

Program Complot
(Version 2018-1)

by

Dermott E. Cullen
(Present Contact Information)

Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550

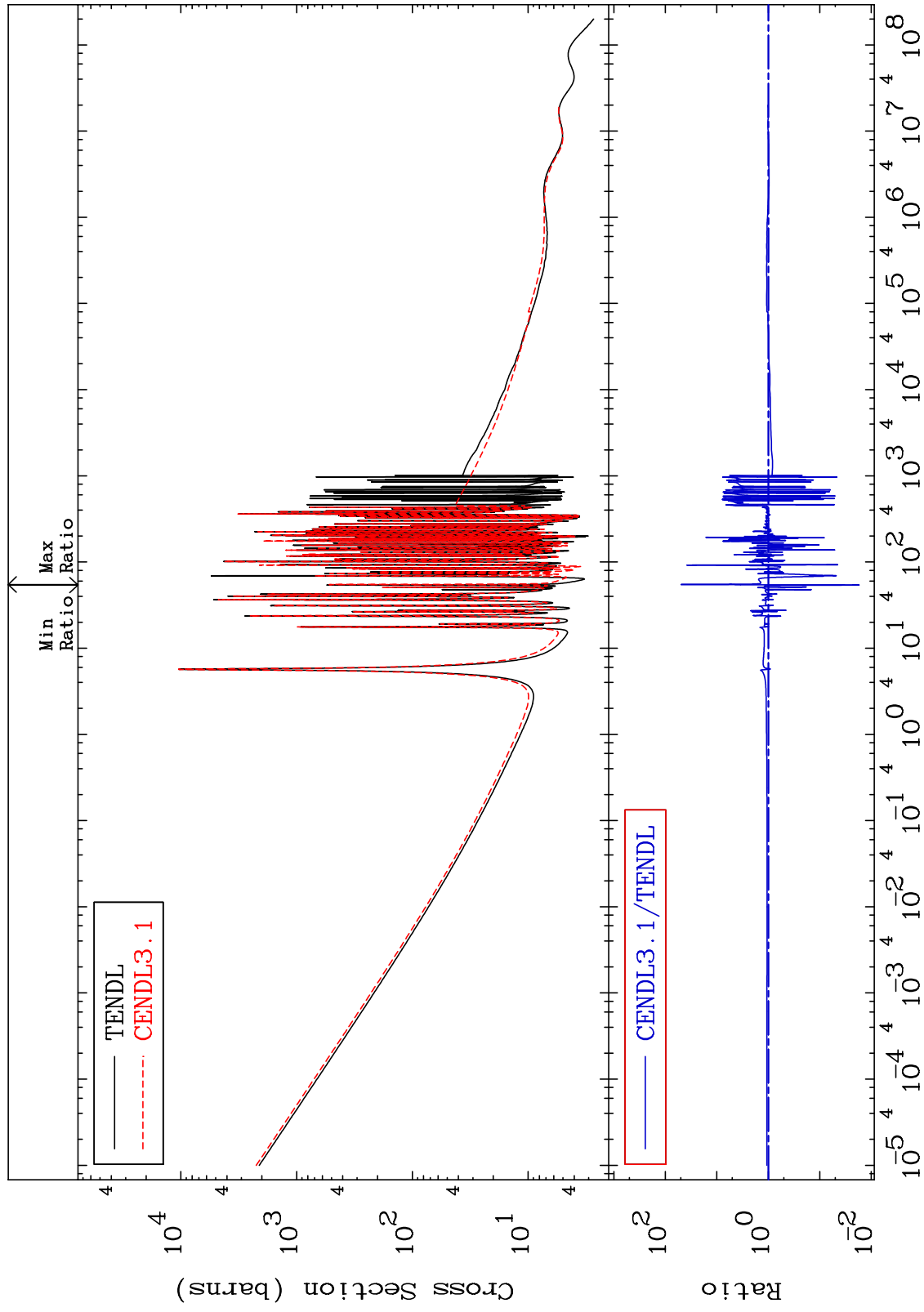
U.S.A.

Tele: 925-443-1911

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

Press Mouse Button to Start

MAT 7240 Total Cross Section 72-Hf-179 -98.27 To 4886. %

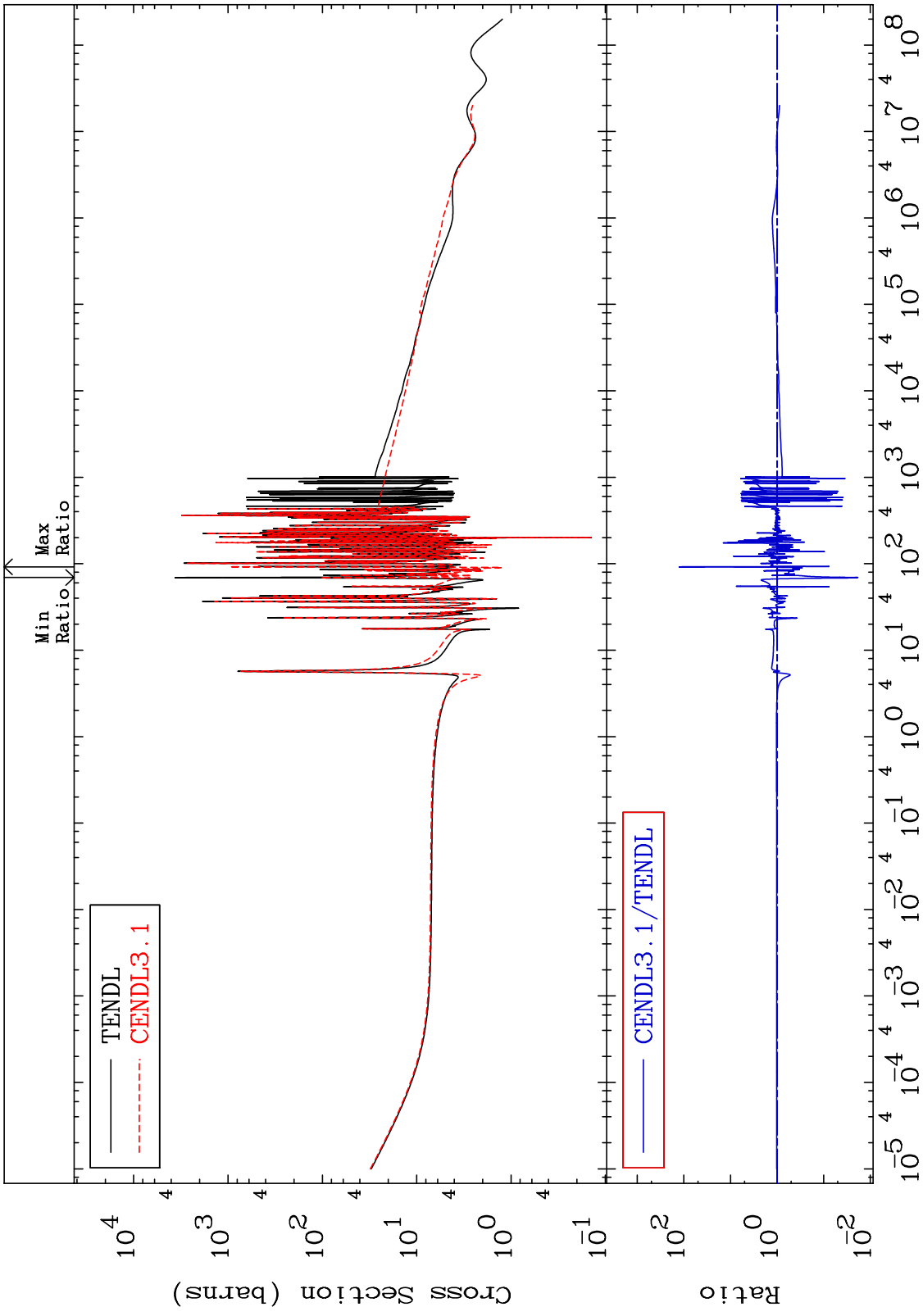


72-Hf-179

Incident Energy (eV)

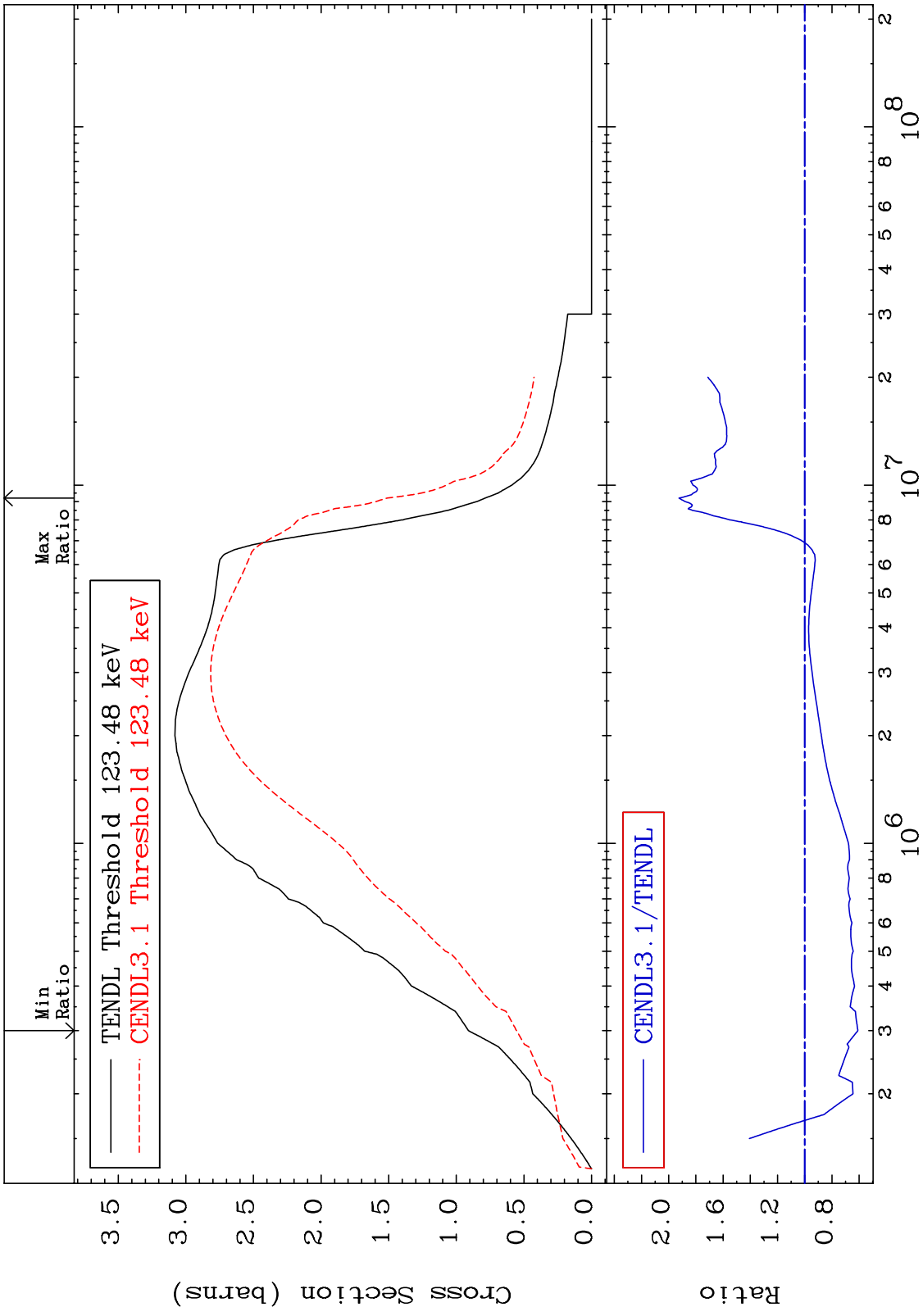
1

MAT 7240 Elastic Cross Section 72-Hf-179 -98.15 To 9999. %

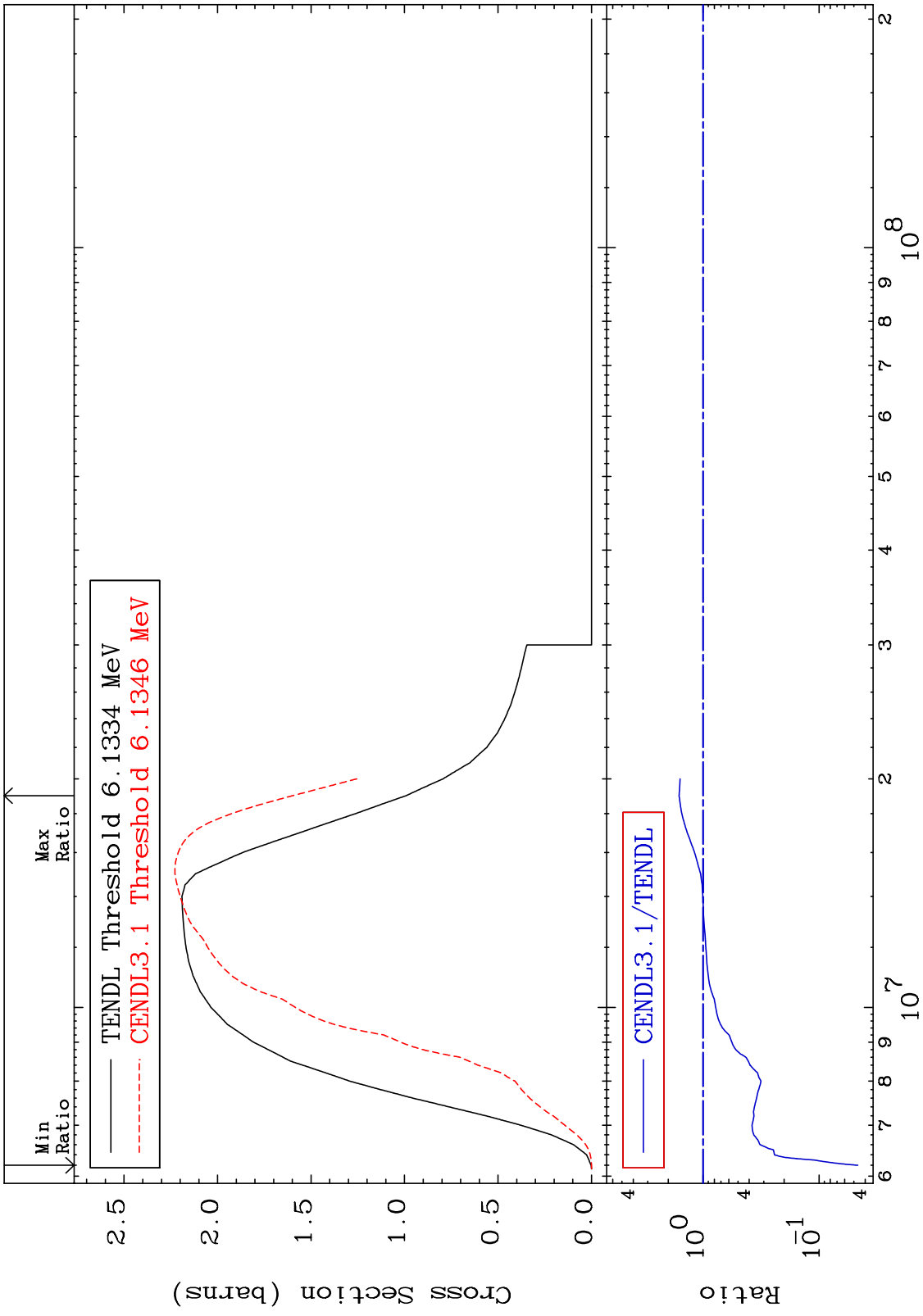


Incident Energy (eV) 72-Hf-179

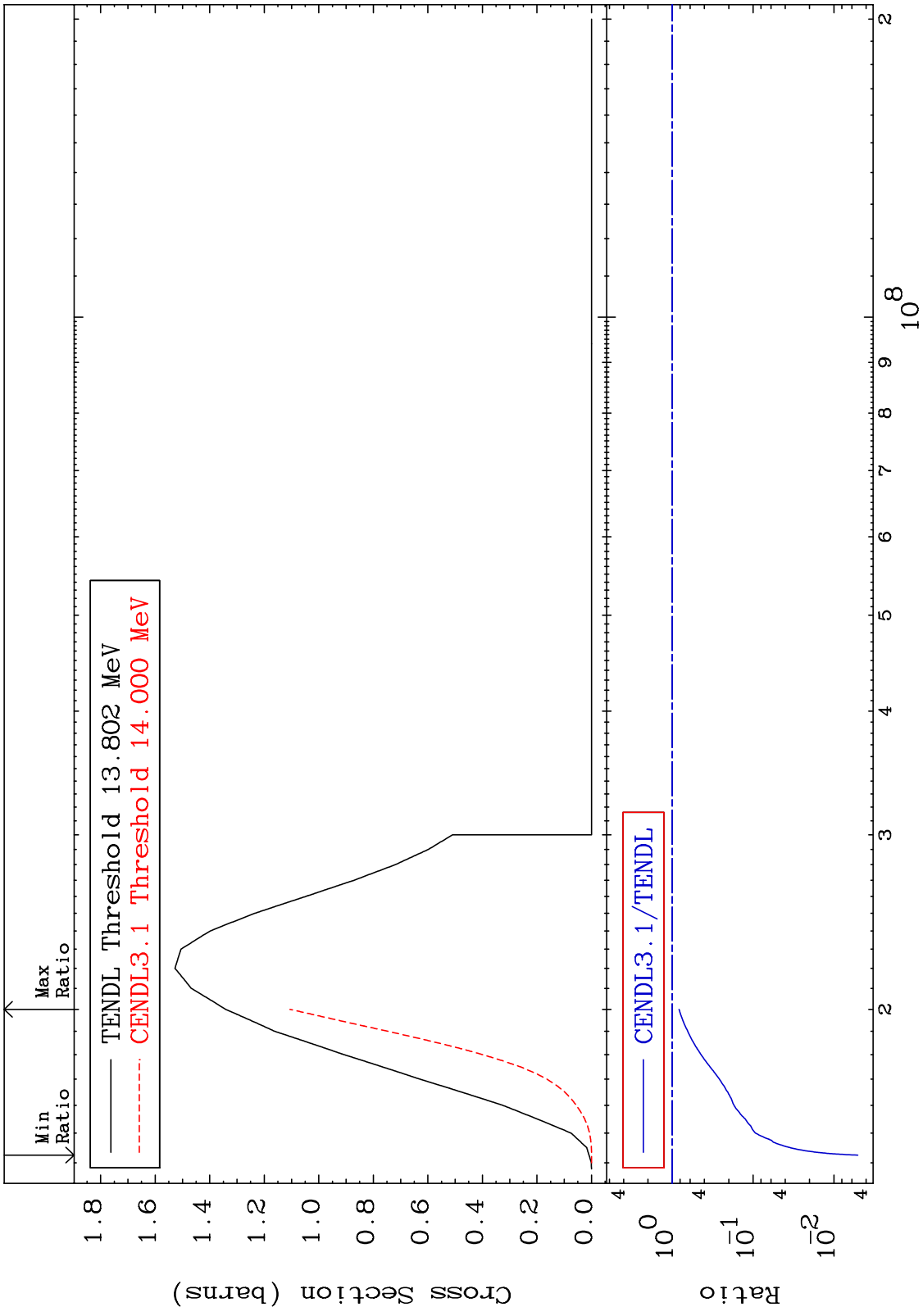
MAT 7240 72-Hf-179
-39.07 To 92.40 %
Inelastic Cross Section



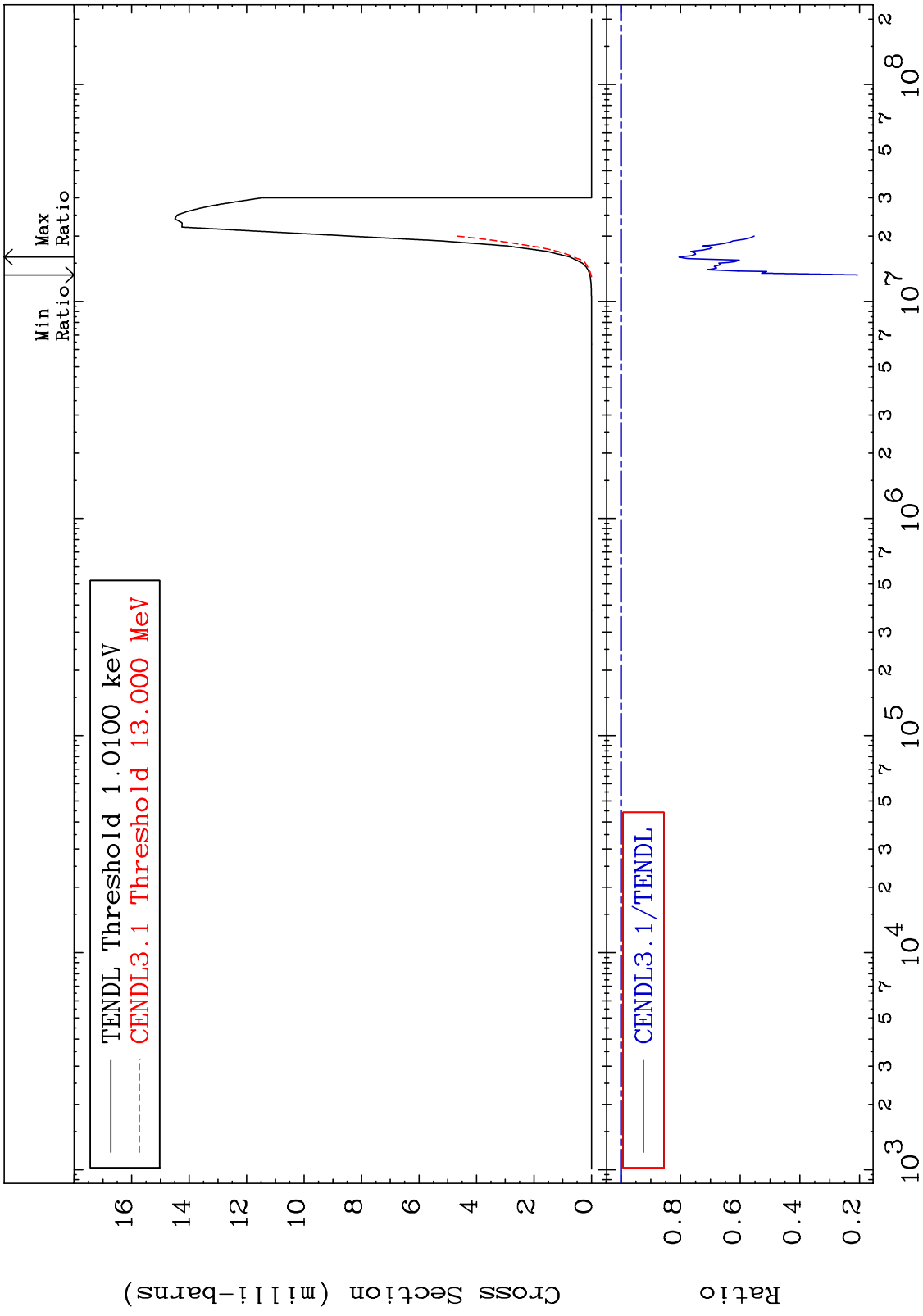
MAT 7240 (n,2n) 72-Hf-179
Cross Section -95.37 To 61.12 %



4 Incident Energy (eV) 72-Hf-179

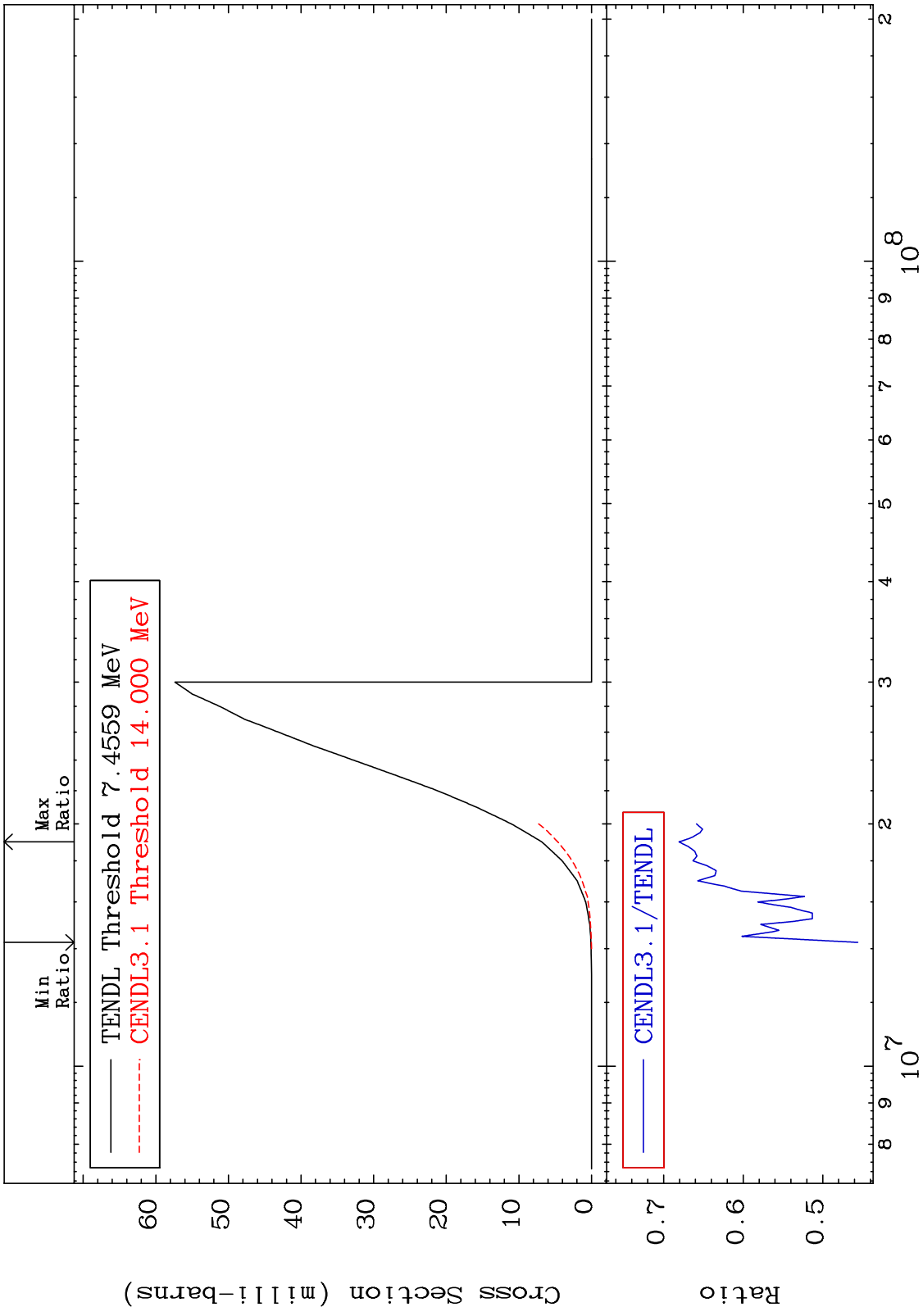


MAT 7240 $(n, n') \alpha$ Cross Section 72-Hf-179 -79.43 To -19.48%



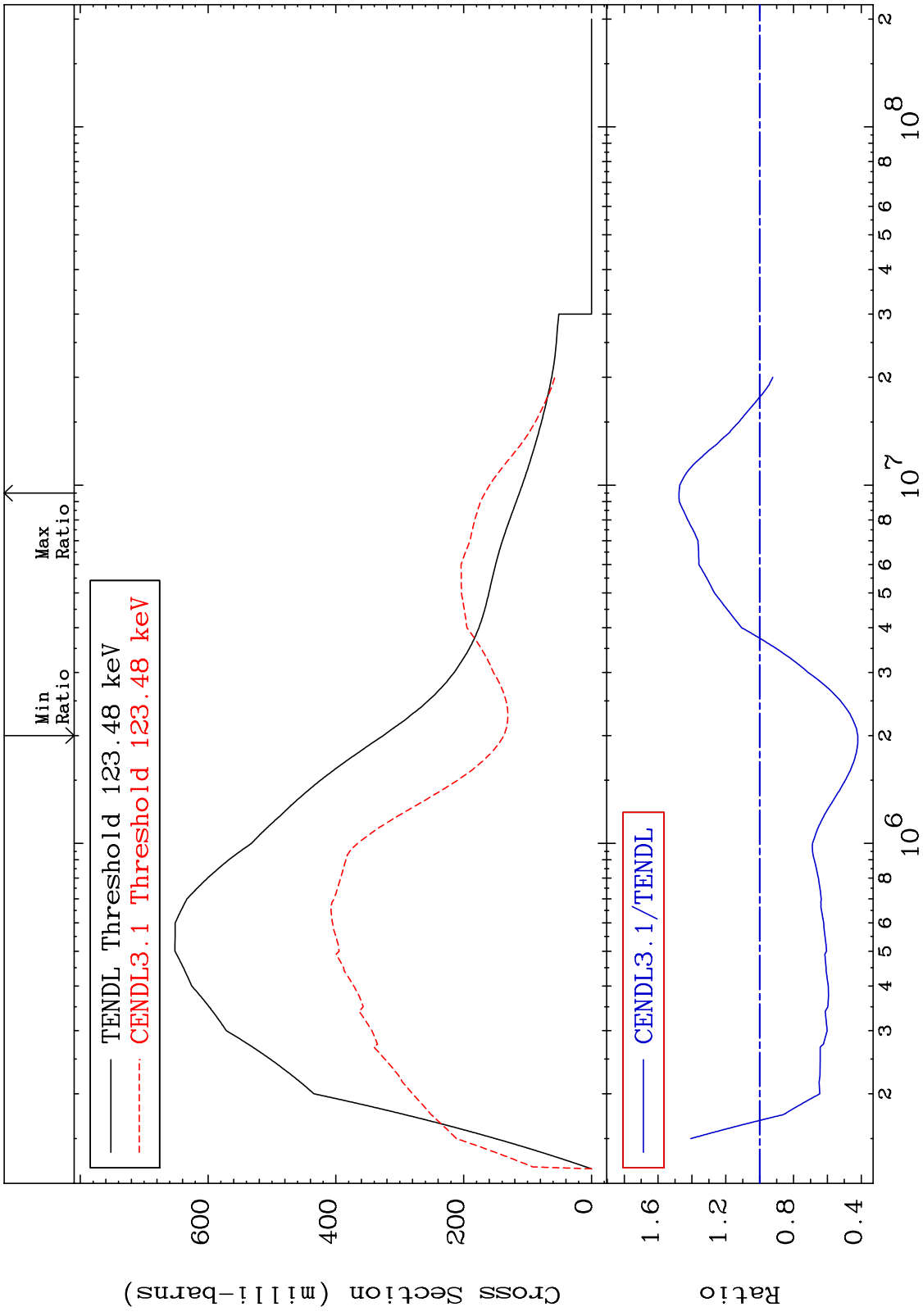
6 72-Hf-179

MAT 7240 (n, n') p $^{72}\text{Hf}-179$
 Cross Section -54.41 To -31.94%

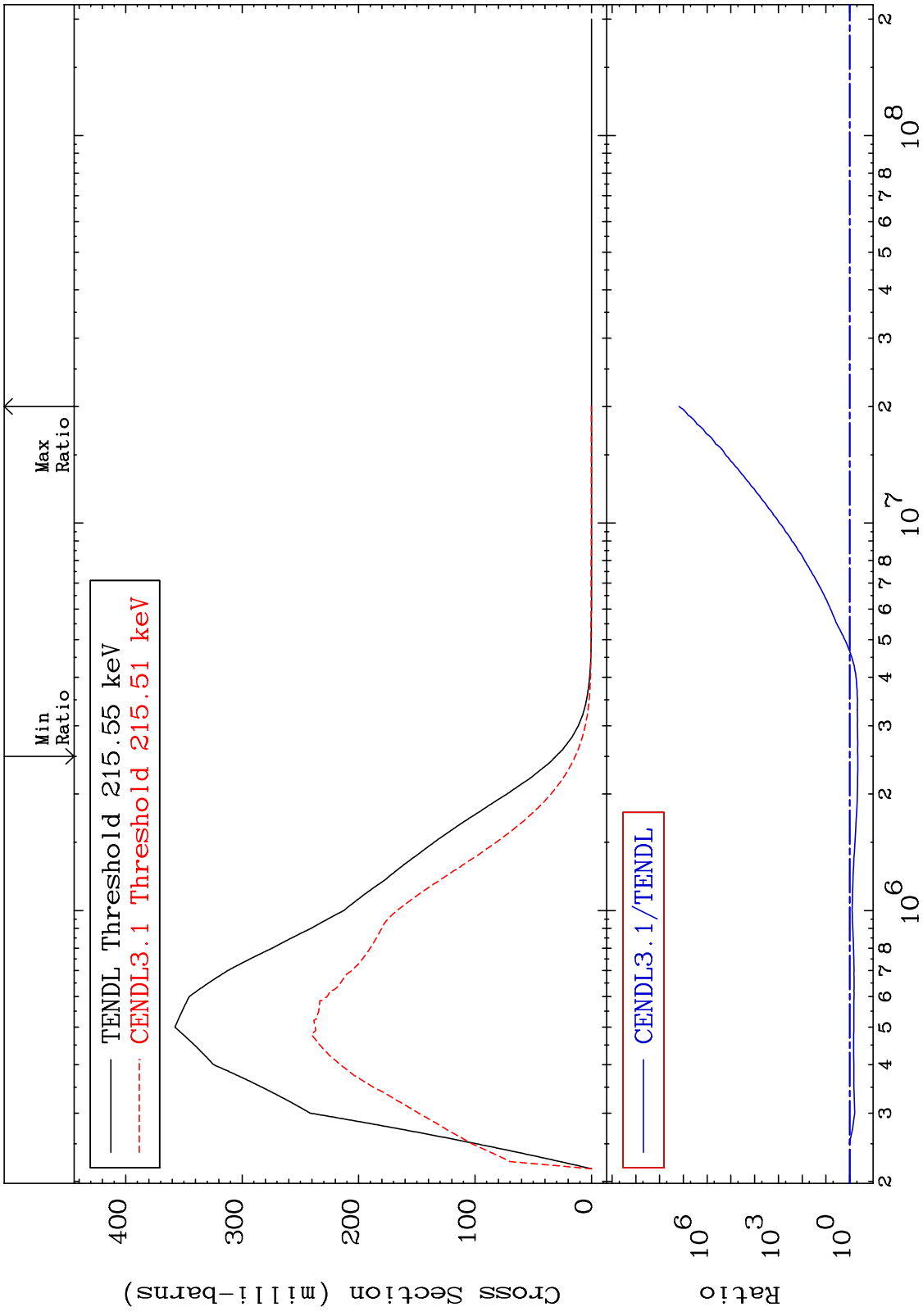


7 $^{72}\text{Hf}-179$
 Incident Energy (eV)

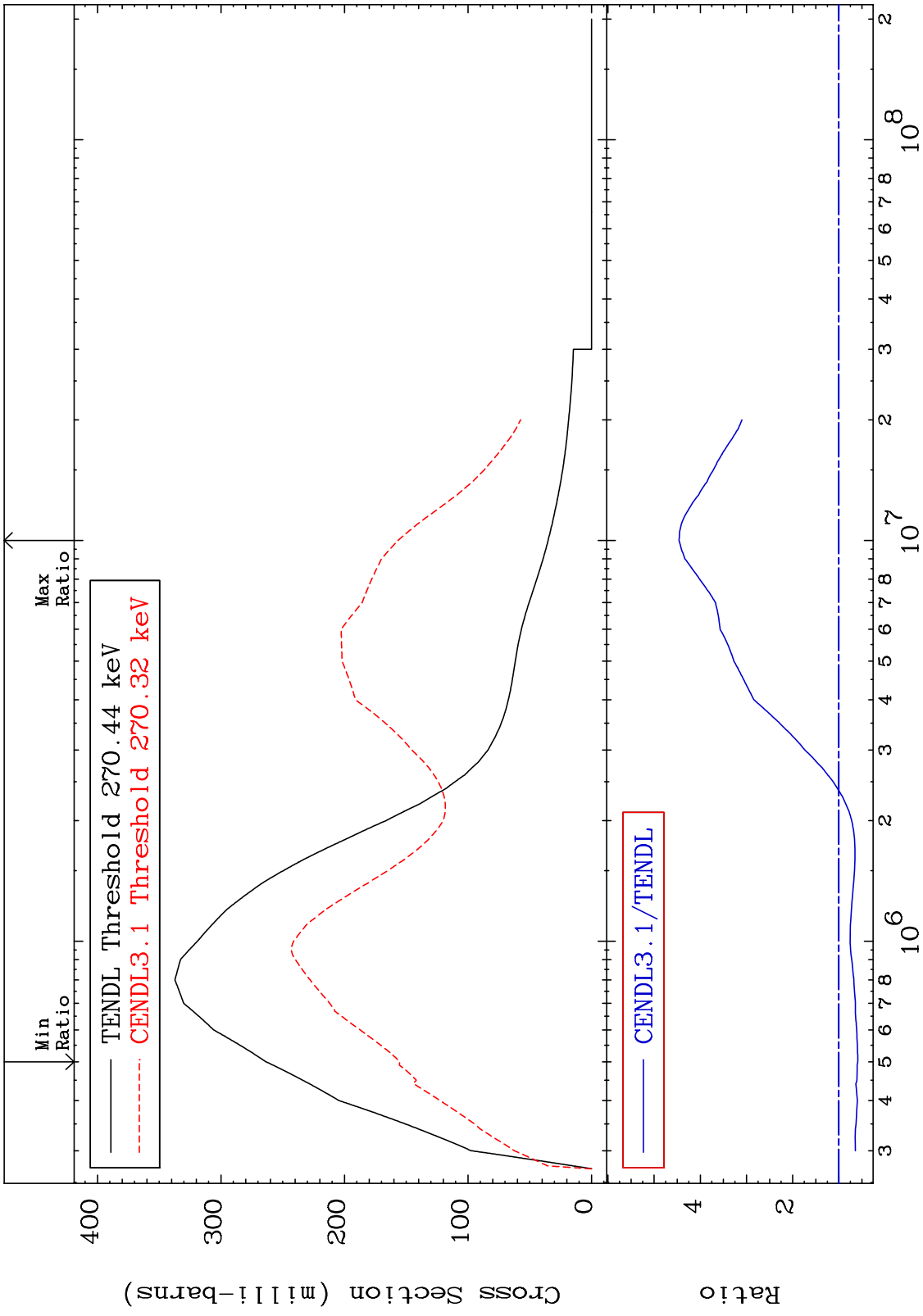
MAT 7240 MT= 51 (n,n') Level Cross Section 72-Hf-179
 -57.98 To 47.62 %



