

Program Complot  
(Version 2021-1)

by

Dermott E. Cullen  
(Present Contact Information)

Dermott E. Cullen  
1466 Hudson Way  
Livermore, CA 94550

U.S.A.

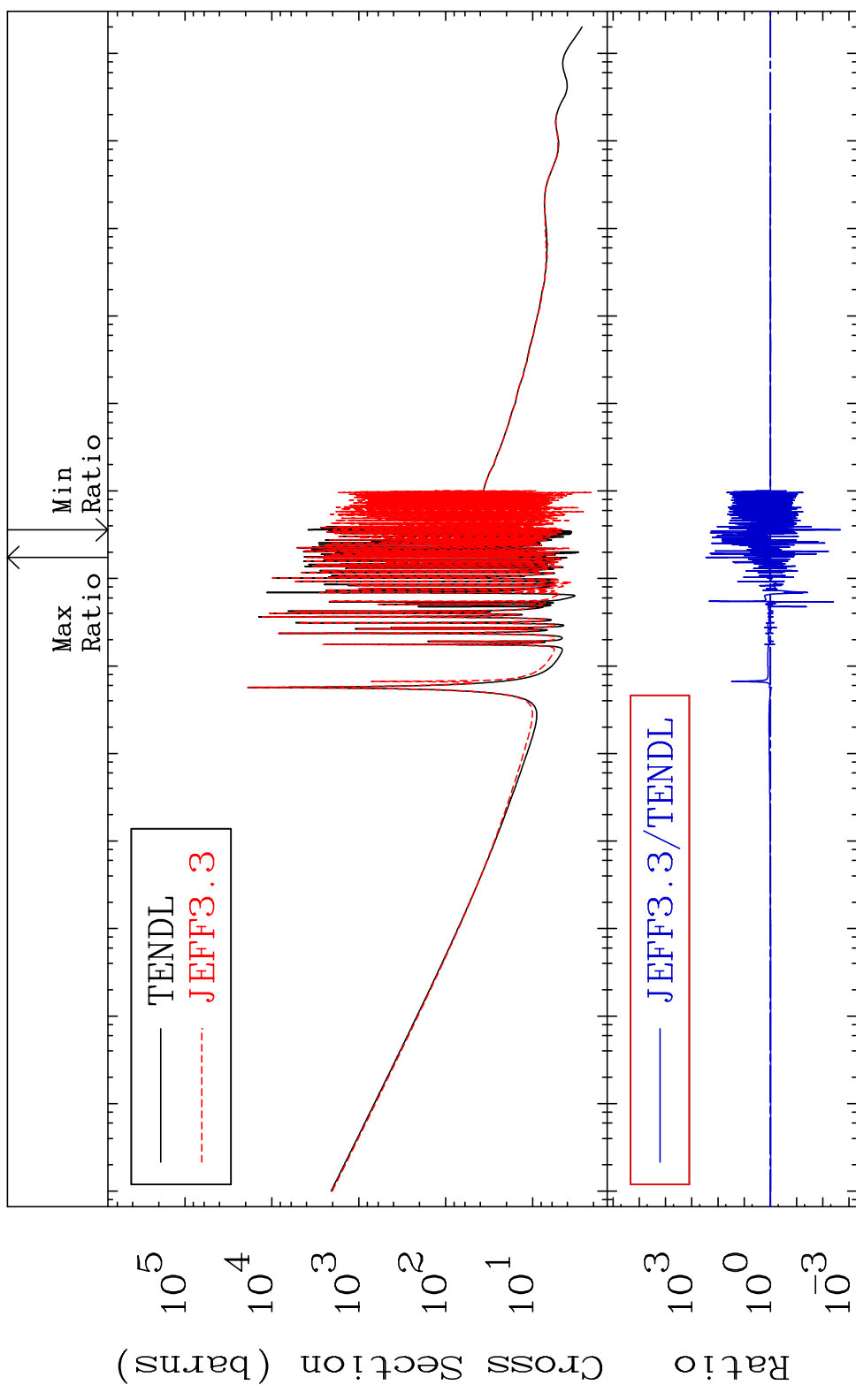
Tele: 925-443-1911

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

Press Mouse Button to Start

MAT 7240

Total Cross Section -99.79 To 9999. %  
72-Hf-179

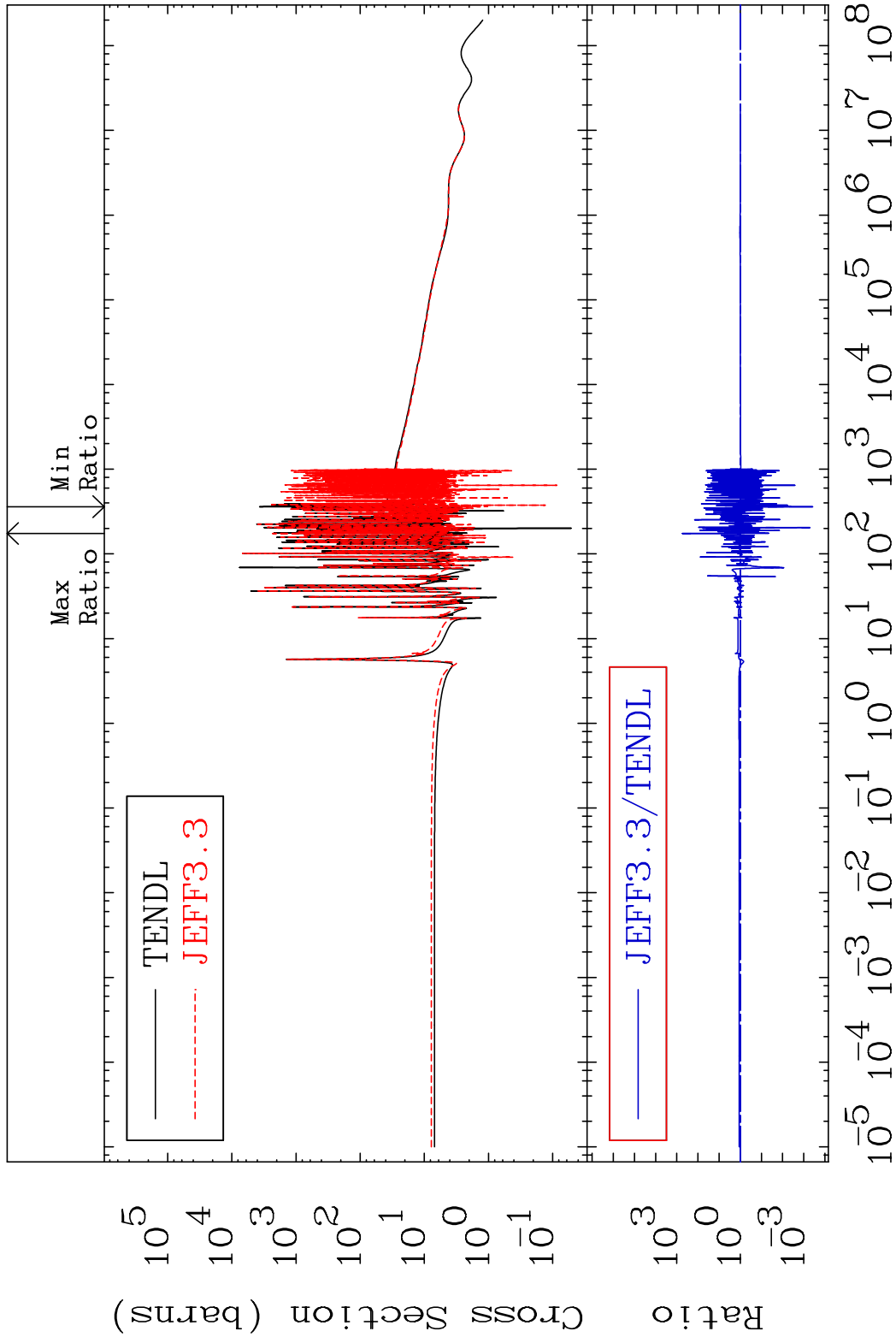


MAT 7240

Elastic

72-Hf-179

Cross Section -99.96 To 9999. %

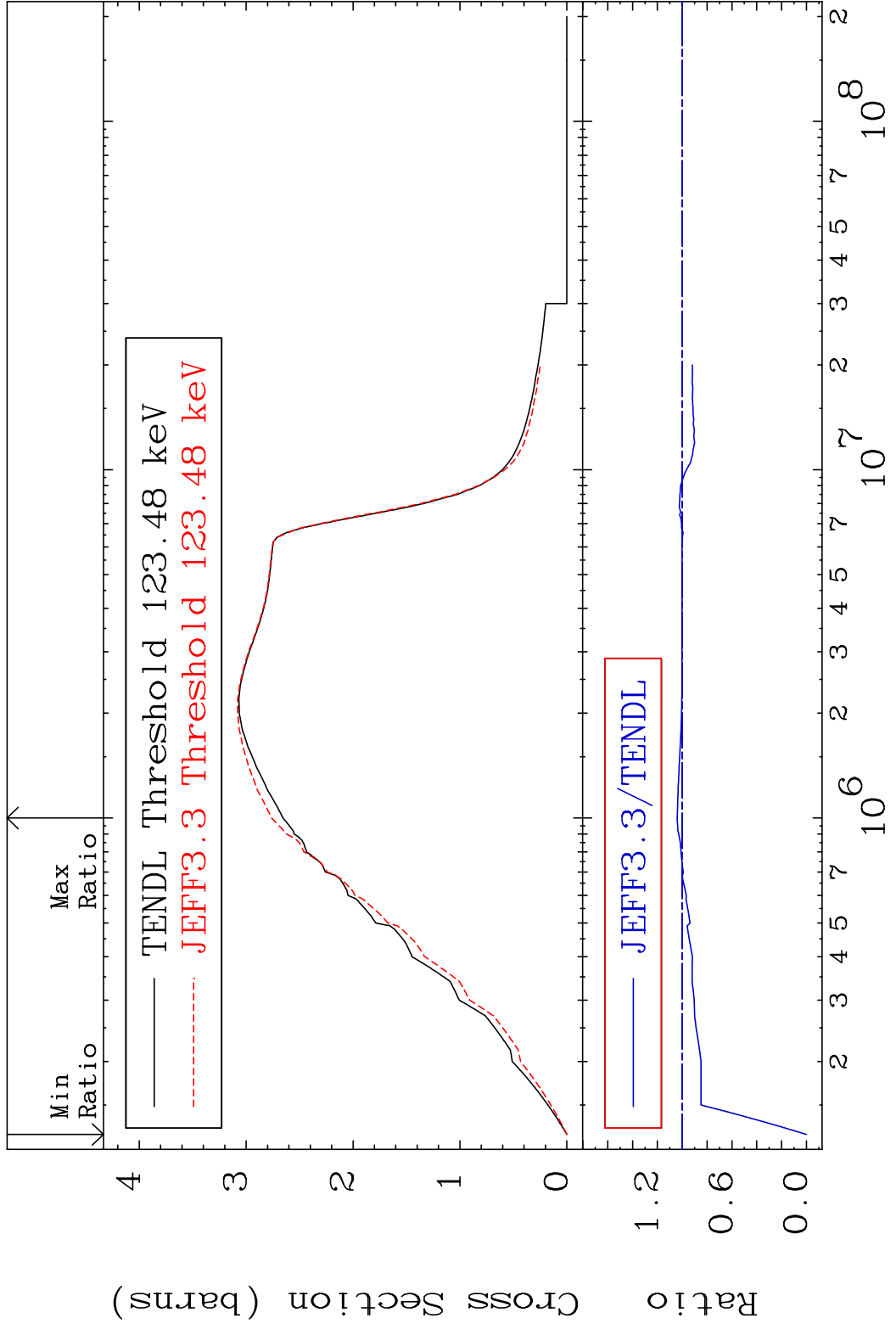


2

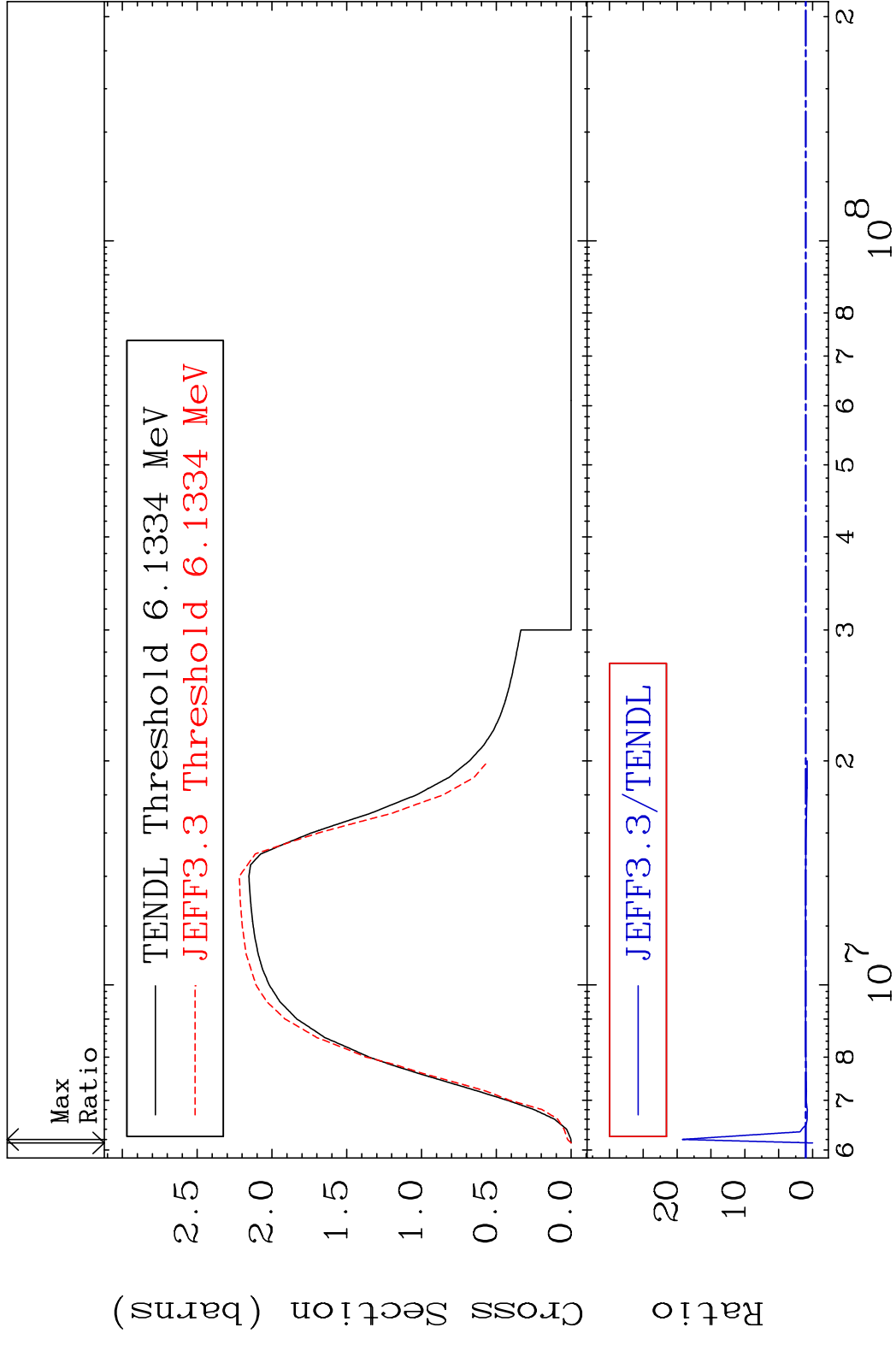
Incident Energy (eV)

72-Hf-179

MAT 7240 Inelastic 72-Hf-179  
 Cross Section -100.0 To 4.059 %



MAT 7240 (n,2n) 72-Hf-179  
 Cross Section -100.0 To 1823. %



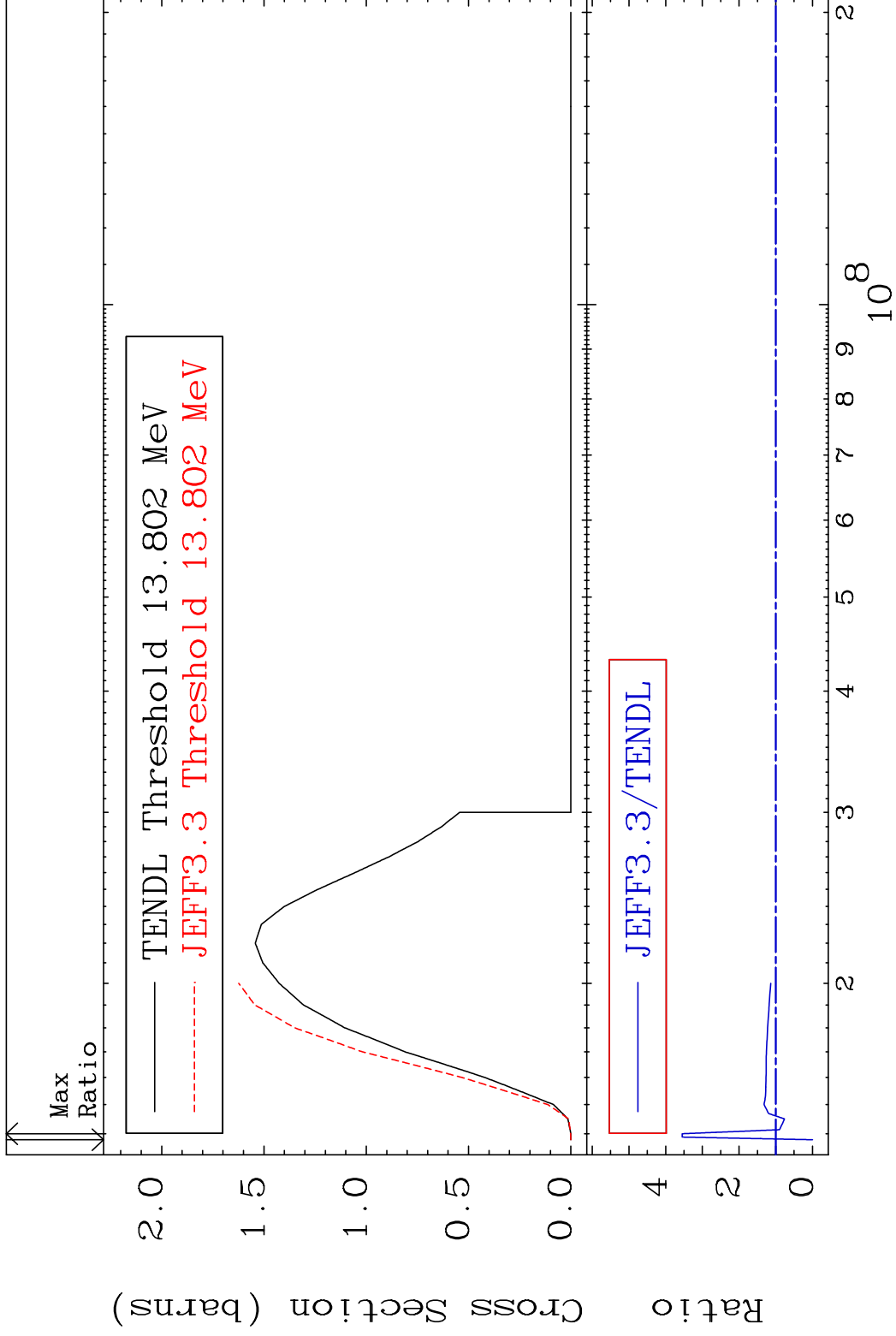
4 Incident Energy (eV) 72-Hf-179

MAT 7240

(n,3n)

72-Hf-179

Cross Section -100.0 To 255.1 %



5

Incident Energy (eV)

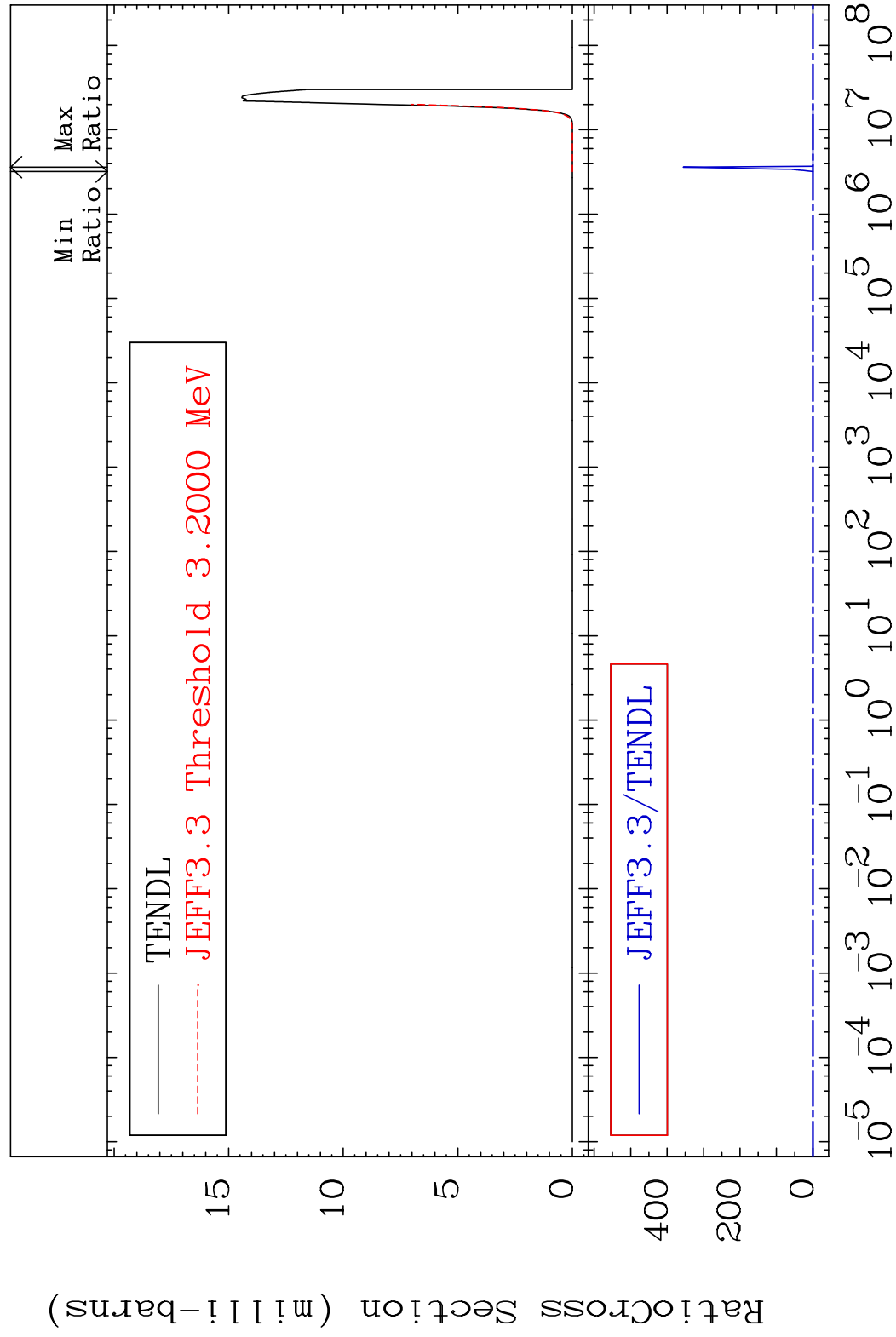
72-Hf-179

MAT 7240

(n, n')  $\alpha$

72-Hf-179

Cross Section -100.0 To 9999. %



6

Incident Energy (eV)

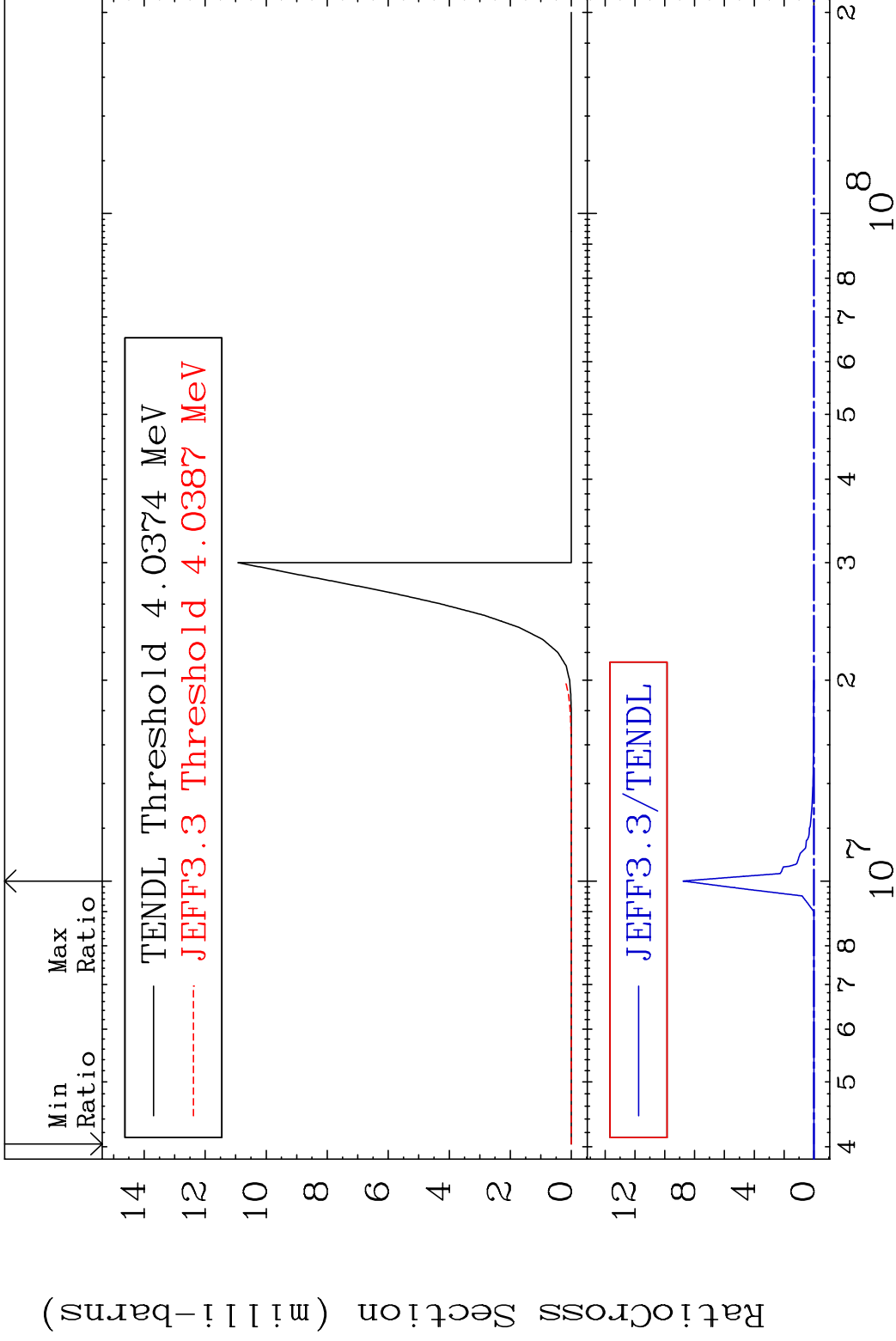
72-Hf-179

MAT 7240

(n,2n)  $\alpha$

72-Hf-179

Cross Section -100.0 To 9999. %



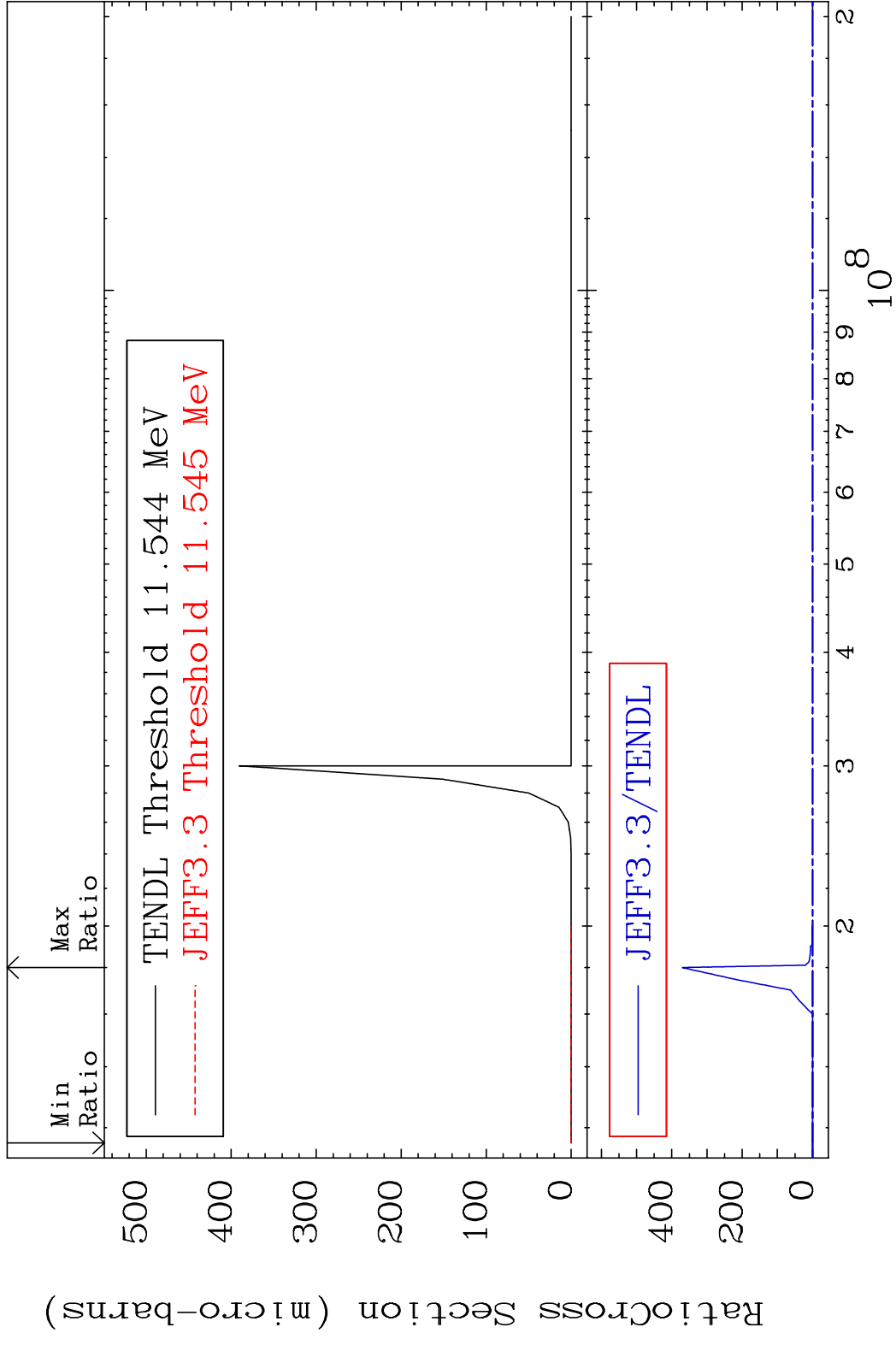
7

Incident Energy (eV)

