

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

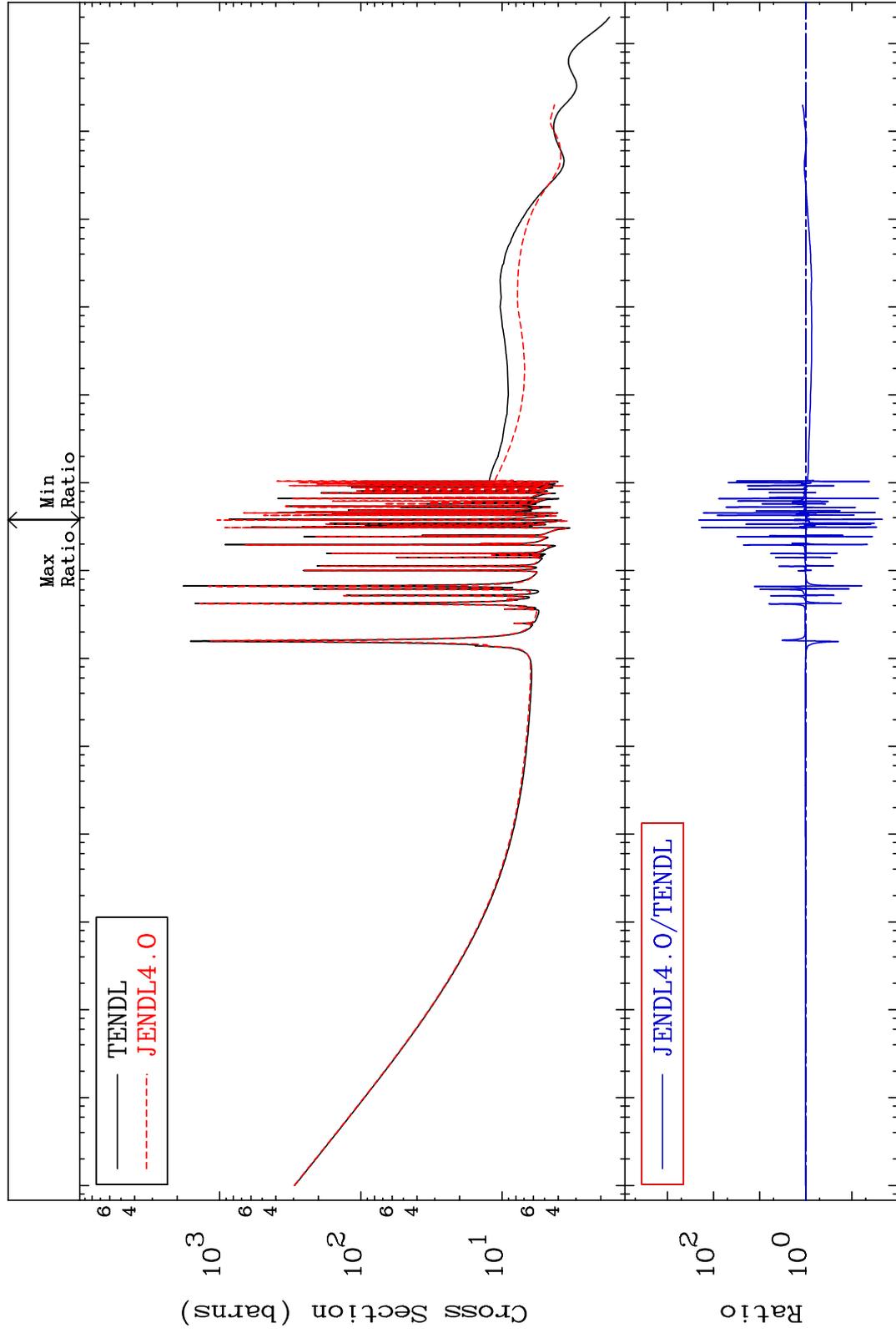
MAT 4440

Total

44-Ru-101

Cross Section

-97.79 To 9999. %

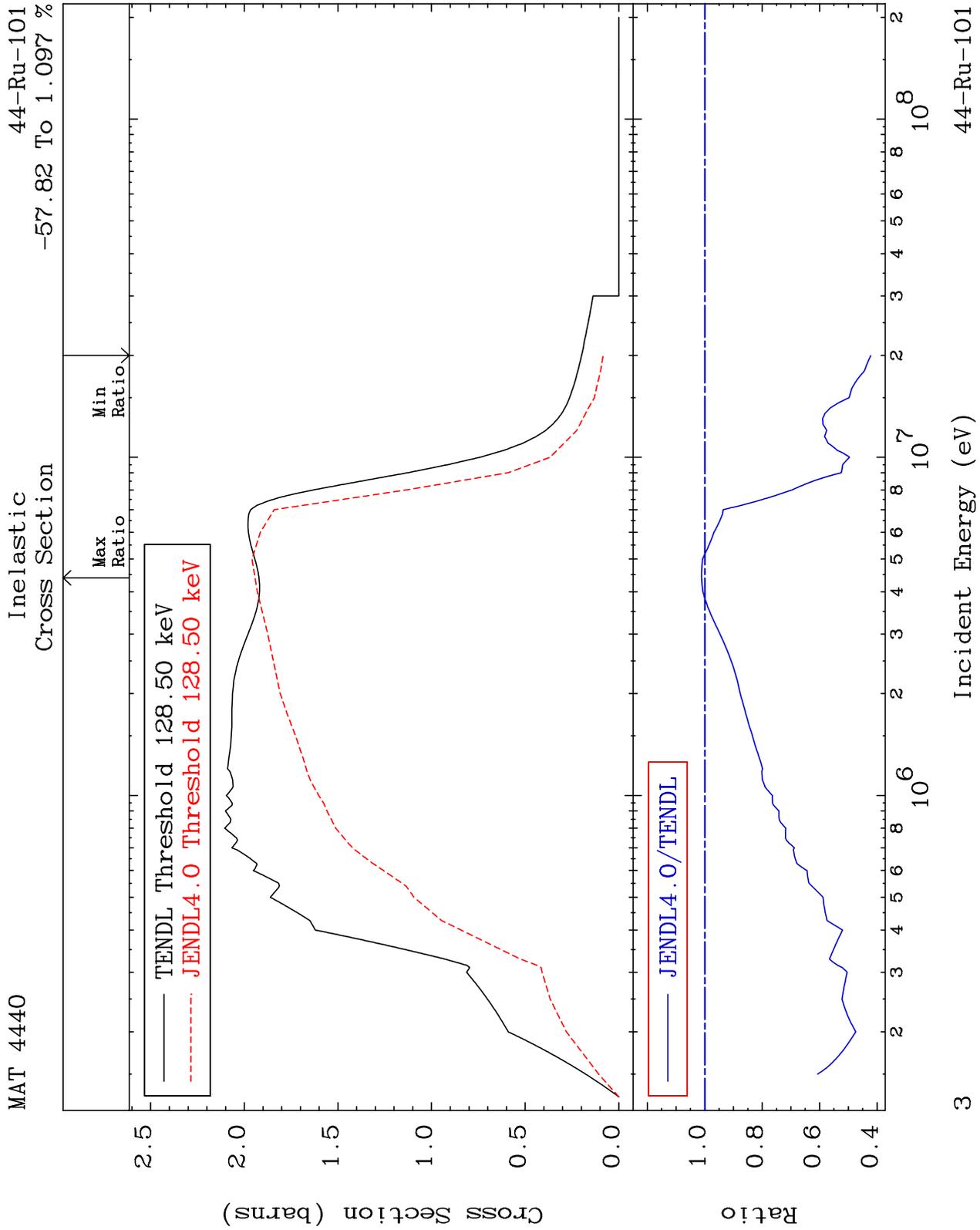


1

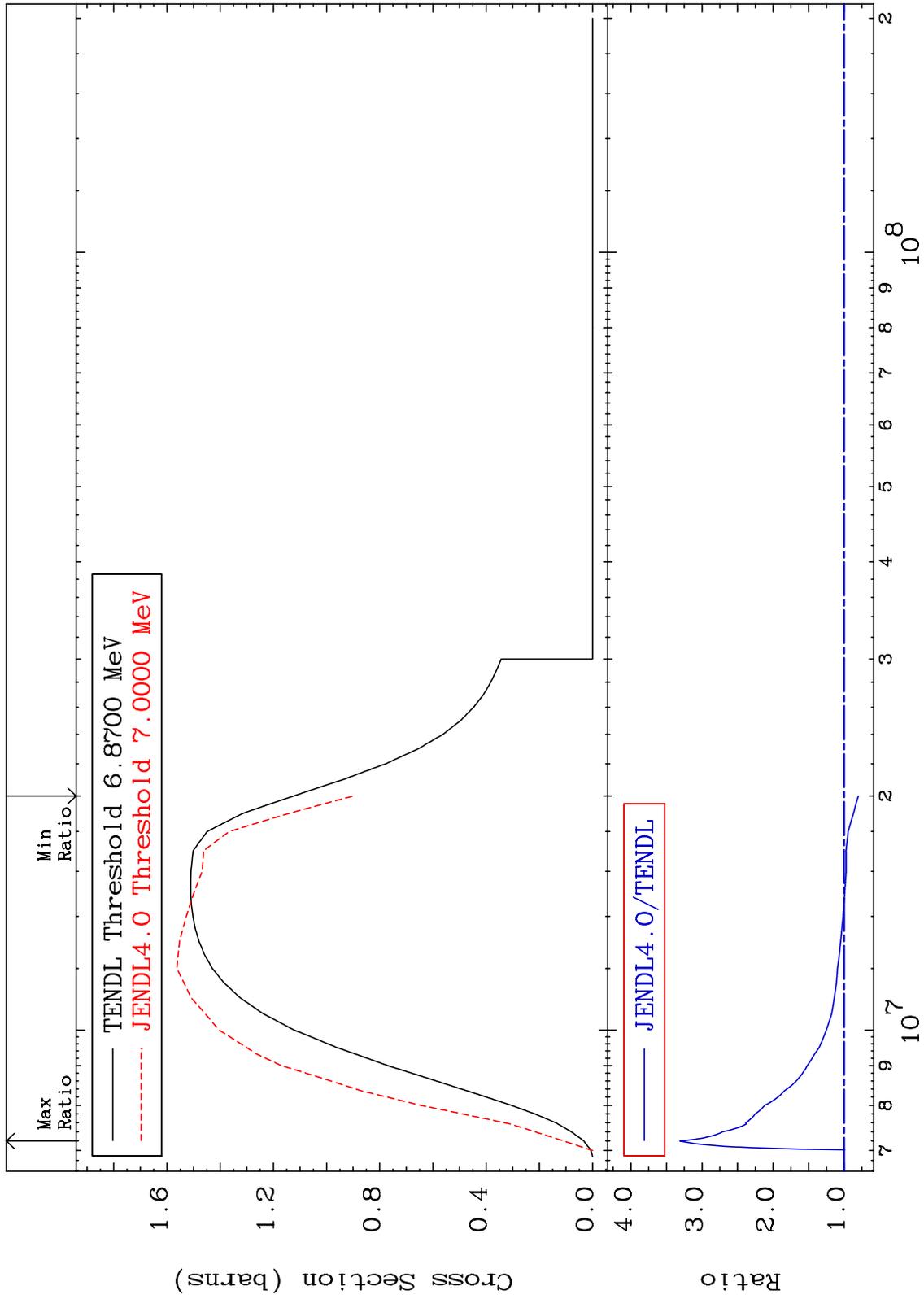
Incident Energy (eV)

44-Ru-101





MAT 4440 (n,2n) Cross Section 44-Ru-101 -20.03 To 231.1 %





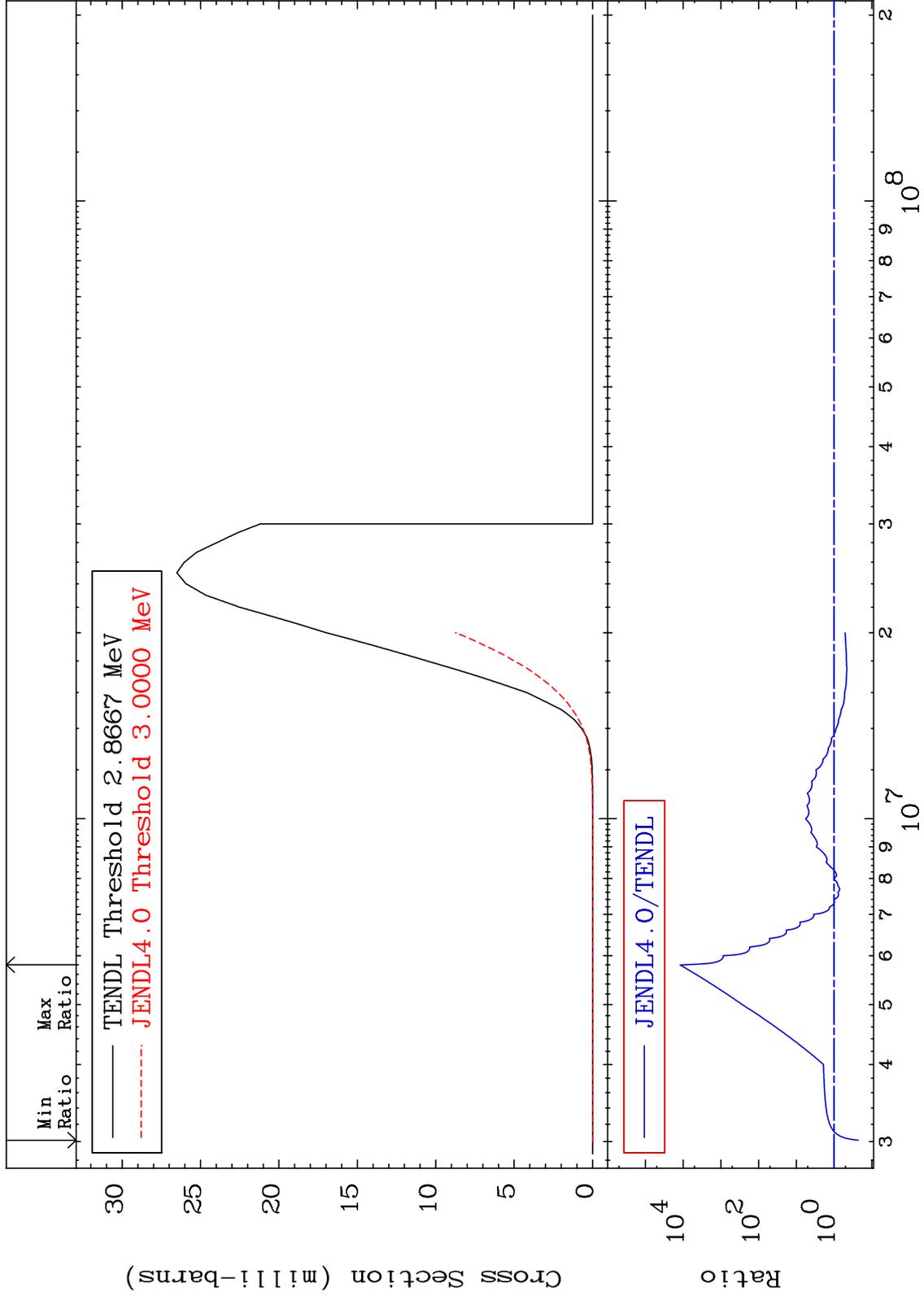
MAT 4440

(n,n')  $\alpha$

44-Ru-101

Cross Section

-77.12 To 9999. %



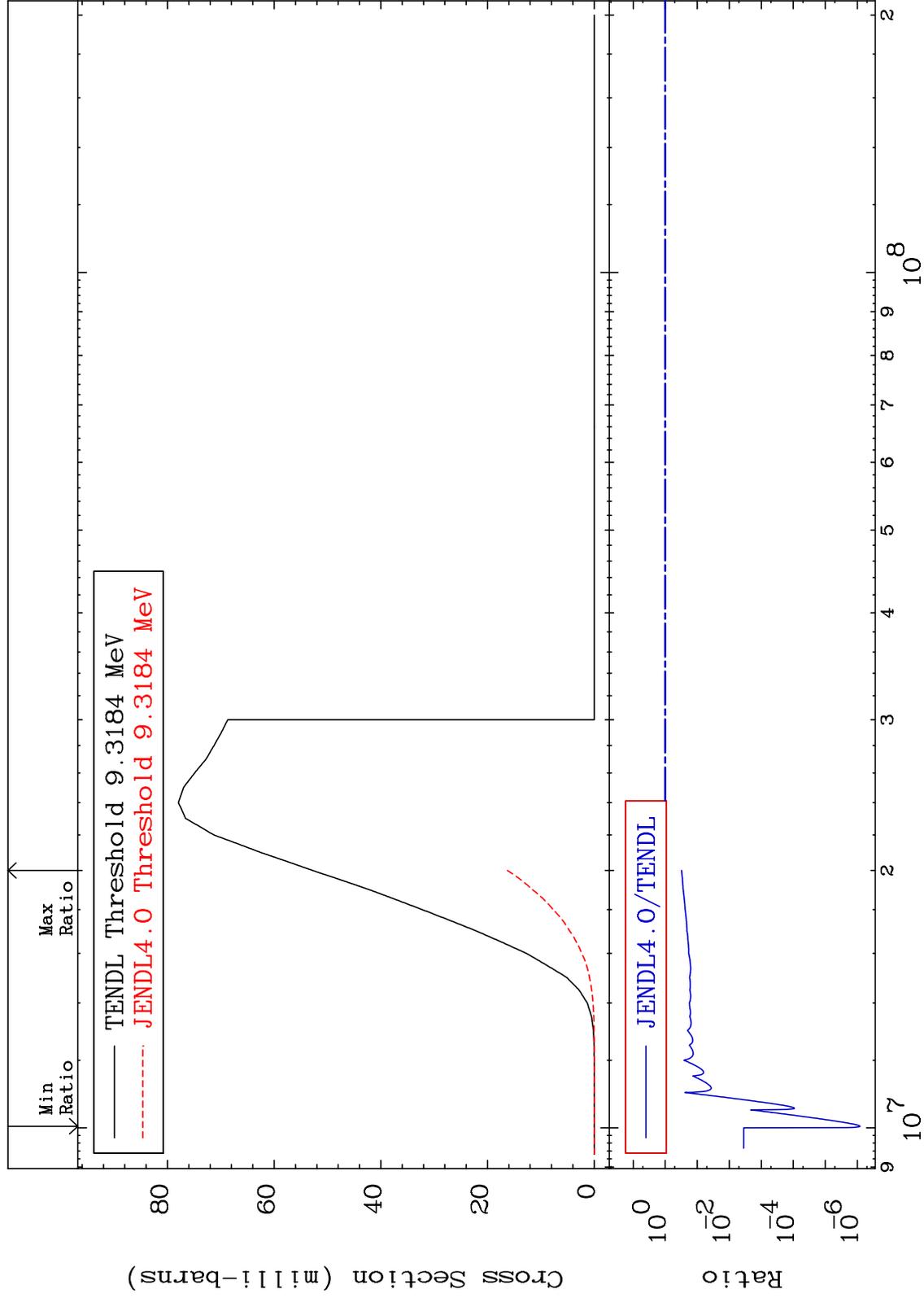
MAT 4440

(n,n') p

44-Ru-101

Cross Section

-100.0 To -69.18%



Incident Energy (eV)

