

Program Complot
(Version 2018-1)

by

Dermott E. Cullen
(Present Contact Information)

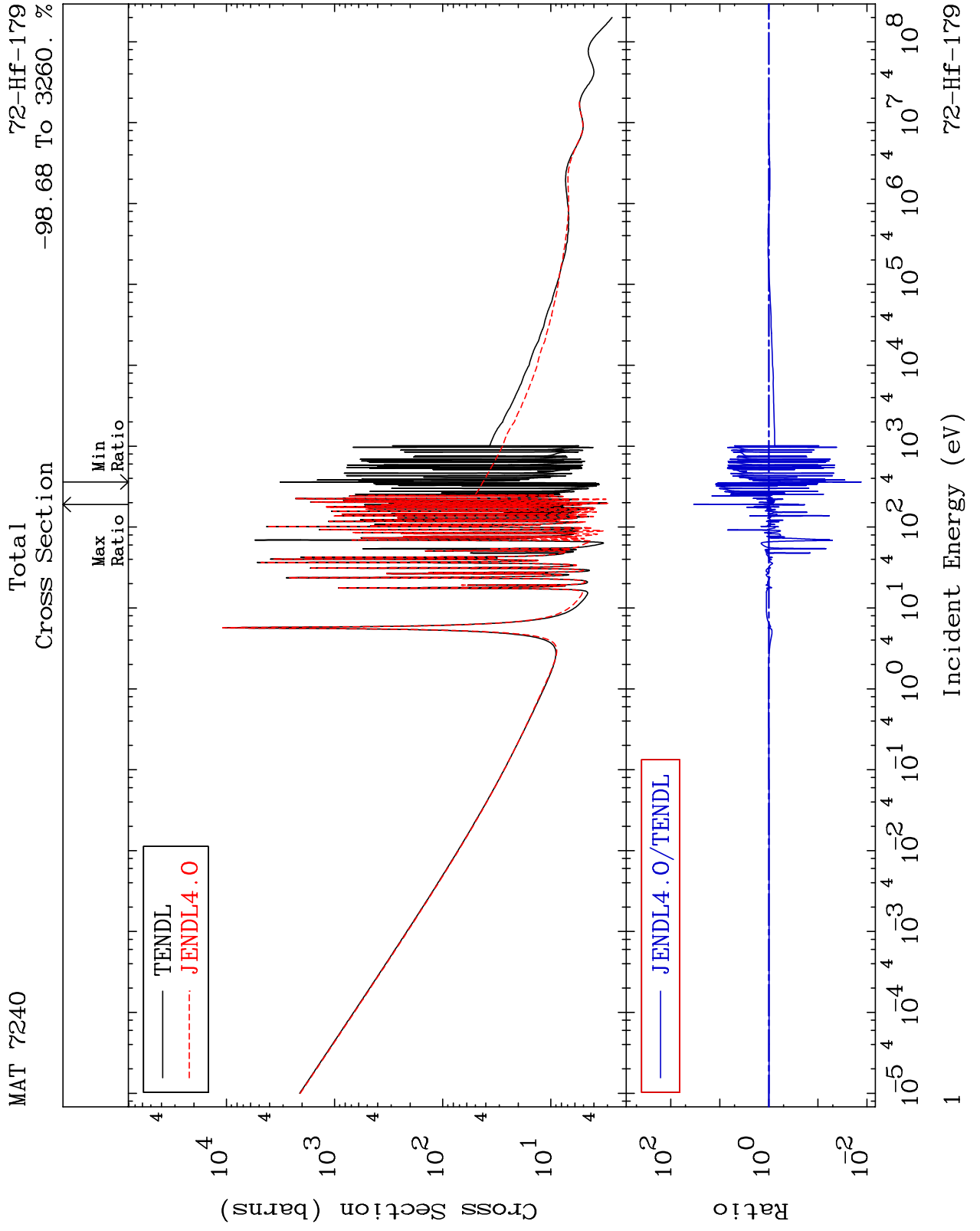
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Press Mouse Button to Start



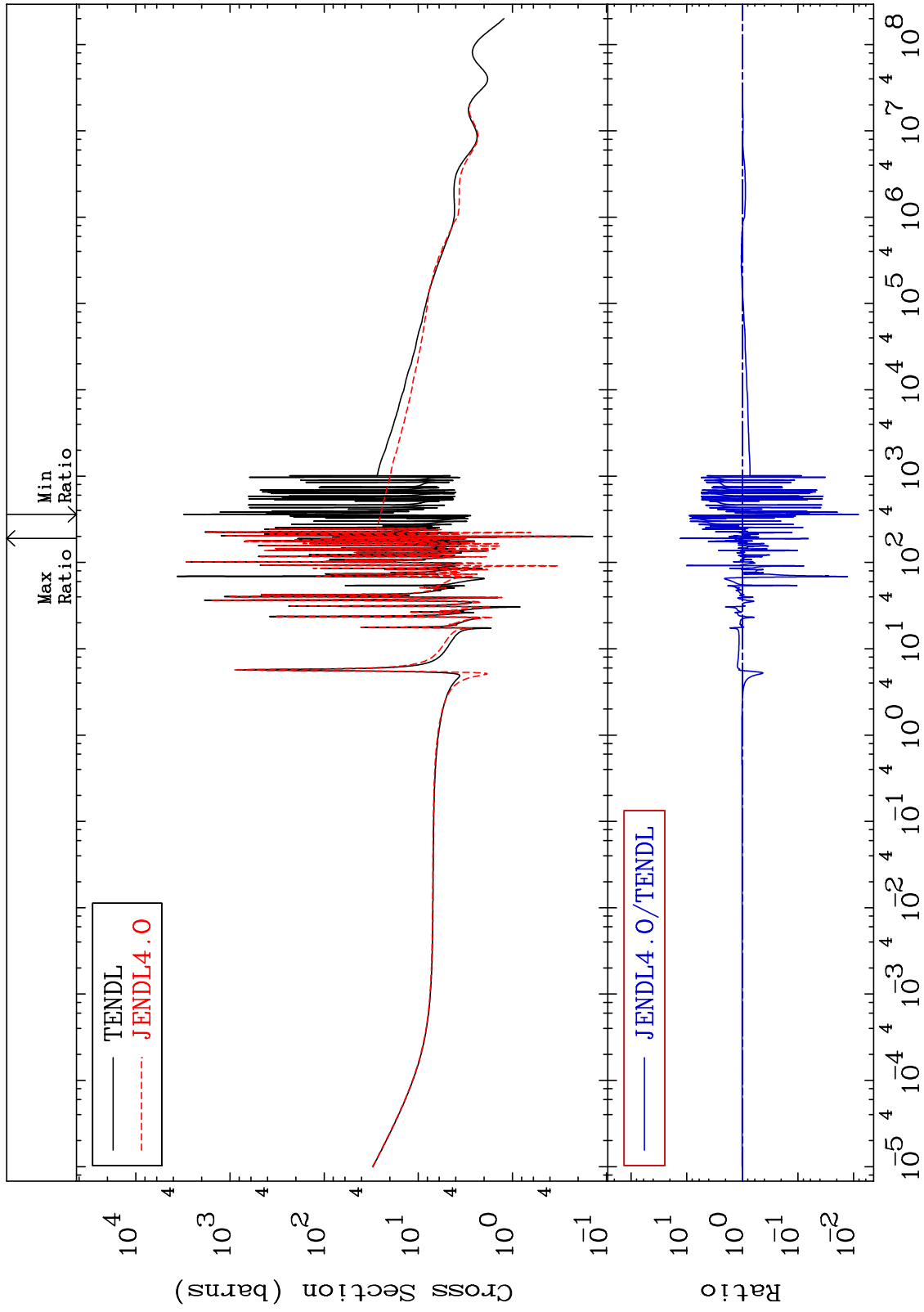
MAT 7240

Elastic

72-Hf-179

Cross Section

-99.18 To 1219. %



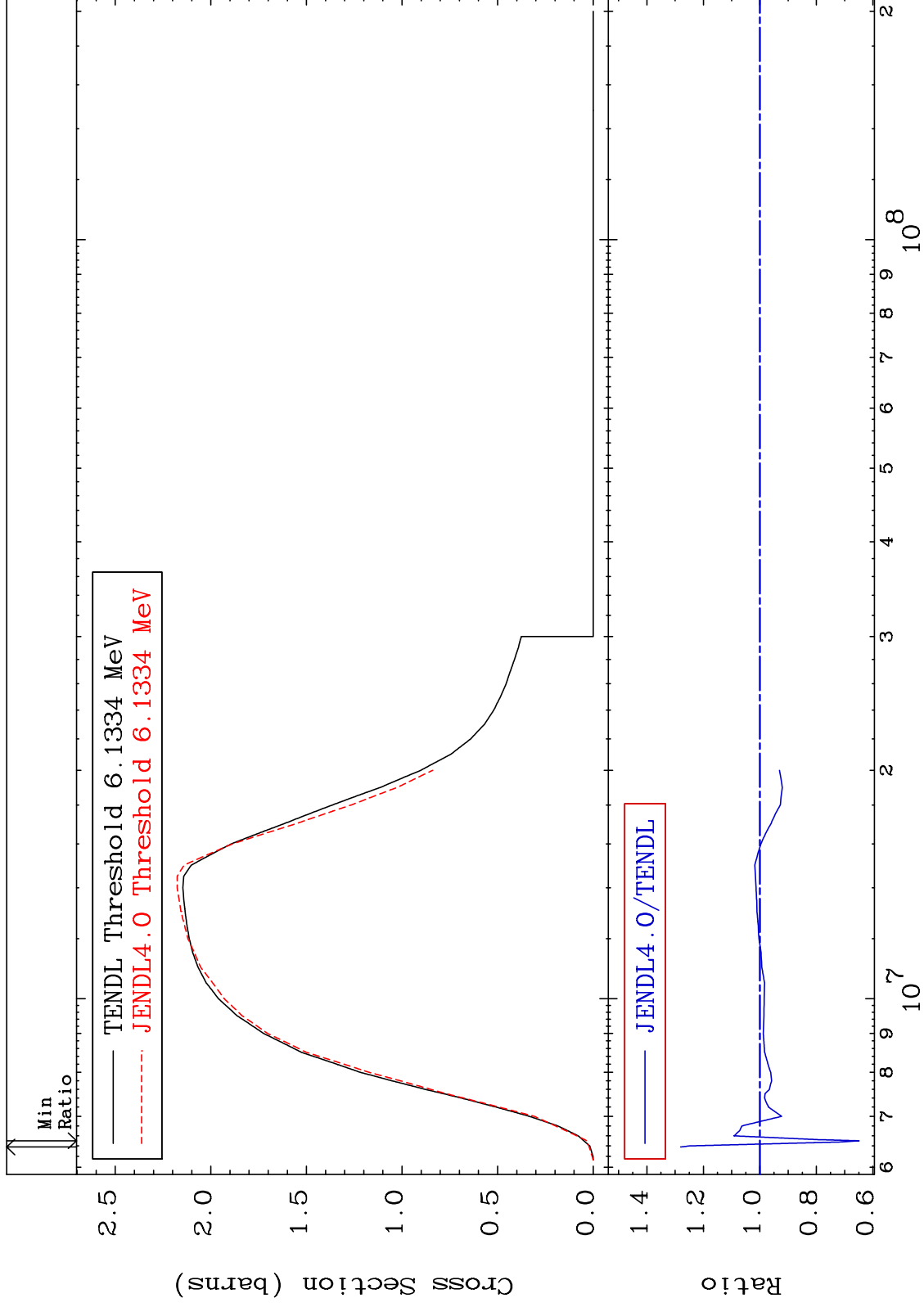
MAT 7240

(n,2n)

72-Hf-179

Cross Section

-35.13 To 28.05 %



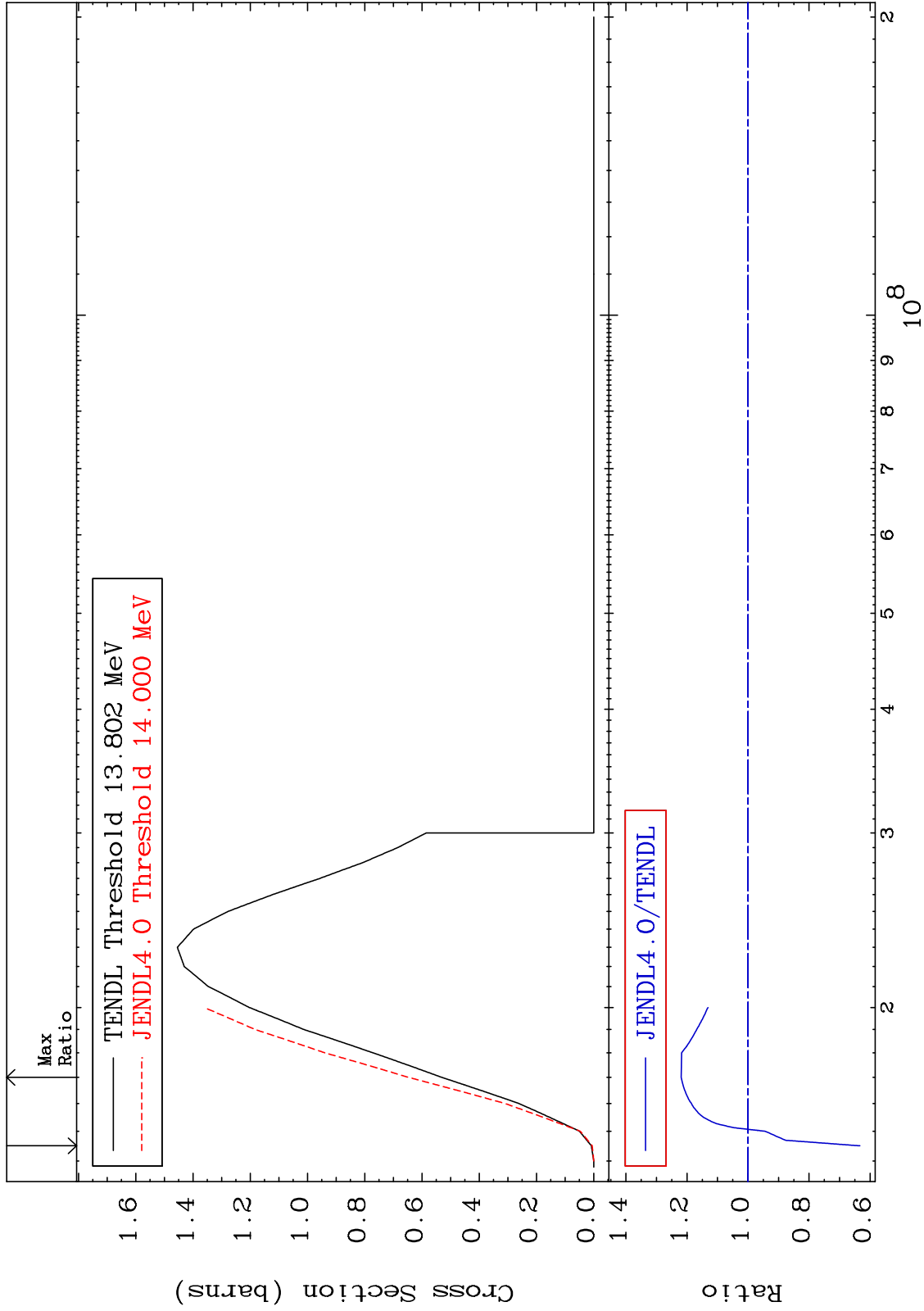
MAT 7240

(n, 3n)

⁷²Hf-179

Cross Section

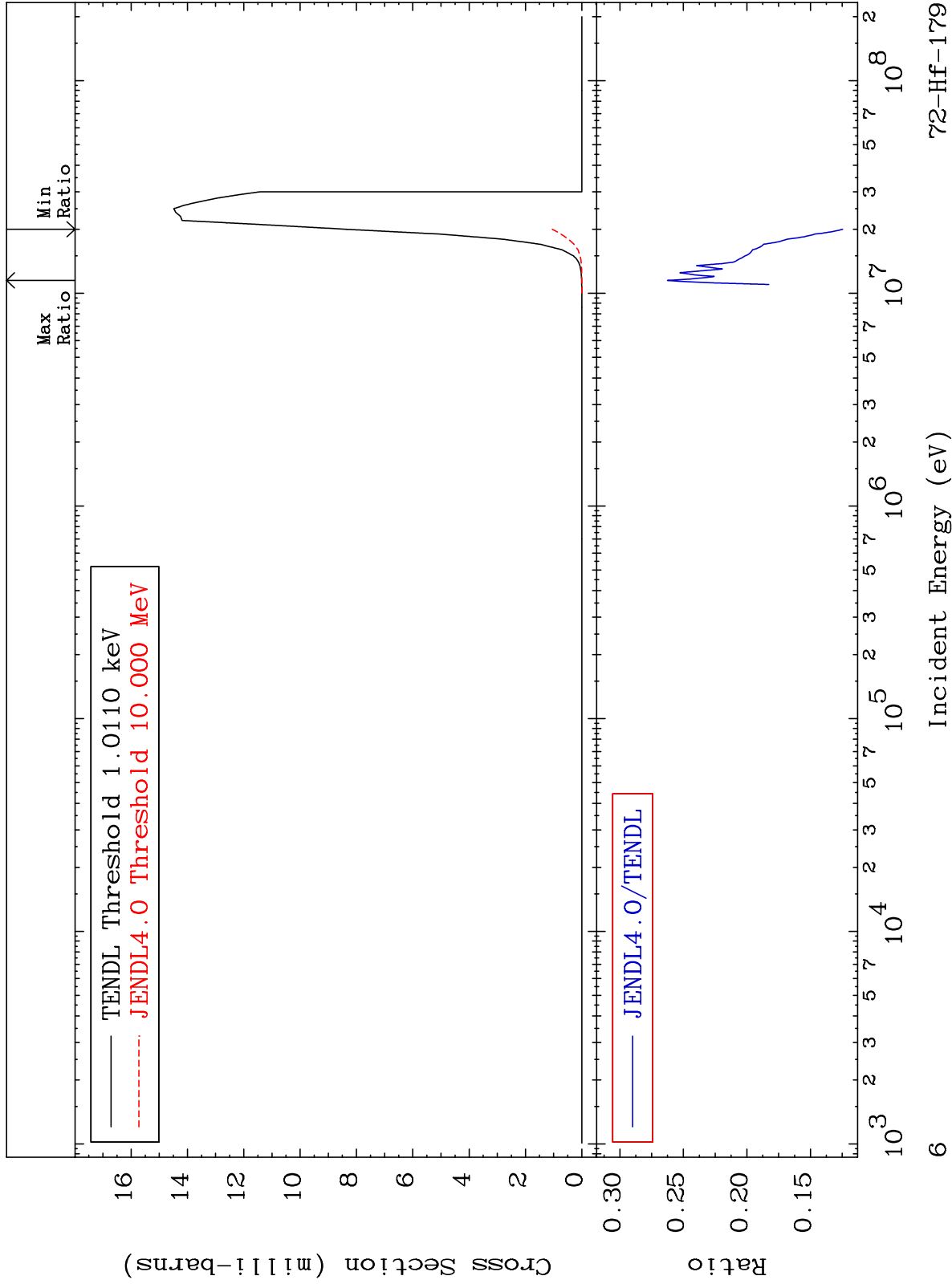
-36.66 To 21.90 %



MAT 7240

(n,n') α
Cross Section

72-Hf-179
-87.54 To -73.75%



72-Hf-179

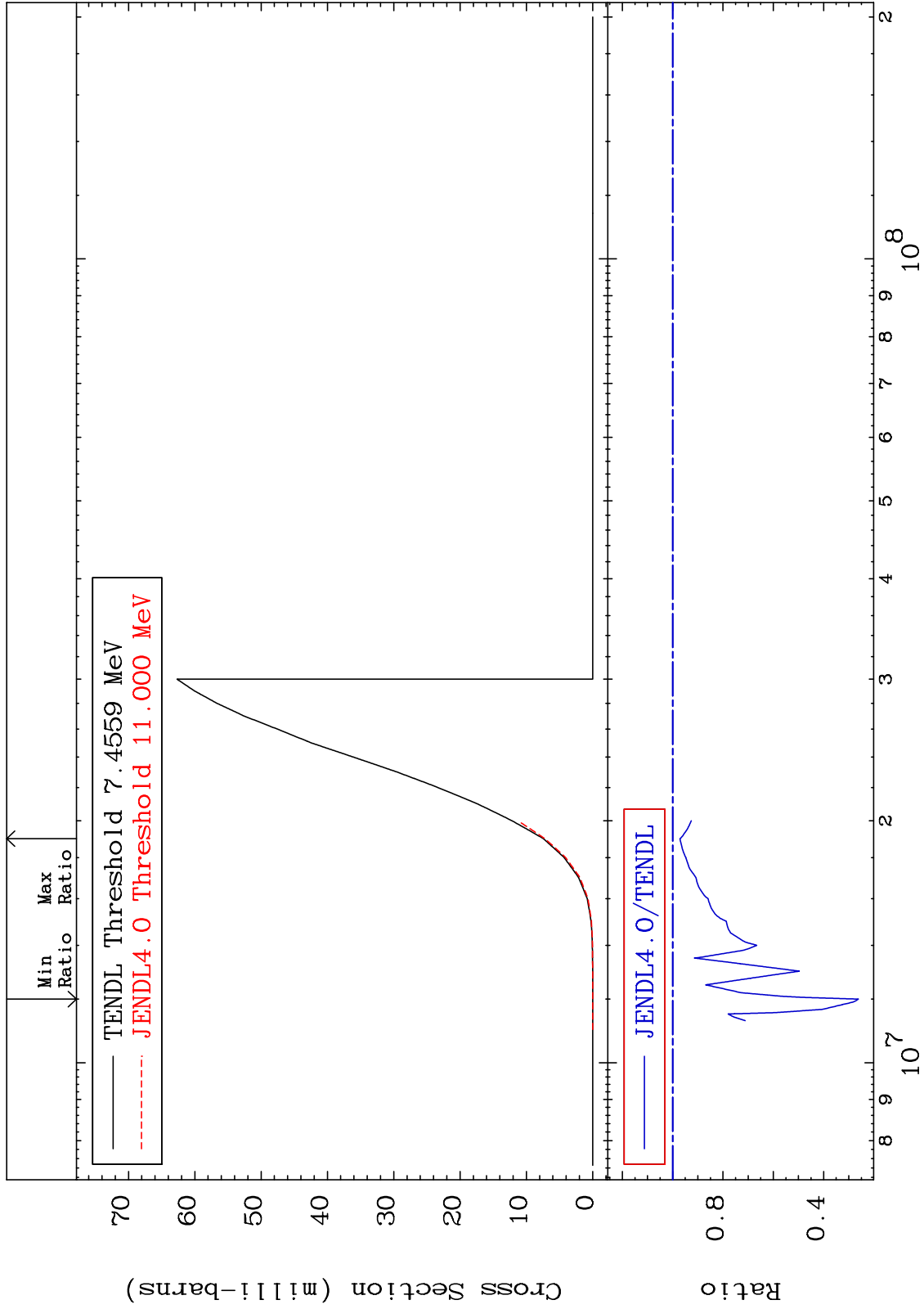
MAT 7240

(n,n') p

72-Hf-179

Cross Section

-73.84 To -2.922%



7

Incident Energy (eV)

