

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

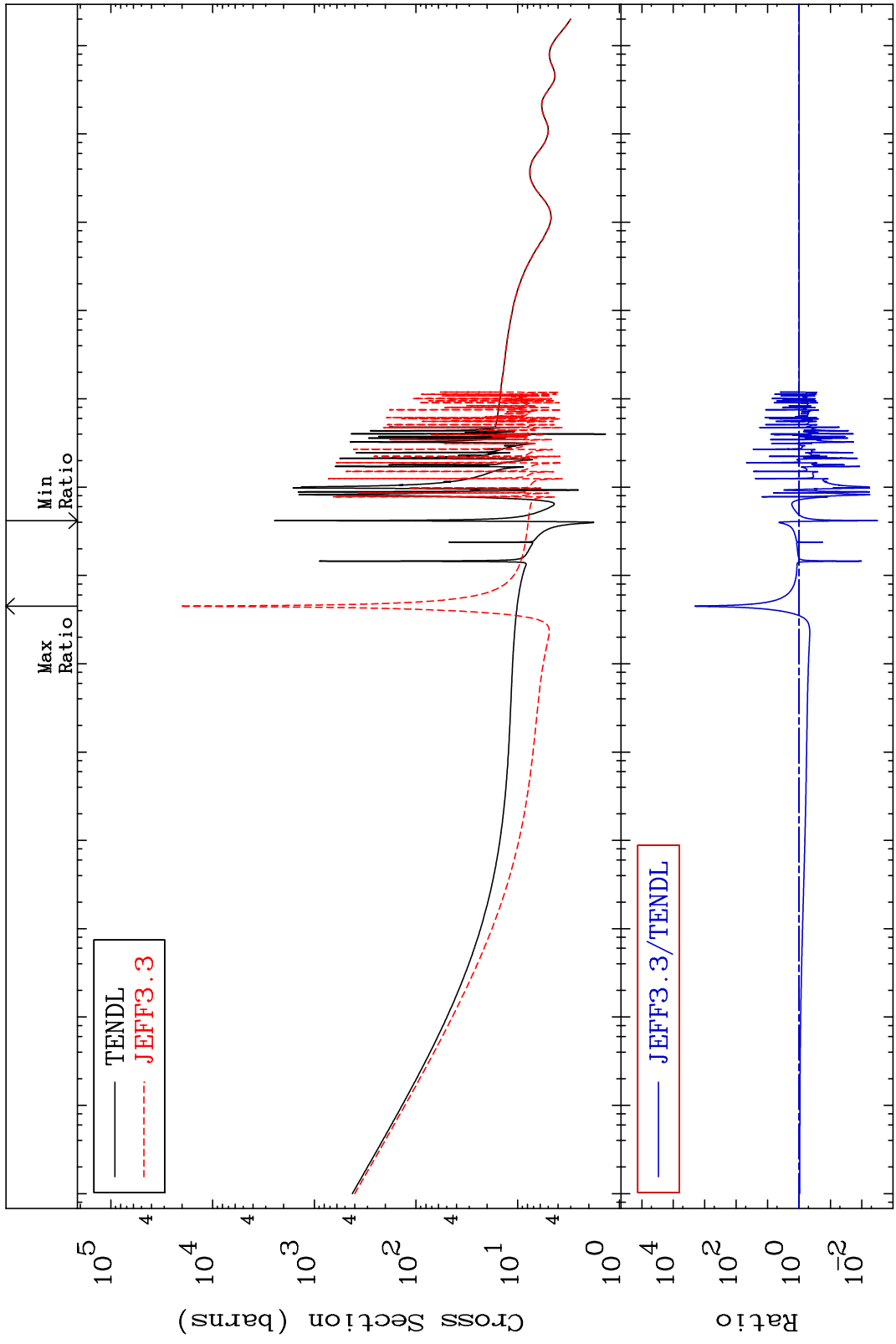
E.Mail: [redcullen1@comcast.net](mailto:redcullen1@comcast.net)  
Web: [redcullen1.net/HOMEPAGE.NEW](http://redcullen1.net/HOMEPAGE.NEW)

Press Mouse Button to Start

MAT 8322

Total  
Cross Section

83-Bi-208  
-99.68 To 9999. %



Incident Energy (eV)

83-Bi-208

1

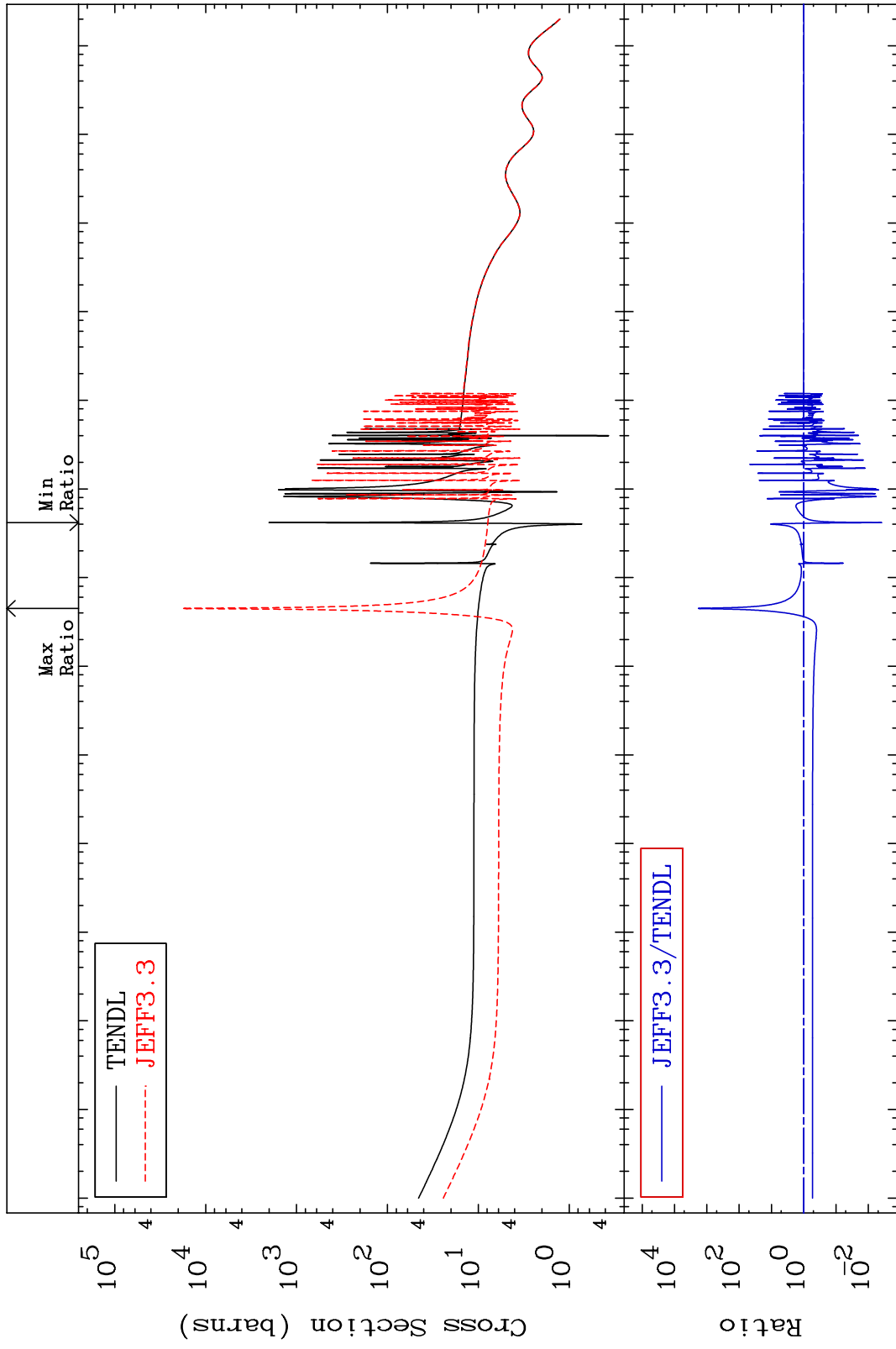
MAT 8322

Elastic

83-Bi-208

Cross Section

-99.61 To 9999. %



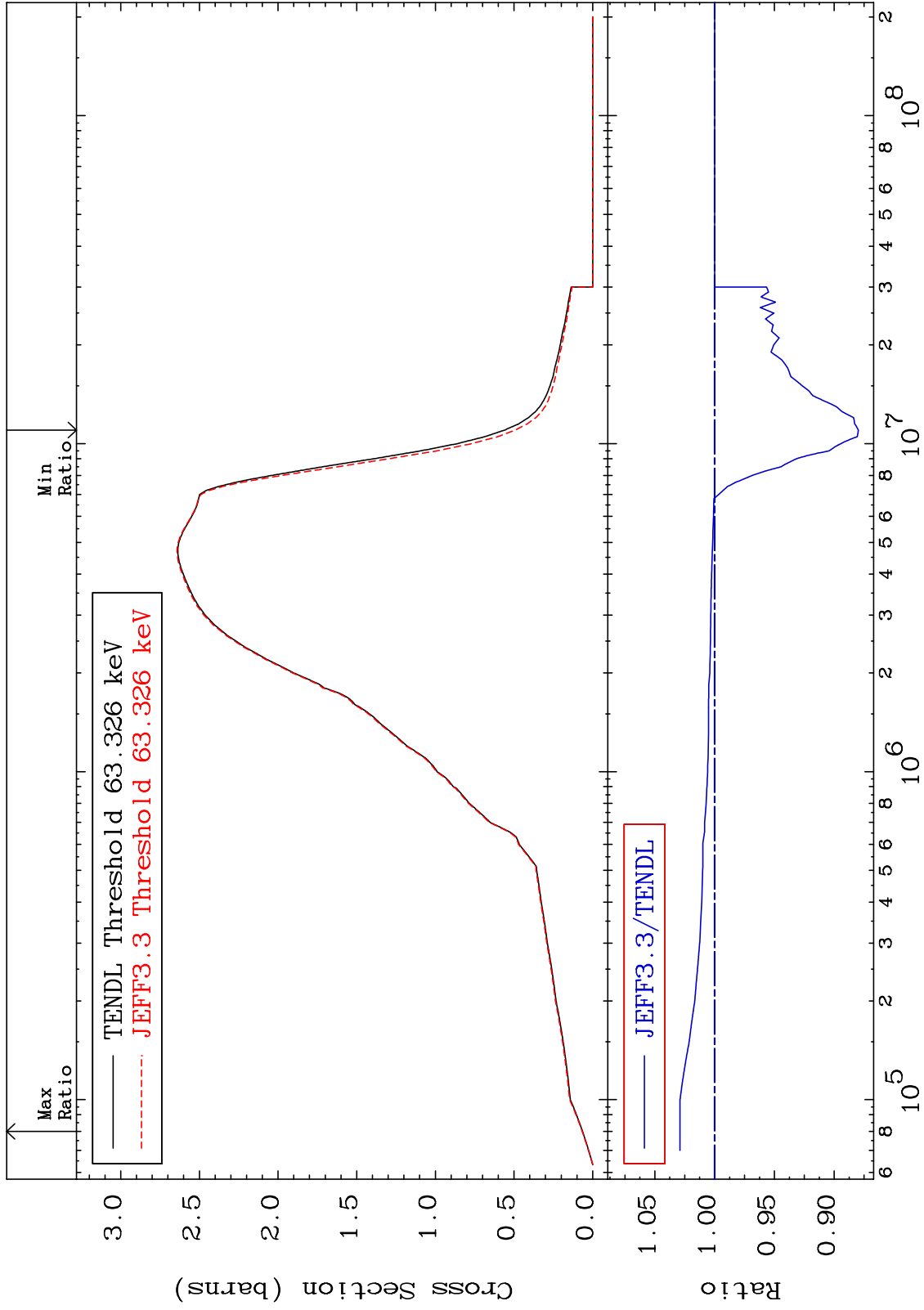
MAT 8322

Inelastic

83-Bi-208

Cross Section

-12.03 To 2.895 %



3

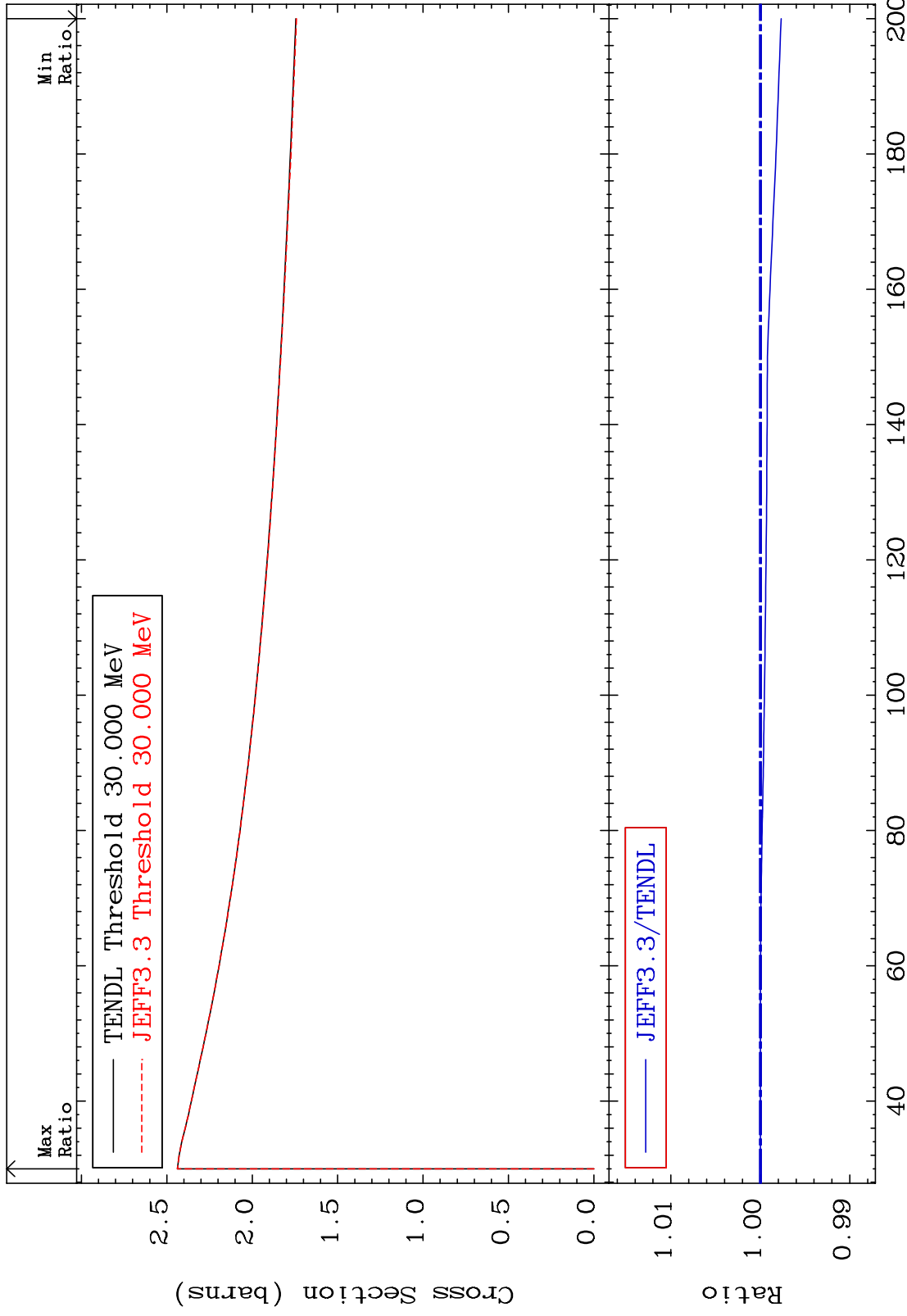
Incident Energy (eV)

83-Bi-208

MAT 8322

(n, remainder)  
Cross Section

83-Bi-208  
-0.232 To 0.000 %



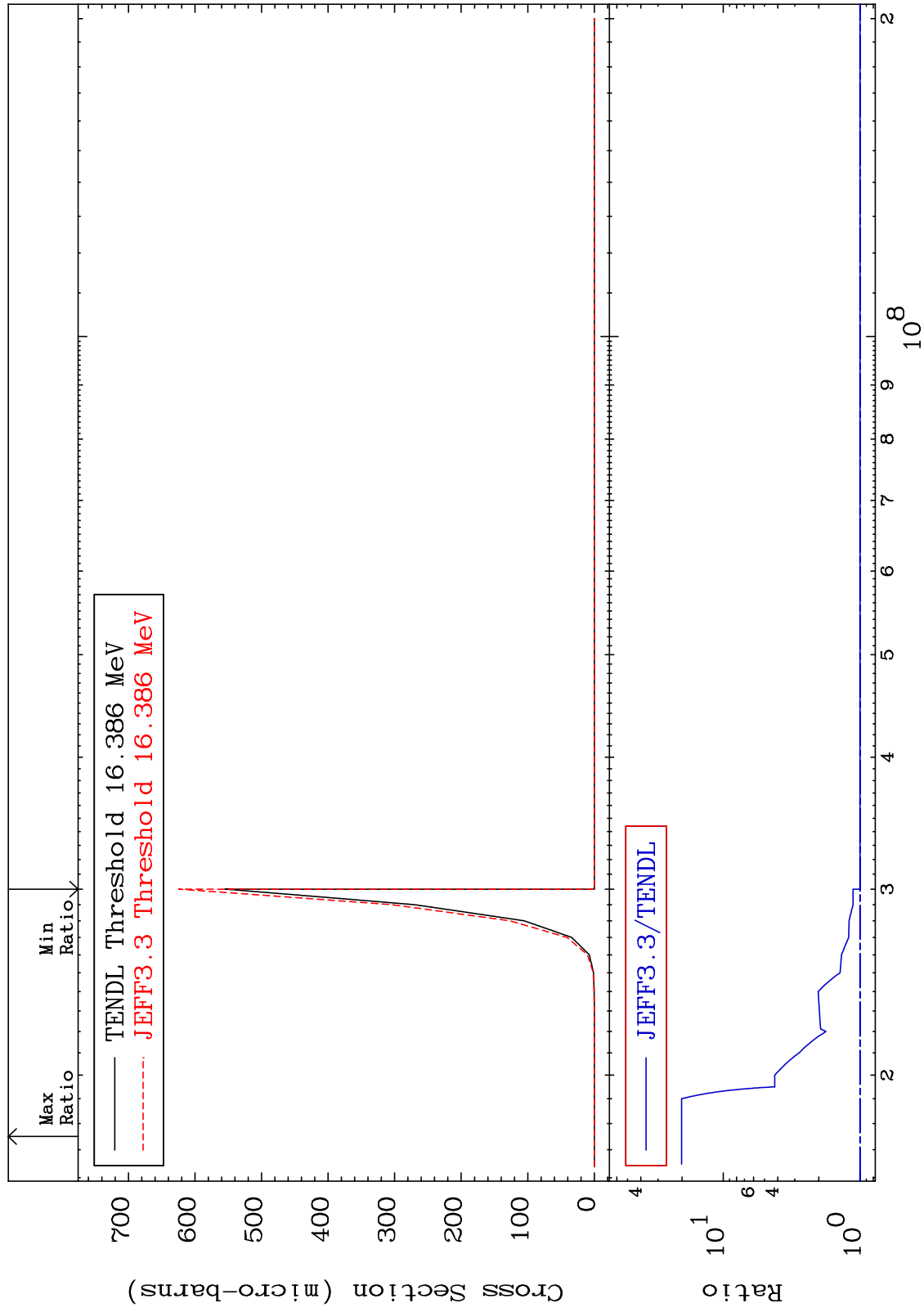
MAT 8322

(n,2n) d

83-Bi-208

Cross Section

0.000 To 1913. %



83-Bi-208

83-Bi-208

5

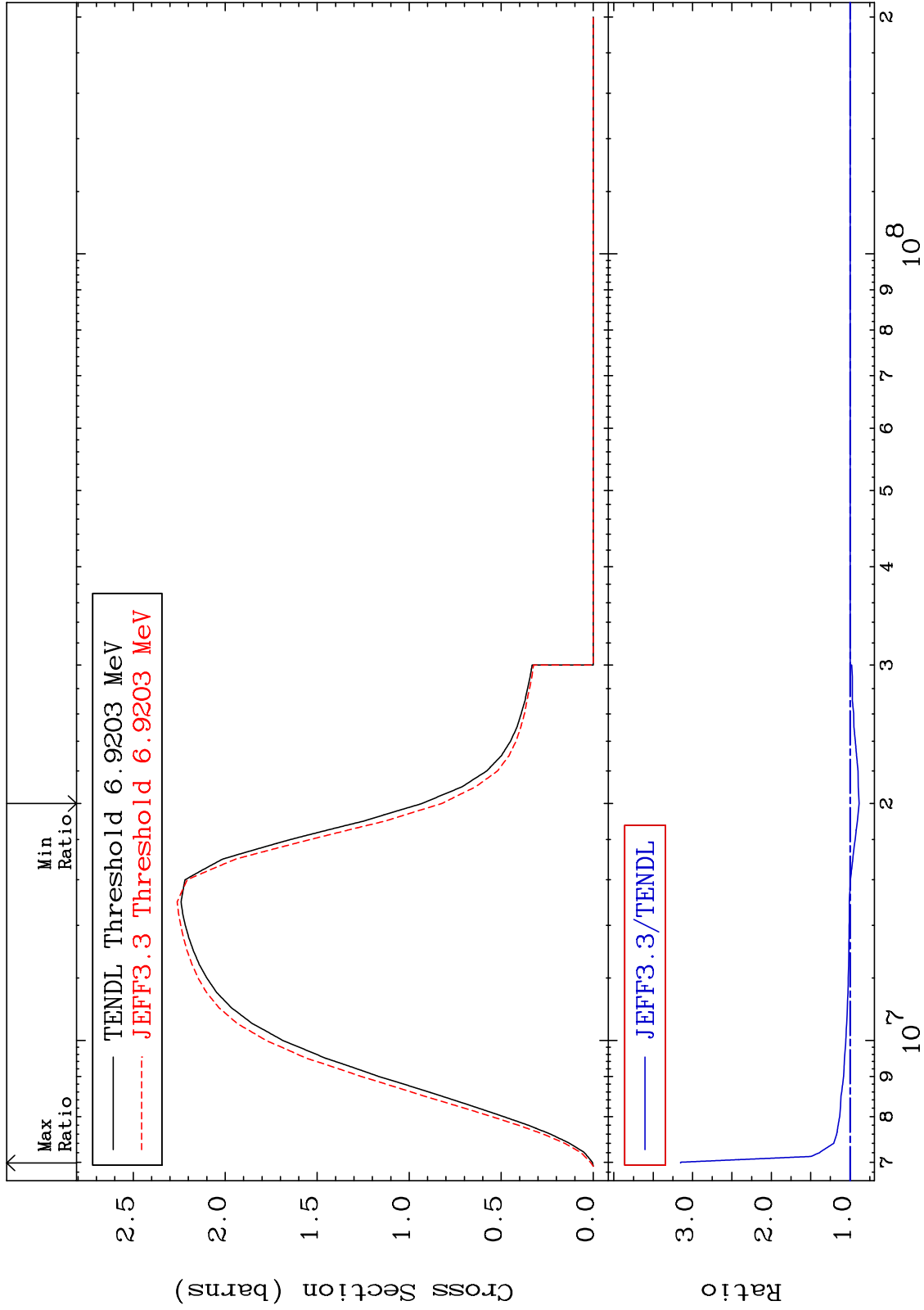
MAT 8322

(n, 2n)

83-Bi-208

Cross Section

-11.56 To 215.2 %



83-Bi-208

Incident Energy (eV)

6

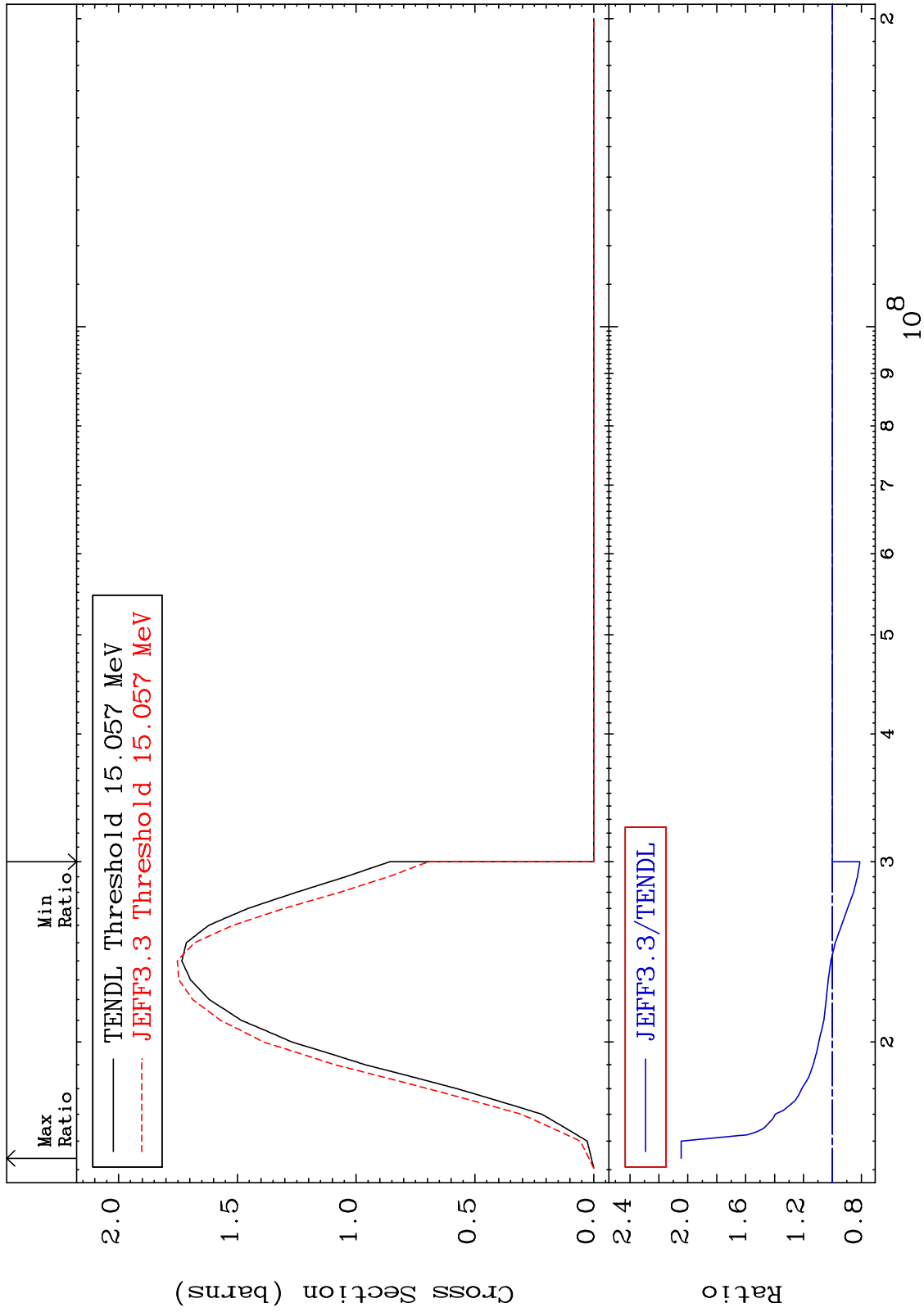
MAT 8322

(n,3n)

83-Bi-208

Cross Section

-19.02 To 104.5 %





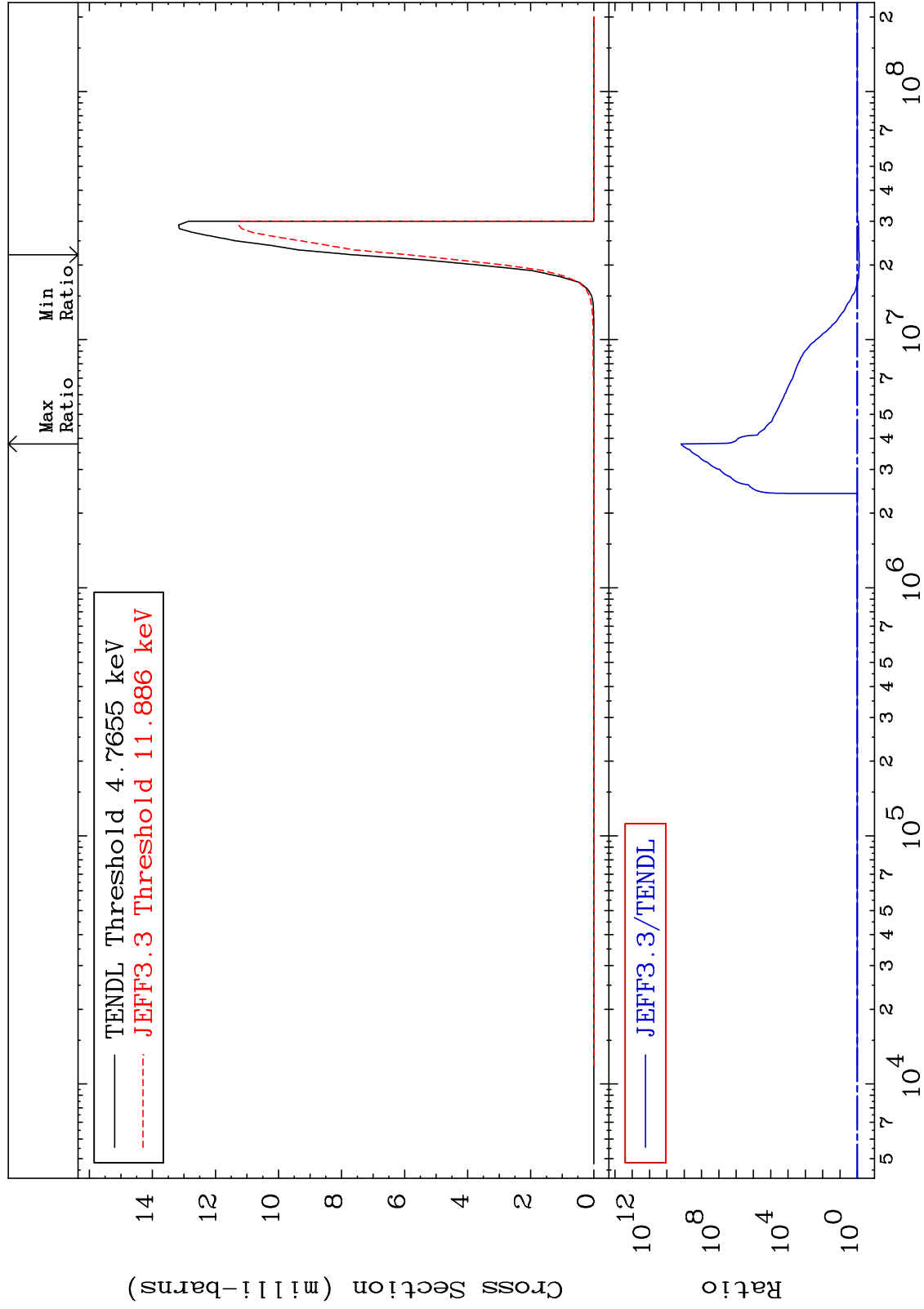
MAT 8322

(n,n')  $\alpha$

83-Bi-208

Cross Section

-23.03 To 9999. %



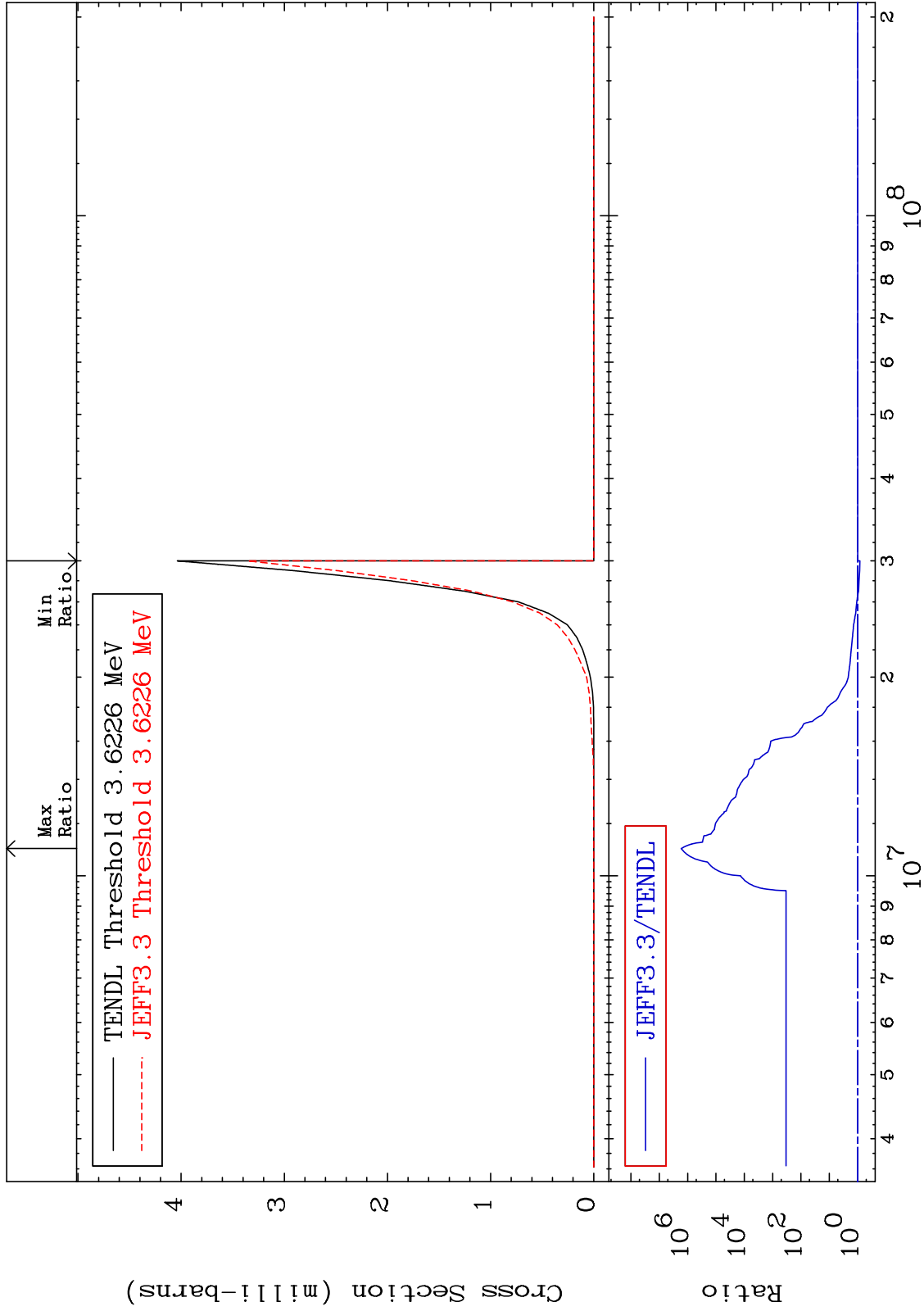
MAT 8322

(n,2n)  $\alpha$

83-Bi-208

-16.81 To 9999. %

Cross Section



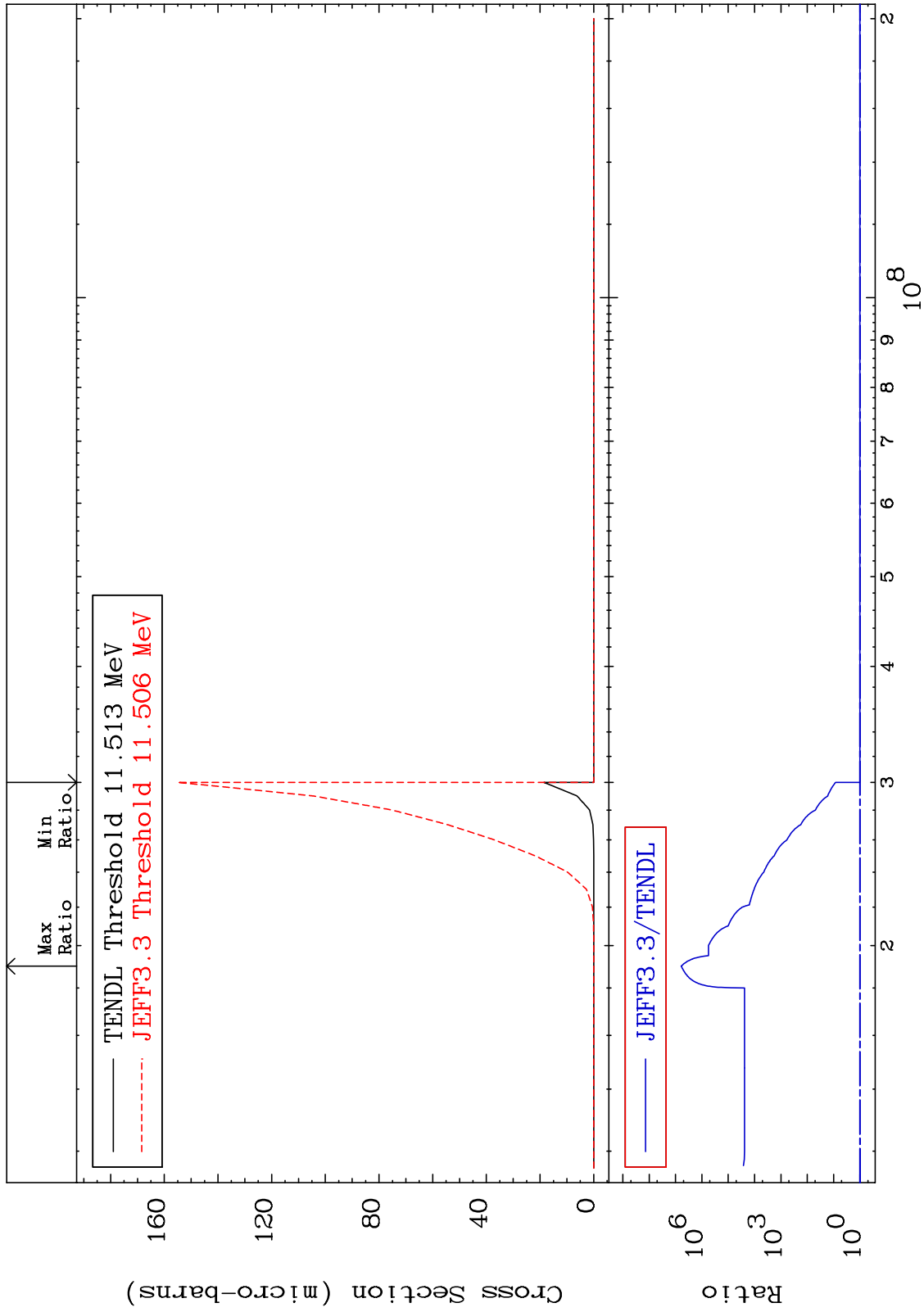
MAT 8322

(n,3n)  $\alpha$

83-Bi-208

Cross Section

0.000 To 9999. %

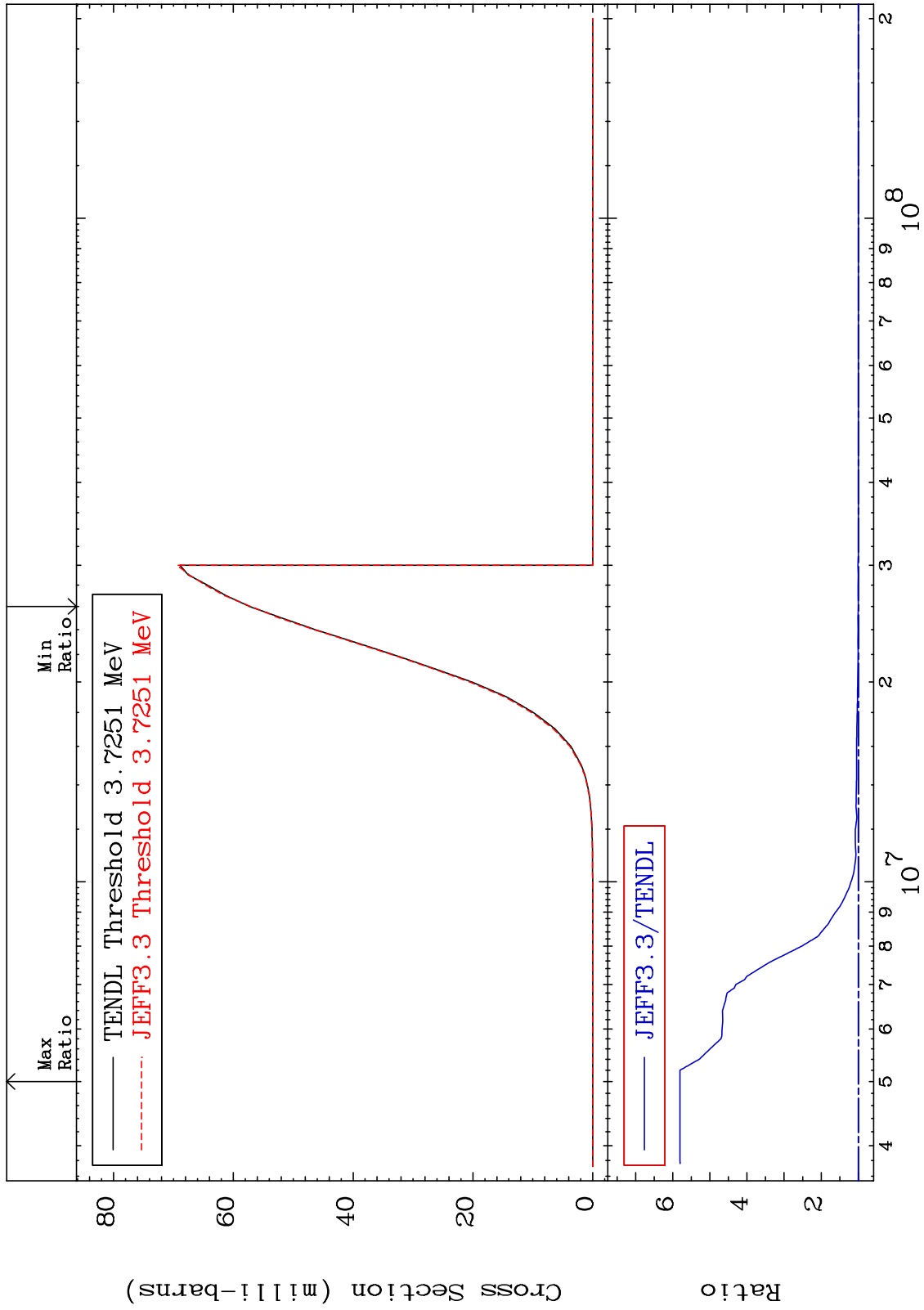


10

Incident Energy (eV)