44-Ru-101

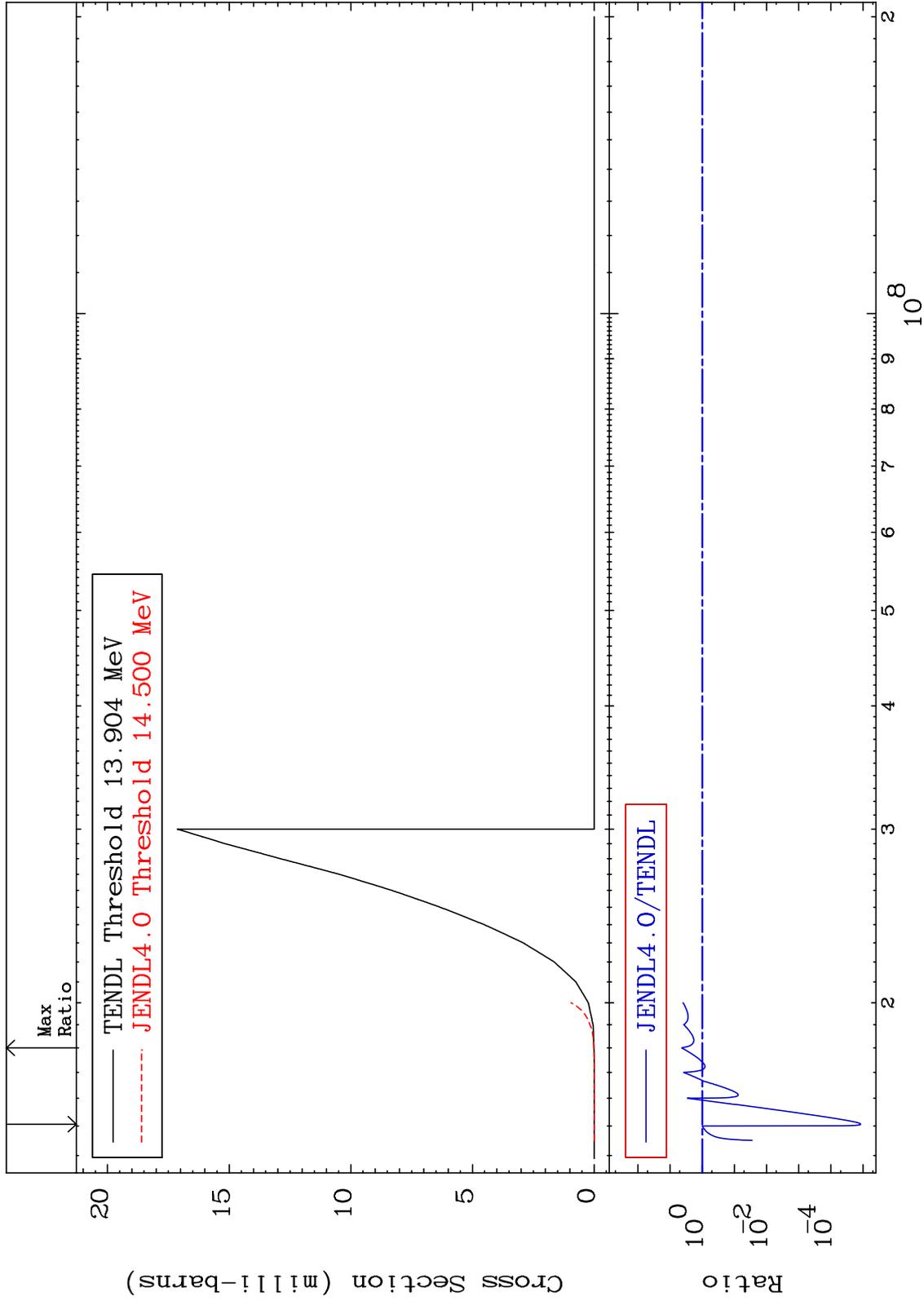
MAT 4440

(n, n') d

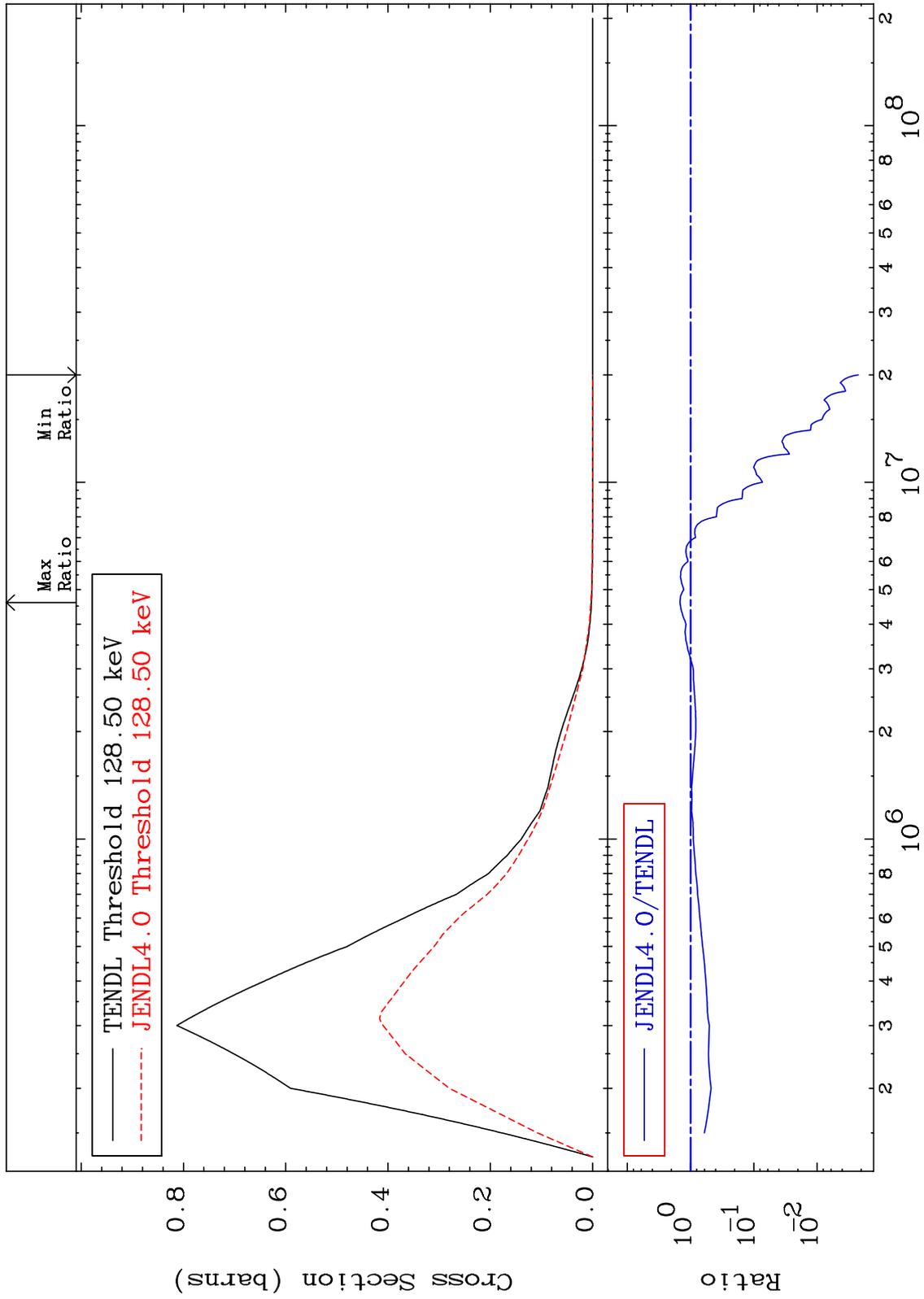
44-Ru-101

Cross Section

-100.0 To 331.8 %



MAT 4440 MT= 51 (n, n') Level Cross Section 44-Ru-101 -99.78 To 46.80 %



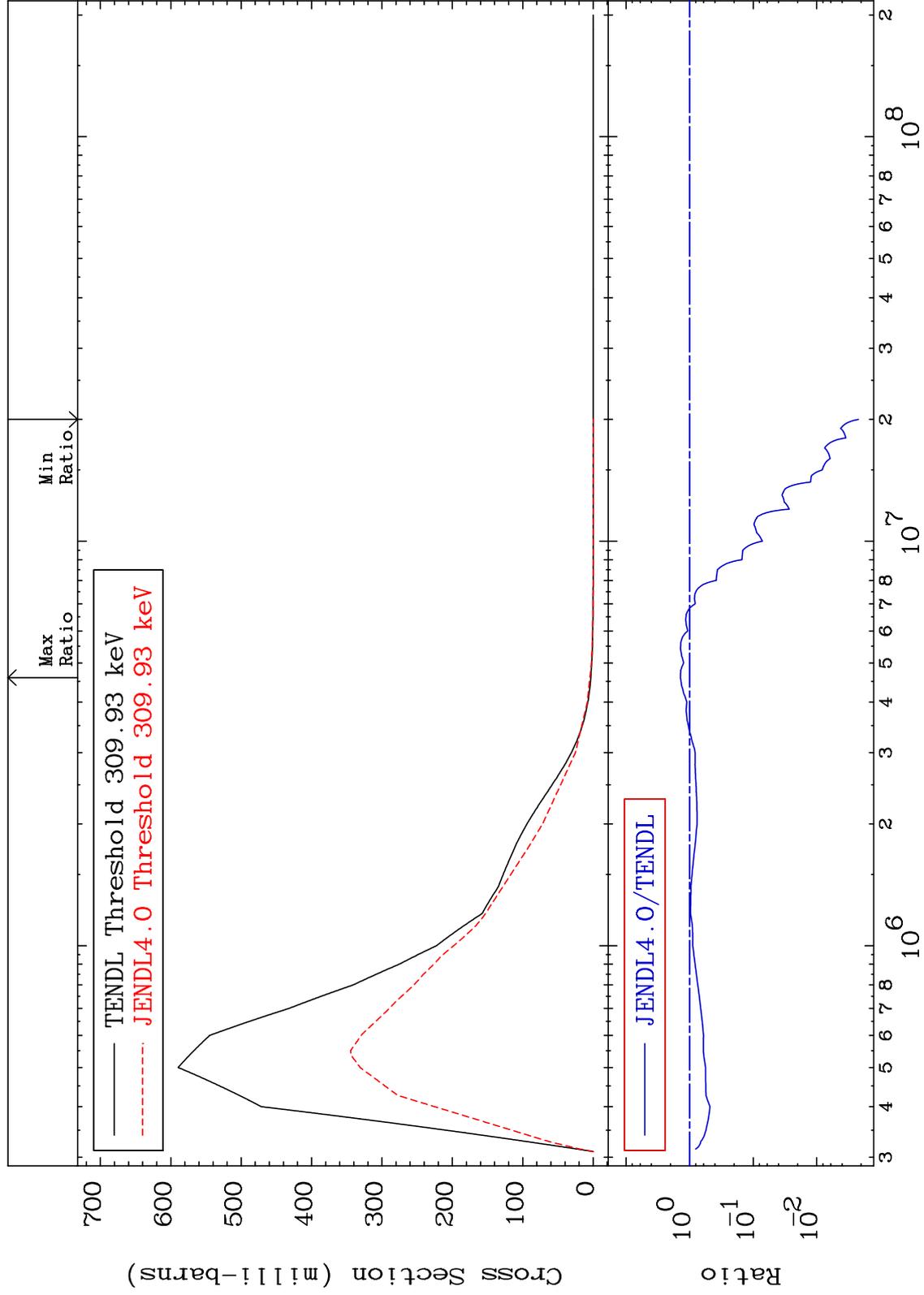
MAT 4440

MT= 52 (n,n') Level

44-Ru-101

-99.78 To 39.70 %

Cross Section

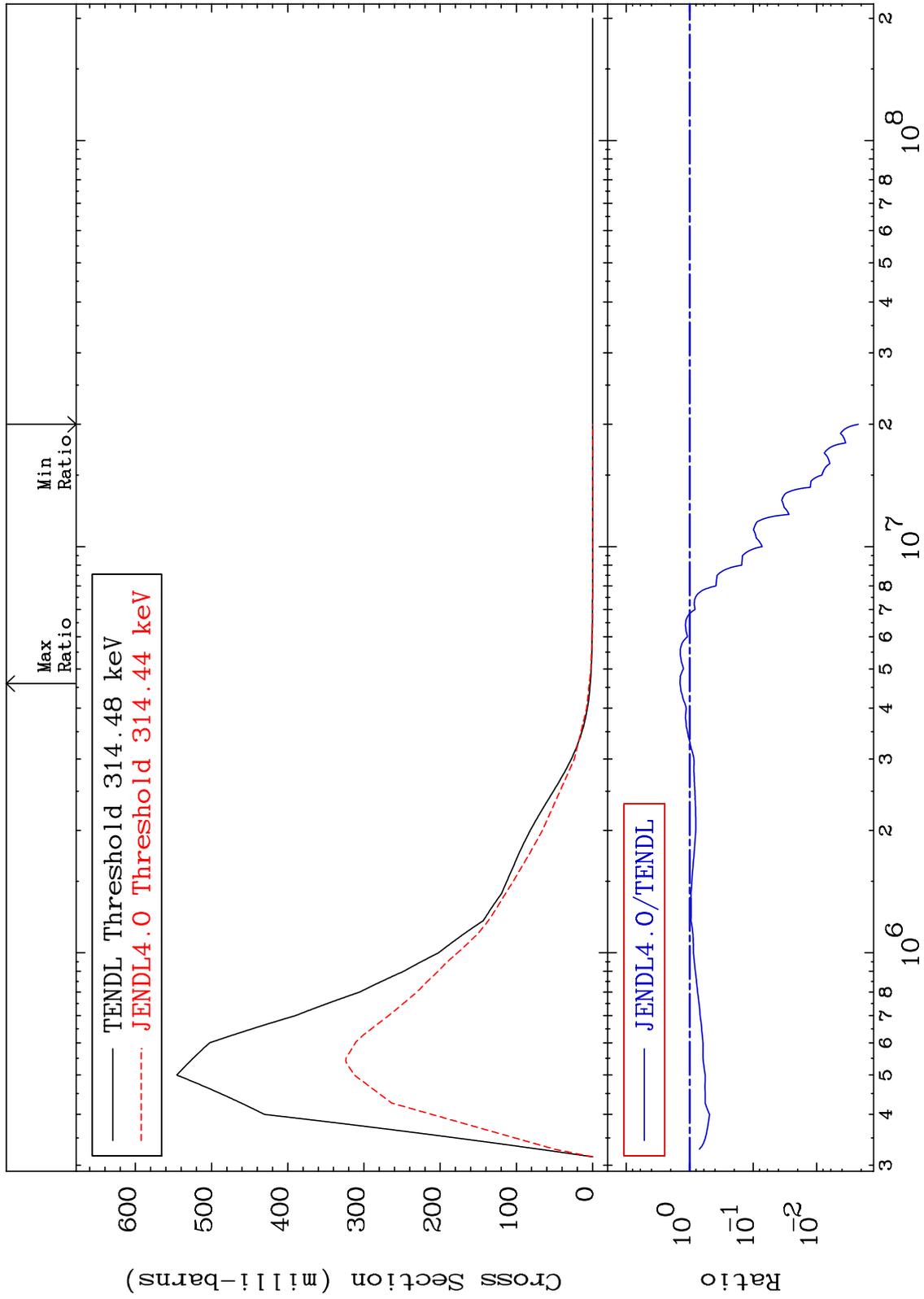


10

Incident Energy (eV)

44-Ru-101

MAT 4440      MT= 53 (n,n') Level      44-Ru-101  
 Cross Section      -99.78 To 42.84 %

