

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

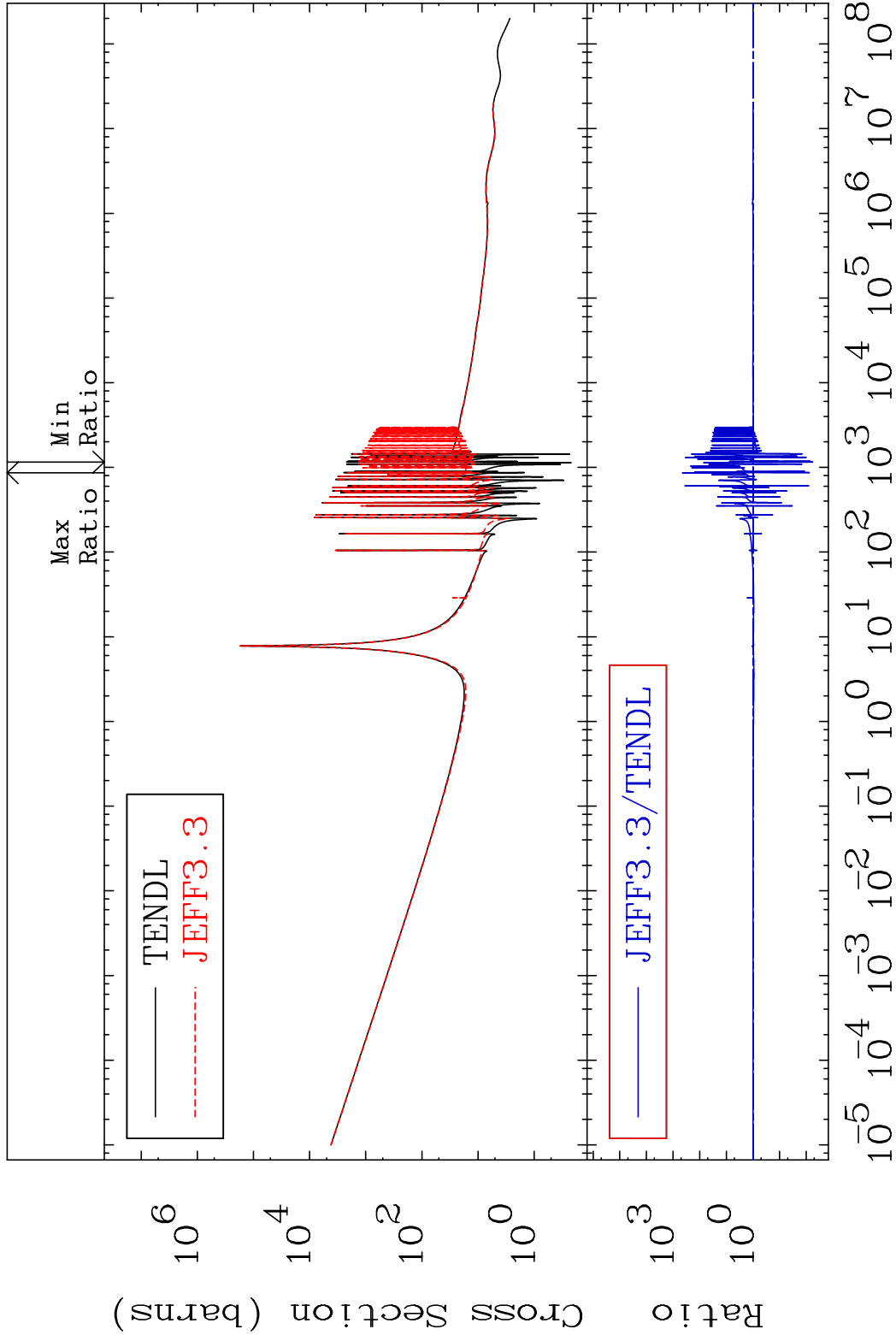
Press Mouse Button to Start

MAT 7237

Total

72-Hf-178

Cross Section -99.42 To 9999. %



1

Incident Energy (eV)

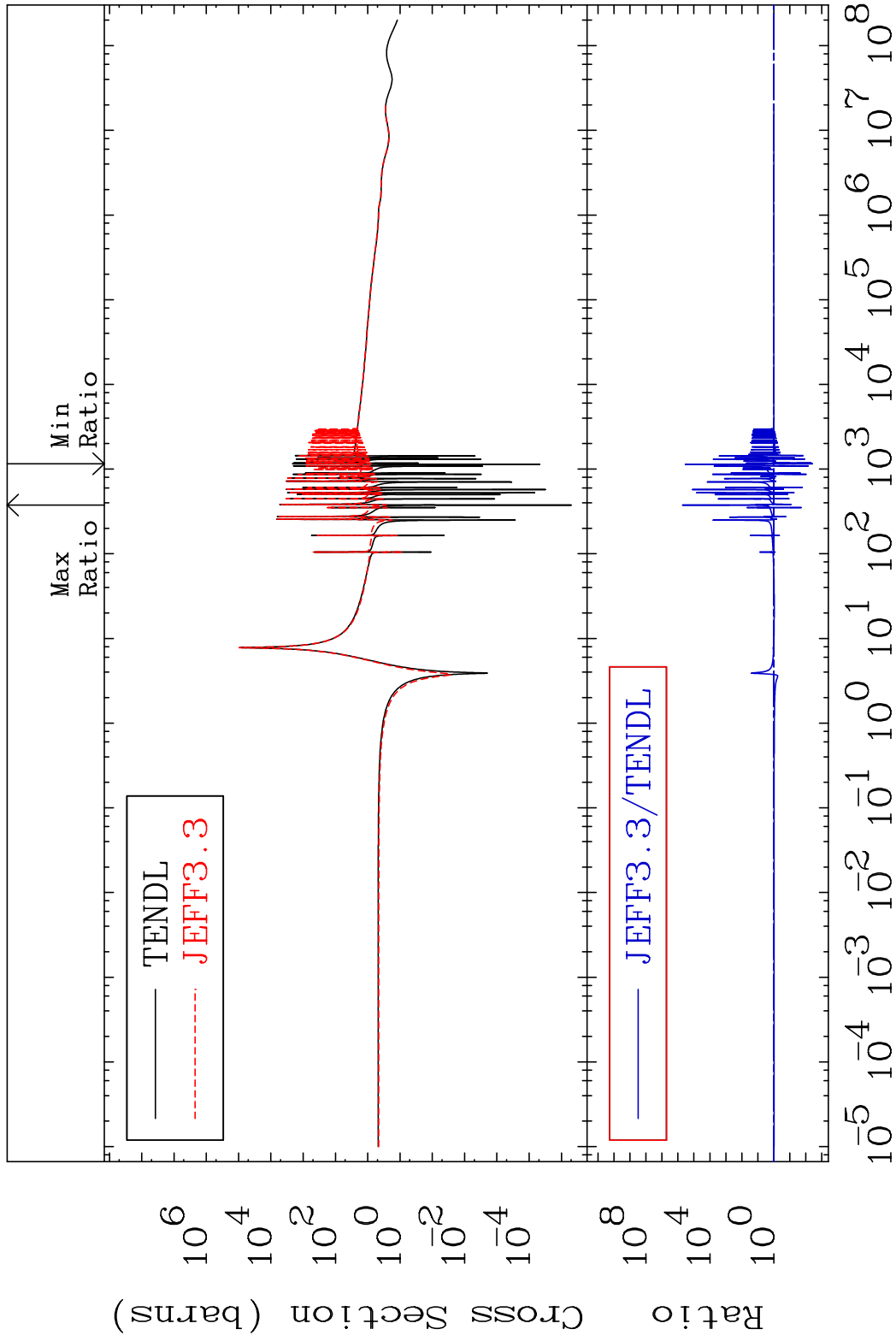
72-Hf-178

MAT 7237

Elastic

72-Hf-178

Cross Section -99.62 To 9999. %



2

Incident Energy (eV)

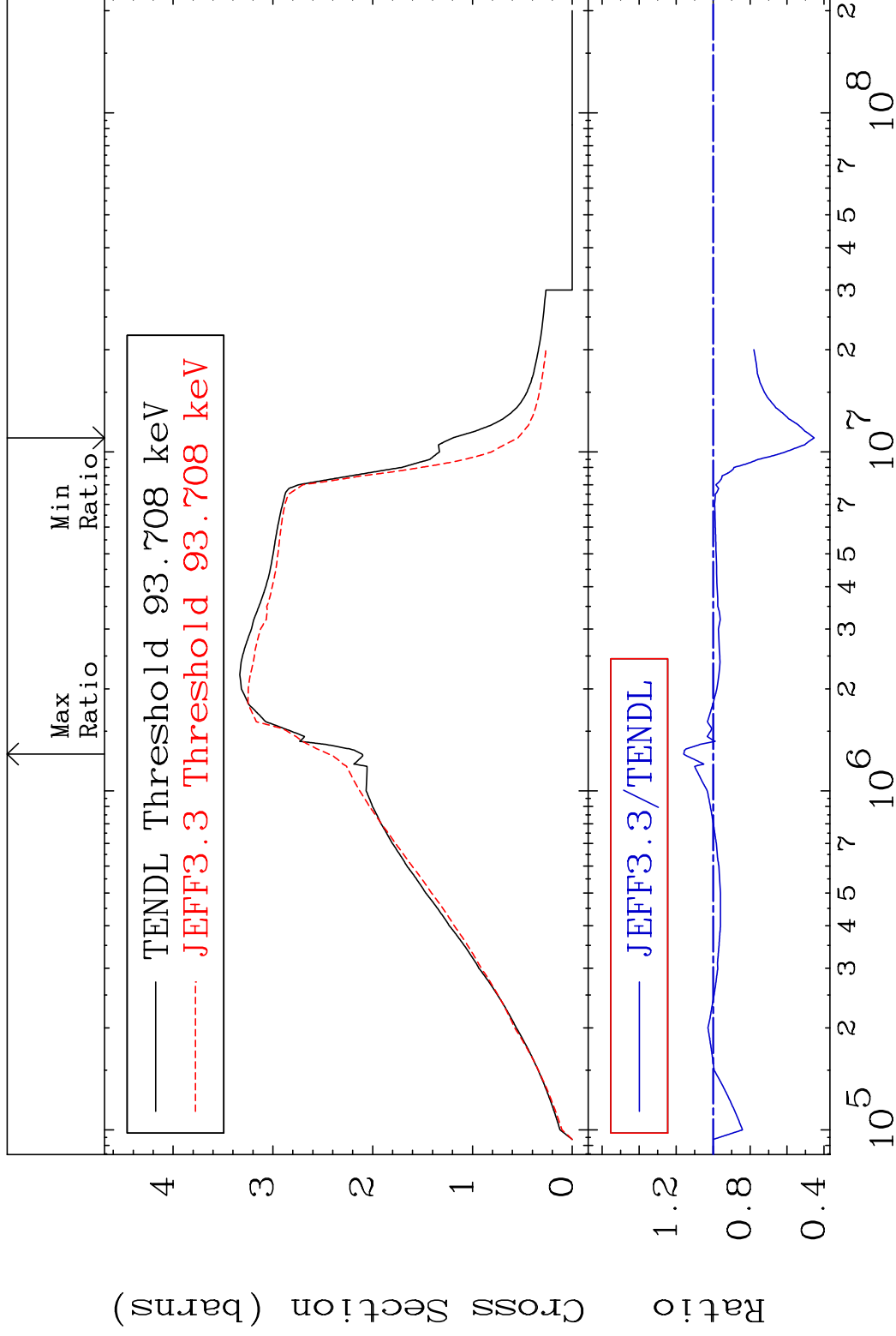
72-Hf-178

MAT 7237

Inelastic

72-Hf-178

Cross Section -54.62 To 15.94 %



3

Incident Energy (eV)

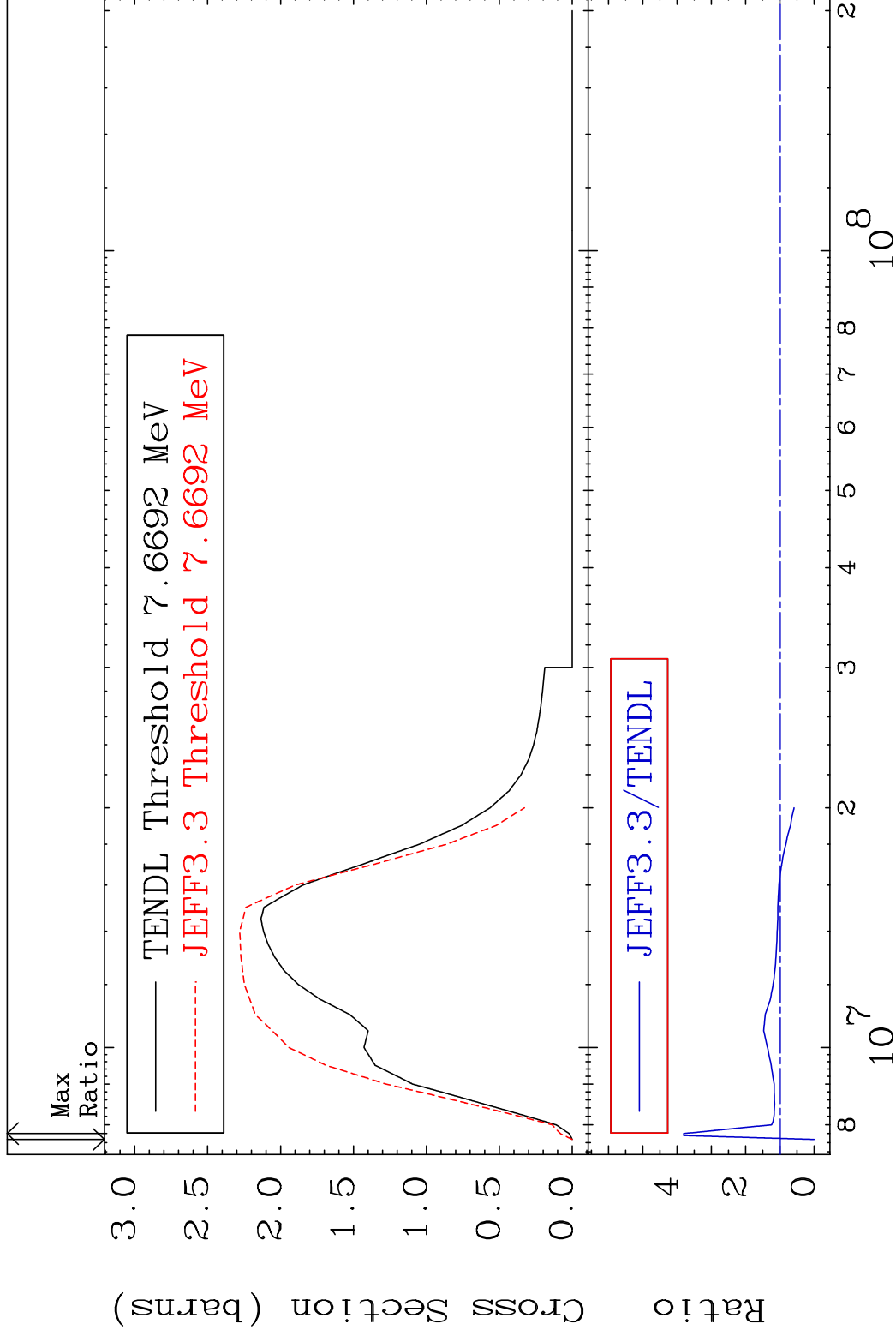
72-Hf-178

MAT 7237

(n,2n)

72-Hf-178

Cross Section -100.0 To 280.6 %



4

Incident Energy (eV)

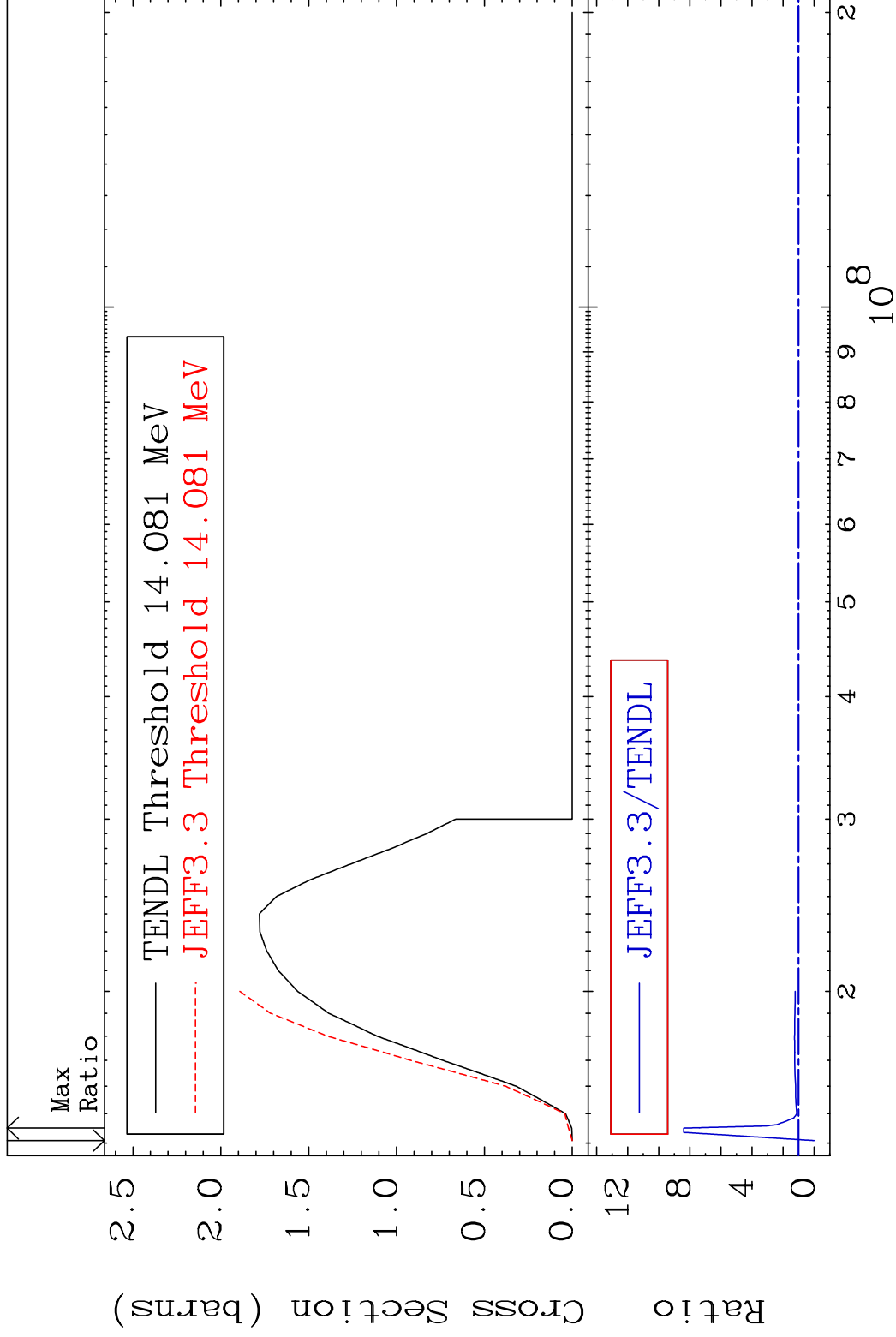
72-Hf-178

MAT 7237

(n,3n)

72-Hf-178

Cross Section -100.0 To 739.8 %



5

Incident Energy (eV)

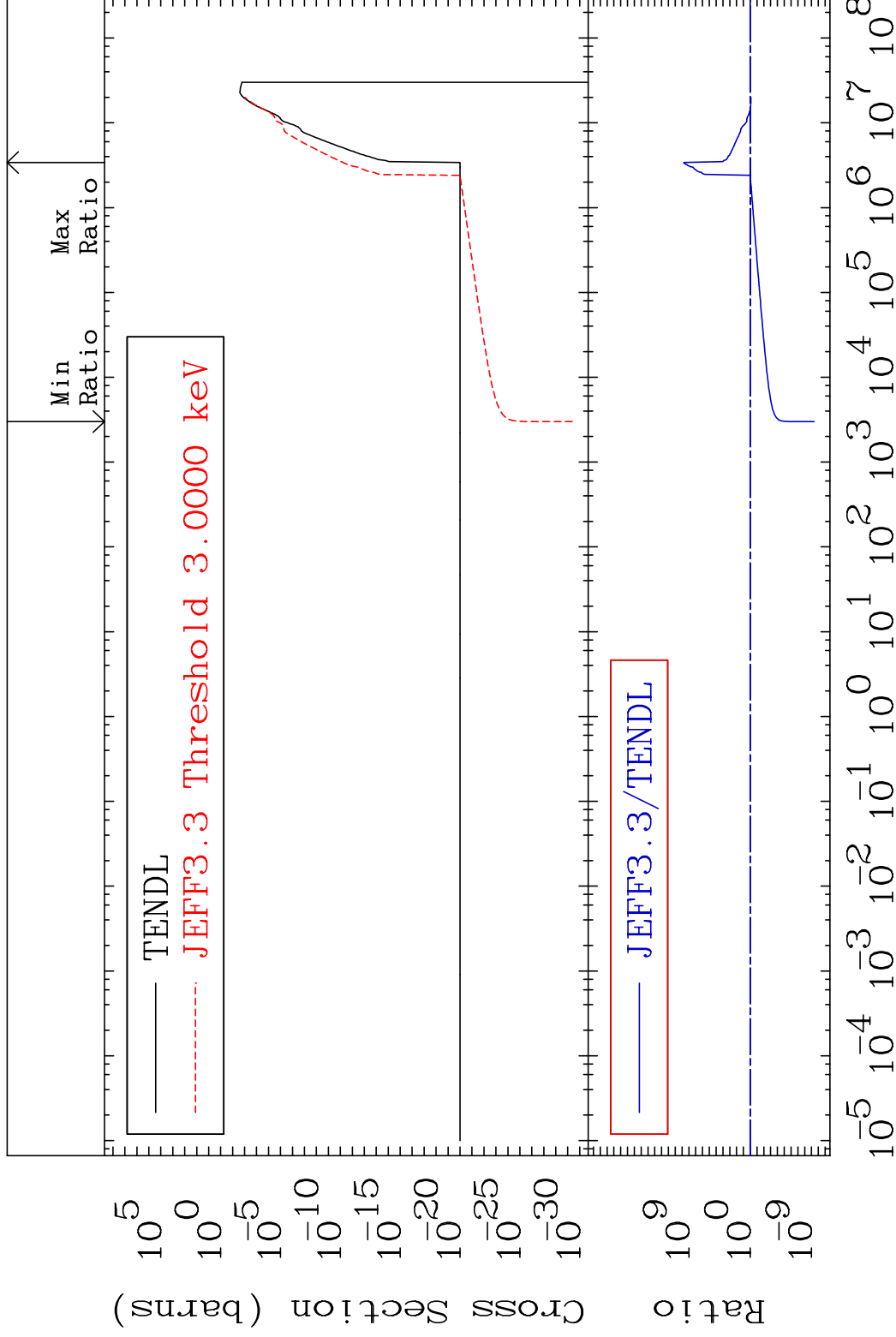
72-Hf-178

MAT 7237

(n, n') α

72-Hf-178

Cross Section -100.0 To 9999. %

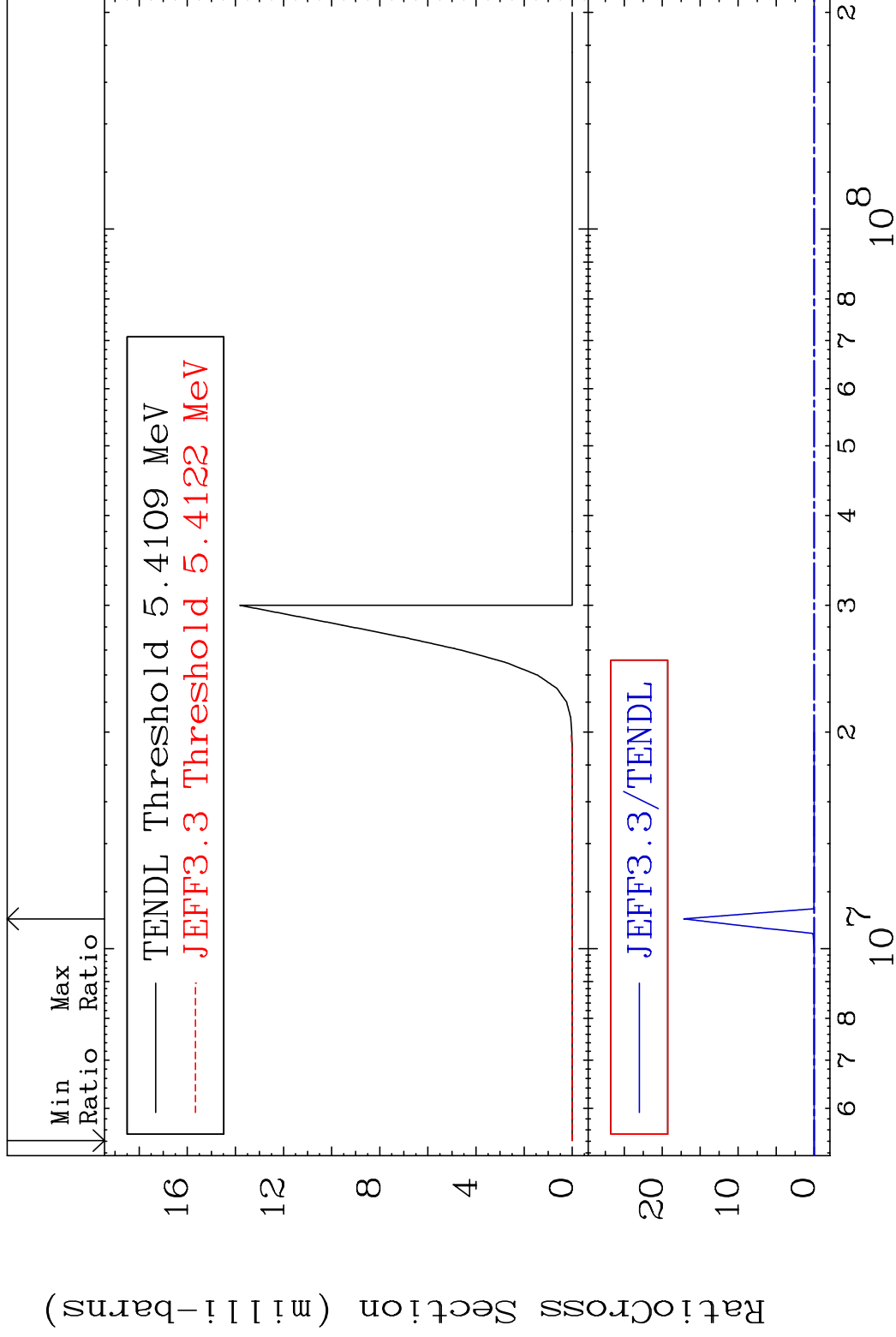


MAT 7237

(n,2n) α

72-Hf-178

Cross Section -100.0 To 9999. %



7

Incident Energy (eV)

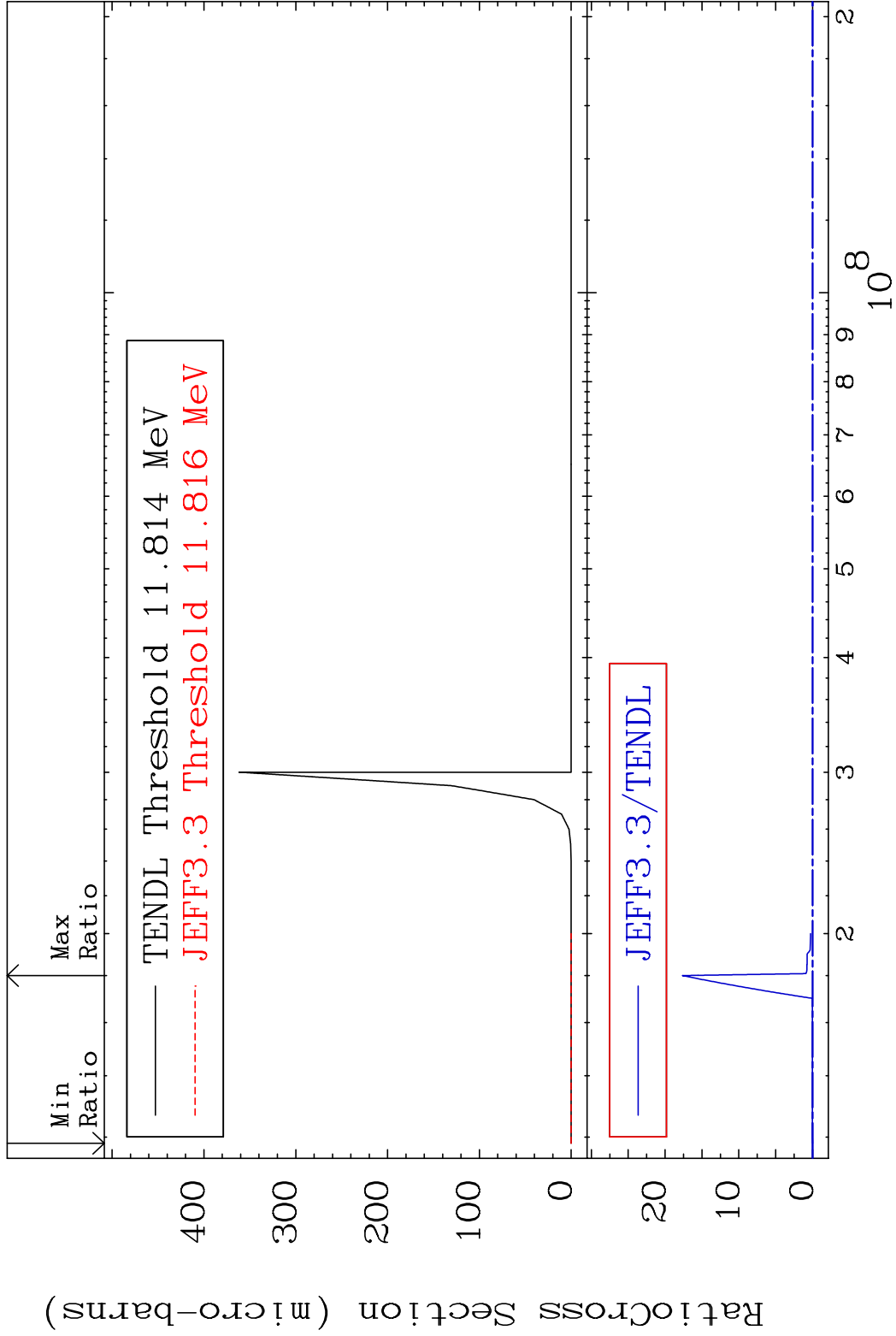
72-Hf-178

MAT 7237

(n,3n) α

72-Hf-178

Cross Section -100.0 To 9999. %



8

Incident Energy (eV)

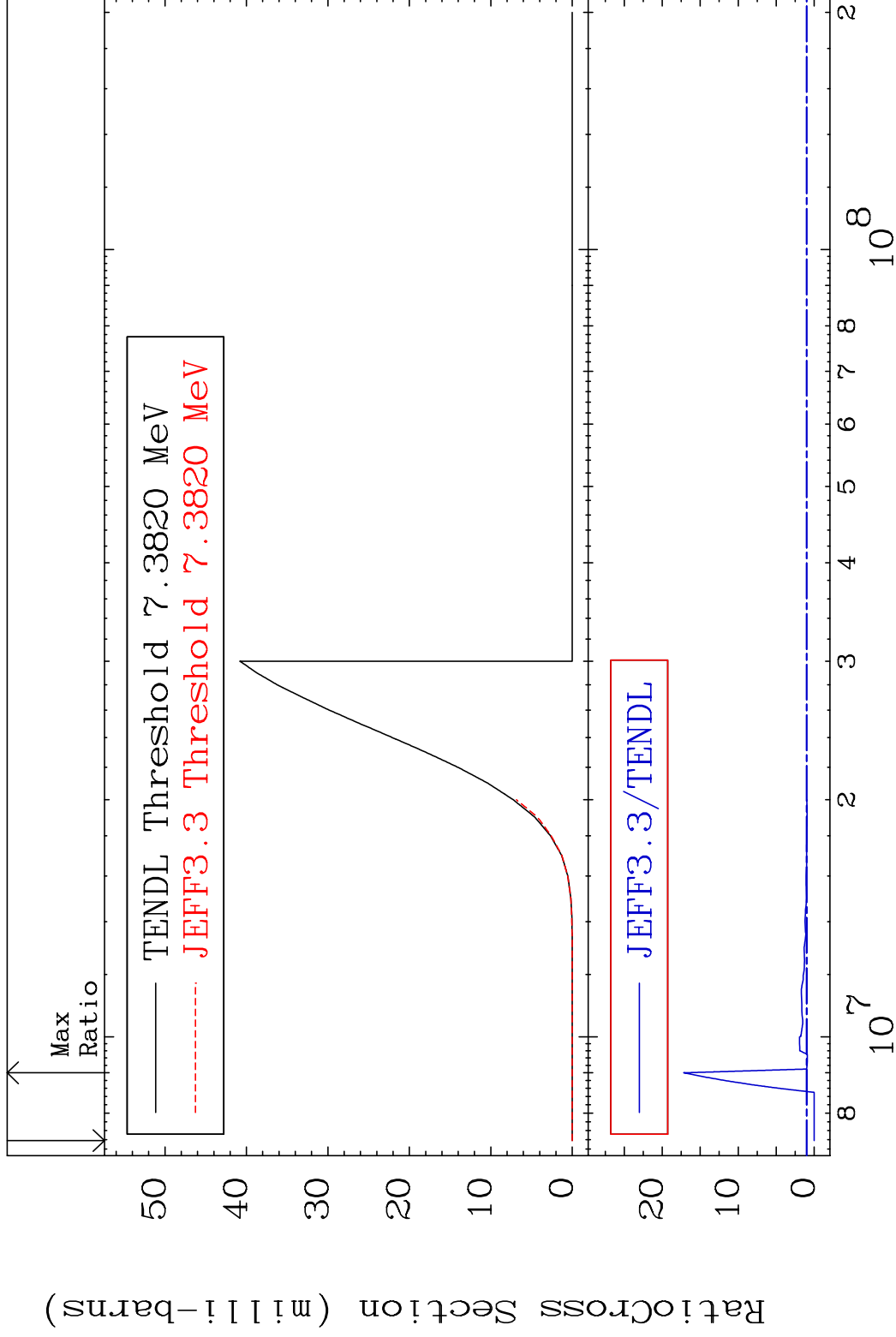
72-Hf-178

MAT 7237

(n, n') p

72-Hf-178

Cross Section -100.0 To 1618. %



9

Incident Energy (eV)

