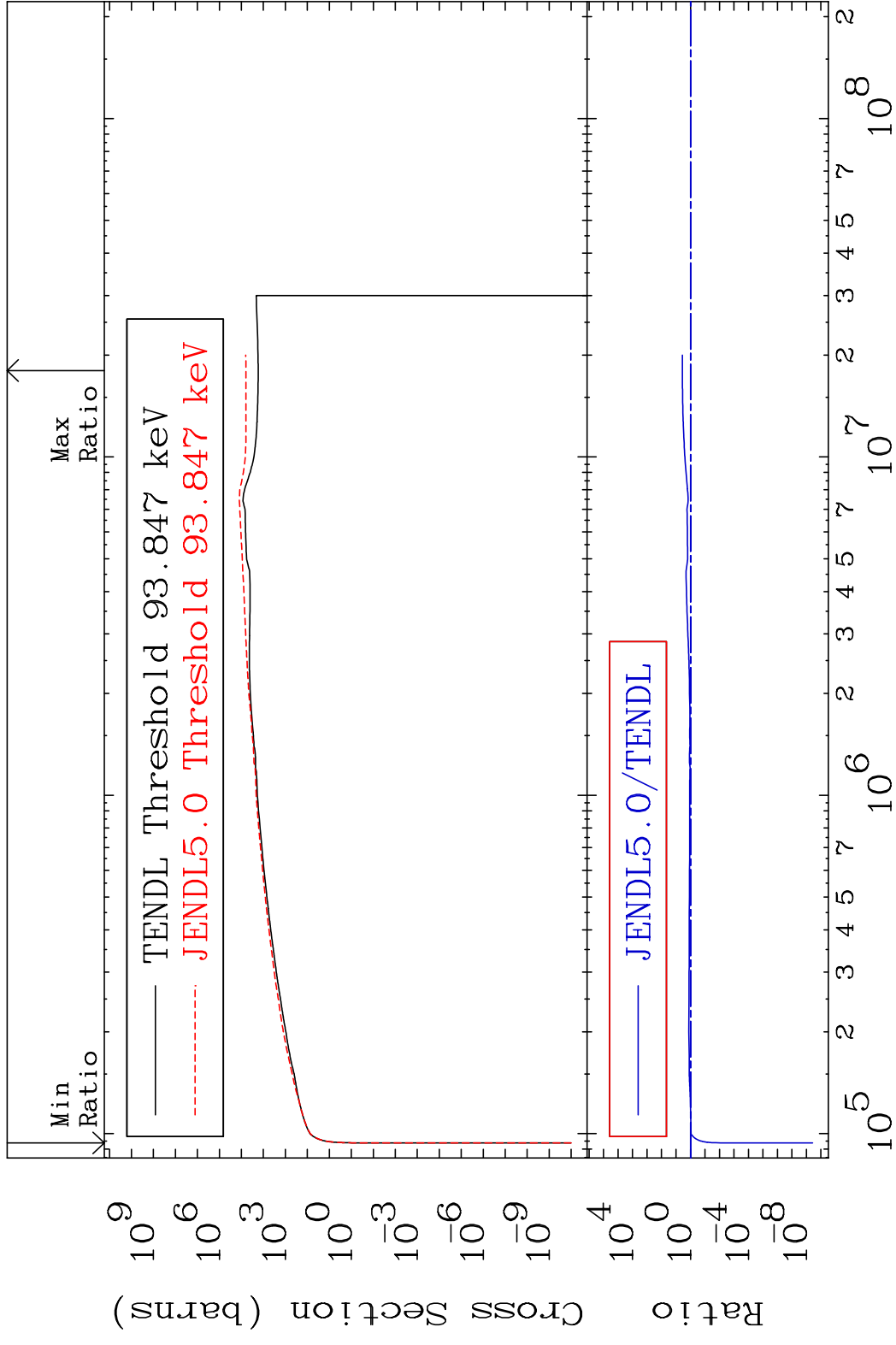


60

Incident Energy (eV)