MAT 7240 MT= 52 (n,n') Level Cross Section 72-Hf-179
 -54.53 To 9999. %

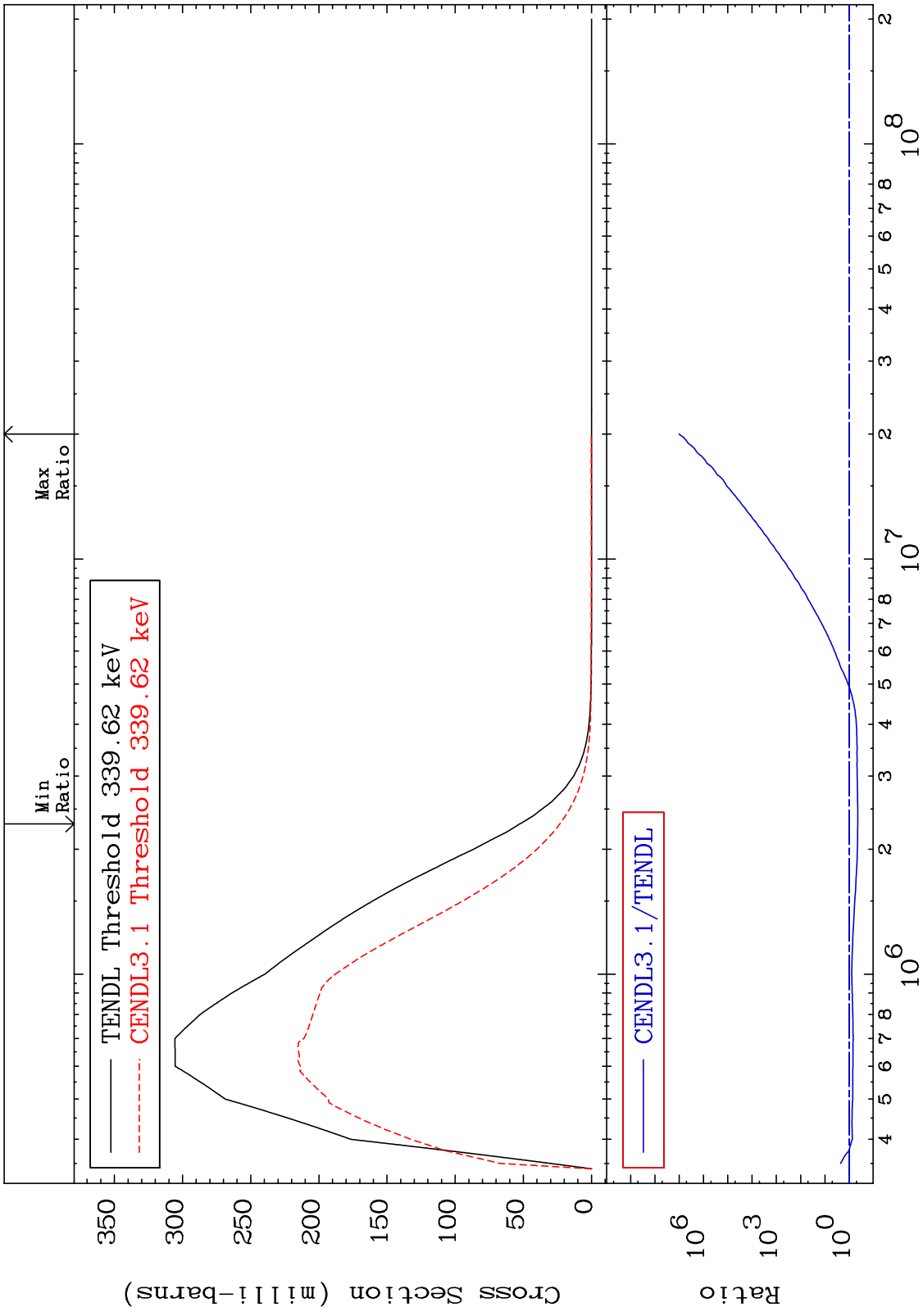


MAT 7240 MT= 53 (n,n') Level Cross Section 72-Hf-179
 -41.11 To 346.1 %

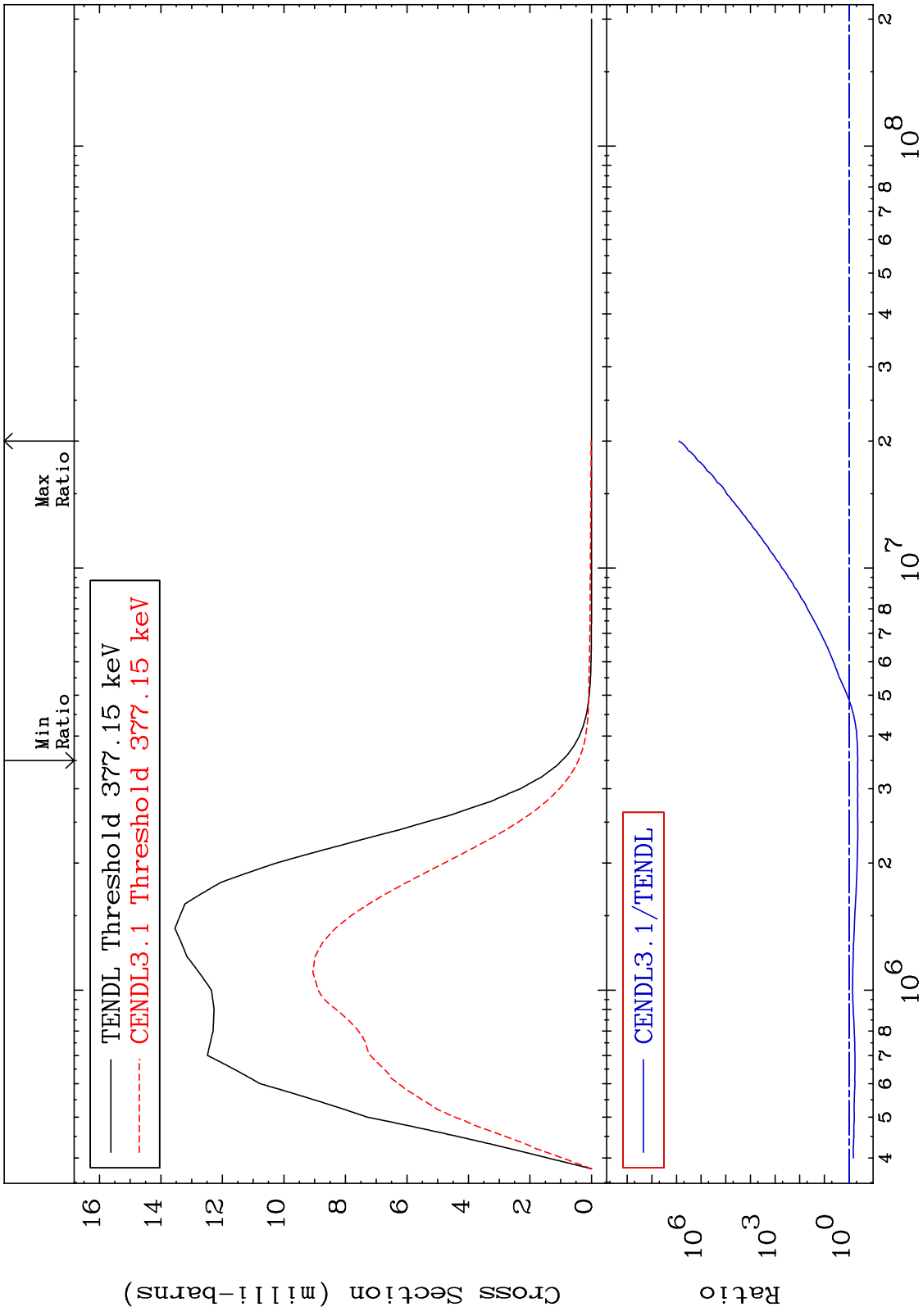


10 Incident Energy (eV) 72-Hf-179

MAT 7240 MT= 54 (n,n') Level Cross Section 72-Hf-179
 -55.85 To 9999. %

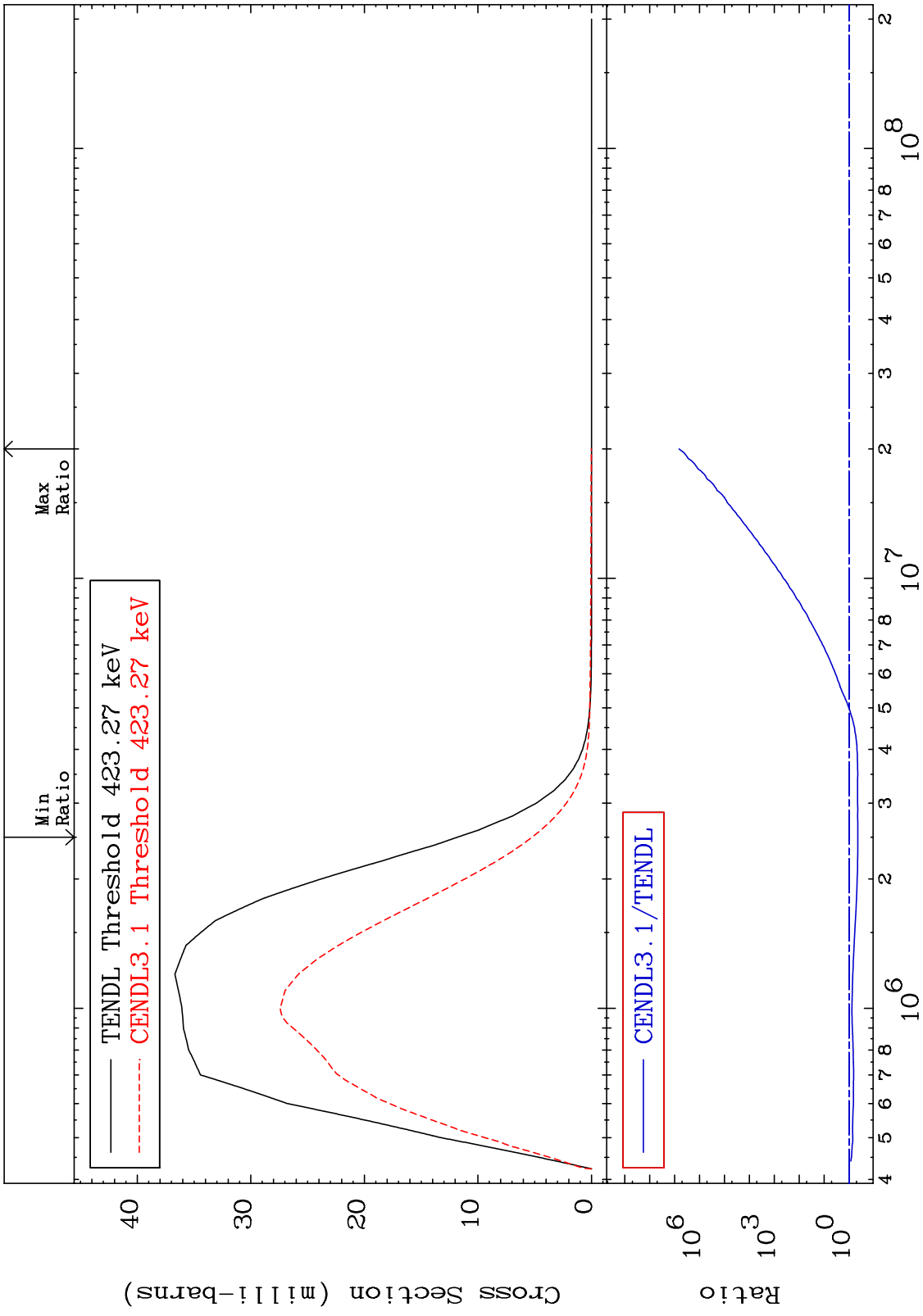


MAT 7240 MT= 55 (n,n') Level Cross Section 72-Hf-179
 -56.04 To 9999. %

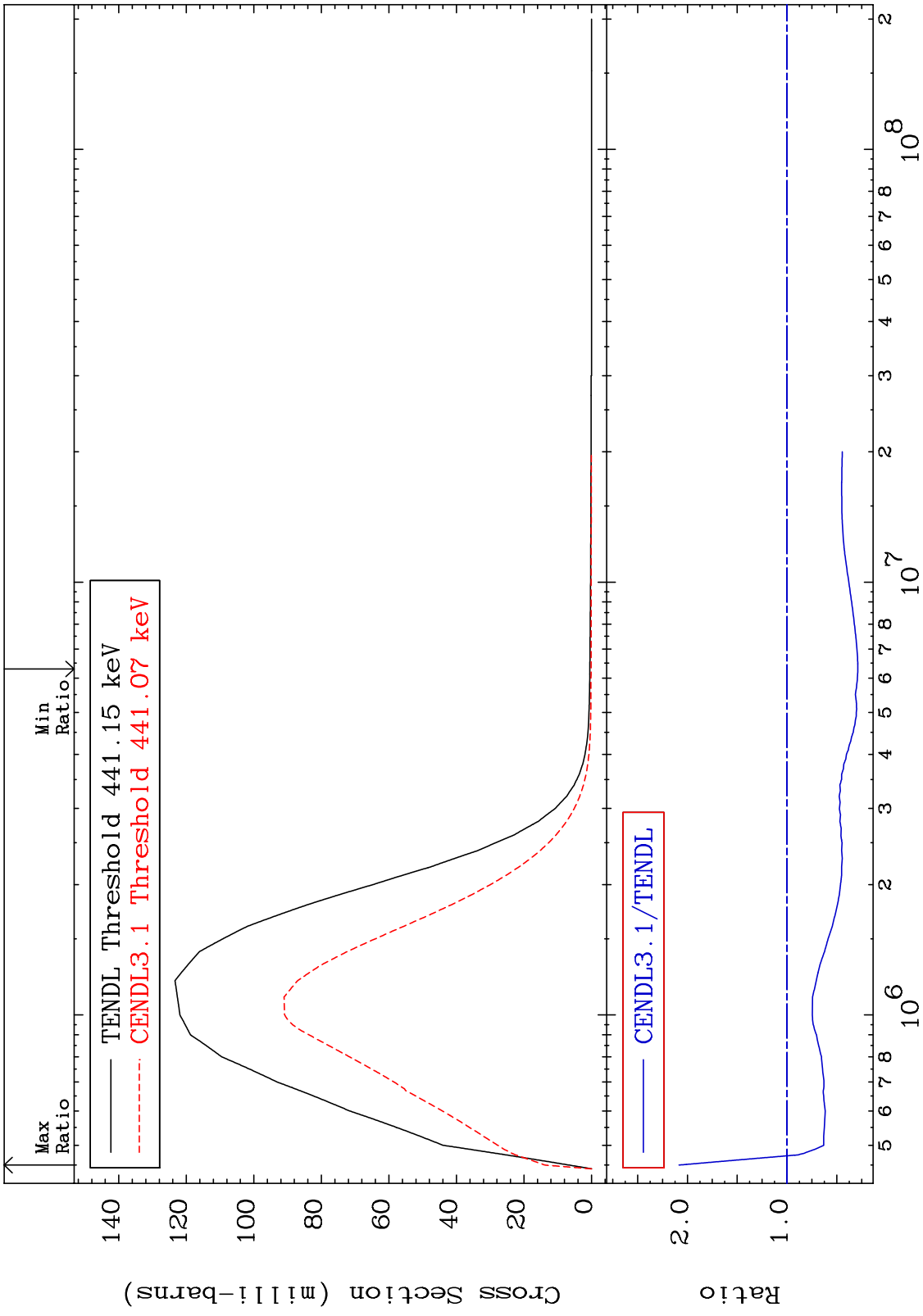


12 72-Hf-179 Incident Energy (eV)

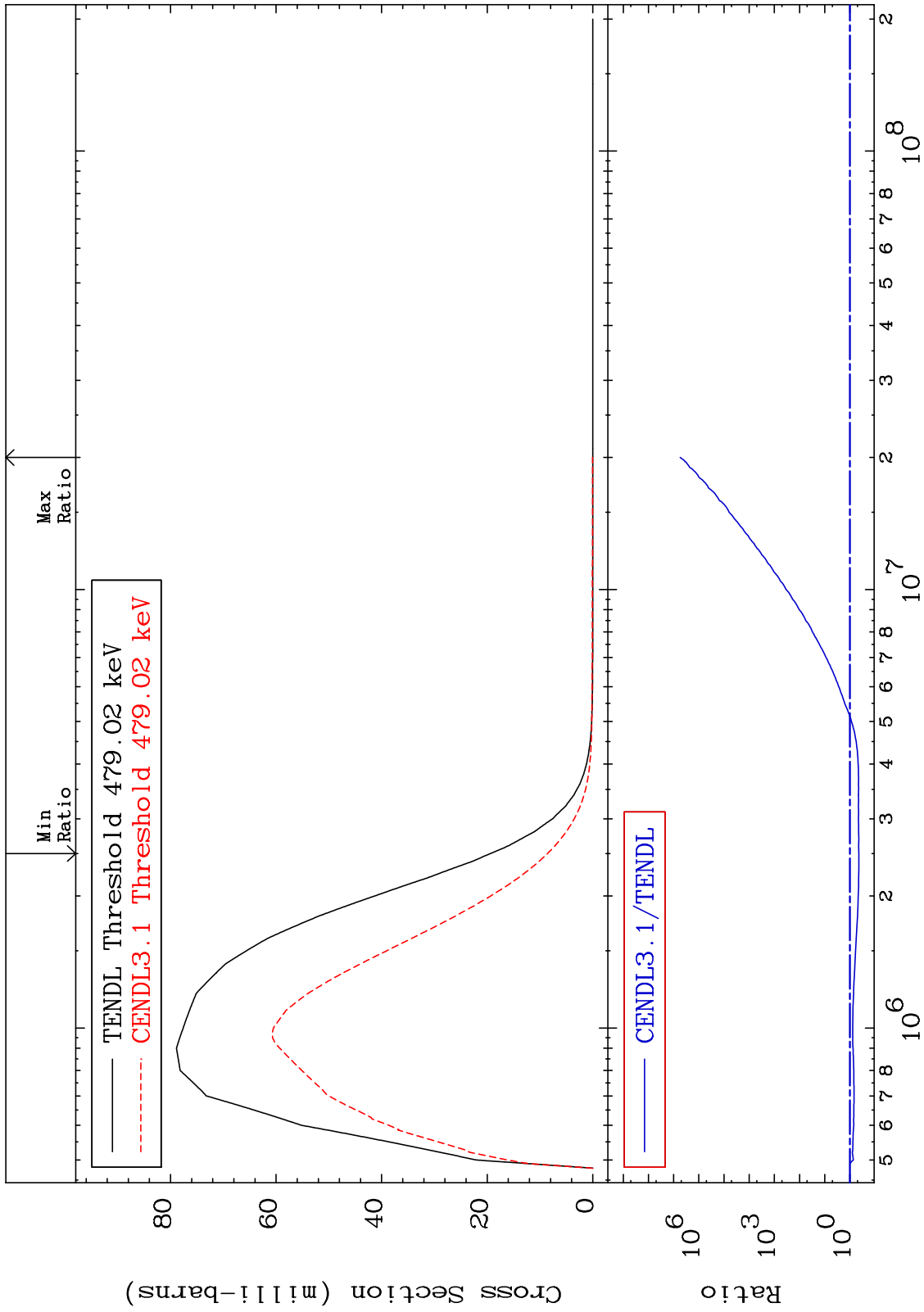
MAT 7240 MT= 56 (n,n') Level Cross Section 72-Hf-179
 -55.78 To 9999. %



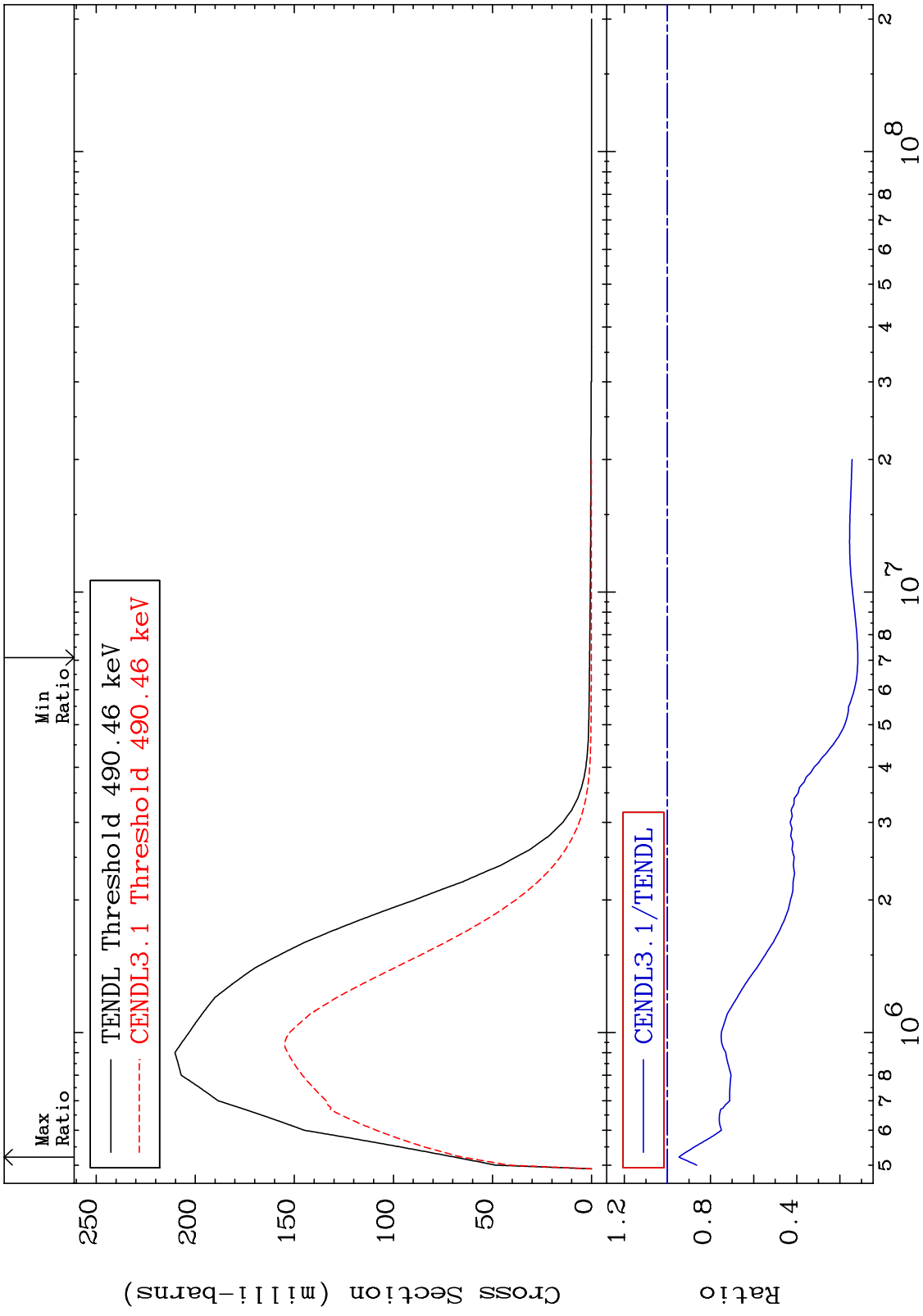
MAT 7240 MT= 57 (n,n') Level Cross Section 72-Hf-179
 -71.16 To 108.4 %



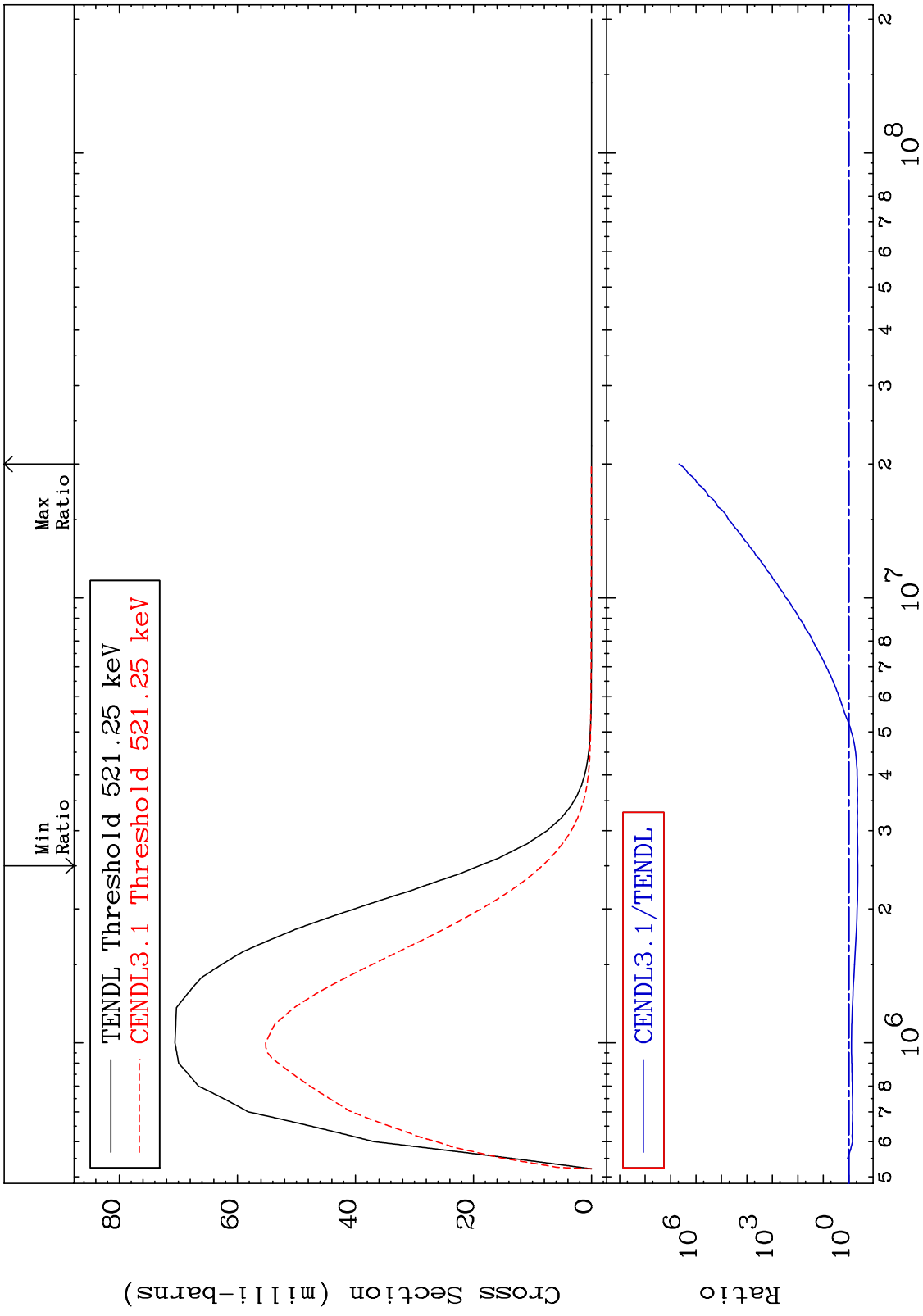
MAT 7240 MT= 58 (n,n') Level Cross Section 72-Hf-179
-55.93 To 9999. %



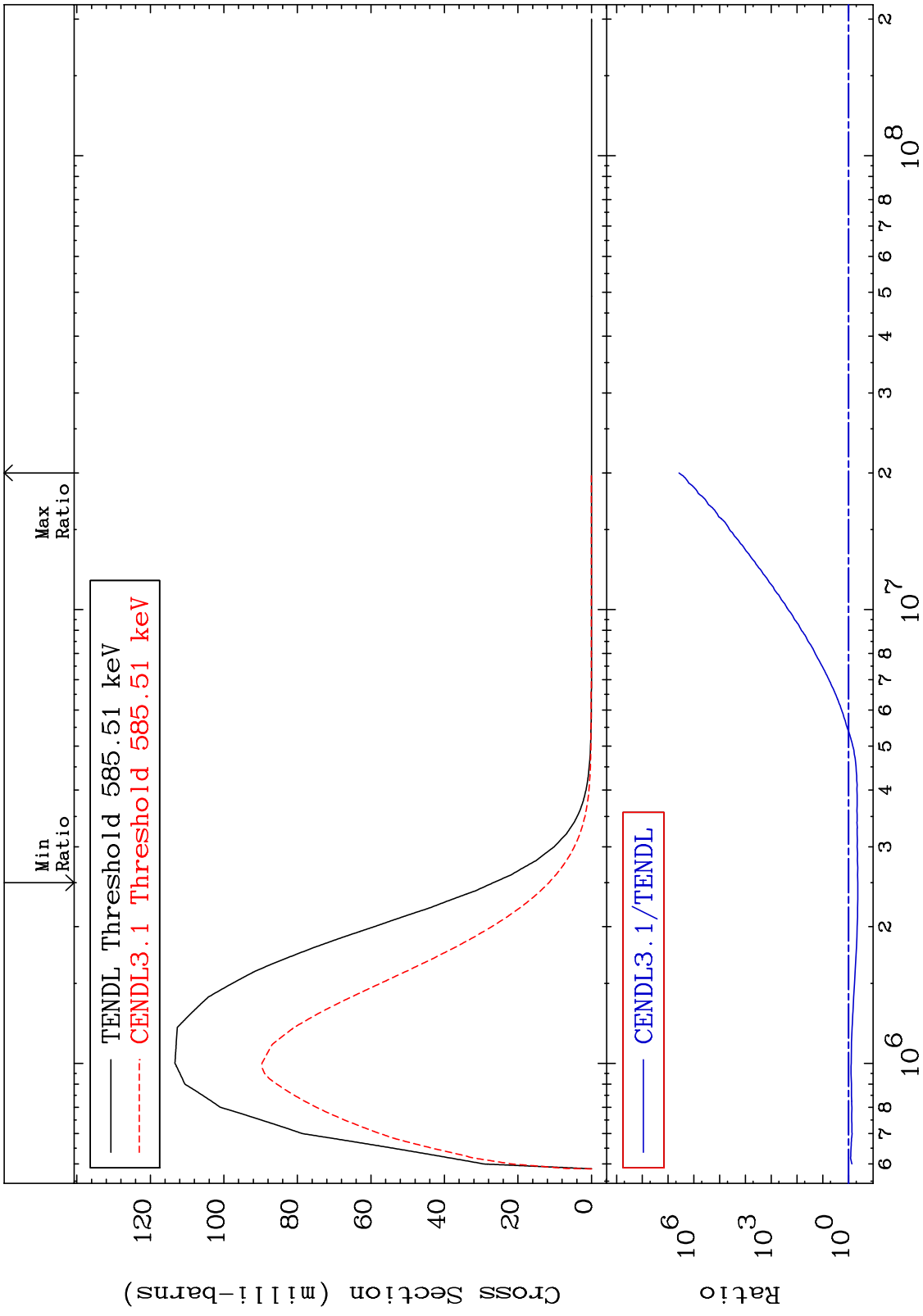
MAT 7240 MT= 59 (n,n') Level Cross Section 72-Hf-179
 -88.32 To -5.388%



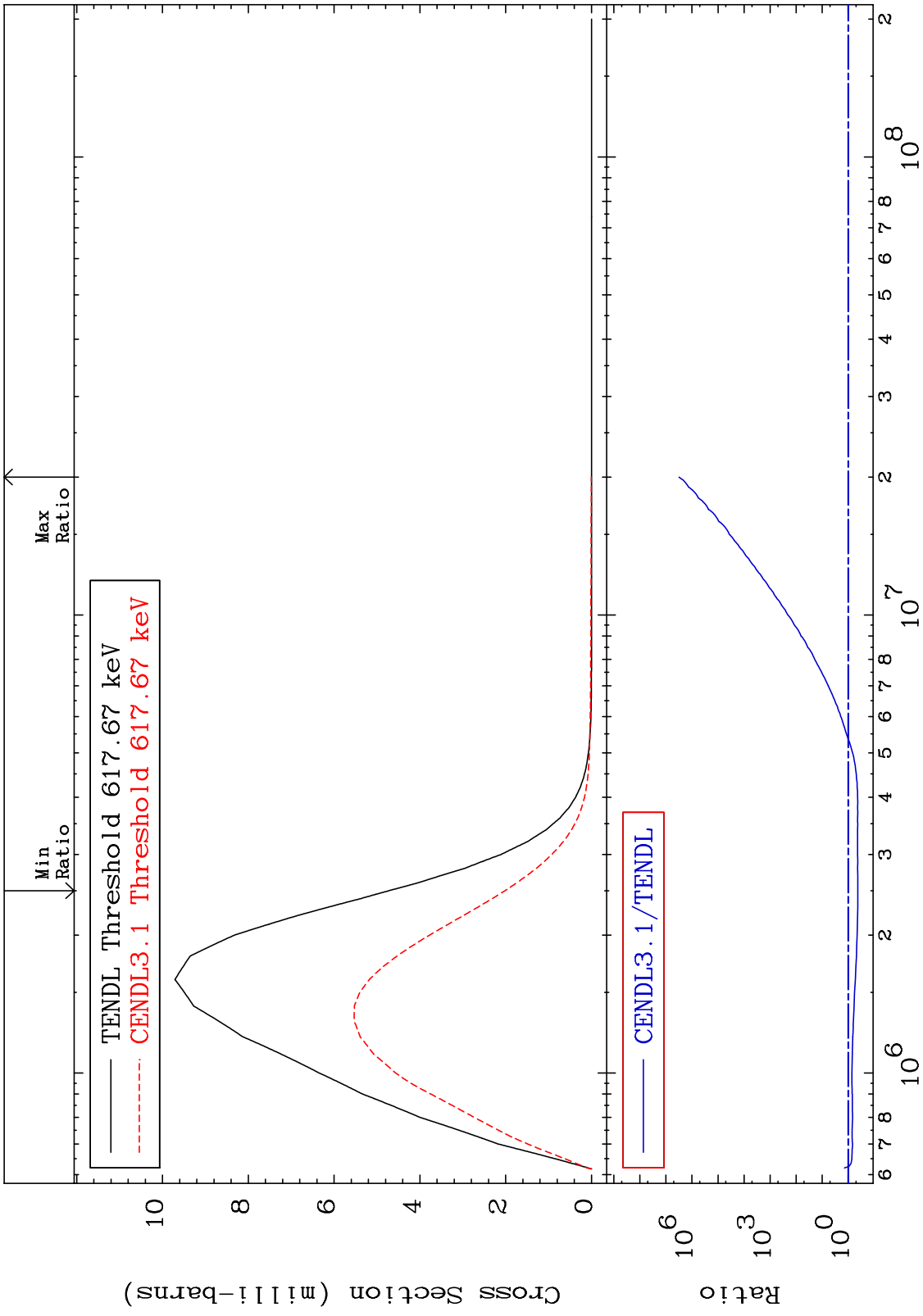
MAT 7240 MT= 60 (n,n') Level Cross Section 72-Hf-179
 -56.17 To 9999. %



MAT 7240 MT= 61 (n,n') Level Cross Section 72-Hf-179
 -56.57 To 9999. %

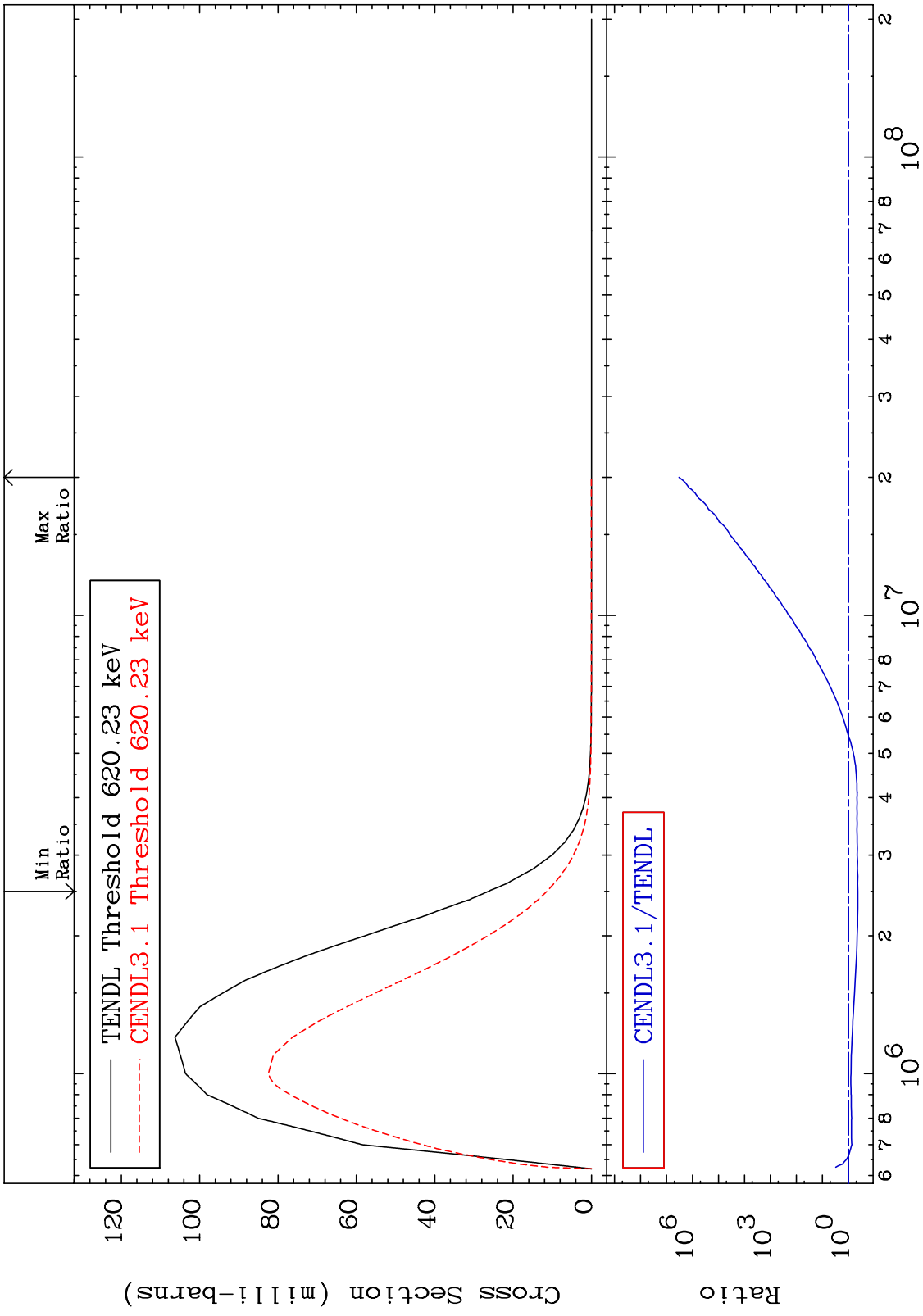


MAT 7240 MT= 62 (n,n') Level Cross Section 72-Hf-179
 -57.27 To 9999. %



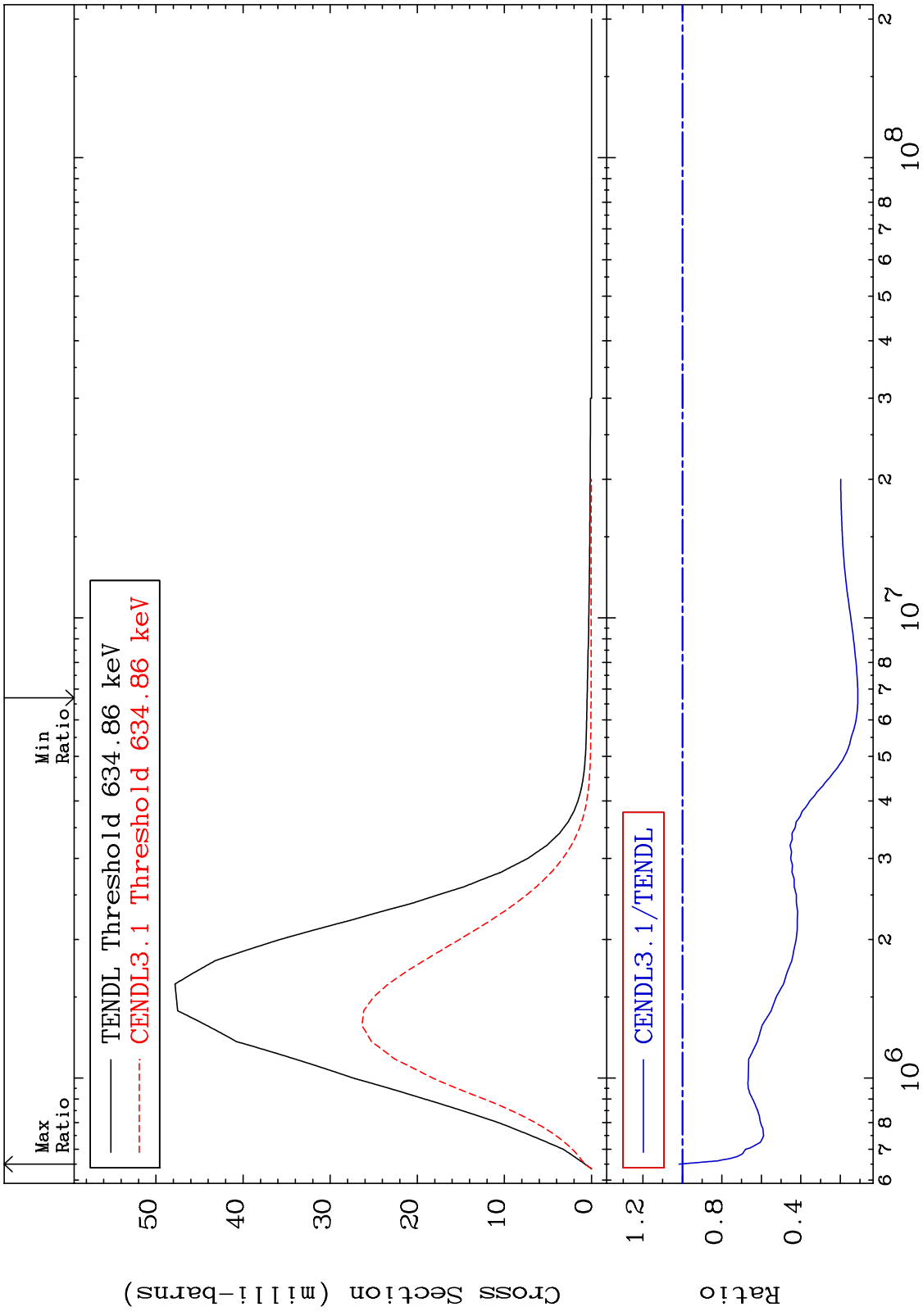
19 72-Hf-179 Incident Energy (eV)