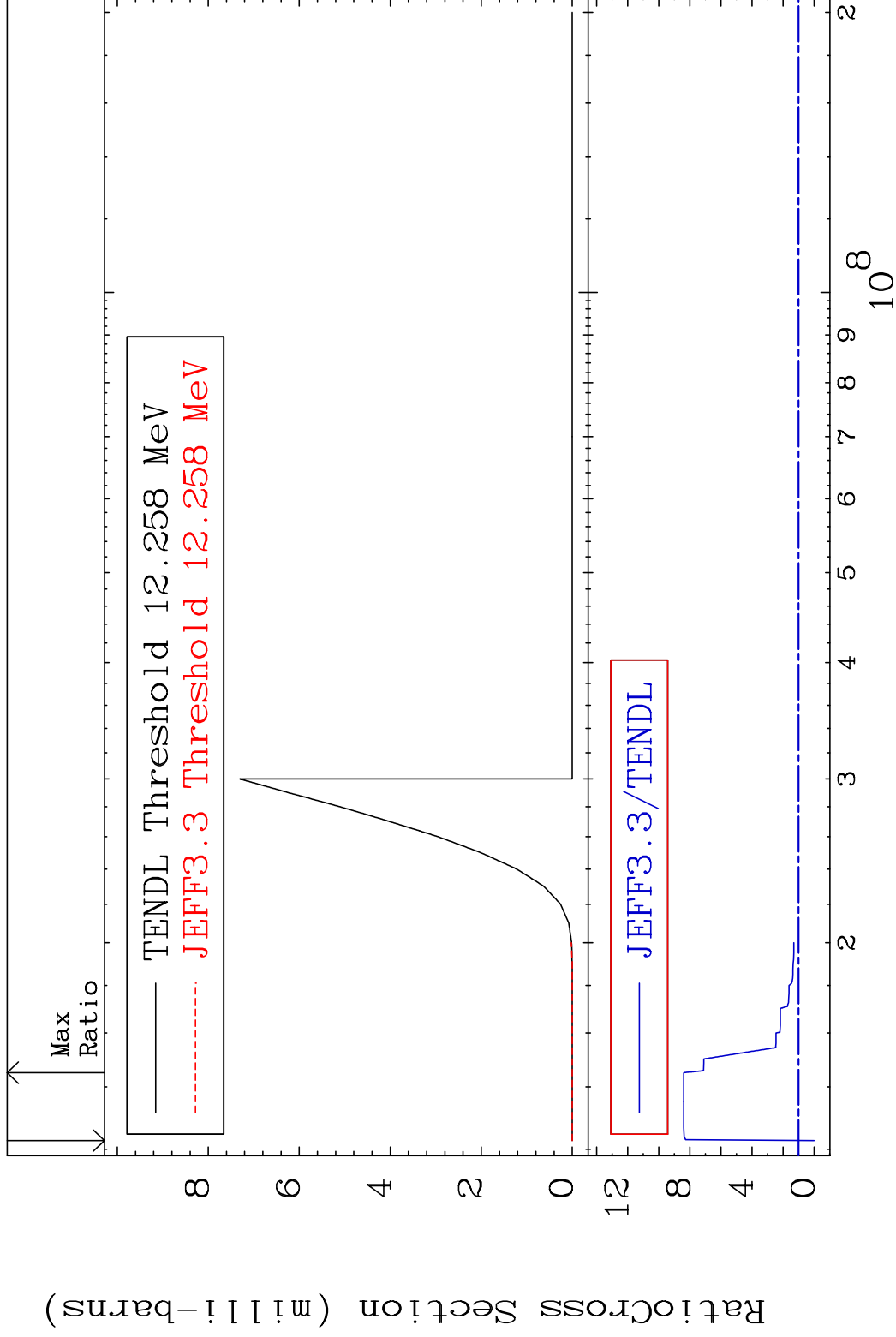
72-Hf-178

MAT 7237

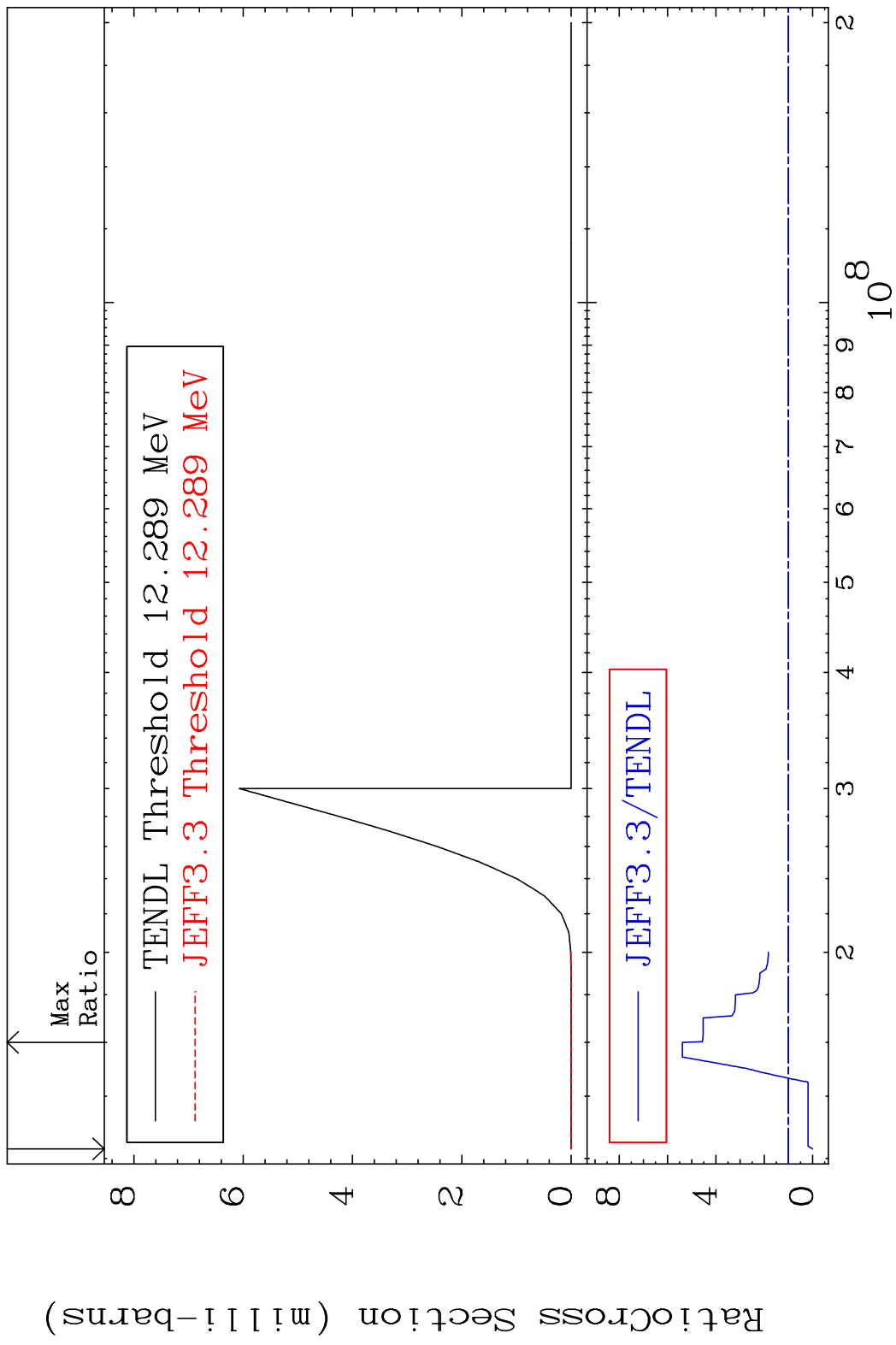
(n, n') d

72-Hf-178

Cross Section -100.0 To 739.4 %



MAT 7237 (n, n') t 72-Hf-178
 Cross Section -100.0 To 439.0 %

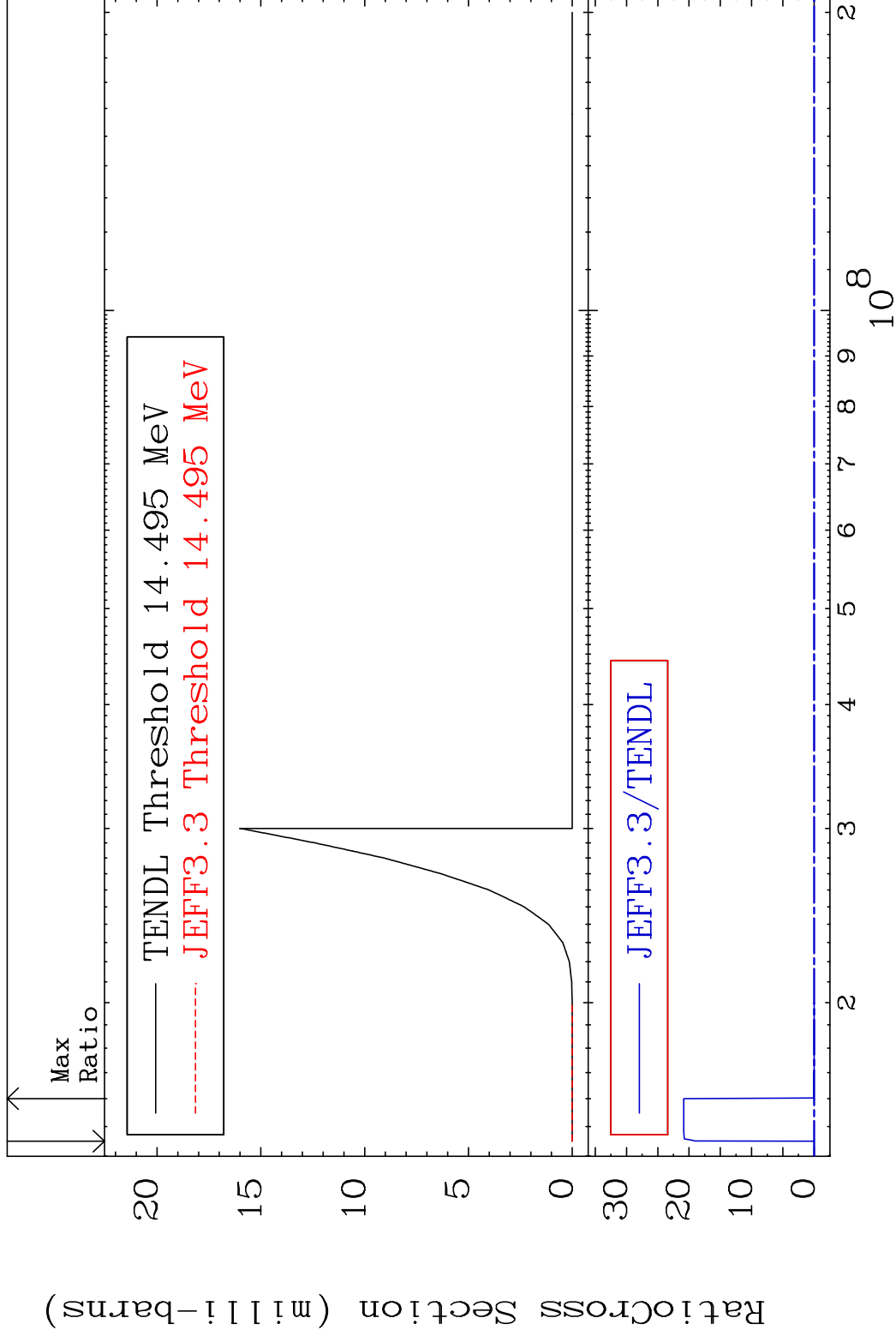


MAT 7237

(n,2n) p

72-Hf-178

Cross Section -100.0 To 9999. %

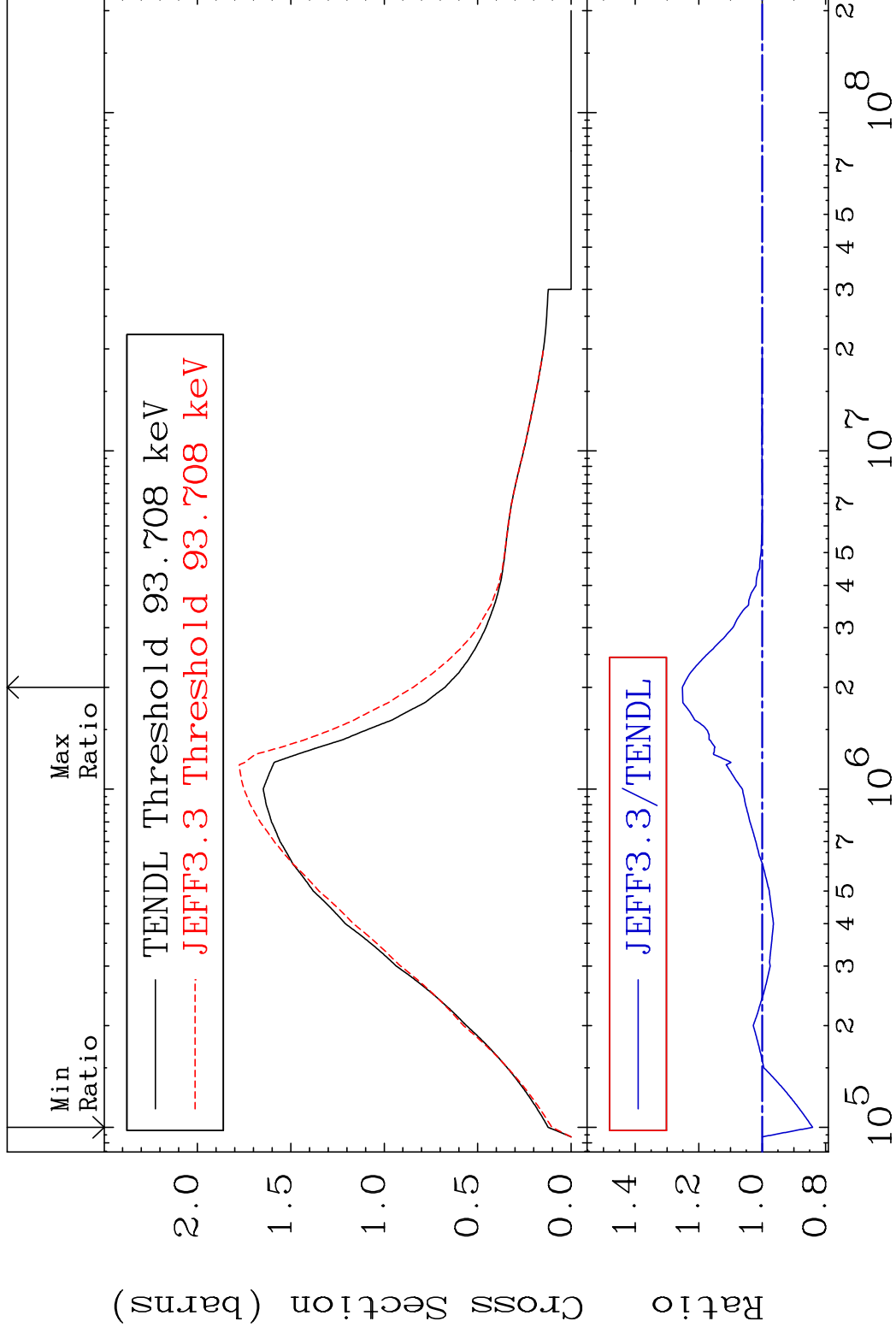


MAT 7237

MT= 51 (n, n') Level

72-Hf-178

Cross Section -15.88 To 25.16 %



13

Incident Energy (eV)

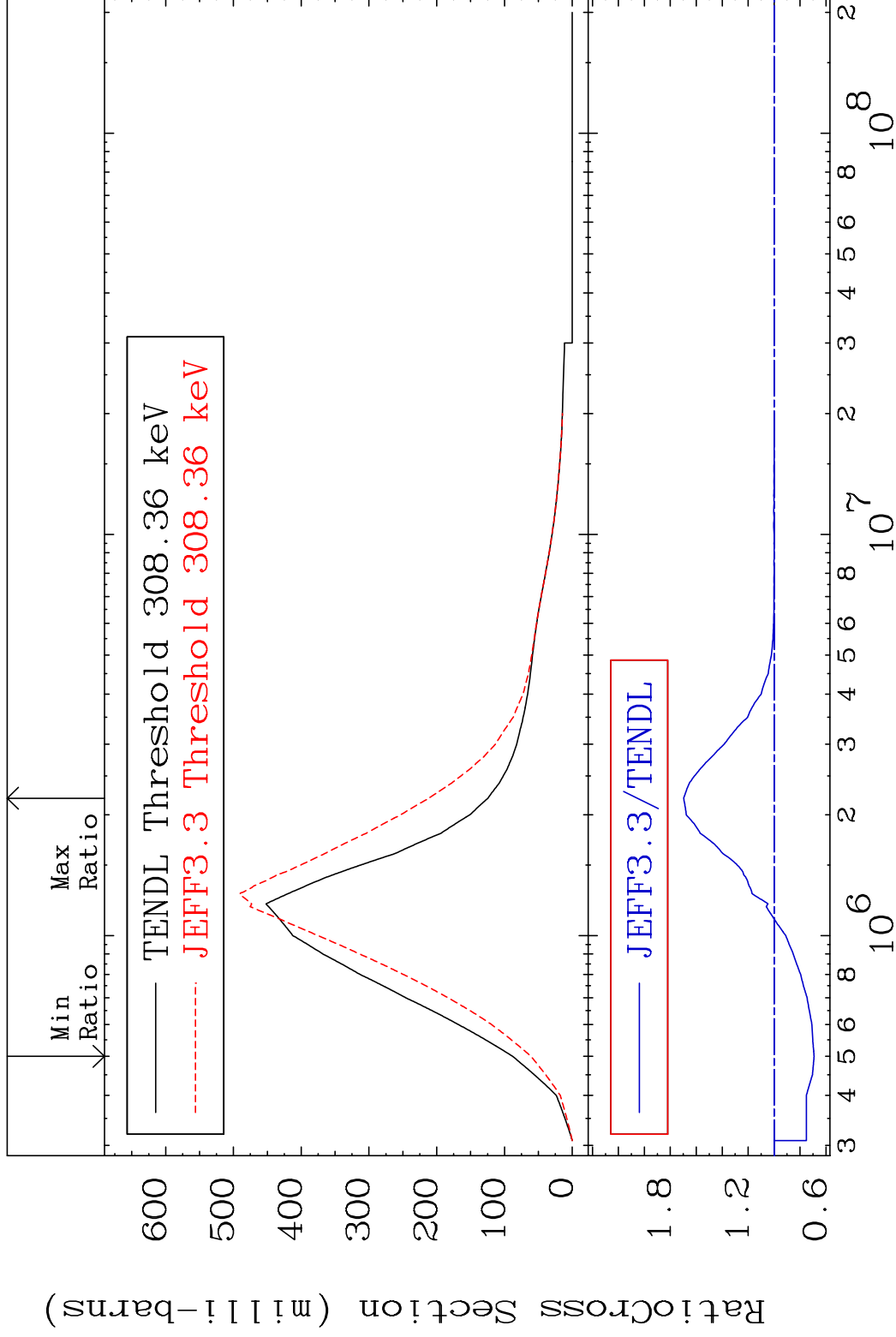
72-Hf-178

MAT 7237

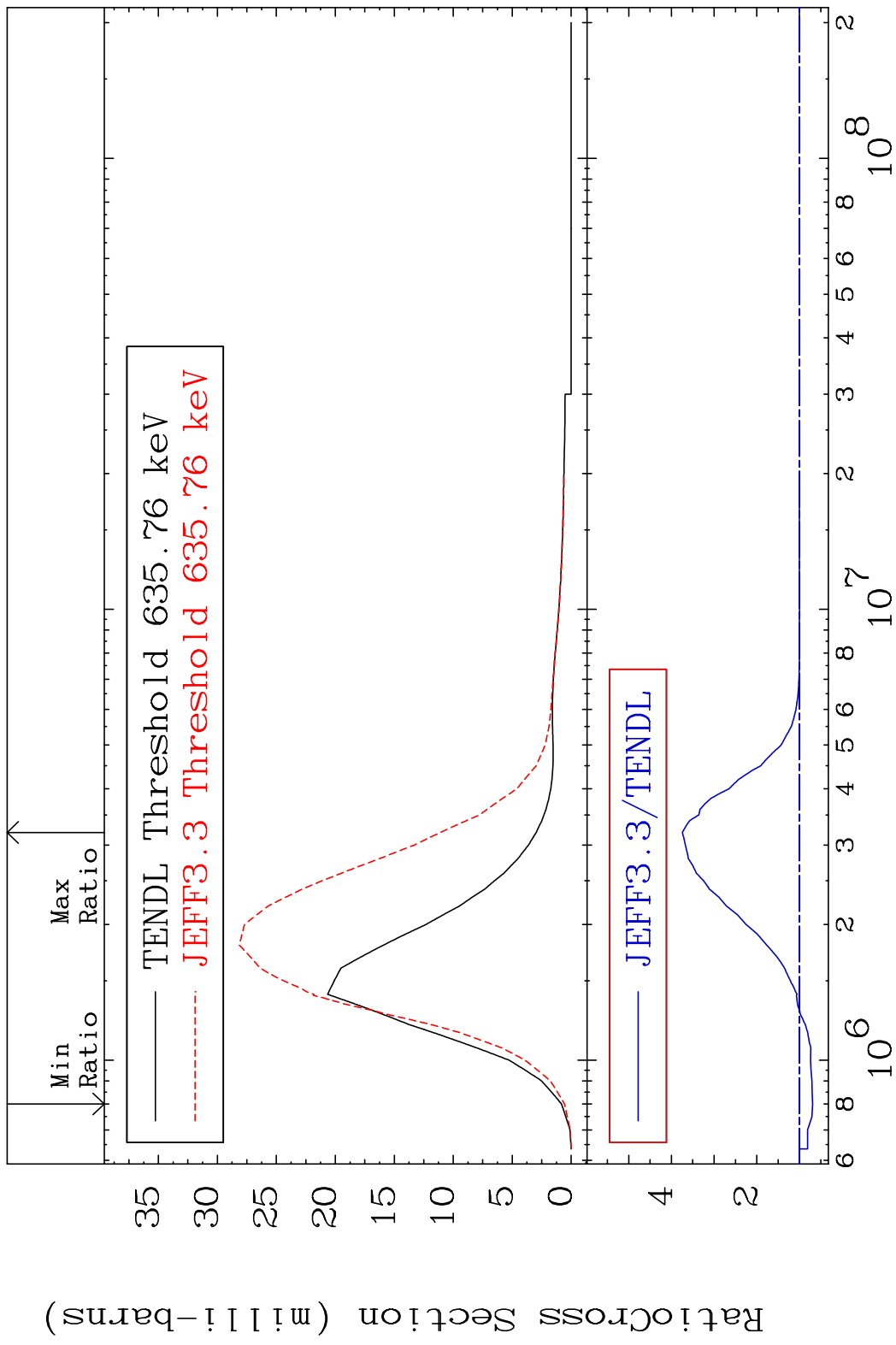
MT= 52 (n, n') Level

72-Hf-178

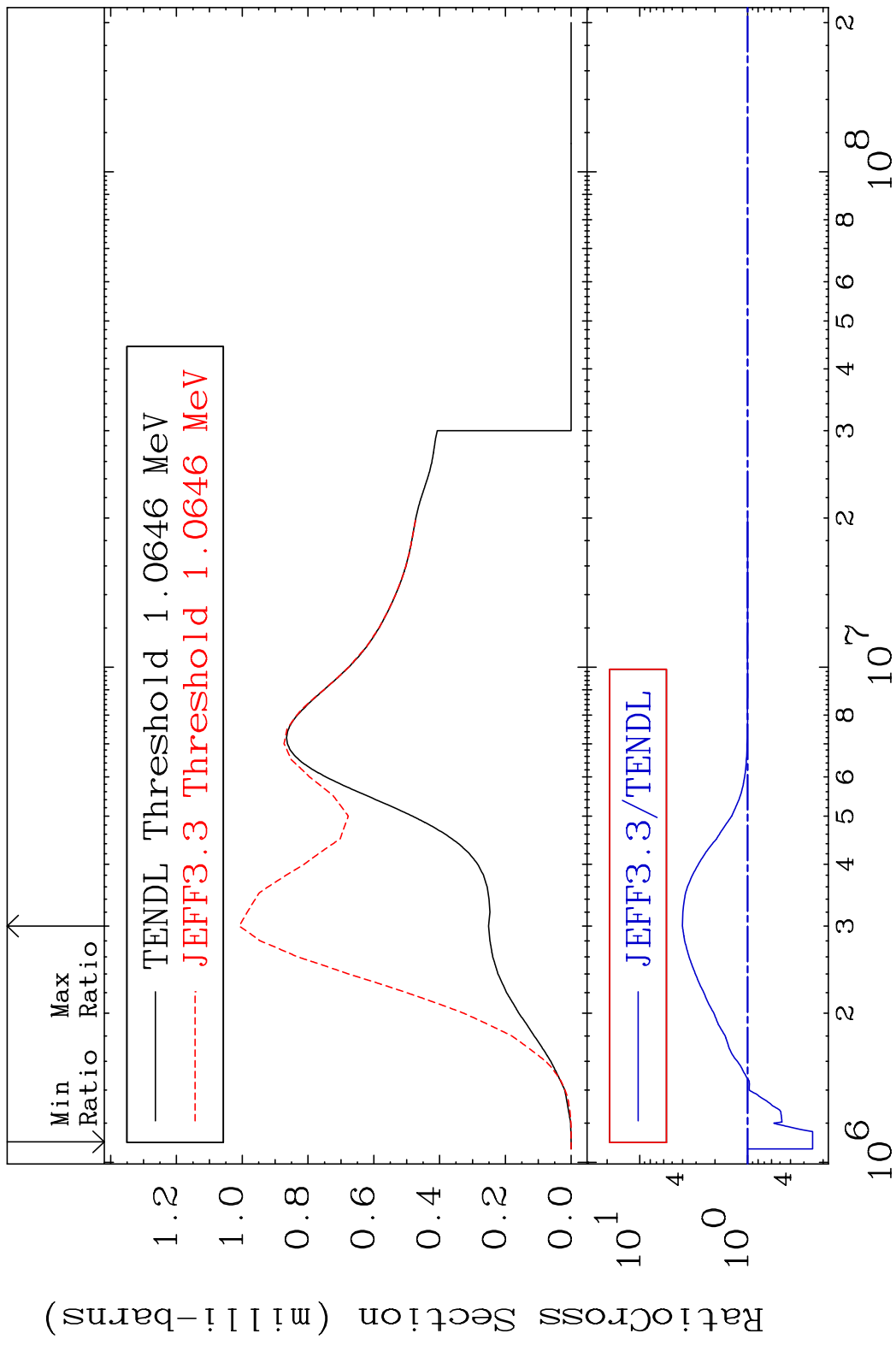
Cross Section -30.84 To 69.72 %



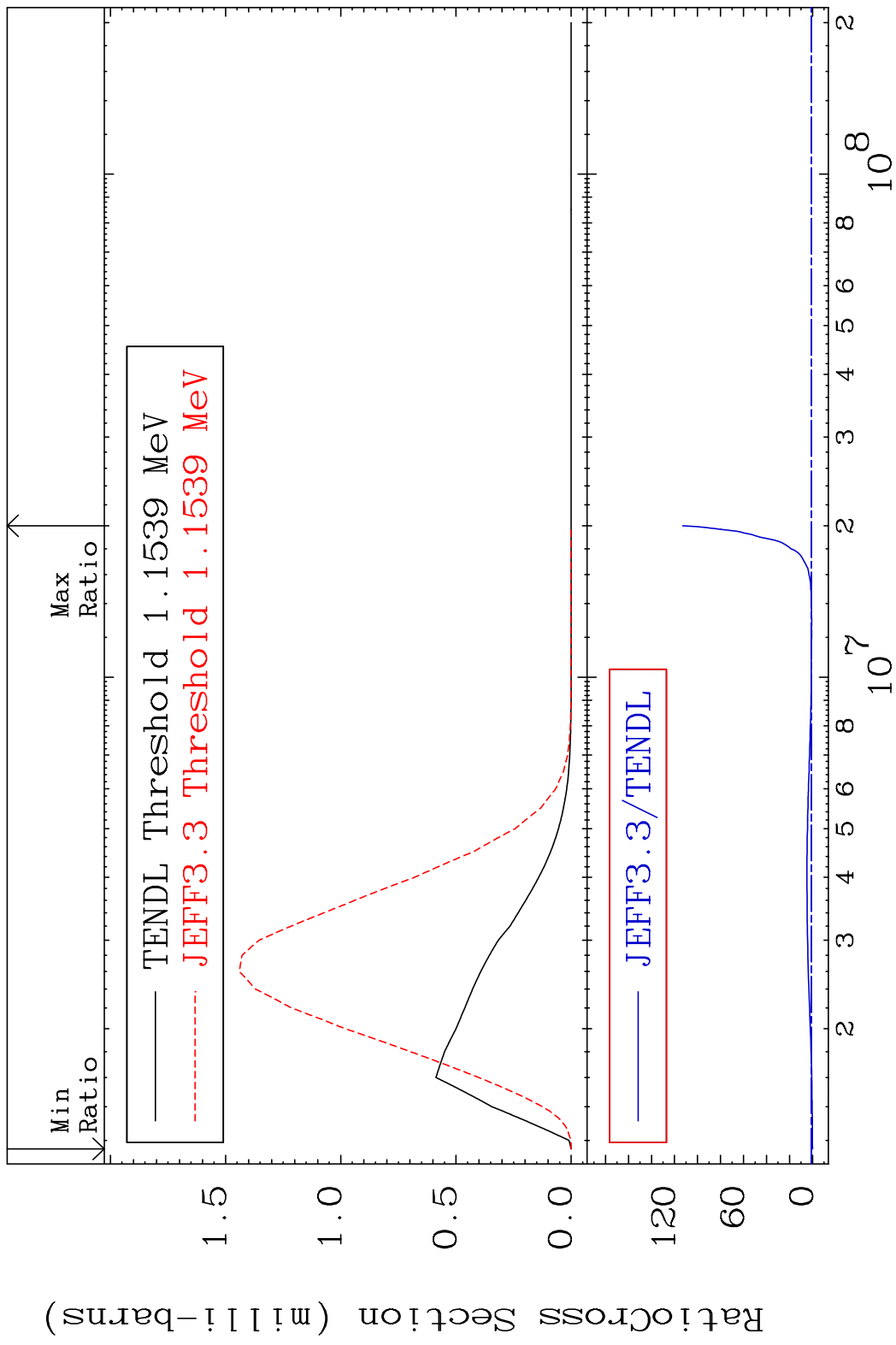
MAT 7237 MT= 53 (n, n') Level 72-Hf-178
 Cross Section -30.60 To 274.4 %



