

Program Complot  
(Version 2018-1)

by

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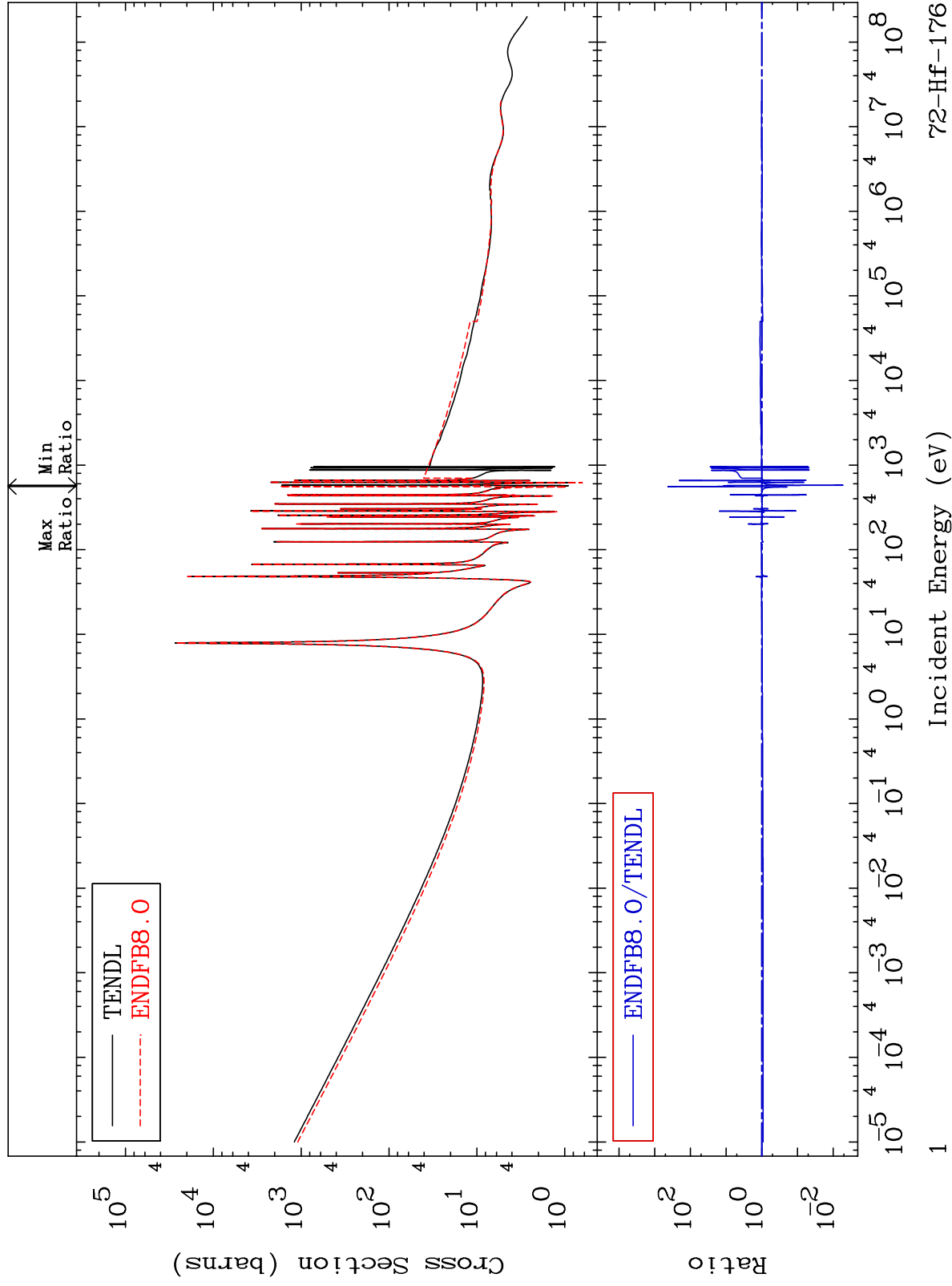
E.Mail: [redcullen1@comcast.net](mailto:redcullen1@comcast.net)  
Web: [redcullen1.net/HOMEPAGE.NEW](http://redcullen1.net/HOMEPAGE.NEW)

Press Mouse Button to Start

MAT 7231

Total  
Cross Section

72-Hf-176  
-99.46 To 9999. %



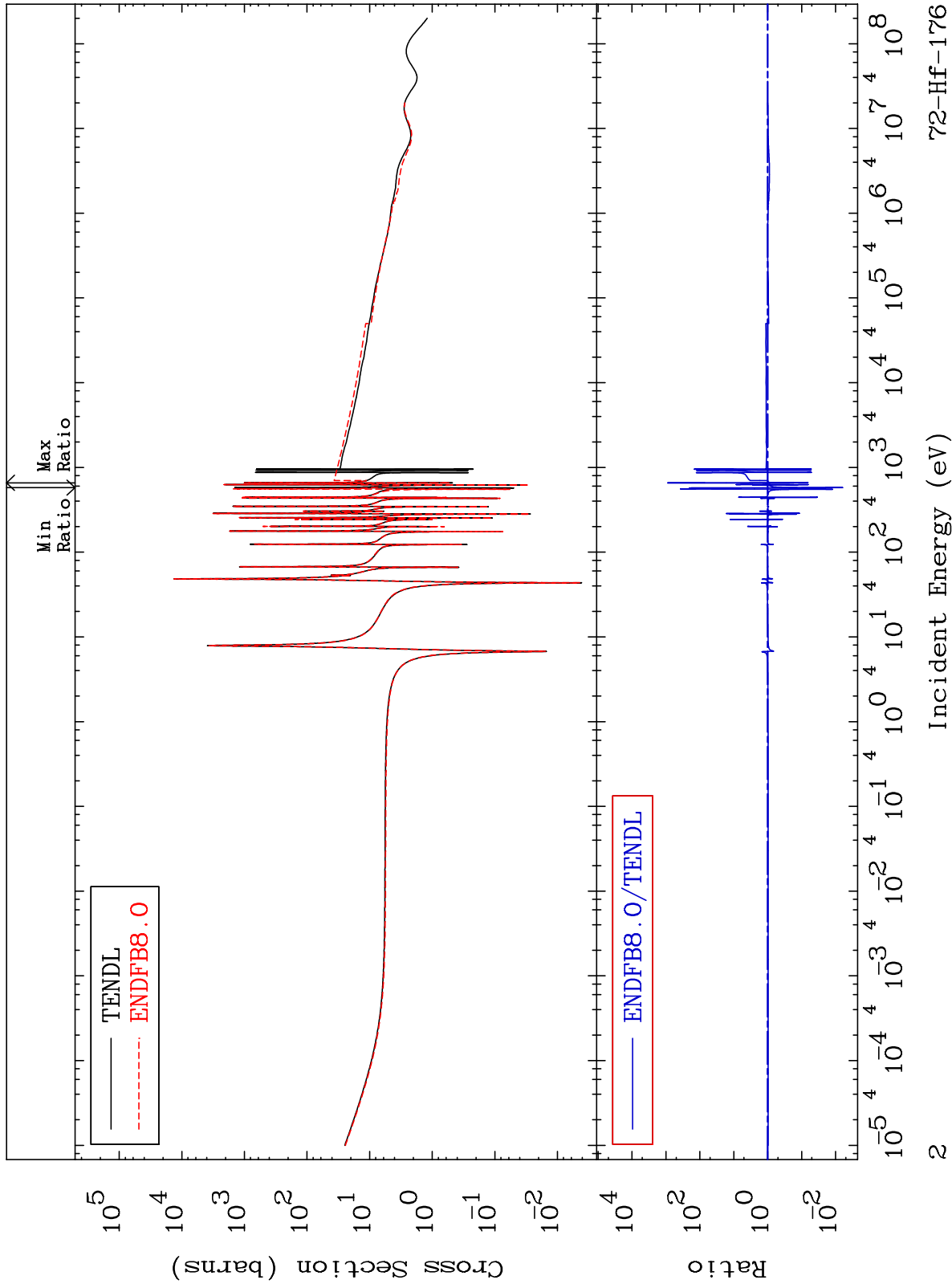
72-Hf-176

MAT 7231

Elastic

<sup>72</sup>Hf-176

Cross Section -99.38 To 9999. %



<sup>72</sup>Hf-176

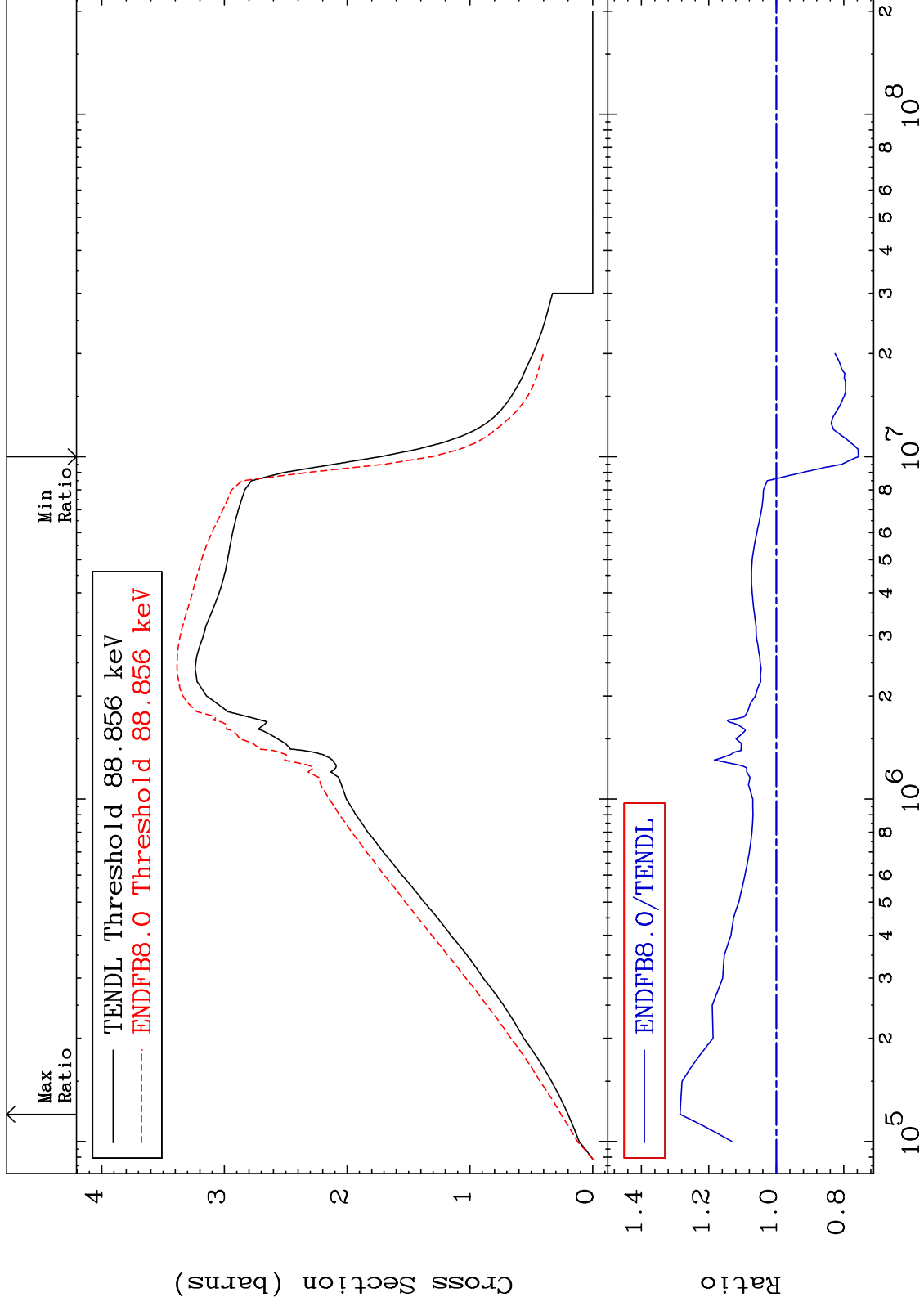
MAT 7231

Inelastic

<sup>72</sup>Hf-176

Cross Section

-24.33 To 28.52 %



Incident Energy (eV)

<sup>72</sup>Hf-176

3

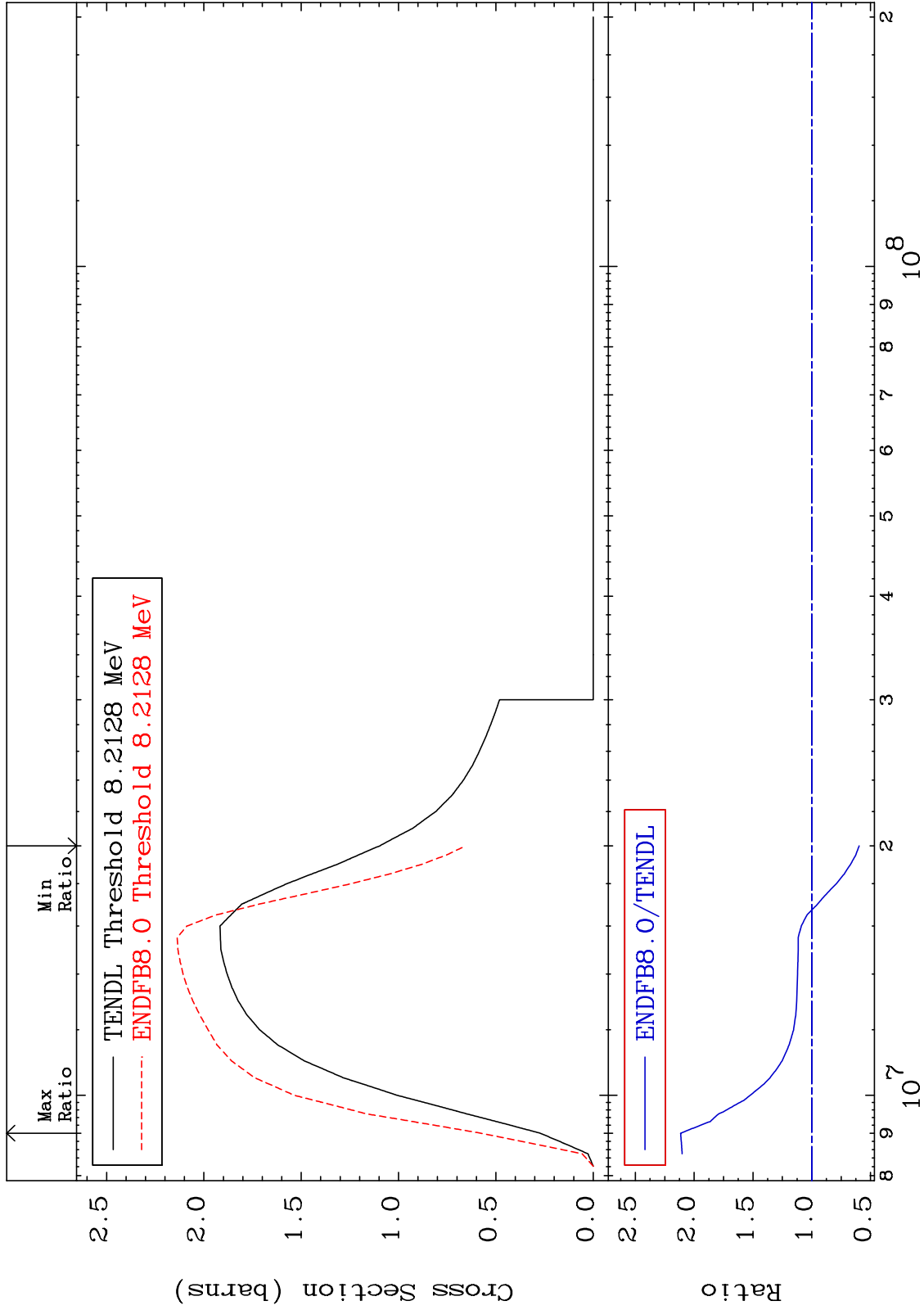
MAT 7231

(n, 2n)

72-Hf-176

Cross Section

-40.32 To 111.5 %



4

72-Hf-176

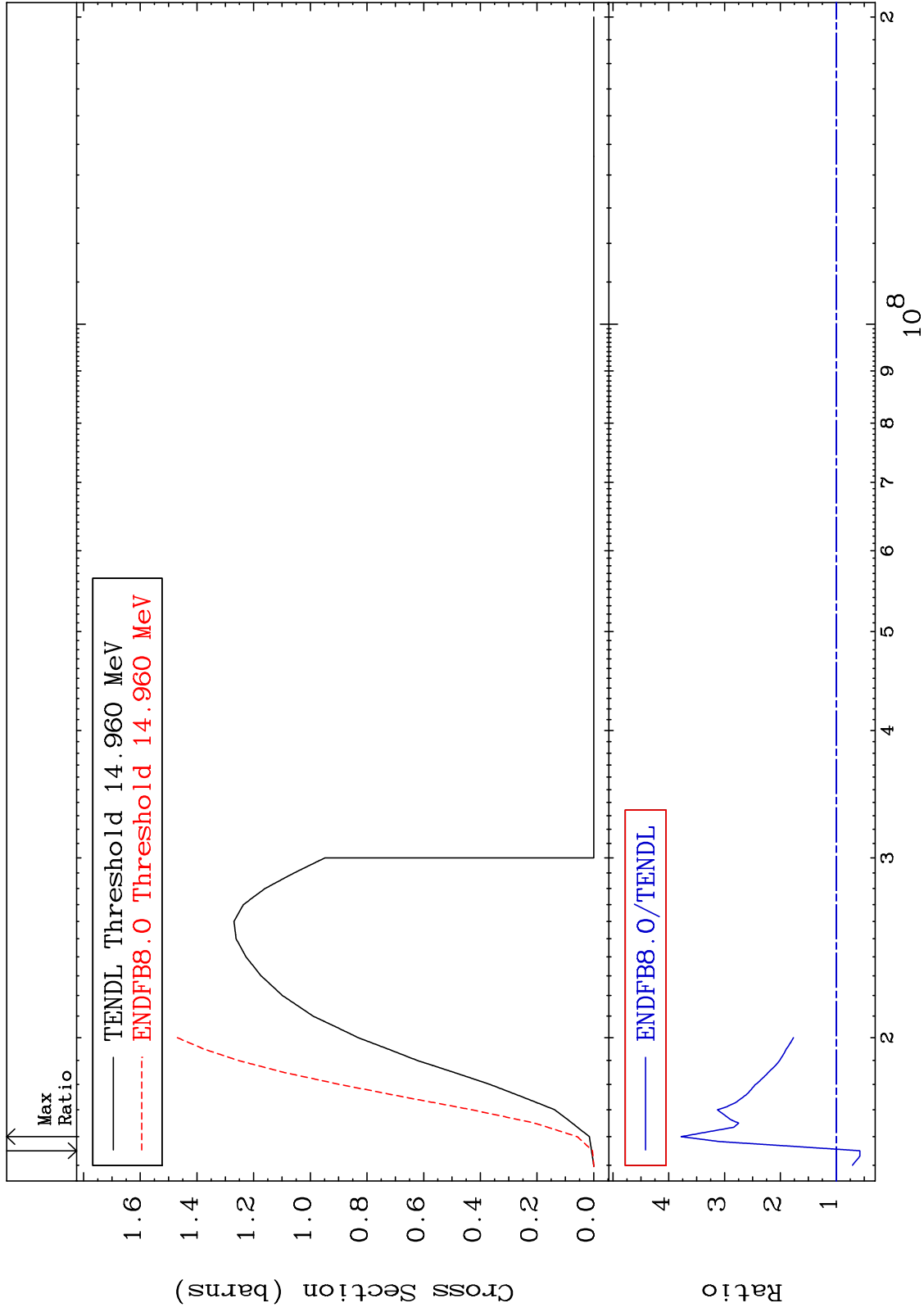
MAT 7231

(n, 3n)

<sup>72</sup>Hf-176

Cross Section

-42.34 To 277.7 %



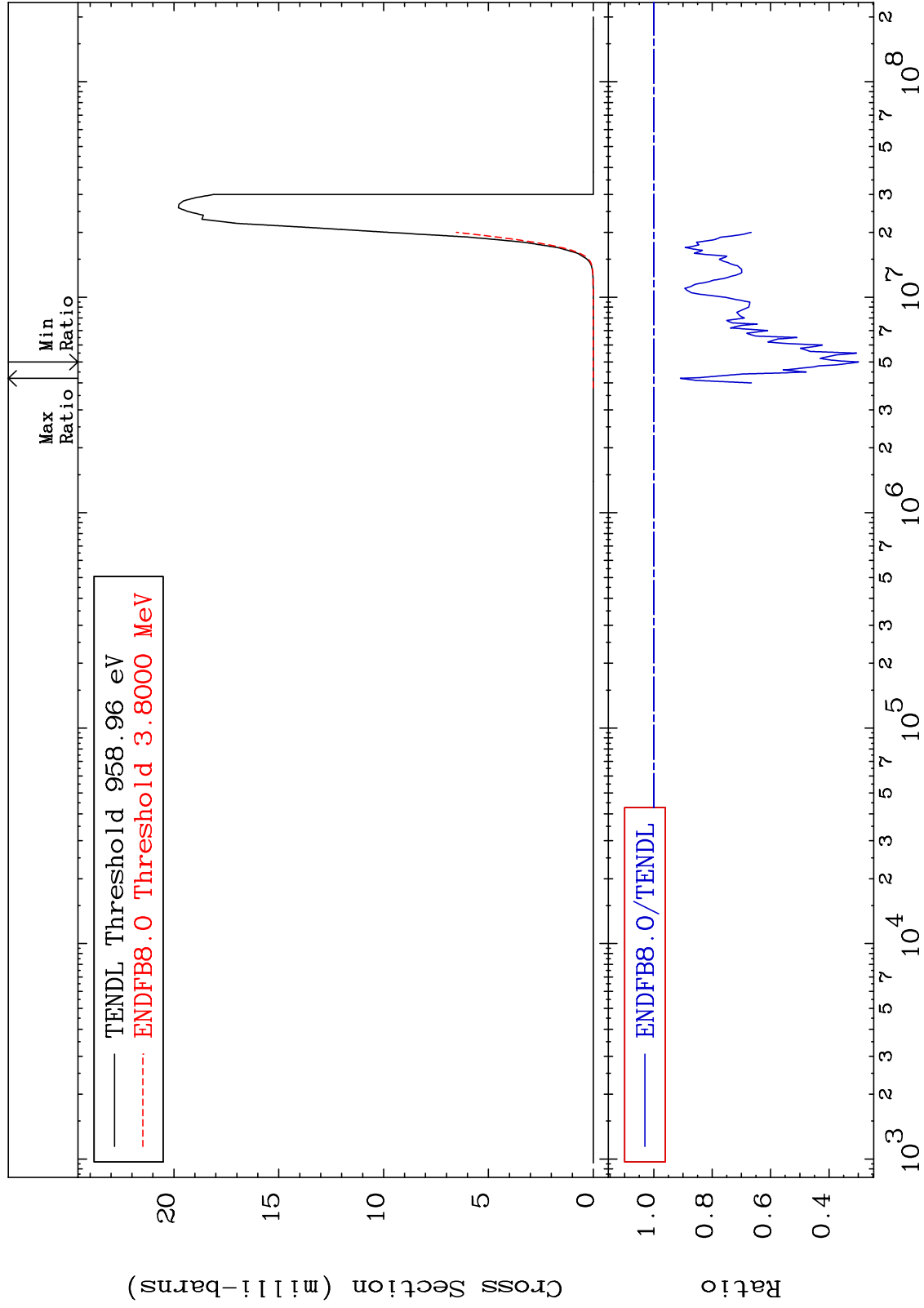
MAT 7231

(n, n')  $\alpha$

Cross Section

72-Hf-176

-70.12 To -9.099%



72-Hf-176

72-Hf-176

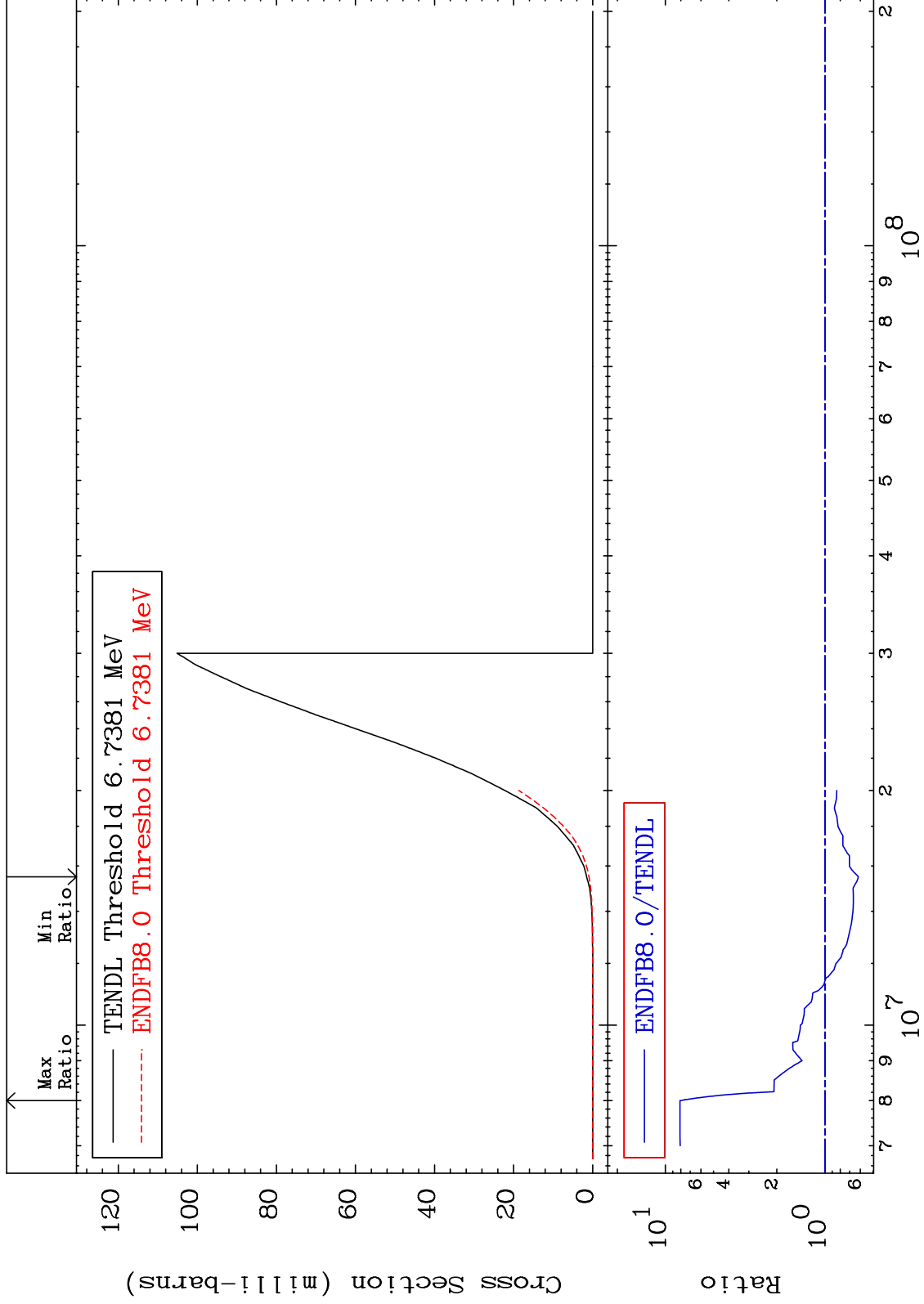
MAT 7231

(n,n') p

72-Hf-176

Cross Section

-38.36 To 710.2 %



7

Incident Energy (eV)