MAT 7240 MT= 63 (n,n') Level Cross Section 72-Hf-179
 -56.76 To 9999. %

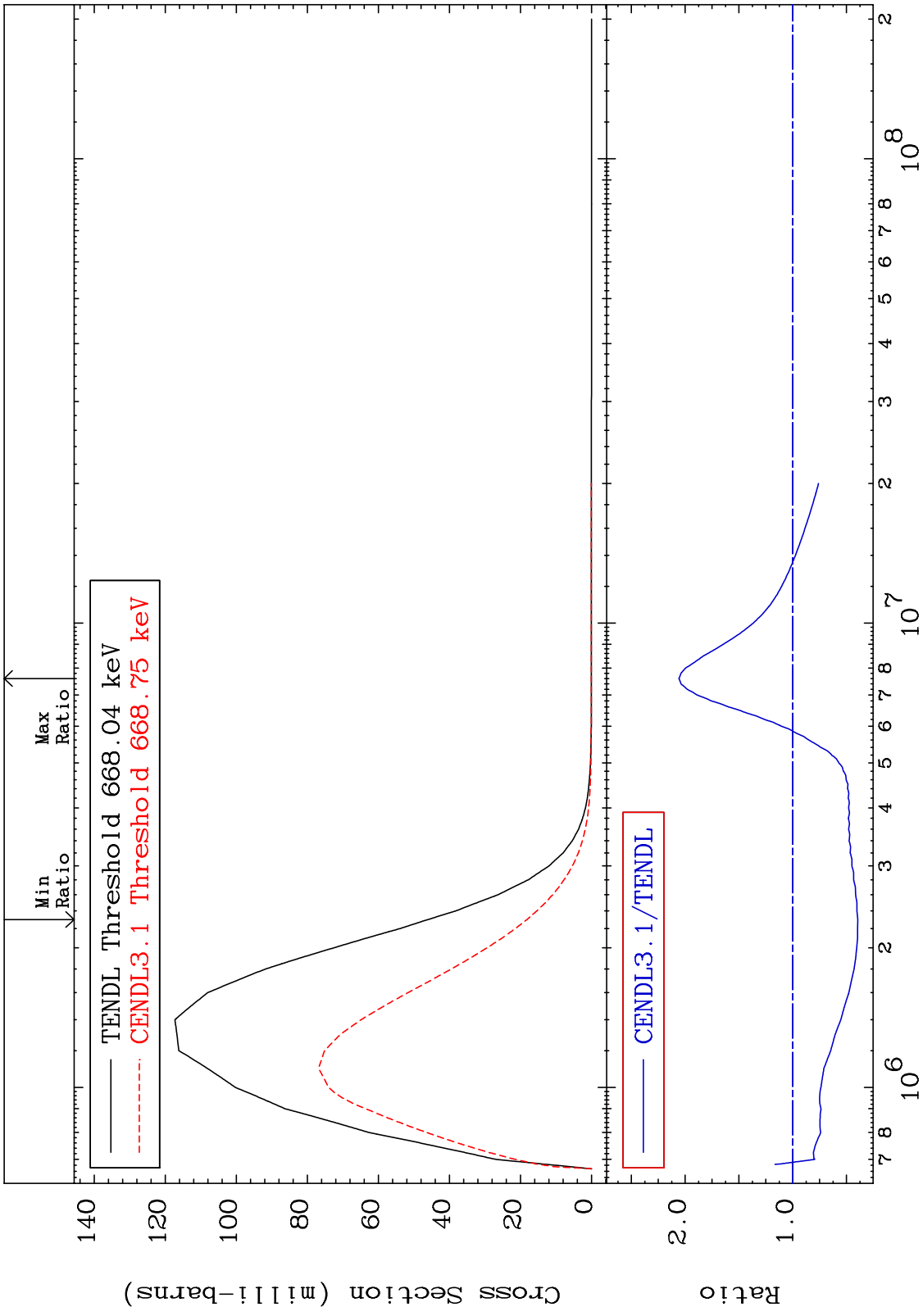


20 Incident Energy (eV) 72-Hf-179

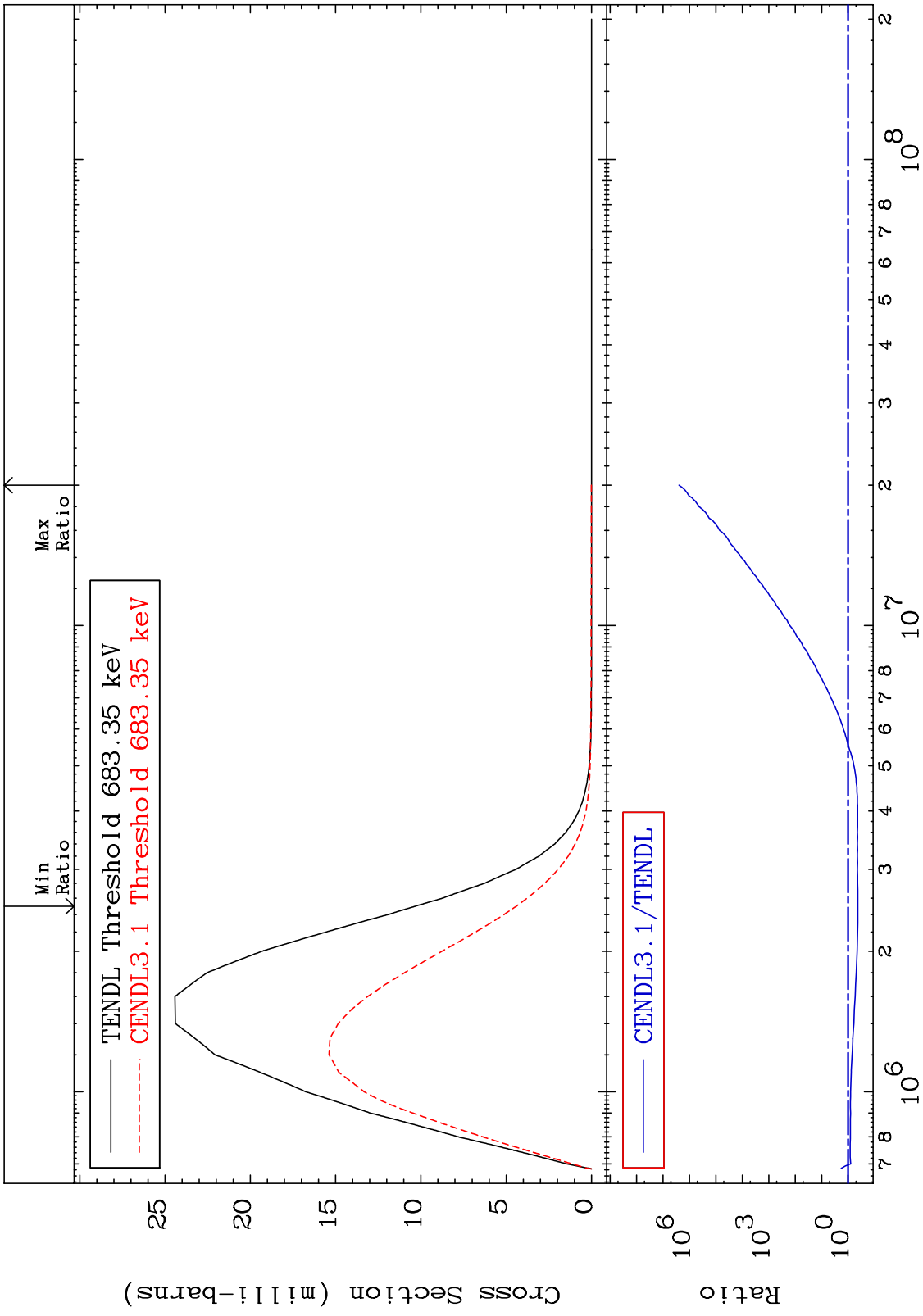
MAT 7240 MT= 64 (n,n') Level 72-Hf-179
 Cross Section -88.89 To 1.693 %



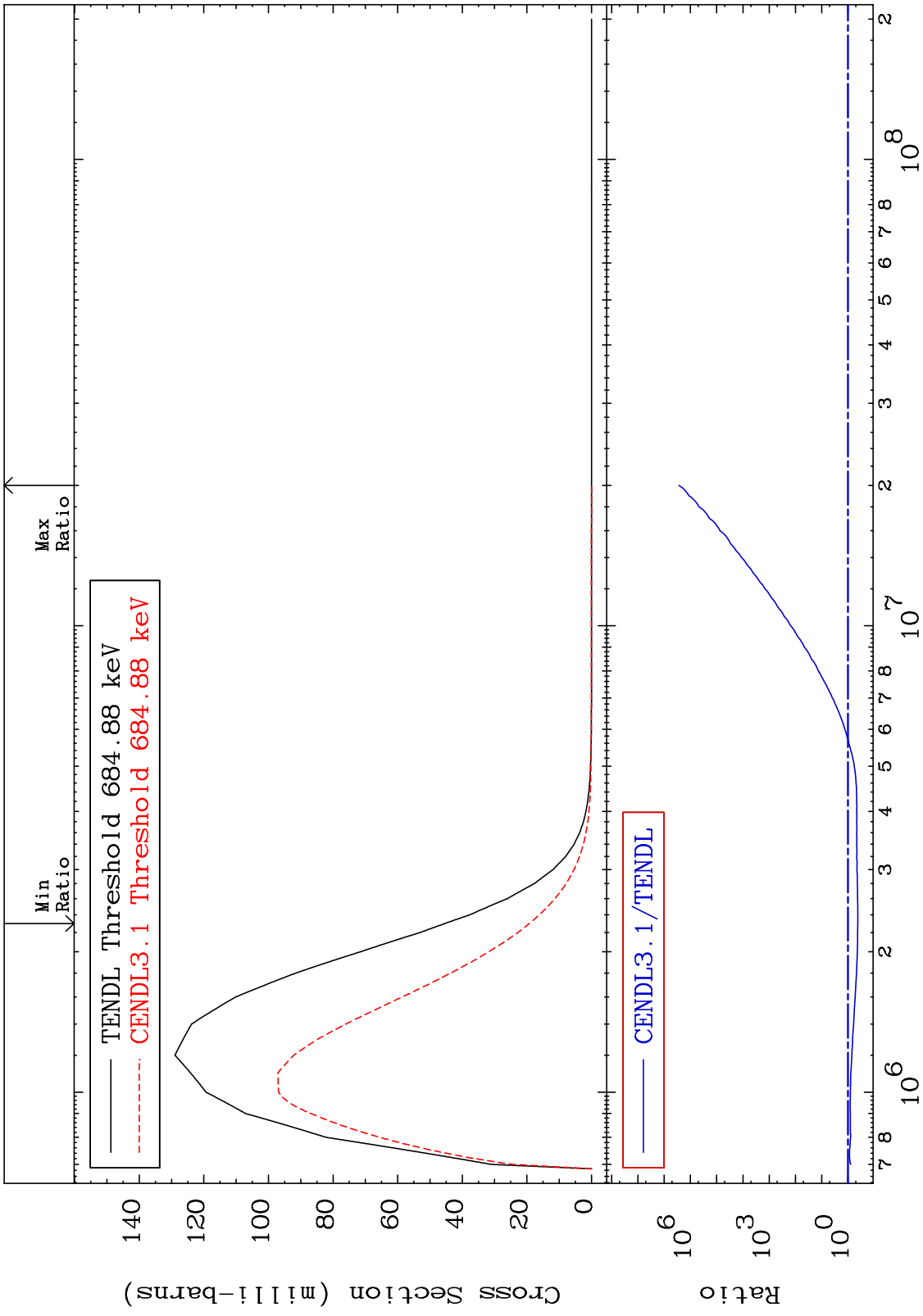
MAT 7240 MT= 65 (n,n') Level Cross Section 72-Hf-179
 -60.51 To 105.7 %



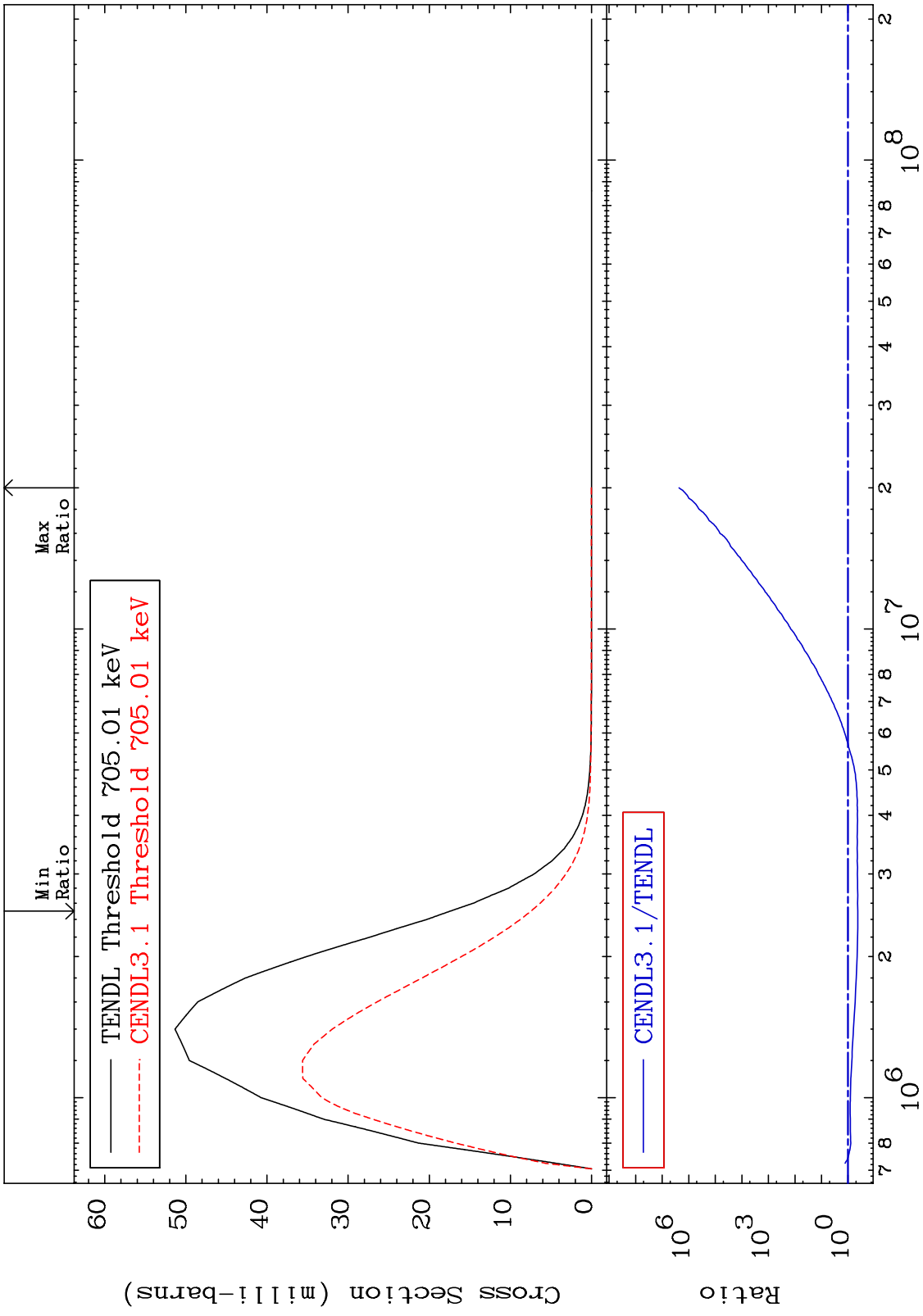
MAT 7240 MT= 66 (n,n') Level Cross Section 72-Hf-179
 -57.31 To 9999. %



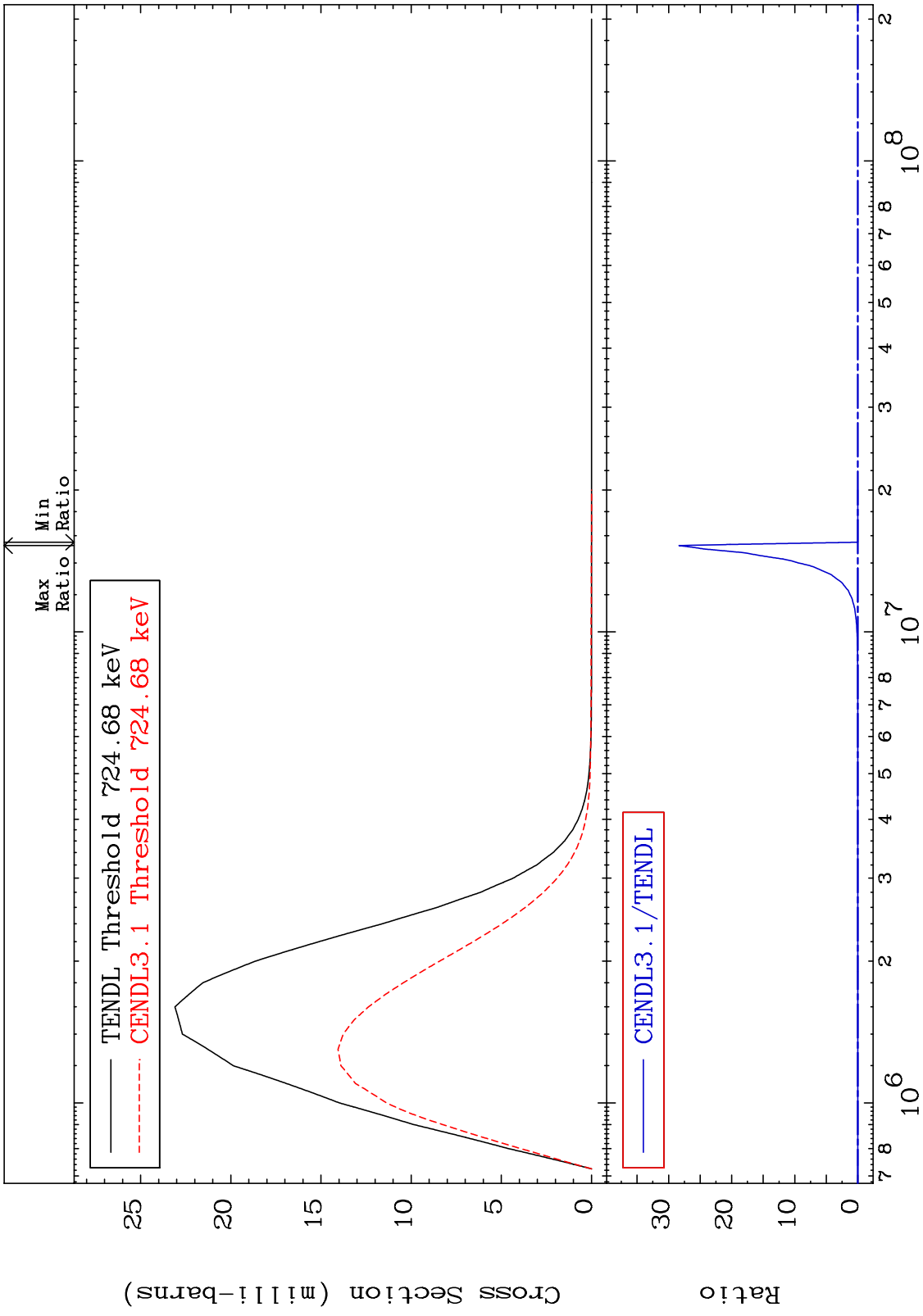
MAT 7240 MT= 67 (n,n') Level Cross Section 72-Hf-179
 -57.69 To 9999. %