MAT 7237 MT= 54 (n,n') Level 72-Hf-178
 Cross Section -75.00 To 302.2 %



MAT 7237 MT= 55 (n, n') Level 72-Hf-178
 Cross Section -100.0 To 9999. %

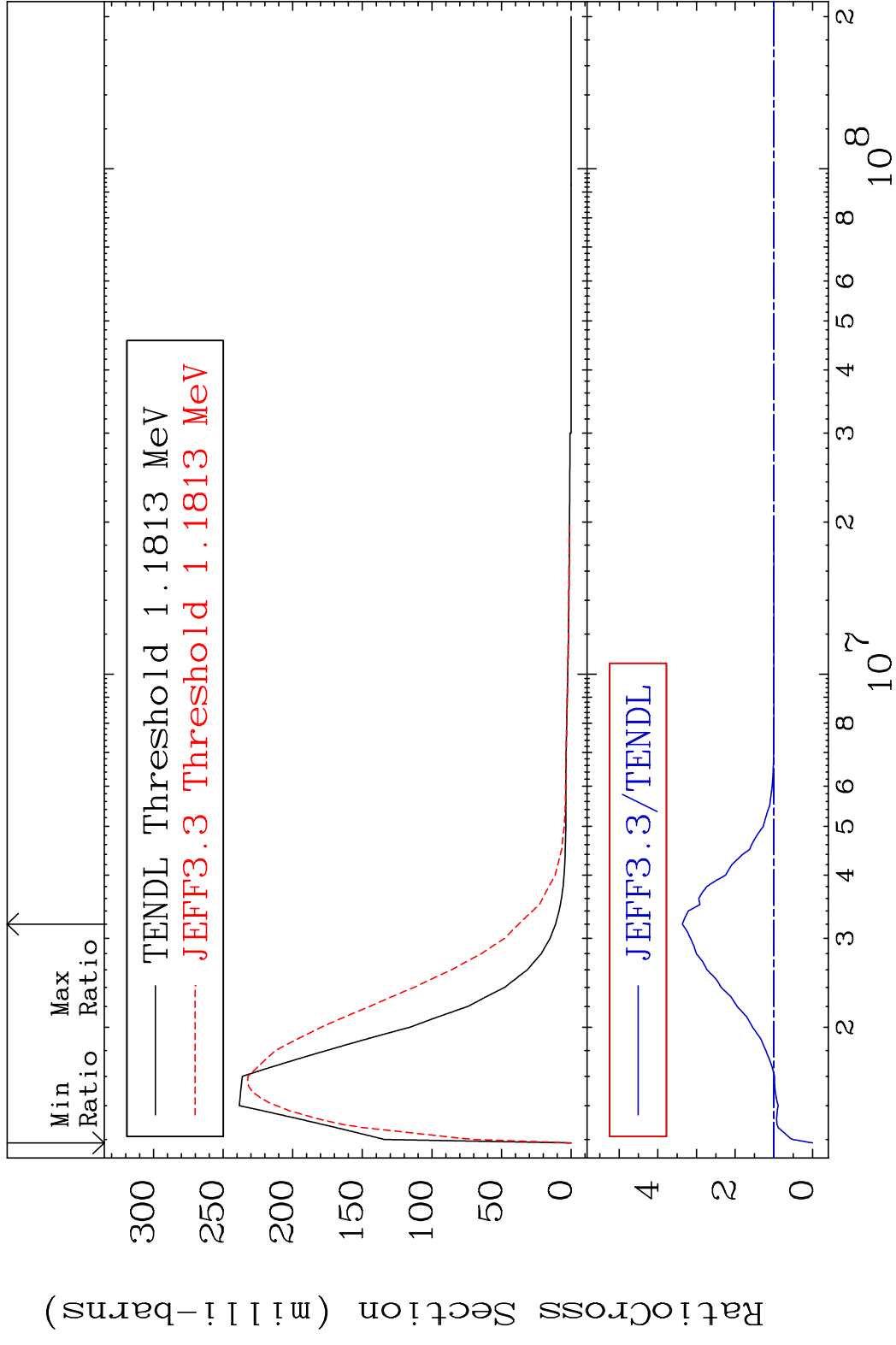


MAT 7237

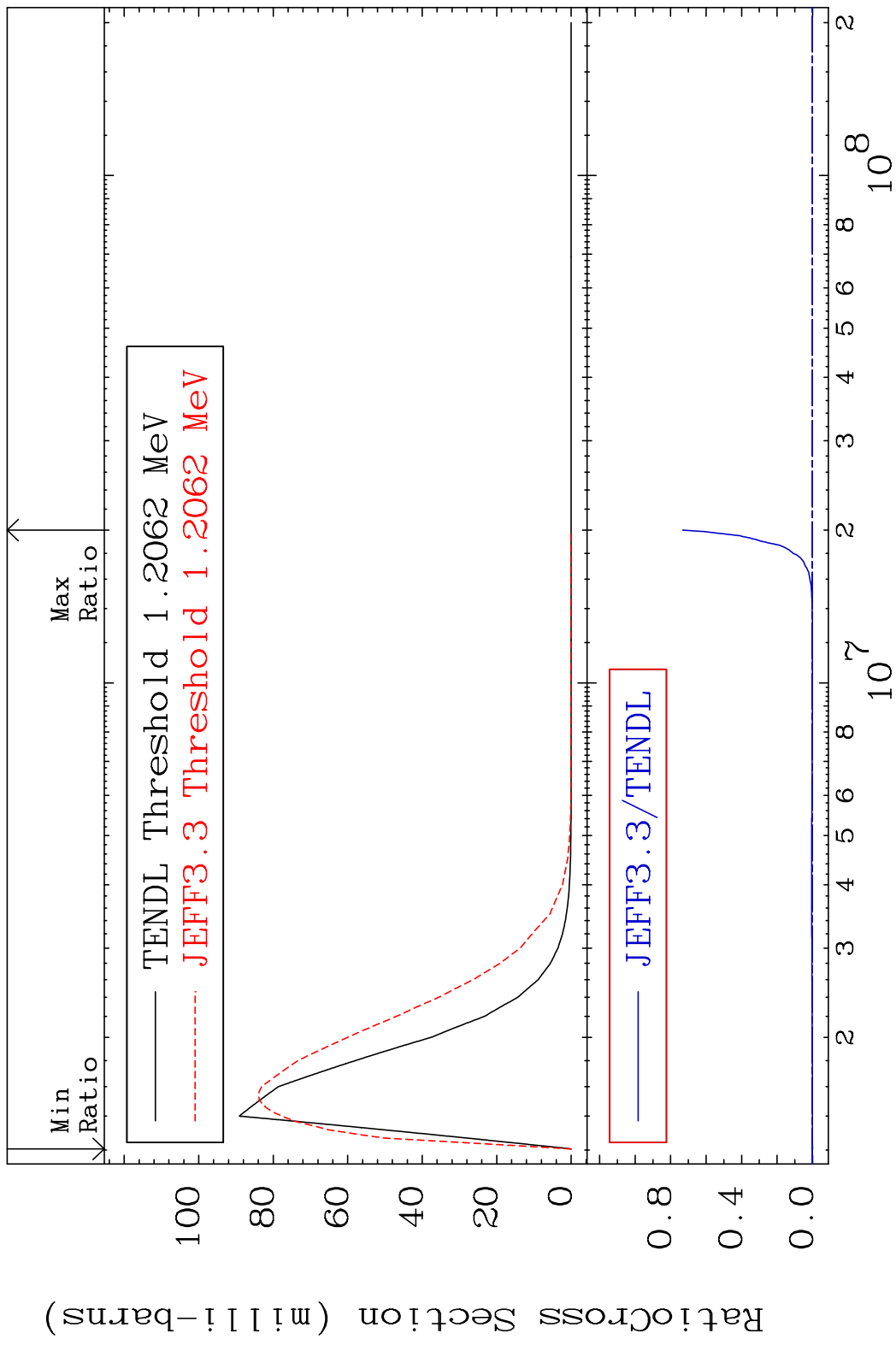
MT= 56 (n, n') Level

72-Hf-178

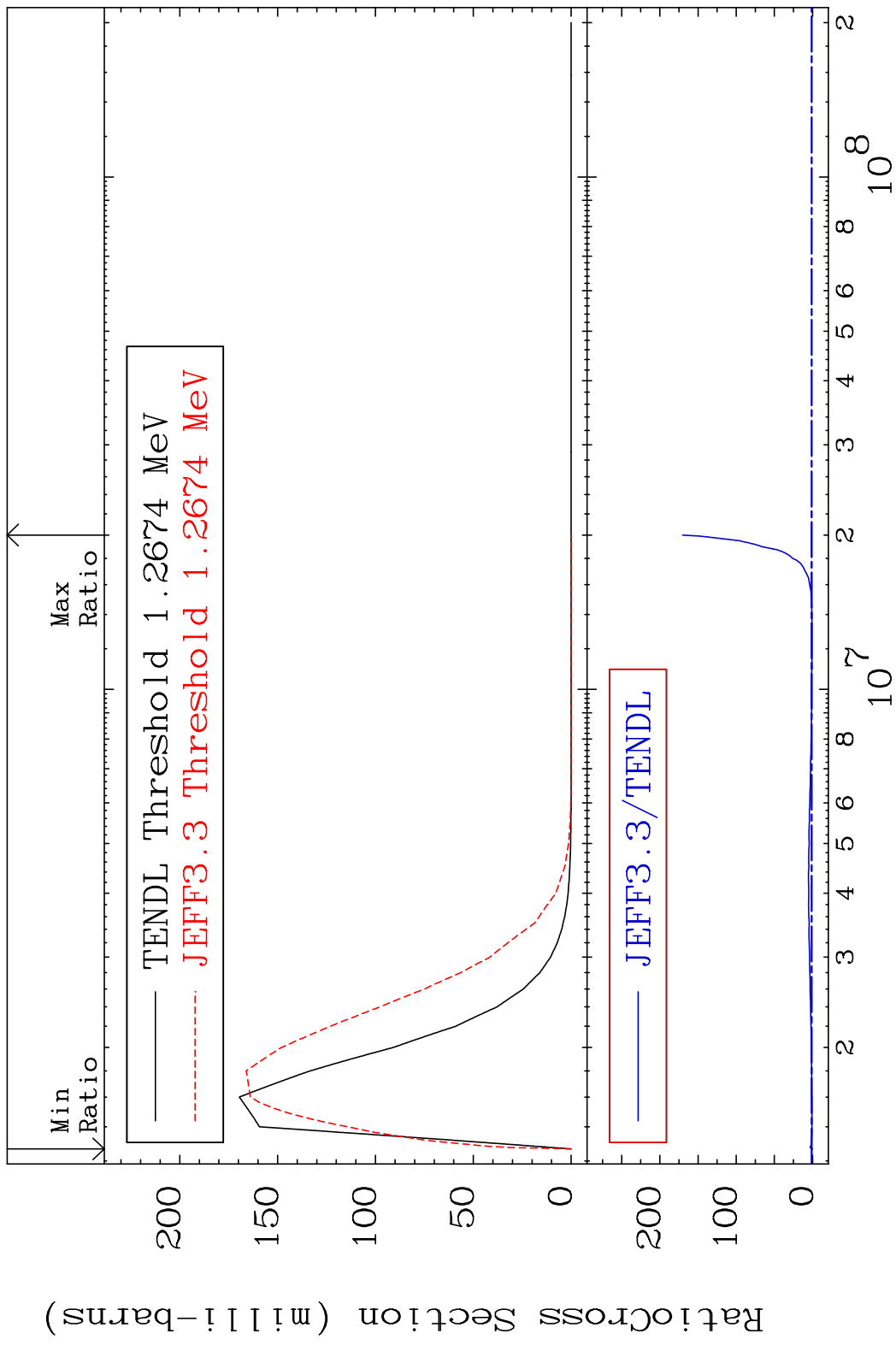
Cross Section -100.0 To 236.5 %



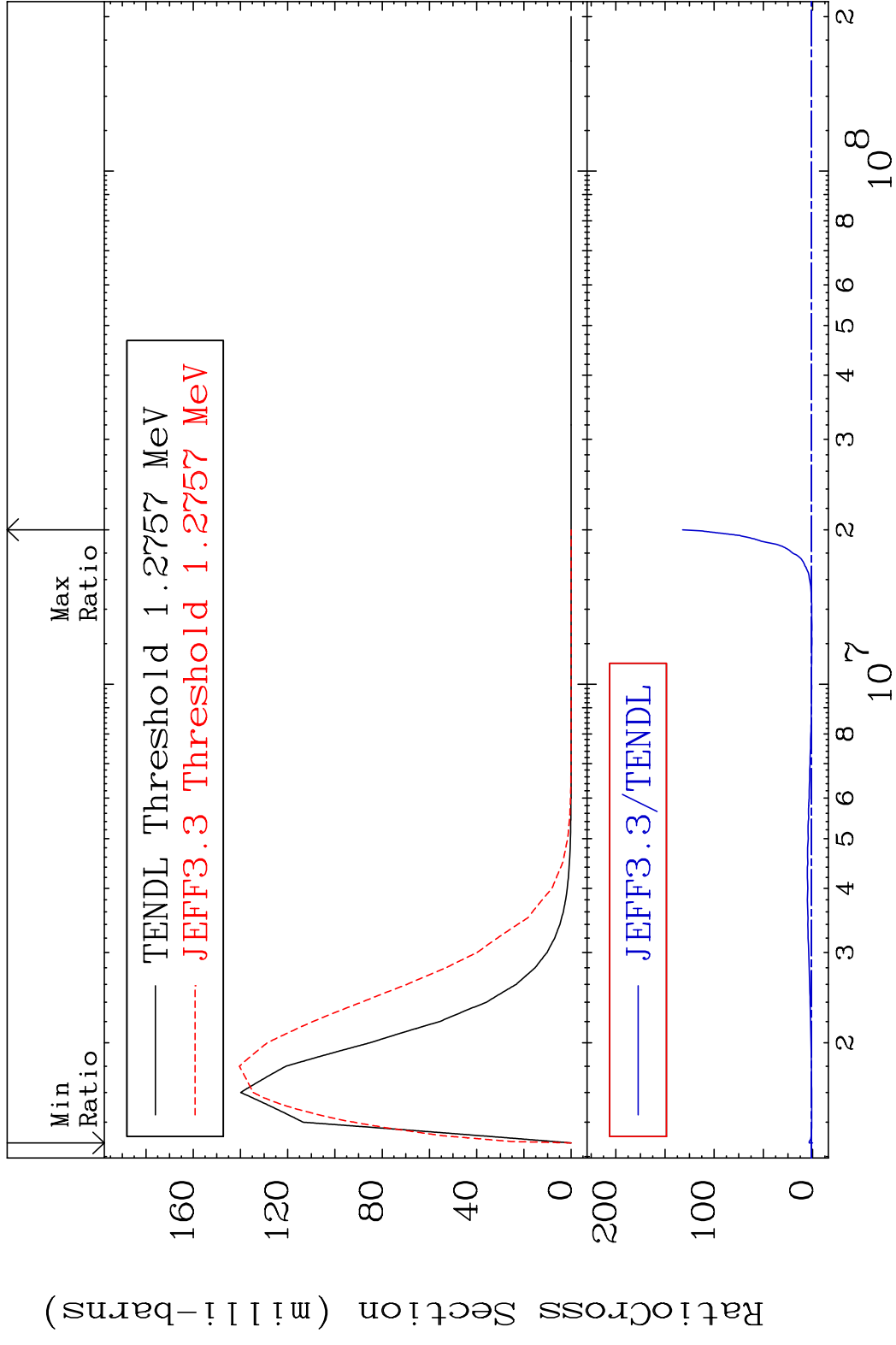
MAT 7237 MT= 57 (n, n') Level 72-Hf-178
 Cross Section -100.0 To 9999. %



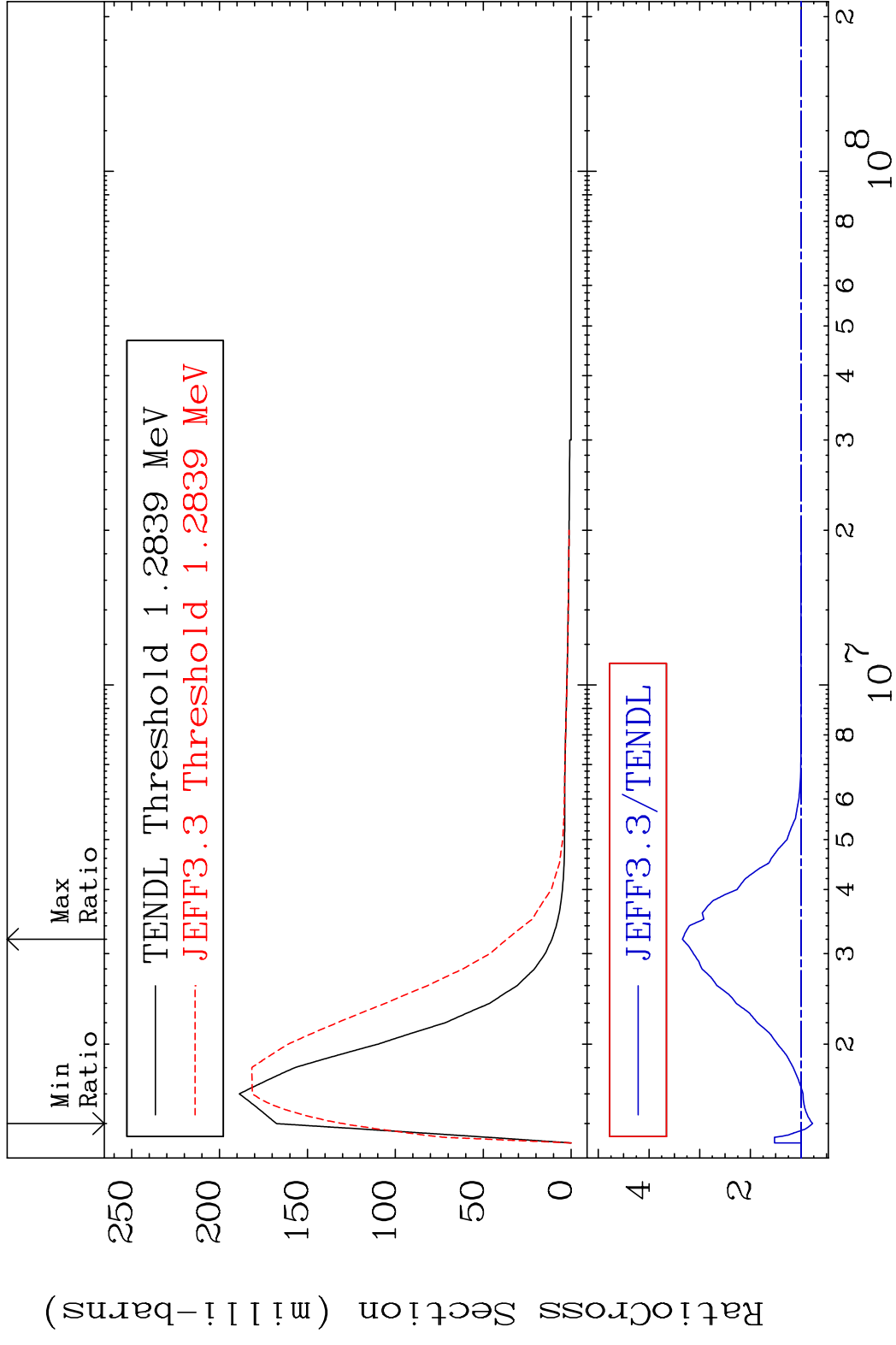
MAT 7237 MT= 58 (n, n') Level 72-Hf-178
 Cross Section -100.0 To 9999. %



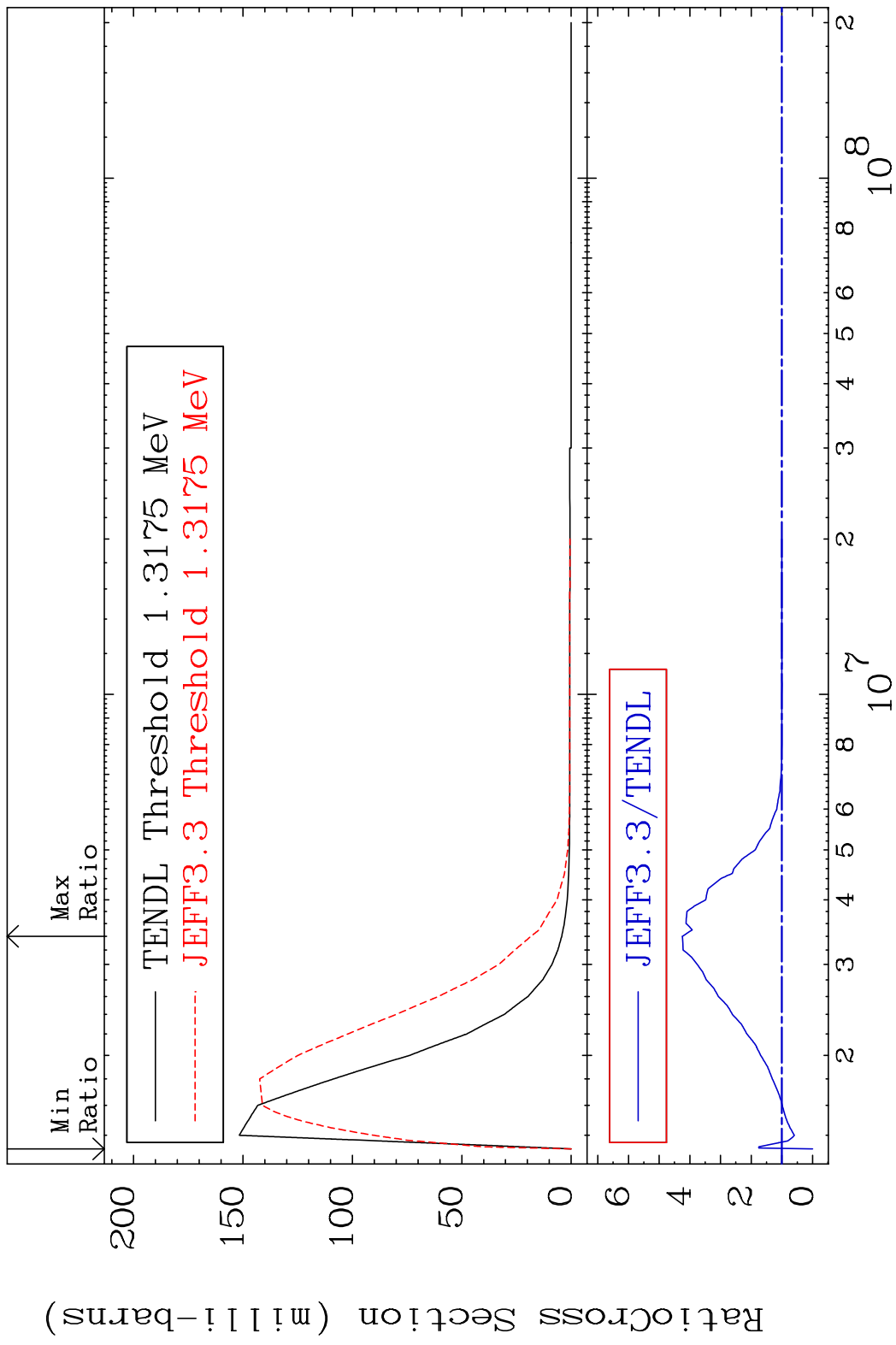
MAT 7237 MT= 59 (n, n') Level 72-Hf-178
 Cross Section -100.0 To 9999. %



MAT 7237 MT= 60 (n, n') Level 72-Hf-178
 Cross Section -22.61 To 234.2 %



MAT 7237 MT= 61 (n, n') Level 72-Hf-178
 Cross Section -100.0 To 324.4 %

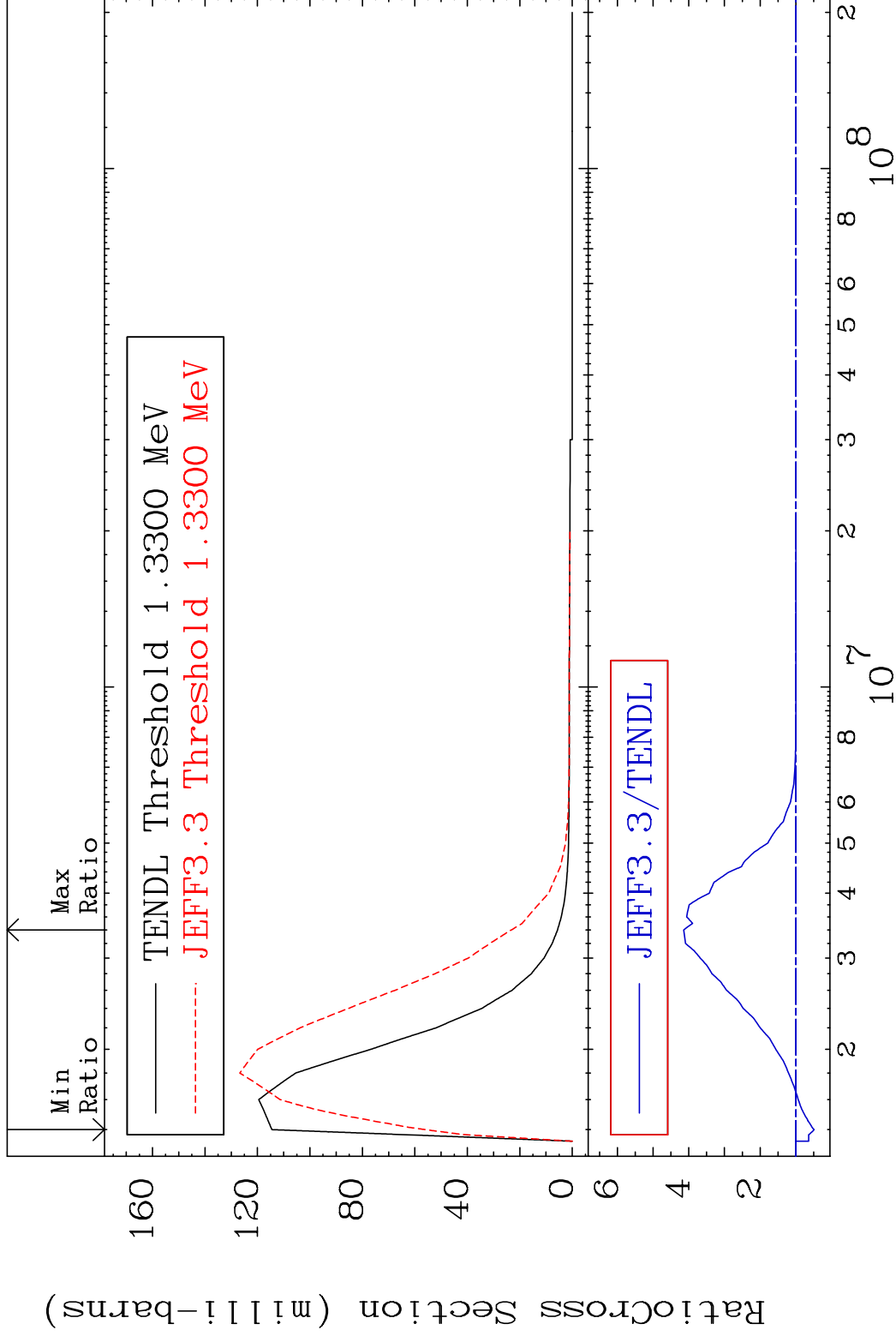


MAT 7237

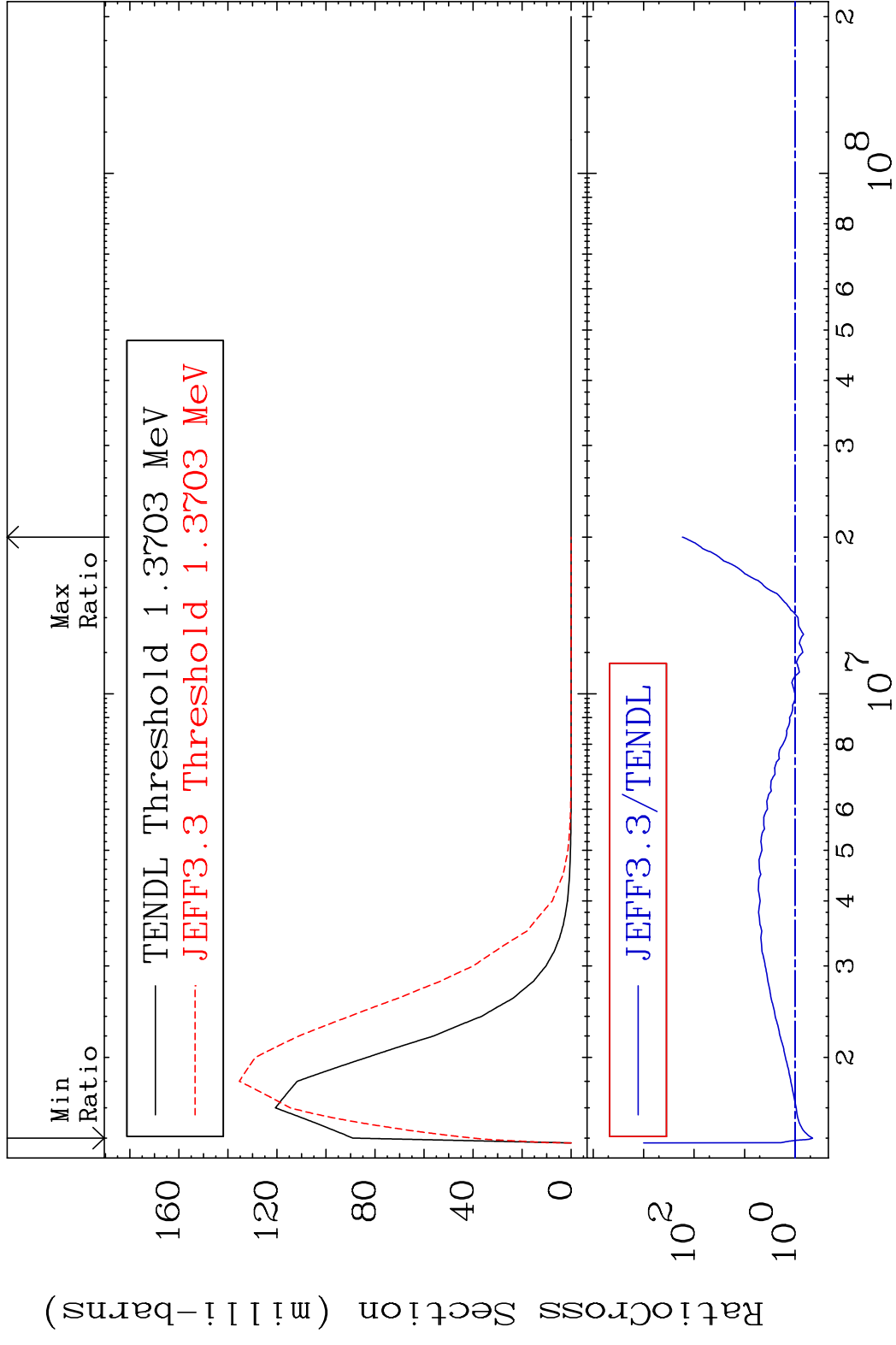
MT= 62 (n, n')

