

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](mailto:redcullen1@comcast.net)  
Web: [redcullen1.net/HOMEPAGE.NEW](http://redcullen1.net/HOMEPAGE.NEW)

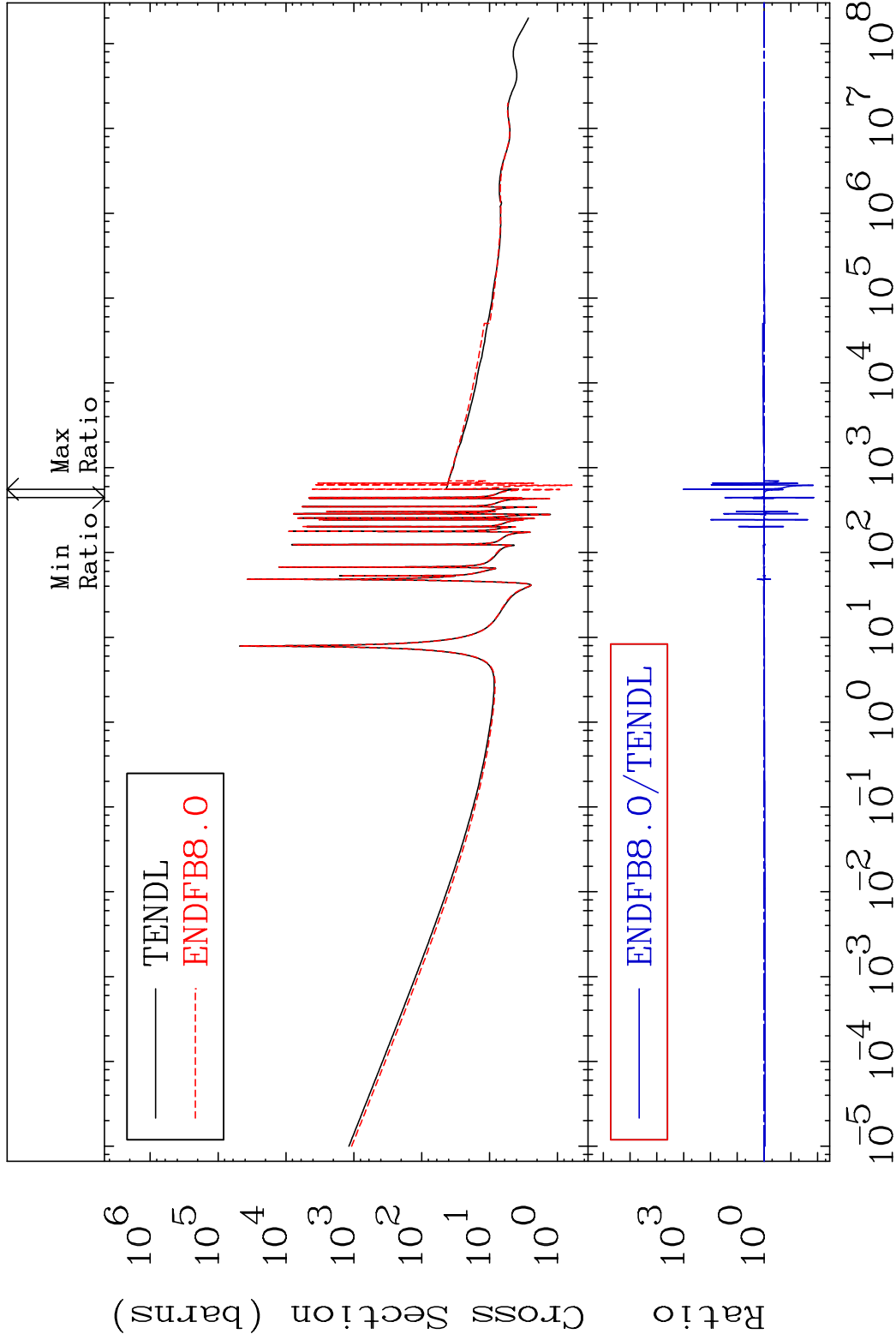
Press Mouse Button to Start

MAT 7231

Total

72-Hf-176

Cross Section -98.62 To 9999. %



1

Incident Energy (eV)

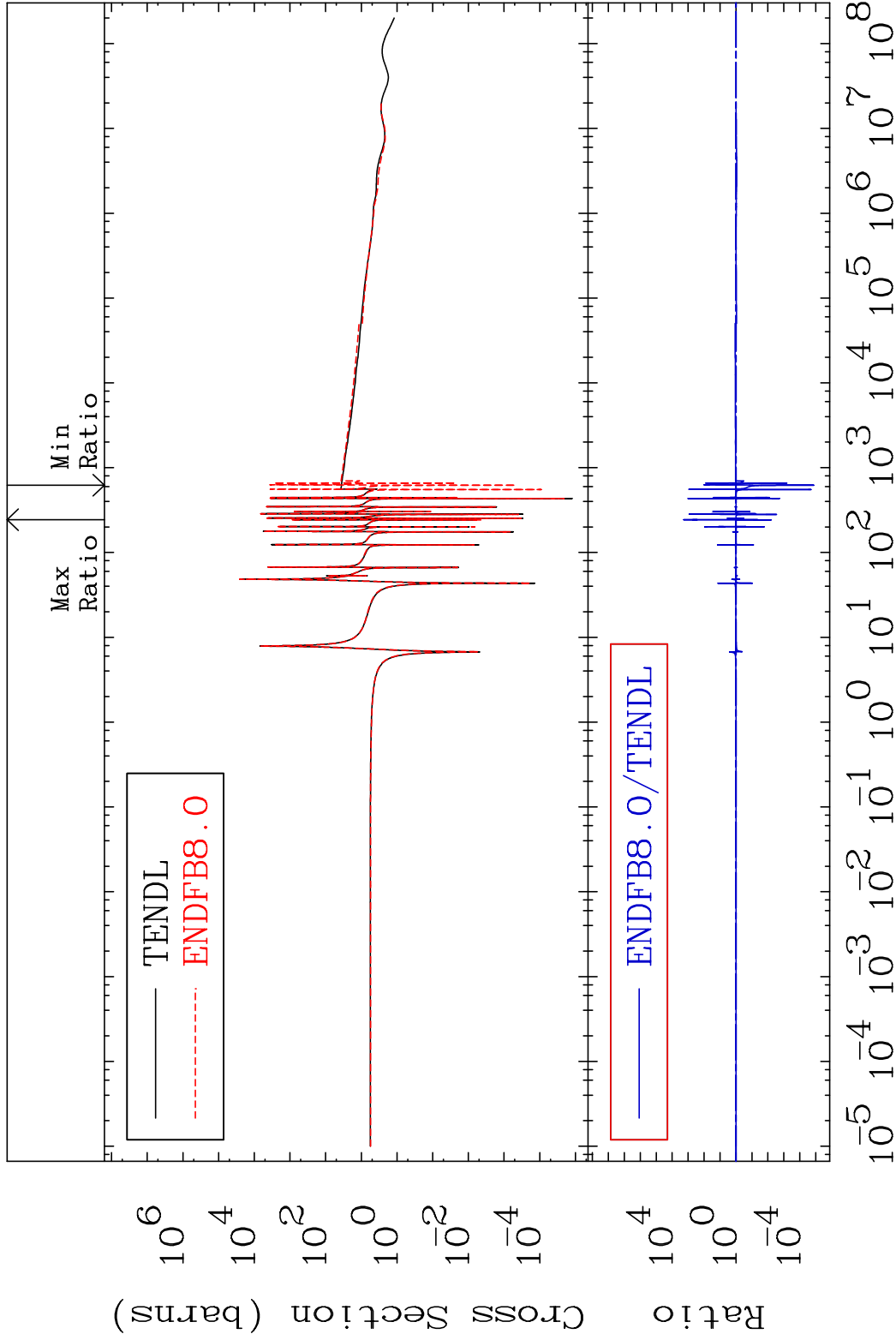
72-Hf-176

MAT 7231

Elastic

72-Hf-176

Cross Section -100.0 To 9999. %

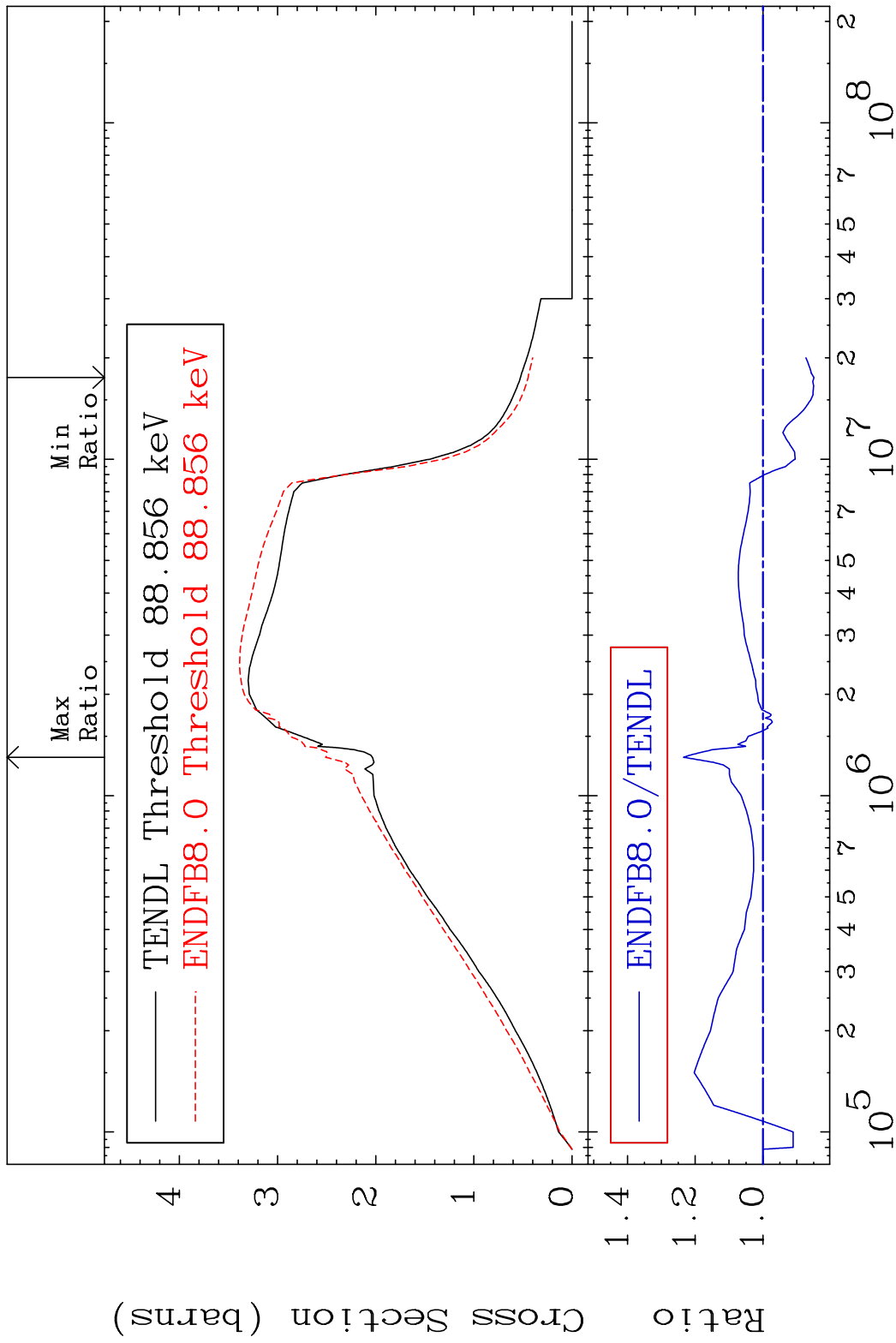


MAT 7231

Inelastic

72-Hf-176

Cross Section -15.07 To 23.48 %

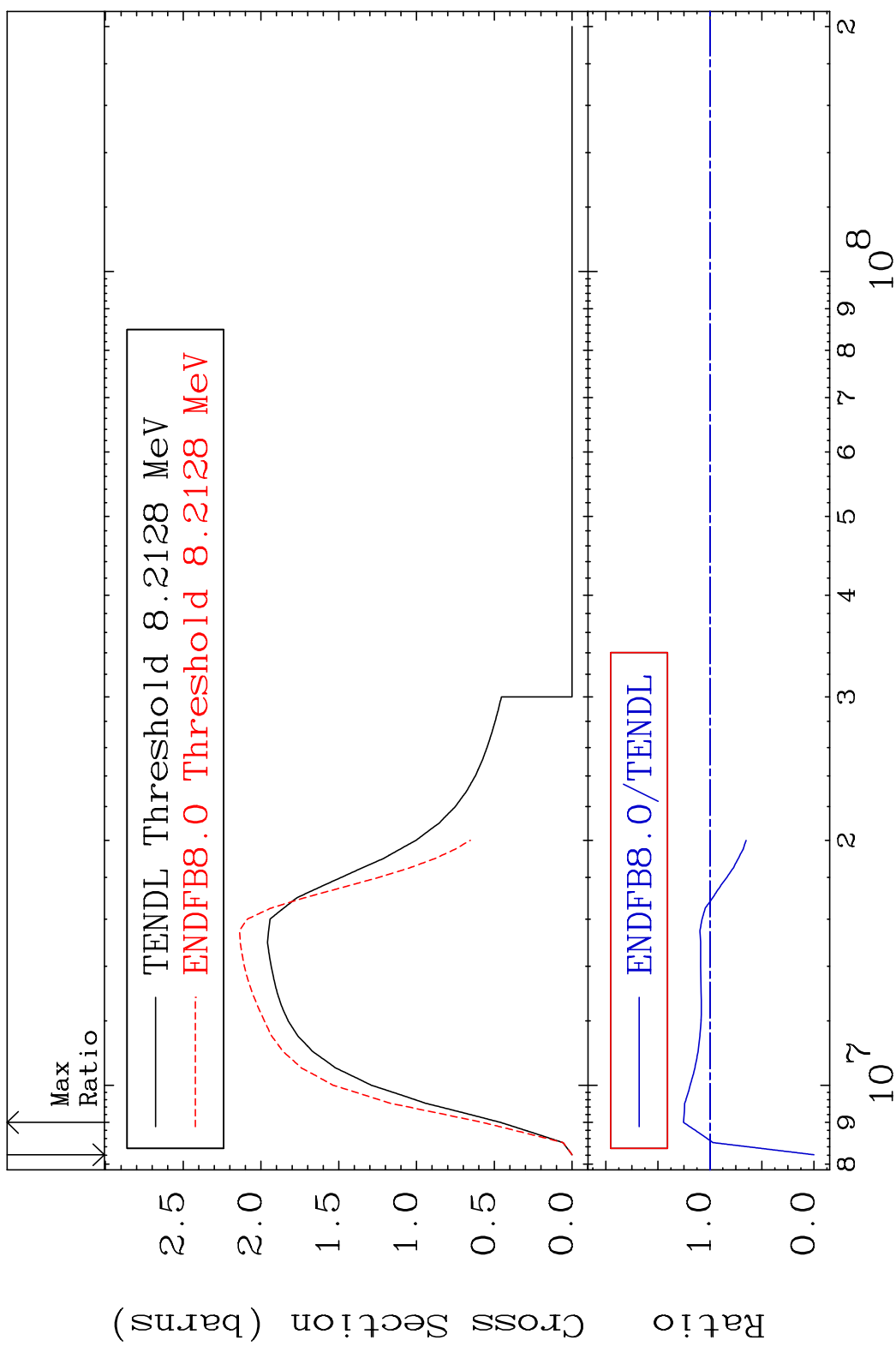


3

Incident Energy (eV)

72-Hf-176

MAT 7231 (n,2n) 72-Hf-176  
 Cross Section -100.0 To 25.43 %



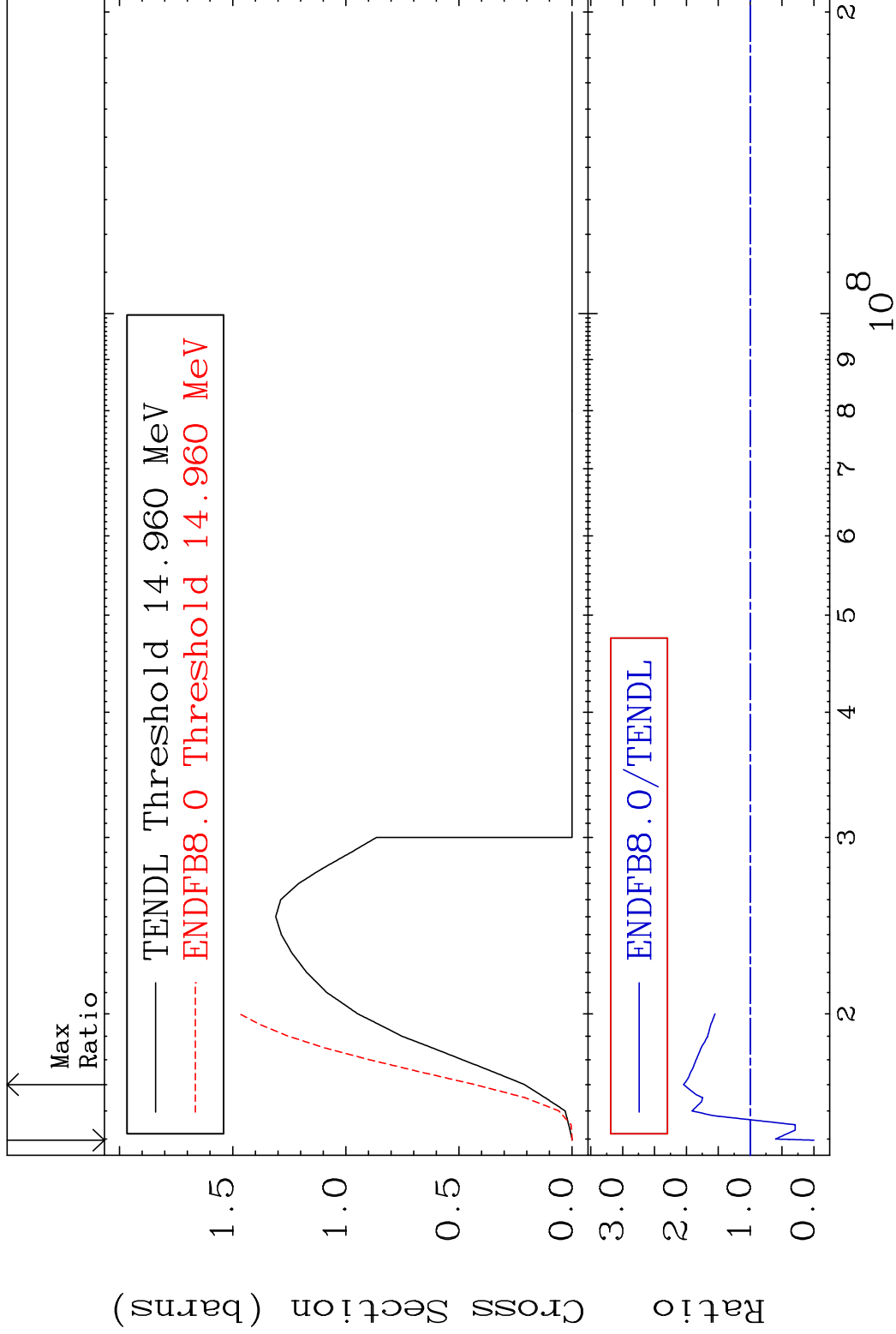
4 Incident Energy (eV) 72-Hf-176

MAT 7231

(n,3n)

