

Program Complot  
(Version 2018-1)

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)

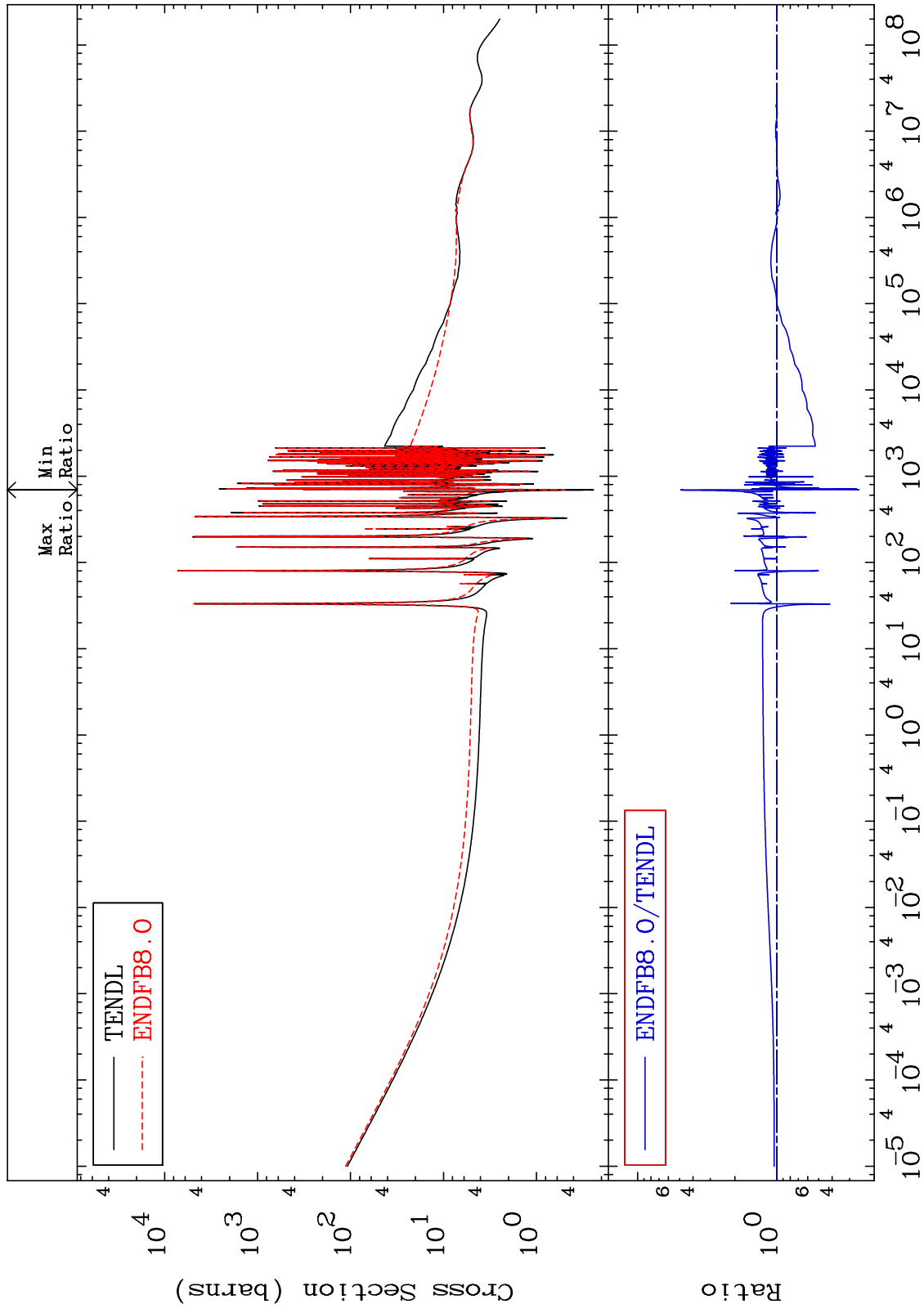
Press Mouse Button to Start

MAT 6437

Total  
Cross Section

64-Gd-156

-74.31 To 390.2 %



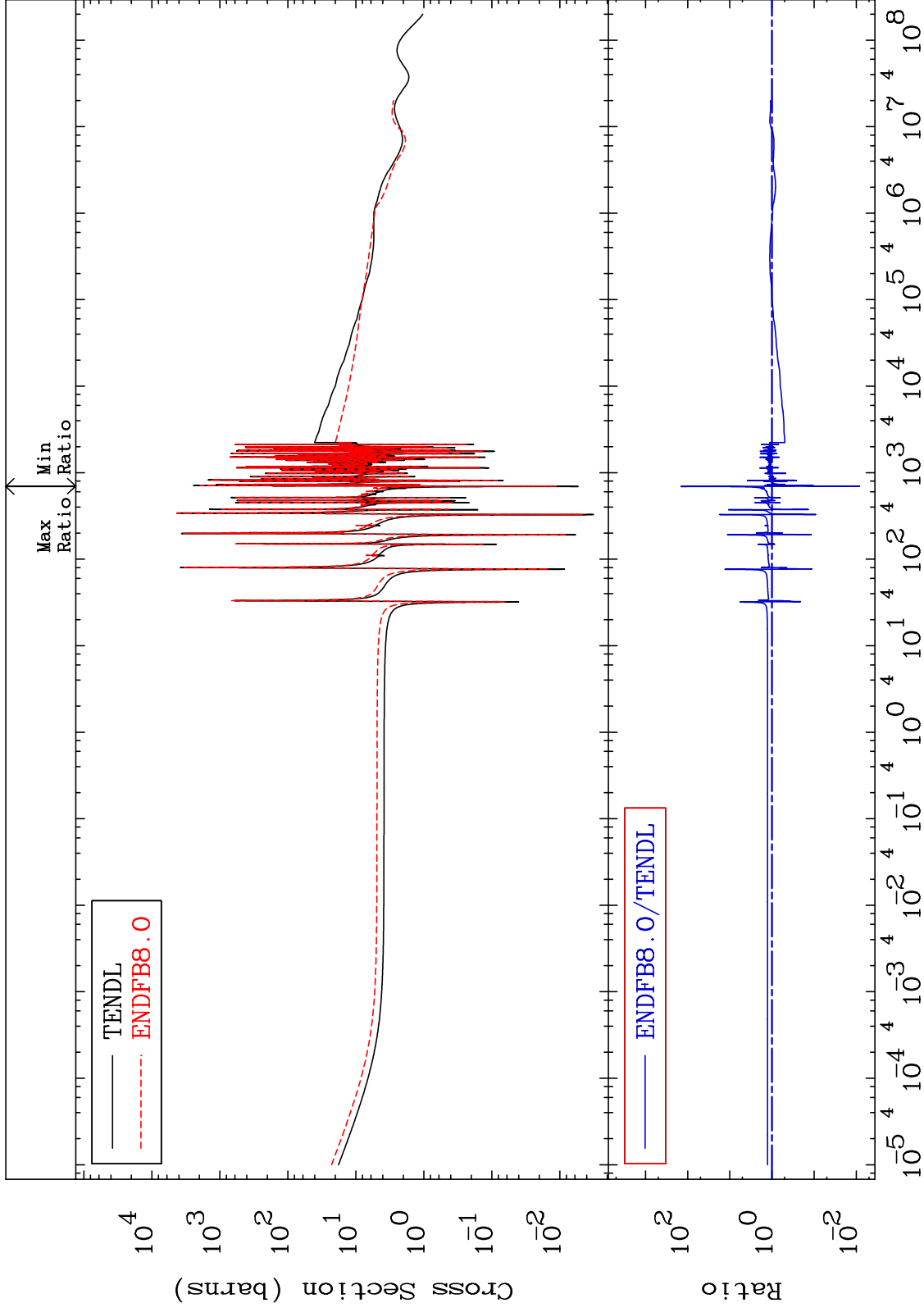
MAT 6437

Elastic

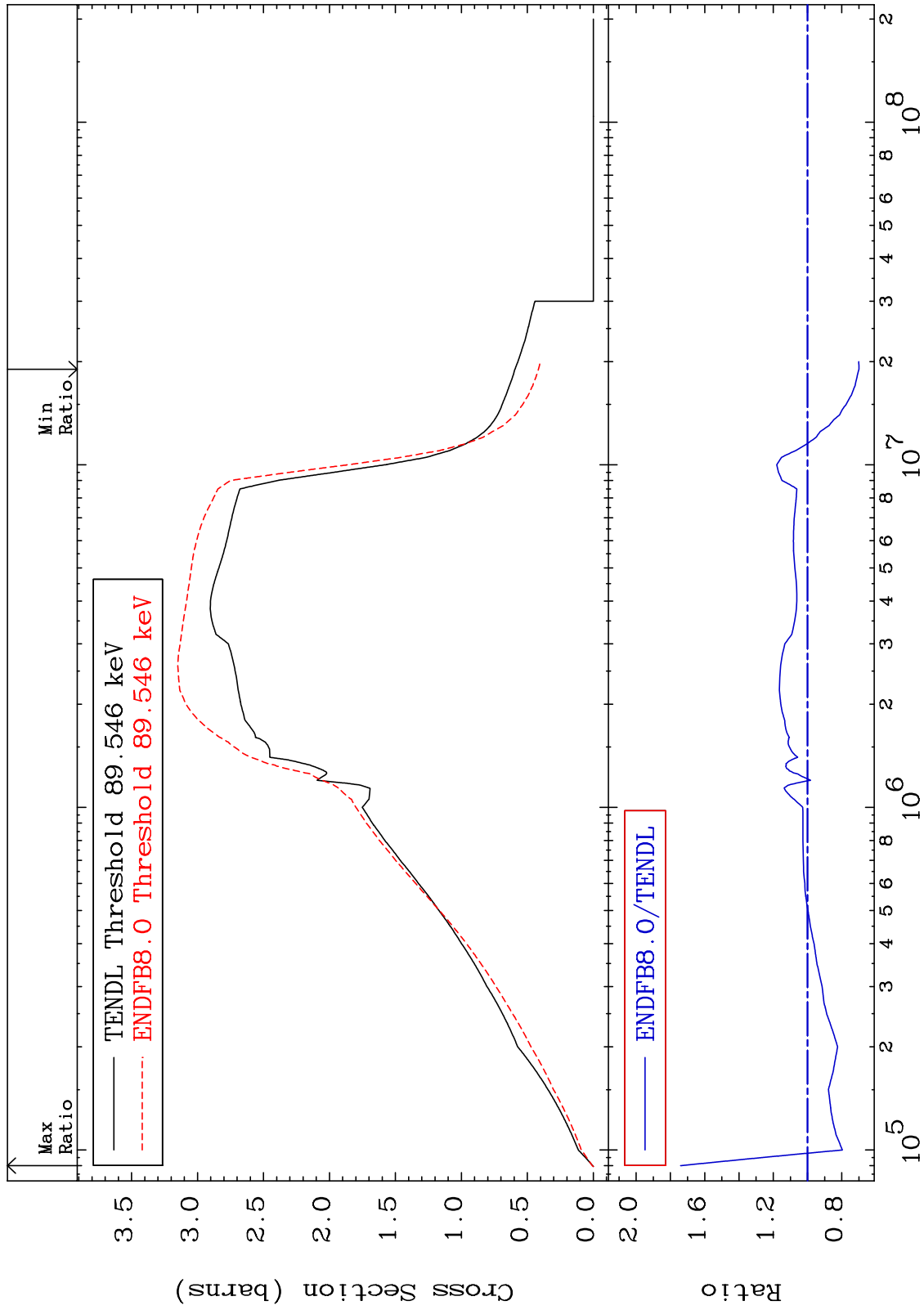
64-Gd-156

Cross Section

-99.17 To 9999. %



MAT 6437 Inelastic Cross Section 64-Gd-156 -30.04 To 74.03 %

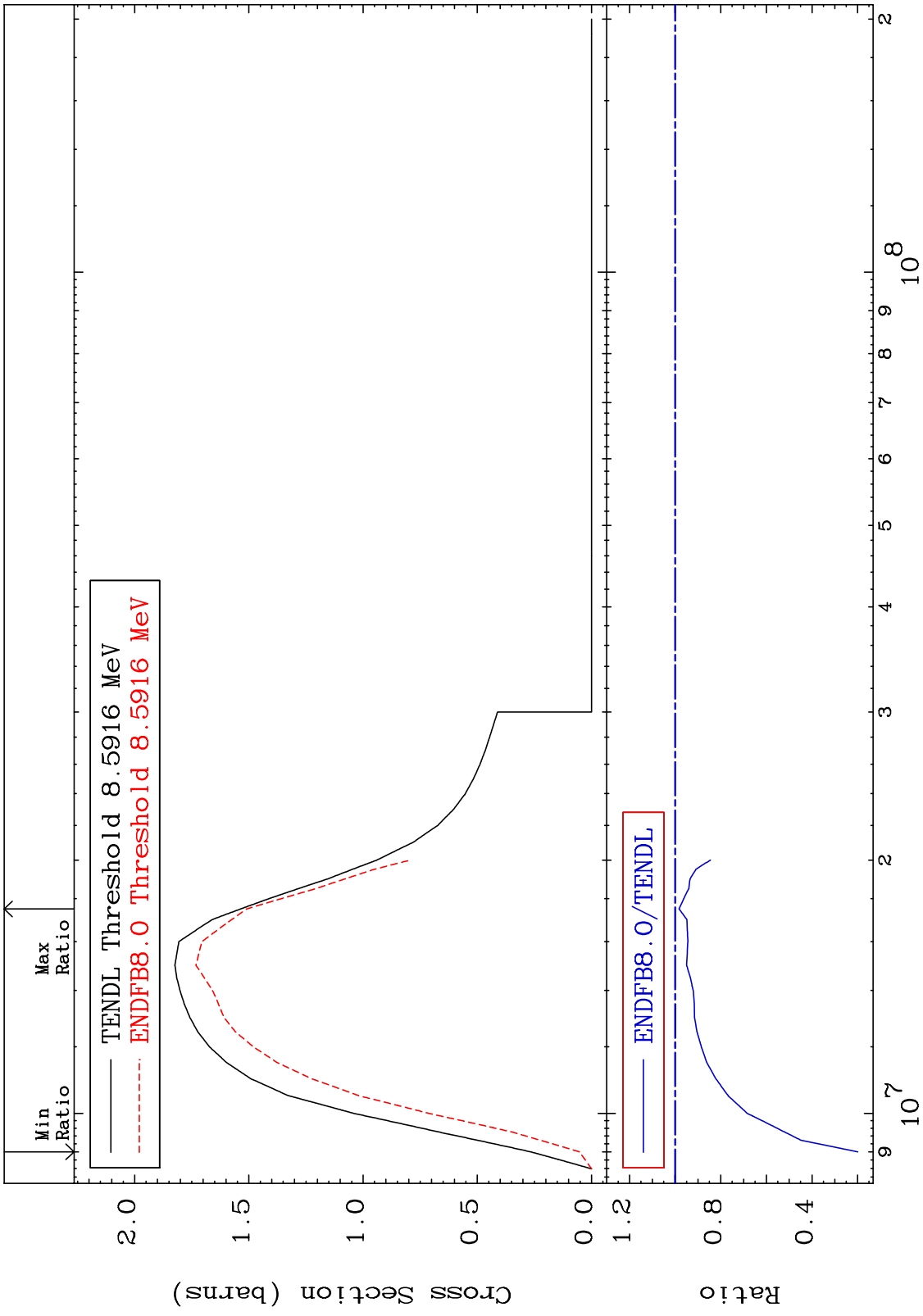


64-Gd-156

Incident Energy (eV)

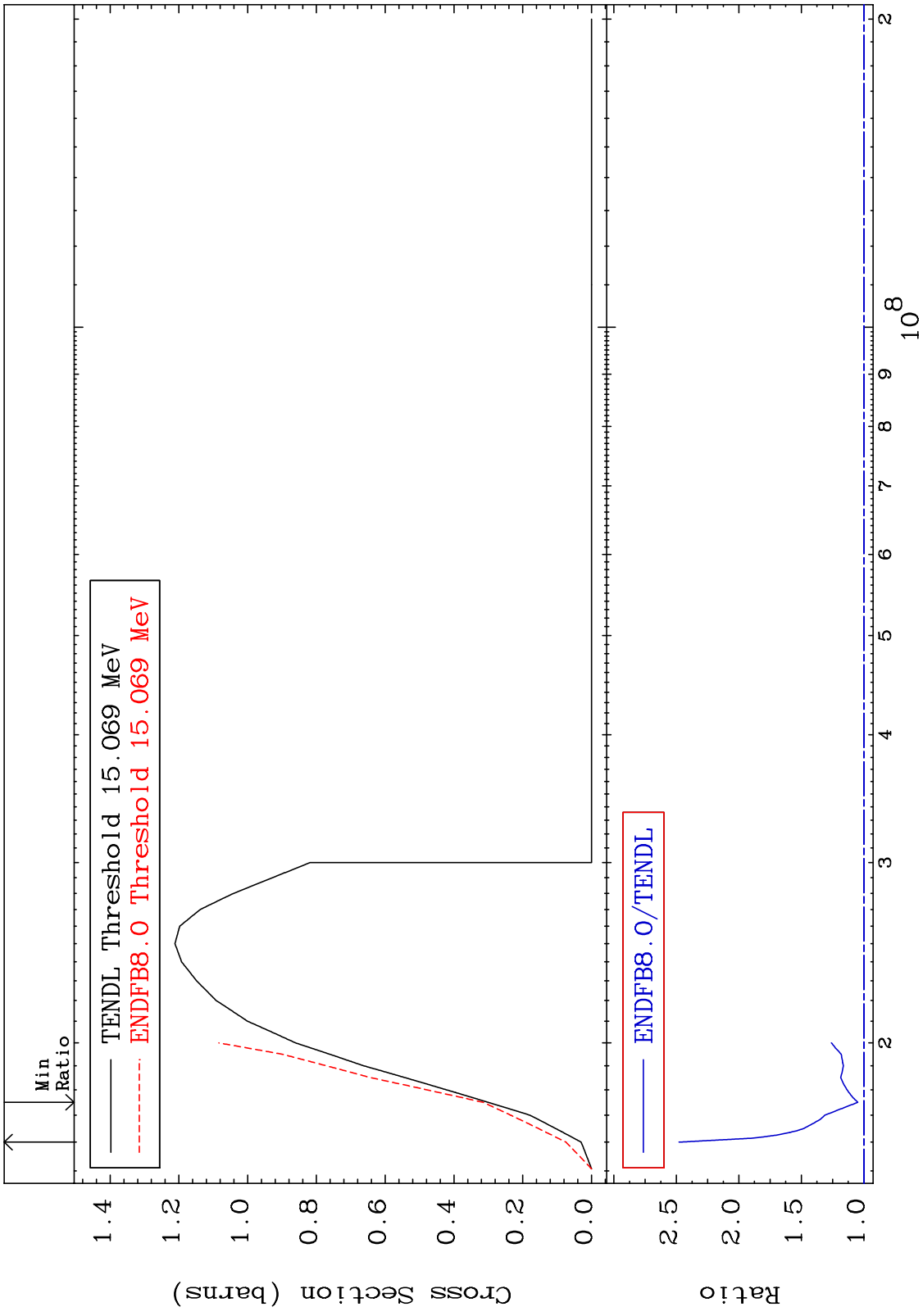
3

MAT 6437 (n,2n) Cross Section 64-Gd-156 -80.09 To -1.713%



4 64-Gd-156 Incident Energy (eV)

MAT 6437 (n,3n) Cross Section 64-Gd-156 To 147.9 %  
 4.806



MAT 6437

(n, n')  $\alpha$

64-Gd-156

-95.85 To 104.5 %

Cross Section

Min Ratio

Max Ratio

TENDL Threshold 198.50 keV  
ENDFB8.0 Threshold 6.5000 MeV

Cross Section (milli-barns)

30

25

20

15

10

5

0

ENDFB8.0/TENDL

10<sup>0</sup>

10<sup>-1</sup>

4

4

2

3

4

5

6

7

8

10<sup>7</sup>

10<sup>8</sup>

2

3

4

5

6

7

8

6

Incident Energy (eV)

64-Gd-156

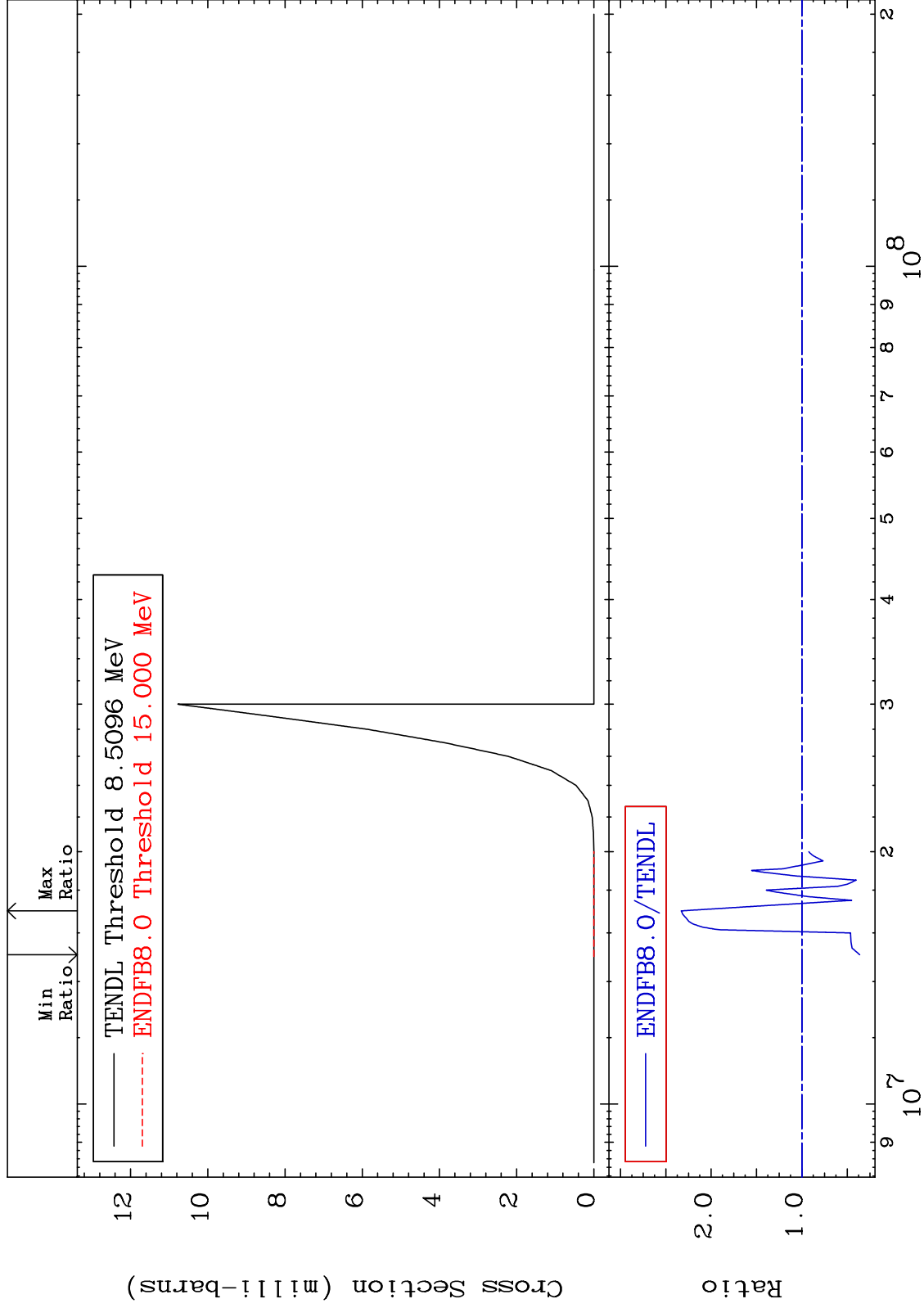
MAT 6437

(n,2n)  $\alpha$

64-Gd-156

Cross Section

-63.81 To 133.0 %



7

Incident Energy (eV)

