

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
Web: redcullen1.net/HOMEPAGE.NEW

Press Mouse Button to Start

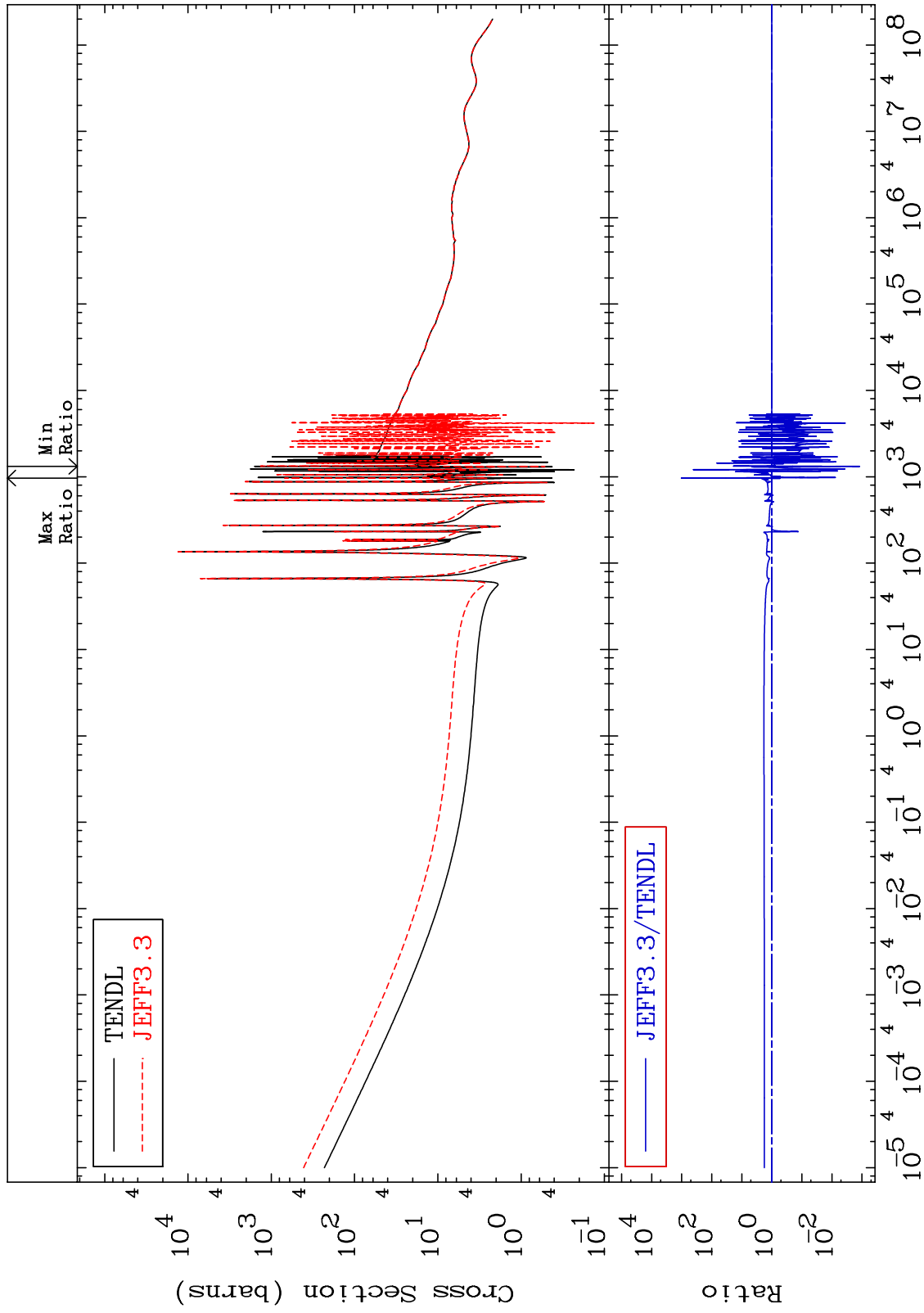
MAT 5825

Total

58-Ce-136

Cross Section

-99.88 To 9999. %



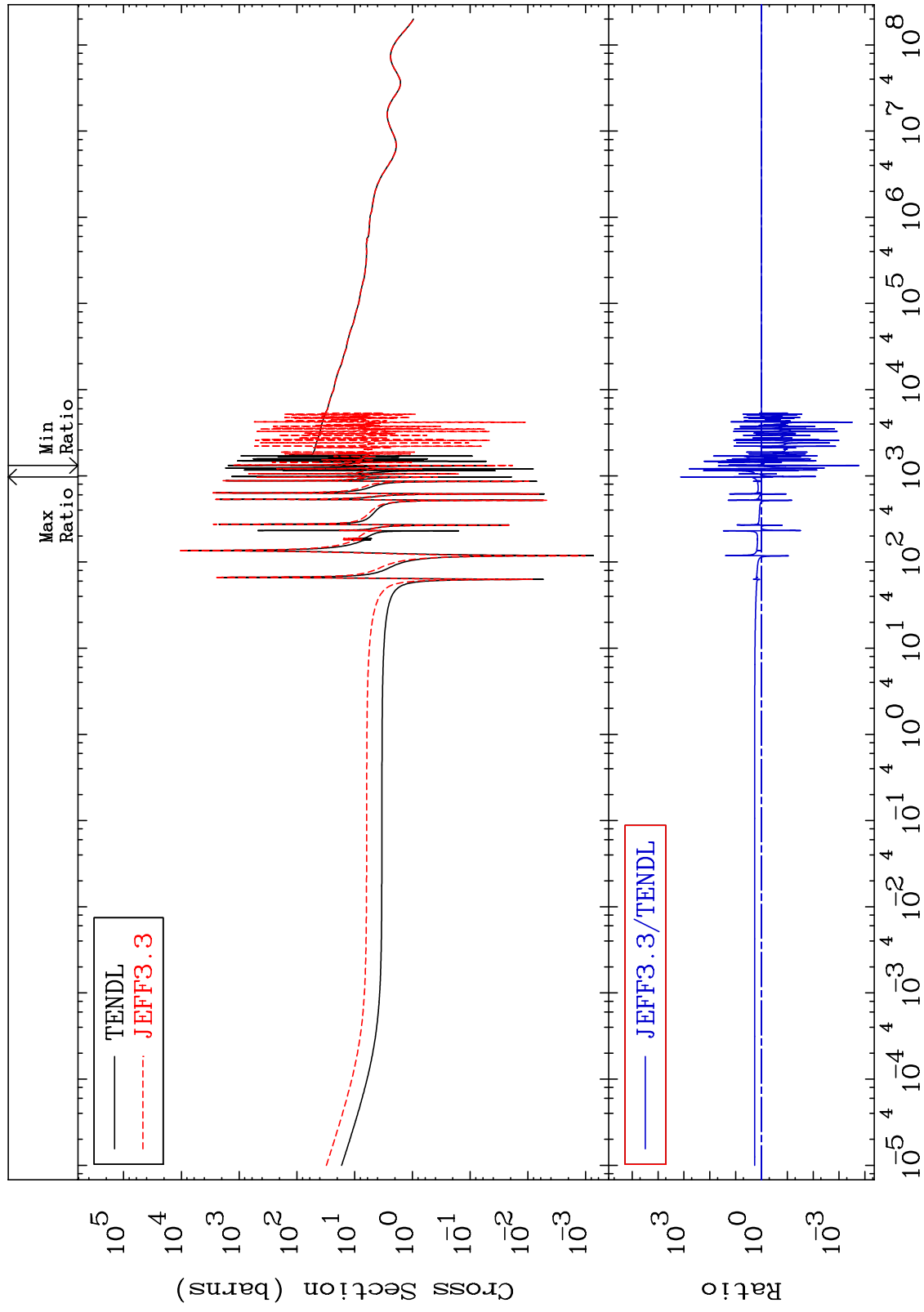
1

58-Ce-136

MAT 5825

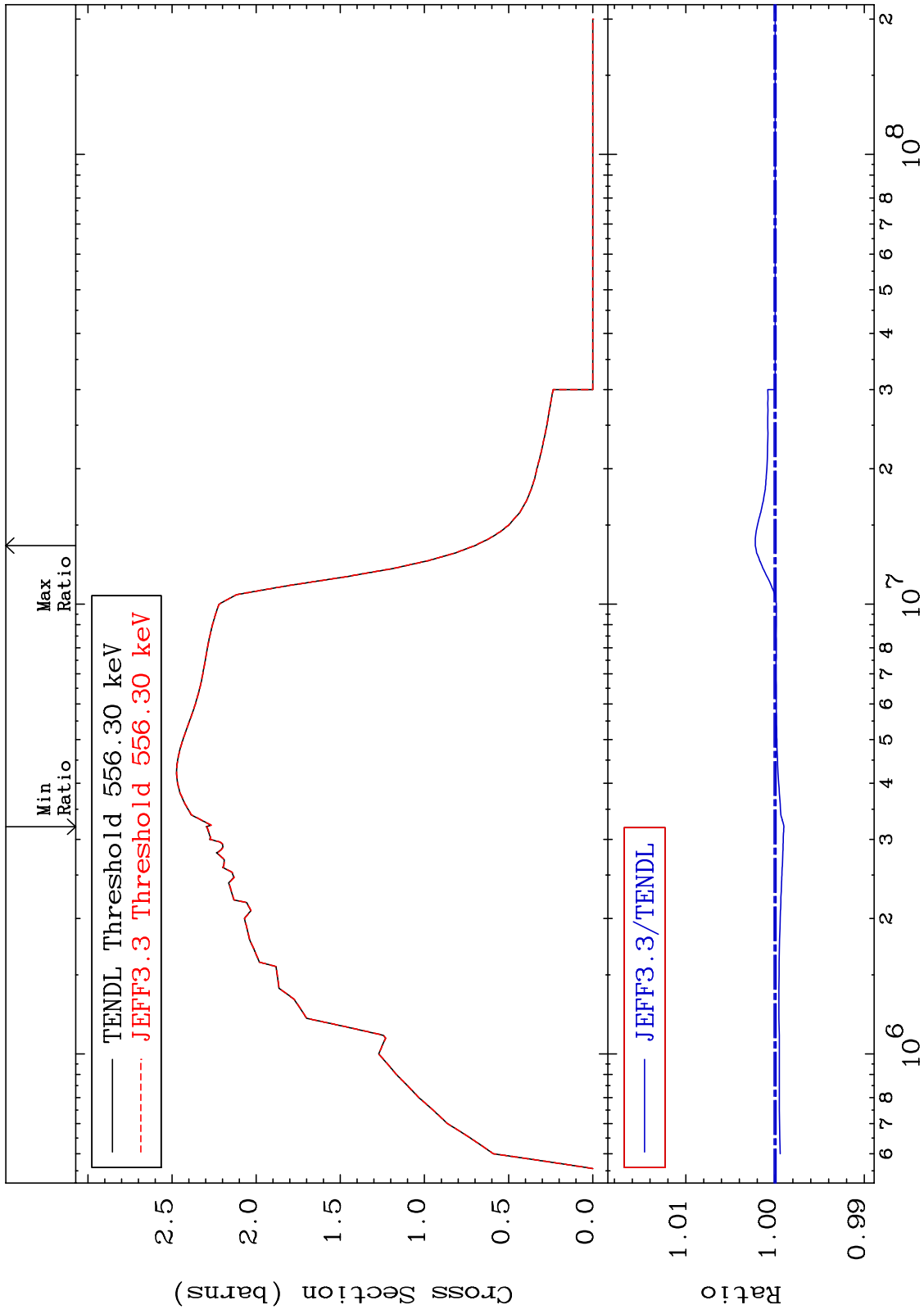
Elastic
Cross Section

58-Ce-136
-99.98 To 9999. %



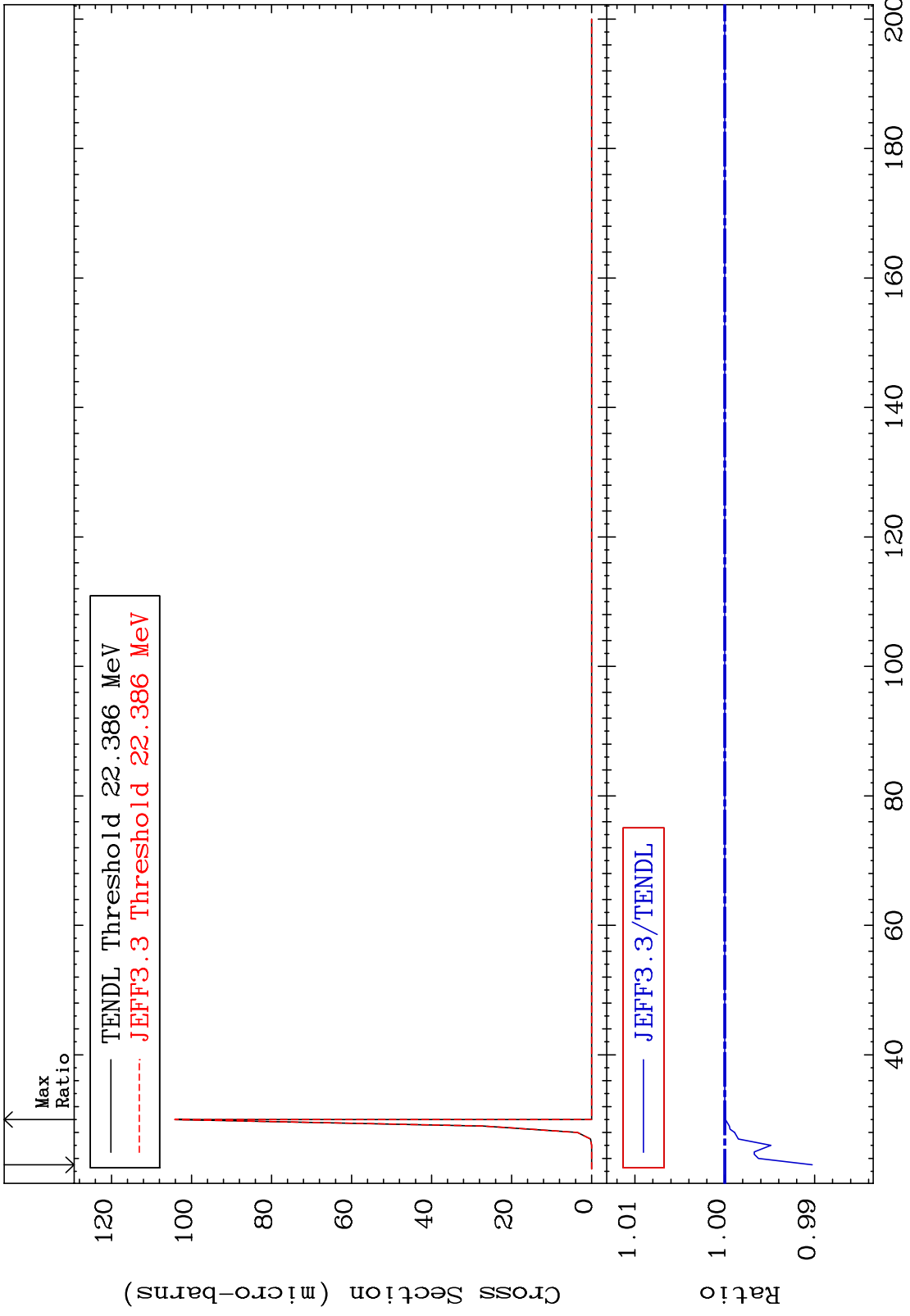
MAT 5825 58-Ce-136 -0.098 To 0.222 %

Inelastic Cross Section

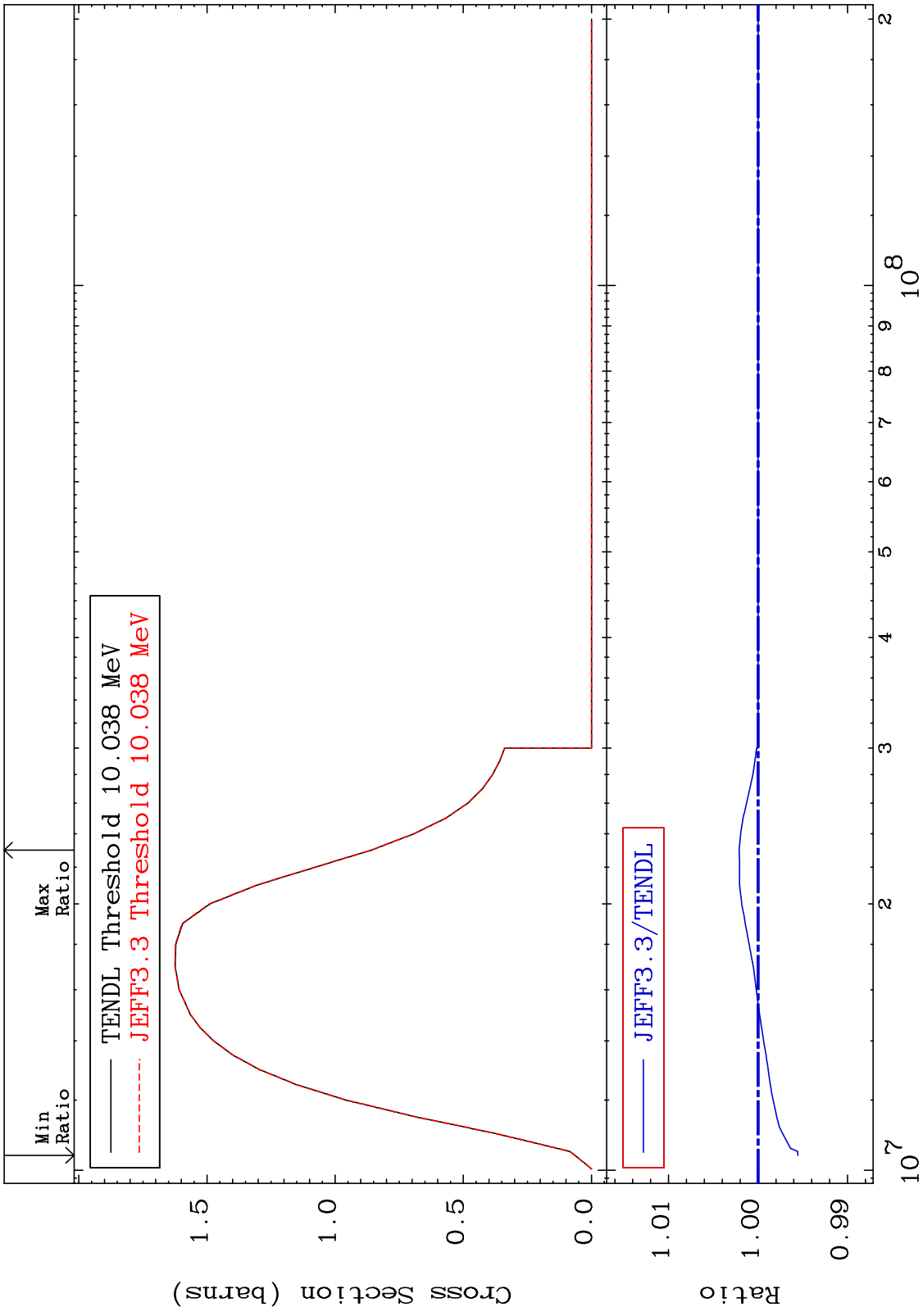


3 58-Ce-136

MAT 5825 (n,2n) d 58-Ce-136
Cross Section -0.974 To 0.000 %

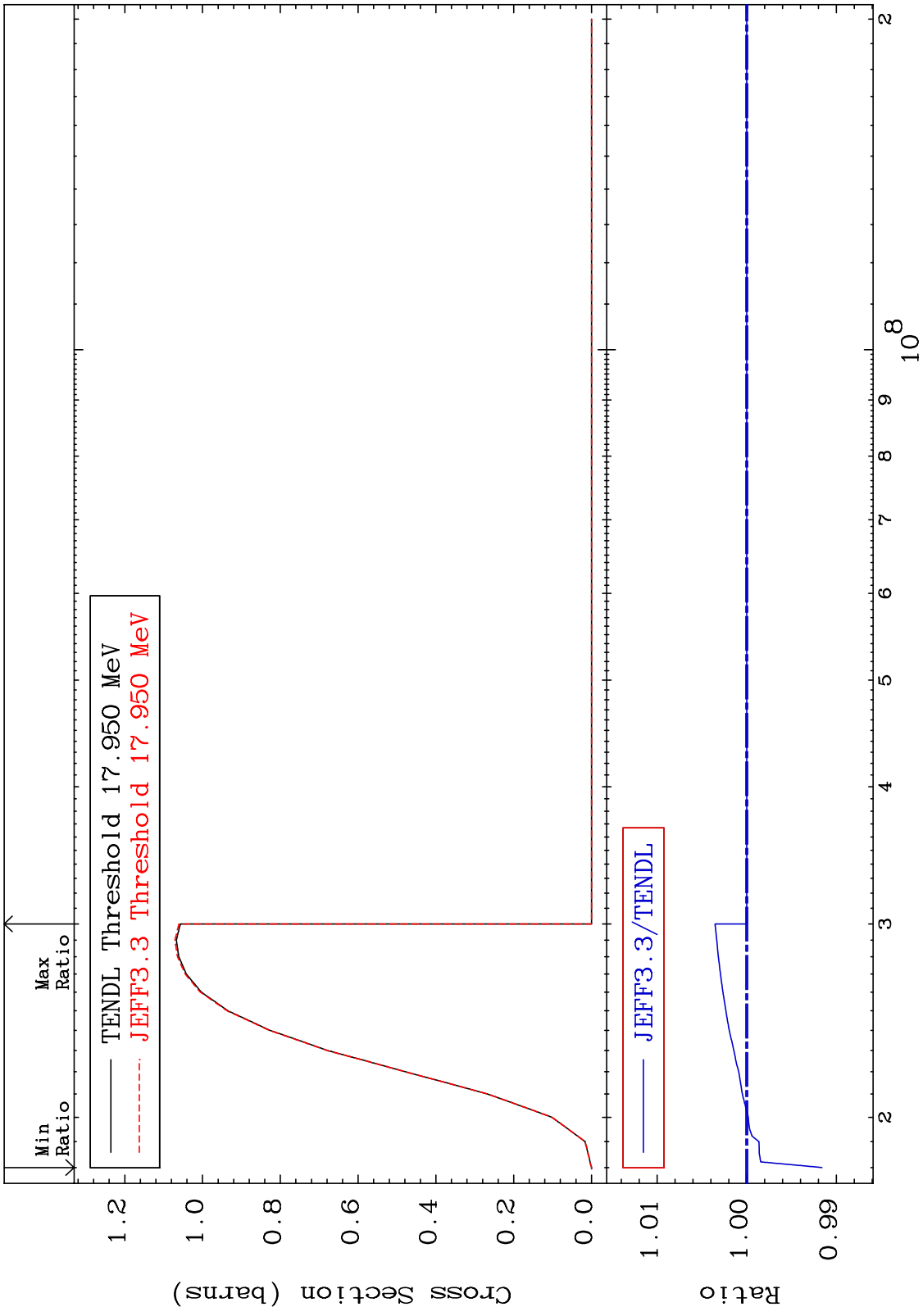


MAT 5825 (n,2n) Cross Section 58-Ce-136 -0.444 To 0.212 %



58-Ce-136

MAT 5825 (n,3n) Cross Section 58-Ce-136 -0.840 To 0.354 %



MAT 5825

$(n, n') \alpha$

58-Ce-136

-8.338 To 9999. %

Cross Section

Max Ratio

Min Ratio

TENDL Threshold 501.96 keV
JEFF3.3 Threshold 502.21 keV

Cross Section (milli-barns)

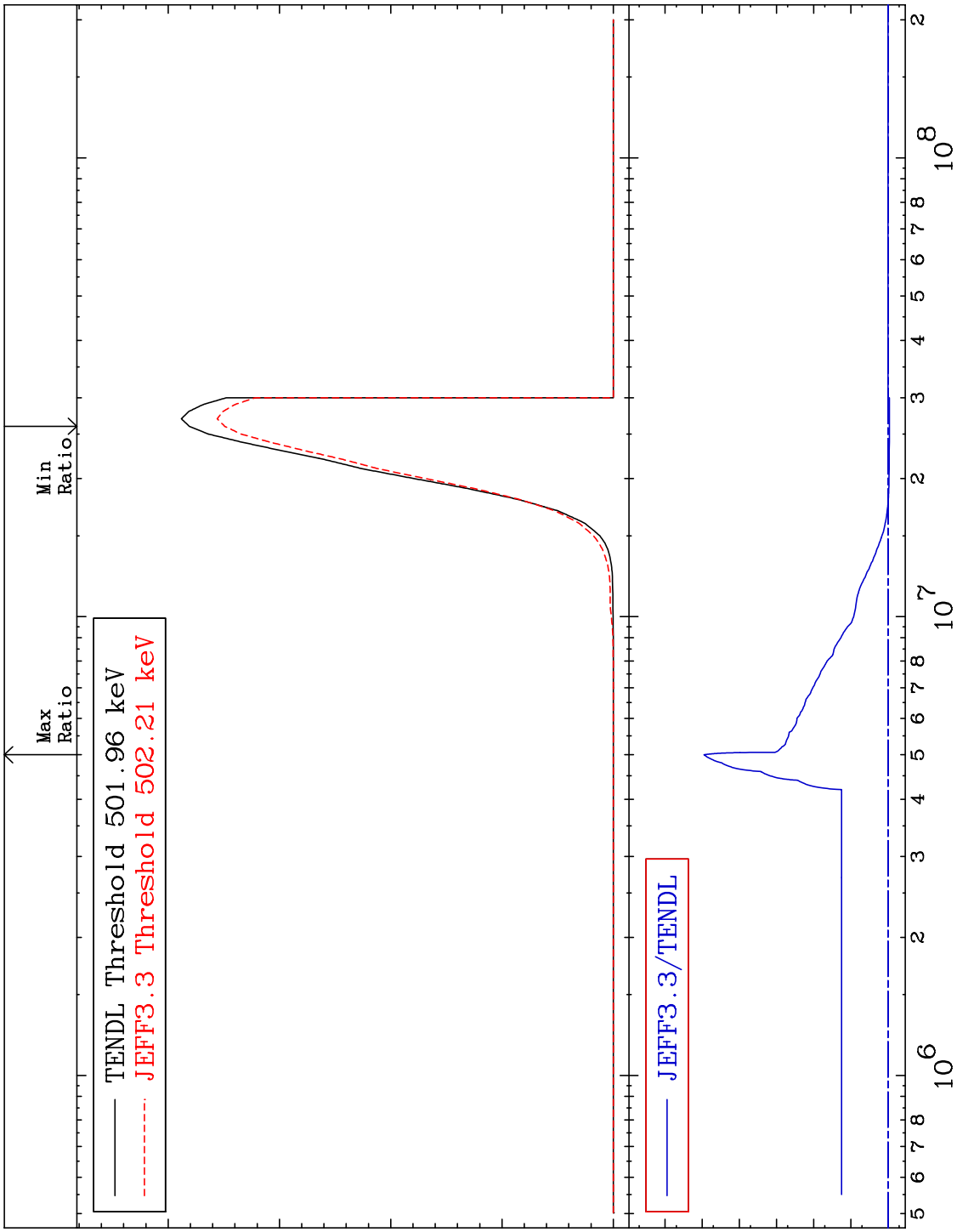
JEFF3.3/TENDL

Ratio

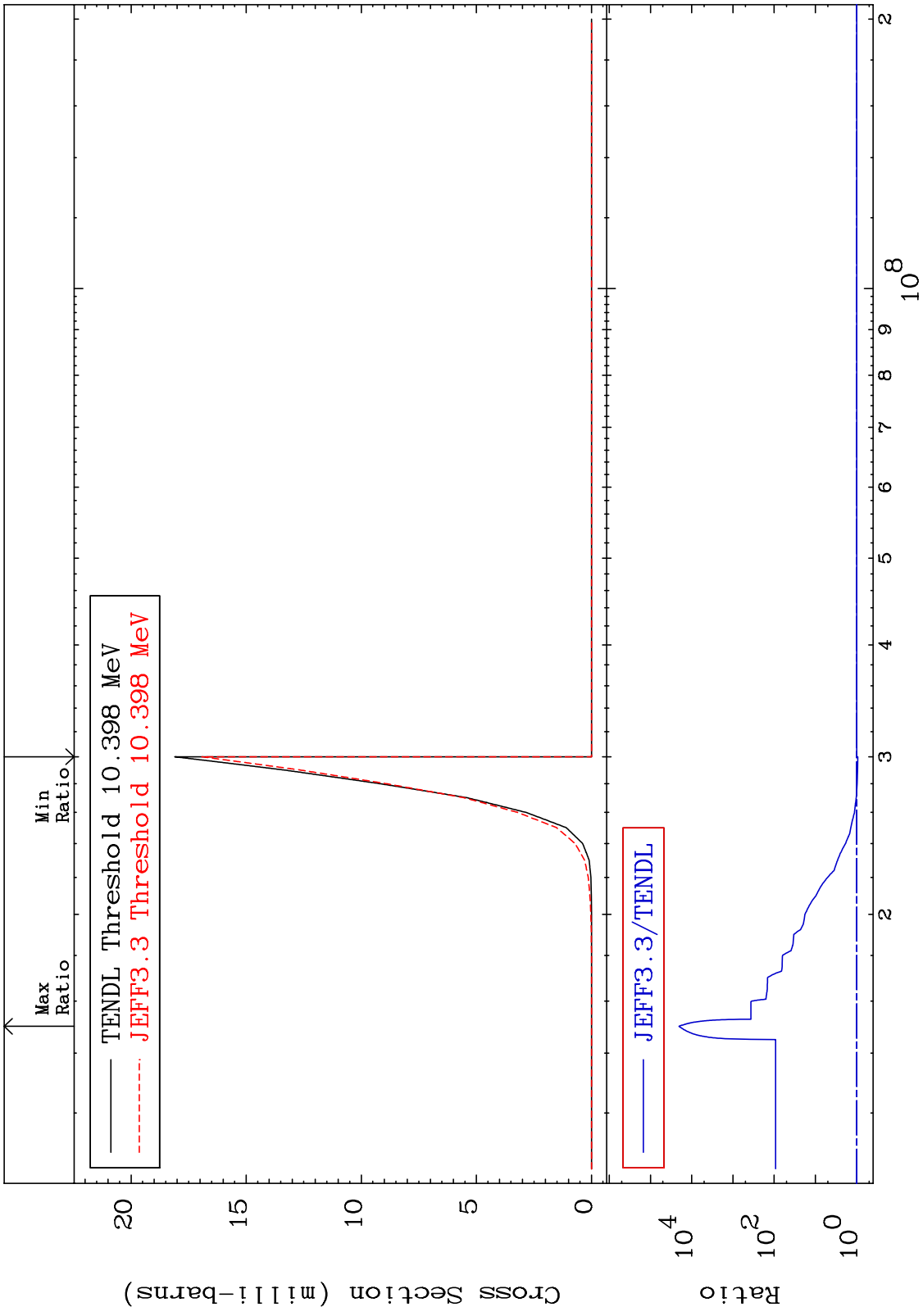
Incident Energy (eV)

7

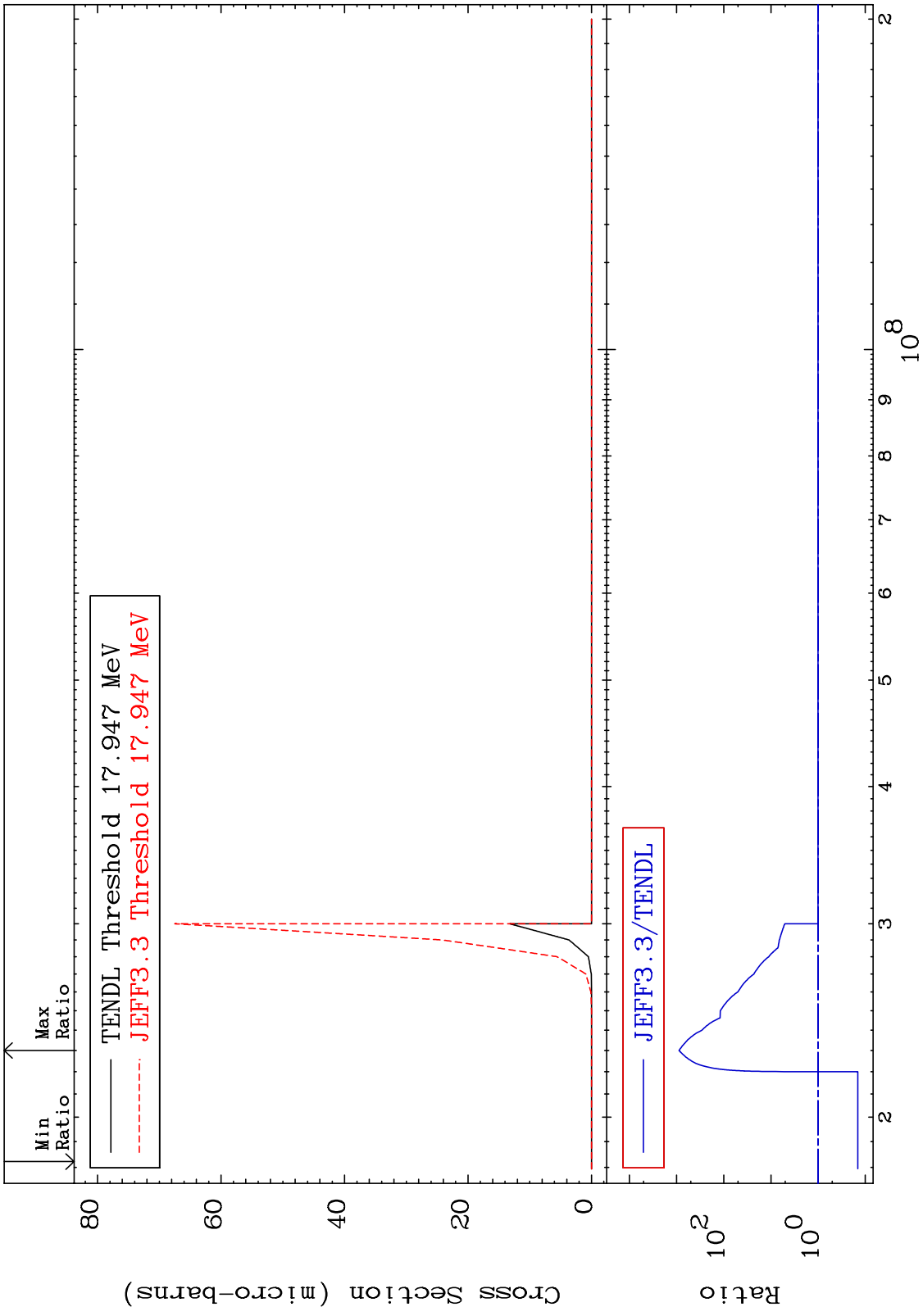
58-Ce-136



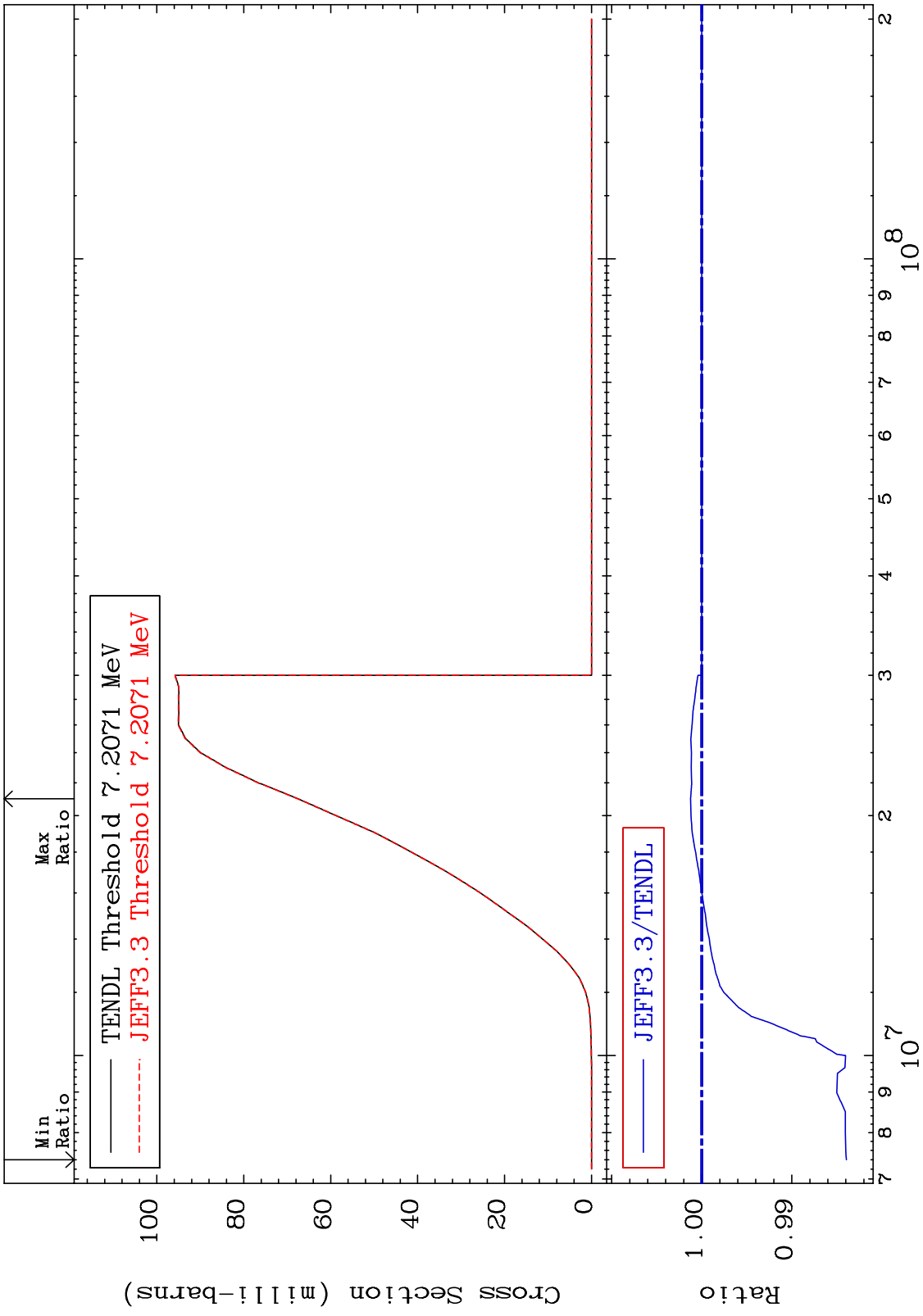
MAT 5825 $(n, 2n) \alpha$ 58-Ce-136
 Cross Section -6.451 To 9999. %