Level 72-Hf-178

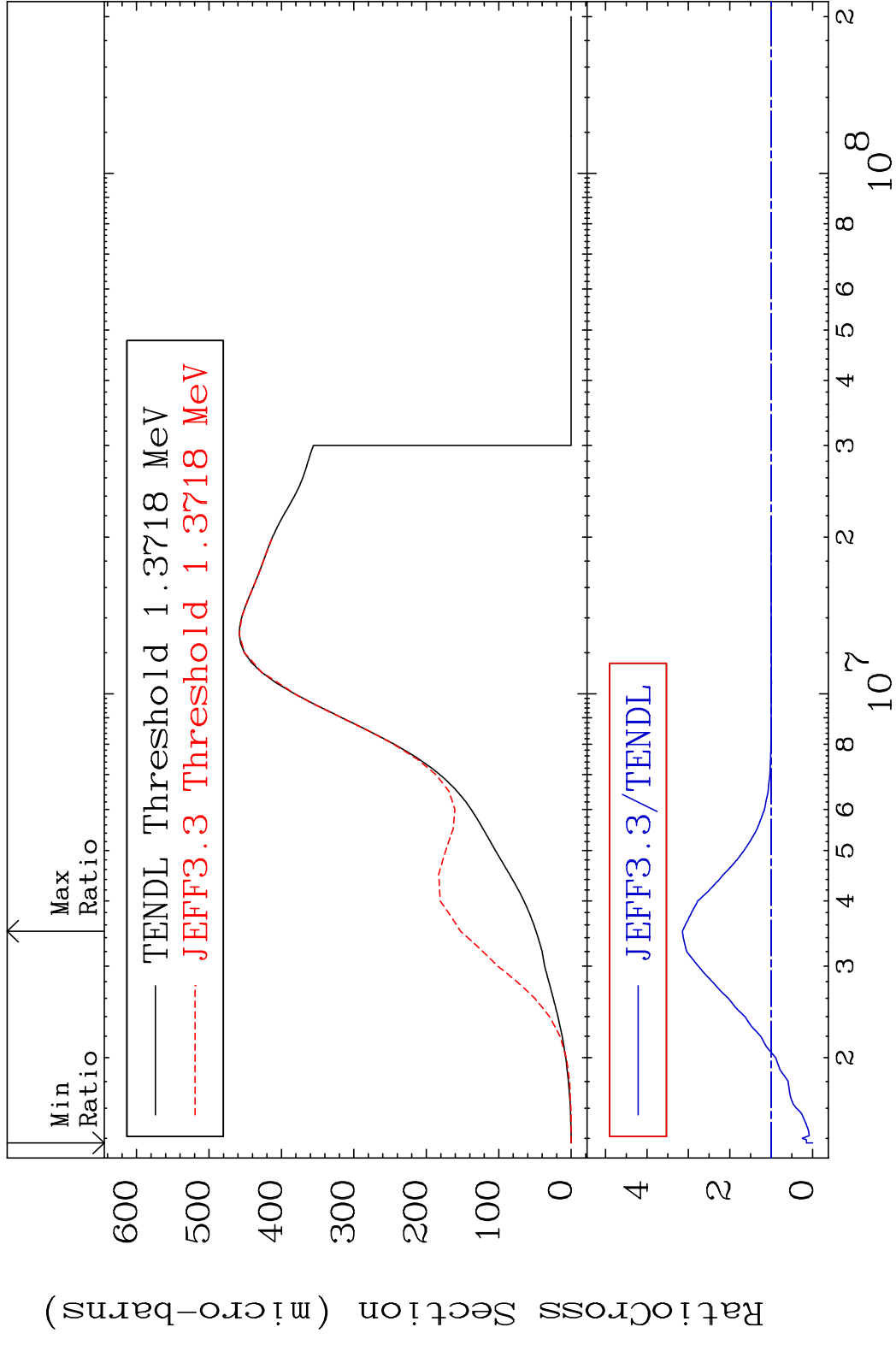
Cross Section -51.22 To 314.3 %



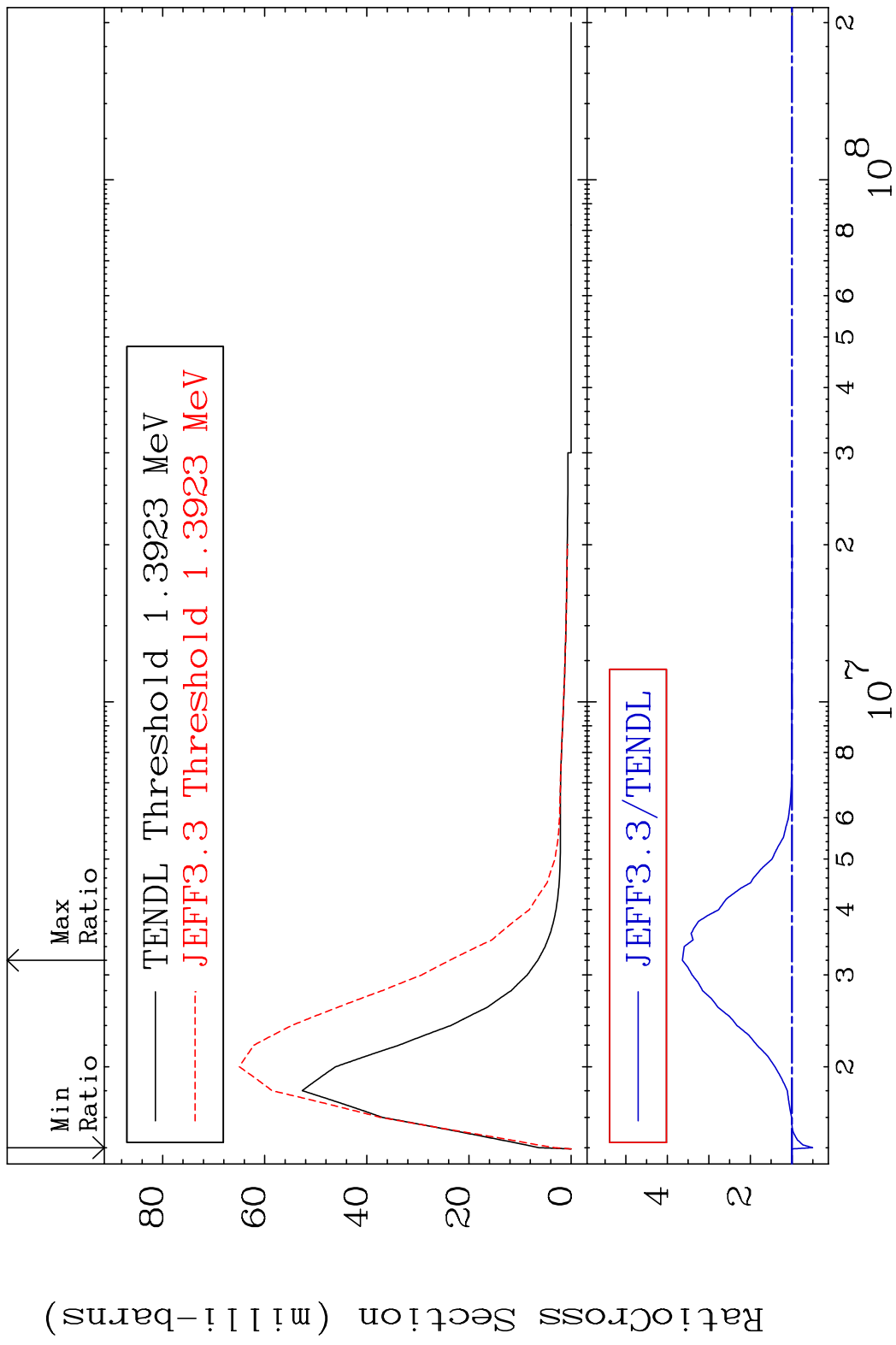
MAT 7237 MT= 63 (n, n') Level 72-Hf-178
 Cross Section -55.06 To 9999. %



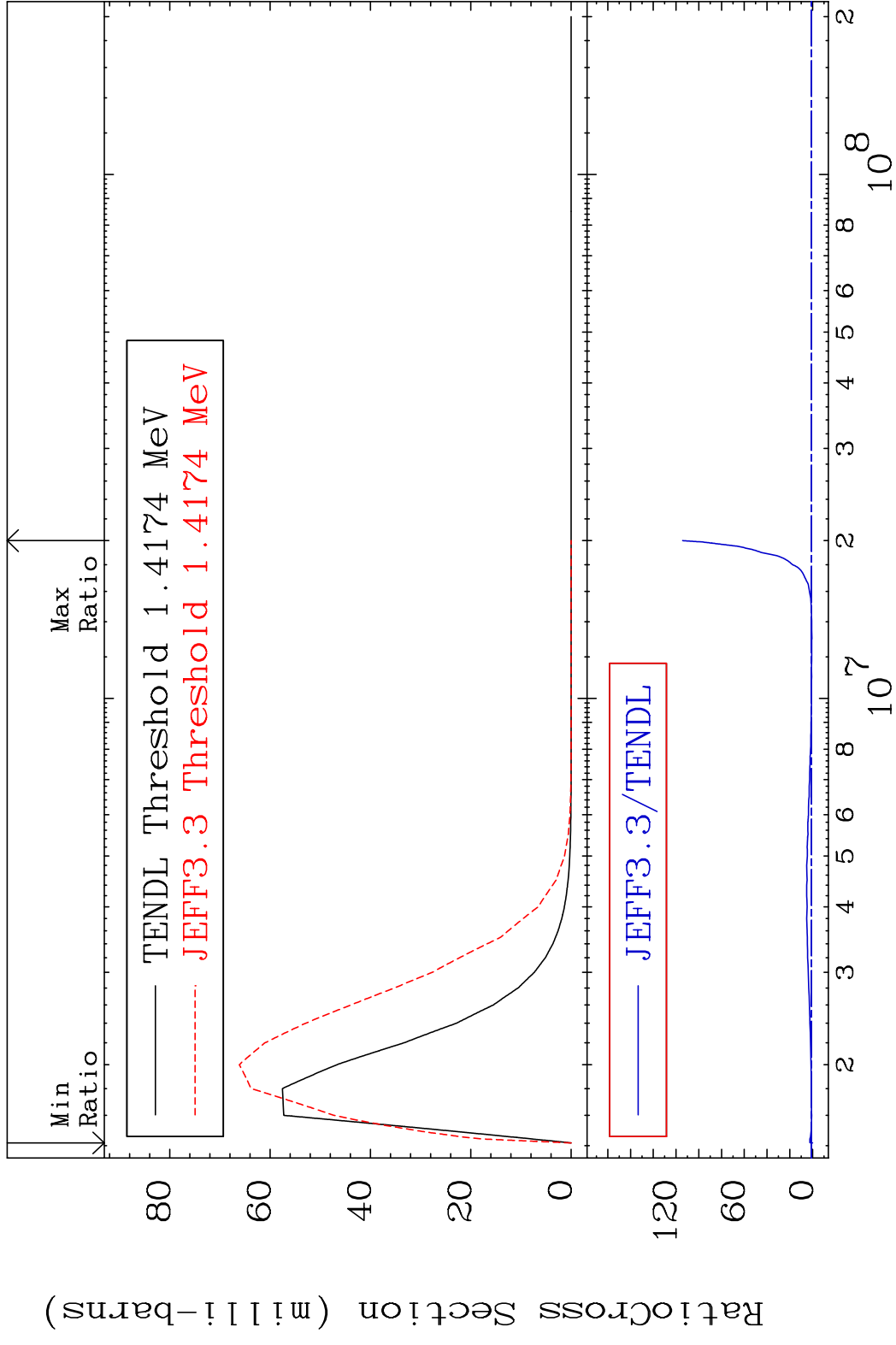
MAT 7237 MT= 64 (n,n') Level 72-Hf-178
 Cross Section -100.0 To 214.6 %



MAT 7237 MT= 65 (n,n') Level 72-Hf-178
 Cross Section -49.54 To 263.8 %



MAT 7237 MT= 66 (n, n') Level 72-Hf-178
 Cross Section -100.0 To 9999. %

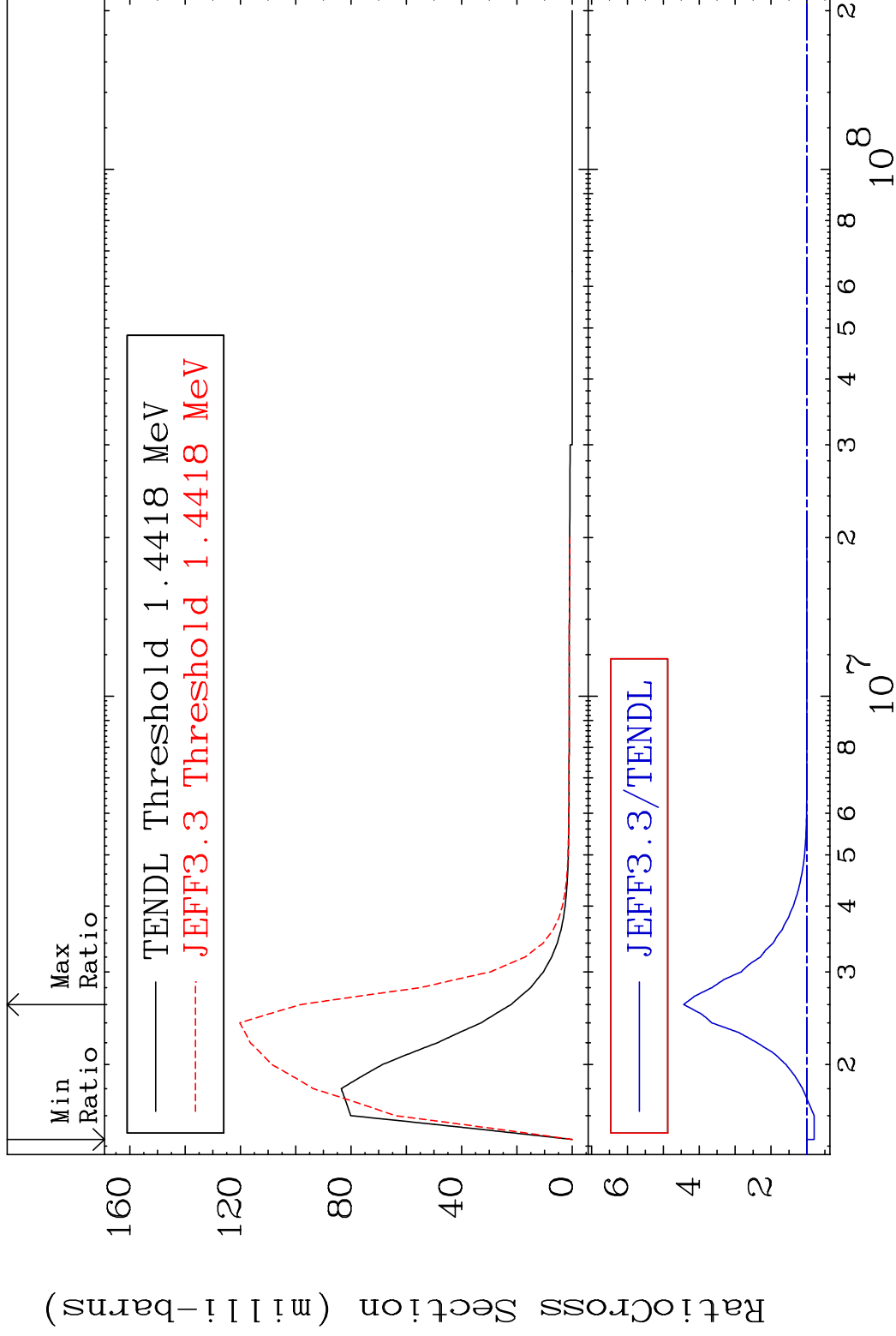


MAT 7237

MT= 67 (n, n') Level

72-Hf-178

Cross Section -20.12 To 343.3 %

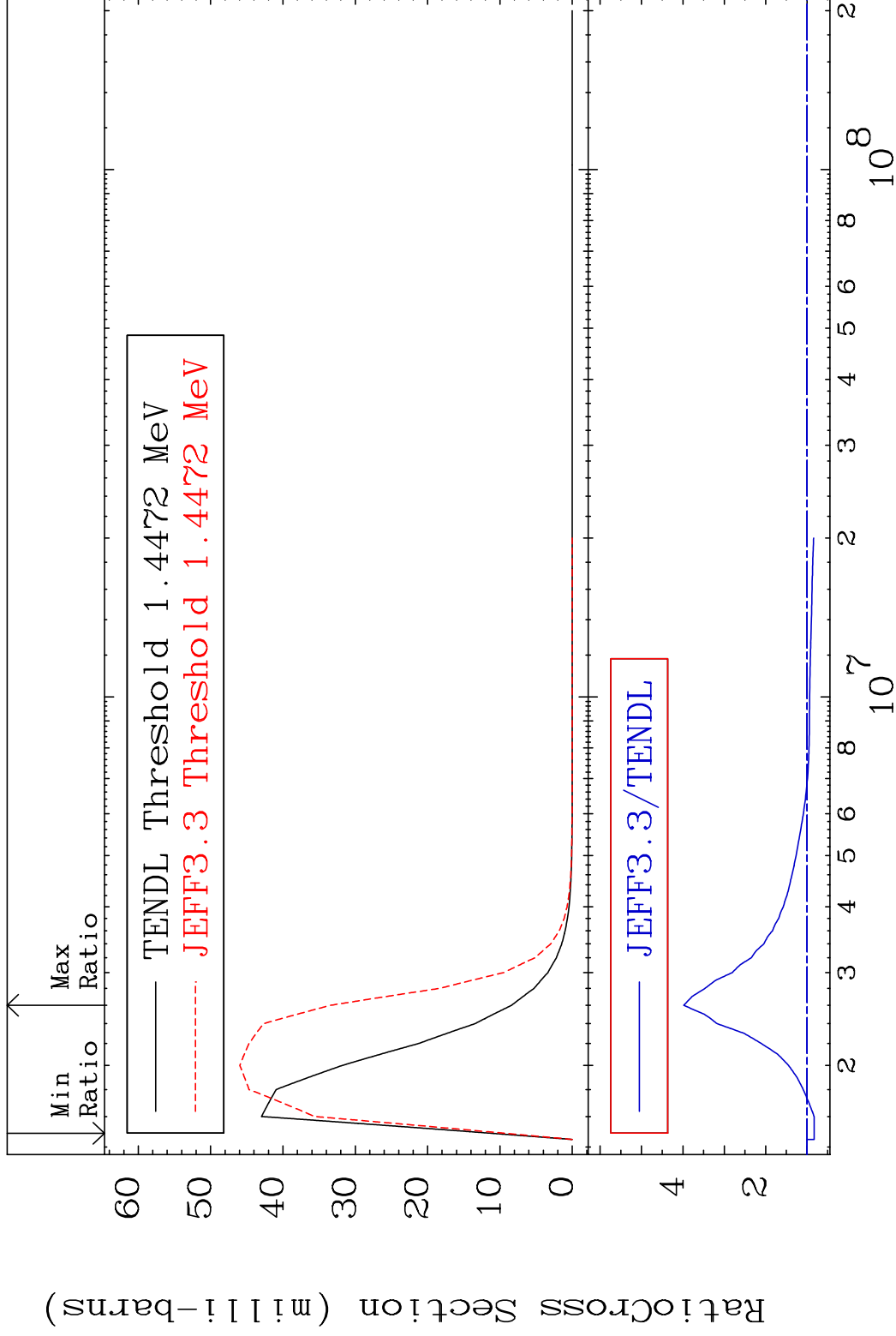


MAT 7237

MT= 68 (n, n') Level

72-Hf-178

Cross Section -17.07 To 298.2 %



30

Incident Energy (eV)

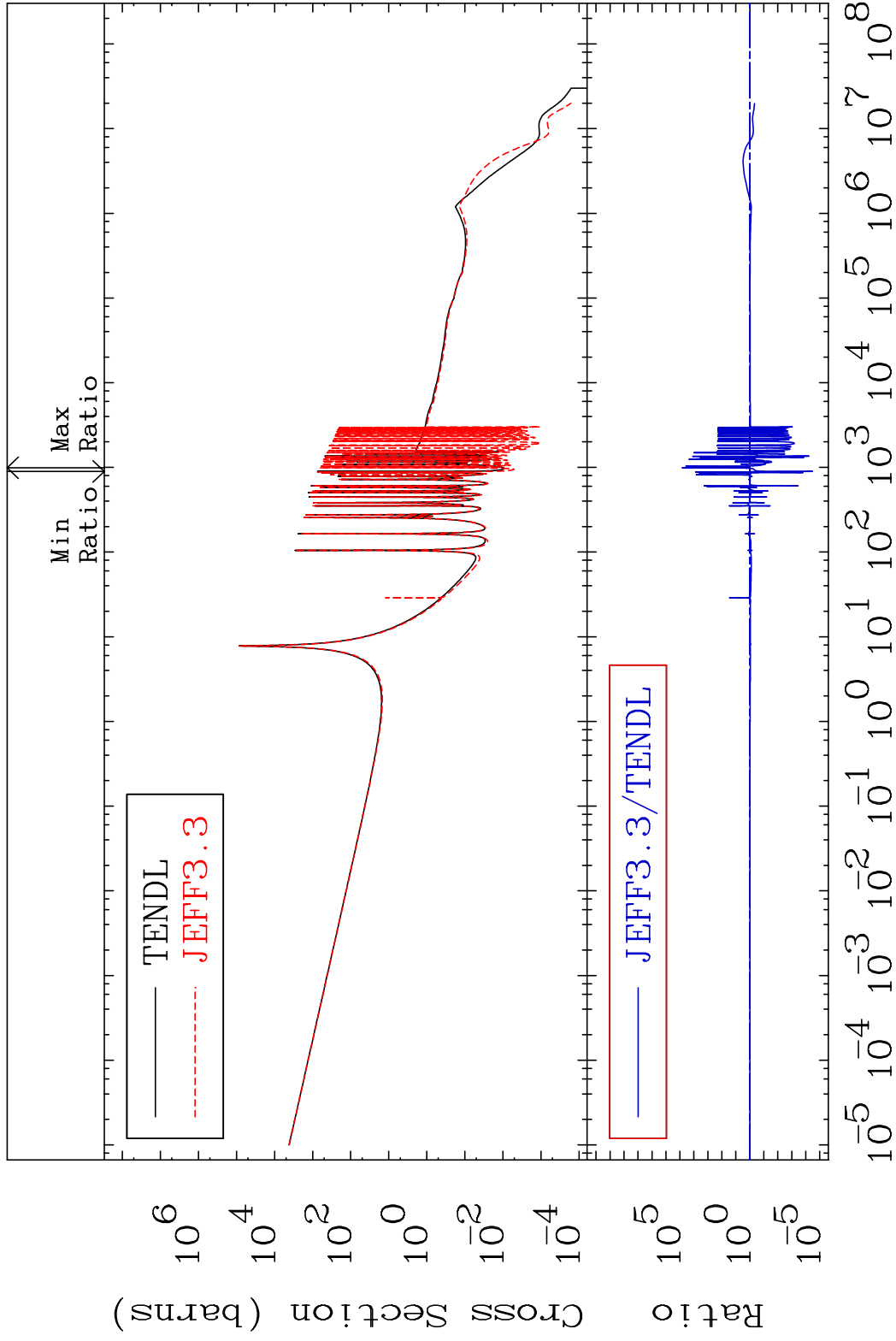
72-Hf-178

MAT 7237

(n, γ)

72-Hf-178

Cross Section -100.0 To 9999. %



32

Incident Energy (eV)

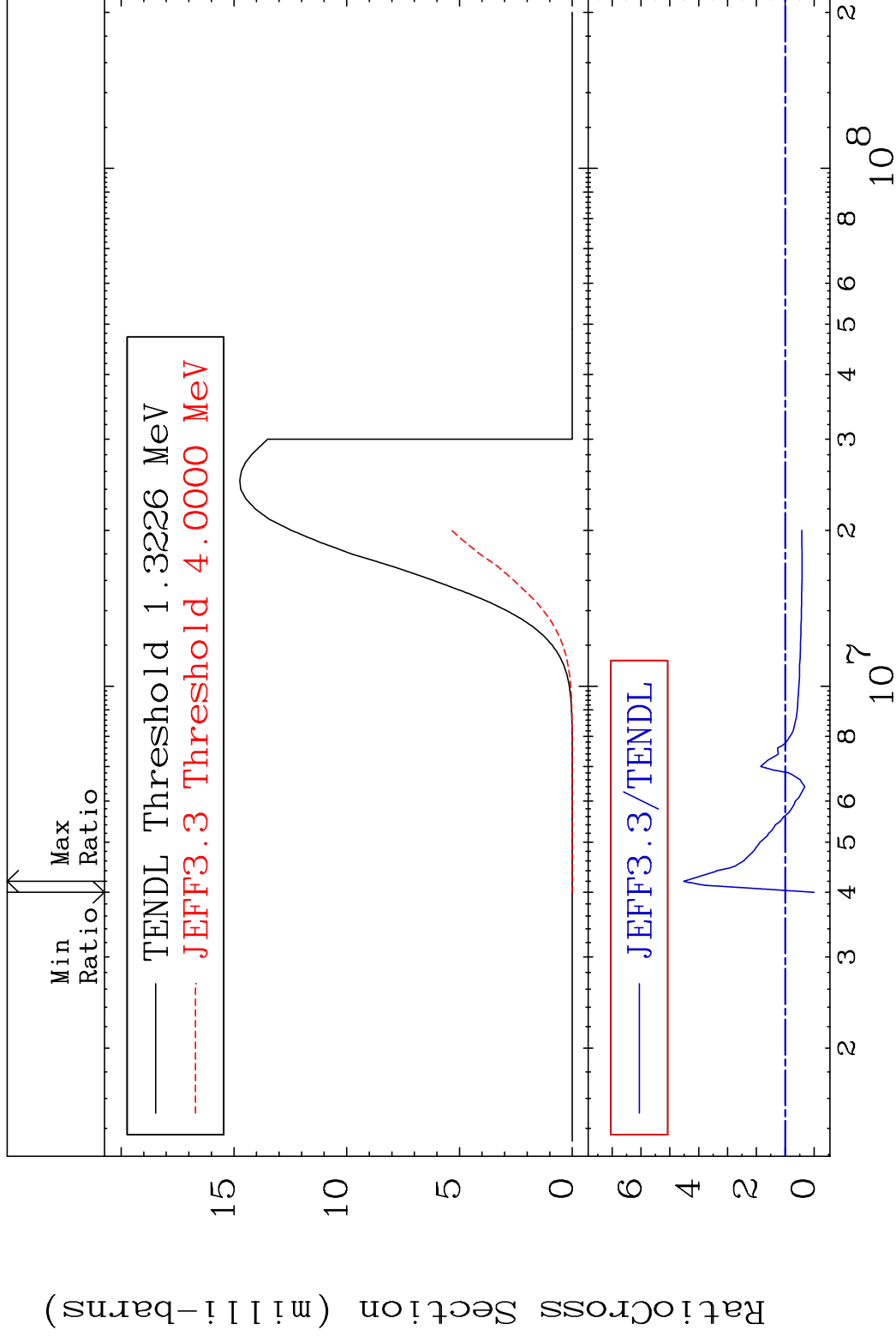
72-Hf-178

MAT 7237

(n, p)

72-Hf-178

Cross Section -100.0 To 352.1 %

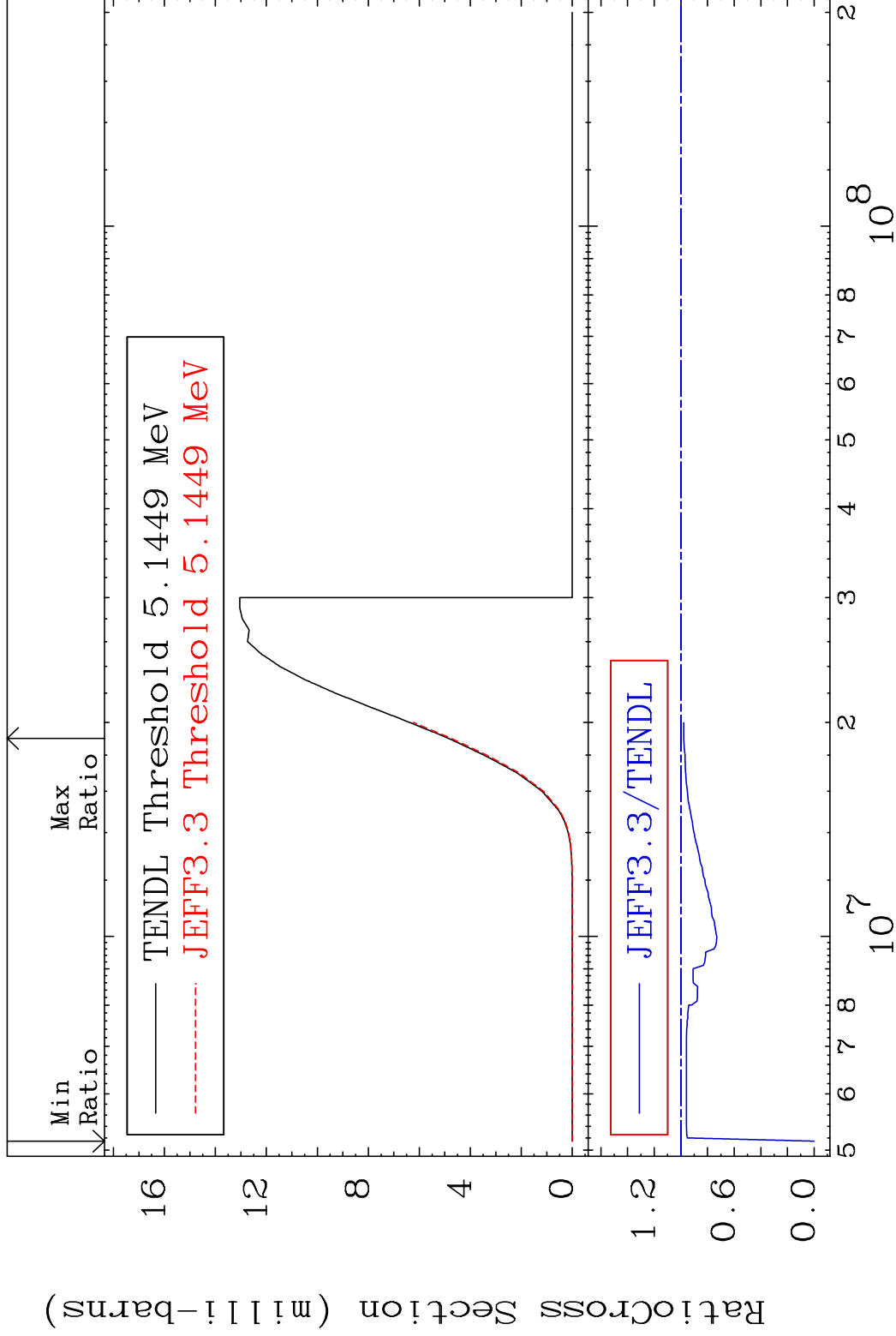


MAT 7237

(n,d)

72-Hf-178

Cross Section -100.0 To -2.097%

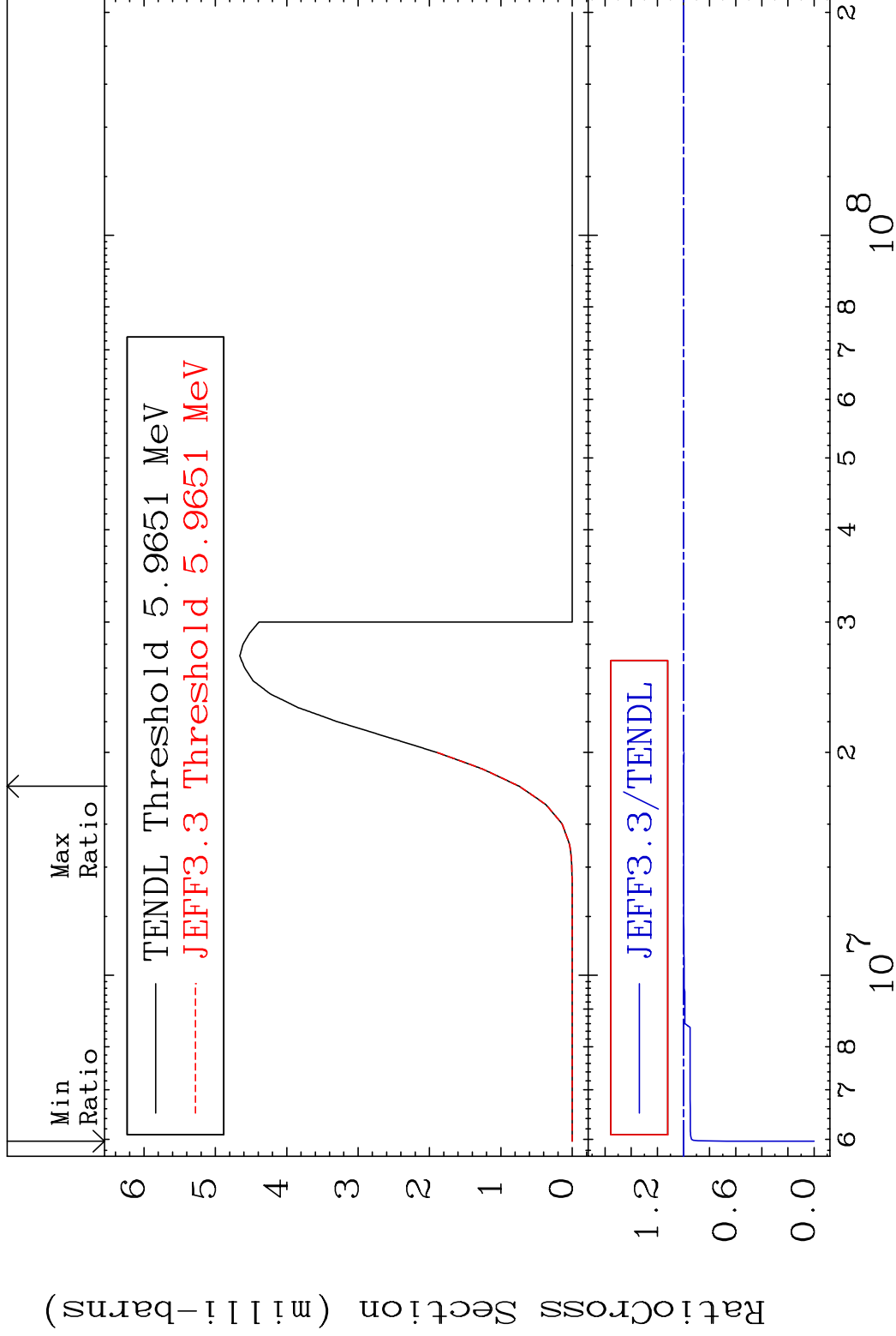


MAT 7237

(n, t)

72-Hf-178

Cross Section -100.0 To -0.128%



35

Incident Energy (eV)