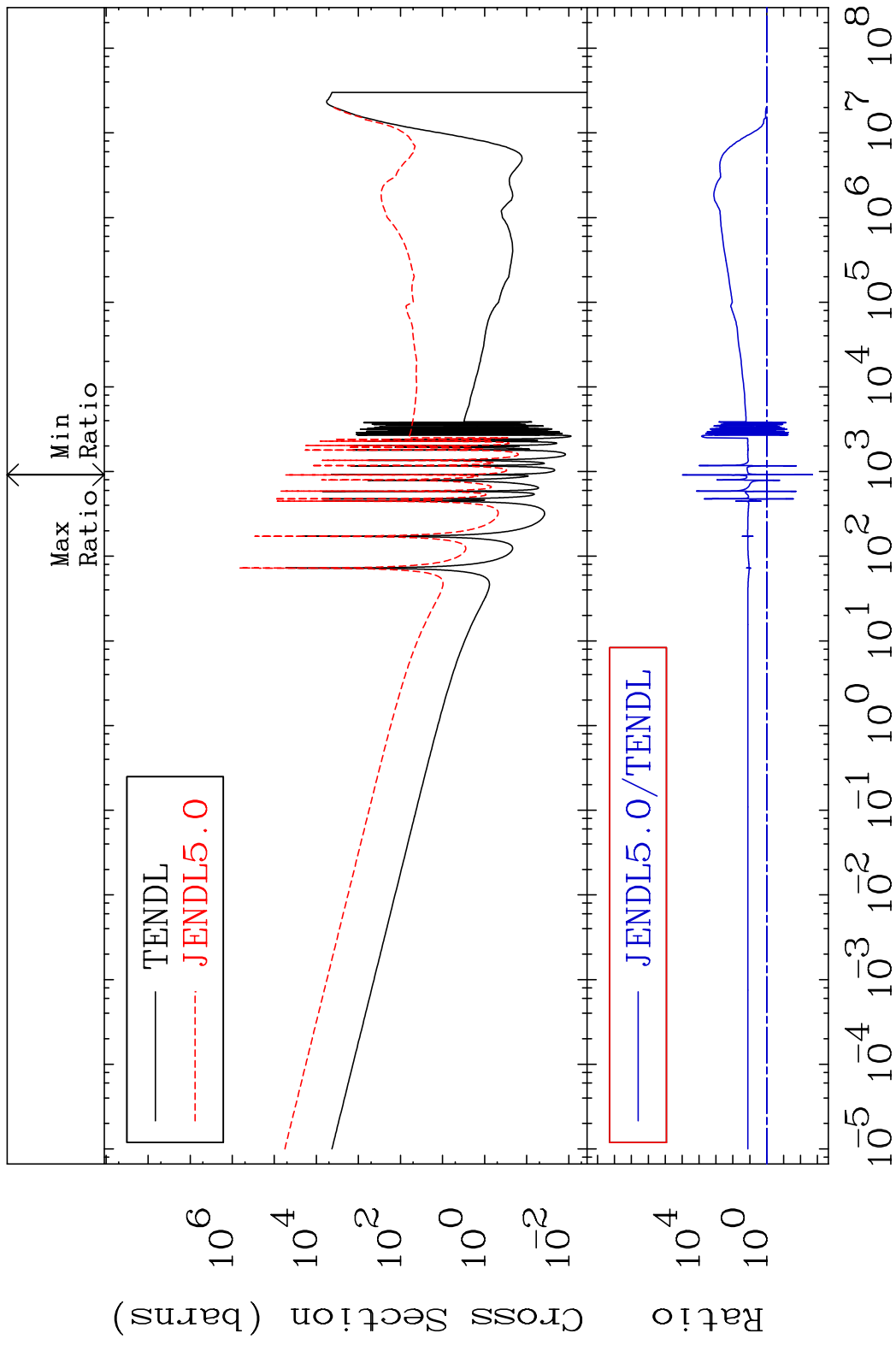
72-Hf-180

MAT 7243 Dpa inelastic (mt51-91) 72-Hf-180
 Cross Section -100.0 To 264.3 %



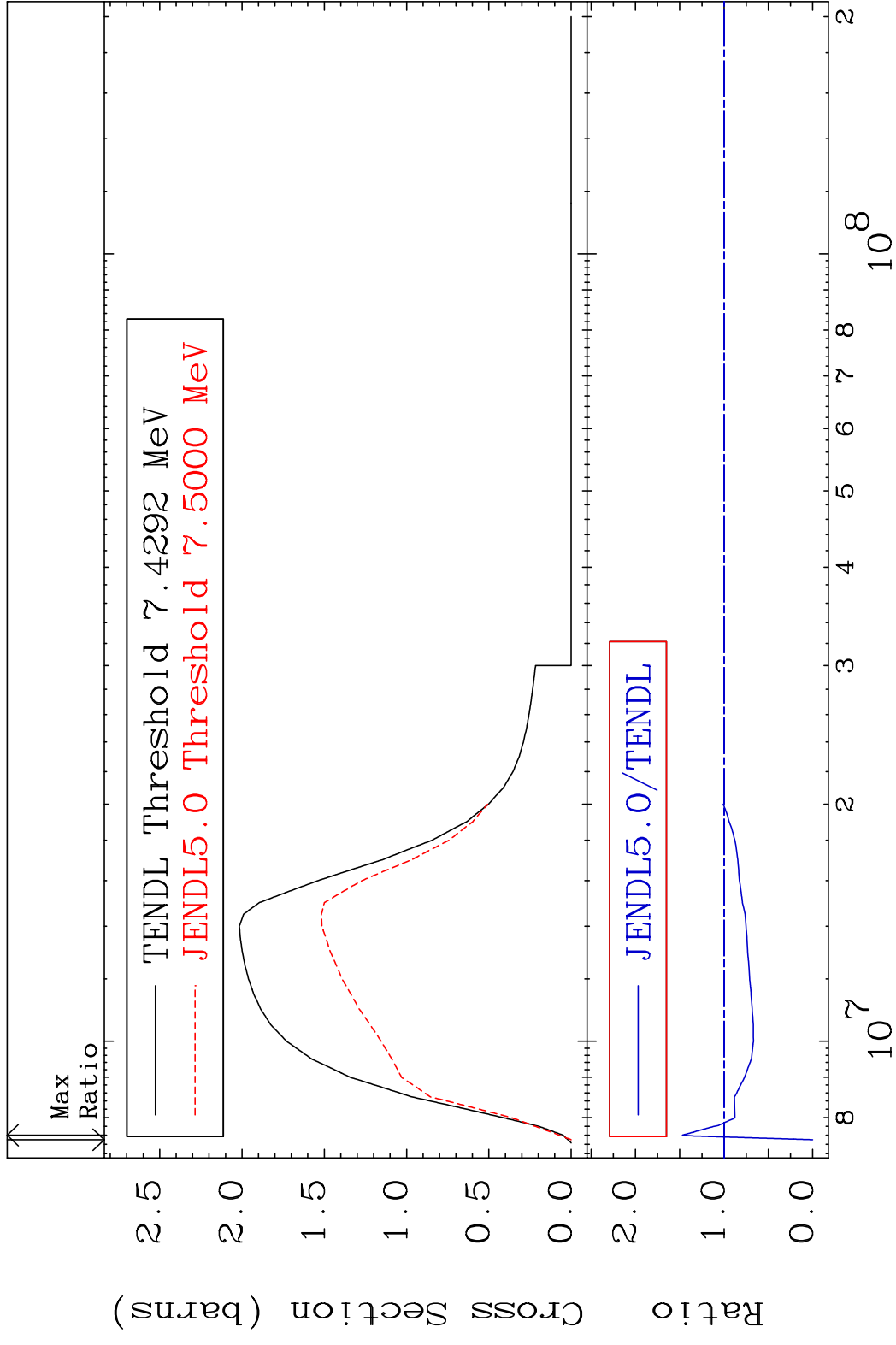
61 Incident Energy (eV) 72-Hf-180

MAT 7243 Dpa disappearance (mt102 -120) 72-Hf-180
 Cross Section -99.80 To 9999. %

