

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

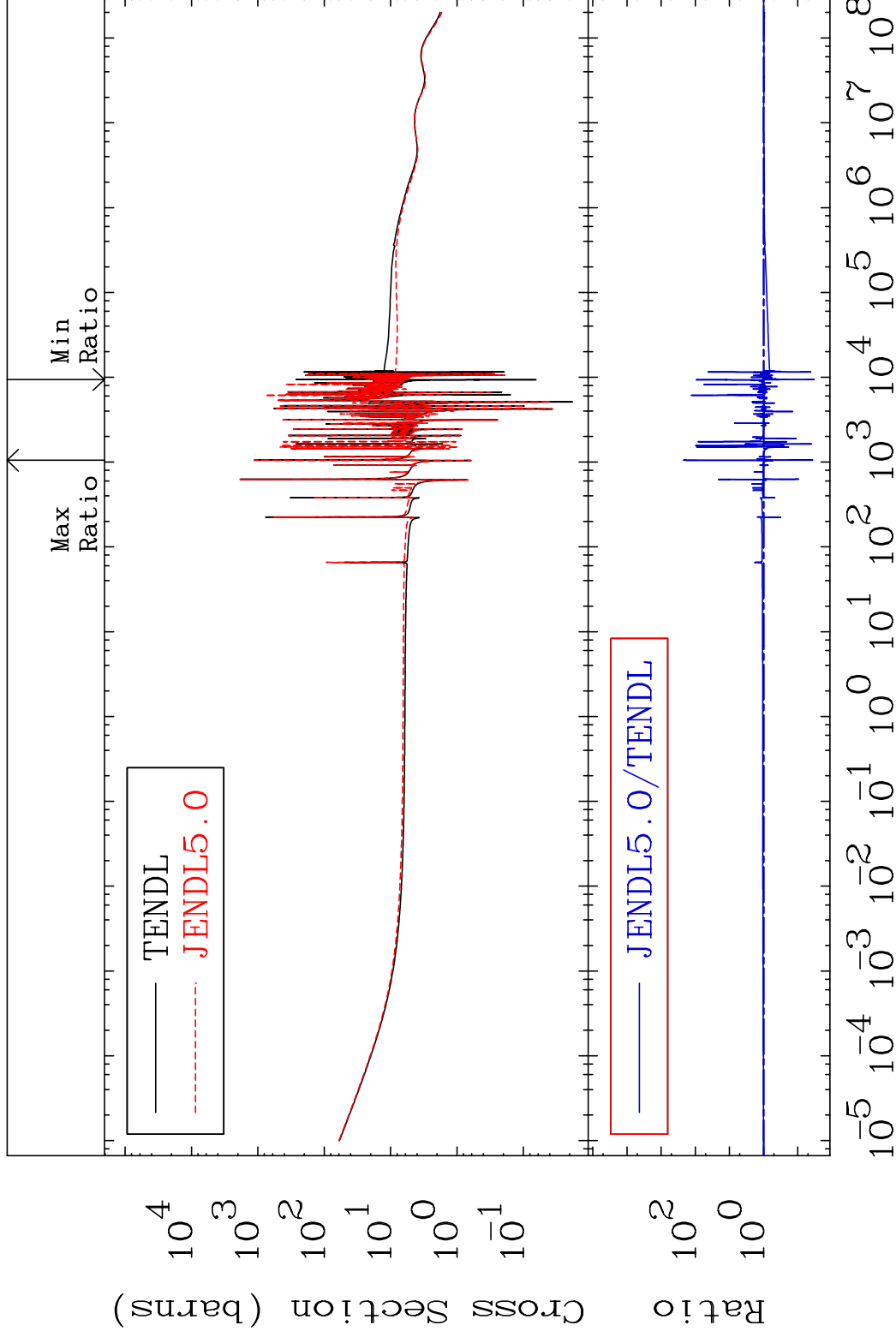
MAT 4449

Total

44-Ru-104

Cross Section

-96.67 To 9999. %



1

Incident Energy (eV)

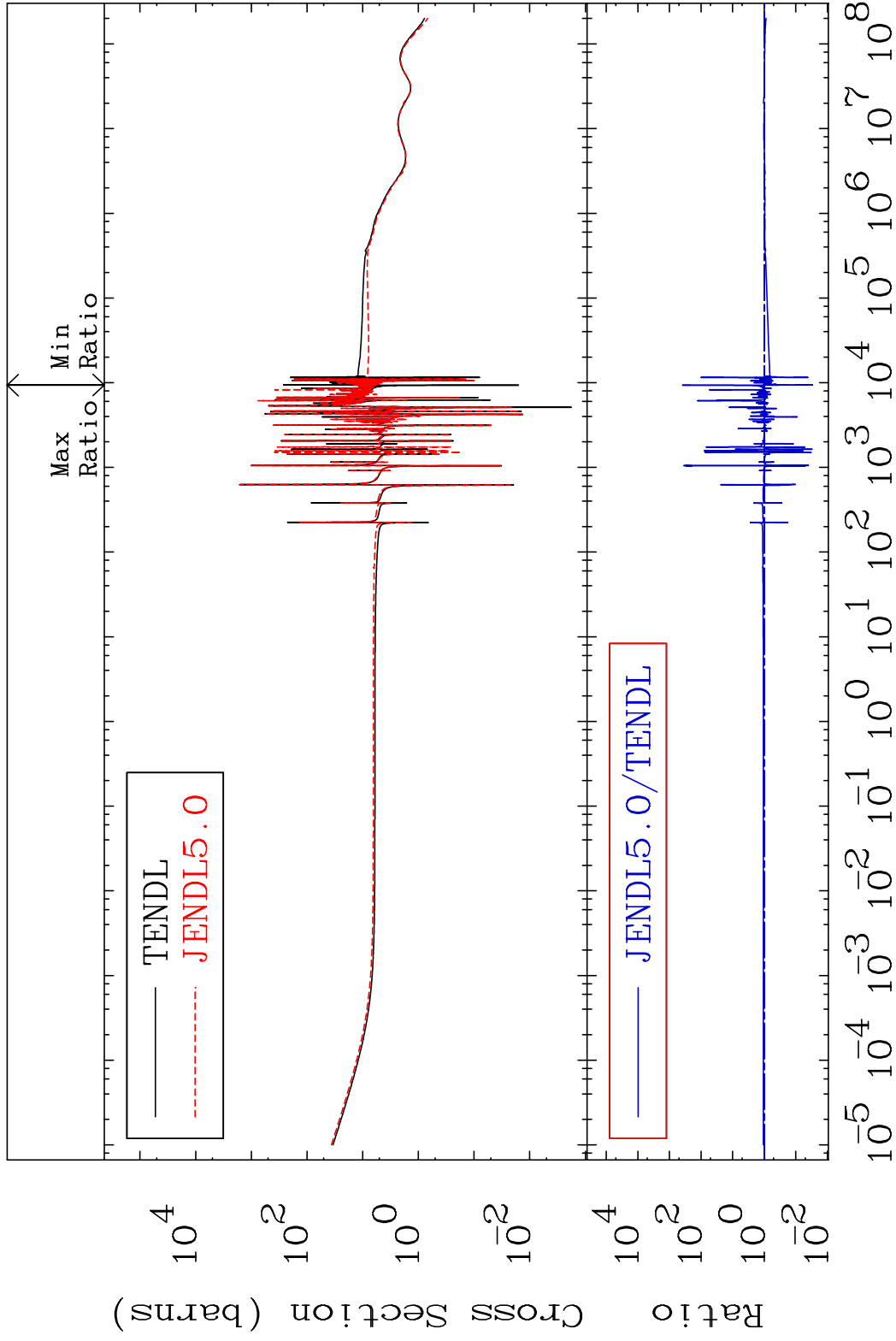
44-Ru-104

MAT 4449

Elastic

44-Ru-104

Cross Section -97.05 To 9999. %



2

Incident Energy (eV)

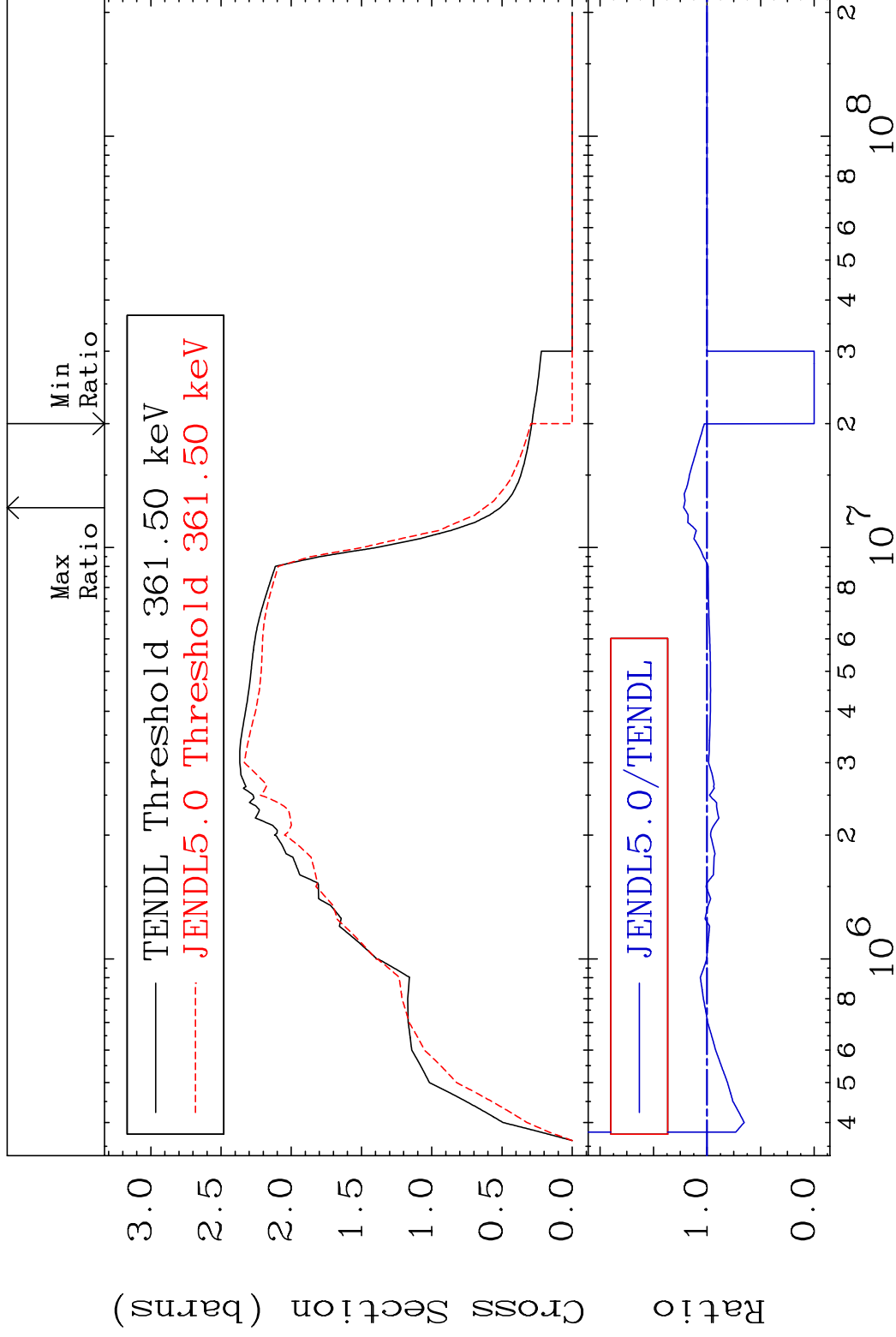
44-Ru-104

MAT 4449

Inelastic

44-Ru-104

Cross Section -100.0 To 21.89 %

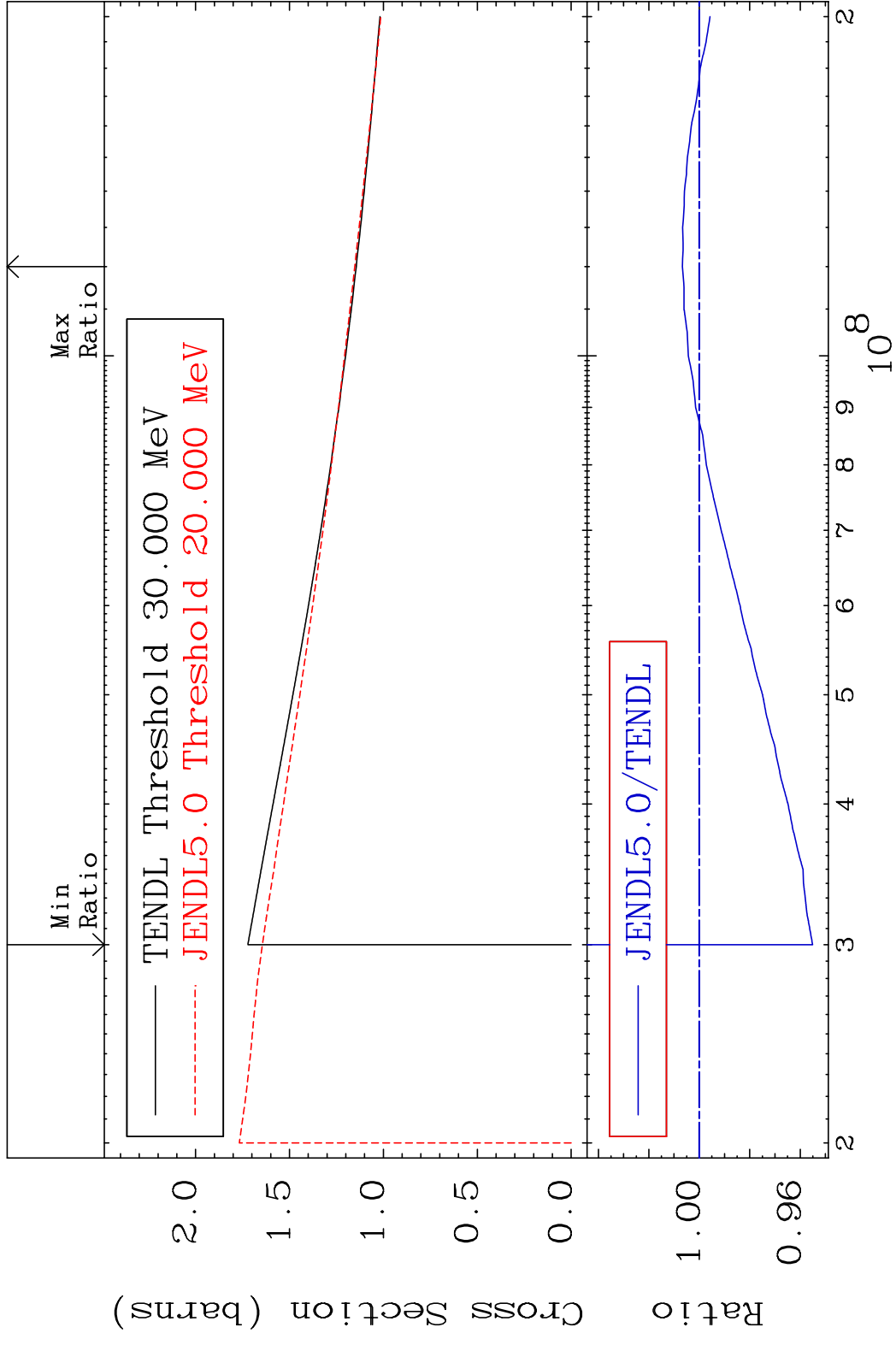


3

Incident Energy (eV)

44-Ru-104

MAT 4449 (n, remainder) 44-Ru-104  
 Cross Section -4.490 To 0.671 %



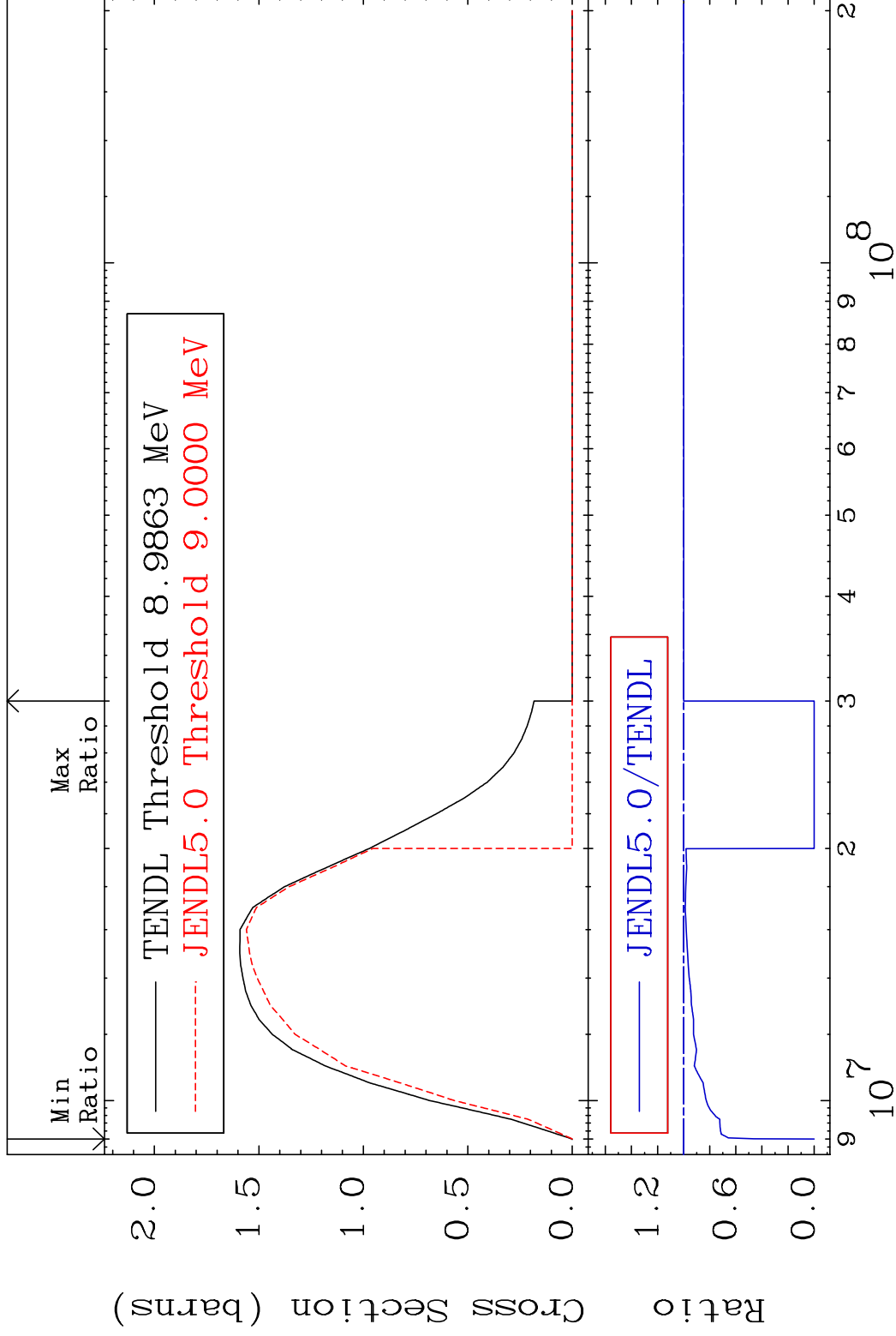
4 Incident Energy (eV) 44-Ru-104

MAT 4449

(n,2n)

44-Ru-104

Cross Section -100.0 To 0.000 %

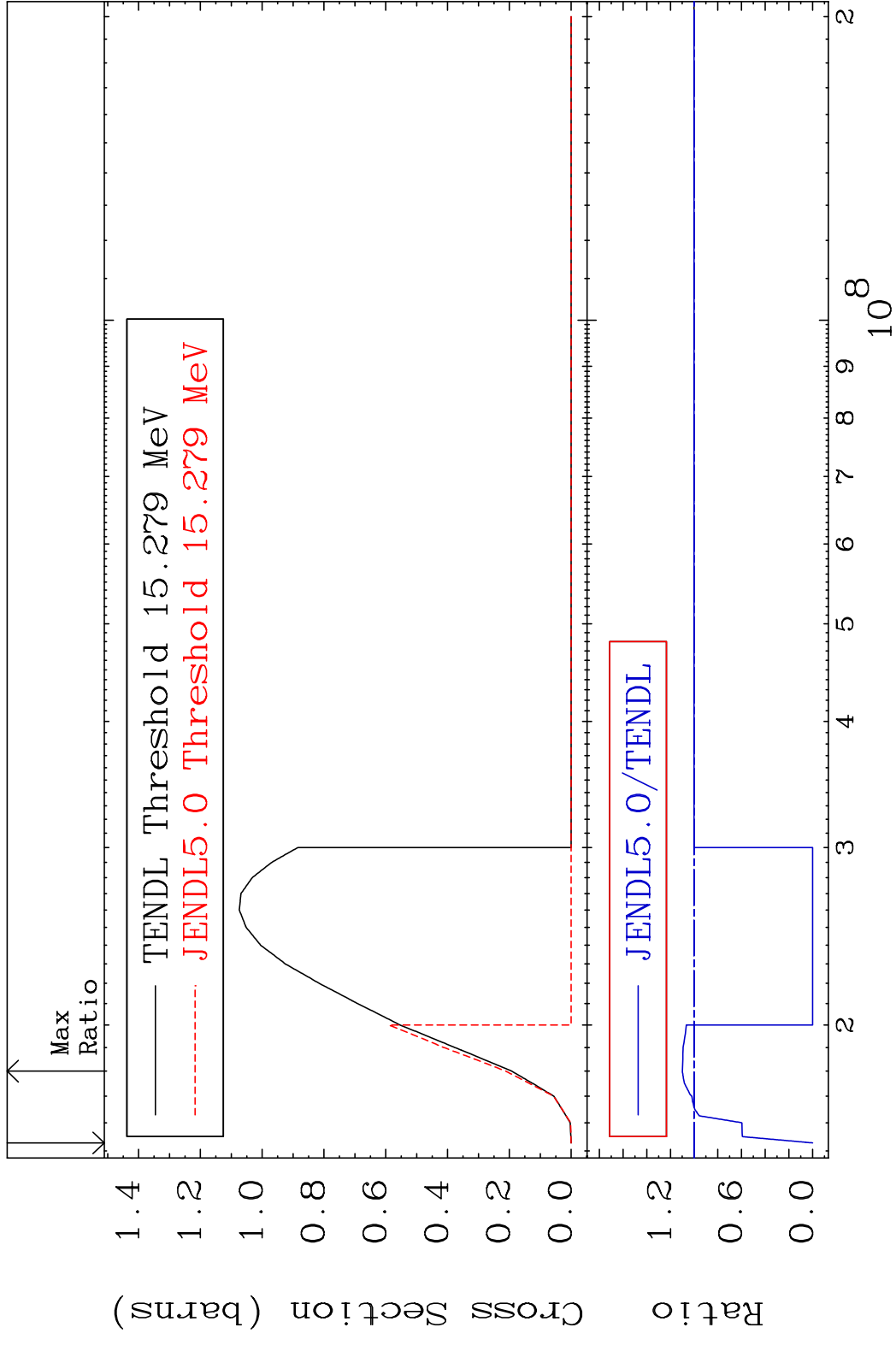


5

Incident Energy (eV)

44-Ru-104

MAT 4449 (n,3n) 44-Ru-104  
 Cross Section -100.0 To 9.925 %

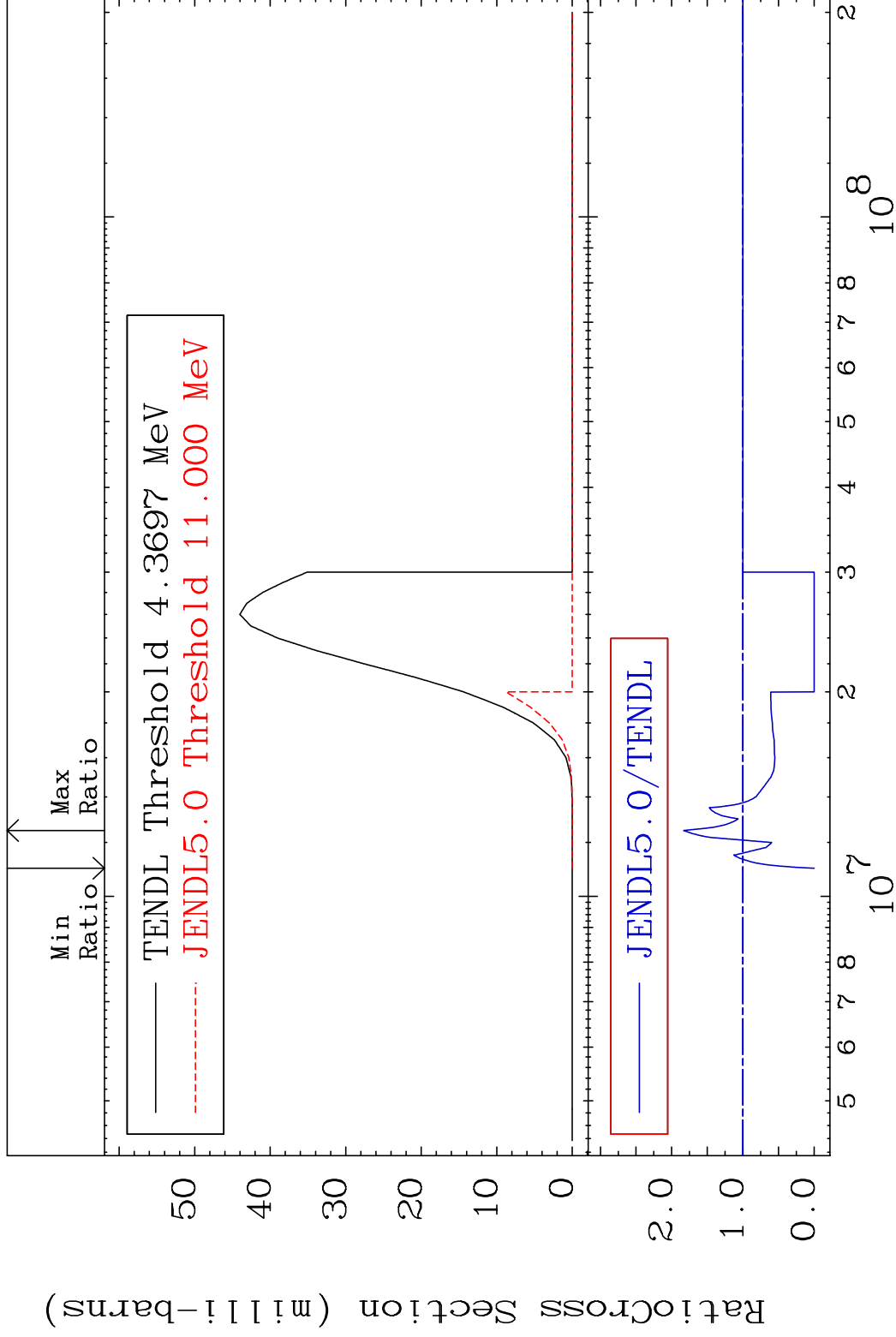


MAT 4449

(n, n')  $\alpha$

44-Ru-104

Cross Section -100.0 To 83.16 %

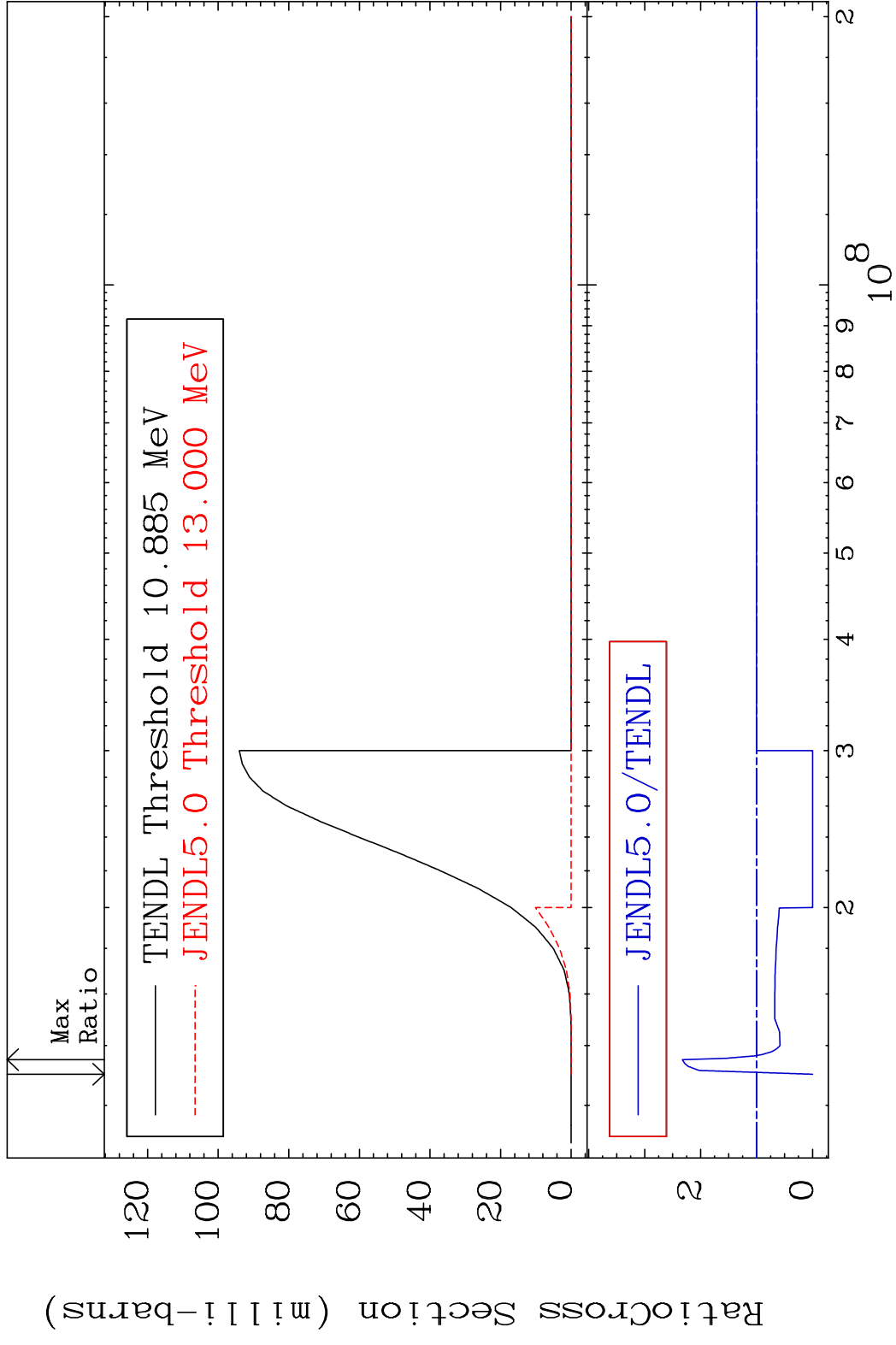


7

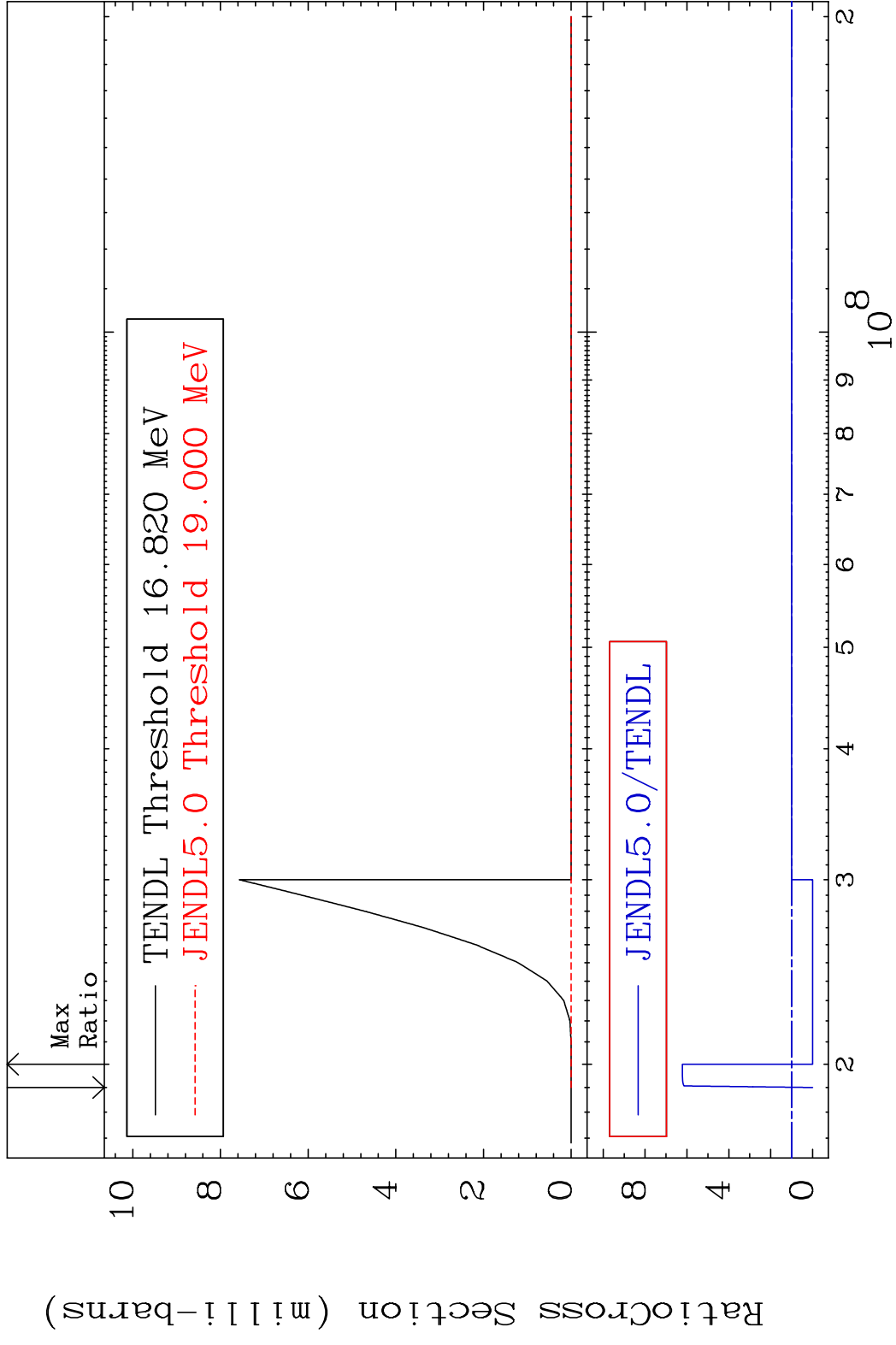
Incident Energy (eV)

44-Ru-104

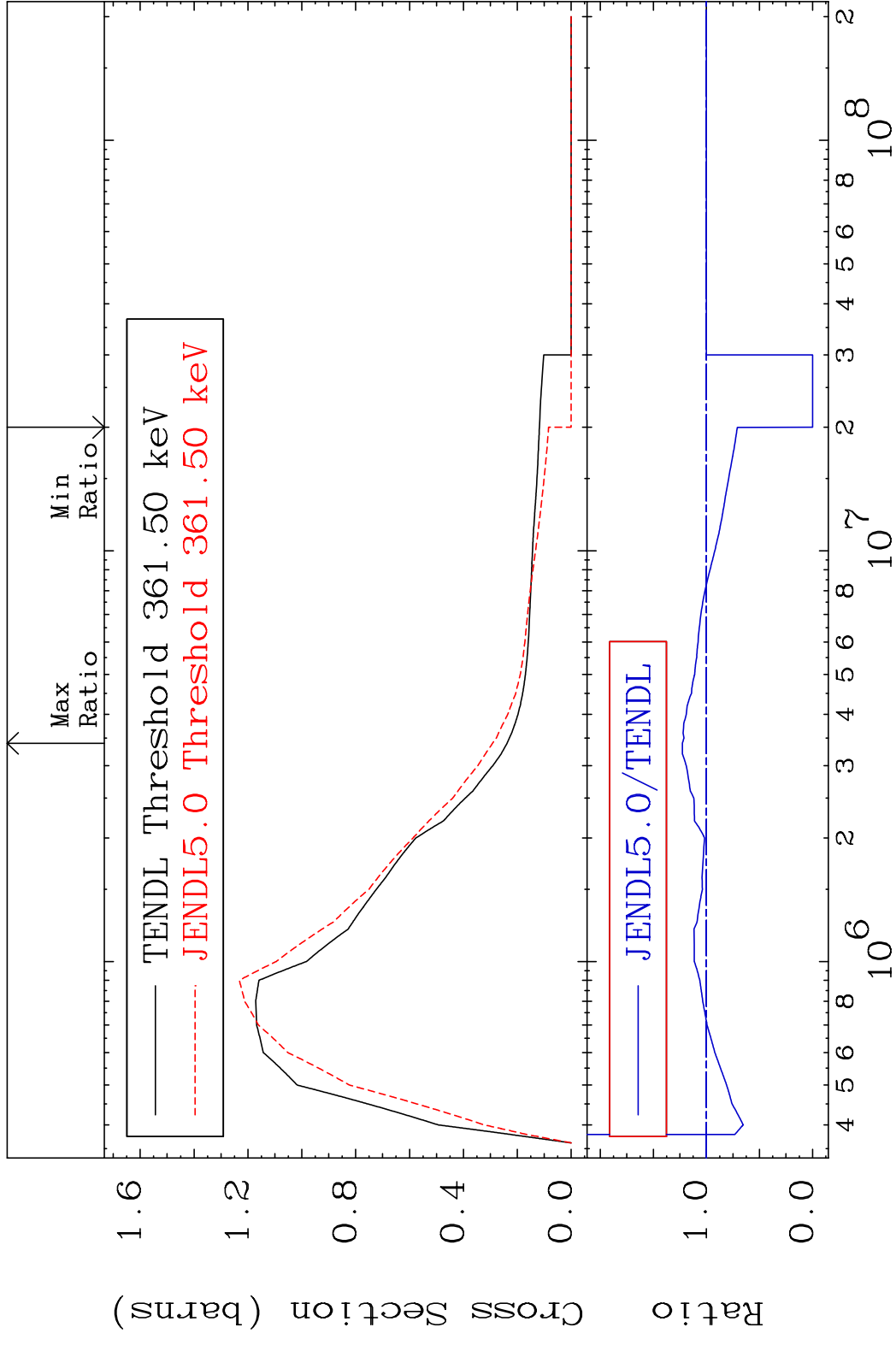
MAT 4449 (n, n') p 44-Ru-104  
 Cross Section -100.0 To 132.6 %