72-Hf-179

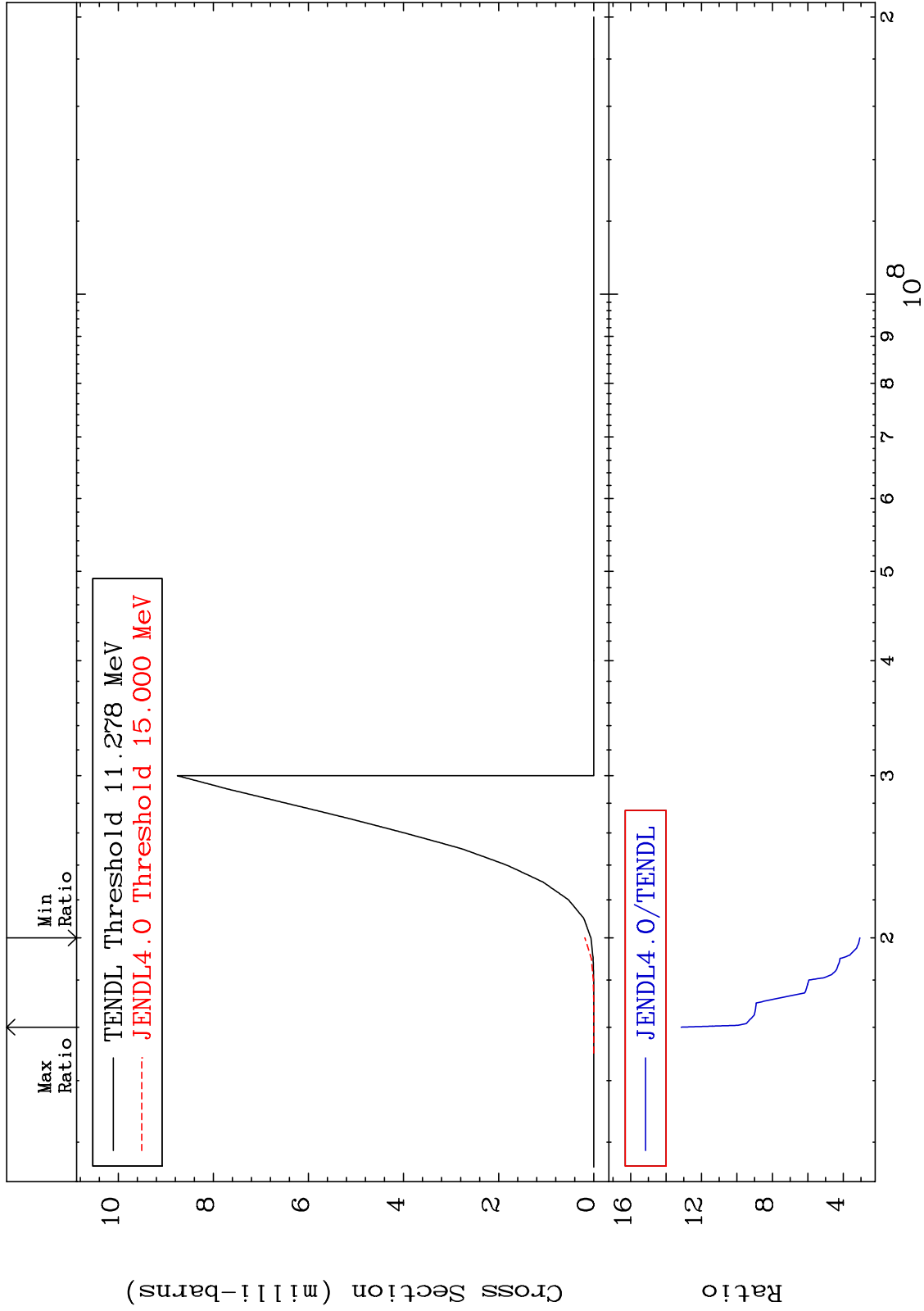
MAT 7240

(n,n') d

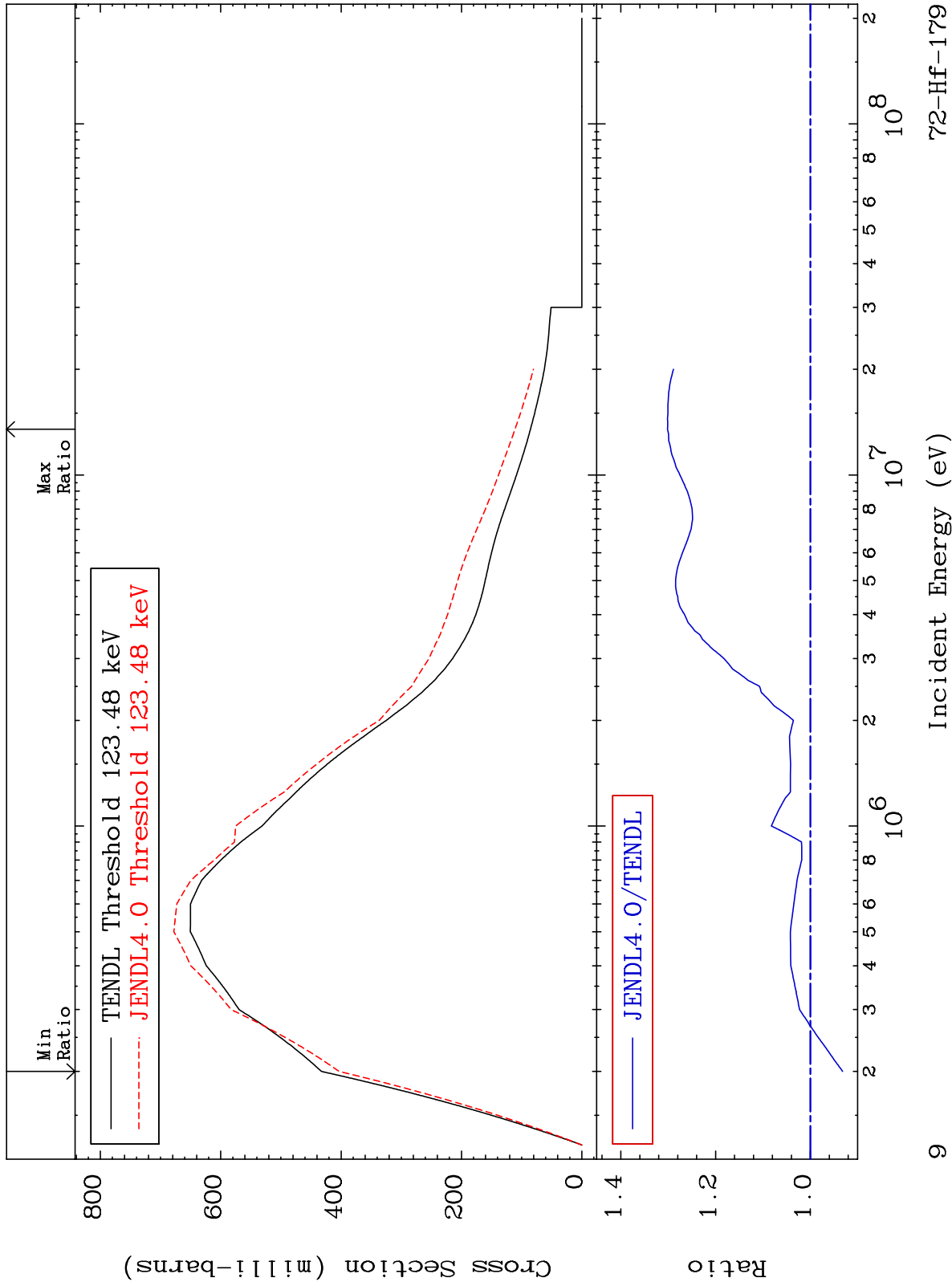
⁷²Hf-179

Cross Section

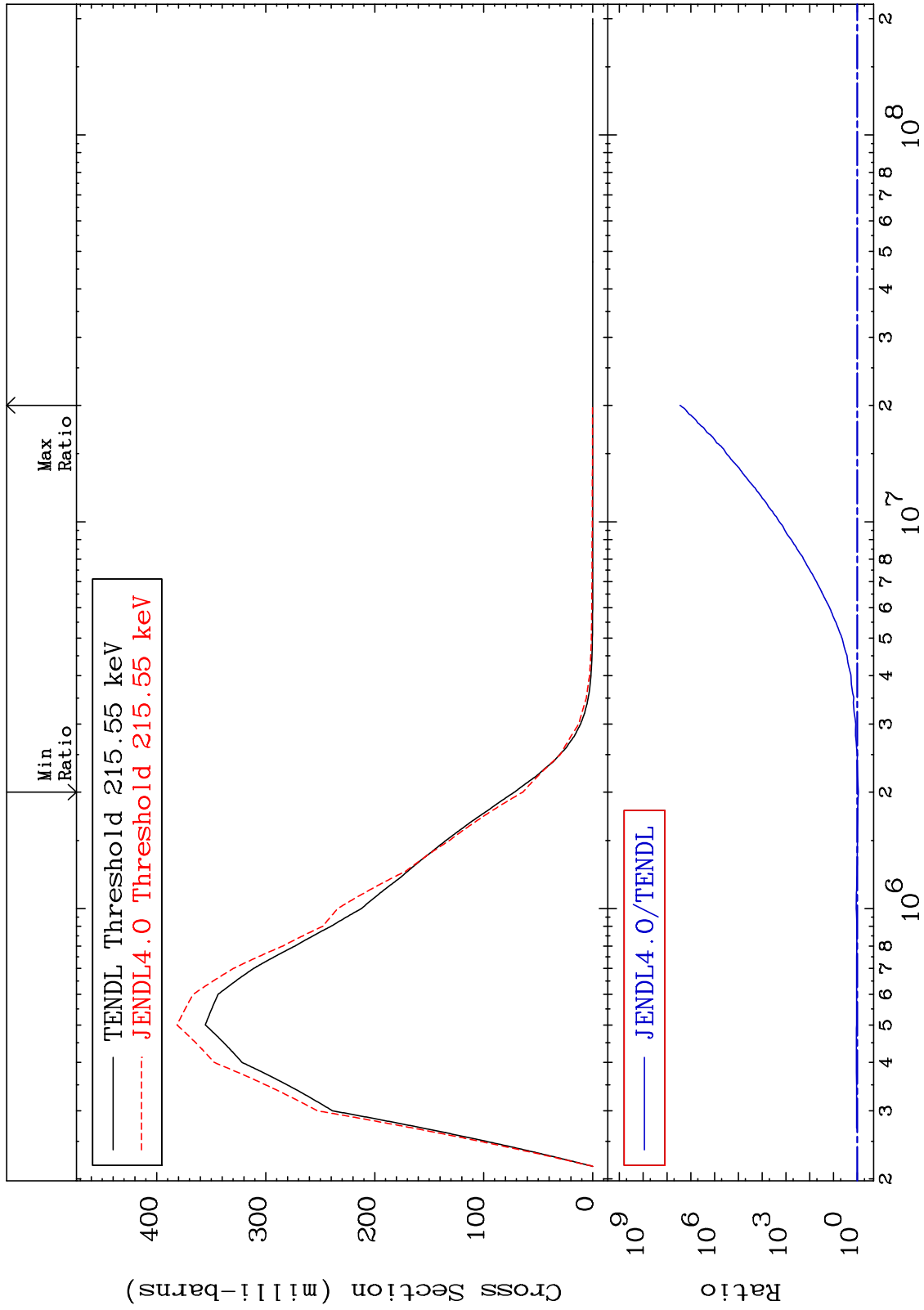
205.9 To 1214. %



MAT 7240 MT= 51 (n,n') Level Cross Section 72-Hf-179 -6.813 To 30.15 %

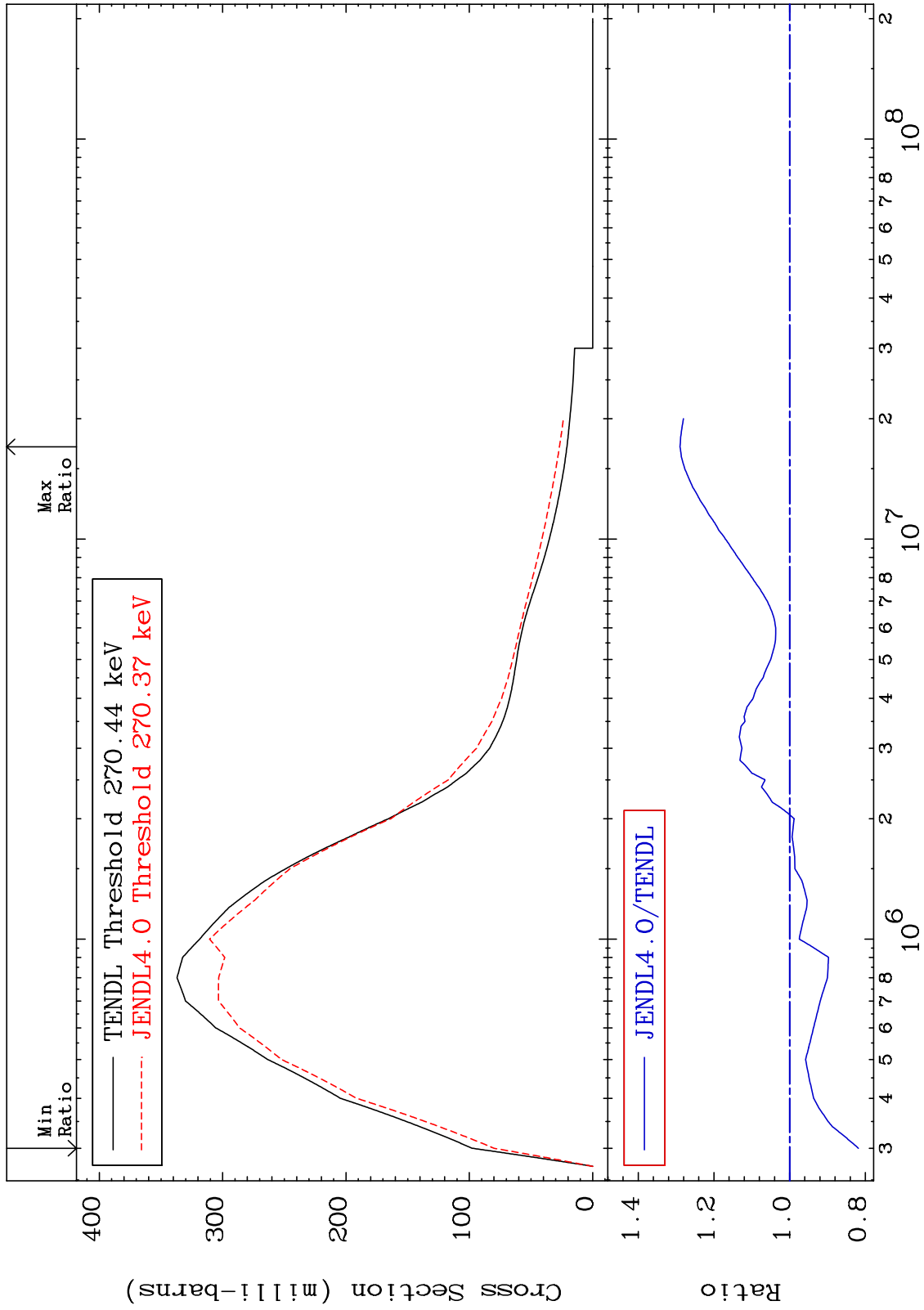


MAT 7240 MT= 52 (n,n') Level Cross Section 72-Hf-179
-10.70 To 9999. %

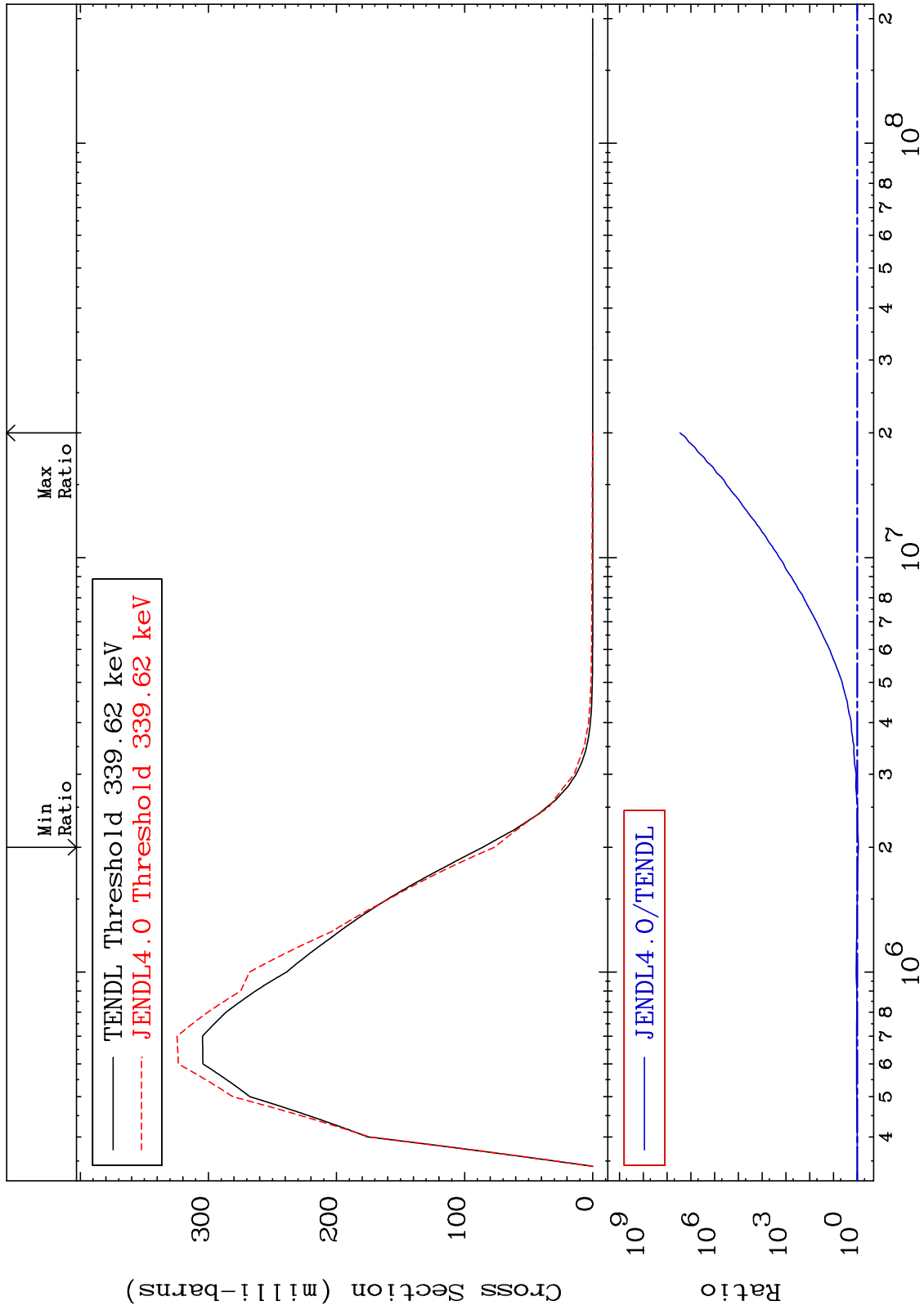


10 Incident Energy (eV) 72-Hf-179

MAT 7240 MT= 53 (n,n') Level Cross Section -18.17 To 28.96 % 72-Hf-179



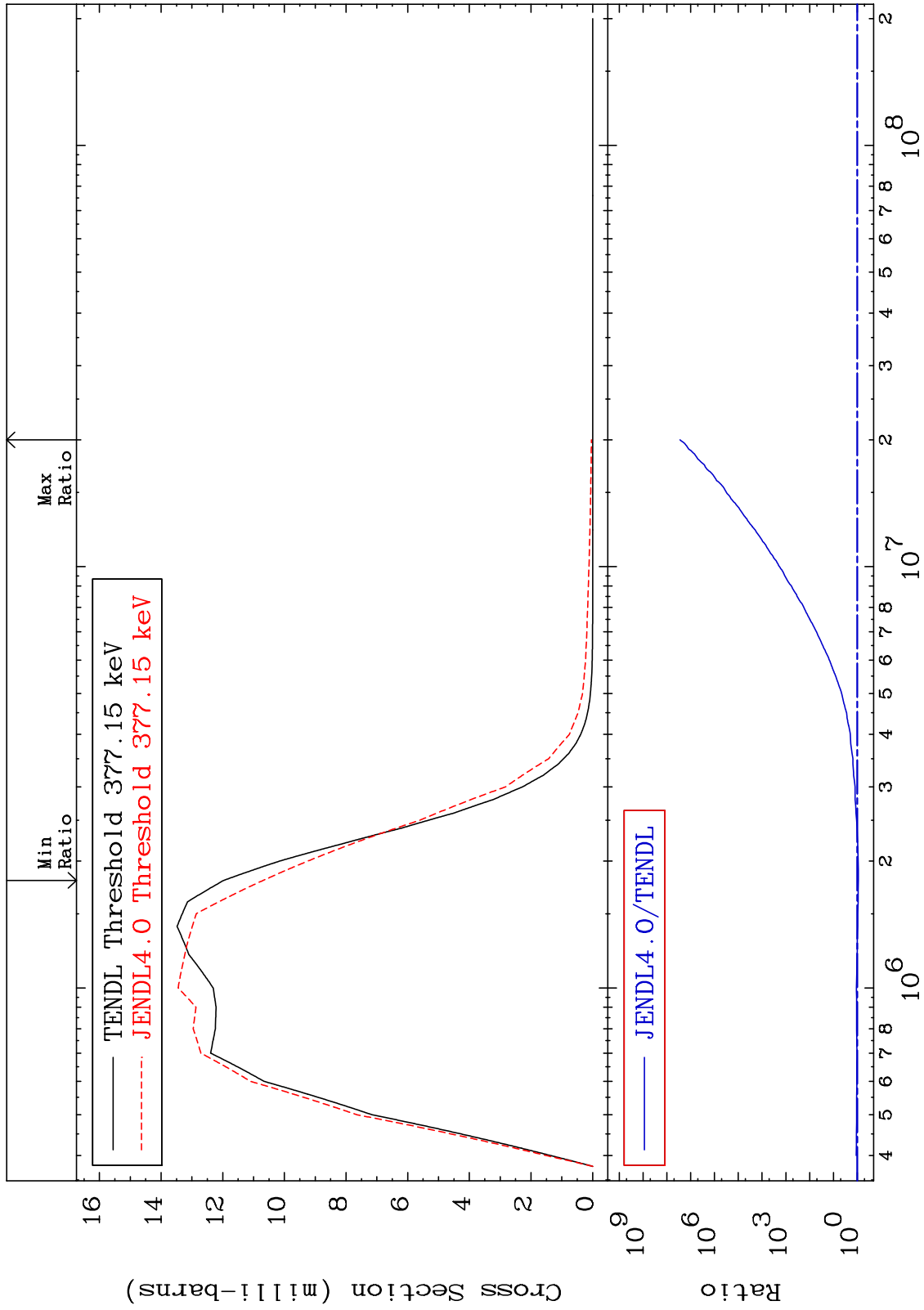
MAT 7240 MT= 54 (n,n') Level Cross Section 72-Hf-179
 -10.56 To 9999. %



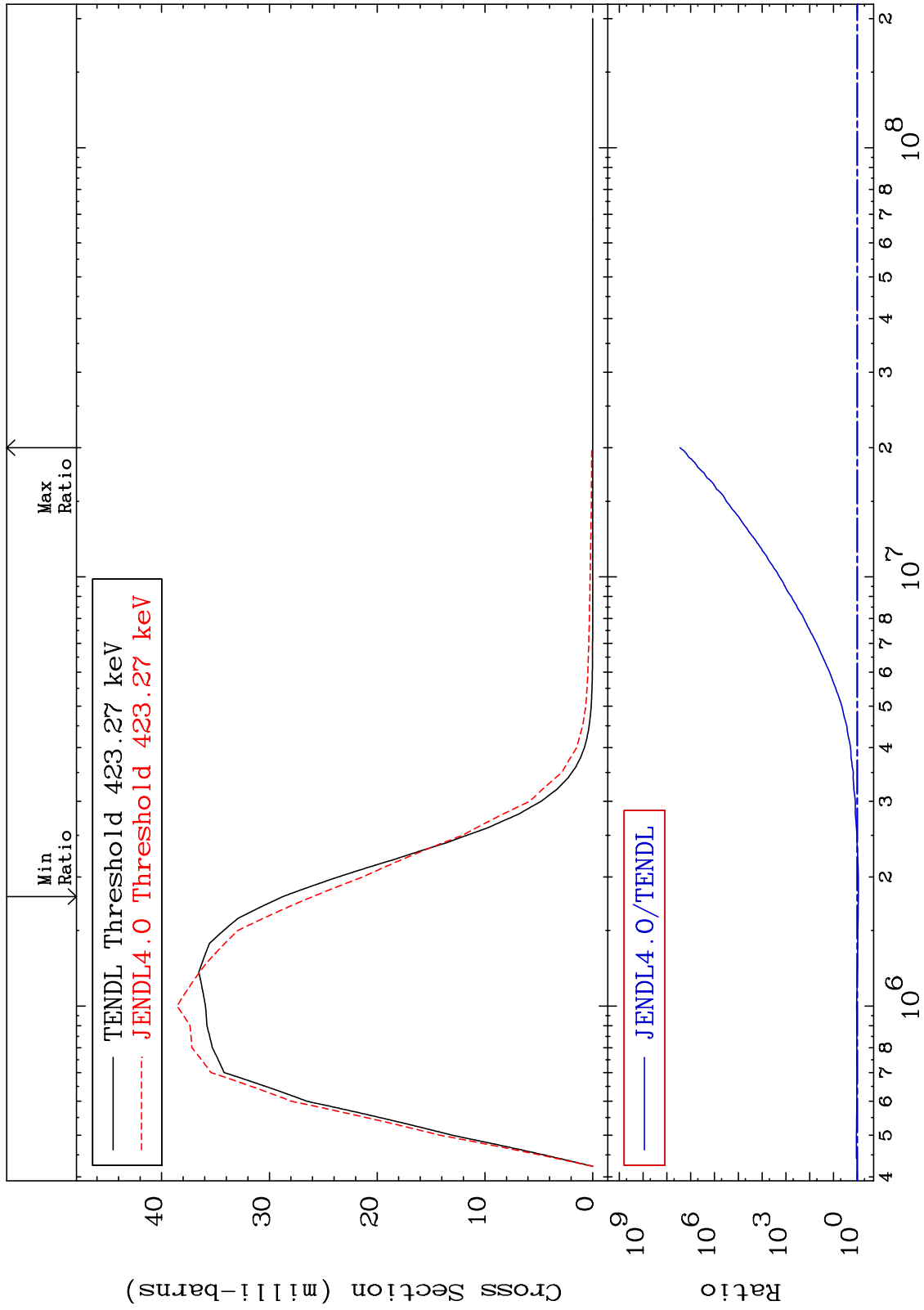
— TENDL Threshold 339.62 keV
 - - - JENDL4.0 Threshold 339.62 keV

— JENDL4.0/TENDL

MAT 7240 MT= 55 (n,n') Level Cross Section 72-Hf-179
 -10.68 To 9999. %



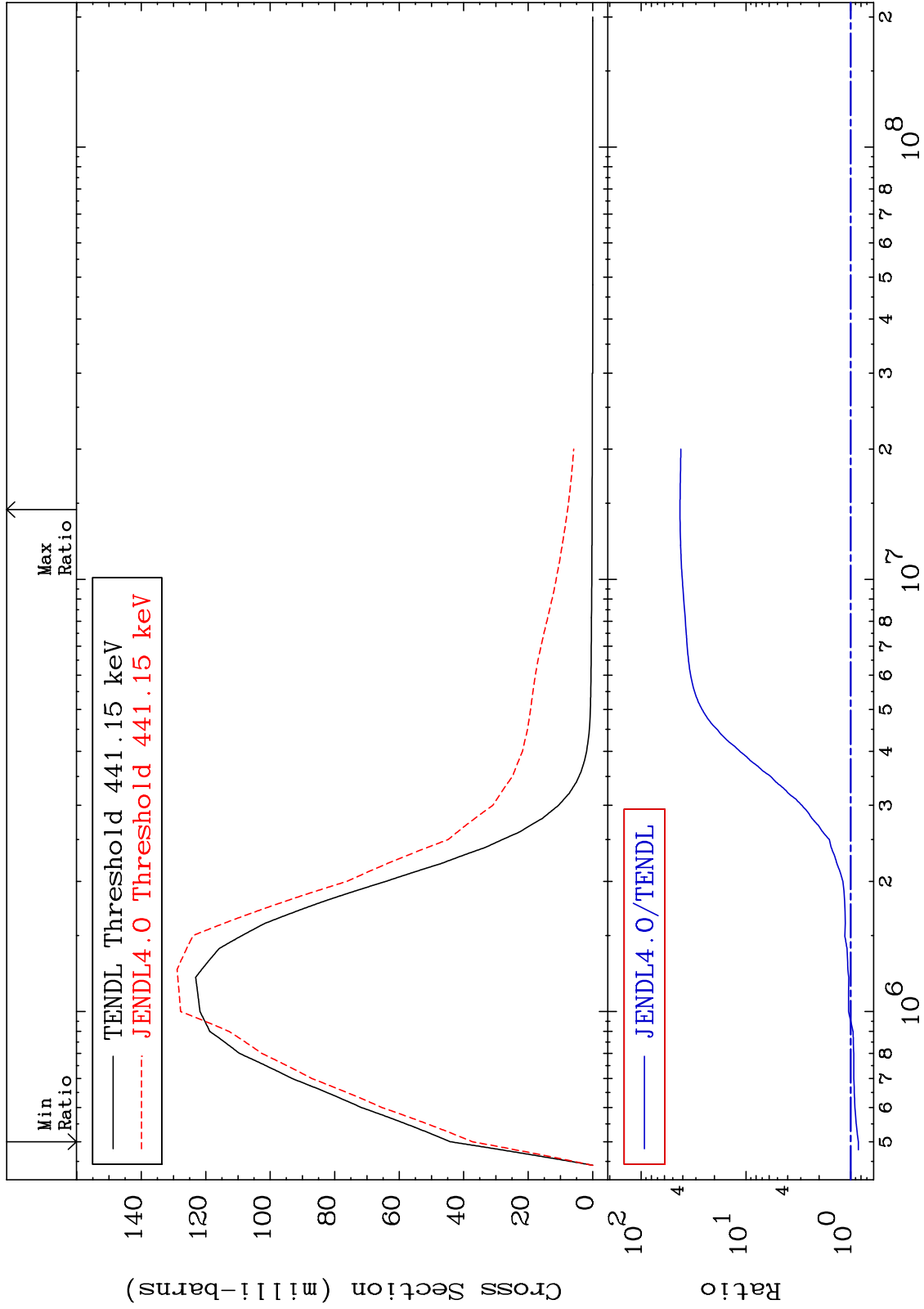
MAT 7240 MT= 56 (n,n') Level Cross Section 72-Hf-179
 -9.701 To 9999. %



MAT 7240

MT= 57 (n,n') Level
Cross Section

72-Hf-179
-15.53 To 4160. %

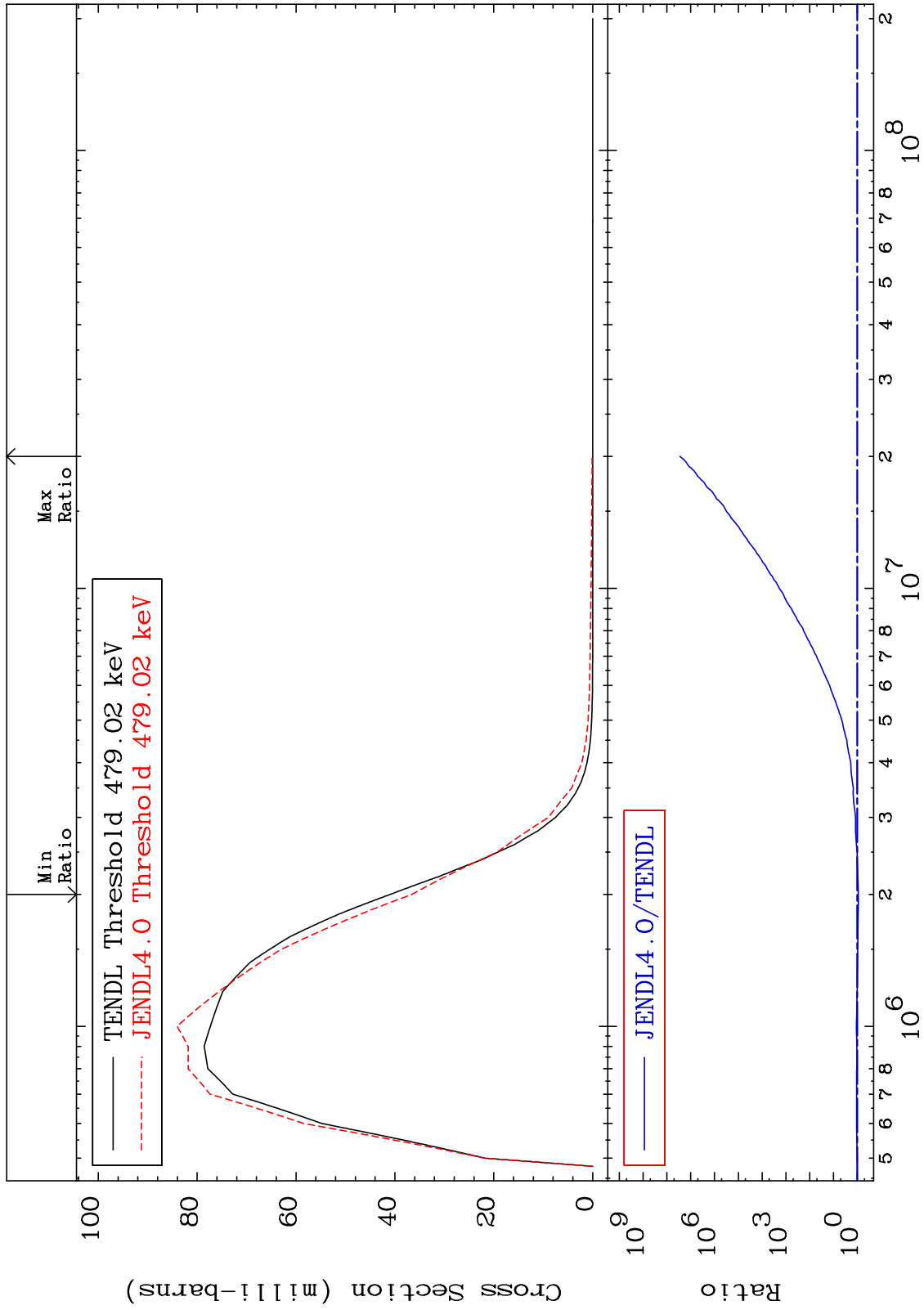


15

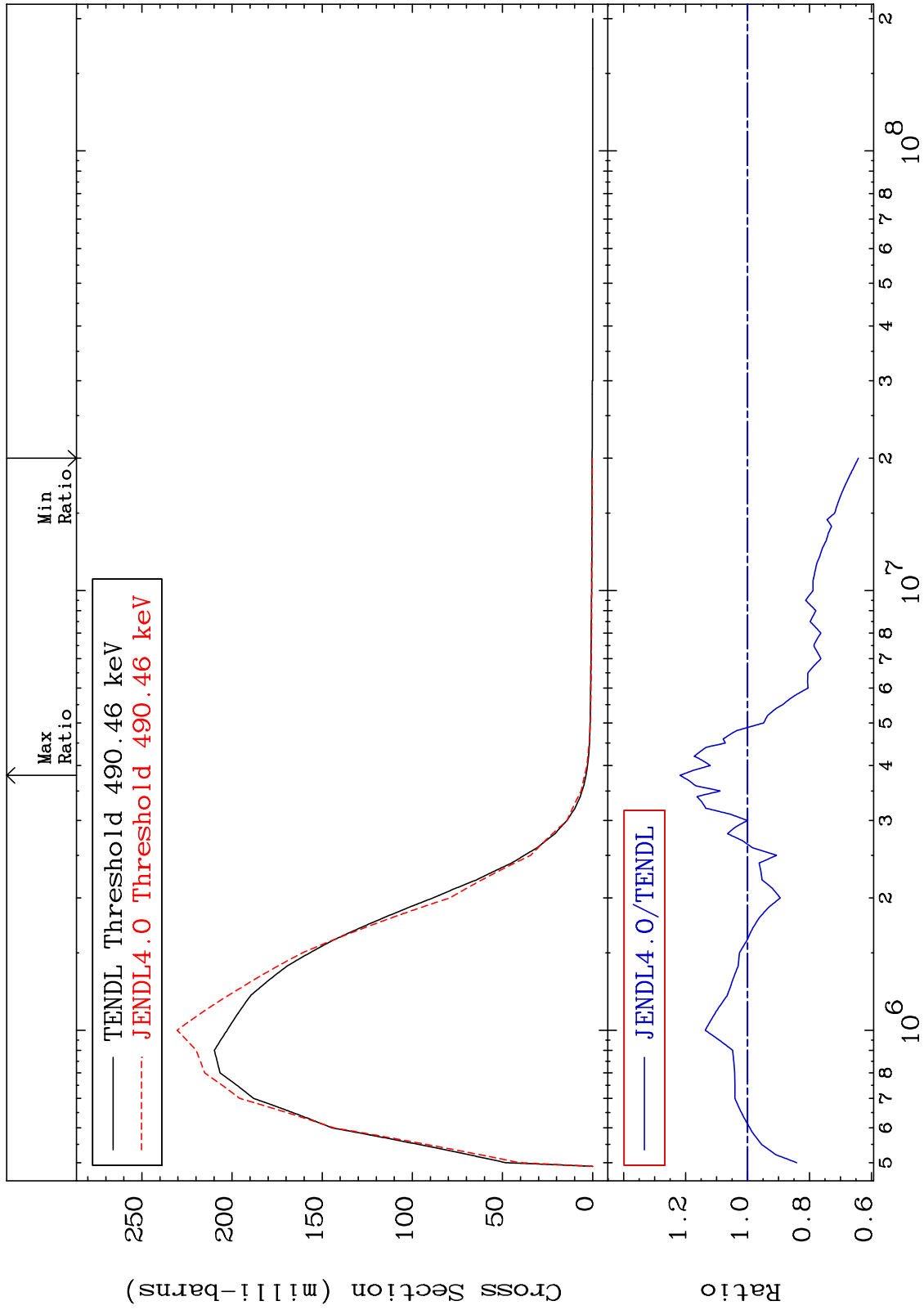
Incident Energy (eV)

72-Hf-179

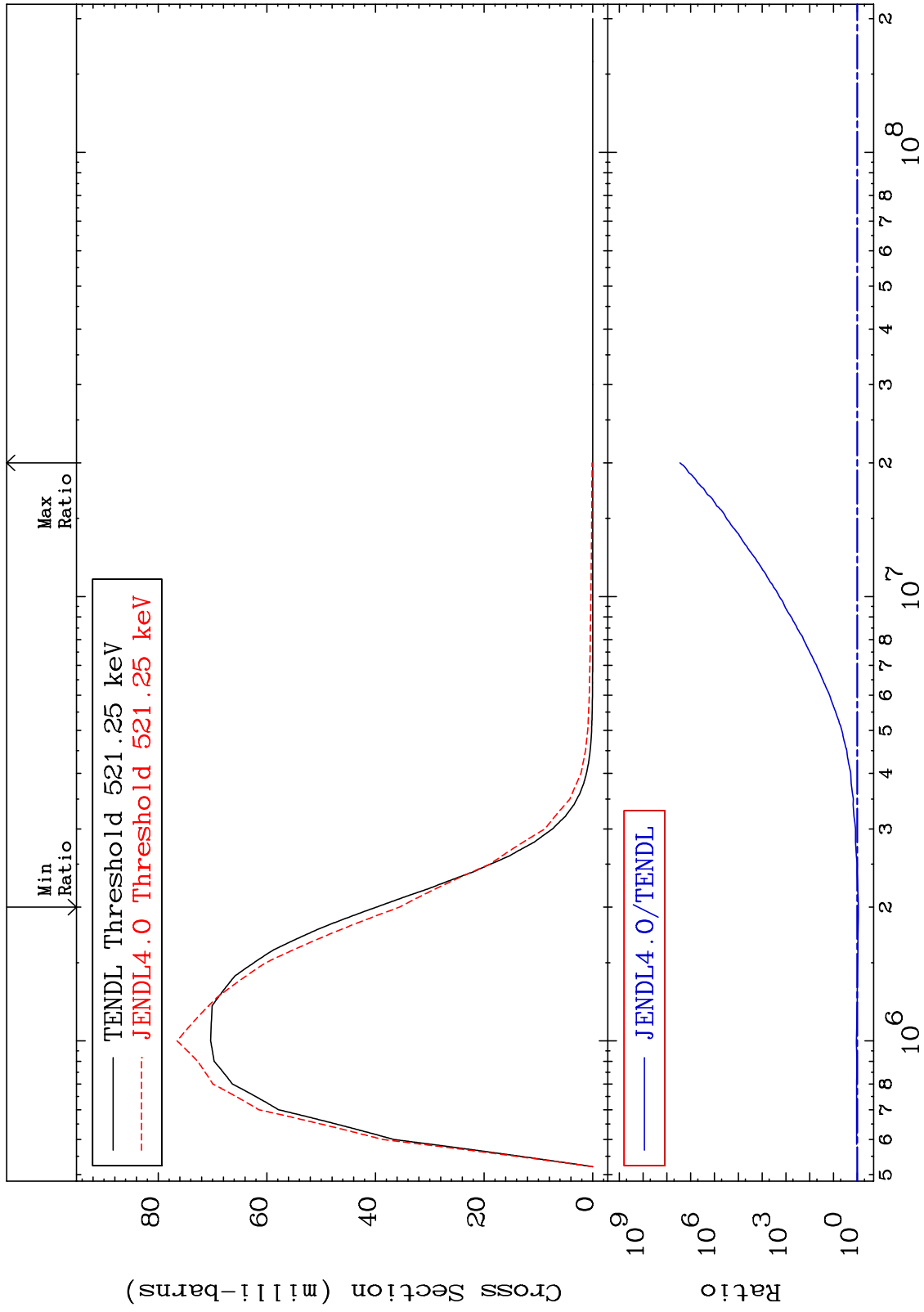
MAT 7240 MT= 58 (n,n') Level Cross Section -10.68 To 9999. % 72-Hf-179



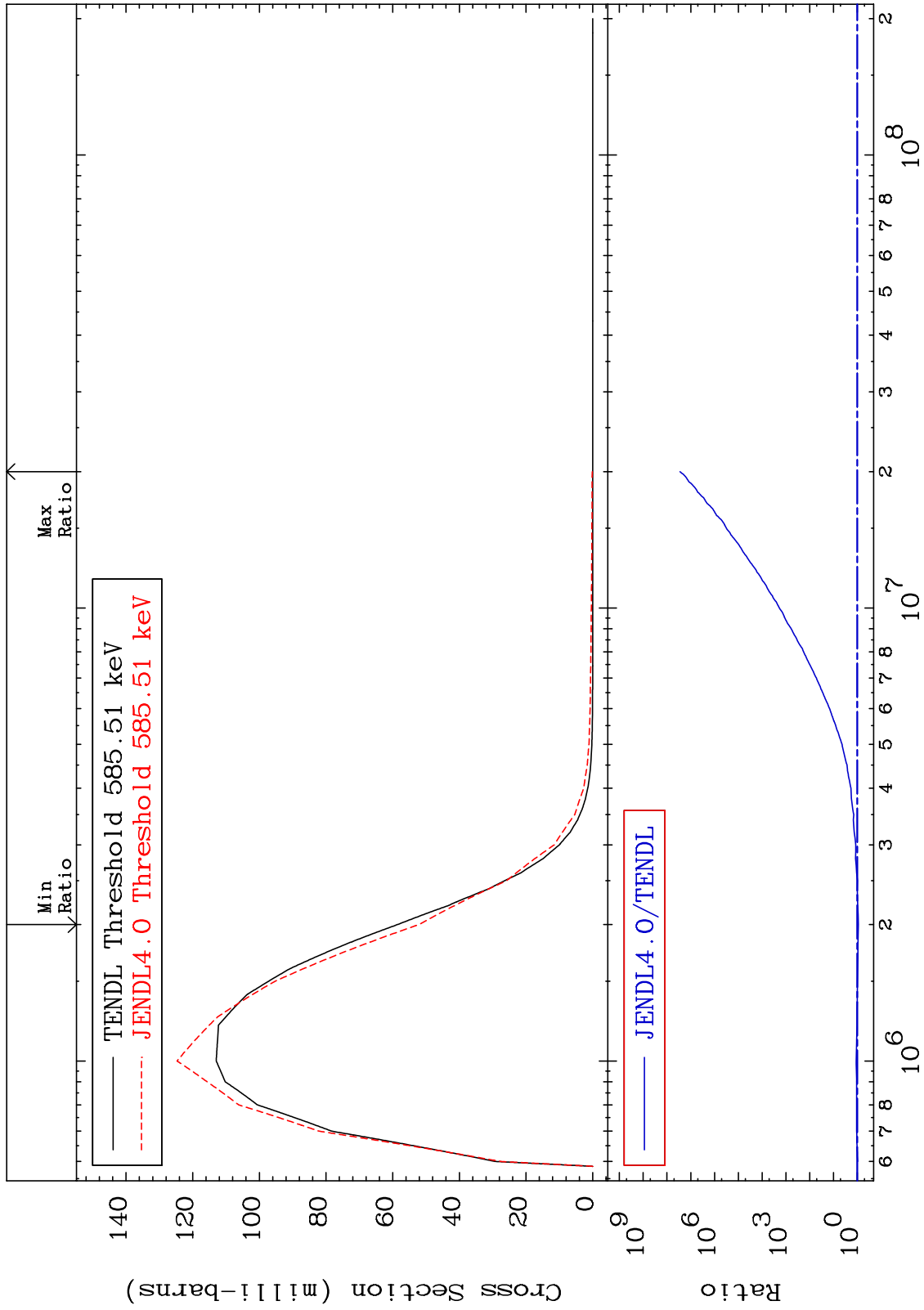
MAT 7240 MT= 59 (n,n') Level Cross Section 72-Hf-179
 -35.77 To 21.80 %



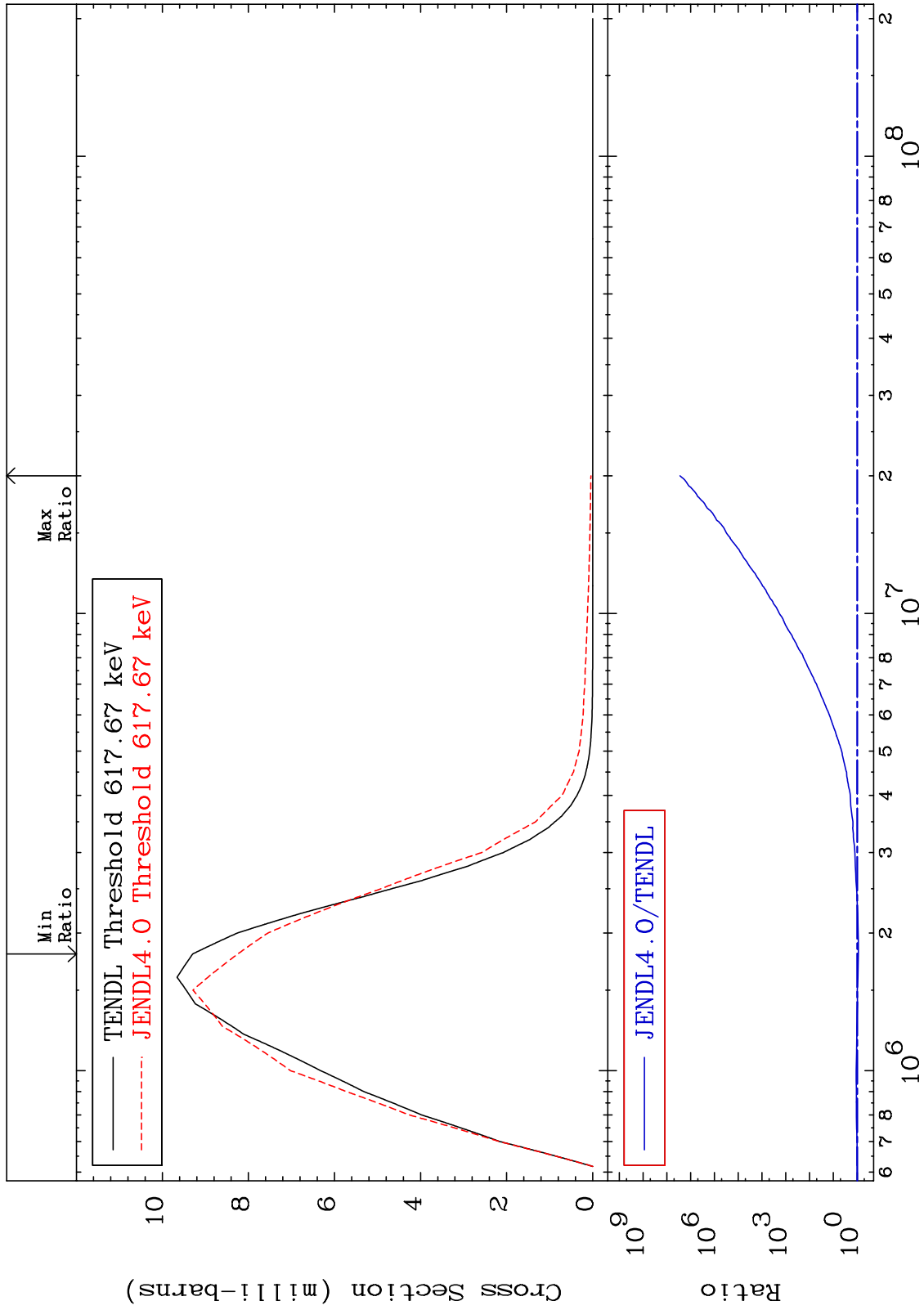
MAT 7240 MT= 60 (n,n') Level Cross Section 72-Hf-179 -10.67 To 9999. %



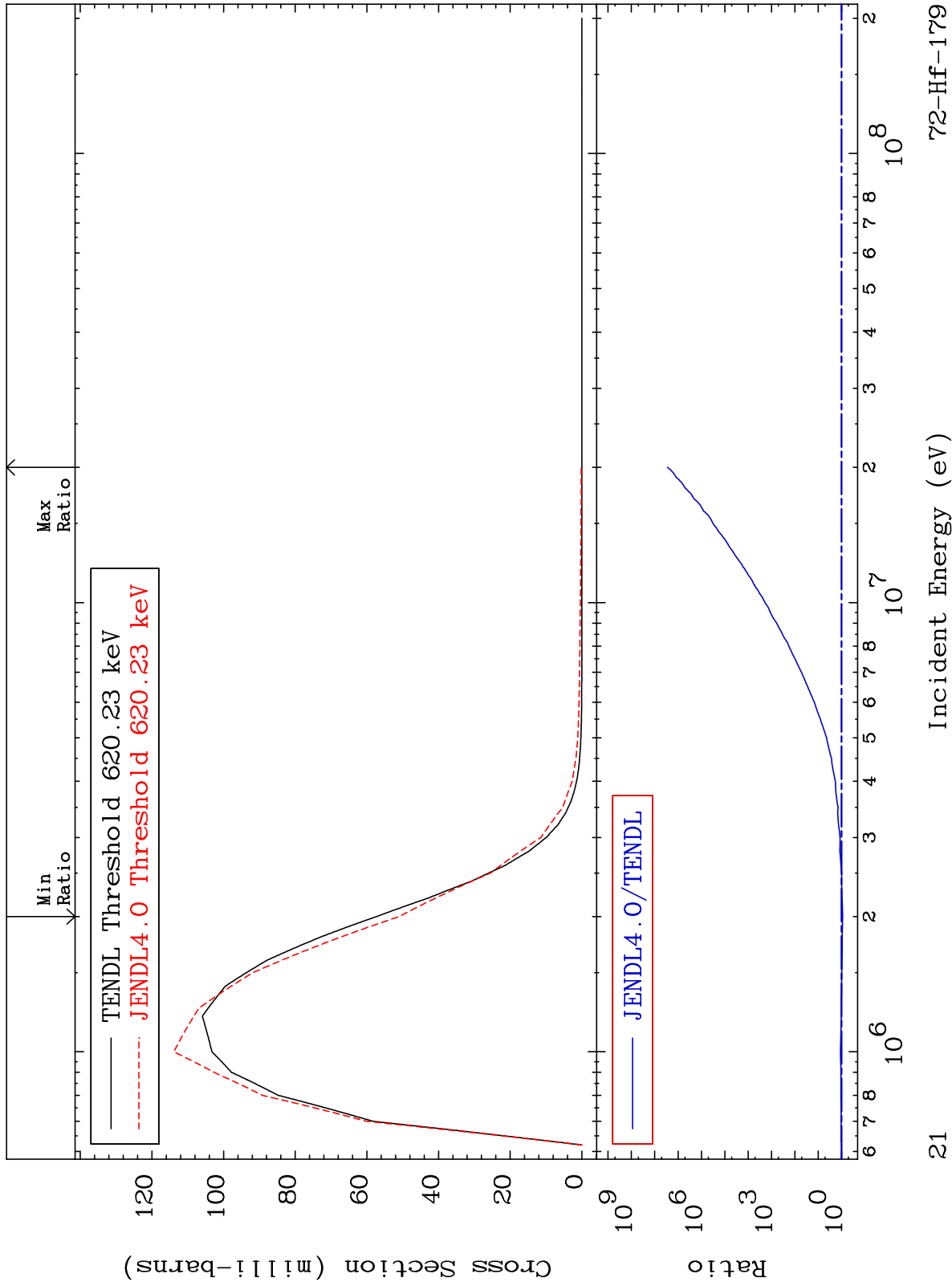
MAT 7240 MT= 61 (n,n') Level Cross Section -11.01 To 9999. % 72-Hf-179