83-Bi-208

MAT 8322  $(n, n') p$  83-Bi-208  
 Cross Section -0.329 To 480.6 %



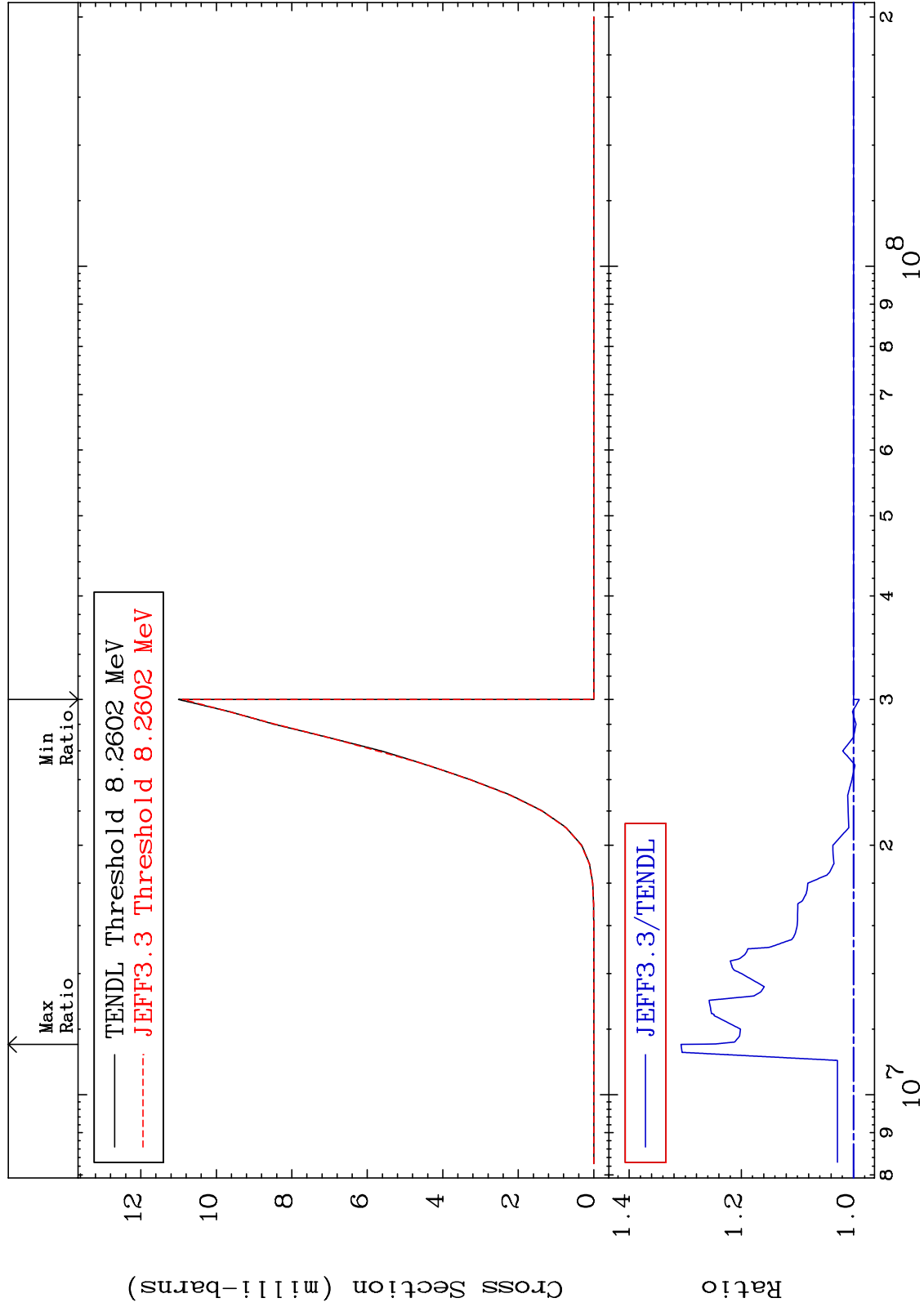
MAT 8322

(n,n') d

83-Bi-208

Cross Section

-1.038 To 30.75 %



12

Incident Energy (eV)

83-Bi-208

MAT 8322

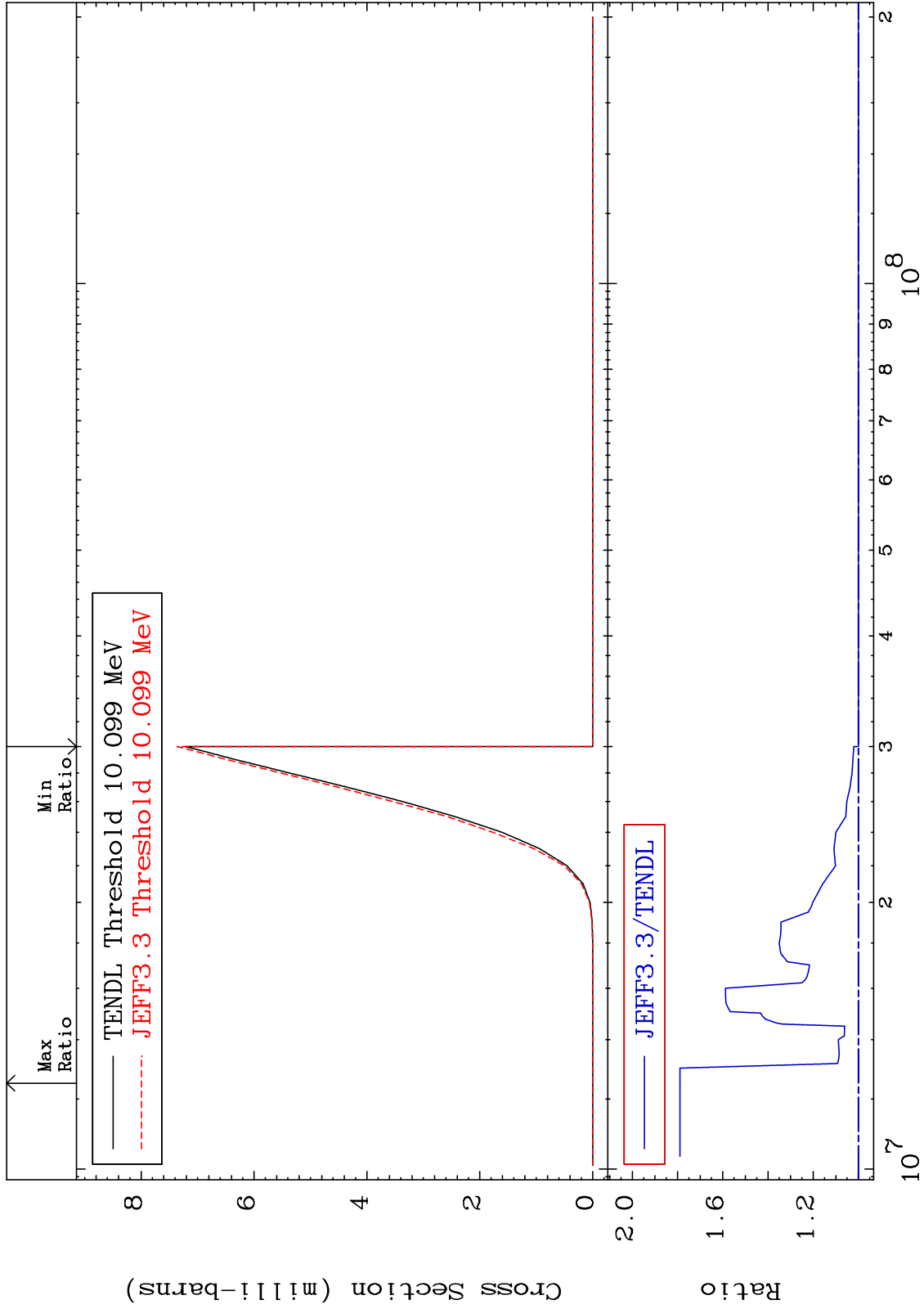
(n,n') t

83-Bi-208

Cross Section

0.000

To 78.91 %



Incident Energy (eV)

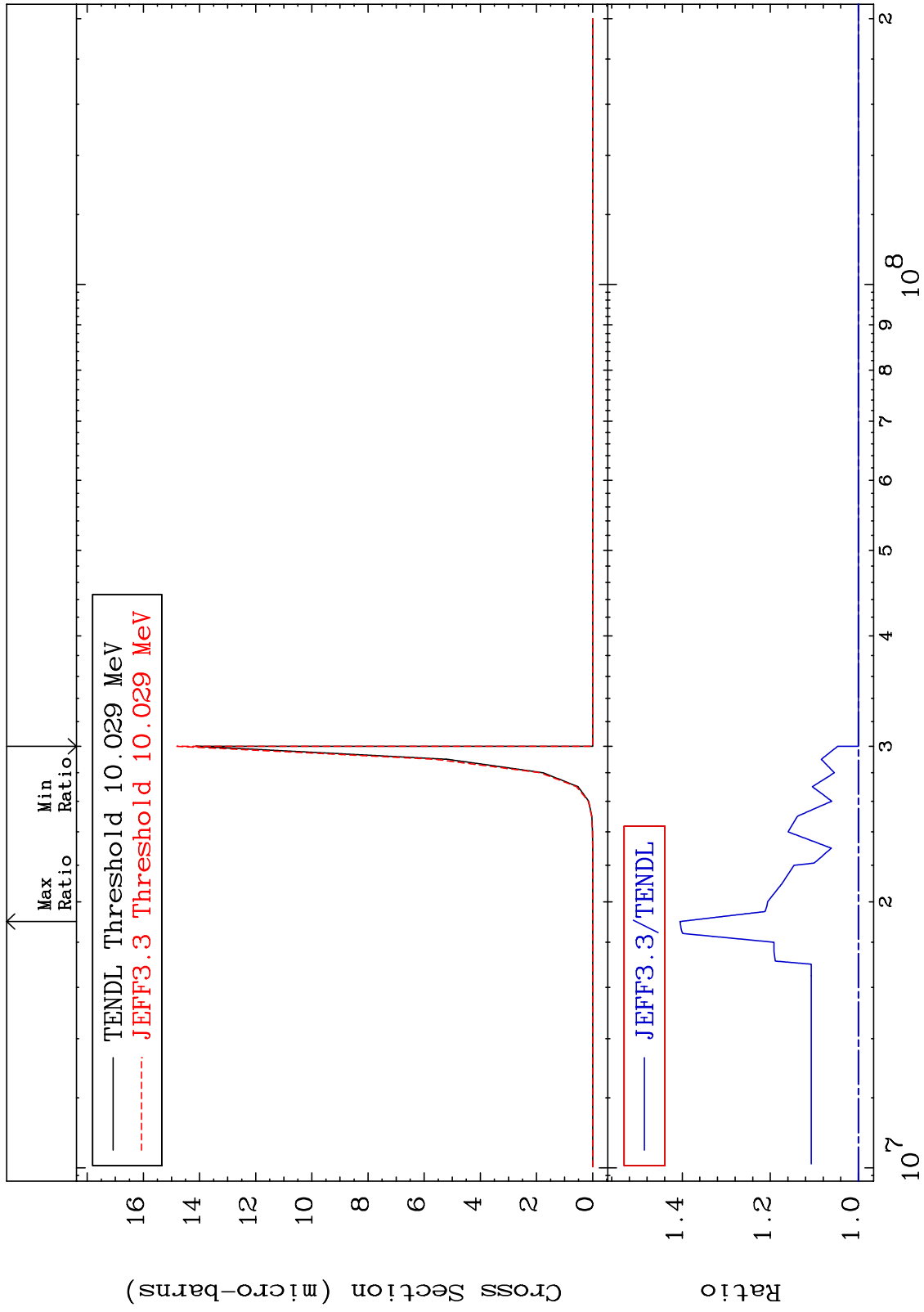
83-Bi-208

13

MAT 8322

(n,n') He-3  
Cross Section

83-Bi-208  
0.000 To 40.51 %



83-Bi-208

Incident Energy (eV)

14

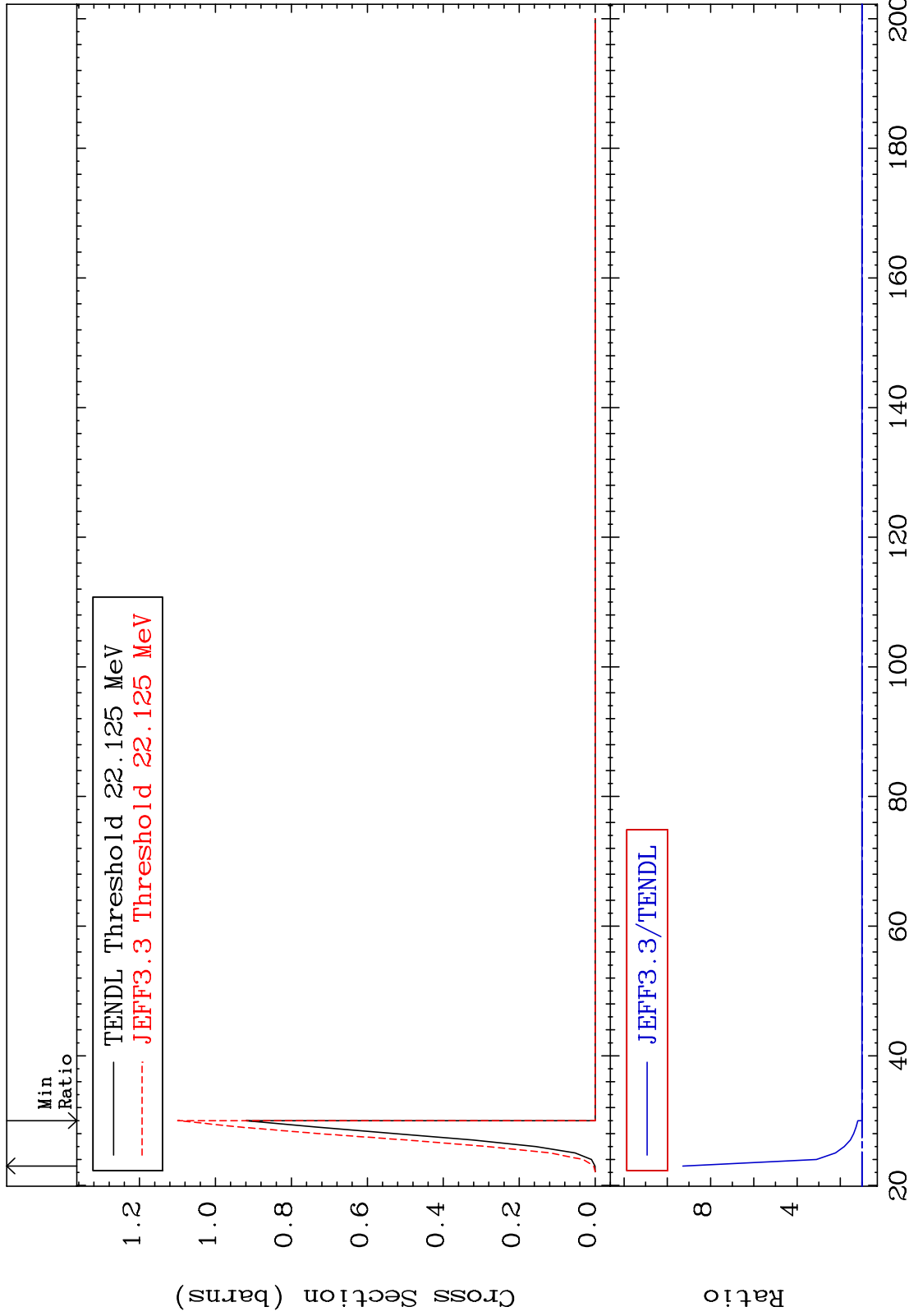
MAT 8322

(n, 4n)

83-Bi-208

Cross Section

0.000 To 828.0 %

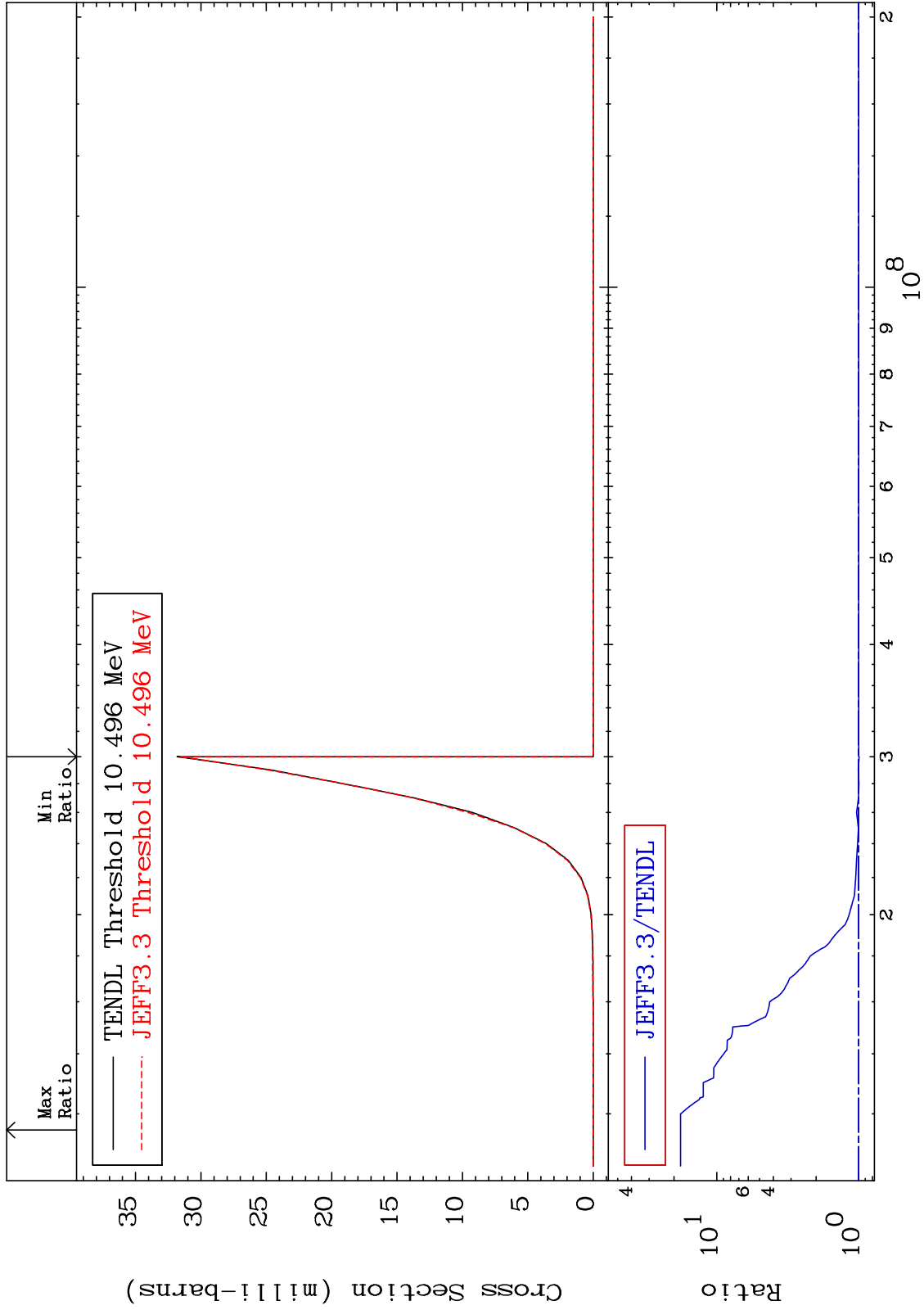




MAT 8322

(n,2n) p  
Cross Section

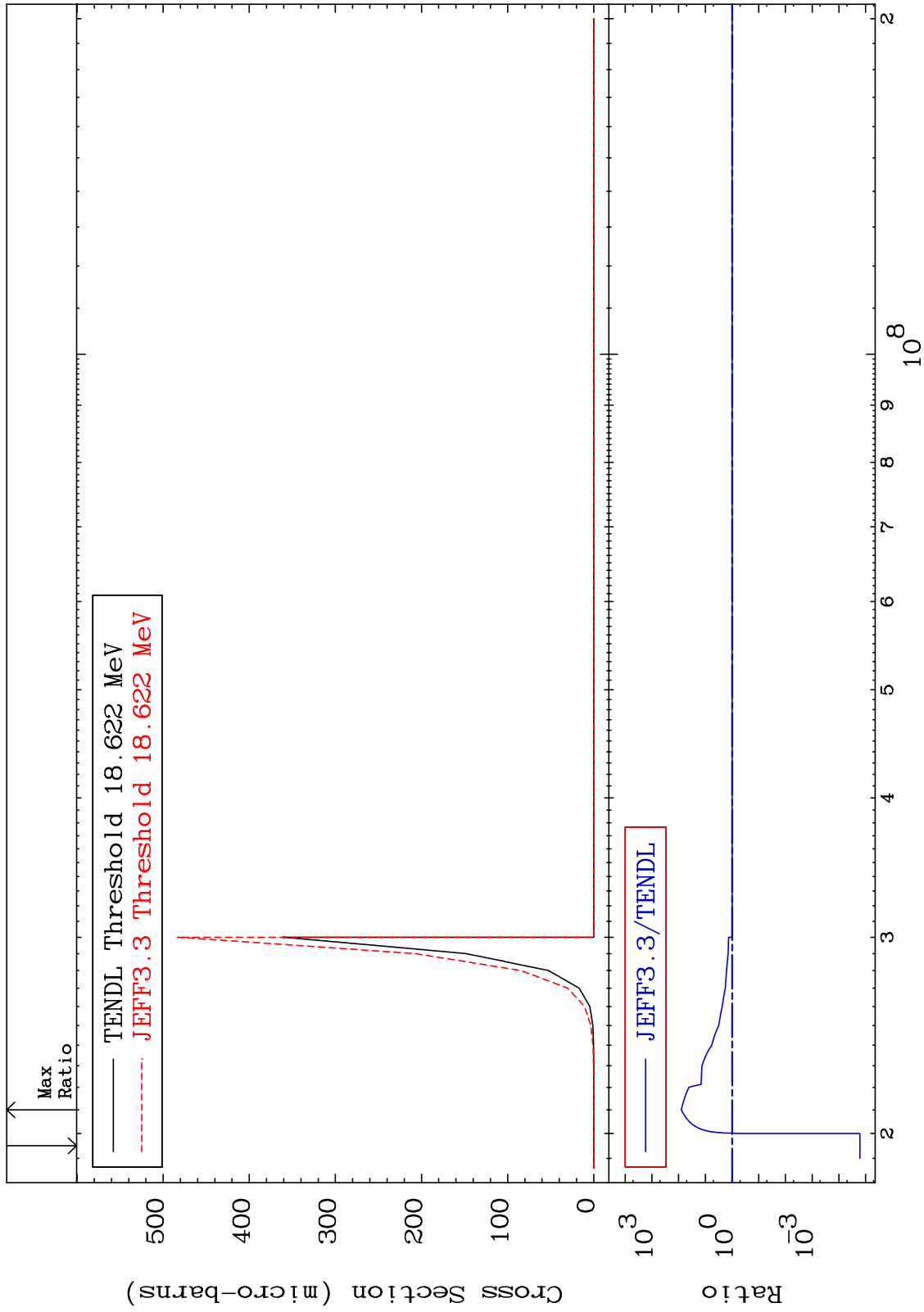
83-Bi-208  
-0.633 To 1699. %



MAT 8322

(n,3n) p  
Cross Section

83-Bi-208  
-100.0 To 7865. %



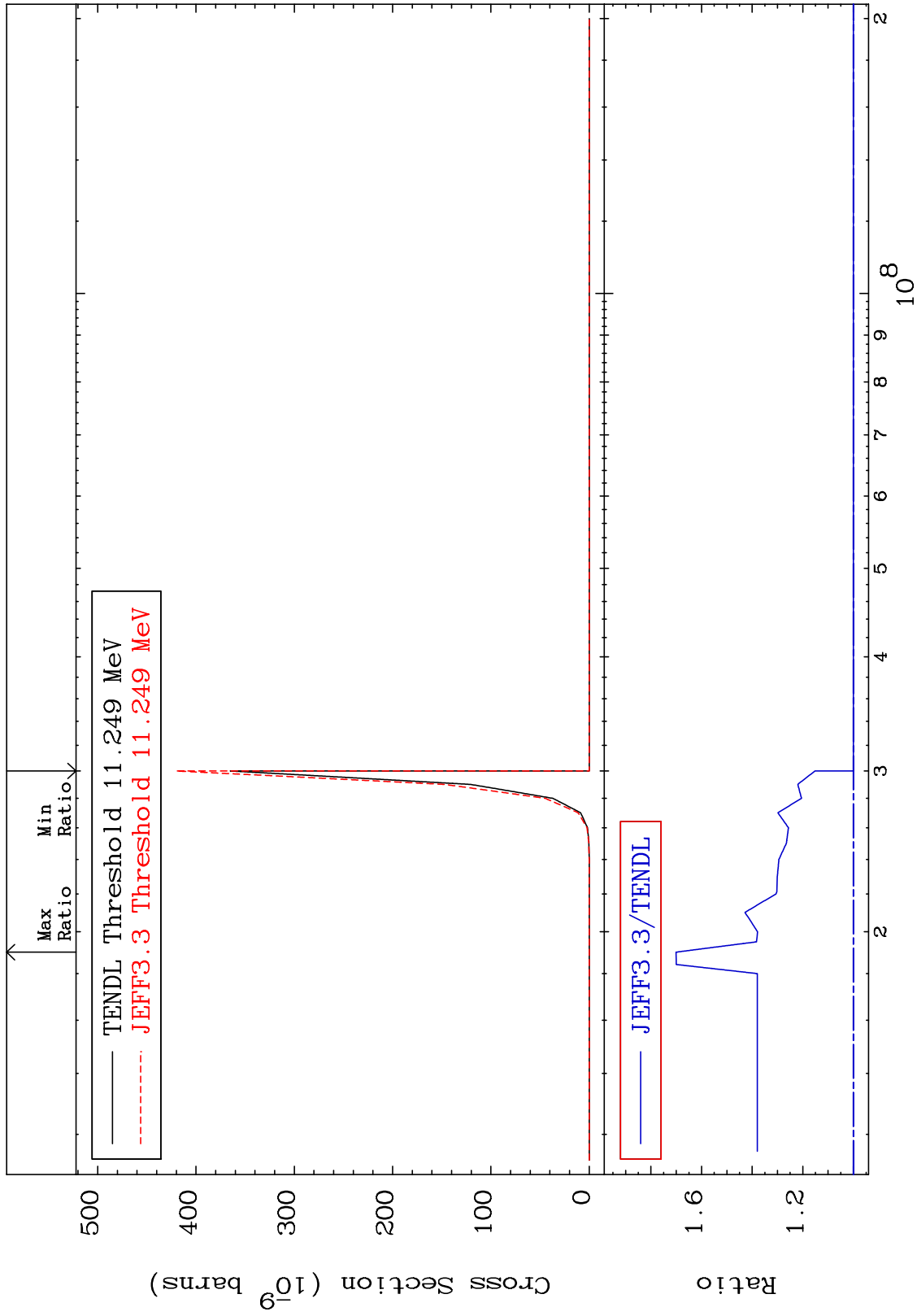
MAT 8322

(n,2n) p

83-Bi-208

Cross Section

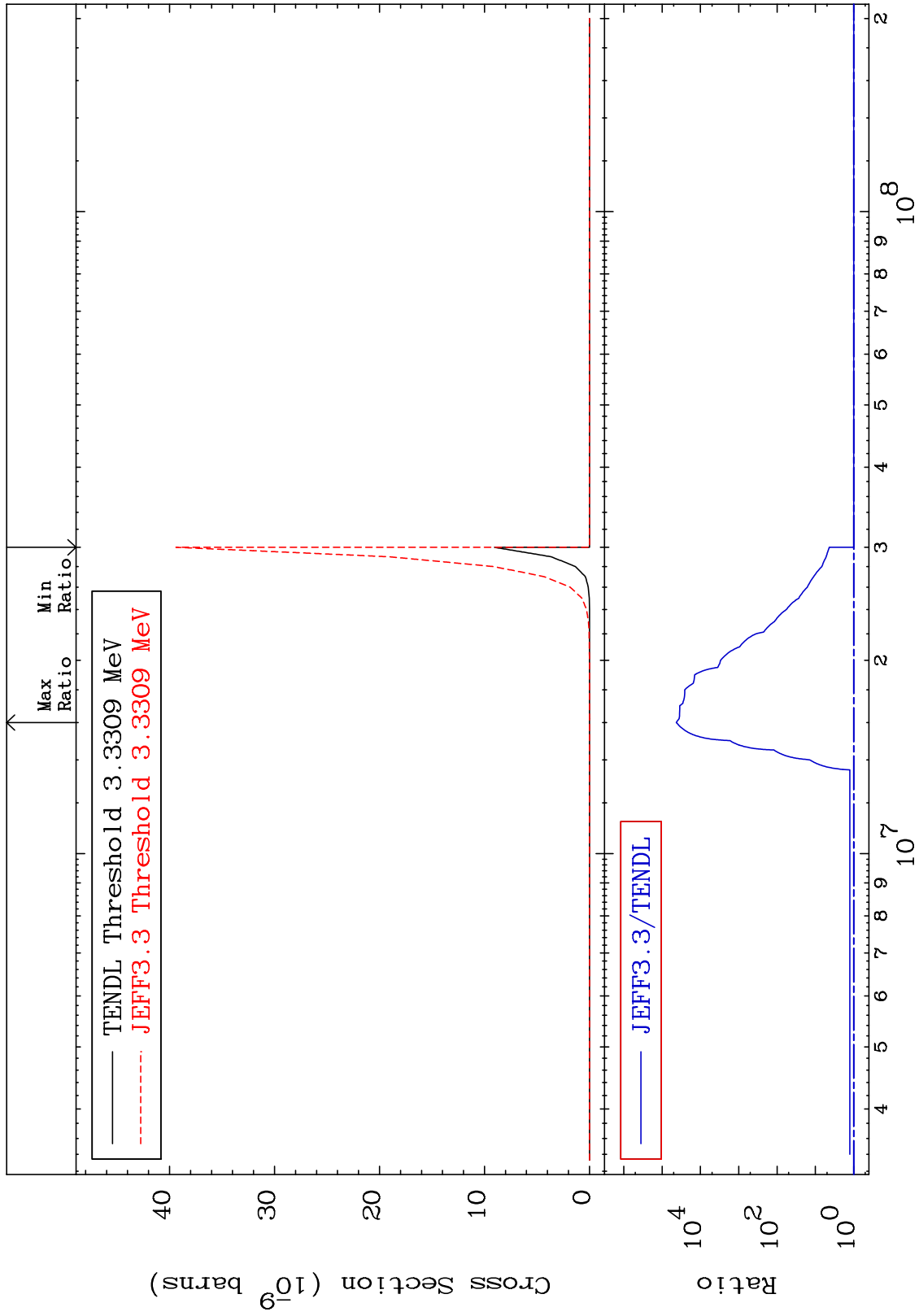
0.000 To 70.07 %

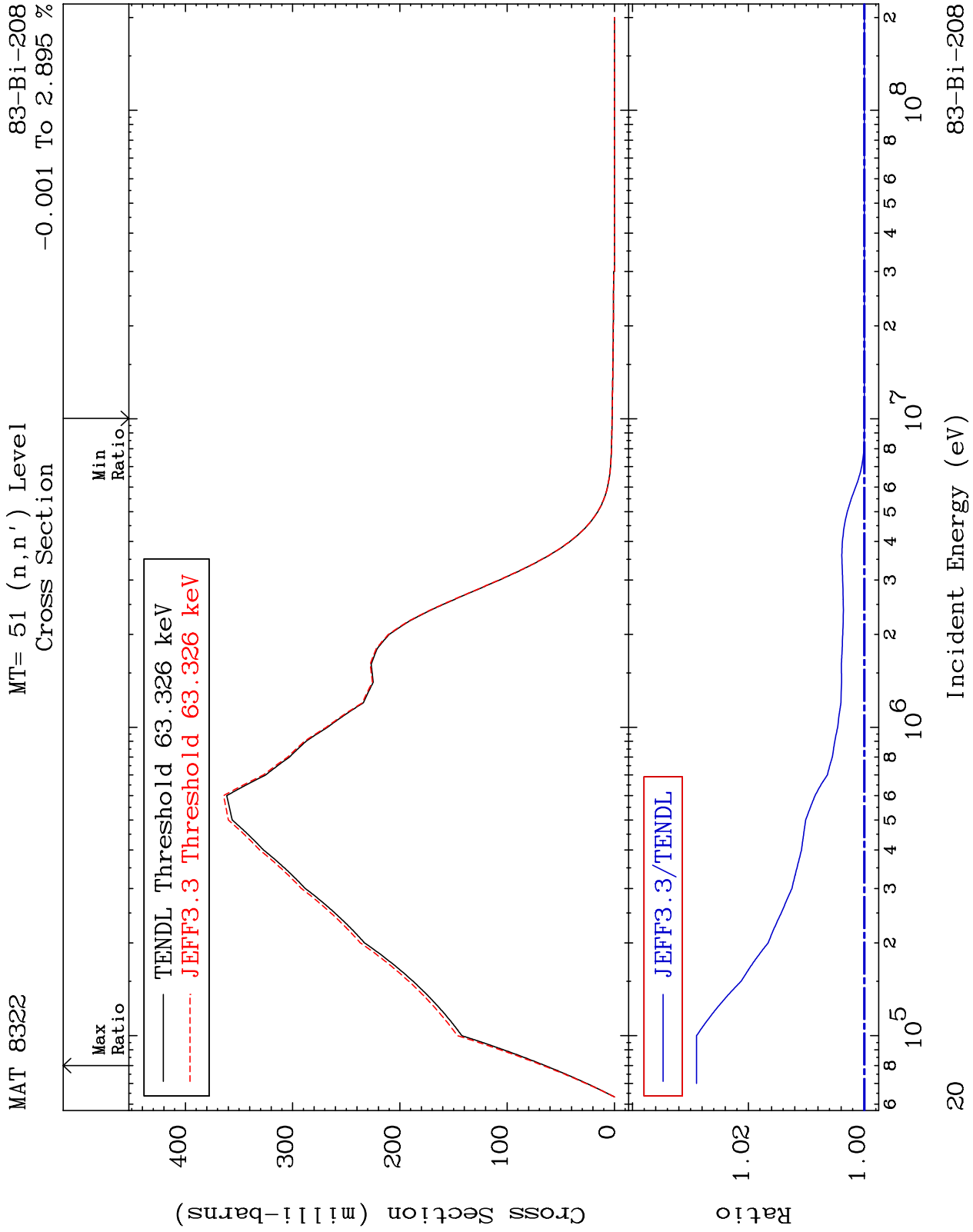


MAT 8322

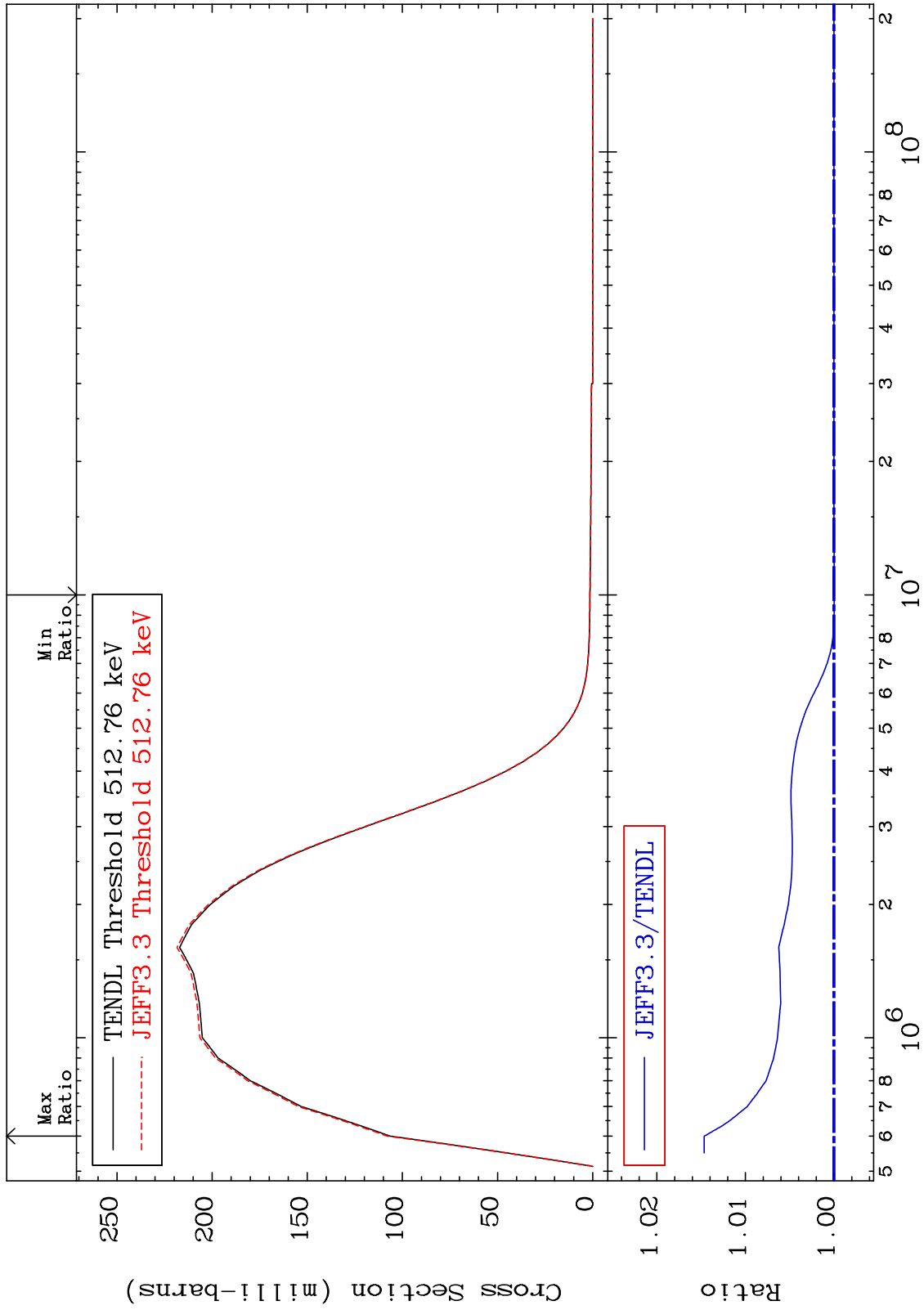
(n,n') p  $\alpha$   
Cross Section

83-Bi-208  
To 9999. %  
0.000





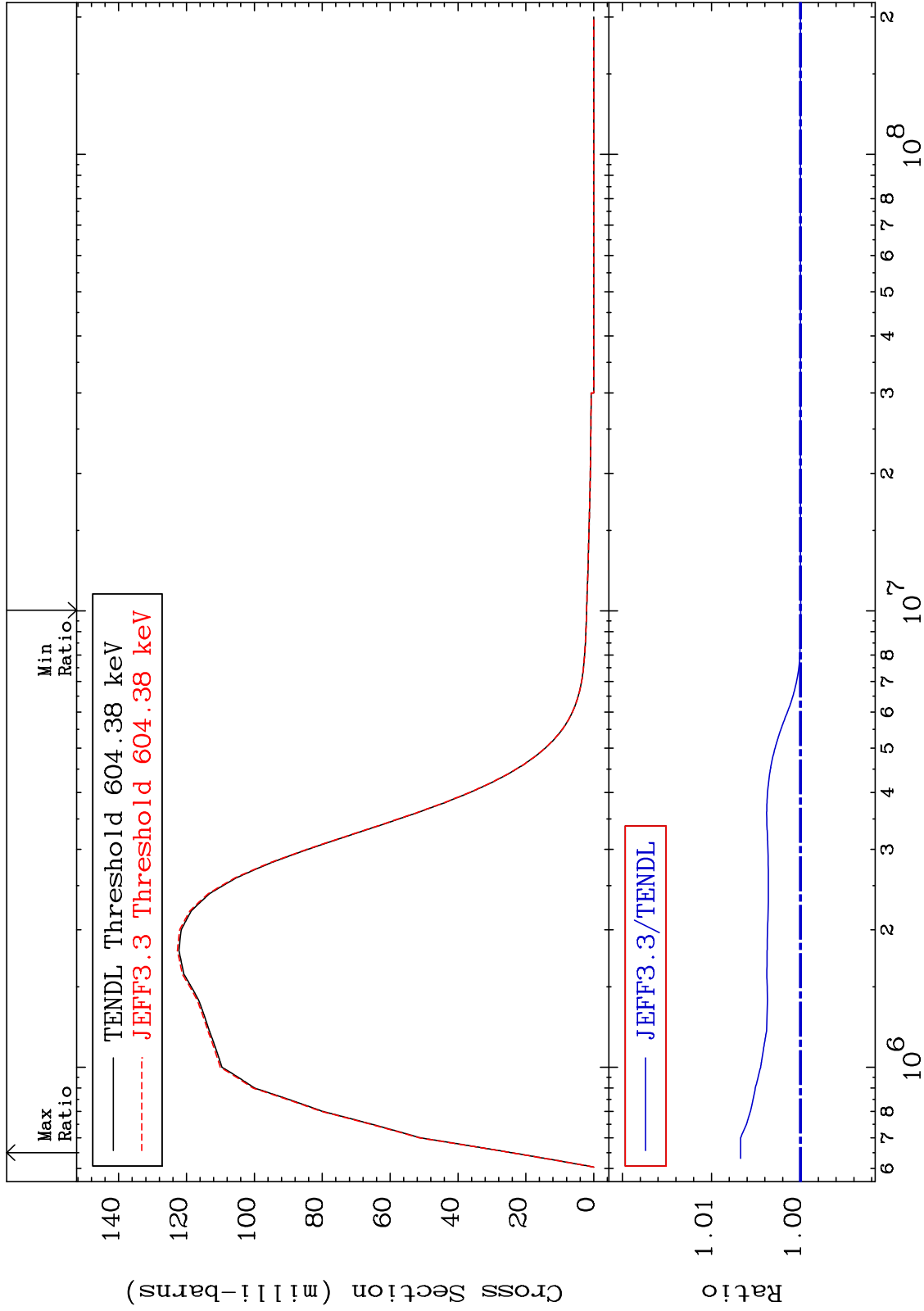
MAT 8322 MT= 52 (n, n') Level Cross Section 83-Bi-208 -0.002 To 1.466 %