MAT 4449 (n, n') d 44-Ru-104  
 Cross Section -100.0 To 522.0 %

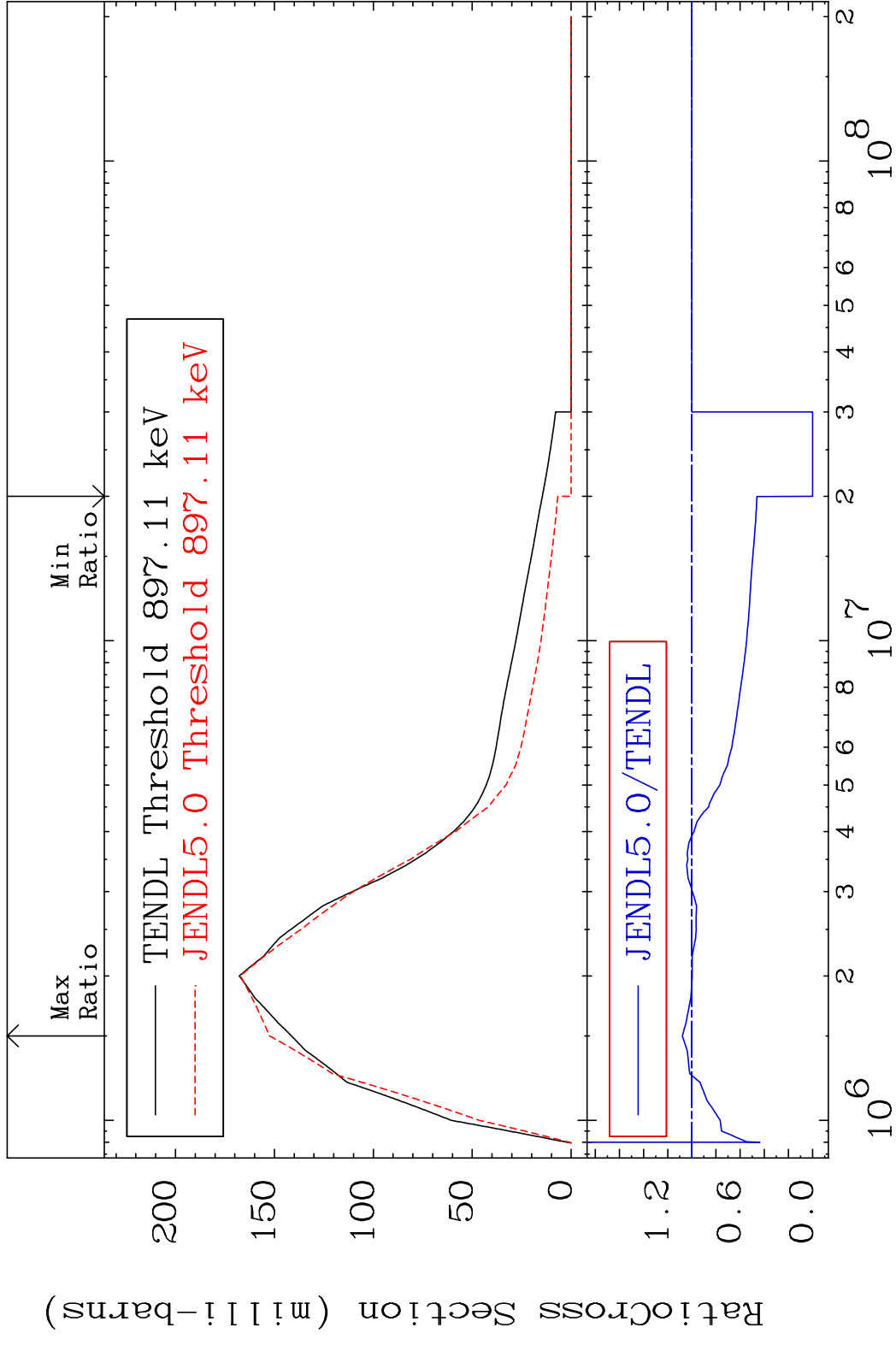


MAT 4449 MT= 51 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 22.69 %

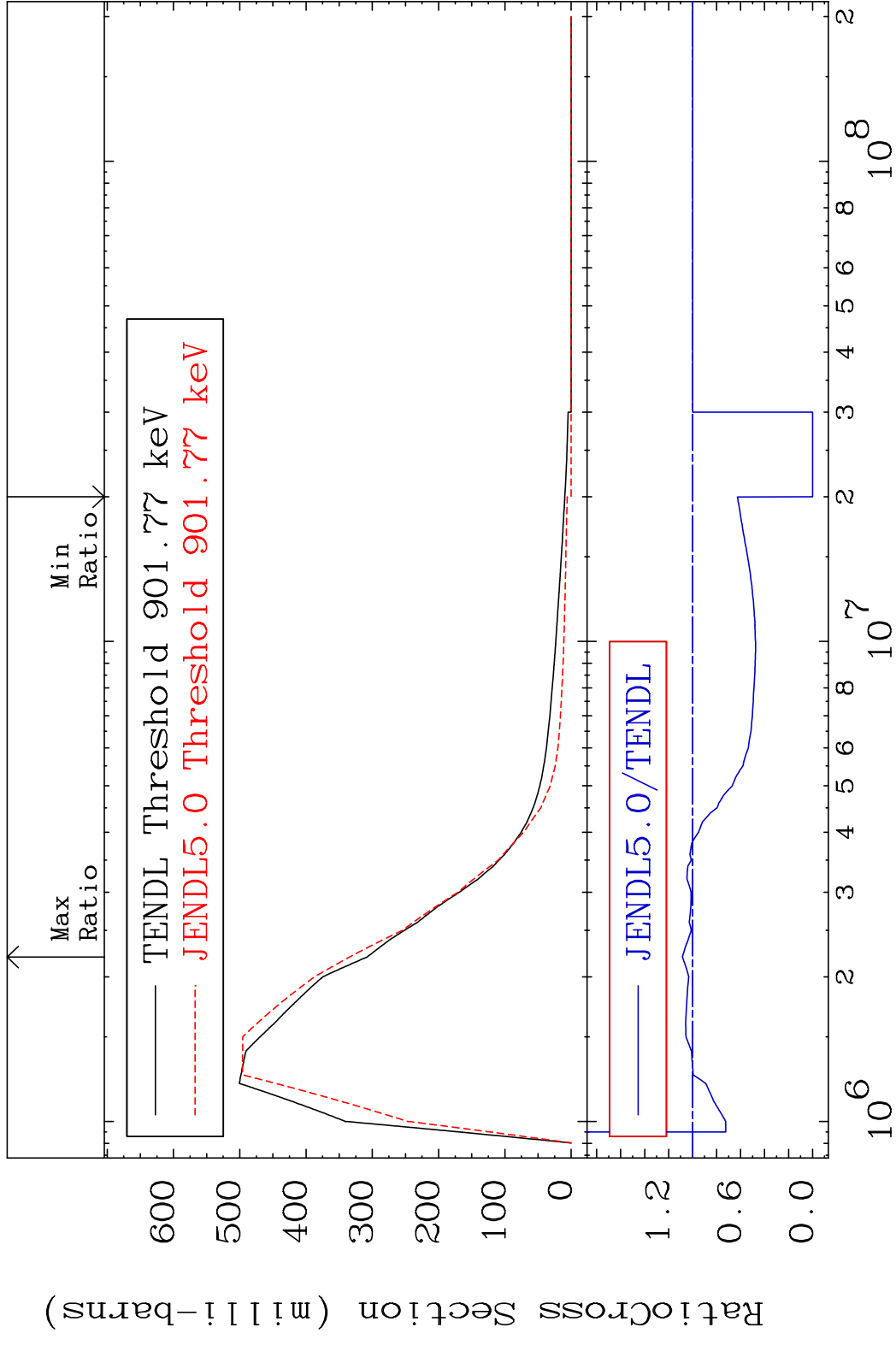


10 Incident Energy (eV) 44-Ru-104

MAT 4449 MT= 52 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 7.846 %

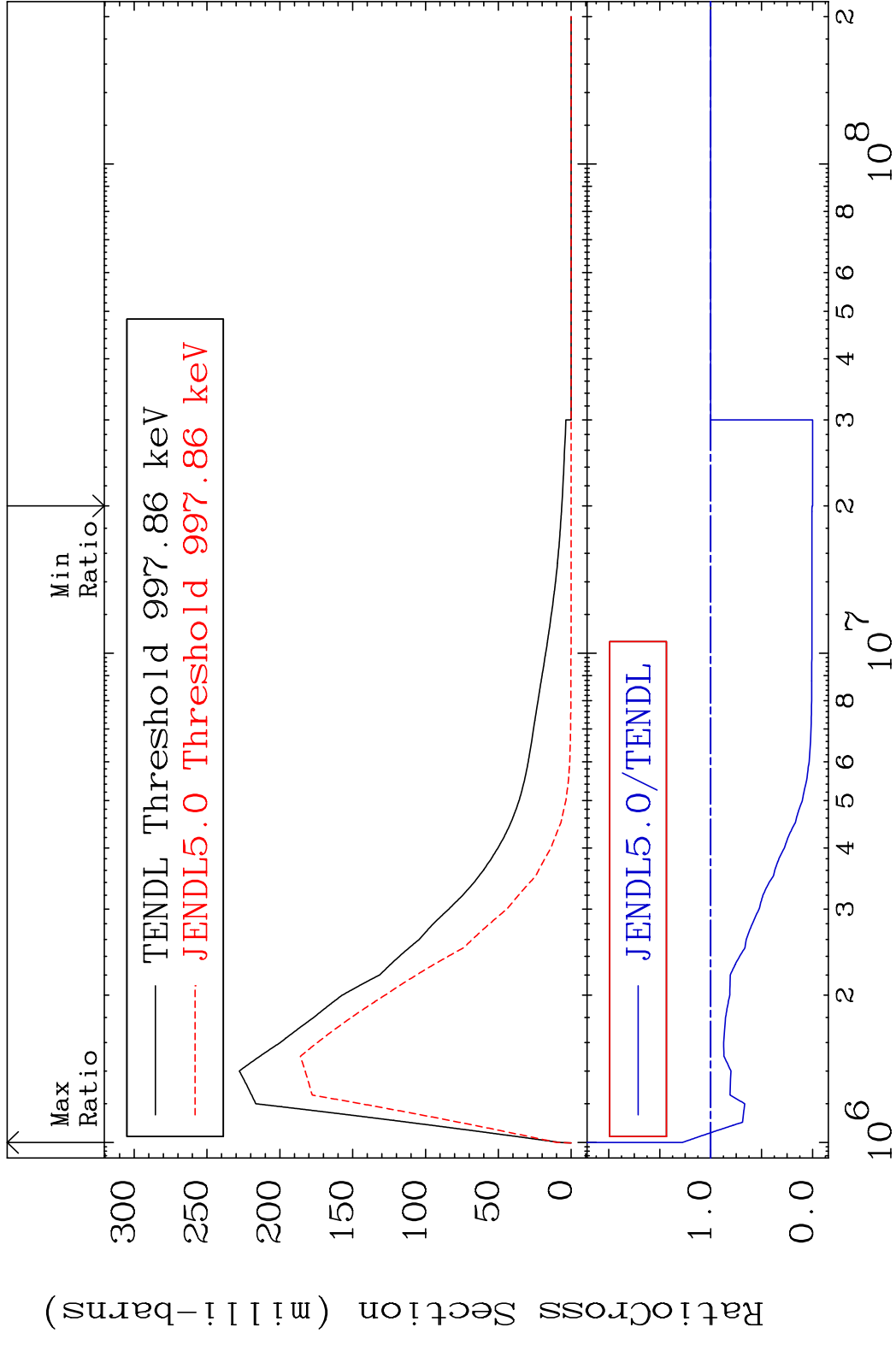


MAT 4449 MT= 53 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 8.567 %



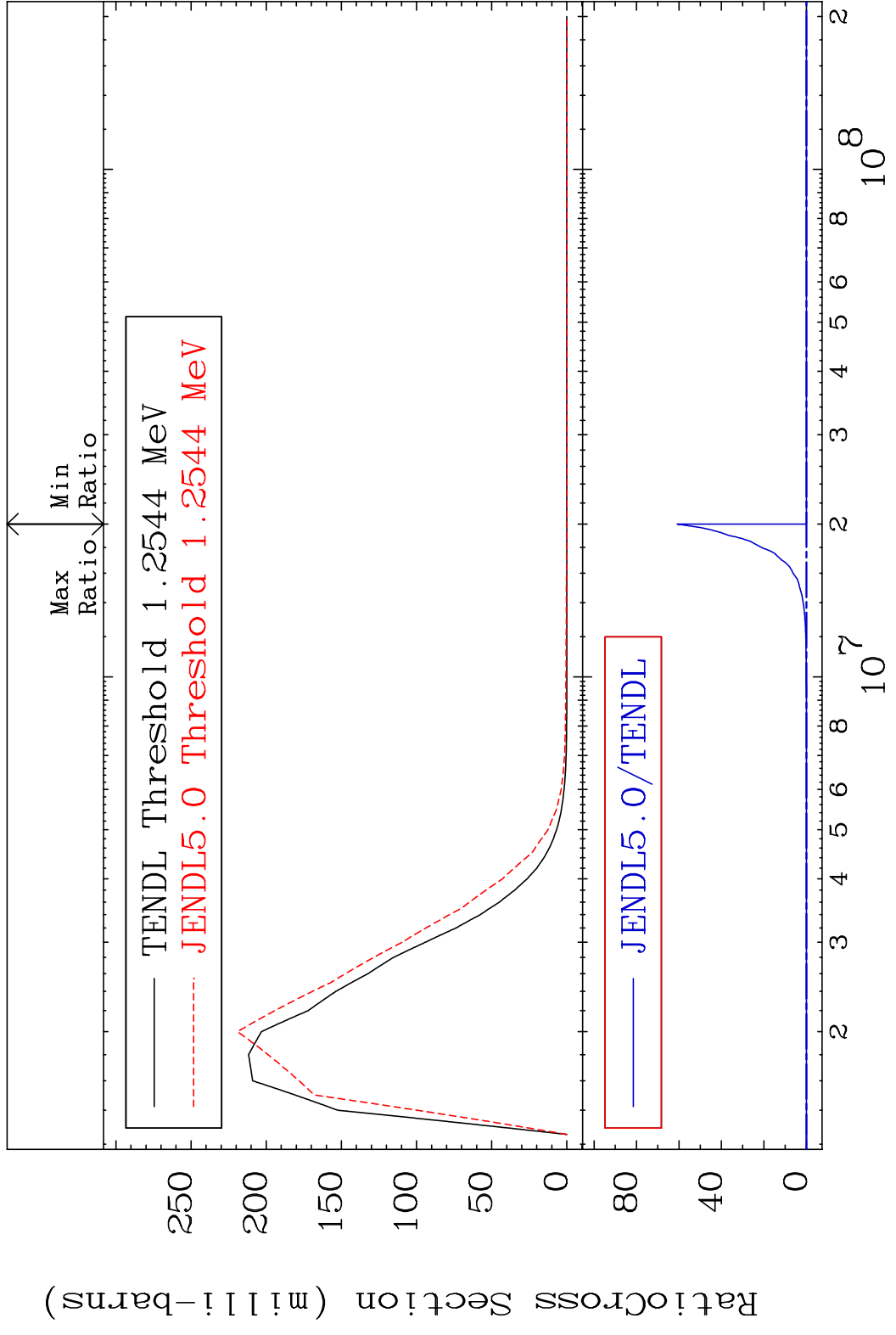
12 Incident Energy (eV) 44-Ru-104

MAT 4449 MT= 54 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 27.82 %

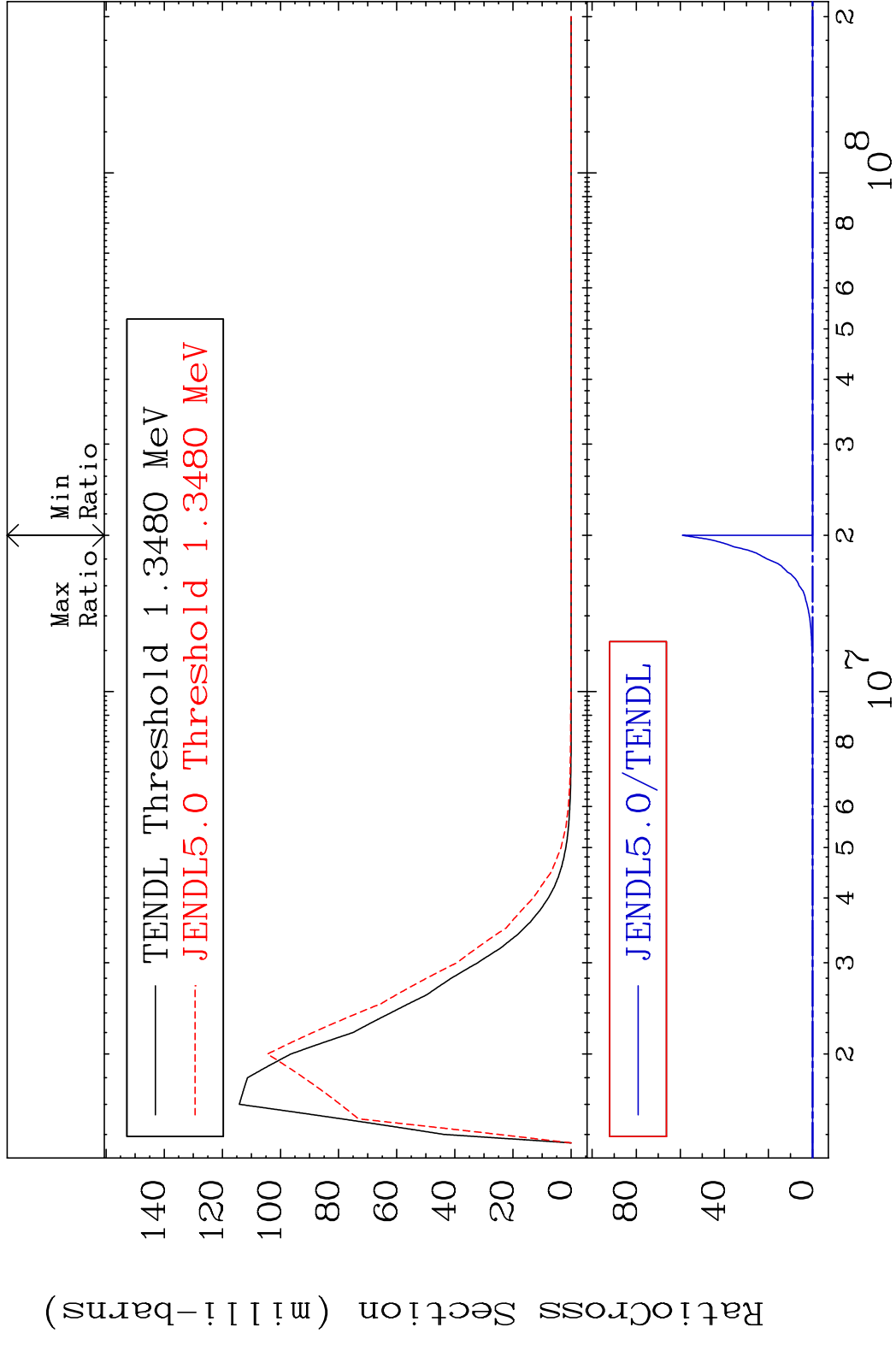


13 44-Ru-104

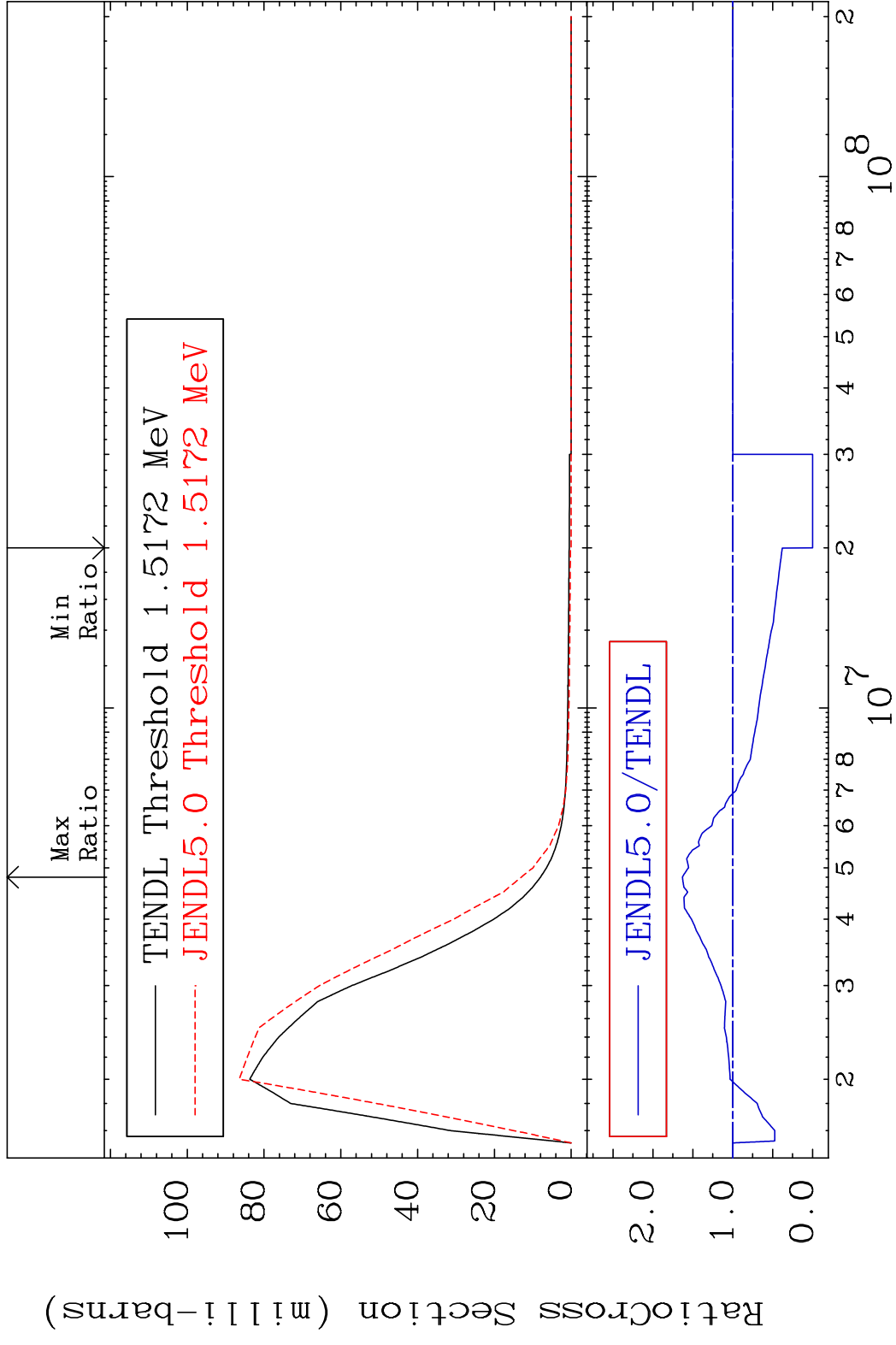
MAT 4449 MT= 55 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %



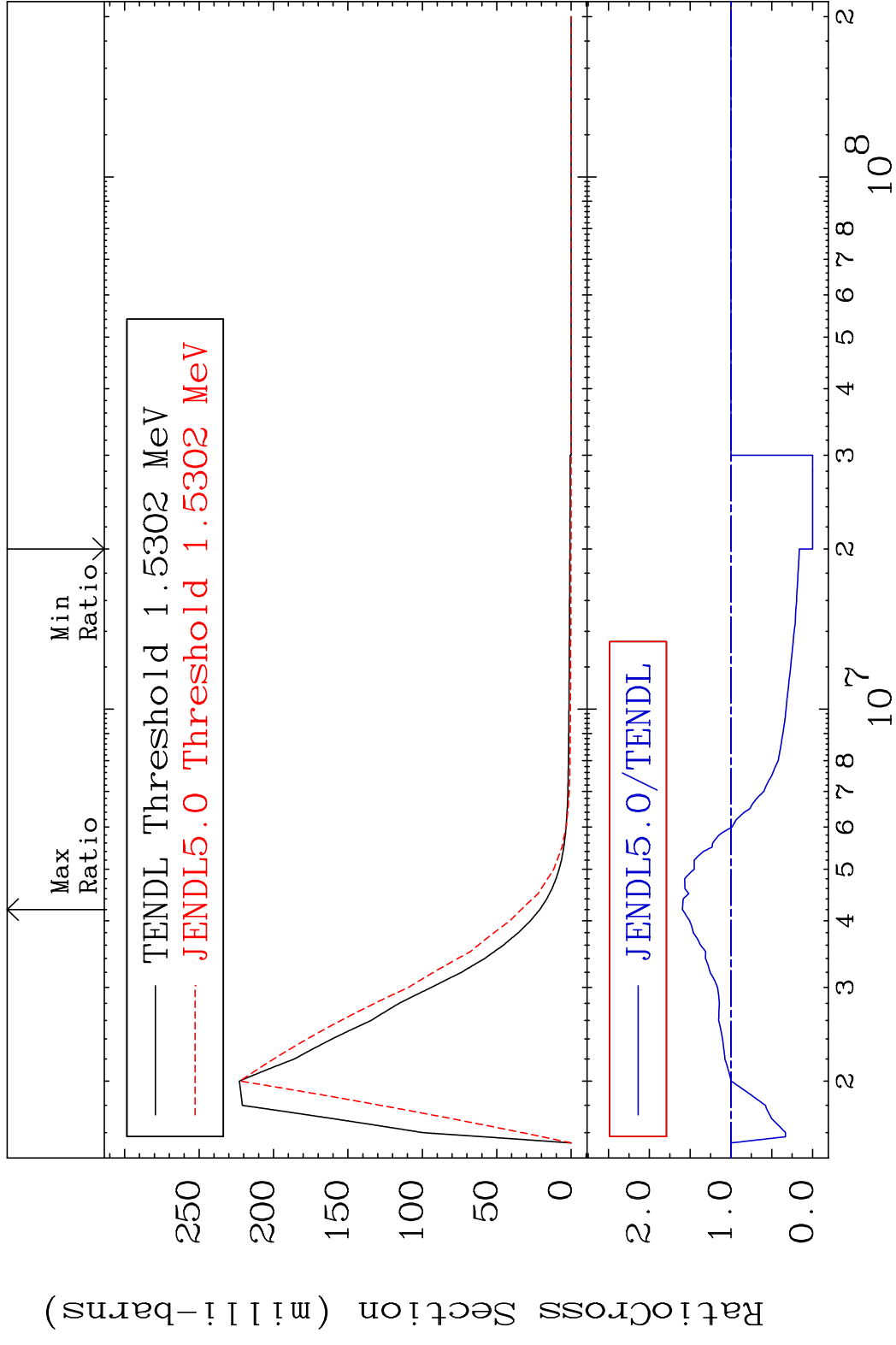
MAT 4449 MT= 56 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %



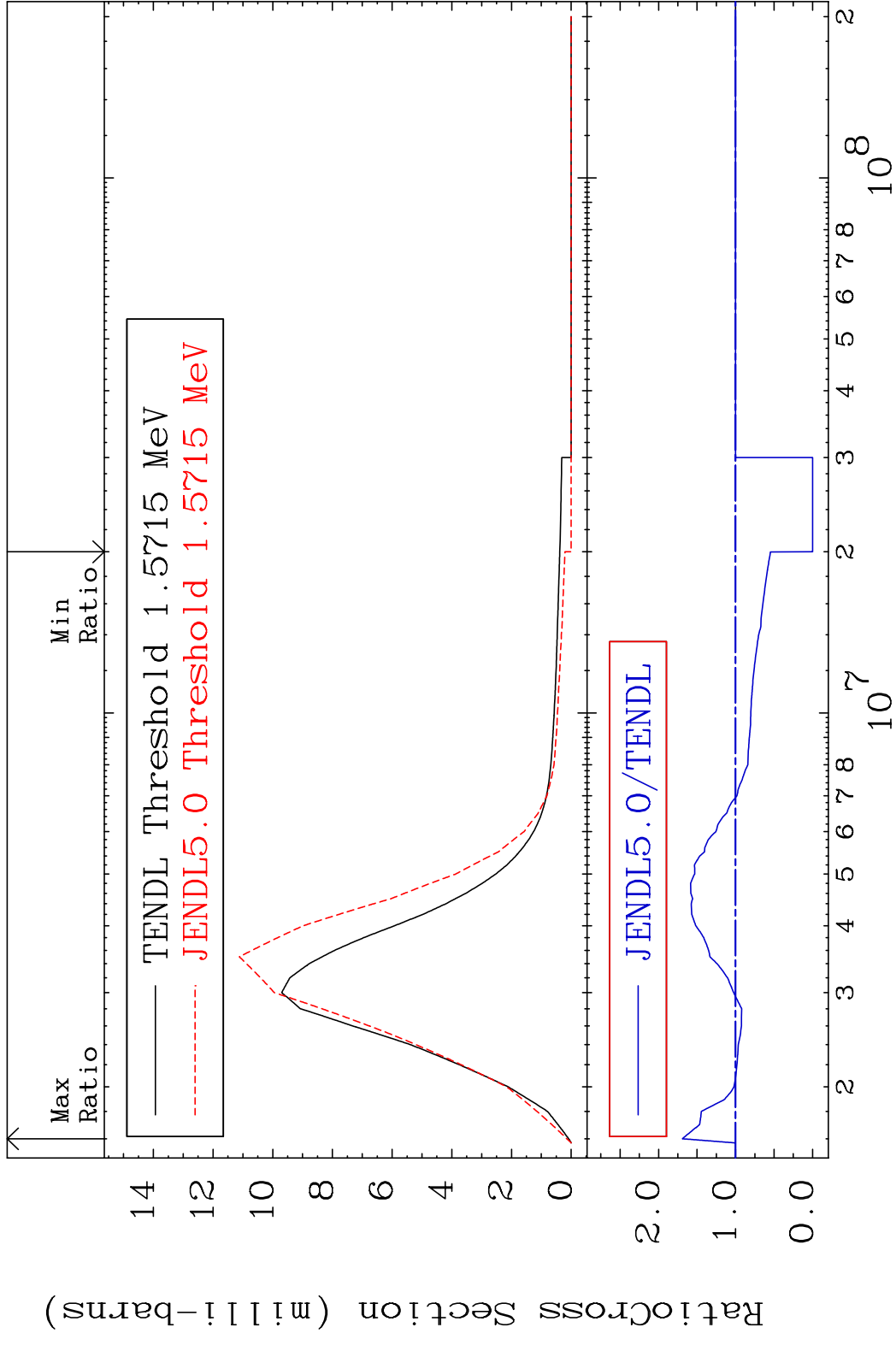
MAT 4449 MT= 57 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 63.12 %



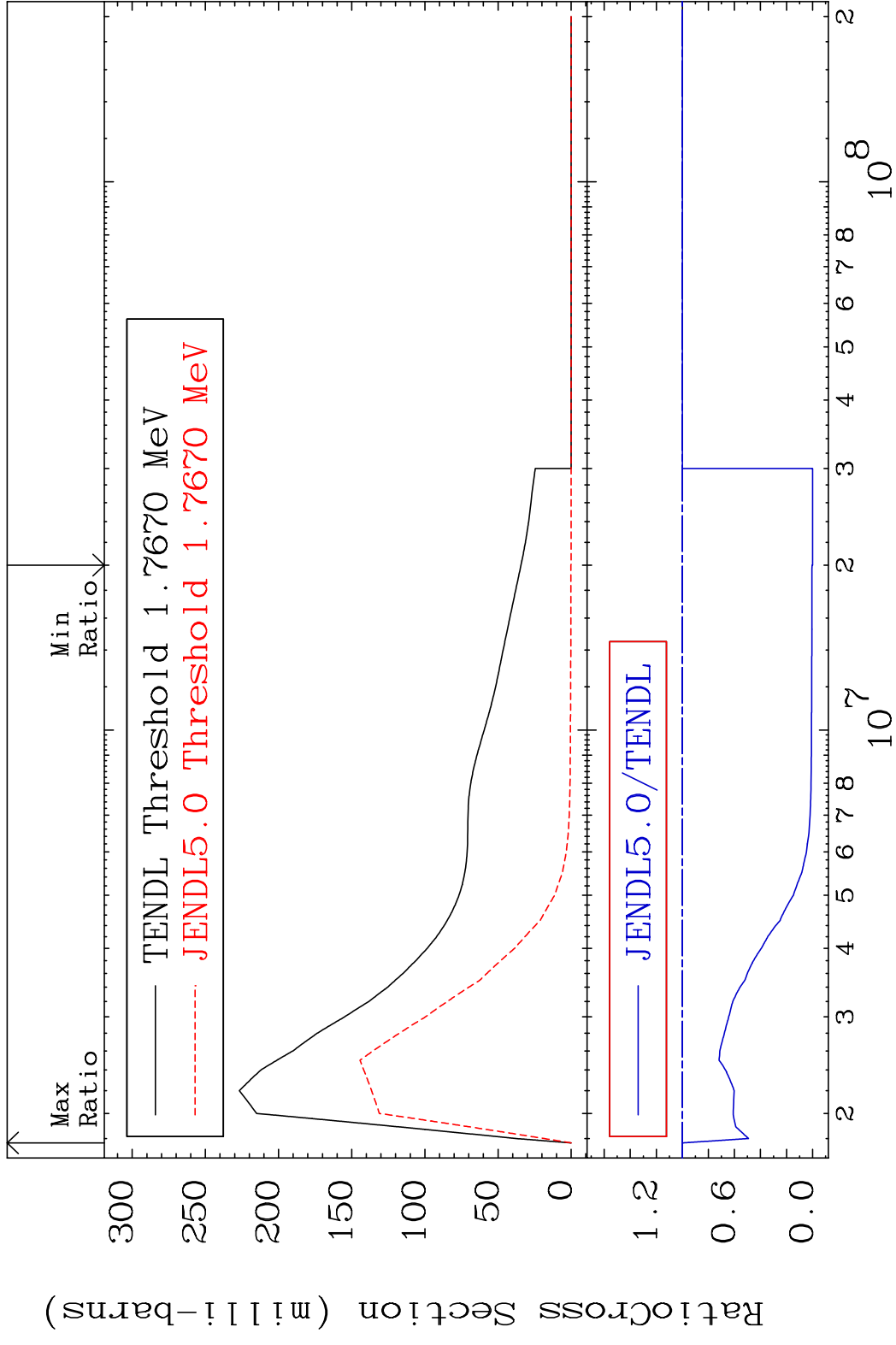
MAT 4449 MT= 58 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 59.59 %



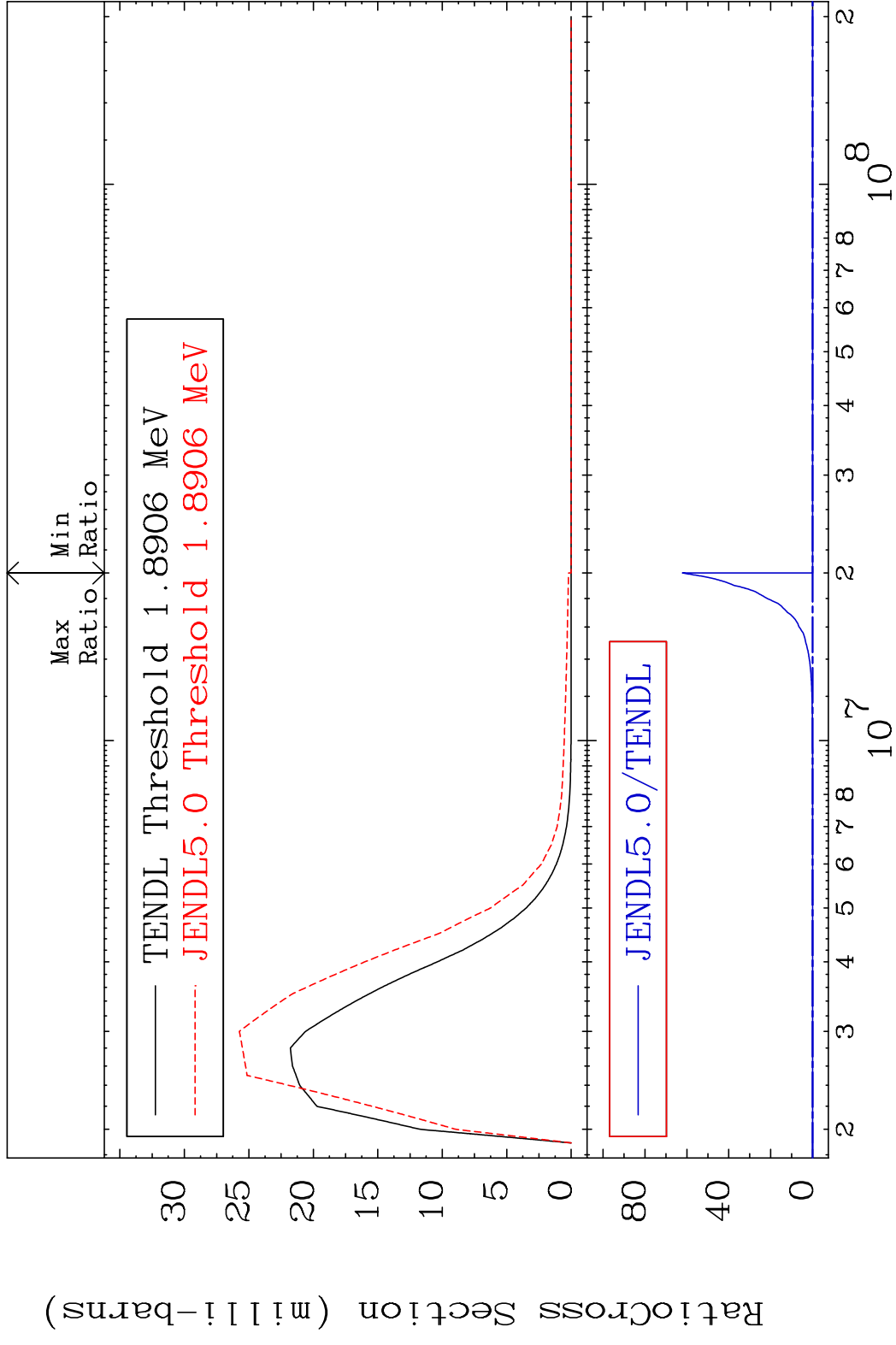
MAT 4449 MT= 59 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 69.11 %



MAT 4449 MT= 60 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 0.000 %

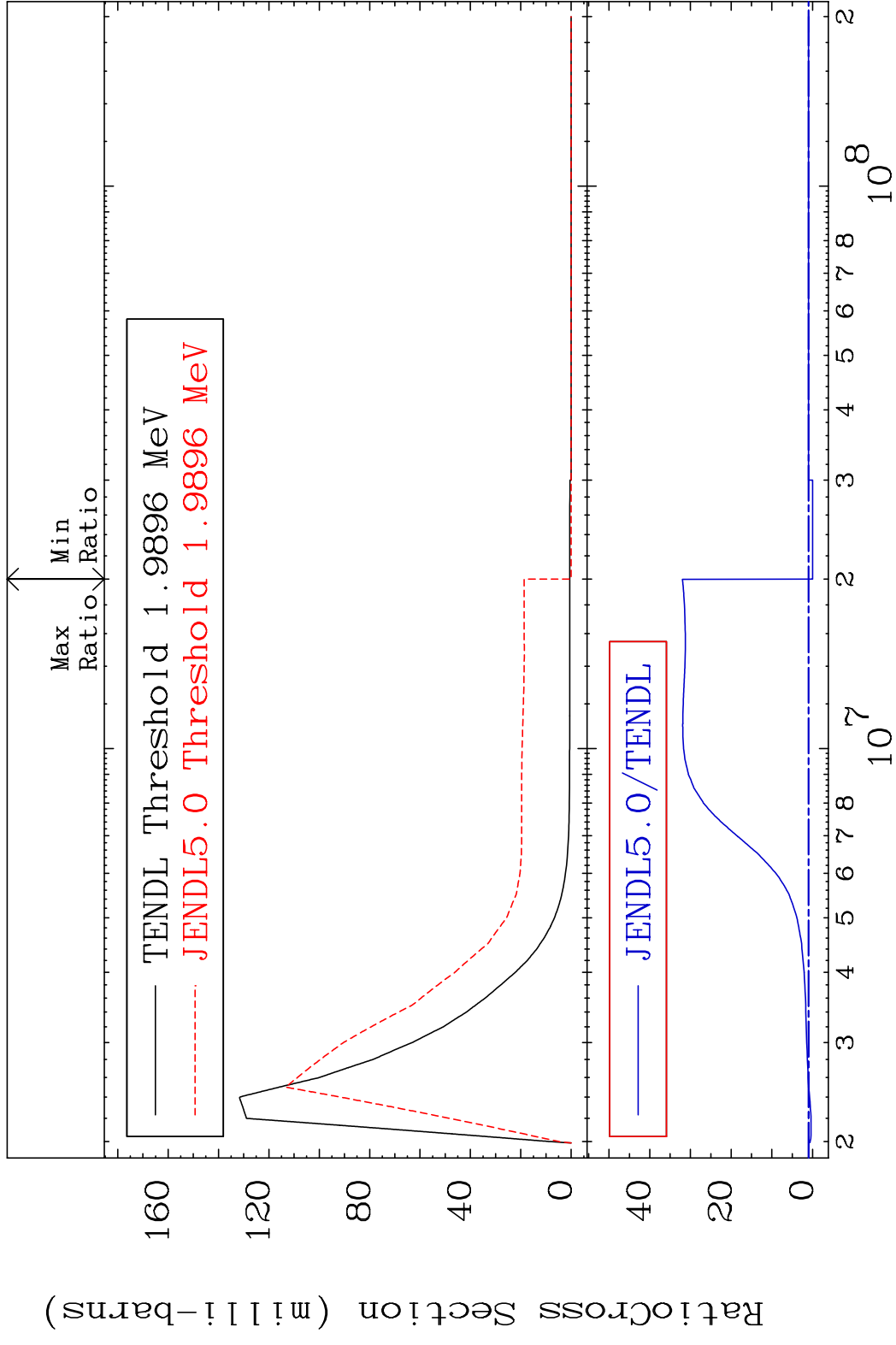


MAT 4449 MT= 61 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %

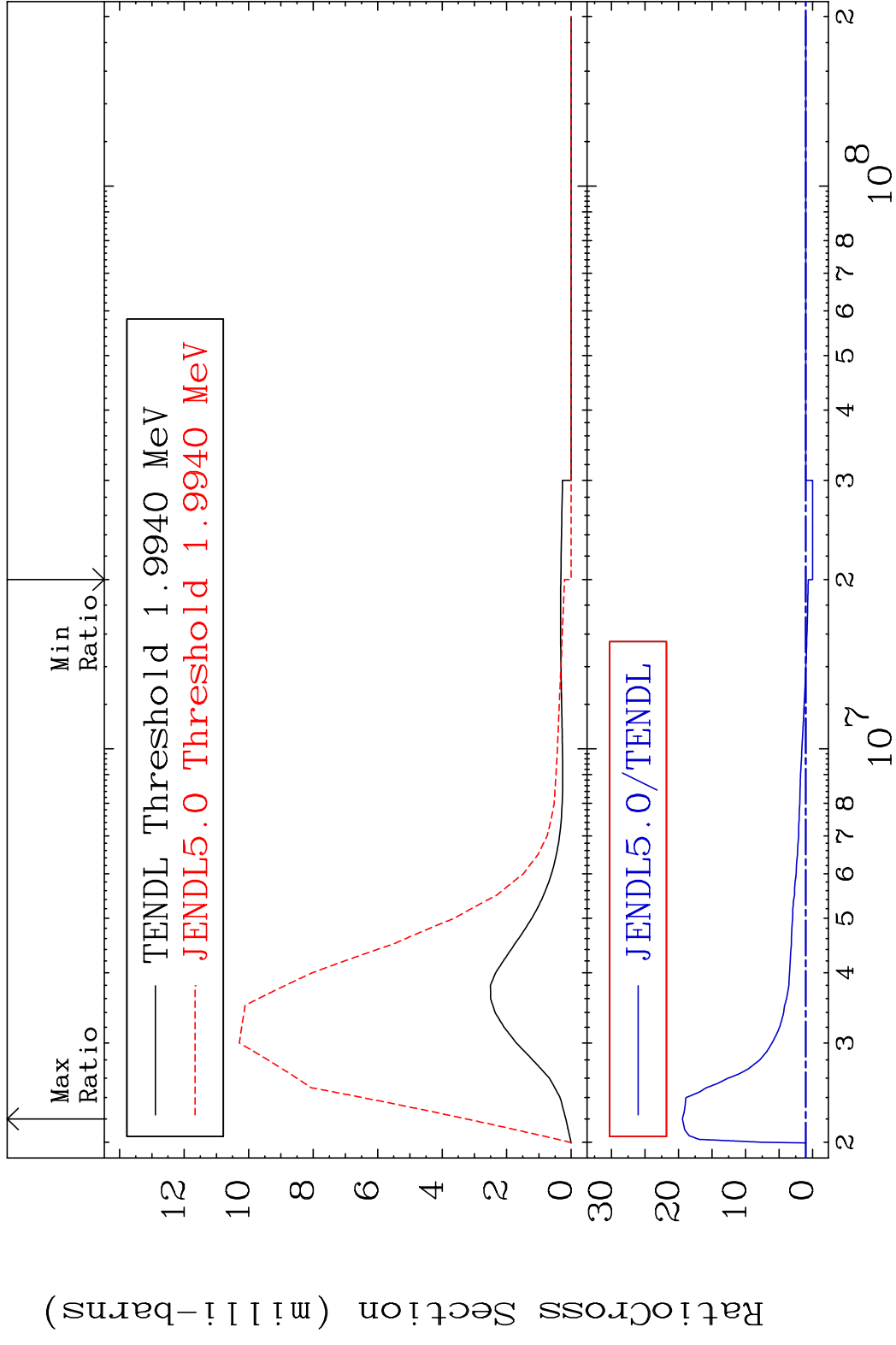


20 44-Ru-104

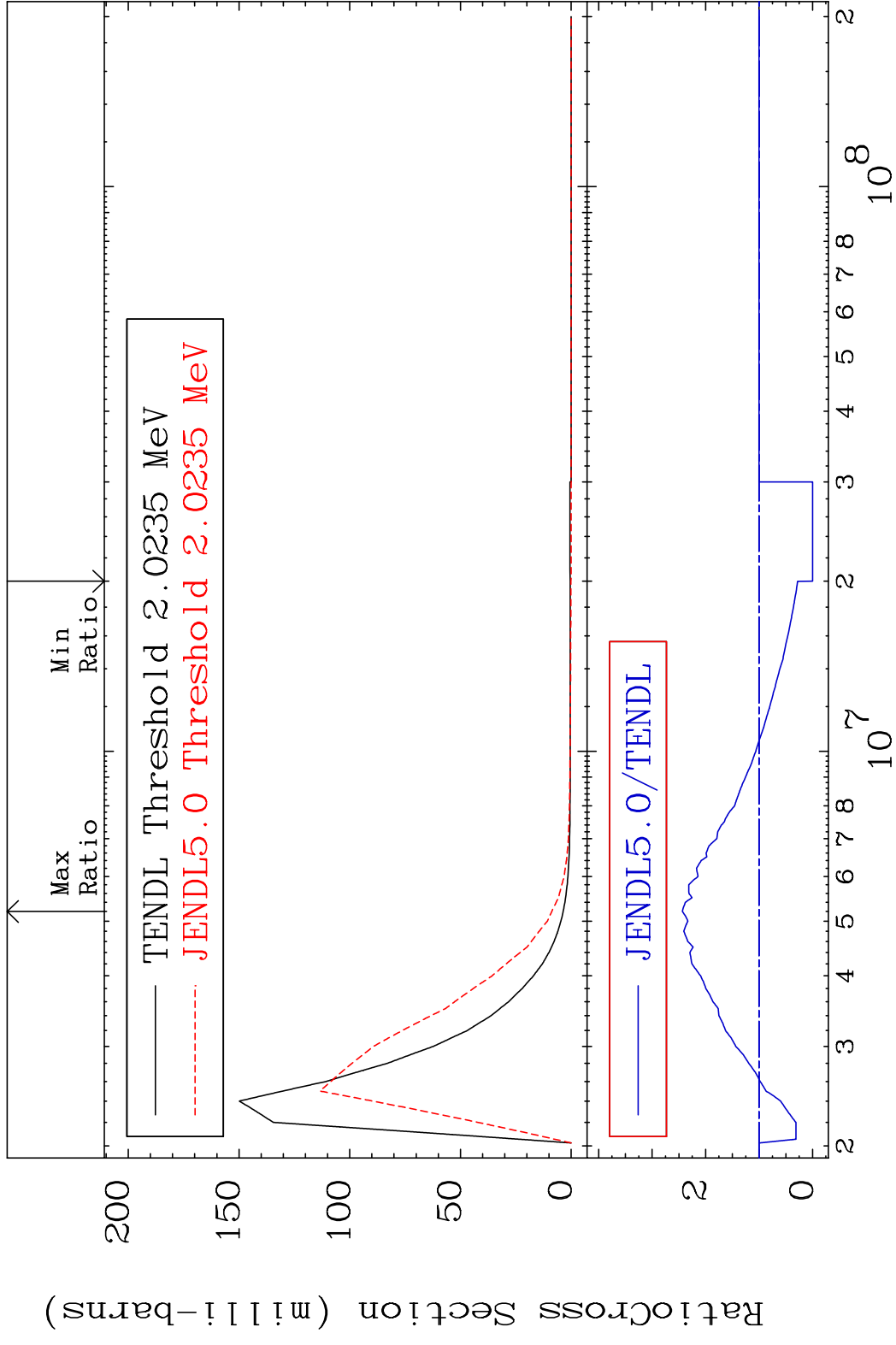
MAT 4449 MT= 62 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 3099. %