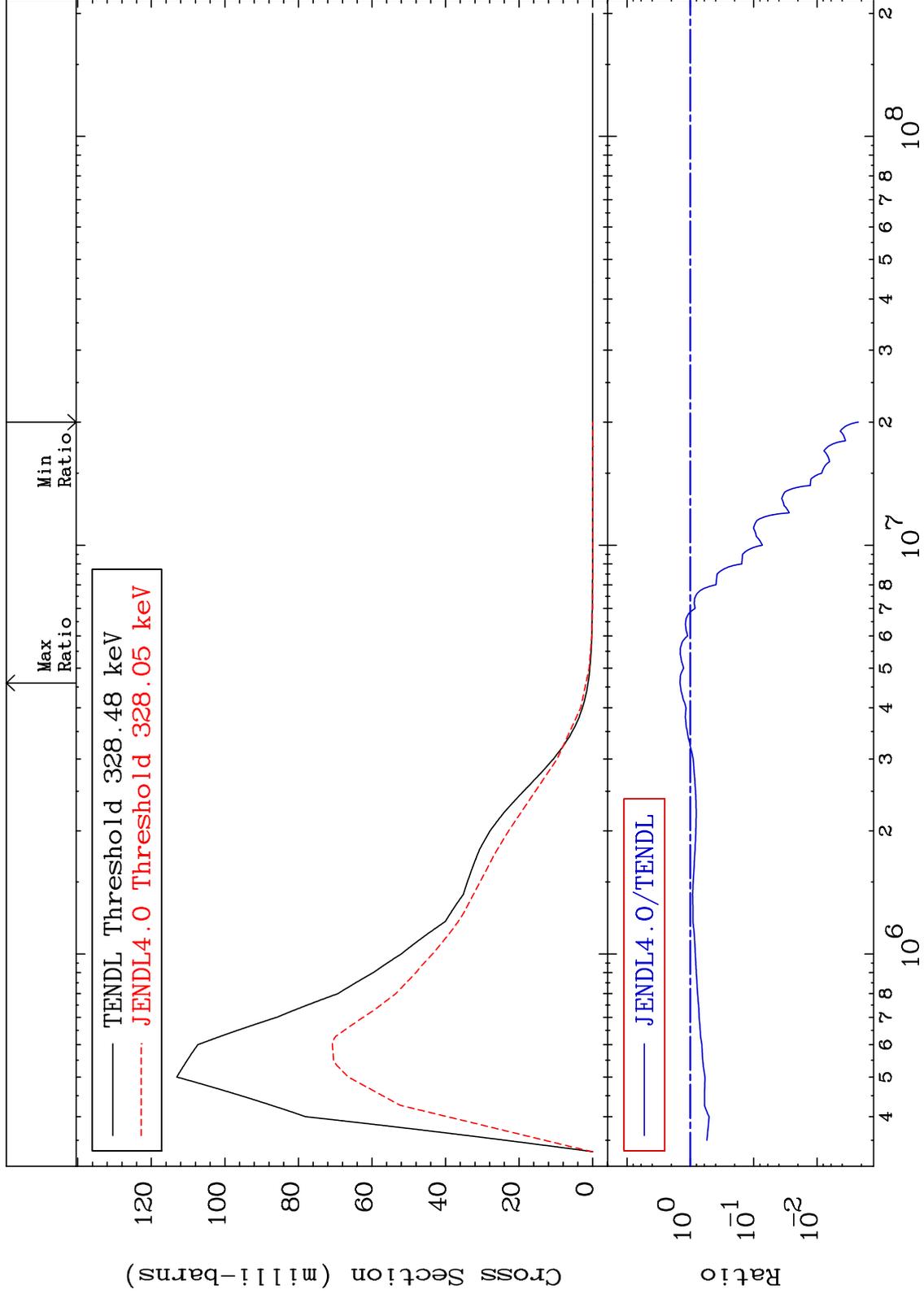


Incident Energy (eV)      44-Ru-101

MAT 4440

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

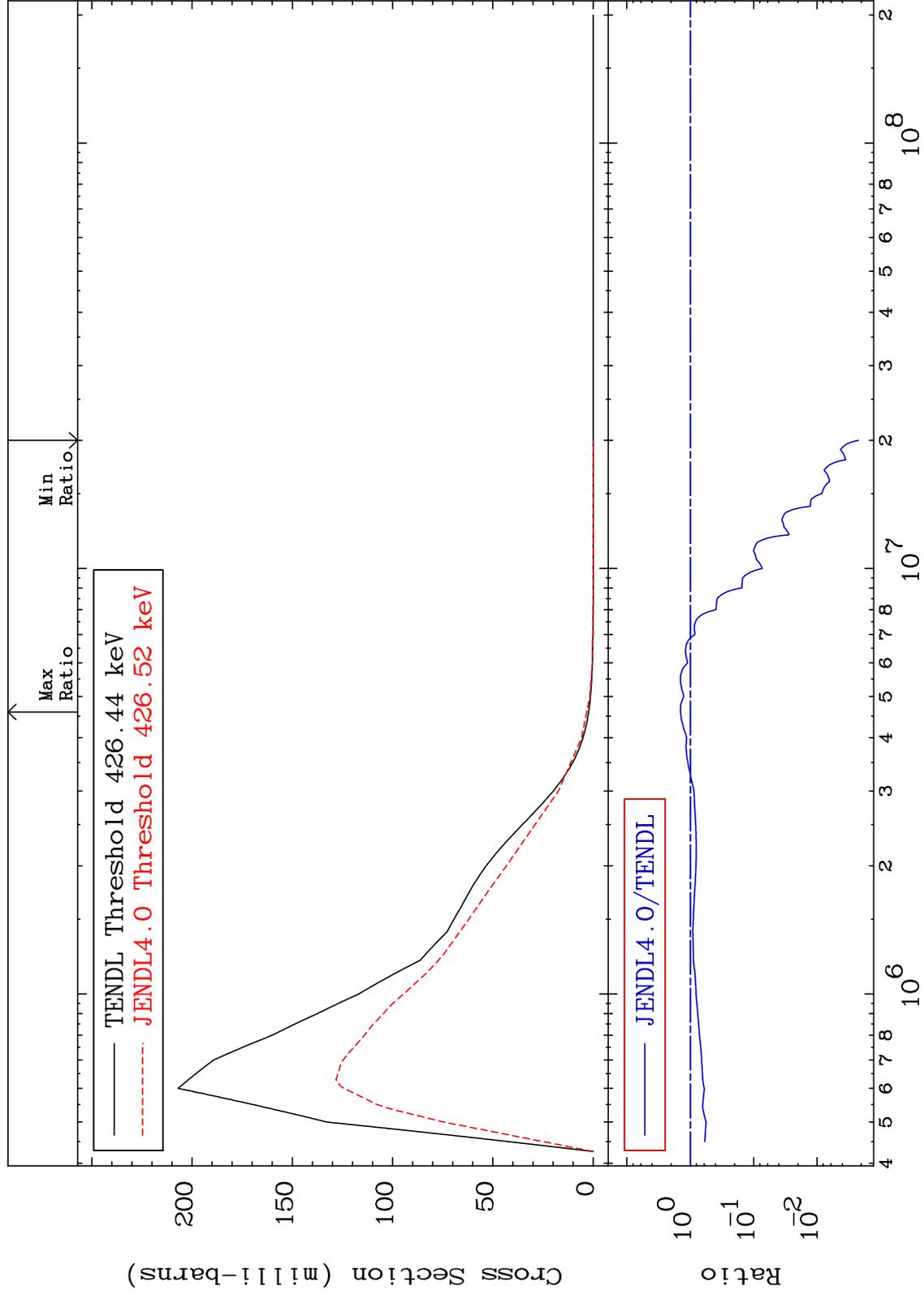
44-Ru-101  
-99.78 To 45.99 %



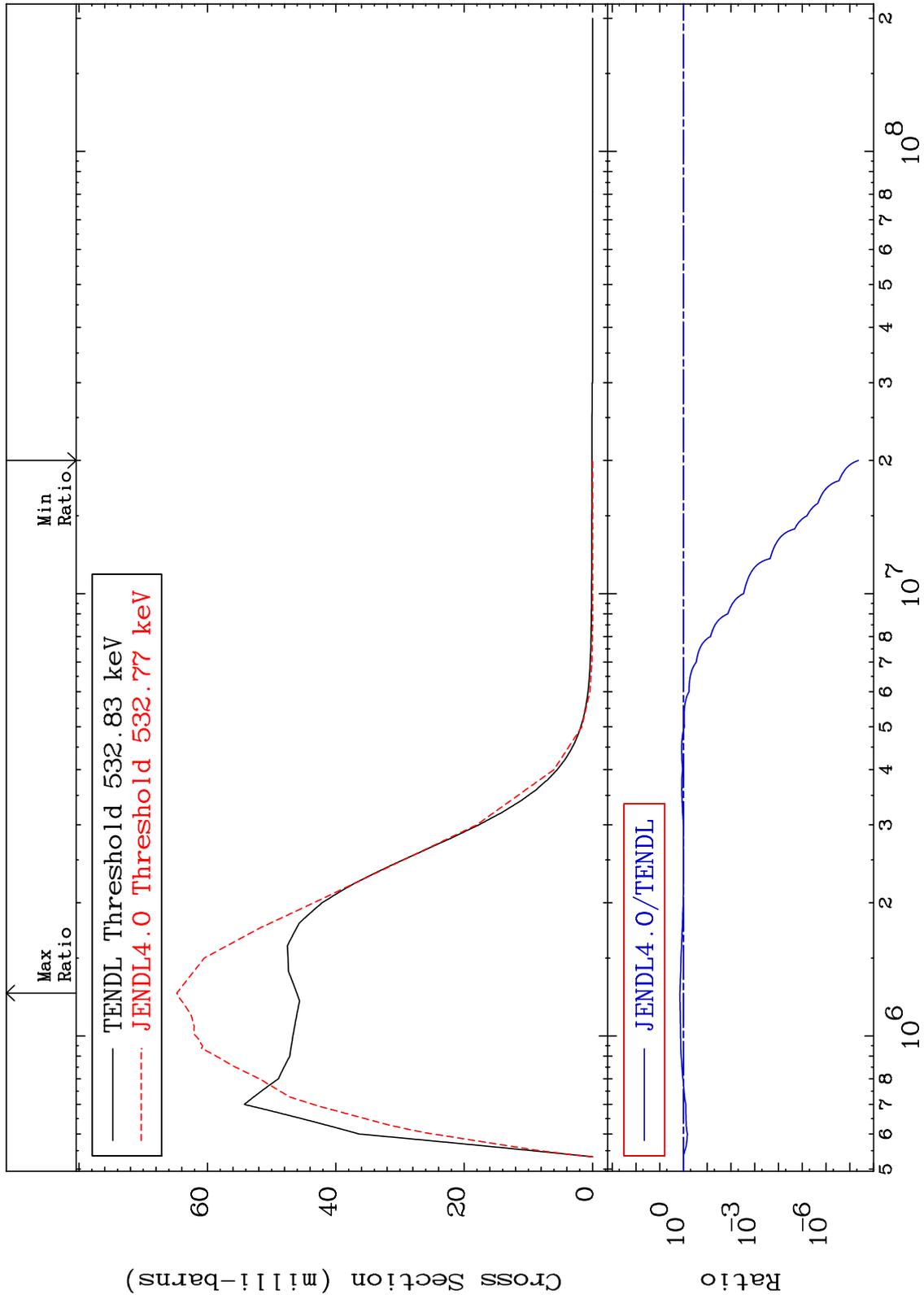
MAT 4440

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

44-Ru-101  
-99.78 To 43.00 %



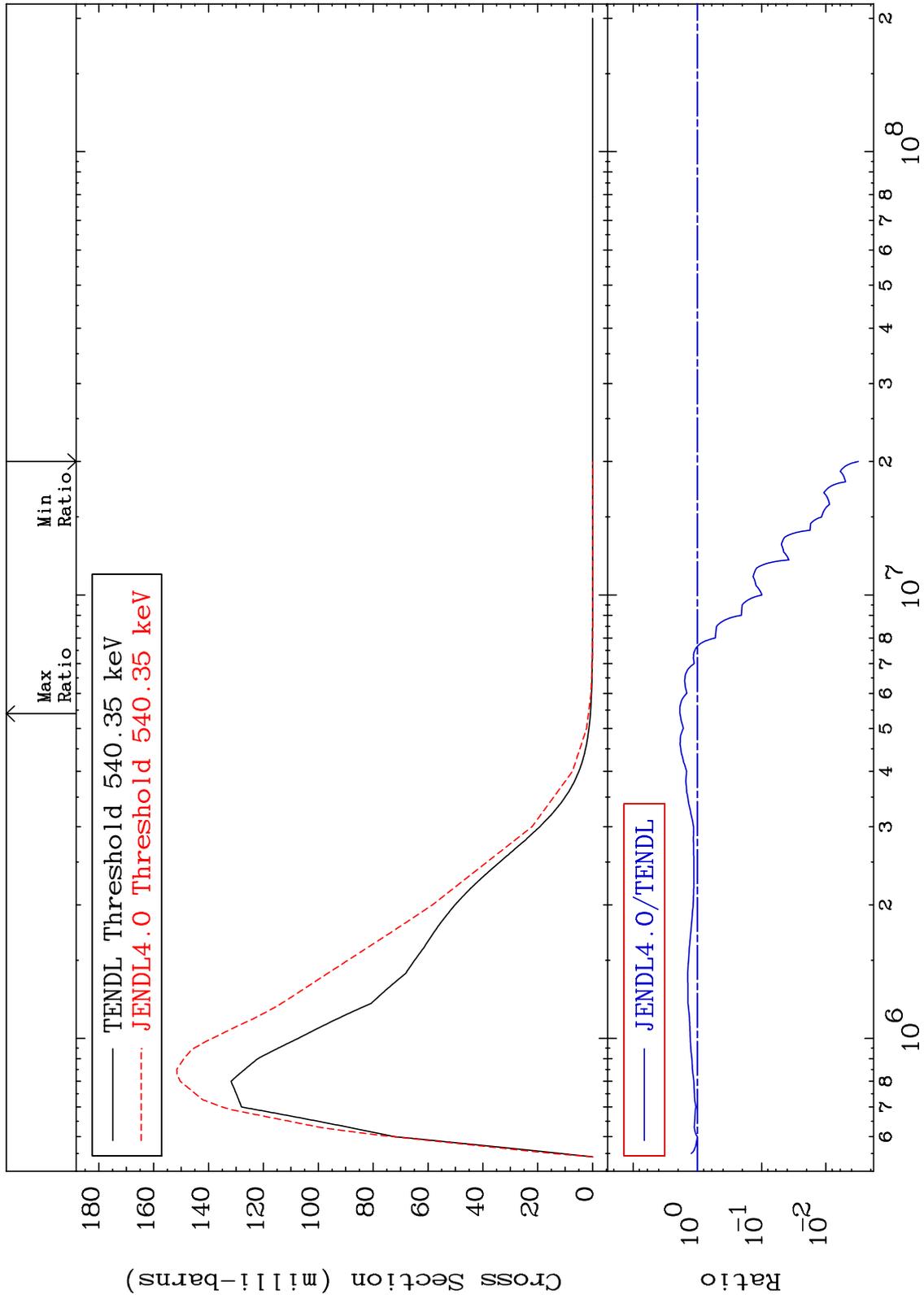
MAT 4440 MT= 56 (n,n') Level Cross Section 44-Ru-101  
 -100.0 To 40.56 %



44-Ru-101

Incident Energy (eV)

MAT 4440      MT= 57 (n,n') Level Cross Section      44-Ru-101  
 -99.69 To 87.10 %

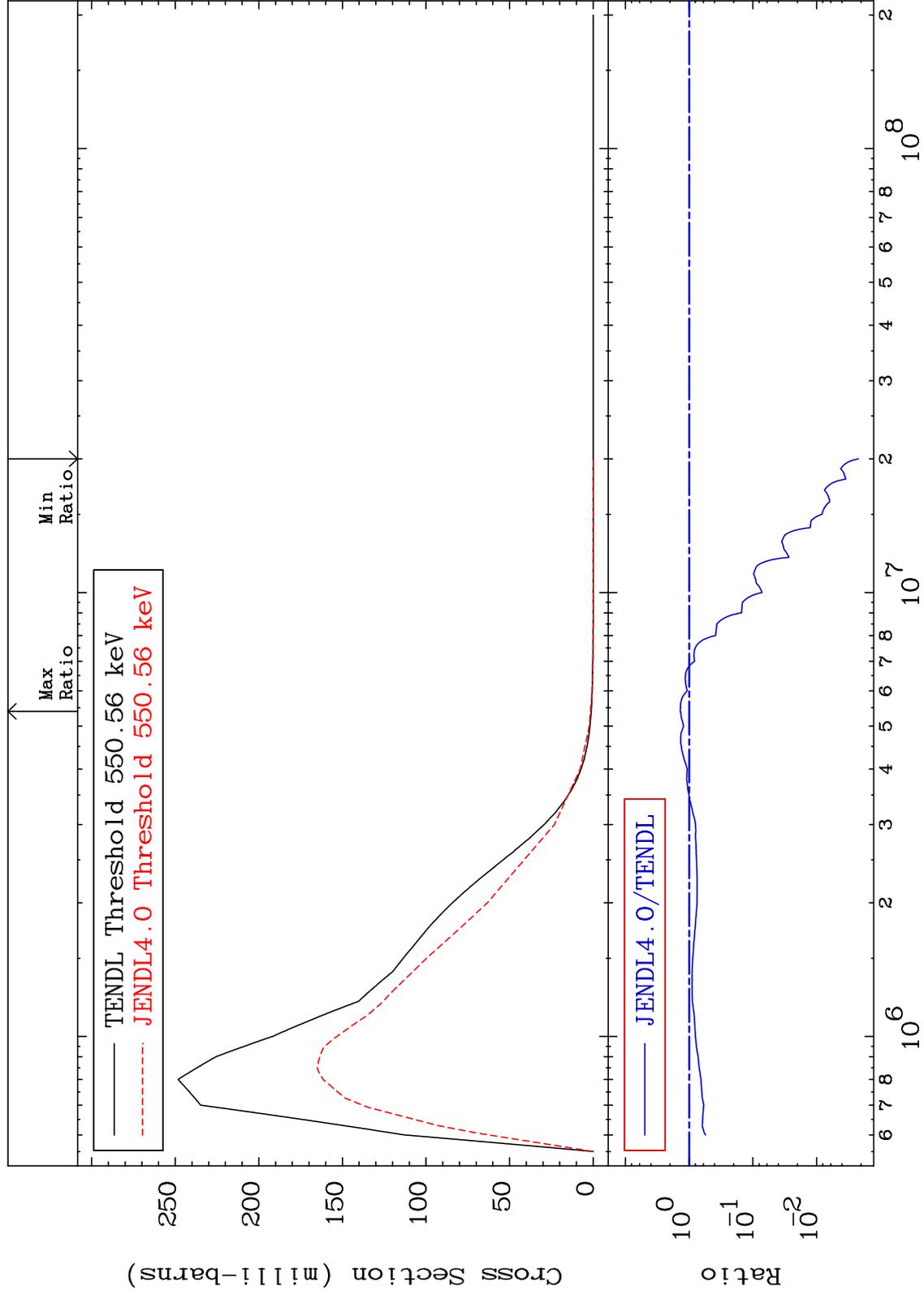


15      Incident Energy (eV)      44-Ru-101

MAT 4440

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

44-Ru-101  
-99.78 To 37.38 %

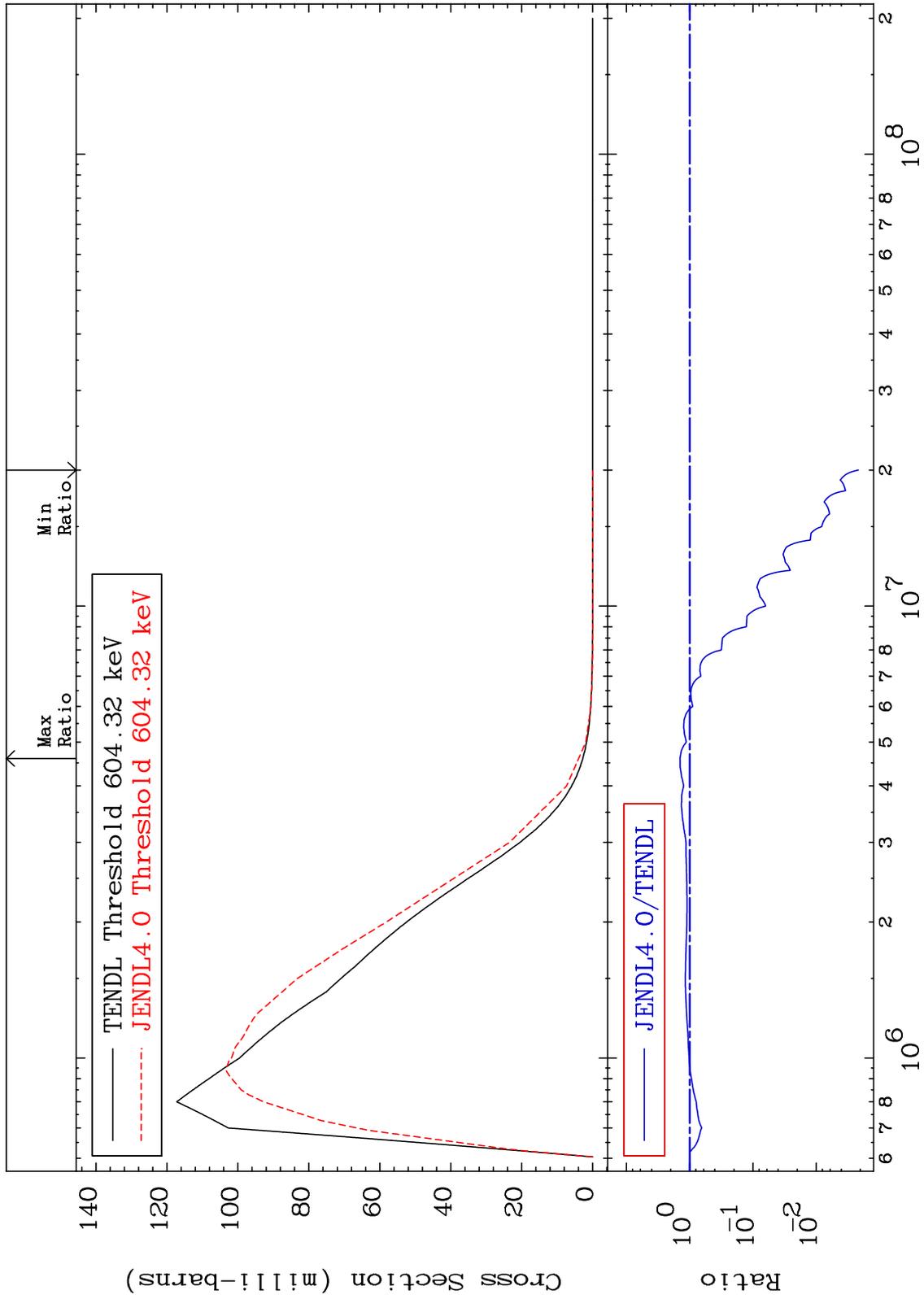


16

Incident Energy (eV)