MAT 8322

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

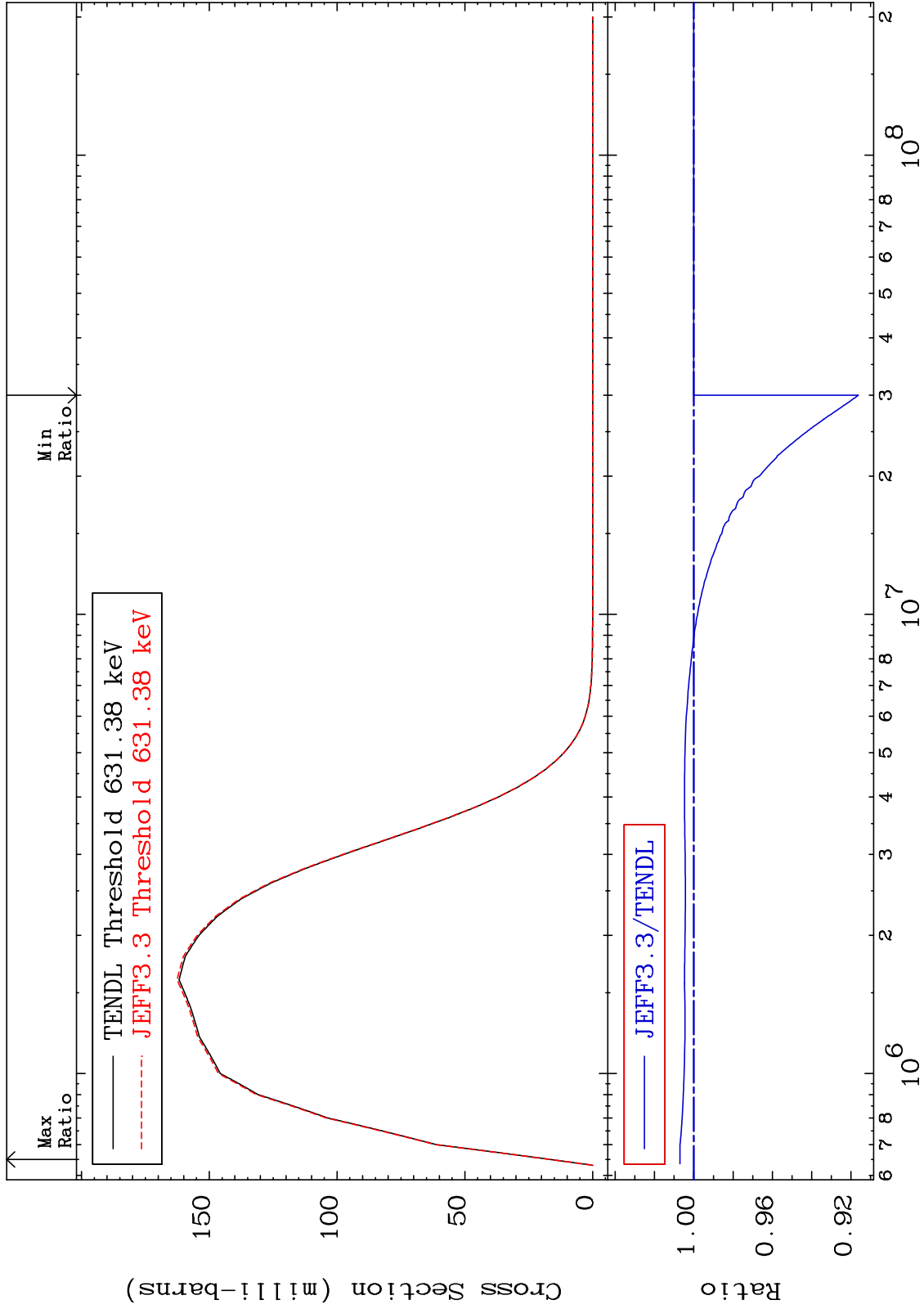
83-Bi-208  
-0.001 To 0.673 %



MAT 8322

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

83-Bi-208  
-8.378 To 0.701 %

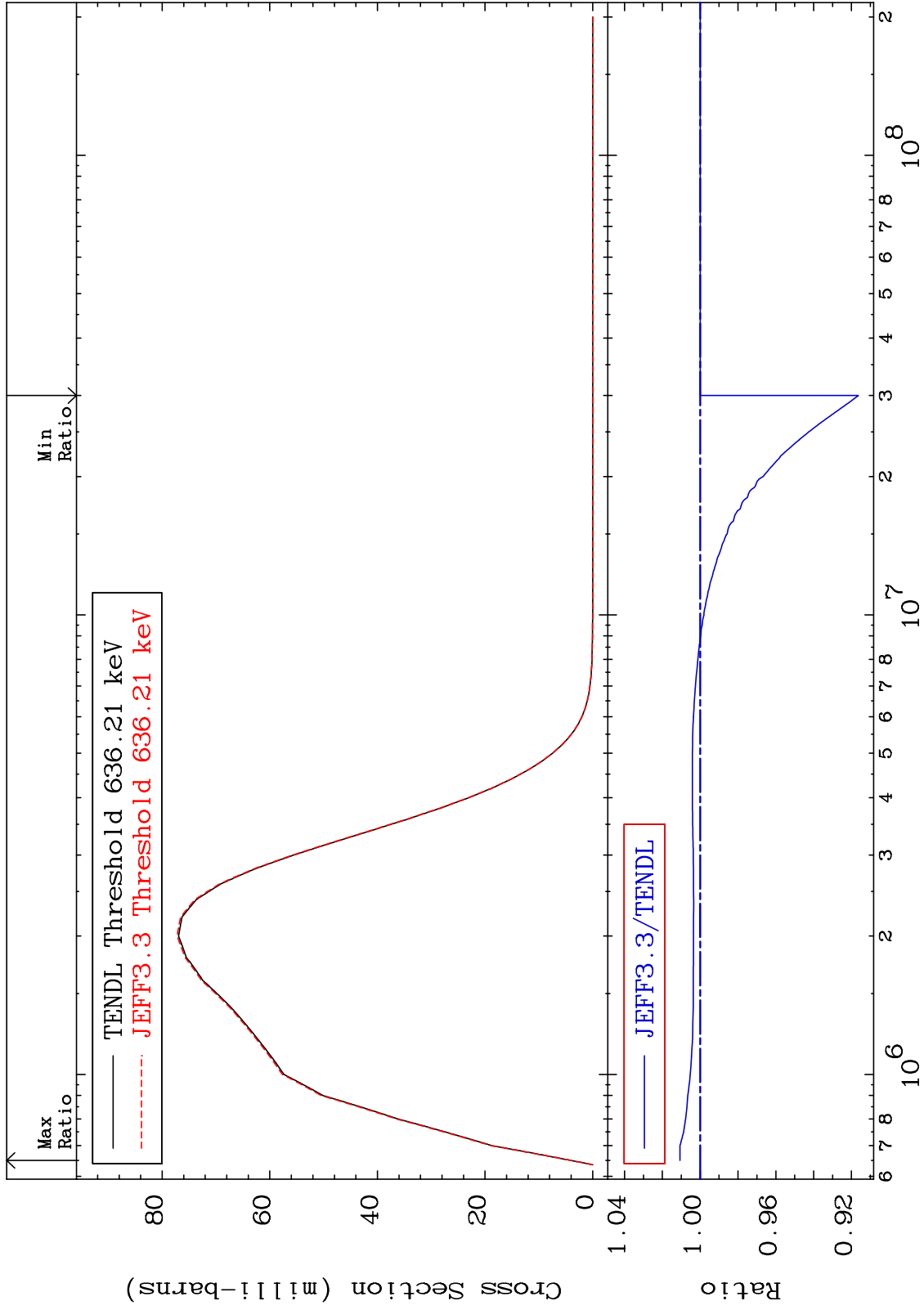




MAT 8322

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

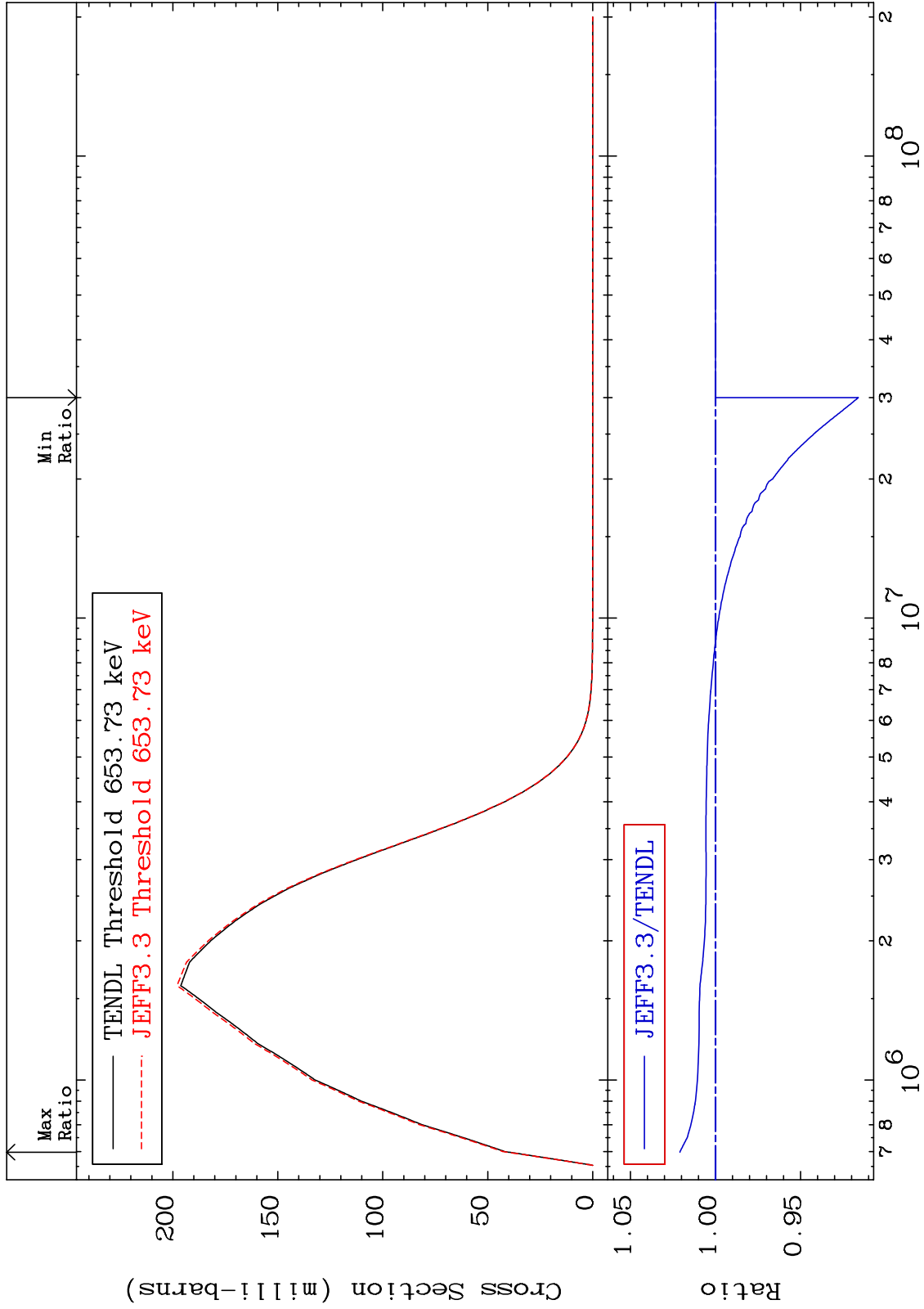
83-Bi-208  
-8.366 To 1.066 %



MAT 8322

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

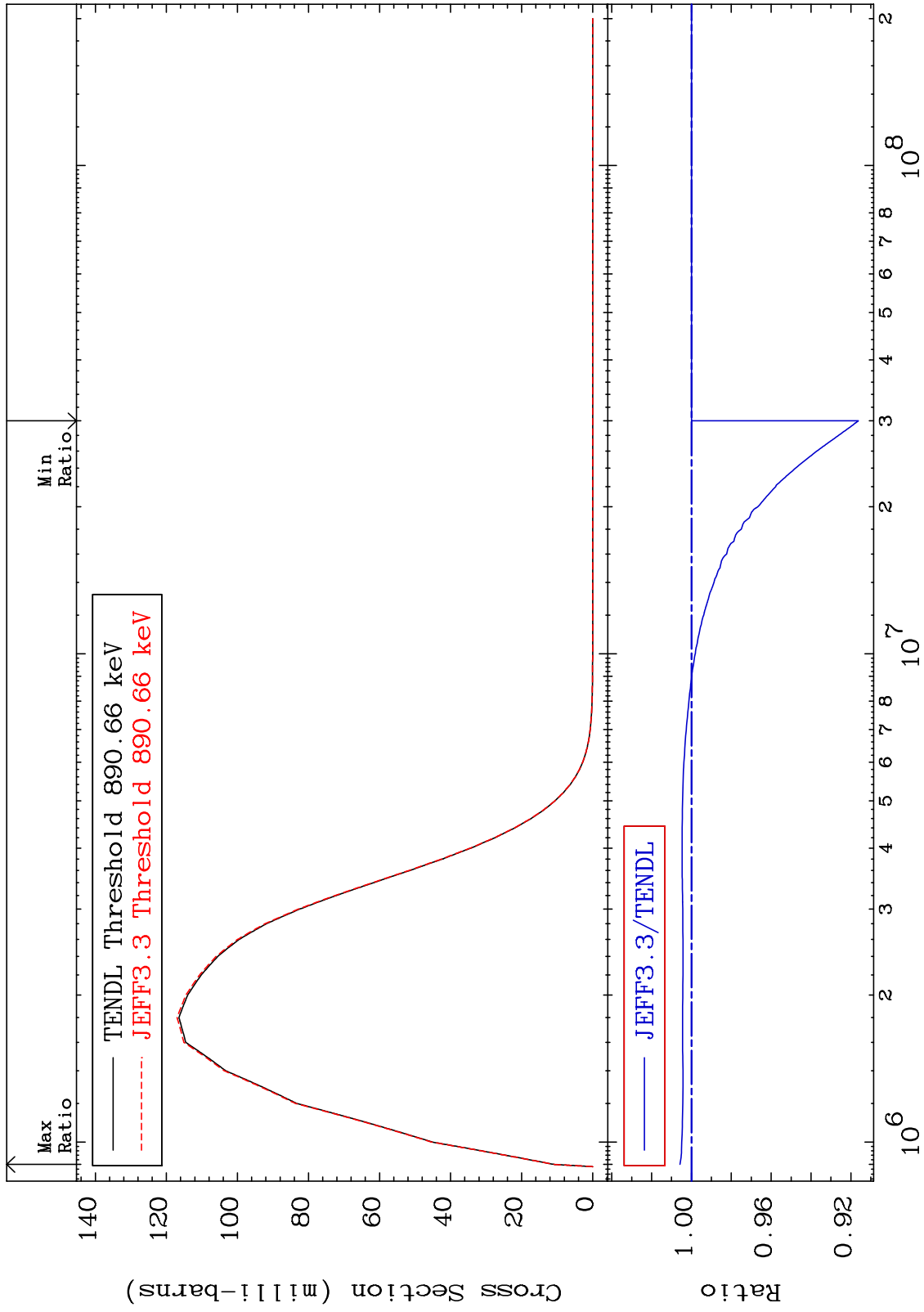
83-Bi-208  
-8.394 To 2.089 %



MAT 8322

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

83-Bi-208  
-8.378 To 0.574 %

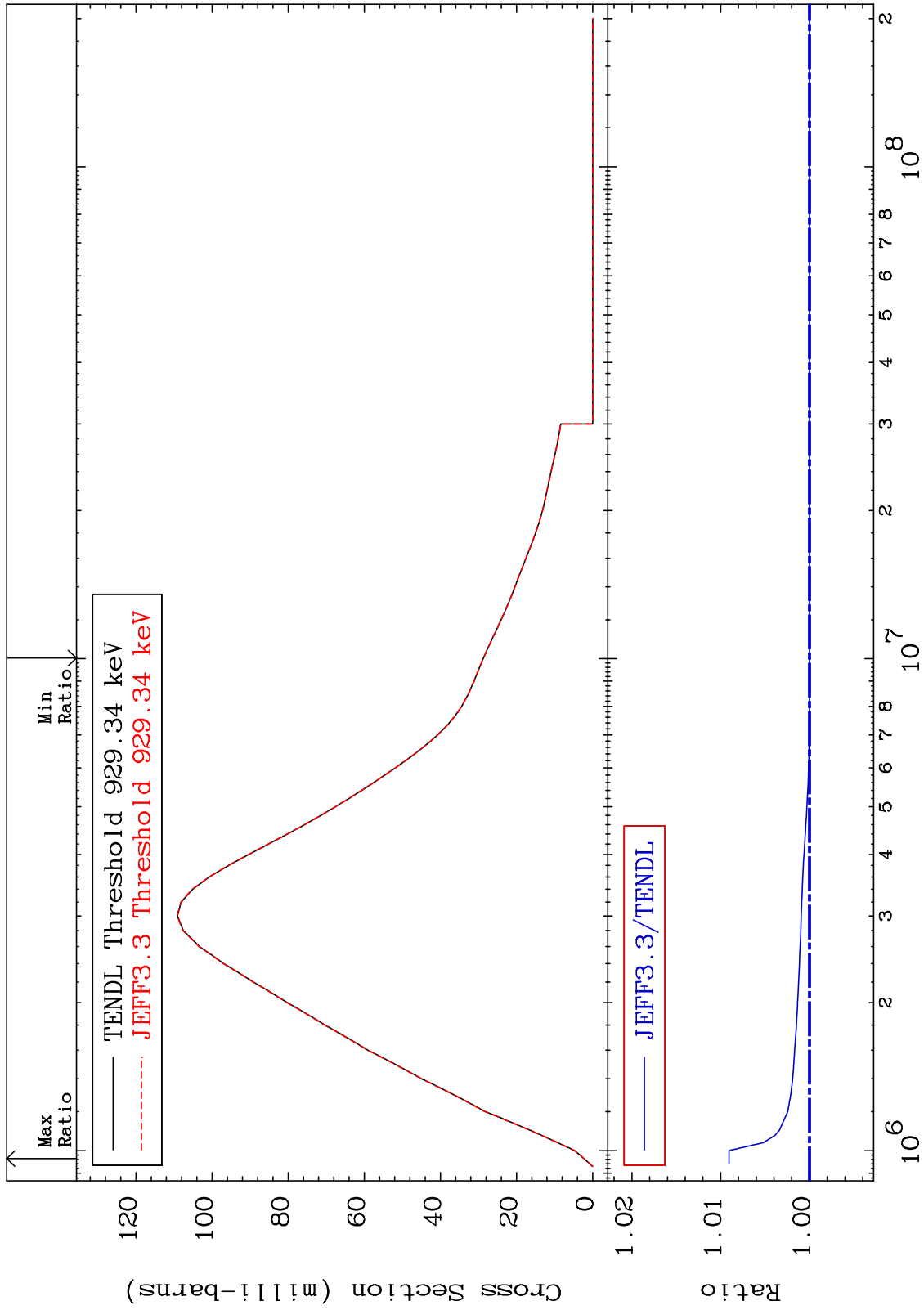


26

Incident Energy (eV)

83-Bi-208

MAT 8322 MT= 58 (n,n') Level Cross Section 83-Bi-208 To 0.907 %

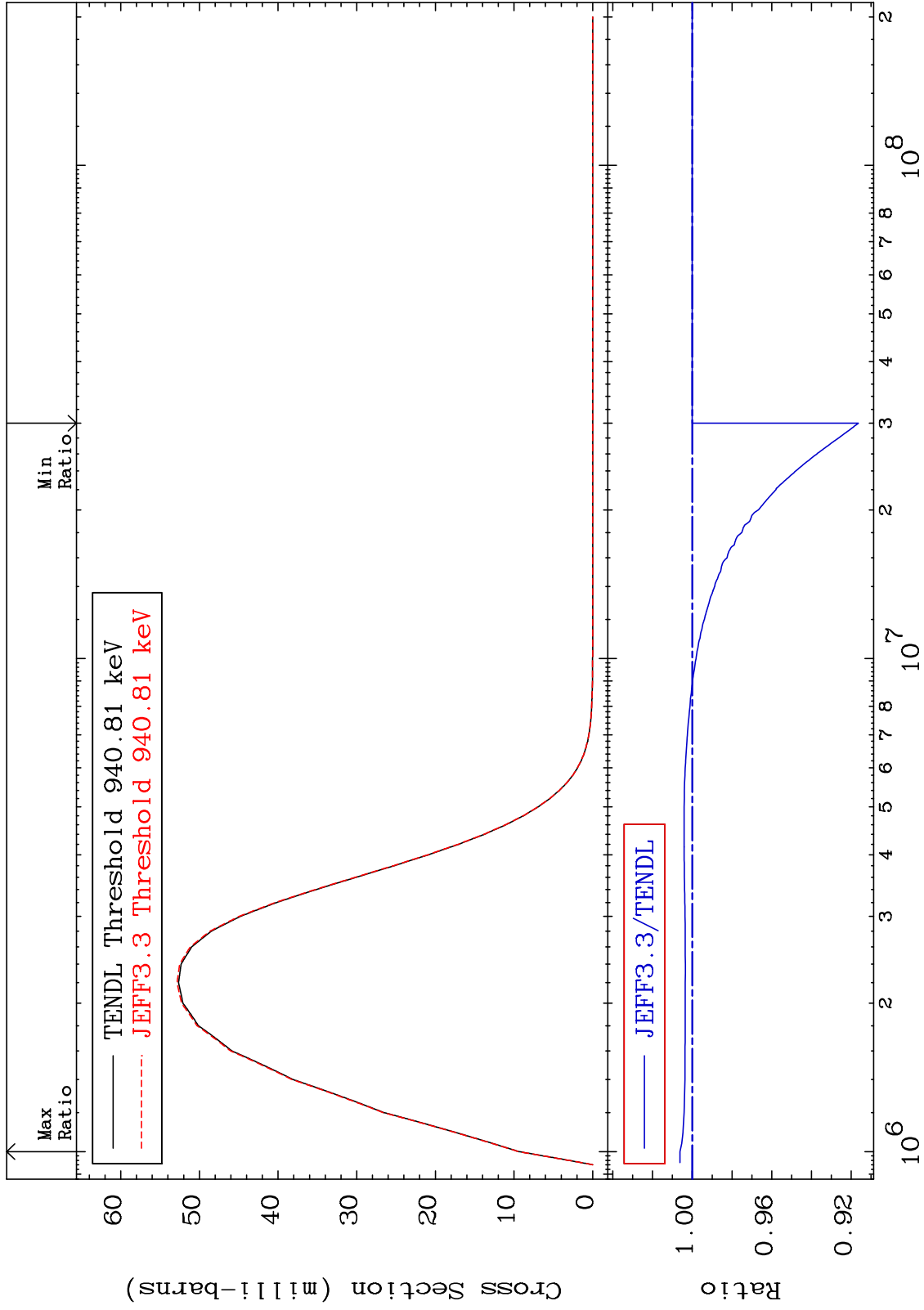


27 Incident Energy (eV) 83-Bi-208

MAT 8322

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

83-Bi-208  
-8.366 To 0.617 %



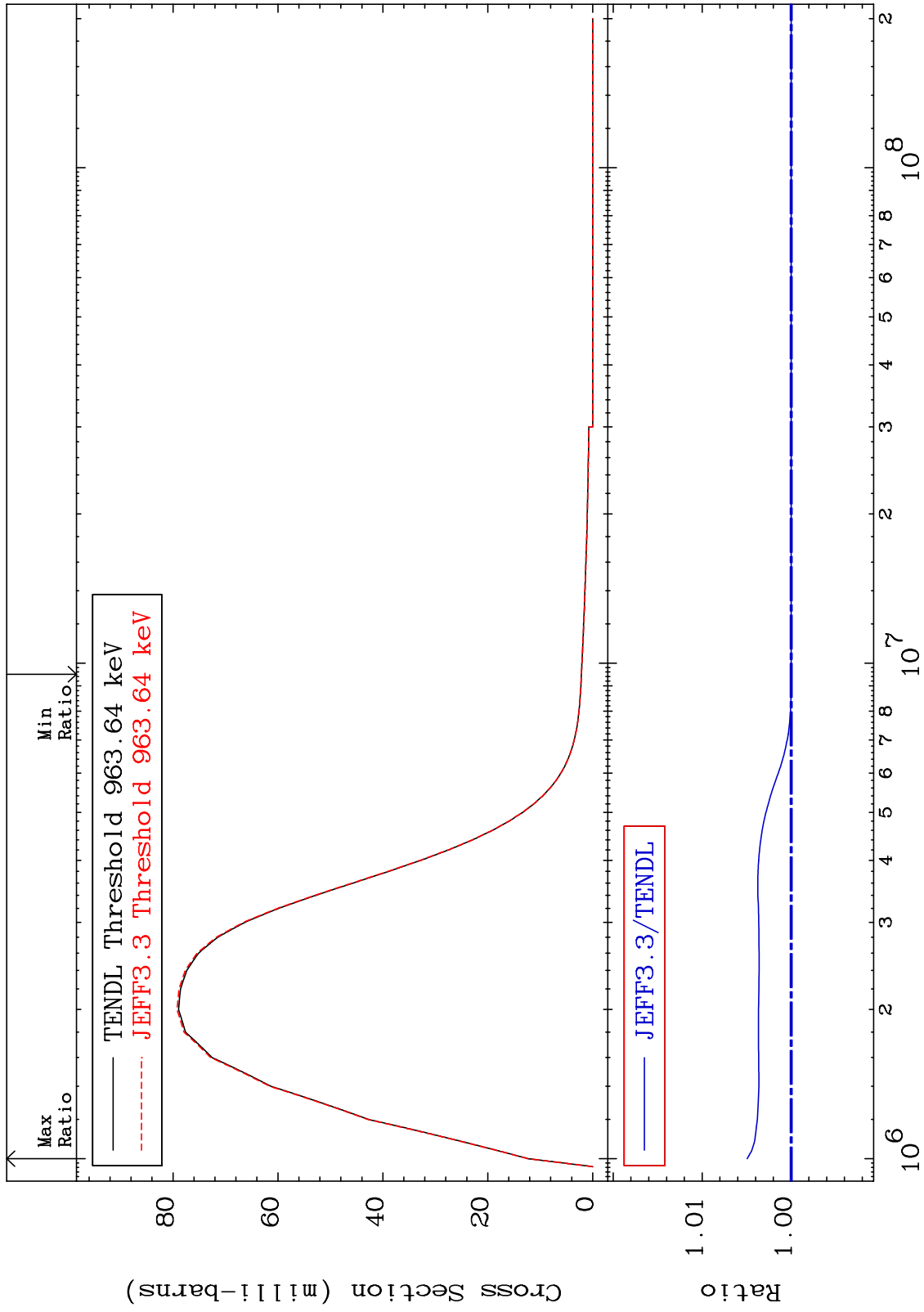
83-Bi-208

28

MAT 8322

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

83-Bi-208  
-0.001 To 0.494 %



29

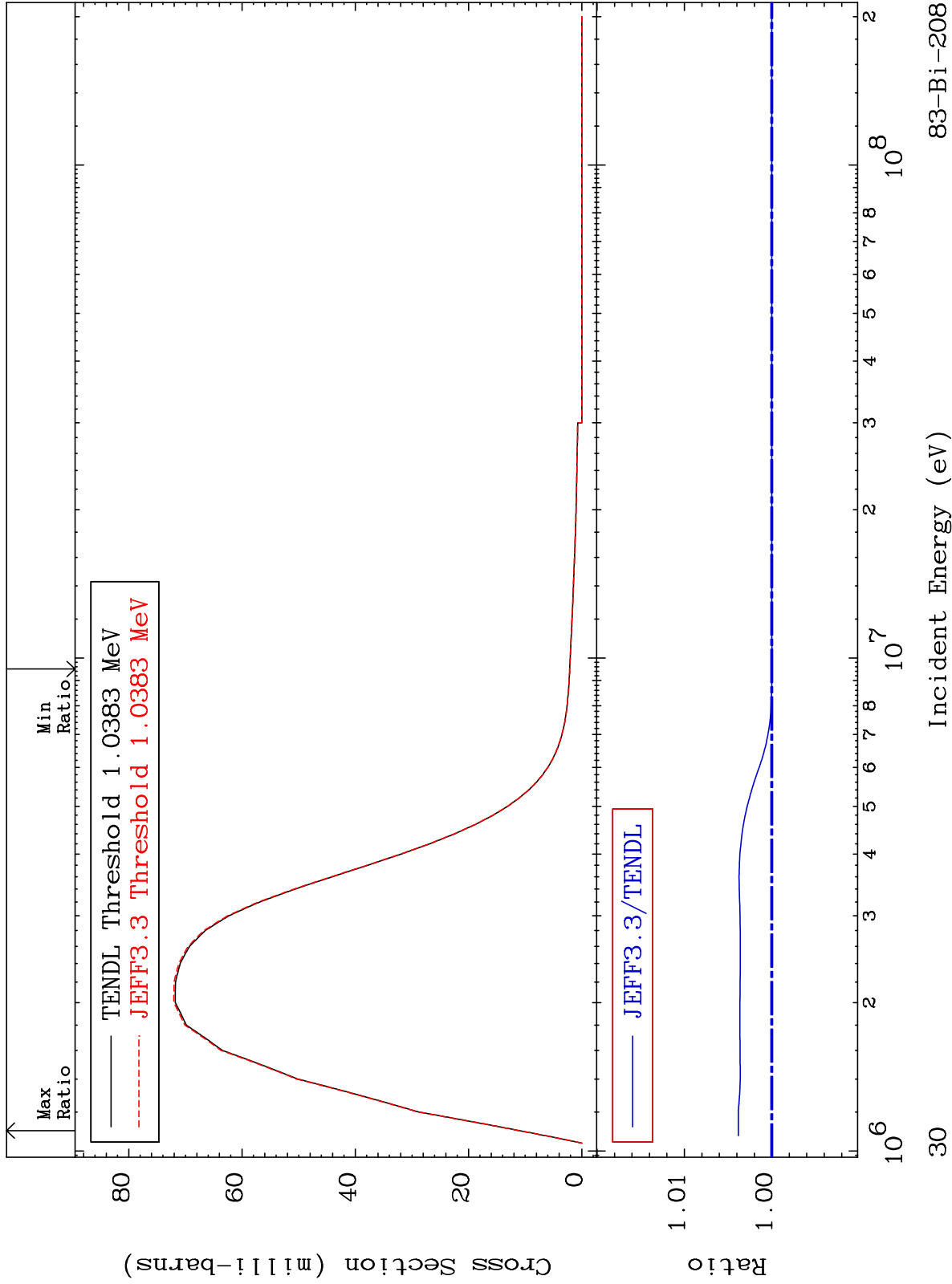
Incident Energy (eV)