MAT 5825 (n,3n) α 58-Ce-136
 Cross Section -85.62 To 9999. %

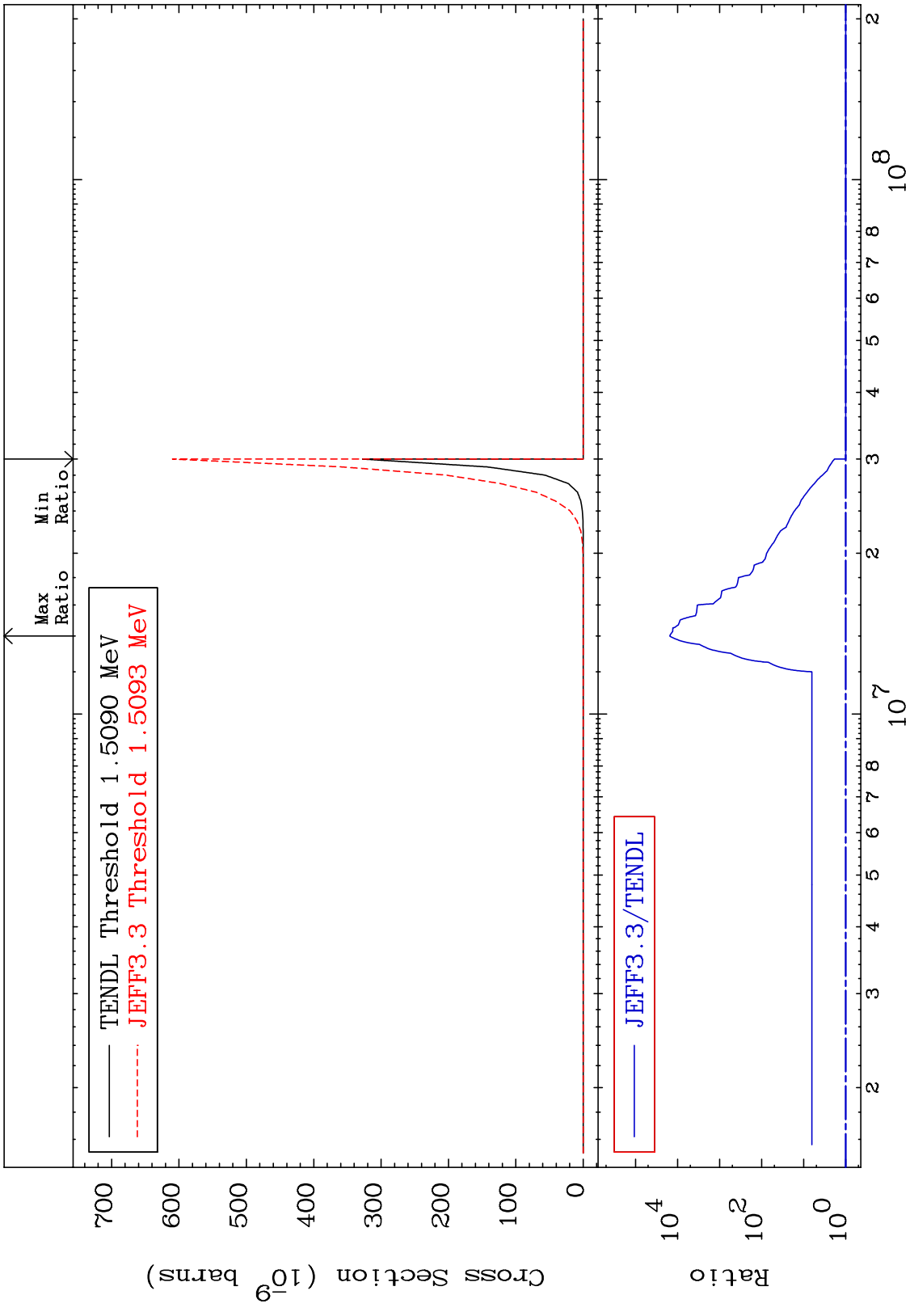


MAT 5825 (n,n') p 58-Ce-136
Cross Section -1.605 To 0.124 %

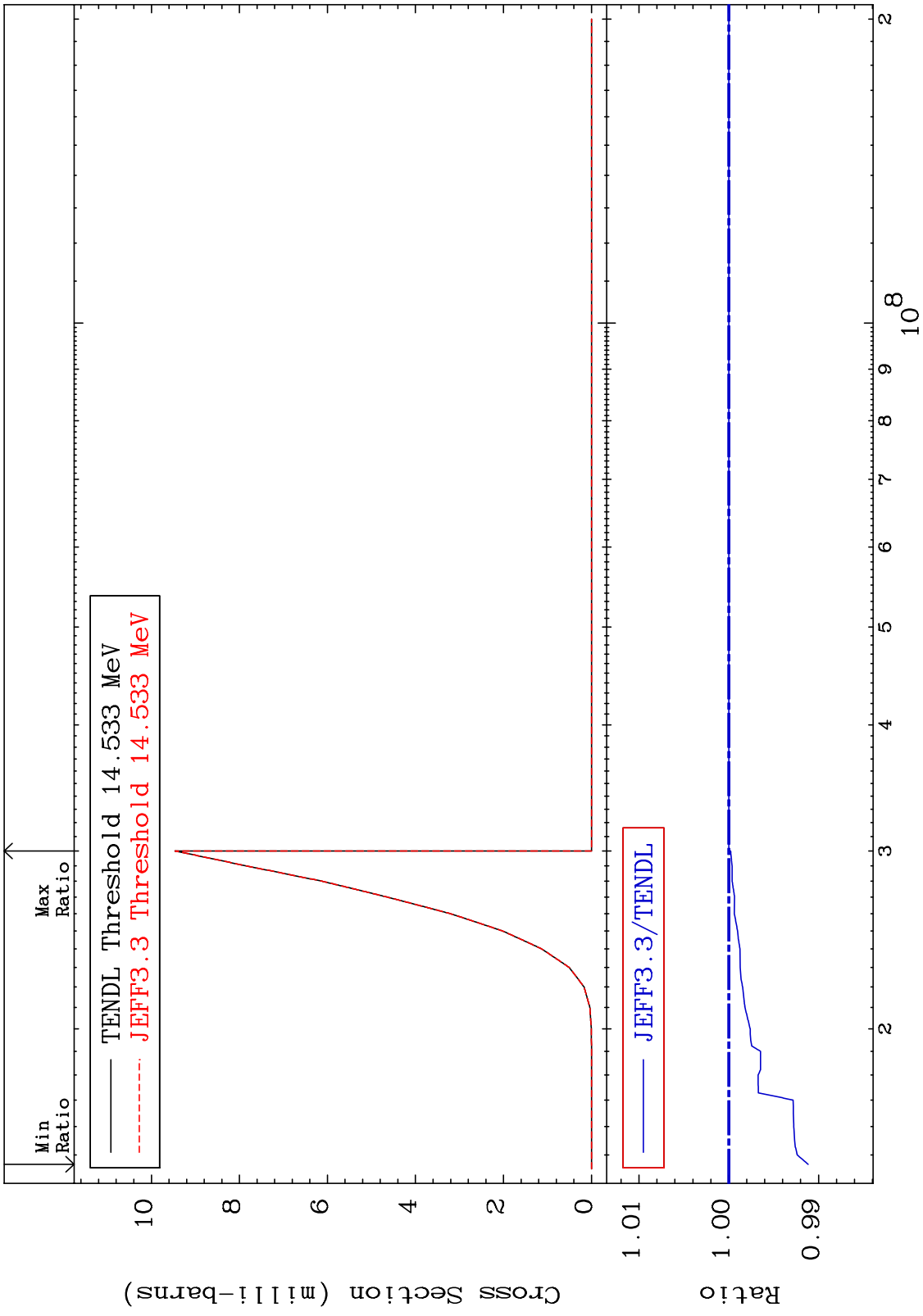


10 7 8 9 10⁷ 2 3 4 5 6 7 8 9 10⁸ 2 58-Ce-136

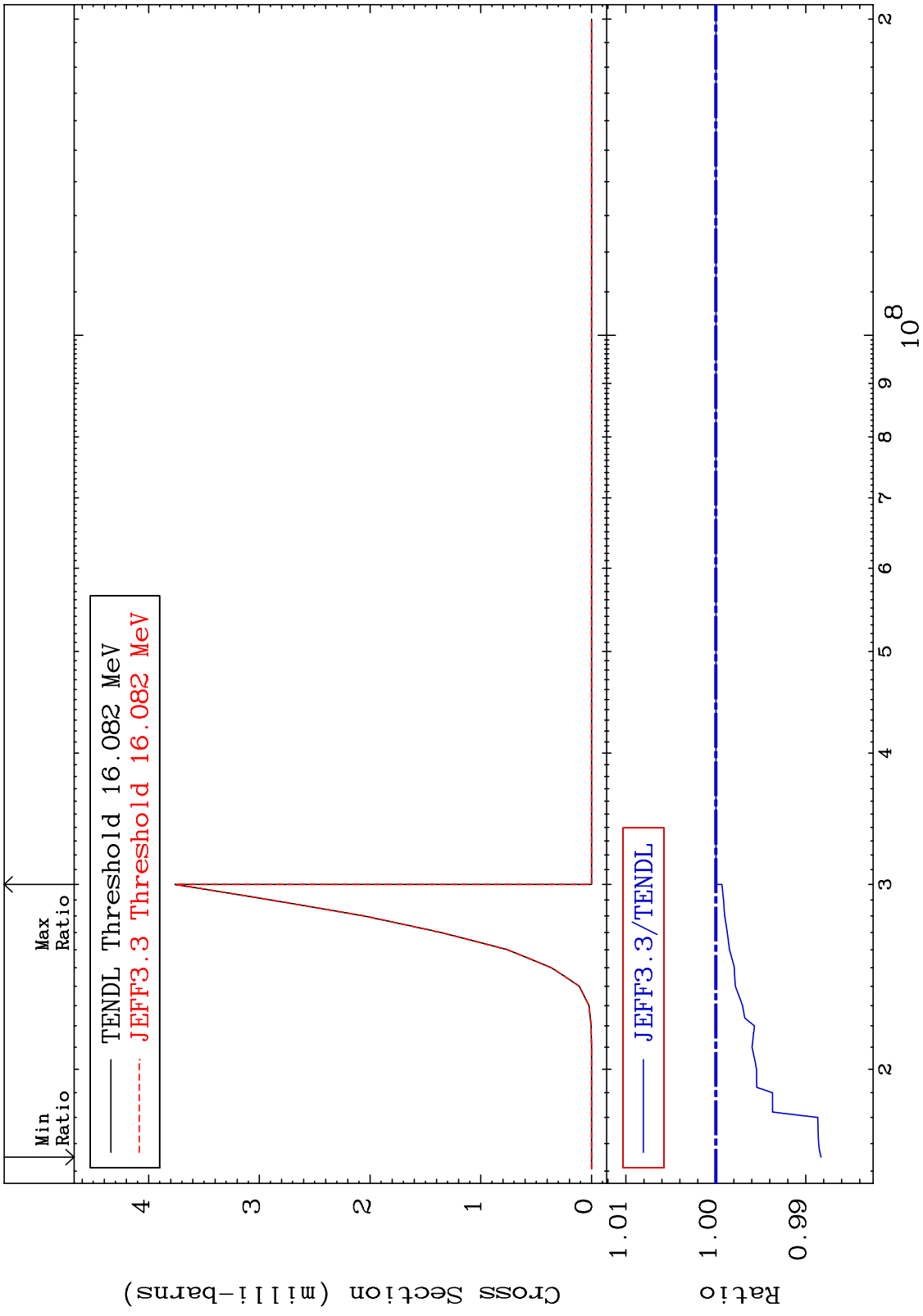
MAT 5825 (n, n') 2α Cross Section 58-Ce-136 To 9999. %



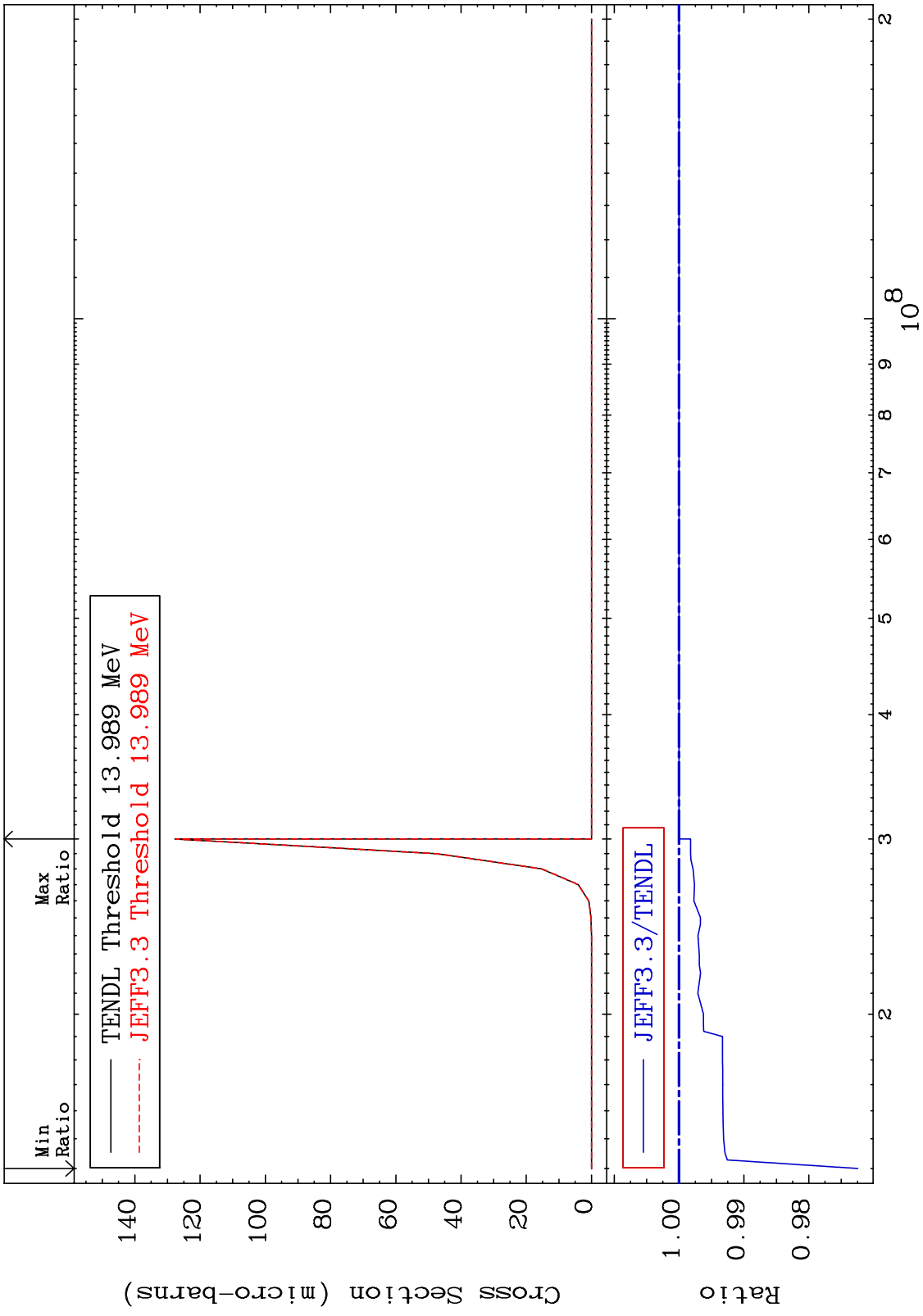
MAT 5825 (n, n') d 58-Ce-136
 Cross Section -0.883 To 0.000 %



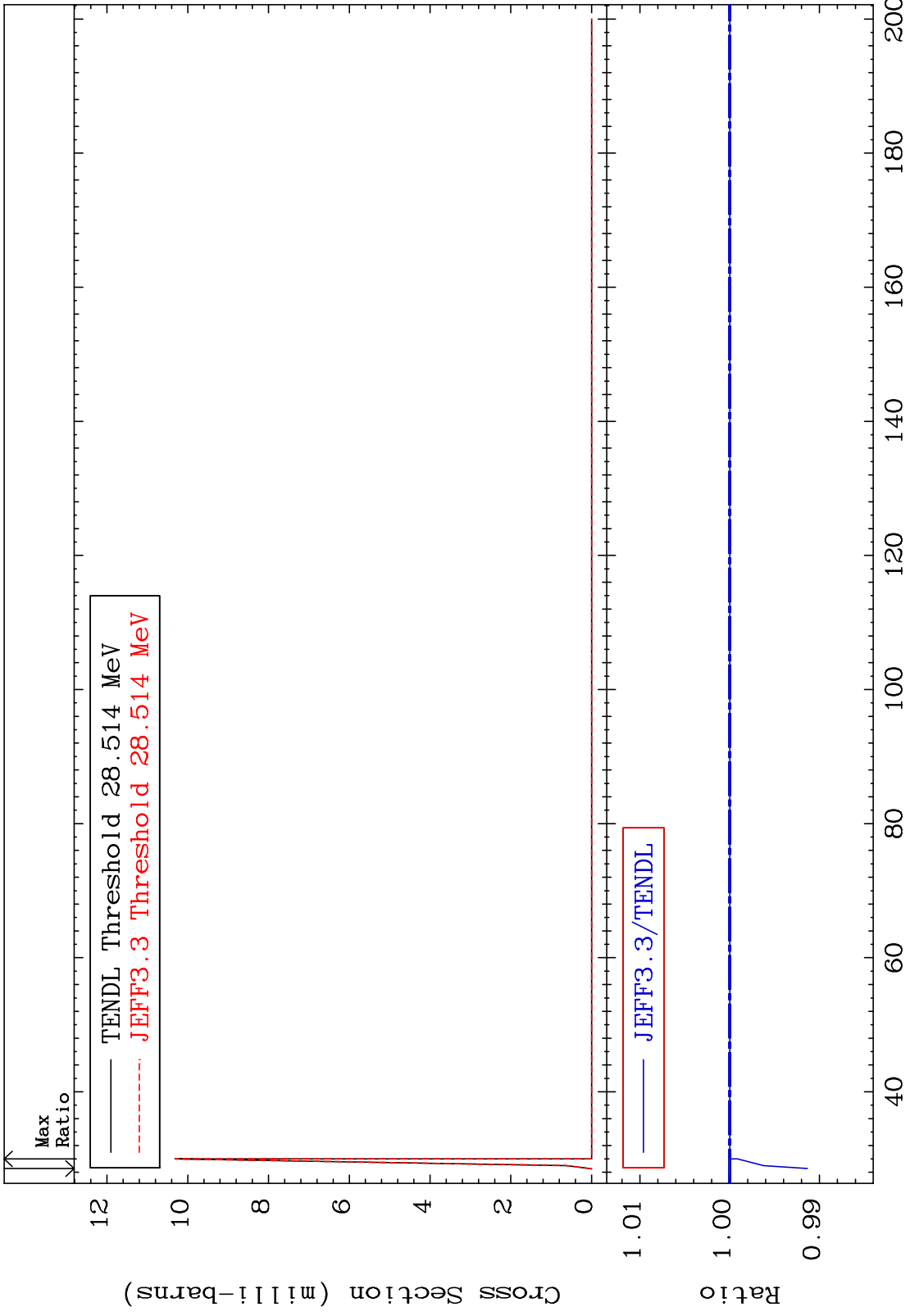
MAT 5825 (n, n') t 58-Ce-136
 Cross Section -1.170 To 0.000 %



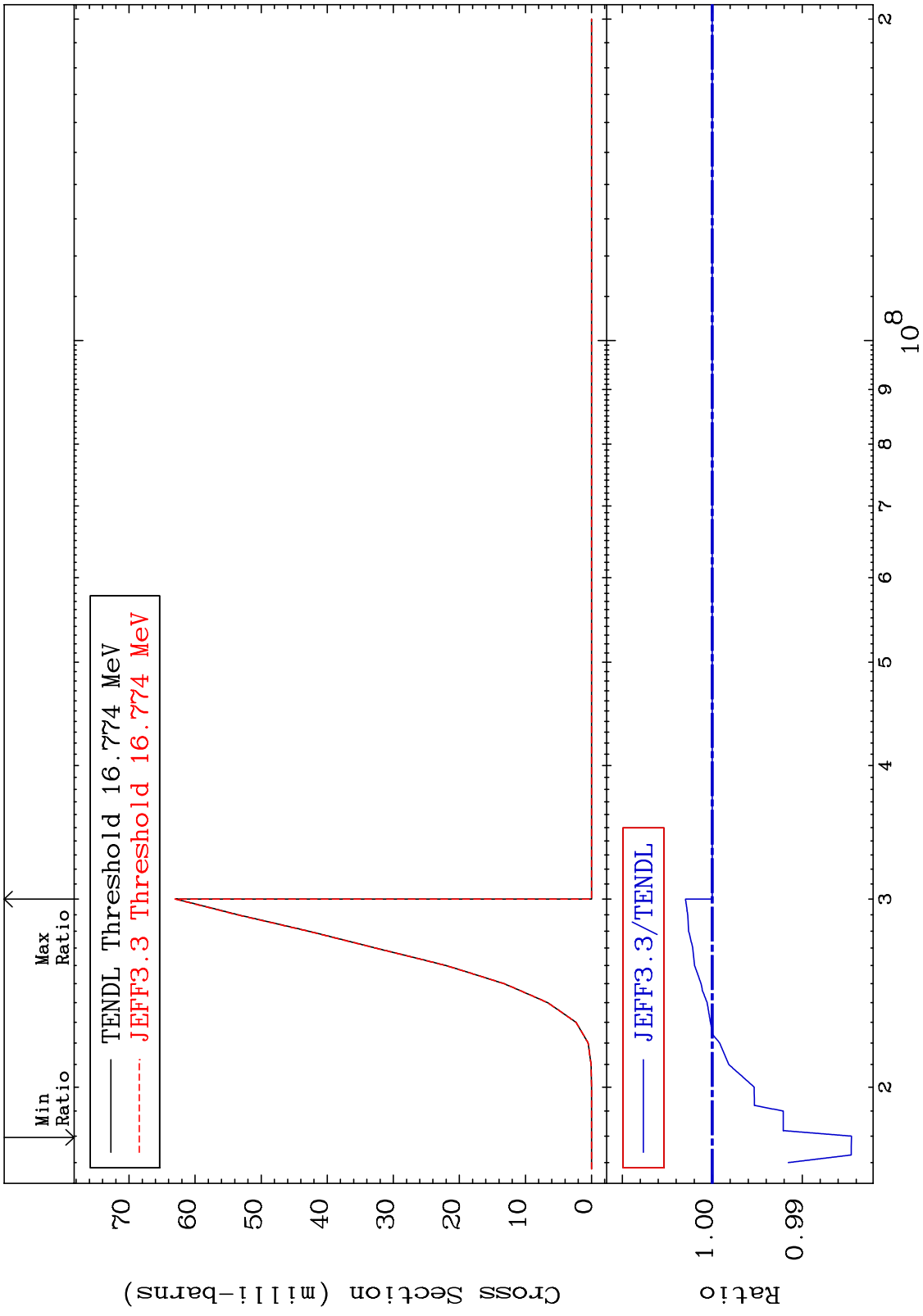
MAT 5825 (n, n') He-3 58-Ce-136
 Cross Section -2.756 To 0.000 %



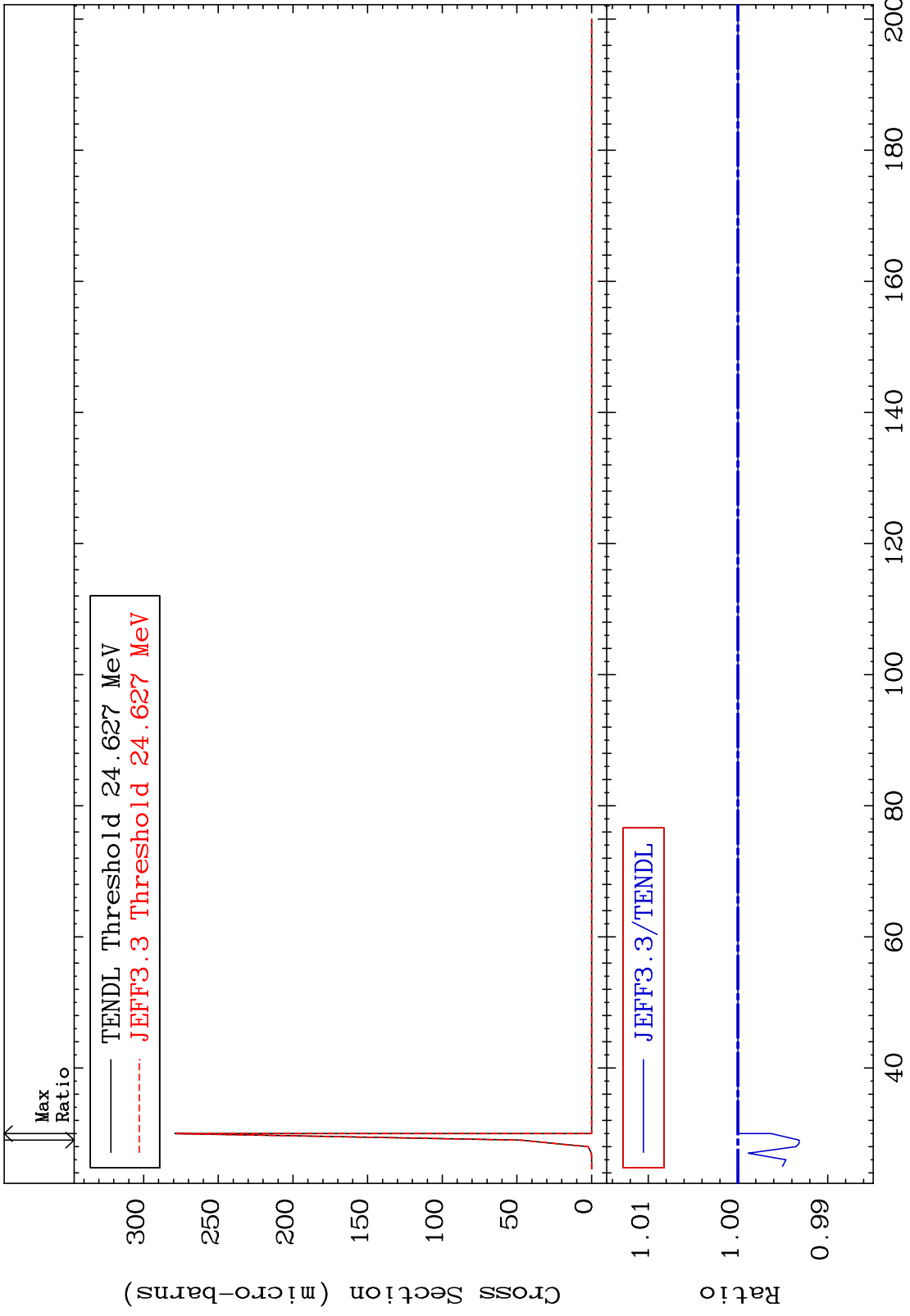
MAT 5825 (n,4n) 58-Ce-136
 Cross Section -0.865 To 0.000 %



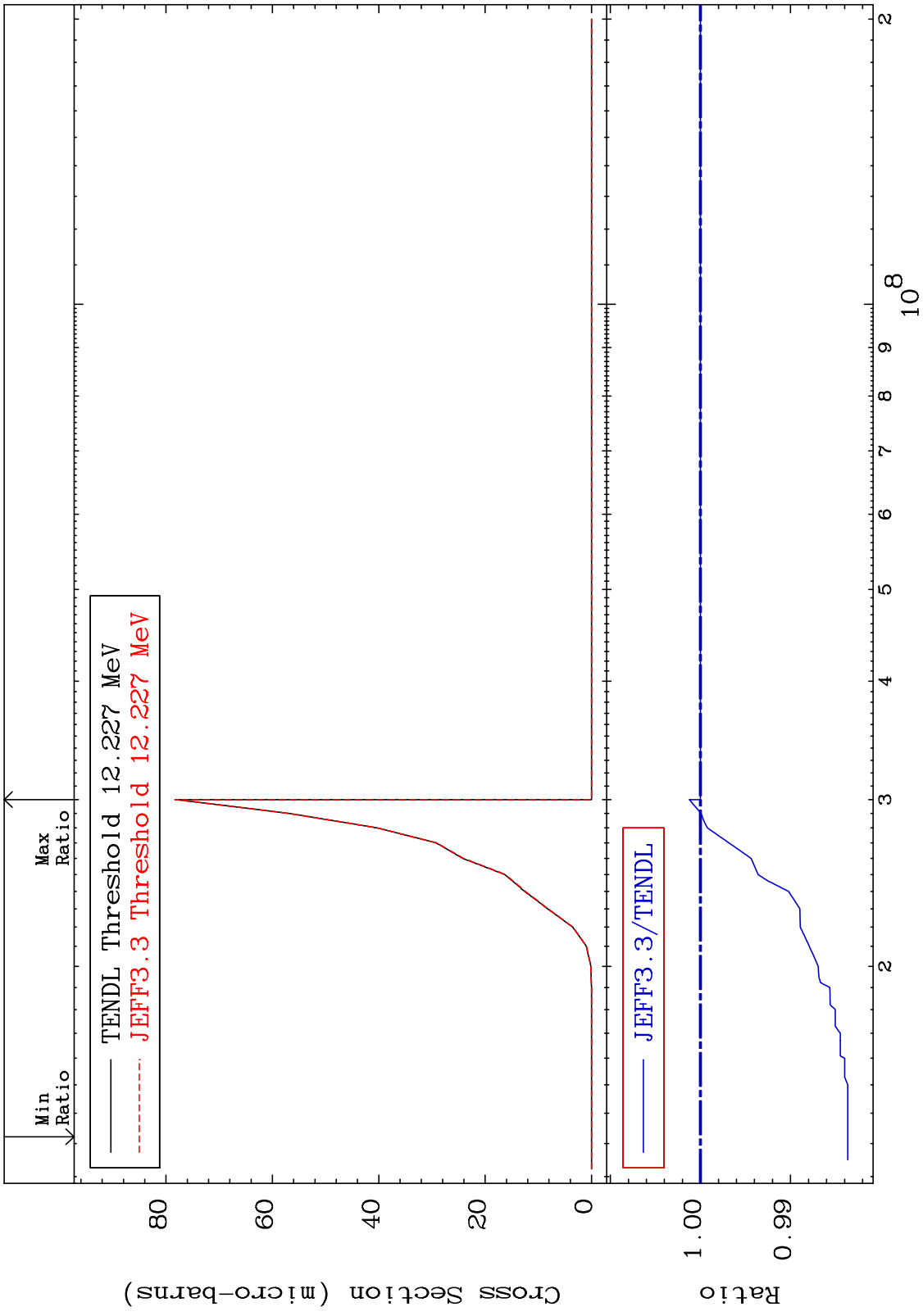
MAT 5825 (n,2n) p 58-Ce-136
 Cross Section -1.547 To 0.297 %



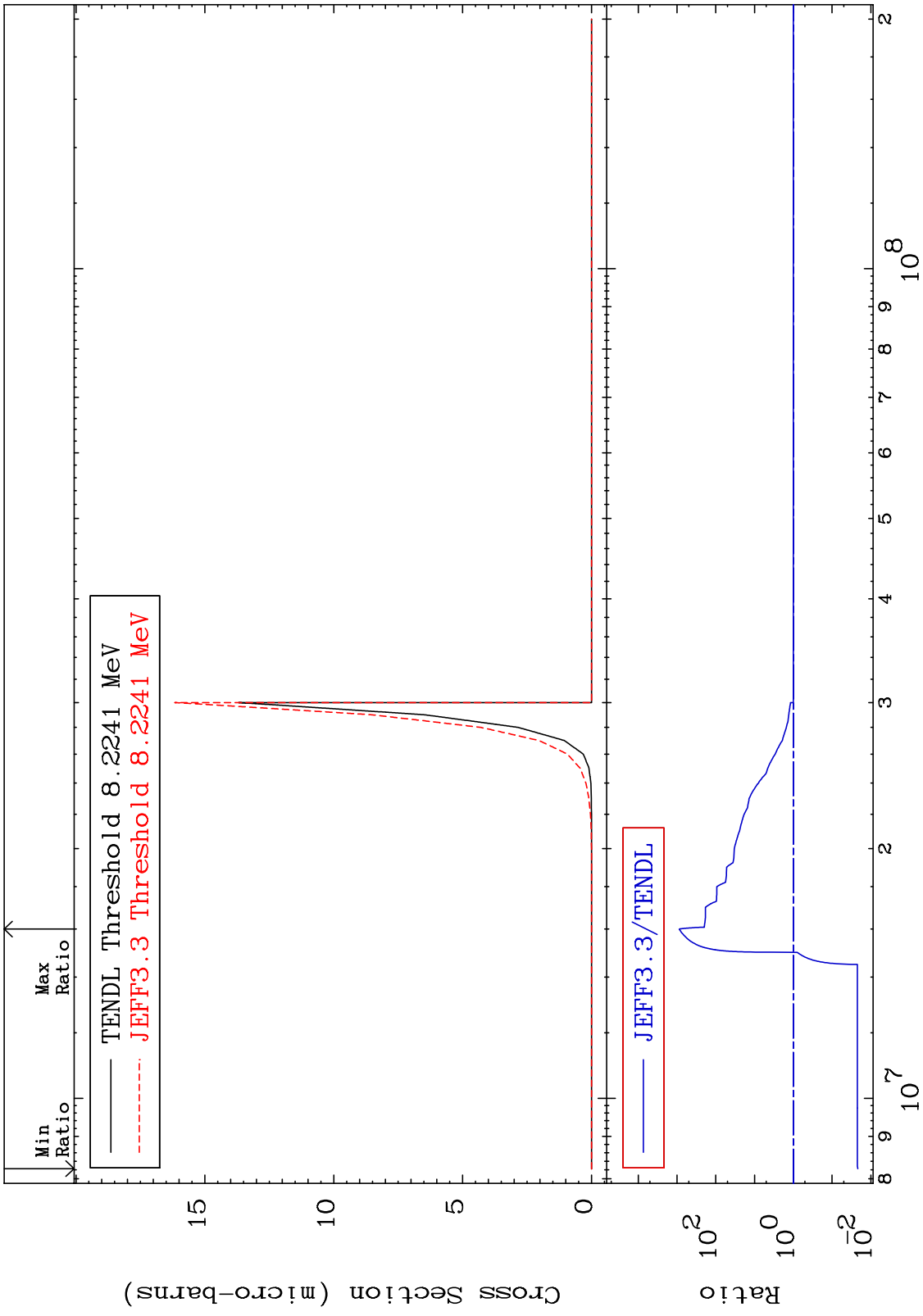
MAT 5825 (n,3n) p 58-Ce-136
Cross Section -0.682 To 0.000 %



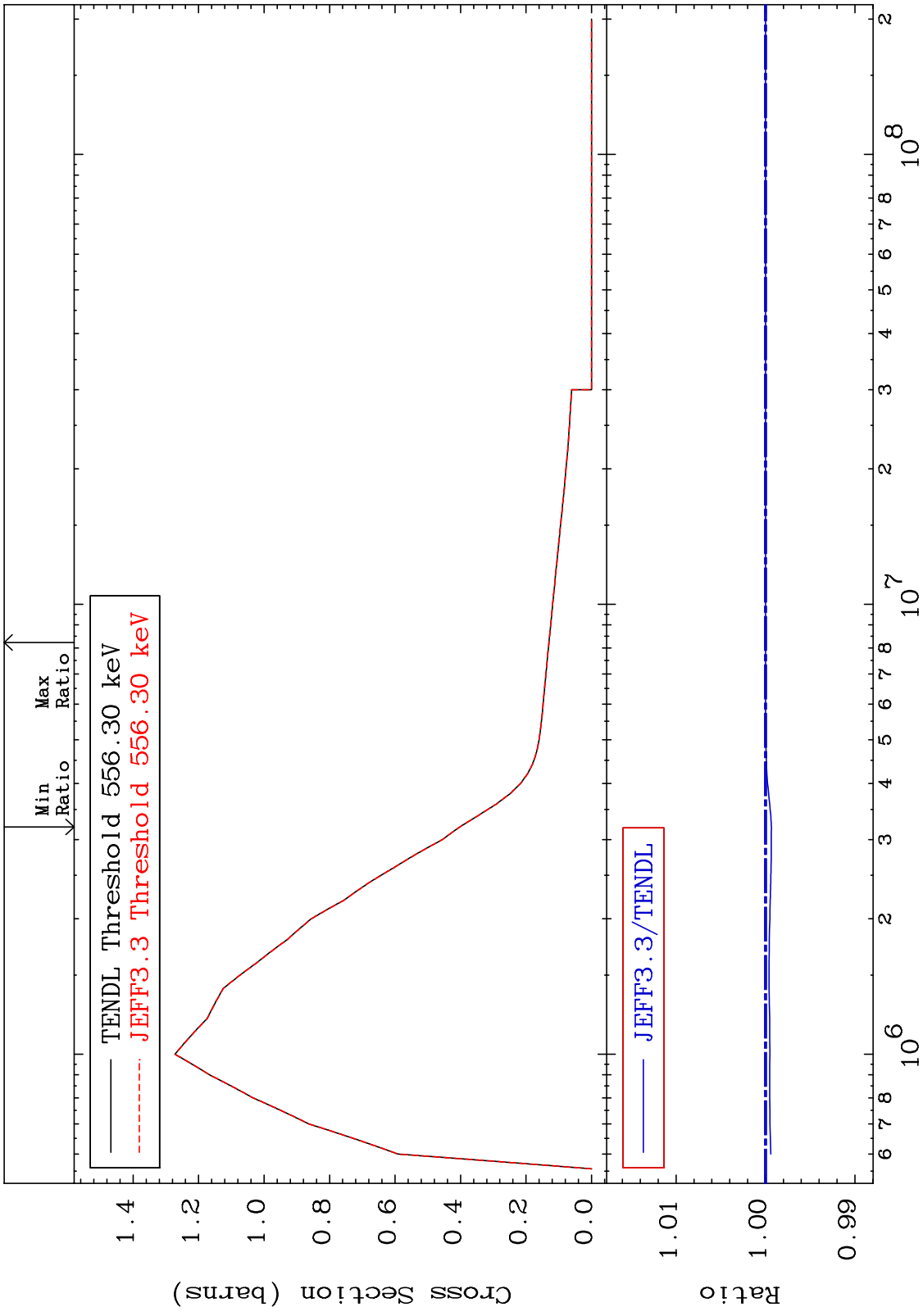
MAT 5825 (n,2n) p 58-Ce-136
 Cross Section -1.635 To 0.125 %



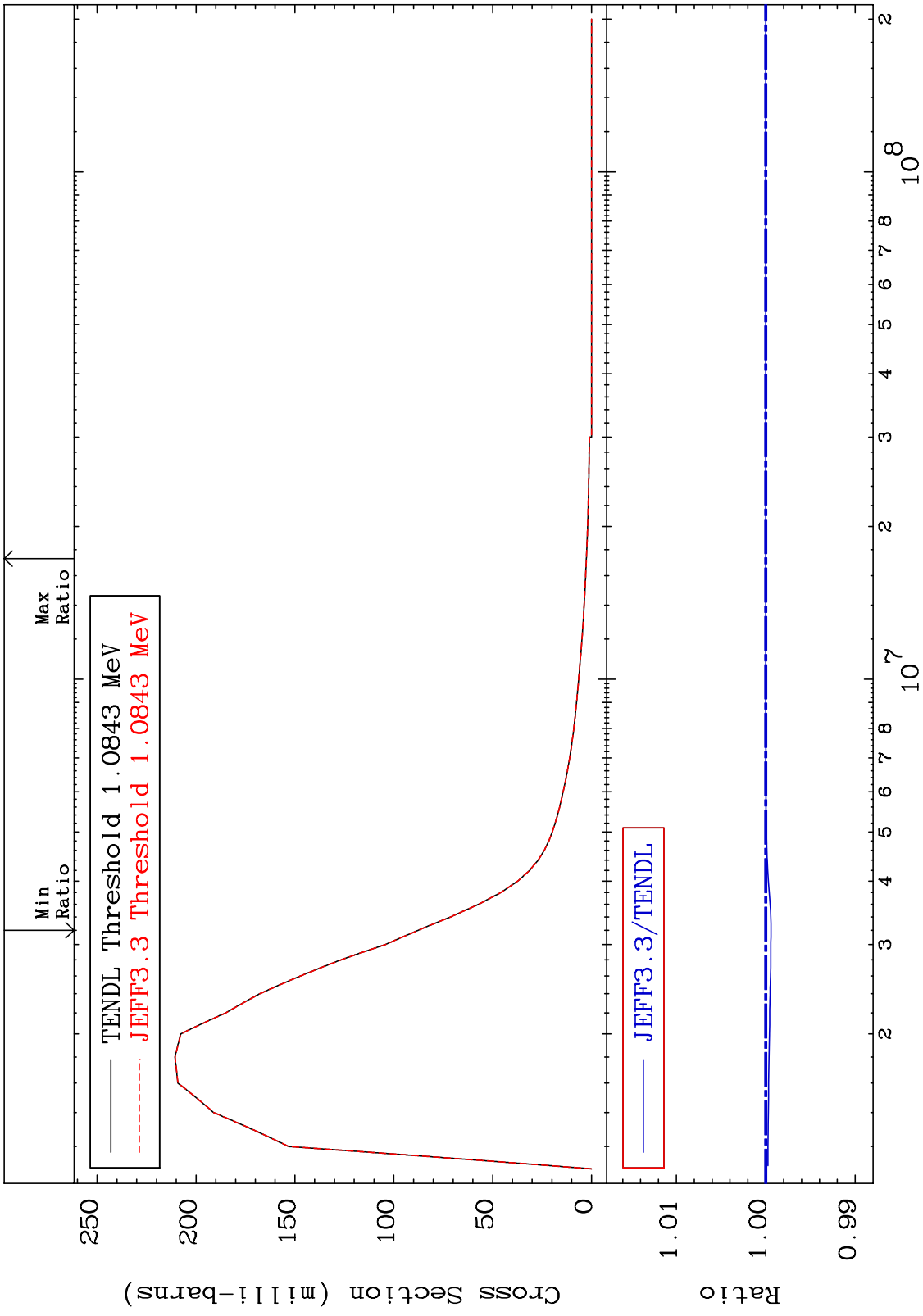
MAT 5825 (n,n') p α 58-Ce-136
 Cross Section -97.84 To 9999. %



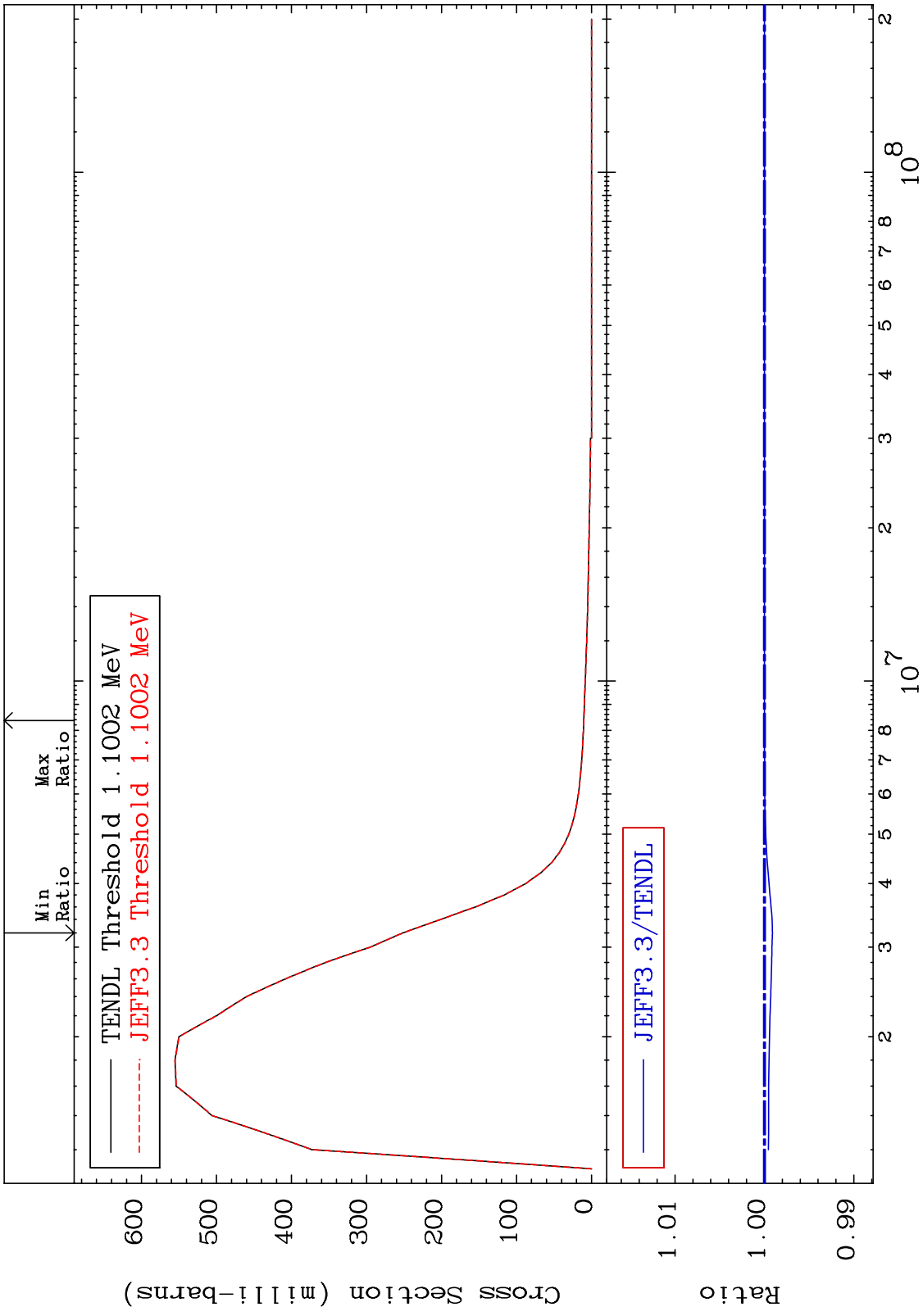
MAT 5825 MT= 51 (n,n') Level Cross Section 58-Ce-136 -0.066 To 0.000 %



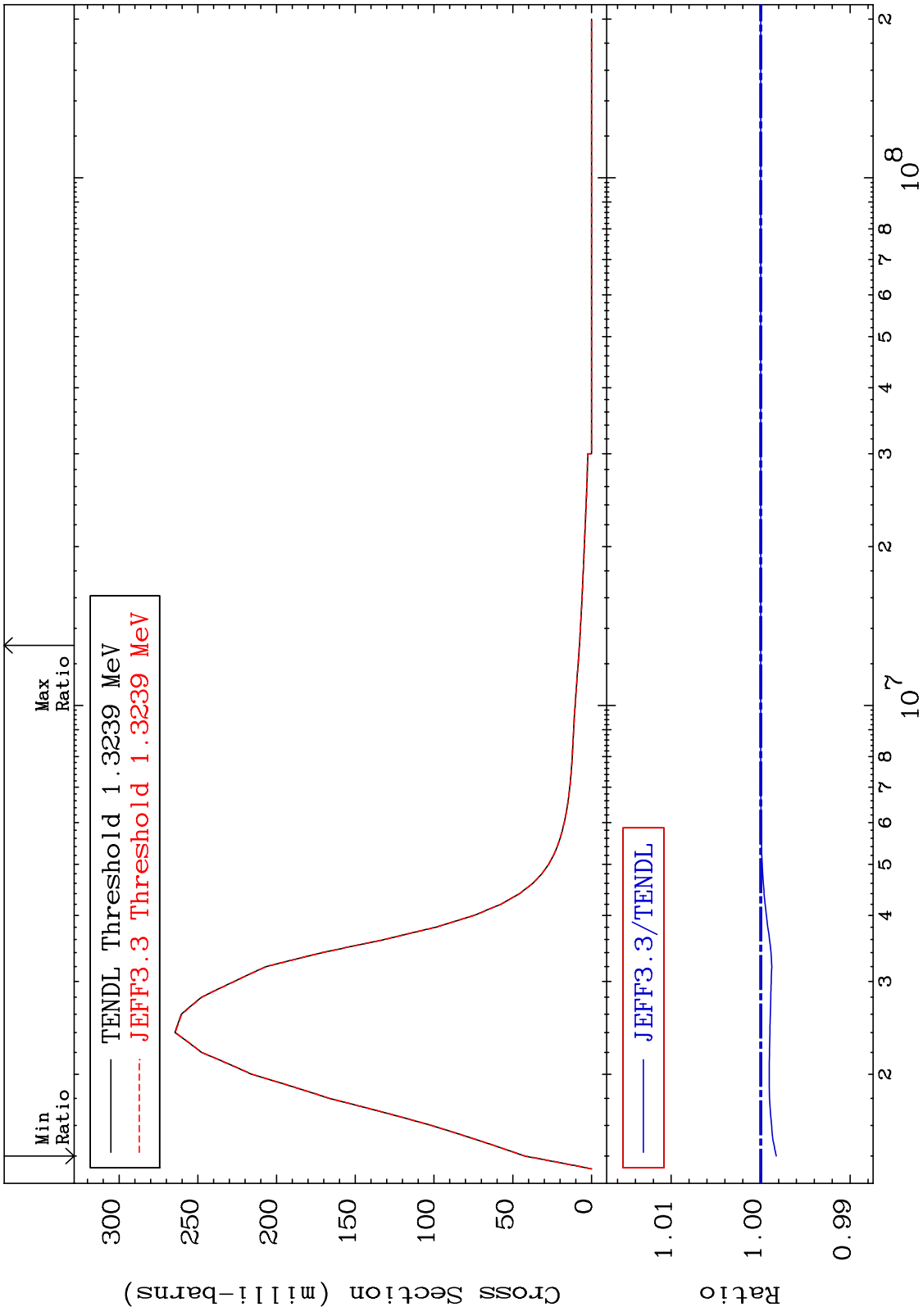
MAT 5825 MT= 52 (n,n') Level Cross Section 58-Ce-136 -0.059 To 0.000 %



