

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

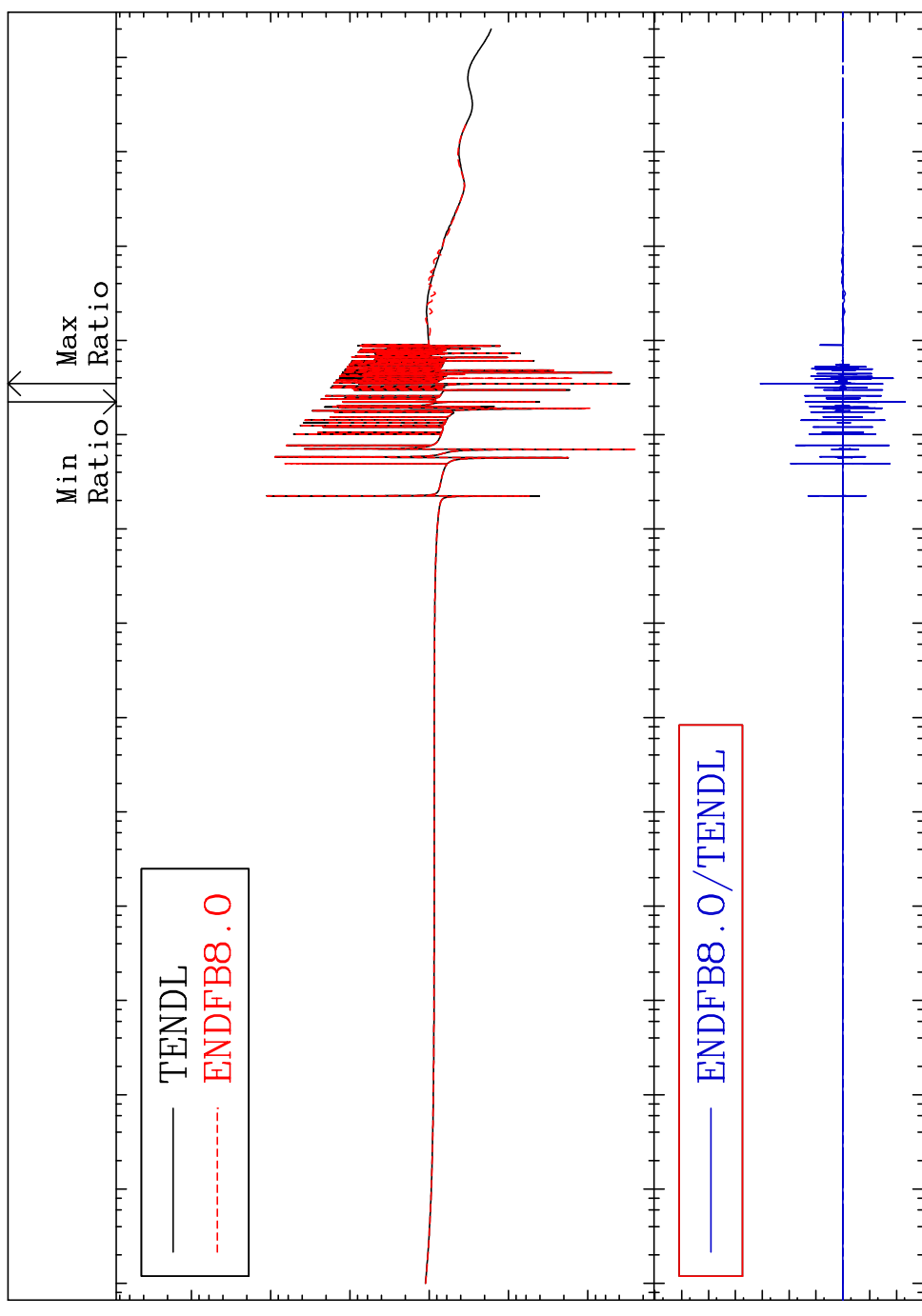
MAT 4037

Total

40-Zr-94

Cross Section

-99.52 To 9999. %



10<sup>4</sup>  
10<sup>3</sup>  
10<sup>2</sup>  
10<sup>1</sup>  
10<sup>0</sup>  
10<sup>-1</sup>

Cross Section (barns)

10<sup>3</sup>  
10<sup>0</sup>

Ratio

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>

1

Incident Energy (eV)

40-Zr-94

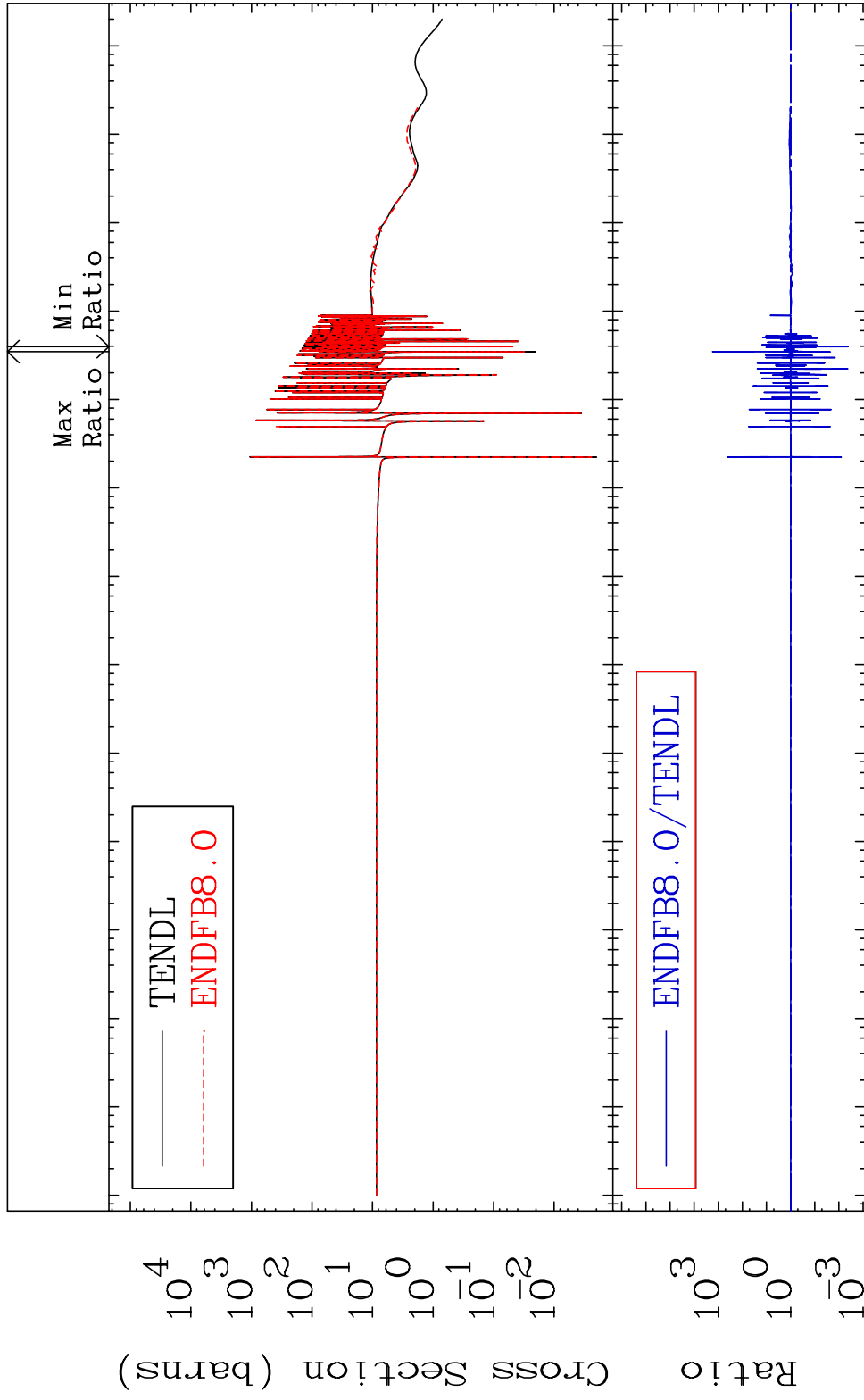
MAT 4037

Elastic

40-Zr-94

Cross Section

-99.59 To 9999. %

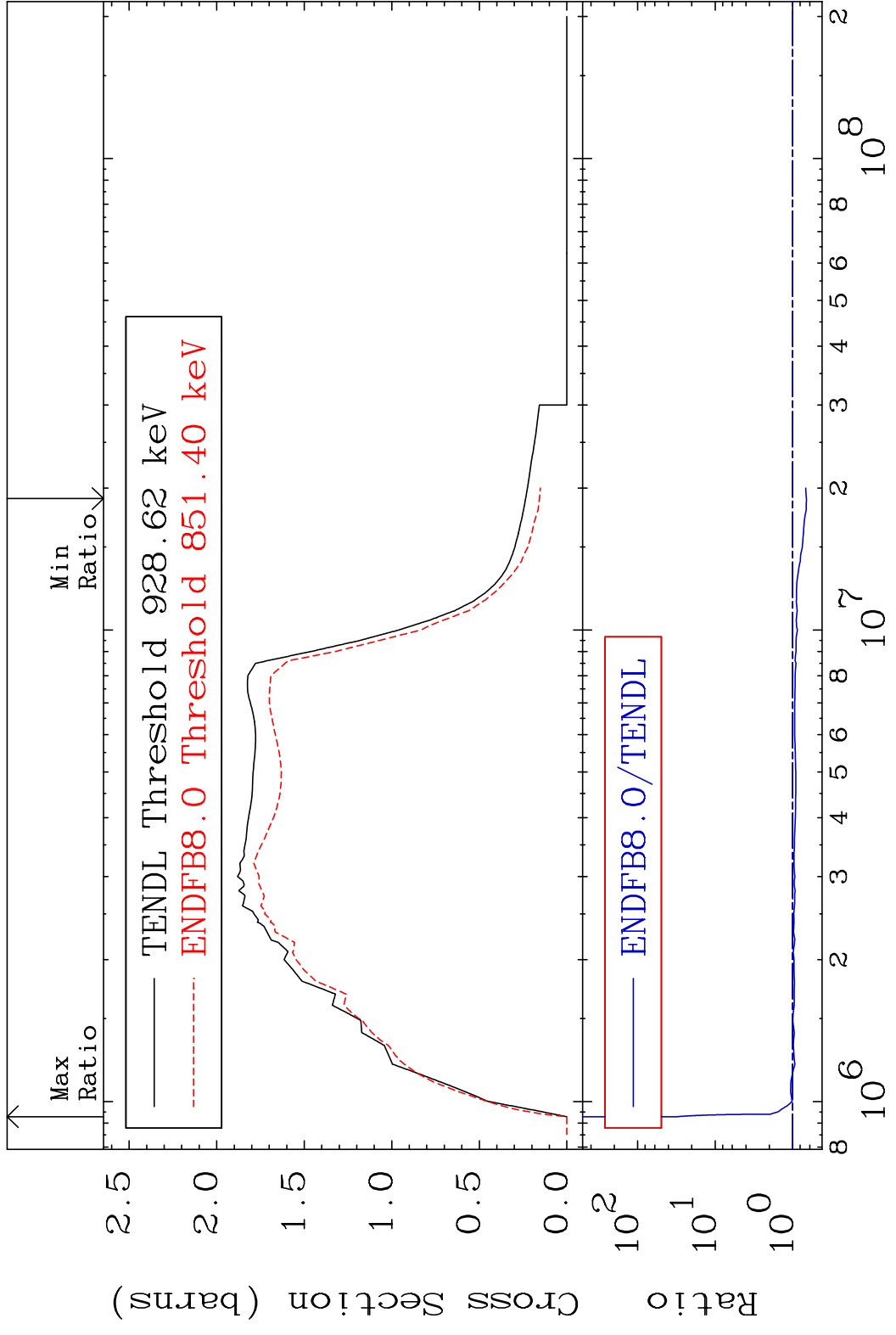


2

Incident Energy (eV)

40-Zr-94

MAT 4037 Inelastic 40-Zr-94  
Cross Section -33.68 To 2990. %



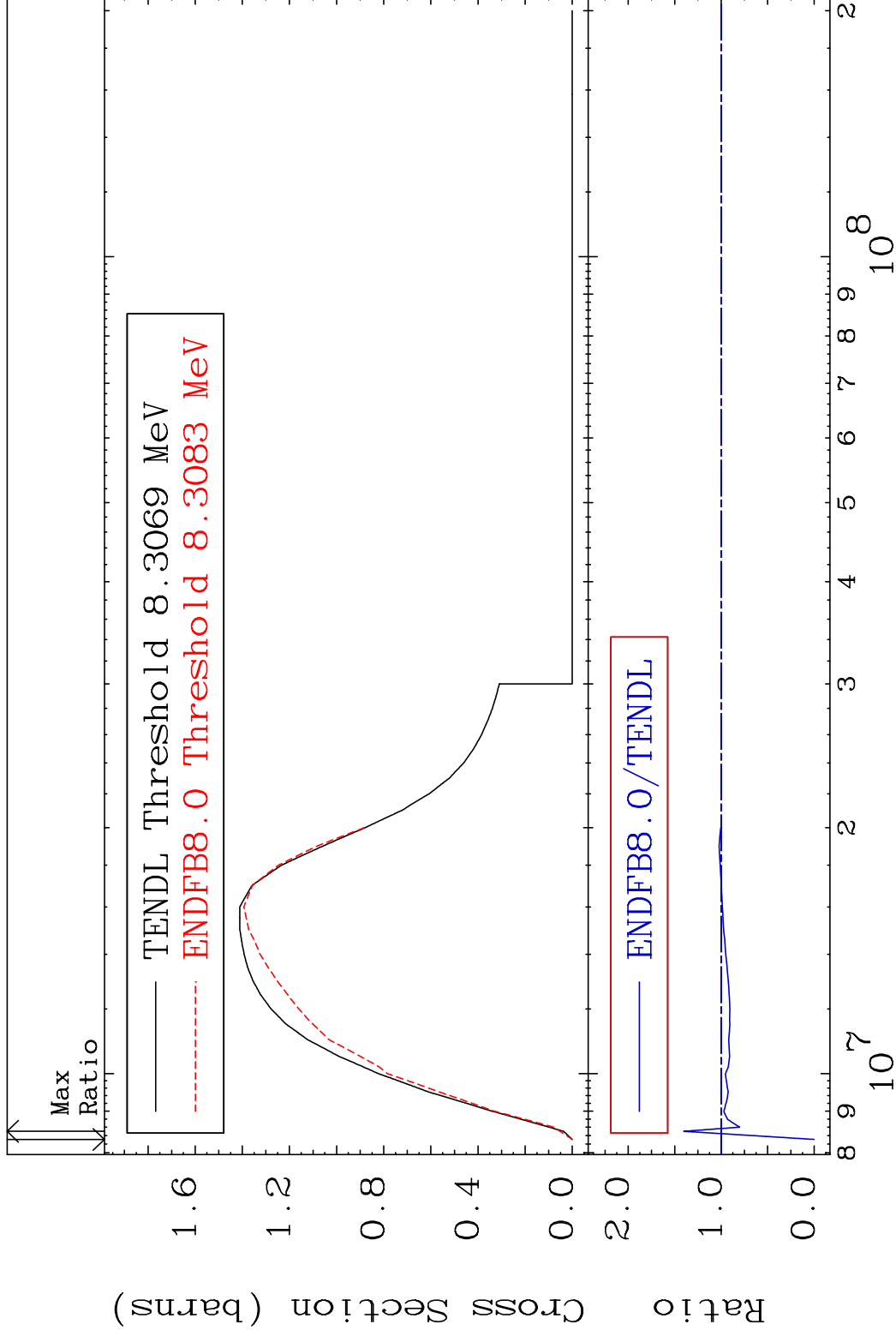
3 8 10<sup>6</sup> 2 3 4 5 6 8 10<sup>7</sup> 2 3 4 5 6 8 10<sup>8</sup> 2 40-Zr-94

MAT 4037

(n,2n)

40-Zr-94

Cross Section -100.0 To 40.38 %



4

Incident Energy (eV)

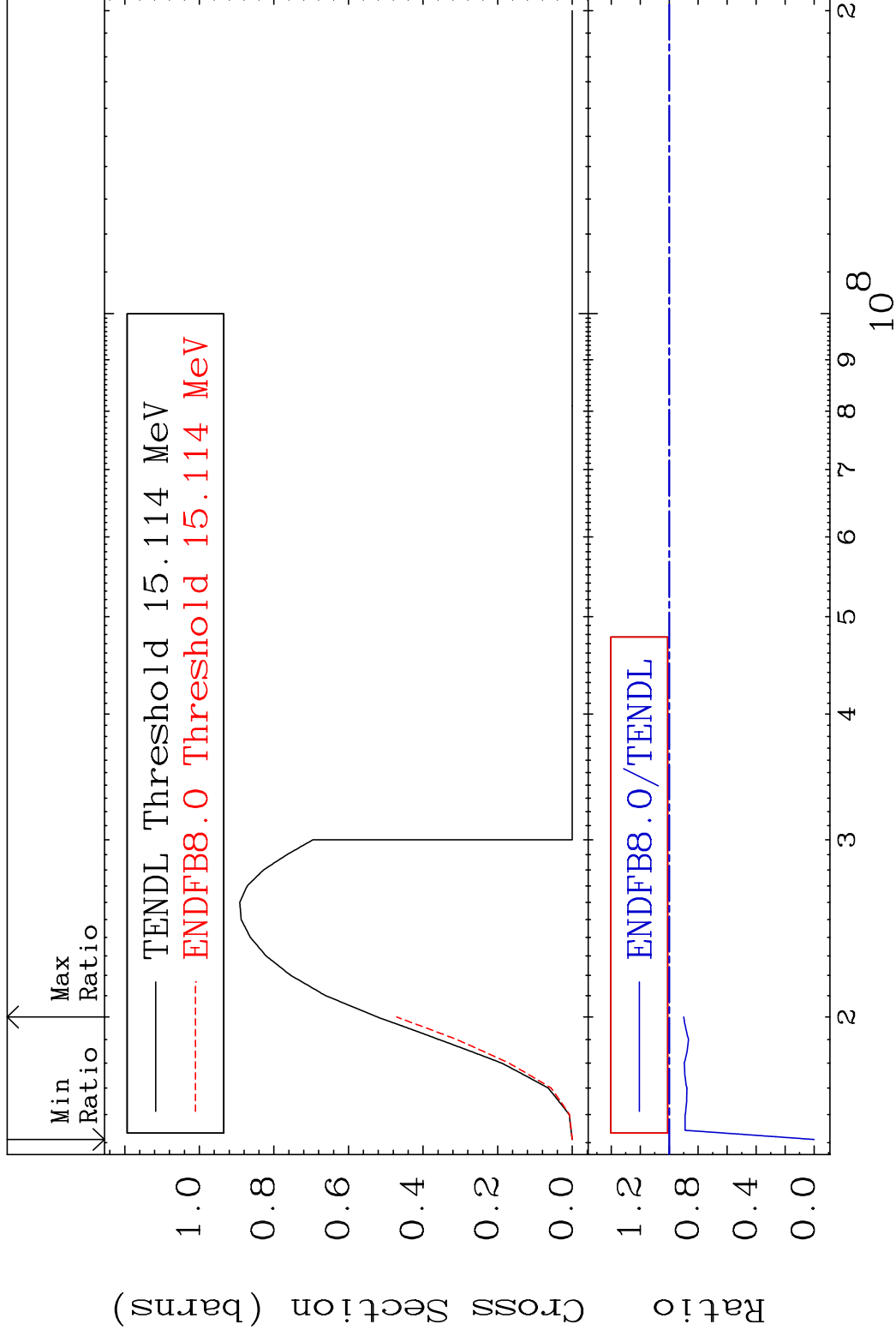
40-Zr-94

MAT 4037

(n,3n)