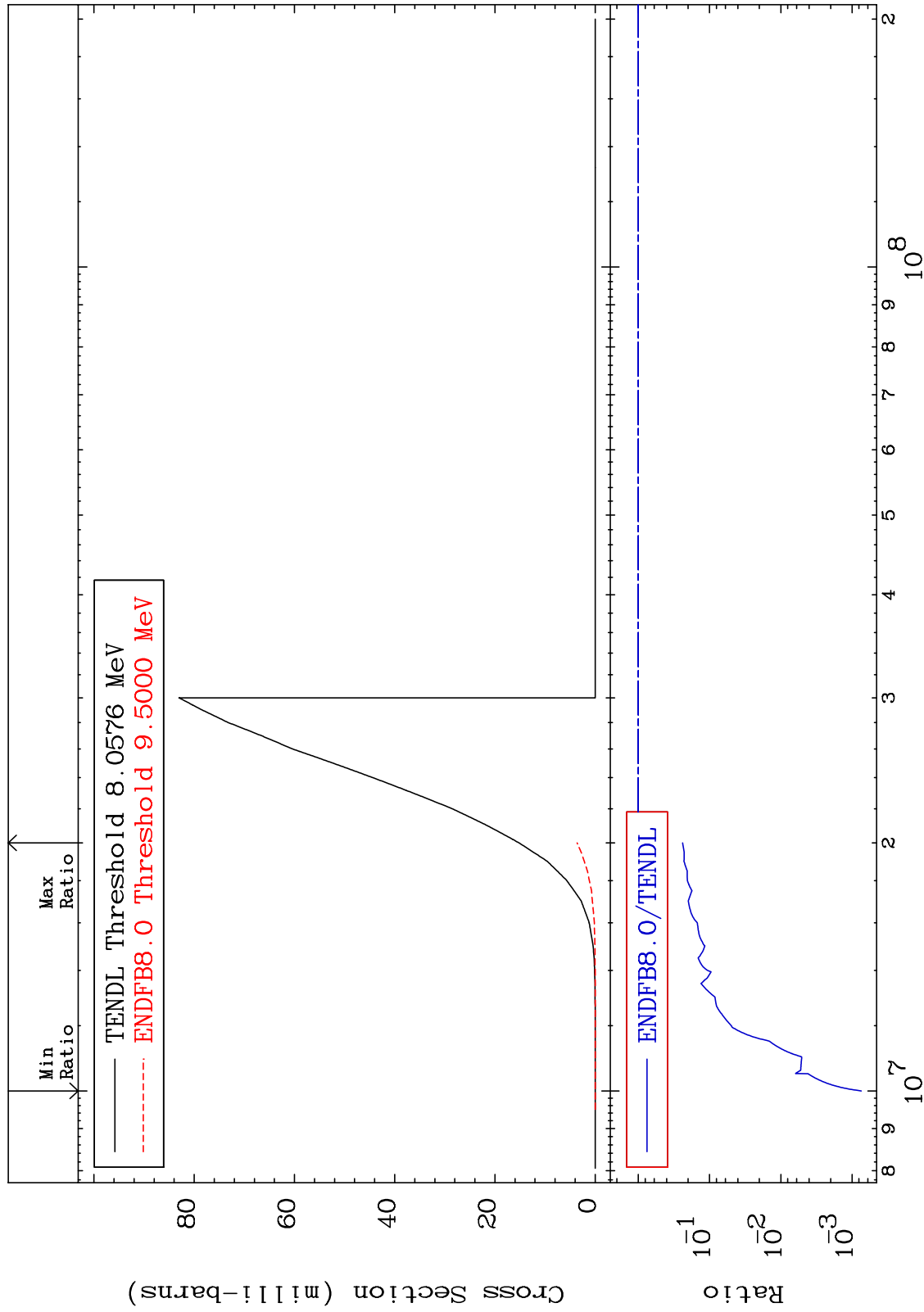
64-Gd-156



MAT 6437

(n,n') p  
Cross Section

64-Gd-156  
-99.93 To -76.17%

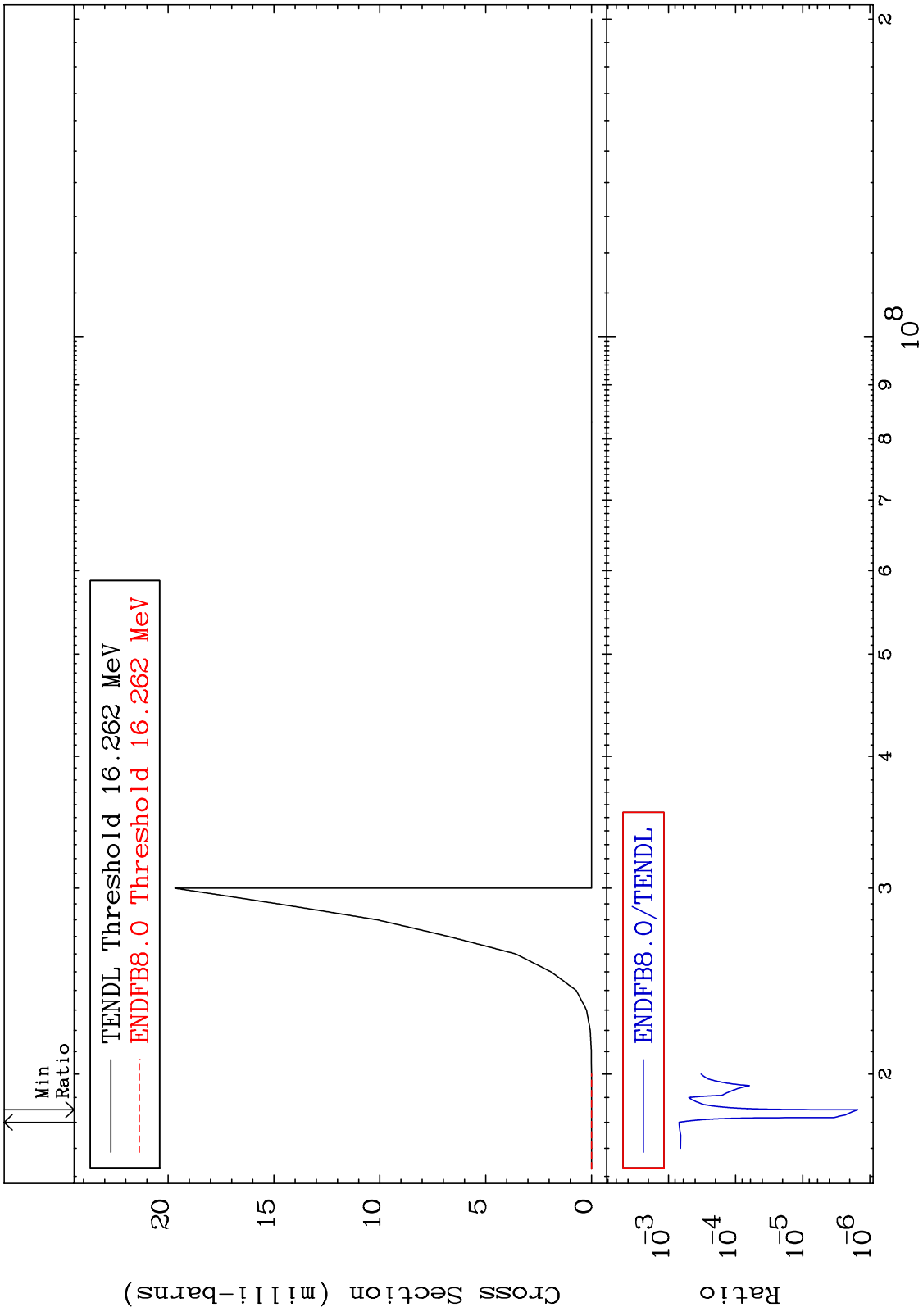


8

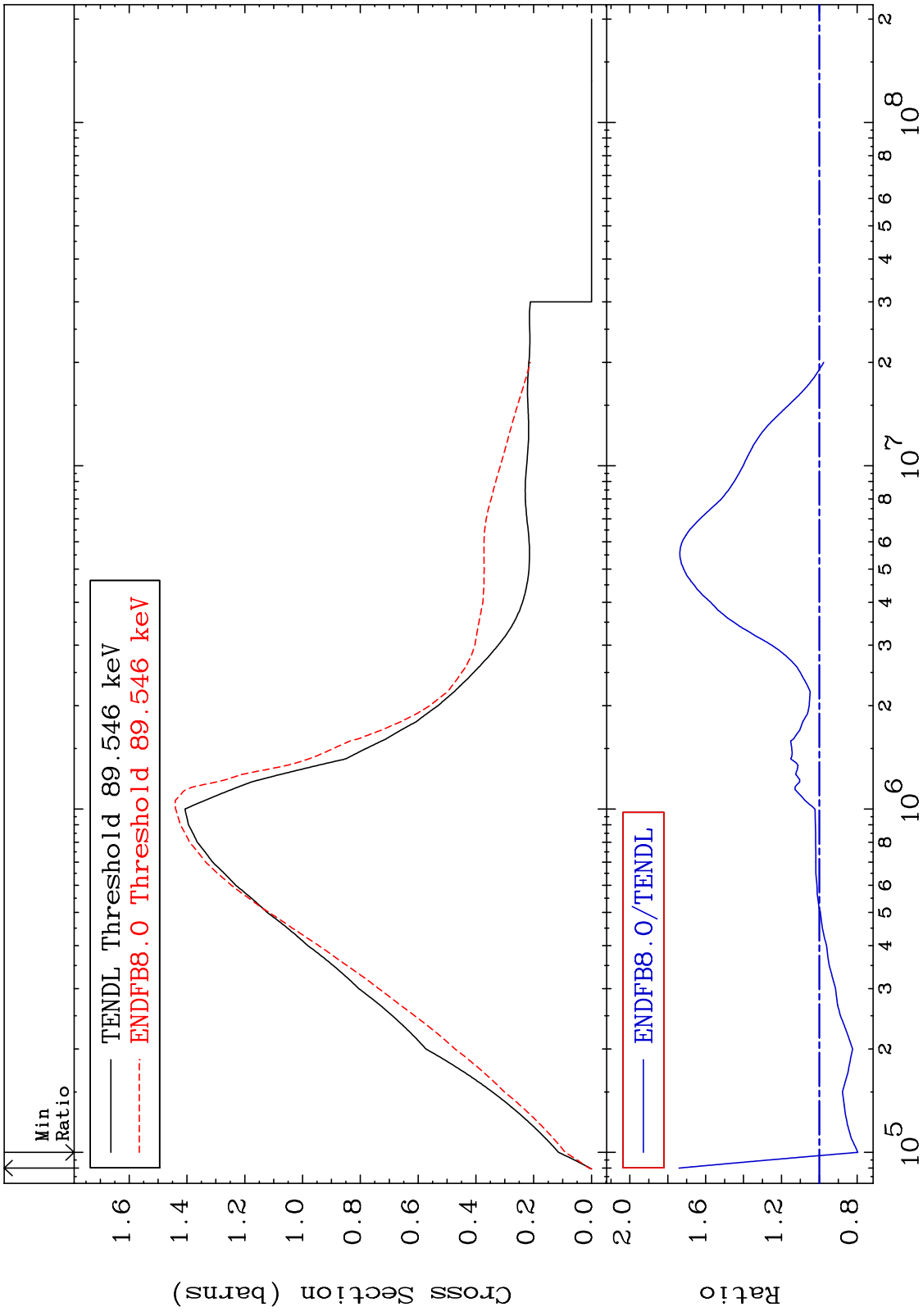
Incident Energy (eV)

64-Gd-156

MAT 6437 (n,2n) p 64-Gd-156  
 Cross Section -100.0 To -99.93%

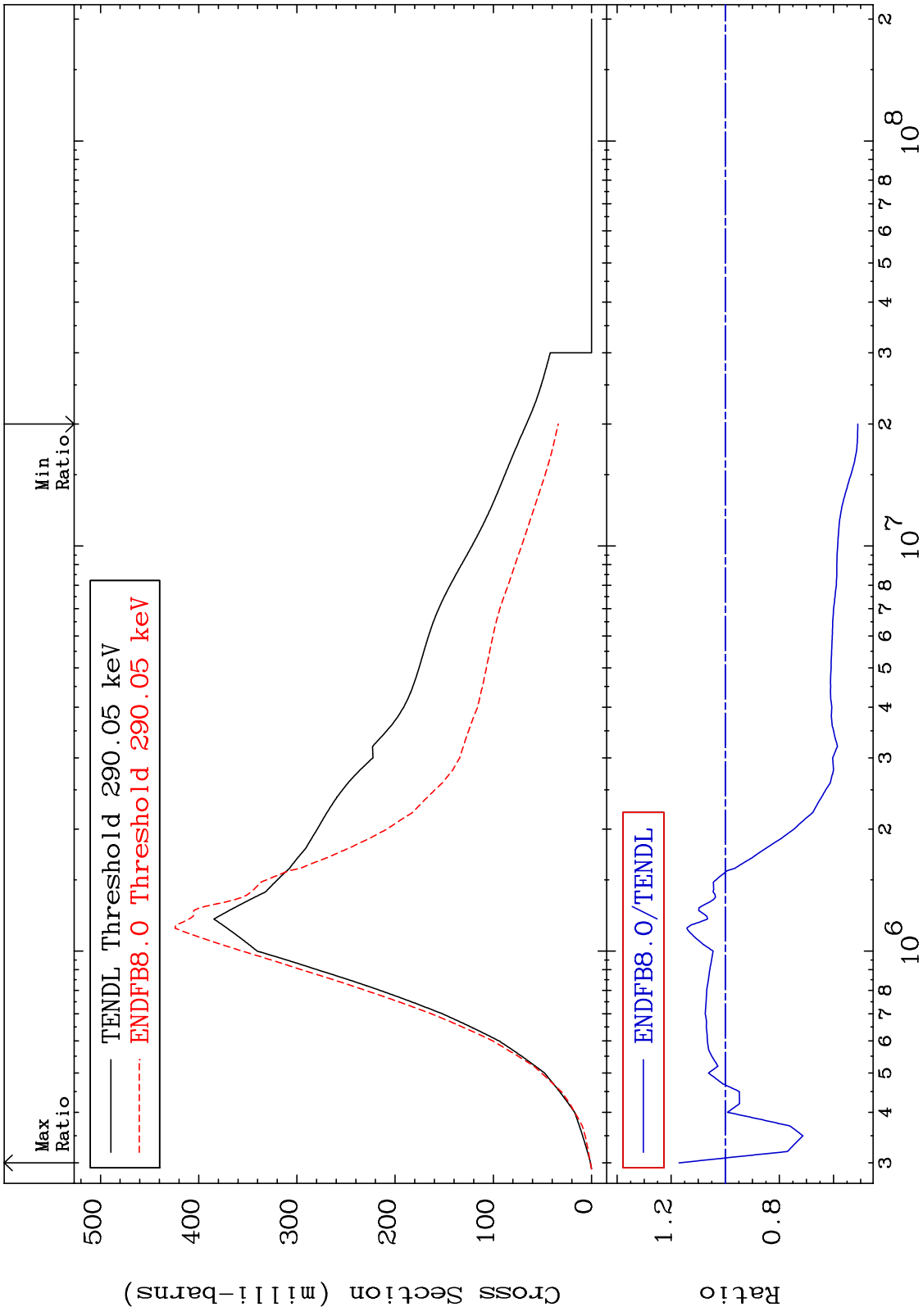


MAT 6437 MT= 51 (n,n') Level Cross Section 64-Gd-156 -20.34 To 74.03 %



64-Gd-156

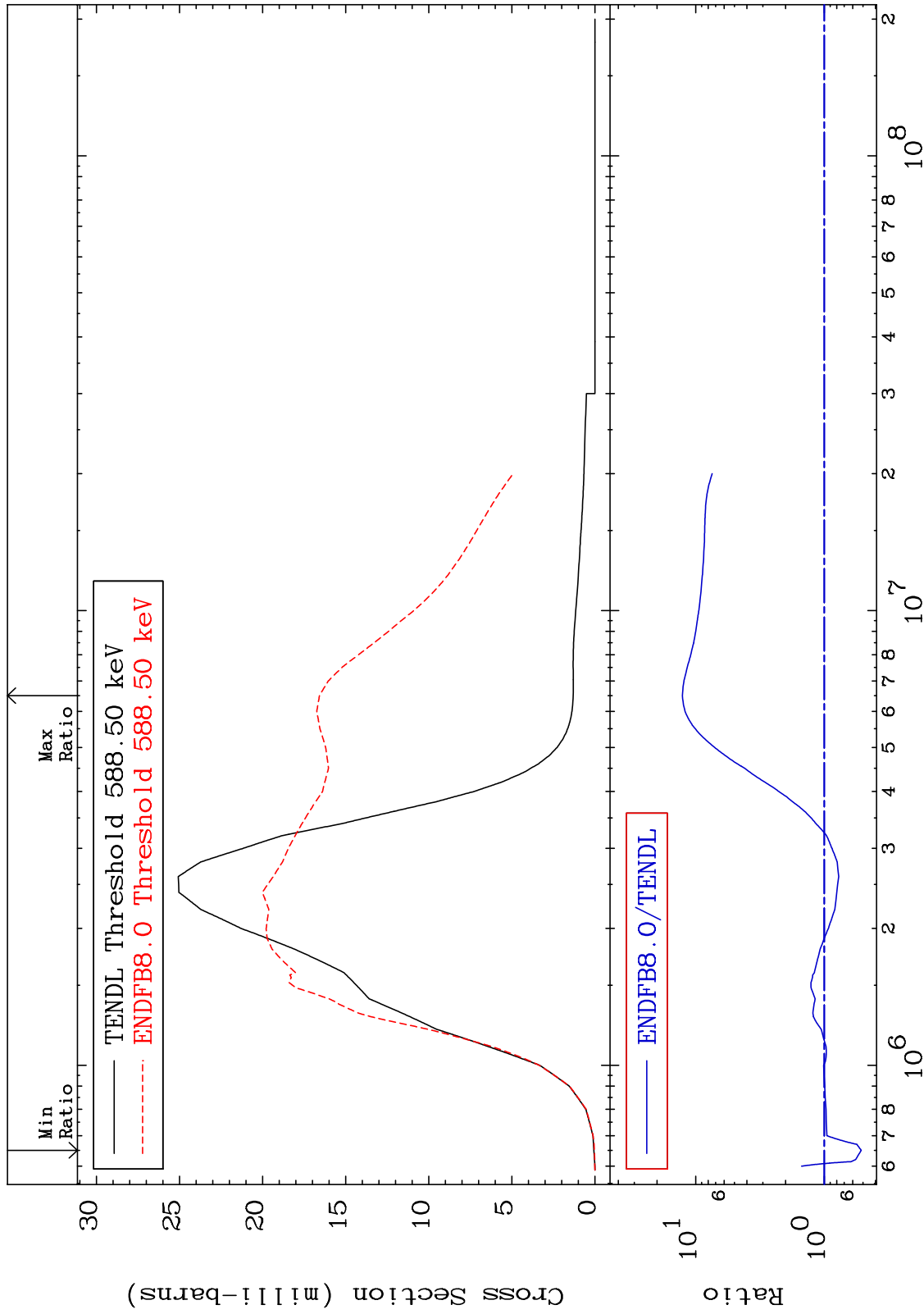
MAT 6437 MT= 52 (n,n') Level Cross Section 64-Gd-156 -48.98 To 17.09 %