72-Hf-176

Cross Section -100.0 To 104.6 %



5

Incident Energy (eV)

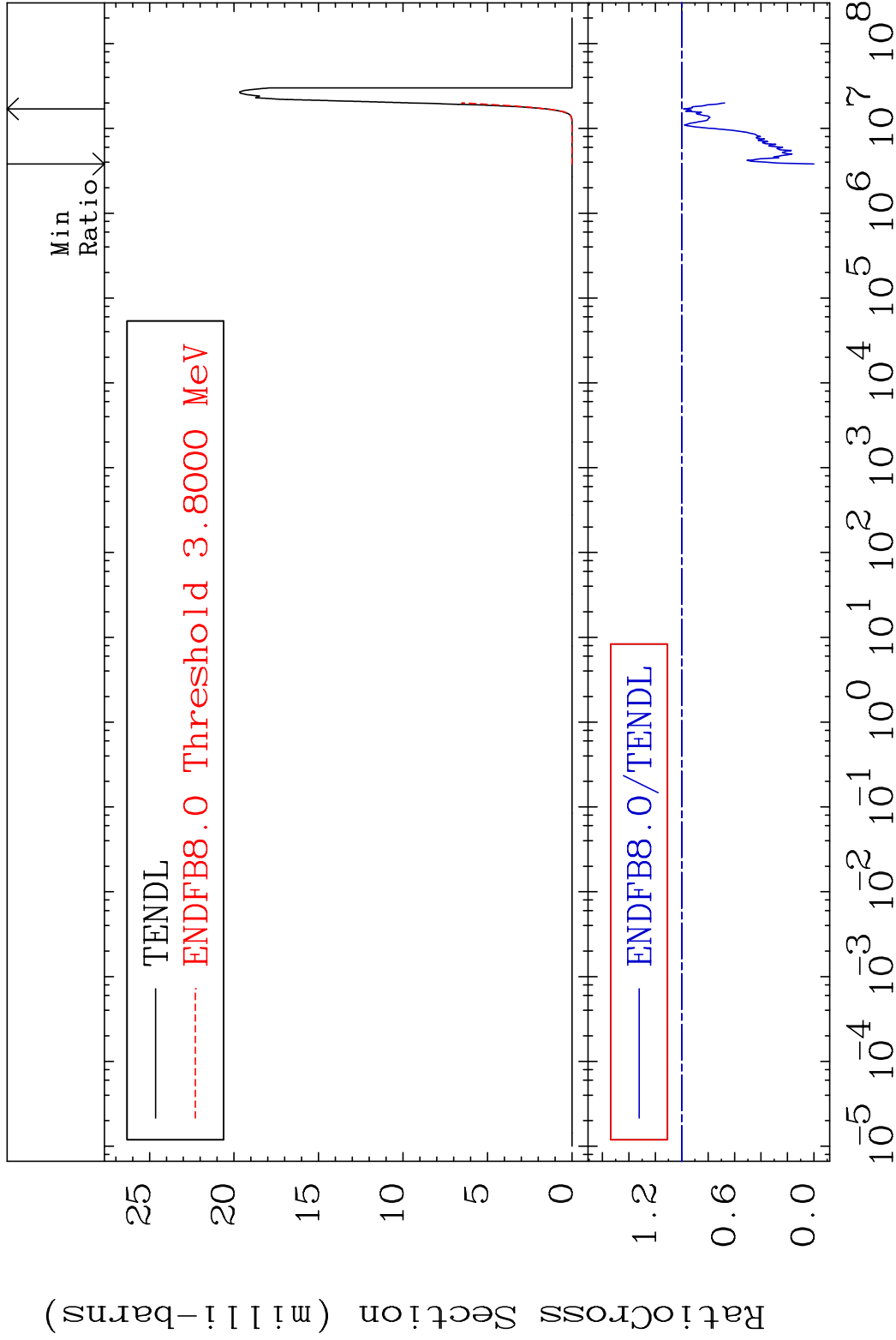
72-Hf-176

MAT 7231

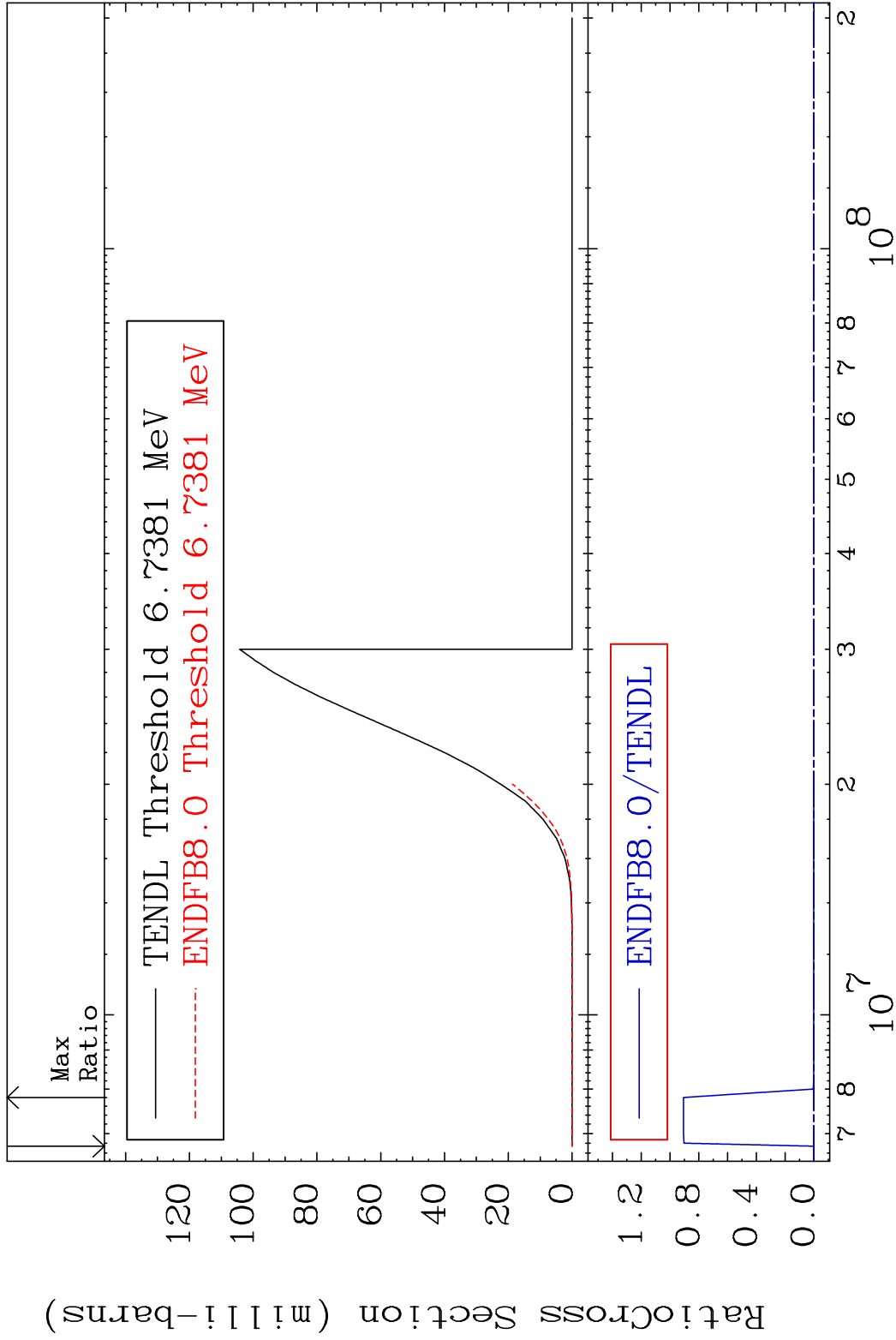
(n, n')  $\alpha$

72-Hf-176

Cross Section -100.0 To -1.303%



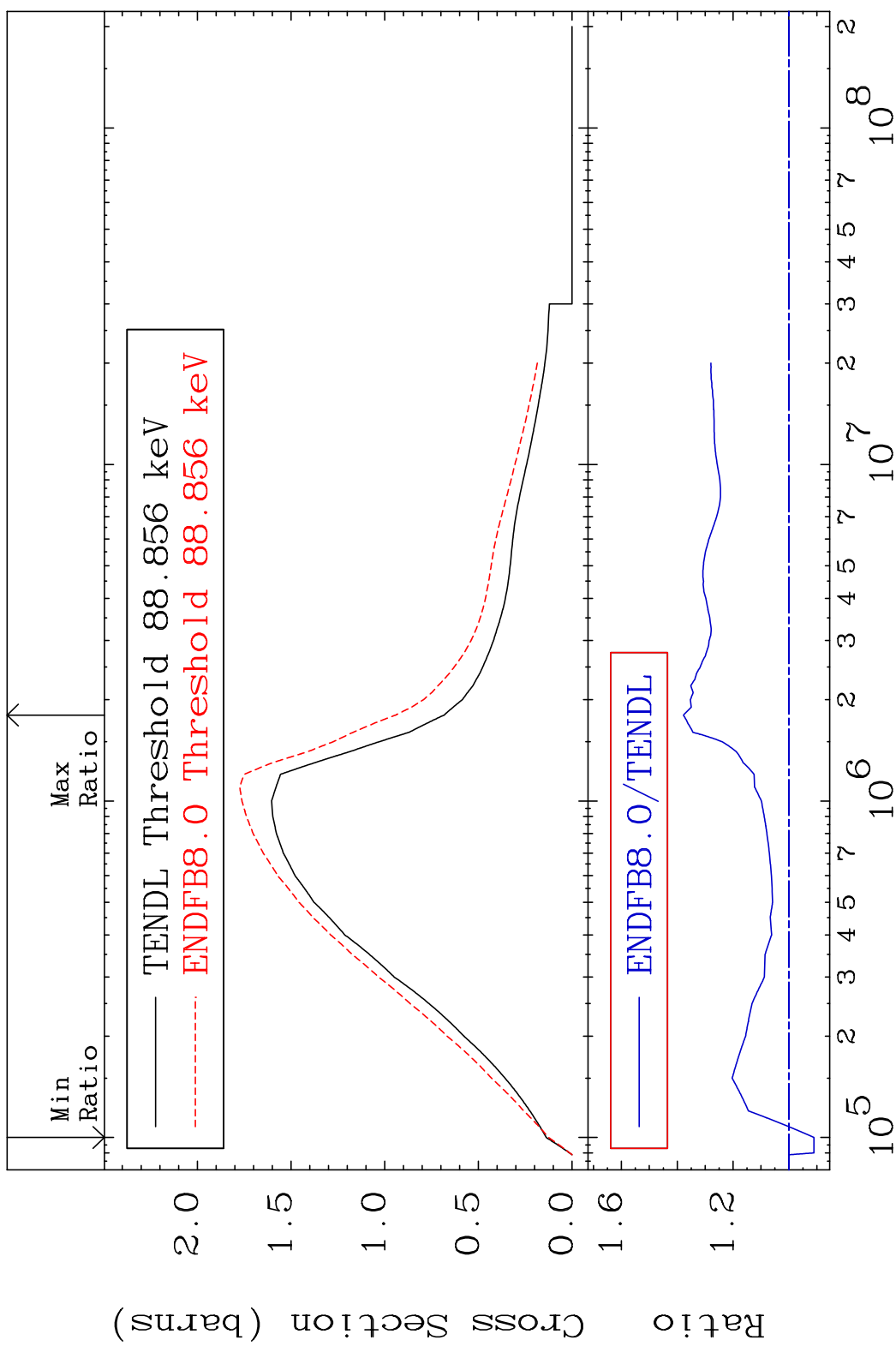
MAT 7231 (n, n') p 72-Hf-176  
 Cross Section -100.0 To 9999. %



7 72-Hf-176

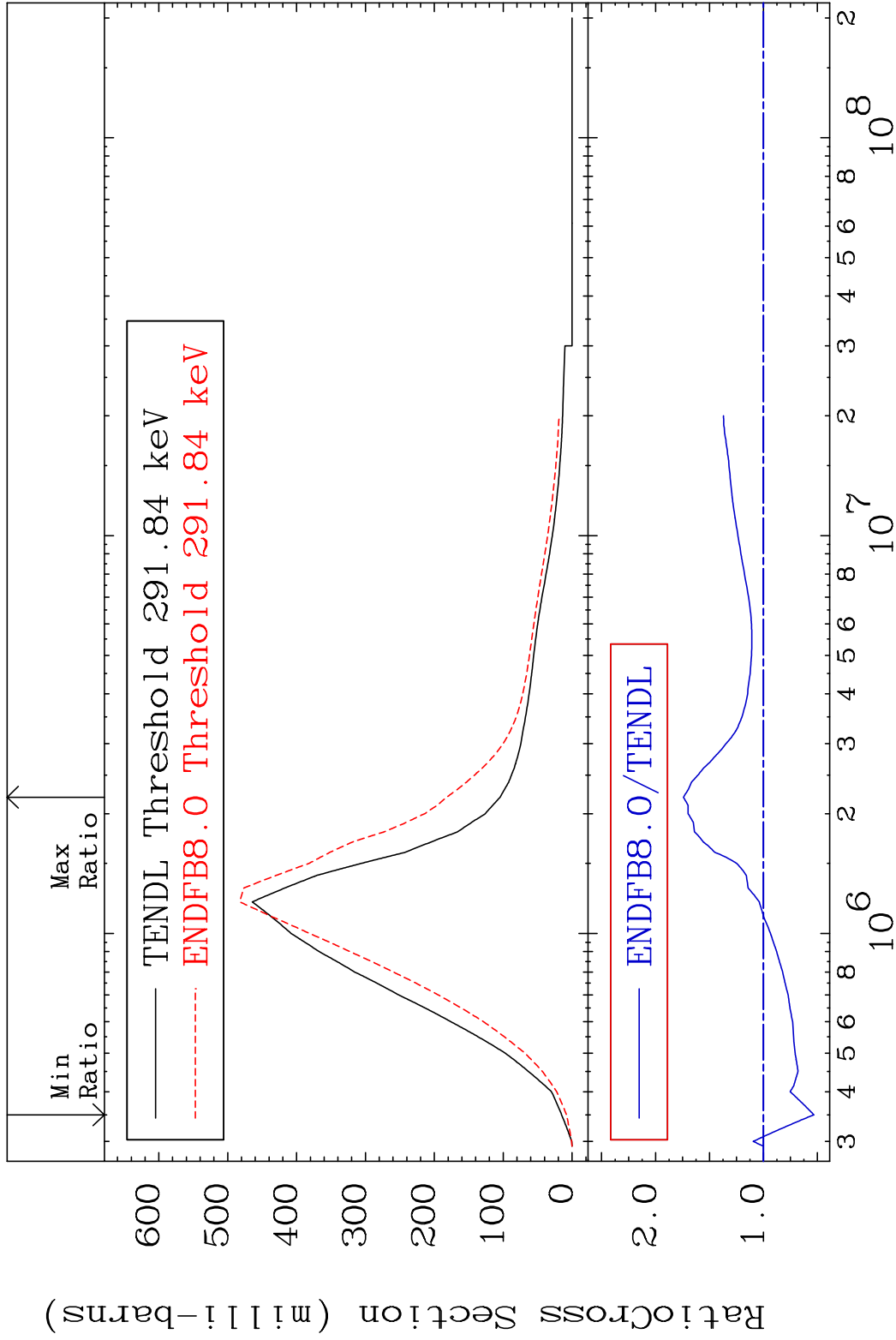


MAT 7231 MT= 51 (n, n') Level 72-Hf-176  
 Cross Section -8.949 To 37.77 %

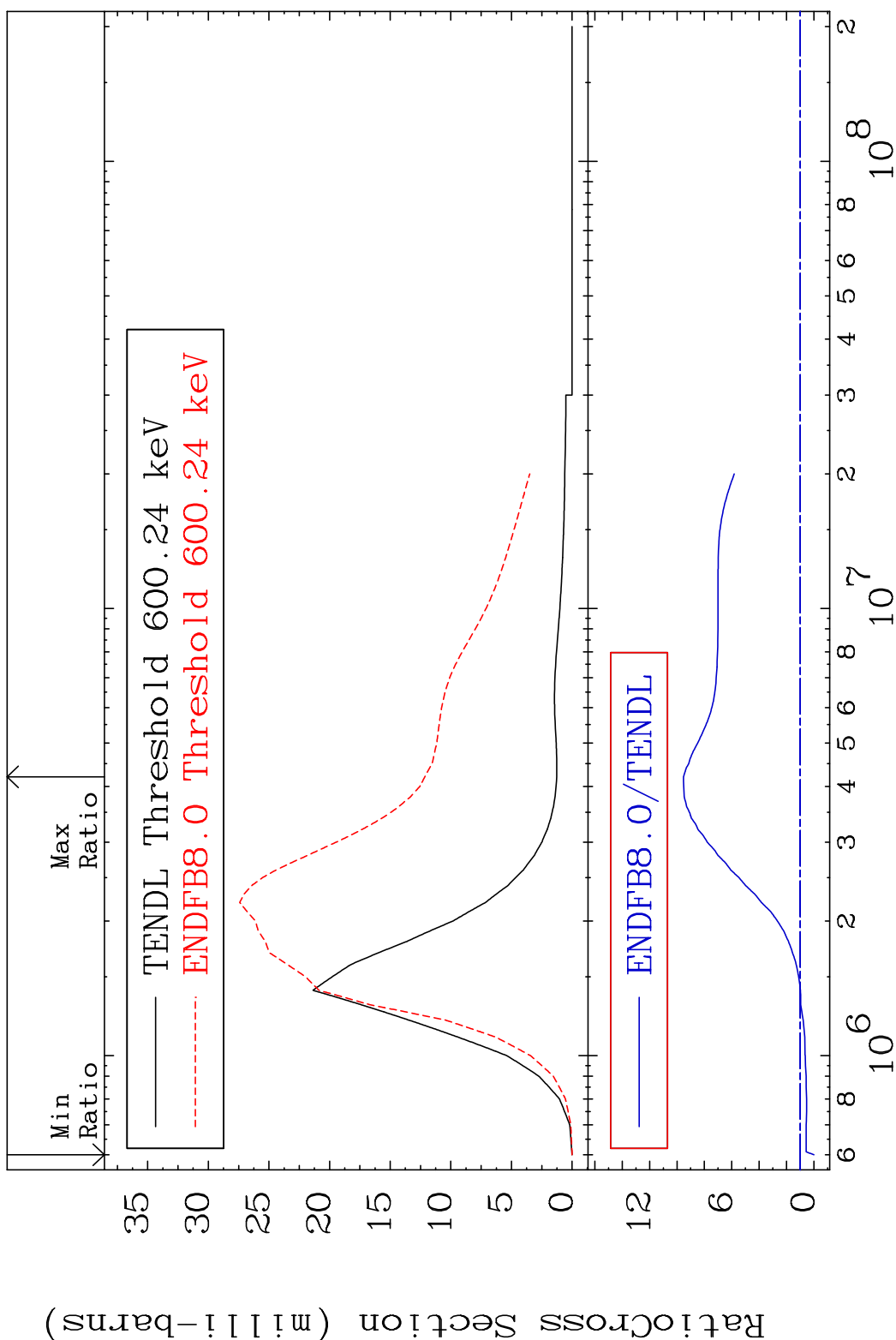


8 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 52 (n, n') Level 72-Hf-176  
 Cross Section -46.70 To 74.14 %