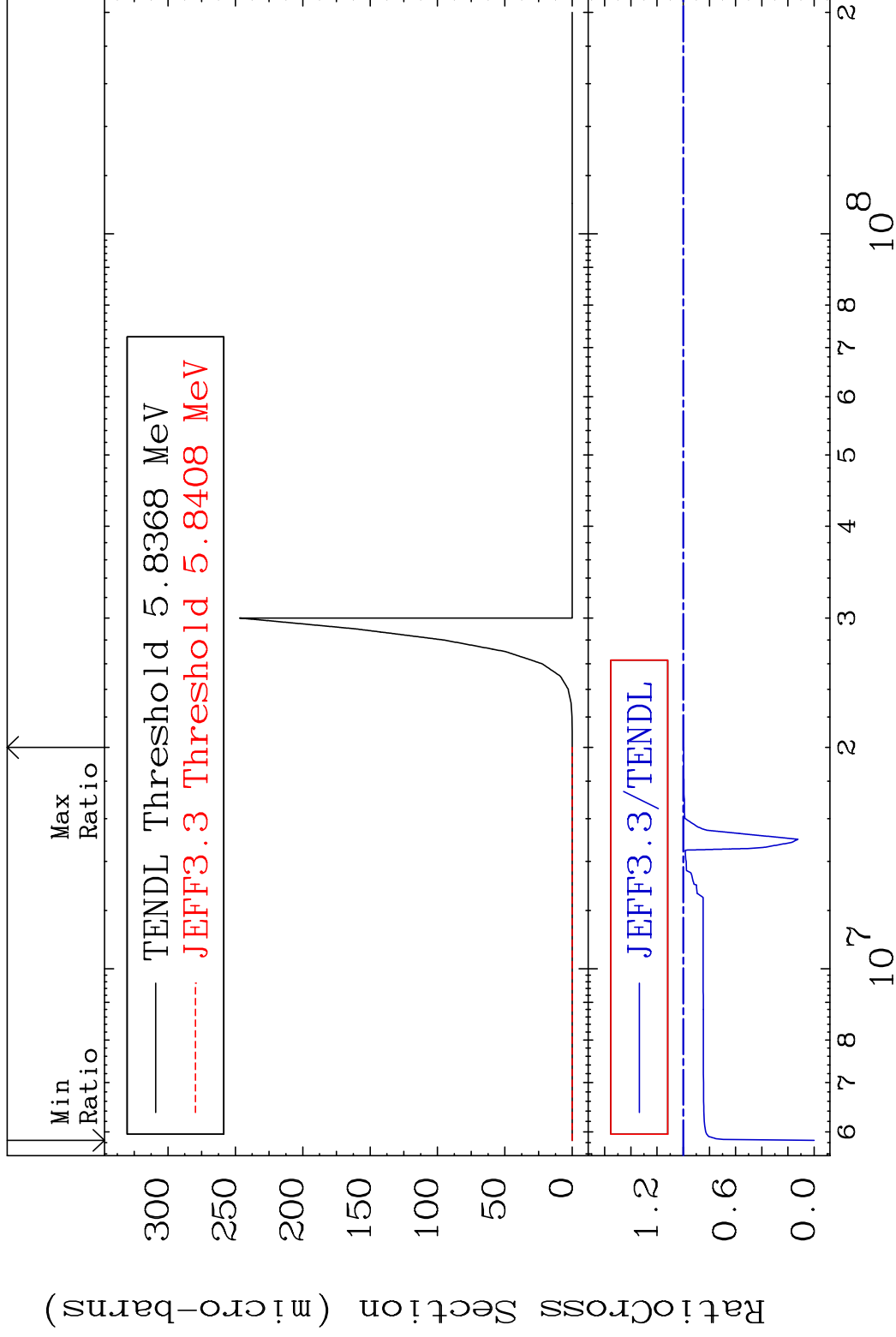
72-Hf-178

MAT 7237

(n, He-3)

72-Hf-178

Cross Section -100.0 To -0.332%



36

Incident Energy (eV)

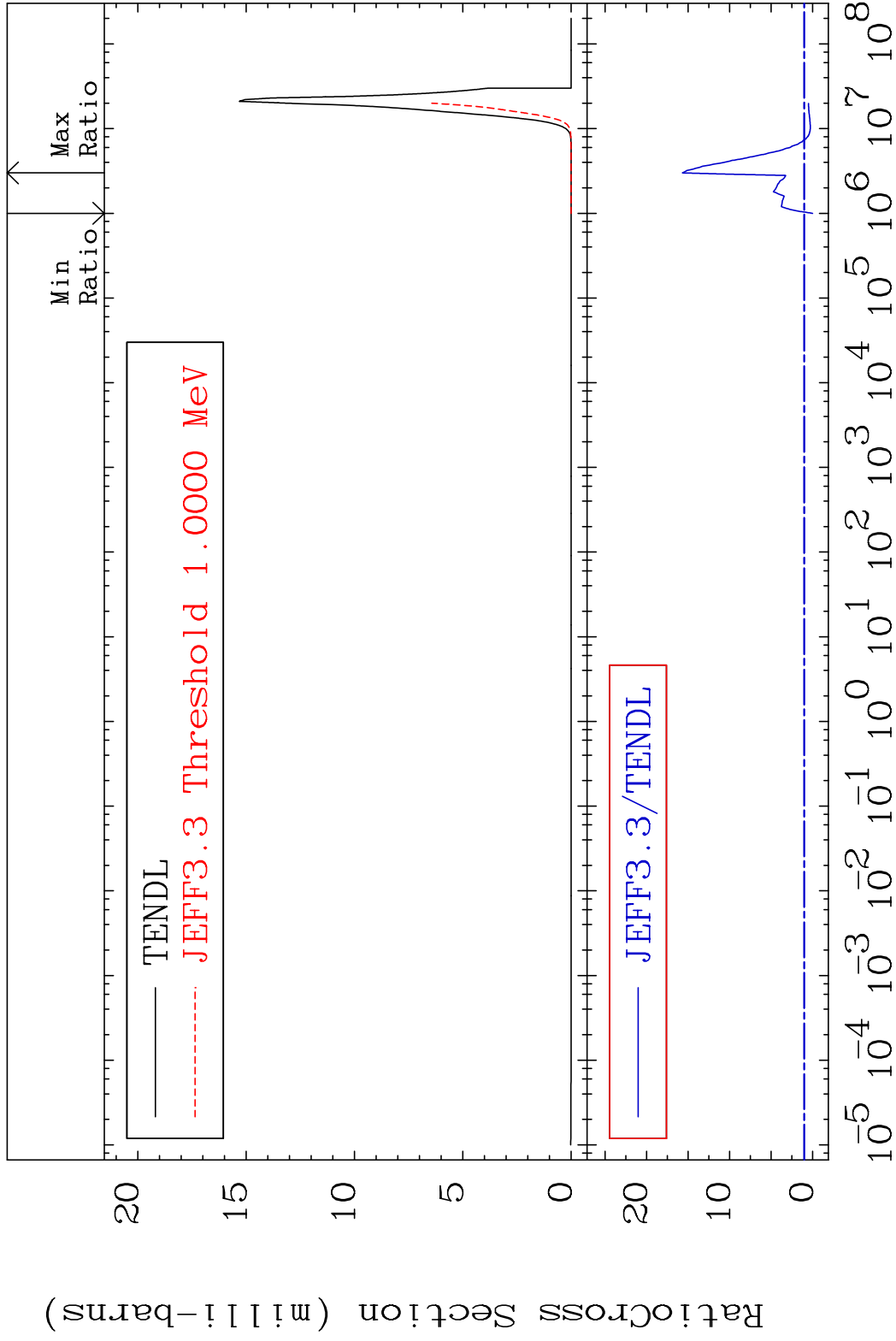
72-Hf-178

MAT 7237

(n, α)

72-Hf-178

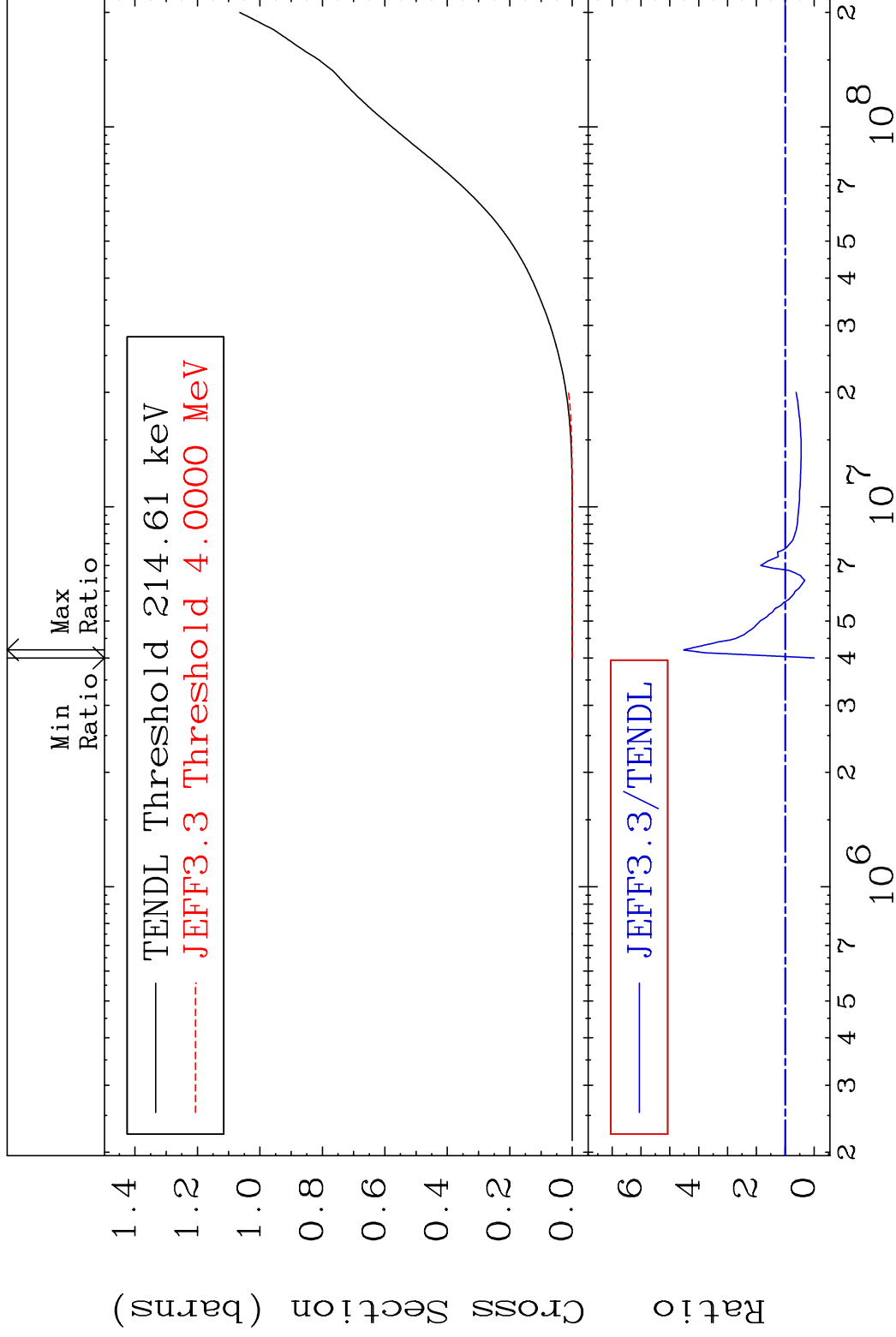
Cross Section -100.0 To 1469. %



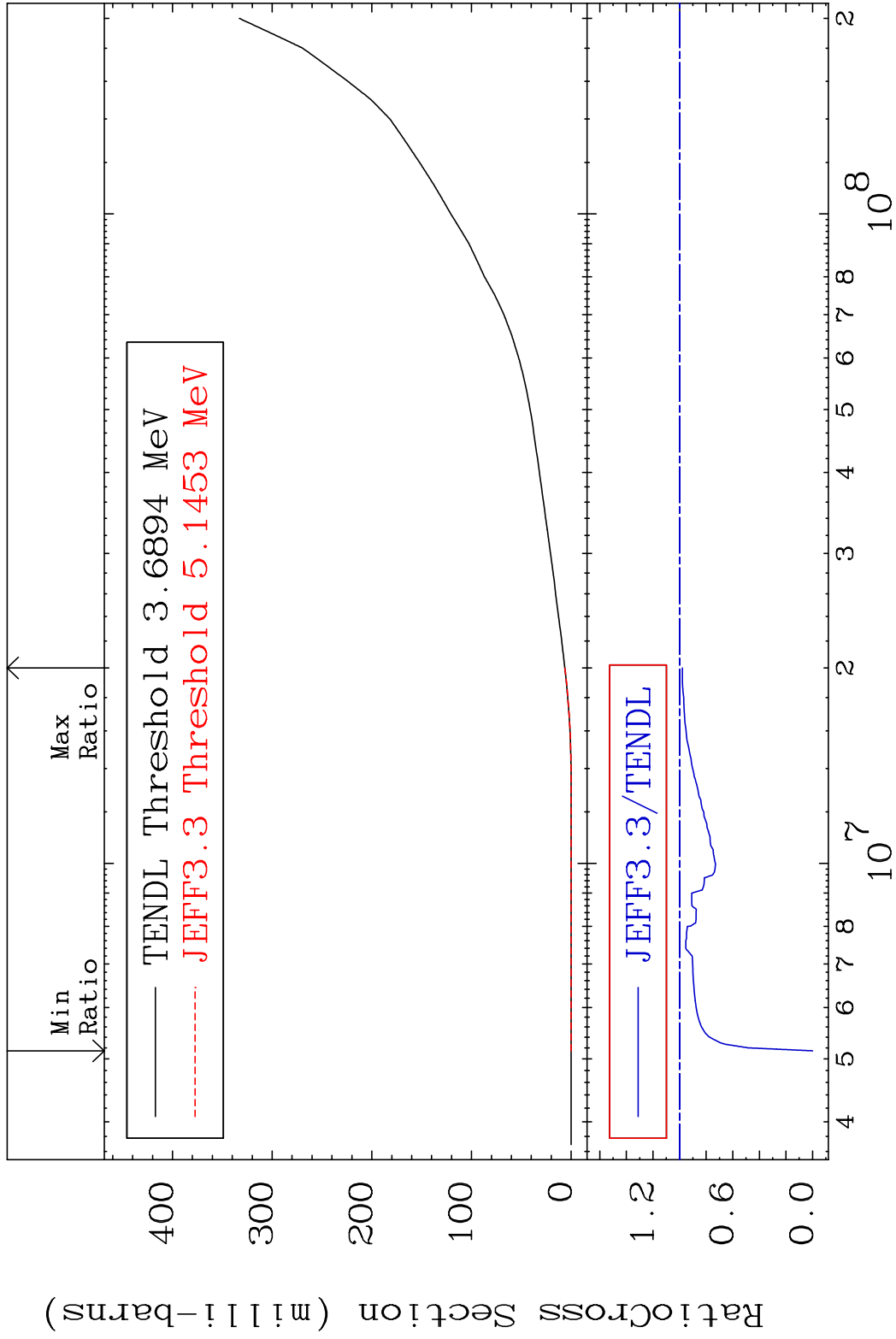
37

Incident Energy (eV)

72-Hf-178



Cross Section -100.0 To -2.082%

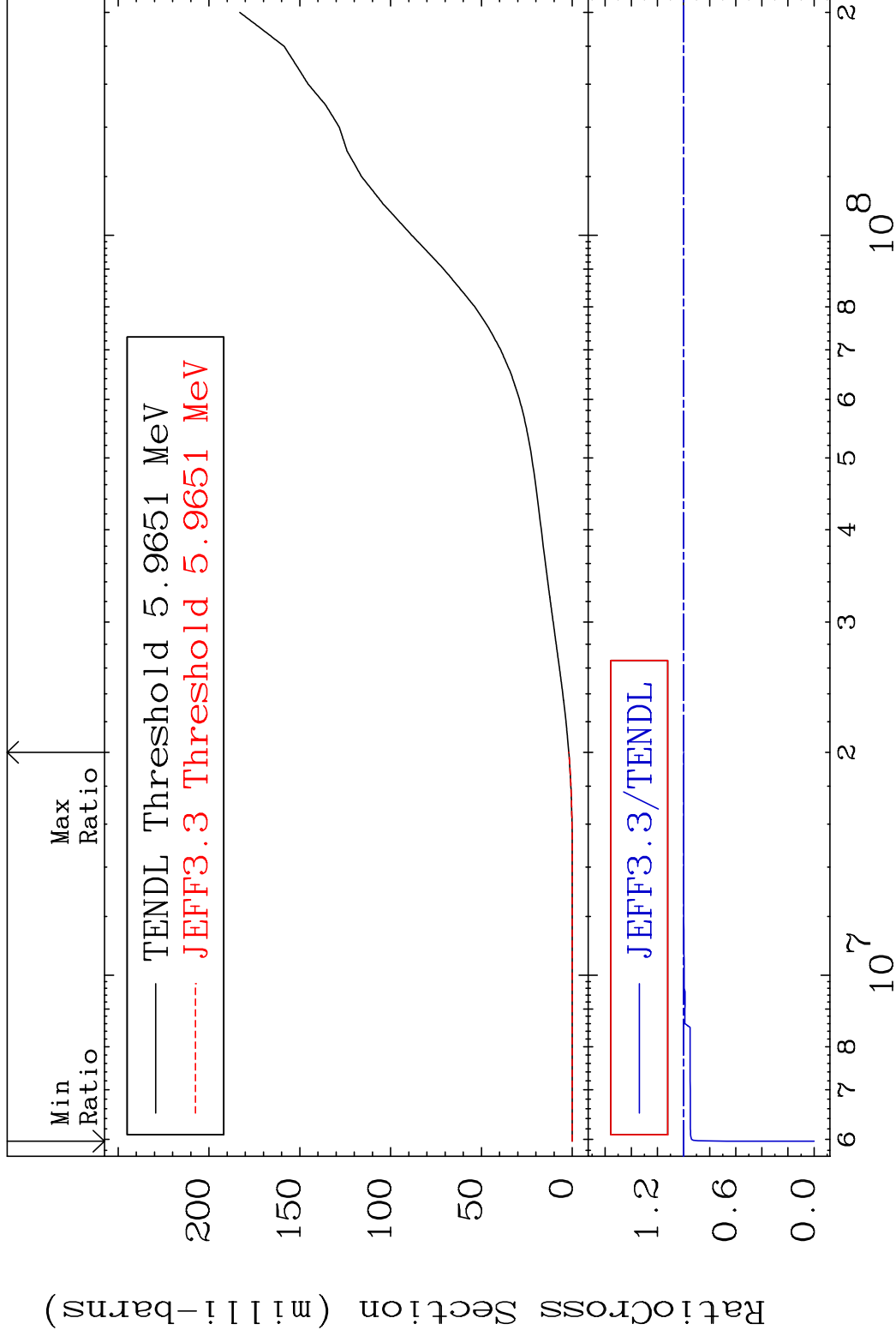


MAT 7237

Tritium Production

72-Hf-178

Cross Section -100.0 To -0.109%



40

Incident Energy (eV)

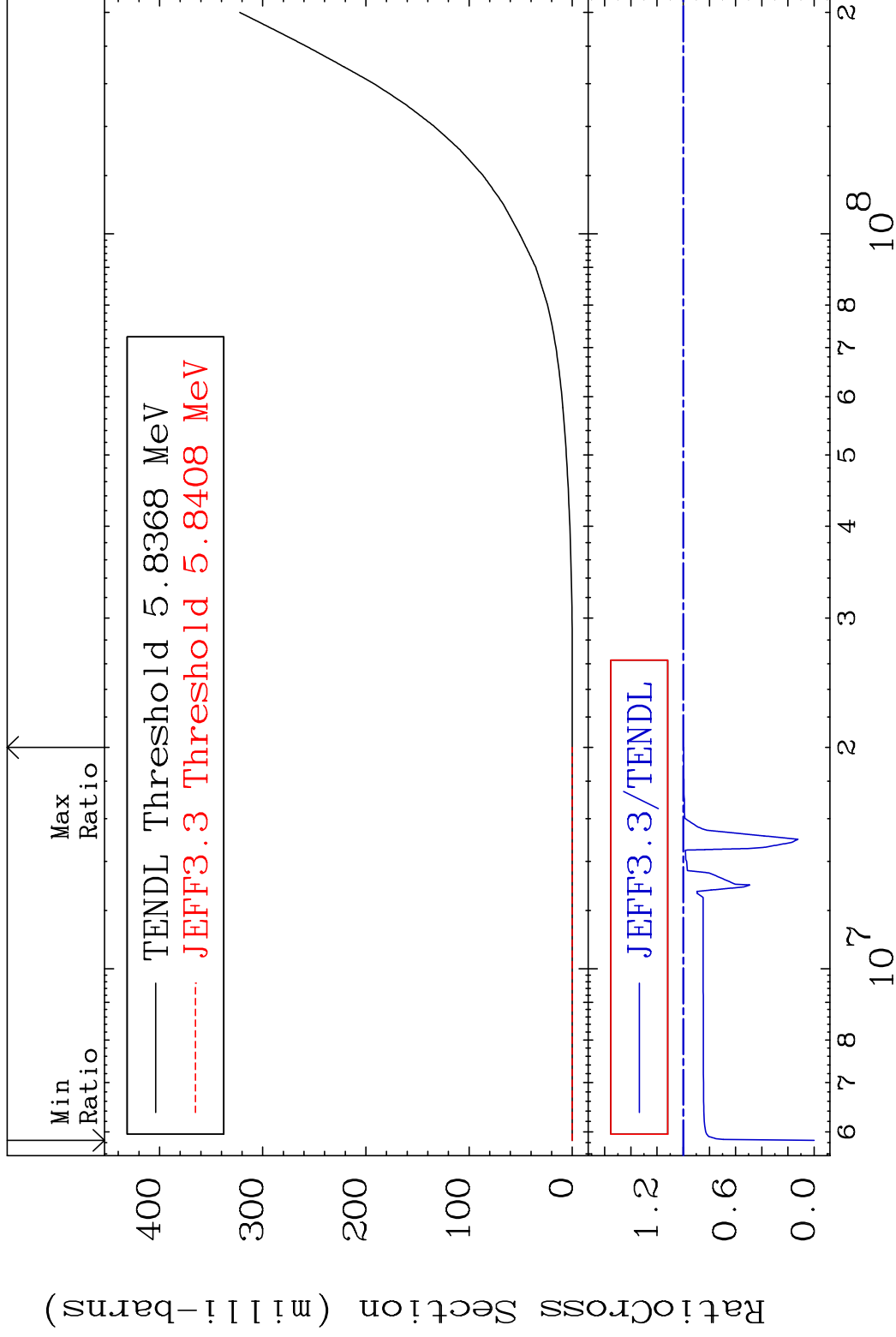
72-Hf-178

MAT 7237

He-3 Production

72-Hf-178

Cross Section -100.0 To -0.332%



41

Incident Energy (eV)

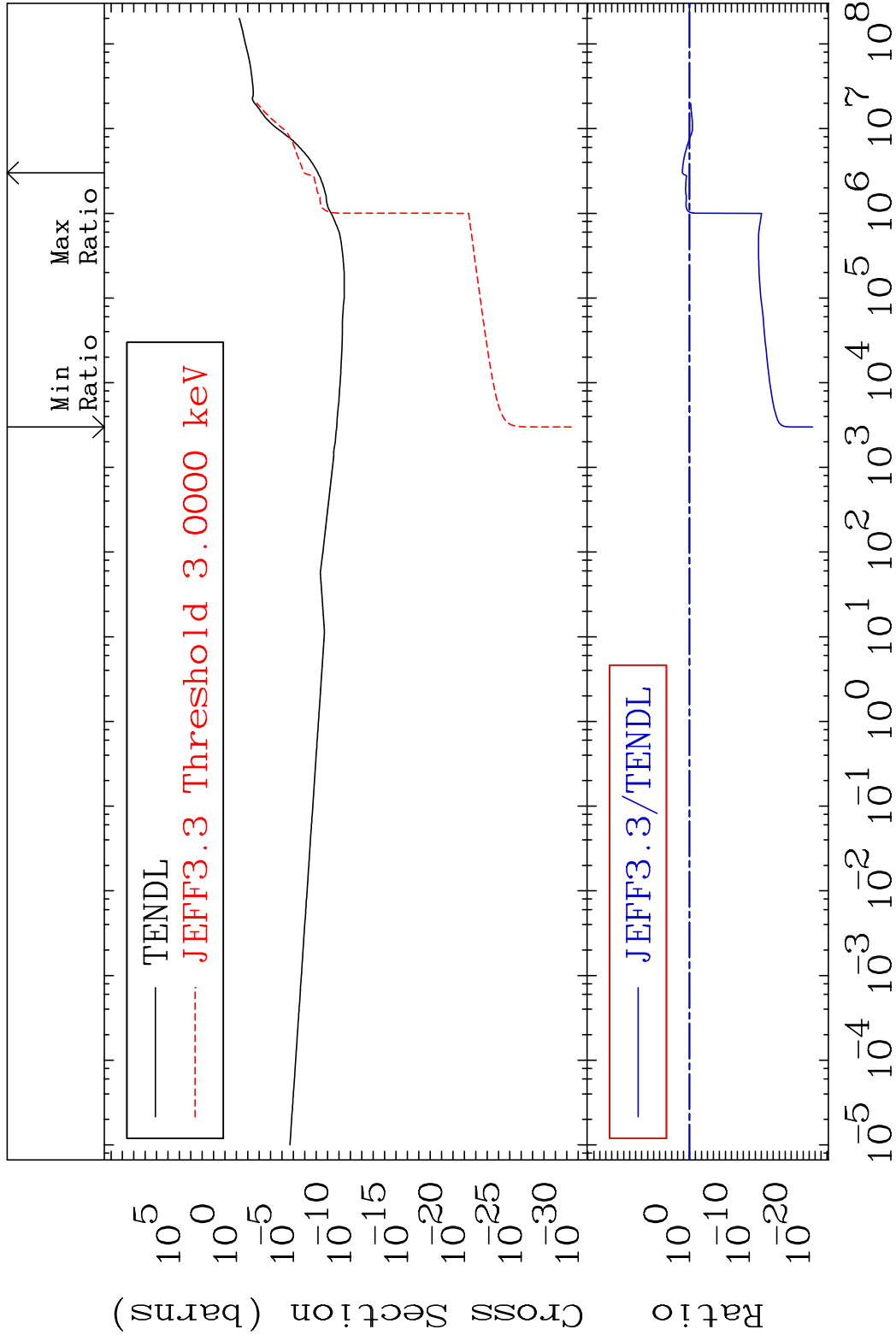
72-Hf-178

MAT 7237

He-4 Production

72-Hf-178

Cross Section -100.0 To 1469. %

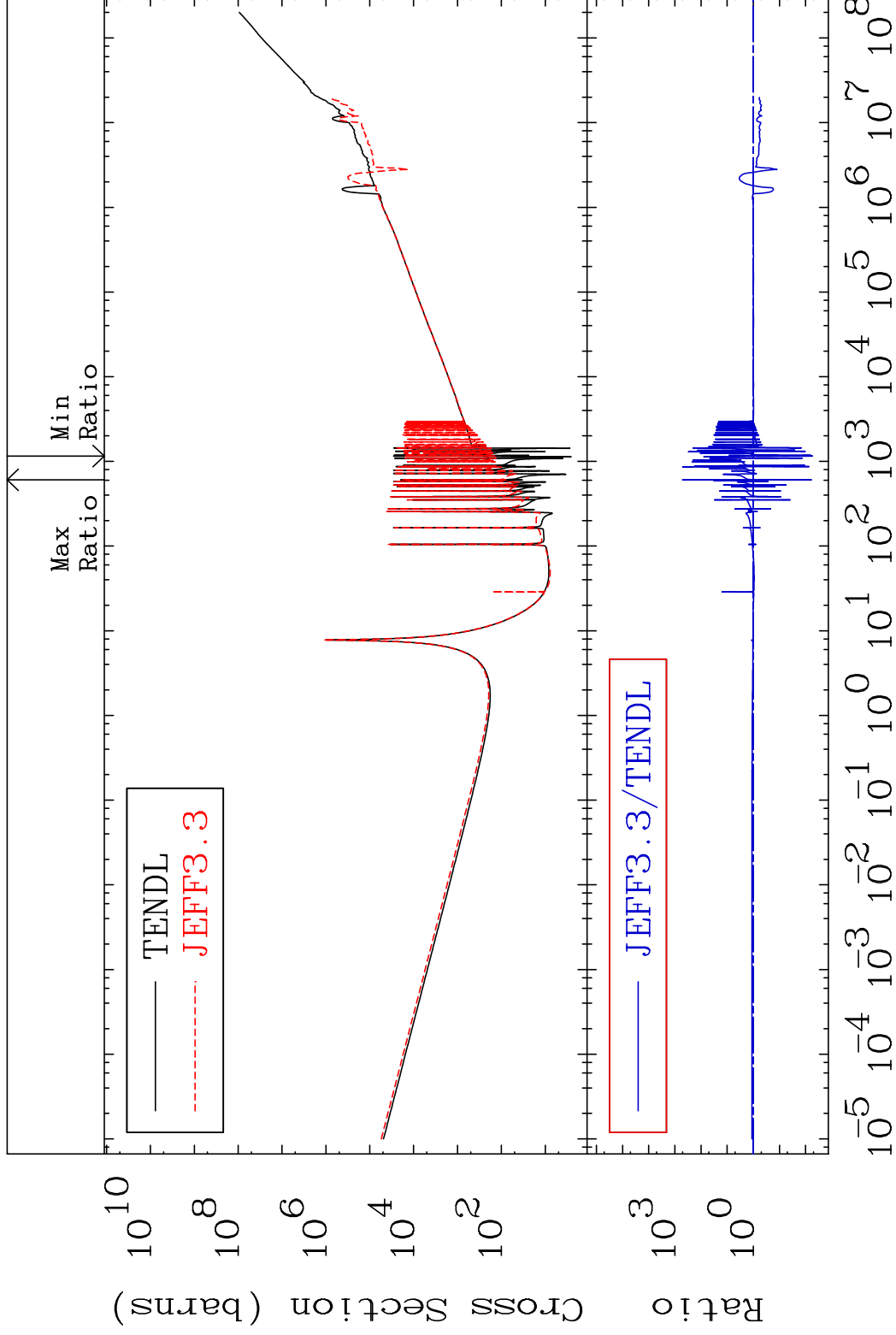


MAT 7237

Kerma total (eV-barns)

72-Hf-178

Cross Section -99.46 To 9999. %



43

Incident Energy (eV)