MAT 6437

MT= 53 (n,n') Level  
Cross Section

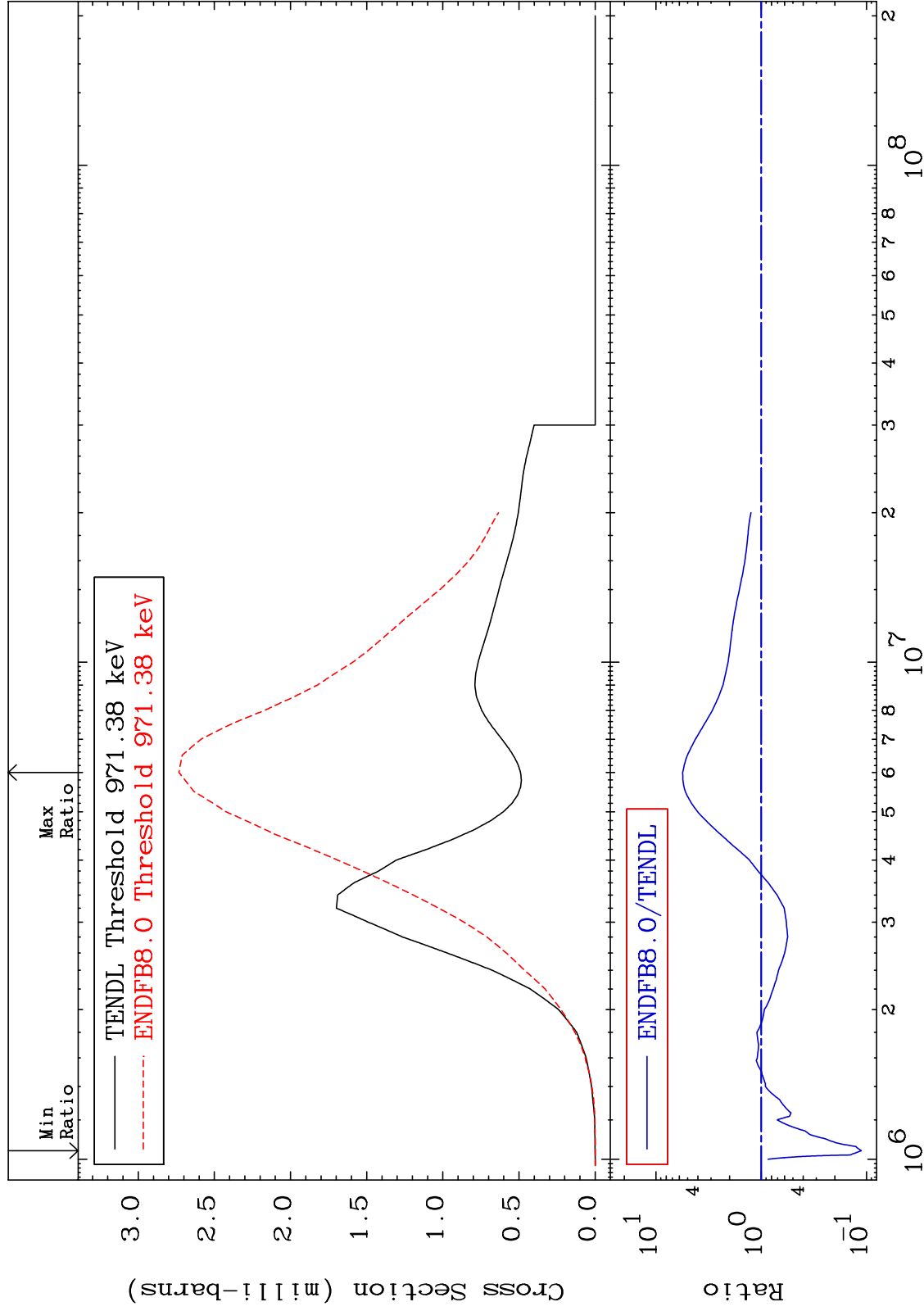
64-Gd-156  
-48.51 To 1167. %



MAT 6437

MT= 54 (n,n') Level  
Cross Section

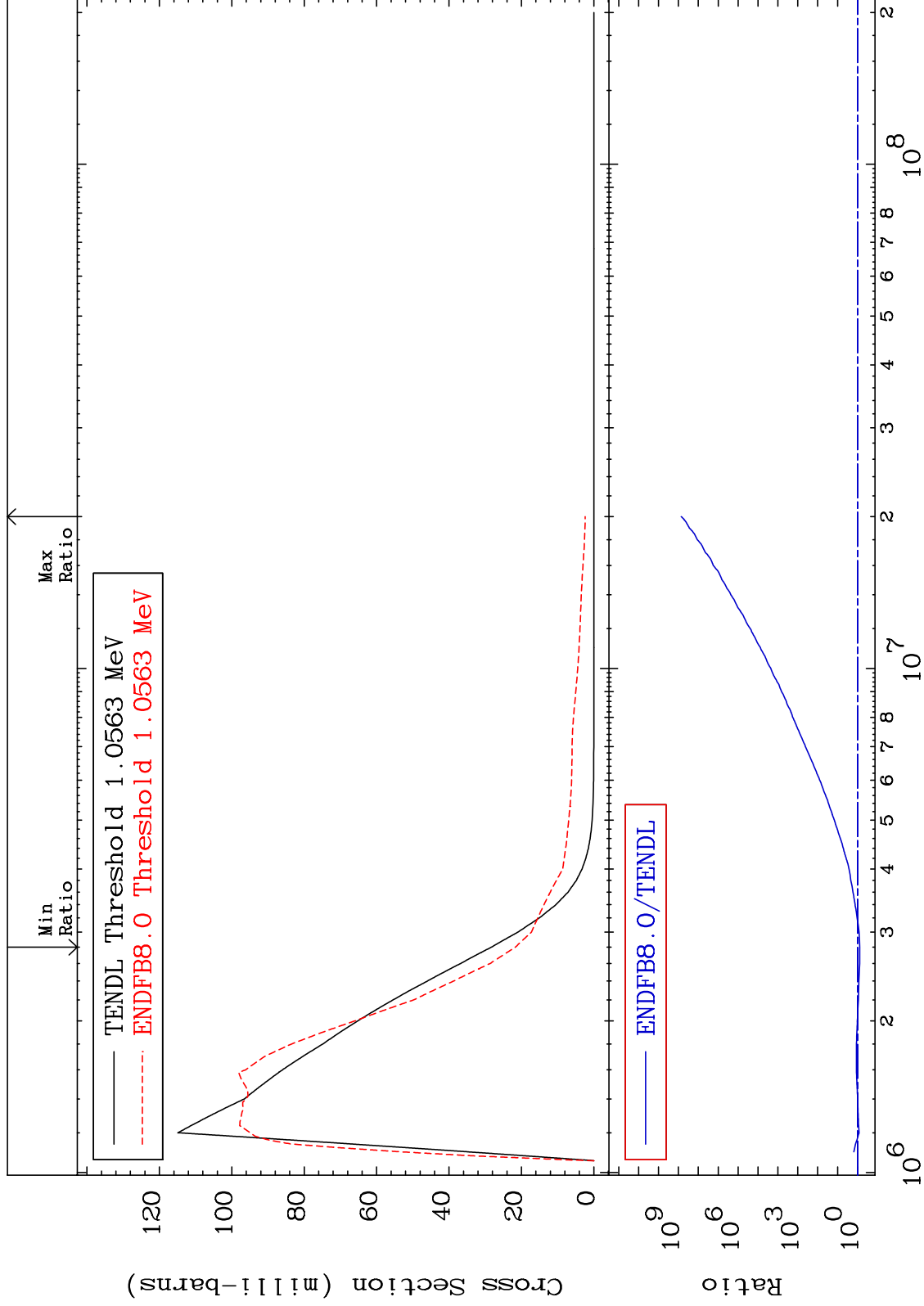
64-Gd-156  
-88.78 To 457.8 %



MAT 6437

MT= 55 (n,n') Level  
Cross Section

64-Gd-156  
-23.42 To 9999. %



14

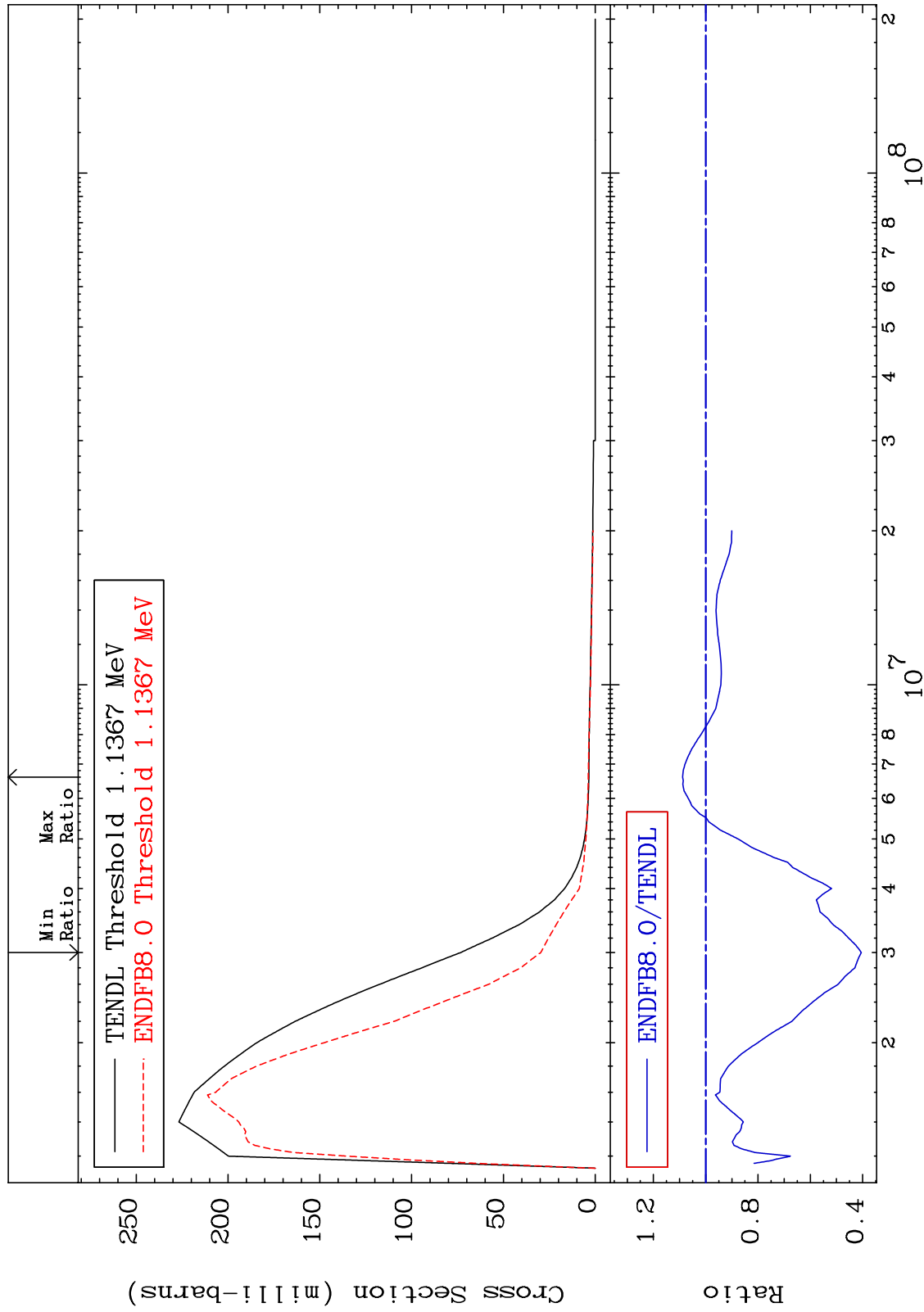
Incident Energy (eV)

64-Gd-156

MAT 6437

MT= 56 (n,n') Level  
Cross Section

64-Gd-156  
-59.50 To 8.812 %

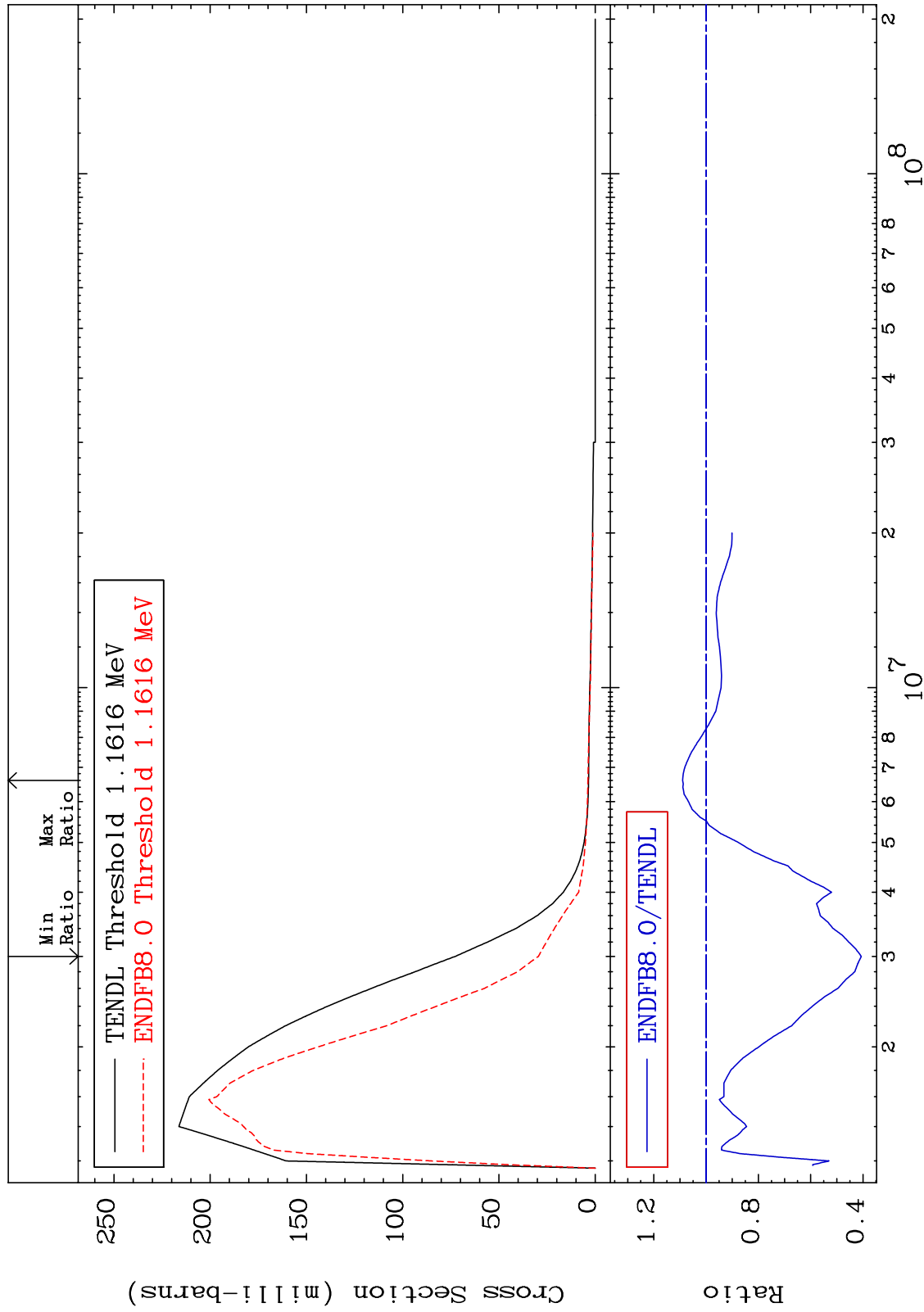




MAT 6437

MT= 57 (n,n') Level  
Cross Section

64-Gd-156  
-59.38 To 8.970 %

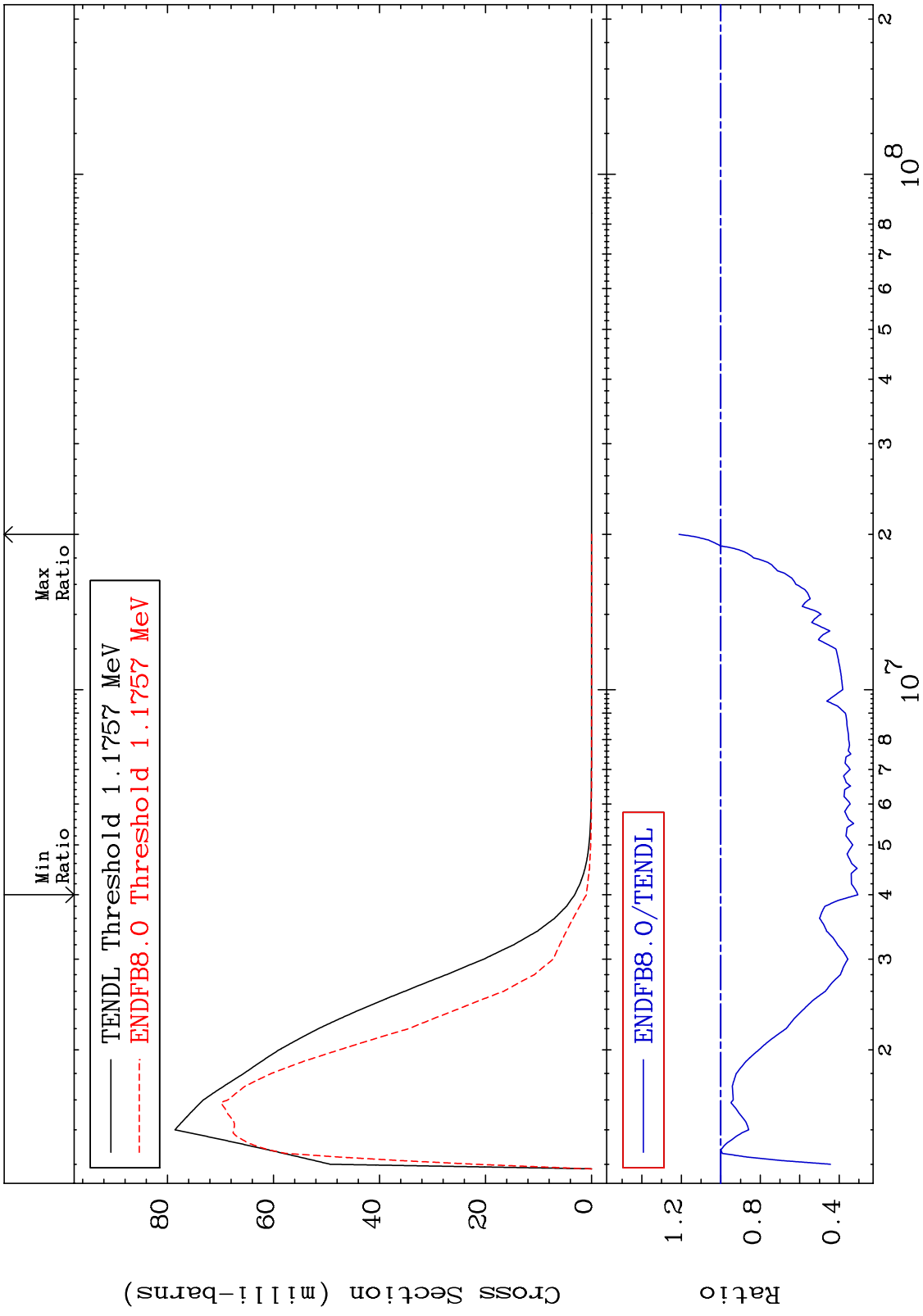


16

Incident Energy (eV)

64-Gd-156

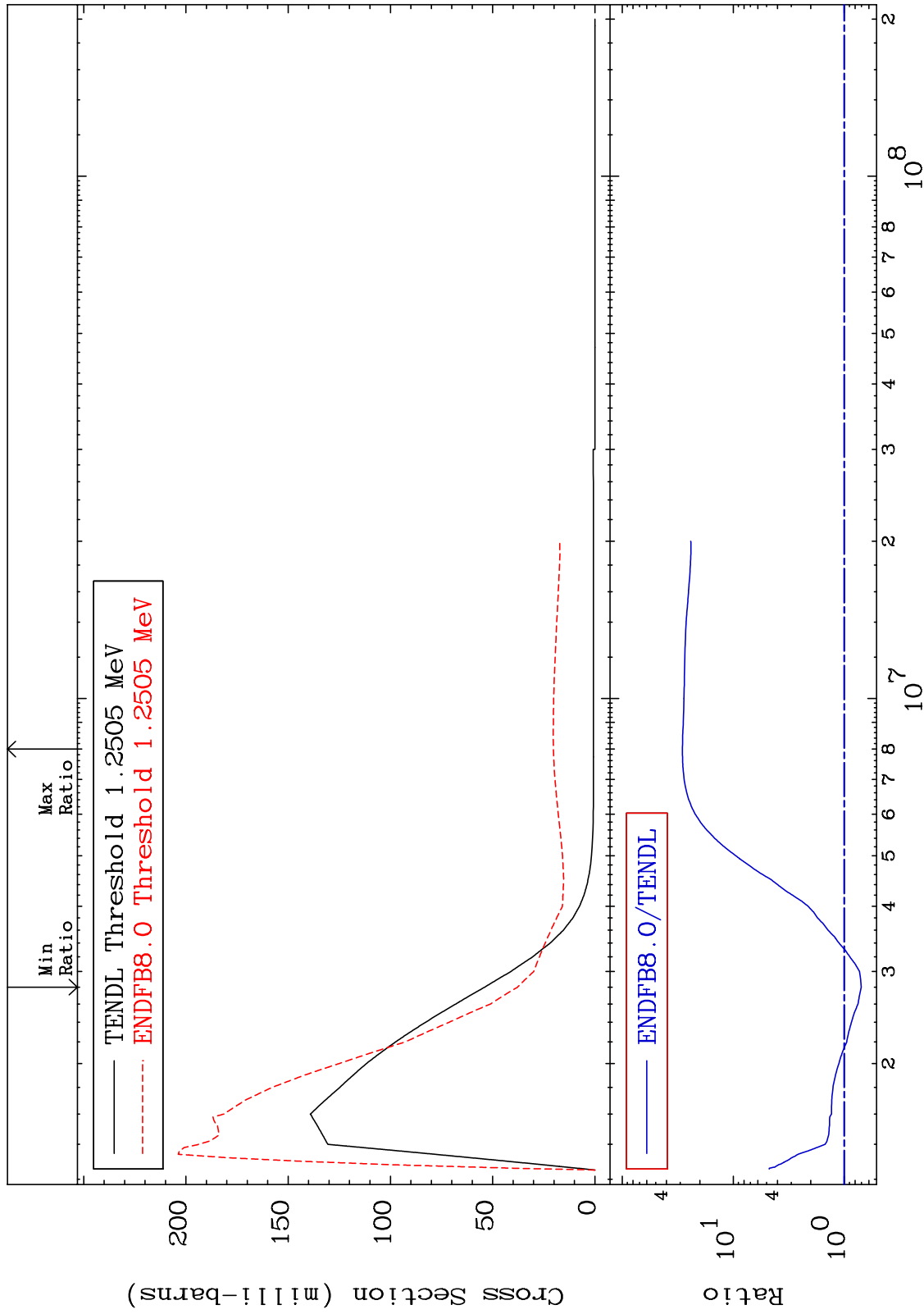
MAT 6437 MT= 58 (n,n') Level Cross Section 64-Gd-156 -69.43 To 21.16 %