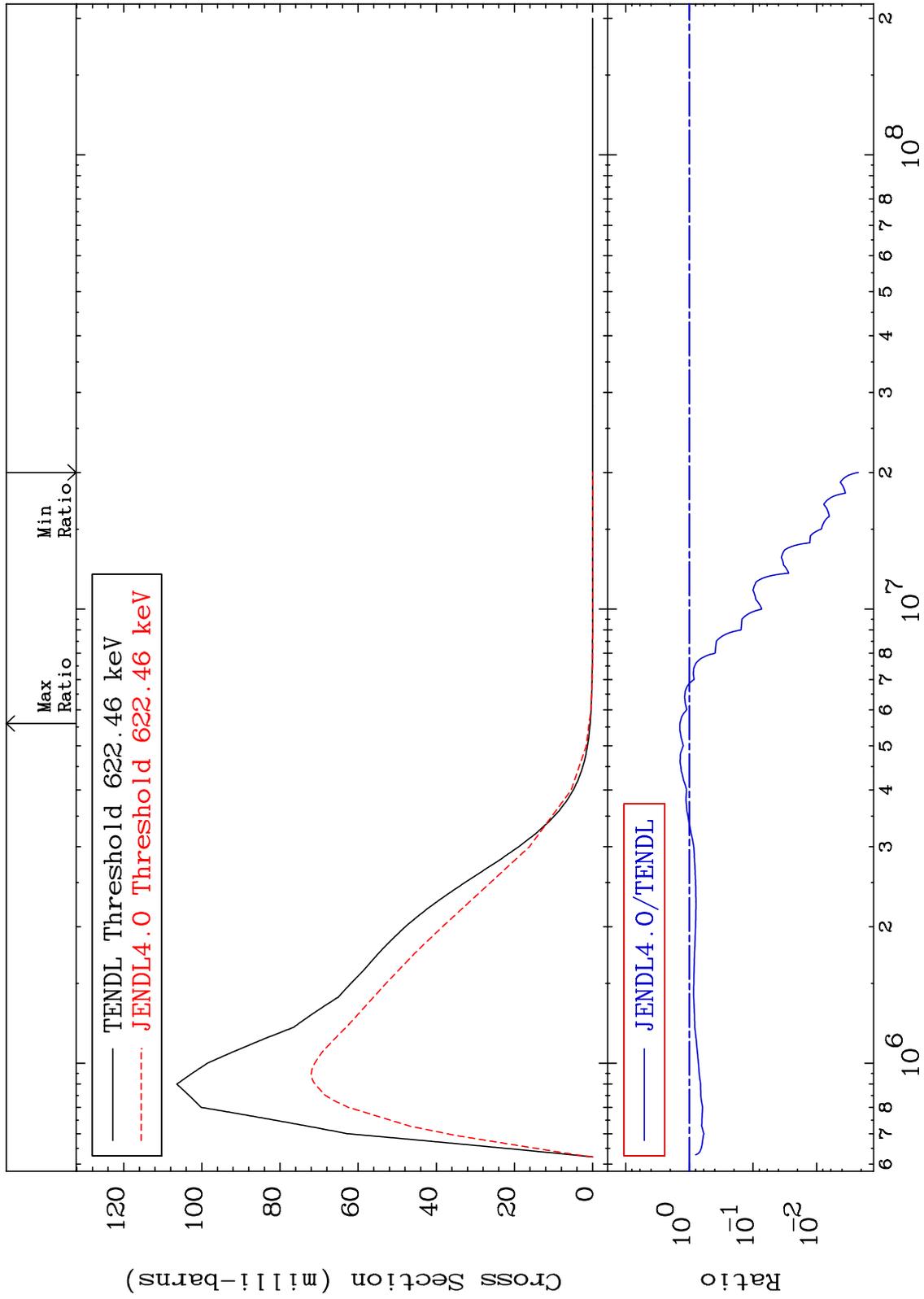
44-Ru-101

MAT 4440 MT= 59 (n,n') Level Cross Section 44-Ru-101 -99.78 To 42.68 %

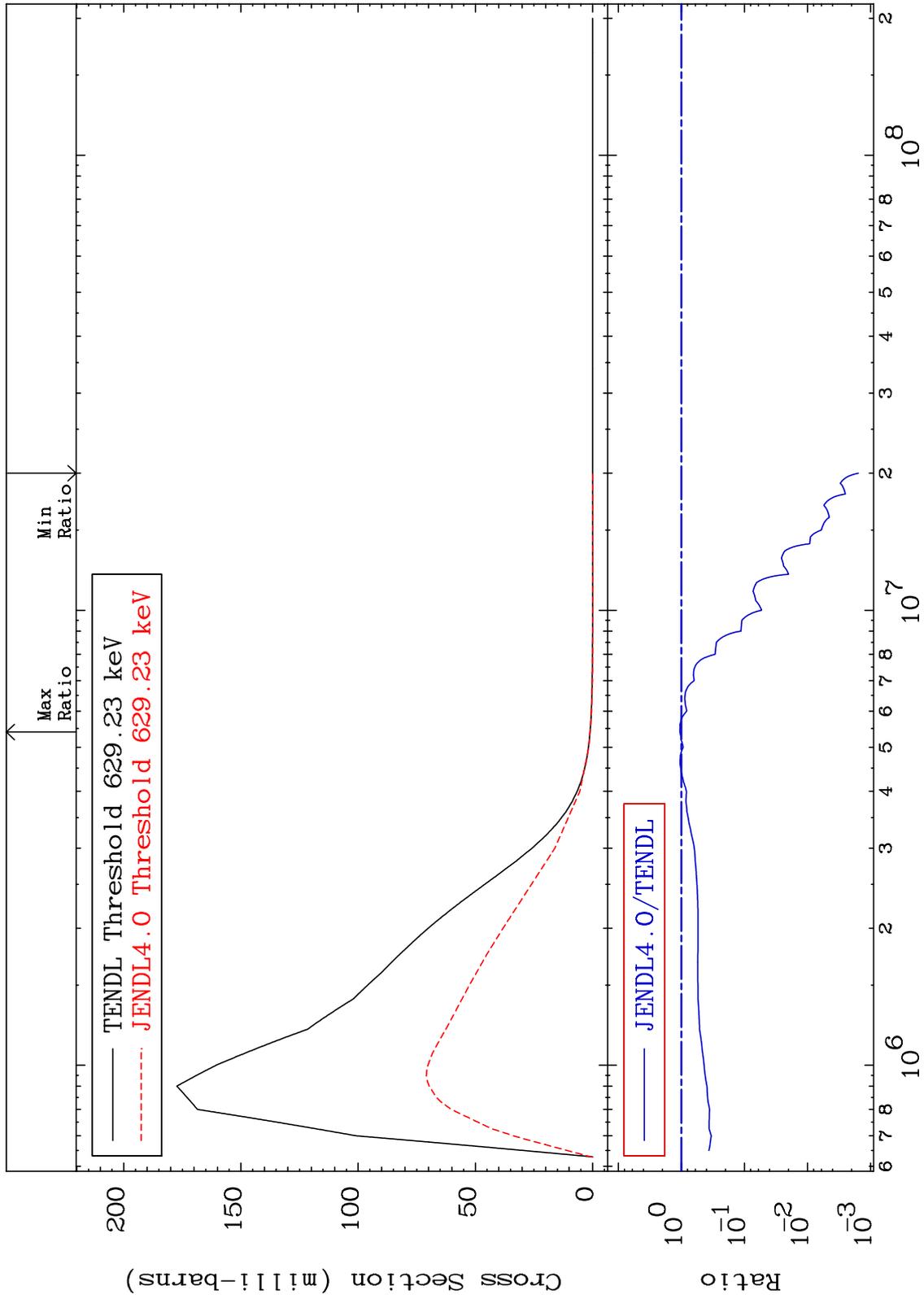


17 44-Ru-101 Incident Energy (eV)

MAT 4440      MT= 60 (n,n') Level      44-Ru-101  
 Cross Section      -99.78 To 40.97 %

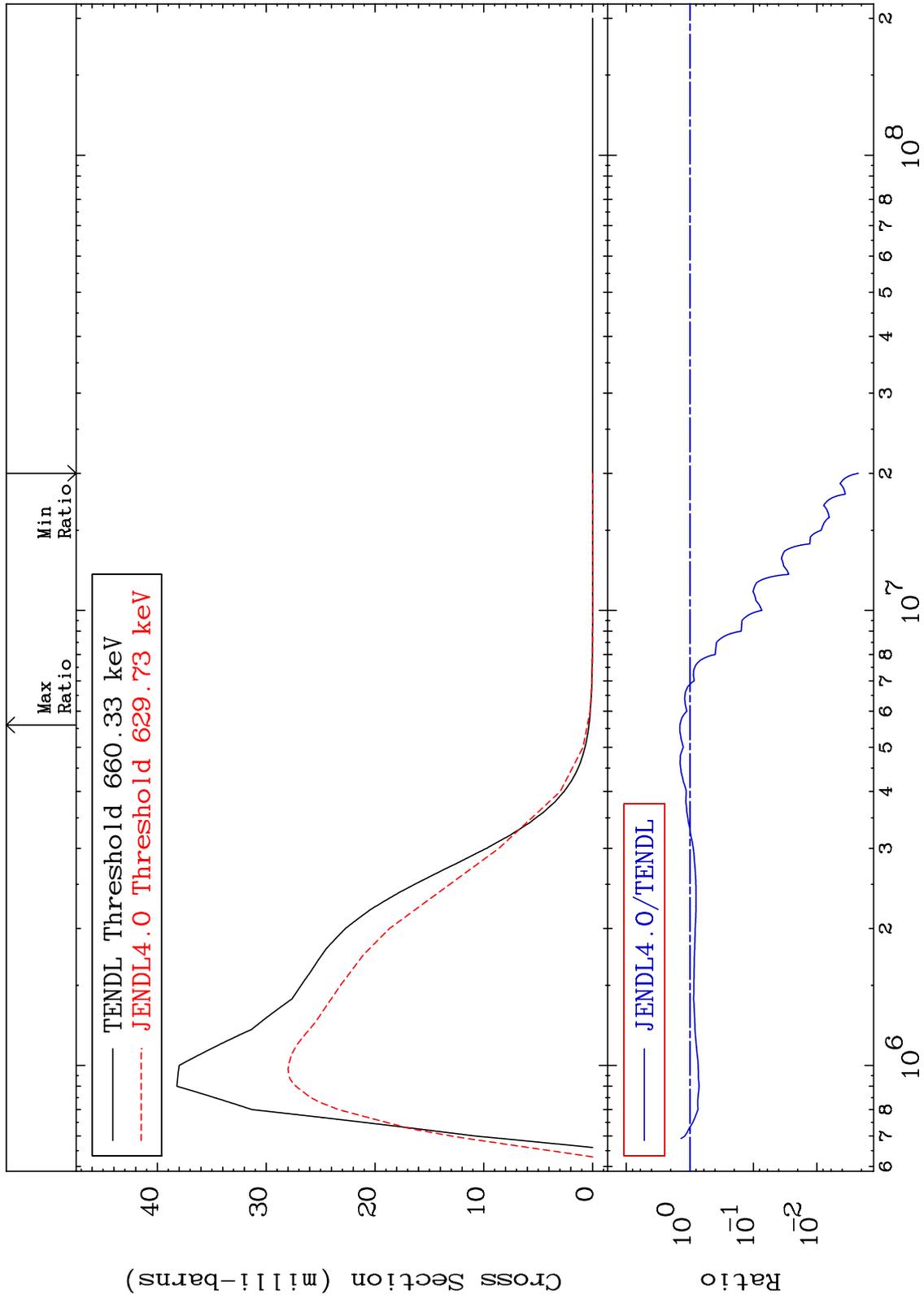


MAT 4440 MT= 61 (n,n') Level Cross Section 44-Ru-101  
 -99.84 To 5.467 %



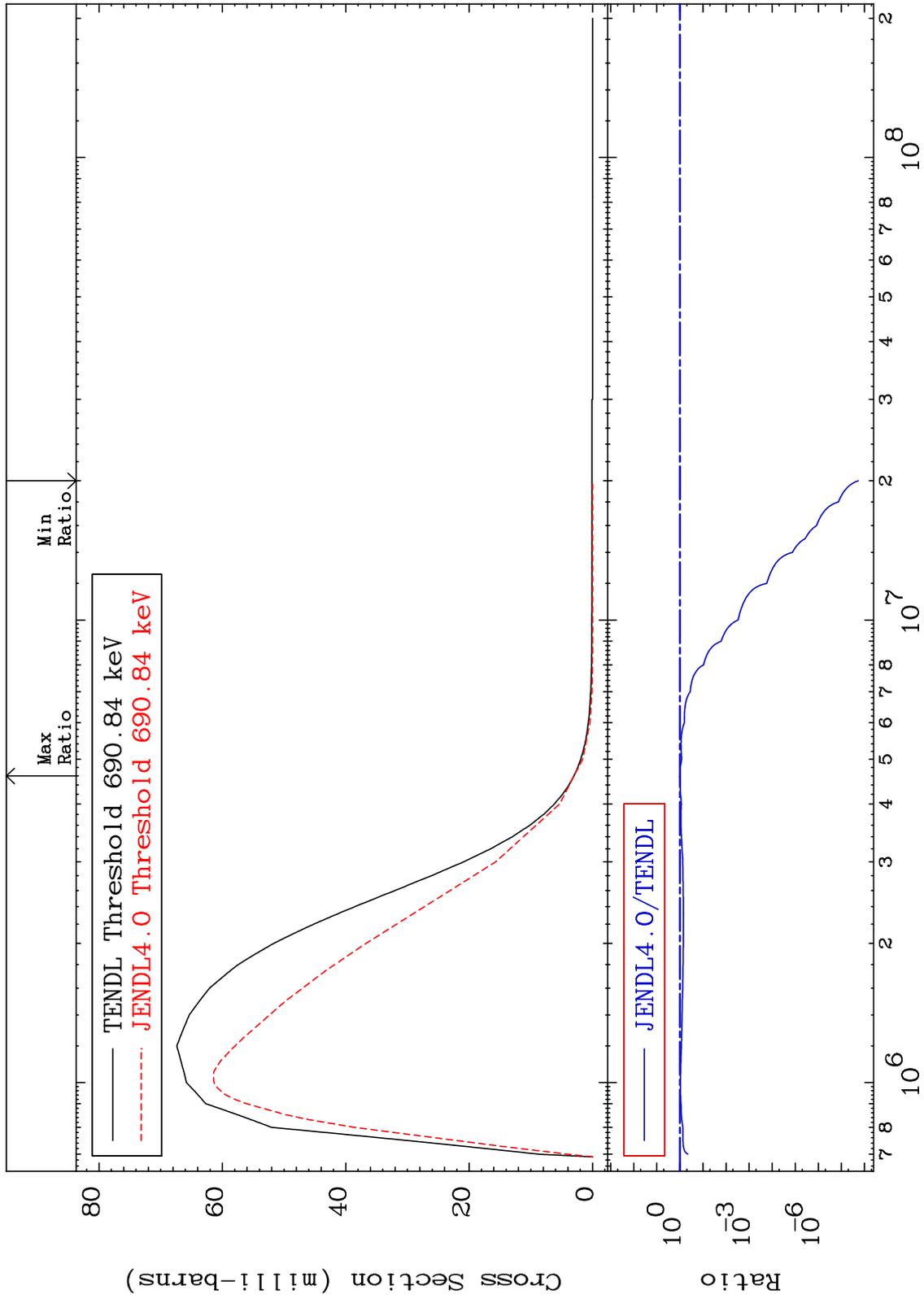
19 Incident Energy (eV) 44-Ru-101

MAT 4440 MT= 62 (n,n') Level Cross Section 44-Ru-101 -99.78 To 43.03 %



20 Incident Energy (eV) 44-Ru-101

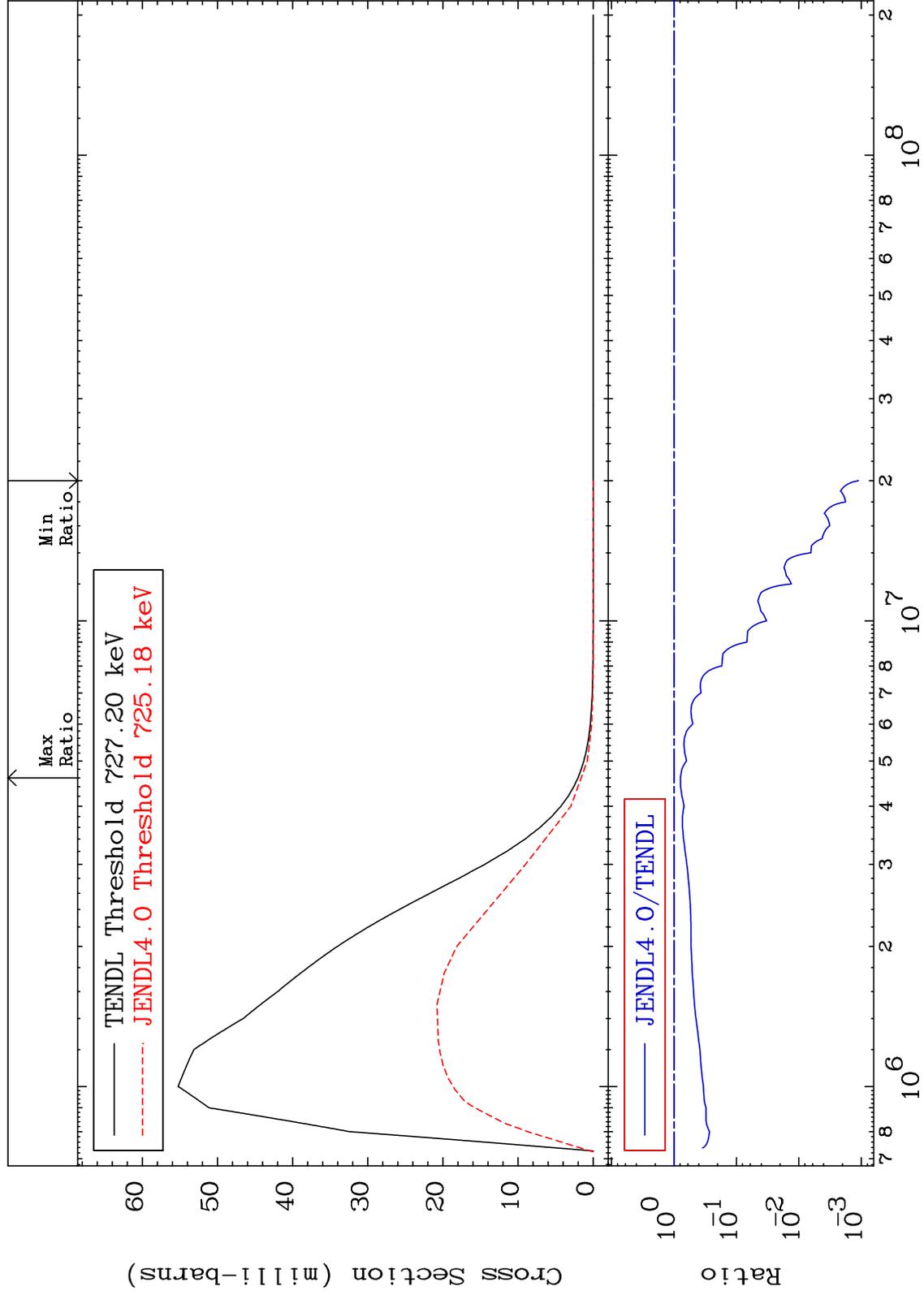
MAT 4440 MT= 63 (n,n') Level Cross Section 44-Ru-101  
 -100.0 To -0.536%



MAT 4440

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

44-Ru-101  
-99.89 To -21.00%



22

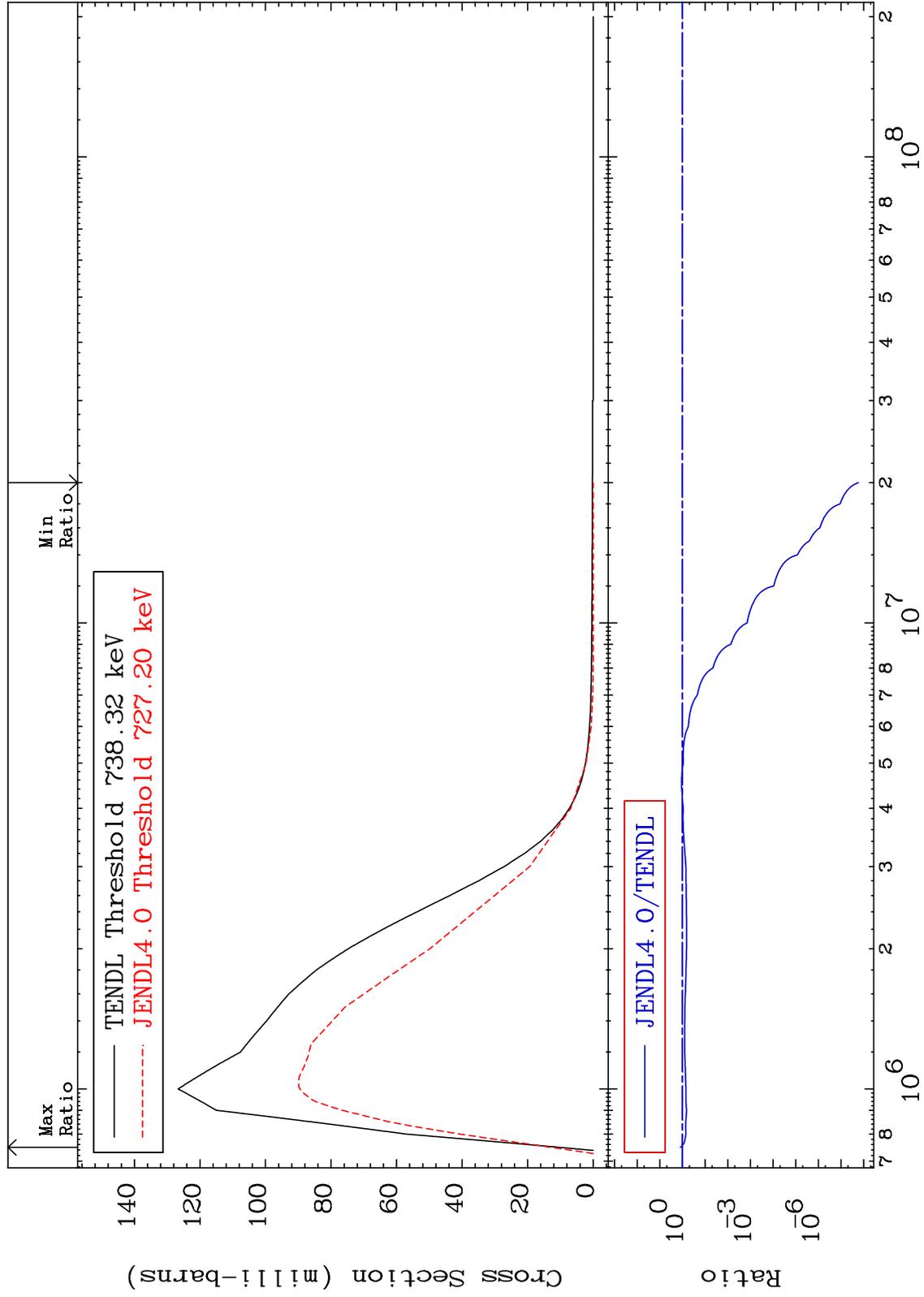
Incident Energy (eV)