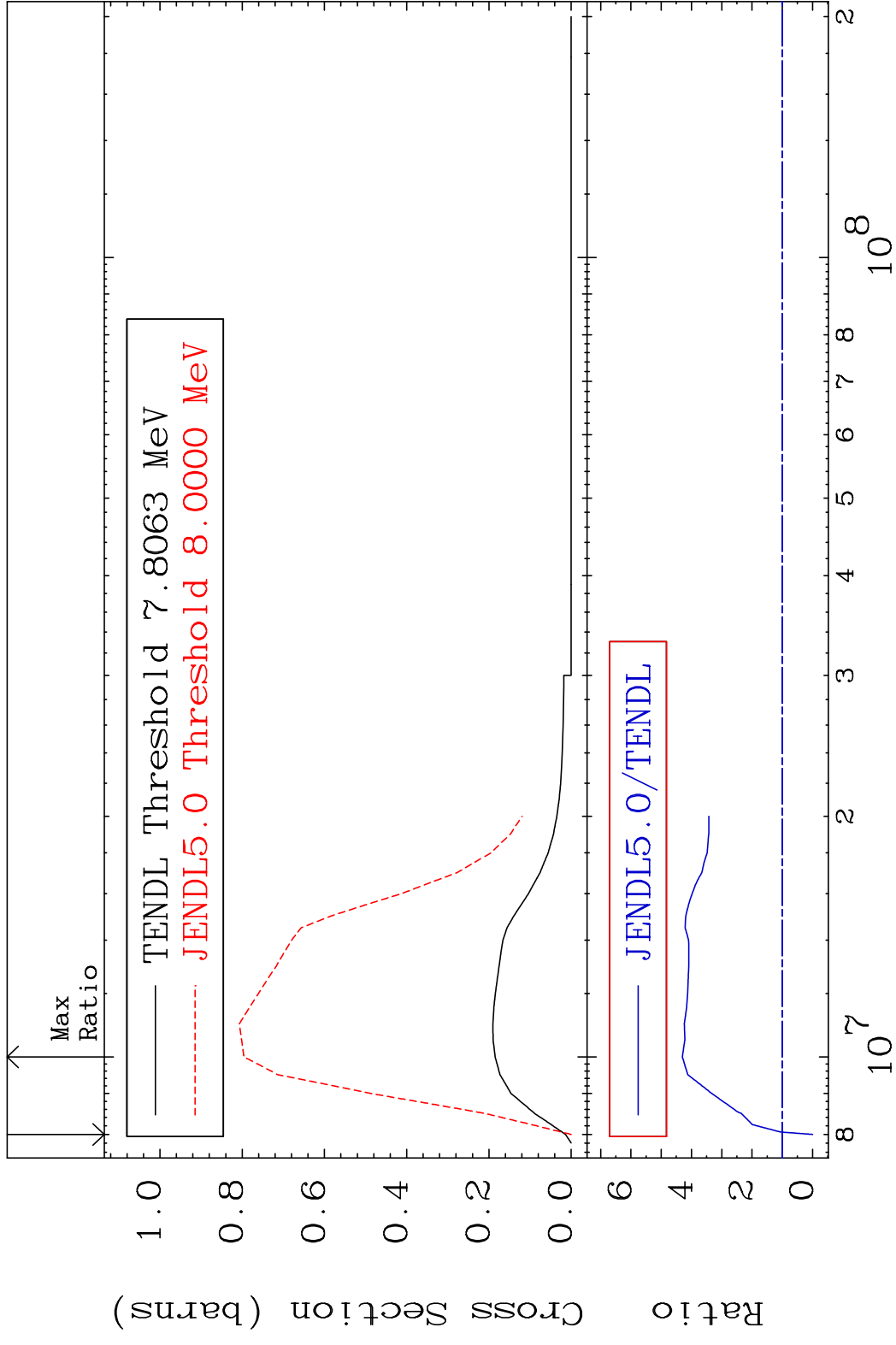


62 Incident Energy (eV) 72-Hf-180

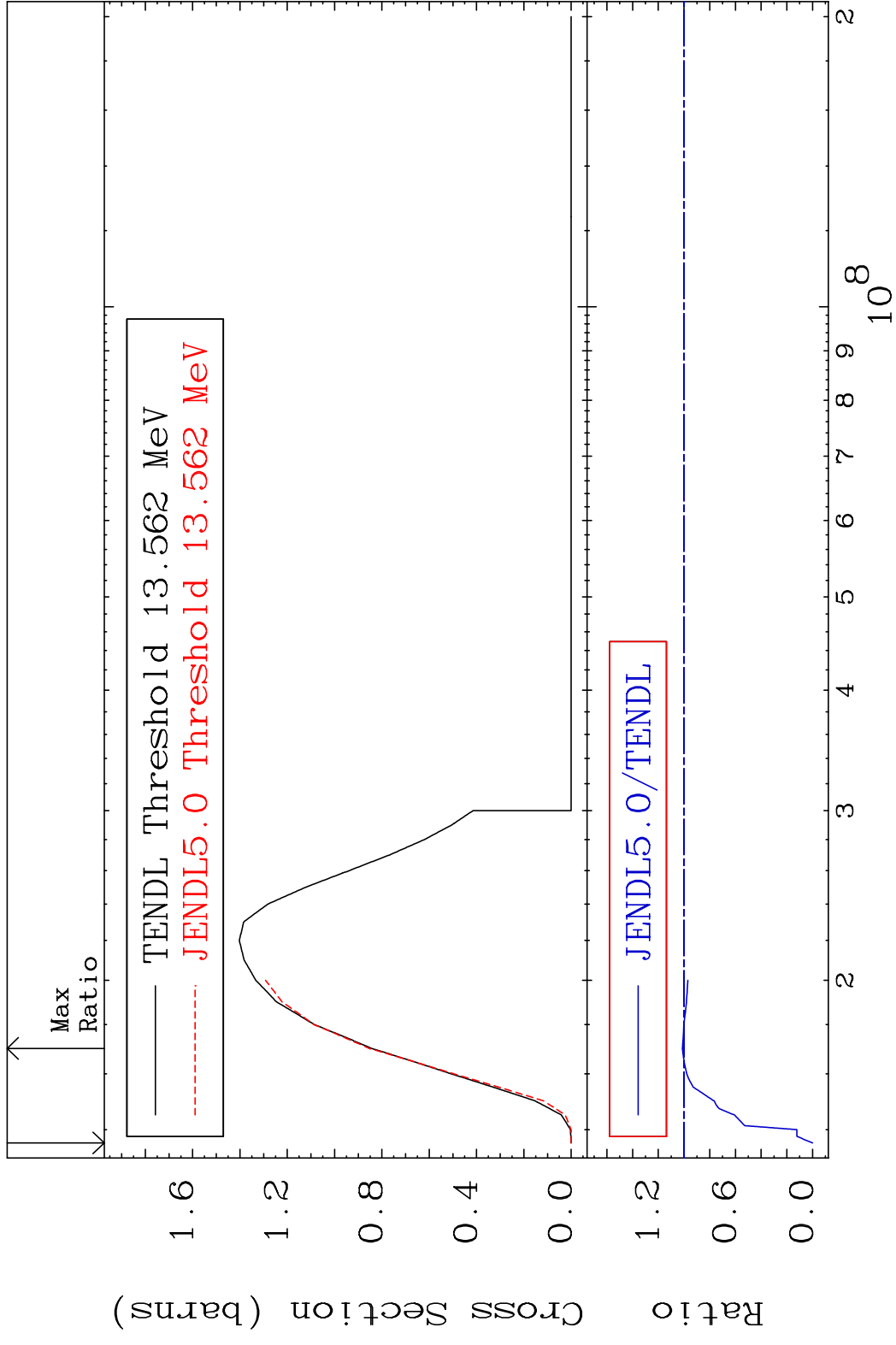
MAT 7243 (n,2n):72-Hf-179g 72-Hf-180
 Radionuclide Production Cross Section 180.01 dth 47.07 %



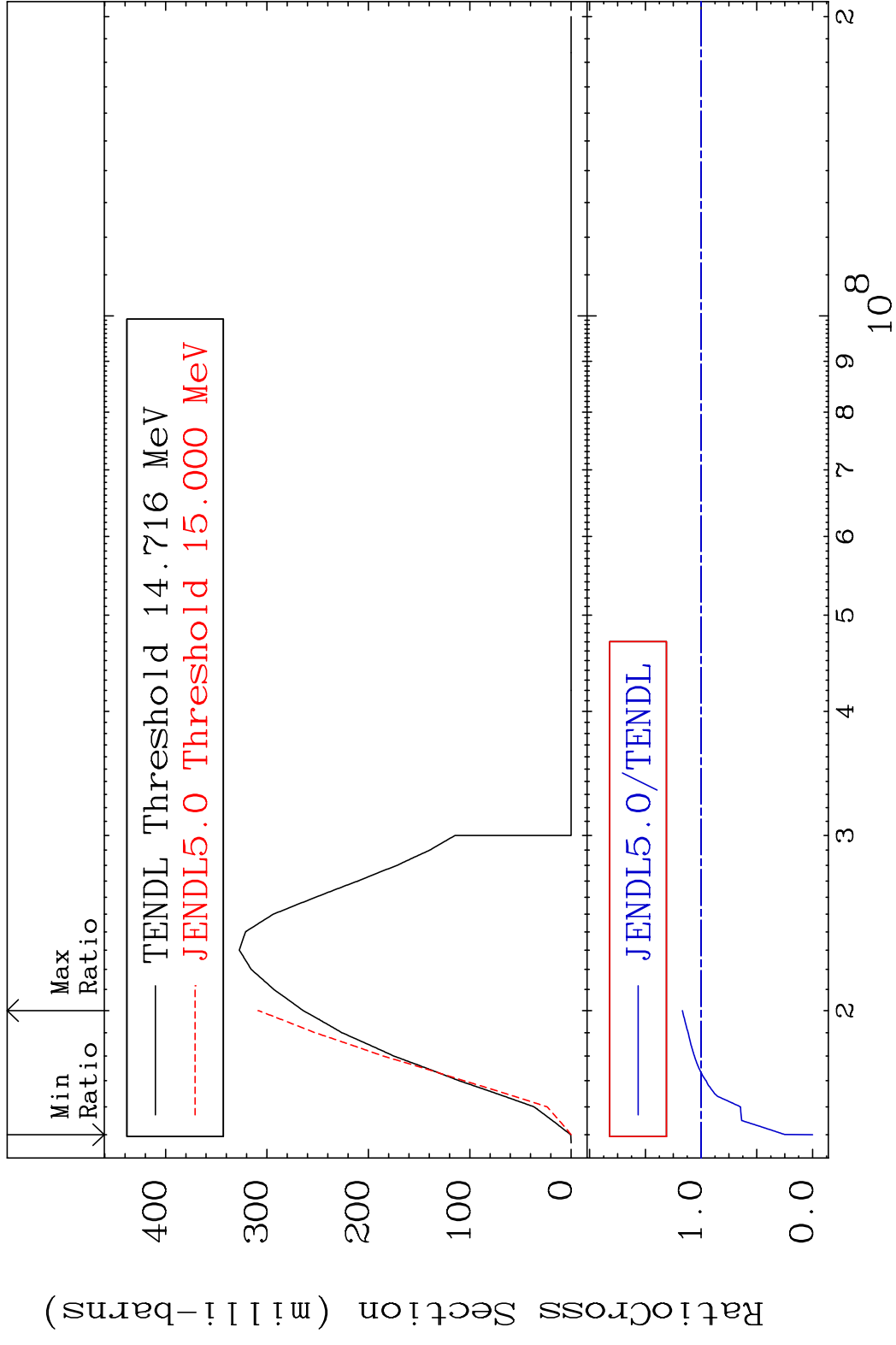
MAT 7243 (n,2n):72-Hf-179m5 72-Hf-180
 Radionuclide Production Cross Section 330.1 %