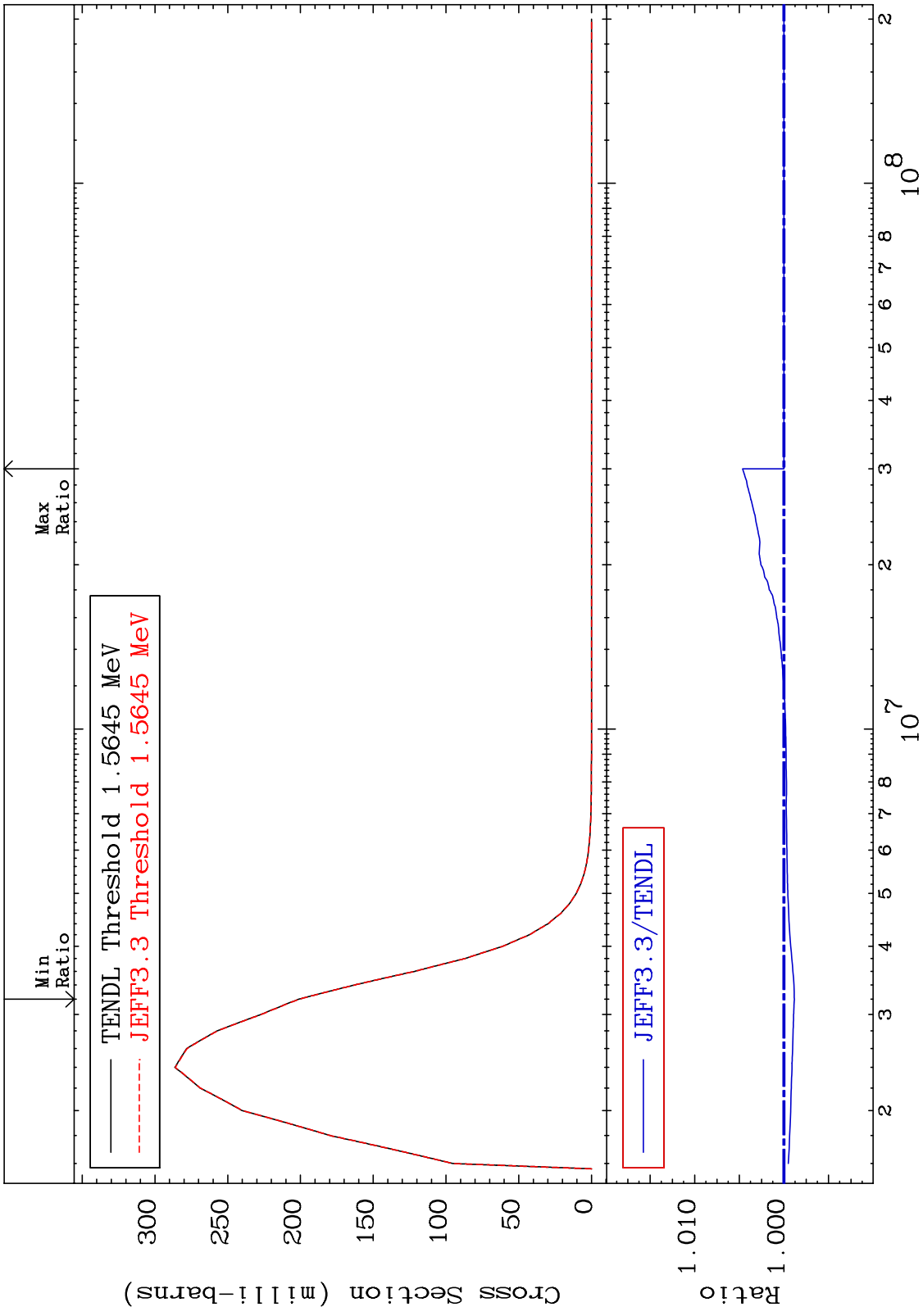
MAT 5825 MT= 53 (n,n') Level Cross Section 58-Ce-136 -0.090 To 0.000 %



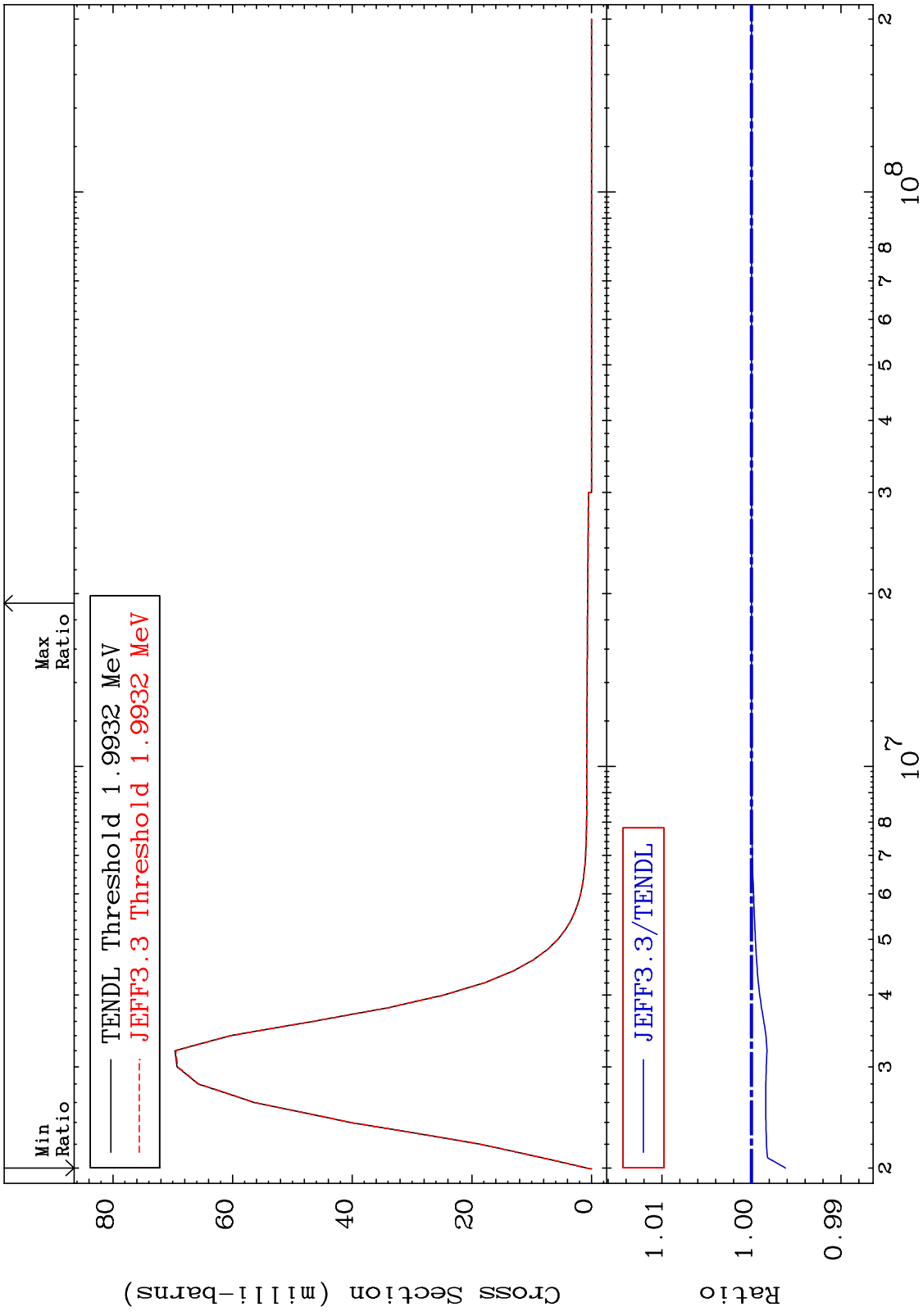
MAT 5825 MT= 54 (n,n') Level Cross Section 58-Ce-136
 -0.174 To 0.000 %



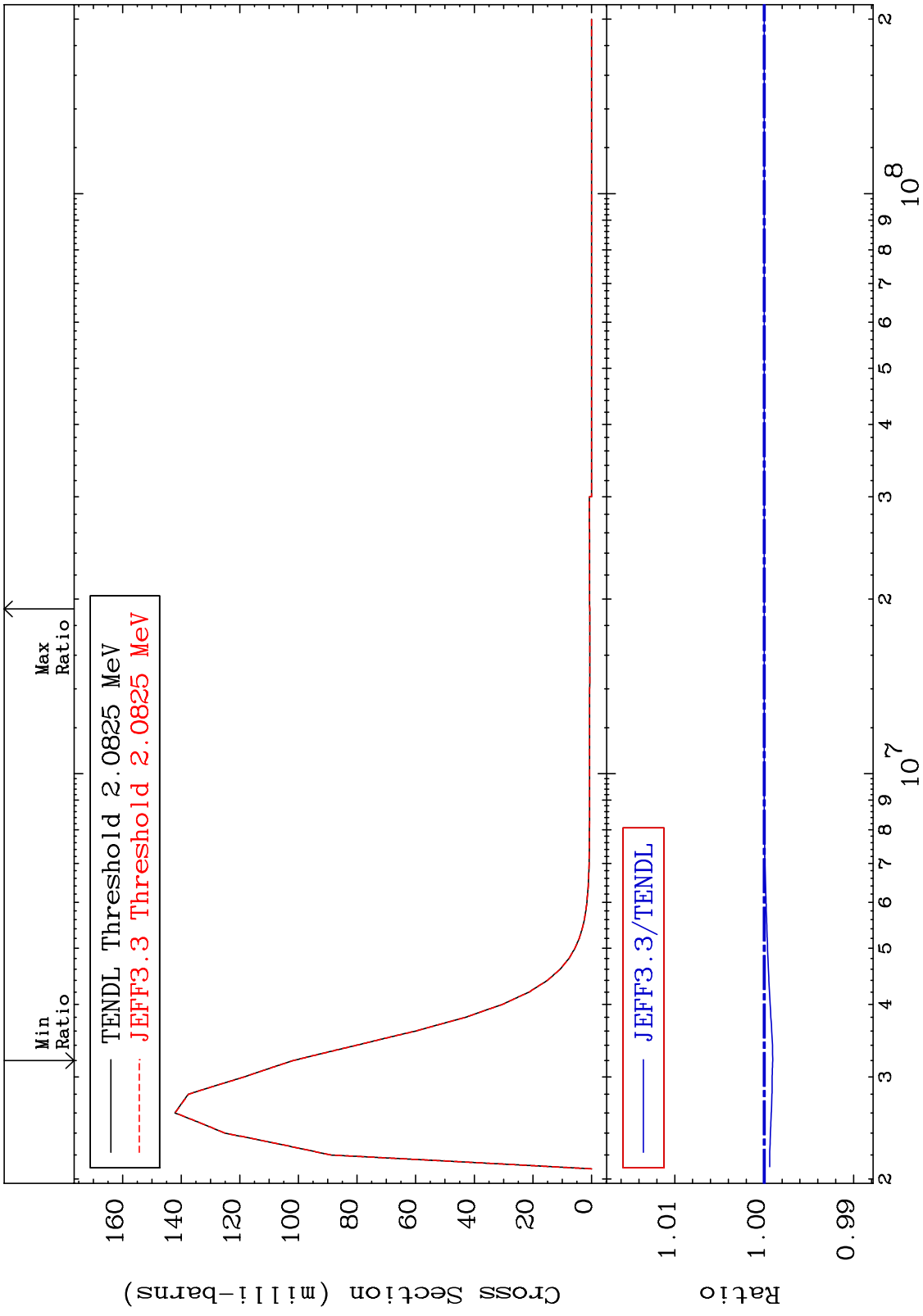
MAT 5825 MT= 55 (n,n') Level Cross Section 58-Ce-136
 -0.116 To 0.464 %



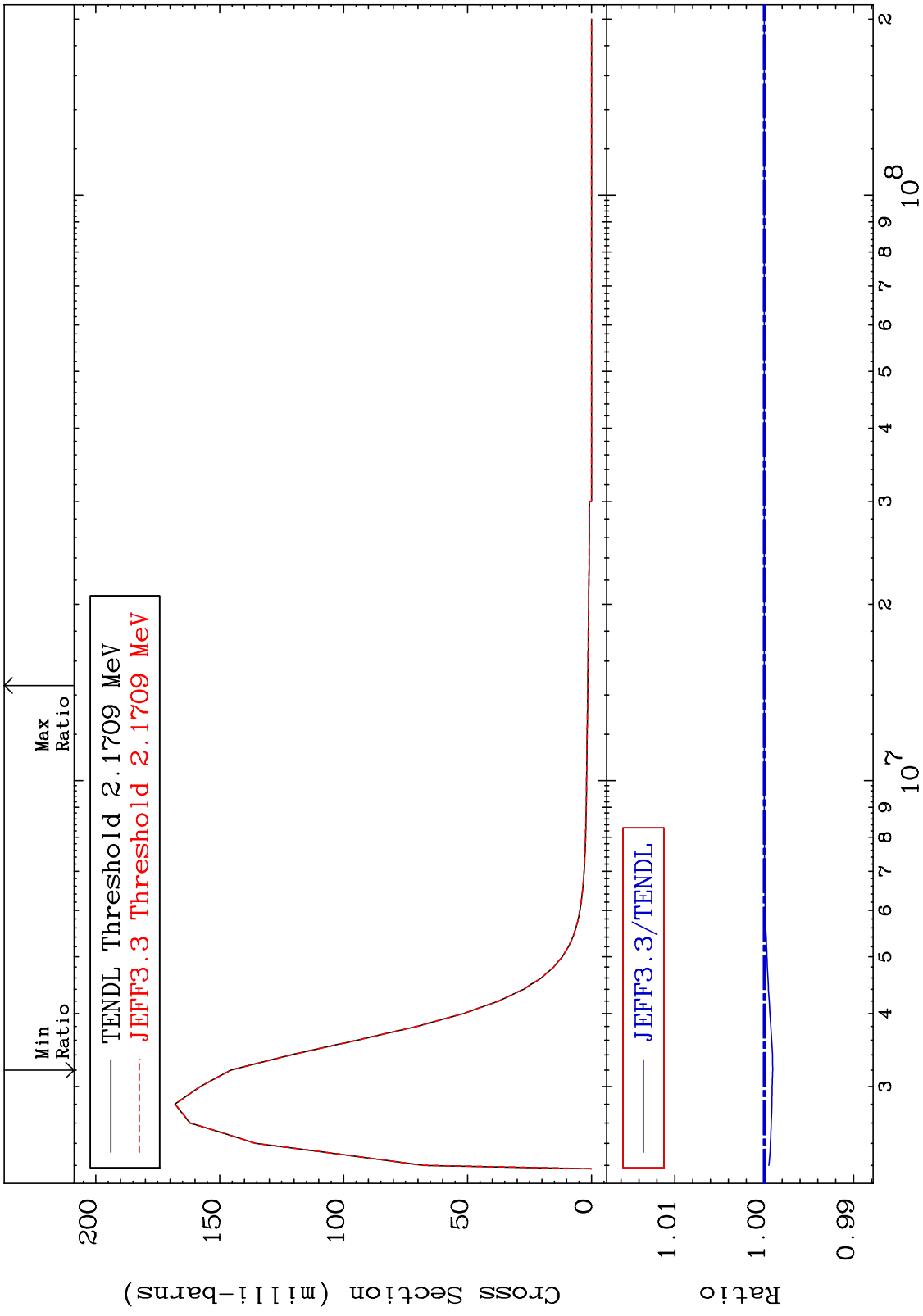
MAT 5825 MT= 56 (n,n') Level Cross Section 58-Ce-136 -0.379 To 0.000 %



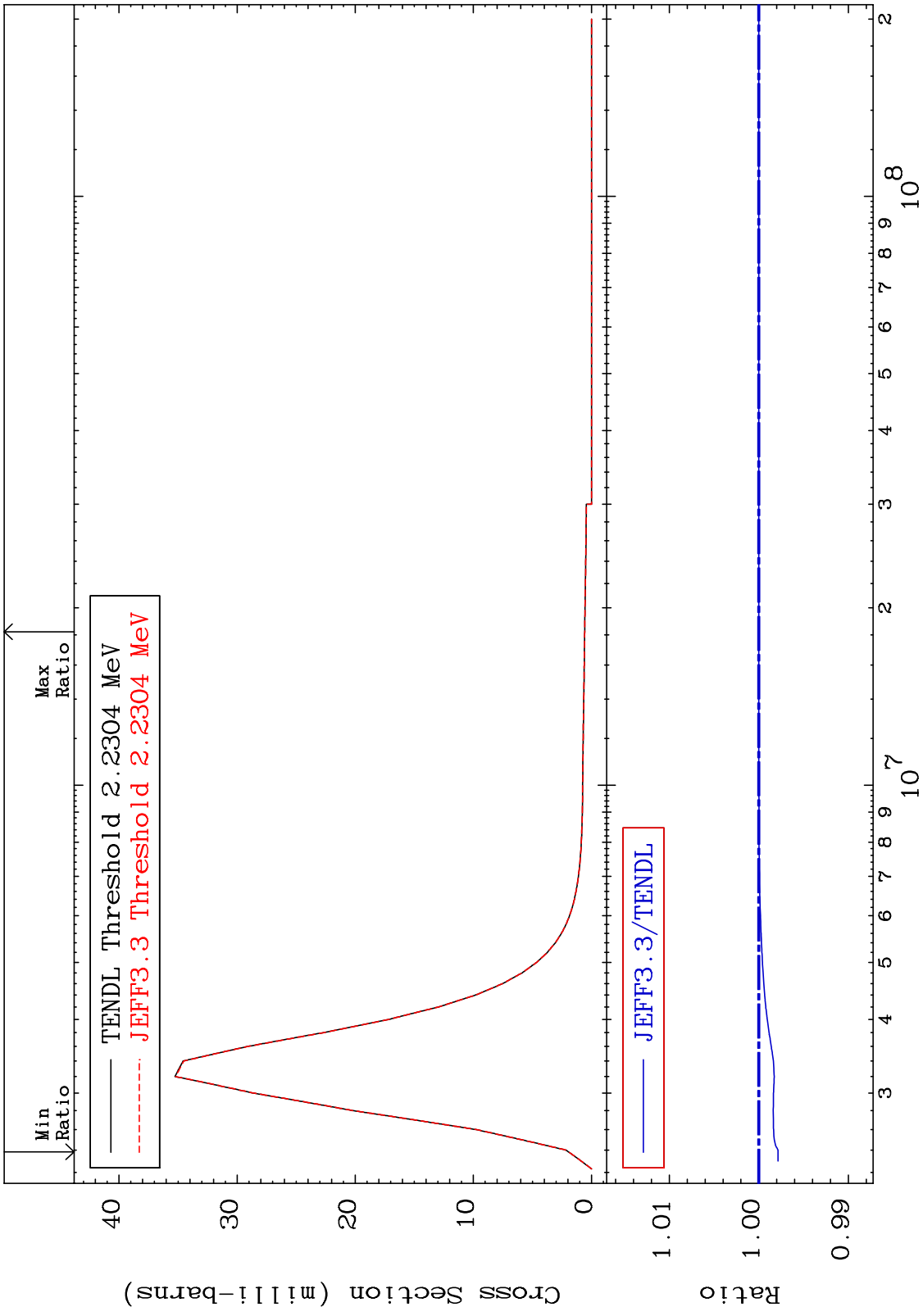
MAT 5825 MT= 57 (n,n') Level Cross Section 58-Ce-136
 -0.095 To 0.000 %



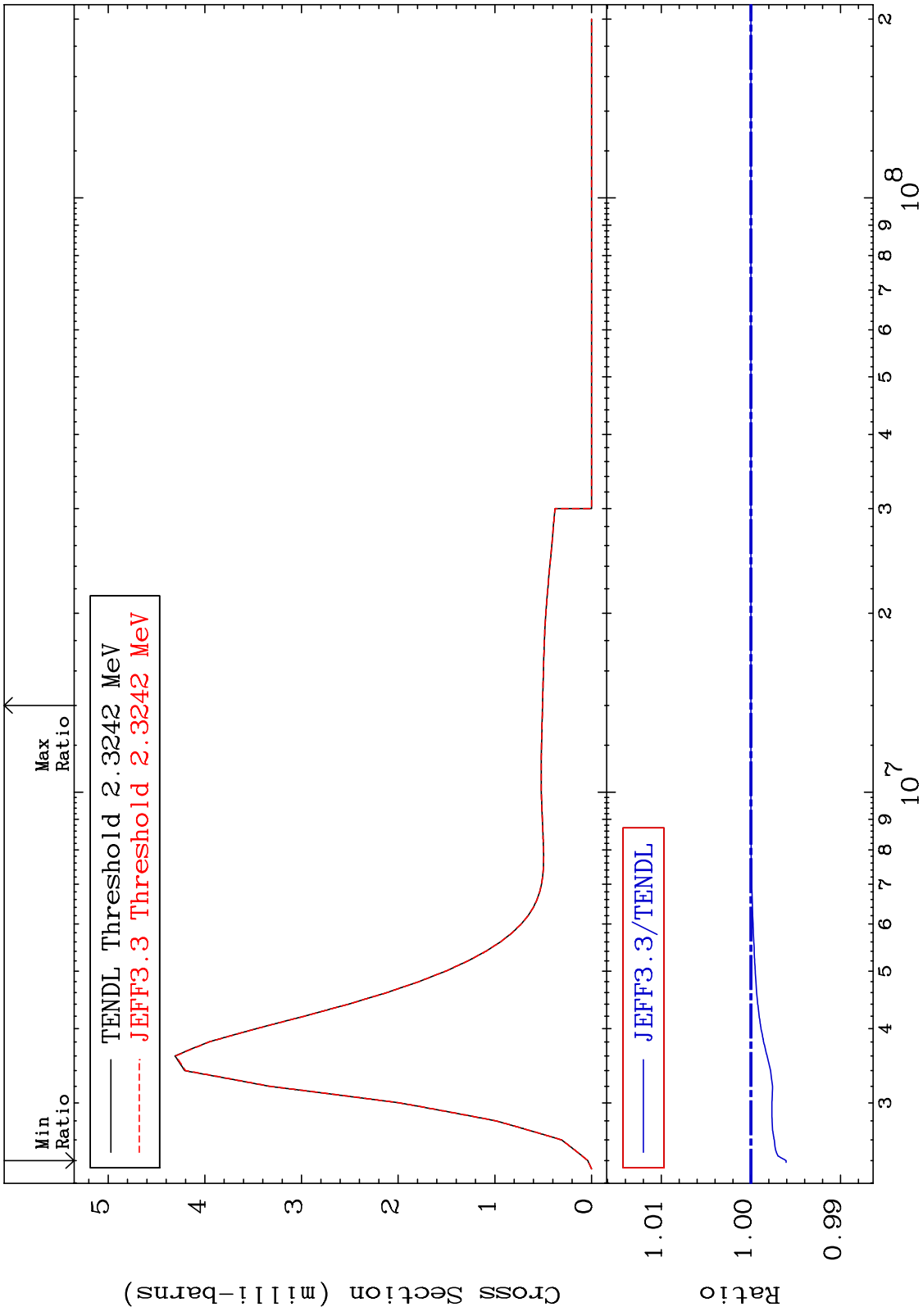
MAT 5825 MT= 58 (n,n') Level Cross Section 58-Ce-136
 -0.095 To 0.000 %



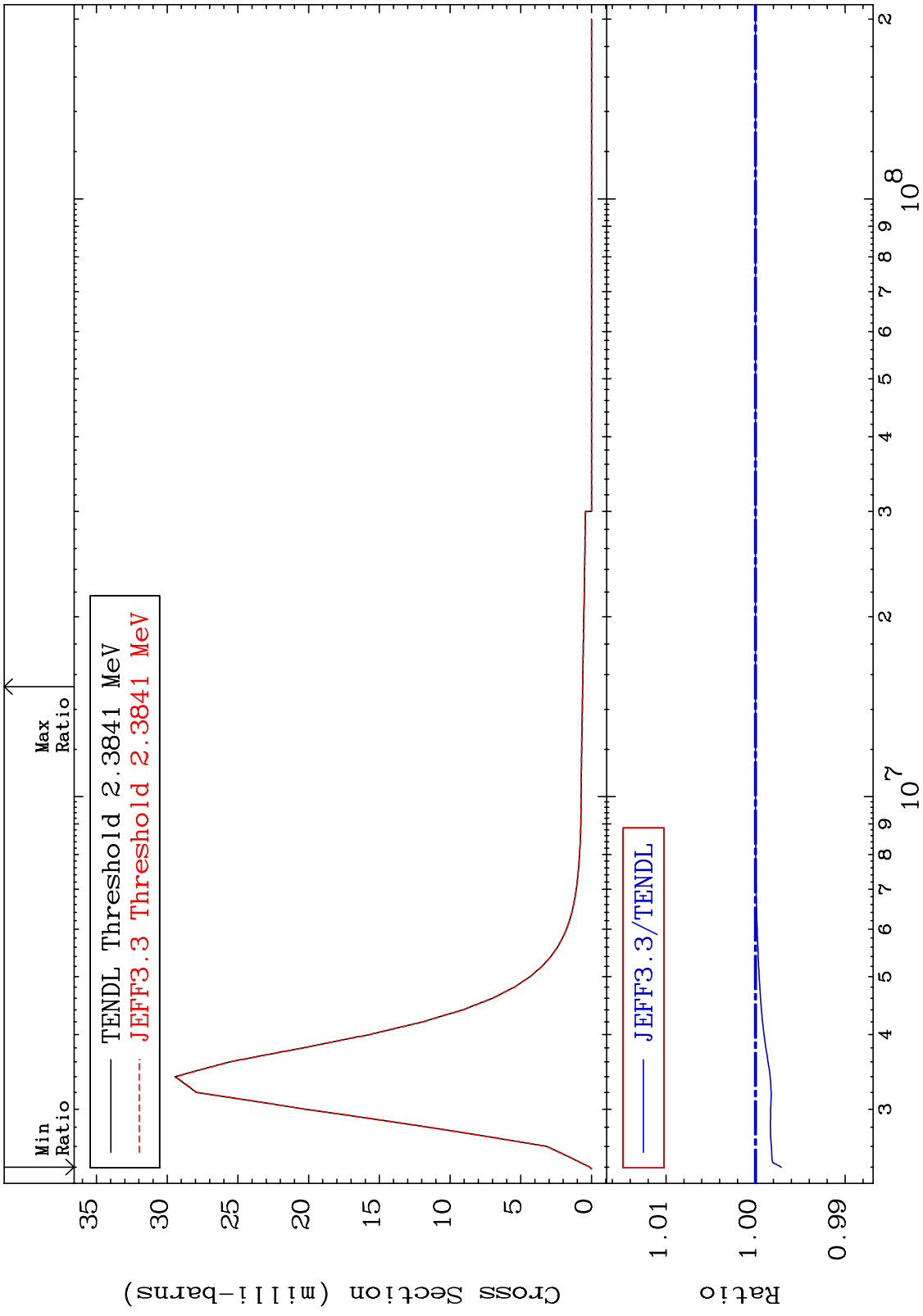
MAT 5825 MT= 59 (n,n') Level Cross Section 58-Ce-136 -0.215 To 0.000 %



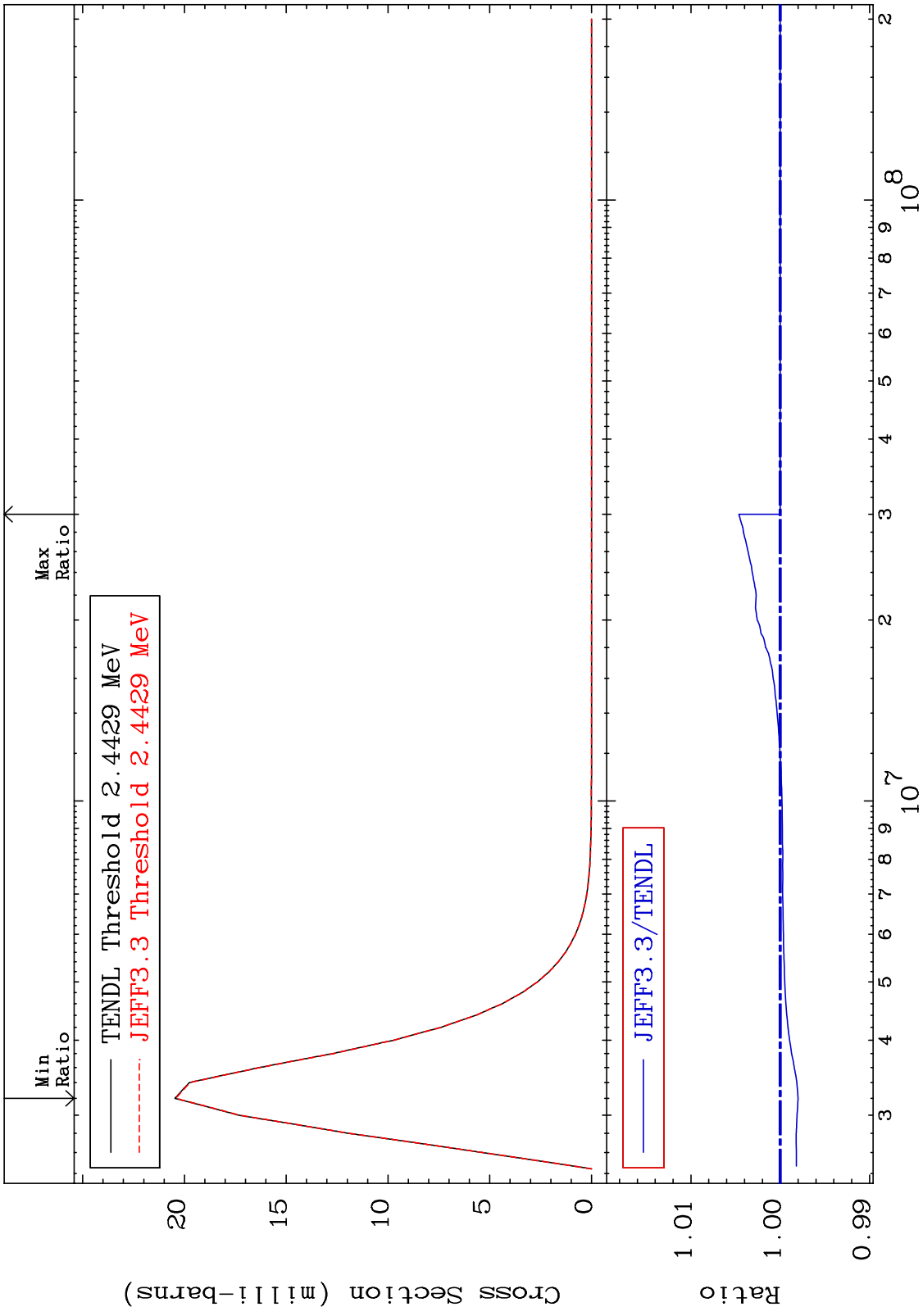
MAT 5825 MT= 60 (n,n') Level Cross Section 58-Ce-136
 -0.392 To 0.000 %



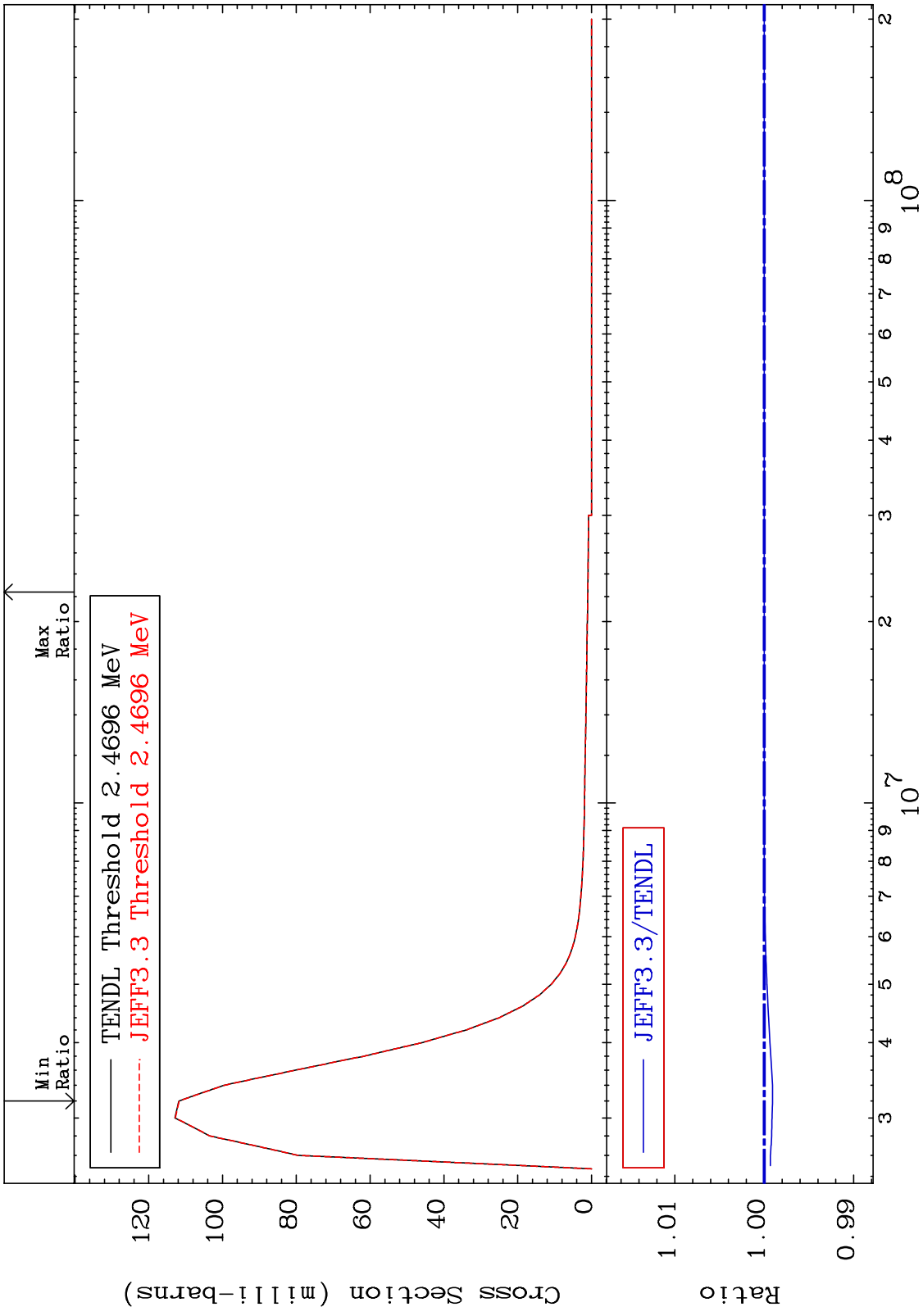
MAT 5825 MT= 61 (n,n') Level Cross Section 58-Ce-136
 -0.288 To 0.000 %



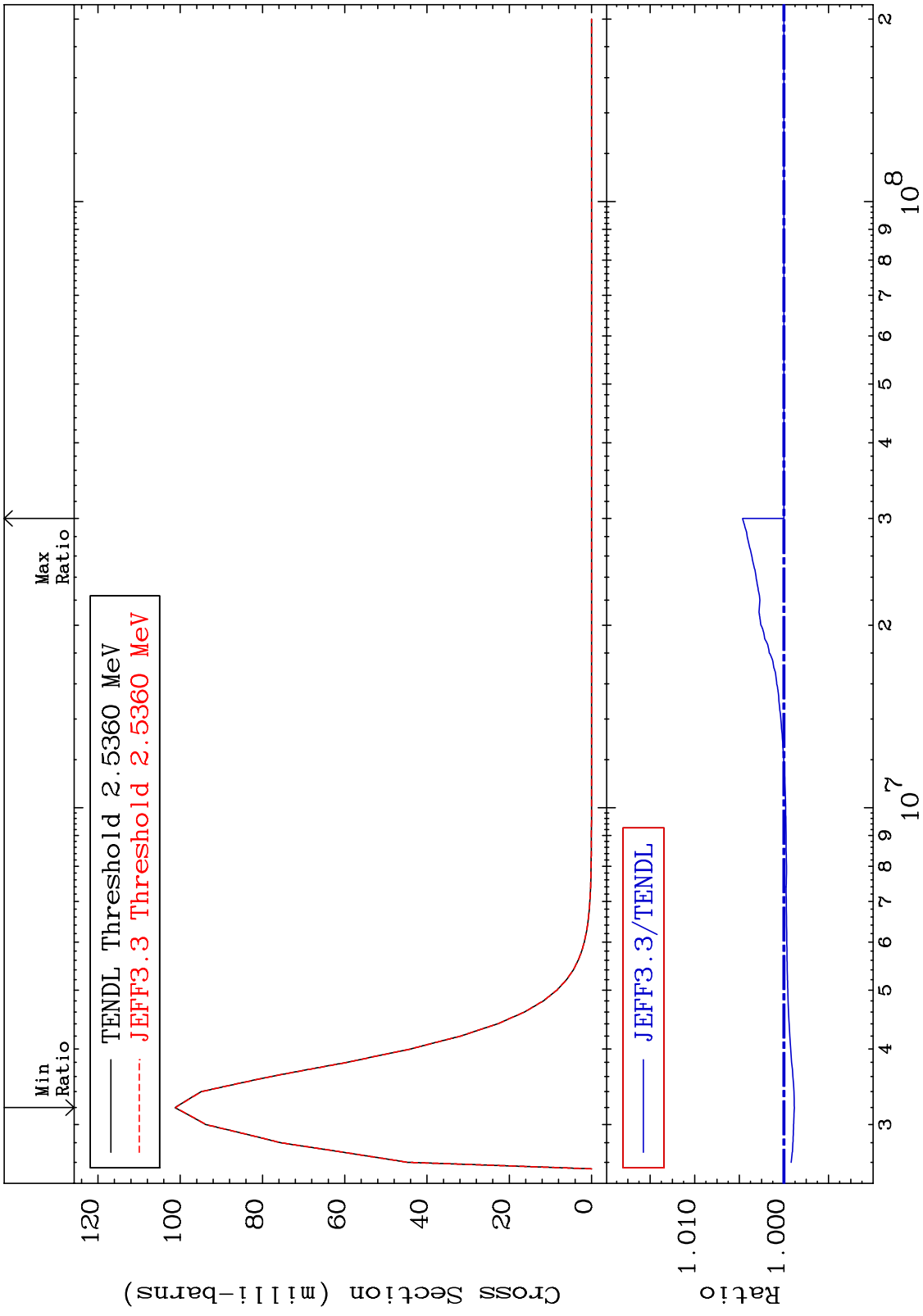
MAT 5825 MT= 62 (n,n') Level Cross Section 58-Ce-136
 -0.200 To 0.464 %



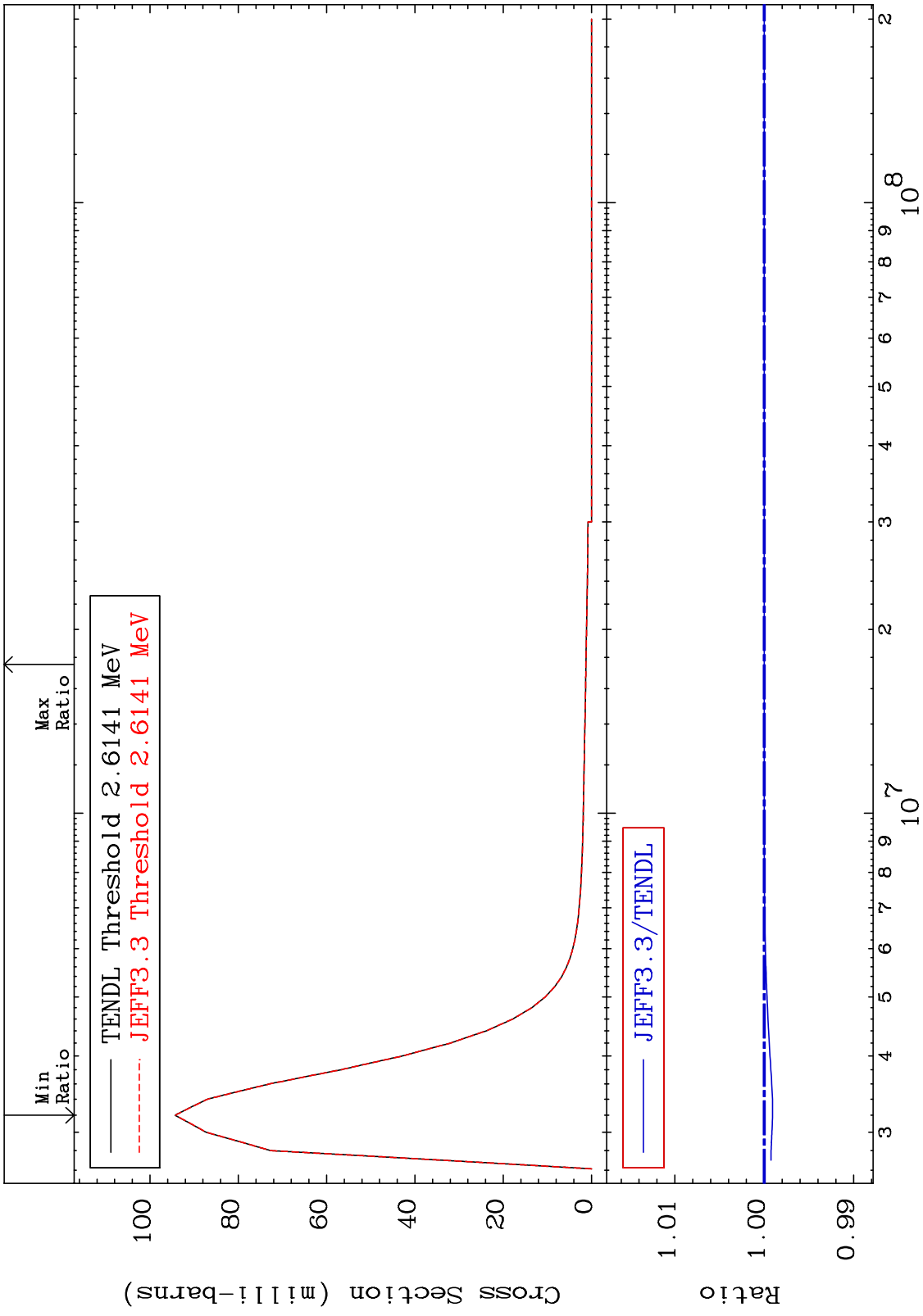
MAT 5825 MT= 63 (n,n') Level Cross Section 58-Ce-136
 -0.094 To 0.000 %