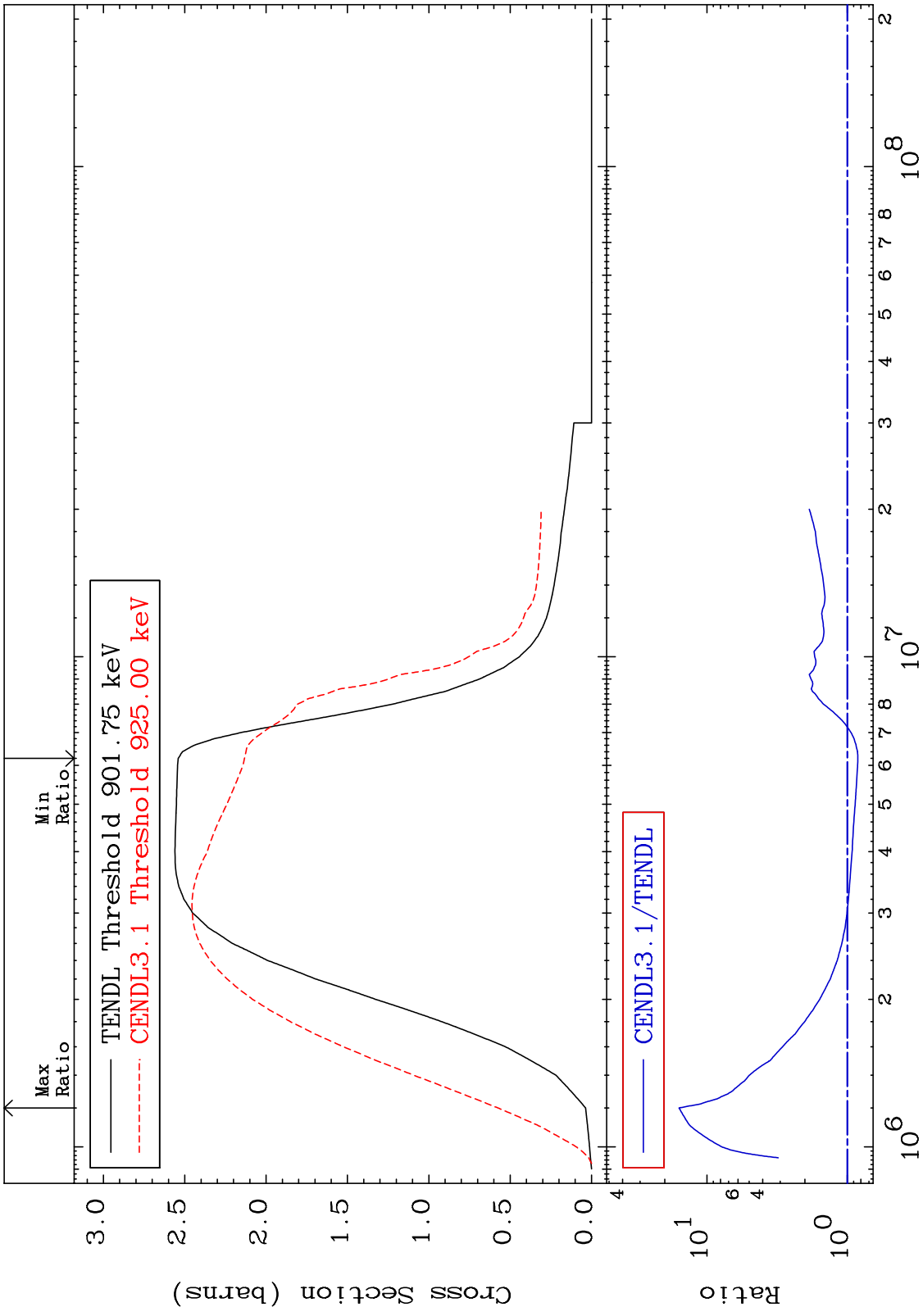


MAT 7240 MT= 68 (n,n') Level Cross Section 72-Hf-179
 -57.19 To 9999. %

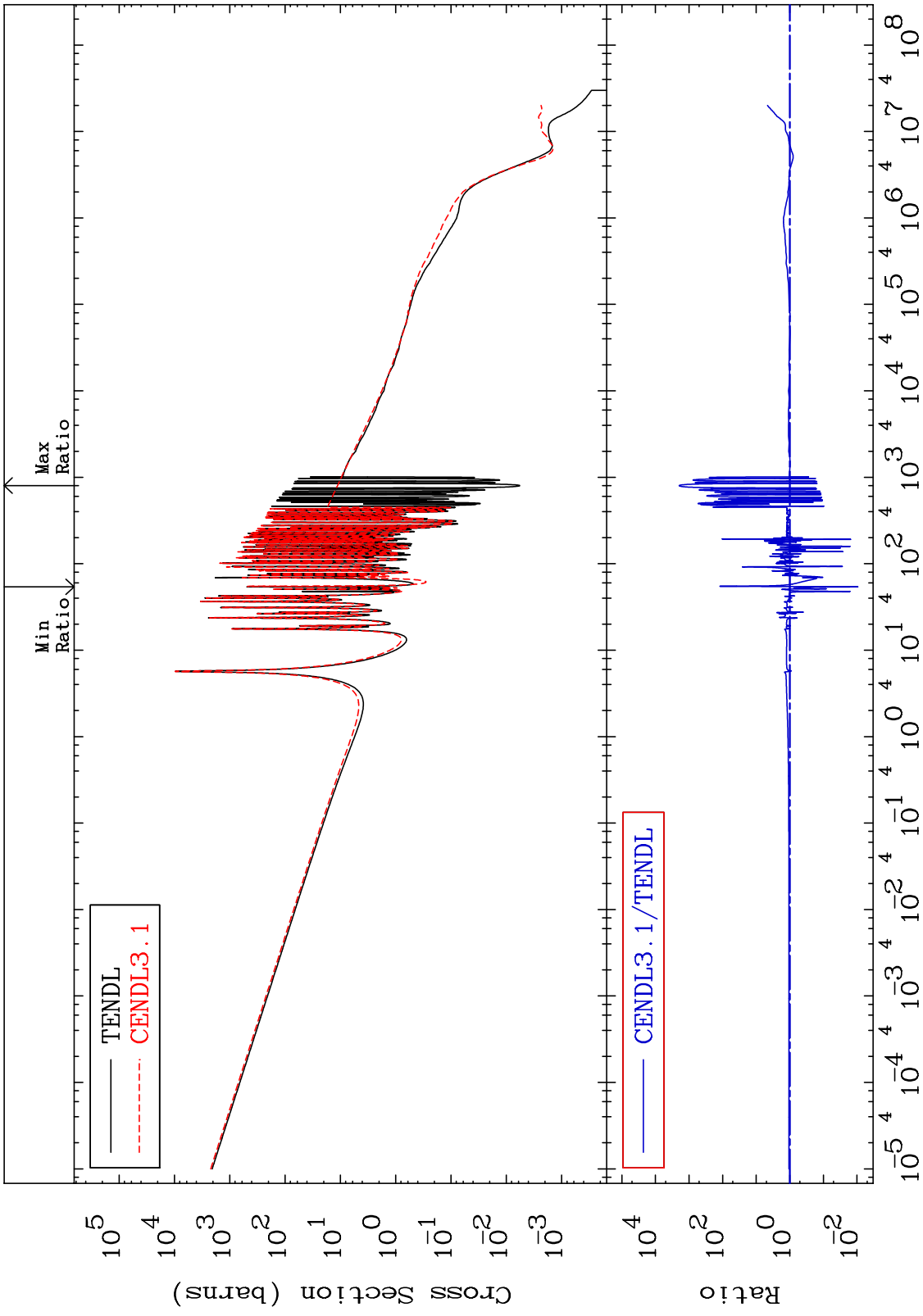


MAT 7240 MT= 69 (n,n') Level Cross Section 72-Hf-179 -100.0 To 9999. %

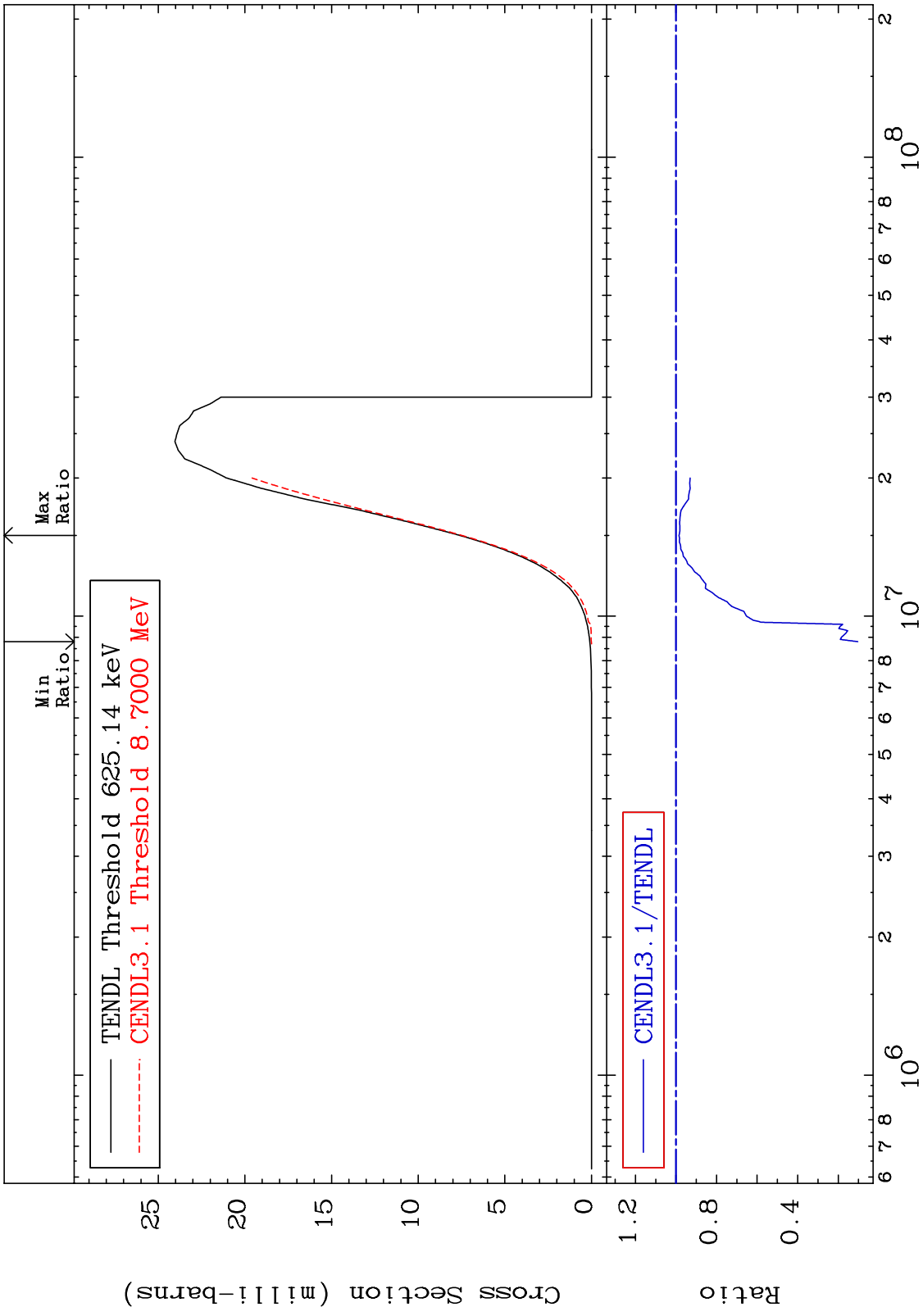




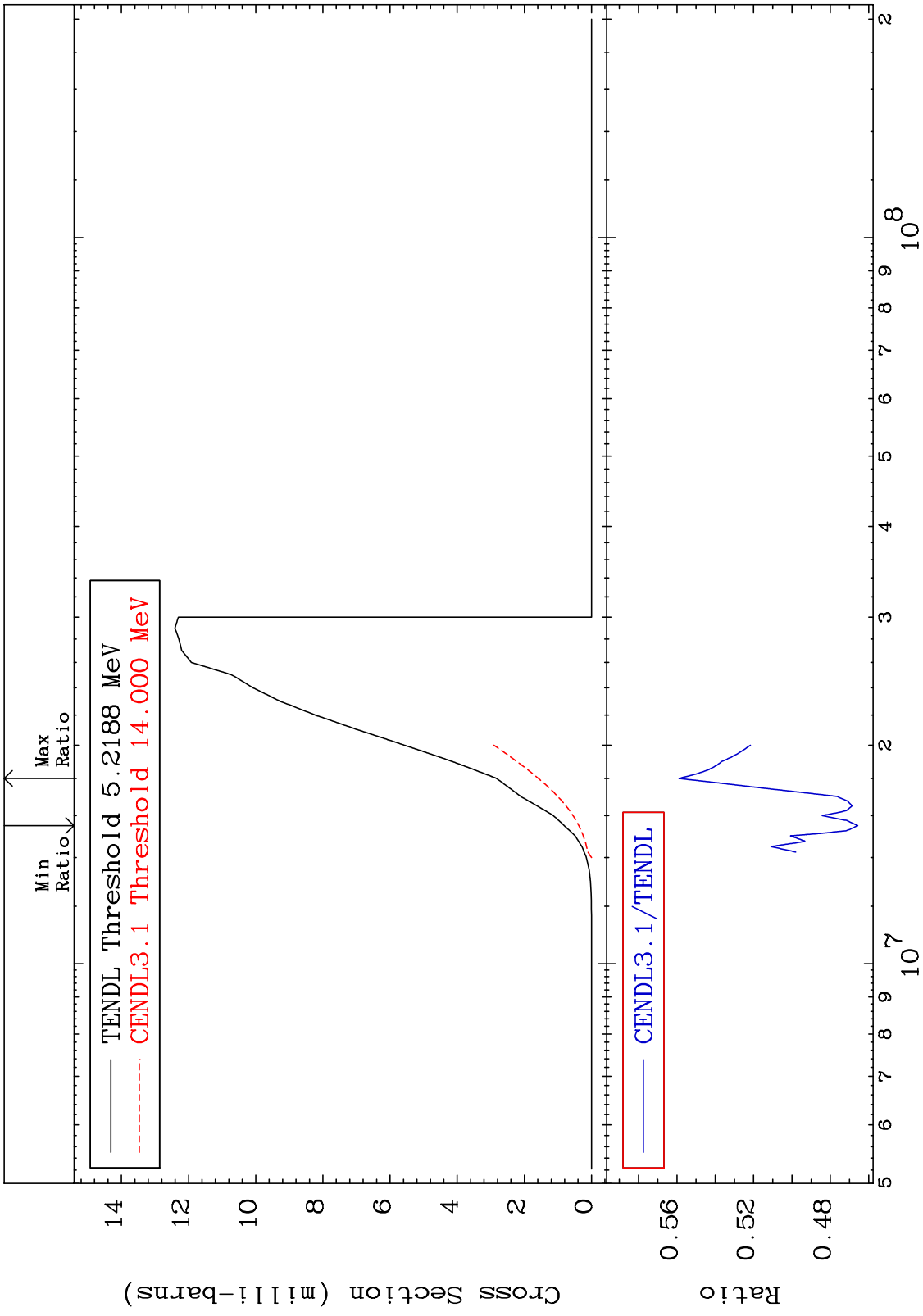
MAT 7240 72-Hf-179
-99.06 To 9999. %



MAT 7240 (n,p) Cross Section 72-Hf-179
 -89.67 To -1.504%

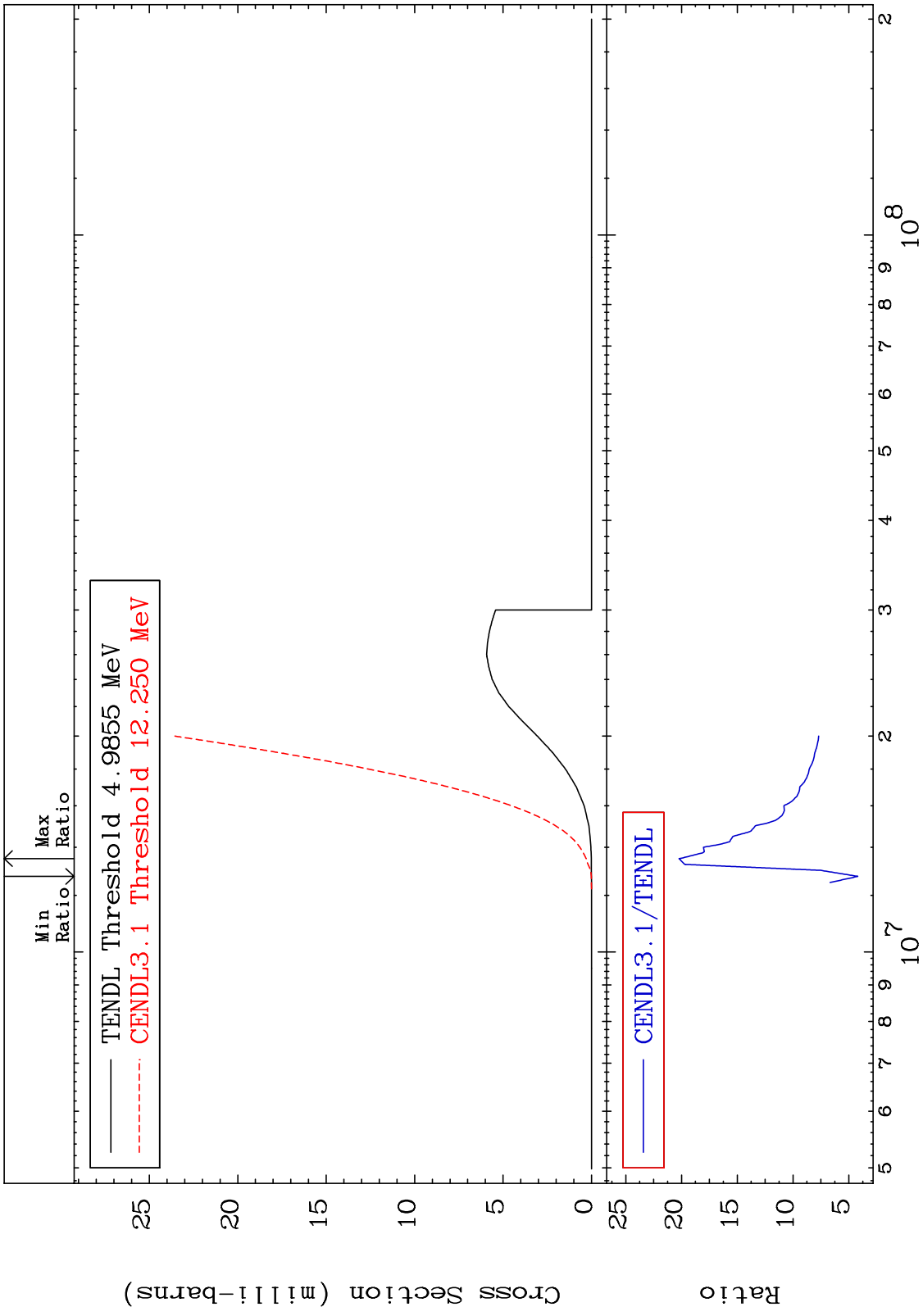


MAT 7240 (n,d) Cross Section 72-Hf-179 -53.44 To -44.11%

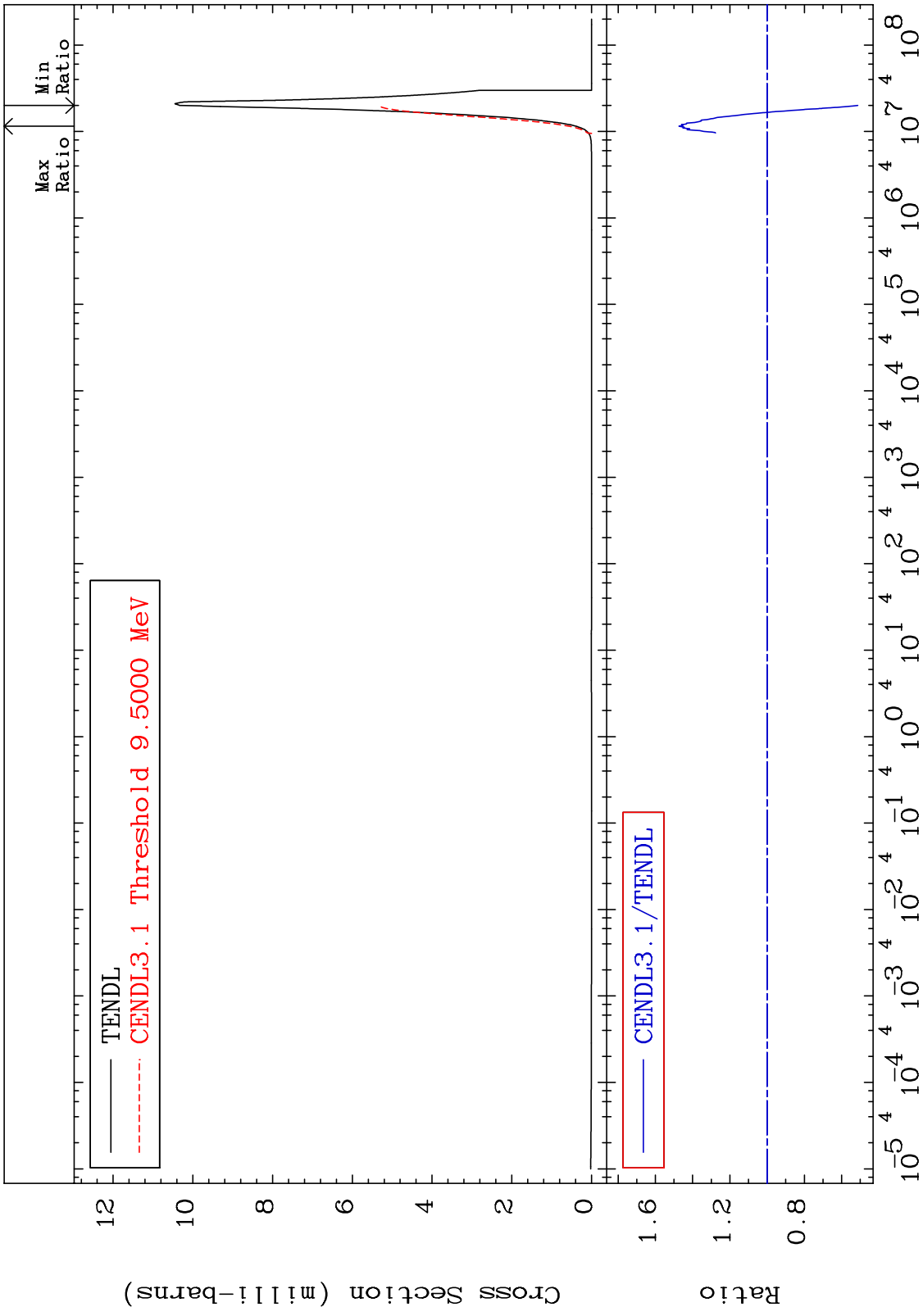


30 72-Hf-179

MAT 7240 (n,t) Cross Section 72-Hf-179 318.7 To 1922. %



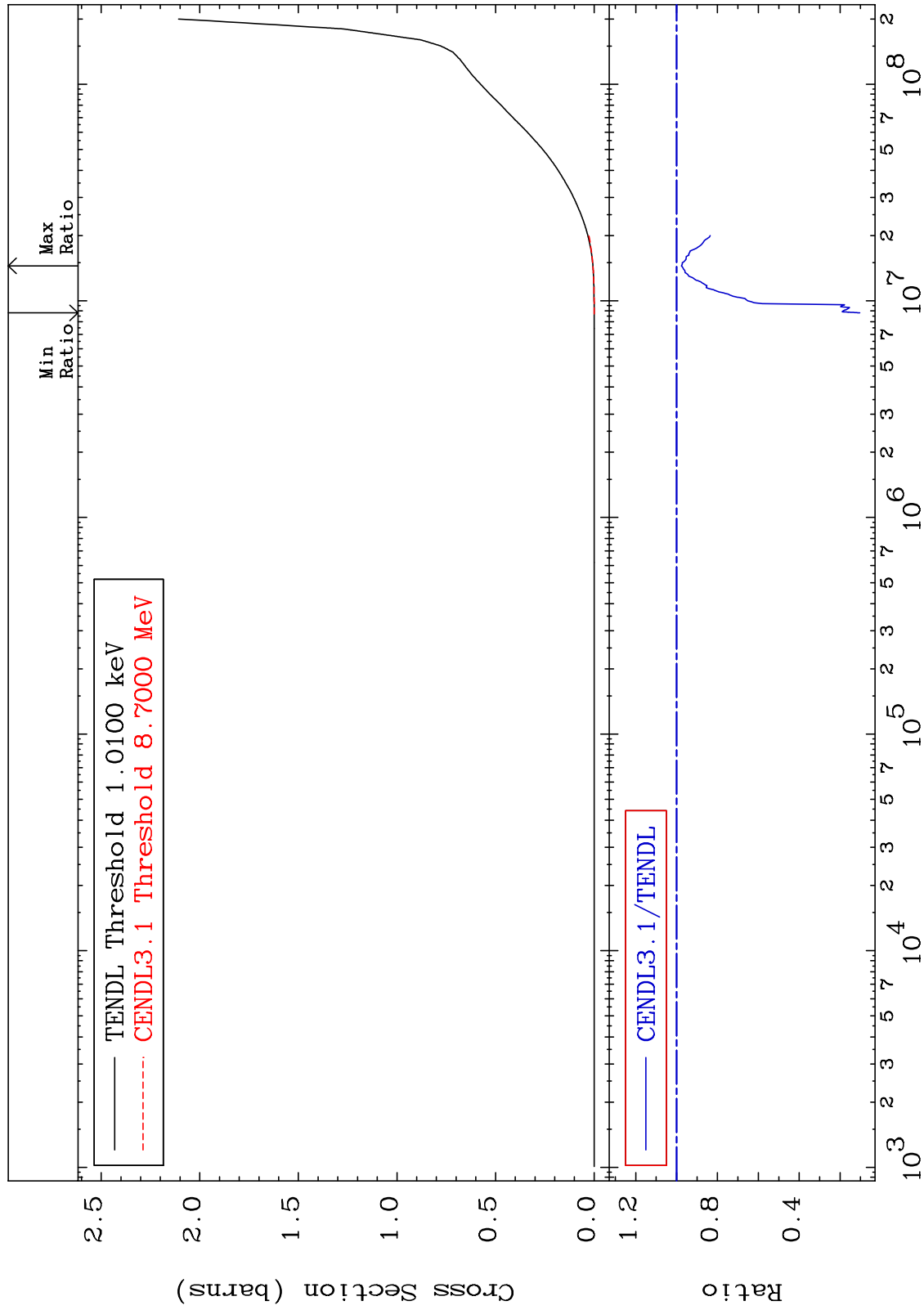
MAT 7240 (n,α) Cross Section 72-Hf-179 -48.70 To 47.29 %



MAT 7240

Hydrogen Production Cross Section

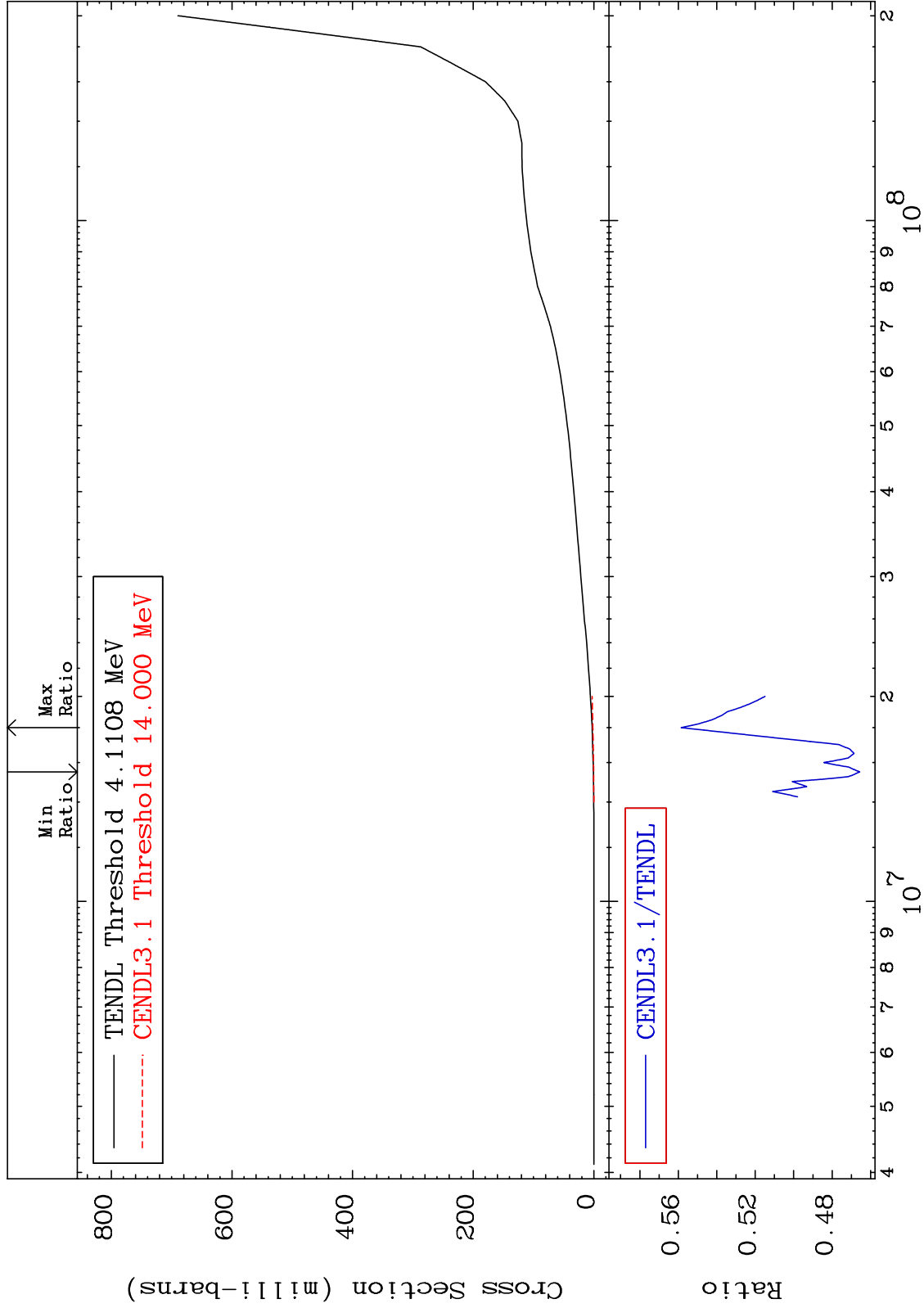
72-Hf-179
-89.67 To -2.372%



MAT 7240

Deuterium Production
Cross Section

72-Hf-179
-53.44 To -44.15%



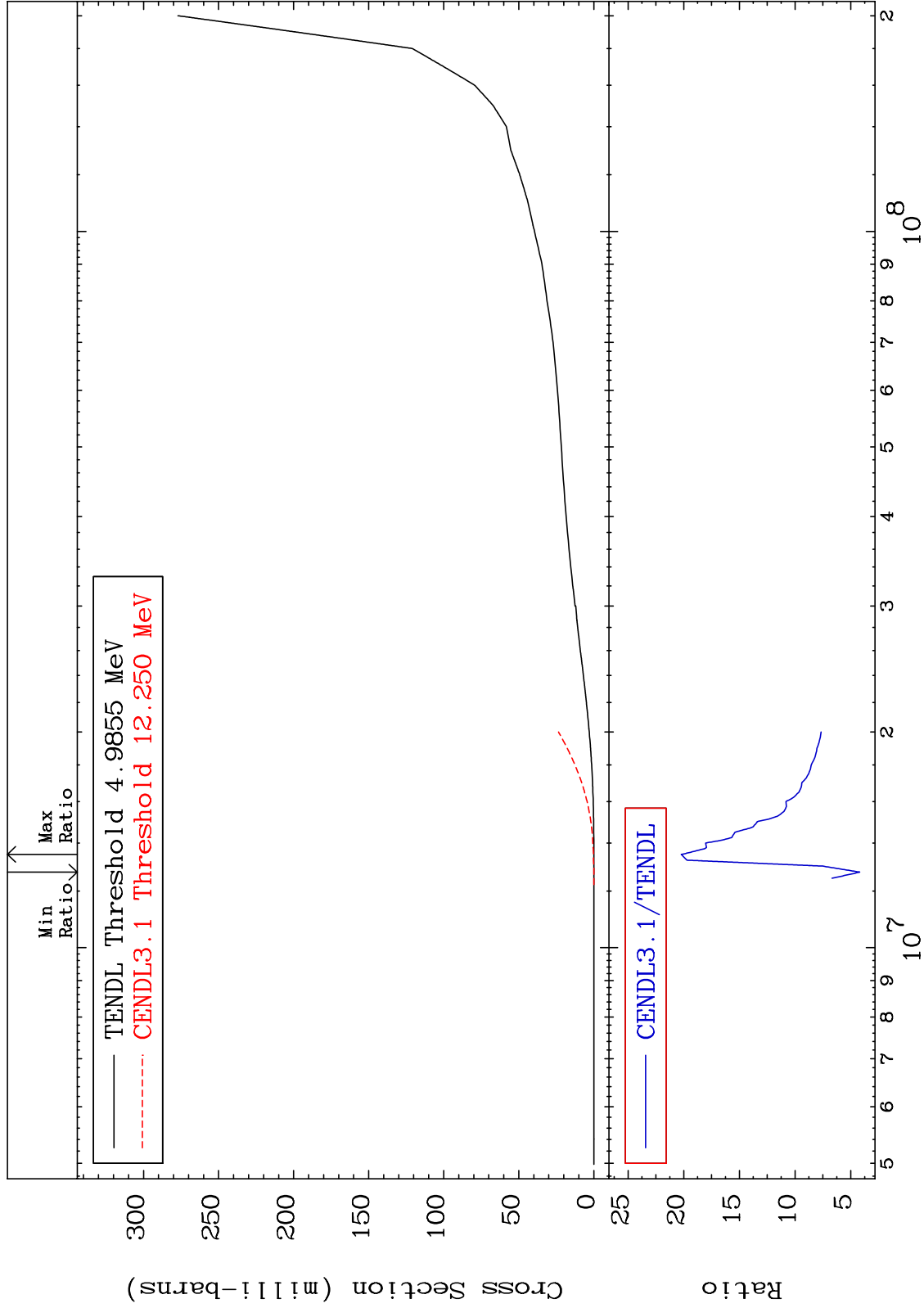
34

72-Hf-179

MAT 7240

Tritium Production
Cross Section

72-Hf-179
318.7 To 1922. %



35

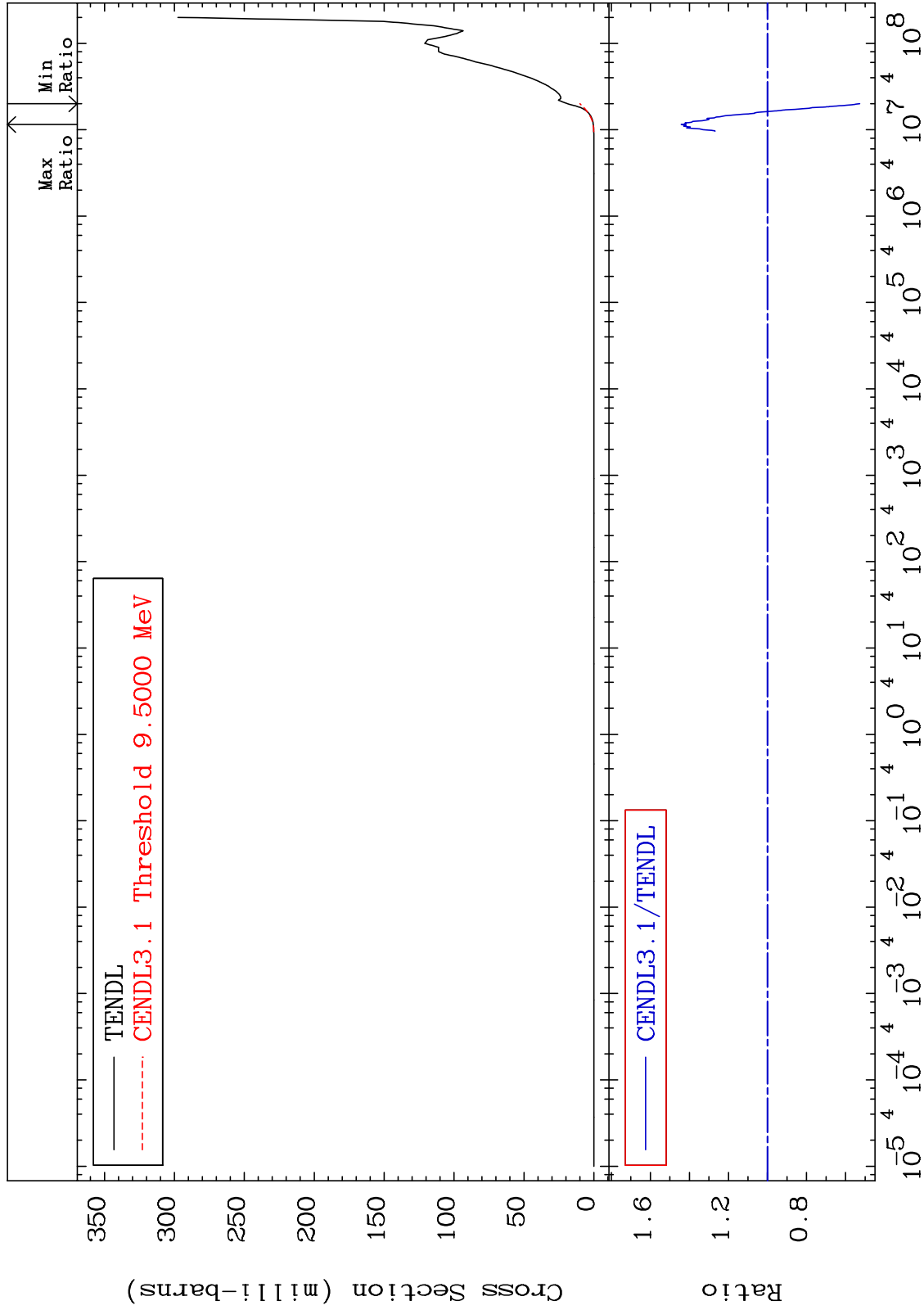
Incident Energy (eV)

72-Hf-179

MAT 7240

He-4 Production
Cross Section

72-Hf-179
-47.24 To 44.16 %

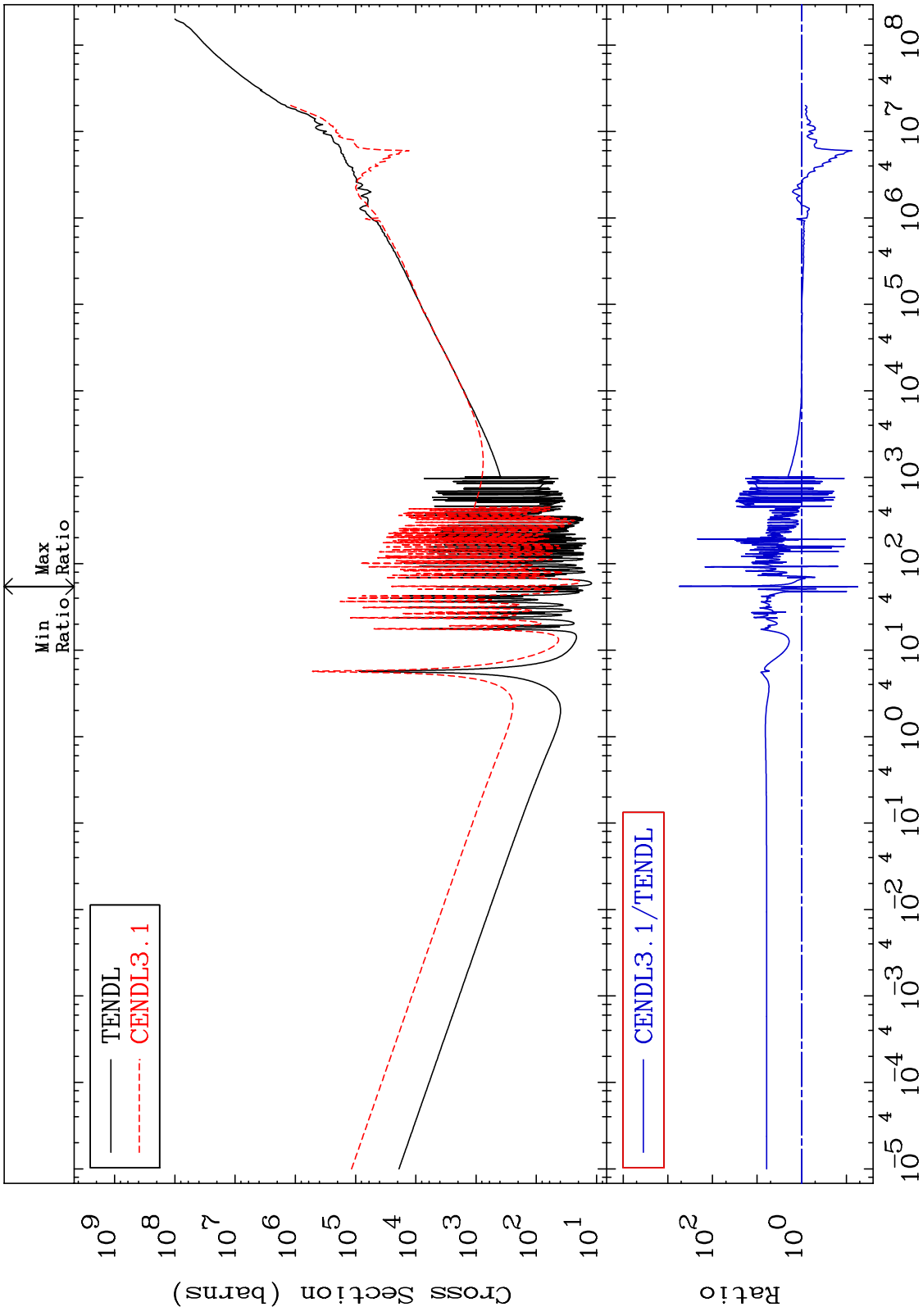


36

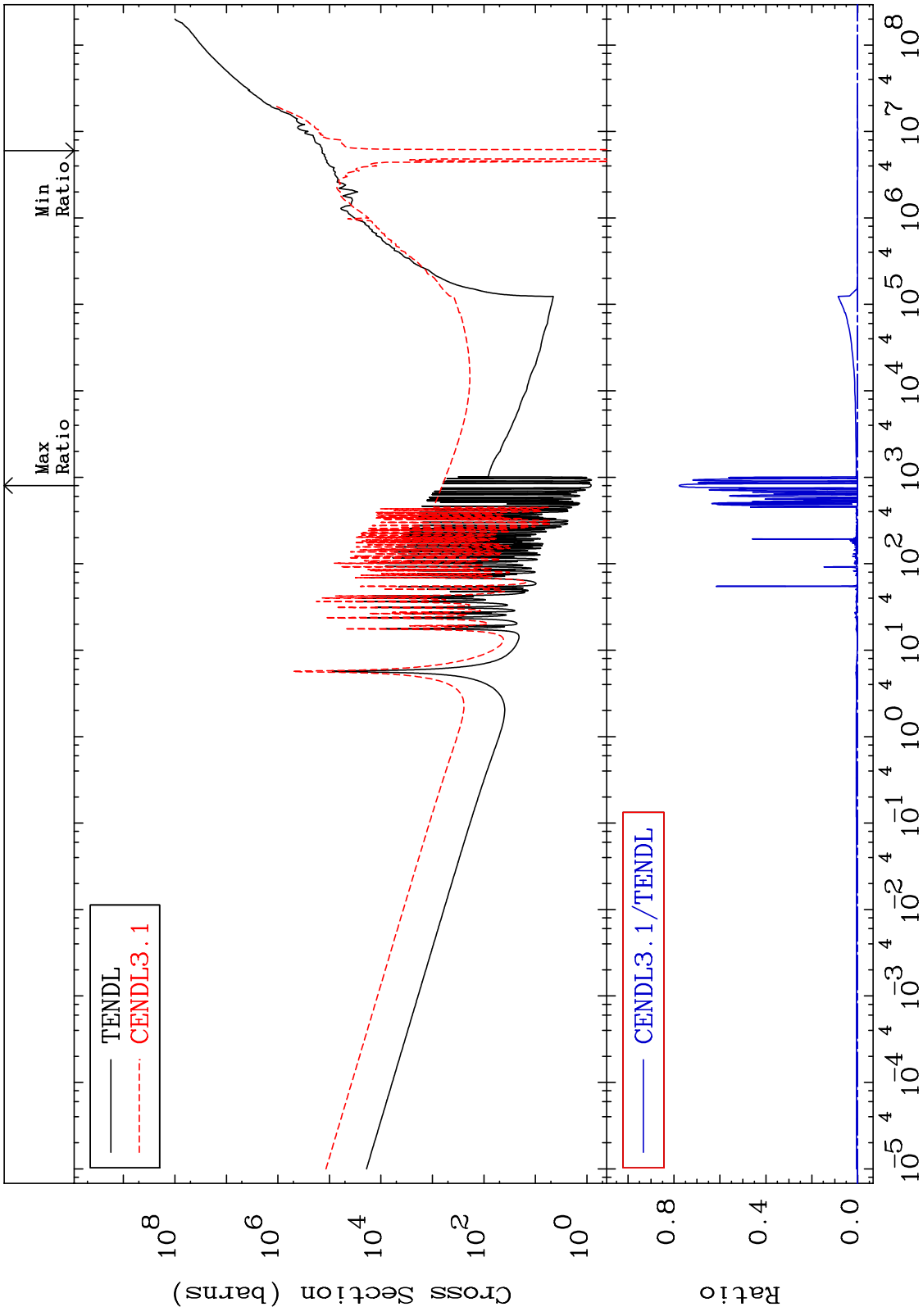
Incident Energy (eV)

72-Hf-179

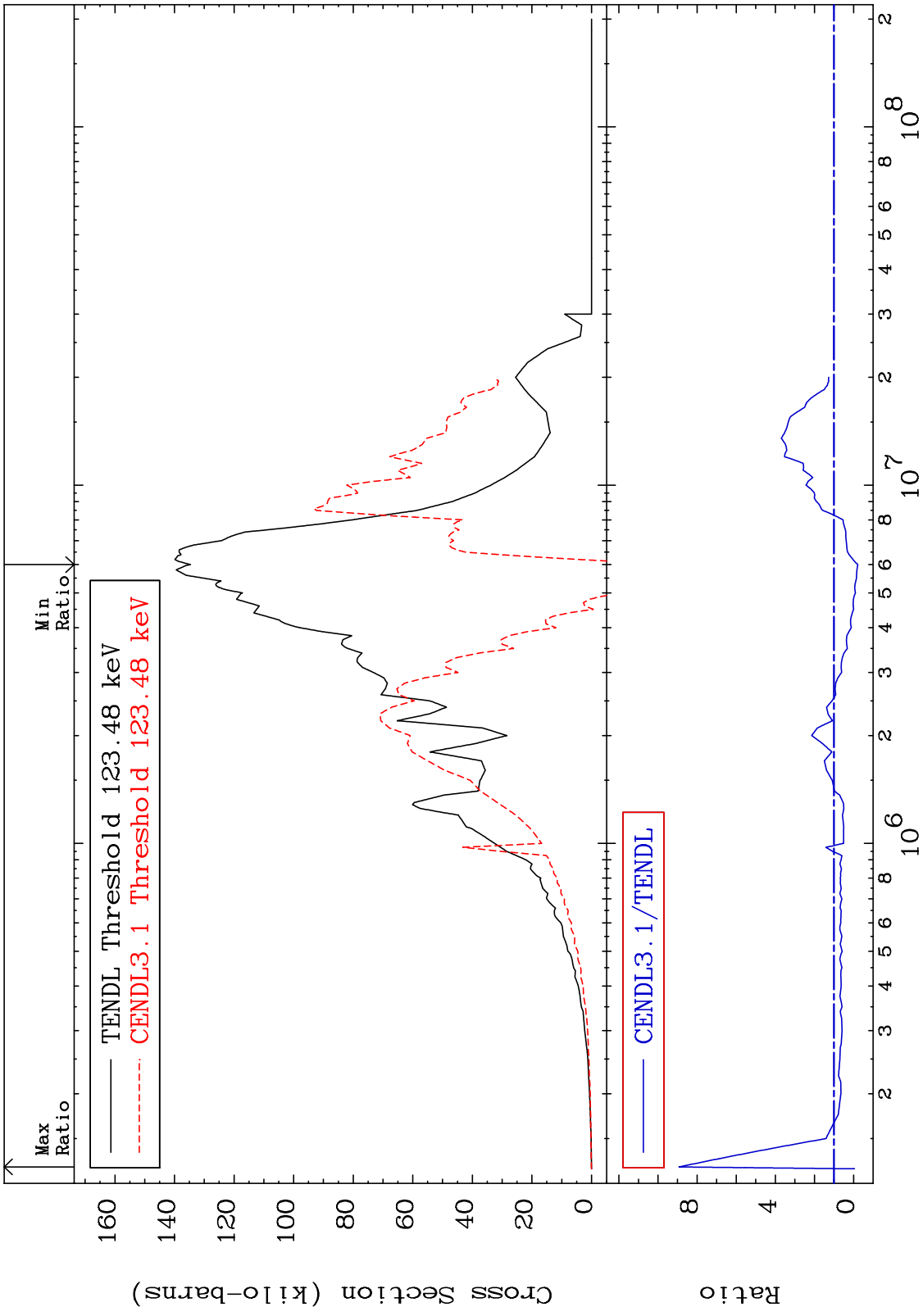
MAT 7240 Kerma total (eV-barns) 72-Hf-179
 Cross Section -94.48 To 9999. %



MAT 7240 Kerma non-elastic (all but mt2) 72-Hf-179
 Cross Section -121.9 To 9999. %