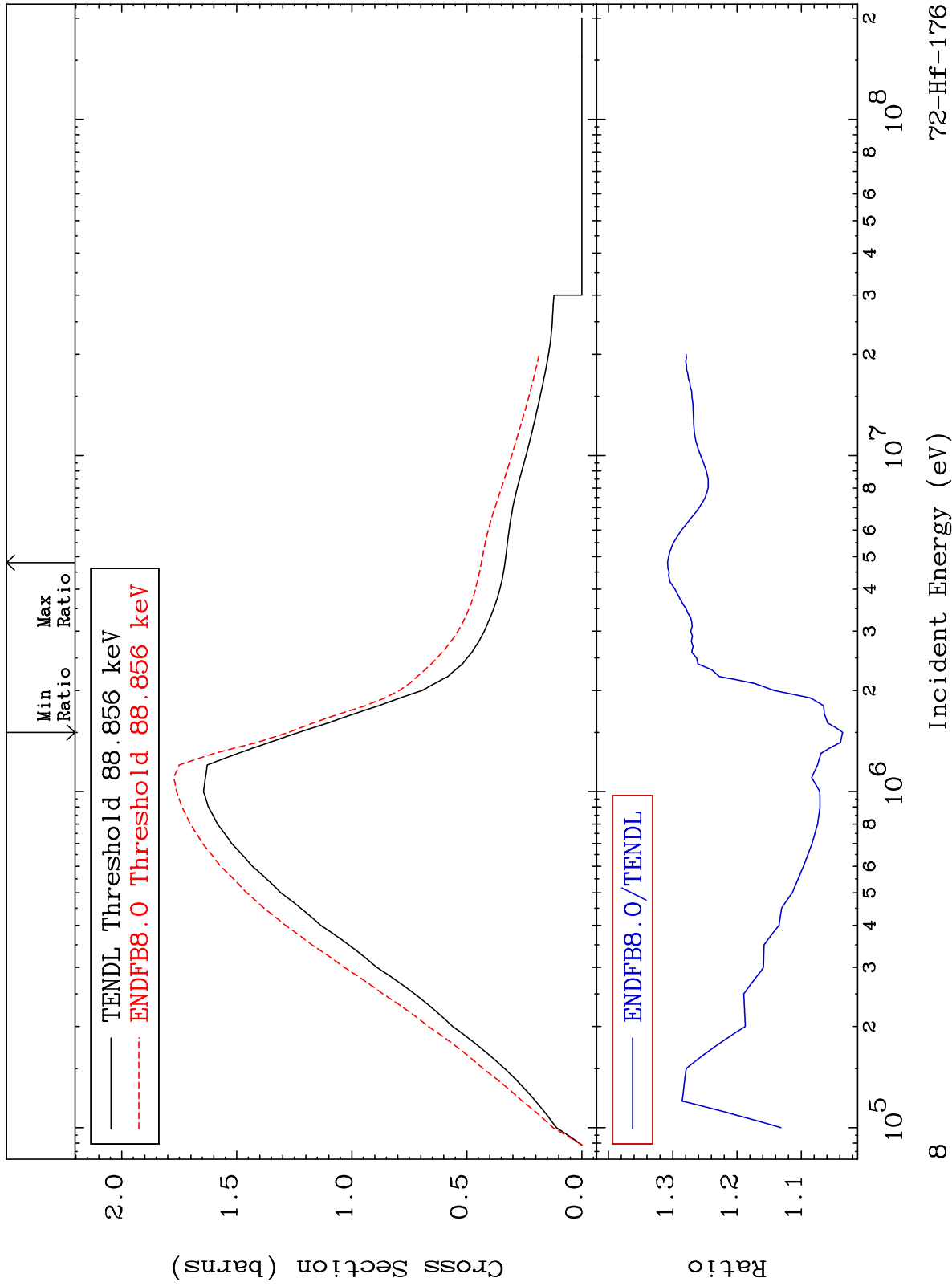
72-Hf-176



MAT 7231

MT= 51 (n,n') Level  
Cross Section

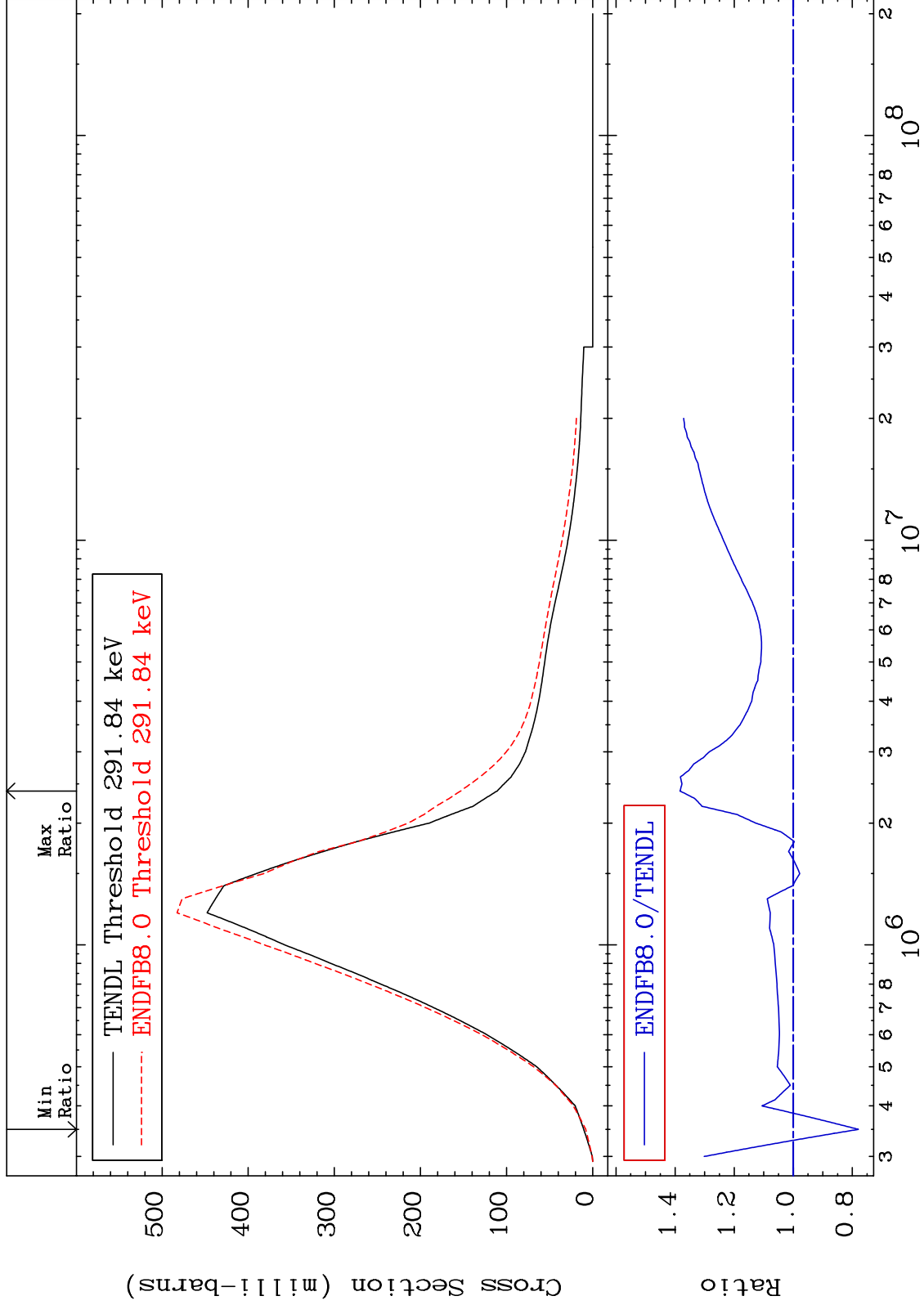
72-Hf-176  
3.562 To 30.81 %



MAT 7231

MT= 52 (n,n') Level  
Cross Section

72-Hf-176  
-22.05 To 38.33 %



9

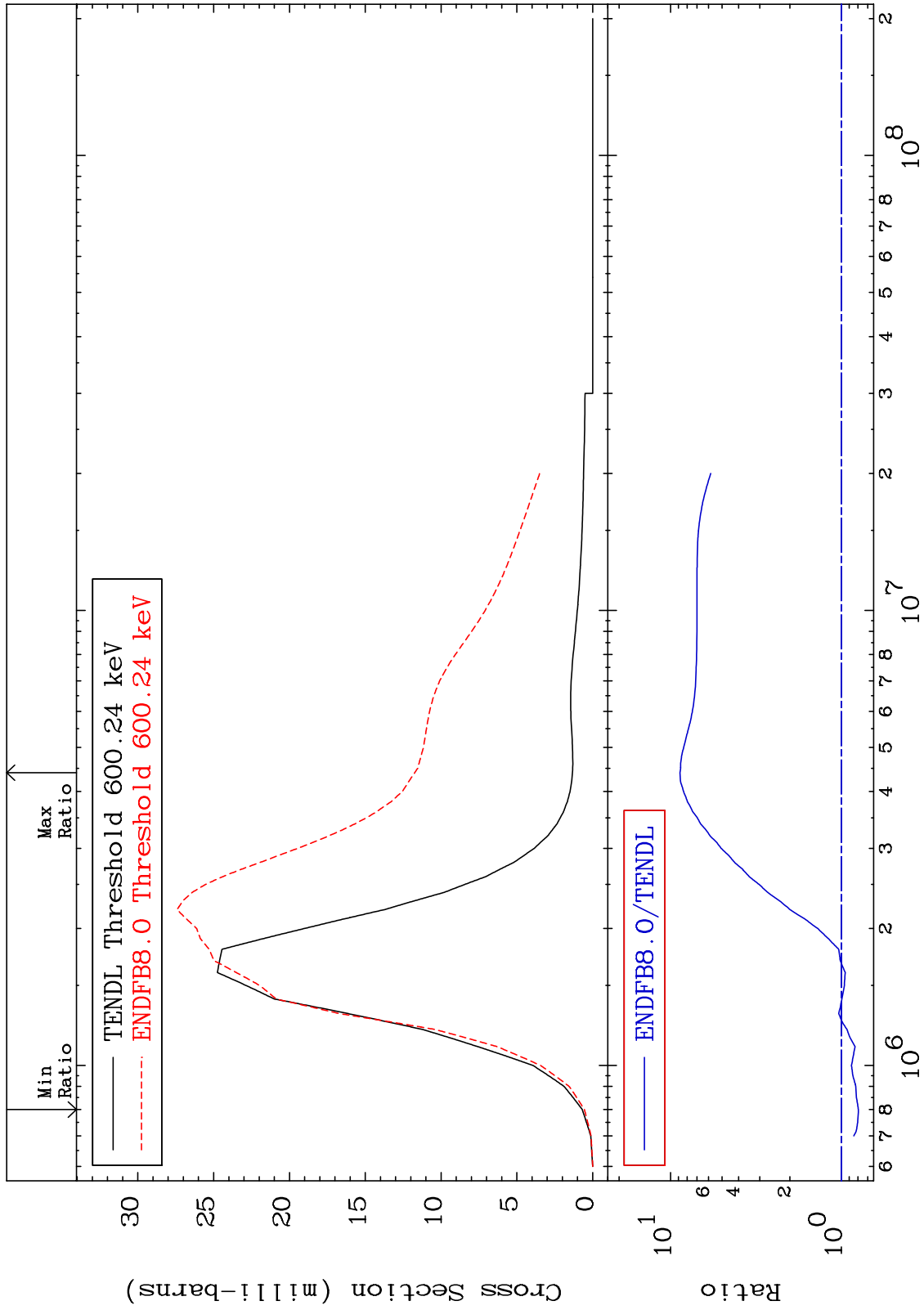
Incident Energy (eV)

72-Hf-176

MAT 7231

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

72-Hf-176  
-20.55 To 780.2 %



10

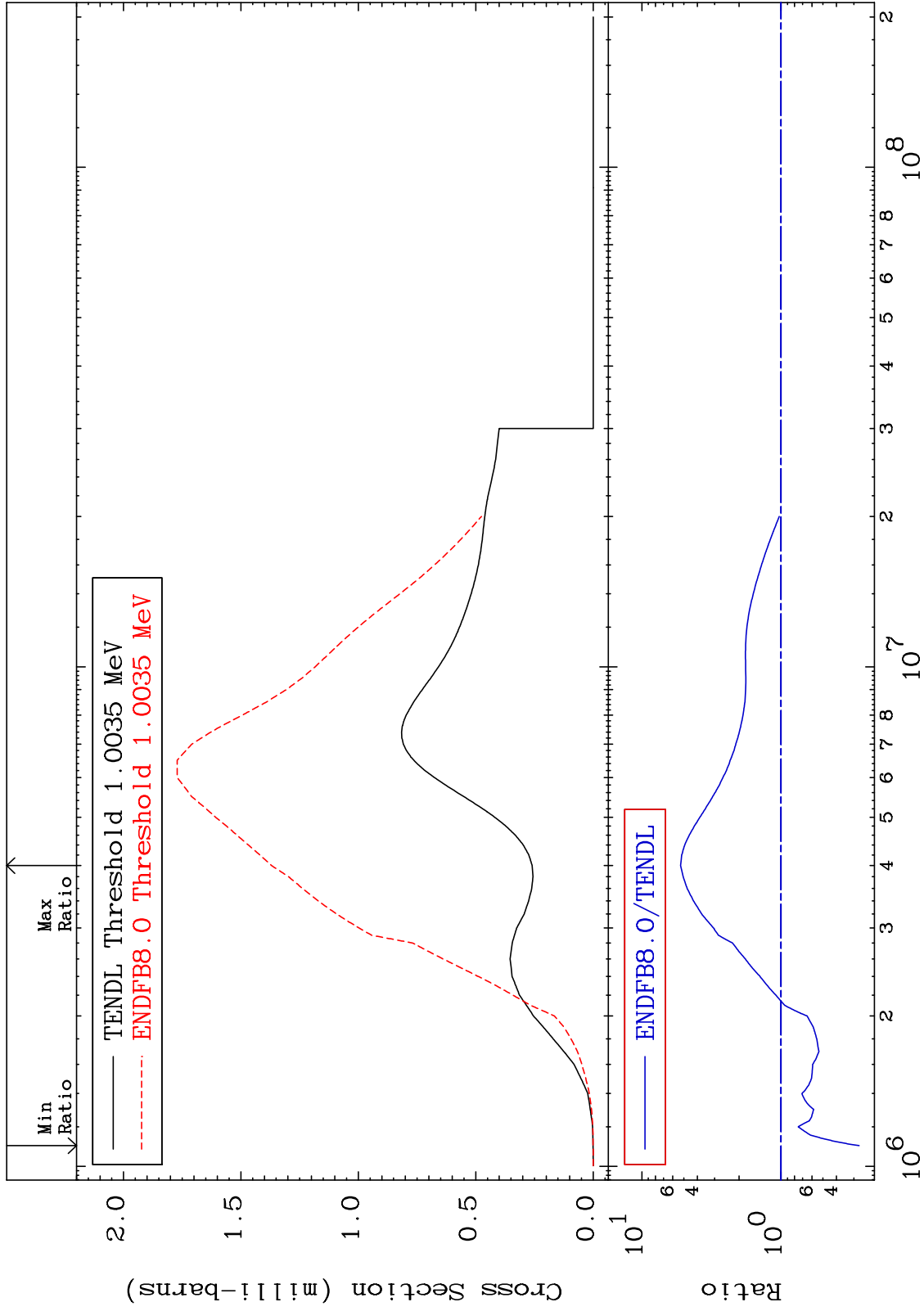
Incident Energy (eV)

72-Hf-176

MAT 7231

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

72-Hf-176  
-72.55 To 427.0 %



Incident Energy (eV)