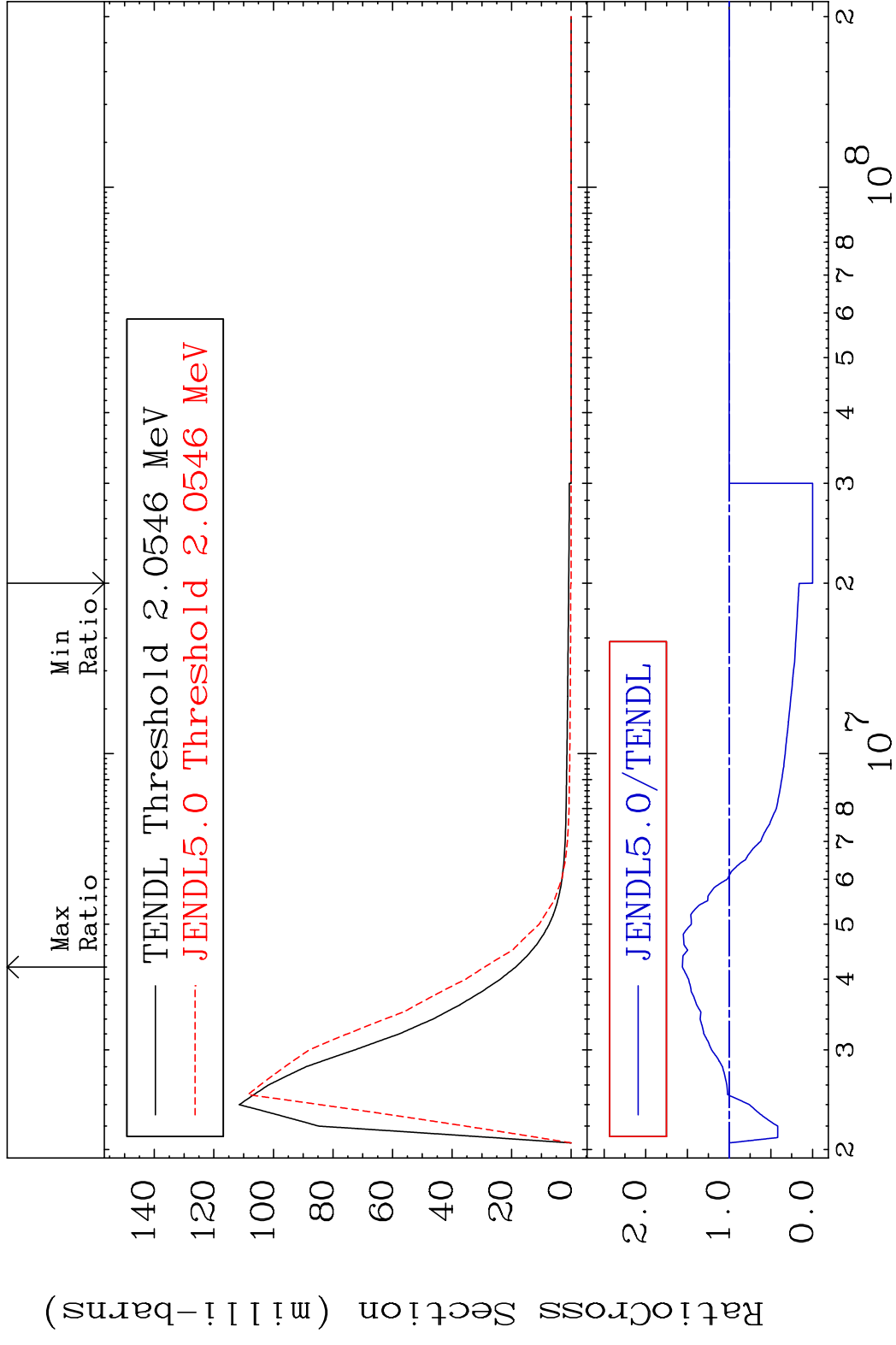
MAT 4449 MT= 63 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 1841. %



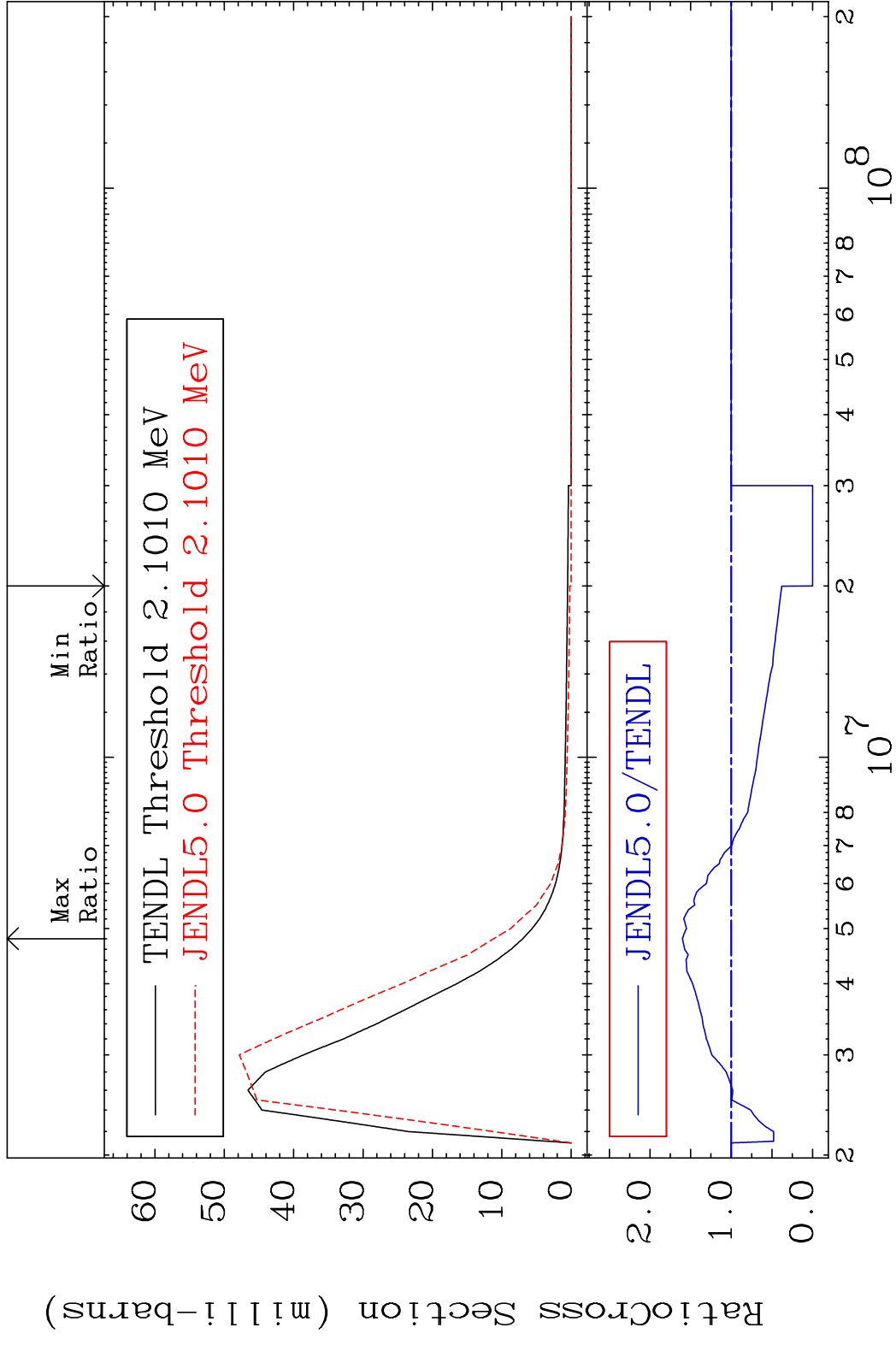
MAT 4449 MT= 64 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 143.5 %



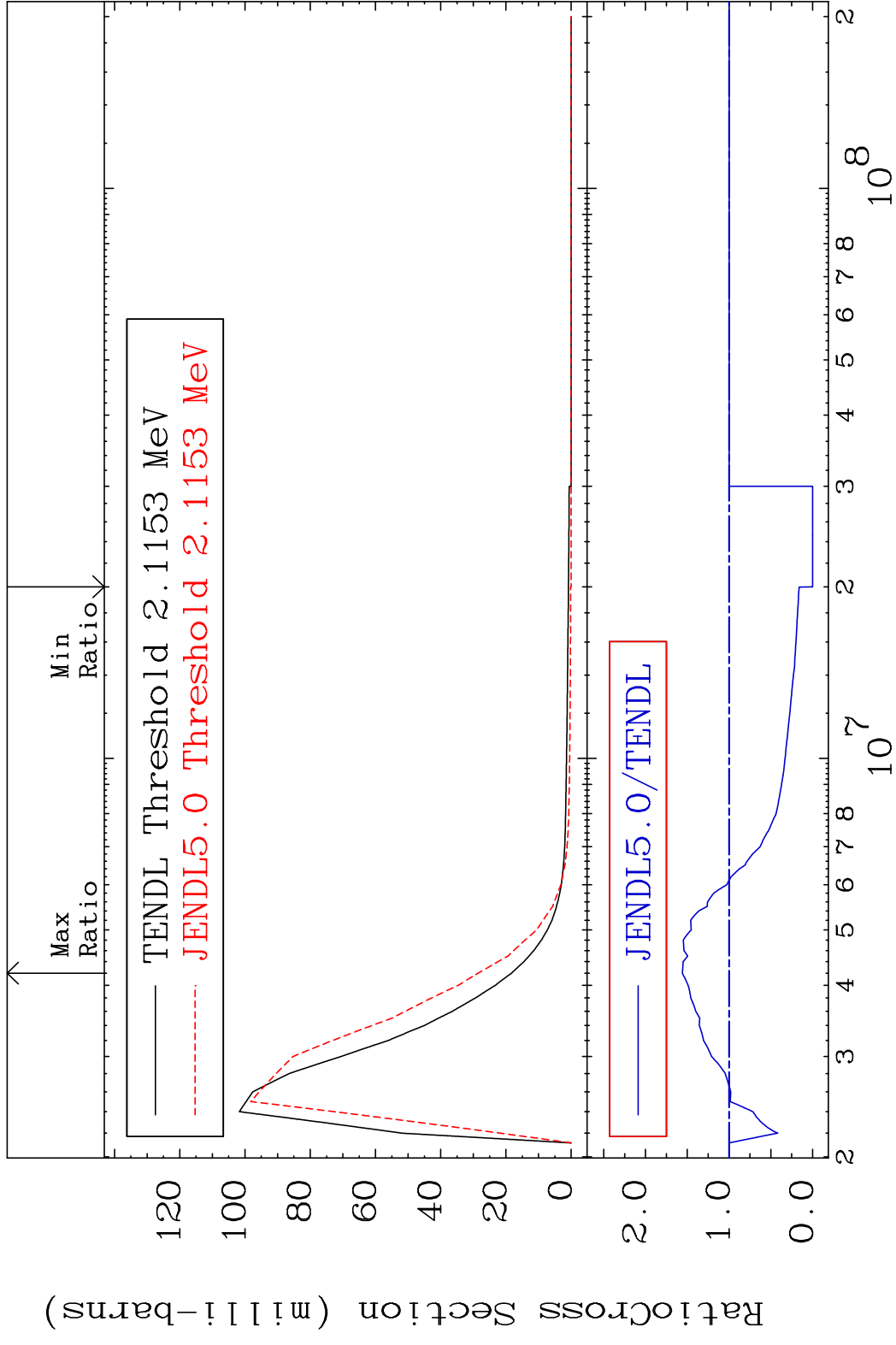
MAT 4449 MT= 65 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 56.12 %



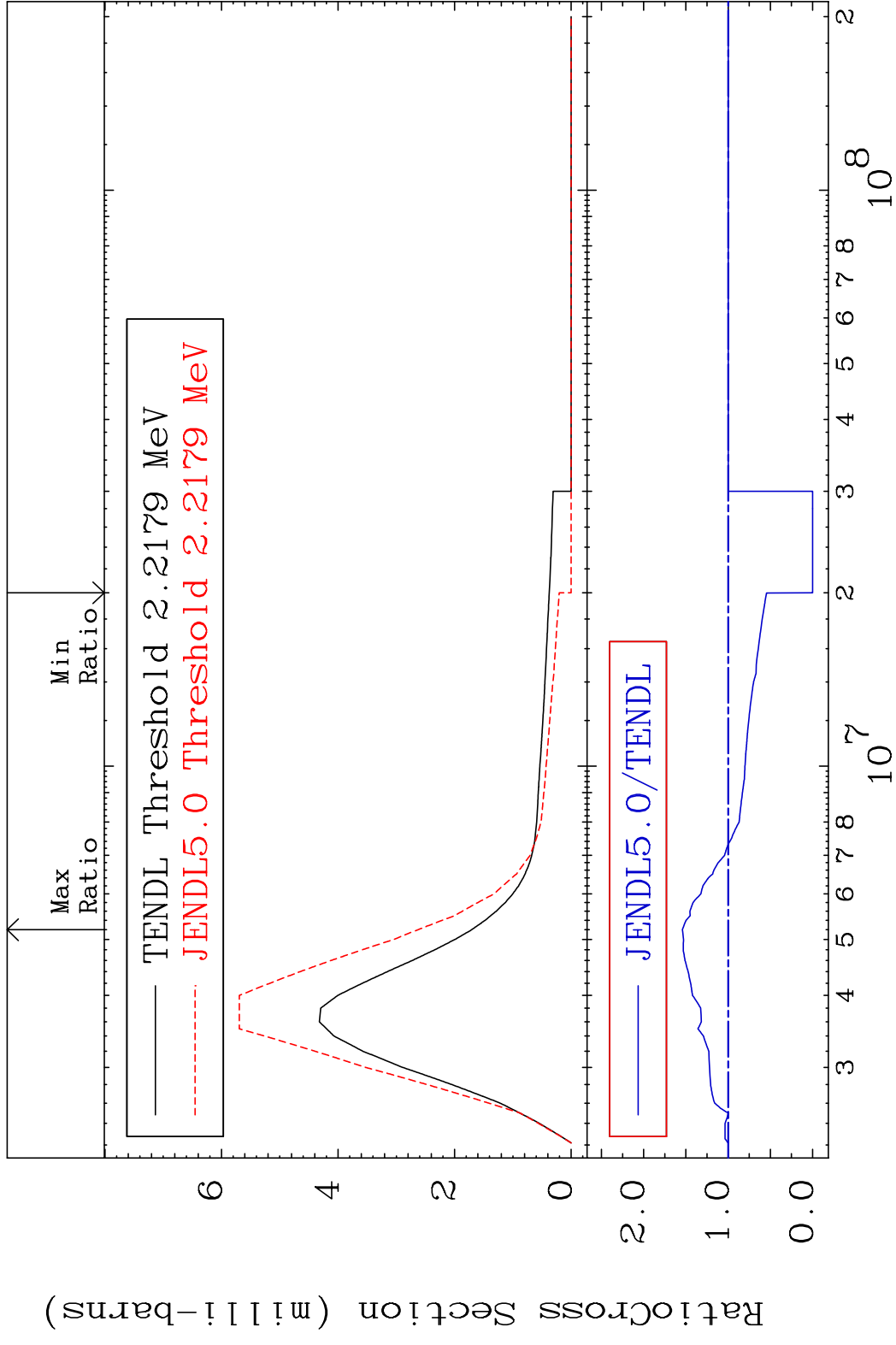
MAT 4449 MT= 66 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 60.23 %



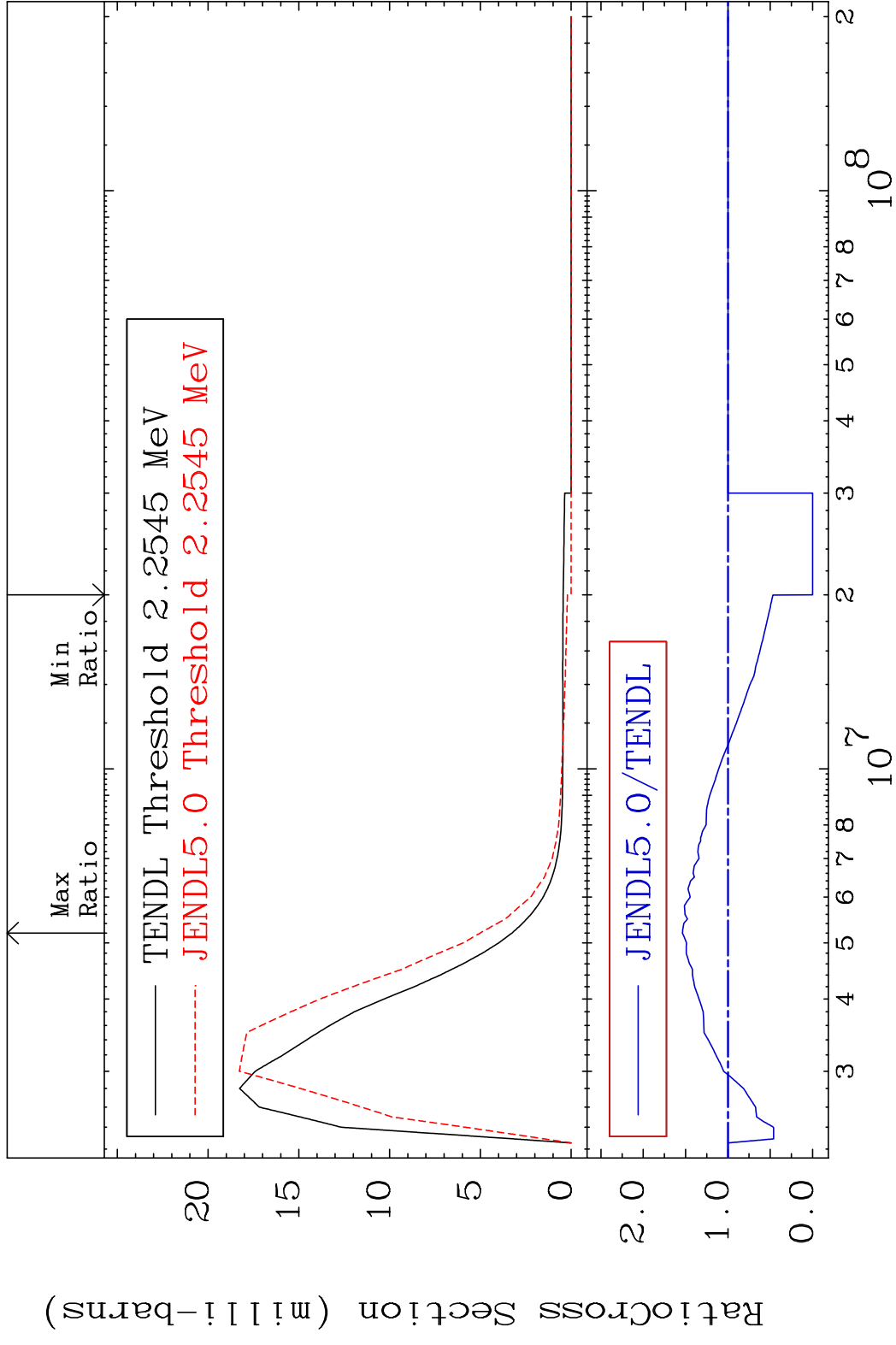
MAT 4449 MT= 67 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 55.88 %



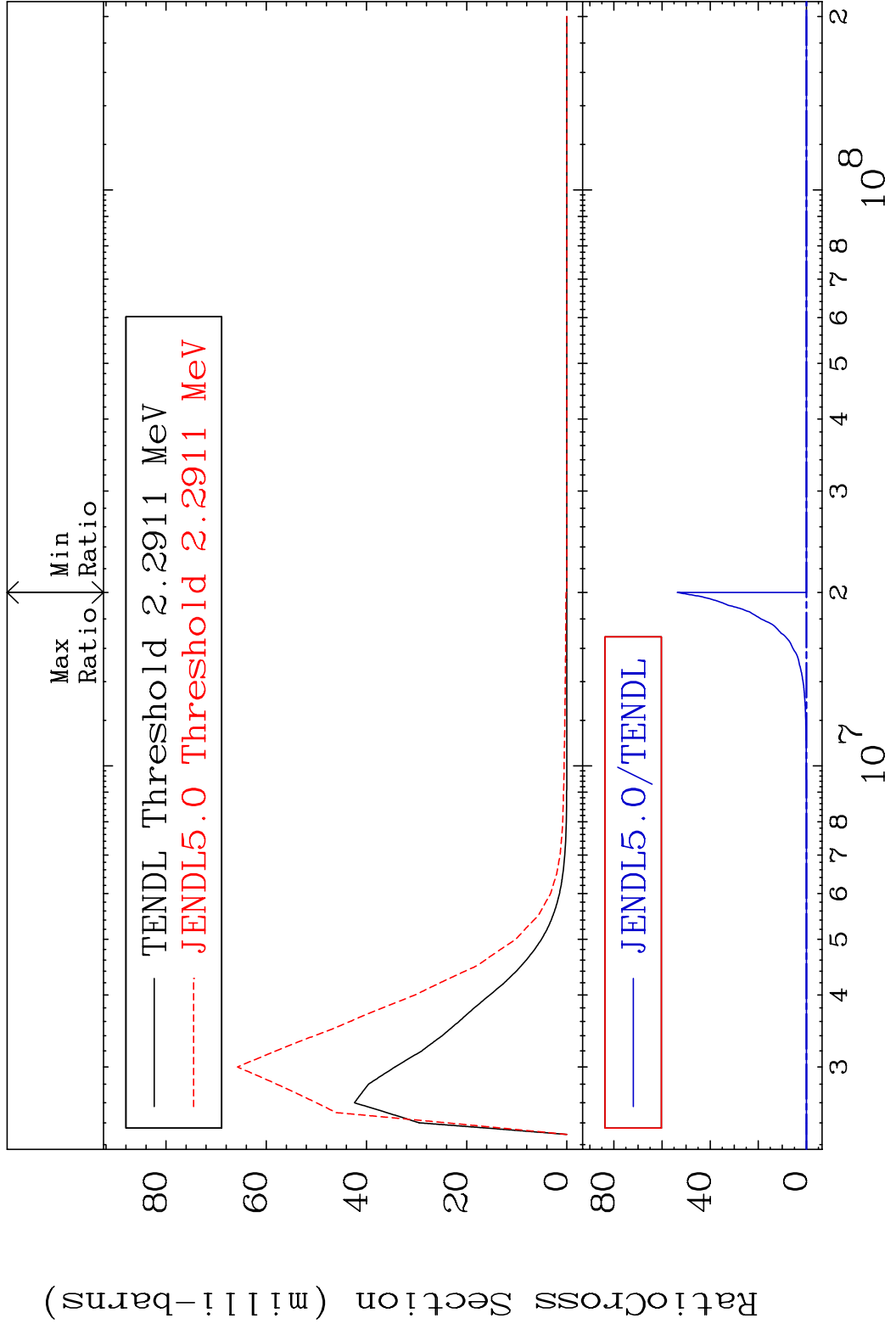
MAT 4449 MT= 68 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 54.19 %



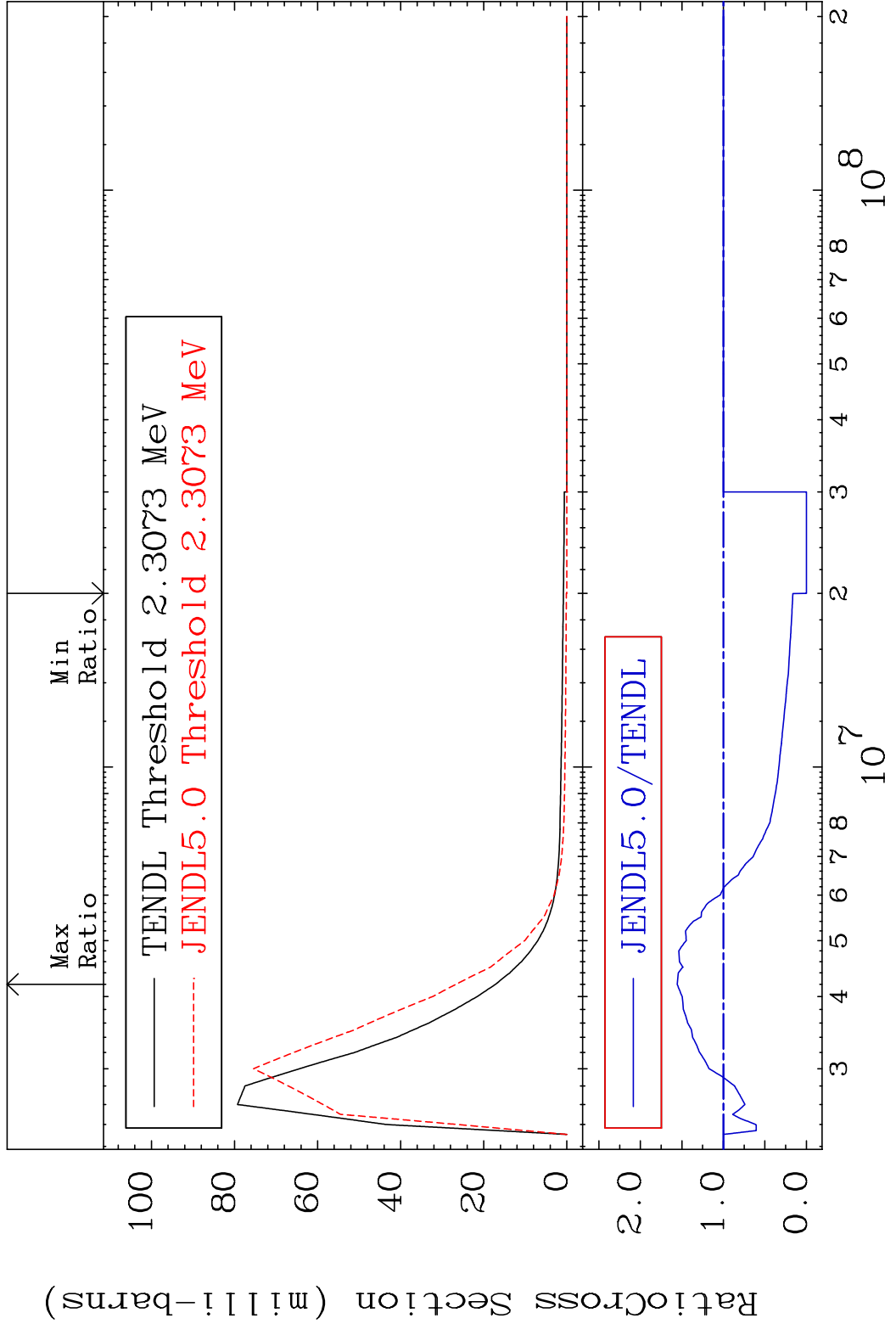
MAT 4449 MT= 69 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 53.83 %



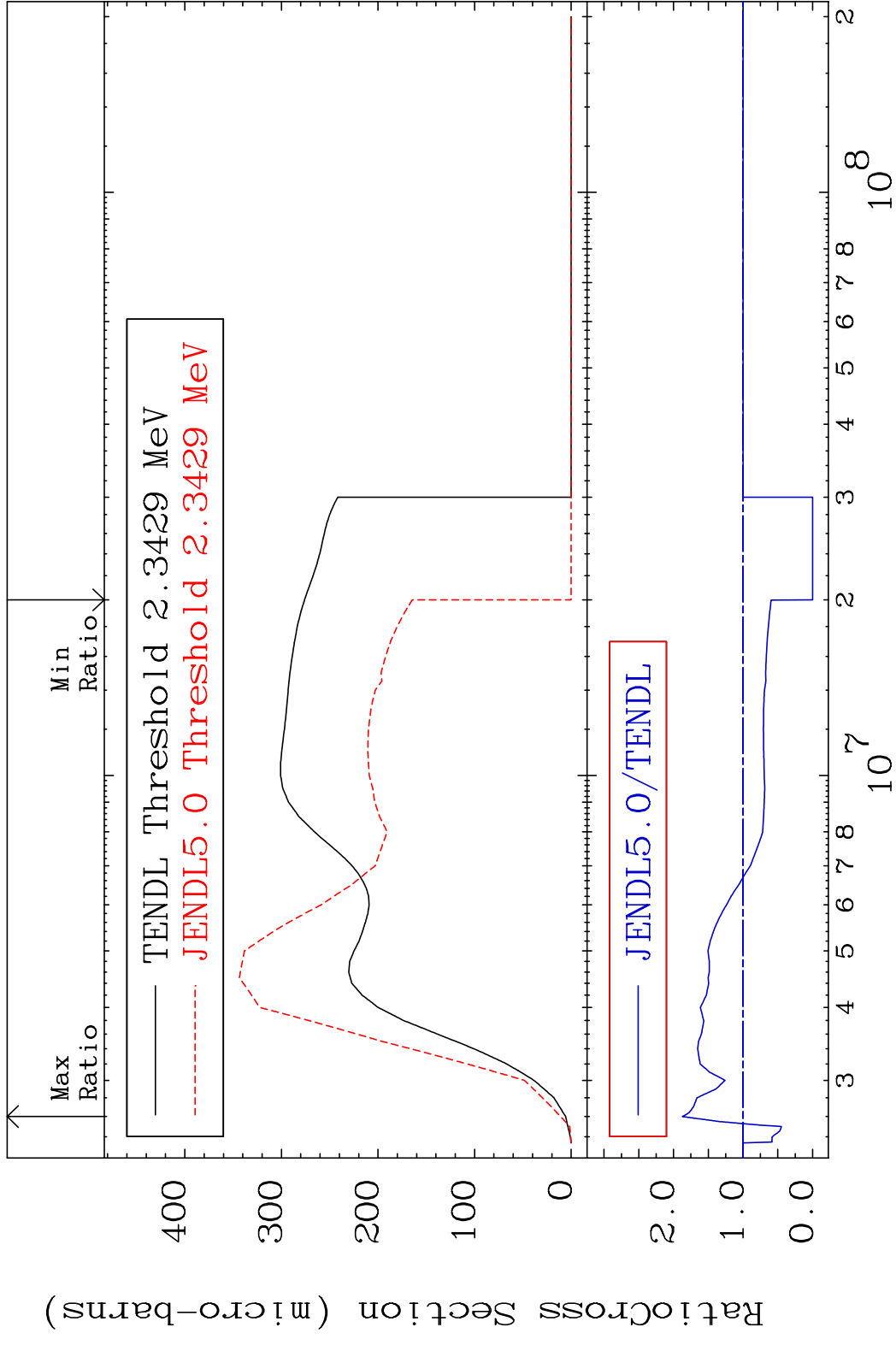
MAT 4449 MT= 70 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %



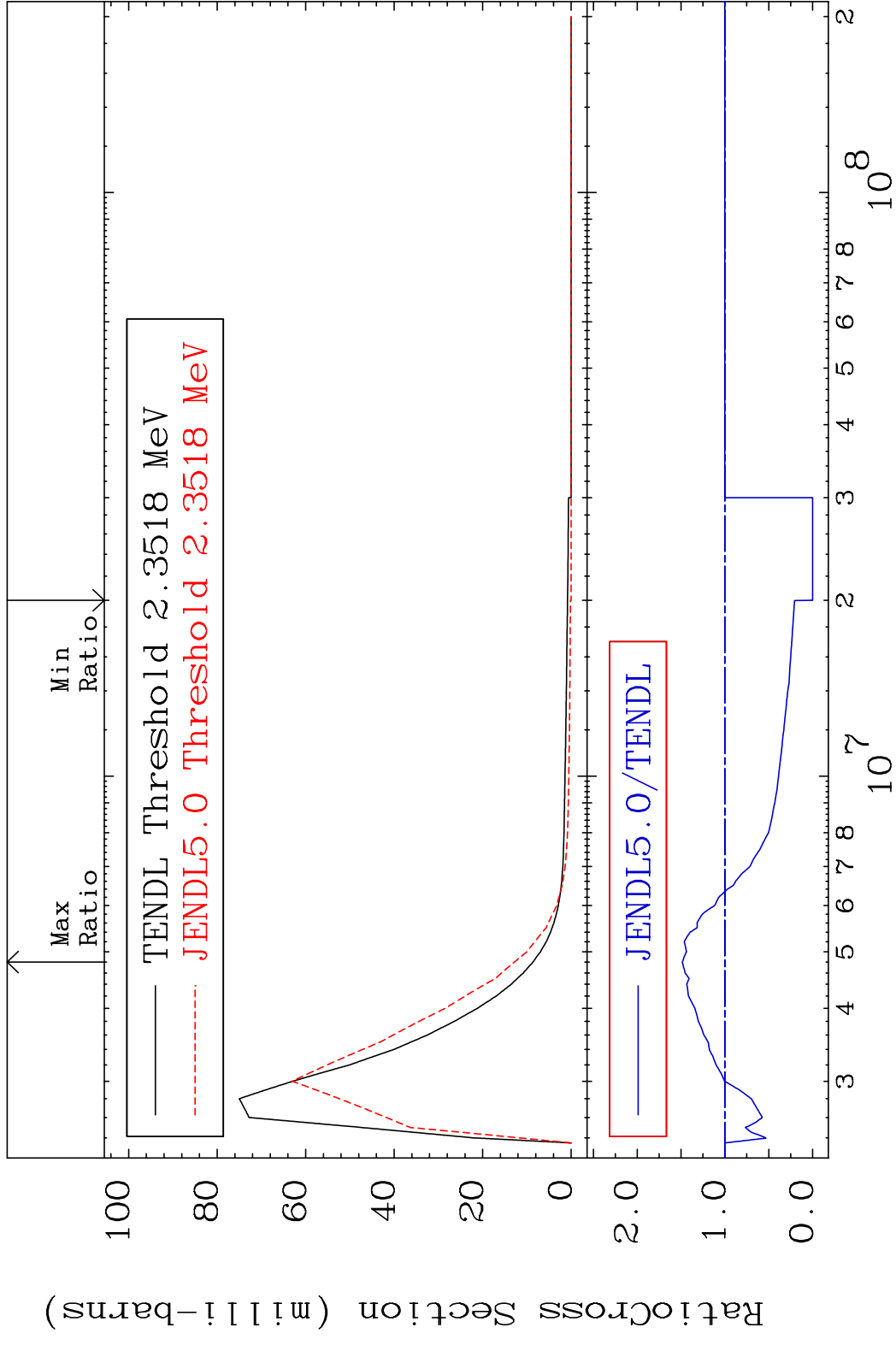
MAT 4449 MT= 71 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 55.66 %



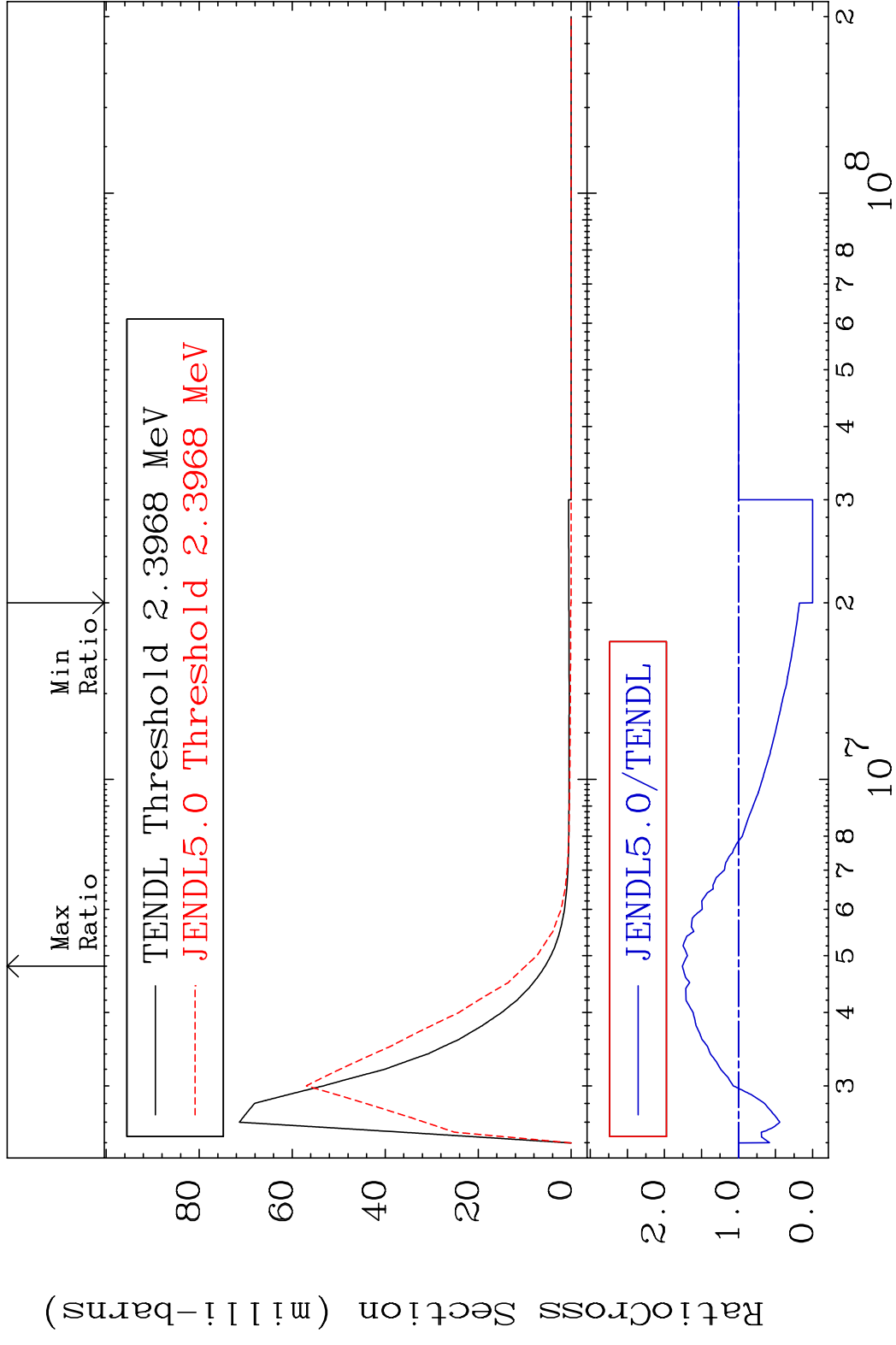
MAT 4449 MT= 72 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 87.32 %