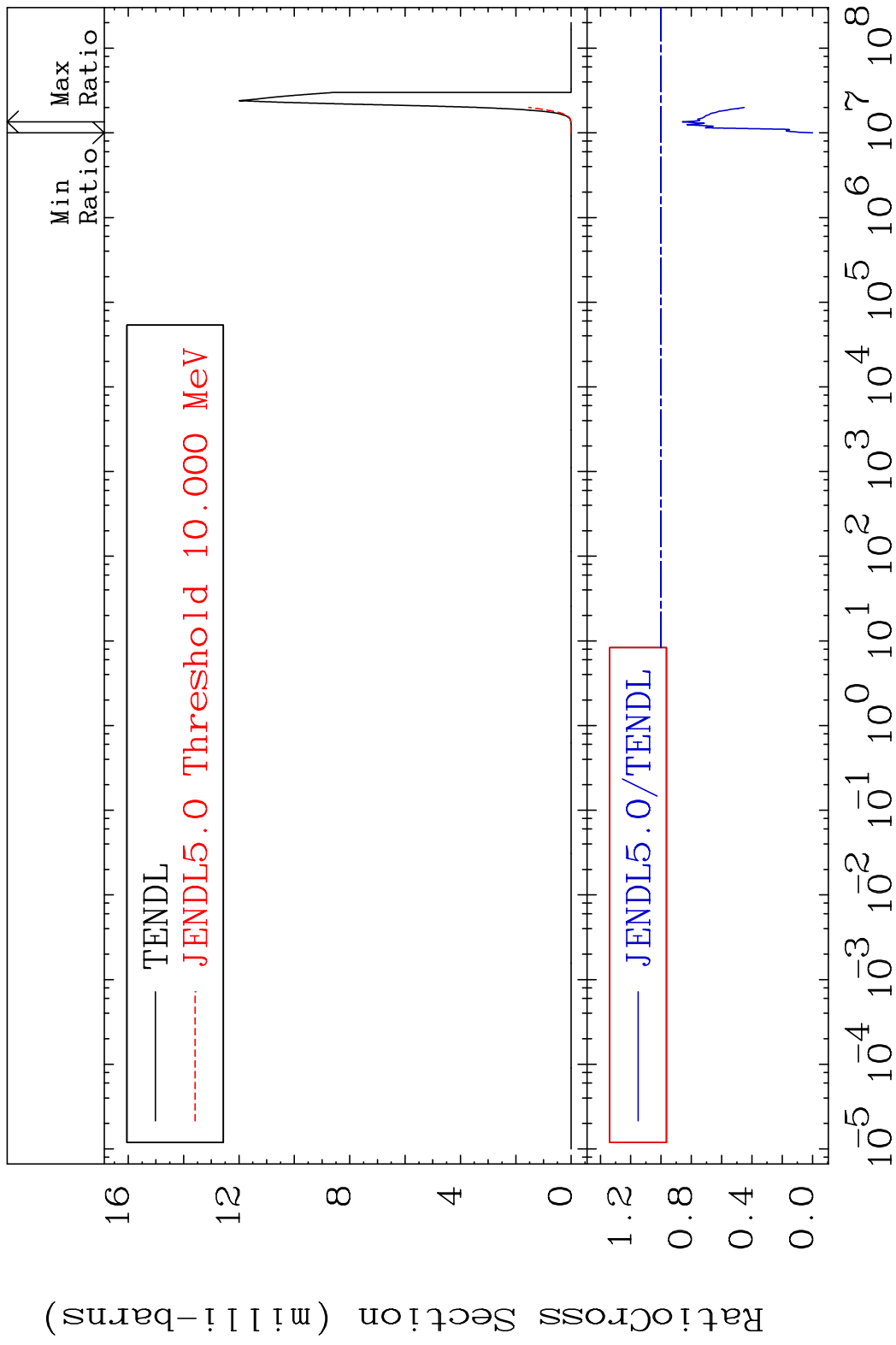
MAT 7243 (n,3n):72-Hf-178g 72-Hf-180
 Radionuclide Production Cross Section 1.296 %



MAT 7243 (n, 3n): 72-Hf-178m5 72-Hf-180
 Radionuclide Production Cross Section 180.0 mb 16.84 %

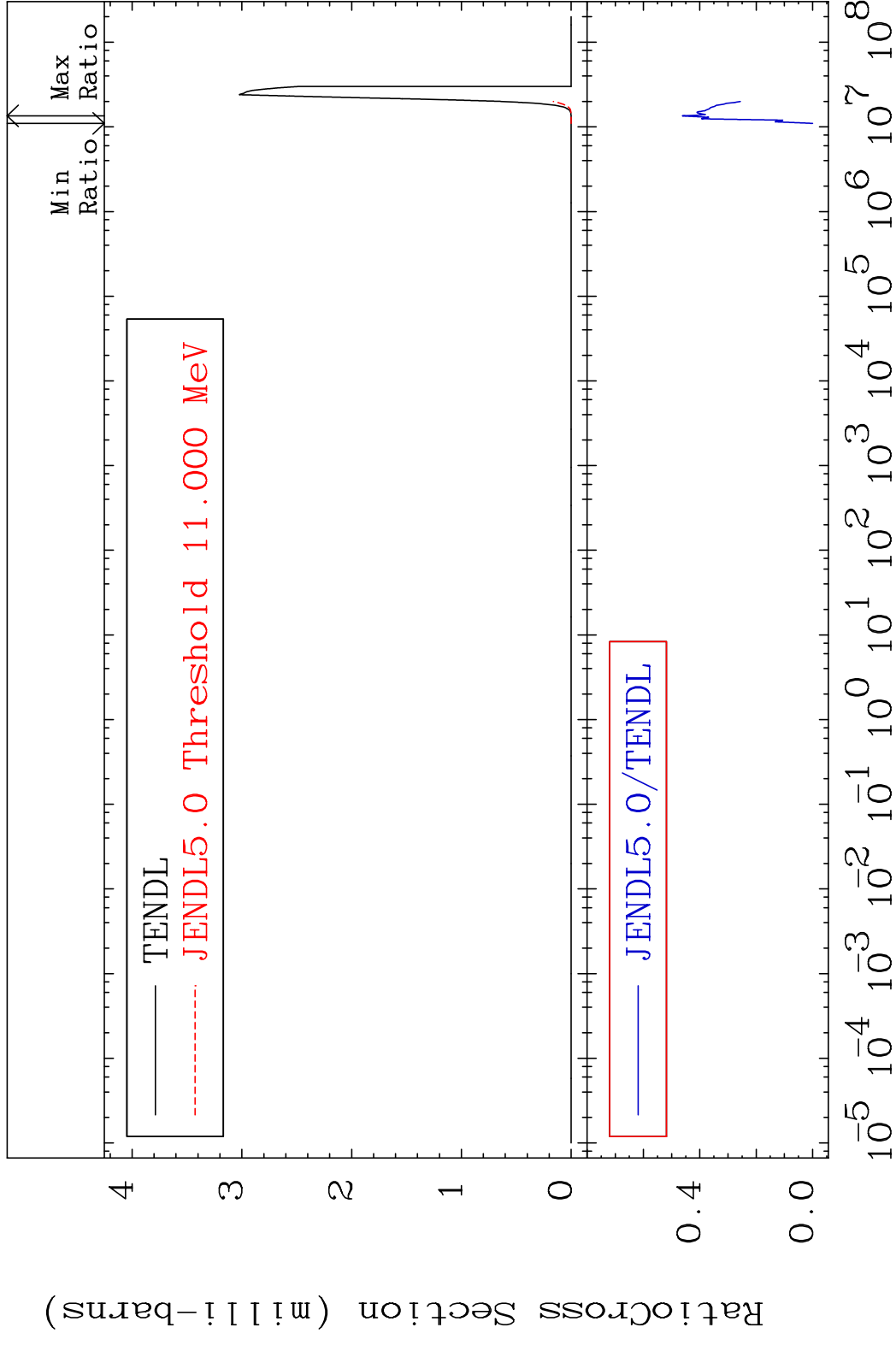


MAT 7243 (n, n') α :70-Yb-176g 72-Hf-180
 Radionuclide Production Cross Section Ratio -14.07%