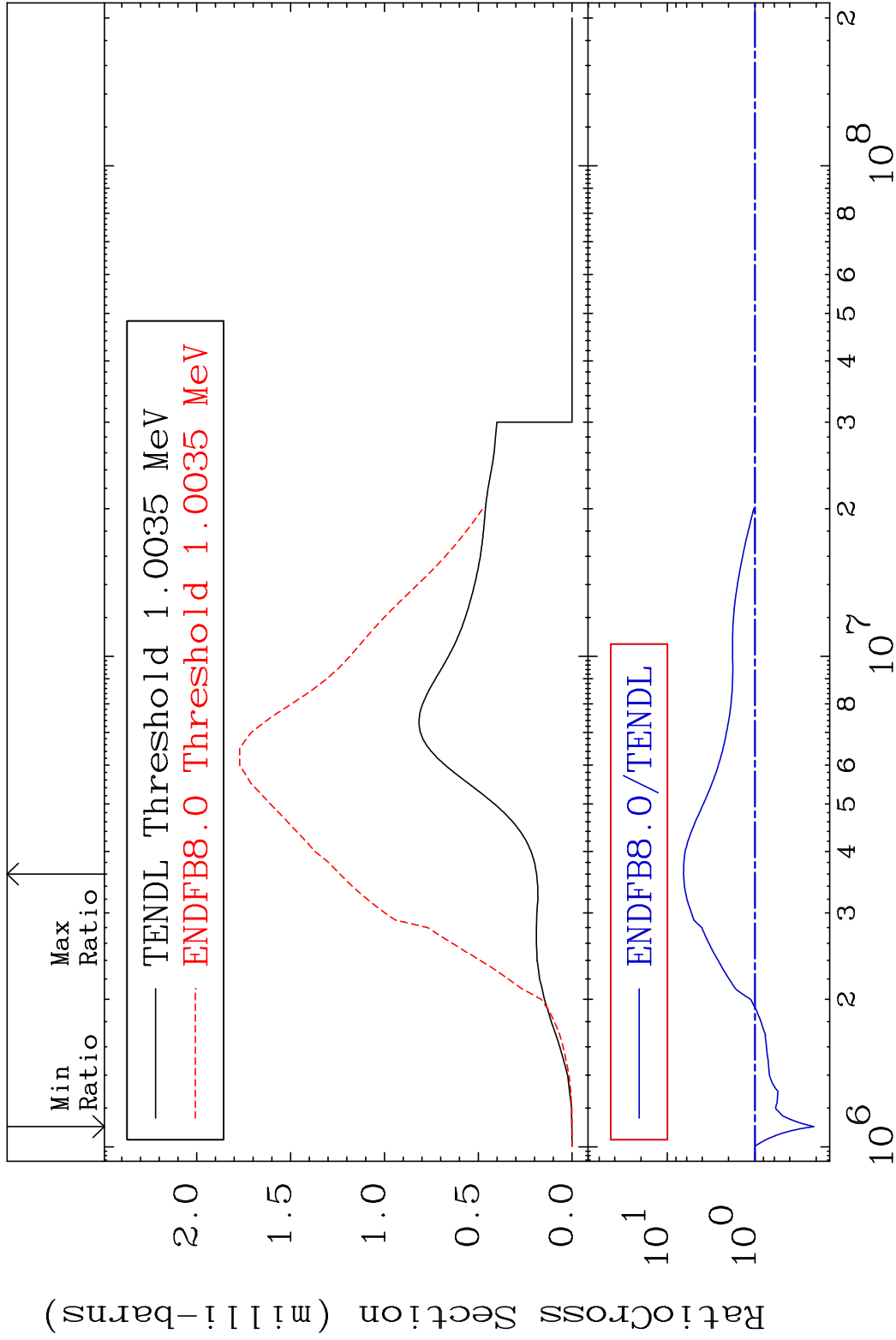


MAT 7231 MT= 53 (n, n') Level 72-Hf-176  
 Cross Section -100.0 To 852.7 %



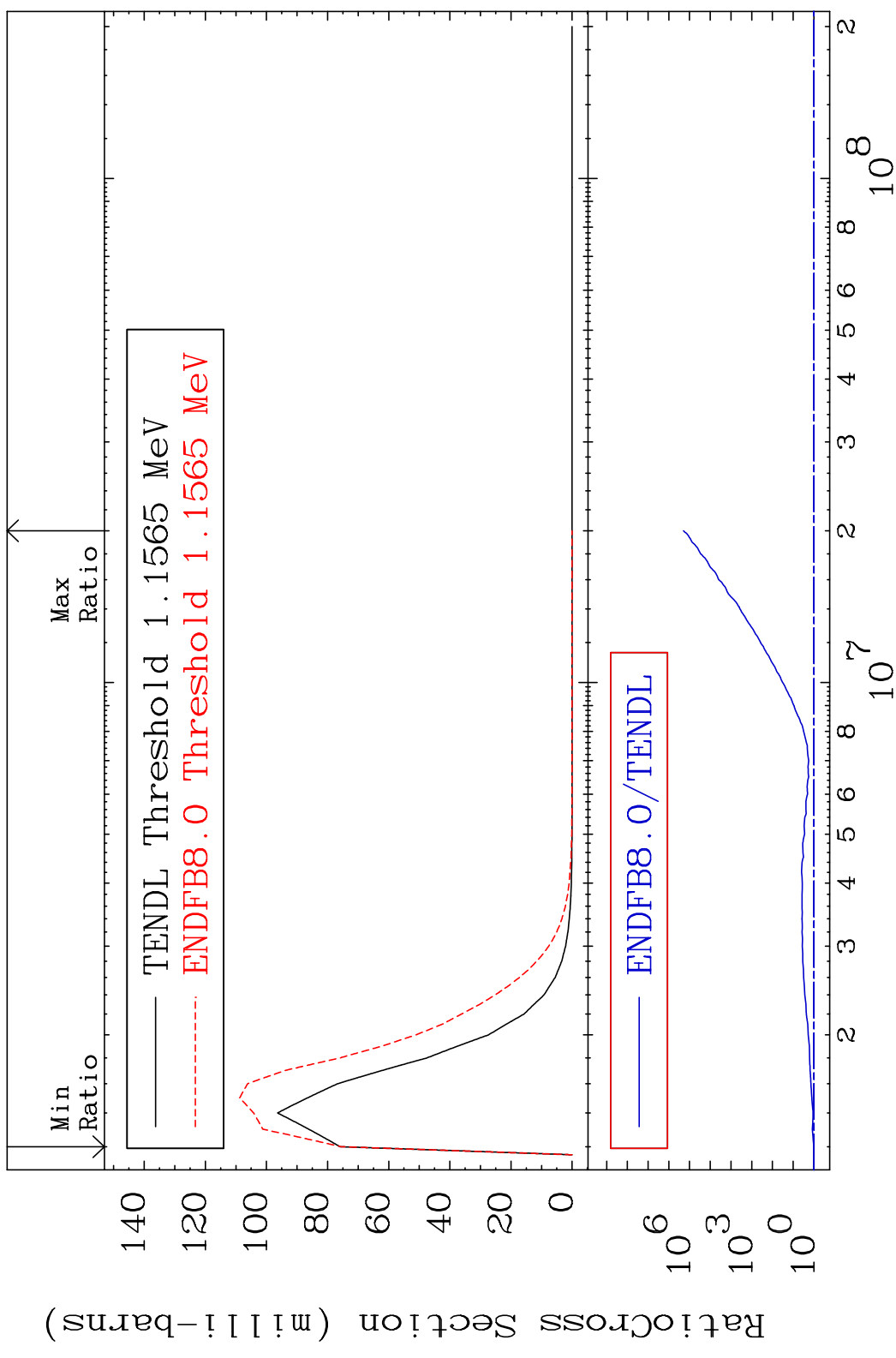
10 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 54 (n, n') Level 72-Hf-176  
 Cross Section -78.76 To 554.9 %



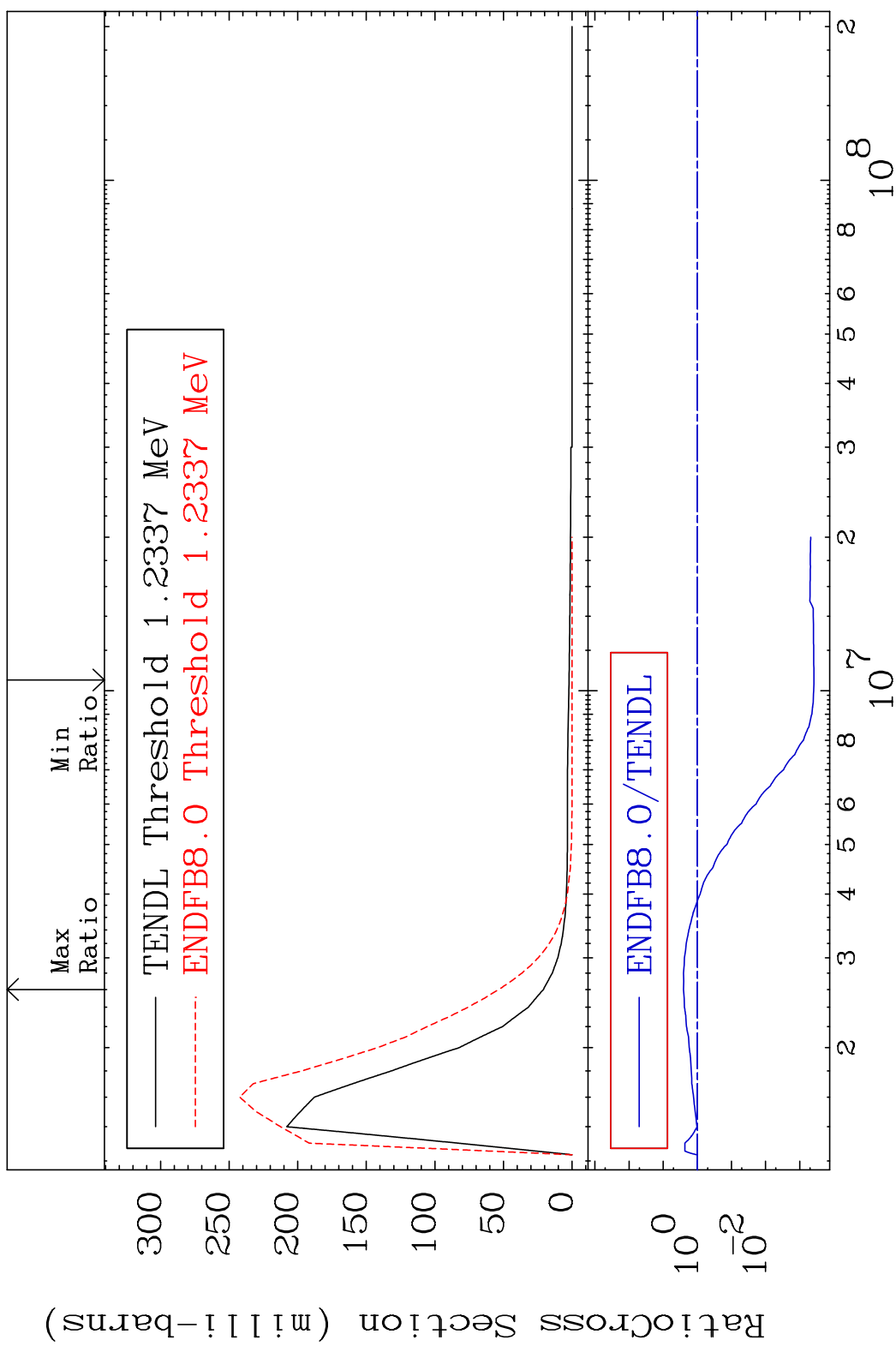
11 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 55 (n, n') Level 72-Hf-176  
 Cross Section -0.538 To 9999. %



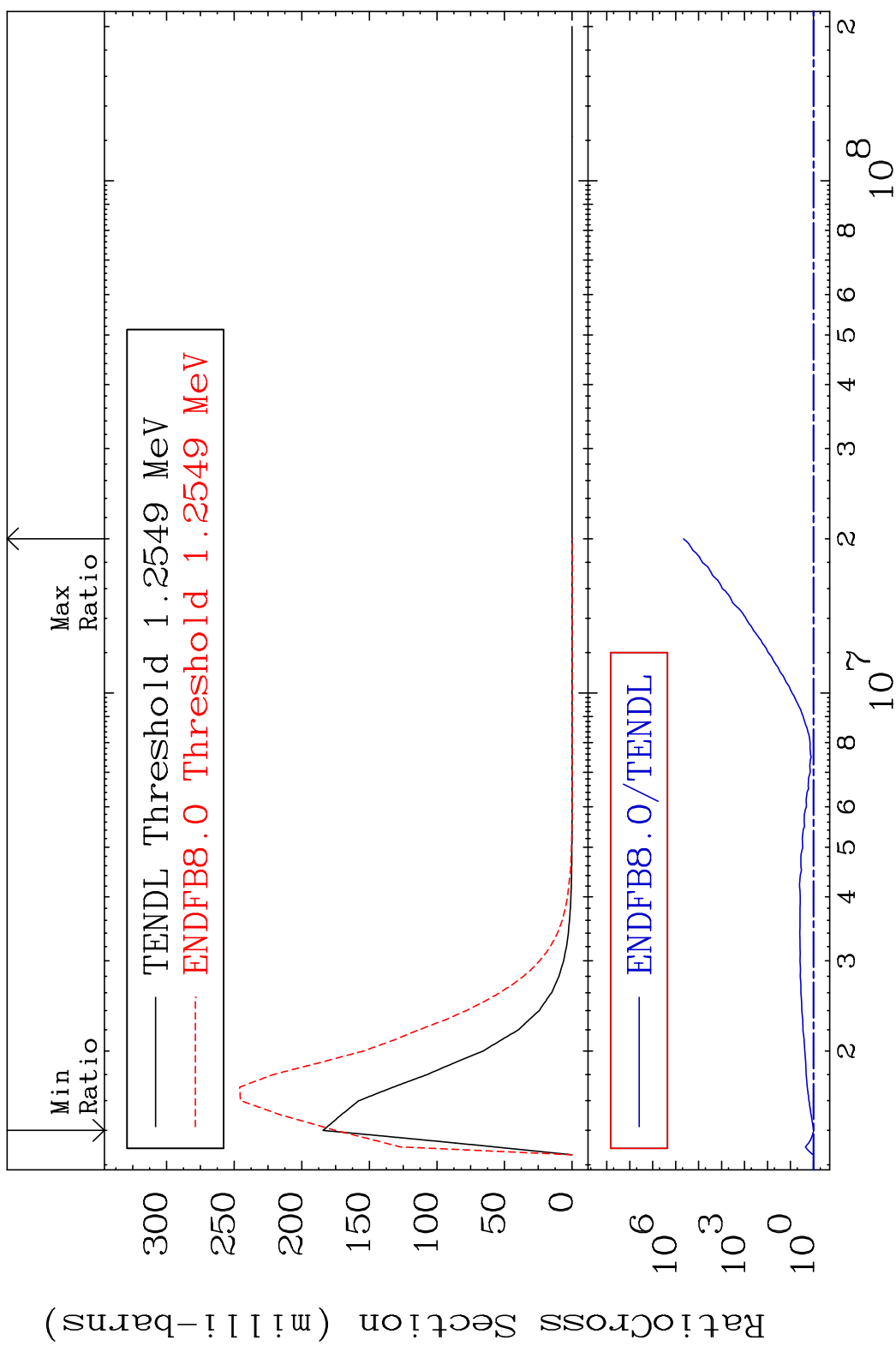
12 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 56 (n, n') Level 72-Hf-176  
 Cross Section -99.96 To 154.9 %



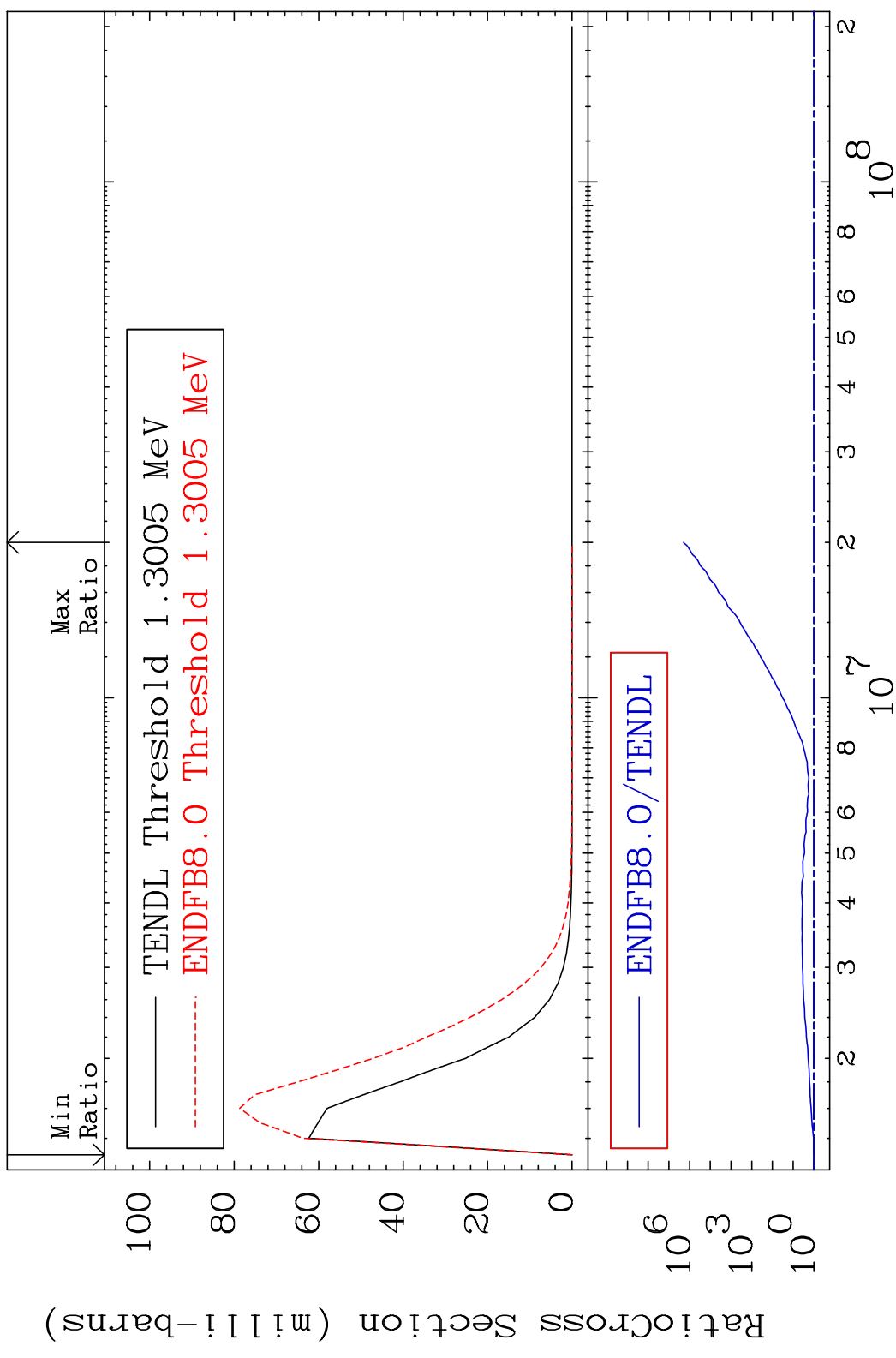
13 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 57 (n, n') Level 72-Hf-176  
 Cross Section -4.876 To 9999. %