40-Zr-94

Cross Section -100.0 To -9.972%

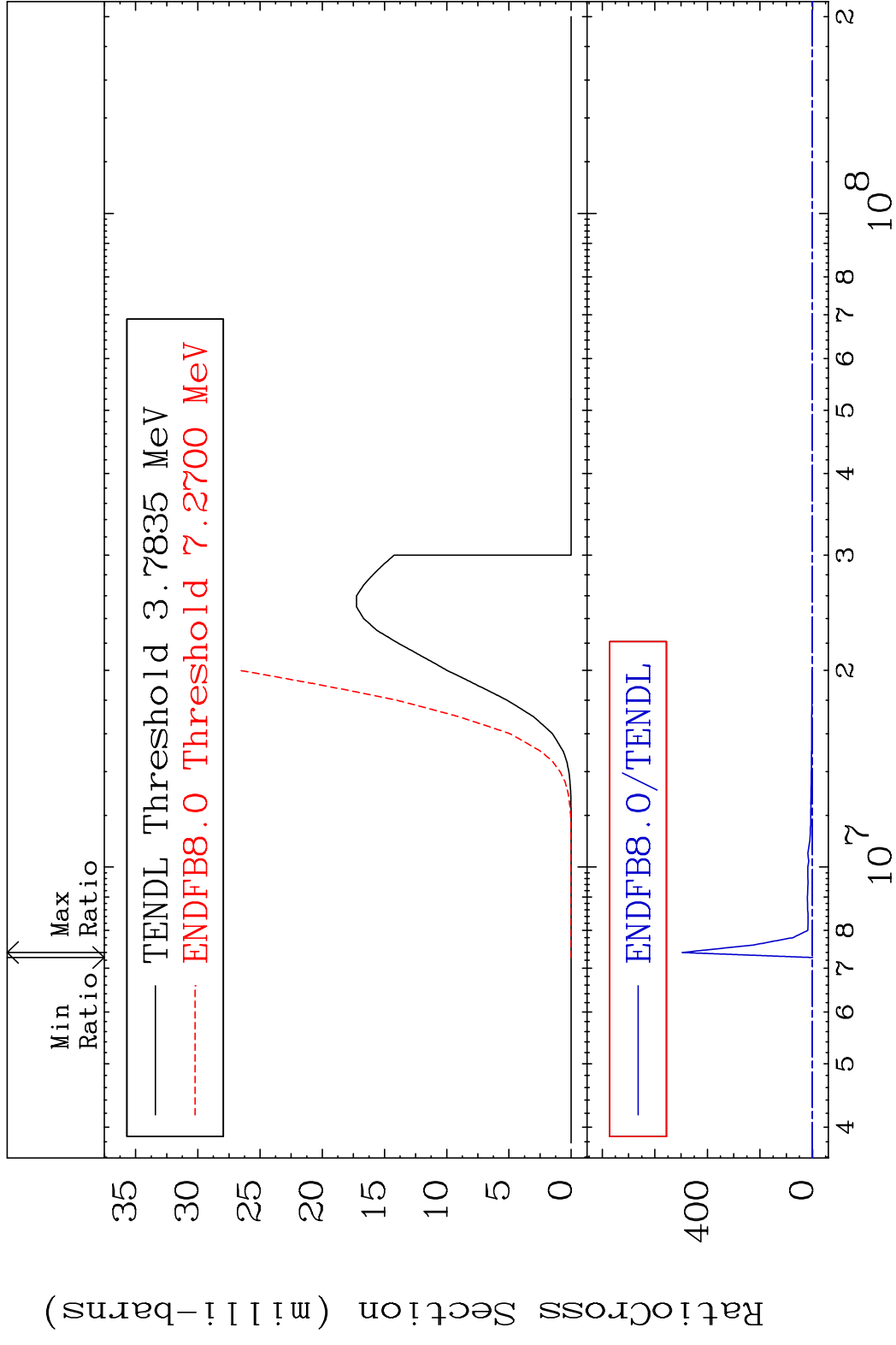


5

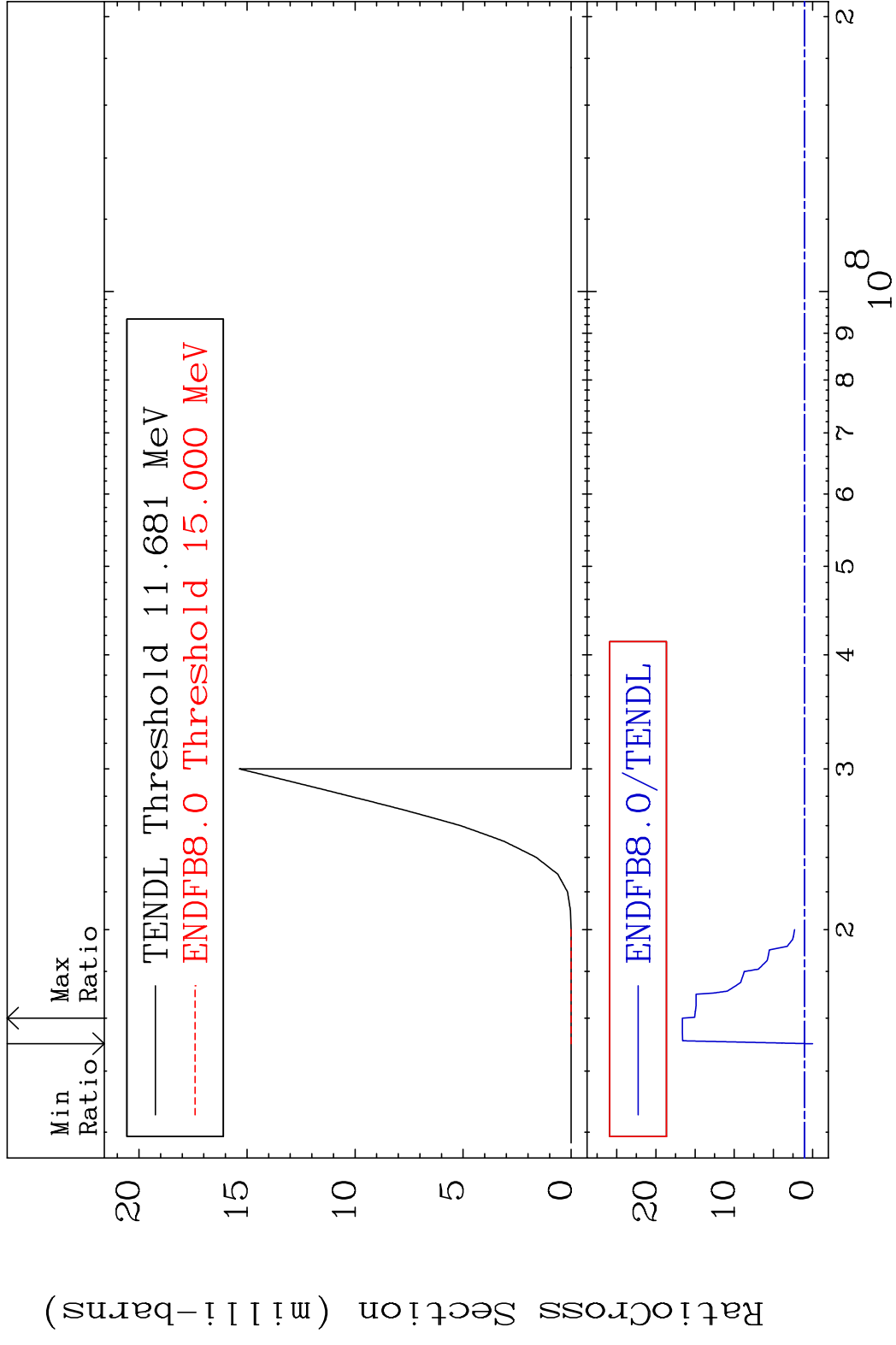
Incident Energy (eV)