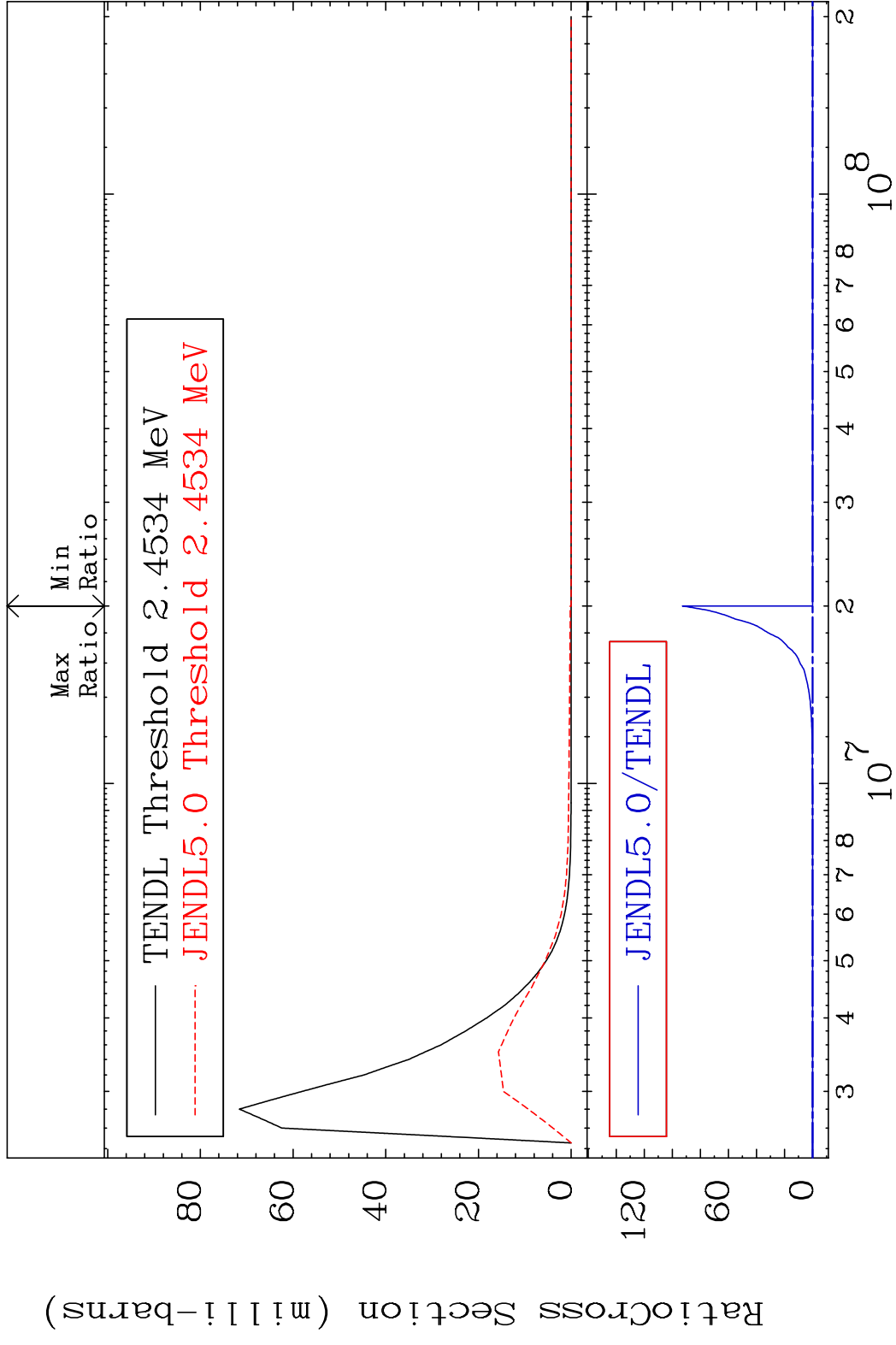
MAT 4449 MT= 73 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 48.53 %



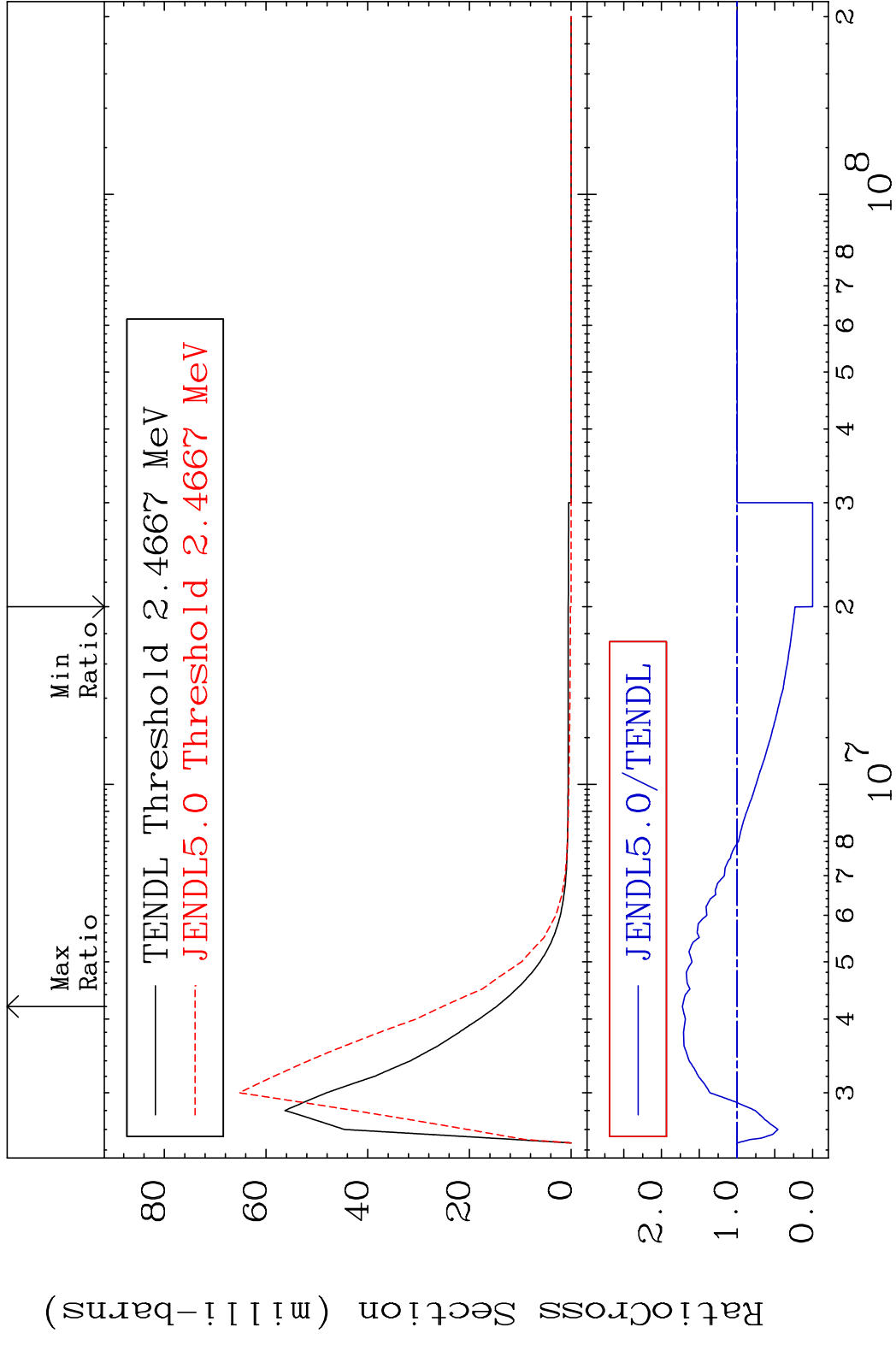
MAT 4449 MT= 74 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 75.75 %



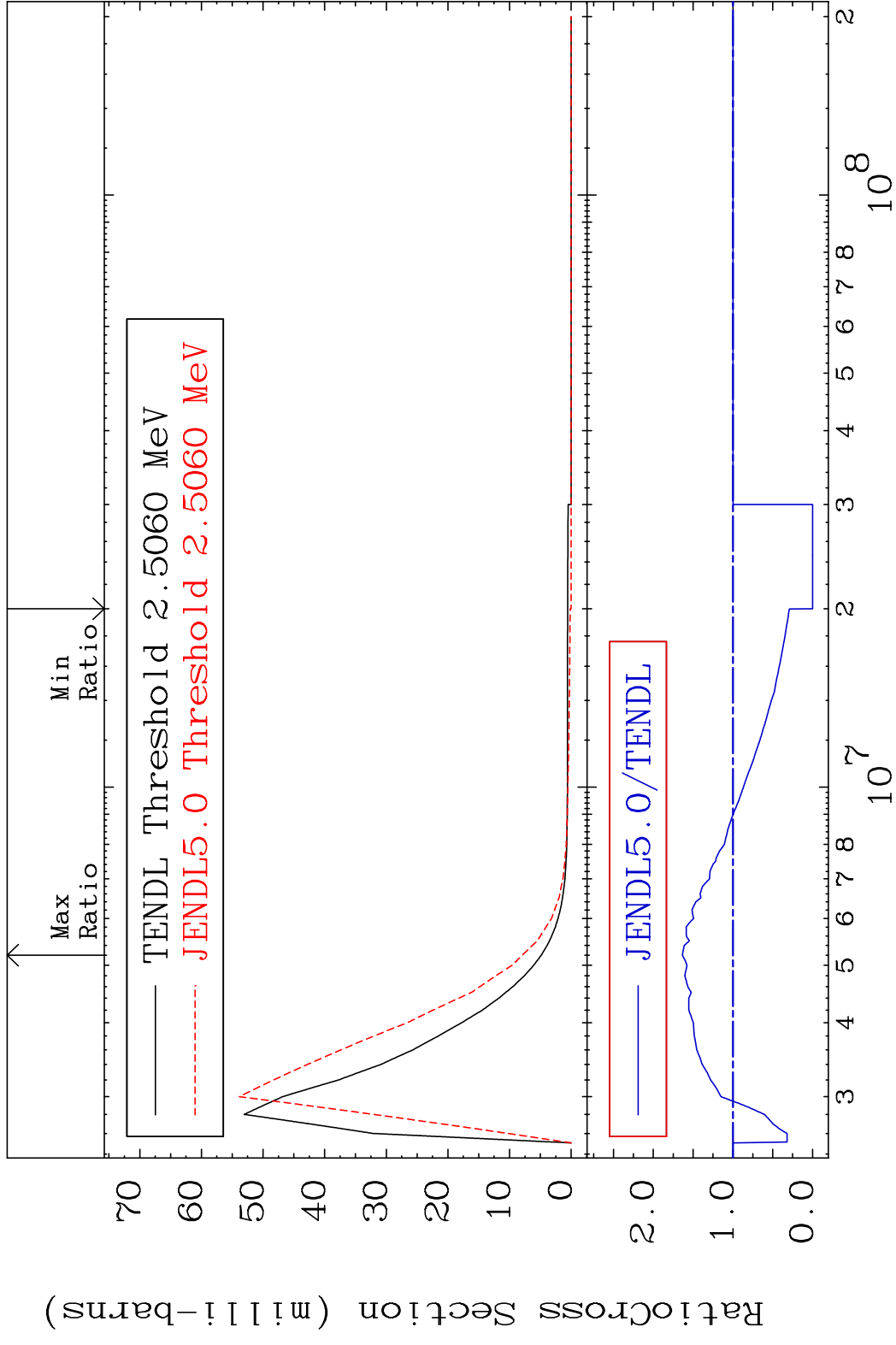
MAT 4449 MT= 75 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %



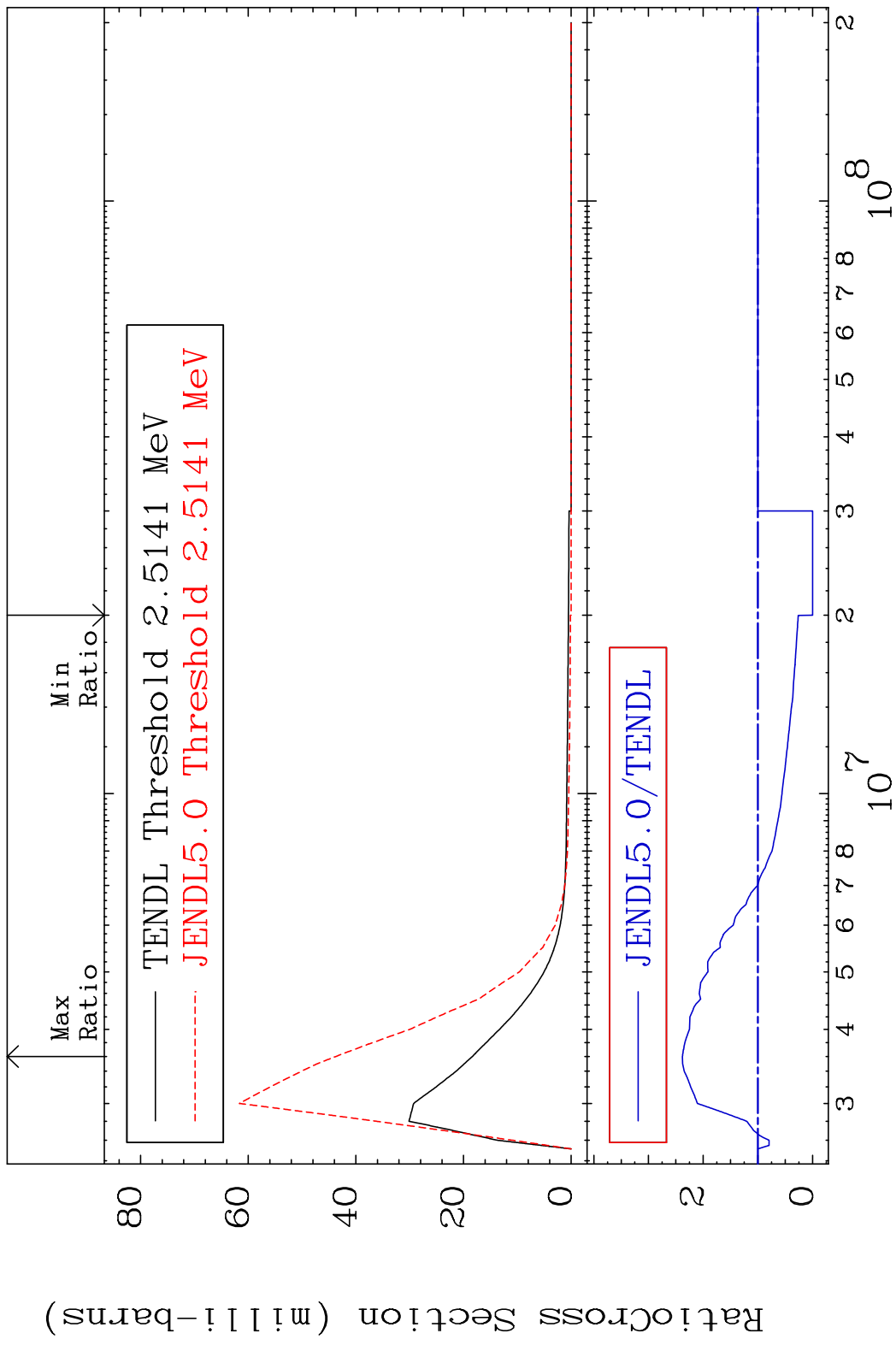
MAT 4449 MT= 76 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 72.38 %



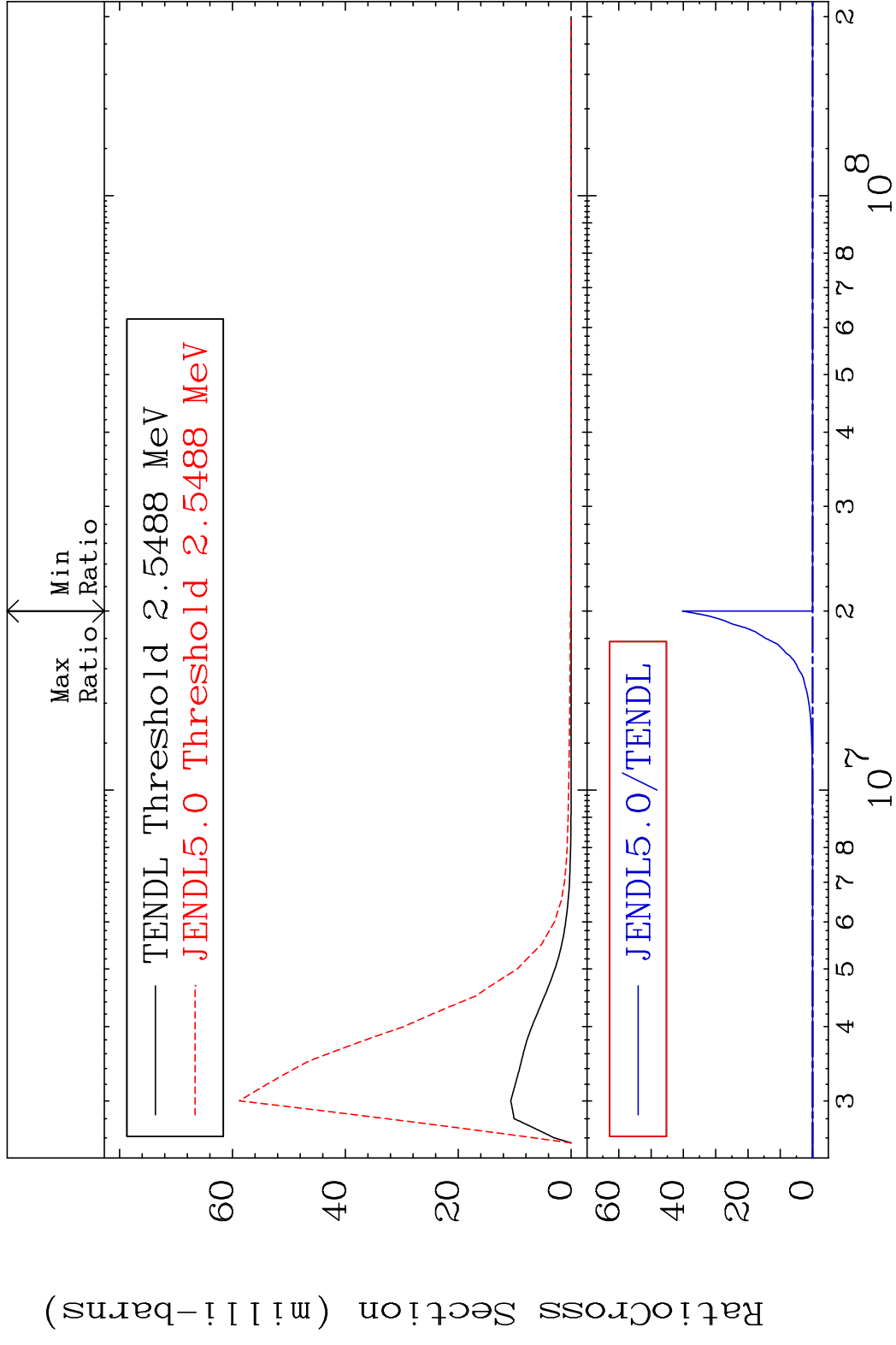
MAT 4449 MT= 77 (n,n') Level 44-Ru-104  
 Cross Section -100.0 To 63.51 %



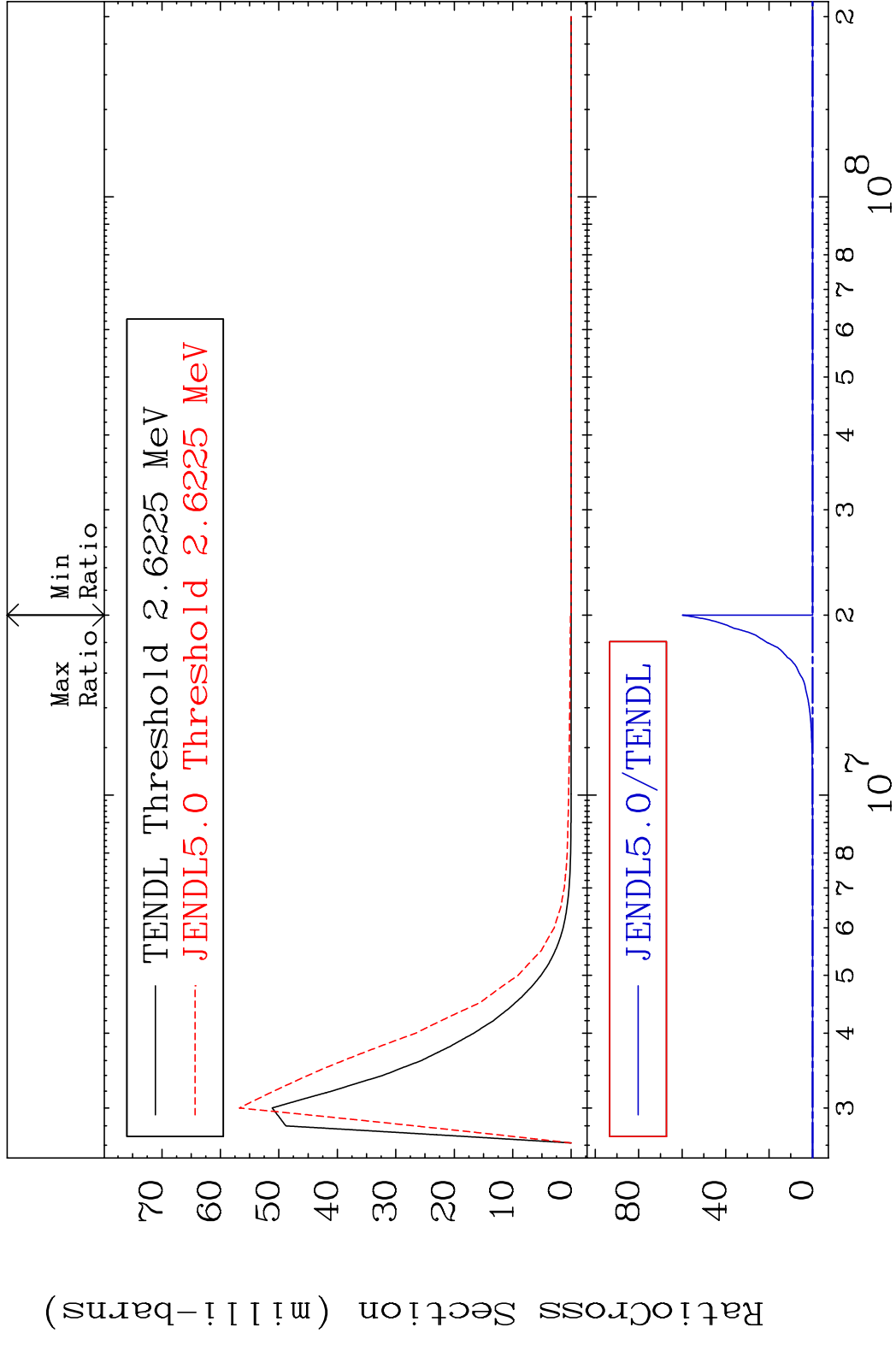
MAT 4449 MT= 78 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 138.1 %



MAT 4449 MT= 79 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %

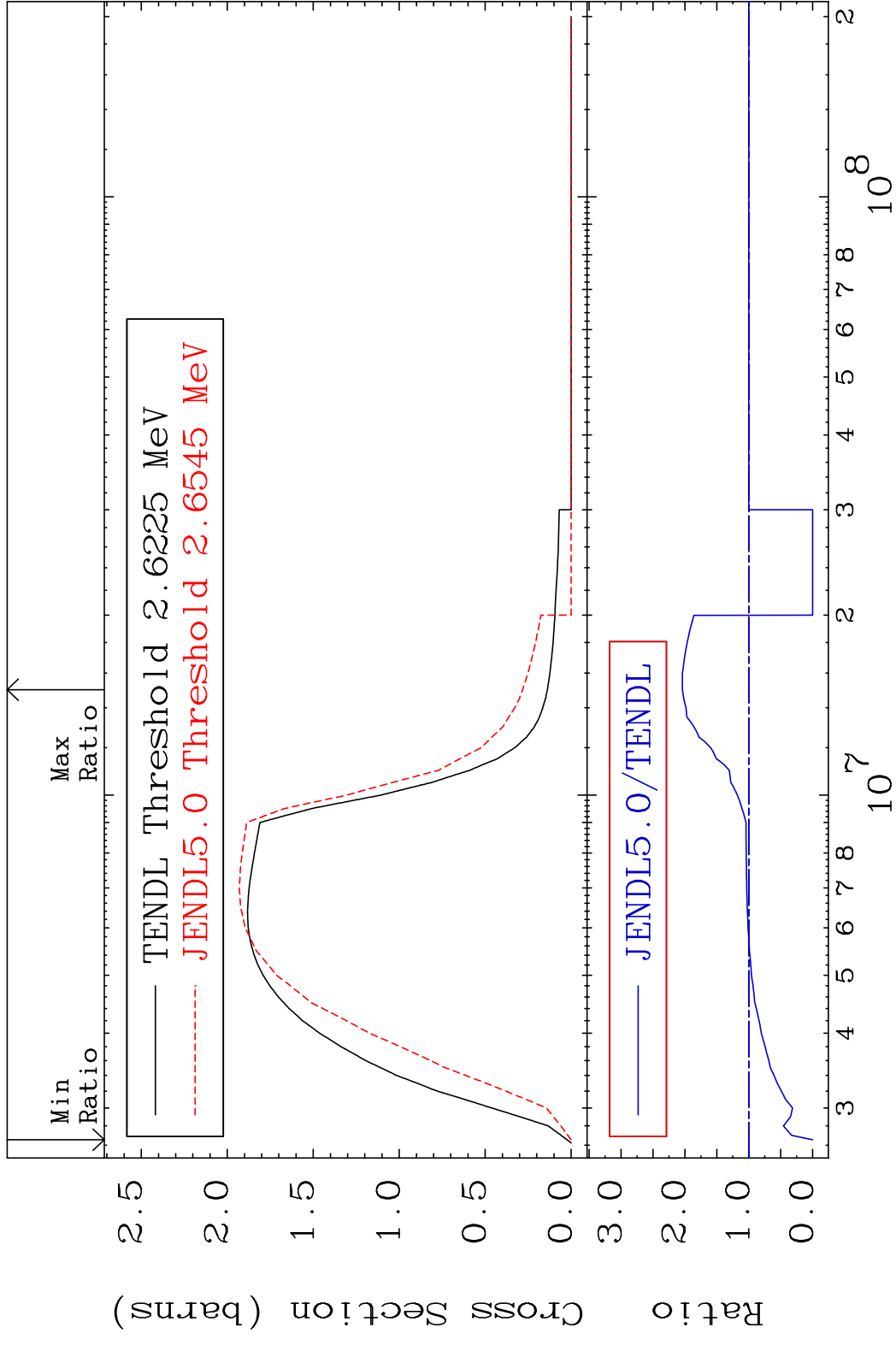


MAT 4449 MT= 80 (n, n') Level 44-Ru-104  
 Cross Section -100.0 To 9999. %



39 Incident Energy (eV) 44-Ru-104

MAT 4449 (n, n') Continuum 44-Ru-104  
 Cross Section -100.0 To 103.9 %



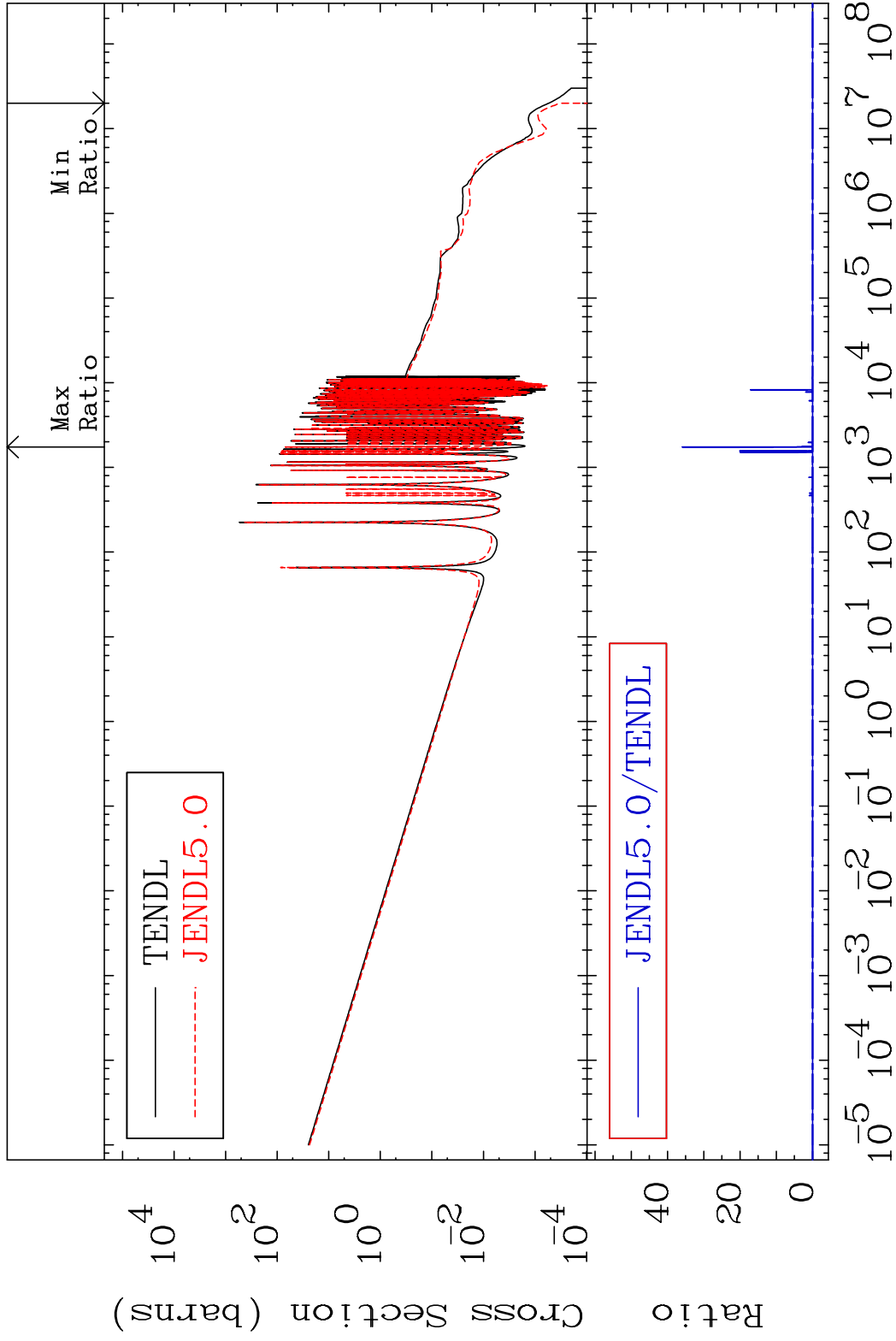
40 Incident Energy (eV) 44-Ru-104

MAT 4449

(n,  $\gamma$ )

44-Ru-104

Cross Section -100.0 To 9999. %



41

Incident Energy (eV)

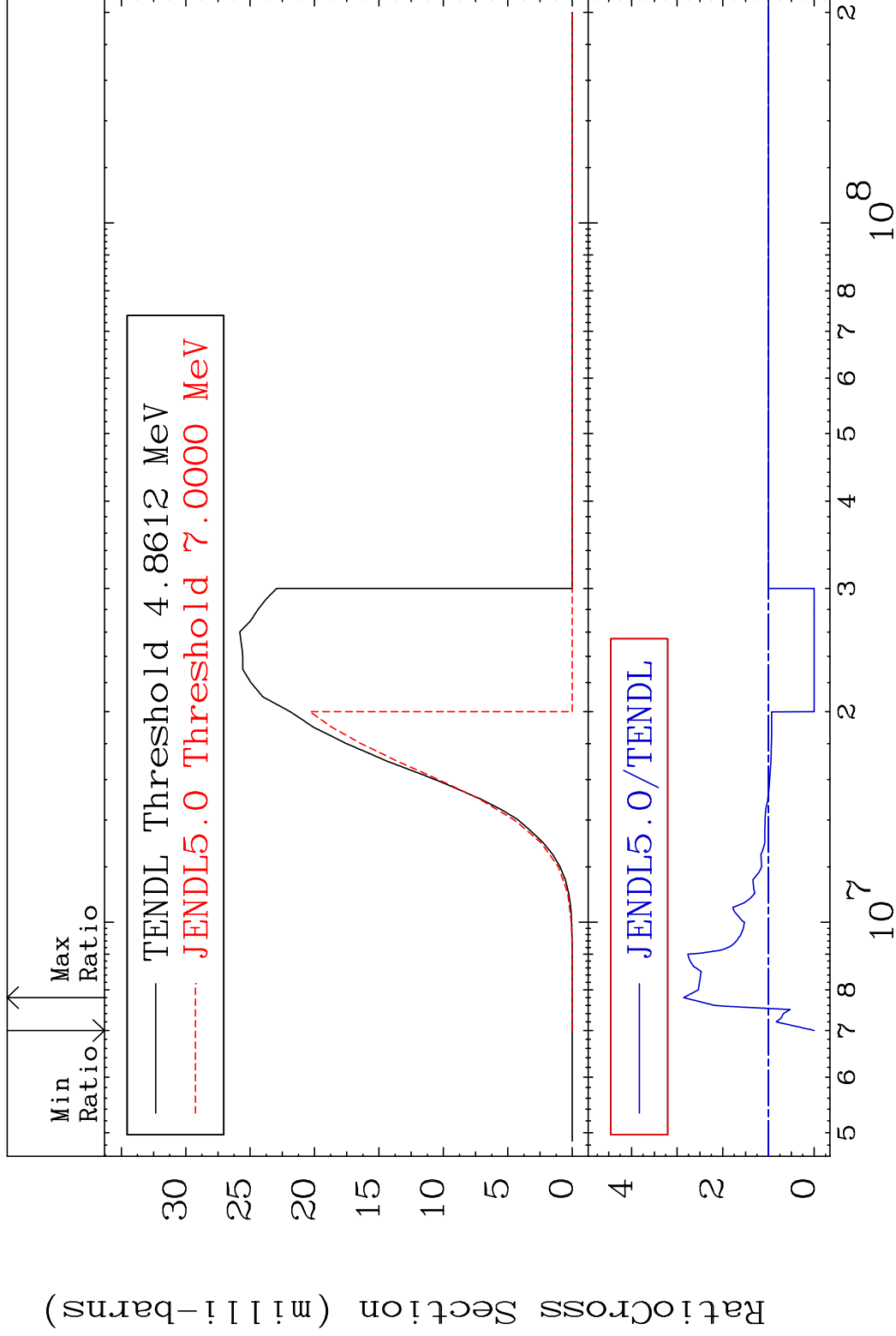
44-Ru-104

MAT 4449

(n, p)

44-Ru-104

Cross Section -100.0 To 185.8 %

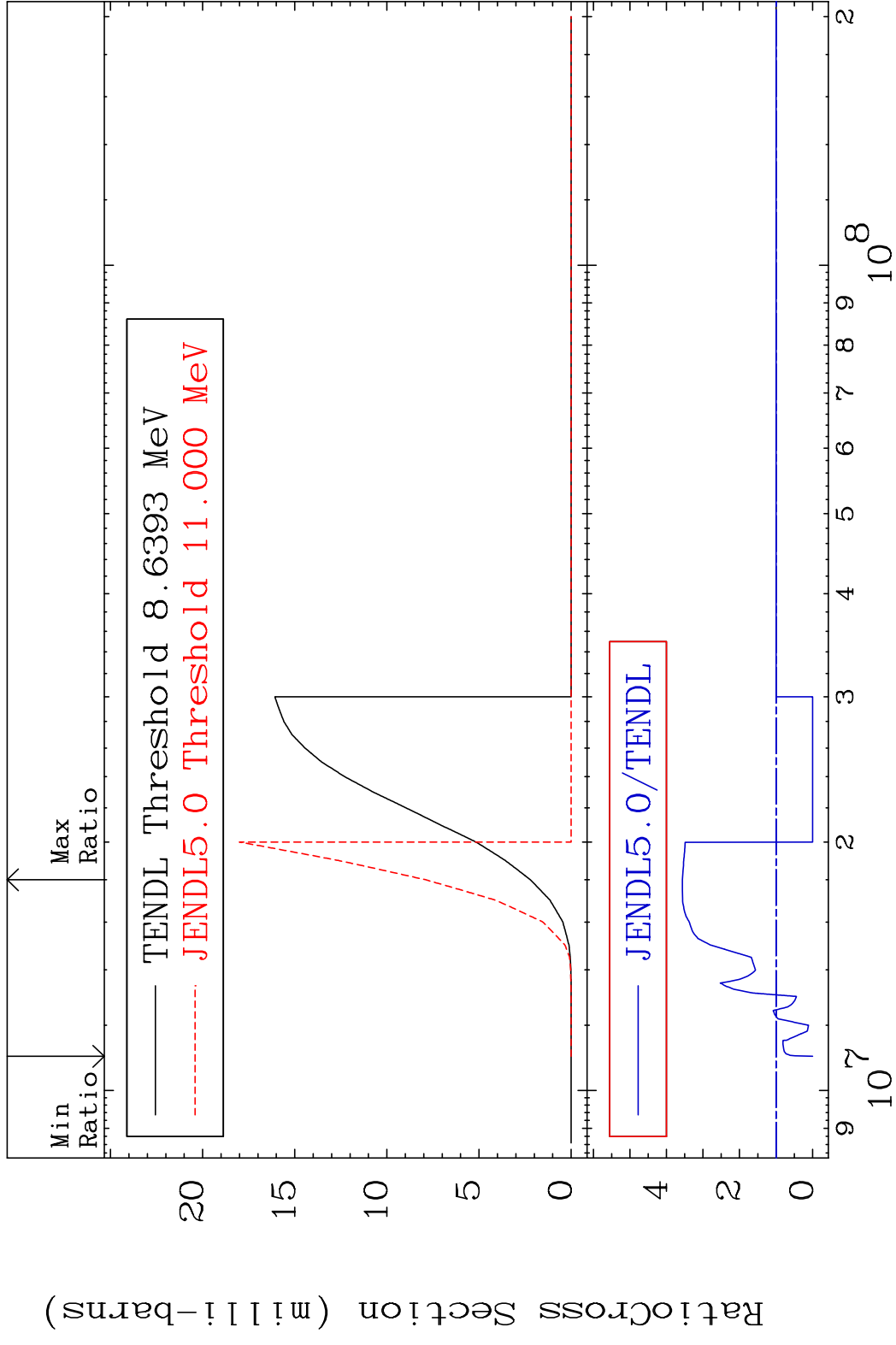


42

Incident Energy (eV)

44-Ru-104

MAT 4449 (n,d) 44-Ru-104  
 Cross Section -100.0 To 256.5 %



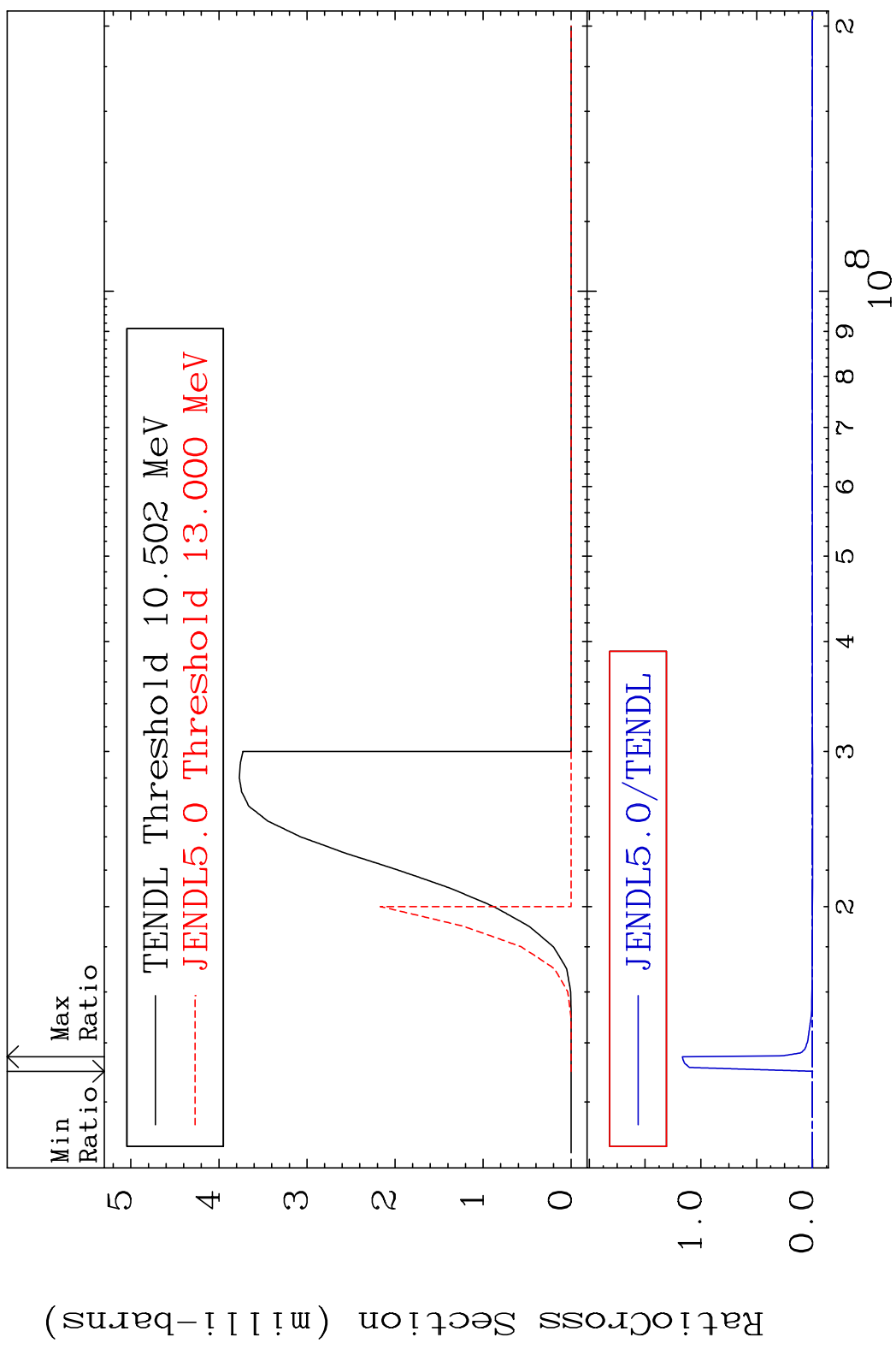
43 44-Ru-104

MAT 4449

(n, t)