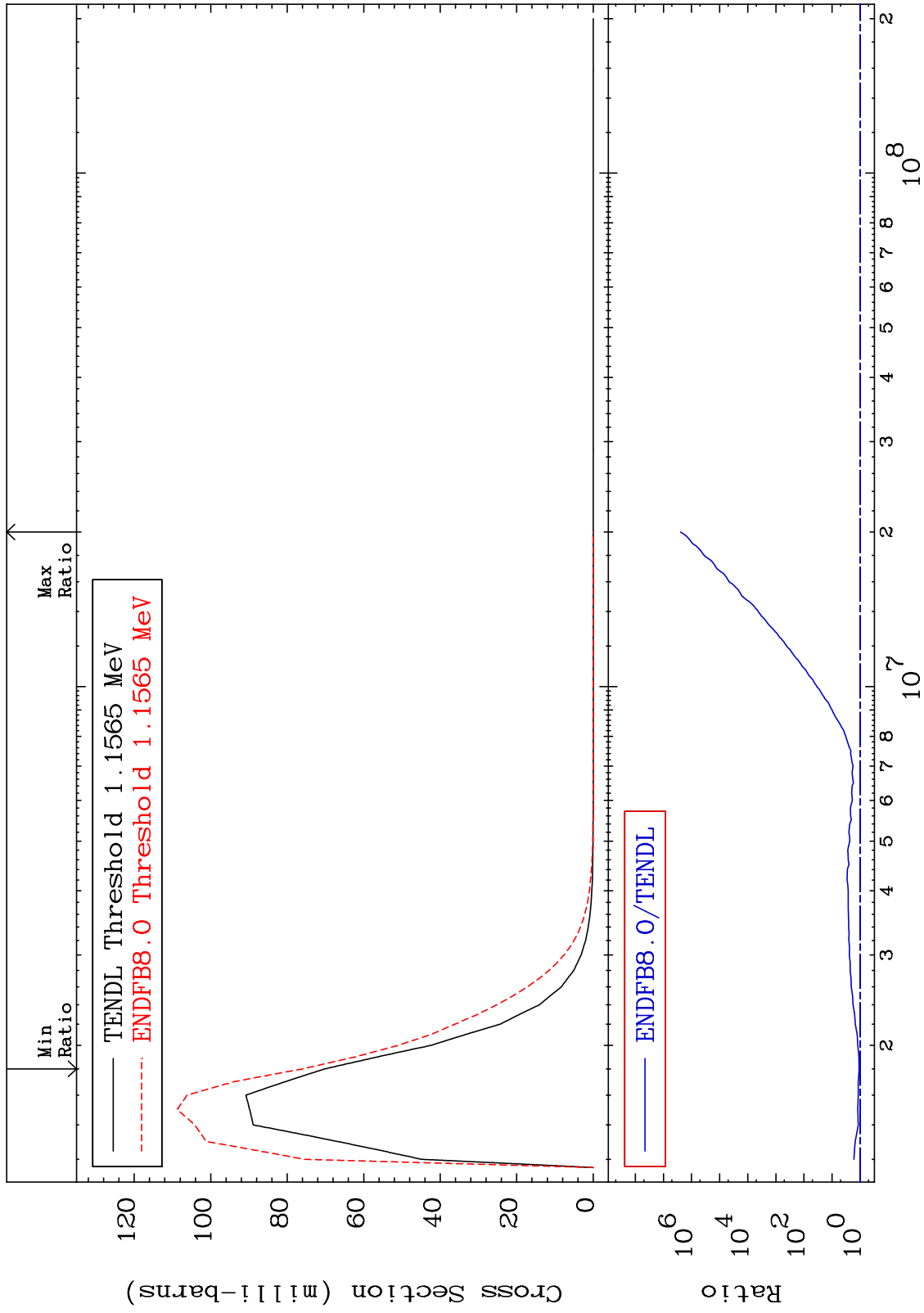
72-Hf-176

11

MAT 7231

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

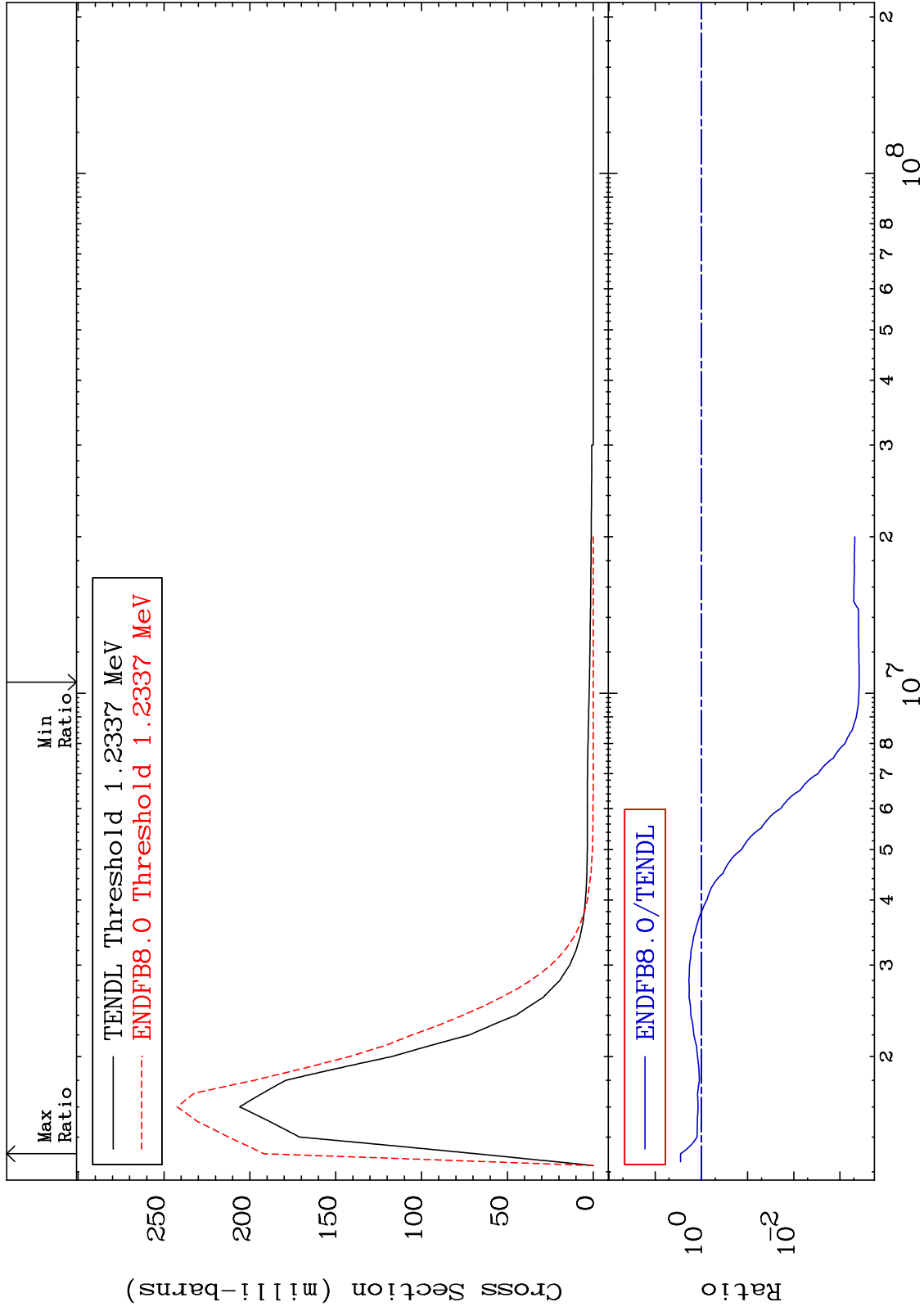
72-Hf-176  
8.275 To 9999. %



MAT 7231

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

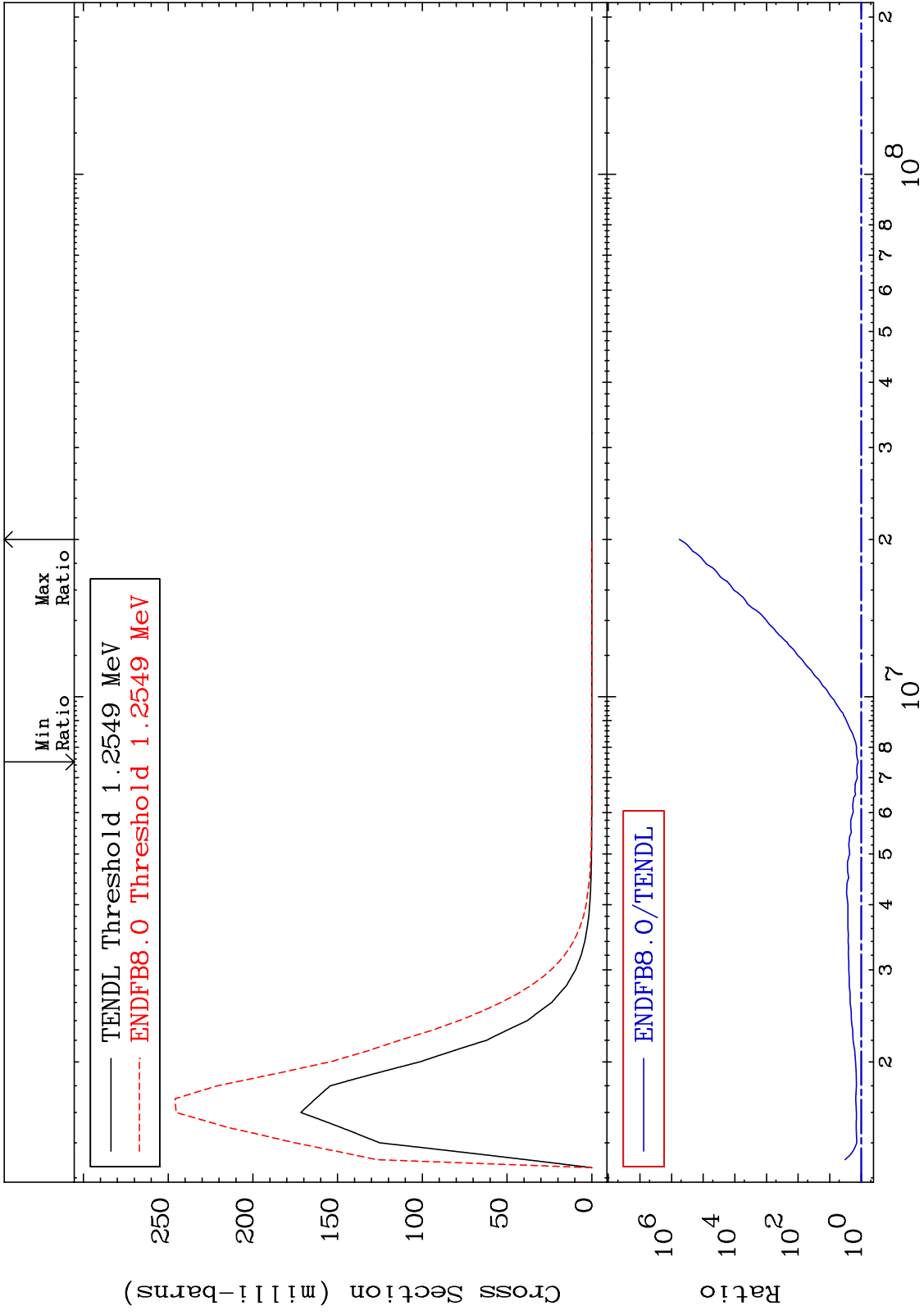
<sup>72</sup>Hf-176  
-99.96 To 180.9 %



MAT 7231

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

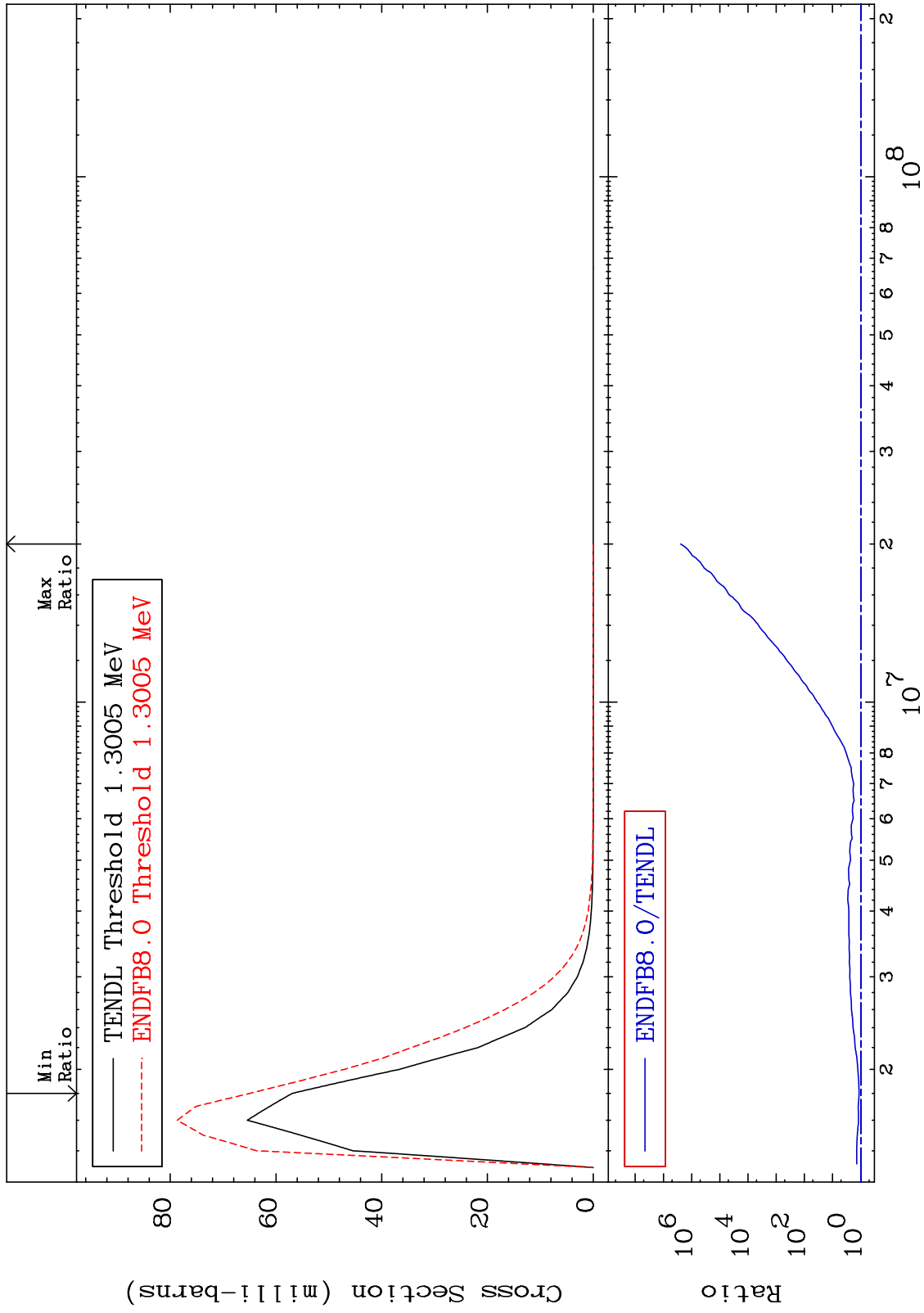
72-Hf-176  
25.31 To 9999. %



MAT 7231

MT= 58 (n, n') Level  
Cross Section

72-Hf-176  
14.02 To 9999. %

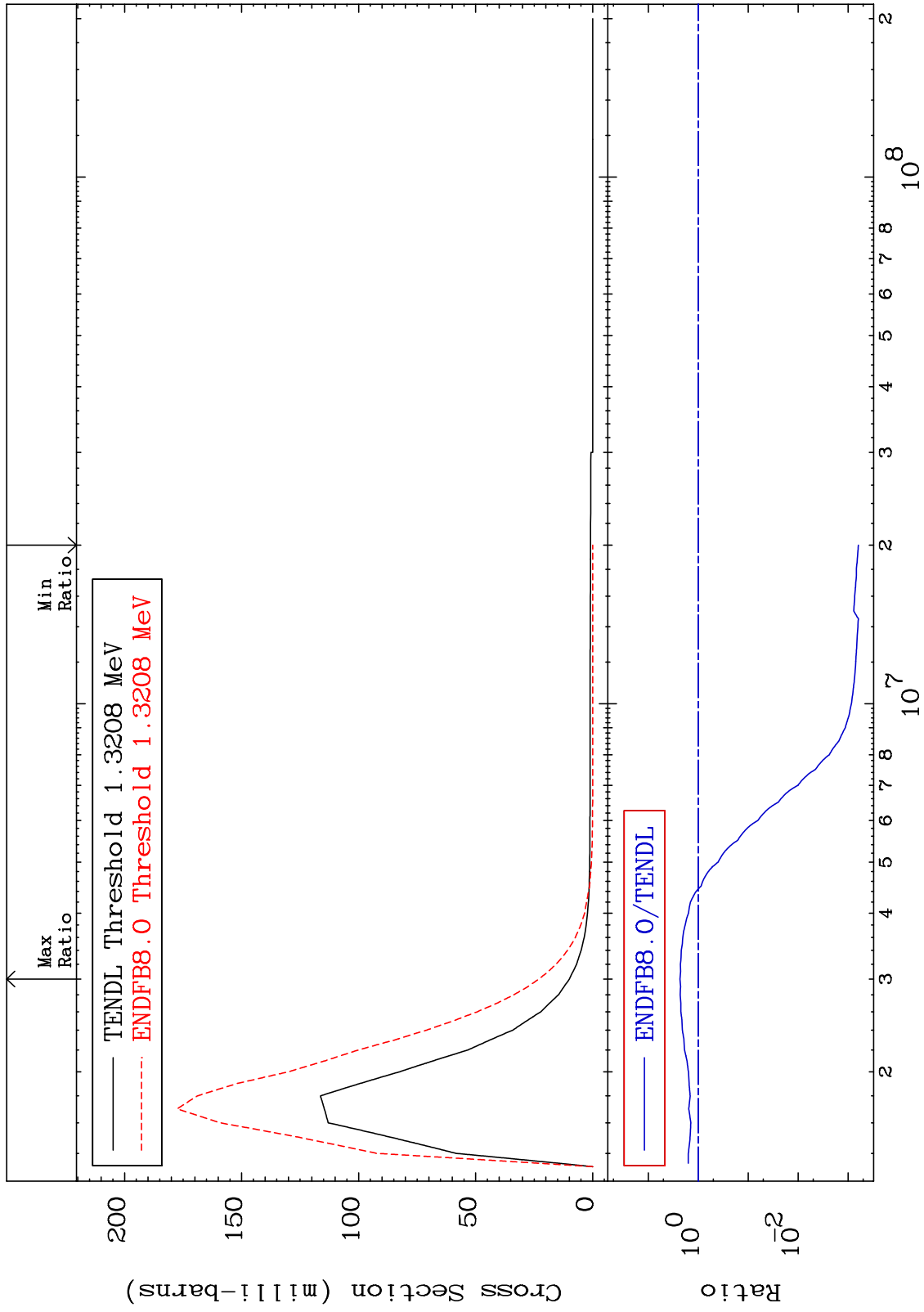


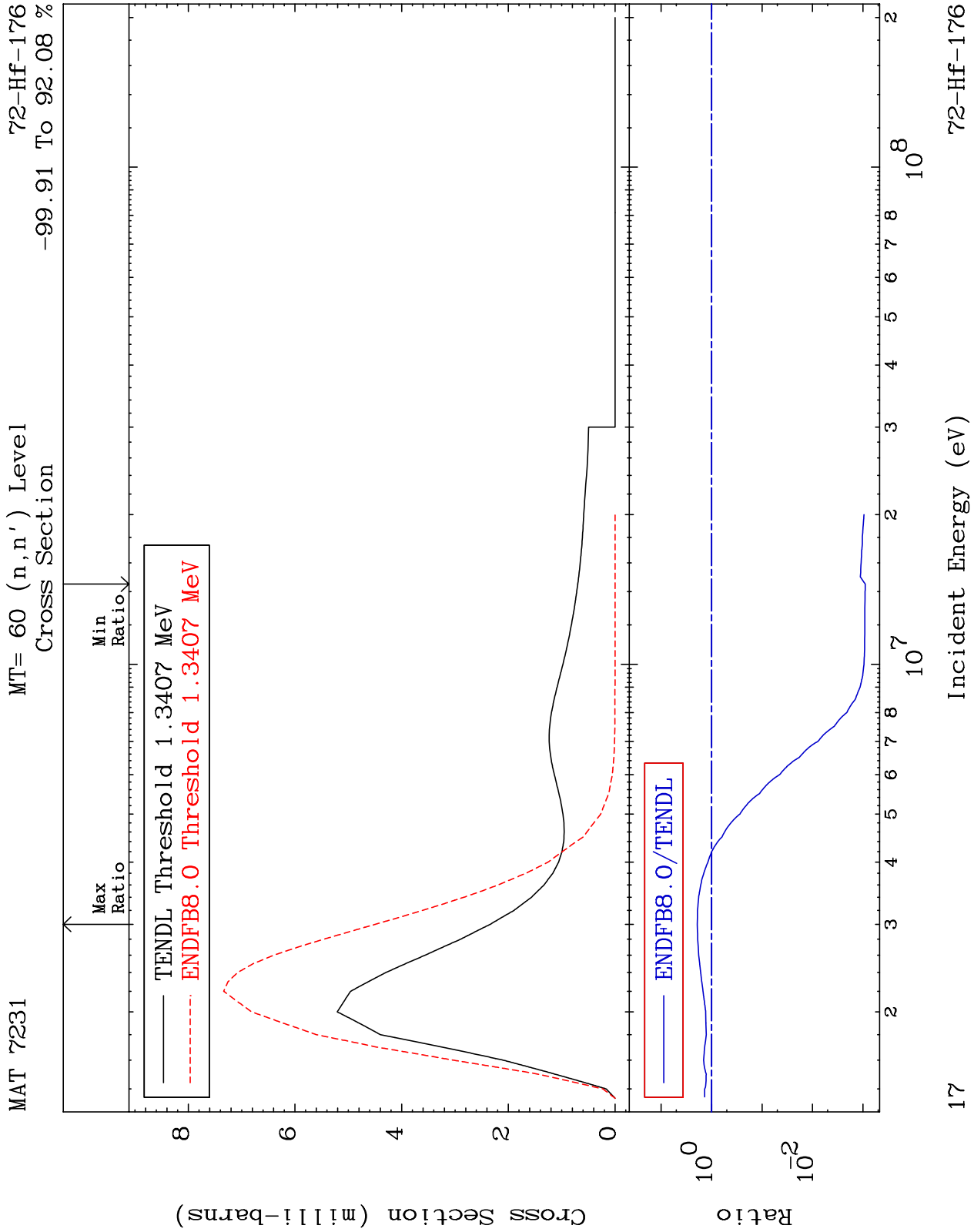


MAT 7231

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

<sup>72</sup>Hf-176  
-99.94 To 131.4 %

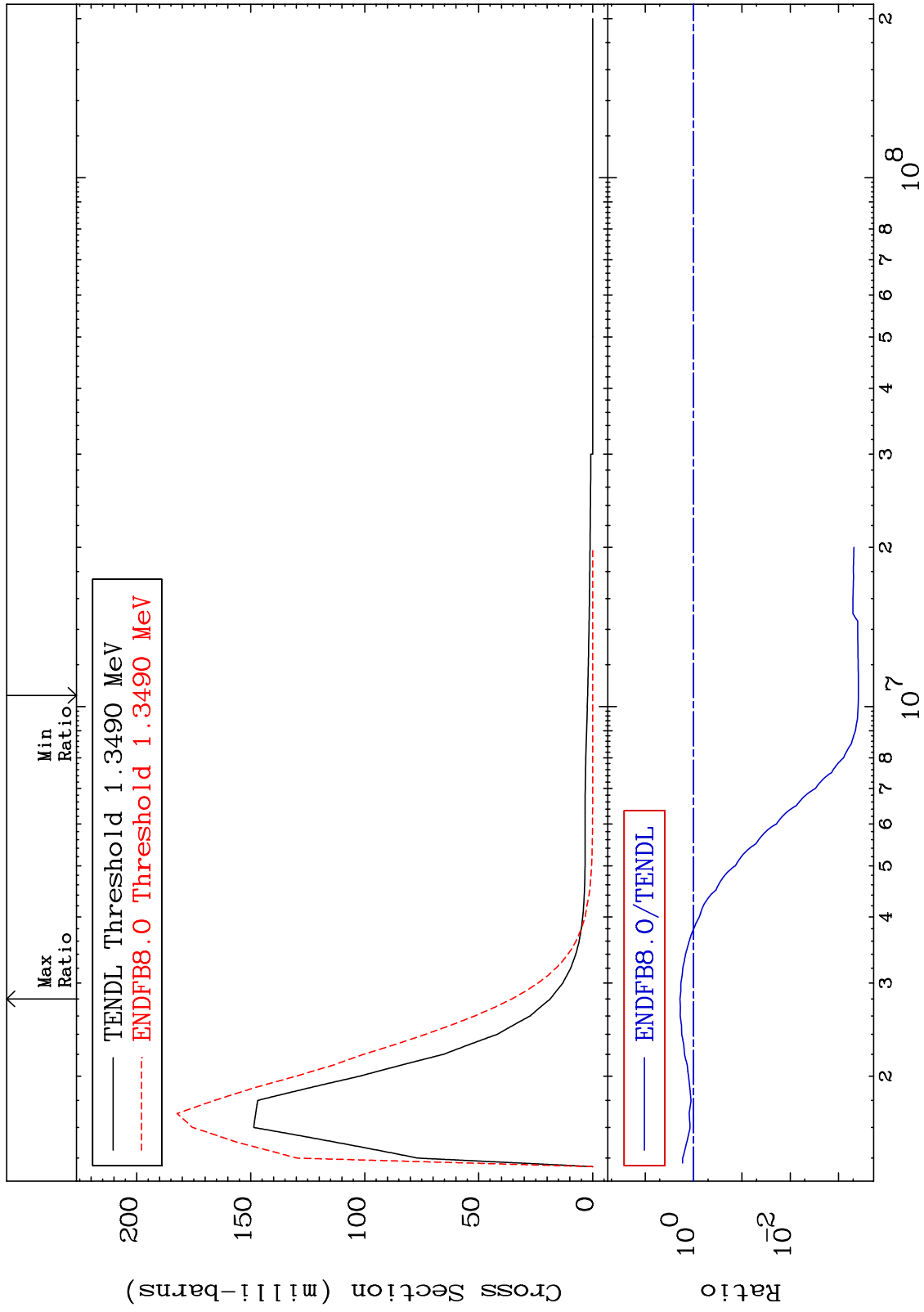




MAT 7231

MT= 61 (n,n') Level  
Cross Section

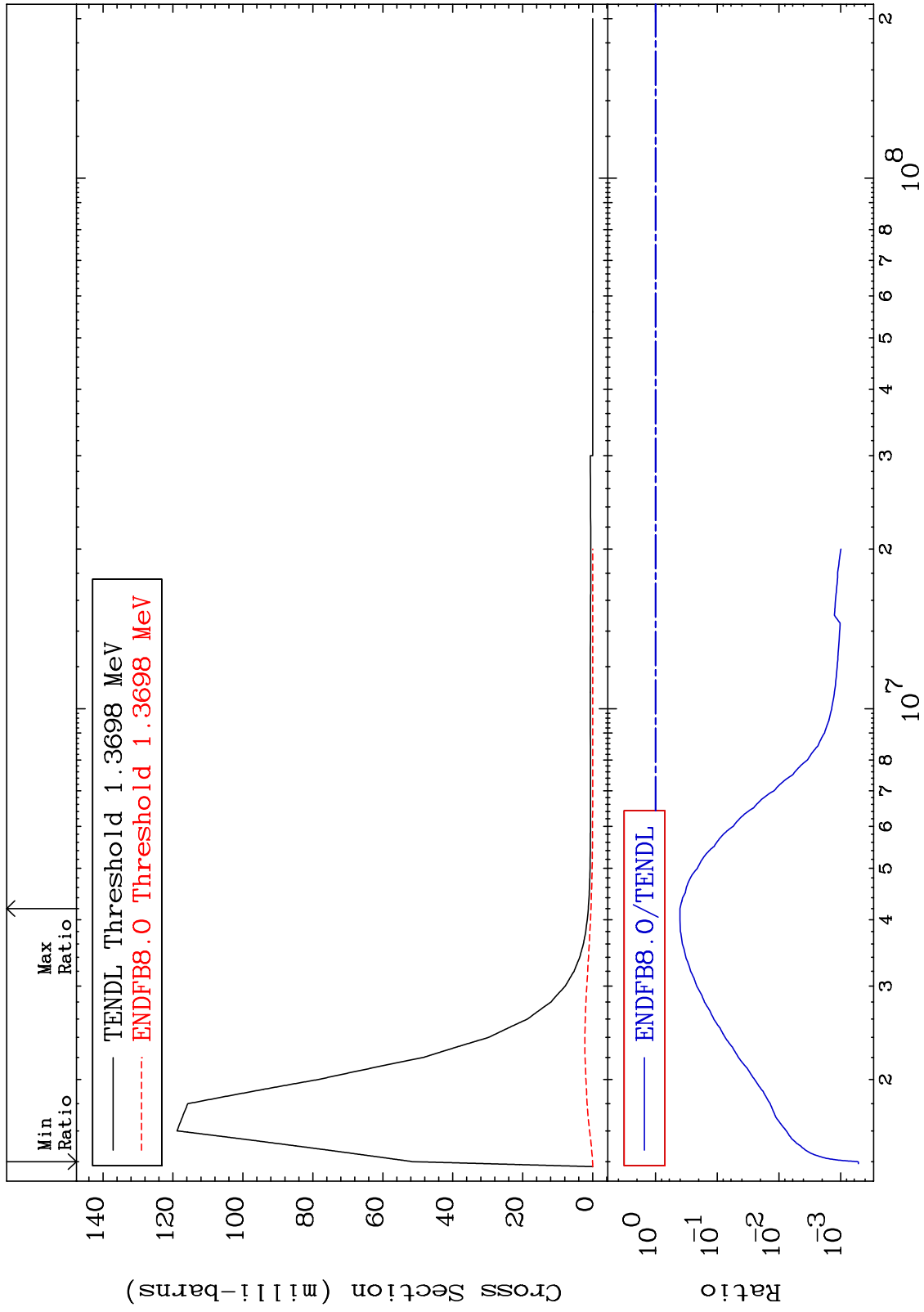
<sup>72</sup>Hf-176  
-99.96 To 90.51 %



MAT 7231

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

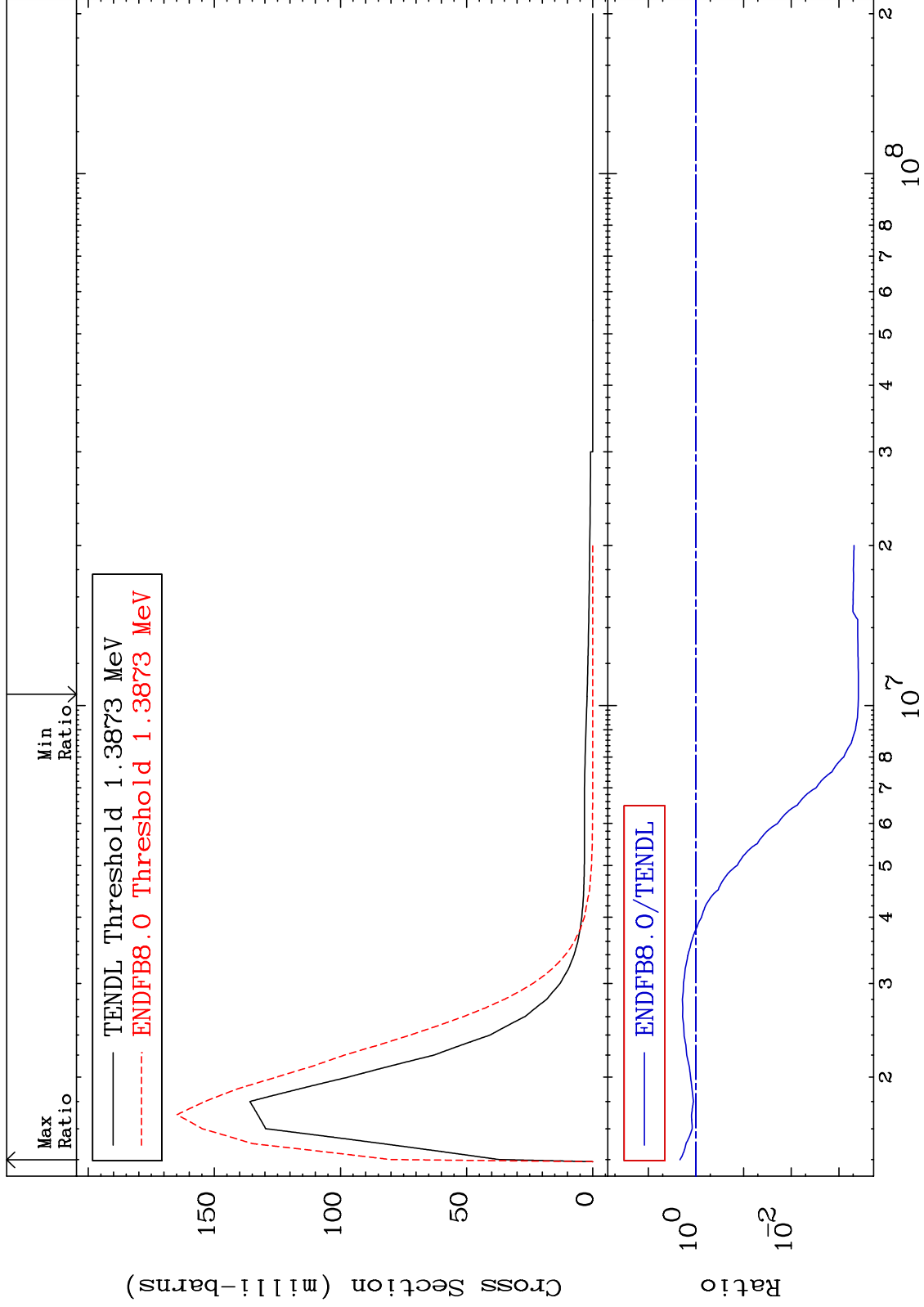
<sup>72</sup>Hf-176  