MAT 6437

MT= 59 (n,n') Level  
Cross Section

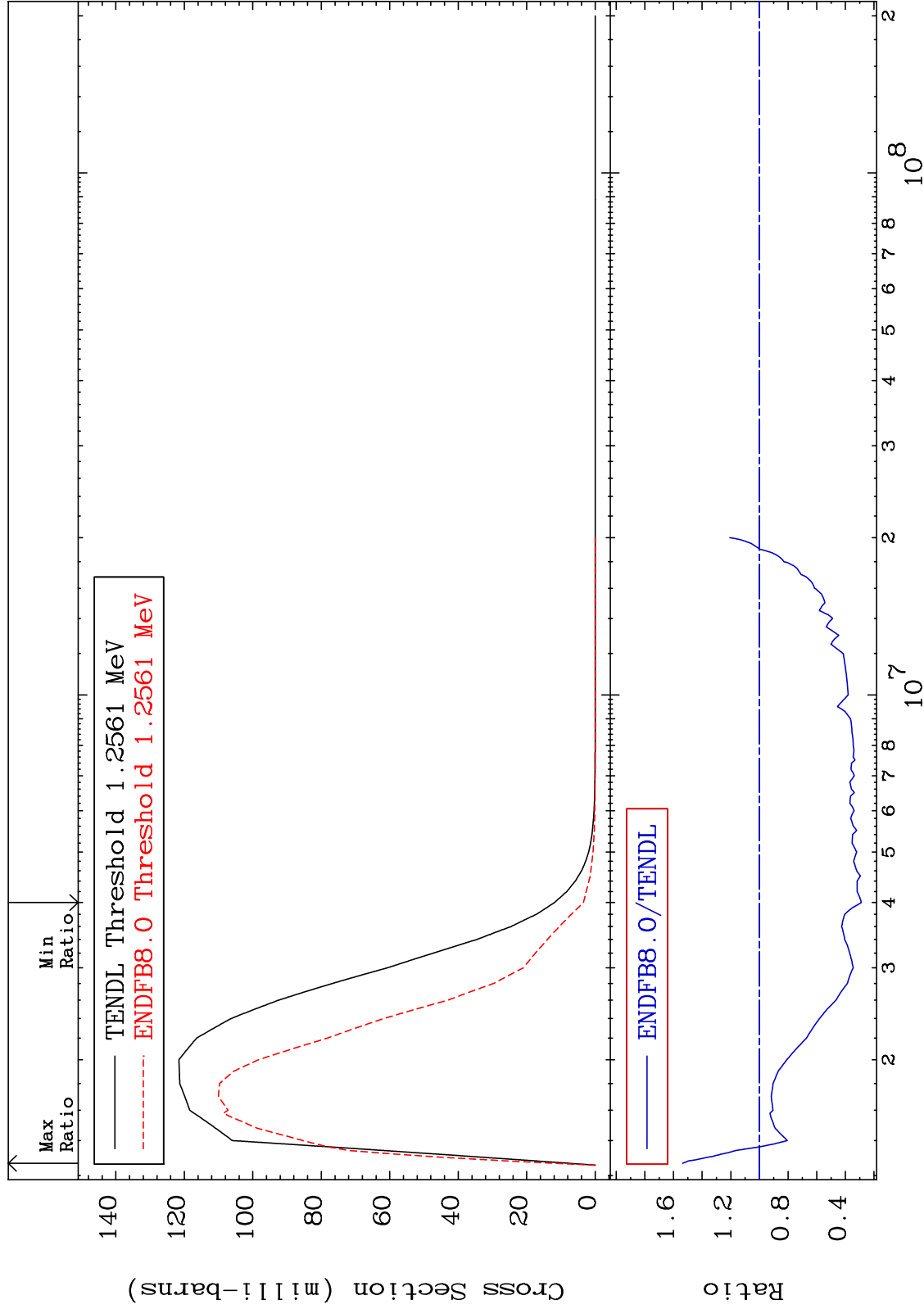
64-Gd-156  
-29.76 To 2767. %



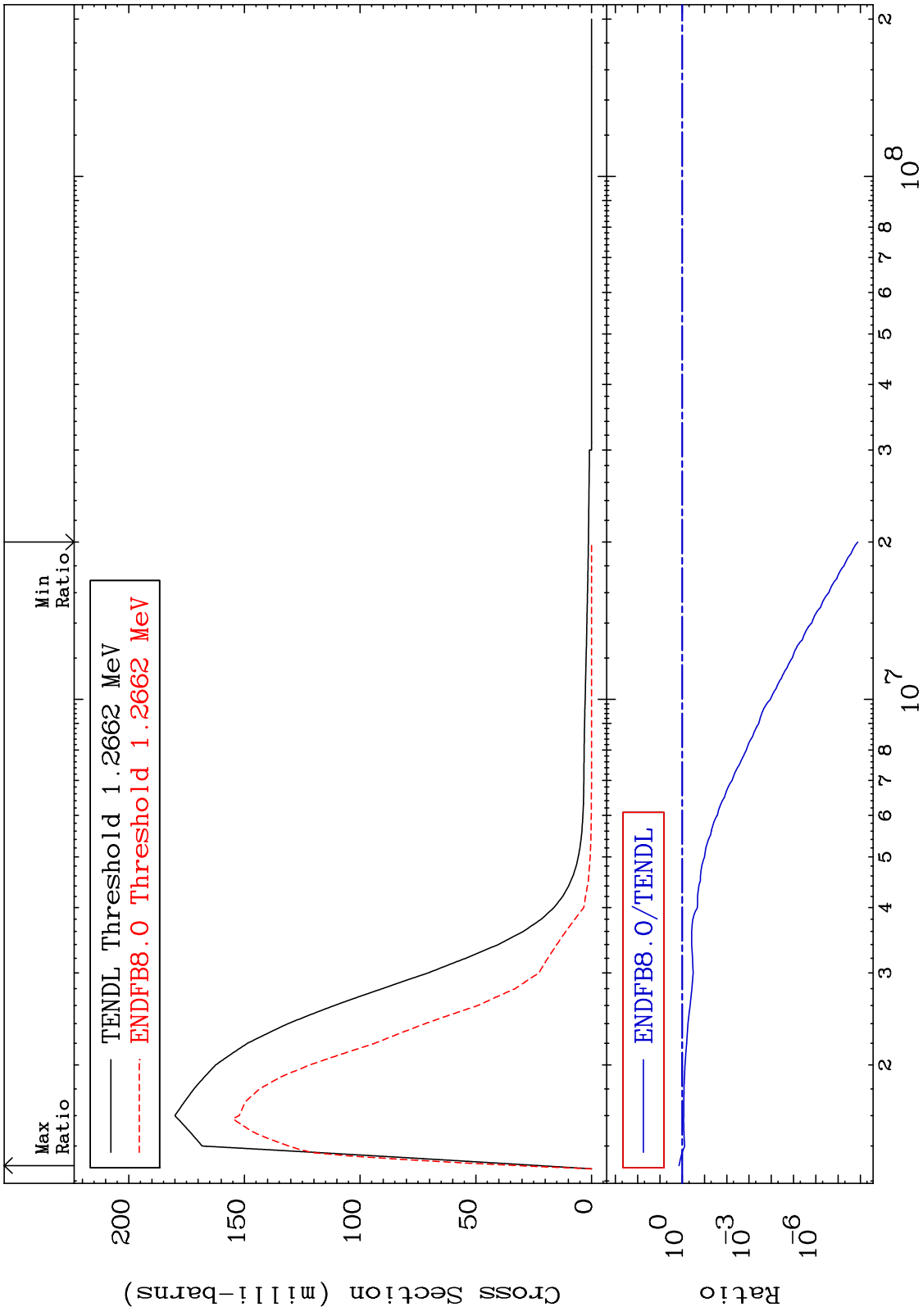
MAT 6437

MT= 60 (n,n') Level  
Cross Section

64-Gd-156  
-71.14 To 53.60 %



MAT 6437 MT= 61 (n,n') Level Cross Section 64-Gd-156  
 -100.0 To 38.91 %

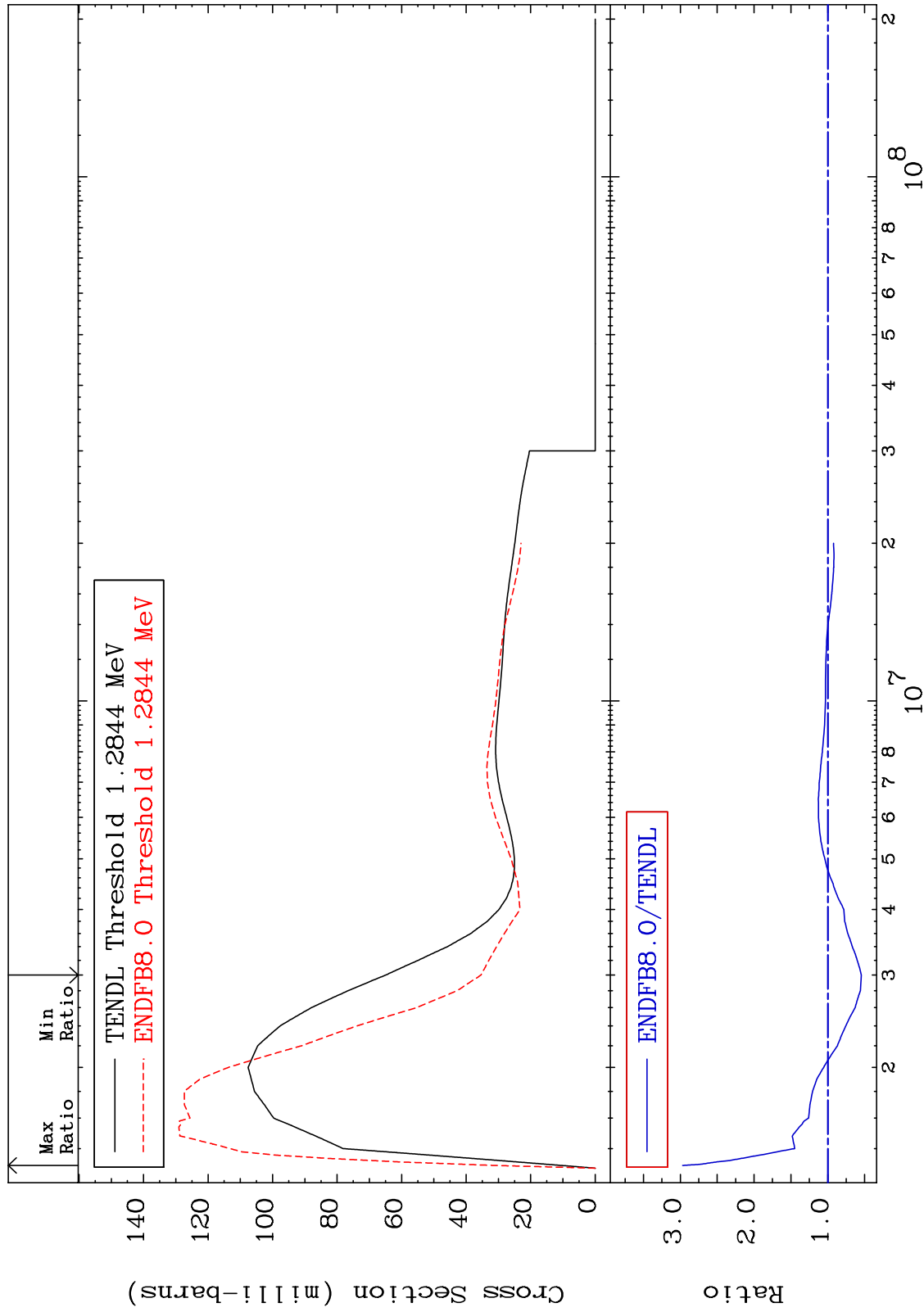


20 64-Gd-156 Incident Energy (eV)

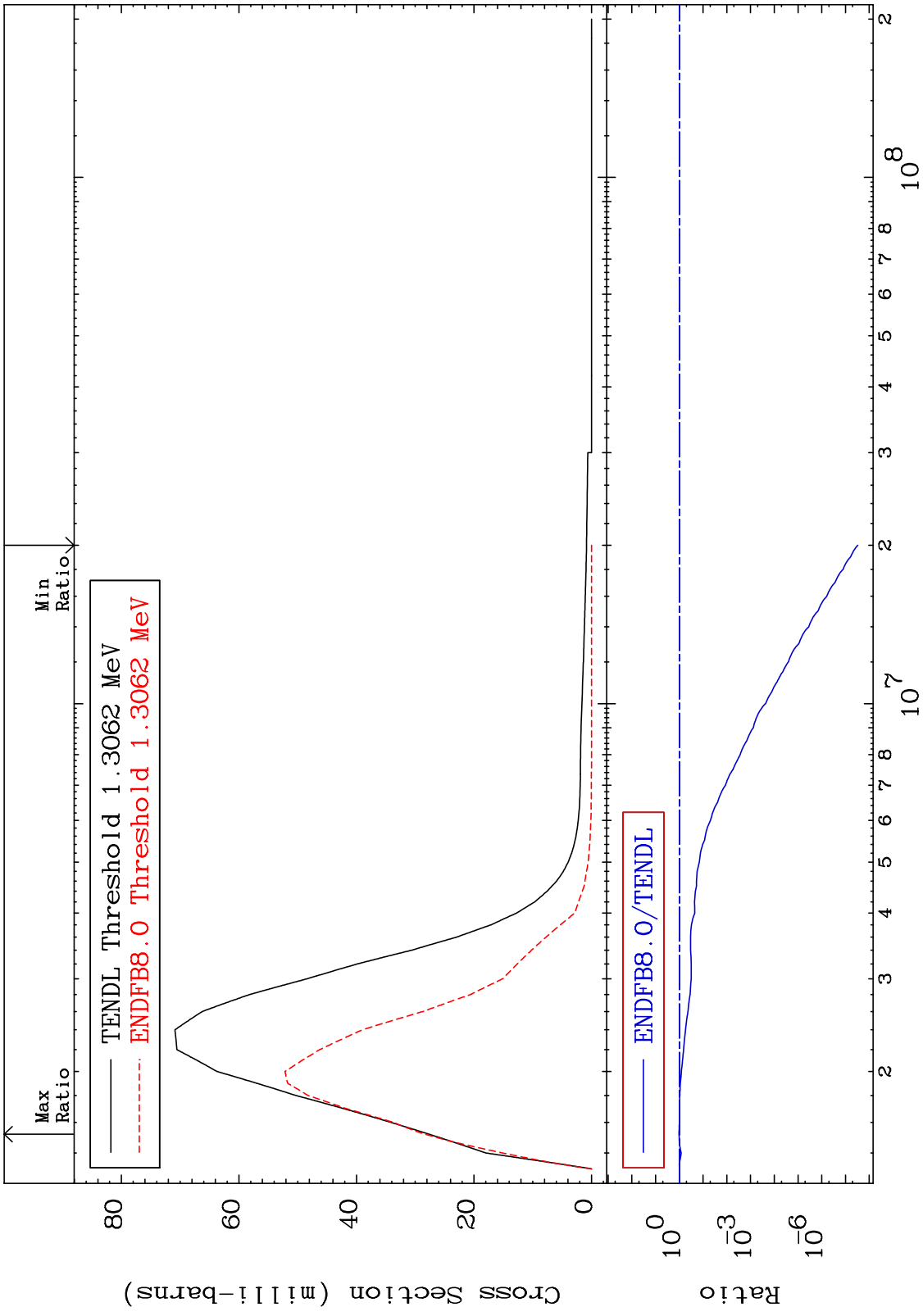
MAT 6437

MT= 62 (n,n') Level  
Cross Section

64-Gd-156  
-45.53 To 196.8 %



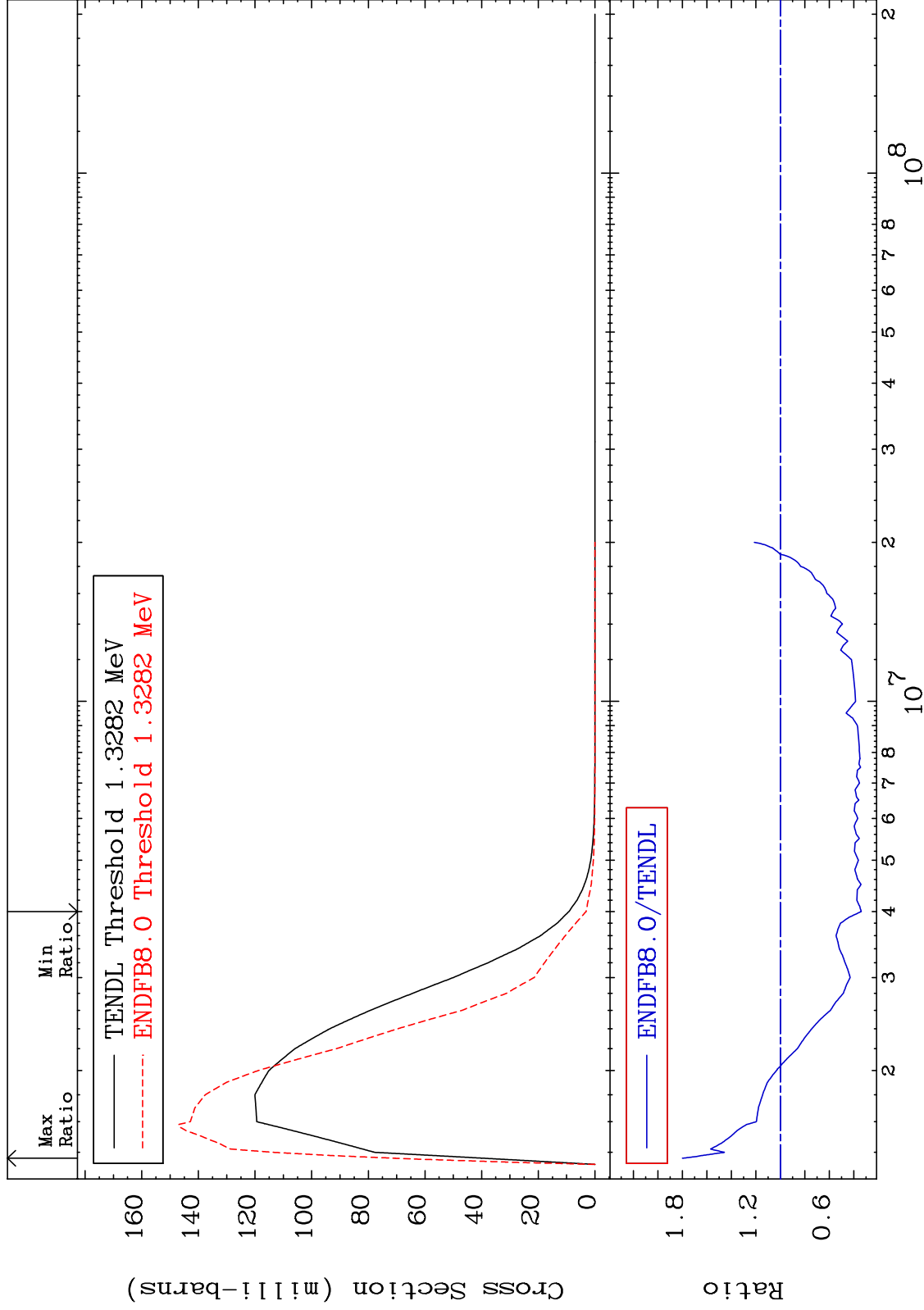
MAT 6437 MT= 63 (n,n') Level Cross Section 64-Gd-156  
 -100.0 To 2.611 %



MAT 6437

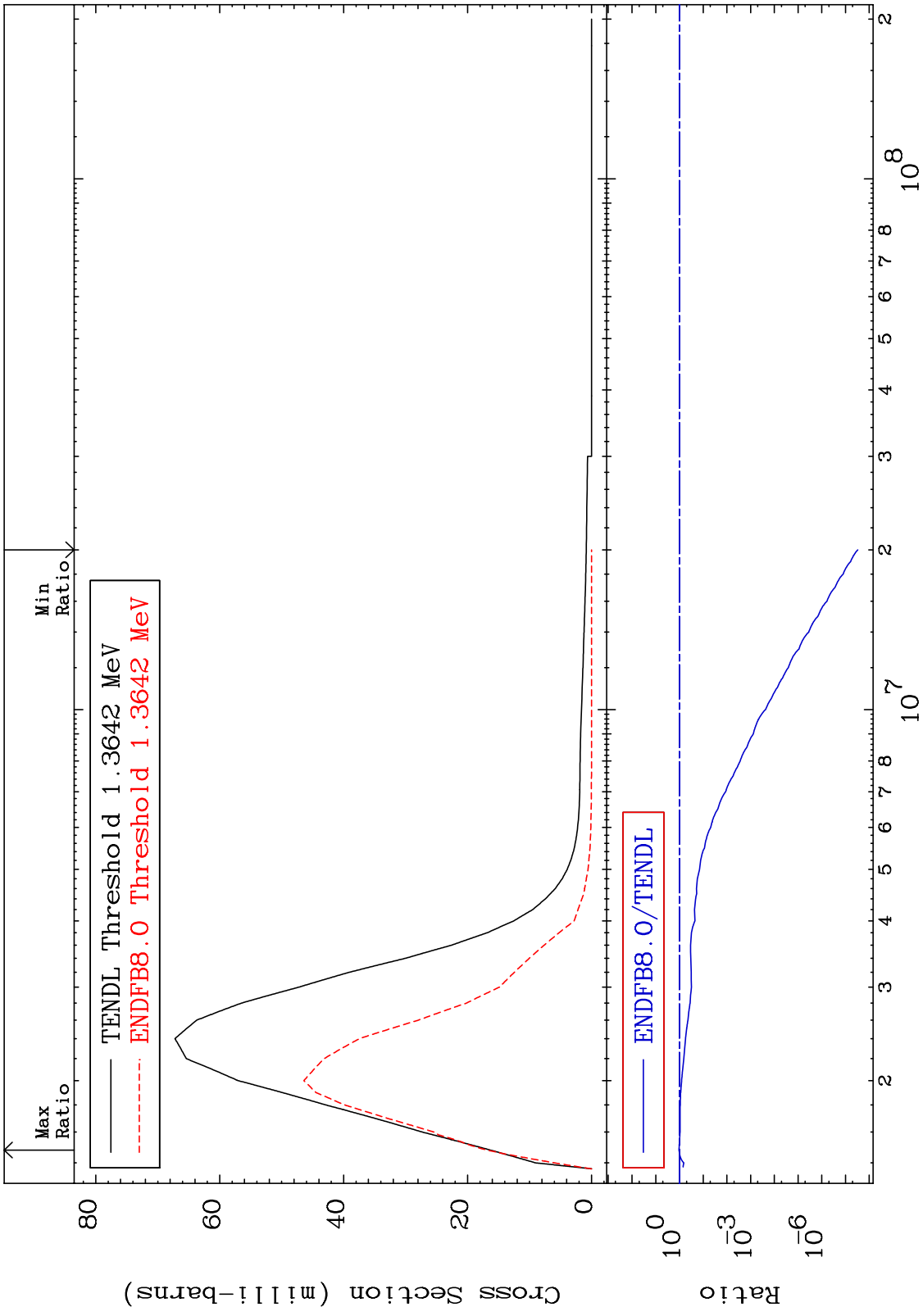
MT= 64 (n,n') Level  
Cross Section

64-Gd-156  
-66.12 To 80.01 %

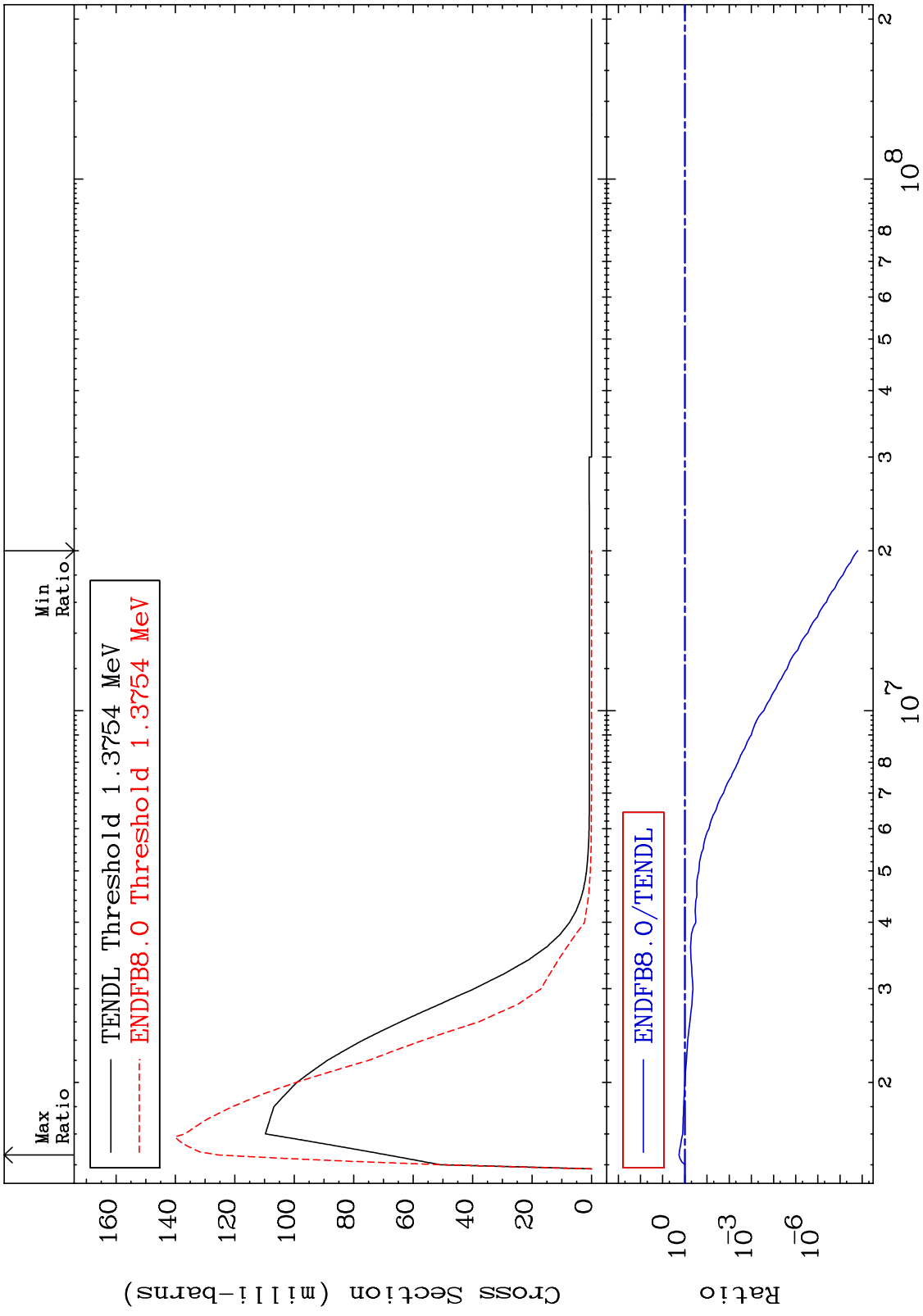




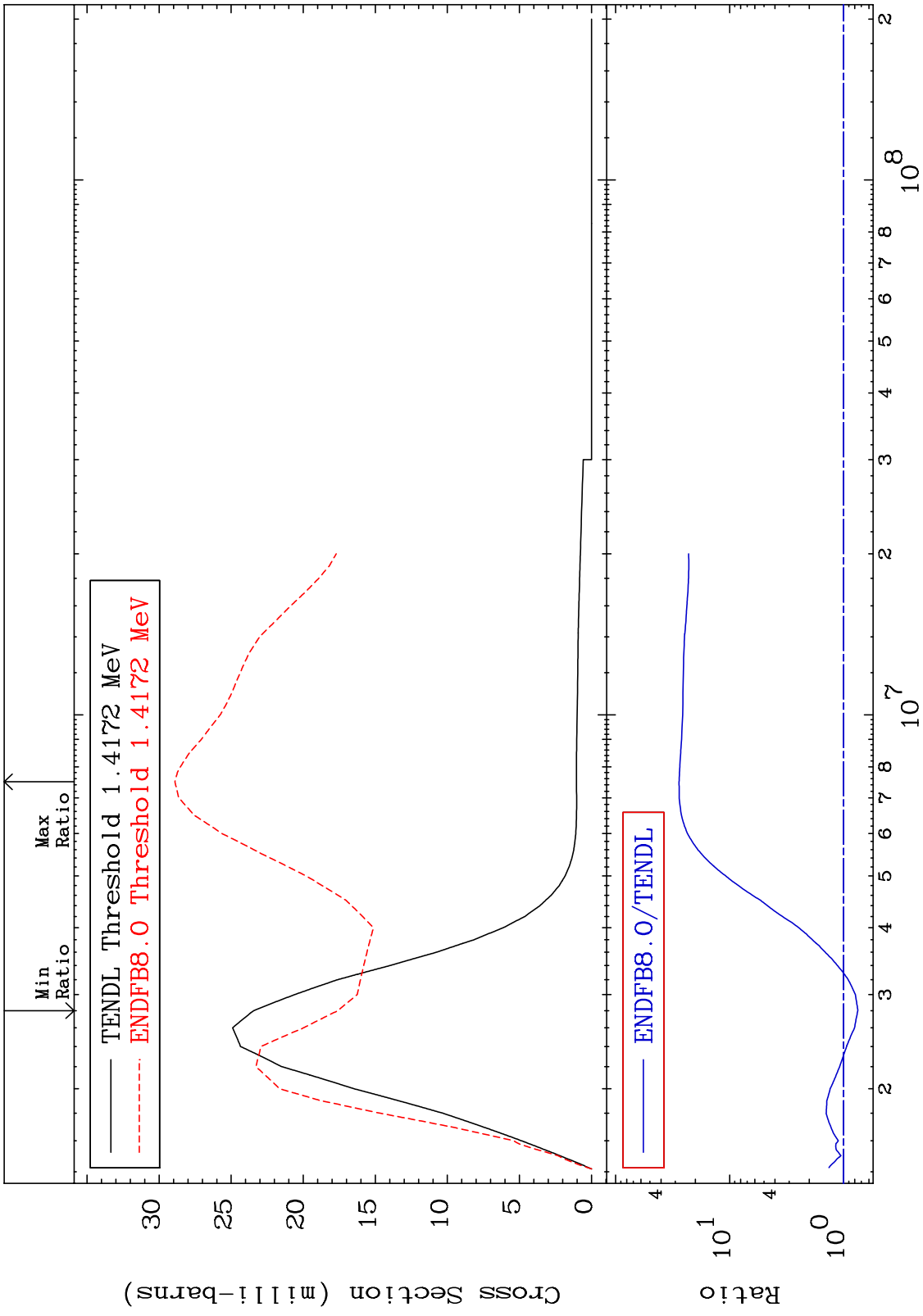
MAT 6437 MT= 65 (n,n') Level Cross Section 64-Gd-156 -100.0 To 3.803 %