44-Ru-104

Cross Section -100.0 To 9999. %



44

Incident Energy (eV)

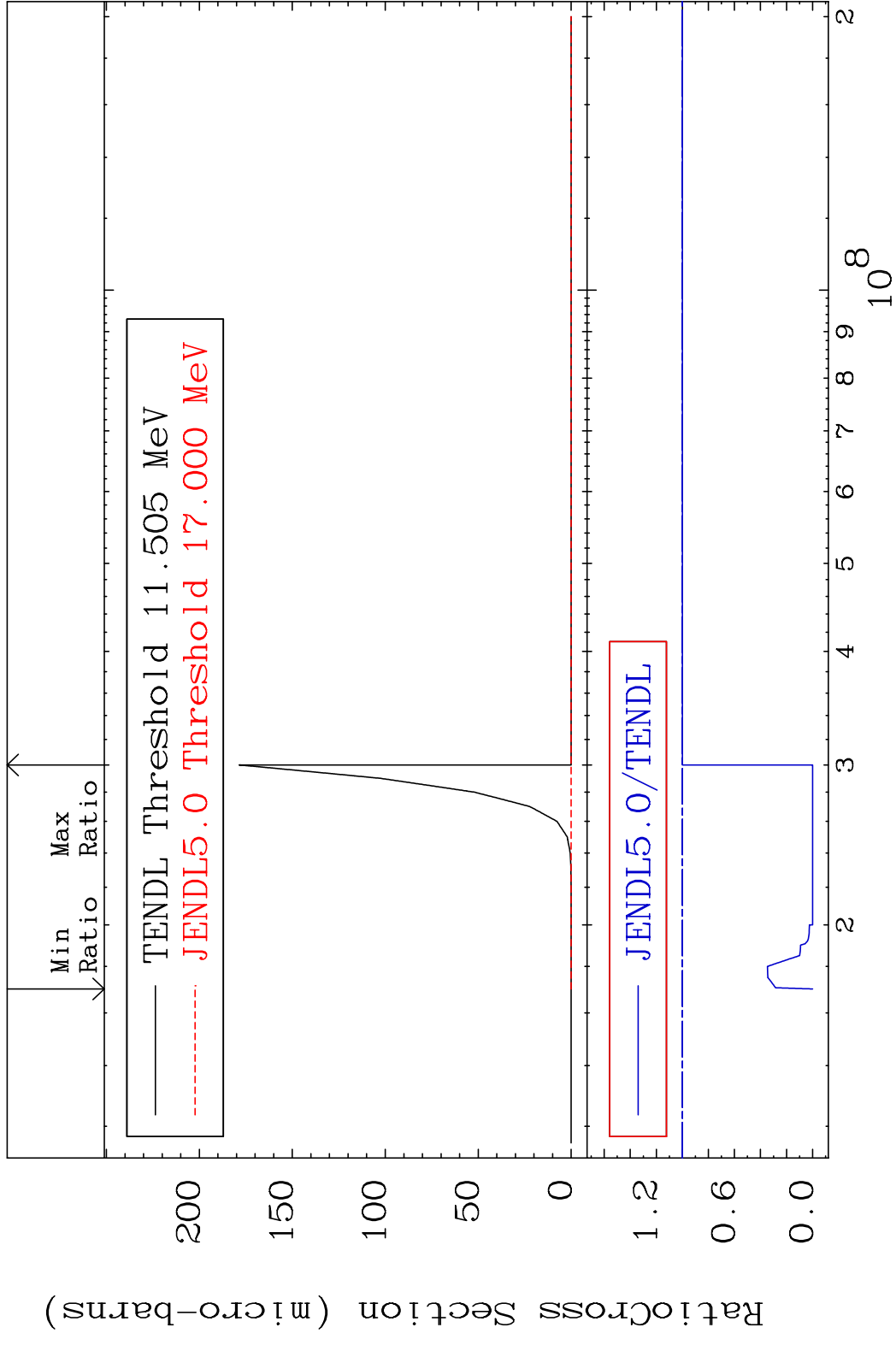
44-Ru-104

MAT 4449

(n, He-3)

44-Ru-104

Cross Section -100.0 To 0.000 %



45

Incident Energy (eV)

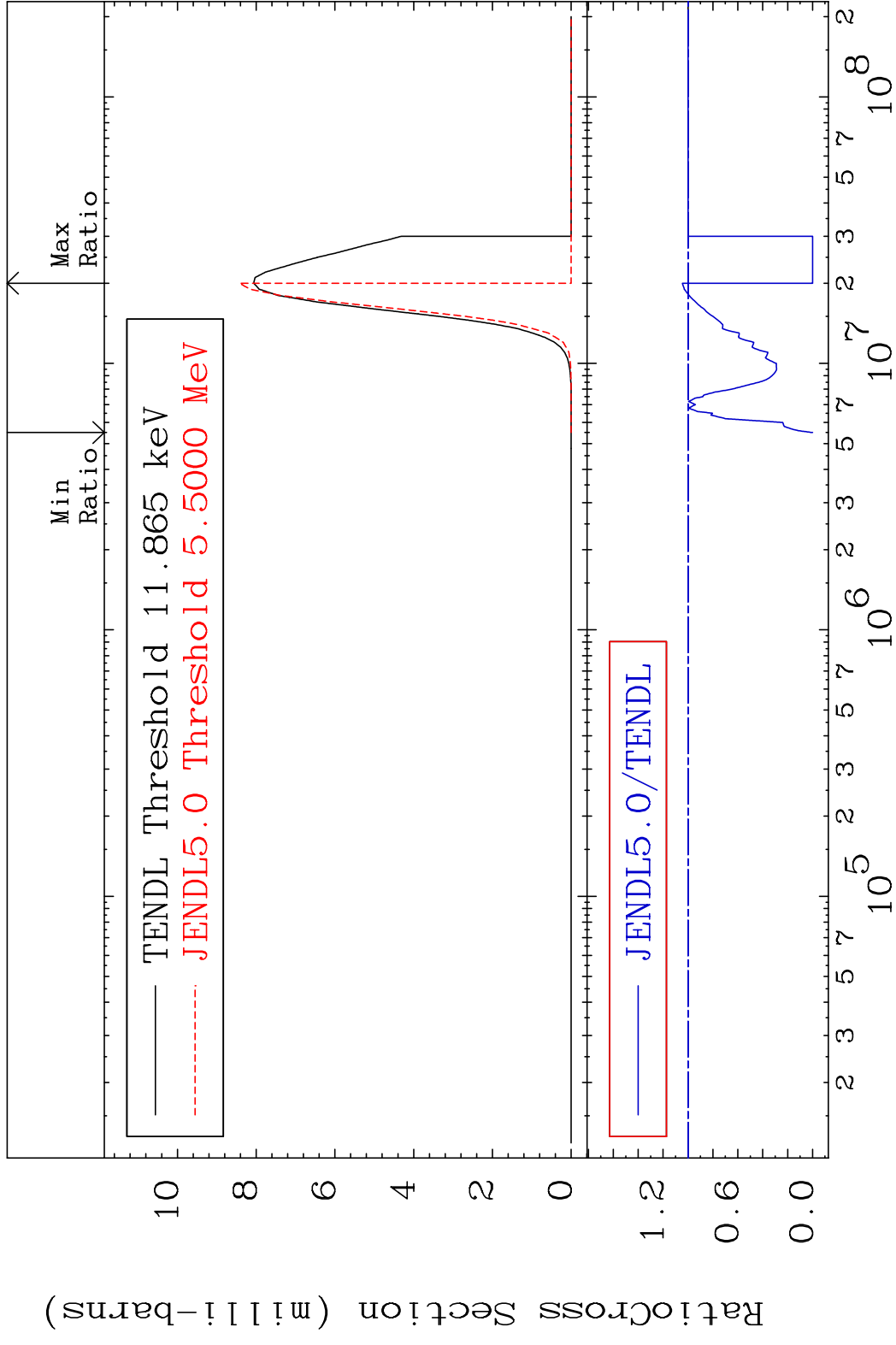
44-Ru-104

MAT 4449

44-Ru-104

(n,  $\alpha$ )

Cross Section -100.0 To 4.532 %

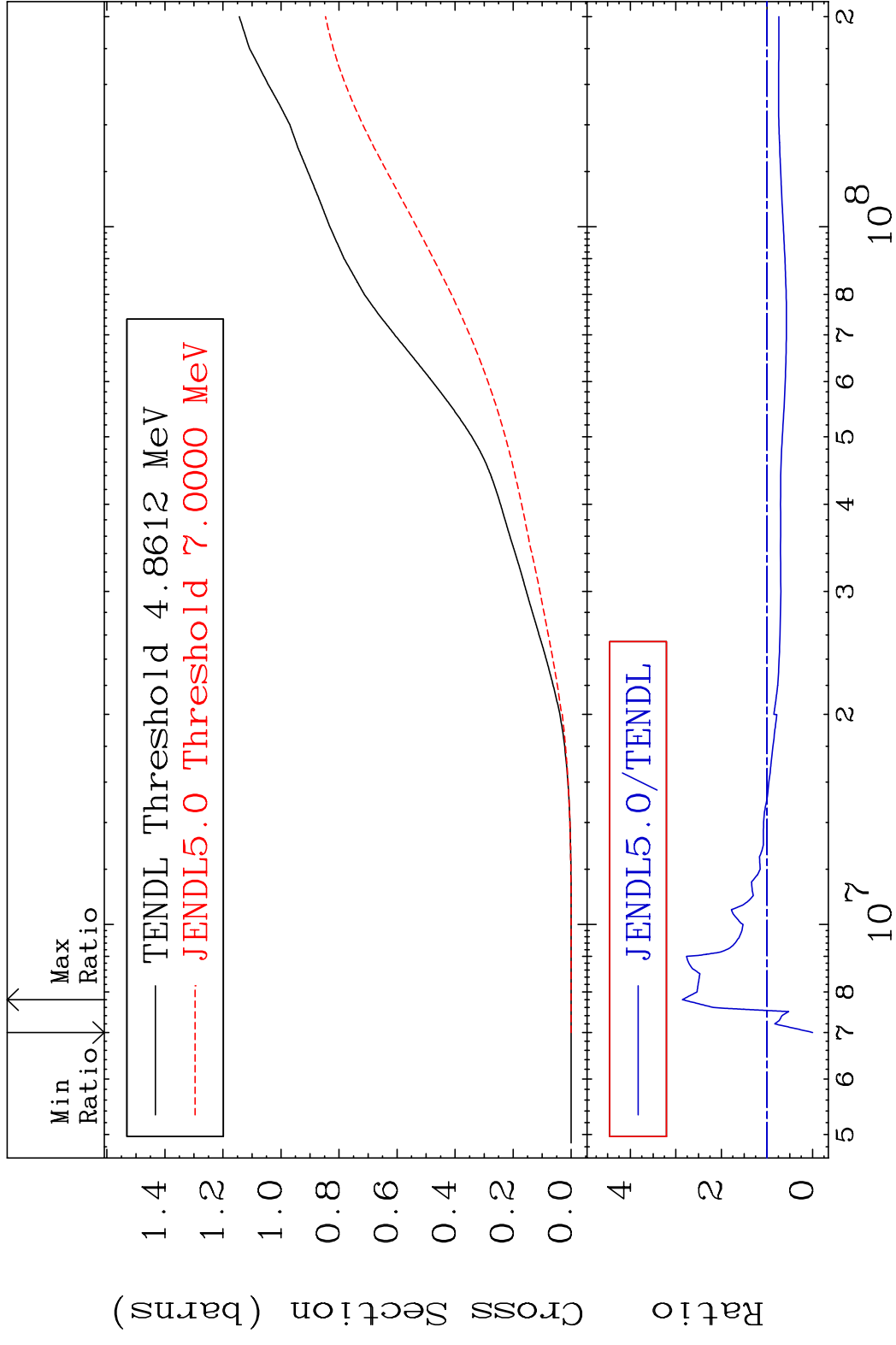


MAT 4449

Hydrogen Production

44-Ru-104

Cross Section -100.0 To 185.8 %

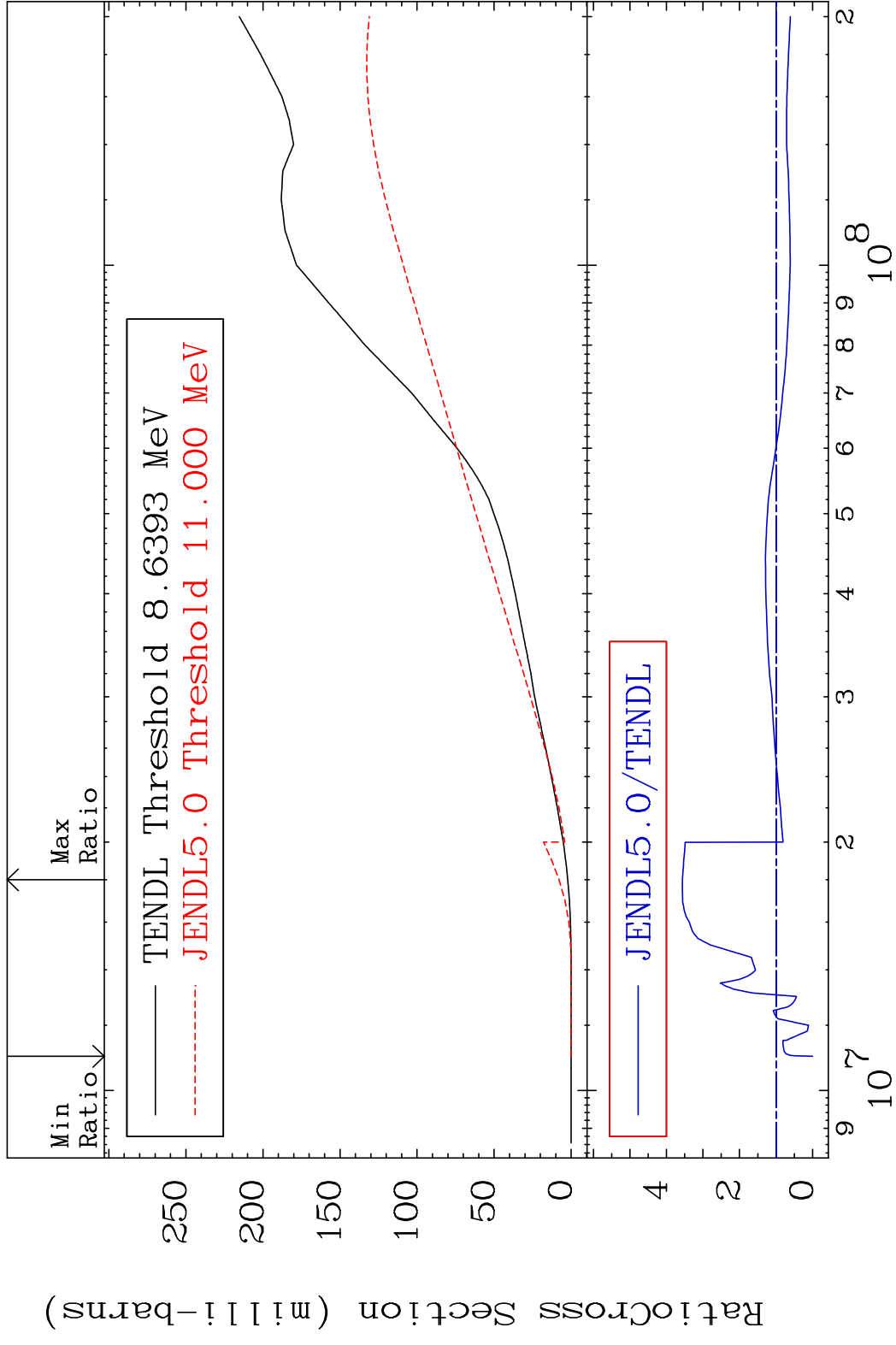


47

Incident Energy (eV)

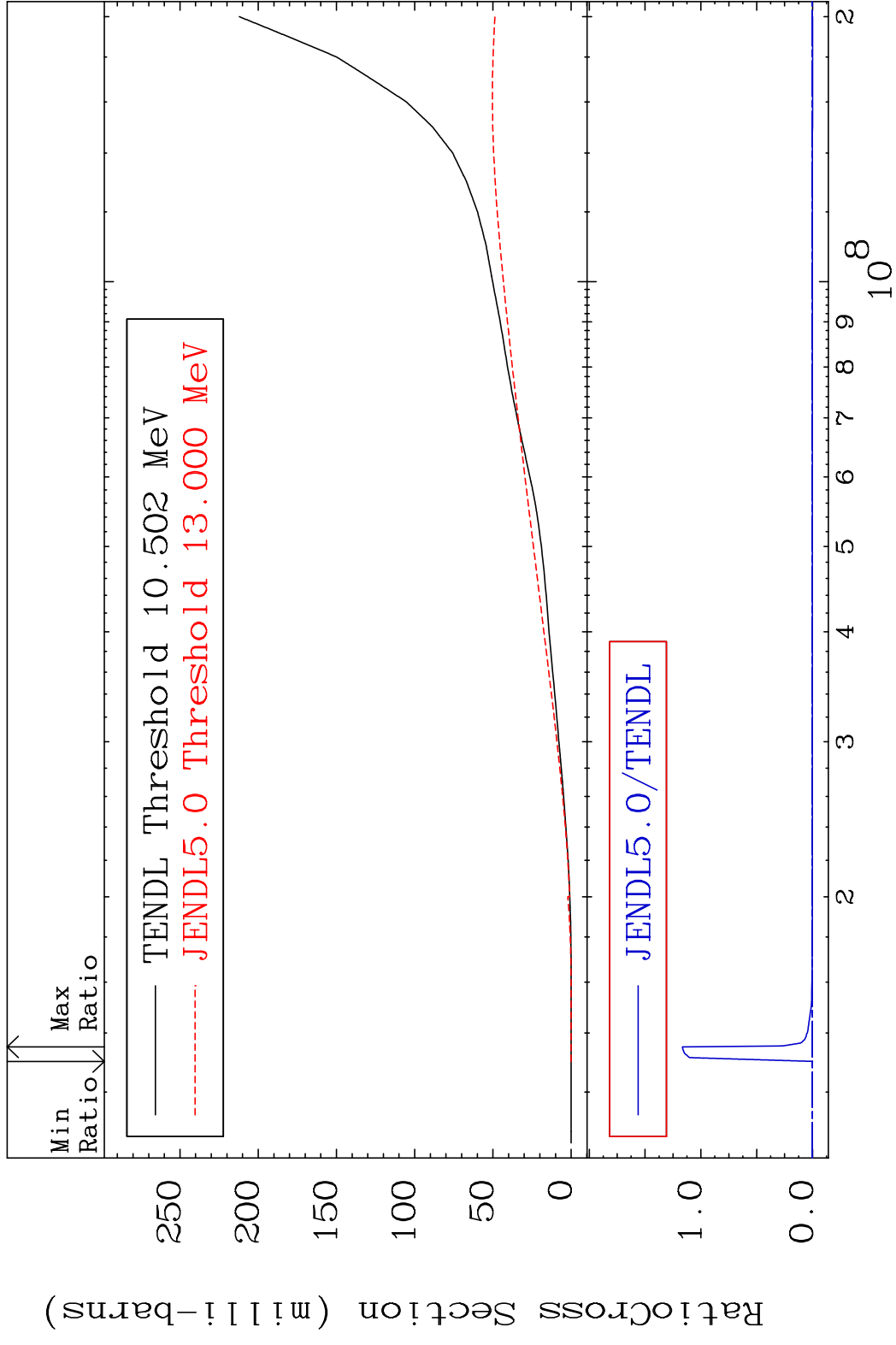
44-Ru-104

MAT 4449 Deuterium Production 44-Ru-104  
 Cross Section -100.0 To 256.5 %



48 Incident Energy (eV) 44-Ru-104

MAT 4449 Tritium Production 44-Ru-104  
 Cross Section -100.0 To 9999. %



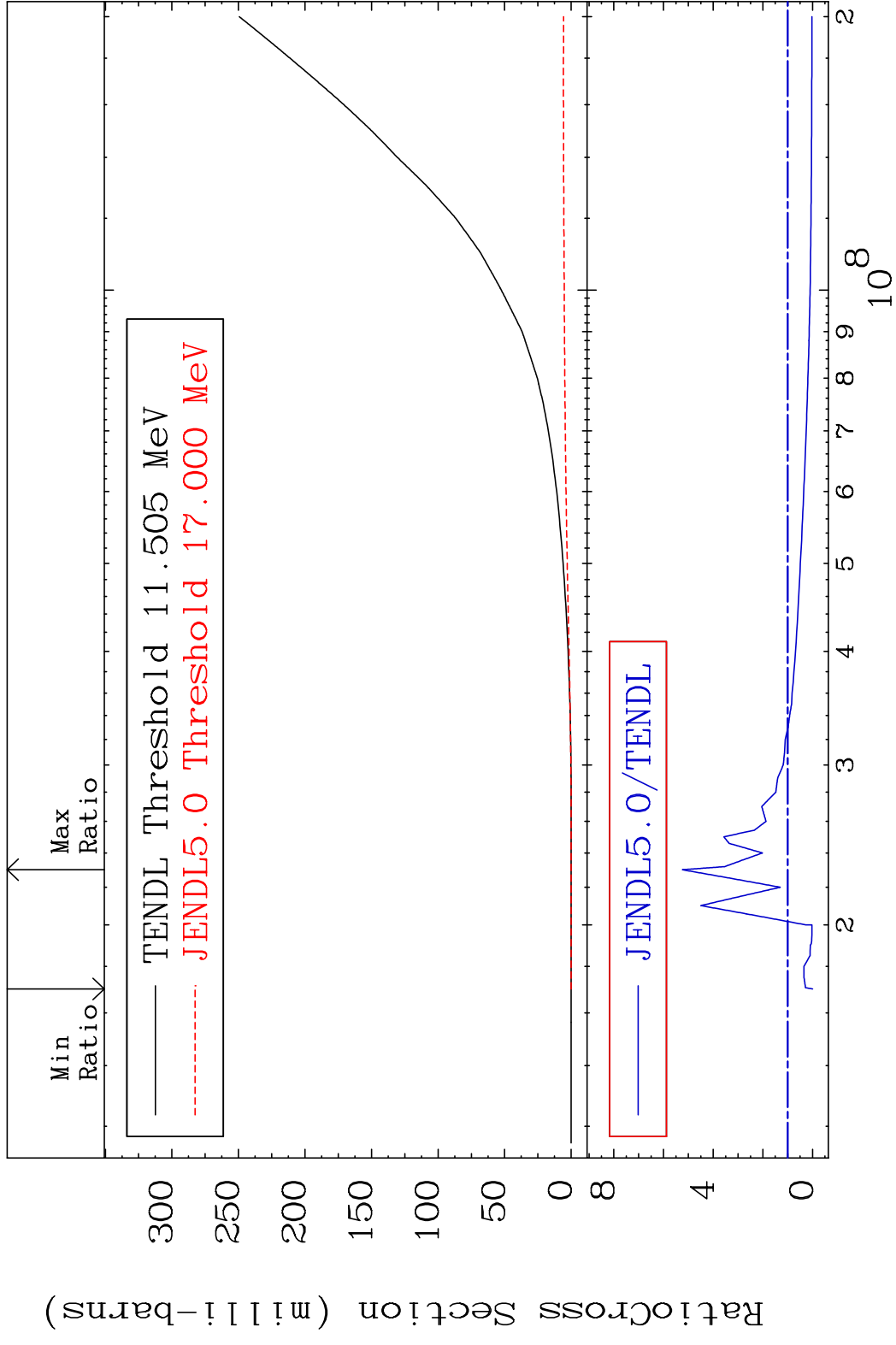
49 Incident Energy (eV) 44-Ru-104

MAT 4449

He-3 Production

44-Ru-104

Cross Section -100.0 To 424.2 %



50

Incident Energy (eV)

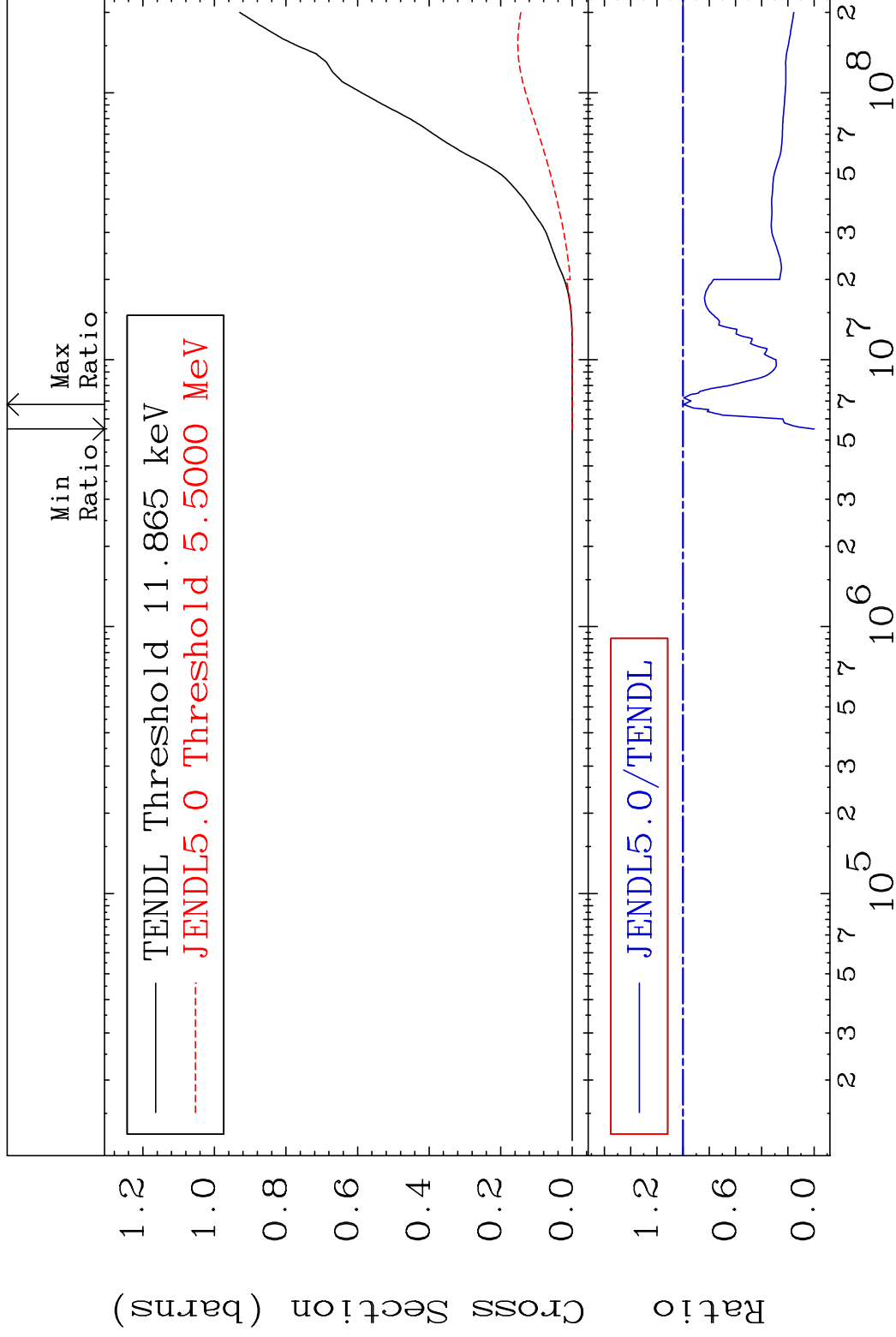
44-Ru-104

MAT 4449

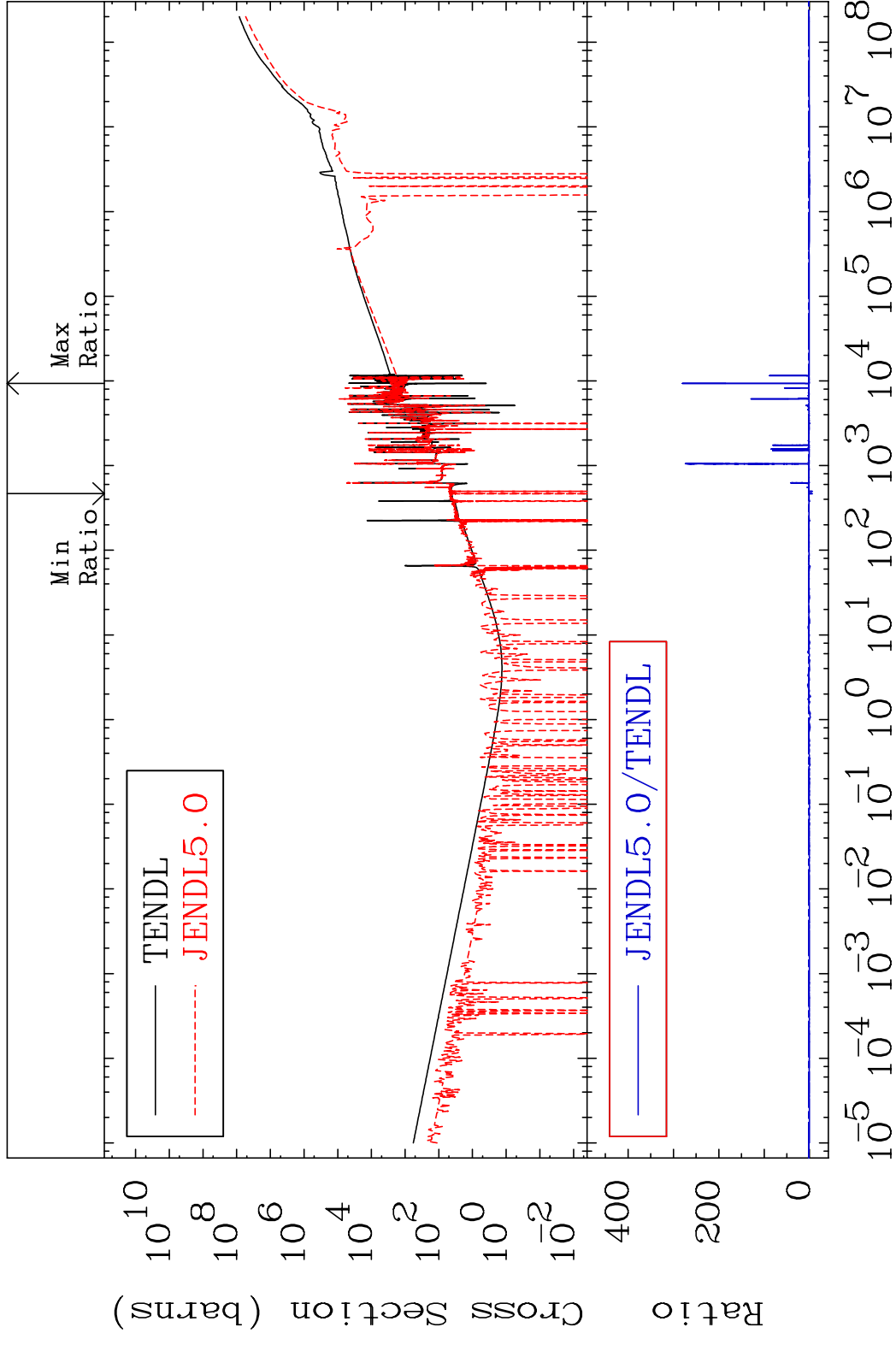
He-4 Production

44-Ru-104

Cross Section -100.0 To -0.437%



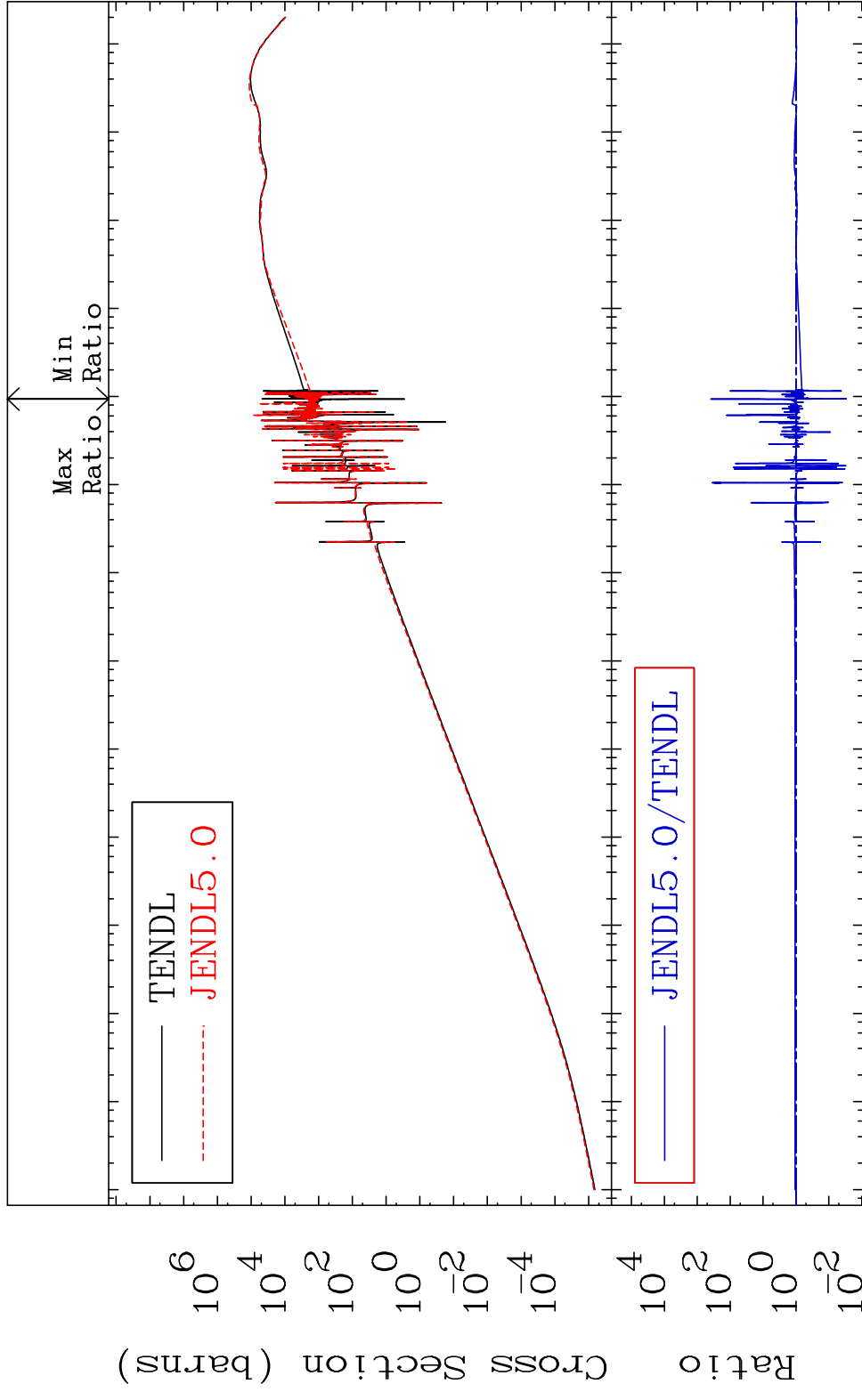
MAT 4449 Kerma total (eV-barns) 44-Ru-104  
 Cross Section -769.3 To 9999. %



MAT 4449

Kerma elastic Cross Section -97.04 To 9999. %

44-Ru-104



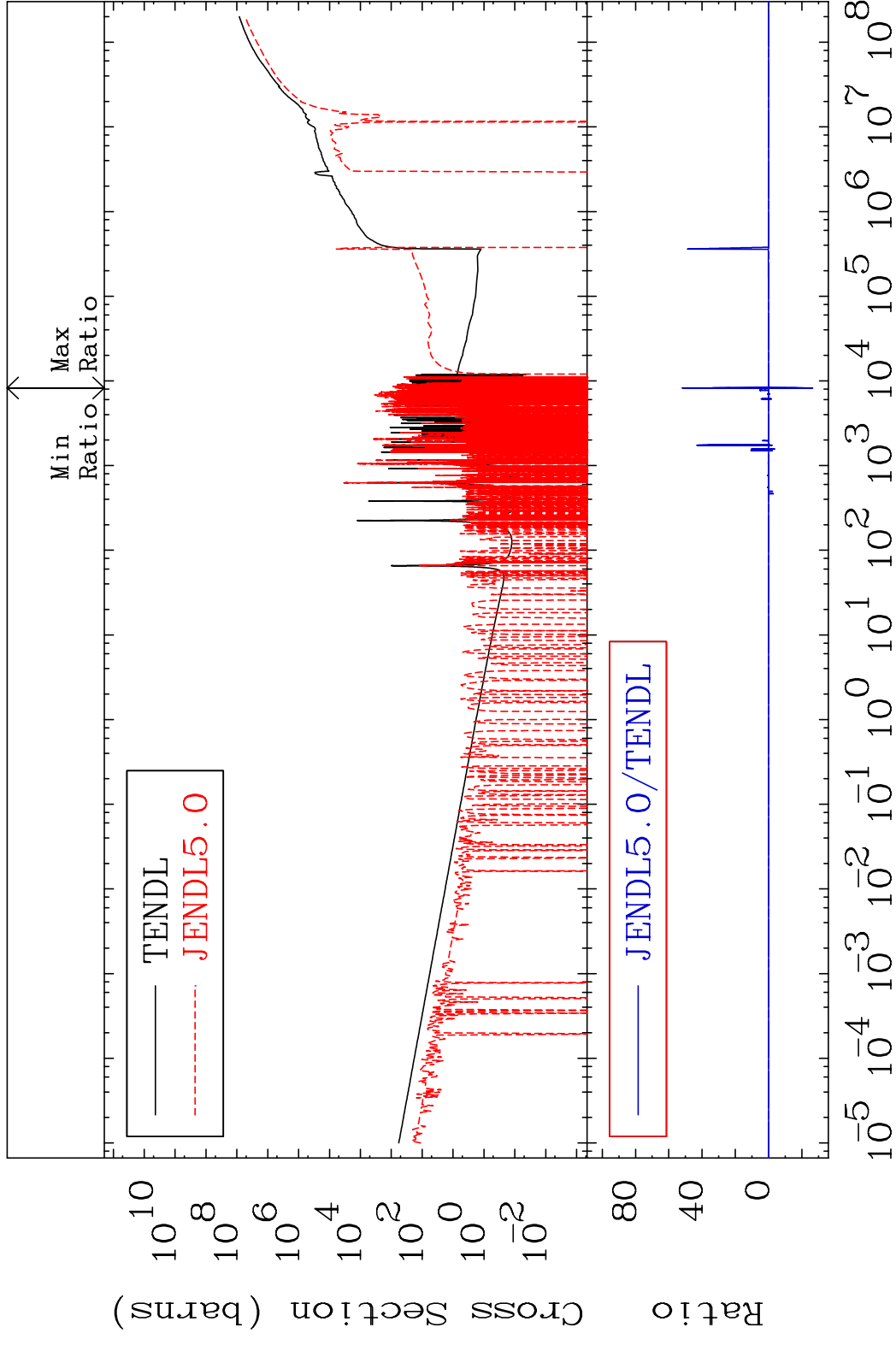
10<sup>-5</sup> 10<sup>-4</sup> 10<sup>-3</sup> 10<sup>-2</sup> 10<sup>-1</sup> 10<sup>0</sup> 10<sup>1</sup> 10<sup>2</sup> 10<sup>3</sup> 10<sup>4</sup> 10<sup>5</sup> 10<sup>6</sup> 10<sup>7</sup> 10<sup>8</sup>