44-Ru-101

MAT 4440

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

44-Ru-101  
-100.0 To 25.04 %



23

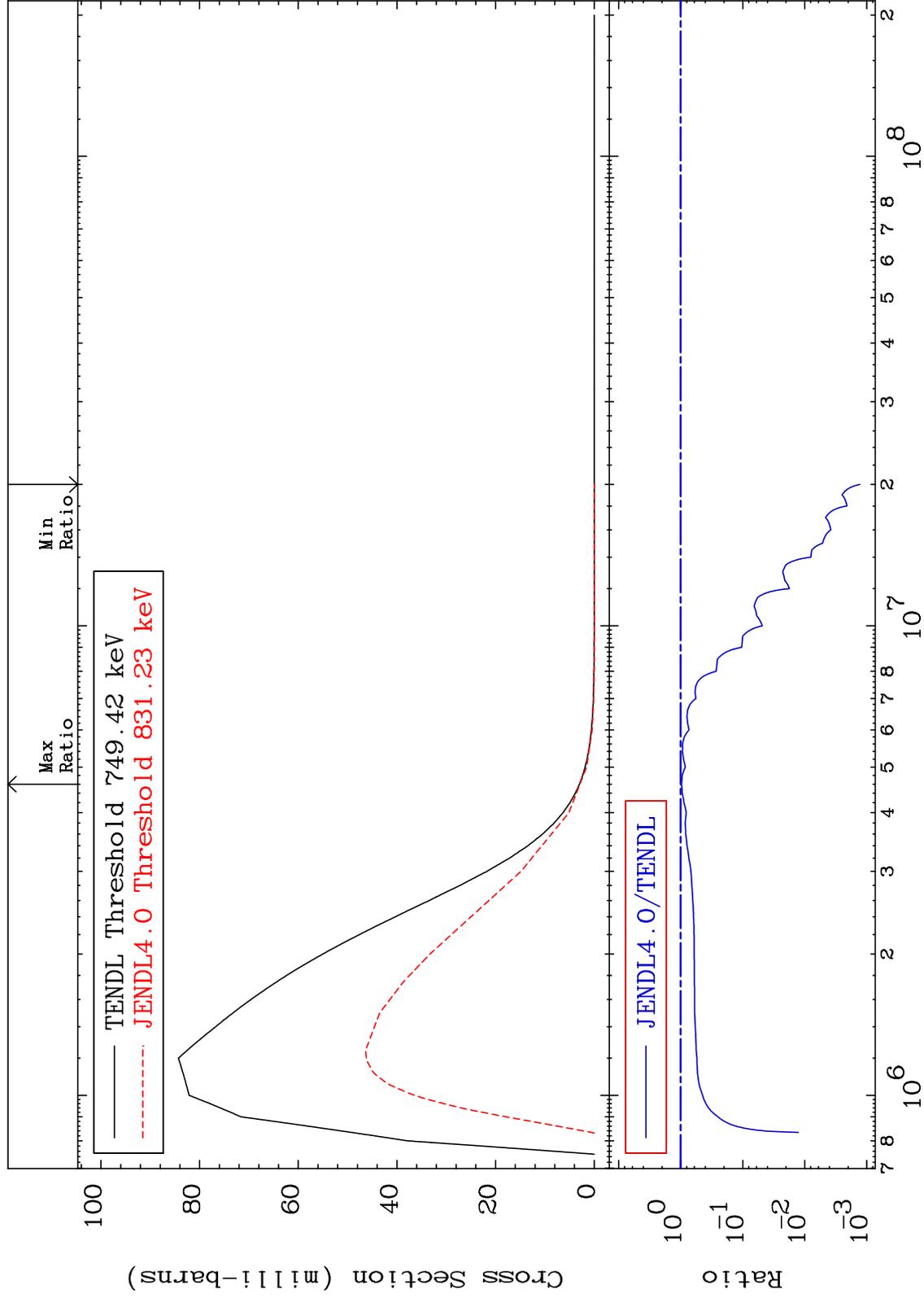
Incident Energy (eV)

44-Ru-101

MAT 4440

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

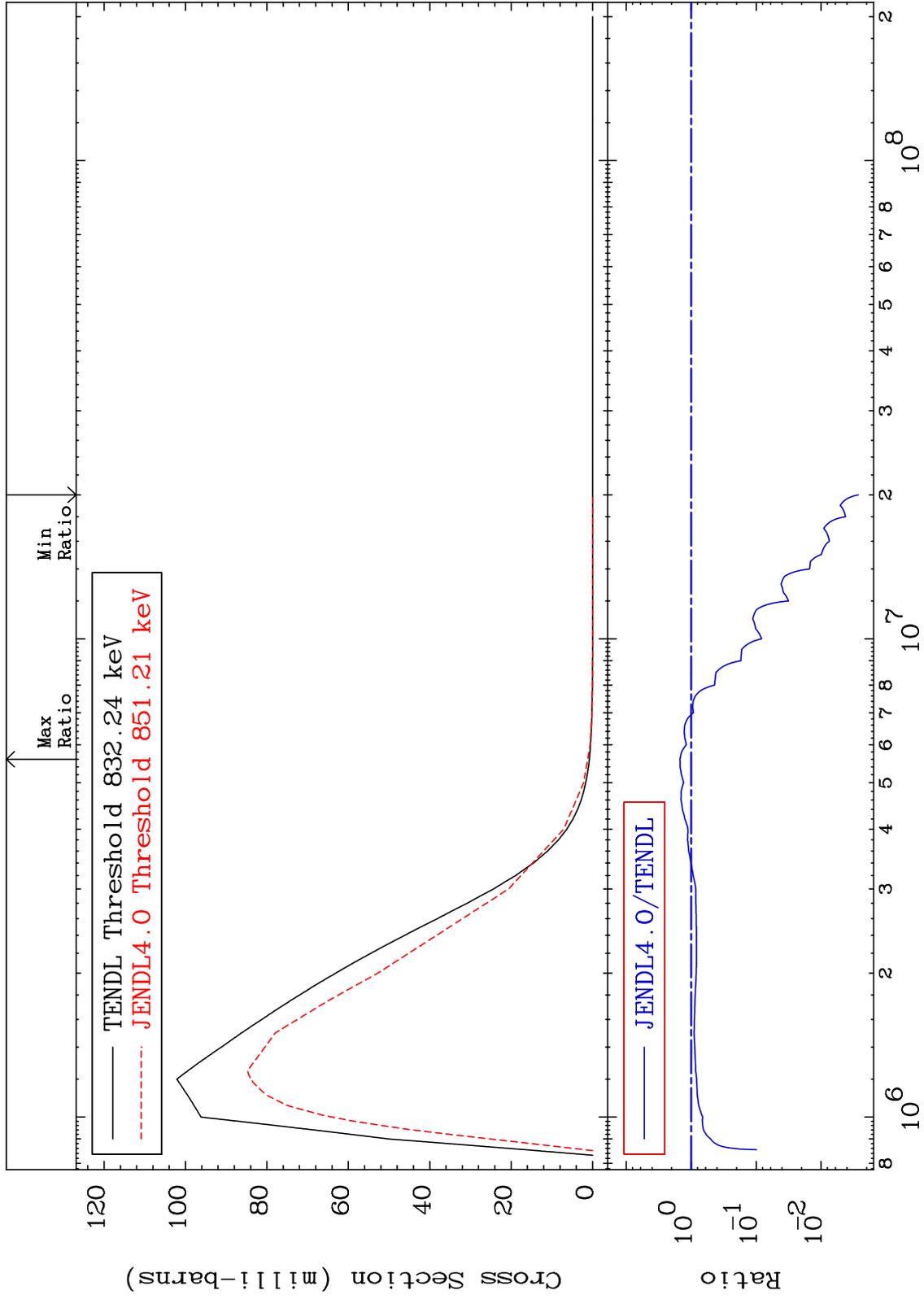
44-Ru-101  
-99.87 To -3.312%



MAT 4440

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

44-Ru-101  
-99.73 To 49.00 %



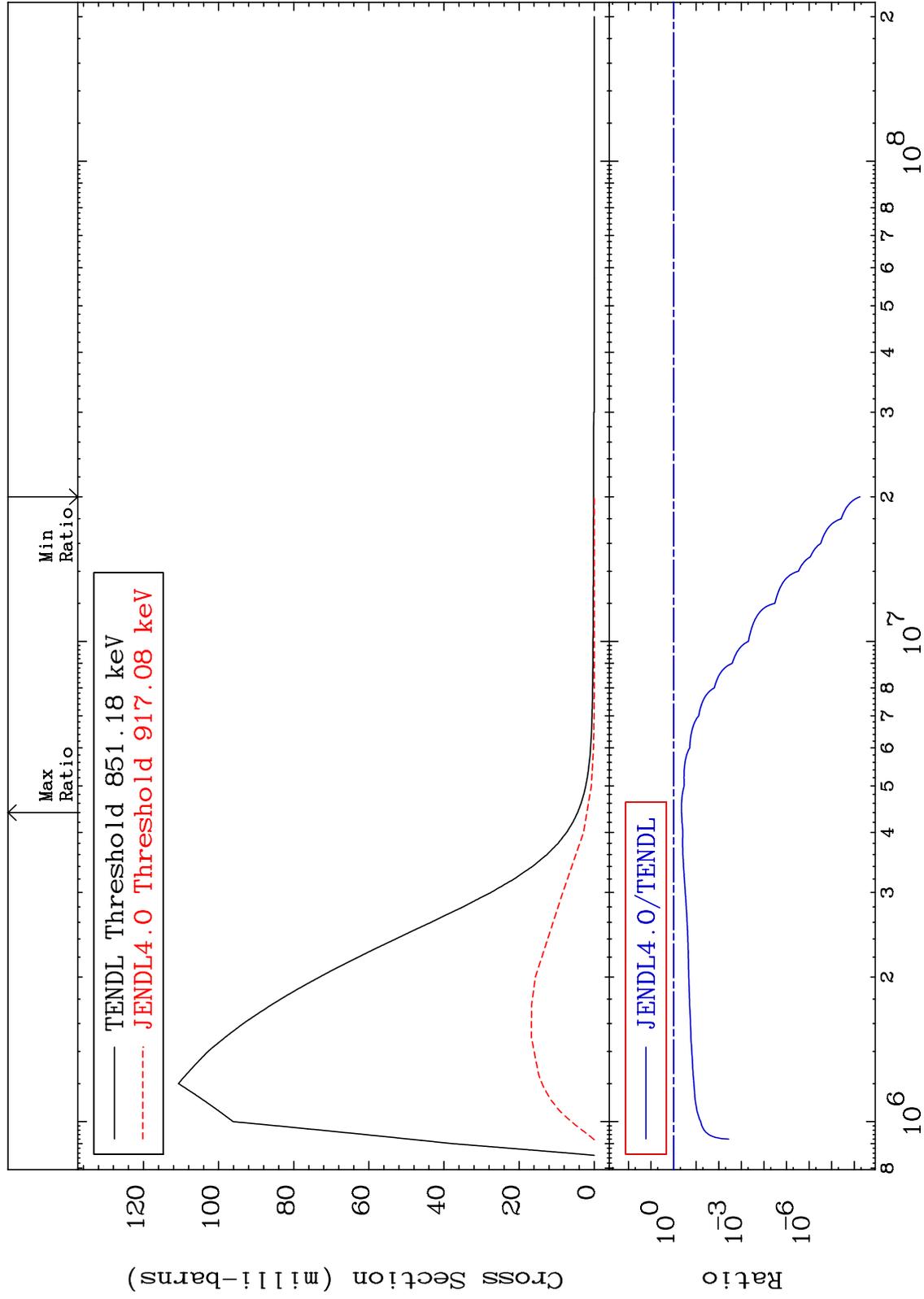
25

44-Ru-101

MAT 4440

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

44-Ru-101  
-100.0 To -55.71%



26

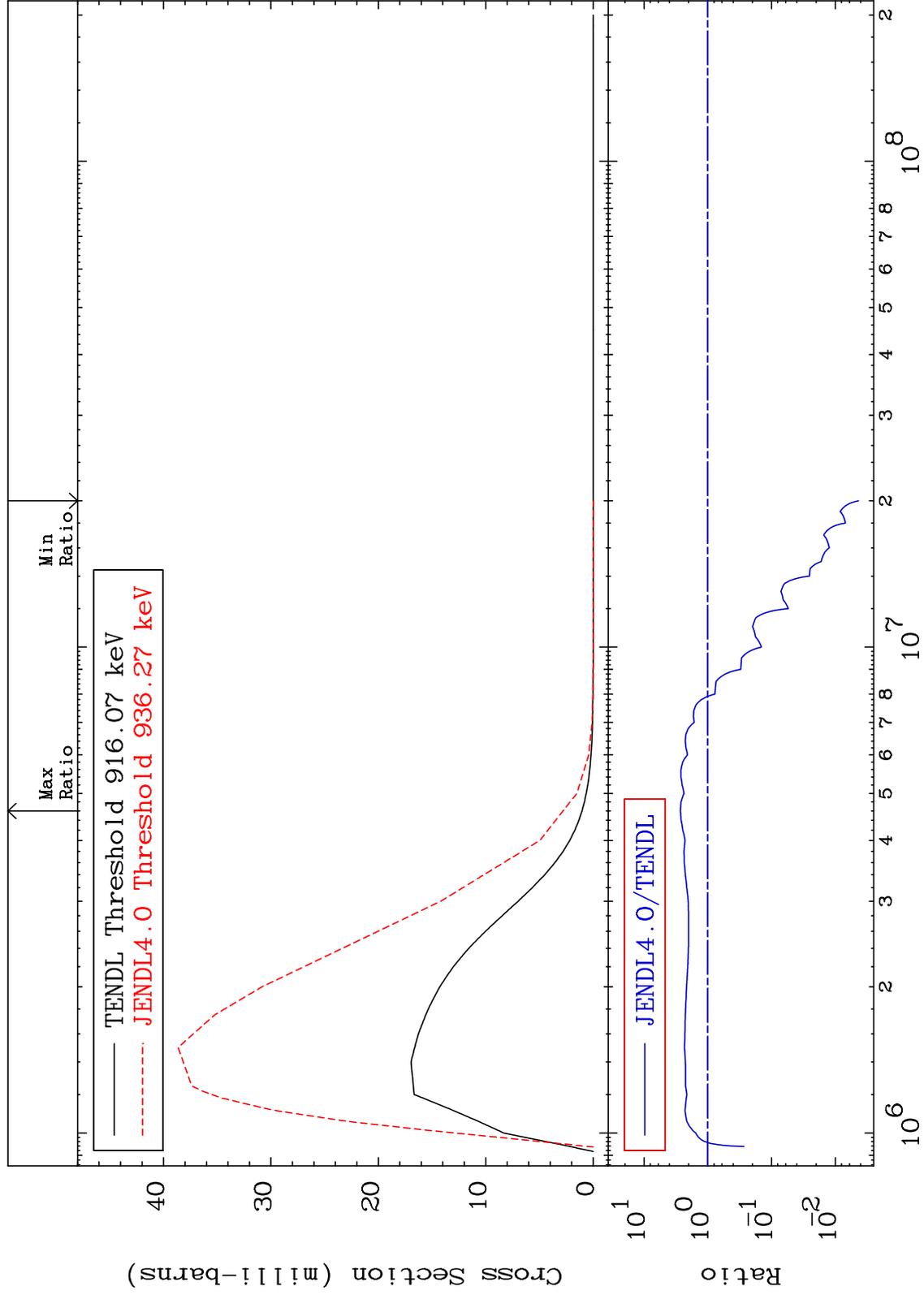
Incident Energy (eV)