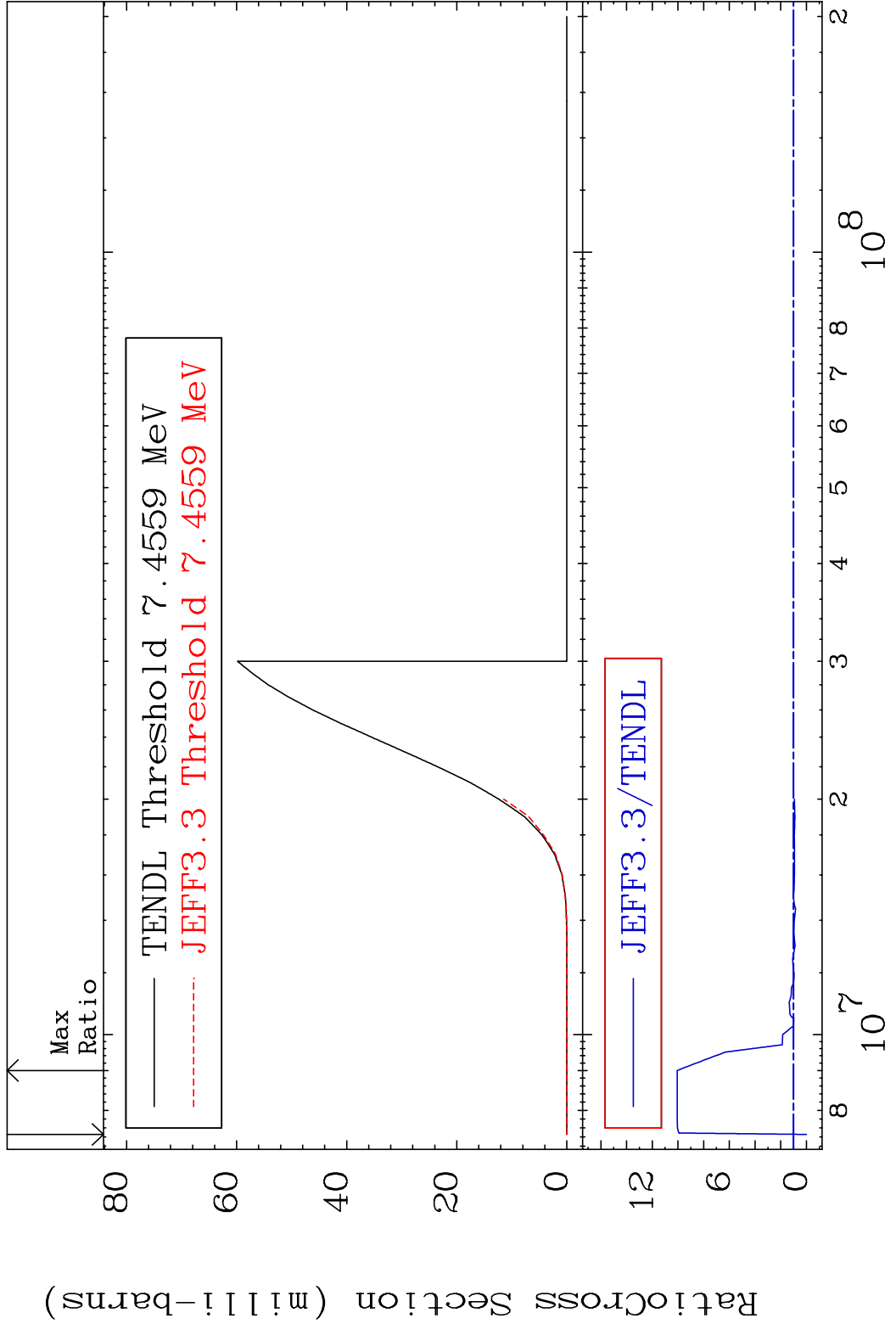
72-Hf-179



MAT 7240 (n,3n)  $\alpha$  72-Hf-179  
 Cross Section -100.0 To 9999. %

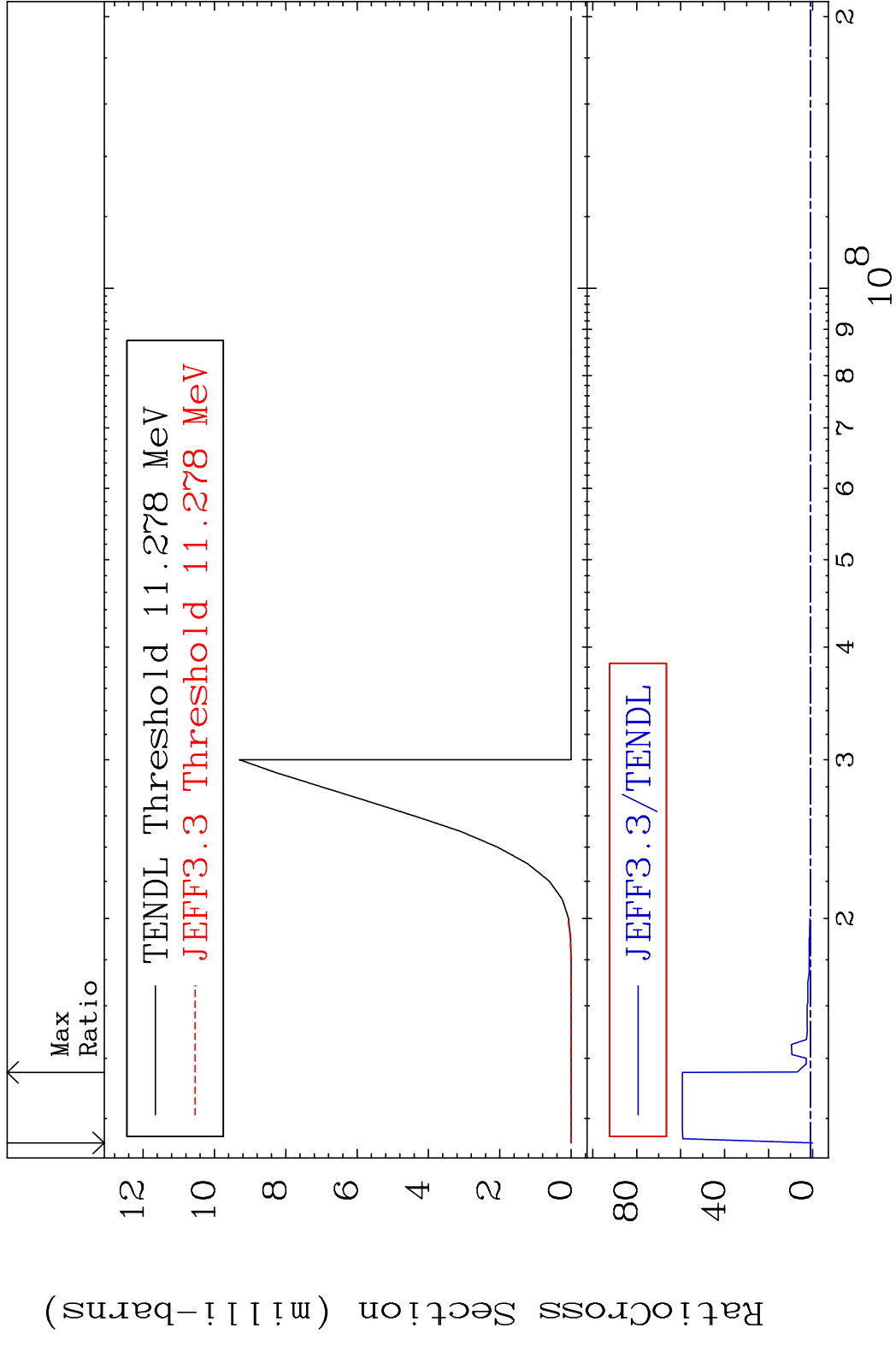


MAT 7240 (n, n') p 72-Hf-179  
 Cross Section -100.0 To 905.9 %



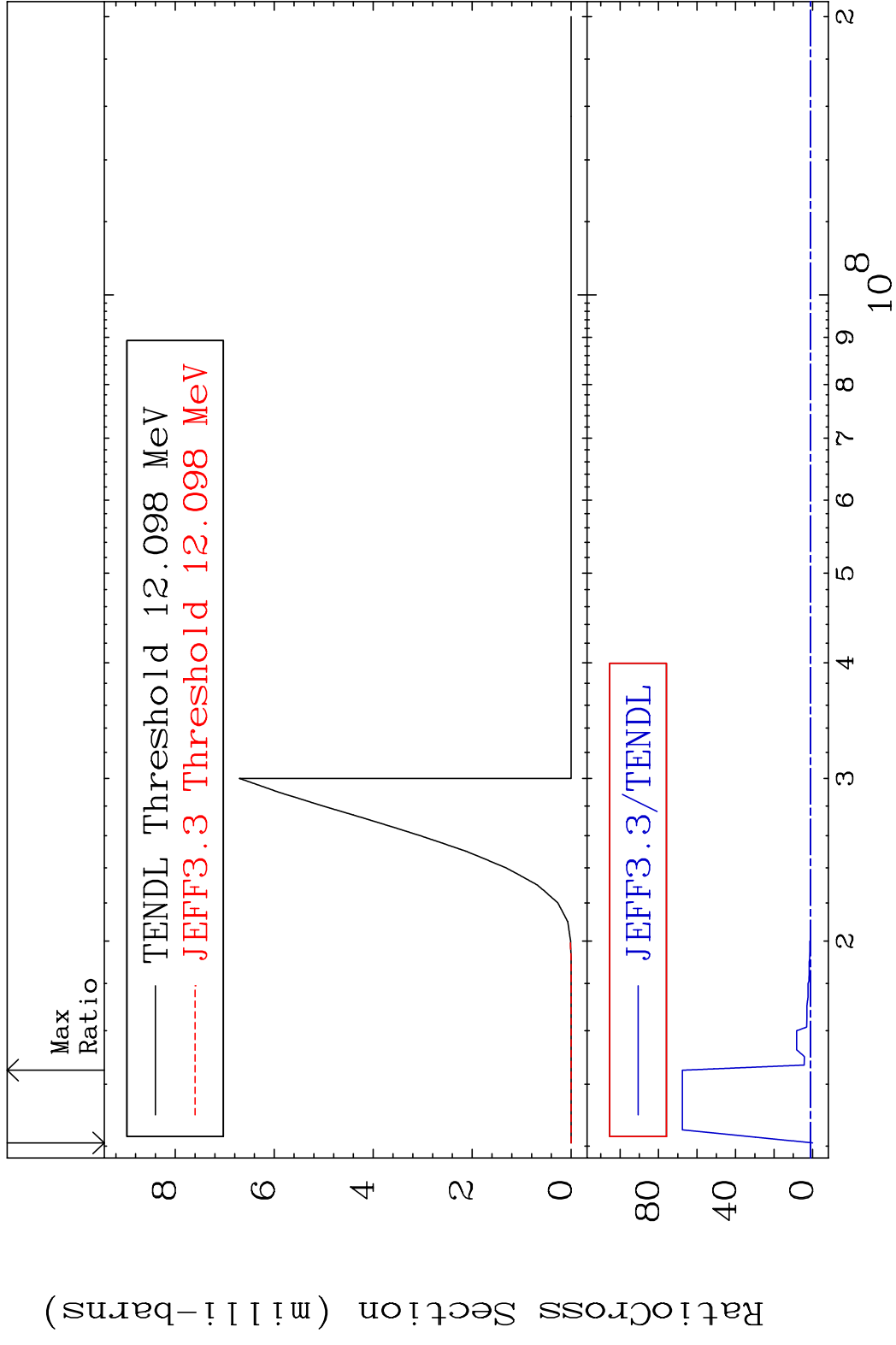
9 9 Incident Energy (eV) 72-Hf-179

MAT 7240 (n, n') d 72-Hf-179  
 Cross Section -100.0 To 5823. %

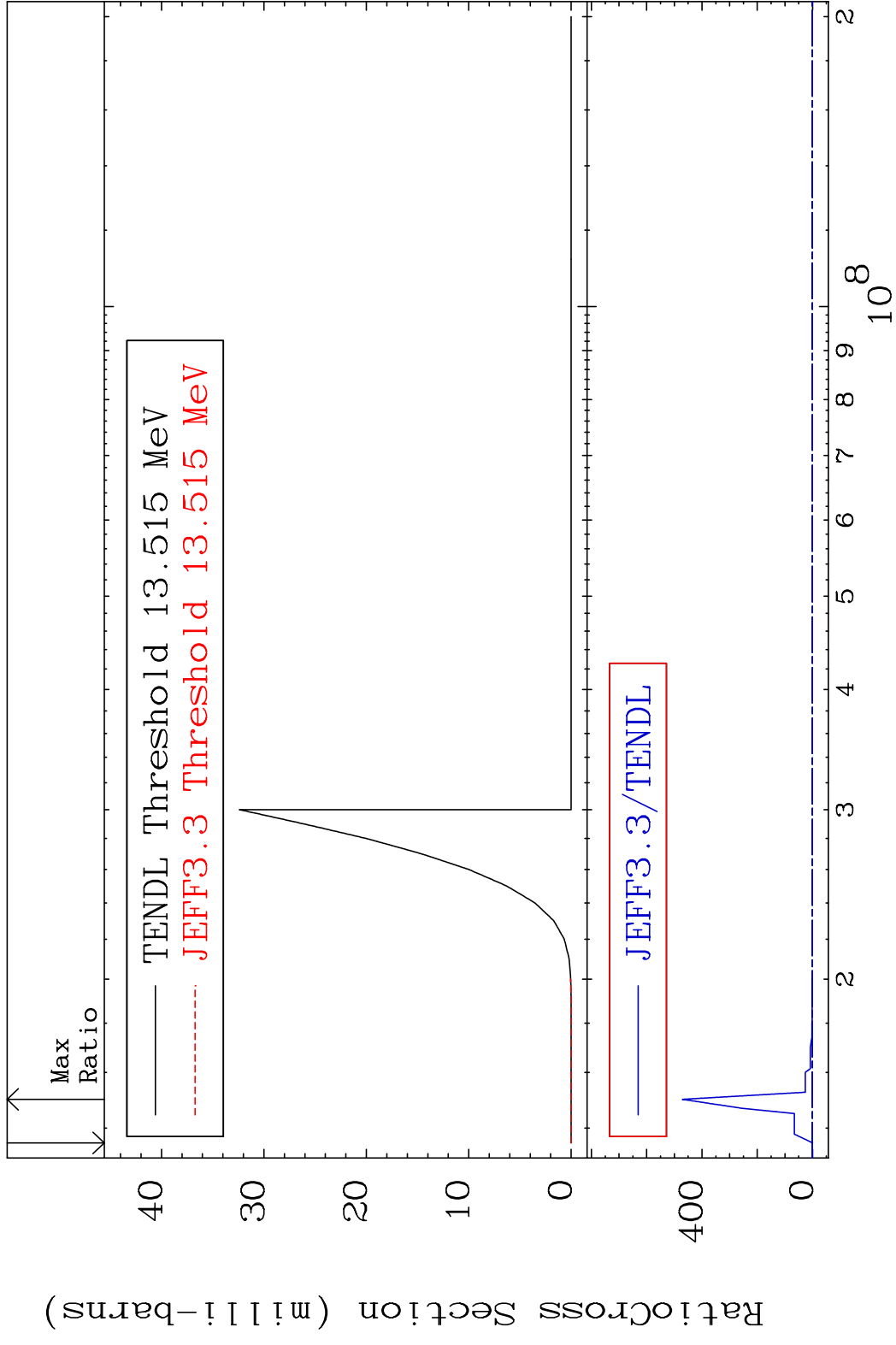


10 Incident Energy (eV) 72-Hf-179

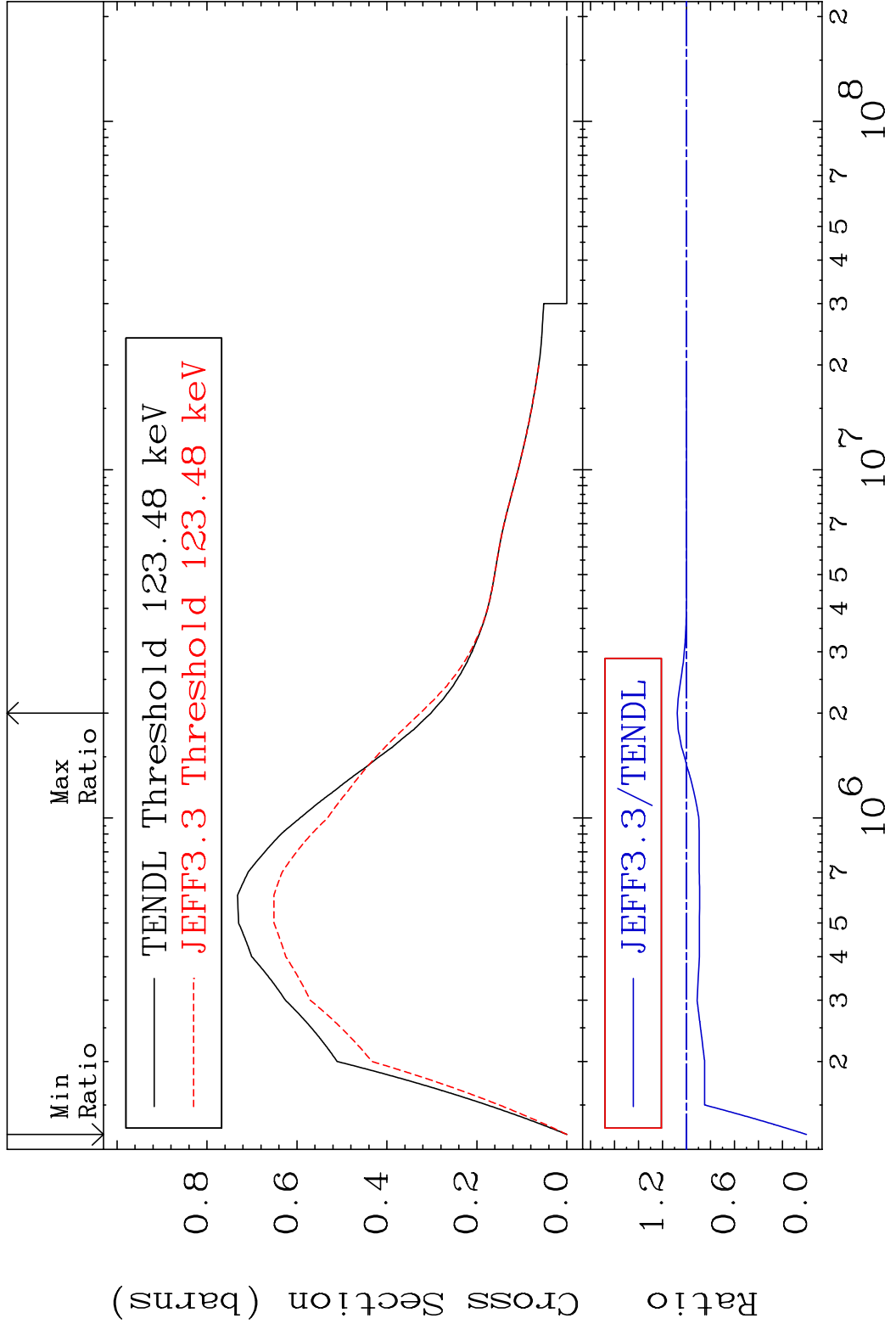
MAT 7240 (n, n') t 72-Hf-179  
 Cross Section -100.0 To 6663. %



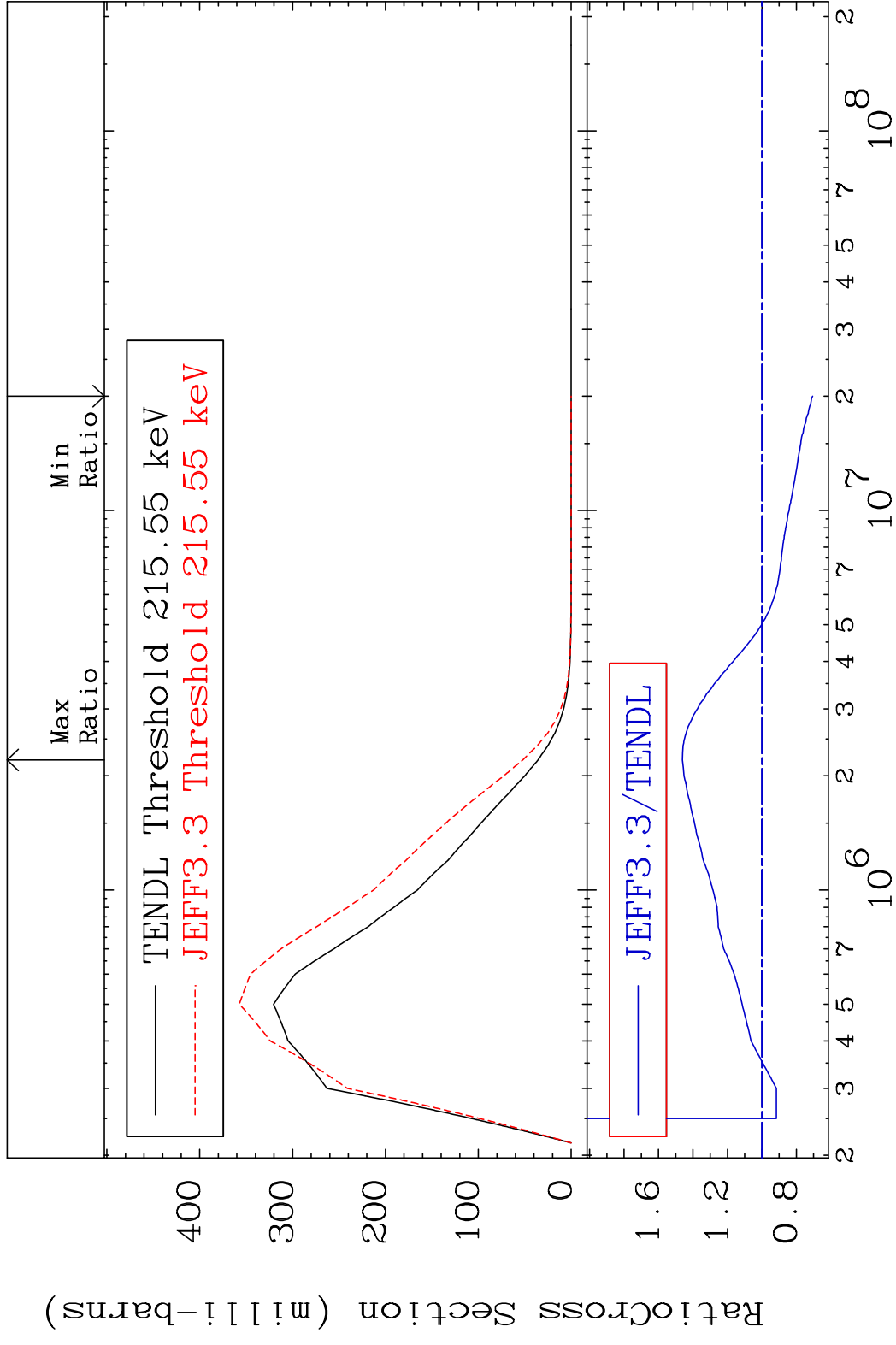
MAT 7240 (n,2n) p 72-Hf-179  
 Cross Section -100.0 To 9999. %



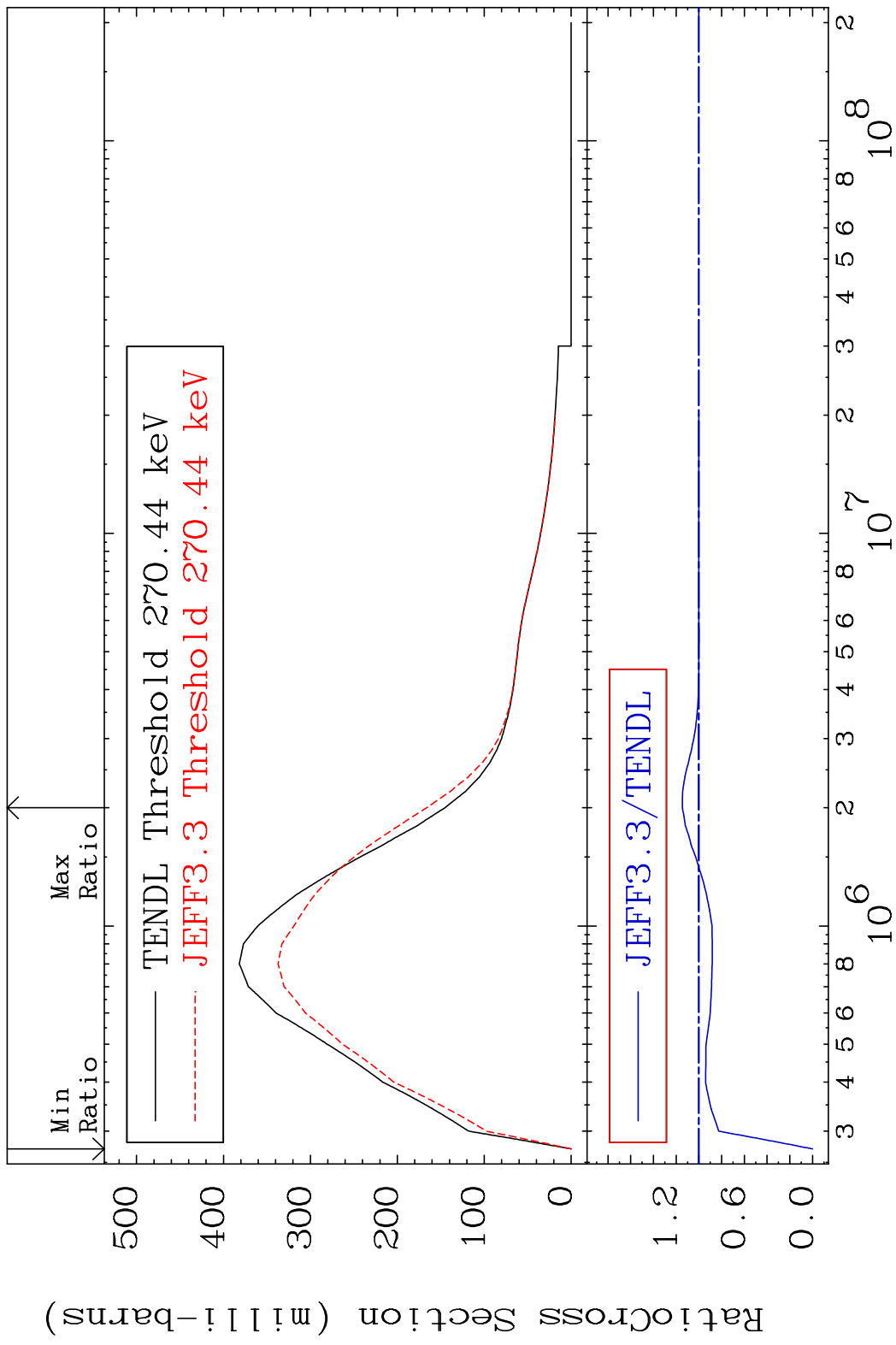
MAT 7240 MT= 51 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 7.757 %



MAT 7240 MT= 52 (n, n') Level 72-Hf-179  
 Cross Section -29.39 To 46.17 %

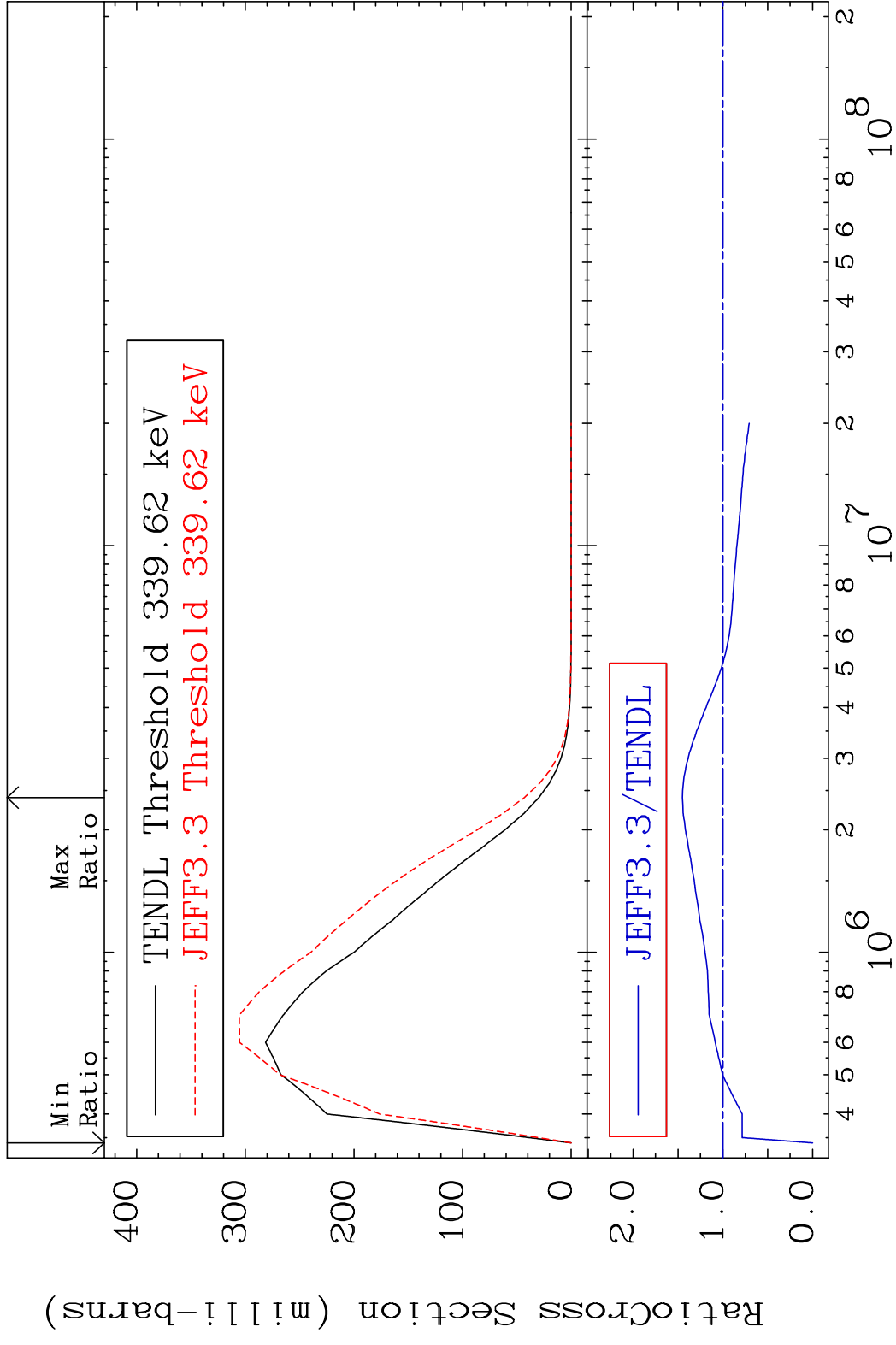


MAT 7240 MT= 53 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 14.56 %

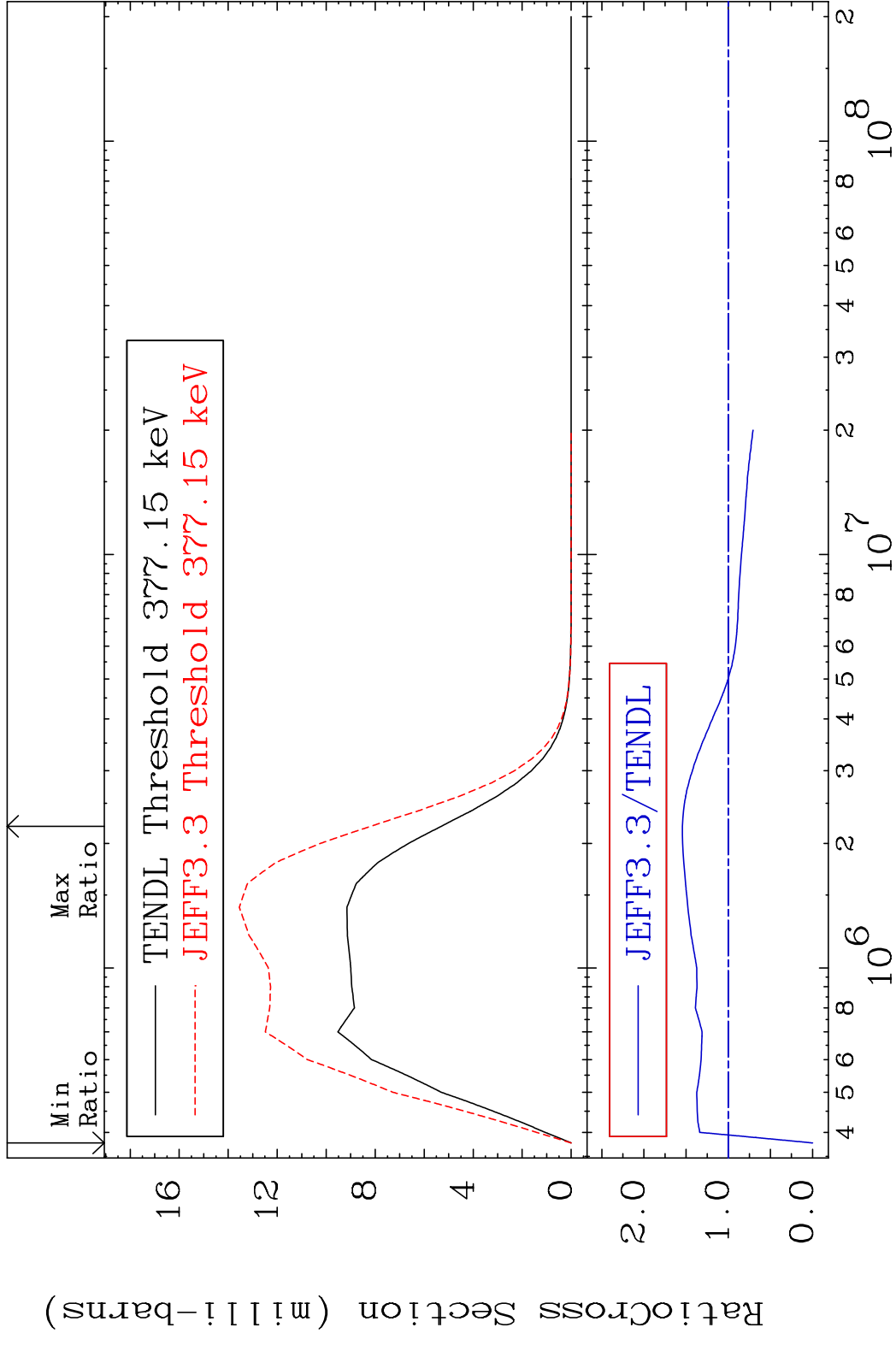




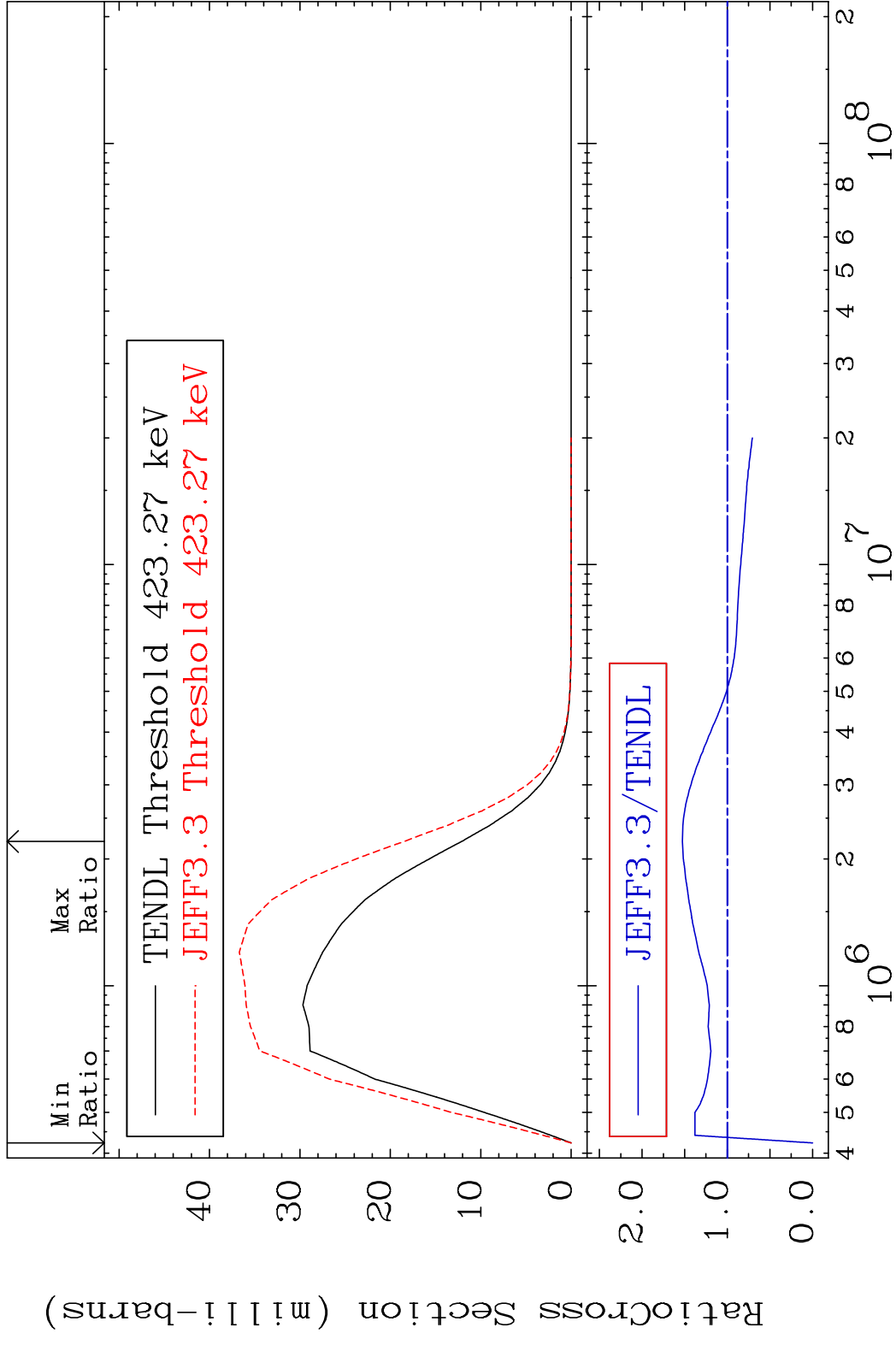
MAT 7240 MT= 54 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 45.16 %