-99.95 To -59.83%



MAT 7231

MT= 63 (n,n') Level  
Cross Section

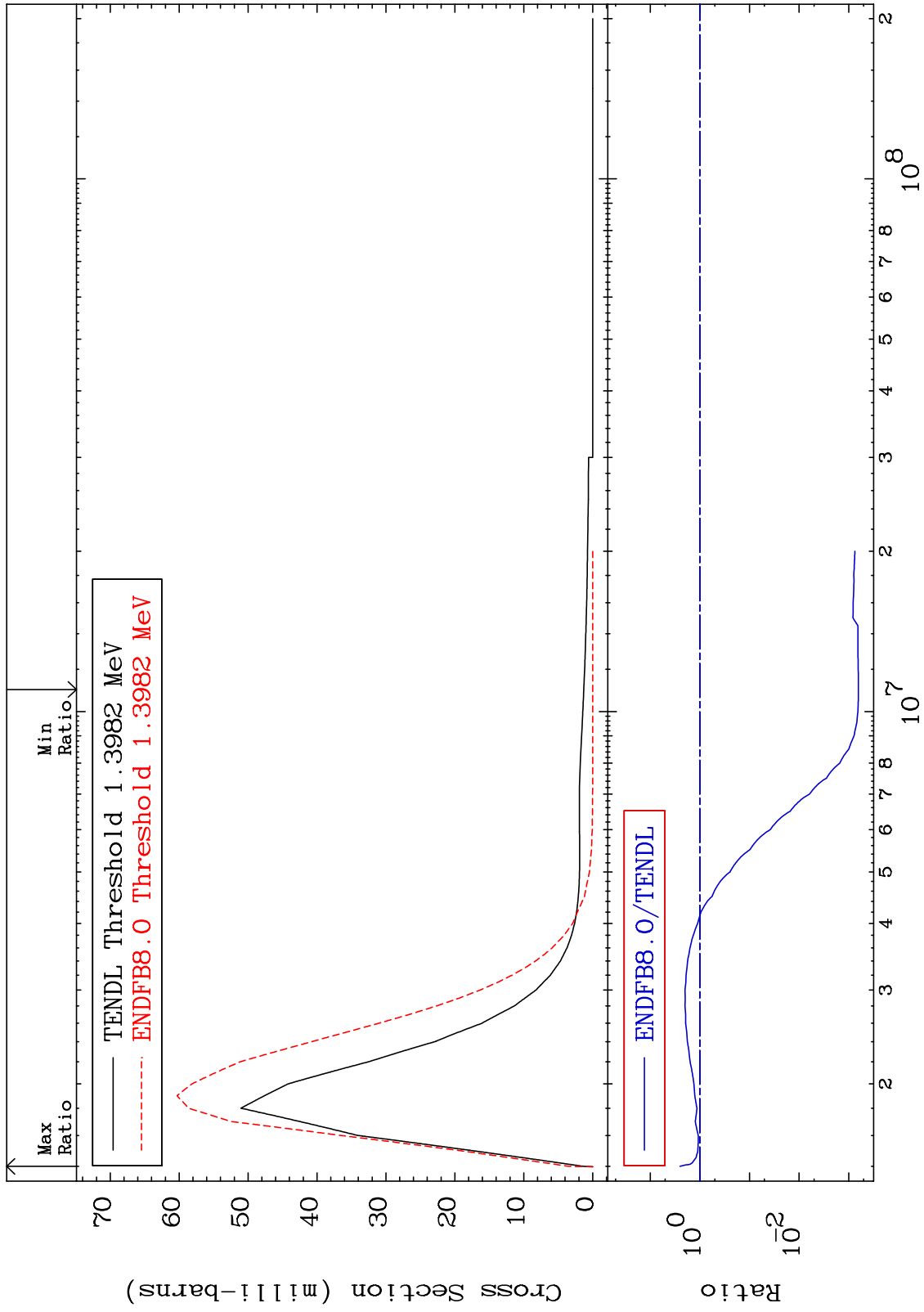
<sup>72</sup>Hf-176  
-99.96 To 115.7 %



MAT 7231

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

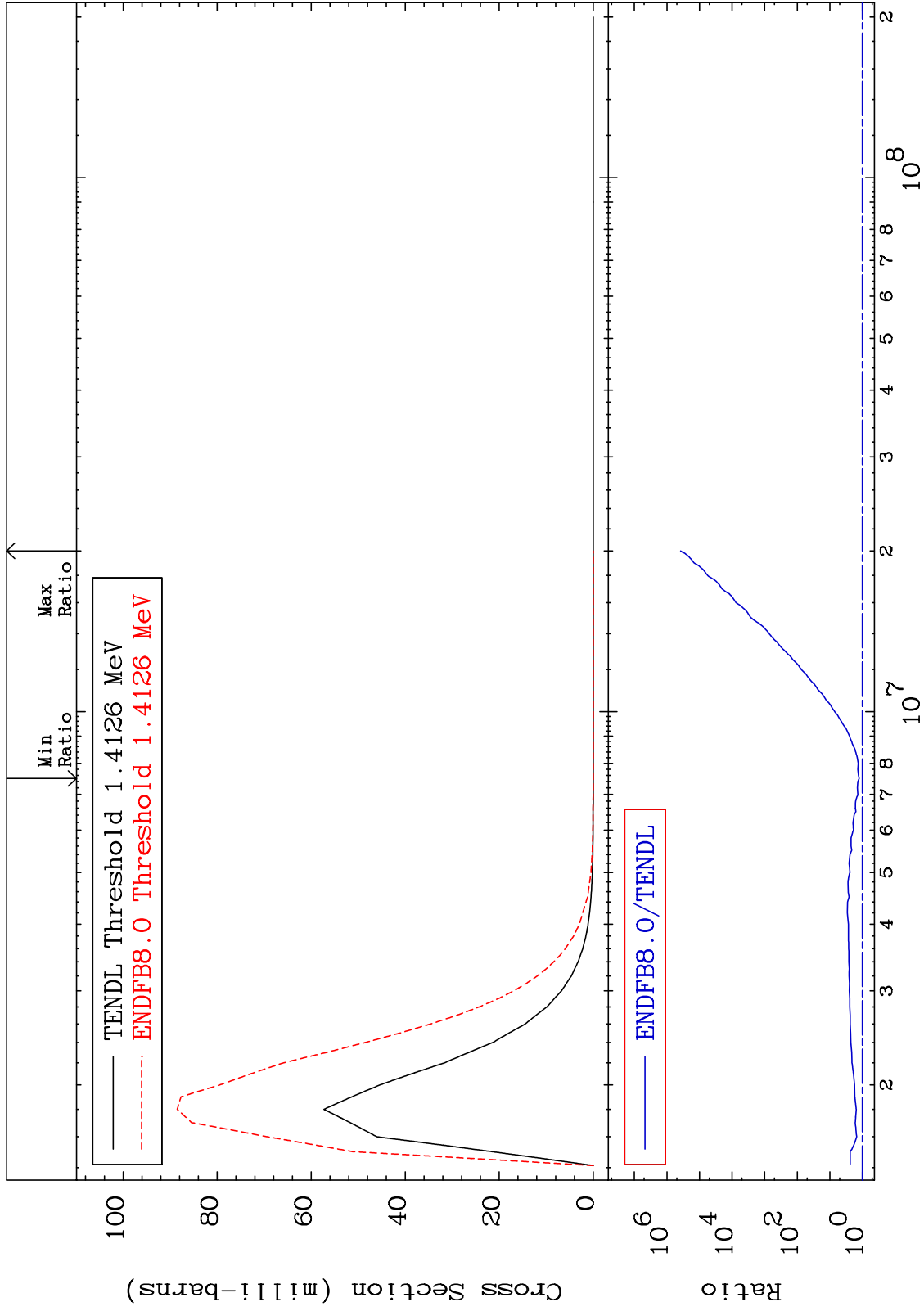
<sup>72</sup>Hf-176  
-99.94 To 151.1 %



MAT 7231

MT= 65 (n,n') Level  
Cross Section

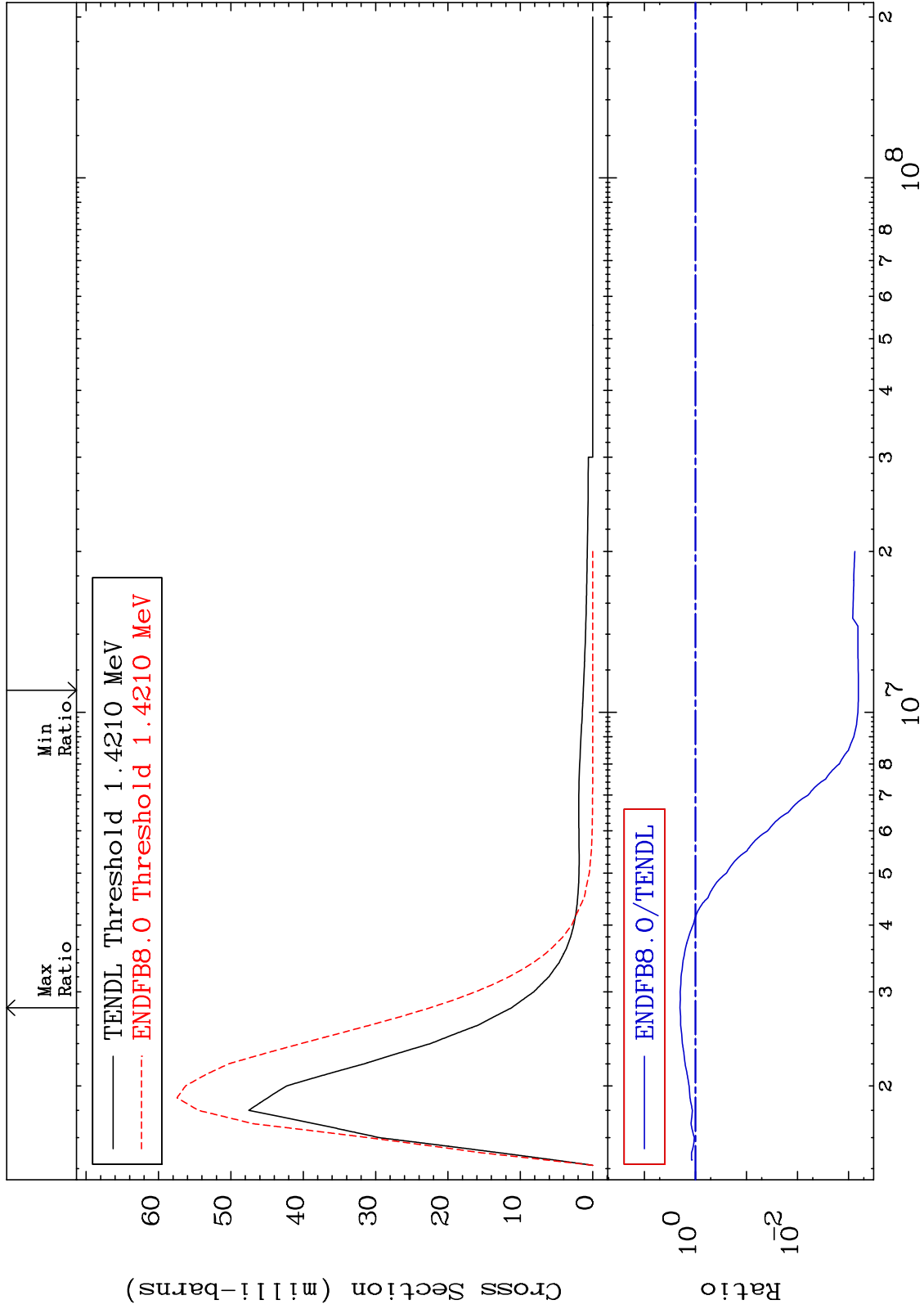
72-Hf-176  
25.72 To 9999. %



MAT 7231

MT= 66 (n,n') Level  
Cross Section

72-Hf-176  
-99.94 To 100.3 %

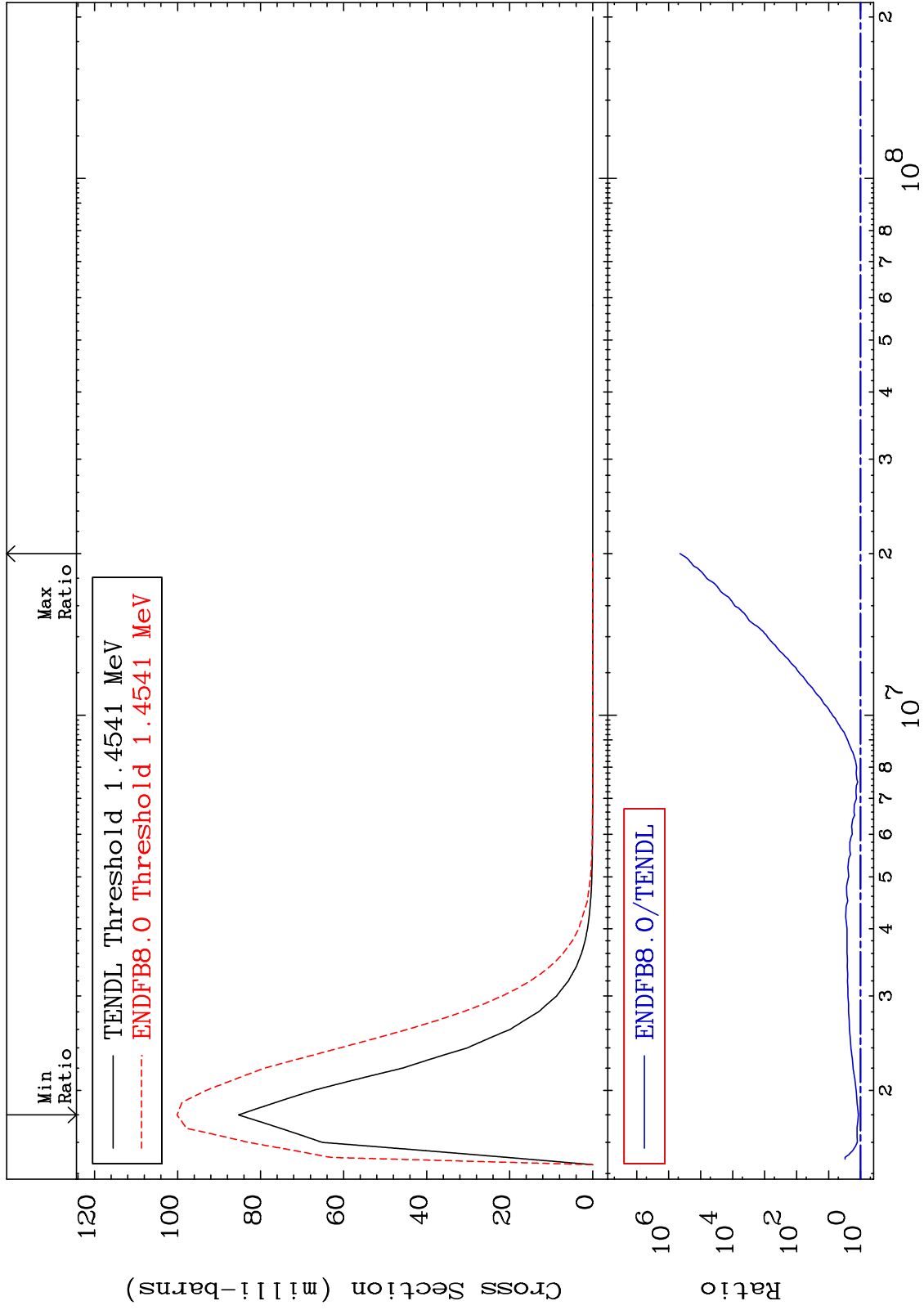




MAT 7231

MT= 67 (n, n') Level  
Cross Section

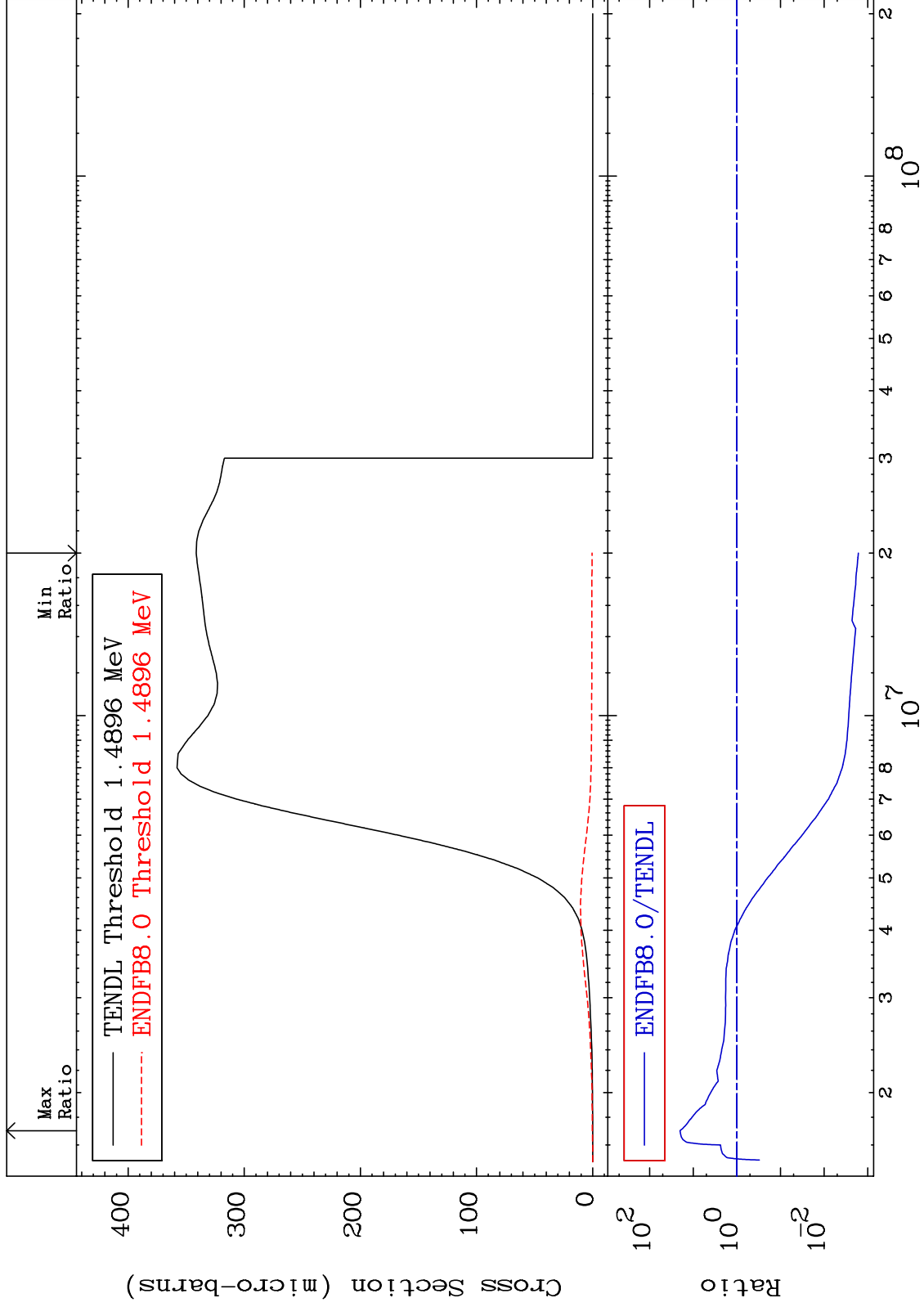
72-Hf-176  
17.35 To 9999. %



MAT 7231

MT= 68 (n,n') Level  
Cross Section

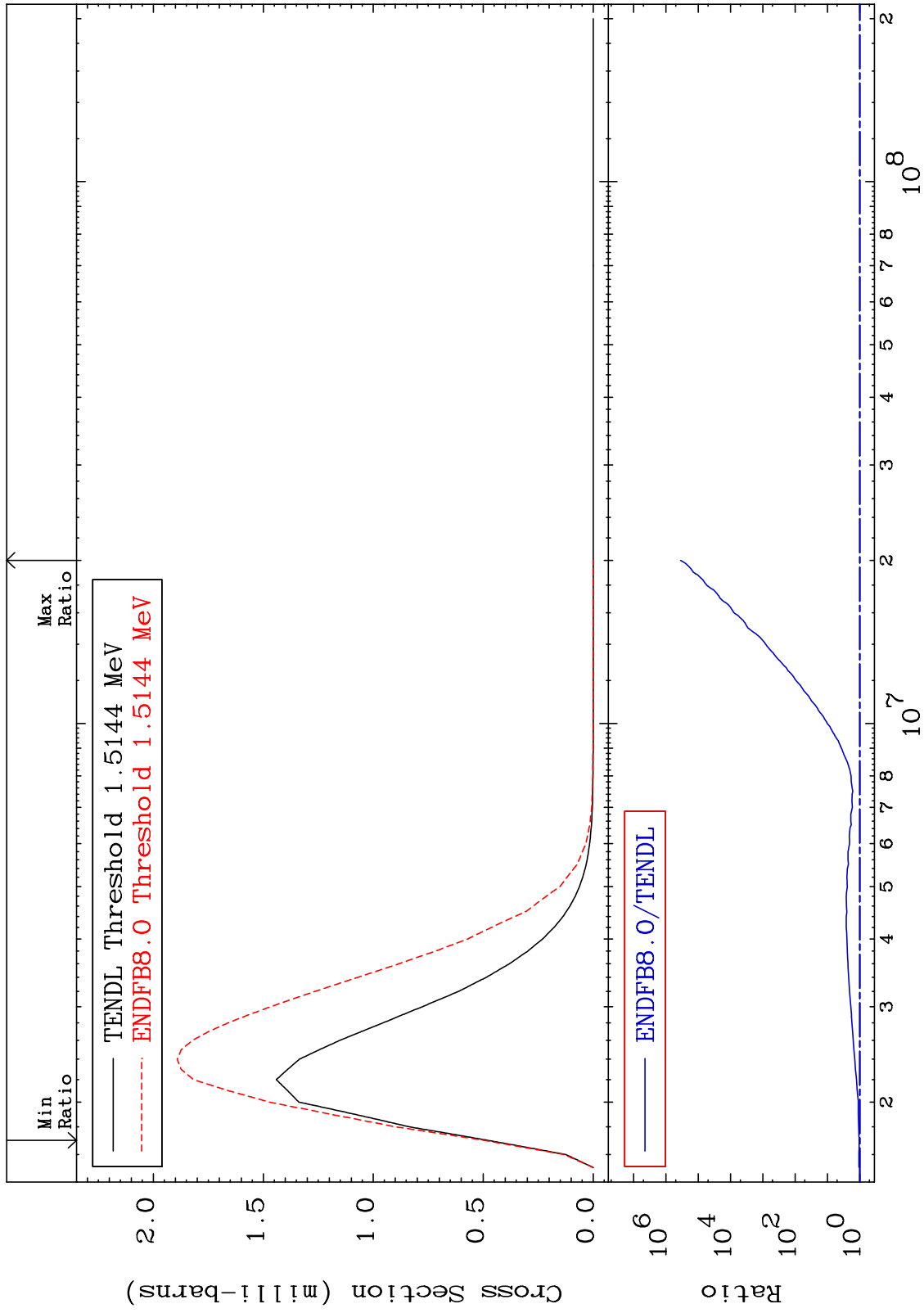
<sup>72</sup>Hf-176  
-99.84 To 1903. %



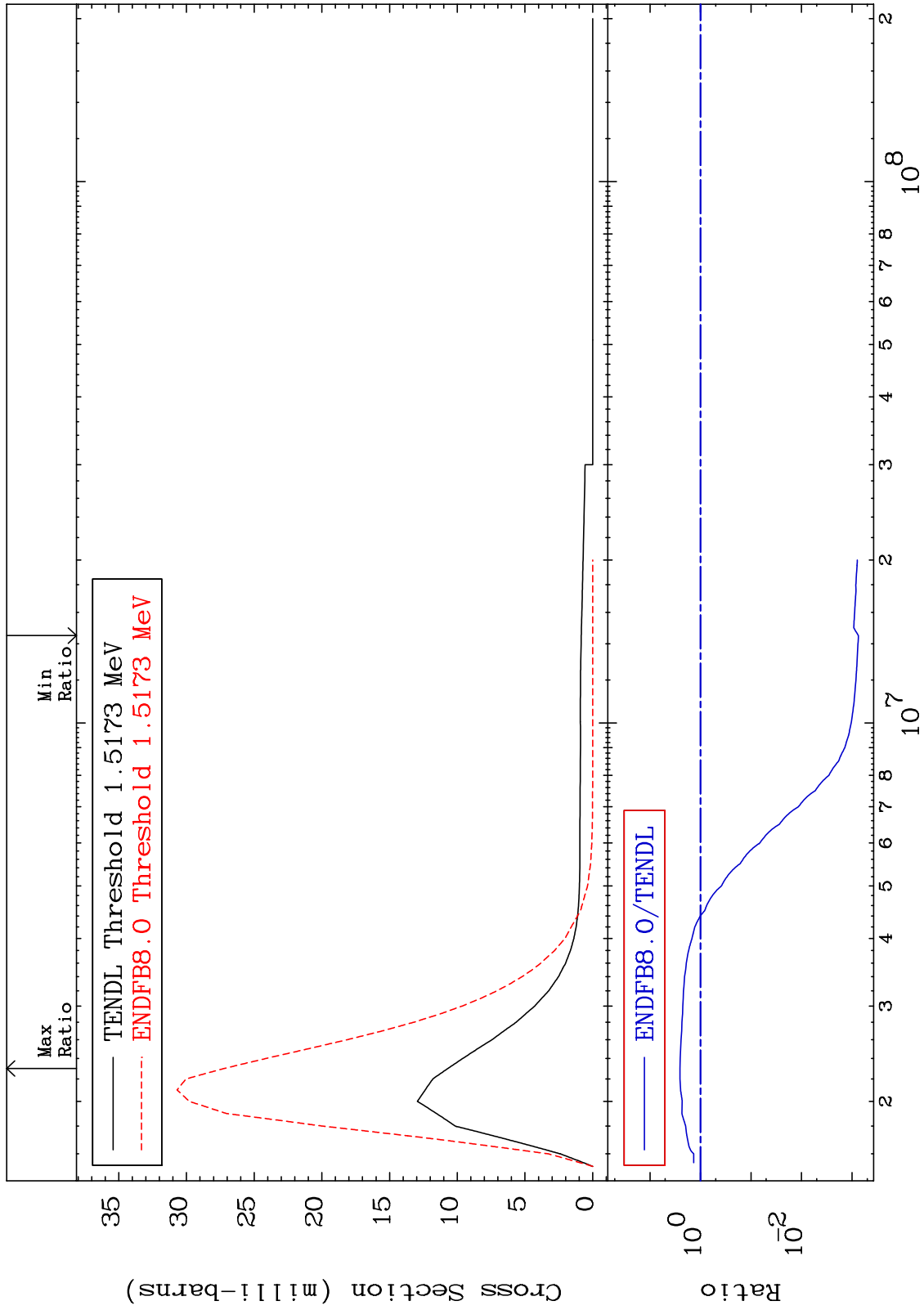
MAT 7231

MT= 69 (n,n') Level  
Cross Section

72-Hf-176  
3.764 To 9999. %



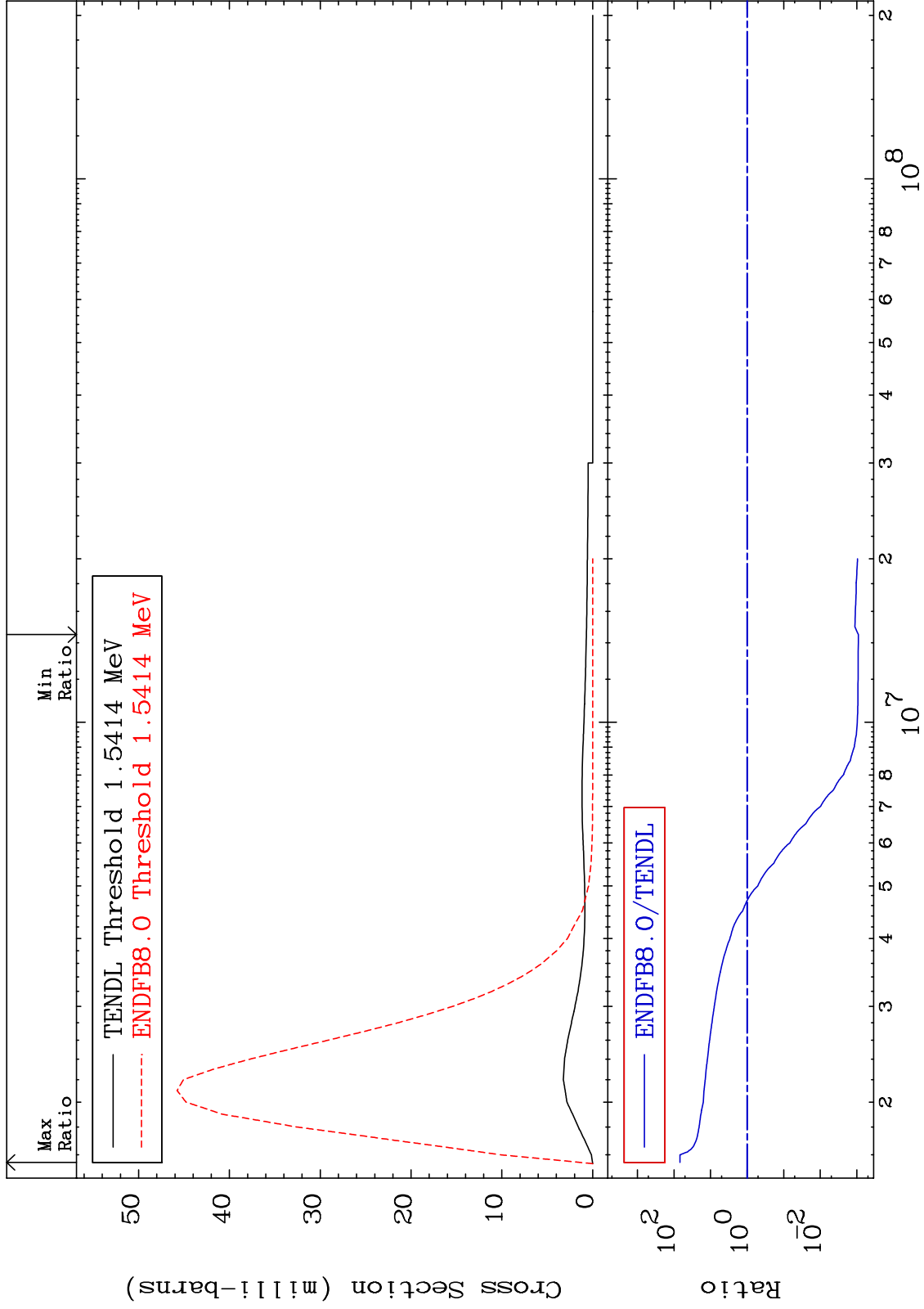
MAT 7231 MT= 70 (n,n') Level  
 Cross Section 72-Hf-176  
 -99.93 To 154.5 %