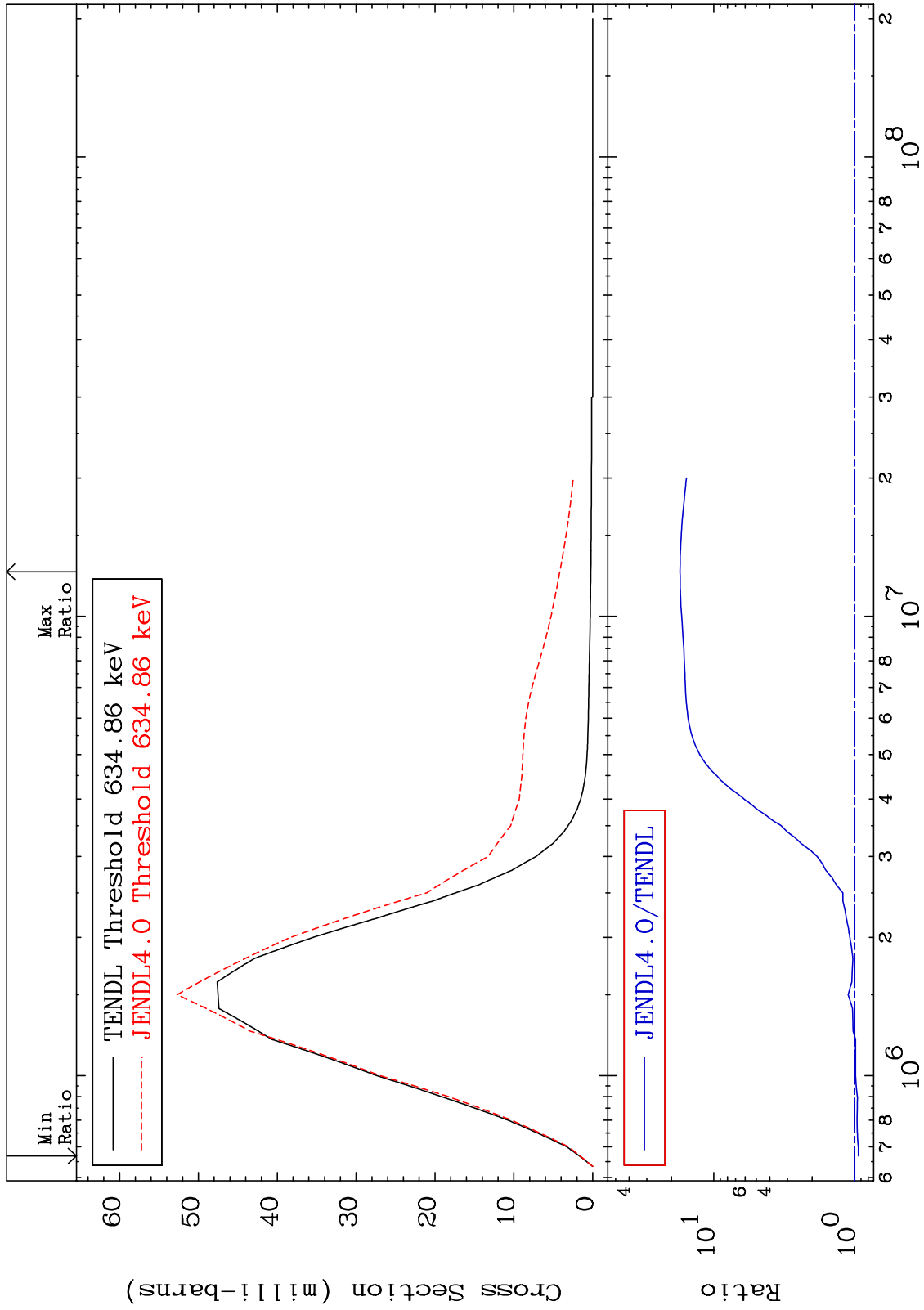
MAT 7240 MT= 62 (n,n') Level Cross Section -11.28 To 9999. % 72-Hf-179



MAT 7240 MT= 63 (n,n') Level Cross Section -11.04 To 9999. % 72-Hf-179



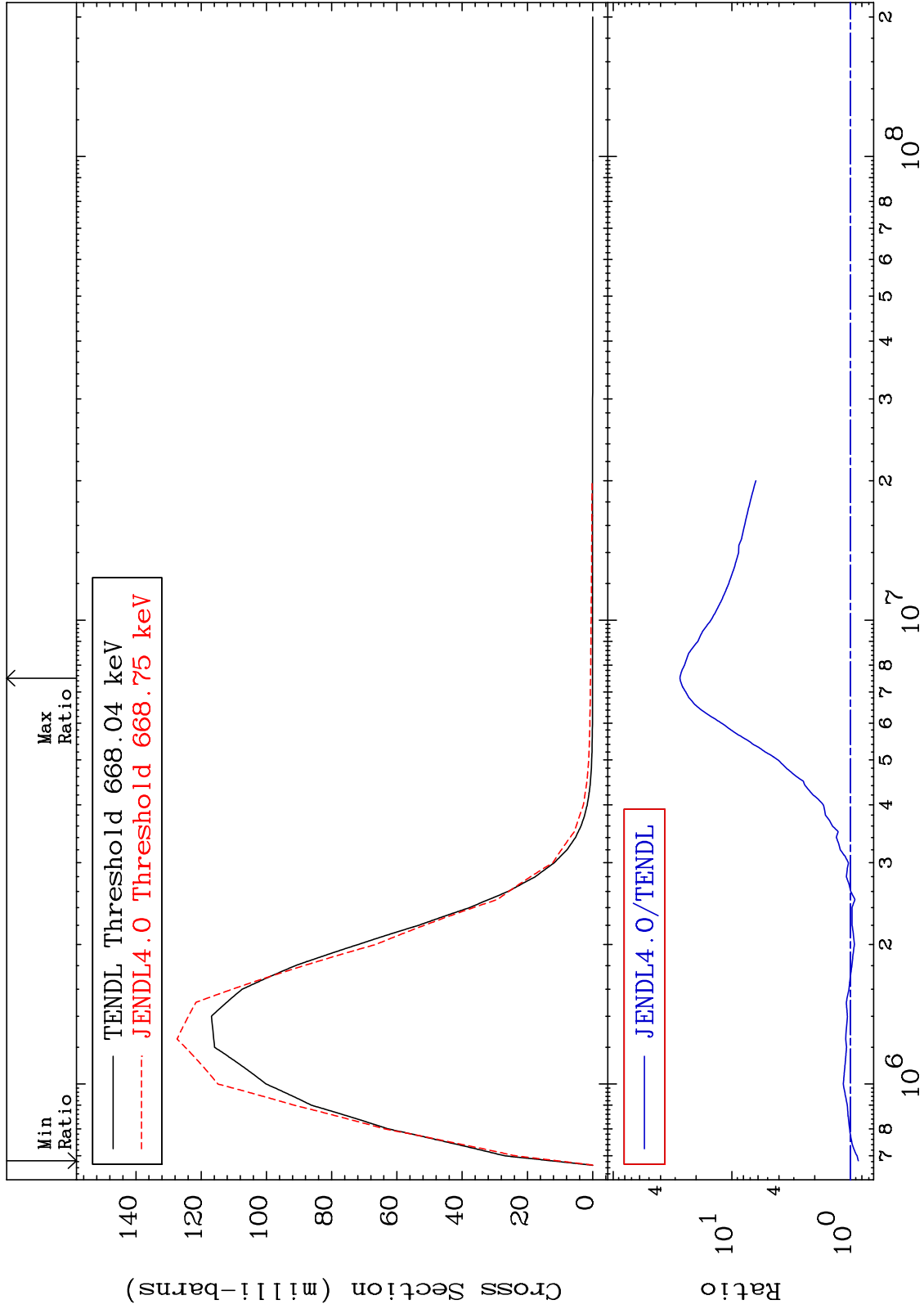
MAT 7240 MT= 64 (n,n') Level Cross Section 72-Hf-179
 -6.103 To 1640. %

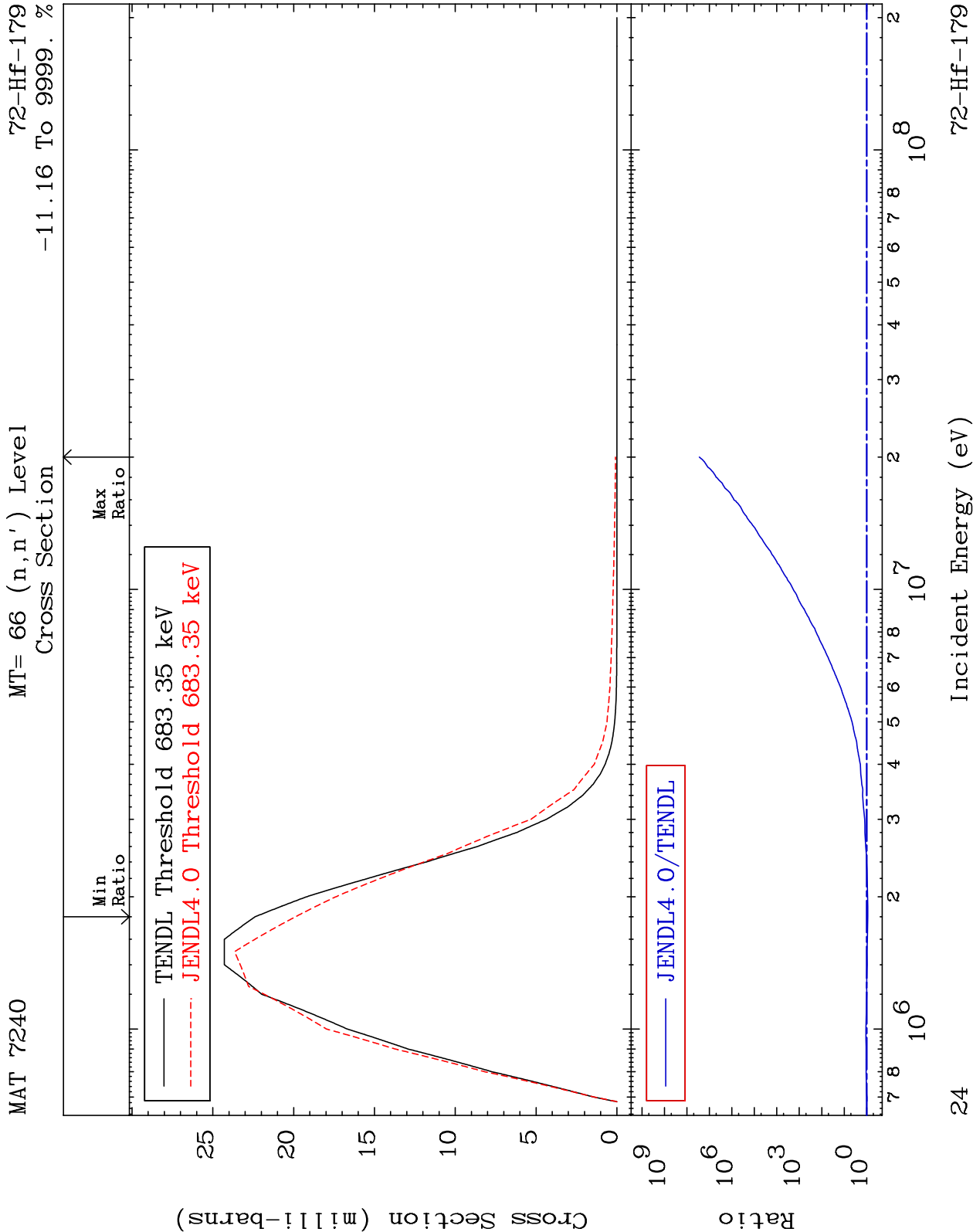


MAT 7240

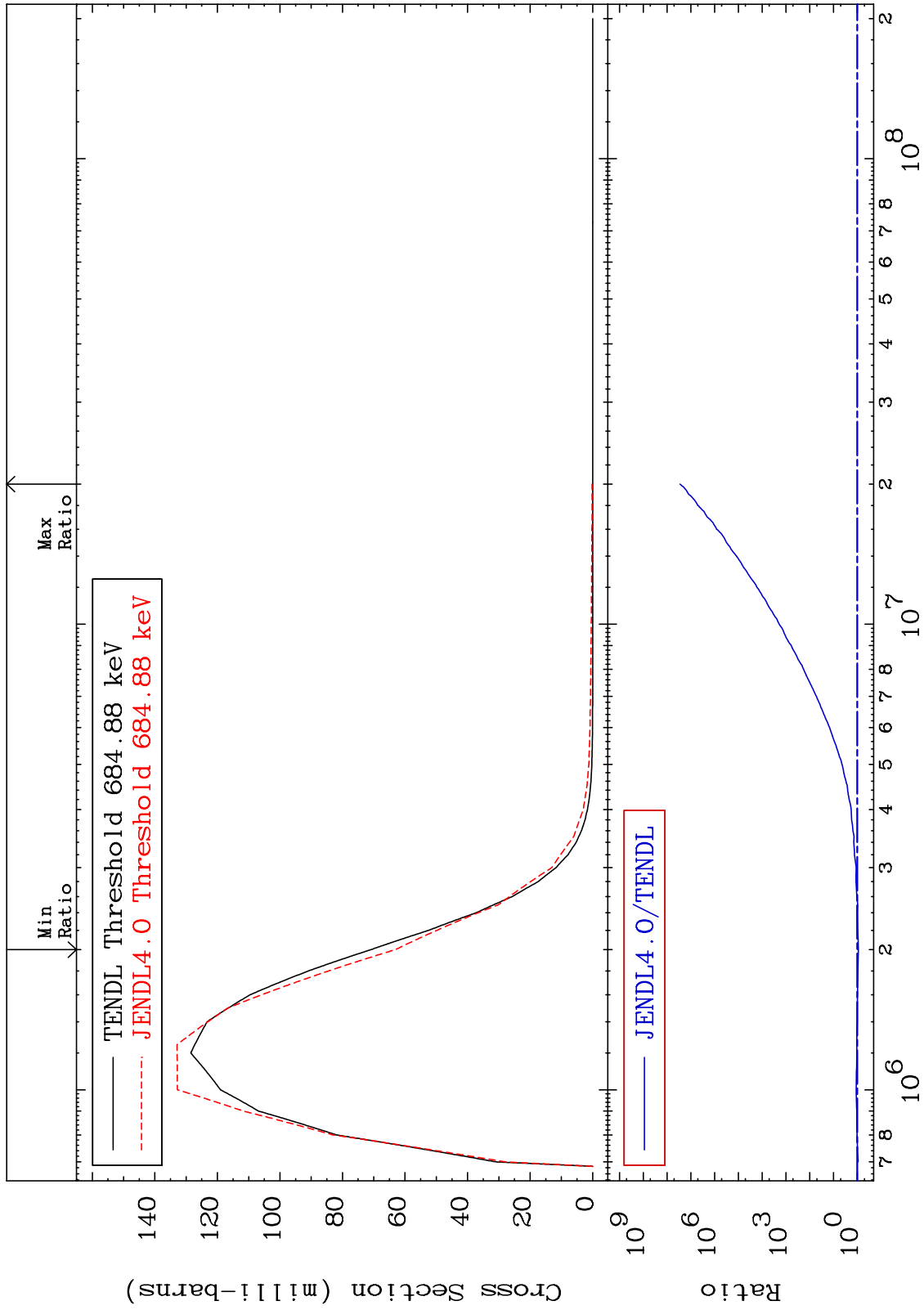
MT= 65 (n,n') Level
Cross Section

72-Hf-179
-14.39 To 2635. %

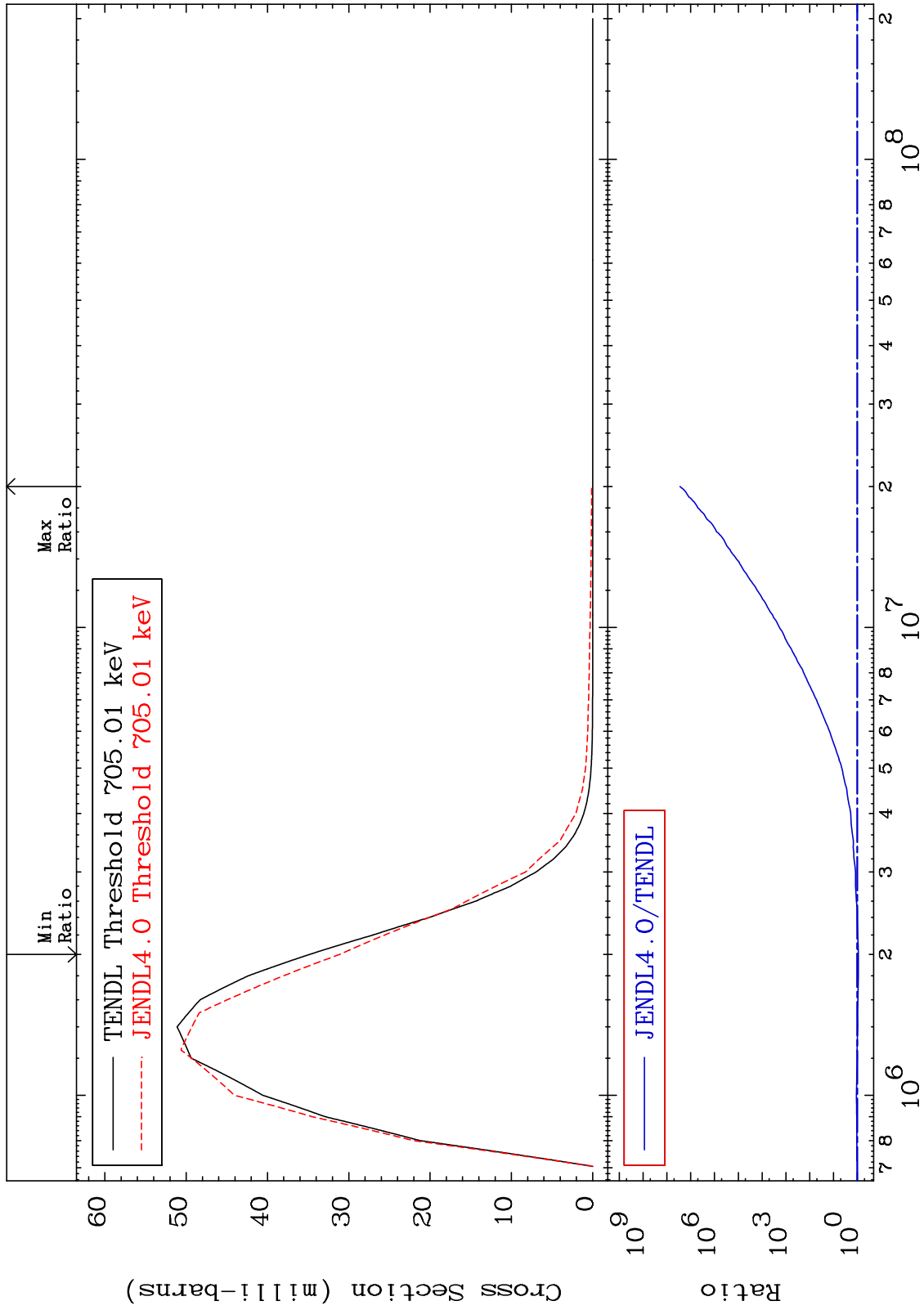




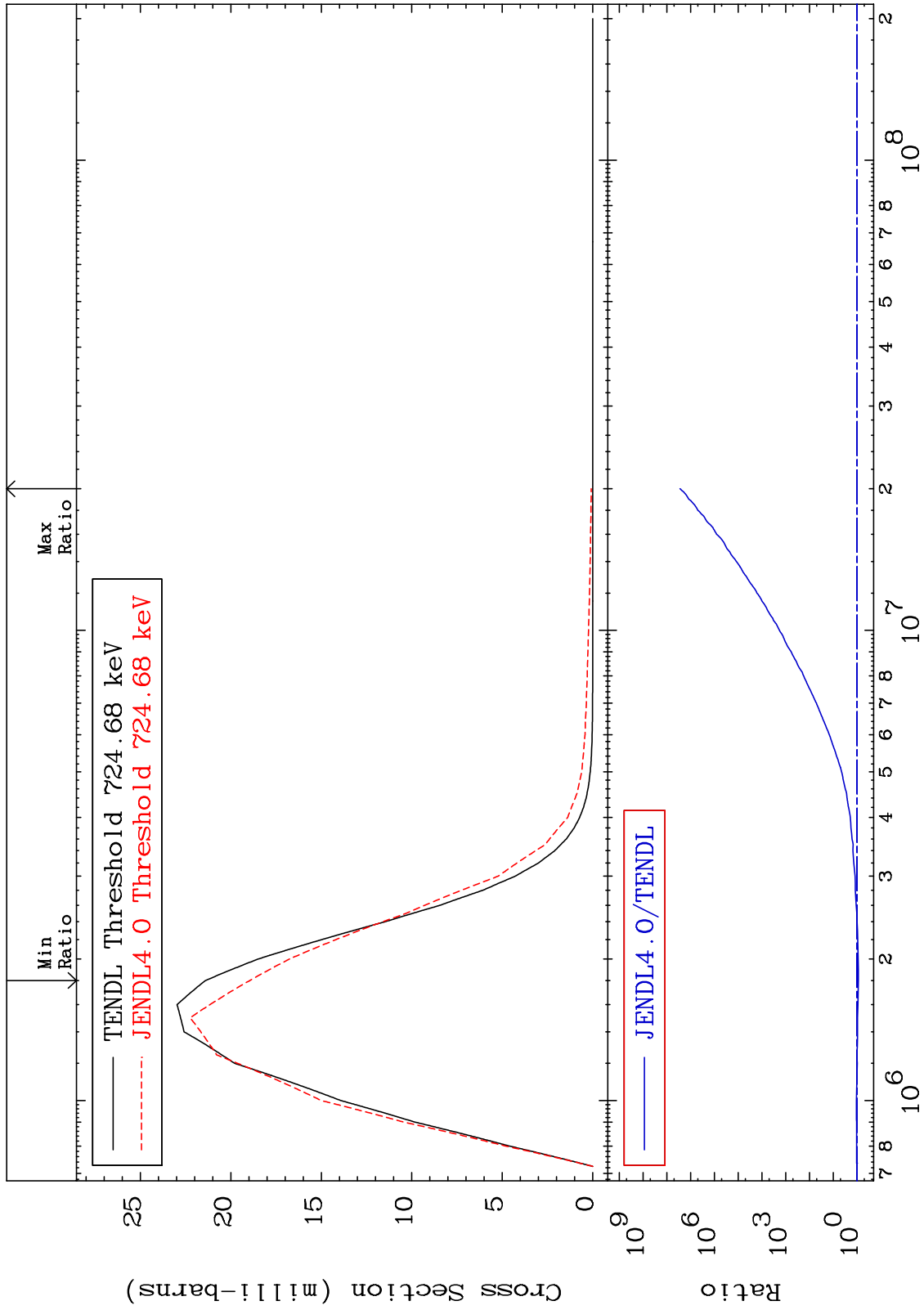
MAT 7240 MT= 67 (n,n') Level 72-Hf-179
 Cross Section -11.01 To 9999. %



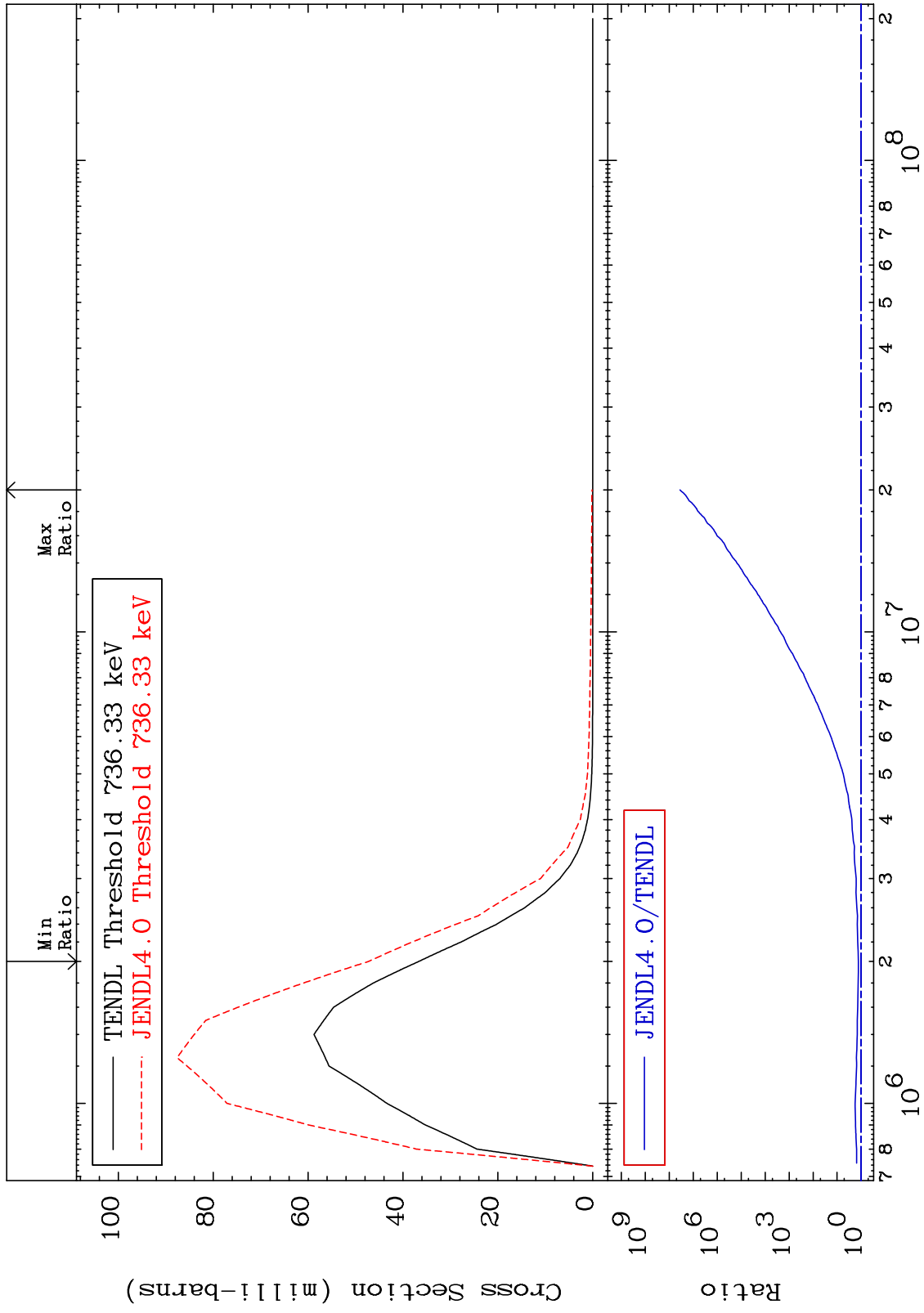
MAT 7240 MT= 68 (n,n') Level Cross Section -10.65 To 9999. % 72-Hf-179



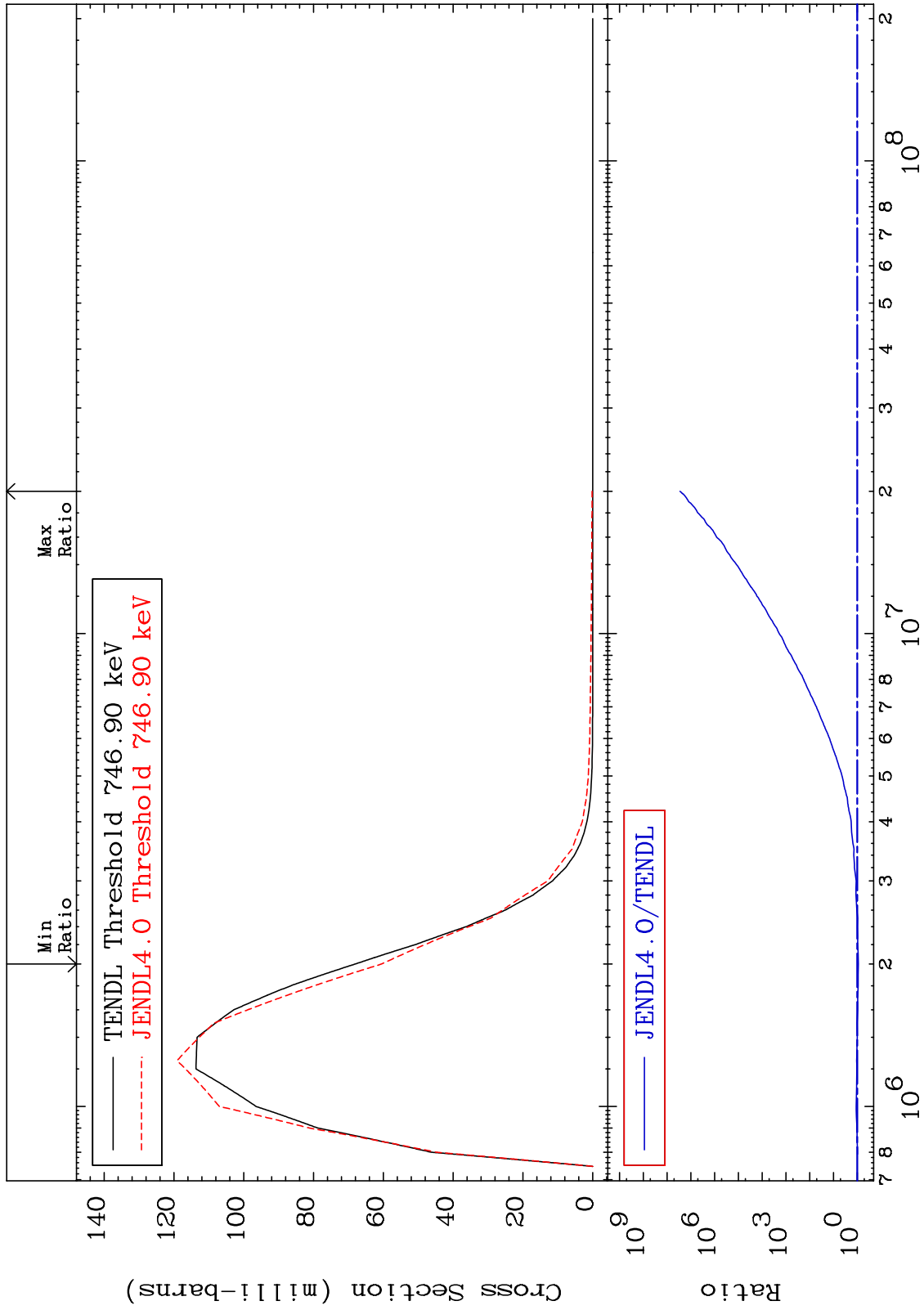
MAT 7240 MT= 69 (n,n') Level 72-Hf-179
 Cross Section -11.45 To 9999. %



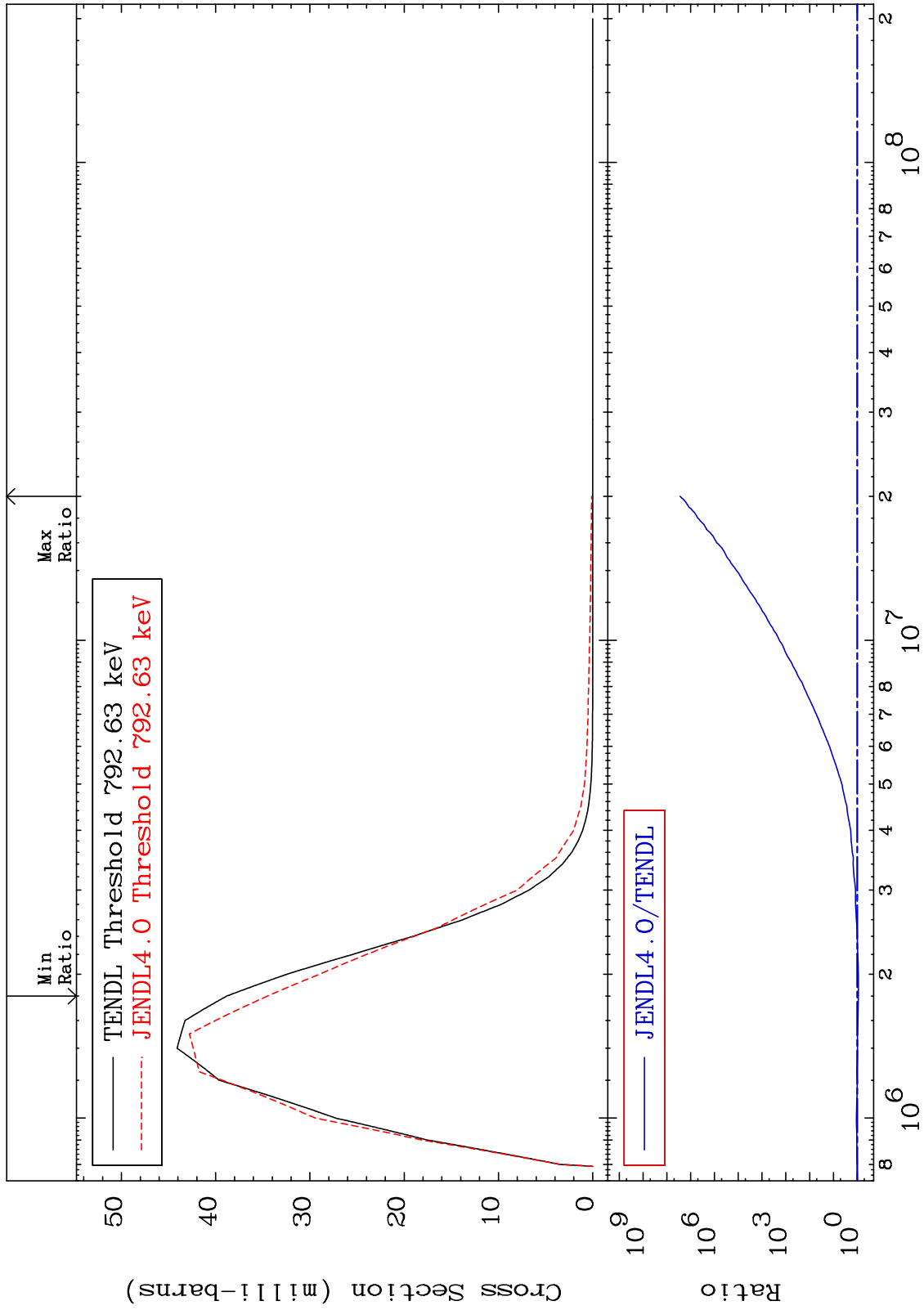
MAT 7240 MT= 70 (n,n') Level 72-Hf-179
 Cross Section 28.84 To 9999. %



MAT 7240 MT= 71 (n,n') Level Cross Section 72-Hf-179 -11.09 To 9999. %

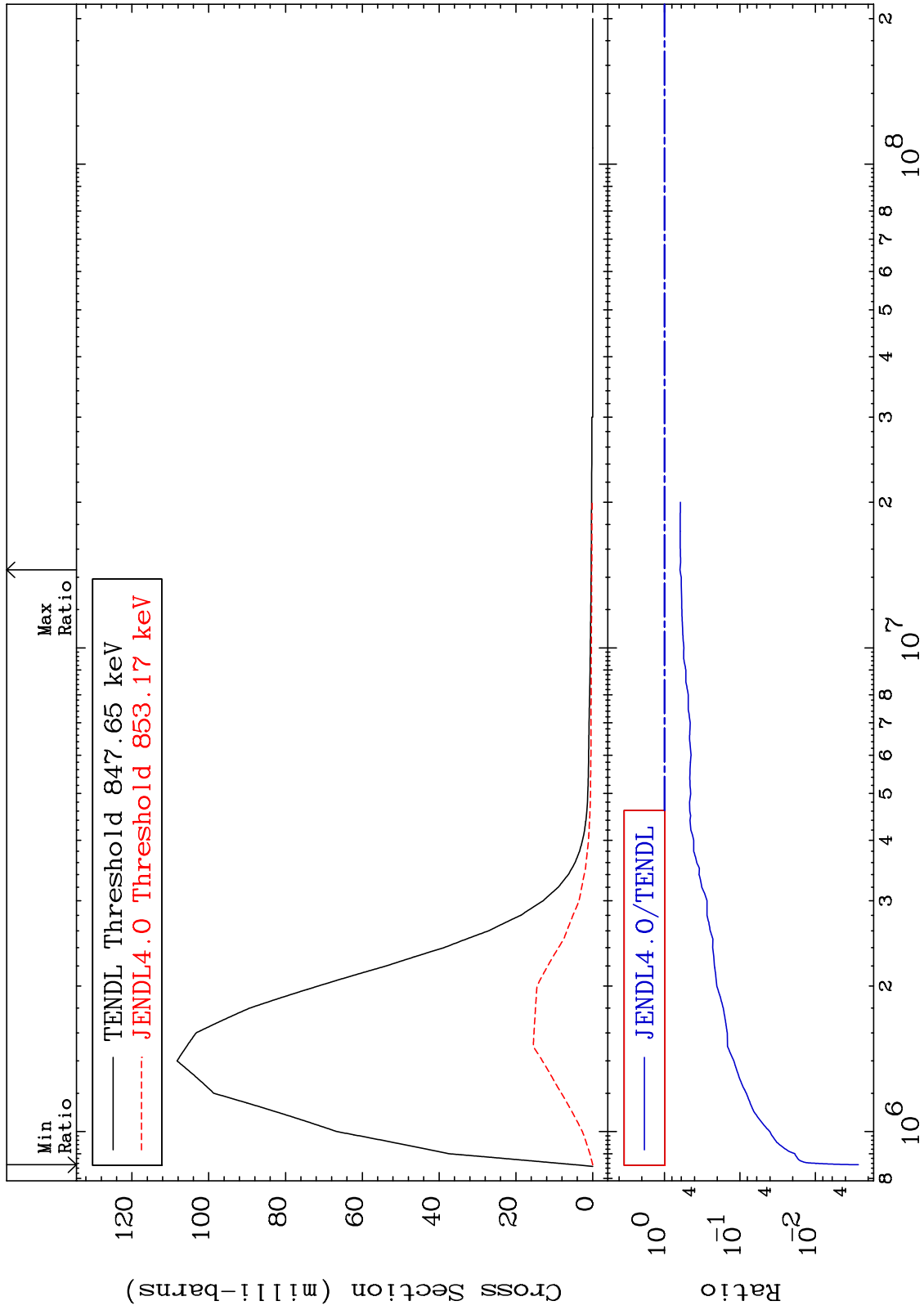


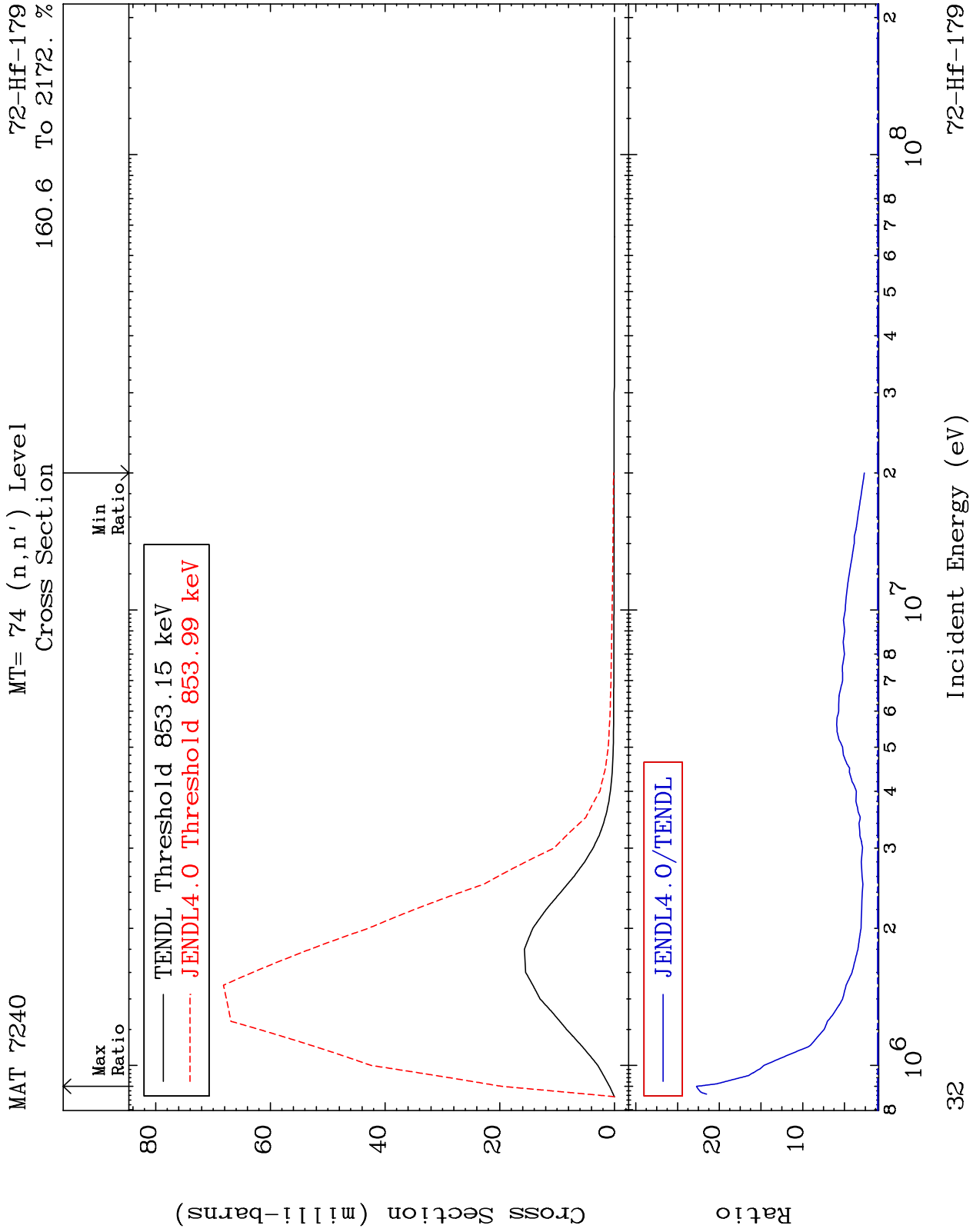
MAT 7240 MT= 72 (n,n') Level Cross Section -11.15 To 9999. % 72-Hf-179