53

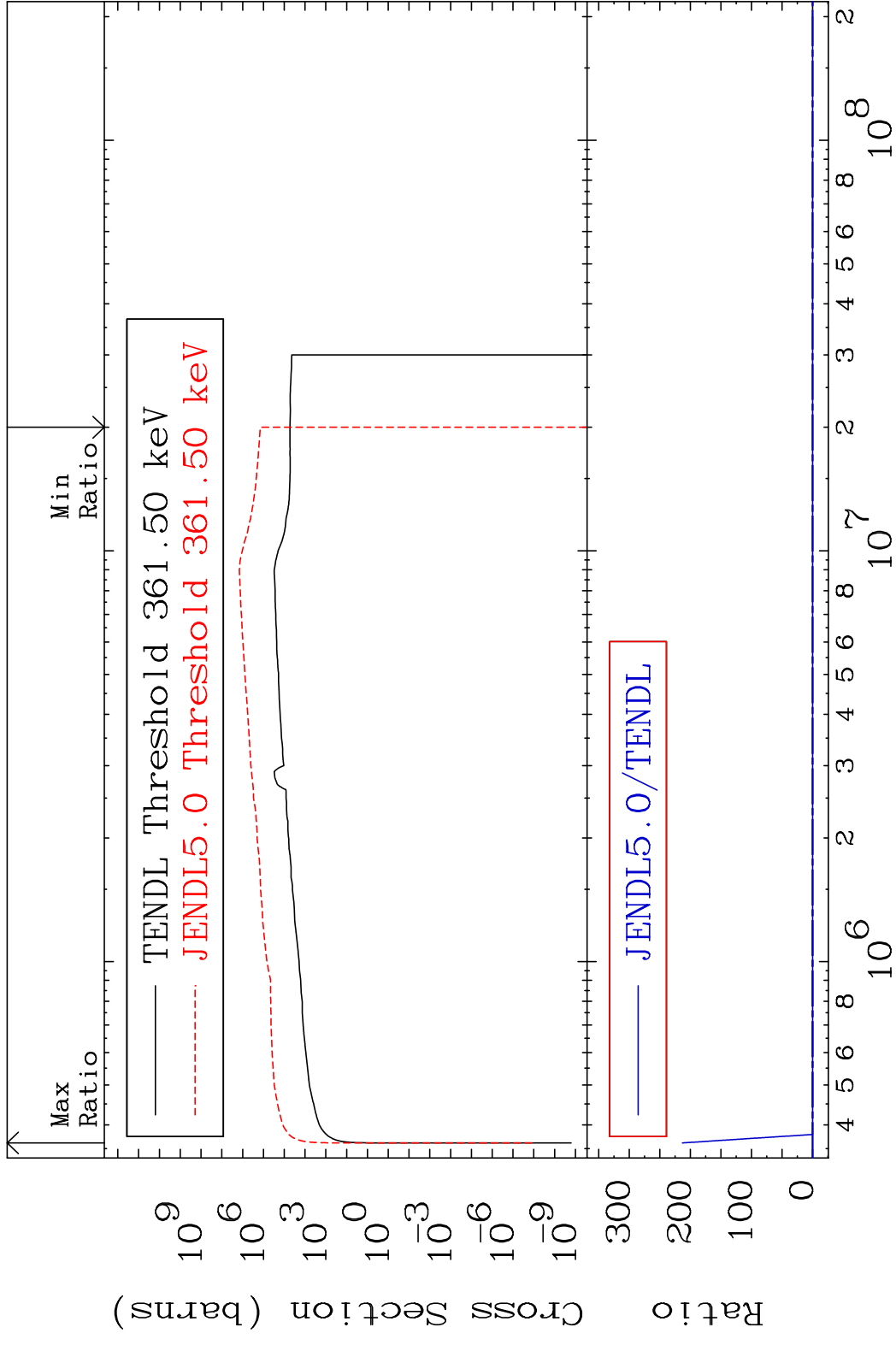
Incident Energy (eV)

44-Ru-104

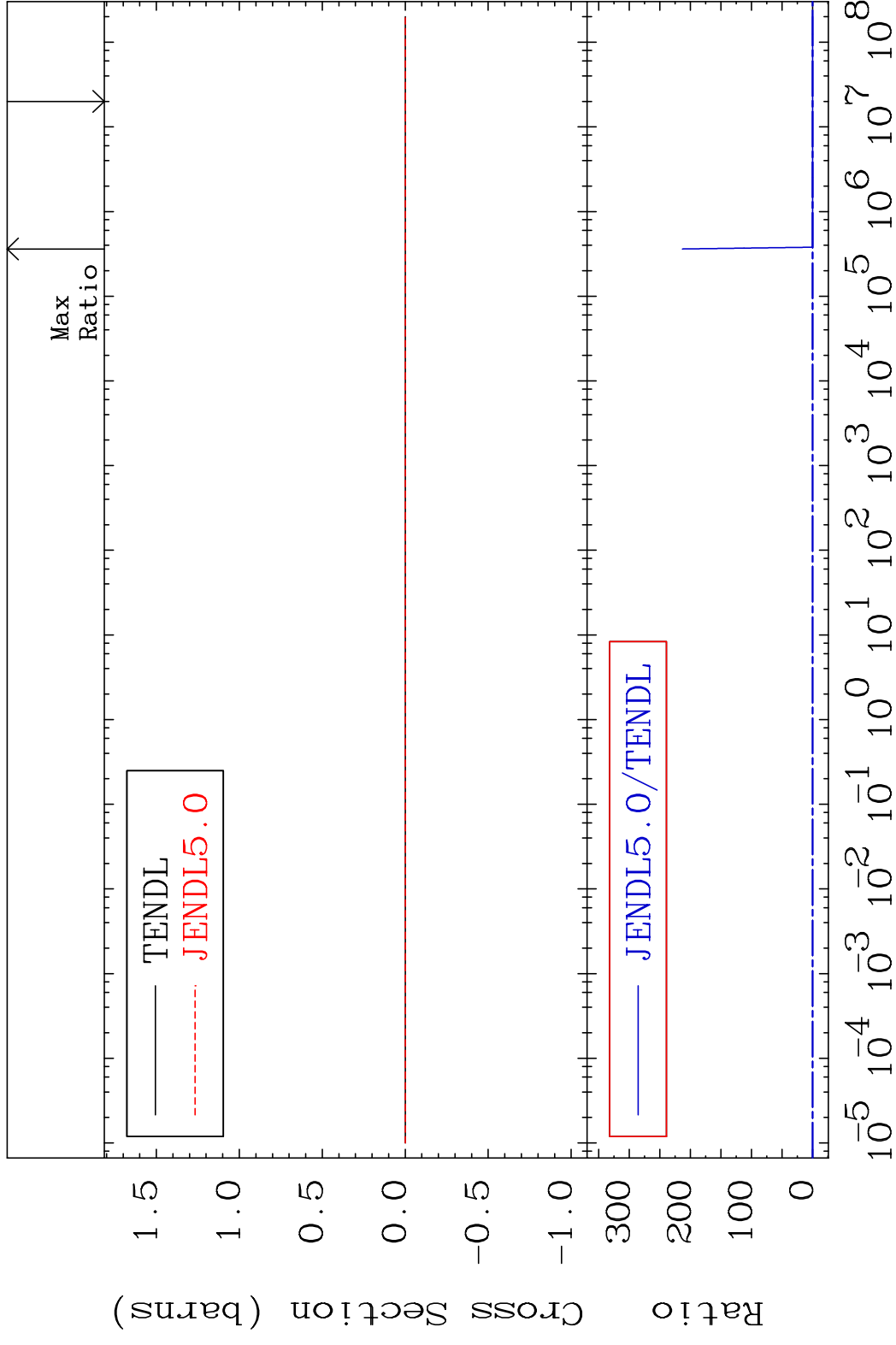
MAT 4449 Kerma non-elastic (all but mt2) 44-Ru-104  
 Cross Section -9999. To 9999. %



MAT 4449 Kerma inelastic (mt51-91) 44-Ru-104  
 Cross Section -100.0 To 9999. %

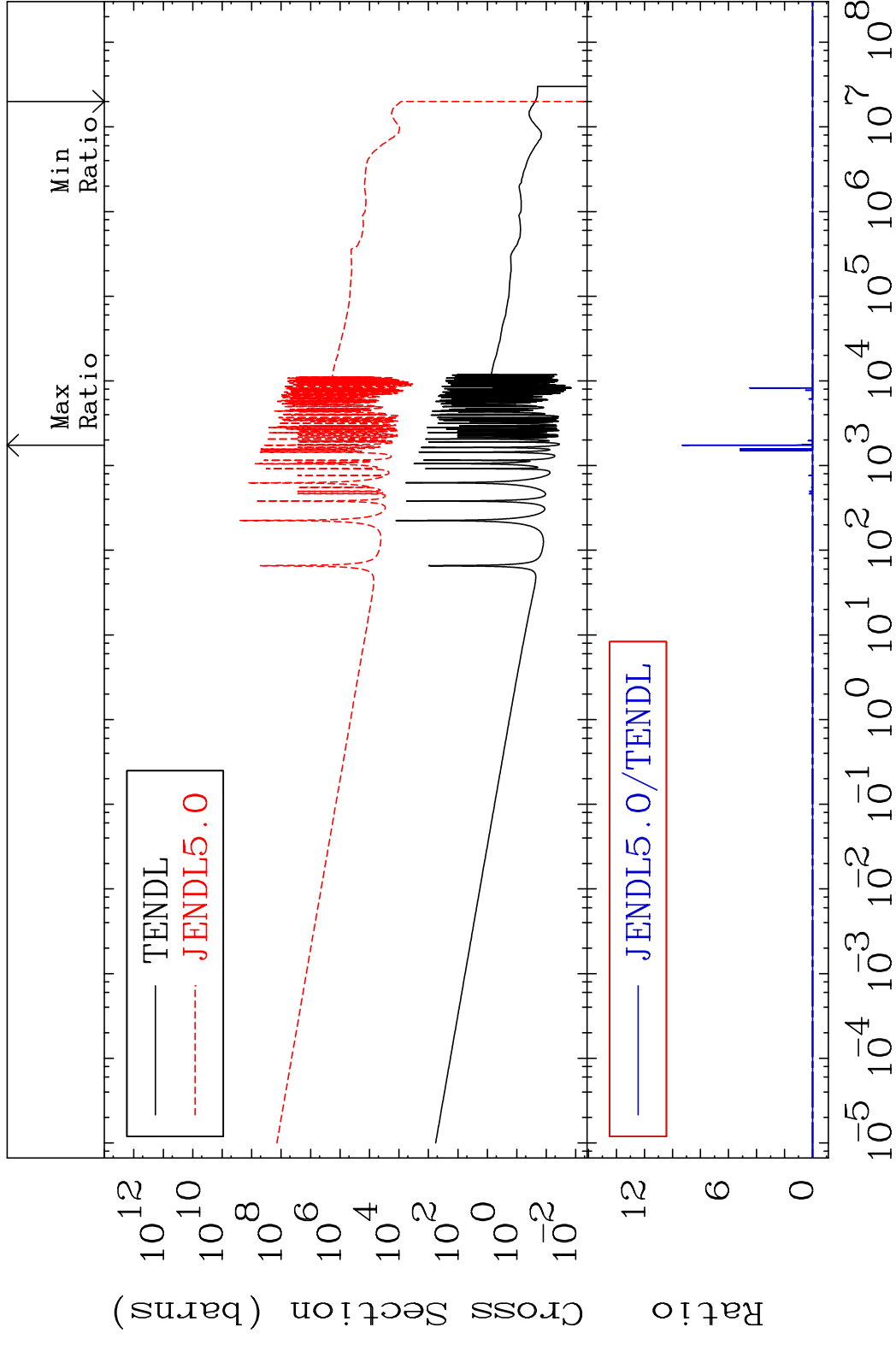


MAT 4449 Kerma fission (mt18 or mt19-20-21-38) 44-Ru-104  
 Cross Section -100.0 To 9999. %



MAT 4449

Kerma capture (mt102) 44-Ru-104  
Cross Section -100.0 To 9999. %

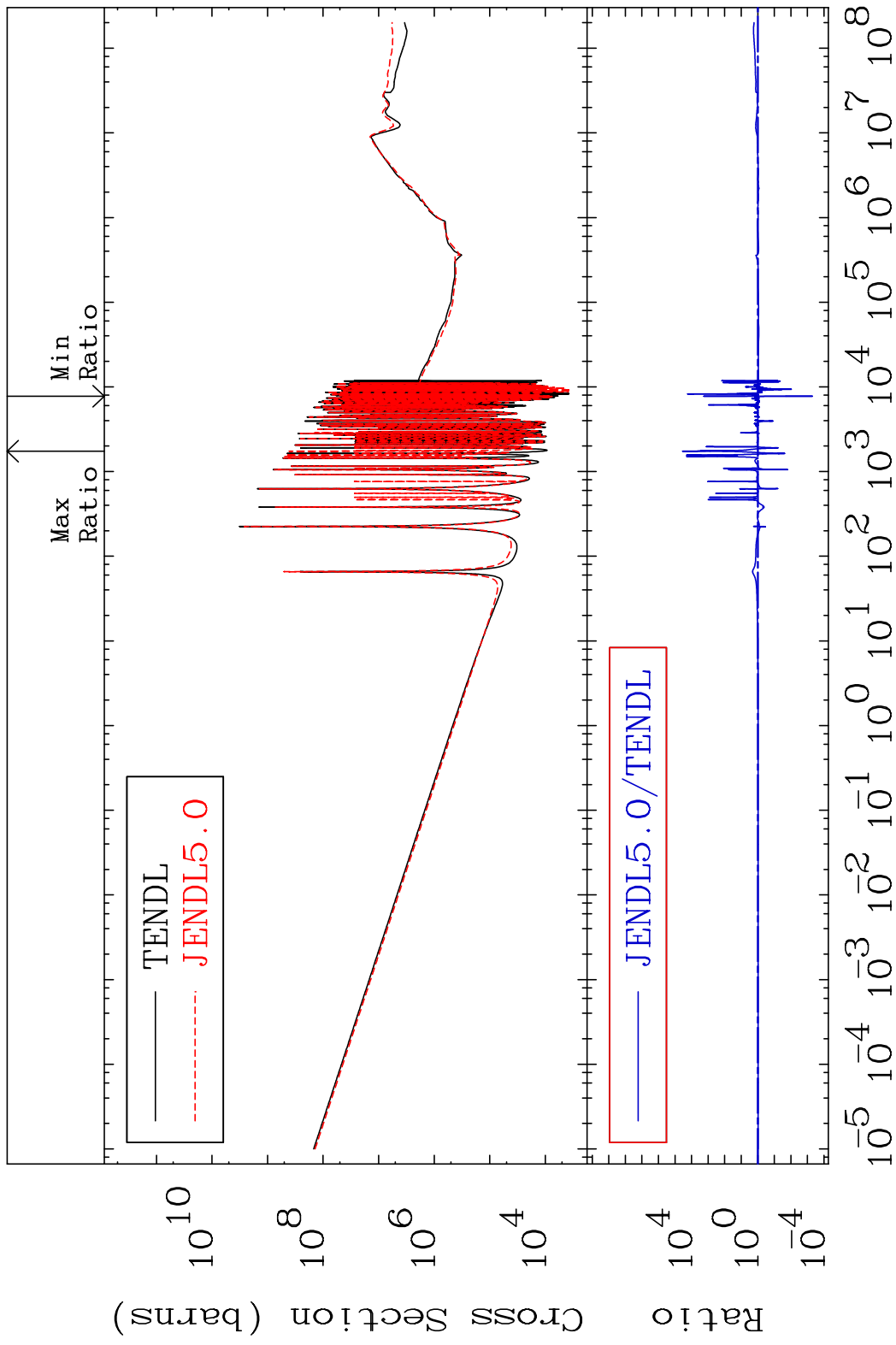


57

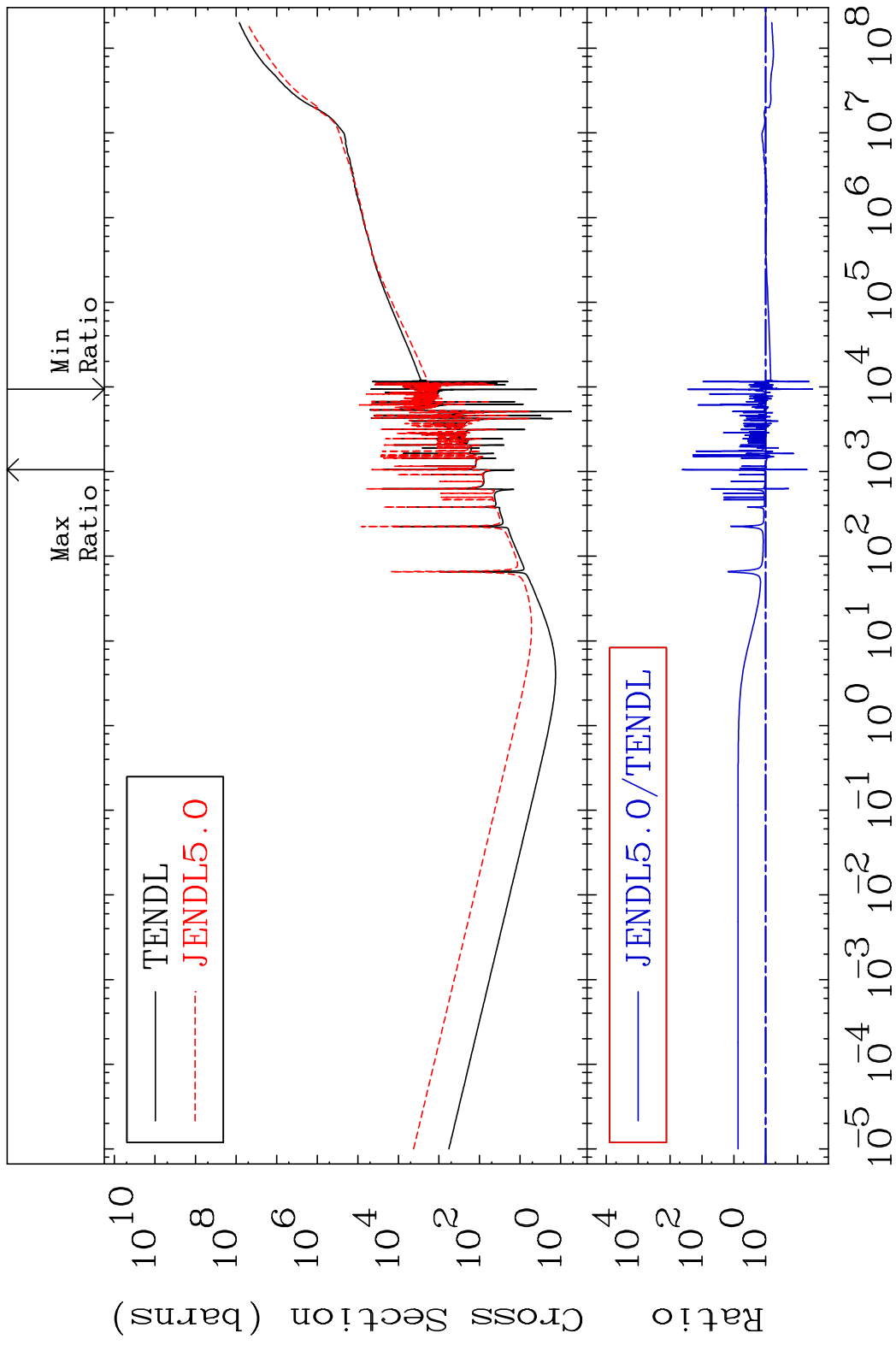
Incident Energy (eV)

44-Ru-104

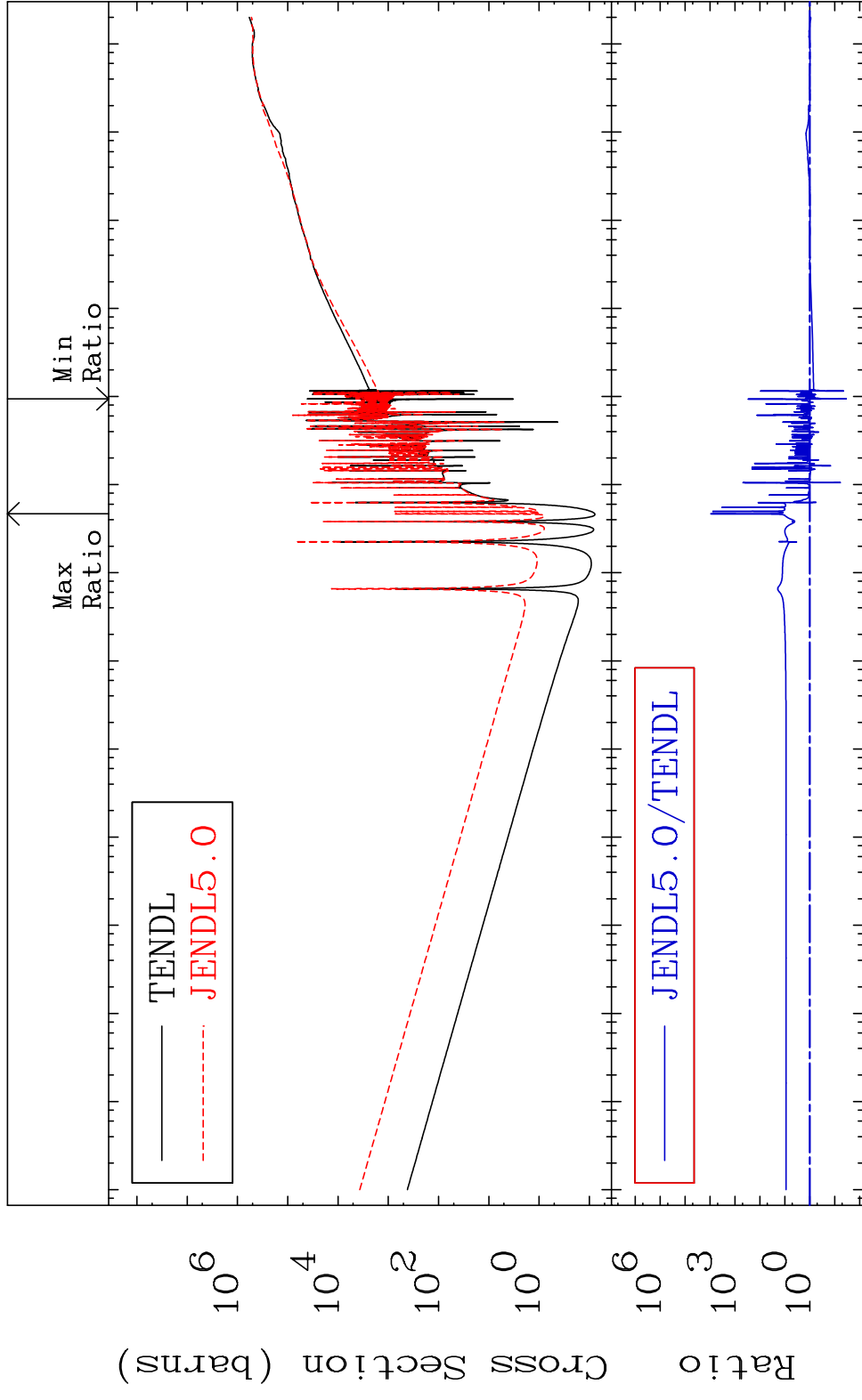
MAT 4449 Total photon (eV-barns) 44-Ru-104  
 Cross Section -99.95 To 9999. %



MAT 4449 Total kinematic kerma (high limit) 44-Ru-104  
 Cross Section -96.60 To 9999. %



MAT 4449      Dpa total (eV-barns)      44-Ru-104  
 Cross Section      -96.60 To 9999. %



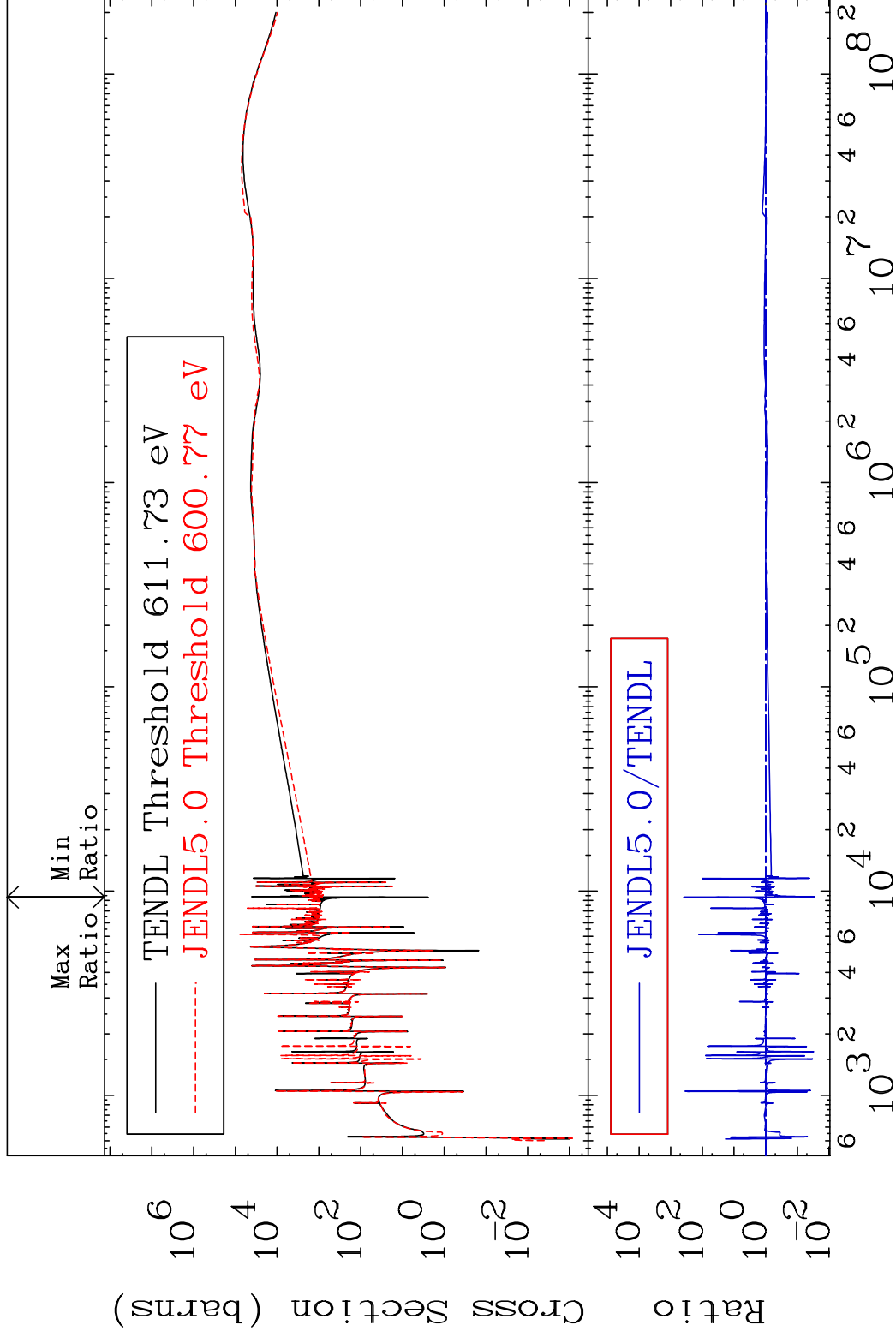
60      Incident Energy (eV)      44-Ru-104

MAT 4449

Dpa elastic (mt2)

44-Ru-104

Cross Section -97.04 To 9999. %

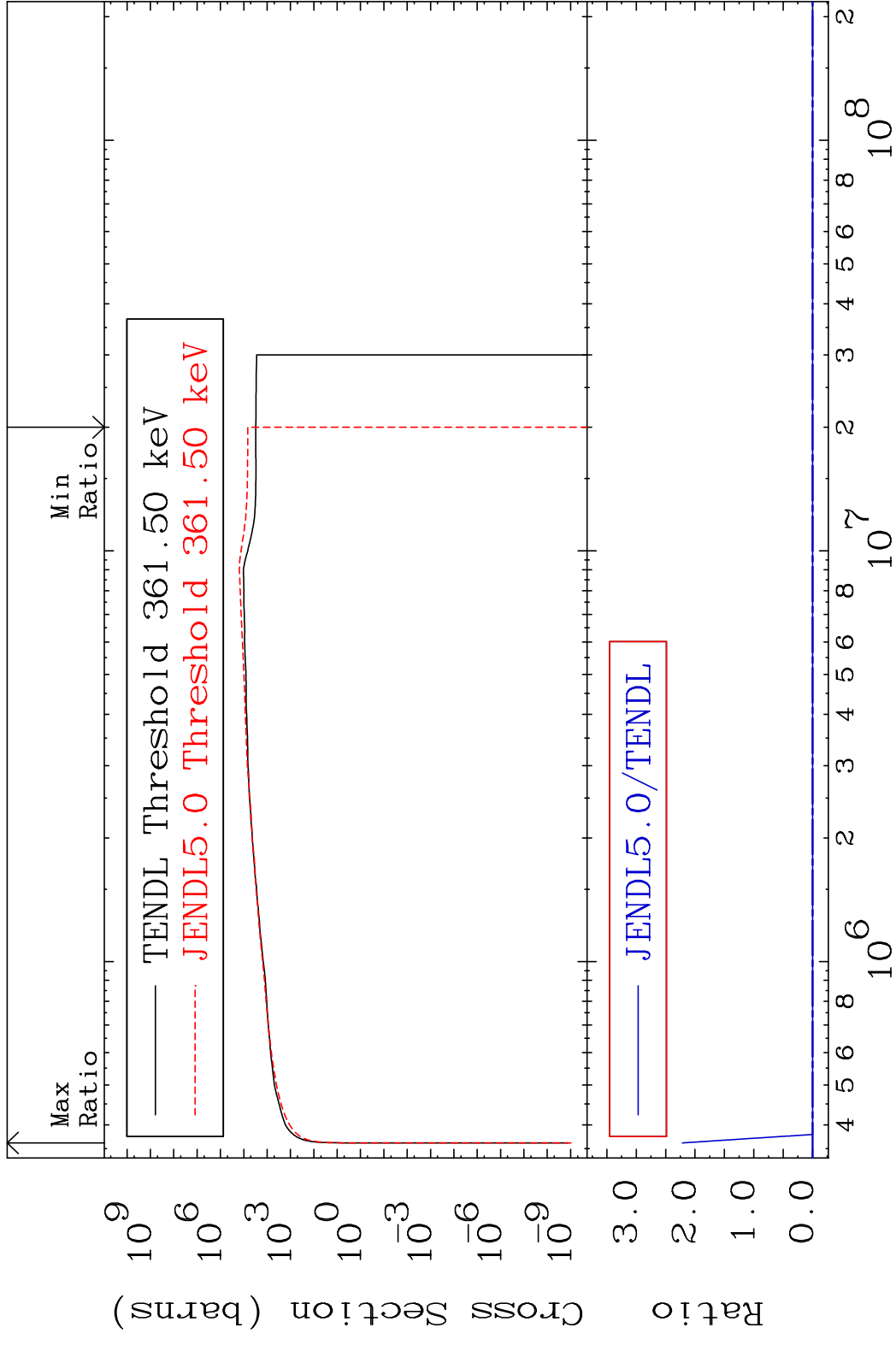


61

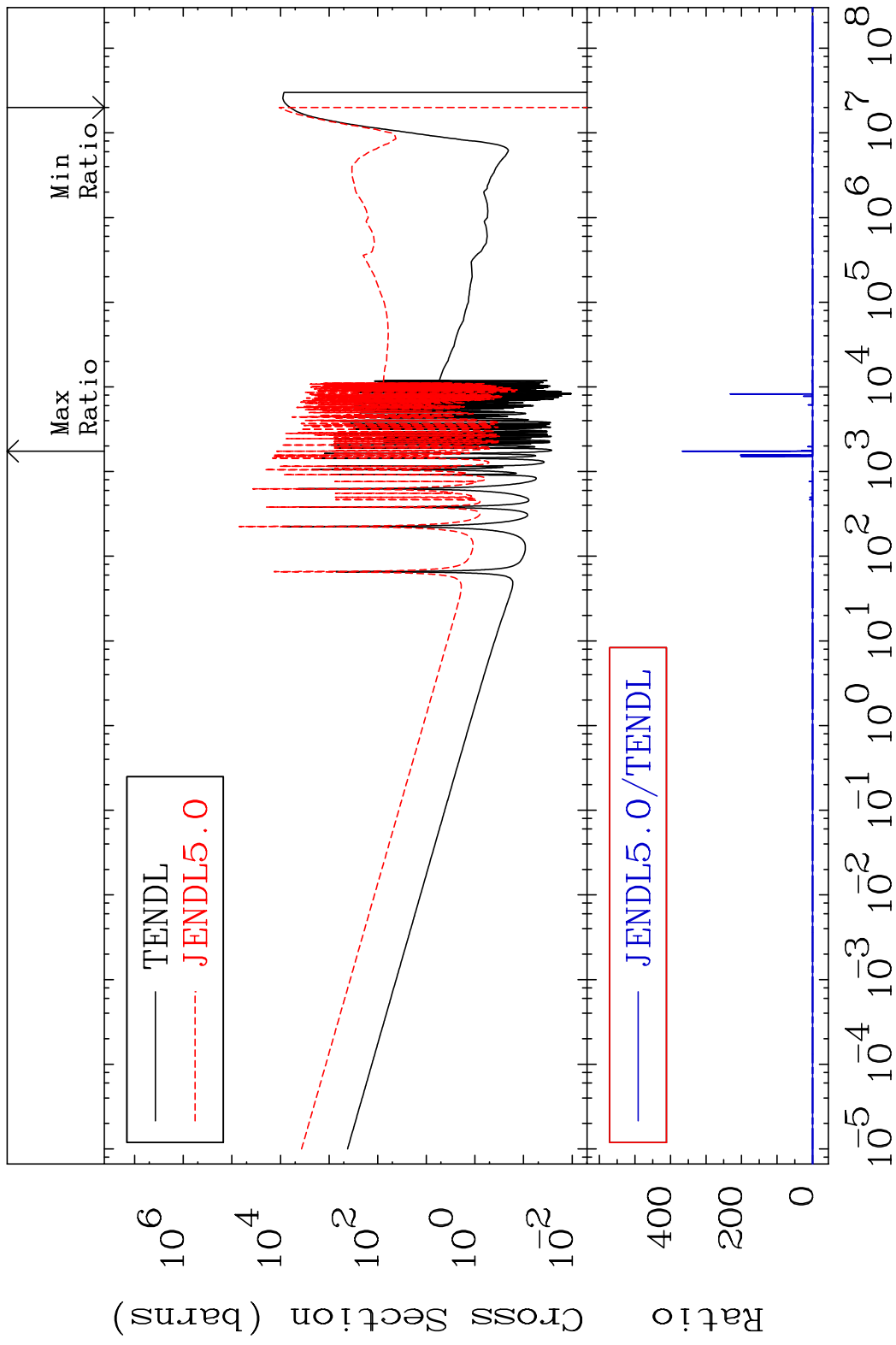
Incident Energy (eV)

44-Ru-104

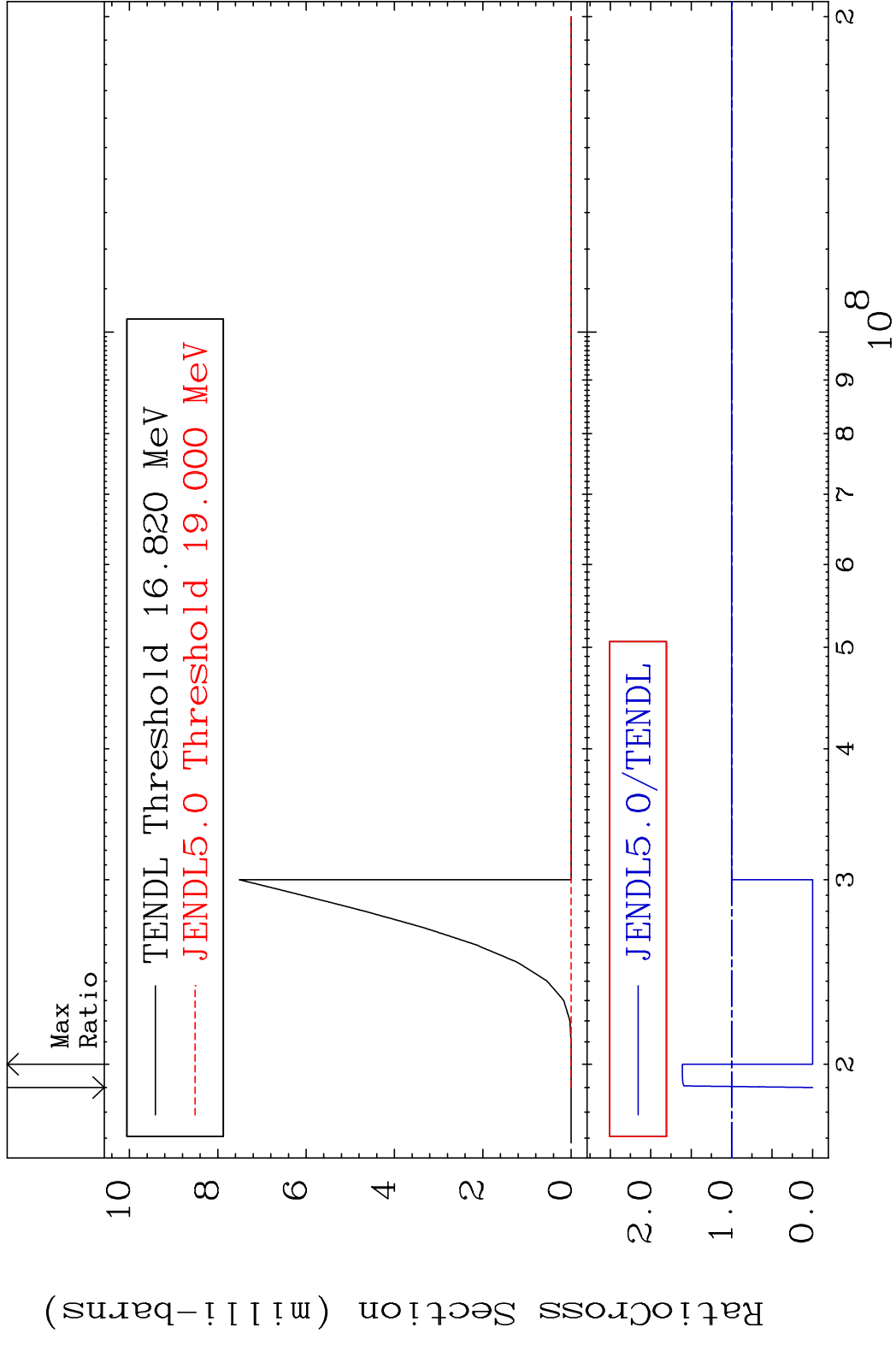
MAT 4449 Dpa inelastic (mt51-91) 44-Ru-104  
 Cross Section -100.0 To 9999. %

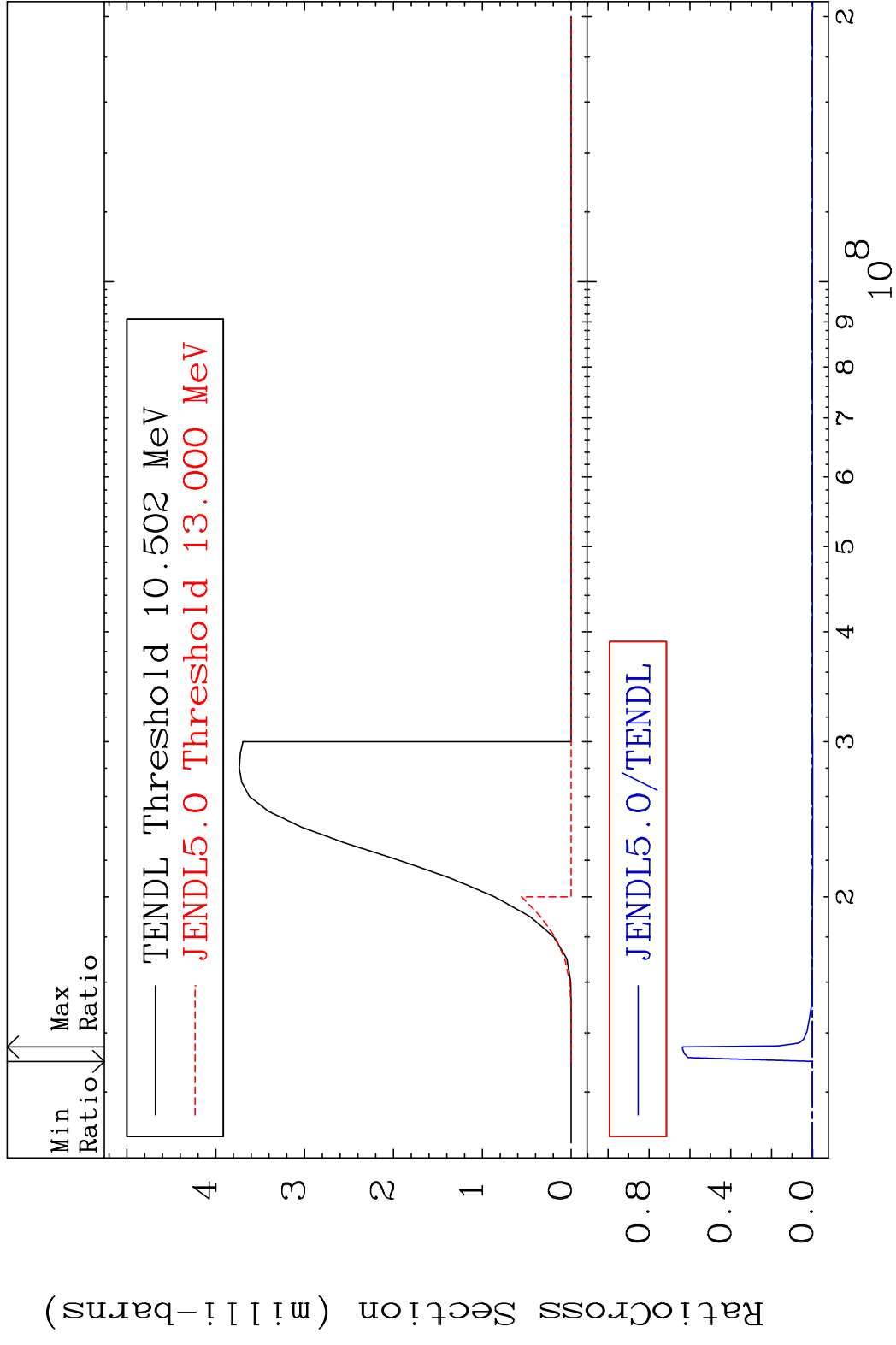


MAT 4449 Dpa disappearance (mt102 -120) 44-Ru-104  
 Cross Section -100.0 To 9999. %



MAT 4449 (n, n') d:43-Tc-102g 44-Ru-104  
 Radionuclide Production Cross Section Ratio 60.90 %