40-Zr-94

MAT 4037 (n, n')  $\alpha$  40-Zr-94  
 Cross Section -100.0 To 9999. %



MAT 4037 (n,2n)  $\alpha$  40-Zr-94  
 Cross Section -100.0 To 1562. %



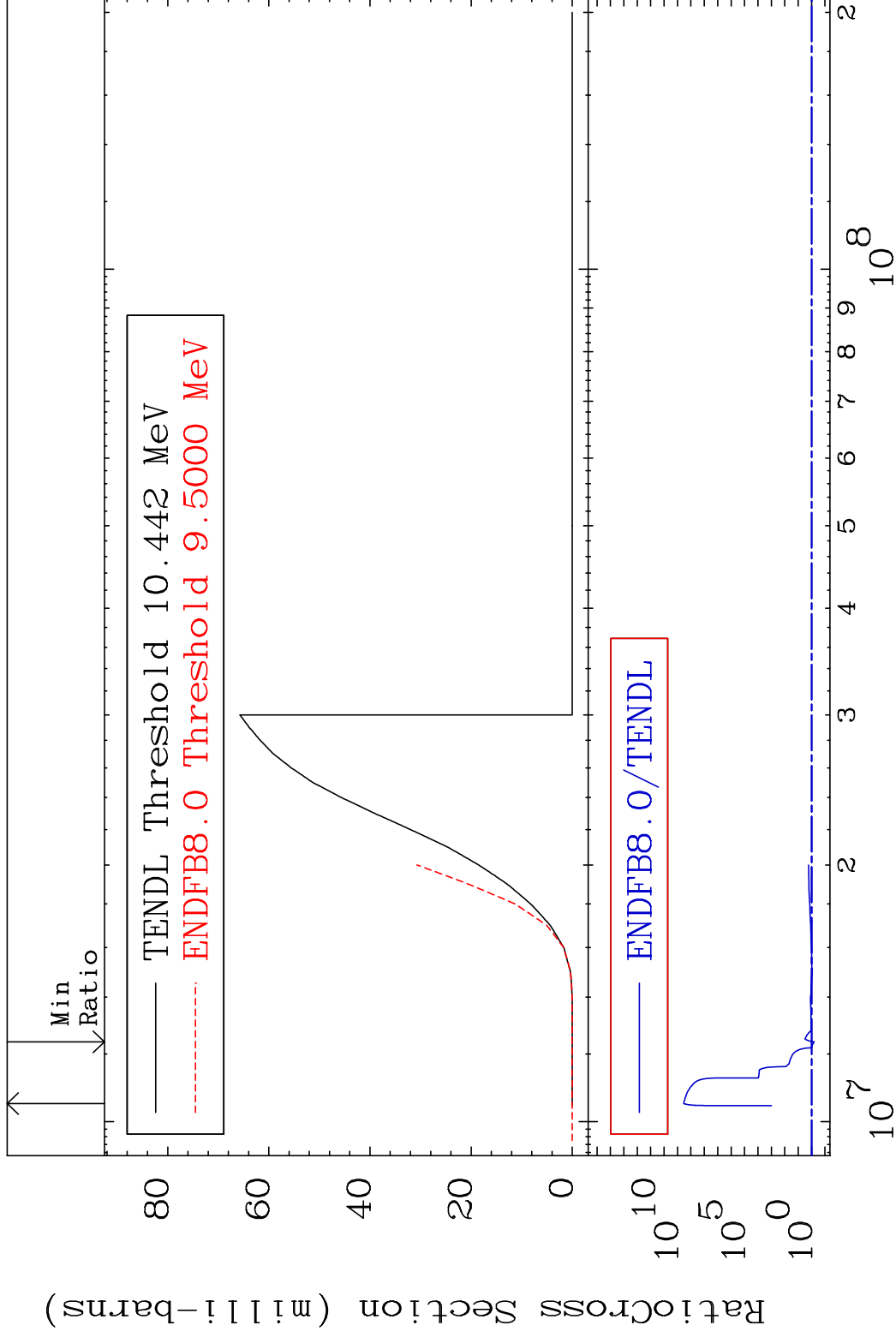


MAT 4037

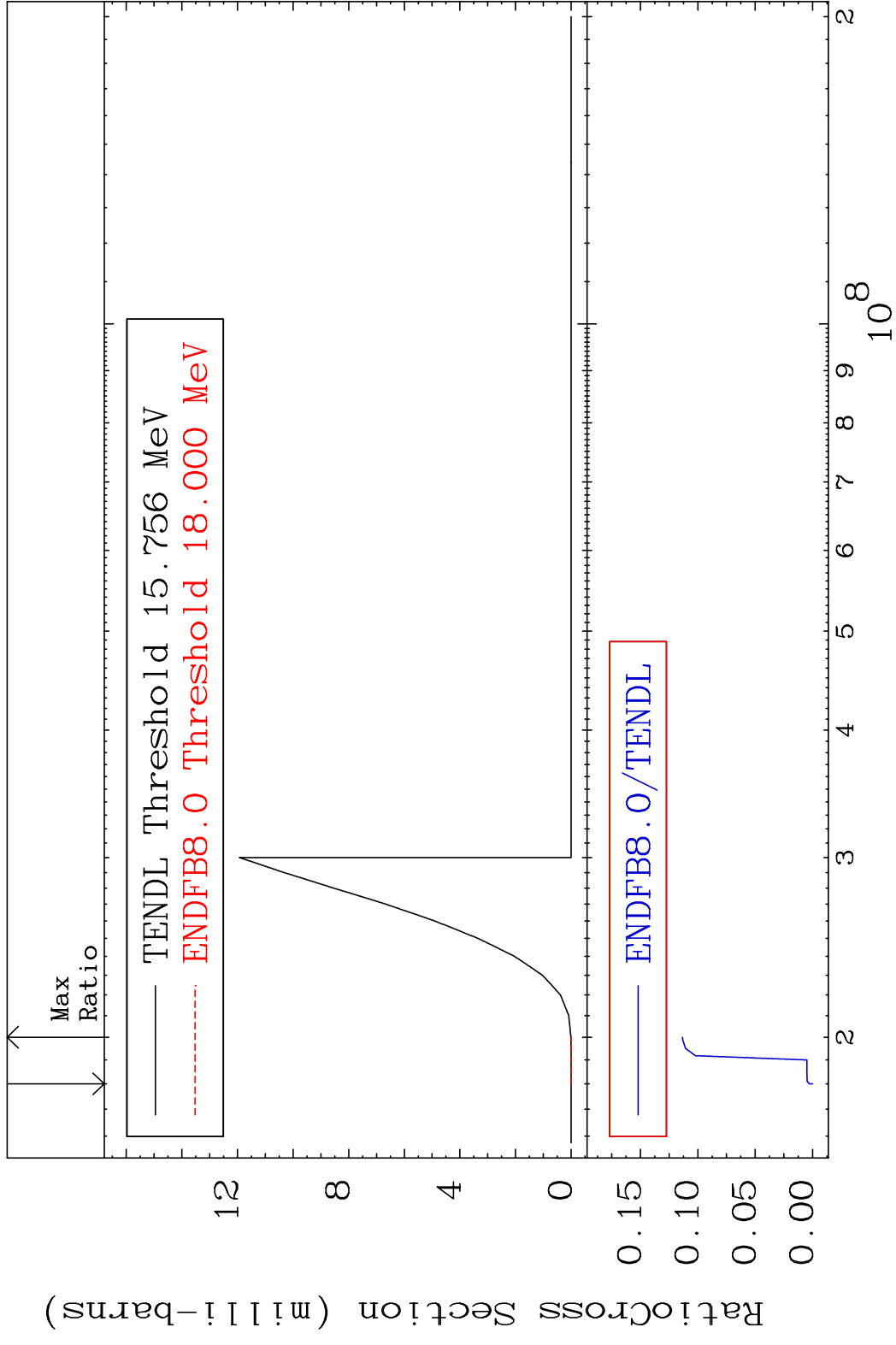
(n, n') p

40-Zr-94

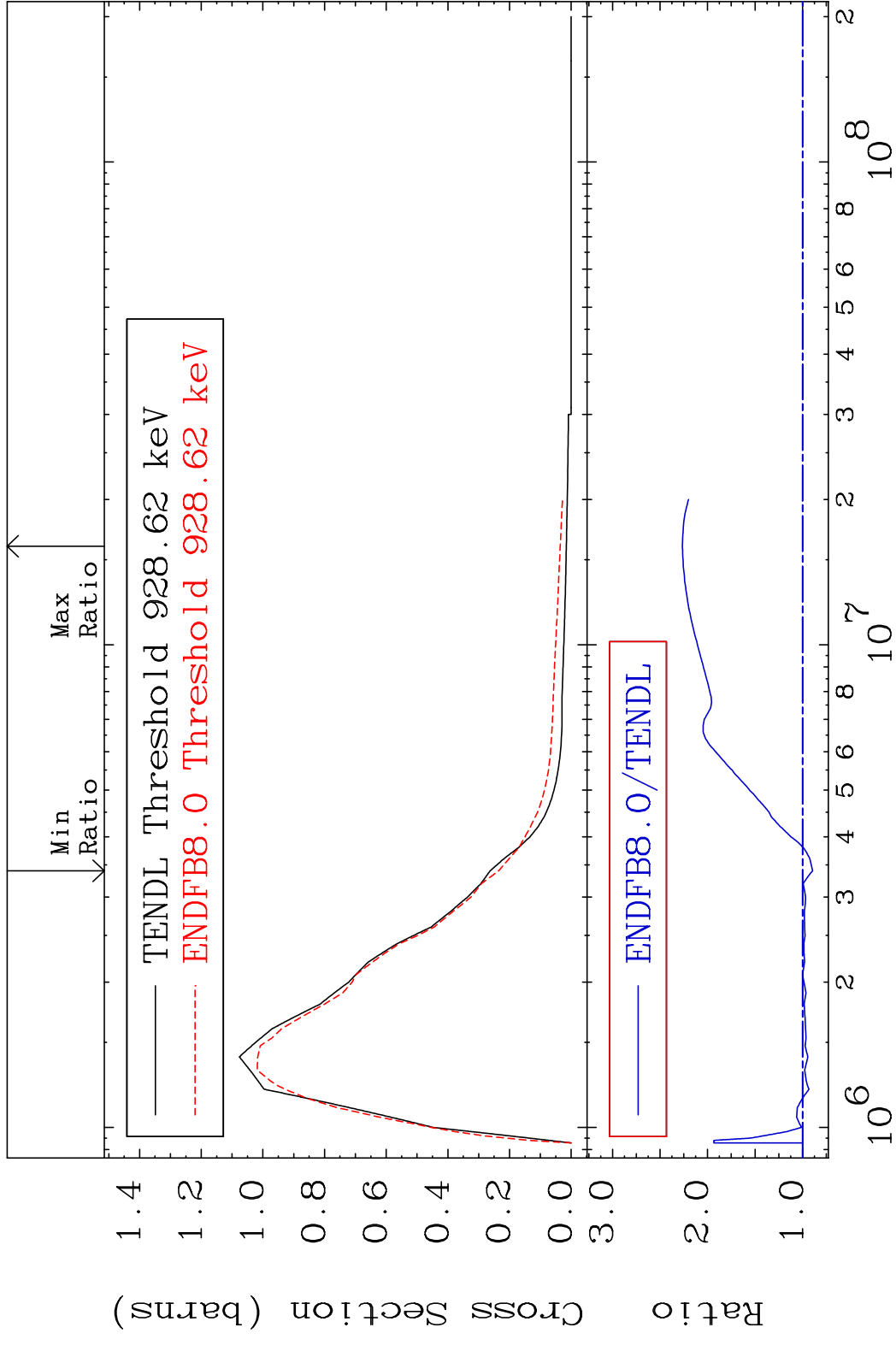
Cross Section -35.03 To 9999. %



MAT 4037 (n, n') d 40-Zr-94  
 Cross Section -100.0 To -88.65%

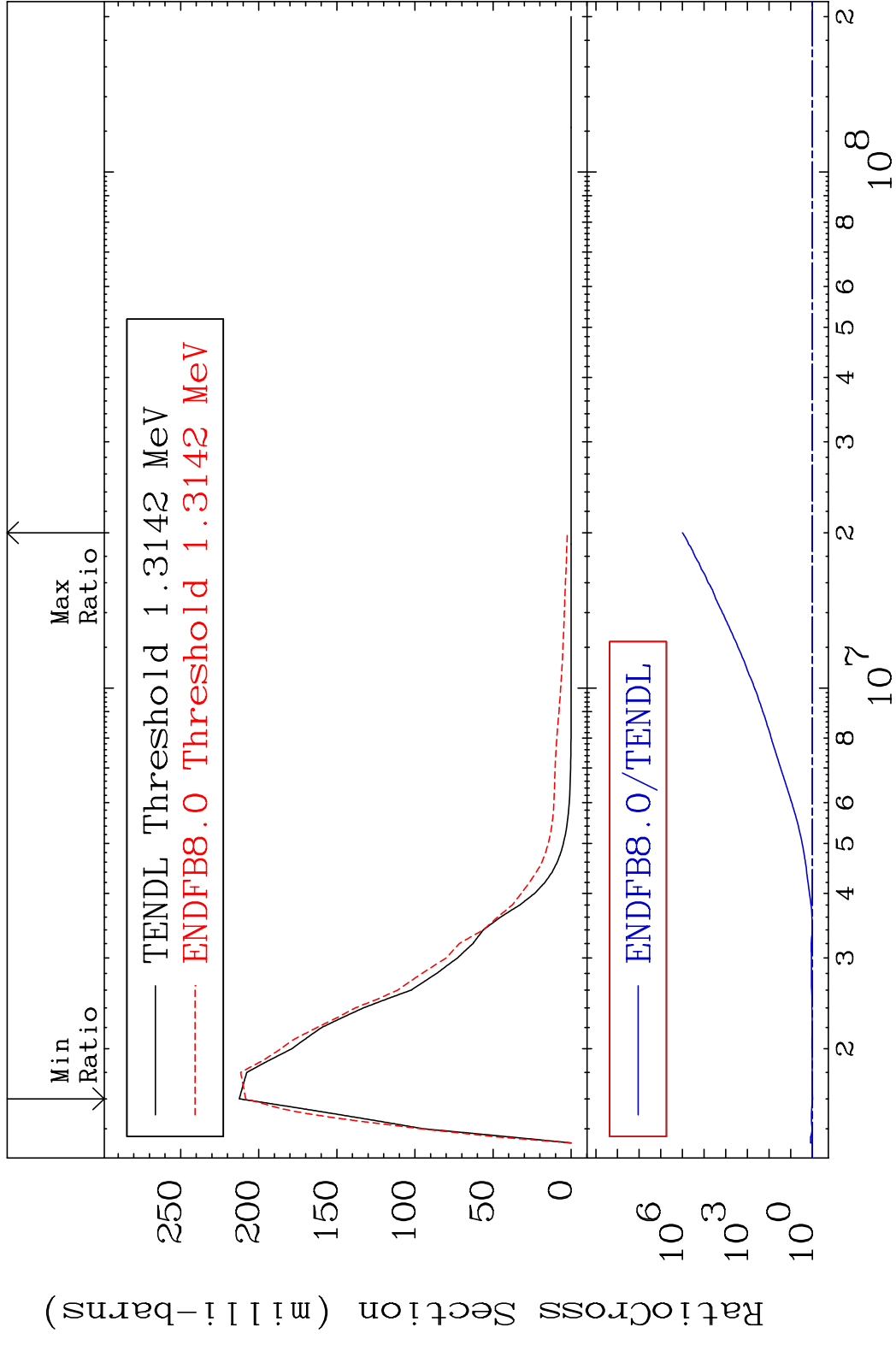


MAT 4037 MT= 51 (n, n') Level 40-Zr-94  
 Cross Section -10.56 To 126.5 %

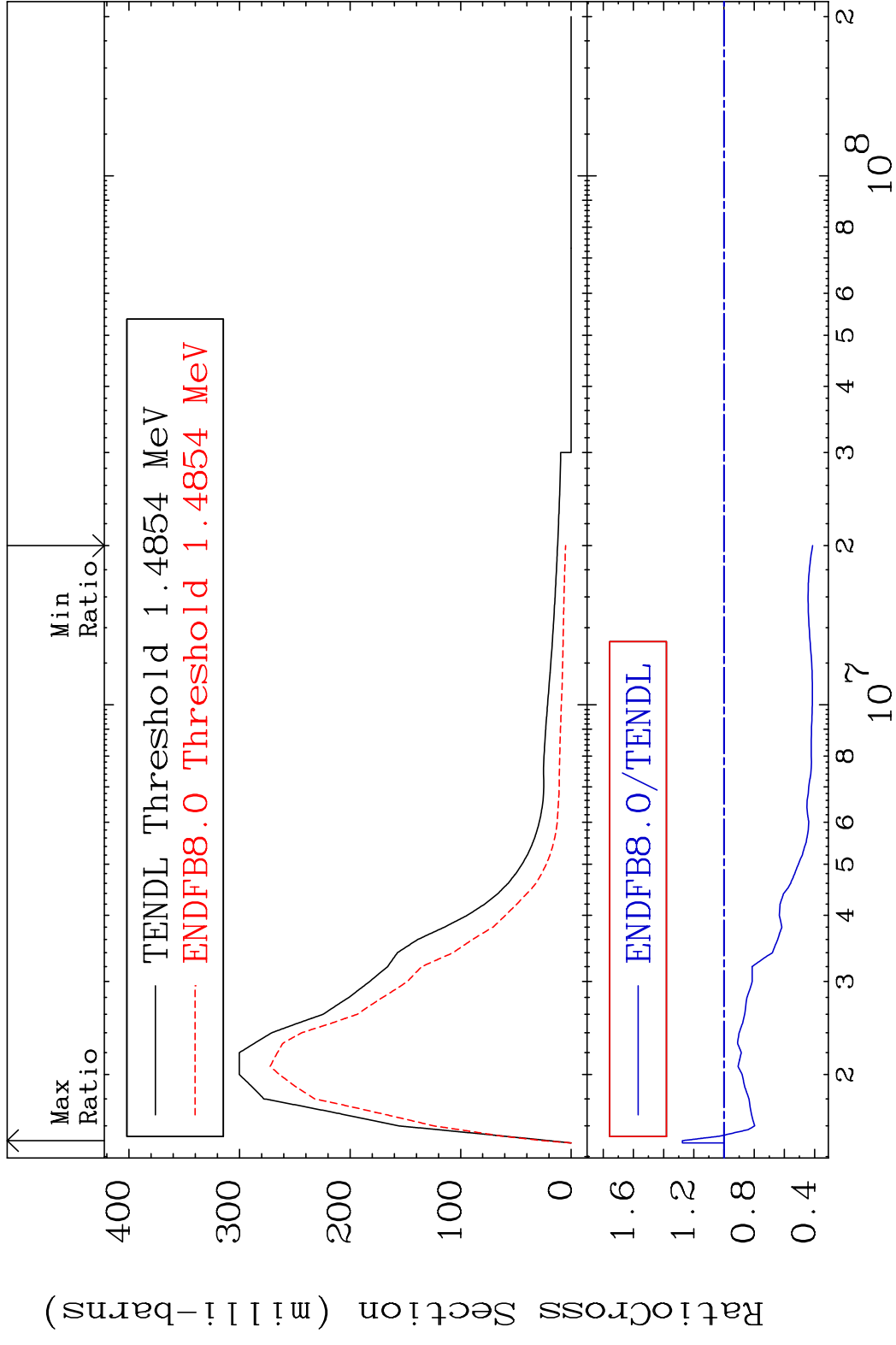


10 Incident Energy (eV) 40-Zr-94

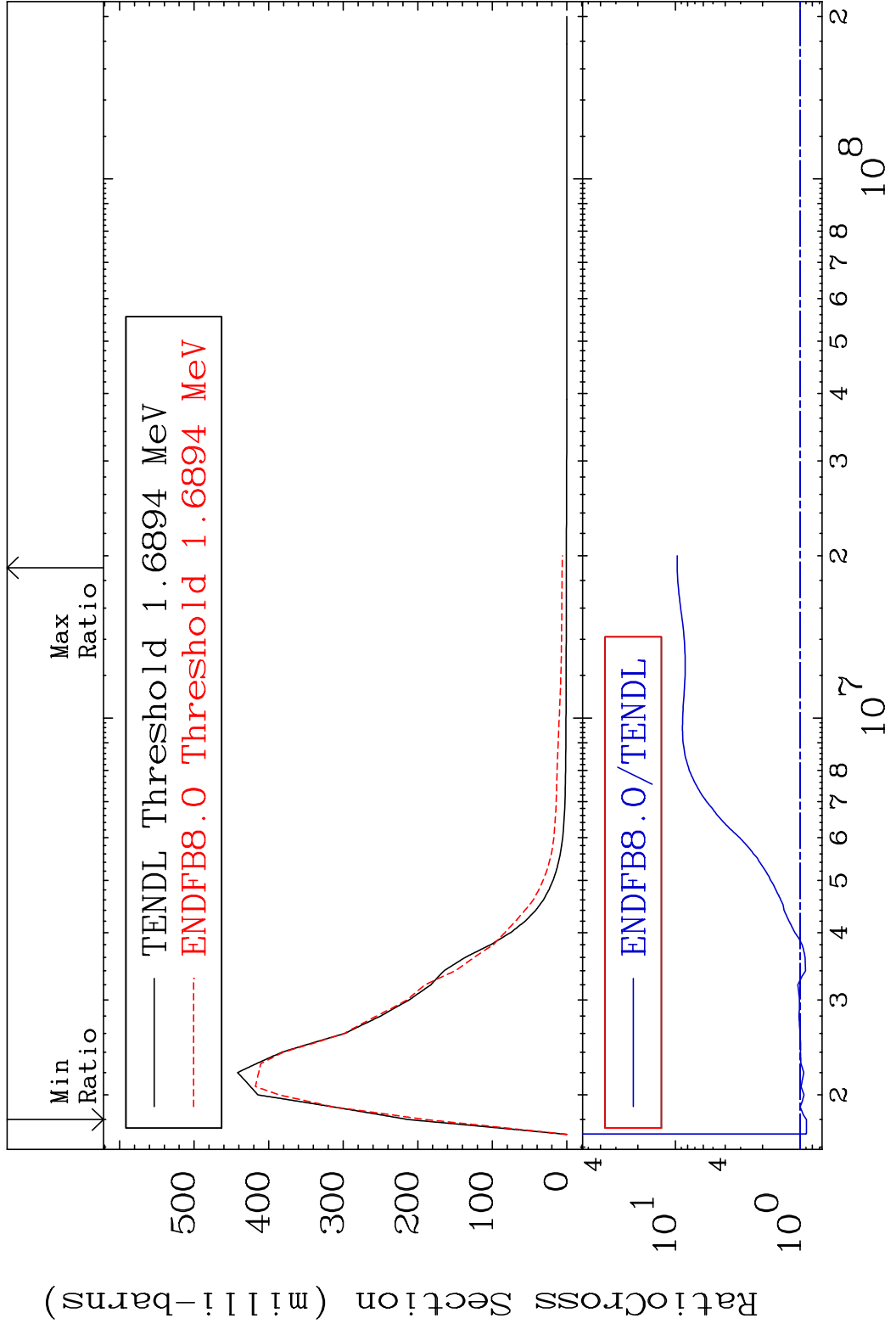
MAT 4037 MT= 52 (n, n') Level 40-Zr-94  
 Cross Section -1.906 To 9999. %



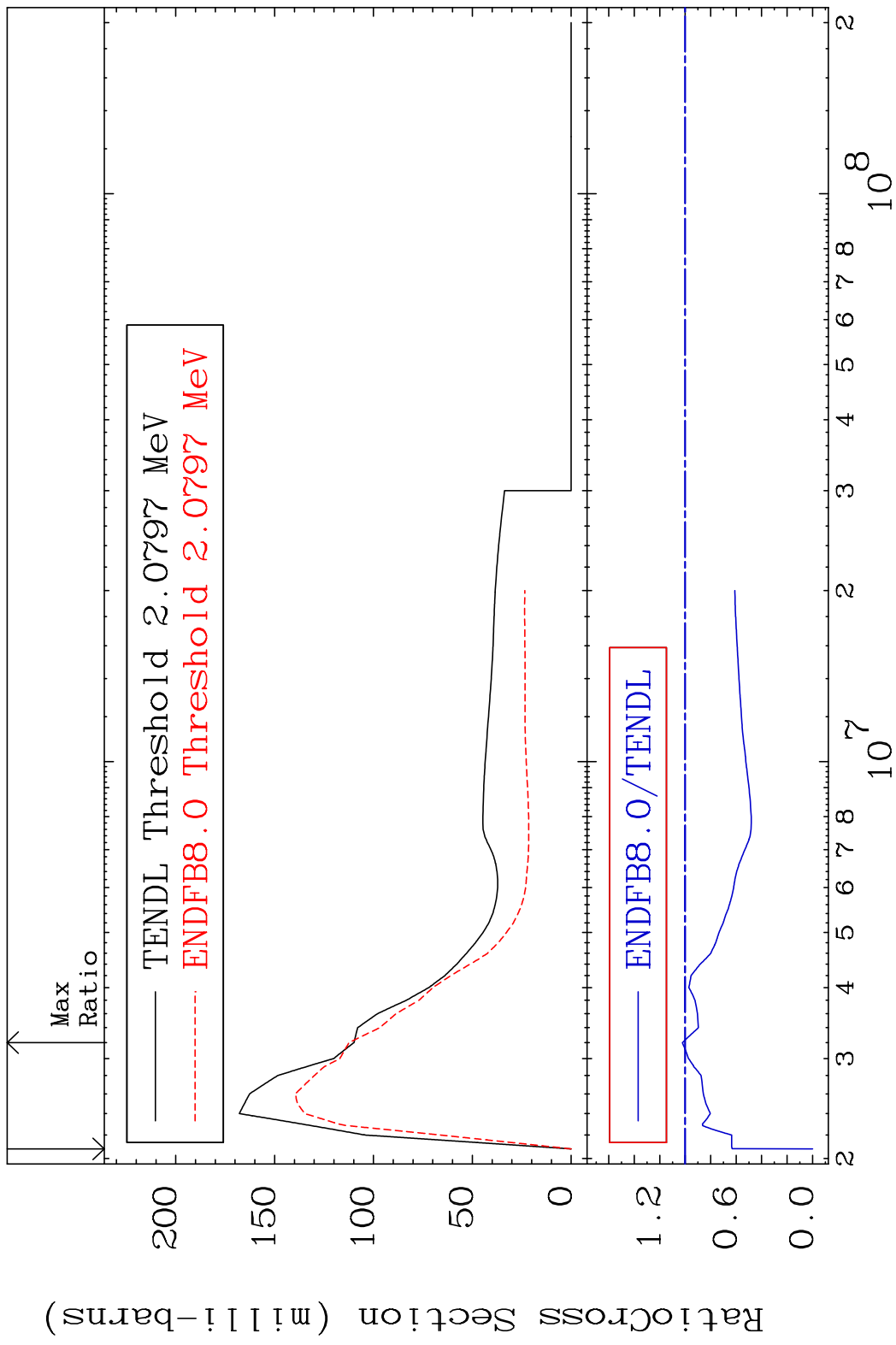
MAT 4037 MT= 53 (n, n') Level 40-Zr-94  
 Cross Section -58.66 To 27.58 %



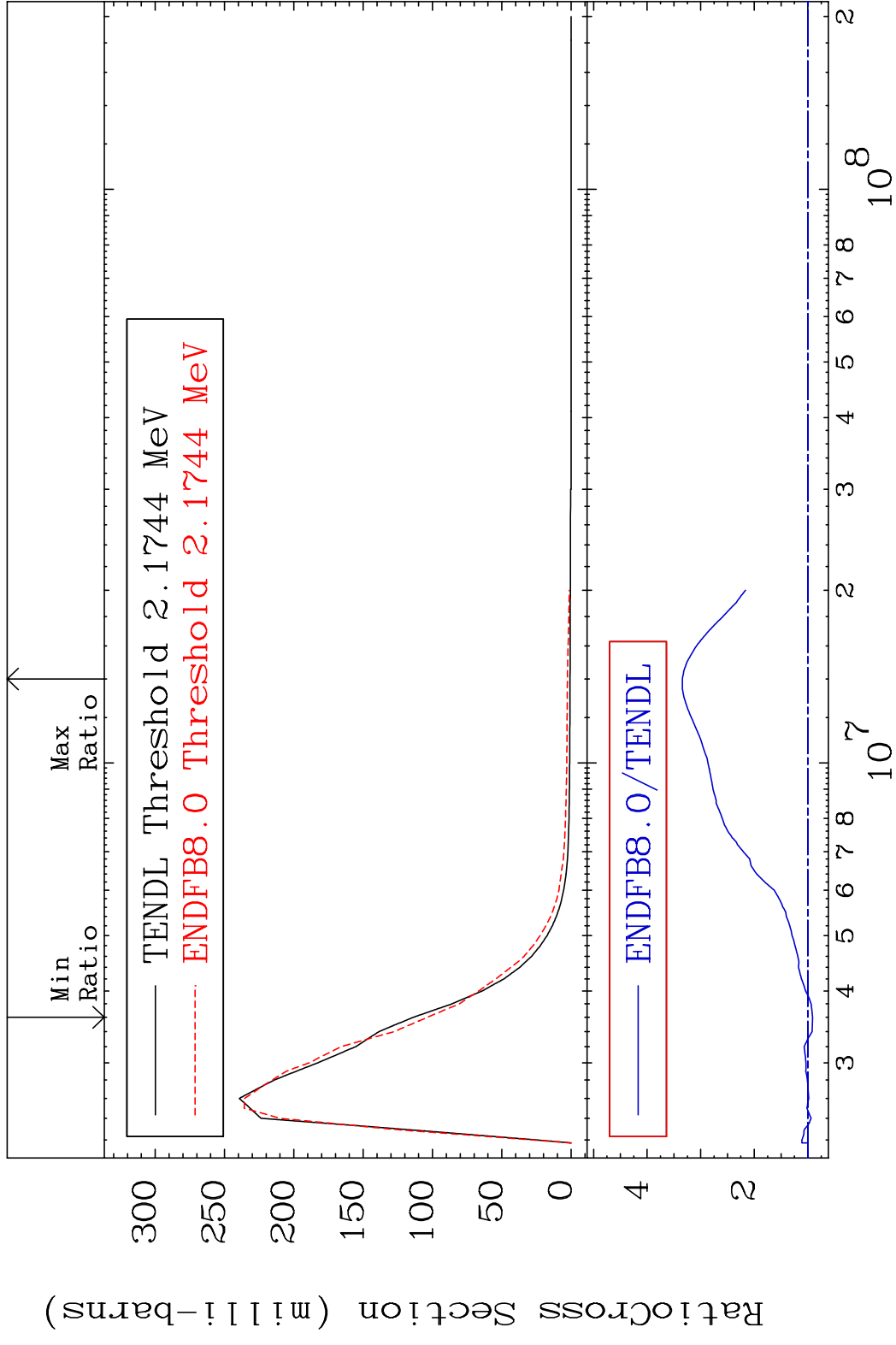
MAT 4037 MT= 54 (n, n') Level 40-Zr-94  
 Cross Section -10.84 To 869.2 %



MAT 4037 MT= 55 (n,n') Level 40-Zr-94  
 Cross Section -100.0 To 2.254 %



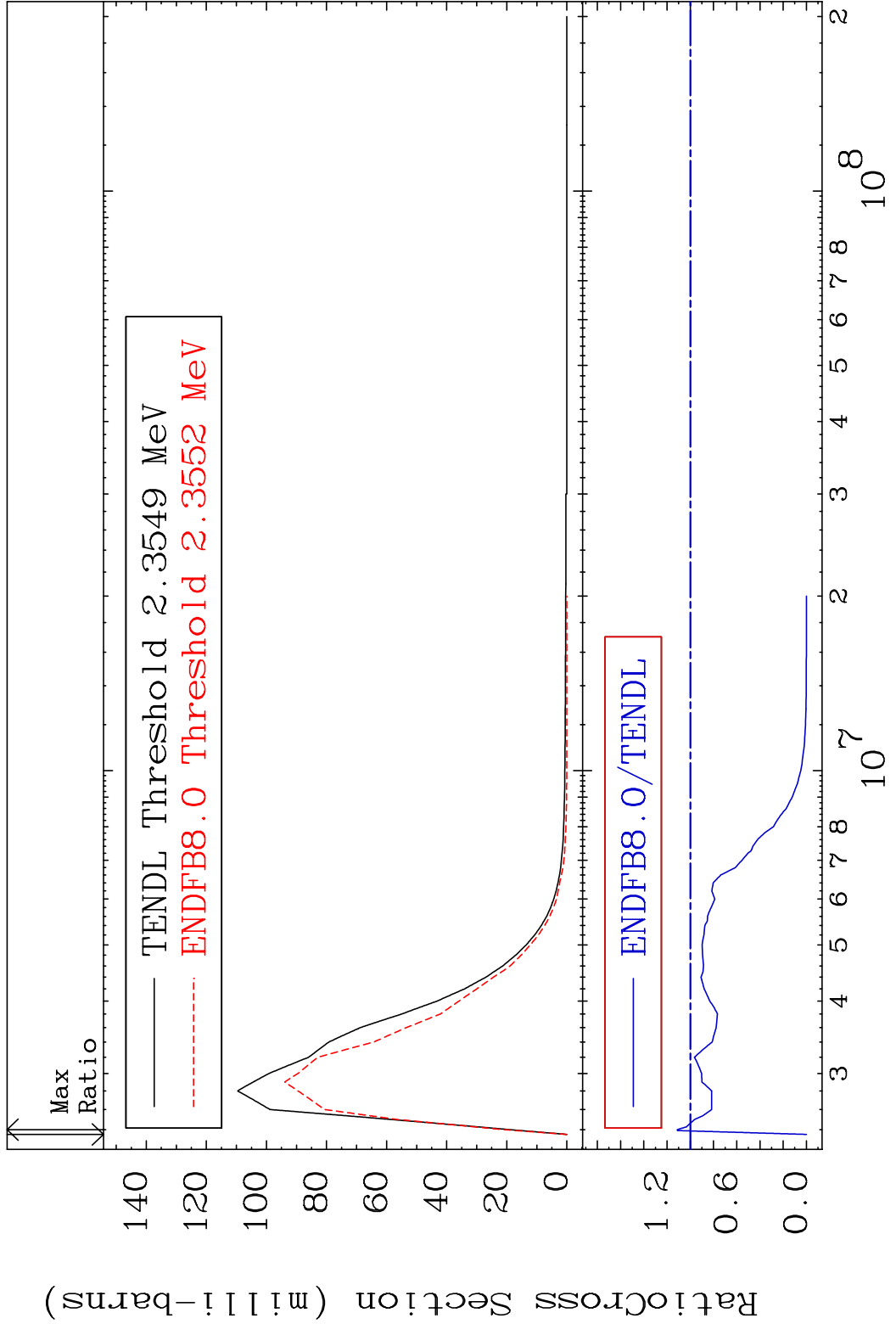
MAT 4037 MT= 56 (n, n') Level 40-Zr-94  
 Cross Section -8.845 To 234.2 %



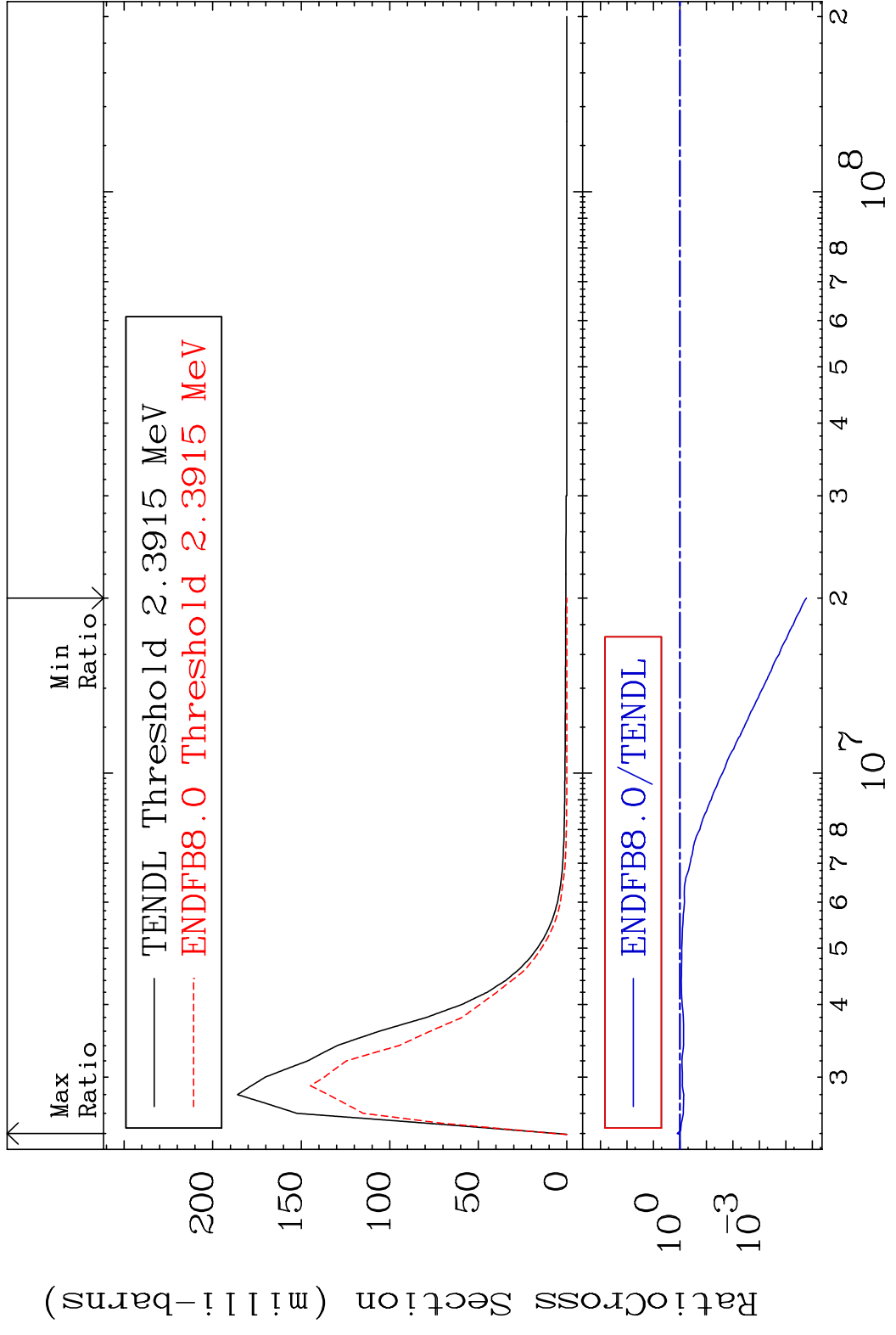
15 Incident Energy (eV) 40-Zr-94



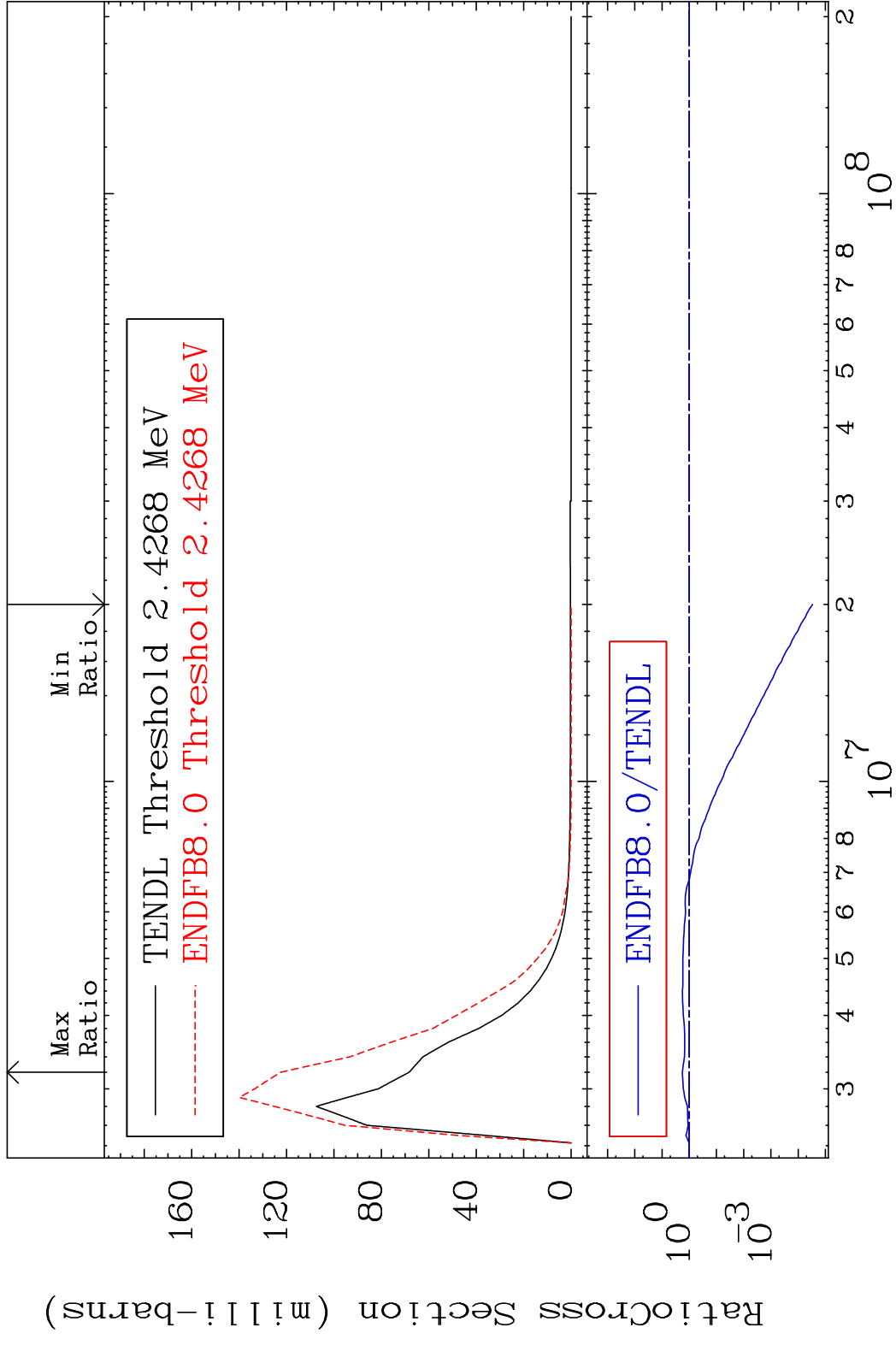
MAT 4037 MT= 57 (n,n') Level 40-Zr-94  
 Cross Section -100.0 To 11.27 %



