

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

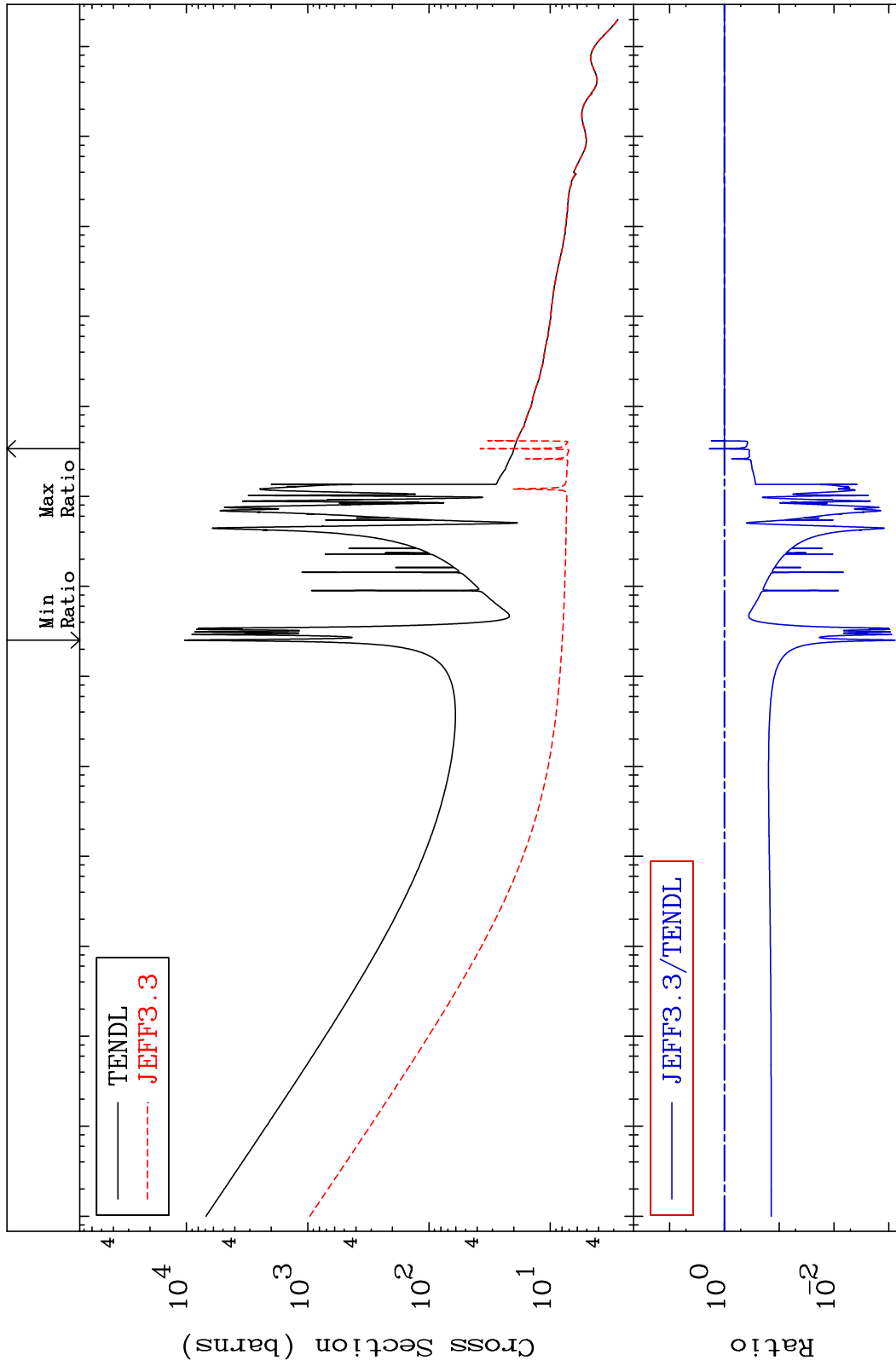
MAT 7249

Total

72-Hf-182

Cross Section

-99.92 To 90.35 %



Incident Energy (eV)

72-Hf-182

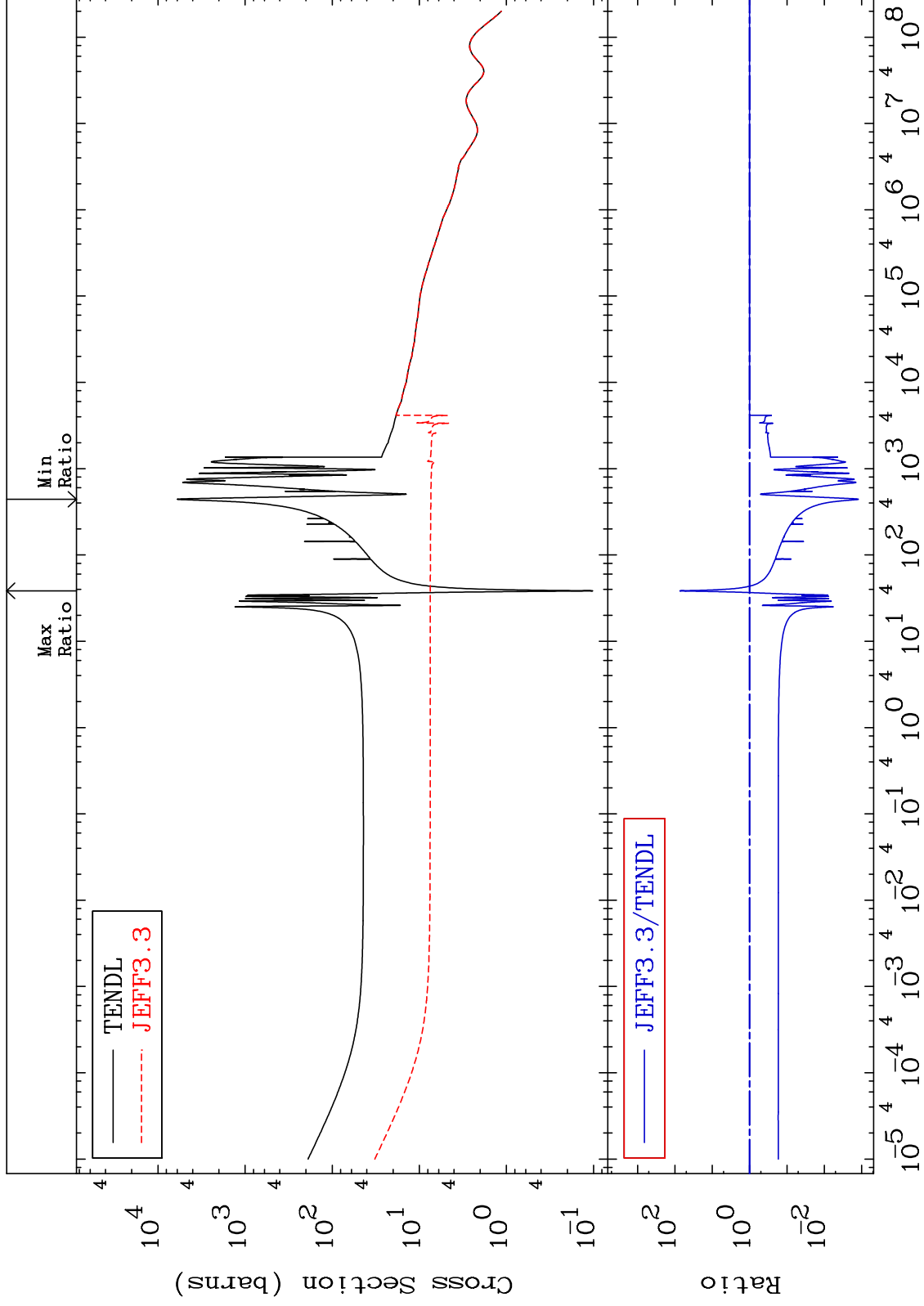
MAT 7249

Elastic

⁷²Hf-182

Cross Section

-99.88 To 7214. %



Incident Energy (eV)

⁷²Hf-182

2

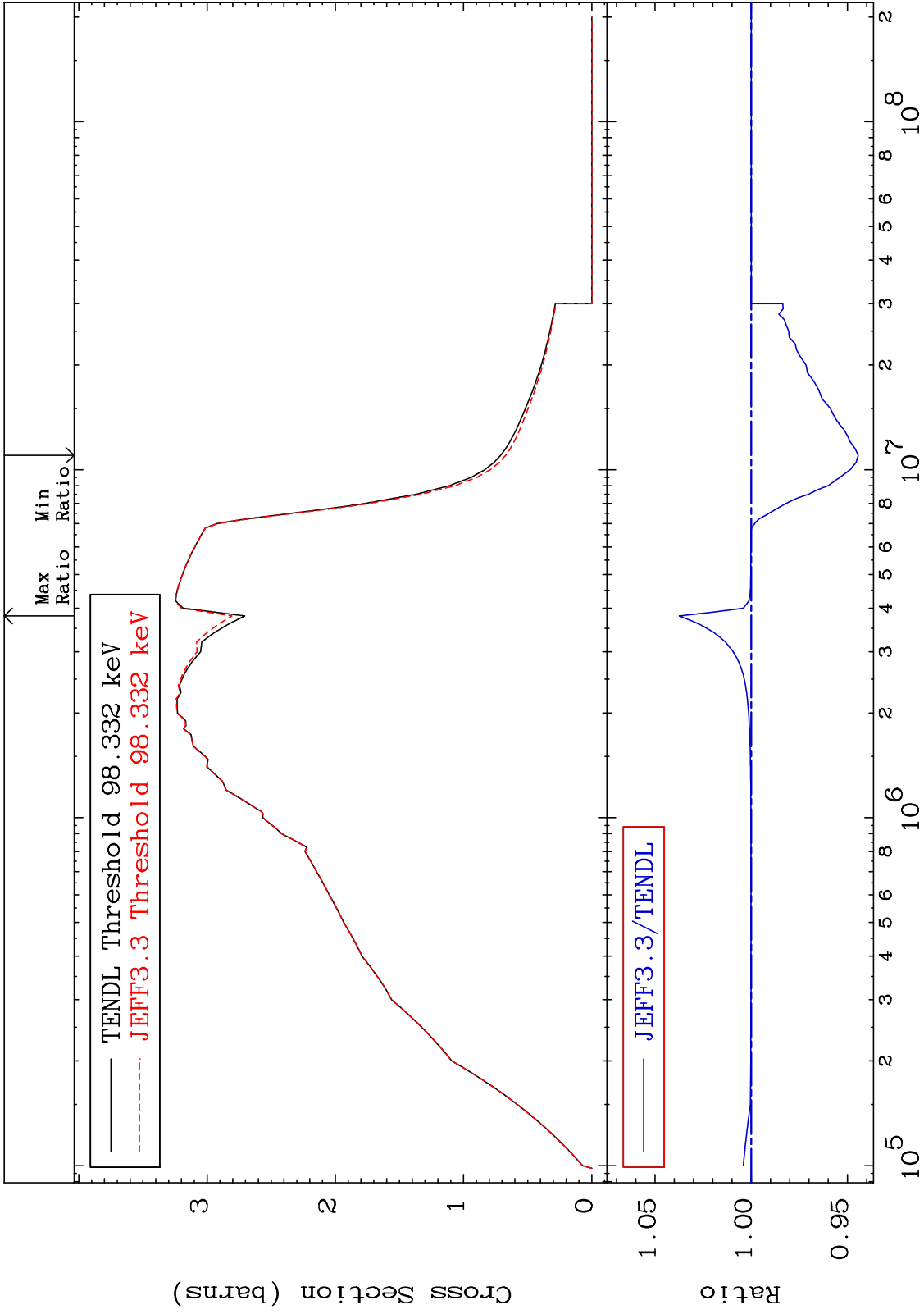
MAT 7249

72-Hf-182

-5.560 To 3.732 %

Inelastic

Cross Section



72-Hf-182

Incident Energy (eV)

3

MAT 7249

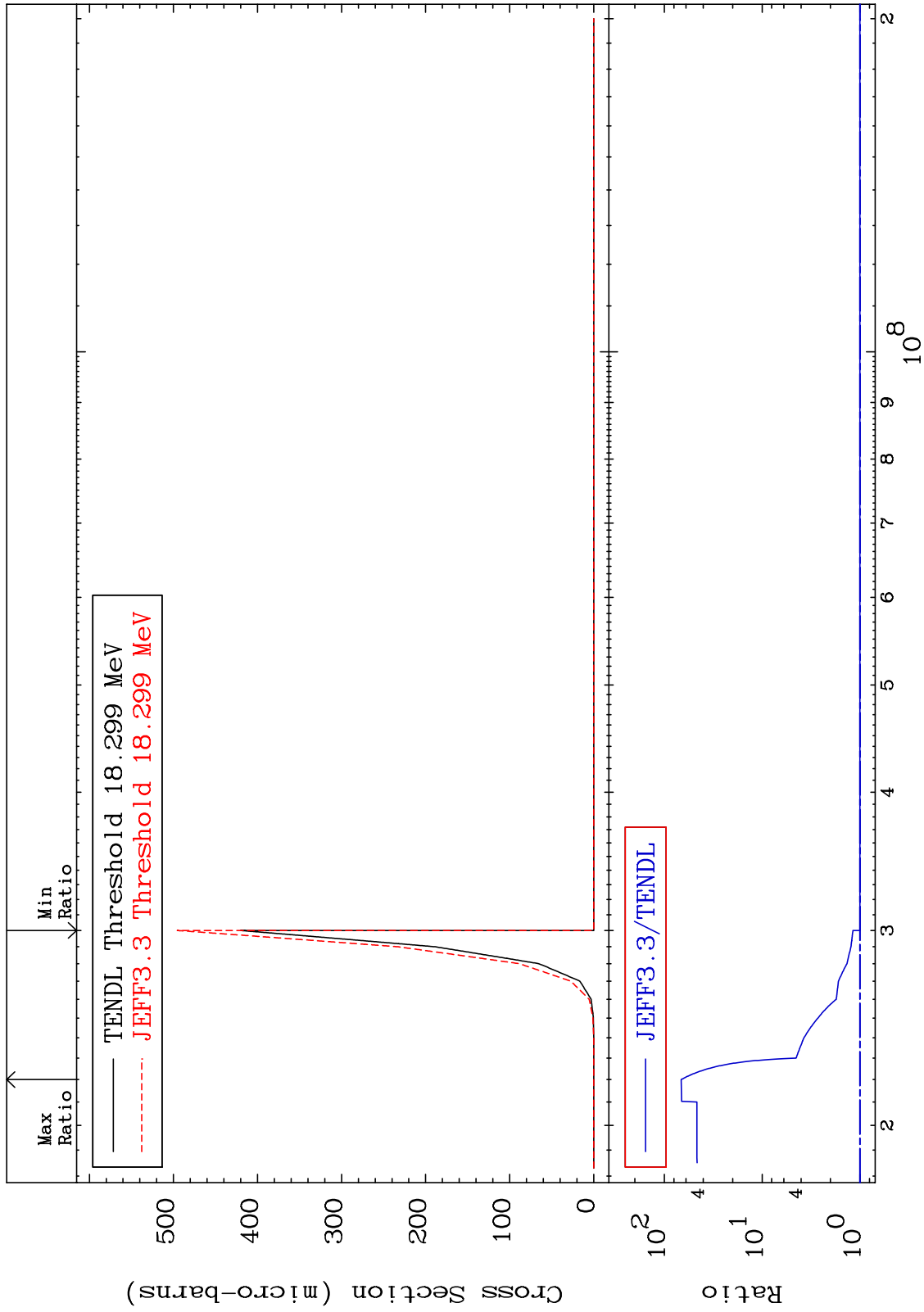
(n,2n) d

72-Hf-182

Cross Section

0.000

To 6623. %



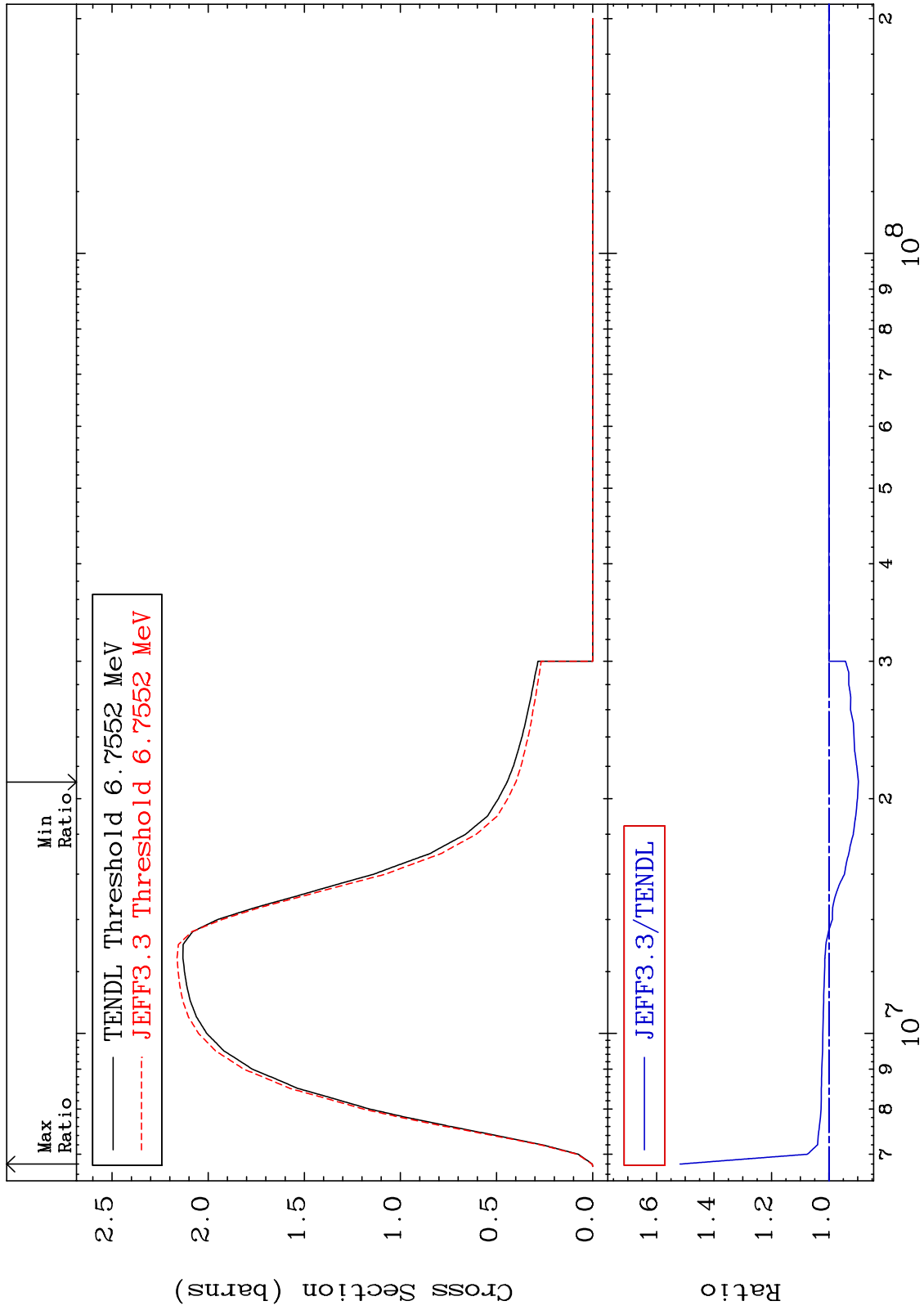
MAT 7249

(n,2n)

72-Hf-182

Cross Section

-10.22 To 51.83 %



5

Incident Energy (eV)

72-Hf-182

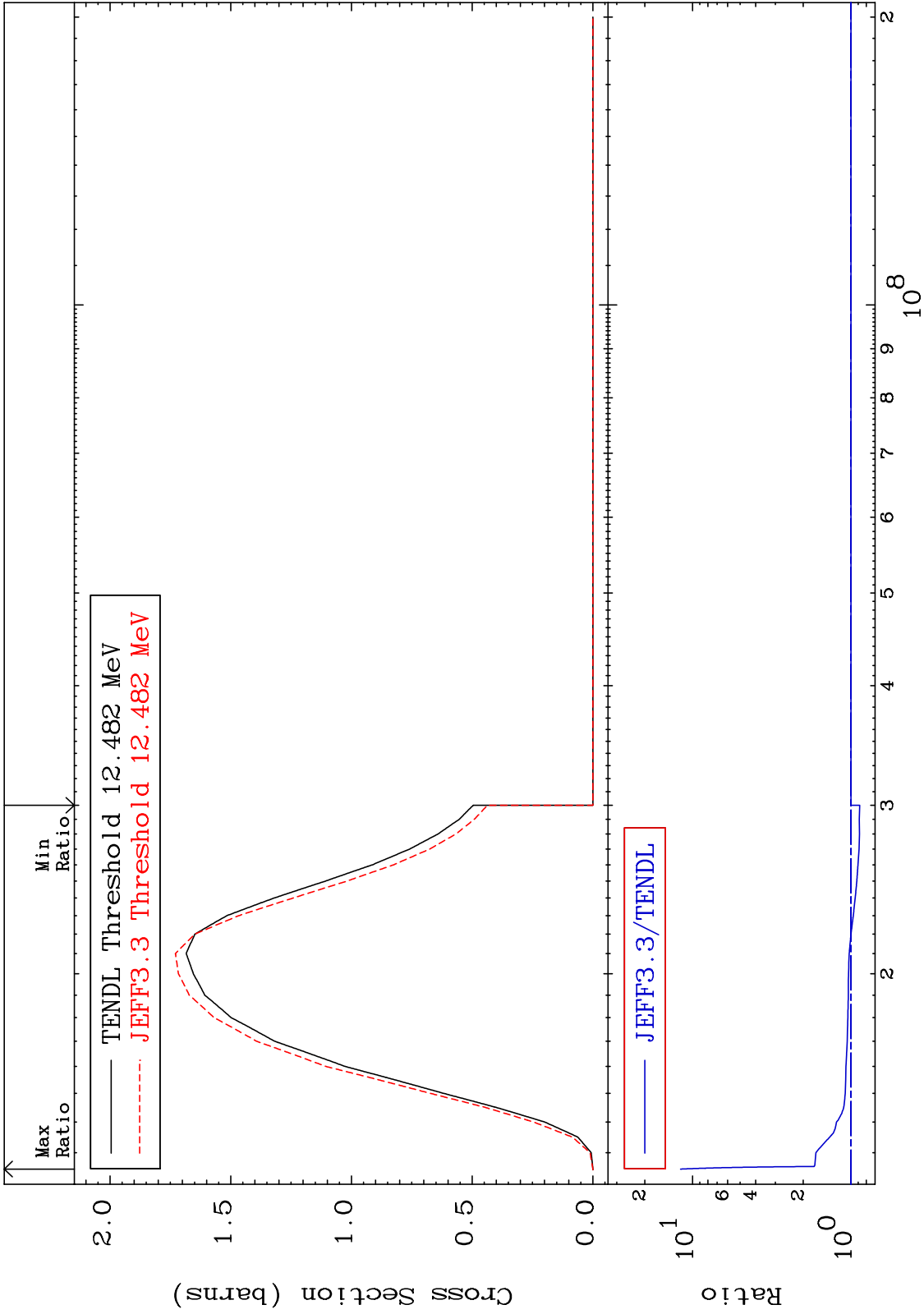
MAT 7249

(n, 3n)