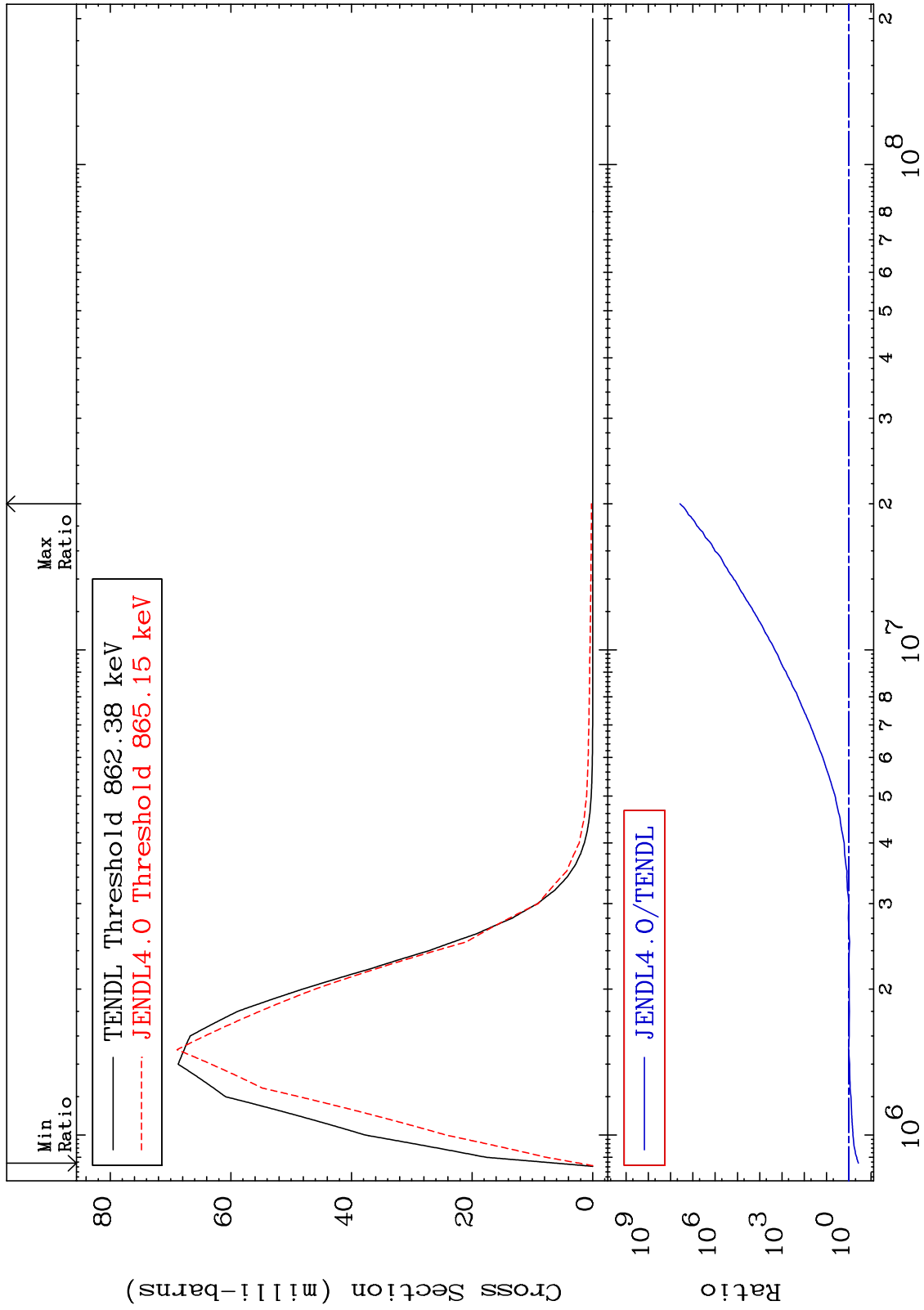
30 Incident Energy (eV) 72-Hf-179

MAT 7240 MT= 73 (n,n') Level Cross Section 72-Hf-179
 -99.73 To -37.61%

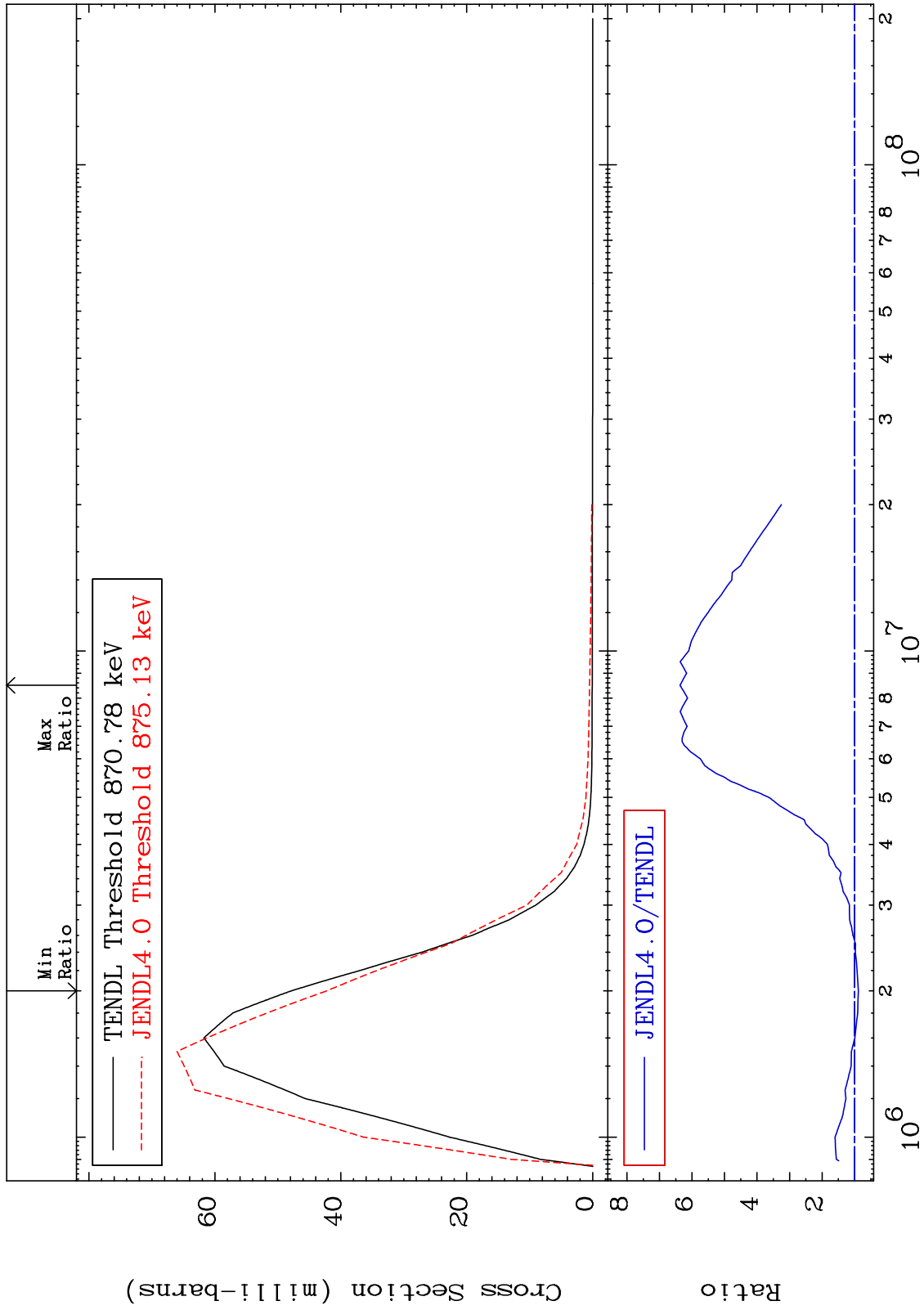




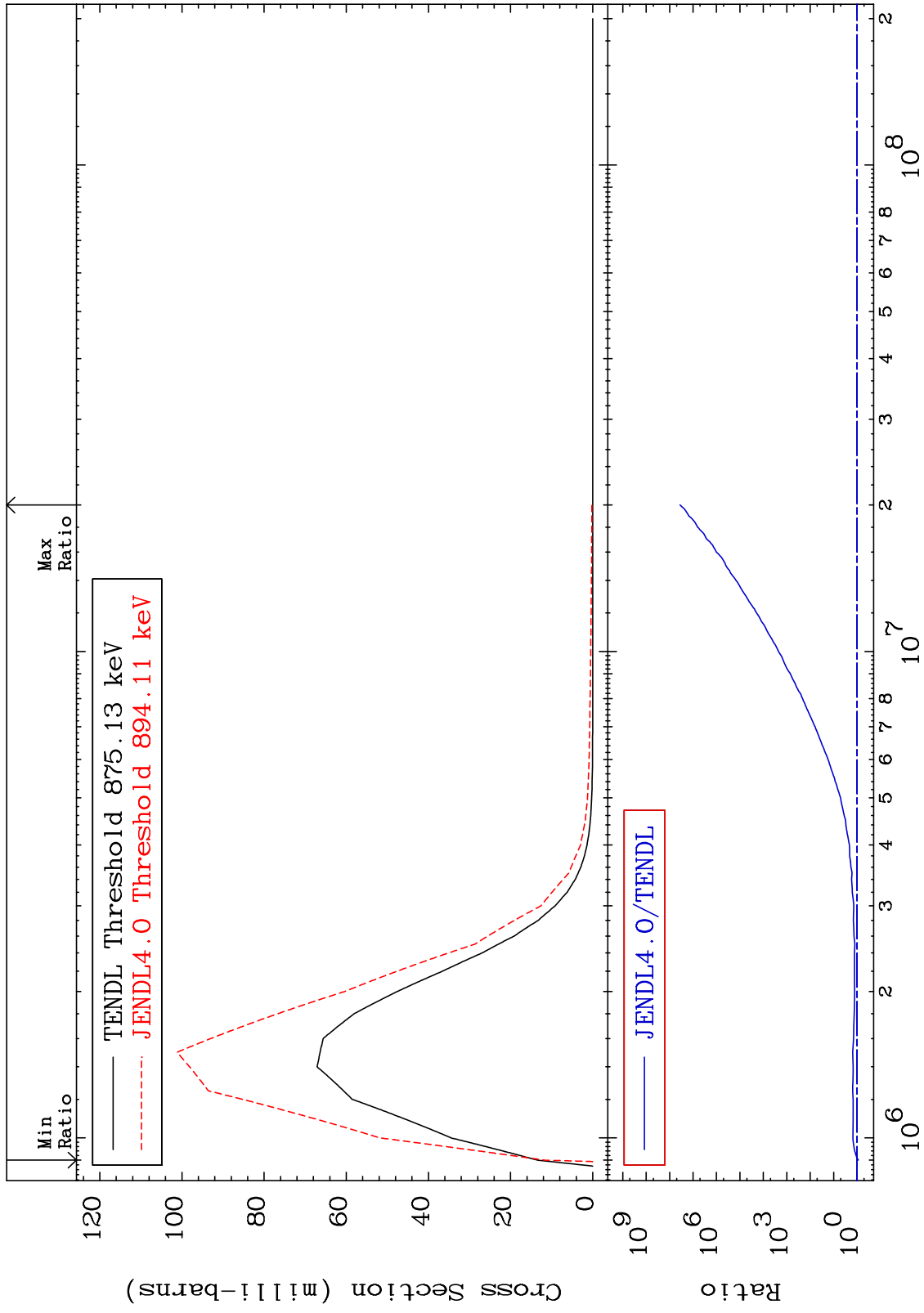
MAT 7240 MT= 75 (n,n') Level 72-Hf-179
 Cross Section -63.13 To 9999. %



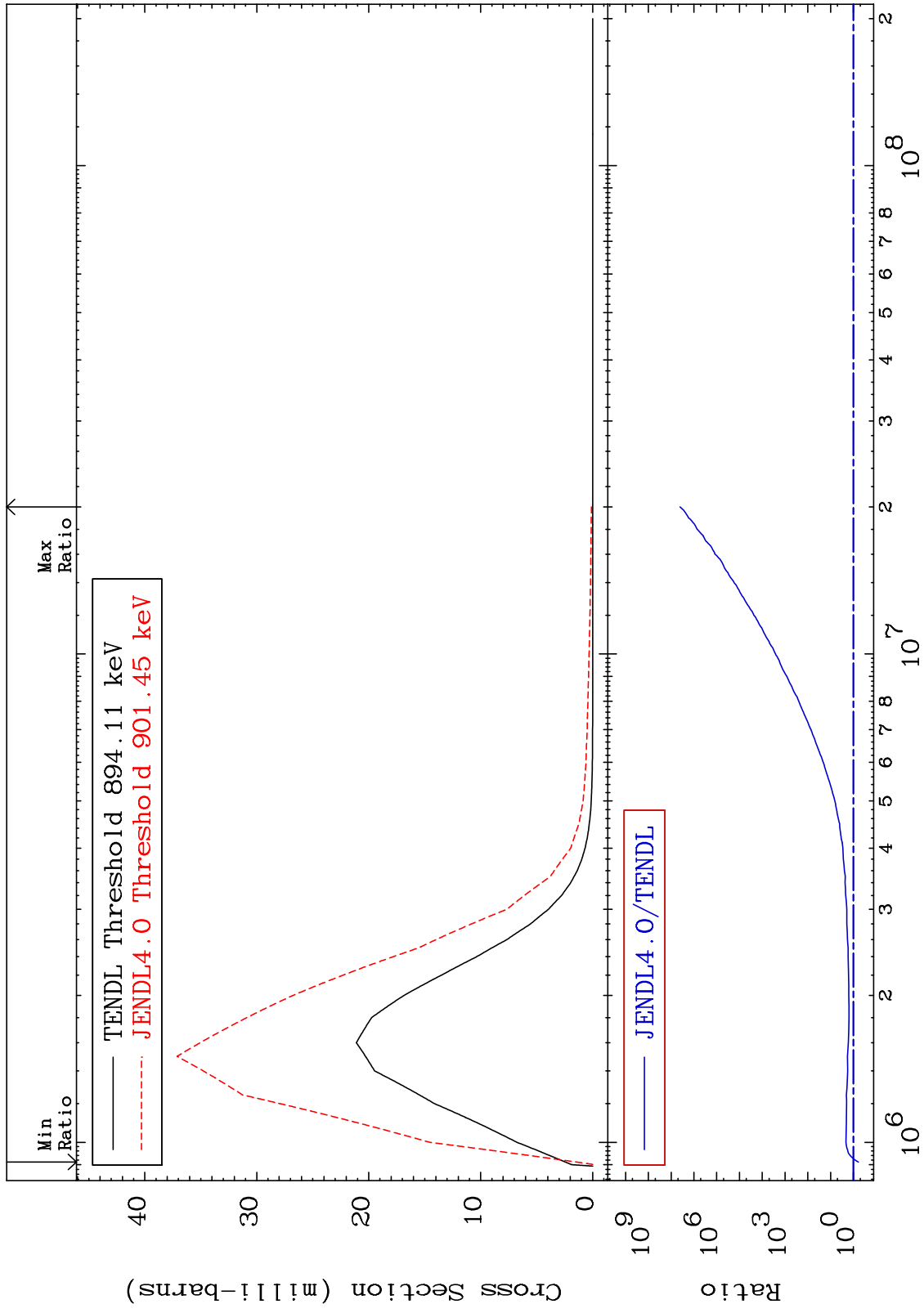
MAT 7240 MT= 76 (n,n') Level
Cross Section -11.76 To 536.9 % 72-Hf-179



MAT 7240 MT= 77 (n,n') Level Cross Section 72-Hf-179 -12.62 To 9999. %



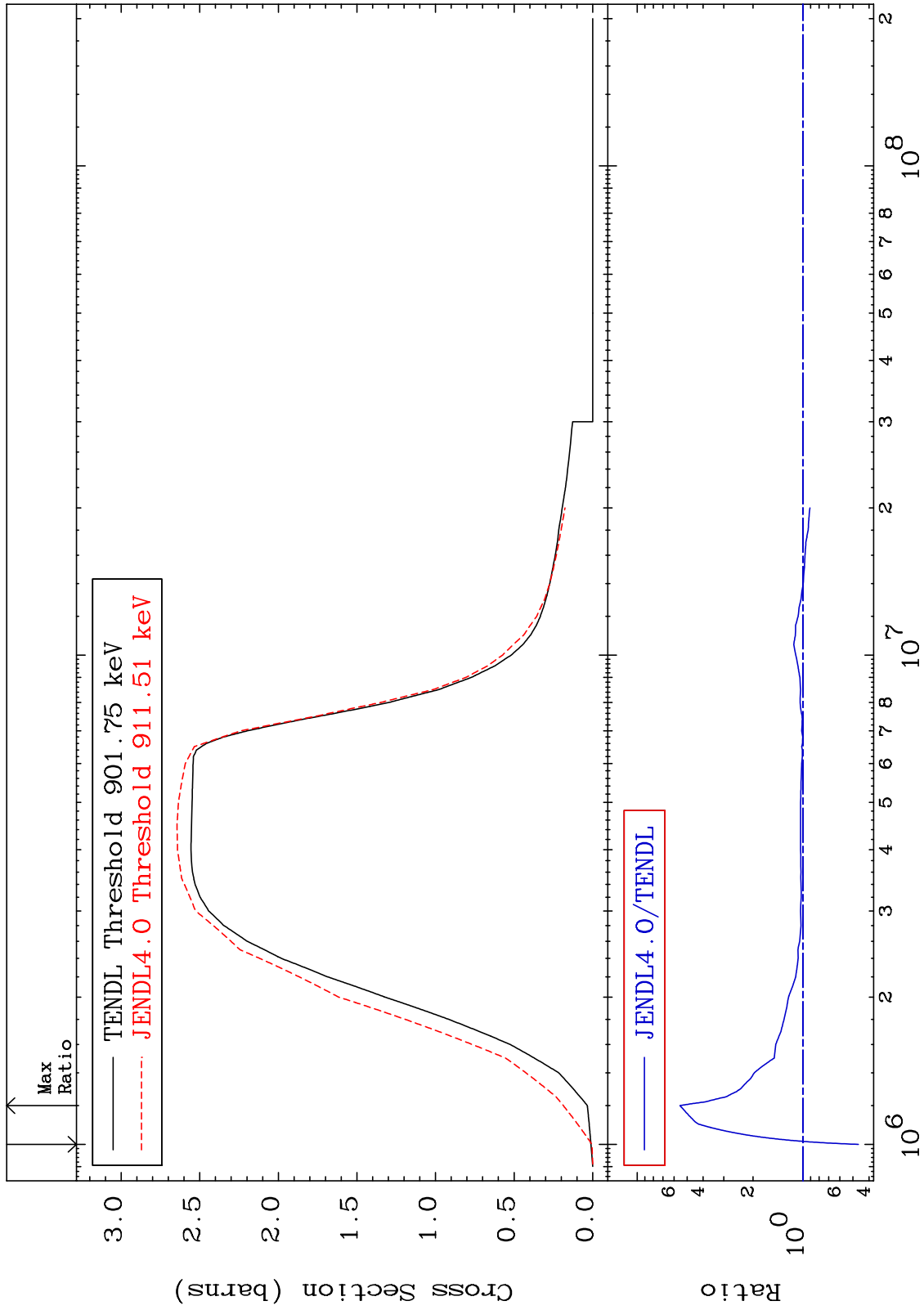
MAT 7240 MT= 78 (n,n') Level Cross Section 72-Hf-179
-39.55 To 9999. %



MAT 7240

(n, n') Continuum
Cross Section

⁷²Hf-179
-53.67 To 451.7 %



37

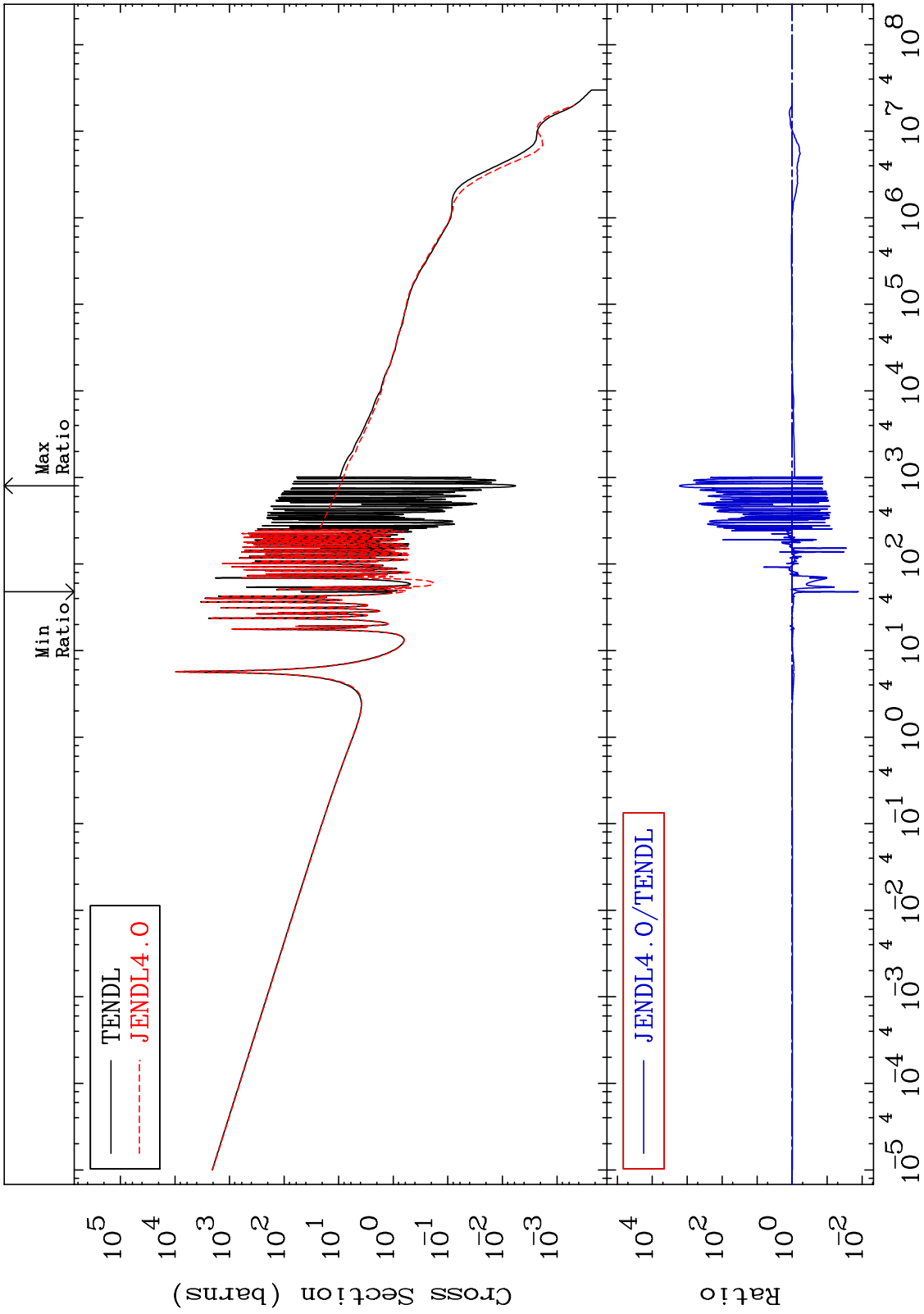
Incident Energy (eV)

⁷²Hf-179

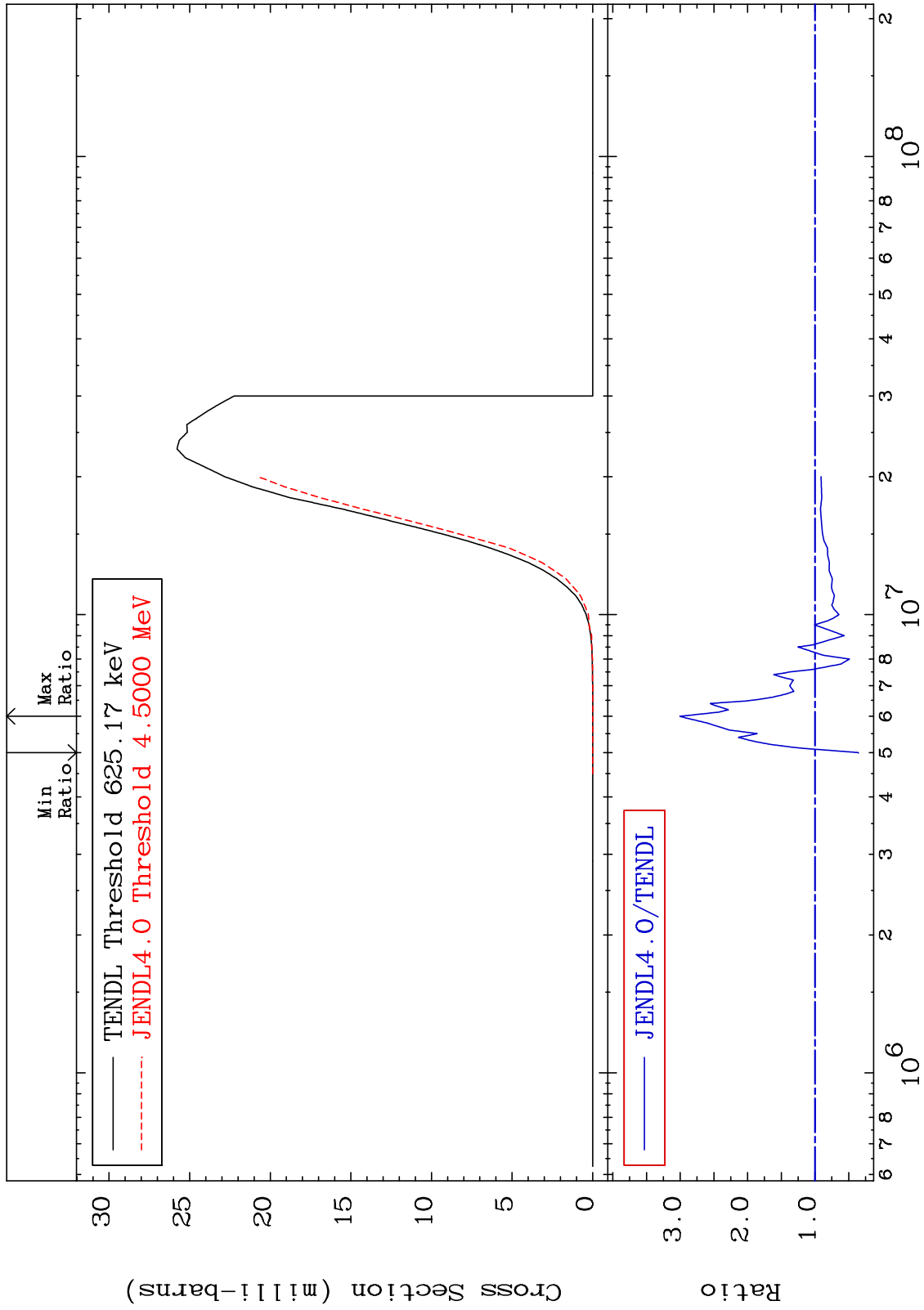
MAT 7240

(n, γ)
Cross Section

72-Hf-179
-98.71 To 9999. %



MAT 7240 (n,p) Cross Section 72-Hf-179 -64.42 To 200.3 %



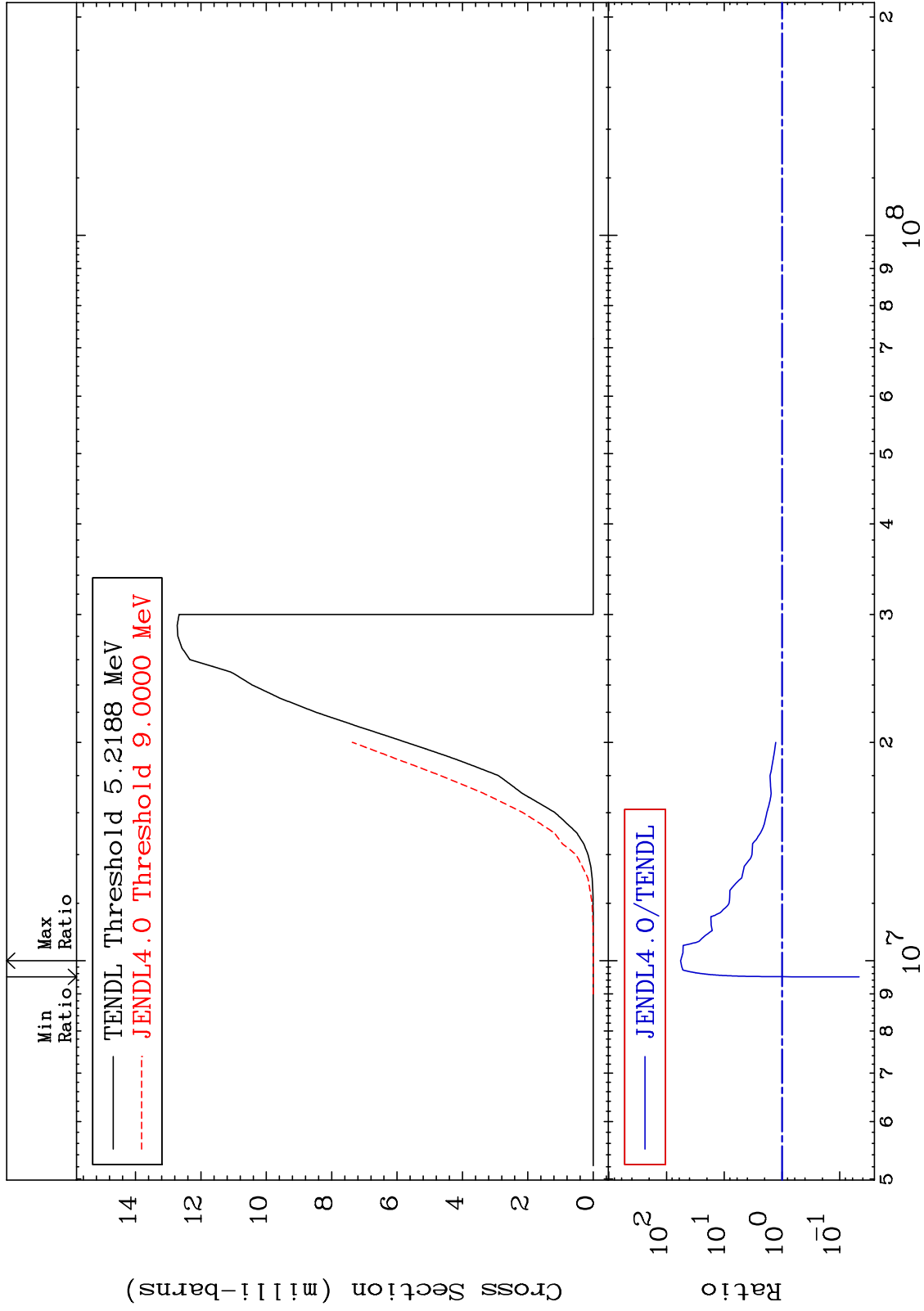
MAT 7240

(n, d)

72-Hf-179

Cross Section

-95.39 To 5604. %



40

Incident Energy (eV)

72-Hf-179

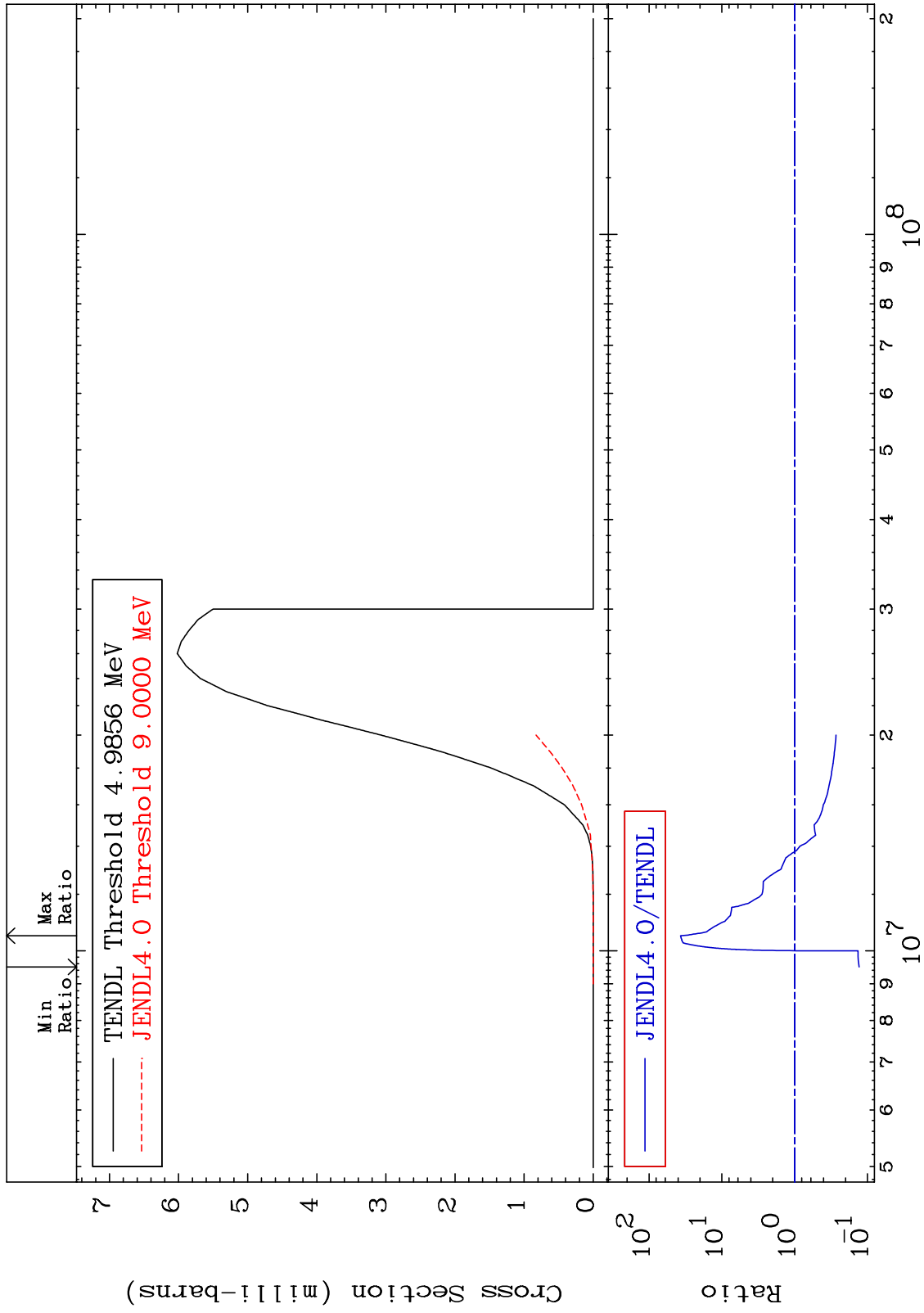
MAT 7240

(n, t)

72-Hf-179

Cross Section

-87.01 To 3588. %



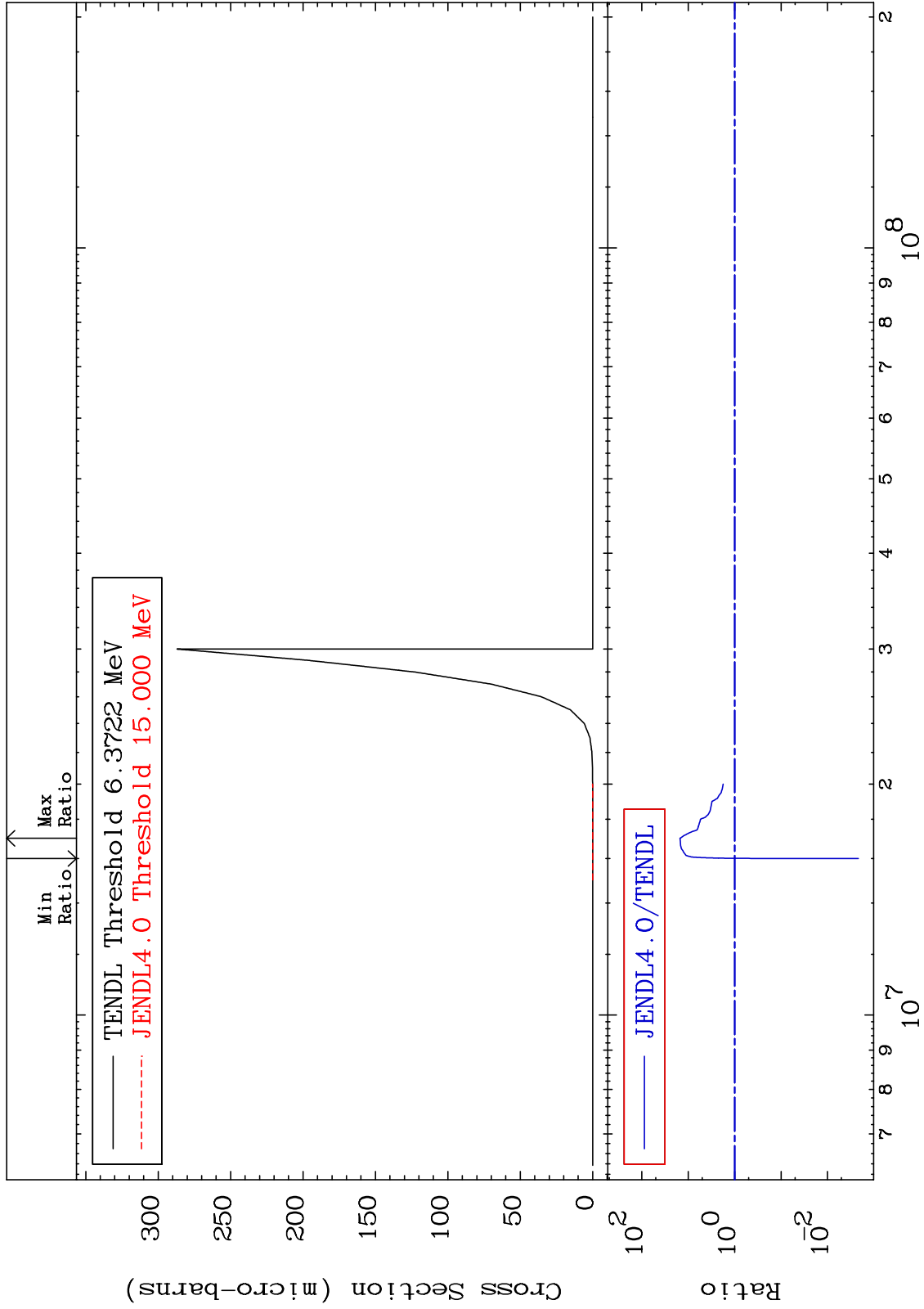
MAT 7240

(n, He-3)