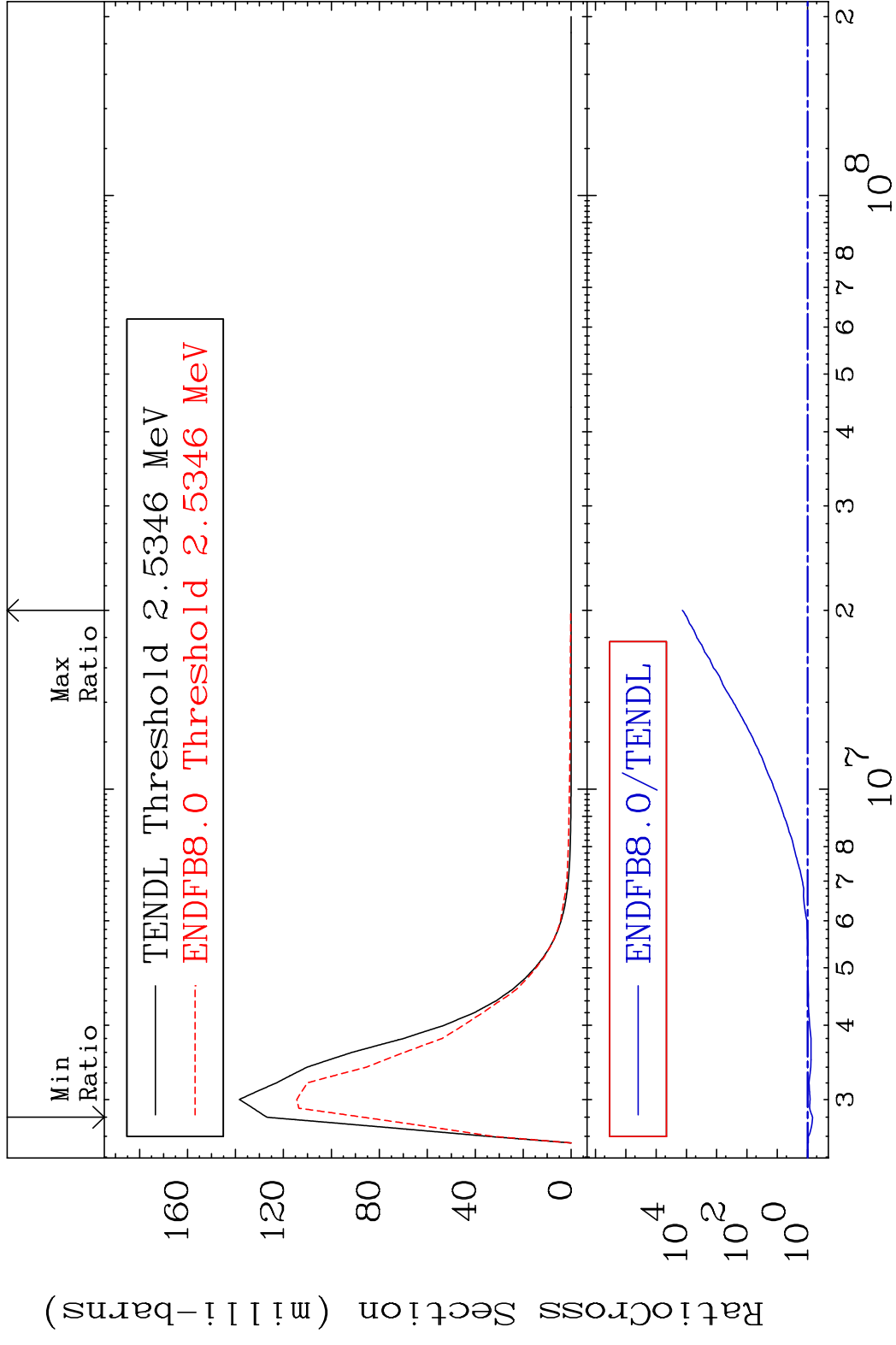
MAT 4037 MT= 58 (n, n') Level 40-Zr-94  
 Cross Section -100.0 To 28.00 %



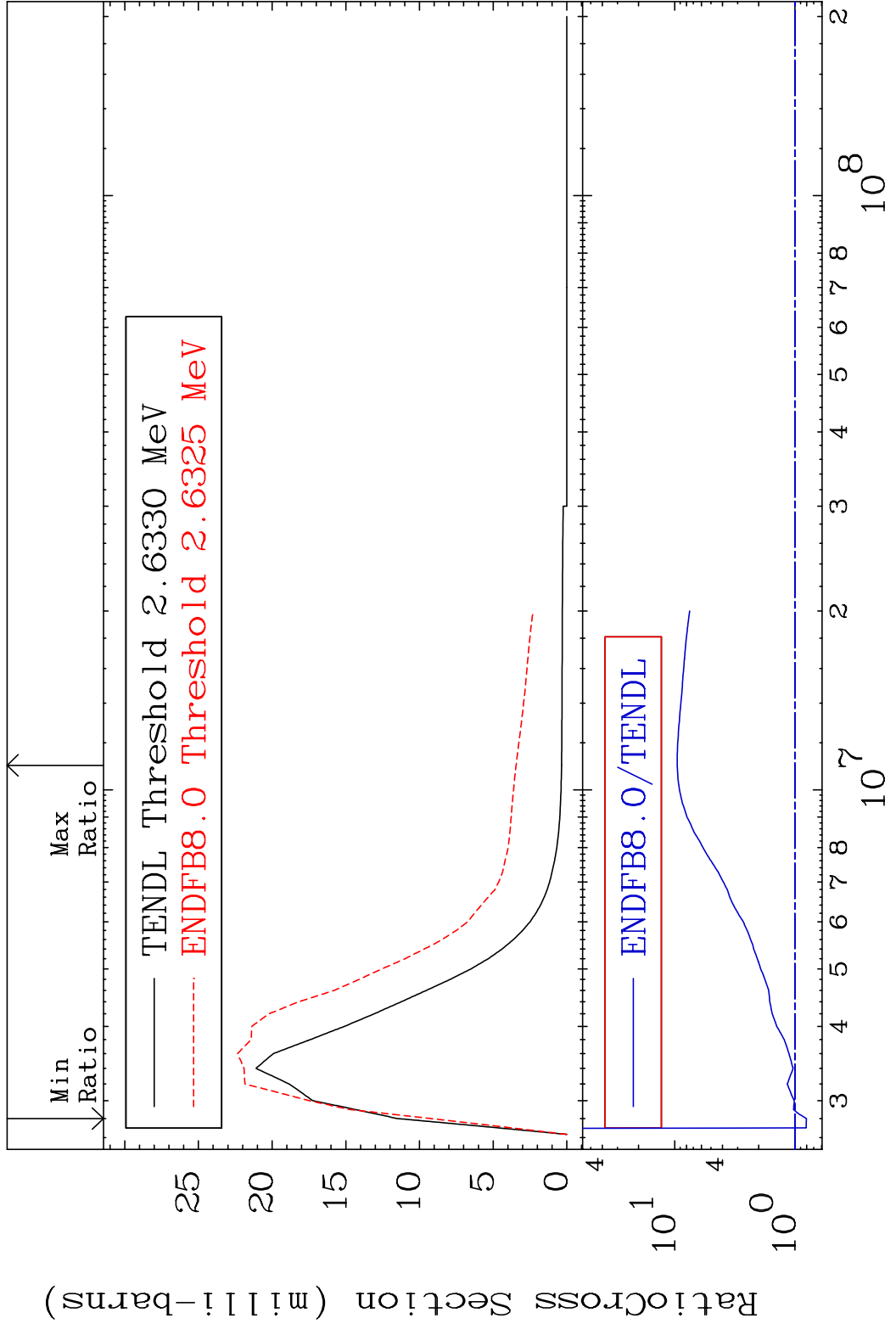
MAT 4037 MT= 59 (n, n') Level 40-Zr-94  
 Cross Section -100.0 To 79.27 %



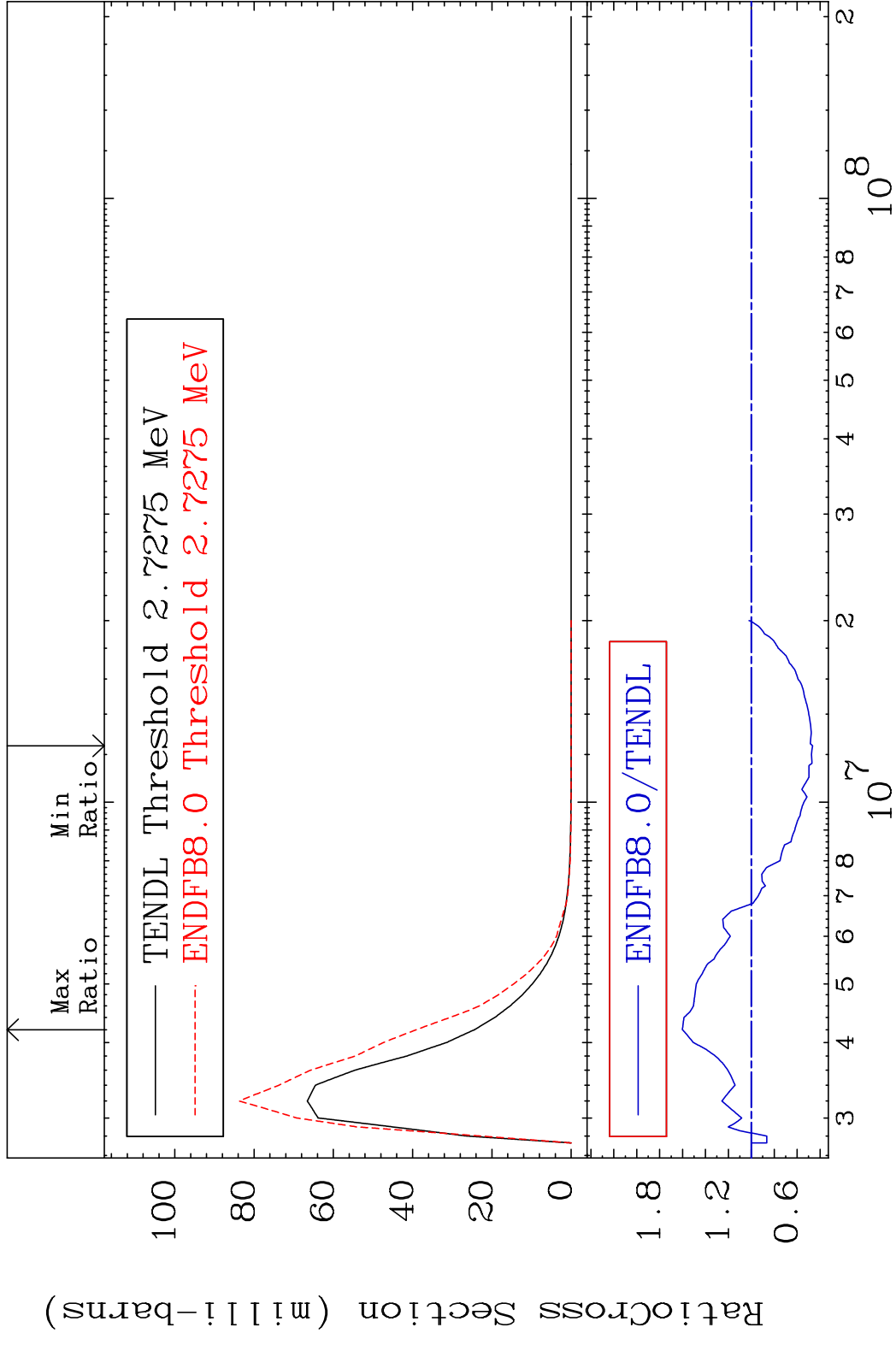
MAT 4037 MT= 60 (n, n') Level 40-Zr-94  
 Cross Section -31.80 To 9999. %



MAT 4037 MT= 61 (n, n') Level 40-Zr-94  
 Cross Section -19.62 To 854.2 %



MAT 4037 MT= 62 (n,n') Level 40-Zr-94  
 Cross Section -53.47 To 60.19 %

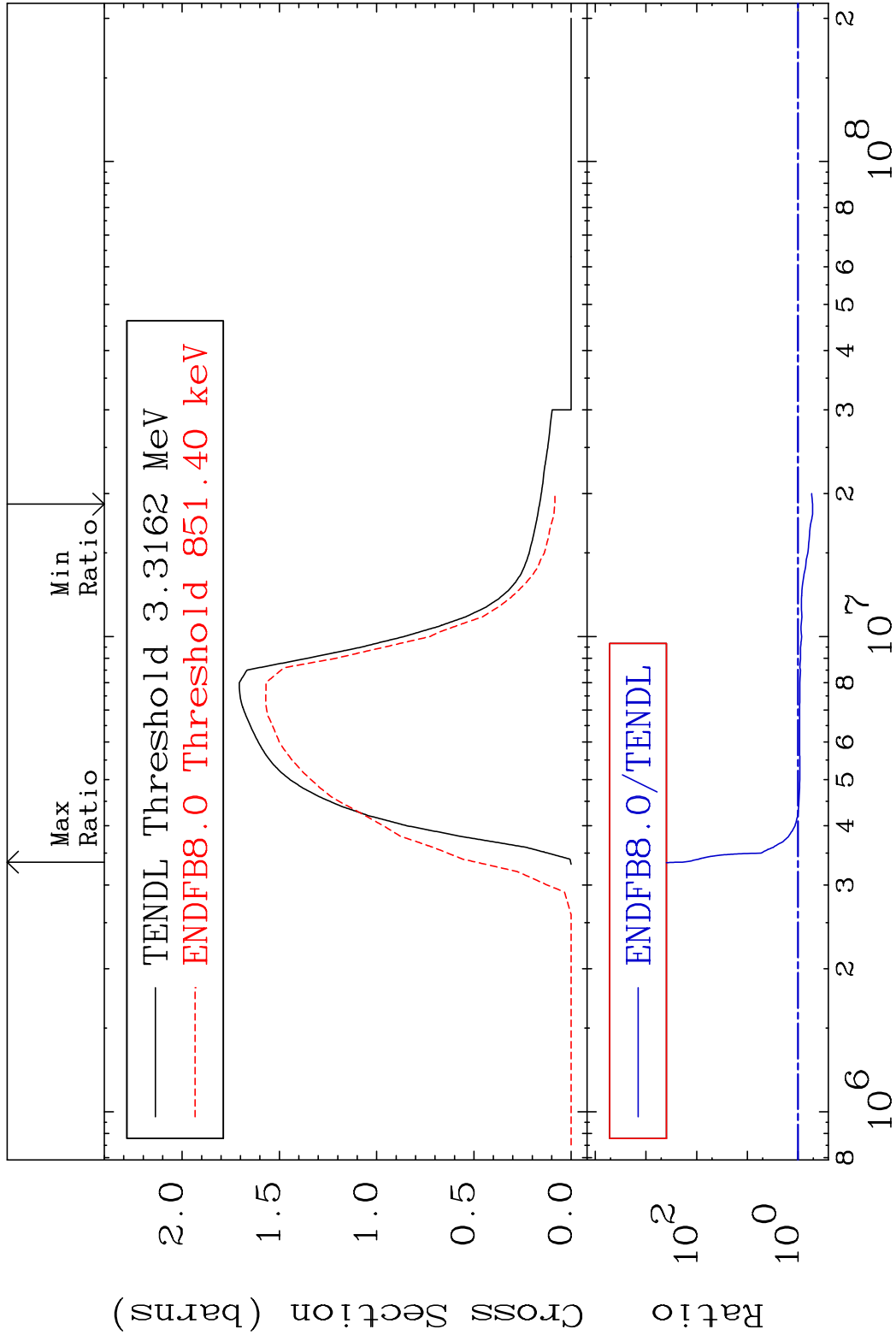


MAT 4037

(n, n') Continuum

40-Zr-94

Cross Section -48.28 To 9999. %



22

Incident Energy (eV)

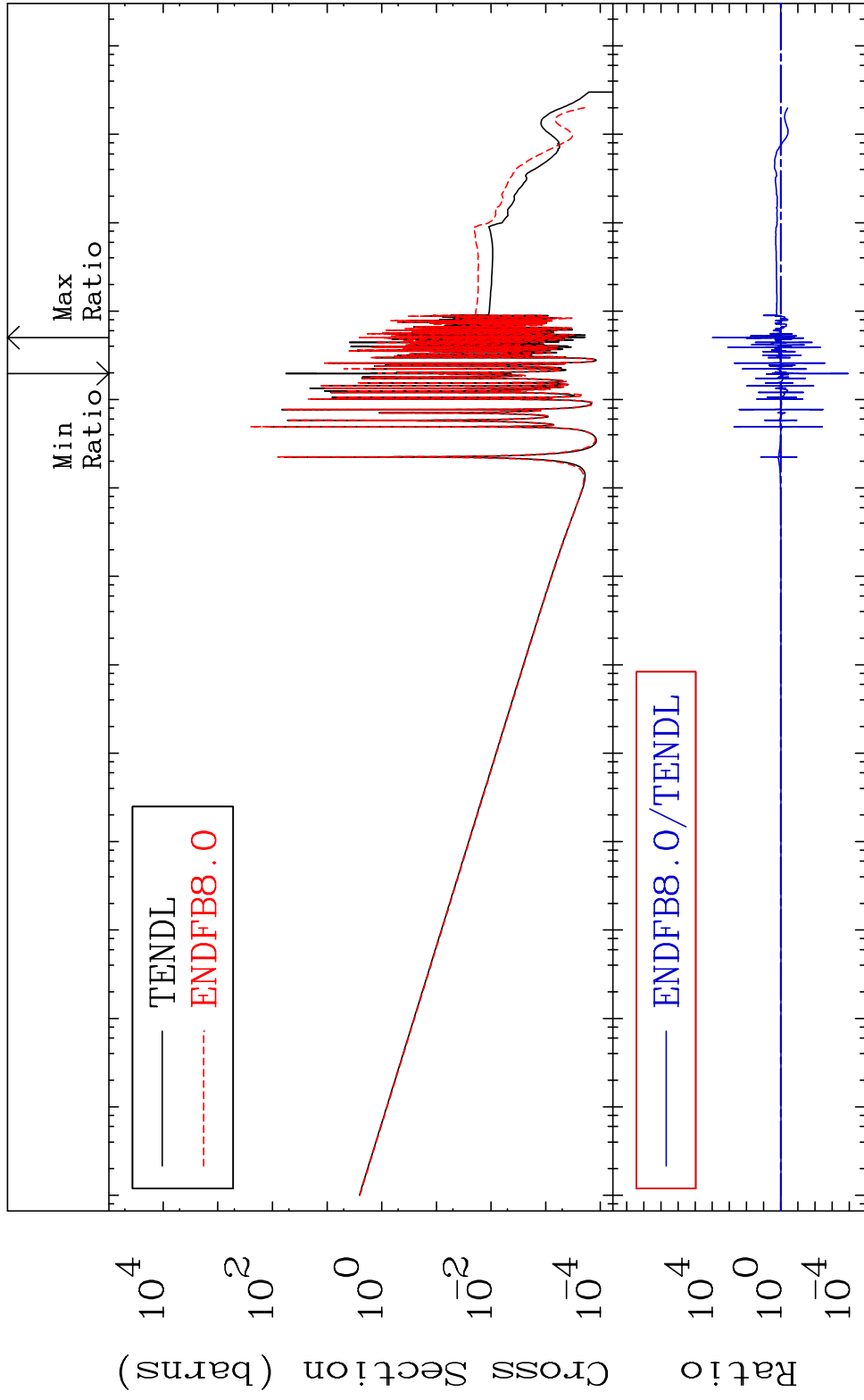
40-Zr-94

MAT 4037

(n,  $\gamma$ )

40-Zr-94

Cross Section -99.99 To 9999. %



23

Incident Energy (eV)

40-Zr-94

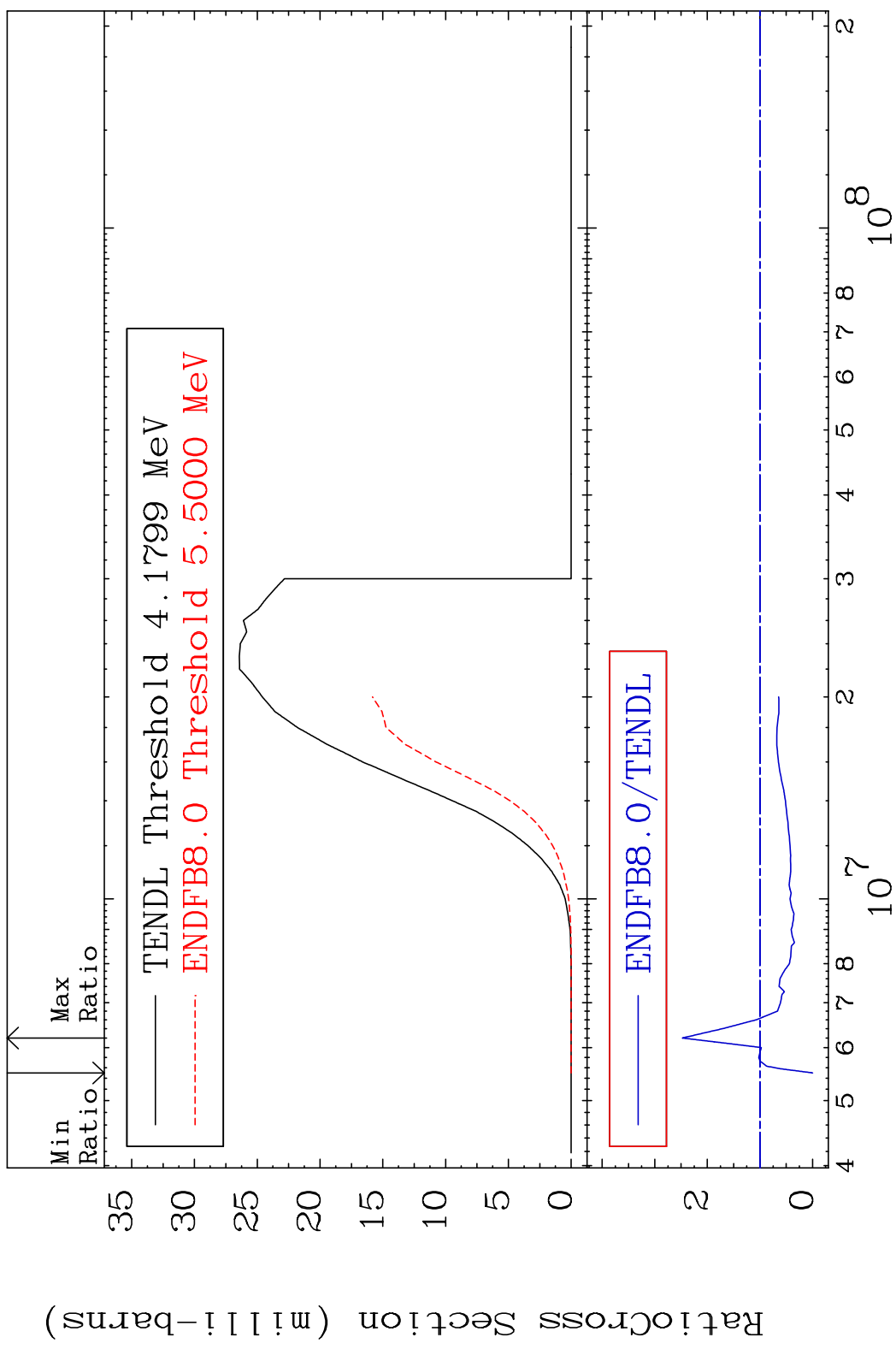


MAT 4037

(n, p)