14 Incident Energy (eV) 72-Hf-176

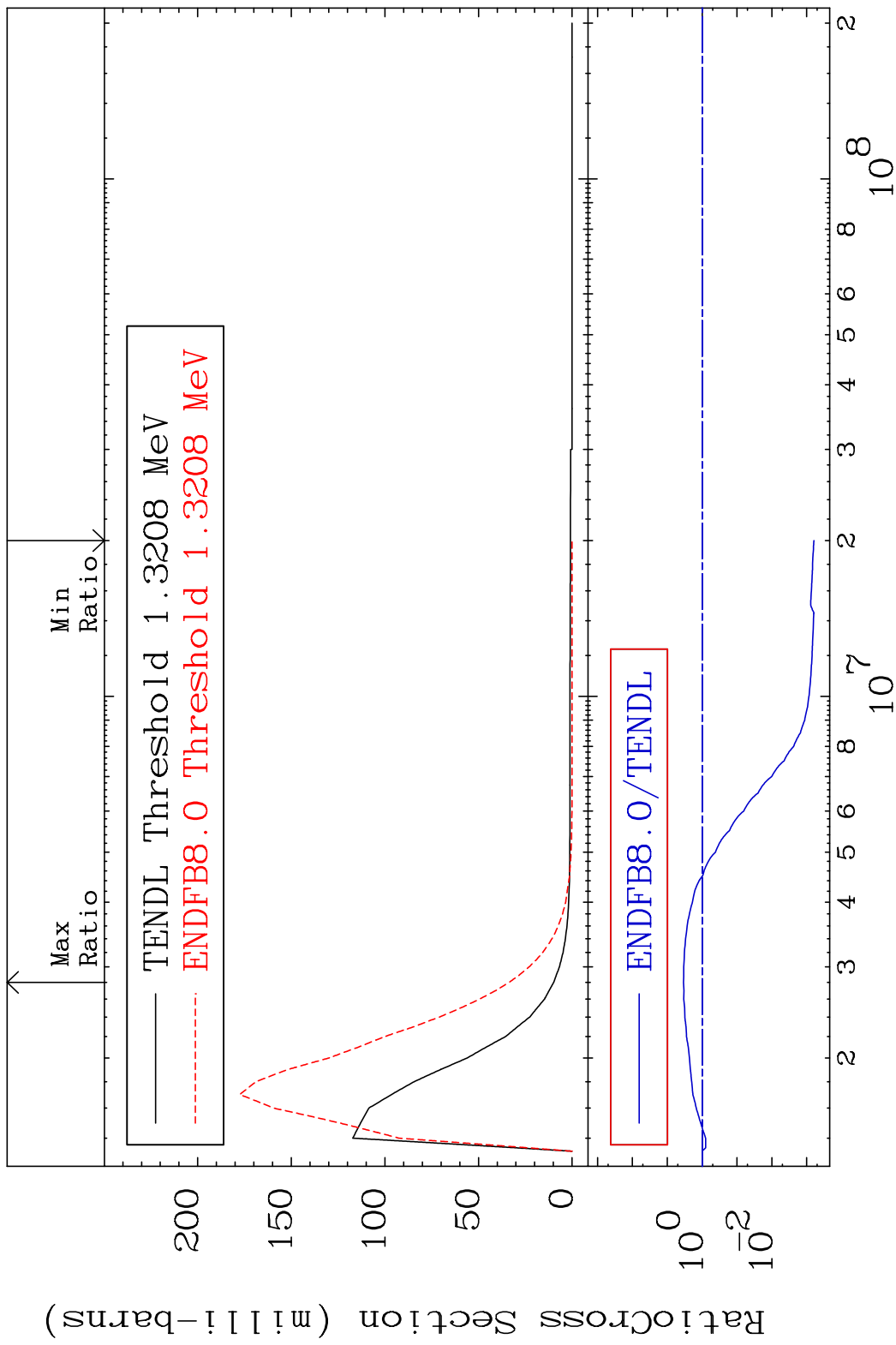
MAT 7231 MT= 58 (n, n') Level 72-Hf-176  
 Cross Section 0.000 To 9999. %



15 Incident Energy (eV) 72-Hf-176

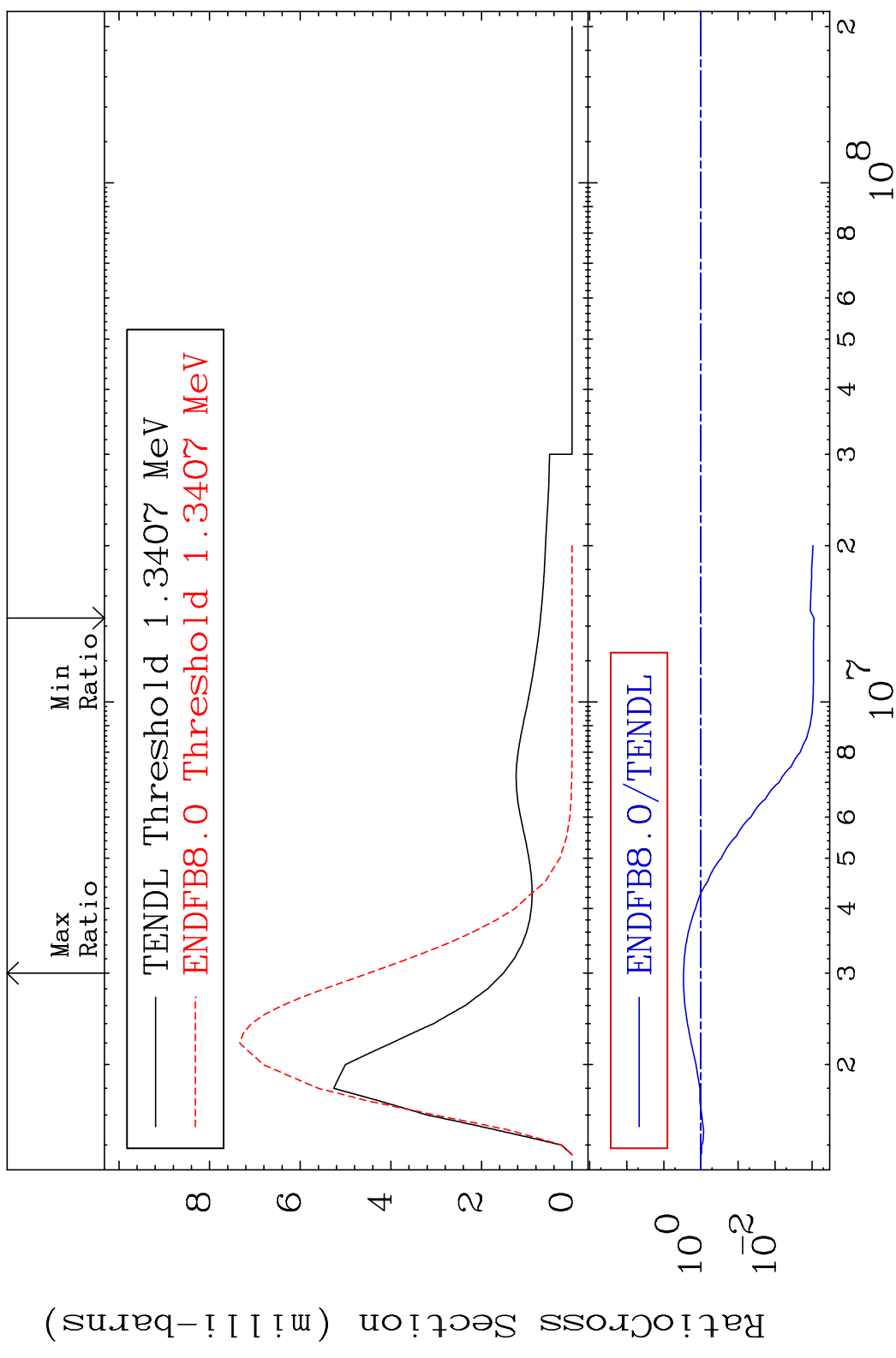


MAT 7231 MT= 59 (n, n') Level 72-Hf-176  
 Cross Section -99.94 To 243.3 %



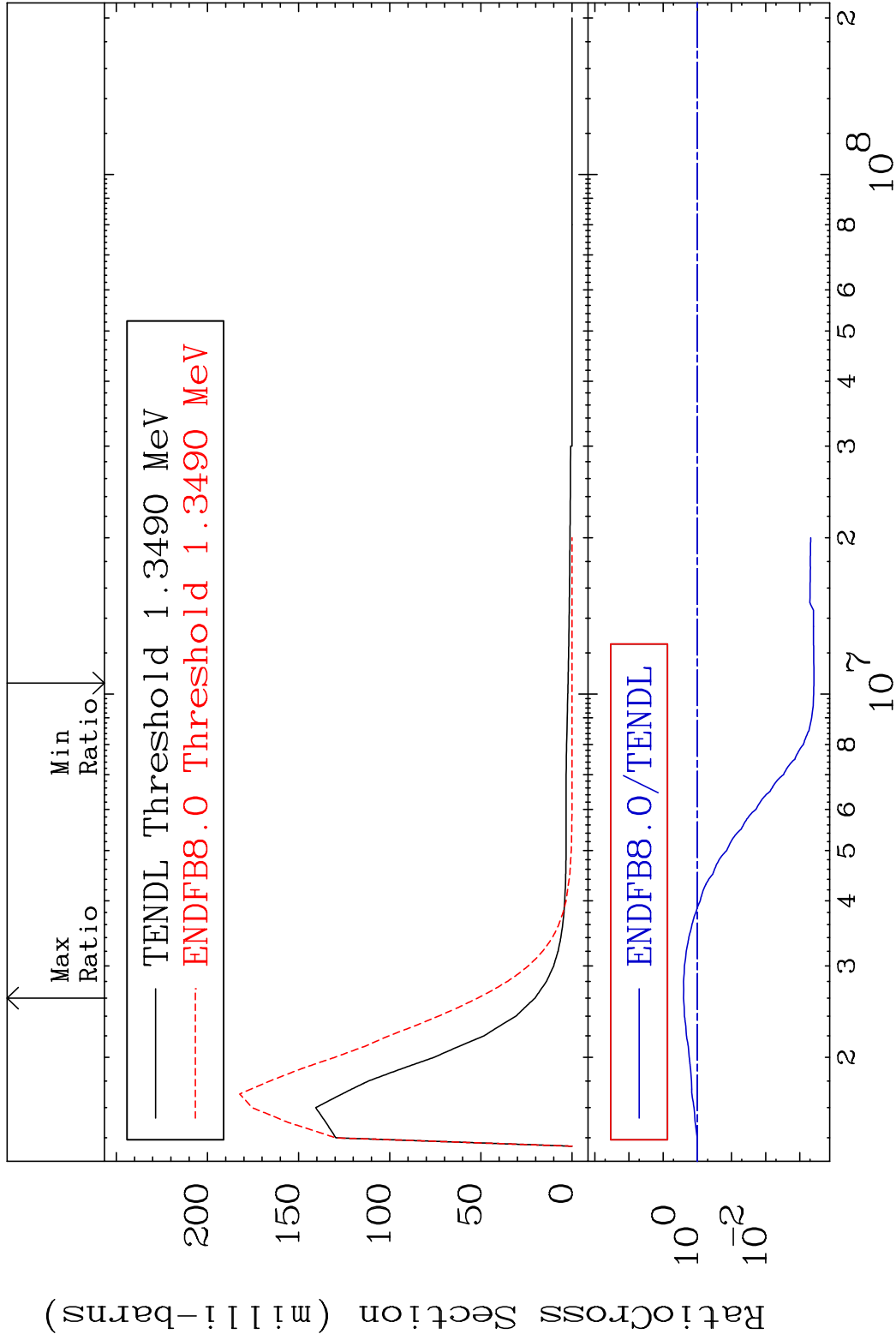
16 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 60 (n, n') Level 72-Hf-176  
 Cross Section -99.91 To 196.3 %