MAT 7240 Kerma inelastic (mt51-91) 72-Hf-179
 -121.9 To 792.4 %
 Cross Section

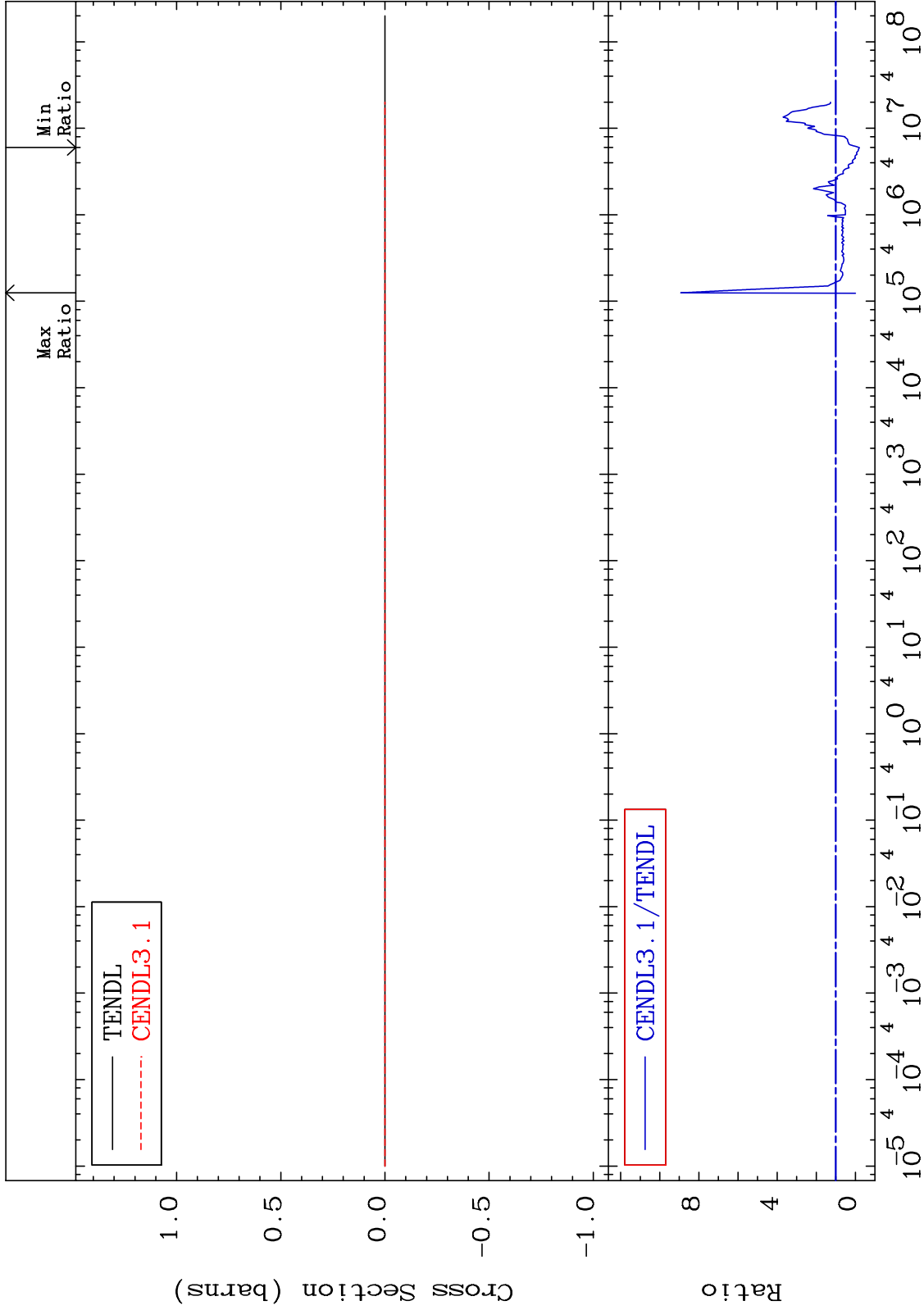


40 72-Hf-179

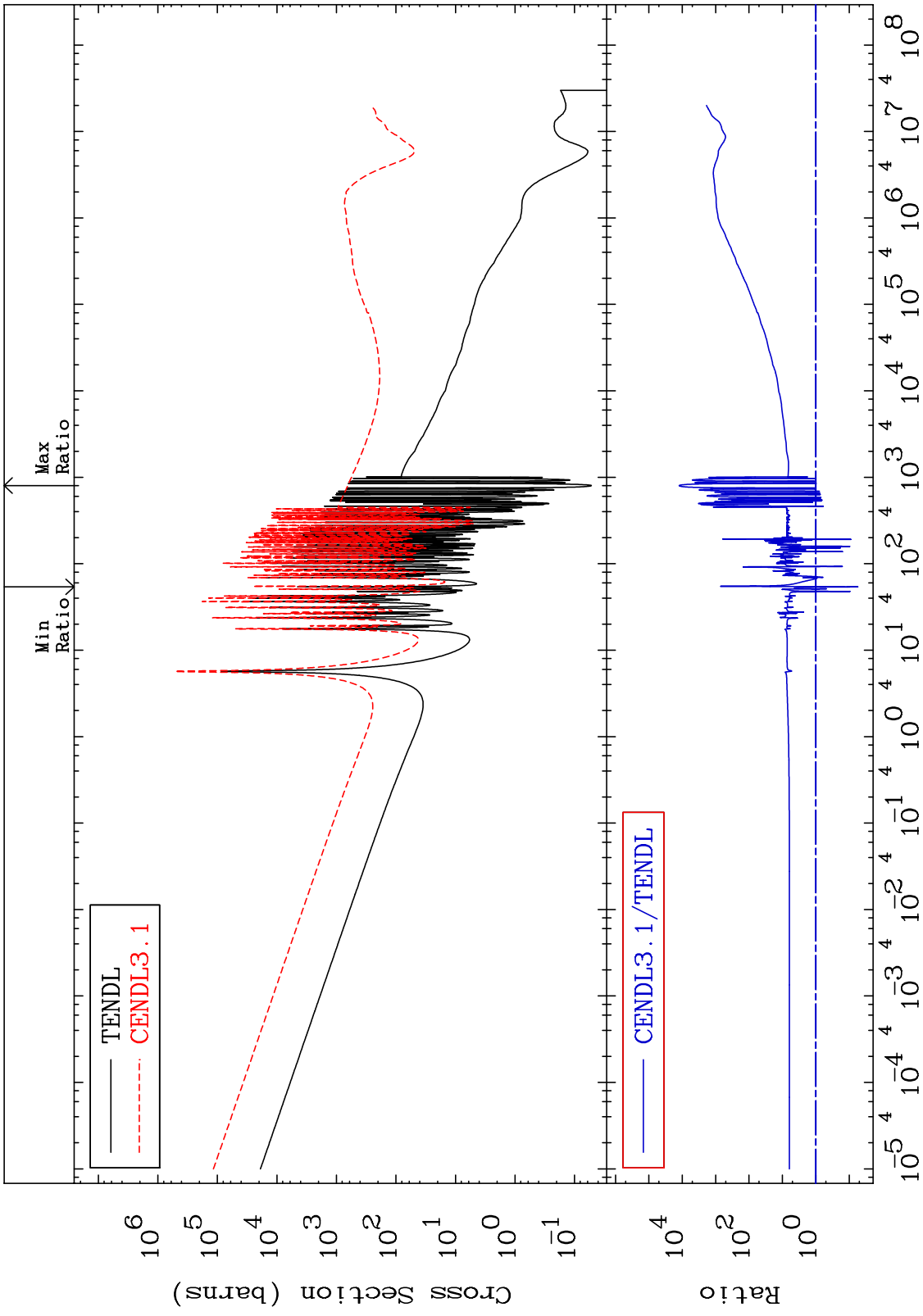
MAT 7240

Kerma fission (mt18 or mt19-20-21-38)
Cross Section

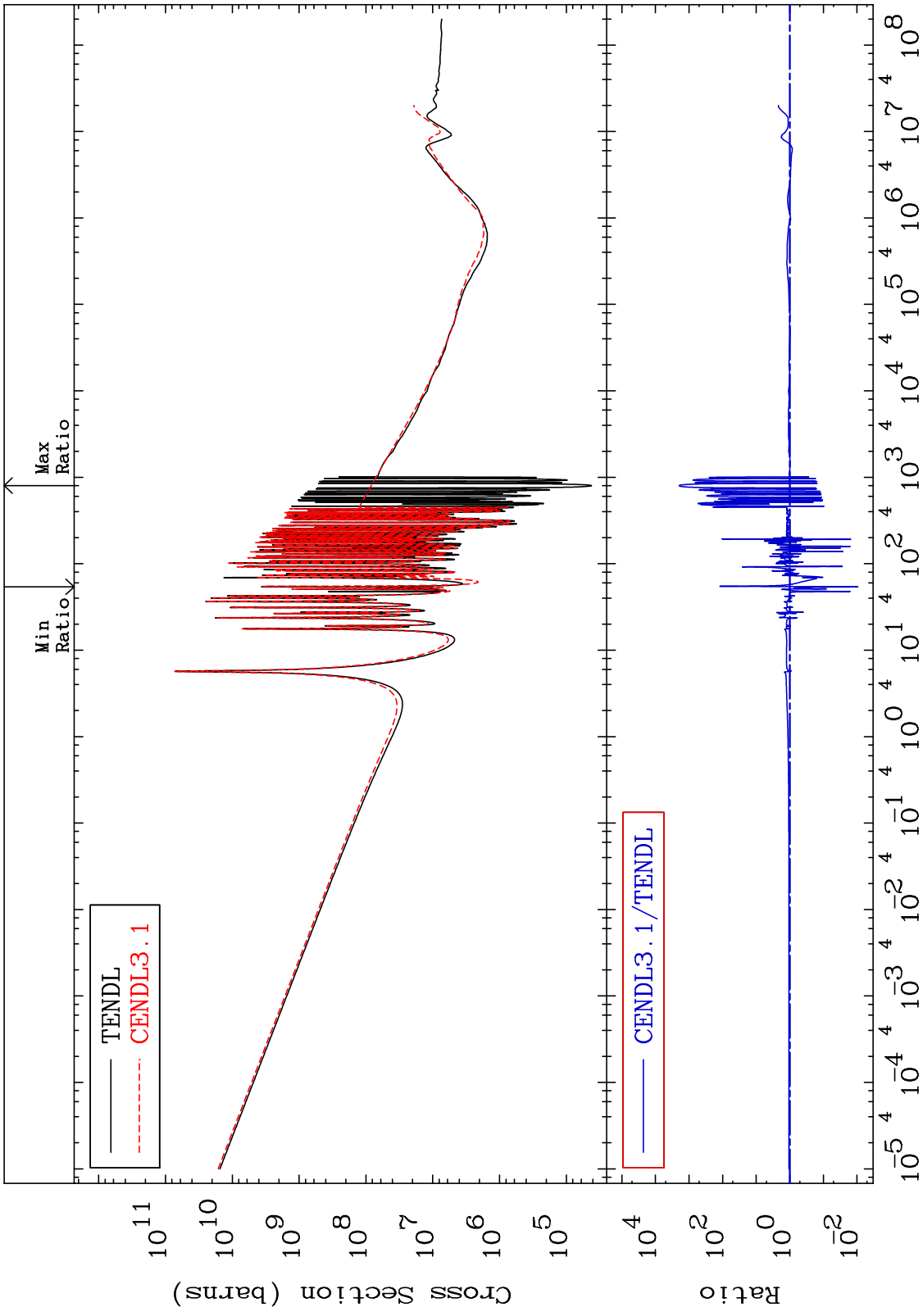
72-Hf-179
-121.9 To 792.4 %



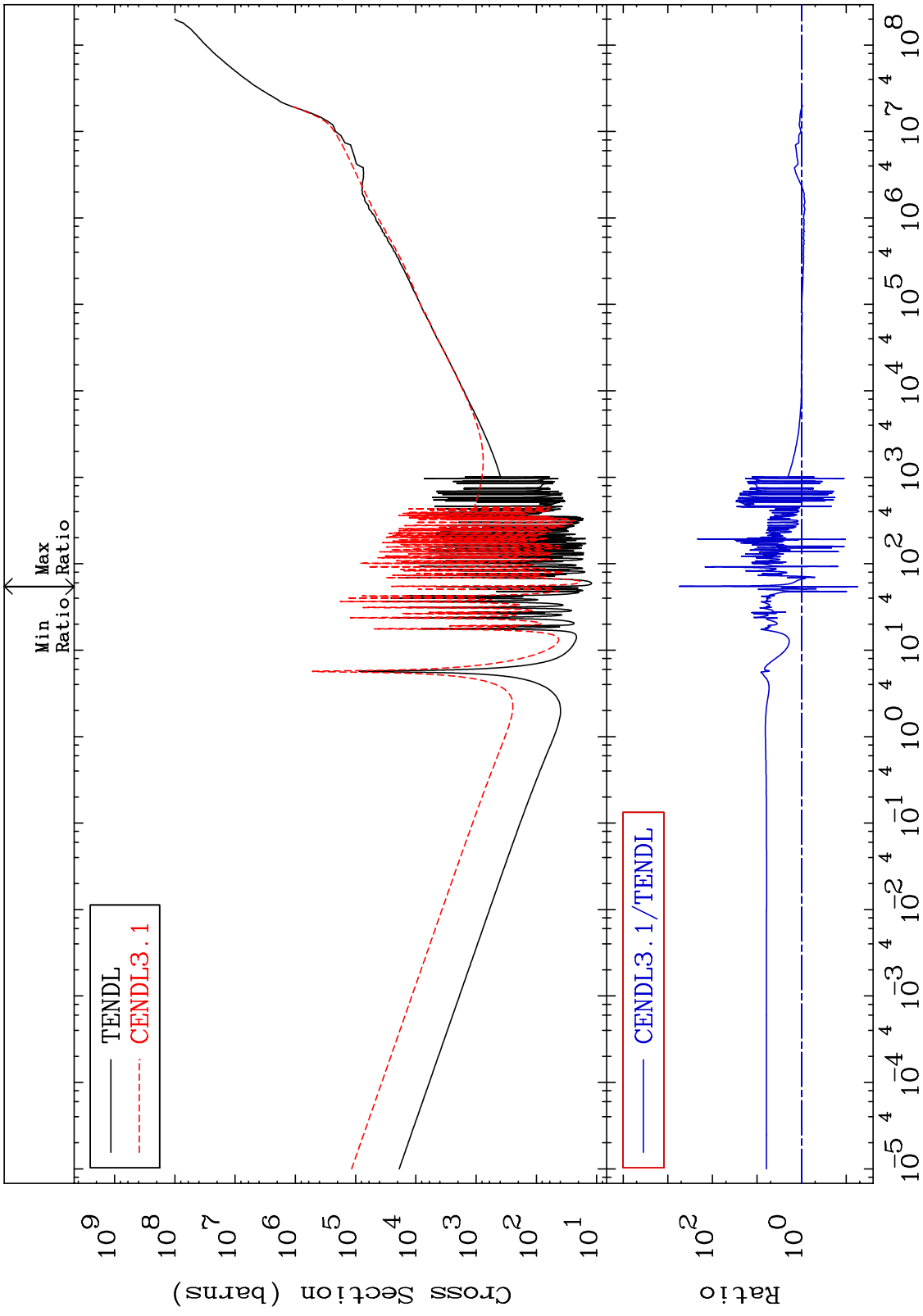
MAT 7240 Kerma capture (mt102) 72-Hf-179
 -94.50 To 9999. %



MAT 7240 72-Hf-179
Total photon (eV-barns) Cross Section -99.06 To 9999. %

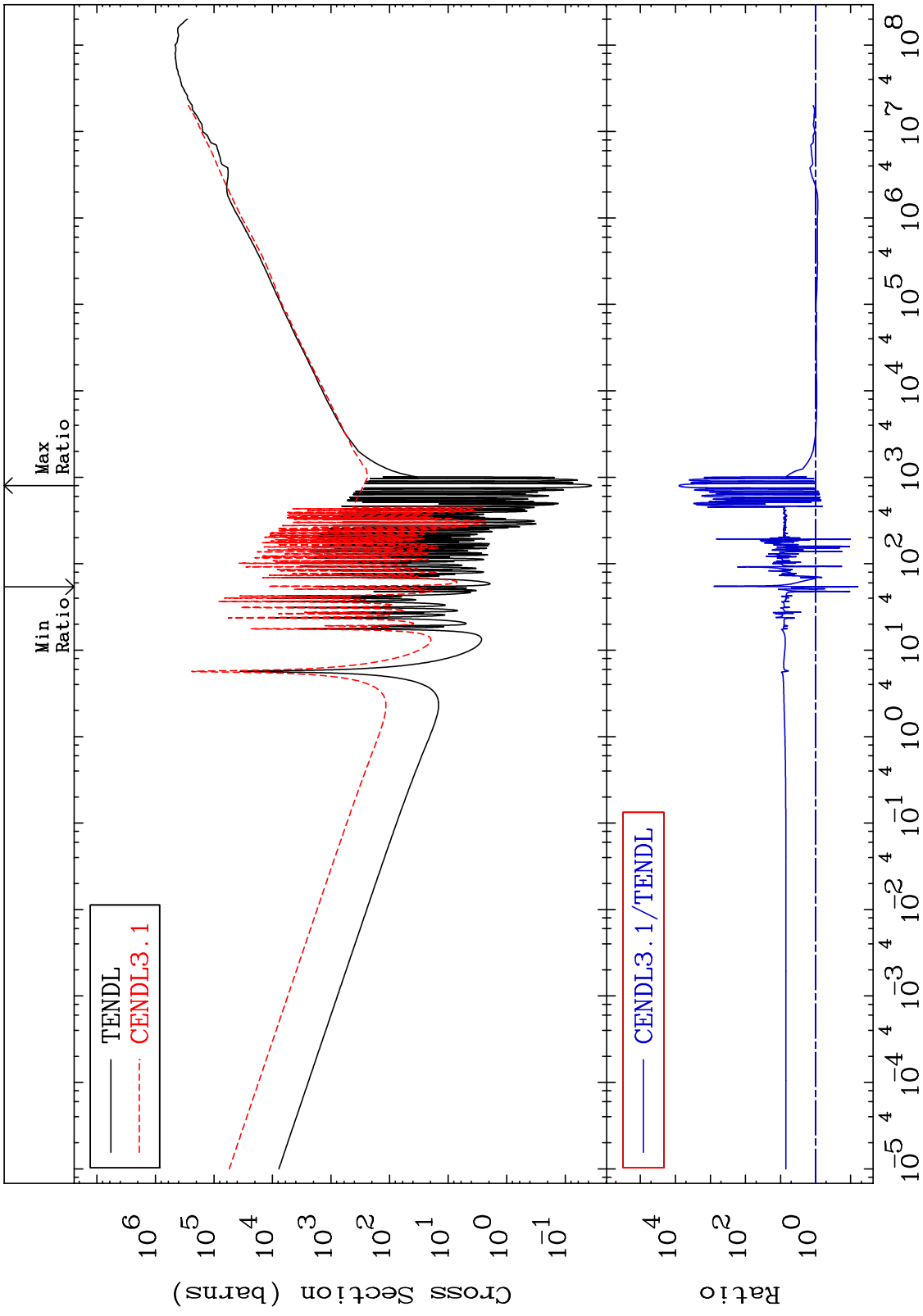


MAT 7240 Total kinematic kerma (high limit) 72-Hf-179
 Cross Section -94.48 To 9999. %

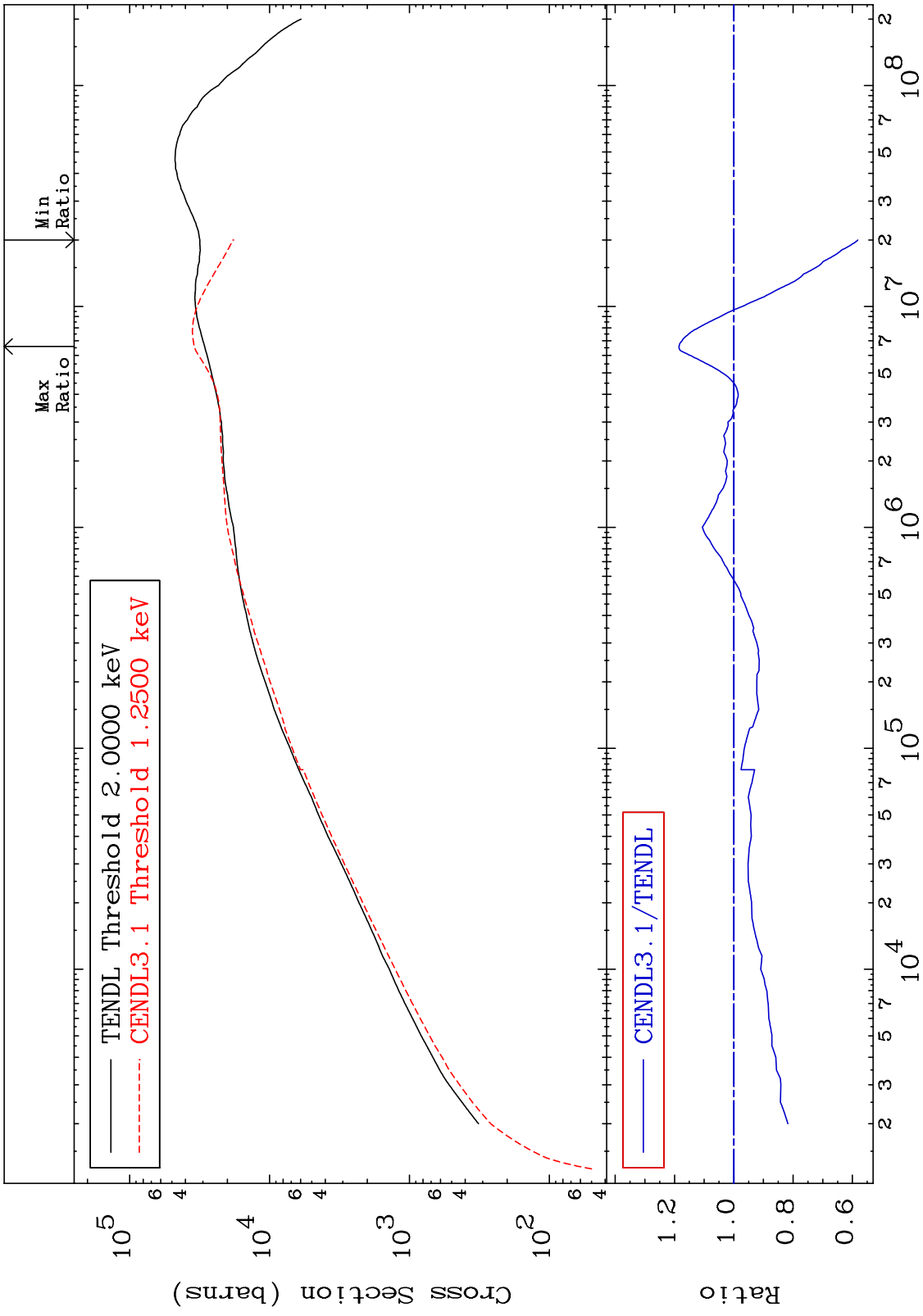


44 Incident Energy (eV) 72-Hf-179

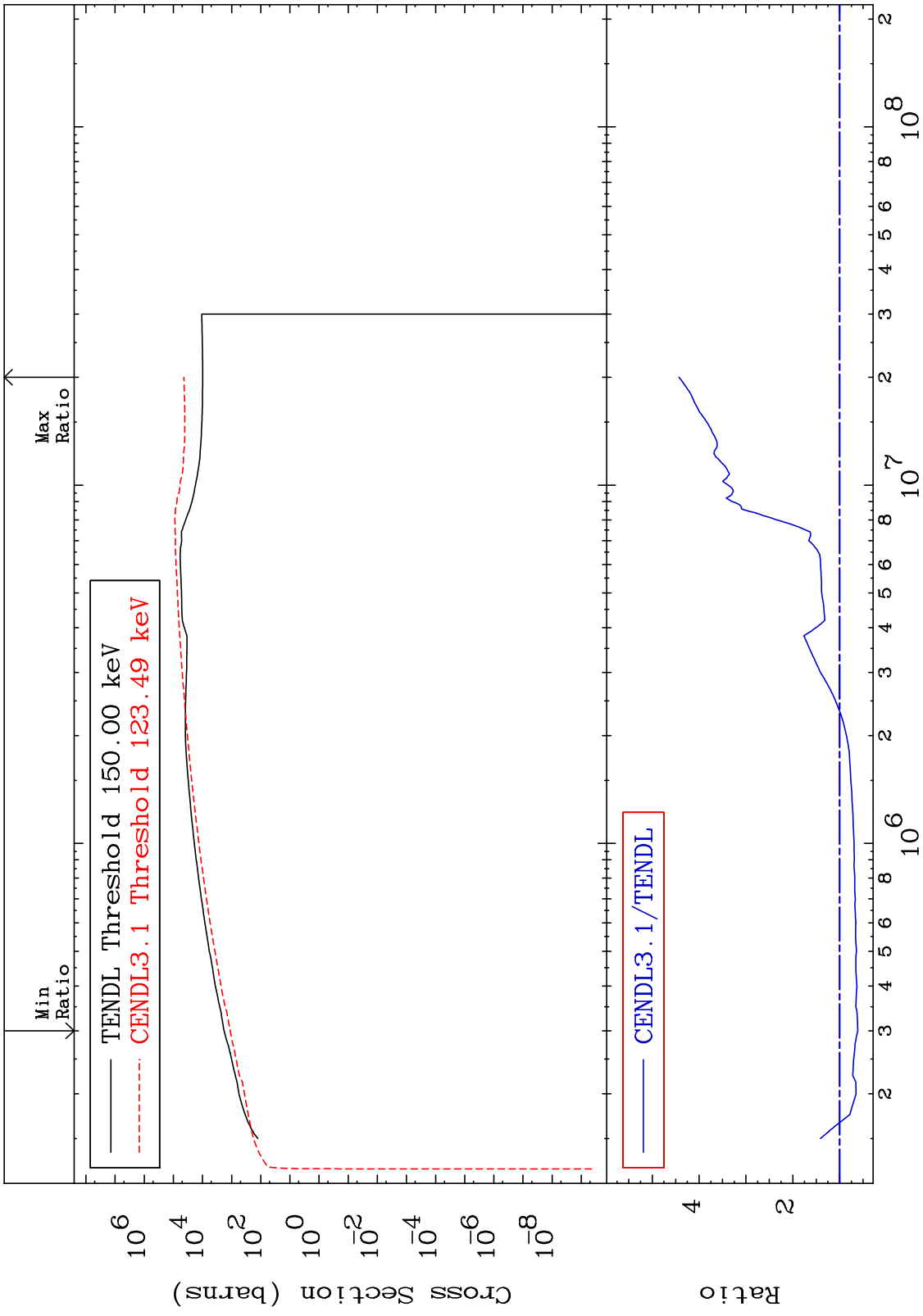
MAT 7240 Dpa total (eV-barns) 72-Hf-179
 Cross Section -93.76 To 9999. %



MAT 7240 72-Hf-179
 Dpa elastic (mt2) -41.83 To 18.47 %
 Cross Section

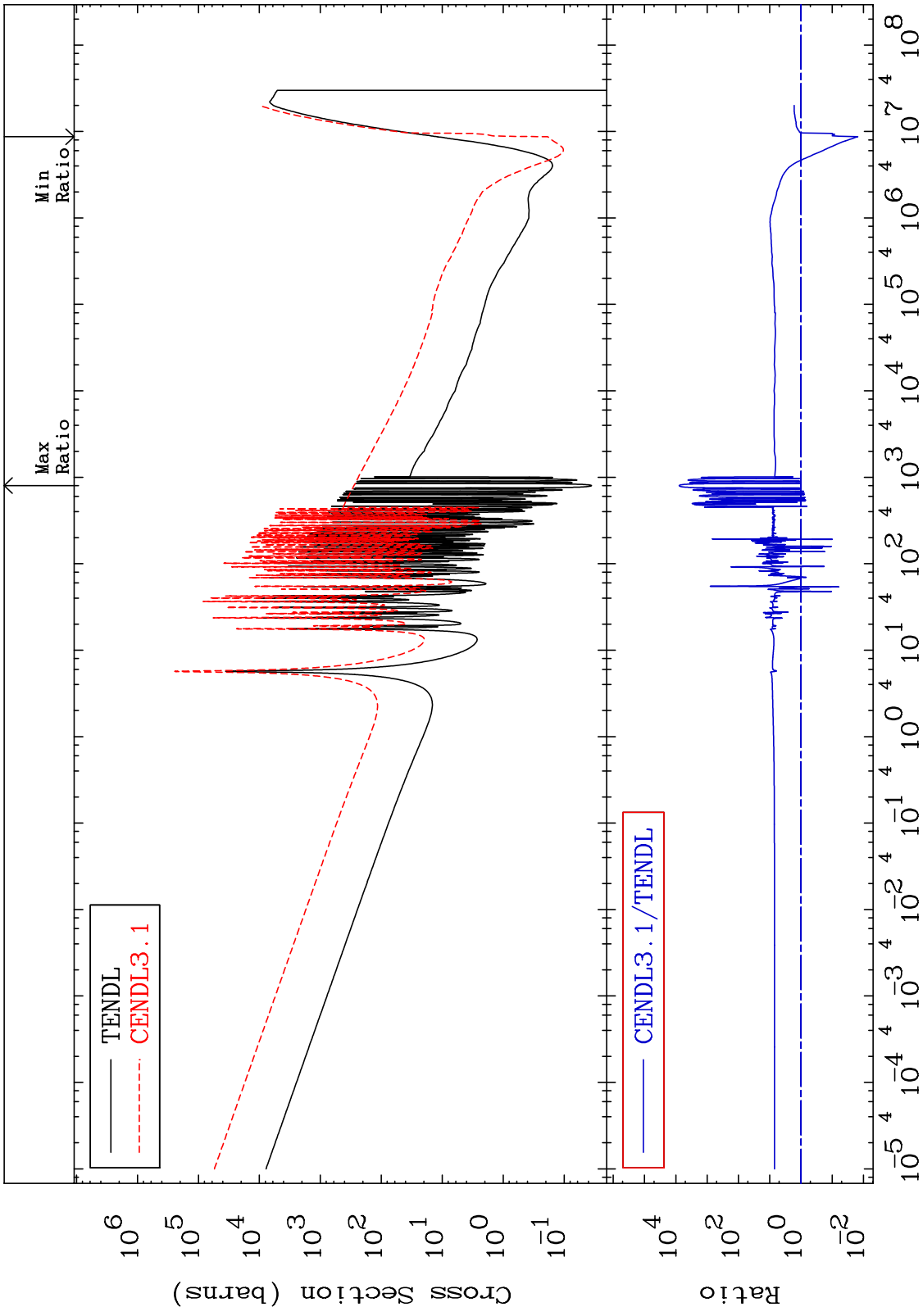


MAT 7240 Dpa inelastic (mt51-91) 72-Hf-179
 Cross Section -38.81 To 342.7 %

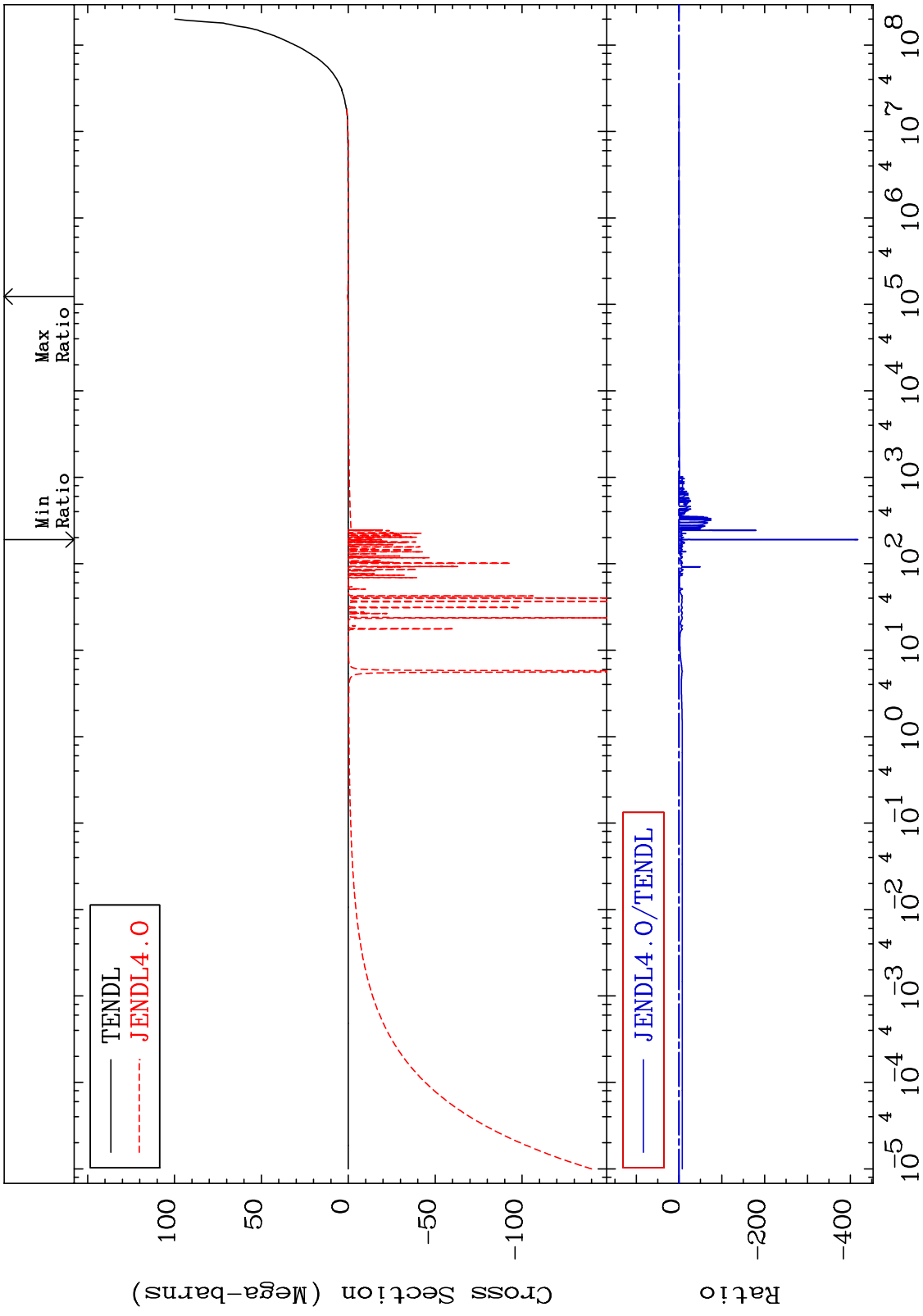


47 72-Hf-179

MAT 7240 Dpa disappearance (mt102 -120) 72-Hf-179
 Cross Section -98.48 To 9999. %

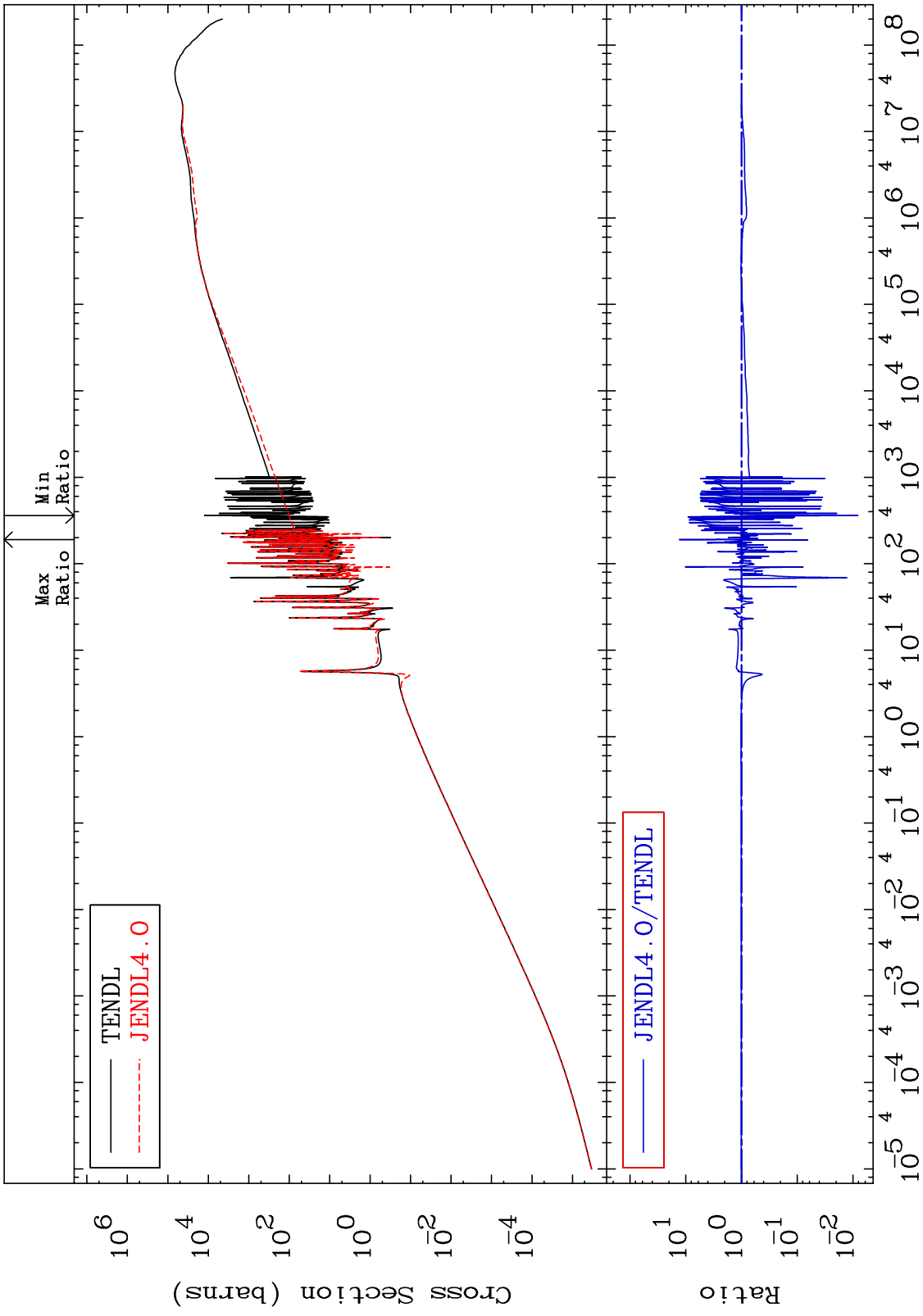


MAT 7240 Kerma total (eV-barns) 72-Hf-179
 Cross Section -9999. To 4955. %



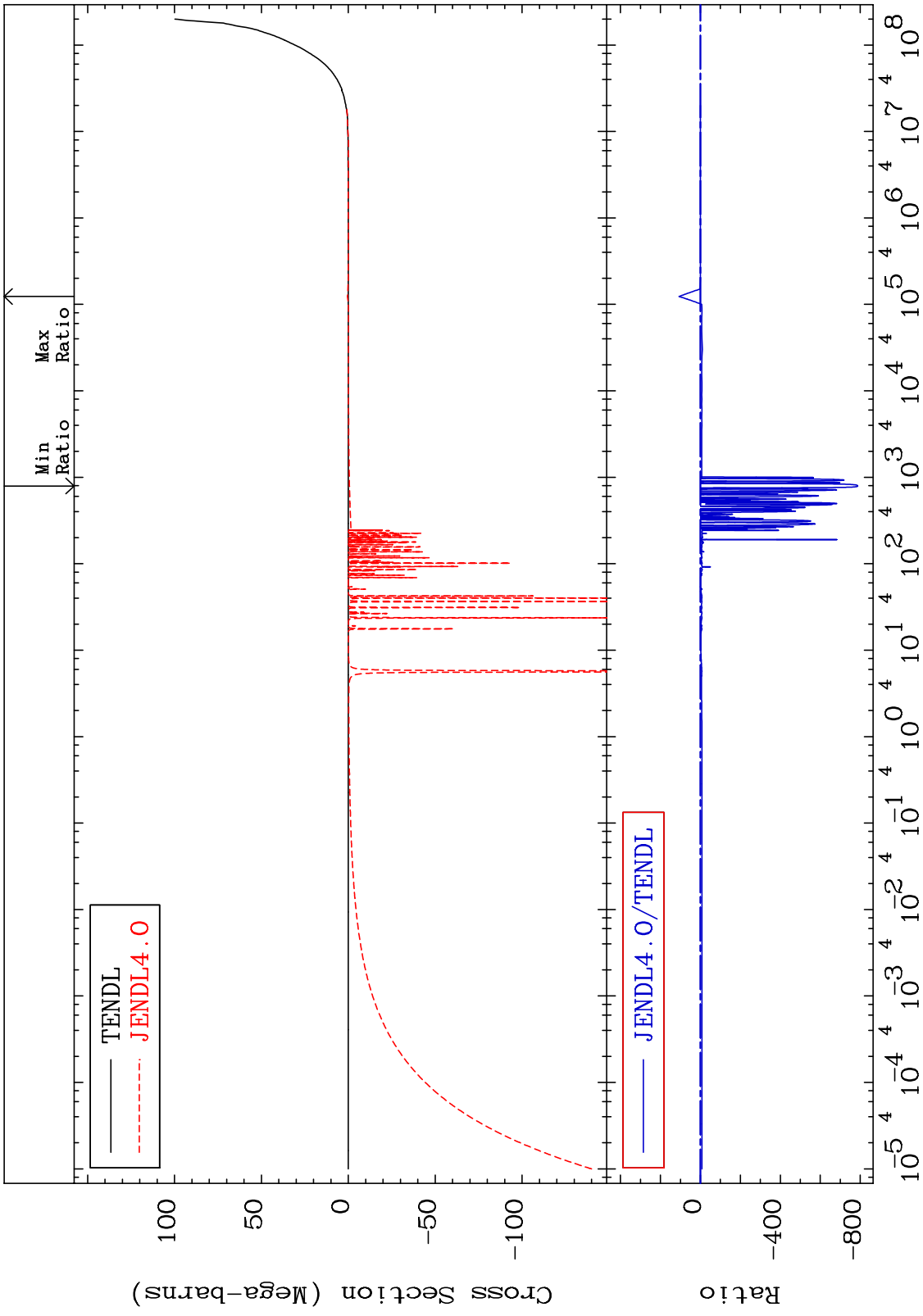
49 Incident Energy (eV) 72-Hf-179

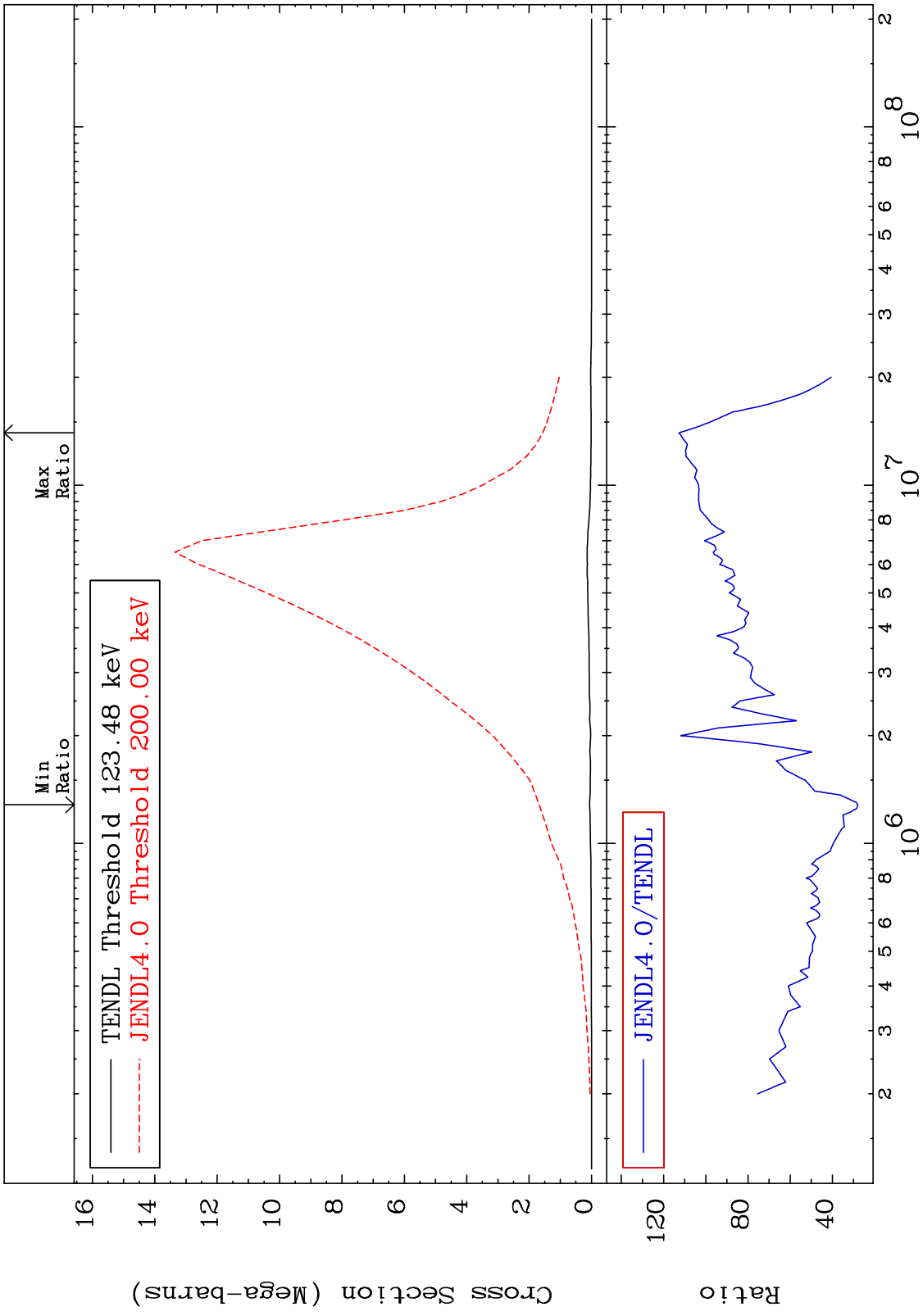
MAT 7240 72-Hf-179
-99.18 To 1220. %
 Kerma elastic Cross Section