40-Zr-94

Cross Section -100.0 To 147.5 %

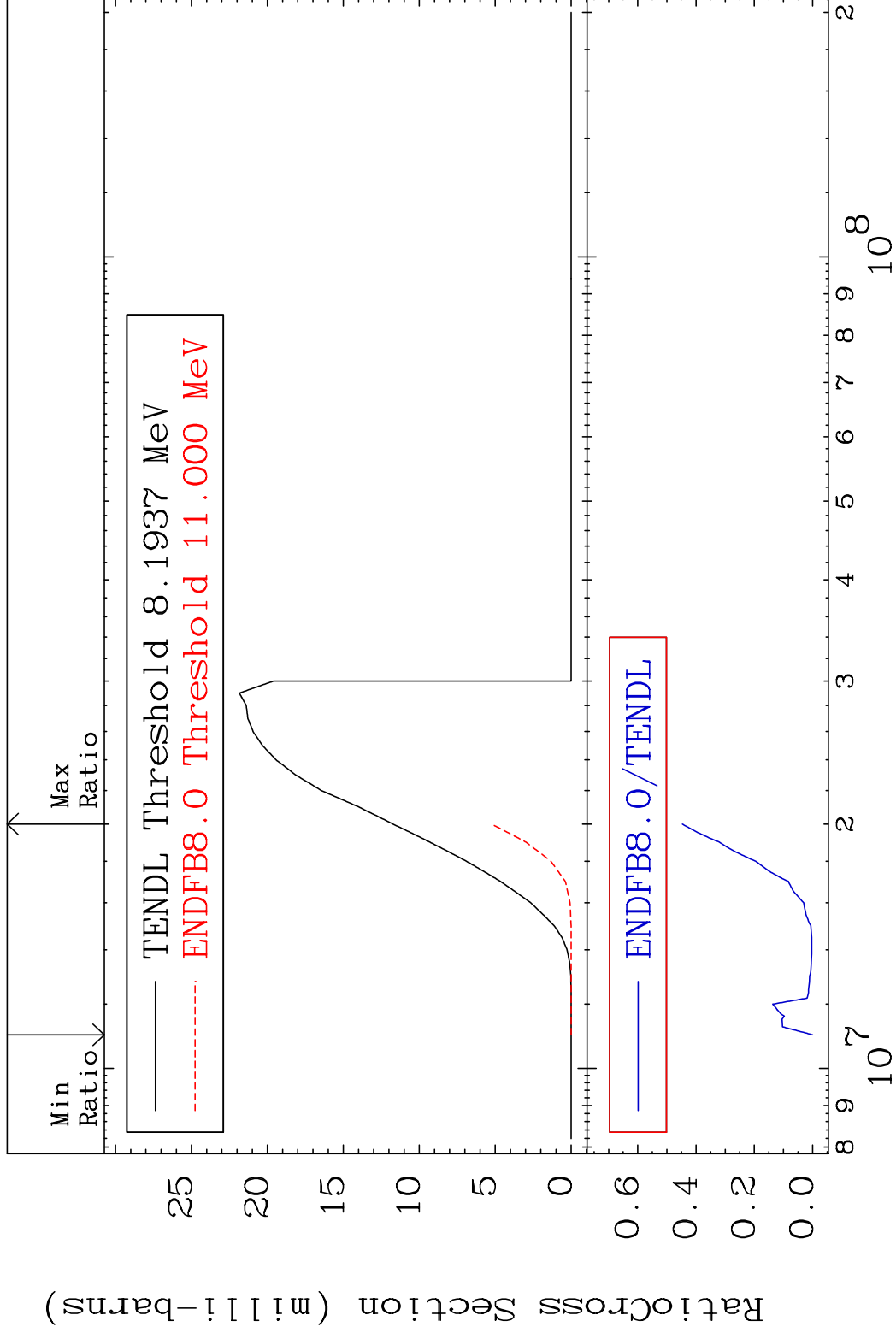


MAT 4037

(n,d)

40-Zr-94

Cross Section -100.0 To -55.31%



25

Incident Energy (eV)

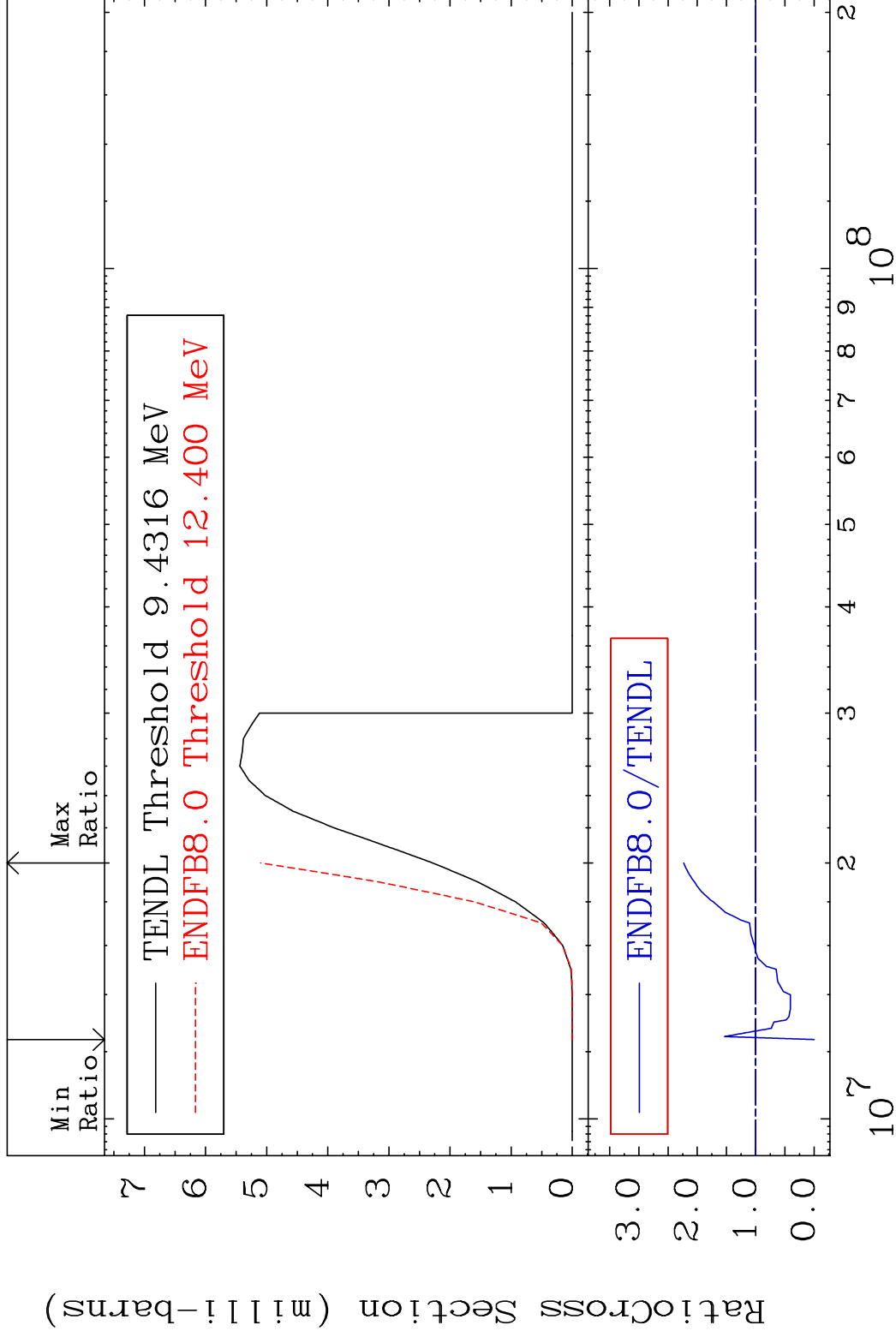
40-Zr-94

MAT 4037

(n, t)

40-Zr-94

Cross Section -100.0 To 123.3 %



26

Incident Energy (eV)

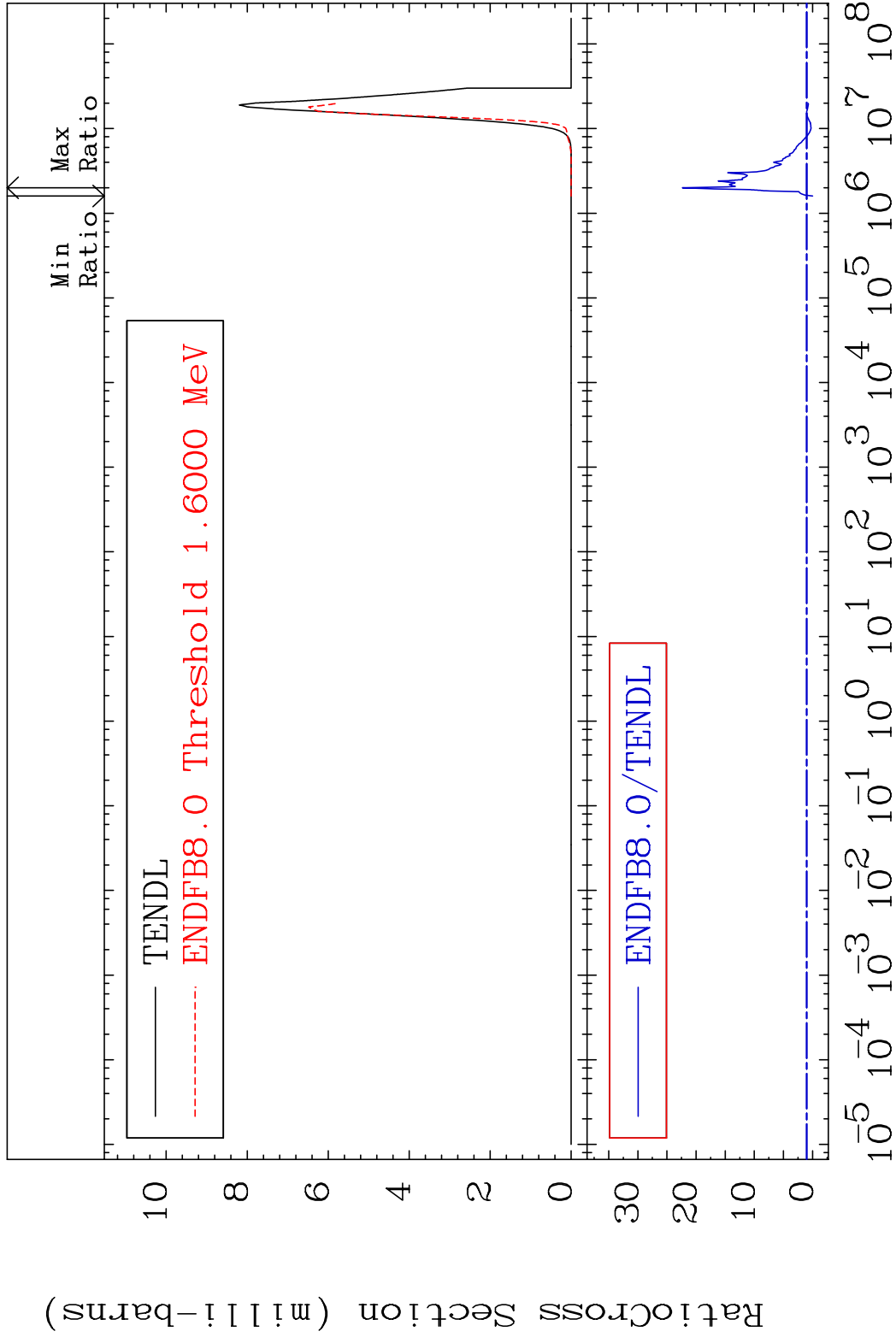
40-Zr-94

MAT 4037

(n,  $\alpha$ )

40-Zr-94

Cross Section -100.0 To 2135. %



27

Incident Energy (eV)

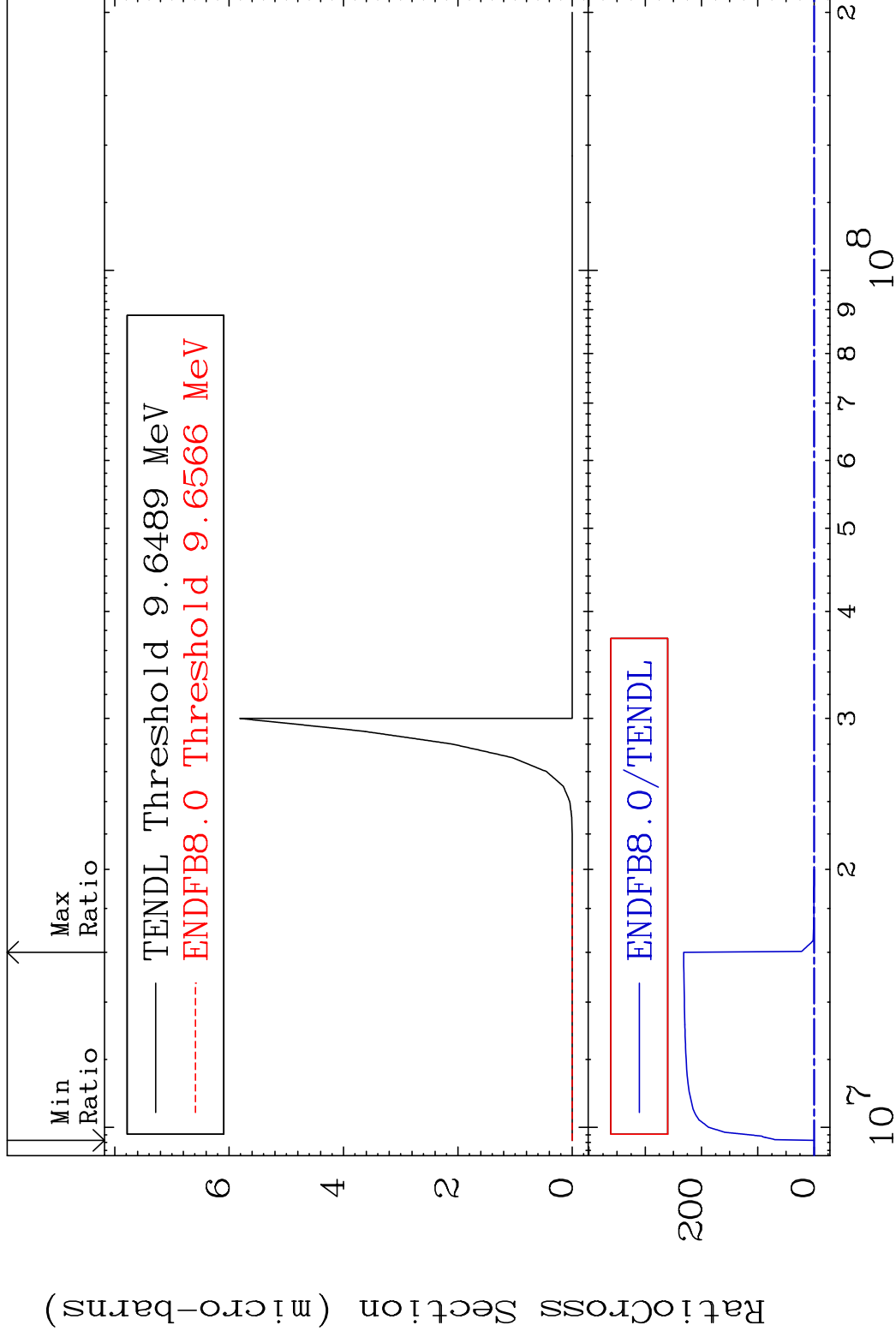
40-Zr-94

MAT 4037

(n,p)  $\alpha$

40-Zr-94

Cross Section -100.0 To 9999. %



28

Incident Energy (eV)