72-Hf-179

Cross Section

-99.78 To 1403. %



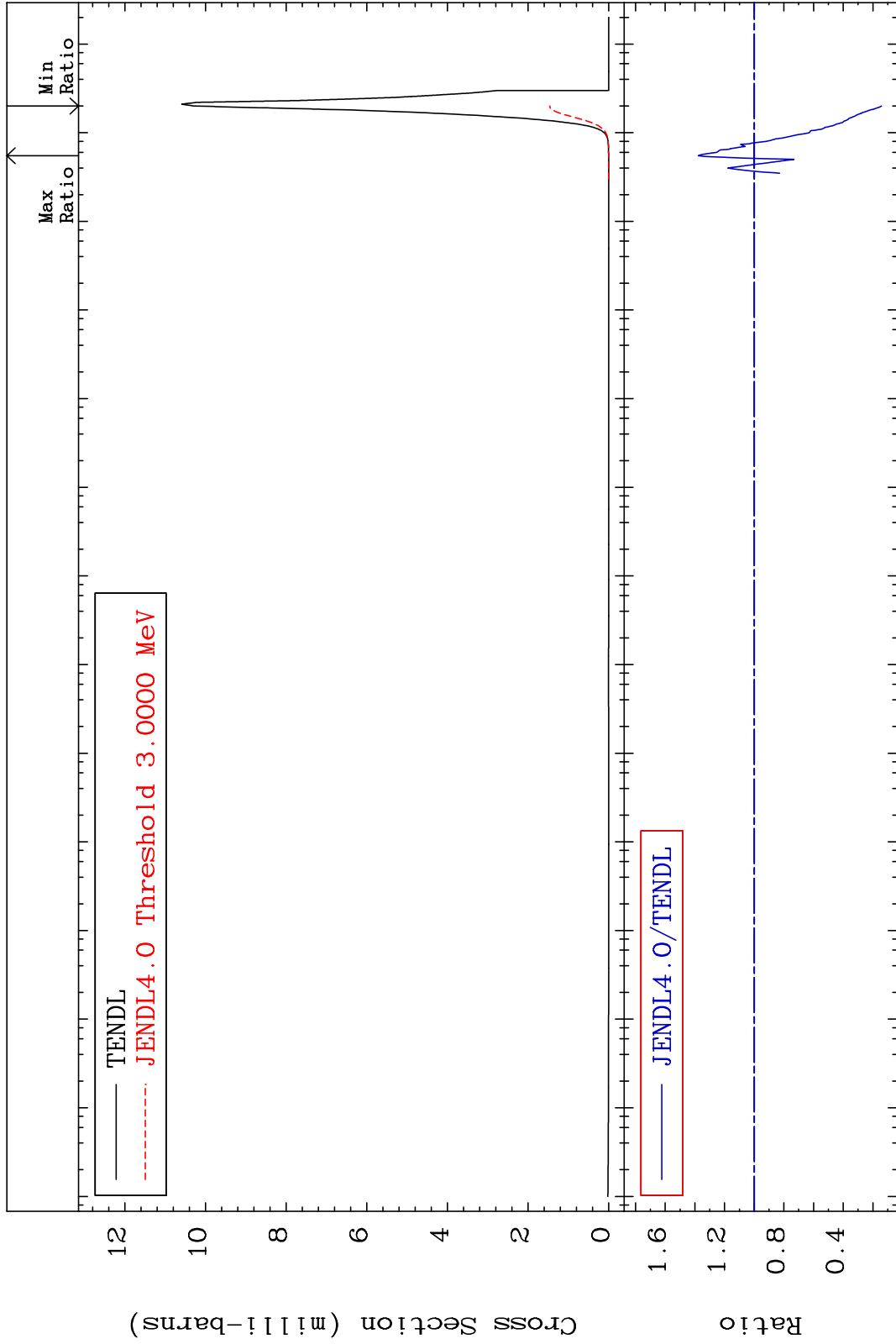
MAT 7240

(n, α)

72-Hf-179

Cross Section

-85.84 To 37.67 %



10⁻⁵ 10⁻⁴ 10⁻³ 10⁻² 10⁻¹ 10⁰ 10¹ 10² 10³ 10⁴ 10⁵ 10⁶ 10⁷ 10⁸

Incident Energy (eV)

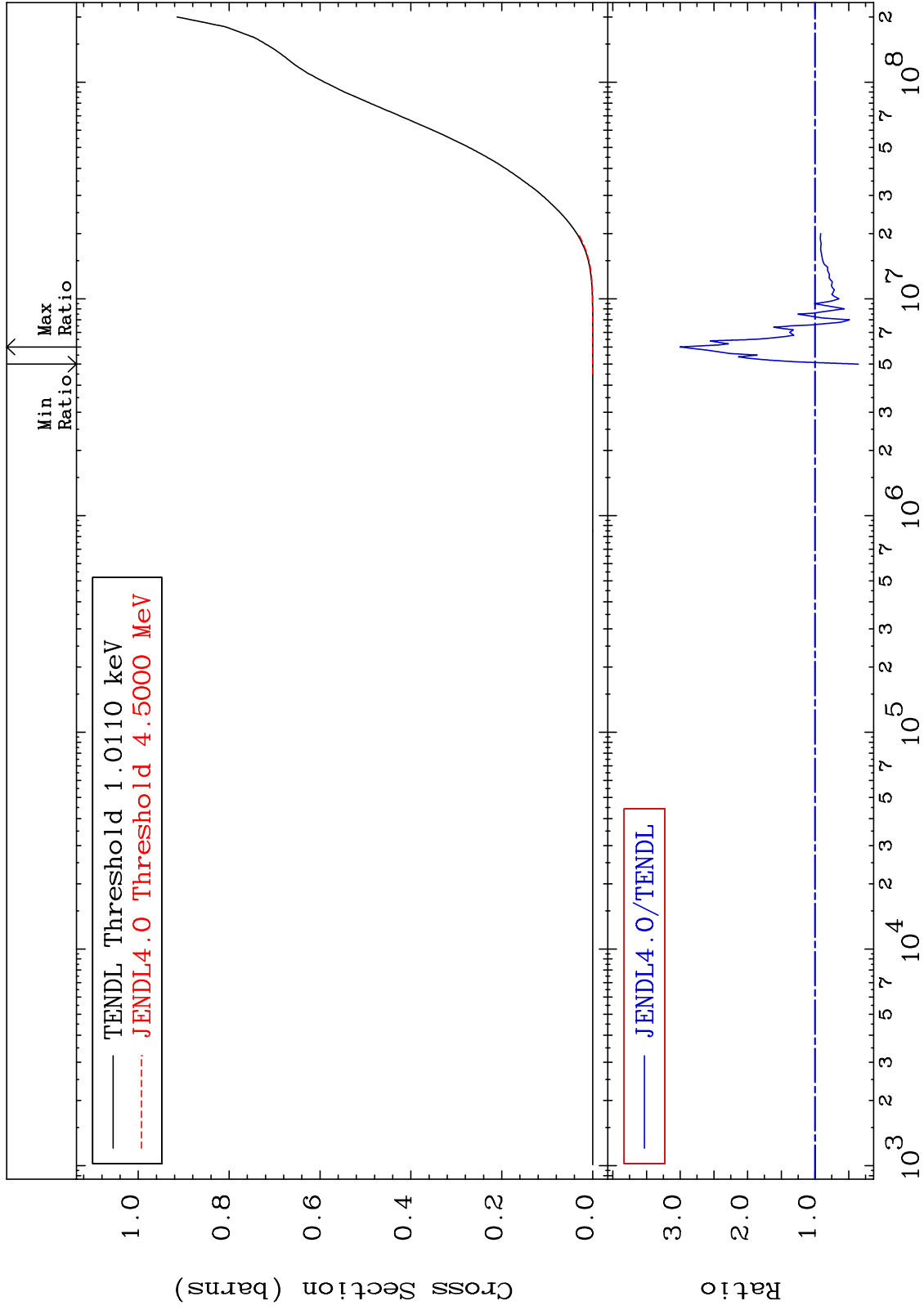
43

72-Hf-179

MAT 7240

Hydrogen Production
Cross Section

72-Hf-179
-64.42 To 200.3 %



44

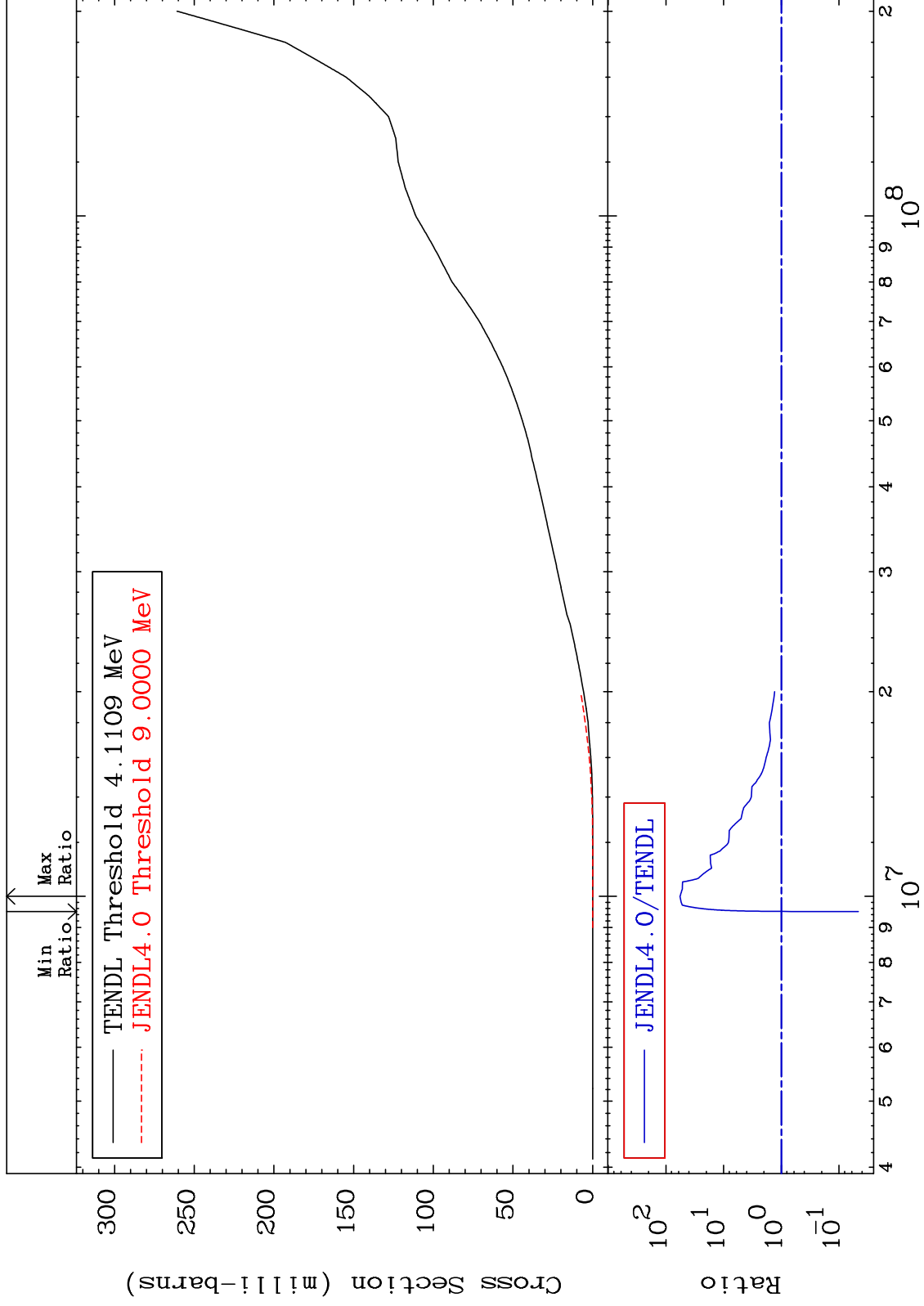
Incident Energy (eV)

72-Hf-179

MAT 7240

Deuterium Production
Cross Section

72-Hf-179
-95.39 To 5604. %



45

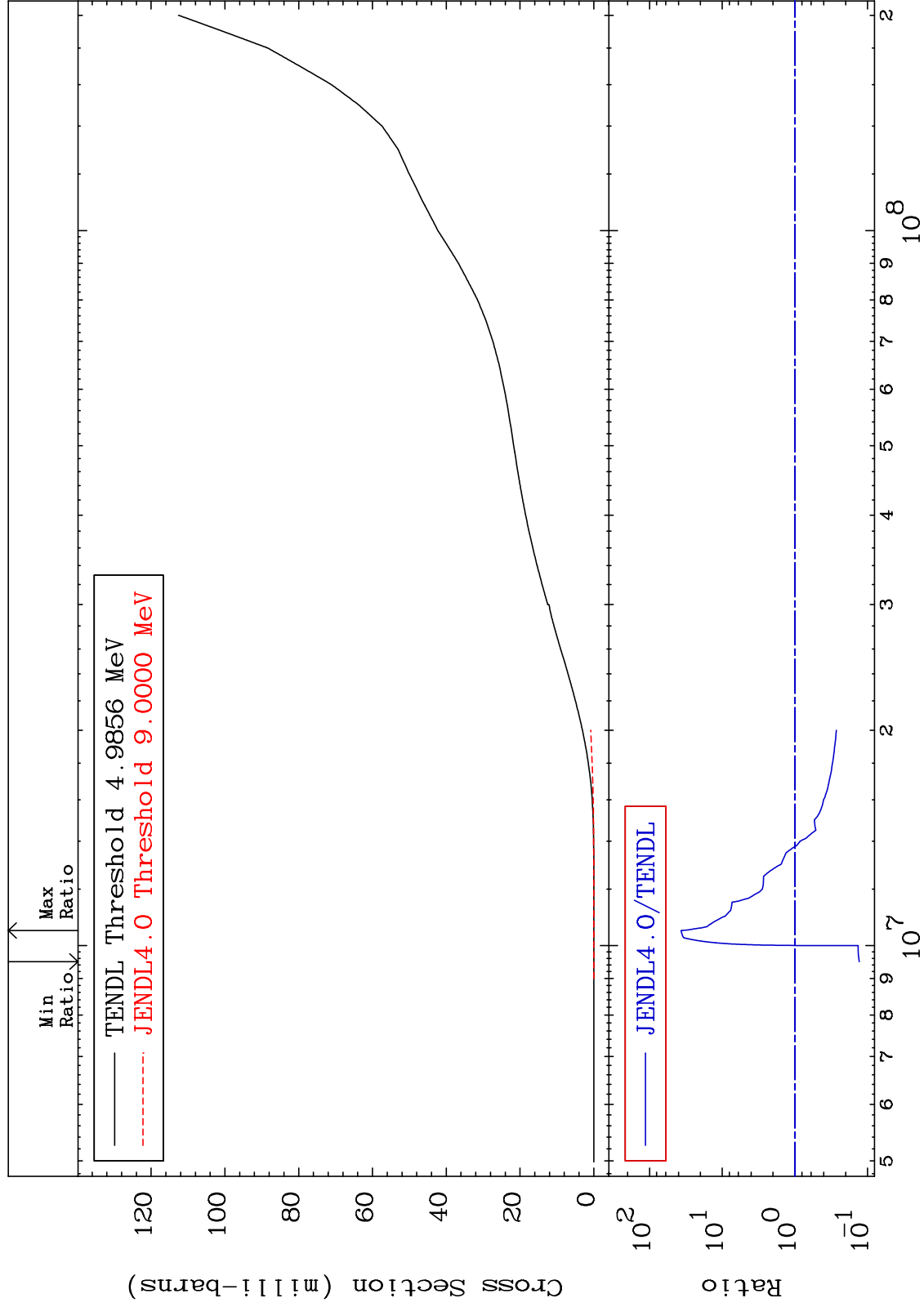
Incident Energy (eV)

72-Hf-179

MAT 7240

Tritium Production
Cross Section

72-Hf-179
-87.01 To 3588. %



46

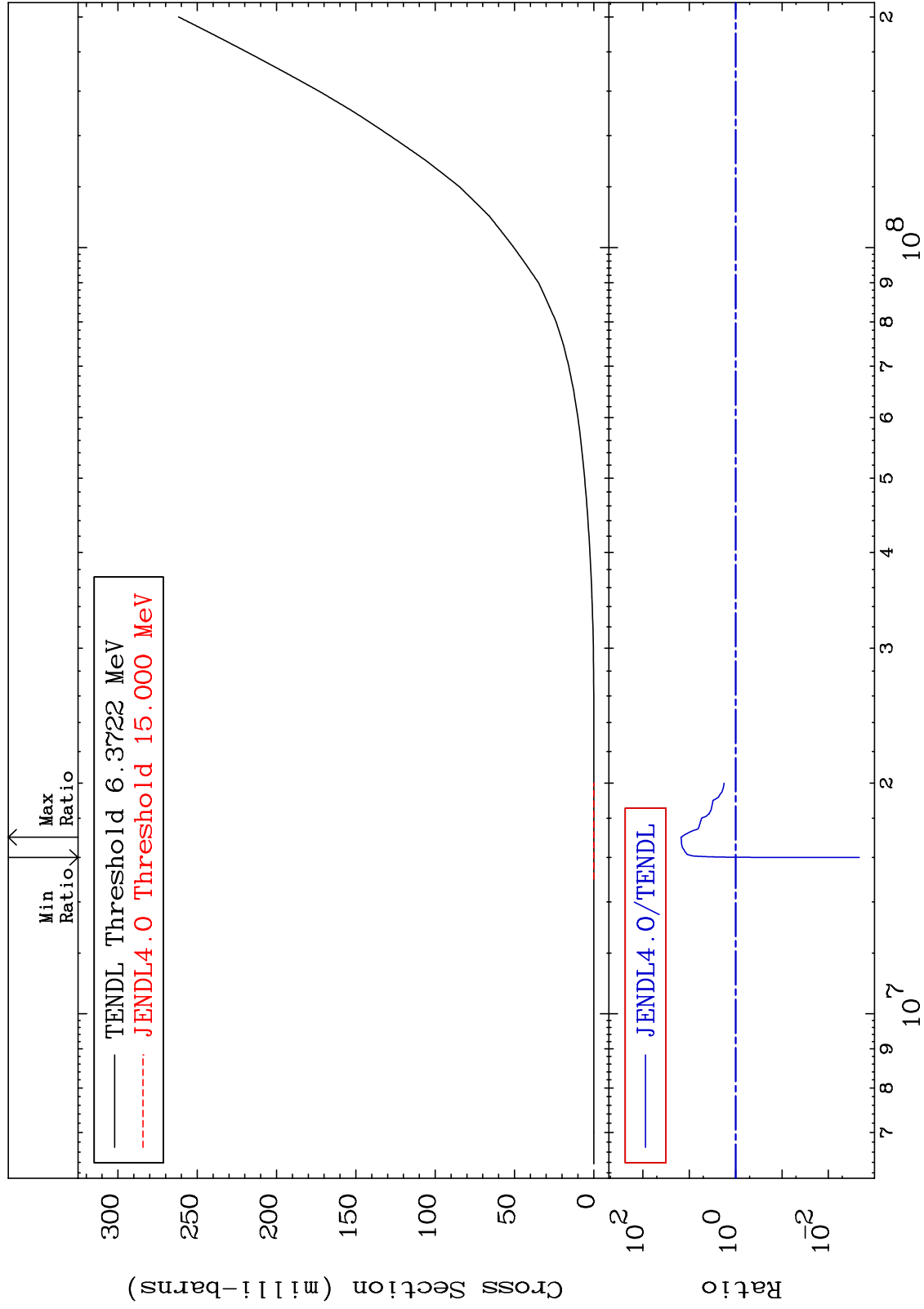
Incident Energy (eV)

72-Hf-179

MAT 7240

He-3 Production
Cross Section

⁷²Hf-179
-99.78 To 1403. %



47

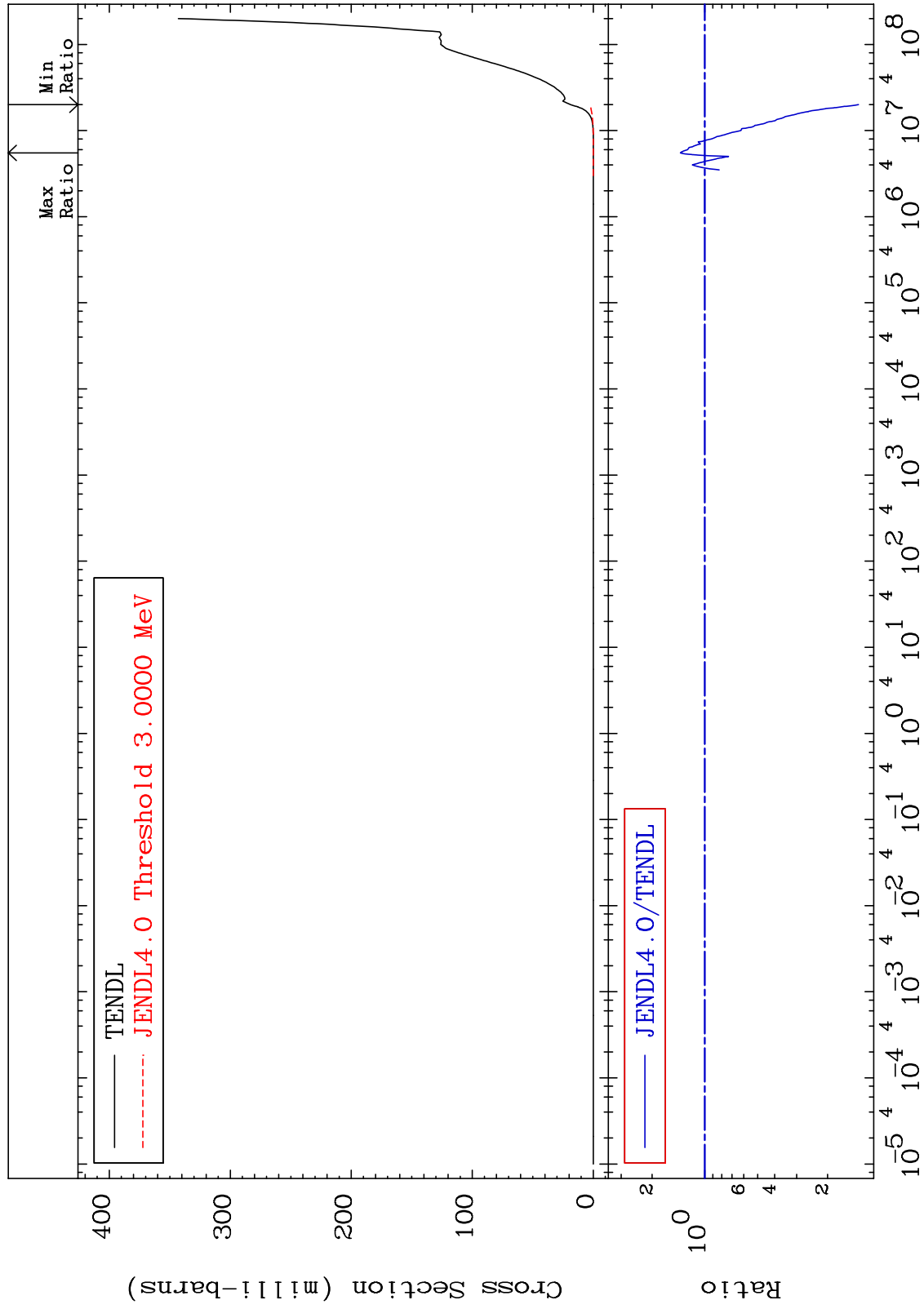
Incident Energy (eV)

⁷²Hf-179

MAT 7240

He-4 Production
Cross Section

72-Hf-179
-86.68 To 37.66 %



48

Incident Energy (eV)

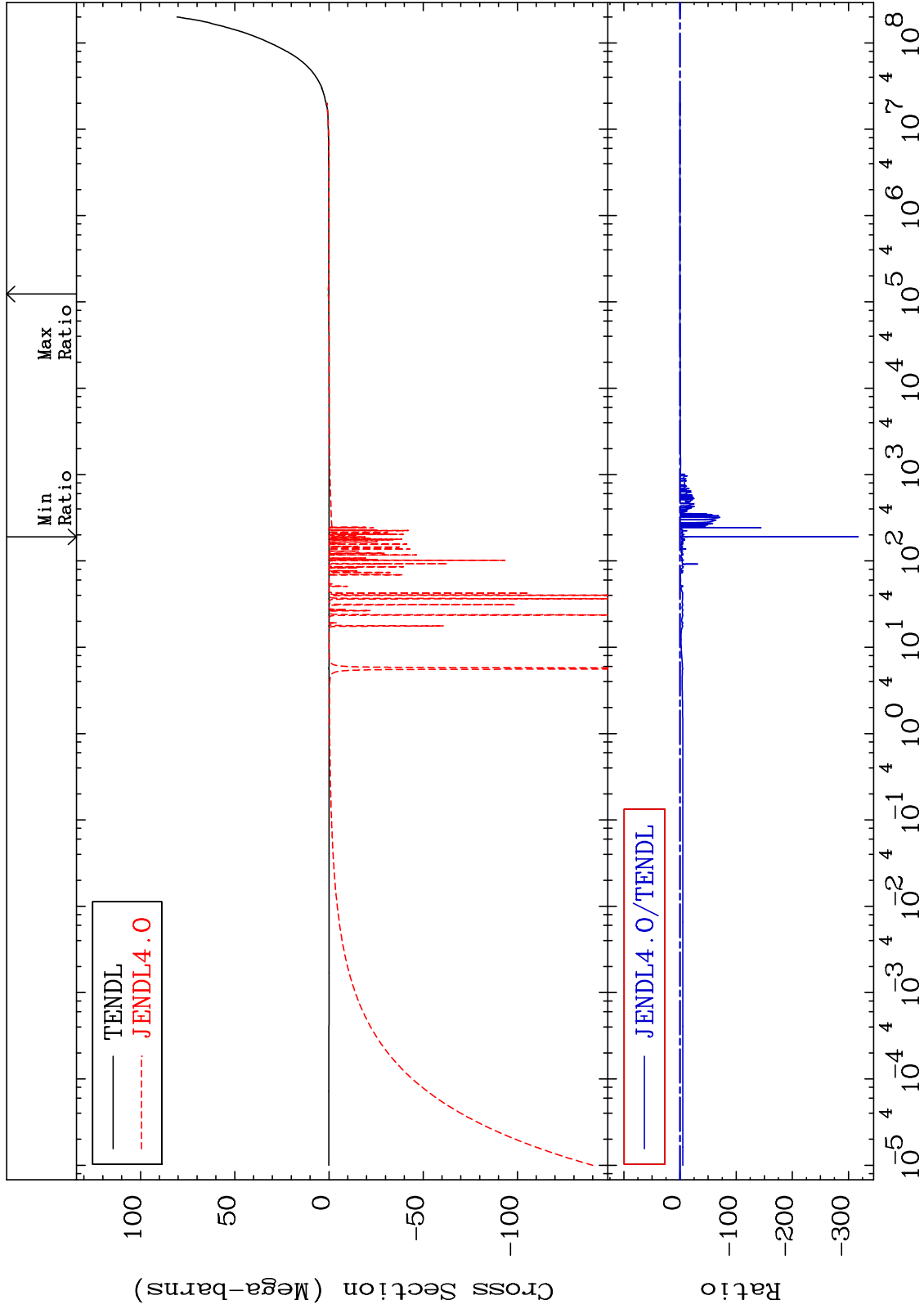
72-Hf-179

MAT 7240

Kerma total (eV-barns)
Cross Section

72-Hf-179

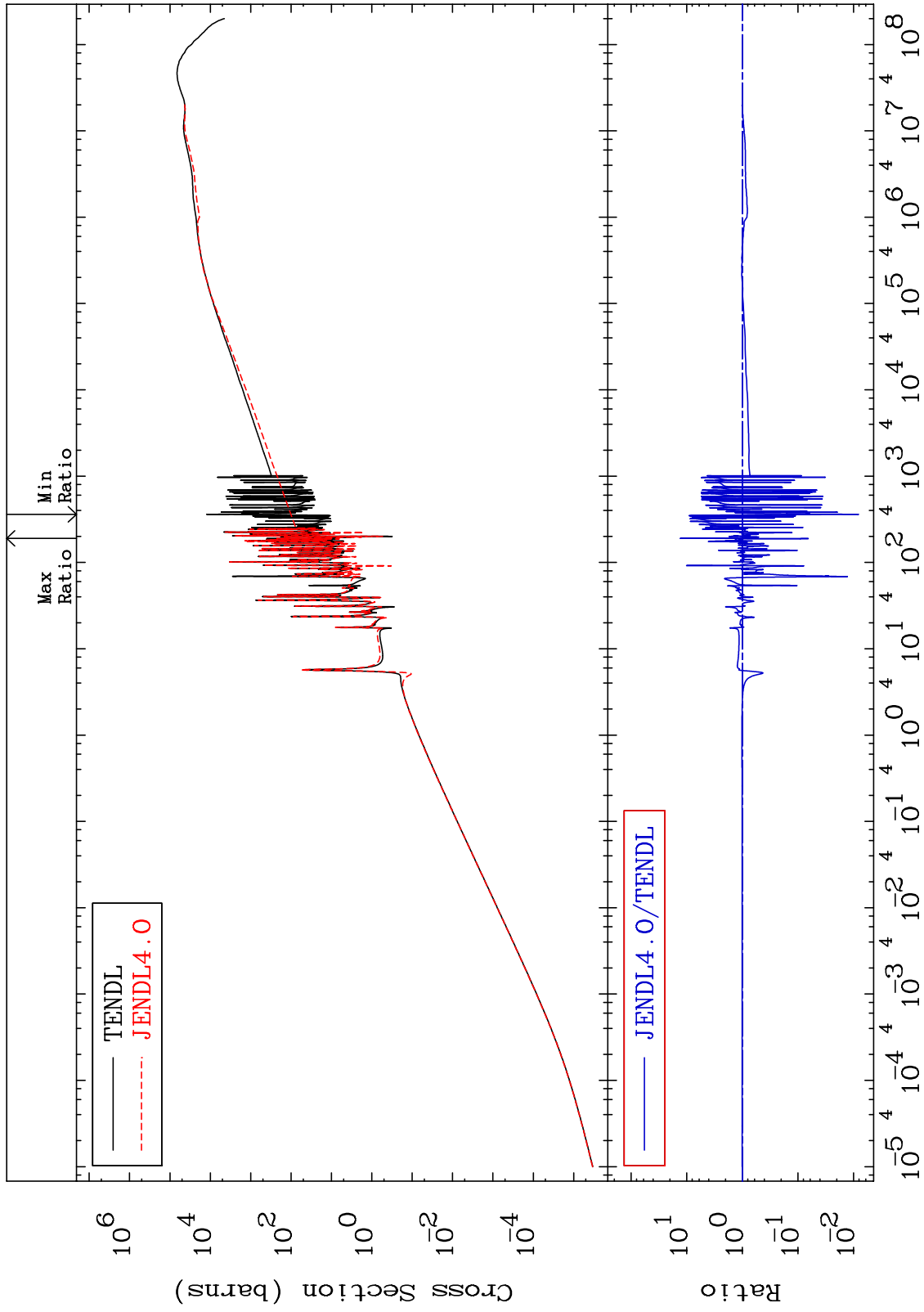
-9999. To 4971. %



MAT 7240

Kerma elastic
Cross Section

⁷²Hf-179
-99.18 To 1219. %



50

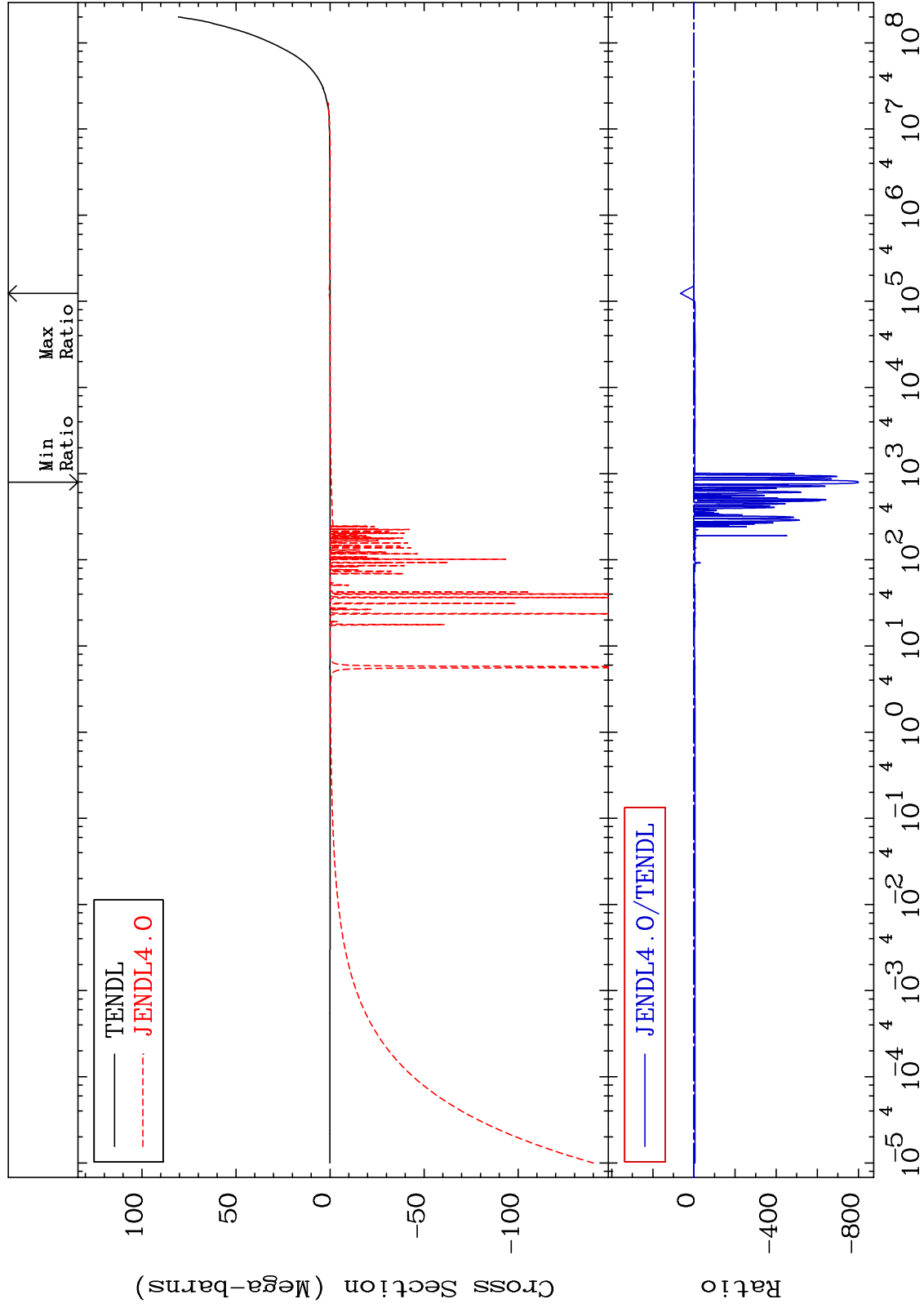
Incident Energy (eV)