44-Ru-101

MAT 4440

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

44-Ru-101  
-99.57 To 169.9 %



27

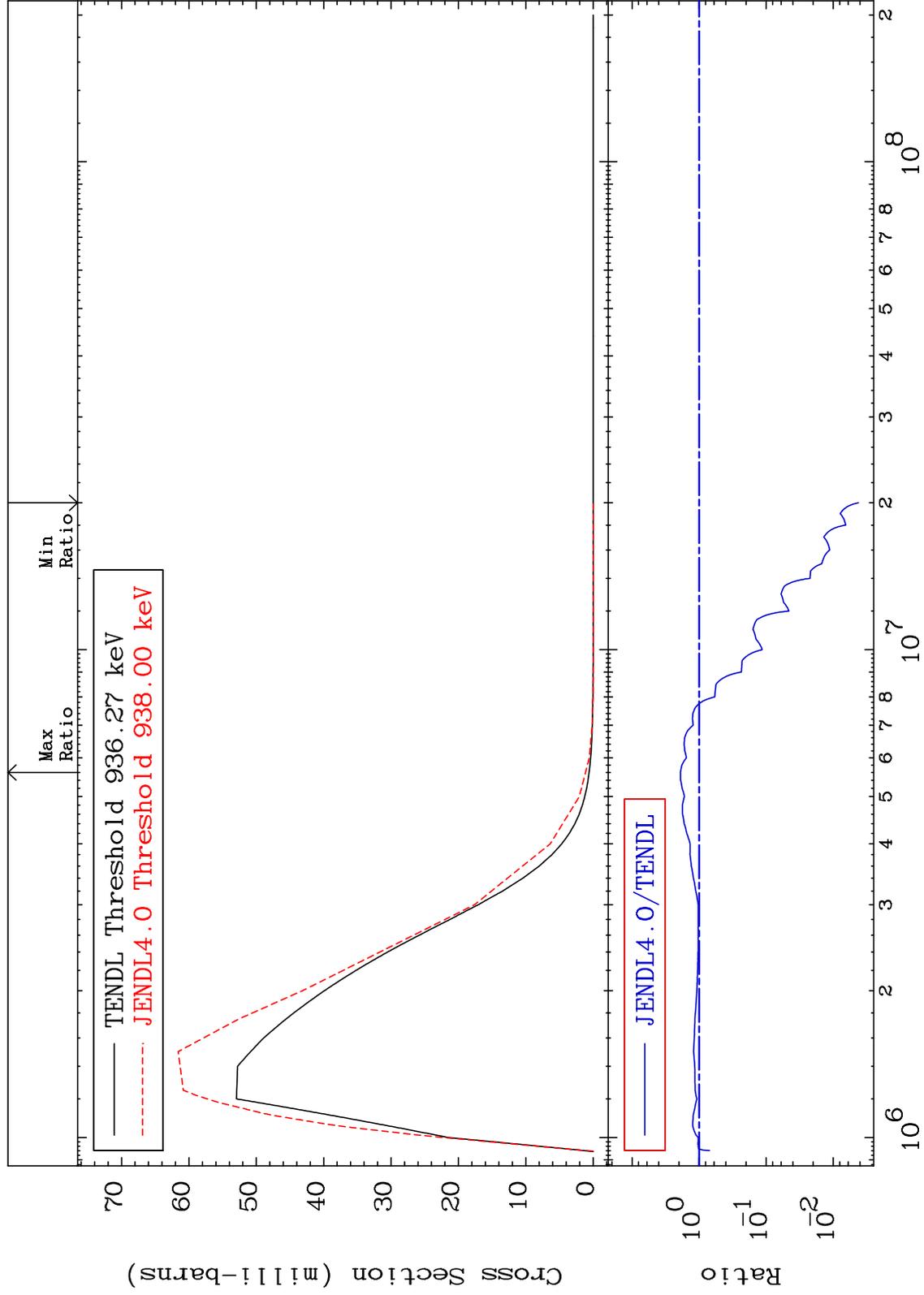
44-Ru-101

44-Ru-101

MAT 4440

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

44-Ru-101  
-99.58 To 90.50 %



28

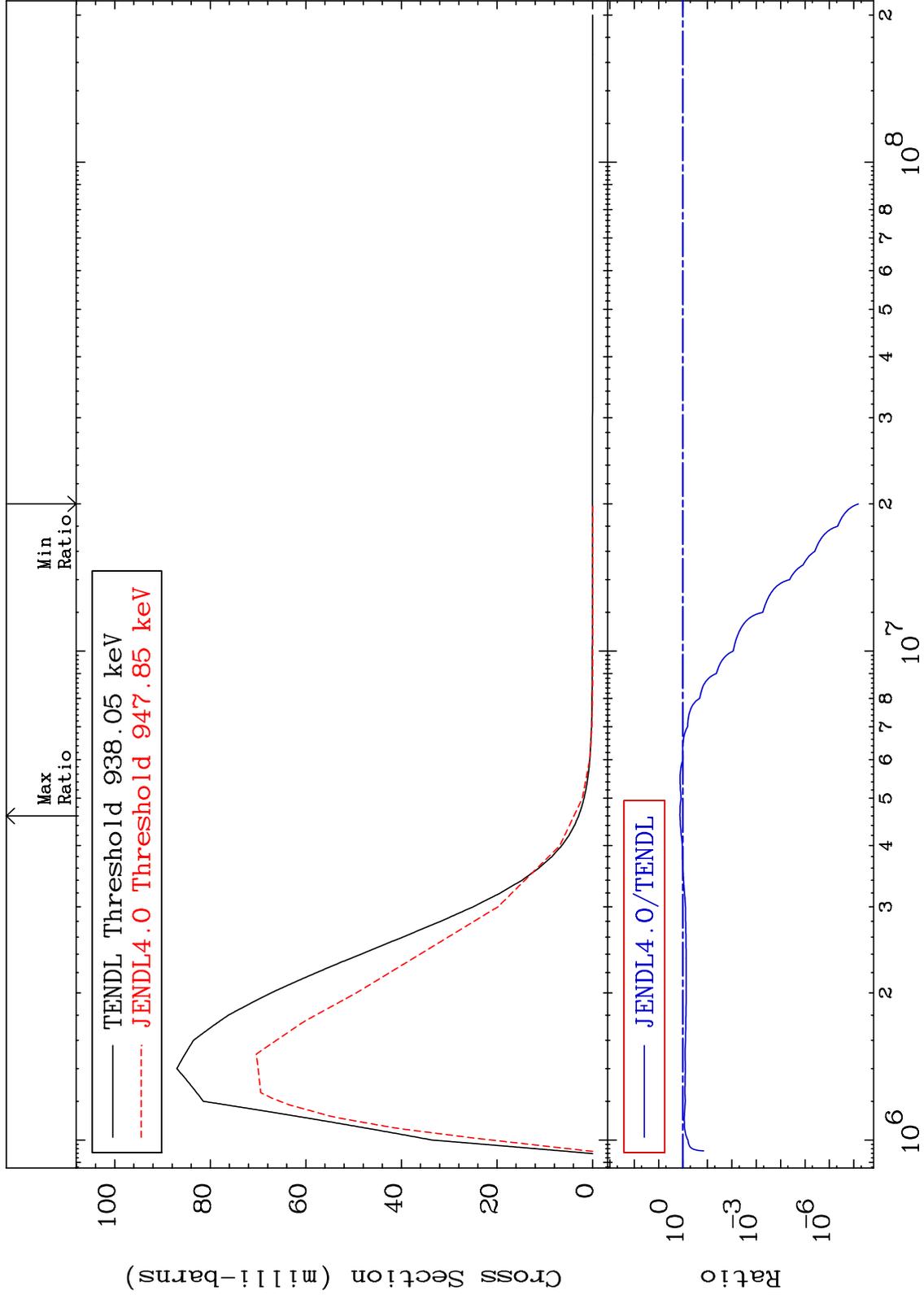
Incident Energy (eV)

44-Ru-101

MAT 4440

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

44-Ru-101  
-100.0 To 33.76 %



29

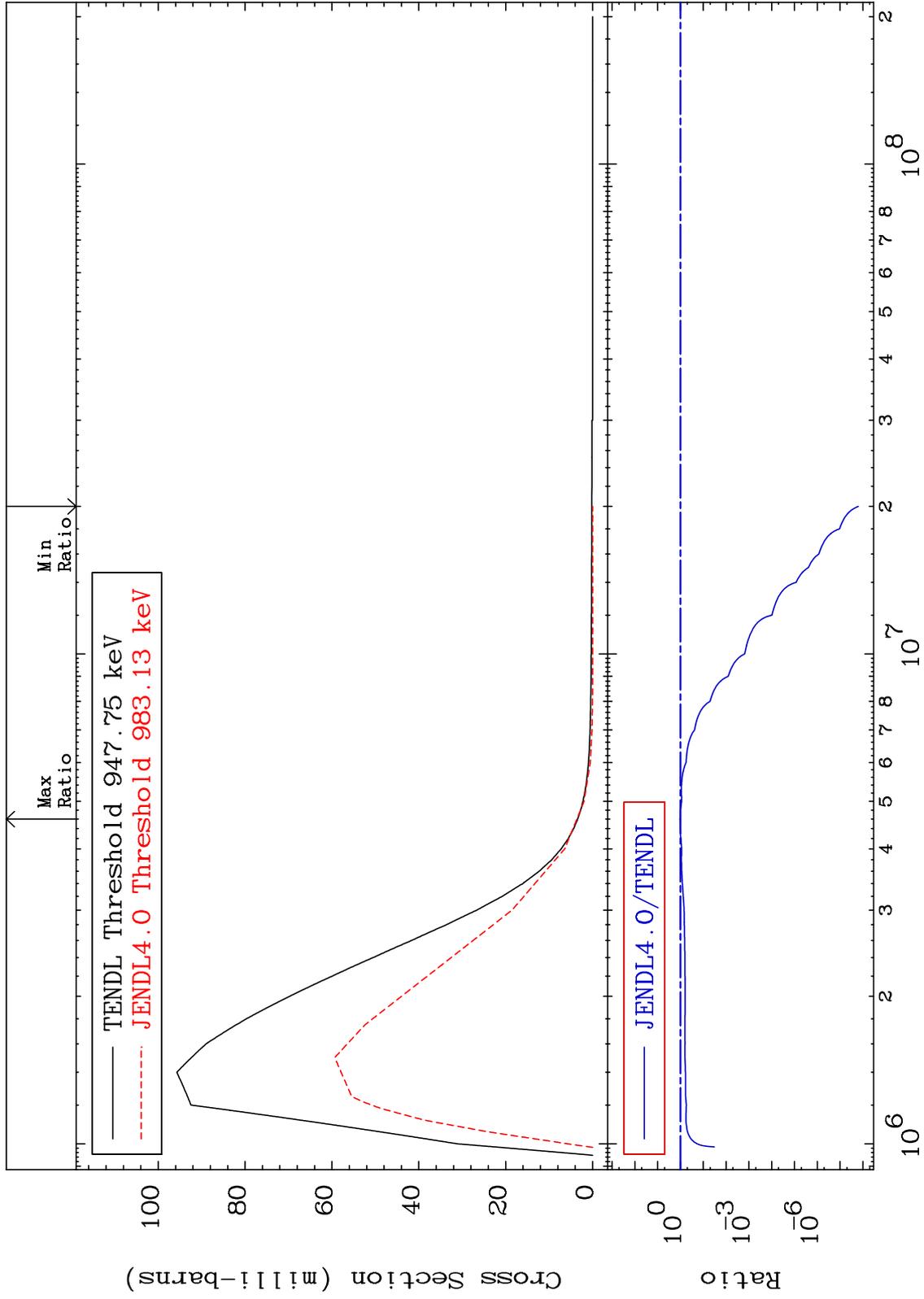
Incident Energy (eV)

44-Ru-101

MAT 4440

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

44-Ru-101  
-100.0 To 5.749 %

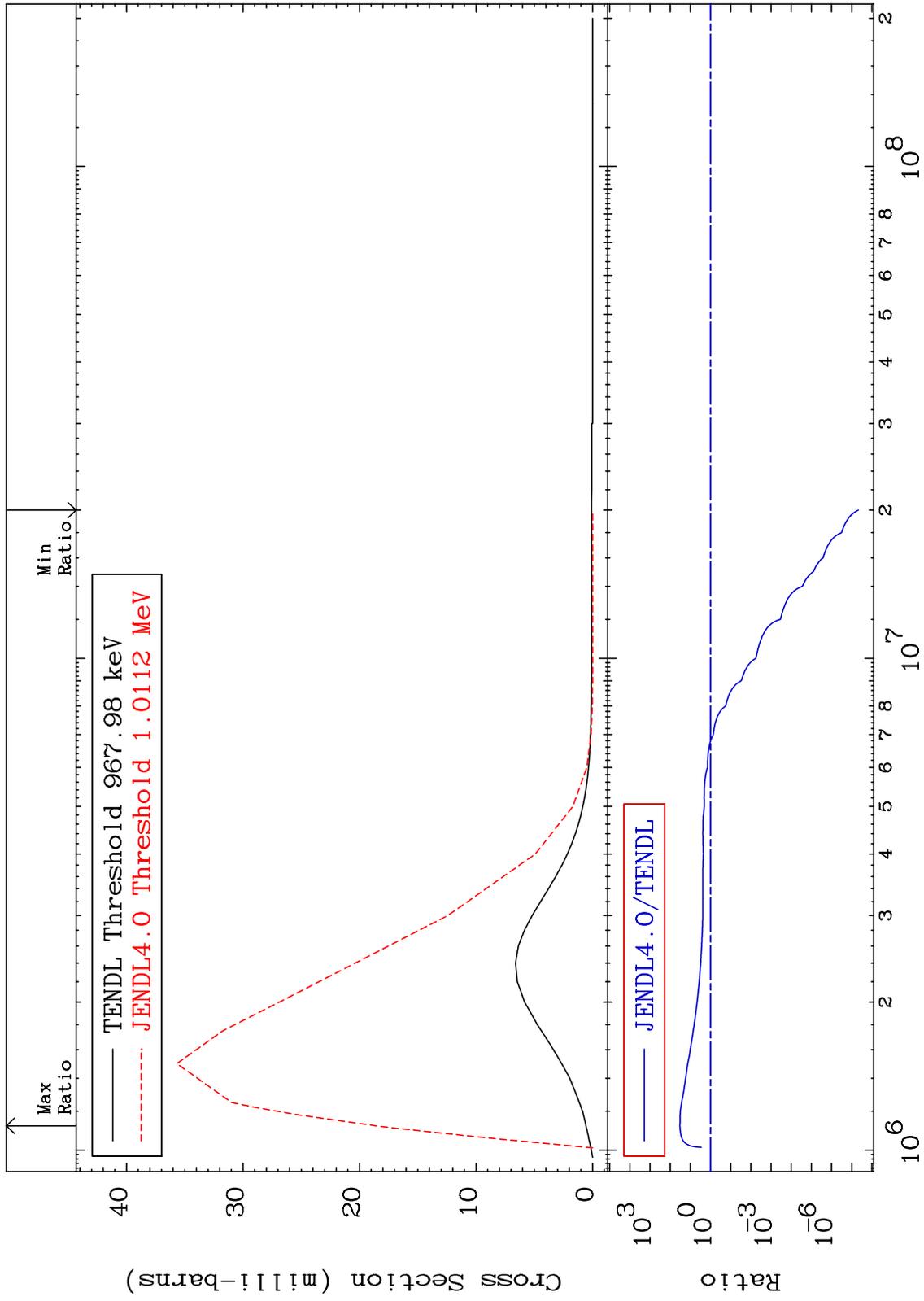


Incident Energy (eV)

44-Ru-101

30

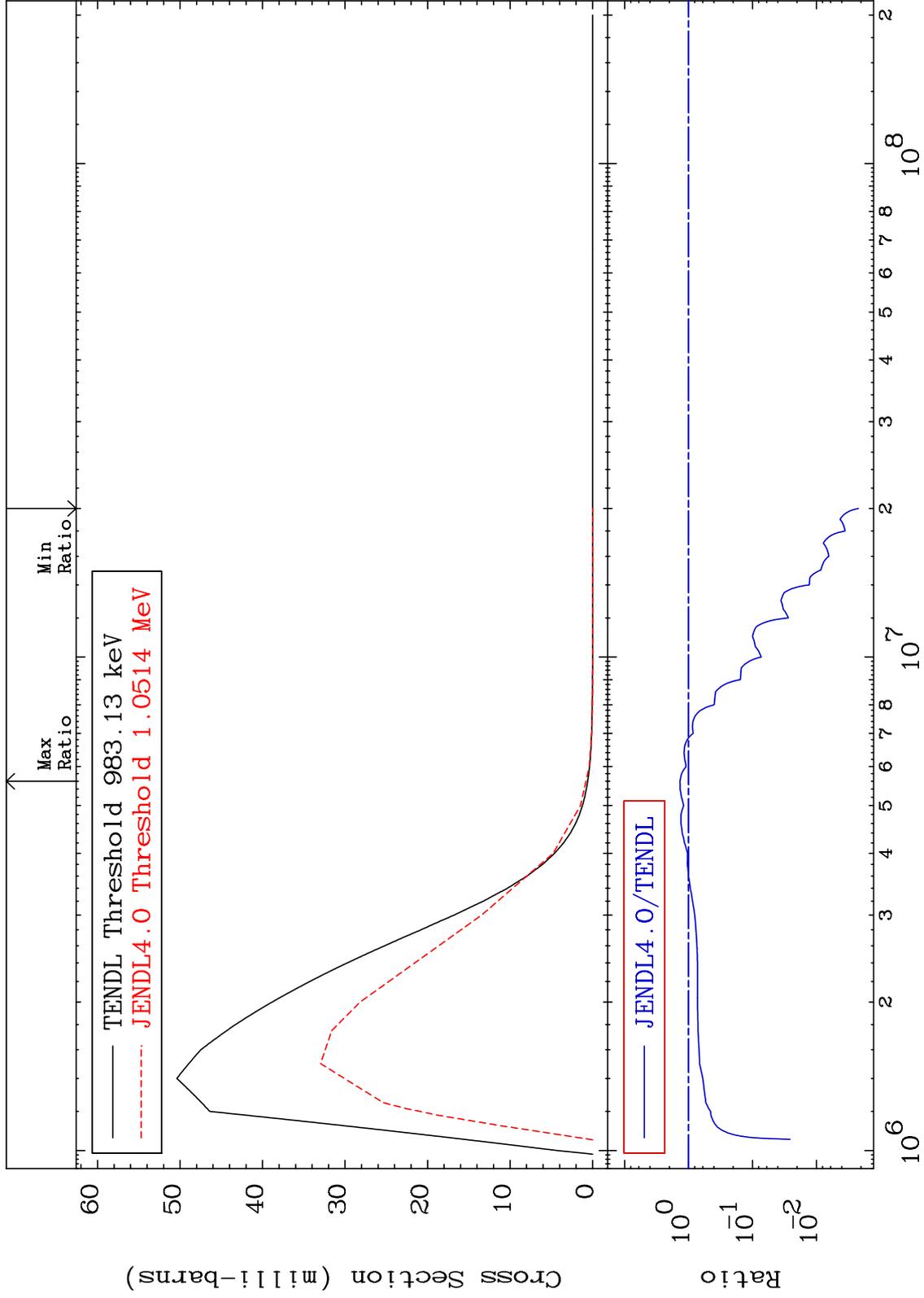
MAT 4440 MT= 73 (n,n') Level  
Cross Section 44-Ru-101  
-100.0 To 3185. %



MAT 4440

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

44-Ru-101  
-99.78 To 36.36 %

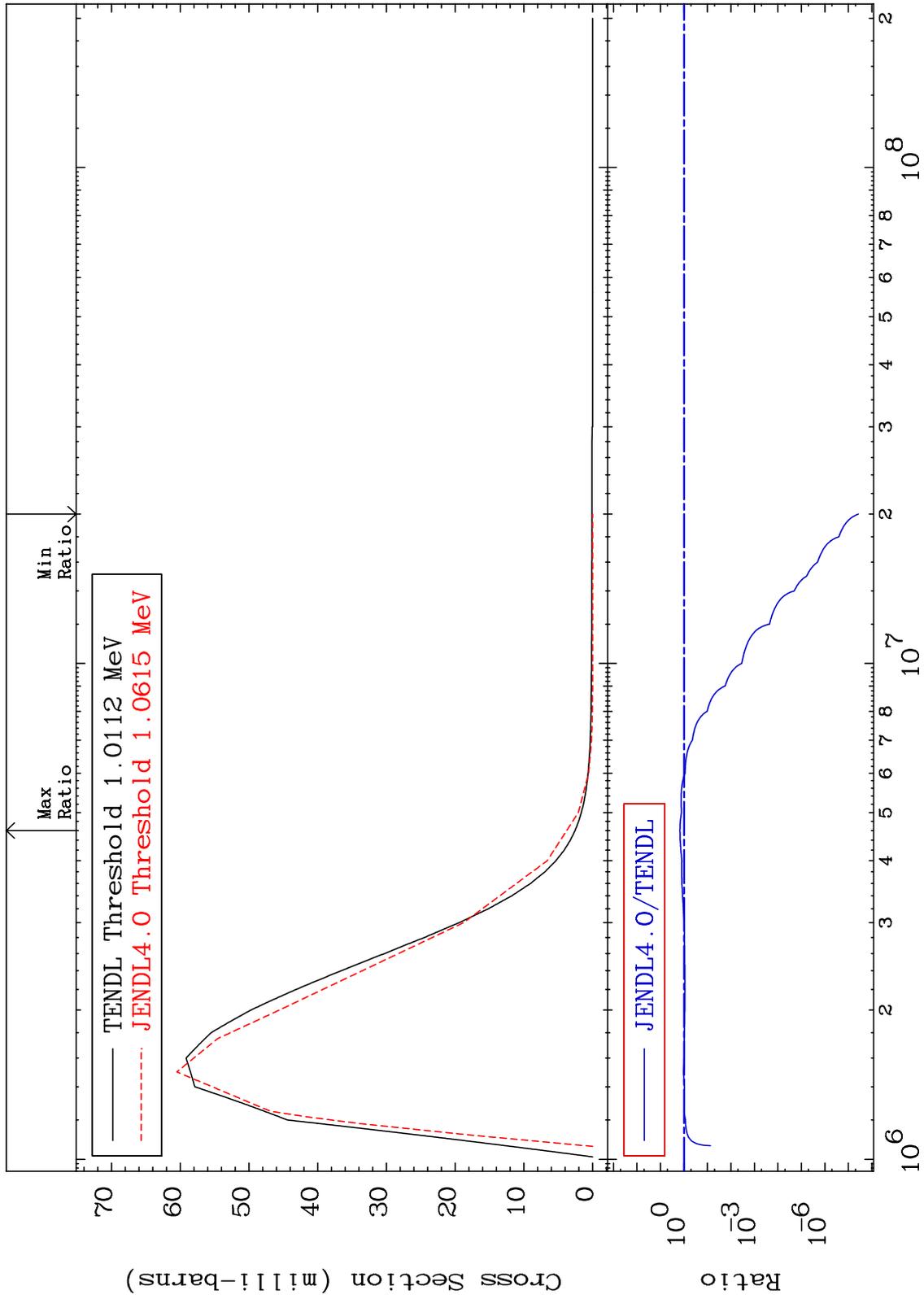


Incident Energy (eV)