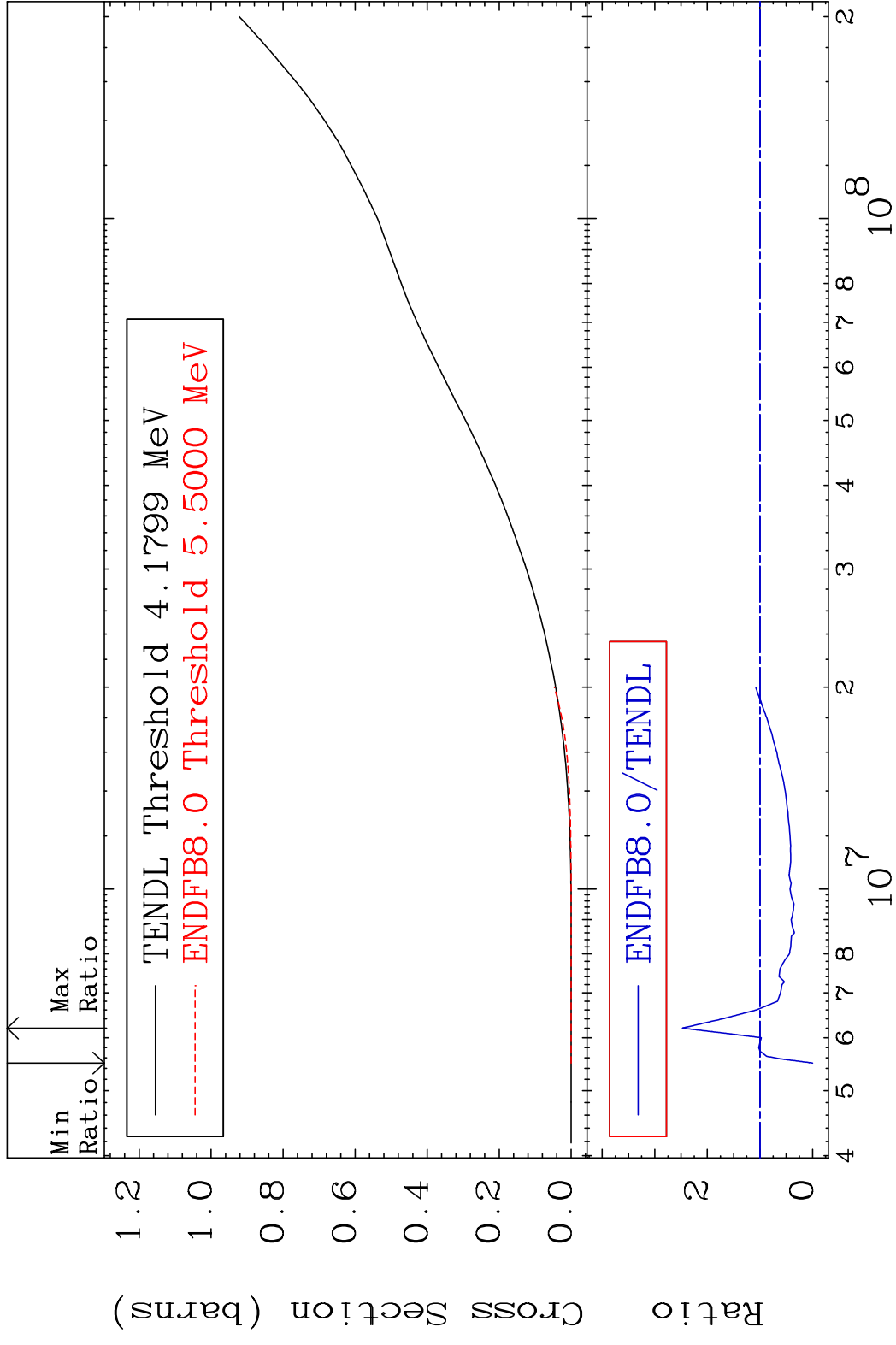
40-Zr-94

MAT 4037

Hydrogen Production

40-Zr-94

Cross Section -100.0 To 147.5 %

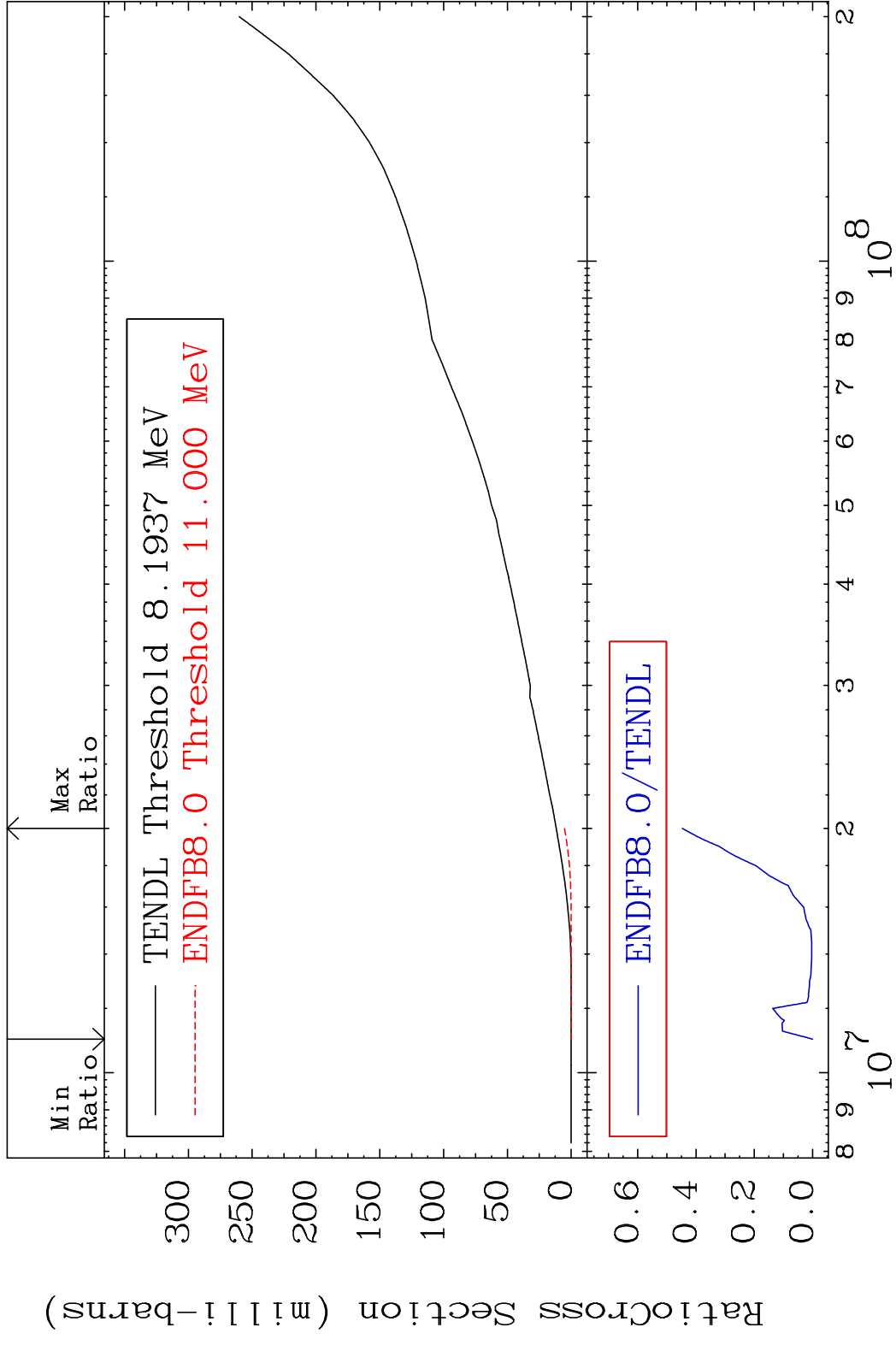


MAT 4037

Deuterium Production

40-Zr-94

Cross Section -100.0 To -55.33%



30

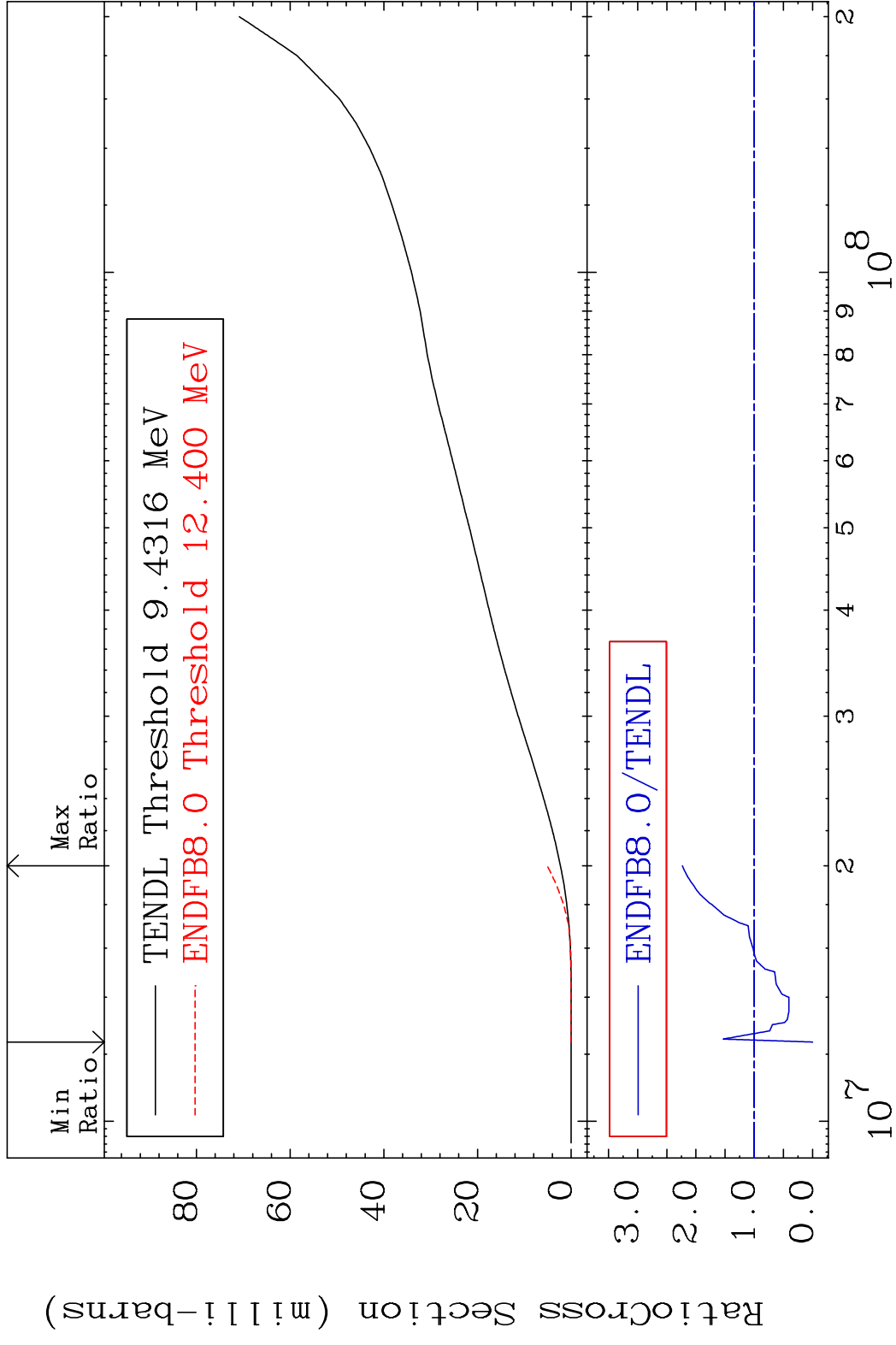
Incident Energy (eV)

40-Zr-94

MAT 4037

Tritium Production  
Cross Section -100.0 To 123.3 %

40-Zr-94



31

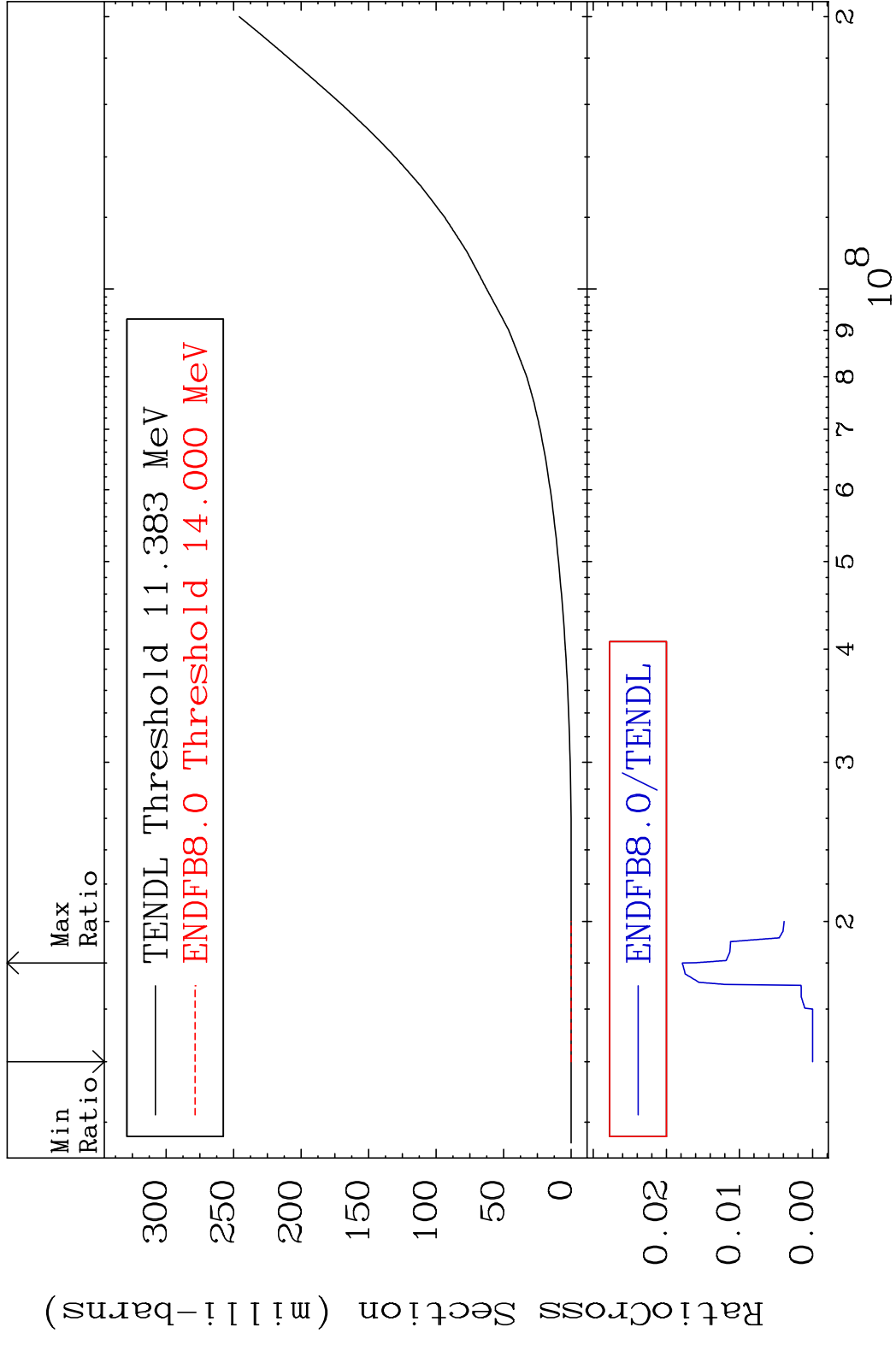


MAT 4037

He-3 Production

40-Zr-94

Cross Section -100.0 To -98.22%



32

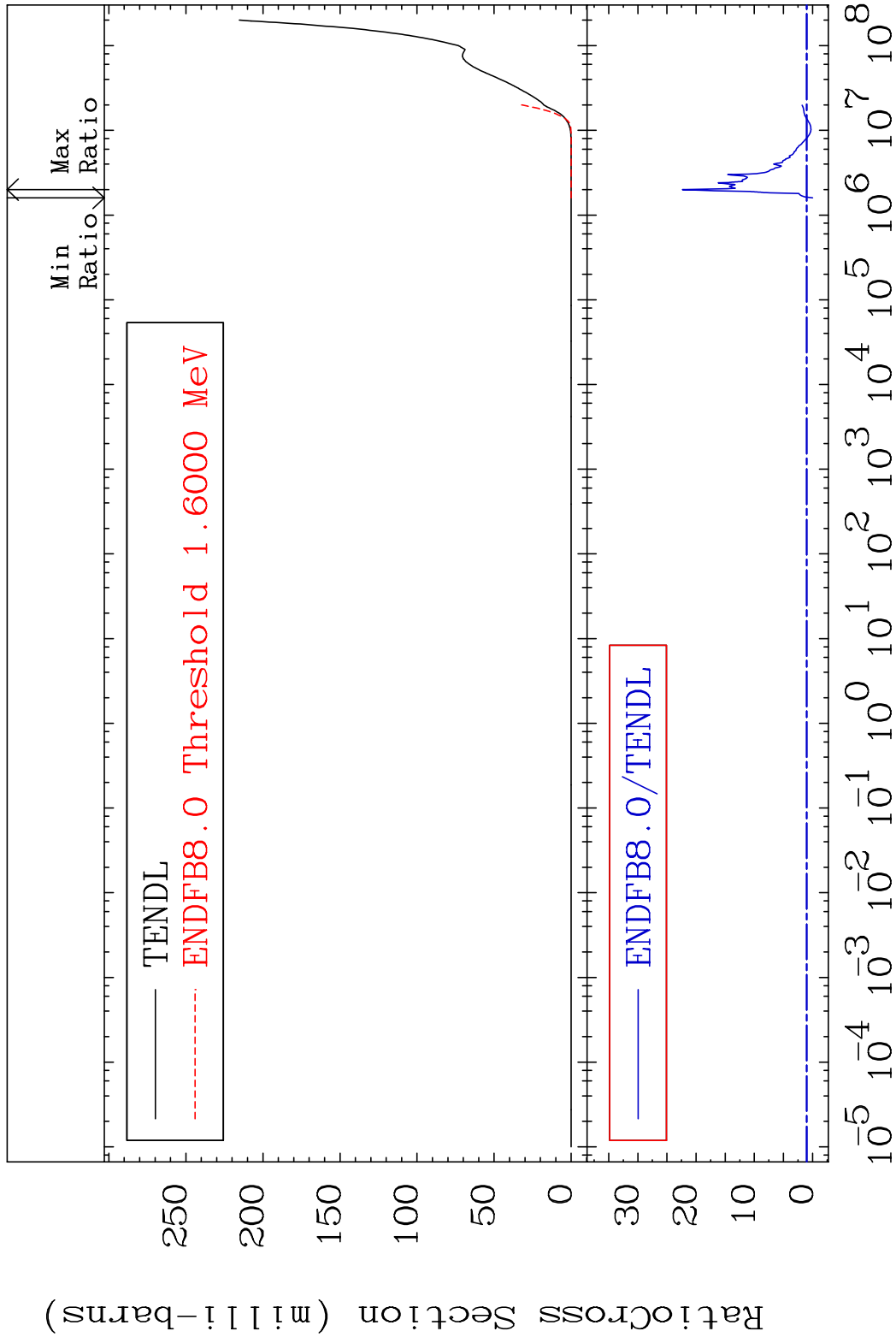
40-Zr-94

MAT 4037

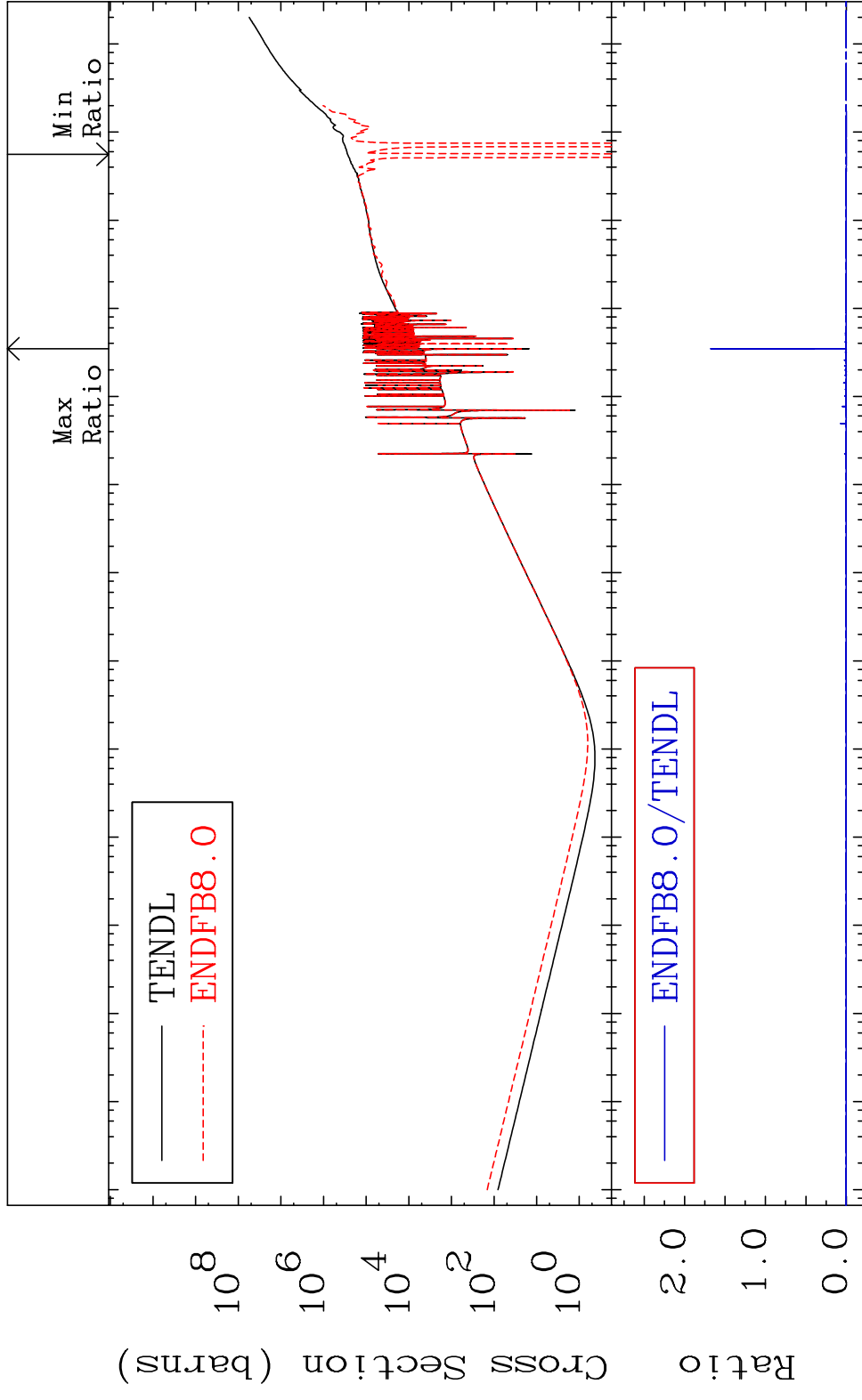
He-4 Production

40-Zr-94

Cross Section -100.0 To 2135. %



MAT 4037 Kerma total (eV-barns) 40-Zr-94  
 Cross Section -121.5 To 9999. %

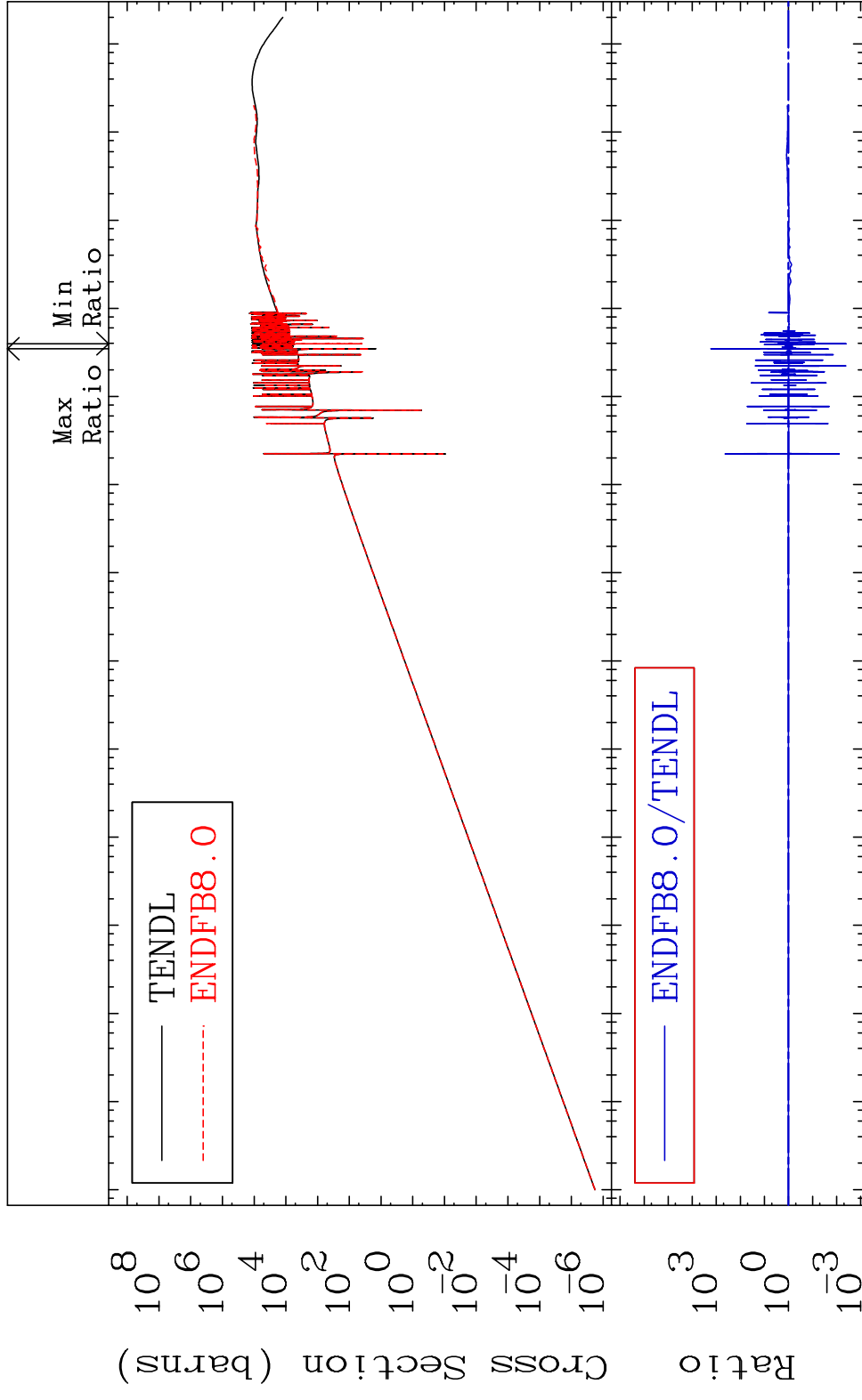


34 Incident Energy (eV) 40-Zr-94

MAT 4037

Kerma elastic  
Cross Section

40-Zr-94  
-99.60 To 9999. %

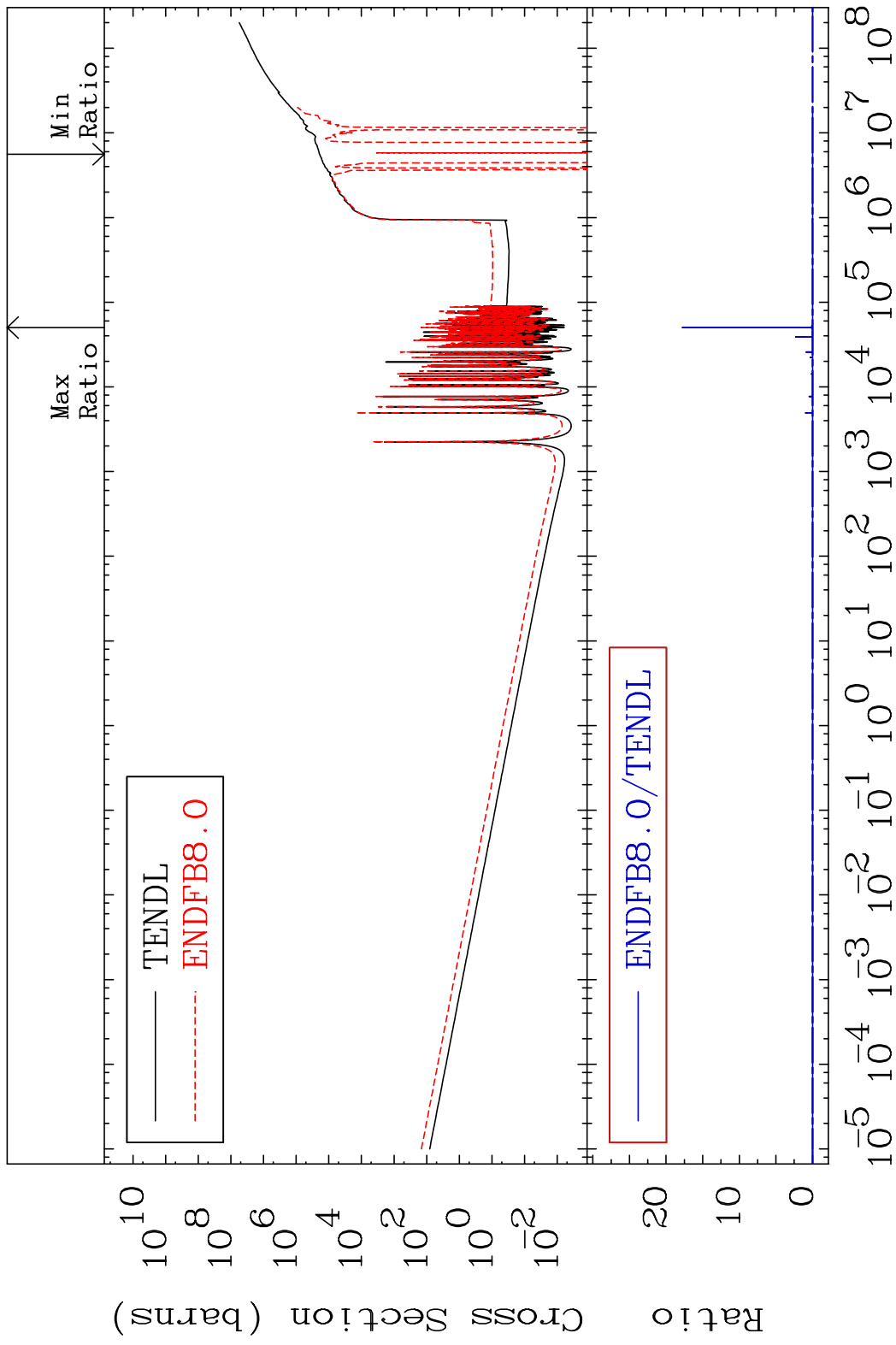


35

Incident Energy (eV)