83-Bi-208

MAT 8322

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

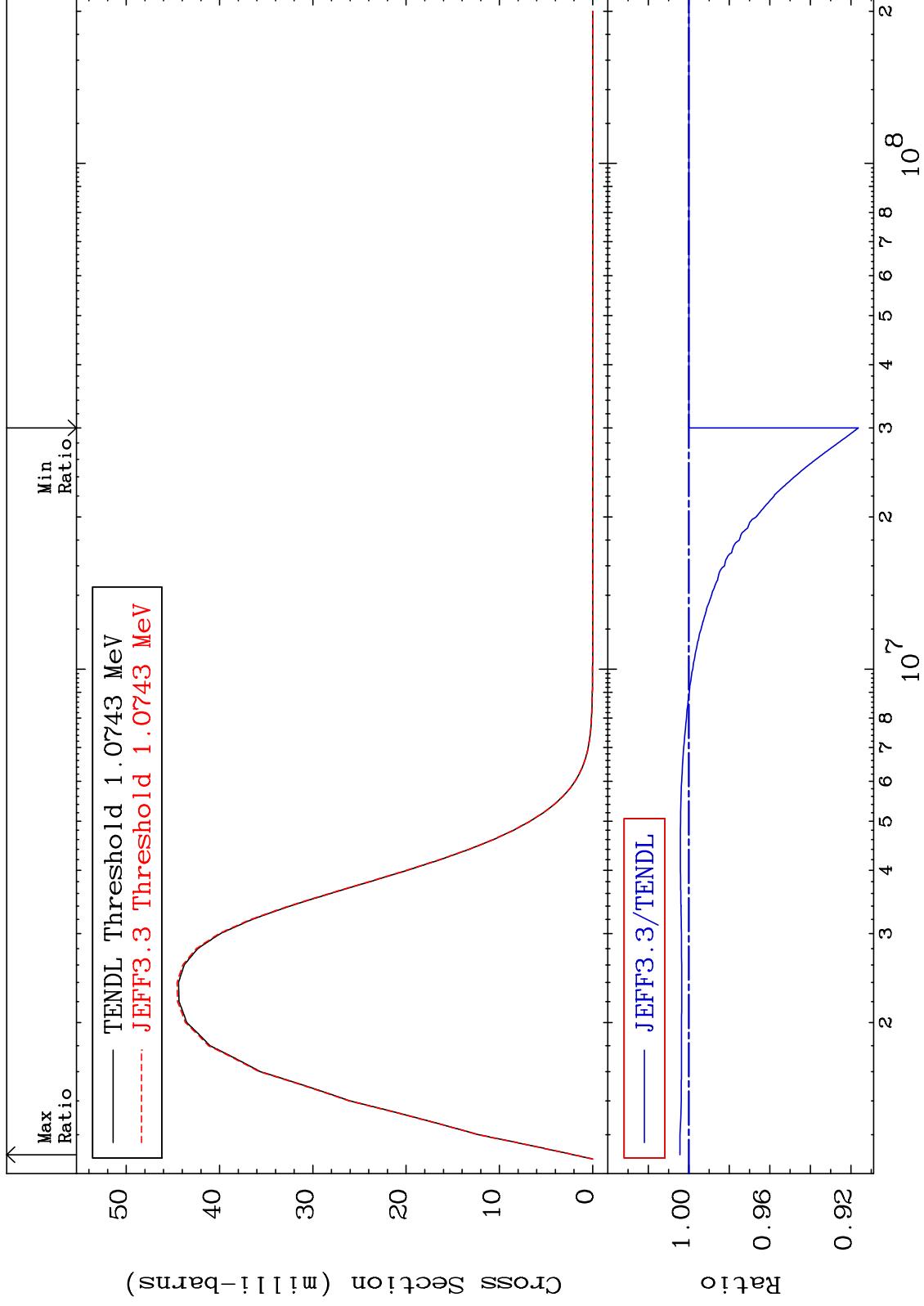
83-Bi-208  
-0.001 To 0.383 %



MAT 8322

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

83-Bi-208  
-8.365 To 0.433 %

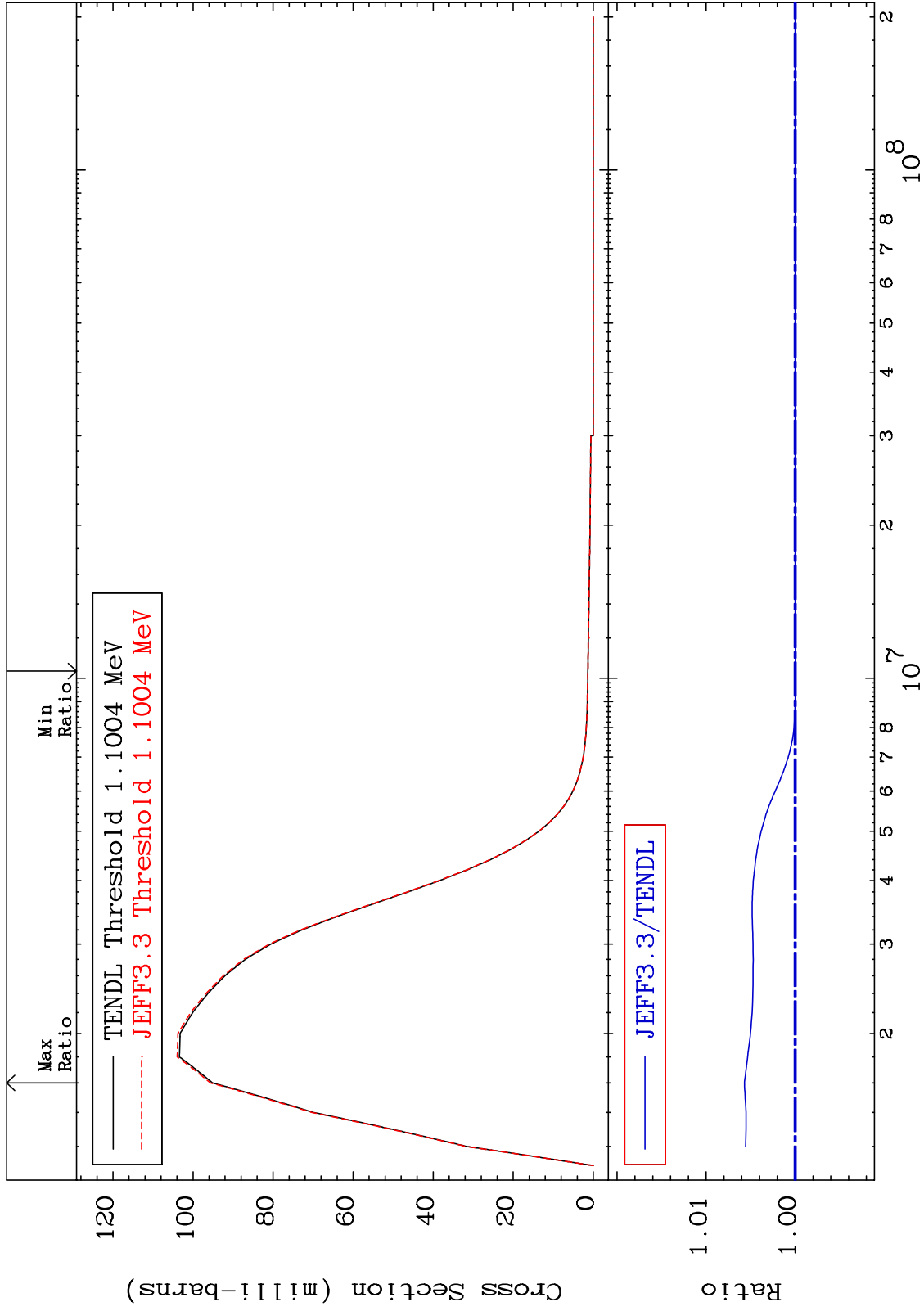




MAT 8322

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

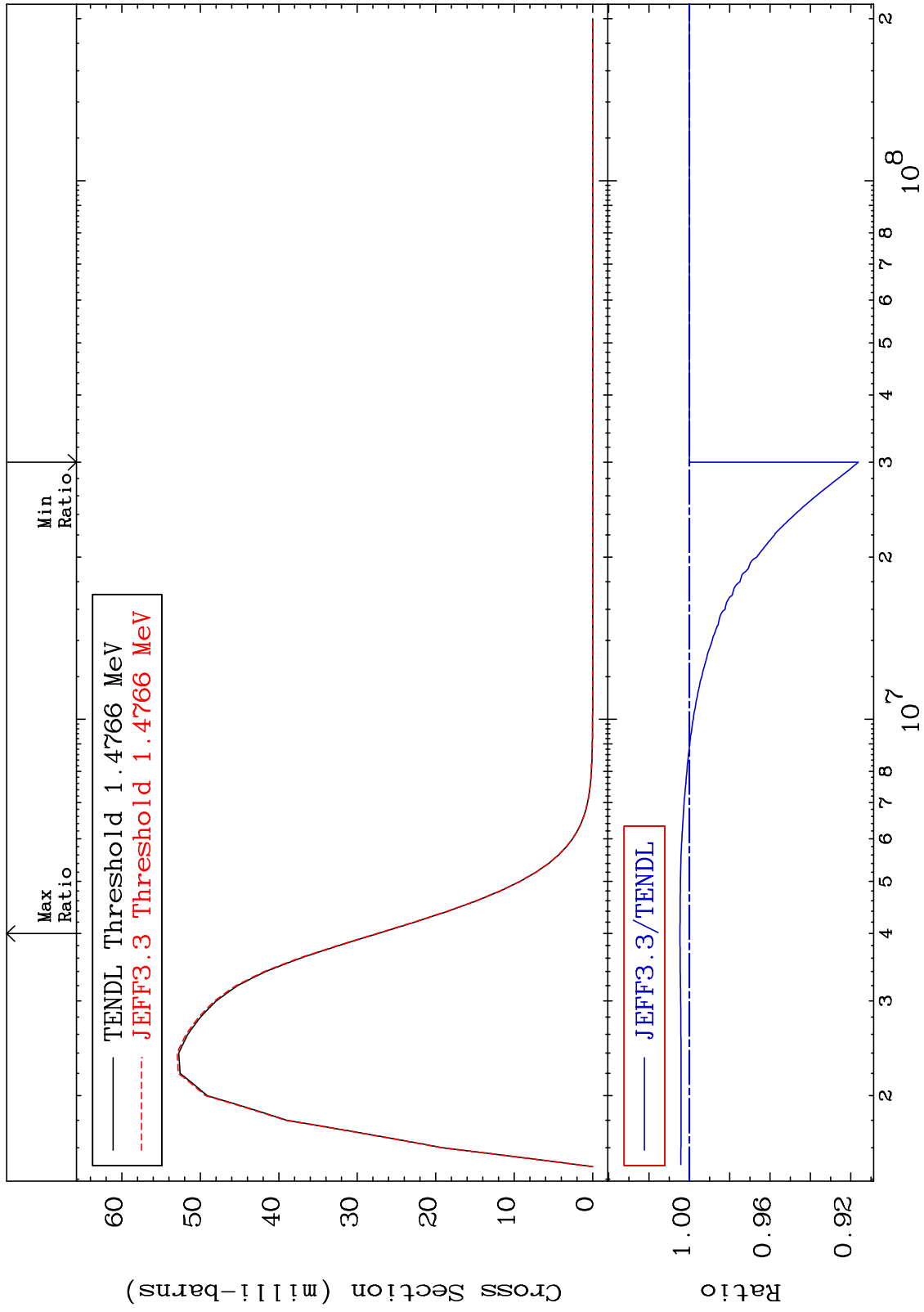
83-Bi-208  
-0.002 To 0.570 %



MAT 8322

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

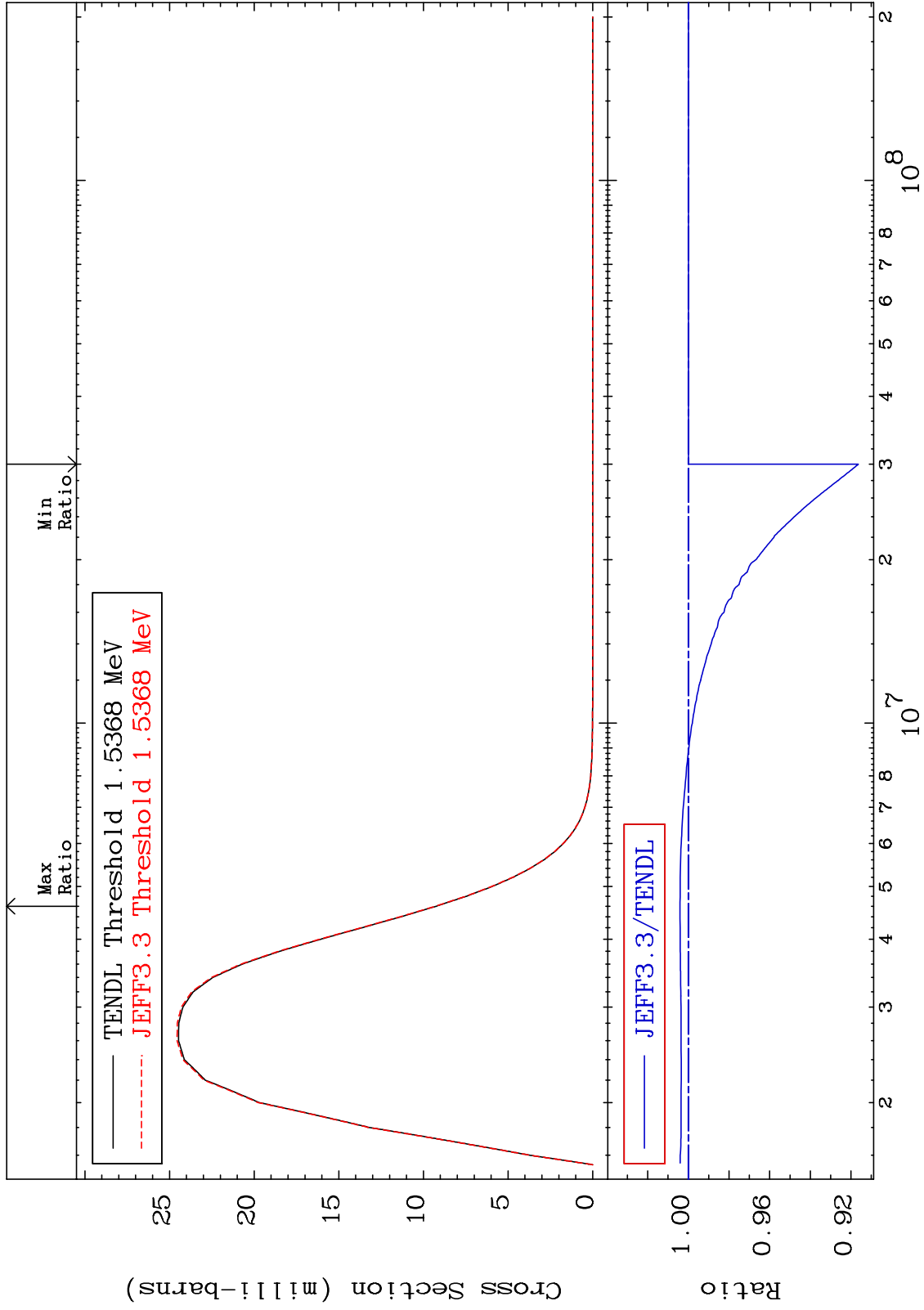
83-Bi-208  
-8.377 To 0.466 %



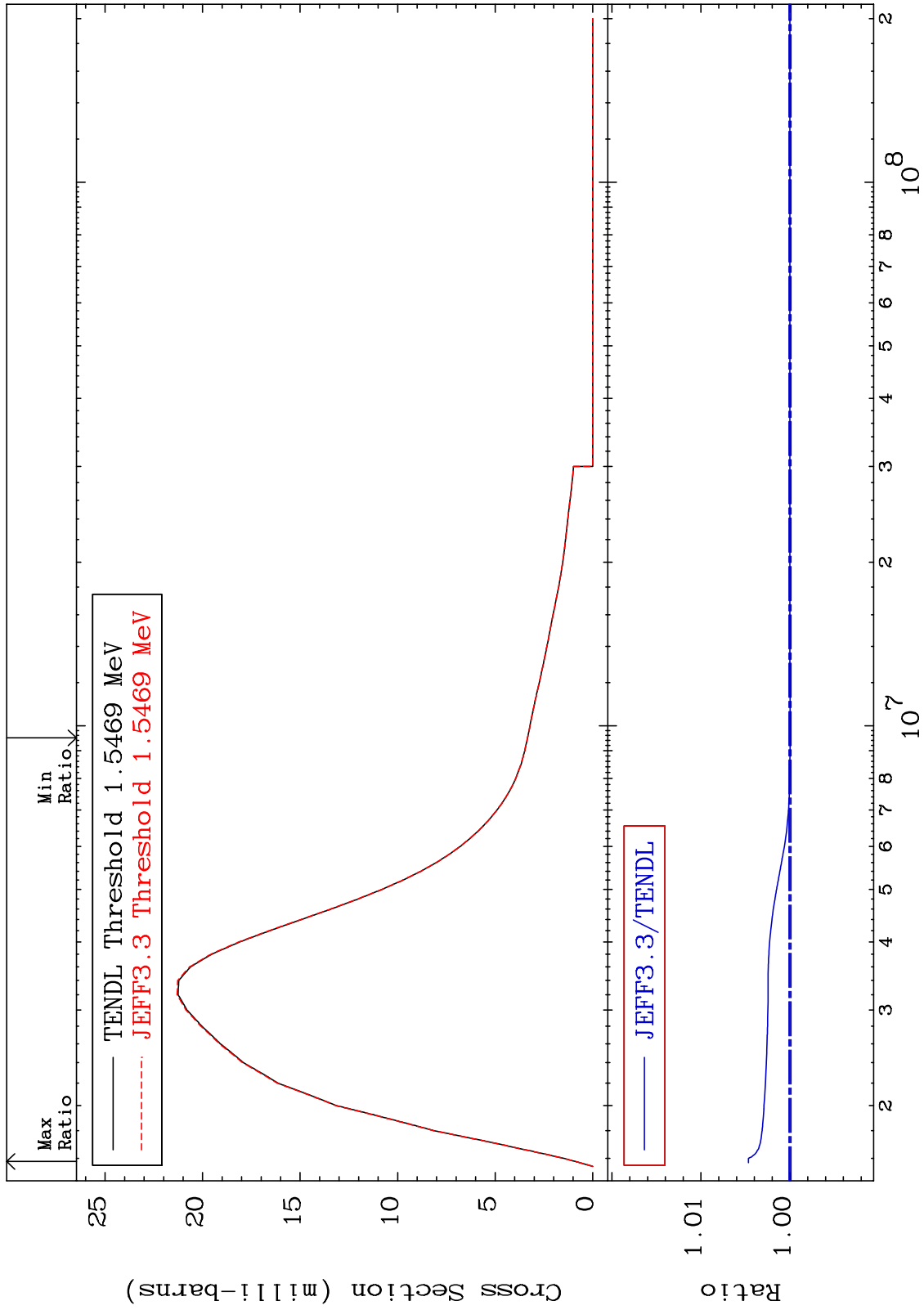
MAT 8322

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

83-Bi-208  
-8.365 To 0.411 %



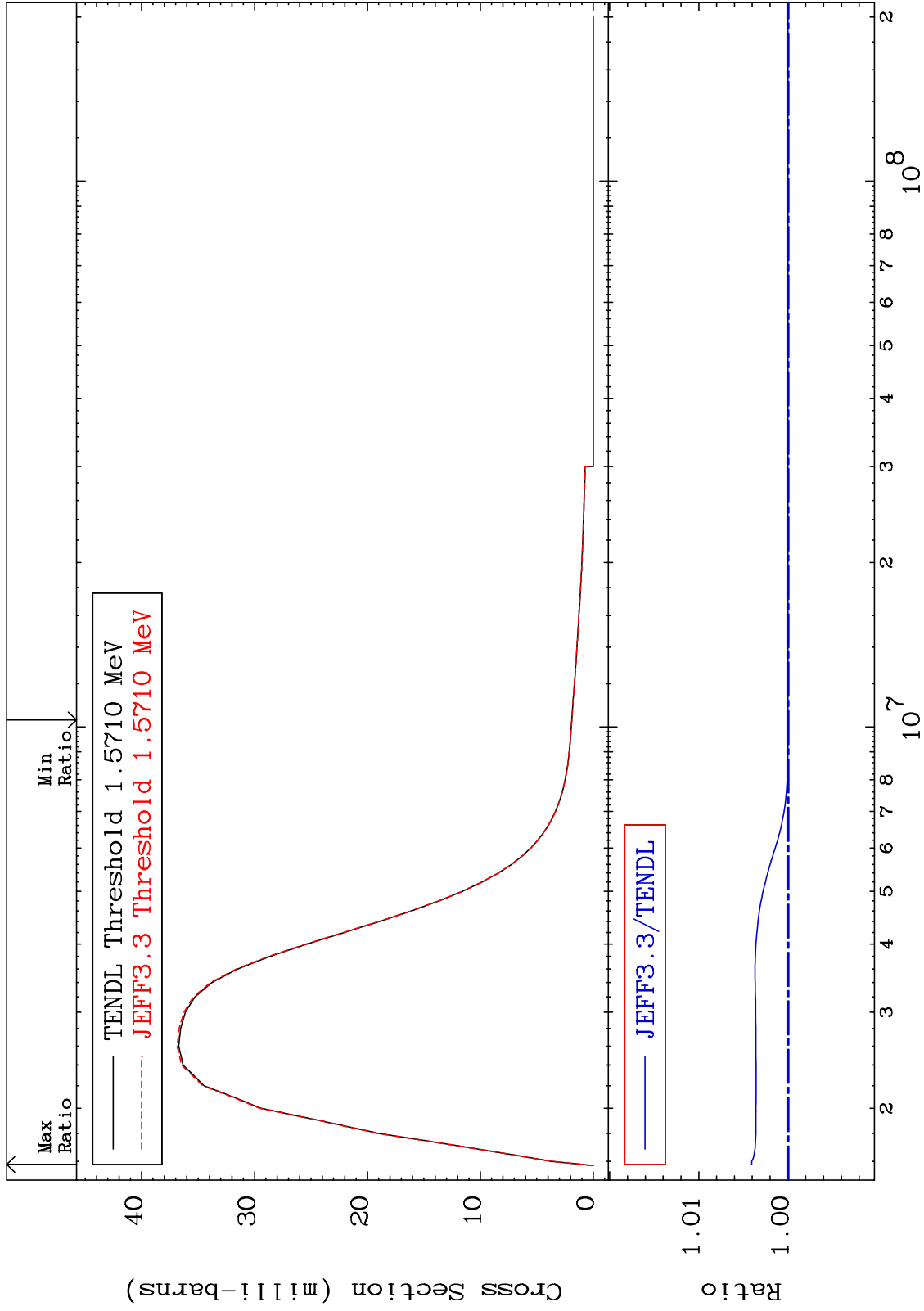
MAT 8322 MT= 66 (n,n') Level Cross Section 83-Bi-208 To 0.467 %



MAT 8322

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

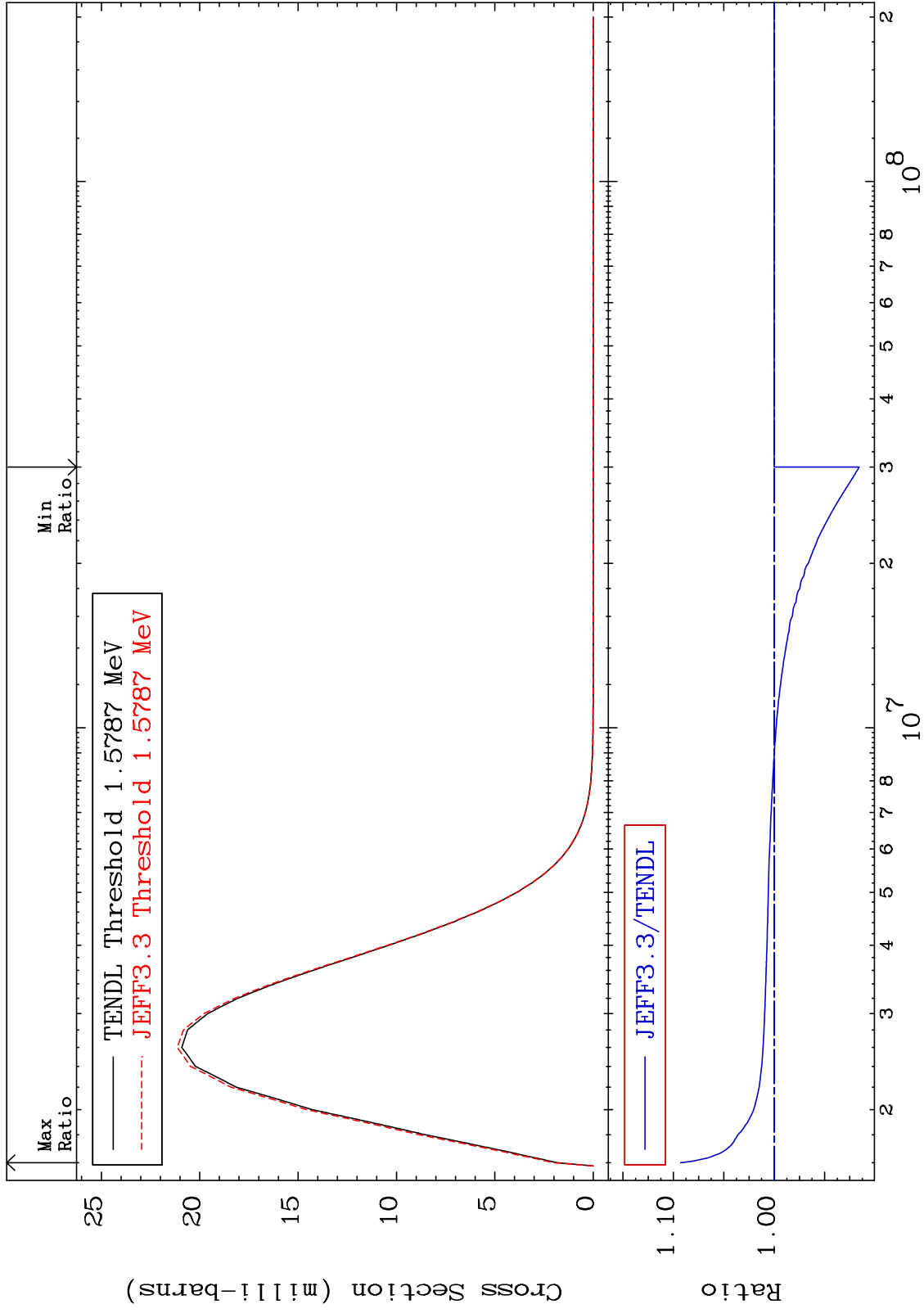
83-Bi-208  
-0.001 To 0.405 %



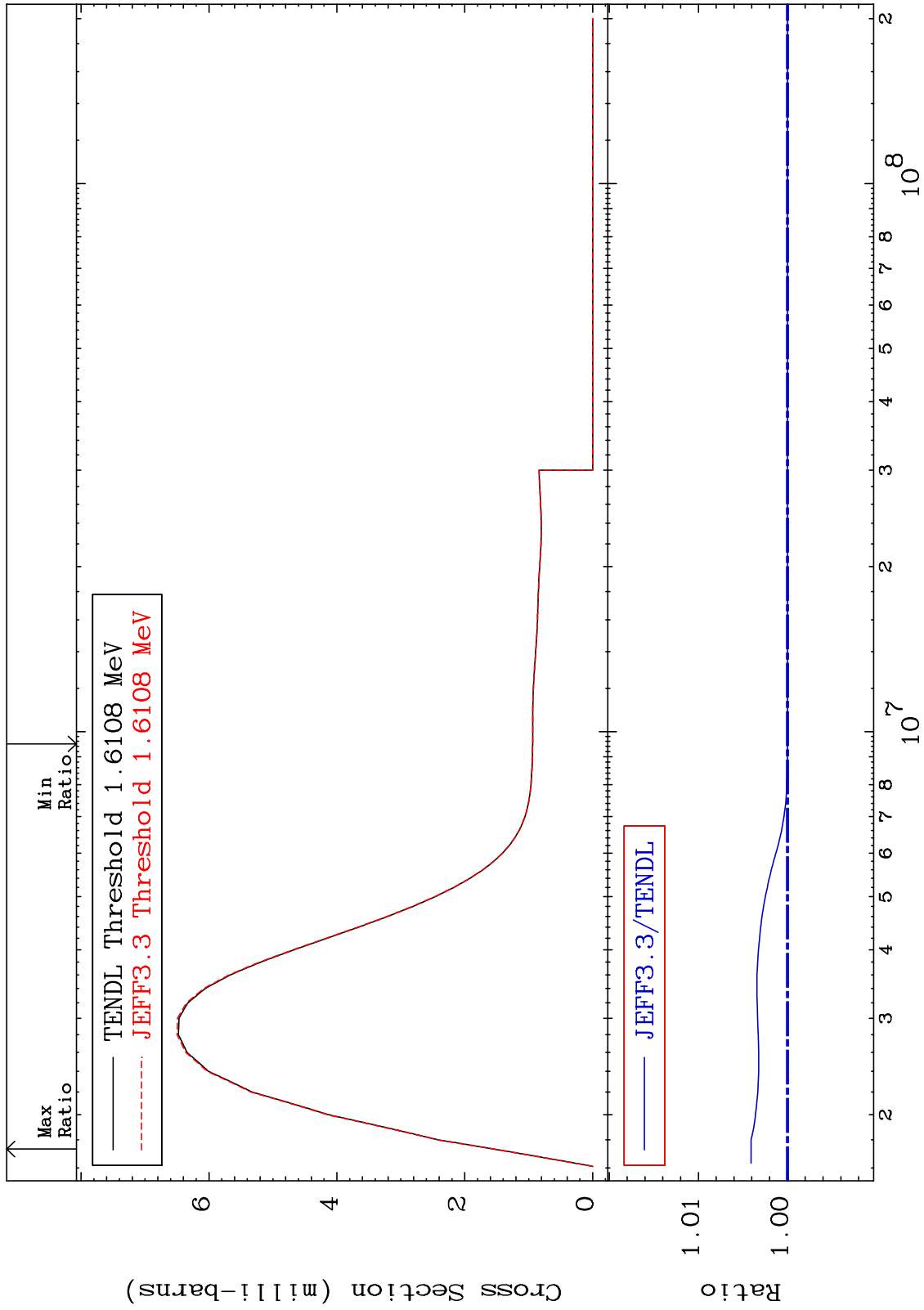
MAT 8322

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

83-Bi-208  
-8.425 To 9.284 %



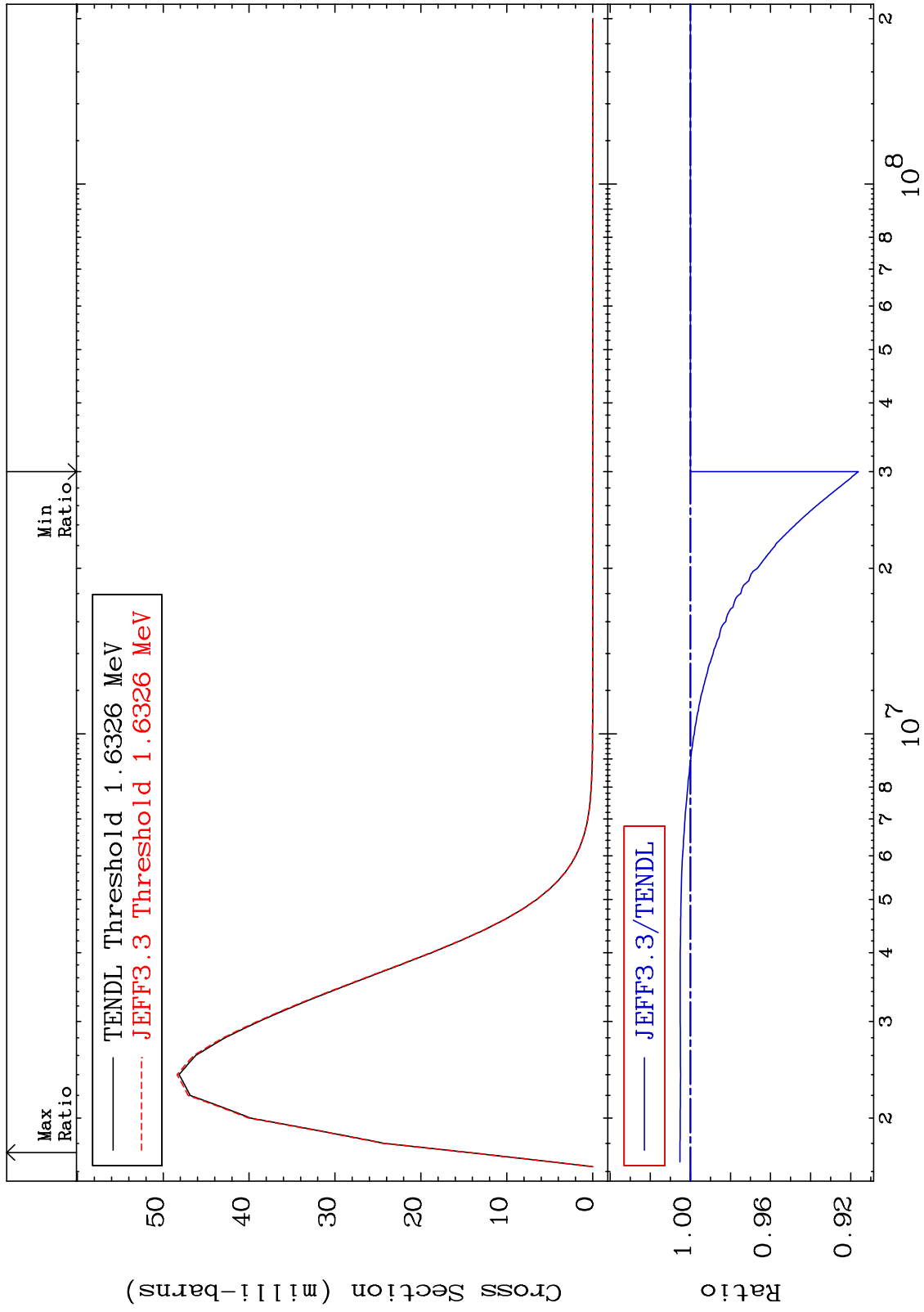
MAT 8322 MT= 69 (n,n') Level Cross Section 83-Bi-208 To 0.409 %



MAT 8322

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

83-Bi-208  
-8.385 To 0.517 %

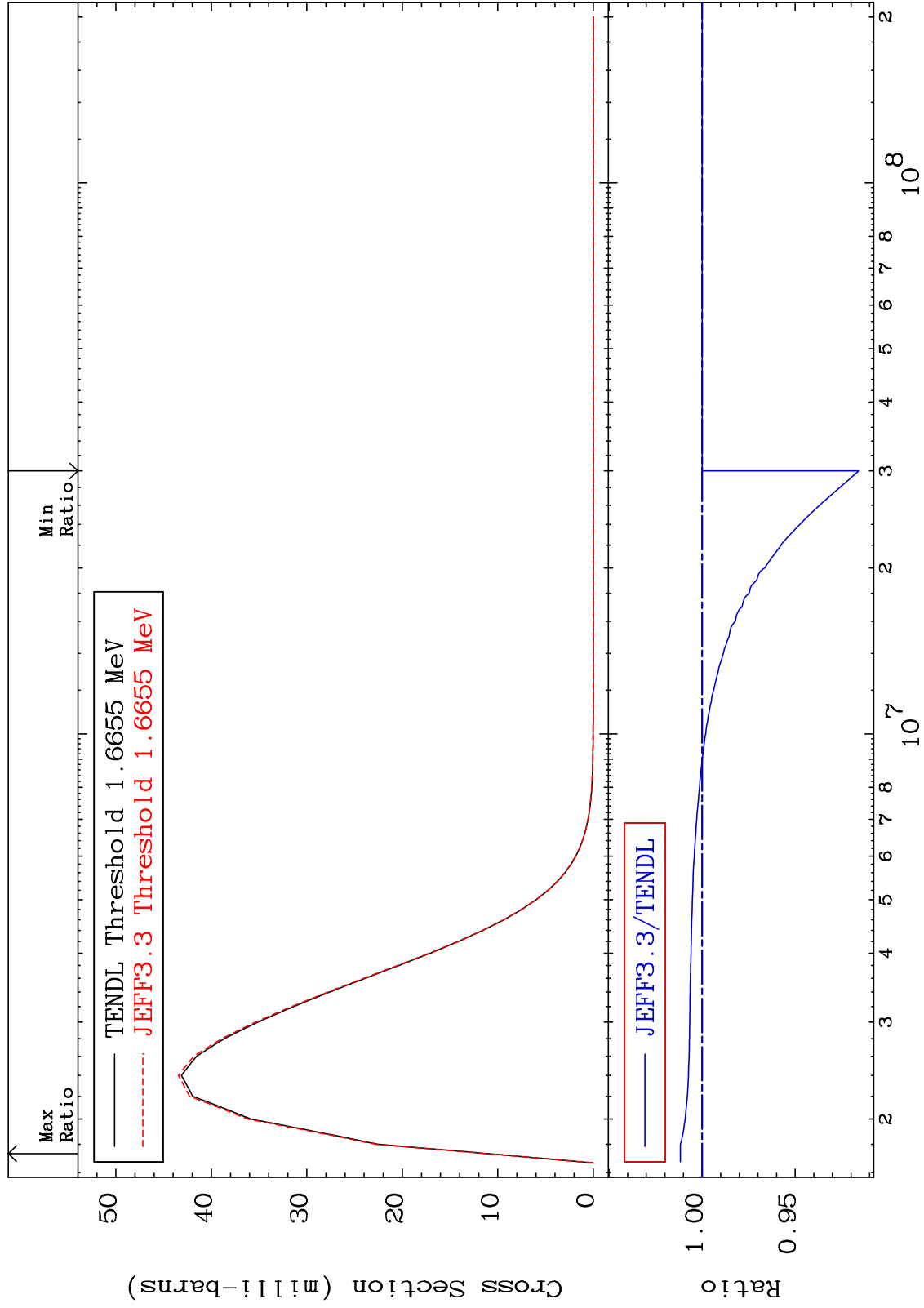




MAT 8322

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

83-Bi-208  
-8.403 To 1.163 %



40

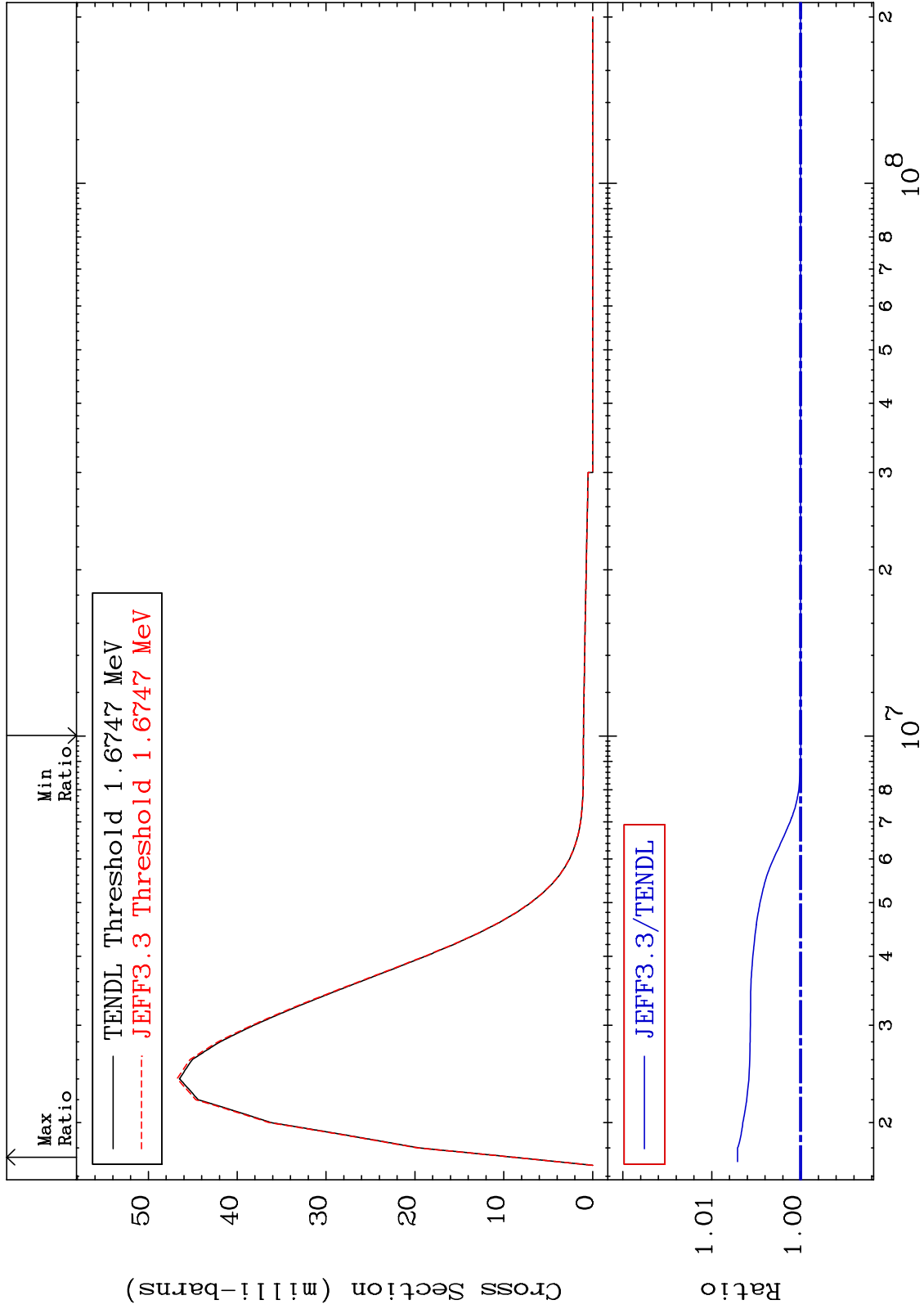
Incident Energy (eV)

83-Bi-208

MAT 8322

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

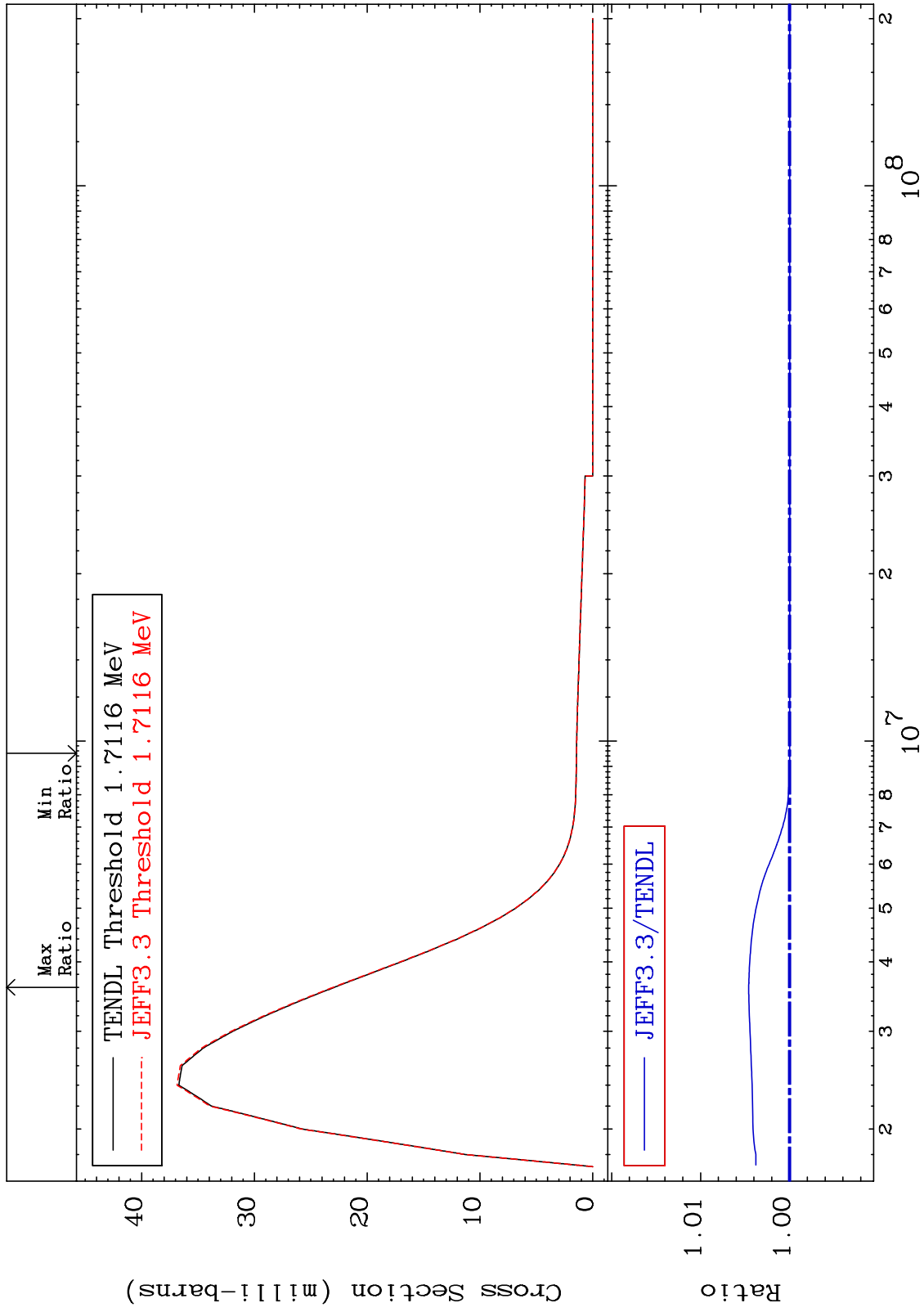
83-Bi-208  
-0.003 To 0.709 %



MAT 8322

MT= 73 (n,n') Level  
Cross Section

83-Bi-208  
-0.002 To 0.459 %



42

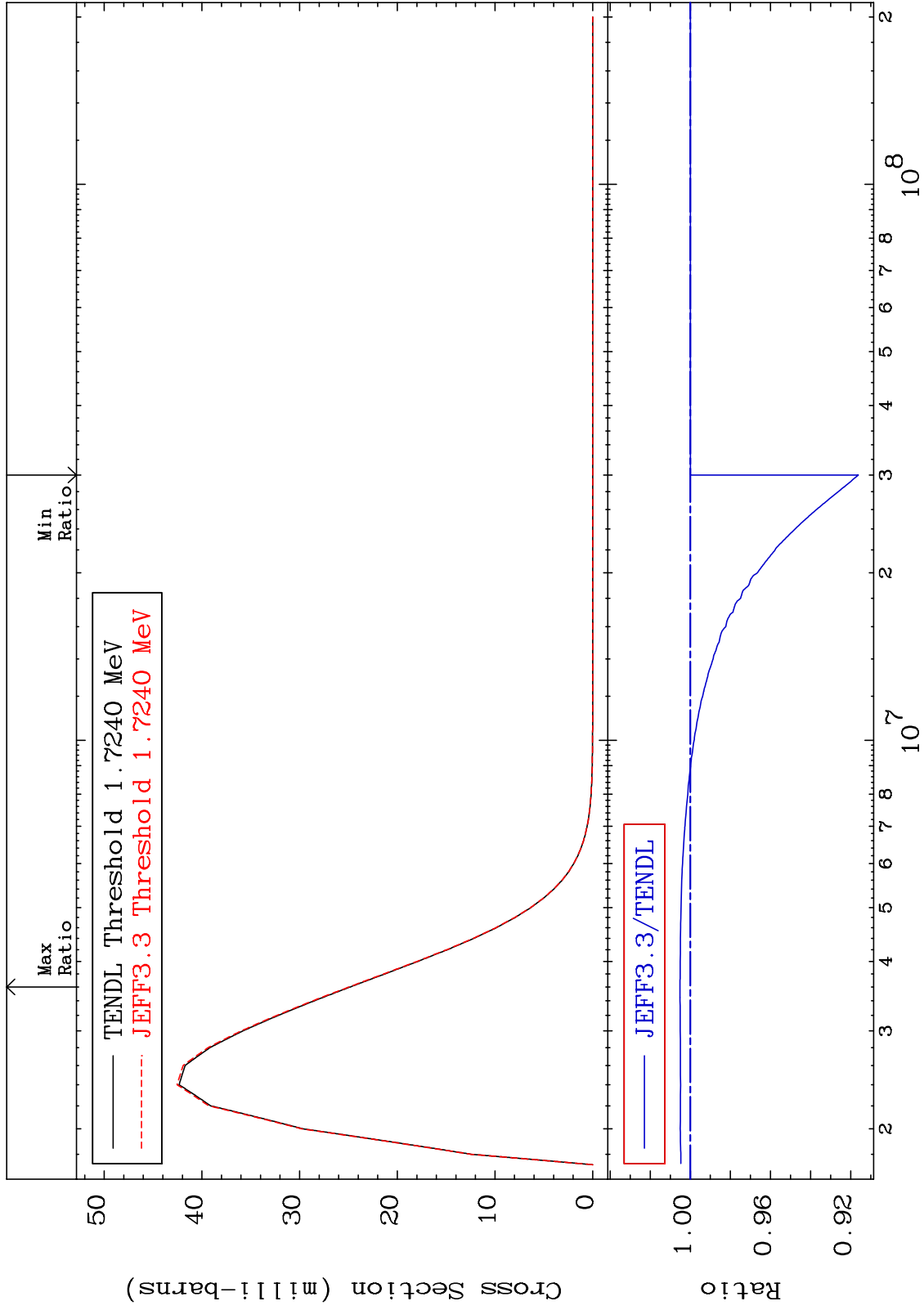
Incident Energy (eV)

83-Bi-208

MAT 8322

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

83-Bi-208  
-8.384 To 0.514 %



43

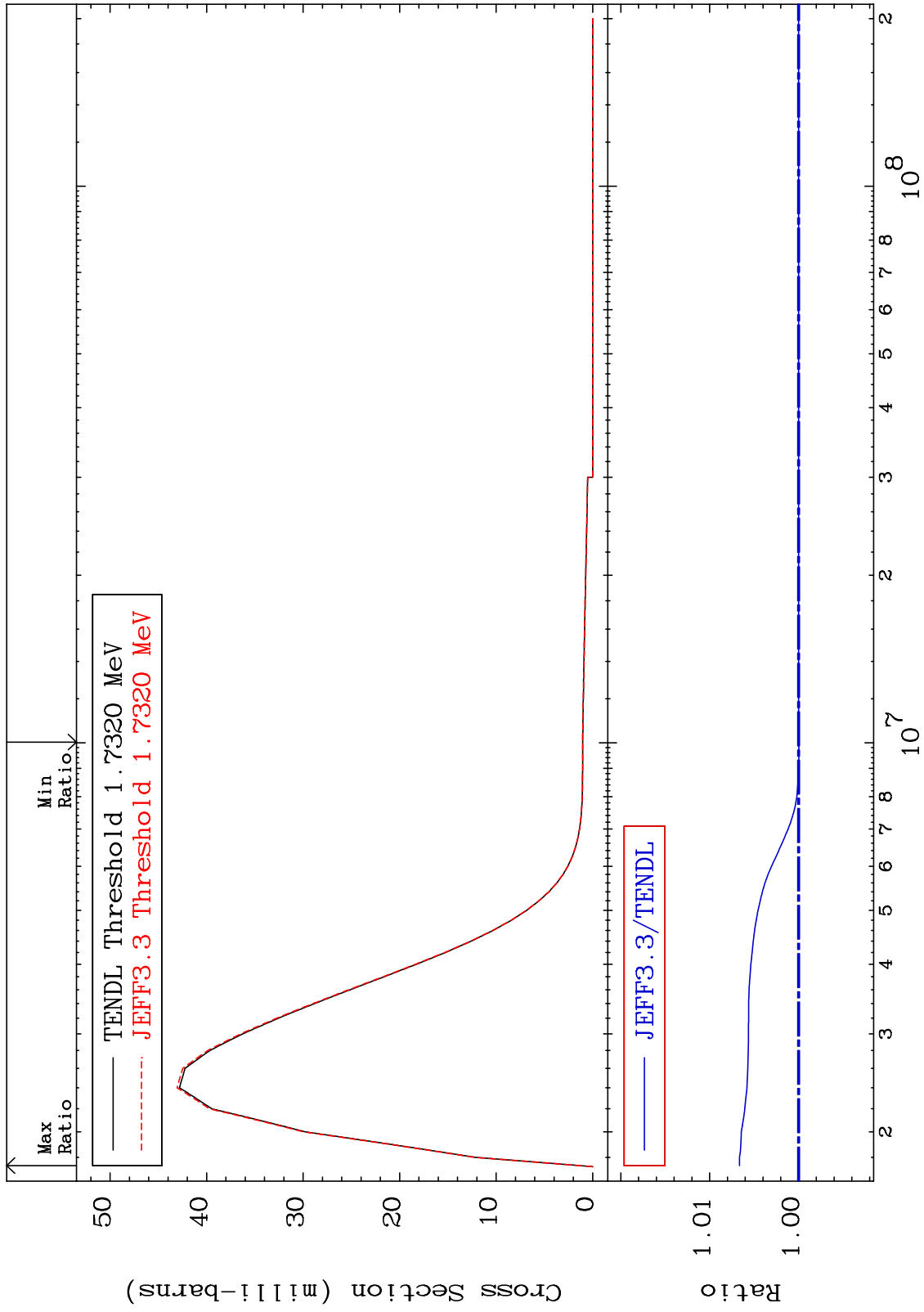
Incident Energy (eV)

83-Bi-208

MAT 8322

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

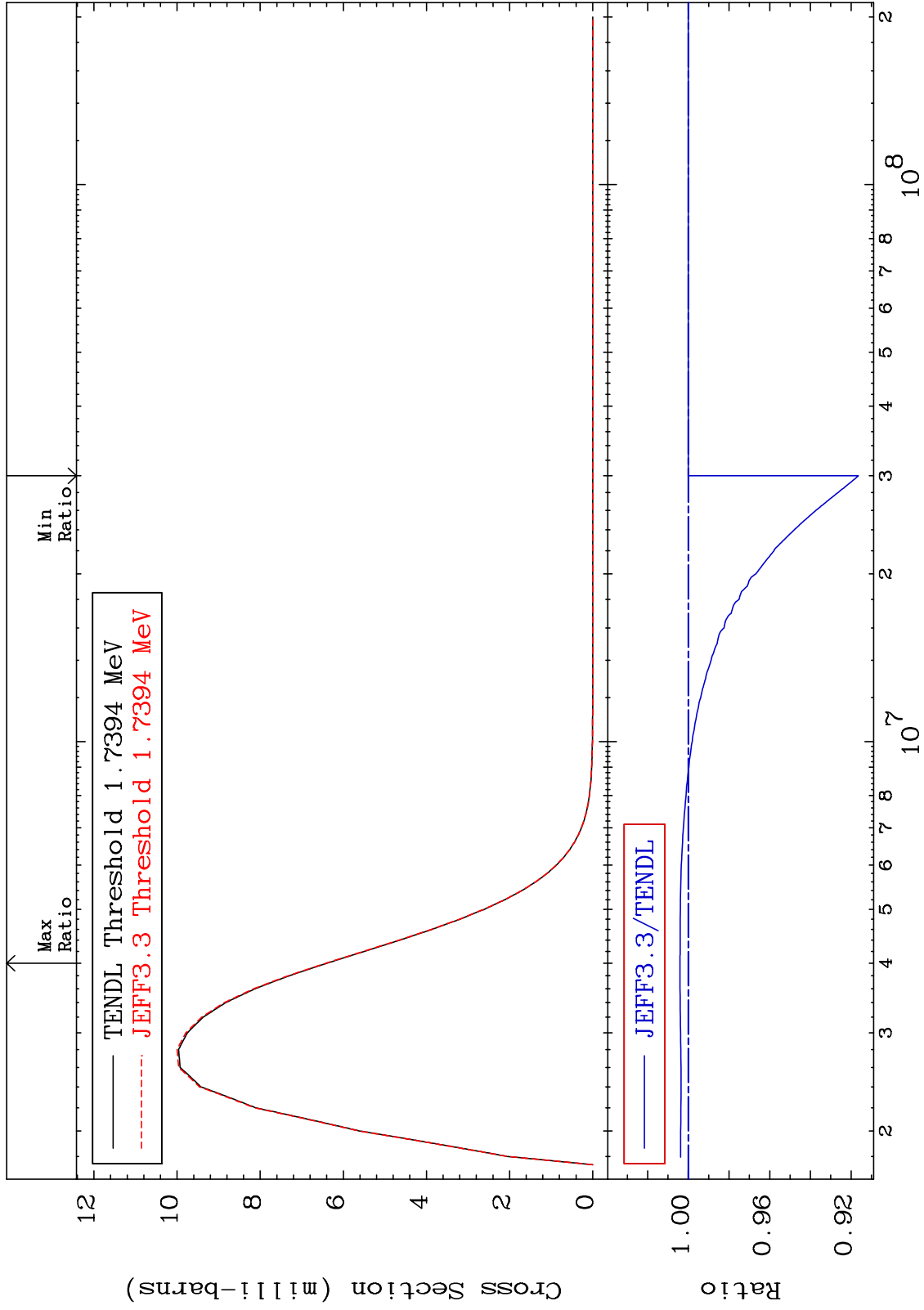
83-Bi-208  
-0.003 To 0.663 %



MAT 8322

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

83-Bi-208  
-8.360 To 0.409 %



45

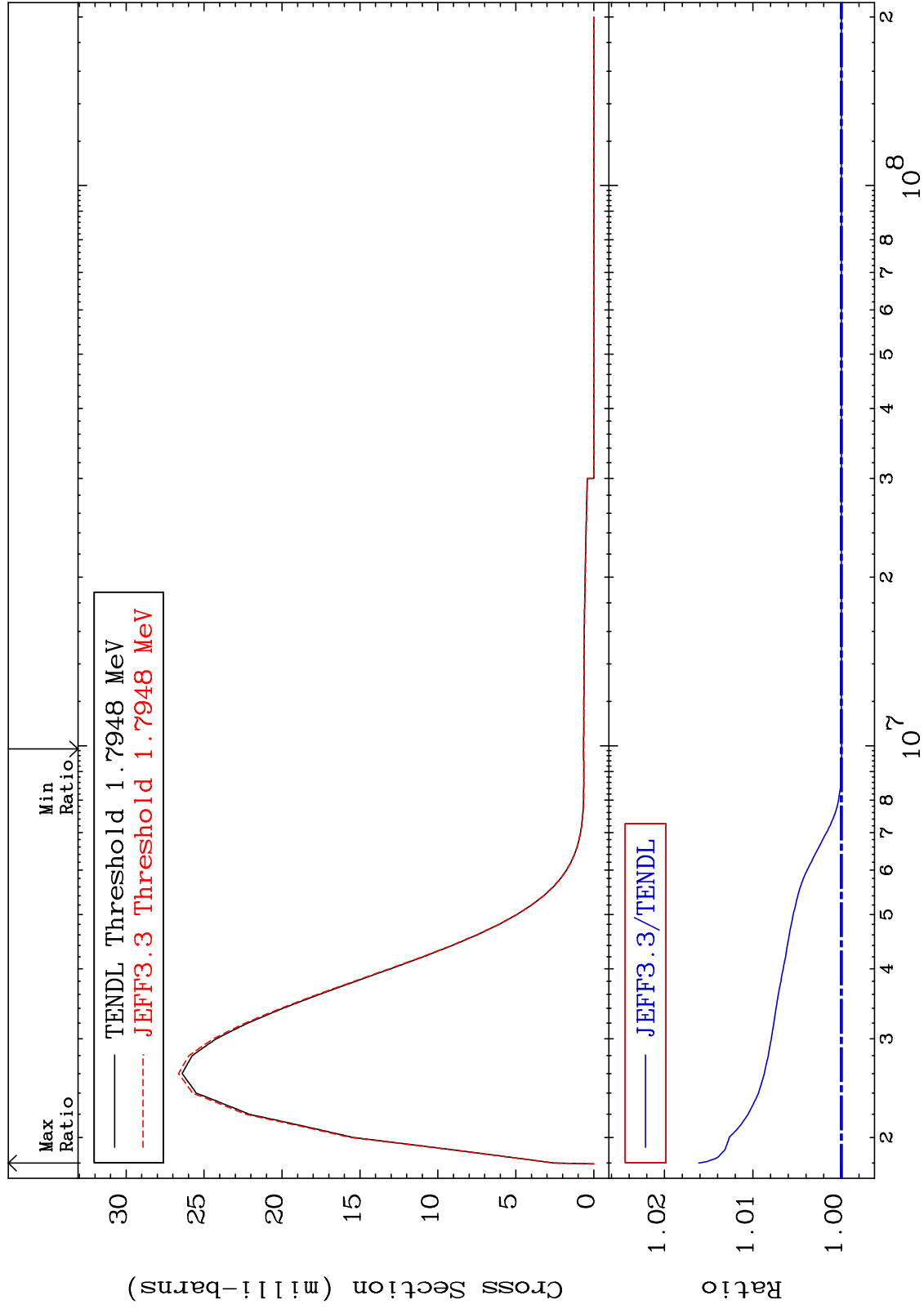
Incident Energy (eV)