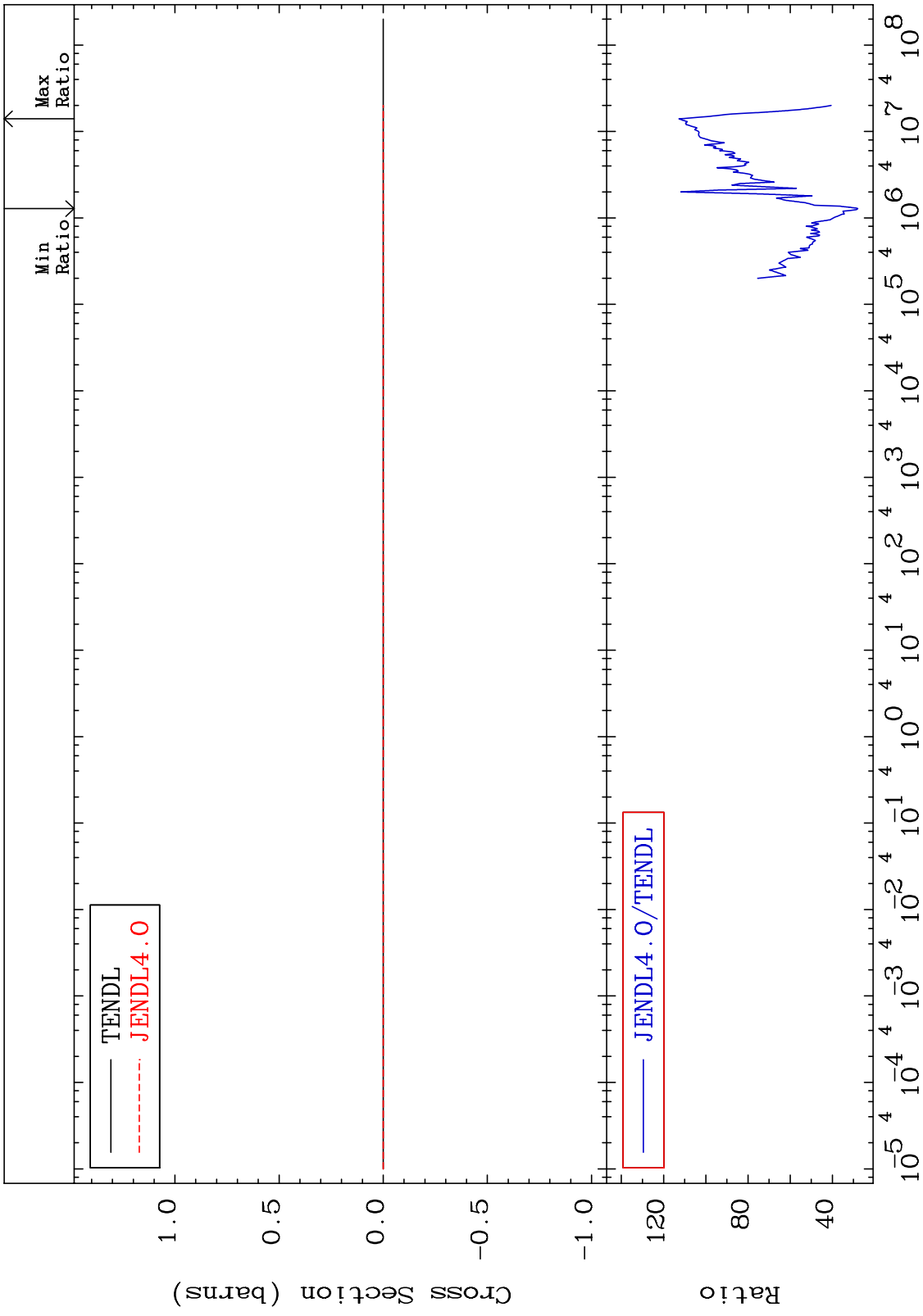
50 72-Hf-179

MAT 7240 Kerma non-elastic (all but mt2) 72-Hf-179
 Cross Section -9999. To 9999. %



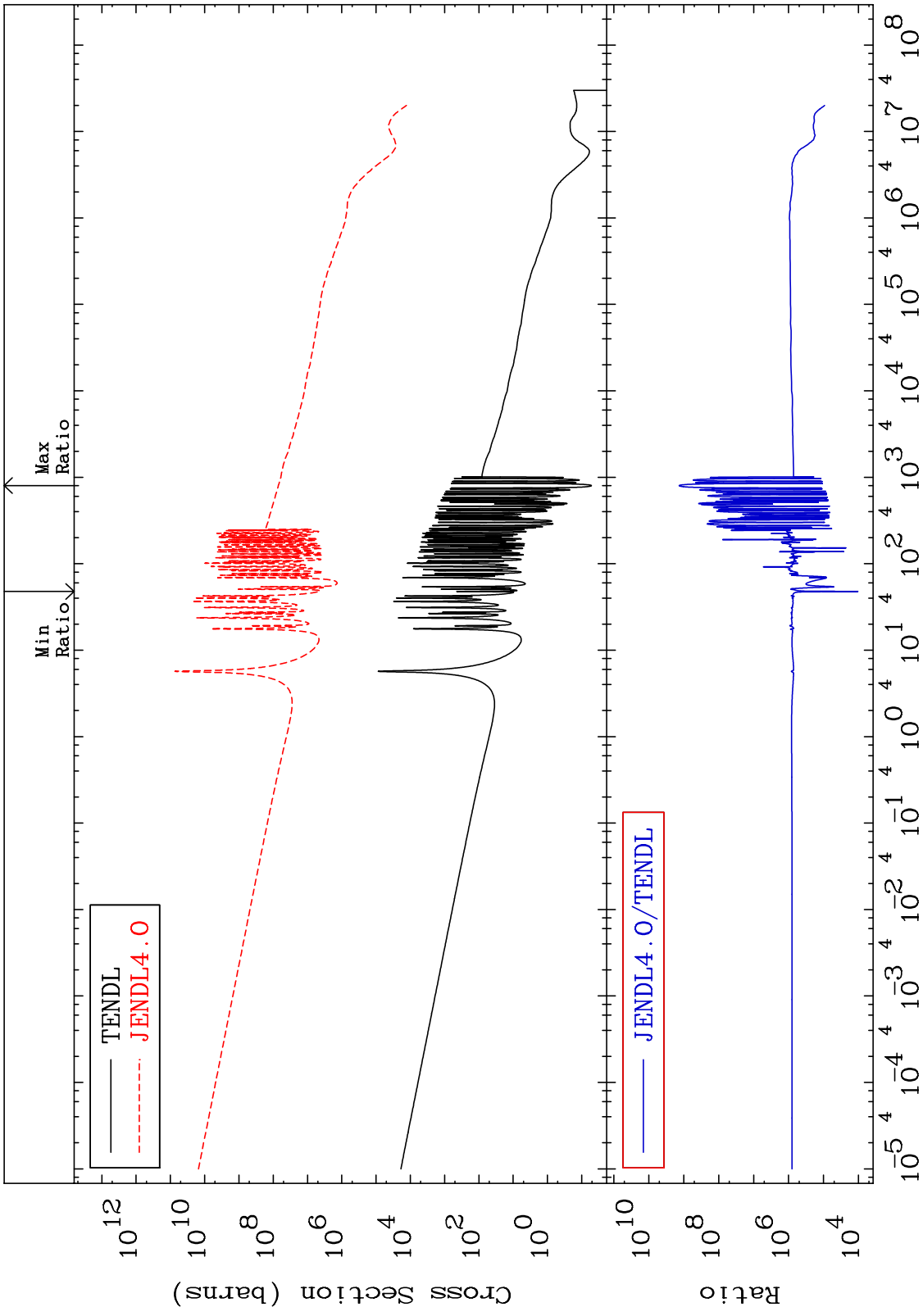


MAT 7240 Kerma fission (mt18 or mt19-20-21-38) 72-Hf-179
 Cross Section 2695. To 9999. %



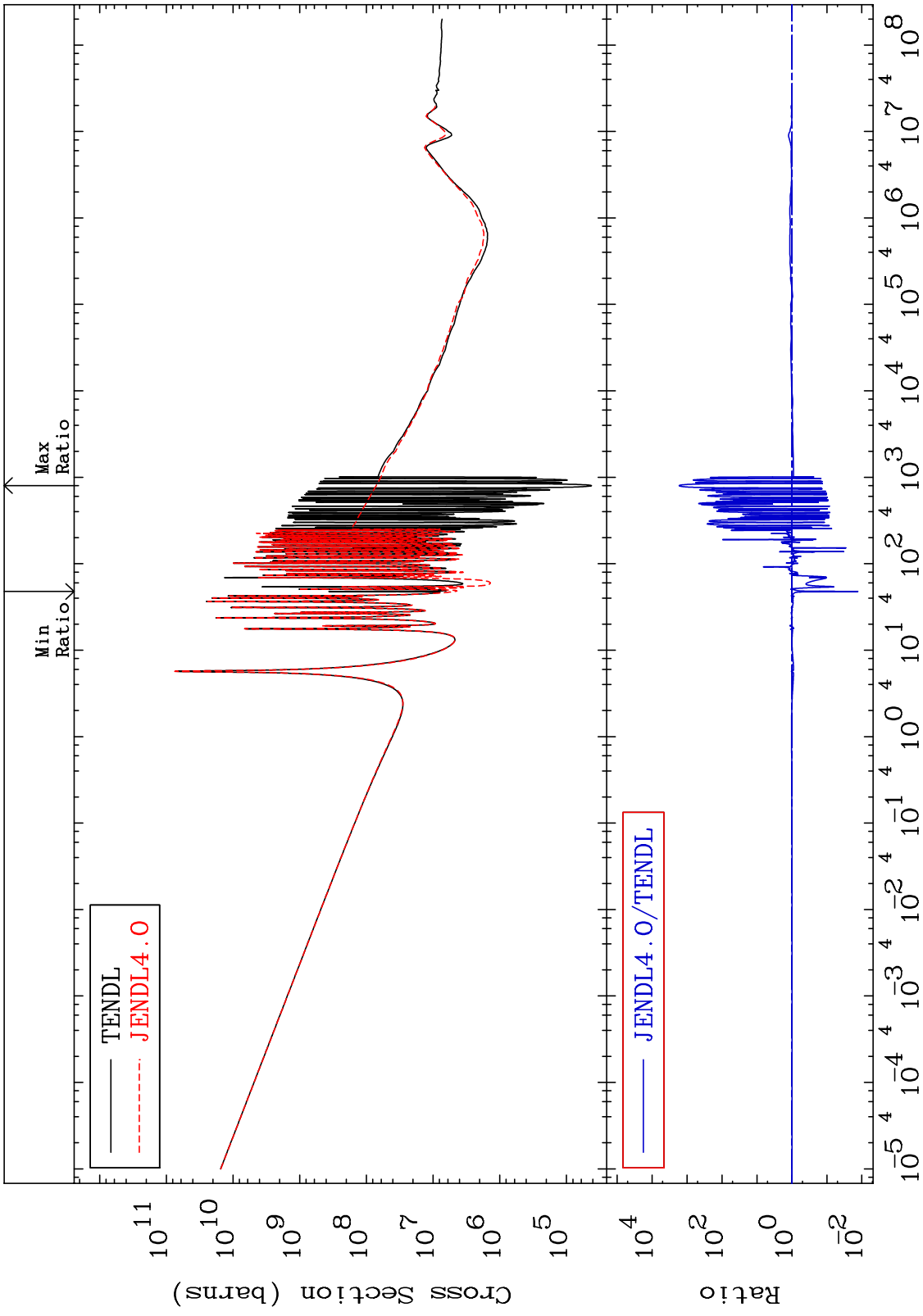
53 Incident Energy (eV) 72-Hf-179

MAT 7240 Kerma capture (mt102) 72-Hf-179
 Cross Section 9999. To 9999. %



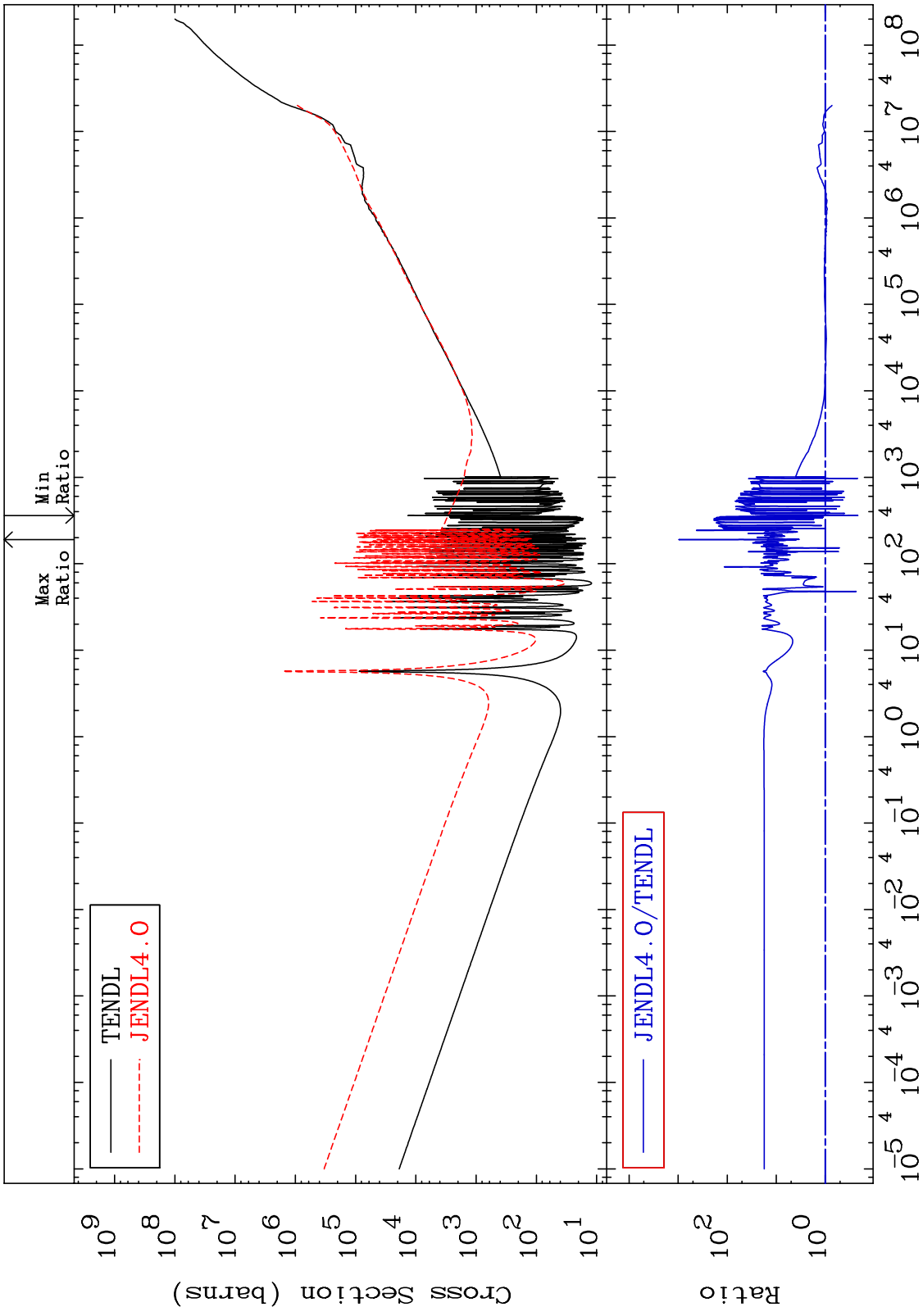
54 Incident Energy (eV) 72-Hf-179

MAT 7240 72-Hf-179
 Total photon (eV-barns) -98.70 To 9999. %
 Cross Section

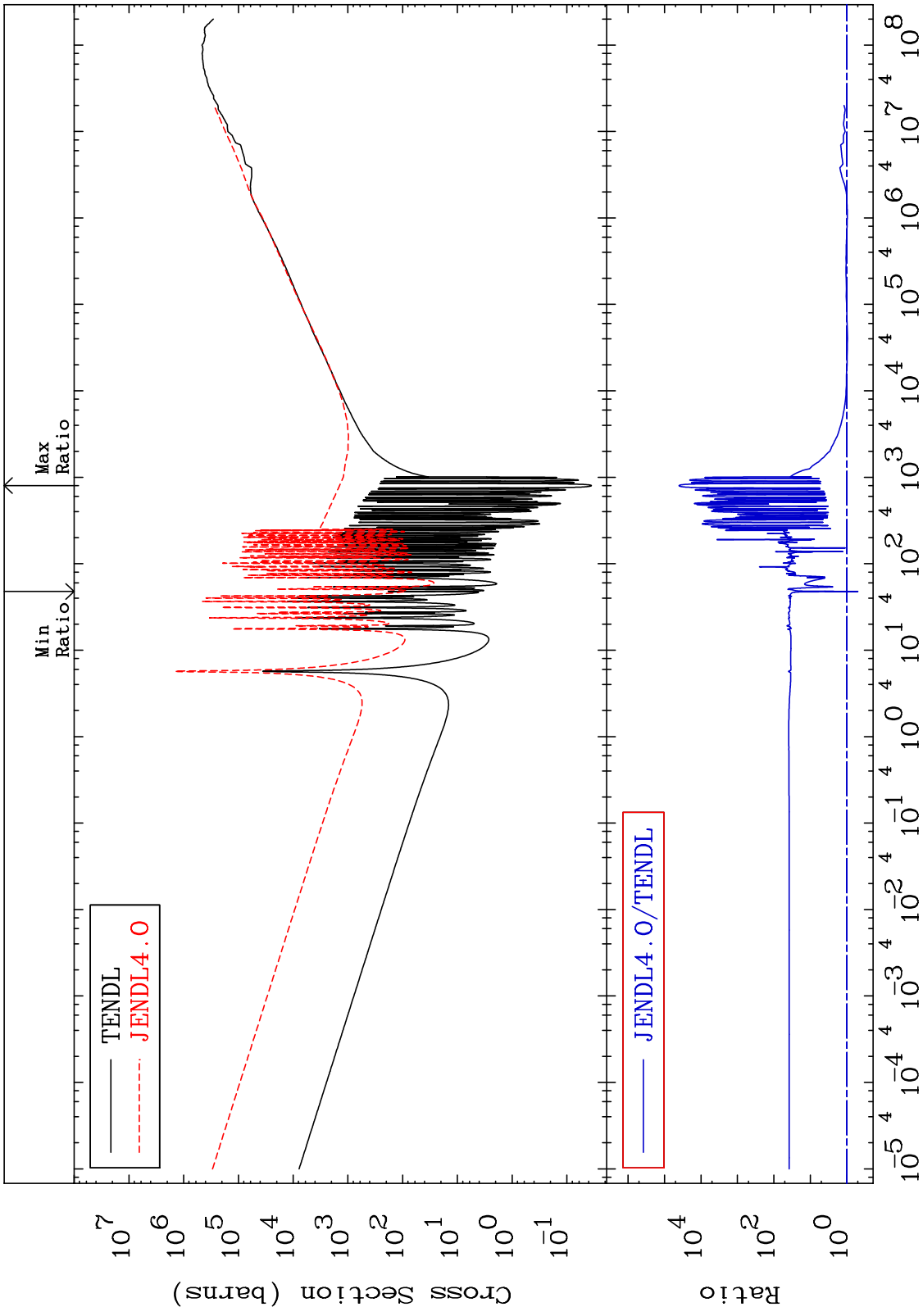


55 72-Hf-179

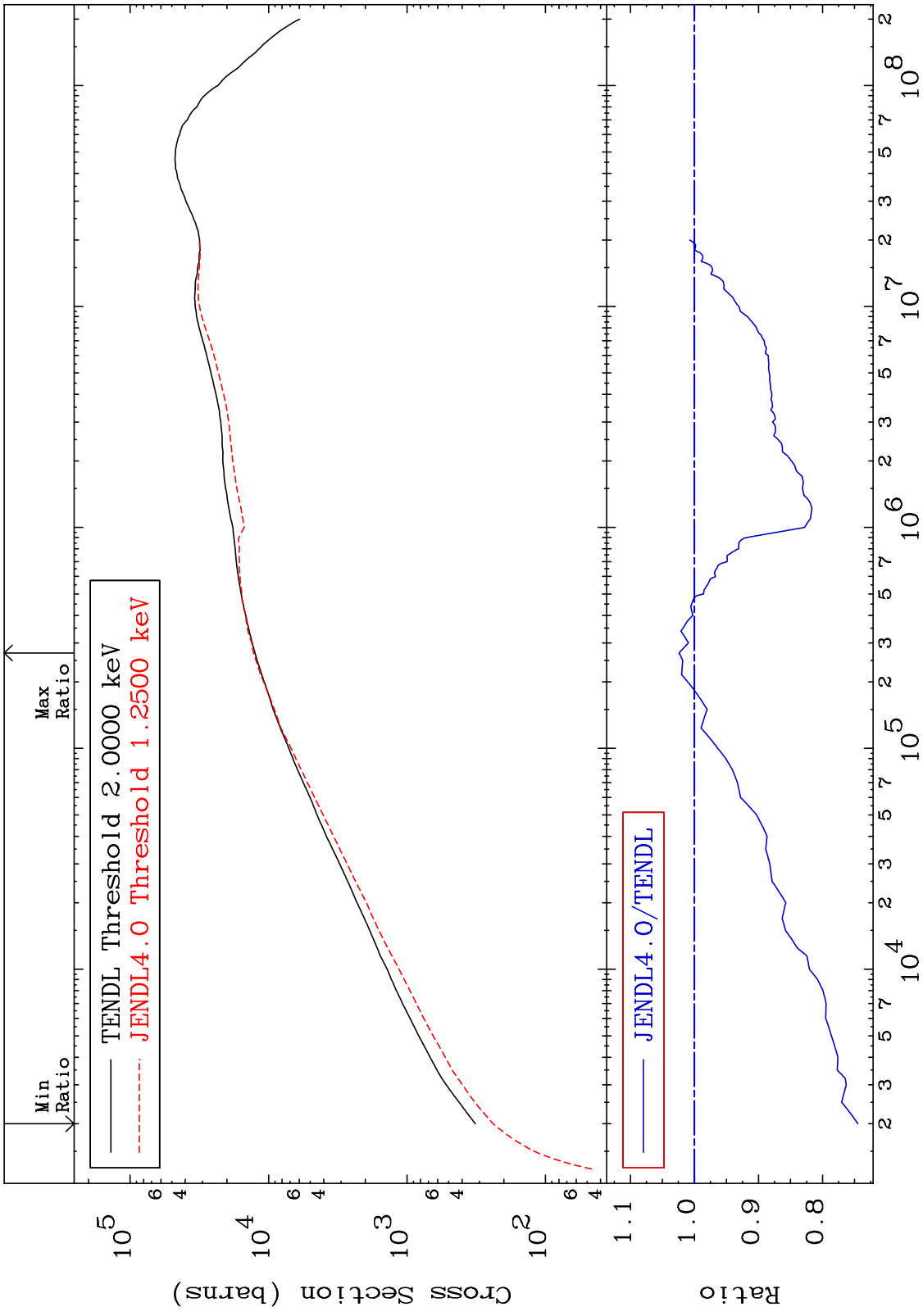
MAT 7240 Total kinematic kerma (high limit) 72-Hf-179
 Cross Section -78.27 To 9999. %



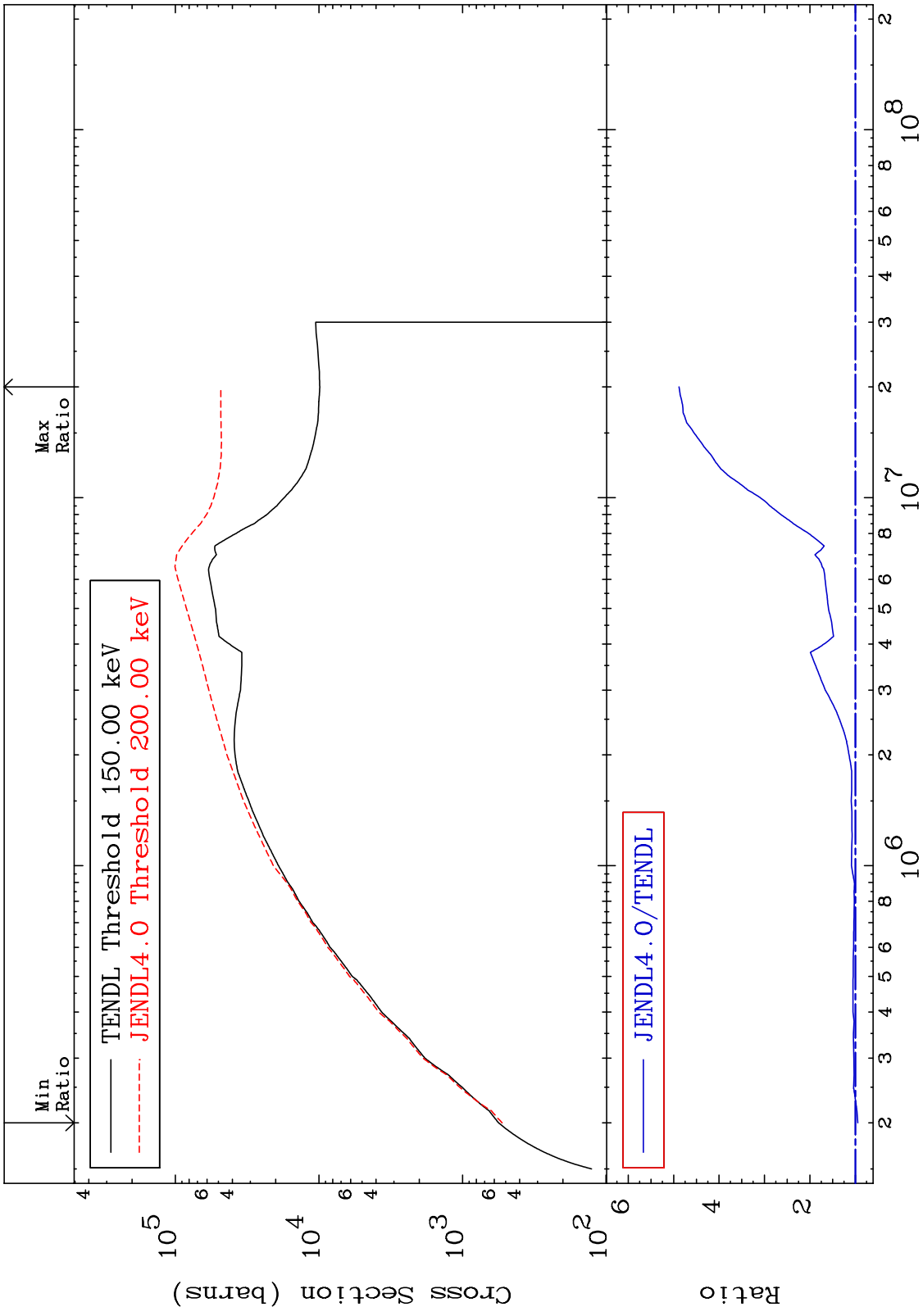
MAT 7240 Dpa total (eV-barns) 72-Hf-179
 Cross Section -50.25 To 9999. %



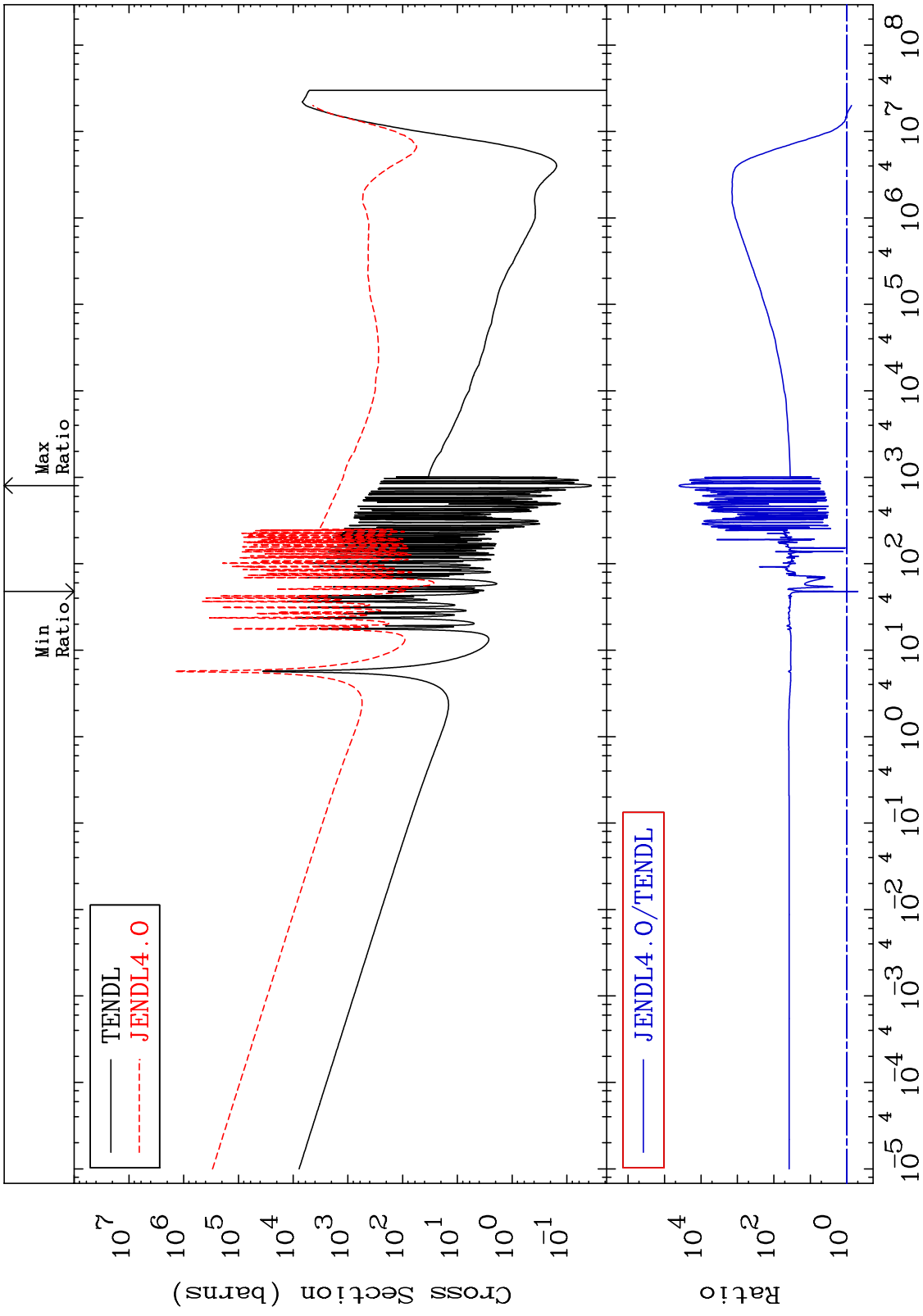
MAT 7240 72-Hf-179
 Dpa elastic (mt2) -25.50 To 2.403 %
 Cross Section



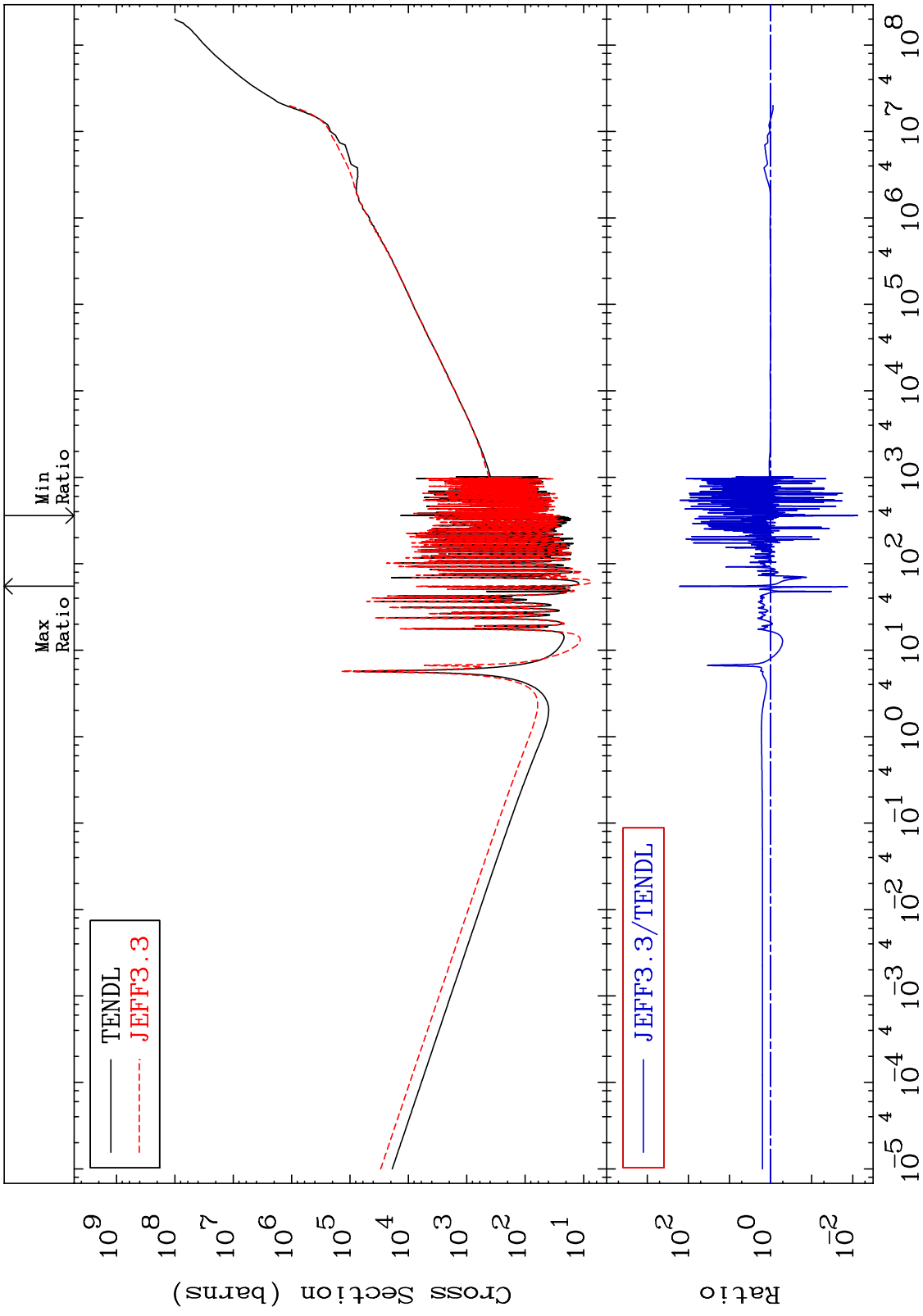
MAT 7240 Dpa inelastic (mt51-91) 72-Hf-179
 Cross Section -5.628 To 388.2 %



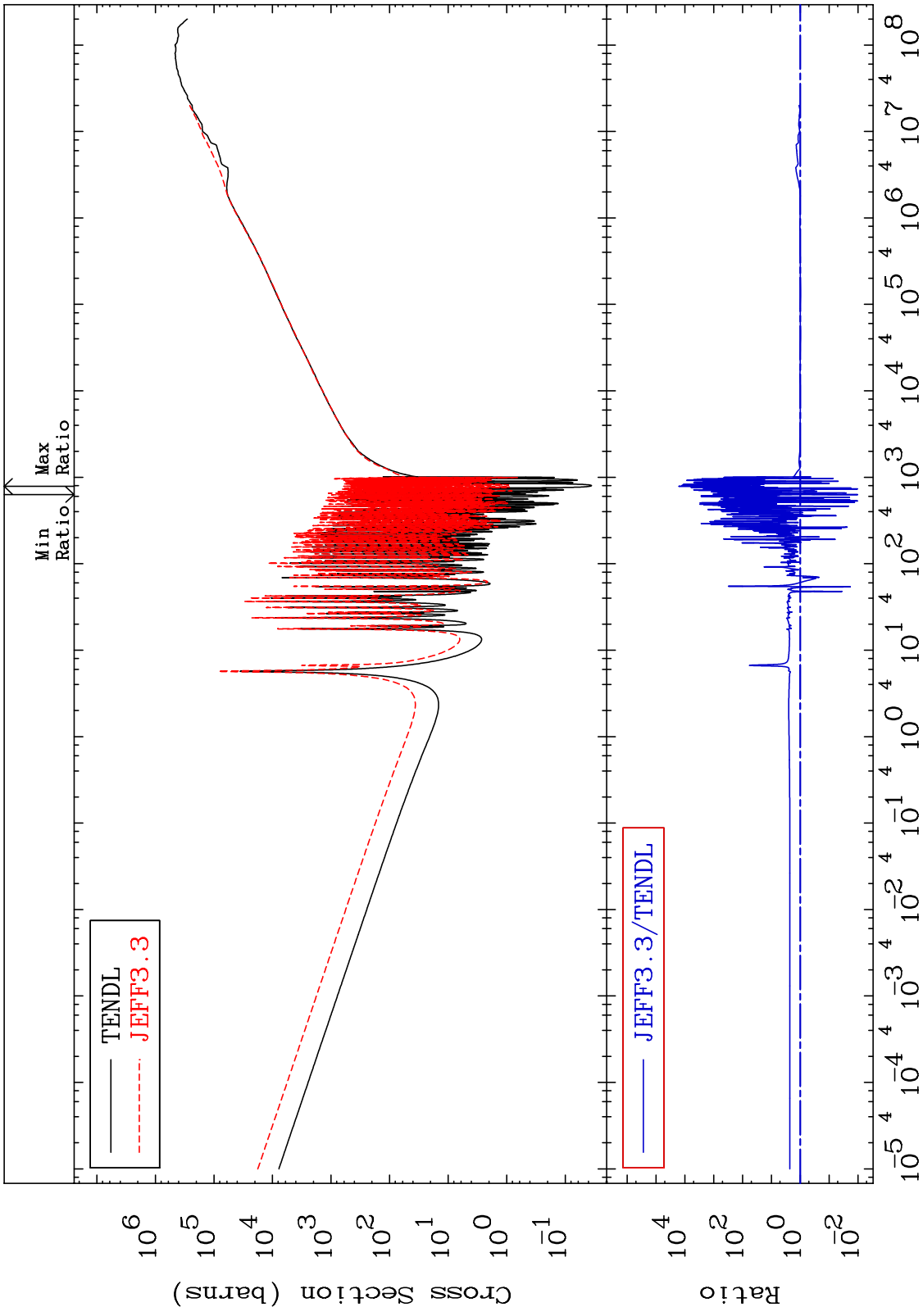
MAT 7240 Dpa disappearance (mt102 -120) 72-Hf-179
 Cross Section -50.25 To 9999. %