⁷²Hf-182

Cross Section

-11.94 To 1088. %



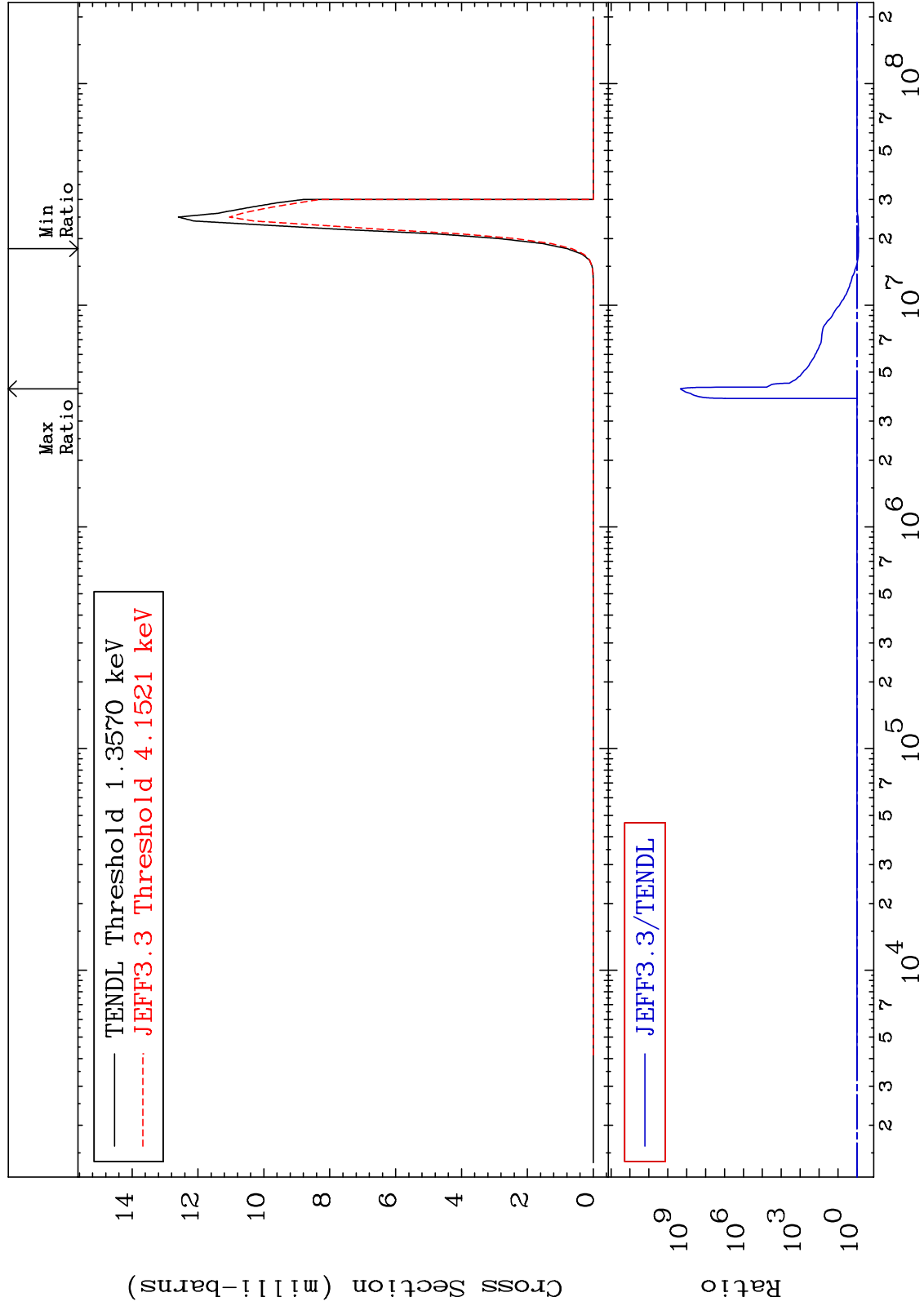
MAT 7249

(n, n') α

72-Hf-182

Cross Section

-17.87 To 9999. %



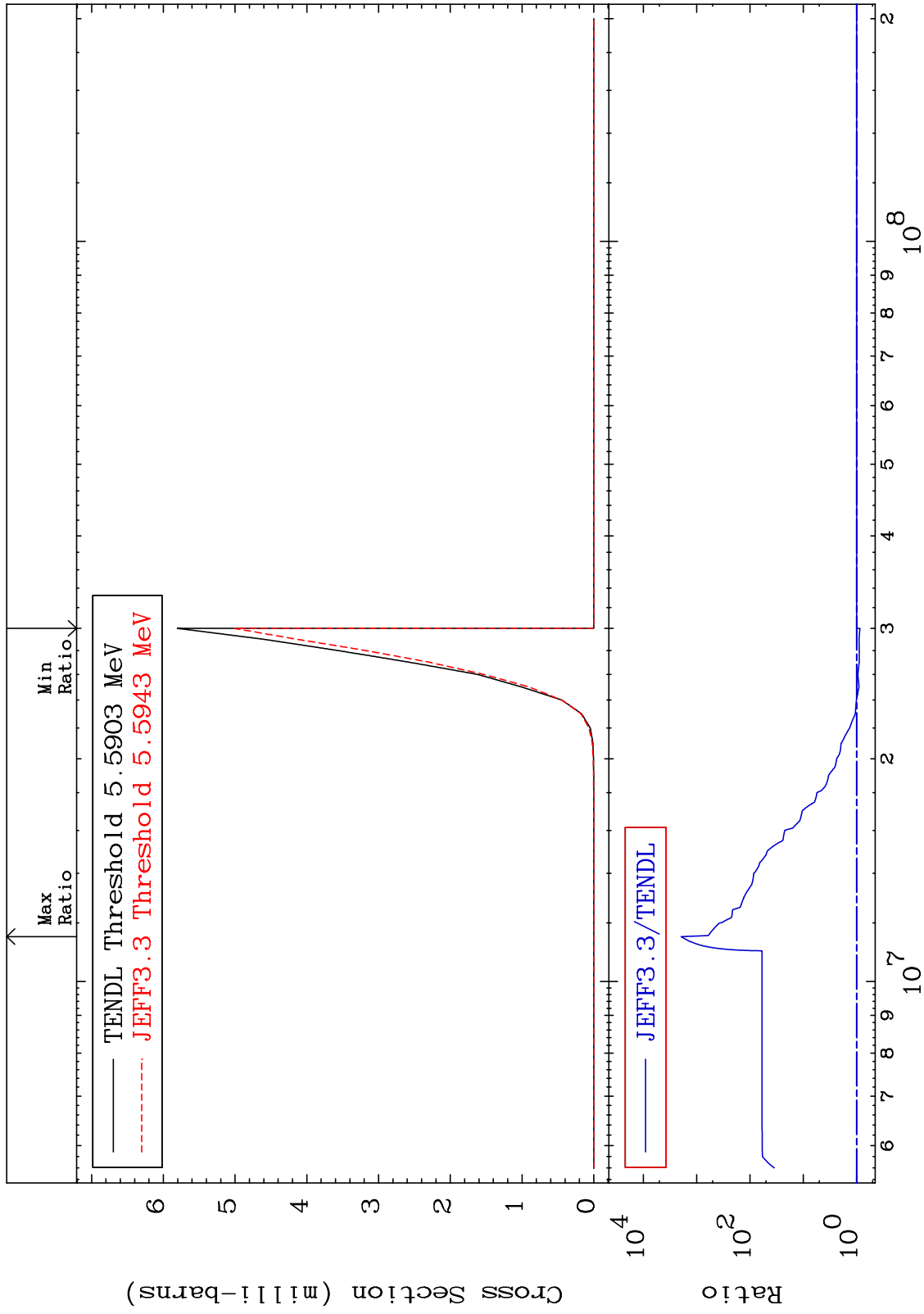
MAT 7249

(n,2n) α

72-Hf-182

-13.61 To 9999. %

Cross Section



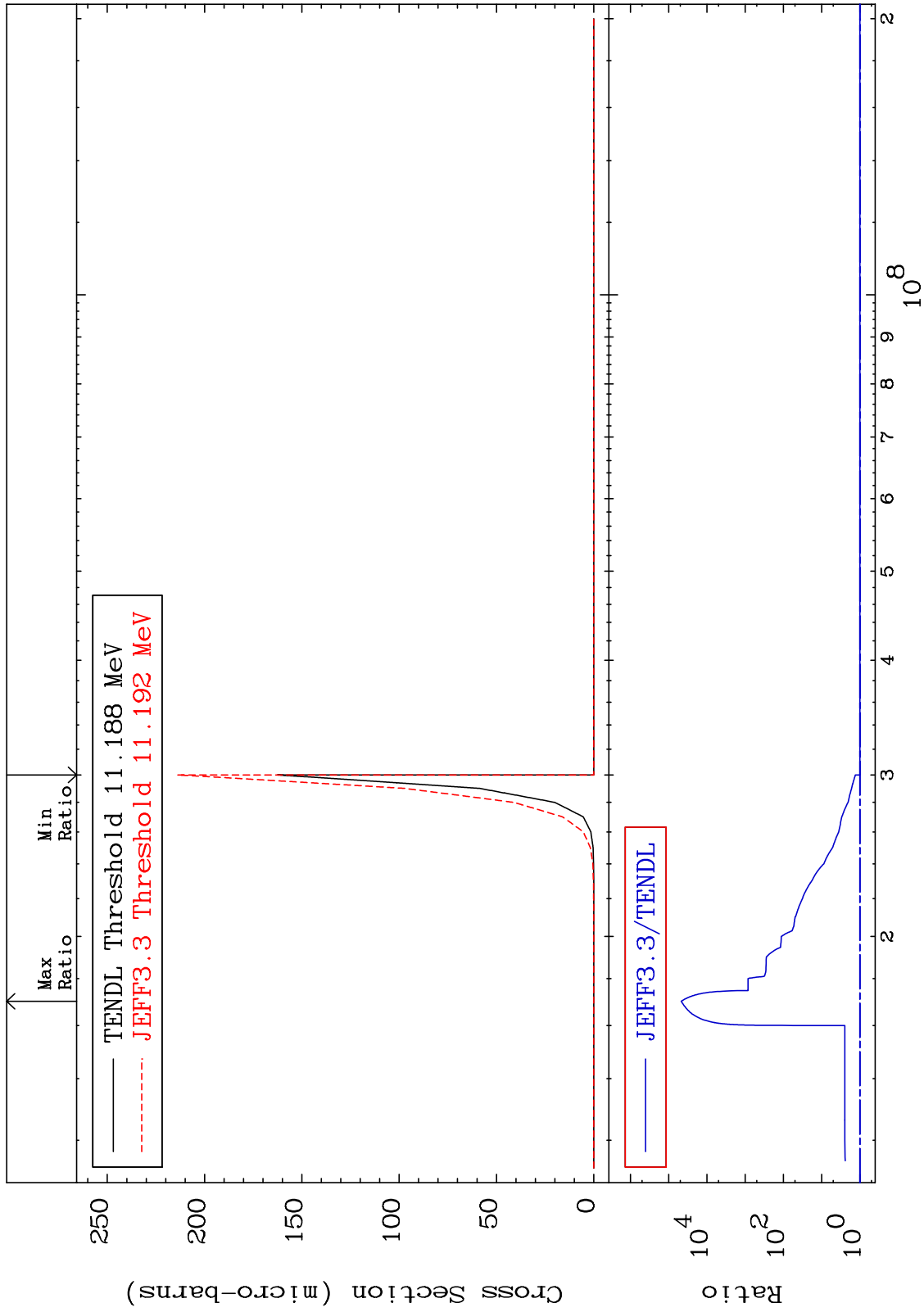
MAT 7249

(n,3n) α

72-Hf-182

Cross Section

0.000 To 9999. %



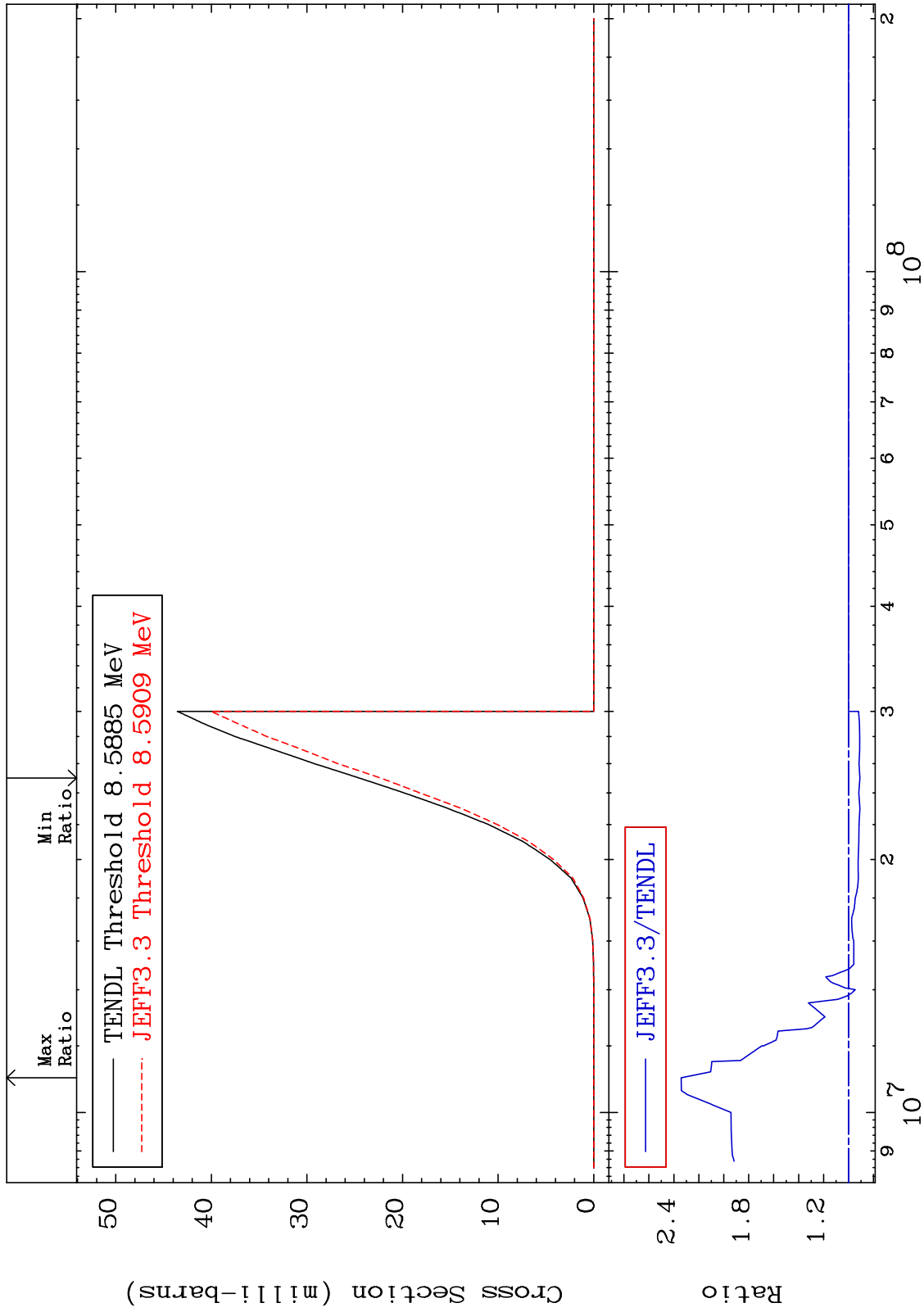
MAT 7249

(n,n') p

72-Hf-182

Cross Section

-9.114 To 134.1 %



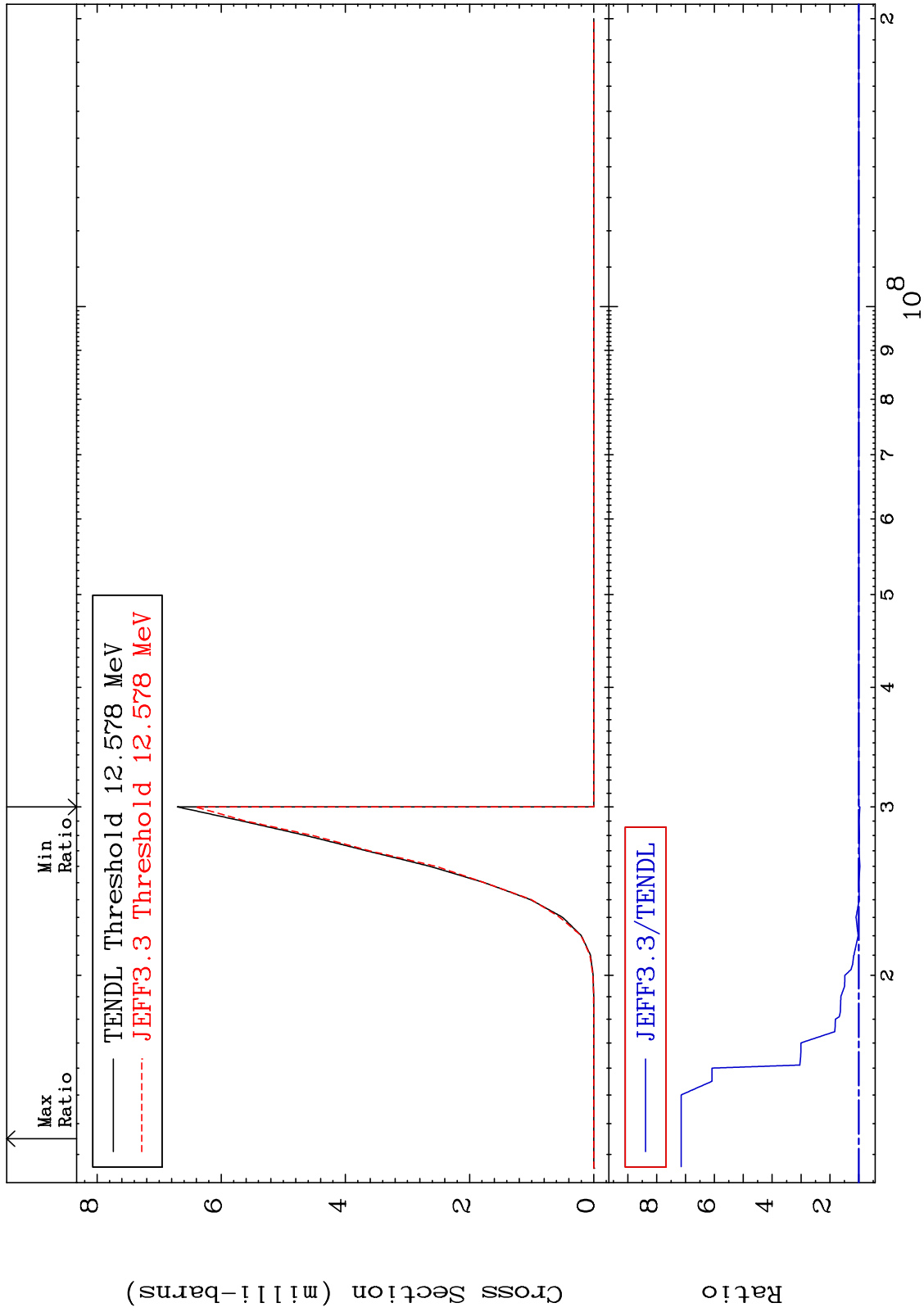
72-Hf-182

Incident Energy (eV)

10

MAT 7249 (n, n') d
 Cross Section

72-Hf-182
 -4.275 To 615.2 %



72-Hf-182

Incident Energy (eV)

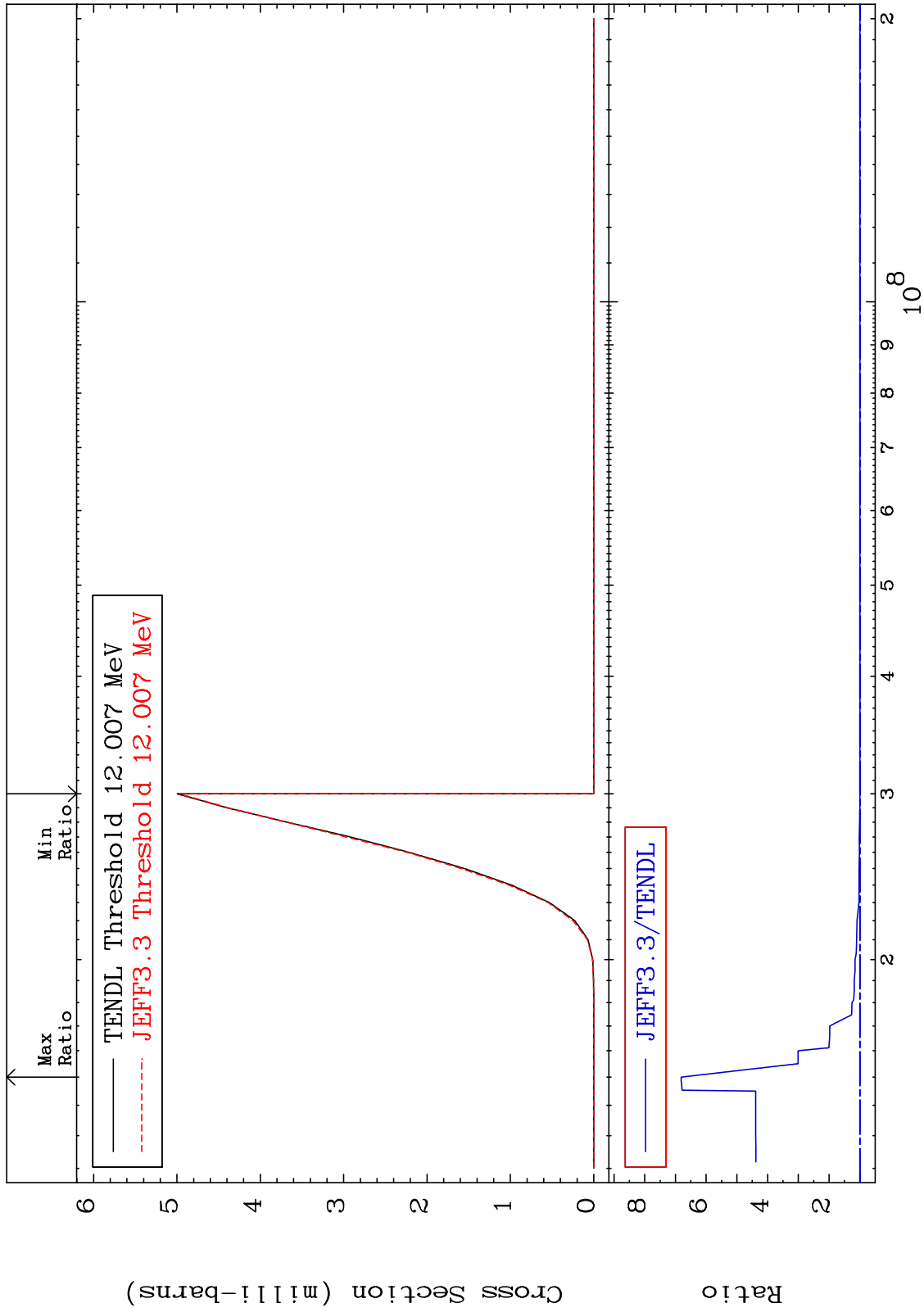
MAT 7249

(n,n') t

⁷²Hf-182

Cross Section

-0.444 To 581.2 %



12

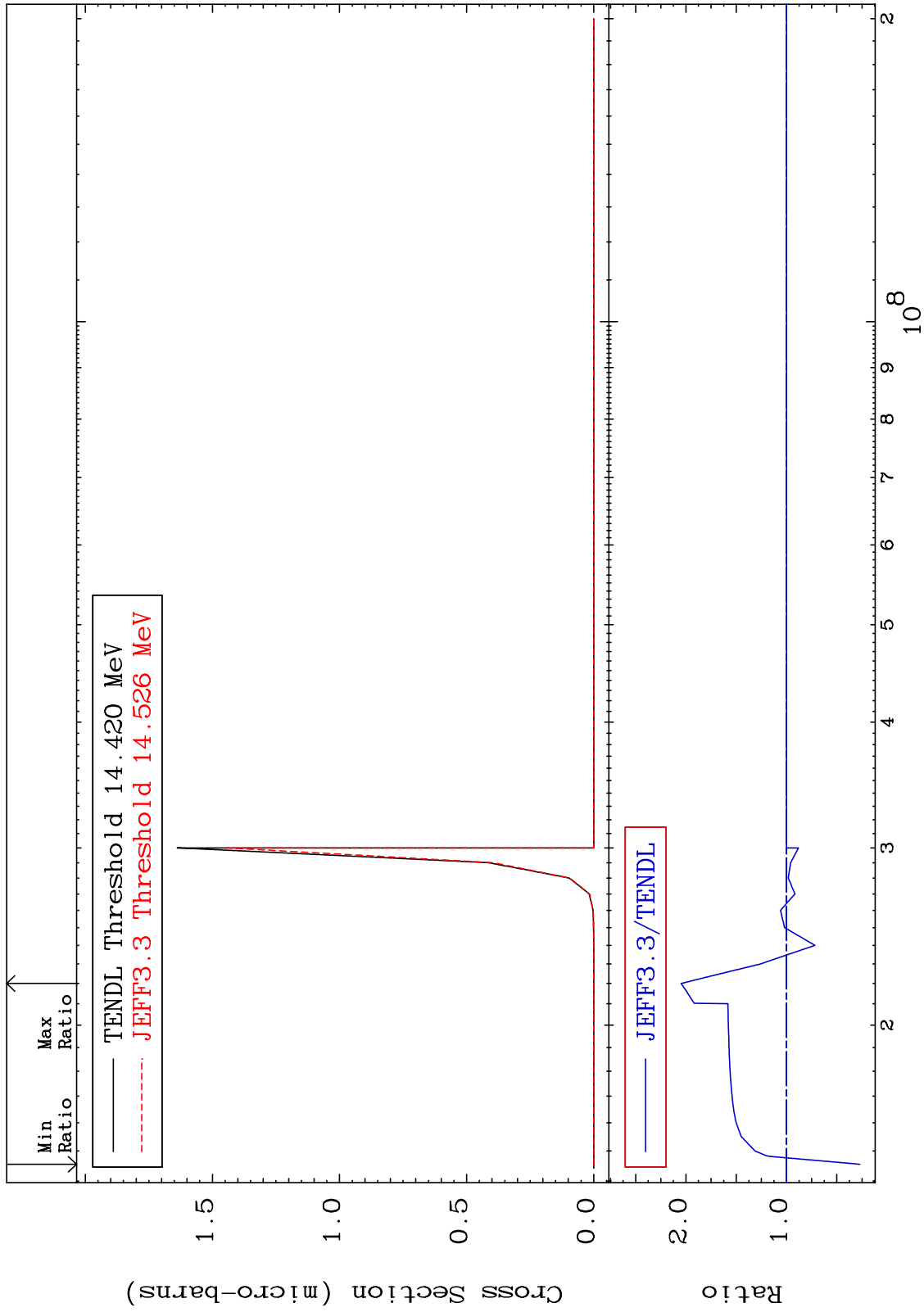
Incident Energy (eV)

⁷²Hf-182

MAT 7249

(n, n') He-3
Cross Section

72-Hf-182
-72.97 To 104.7 %



MAT 7249

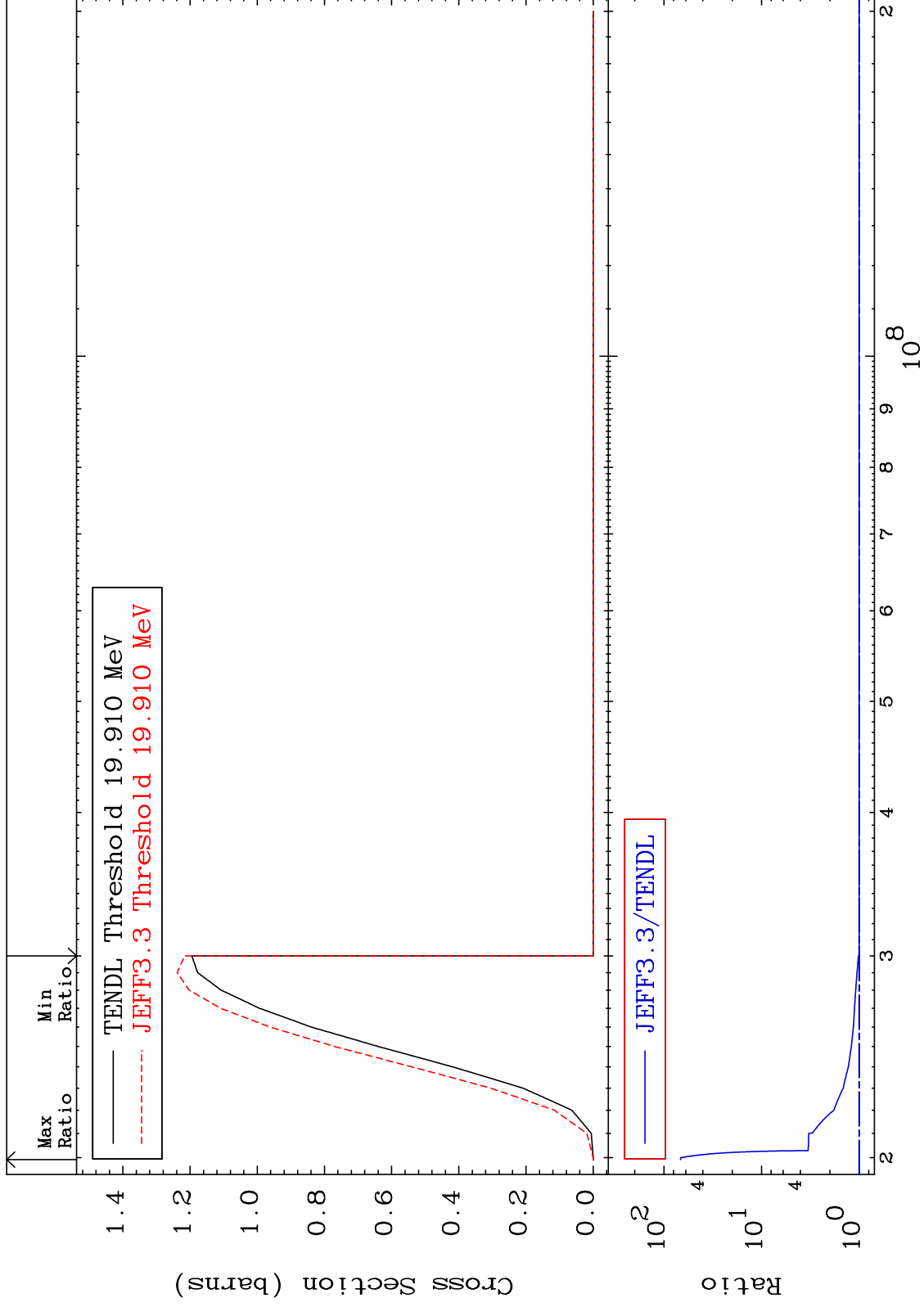
(n, 4n)

⁷²Hf-182

Cross Section

0.000

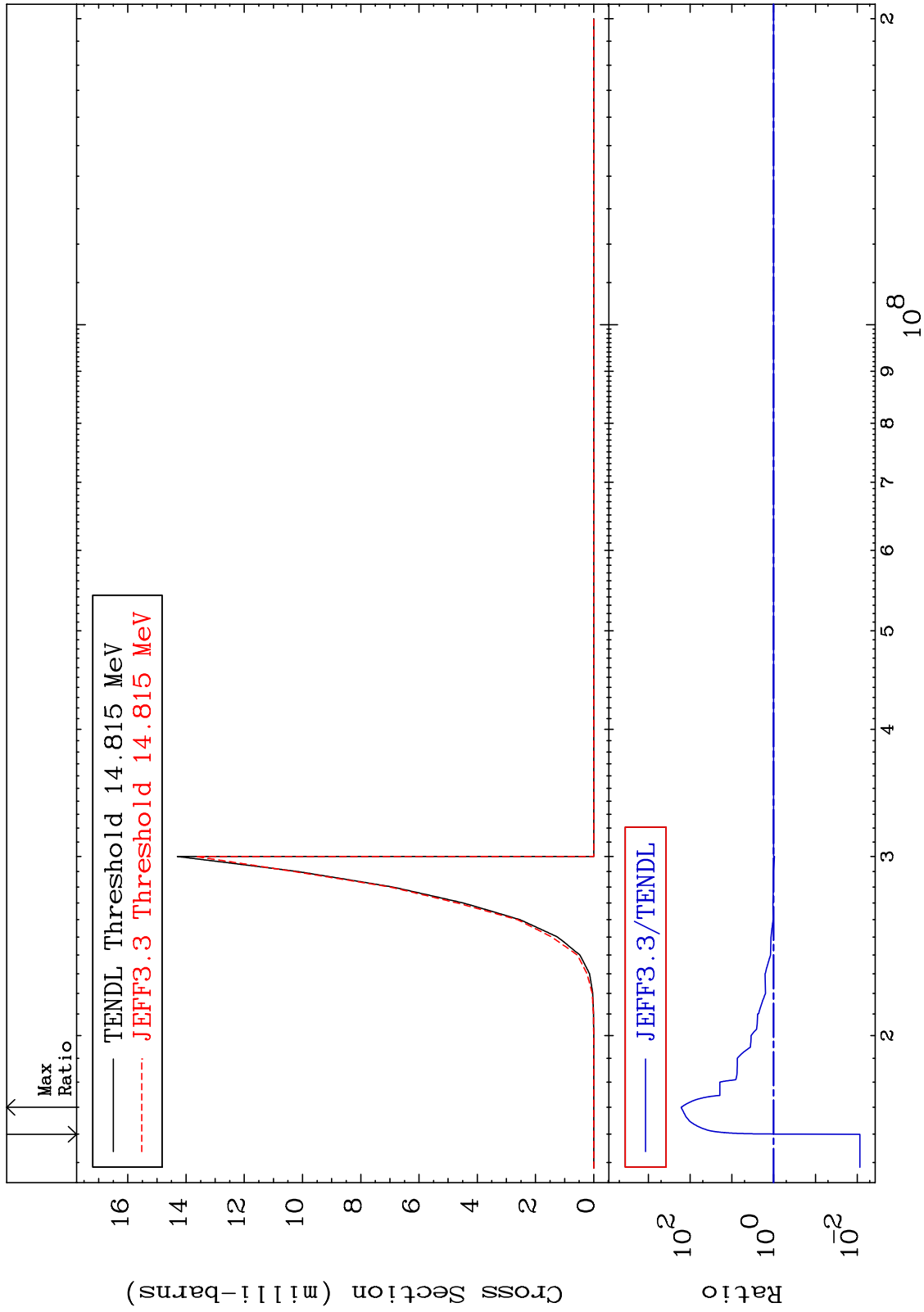
To 6664. %



MAT 7249

(n,2n) p
Cross Section

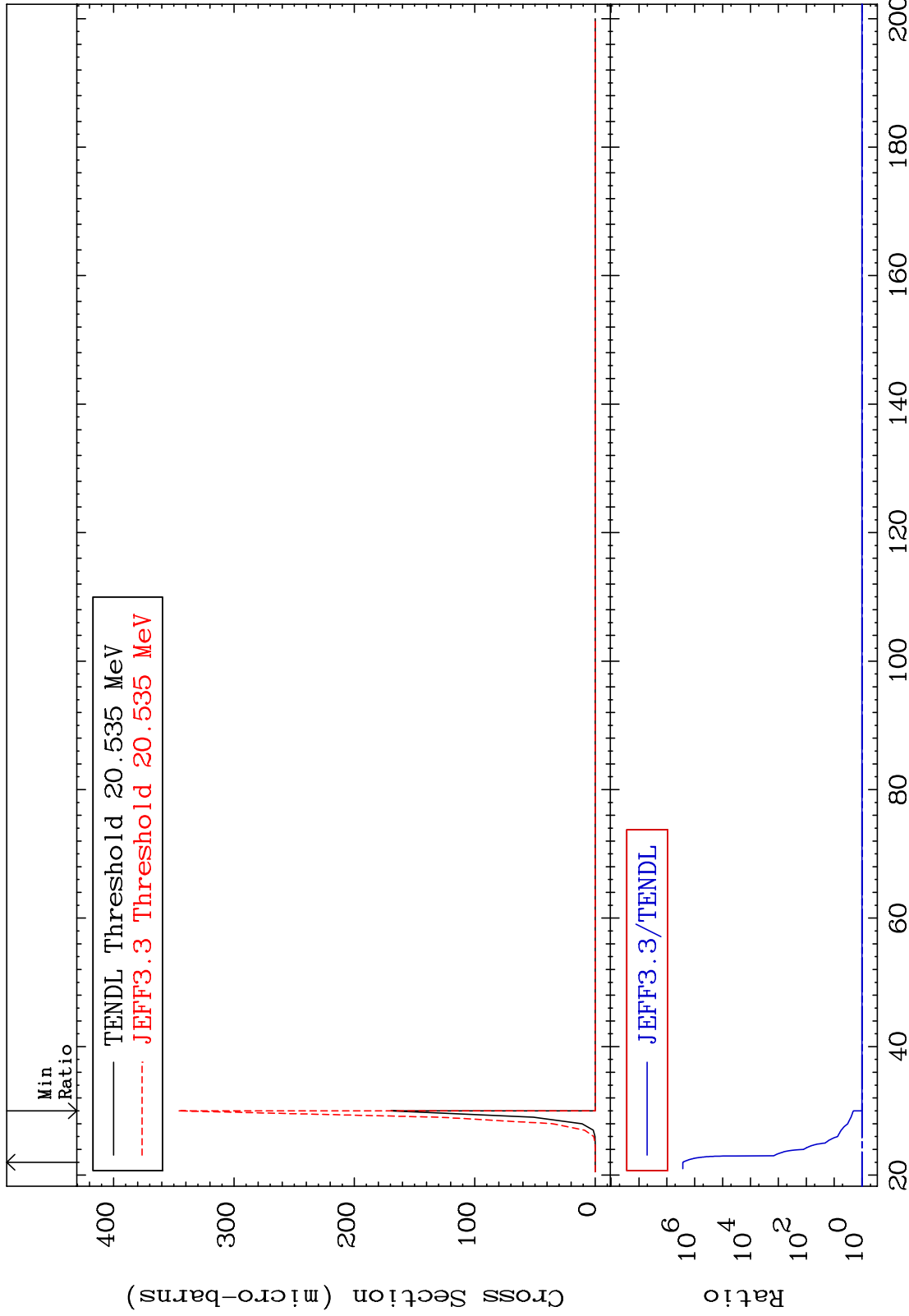
72-Hf-182
-99.14 To 9999. %



MAT 7249

(n,3n) p
Cross Section

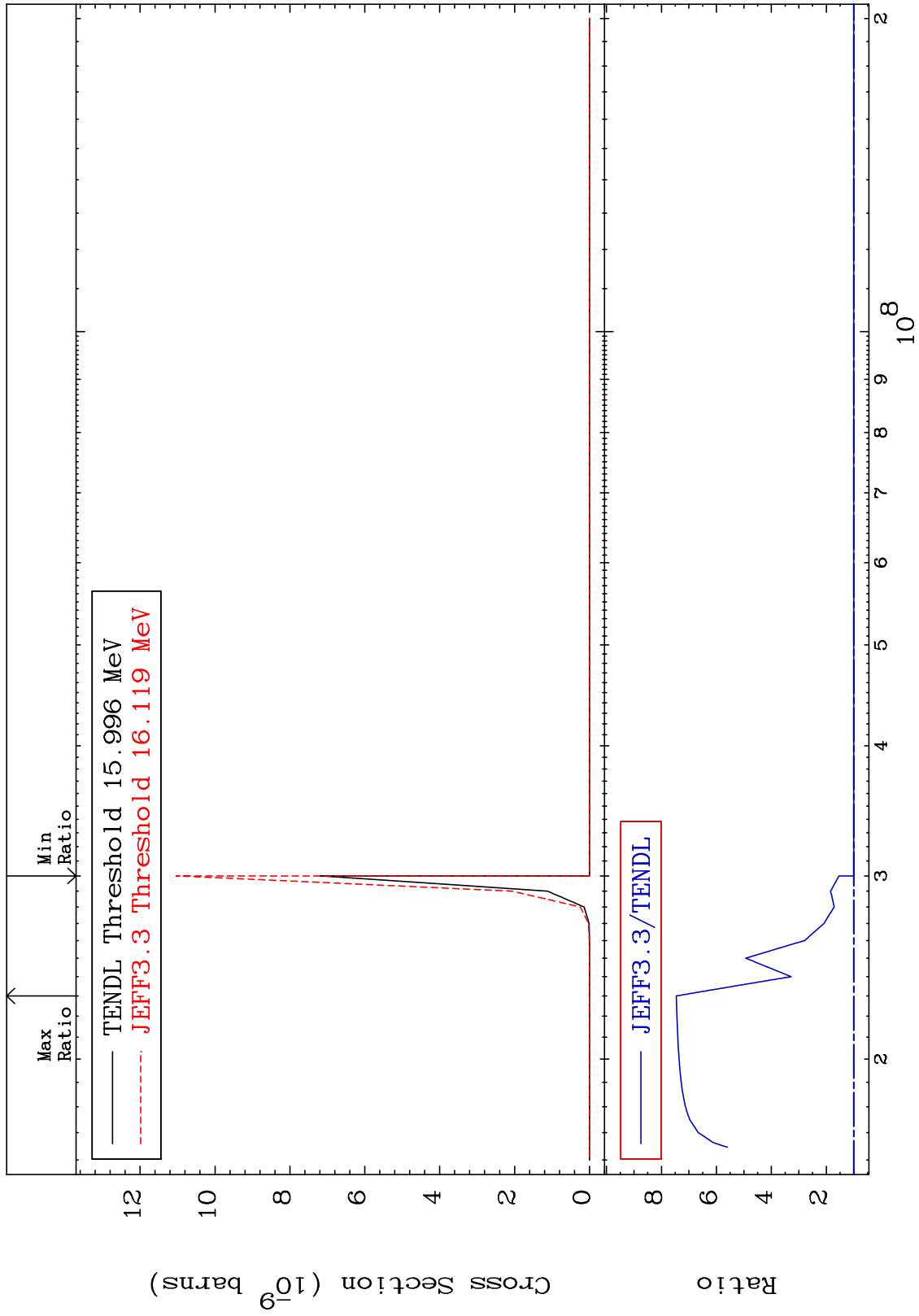
72-Hf-182
0.000 To 9999. %



72-Hf-182

16

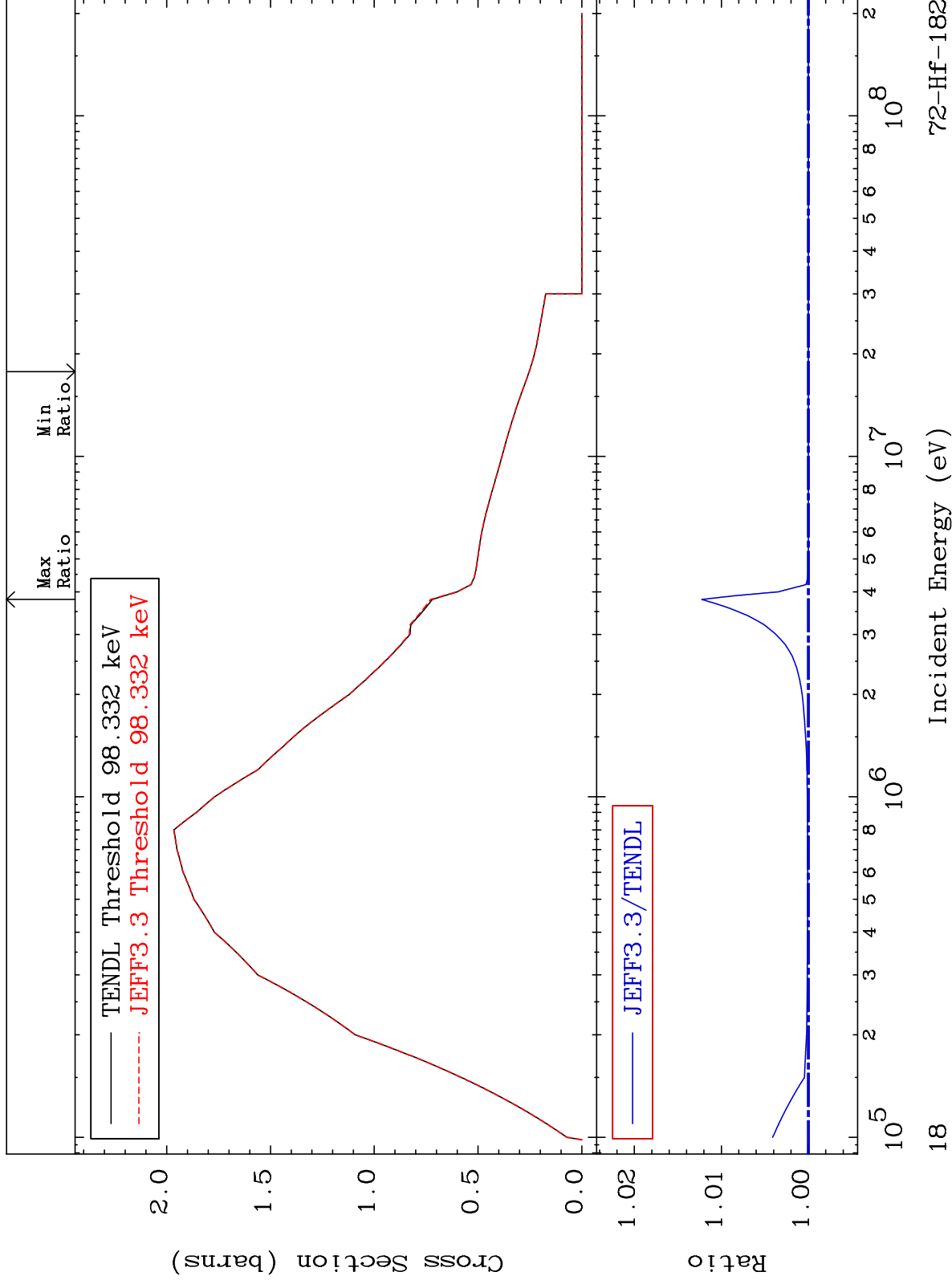
MAT 7249 (n,2n) p 72-Hf-182
 Cross Section 0.000 To 645.8 %



MAT 7249

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

72-Hf-182
0.000 To 1.225 %



72-Hf-182

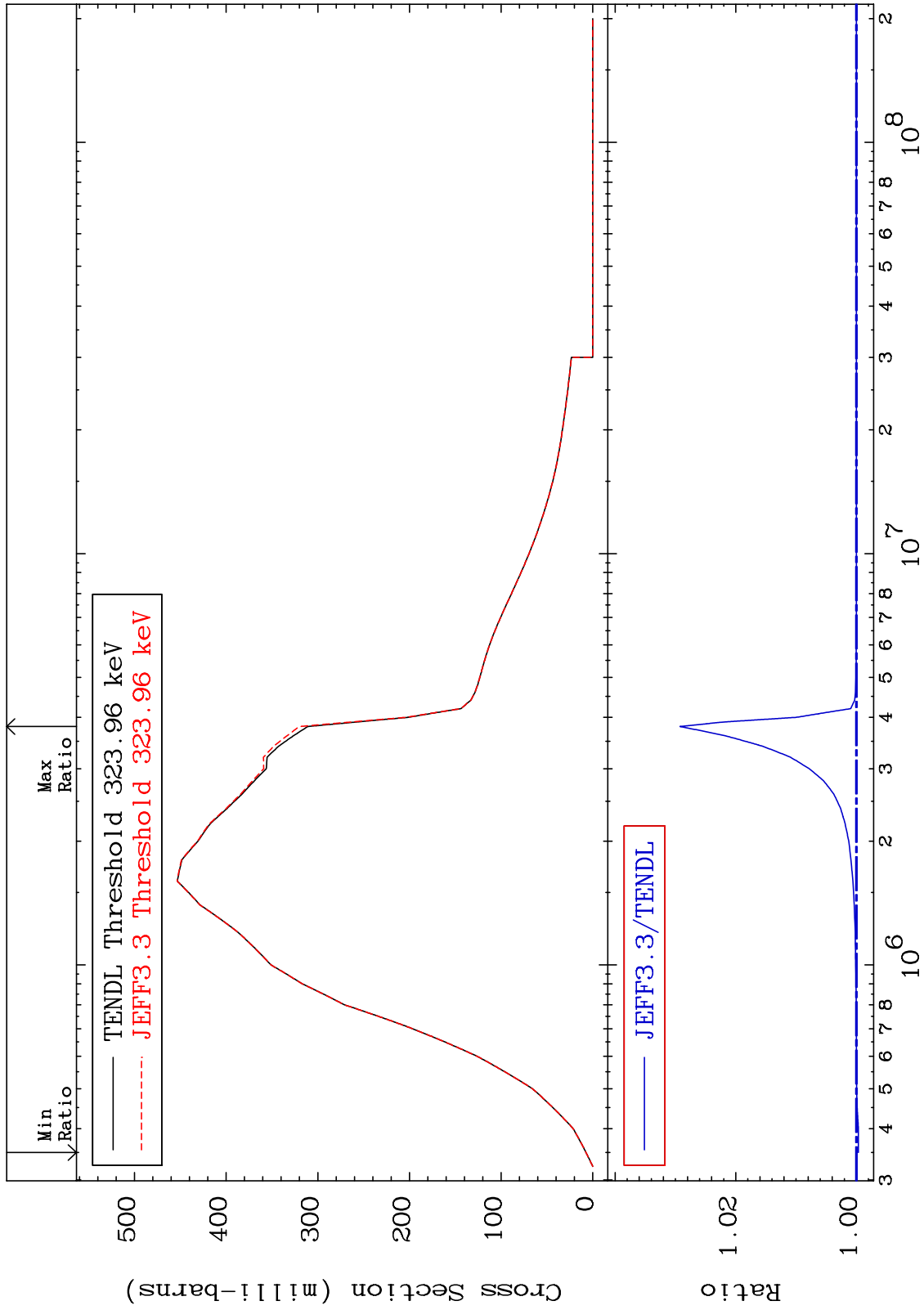
Incident Energy (eV)