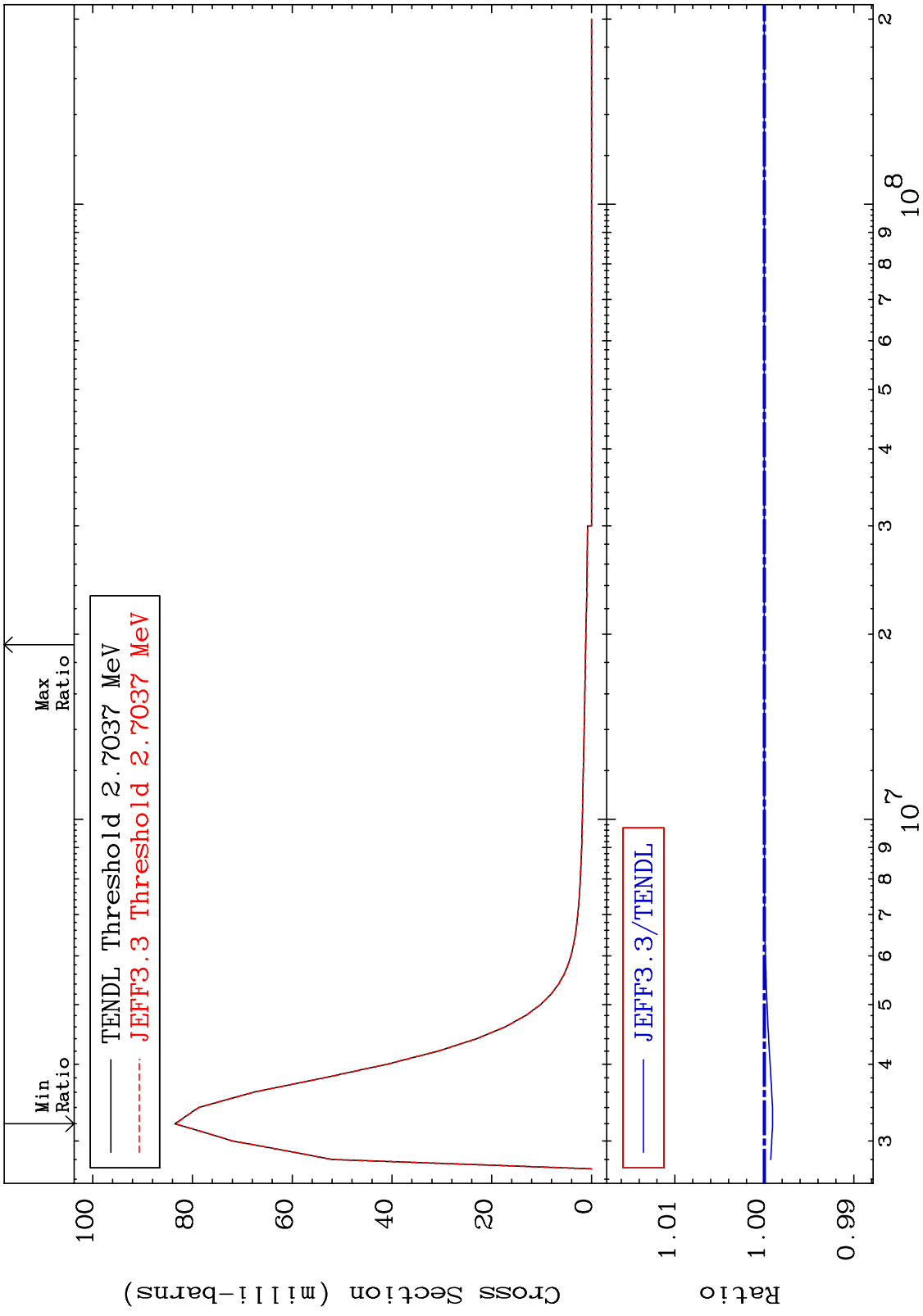
MAT 5825 MT= 64 (n,n') Level Cross Section 58-Ce-136
 -0.116 To 0.464 %



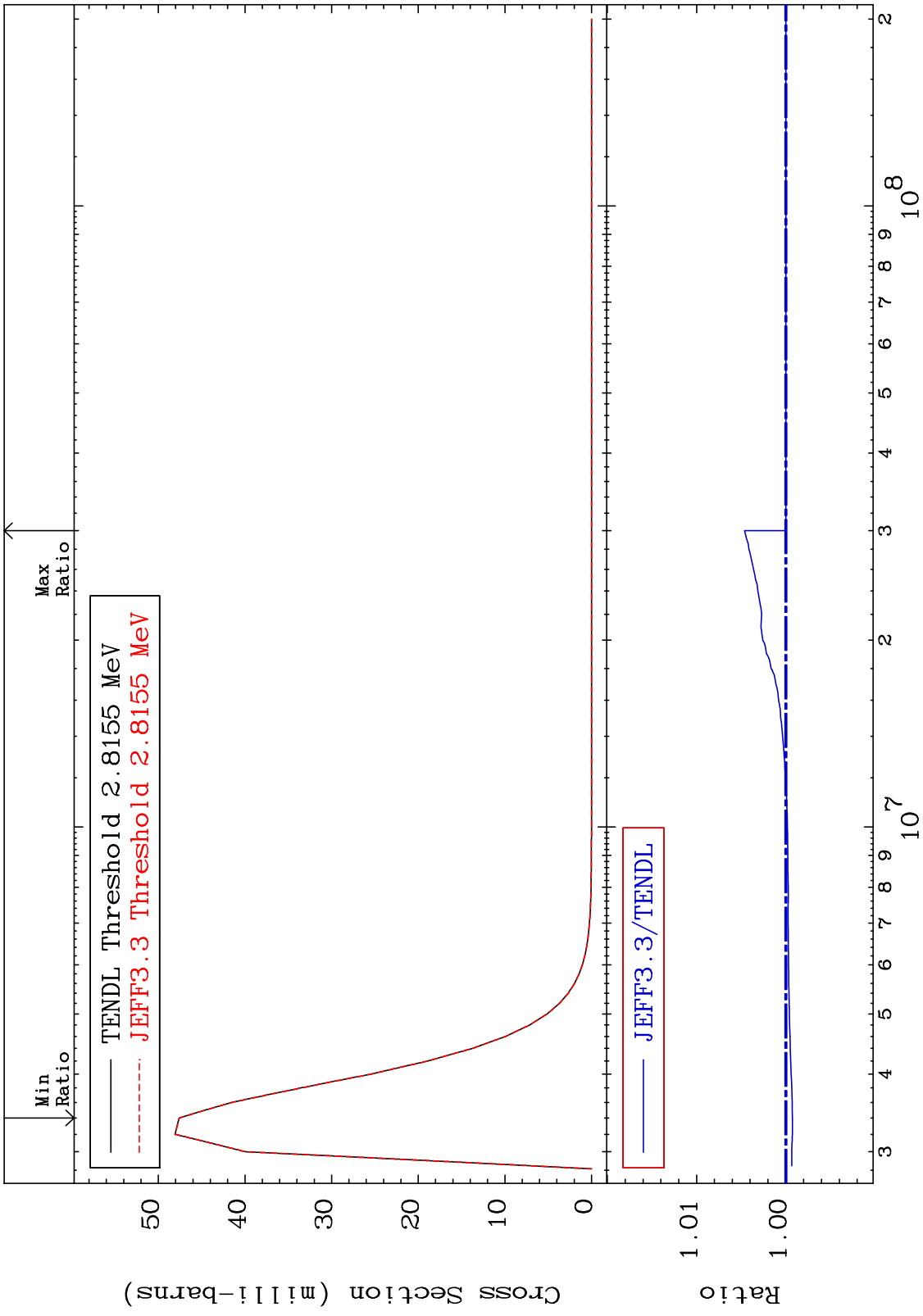
MAT 5825 MT= 65 (n,n') Level Cross Section 58-Ce-136
 -0.093 To 0.000 %



MAT 5825 MT= 66 (n,n') Level Cross Section 58-Ce-136
 -0.092 To 0.000 %

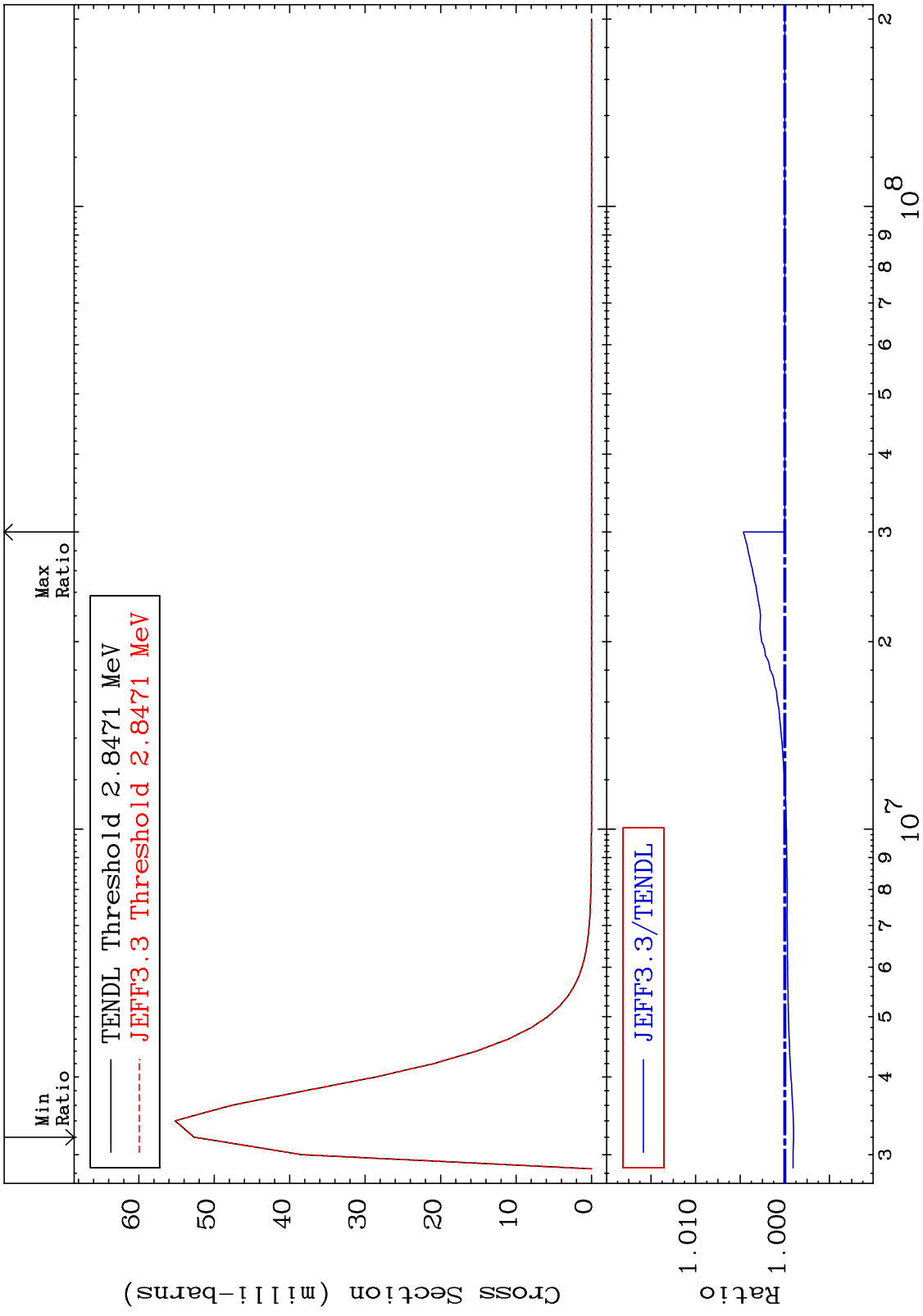


MAT 5825 MT= 67 (n, n') Level Cross Section 58-Ce-136
 -0.074 To 0.463 %

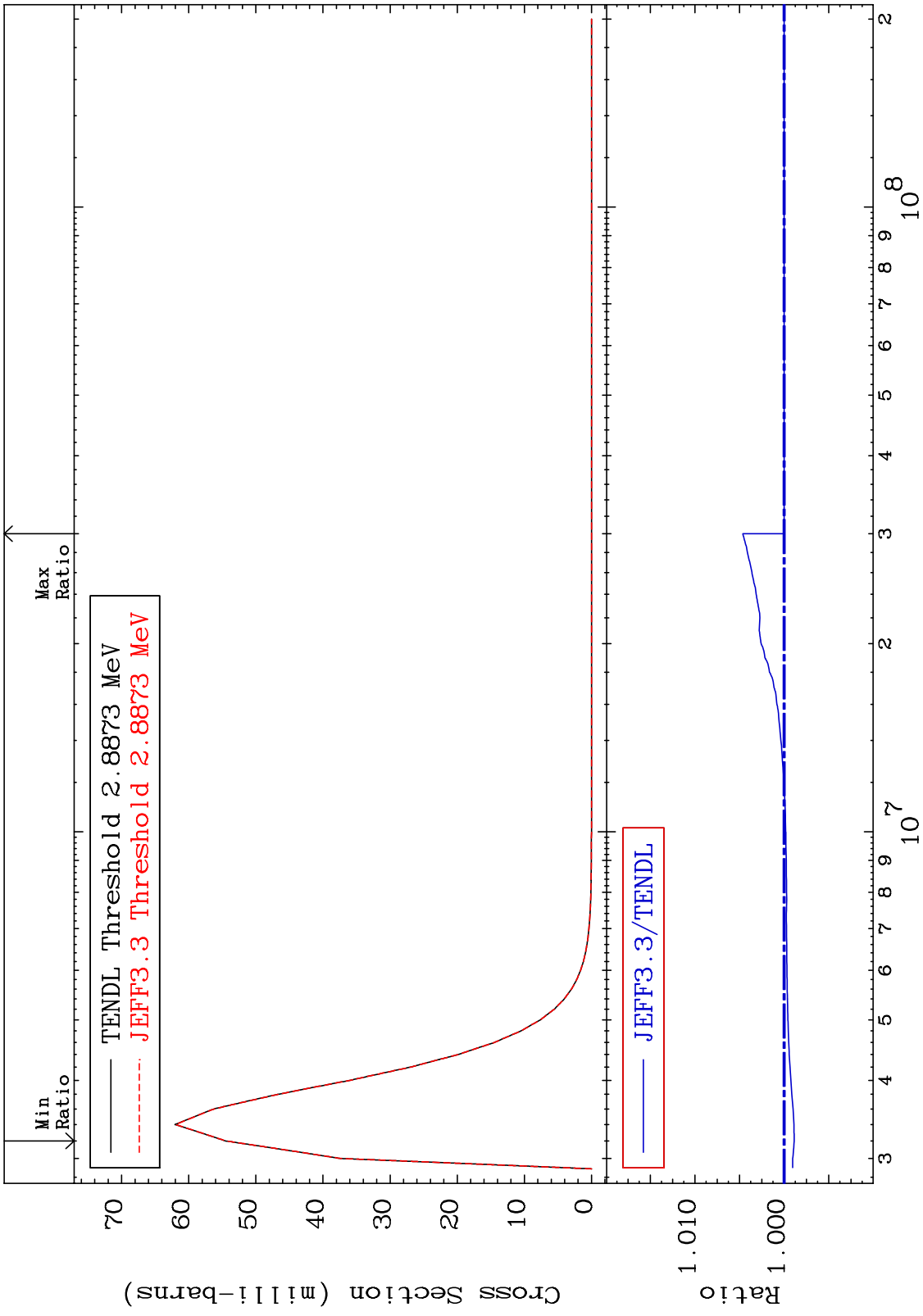


36 Incident Energy (eV) 58-Ce-136

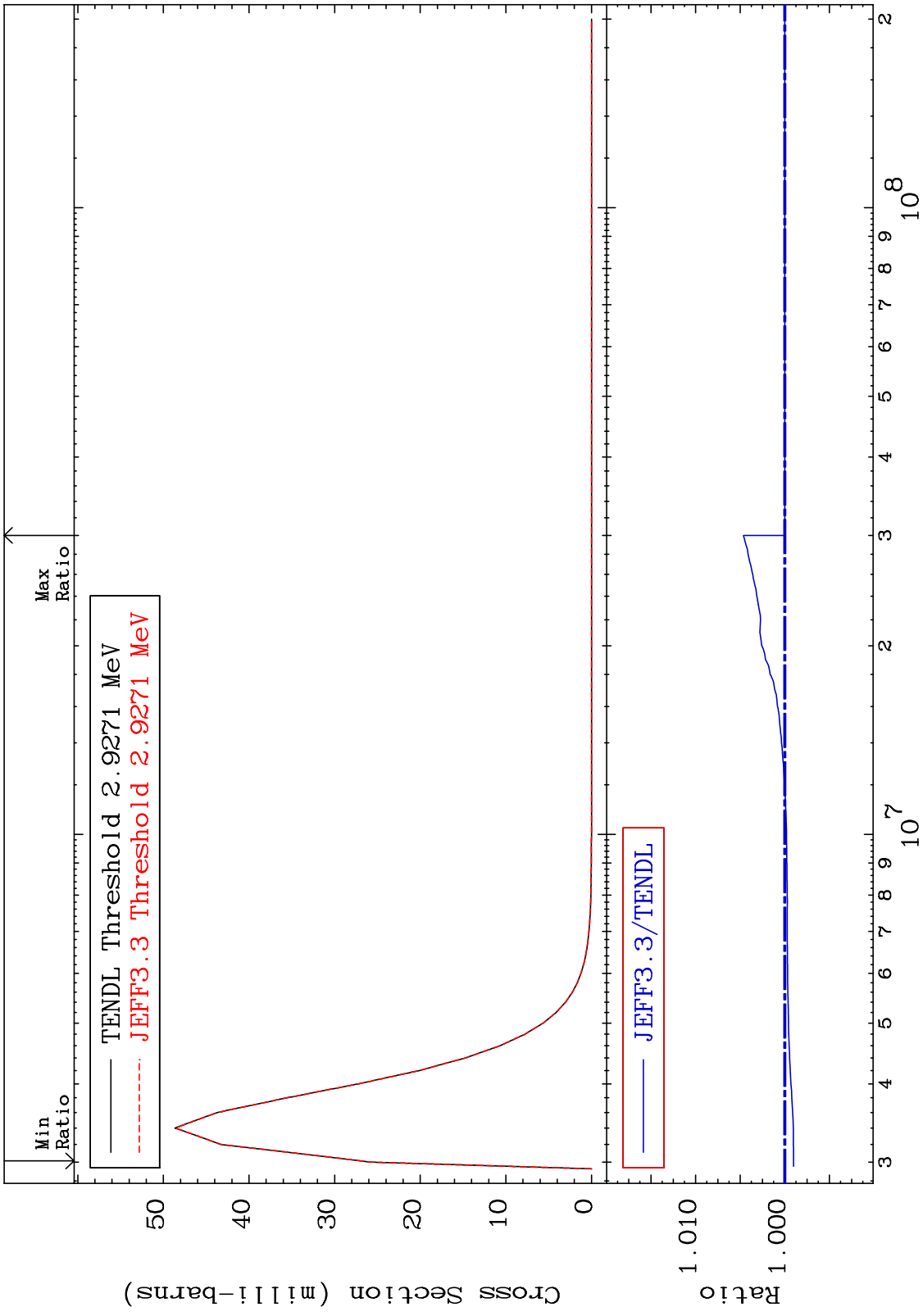
MAT 5825 MT= 68 (n,n') Level Cross Section 58-Ce-136
 -0.098 To 0.464 %



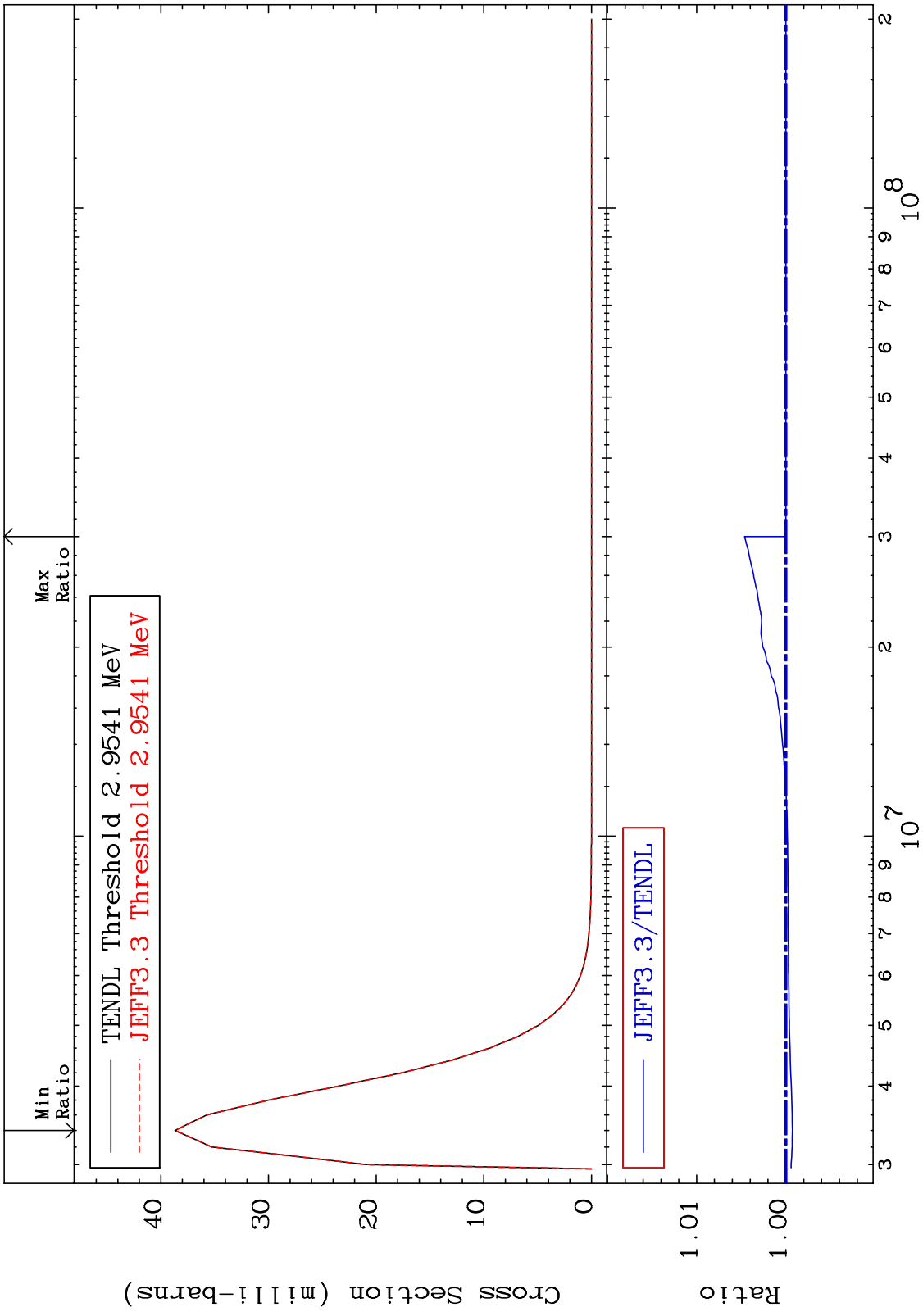
MAT 5825 MT= 69 (n,n') Level Cross Section 58-Ce-136 -0.112 To 0.463 %



MAT 5825 MT= 70 (n,n') Level Cross Section 58-Ce-136
 -0.097 To 0.464 %

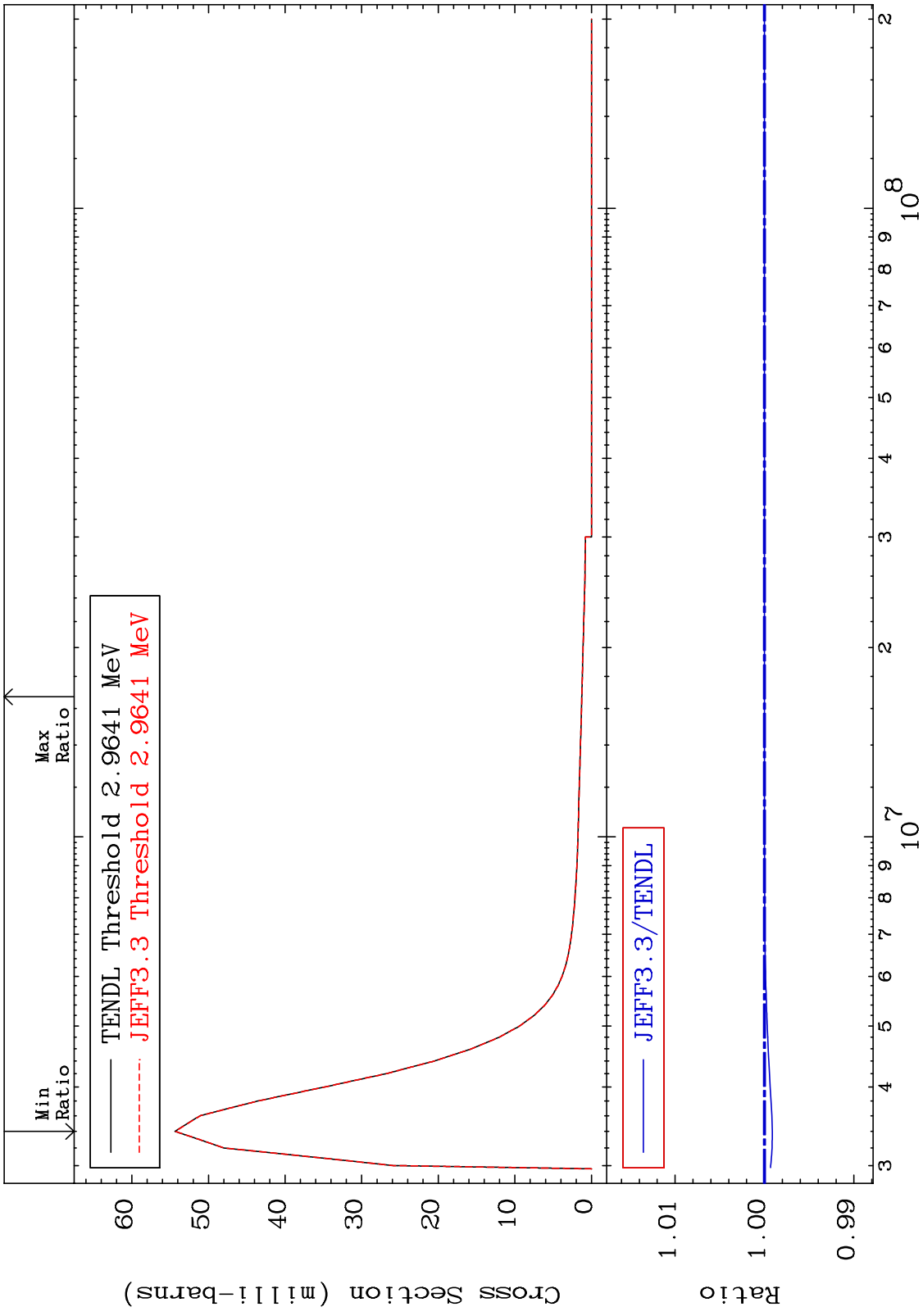


MAT 5825 MT= 71 (n,n') Level Cross Section 58-Ce-136 -0.073 To 0.464 %

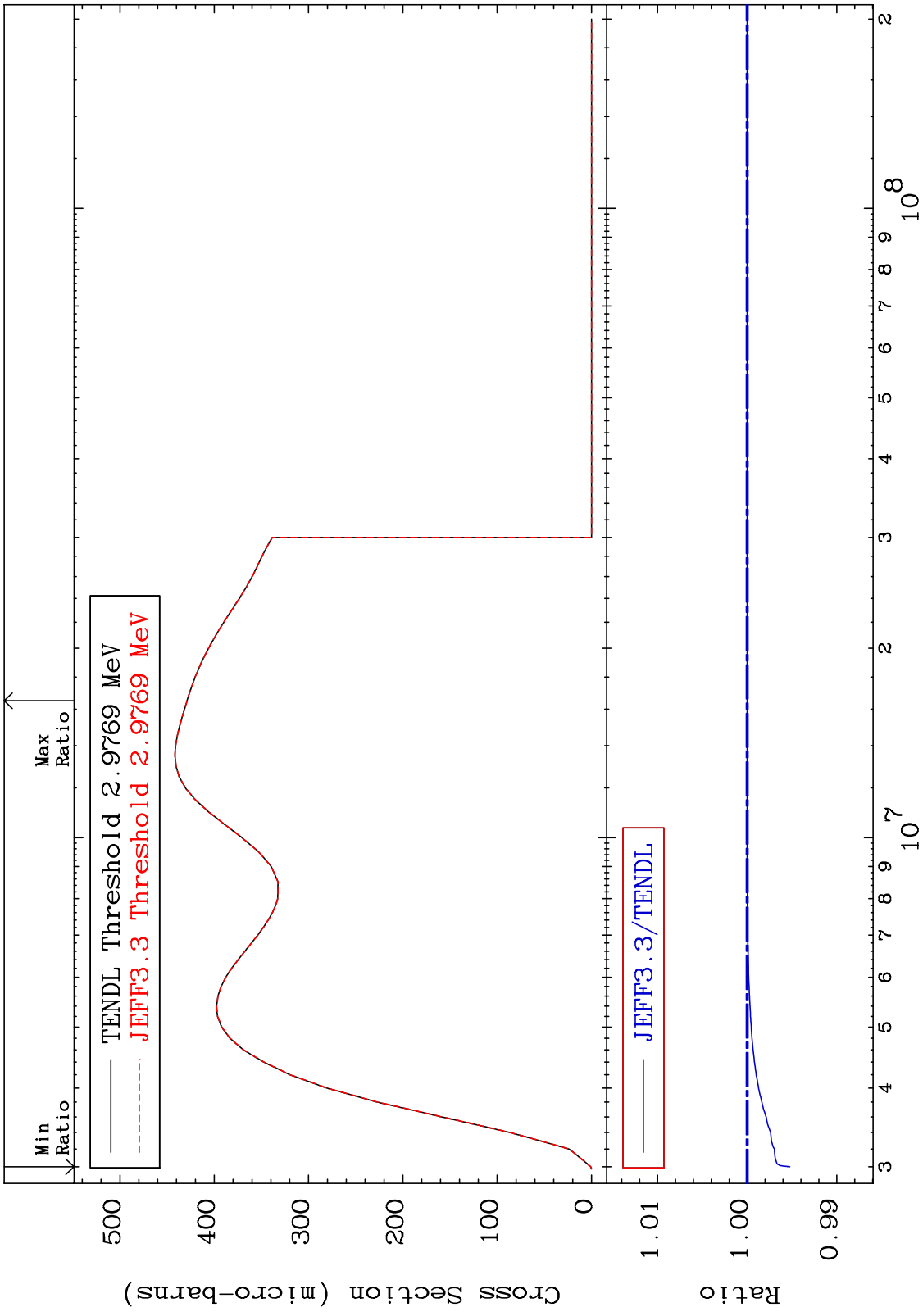


40 Incident Energy (eV) 58-Ce-136

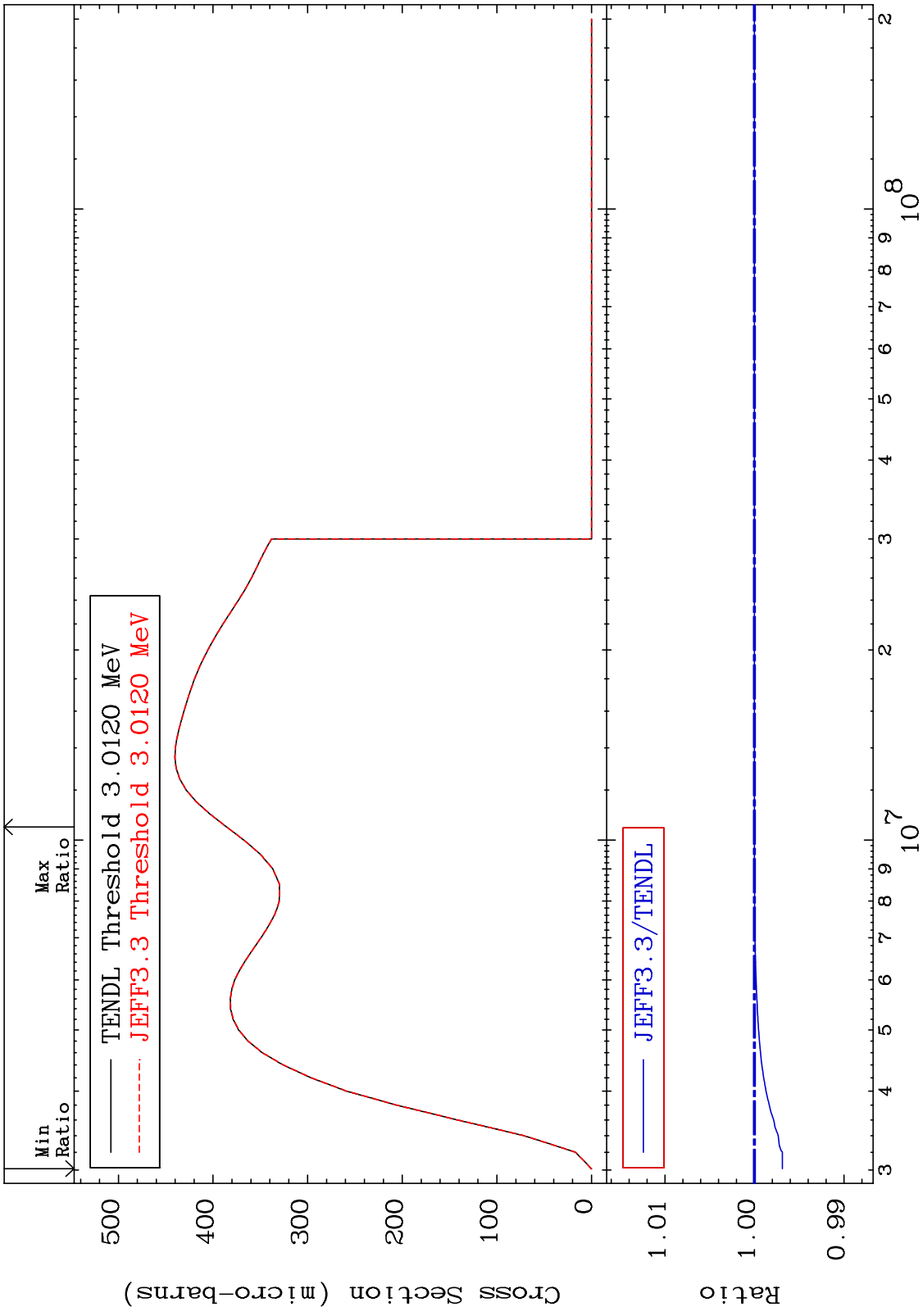
MAT 5825 MT= 72 (n,n') Level Cross Section 58-Ce-136
 -0.088 To 0.000 %



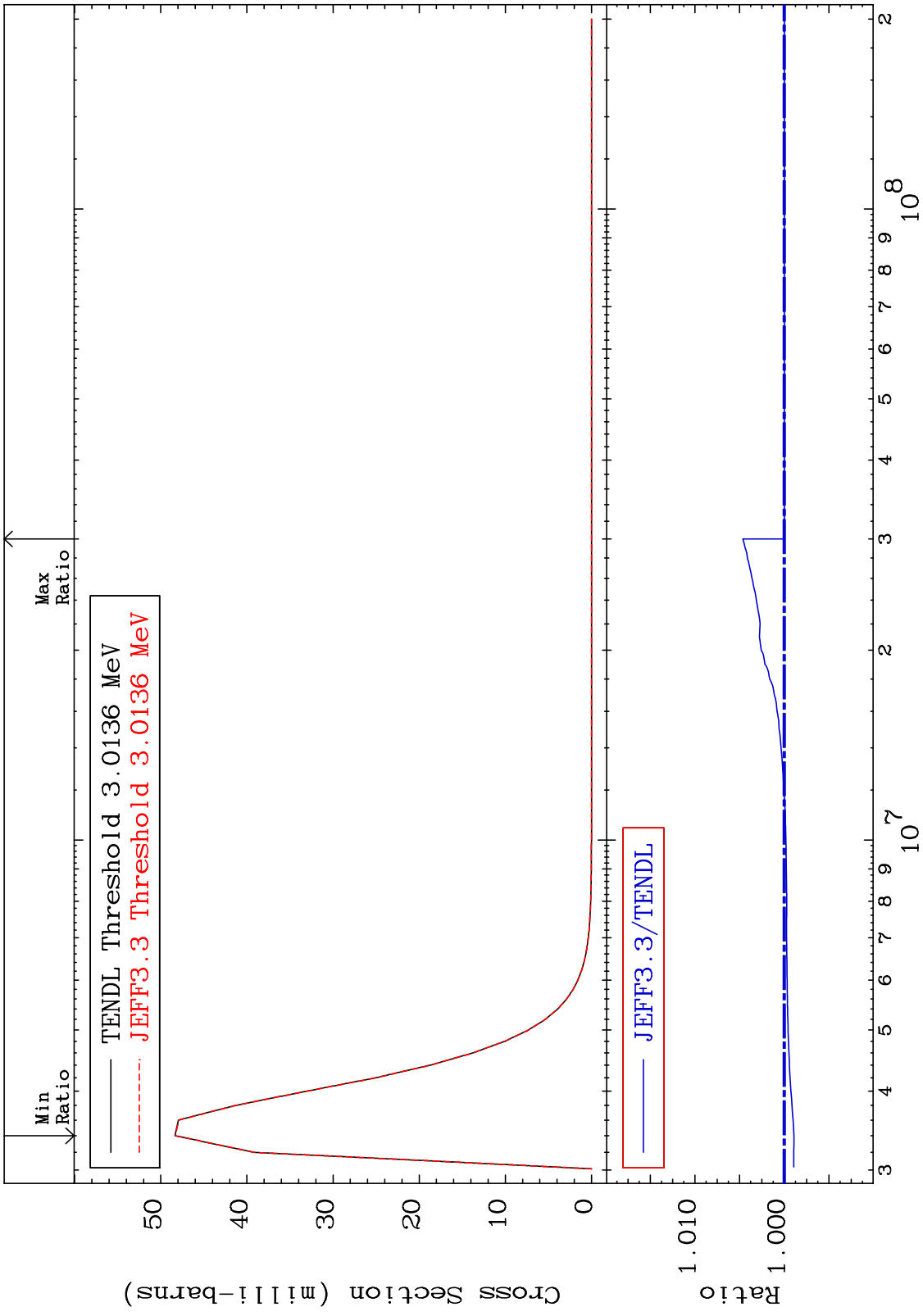
MAT 5825 MT= 73 (n,n') Level Cross Section 58-Ce-136 -0.476 To 0.000 %



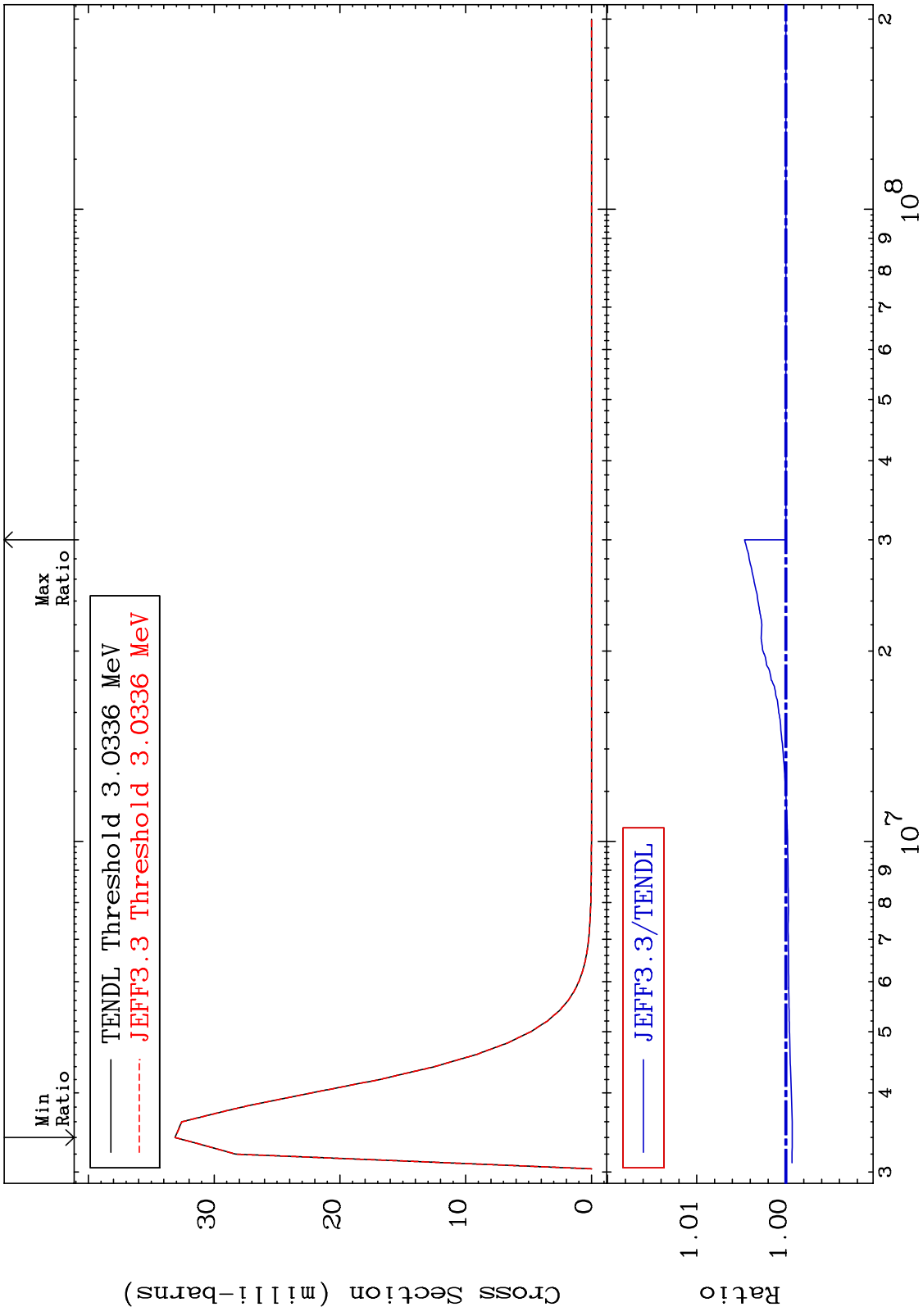
MAT 5825 MT= 74 (n,n') Level Cross Section 58-Ce-136
 -0.313 To 0.000 %