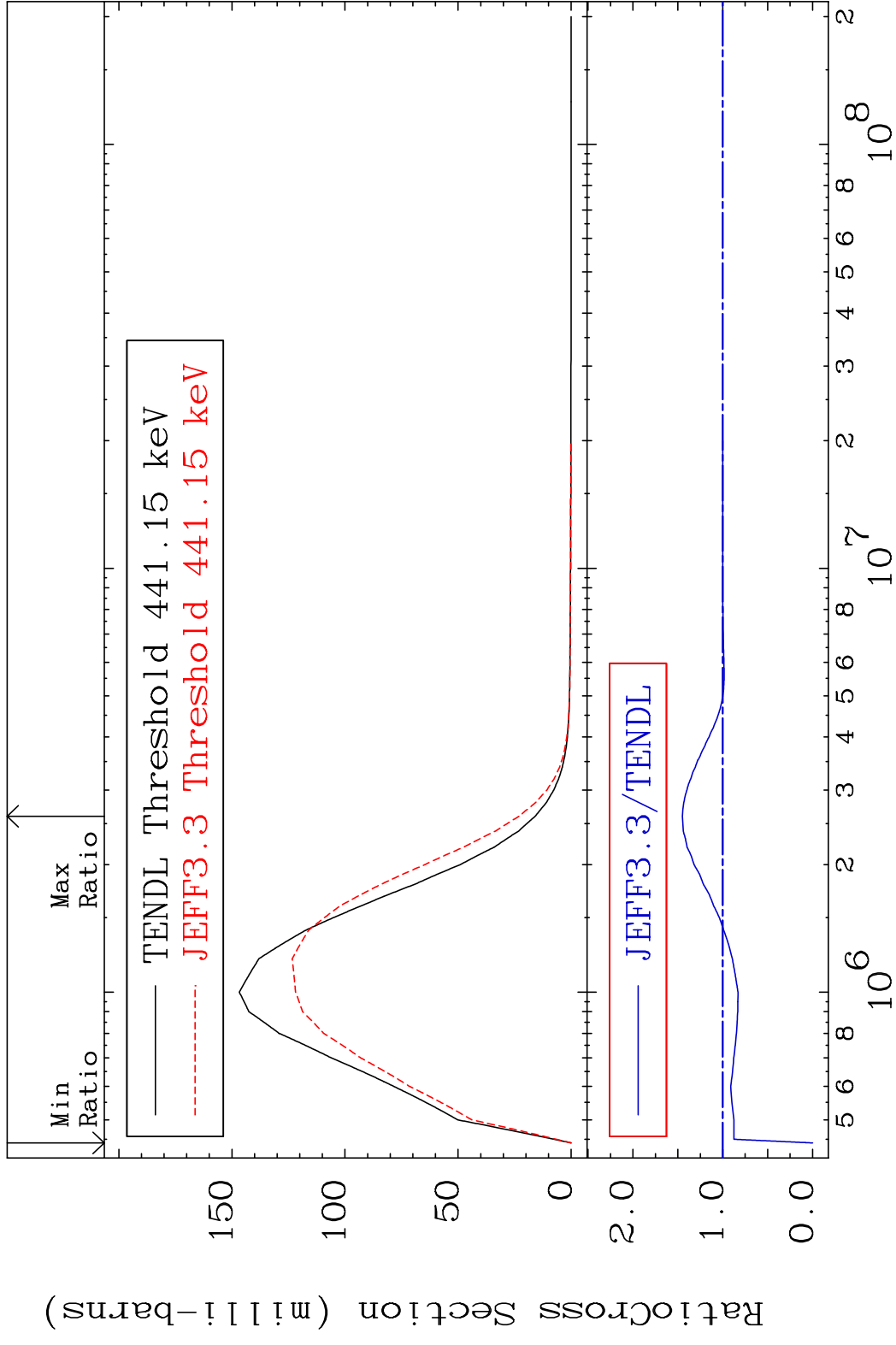
MAT 7240 MT= 55 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 54.43 %



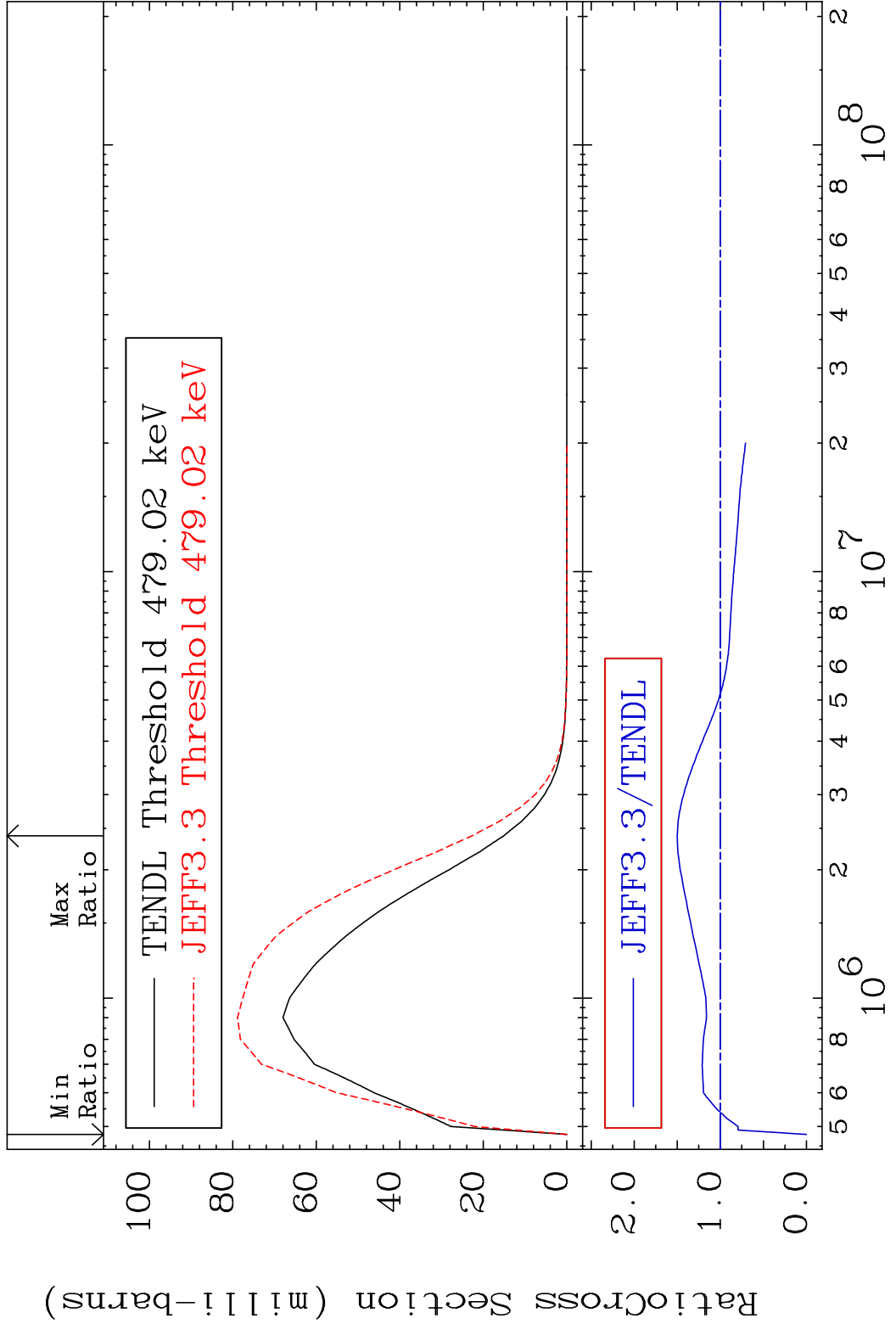
MAT 7240 MT= 56 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 52.71 %



MAT 7240 MT= 57 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 44.98 %

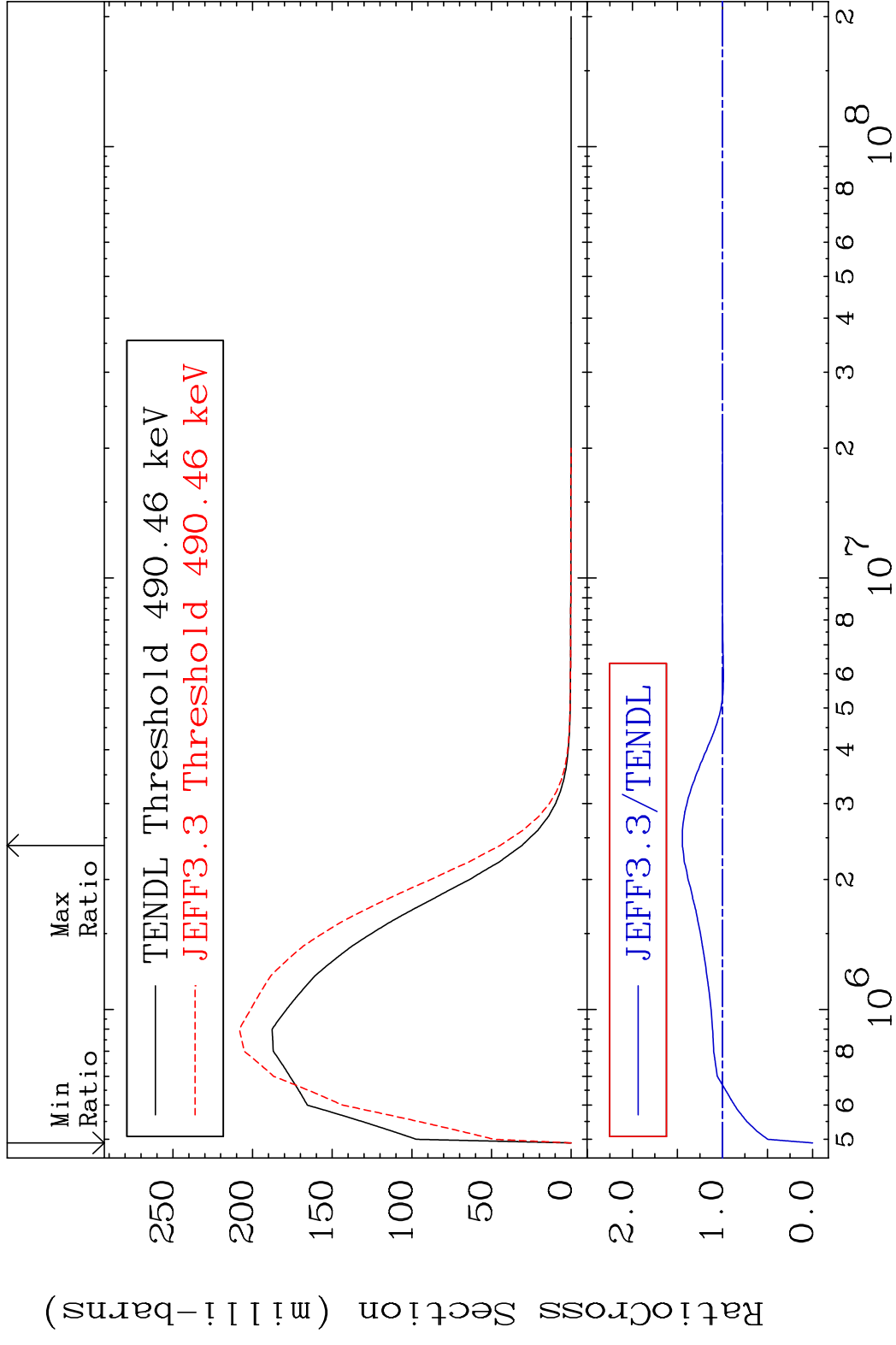


MAT 7240 MT= 58 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 50.08 %

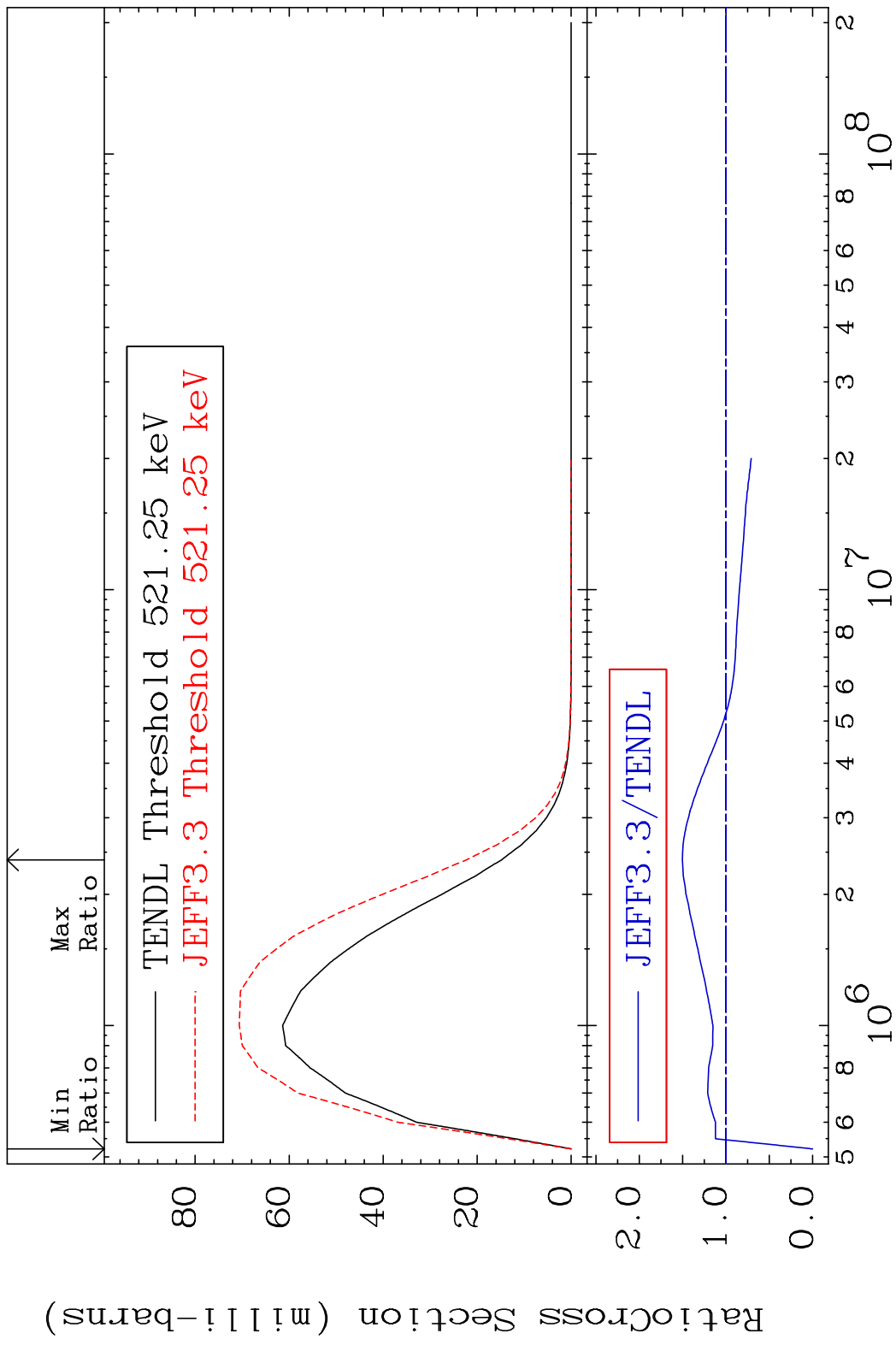


20 Incident Energy (eV) 72-Hf-179

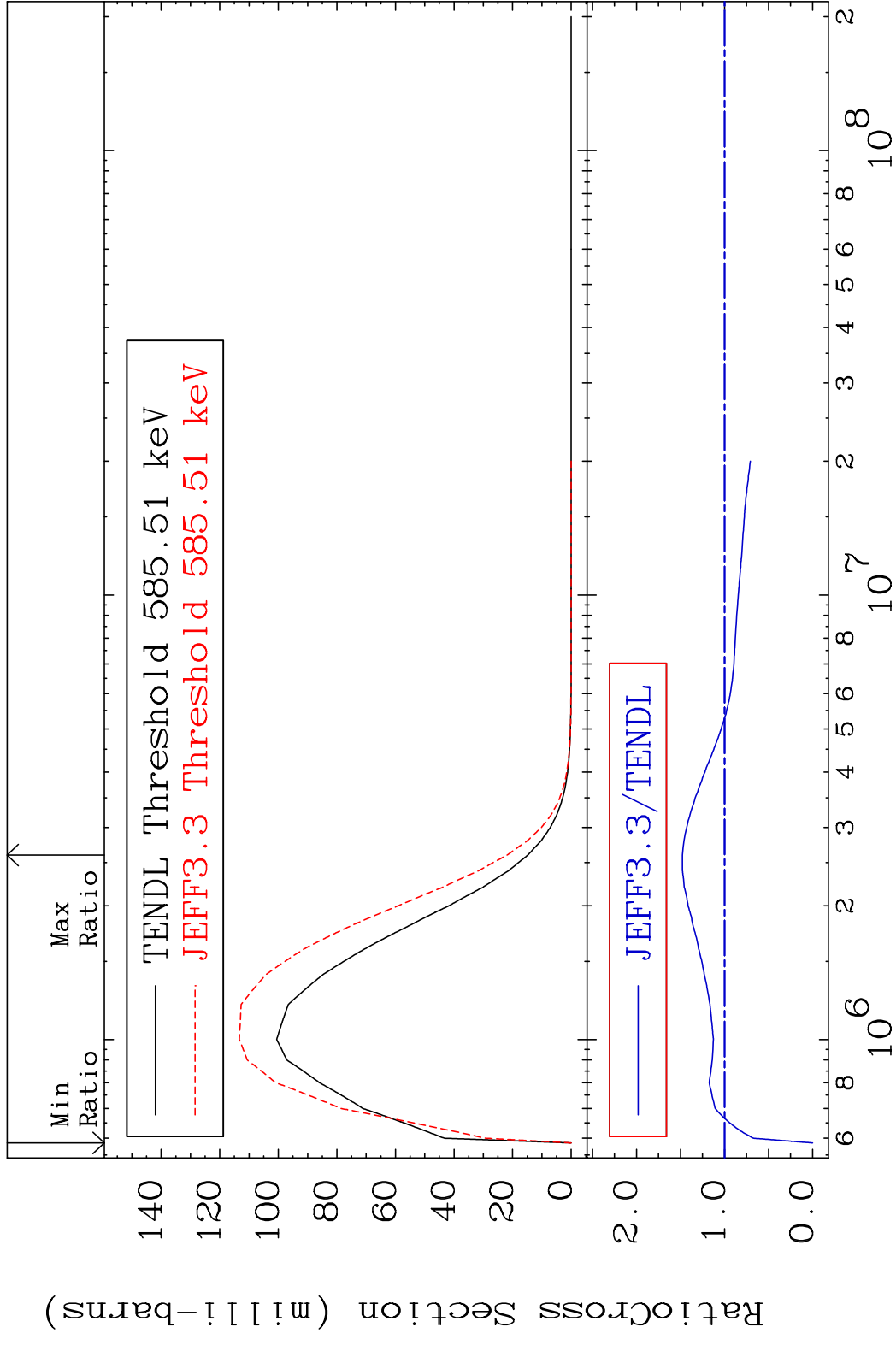
MAT 7240 MT= 59 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 44.52 %



MAT 7240 MT= 60 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 50.21 %

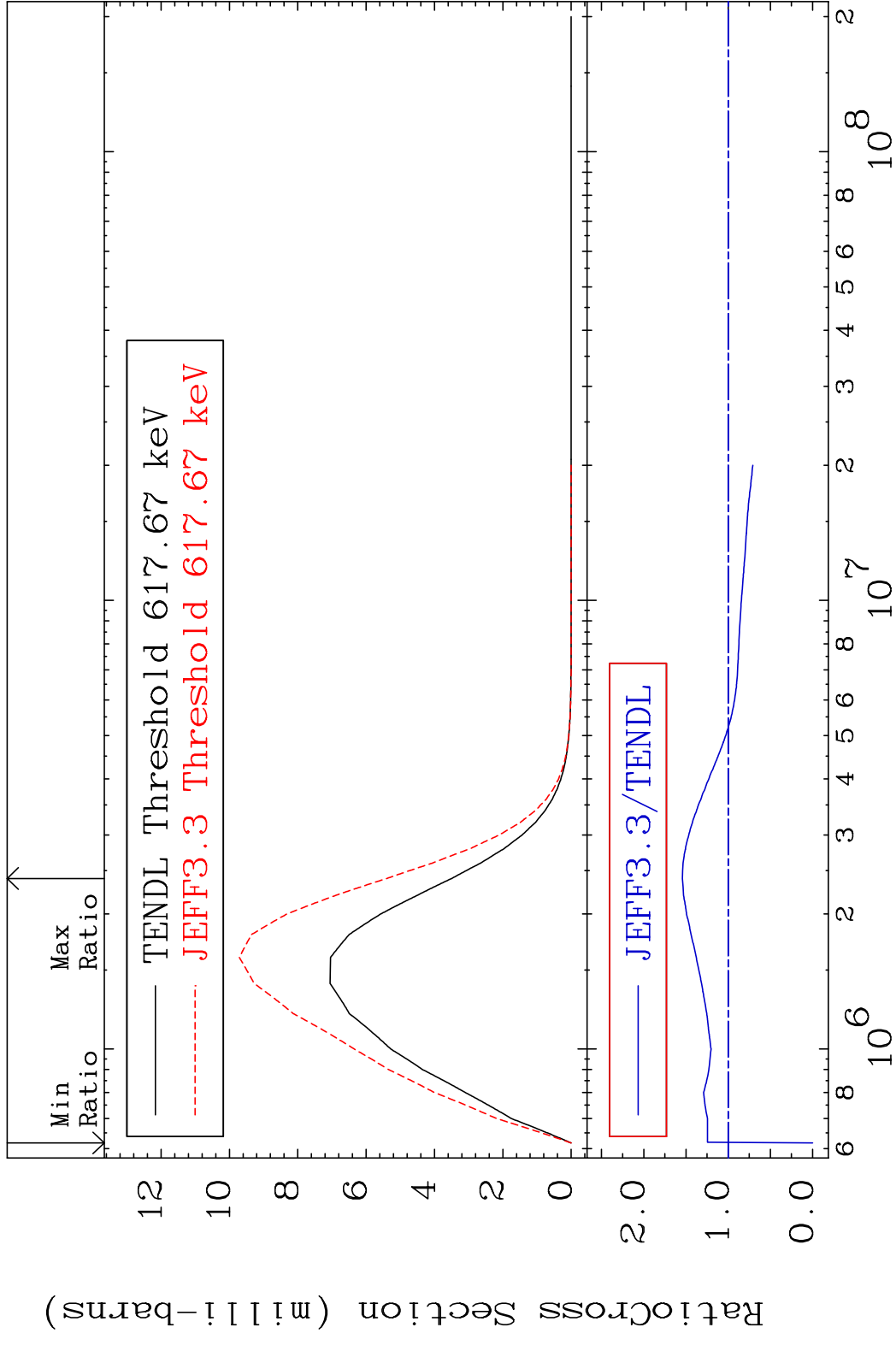


MAT 7240 MT= 61 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 47.94 %

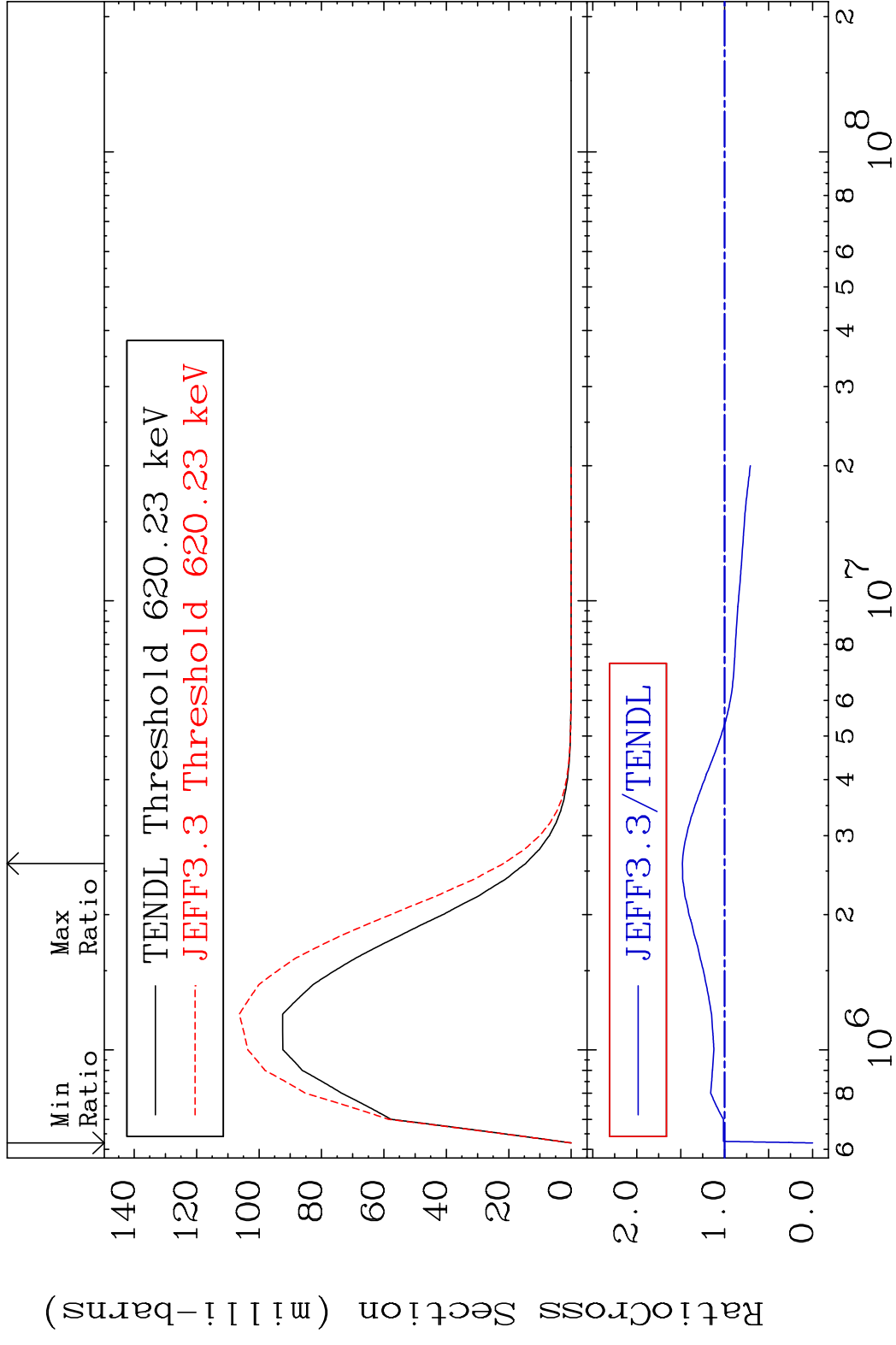




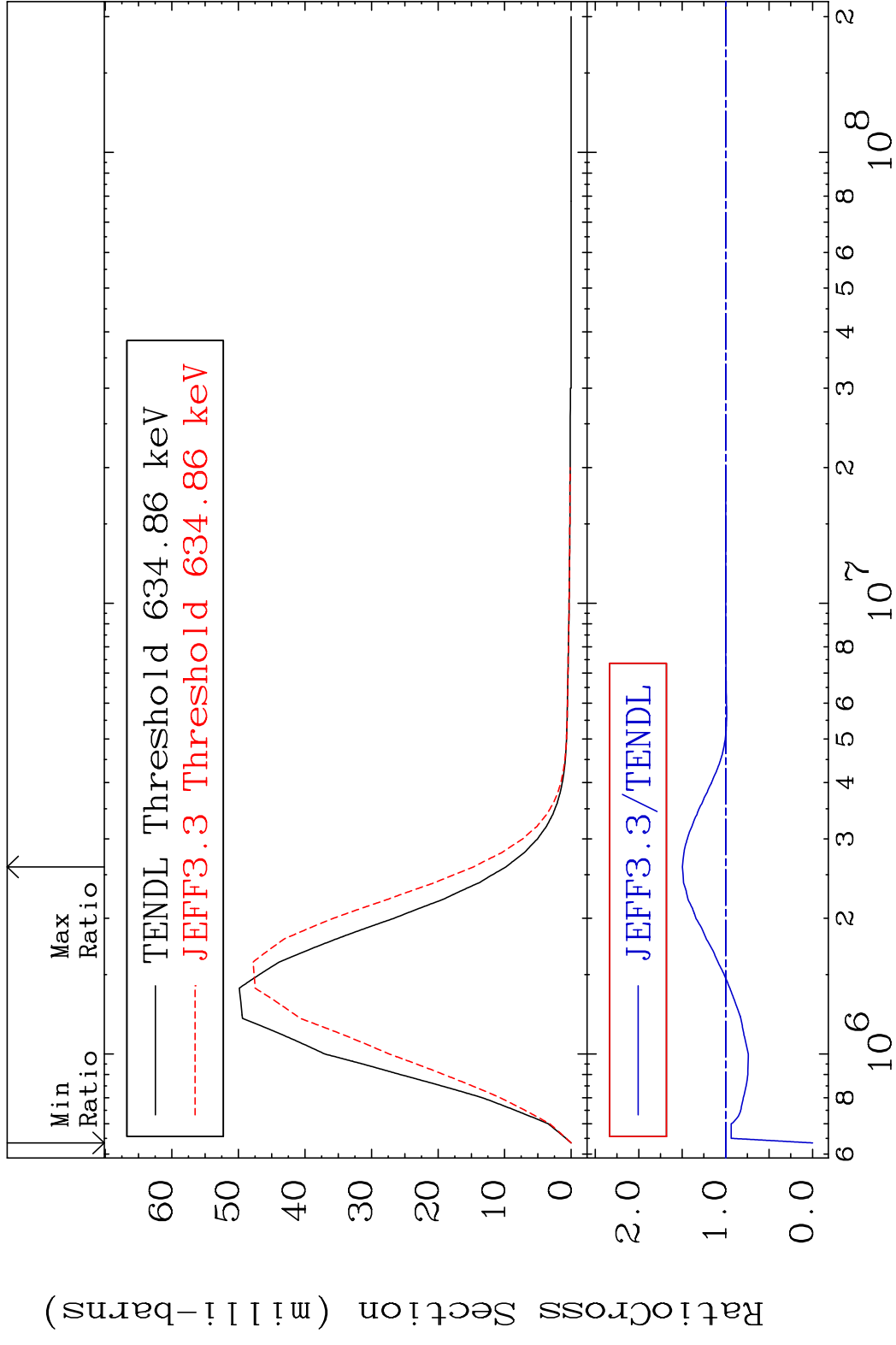
MAT 7240 MT= 62 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 54.25 %



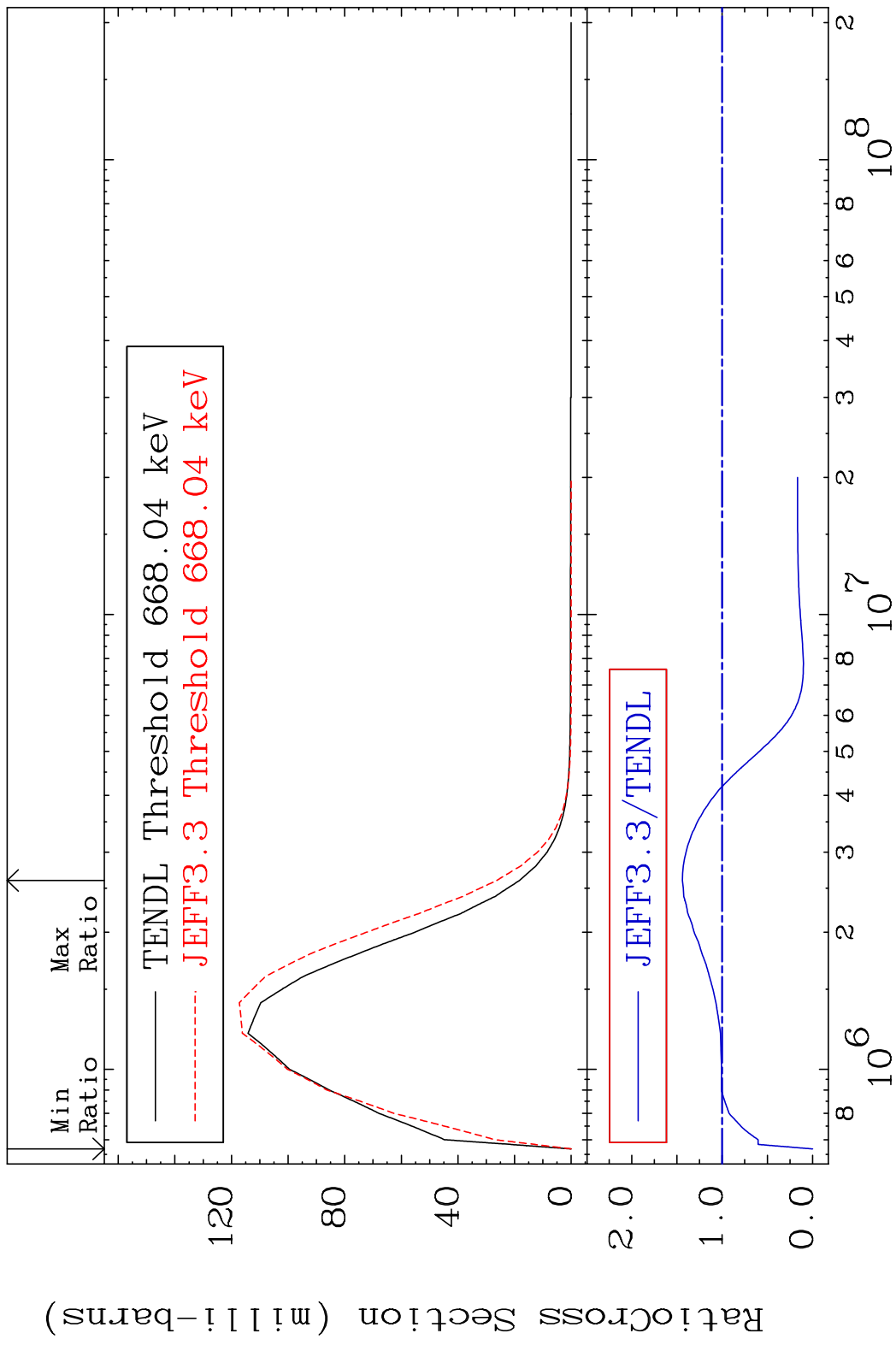
MAT 7240 MT= 63 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 48.12 %



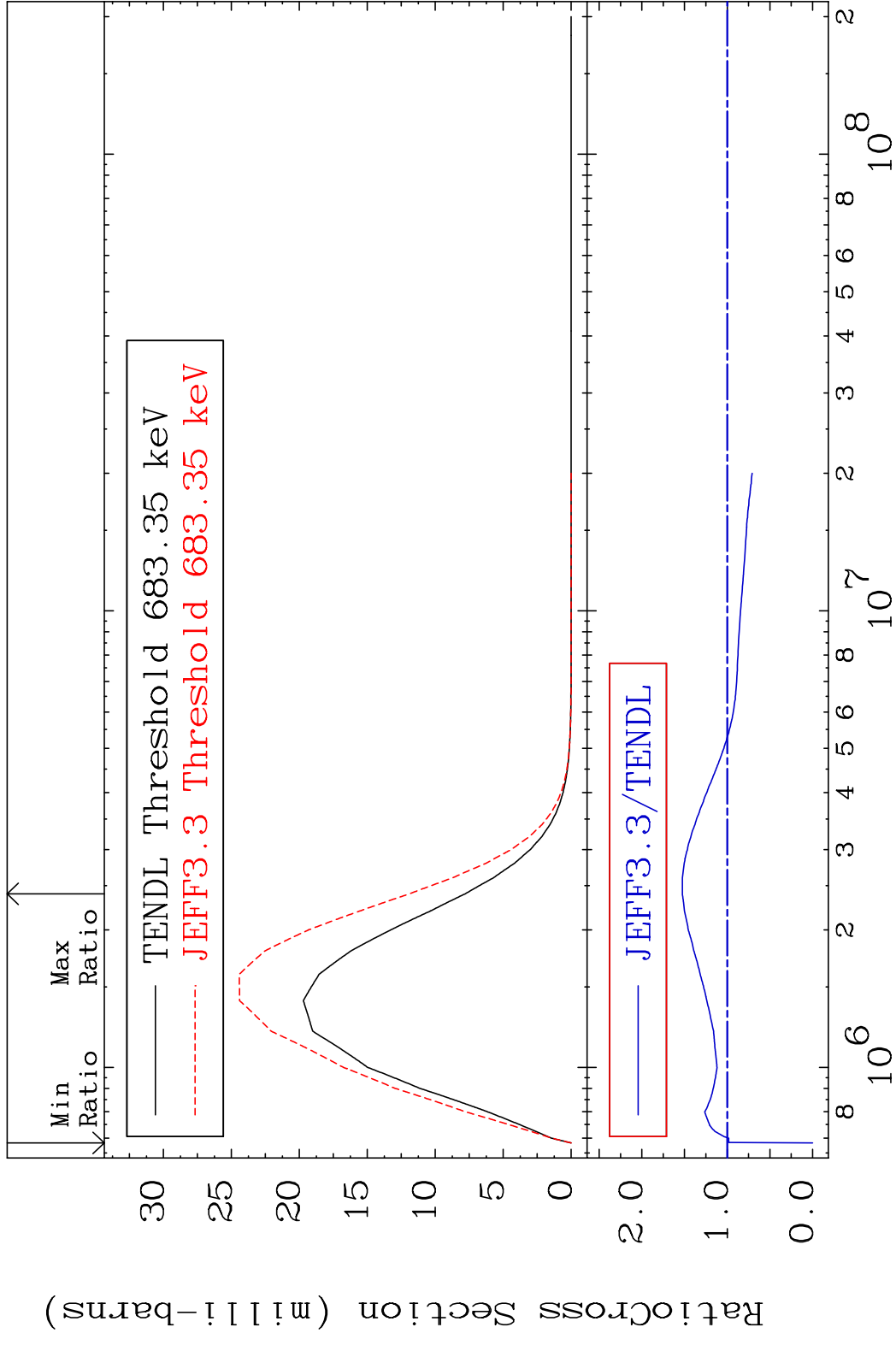
MAT 7240 MT= 64 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 49.80 %