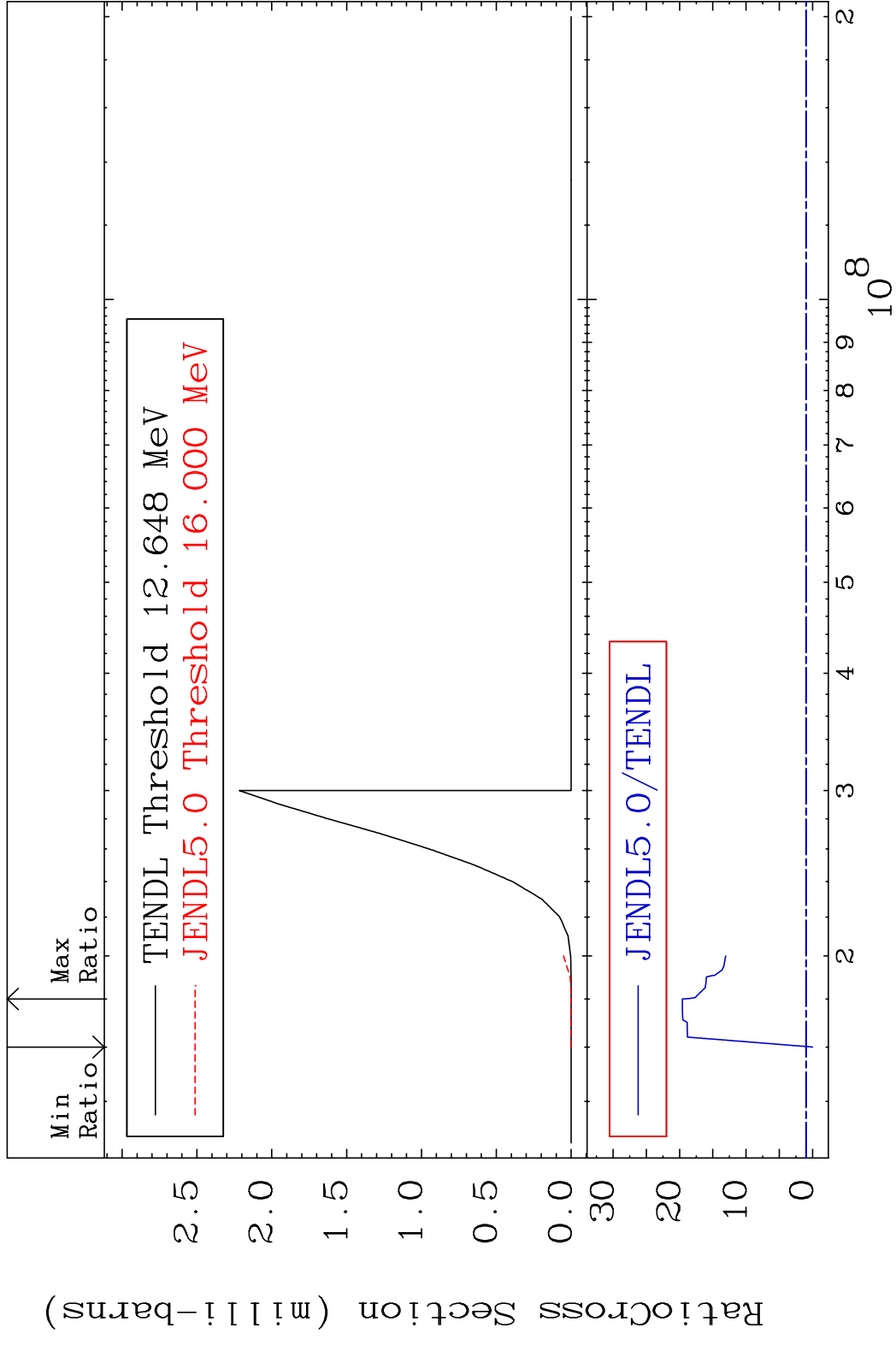


67 Incident Energy (eV) 72-Hf-180

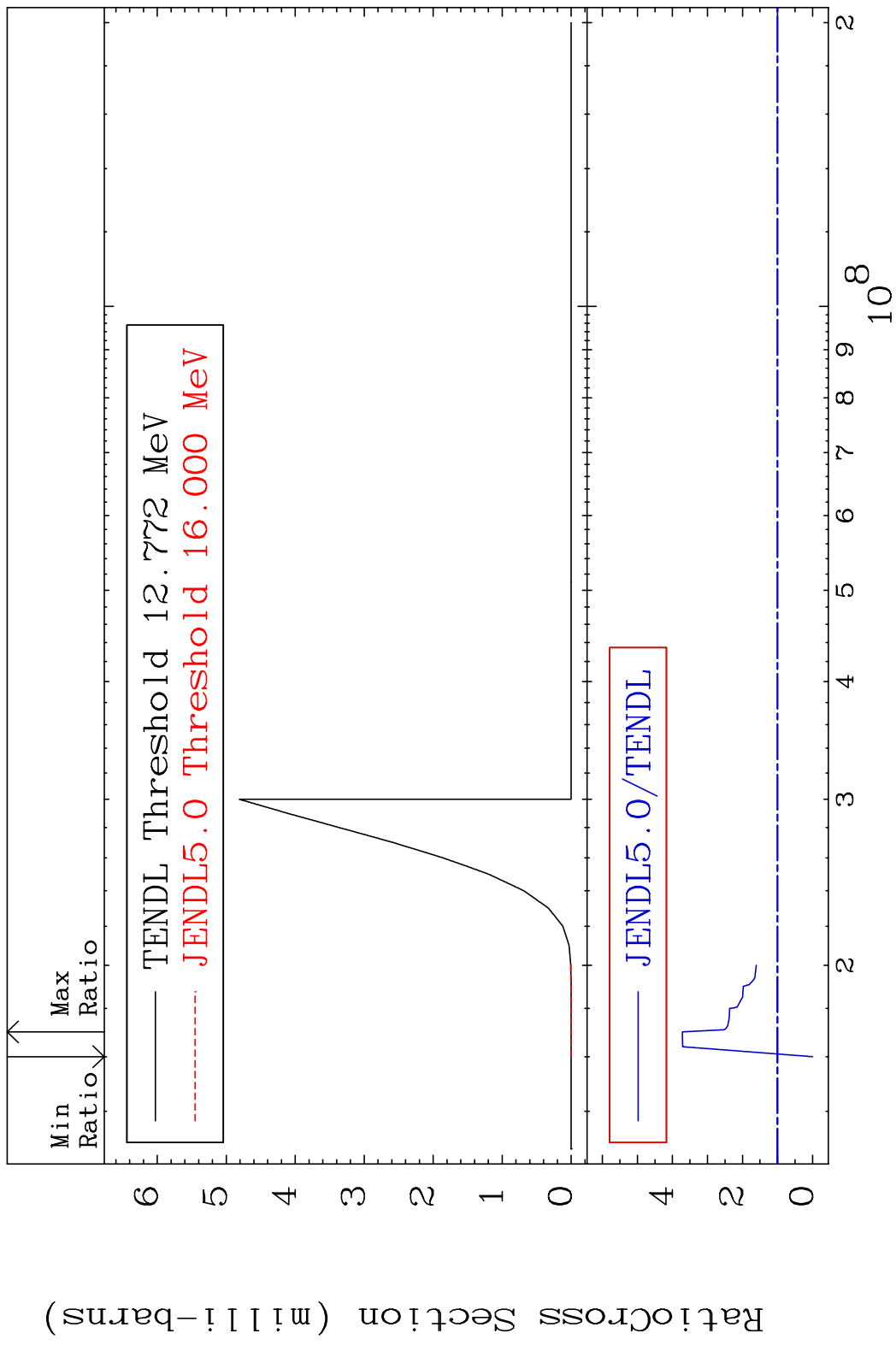
MAT 7243 (n, n') α :70-Yb-176m5 72-Hf-180
 Radionuclide Production Cross Section Ratio -53.80%