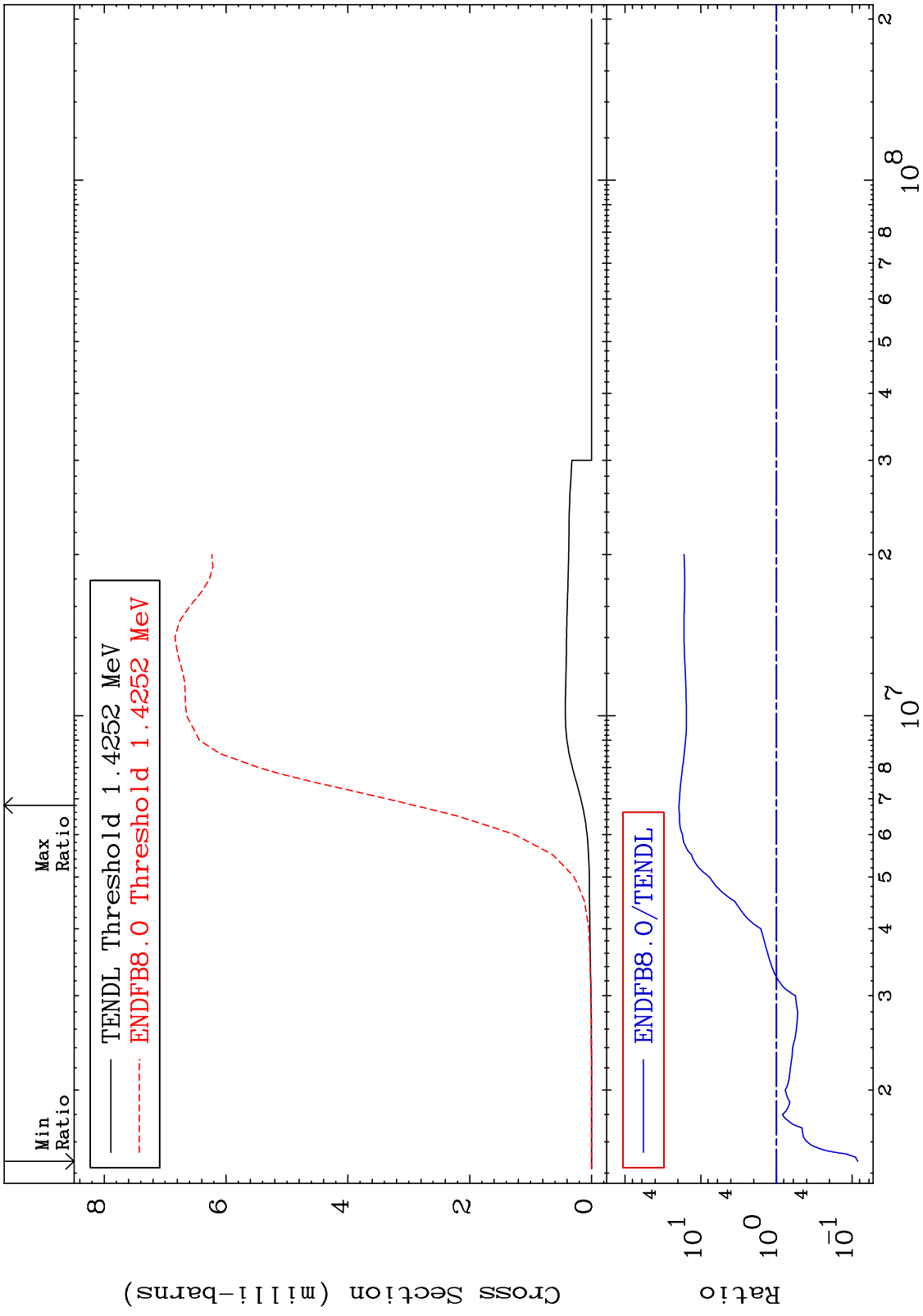
MAT 6437 MT= 66 (n,n') Level Cross Section 64-Gd-156 -100.0 To 82.77 %



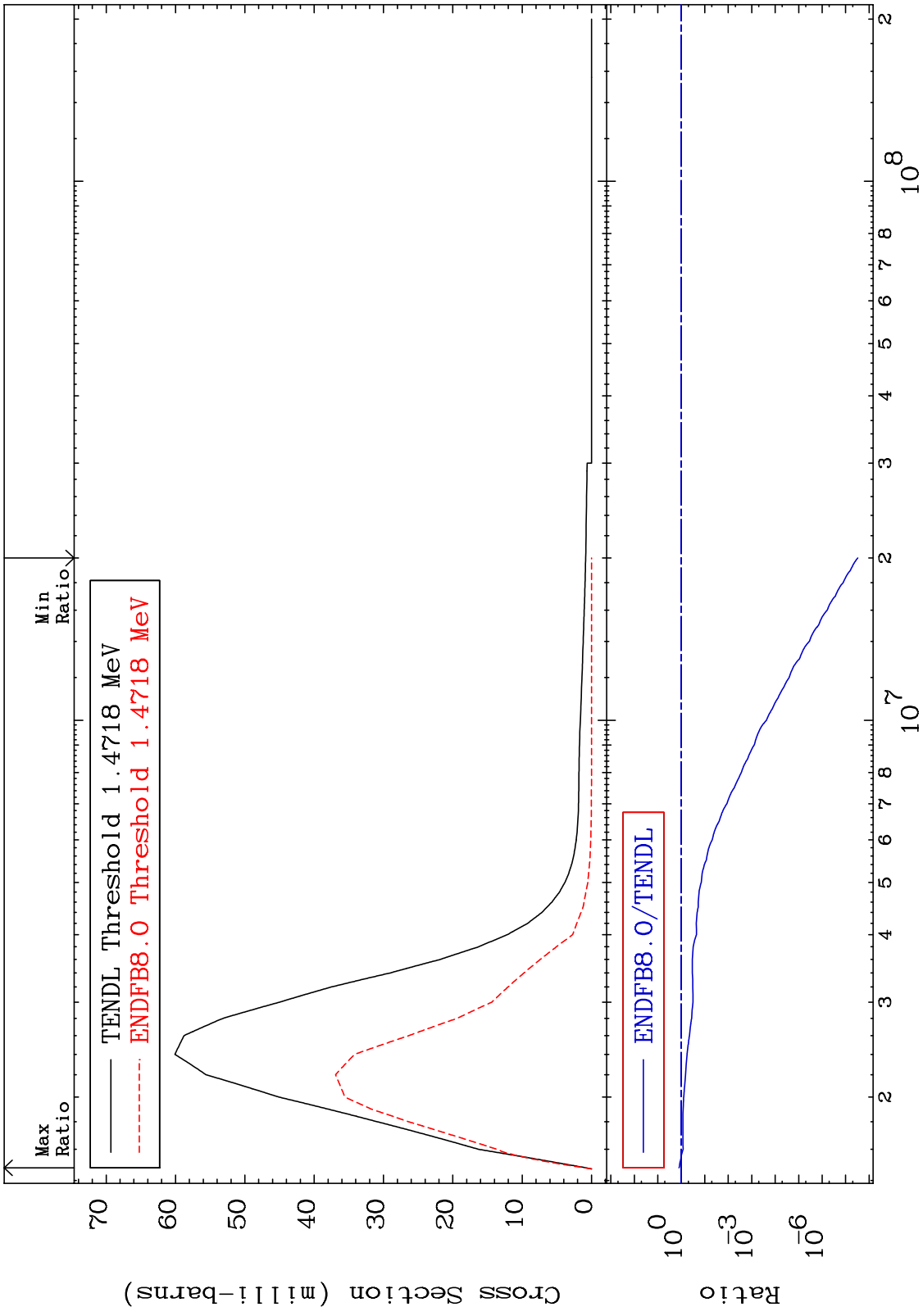
MAT 6437 MT= 67 (n,n') Level Cross Section 64-Gd-156  
 -24.97 To 2677. %



MAT 6437      MT= 68 (n,n') Level      64-Gd-156  
 Cross Section      -91.59 To 1836. %



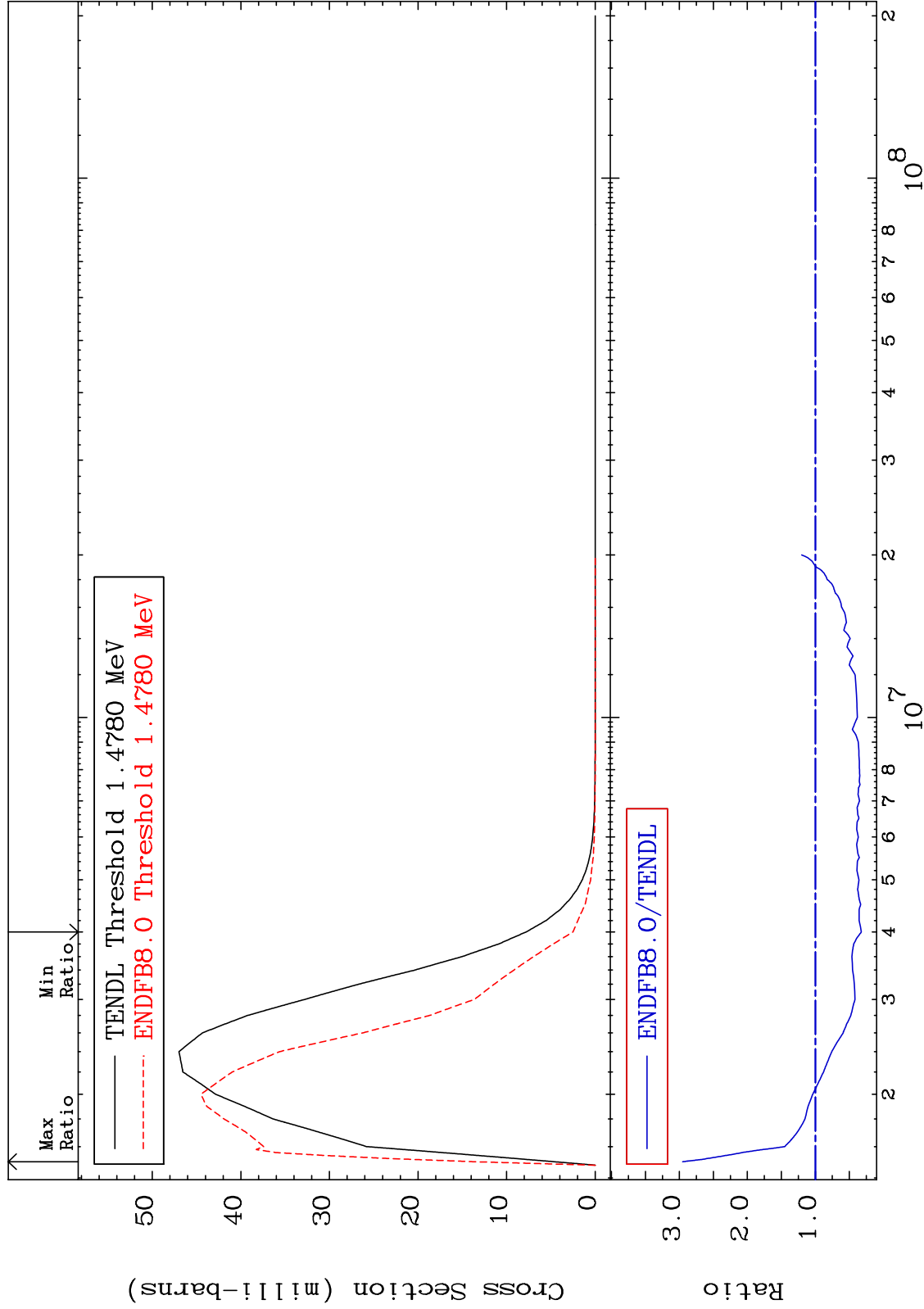
MAT 6437      MT= 69 (n,n') Level Cross Section      64-Gd-156  
 -100.0 To 24.20 %