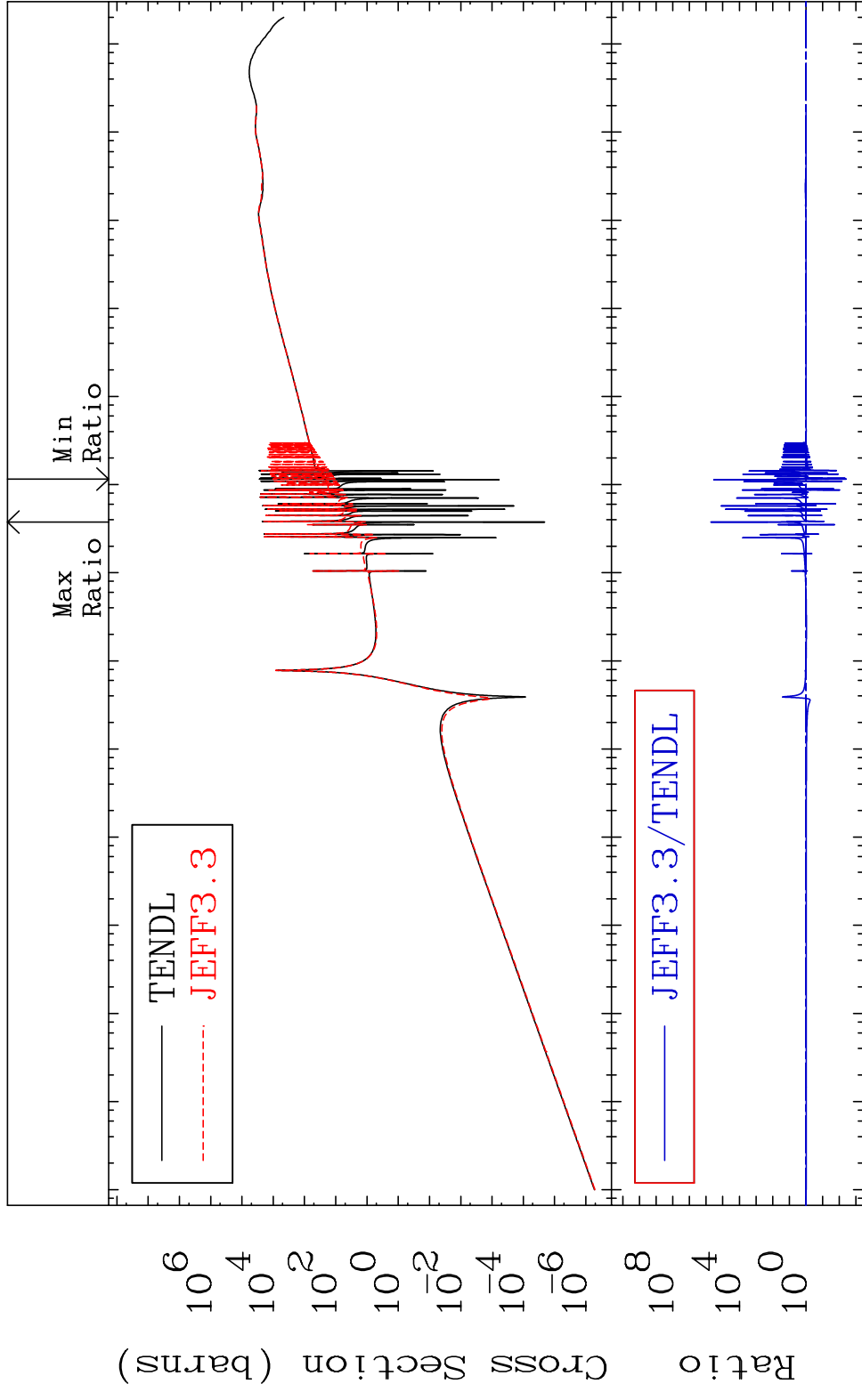
72-Hf-178

MAT 7237

Kerma elastic

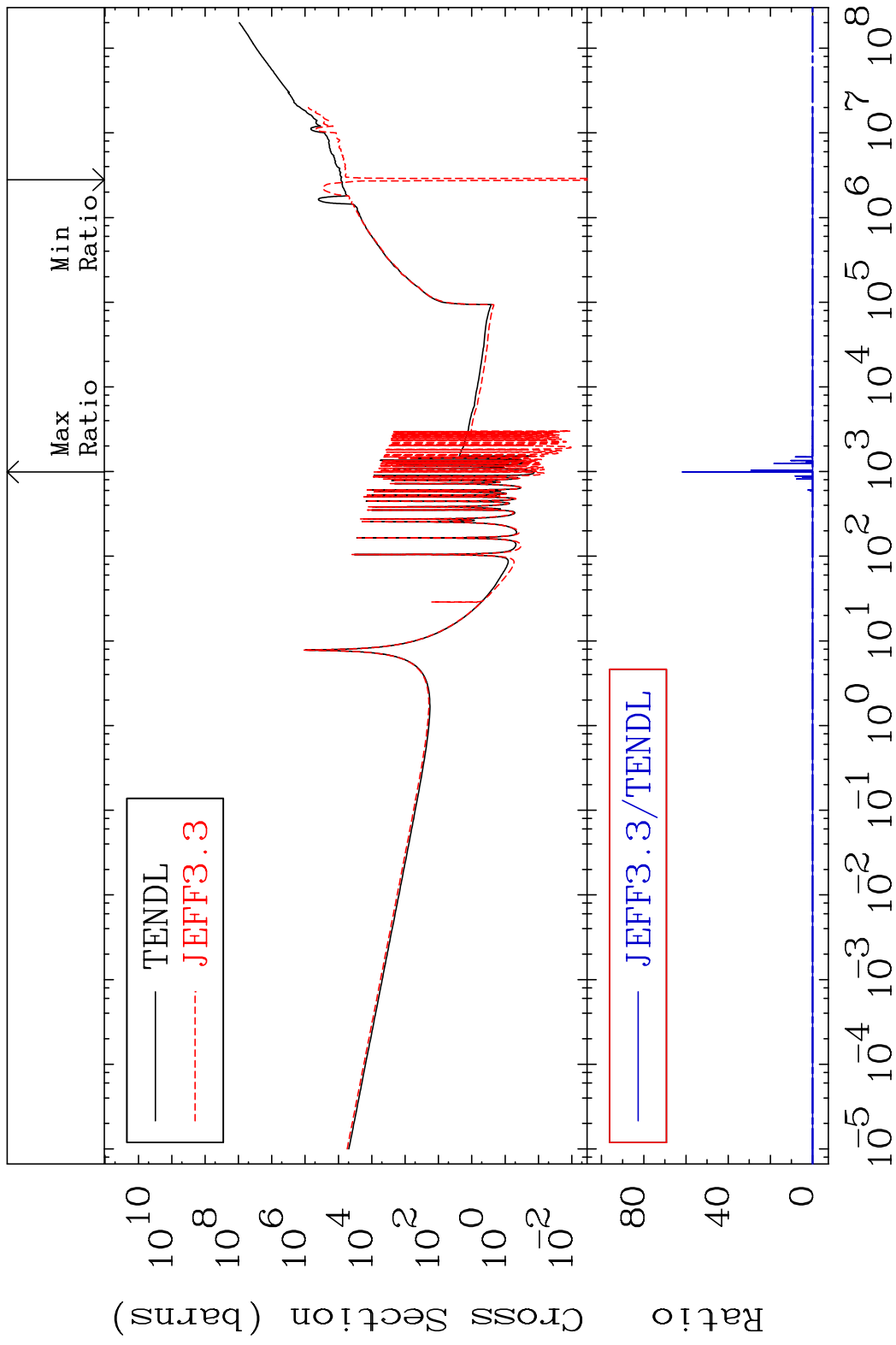
72-Hf-178

Cross Section -99.62 To 9999. %



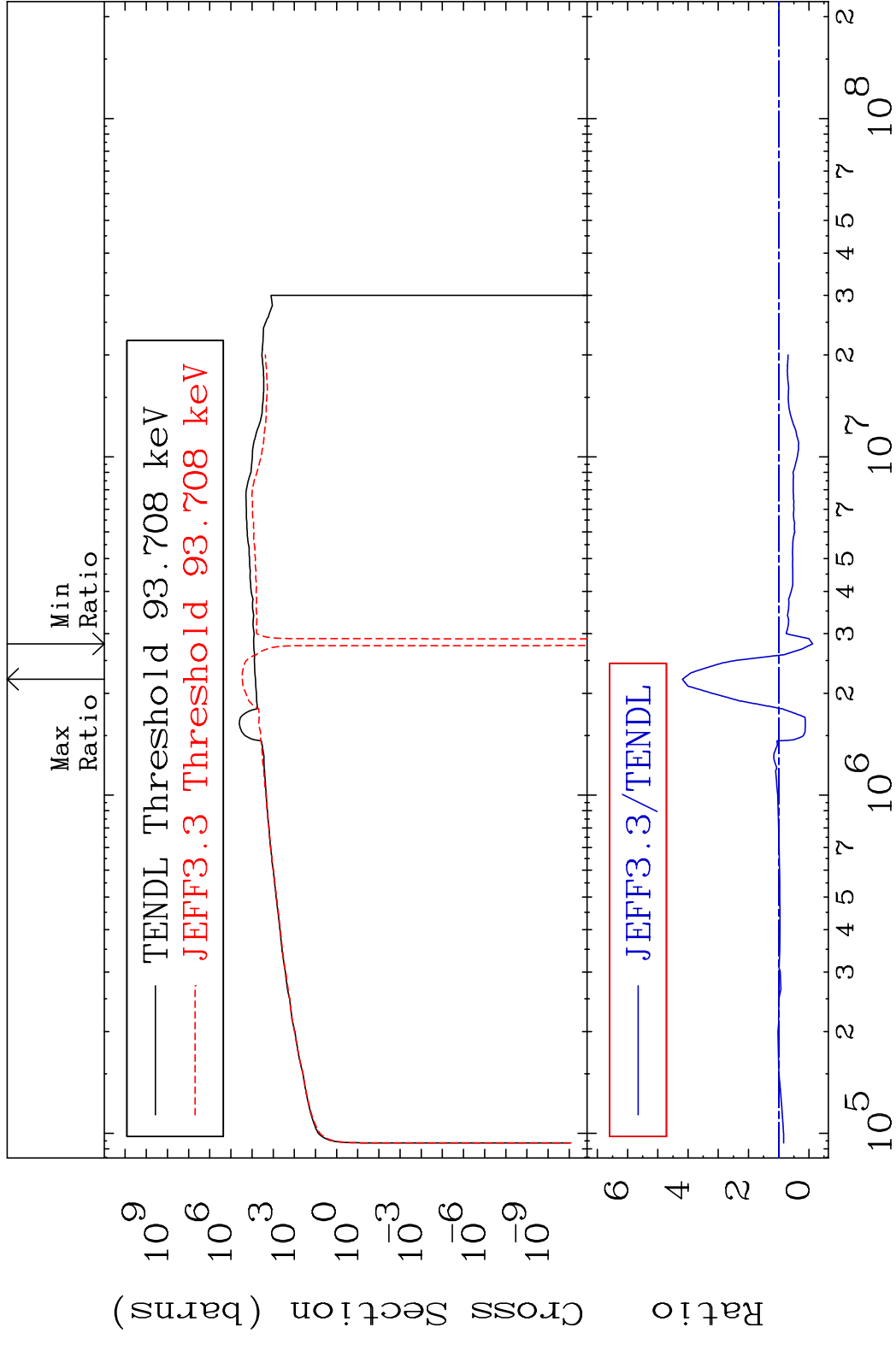
10⁻⁵ 10⁻⁴ 10⁻³ 10⁻² 10⁻¹ 10⁰ 10¹ 10² 10³ 10⁴ 10⁵ 10⁶ 10⁷ 10⁸

MAT 7237 Kerma non-elastic (all but mt2) 72-Hf-178
 Cross Section -111.8 To 9999. %



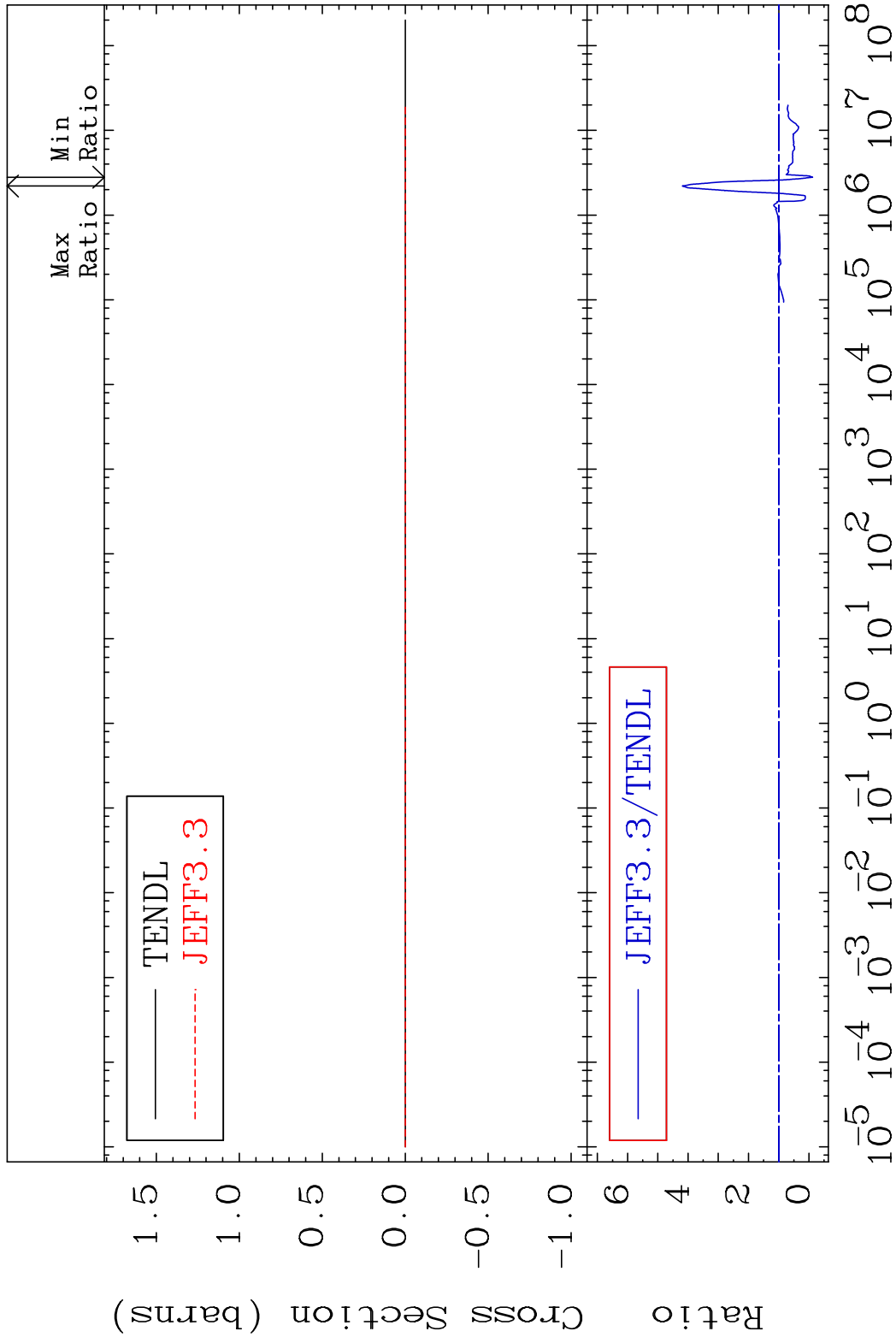
45 Incident Energy (eV) 72-Hf-178

MAT 7237 Kerma inelastic (mt51-91) 72-Hf-178
 Cross Section -111.8 To 318.9 %



46 Incident Energy (eV) 72-Hf-178

MAT 7237 Kerma fission (mt18 or mt19-20-21-38) 72-Hf-178
 Cross Section -111.8 To 318.9 %

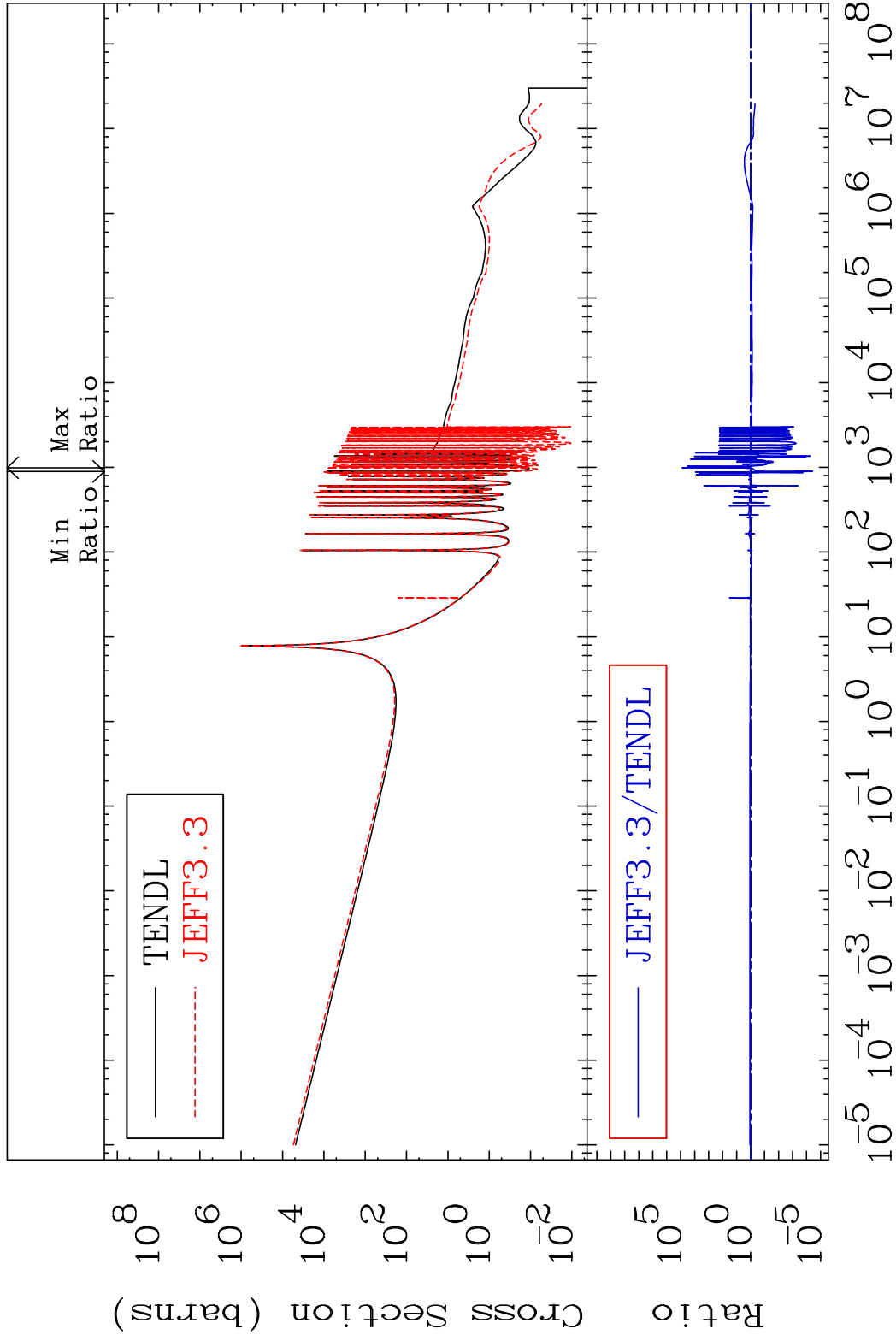


MAT 7237

Kerma capture (mt102)

72-Hf-178

Cross Section -100.0 To 9999. %



48

Incident Energy (eV)

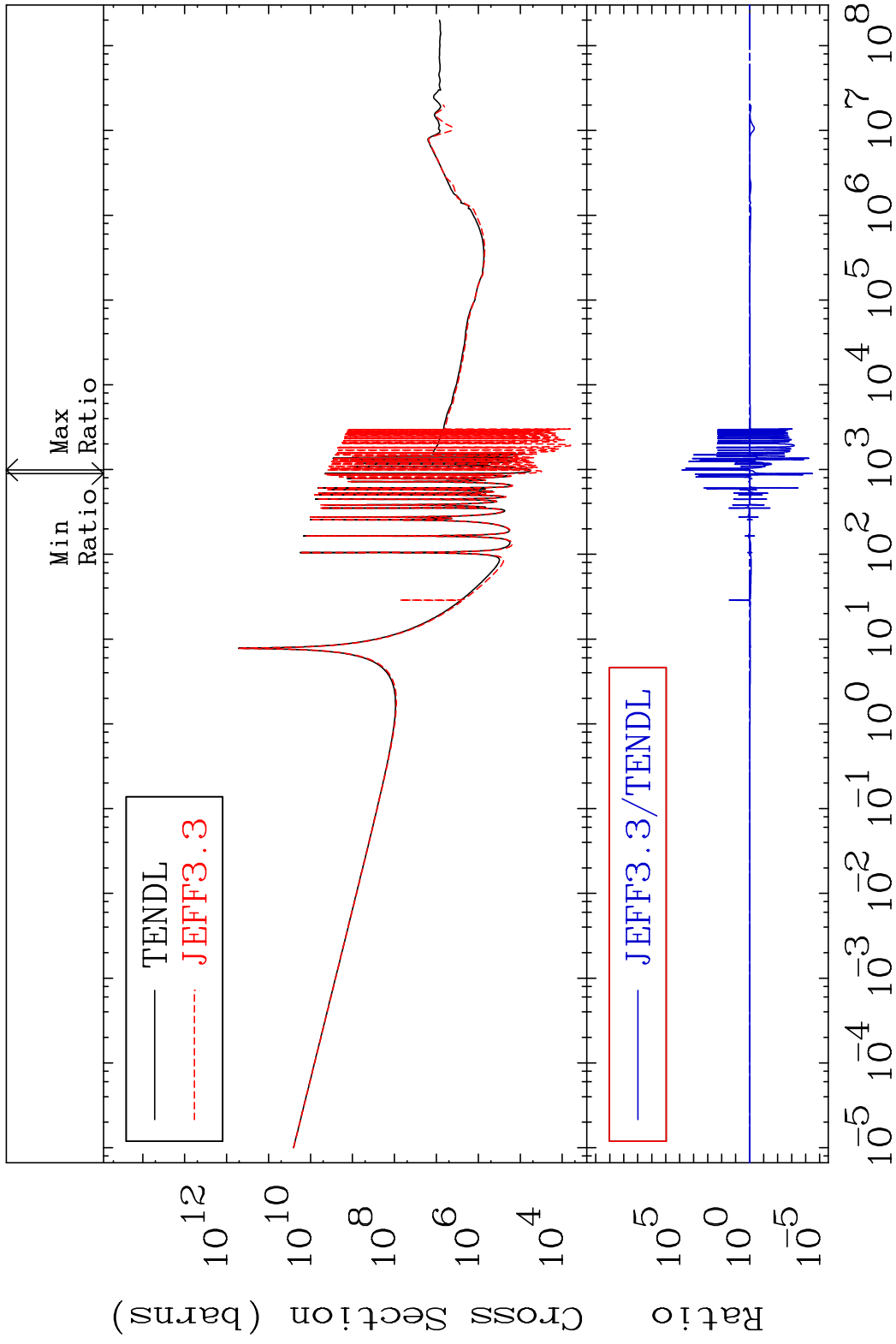
72-Hf-178

MAT 7237

Total photon (eV-barns)

72-Hf-178

Cross Section -100.0 To 9999. %

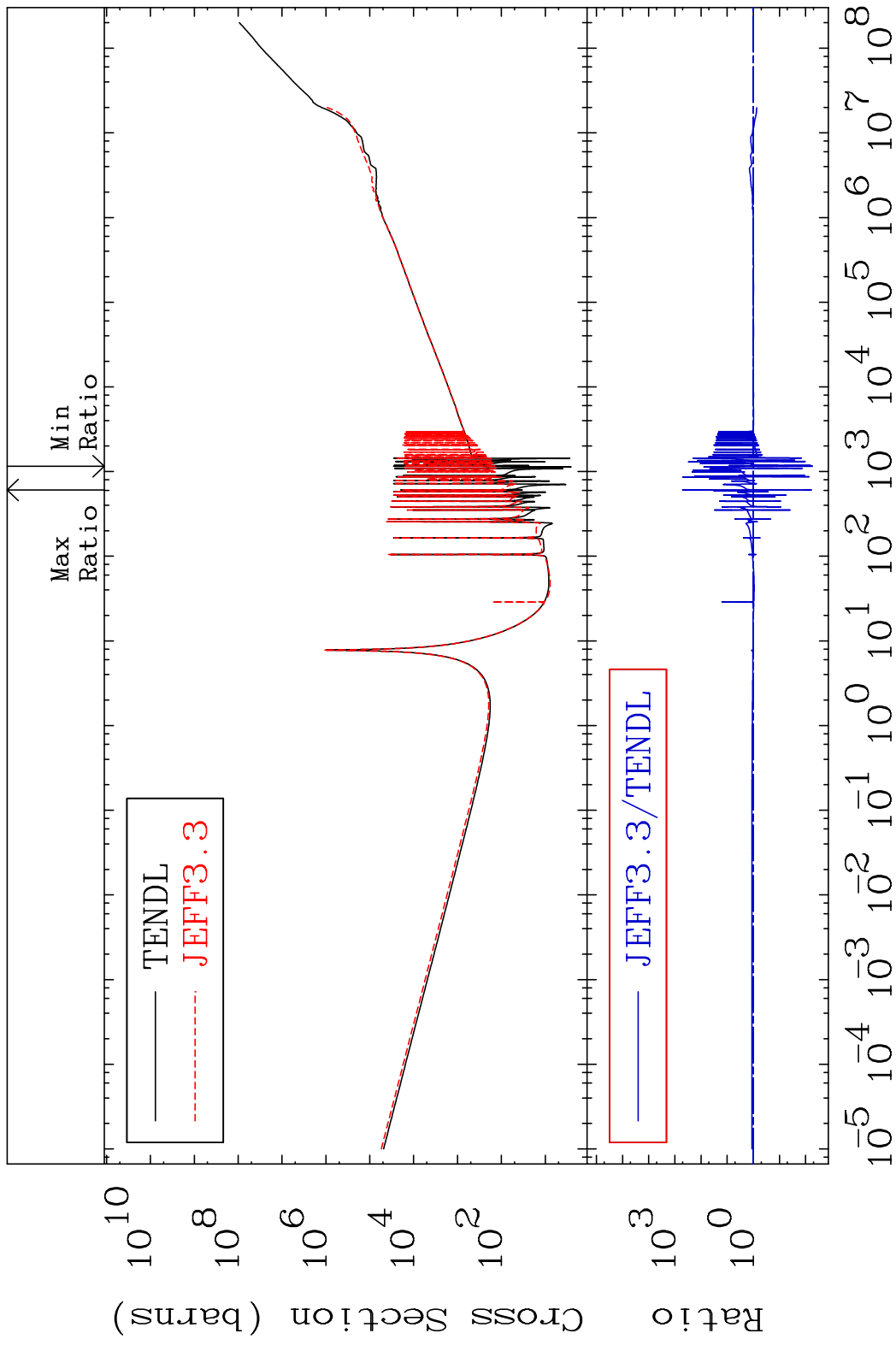


49

Incident Energy (eV)

72-Hf-178

MAT 7237 Total kinematic kerma (high limit) 72-Hf-178
 Cross Section -99.46 To 9999. %

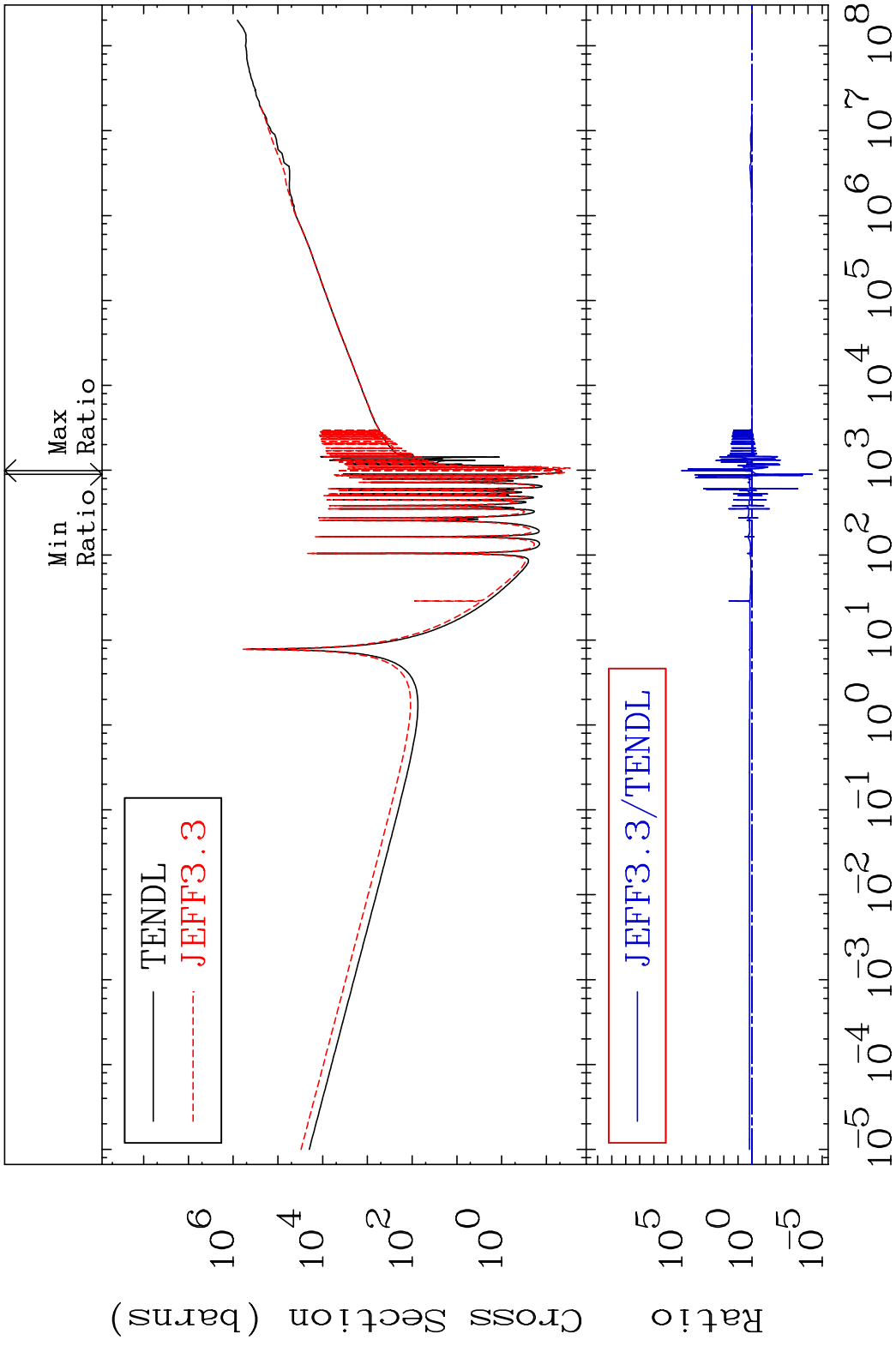


MAT 7237

Dpa total (eV-barns)

72-Hf-178

Cross Section -100.0 To 9999. %



51

Incident Energy (eV)

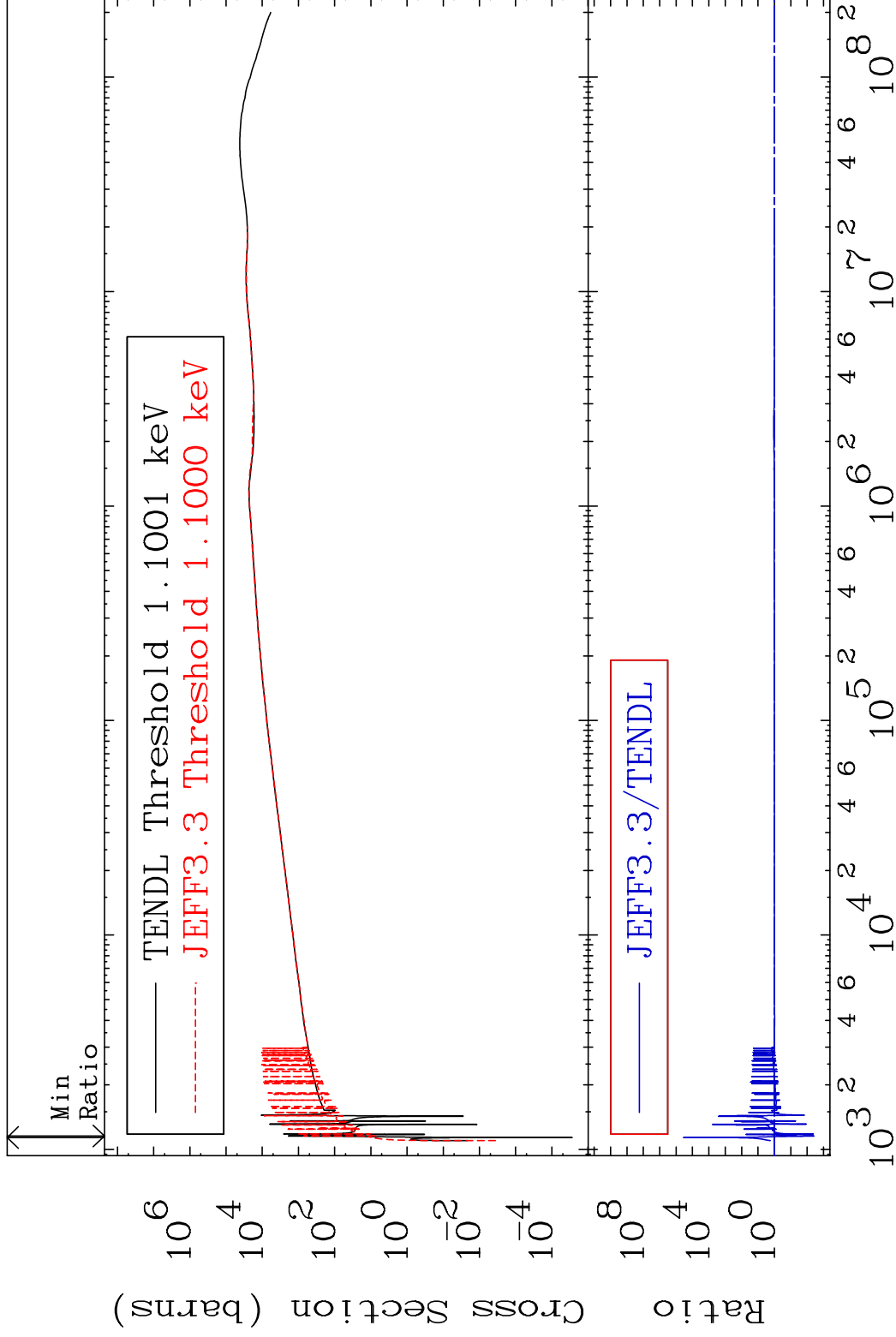
72-Hf-178

MAT 7237

Dpa elastic (mt2)

72-Hf-178

Cross Section -99.62 To 9999. %



52

Incident Energy (eV)

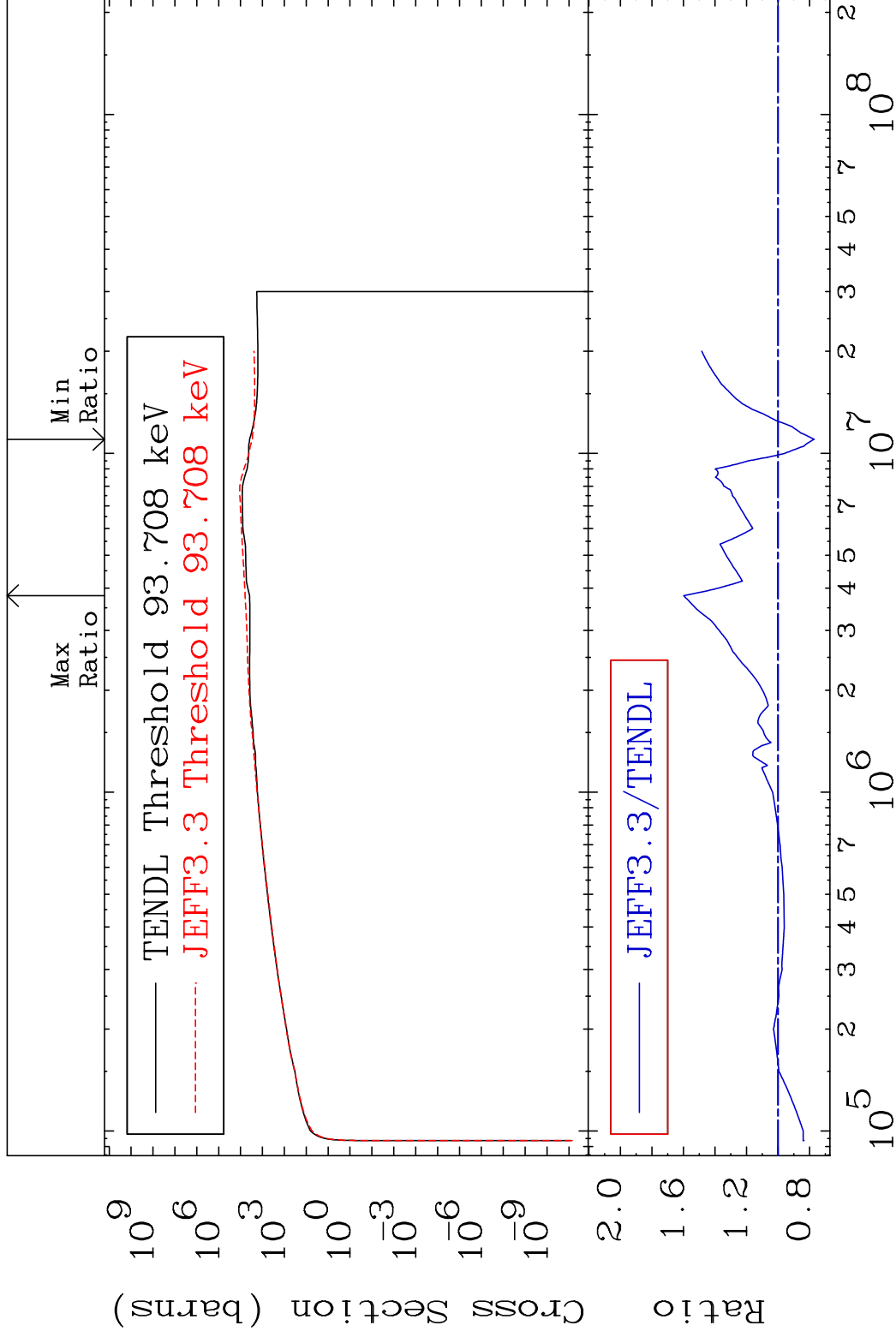
72-Hf-178

MAT 7237

Dpa inelastic (mt51-91)