83-Bi-208

MAT 8322

MT= 77 (n,n') Level  
Cross Section

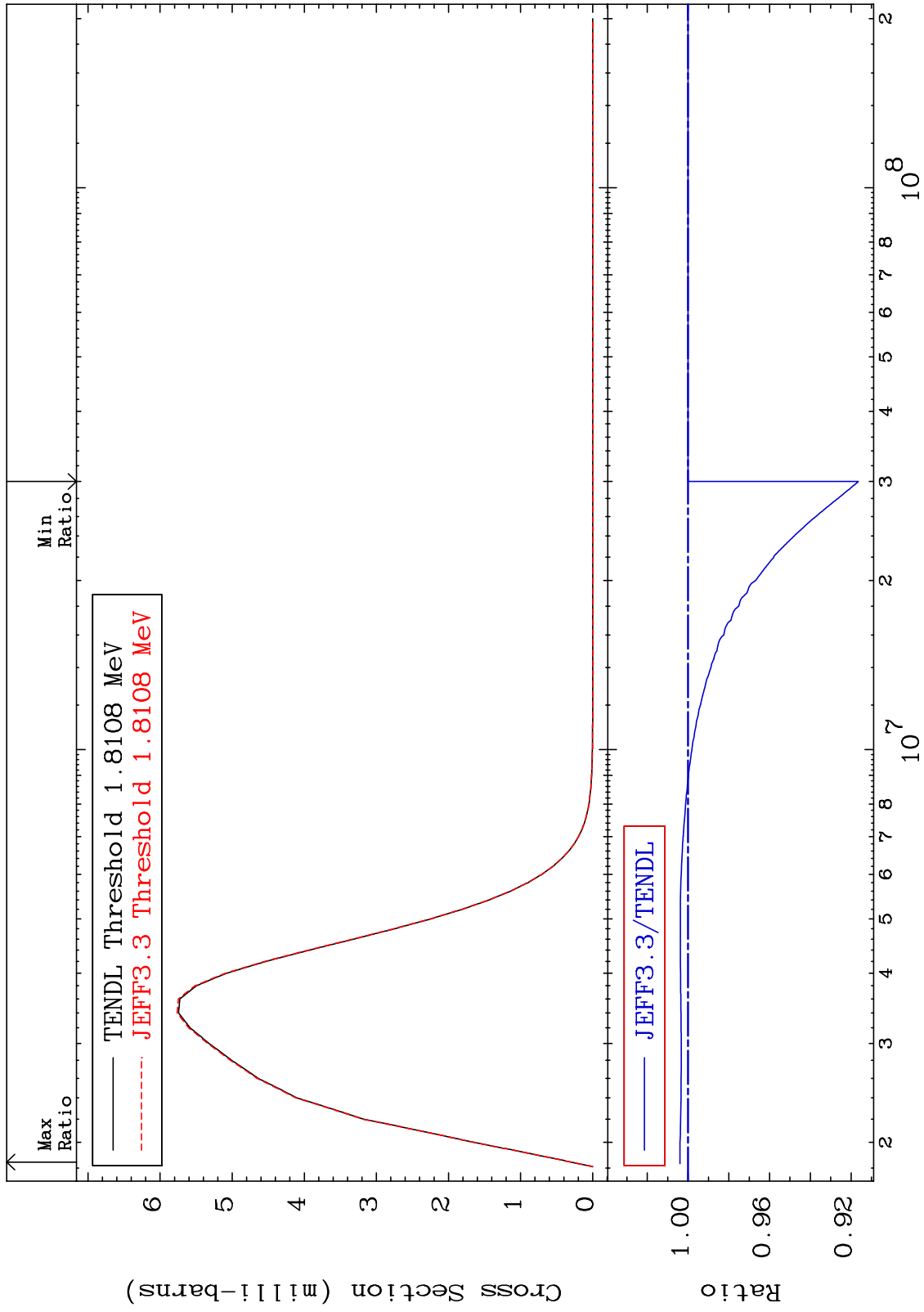
83-Bi-208  
-0.004 To 1.613 %



MAT 8322

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

83-Bi-208  
-8.357 To 0.394 %



47

Incident Energy (eV)

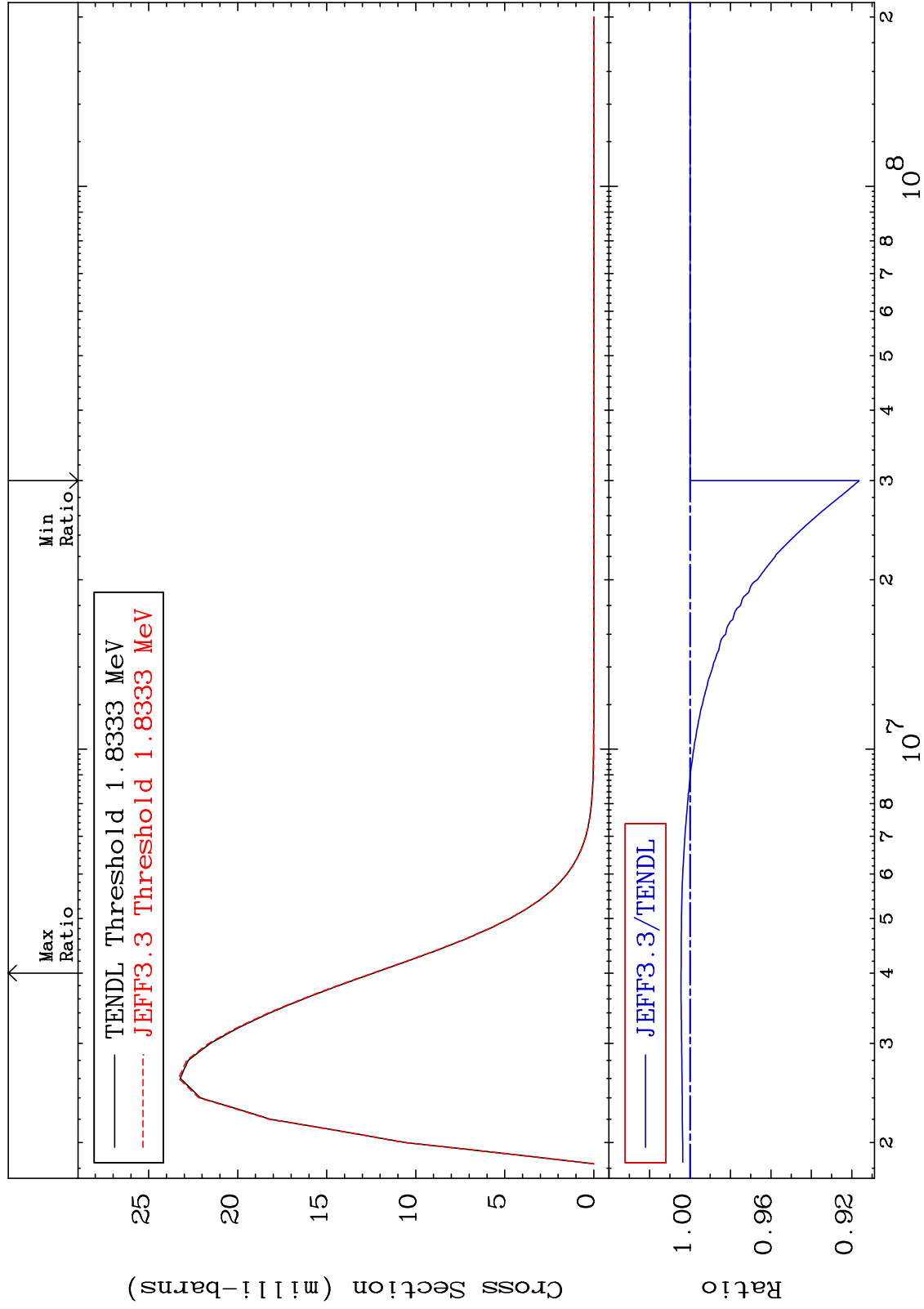
83-Bi-208



MAT 8322

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

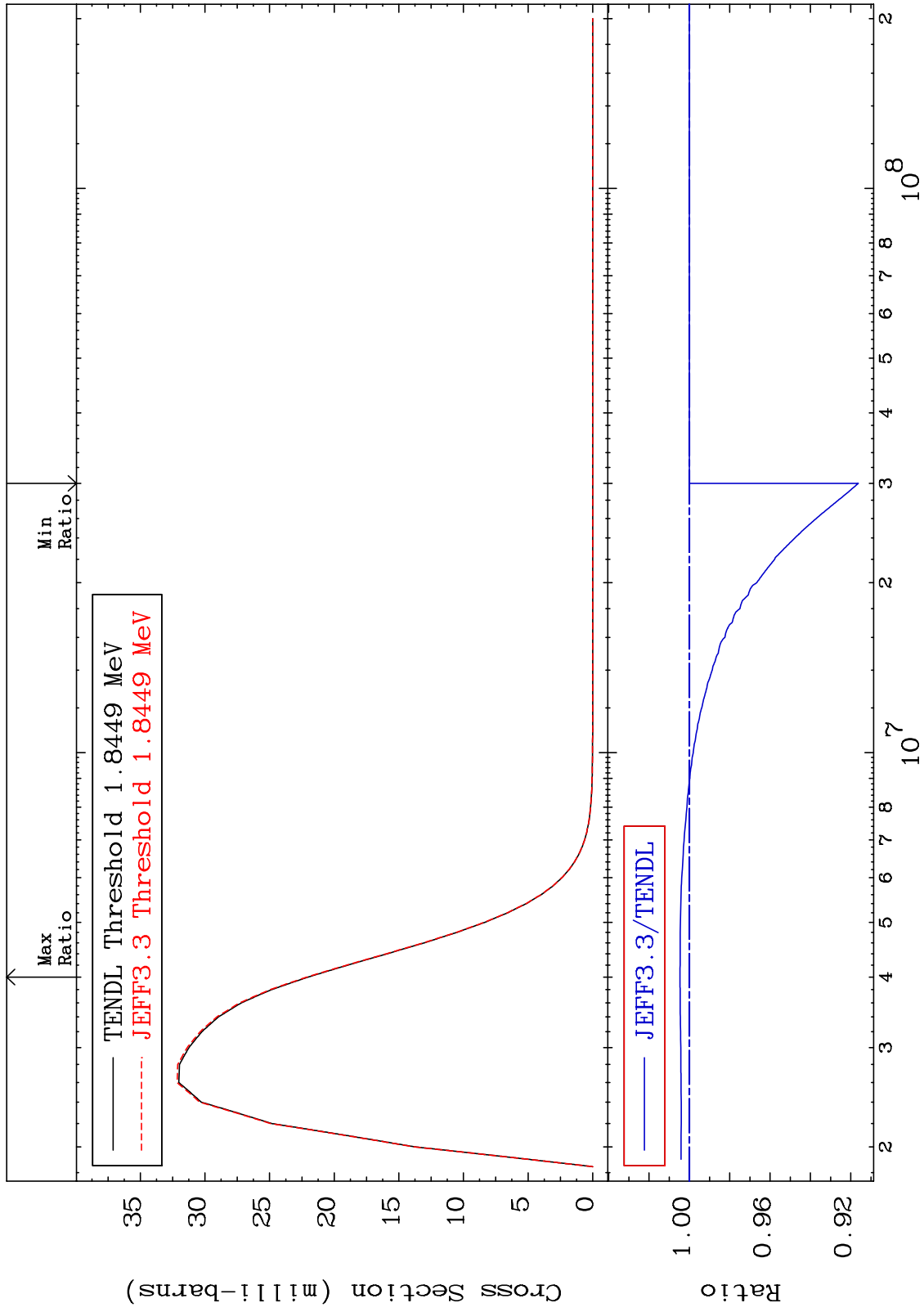
83-Bi-208  
-8.369 To 0.444 %



MAT 8322

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

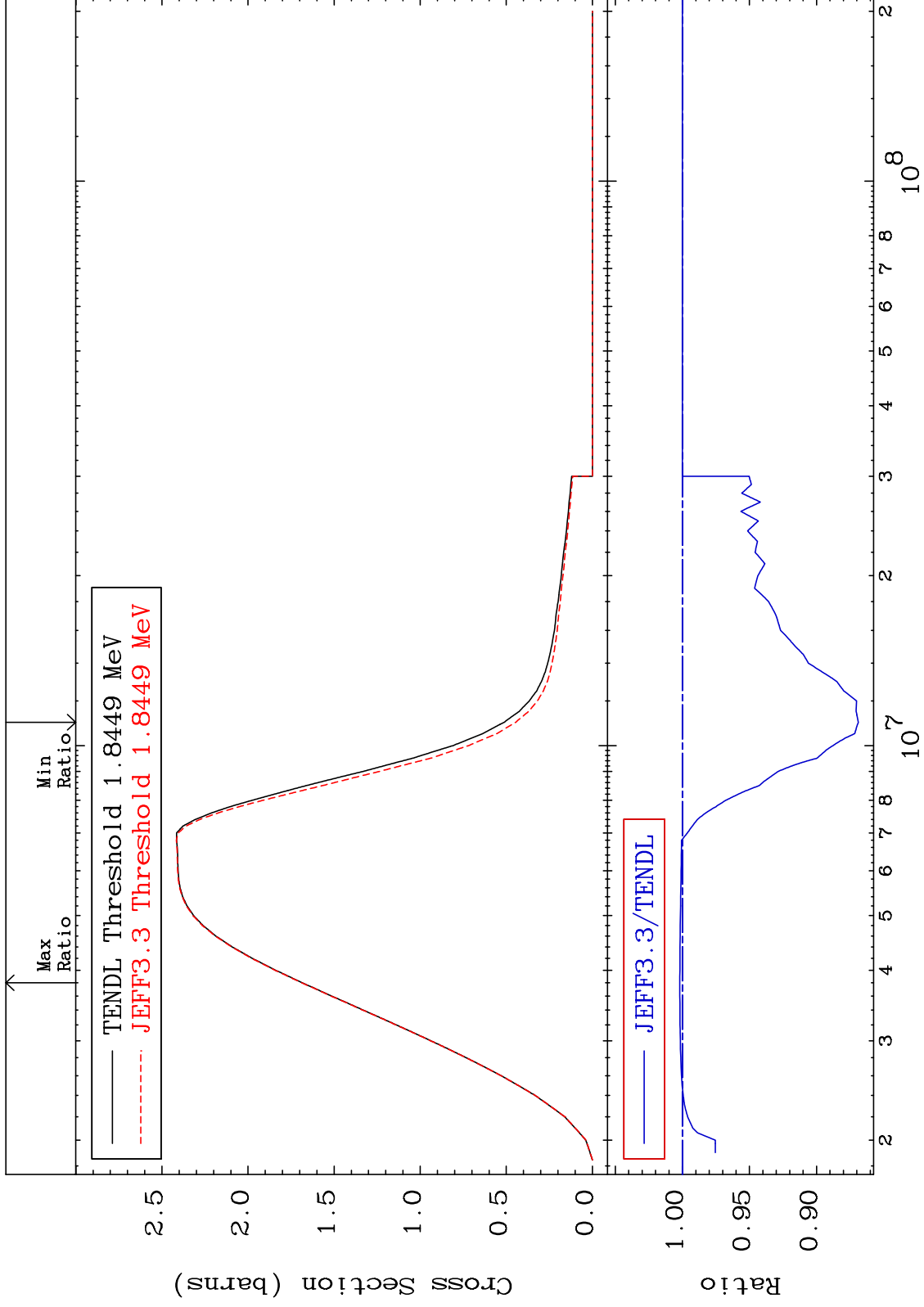
83-Bi-208  
-8.377 To 0.463 %



MAT 8322

(n, n') Continuum  
Cross Section

83-Bi-208  
-13.11 To 0.192 %



50

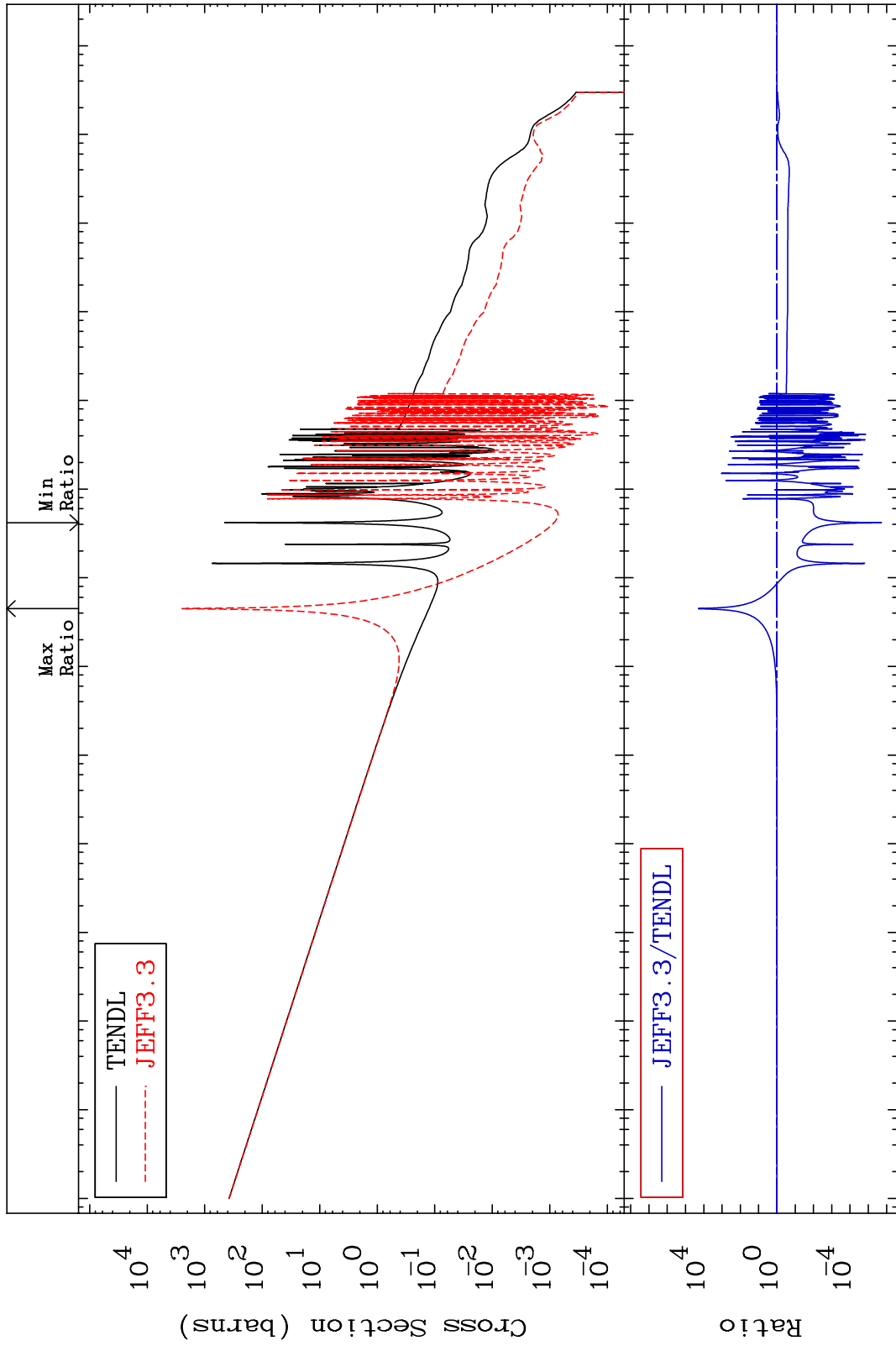
Incident Energy (eV)

83-Bi-208

MAT 8322

(n,  $\gamma$ )  
Cross Section

83-Bi-208  
-100.0 To 9999. %



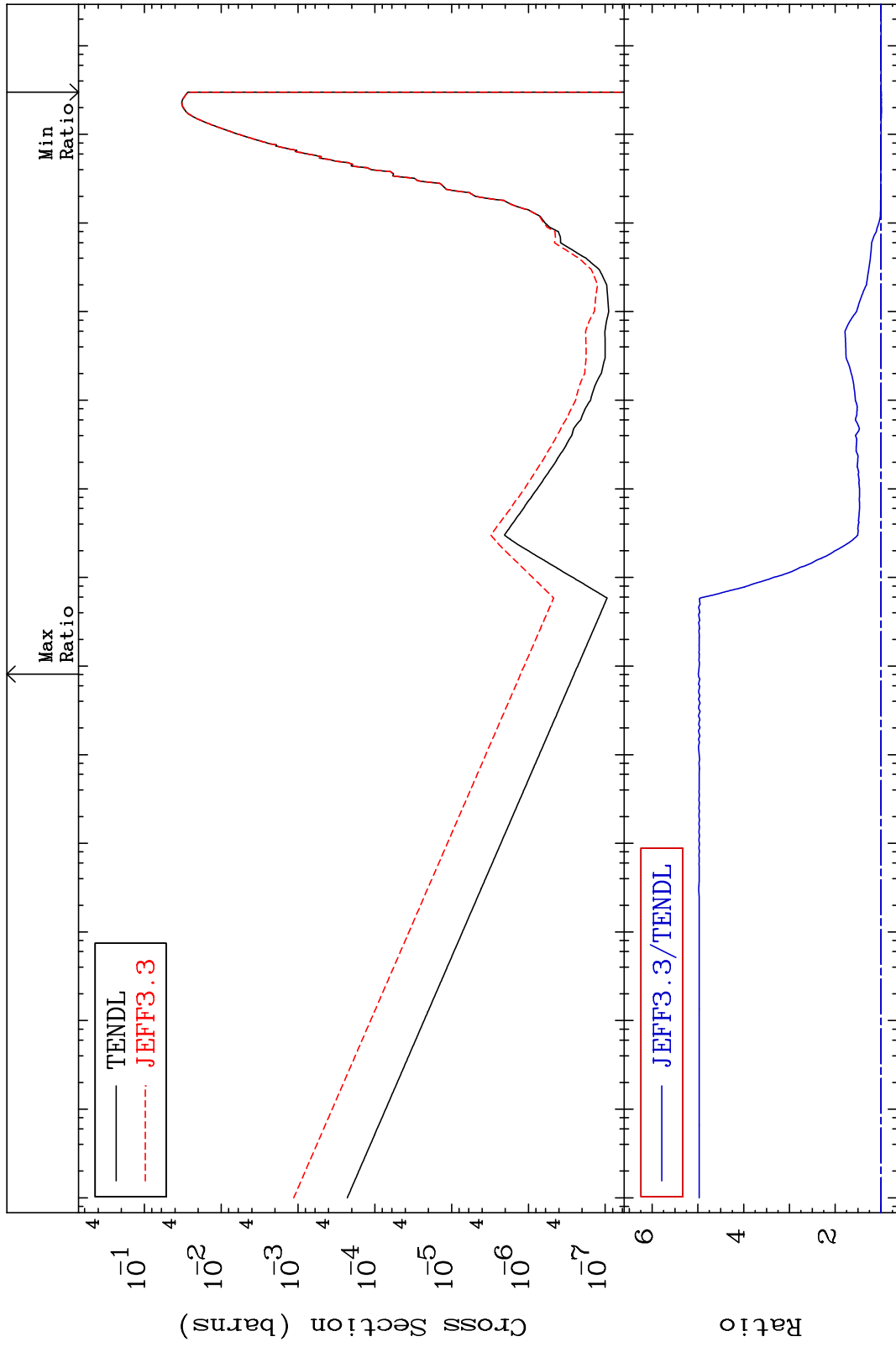
MAT 8322

(n,p)

83-Bi-208

Cross Section

-1.297 To 399.0 %



Incident Energy (eV)

83-Bi-208

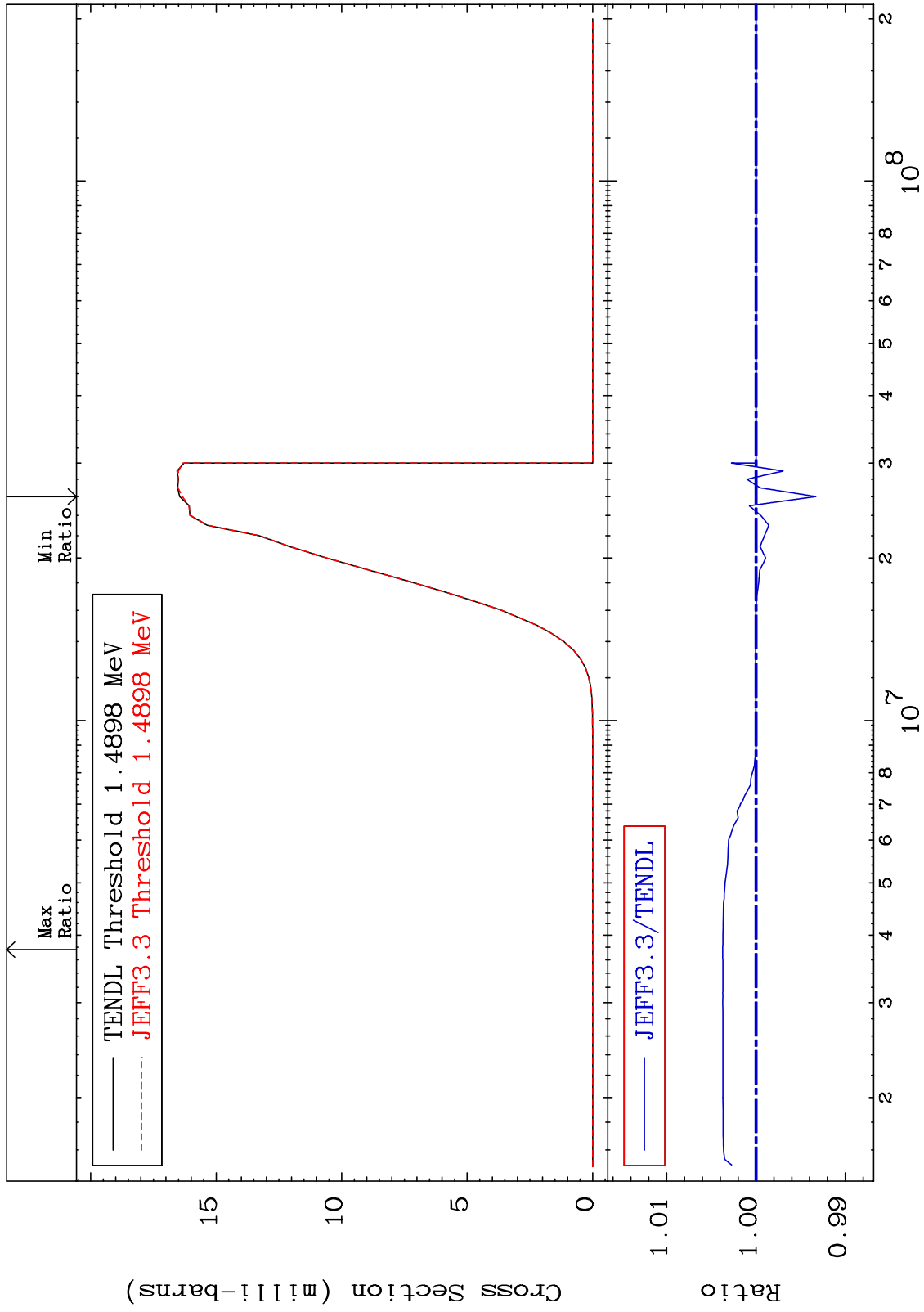
MAT 8322

(n, d)

83-Bi-208

Cross Section

-0.669 To 0.373 %



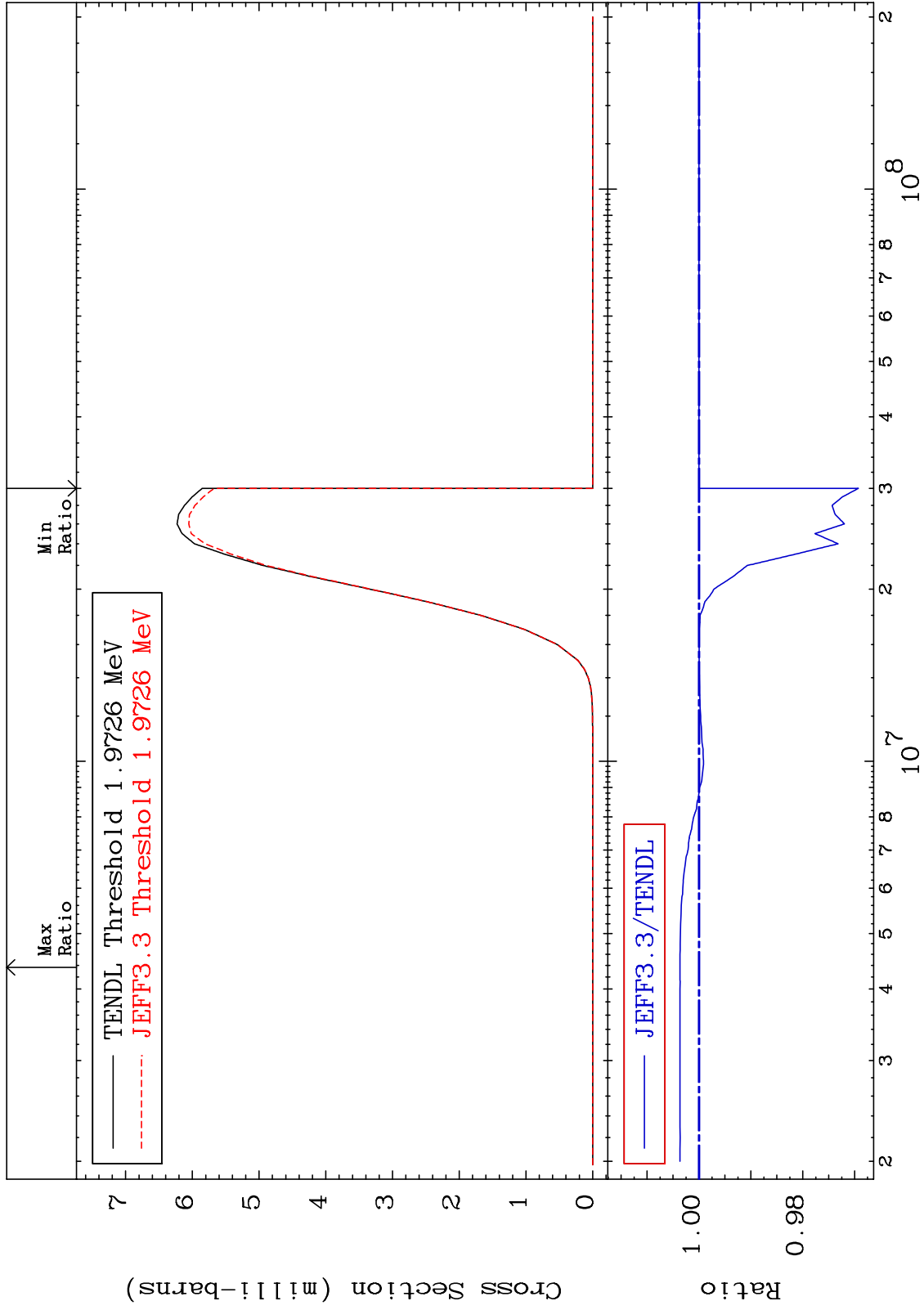
MAT 8322

(n, t)

83-Bi-208

Cross Section

-3.072 To 0.366 %



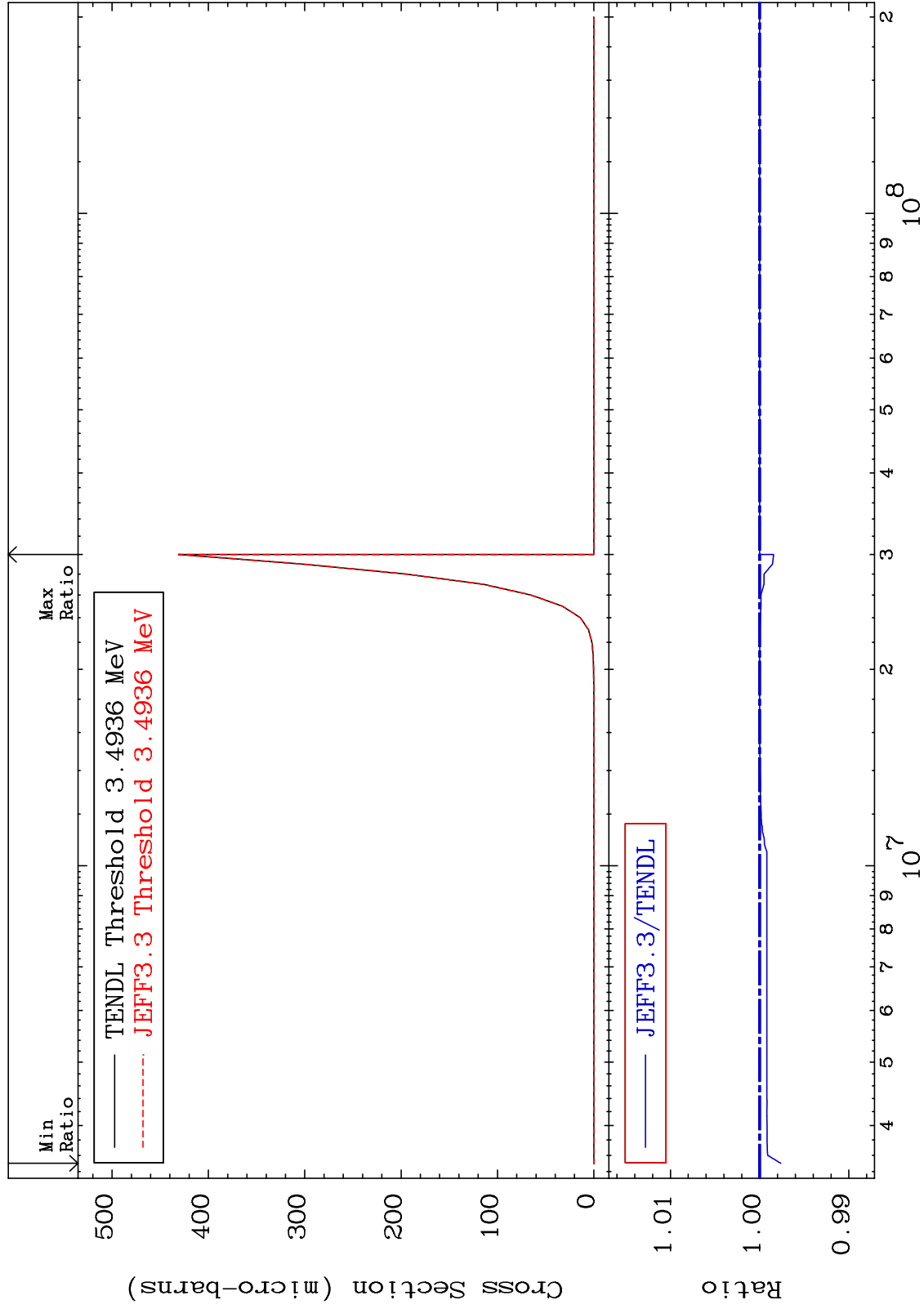
MAT 8322

(n, He-3)

83-Bi-208

Cross Section

-0.236 To 0.000 %



55

Incident Energy (eV)

83-Bi-208



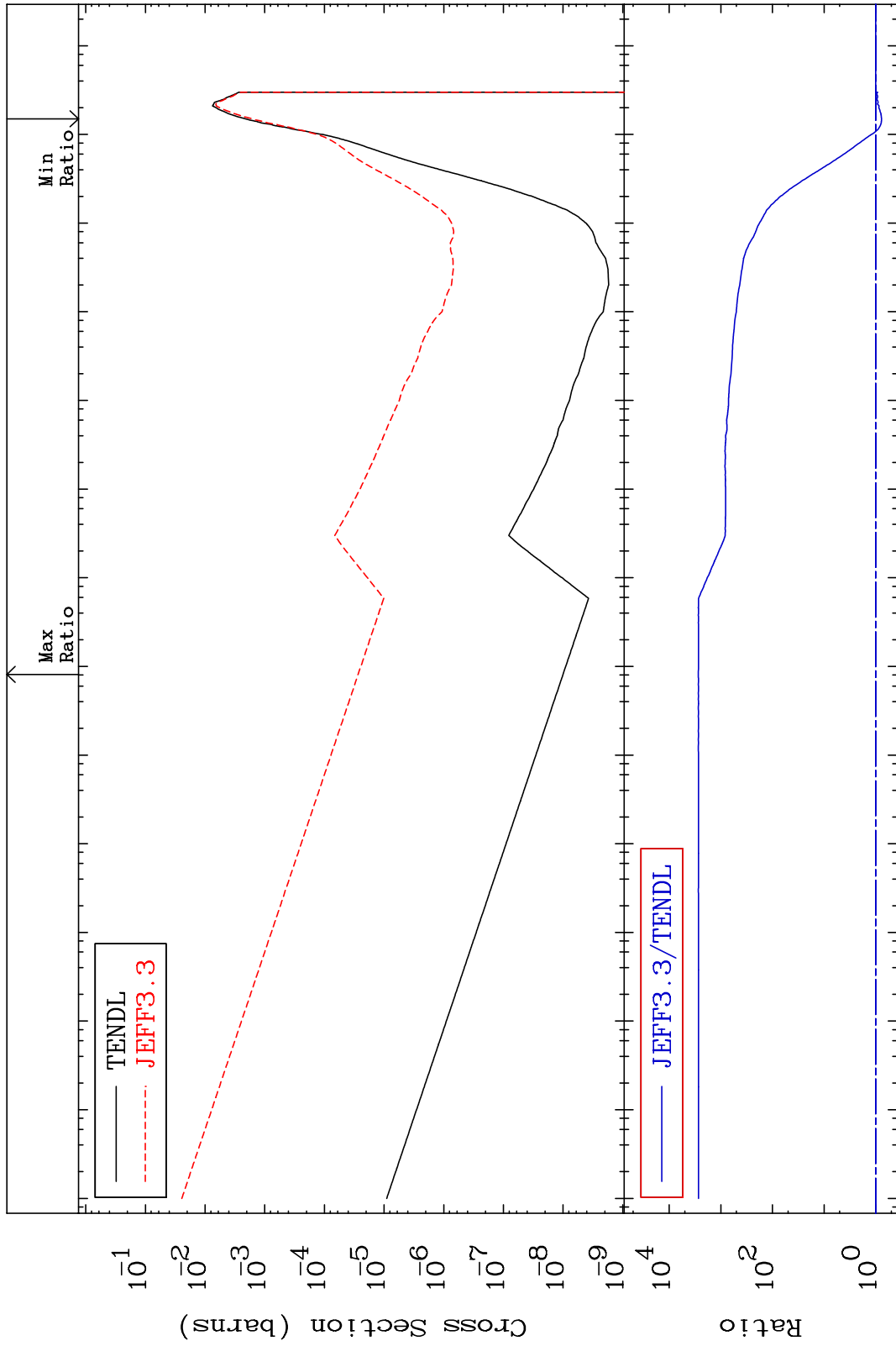
MAT 8322

(n,  $\alpha$ )

83-Bi-208

Cross Section

-22.76 To 9999. %



Incident Energy (eV)