MAT 7231

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

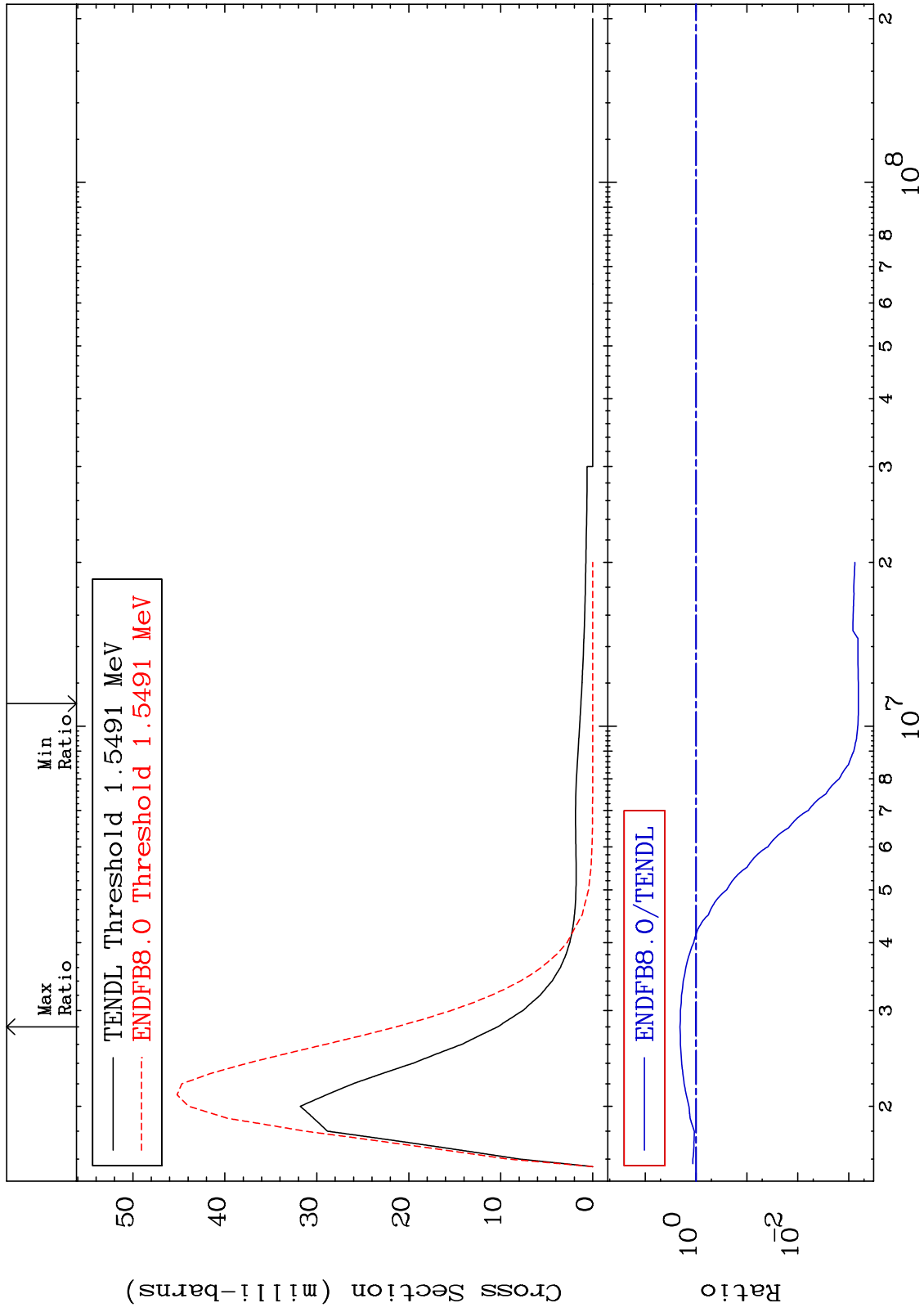
72-Hf-176  
-99.91 To 6734. %



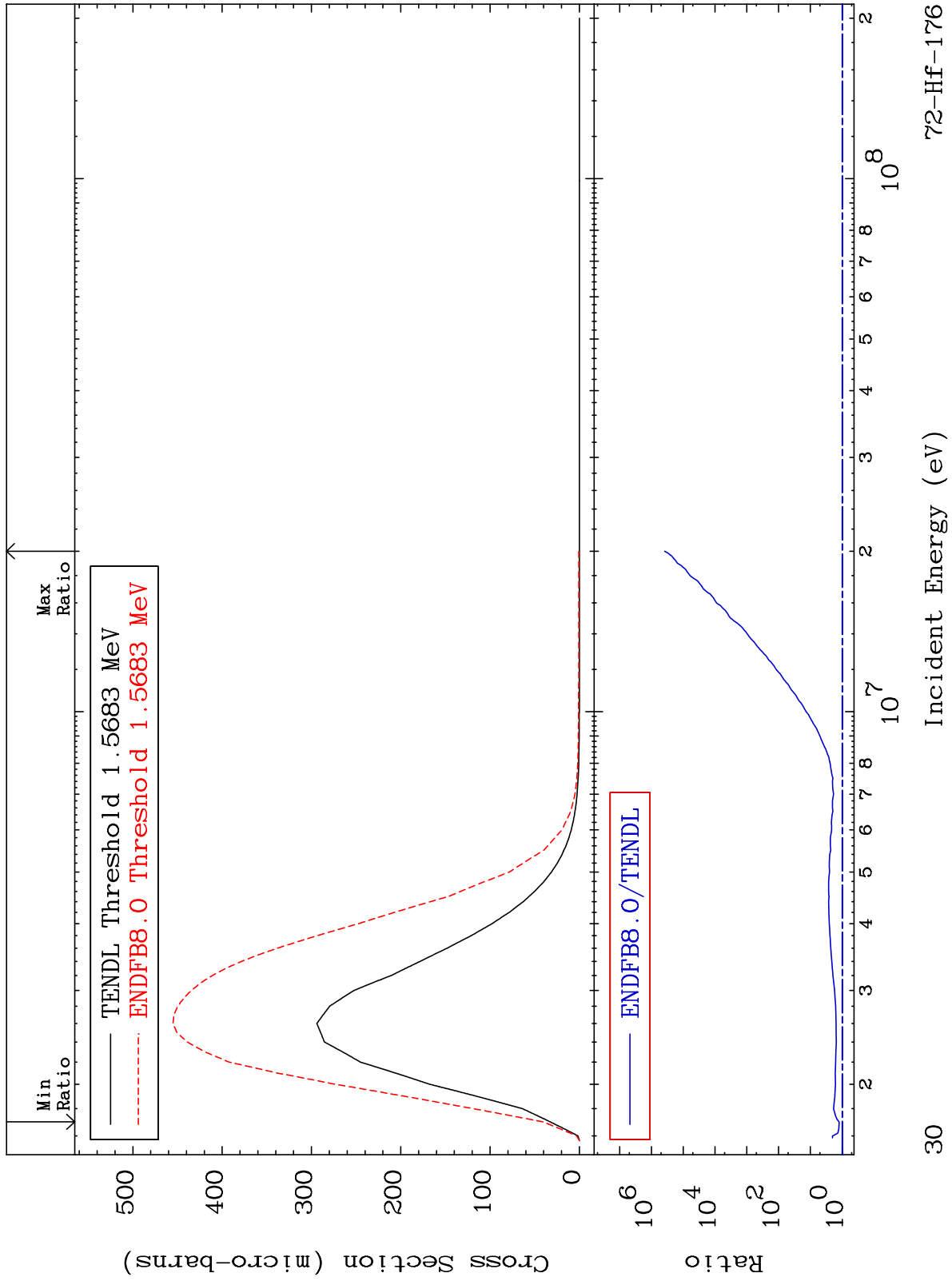
MAT 7231

MT= 72 (n,n') Level  
Cross Section

72-Hf-176  
-99.94 To 106.8 %



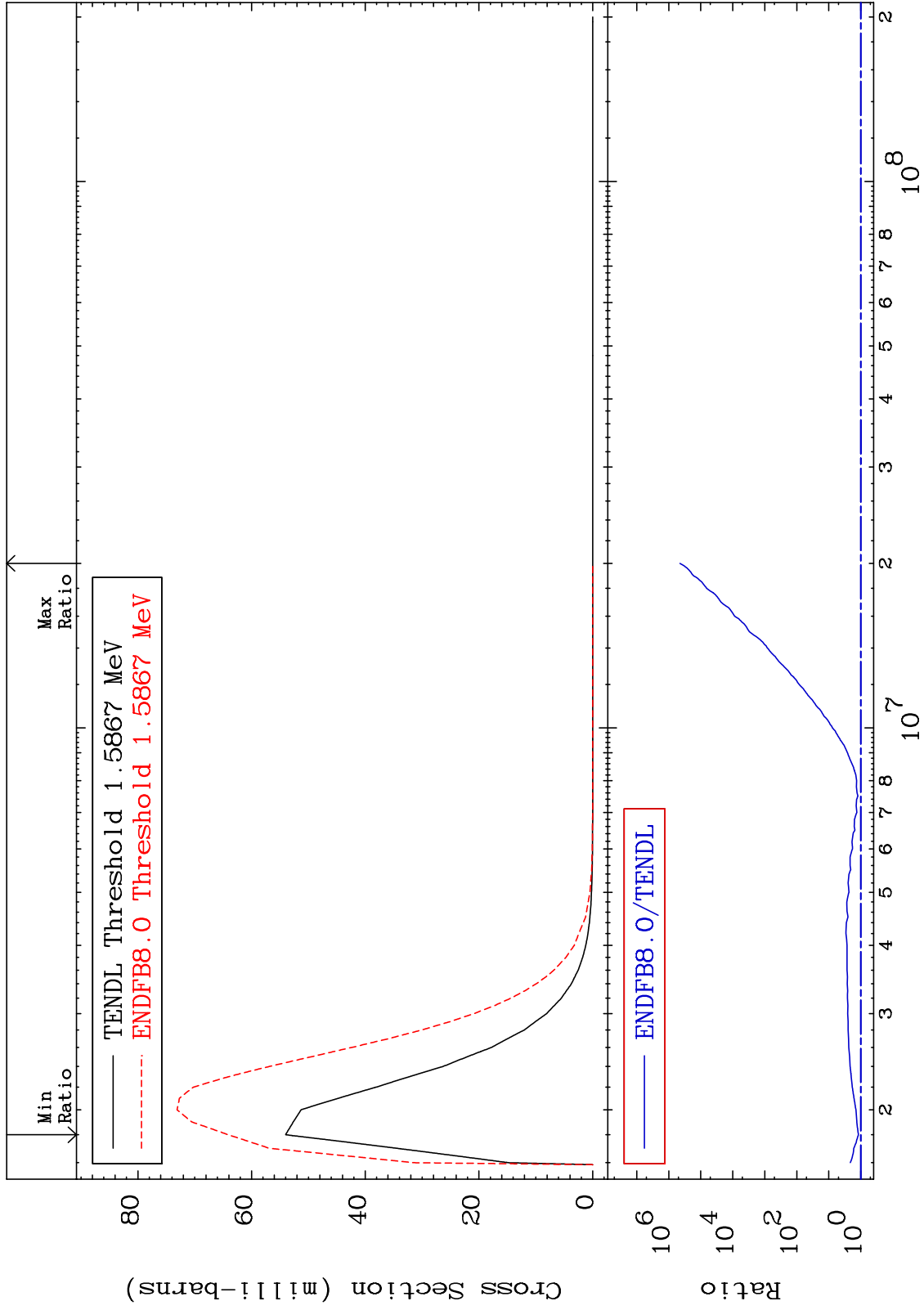
MAT 7231 MT= 73 (n,n') Level Cross Section 72-Hf-176 24.70 To 9999. %