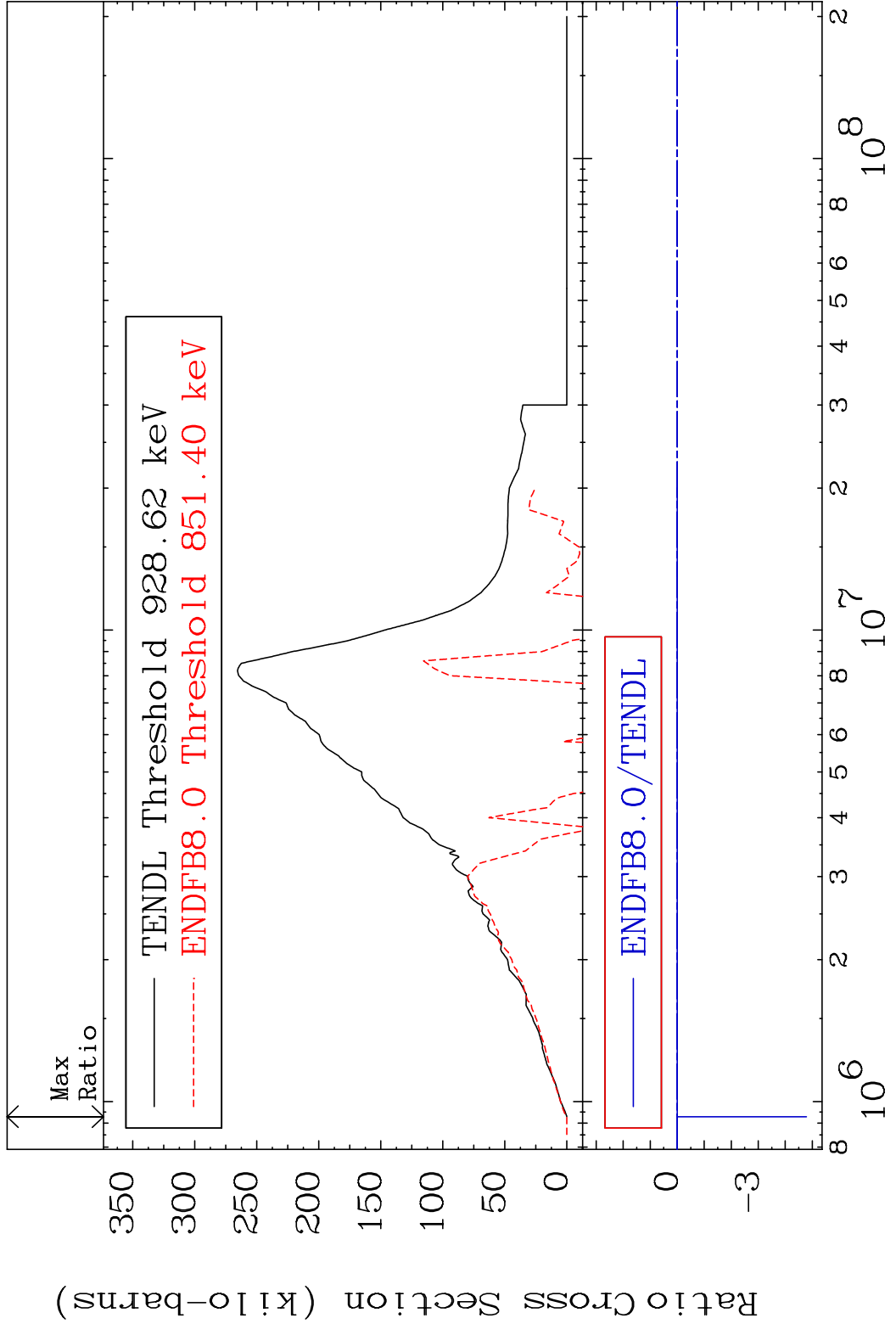
40-Zr-94

MAT 4037 Kerma non-elastic (all but mt2) 40-Zr-94  
 Cross Section -180.8 To 9999. %



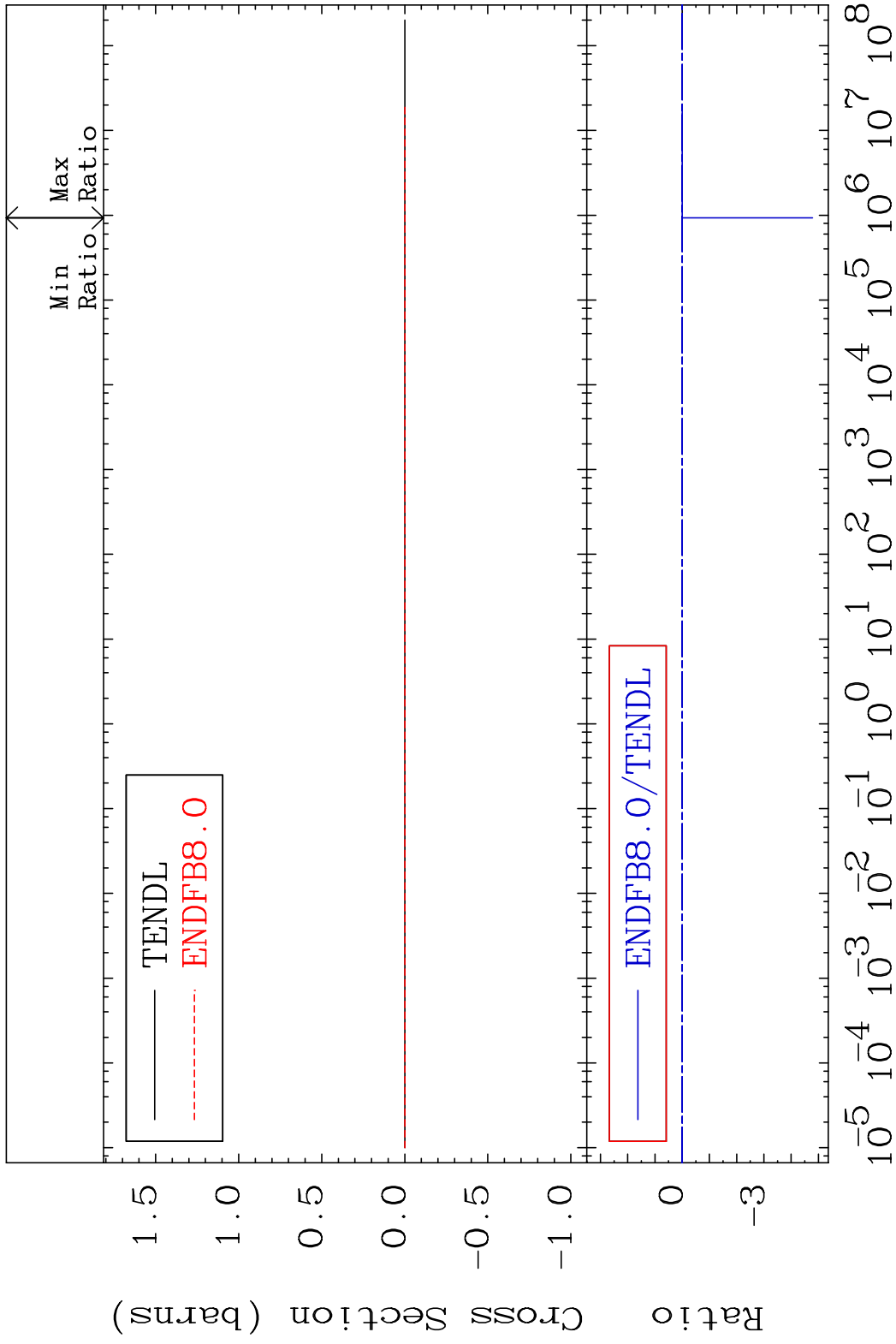
36 Incident Energy (eV) 40-Zr-94

MAT 4037 Kerma inelastic (mt51-91) 40-Zr-94  
 Cross Section -9999. To 9999. %



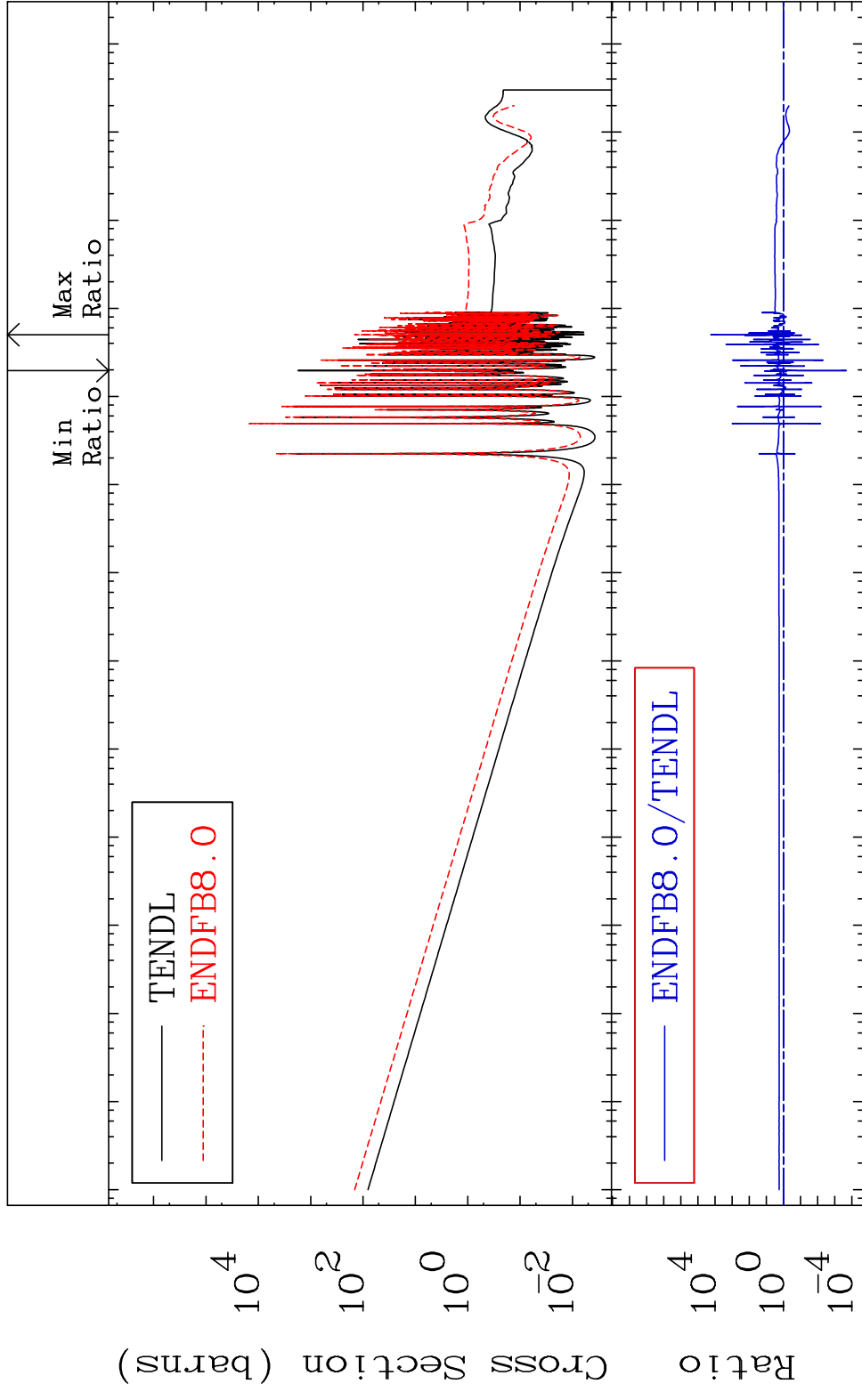
37 Incident Energy (eV) 40-Zr-94

MAT 4037 Kerma fission (mt18 or mt19-20-21-38) 40-Zr-94  
 Cross Section -9999. To 9999. %



MAT 4037

Kerma capture (mt102) 40-Zr-94  
Cross Section -99.98 To 9999. %



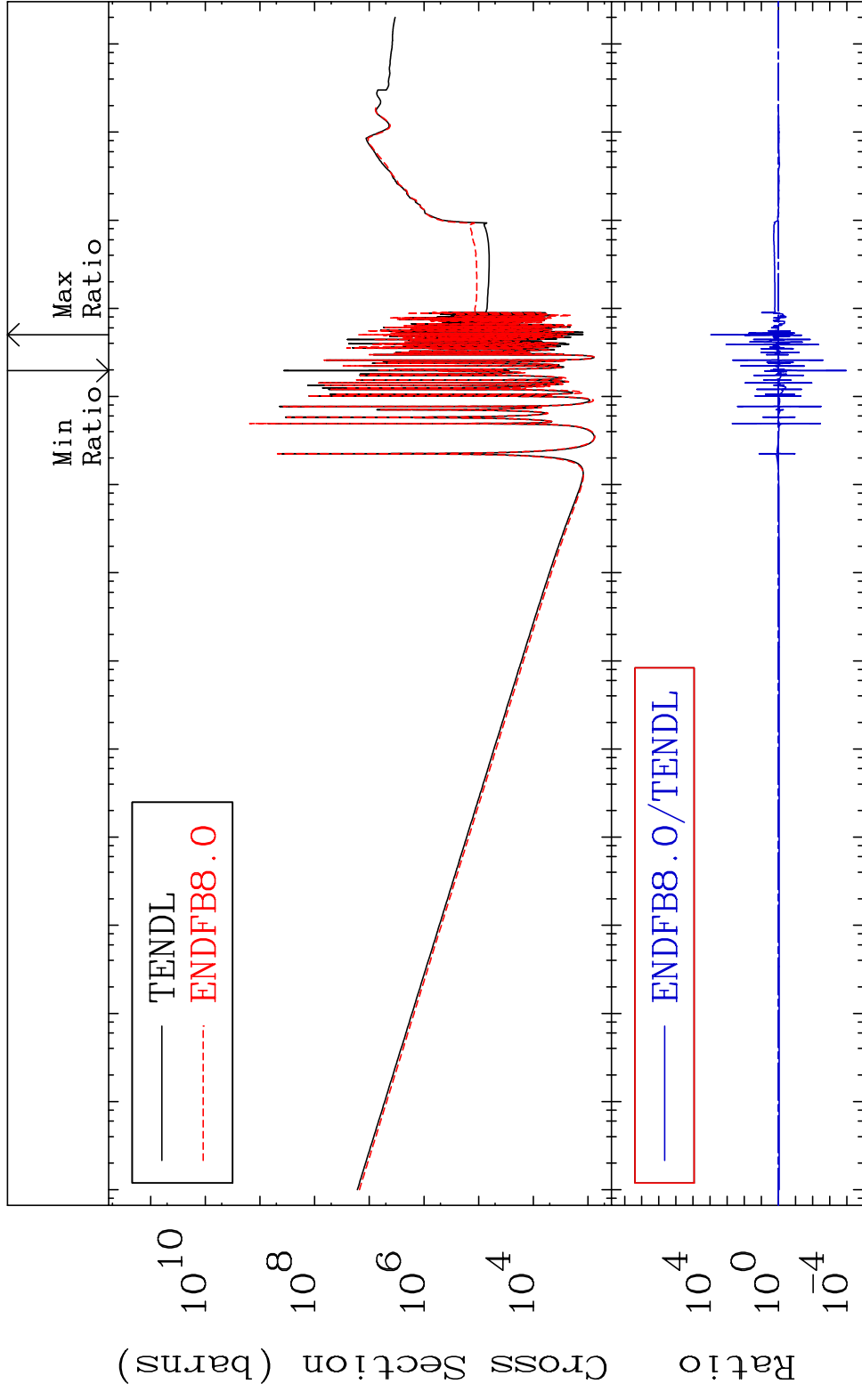
39

Incident Energy (eV)

40-Zr-94

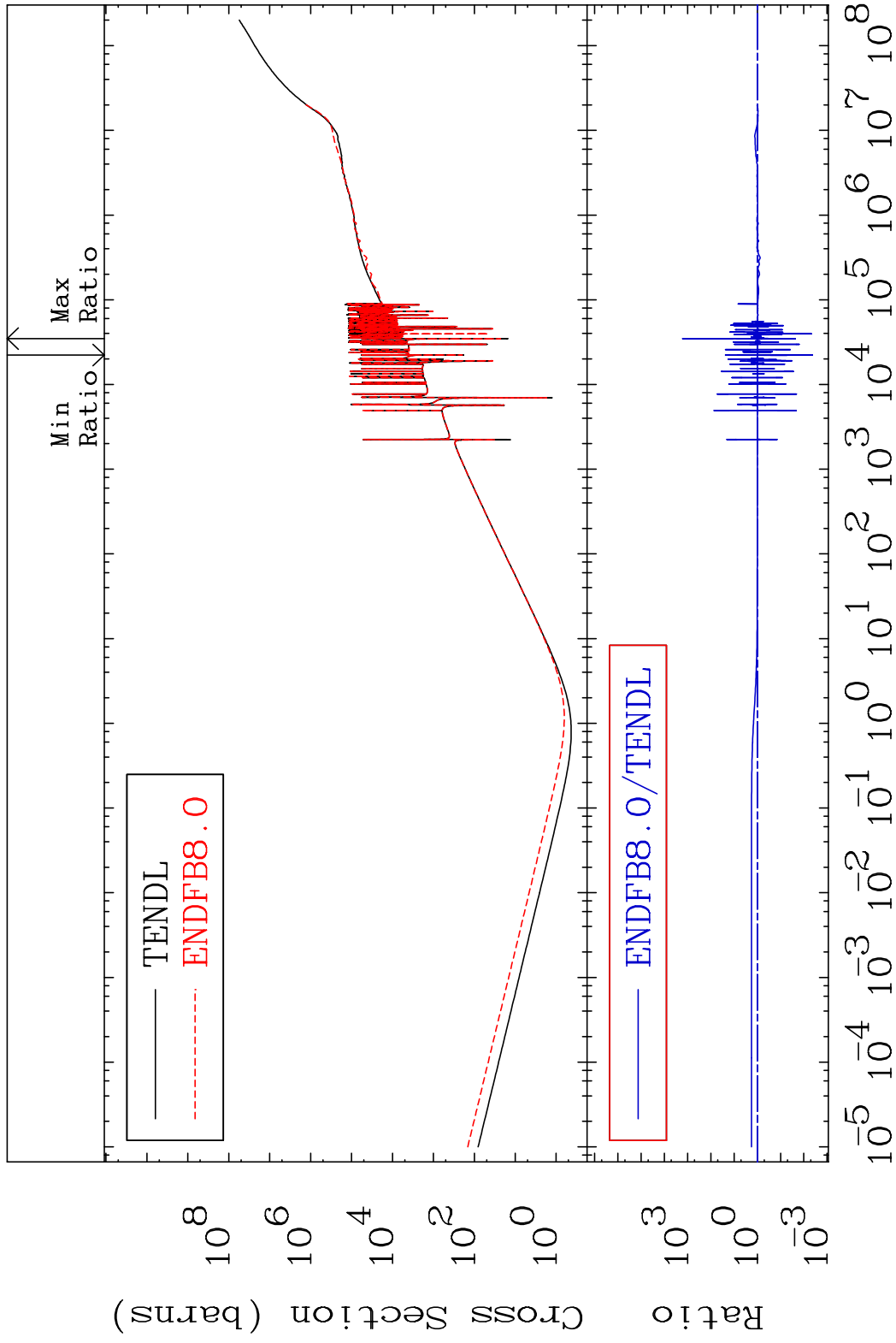


MAT 4037 Total photon (eV-barns) 40-Zr-94  
 Cross Section -99.99 To 9999. %



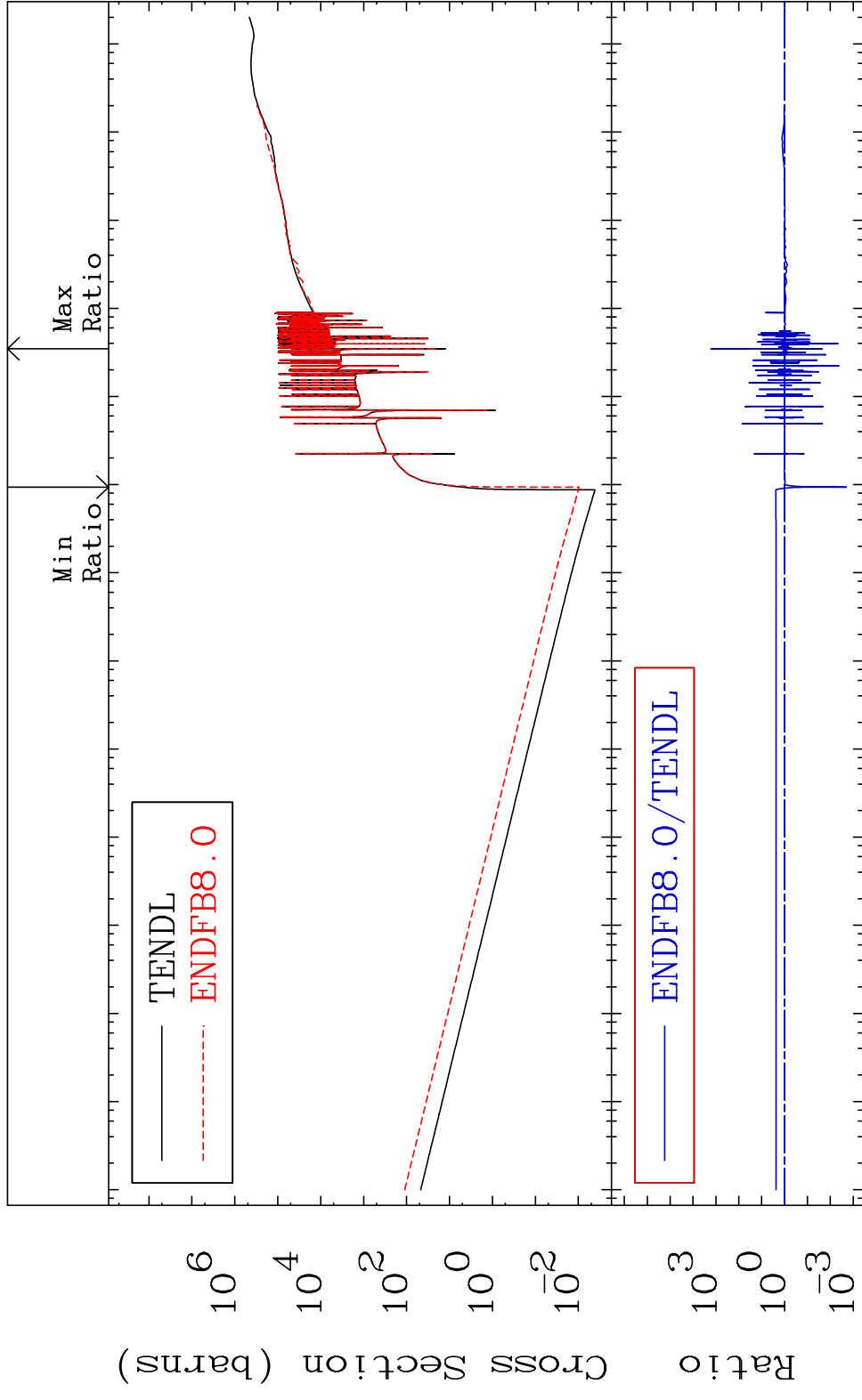
40 Incident Energy (eV) 40-Zr-94

MAT 4037 Total kinematic kerma (high limit) 40-Zr-94  
Cross Section -99.58 To 9999. %