18

MAT 7249

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

72-Hf-182
-0.033 To 2.924 %



19

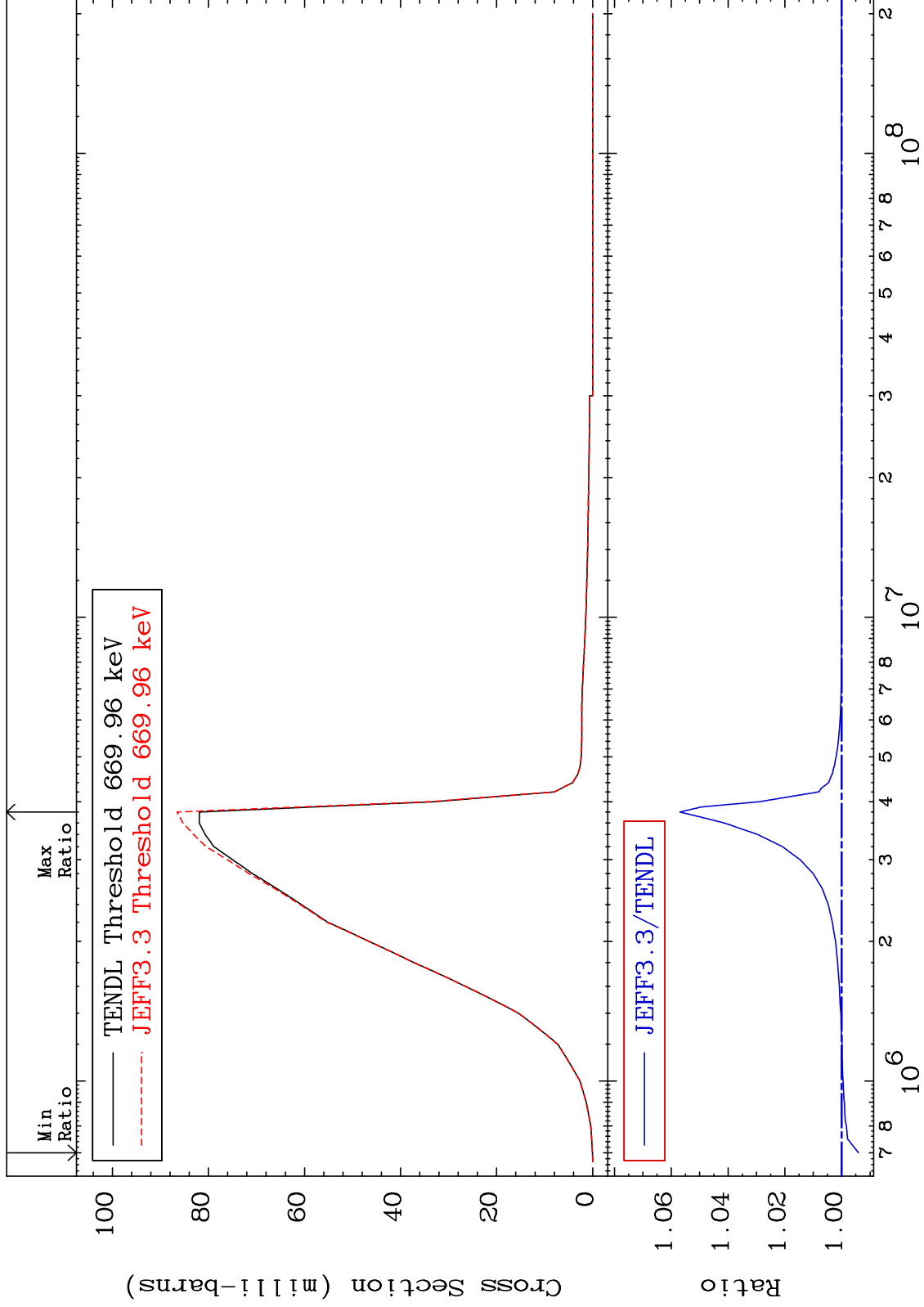
Incident Energy (eV)

72-Hf-182

MAT 7249

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

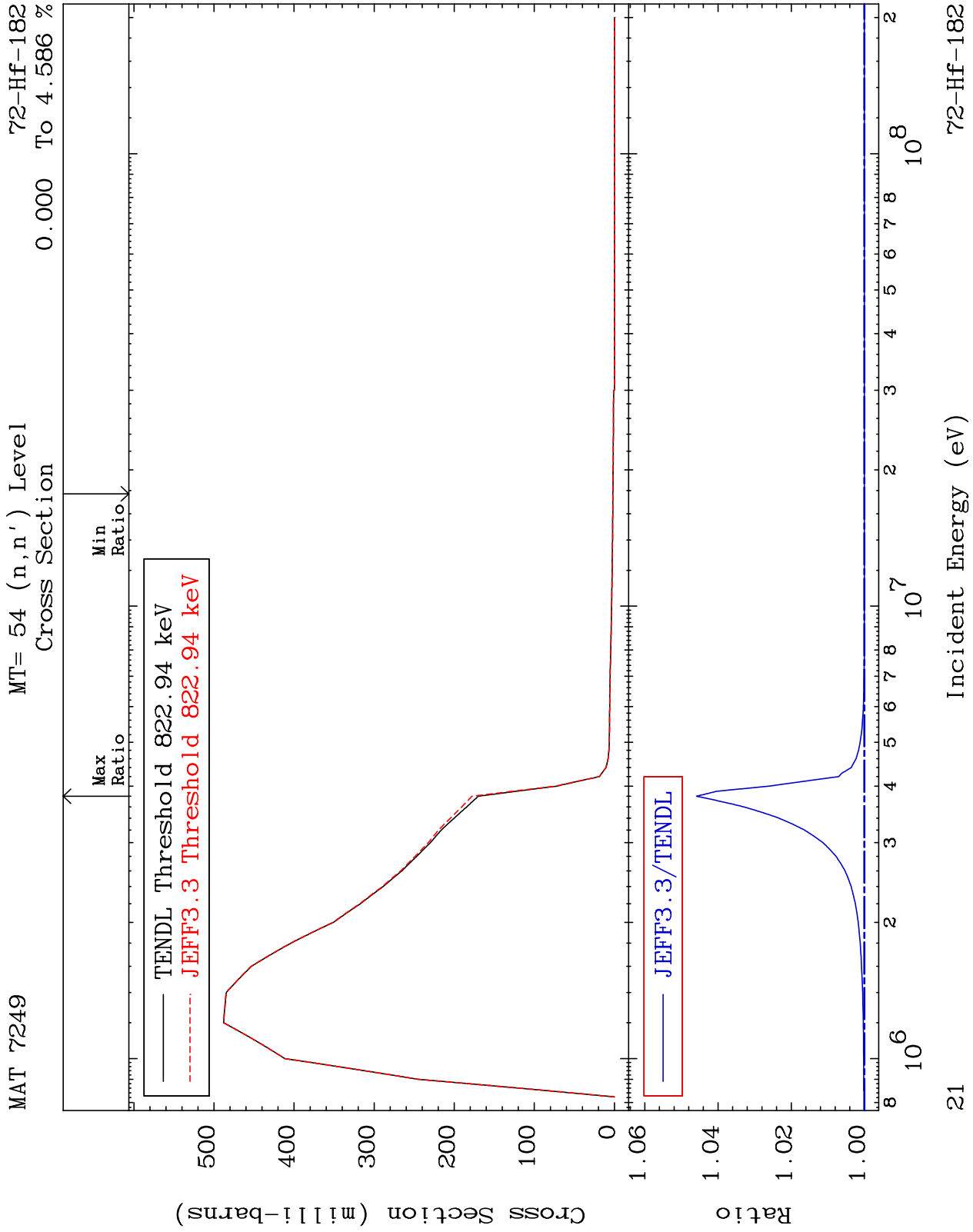
72-Hf-182
-0.590 To 5.692 %



20

Incident Energy (eV)

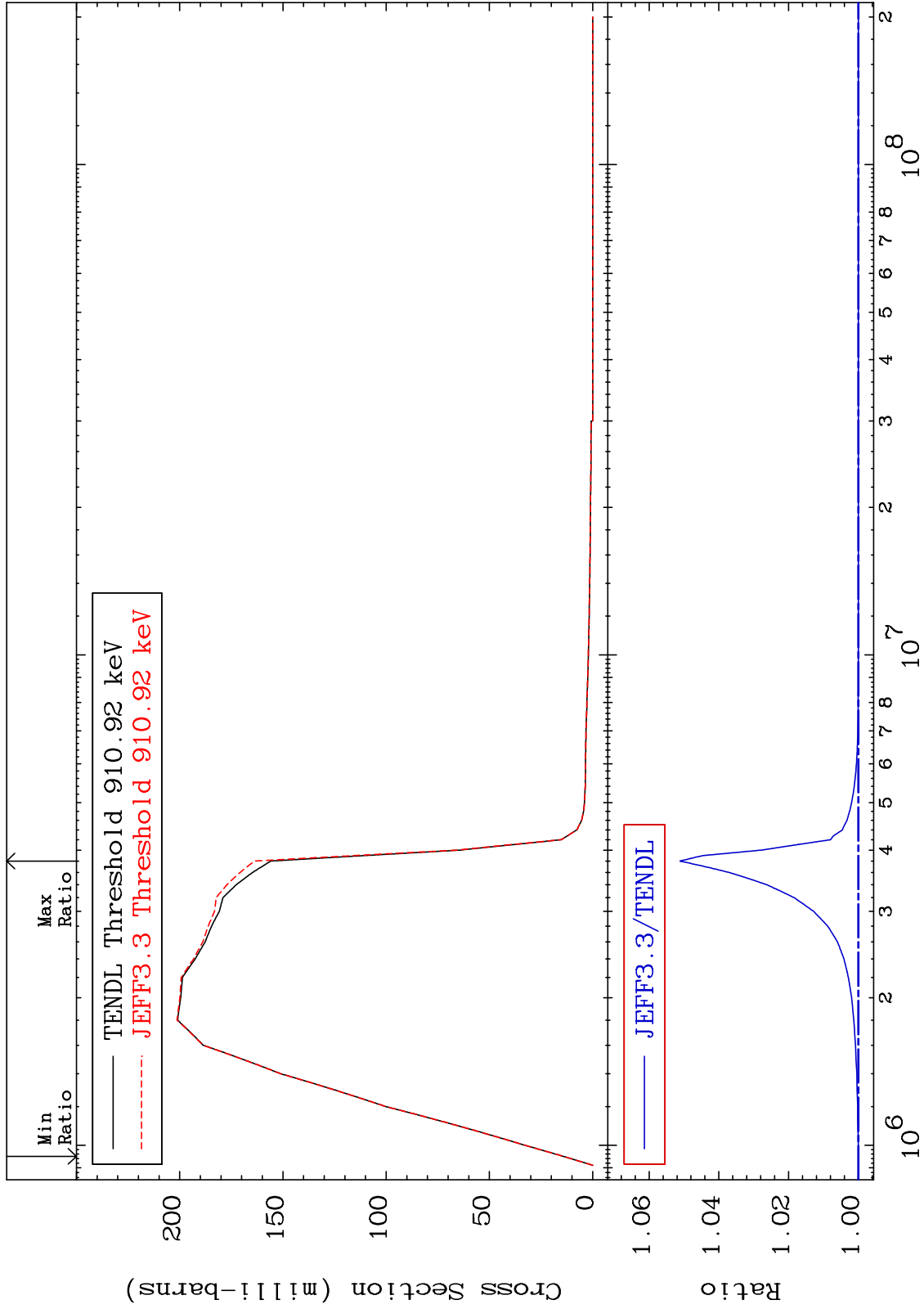
72-Hf-182



MAT 7249

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

72-Hf-182
-0.002 To 5.114 %



22

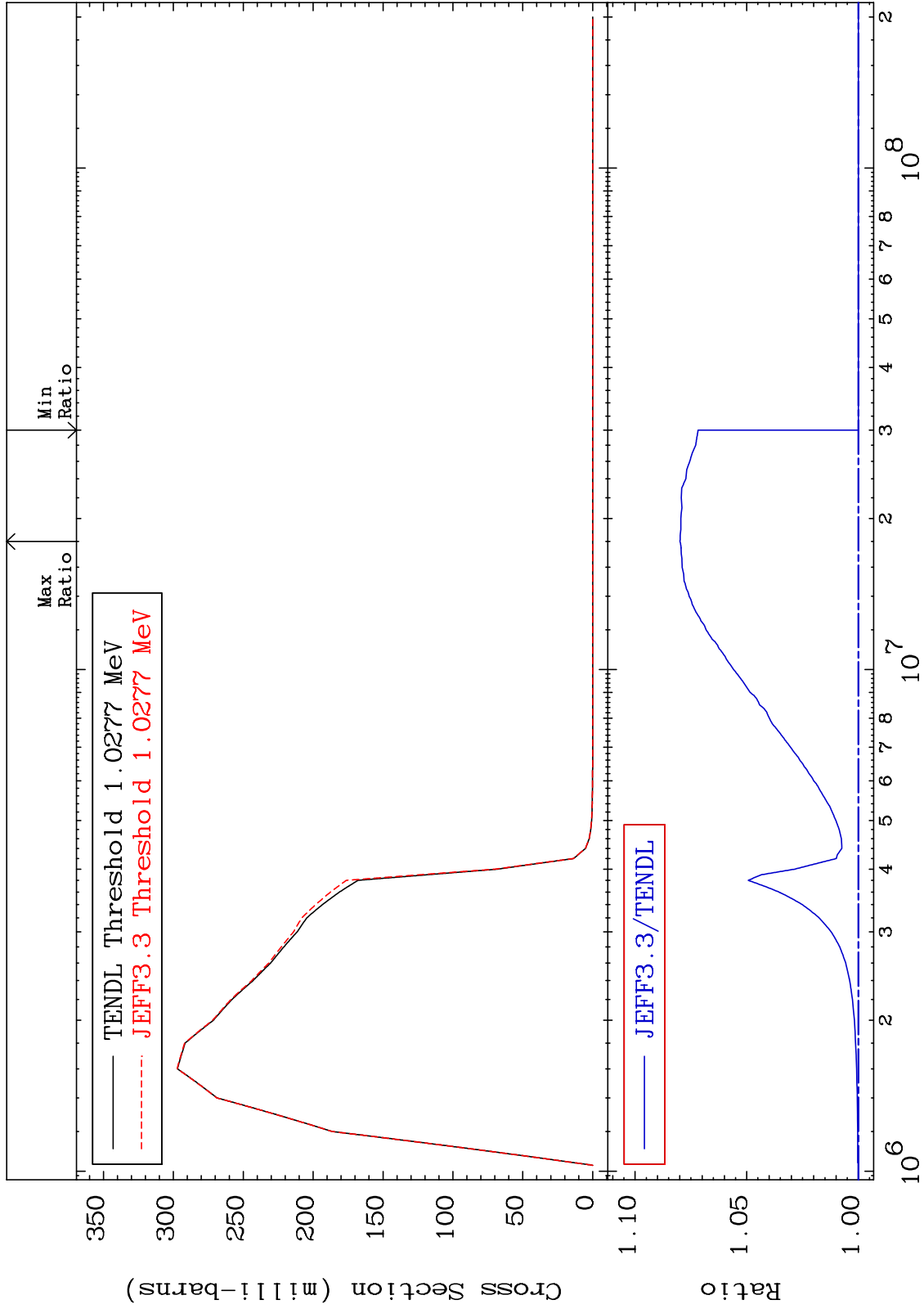
Incident Energy (eV)

72-Hf-182

MAT 7249

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

72-Hf-182
0.000 To 7.989 %



Incident Energy (eV)

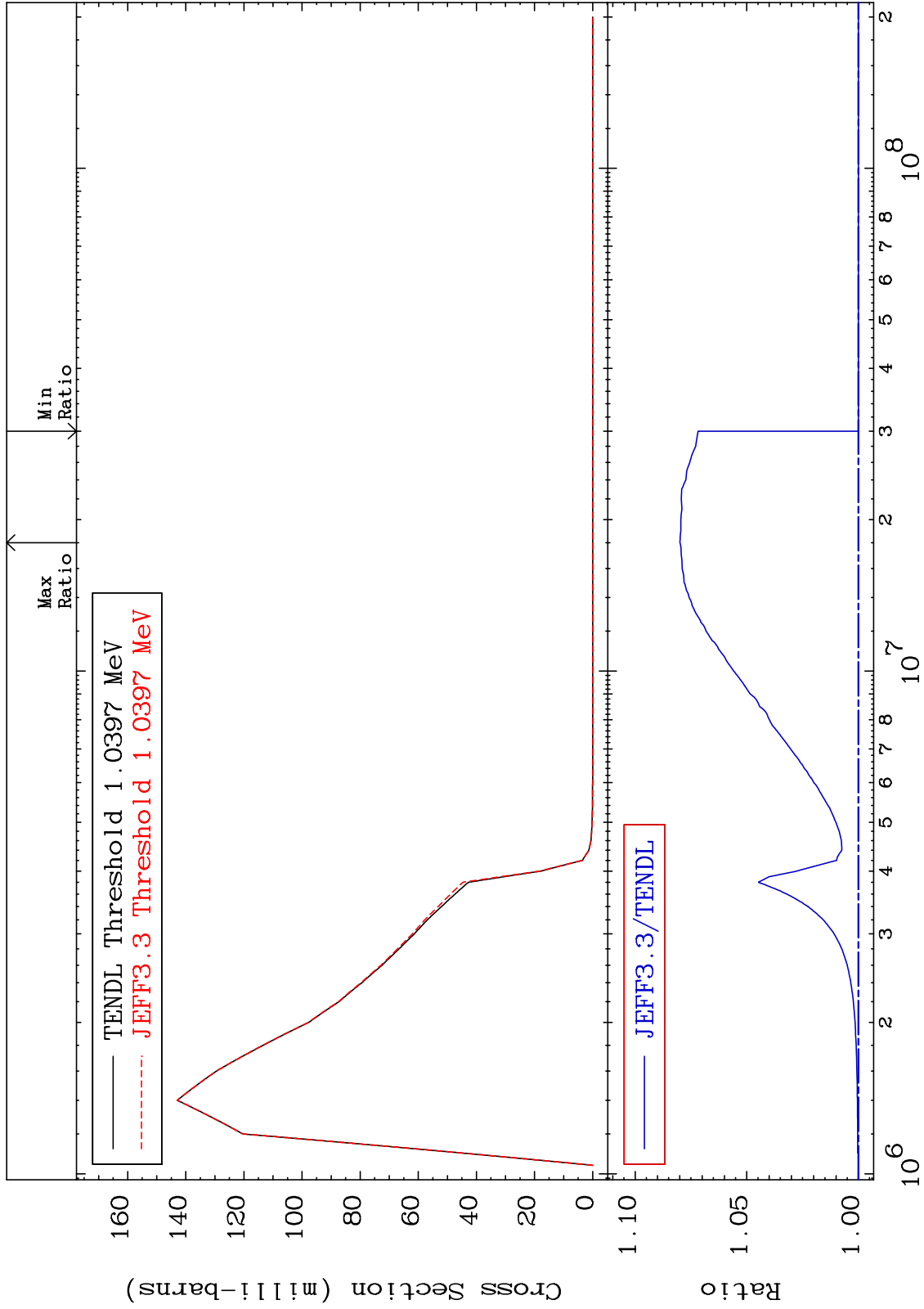
72-Hf-182

23

MAT 7249

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

72-Hf-182
0.000 To 7.990 %



24

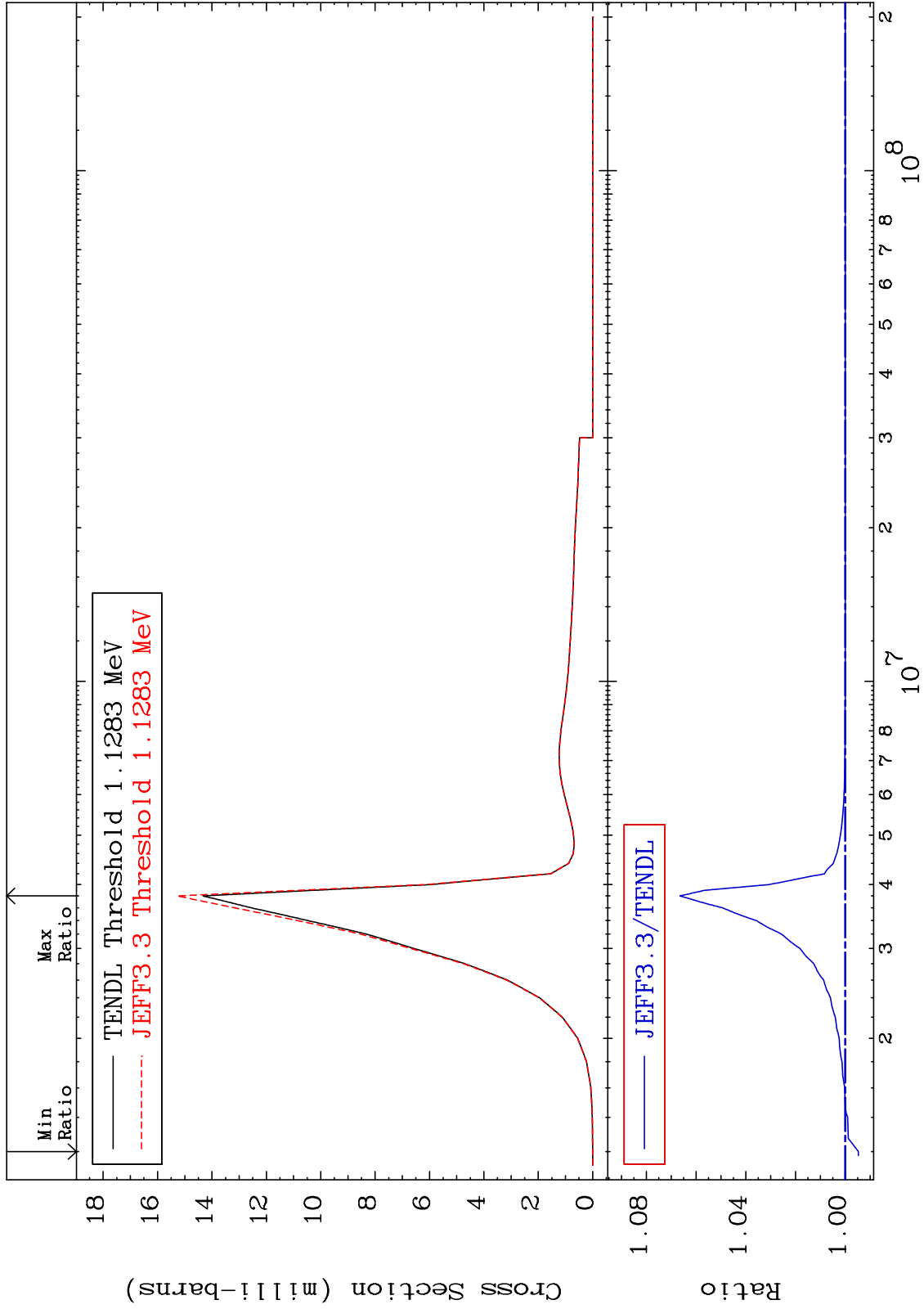
Incident Energy (eV)

72-Hf-182

MAT 7249

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

72-Hf-182
-0.532 To 6.648 %



25

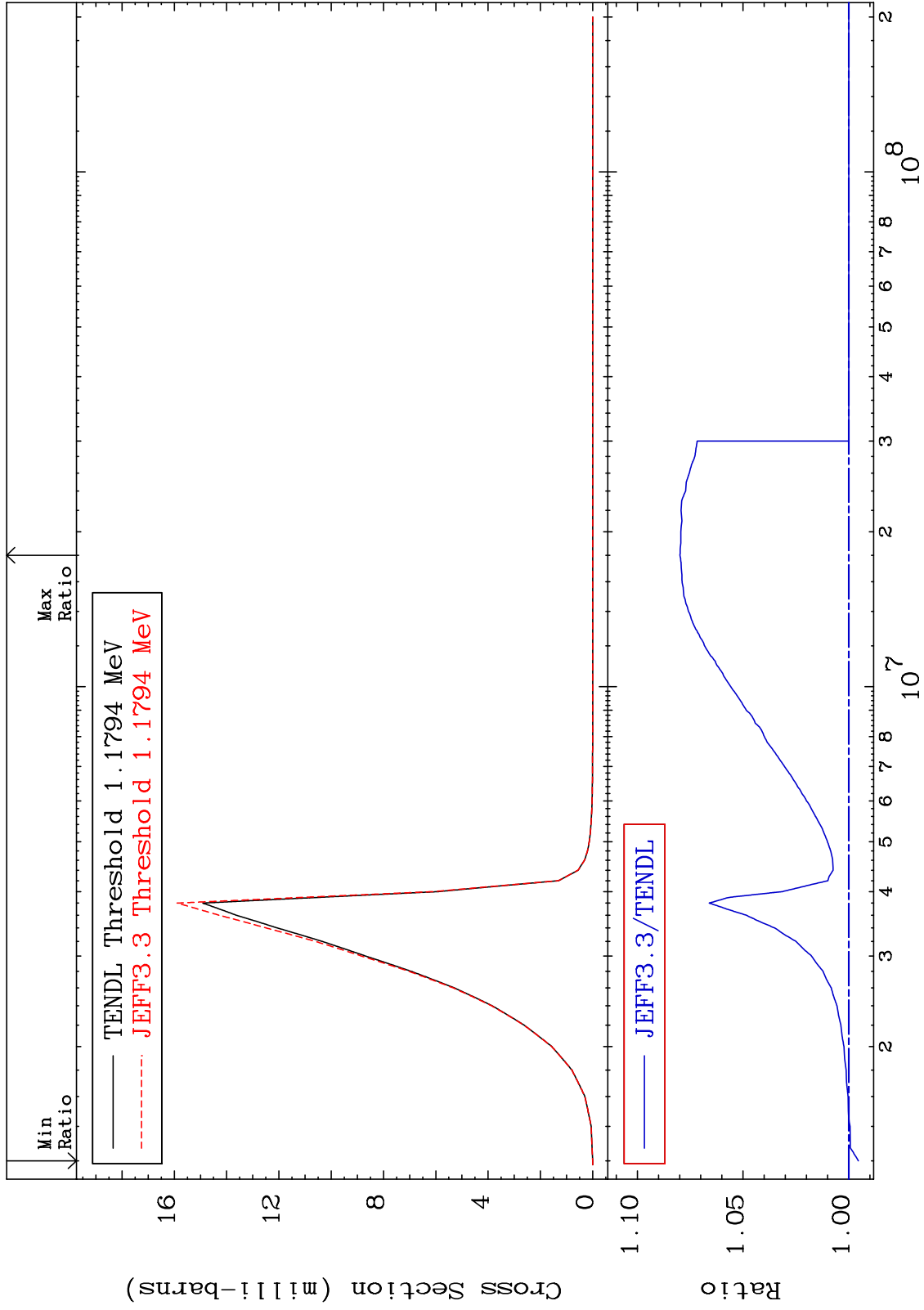
Incident Energy (eV)