72-Hf-178

Cross Section -22.82 To 59.88 %

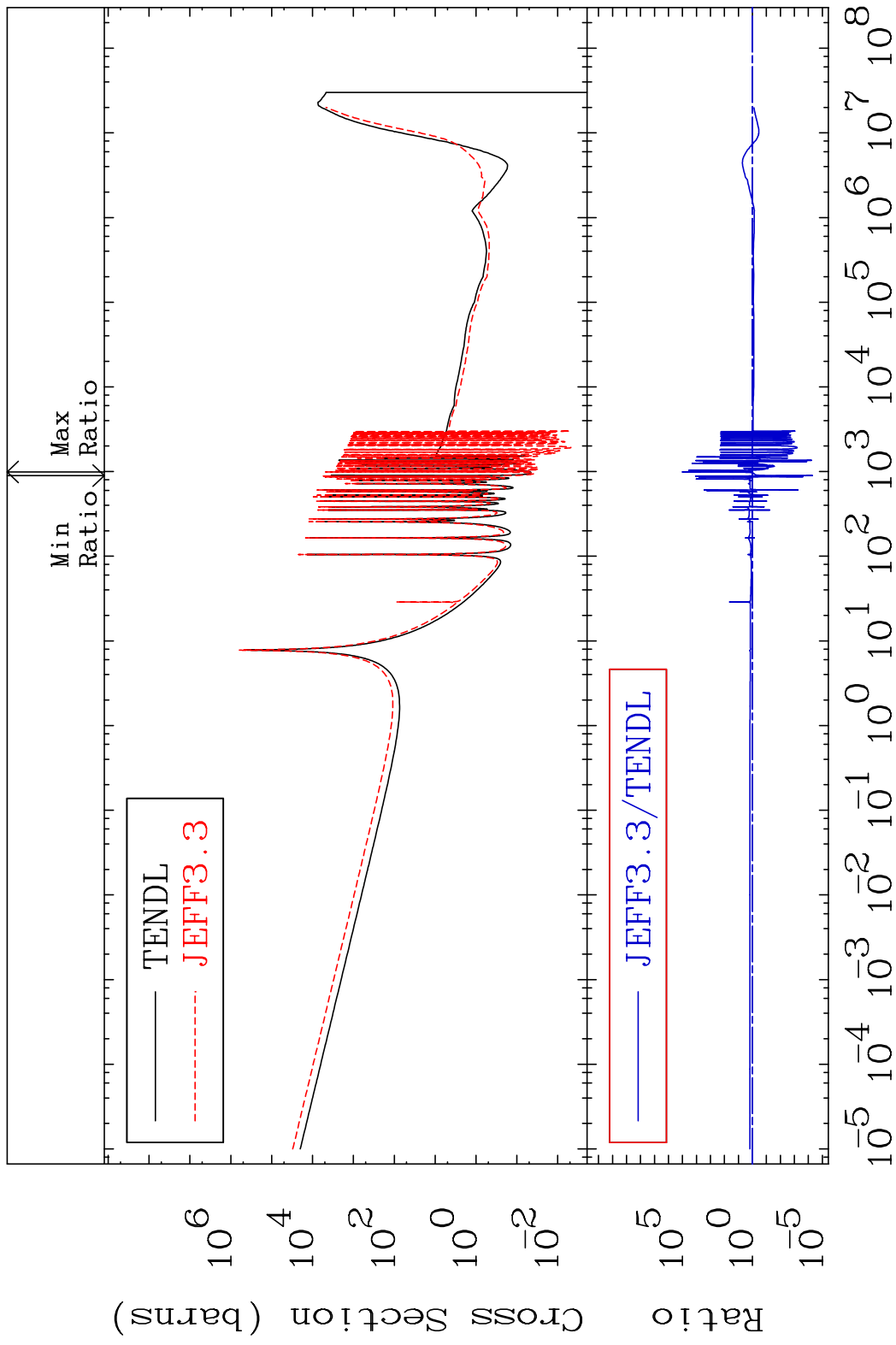


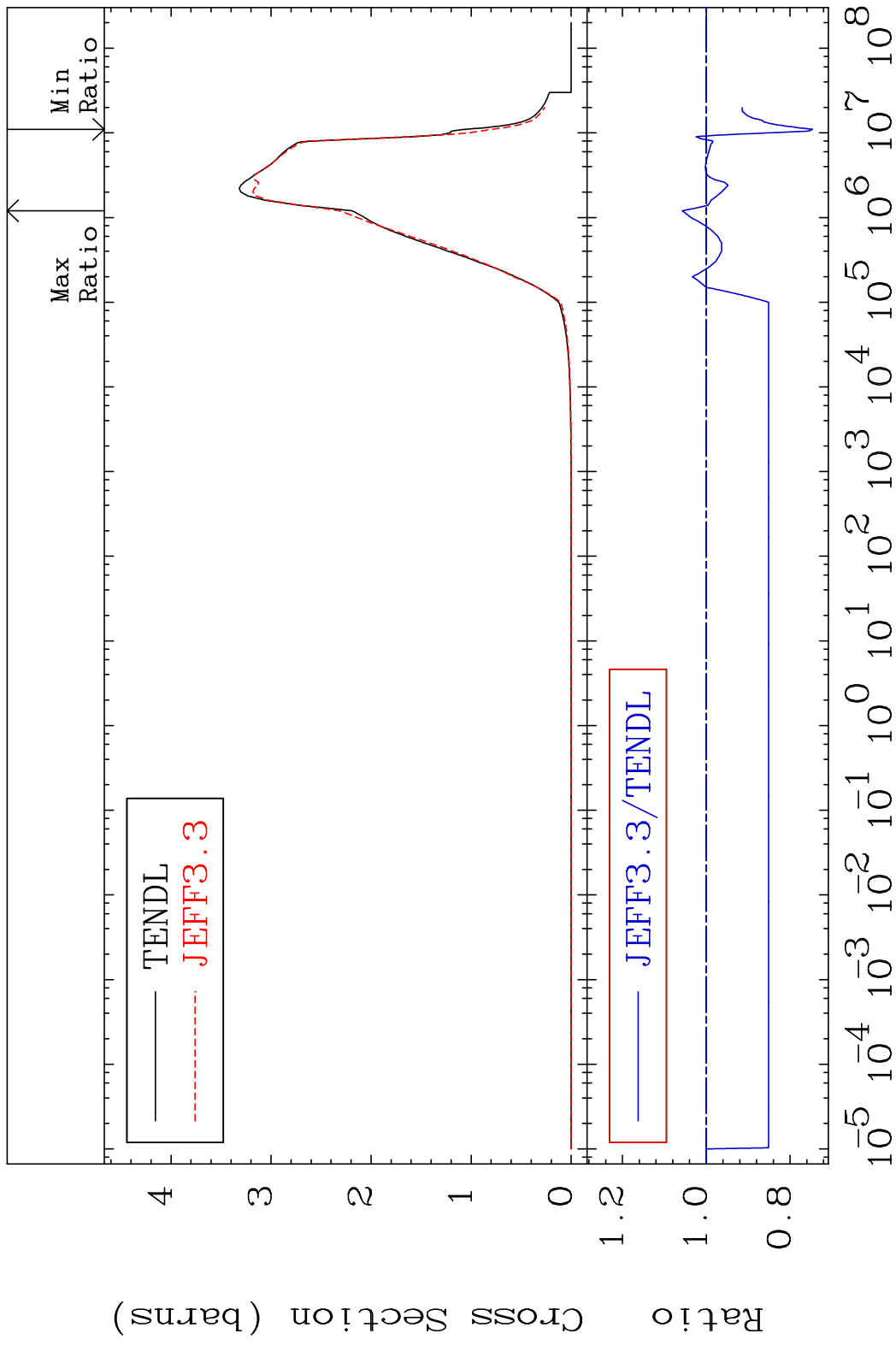
53

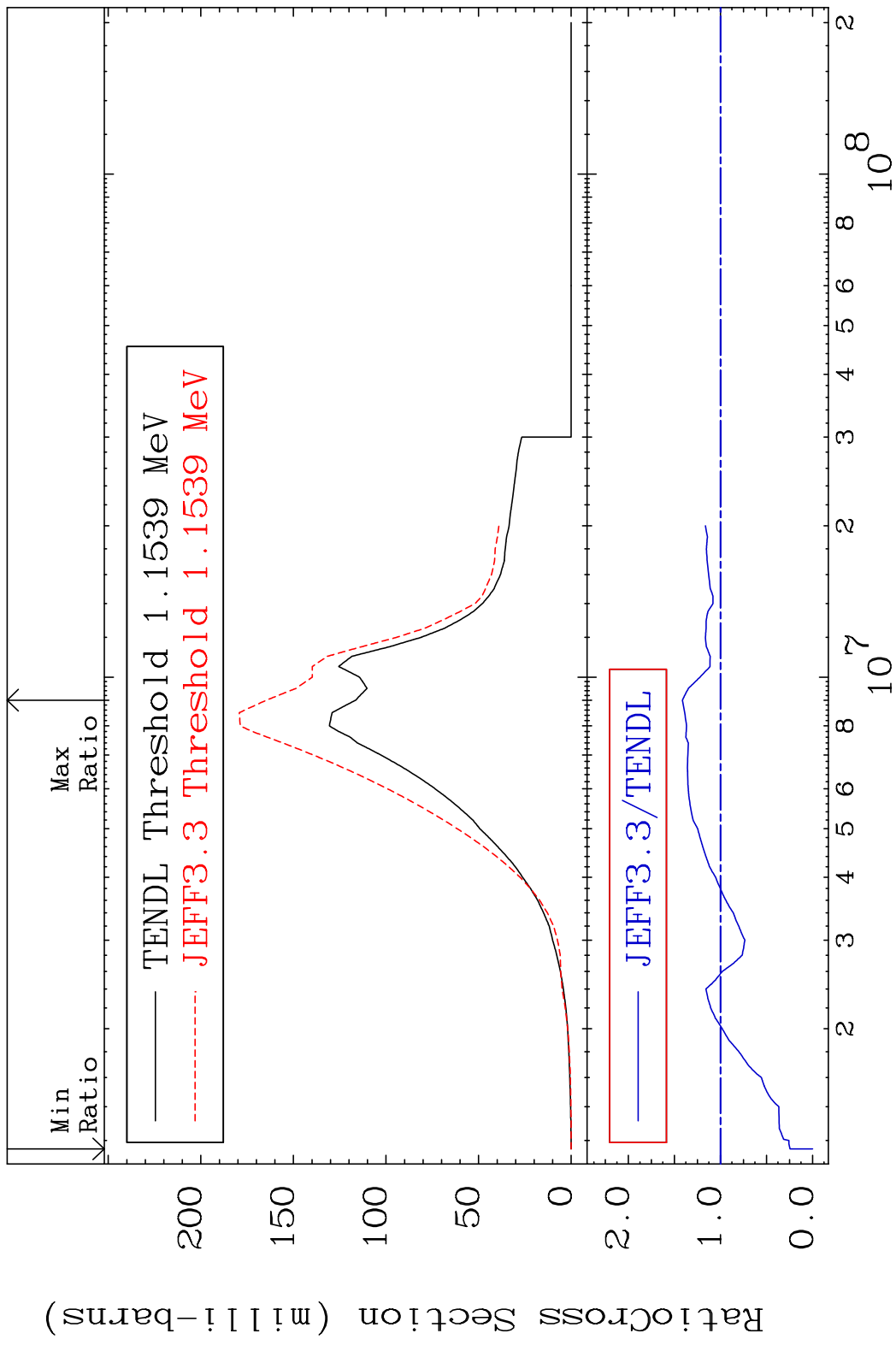
Incident Energy (eV)

72-Hf-178

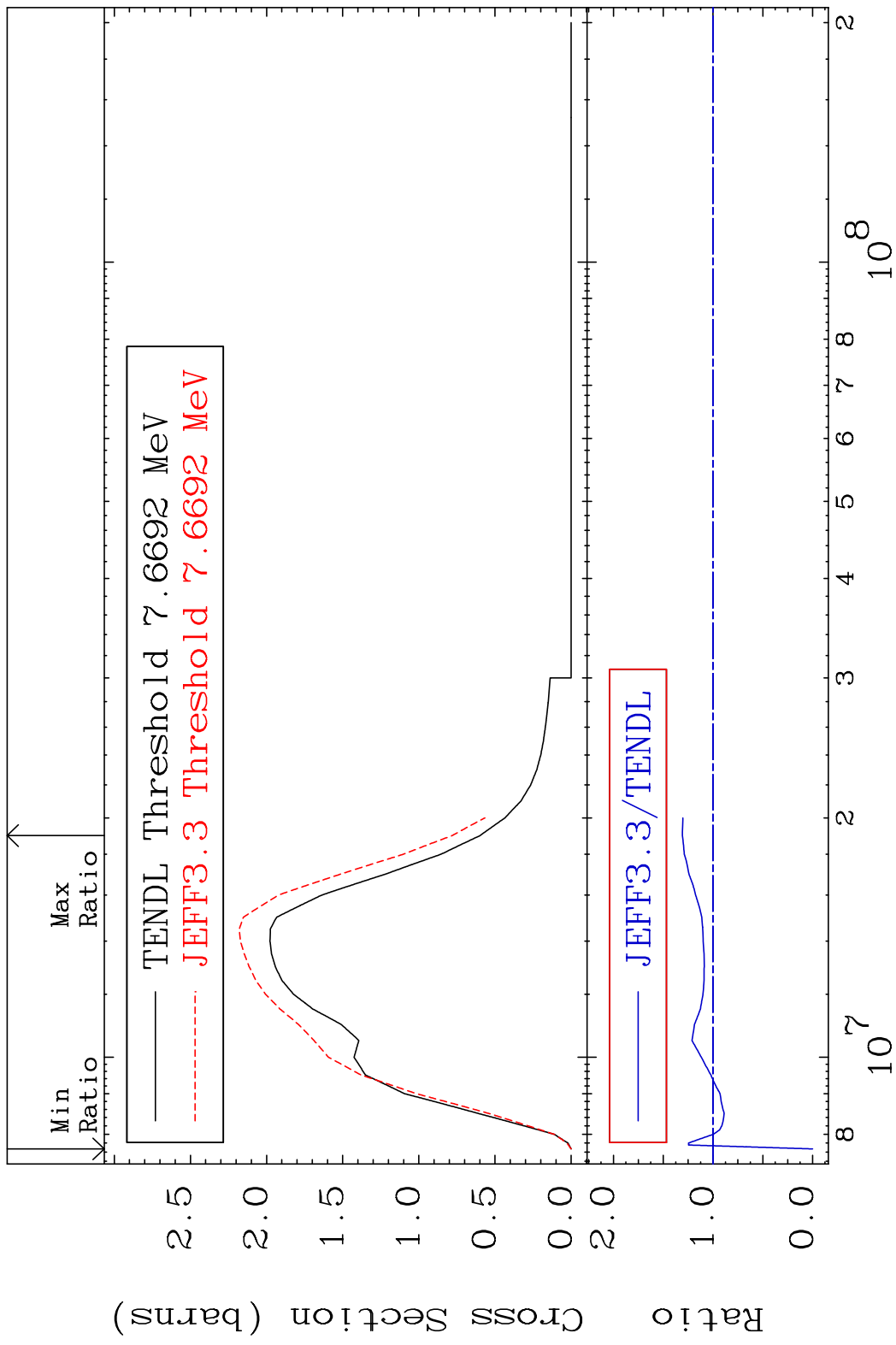
MAT 7237 Dpa disappearance (mt102 -120) 72-Hf-178
 Cross Section -100.0 To 9999. %

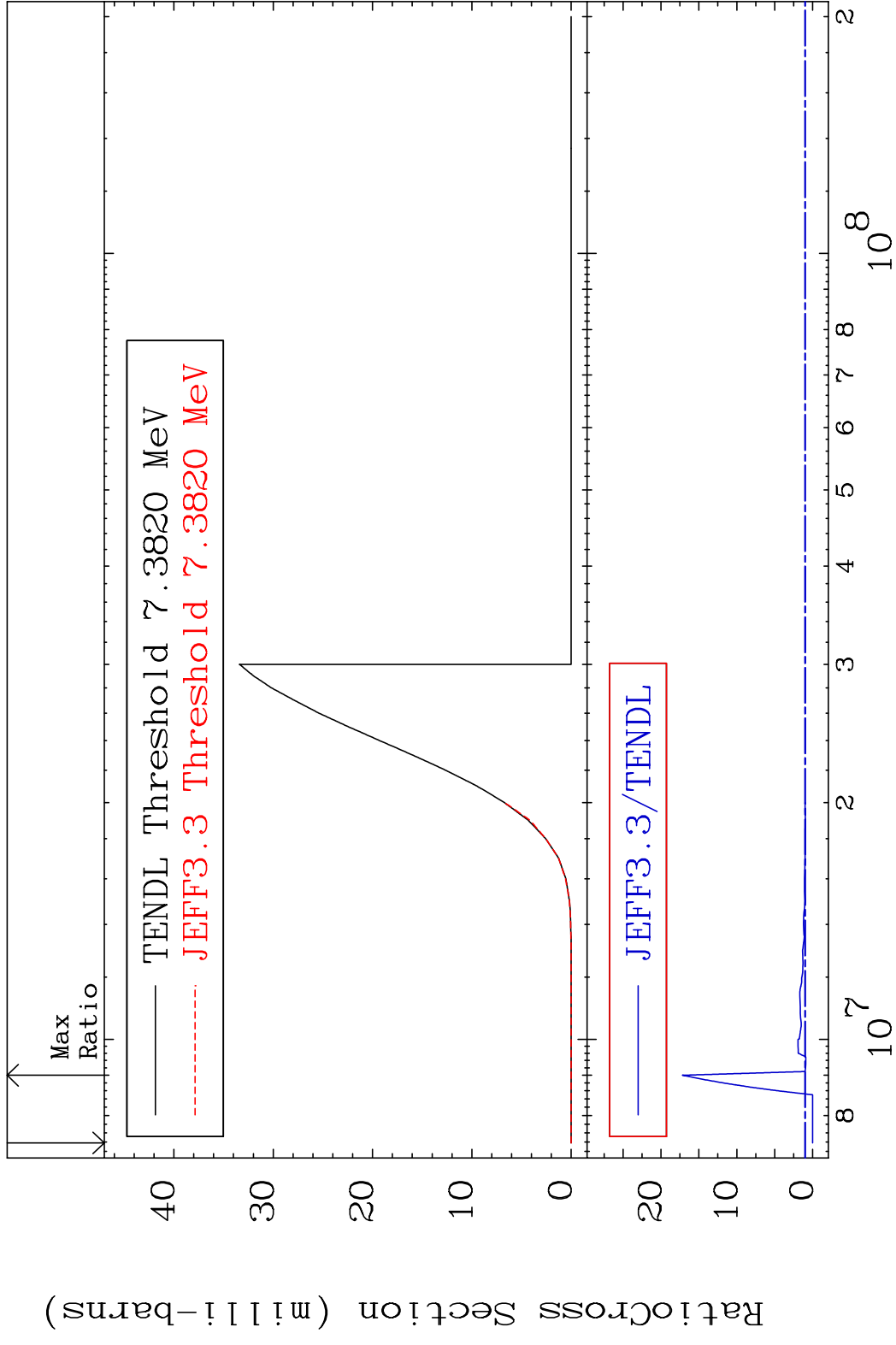


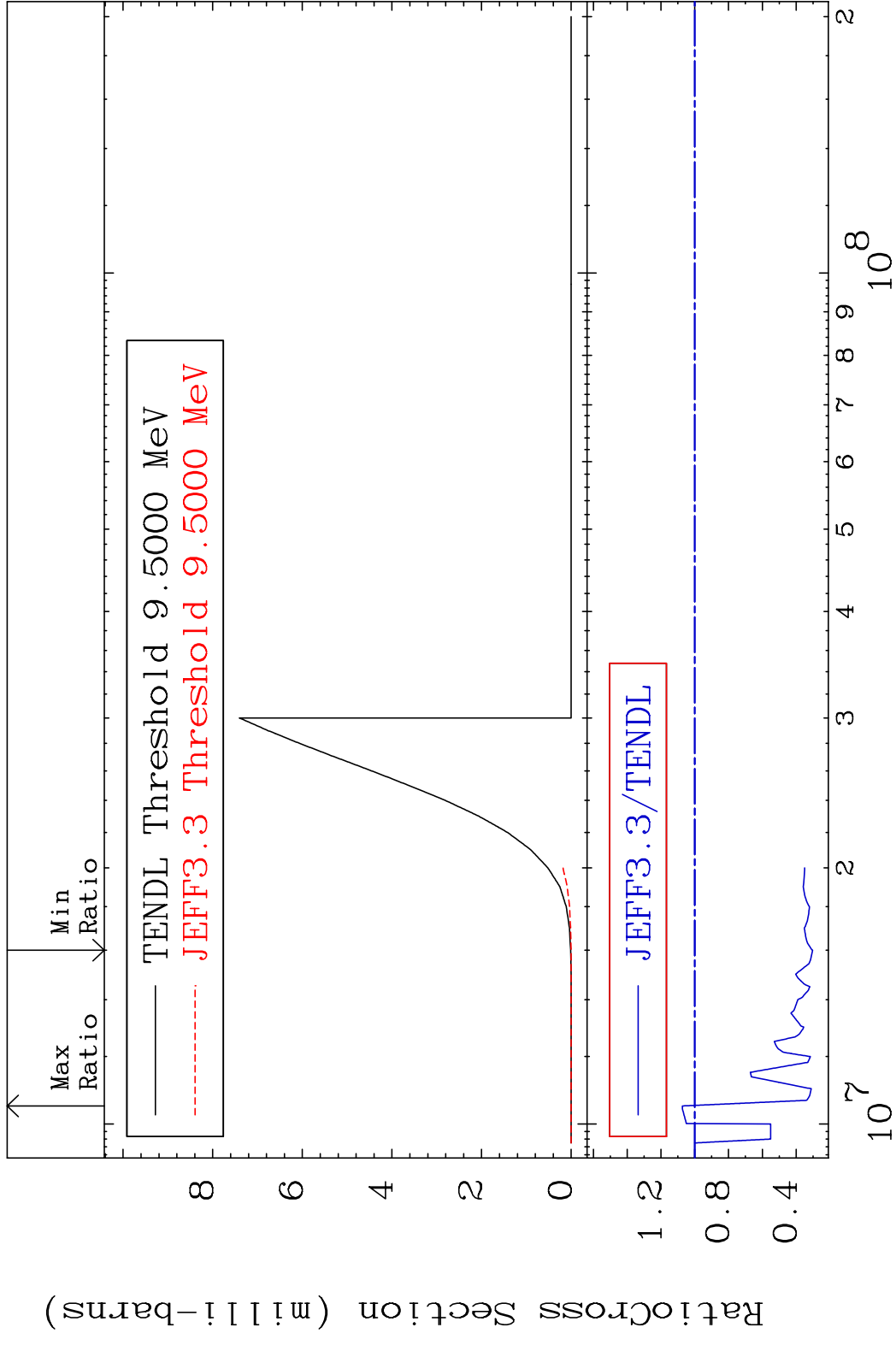




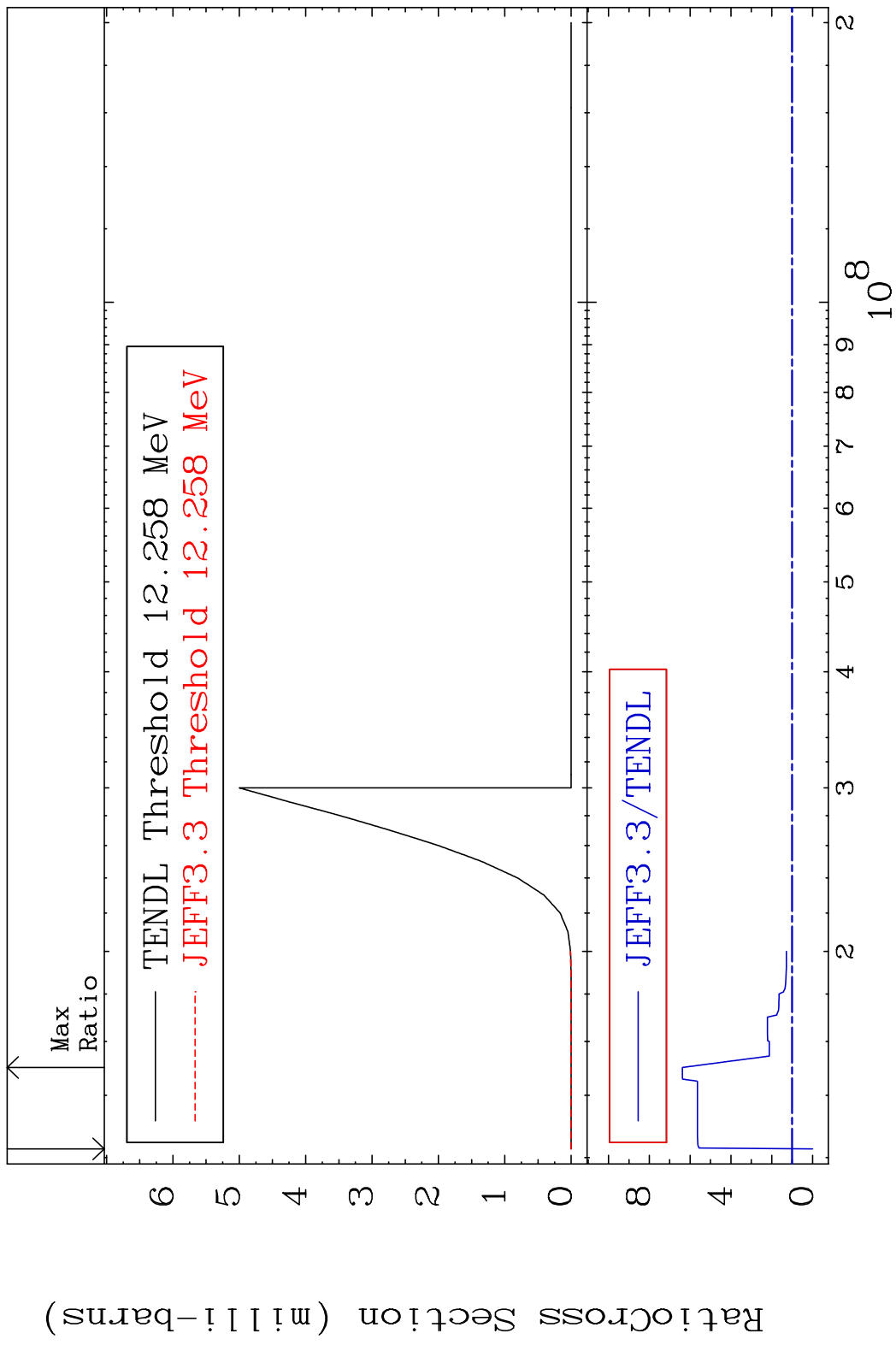
MAT 7237 (n,2n):72-Hf-177g 72-Hf-178
 Radionuclide Production Cross Section Ratio 30.79 %