MAT 7231

MT= 74 (n,n') Level  
Cross Section

72-Hf-176  
18.70 To 9999. %

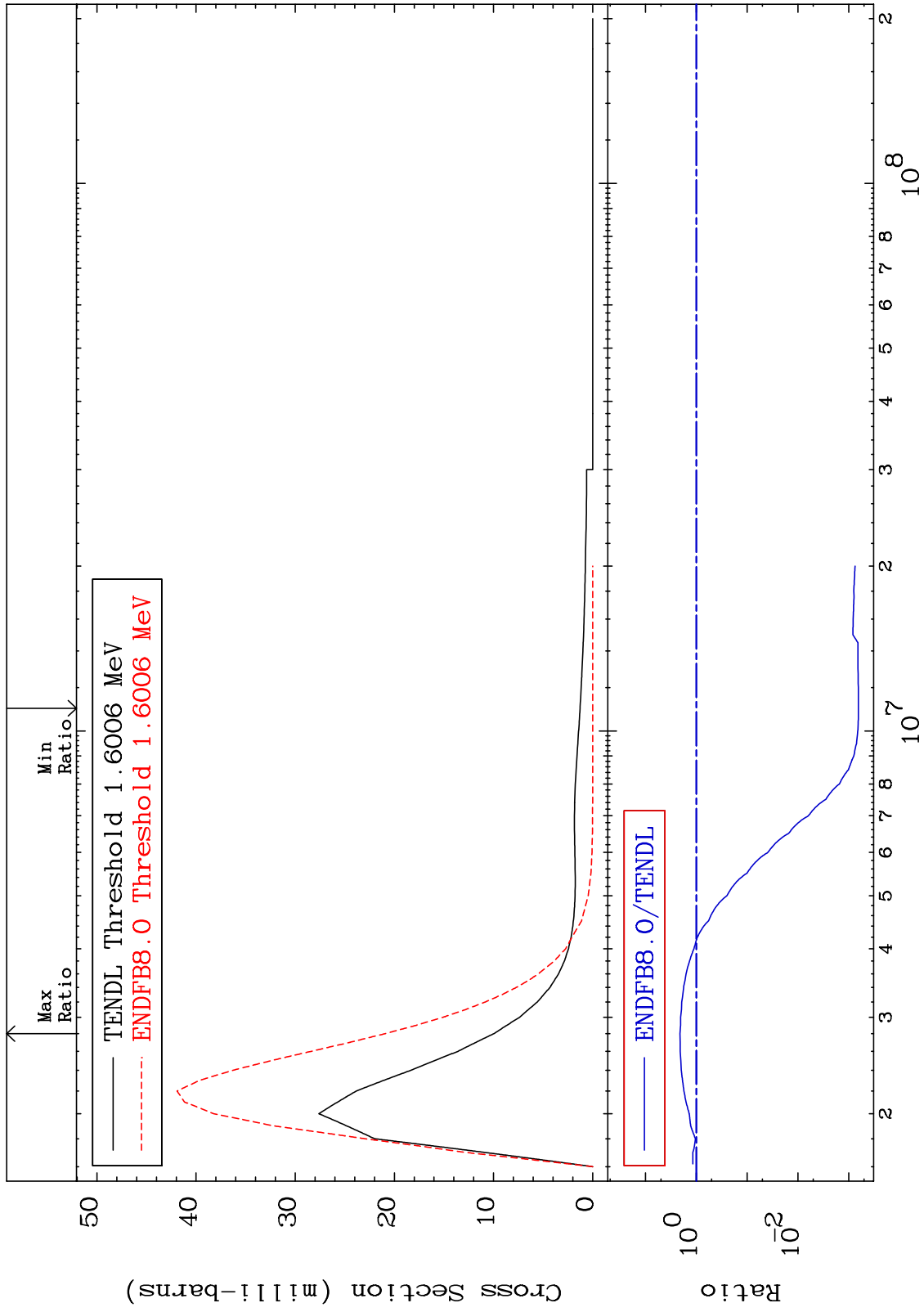




MAT 7231

MT= 75 (n,n') Level  
Cross Section

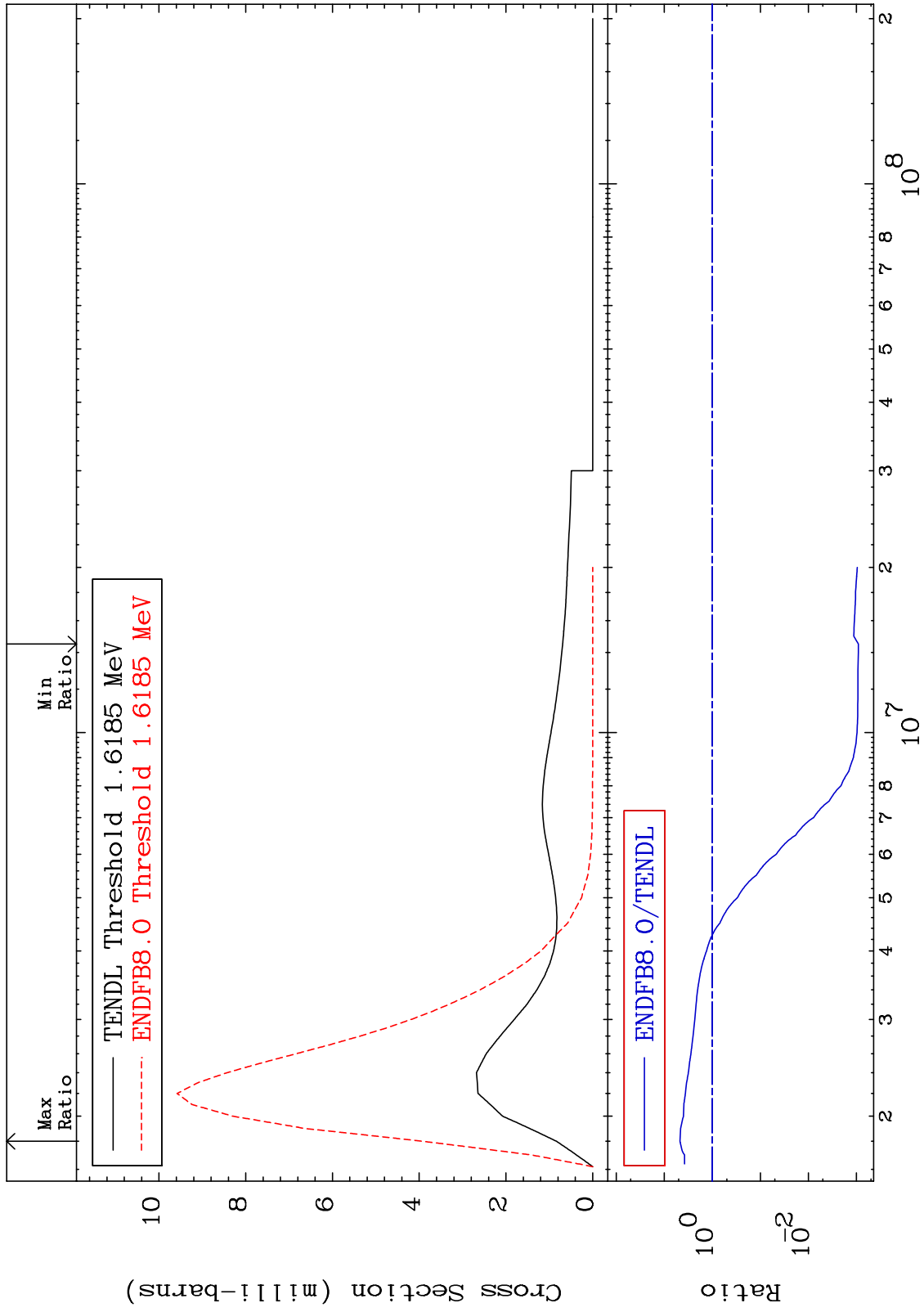
72-Hf-176  
-99.94 To 110.1 %

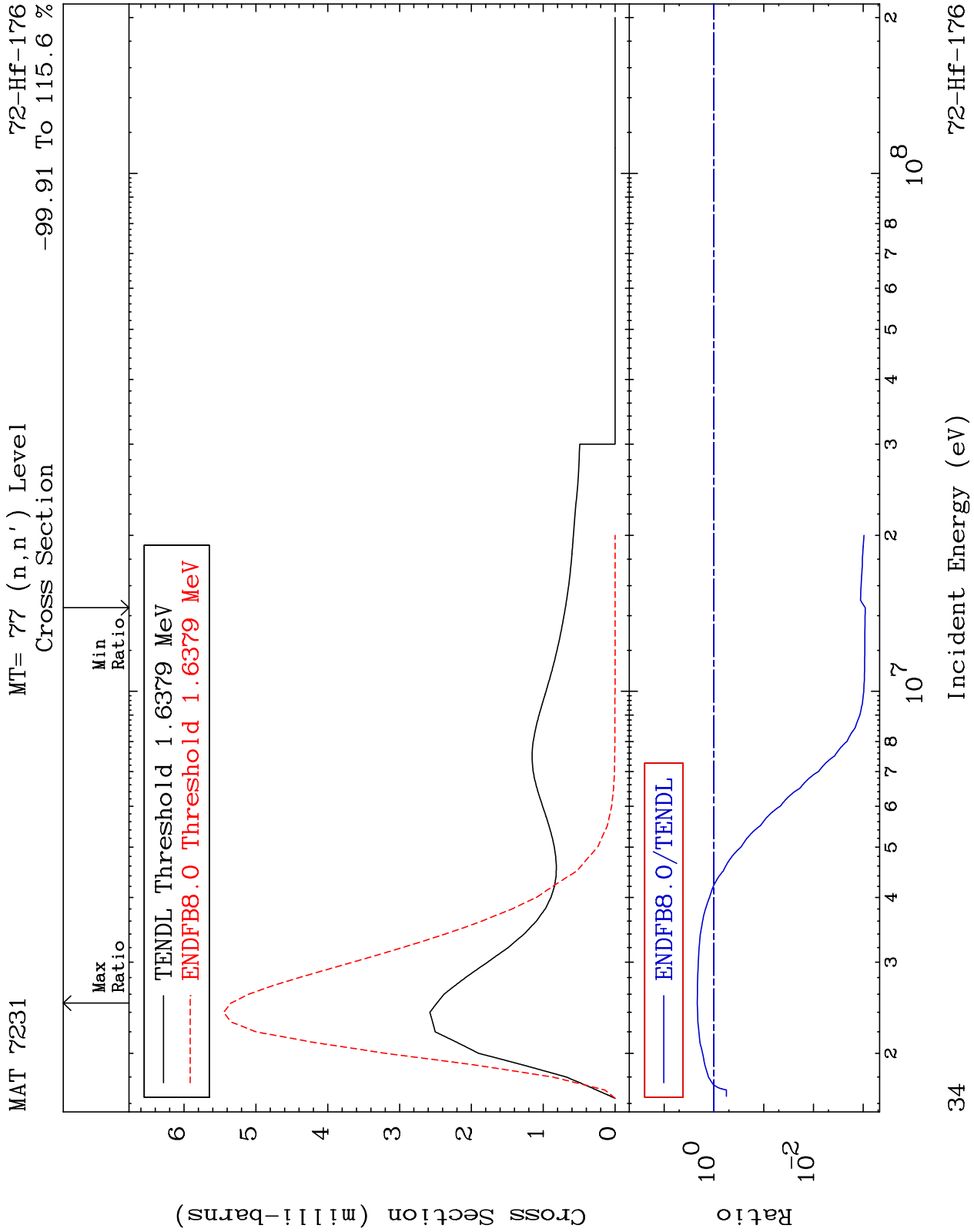


MAT 7231

MT= 76 (n,n') Level  
Cross Section

72-Hf-176  
-99.91 To 369.0 %

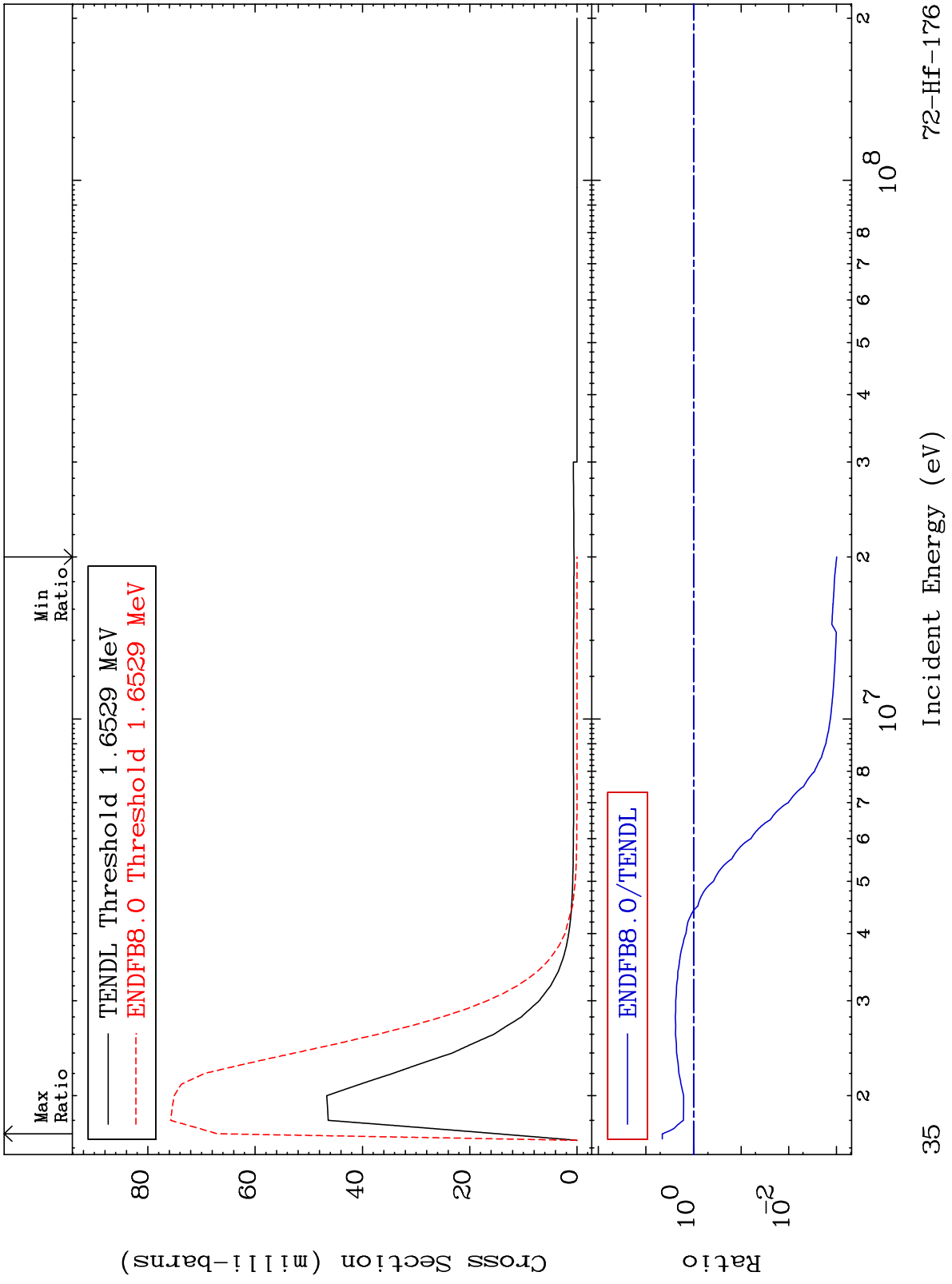




MAT 7231

MT= 78 (n,n') Level  
Cross Section

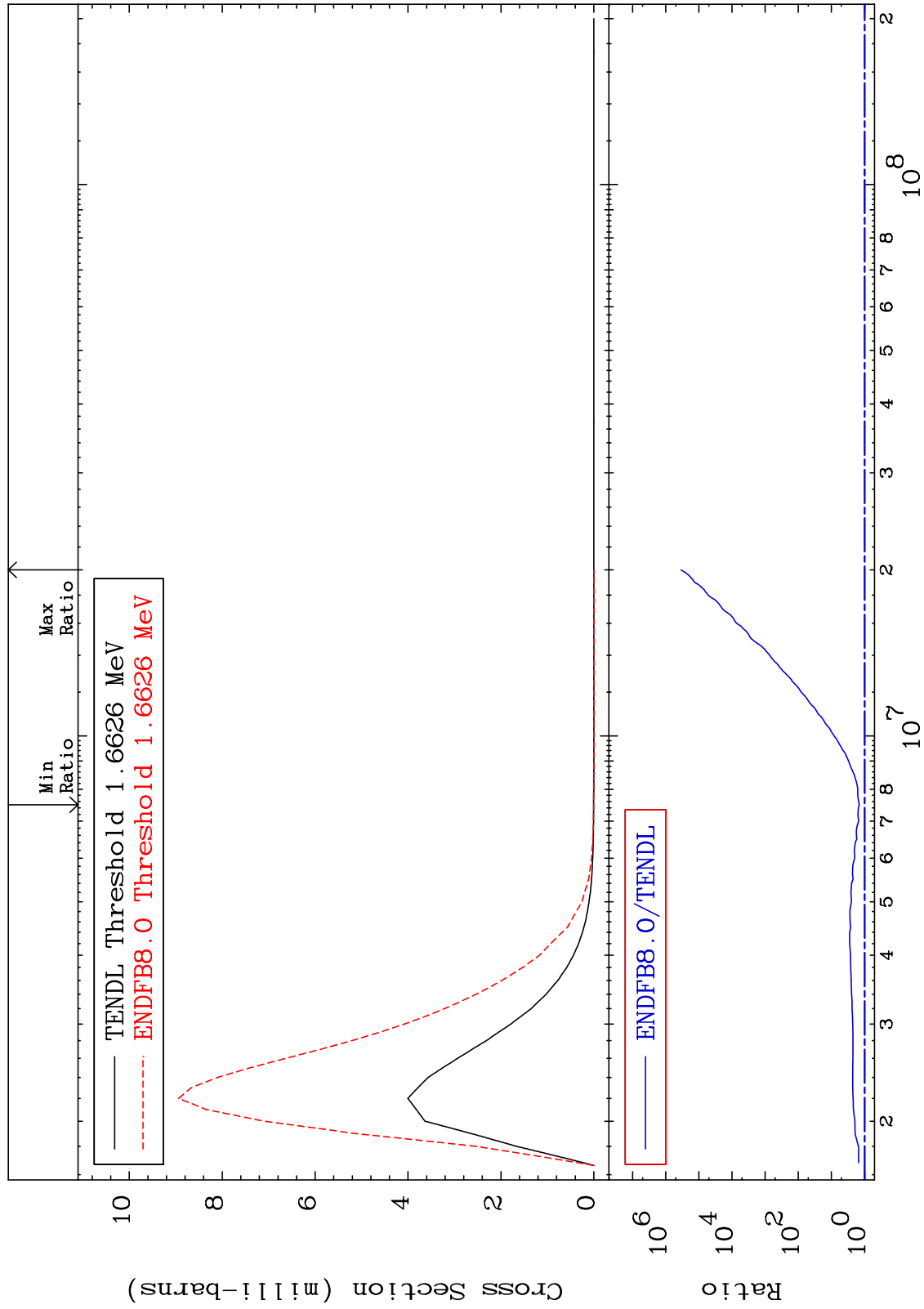
72-Hf-176  
-99.90 To 351.5 %



MAT 7231

MT= 79 (n,n') Level  
Cross Section

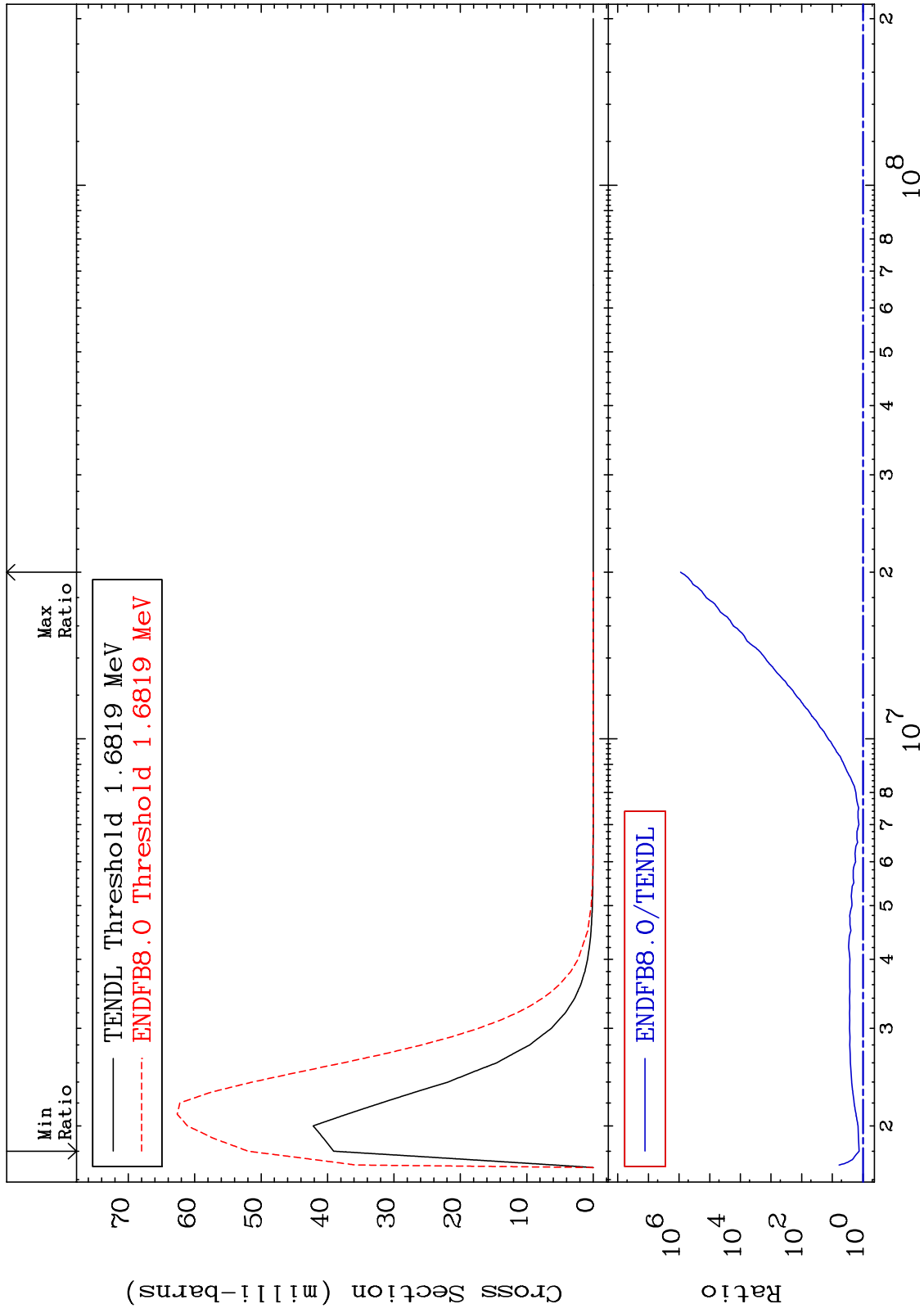
72-Hf-176  
44.61 To 9999. %



MAT 7231

MT= 80 (n,n') Level  
Cross Section

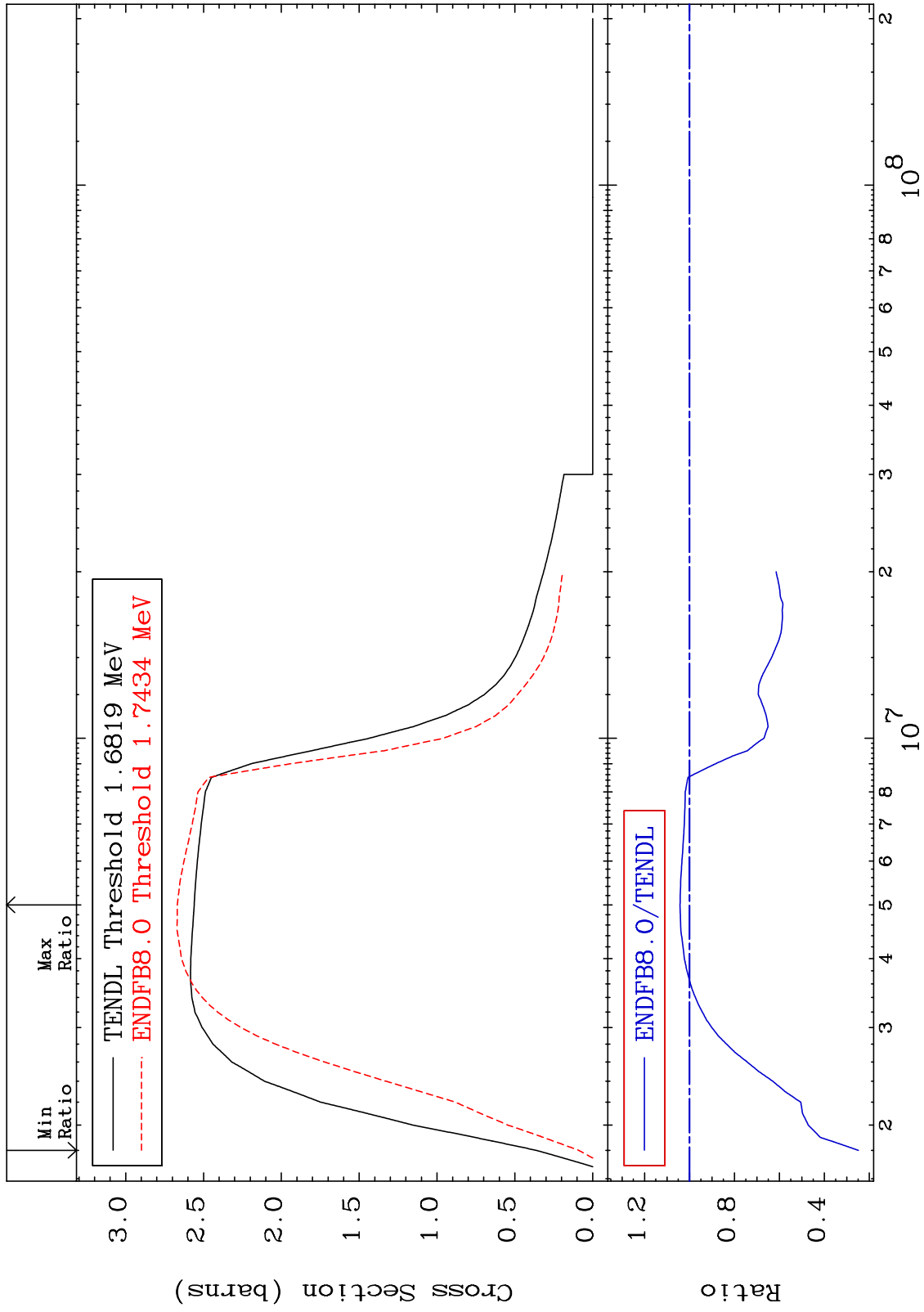
72-Hf-176  
32.96 To 9999. %



MAT 7231

(n,n') Continuum  
Cross Section

<sup>72</sup>Hf-176  
-75.15 To 4.241 %



38

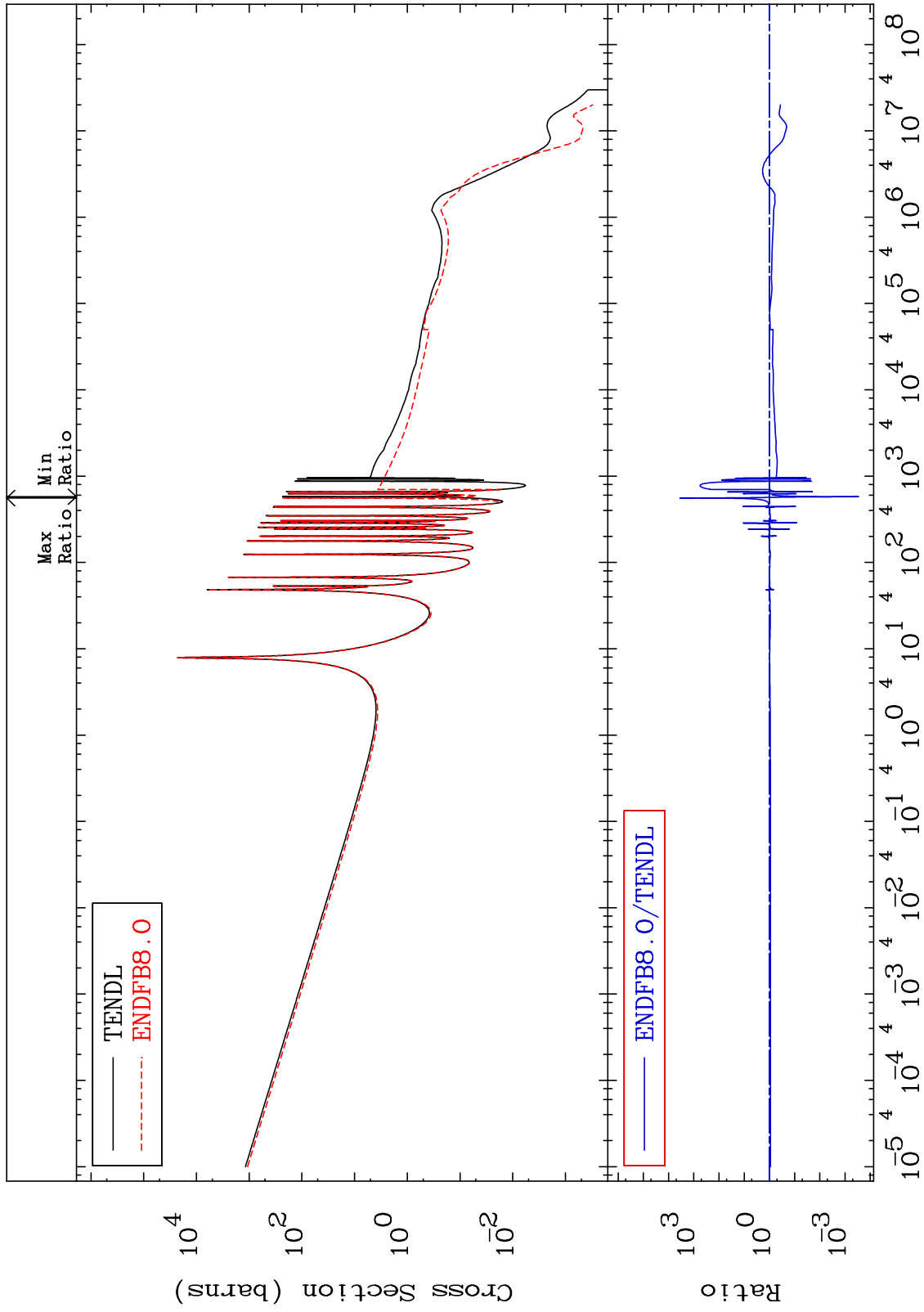
Incident Energy (eV)

<sup>72</sup>Hf-176

MAT 7231

(n,  $\gamma$ )  
Cross Section

72-Hf-176  
-99.97 To 9999. %



39

Incident Energy (eV)

72-Hf-176



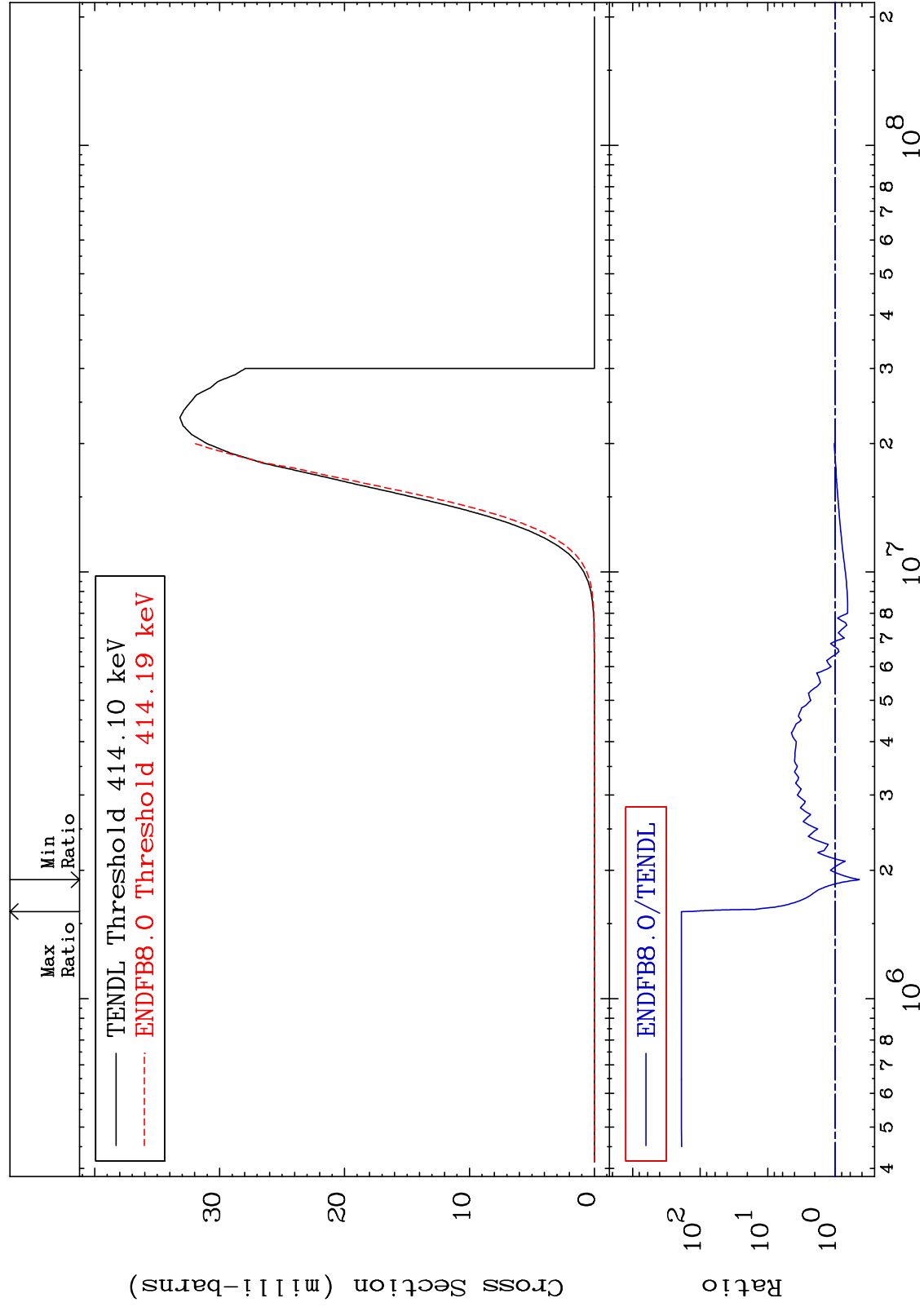
MAT 7231

(n,p)

<sup>72</sup>Hf-176

Cross Section

-56.28 To 9999. %



40

Incident Energy (eV)

<sup>72</sup>Hf-176

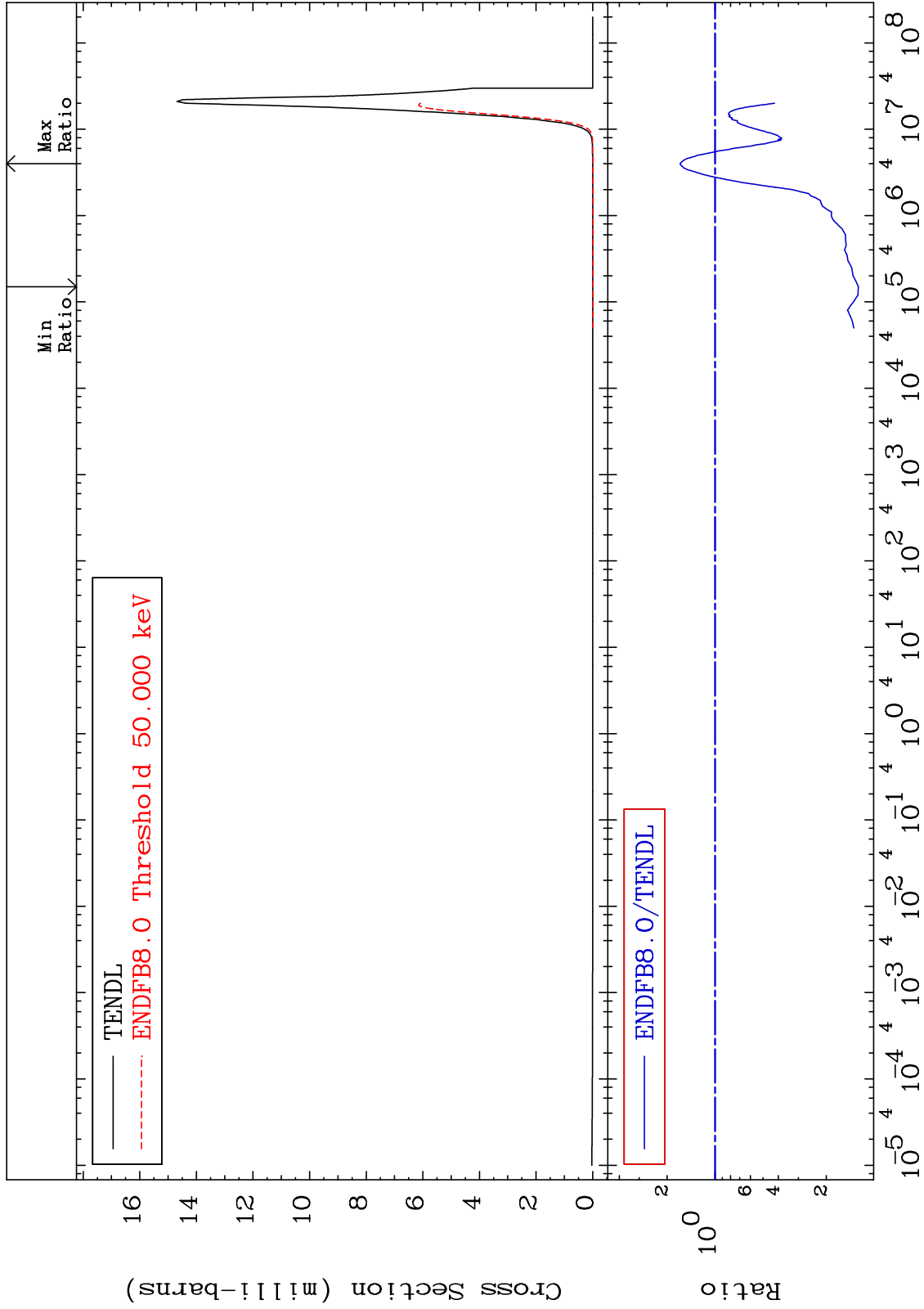
MAT 7231

(n,  $\alpha$ )