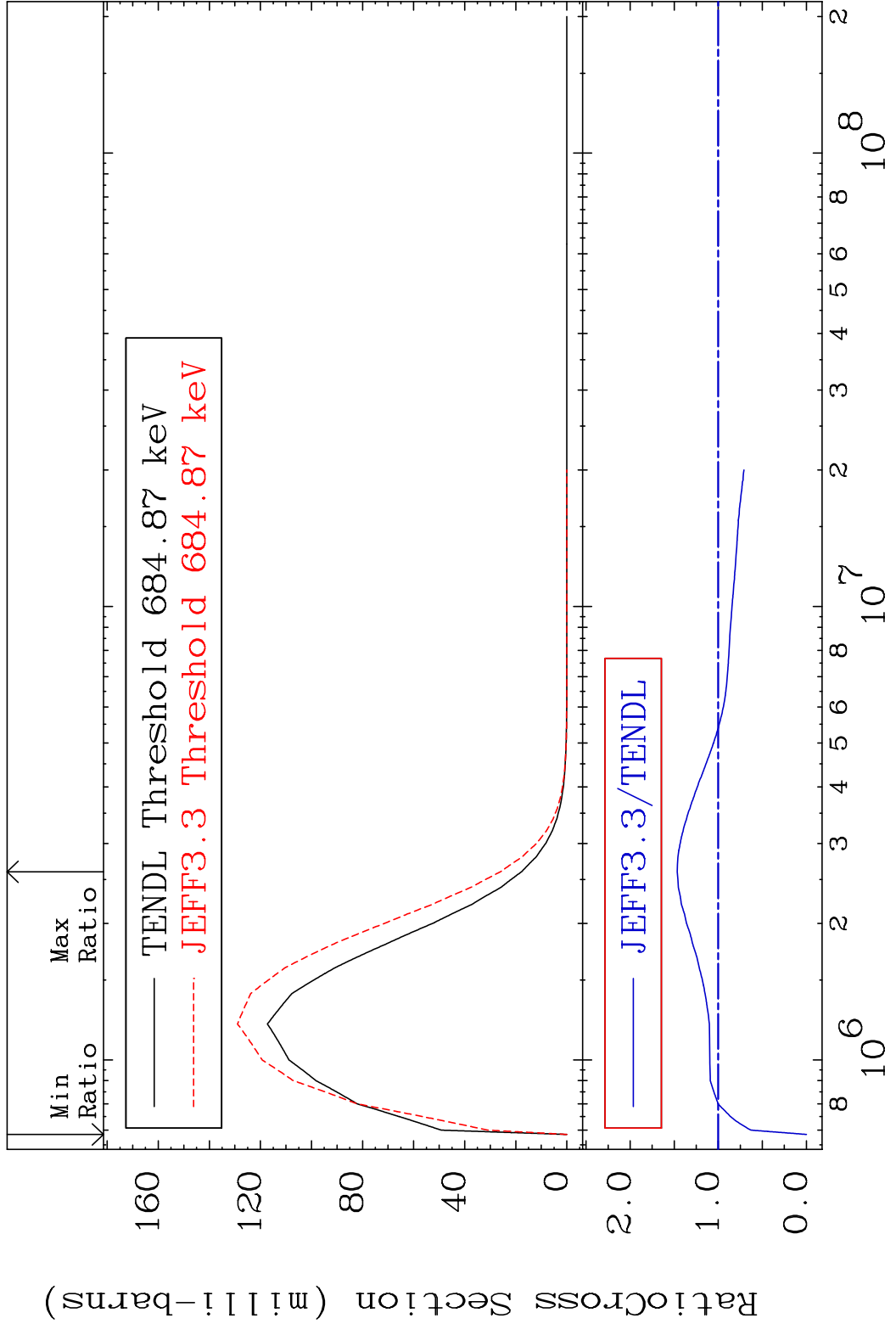
MAT 7240 MT= 65 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 44.04 %



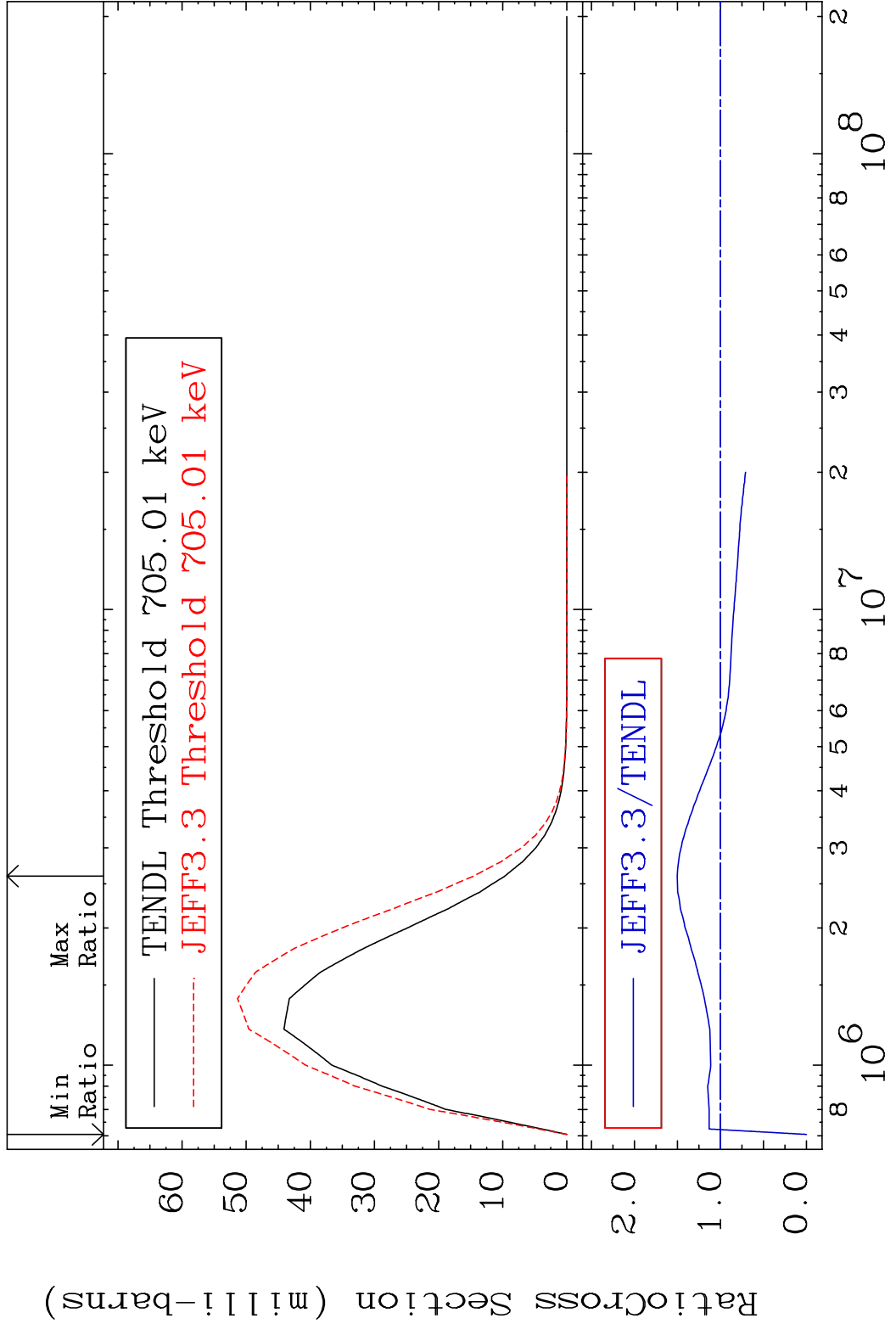
MAT 7240 MT= 66 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 52.55 %



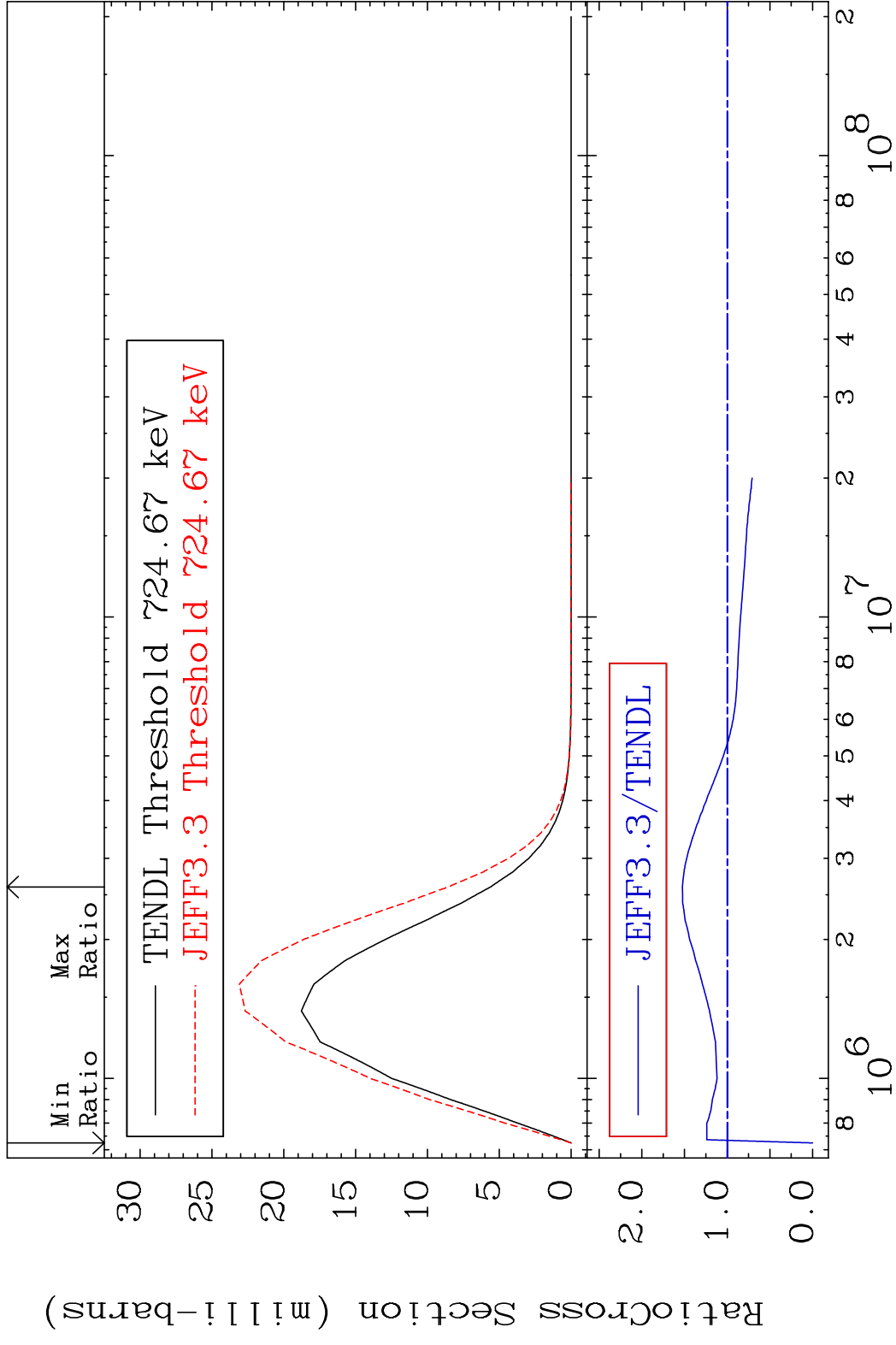
MAT 7240 MT= 67 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 46.60 %



MAT 7240 MT= 68 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 50.31 %

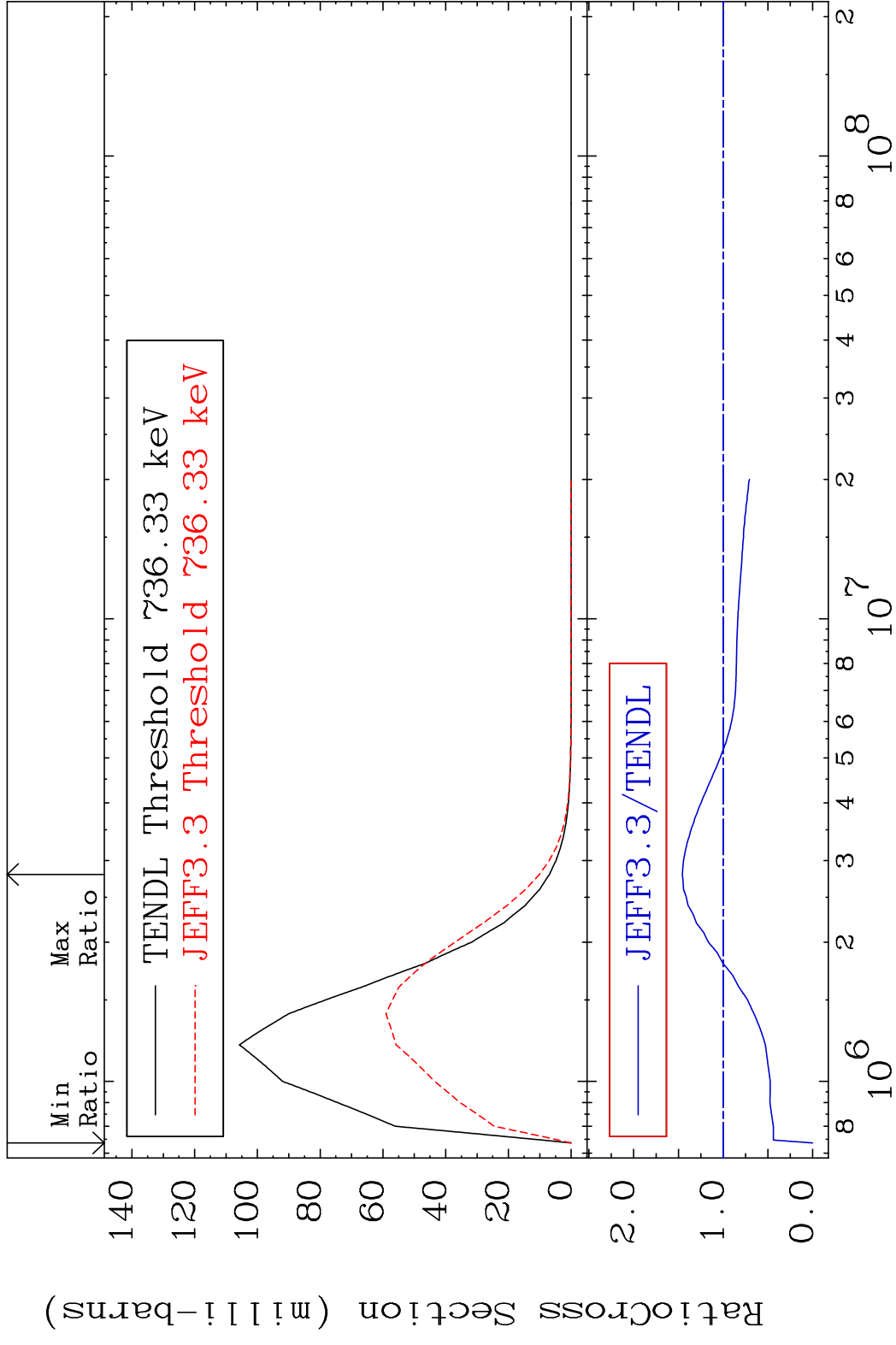


MAT 7240 MT= 69 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 52.57 %

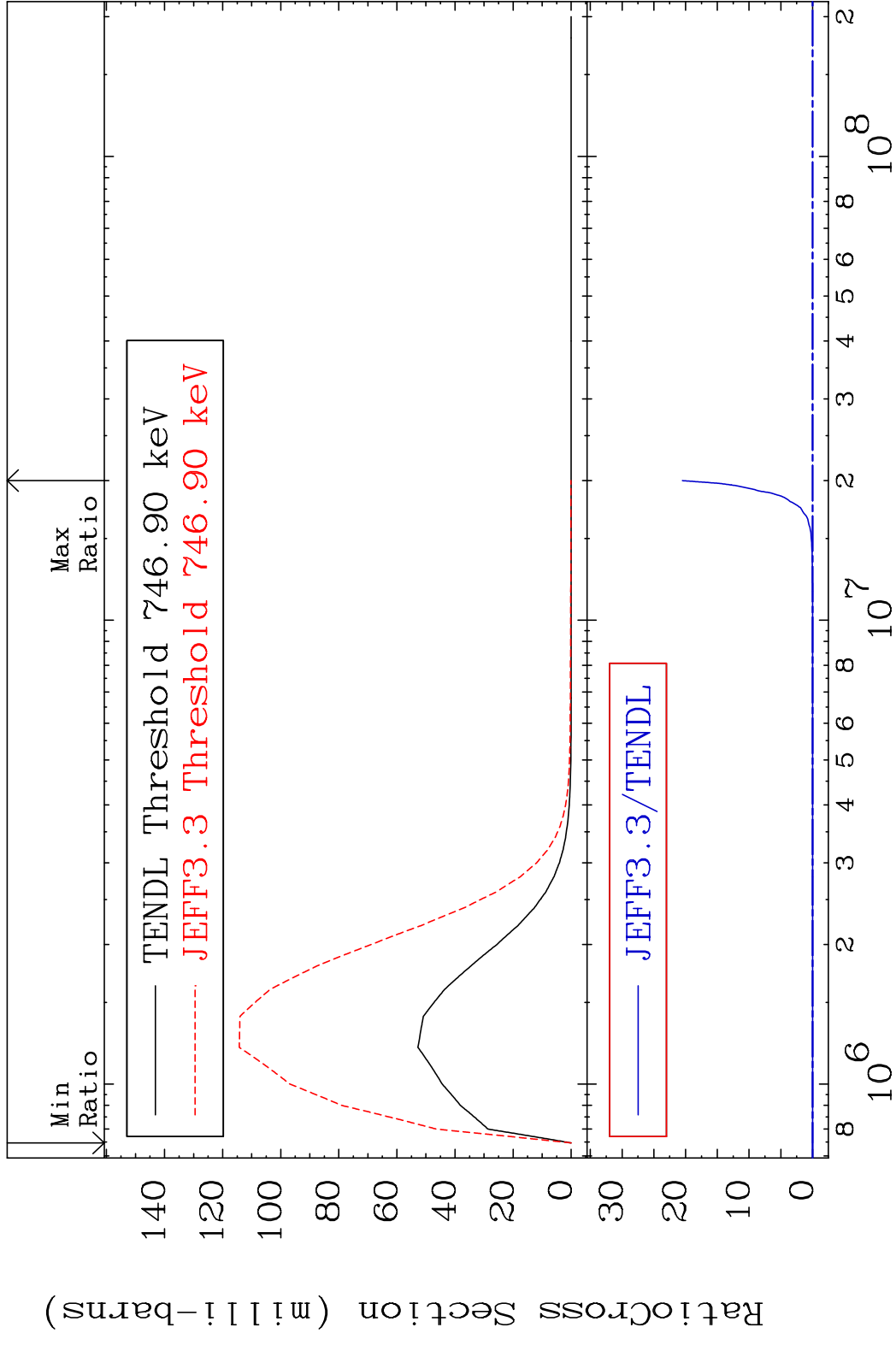




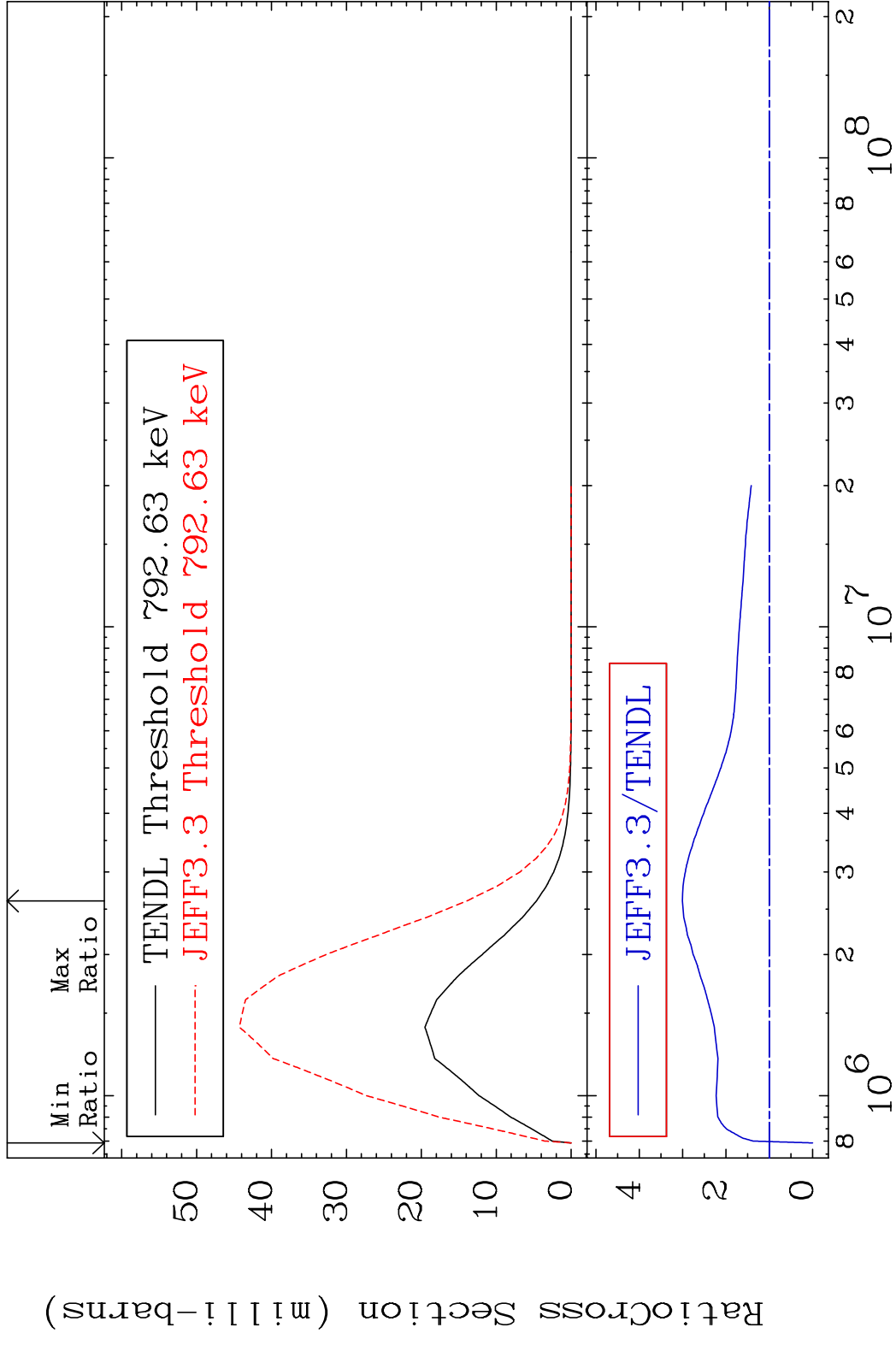
MAT 7240 MT= 70 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 45.59 %



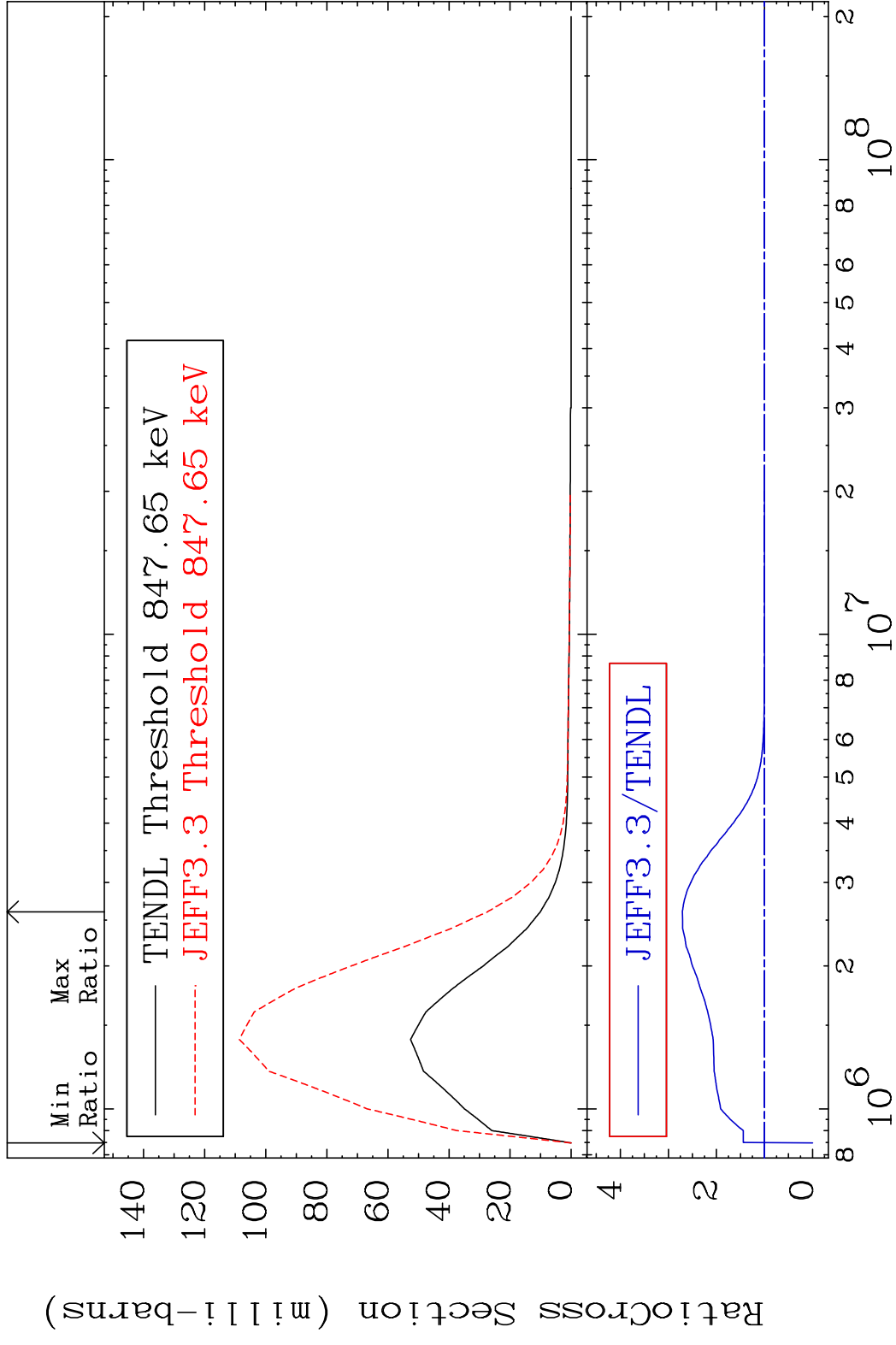
MAT 7240 MT= 71 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 9999. %



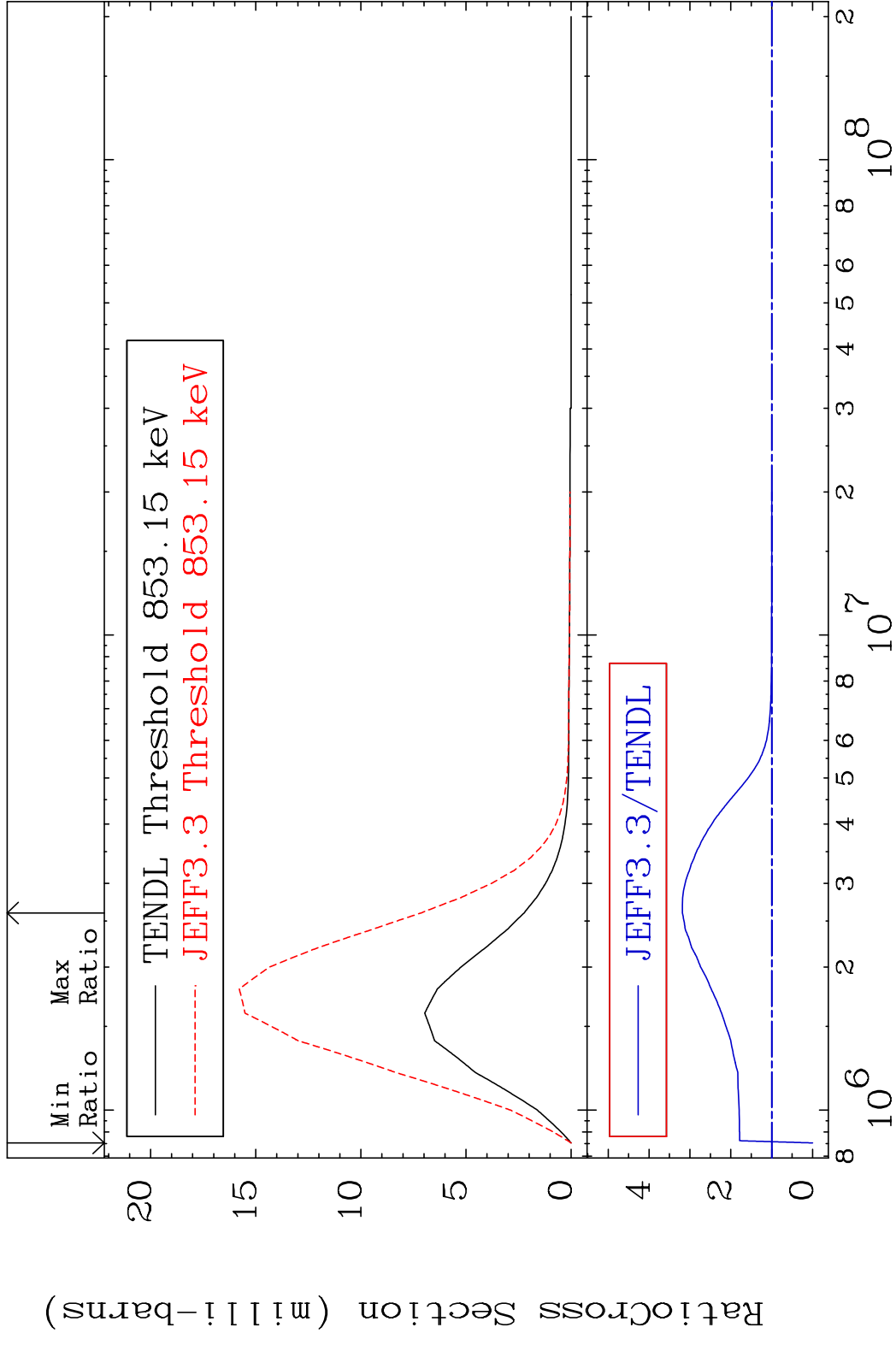
MAT 7240 MT= 72 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 200.5 %



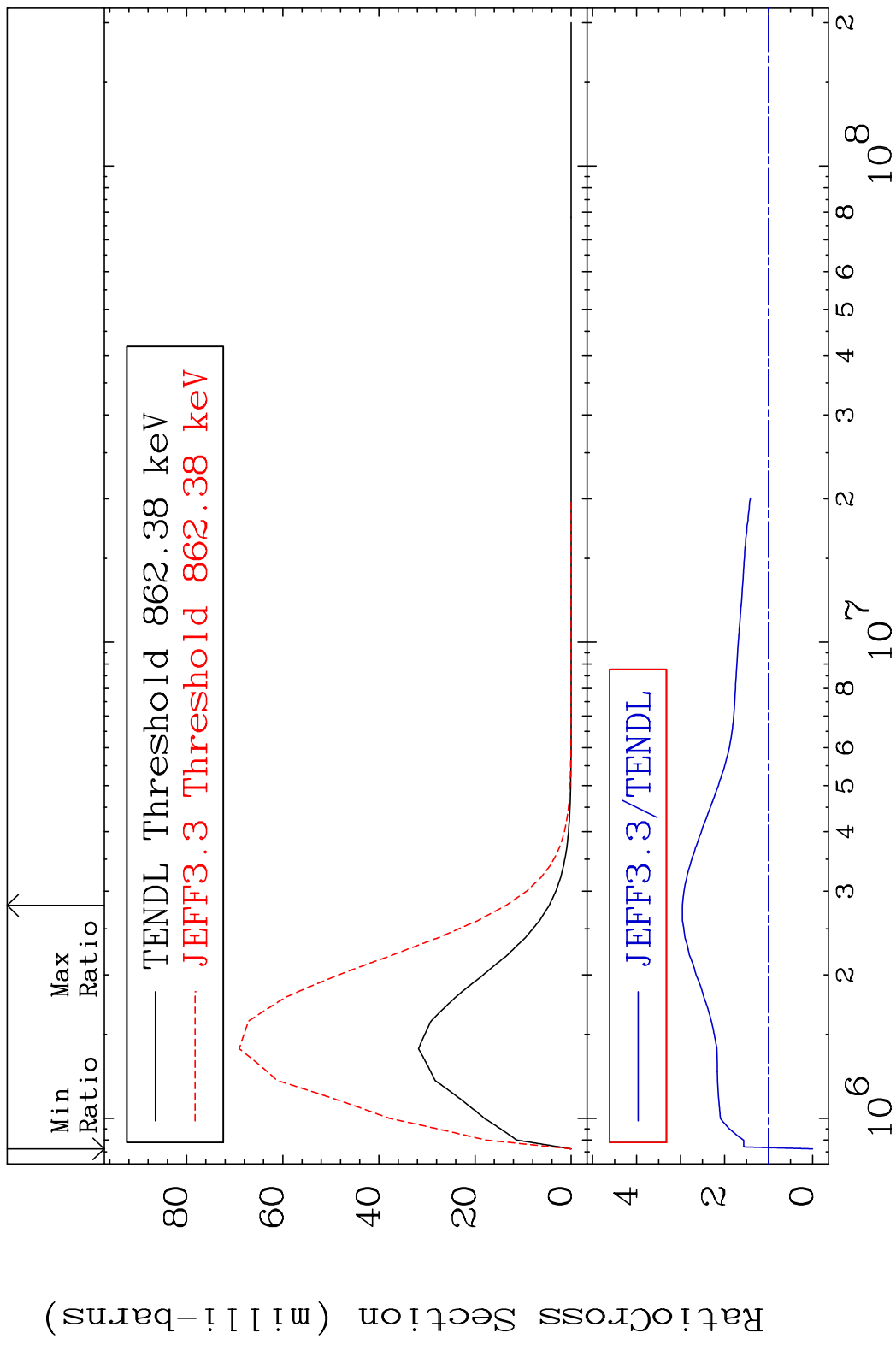
MAT 7240 MT= 73 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 170.9 %