41 Incident Energy (eV) 40-Zr-94

MAT 4037      Dpa total (eV-barns)      40-Zr-94  
 Cross Section      -99.80 To 9999. %



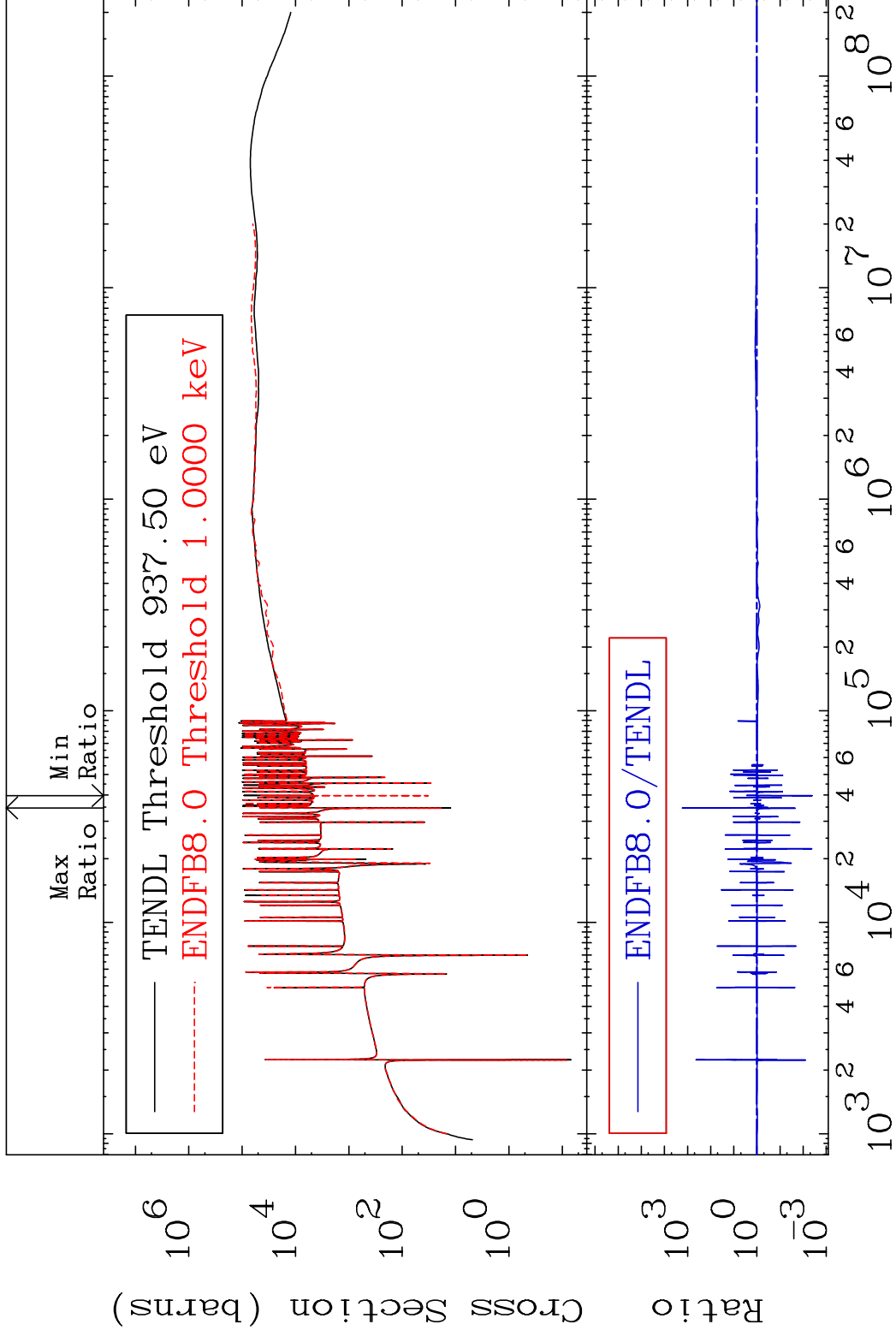
42      Incident Energy (eV)      40-Zr-94

MAT 4037

Dpa elastic (mt2)

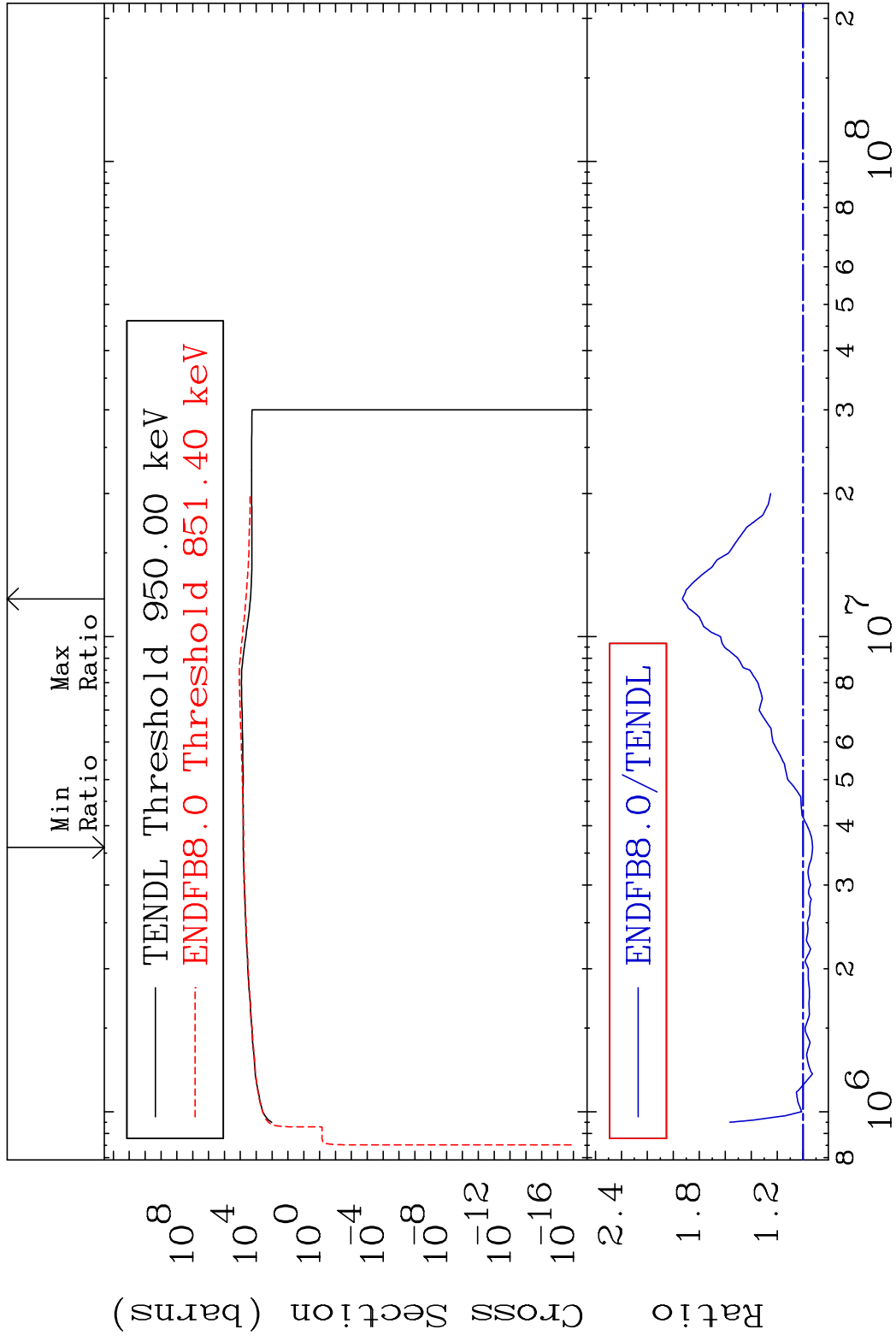
40-Zr-94

Cross Section -99.60 To 9999. %



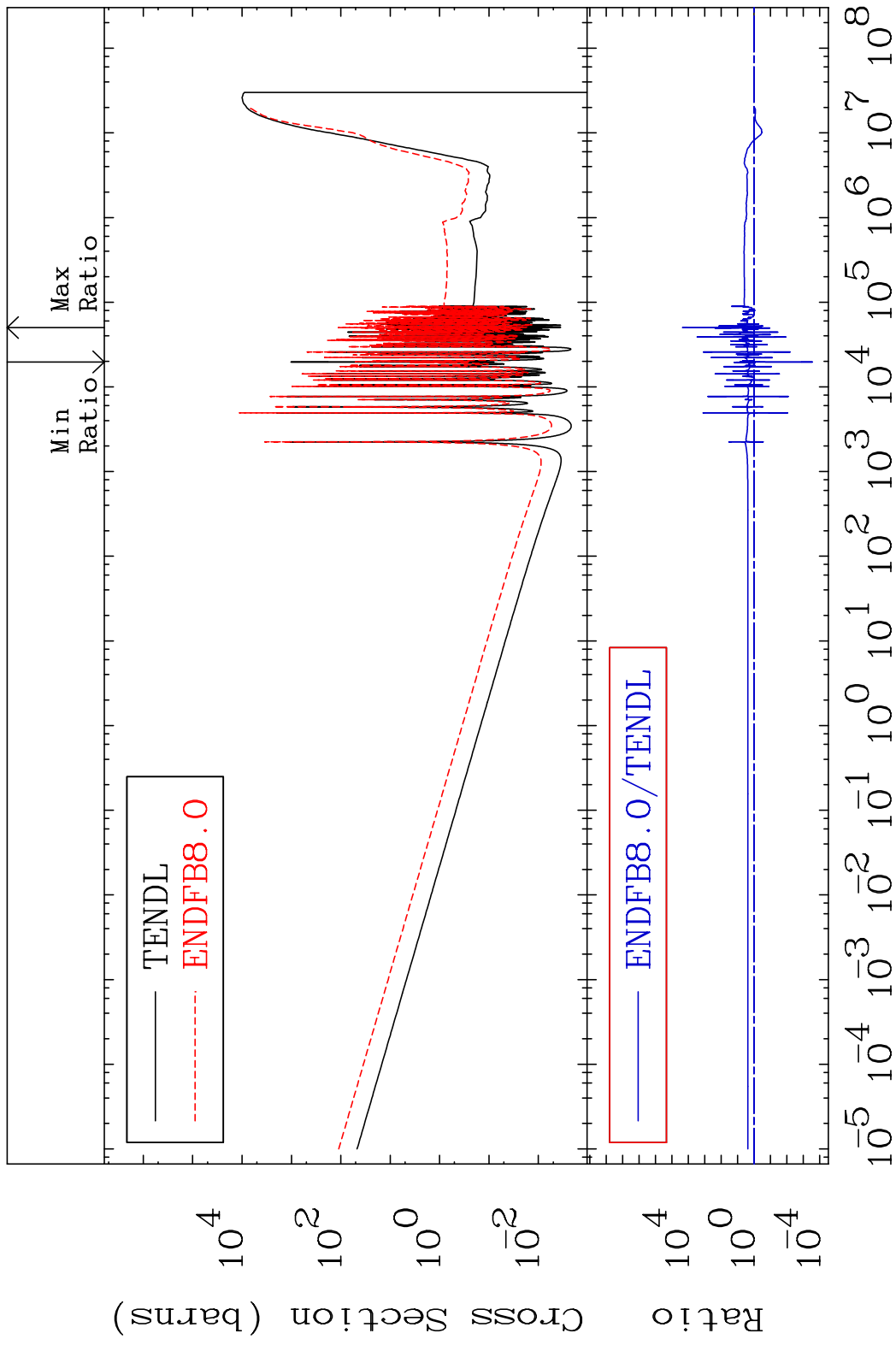
40-Zr-94

MAT 4037      Dpa inelastic (mt51-91)      40-Zr-94  
 Cross Section      -7.261 To 93.04 %



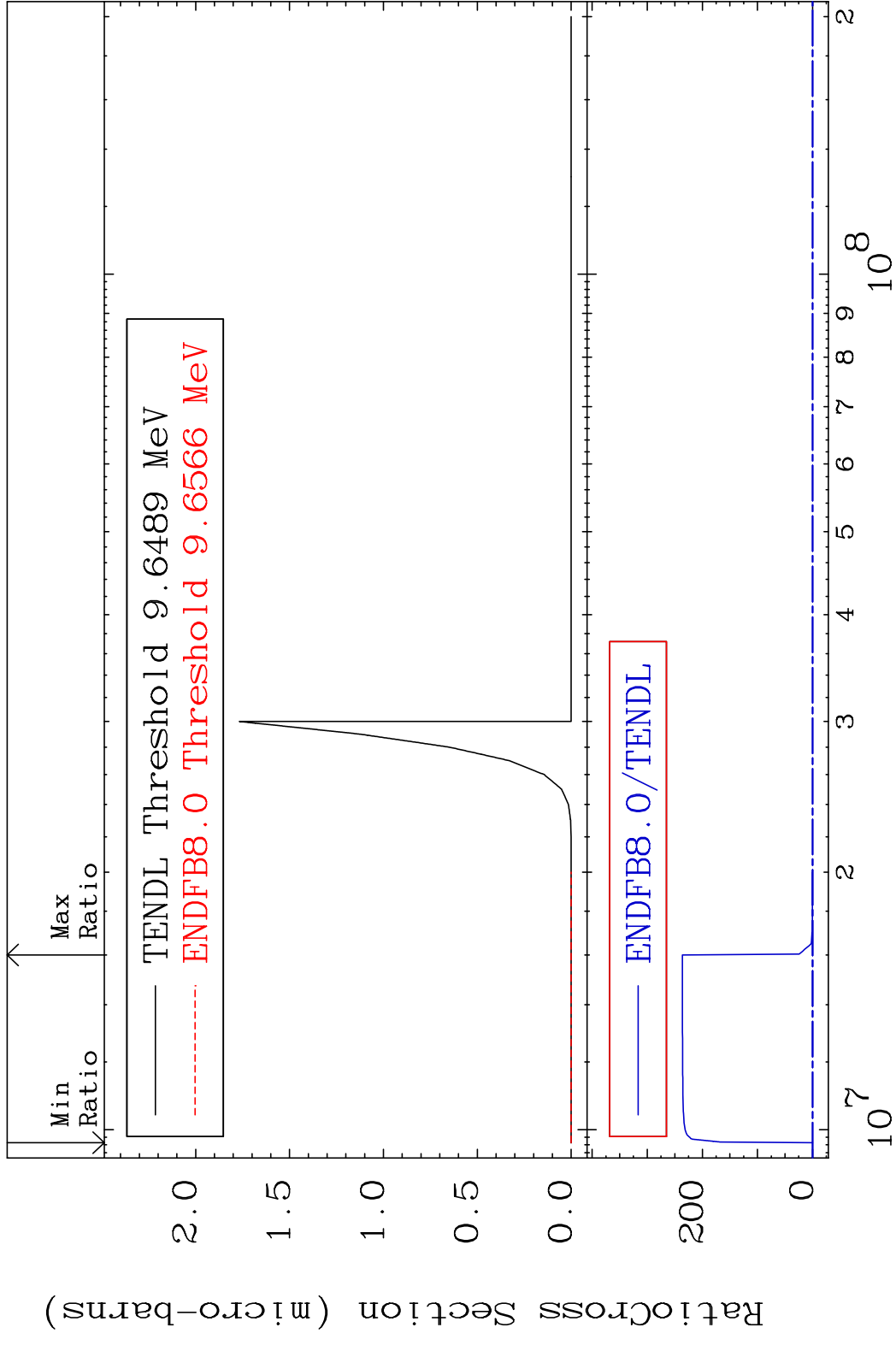
44      Incident Energy (eV)      40-Zr-94

MAT 4037 Dpa disappearance (mt102 -120) 40-Zr-94  
 Cross Section -99.97 To 9999. %



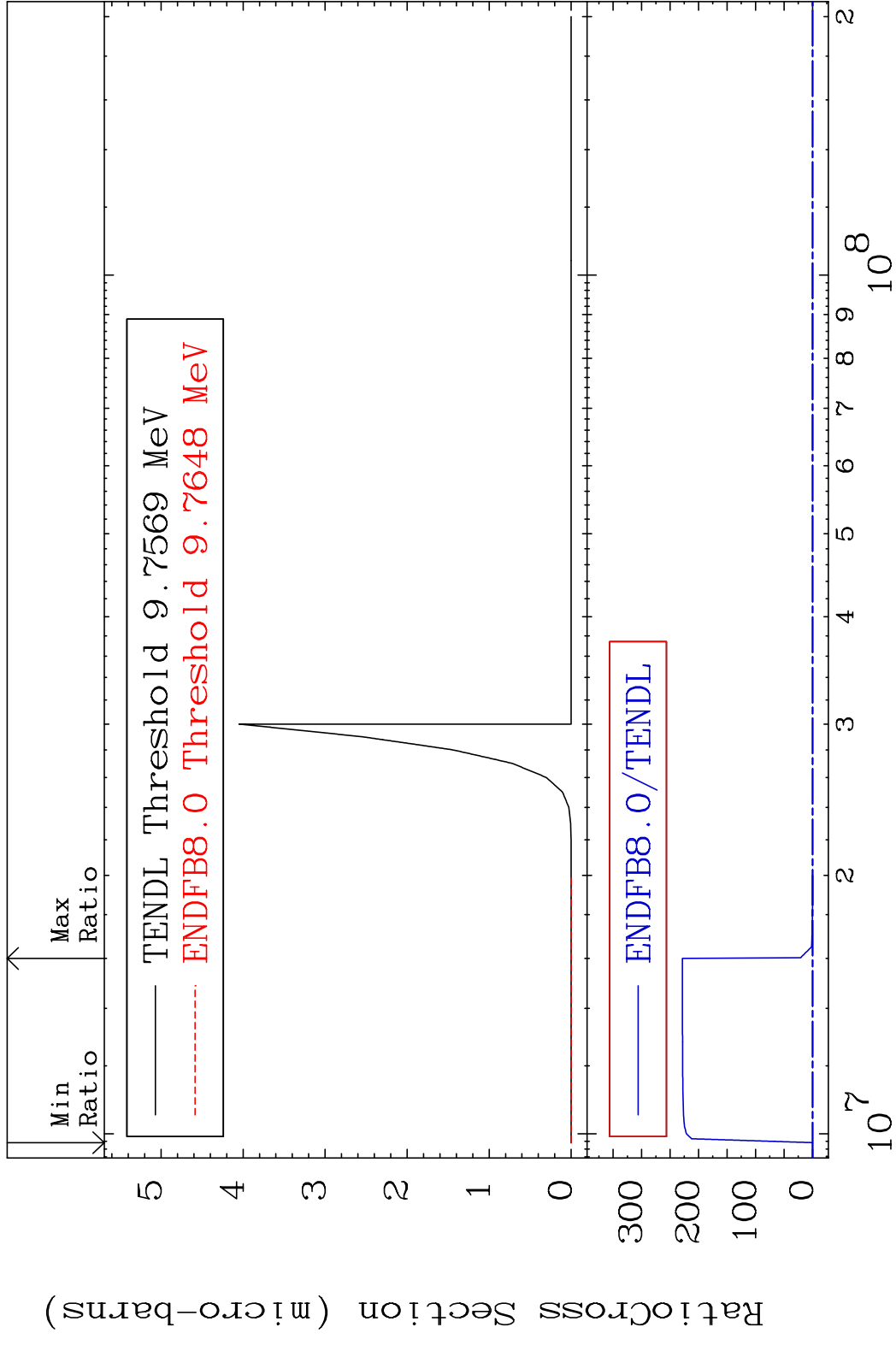
45 Incident Energy (eV) 40-Zr-94

MAT 4037 (n, p)  $\alpha$ :37-Rb-90g 40-Zr-94  
 Radionuclide Production Cross Section Ratio 9999. %



46 Incident Energy (eV) 40-Zr-94

MAT 4037 (n,p)  $\alpha$ :37-Rb-90m1 40-Zr-94  
 Radionuclide Production Cross Section Ratio 9999. %



47 Incident Energy (eV) 40-Zr-94