83-Bi-208

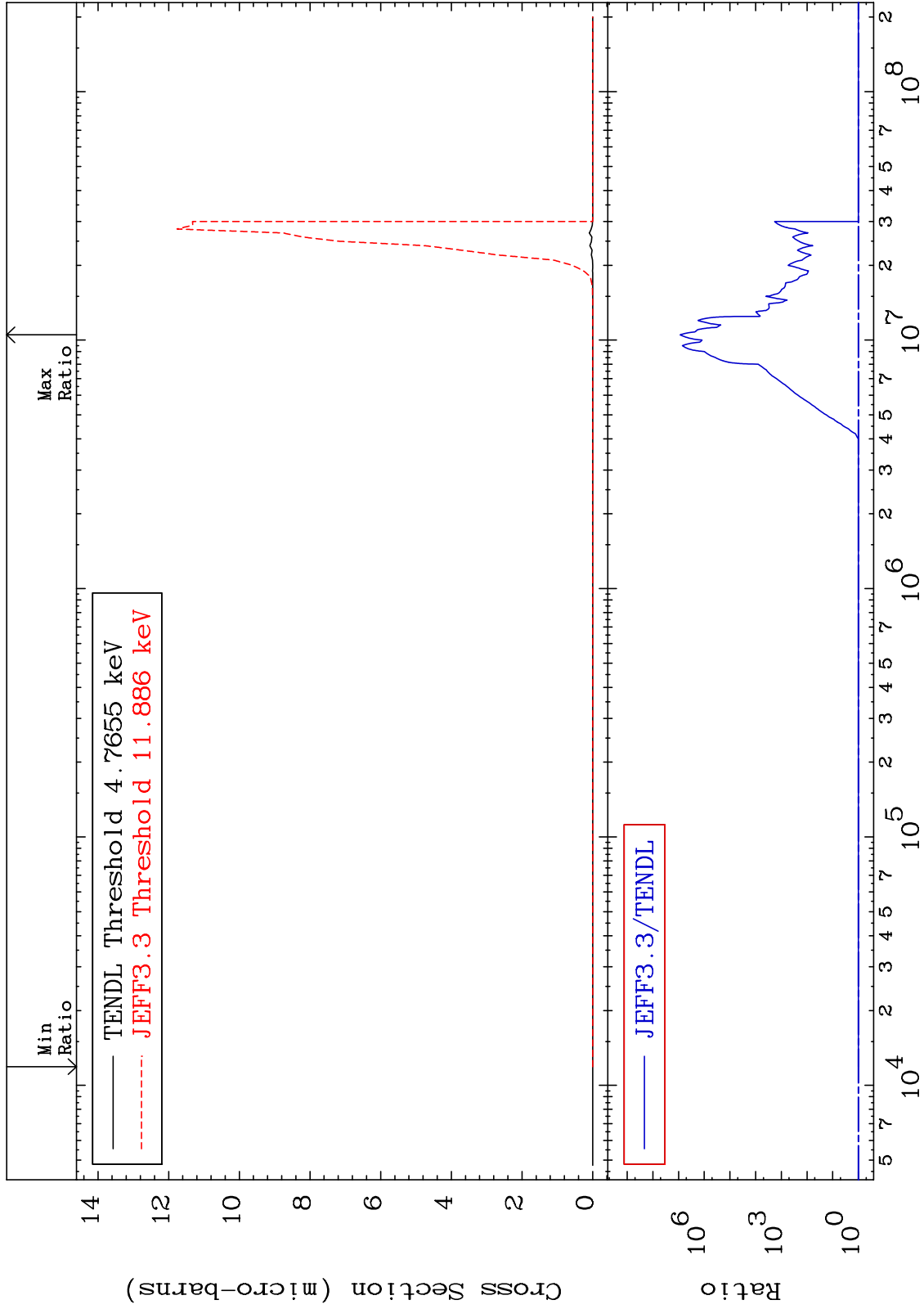
MAT 8322

(n, 2α)

83-Bi-208

Cross Section

0.000 To 9999. %



57

Incident Energy (eV)

83-Bi-208

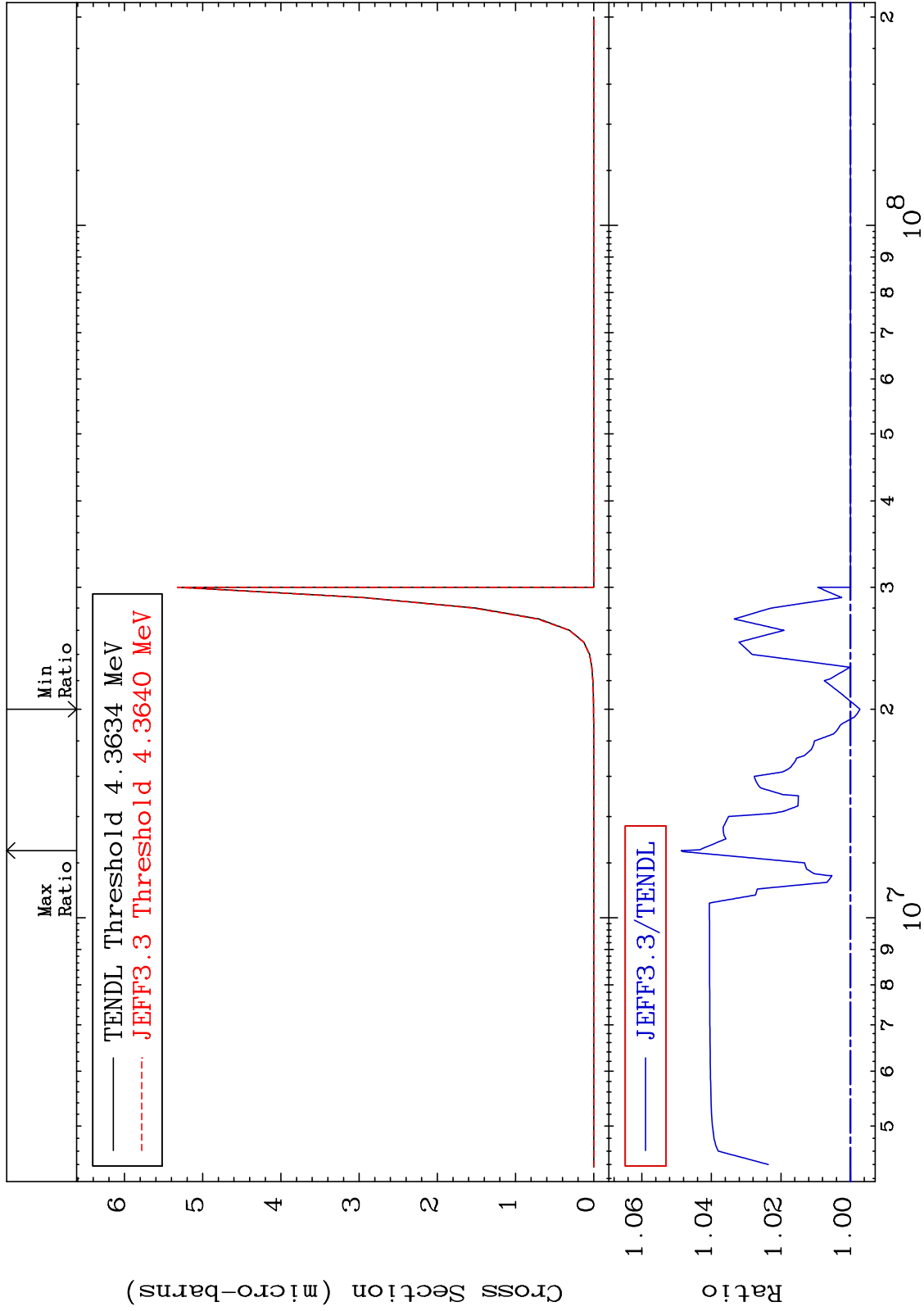
MAT 8322

(n,2p)

83-Bi-208

Cross Section

-0.273 To 4.868 %



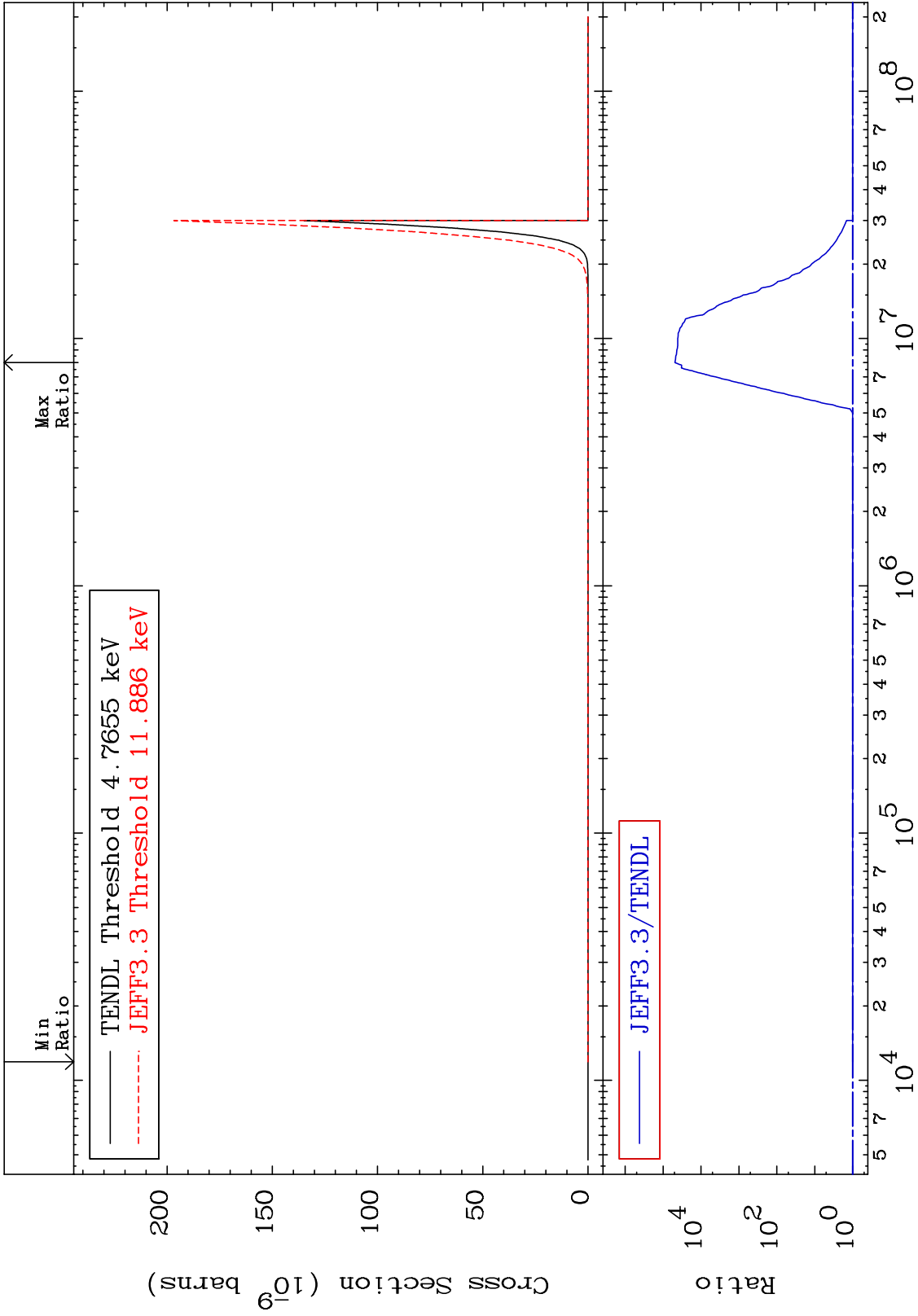
MAT 8322

(n,p)  $\alpha$

83-Bi-208

Cross Section

0.000 To 9999. %



59

Incident Energy (eV)

83-Bi-208

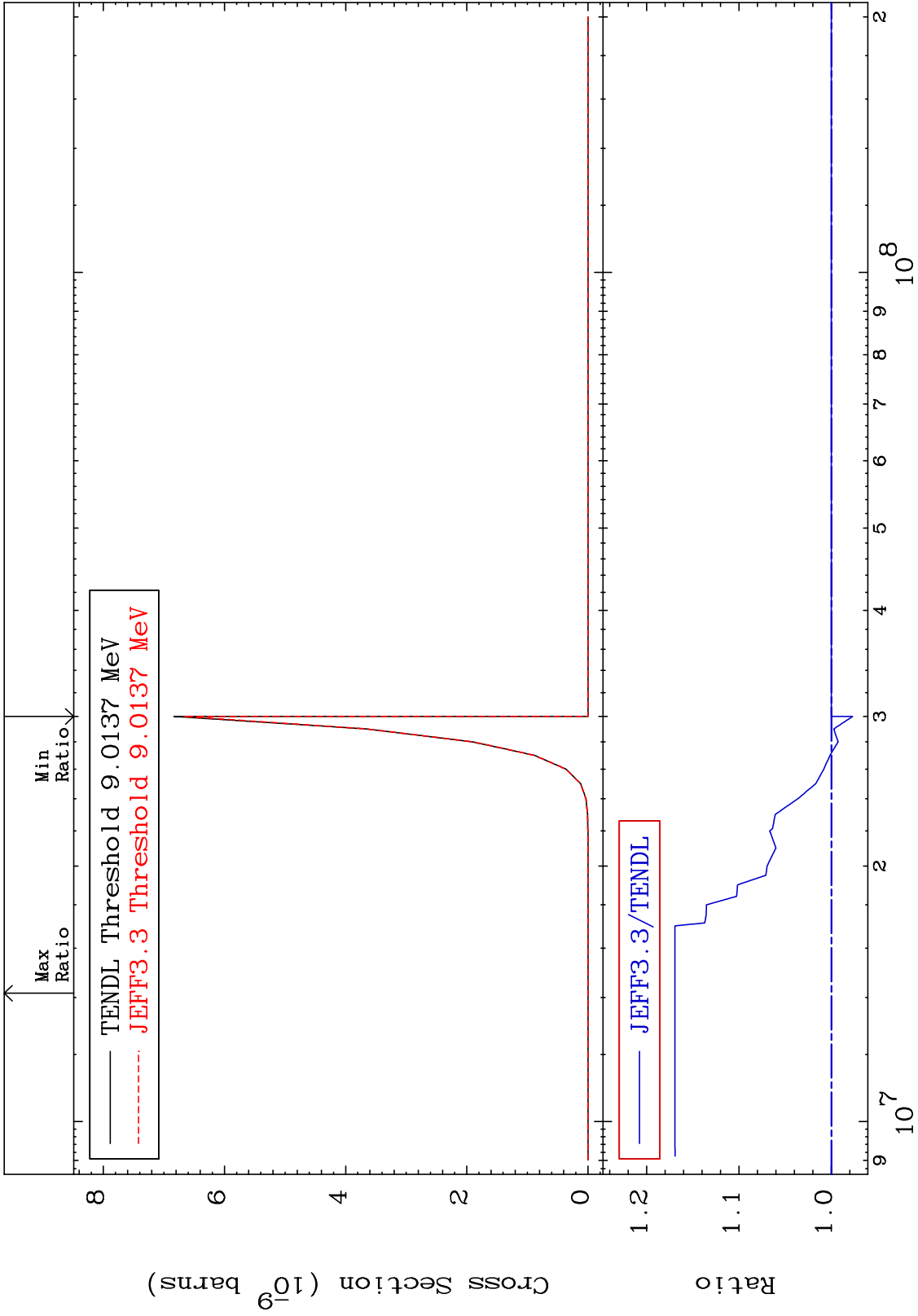
MAT 8322

(n,p) d

83-Bi-208

Cross Section

-2.303 To 16.94 %



83-Bi-208

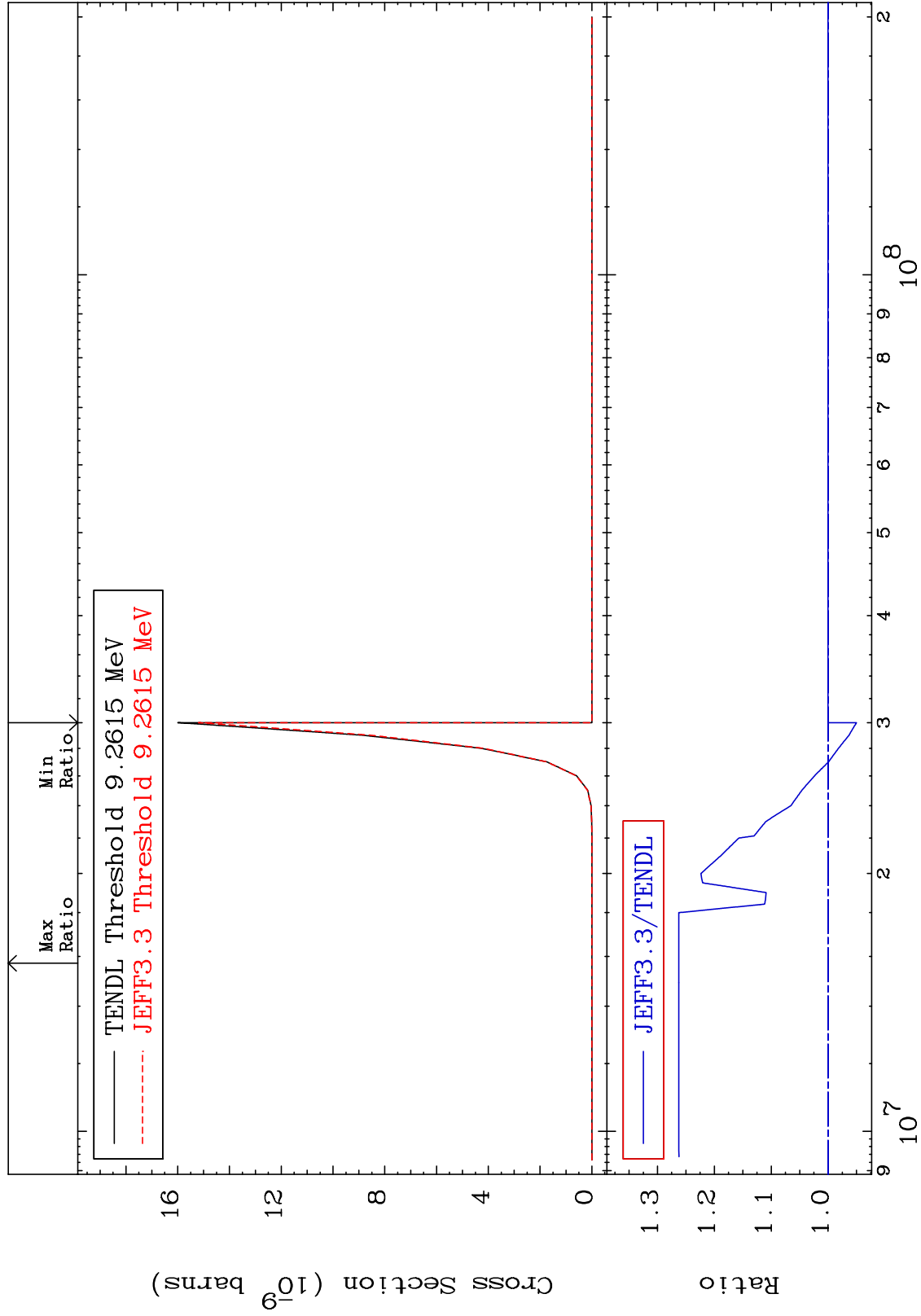
MAT 8322

(n,p) t

83-Bi-208

Cross Section

-4.996 To 26.25 %



61

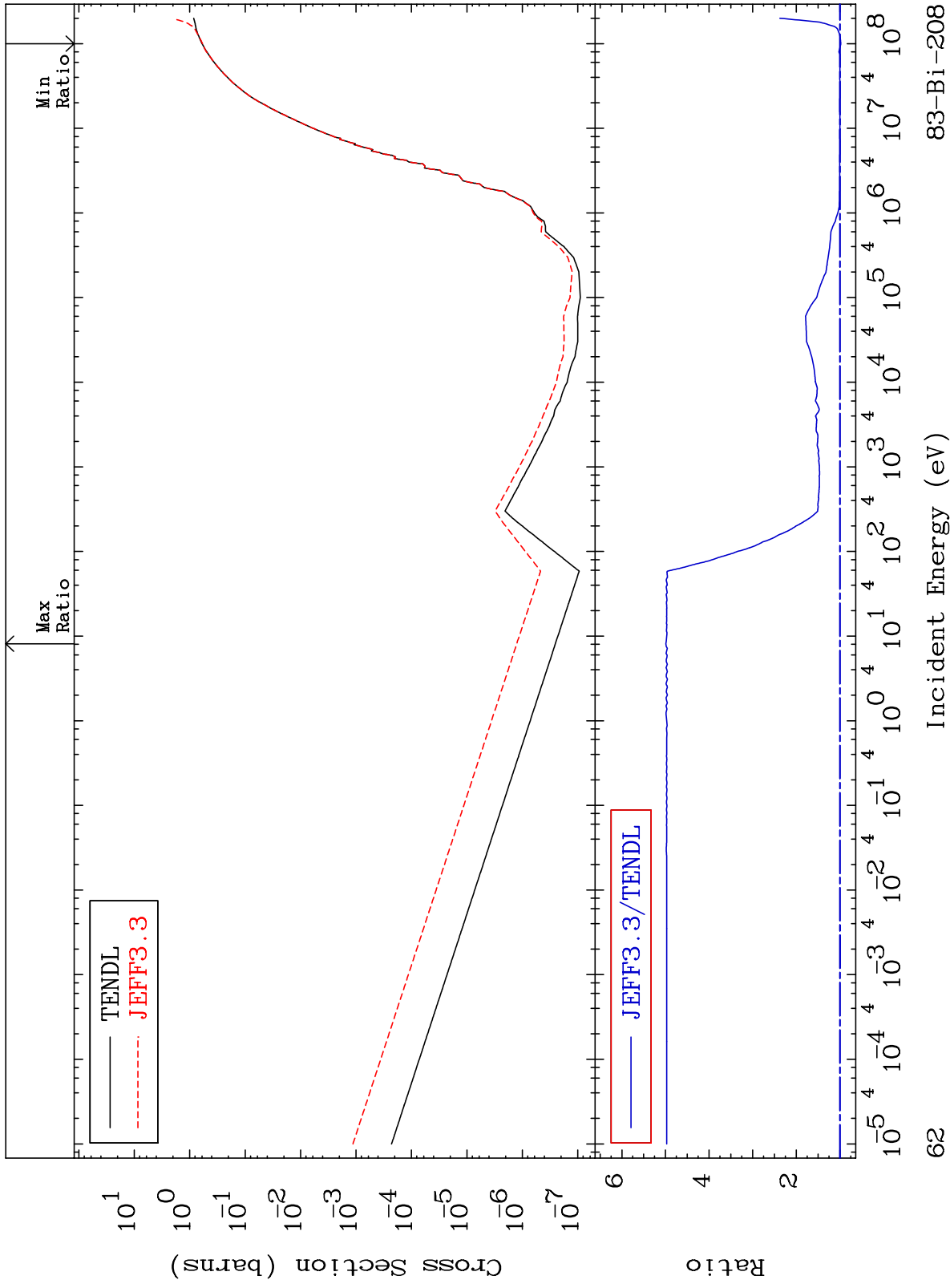
Incident Energy (eV)

83-Bi-208

MAT 8322

Hydrogen Production  
Cross Section

83-Bi-208  
-2.273 To 399.0 %



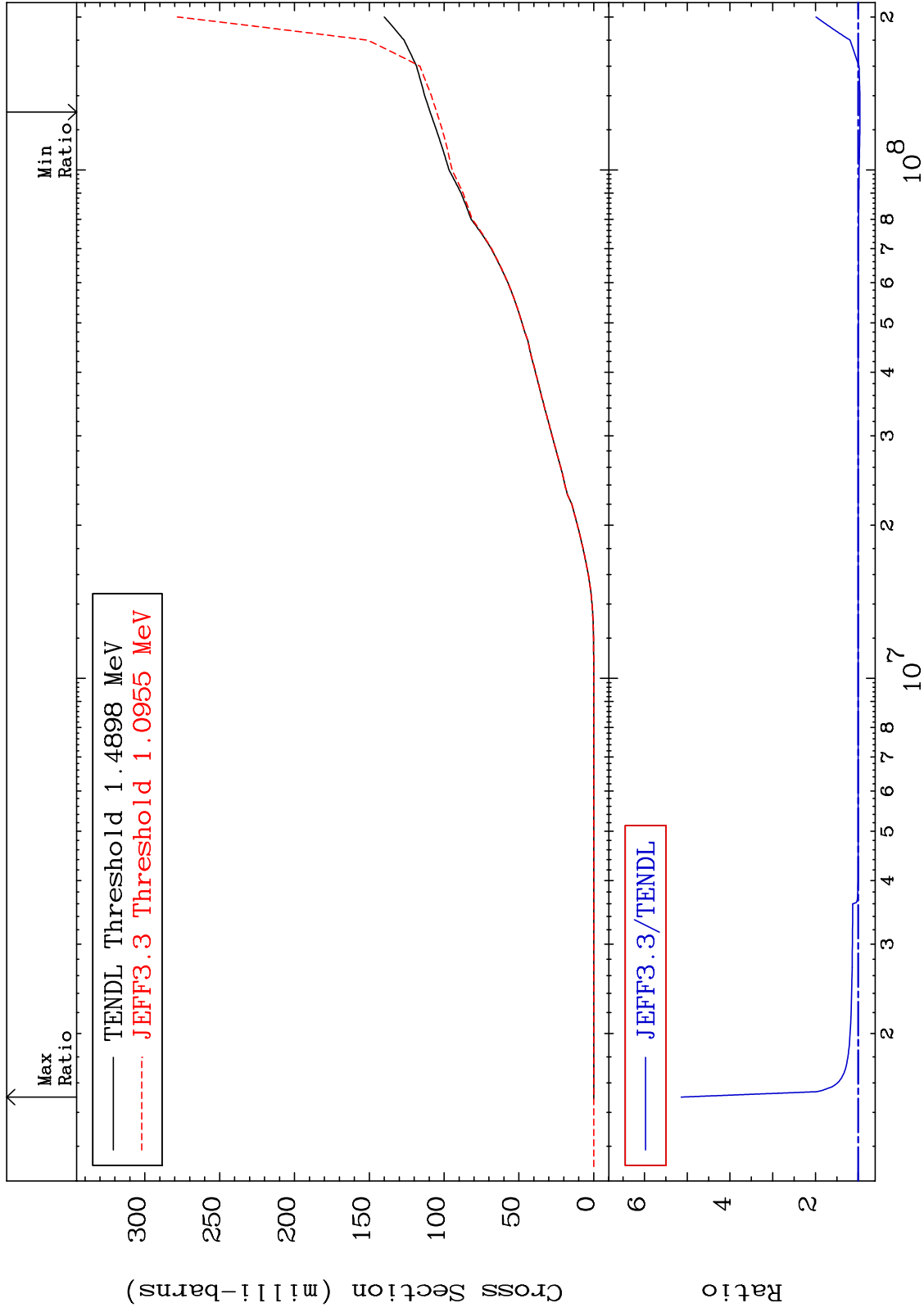
62

83-Bi-208

MAT 8322

Deuterium Production  
Cross Section

83-Bi-208  
-3.990 To 414.0 %

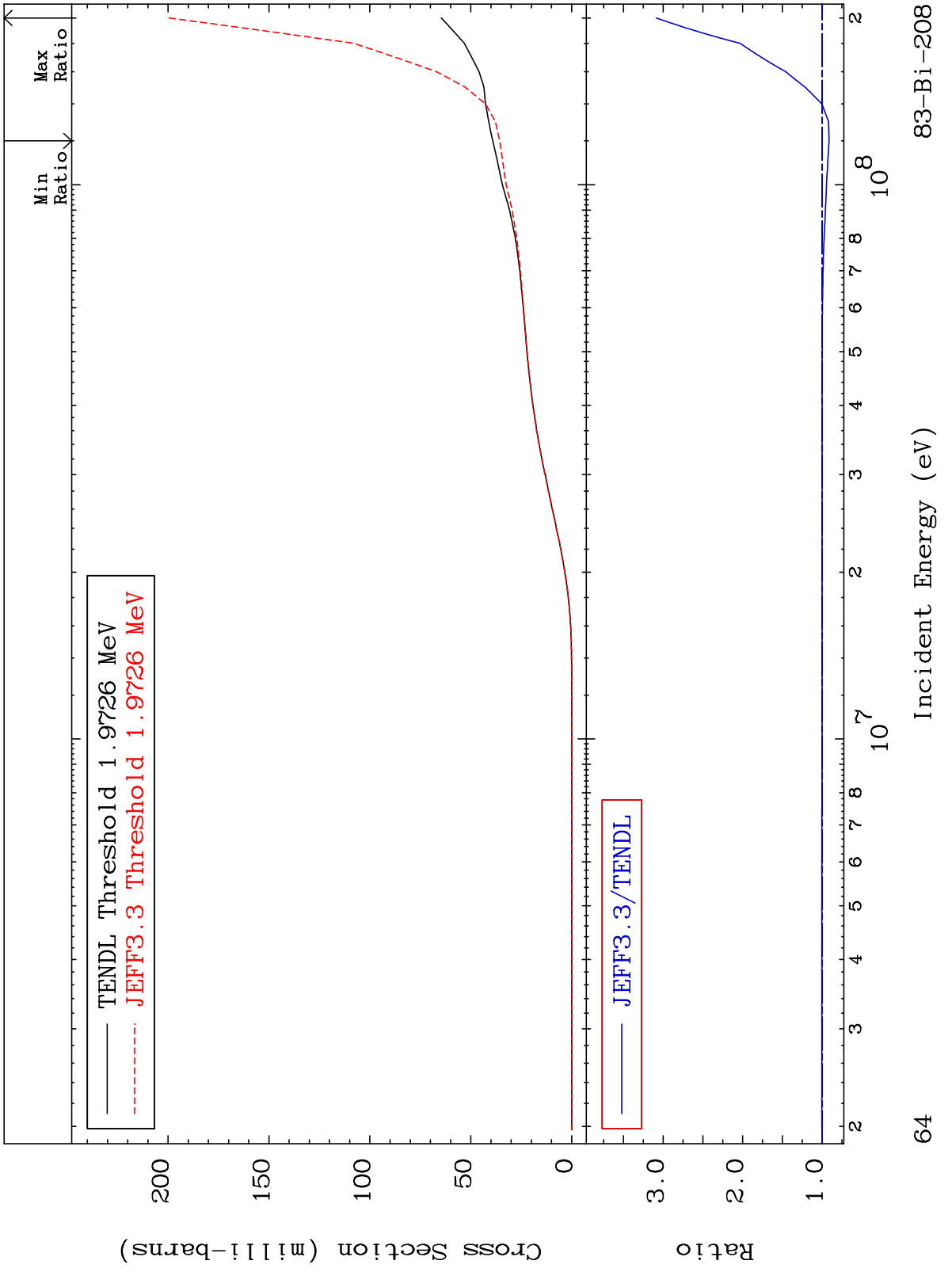




MAT 8322

Tritium Production  
Cross Section

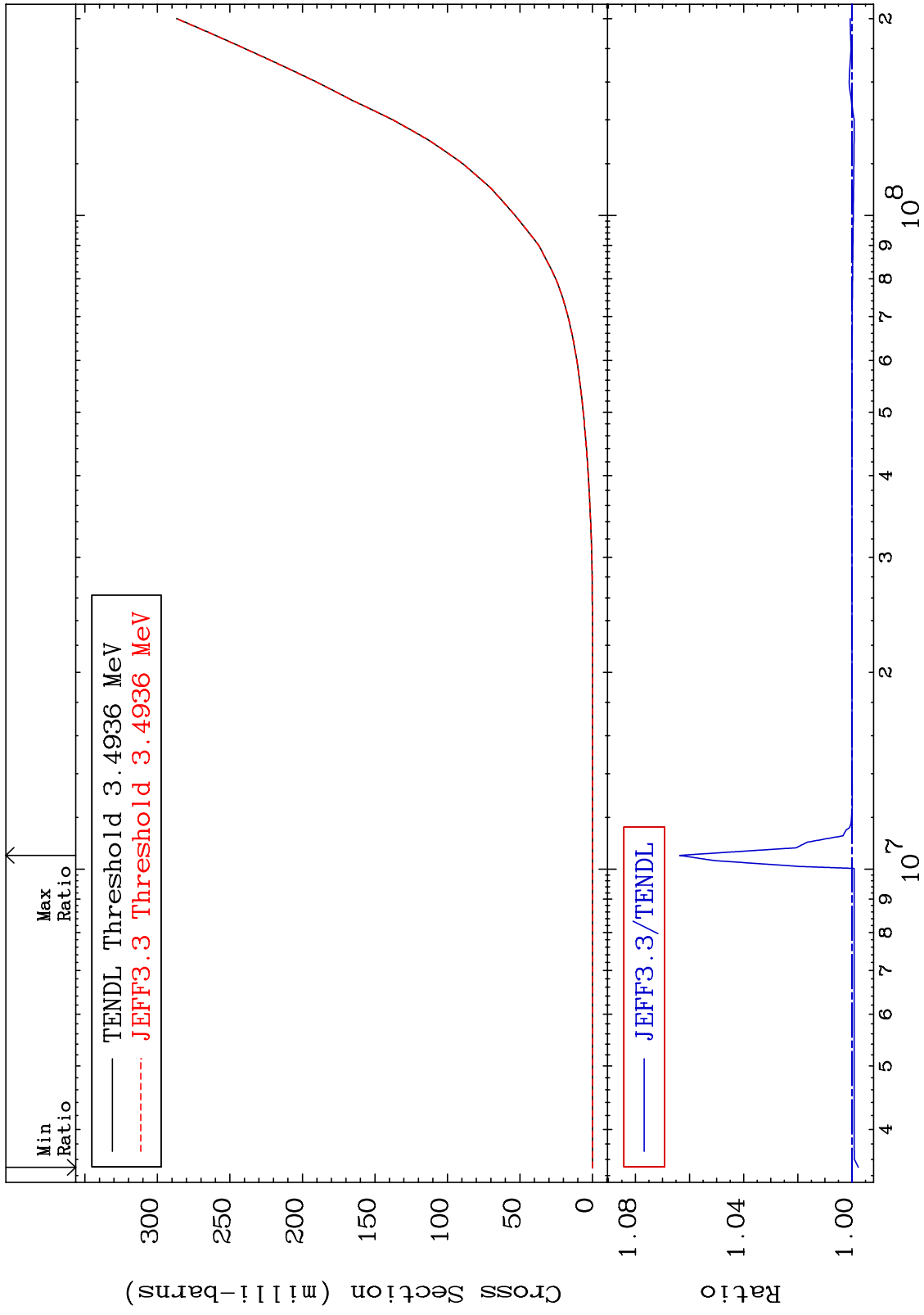
83-Bi-208  
-8.800 To 208.6 %



MAT 8322

He-3 Production  
Cross Section

83-Bi-208  
-0.236 To 6.359 %



65

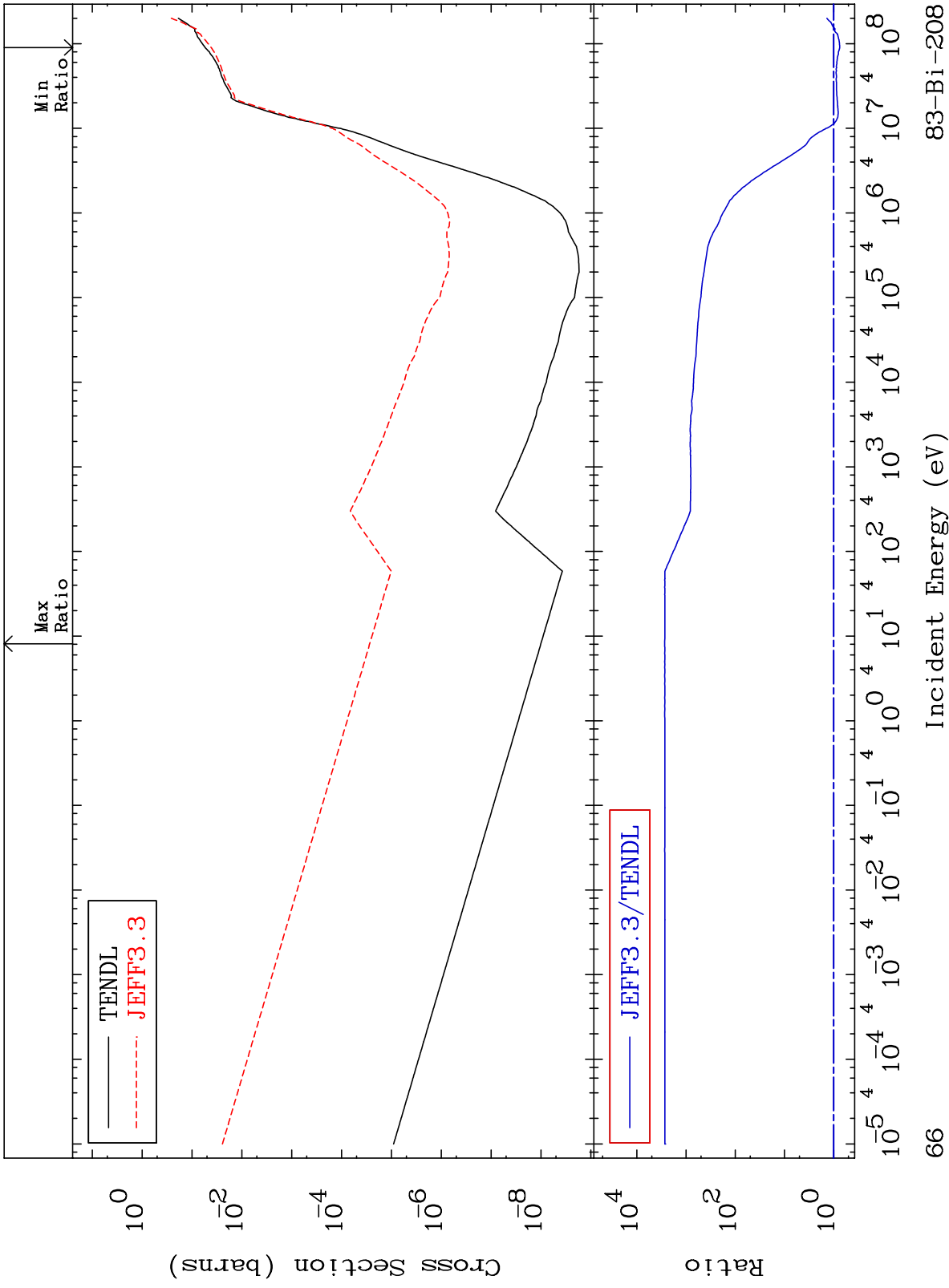
Incident Energy (eV)

83-Bi-208

MAT 8322

He-4 Production  
Cross Section

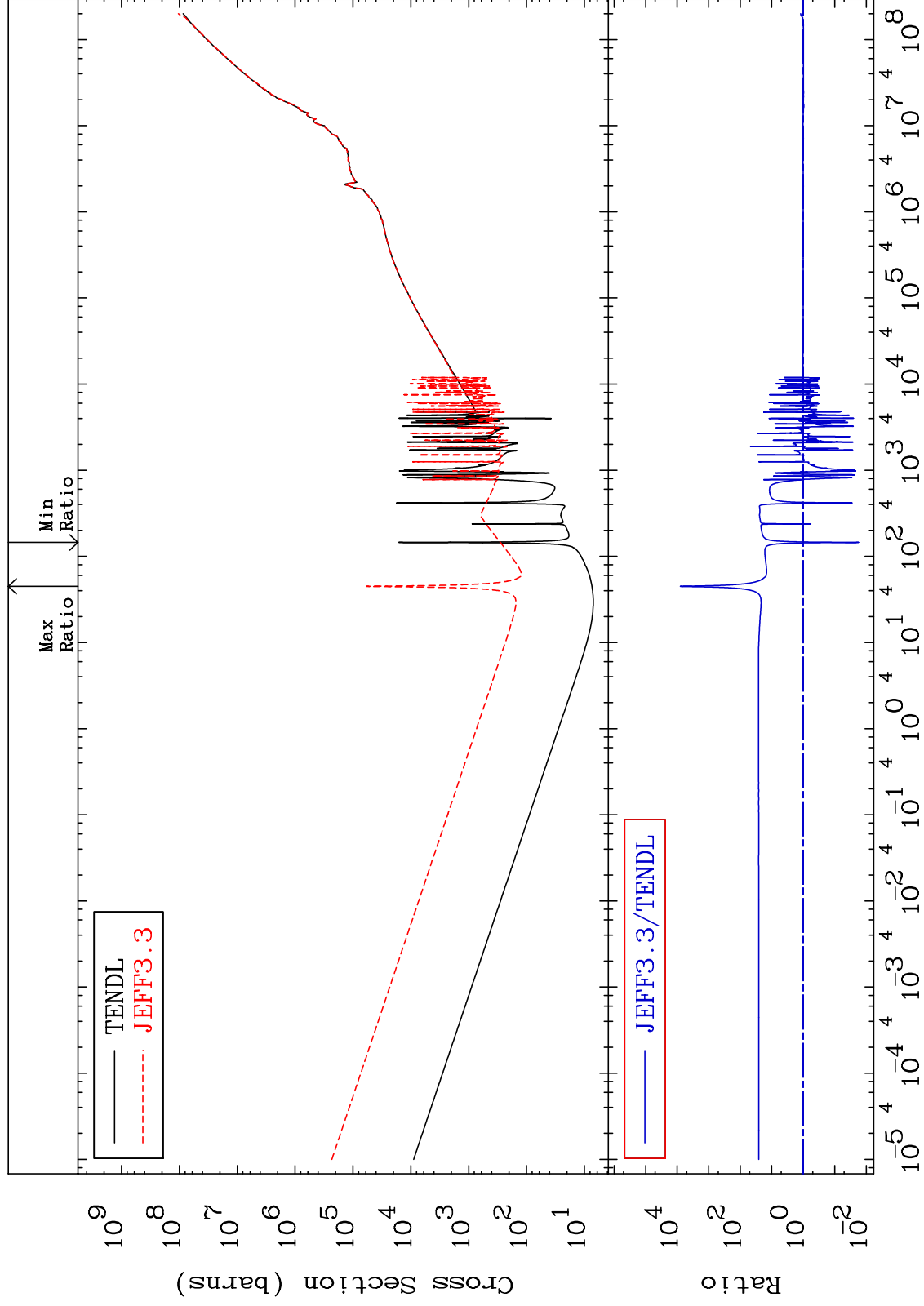
83-Bi-208  
-24.40 To 9999. %



MAT 8322

Kerma total (eV-barns)  
Cross Section

83-Bi-208  
-98.25 To 9999. %



67

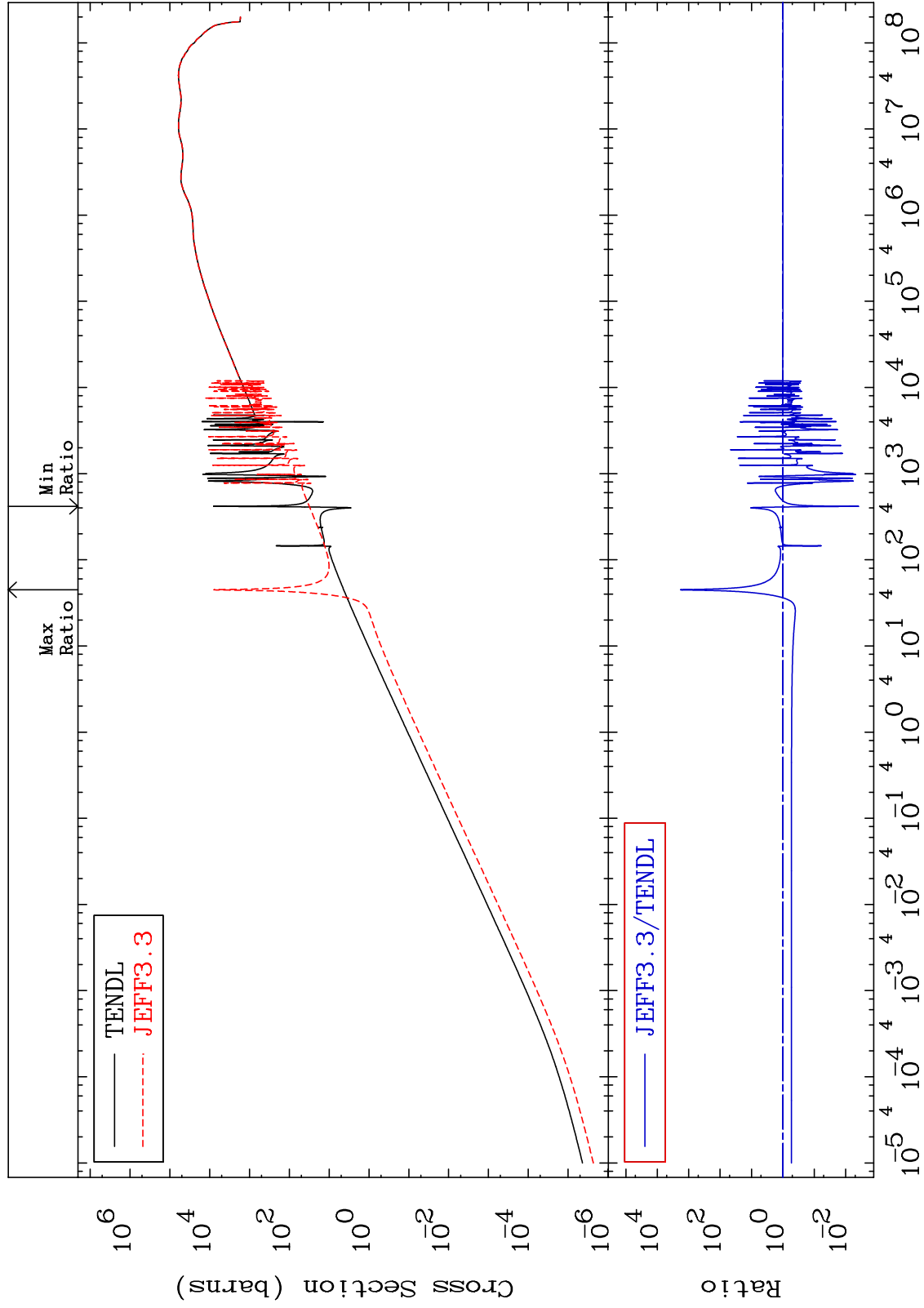
Incident Energy (eV)