MAT 6437

MT= 70 (n,n') Level  
Cross Section

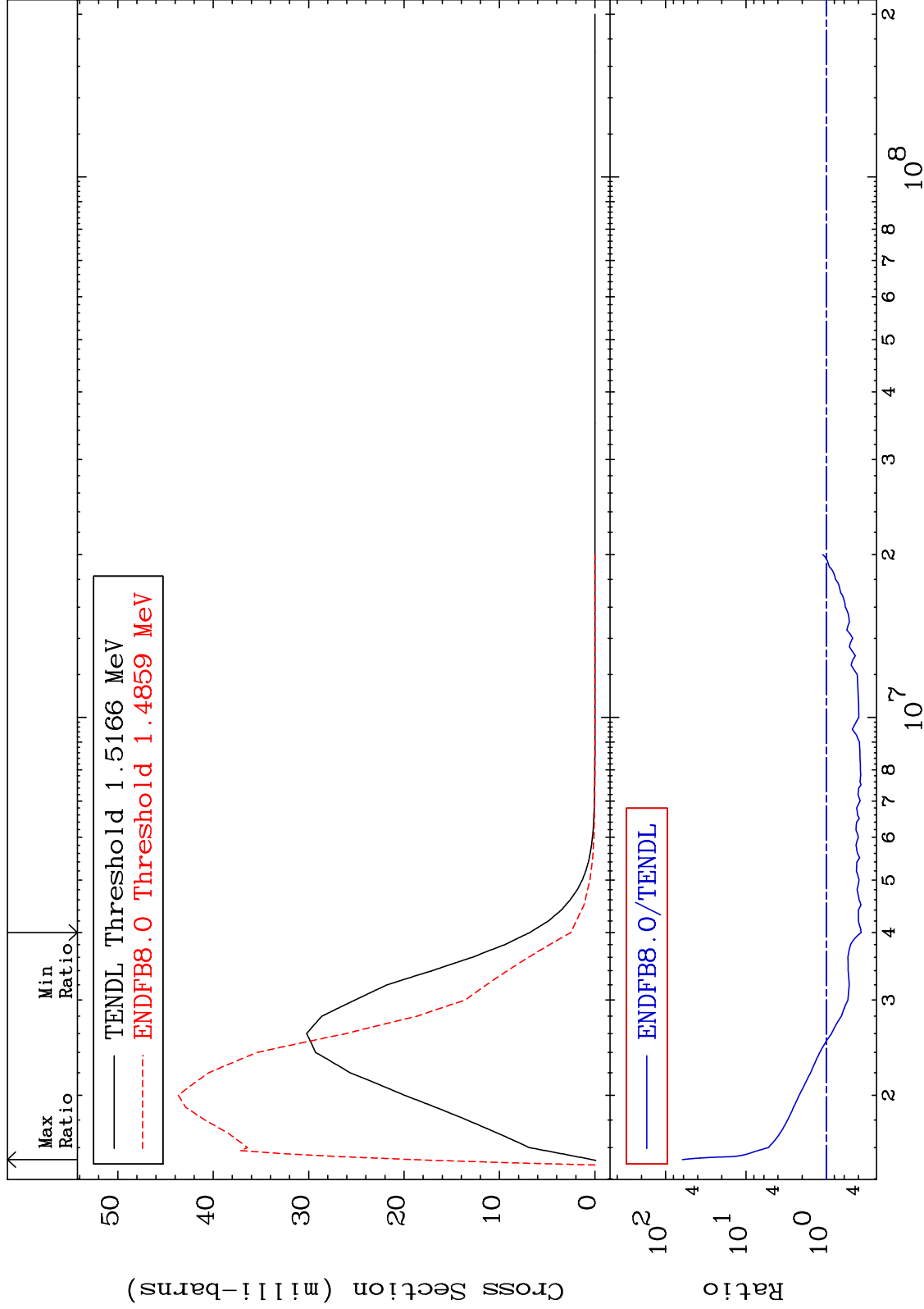
64-Gd-156  
-67.72 To 195.2 %



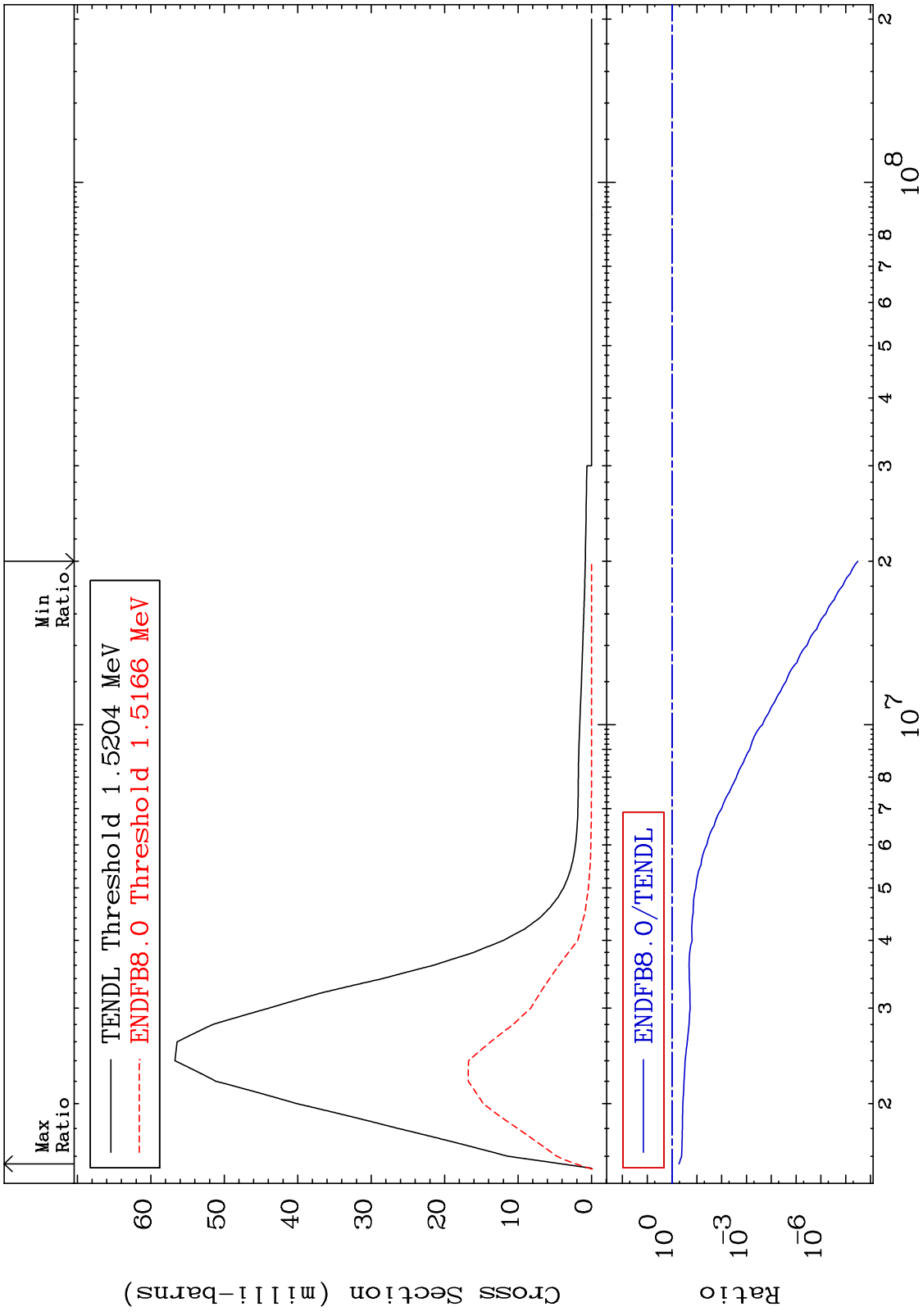
MAT 6437

MT= 71 (n,n') Level  
Cross Section

64-Gd-156  
-63.12 To 6076. %

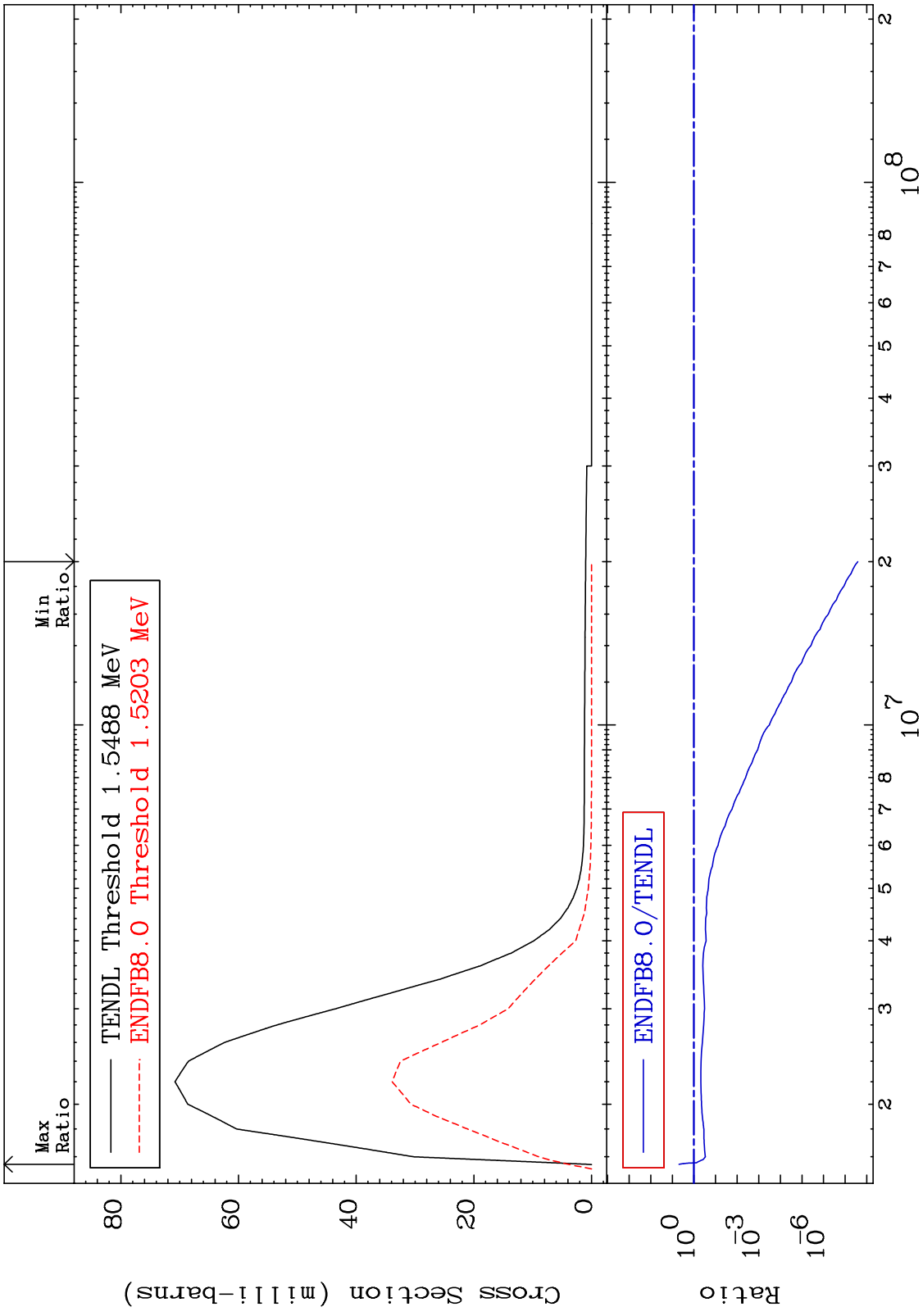


MAT 6437 MT= 72 (n,n') Level Cross Section 64-Gd-156 -100.0 To -47.81%



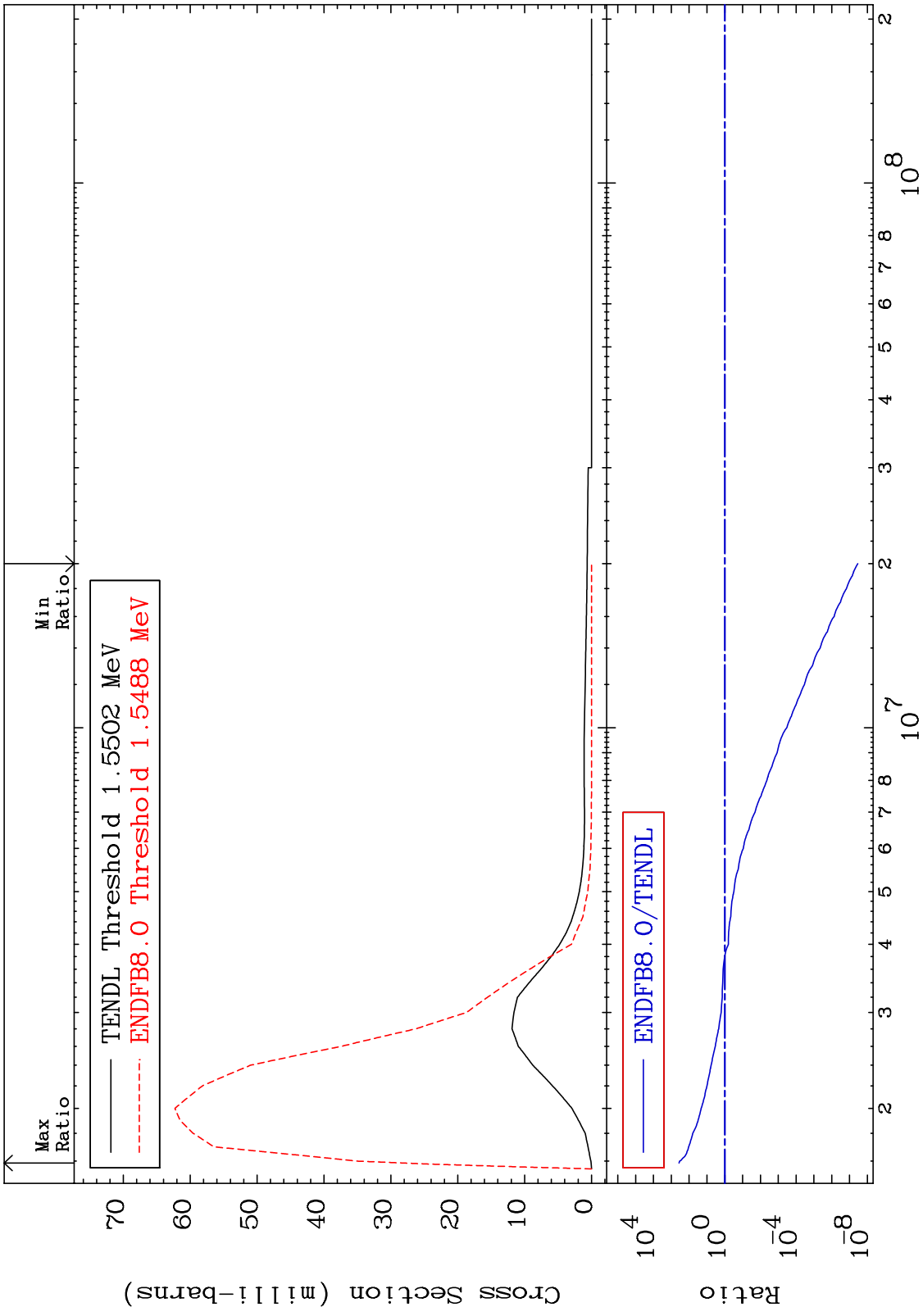


MAT 6437 MT= 73 (n,n') Level Cross Section 64-Gd-156  
 -100.0 To 389.5 %

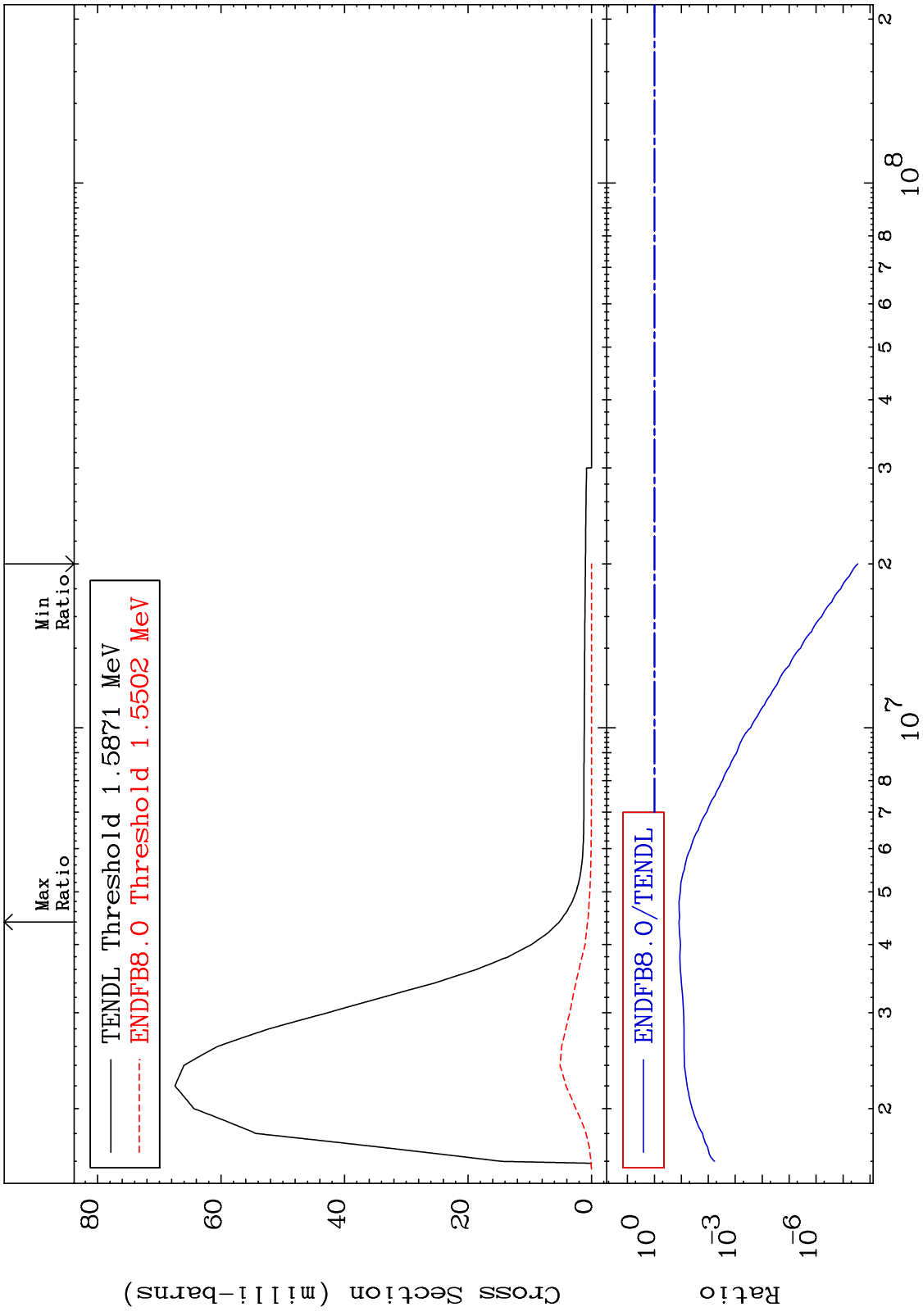


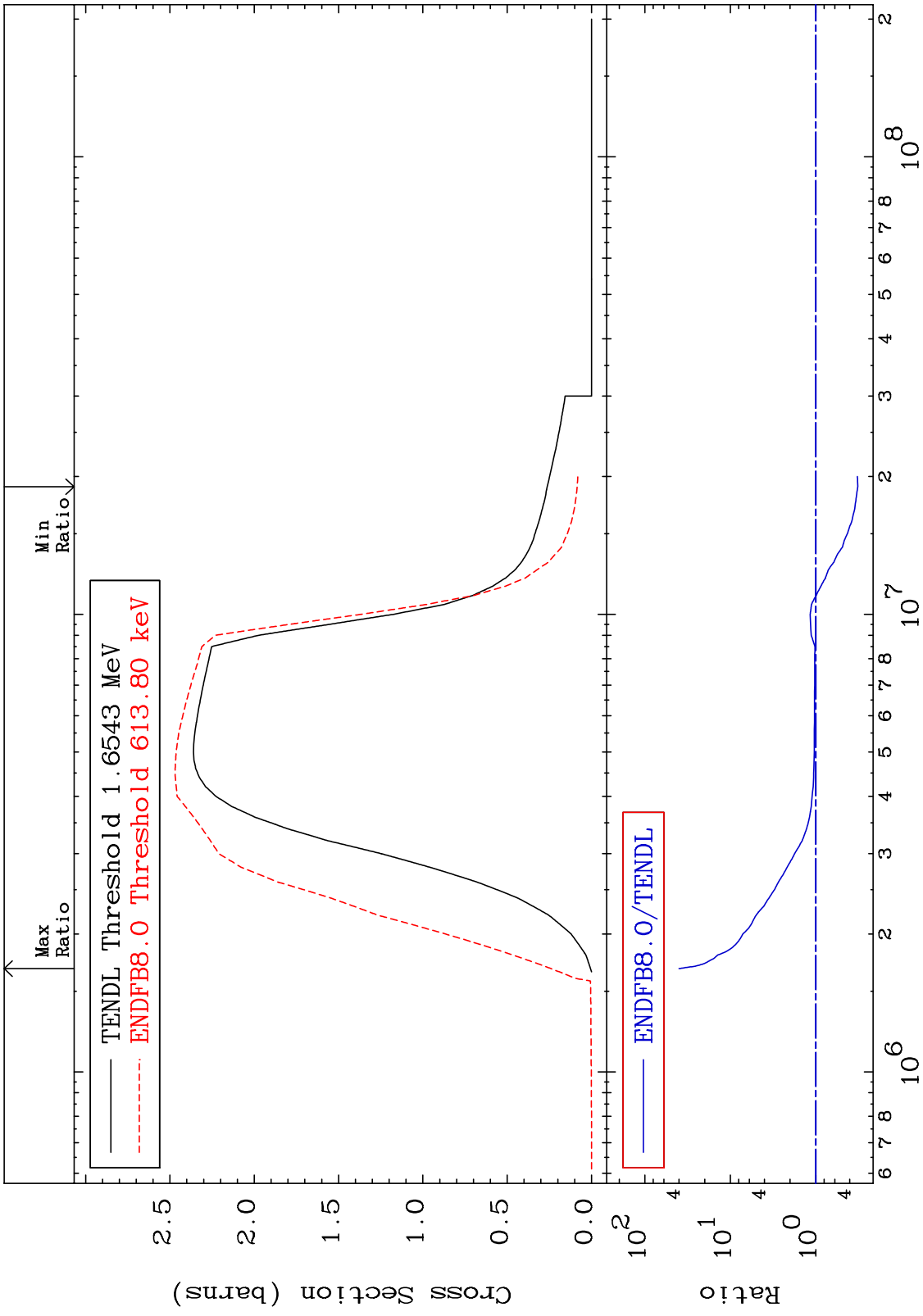
32 Incident Energy (eV) 64-Gd-156

MAT 6437 MT= 74 (n,n') Level Cross Section 64-Gd-156  
 -100.0 To 9999. %



MAT 6437 MT= 75 (n,n') Level Cross Section 64-Gd-156 -100.0 To -87.81%





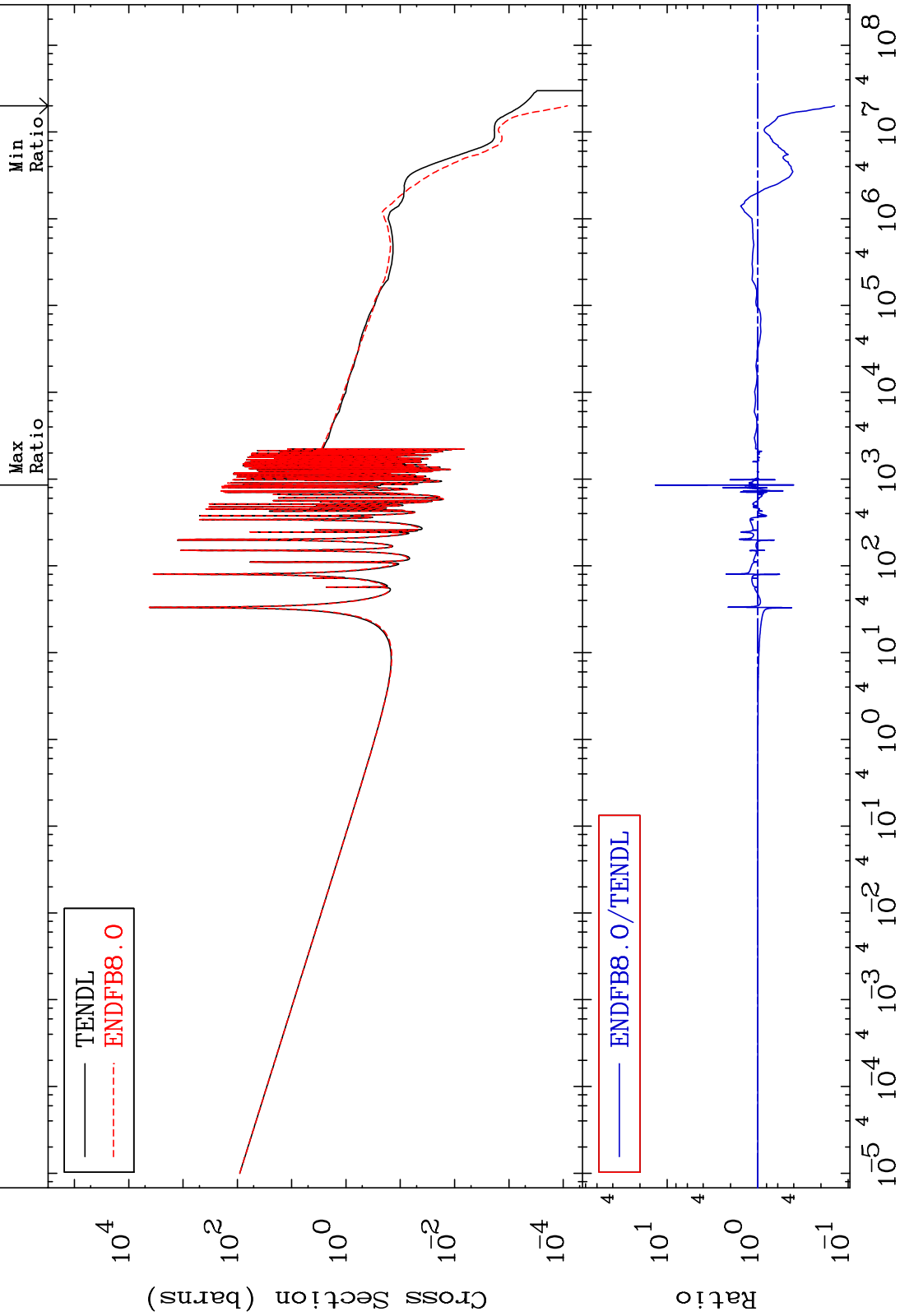
MAT 6437

(n,  $\gamma$ )

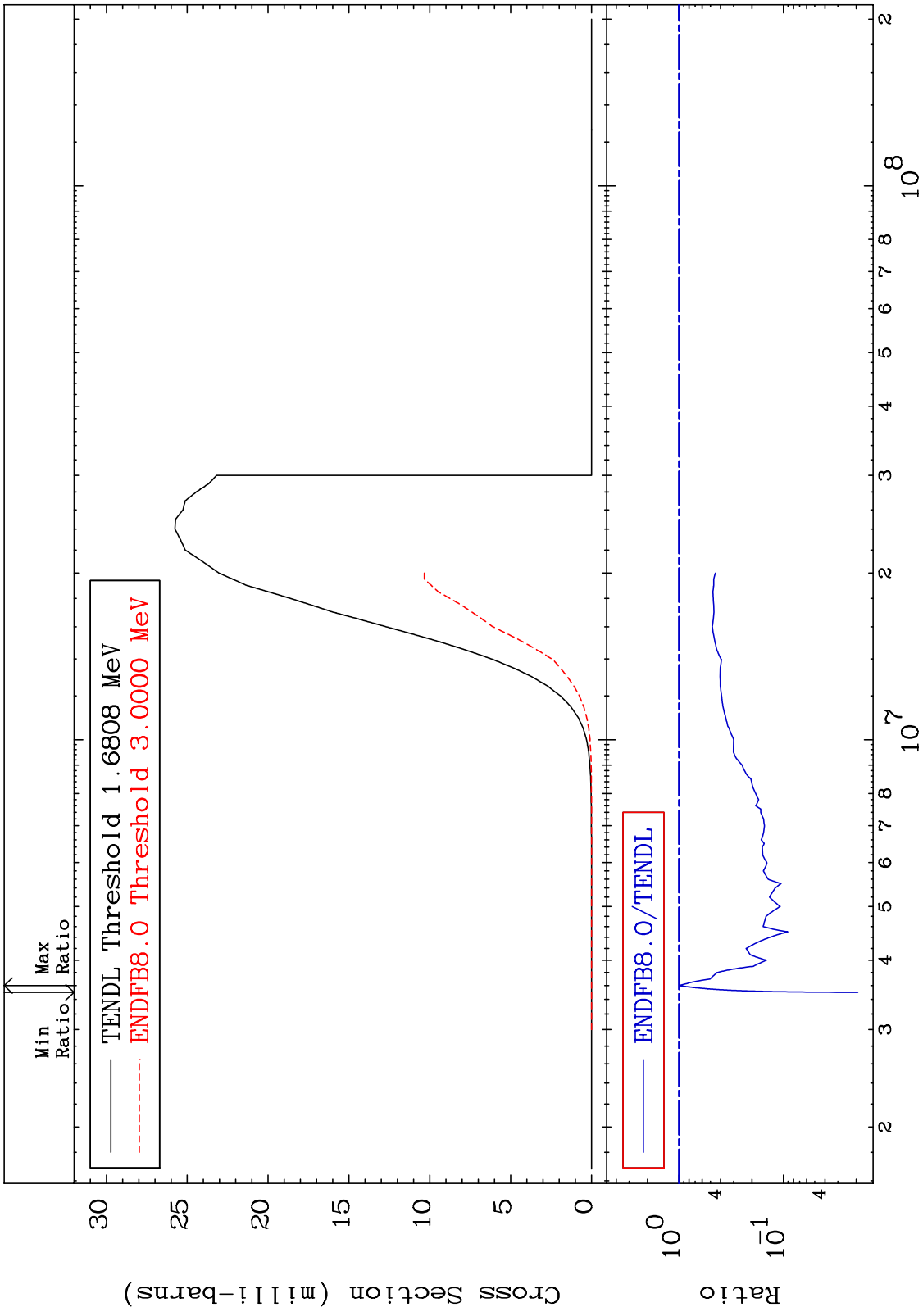
64-Gd-156

-85.88 To 1260. %

Cross Section

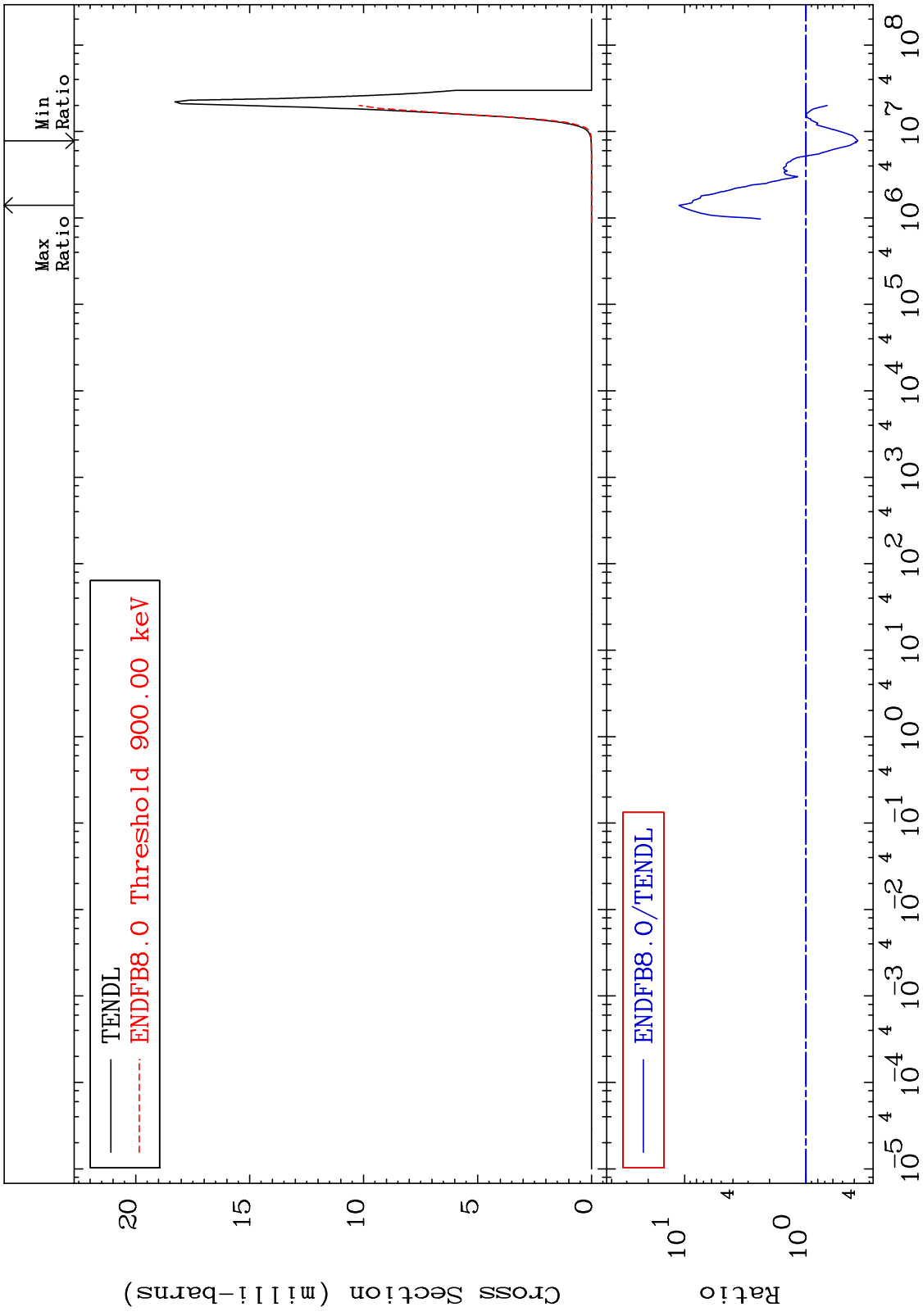


MAT 6437 (n,p) Cross Section 64-Gd-156 -98.07 To -0.054%



37 64-Gd-156 Incident Energy (eV)