72-Hf-176

Cross Section

-87.43 To 66.09 %



— TENDL  
- - - ENDFB8.0 Threshold 50.000 keV

— ENDFB8.0/TENDL

41

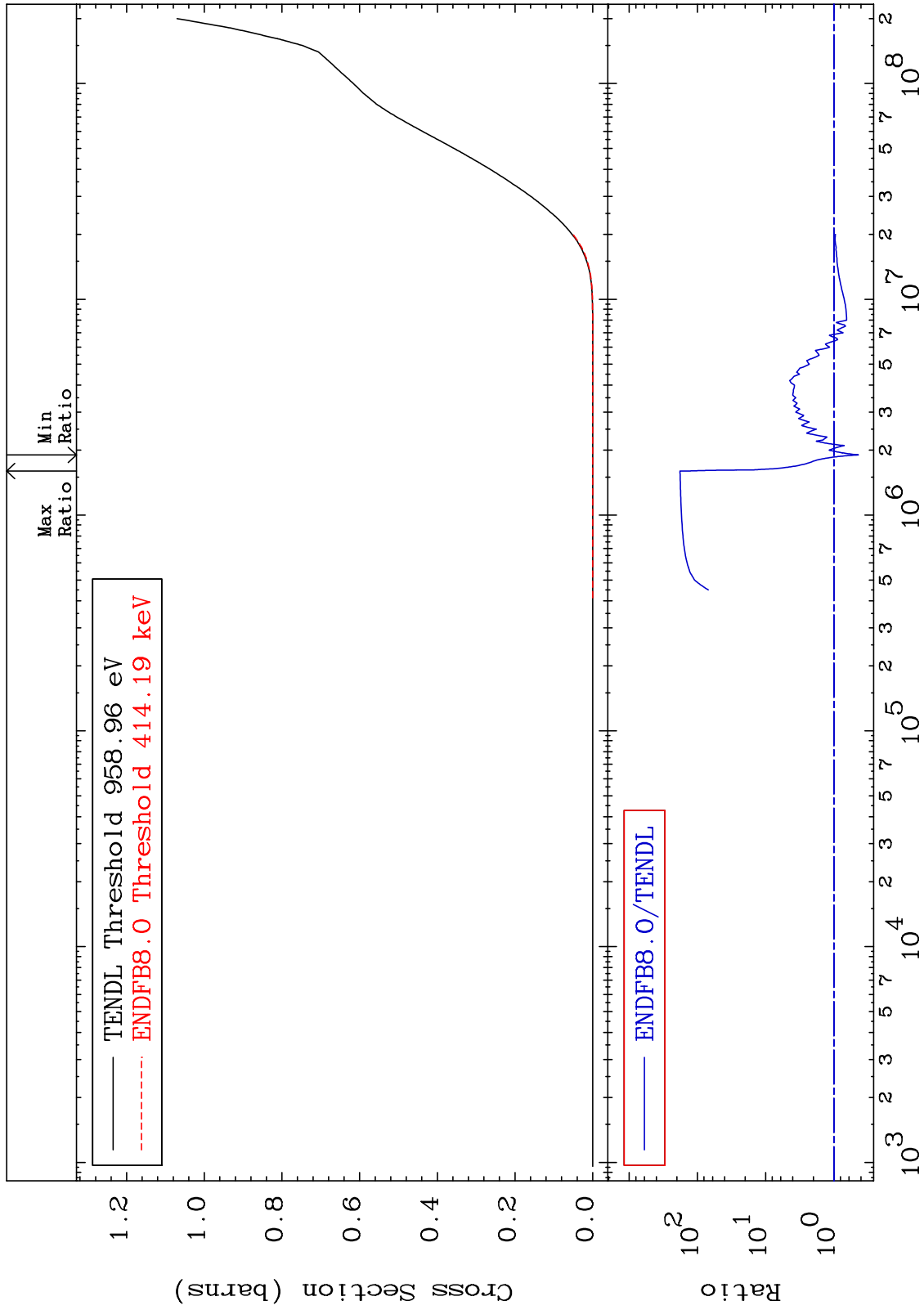
Incident Energy (eV)

72-Hf-176

MAT 7231

Hydrogen Production  
Cross Section

72-Hf-176  
-56.28 To 9999. %



42

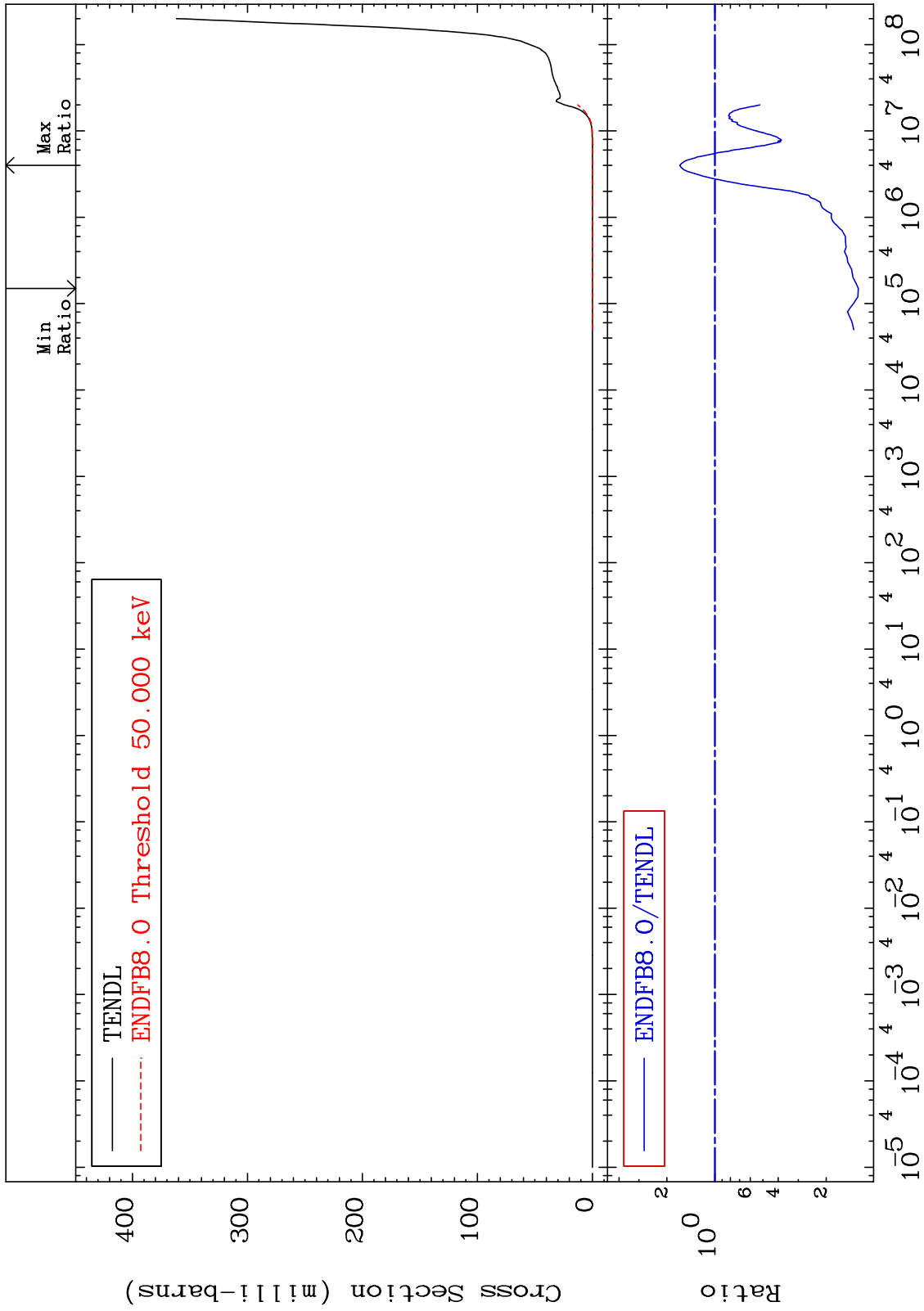
Incident Energy (eV)

72-Hf-176

MAT 7231

He-4 Production  
Cross Section

72-Hf-176  
-87.43 To 66.09 %



43

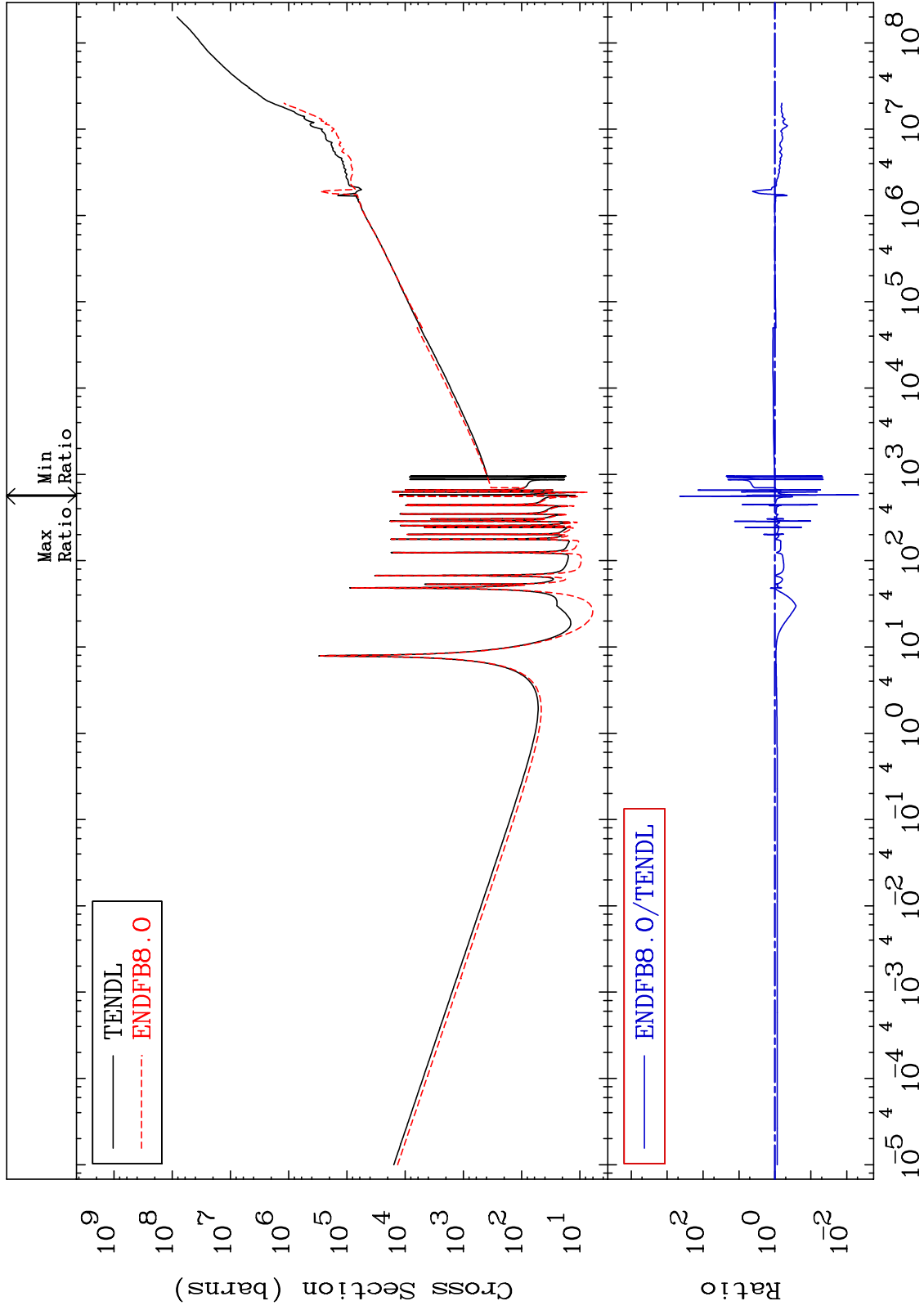
Incident Energy (eV)

72-Hf-176

MAT 7231

Kerma total (eV-barns)  
Cross Section

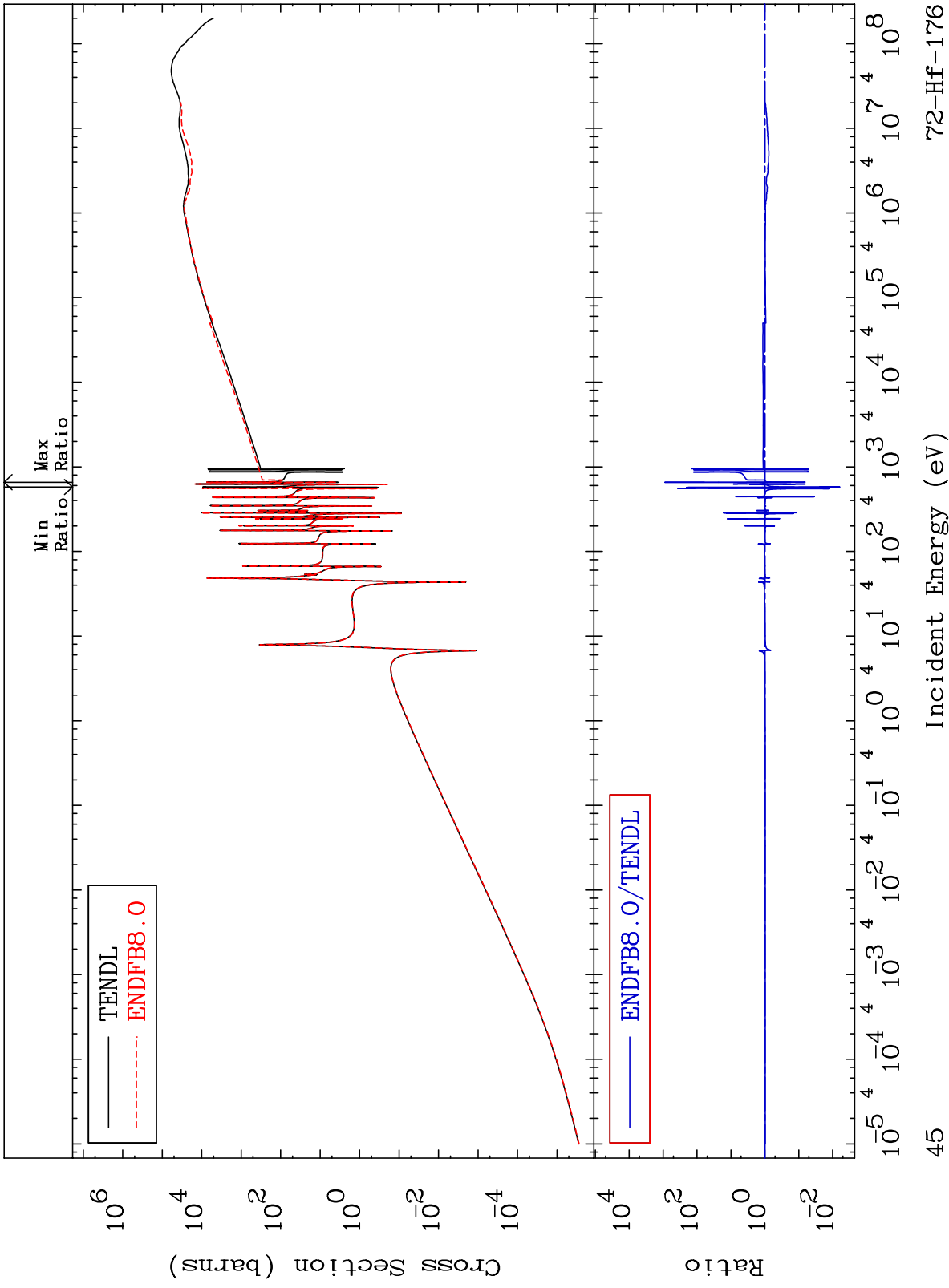
72-Hf-176  
-99.53 To 9999. %



MAT 7231

Kerma elastic  
Cross Section

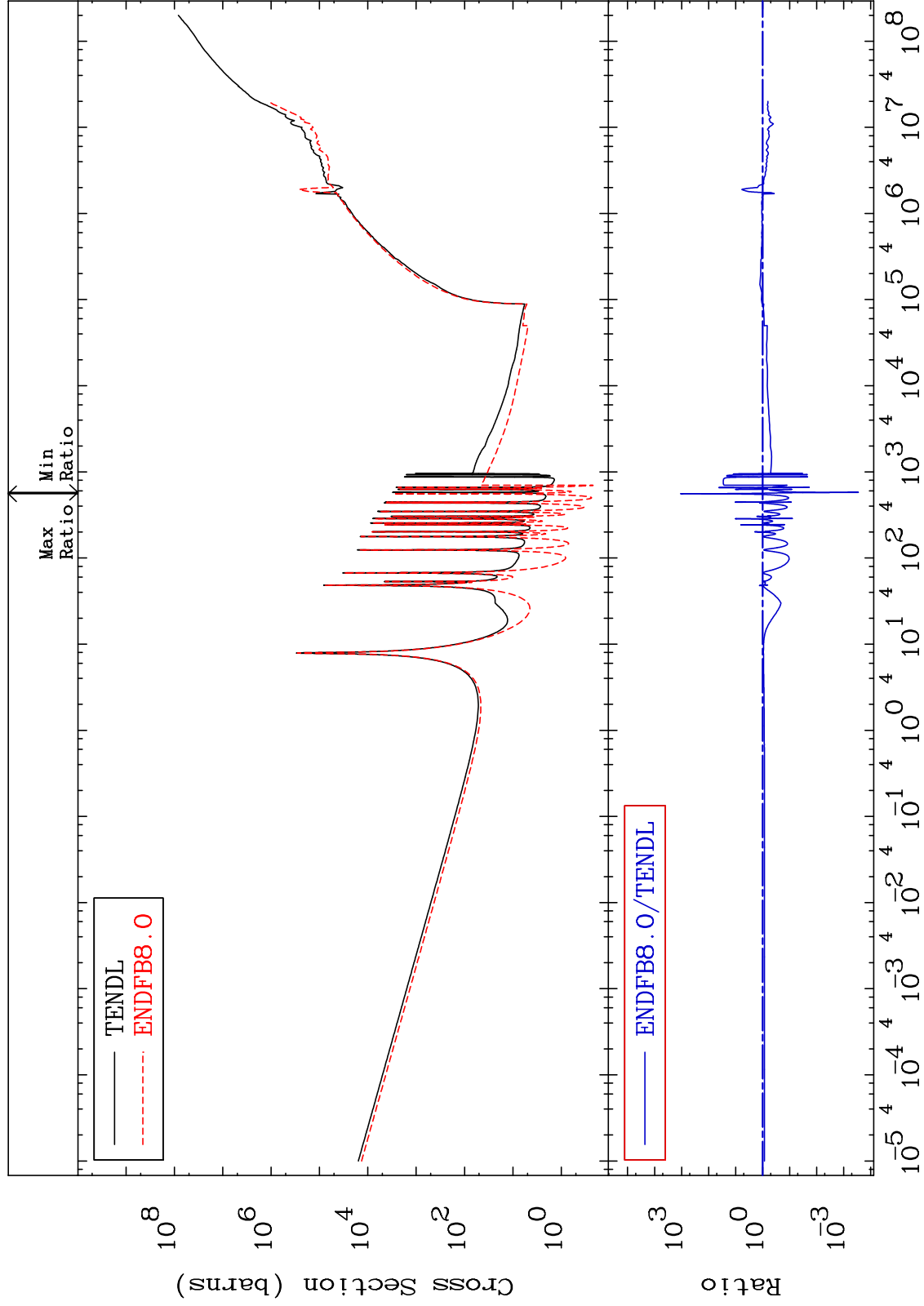
<sup>72</sup>Hf-176  
-99.38 To 9999. %



MAT 7231

Kerma non-elastic (all but mt2)  
Cross Section

72-Hf-176  
-99.97 To 9999. %



46

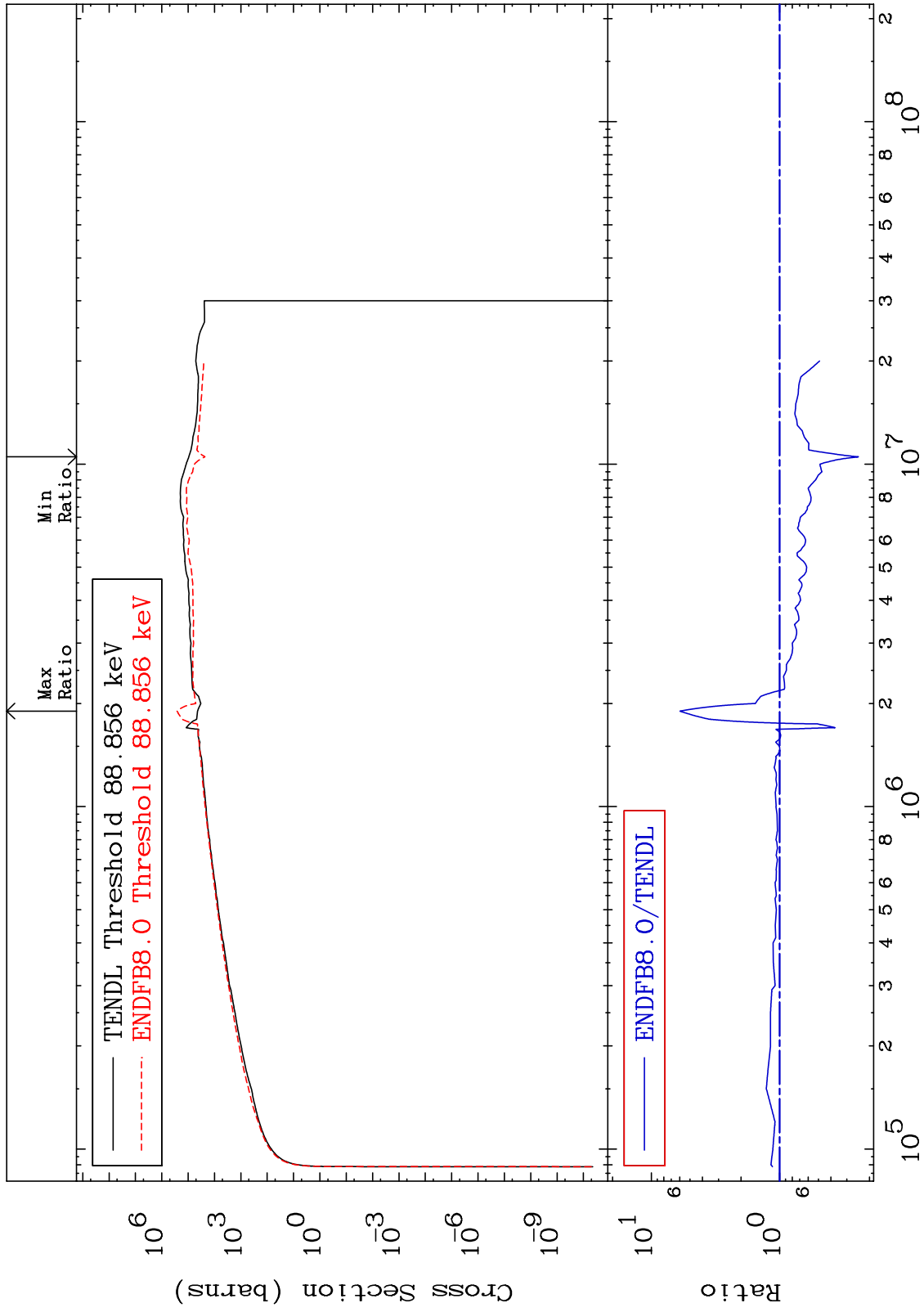
Incident Energy (eV)

72-Hf-176

MAT 7231

Kerma inelastic (mt51-91)  
Cross Section

72-Hf-176  
-75.60 To 497.5 %



47

Incident Energy (eV)

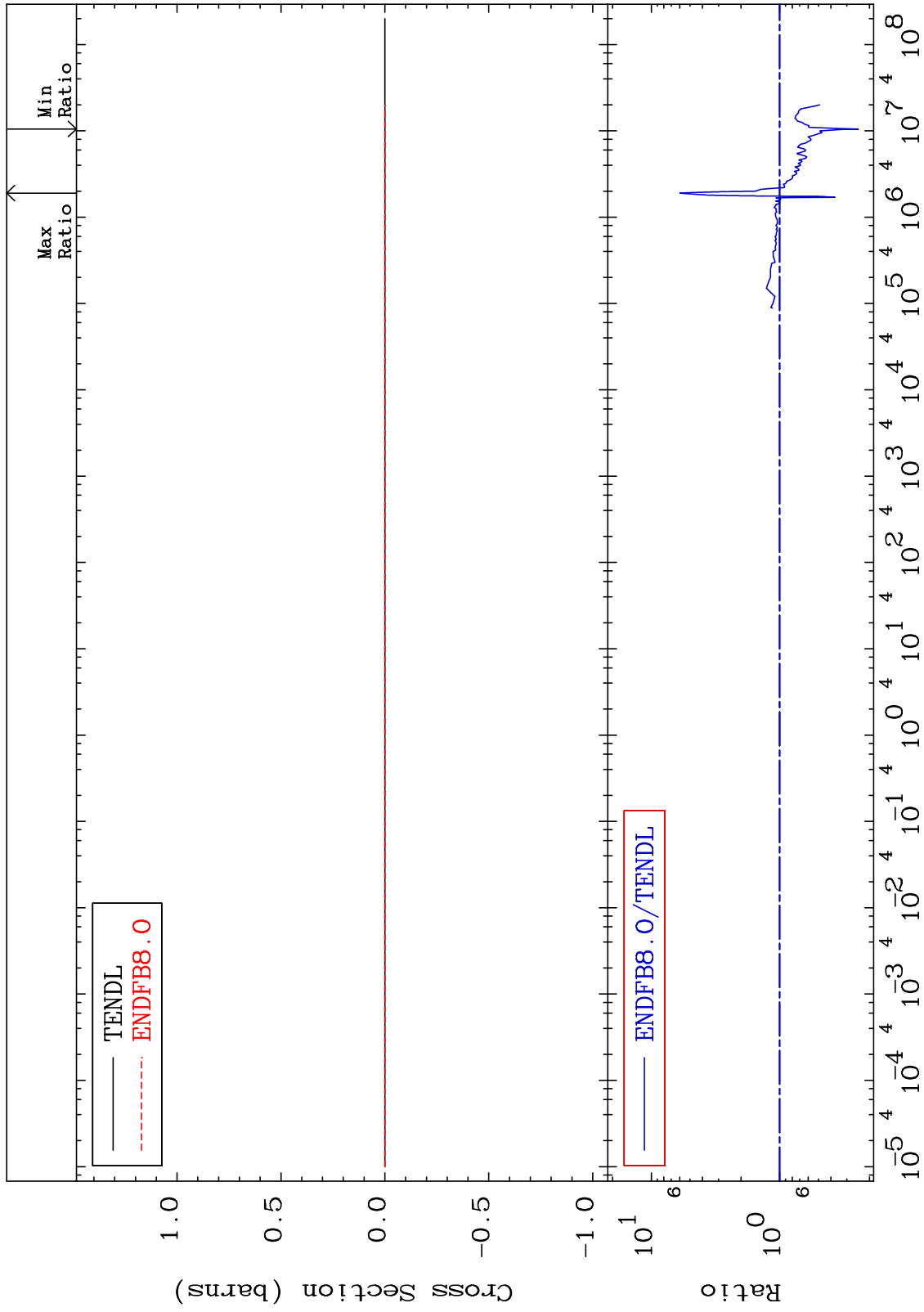
72-Hf-176



MAT 7231

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

72-Hf-176  
-75.60 To 497.5 %



48

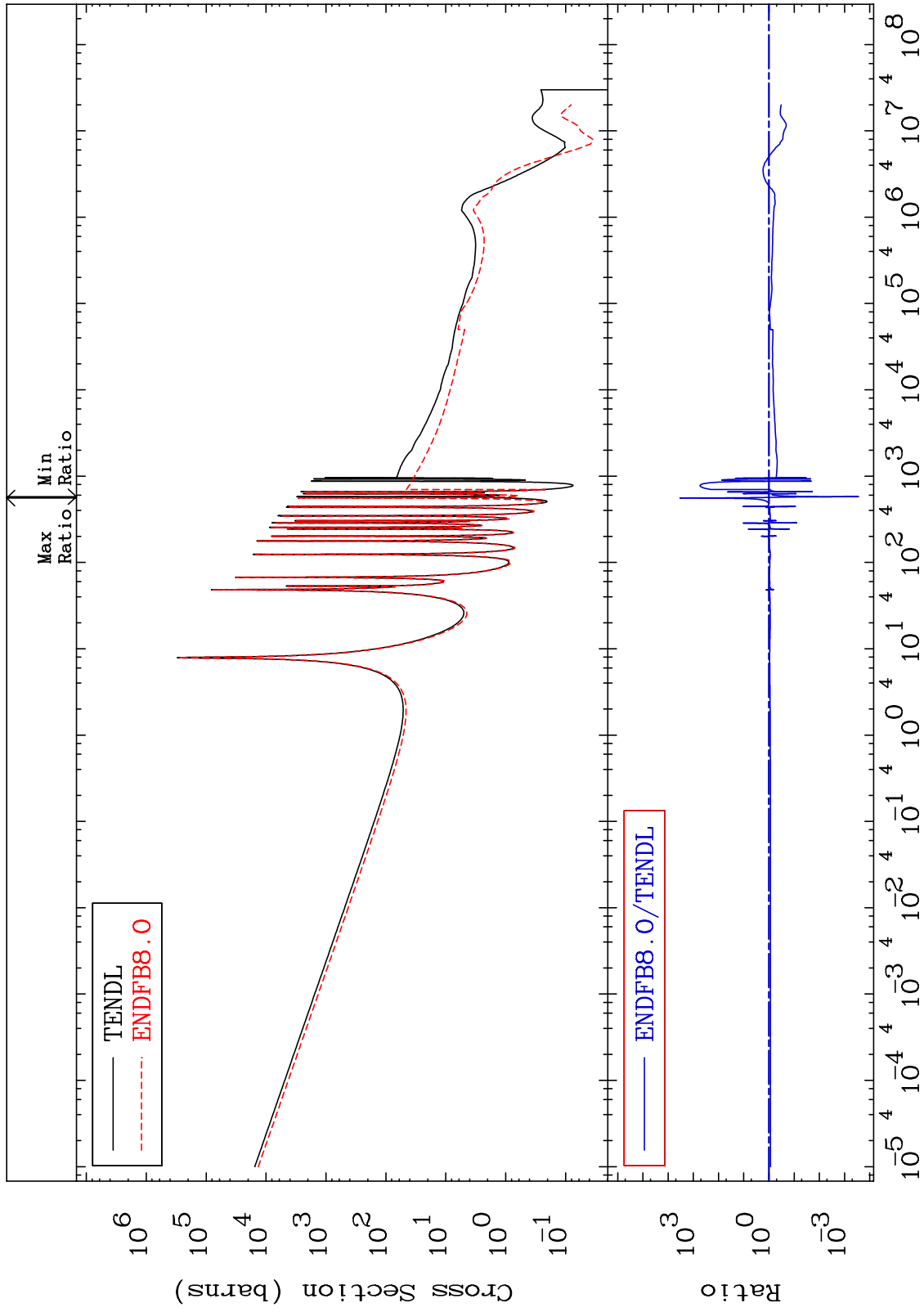
Incident Energy (eV)