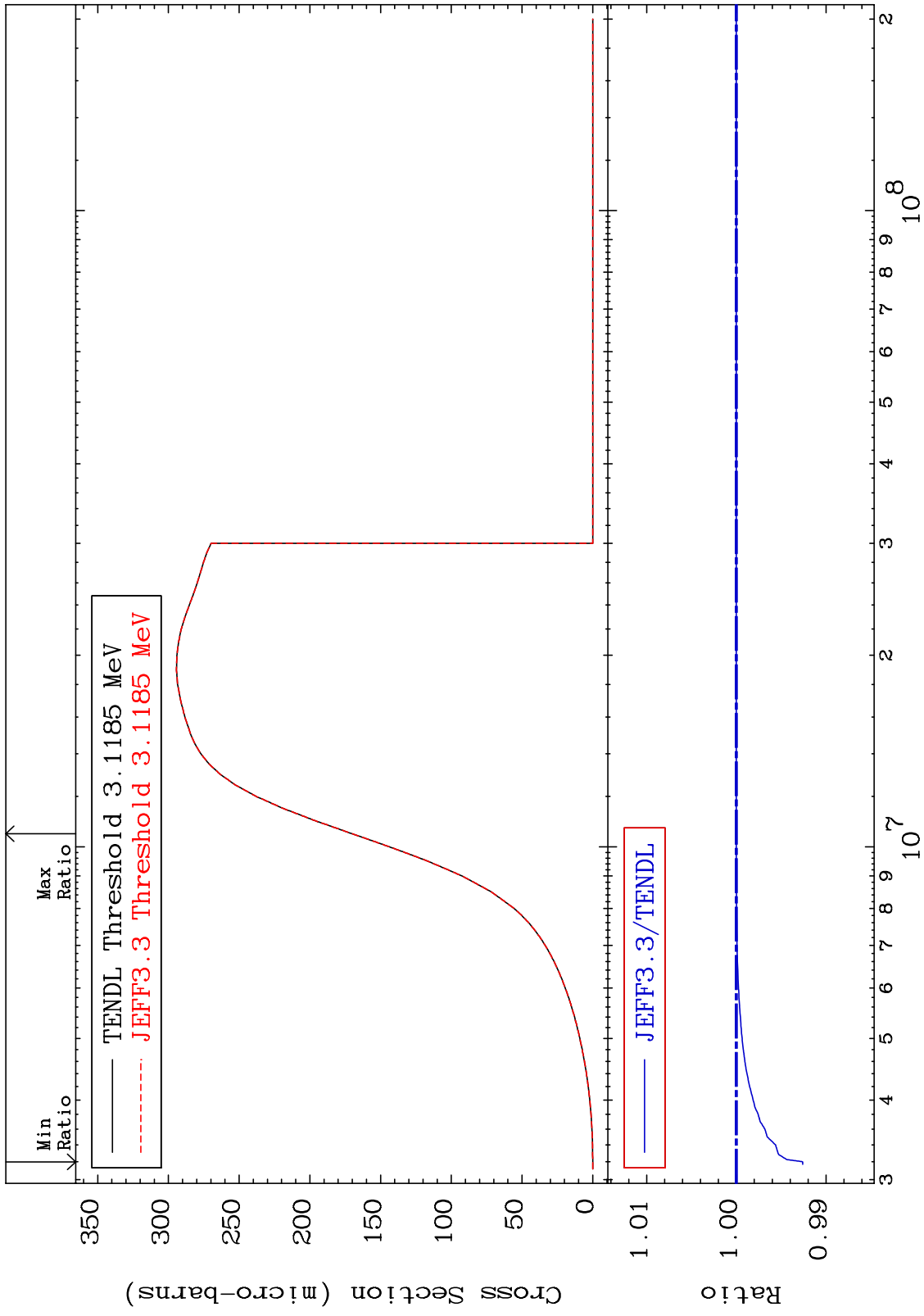
MAT 5825 MT= 75 (n,n') Level Cross Section 58-Ce-136
 -0.109 To 0.463 %



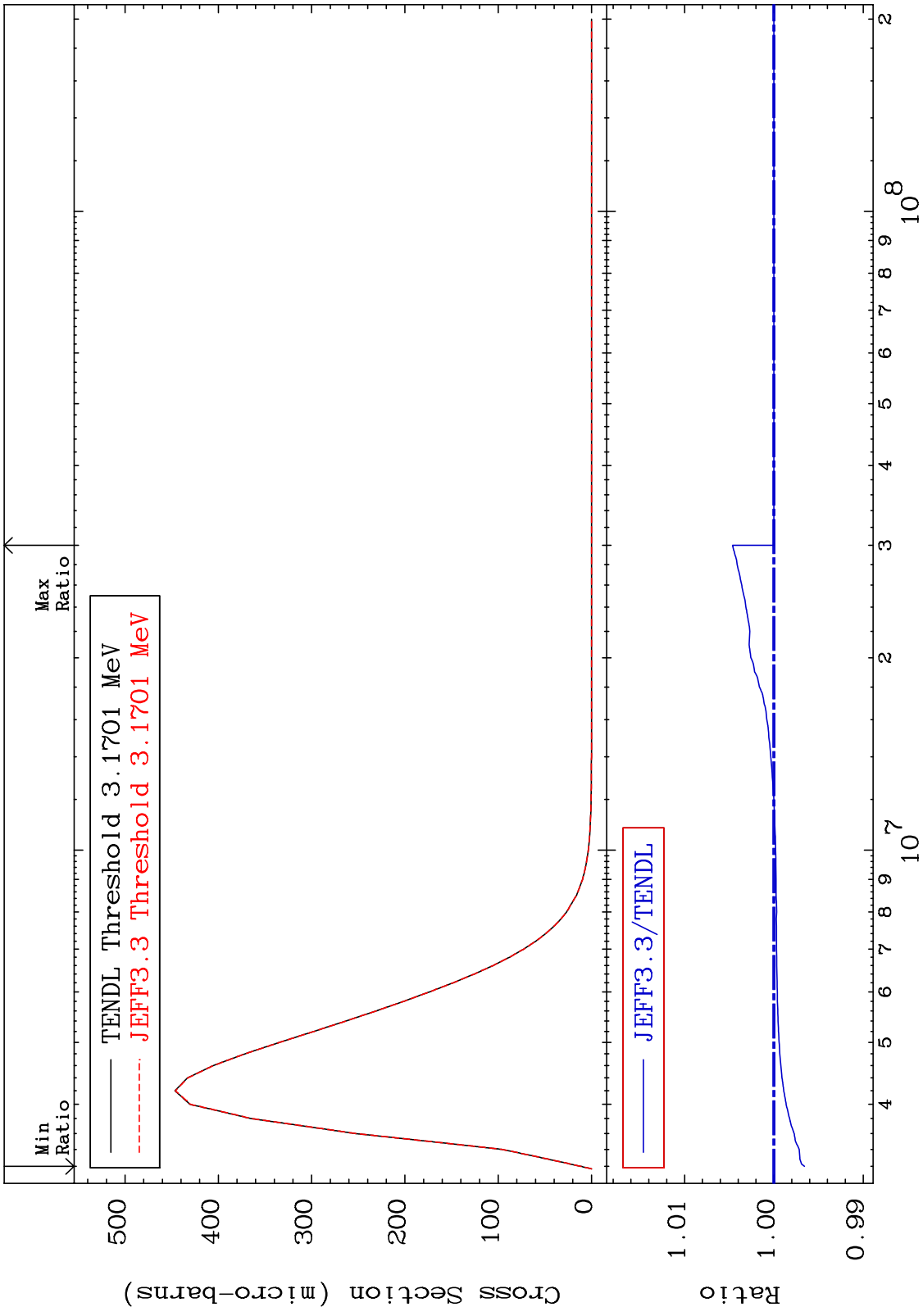
MAT 5825 MT= 76 (n,n') Level Cross Section 58-Ce-136 -0.072 To 0.464 %



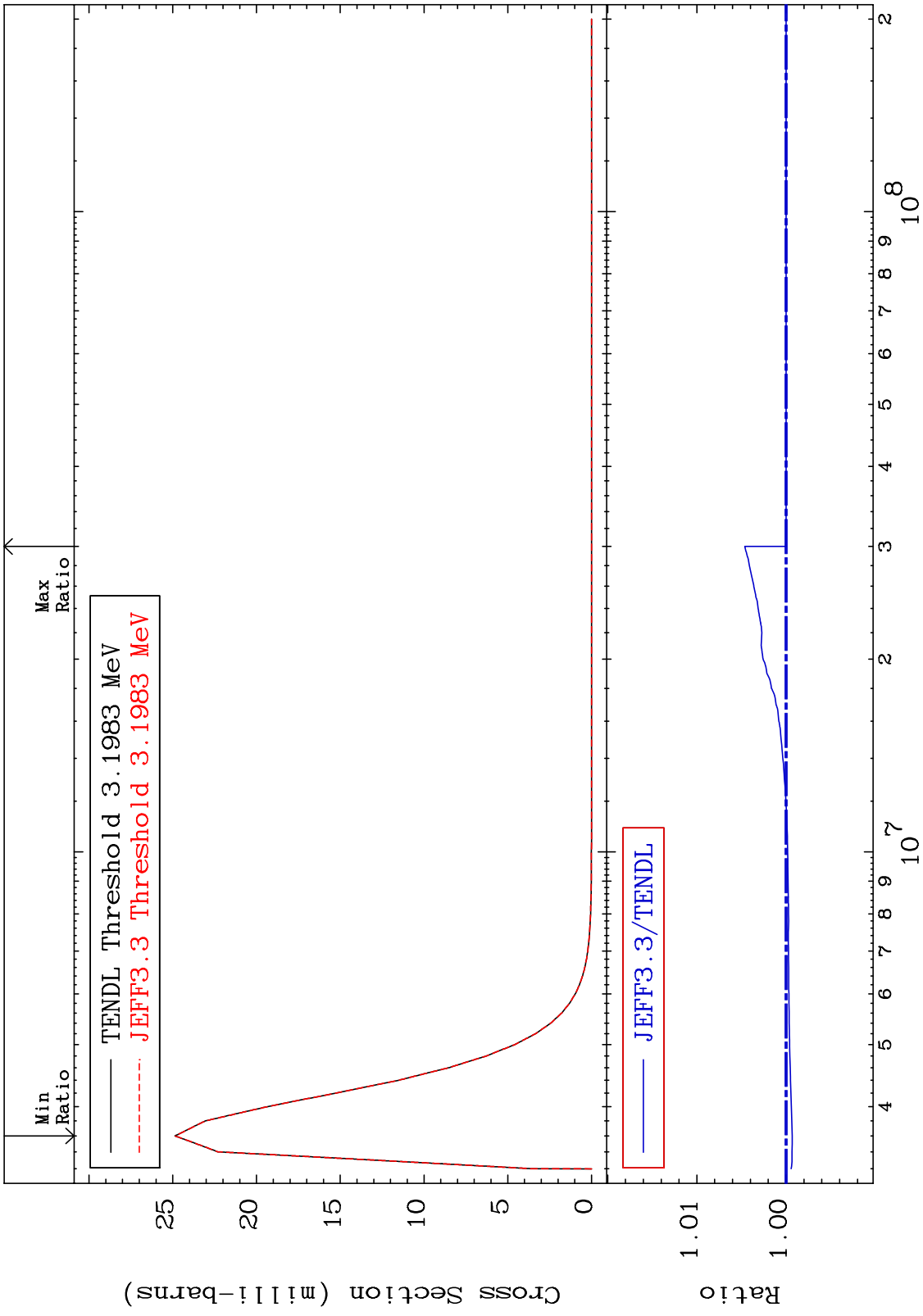
MAT 5825 MT= 77 (n,n') Level Cross Section 58-Ce-136
 -0.740 To 0.000 %



MAT 5825 MT= 78 (n,n') Level Cross Section 58-Ce-136 -0.341 To 0.464 %

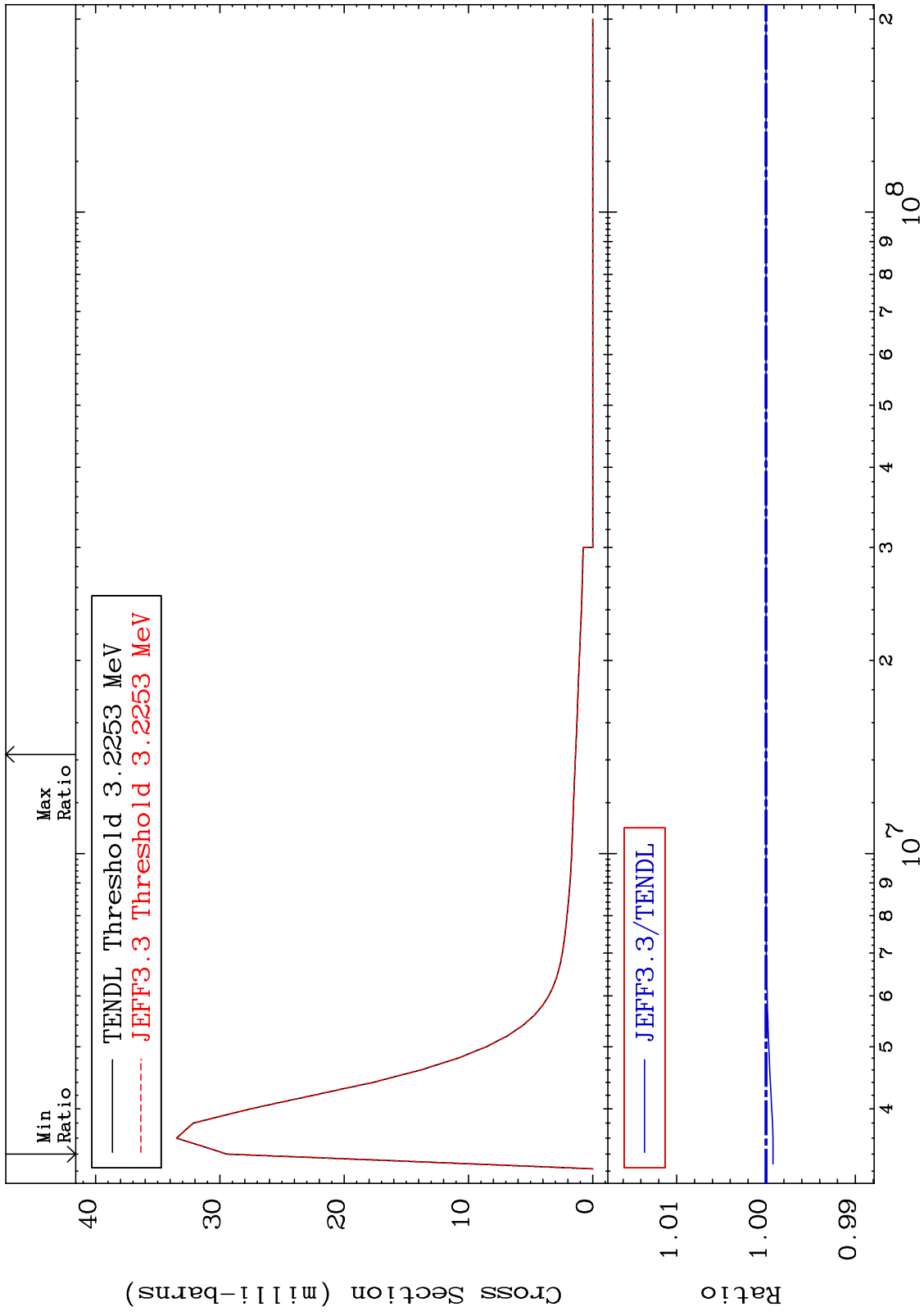


MAT 5825 MT= 79 (n,n') Level Cross Section 58-Ce-136
 -0.068 To 0.464 %

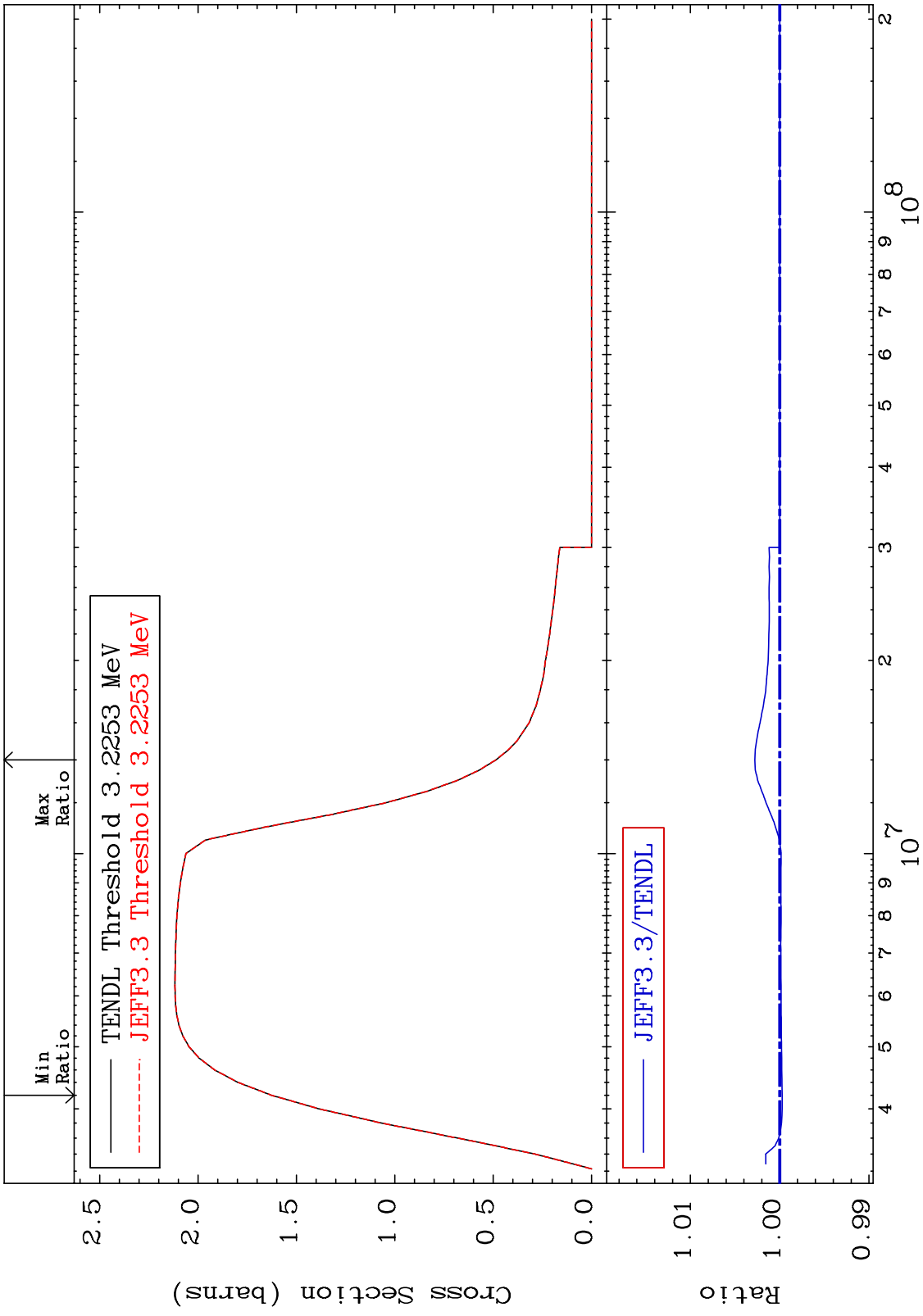


48 Incident Energy (eV) 58-Ce-136

MAT 5825 MT= 80 (n,n') Level Cross Section 58-Ce-136
 -0.079 To 0.000 %

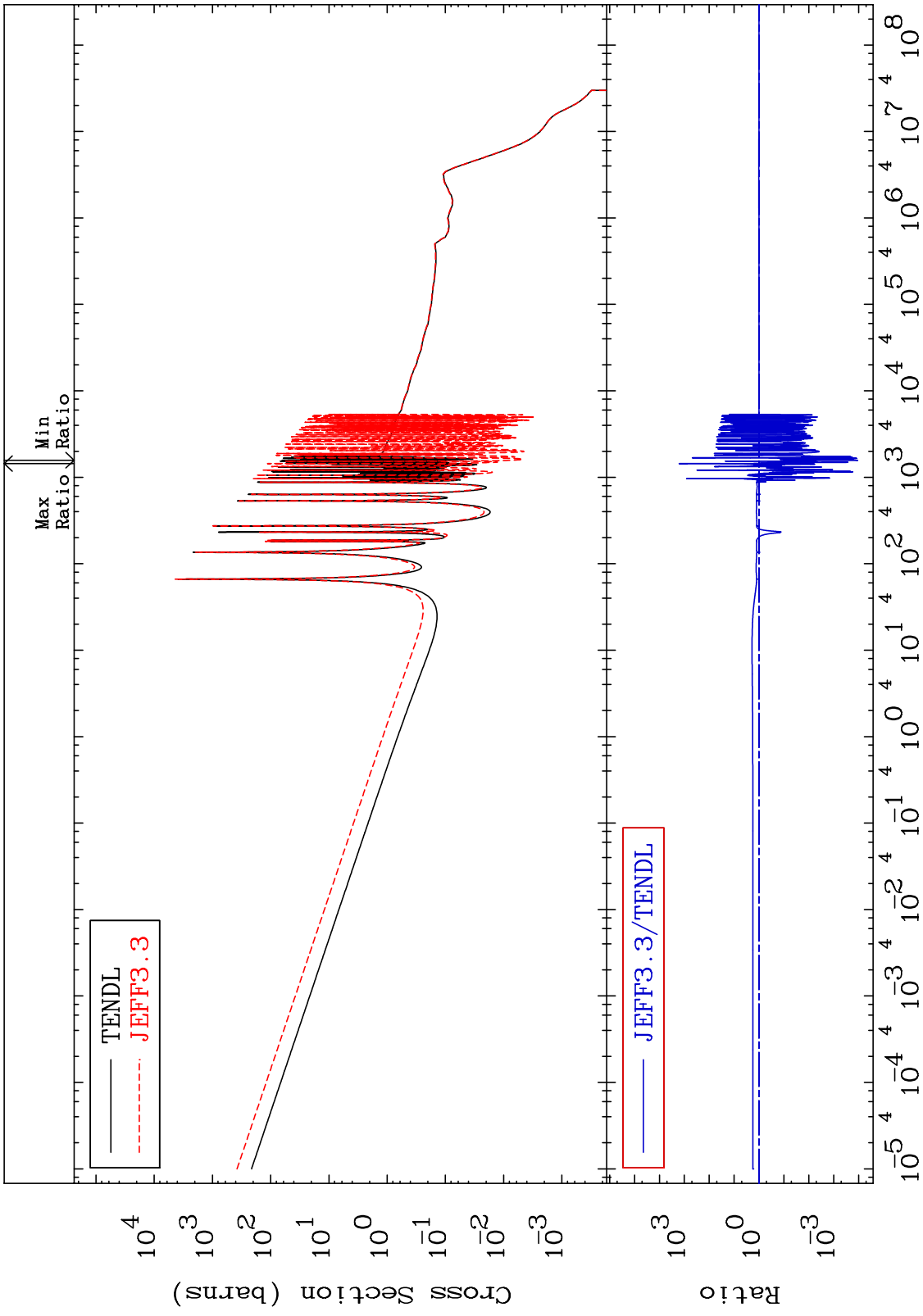


MAT 5825 (n,n') Continuum Cross Section 58-Ce-136 -0.027 To 0.280 %

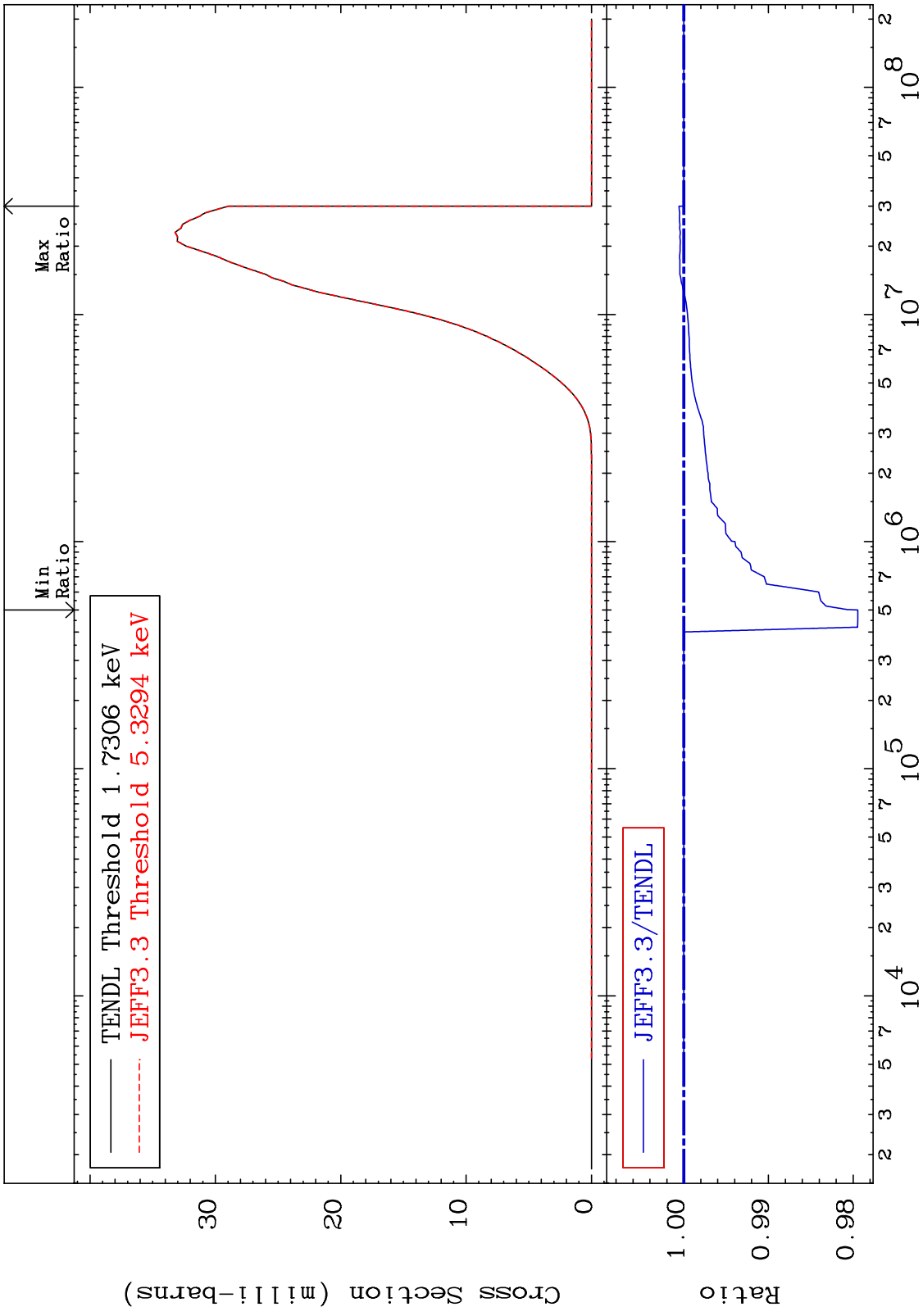


50 58-Ce-136

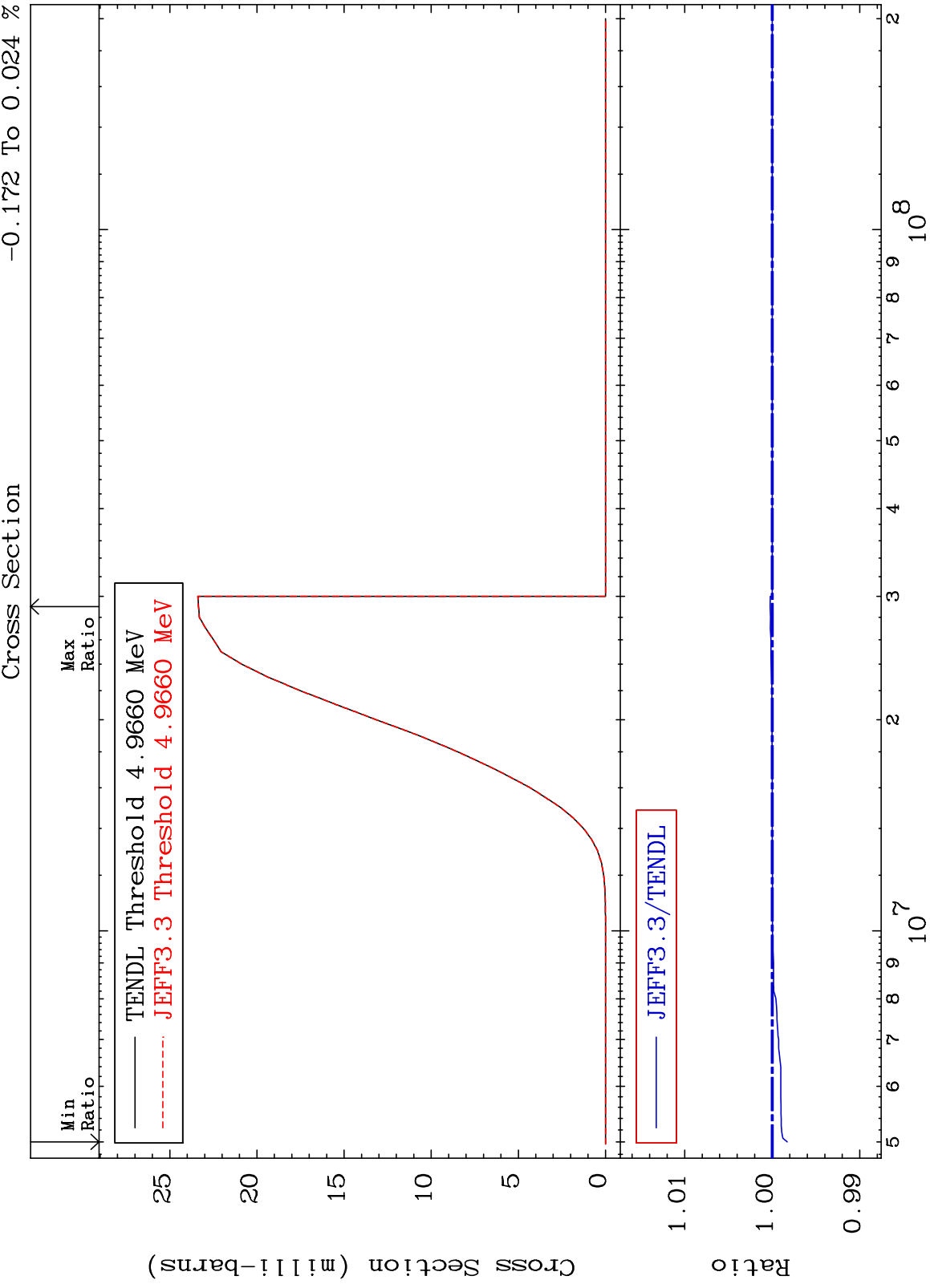
MAT 5825 (n, γ) Cross Section 58-Ce-136 -99.99 To 9999. %

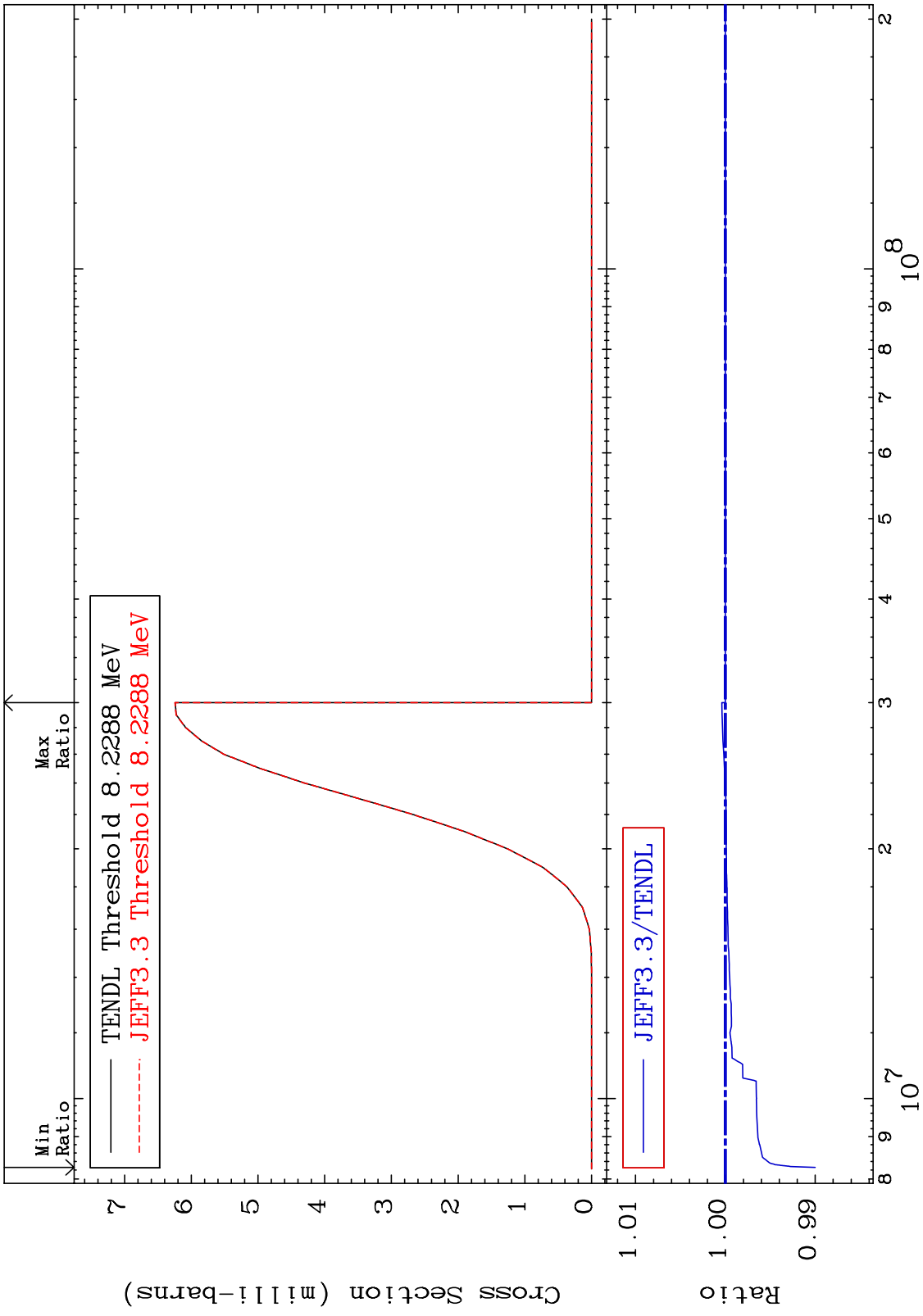


MAT 5825 (n,p) Cross Section 58-Ce-136 -2.056 To 0.057 %

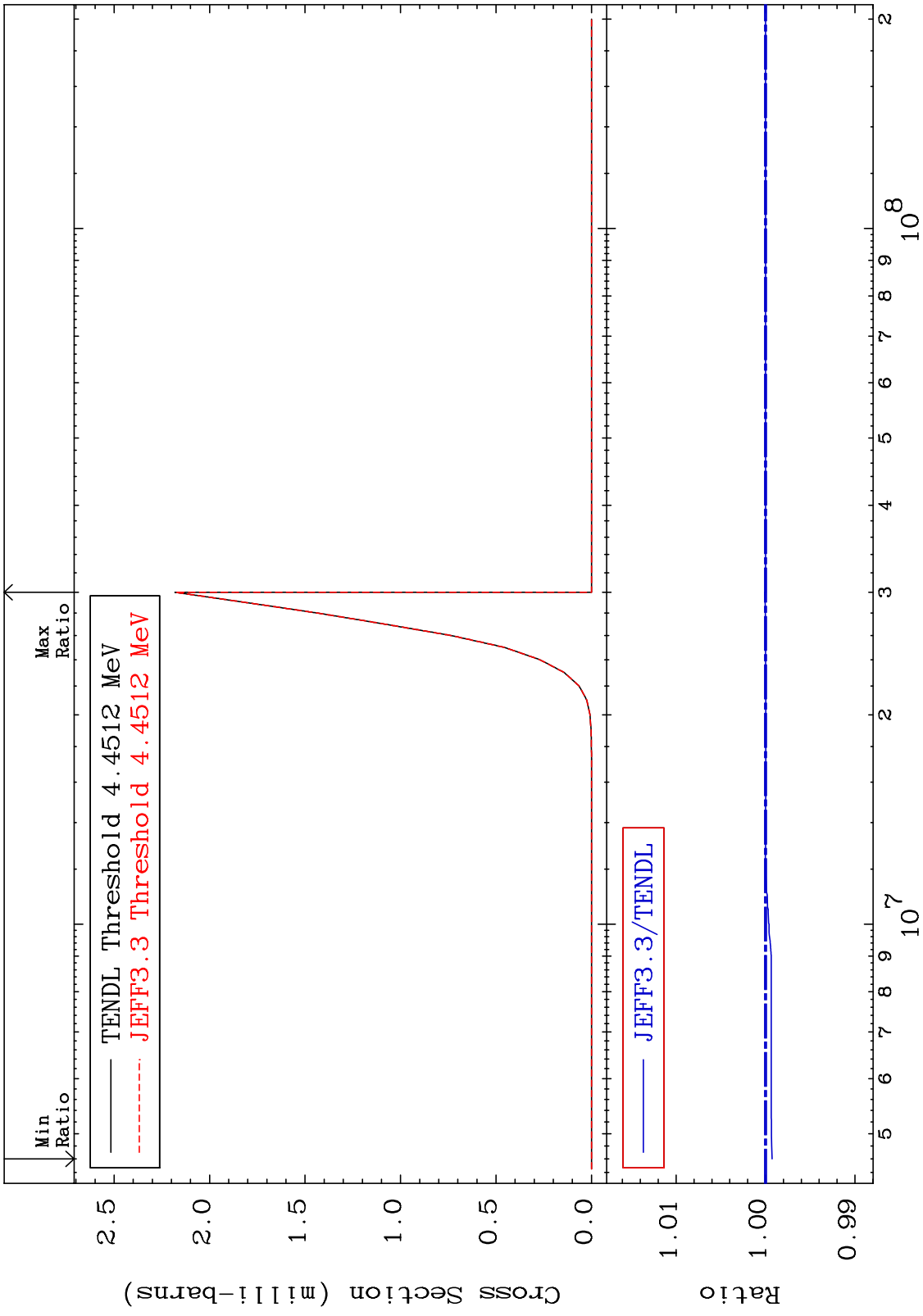


MAT 5825 (n,d) 58-Ce-136 -0.172 To 0.024 %

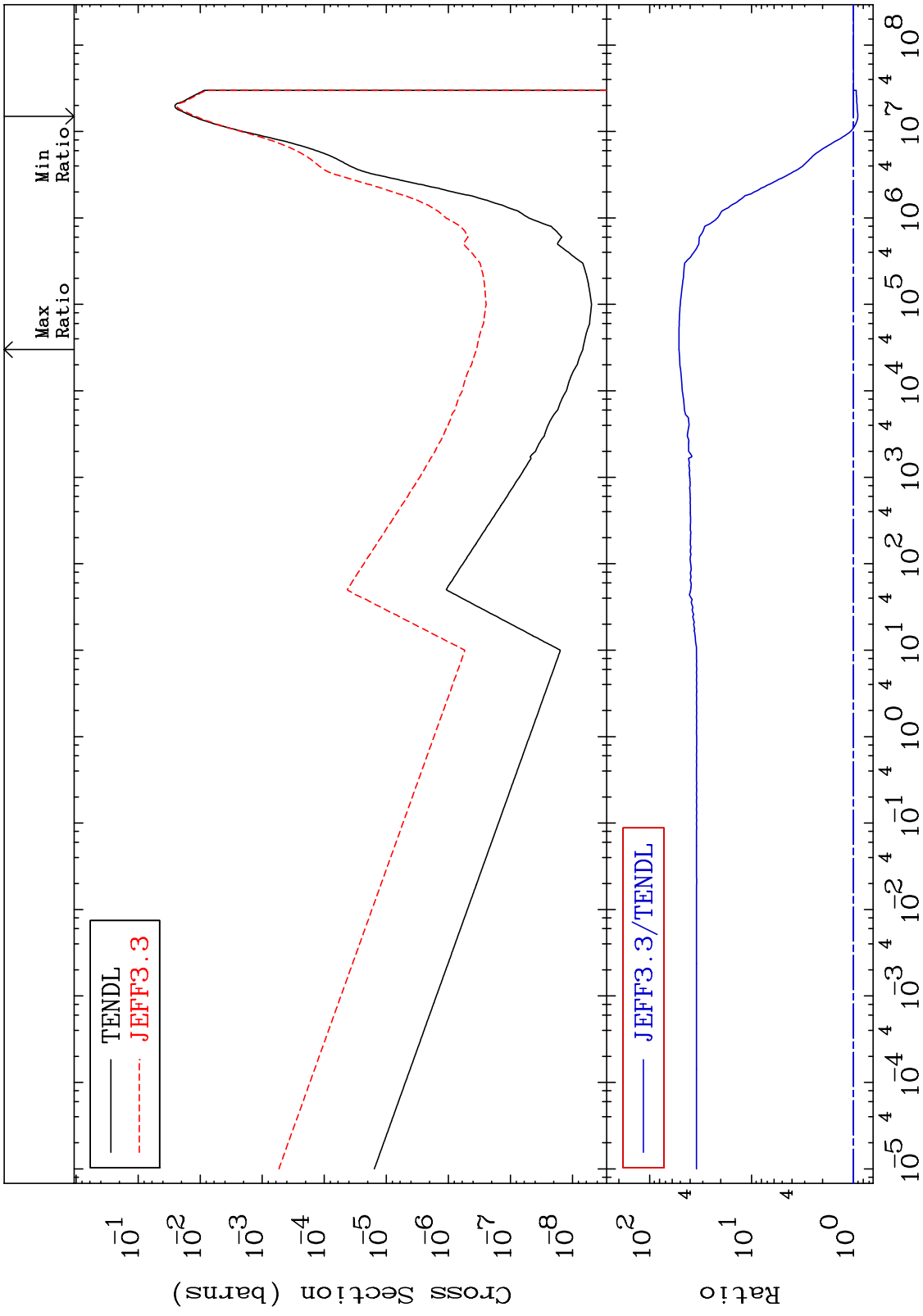




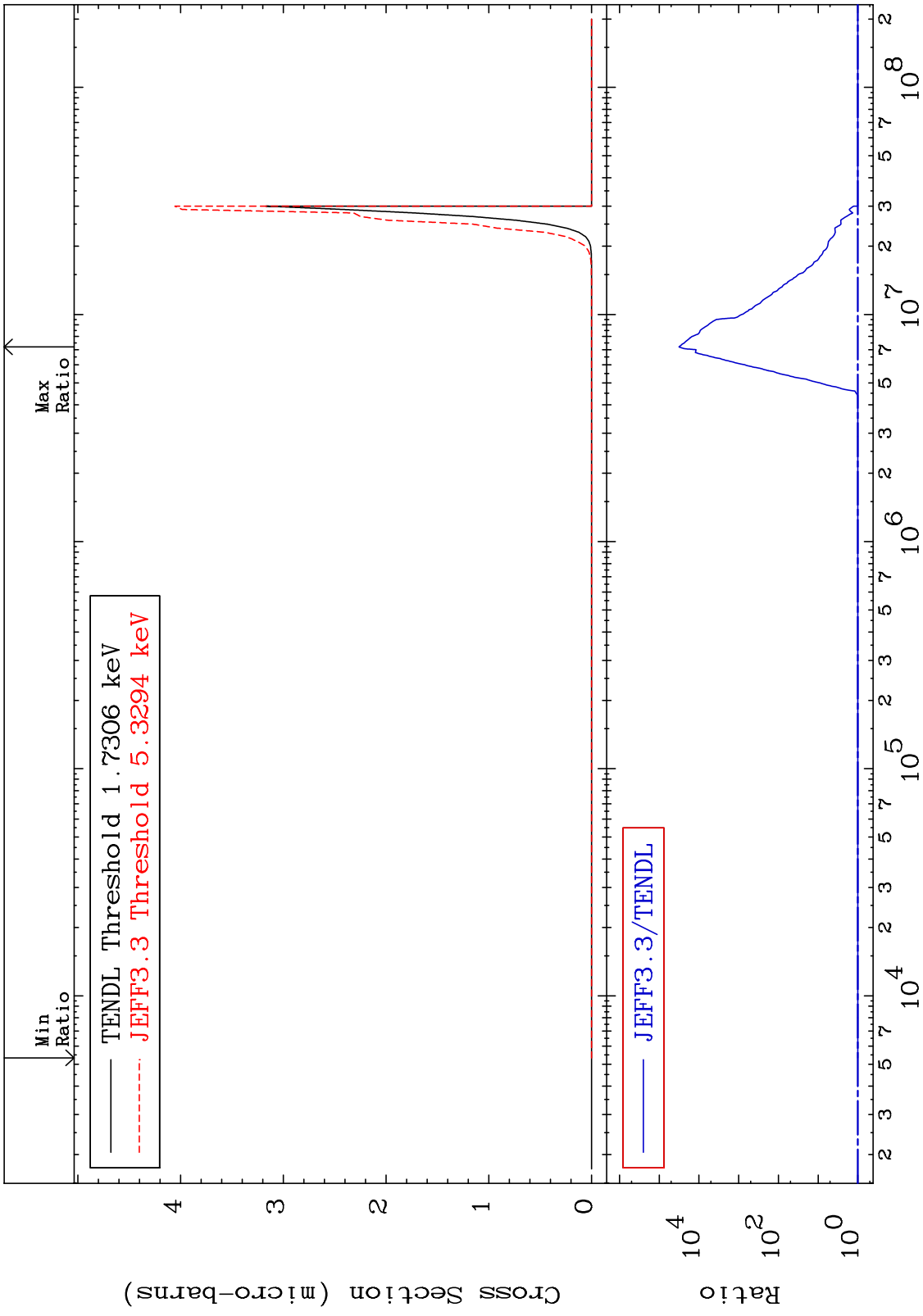
MAT 5825 (n, He-3) 58-Ce-136
Cross Section -0.074 To 0.010 %