83-Bi-208

MAT 8322

Kerma elastic  
Cross Section

83-Bi-208  
-99.61 To 9999. %



68

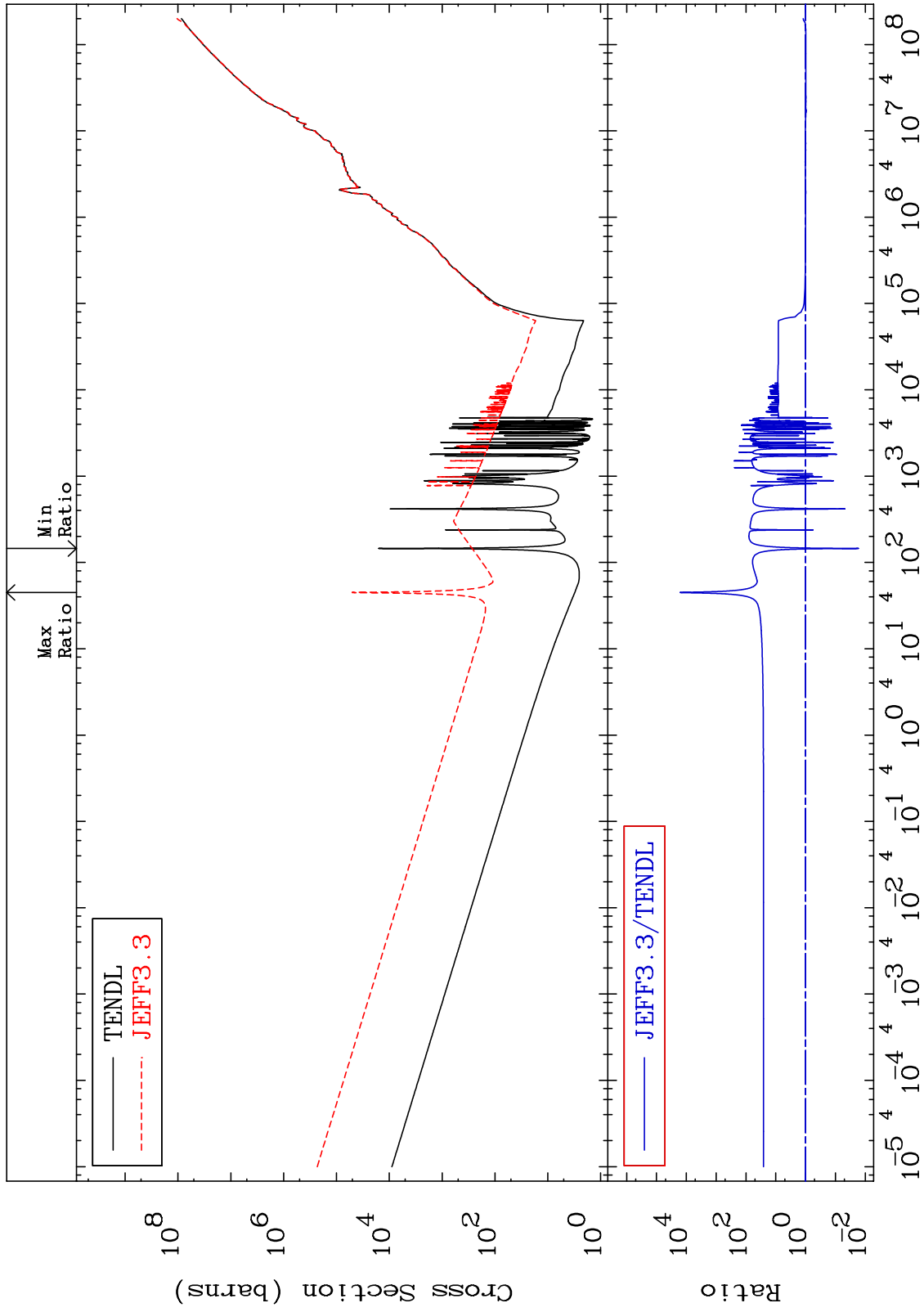
Incident Energy (eV)

83-Bi-208

MAT 8322

Kerma non-elastic (all but mt2)  
Cross Section

83-Bi-208  
-98.30 To 9999. %



69

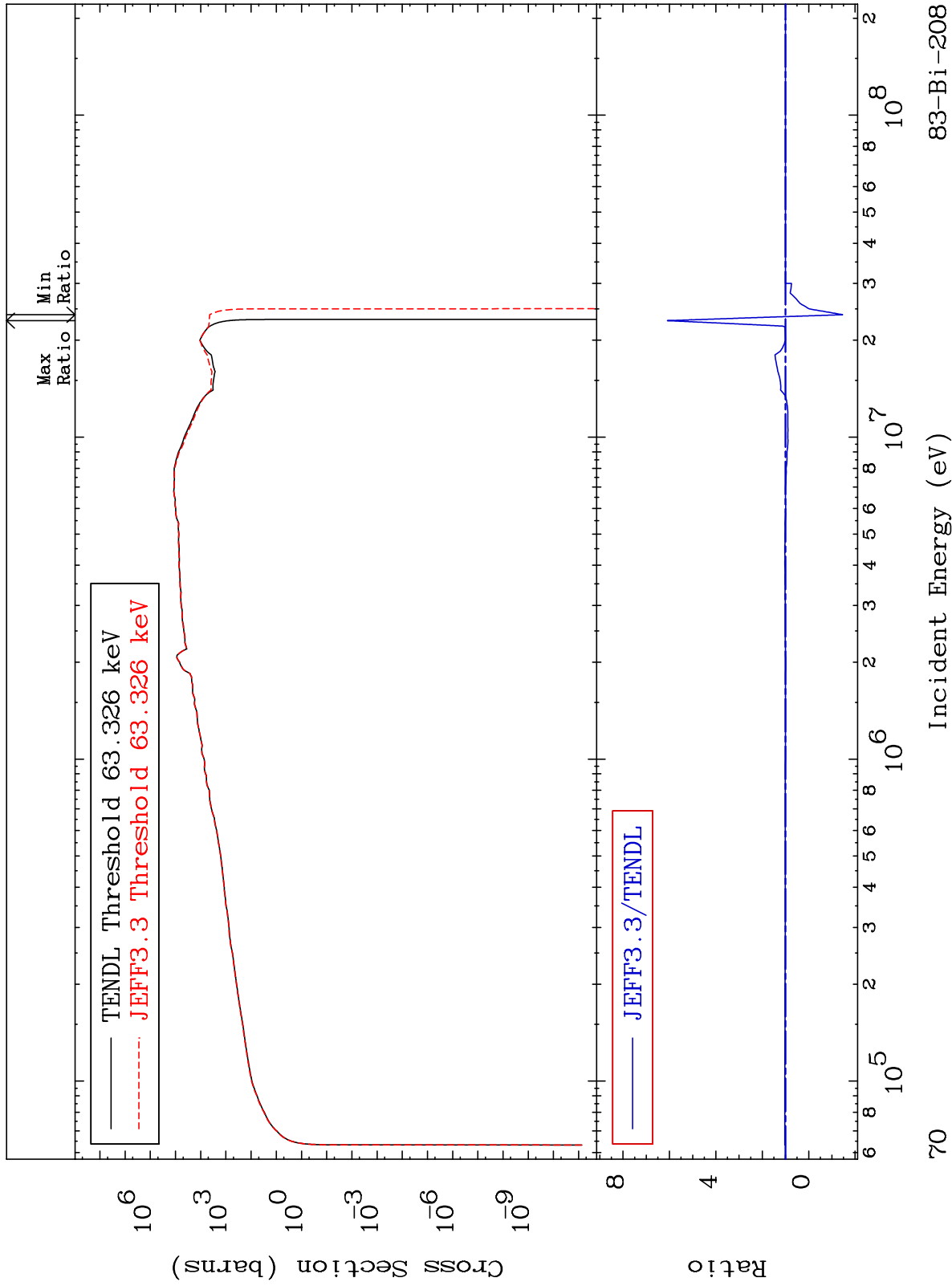
Incident Energy (eV)

83-Bi-208

MAT 8322

Kerma inelastic (mt51-91)  
Cross Section

83-Bi-208  
-246.4 To 508.2 %



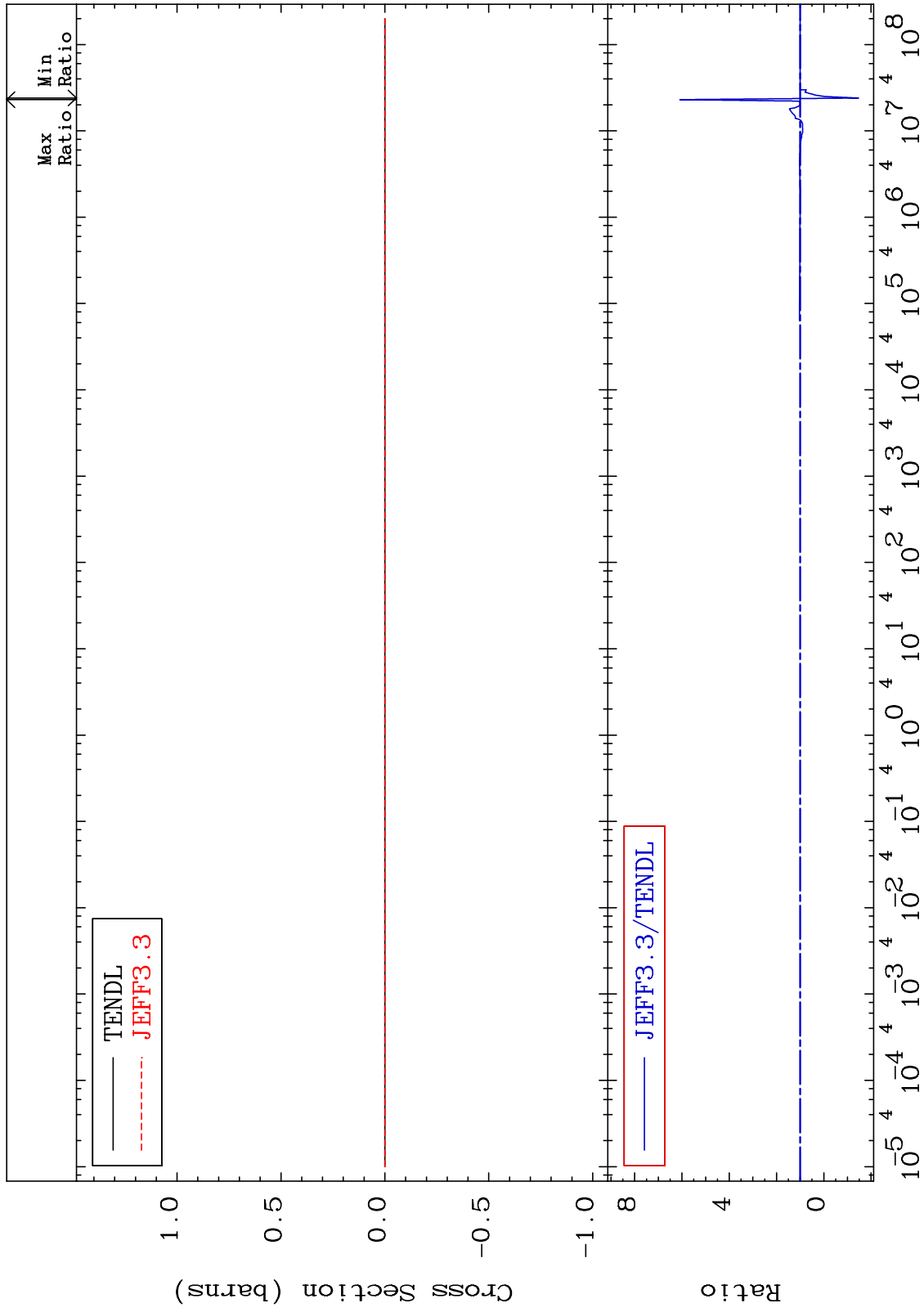
83-Bi-208

70

MAT 8322

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

83-Bi-208  
-246.4 To 508.2 %



71

Incident Energy (eV)

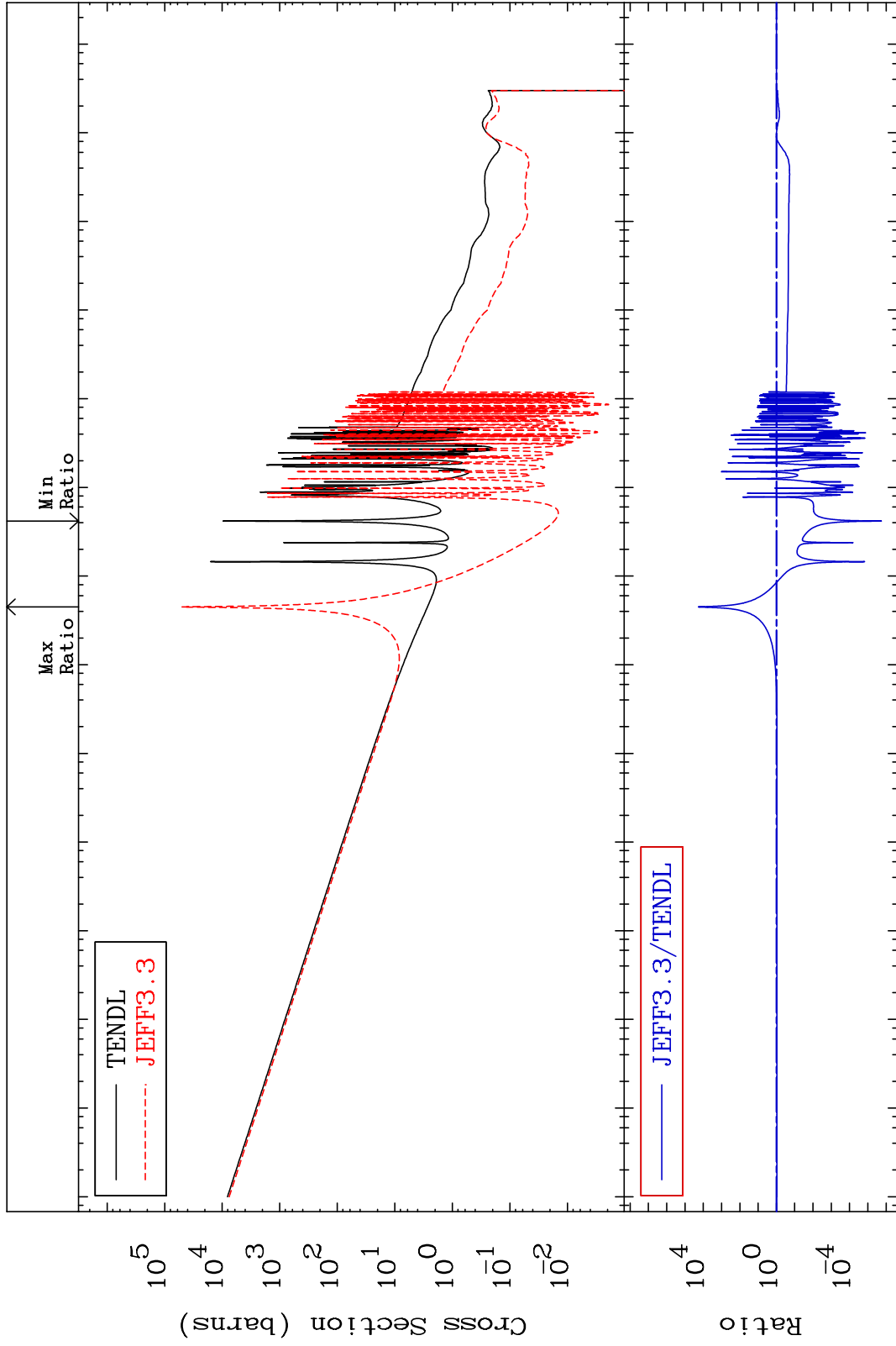
83-Bi-208



MAT 8322

Kerma capture (mt102)  
Cross Section

83-Bi-208  
-100.0 To 9999. %

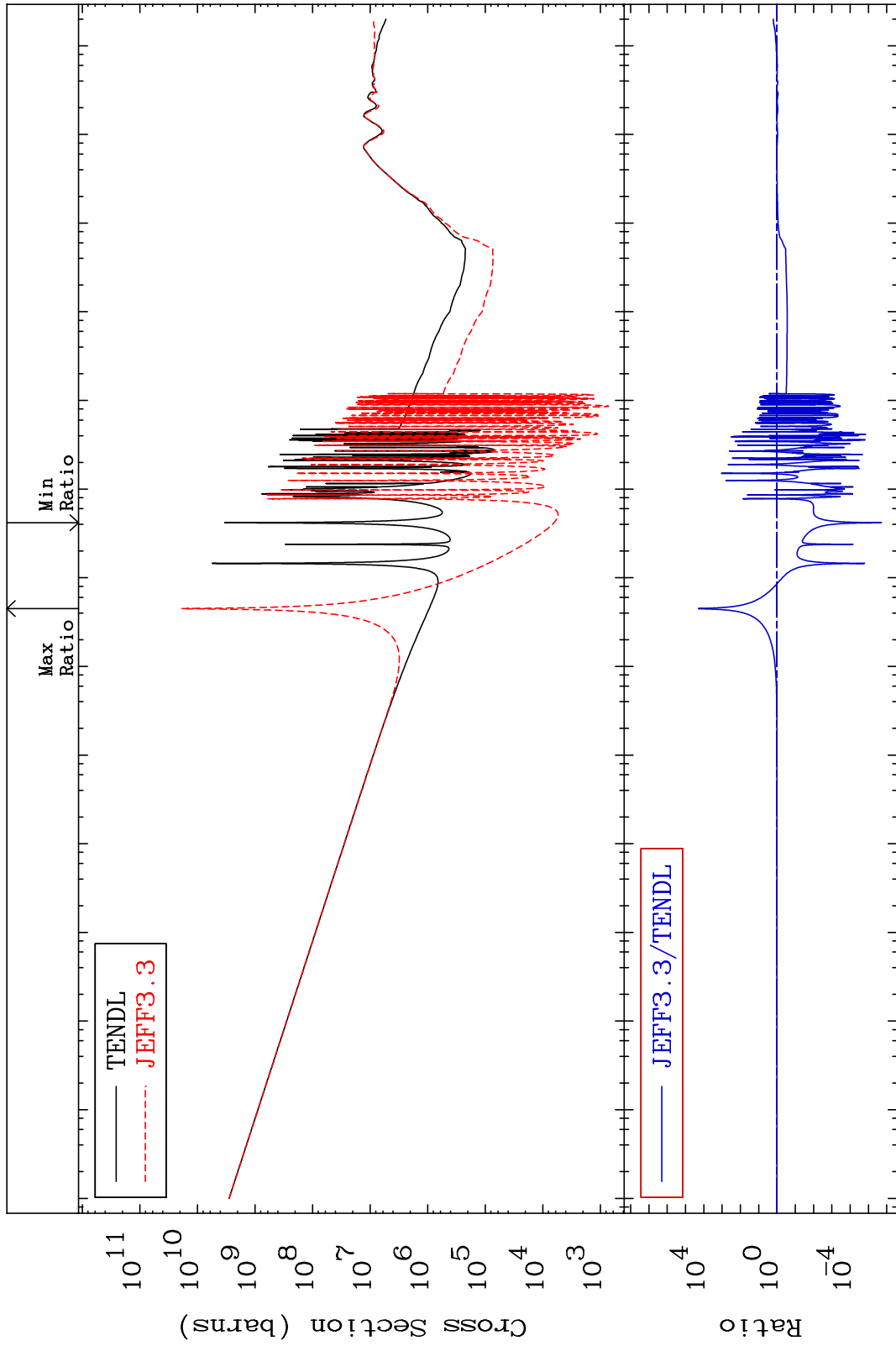


MAT 8322

Total photon (eV-barns)  
Cross Section

83-Bi-208

-100.0 To 9999. %



73

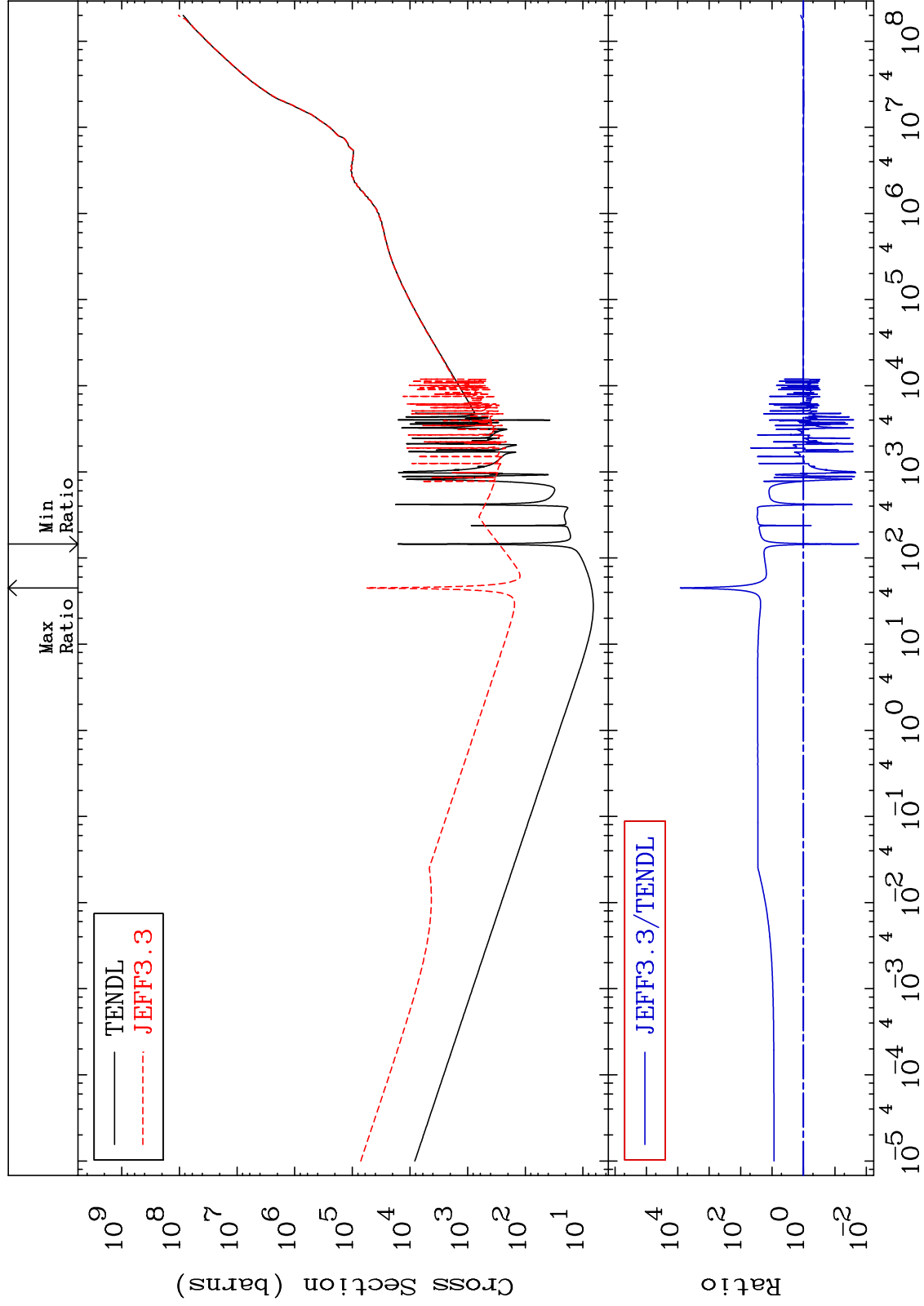
Incident Energy (eV)

83-Bi-208

MAT 8322

Total kinematic kerma (high limit)  
Cross Section

83-Bi-208  
-98.23 To 9999. %



74

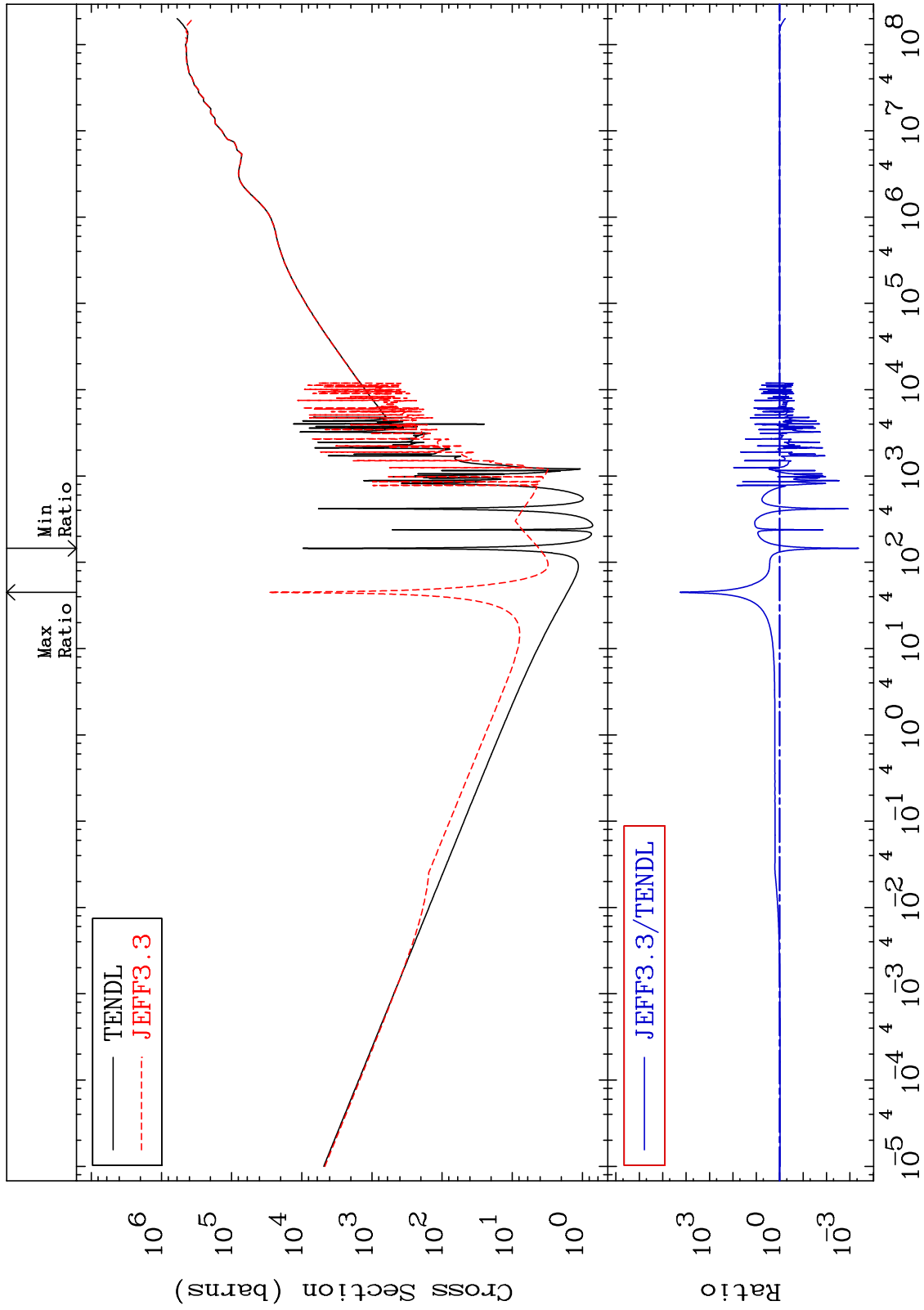
Incident Energy (eV)

83-Bi-208

MAT 8322

Dpa total (eV-barns)  
Cross Section

83-Bi-208  
-99.96 To 9999. %



75

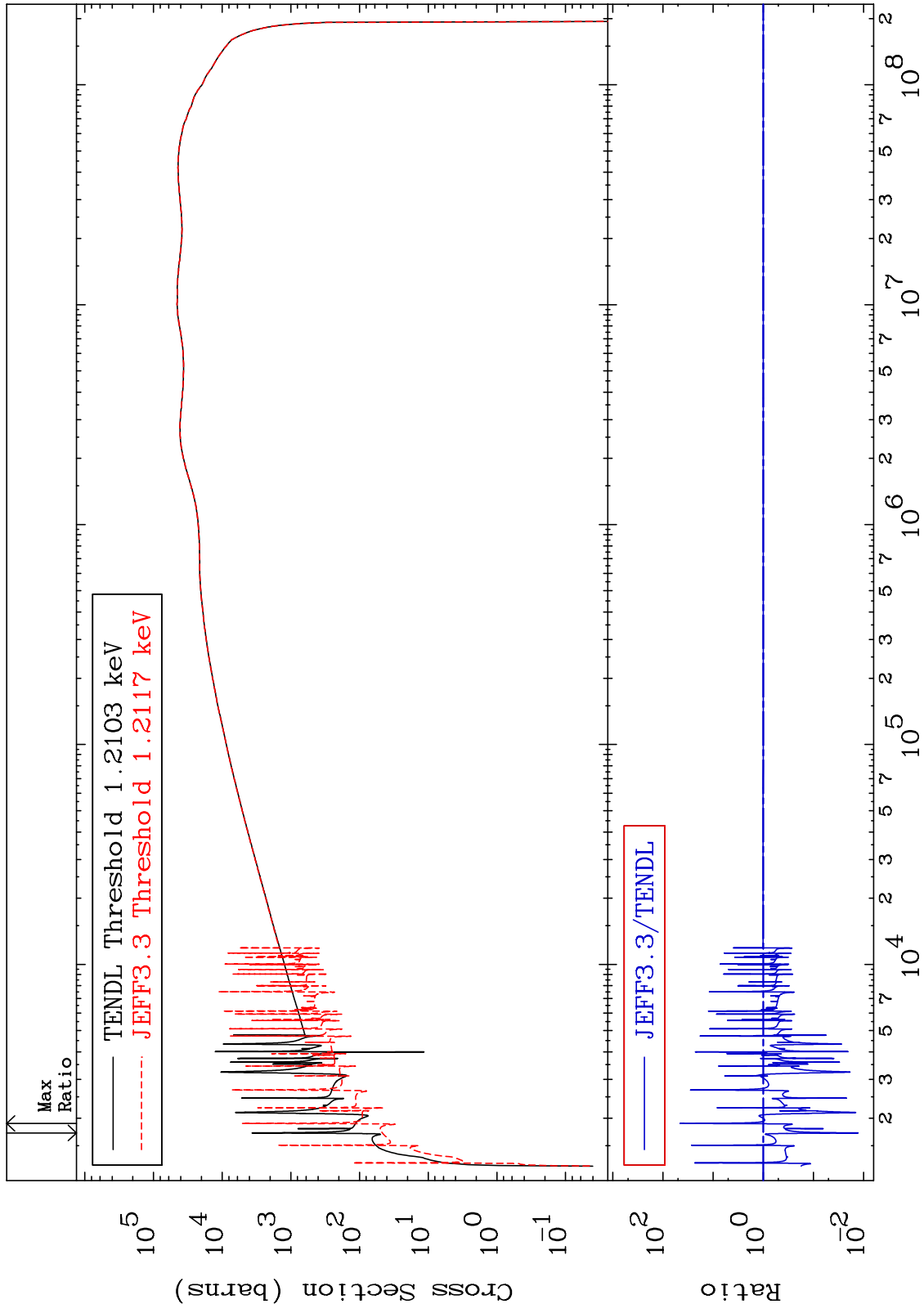
Incident Energy (eV)

83-Bi-208

MAT 8322

Dpa elastic (mt2)  
Cross Section

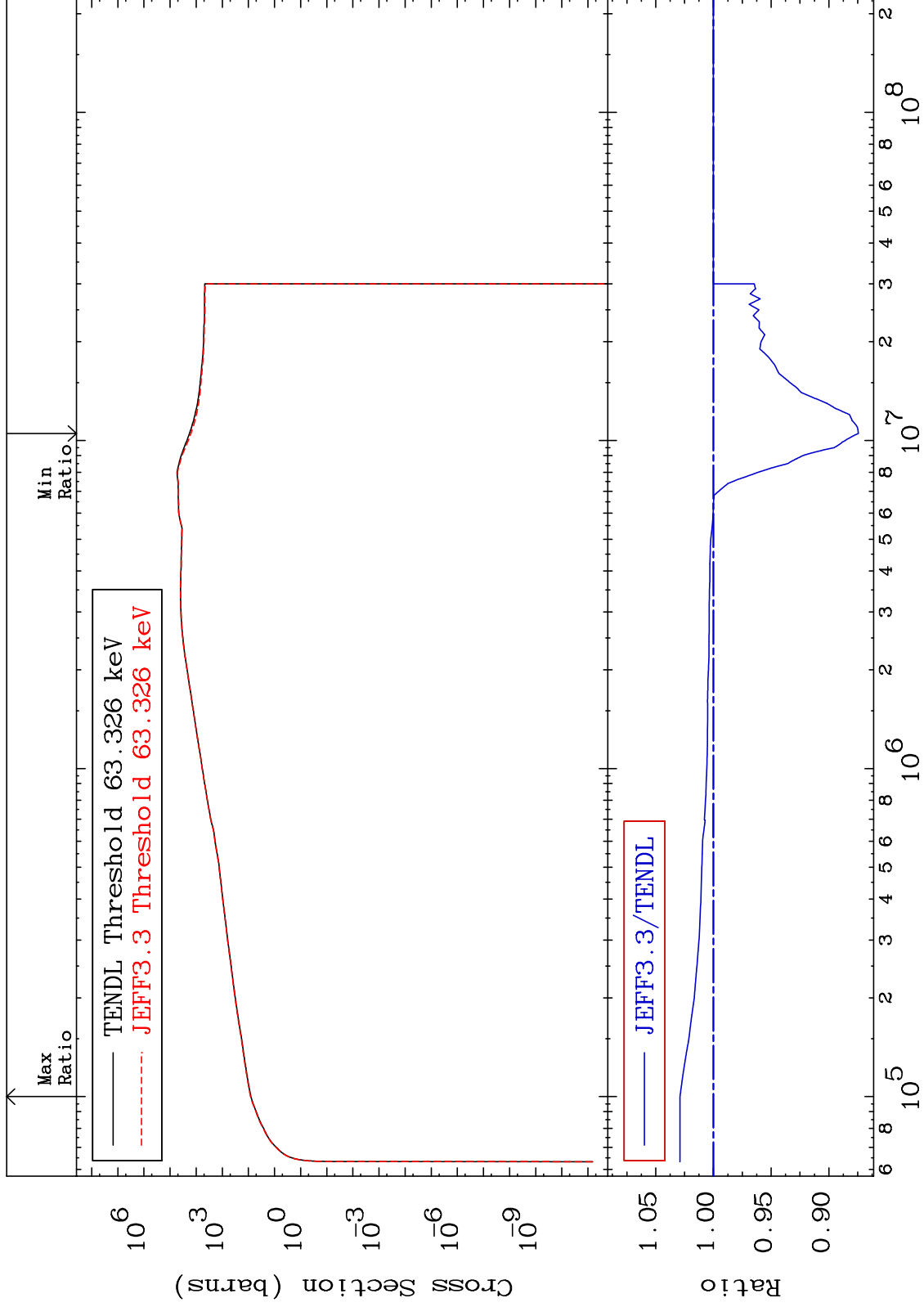
83-Bi-208  
-98.73 To 4473. %



MAT 8322

Dpa inelastic (mt51-91)  
Cross Section

83-Bi-208  
-12.56 To 2.895 %



77

83-Bi-208

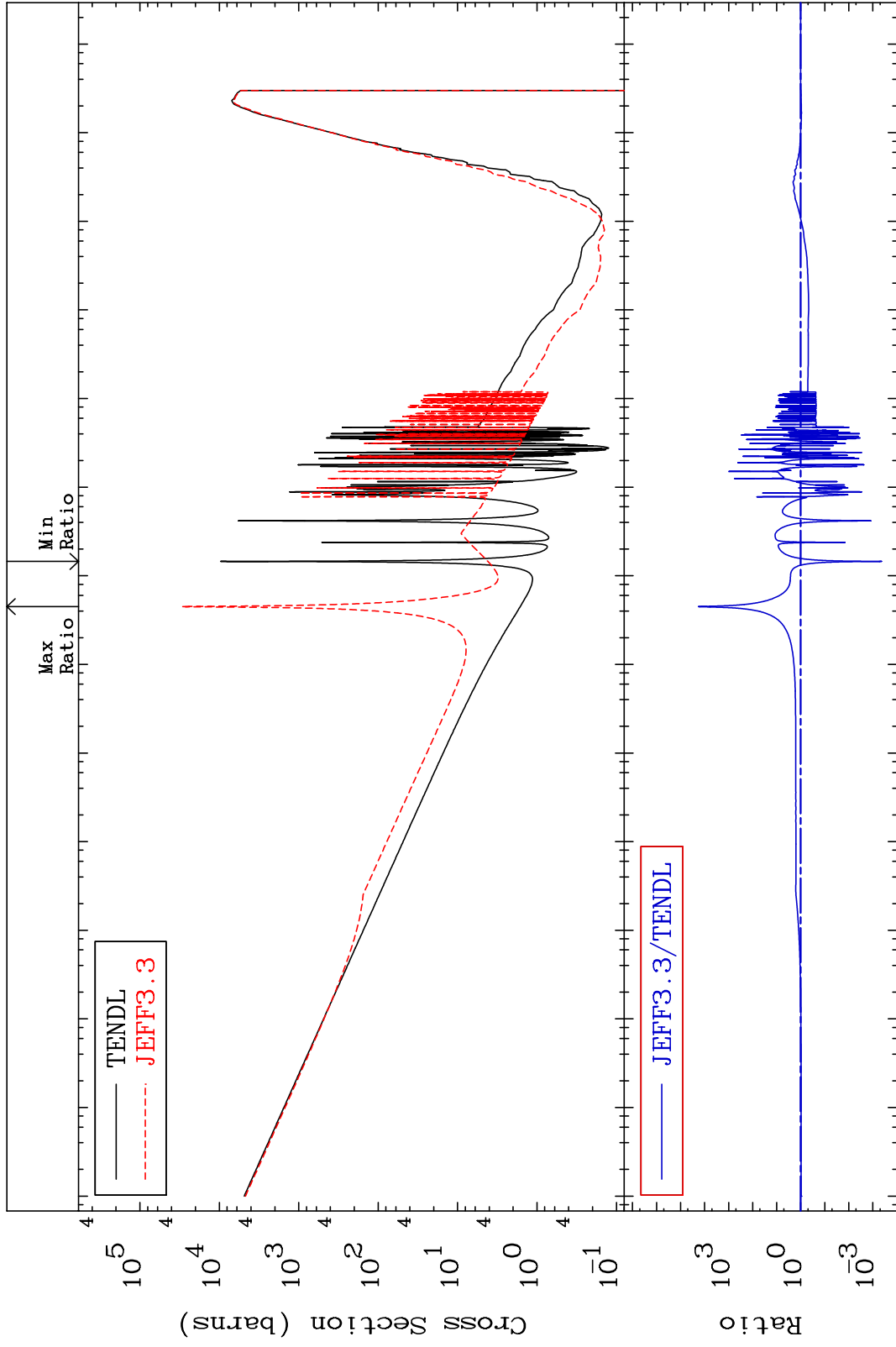
MAT 8322

Dpa disappearance (mt102 -120)

83-Bi-208

-99.96 To 9999. %

Cross Section



78

Incident Energy (eV)