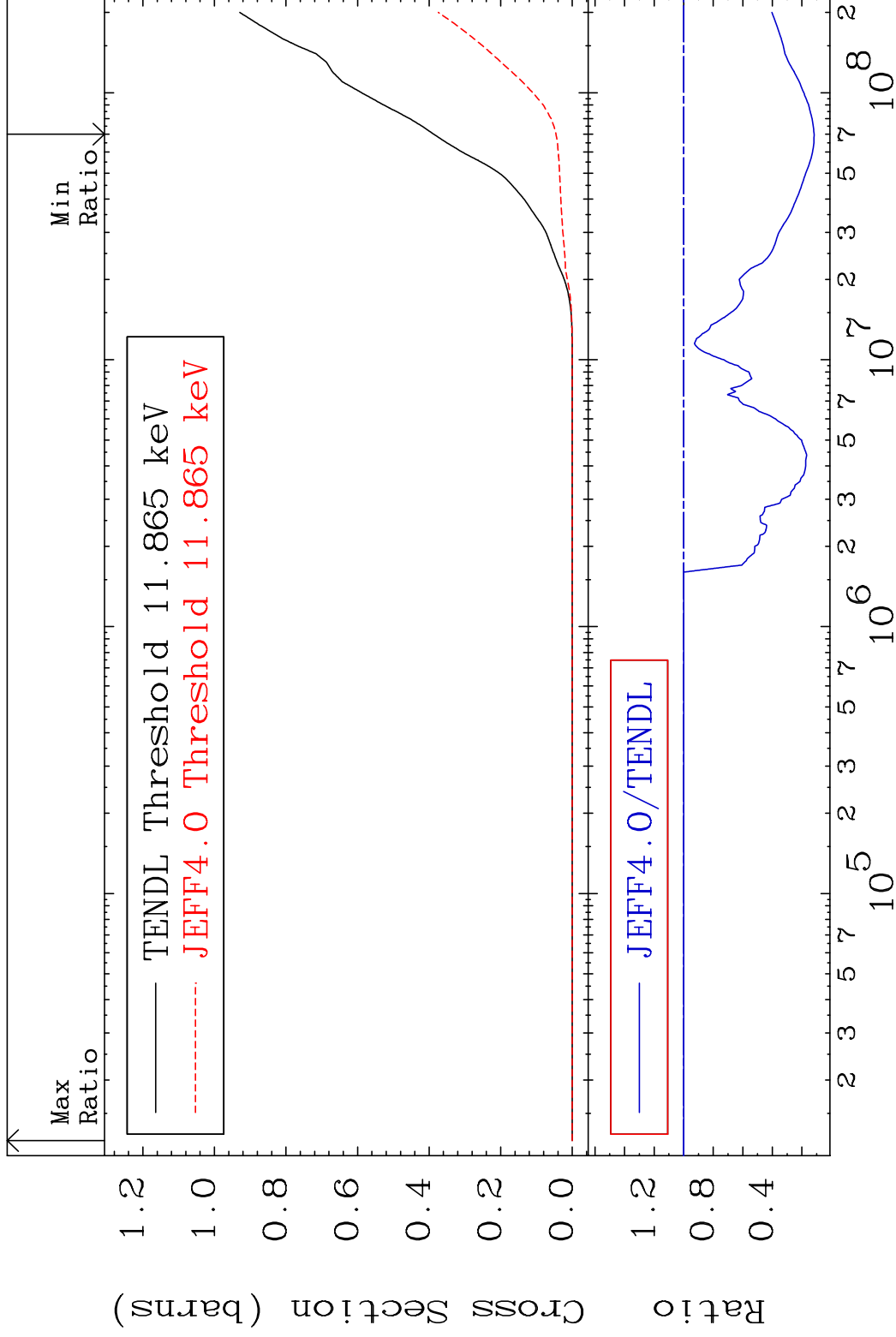


MAT 4449

He-4 Production

44-Ru-104

Cross Section -88.28 To 0.000 %



66

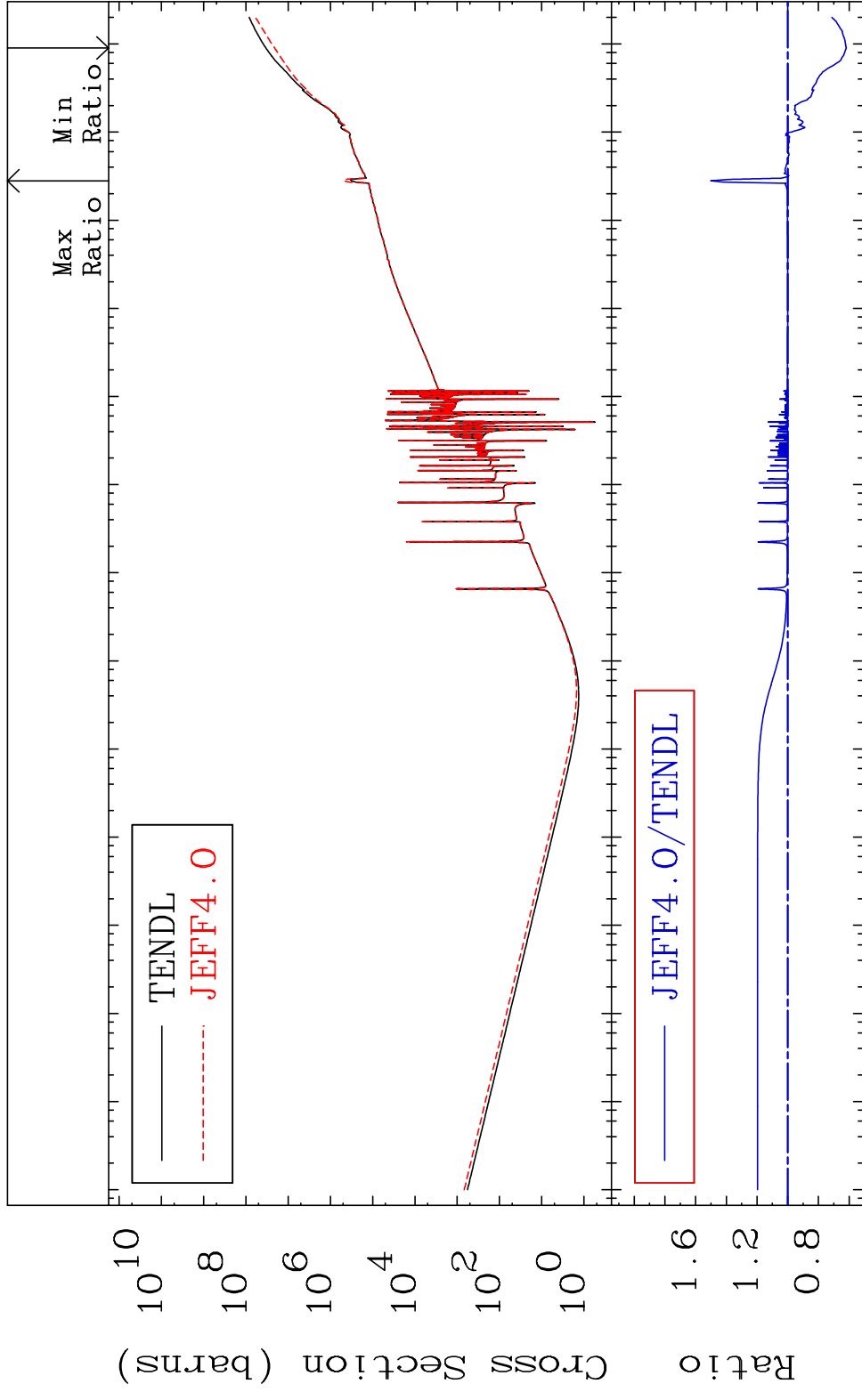
Incident Energy (eV)

44-Ru-104

MAT 4449

Kerma total (eV-barns) 44-Ru-104

Cross Section -38.18 To 50.16 %

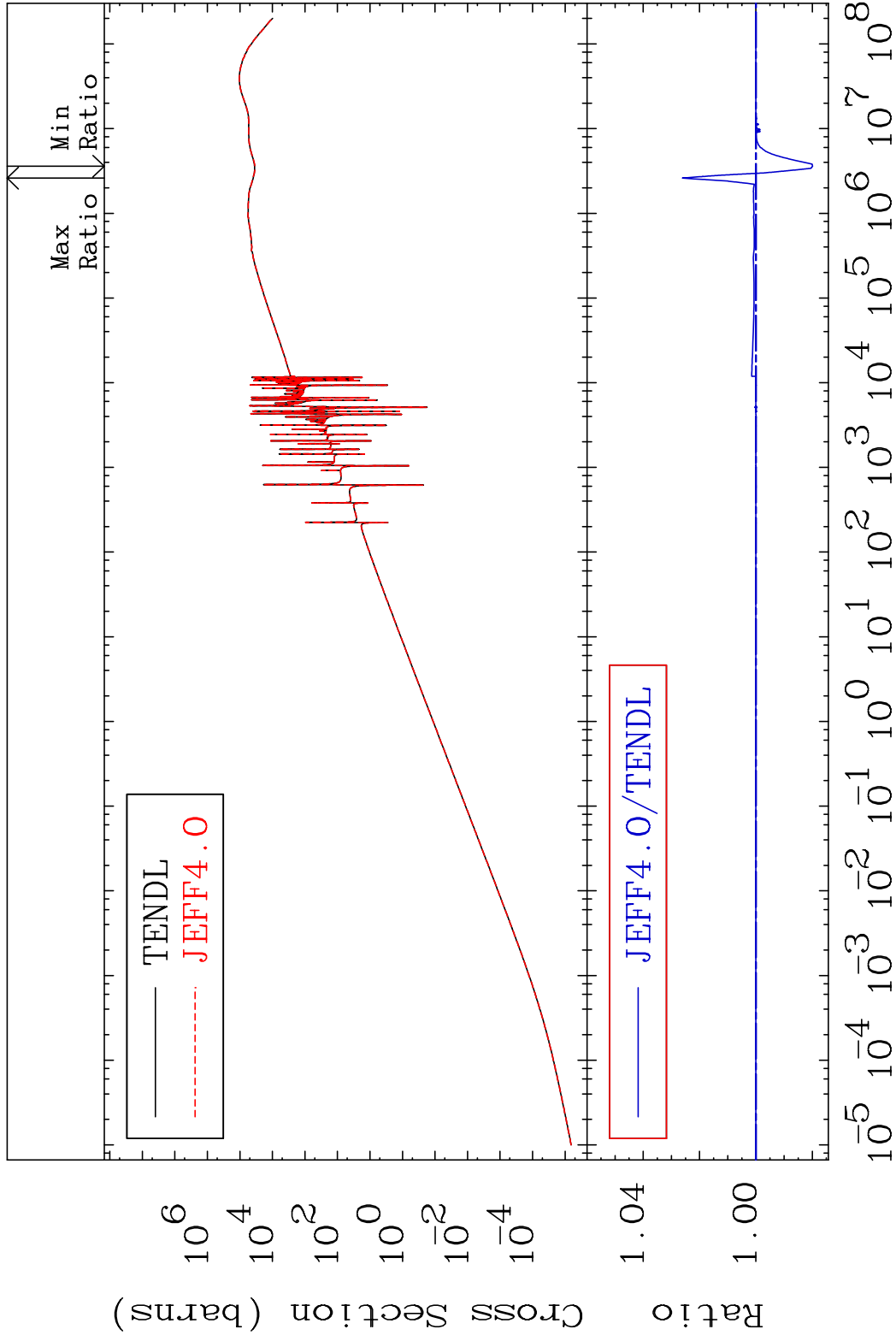


MAT 4449

Kerma elastic

44-Ru-104

Cross Section -2.010 To 2.611 %

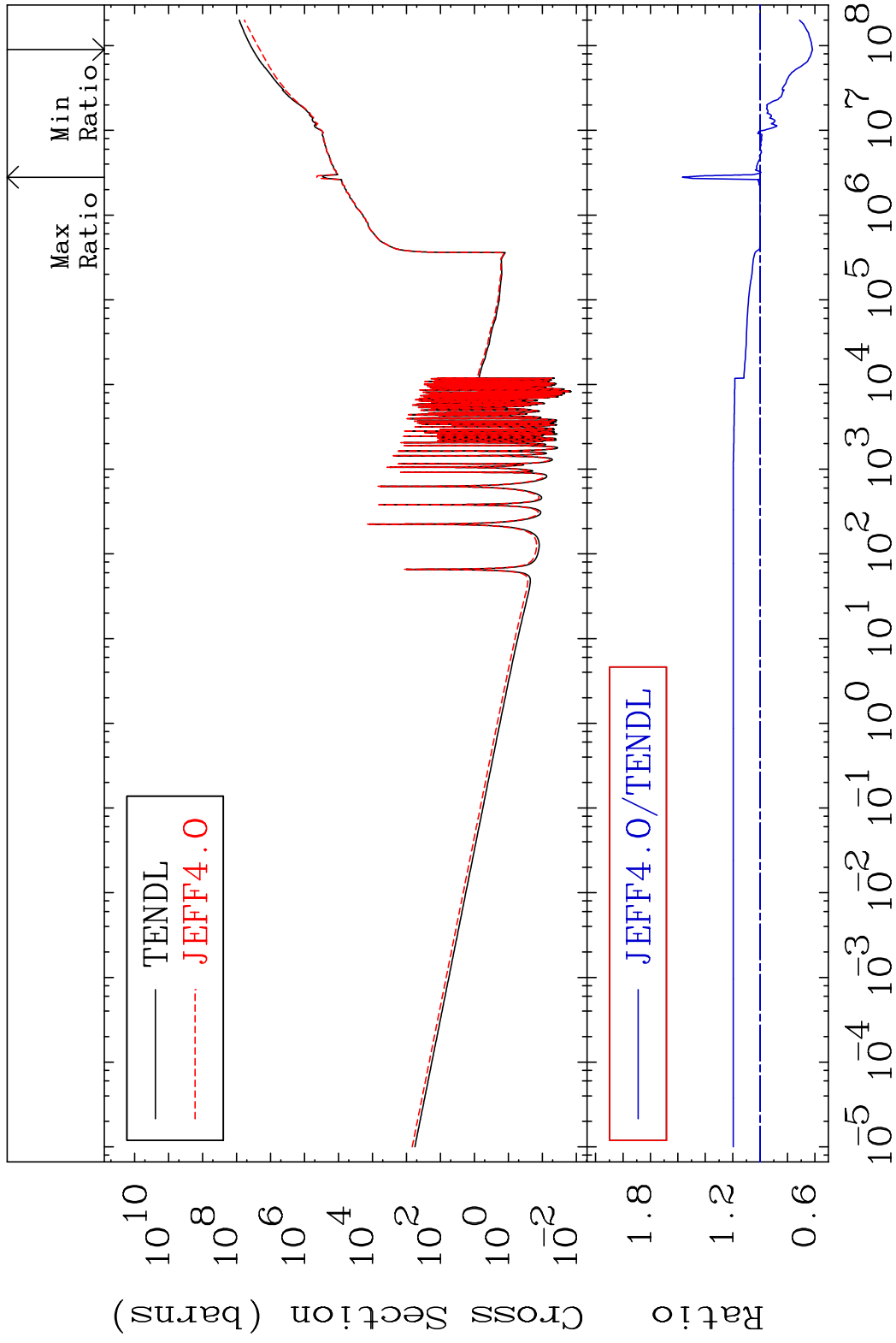


68

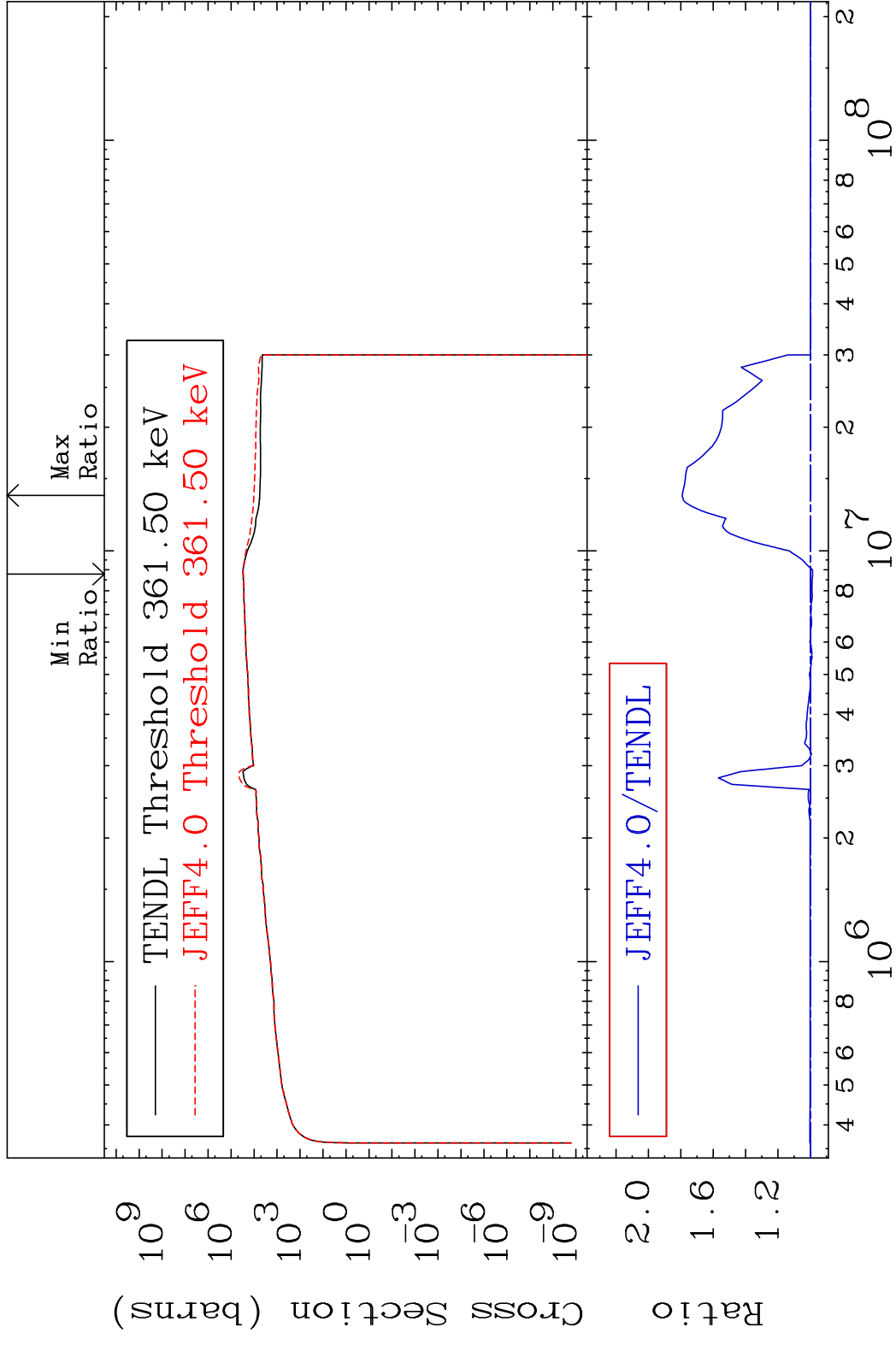
Incident Energy (eV)

44-Ru-104

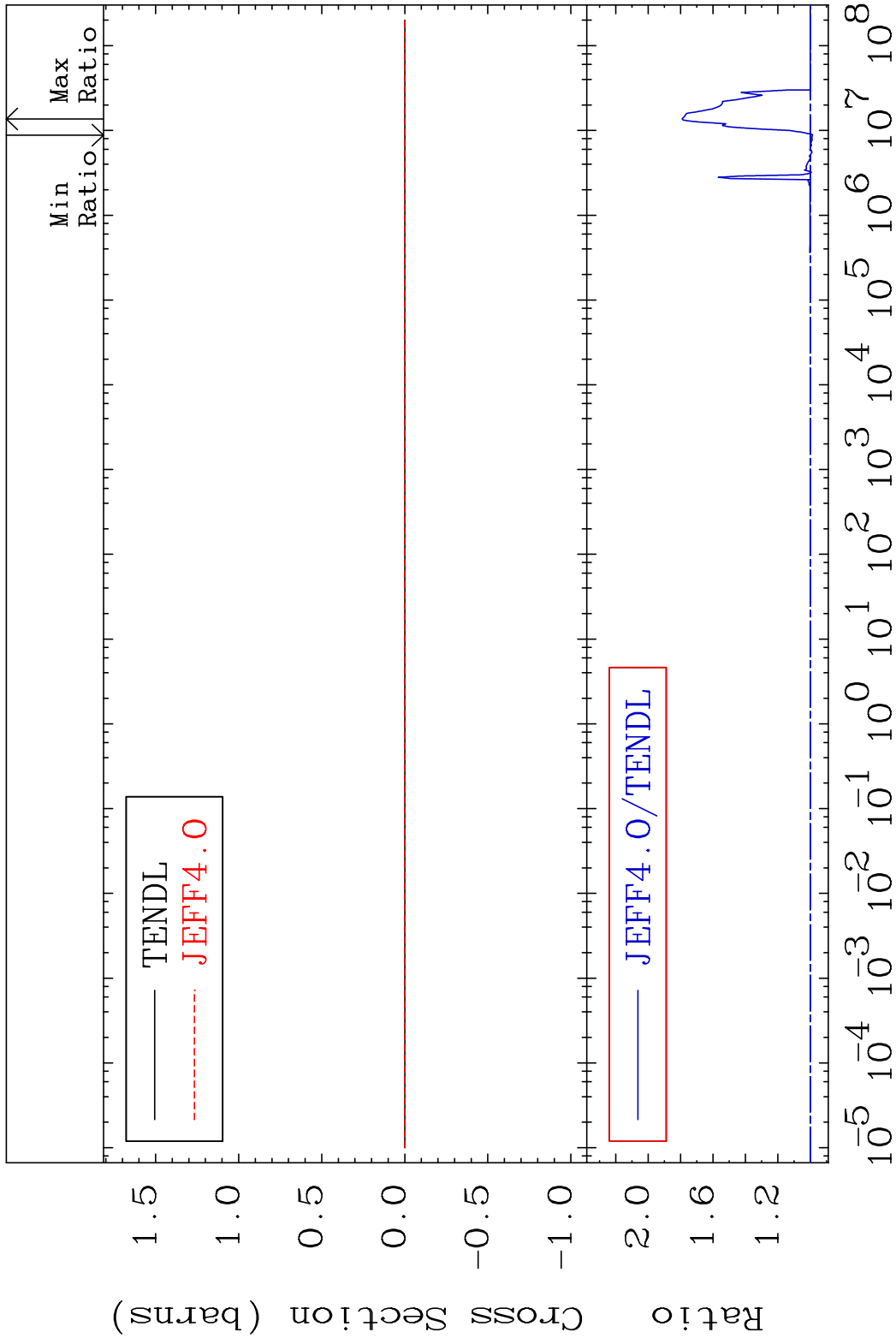
MAT 4449 Kerma non-elastic (all but mt2) 44-Ru-104  
 Cross Section -38.24 To 56.73 %



MAT 4449 Kerma inelastic (mt51-91) 44-Ru-104  
 Cross Section -1.341 To 79.05 %



MAT 4449 Kerma fission (mt18 or mt19-20-21-38) 44-Ru-104  
 Cross Section -1.341 To 79.05 %

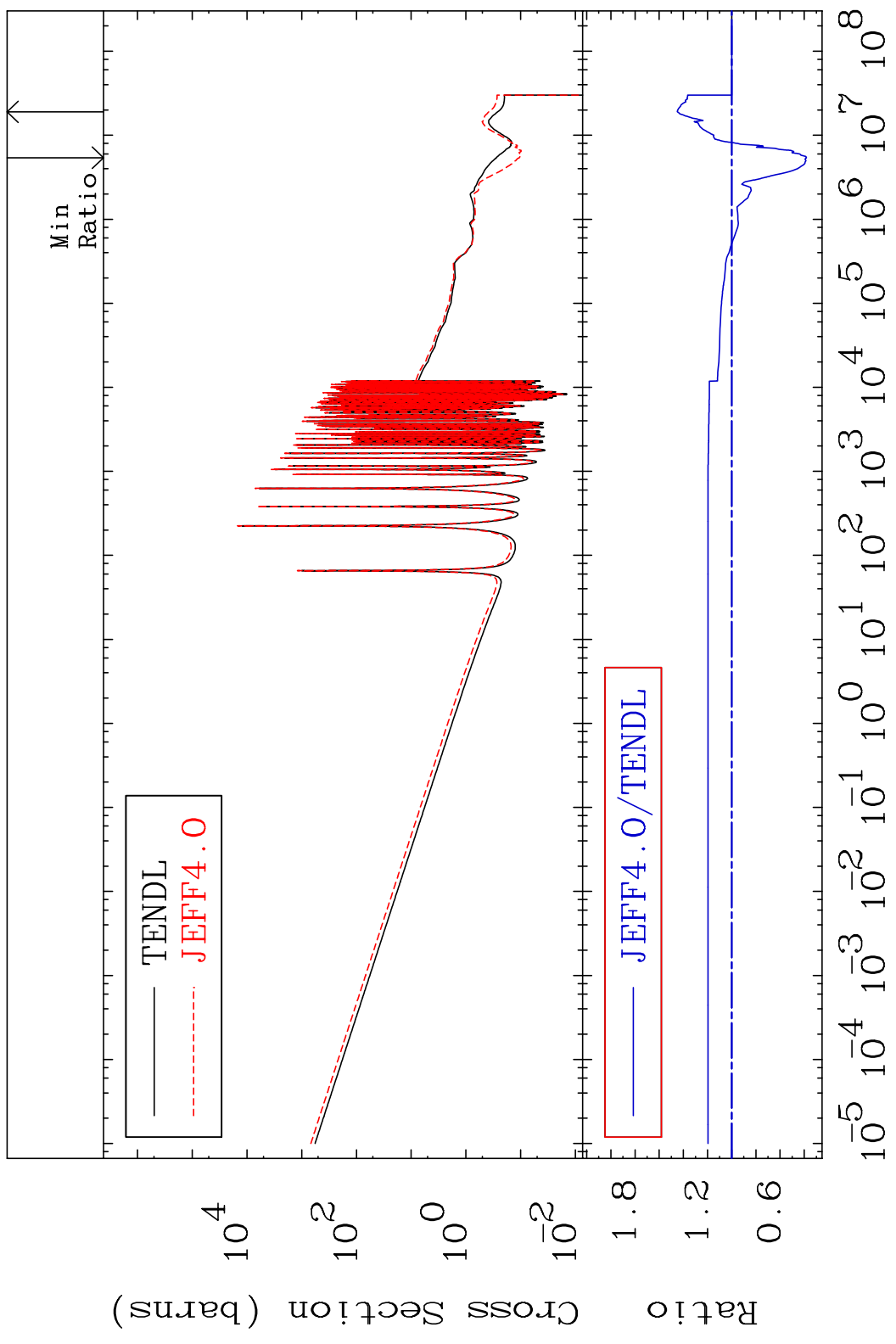


MAT 4449

Kerma capture (mt102)

44-Ru-104

Cross Section -61.78 To 45.13 %

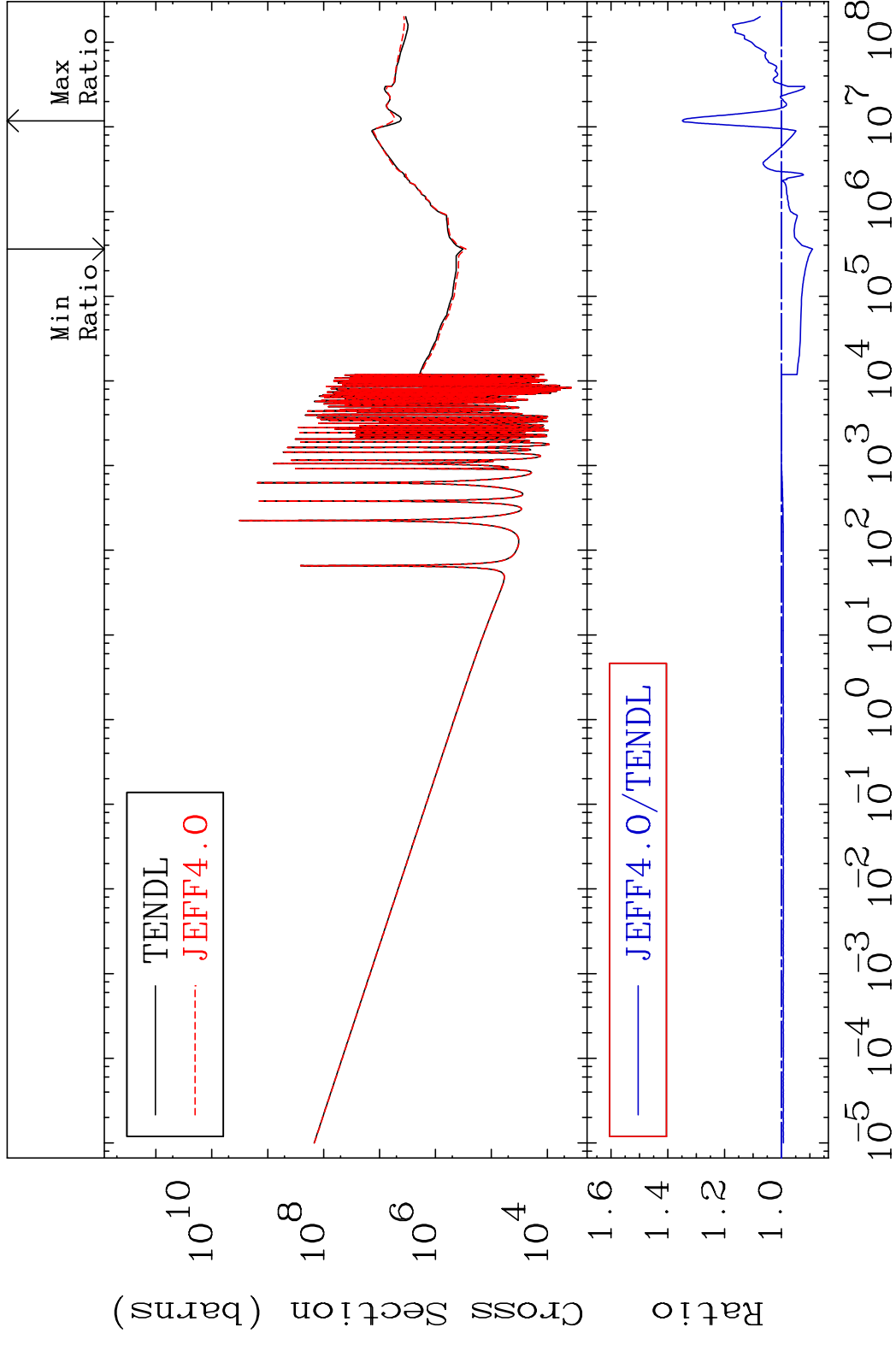


72

Incident Energy (eV)

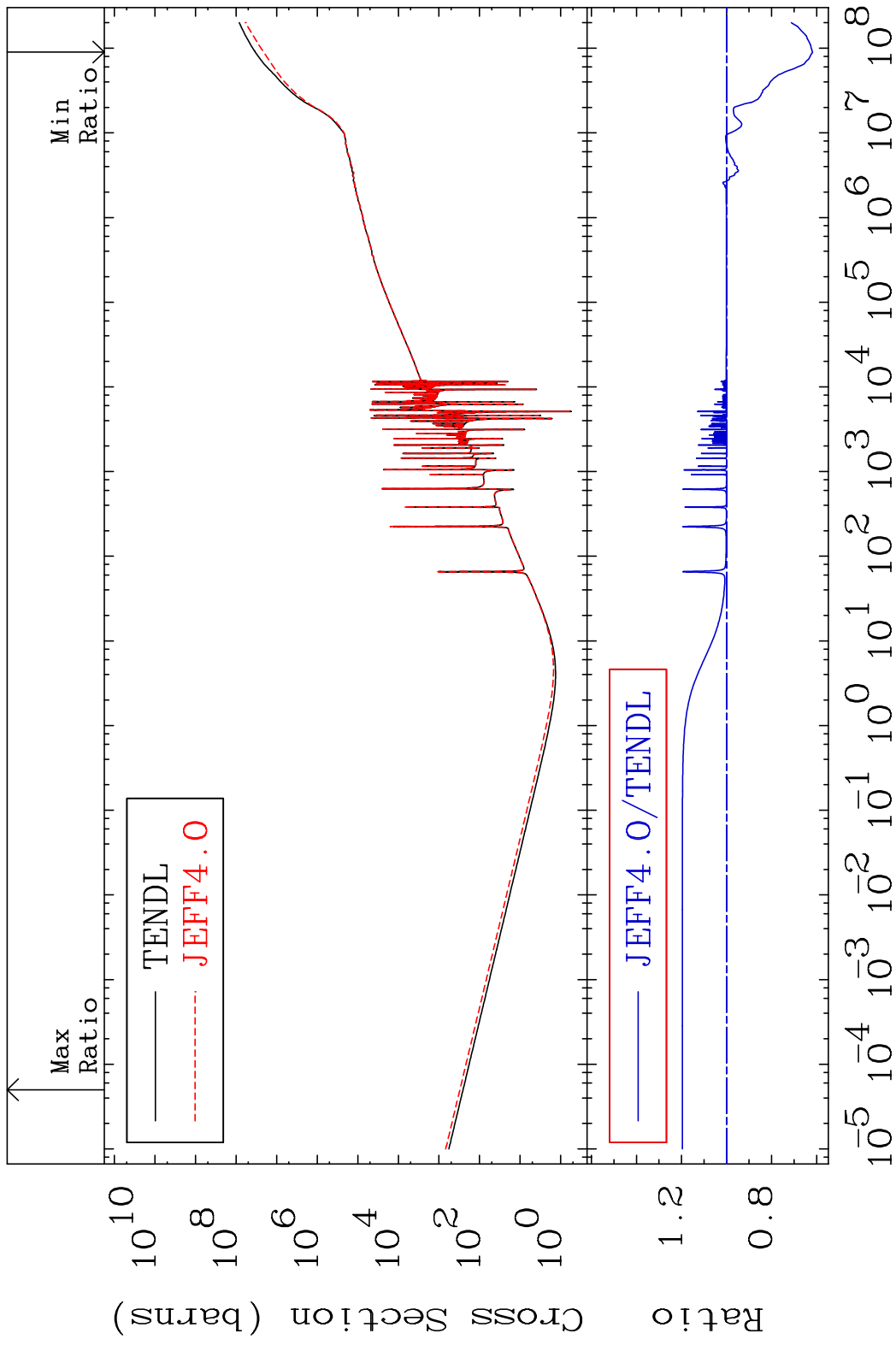
44-Ru-104

MAT 4449 Total photon (eV-barns) 44-Ru-104  
 Cross Section -10.96 To 34.89 %



73 Incident Energy (eV) 44-Ru-104

MAT 4449 Total kinematic kerma (high limit) 44-Ru-104  
 Cross Section -38.18 To 19.63 %

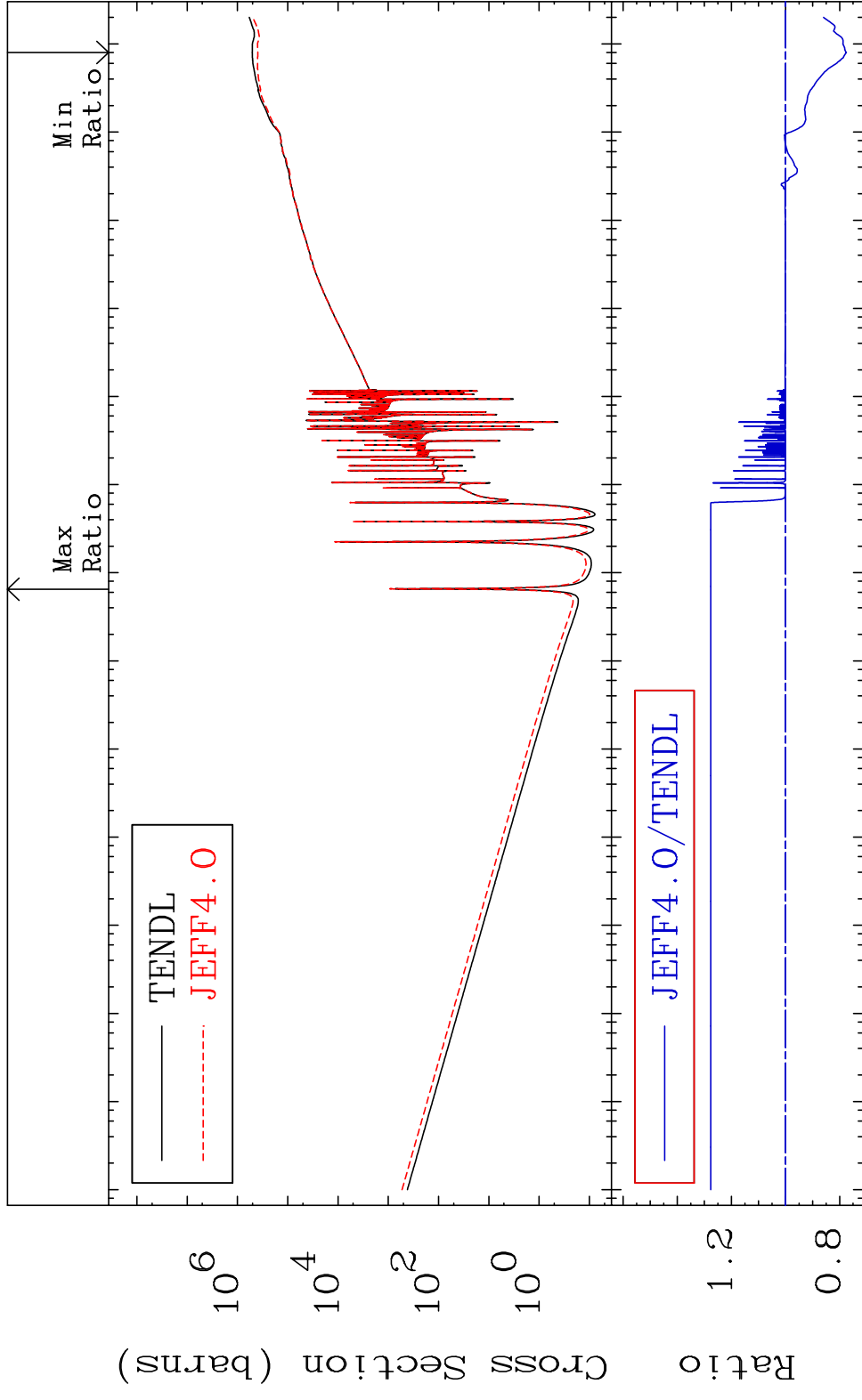


MAT 4449

Dpa total (eV-barns)

44-Ru-104

Cross Section -22.48 To 27.64 %



75

Incident Energy (eV)

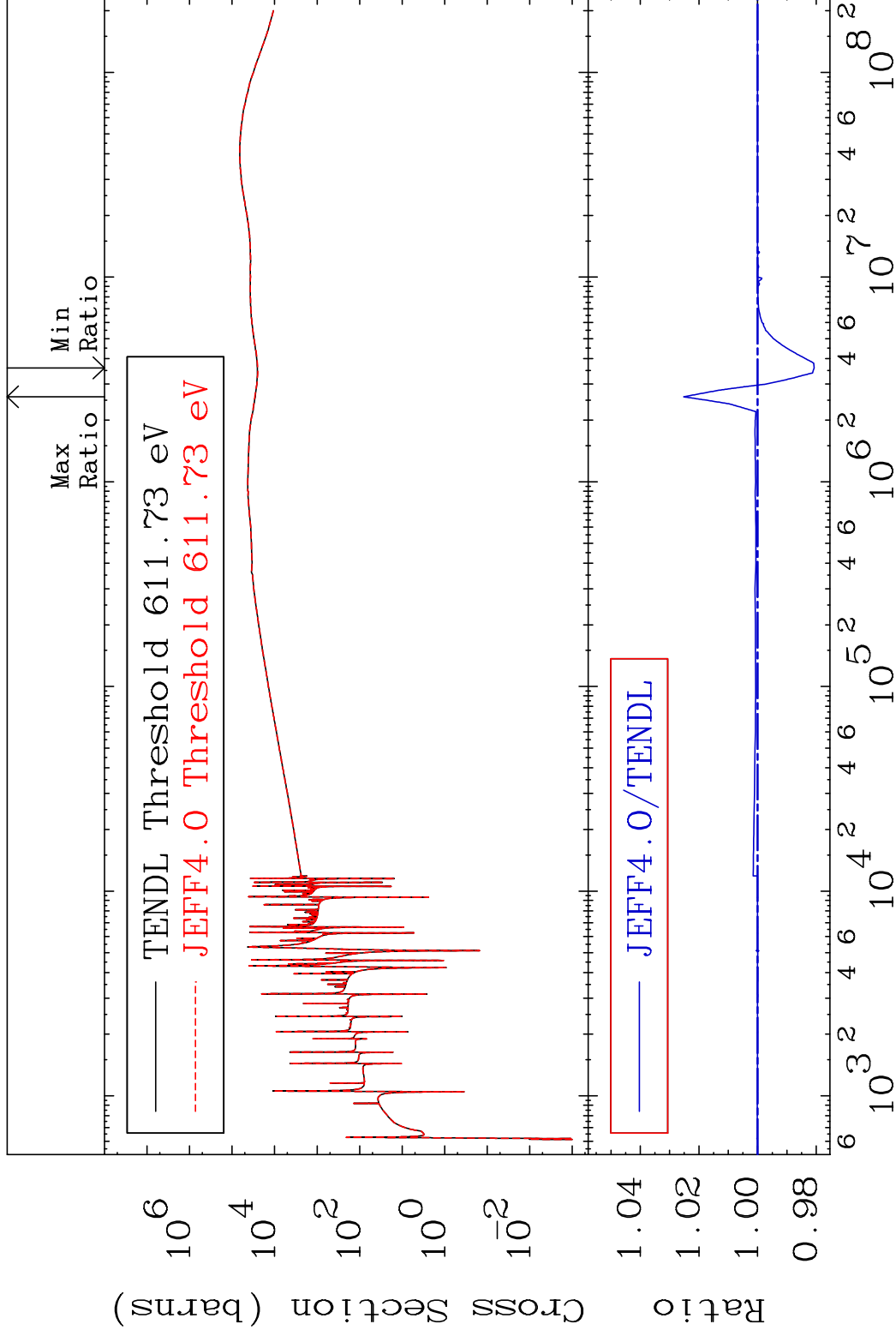
44-Ru-104

MAT 4449

Dpa elastic (mt2)