72-Hf-176

MAT 7231

Kerma capture (mt102)  
Cross Section

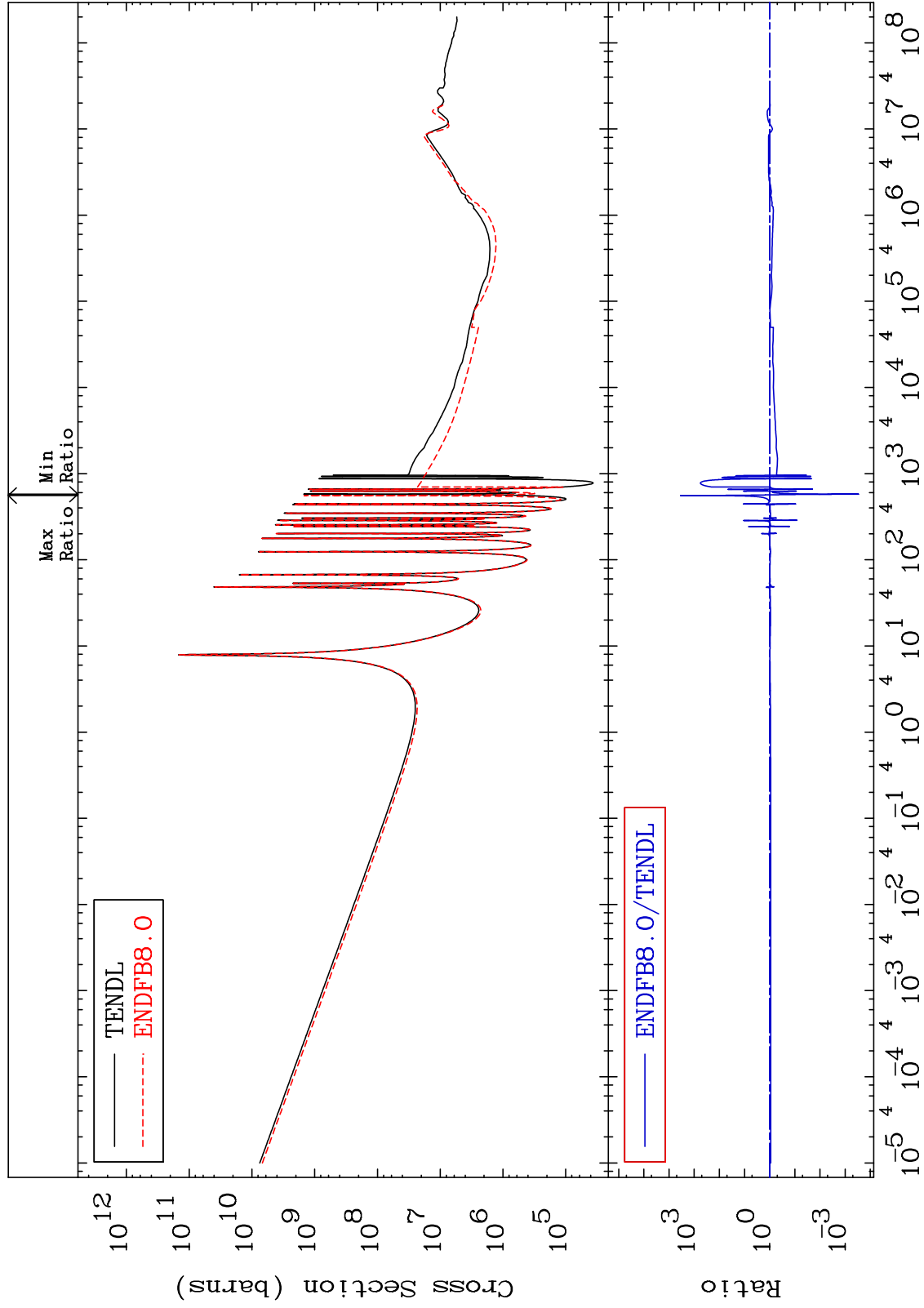
72-Hf-176  
-99.97 To 9999. %



MAT 7231

Total photon (eV-barns)  
Cross Section

72-Hf-176  
-99.97 To 9999. %



50

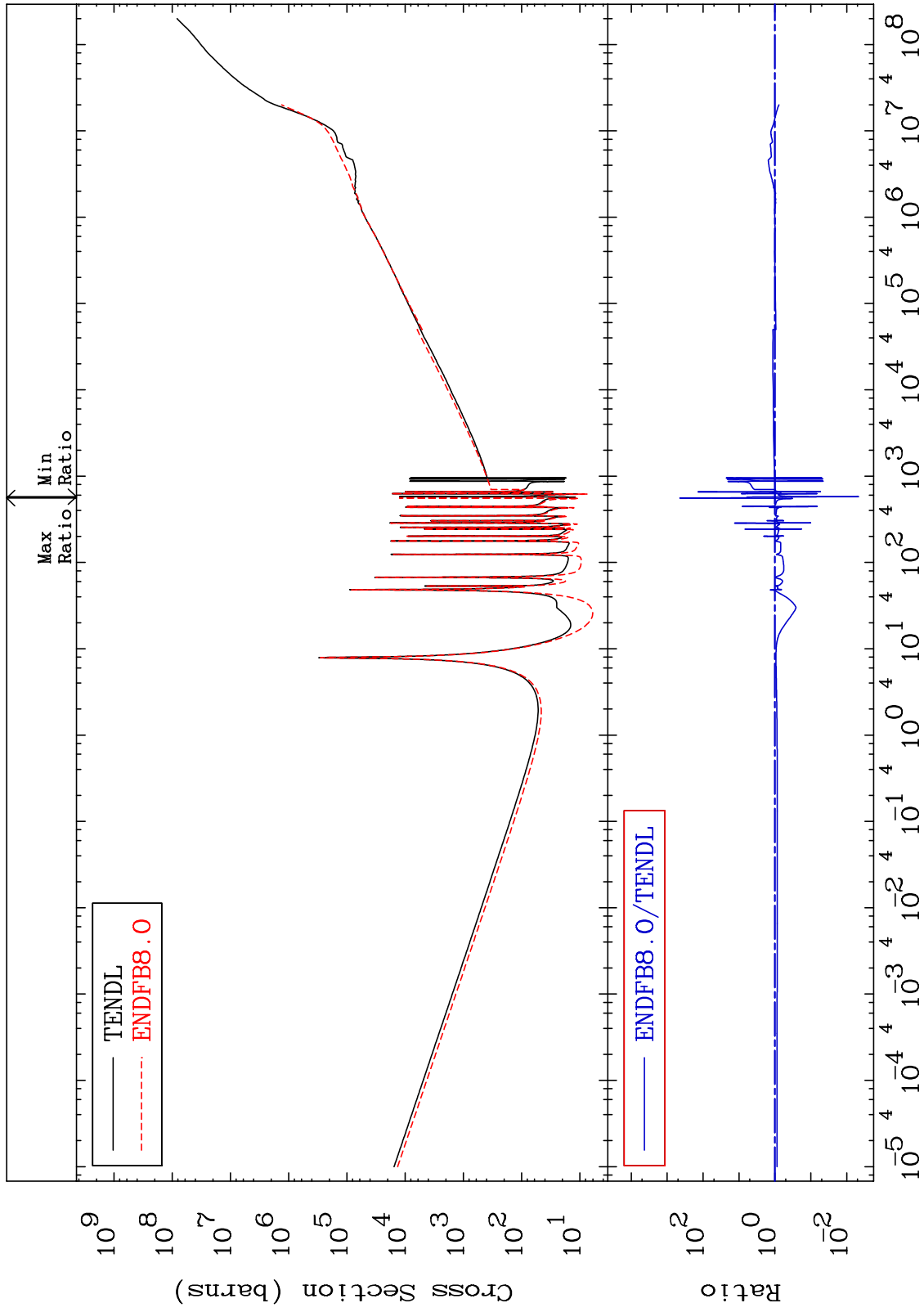
Incident Energy (eV)

72-Hf-176

MAT 7231

Total kinematic kerma (high limit)  
Cross Section

72-Hf-176  
-99.53 To 9999. %



51

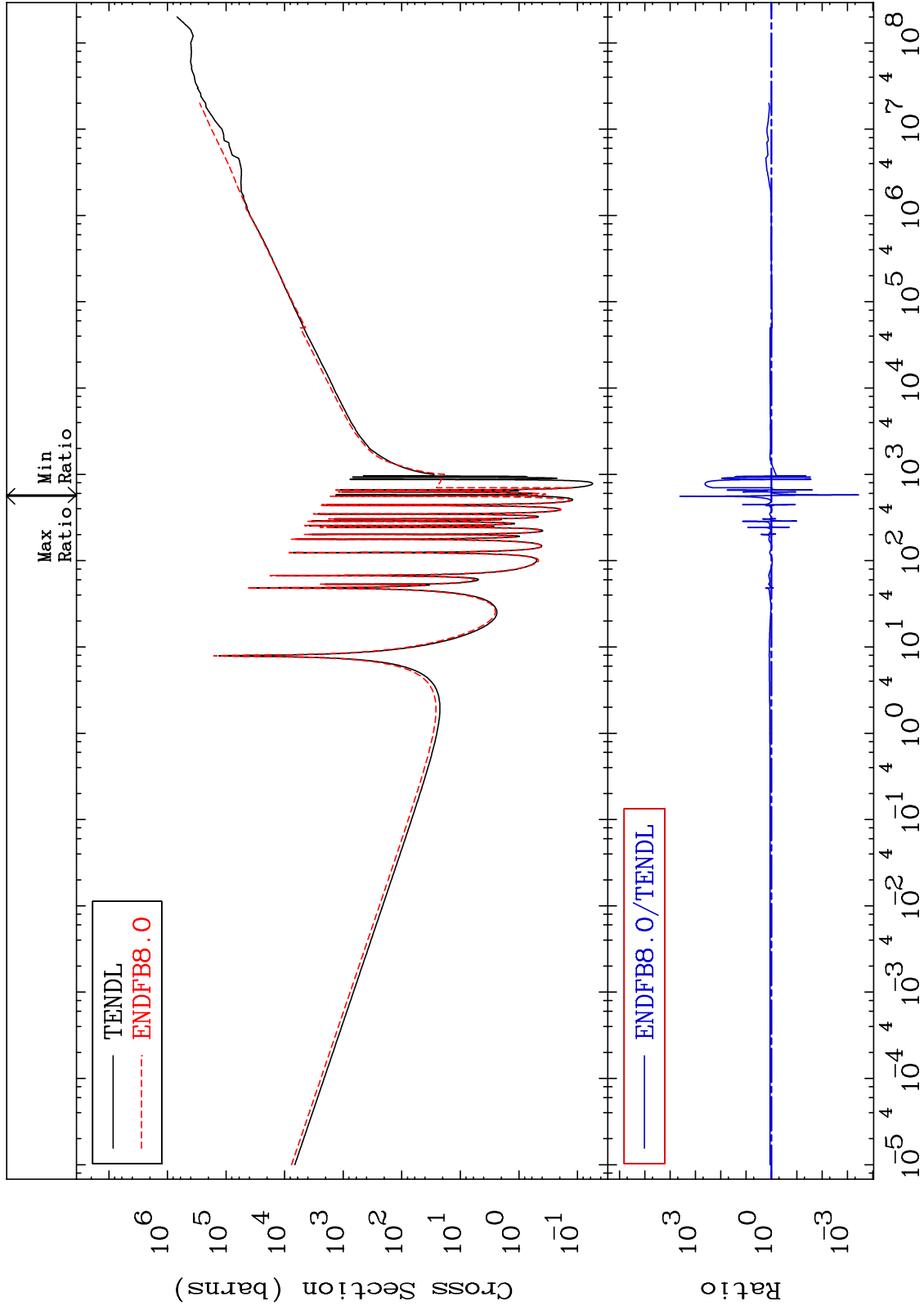
Incident Energy (eV)

72-Hf-176

MAT 7231

Dpa total (eV-barns)  
Cross Section

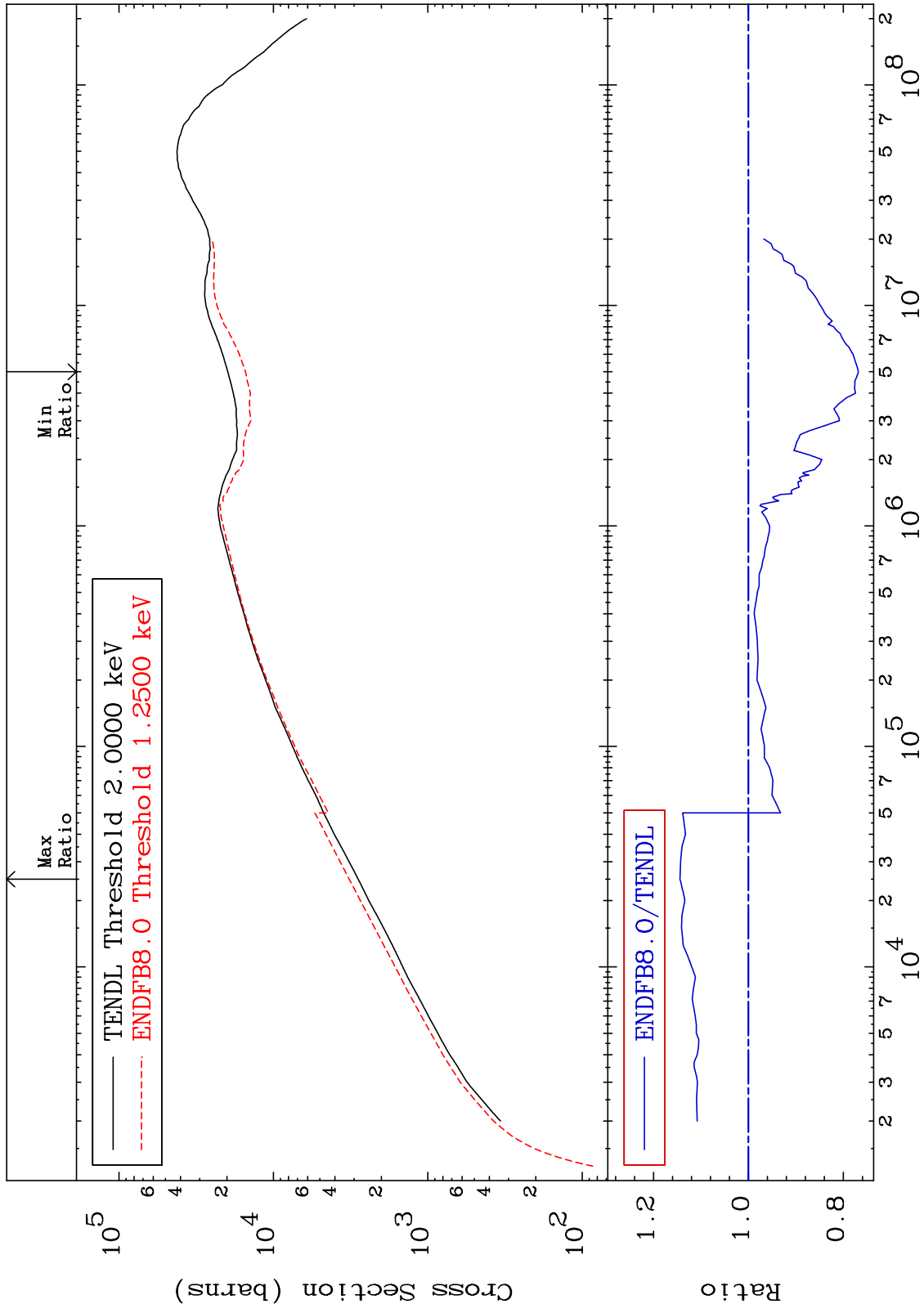
72-Hf-176  
-99.96 To 9999. %



MAT 7231

Dpa elastic (mt2)  
Cross Section

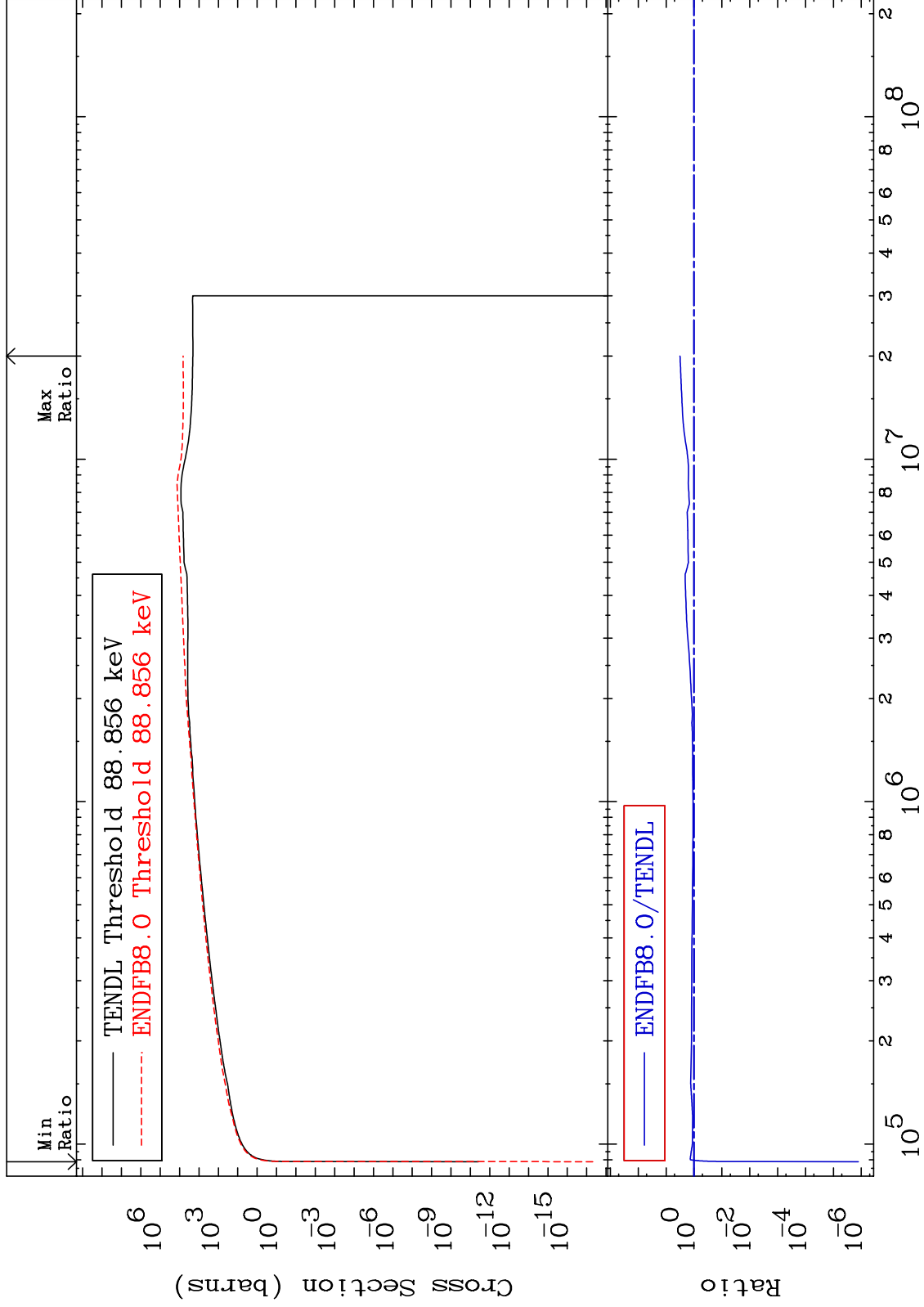
72-Hf-176  
-23.16 To 14.42 %



MAT 7231

Dpa inelastic (mt51-91)  
Cross Section

72-Hf-176  
-100.0 To 217.2 %



54

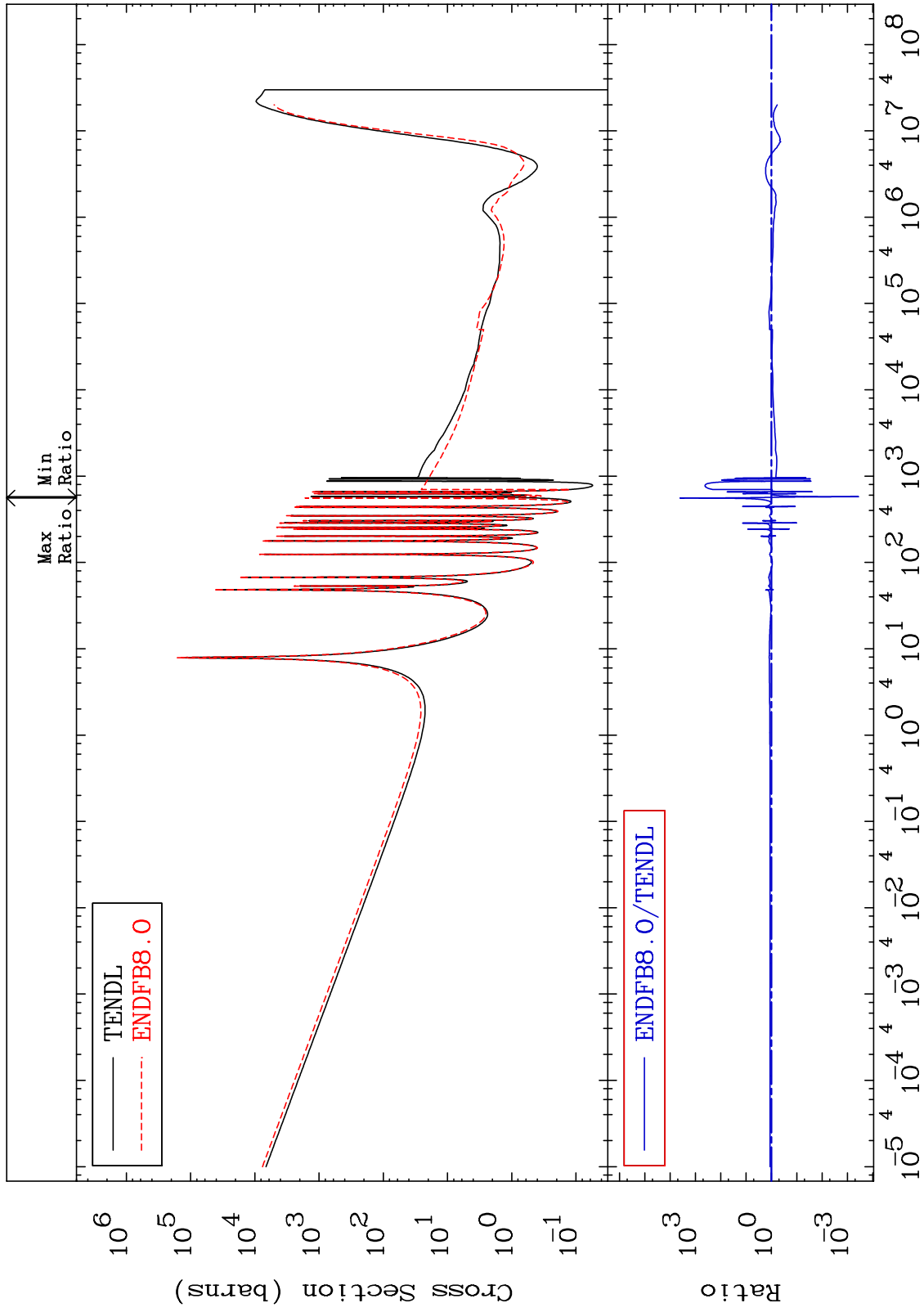
Incident Energy (eV)

72-Hf-176

MAT 7231

Dpa disappearance (mt102 -120)  
Cross Section

72-Hf-176  
-99.96 To 9999. %



55

Incident Energy (eV)

72-Hf-176