MAT 6437 (n,α) Cross Section 64-Gd-156 -62.64 To 1012. %

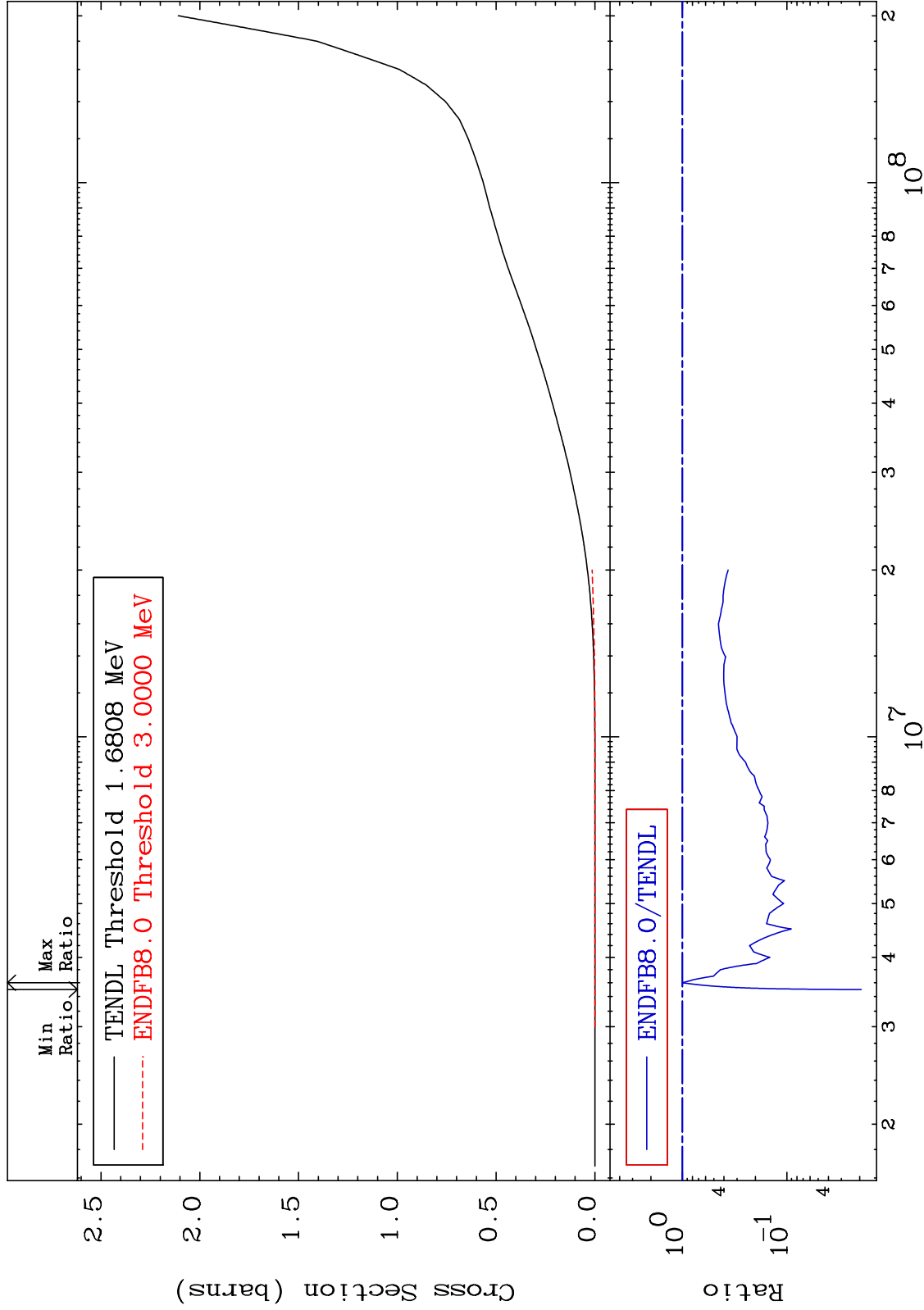


38 Incident Energy (eV) 64-Gd-156

MAT 6437

Hydrogen Production  
Cross Section

64-Gd-156  
-98.07 To -0.054%

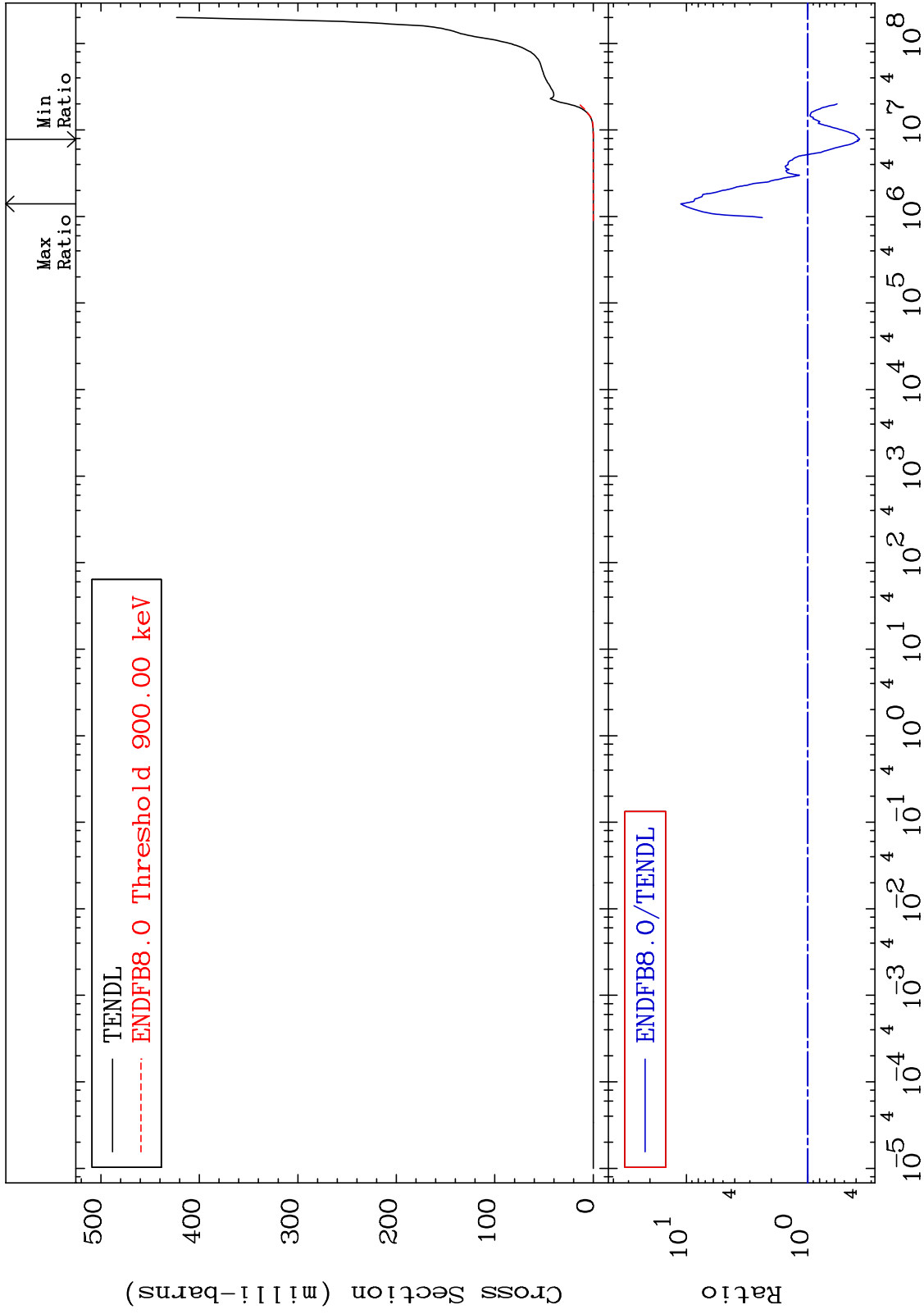




MAT 6437

He-4 Production  
Cross Section

64-Gd-156  
-62.63 To 1012. %

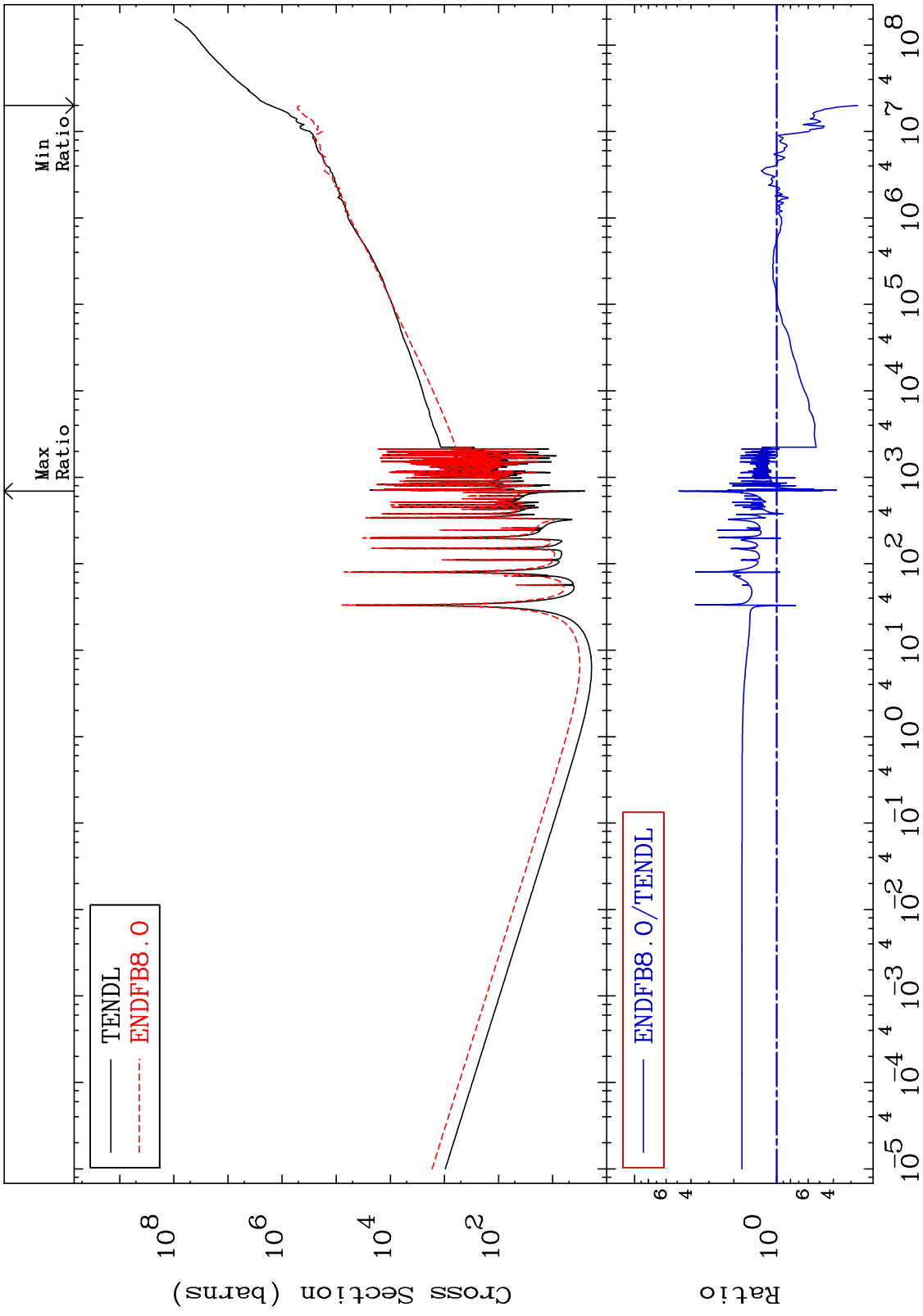


40

Incident Energy (eV)

64-Gd-156

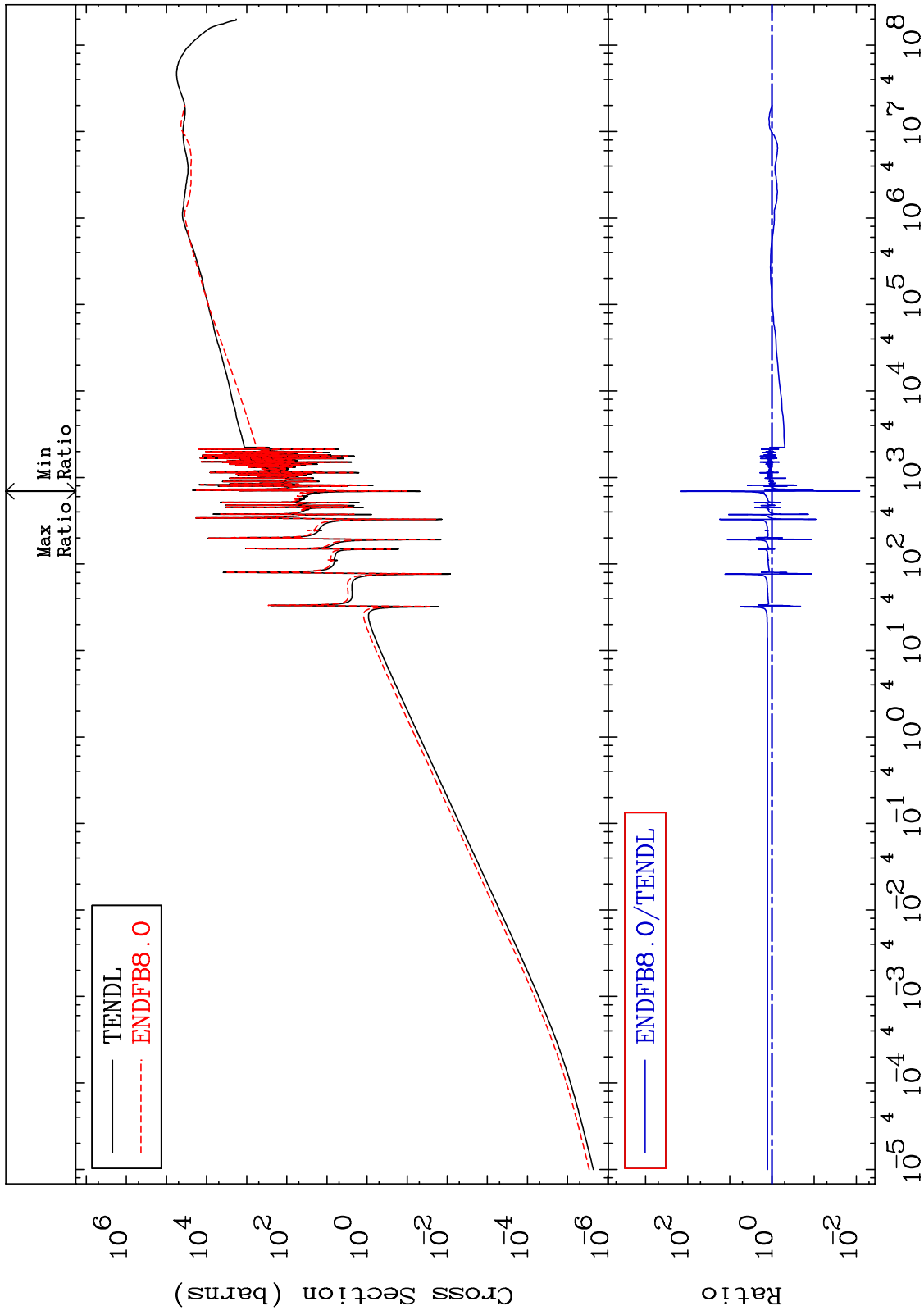
MAT 6437      Kerma total (eV-barns)  
 Cross Section      64-Gd-156  
 -73.16 To 386.3 %



MAT 6437

Kerma elastic  
Cross Section

64-Gd-156  
-99.17 To 9999. %

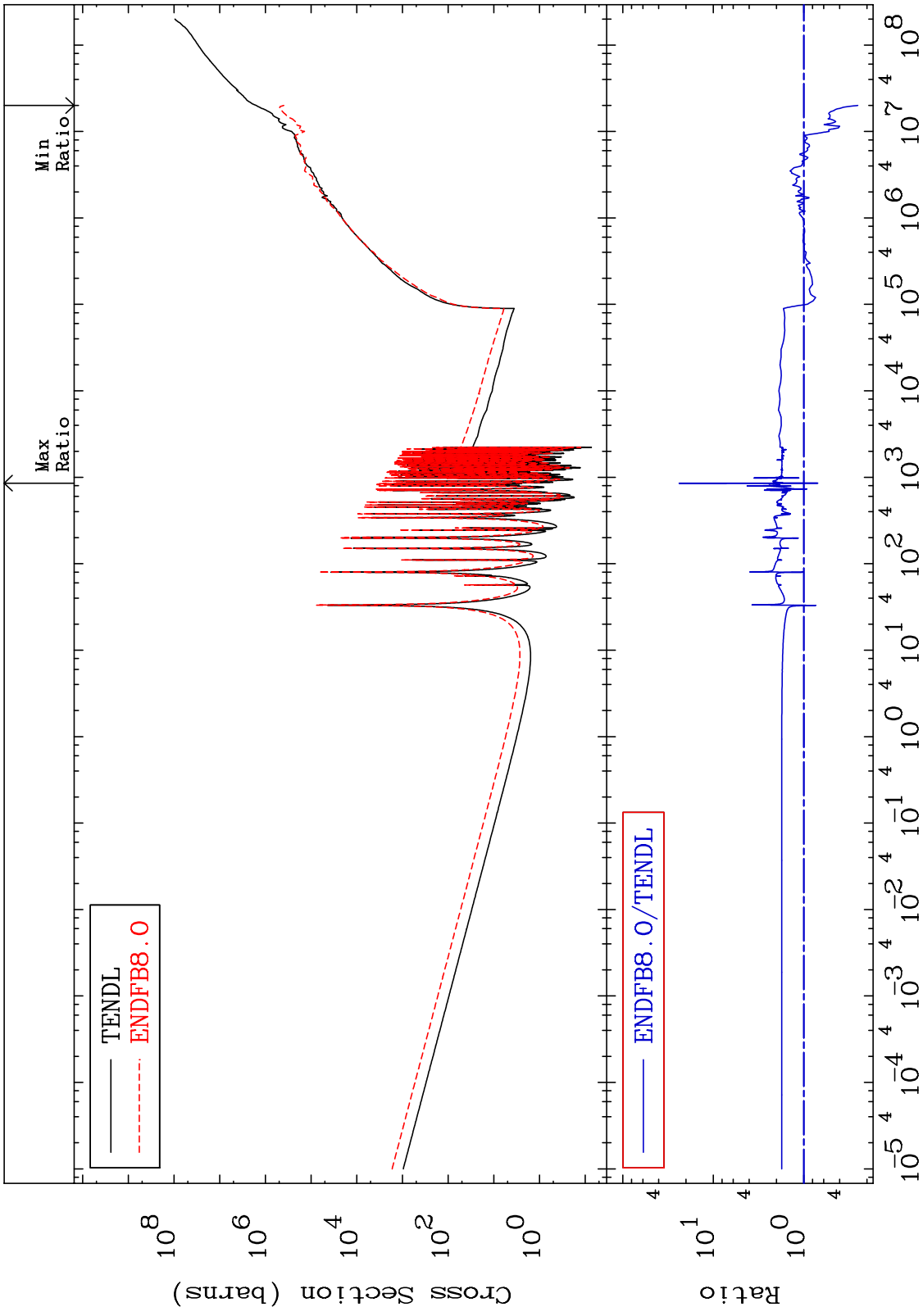


42

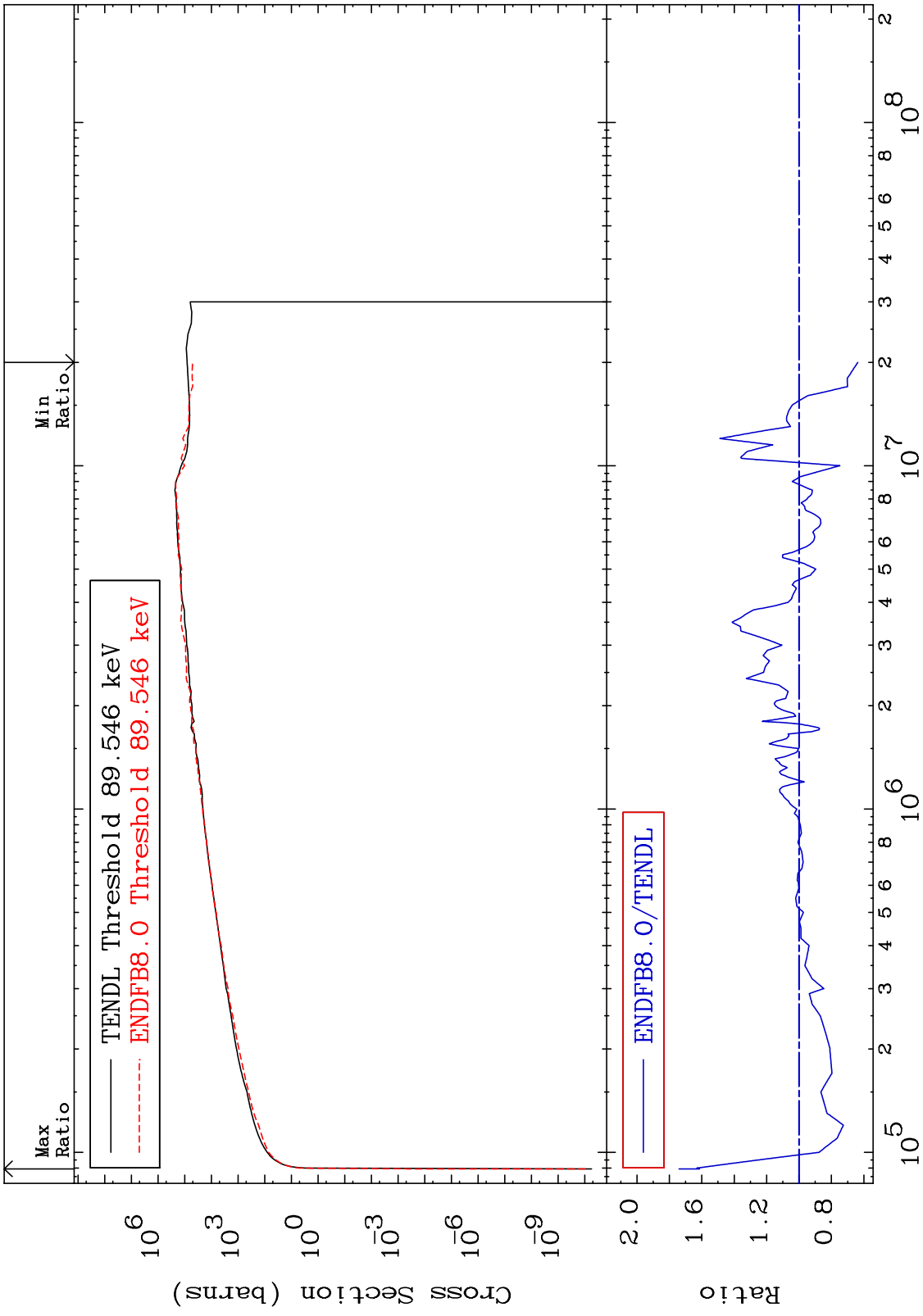
Incident Energy (eV)

64-Gd-156

MAT 6437      Kerma non-elastic (all but mt2)      64-Gd-156  
 Cross Section      -74.78 To 2286. %



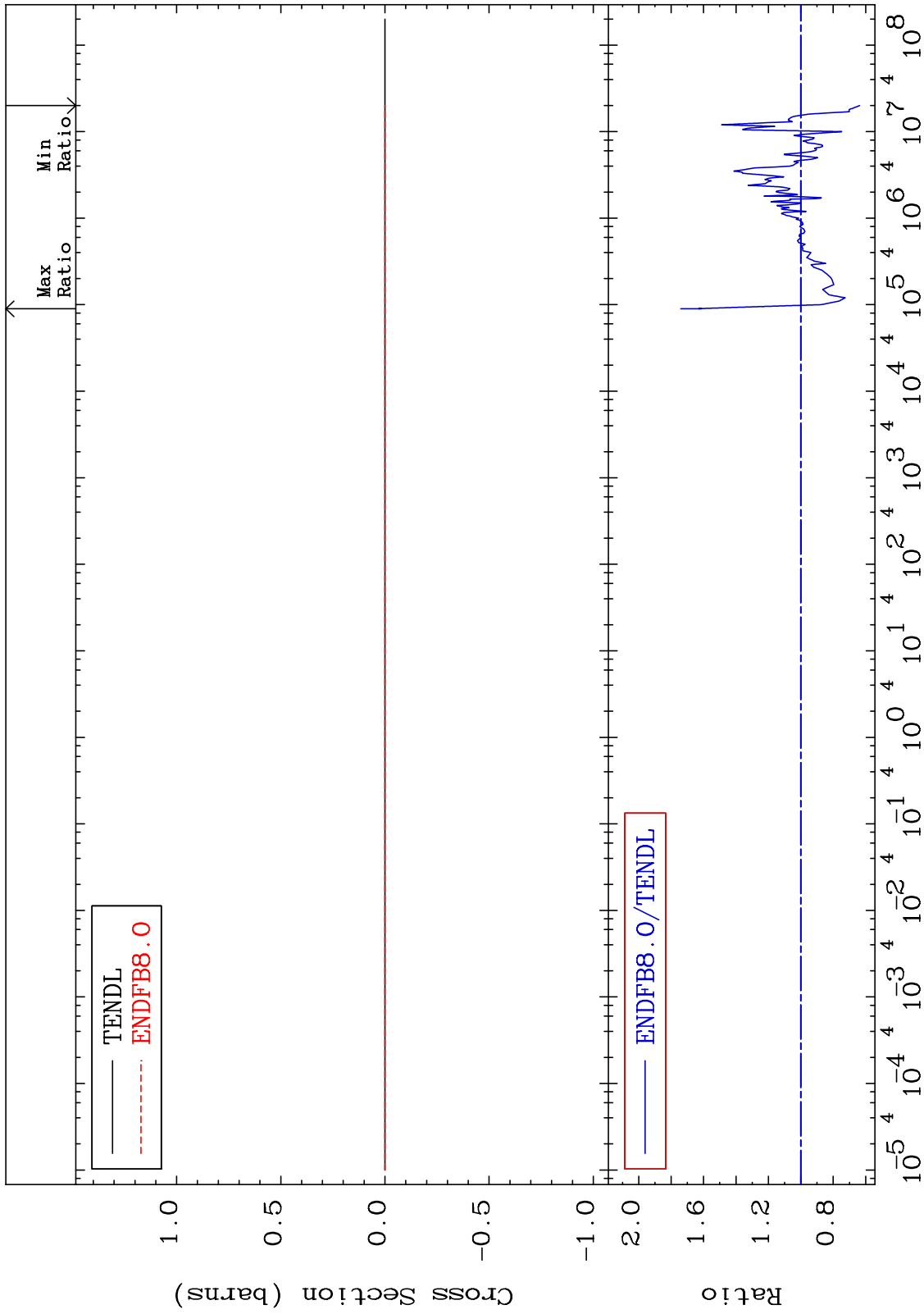
MAT 6437 Kerma inelastic (mt51-91) 64-Gd-156  
 Cross Section -36.29 To 74.04 %