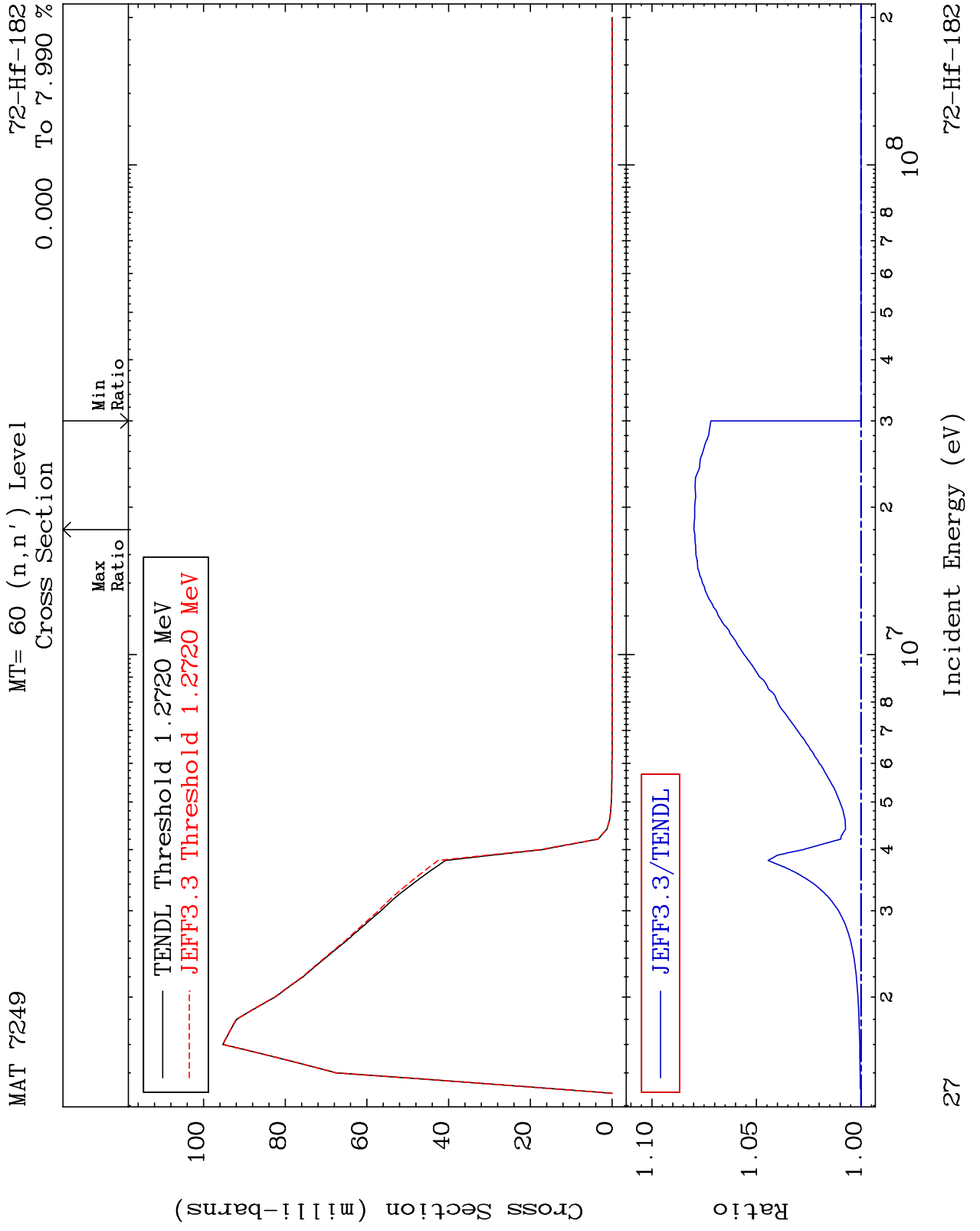
72-Hf-182

MAT 7249

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

72-Hf-182
-0.454 To 7.982 %

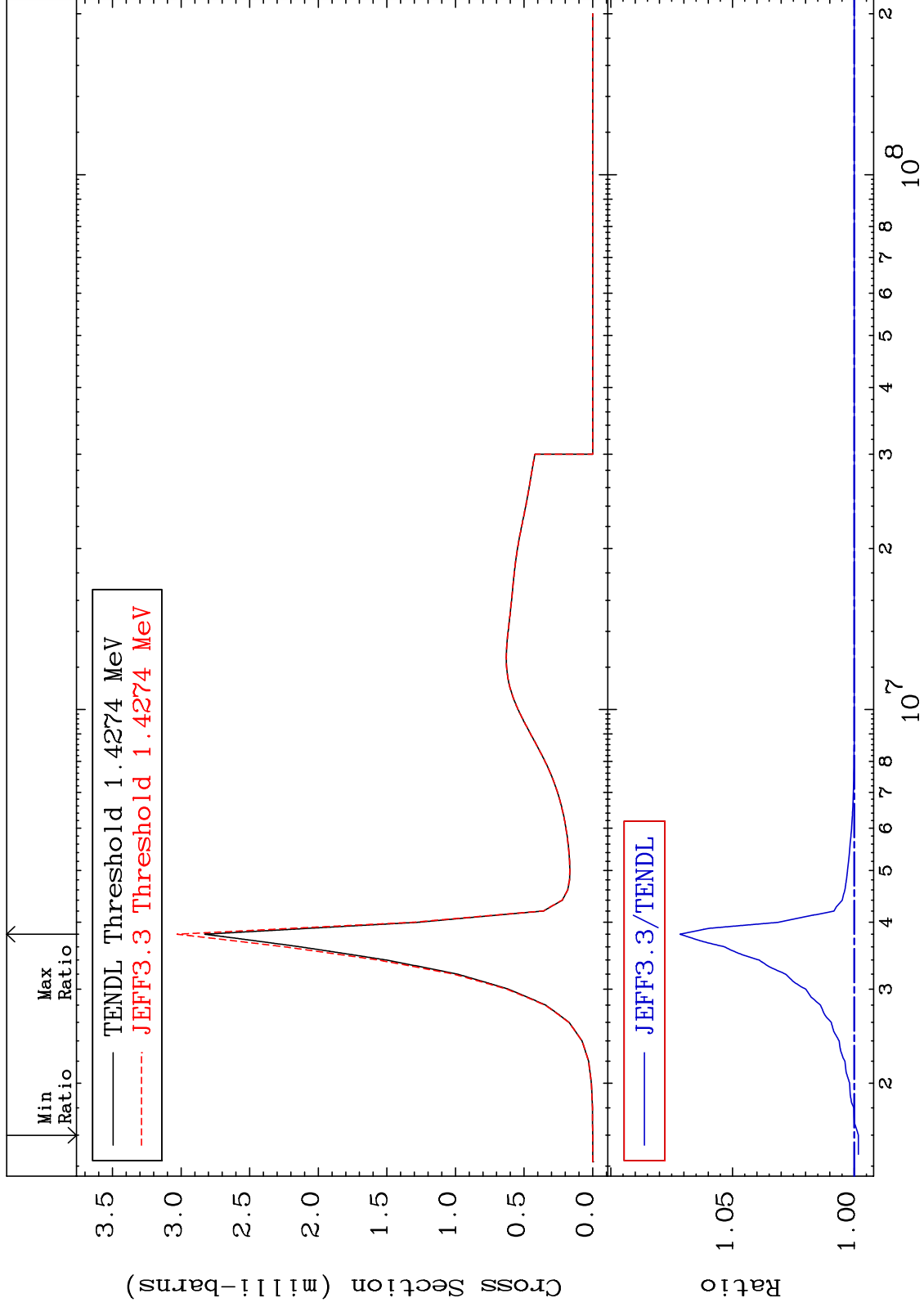


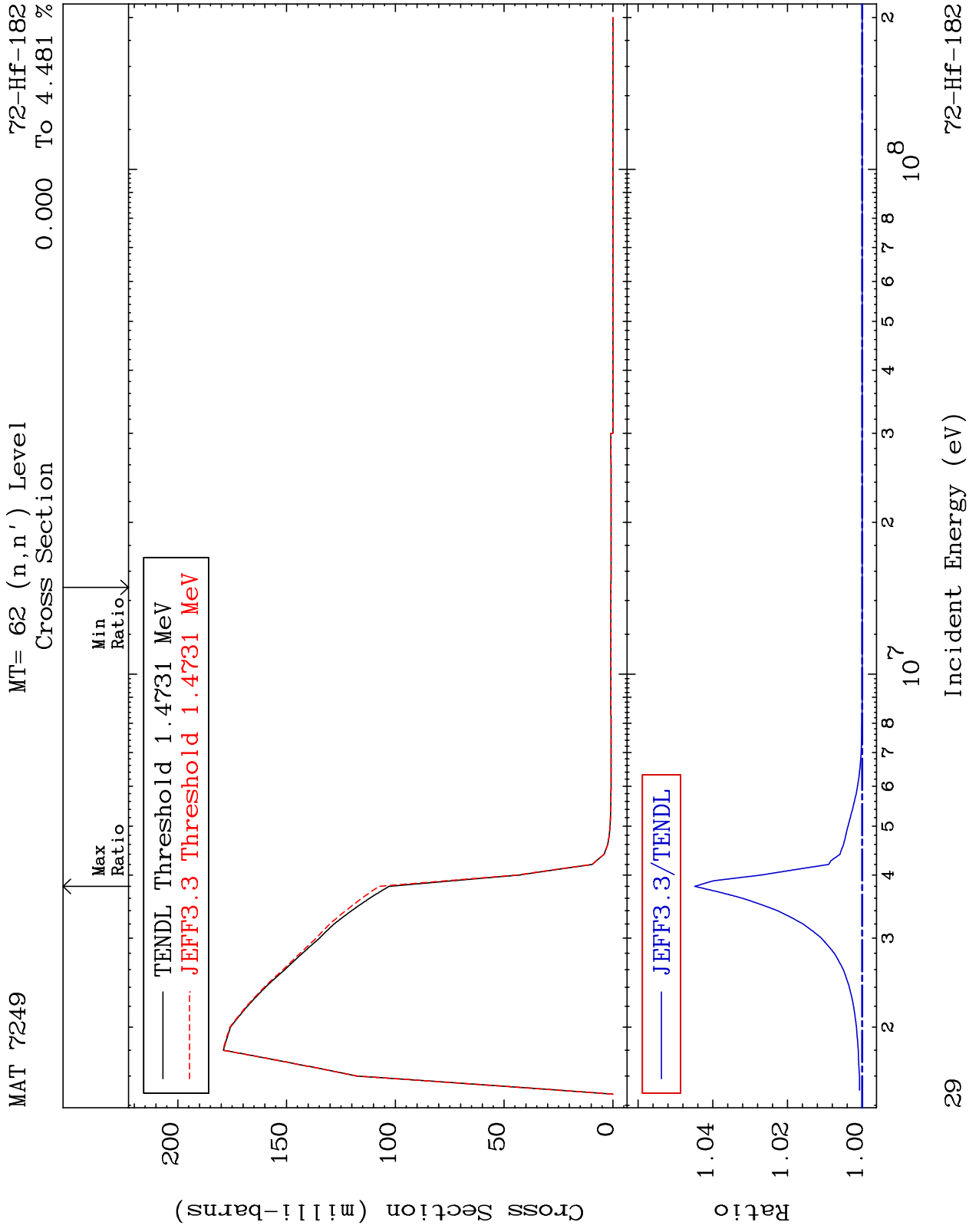


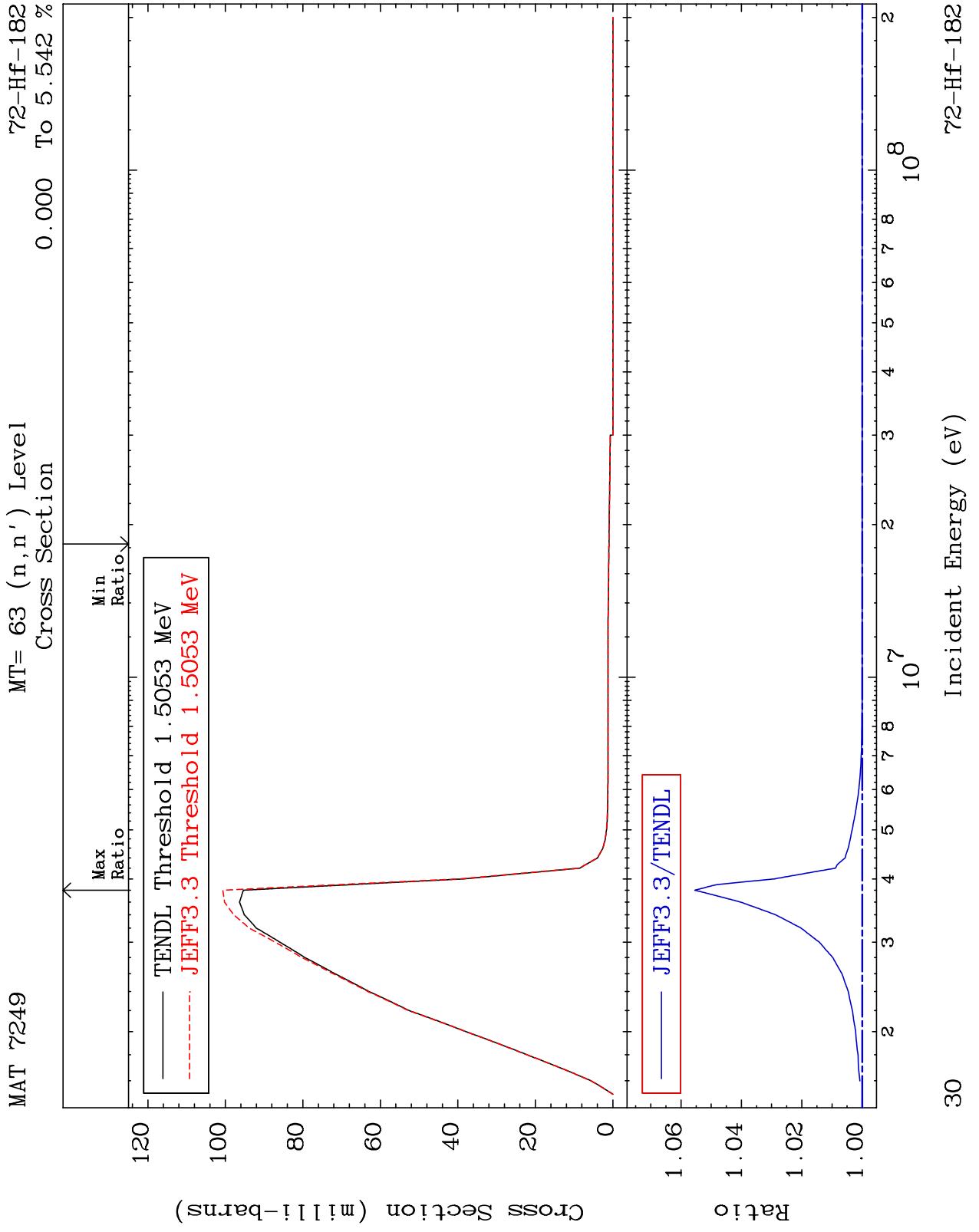
MAT 7249

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

72-Hf-182
-0.172 To 7.159 %



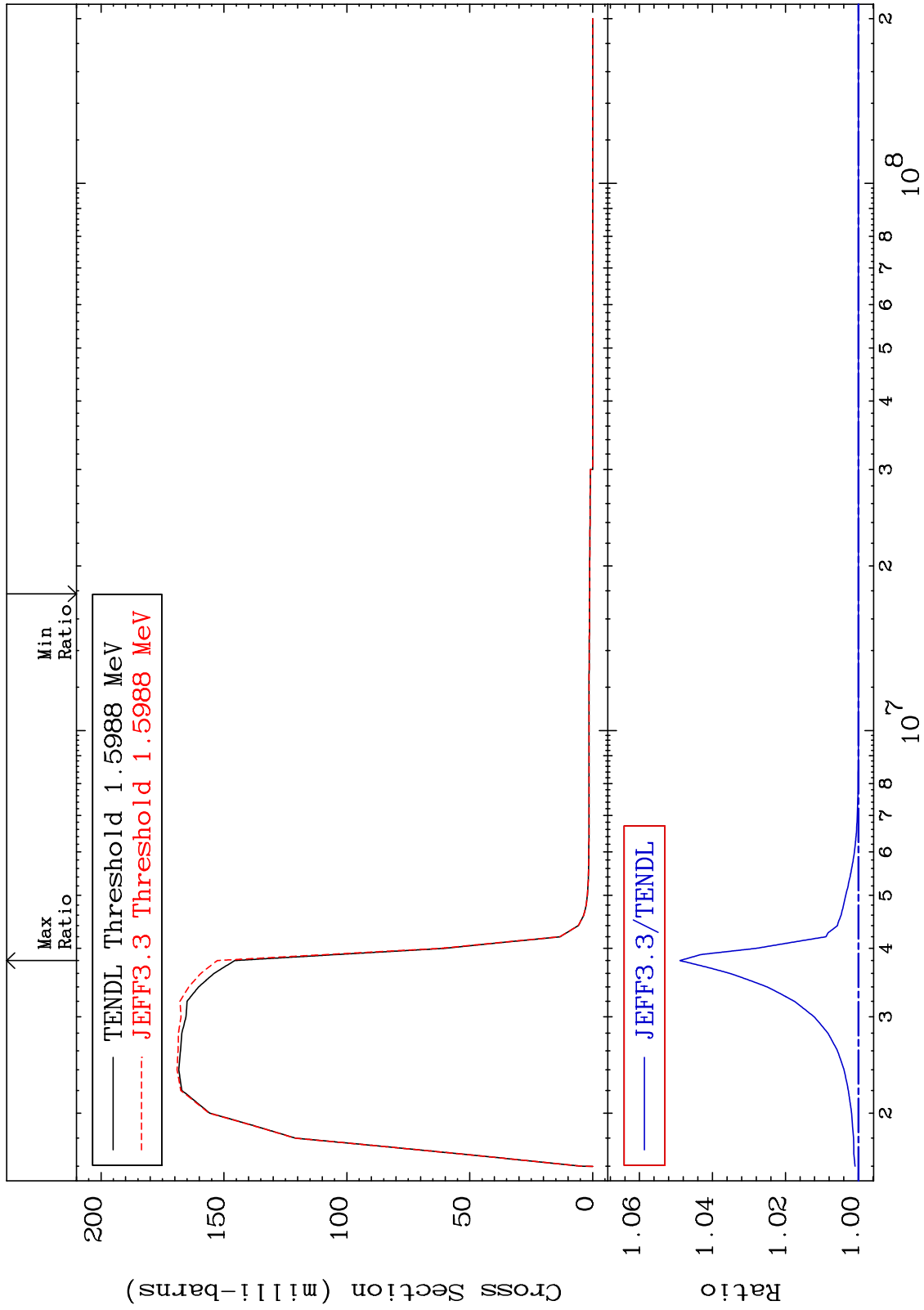




MAT 7249

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

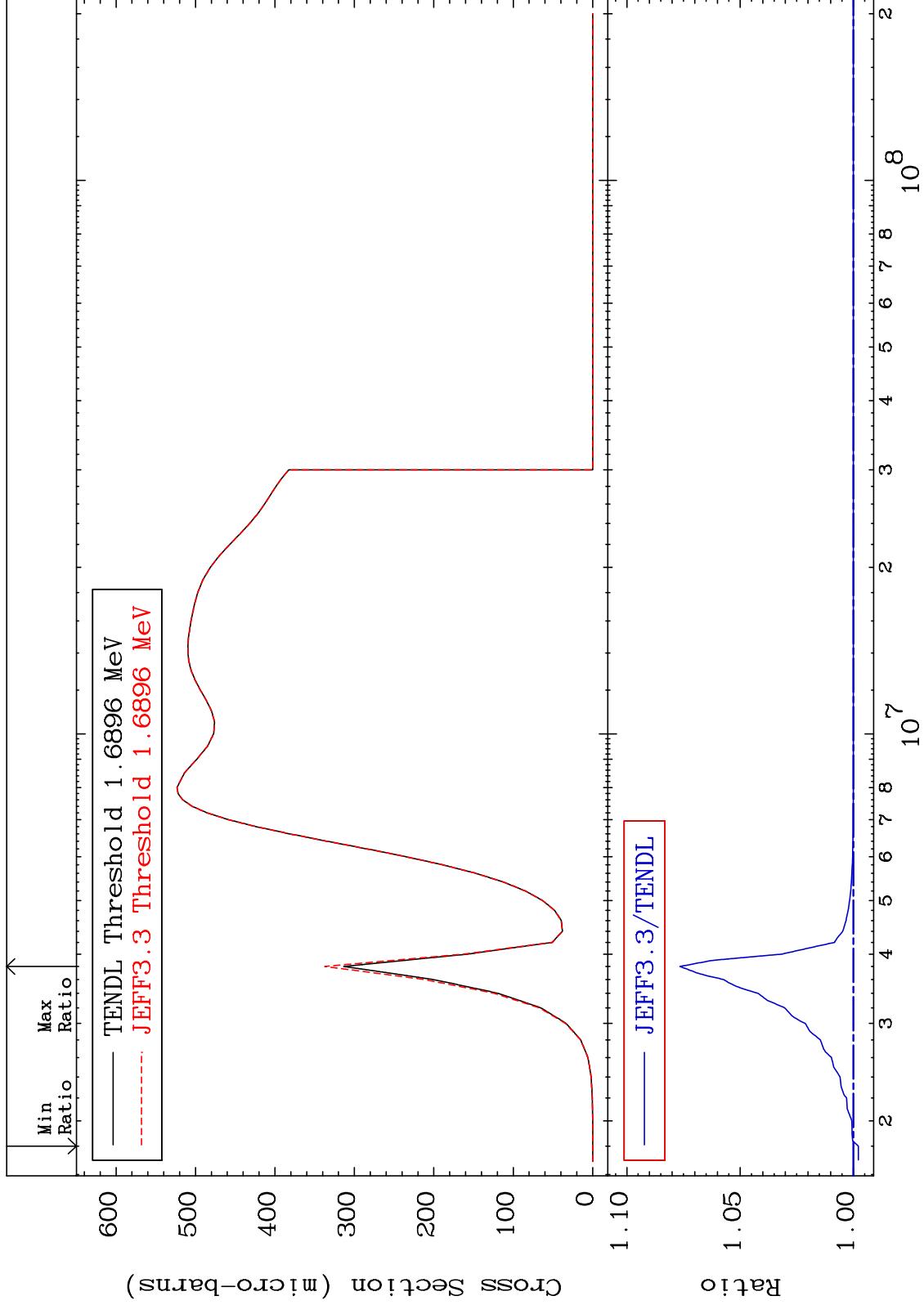
72-Hf-182
0.000 To 4.889 %



MAT 7249

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

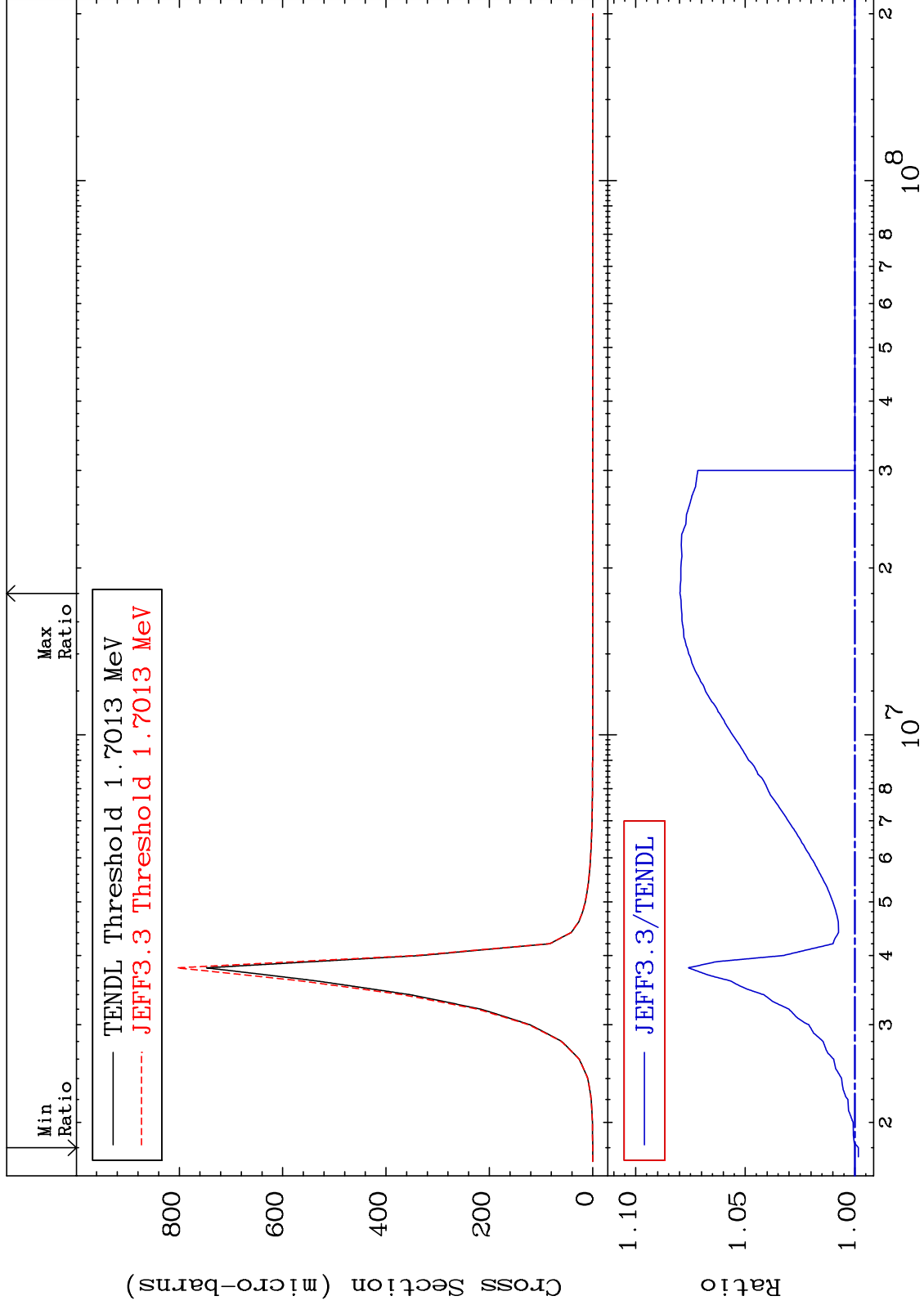
72-Hf-182
-0.223 To 7.653 %

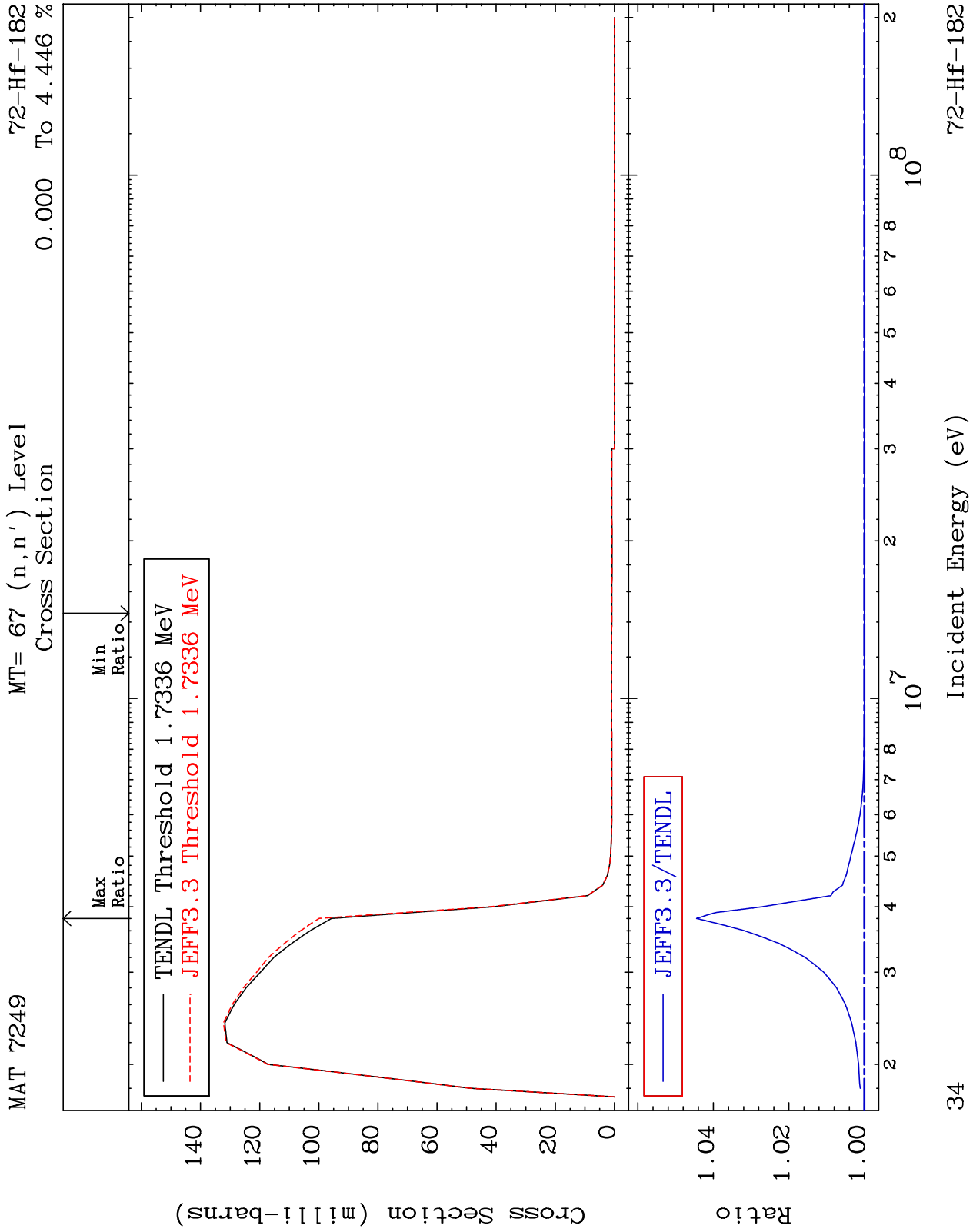


MAT 7249

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

72-Hf-182
-0.163 To 7.978 %

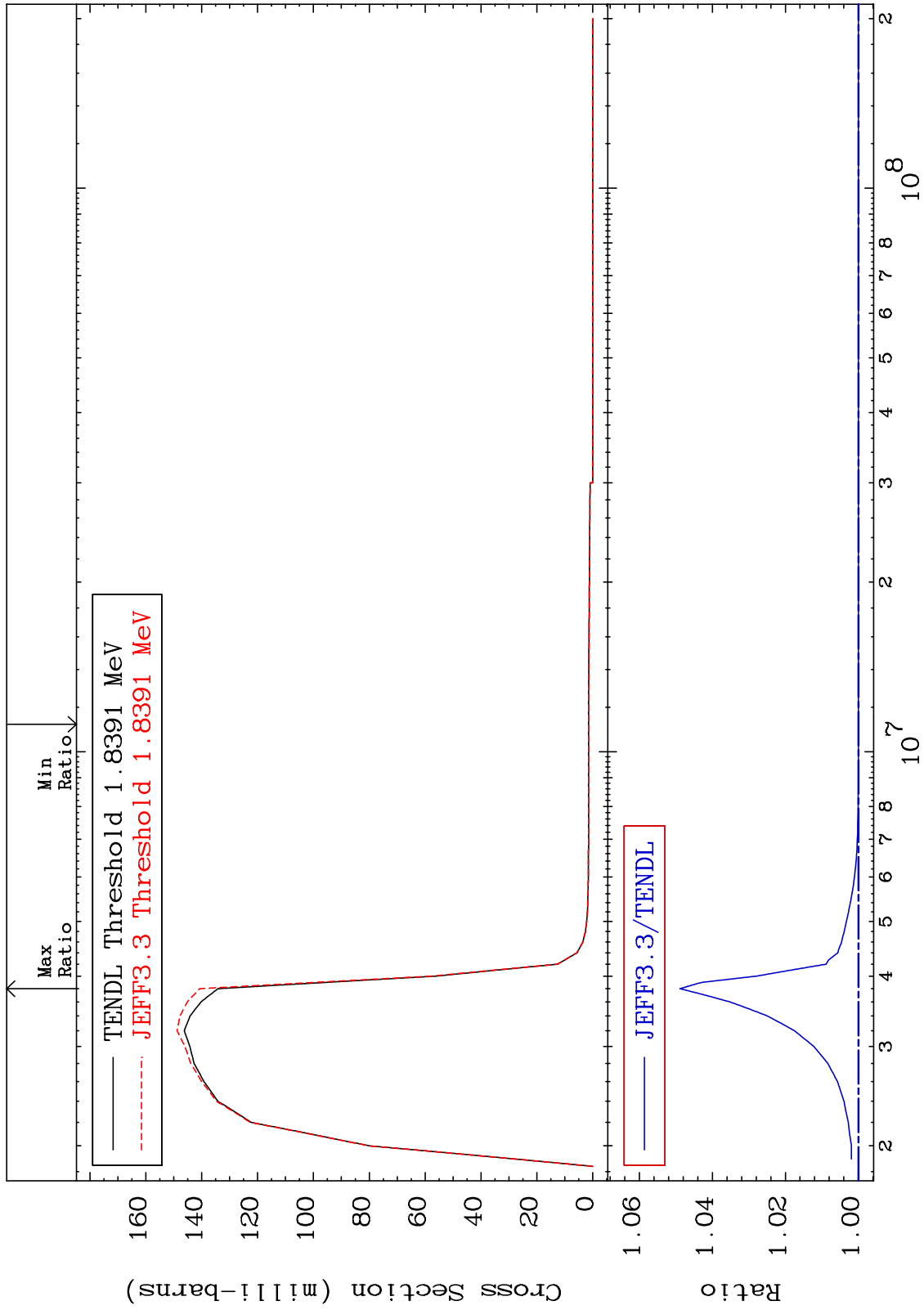




MAT 7249

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

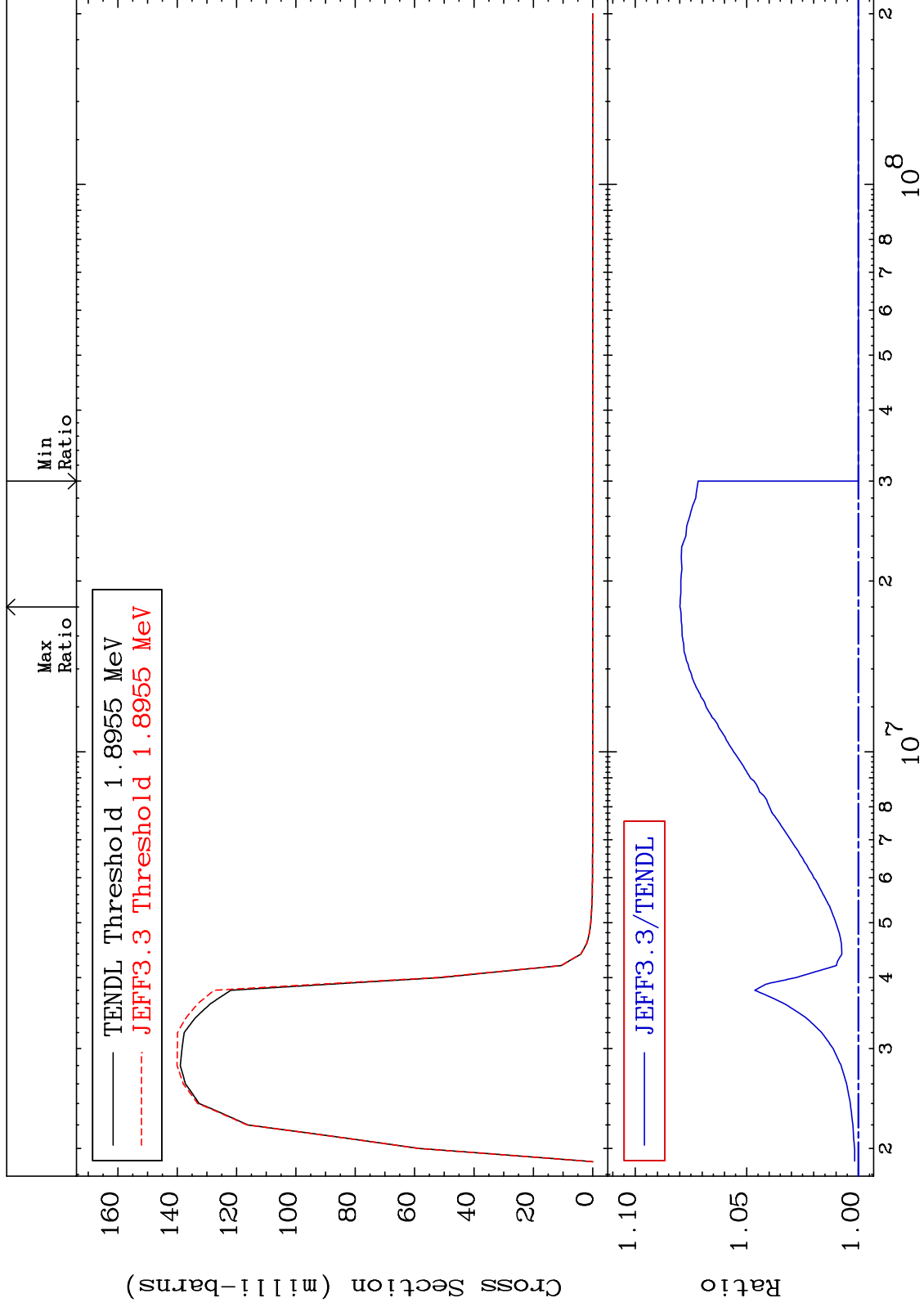
72-Hf-182
0.000 To 4.888 %

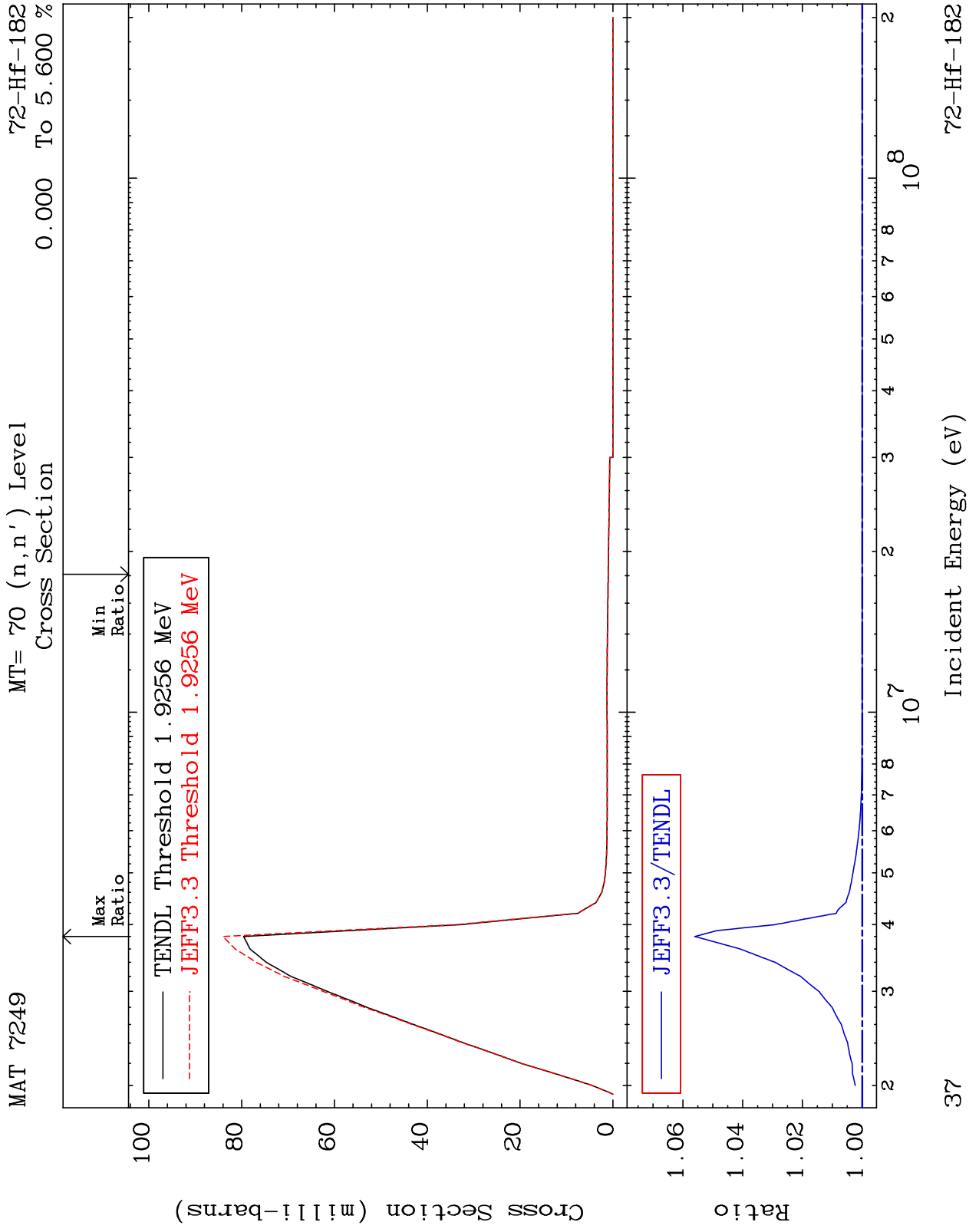


MAT 7249

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

72-Hf-182
0.000 To 7.990 %

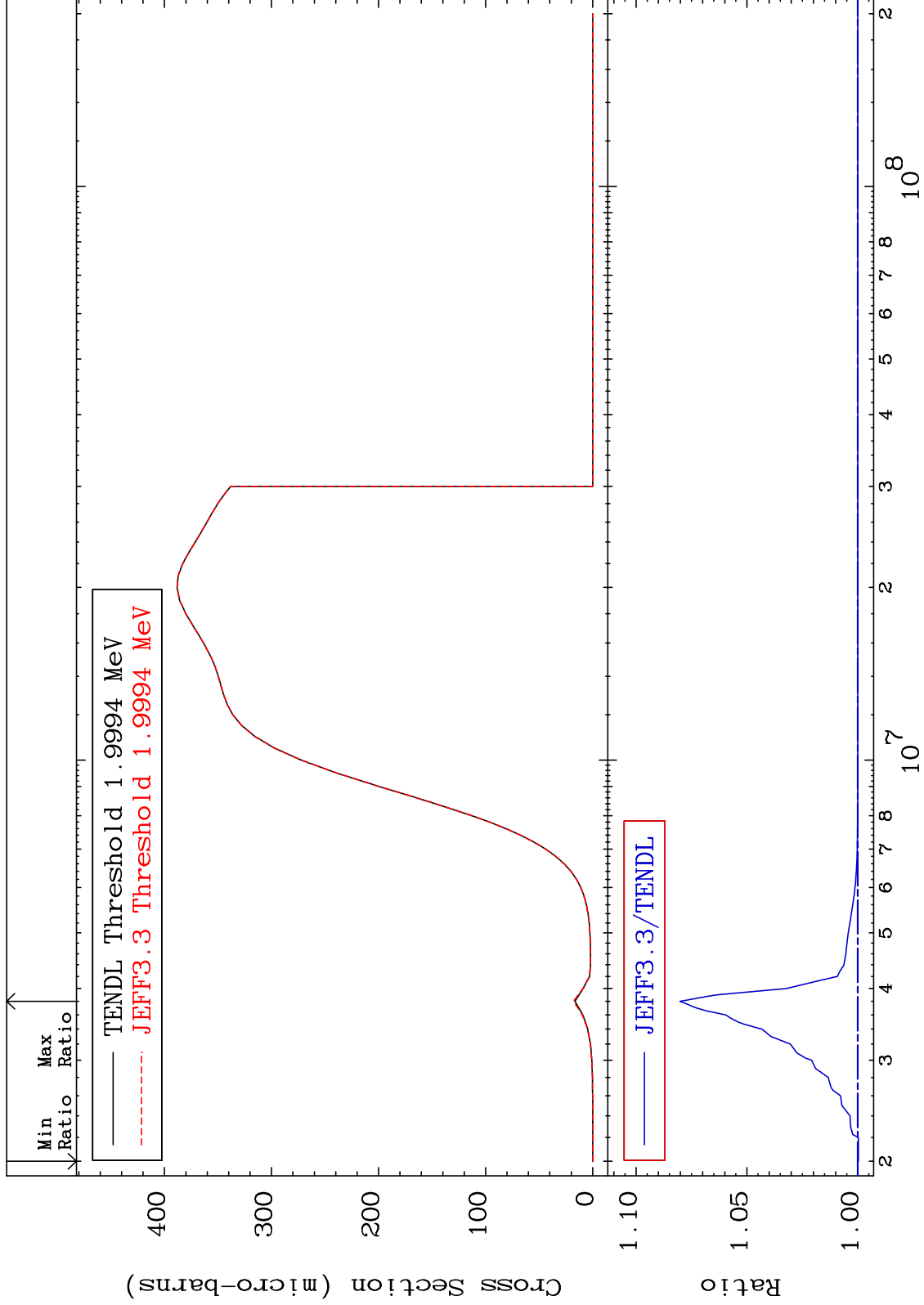




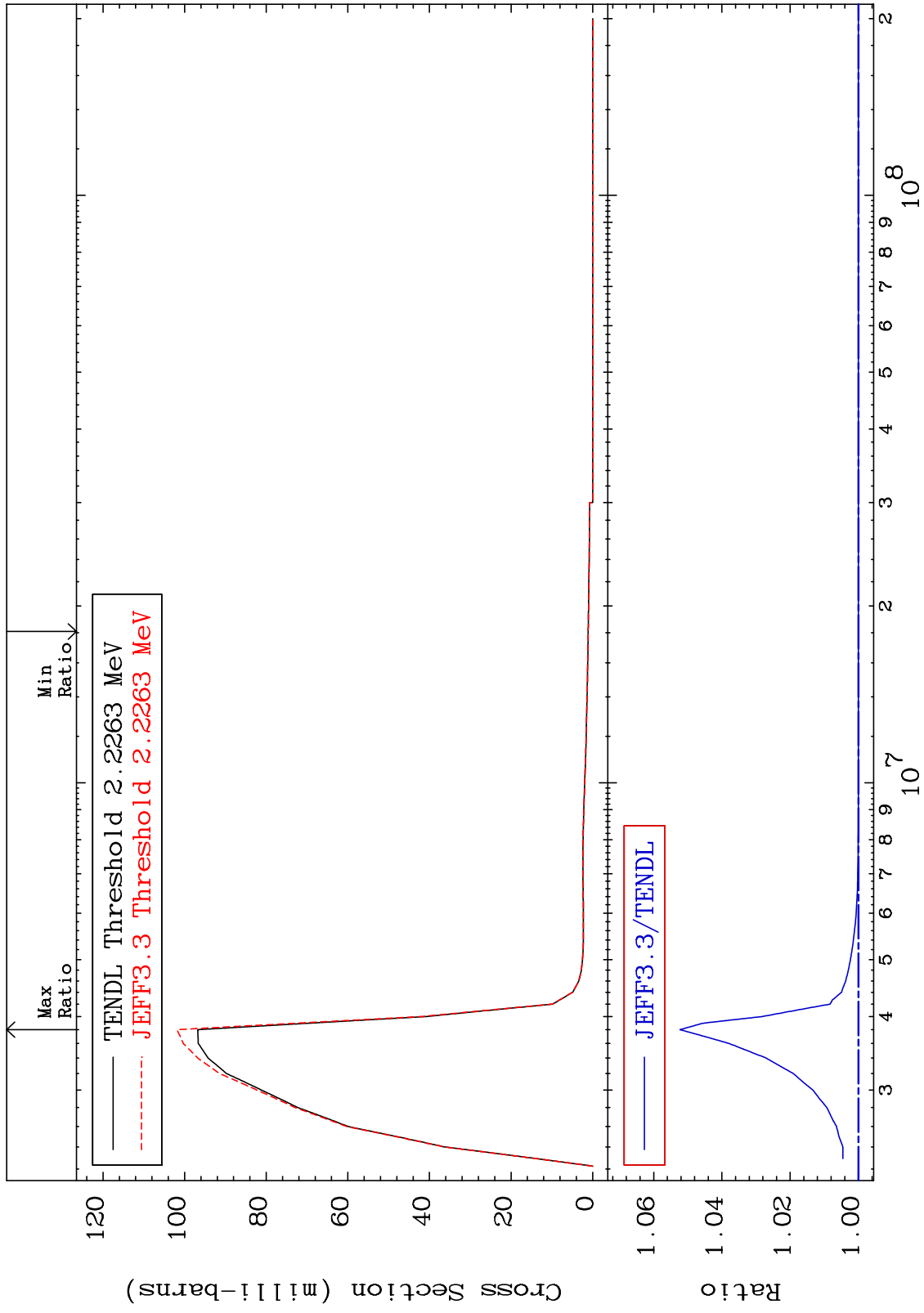
MAT 7249