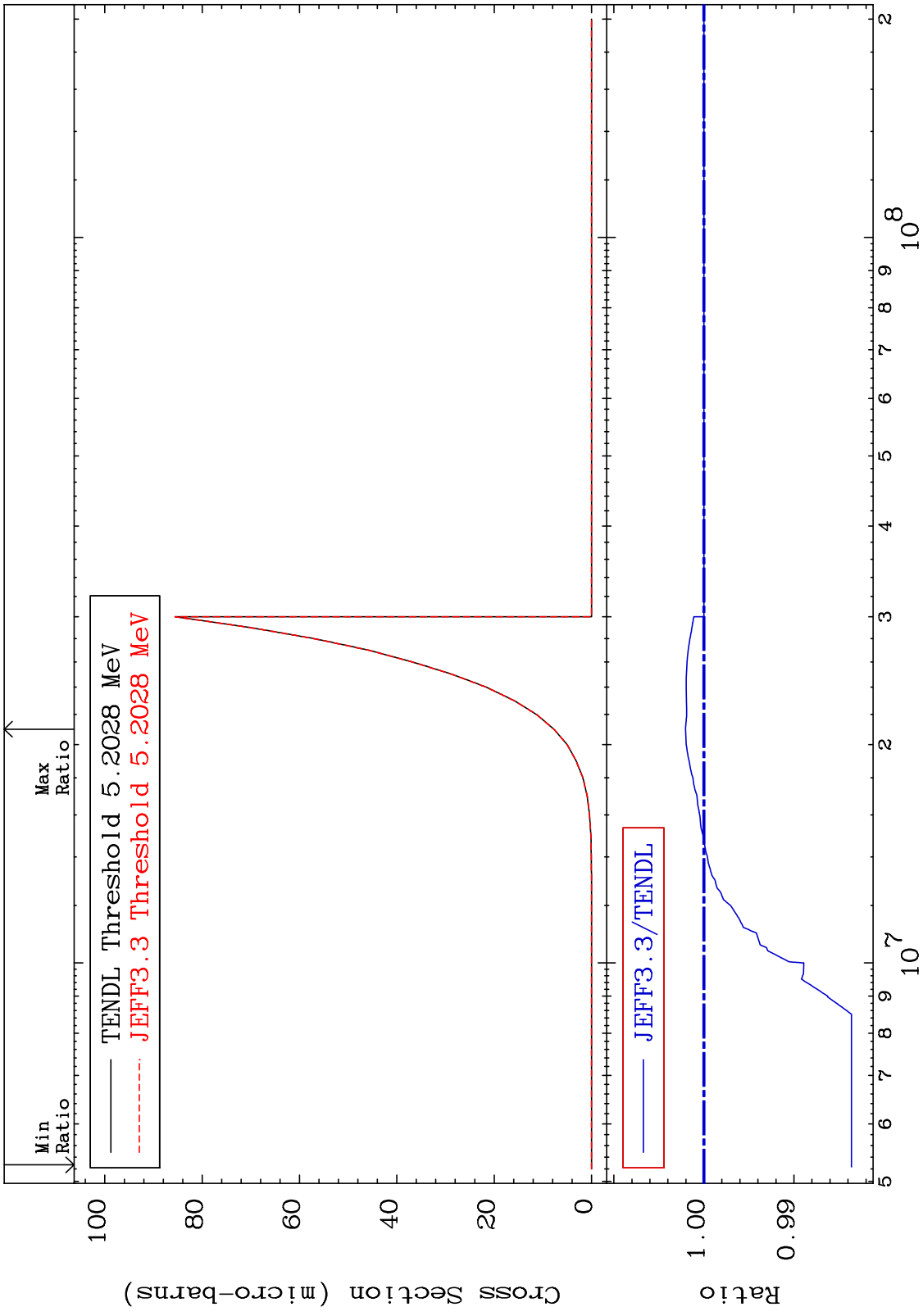
MAT 5825 (n, α) Cross Section 58-Ce-136
 -9.669 To 5037. %



MAT 5825 (n,2α) Cross Section 58-Ce-136 To 9999. %



MAT 5825 $(n,2p)$ 58-Ce-136
 Cross Section -1.638 To 0.205 %



58 58-Ce-136

MAT 5825

(n,p) α

58-Ce-136

-73.48 To 9999. %

Cross Section

Min Ratio

Max Ratio

TENDL Threshold 1.0057 MeV
JEFF3.3 Threshold 1.0023 MeV

40

30

20

10

0

Cross Section (micro-barns)

10^4

10^2

10^0

Ratio

10^6

10^7

10^8

2

3

4

5

6

7

8

10

2

3

4

5

6

7

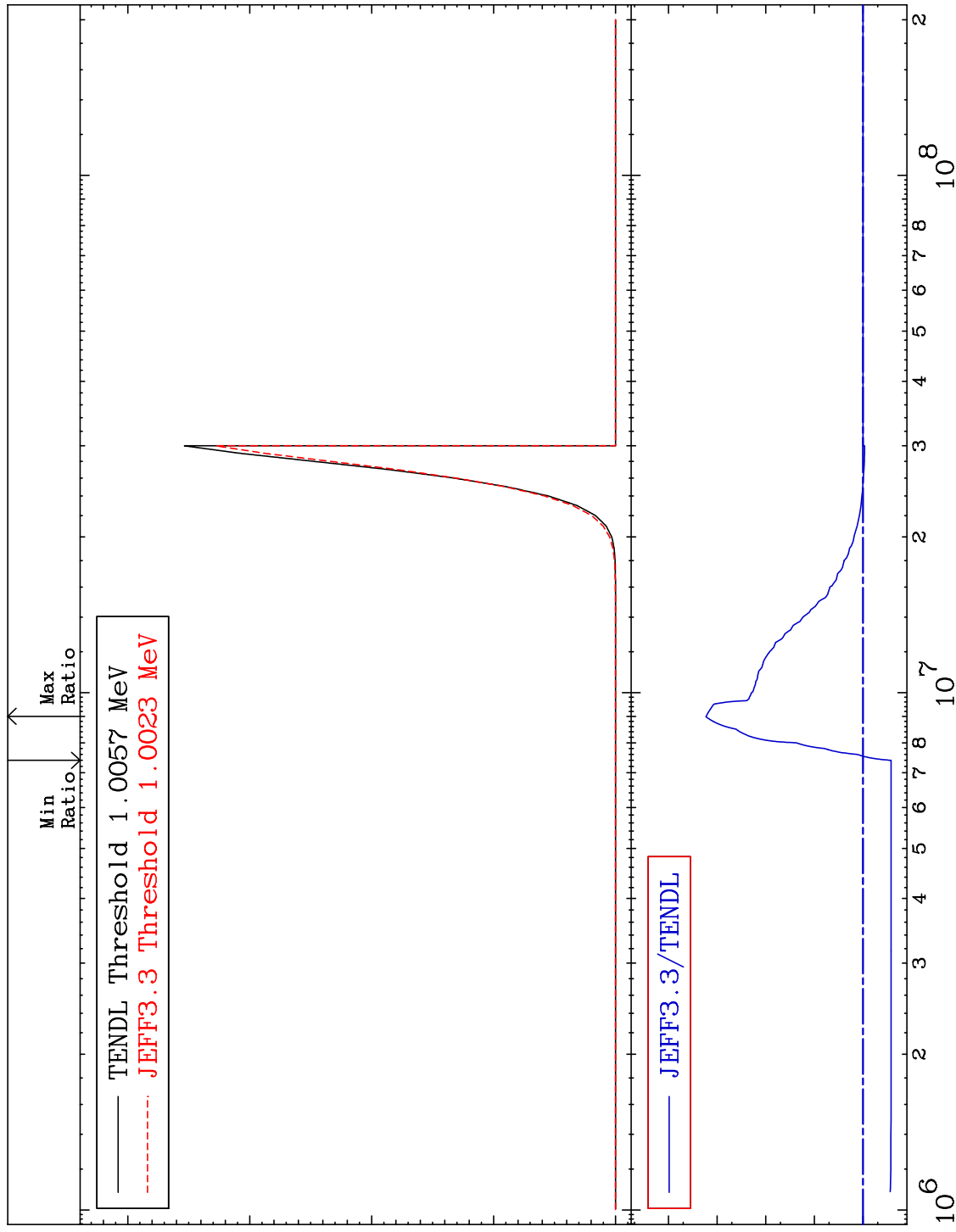
8

10

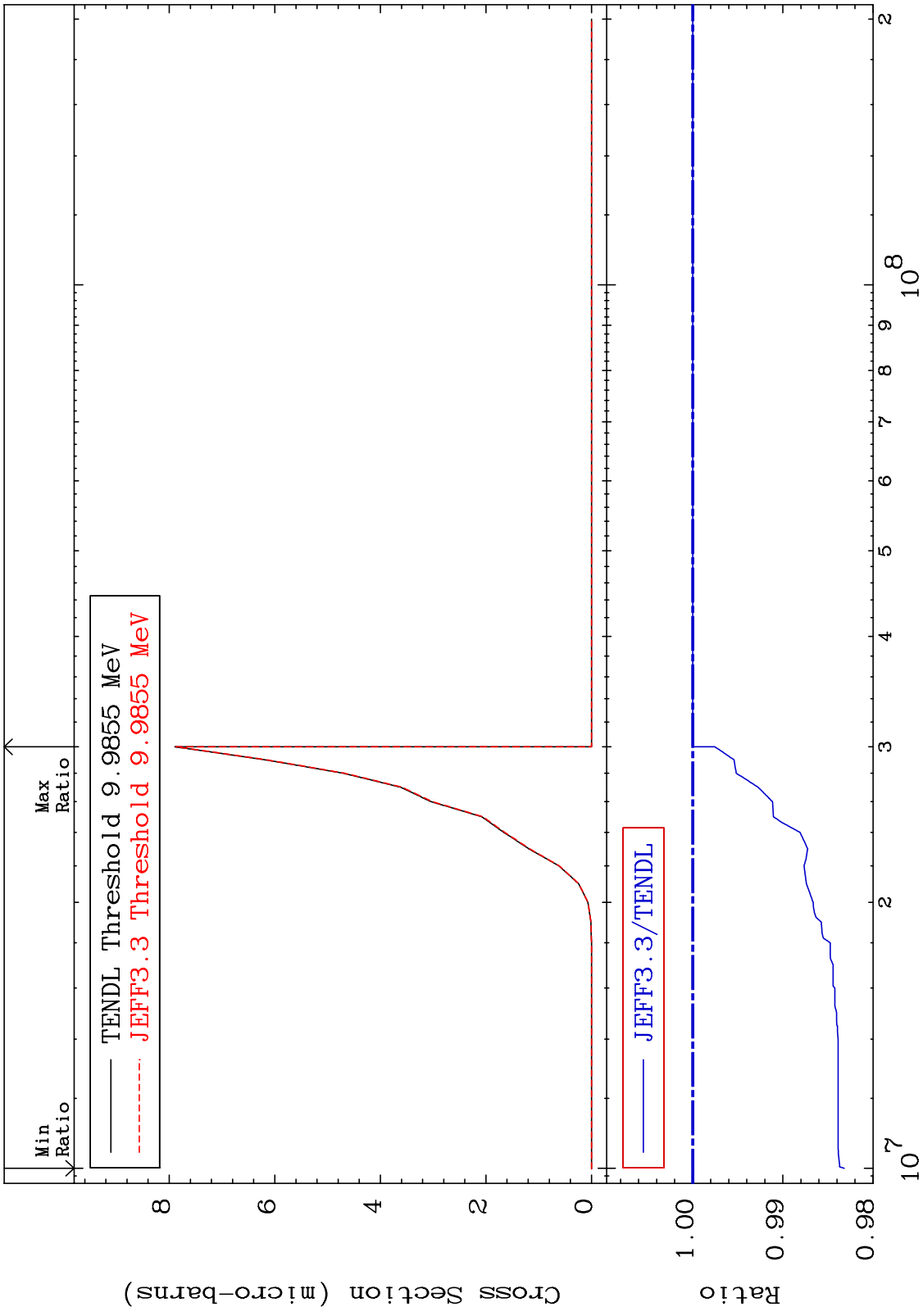
59

Incident Energy (eV)

58-Ce-136

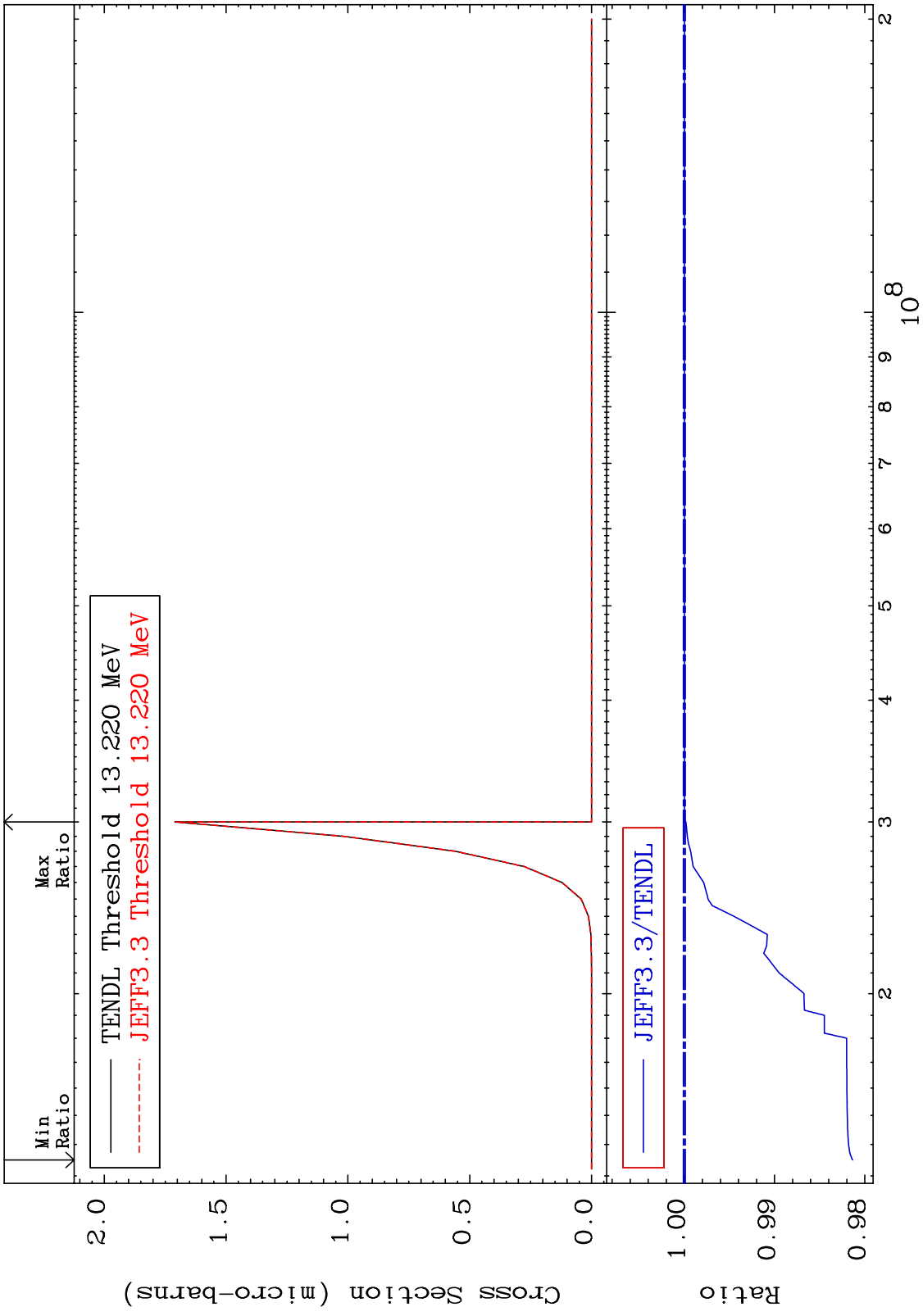


MAT 5825 (n,p) d 58-Ce-136
Cross Section -1.680 To 0.000 %

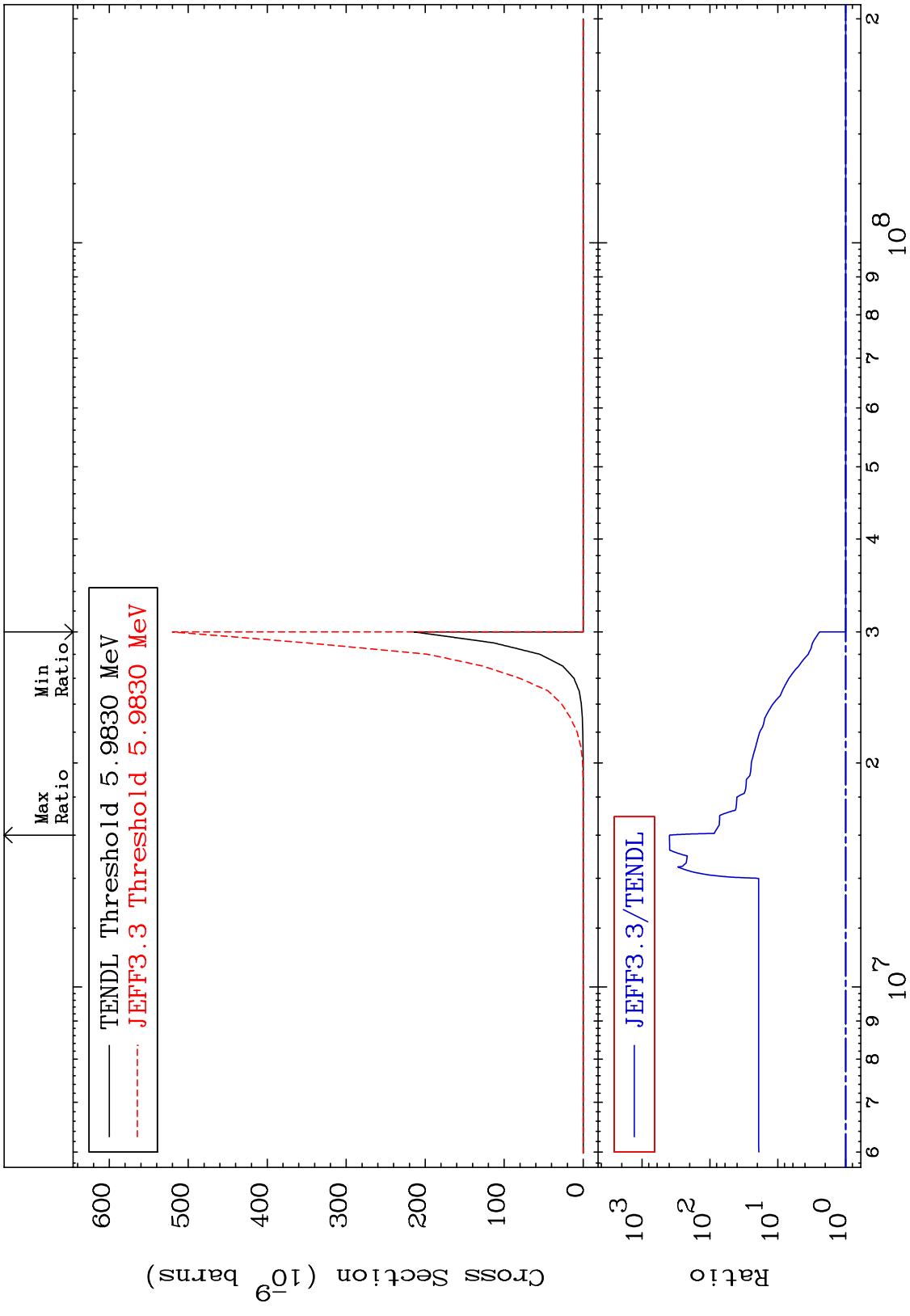


60 Incident Energy (eV) 58-Ce-136

MAT 5825 (n,p) t 58-Ce-136
 Cross Section -1.864 To 0.000 %



MAT 5825 (n,d) α 58-Ce-136 To 9999. %
 Cross Section 0.000

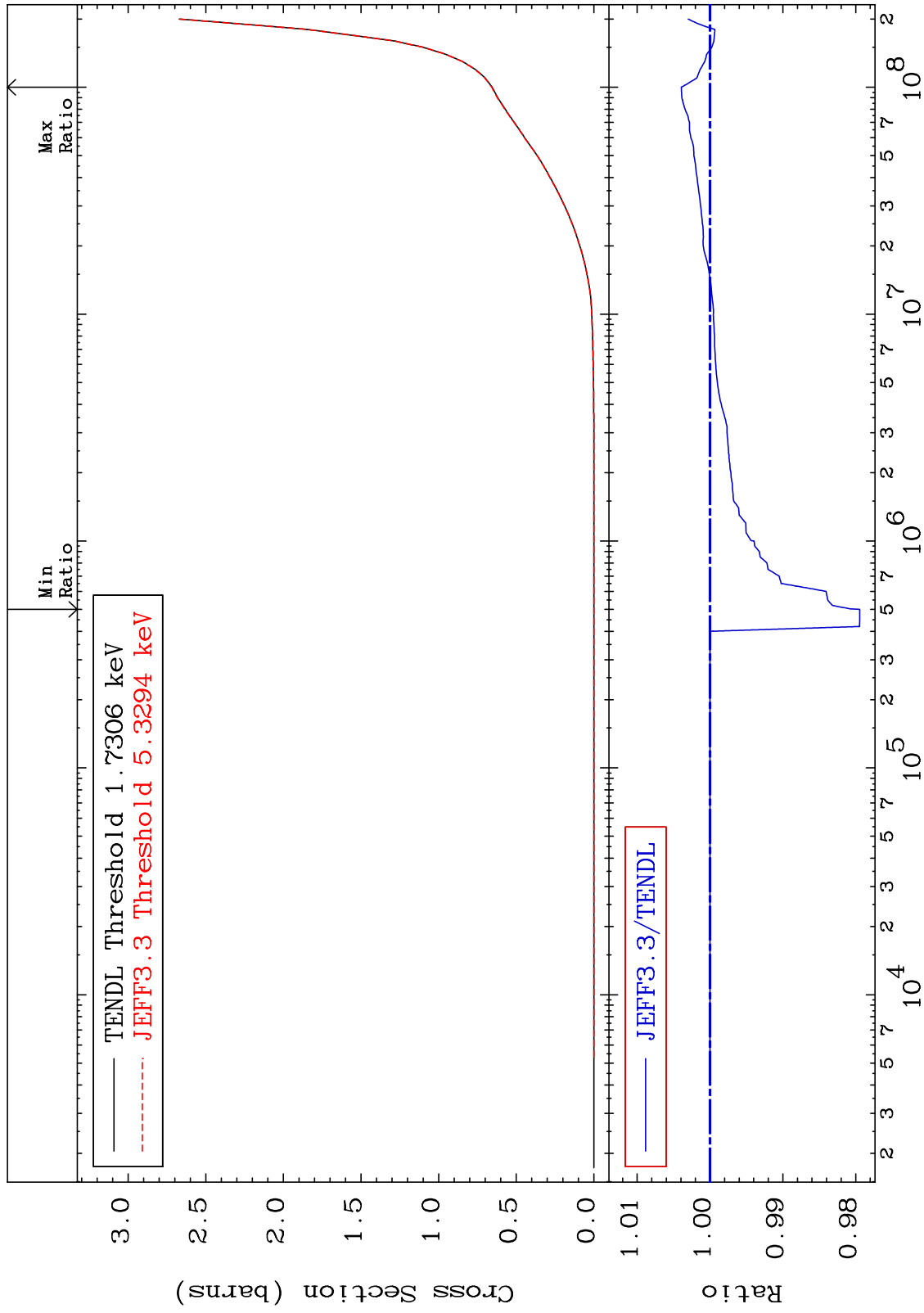


62 58-Ce-136 Incident Energy (eV)

MAT 5825

Hydrogen Production
Cross Section

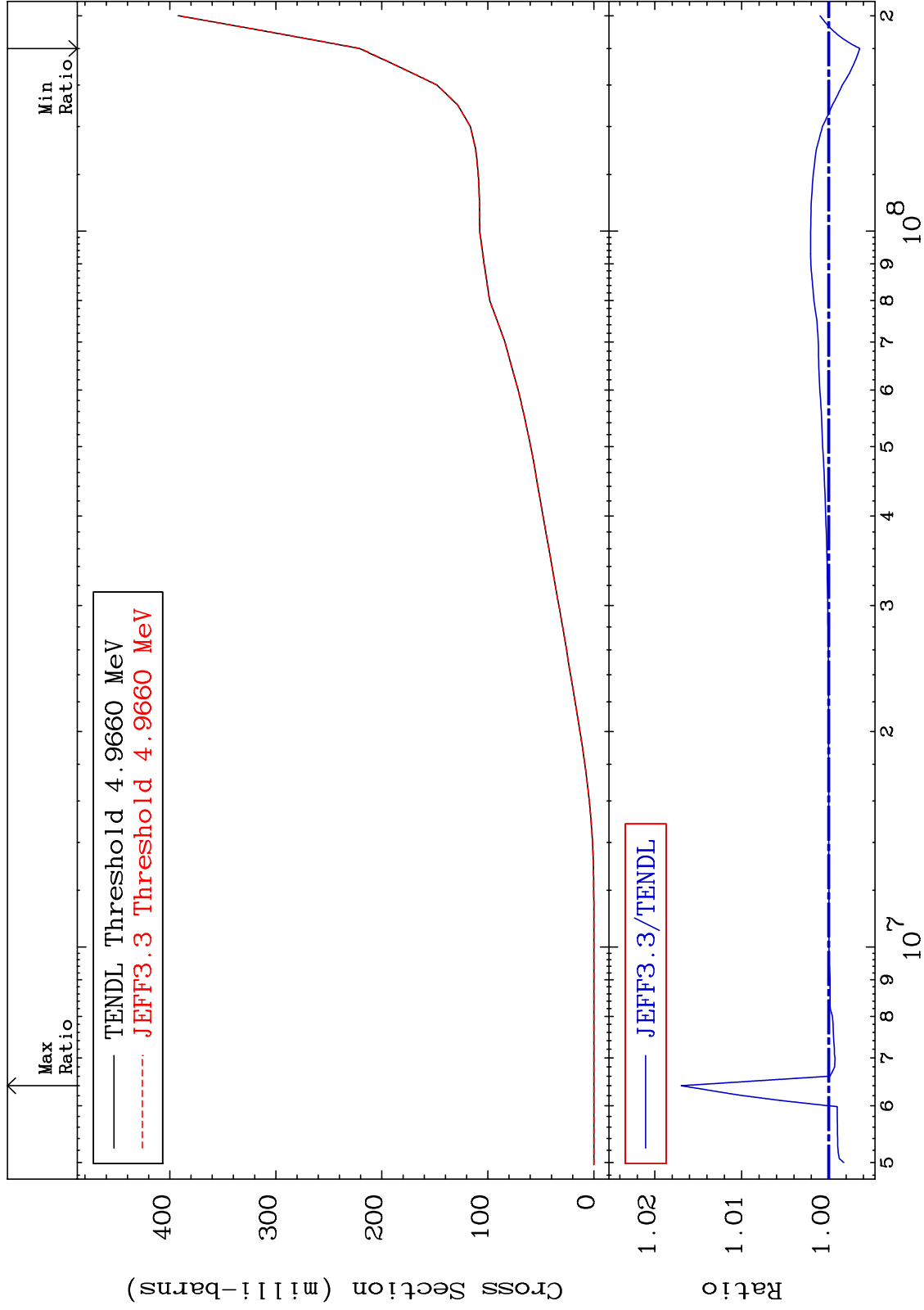
58-Ce-136
-2.056 To 0.395 %



MAT 5825

Deuterium Production
Cross Section

58-Ce-136
-0.357 To 1.695 %



64

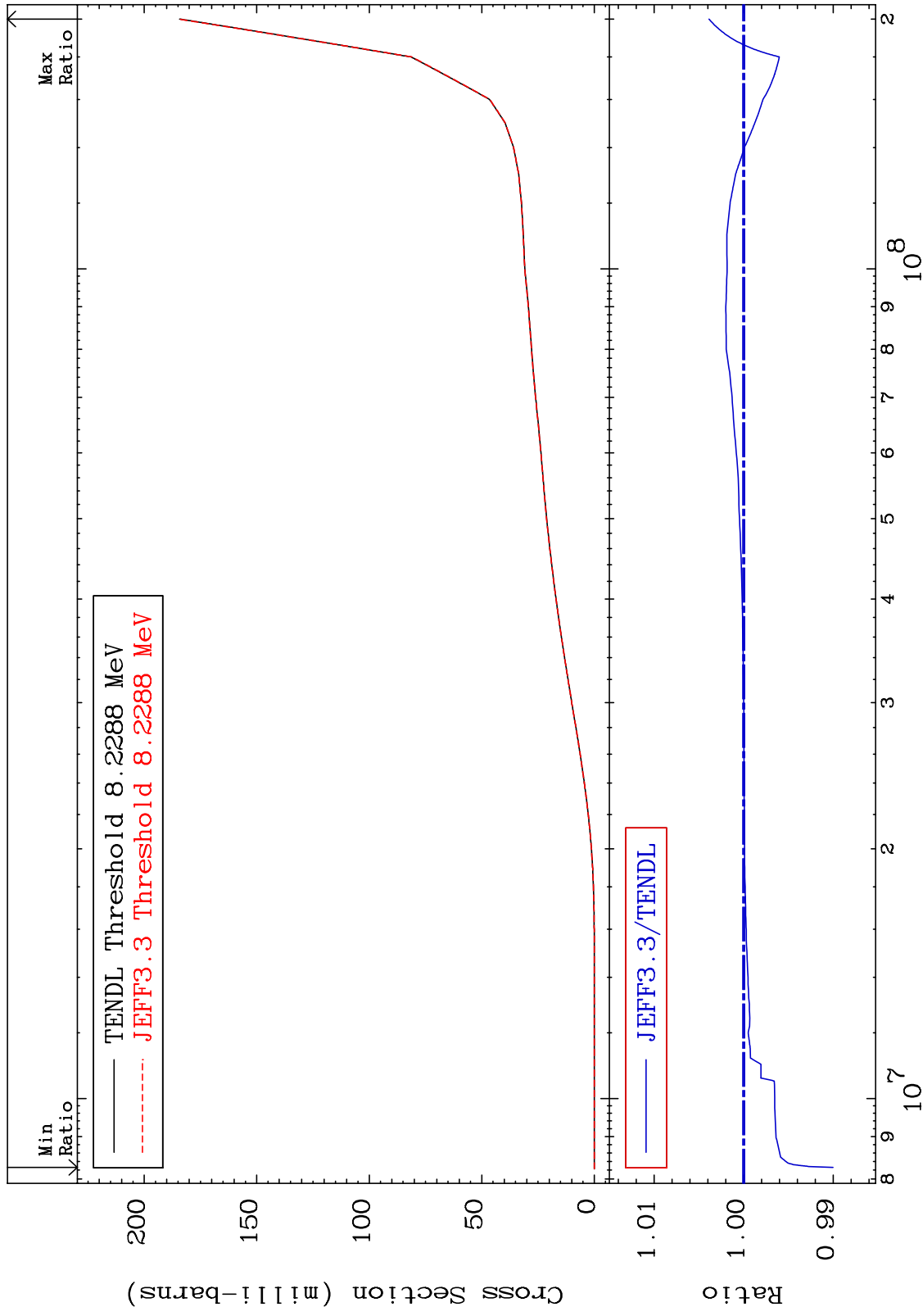
Incident Energy (eV)

58-Ce-136

MAT 5825

Tritium Production
Cross Section

58-Ce-136
-0.998 To 0.387 %



65

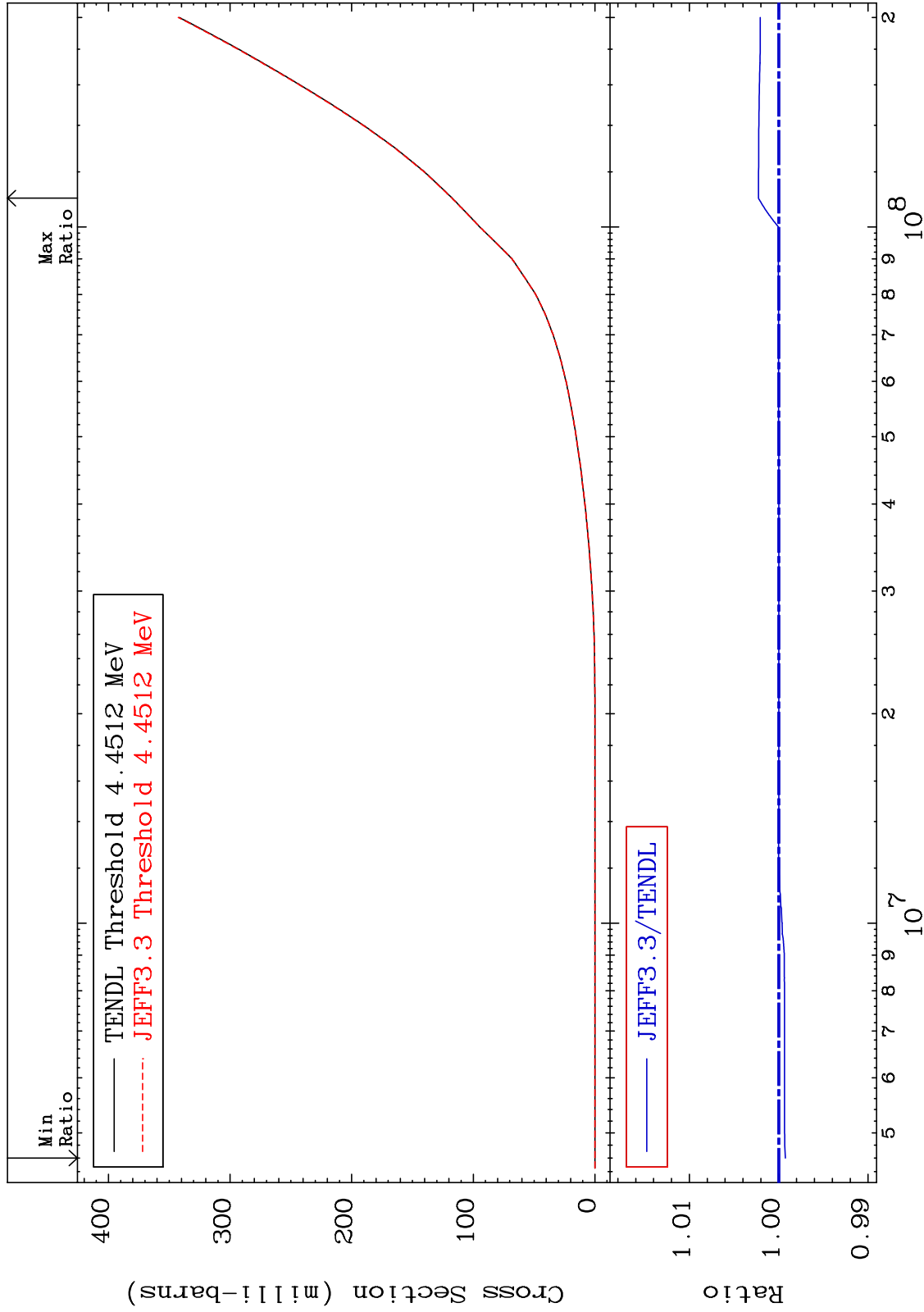
Incident Energy (eV)

58-Ce-136

MAT 5825

He-3 Production
Cross Section

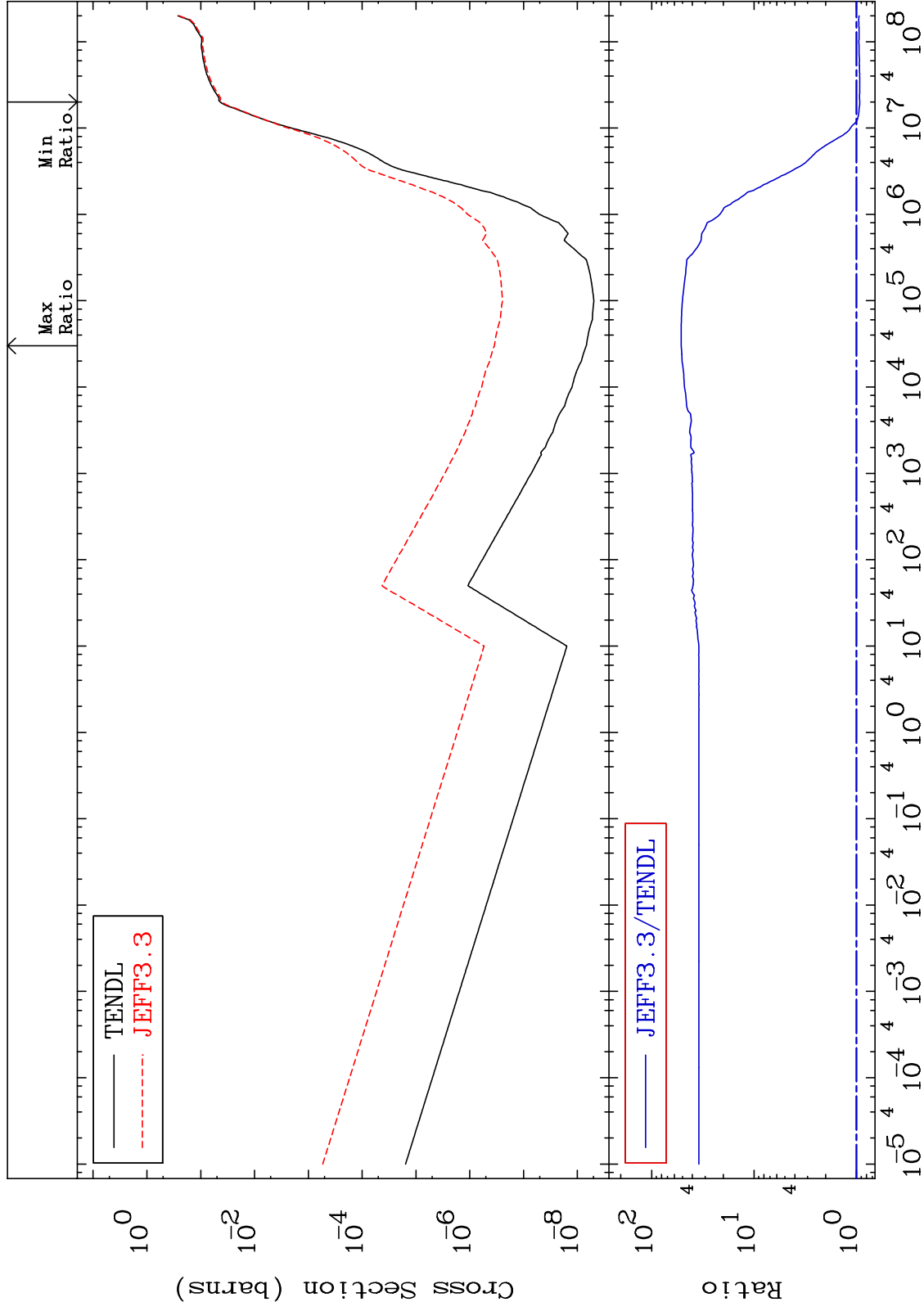
58-Ce-136
-0.074 To 0.228 %



MAT 5825

He-4 Production
Cross Section

58-Ce-136
-7.120 To 5037. %

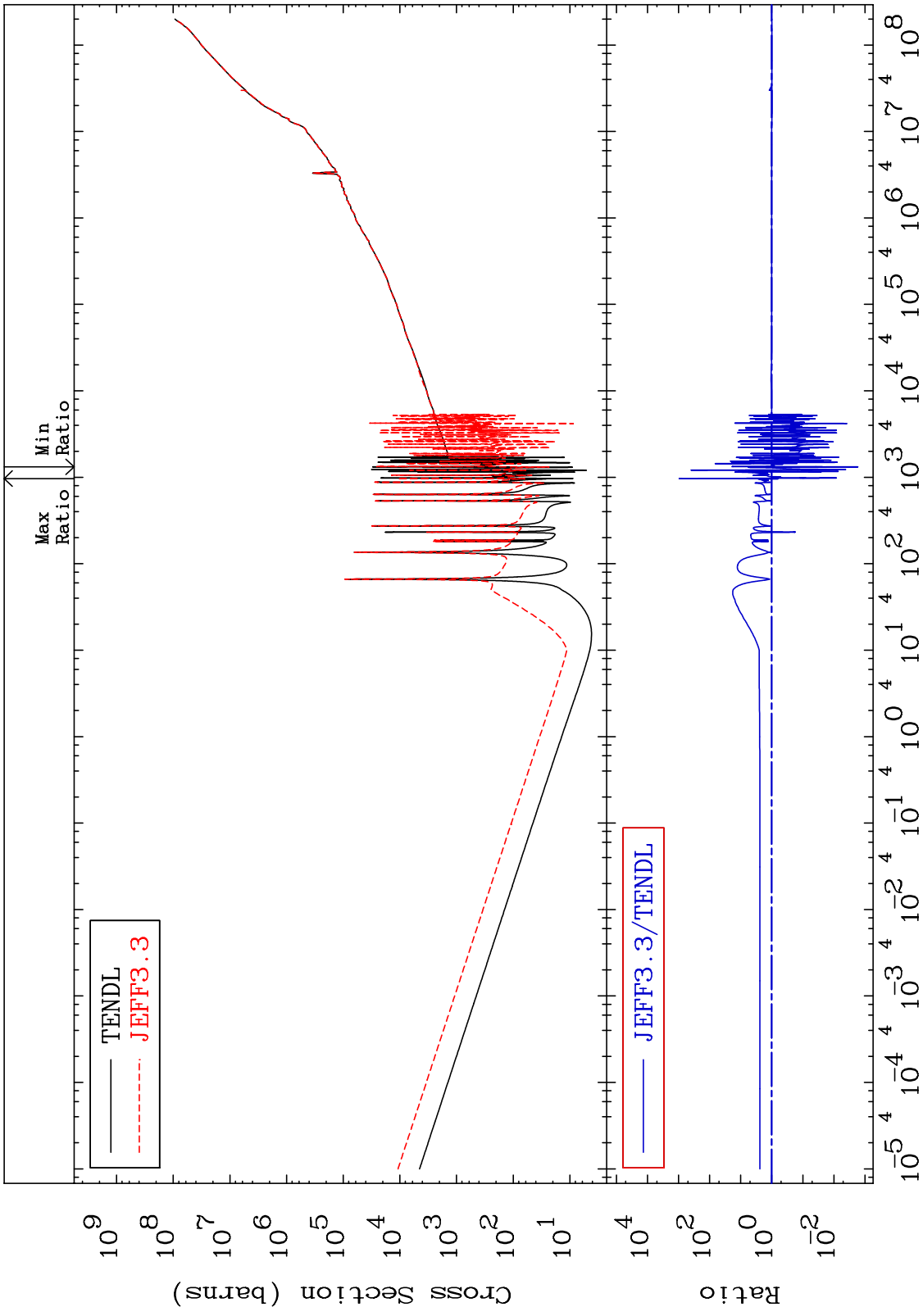


67

Incident Energy (eV)