44-Ru-104

Cross Section -1.928 To 2.520 %

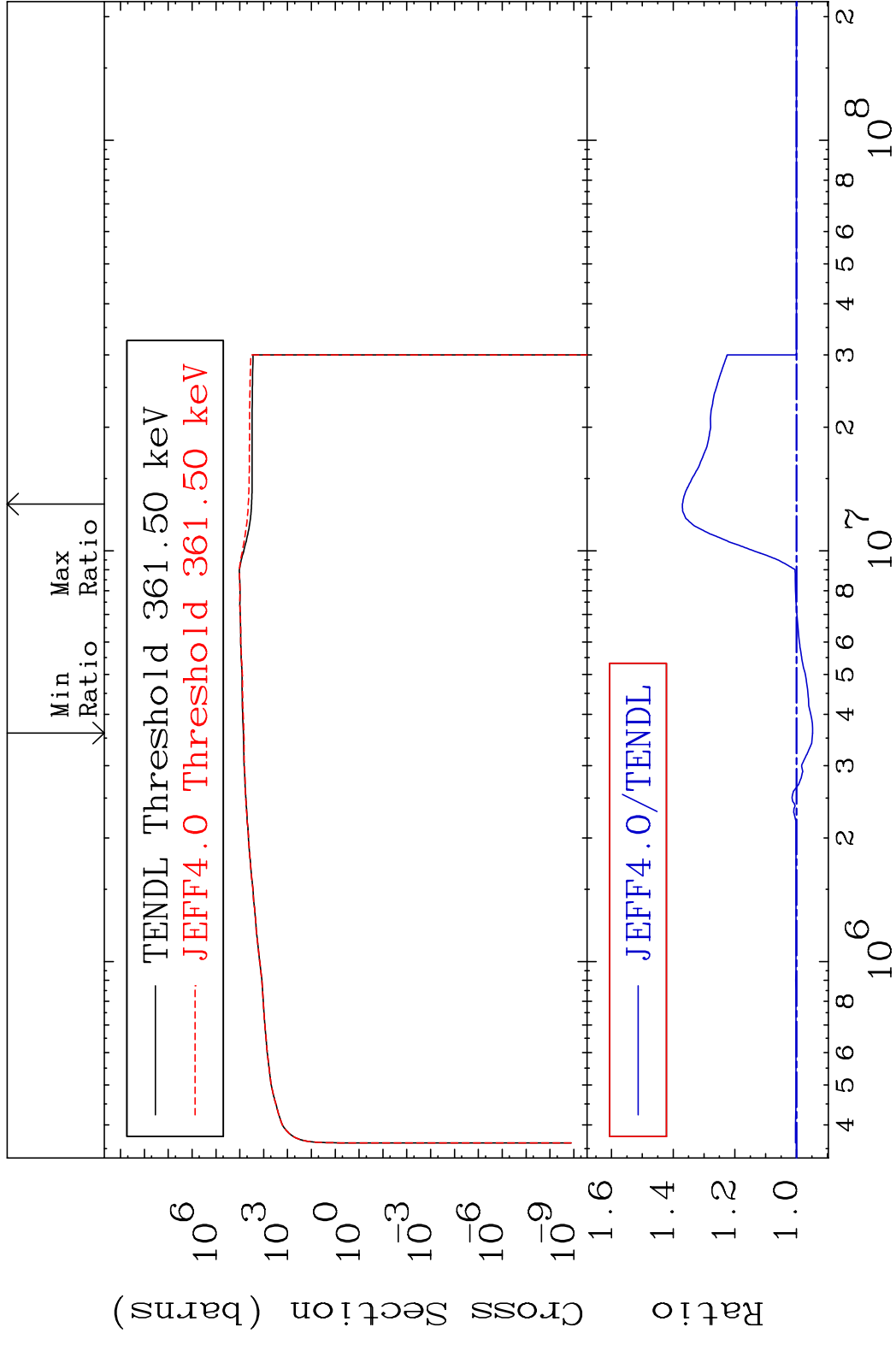


76

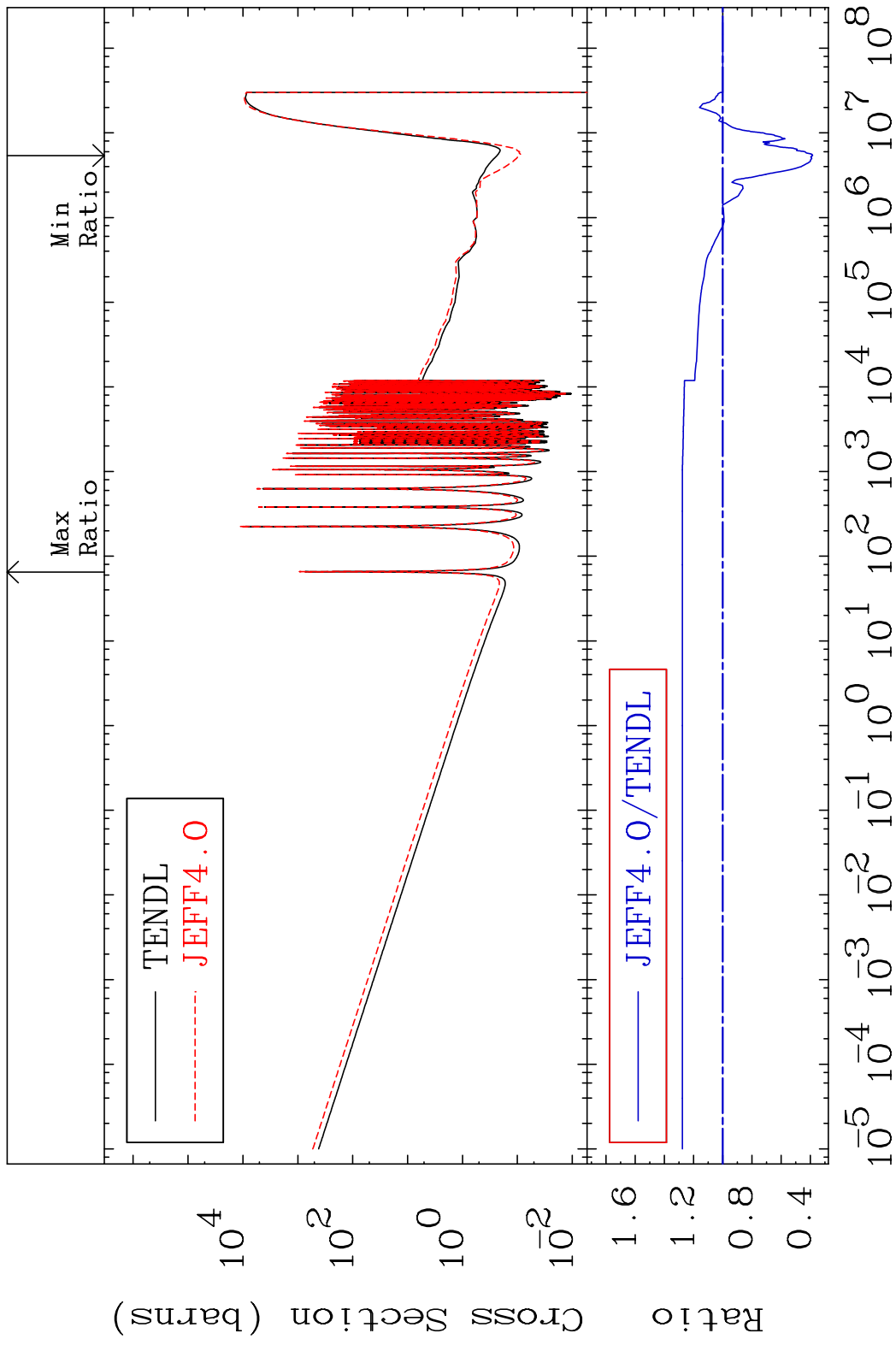
Incident Energy (eV)

44-Ru-104

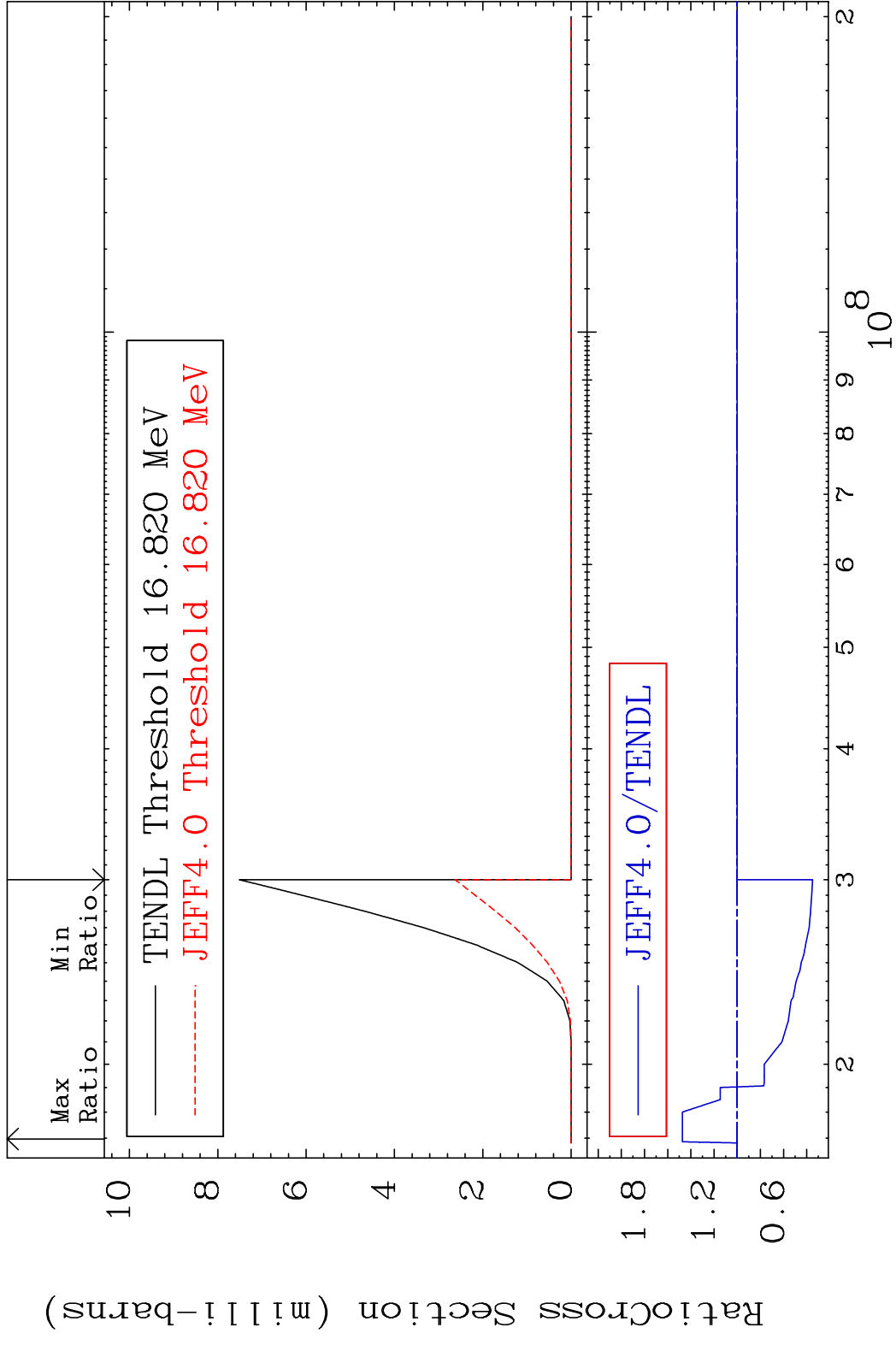
MAT 4449 Dpa inelastic (mt51-91) 44-Ru-104  
 Cross Section -5.201 To 37.02 %

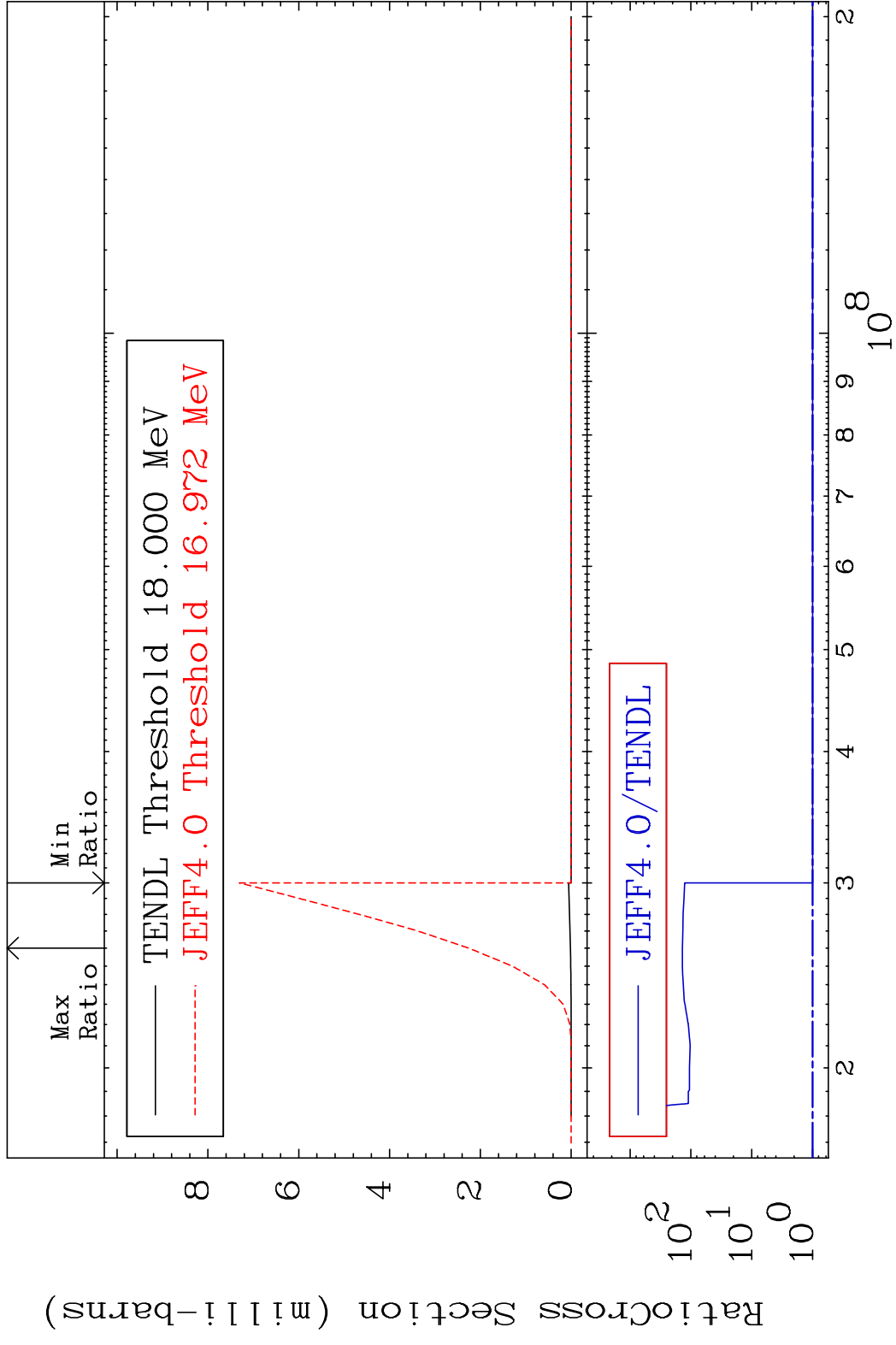


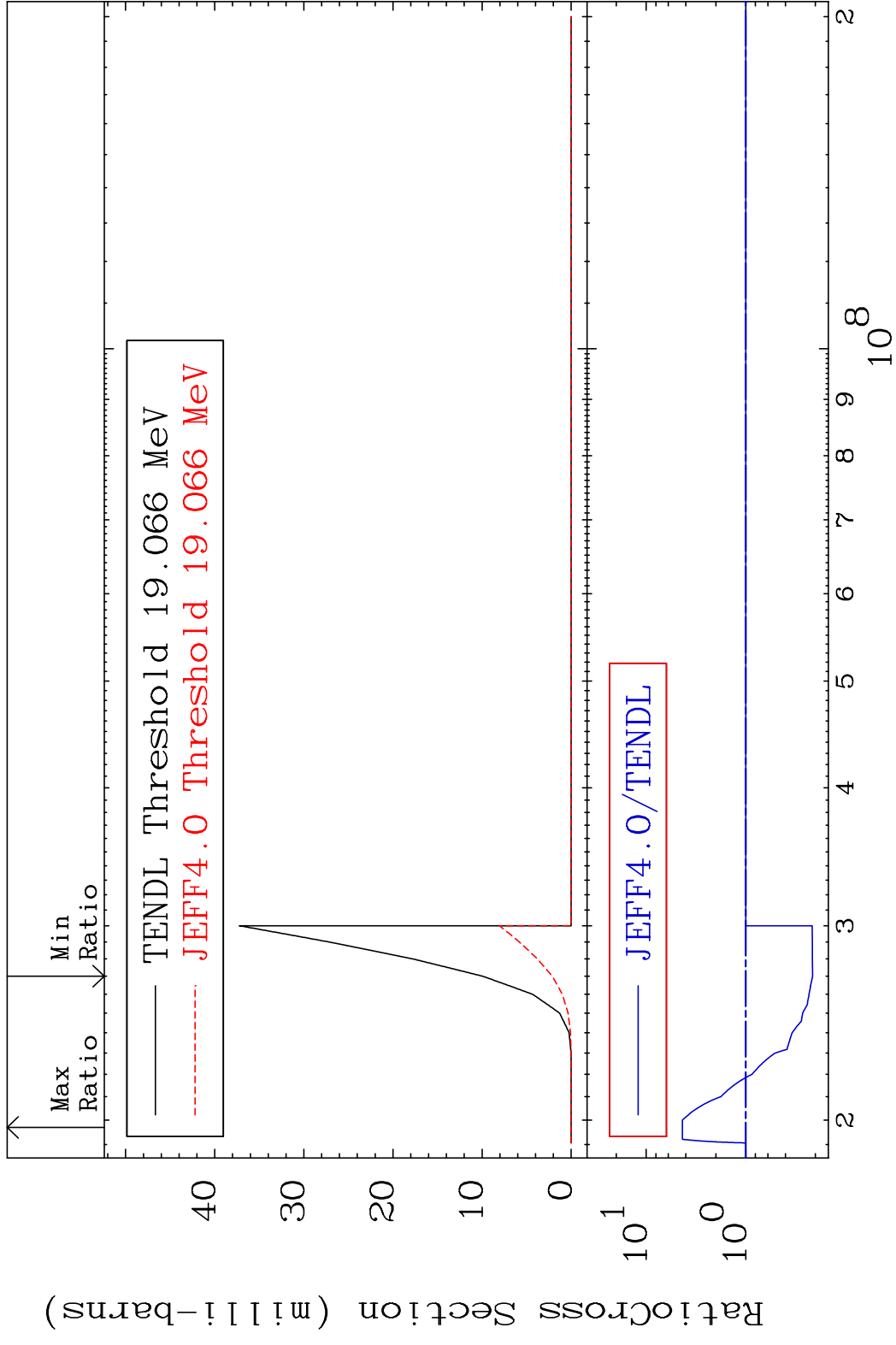
MAT 4449 Dpa disappearance (mt102 -120) 44-Ru-104  
 Cross Section -61.51 To 27.64 %

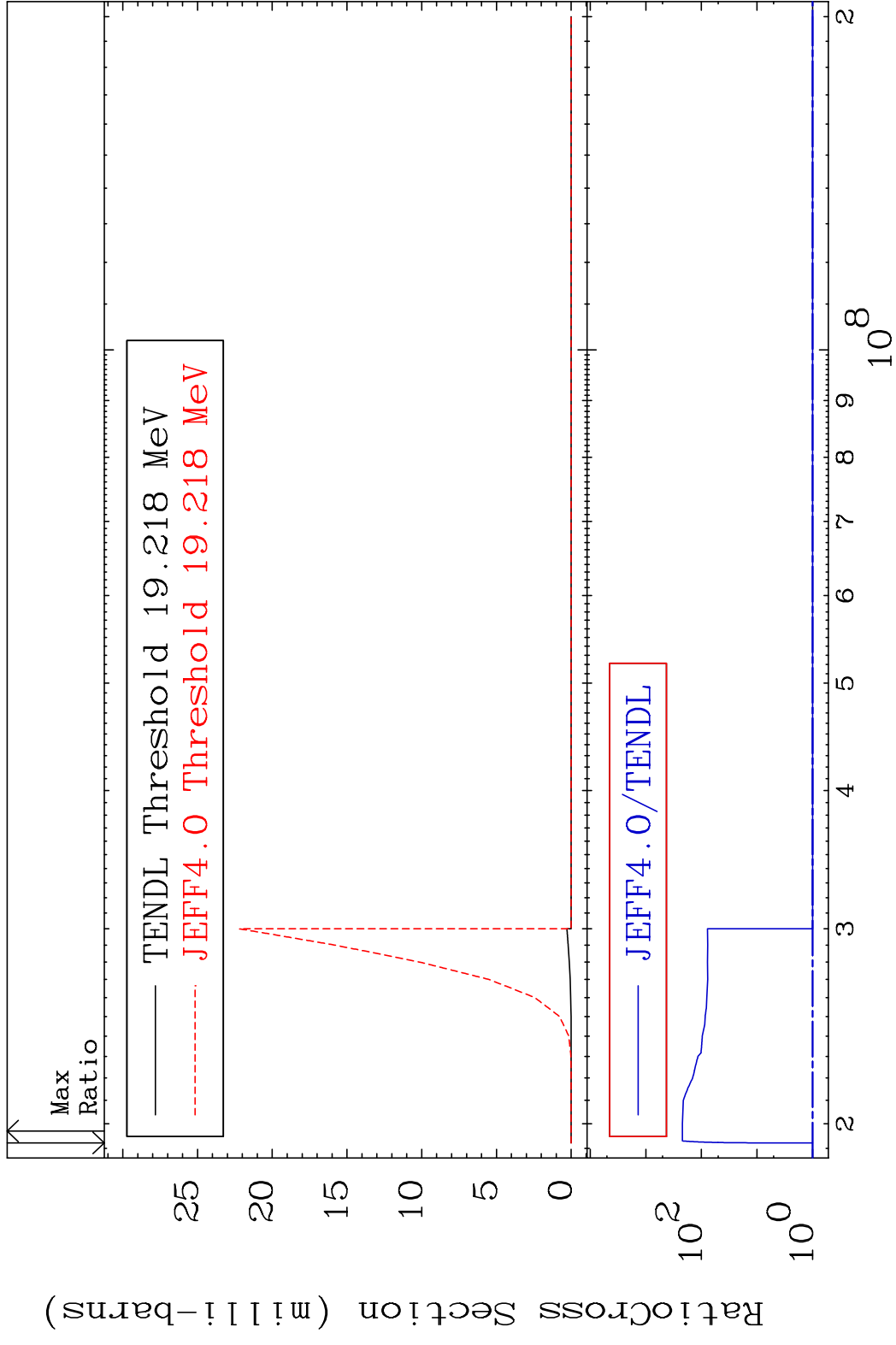


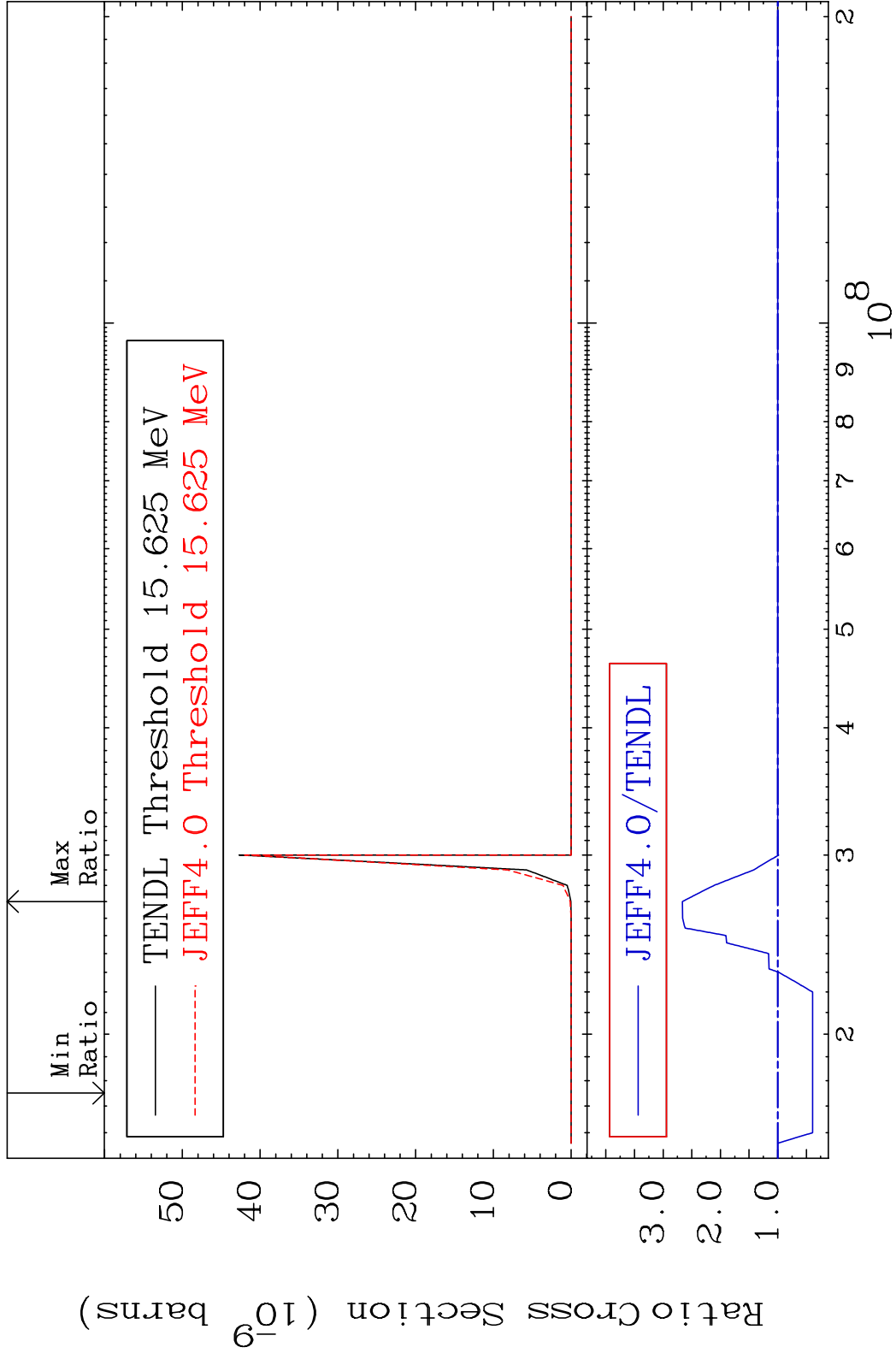
MAT 4449 (n, n') d:43-Tc-102g 44-Ru-104  
 Radionuclide Production Cross Section 47.35 %



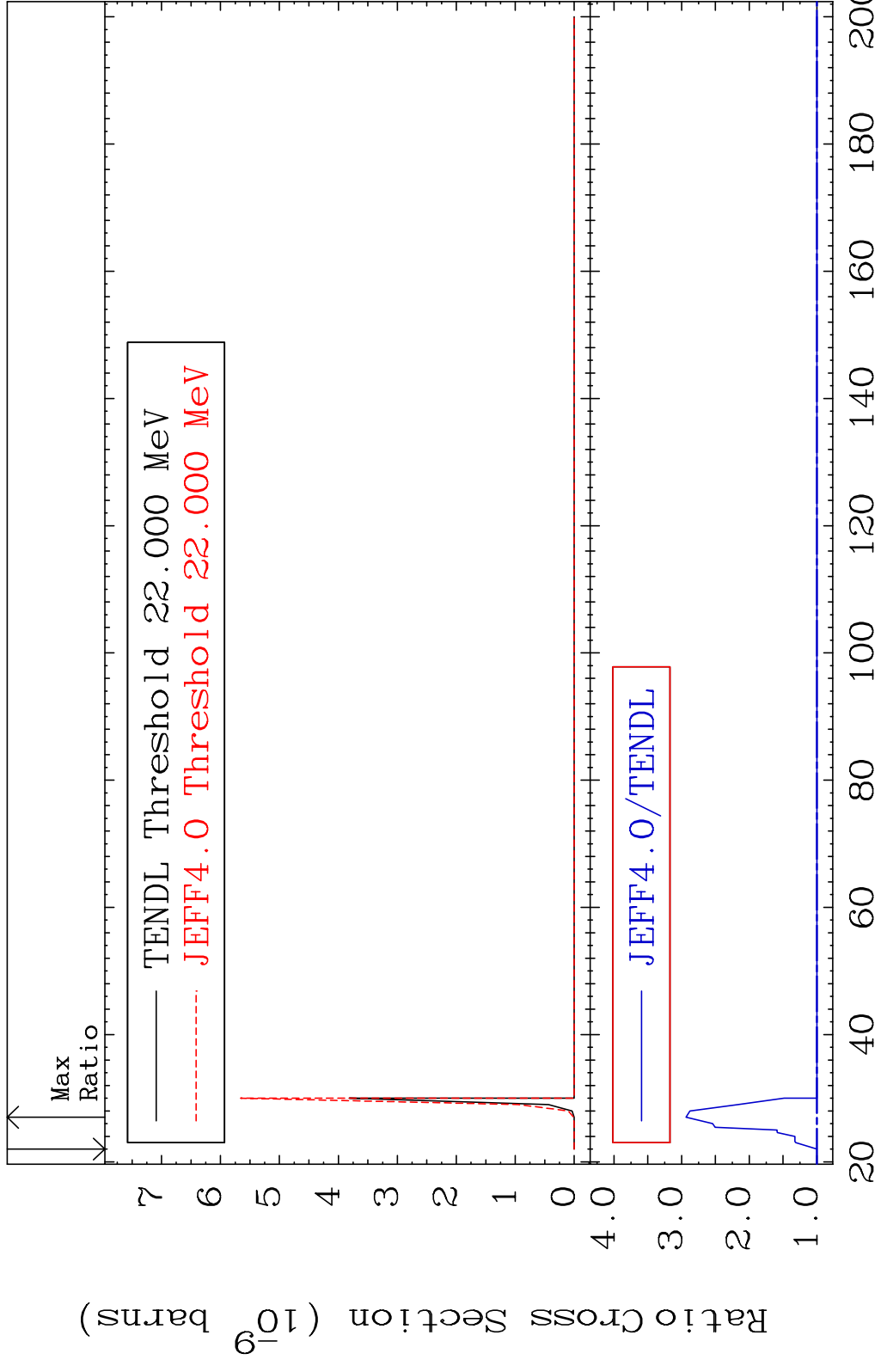




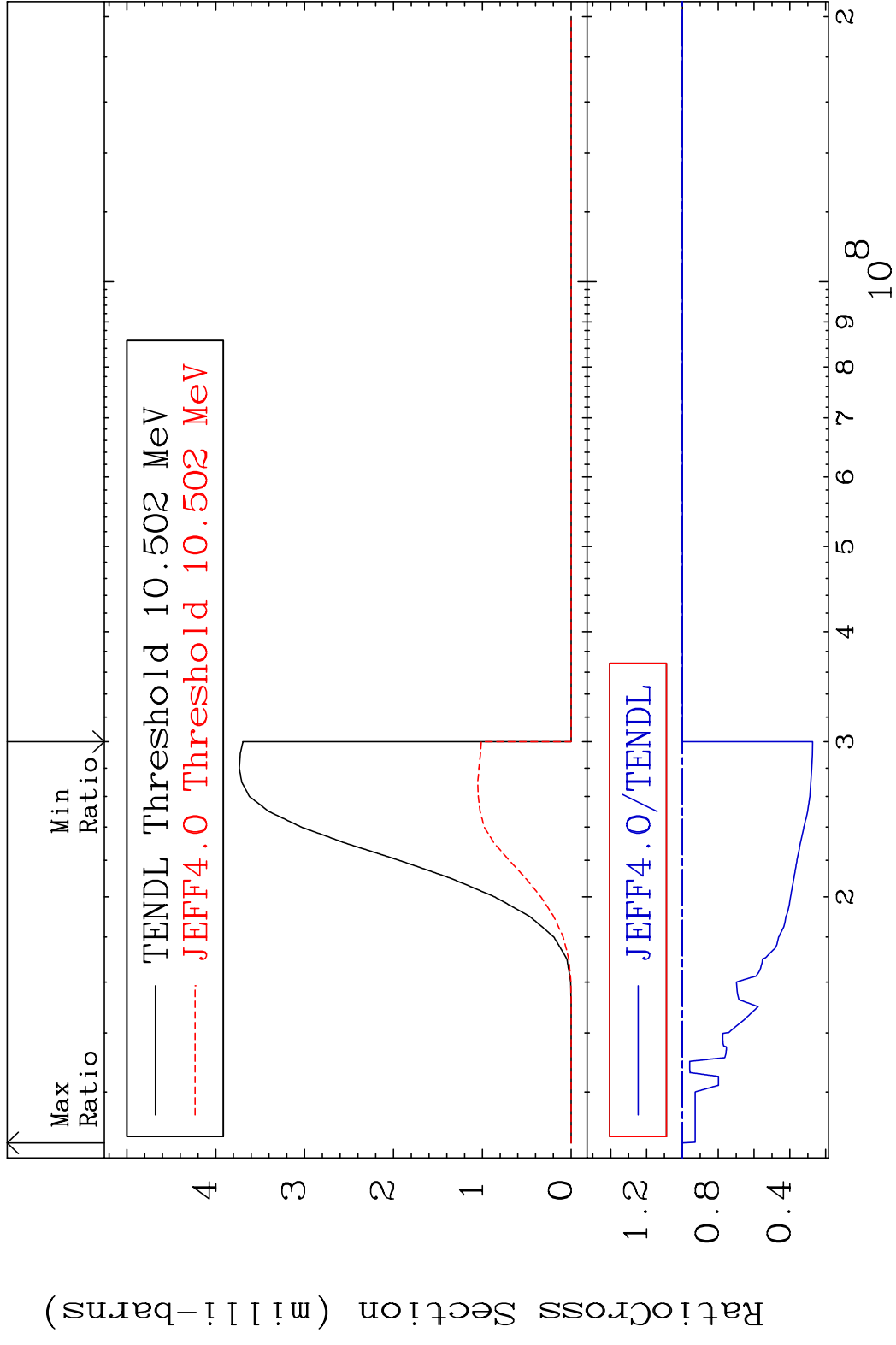


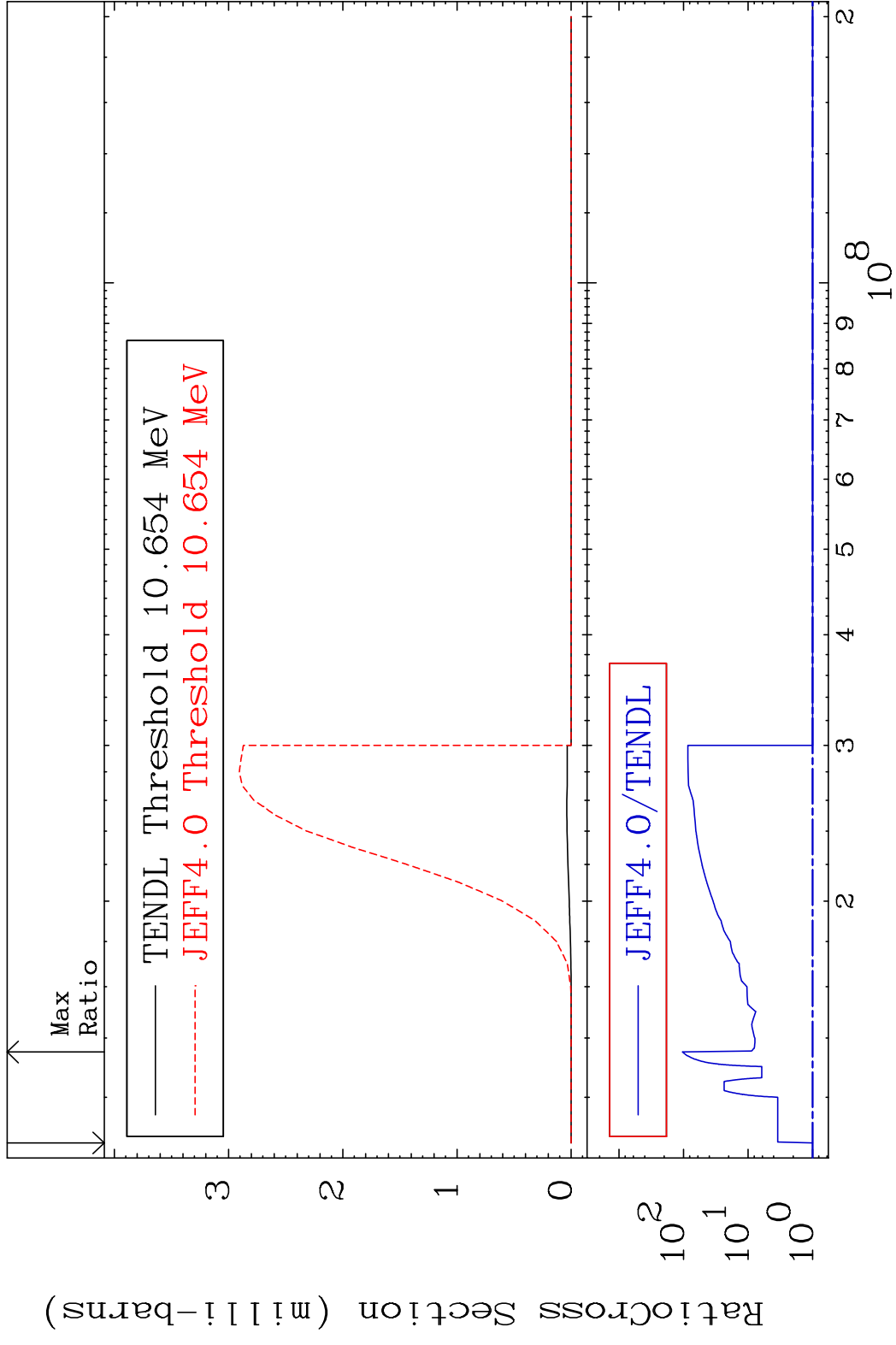


MAT 4449 (n, n') p  $\alpha$ : 41-Nb-99m1 44-Ru-104  
 Radionuclide Production Cross Section 193.5 %

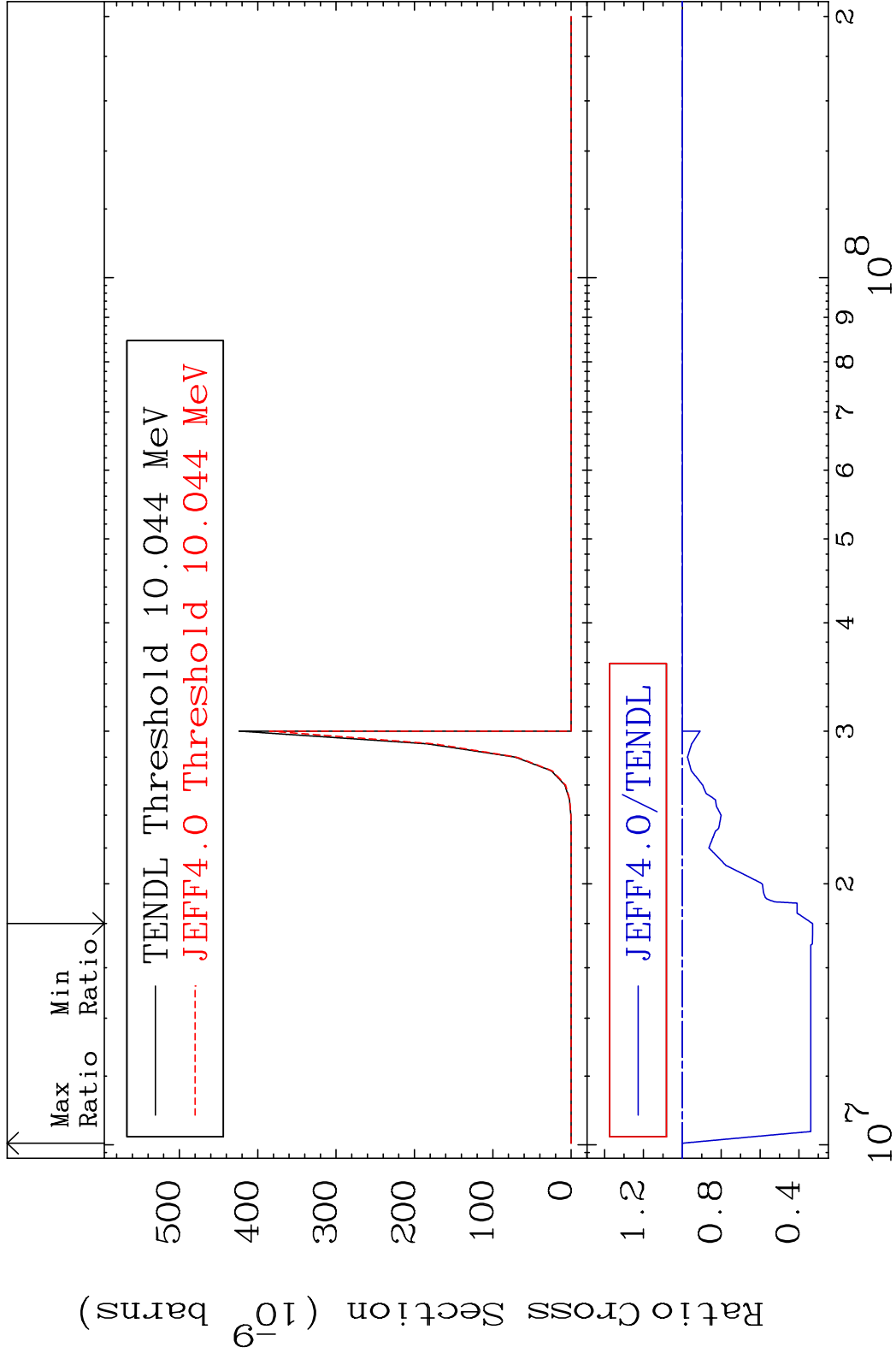


MAT 4449 (n,t):43-Tc-102g 44-Ru-104  
 Radionuclide Production Cross Section 726610 0.000 %





MAT 4449 (n,p)  $\alpha$ :41-Nb-100g 44-Ru-104  
 Radionuclide Production Cross Section 0.000 %



MAT 4449 (n, p)  $\alpha$ : 41-Nb-100m4 44-Ru-104  
 Radionuclide Production Cross Section 180.01 dth 17.20 %