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

72-Hf-182
-0.028 To 8.020 %



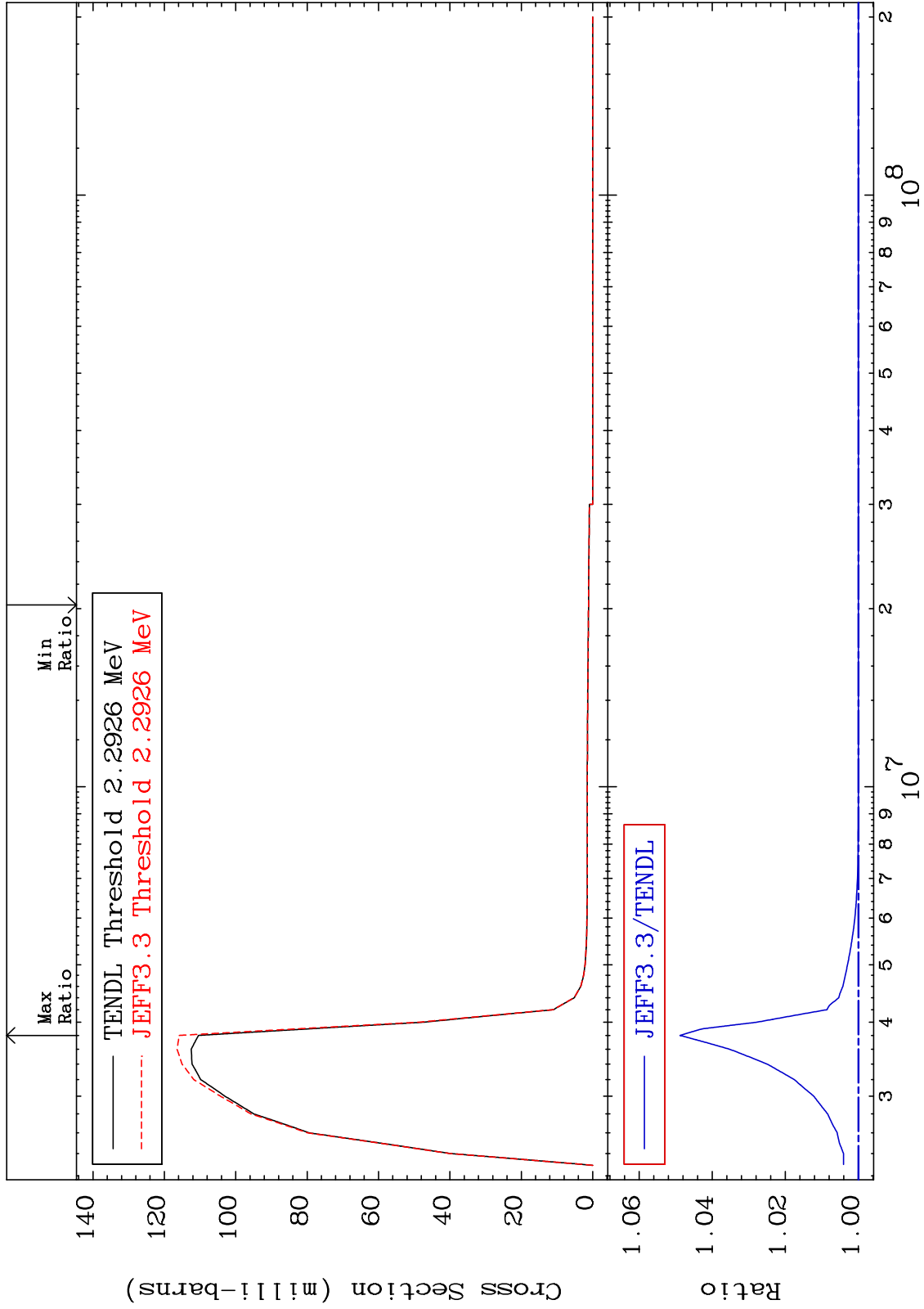
MAT 7249 MT= 72 (n,n') Level
Cross Section 0.000 To 5.228 %
72-Hf-182



MAT 7249

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

72-Hf-182
0.000 To 4.883 %



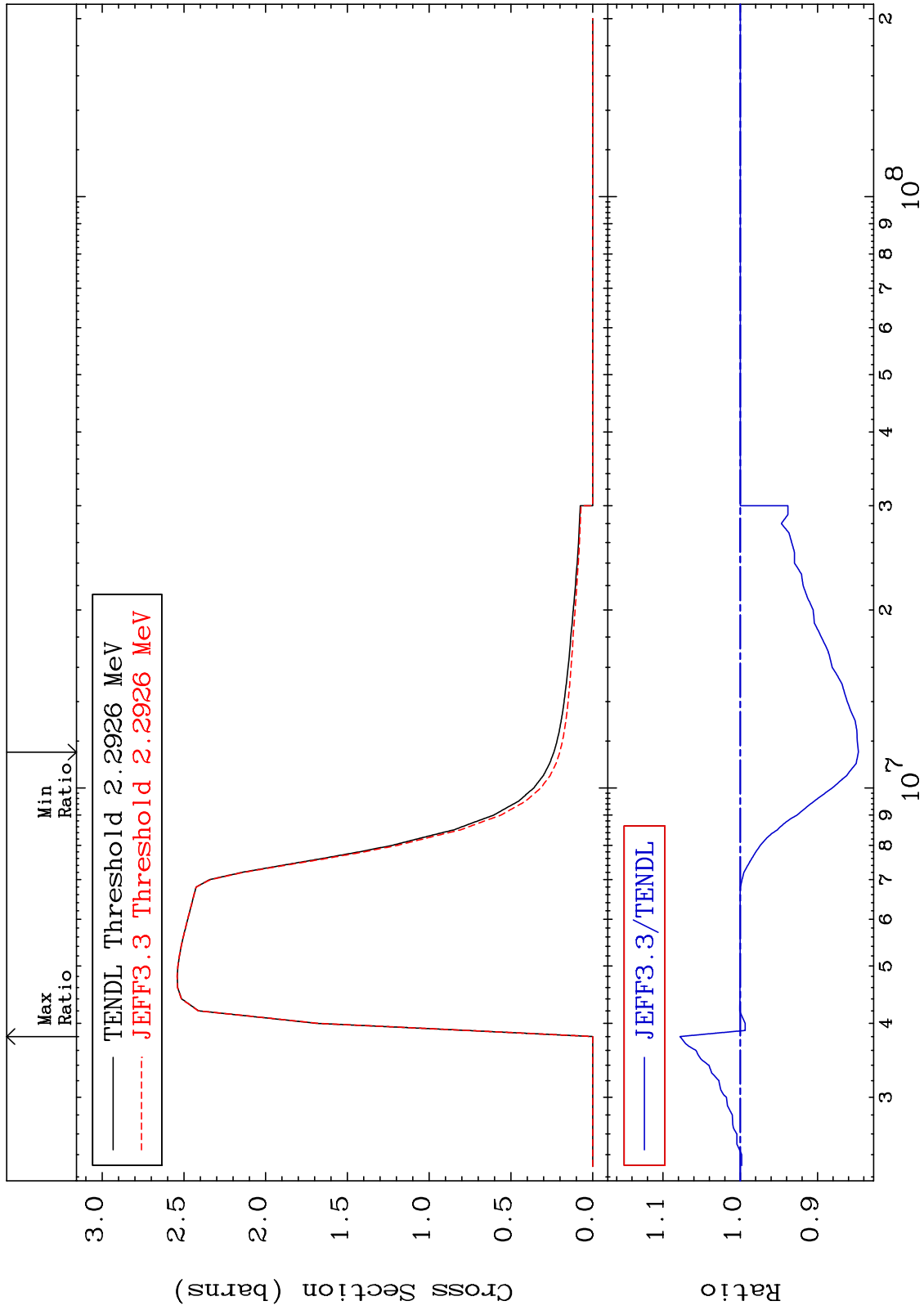
40

72-Hf-182

MAT 7249

(n, n') Continuum
Cross Section

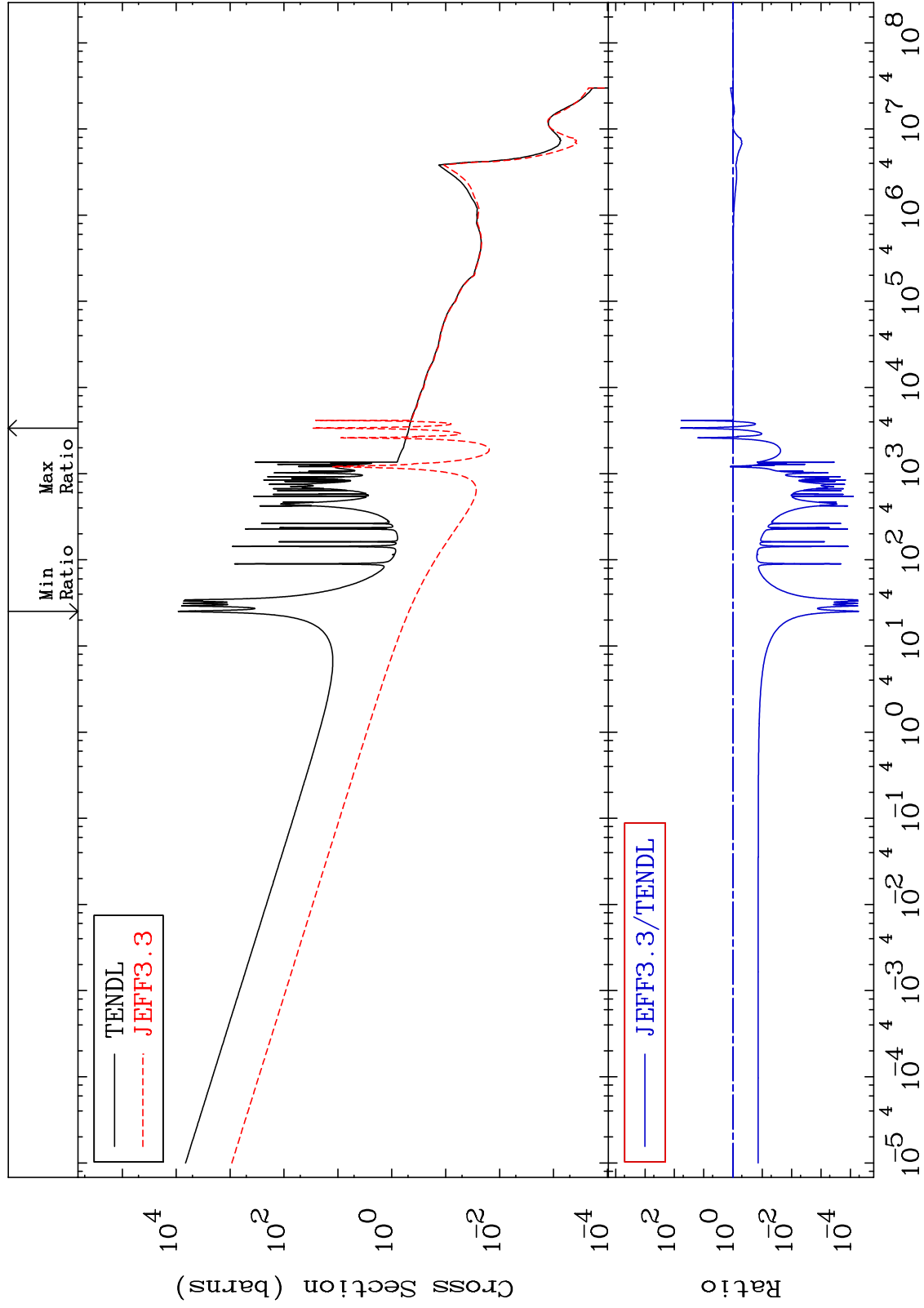
72-Hf-182
-15.29 To 7.796 %



MAT 7249

(n, γ)
Cross Section

72-Hf-182
-99.99 To 6090. %



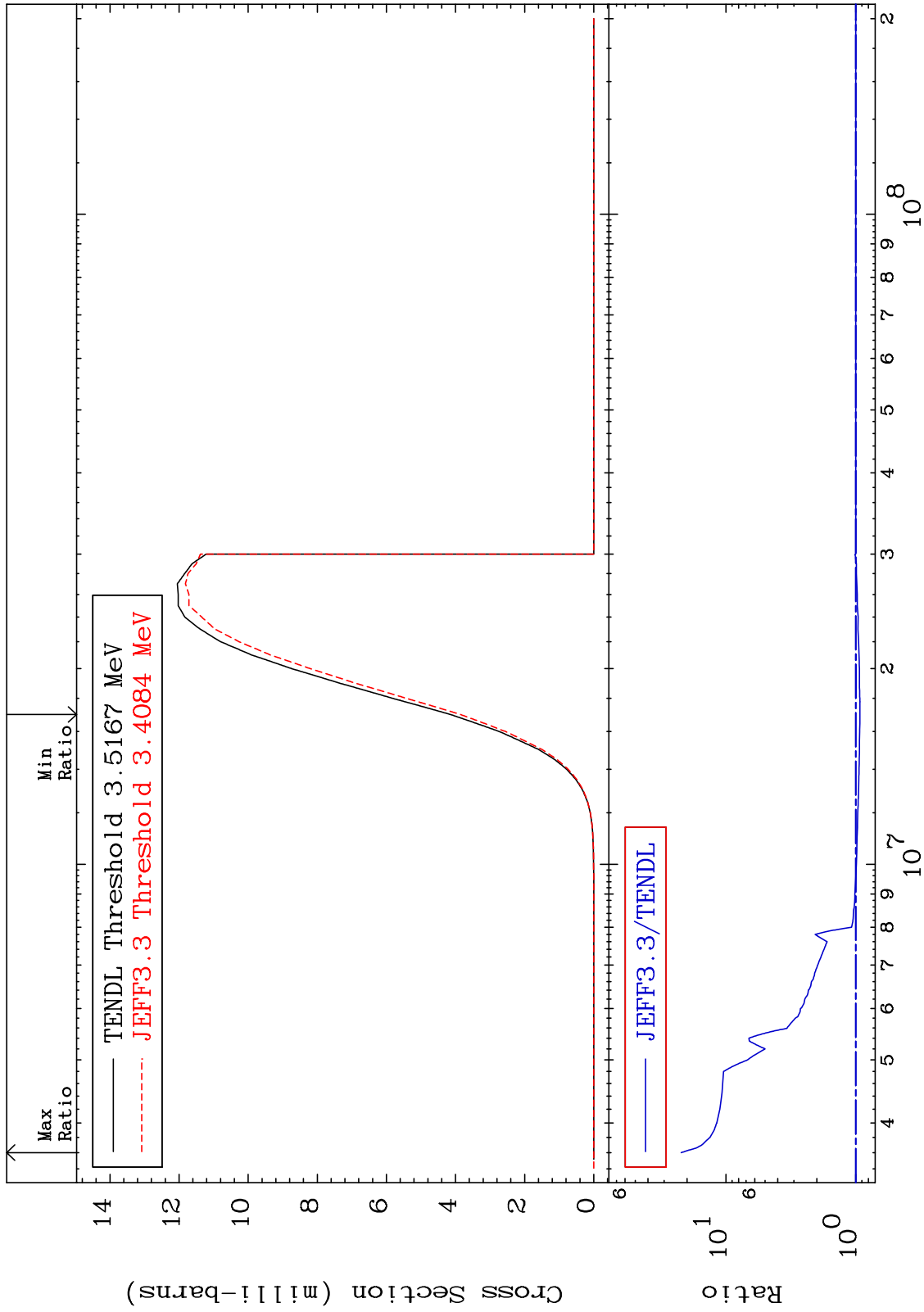
MAT 7249

(n, p)

⁷²Hf-182

Cross Section

-7.030 To 2115. %



43

Incident Energy (eV)

⁷²Hf-182

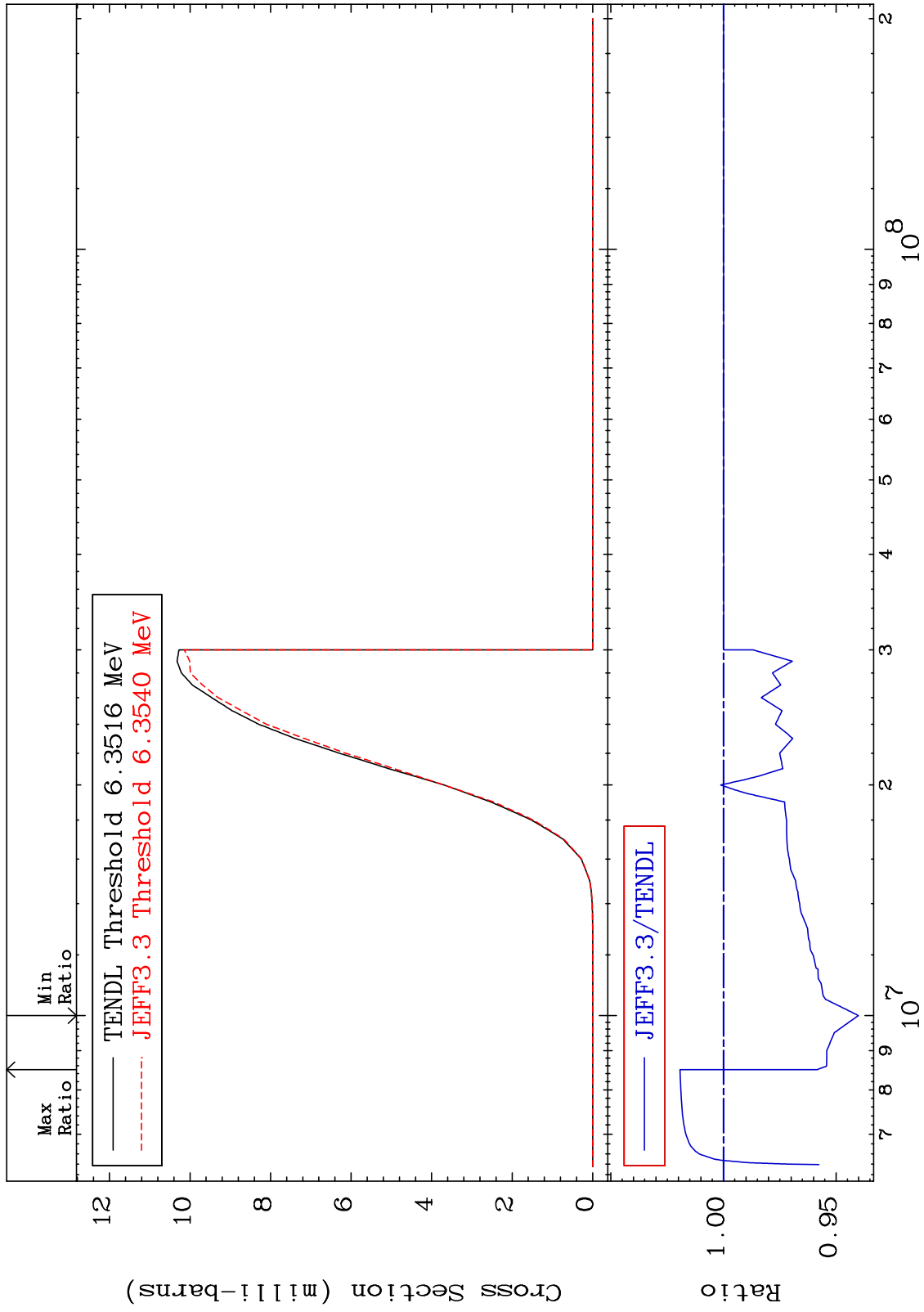
MAT 7249

(n, d)

72-Hf-182

Cross Section

-5.989 To 1.931 %



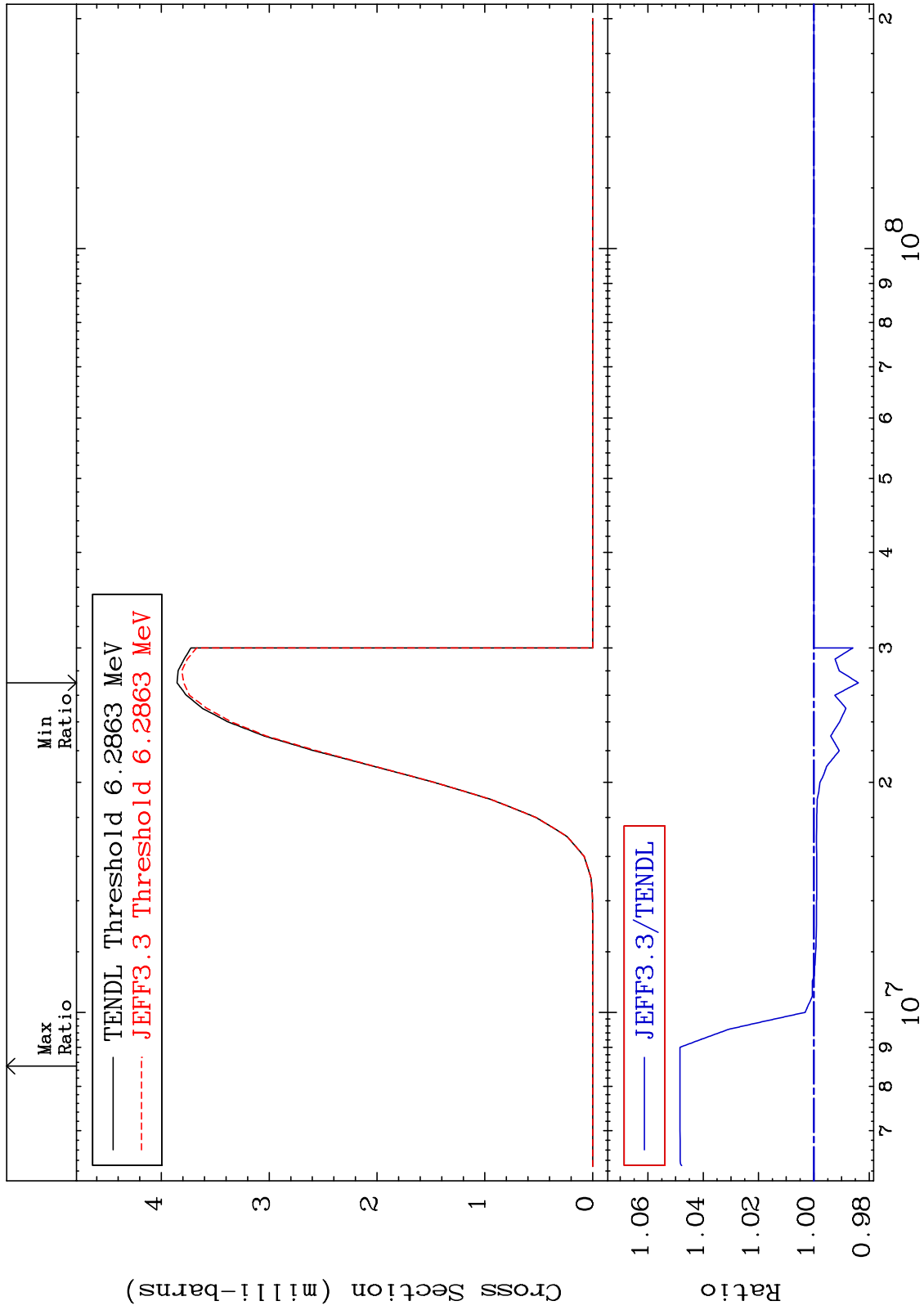
MAT 7249

(n, t)

72-Hf-182

Cross Section

-1.609 To 4.840 %



45

Incident Energy (eV)

72-Hf-182

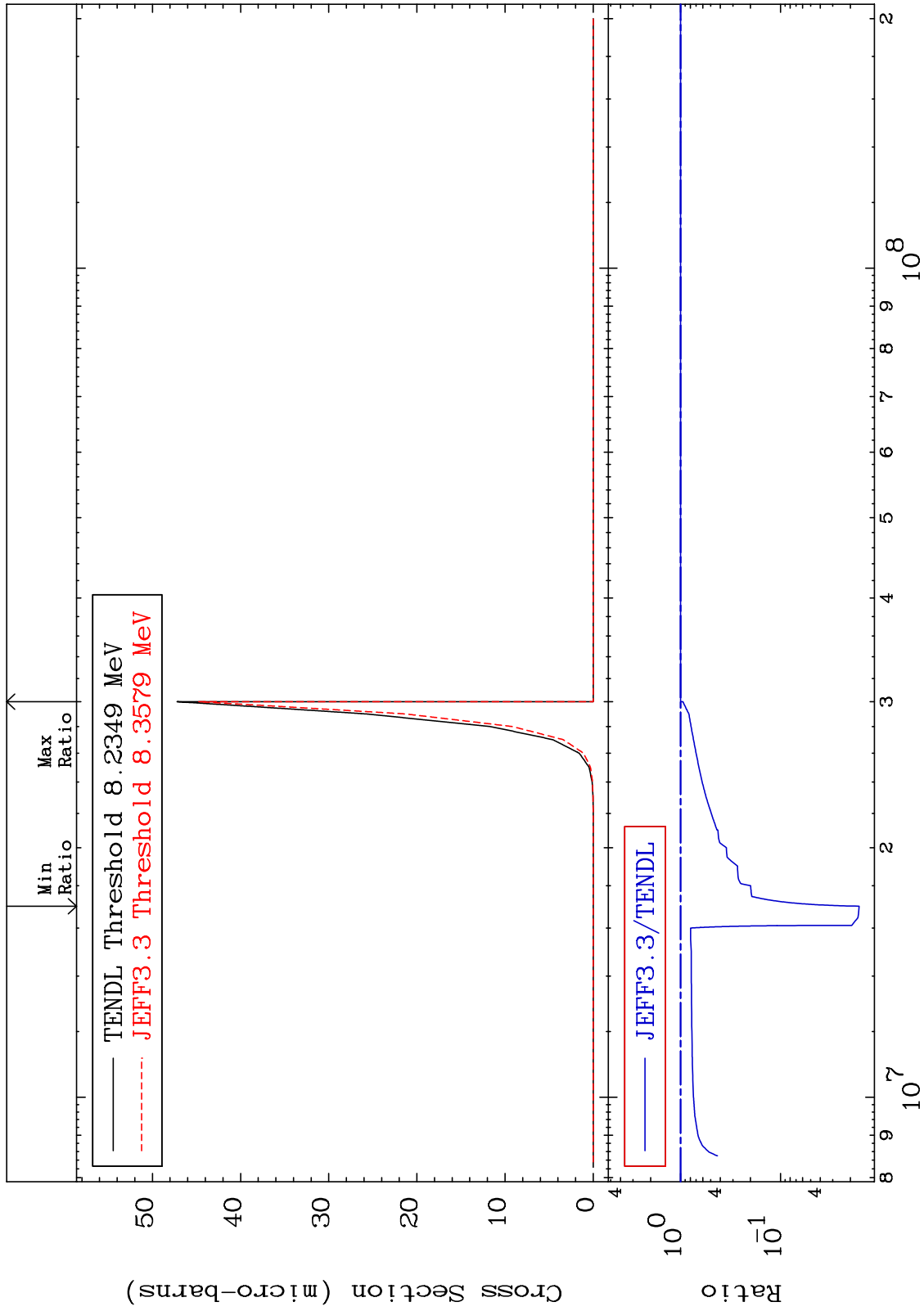
MAT 7249

(n, He-3)

72-Hf-182

Cross Section

-98.37 To 0.000 %



46

72-Hf-182

72-Hf-182

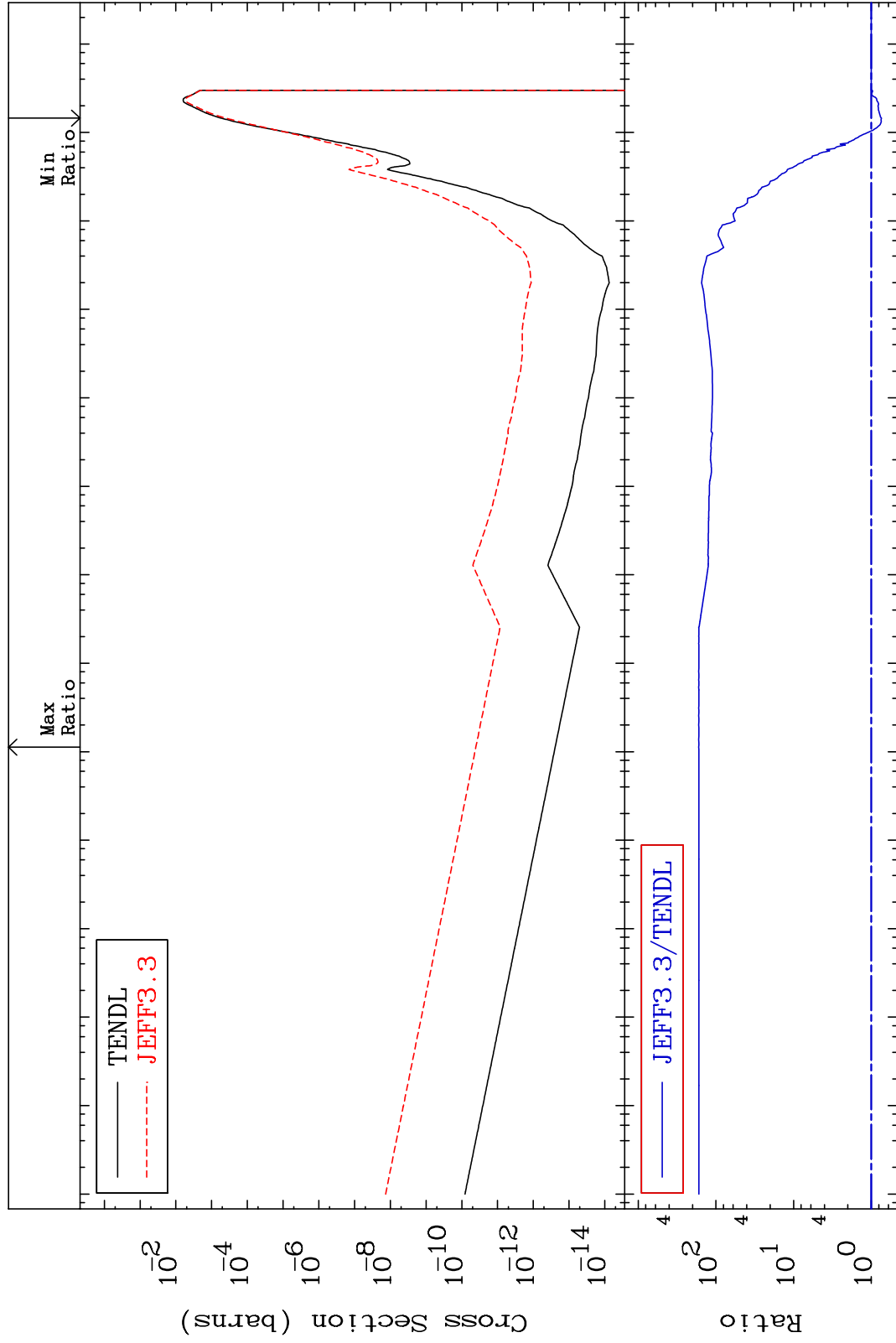
MAT 7249

(n, α)

72-Hf-182

Cross Section

-26.43 To 9999. %



Incident Energy (eV)

47

72-Hf-182

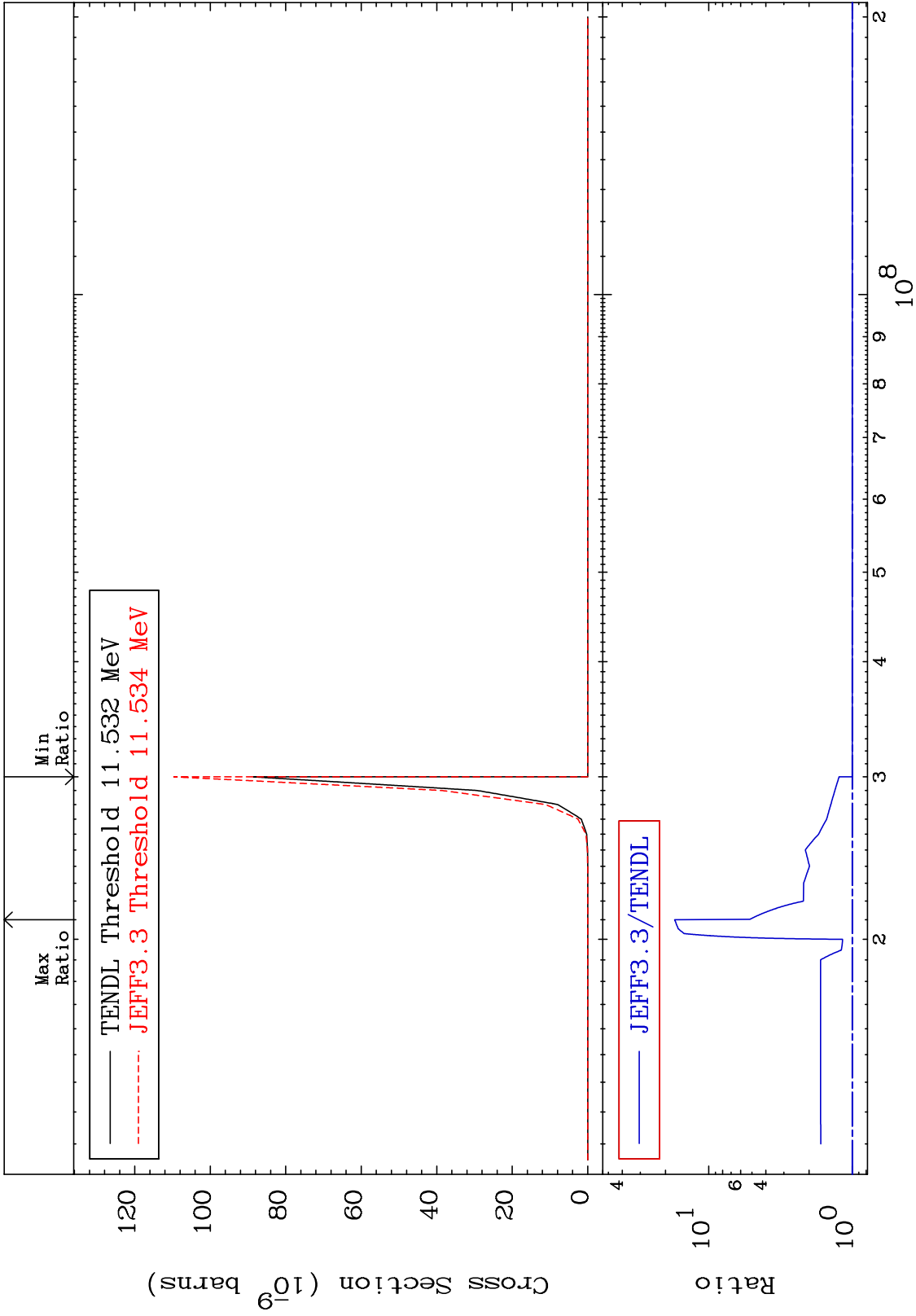
MAT 7249

(n,2p)