MAT 6437

Kerma fission (mt18 or mt19-20-21-38)  
Cross Section

64-Gd-156  
-36.29 To 74.04 %



45

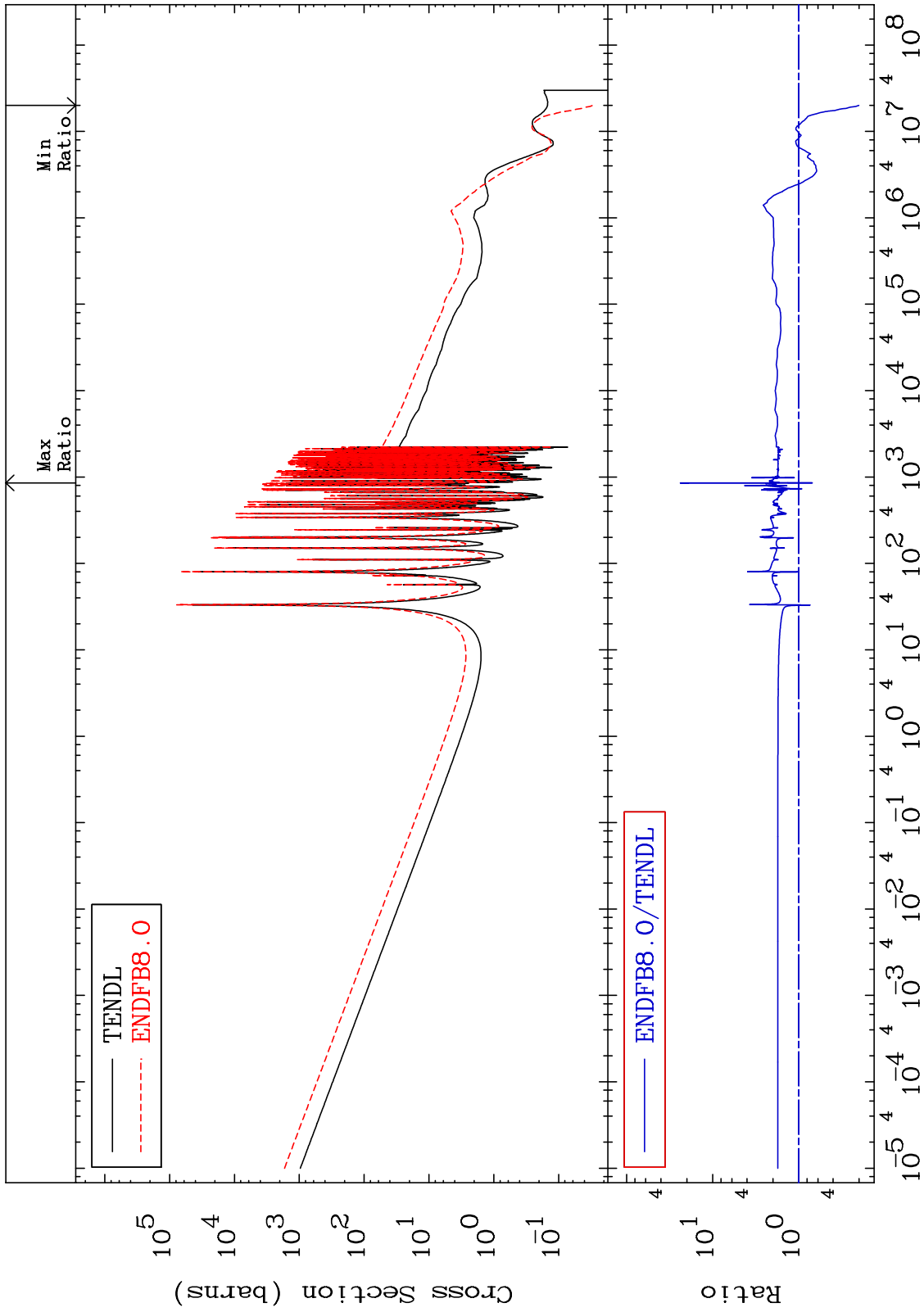
Incident Energy (eV)

64-Gd-156

MAT 6437

Kerma capture (mt102)  
Cross Section

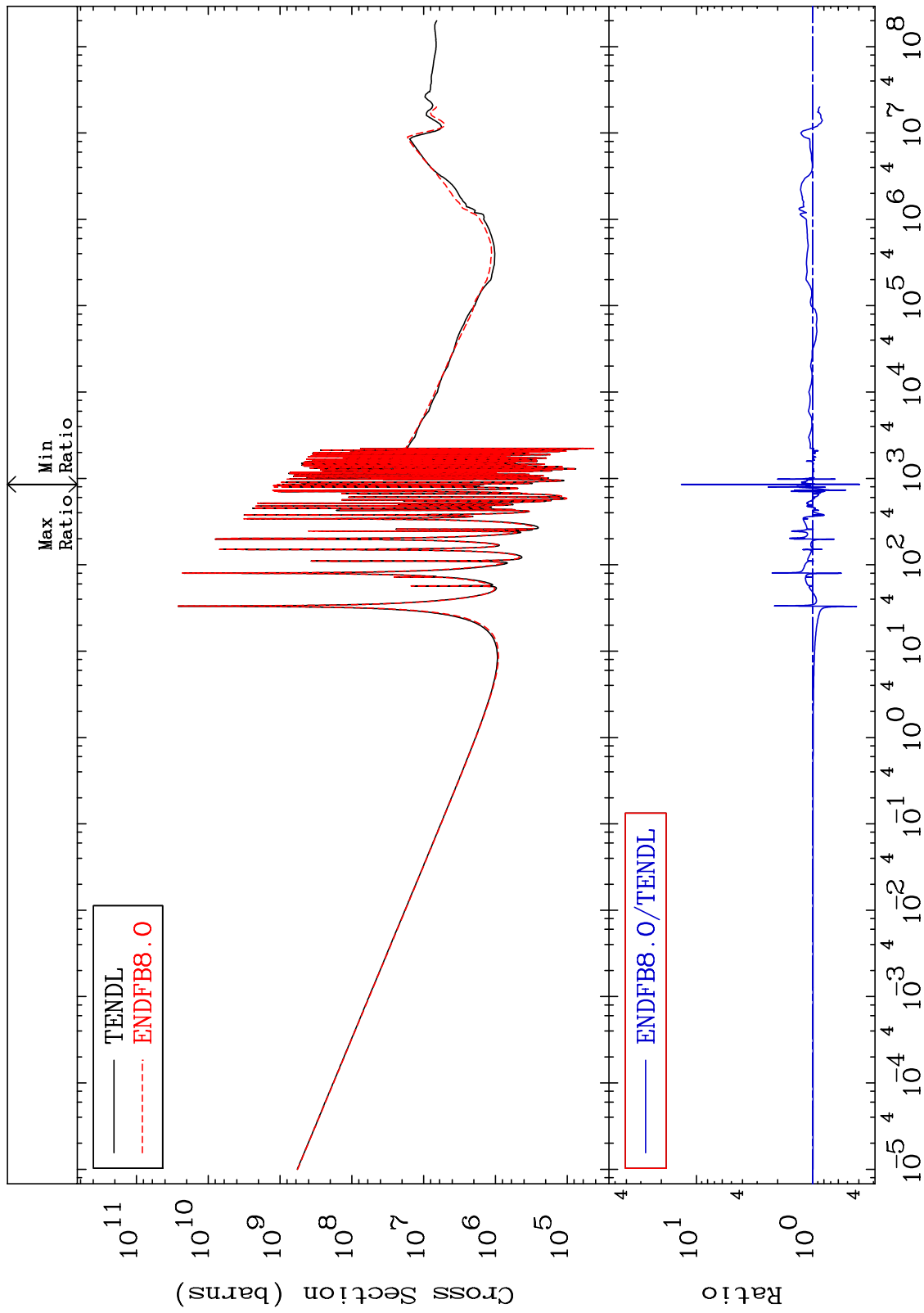
64-Gd-156  
-79.93 To 2286. %



MAT 6437

Total photon (eV-barns)  
Cross Section

64-Gd-156  
-60.72 To 1249. %



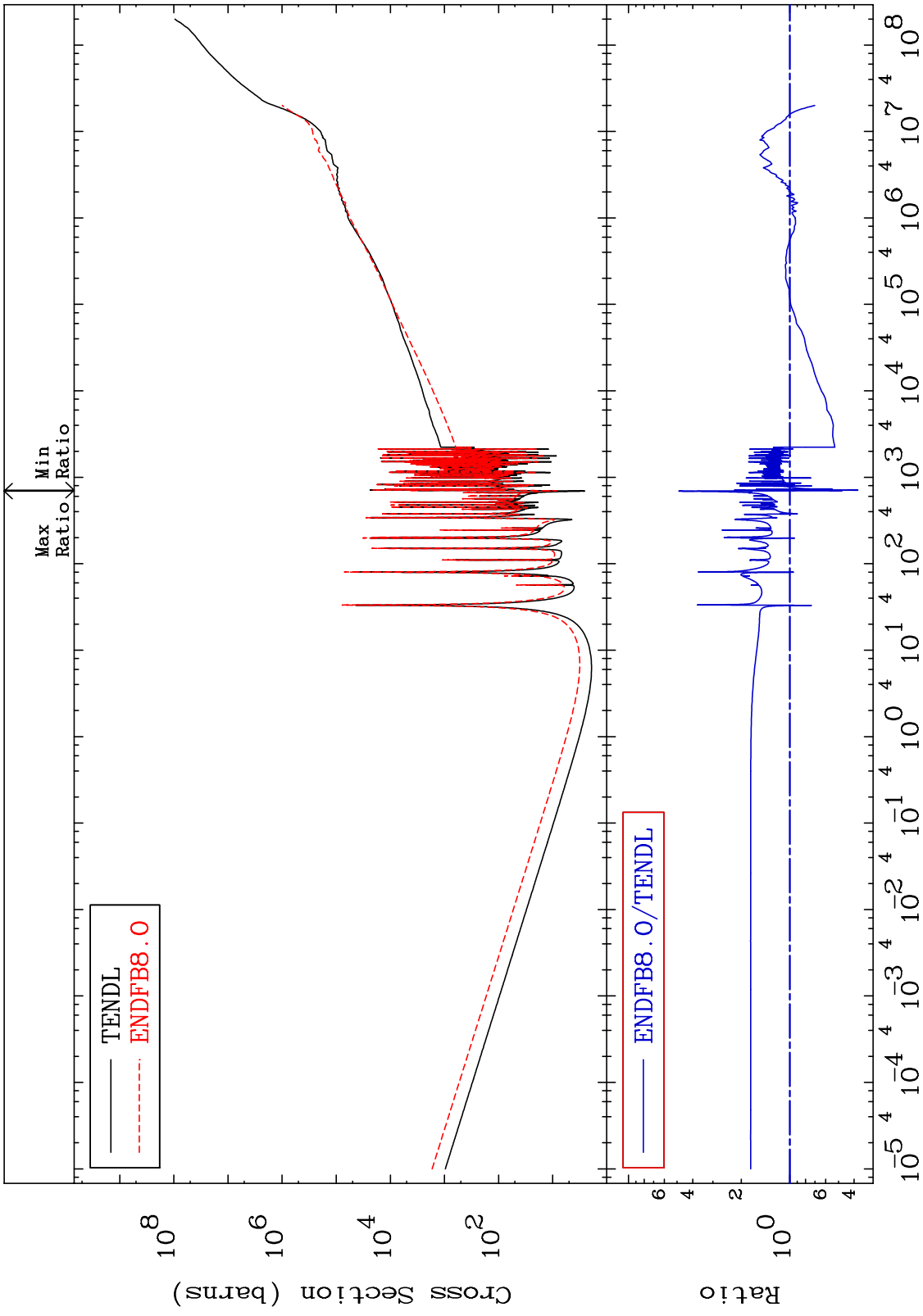
47

Incident Energy (eV)

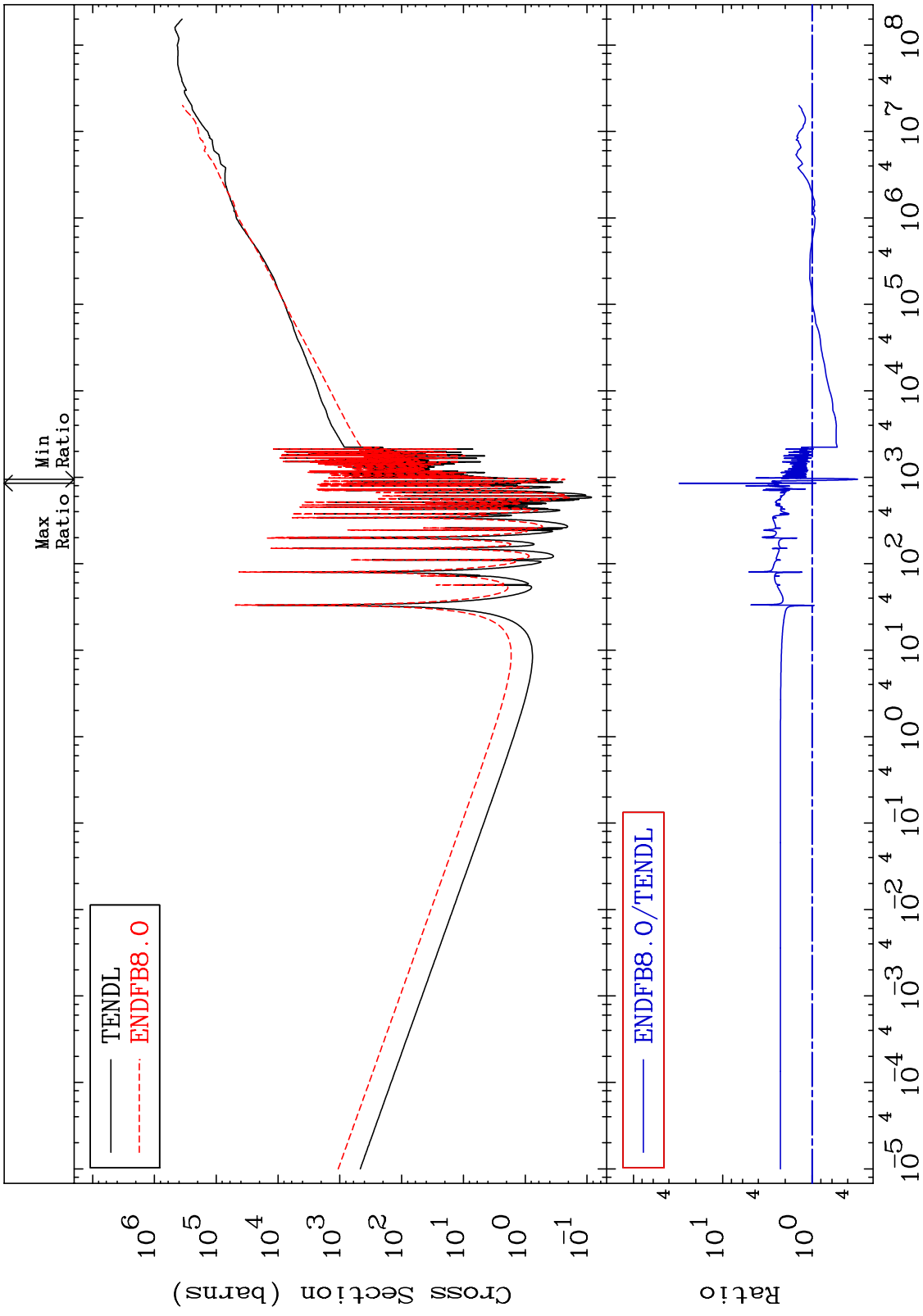
64-Gd-156



MAT 6437      Total kinematic kerma (high limit)      64-Gd-156  
 Cross Section      -62.06 To 386.3 %



MAT 6437      Dpa total (eV-barns)      64-Gd-156  
 Cross Section      -69.19 To 2988. %

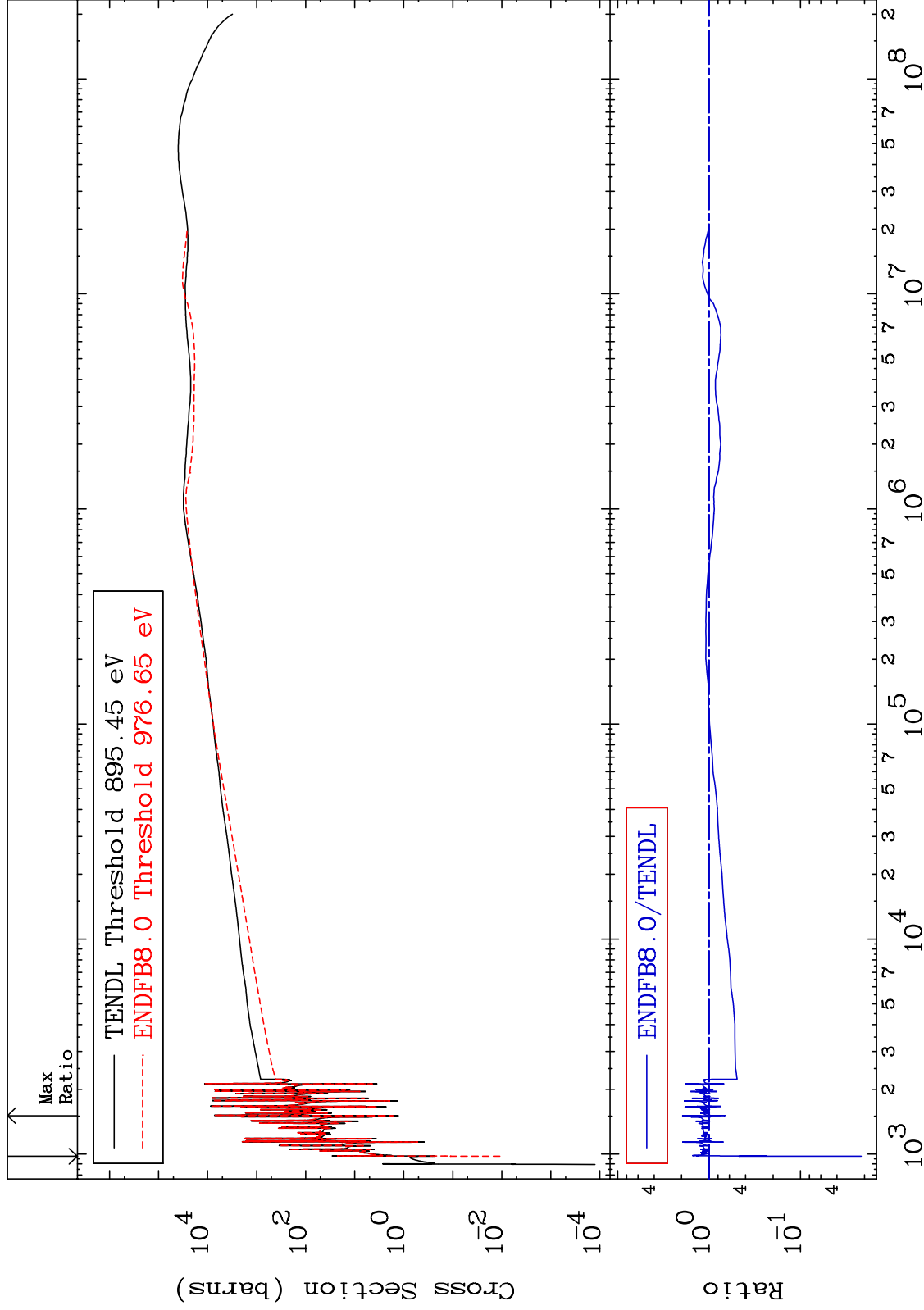


49      Incident Energy (eV)      64-Gd-156

MAT 6437

Dpa elastic (mt2)  
Cross Section

64-Gd-156  
-97.83 To 95.80 %

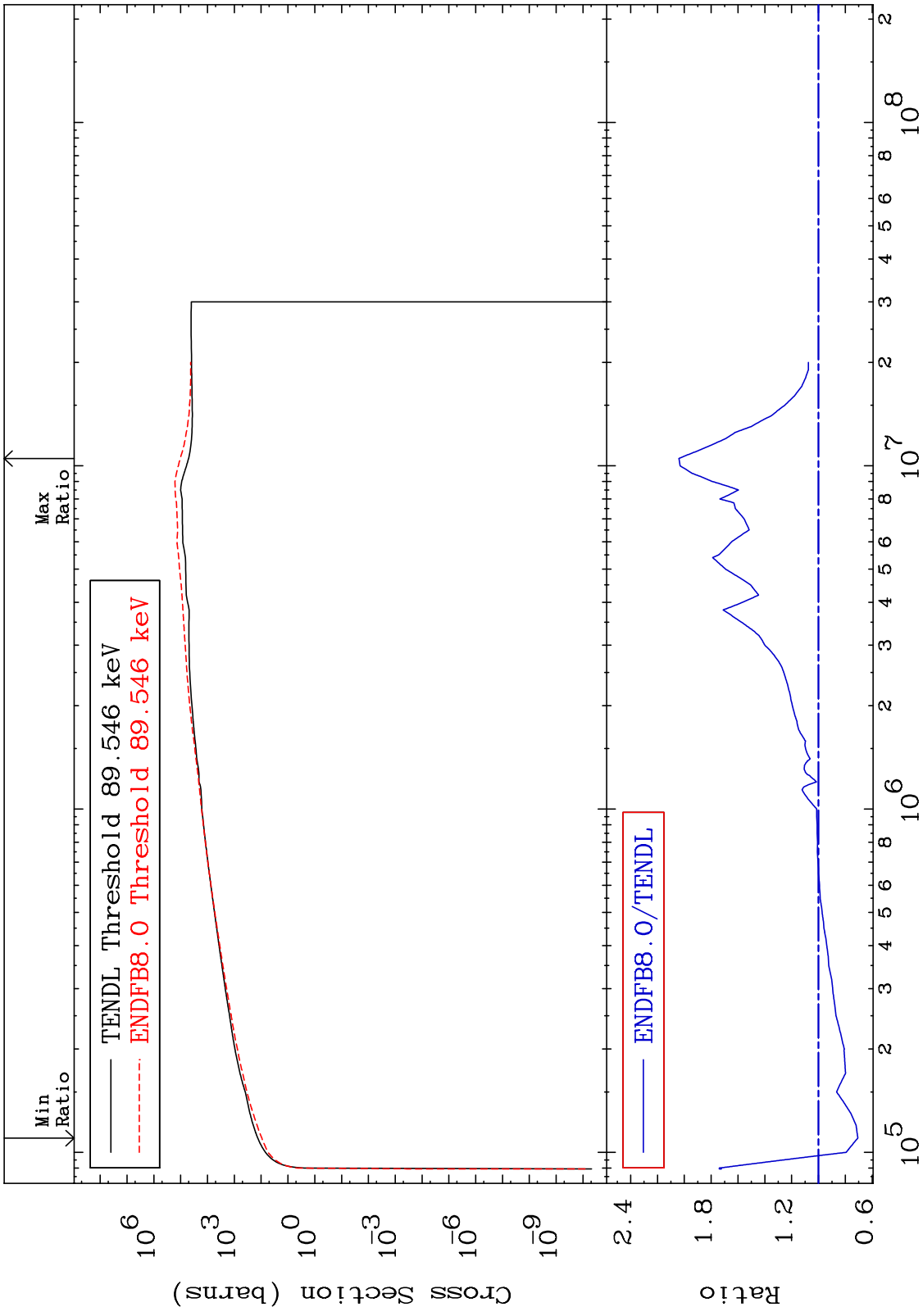


50

64-Gd-156

64-Gd-156

MAT 6437 Dpa inelastic (mt51-91) 64-Gd-156  
 Cross Section -29.33 To 103.9 %



51 64-Gd-156

MAT 6437      Dpa disappearance (mt102 -120)      64-Gd-156  
 Cross Section      -71.92 To 2988. %