⁷²Hf-179

MAT 7240

Kerma non-elastic (all but mt2)
Cross Section

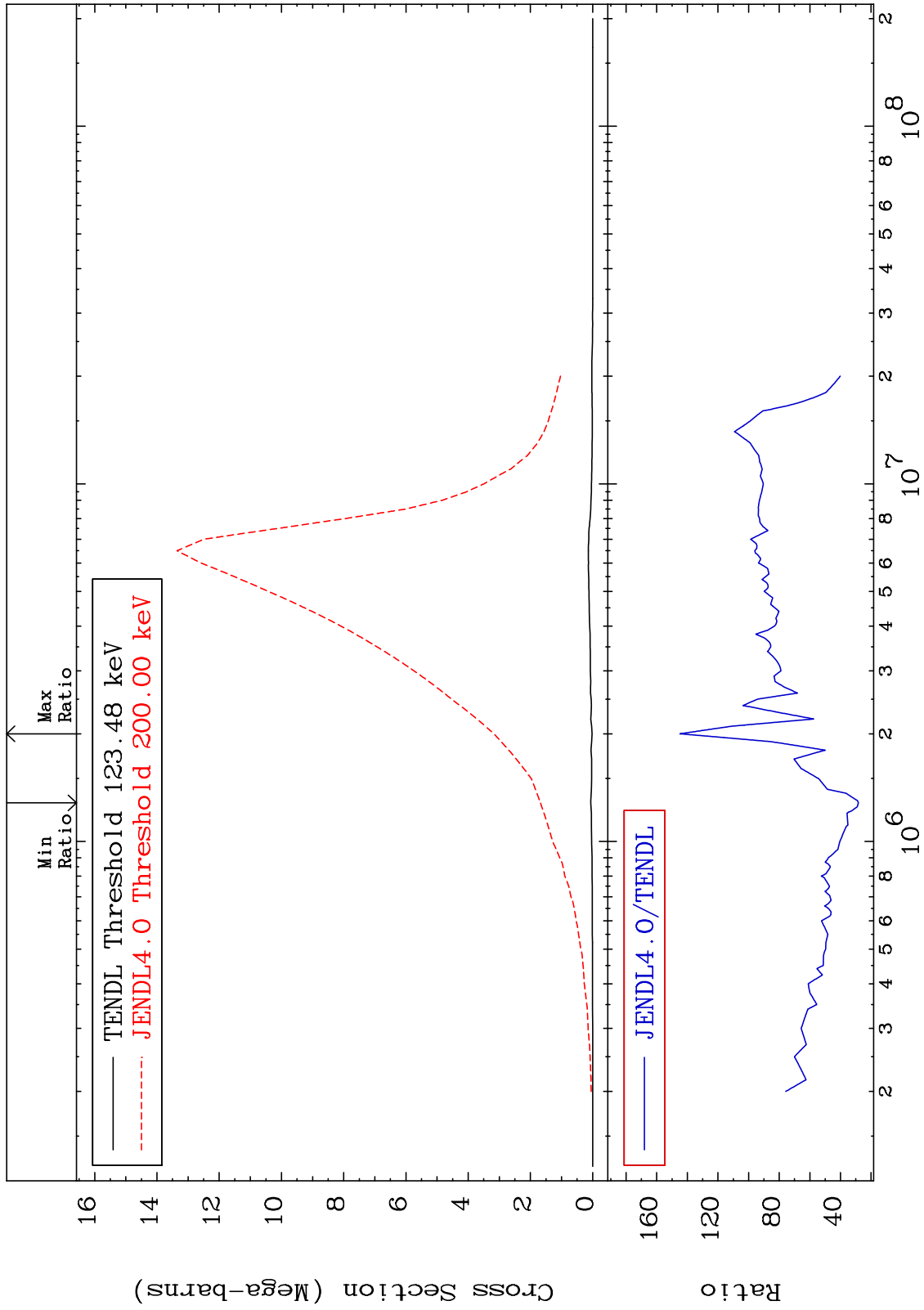
72-Hf-179
-9999. To 9999. %



MAT 7240

Kerma inelastic (mt51-91)
Cross Section

72-Hf-179
2729. To 9999. %



52

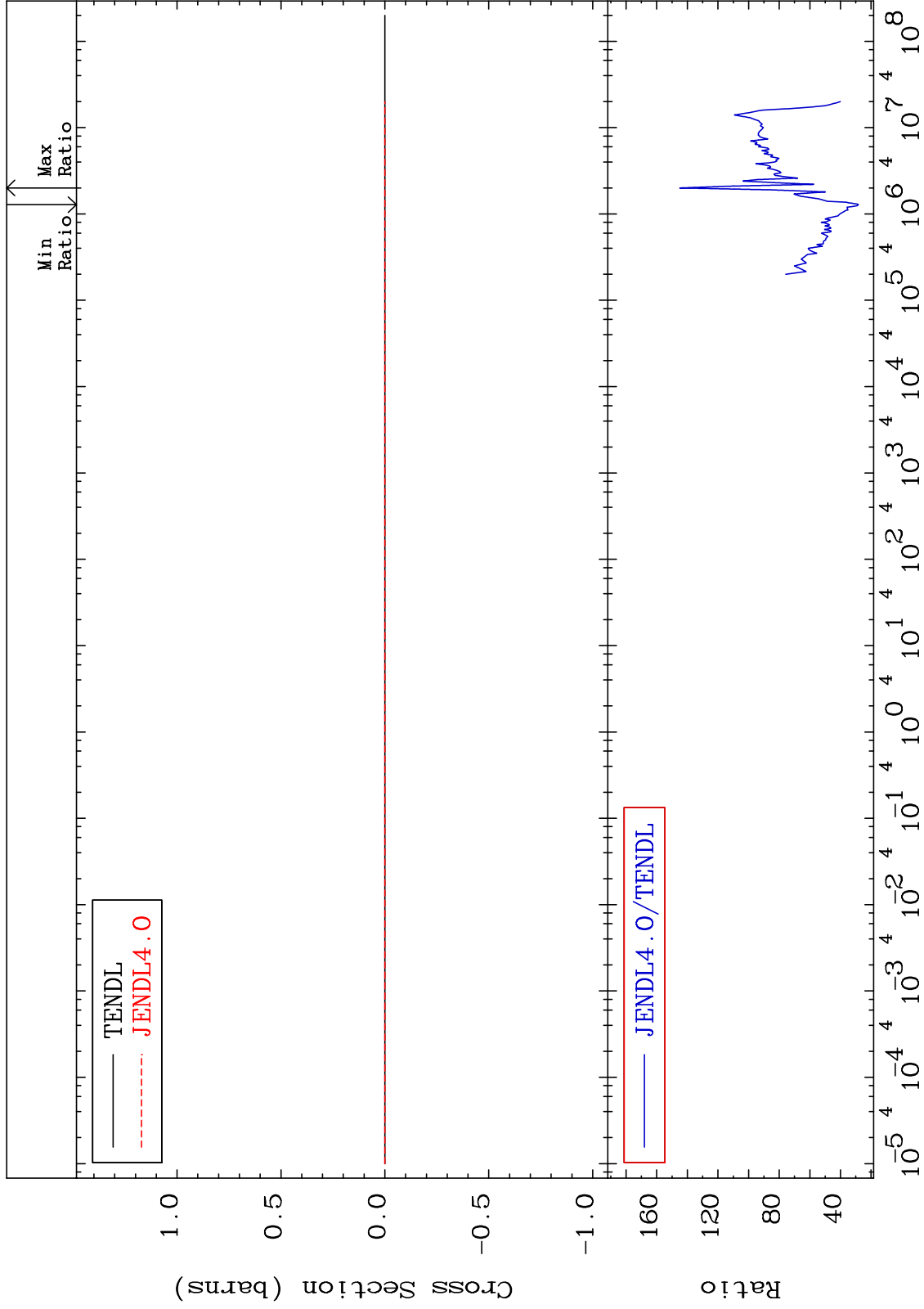
Incident Energy (eV)

72-Hf-179

MAT 7240

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

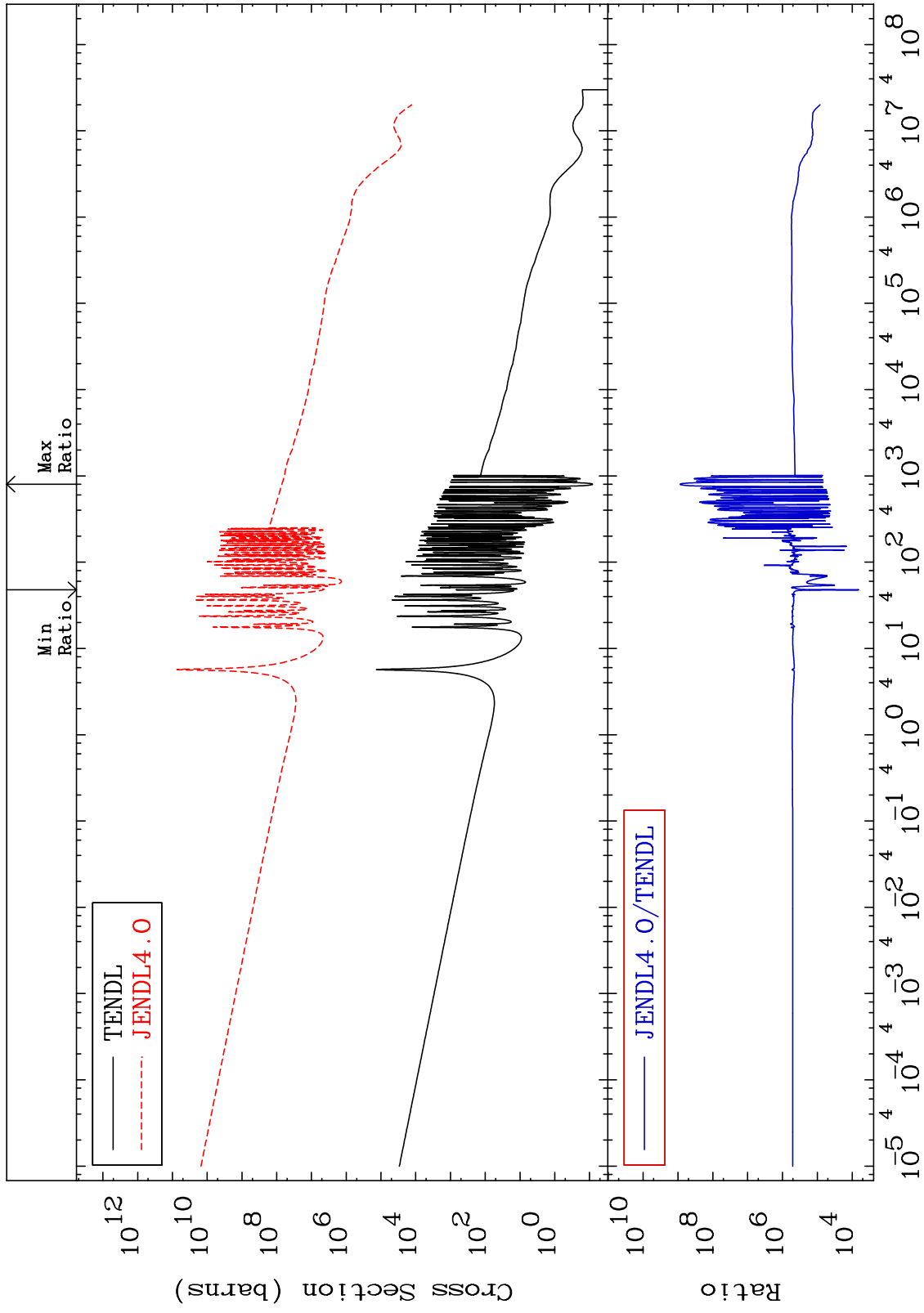
72-Hf-179
2729. To 9999. %



MAT 7240

Kerma capture (mt102)
Cross Section

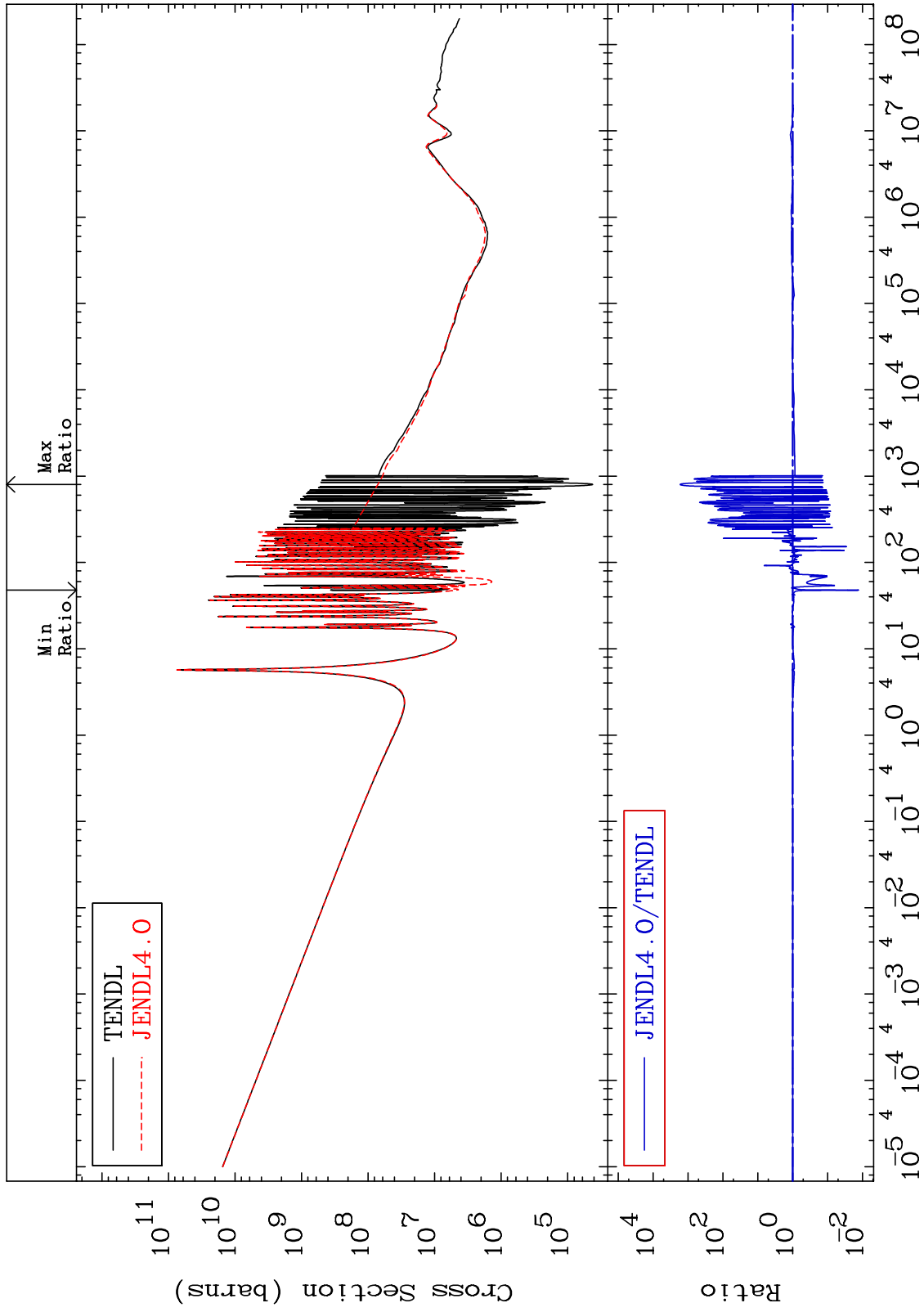
72-Hf-179
9999. To 9999. %



MAT 7240

Total photon (eV-barns)
Cross Section

72-Hf-179
-98.70 To 9999. %



55

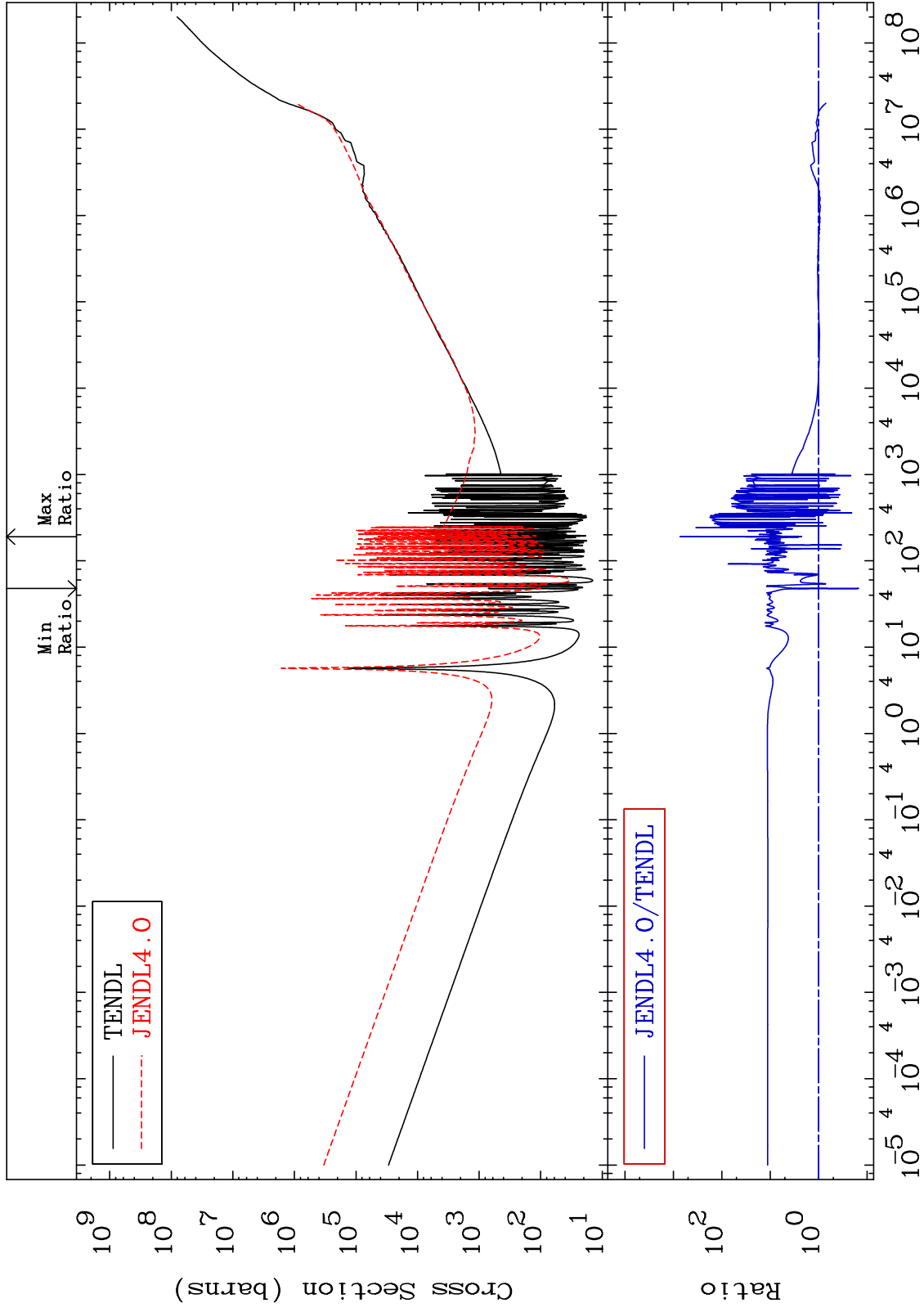
Incident Energy (eV)

72-Hf-179

MAT 7240

Total kinematic kerma (high limit)
Cross Section

72-Hf-179
-84.90 To 9999. %



56

Incident Energy (eV)

72-Hf-179

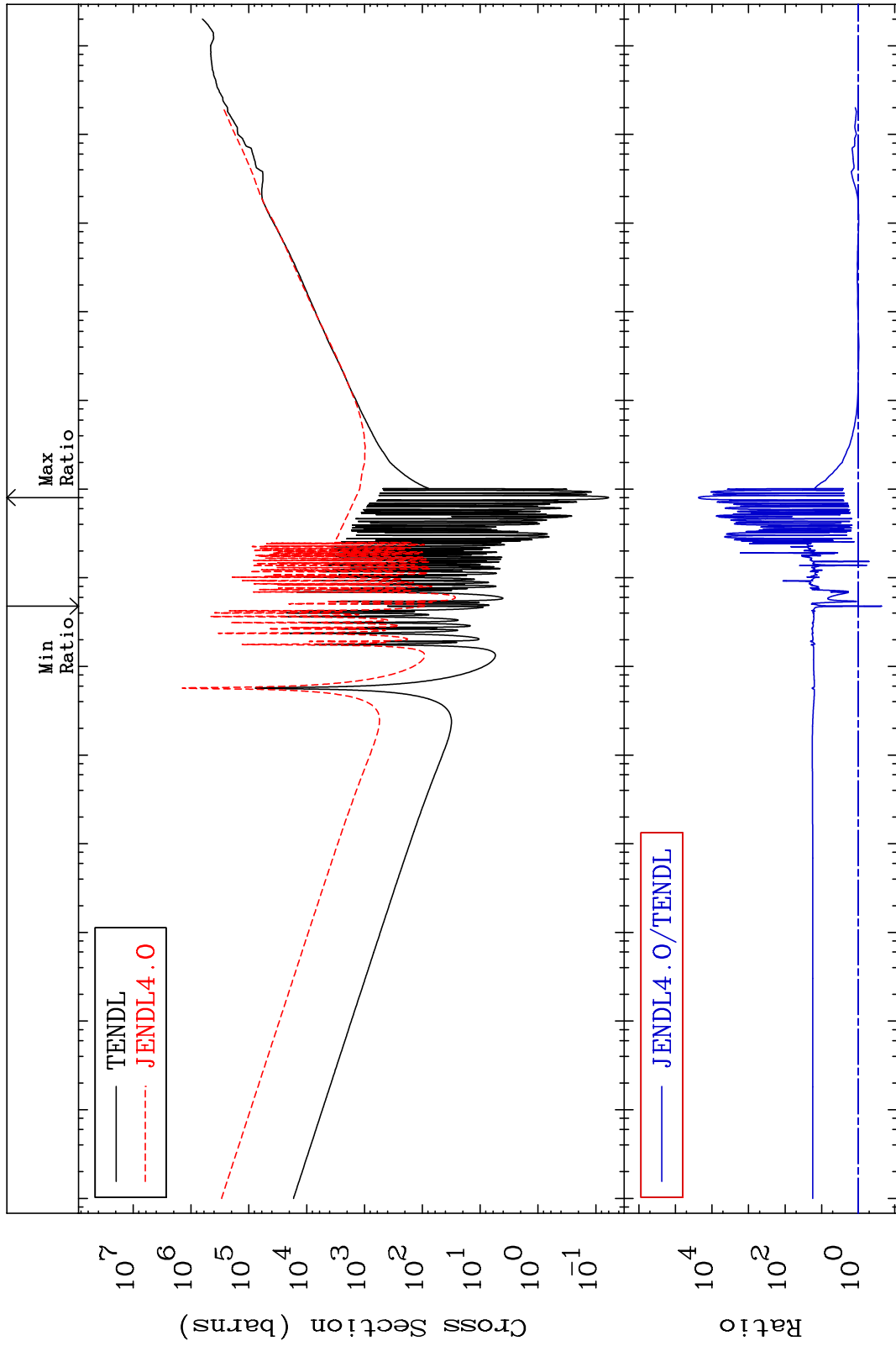
MAT 7240

Dpa total (eV-barns)

72-Hf-179

-77.09 To 9999. %

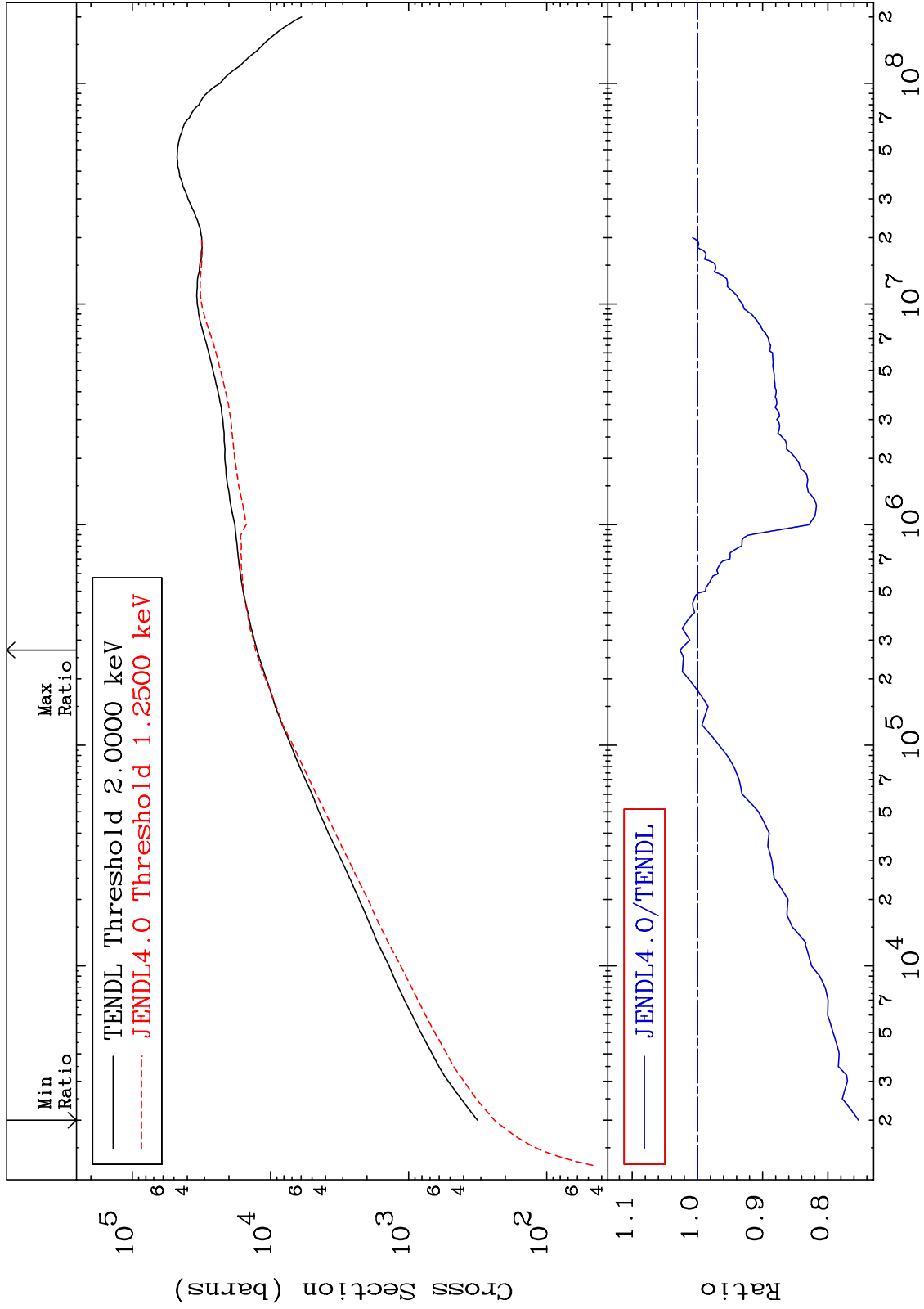
Cross Section



MAT 7240

Dpa elastic (mt2)
Cross Section

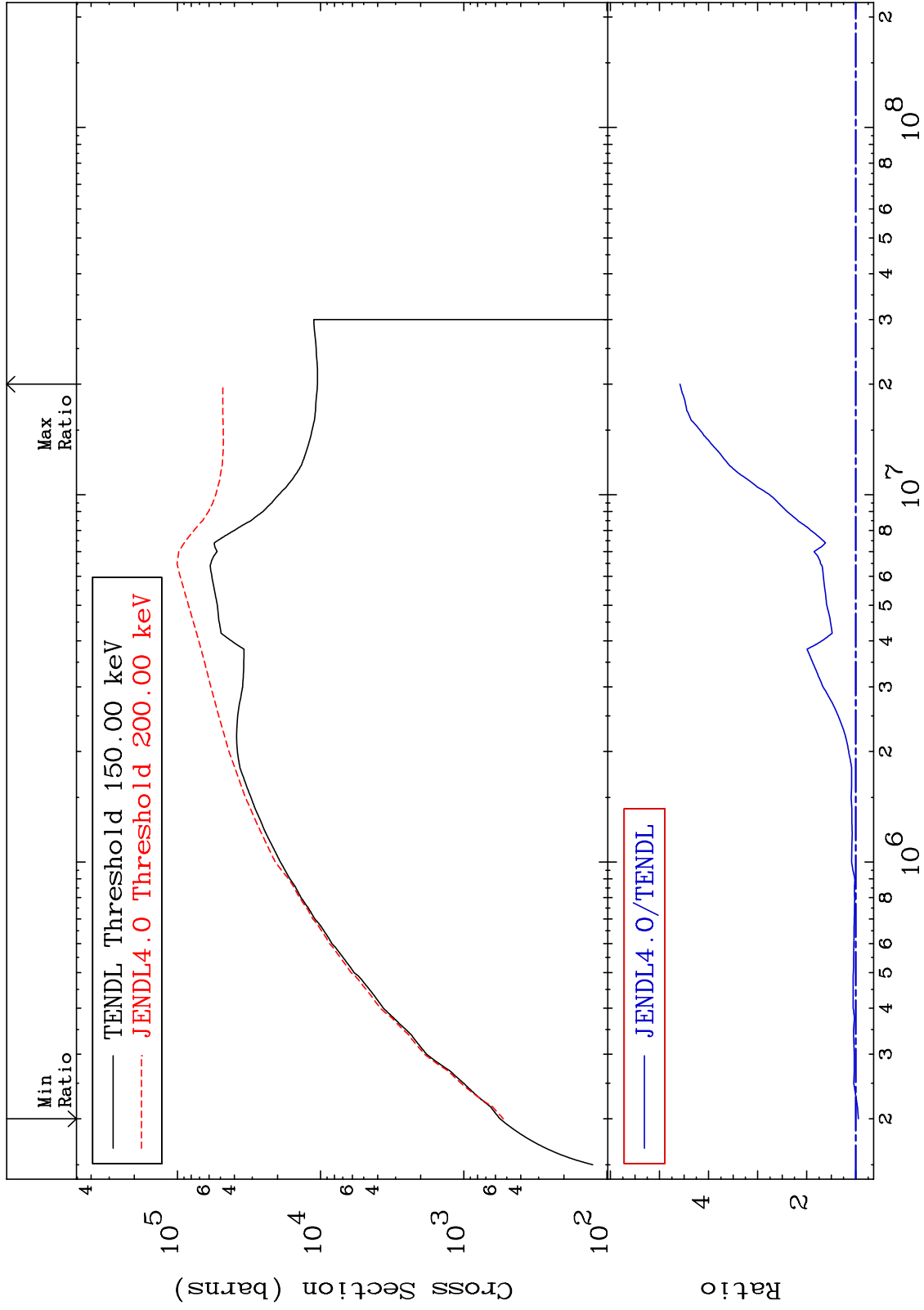
72-Hf-179
-24.69 To 2.673 %



MAT 7240

Dpa inelastic (mt51-91)
Cross Section

72-Hf-179
-5.267 To 358.3 %



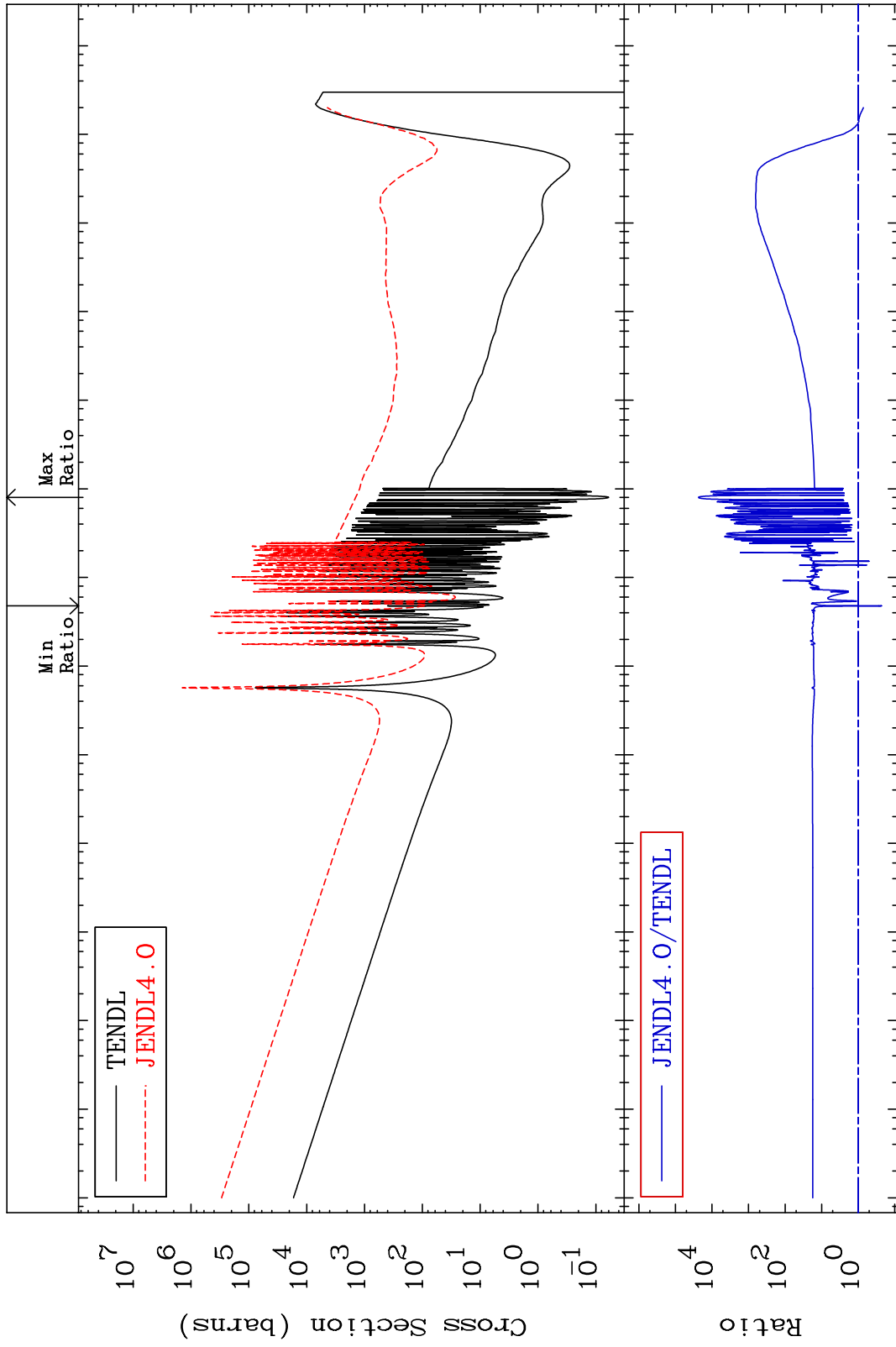
MAT 7240

Dpa disappearance (mt102 -120)

72-Hf-179

-77.09 To 9999. %

Cross Section



60

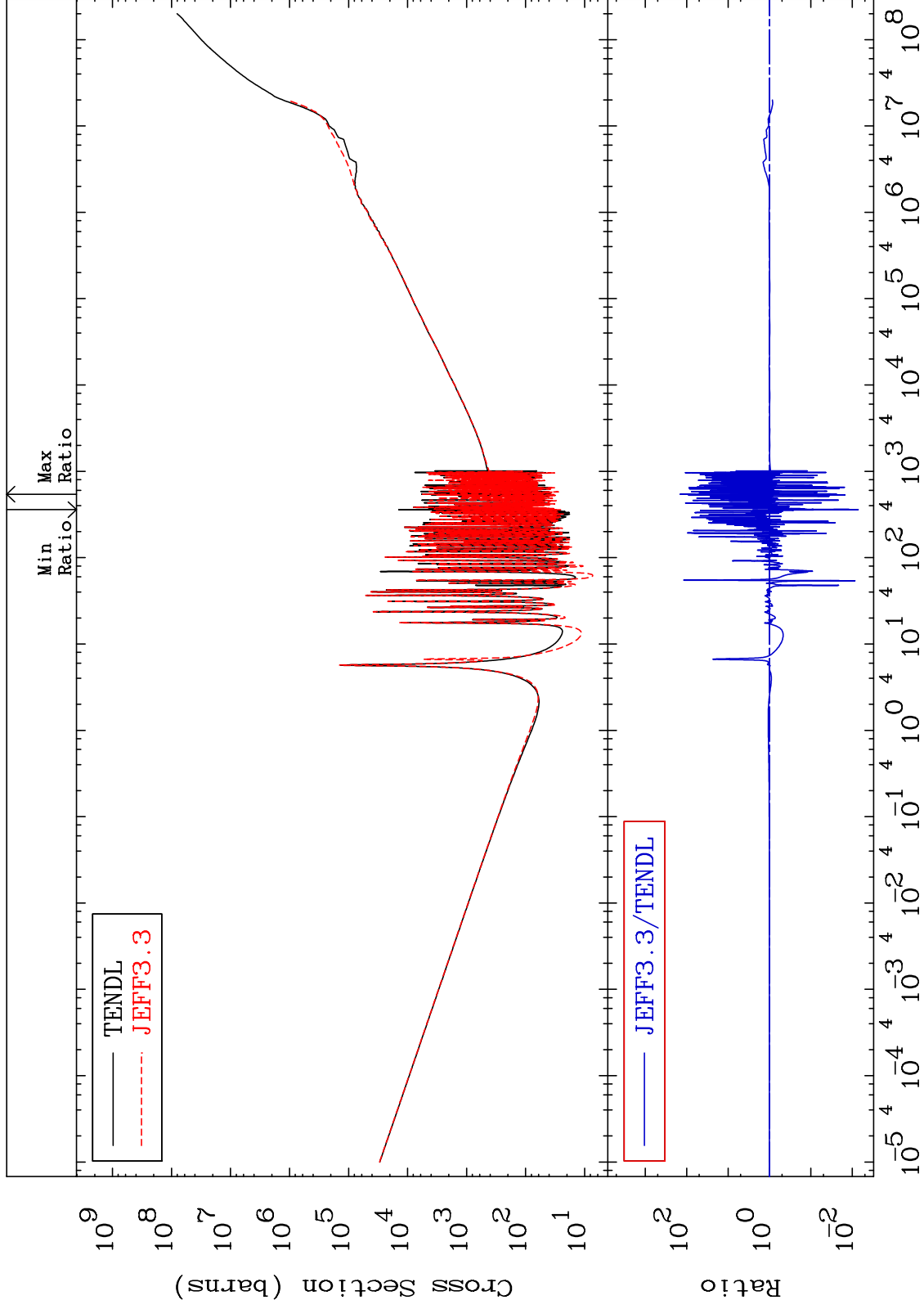
Incident Energy (eV)

72-Hf-179

MAT 7240

Total kinematic kerma (high limit)
Cross Section

72-Hf-179
-99.29 To 9999. %



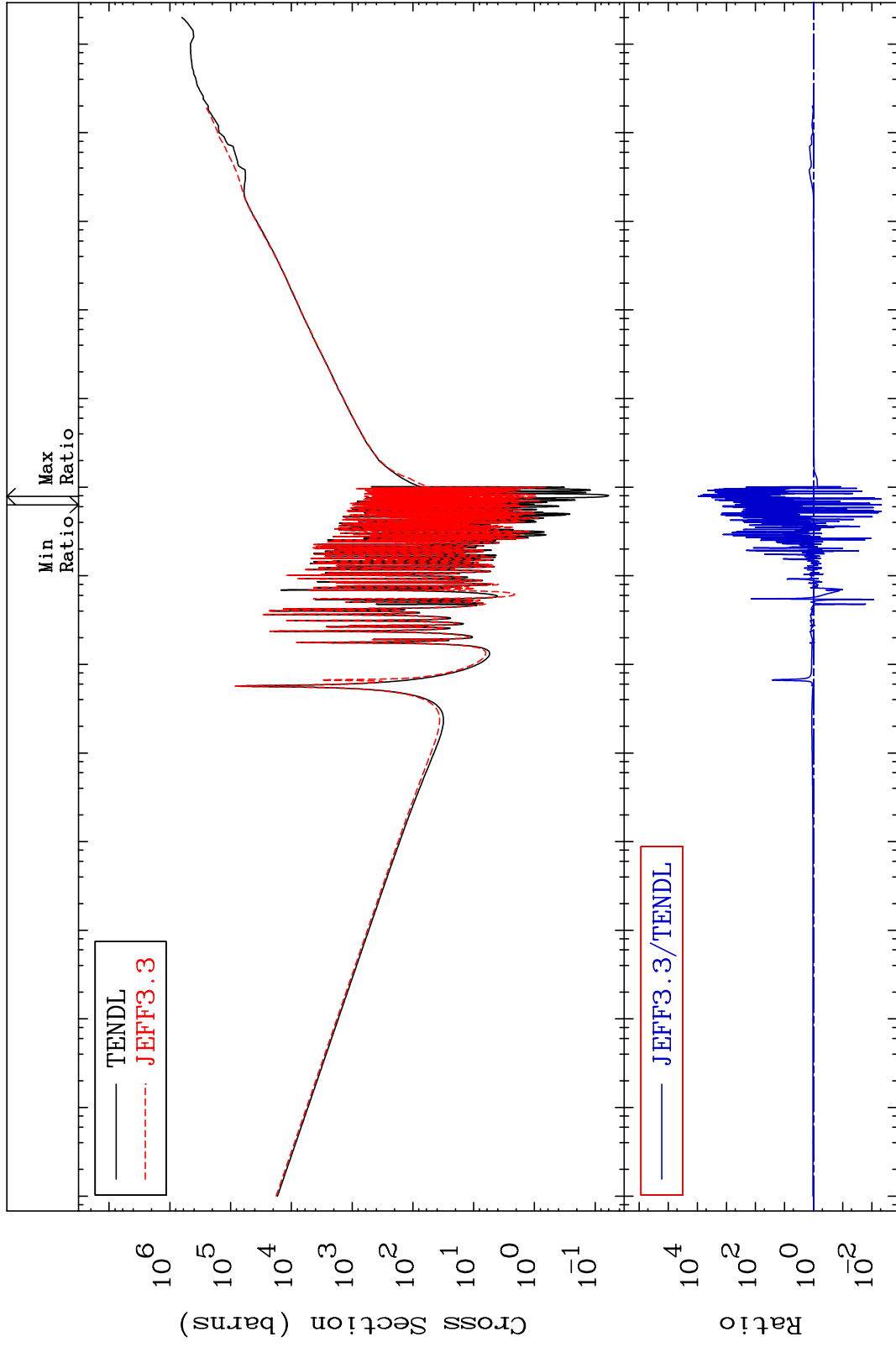
MAT 7240

Dpa total (eV-barns)