72-Hf-182

Cross Section

0.000 To 1628. %



72-Hf-182

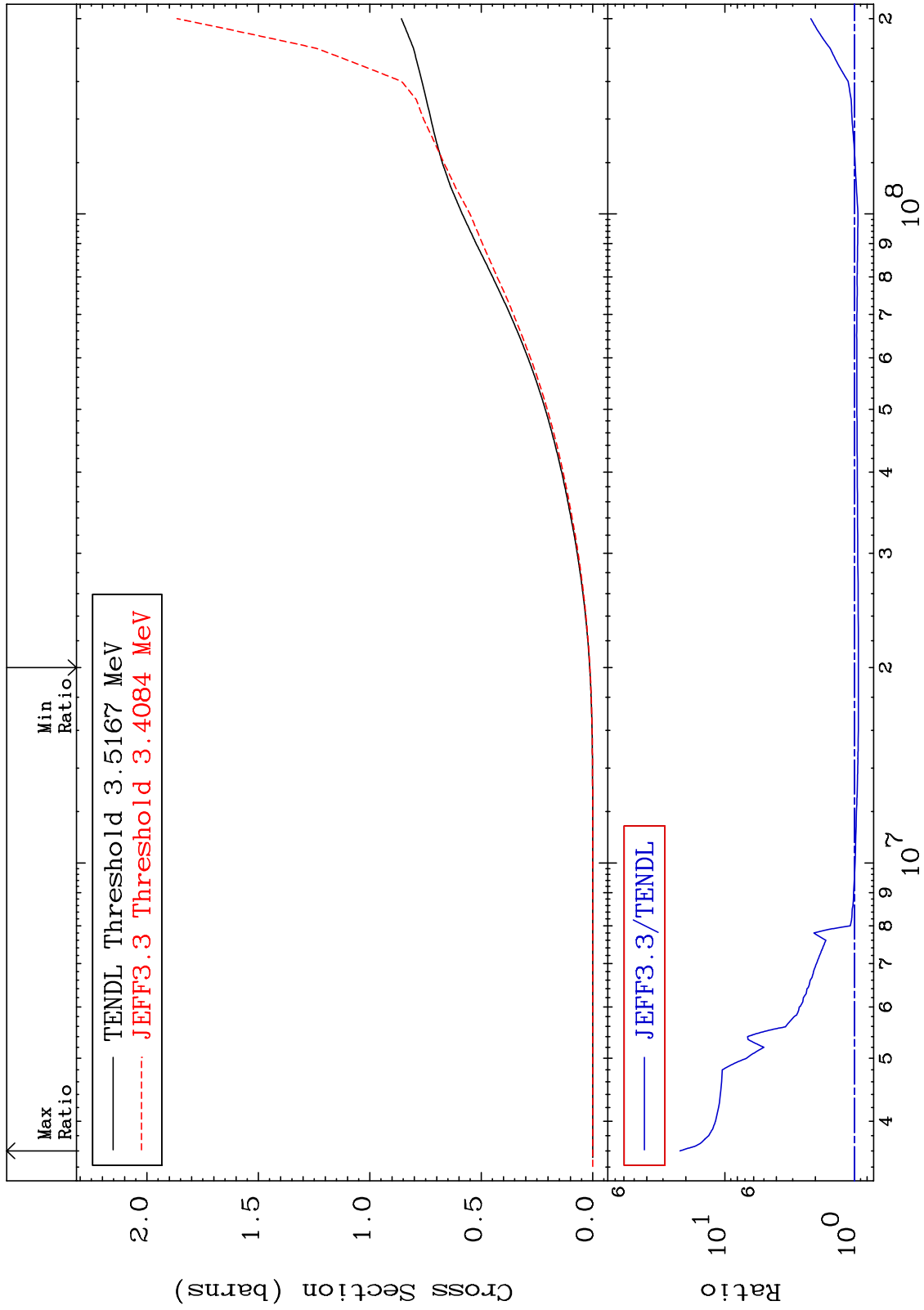
Incident Energy (eV)

48

MAT 7249

Hydrogen Production
Cross Section

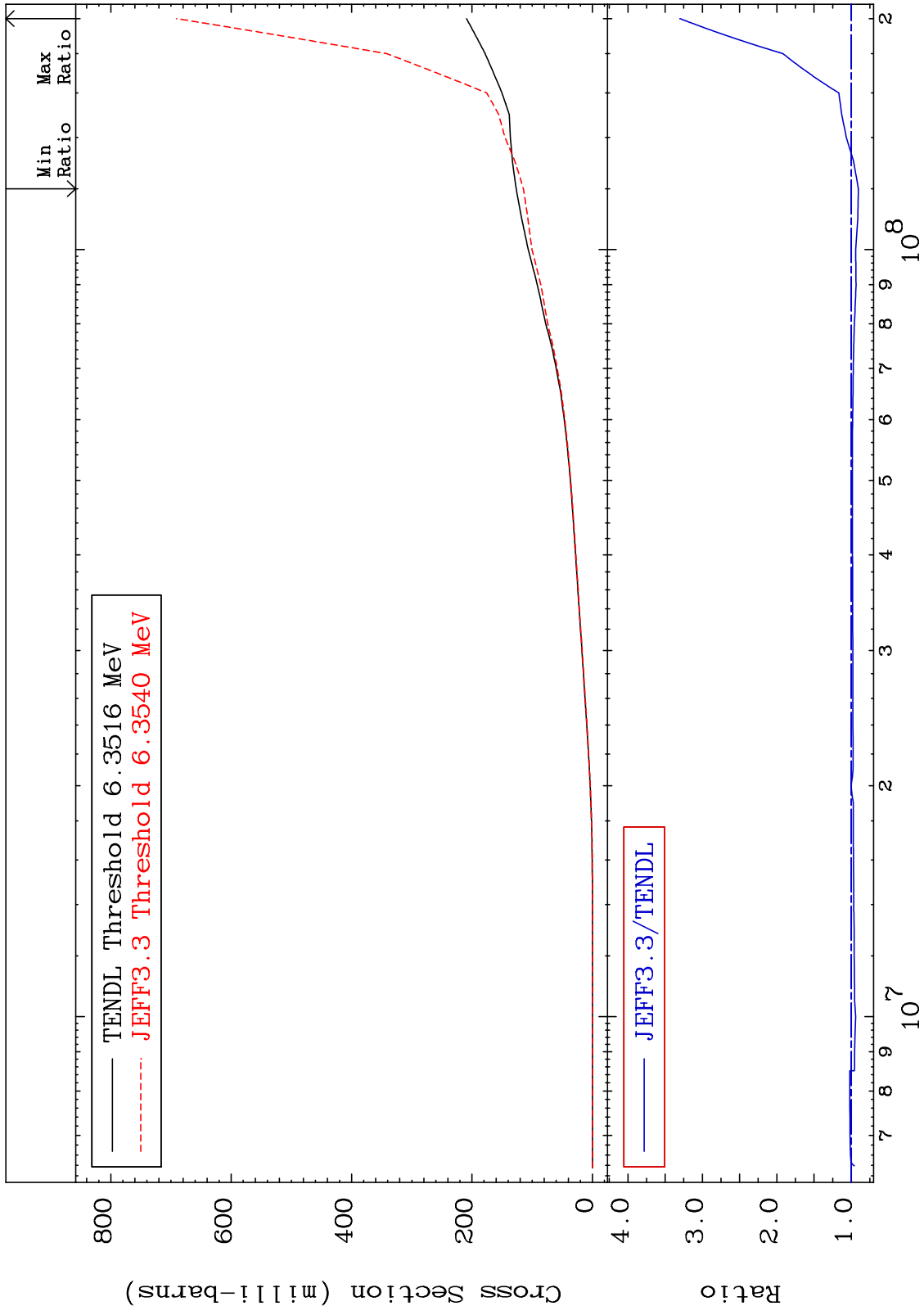
⁷²Hf-182
-6.655 To 2115. %



MAT 7249

Deuterium Production
Cross Section

72-Hf-182
-9.503 To 230.3 %



50

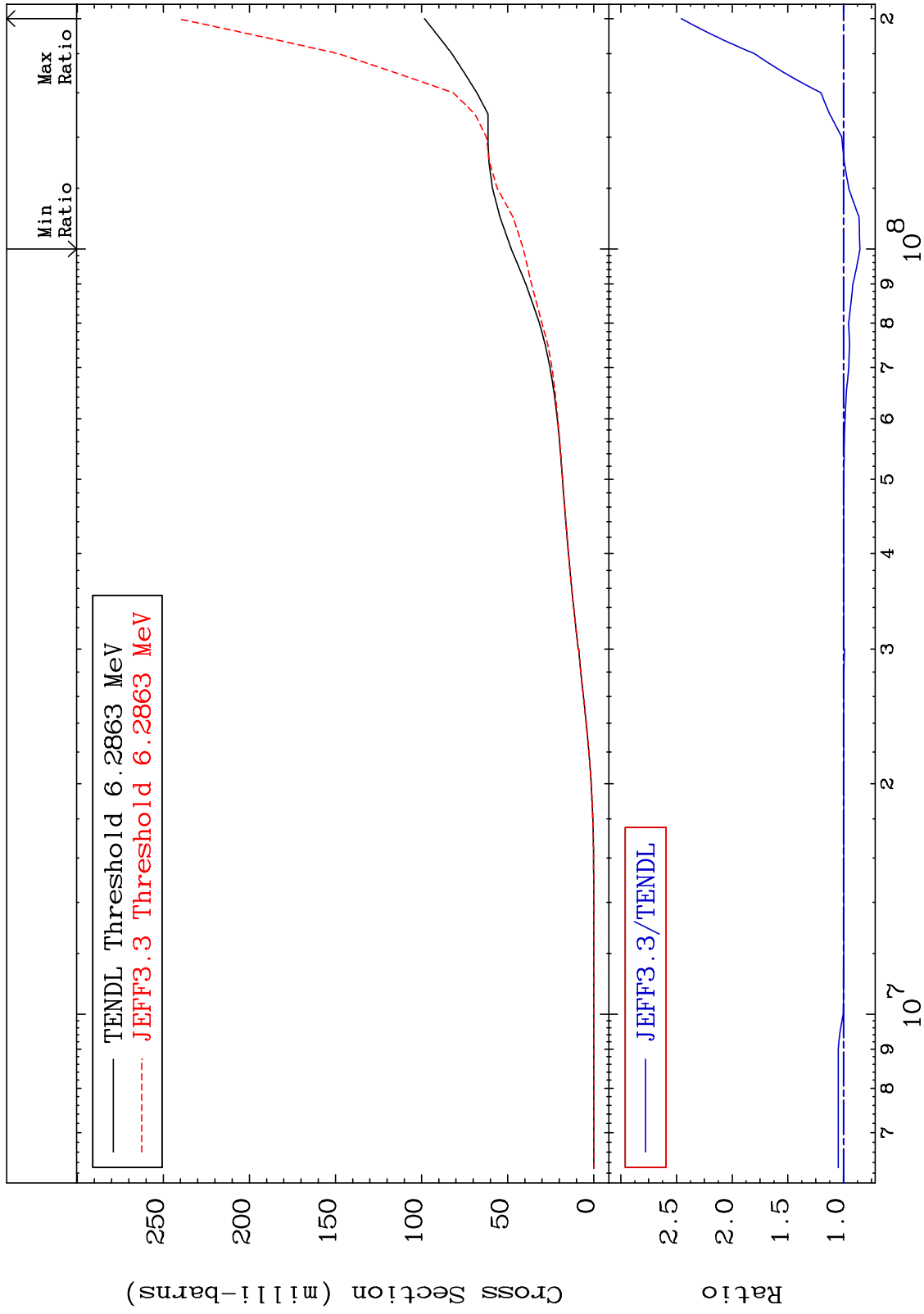
Incident Energy (eV)

72-Hf-182

MAT 7249

Tritium Production
Cross Section

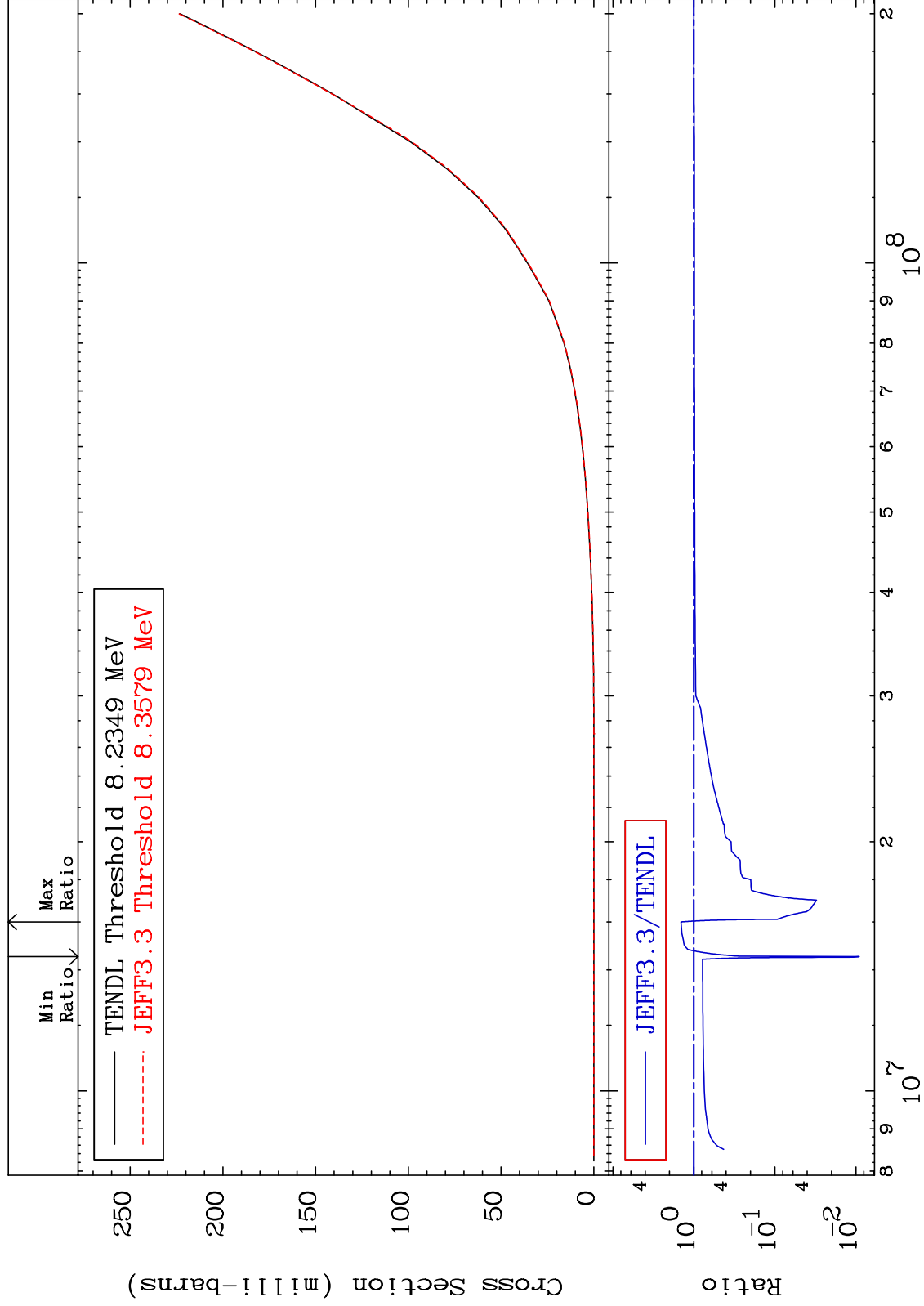
72-Hf-182
-14.72 To 145.8 %



MAT 7249

He-3 Production
Cross Section

⁷²Hf-182
-99.09 To 44.18 %



52

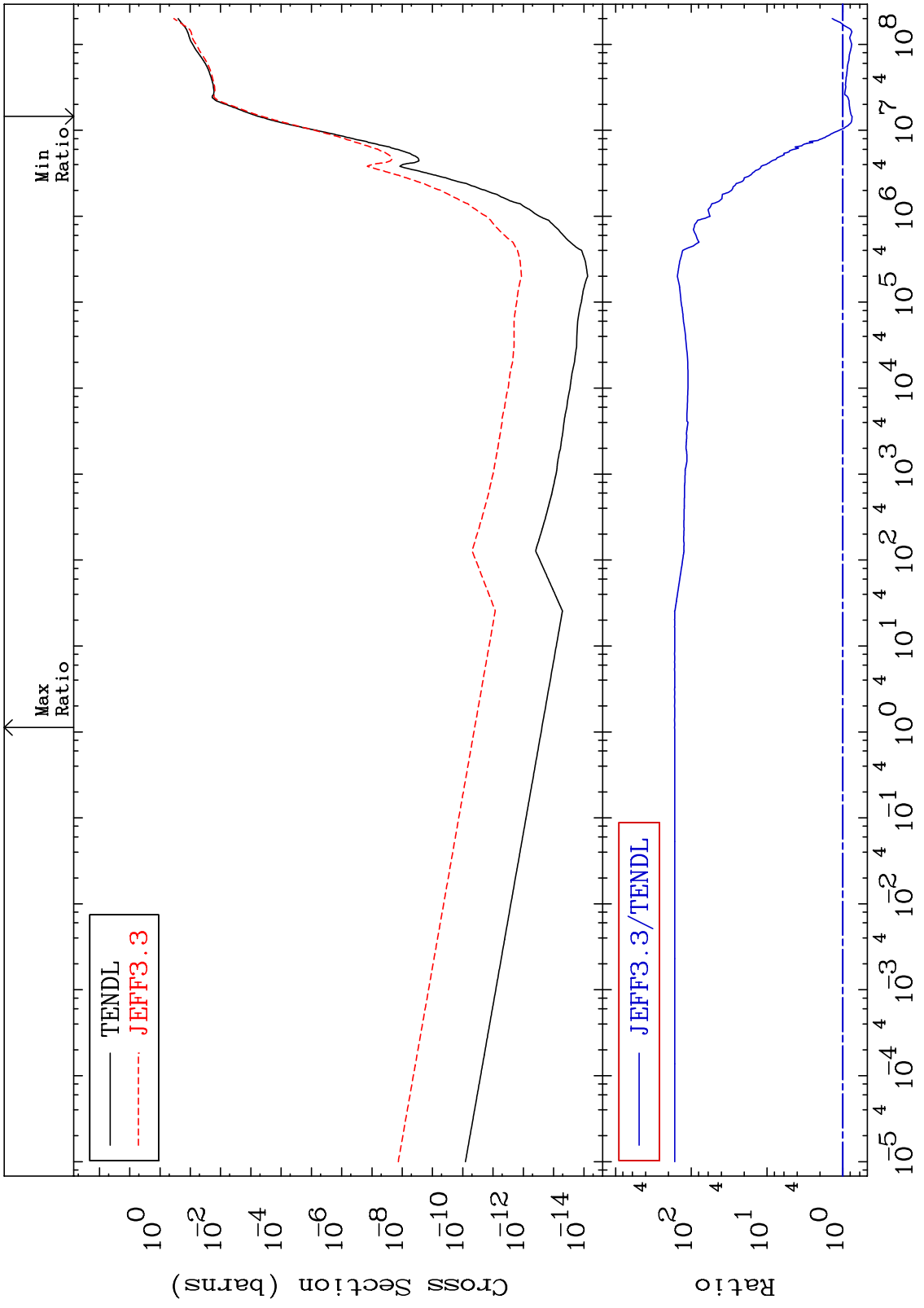
Incident Energy (eV)

⁷²Hf-182

MAT 7249

He-4 Production
Cross Section

72-Hf-182
-24.72 To 9999. %



53

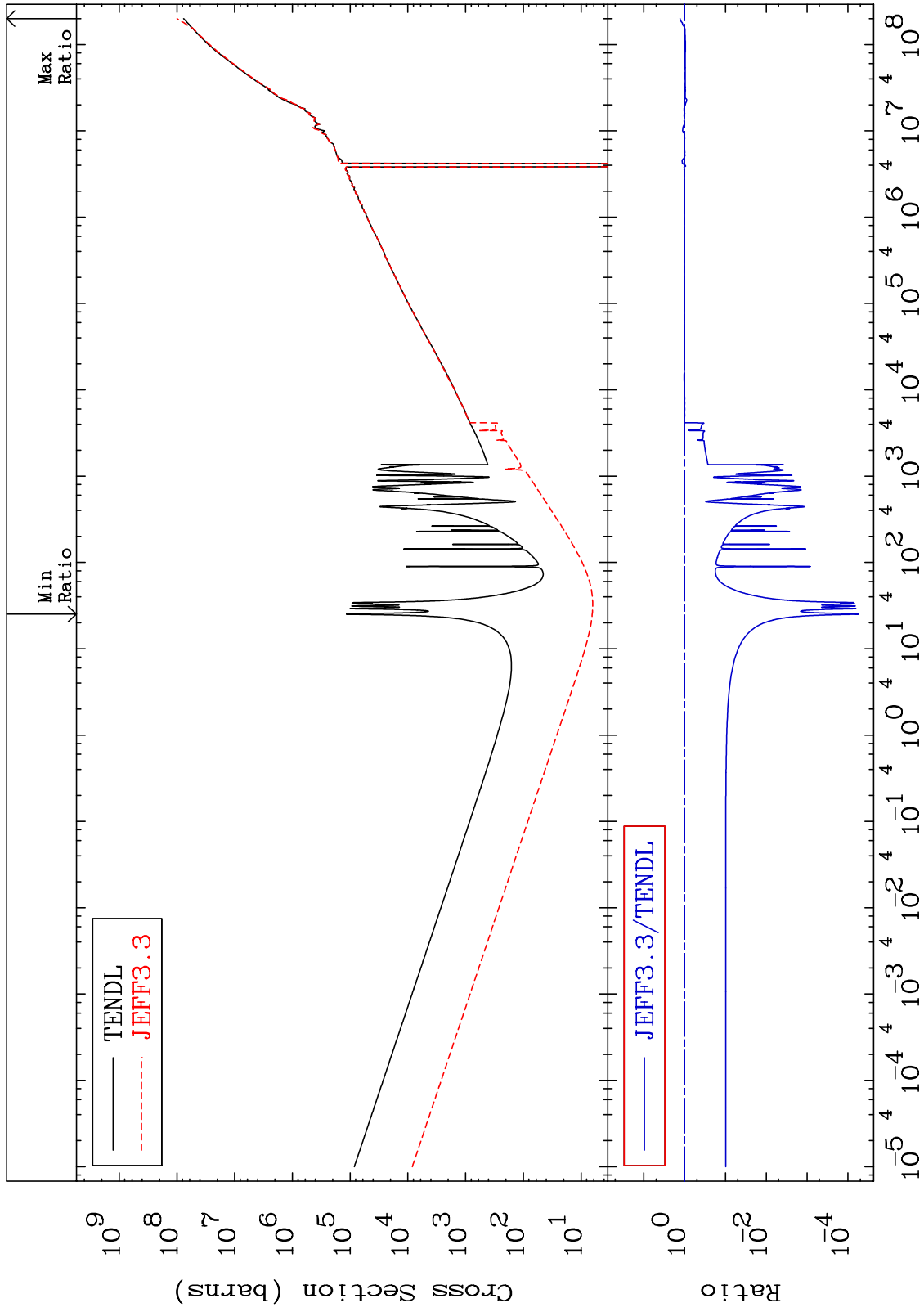
Incident Energy (eV)

72-Hf-182

MAT 7249

Kerma total (eV-barns)
Cross Section

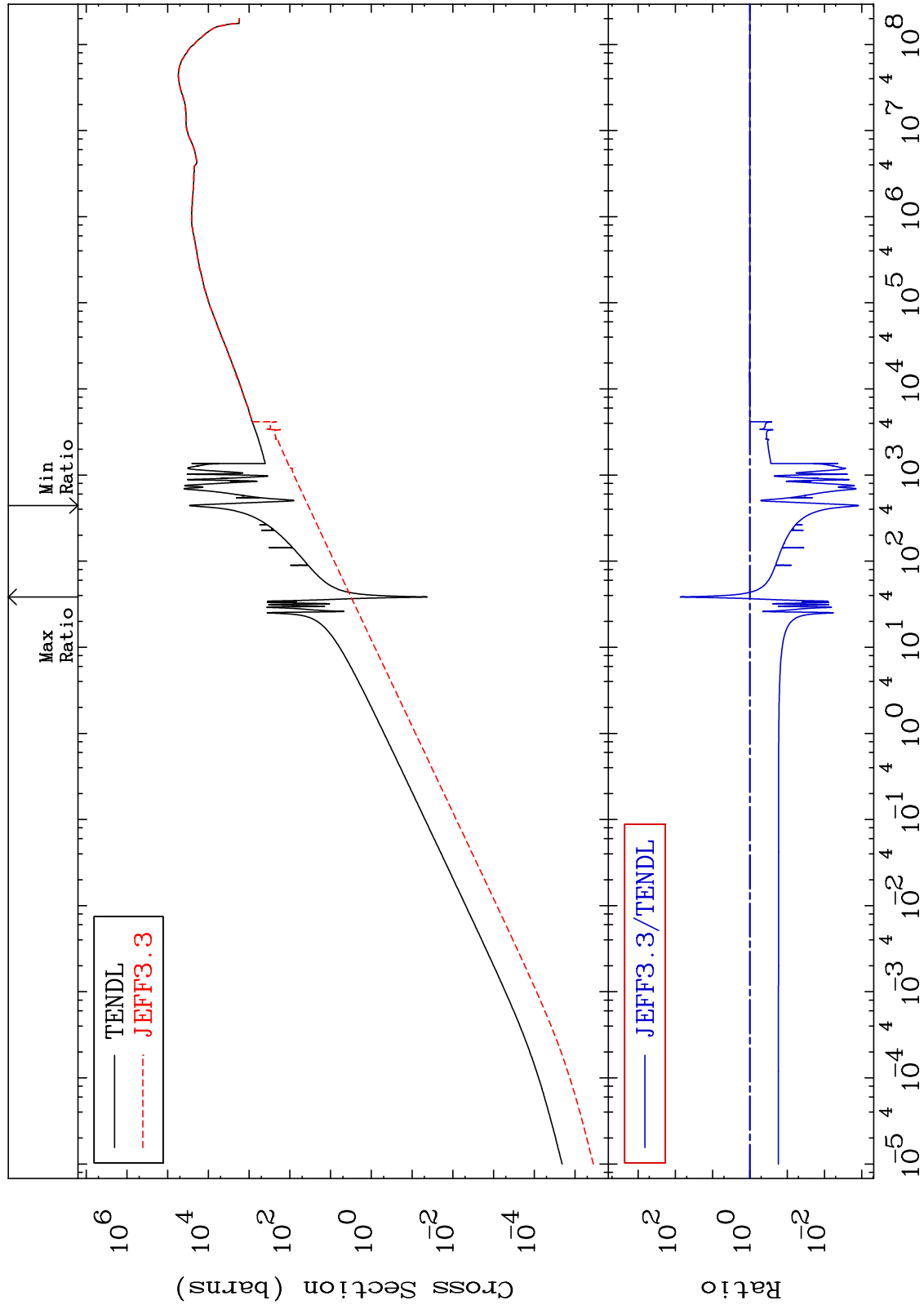
72-Hf-182
-99.99 To 29.72 %



MAT 7249

Kerma elastic
Cross Section

⁷²Hf-182
-99.88 To 7214. %



55

Incident Energy (eV)

⁷²Hf-182

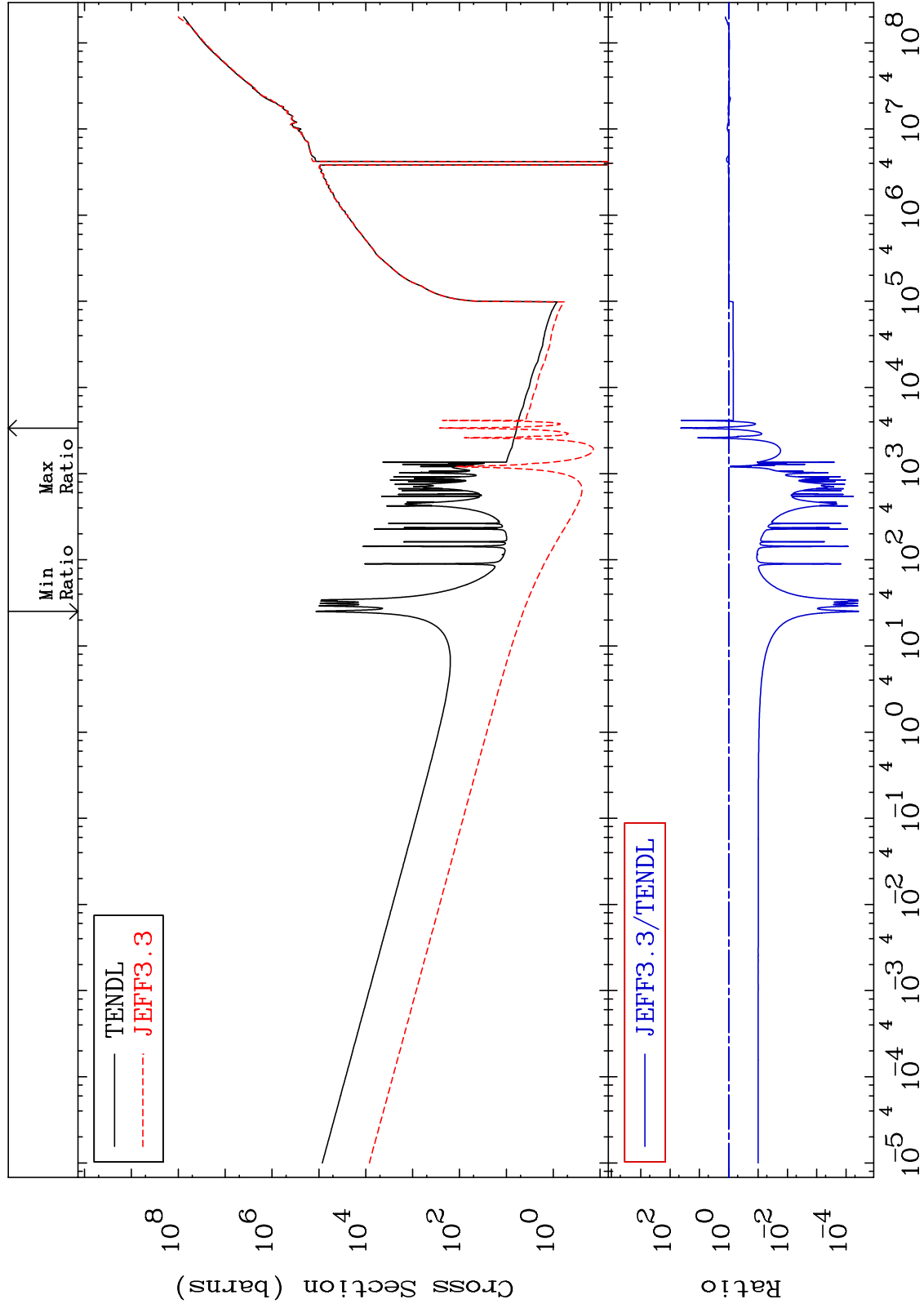
MAT 7249

Kerma non-elastic (all but mt2)

72-Hf-182

-100.0 To 4334. %

Cross Section



56

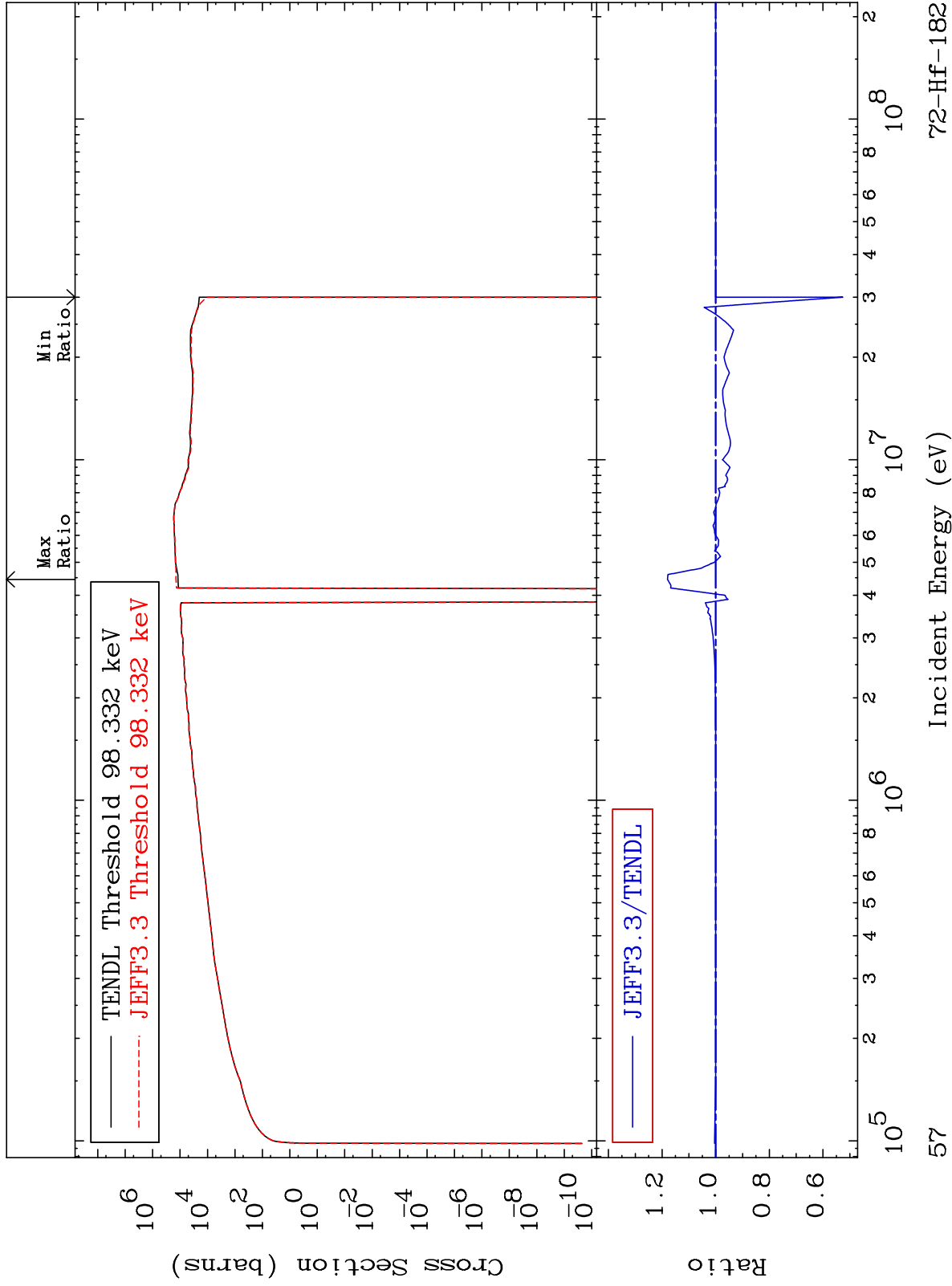
Incident Energy (eV)