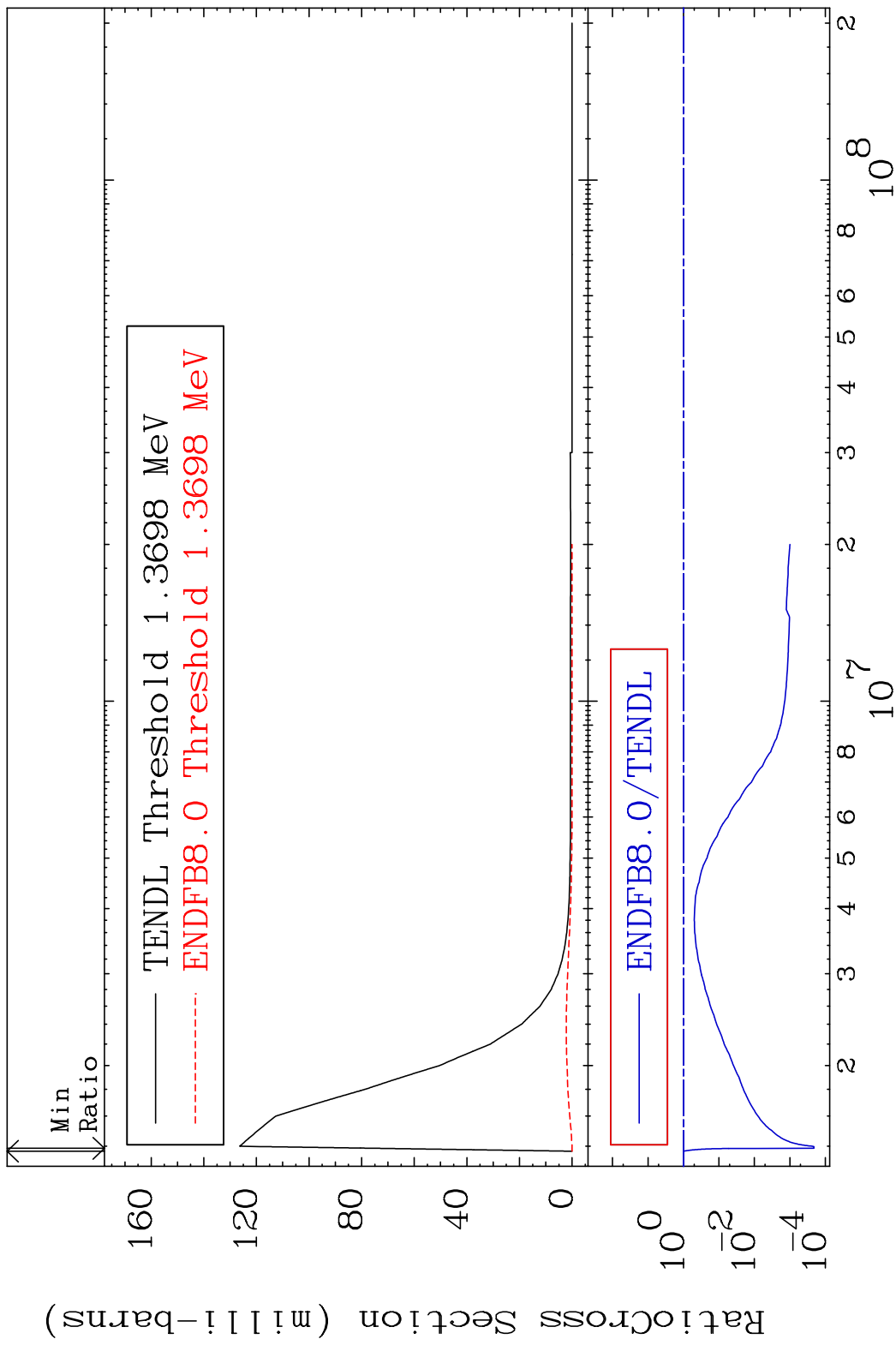
17 72-Hf-176

MAT 7231 MT= 61 (n, n') Level 72-Hf-176  
 Cross Section -99.96 To 154.4 %



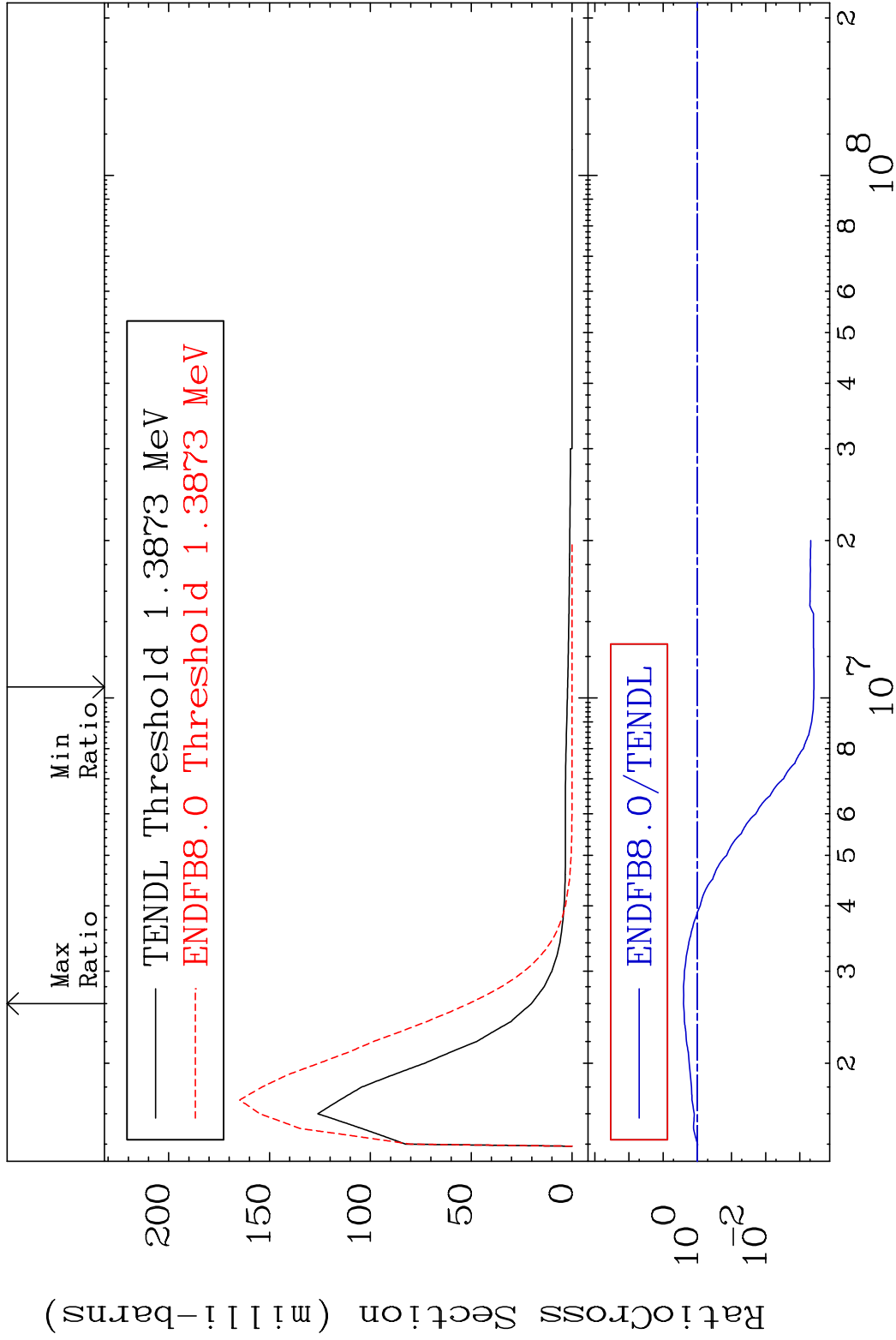
18 72-Hf-176

MAT 7231 MT= 62 (n, n') Level 72-Hf-176  
 Cross Section -99.98 To 0.000 %



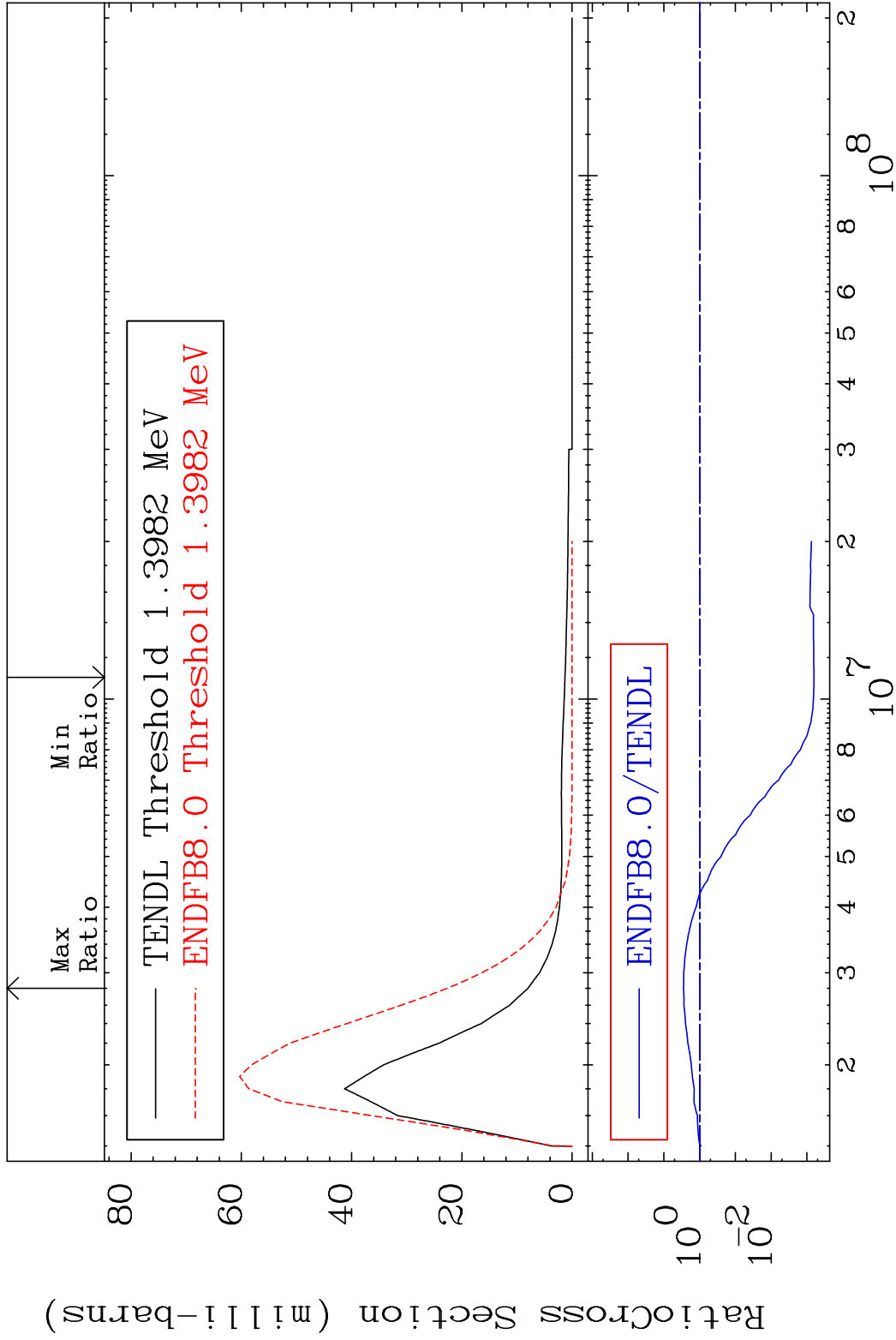
19 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 63 (n, n') Level 72-Hf-176  
 Cross Section -99.96 To 154.3 %



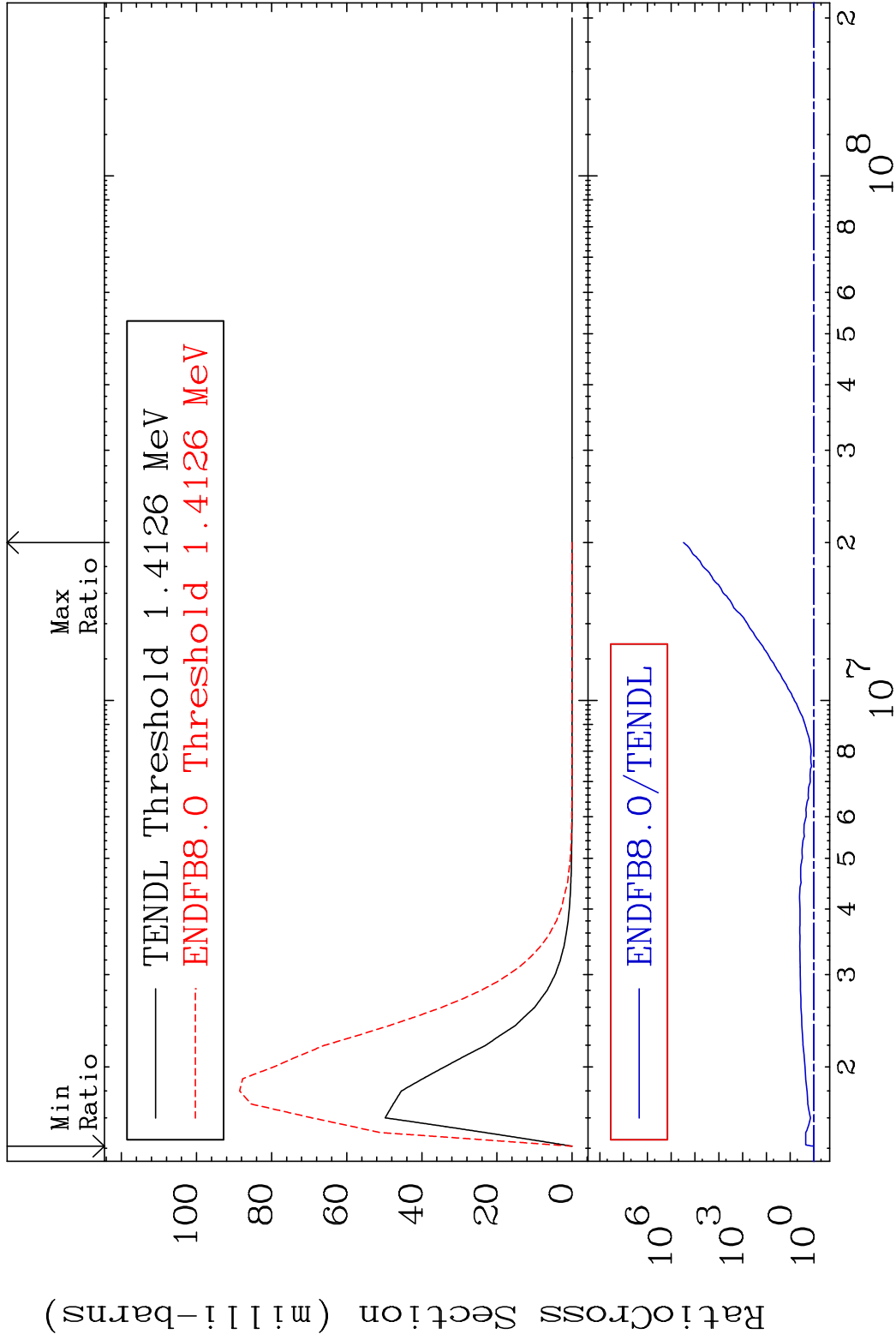
20 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 64 (n, n') Level 72-Hf-176  
 Cross Section -99.94 To 182.7 %

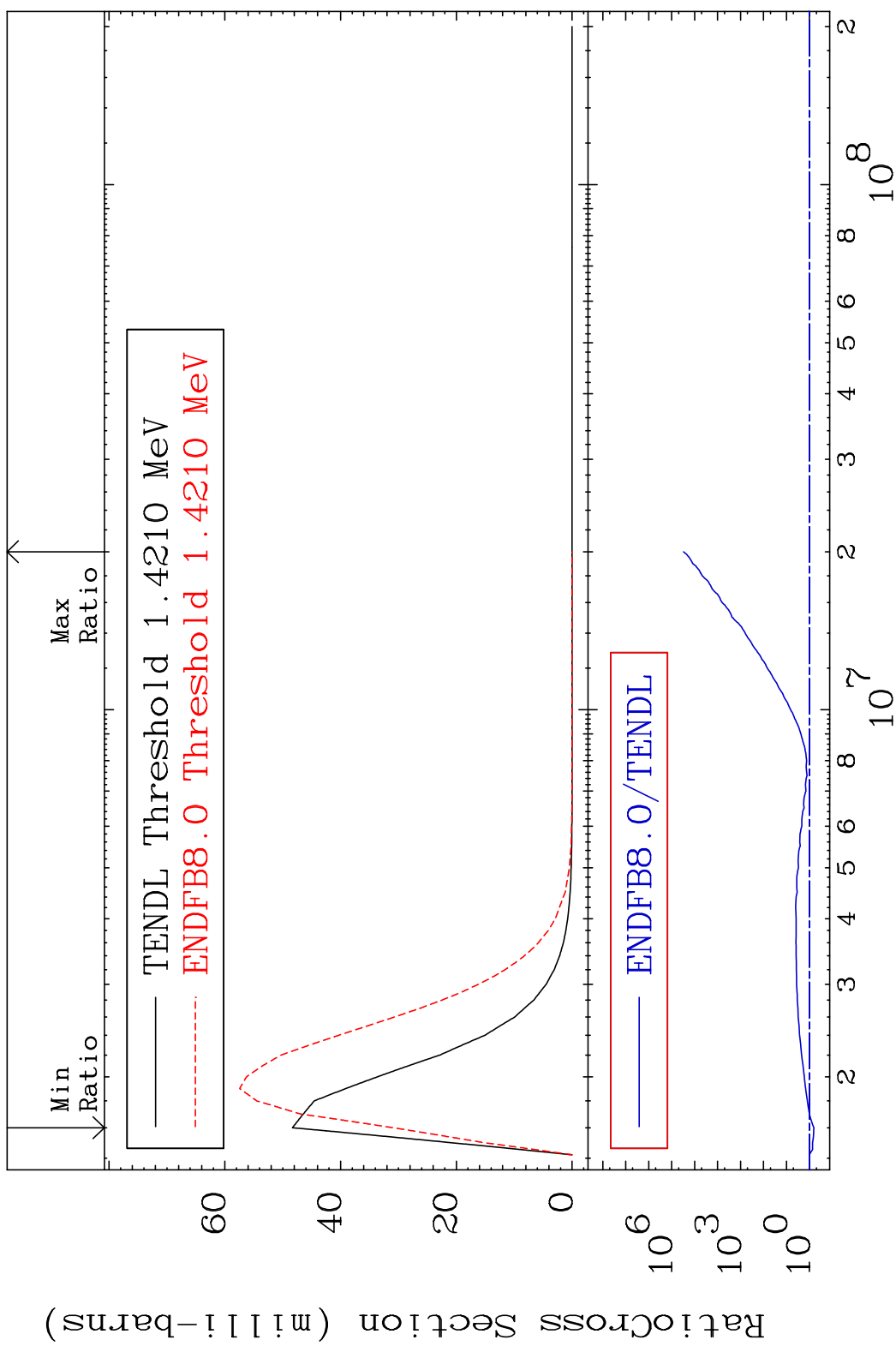


21 Incident Energy (eV) 72-Hf-176

MAT 7231 MT= 65 (n, n') Level 72-Hf-176  
 Cross Section 0.000 To 9999. %

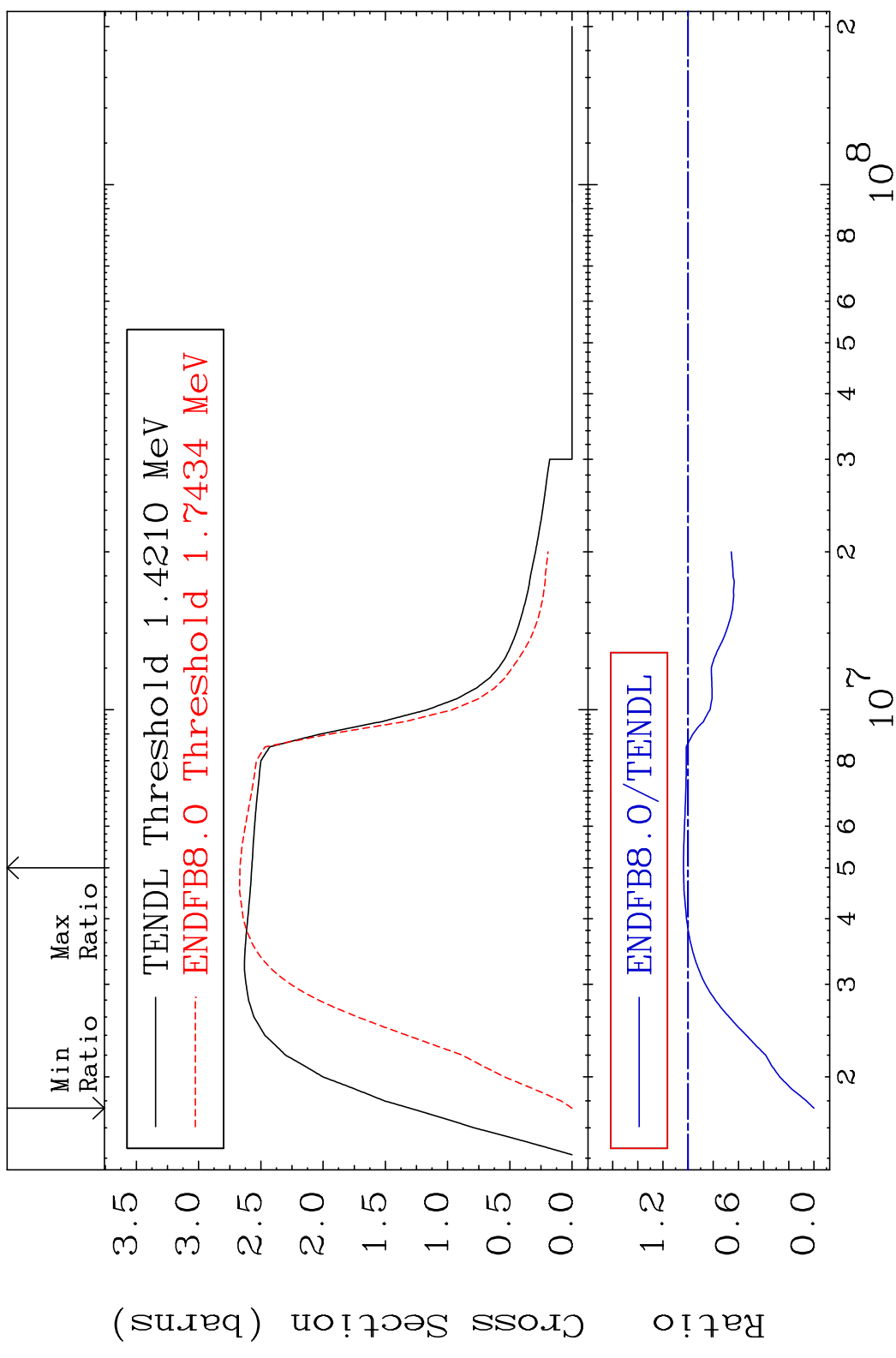


MAT 7231 MT= 66 (n, n') Level 72-Hf-176  
 Cross Section -35.98 To 9999. %





MAT 7231 (n, n') Continuum 72-Hf-176  
 Cross Section -100.0 To 3.730 %

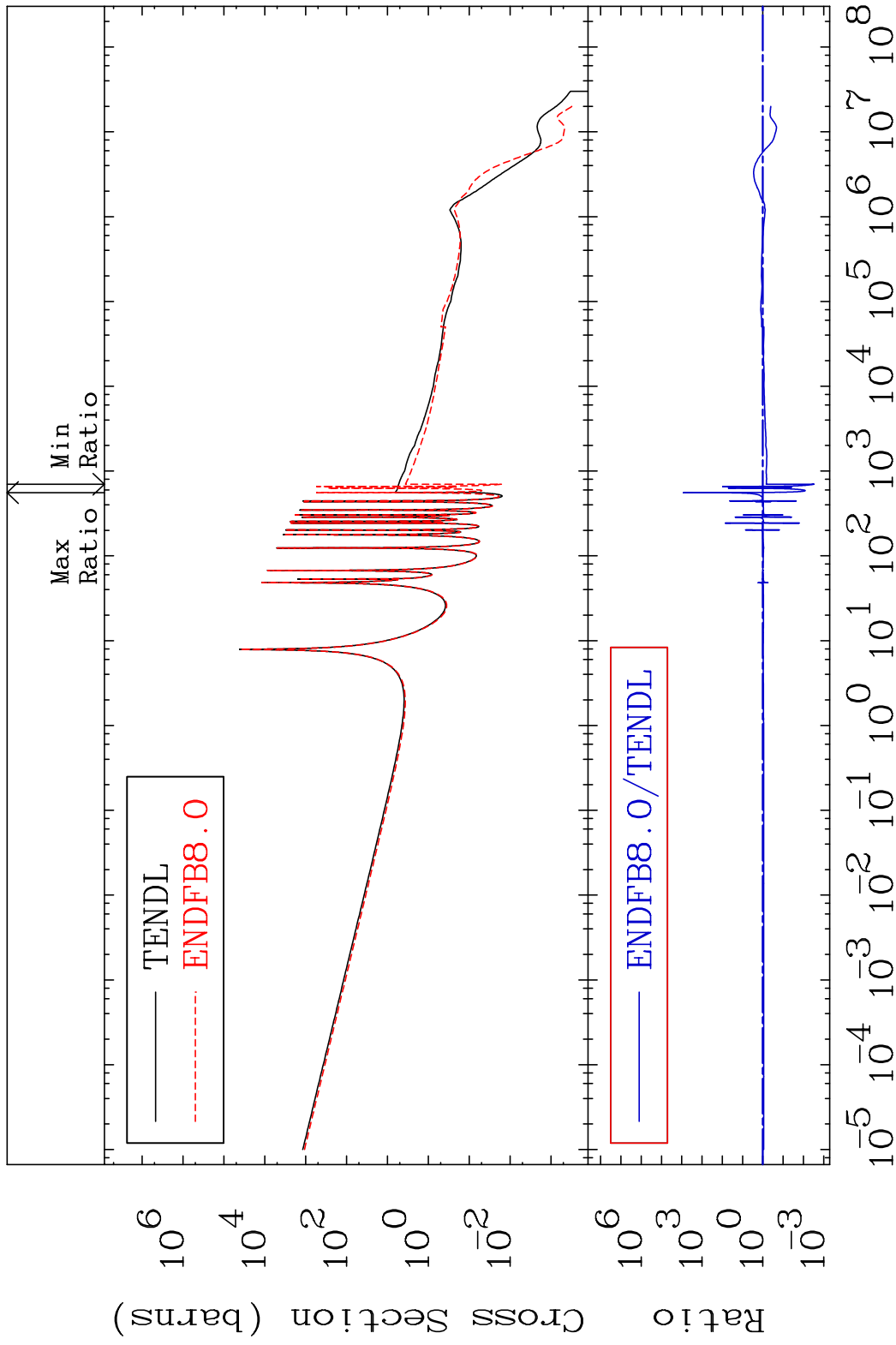


MAT 7231

(n,  $\gamma$ )

72-Hf-176

Cross Section -99.70 To 9999. %



25

Incident Energy (eV)