72-Hf-179

-99.54 To 9999. %

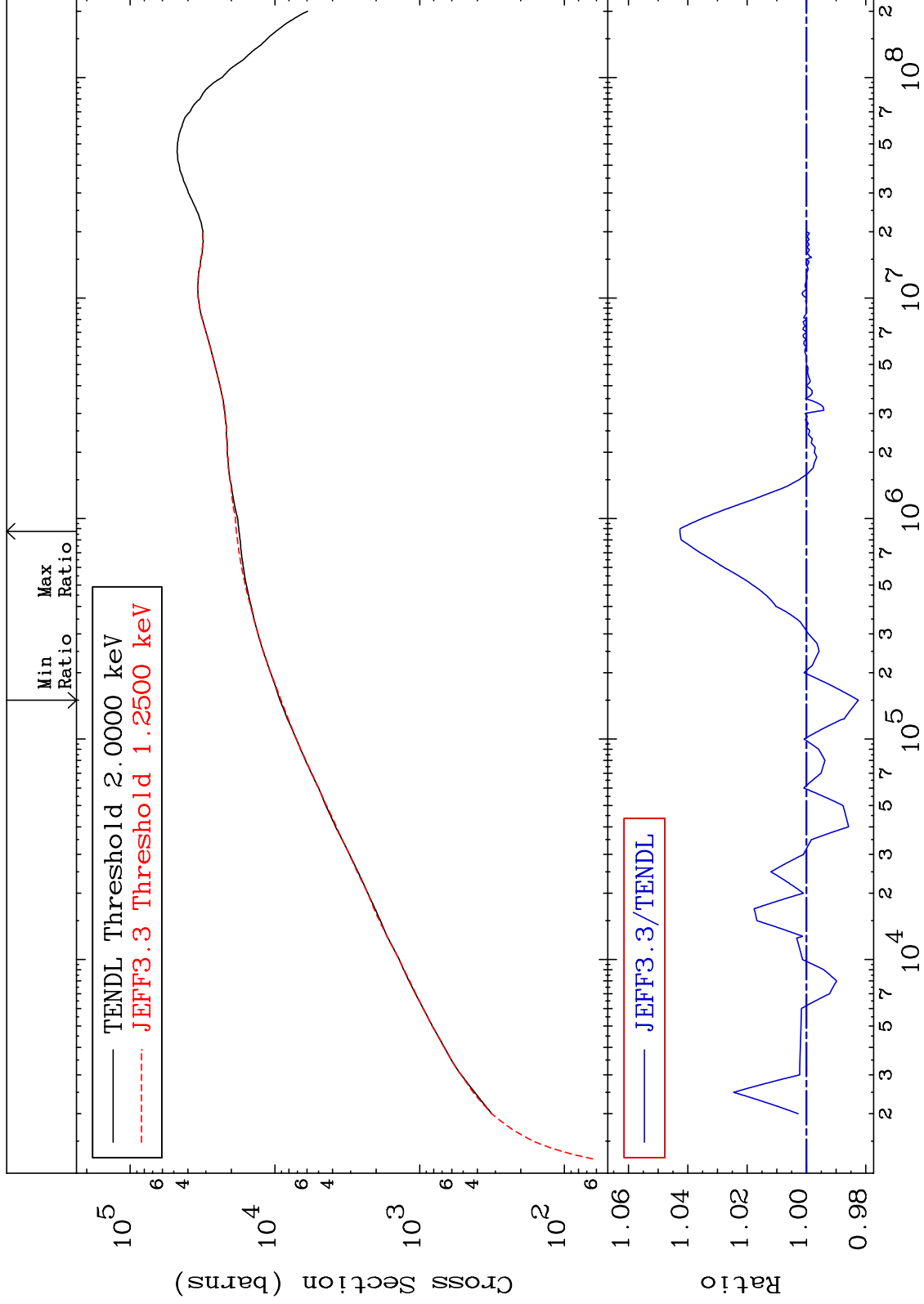
Cross Section



MAT 7240

Dpa elastic (mt2)
Cross Section

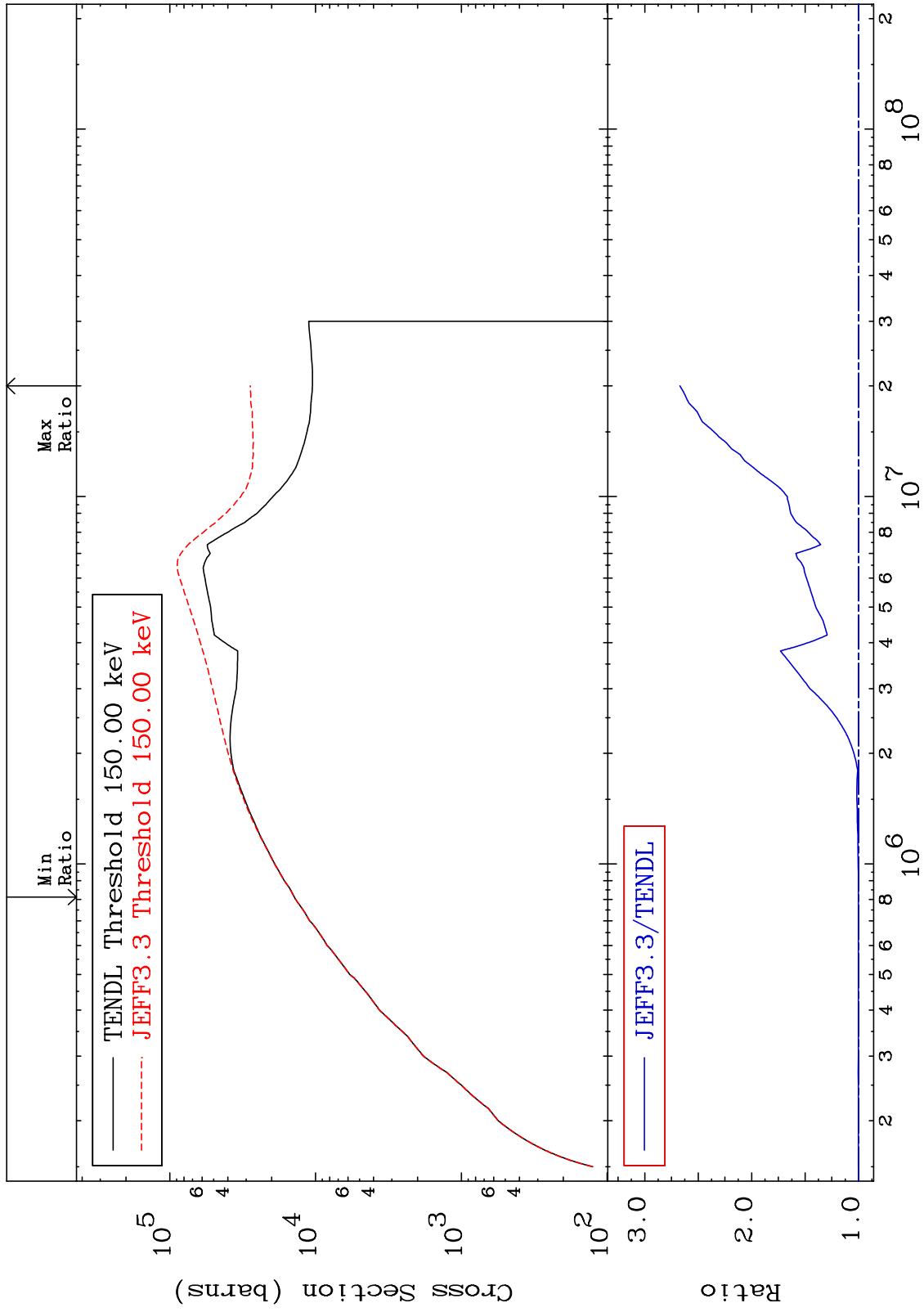
72-Hf-179
-1.753 To 4.262 %



MAT 7240

Dpa inelastic (mt51-91)
Cross Section

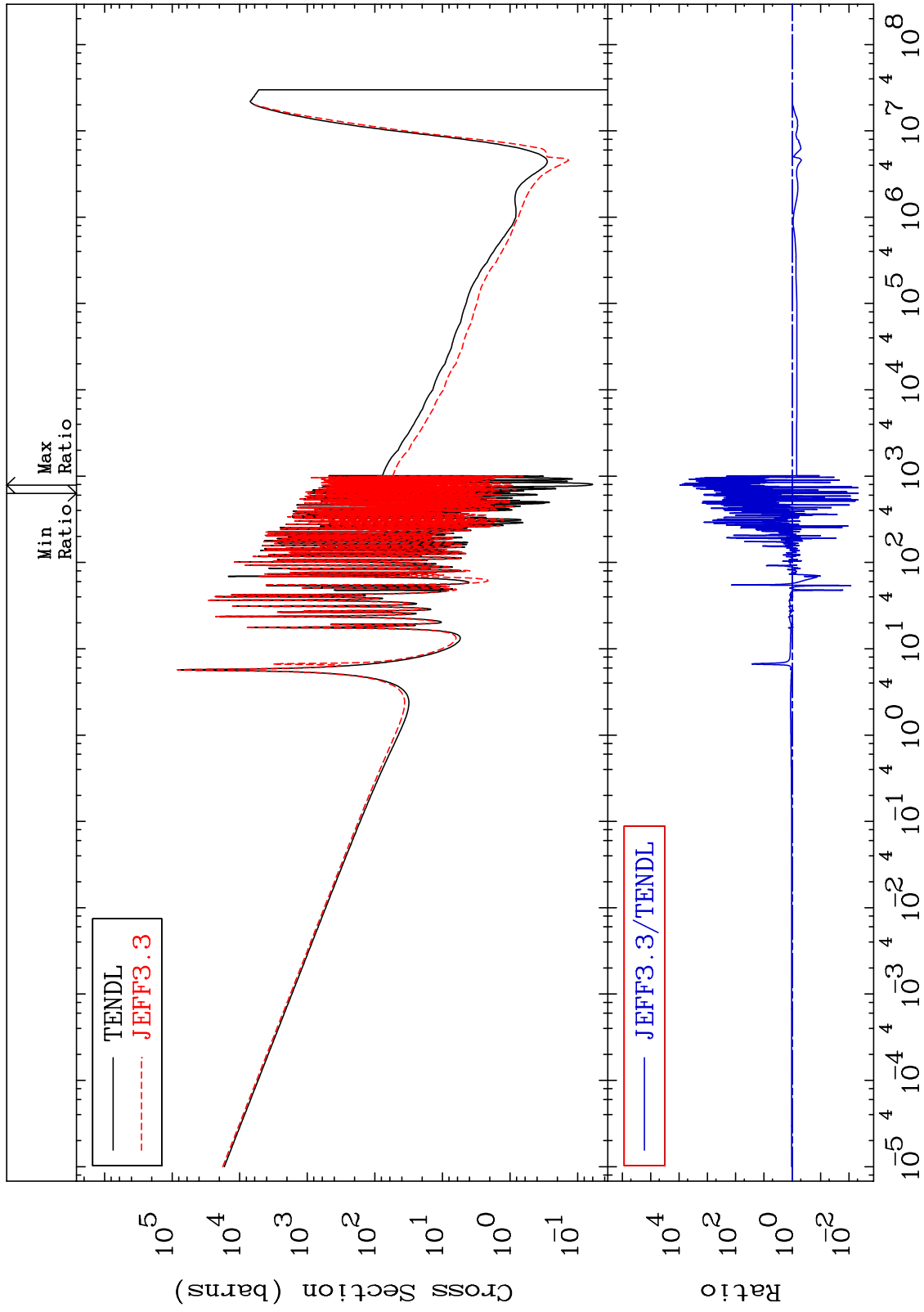
72-Hf-179
0.149 To 167.0 %



MAT 7240

Dpa disappearance (mt102 -120)
Cross Section

72-Hf-179
-99.54 To 9999. %



65

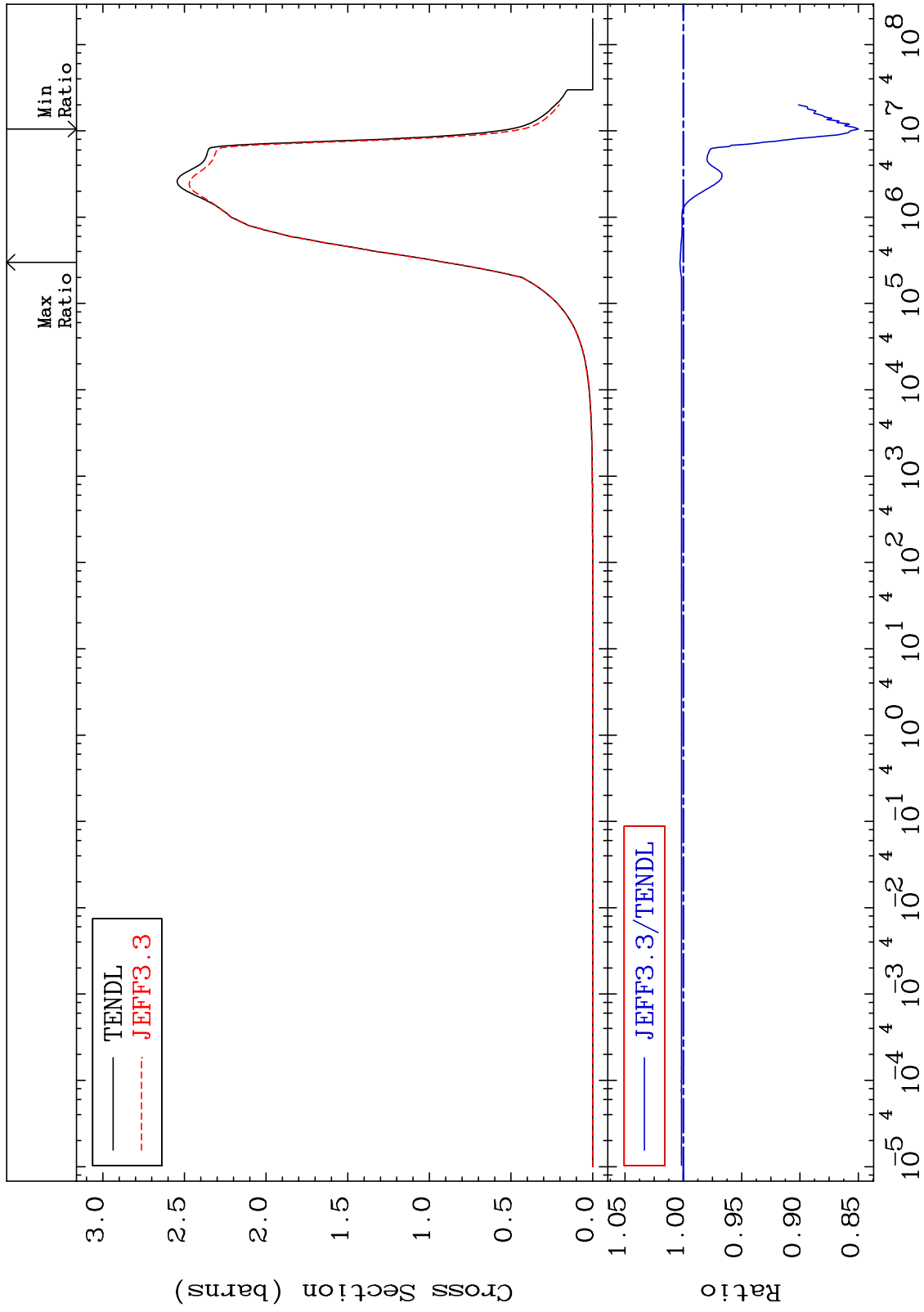
Incident Energy (eV)

72-Hf-179

MAT 7240

Inelastic: 72-Hf-179
Radionuclide Production Cross Section -15.01 To 0.283 %

72-Hf-179



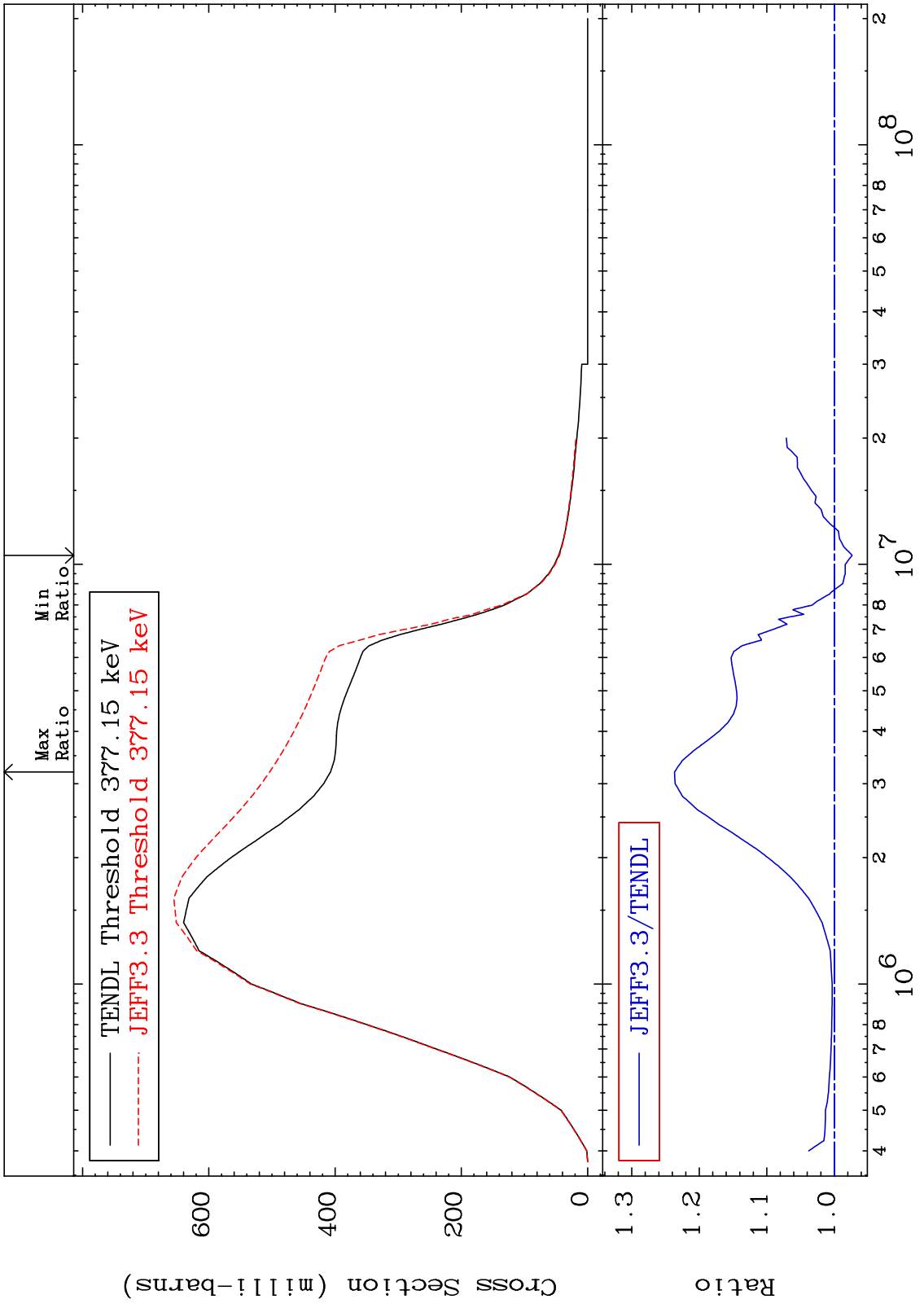
MAT 7240

Inelastic: 72-Hf-179m5

72-Hf-179

Radionuclide Production Cross Section

-2.650 To 23.66 %



67

Incident Energy (eV)

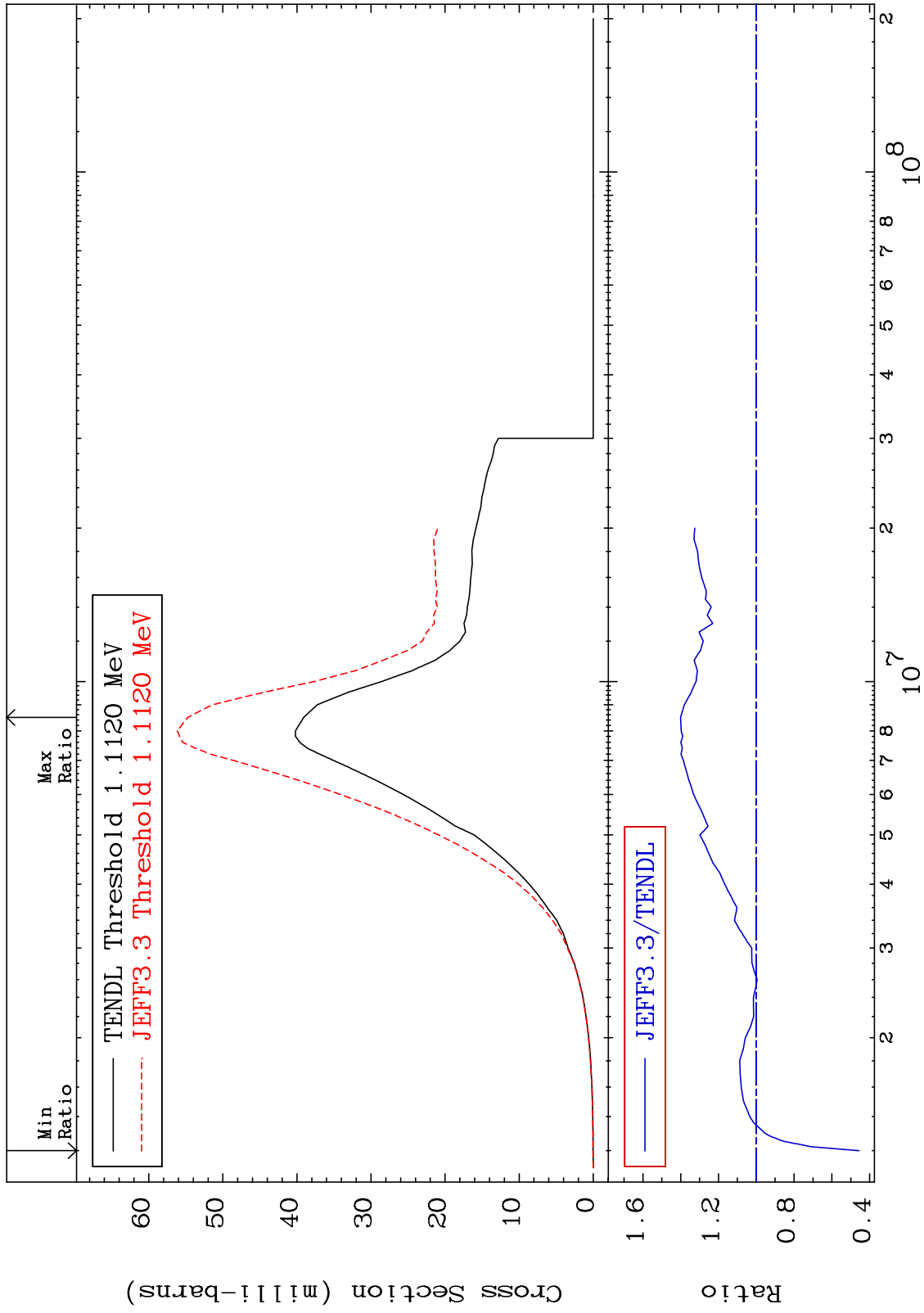
72-Hf-179

MAT 7240

Inelastic: 72-Hf-179m30

72-Hf-179

Radionuclide Production Cross Section -54.46 To 40.04 %

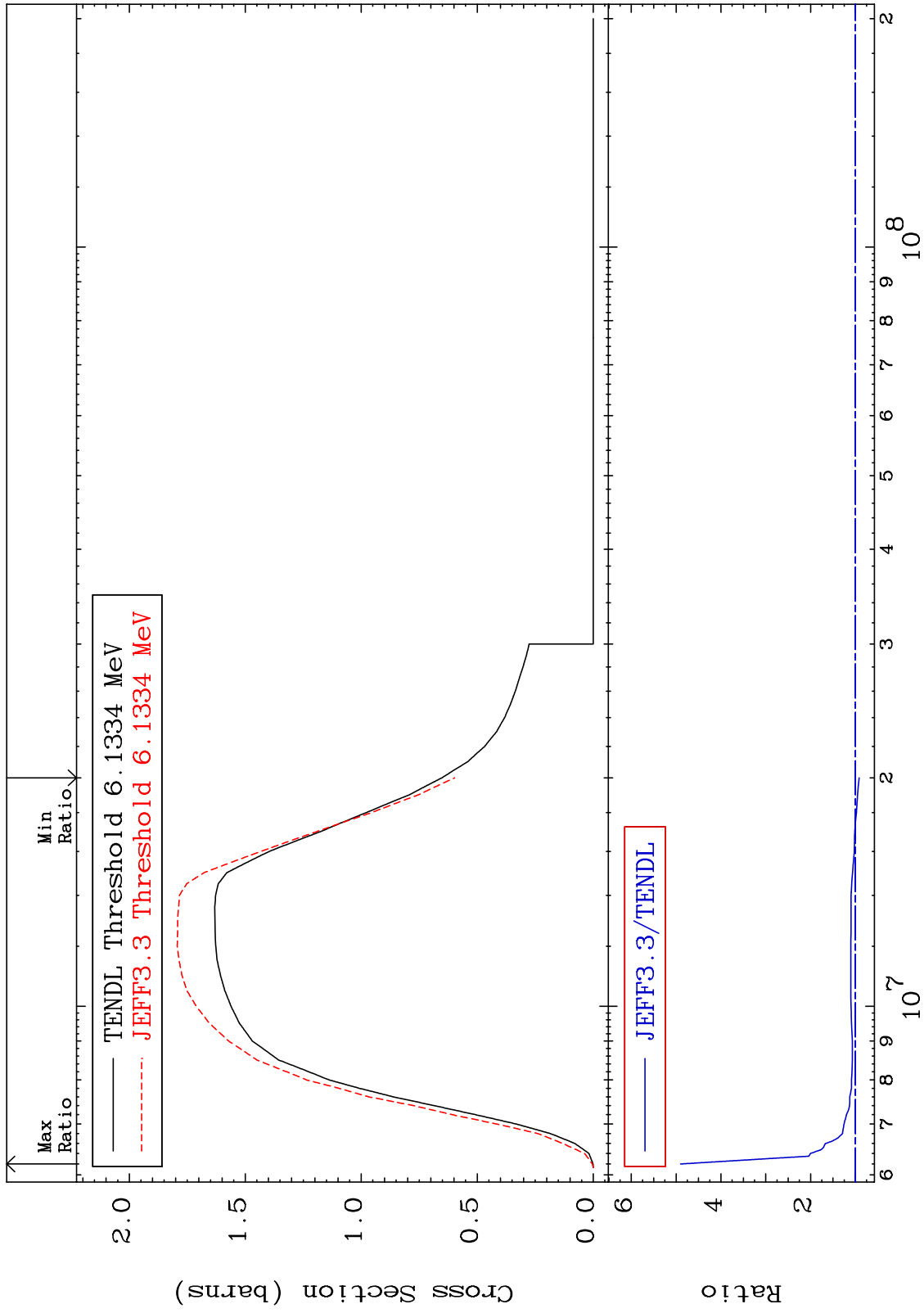


MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section -8.453 To 389.9 %



69

Incident Energy (eV)

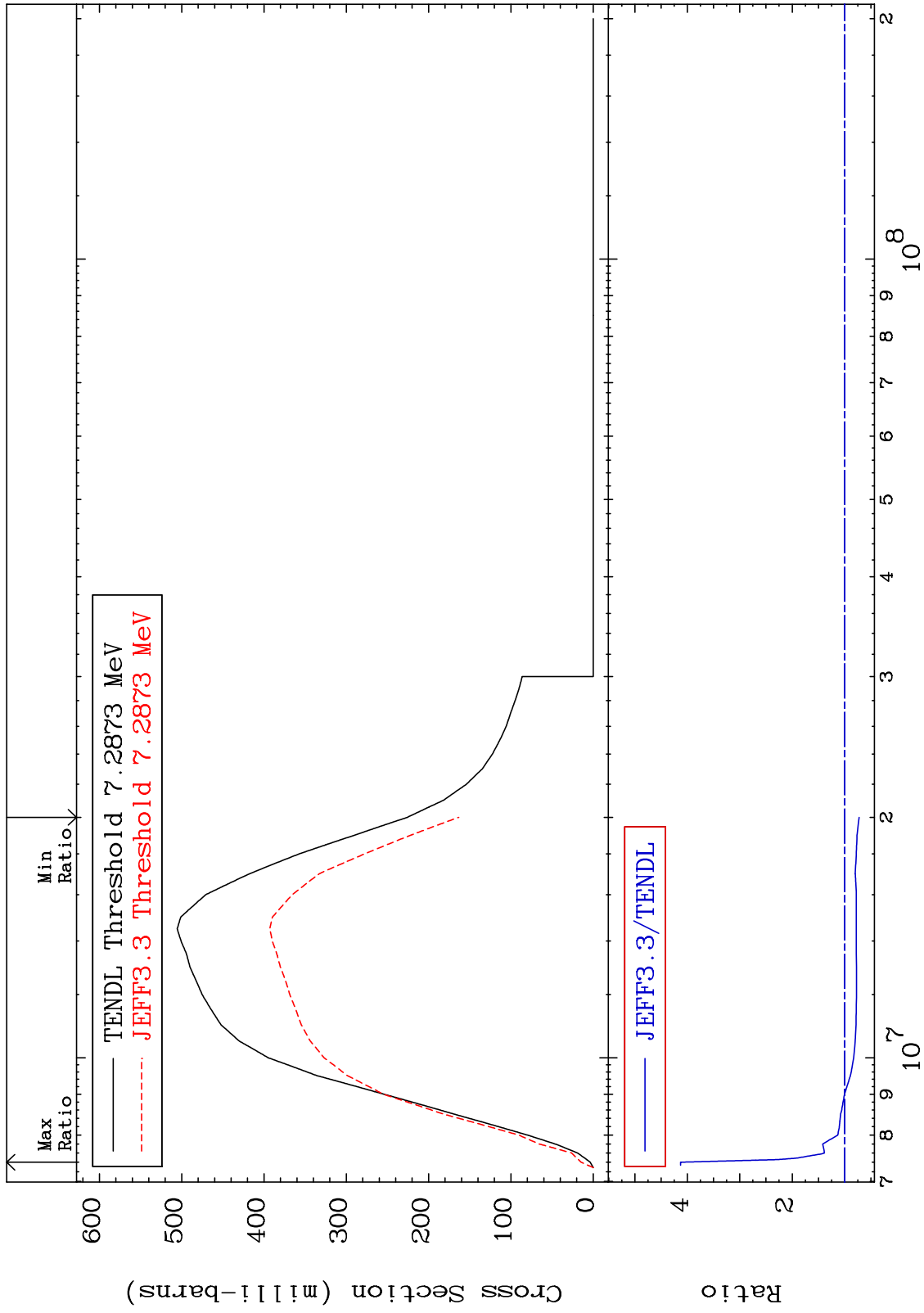
72-Hf-179

MAT 7240

(n,2n): 72-Hf-178m5

72-Hf-179

Radionuclide Production Cross Section -27.66 To 312.8 %



70

Incident Energy (eV)

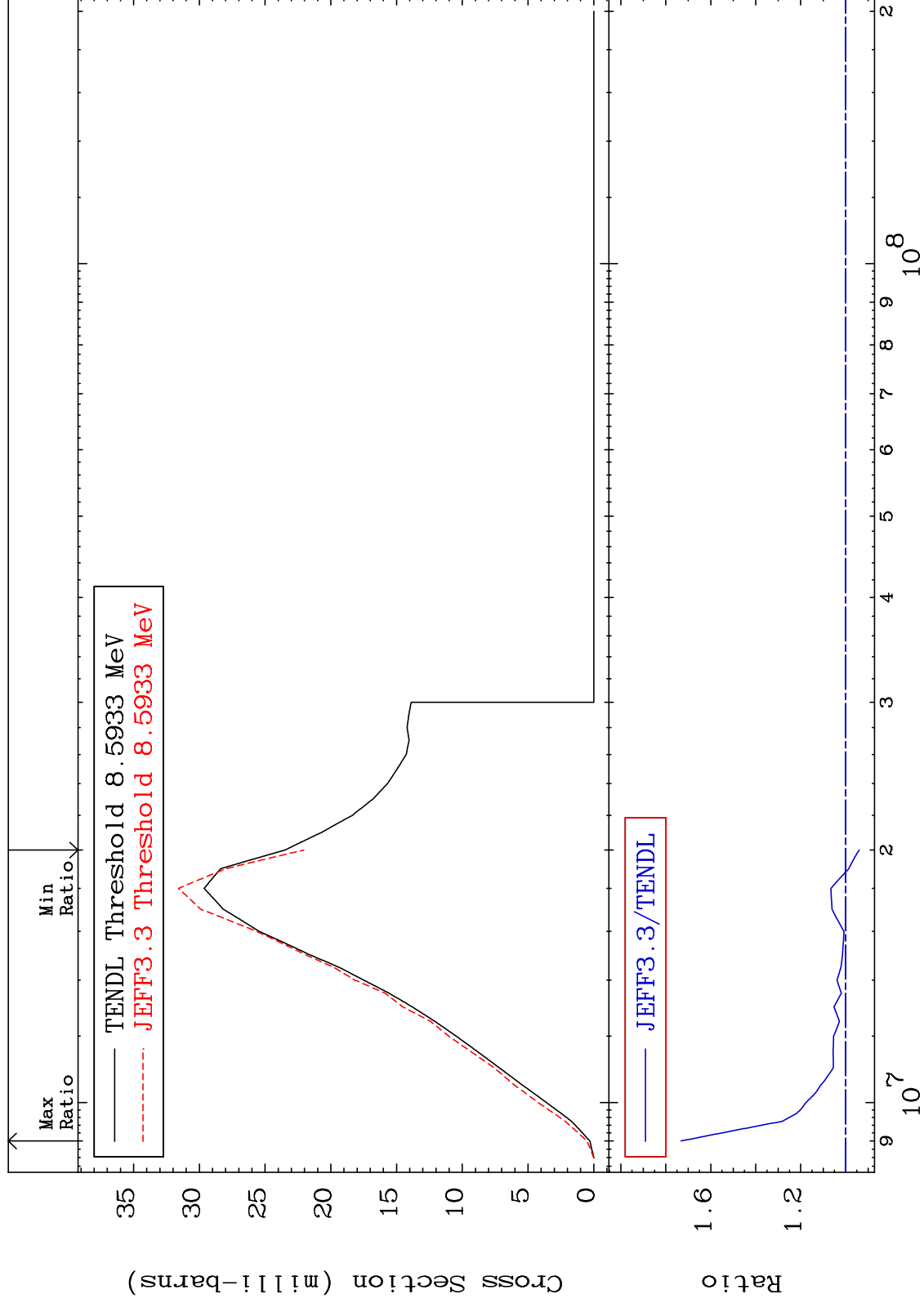
72-Hf-179

MAT 7240

(n,2n) : 72-Hf-178m10

72-Hf-179

Radionuclide Production Cross Section -6.058 To 73.21 %



71

Incident Energy (eV)

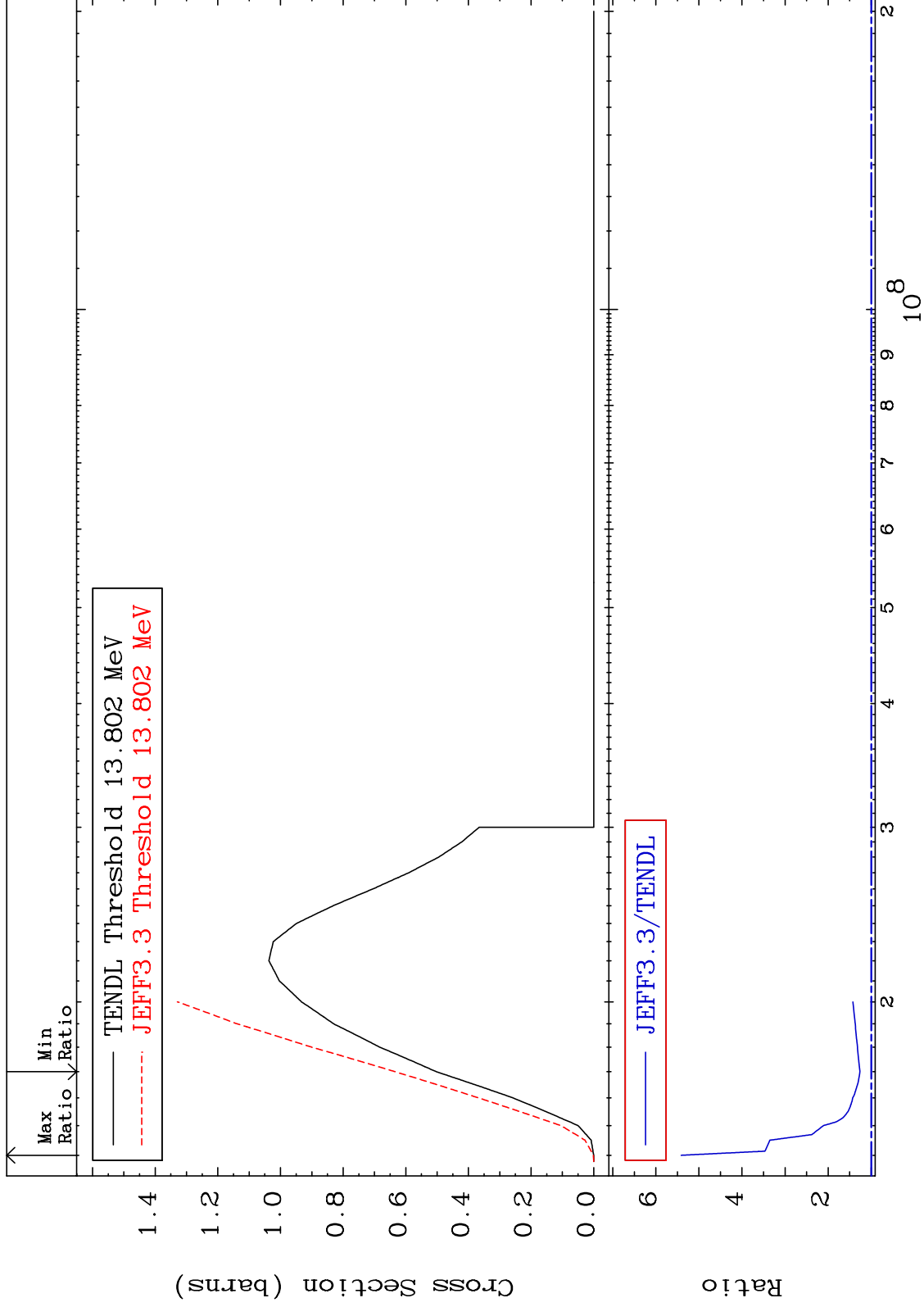
72-Hf-179

MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section 26.12 To 441.1 %



72

Incident Energy (eV)