72-Hf-182

MAT 7249

Kerma inelastic (mt51-91)
Cross Section

72-Hf-182
-47.34 To 17.96 %



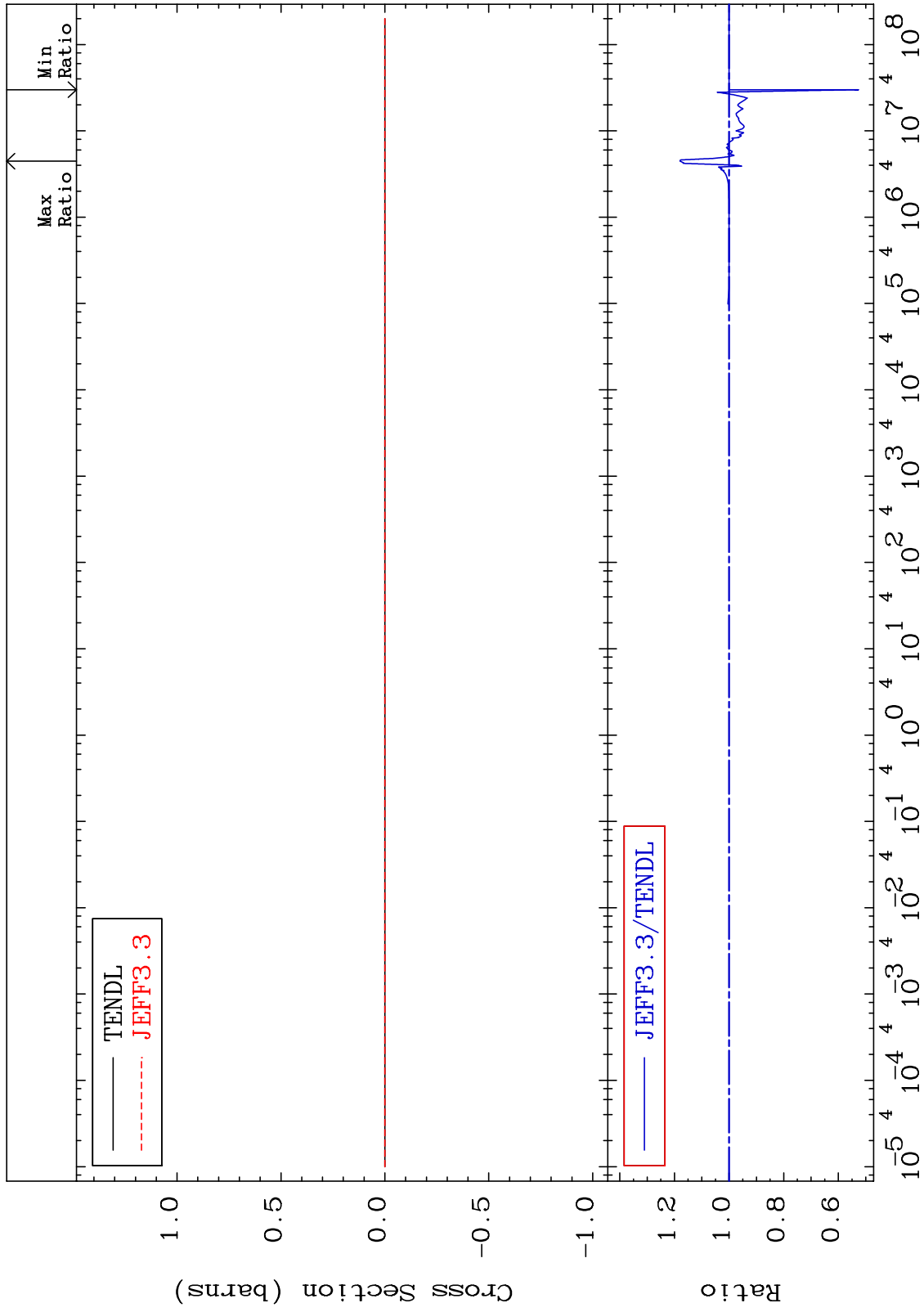
57

72-Hf-182

MAT 7249

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

72-Hf-182
-47.34 To 17.96 %



58

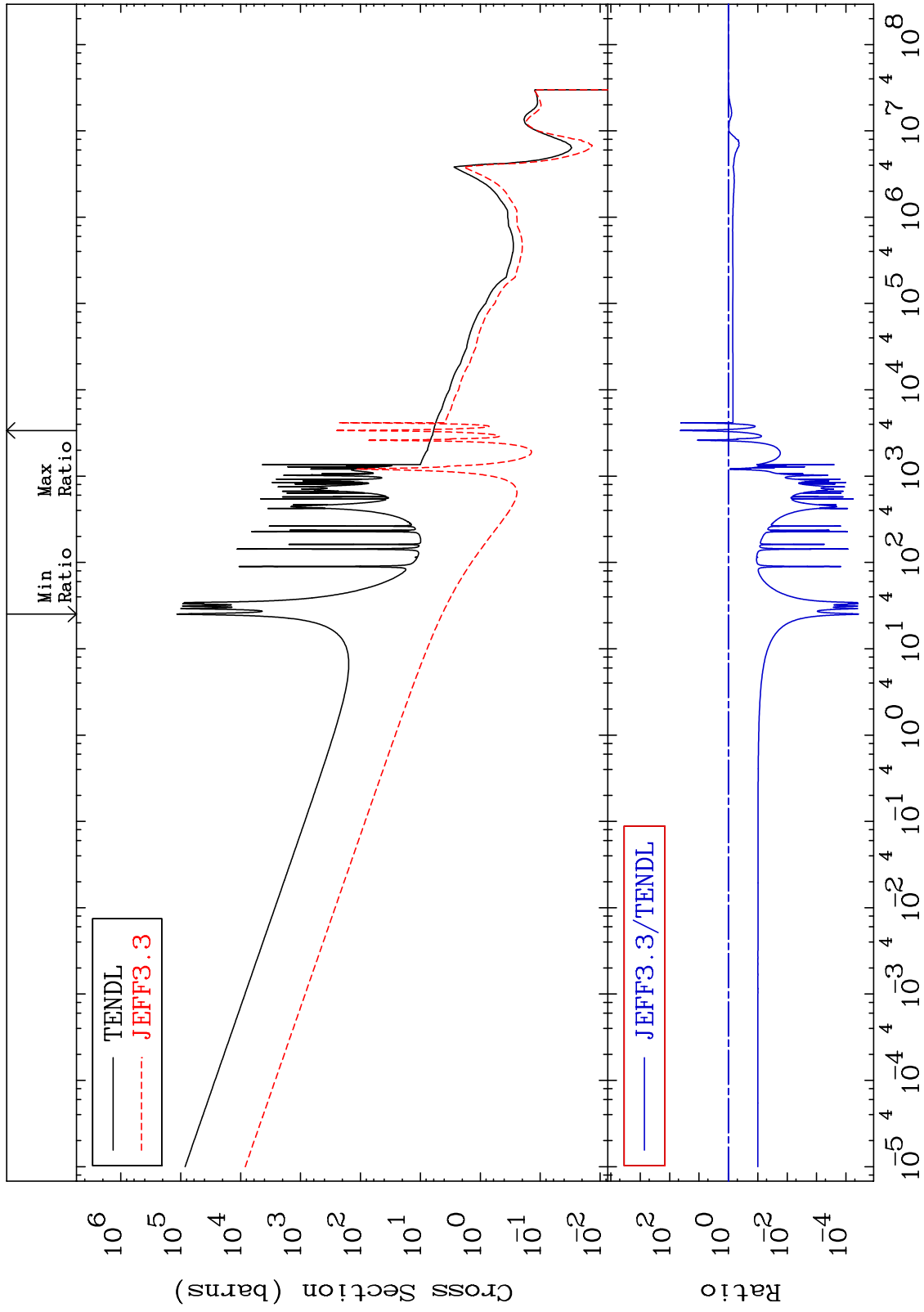
Incident Energy (eV)

72-Hf-182

MAT 7249

Kerma capture (mt102)
Cross Section

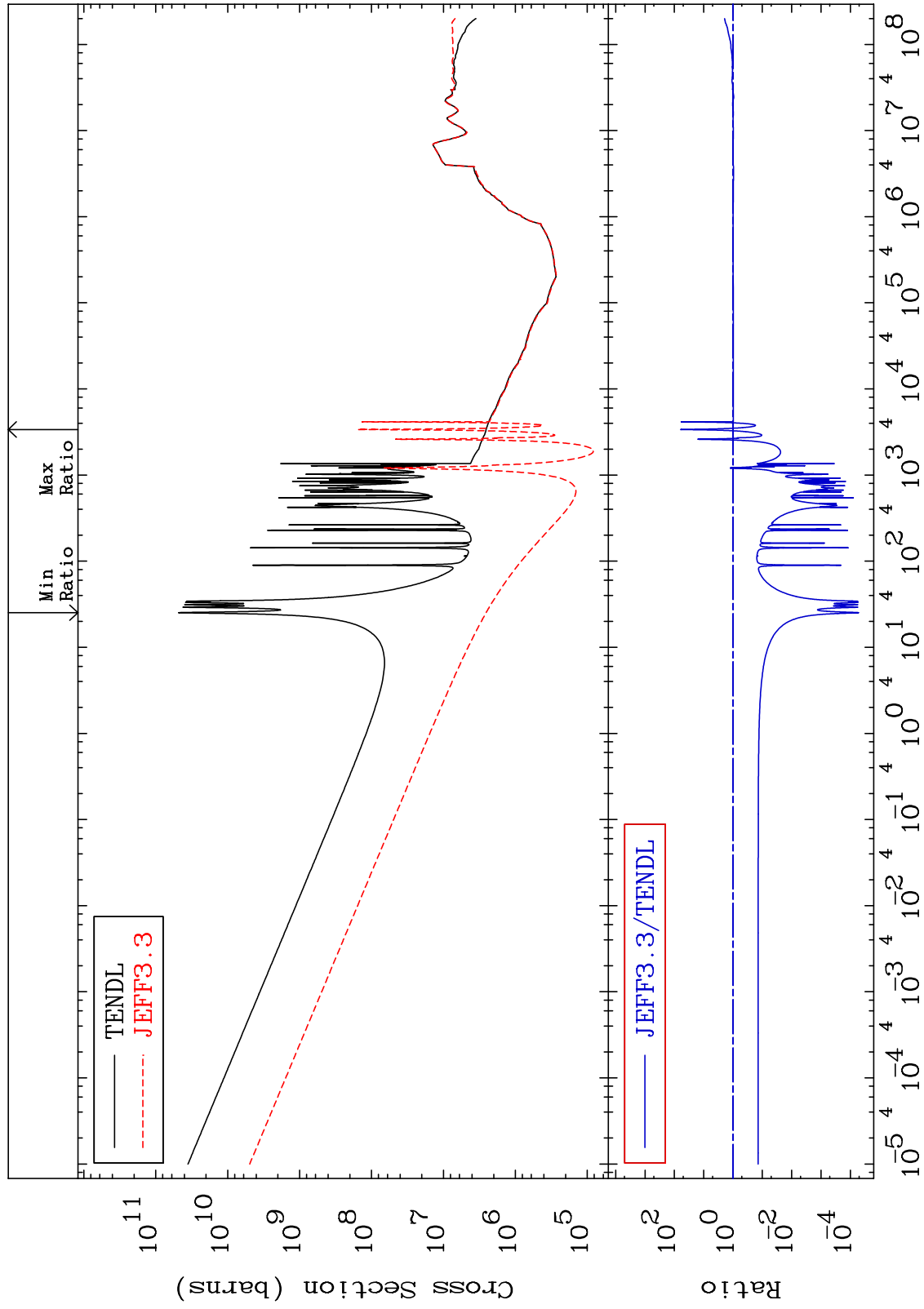
72-Hf-182
-100.0 To 4334. %



MAT 7249

Total photon (eV-barns)
Cross Section

72-Hf-182
-99.99 To 6090. %



60

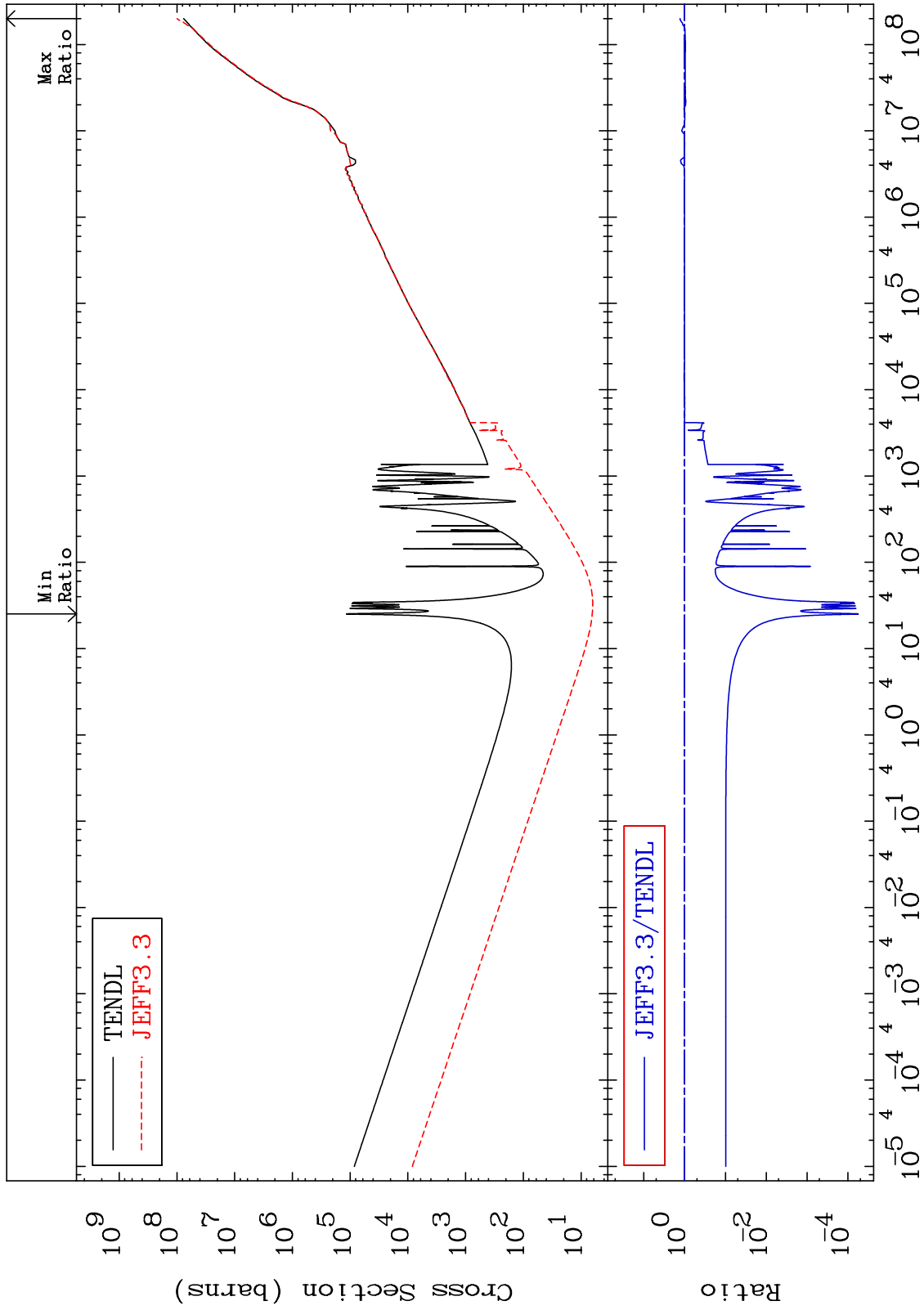
Incident Energy (eV)

72-Hf-182

MAT 7249

Total kinematic kerma (high limit)
Cross Section

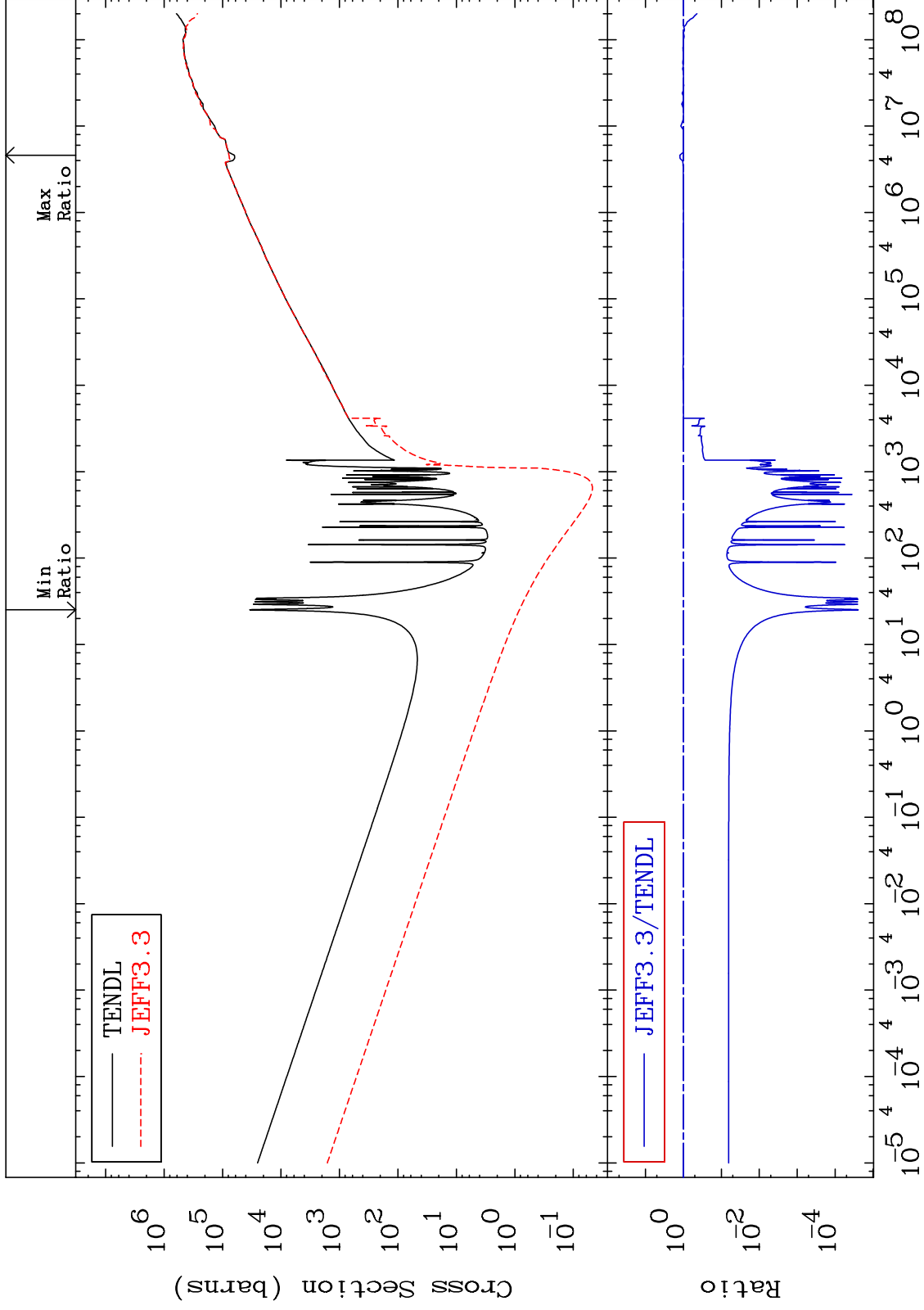
72-Hf-182
-99.99 To 29.72 %



MAT 7249

Dpa total (eV-barns)
Cross Section

72-Hf-182
-100.0 To 24.54 %



62

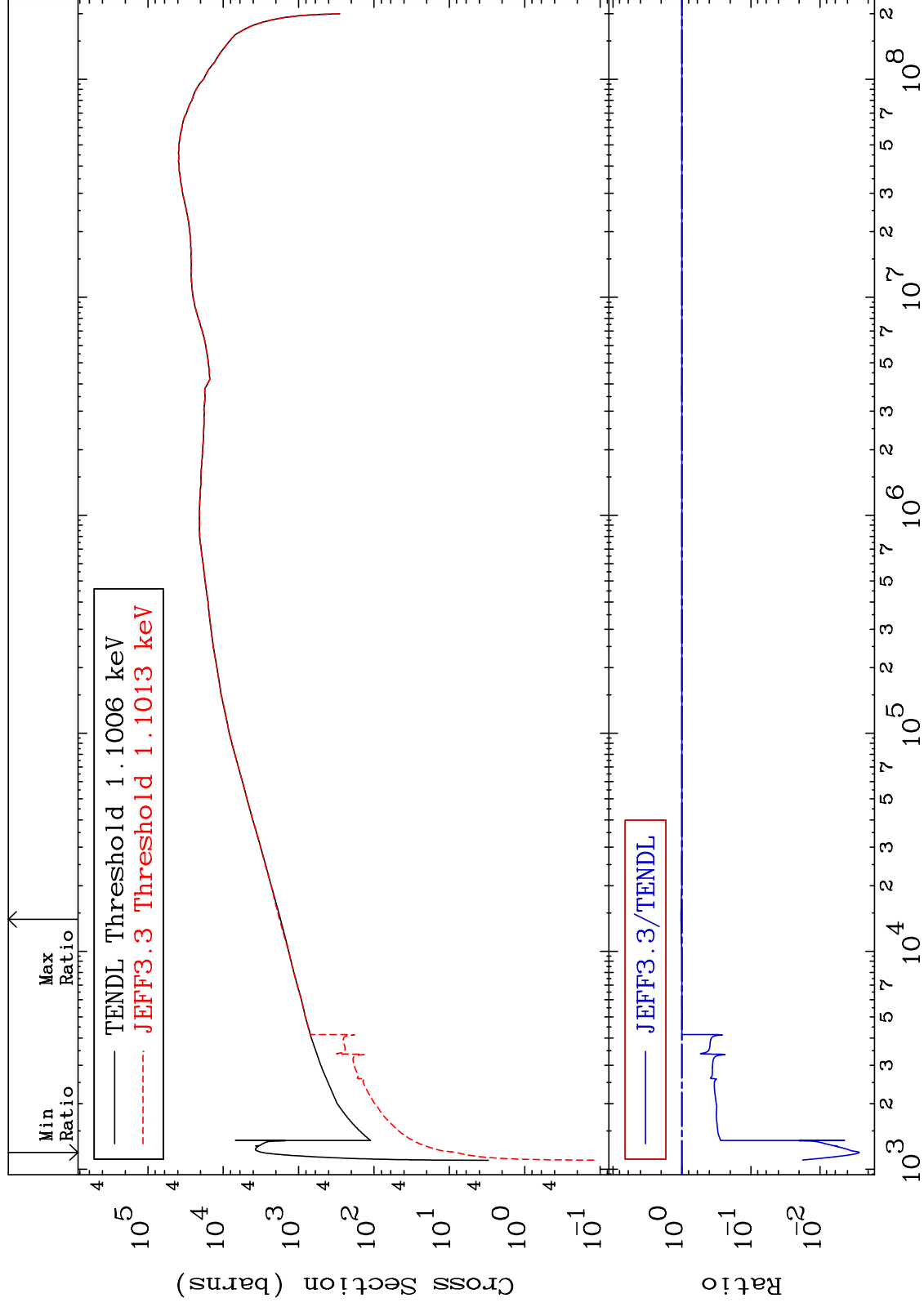
Incident Energy (eV)

72-Hf-182

MAT 7249

Dpa elastic (mt2)
Cross Section

72-Hf-182
-99.73 To 2.991 %



63

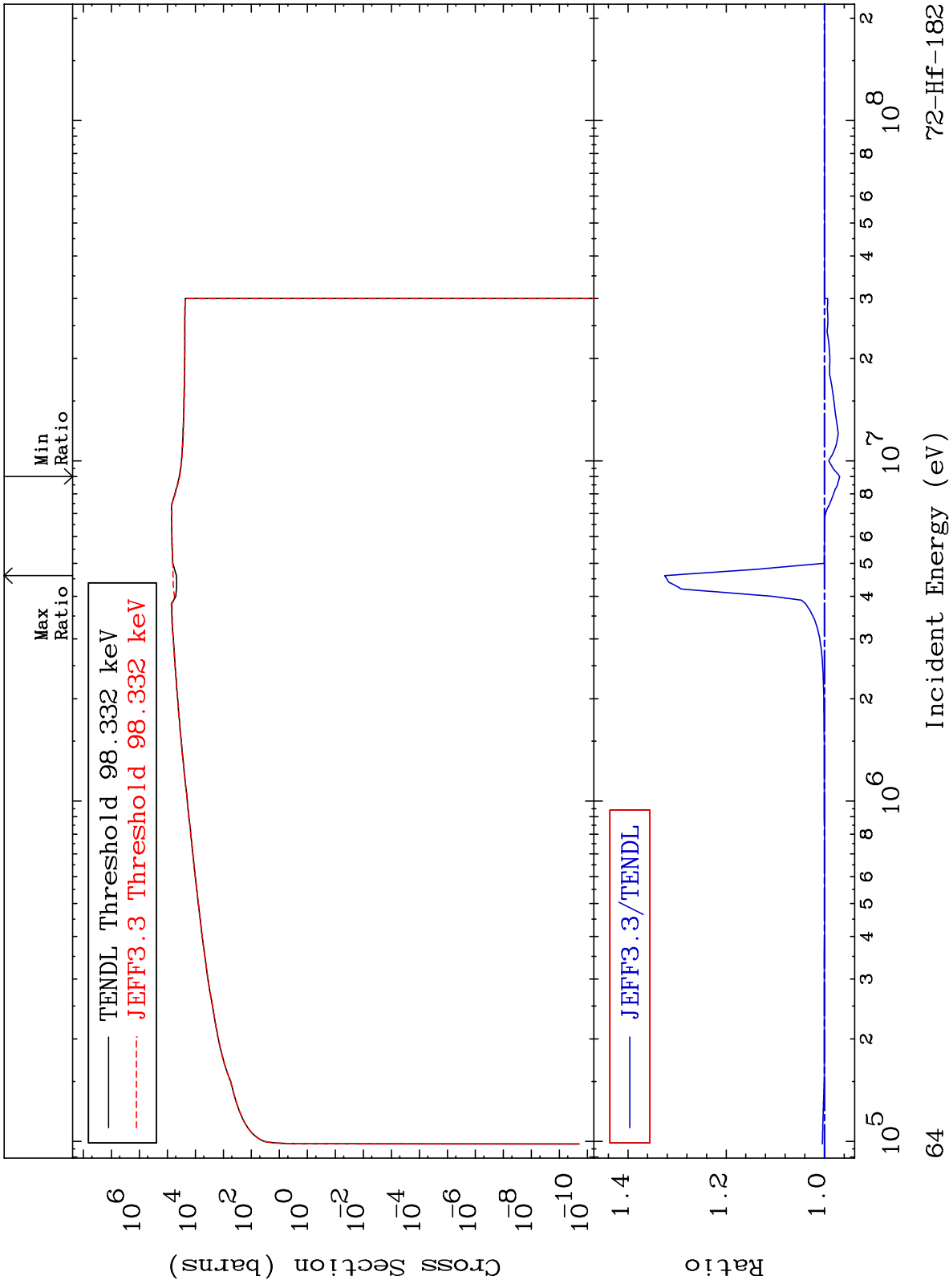
Incident Energy (eV)

72-Hf-182

MAT 7249

Dpa inelastic (mt51-91)
Cross Section

72-Hf-182
-3.115 To 32.52 %



64

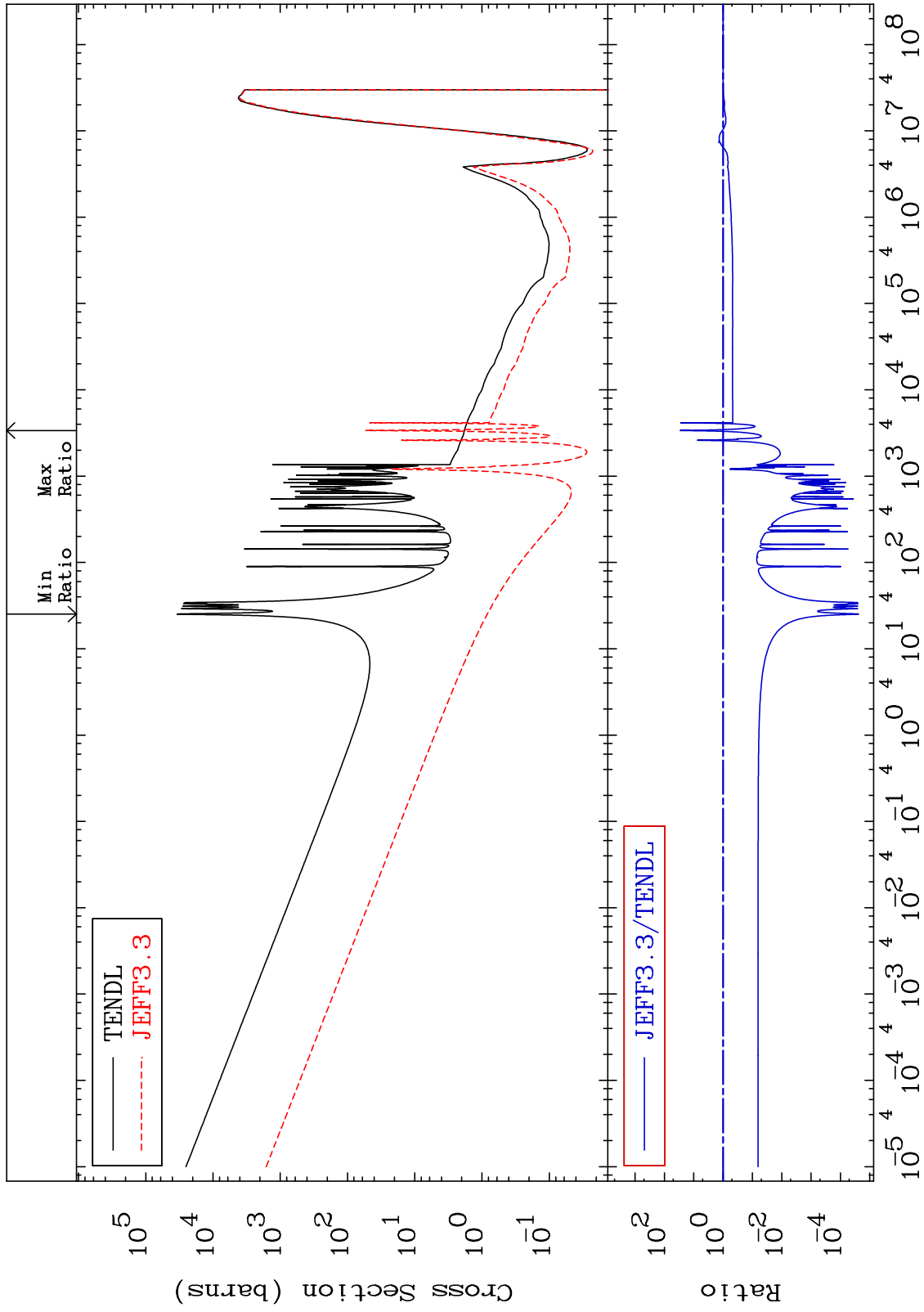
Incident Energy (eV)

72-Hf-182

MAT 7249

Dpa disappearance (mt102 -120)
Cross Section

72-Hf-182
-100.0 To 2846. %



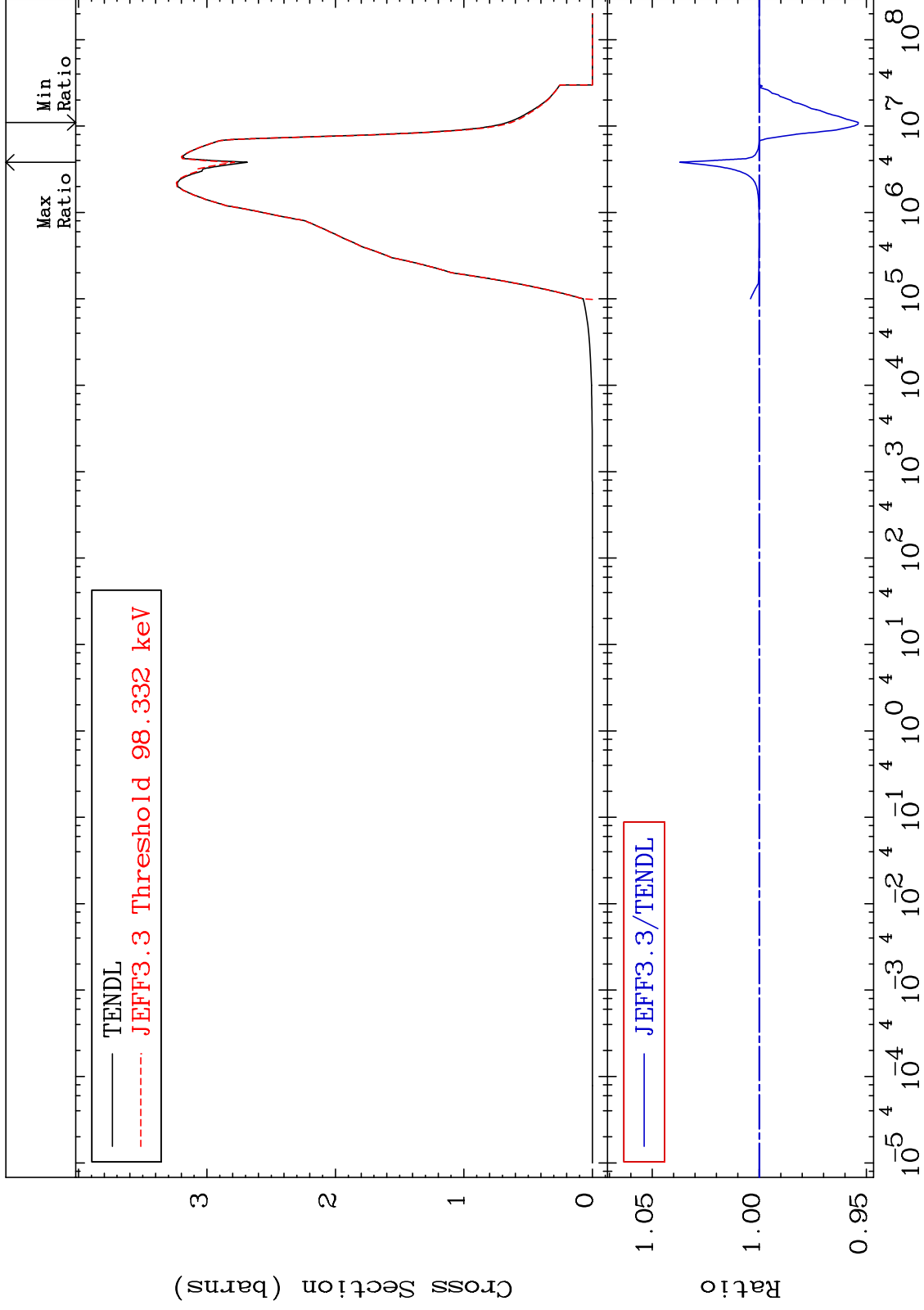
MAT 7249

Inelastic: 72-Hf-182g

72-Hf-182

Radionuclide Production Cross Section

-4.624 To 3.712 %



66

Incident Energy (eV)