58-Ce-136

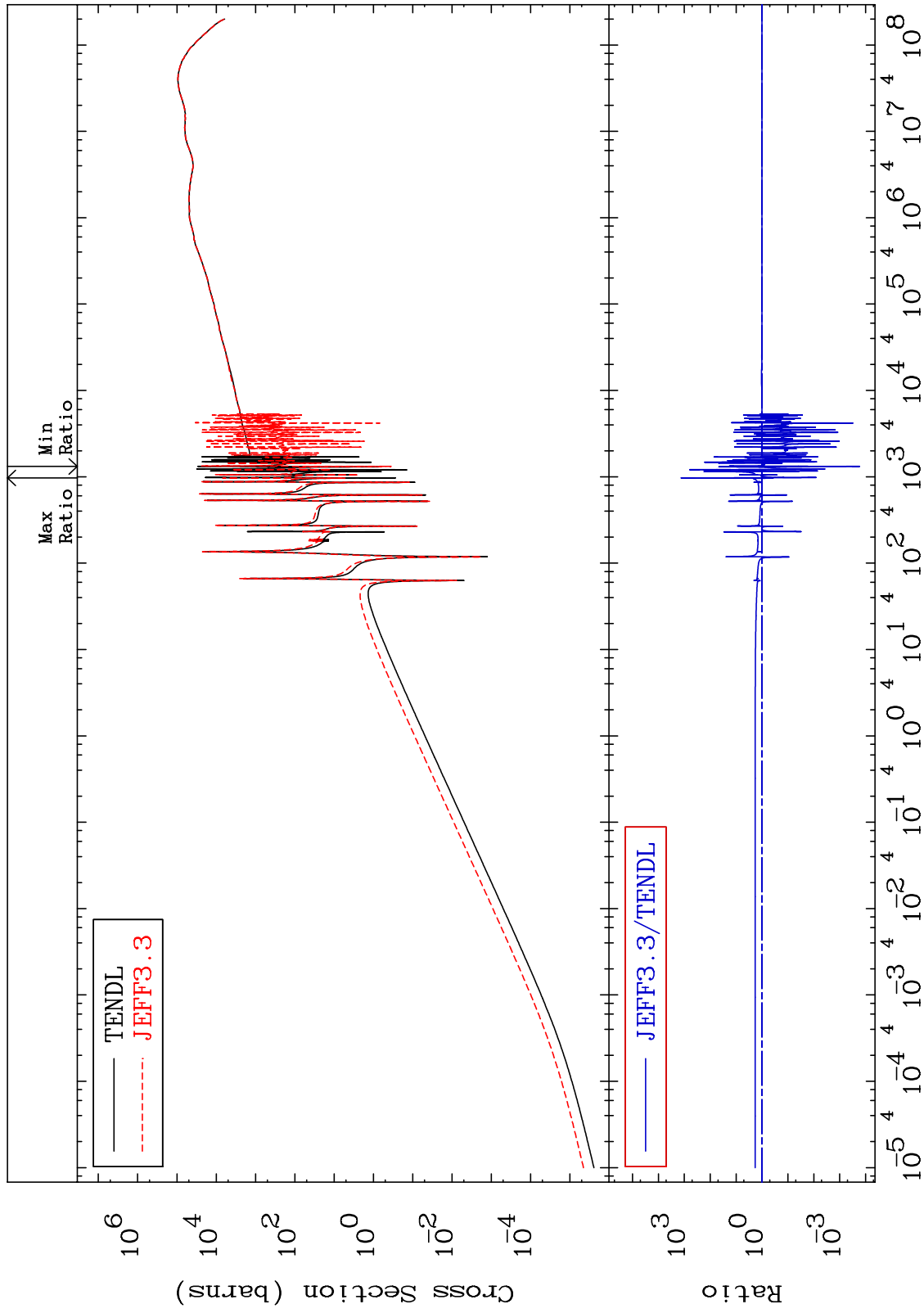
MAT 5825 Kerma total (eV-barns) 58-Ce-136
 Cross Section -99.83 To 9999. %



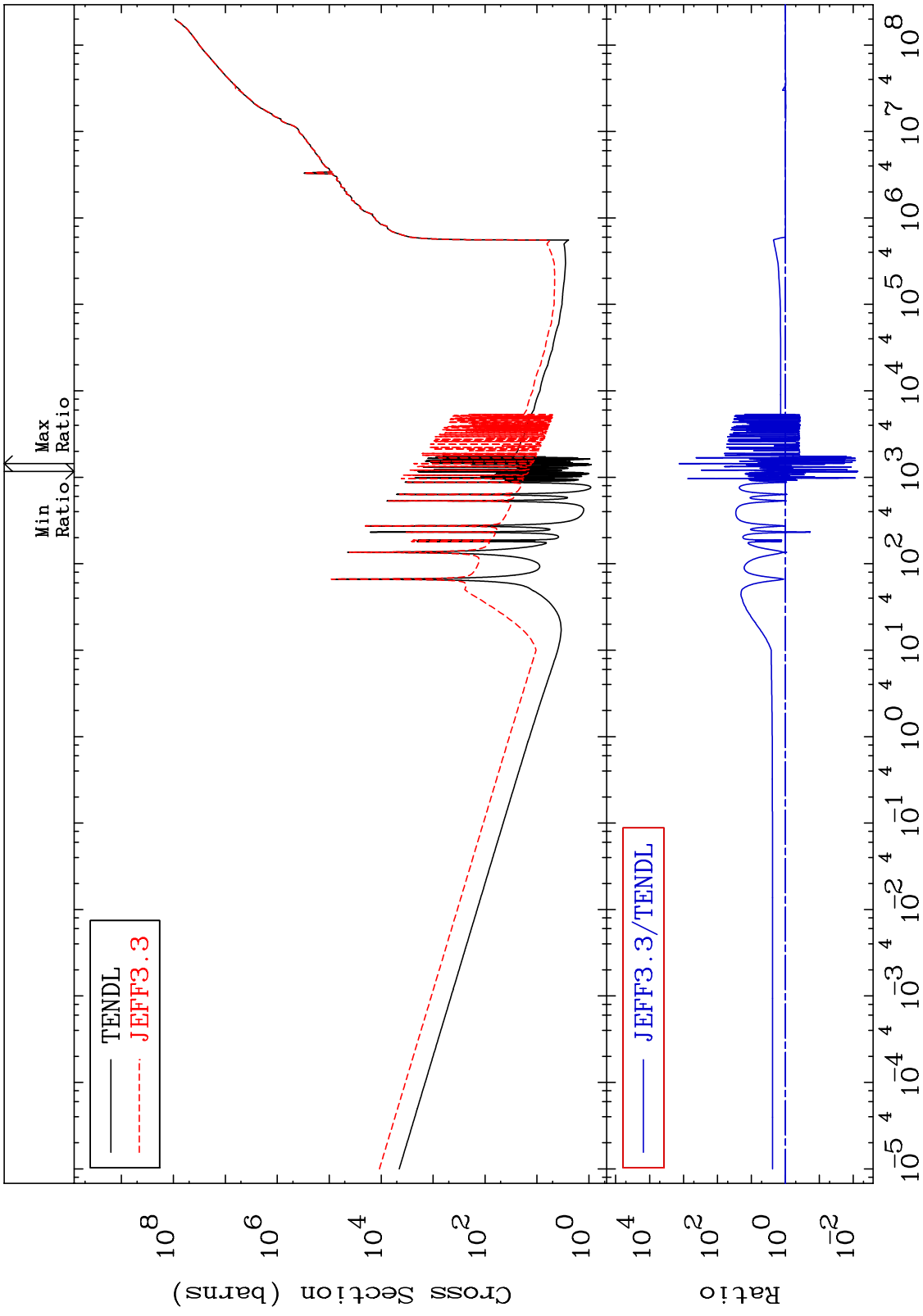
MAT 5825

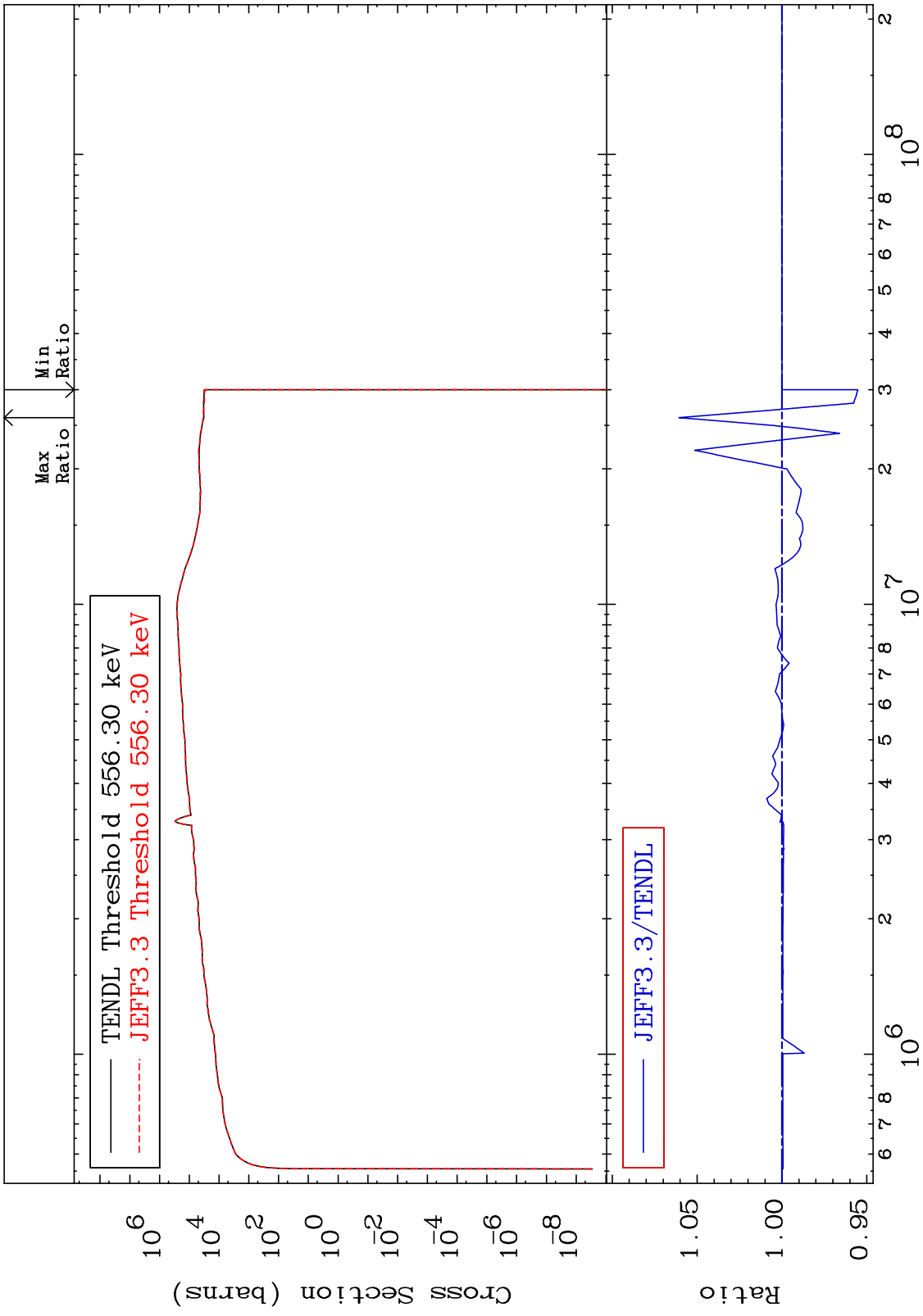
Kerma elastic
Cross Section

58-Ce-136
-99.98 To 9999. %

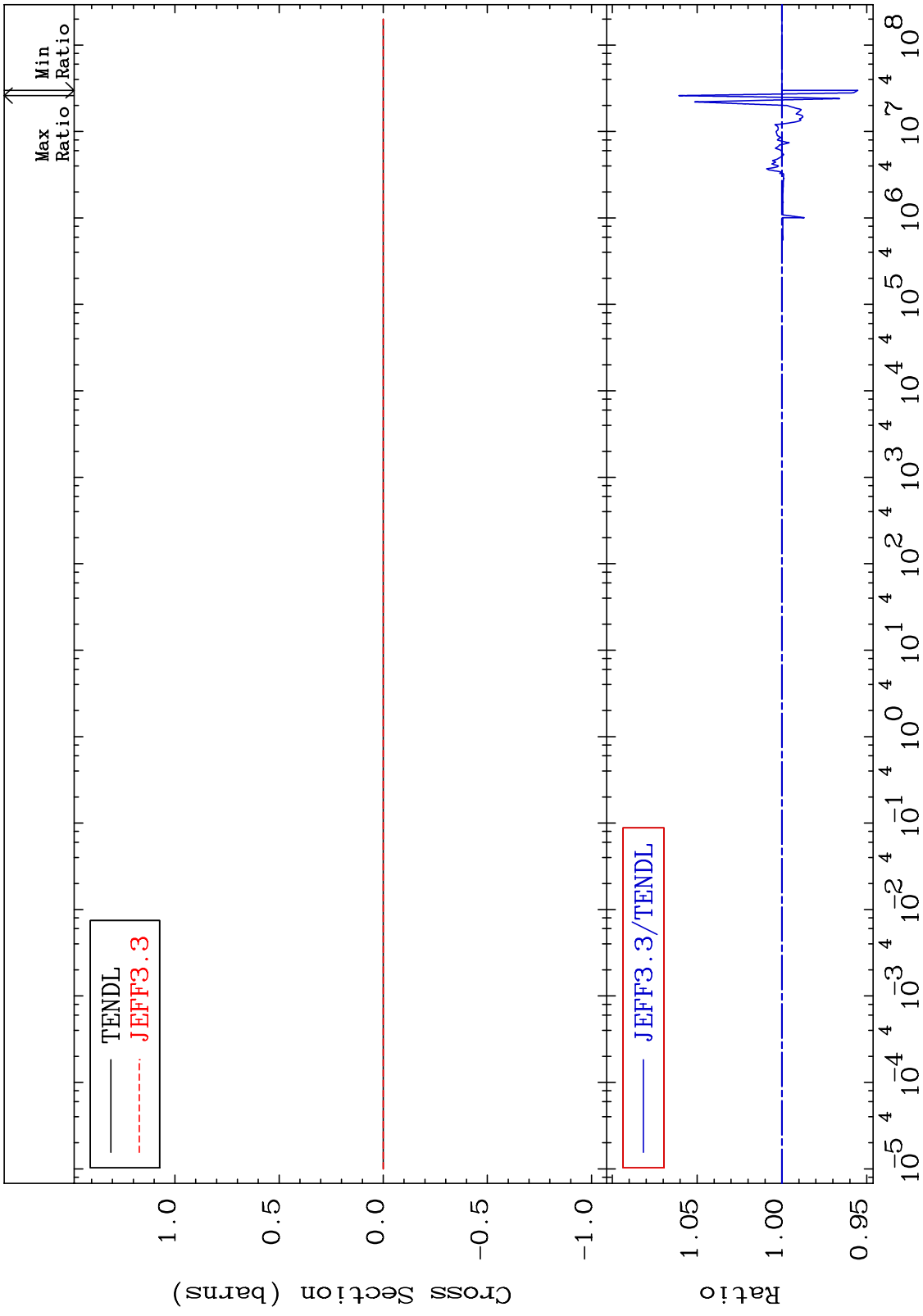


MAT 5825 Kerma non-elastic (all but mt2) 58-Ce-136
 Cross Section -99.27 To 9999. %





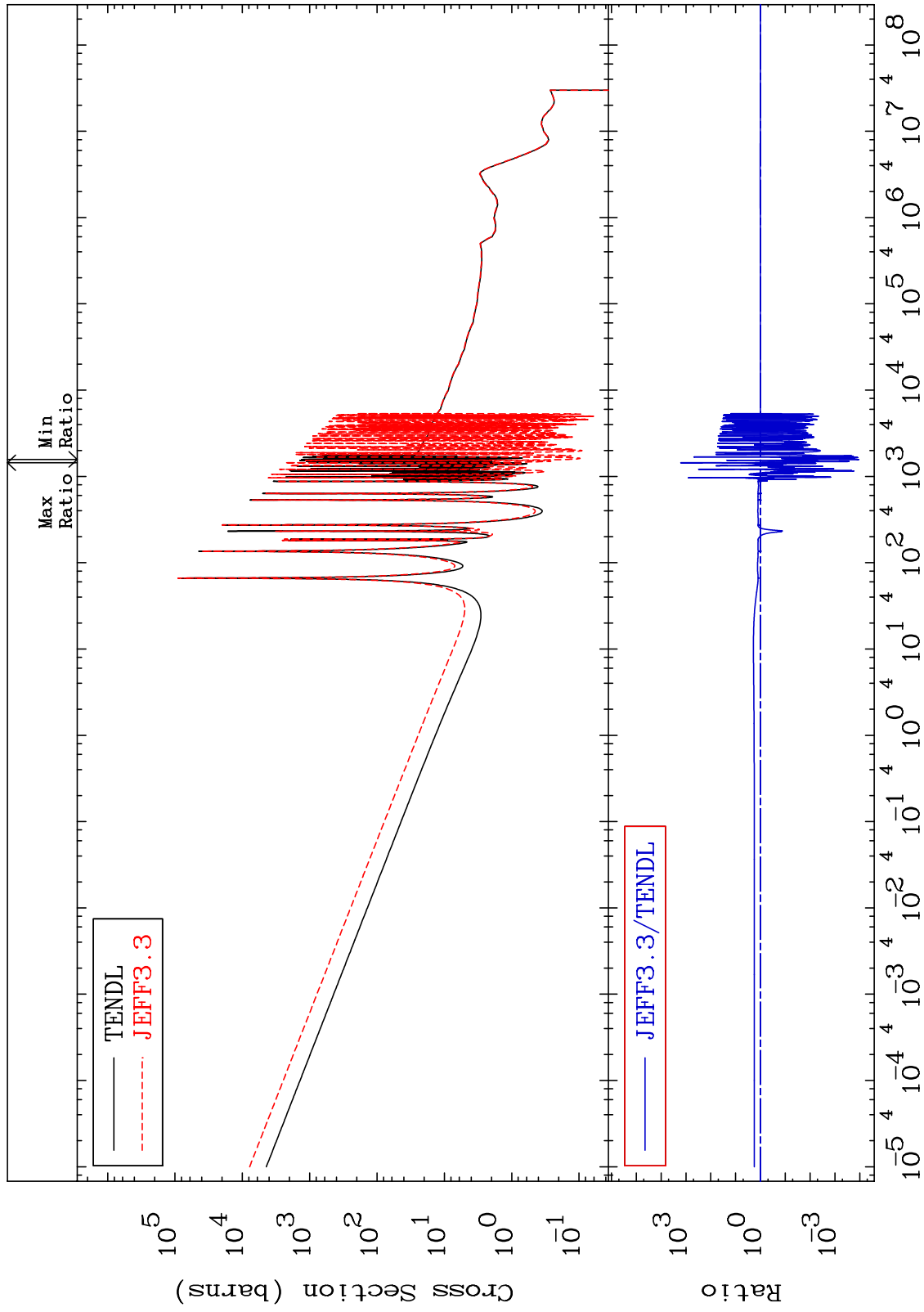
MAT 5825 Kerma fission (mt18 or mt19-20-21-38) 58-Ce-136
Cross Section -4.470 To 6.065 %



MAT 5825

Kerma capture (mt102)
Cross Section

58-Ce-136
-99.99 To 9999. %



73

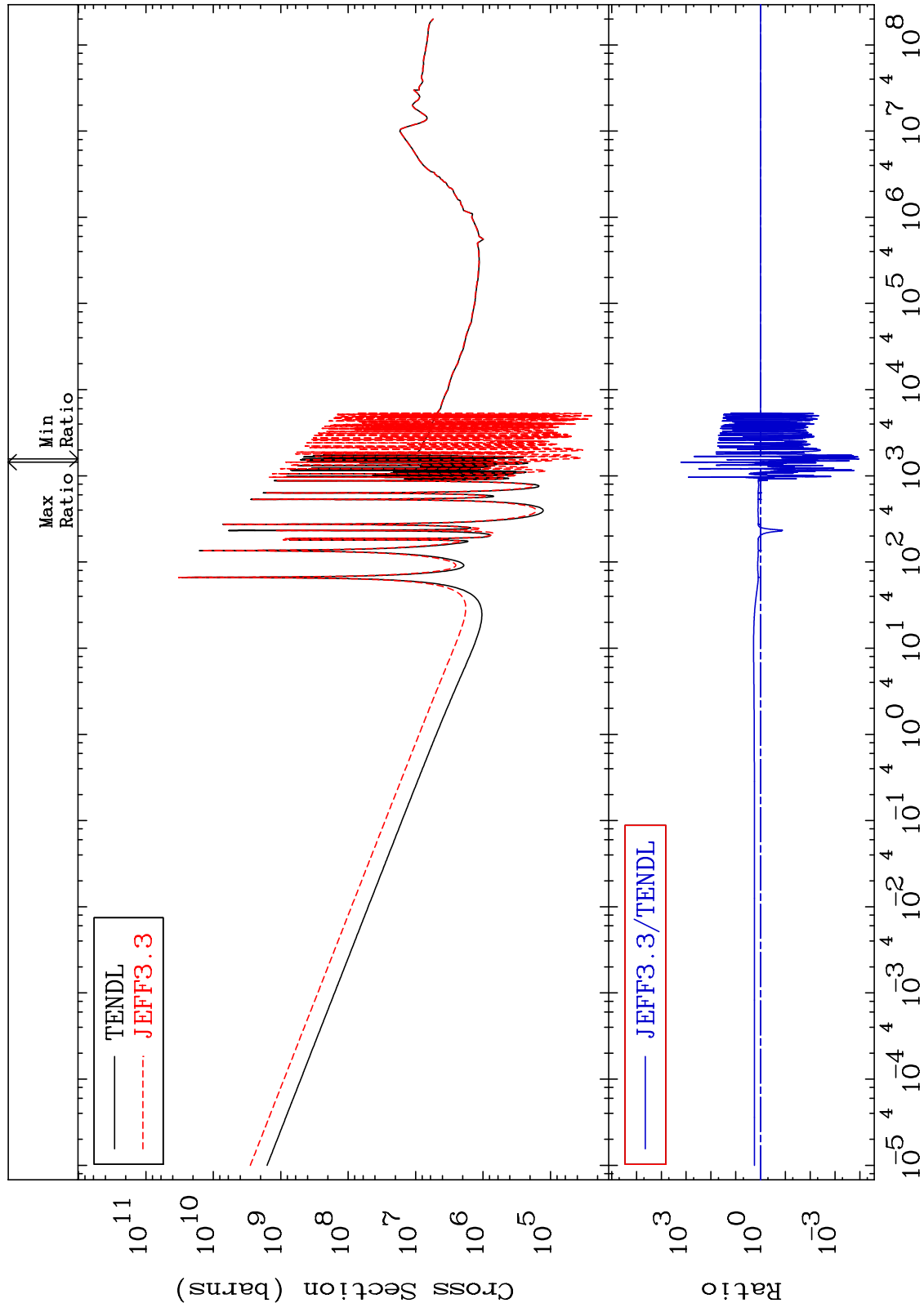
Incident Energy (eV)

58-Ce-136

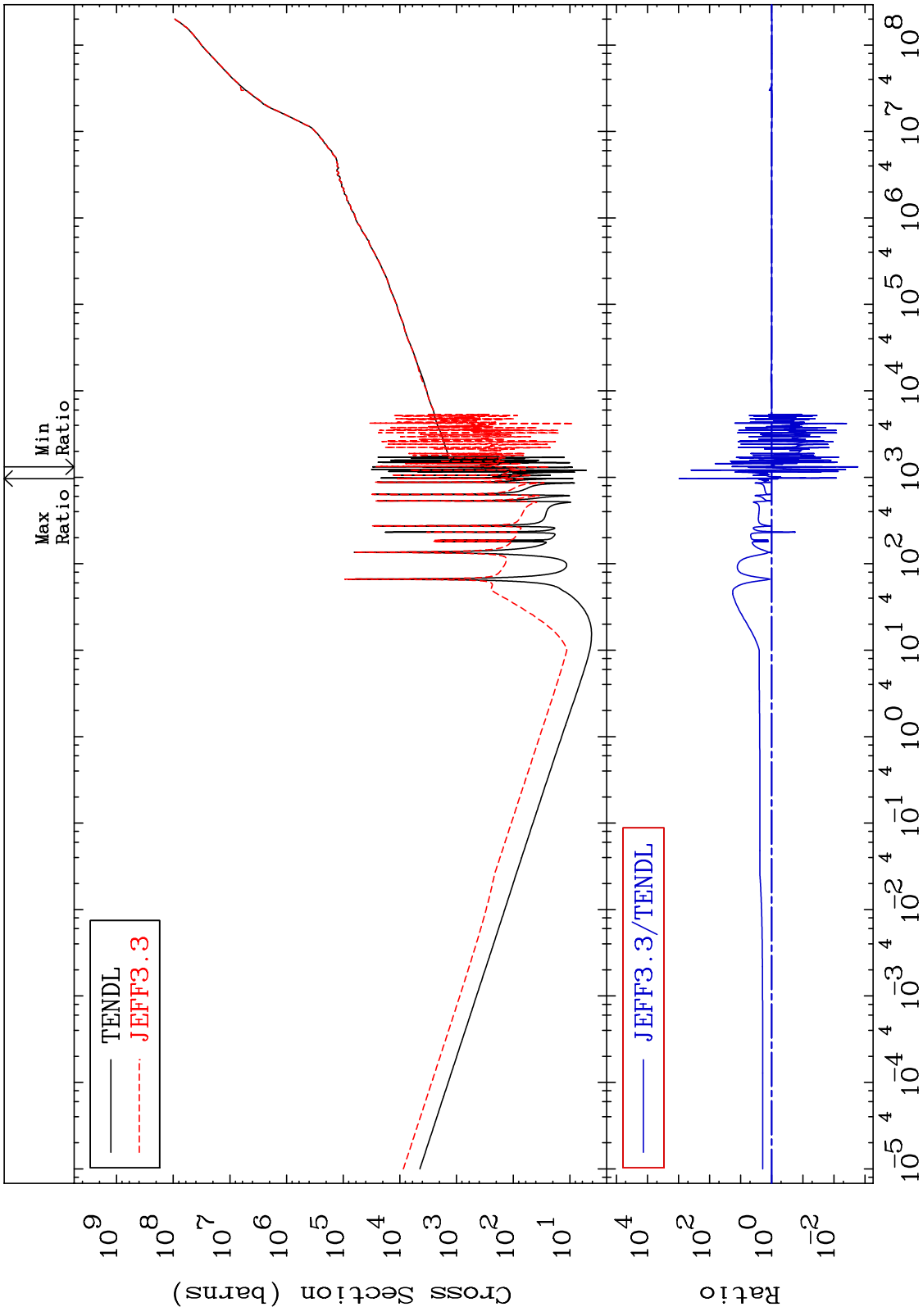
MAT 5825

Total photon (eV-barns)
Cross Section

58-Ce-136
-99.99 To 9999. %



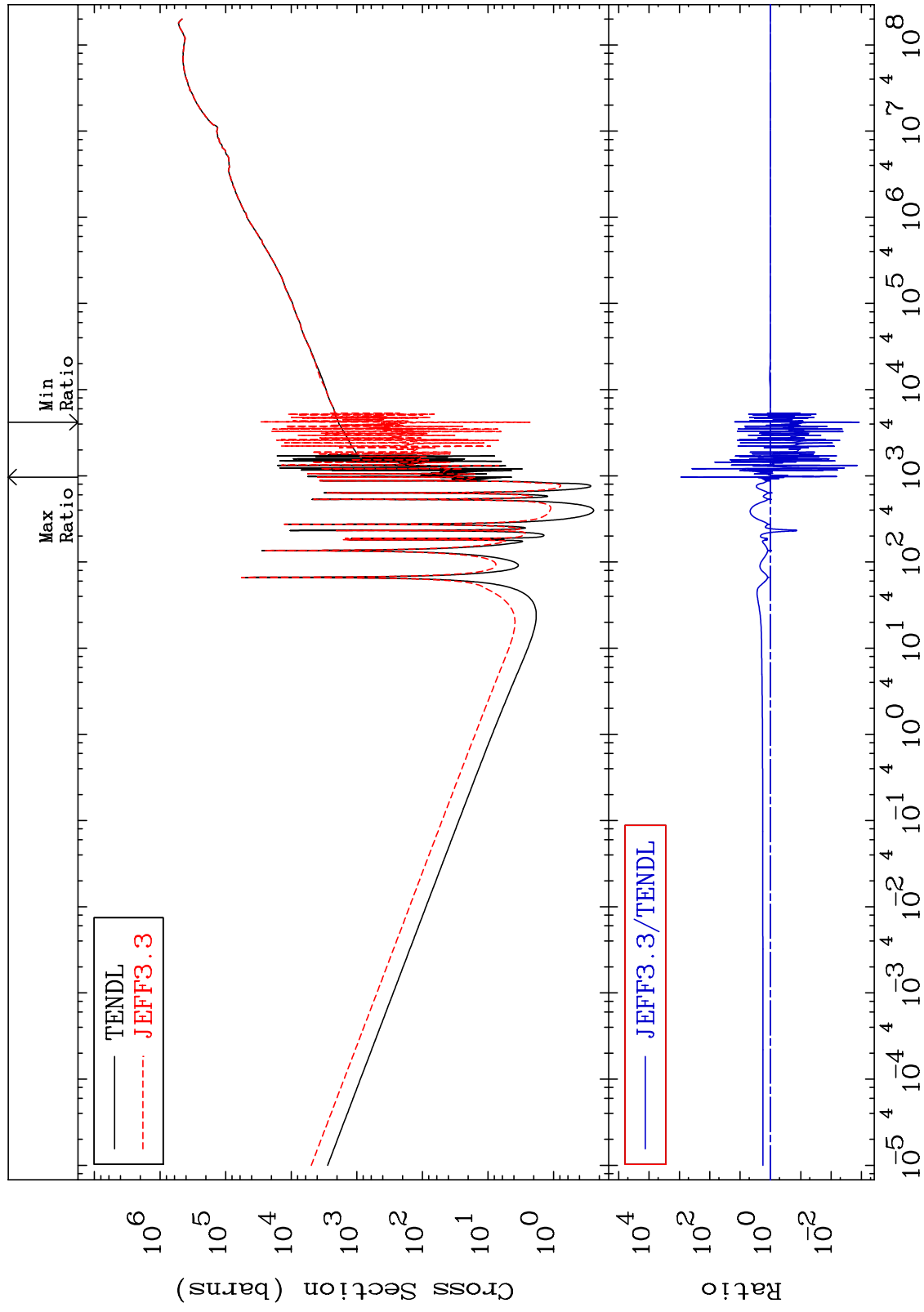
MAT 5825 Total kinematic kerma (high limit) 58-Ce-136
 Cross Section -99.83 To 9999. %



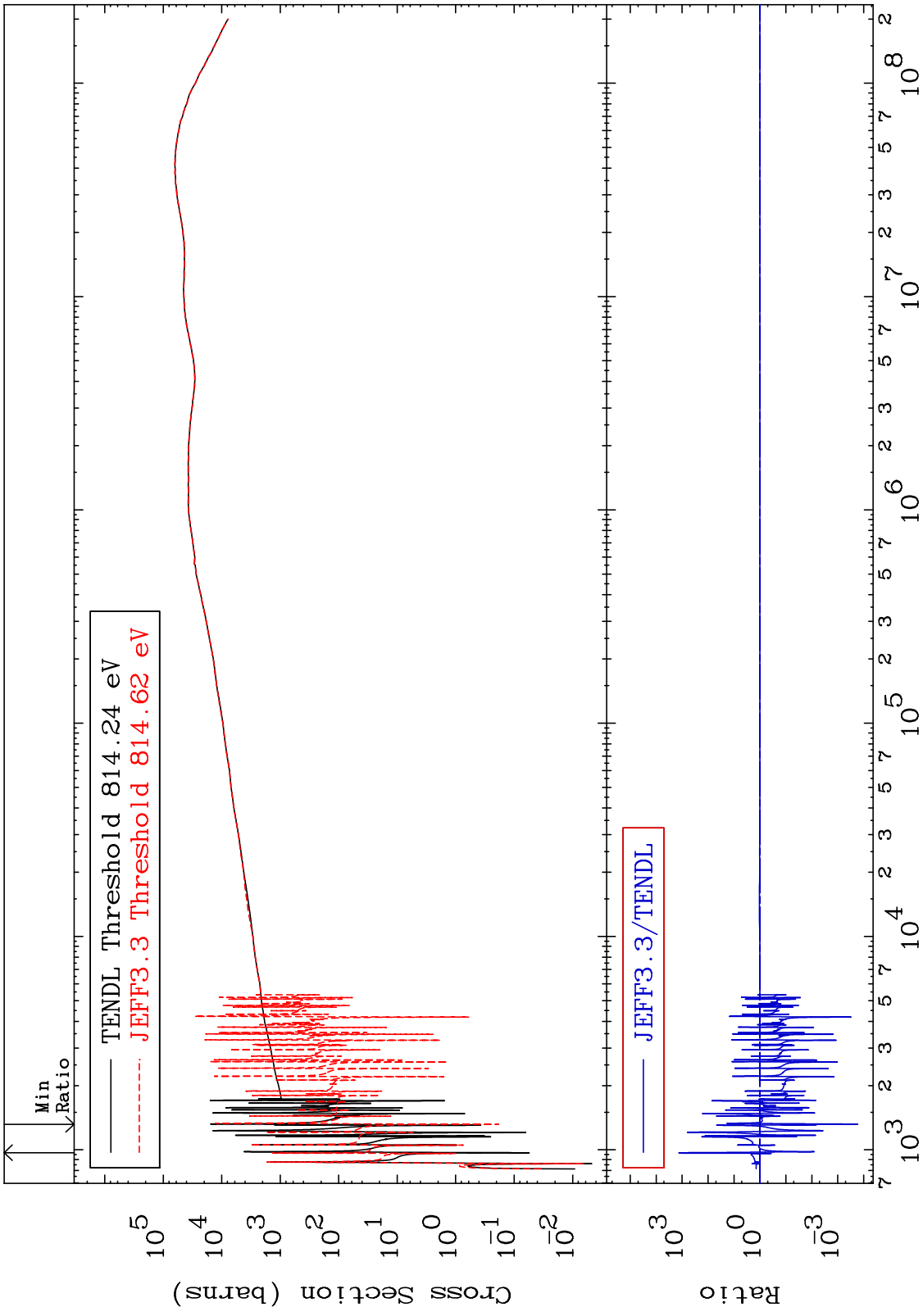
MAT 5825

Dpa total (eV-barns)
Cross Section

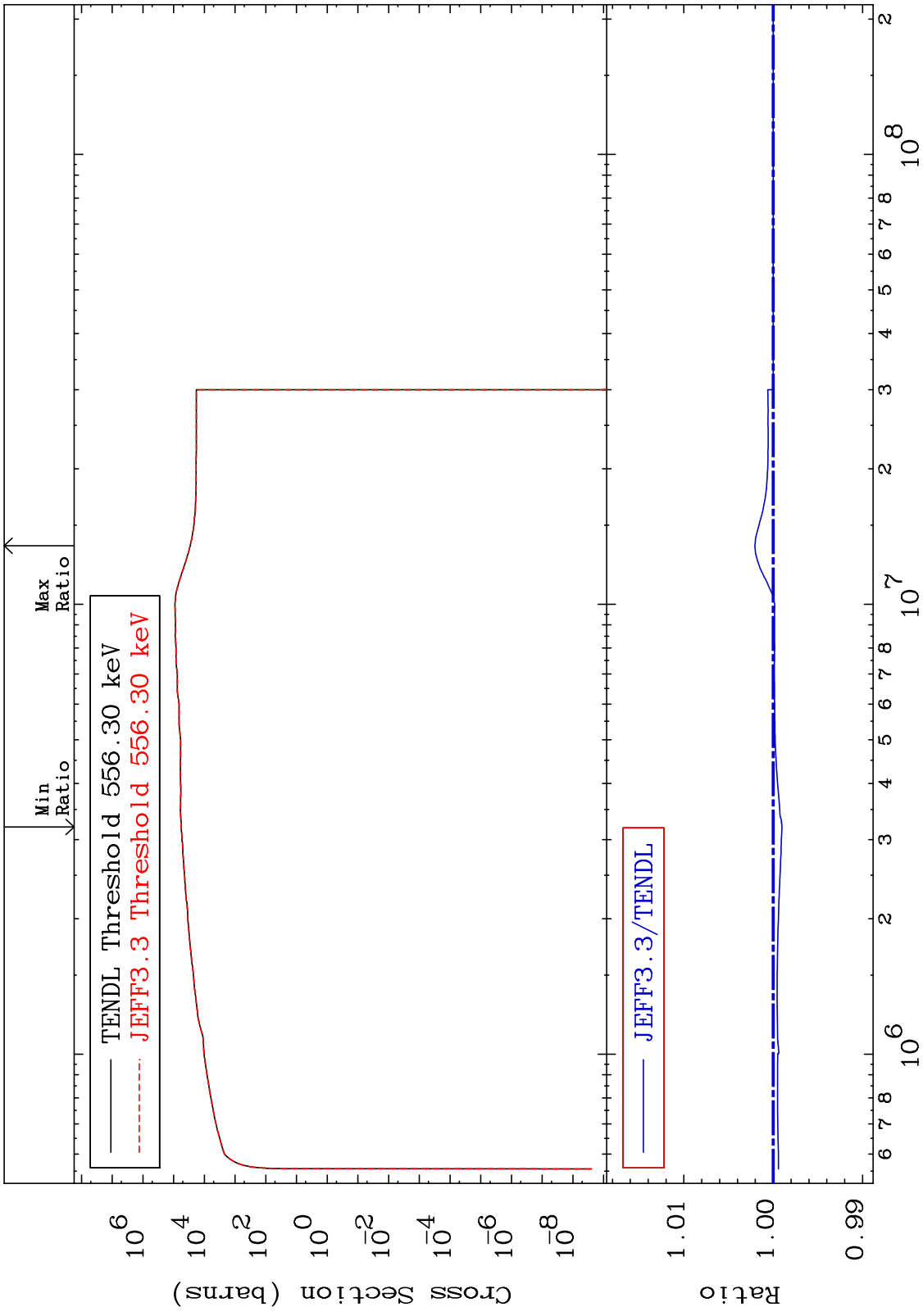
58-Ce-136
-99.88 To 9999. %



MAT 5825 Dpa elastic (mt2) 58-Ce-136
Cross Section -99.98 To 9999. %



MAT 5825 Dpa inelastic (mt51-91) 58-Ce-136
 Cross Section -0.098 To 0.205 %

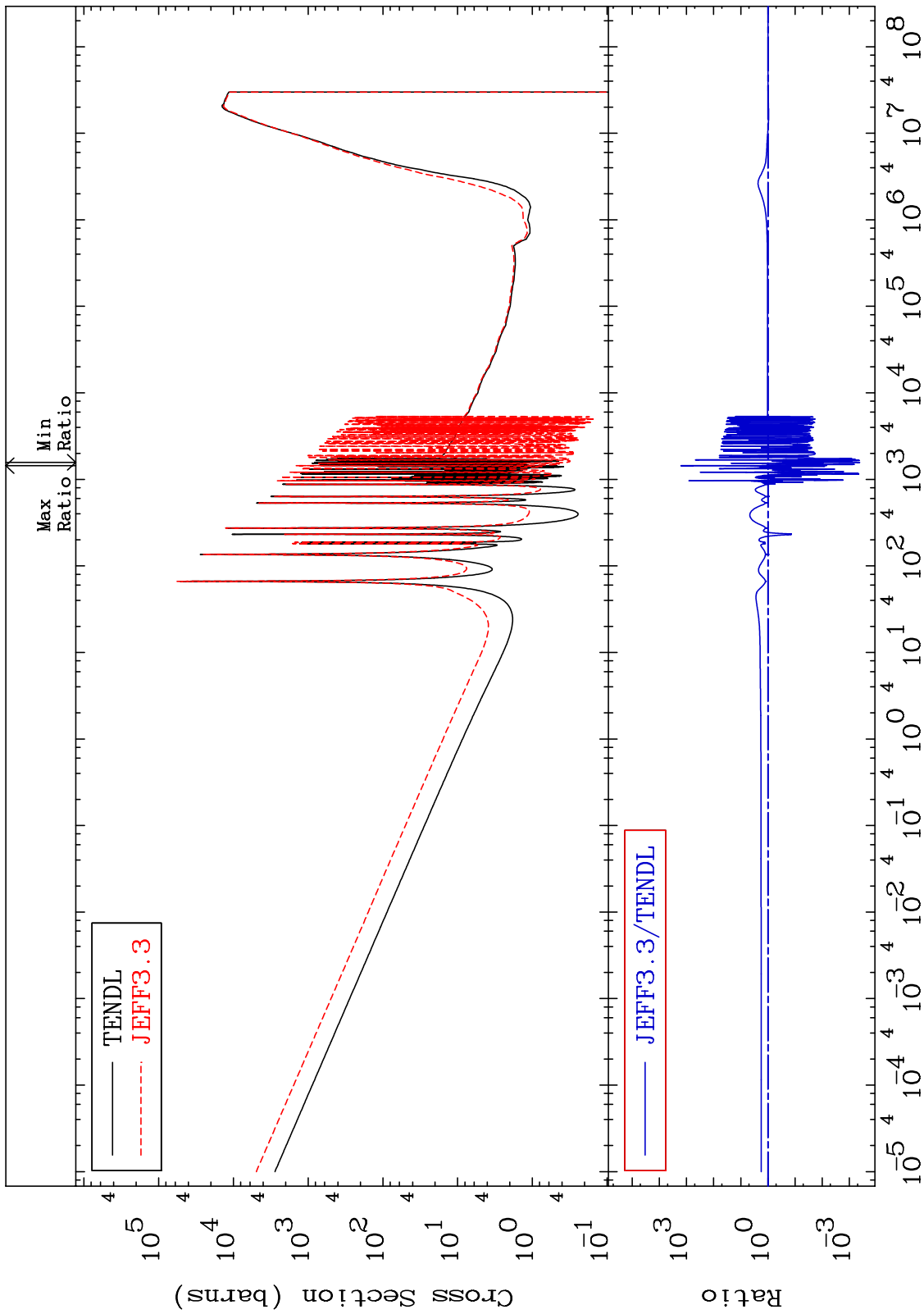


78 Incident Energy (eV) 58-Ce-136

MAT 5825

Dpa disappearance (mt102 -120)
Cross Section

58-Ce-136
-99.96 To 9999. %

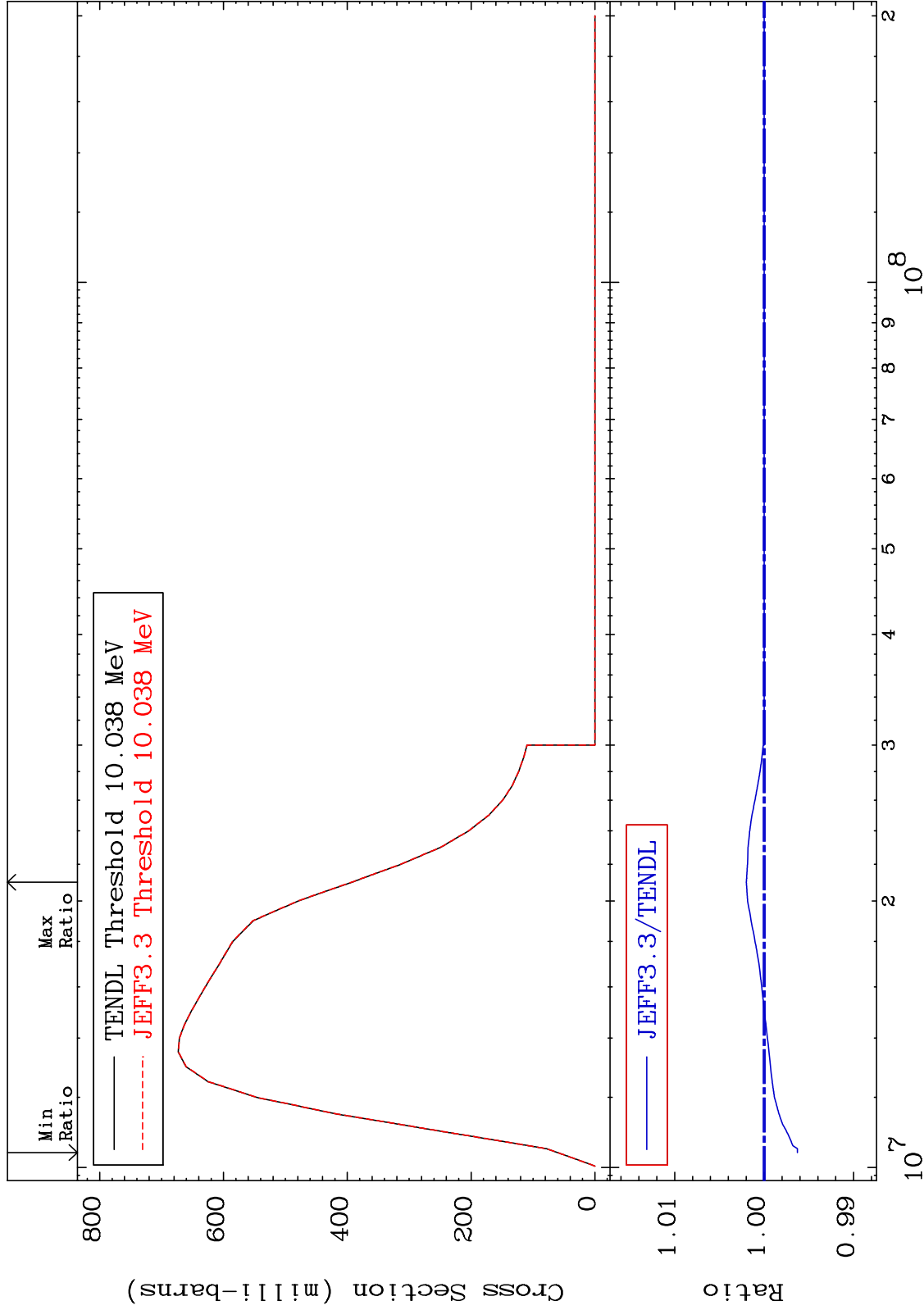


MAT 5825

(n,2n):58-Ce-135g

58-Ce-136

Radionuclide Production Cross Section -0.371 To 0.199 %



Incident Energy (eV)