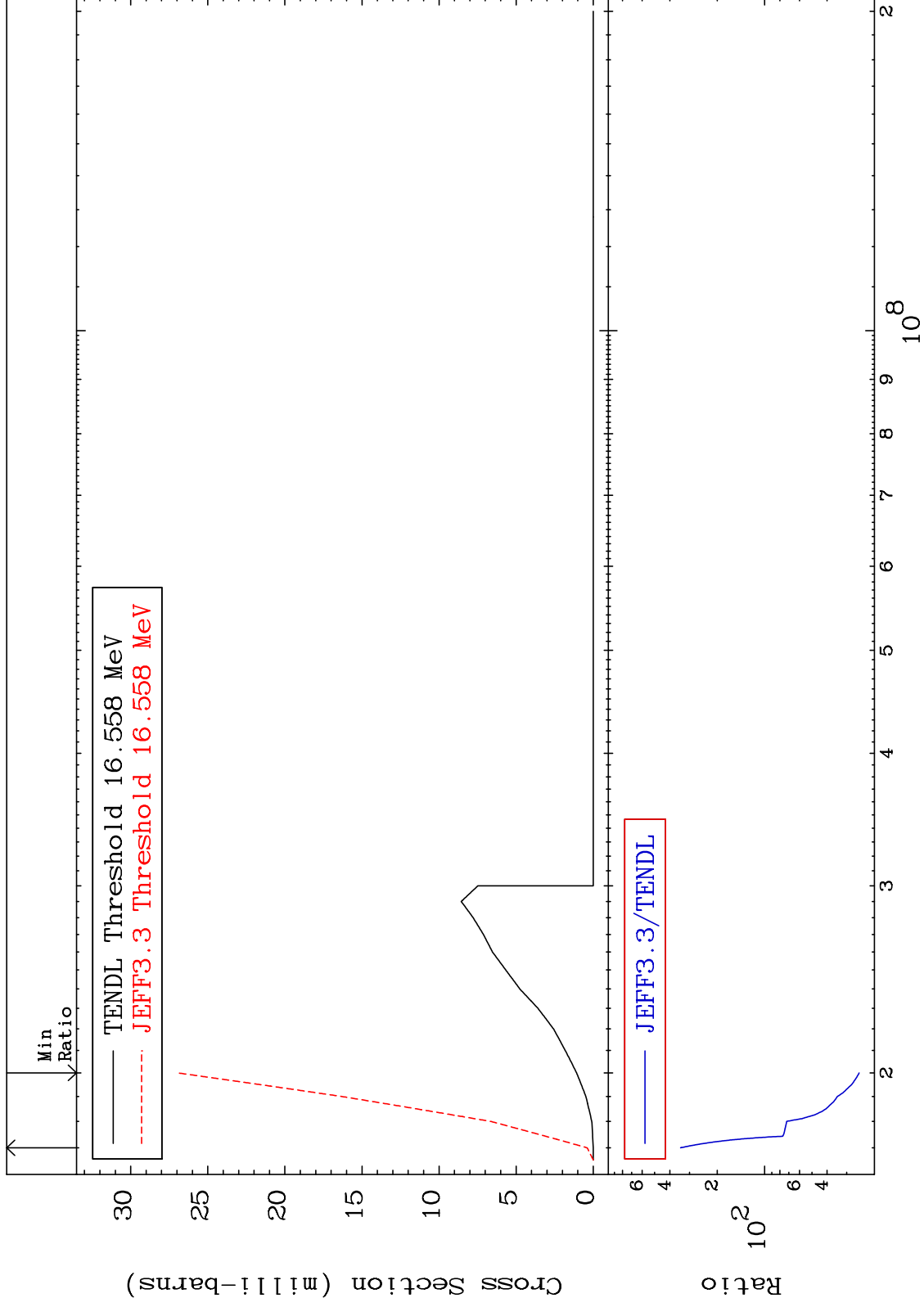
72-Hf-179

MAT 7240

(n,3n):72-Hf-177m10

72-Hf-179

Radionuclide Production Cross Section 2401. To 9999. %



73

Incident Energy (eV)

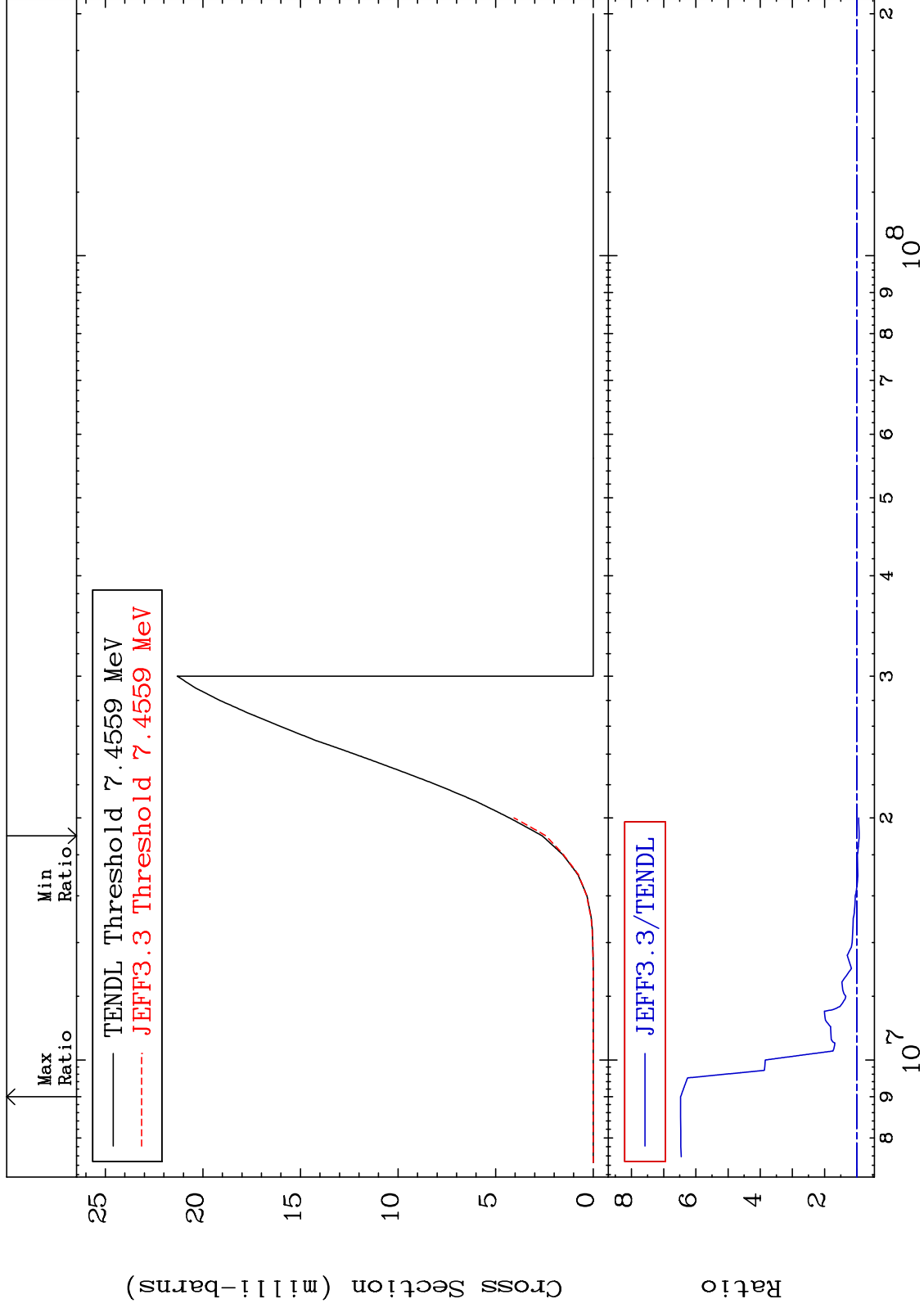
72-Hf-179

MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section -7.346 To 547.3 %



74

Incident Energy (eV)

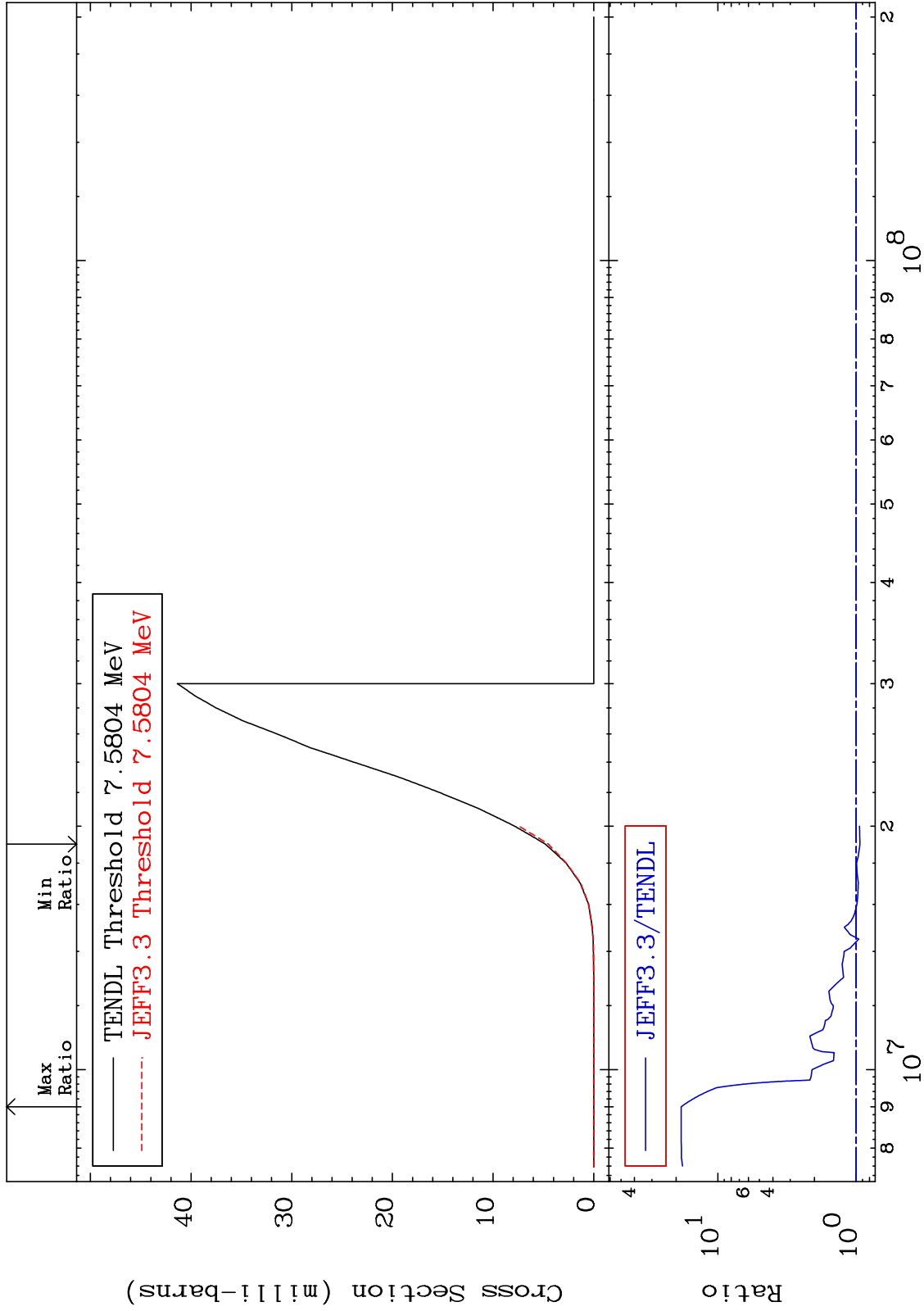
72-Hf-179

MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section -6.104 To 1738. %



75

Incident Energy (eV)

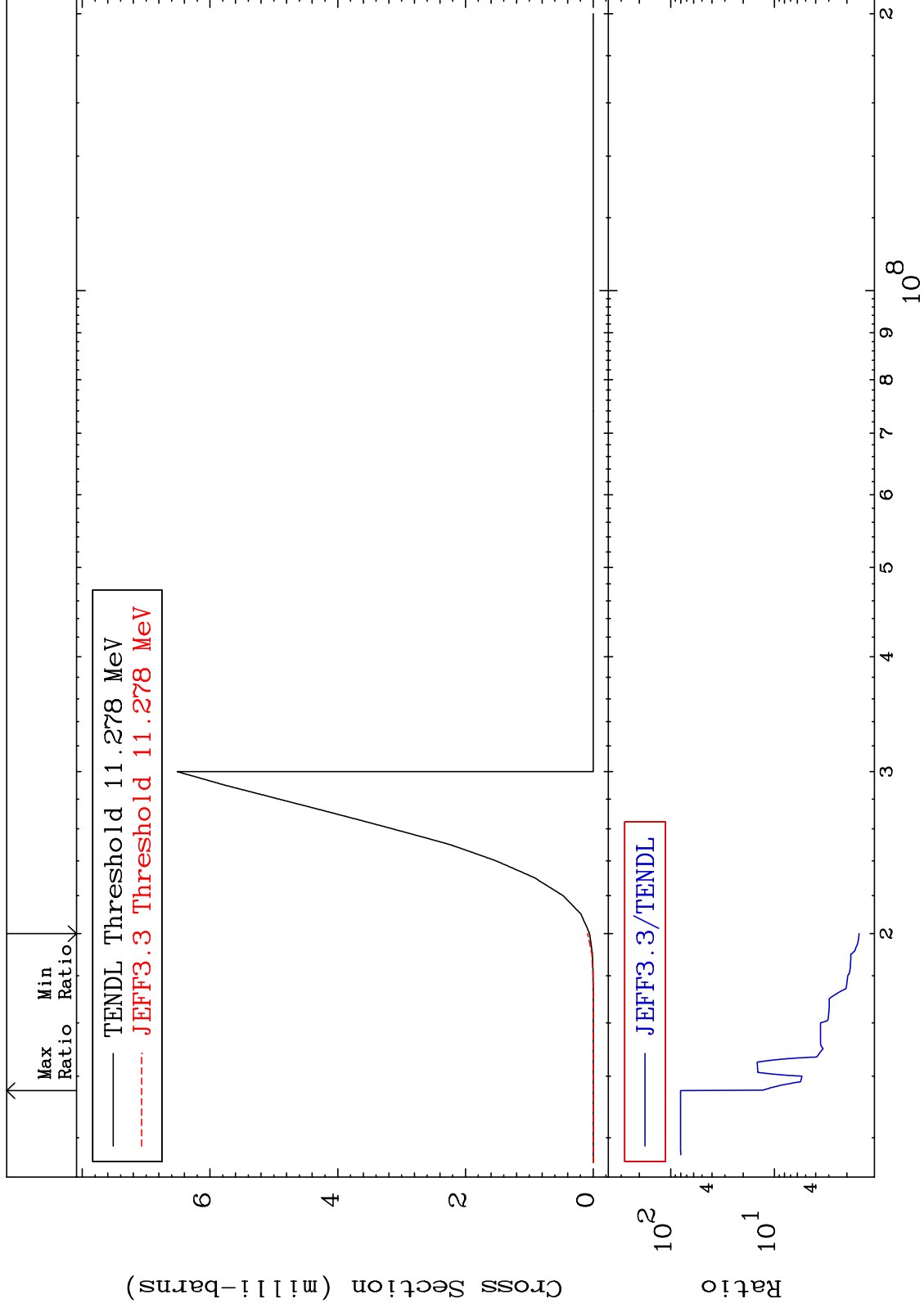
72-Hf-179

MAT 7240

(n, n') d:71-Lu-177g

72-Hf-179

Radionuclide Production Cross Section 52.51 To 7911. %



76

Incident Energy (eV)

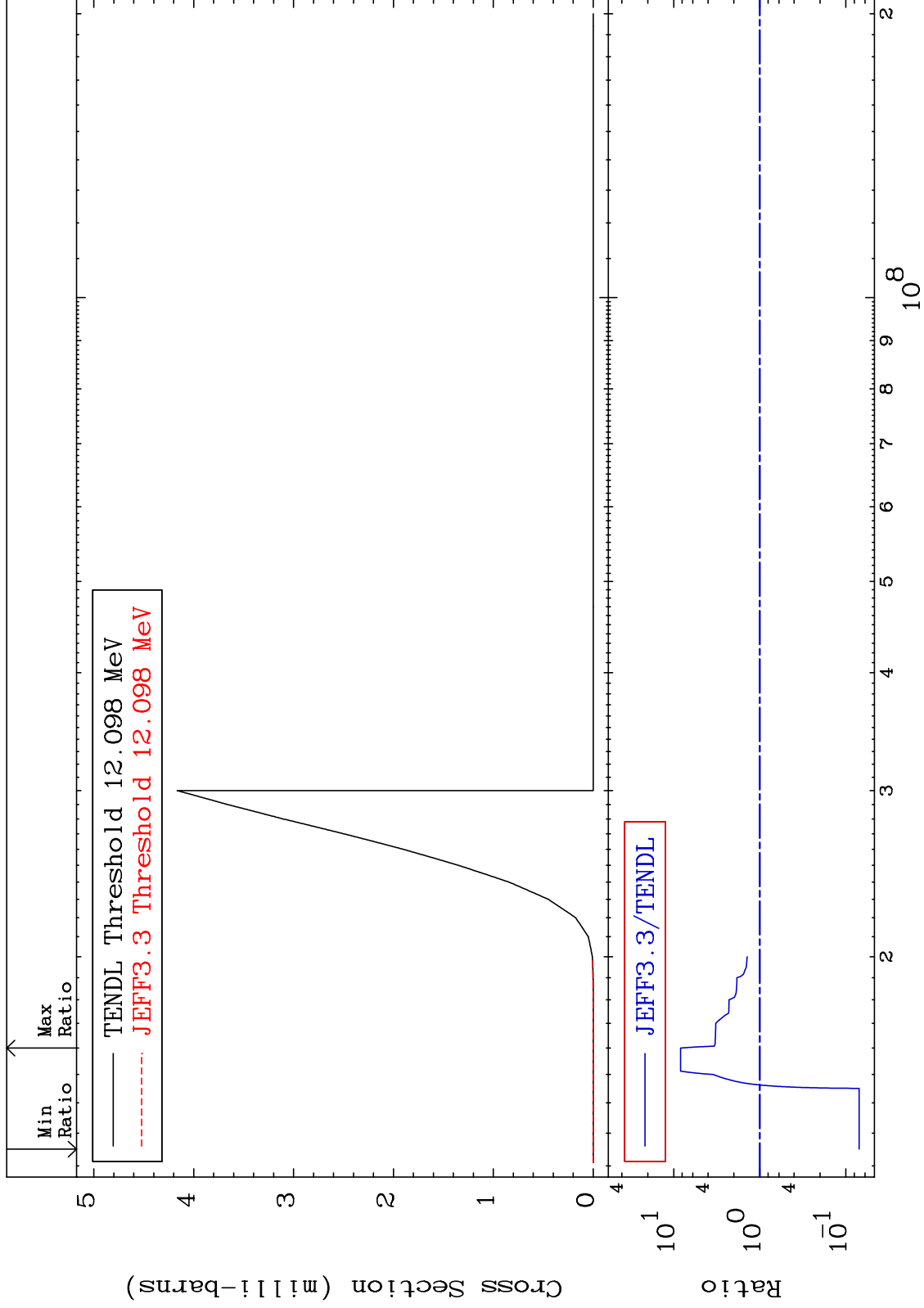
72-Hf-179

MAT 7240

(n, n') t:71-Lu-176g

72-Hf-179

Radionuclide Production Cross Section -92.99 To 732.2 %

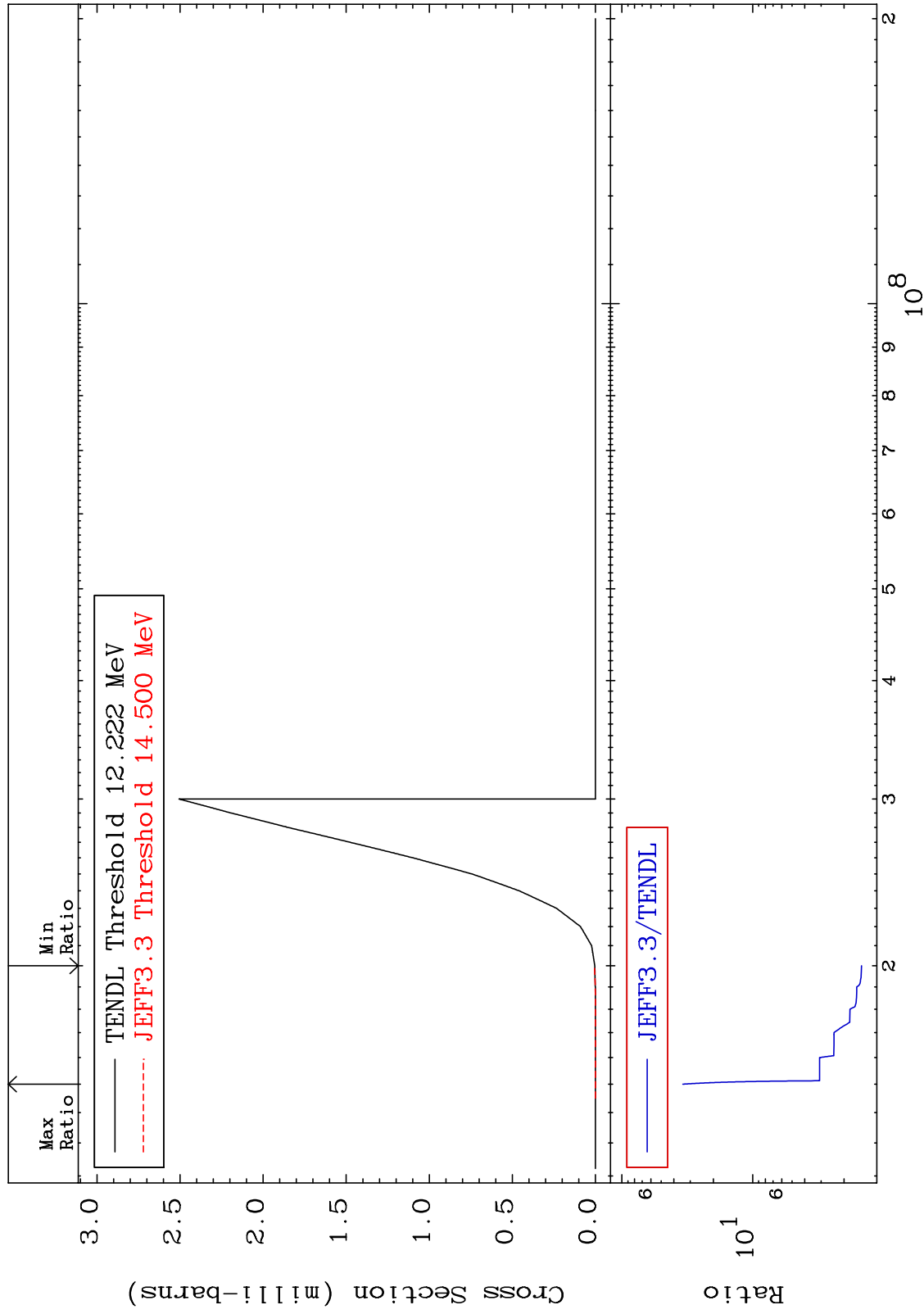


MAT 7240

(n, n') t:71-Lu-176m1

72-Hf-179

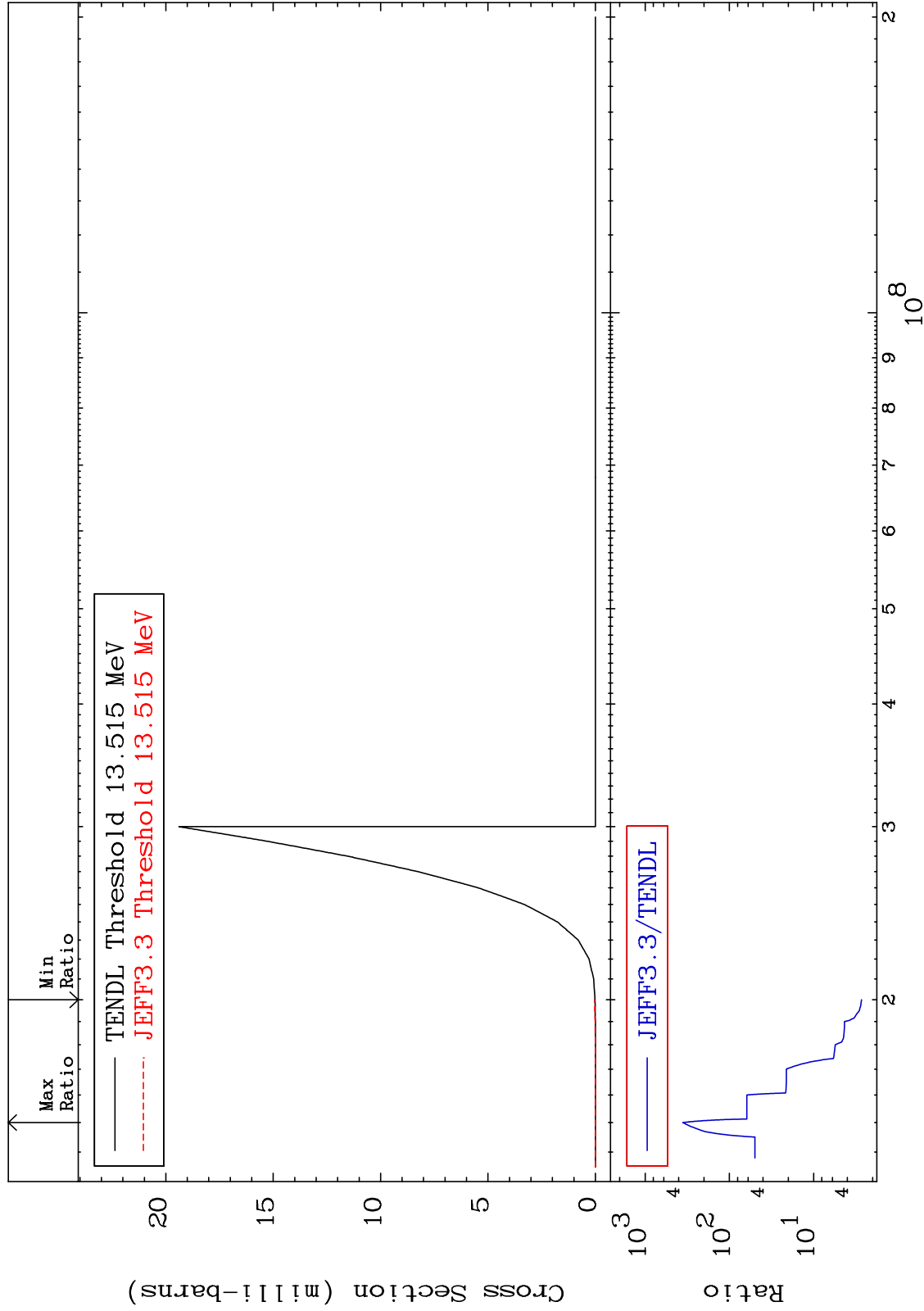
Radionuclide Production Cross Section 47.11 To 3319. %



78

Incident Energy (eV)

72-Hf-179

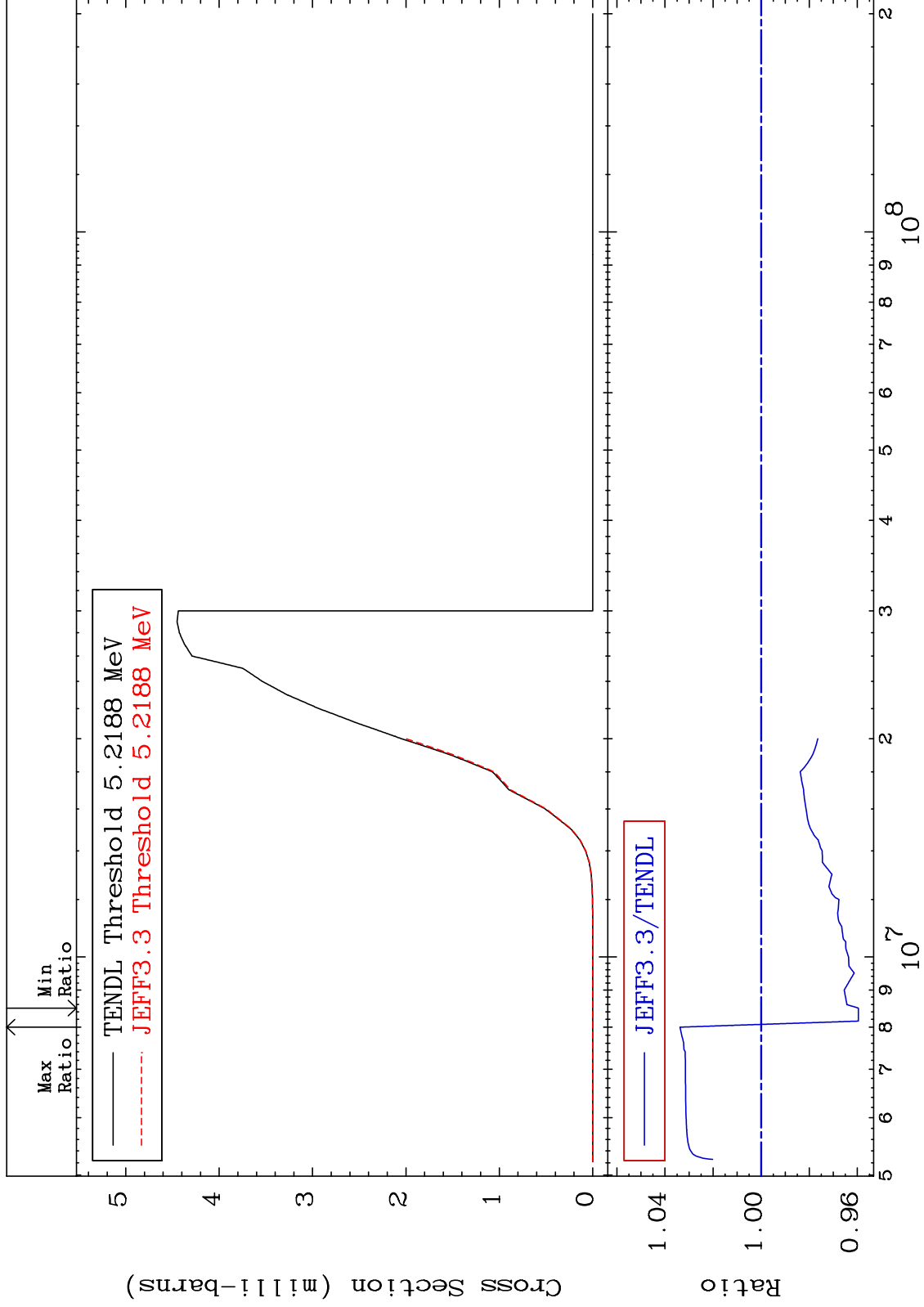


MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section -4.043 To 3.375 %



80

Incident Energy (eV)

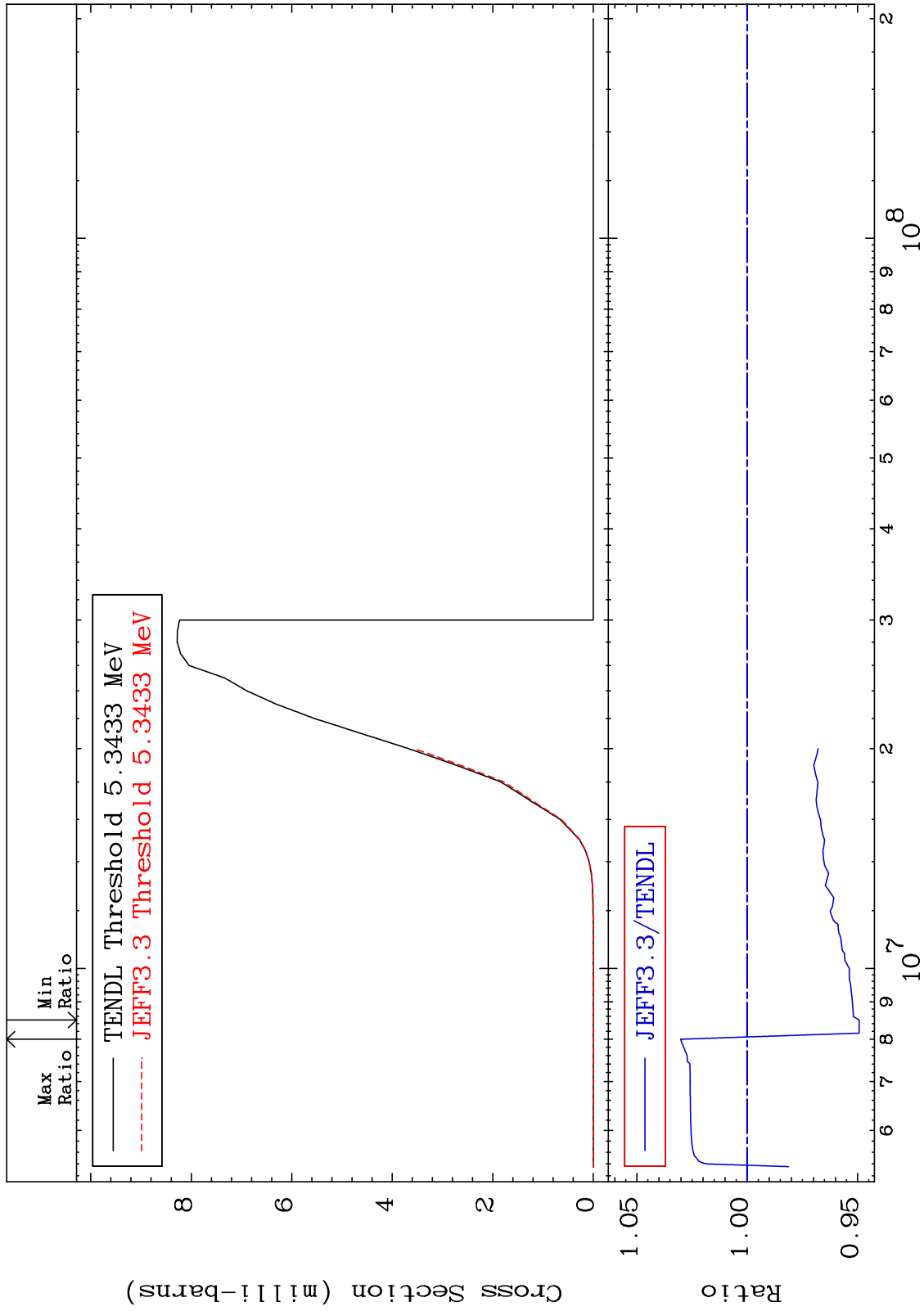
72-Hf-179

MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section -5.072 To 3.017 %

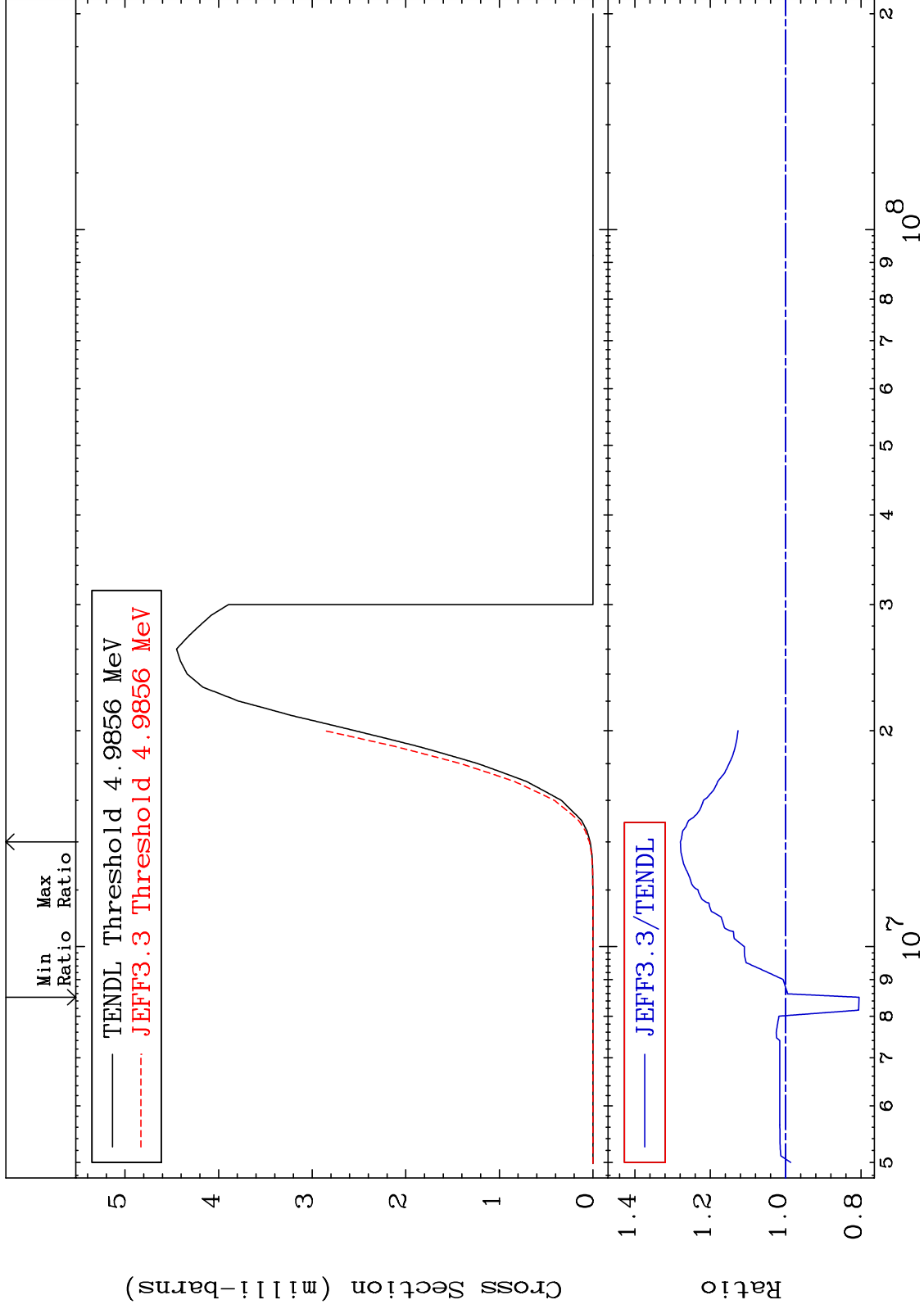


MAT 7240

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

72-Hf-179

Radionuclide Production Cross Section -19.48 To 27.90 %



82

Incident Energy (eV)

72-Hf-179

MAT 7240

(n, He-3):70-Yb-177g

72-Hf-179

Radionuclide Production Cross Section 0.275 To 7.777 %