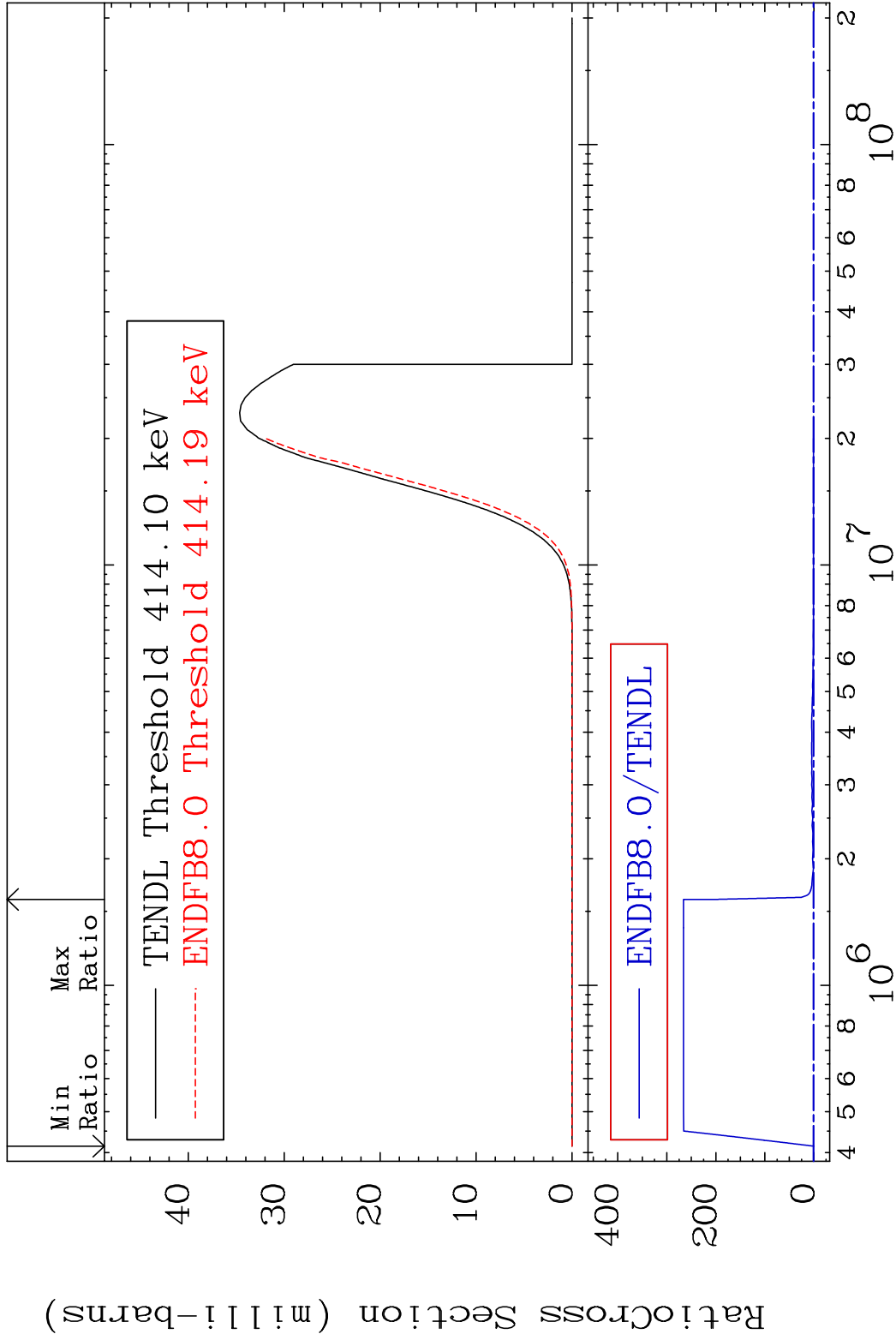
72-Hf-176

MAT 7231

(n, p)

72-Hf-176

Cross Section -100.0 To 9999. %



26

Incident Energy (eV)

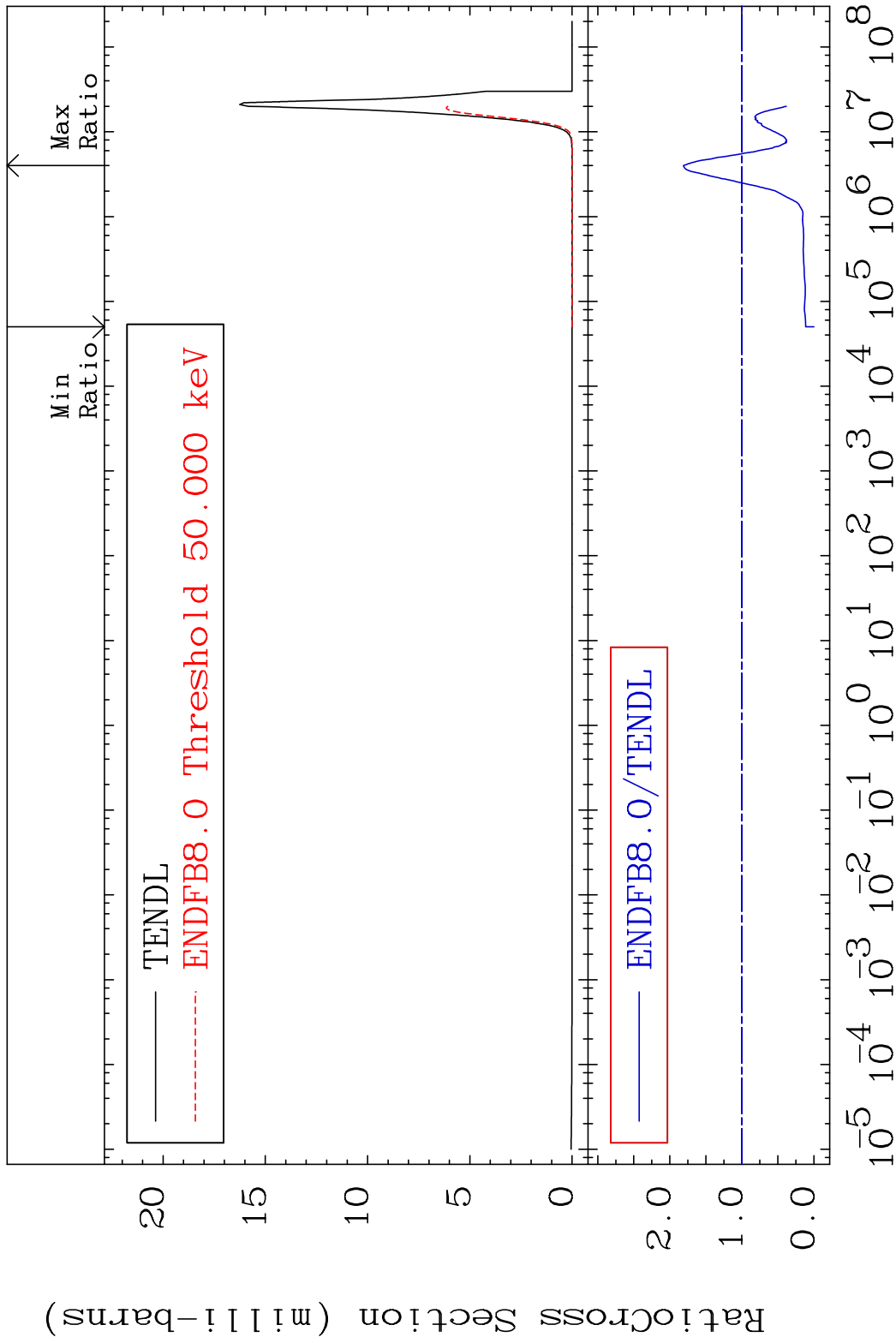
72-Hf-176

MAT 7231

(n,  $\alpha$ )

72-Hf-176

Cross Section -100.0 To 81.03 %



27

Incident Energy (eV)

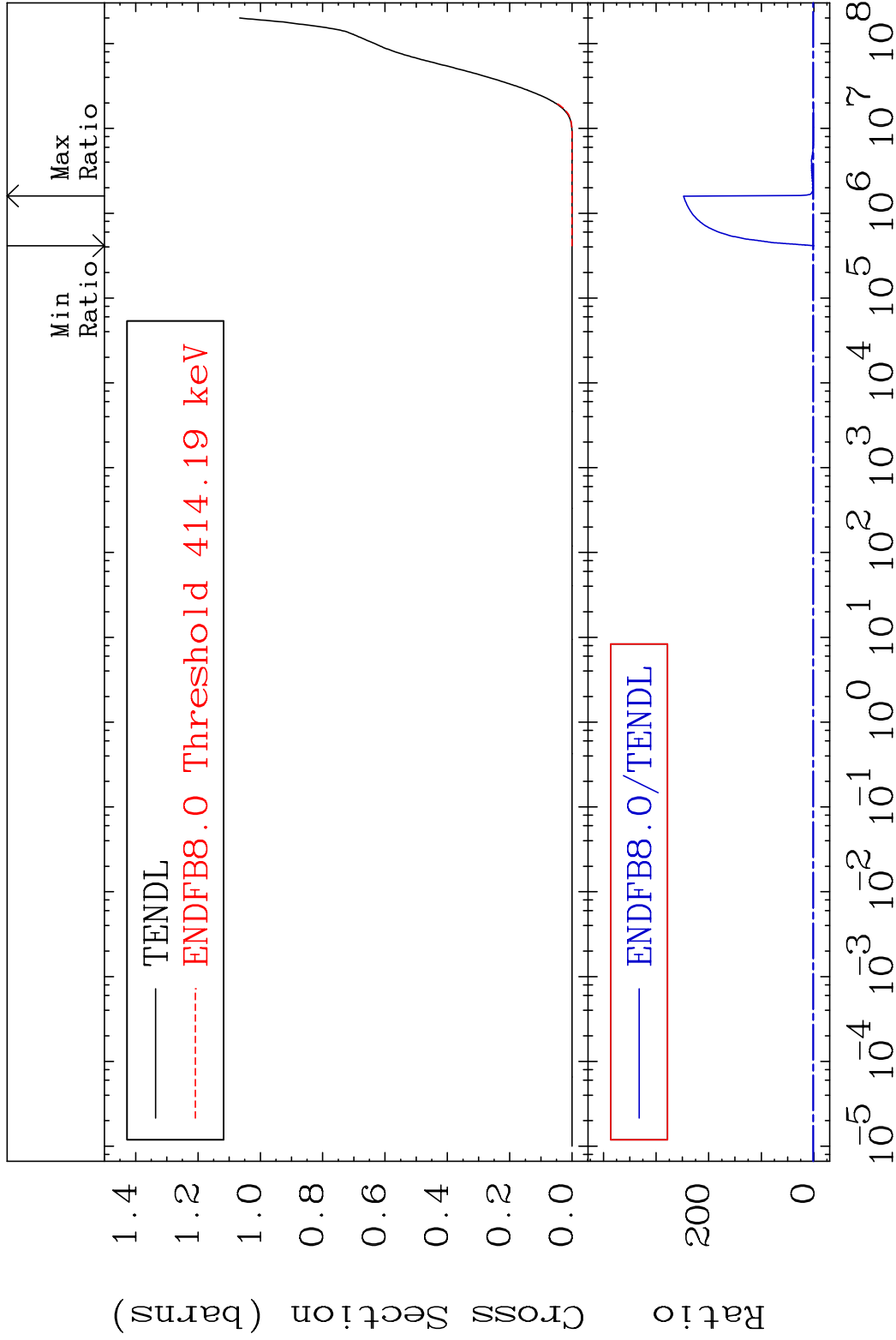
72-Hf-176

MAT 7231

Hydrogen Production

72-Hf-176

Cross Section -100.0 To 9999. %



28

Incident Energy (eV)