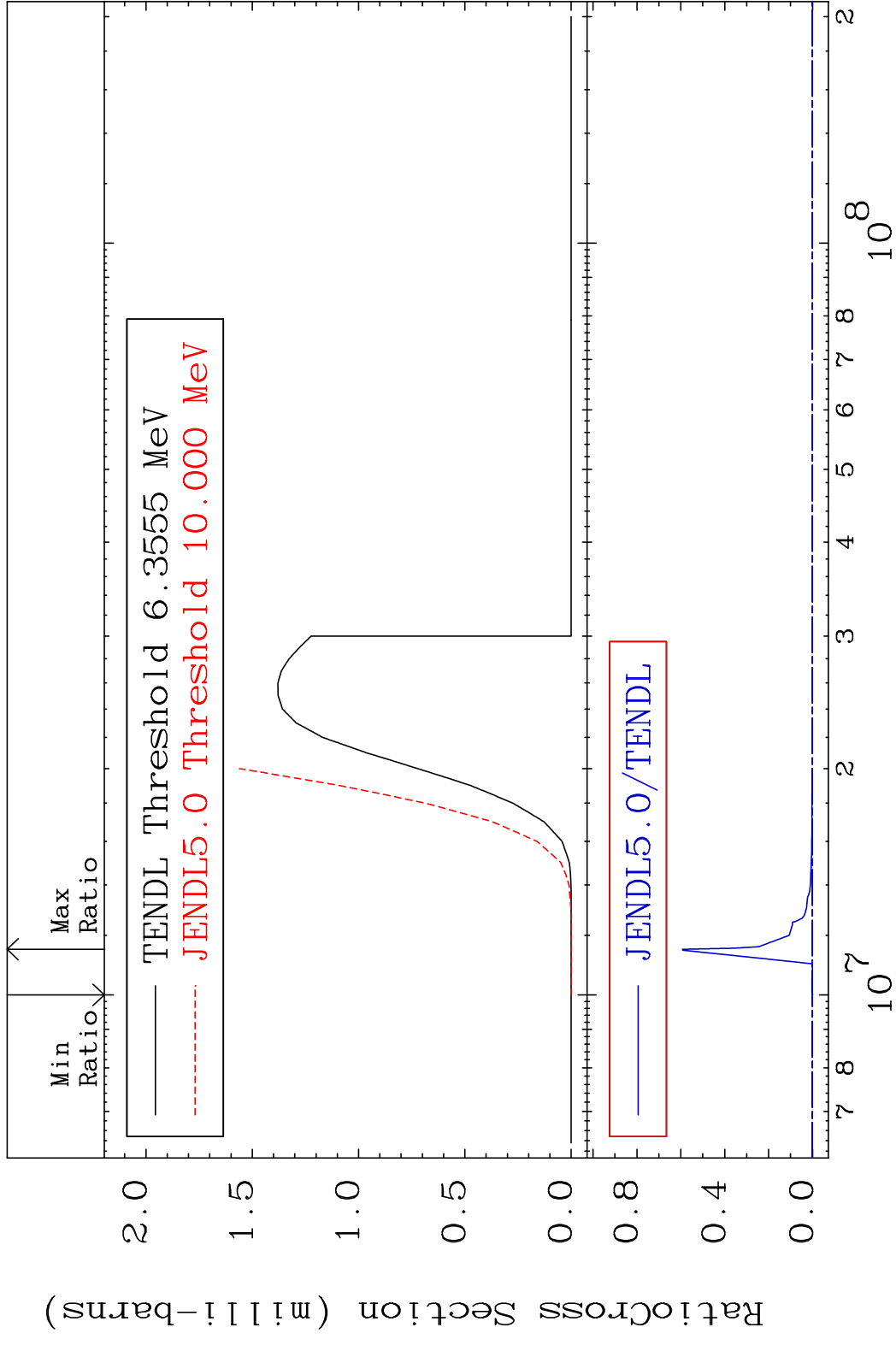
68 Incident Energy (eV) 72-Hf-180



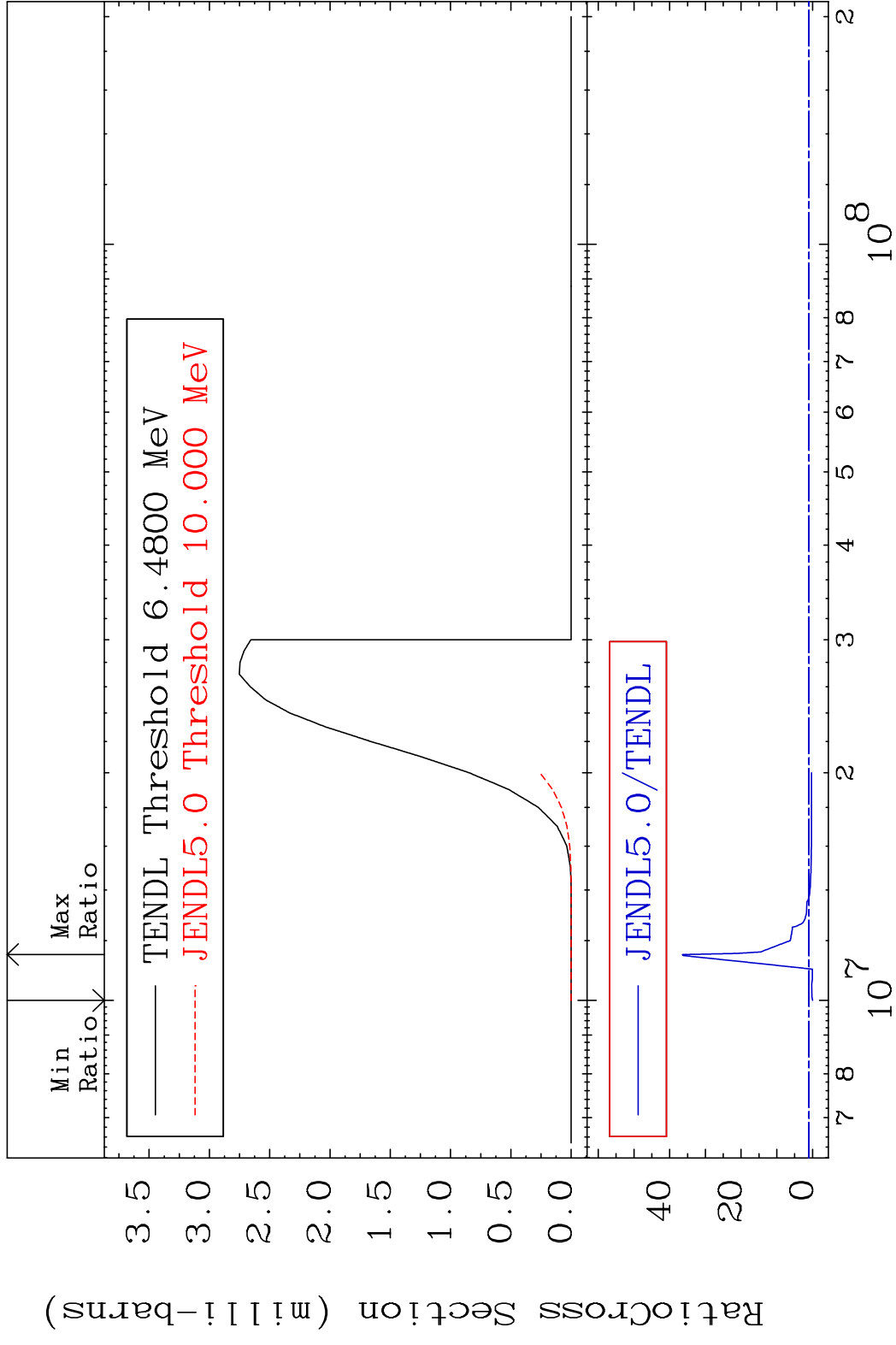
MAT 7243 (n, n') d:71-Lu-178m3 72-Hf-180
 Radionuclide Production Cross Section 180.01 dth 271.8 %