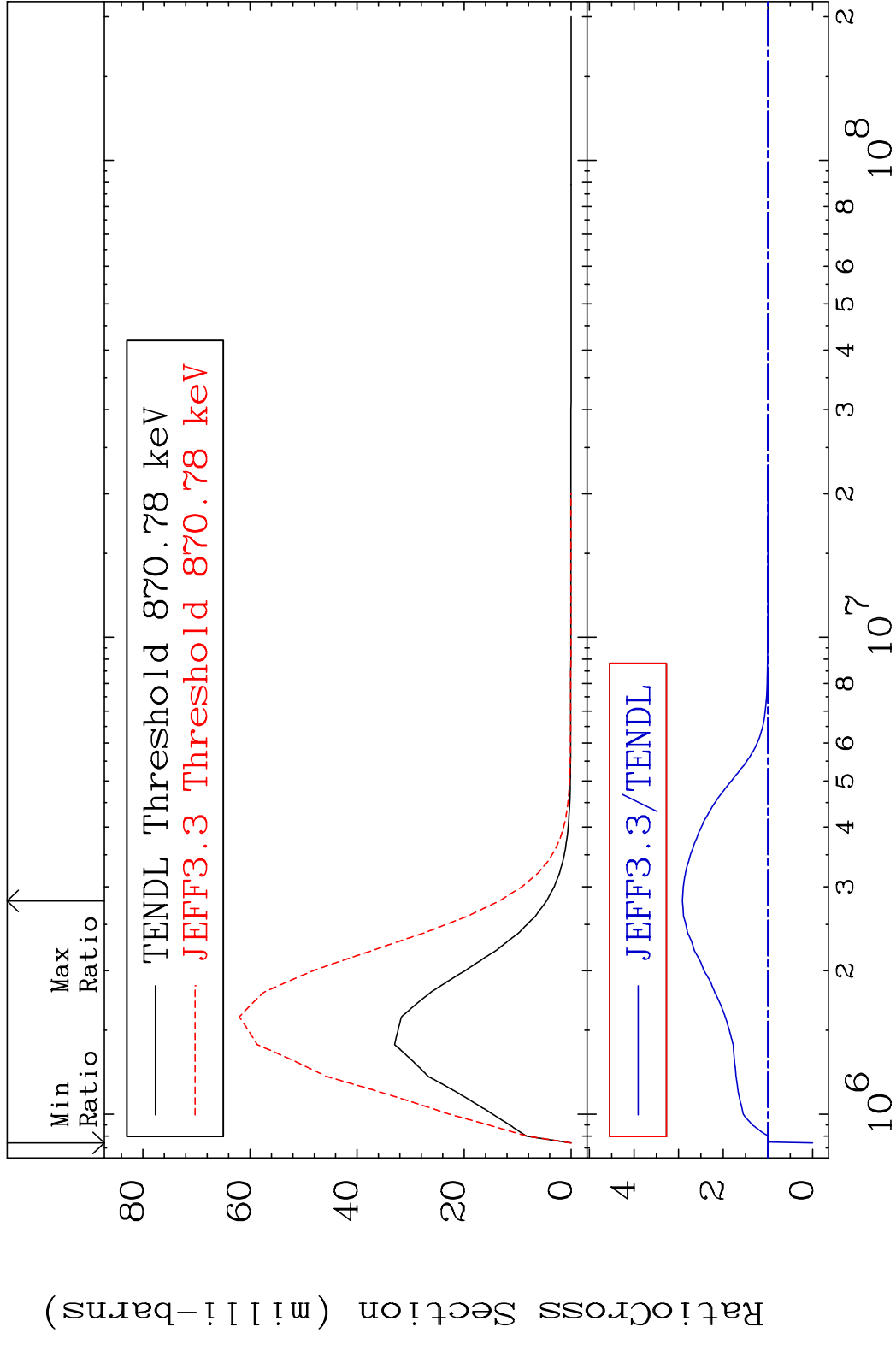
MAT 7240 MT= 74 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 218.5 %



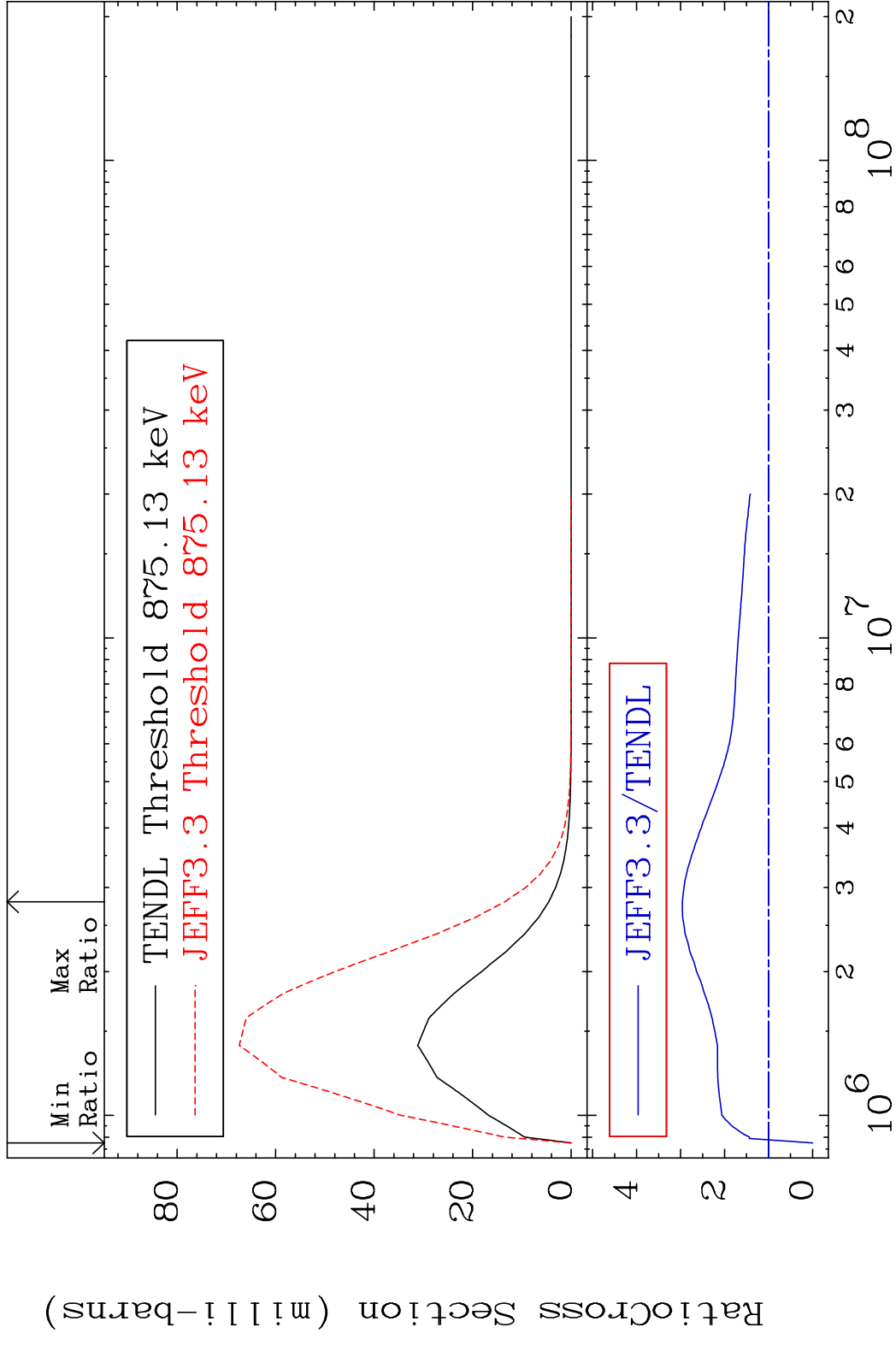
MAT 7240 MT= 75 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 196.0 %



MAT 7240 MT= 76 (n,n') Level 72-Hf-179  
 Cross Section -100.0 To 191.6 %

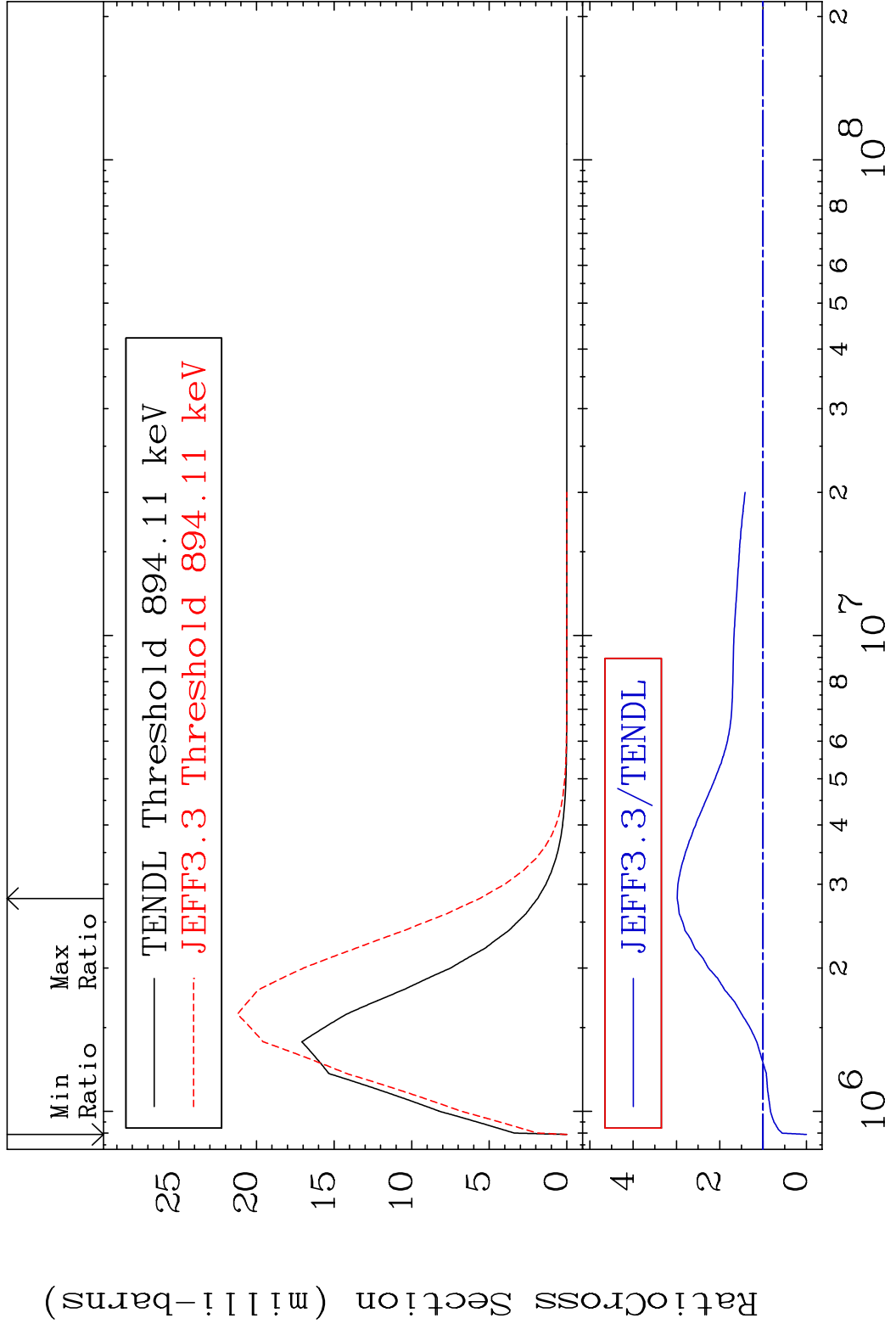


MAT 7240 MT= 77 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 196.0 %



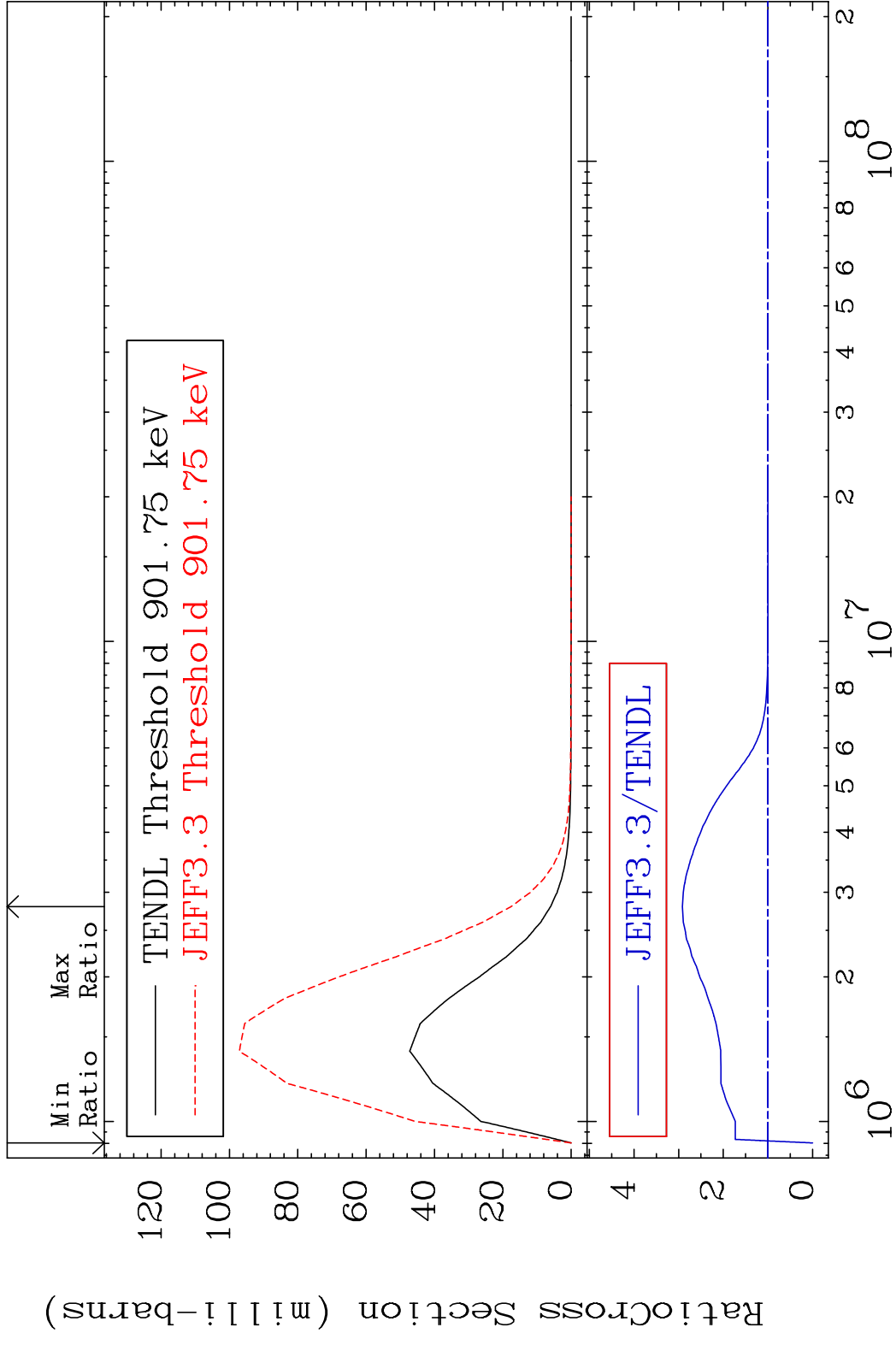


MAT 7240 MT= 78 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 198.3 %



40 Incident Energy (eV) 72-Hf-179

MAT 7240 MT= 79 (n, n') Level 72-Hf-179  
 Cross Section -100.0 To 191.7 %

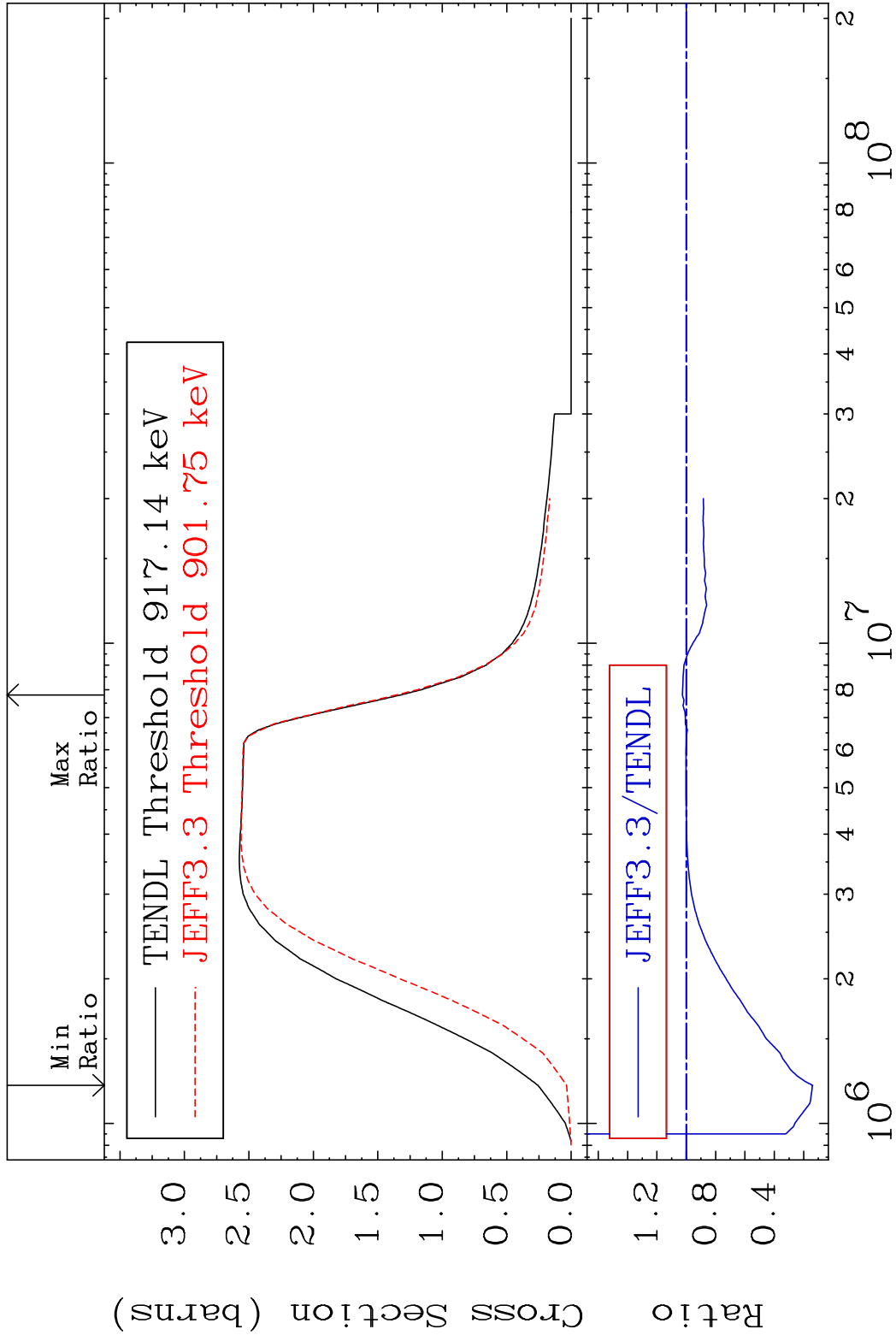


MAT 7240

(n, n') Continuum

72-Hf-179

Cross Section -86.05 To 2.675 %



42

Incident Energy (eV)

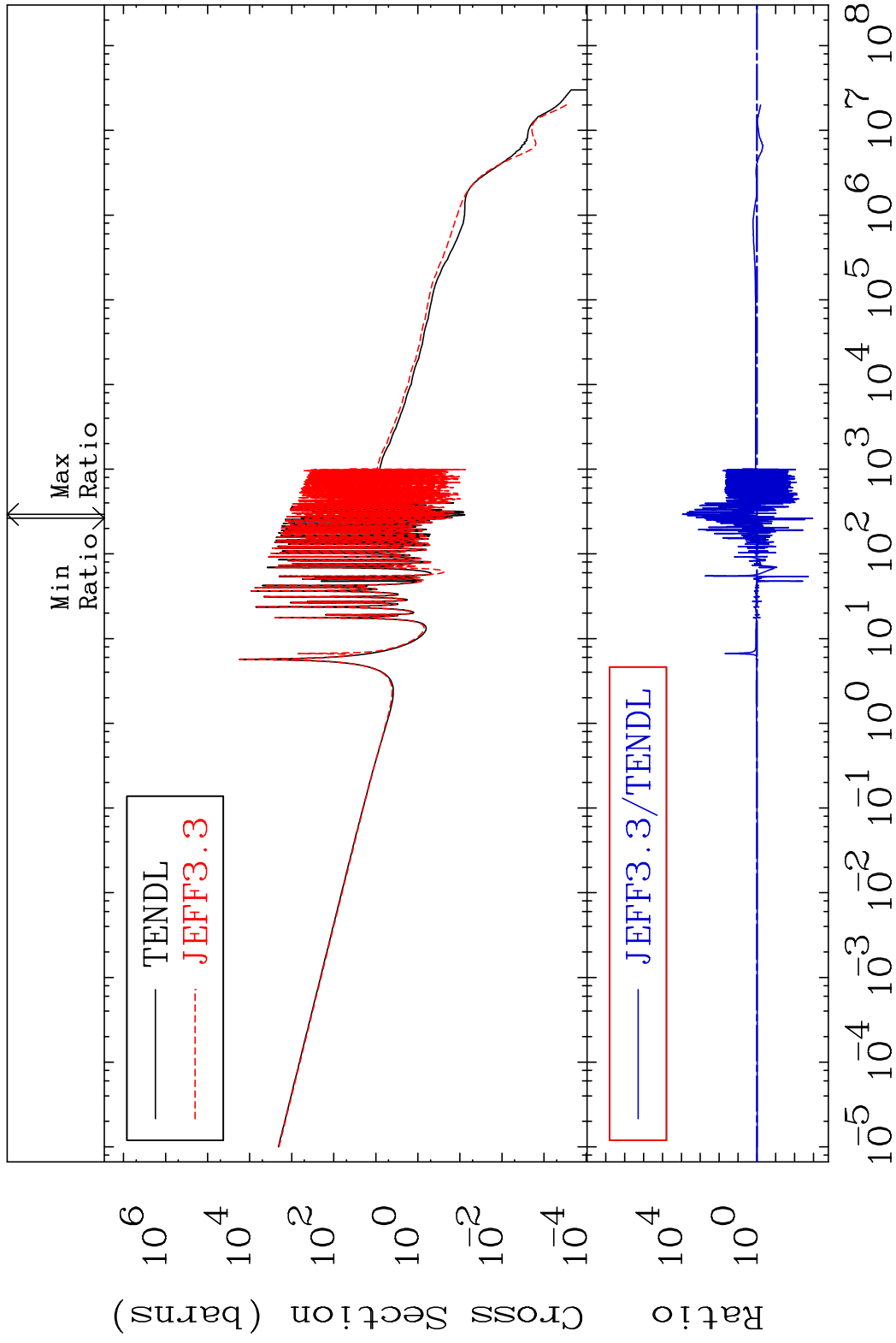
72-Hf-179

MAT 7240

(n,  $\gamma$ )

72-Hf-179

Cross Section -99.89 To 9999. %

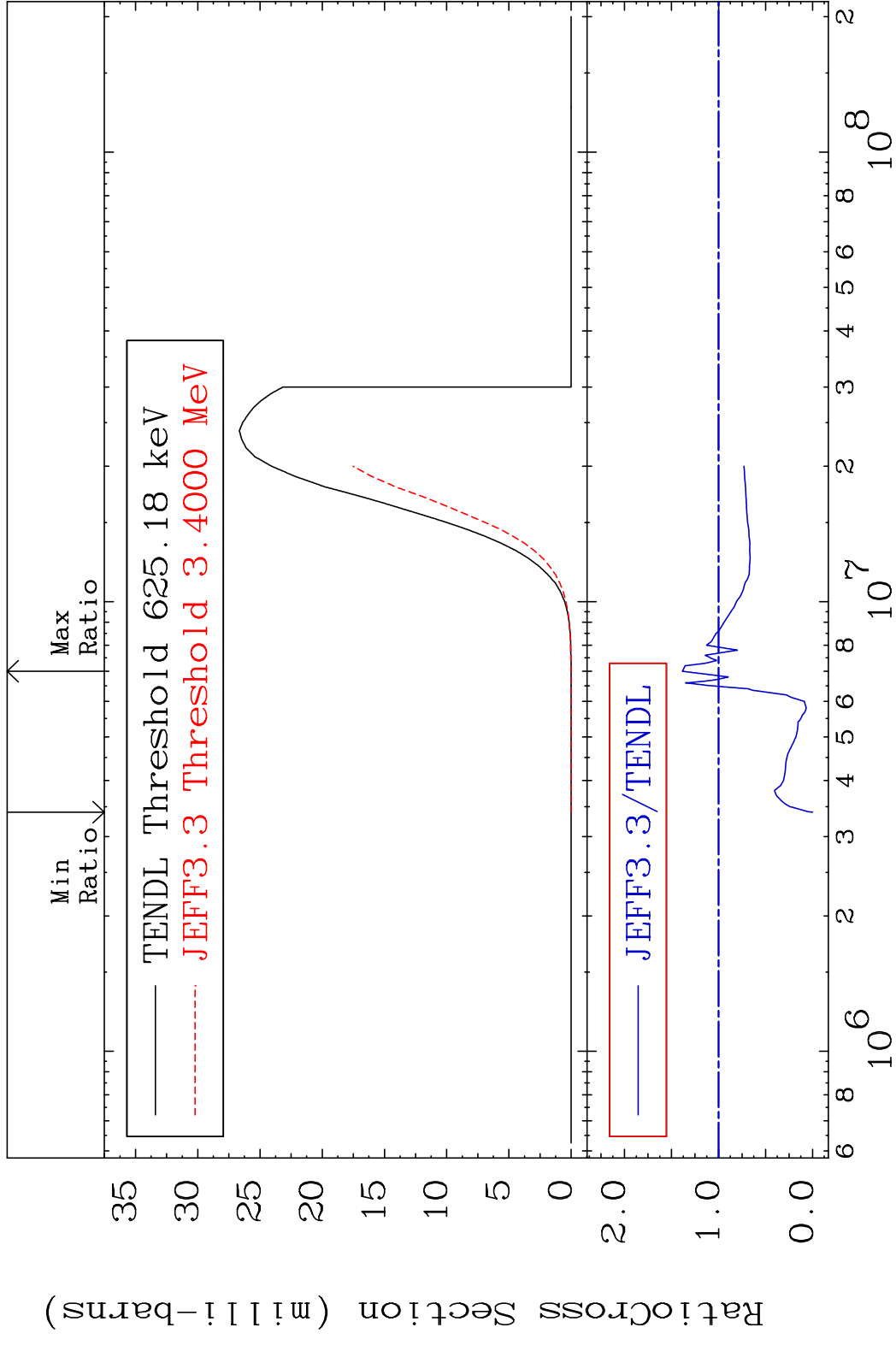


43

Incident Energy (eV)

72-Hf-179

MAT 7240 (n,p) 72-Hf-179  
 Cross Section -100.0 To 38.48 %

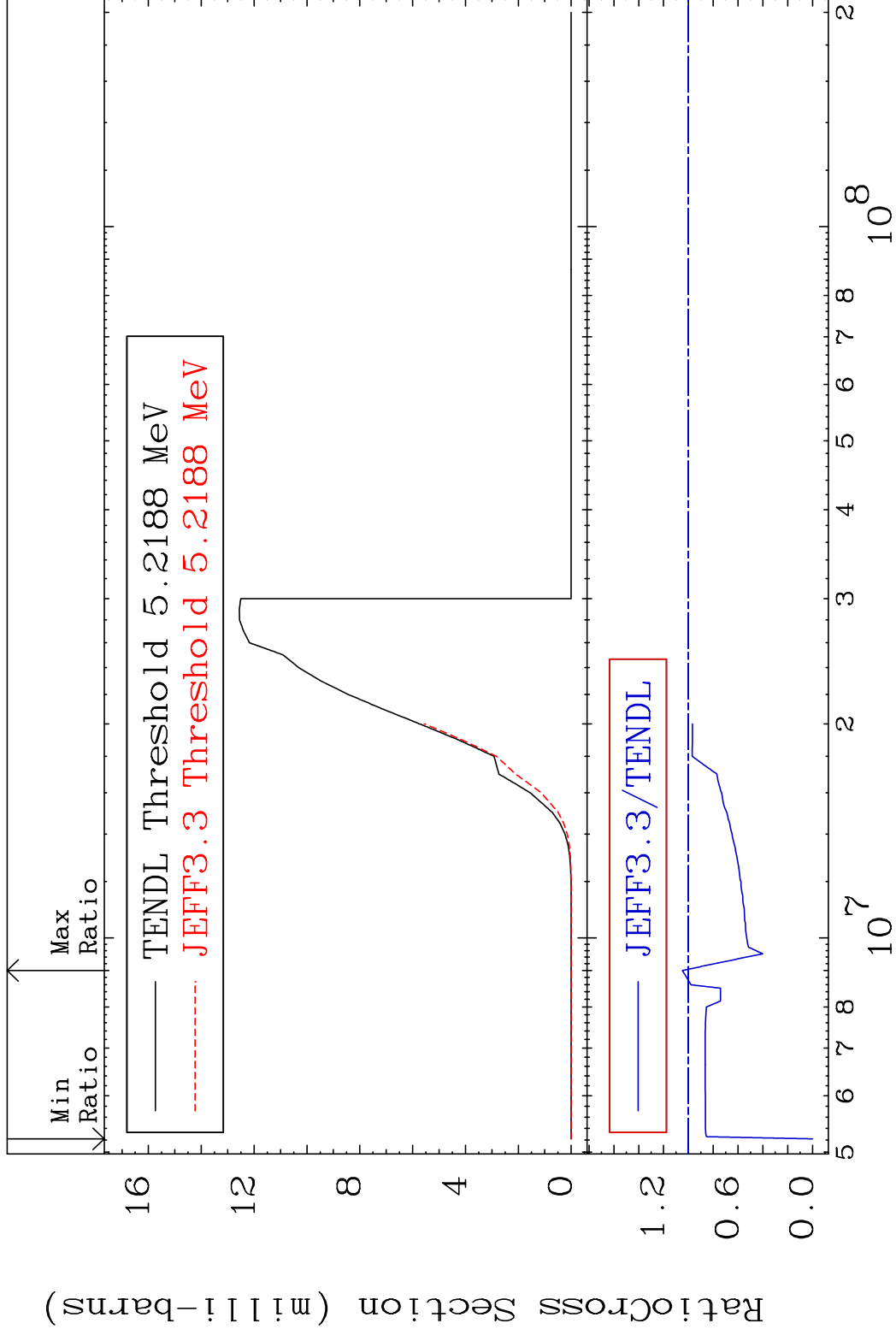


MAT 7240

(n,d)

72-Hf-179

Cross Section -100.0 To 4.862 %



45

Incident Energy (eV)

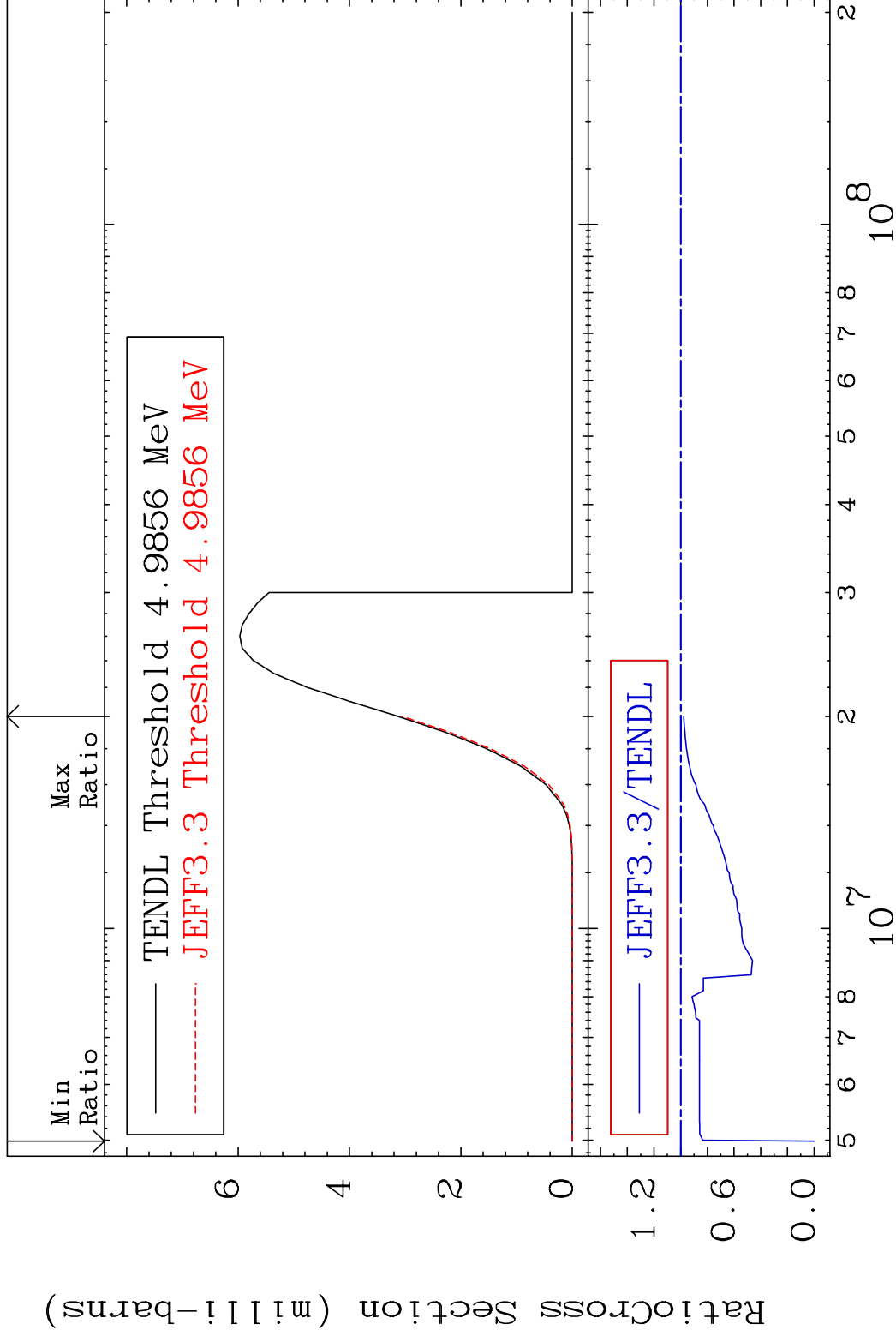
72-Hf-179

MAT 7240

(n, t)