72-Hf-182

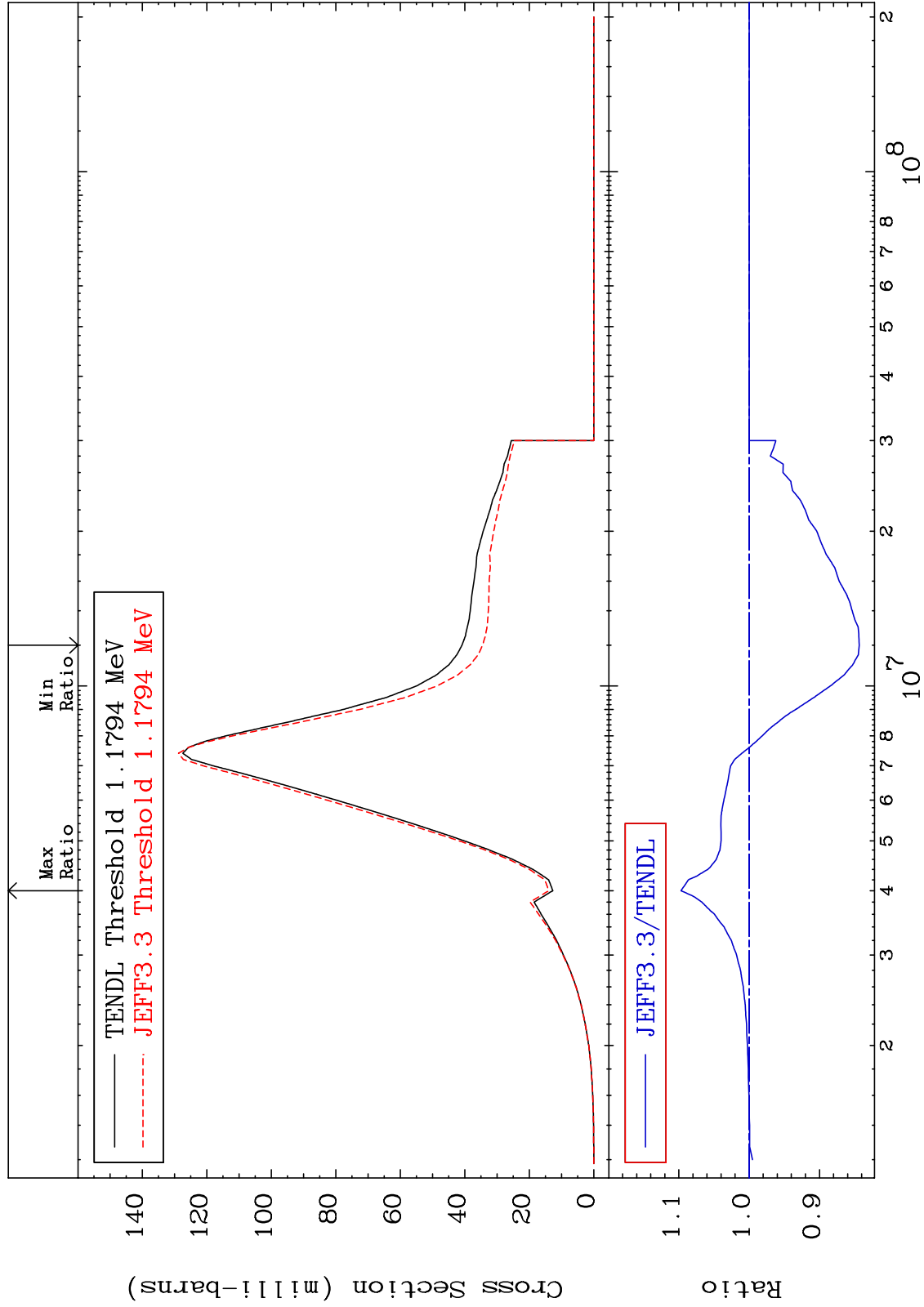
MAT 7249

Inelastic: 72-Hf-182m9

72-Hf-182

Radionuclide Production Cross Section

-15.66 To 9.688 %



67

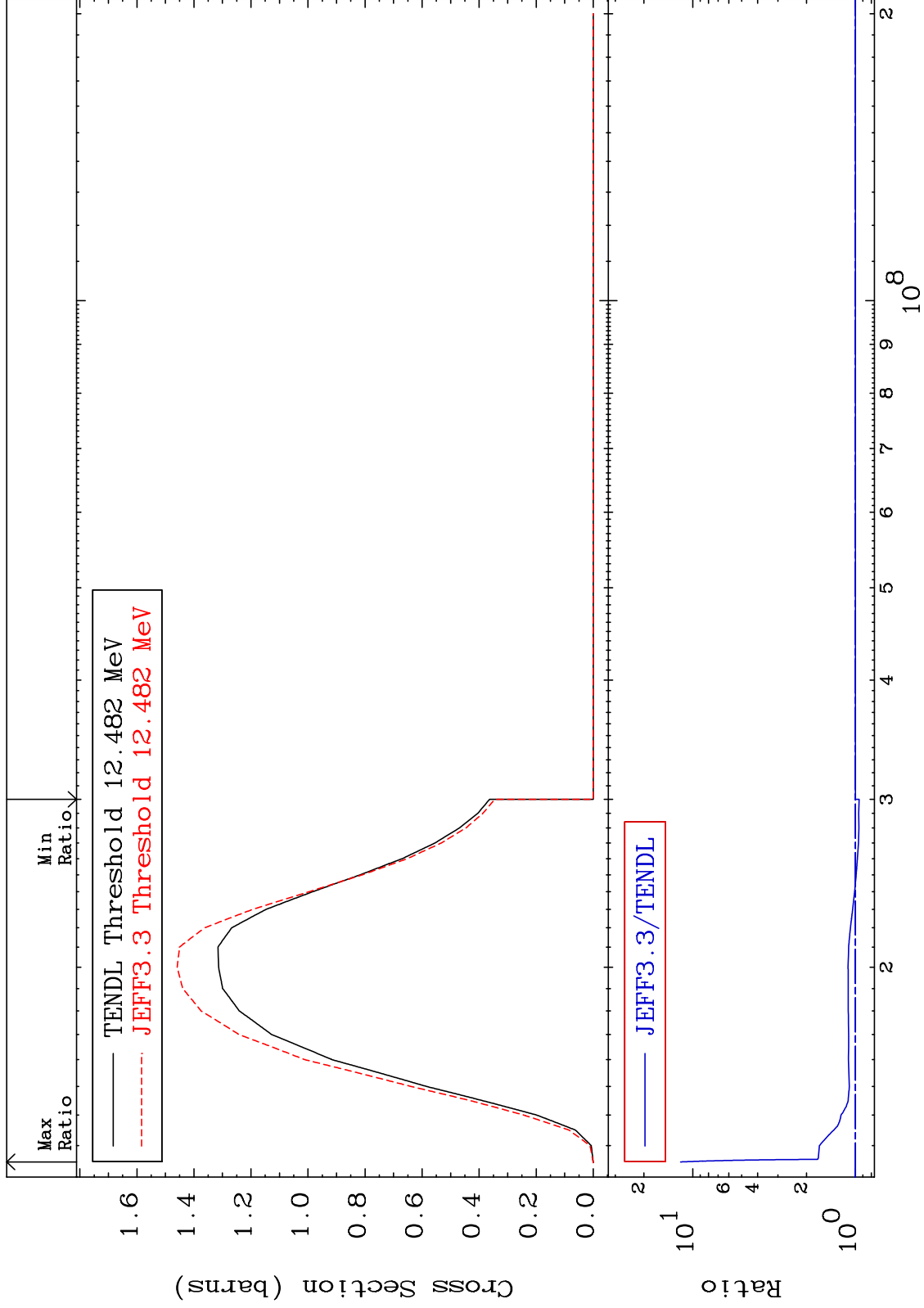
72-Hf-182

MAT 7249

(n,3n):72-Hf-180g

72-Hf-182

Radionuclide Production Cross Section -5.072 To 1088. %



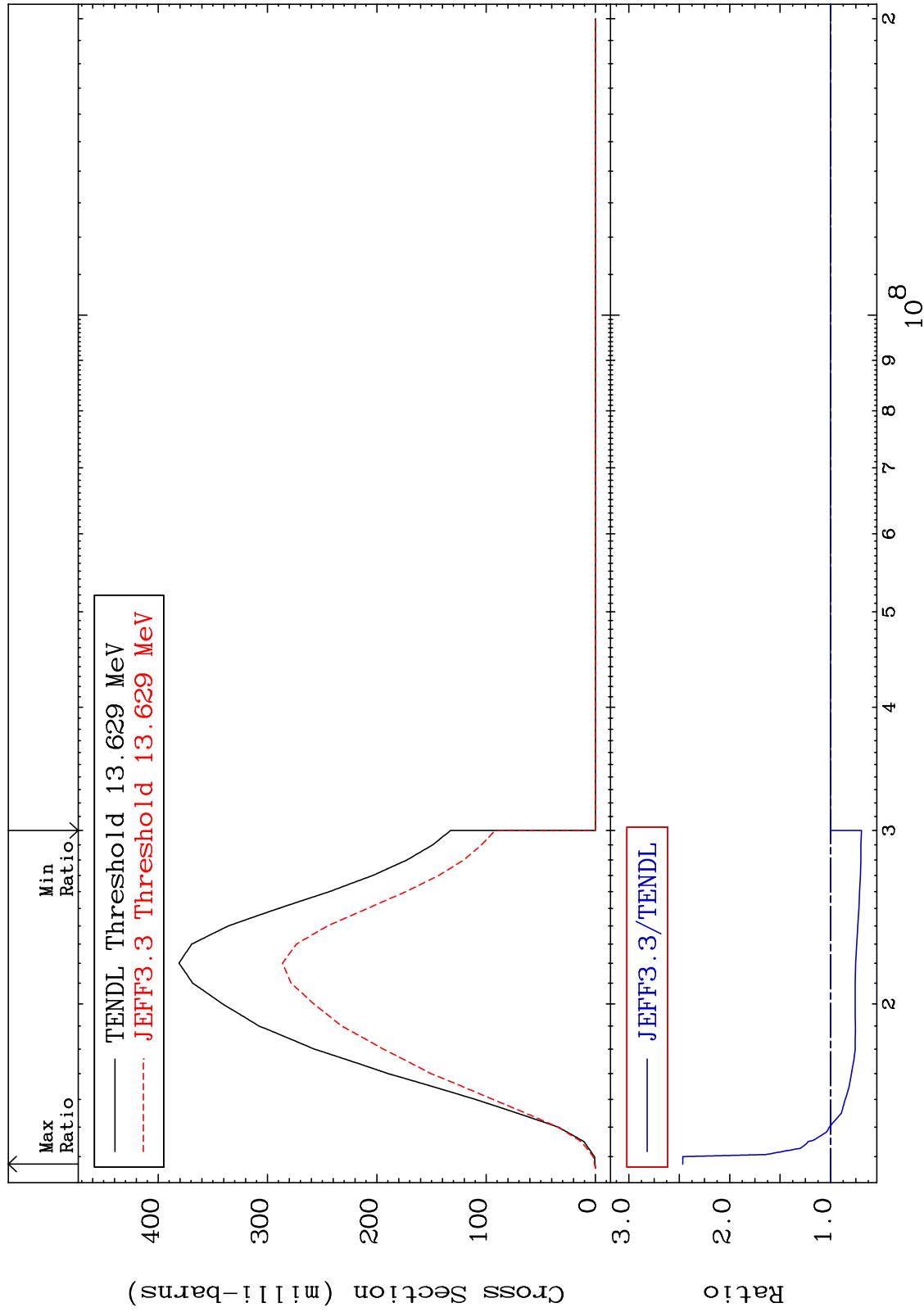
MAT 7249

(n, 3n): 72-Hf-180m7

72-Hf-182

Radionuclide Production Cross Section

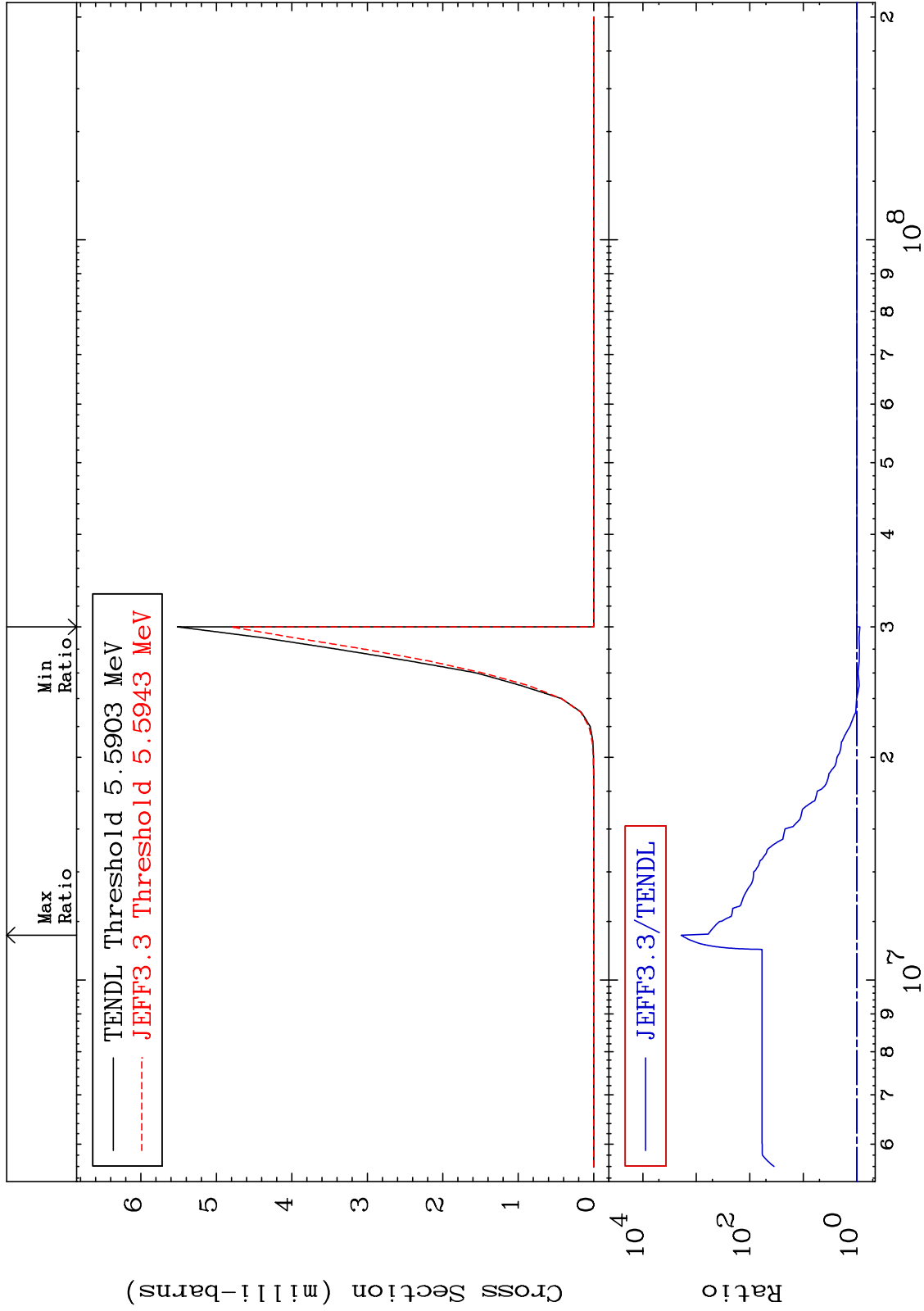
-30.78 To 146.5 %



MAT 7249

72-Hf-182

(n,2n) α :70-Yb-177g
Radionuclide Production Cross Section -12.81 To 9999. %



70

Incident Energy (eV)

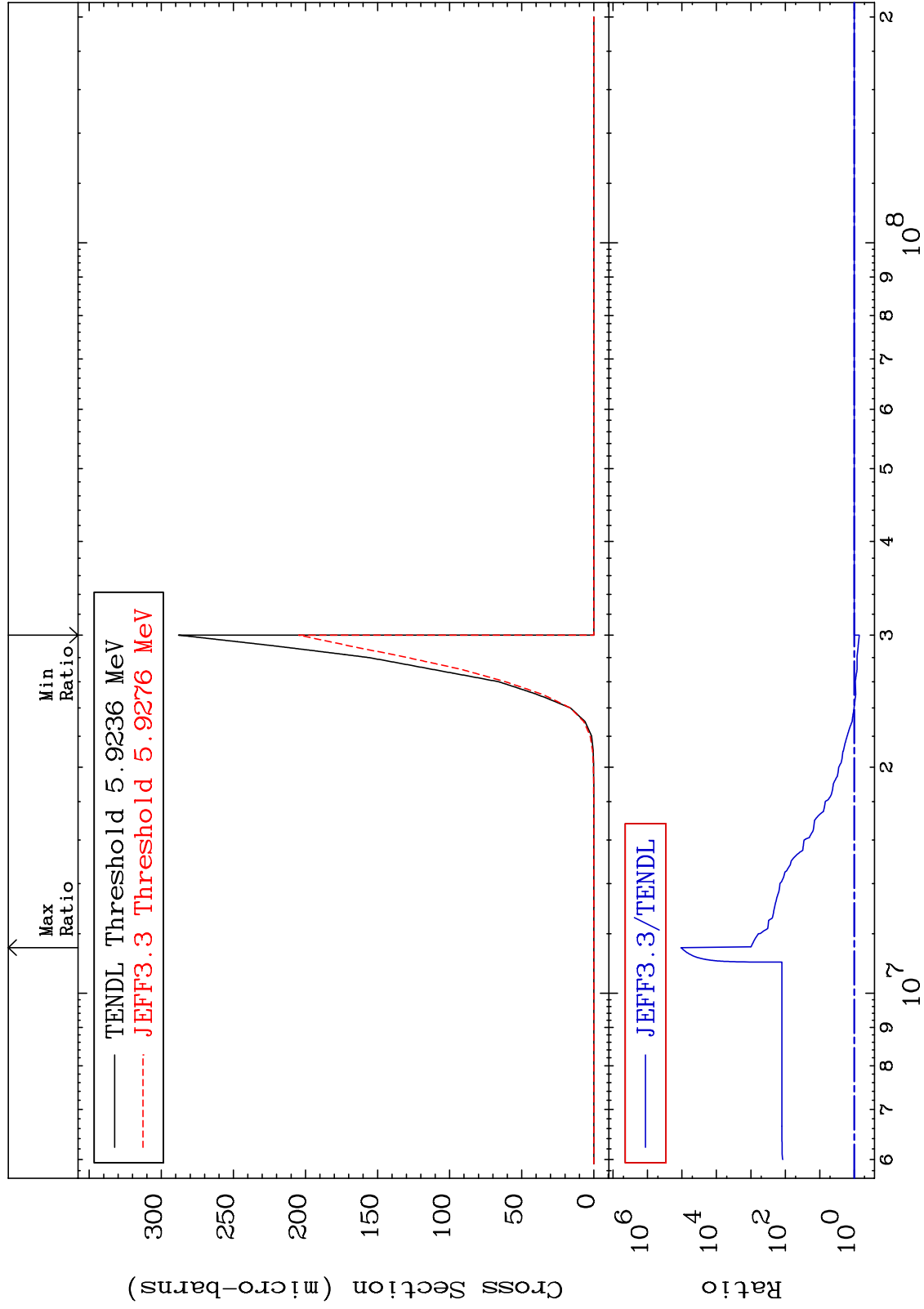
72-Hf-182

MAT 7249

(n,2n) α :70-Yb-177m6

72-Hf-182

Radionuclide Production Cross Section -28.95 To 9999. %



71

Incident Energy (eV)

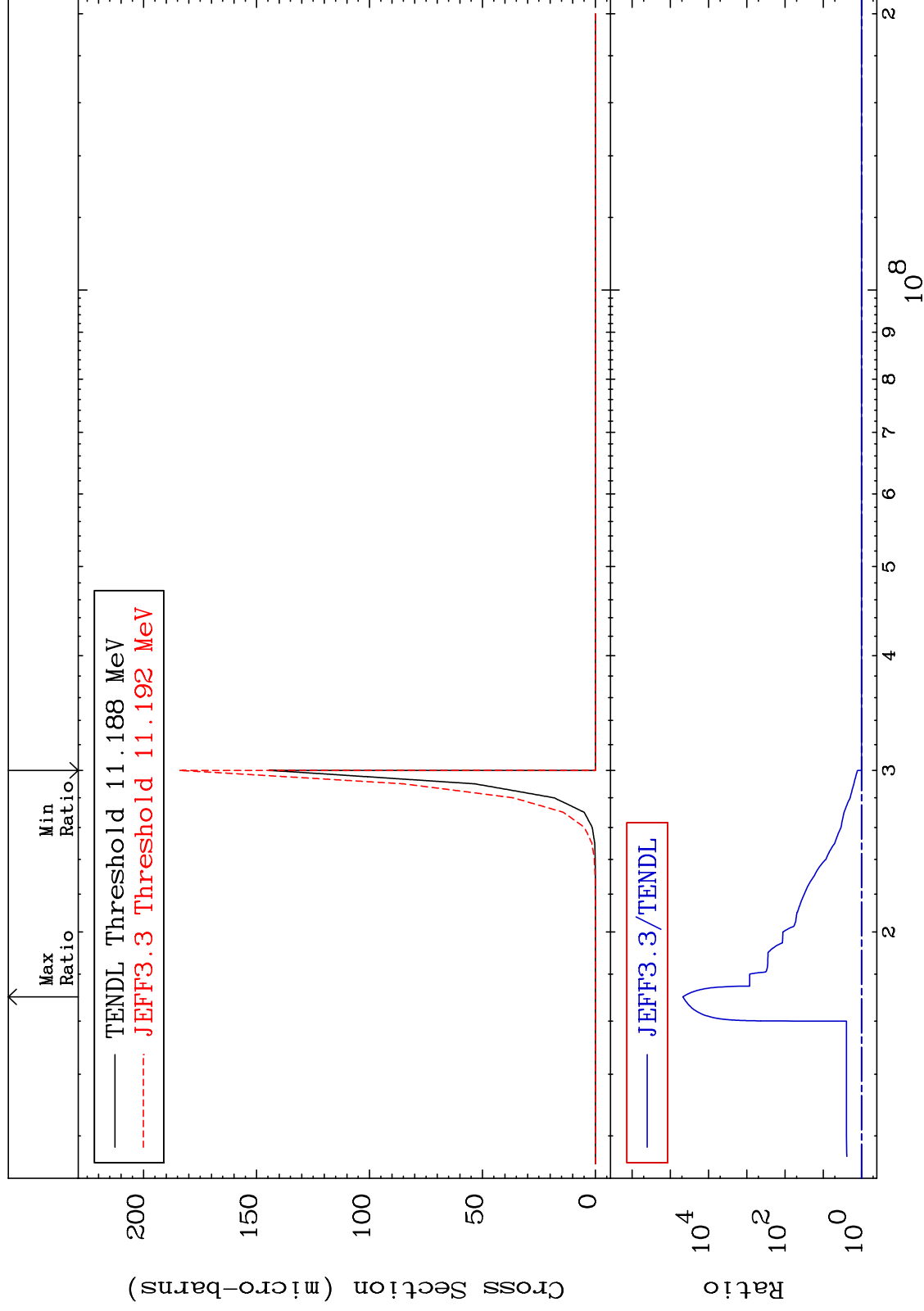
72-Hf-182

MAT 7249

(n,3n) α :70-Yb-176g

72-Hf-182

Radionuclide Production Cross Section 0.000 To 9999. %



72

Incident Energy (eV)

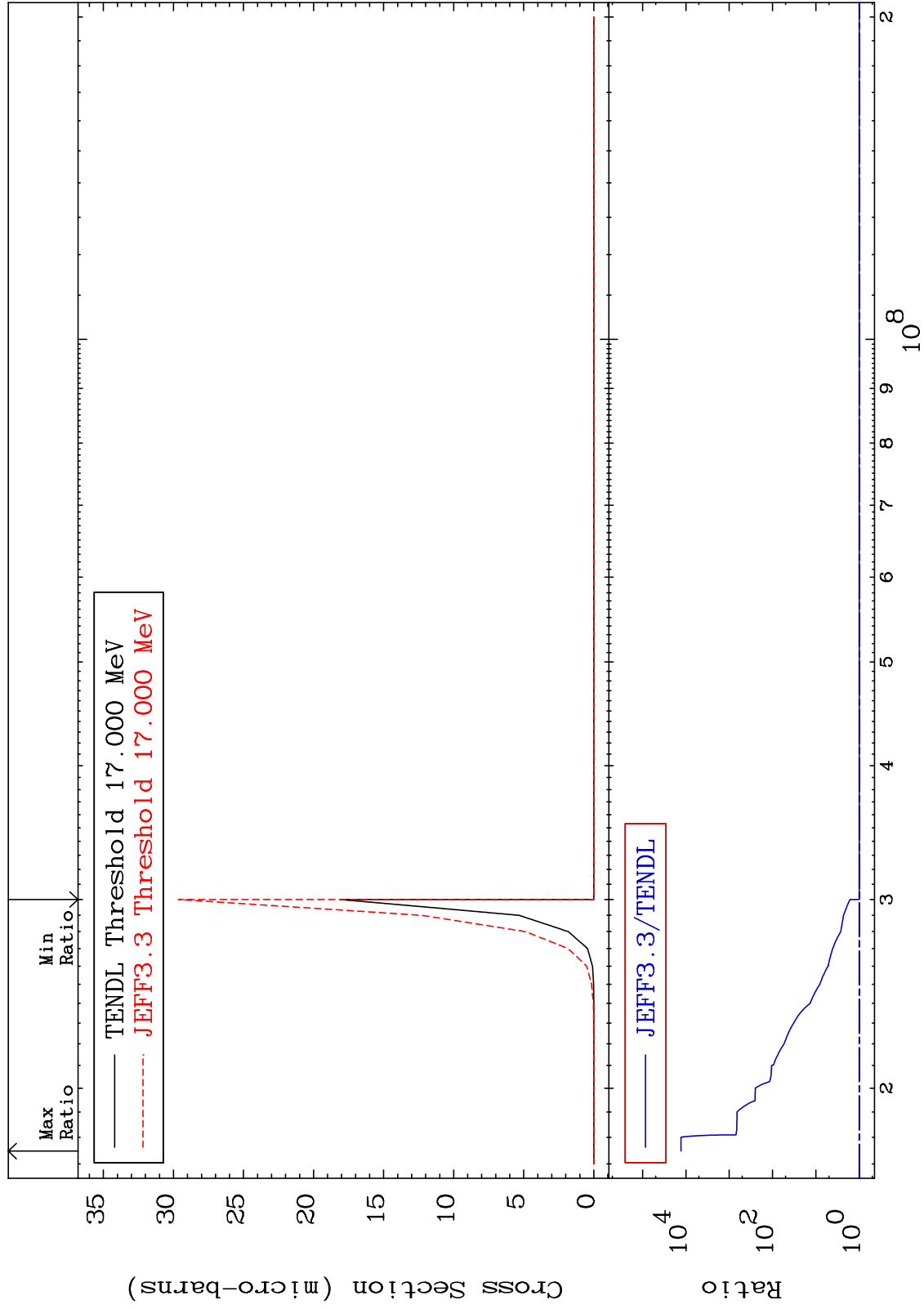
72-Hf-182

MAT 7249

(n, 3n) α : 70-Yb-176m5

72-Hf-182

Radionuclide Production Cross Section 0.000 To 9999. %



73

Incident Energy (eV)

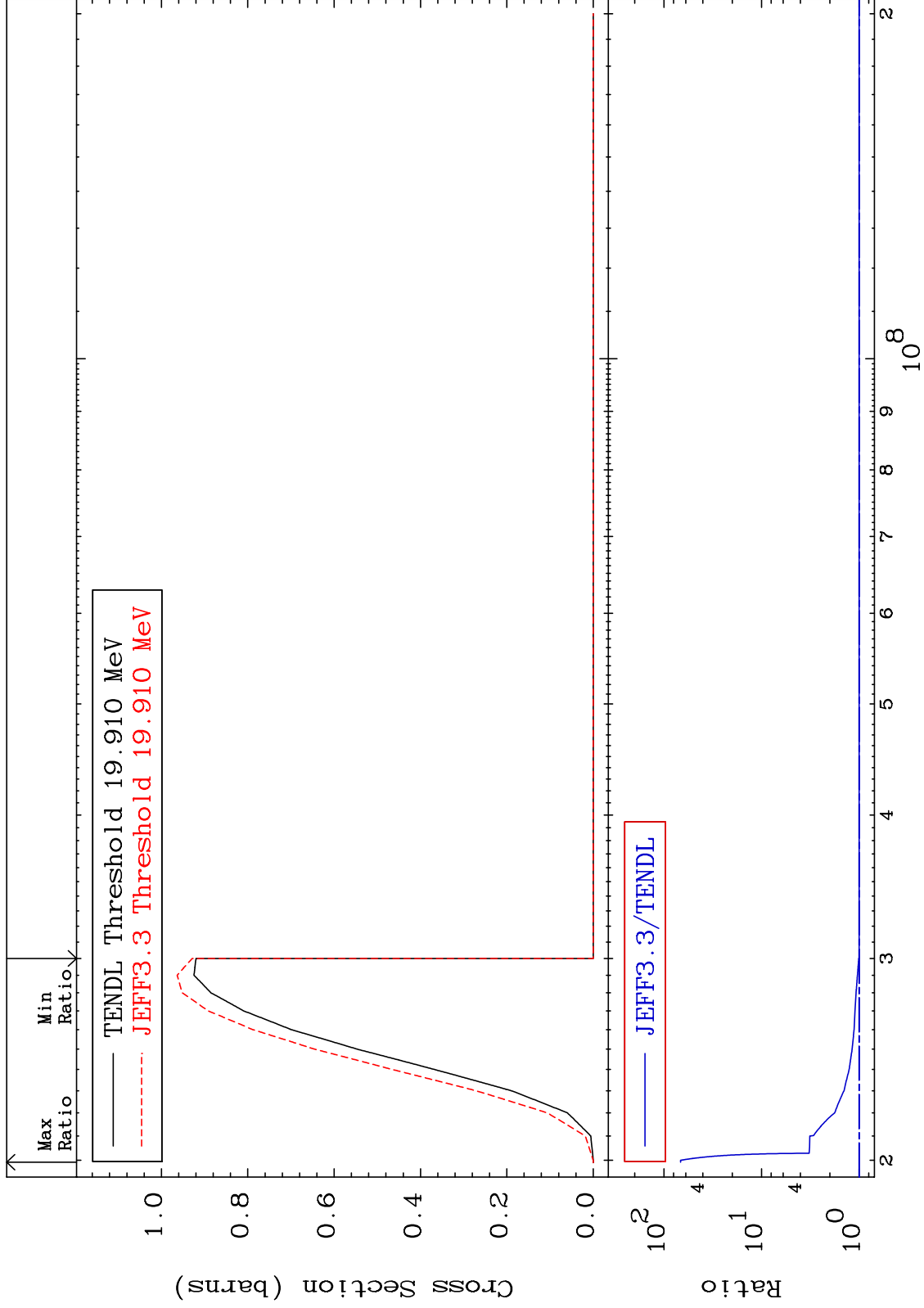
72-Hf-182

MAT 7249

(n,4n):72-Hf-179g

72-Hf-182

Radionuclide Production Cross Section 0.000 To 6664. %

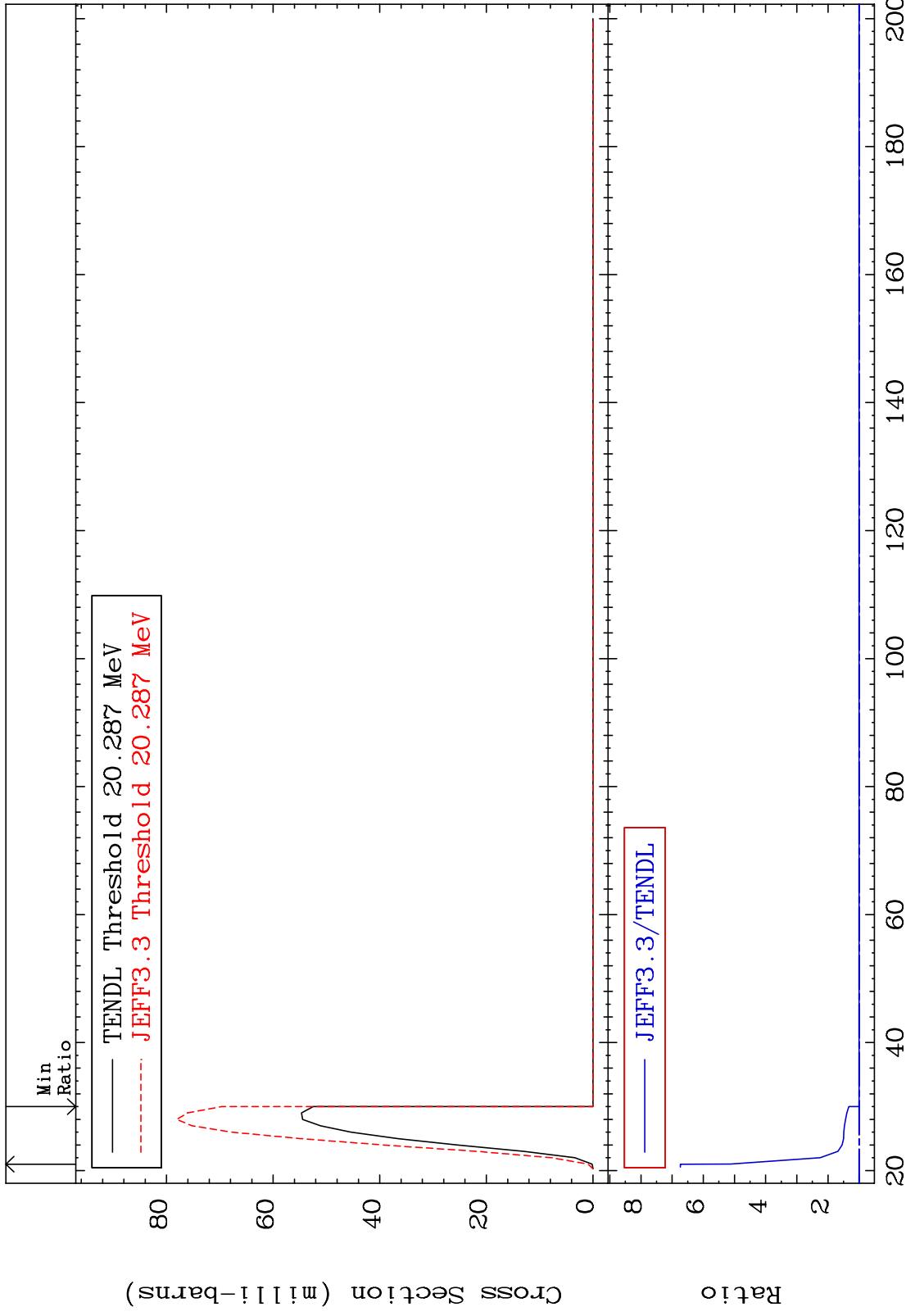


MAT 7249

(n, 4n): 72-Hf-179m5

72-Hf-182

Radionuclide Production Cross Section 0.000 To 573.4 %



75

Incident Energy (MeV)

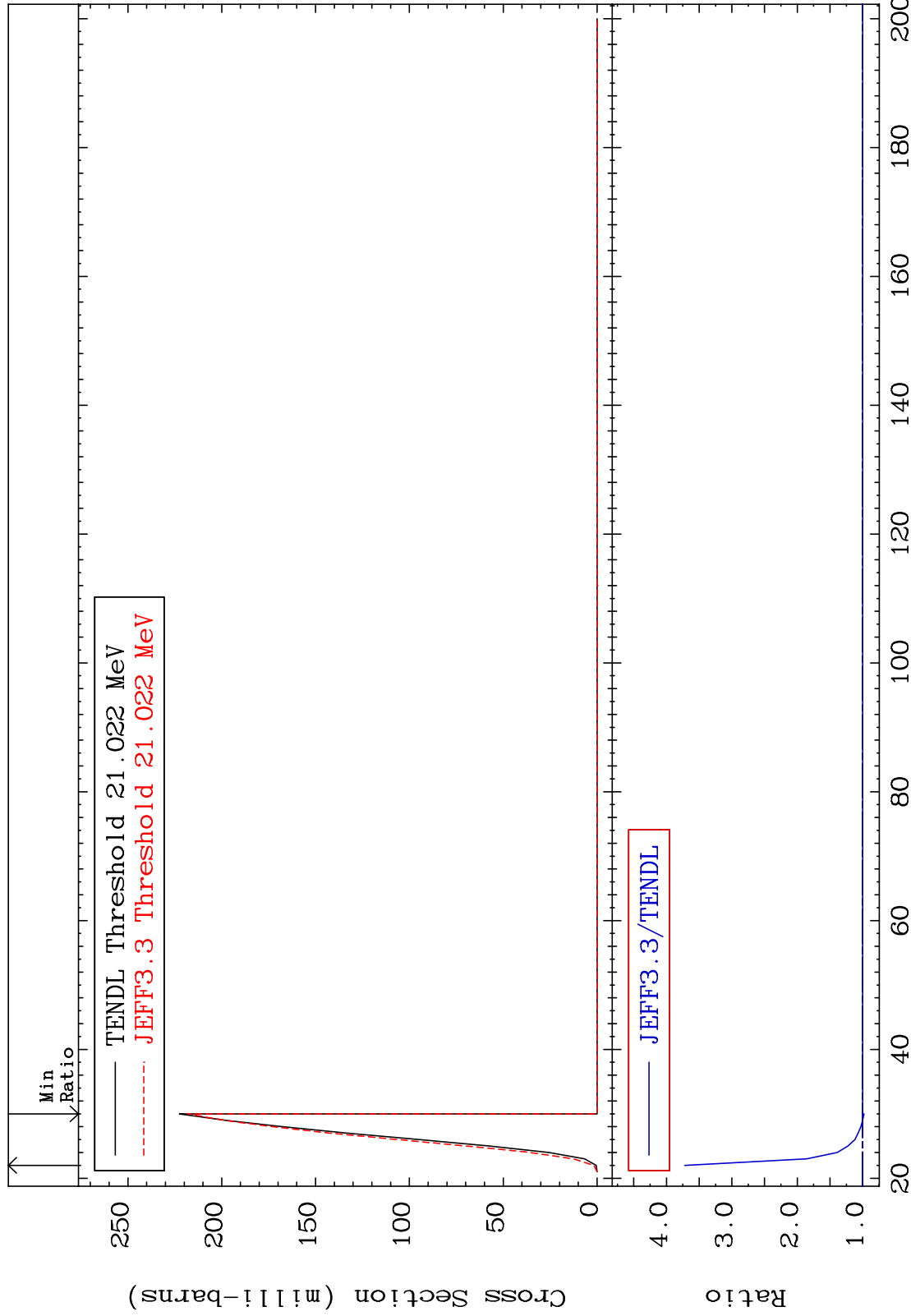
72-Hf-182

MAT 7249

(n, 4n) : 72-Hf-179m10

72-Hf-182

Radionuclide Production Cross Section -1.958 To 272.0 %



72-Hf-182

Incident Energy (MeV)

76