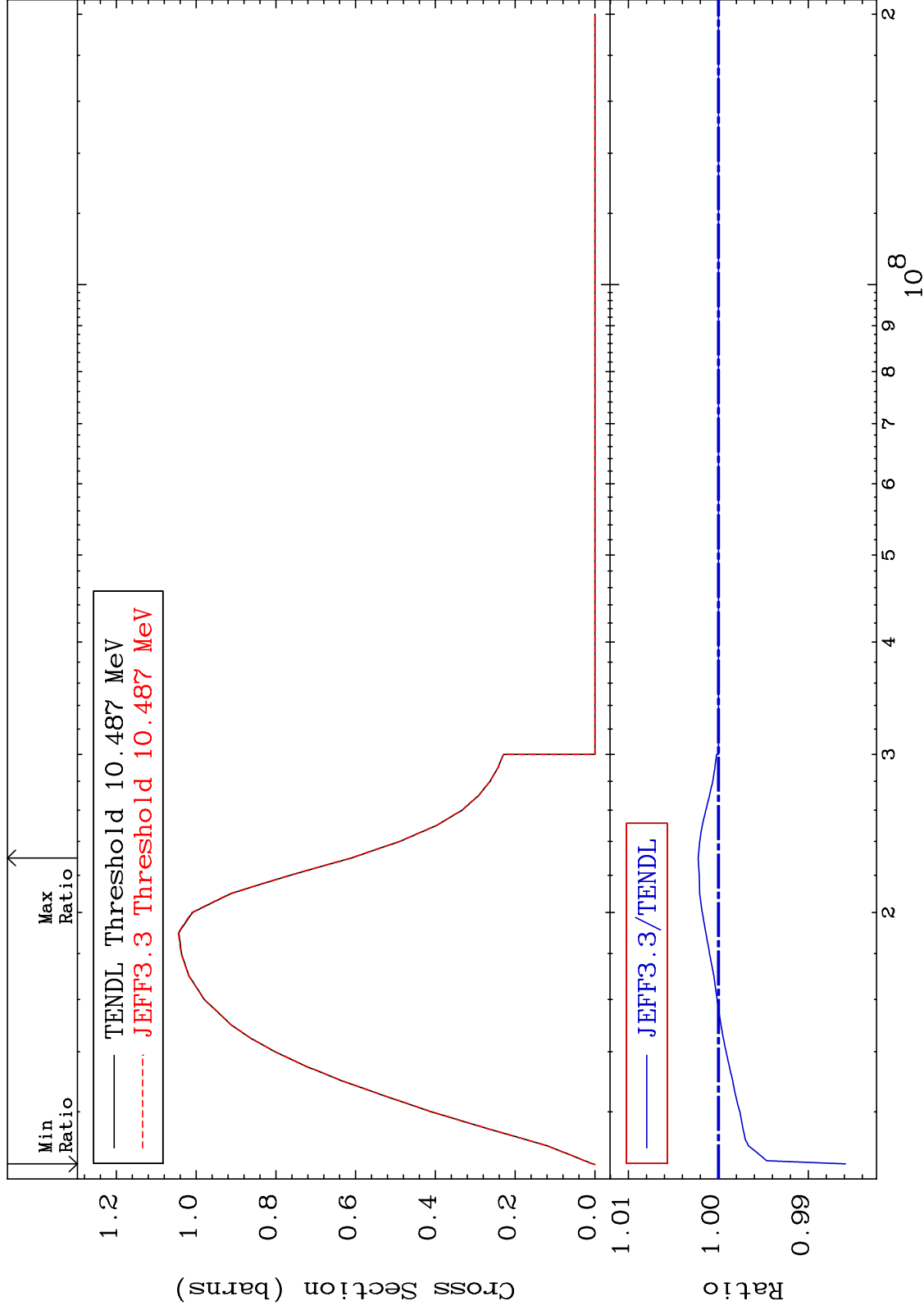
58-Ce-136

MAT 5825

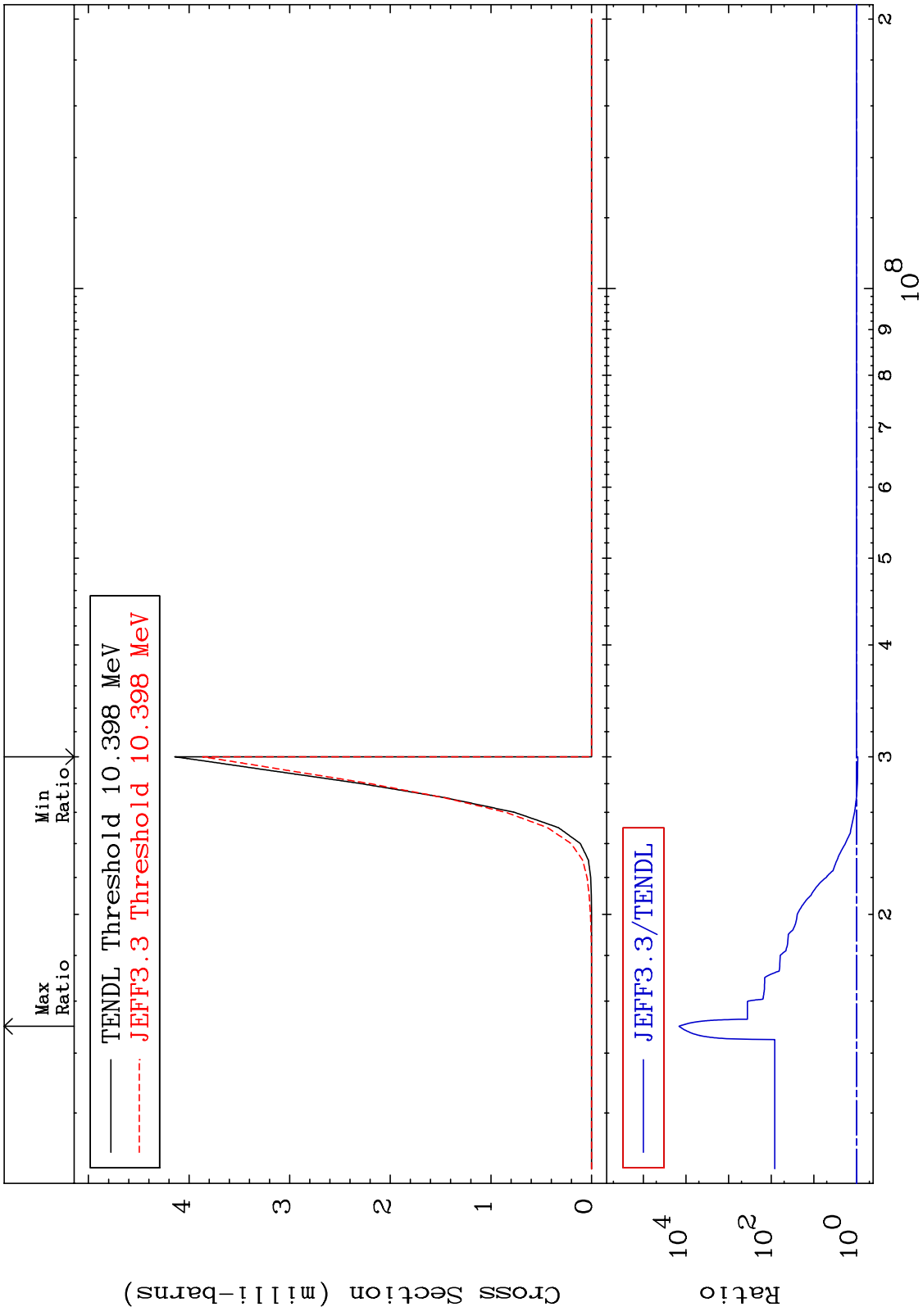
(n,2n):58-Ce-135m4

58-Ce-136

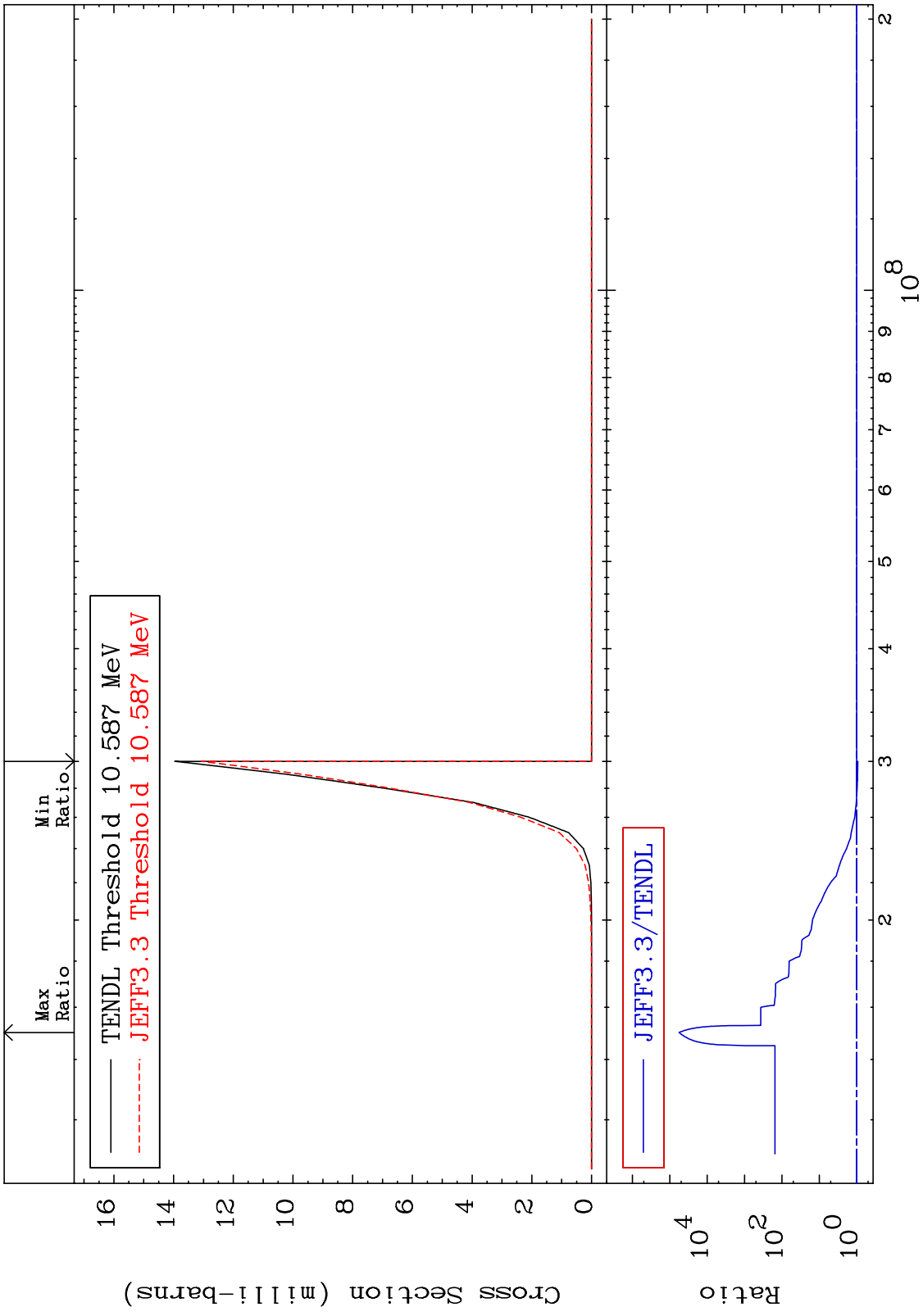
Radionuclide Production Cross Section -1.414 To 0.225 %



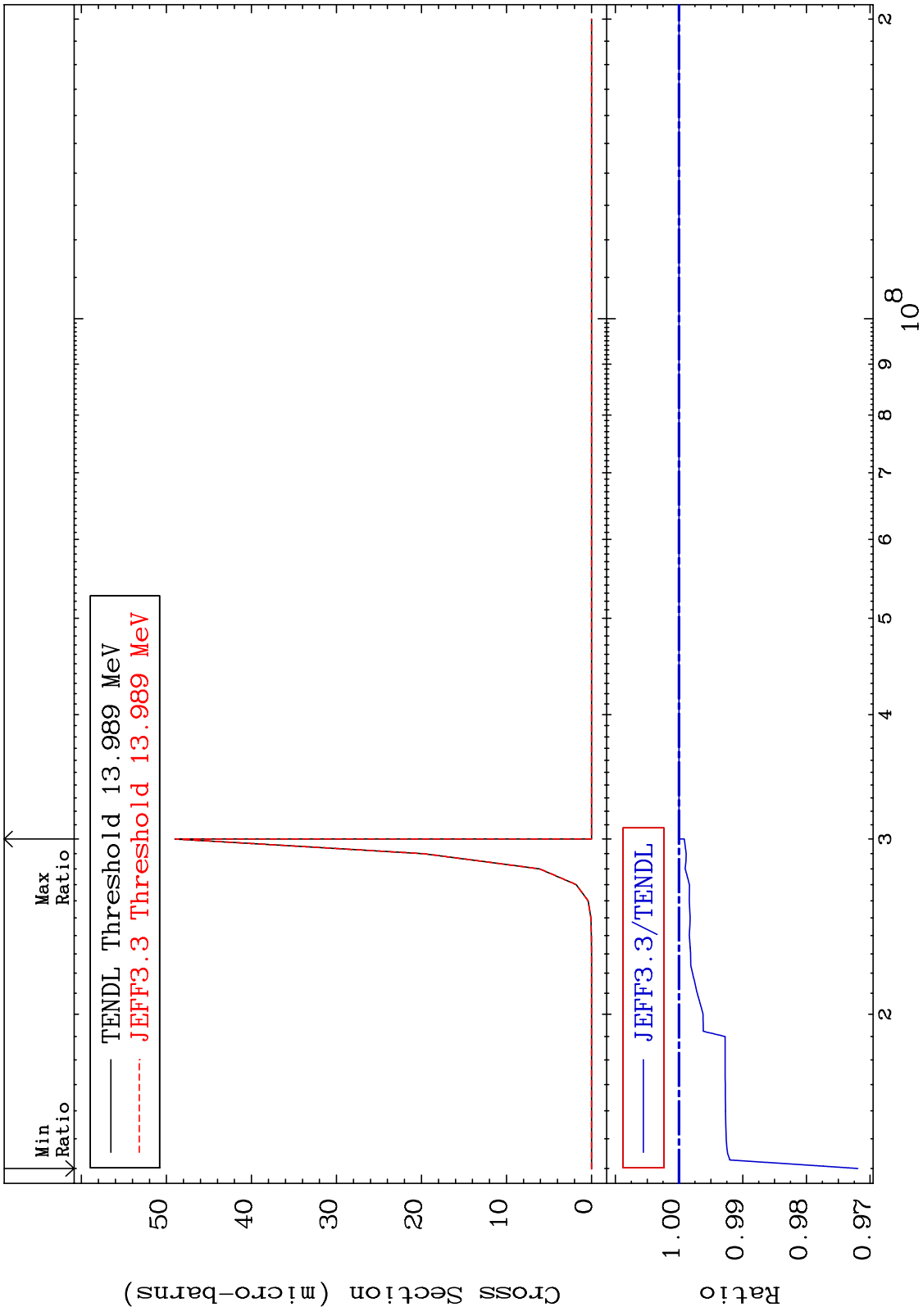
MAT 5825 (n,2n) α :56-Ba-131g 58-Ce-136
 Radionuclide Production Cross Section -6.670 To 9999. %



MAT 5825 (n,2n) α :56-Ba-131m2 58-Ce-136
 Radionuclide Production Cross Section -6.385 To 9999. %



MAT 5825 (n,n') He-3:56-Ba-133g 58-Ce-136
 Radionuclide Production Cross Section -2.807 To 0.000 %

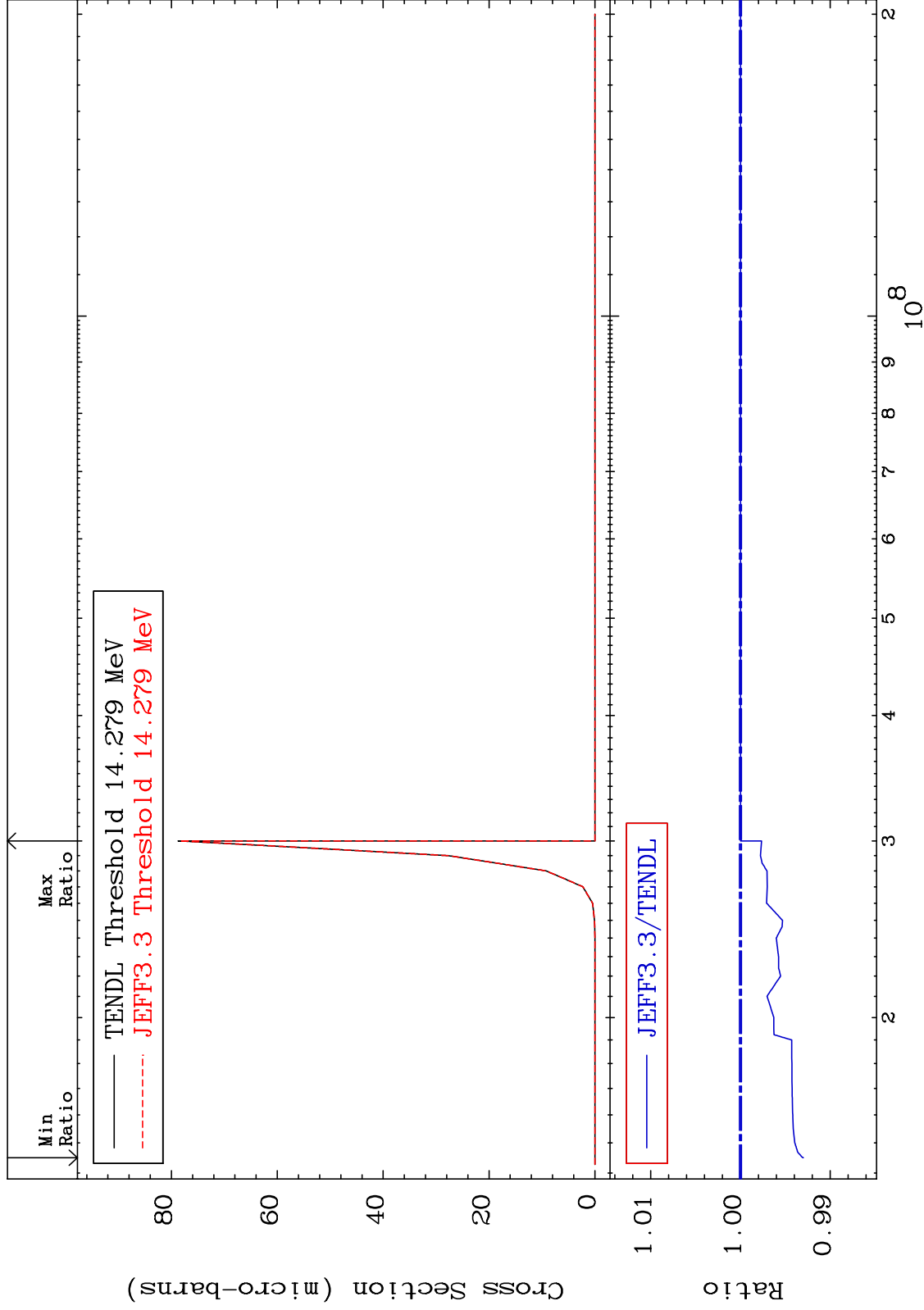


MAT 5825

(n, n') He-3:56-Ba-133m2

58-Ce-136

Radionuclide Production Cross Section -0.700 To 0.000 %



85

Incident Energy (eV)

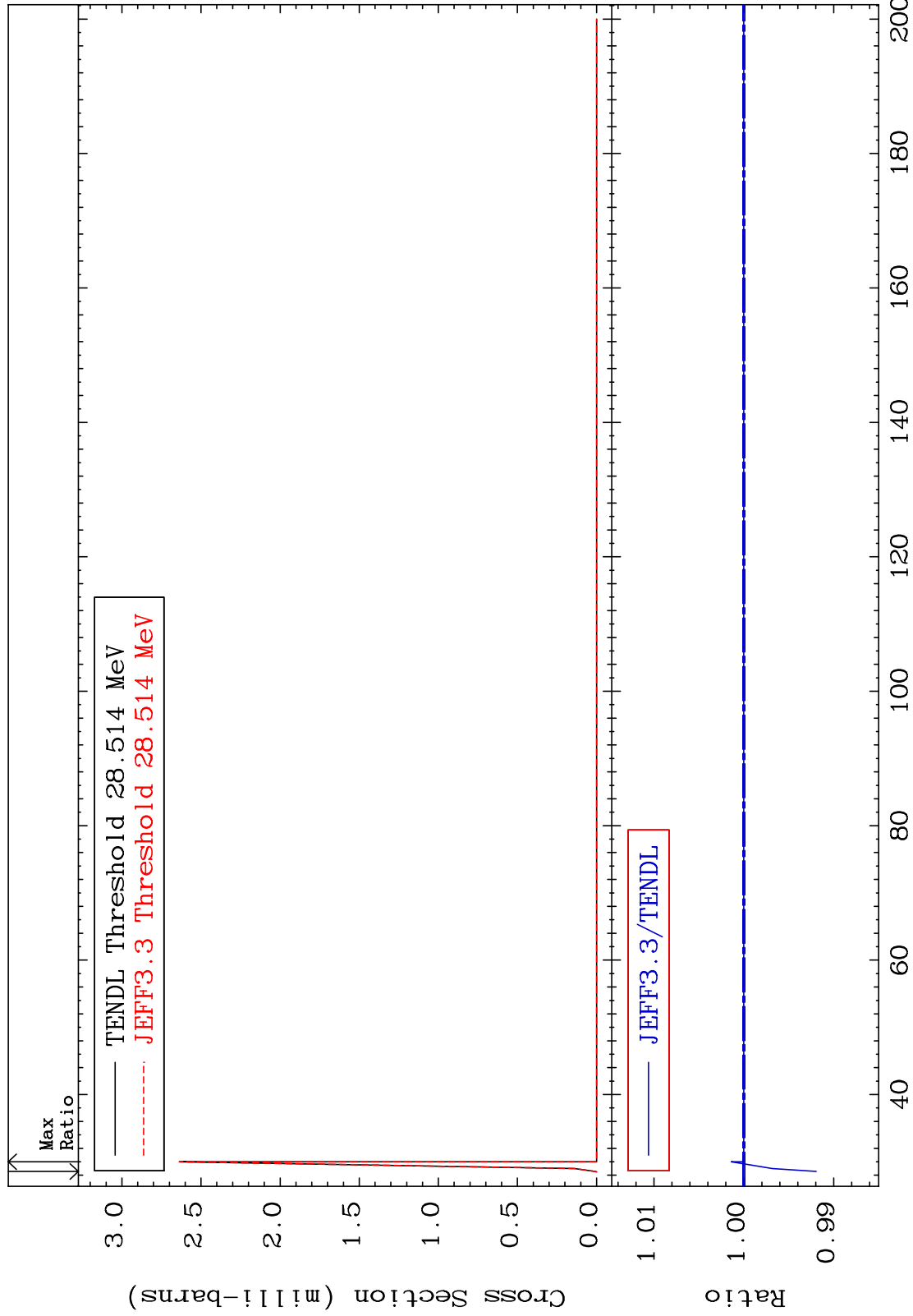
58-Ce-136

MAT 5825

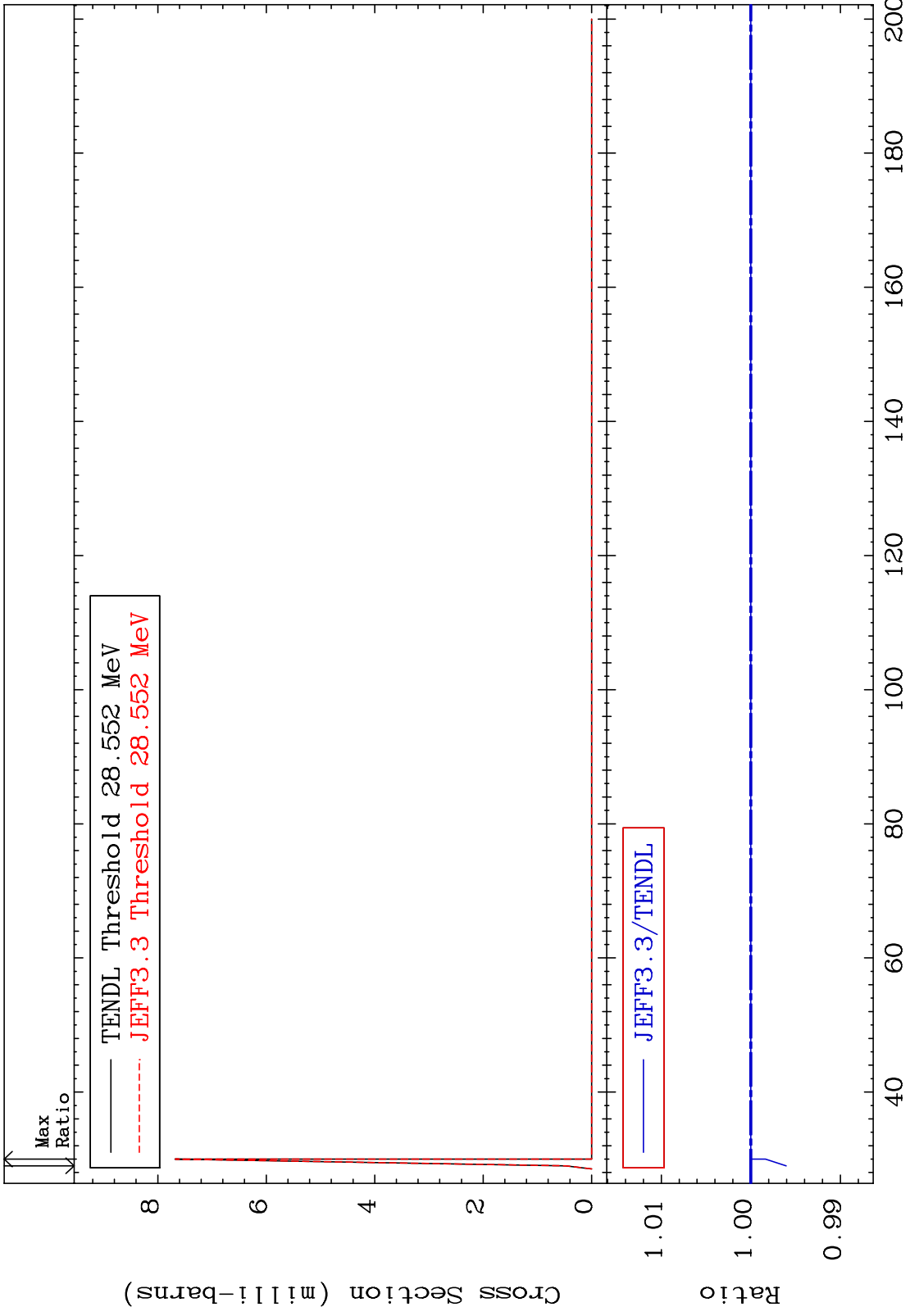
(n,4n):58-Ce-133g

58-Ce-136

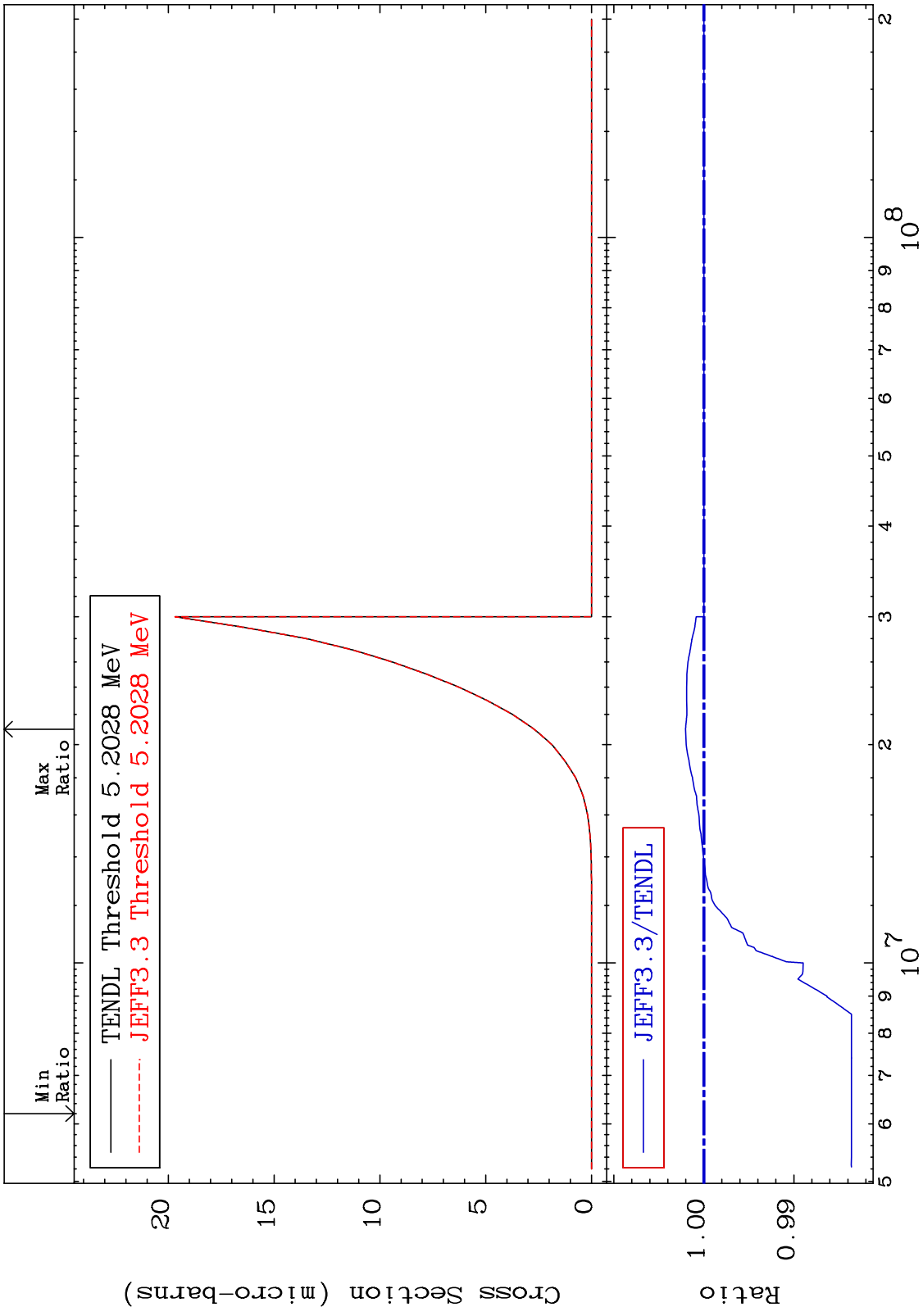
Radionuclide Production Cross Section -0.806 To 0.139 %



MAT 5825 (n,4n):58-Ce-133m1 58-Ce-136
 Radionuclide Production Cross Section -0.395 To 0.000 %



MAT 5825 (n,2p):56-Ba-135g 58-Ce-136
 Radionuclide Production Cross Section -1.639 To 0.204 %

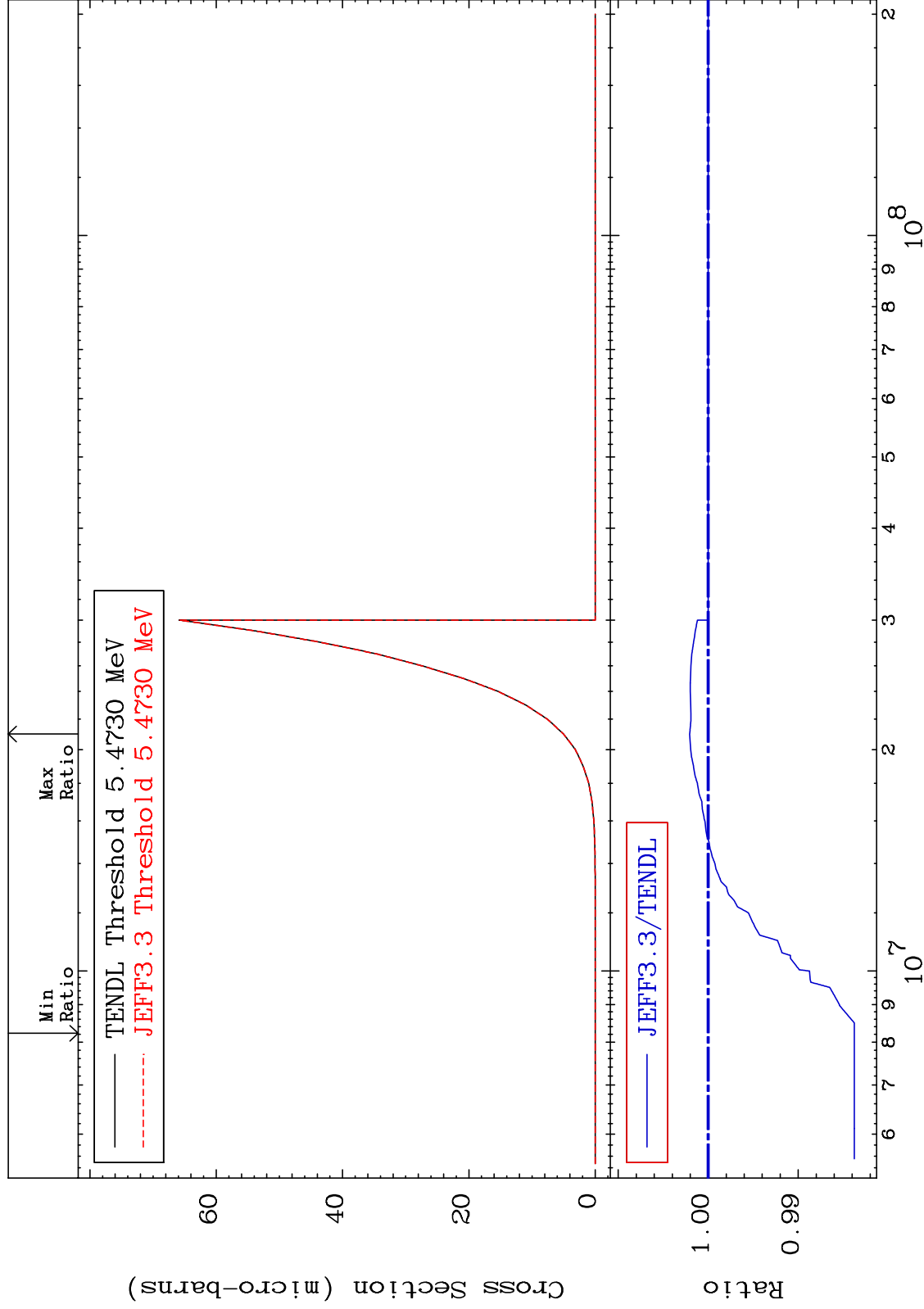


MAT 5825

(n,2p) : 56-Ba-135m2

58-Ce-136

Radionuclide Production Cross Section -1.624 To 0.206 %

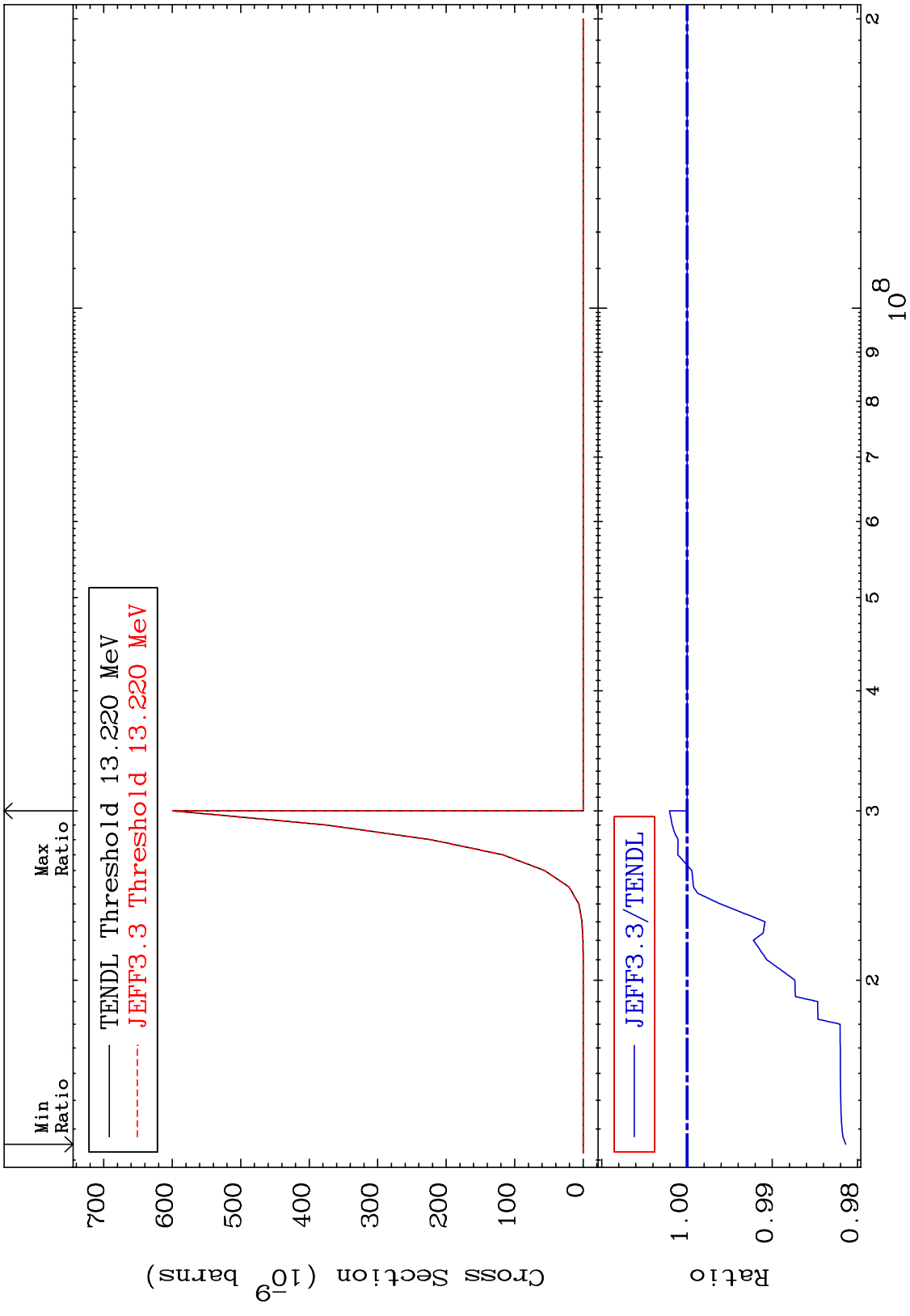


89

Incident Energy (eV)

58-Ce-136

MAT 5825 (n,p) t:56-Ba-133g 58-Ce-136
 Radionuclide Production Cross Section -1.861 To 0.206 %



MAT 5825

(n,p) t:56-Ba-133m2

58-Ce-136

Radionuclide Production Cross Section -9.510 To 0.000 %