72-Hf-179

Cross Section -100.0 To -2.235%

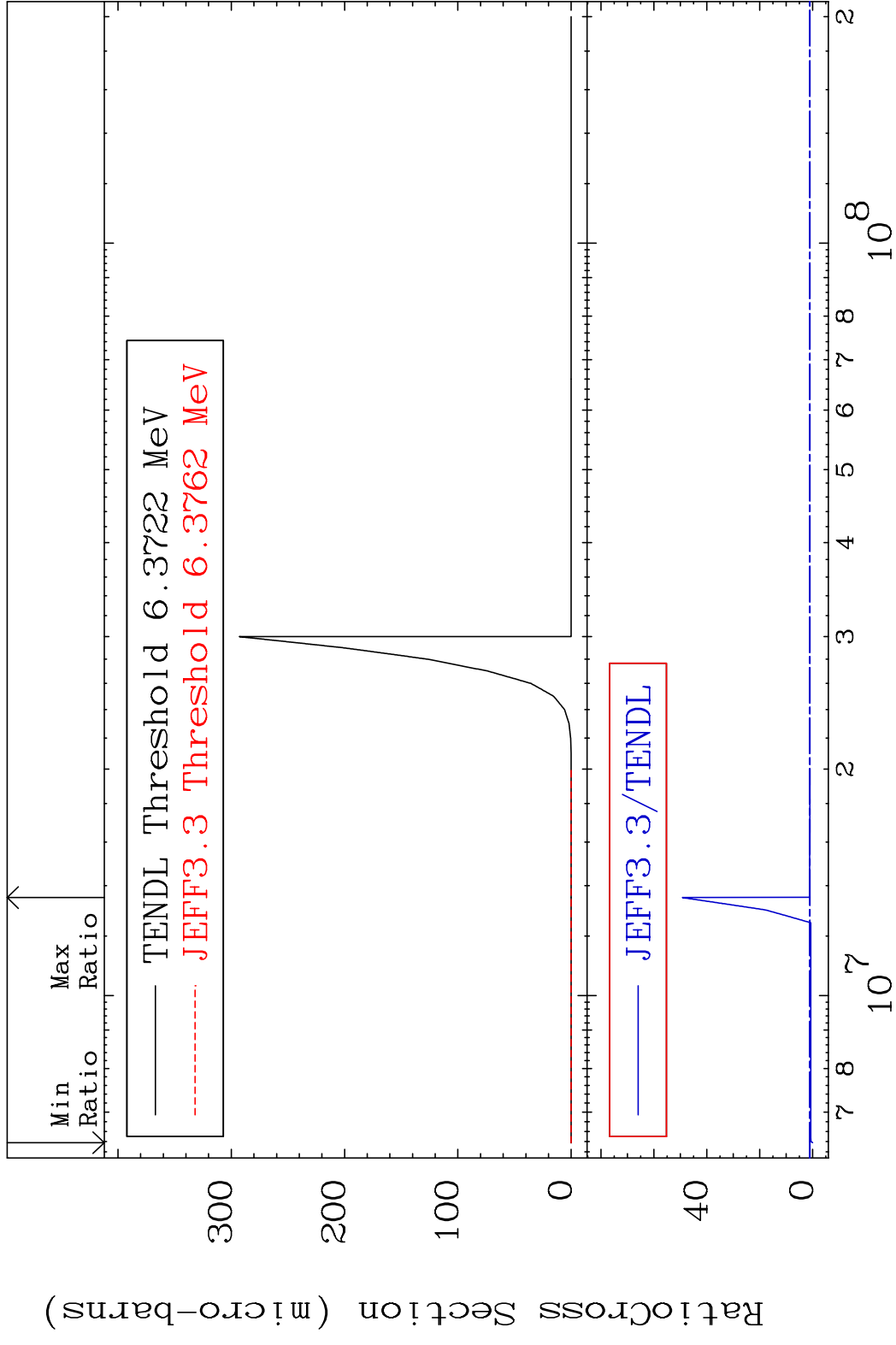


46

Incident Energy (eV)

72-Hf-179

MAT 7240 (n, He-3) 72-Hf-179  
 Cross Section -100.0 To 4825. %



47 Incident Energy (eV) 72-Hf-179

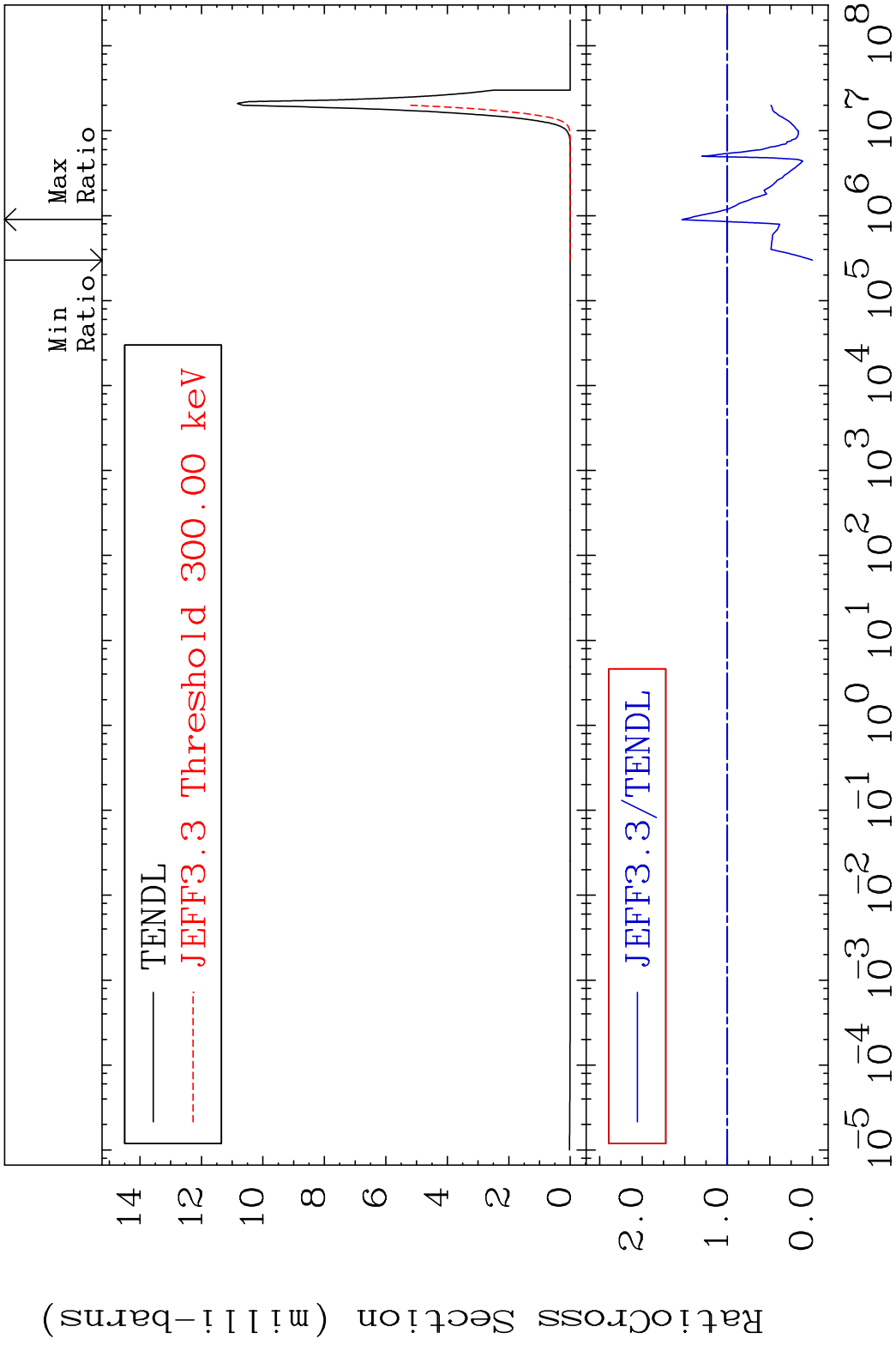


MAT 7240

(n,  $\alpha$ )

72-Hf-179

Cross Section -100.0 To 53.50 %



48

Incident Energy (eV)

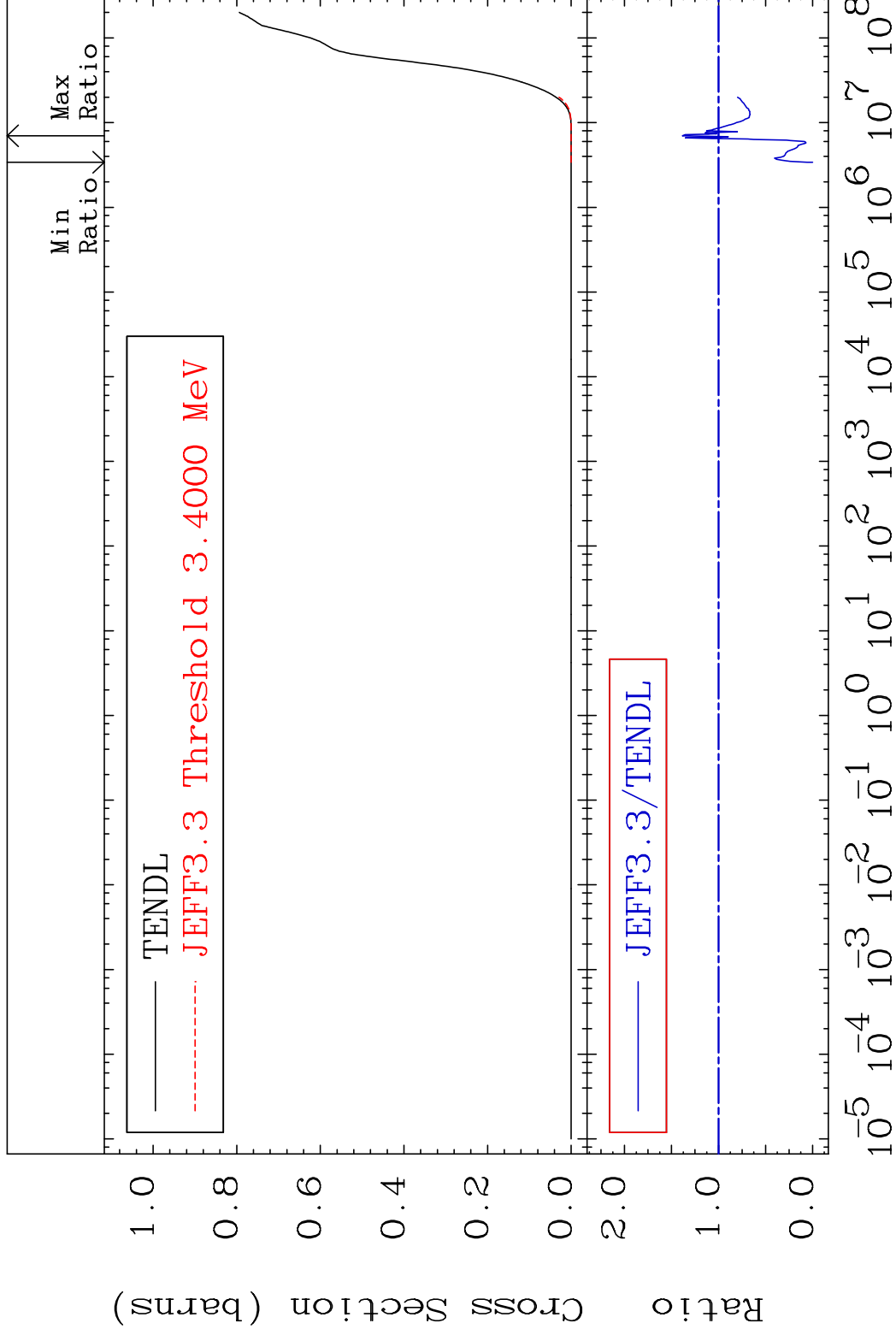
72-Hf-179

MAT 7240

Hydrogen Production

72-Hf-179

Cross Section -100.0 To 38.48 %



49

Incident Energy (eV)

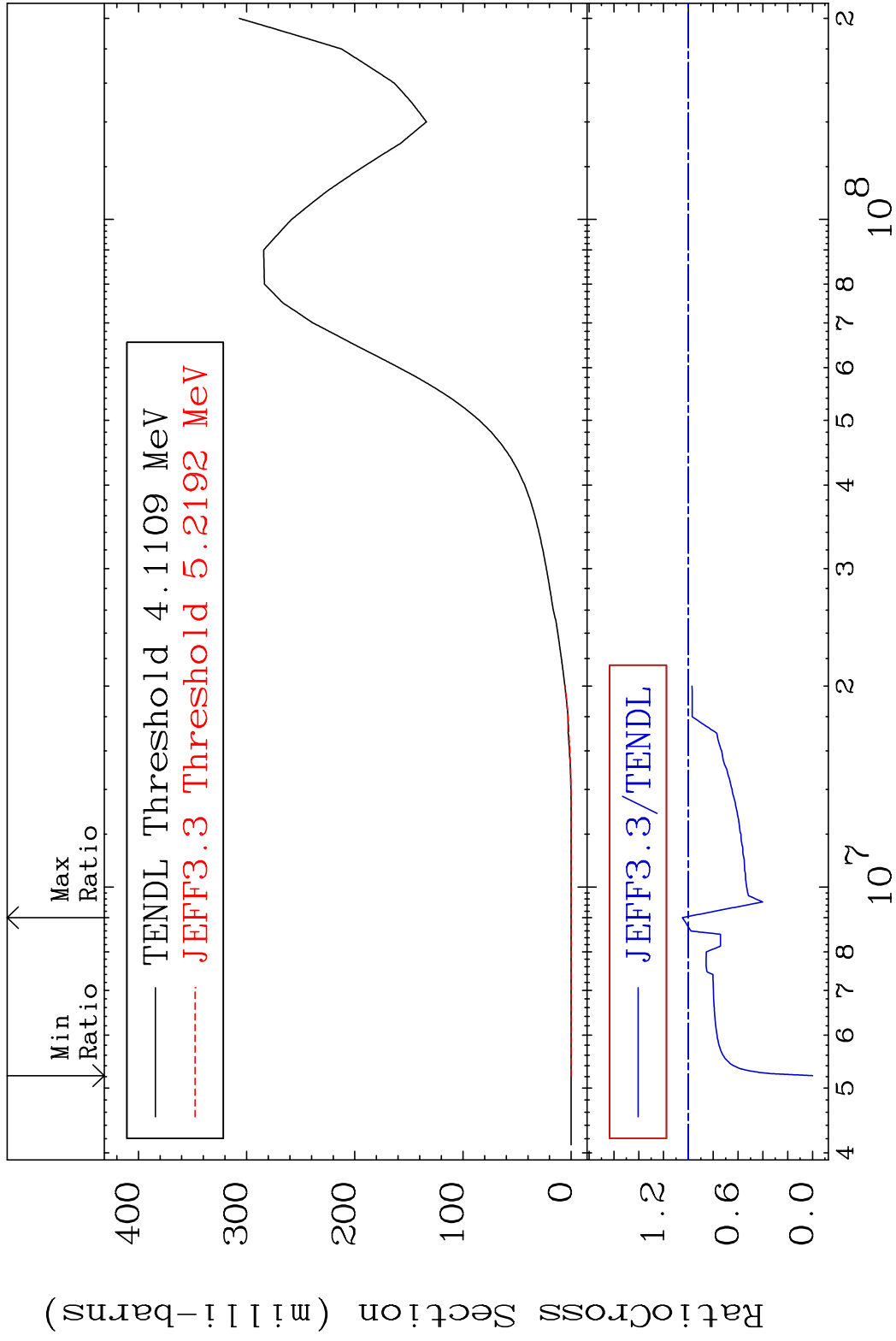
72-Hf-179

MAT 7240

Deuterium Production

72-Hf-179

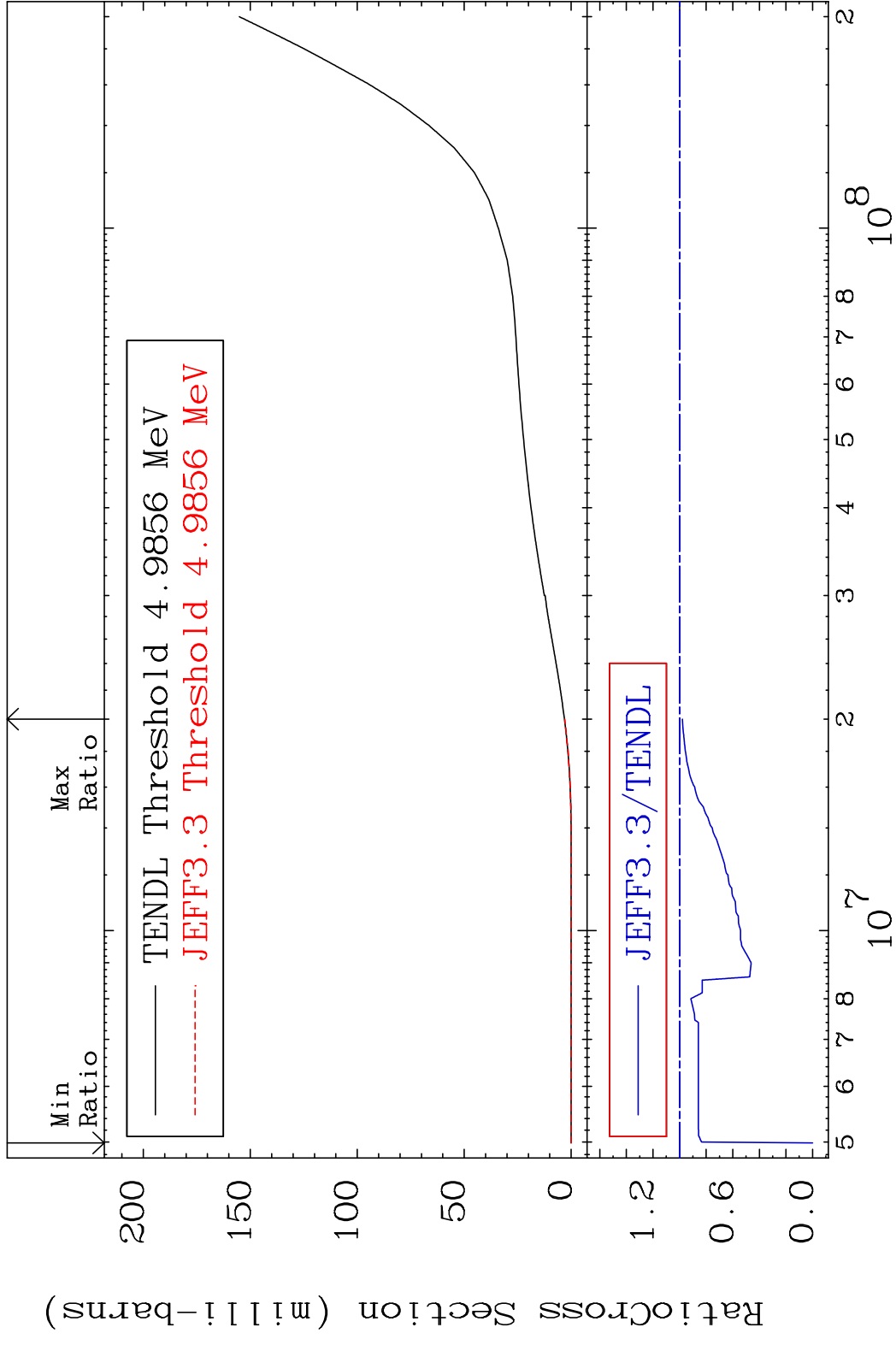
Cross Section -100.0 To 4.862 %



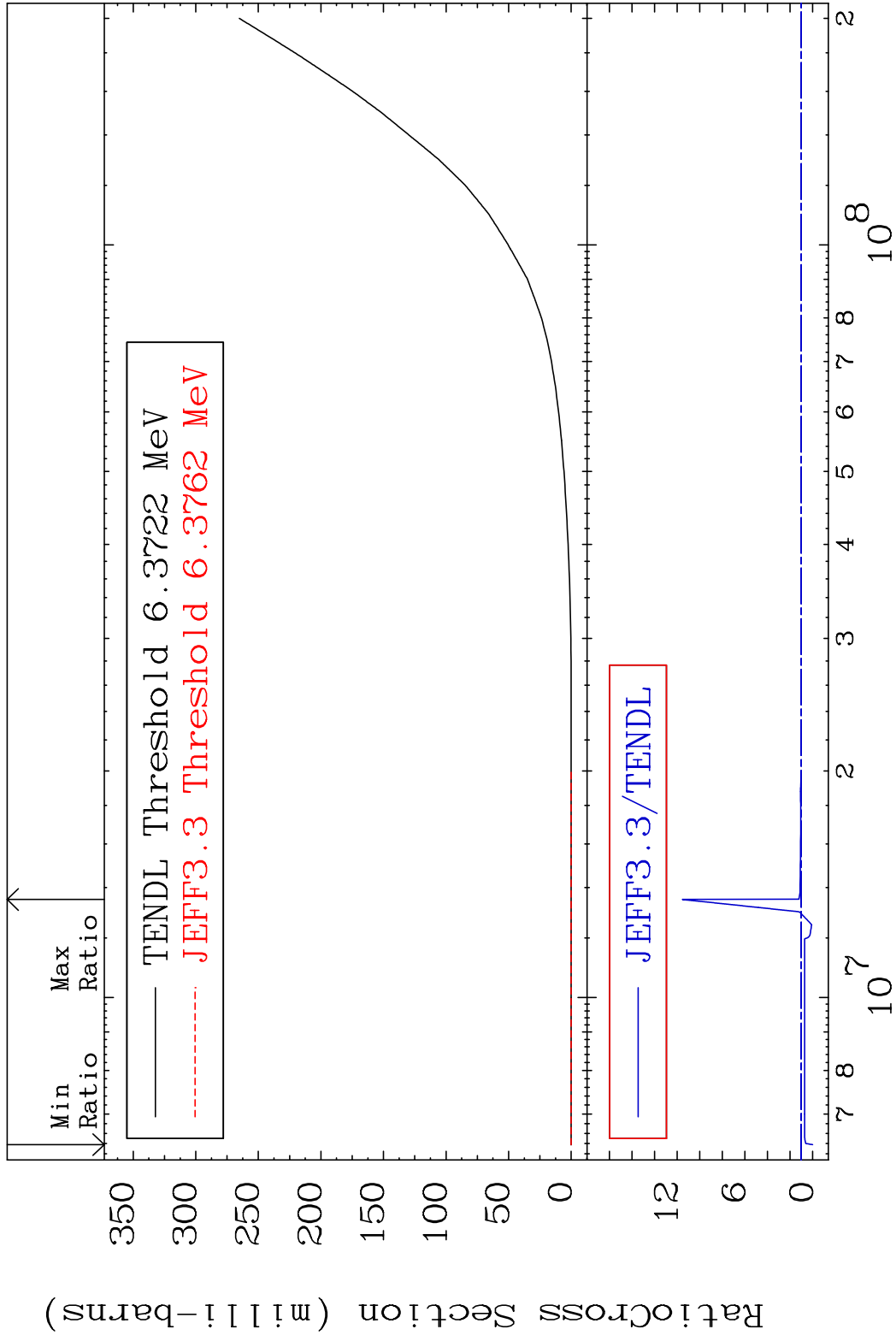
50

Incident Energy (eV)

72-Hf-179



Cross Section -100.0 To 1054. %

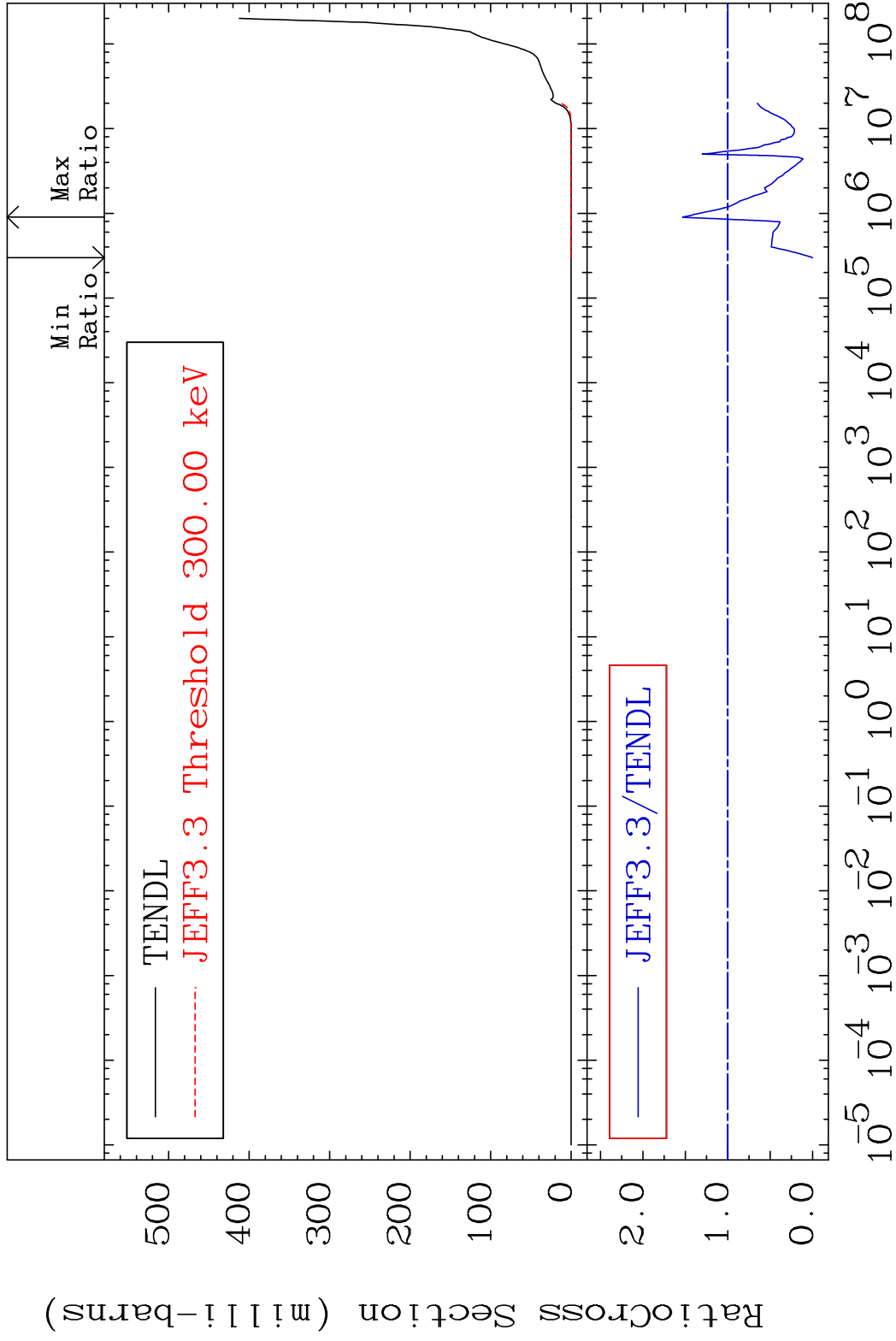


MAT 7240

He-4 Production

72-Hf-179

Cross Section -100.0 To 53.50 %

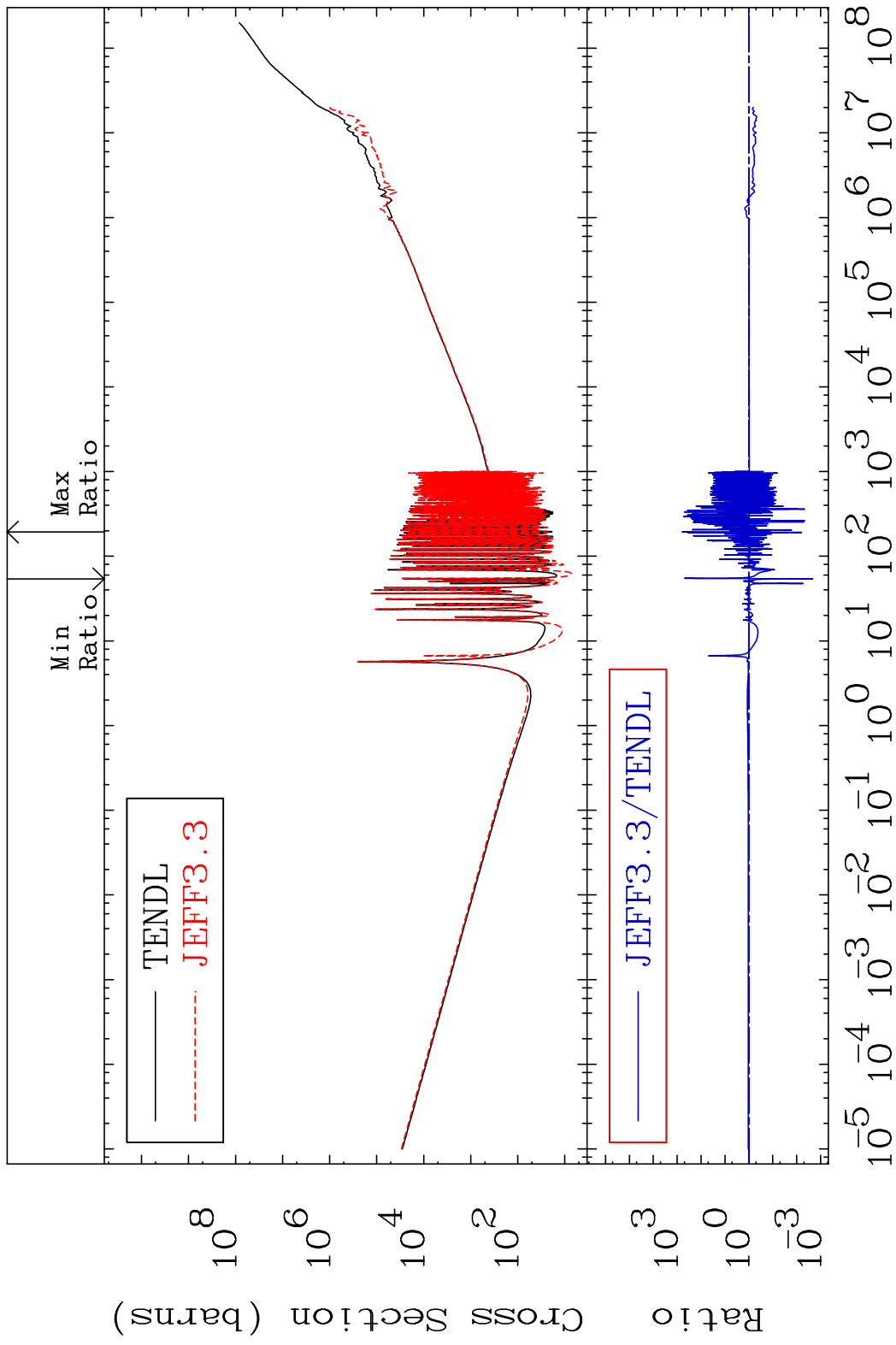


53

Incident Energy (eV)

72-Hf-179

MAT 7240 Kerma total (eV-barns) 72-Hf-179  
 Cross Section -99.78 To 9999. %

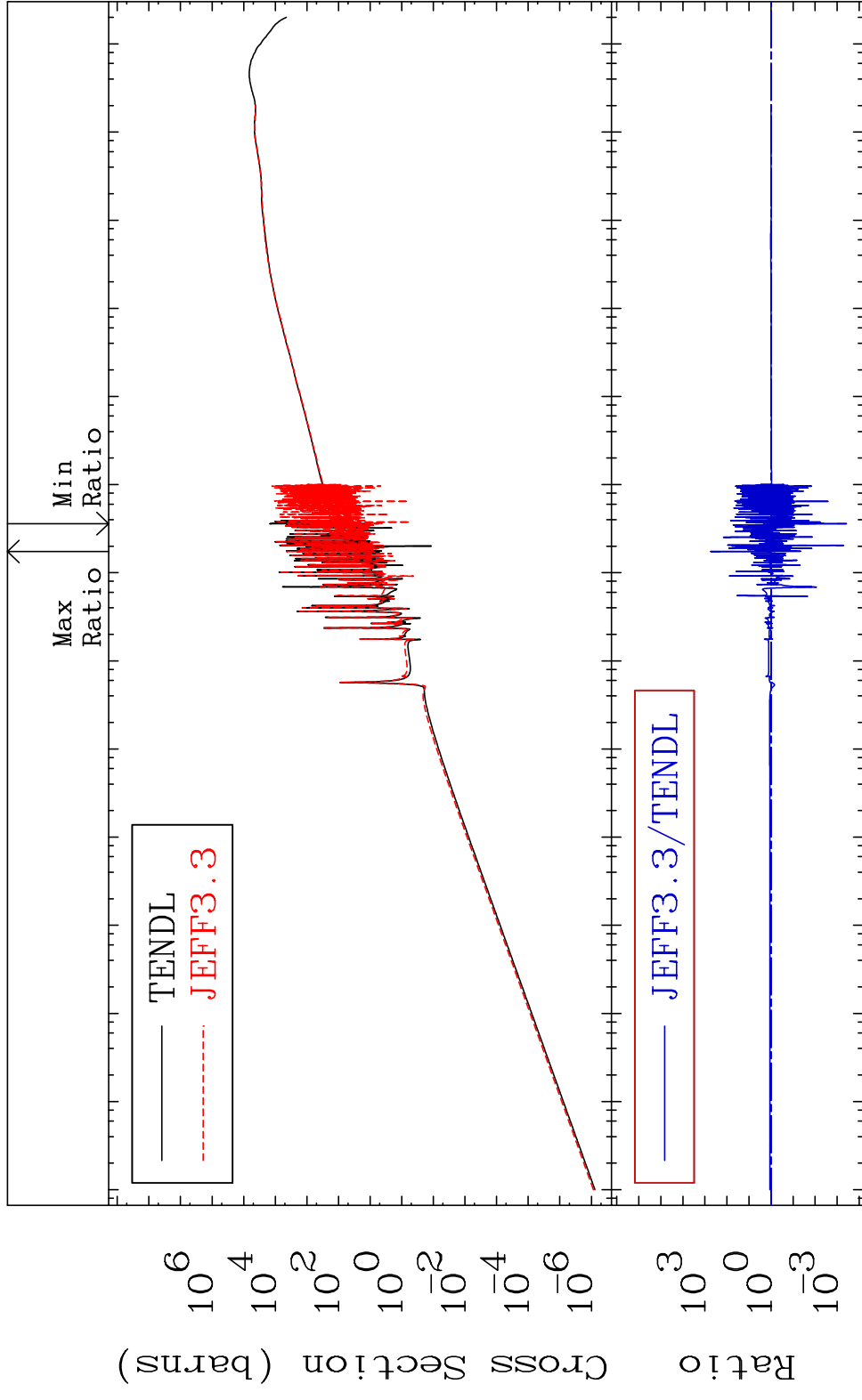


MAT 7240

Kerma elastic

72-Hf-179

Cross Section -99.96 To 9999. %



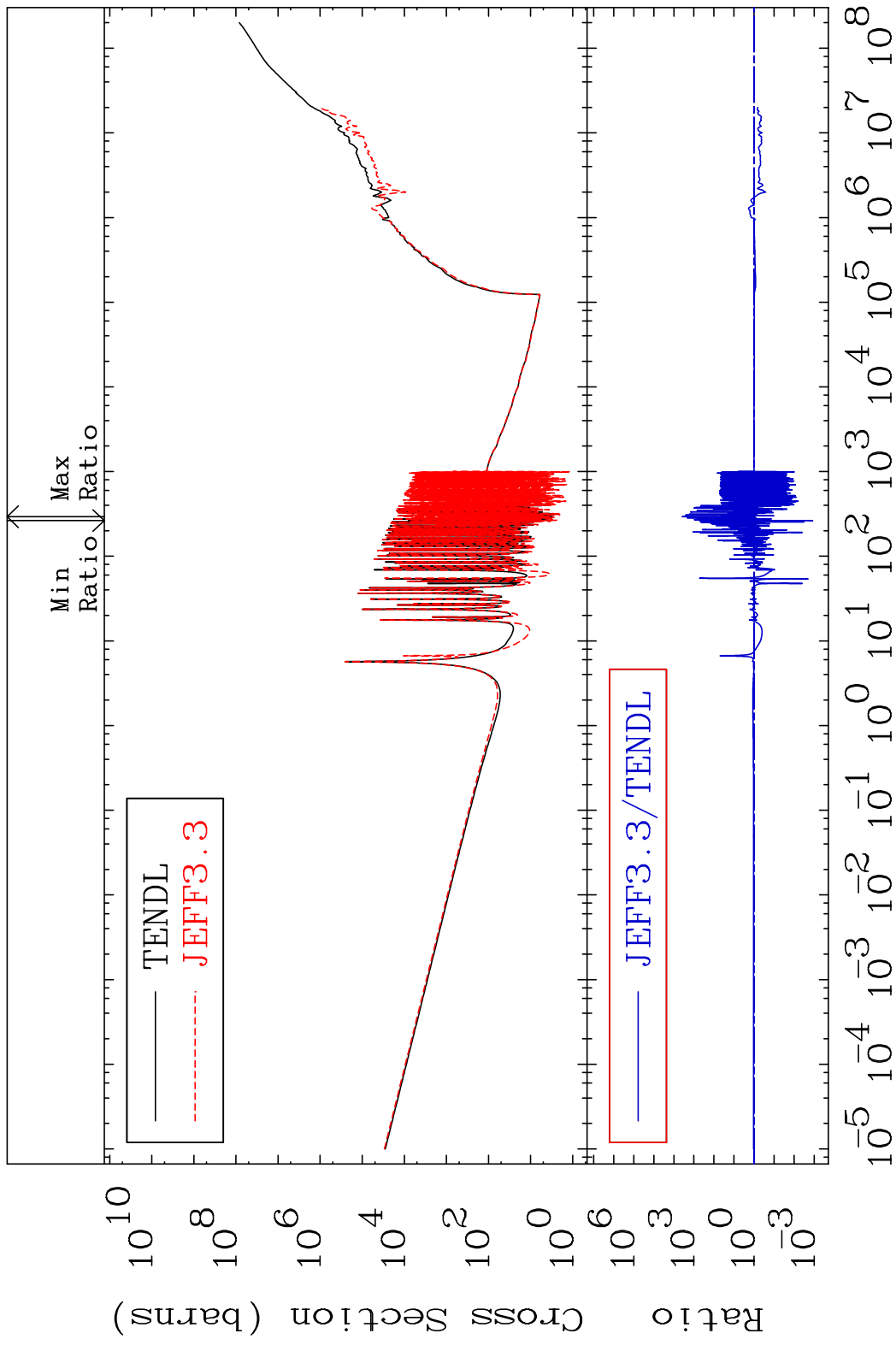
Cross Section (barns)