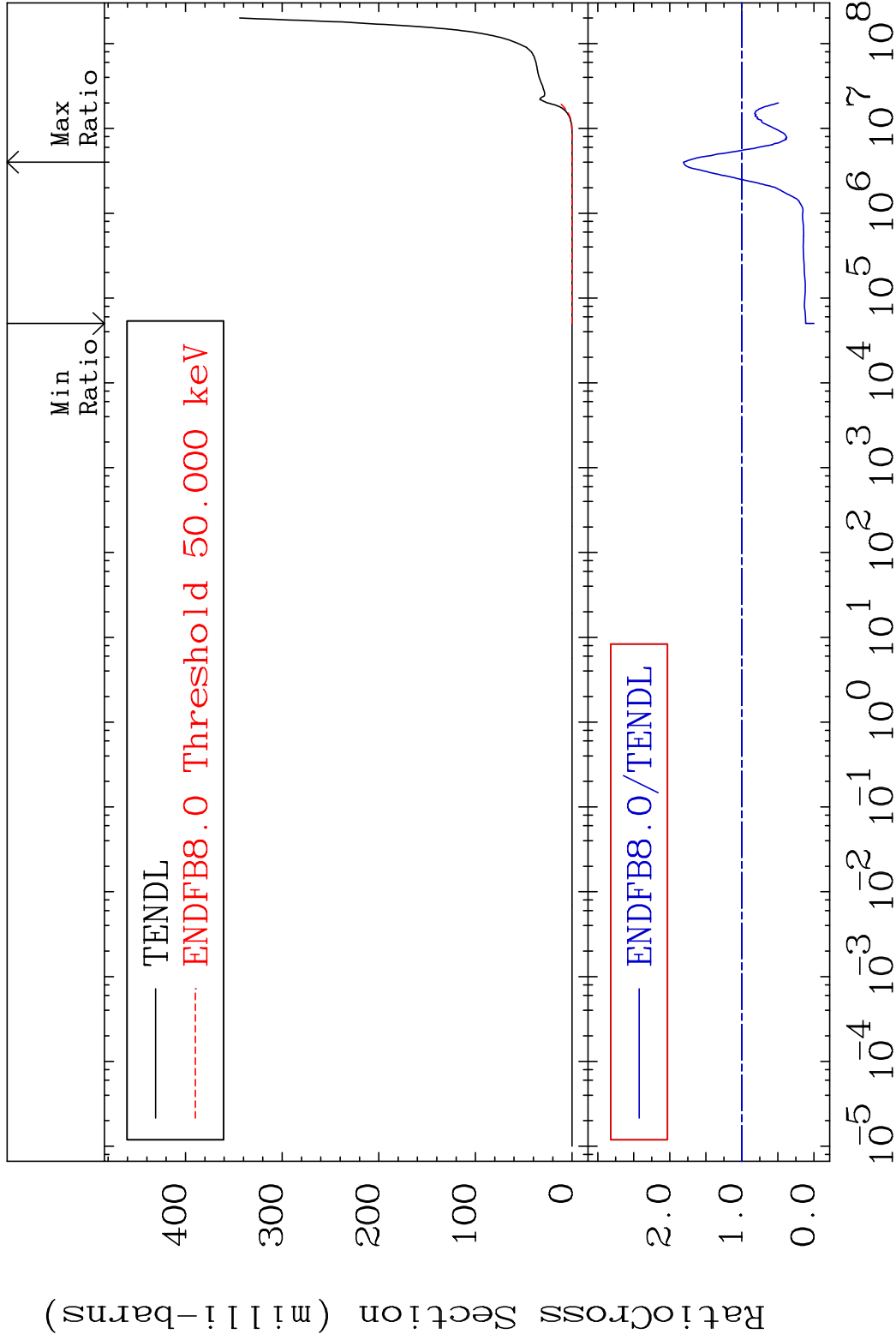
72-Hf-176

MAT 7231

He-4 Production

72-Hf-176

Cross Section -100.0 To 81.03 %

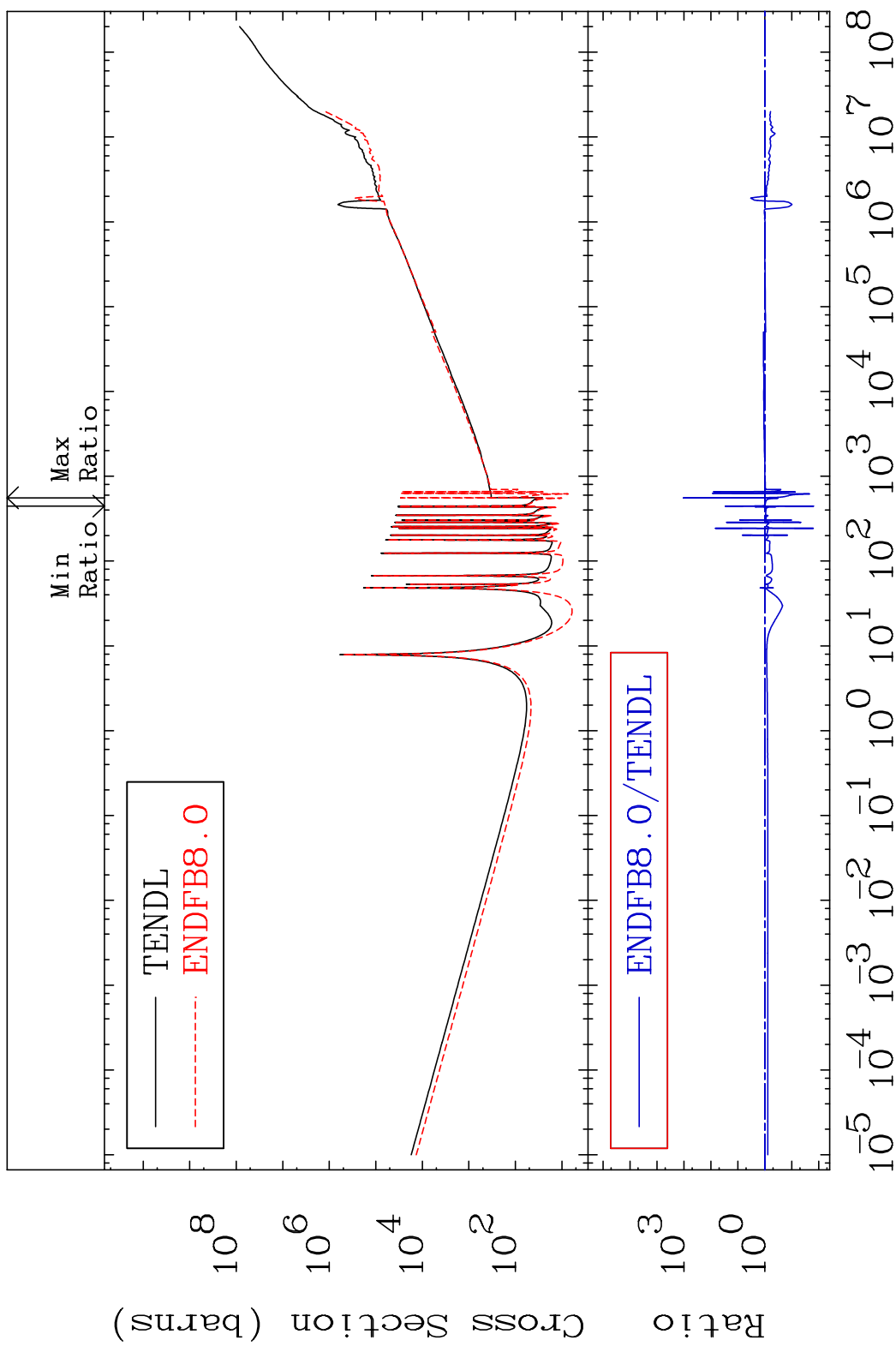


29

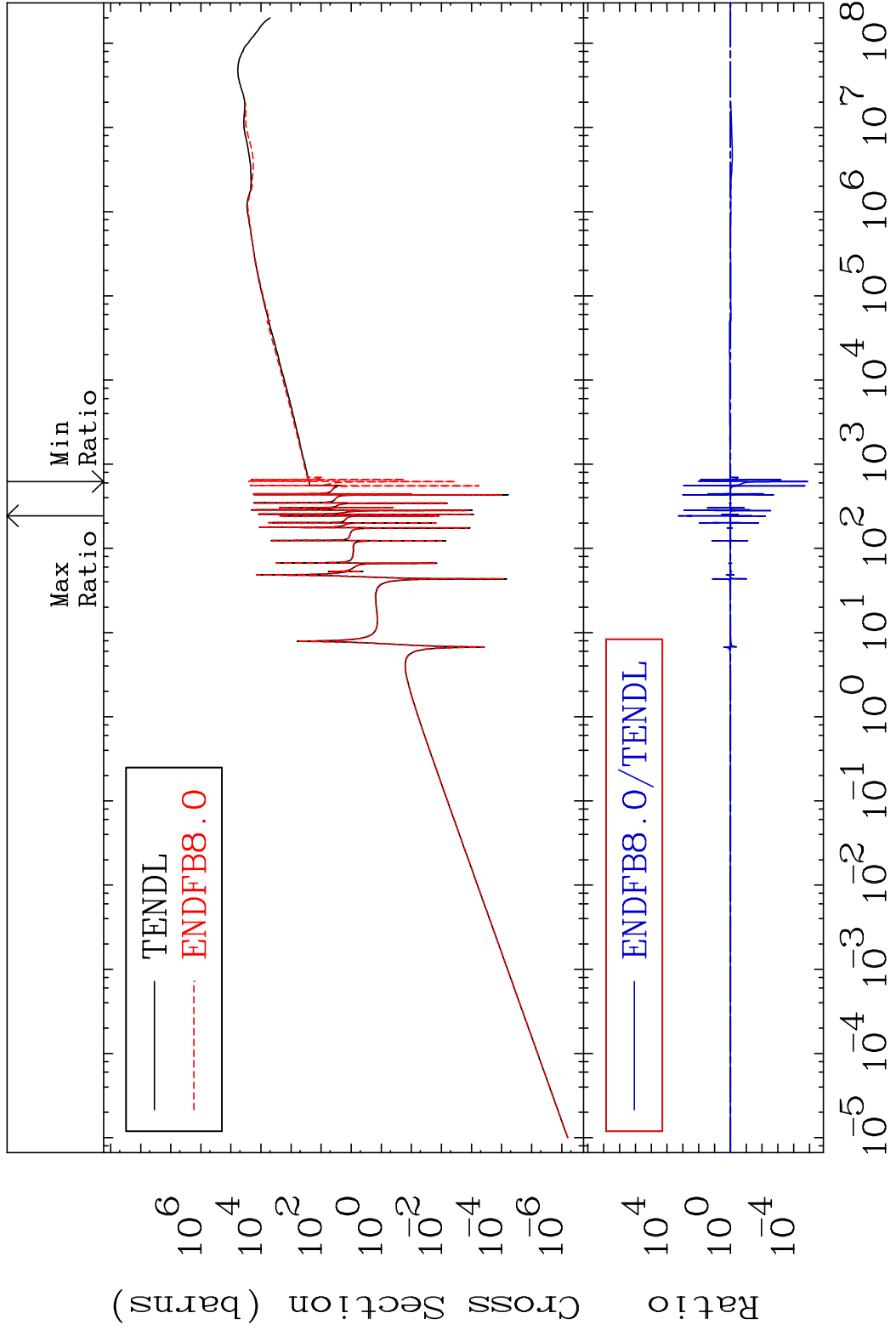
Incident Energy (eV)

72-Hf-176

MAT 7231 Kerma total (eV-barns) 72-Hf-176  
 Cross Section -98.48 To 9999. %

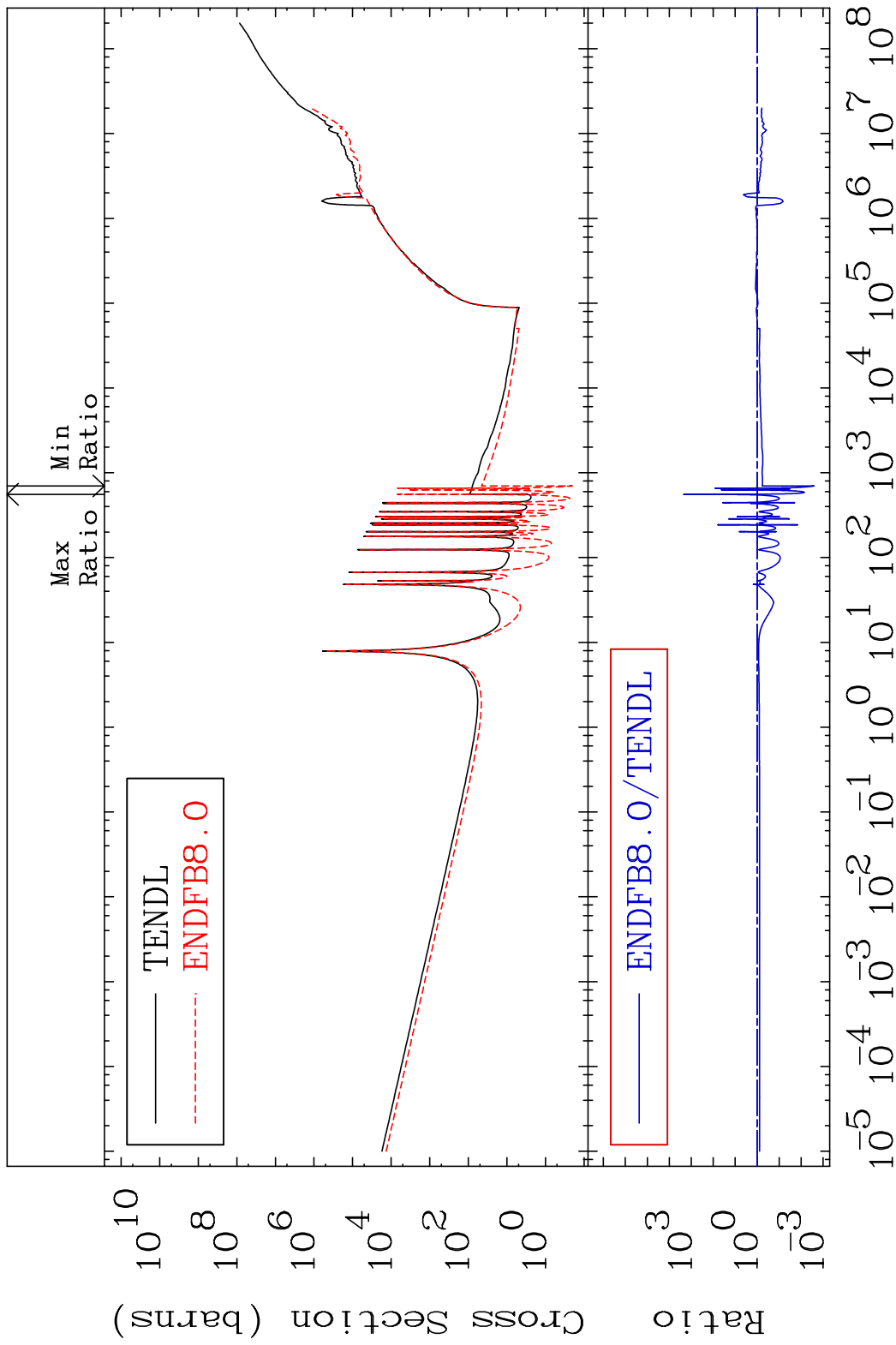


MAT 7231 Kerma elastic 72-Hf-176  
 Cross Section -100.0 To 9999. %



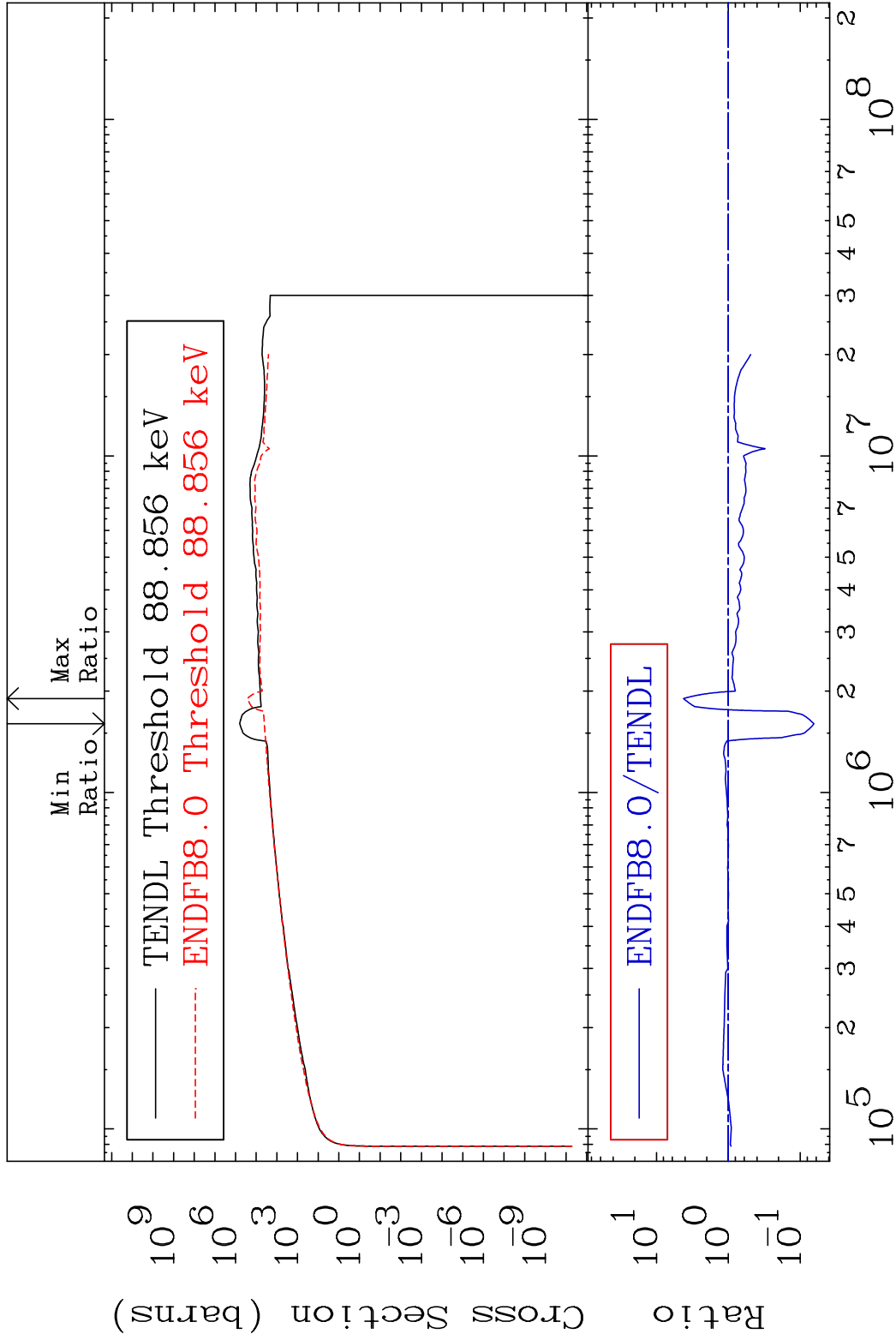


MAT 7231 Kerma non-elastic (all but mt2) 72-Hf-176  
 Cross Section -99.74 To 9999. %



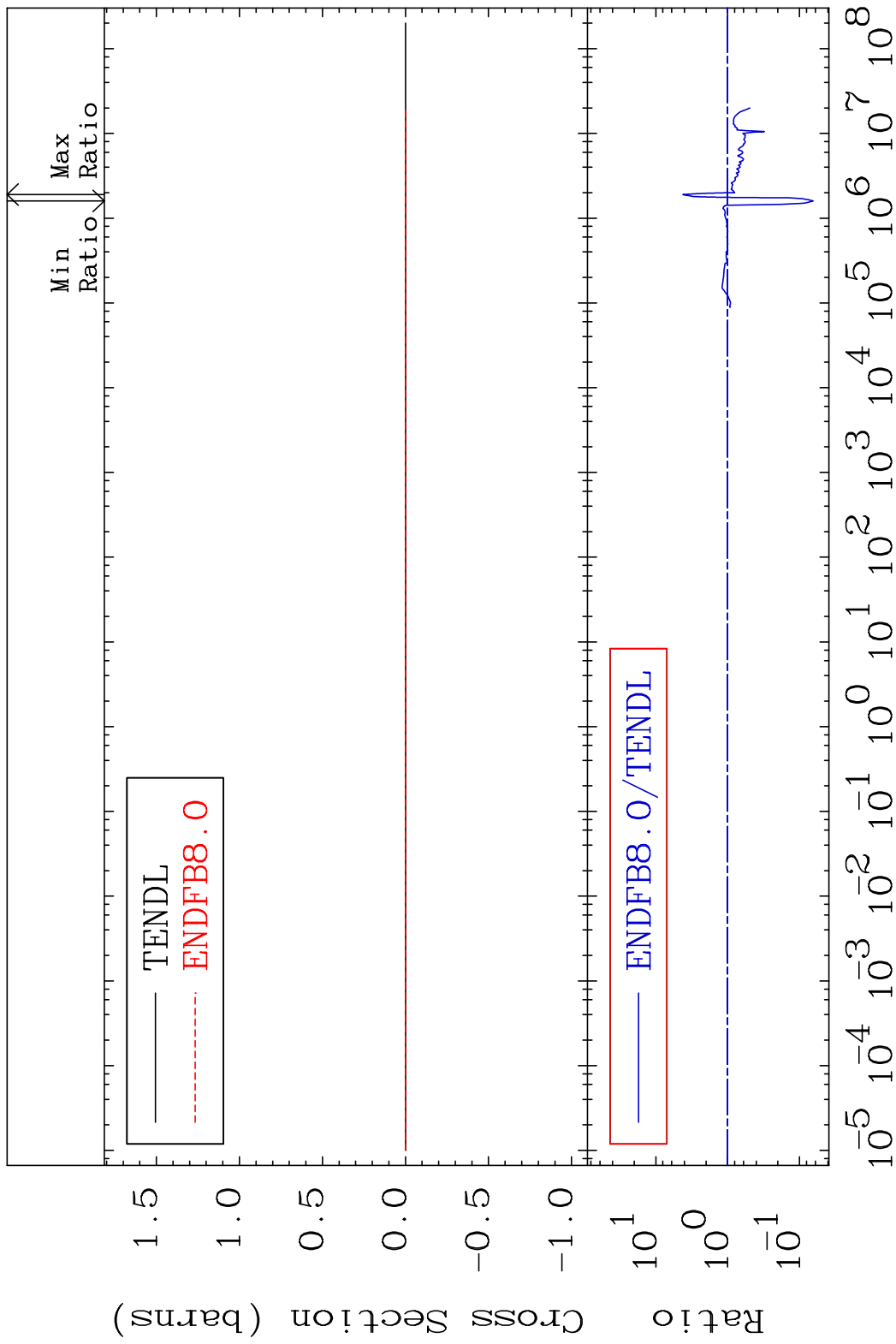
32 Incident Energy (eV) 72-Hf-176

MAT 7231 Kerma inelastic (mt51-91) 72-Hf-176  
 Cross Section -93.54 To 321.0 %

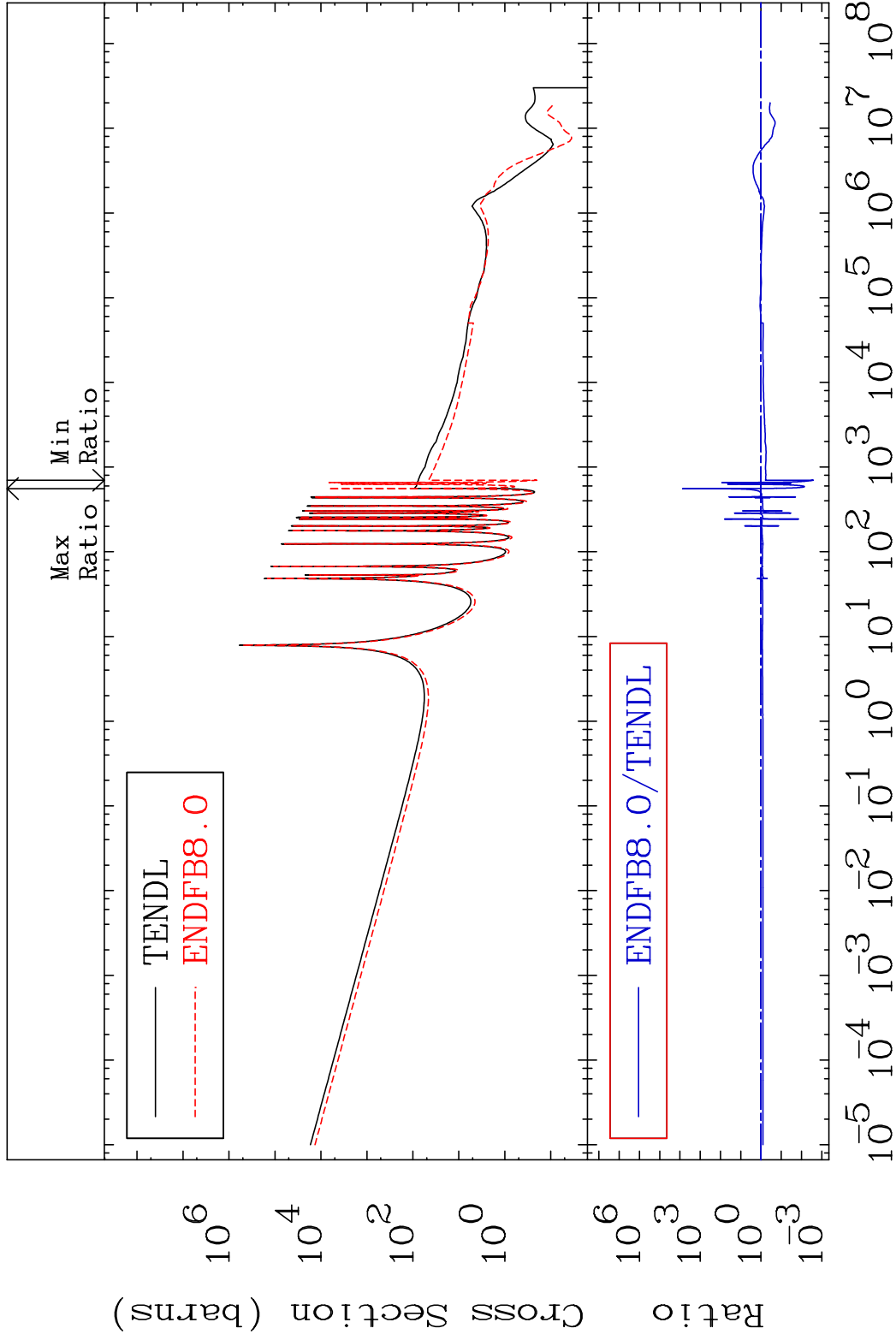


33 Incident Energy (eV) 72-Hf-176

MAT 7231 Kerma fission (mt18 or mt19-20-21-38)72-Hf-176  
 Cross Section -93.54 To 321.0 %