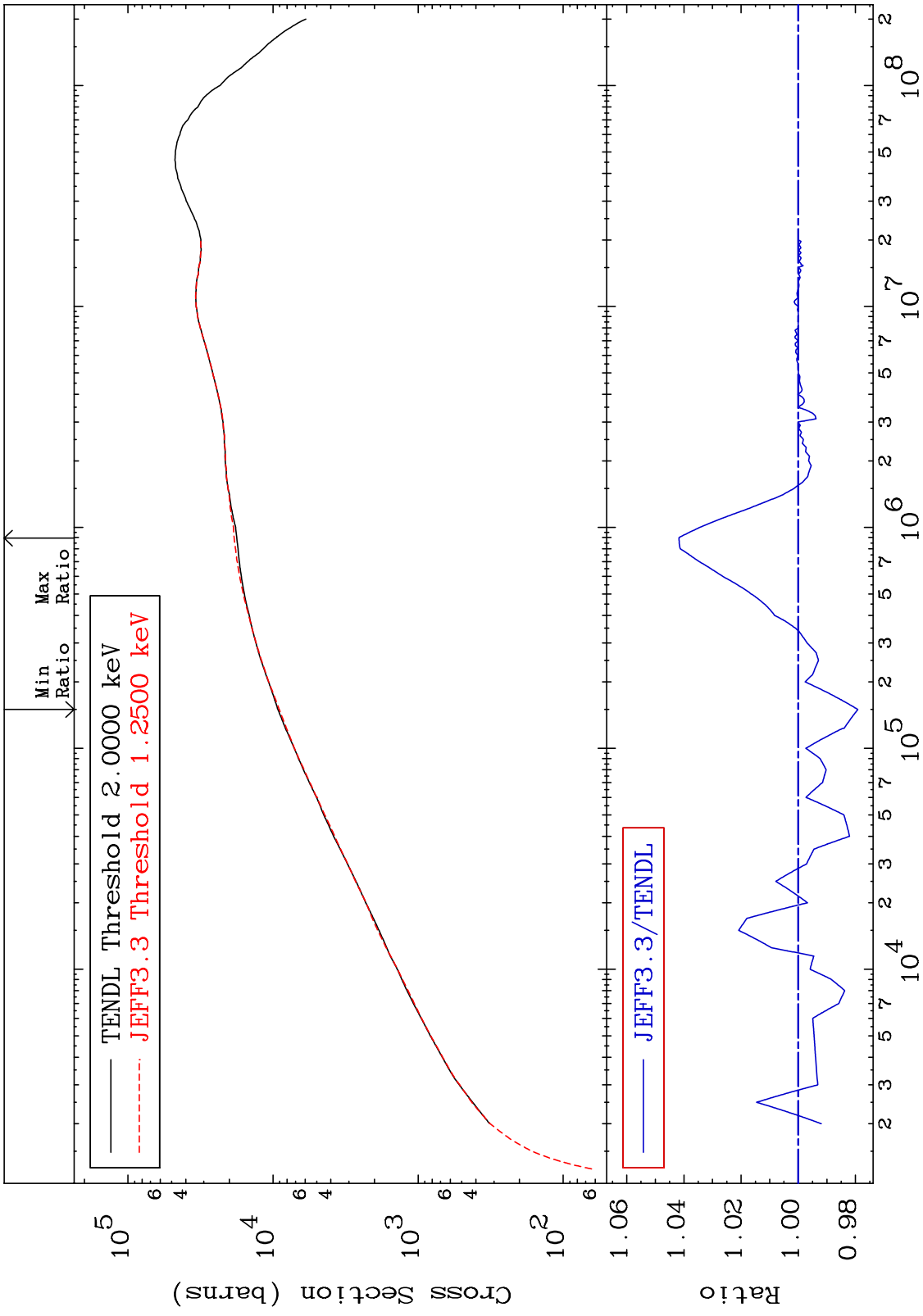
MAT 7240 Total kinematic kerma (high limit) 72-Hf-179
 Cross Section -99.25 To 9999. %



MAT 7240 Dpa total (eV-barns) 72-Hf-179
 Cross Section -98.99 To 9999. %

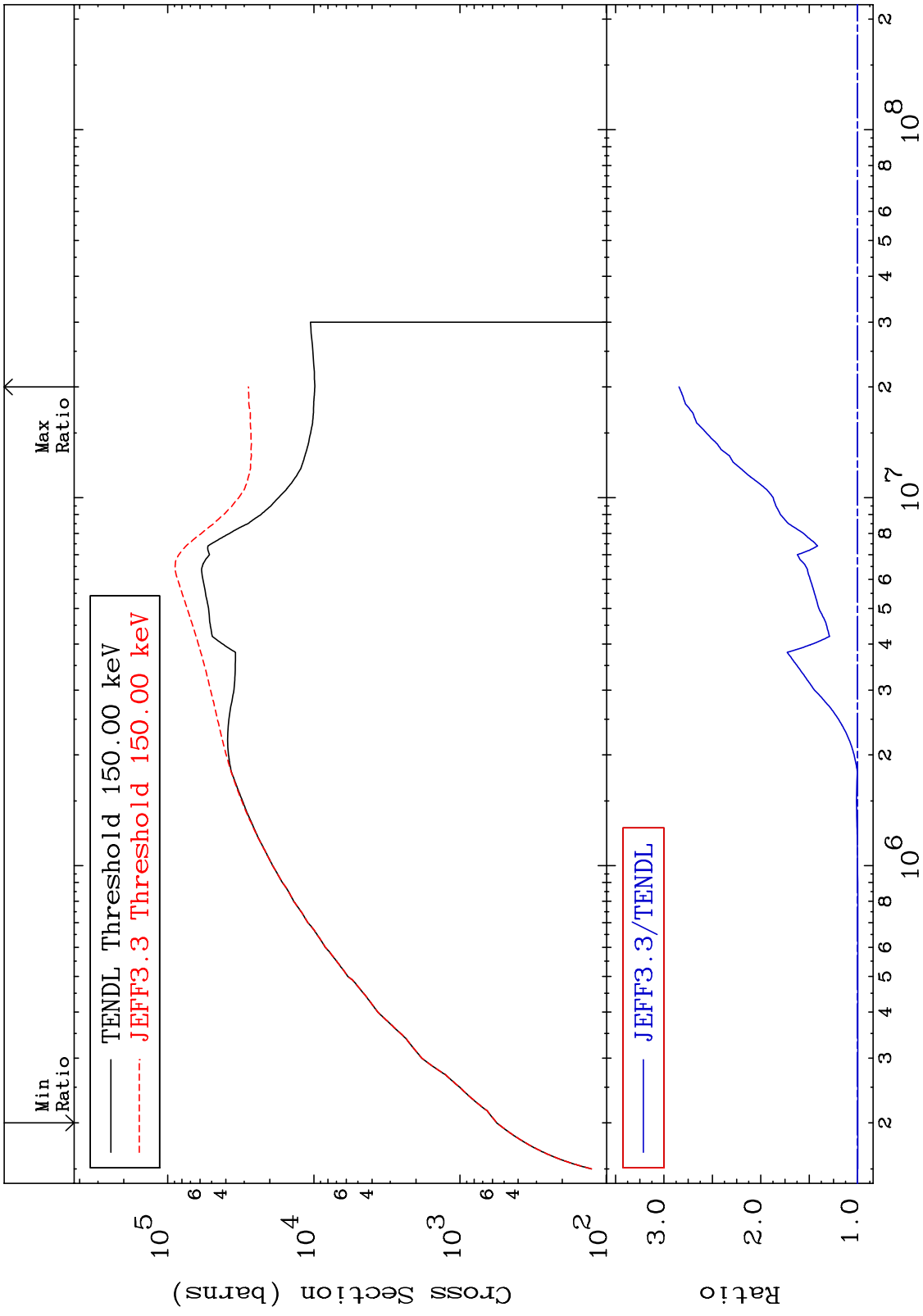


MAT 7240 72-Hf-179
-2.083 To 4.170 %
 Dpa elastic (mt2)
 Cross Section

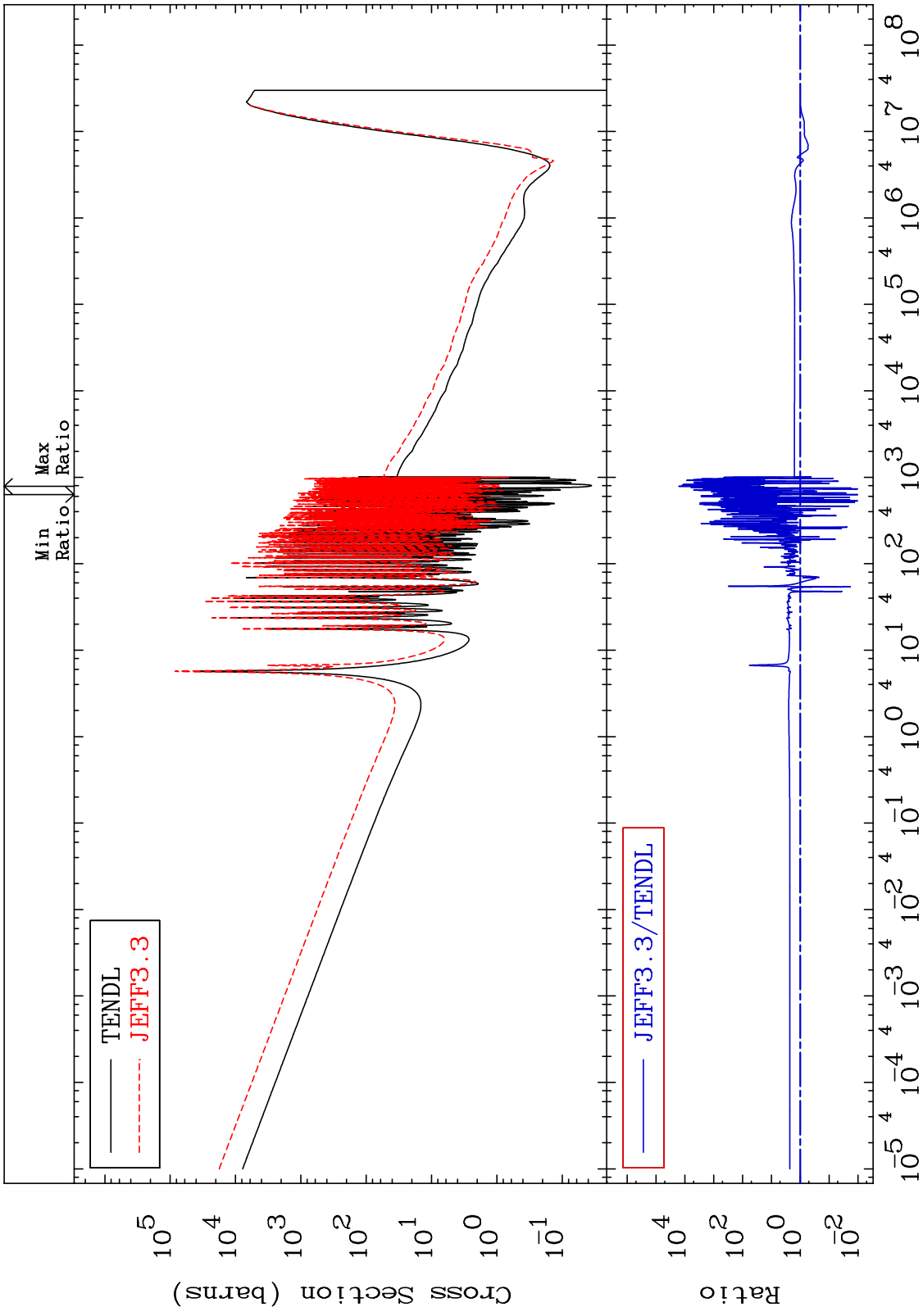


63 72-Hf-179

MAT 7240 Dpa inelastic (mt51-91) 72-Hf-179
 Cross Section -0.214 To 184.4 %



MAT 7240 Dpa disappearance (mt102 -120) 72-Hf-179
 Cross Section -98.99 To 9999. %

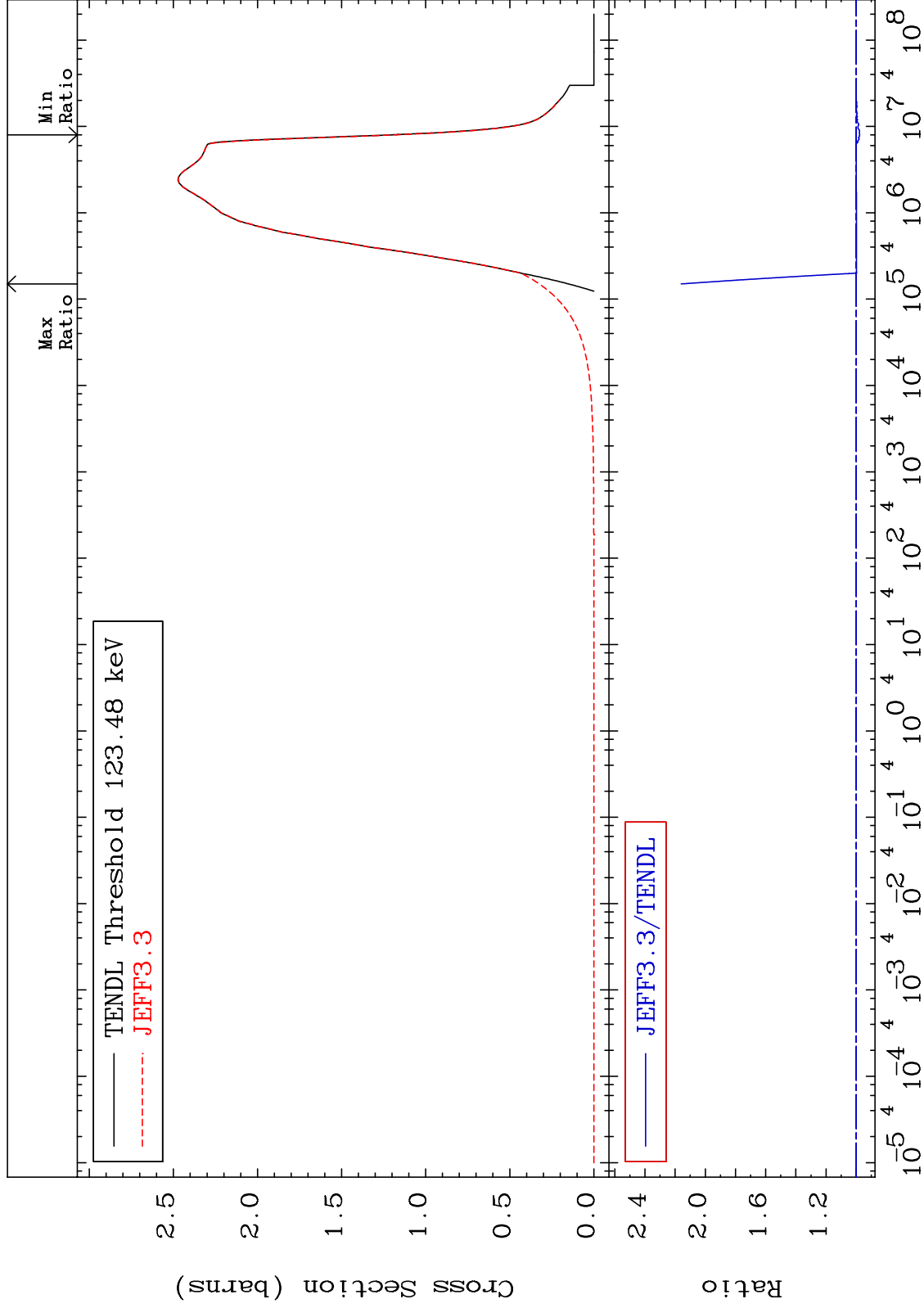


MAT 7240

Inelastic: 72-Hf-179g

72-Hf-179

Radionuclide Production Cross Section -2.340 To 116.0 %

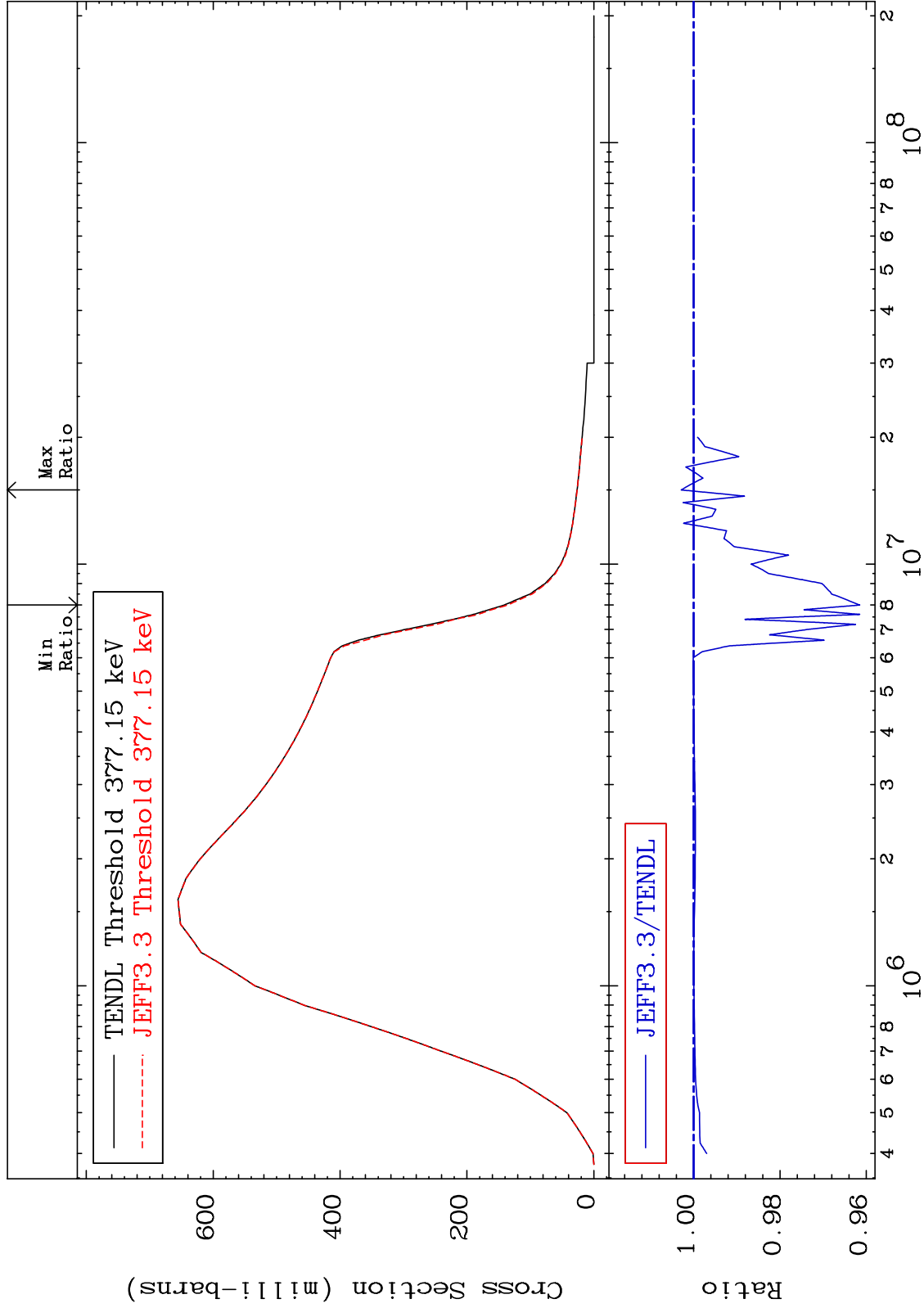


MAT 7240

Inelastic: 72-Hf-179m5

72-Hf-179

Radionuclide Production Cross Section -3.848 To 0.287 %

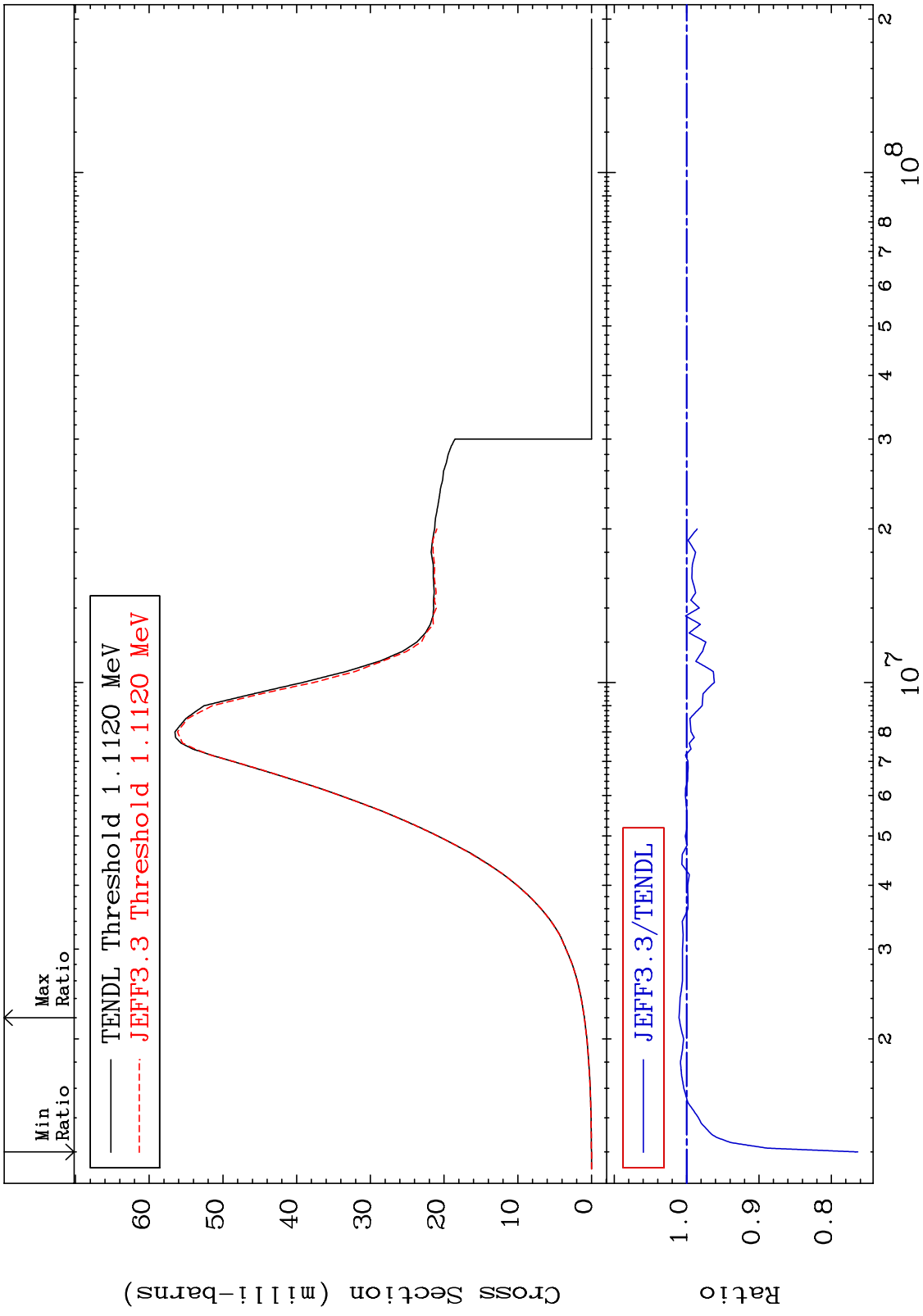


67

Incident Energy (eV)

72-Hf-179

MAT 7240 Inelastic: 72-Hf-179m30 72-Hf-179
 Radionuclide Production Cross Section -23.66 To 1.048 %

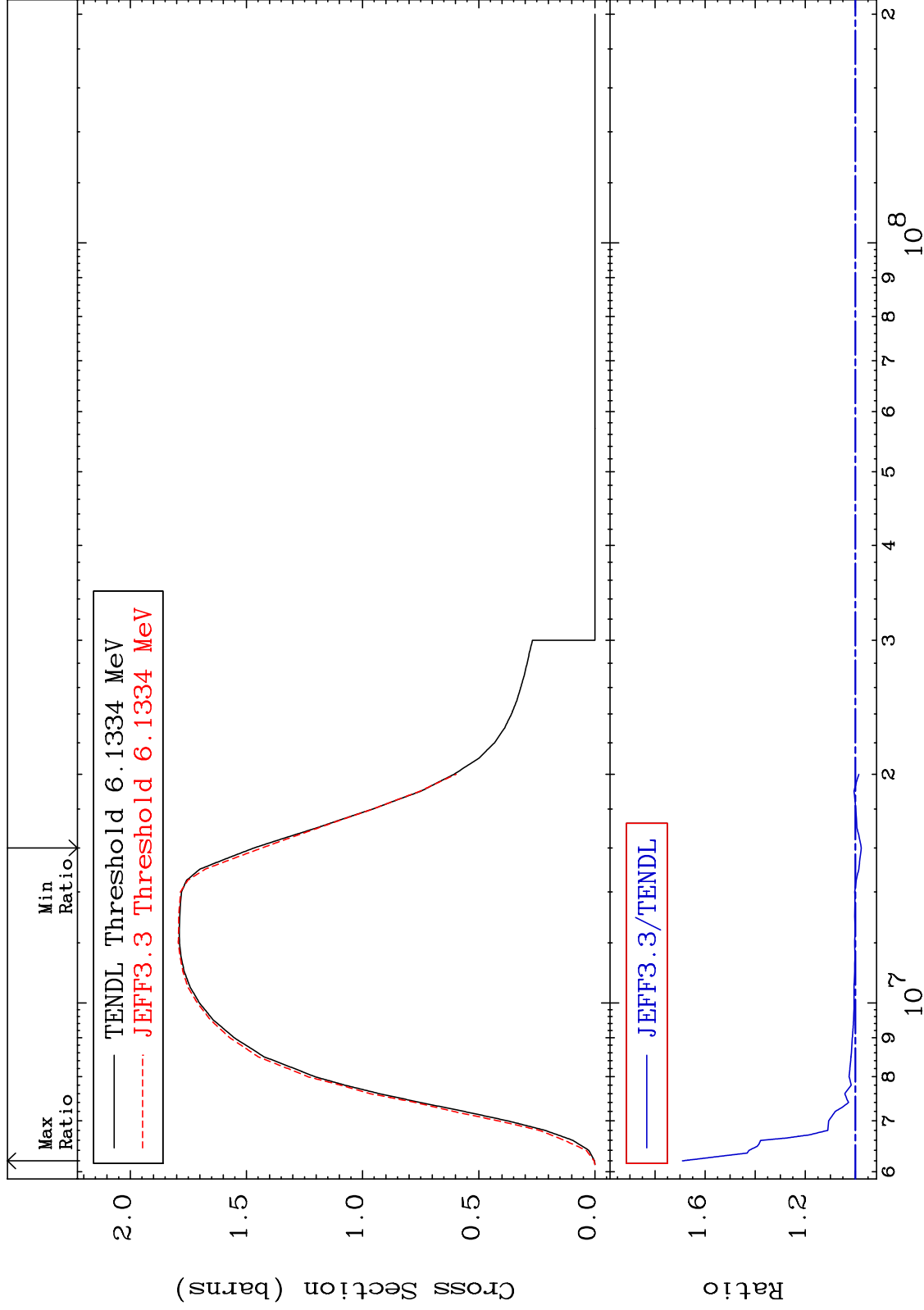


MAT 7240

(n,2n):72-Hf-178g

72-Hf-179

Radionuclide Production Cross Section -2.340 To 69.03 %

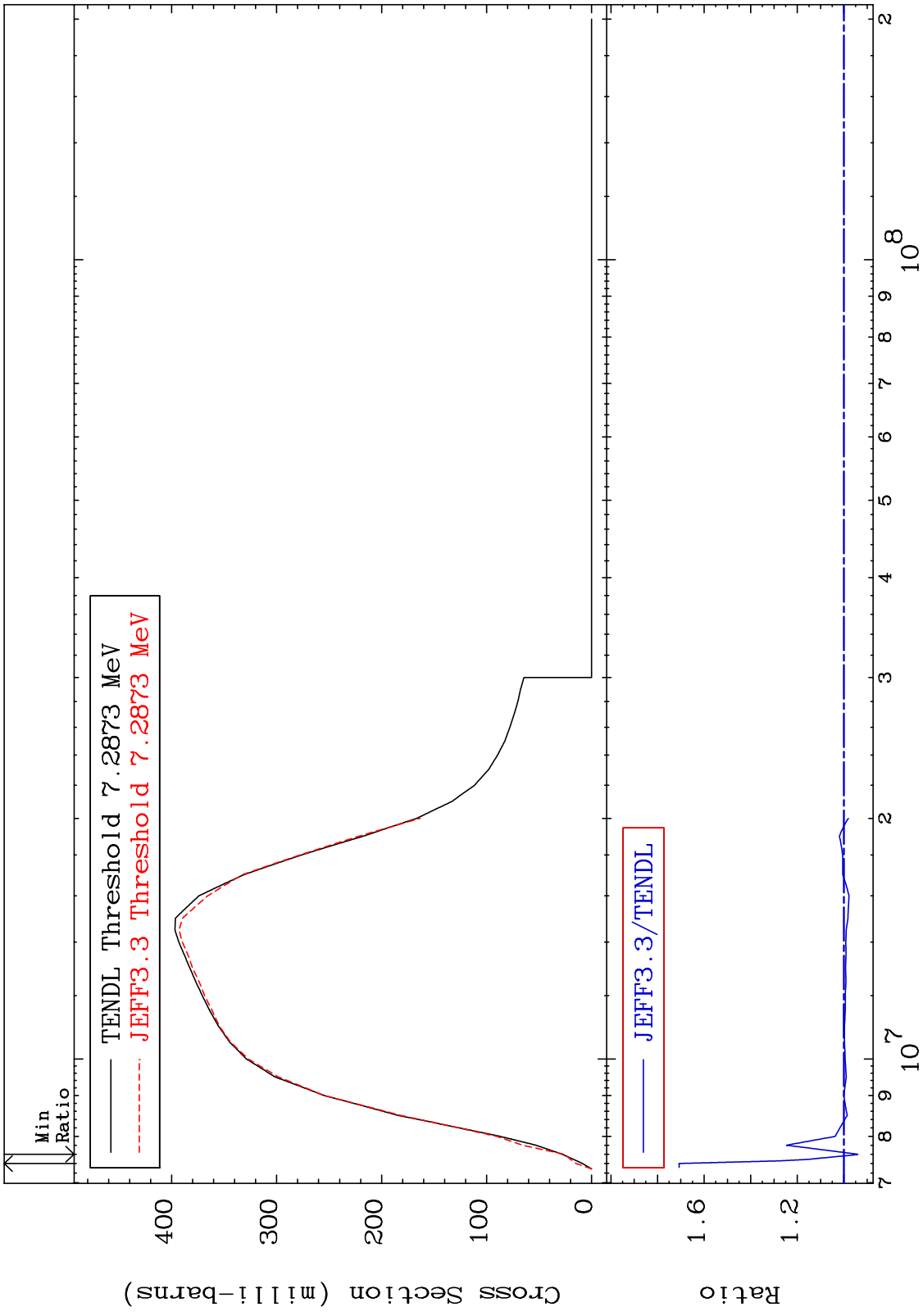


69

Incident Energy (eV)

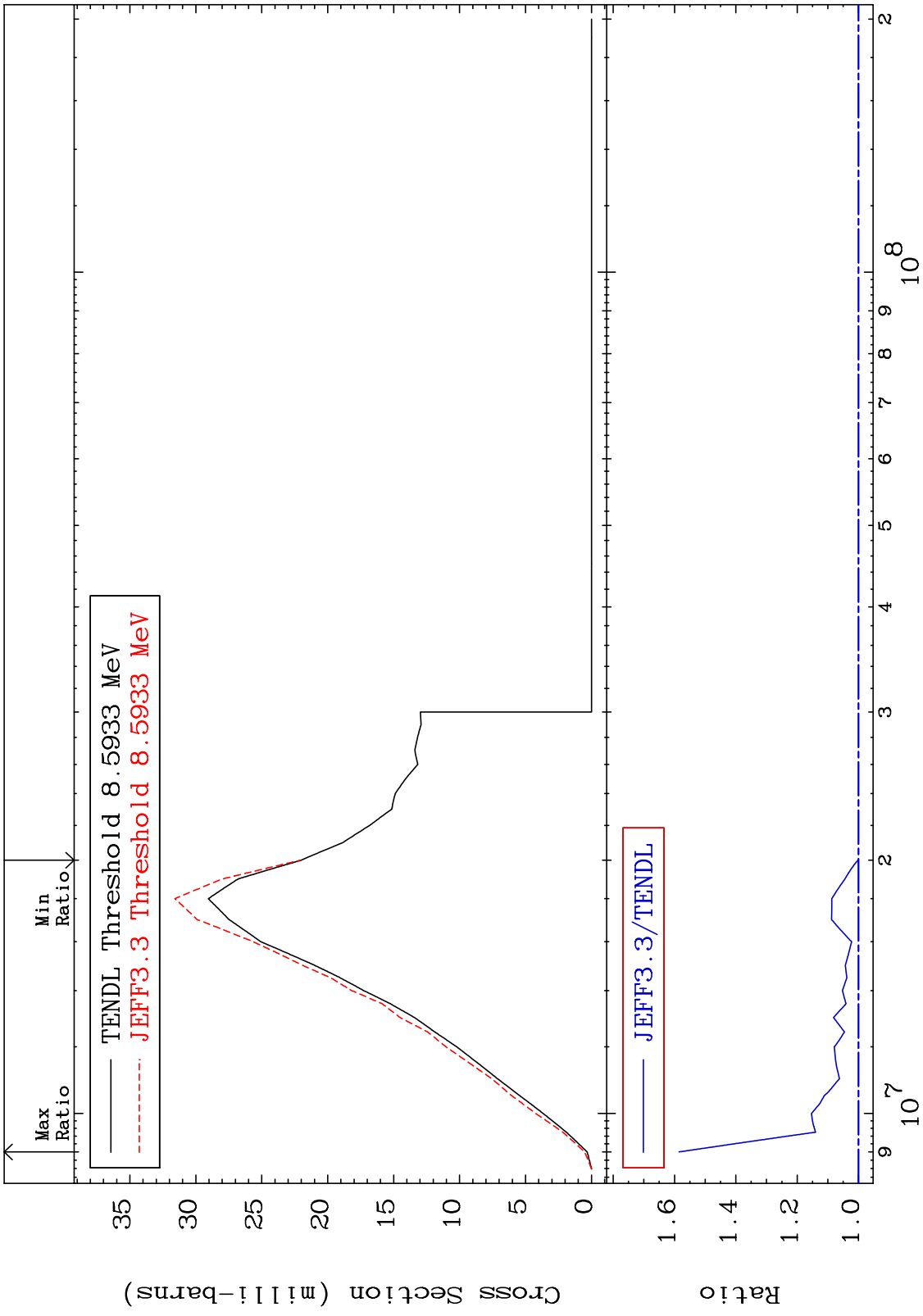
72-Hf-179

MAT 7240 (n,2n):72-Hf-178m5 72-Hf-179
Radionuclide Production Cross Section -5.980 To 70.75 %



70 72-Hf-179

MAT 7240 (n,2n): 72-Hf-178m10 72-Hf-179
 Radionuclide Production Cross Section 0.230 To 58.52 %