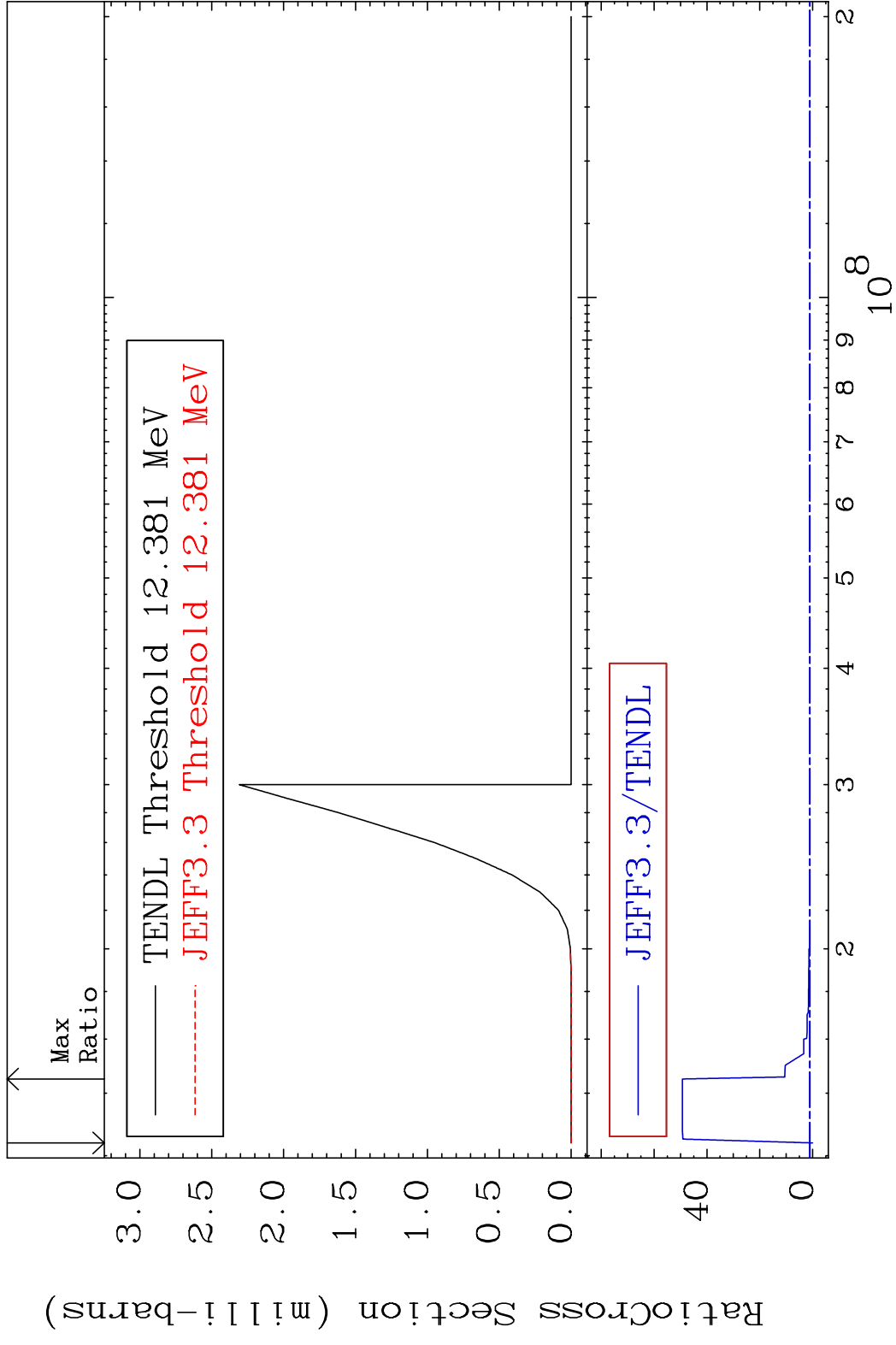


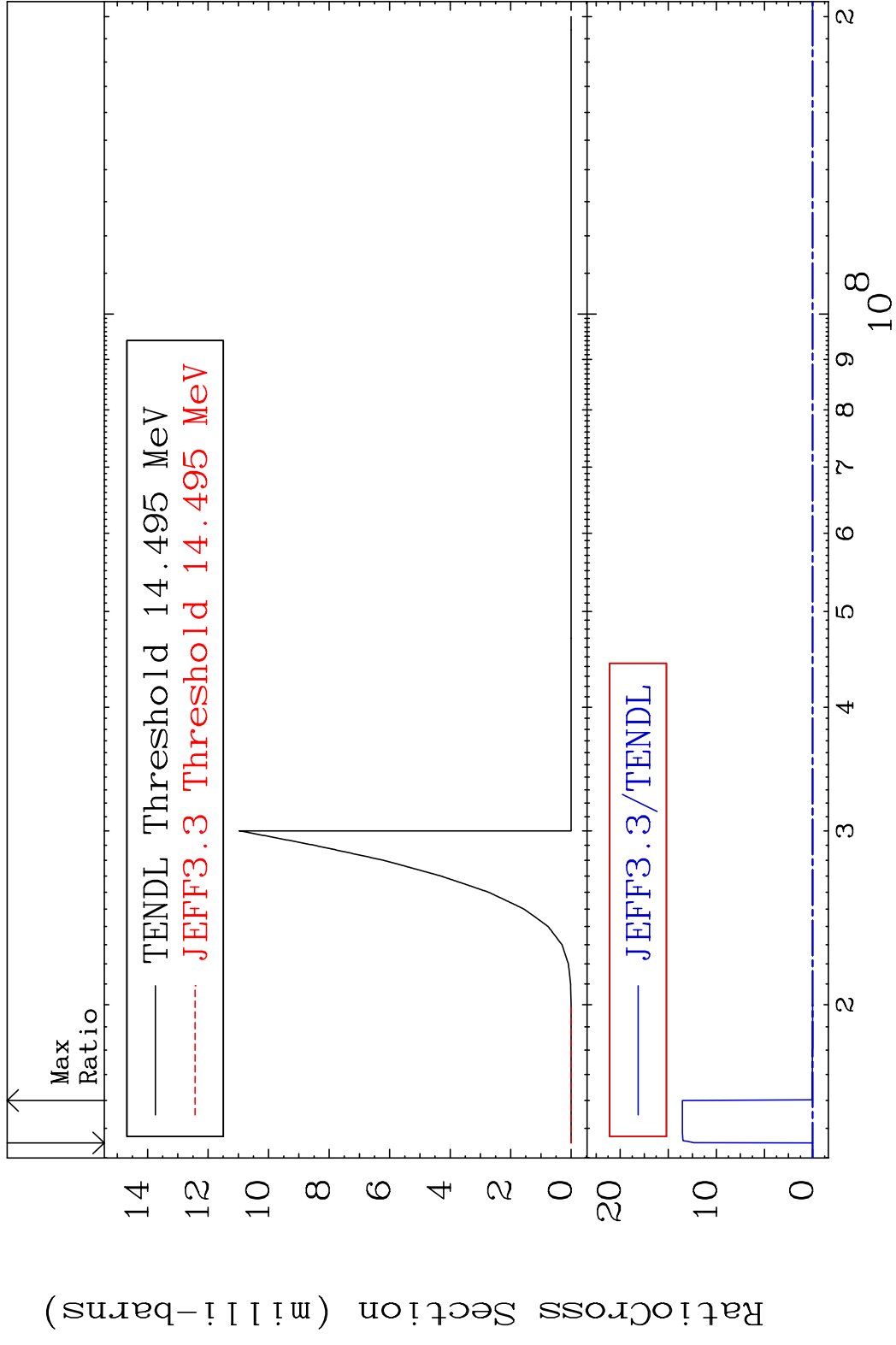


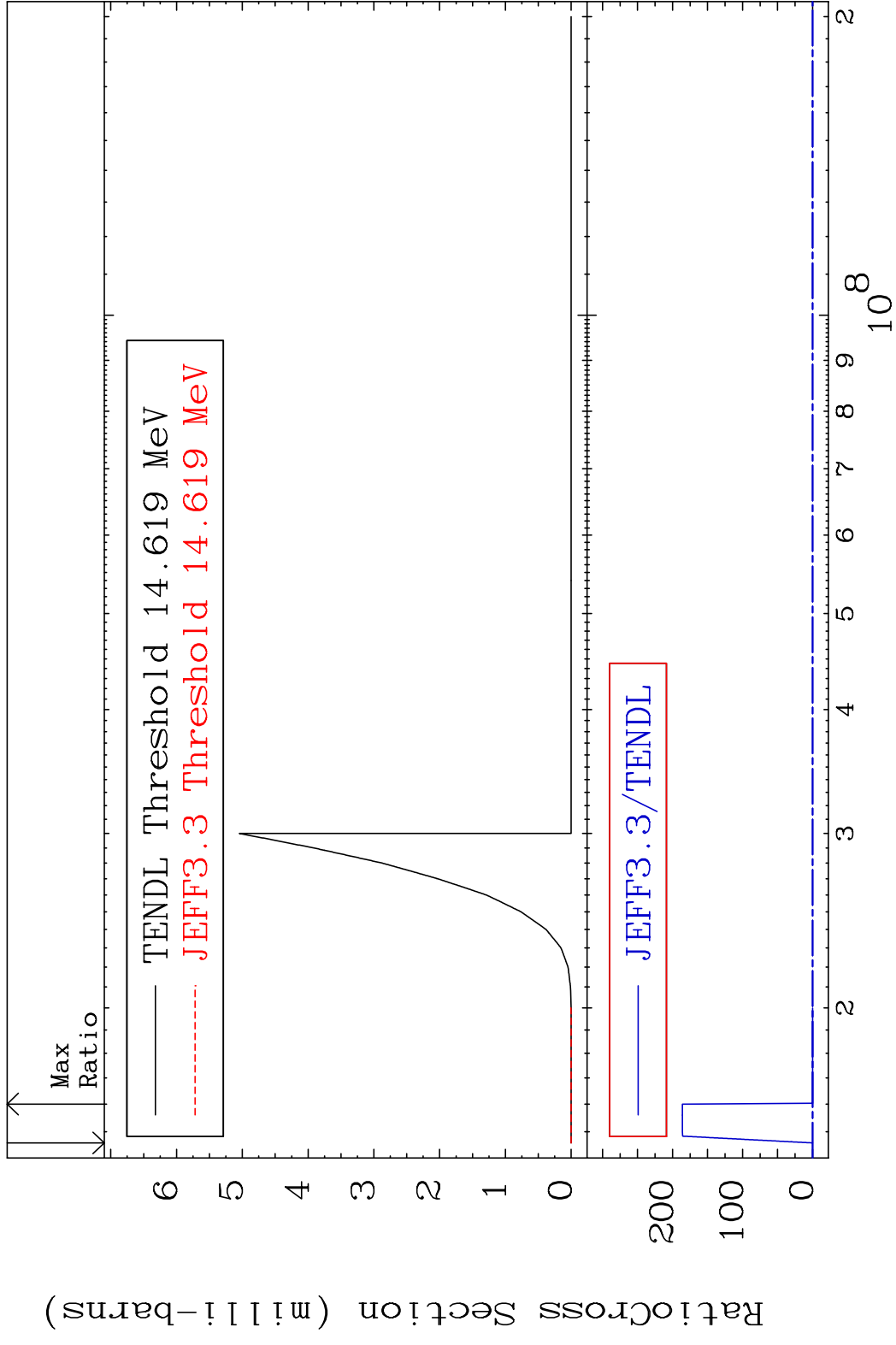


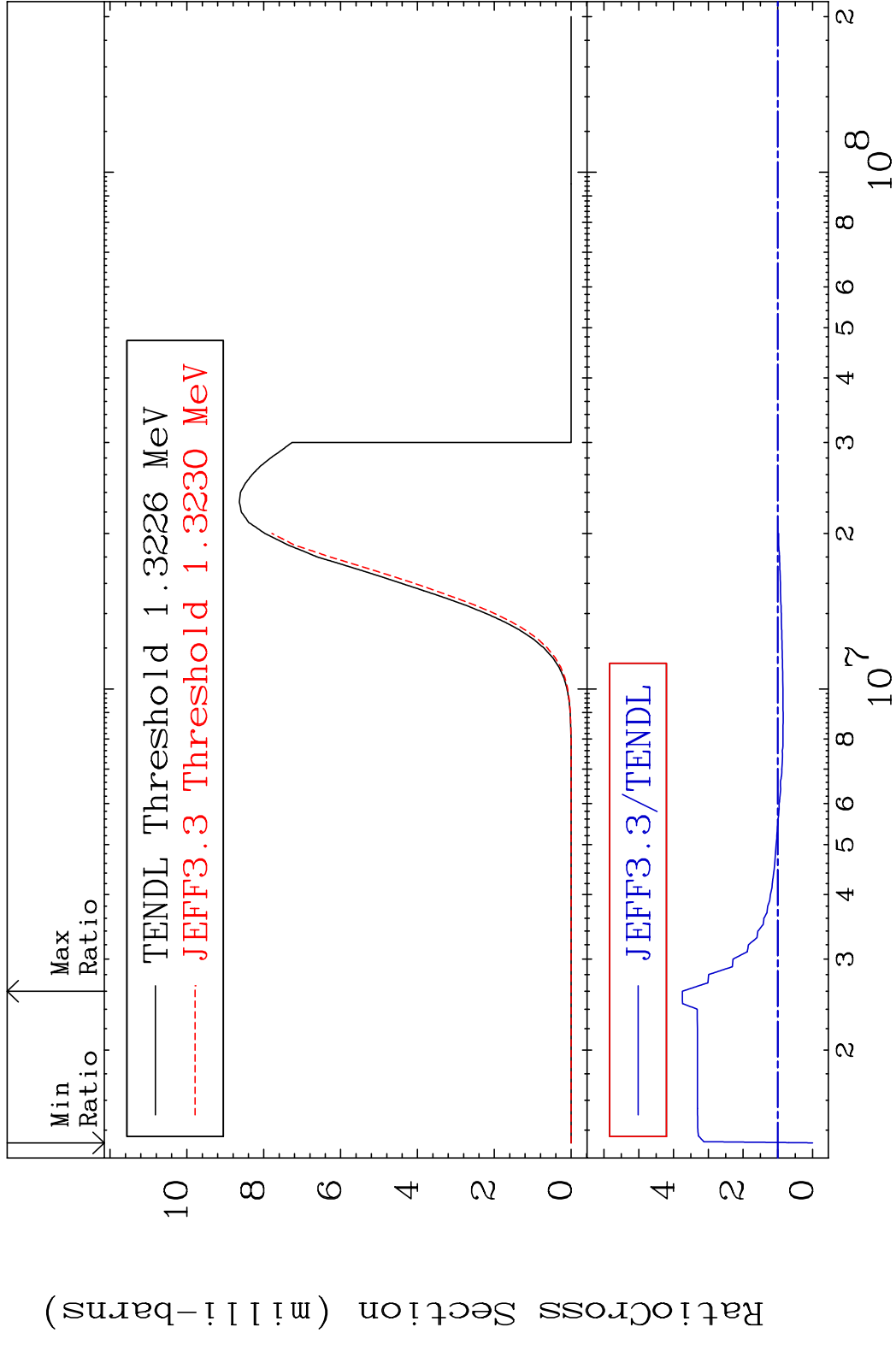
MAT 7237 (n, n') d:71-Lu-176g 72-Hf-178
 Radionuclide Production Cross Section 538.1 %

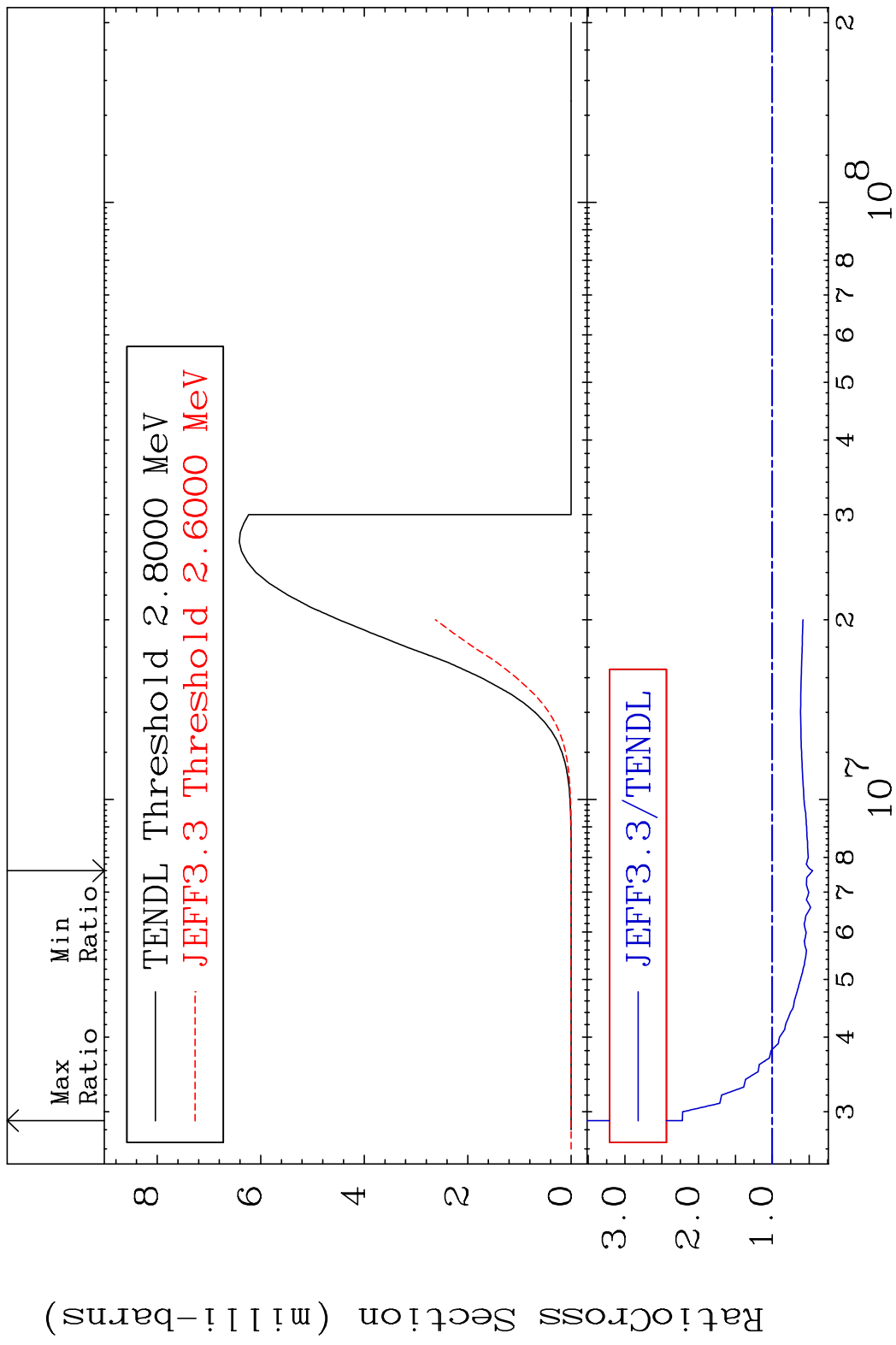




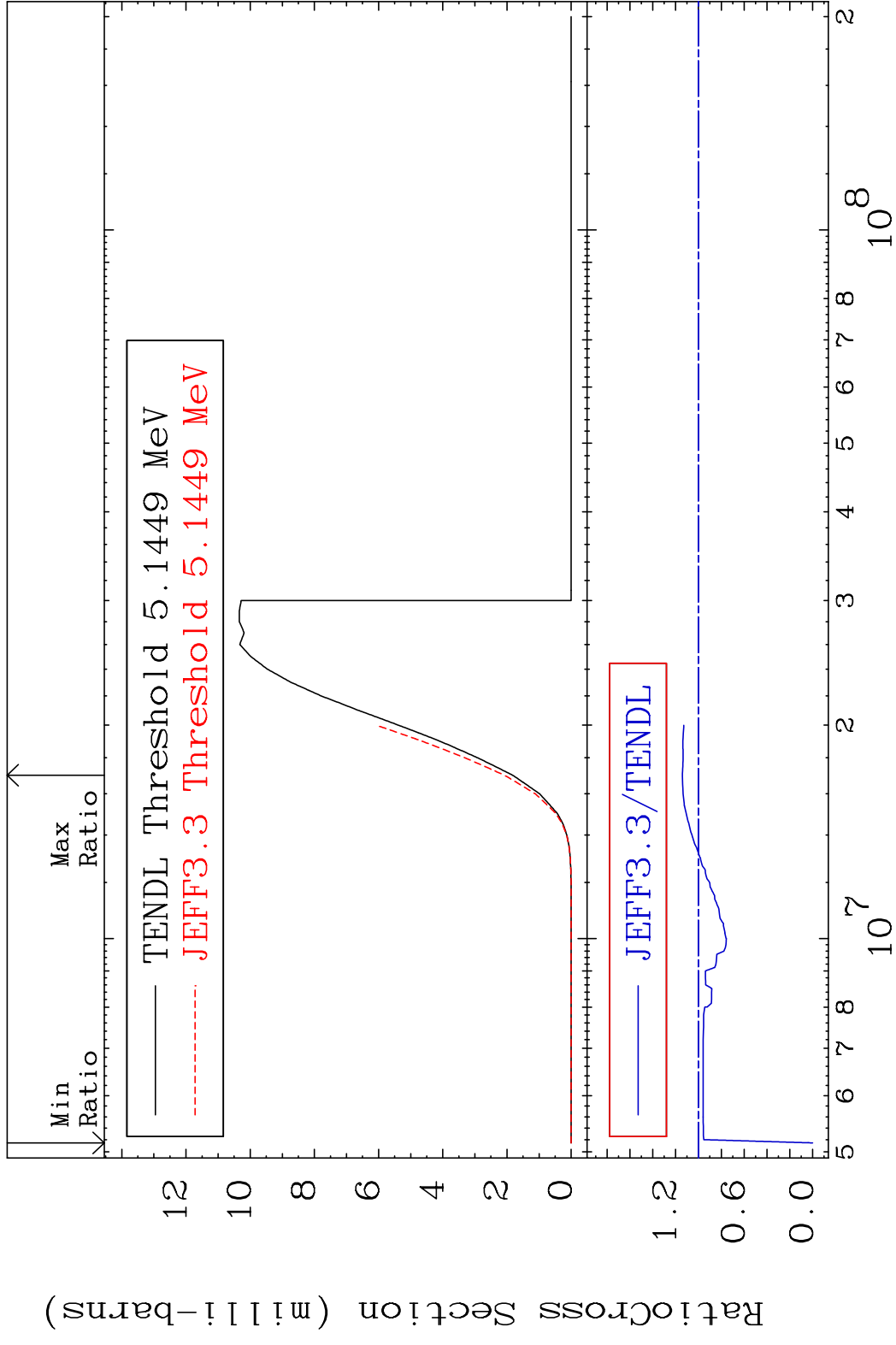








MAT 7237 (n,d):71-Lu-177g 72-Hf-178
 Radionuclide Production Cross Section 18.00 mb 14.11 %



MAT 7237

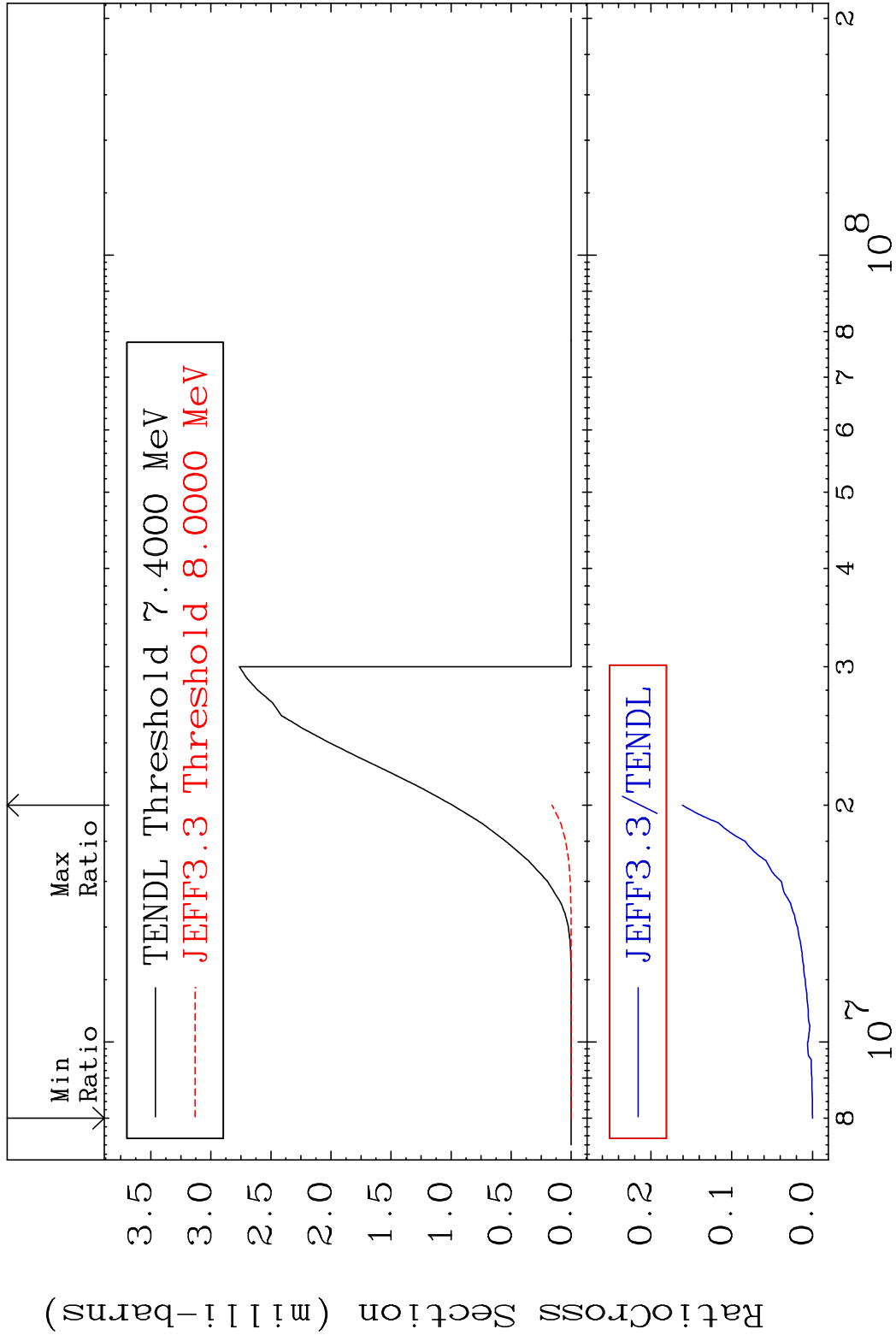
(n, d) : 71-Lu-177m29

72-Hf-178

Radionuclide Production Cross Section

18000 b

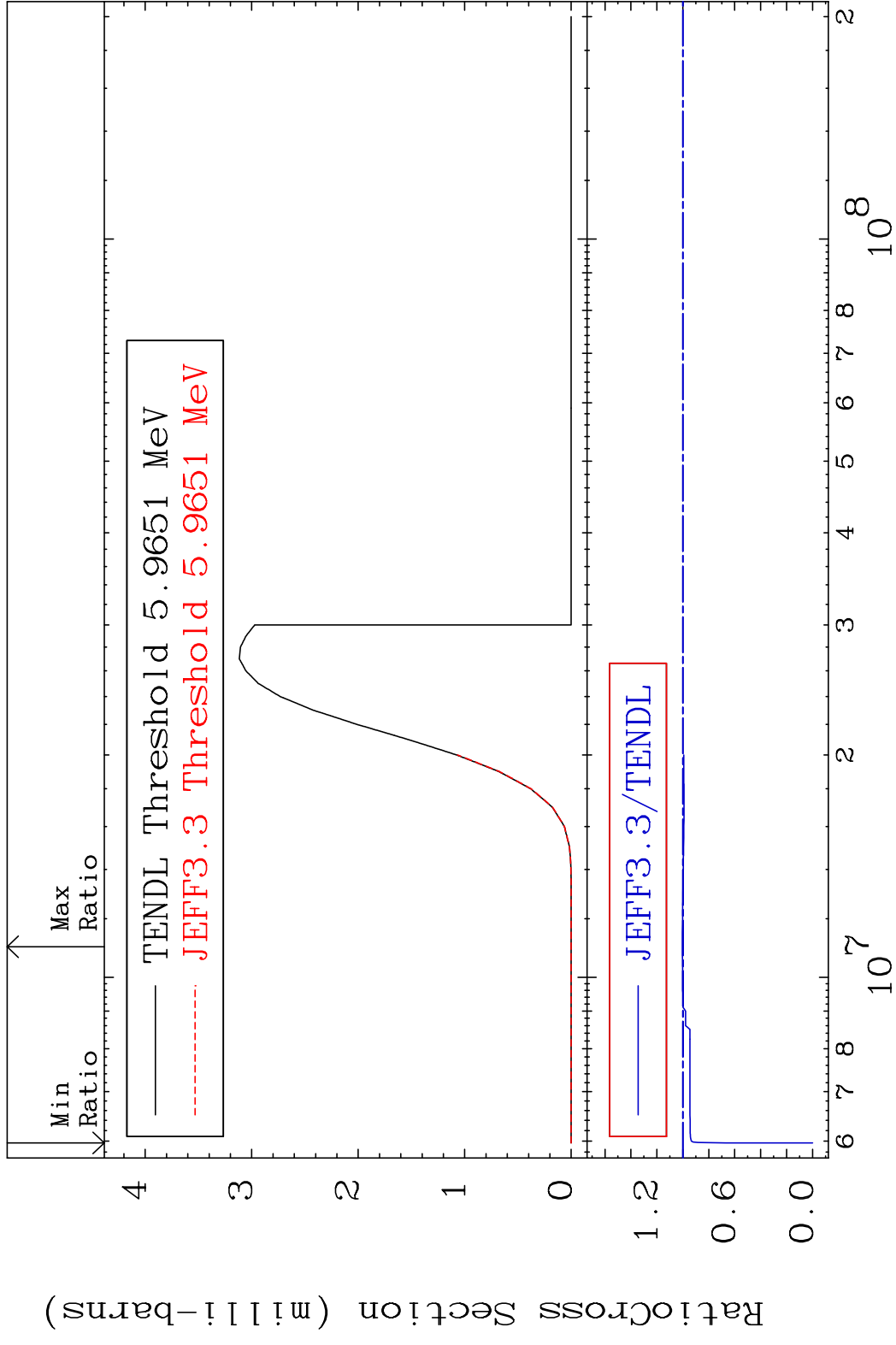
-83.90%

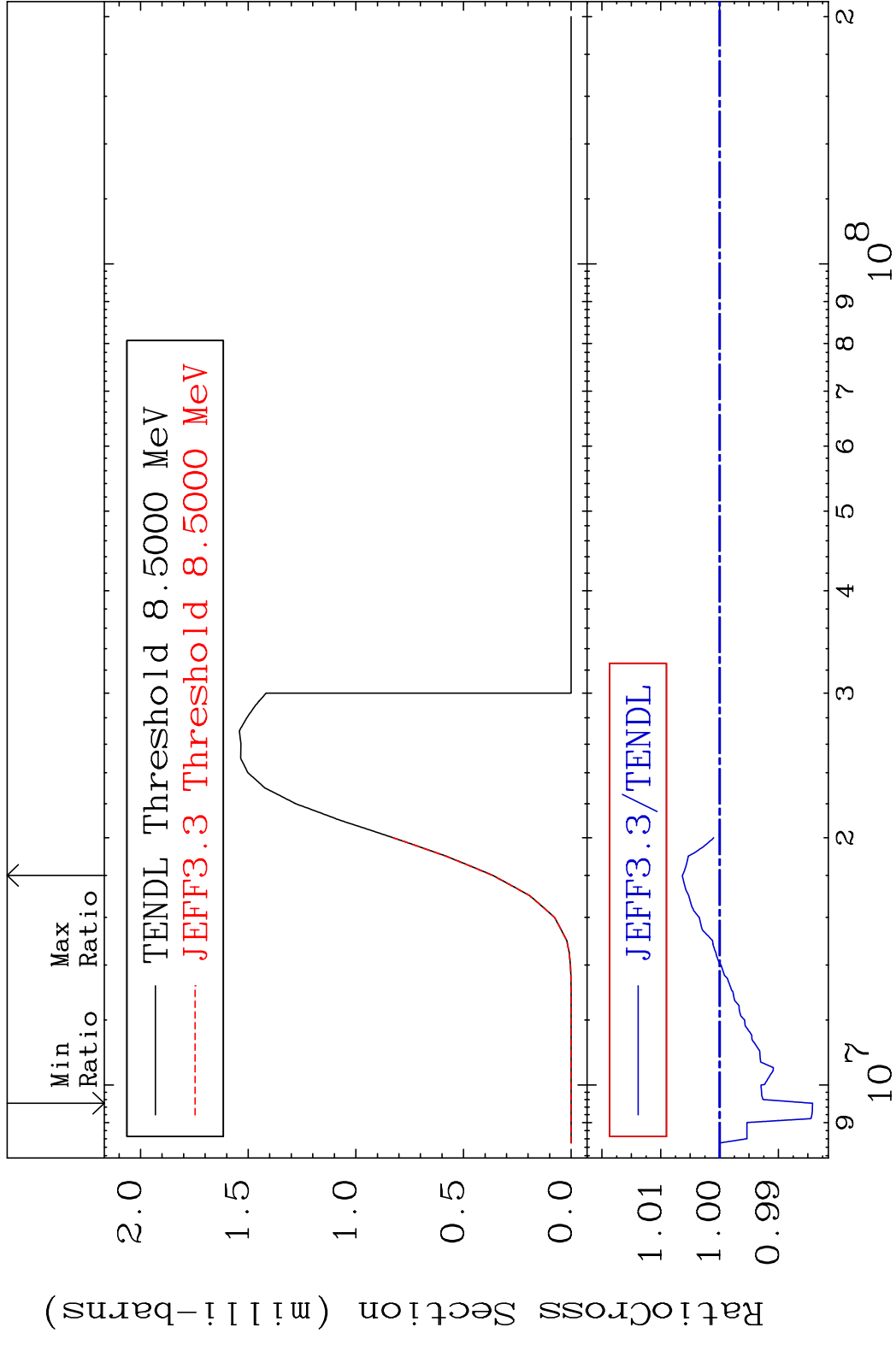


67

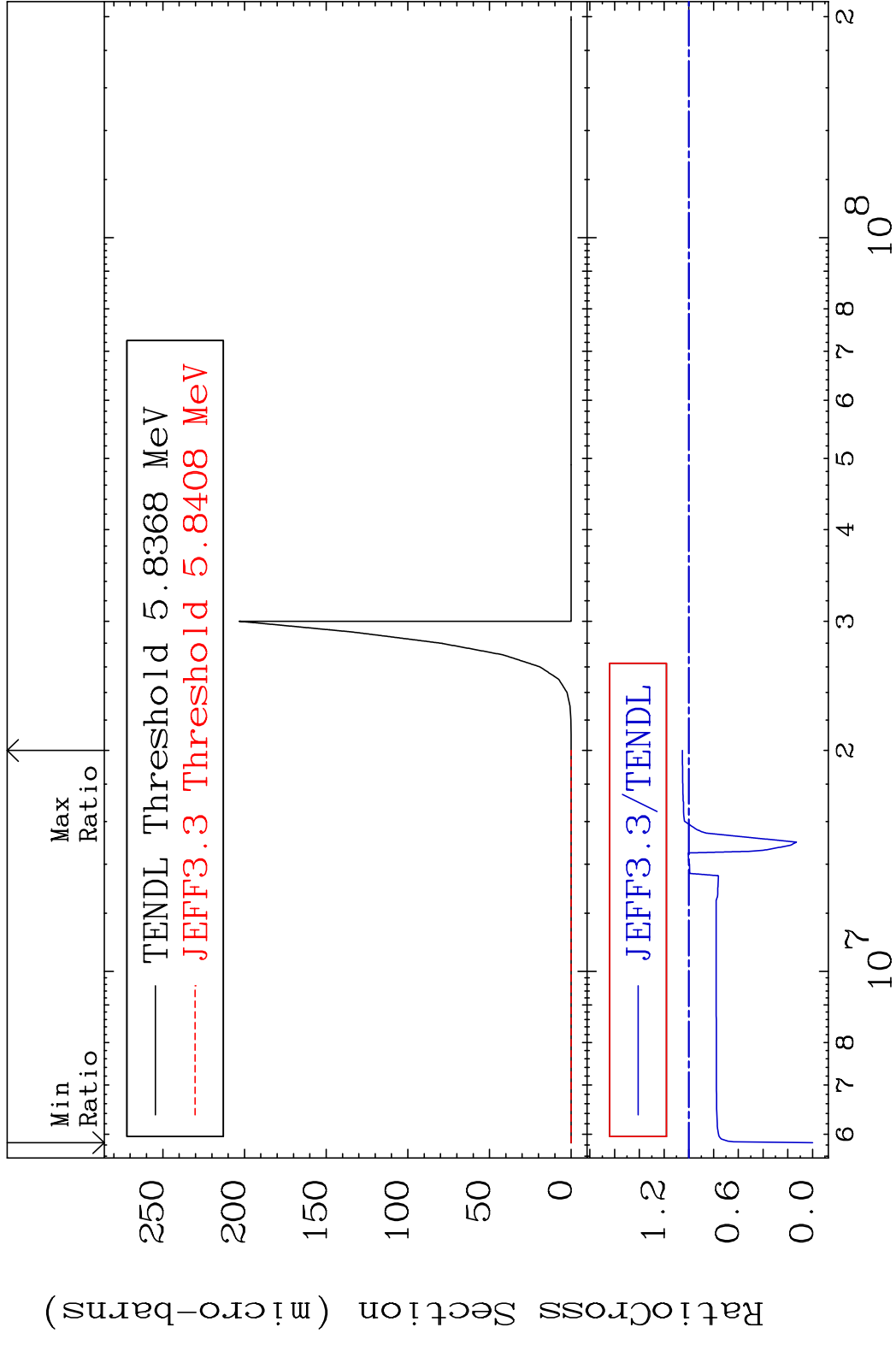
Incident Energy (eV)

72-Hf-178





MAT 7237 (n, He-3) : 70-Yb-176g 72-Hf-178
 Radionuclide Production Cross Section Ratio 5.238 %



70 Incident Energy (eV) 72-Hf-178