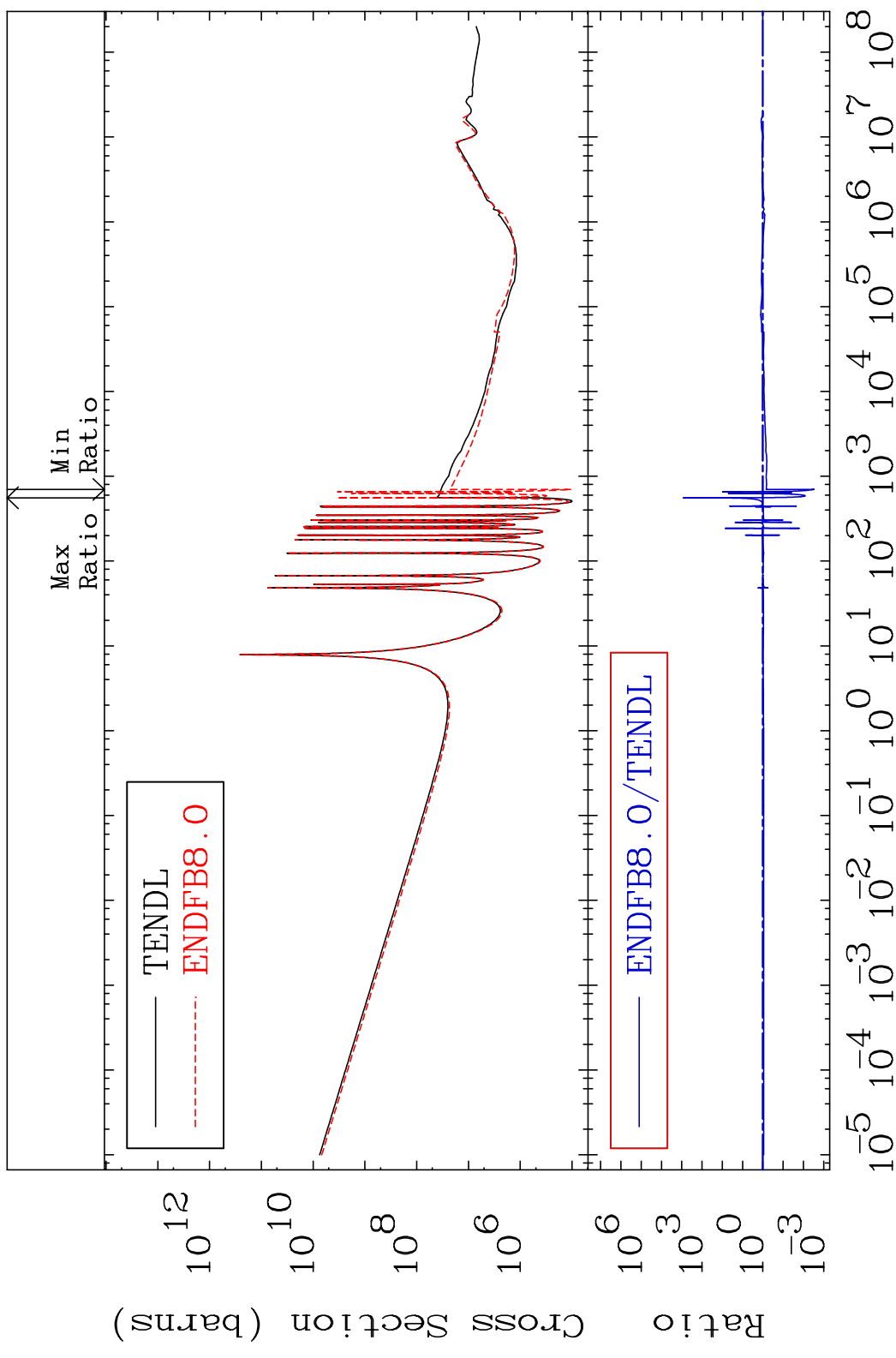


MAT 7231 Kerma capture (mt102) 72-Hf-176  
 Cross Section -99.73 To 9999. %

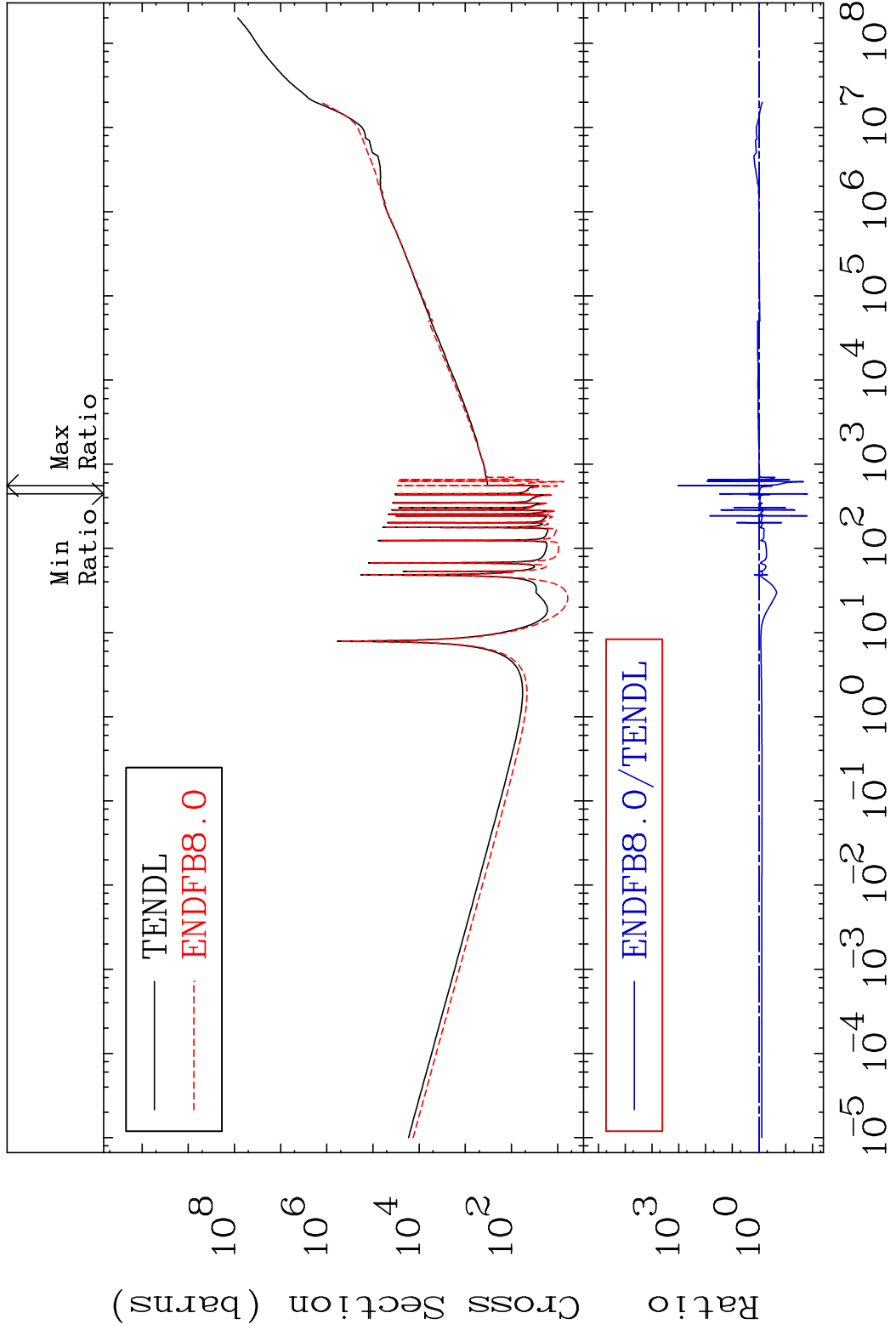


35 Incident Energy (eV) 72-Hf-176

MAT 7231 Total photon (eV-barns) 72-Hf-176  
 Cross Section -99.70 To 9999. %

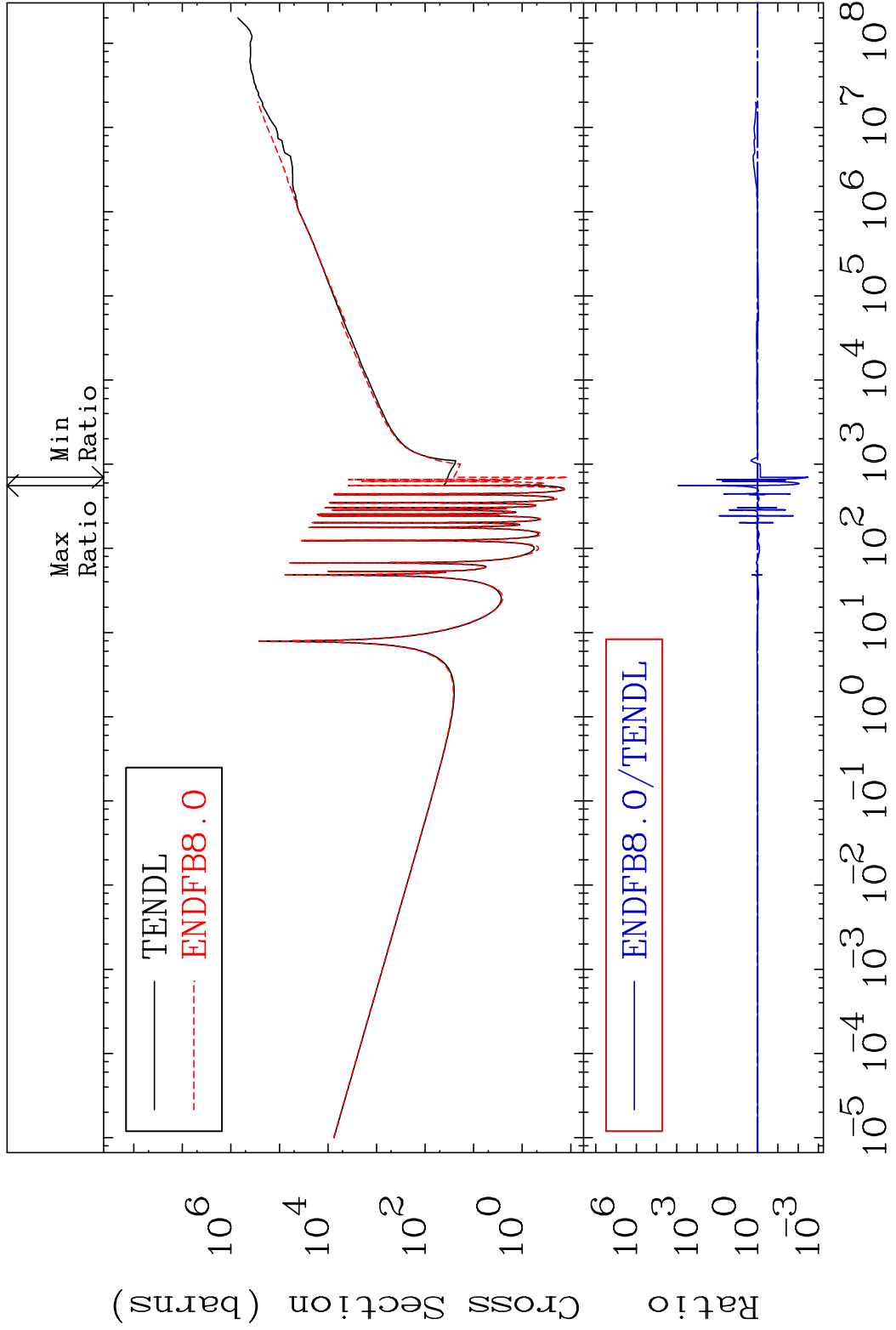


MAT 7231 Total kinematic kerma (high limit) 72-Hf-176  
 Cross Section -98.48 To 9999. %



37 Incident Energy (eV) 72-Hf-176

MAT 7231      Dpa total (eV-barns)      72-Hf-176  
 Cross Section      -99.66 To 9999. %



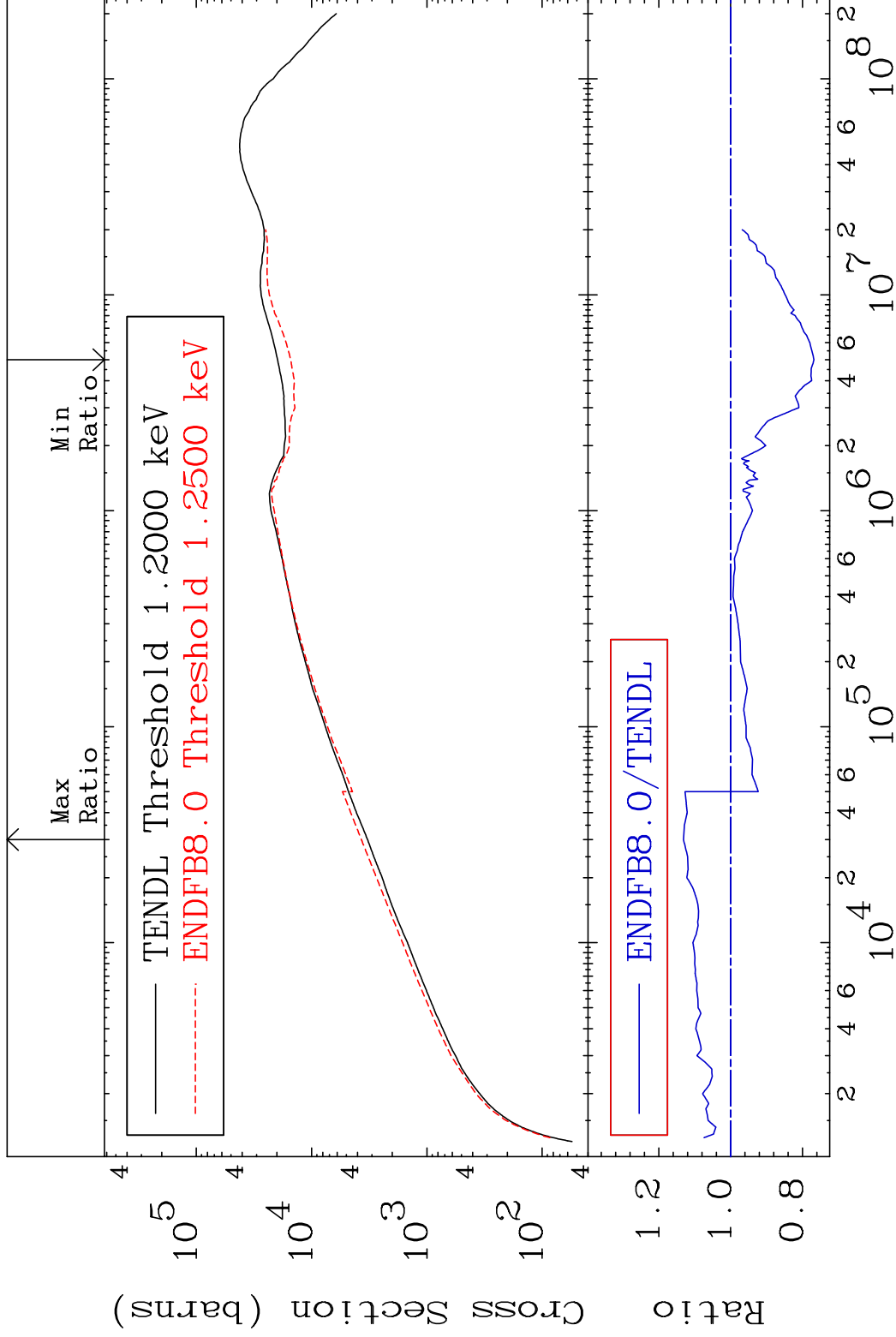
38      Incident Energy (eV)      72-Hf-176

MAT 7231

Dpa elastic (mt2)

72-Hf-176

Cross Section -23.16 To 13.13 %



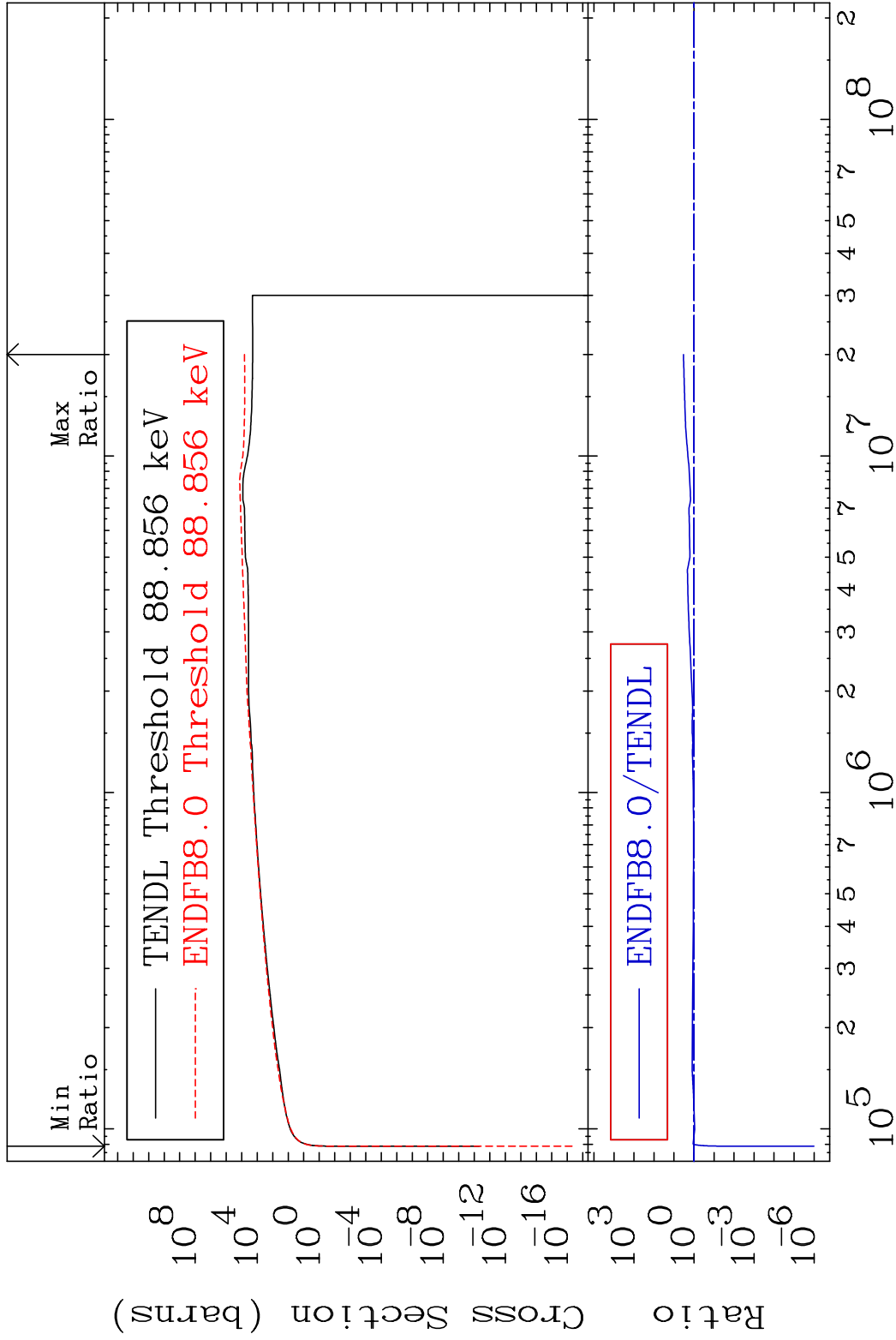
39

Incident Energy (eV)

72-Hf-176



MAT 7231 Dpa inelastic (mt51-91) 72-Hf-176  
 Cross Section -100.0 To 235.9 %



40 Incident Energy (eV) 72-Hf-176

MAT 7231 Dpa disappearance (mt102 -120) 72-Hf-176  
 Cross Section -99.66 To 9999. %