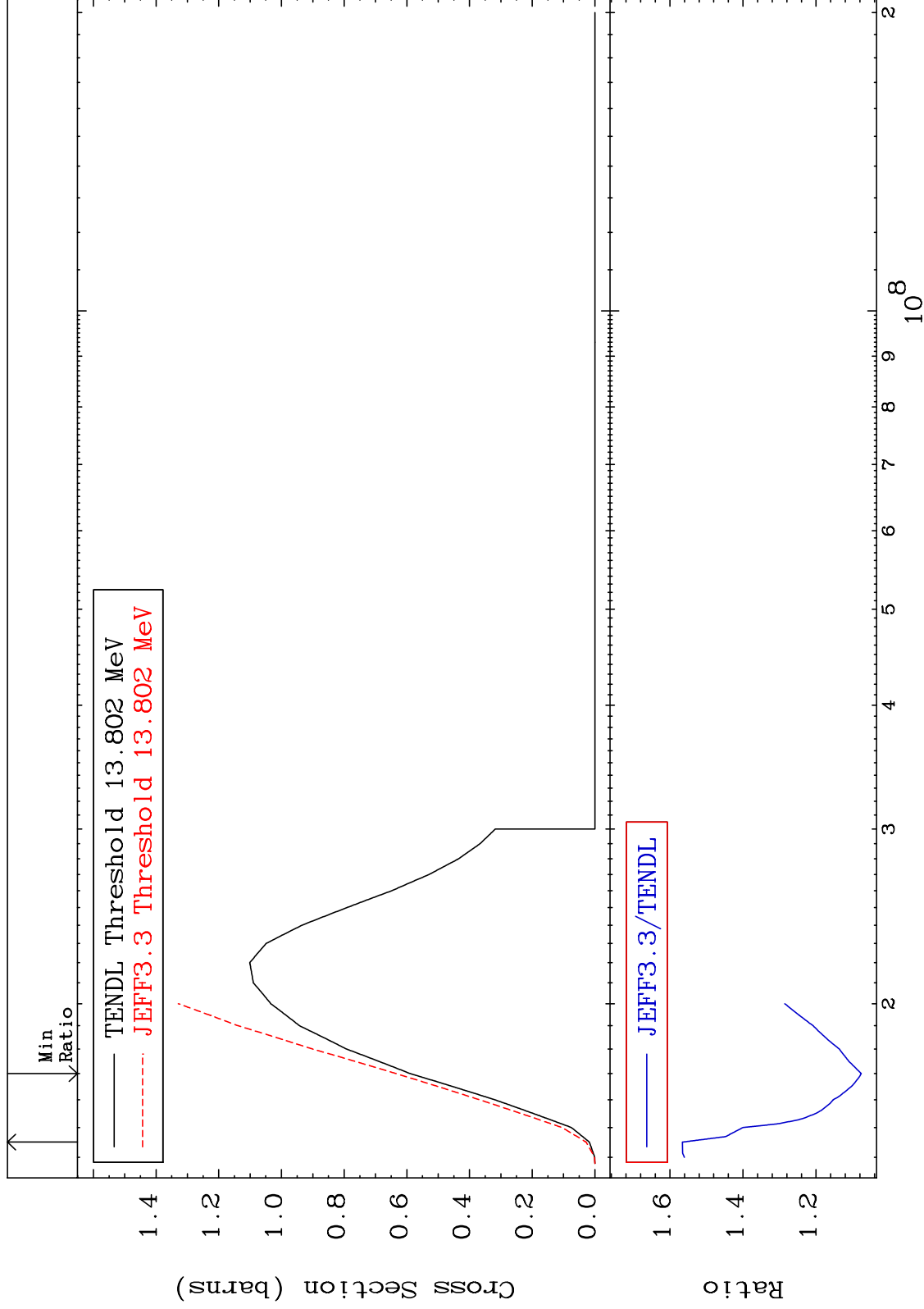


MAT 7240

(n,3n):72-Hf-177g

72-Hf-179

Radionuclide Production Cross Section 7.624 To 56.56 %

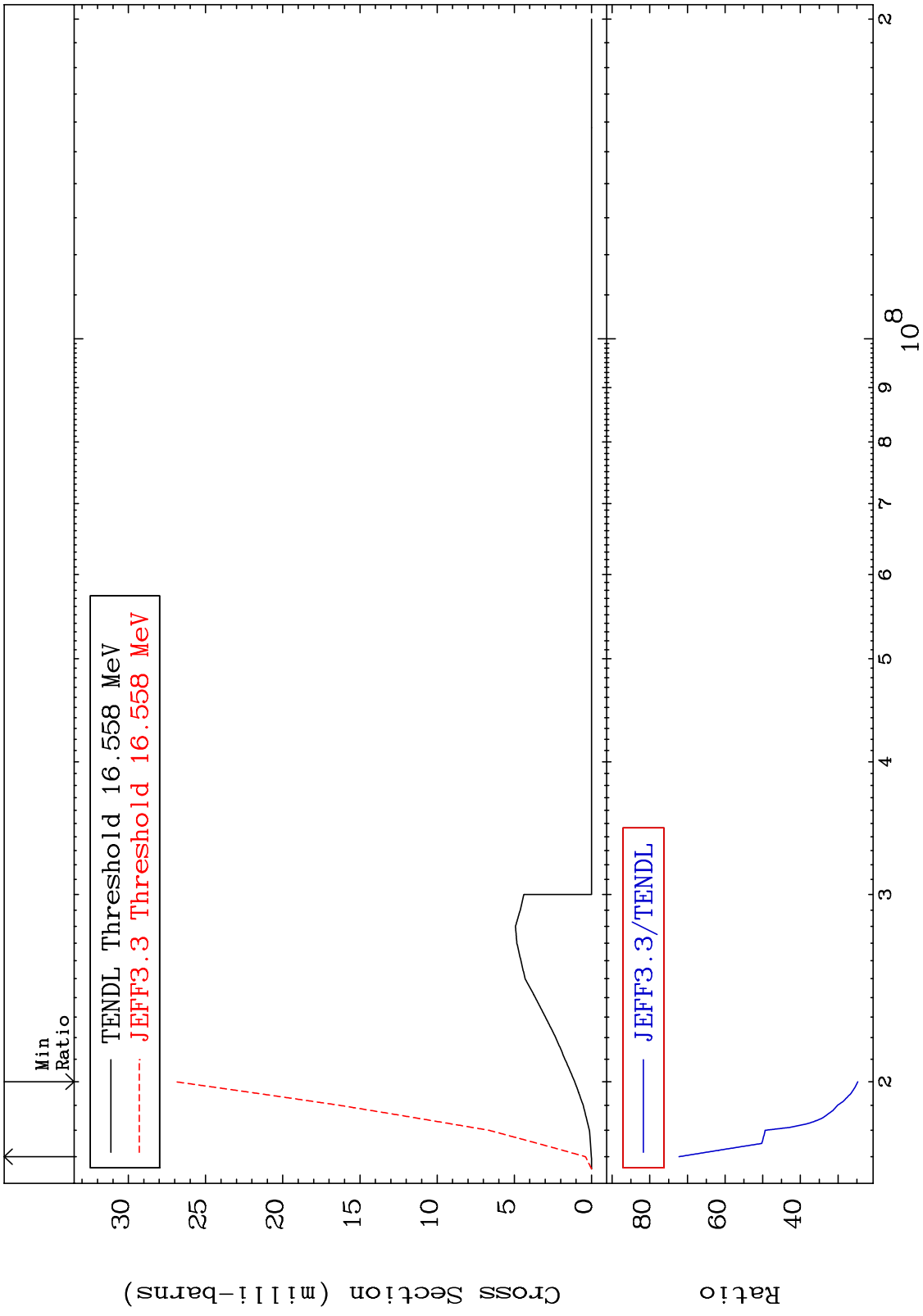


72

Incident Energy (eV)

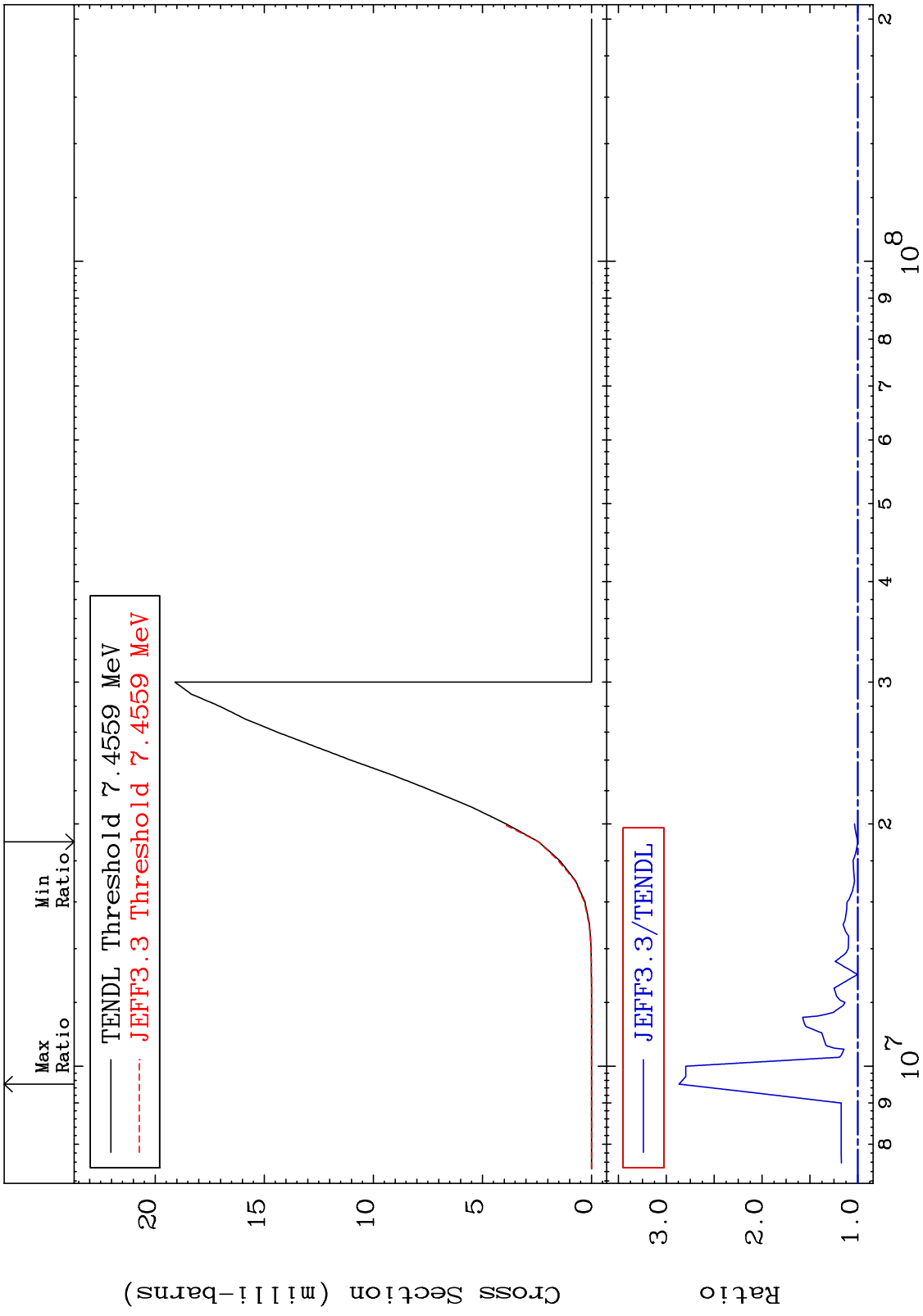
72-Hf-179

MAT 7240 (n,3n):72-Hf-177m10 72-Hf-179
 Radionuclide Production Cross Section 2375. To 7123. %



73 72-Hf-179

MAT 7240 (n, n') p: 71-Lu-178g 72-Hf-179
 Radionuclide Production Cross Section 0.045 To 186.8 %

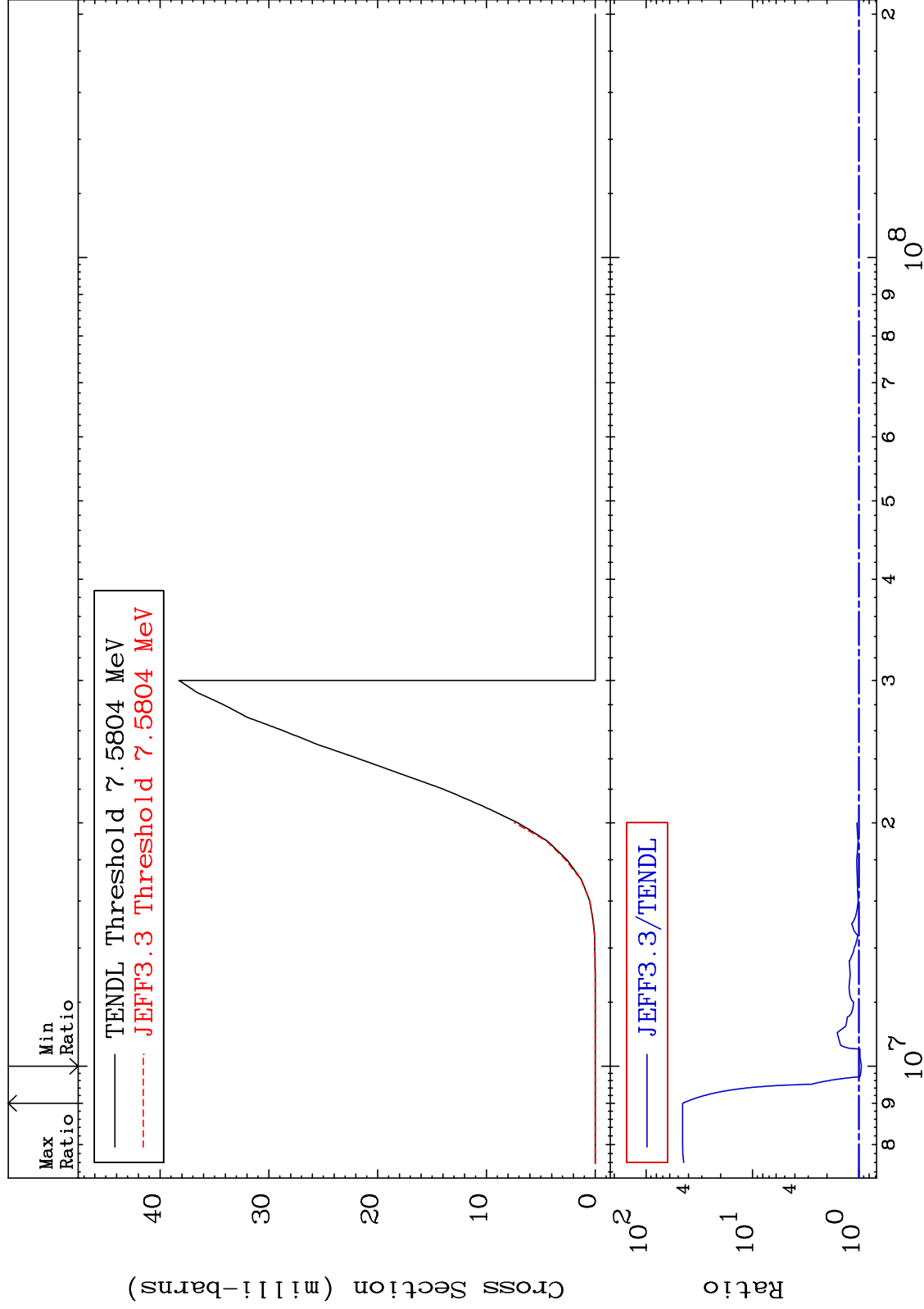


MAT 7240

(n,n') p:71-Lu-178m3

72-Hf-179

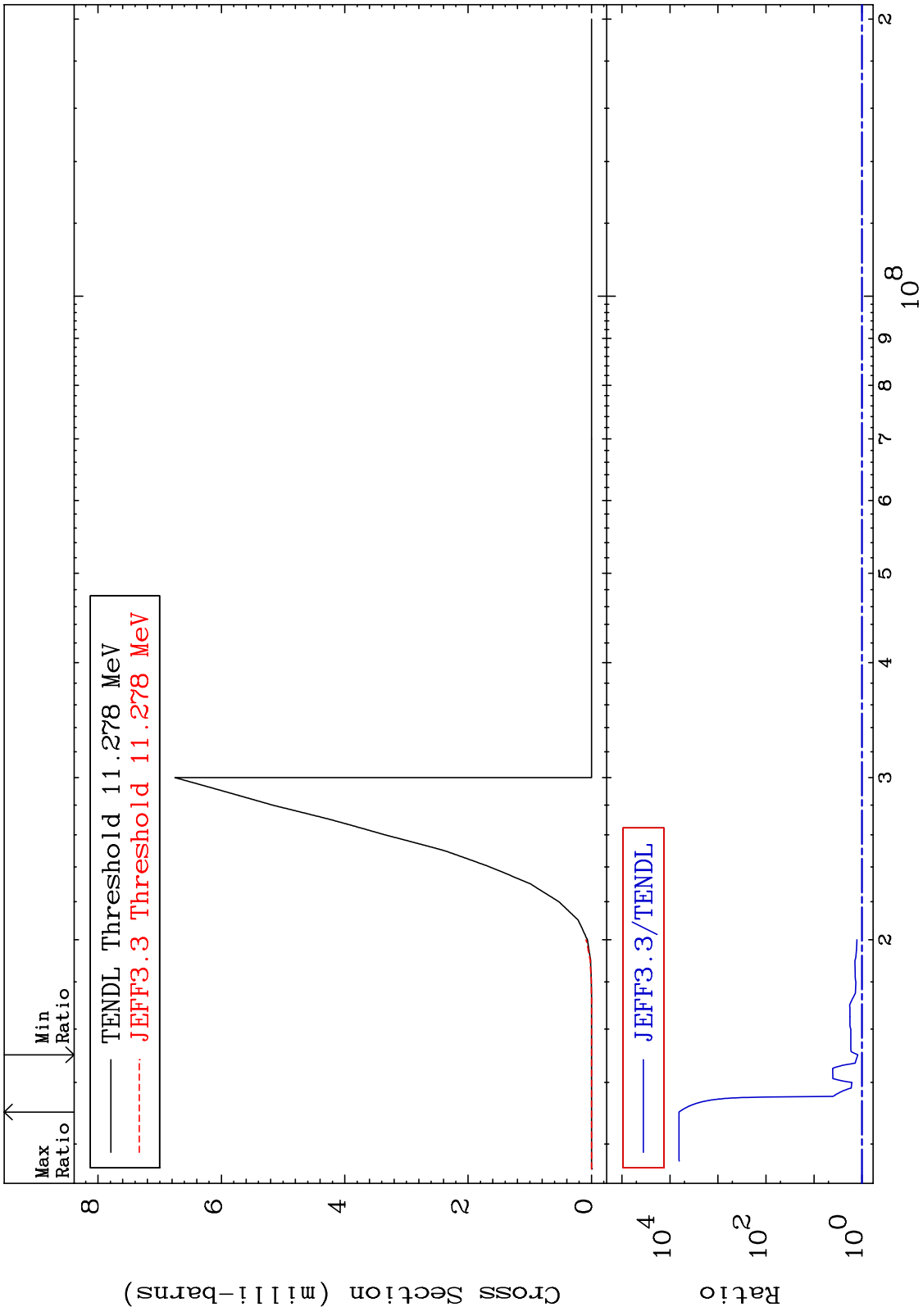
Radionuclide Production Cross Section -5.112 To 4436. %



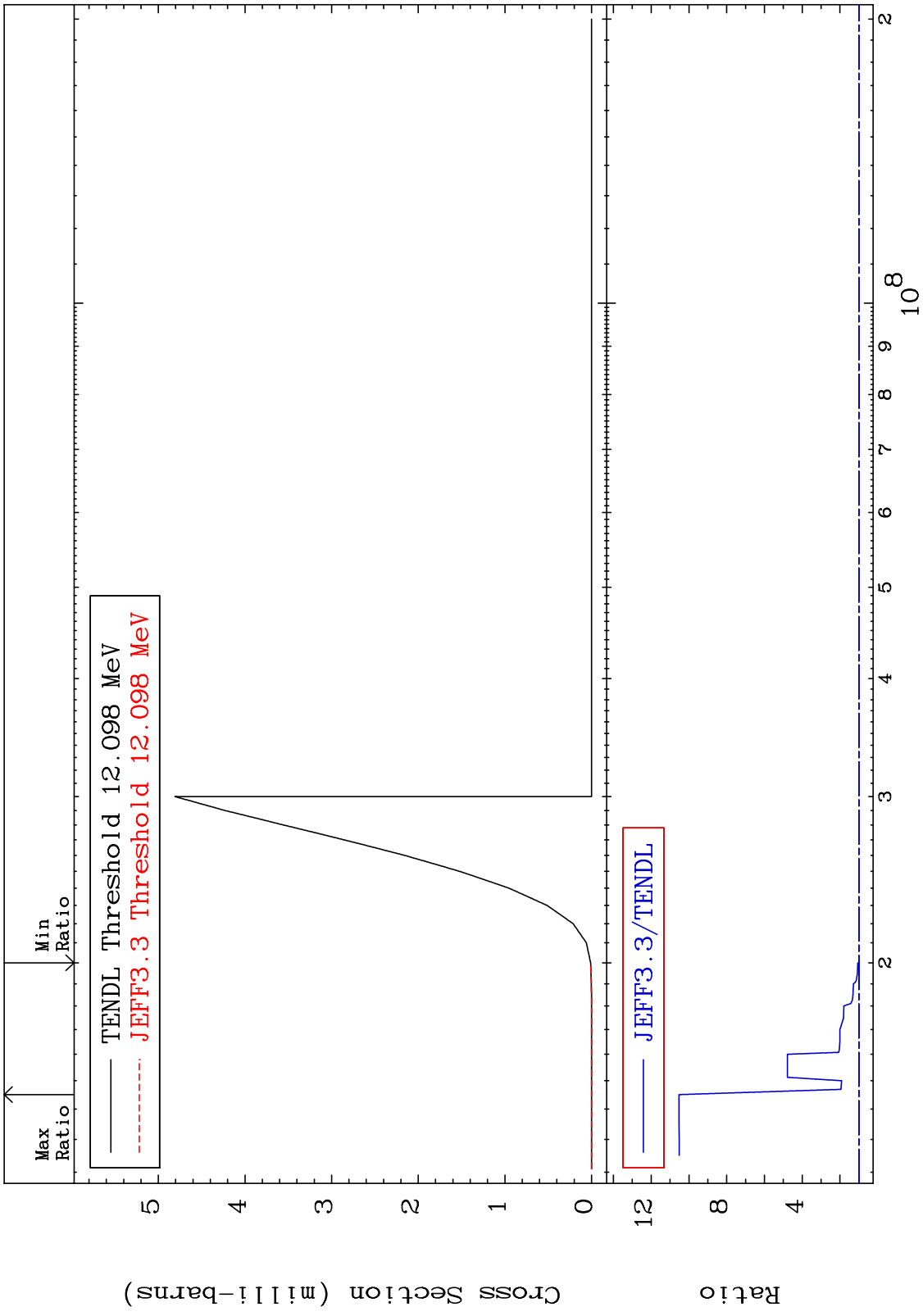
75

Incident Energy (eV)

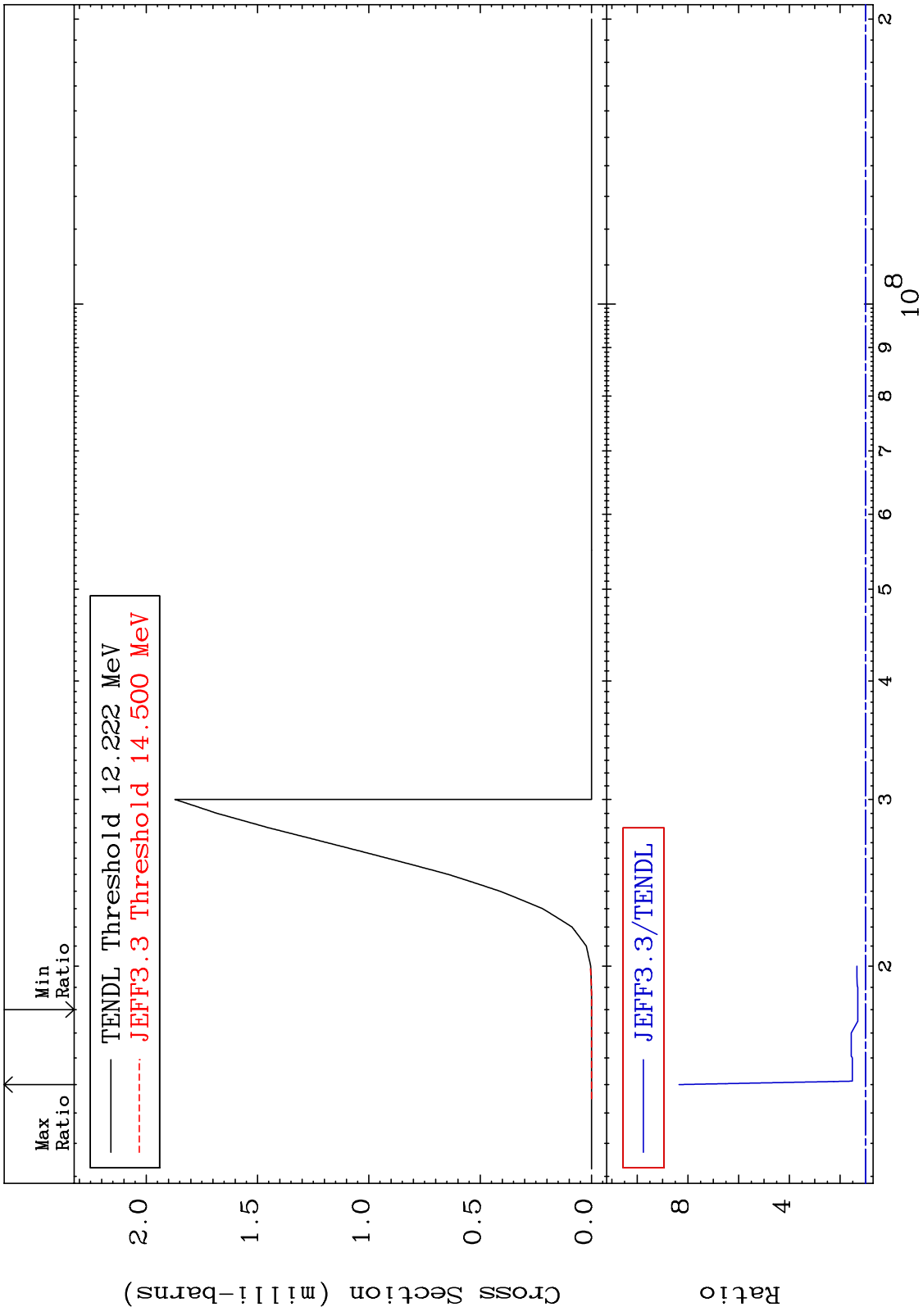
72-Hf-179



MAT 7240 (n,n') t:71-Lu-176g 72-Hf-179
 Radionuclide Production Cross Section 5.370 To 952.4 %



MAT 7240 (n,n') t:71-Lu-176m1 72-Hf-179
 Radionuclide Production Cross Section 30.31 To 735.3 %

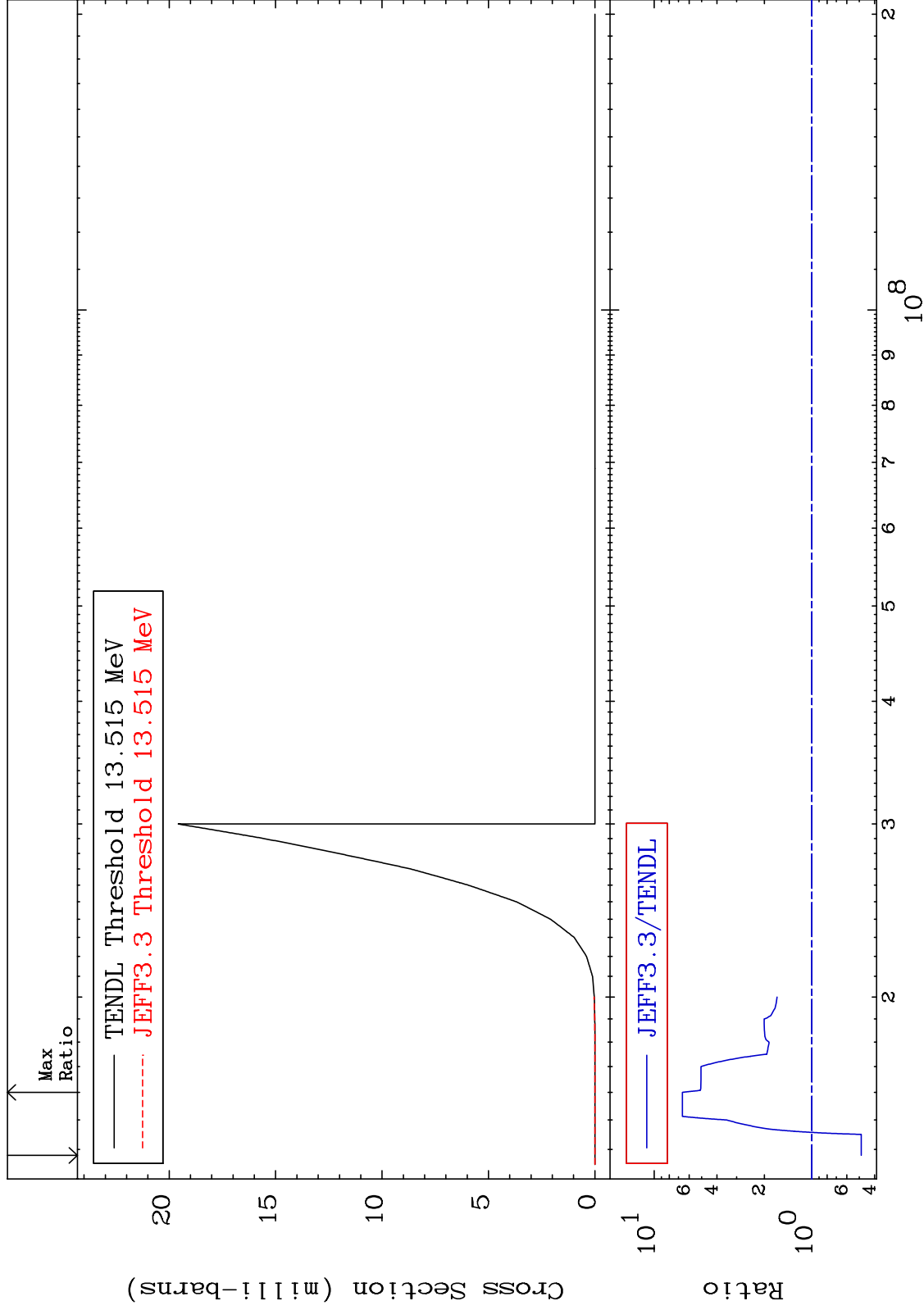


MAT 7240

(n,2n) p:71-Lu-177g

72-Hf-179

Radionuclide Production Cross Section -51.40 To 560.9 %



79

Incident Energy (eV)

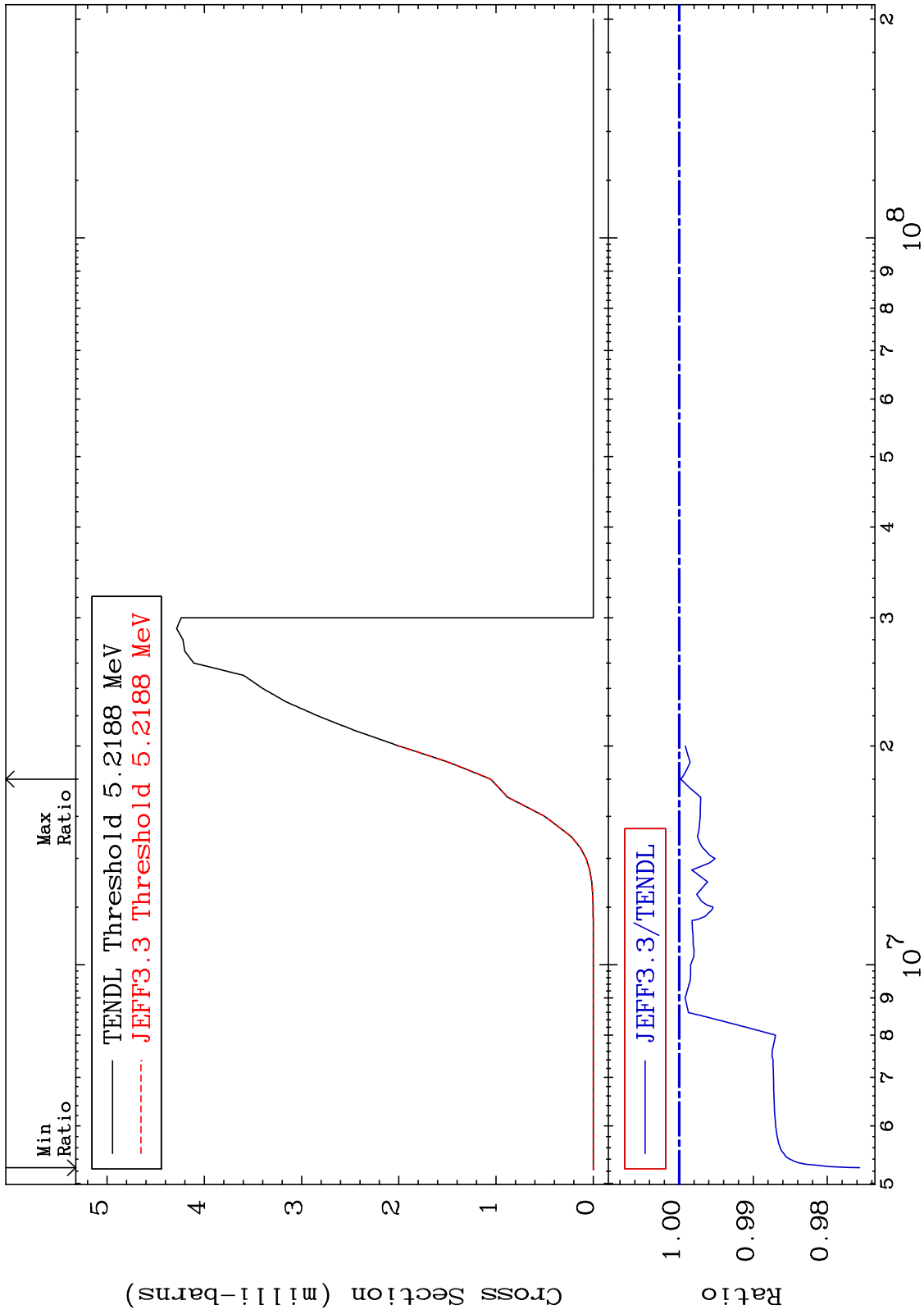
72-Hf-179

MAT 7240

(n, d) : 71-Lu-178g

72-Hf-179

Radionuclide Production Cross Section -2.436 To -0.022%



80

Incident Energy (eV)

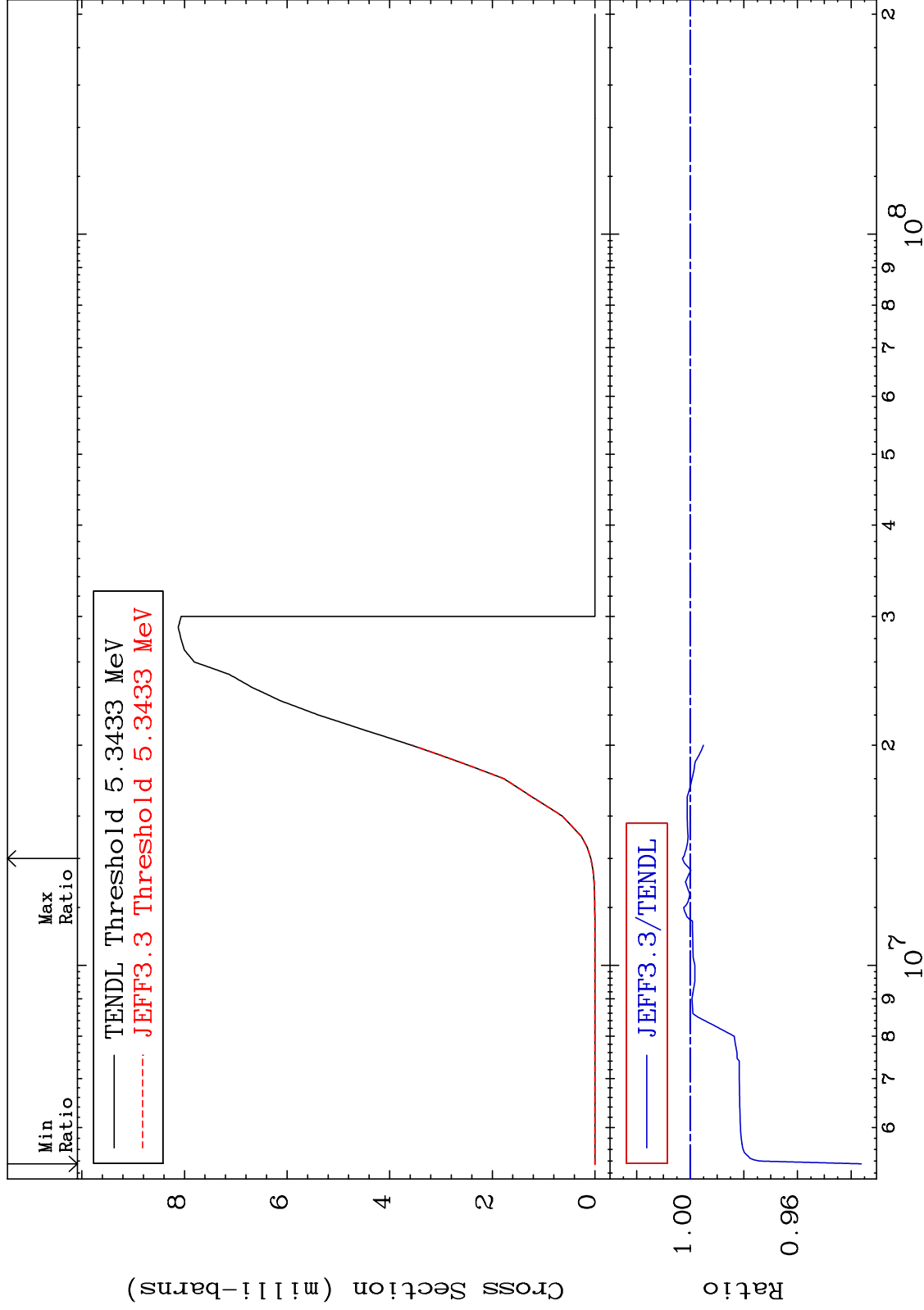
72-Hf-179

MAT 7240

(n, d) : 71-Lu-178m3

72-Hf-179

Radionuclide Production Cross Section -6.380 To 0.292 %



81

Incident Energy (eV)

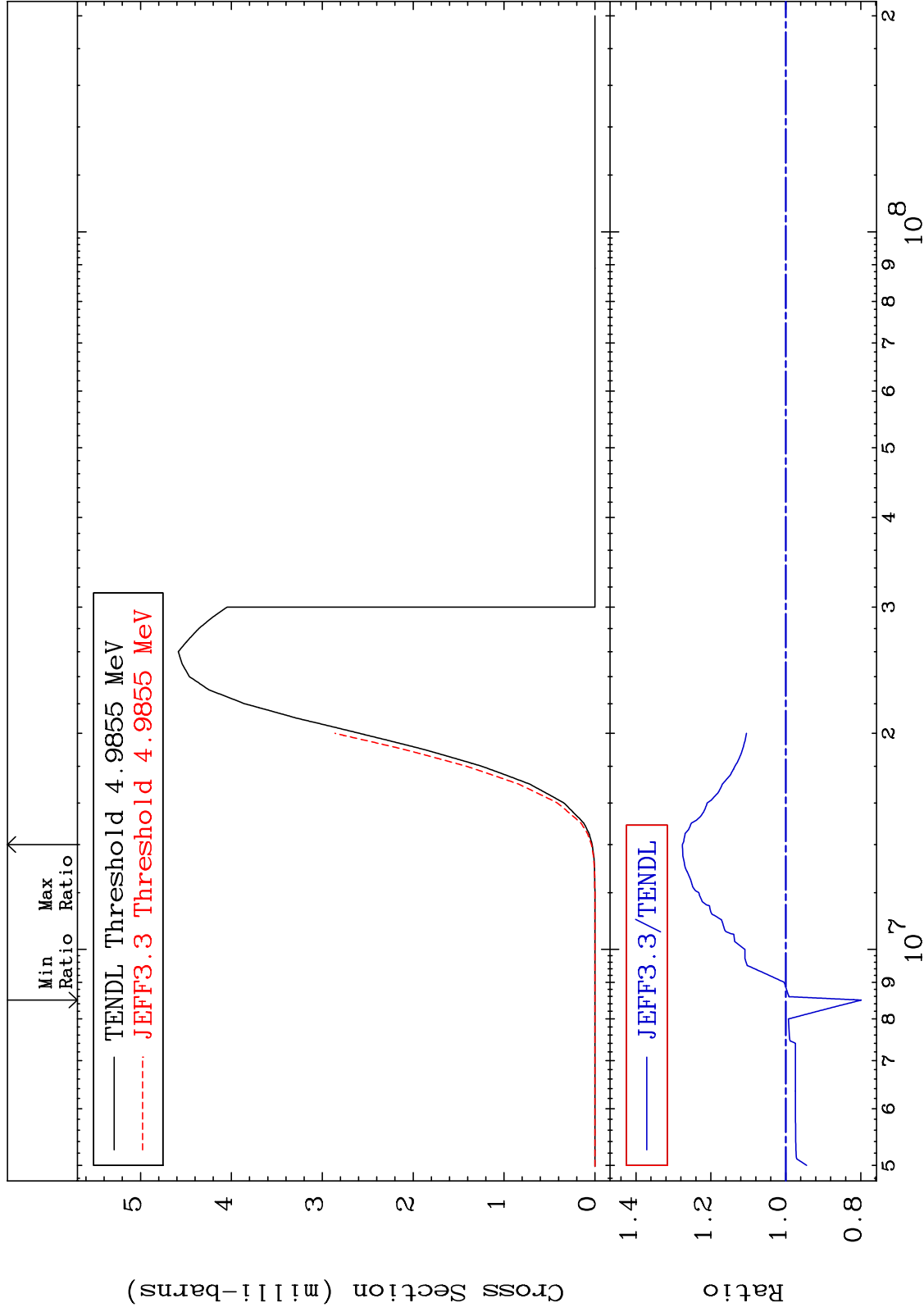
72-Hf-179

MAT 7240

(n, t) : 71-Lu-177g

72-Hf-179

Radionuclide Production Cross Section -20.16 To 27.59 %



MAT 7240 (n, He-3) : 70-Yb-177g 72-Hf-179
 Radionuclide Production Cross Section -5.730 To 9.508 %