44-Ru-101

32

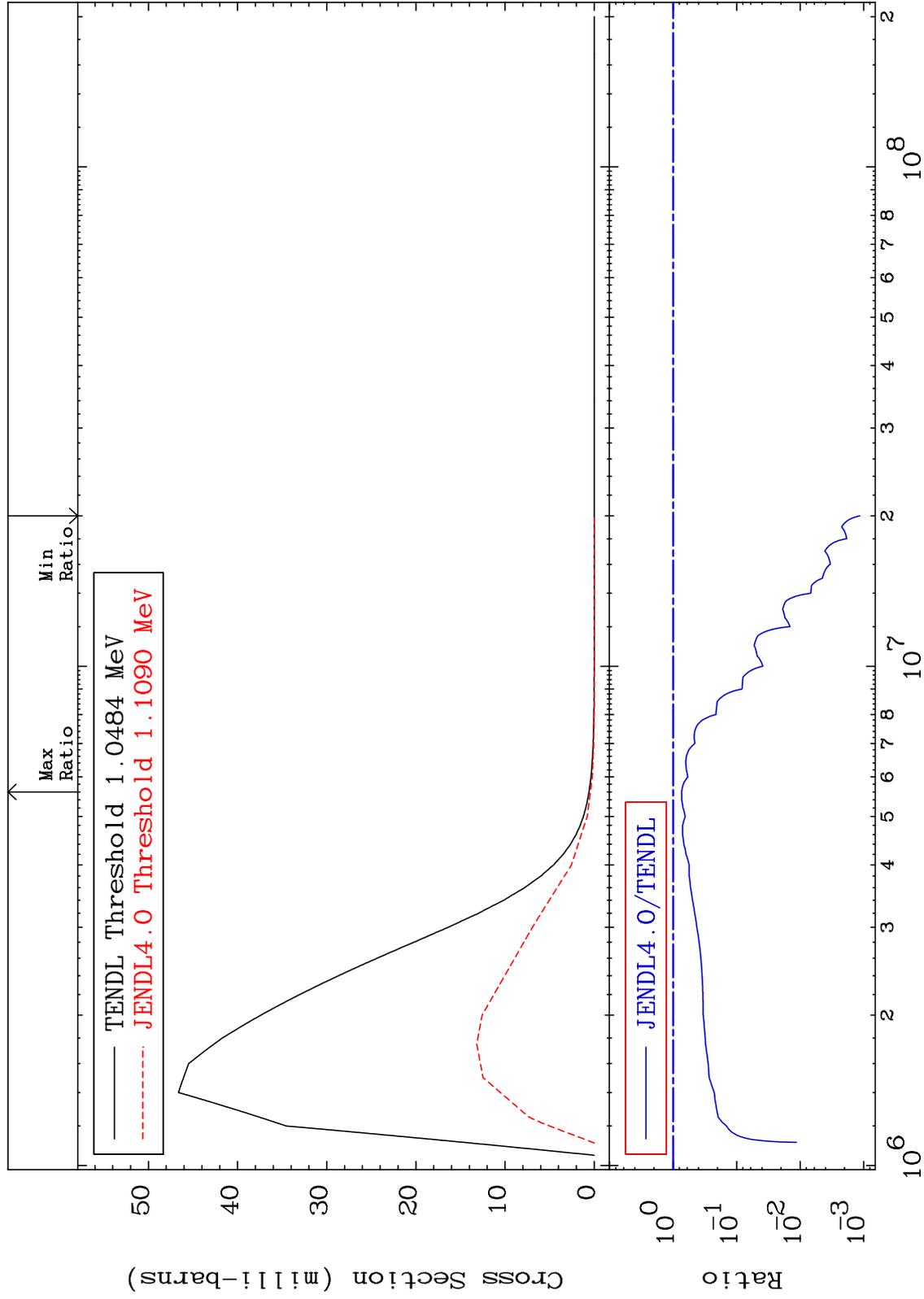
MAT 4440 MT= 75 (n,n') Level  
Cross Section 44-Ru-101  
-100.0 To 47.96 %



MAT 4440

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

44-Ru-101  
-99.89 To -26.35%



34

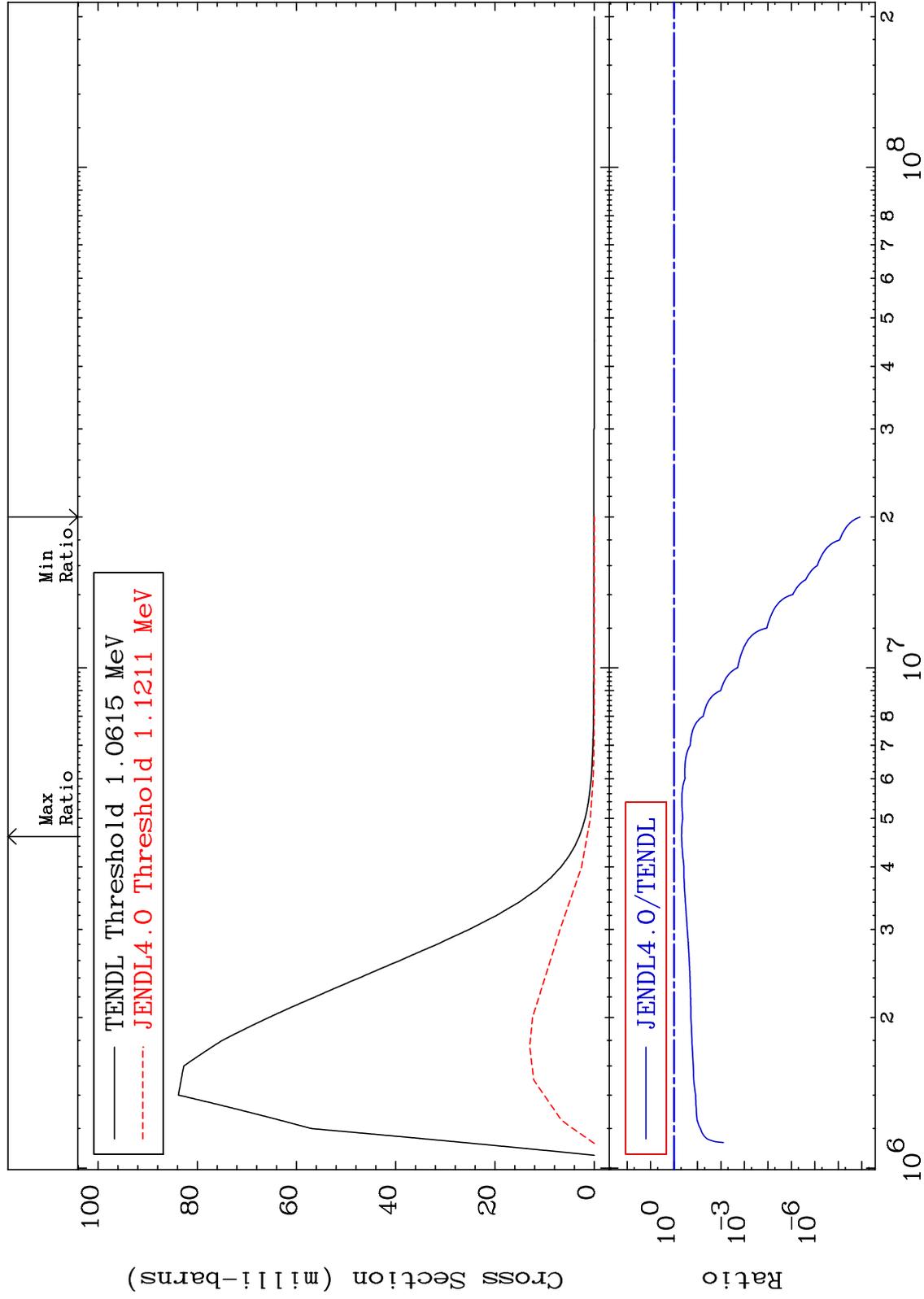
Incident Energy (eV)

44-Ru-101

MAT 4440

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

44-Ru-101  
-100.0 To -52.27%

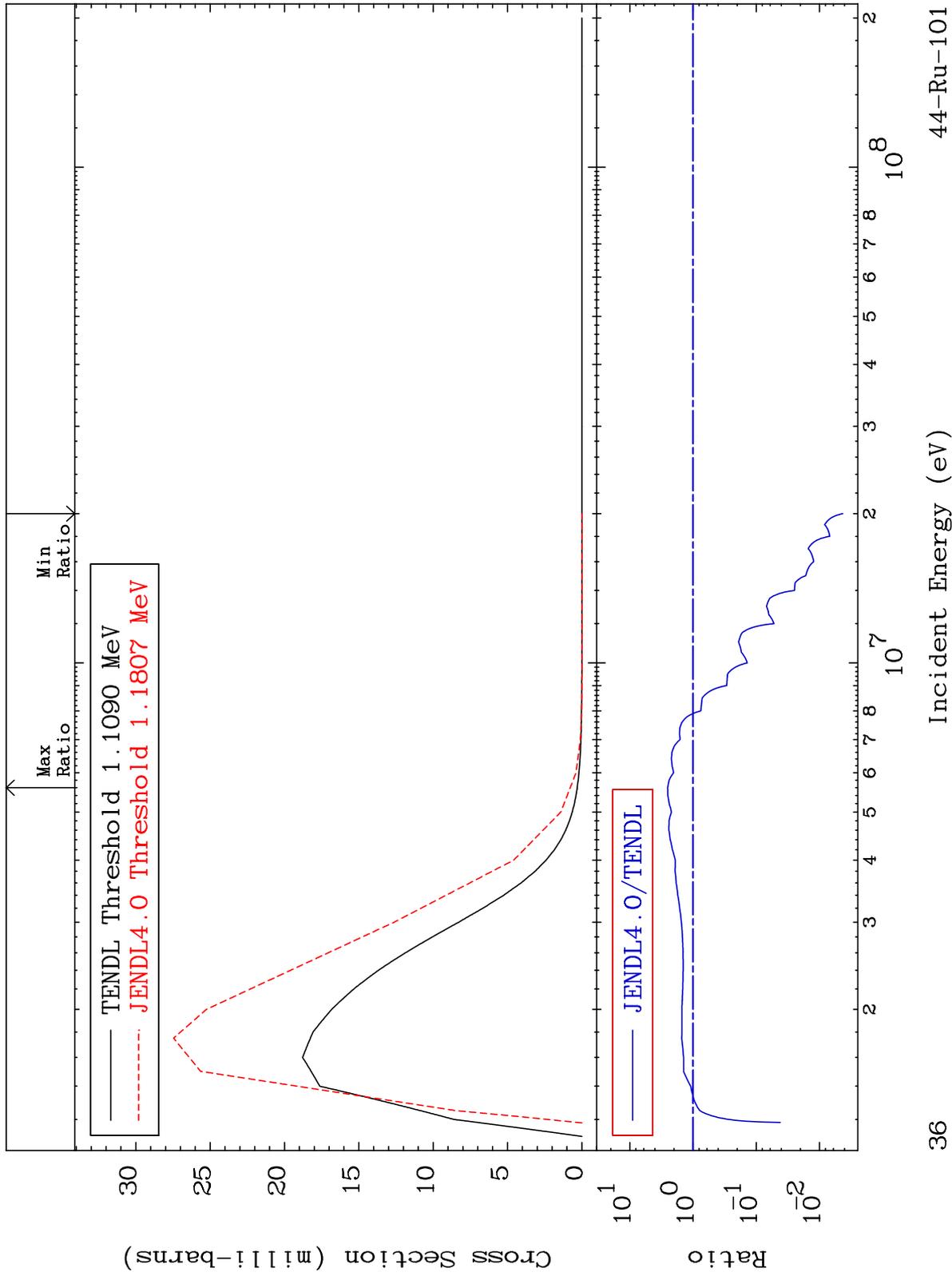


35

Incident Energy (eV)

44-Ru-101

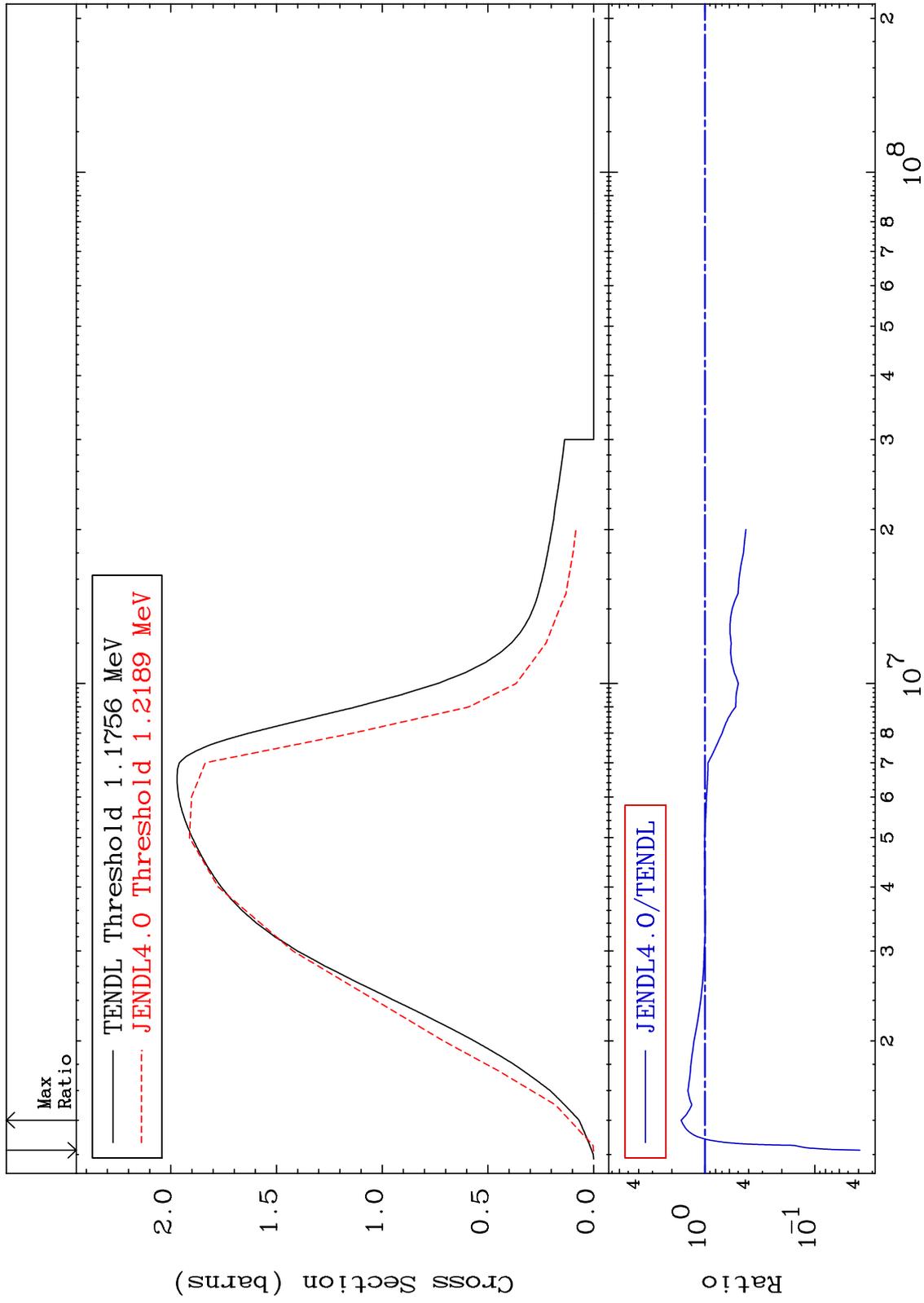
MAT 4440 MT= 78 (n, n') Level Cross Section 44-Ru-101  
 -99.58 To 151.7 %