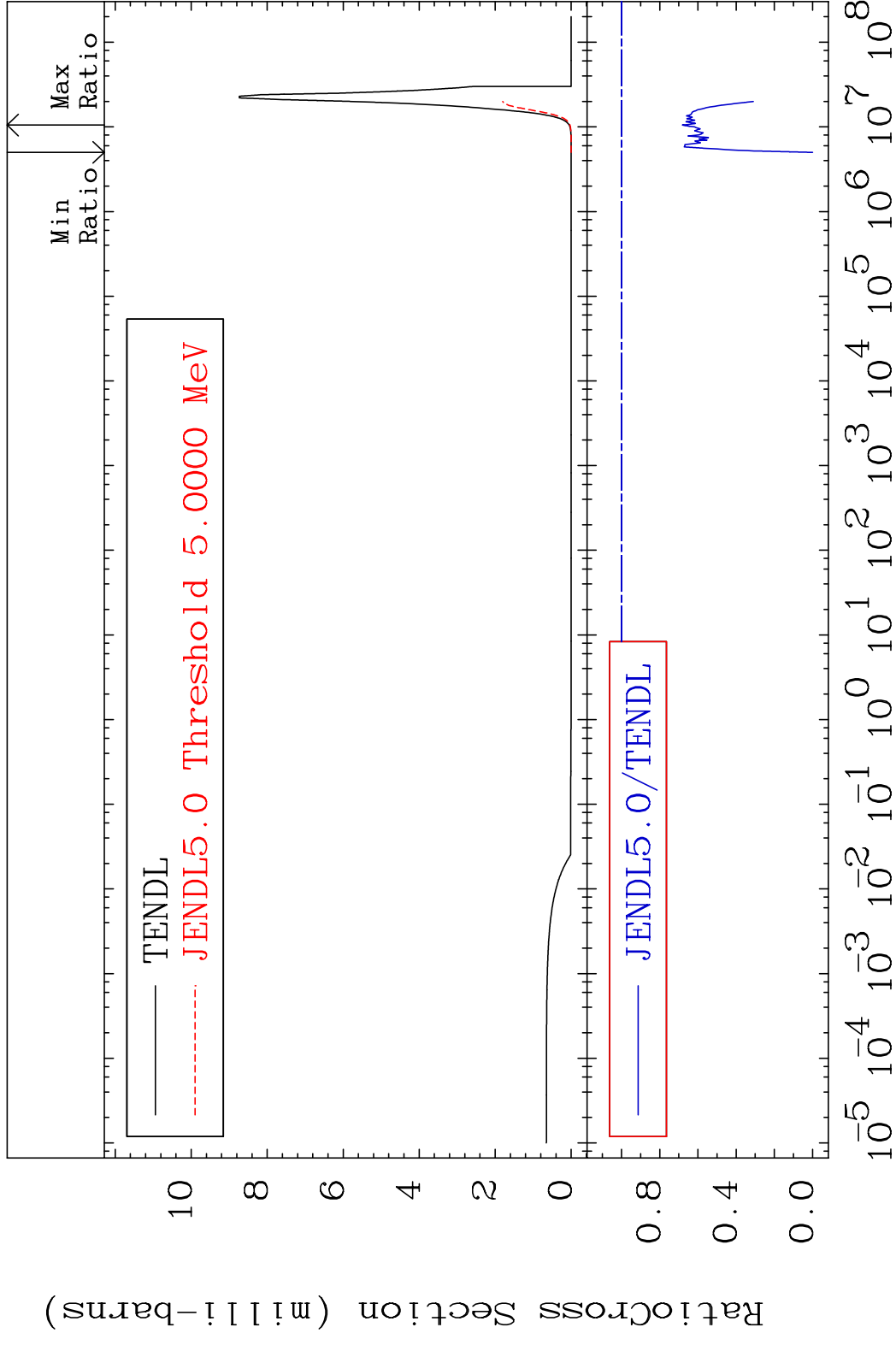
MAT 7243 (n, t):71-Lu-178g 72-Hf-180
 Radionuclide Production Cross Section (%)



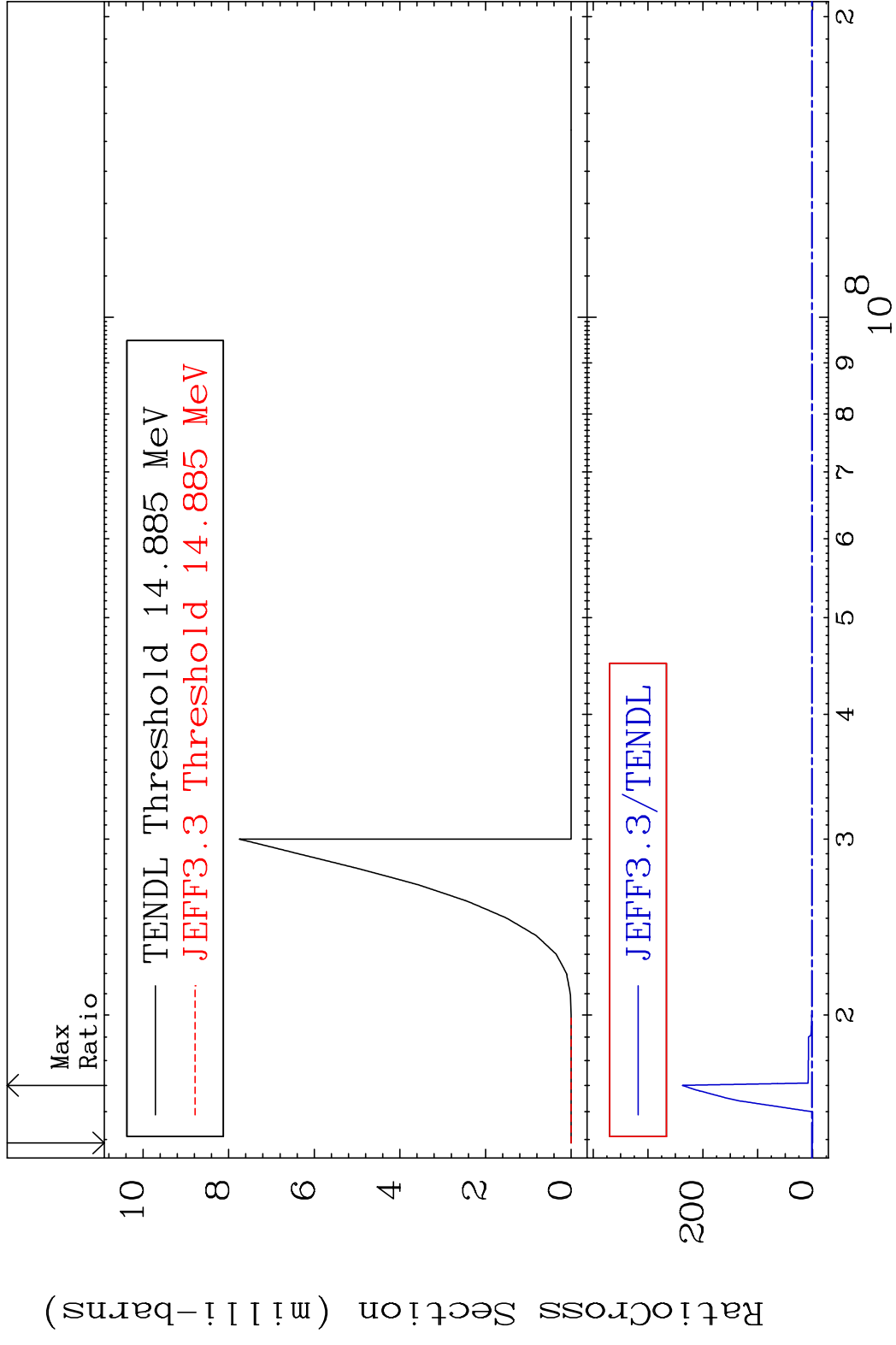
MAT 7243 (n, t):71-Lu-178m3 72-Hf-180
 Radionuclide Production Cross Section 180.01 dth 3545. %