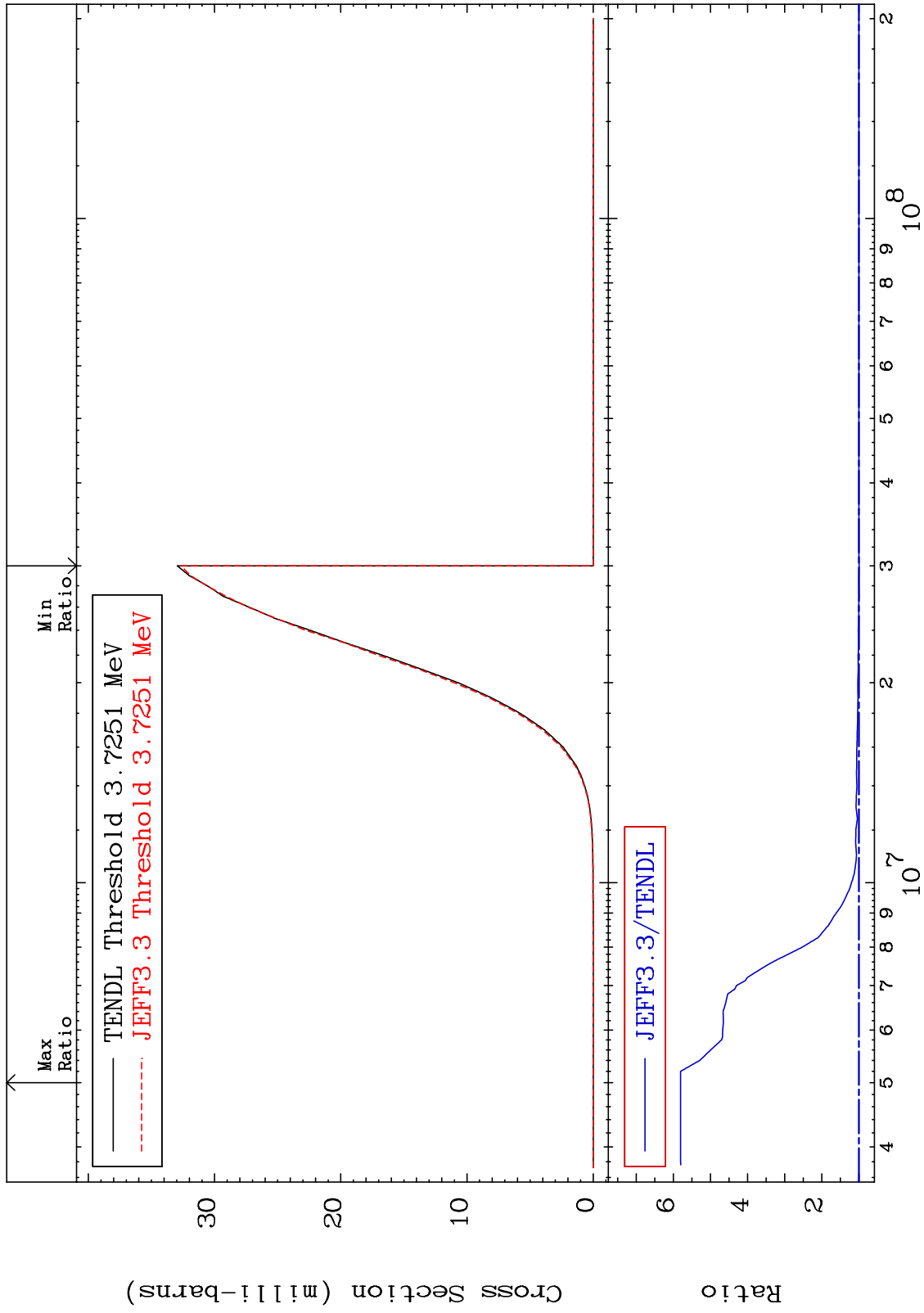
83-Bi-208

MAT 8322

(n, n') p:82-Pb-207g

83-Bi-208

Radionuclide Production Cross Section -0.872 To 480.6 %



79

83-Bi-208

83-Bi-208

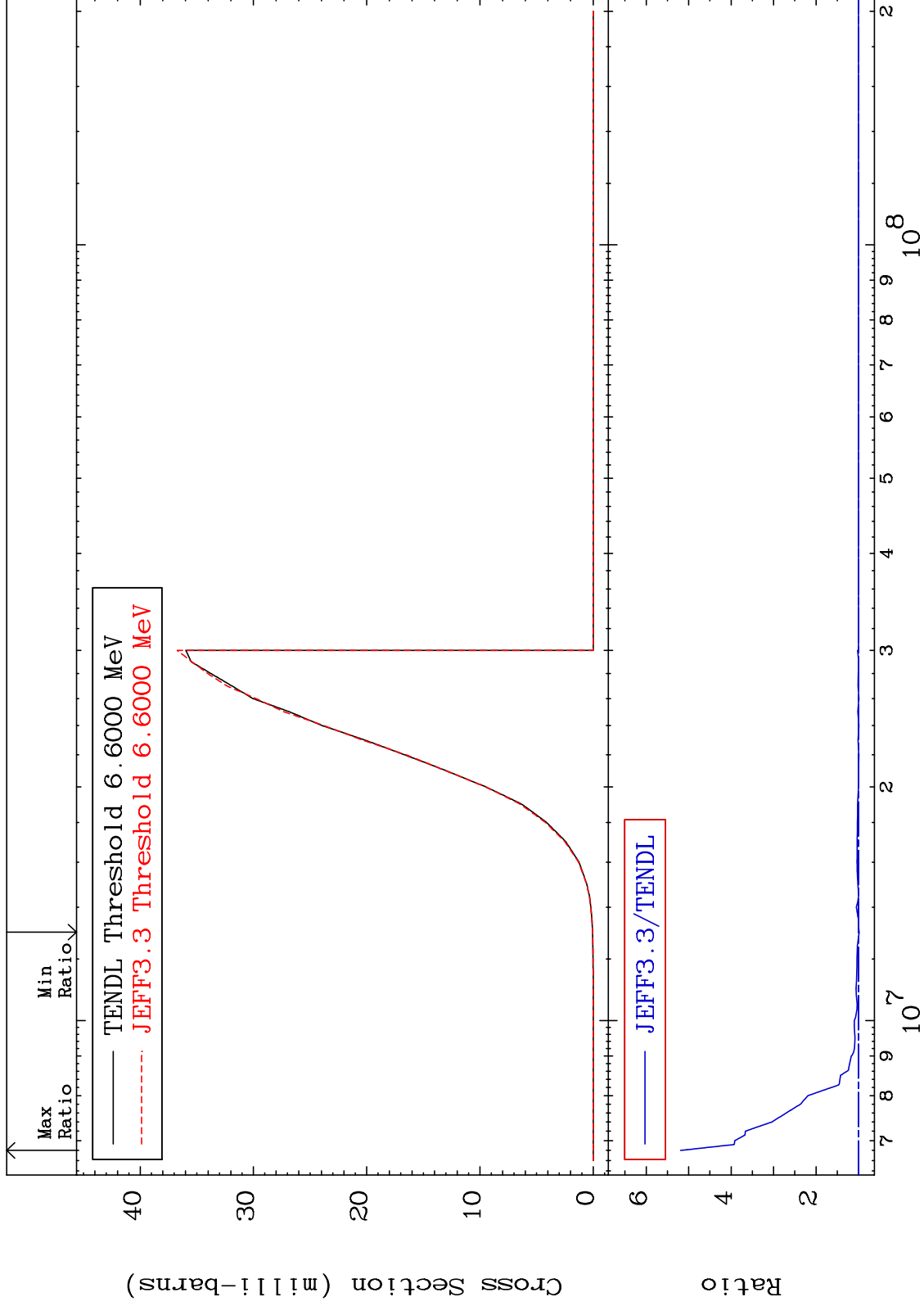


MAT 8322

(n, n') p:82-Pb-207m3

83-Bi-208

Radionuclide Production Cross Section -1.519 To 418.9 %

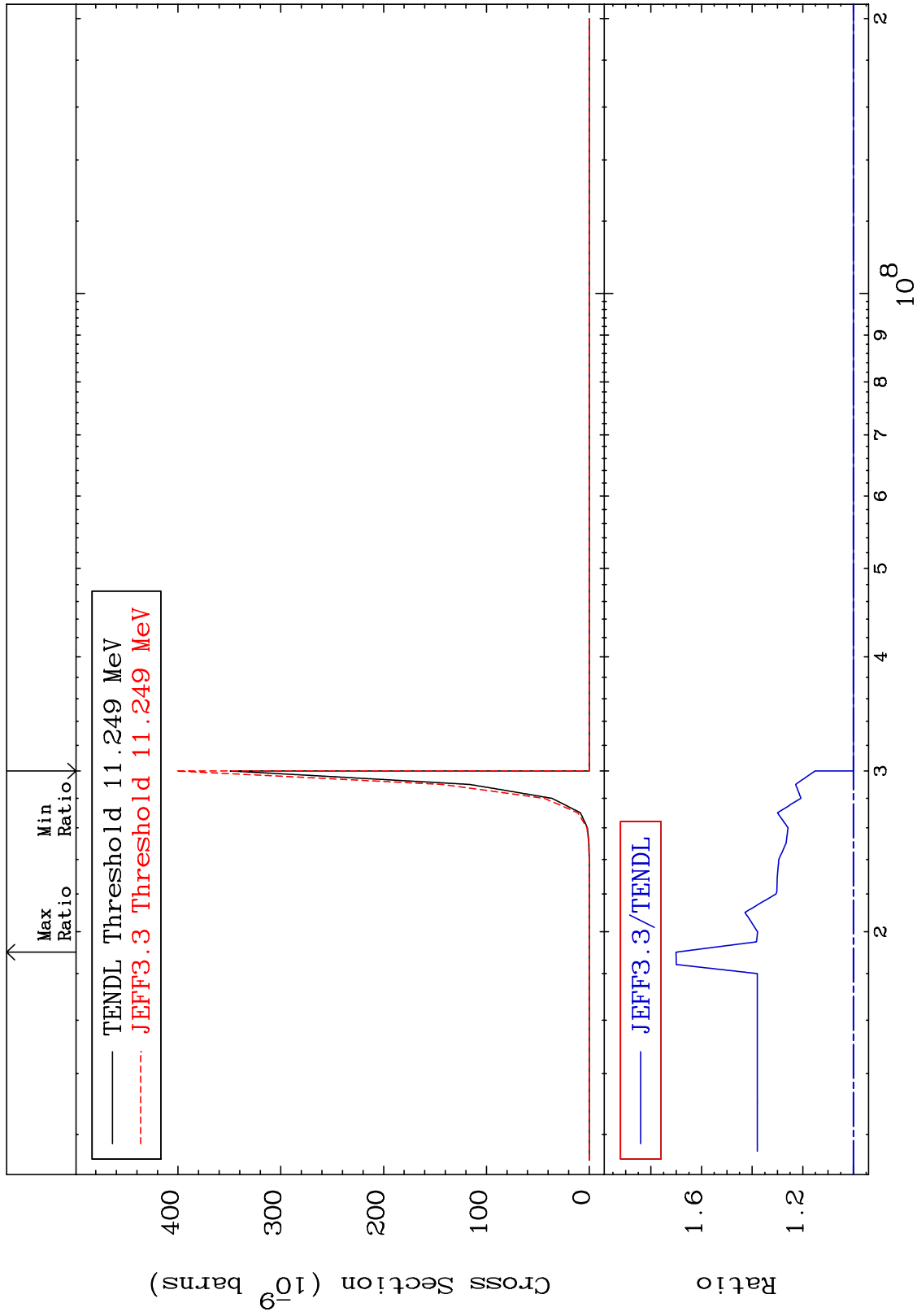


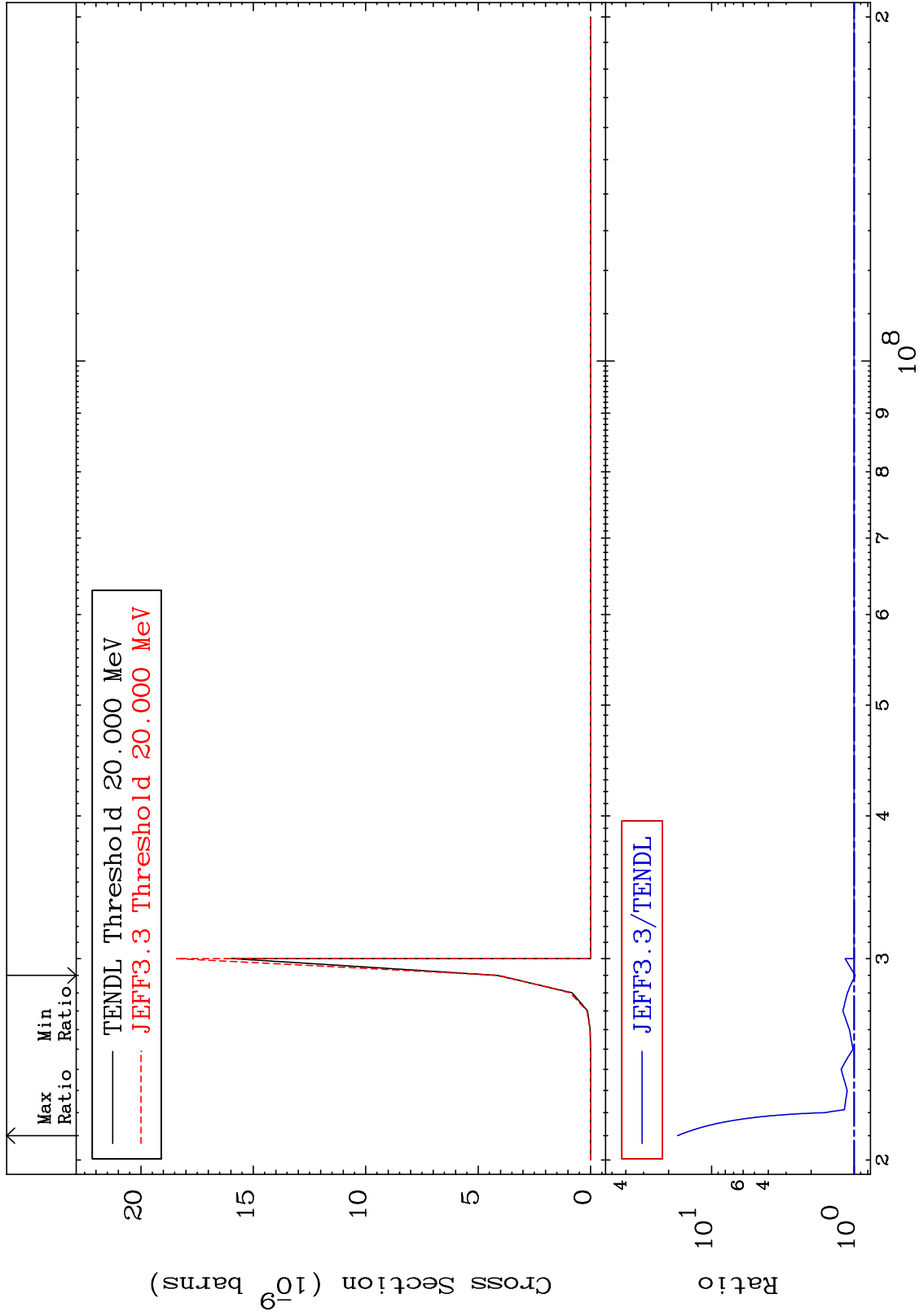
80

Incident Energy (eV)

83-Bi-208

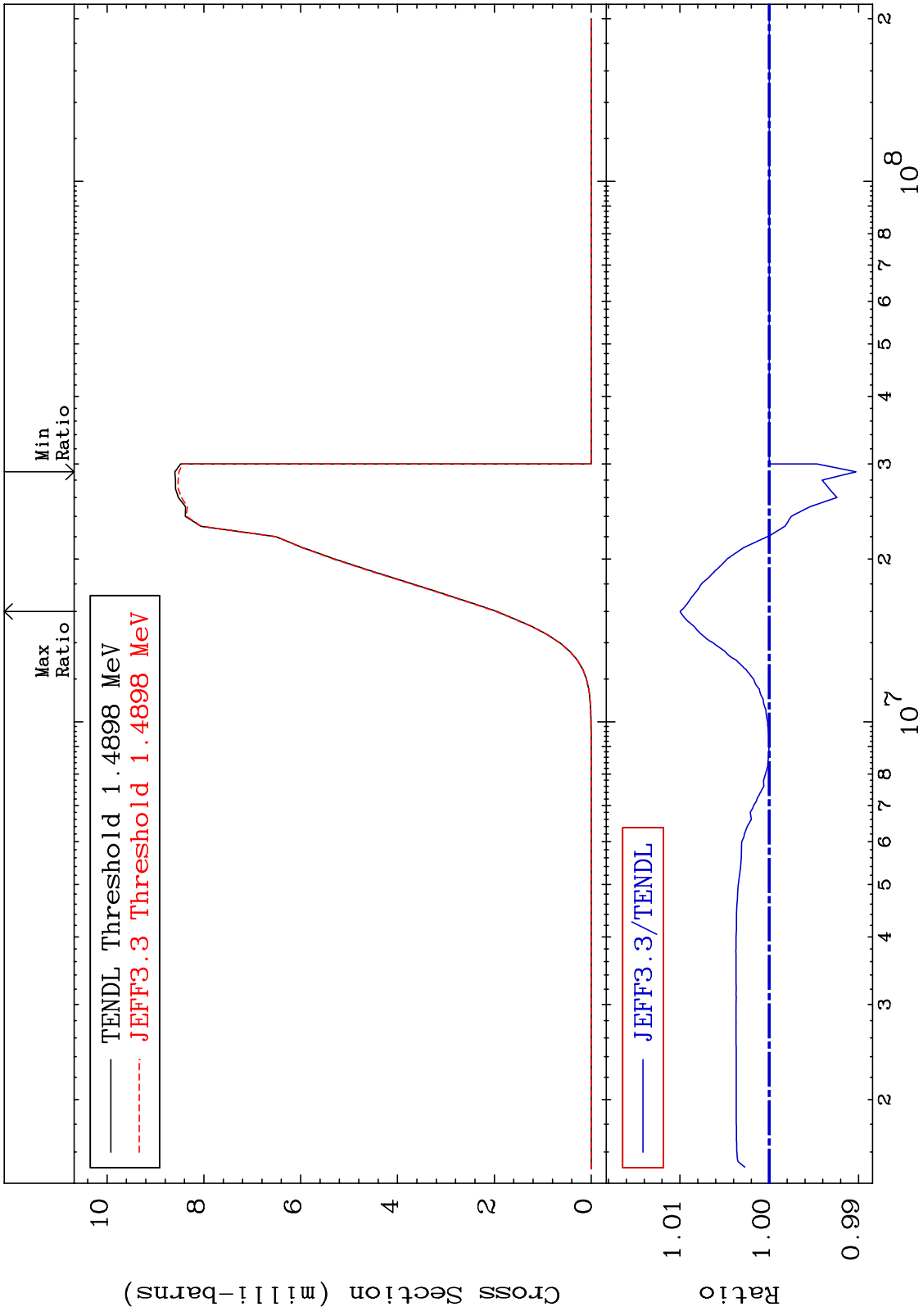
Radionuclide Production Cross Section 0.000 To 70.07 %





MAT 8322

(n,d):82-Pb-207g 83-Bi-208  
Radionuclide Production Cross Section -0.970 To 0.999 %



83

Incident Energy (eV)

83-Bi-208

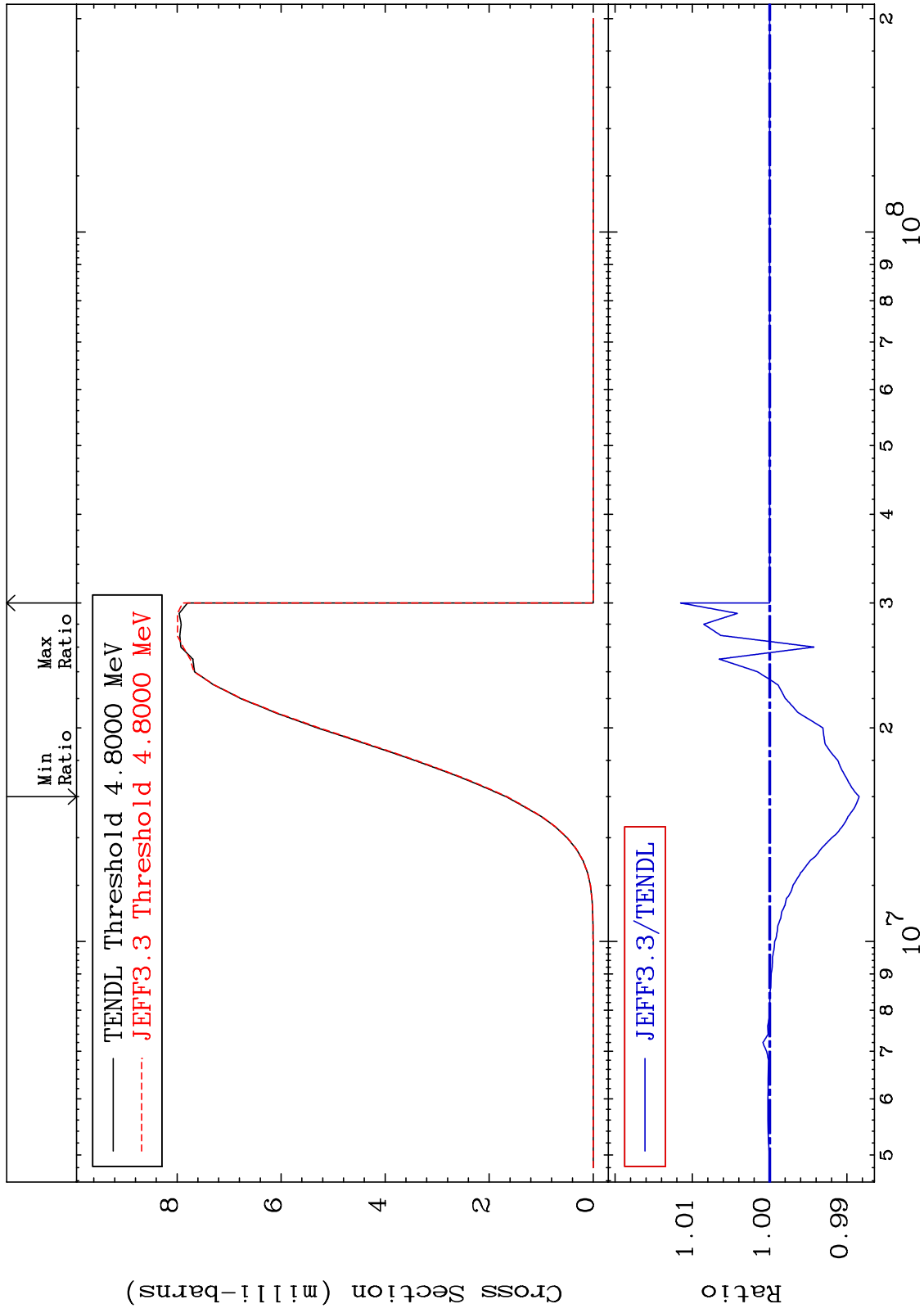
MAT 8322

(n, d) : 82-Pb-207m3

83-Bi-208

Radionuclide Production Cross Section

-1.158 To 1.152 %

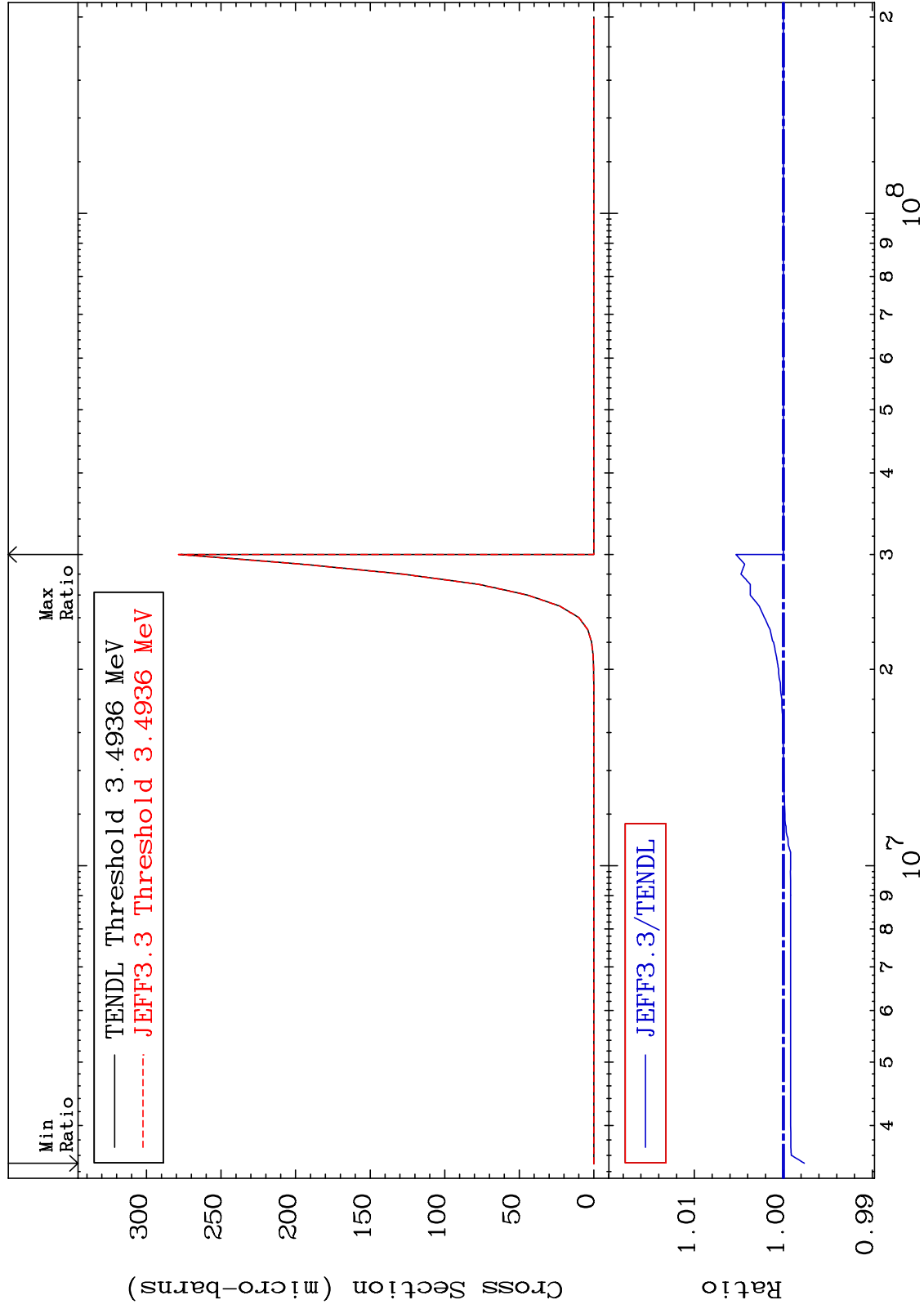


MAT 8322

(n,He-3):81-Tl-206g

83-Bi-208

Radionuclide Production Cross Section -0.237 To 0.533 %

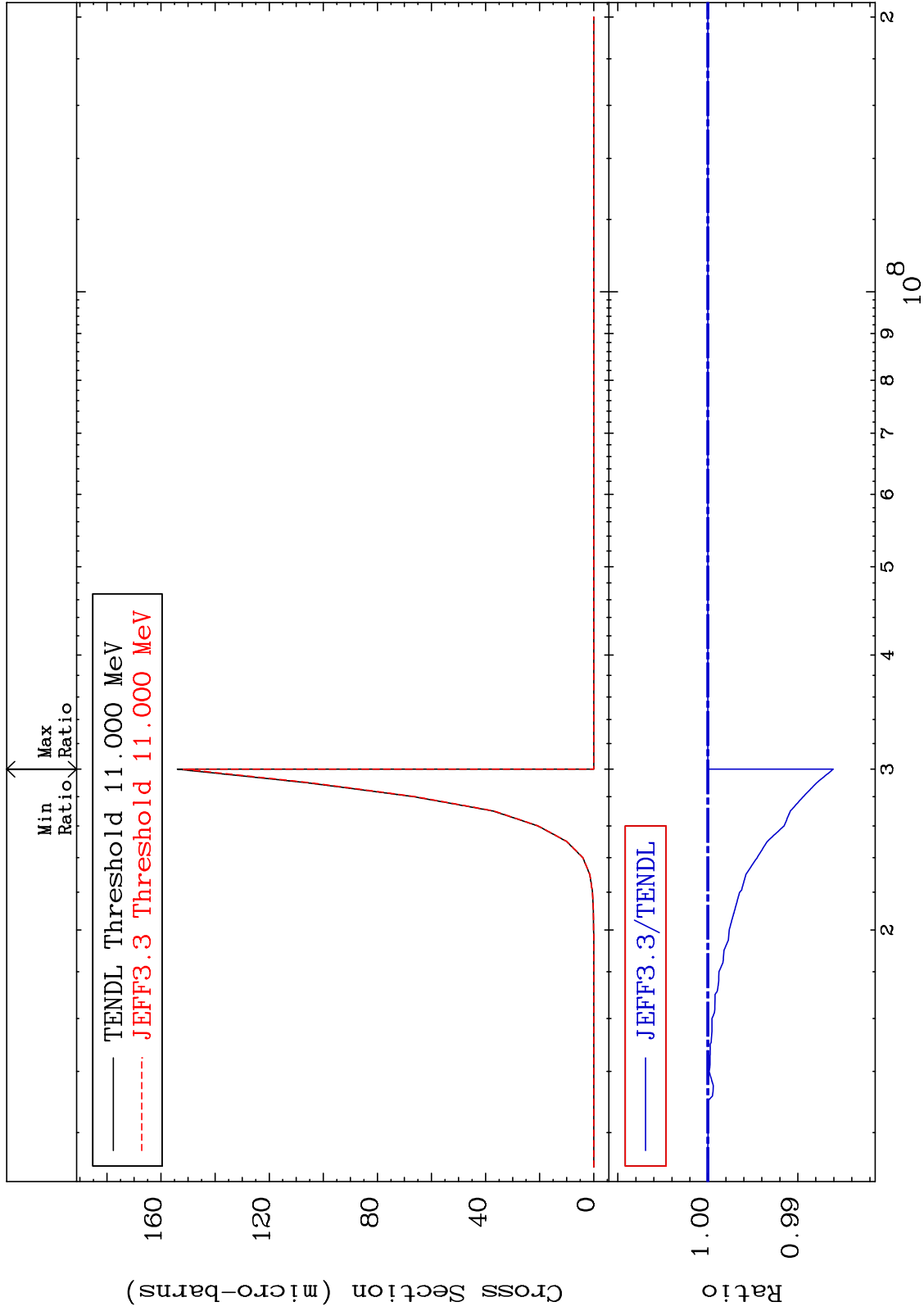


85

Incident Energy (eV)

83-Bi-208

Radionuclide Production Cross Section -1.394 To 0.000 %



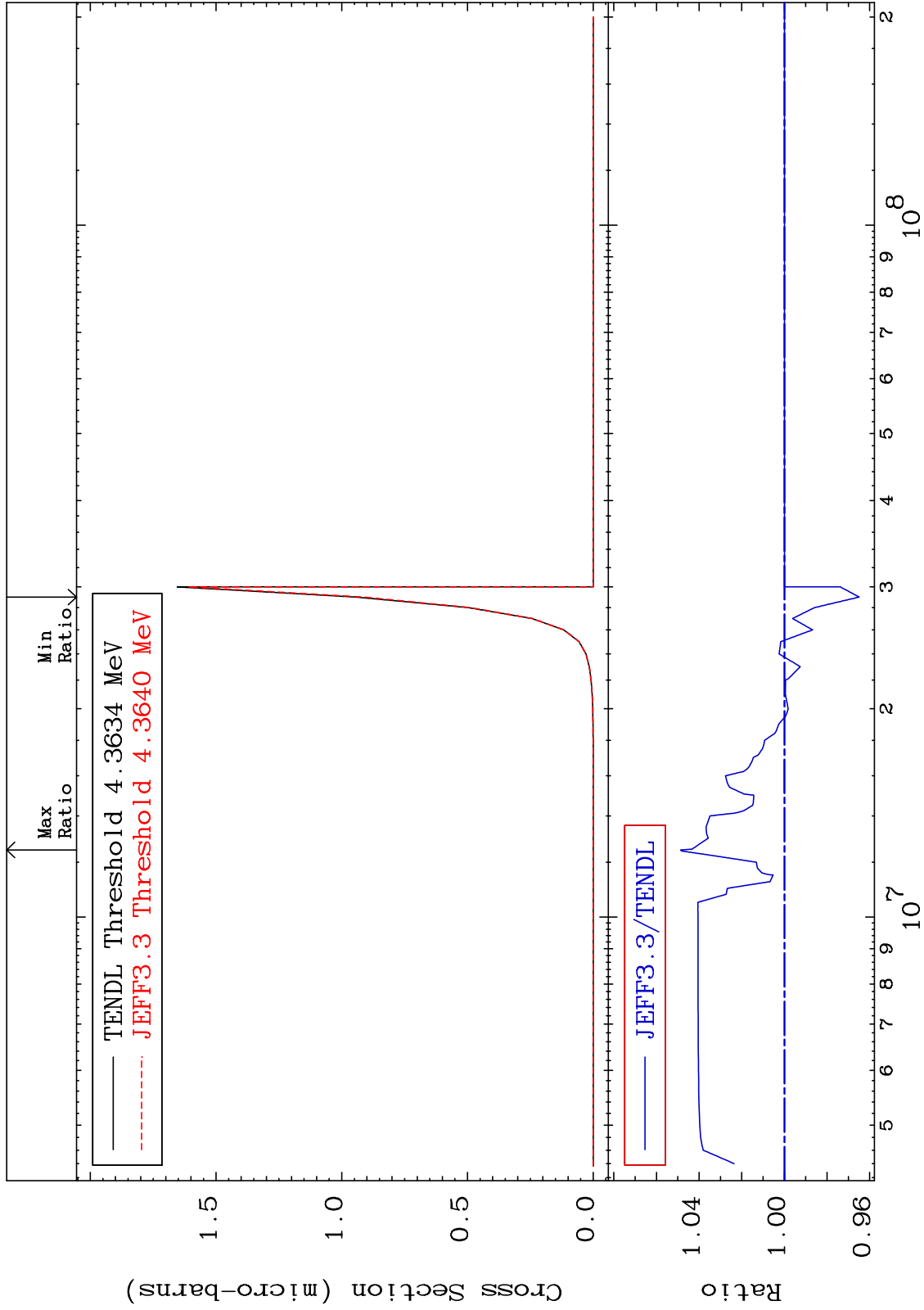
MAT 8322

(n,2p):81-Tl-207g

83-Bi-208

Radionuclide Production Cross Section

-3.507 To 4.868 %



87

Incident Energy (eV)

83-Bi-208

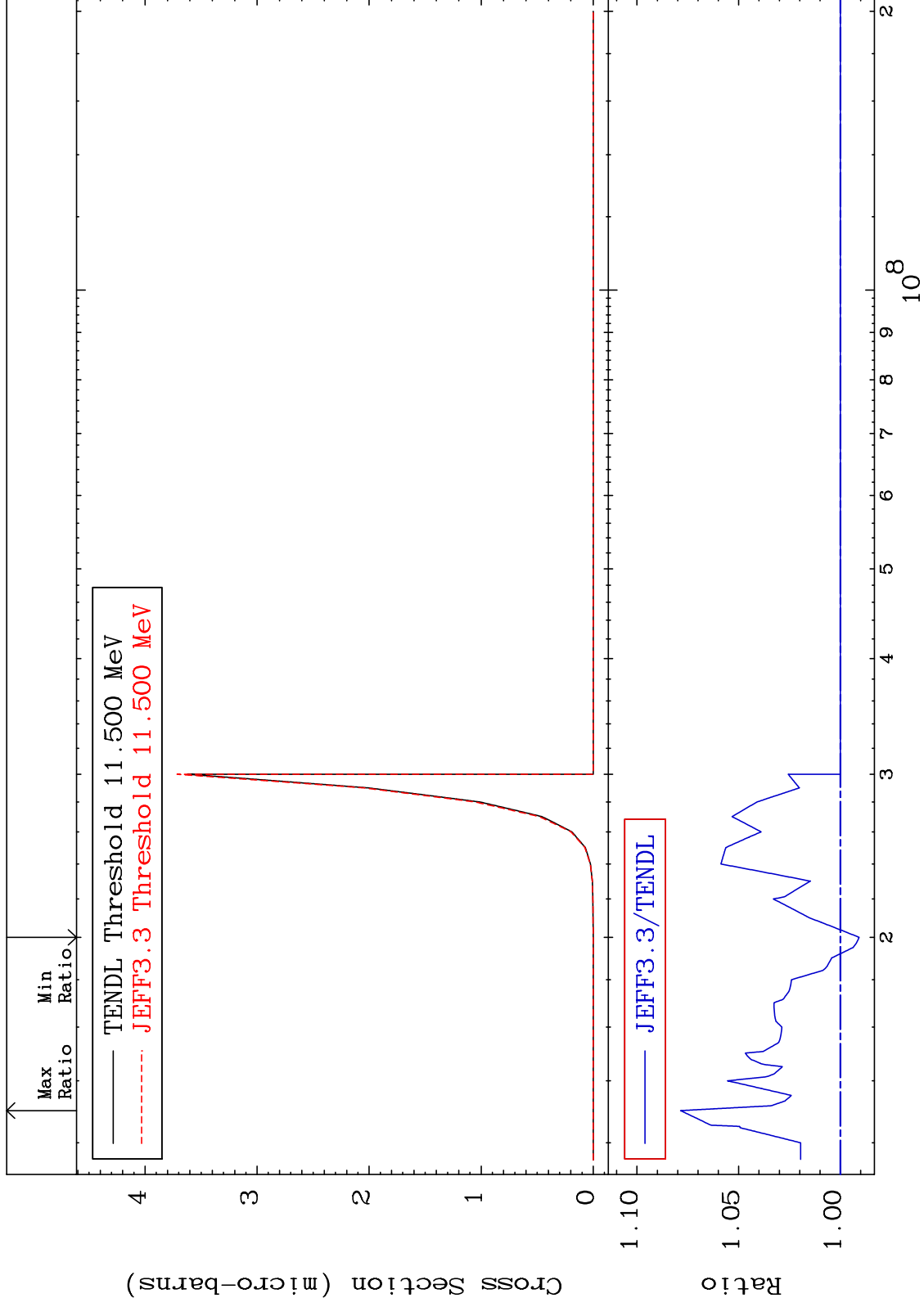


MAT 8322

(n,2p):81-Tl-207m2

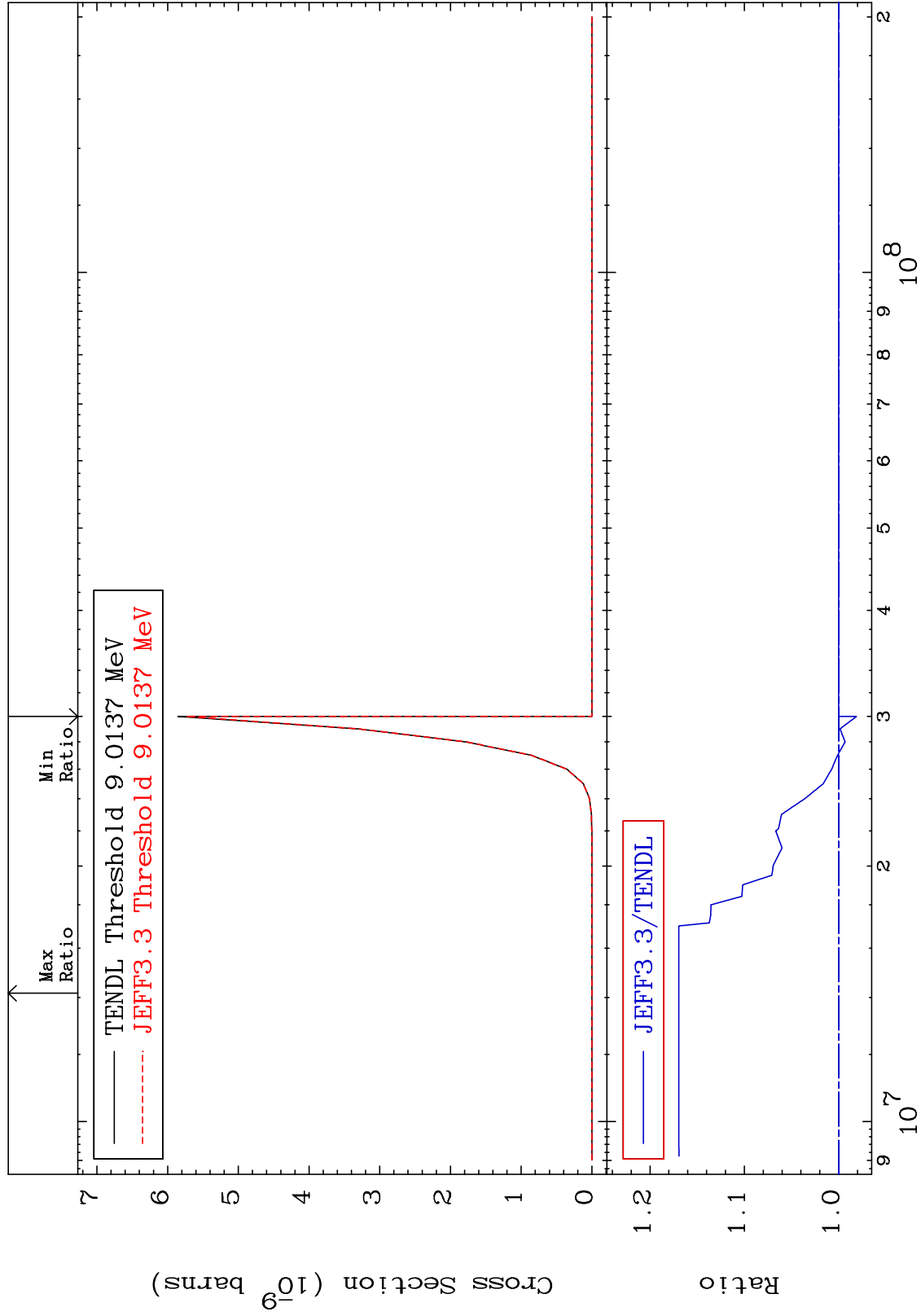
83-Bi-208

Radionuclide Production Cross Section -0.925 To 7.855 %



MAT 8322

(n, p) d:81-Tl-206g 83-Bi-208  
Radionuclide Production Cross Section -1.891 To 16.94 %



89

Incident Energy (eV)

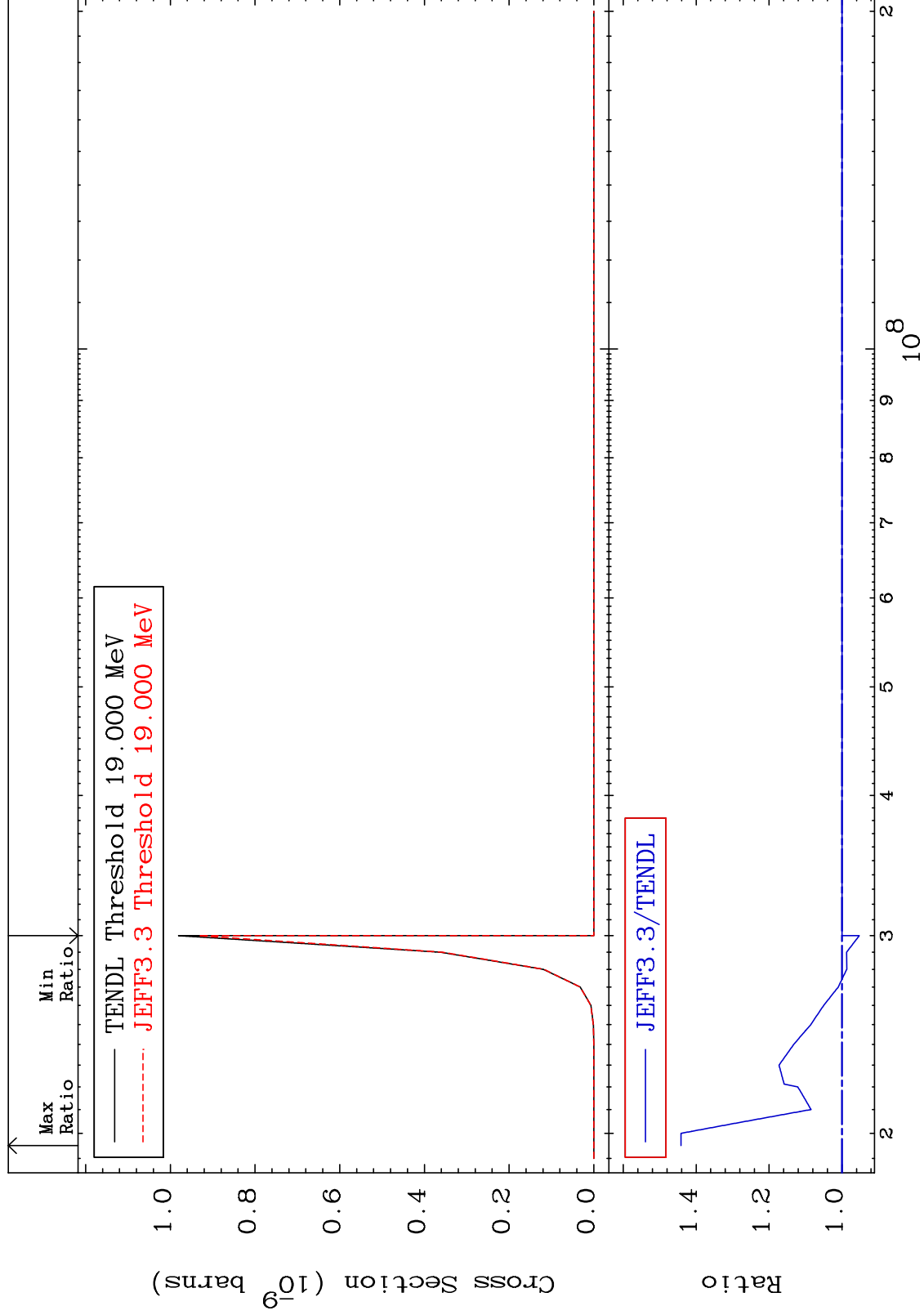
83-Bi-208

MAT 8322

(n,p) d:81-Tl-206m5

83-Bi-208

Radionuclide Production Cross Section -4.760 To 44.14 %



90

Incident Energy (eV)

83-Bi-208