Ratio

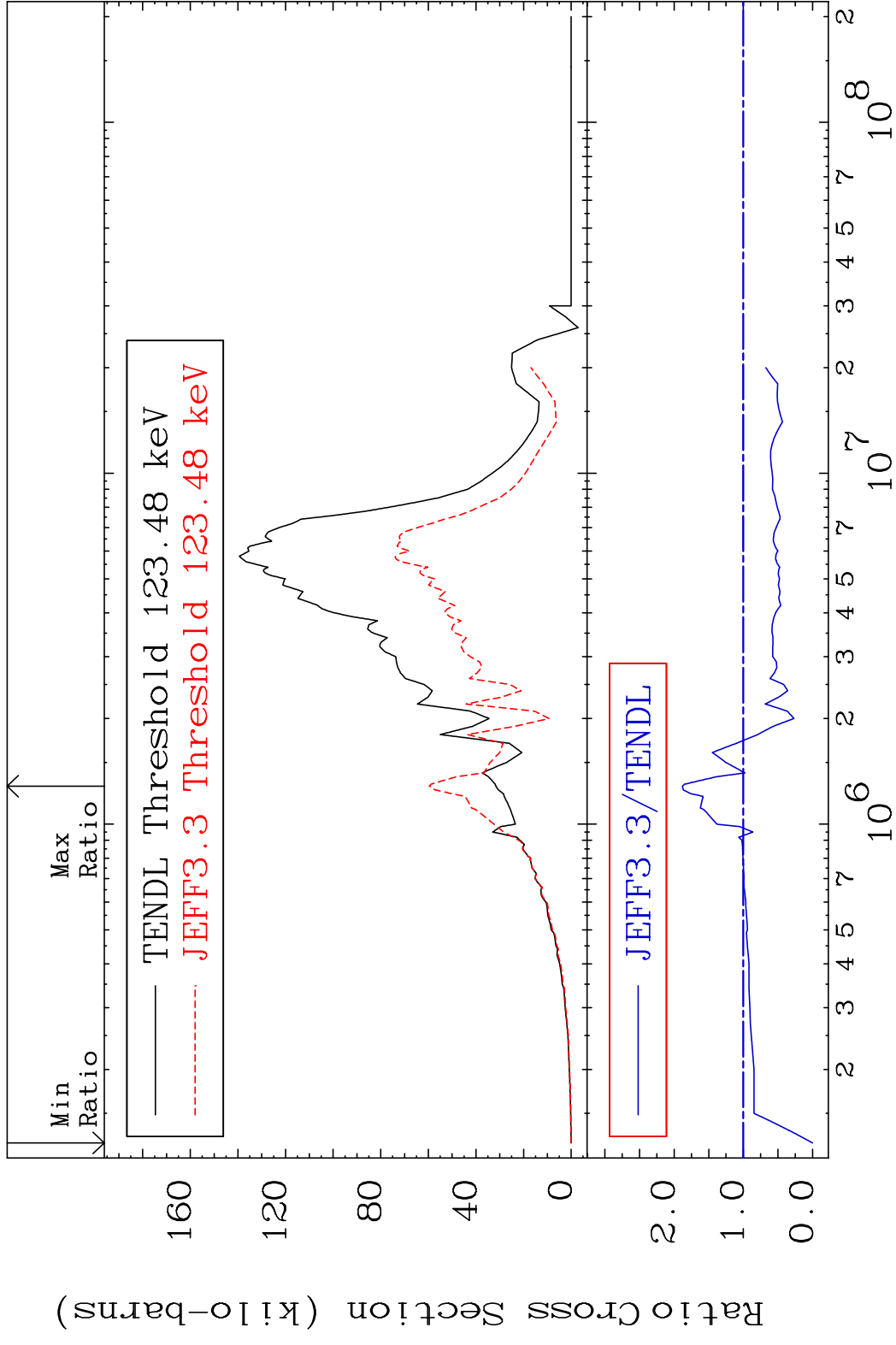
Incident Energy (eV)



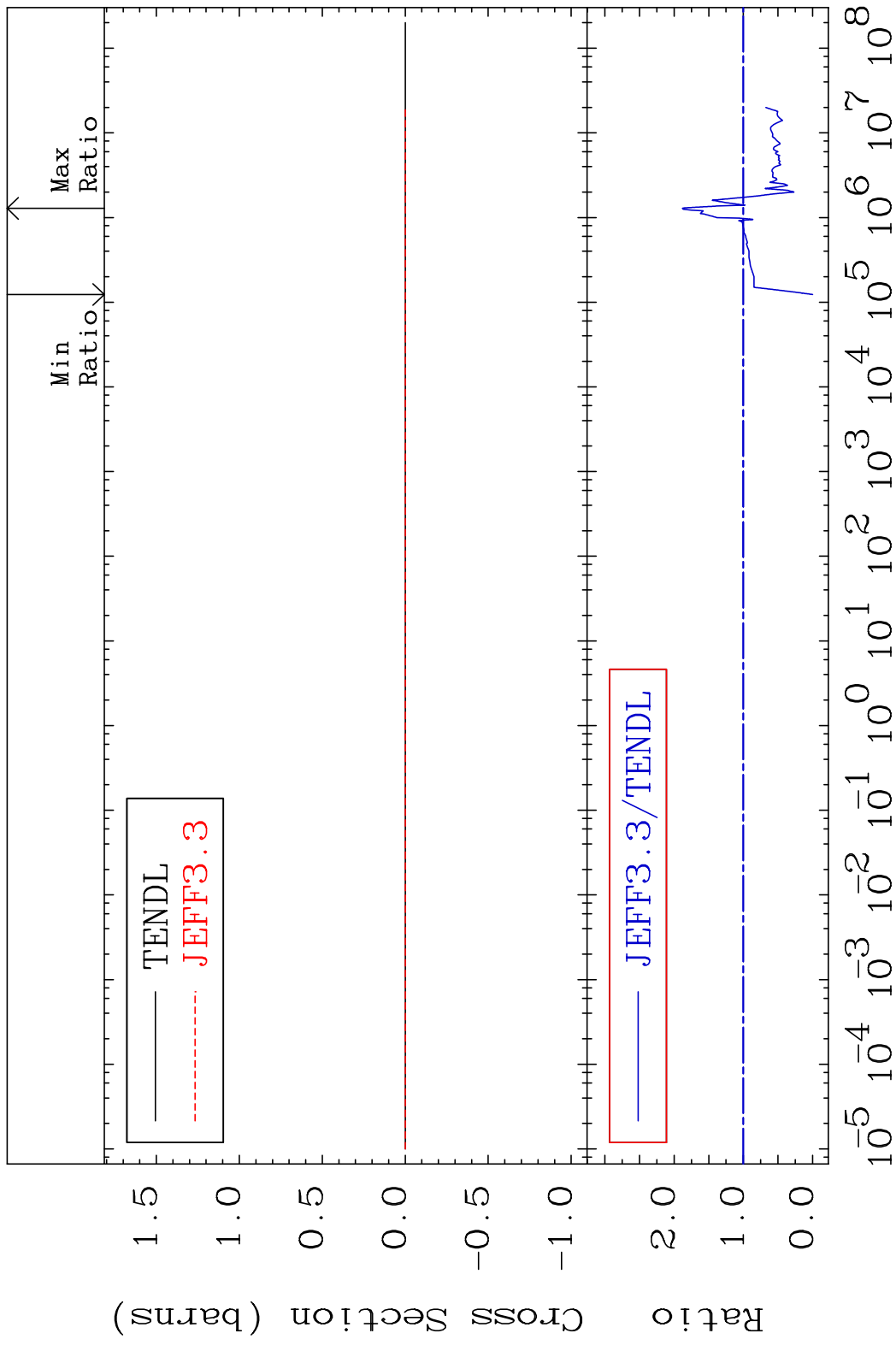
MAT 7240 Kerma non-elastic (all but mt2) 72-Hf-179  
 Cross Section -99.88 To 9999. %



MAT 7240 Kerma inelastic (mt51-91) 72-Hf-179  
 Cross Section -100.0 To 88.13 %

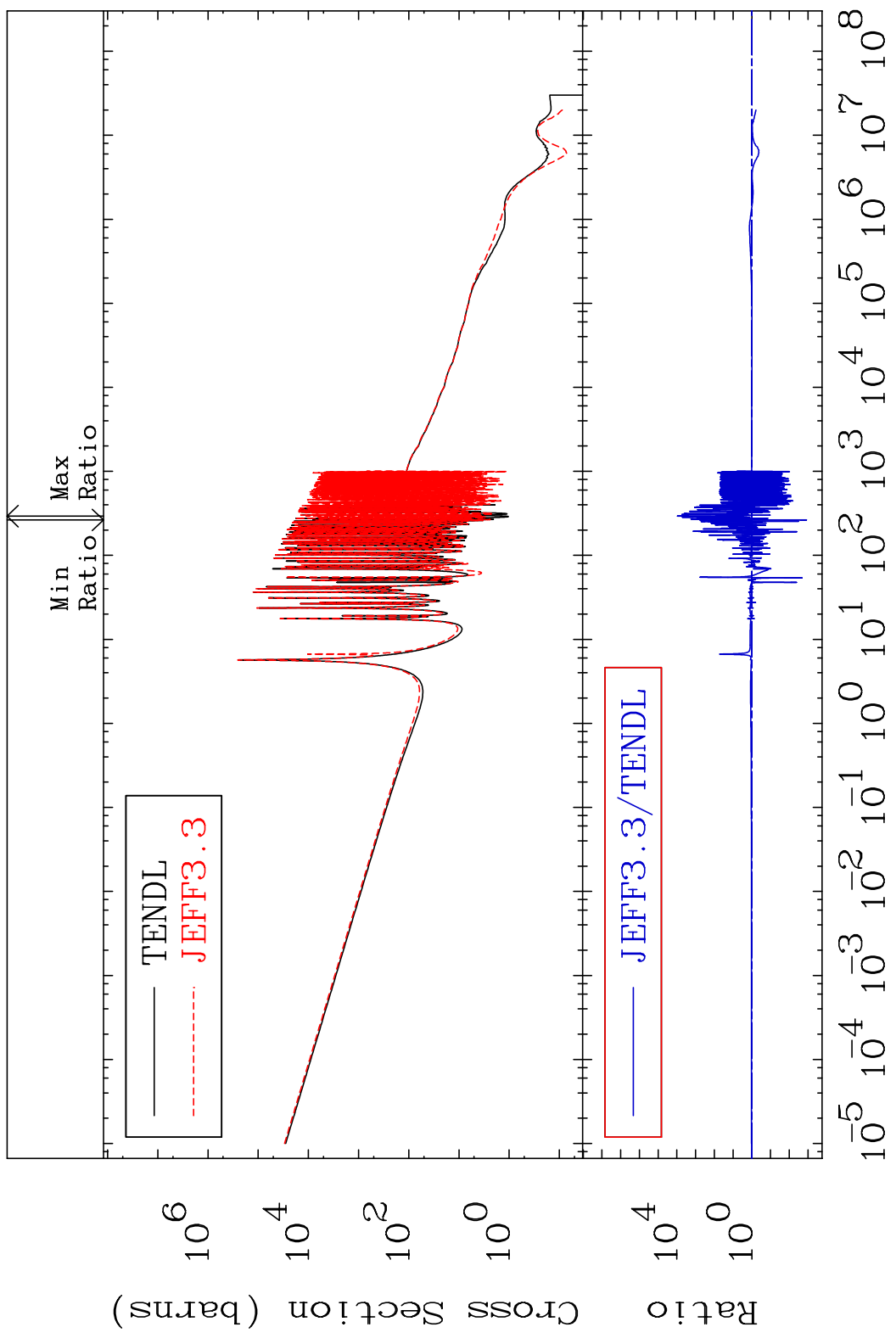


MAT 7240 Kerma fission (mt18 or mt19-20-21-38) 72-Hf-179  
 Cross Section -100.0 To 88.13 %



MAT 7240

Kerma capture (mt102) 72-Hf-179  
Cross Section -99.88 To 9999. %



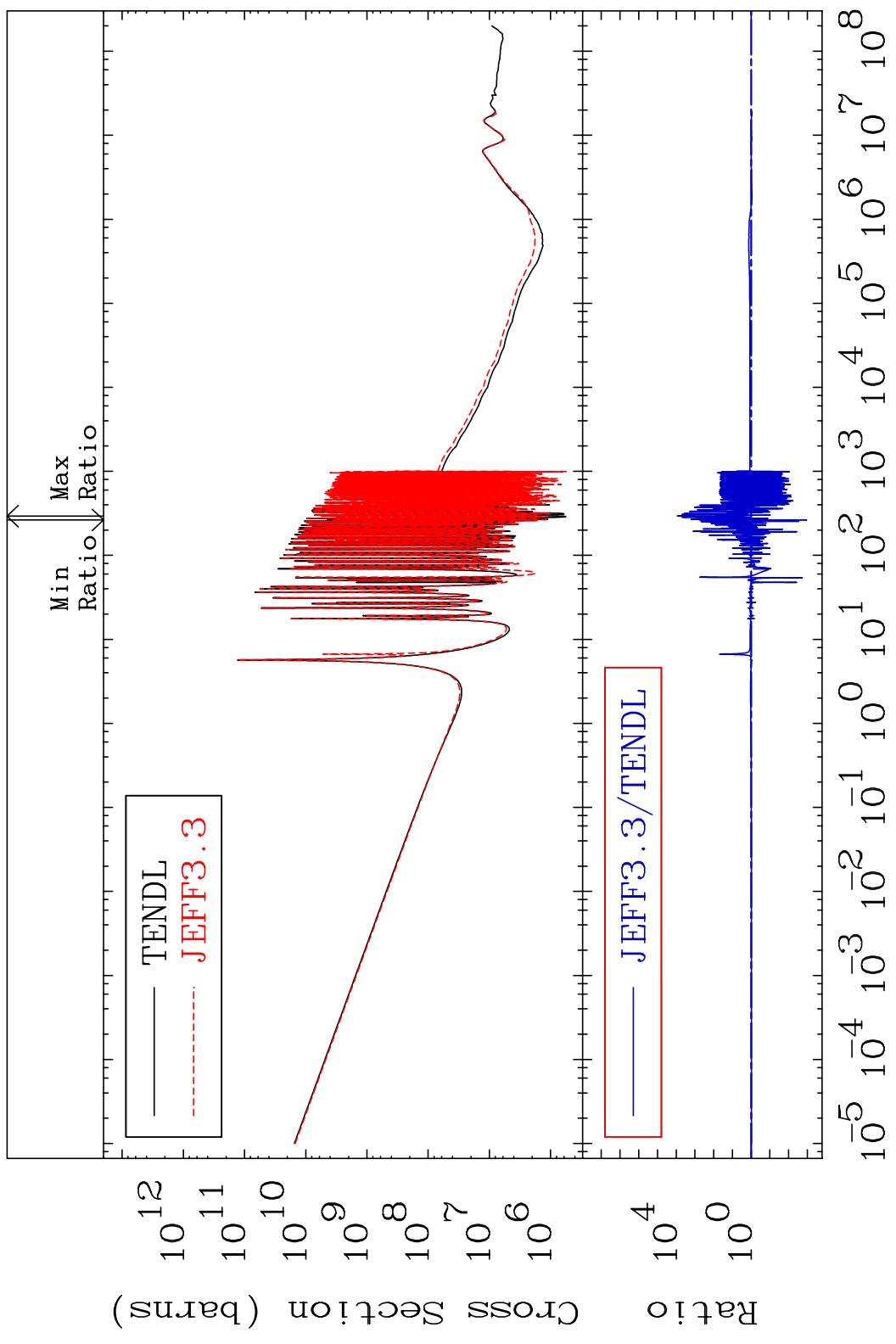
59

Incident Energy (eV)

72-Hf-179

MAT 7240

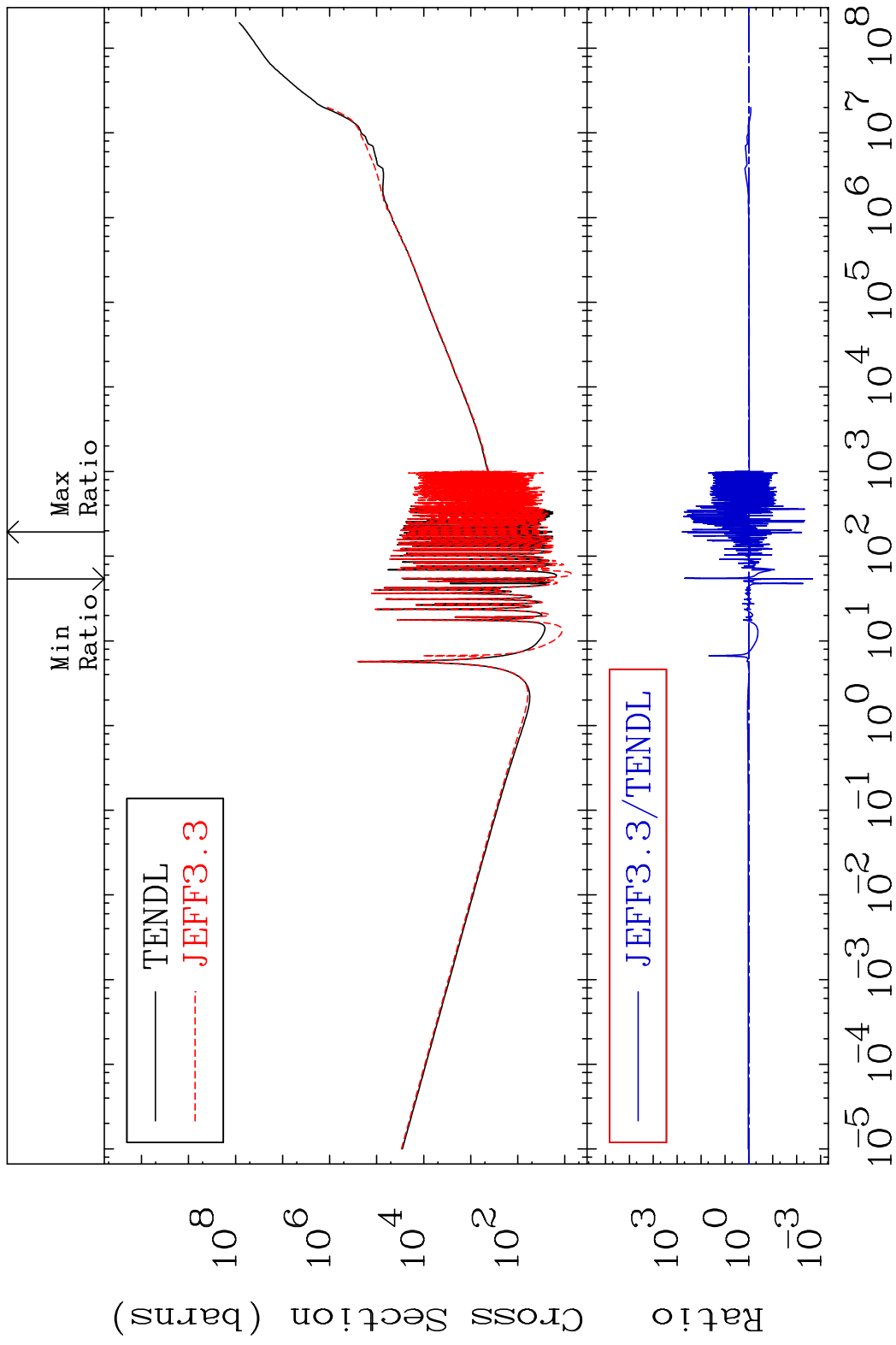
Total photon (eV-barns) 72-Hf-179  
Cross Section -99.89 To 9999. %



60

Incident Energy (eV) 72-Hf-179

MAT 7240 Total kinematic kerma (high limit) 72-Hf-179  
 Cross Section -99.78 To 9999. %

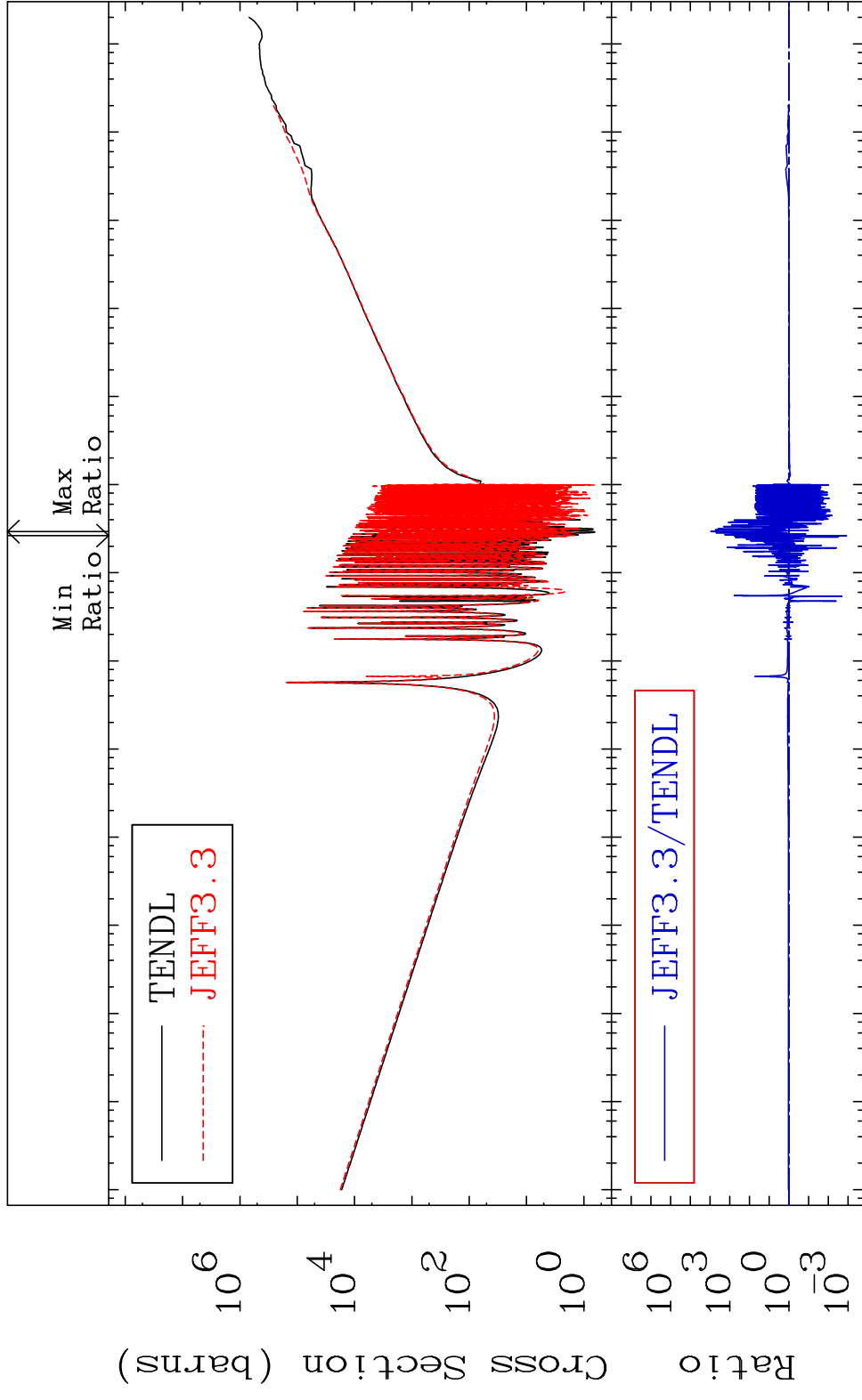


MAT 7240

Dpa total (eV-barns)

72-Hf-179

Cross Section -99.88 To 9999. %



62

Incident Energy (eV)

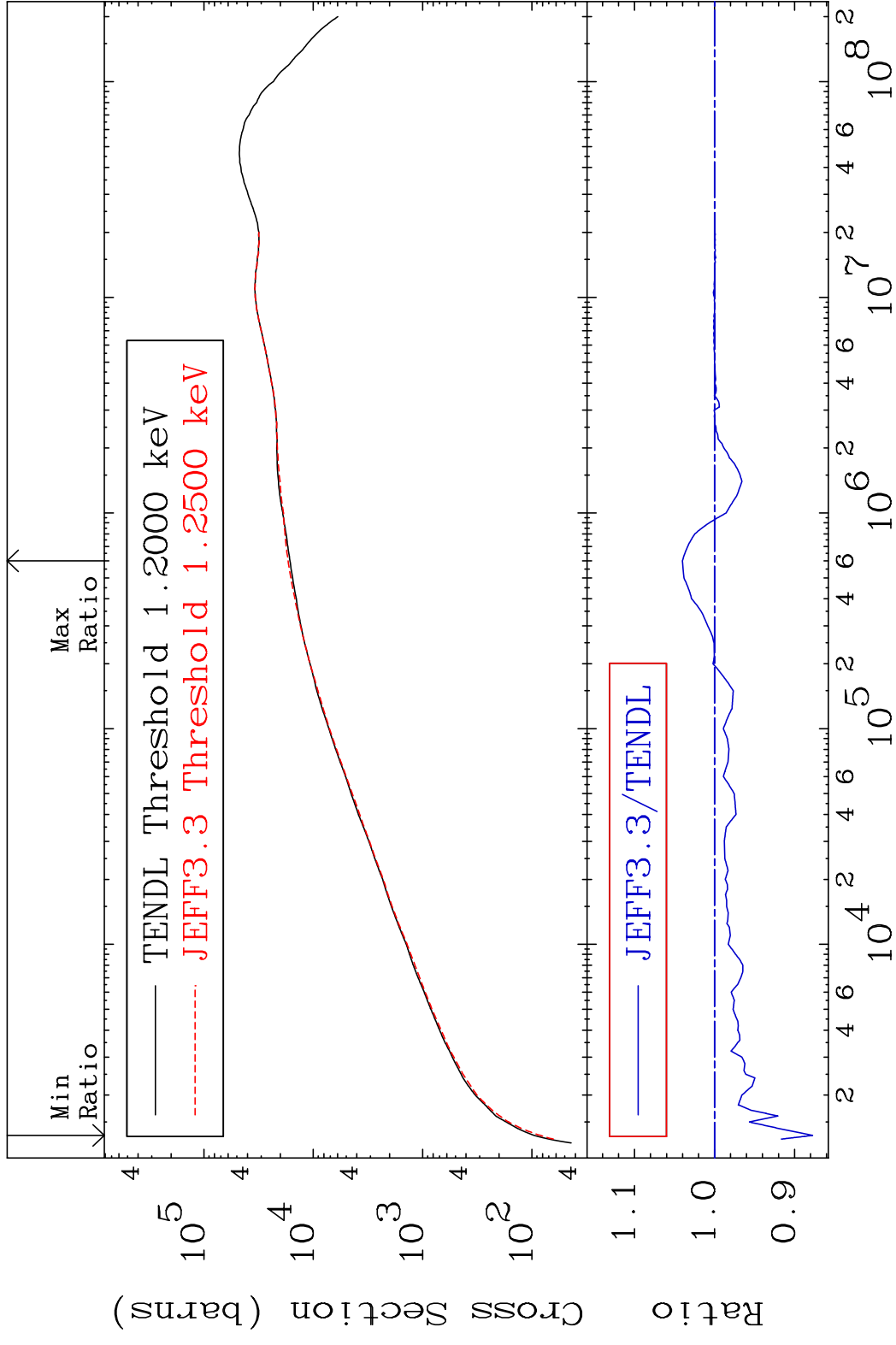
72-Hf-179

MAT 7240

Dpa elastic (mt2)