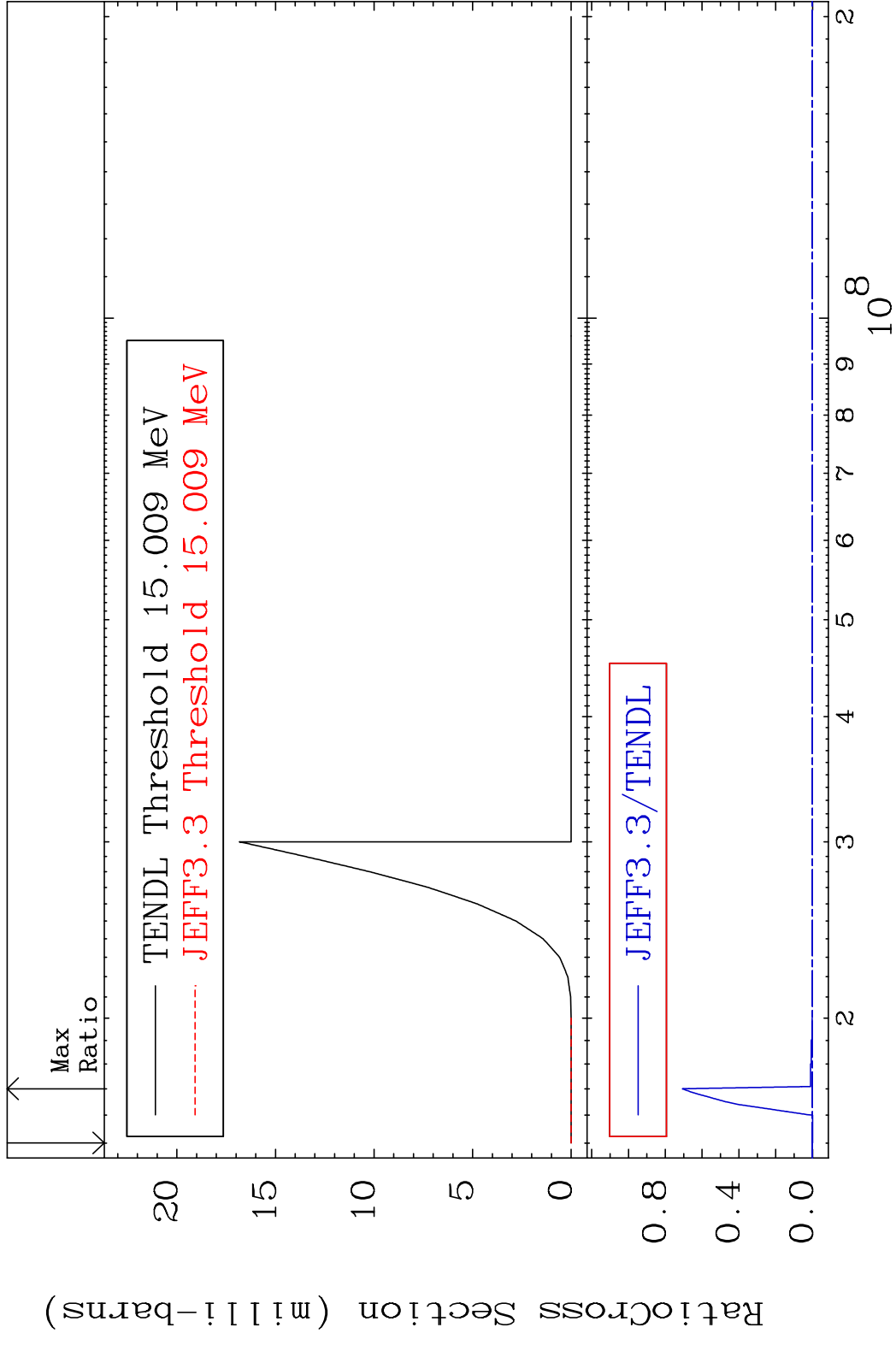


MAT 7243 (n,α):70-Yb-177g 72-Hf-180
 Radionuclide Production Cross Section Ratio -31.85%

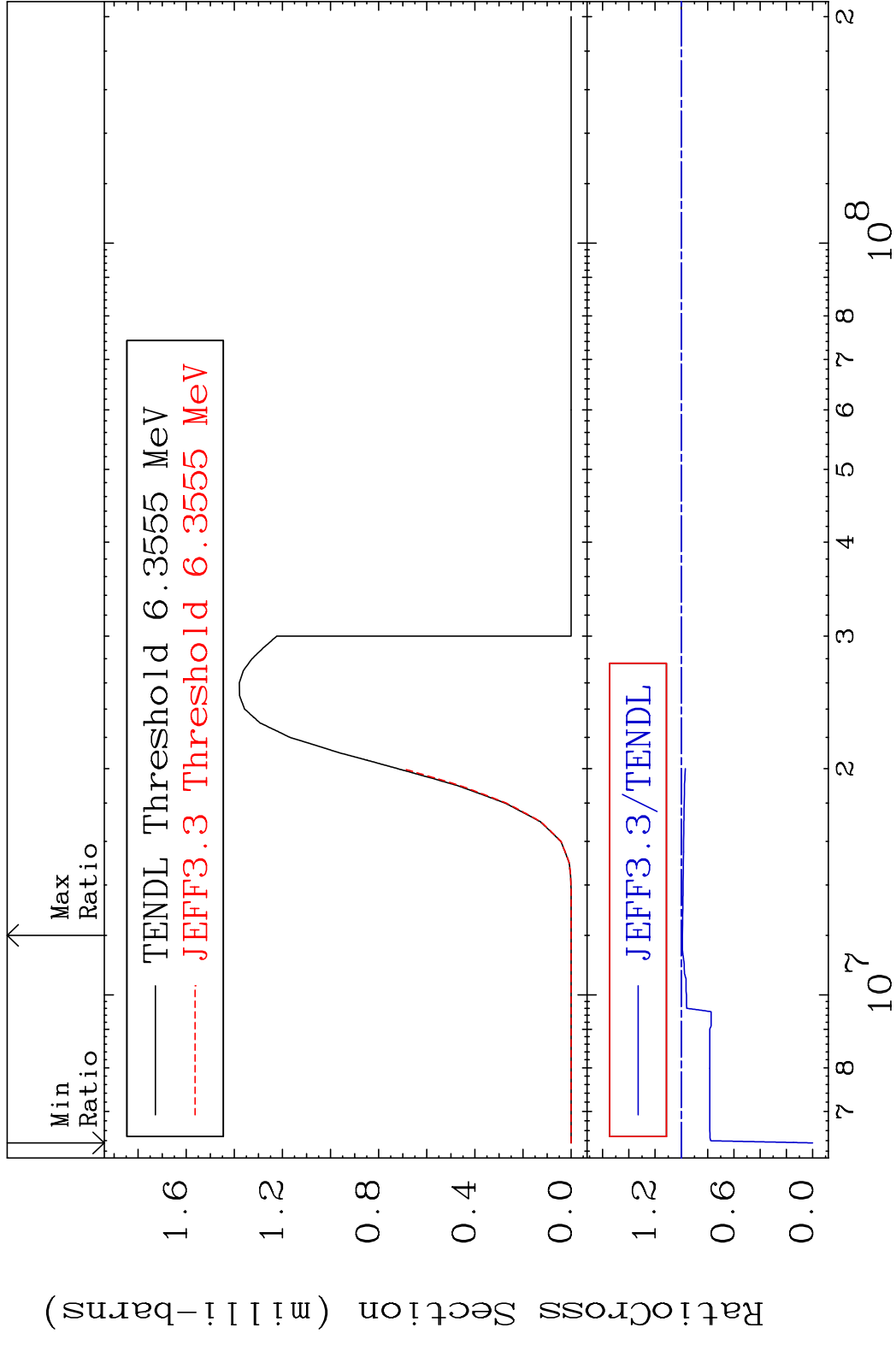


73 Incident Energy (eV) 72-Hf-180





MAT 7243 (n,t):71-Lu-178g 72-Hf-180
 Radionuclide Production Cross Section Ratio -0.766%



MAT 7243 (n, t):71-Lu-178m3 72-Hf-180
 Radionuclide Production Cross Section 180.01 dth 17.60 %