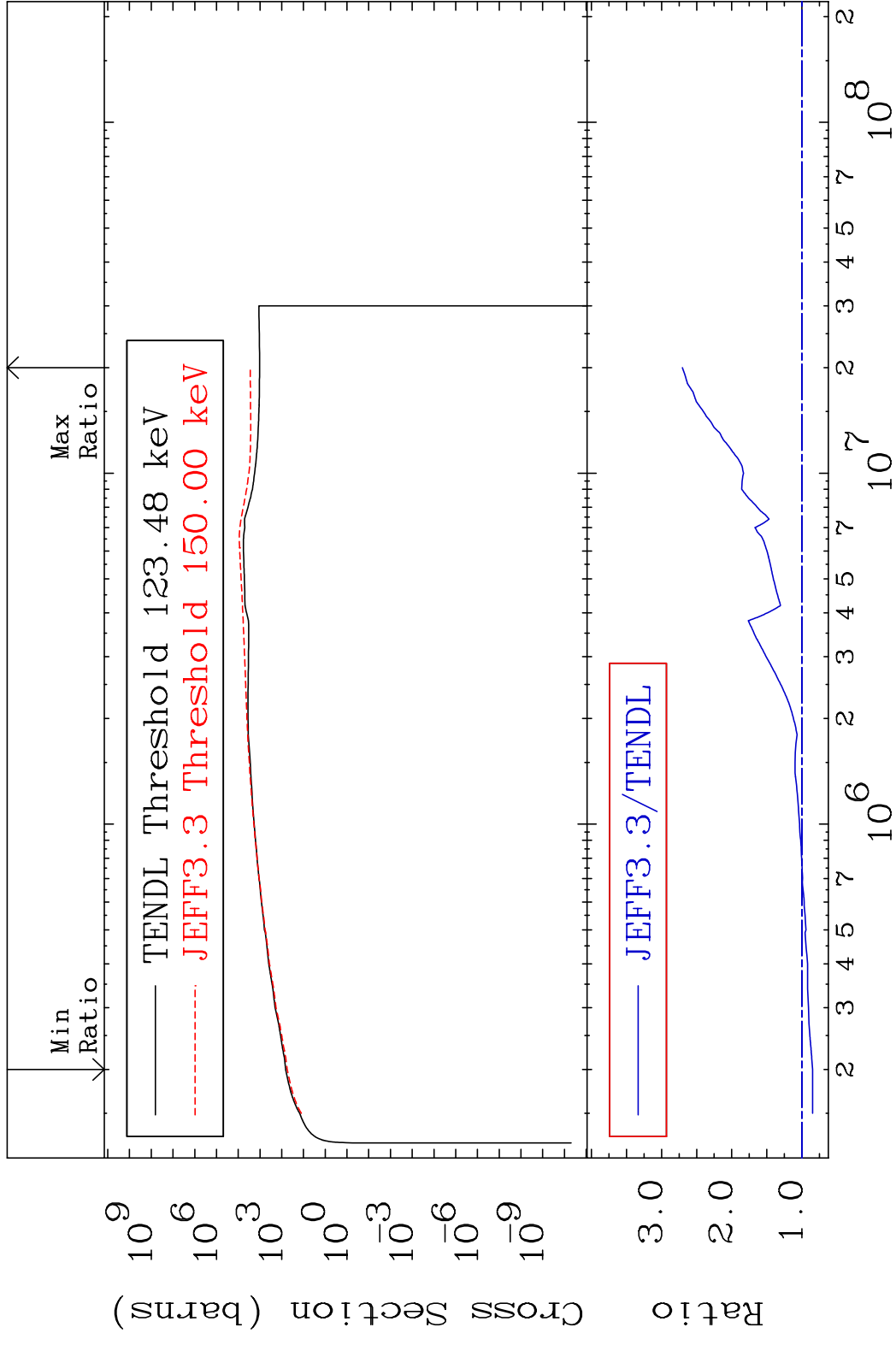
72-Hf-179

Cross Section -12.26 To 4.025 %

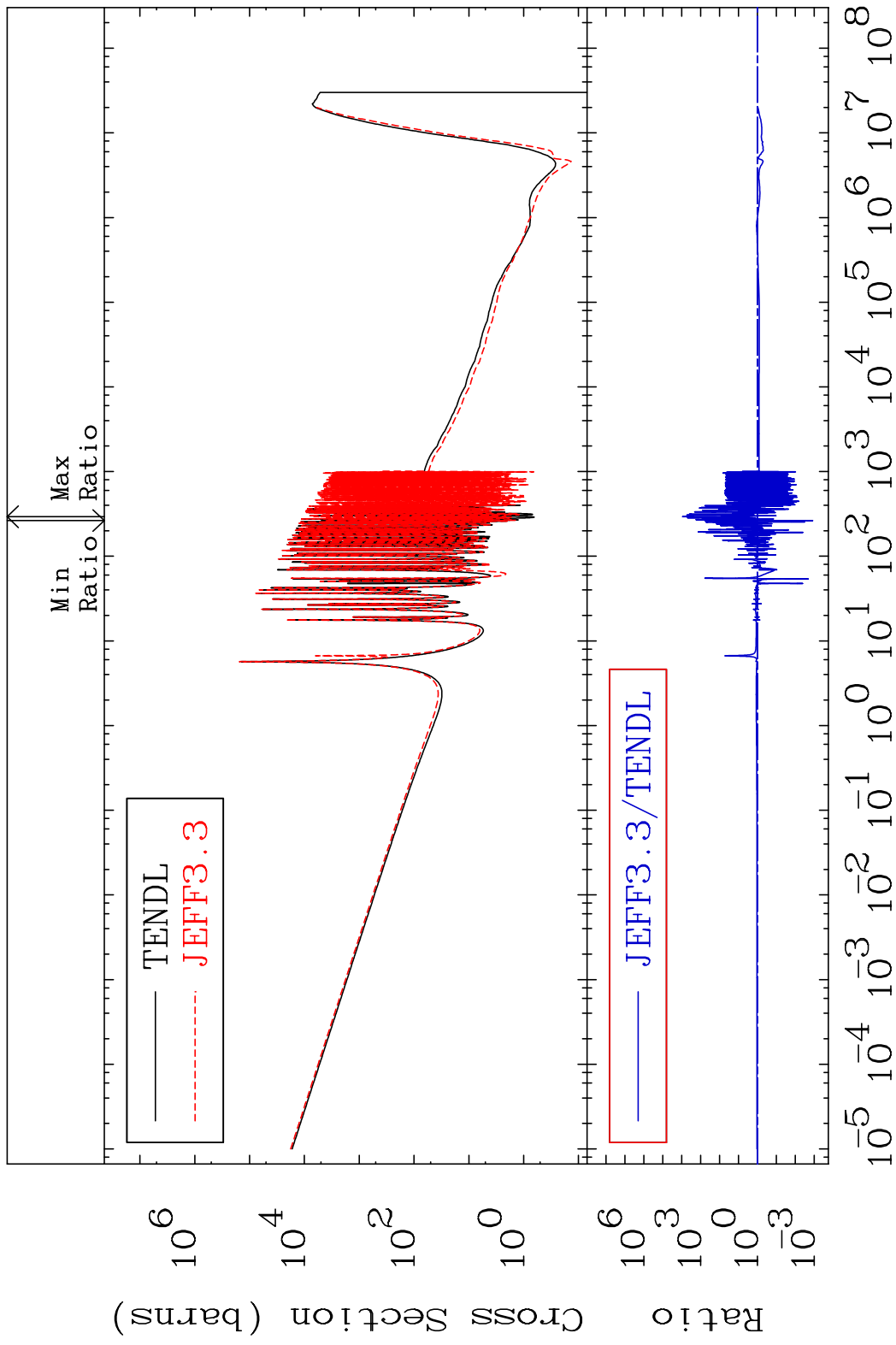




MAT 7240 Dpa inelastic (mt51-91) 72-Hf-179  
 Cross Section -15.22 To 170.4 %

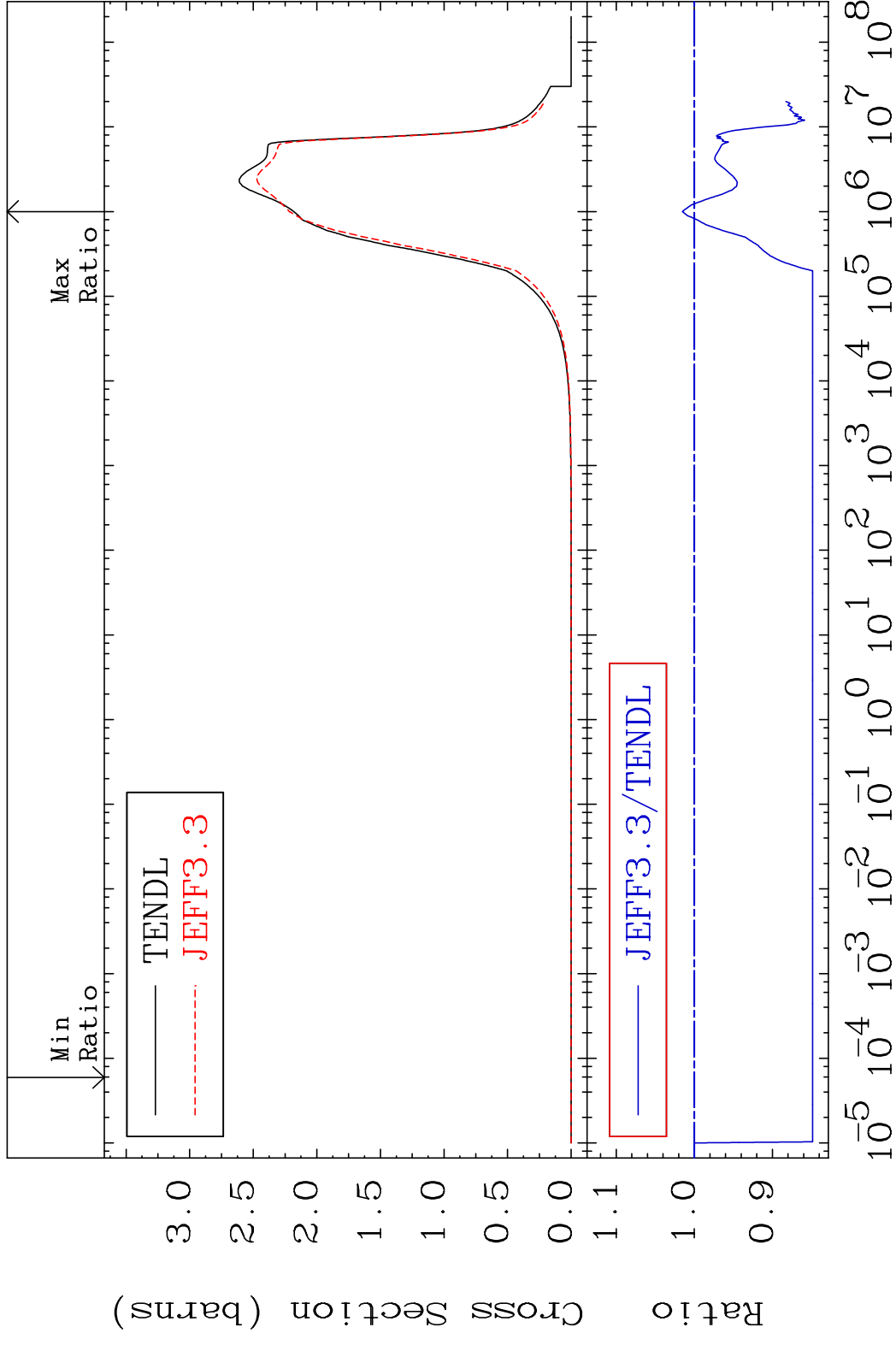


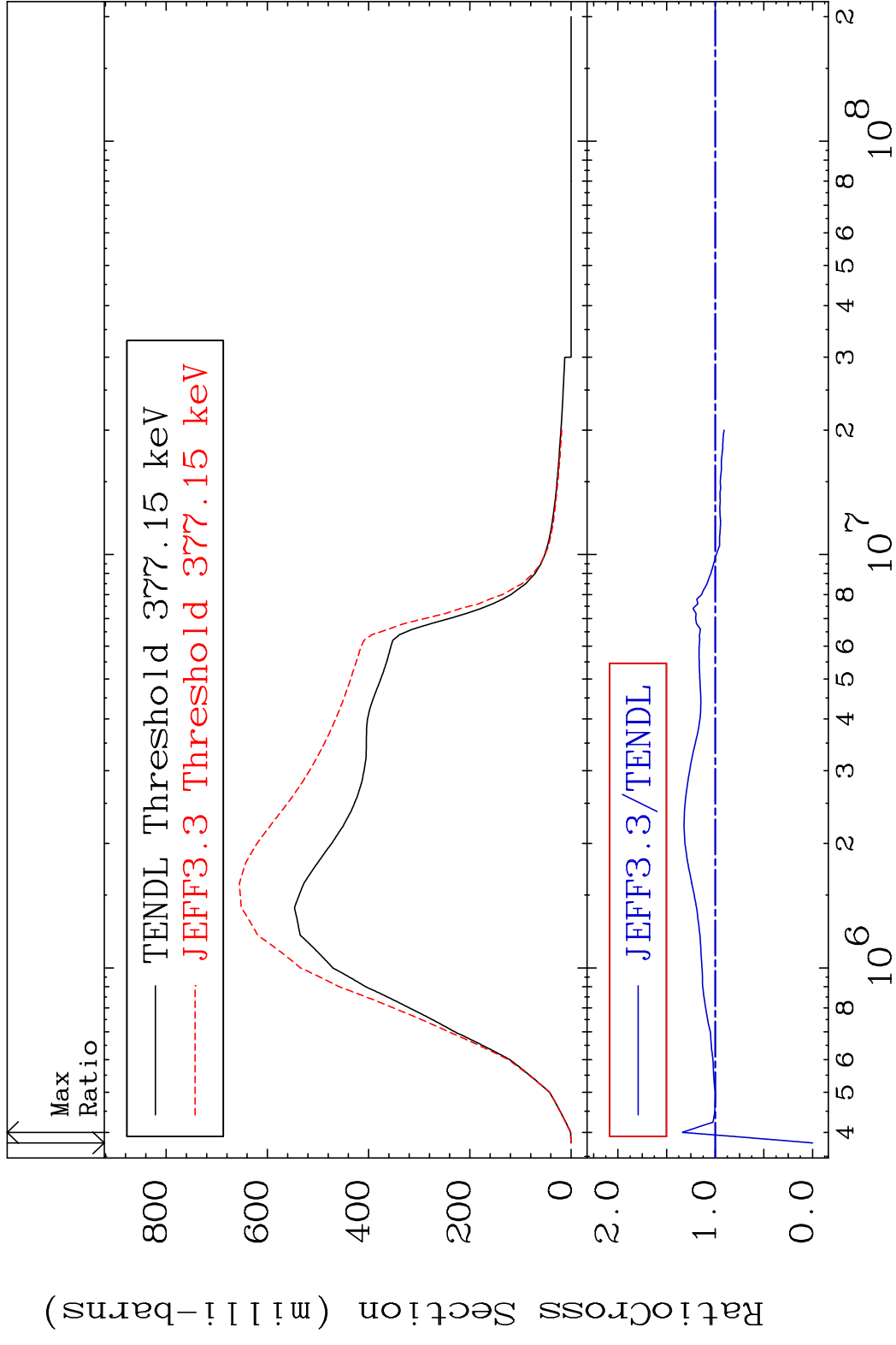
MAT 7240 Dpa disappearance (mt102 -120) 72-Hf-179  
 Cross Section -99.88 To 9999. %



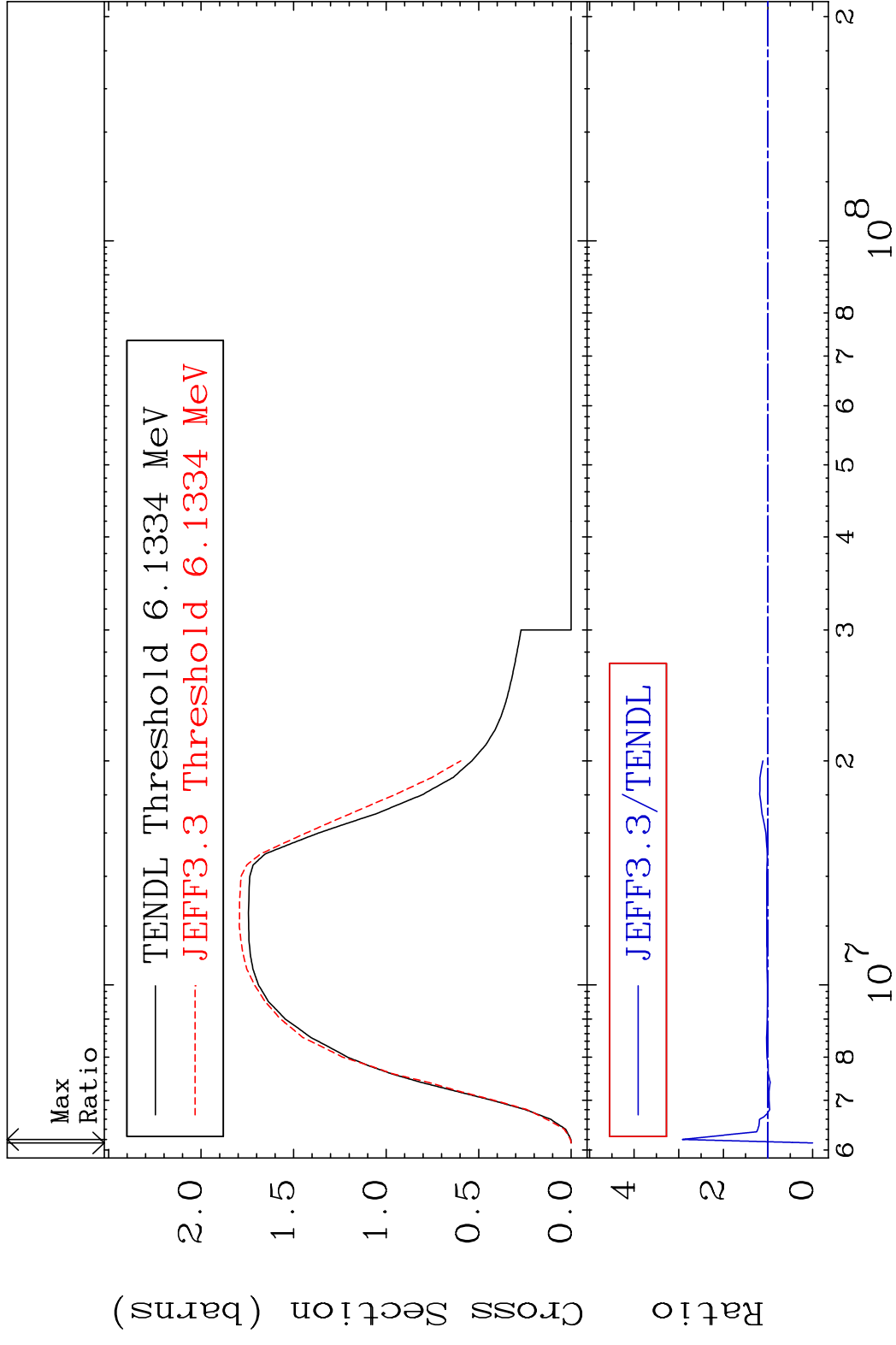
65 Incident Energy (eV) 72-Hf-179

MAT 7240 Inelastic: 72-Hf-179g 72-Hf-179  
 Radionuclide Production Cross Section 1.533 %

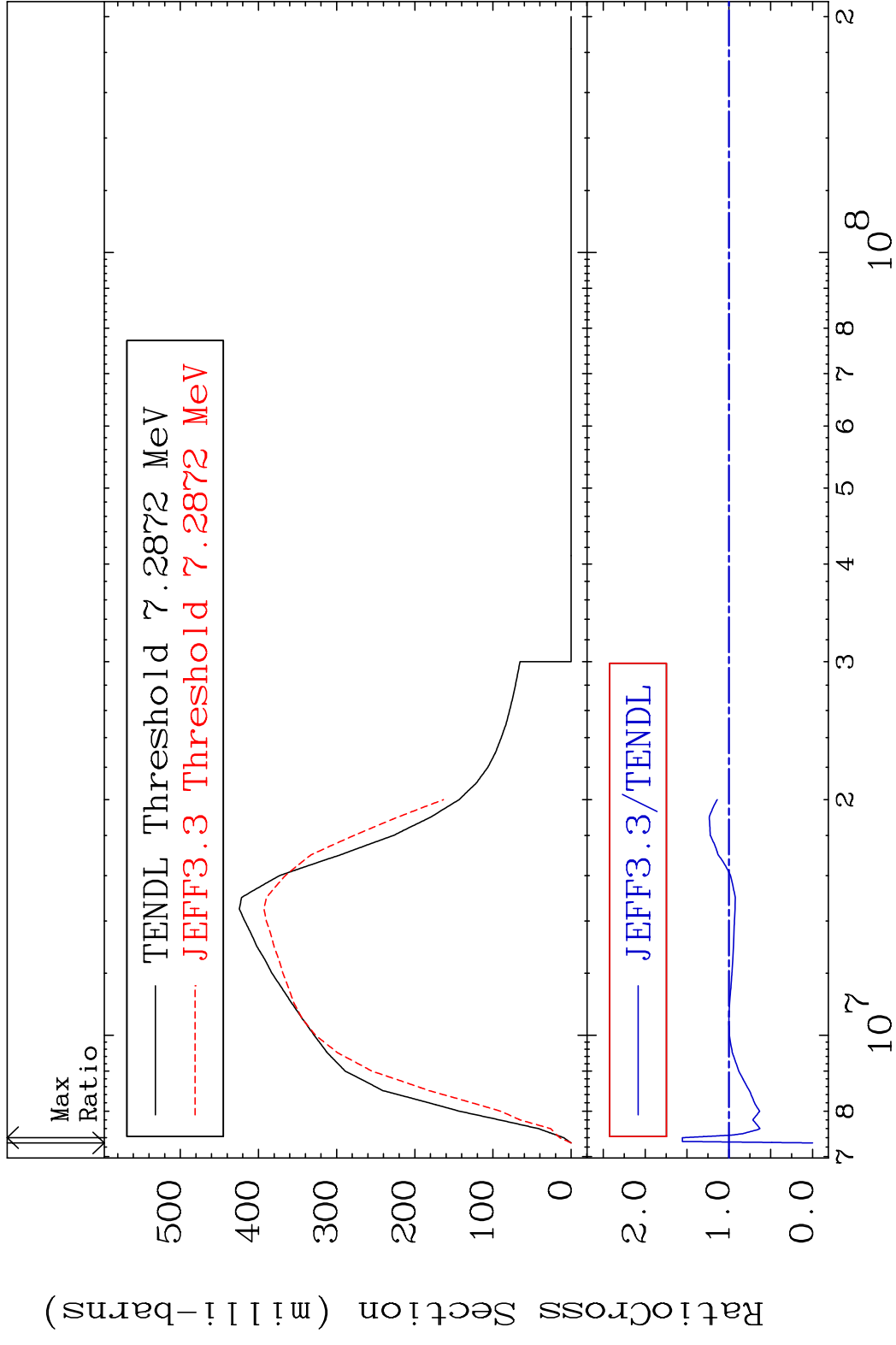




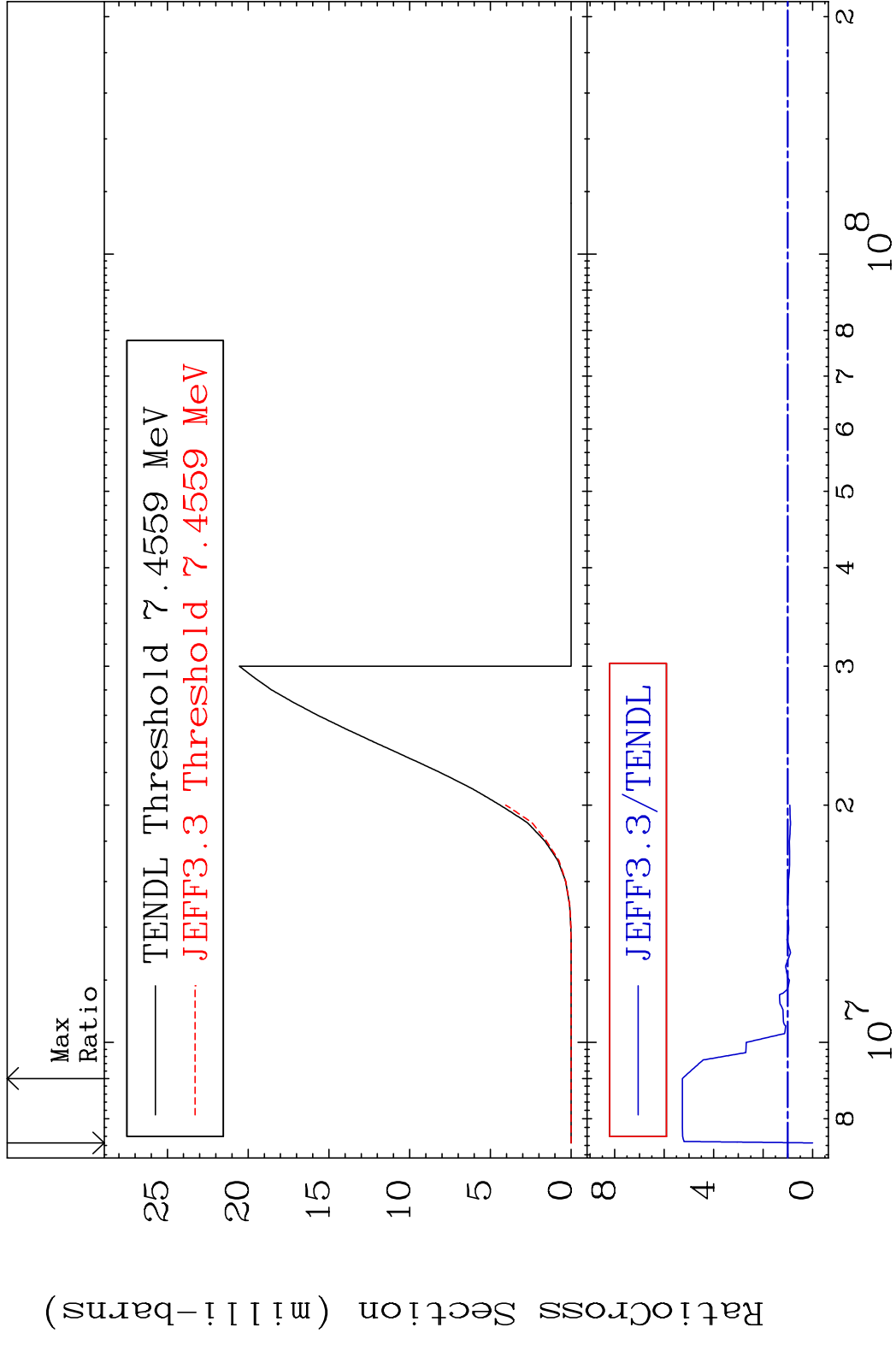
MAT 7240 (n,2n):72-Hf-178g 72-Hf-179  
 Radionuclide Production Cross Section 180.01 dth 191.9 %



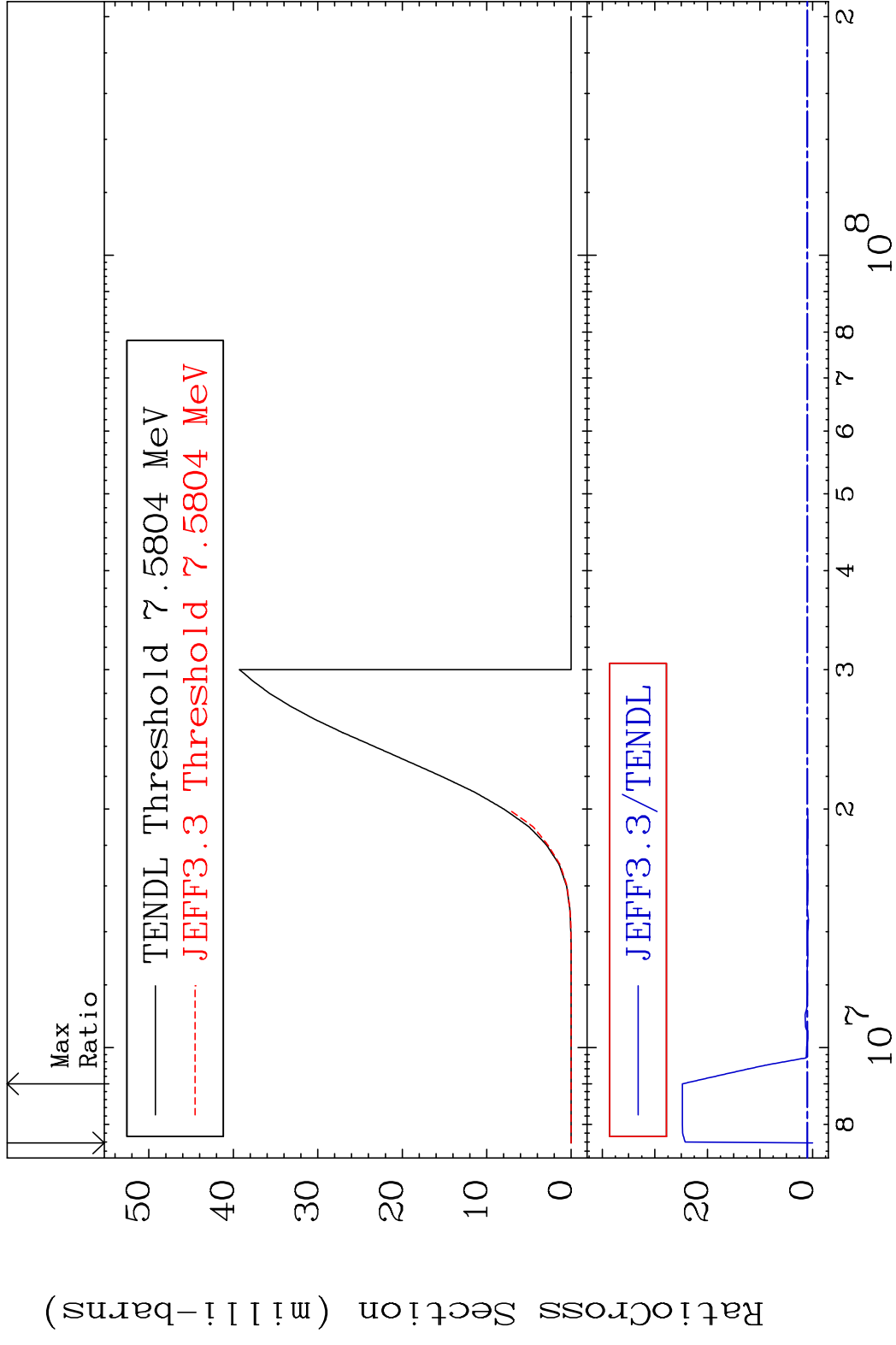
MAT 7240 (n,2n):72-Hf-178m5 72-Hf-179  
 Radionuclide Production Cross Section Ratio 55.58 %



MAT 7240 (n, n') p:71-Lu-178g 72-Hf-179  
 Radionuclide Production Cross Section Ratio 426.4 %

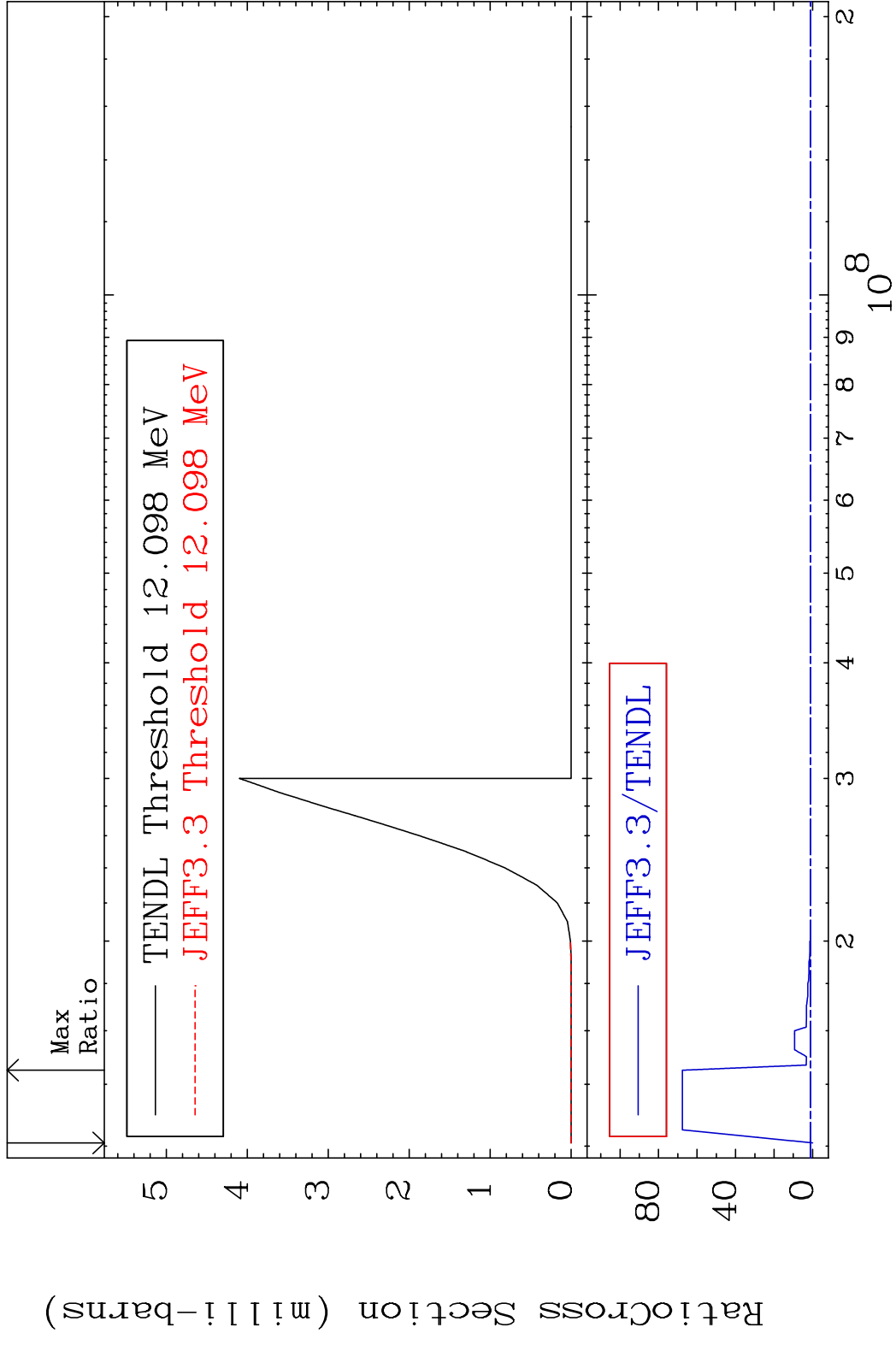


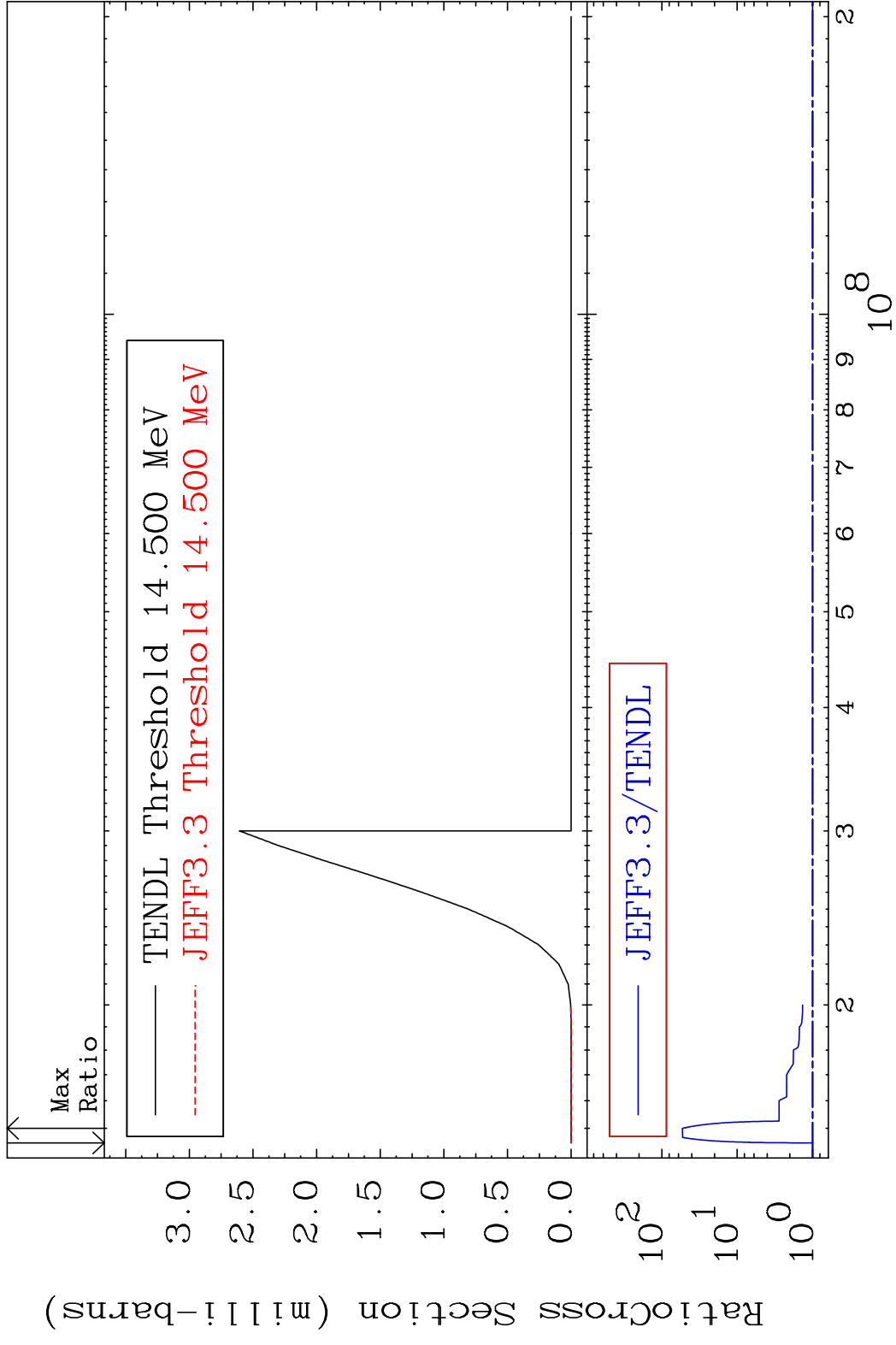
70 Incident Energy (eV) 72-Hf-179



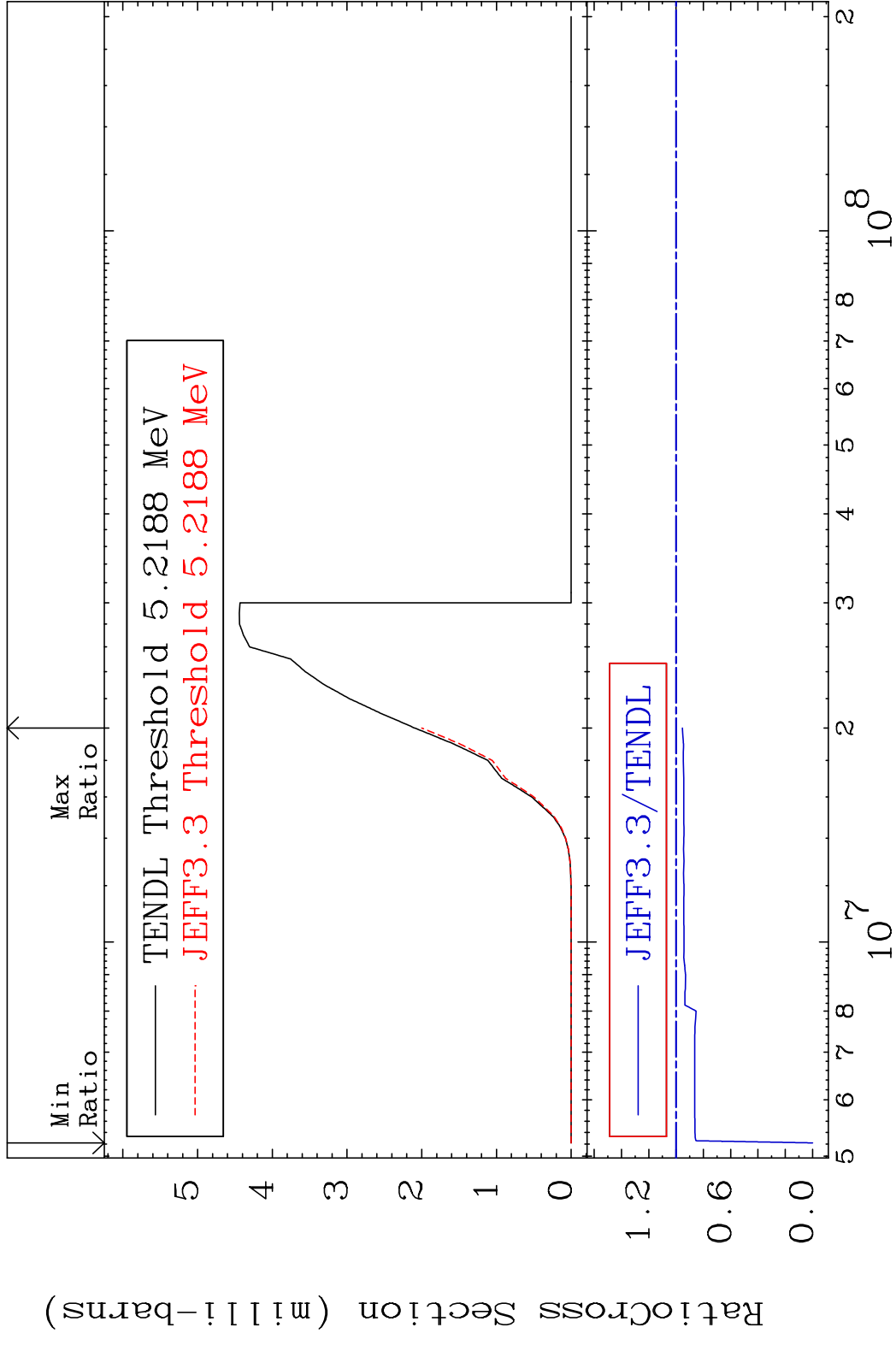


MAT 7240 (n, n') t:71-Lu-176g 72-Hf-179  
 Radionuclide Production Cross Section Ratio 6663. %





MAT 7240 (n, d):71-Lu-178g 72-Hf-179  
 Radionuclide Production Cross Section Ratio



MAT 7240 (n, d): 71-Lu-178m3 72-Hf-179  
 Radionuclide Production Cross Section 180.01 dth 16.59 %