MAT 4440

(n, n') Continuum  
Cross Section

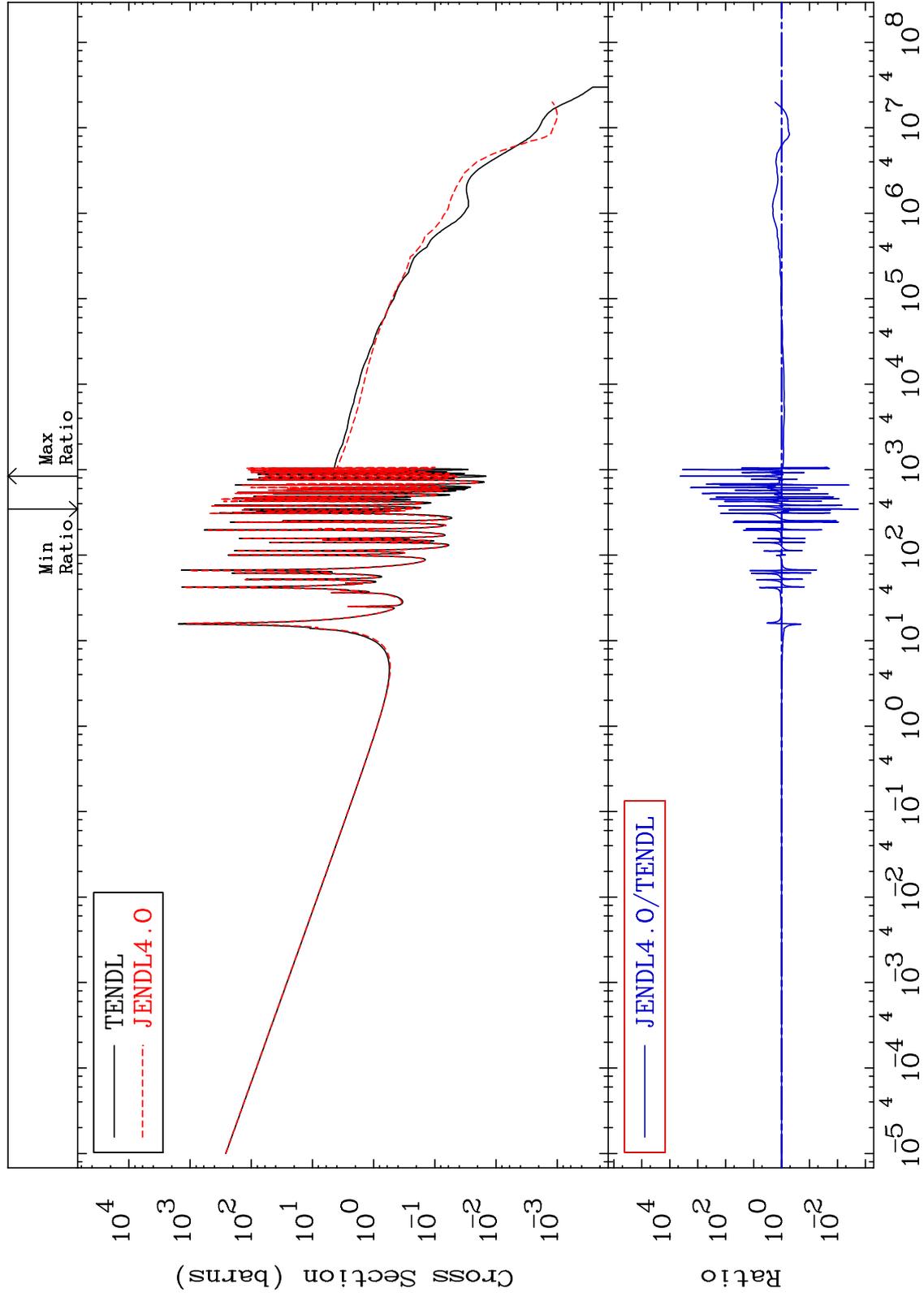
44-Ru-101  
-96.11 To 64.66 %



MAT 4440

(n,  $\gamma$ )  
Cross Section

44-Ru-101  
-99.82 To 9999. %



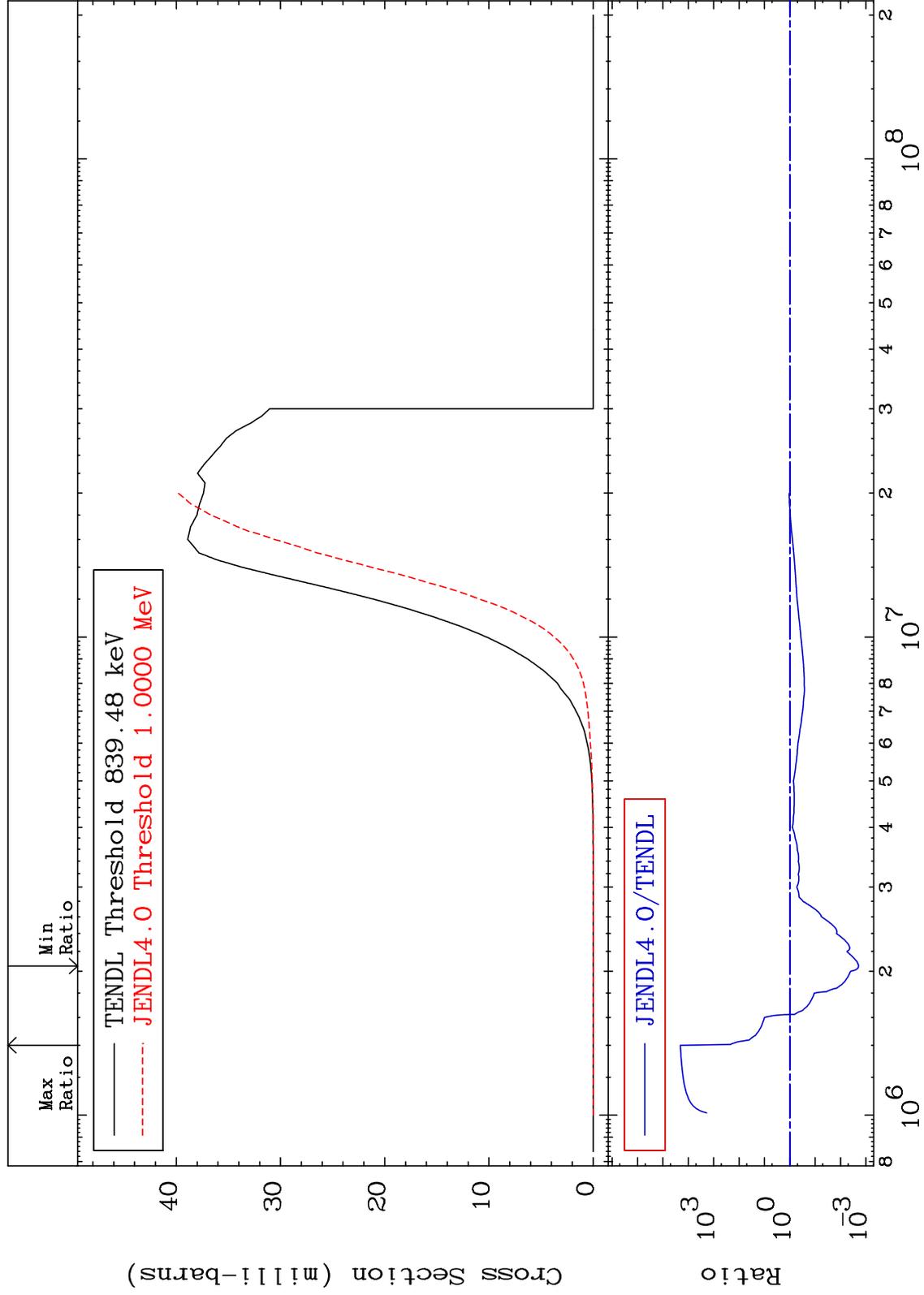
MAT 4440

(n, p)

44-Ru-101

Cross Section

-99.80 To 9999. %



39

Incident Energy (eV)

44-Ru-101

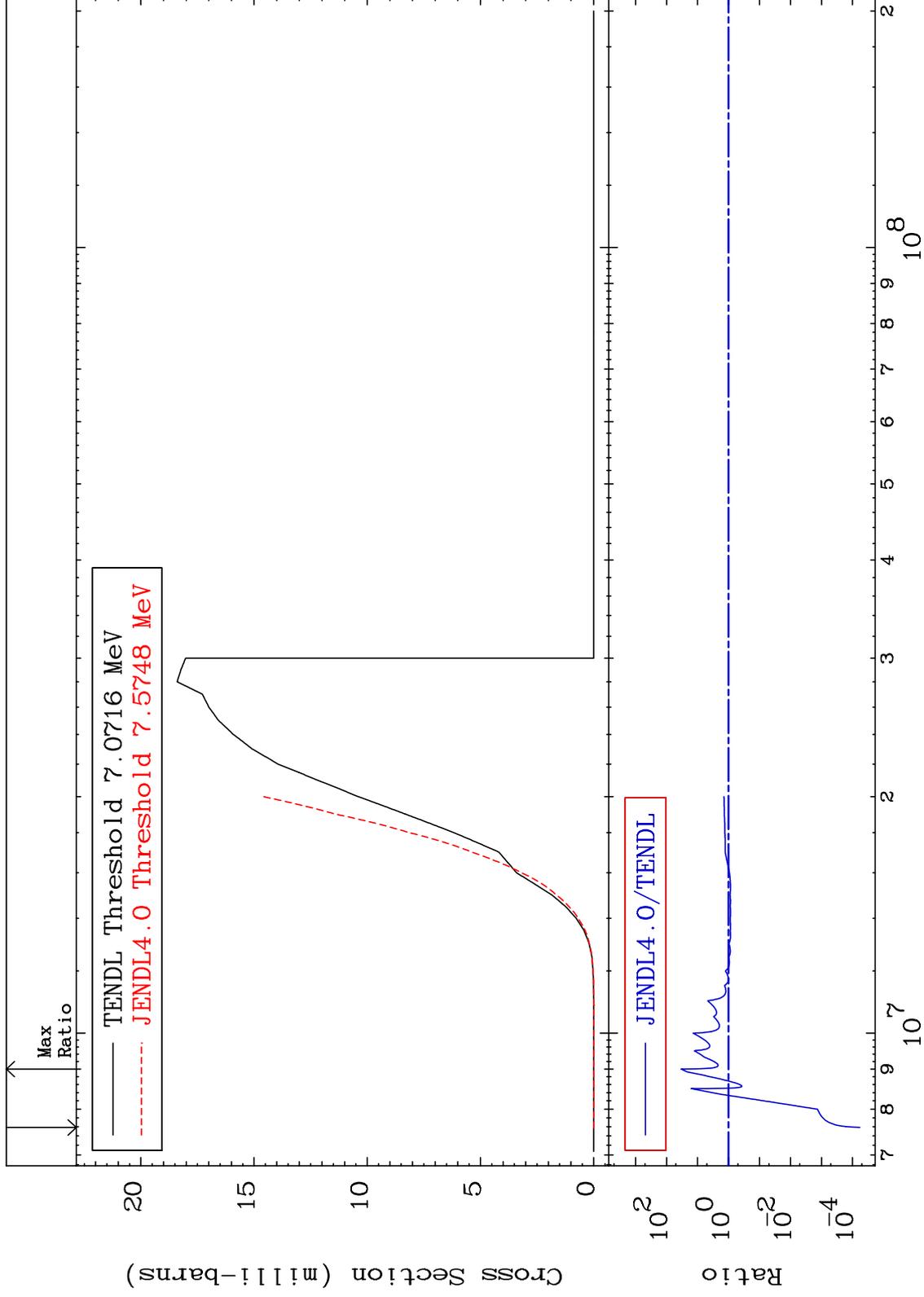
MAT 4440

(n, d)

44-Ru-101

Cross Section

-99.99 To 3286. %



40

Incident Energy (eV)

44-Ru-101

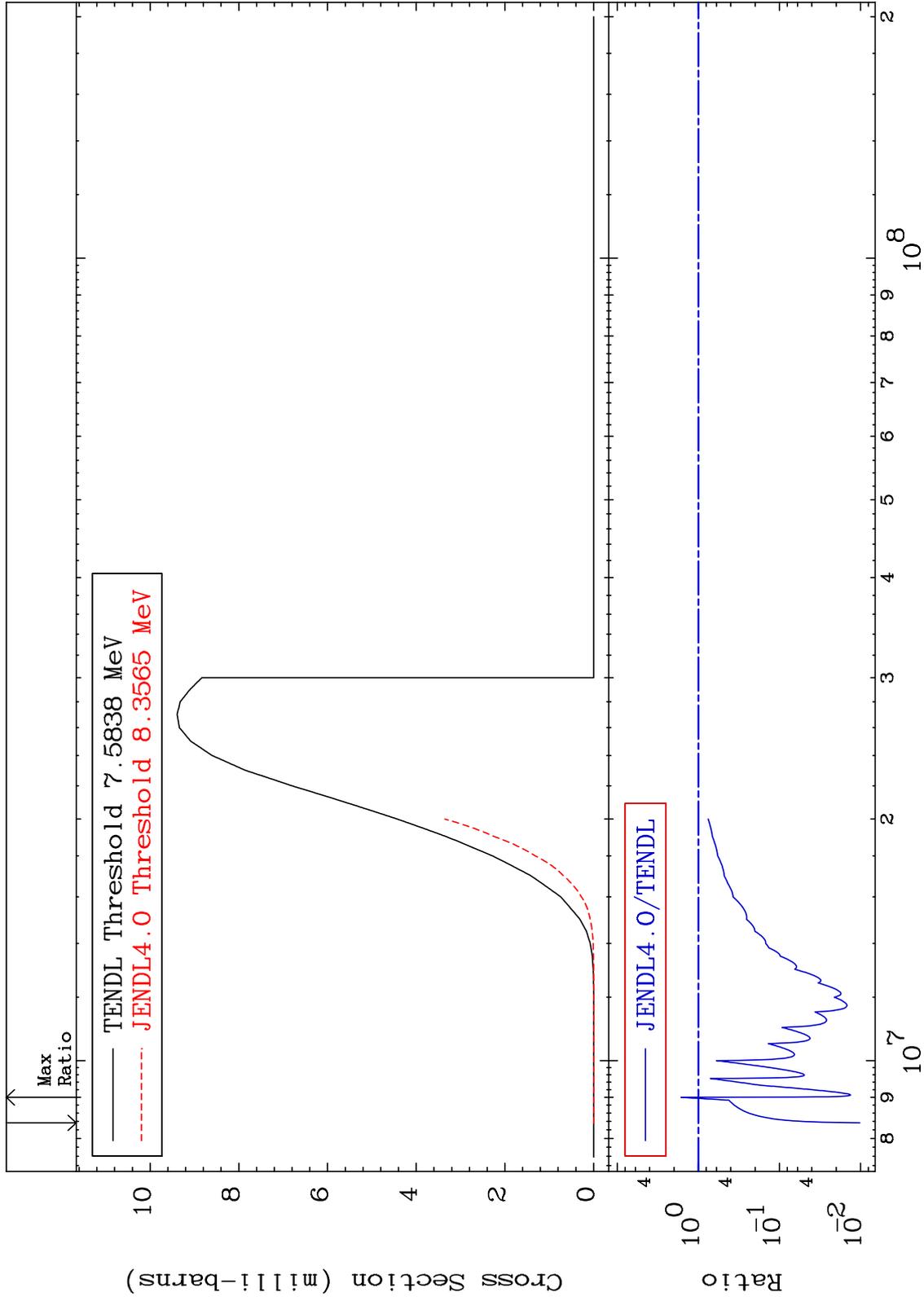
MAT 4440

(n, t)

44-Ru-101

Cross Section

-98.98 To 63.38 %



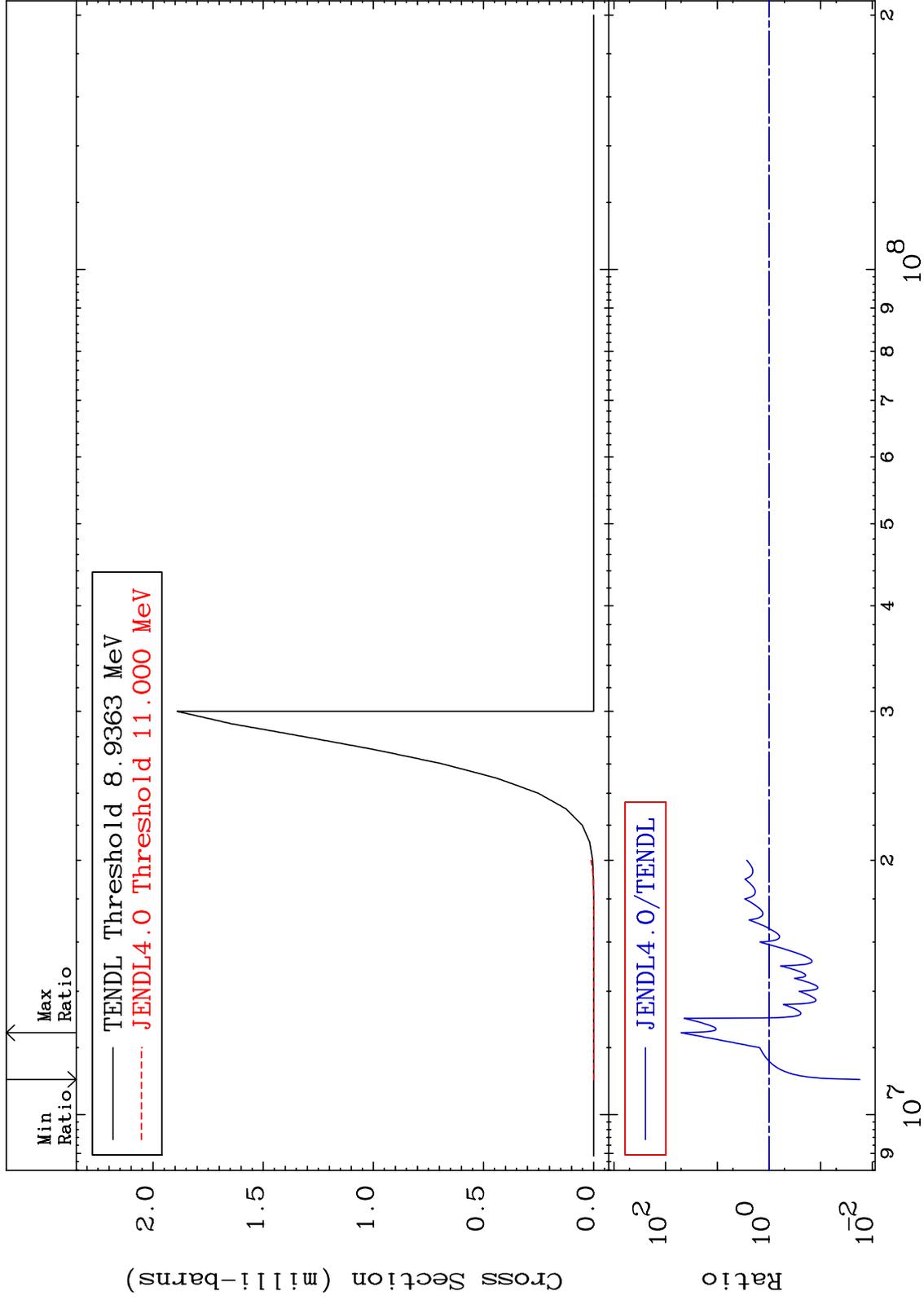
MAT 4440

(n, He-3)

44-Ru-101

Cross Section

-98.26 To 4900. %



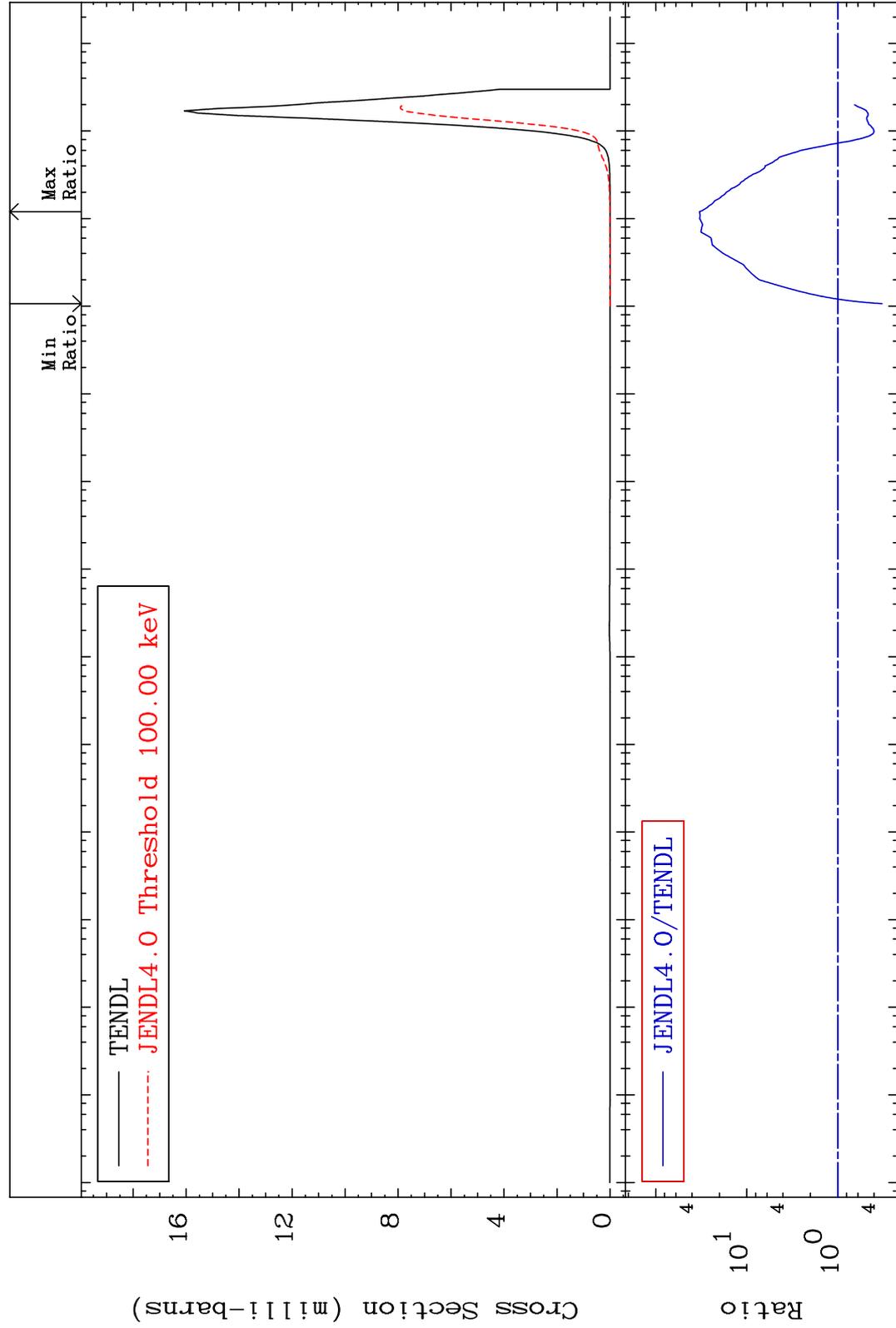
MAT 4440

(n,  $\alpha$ )

44-Ru-101

Cross Section

-67.40 To 3211. %



43

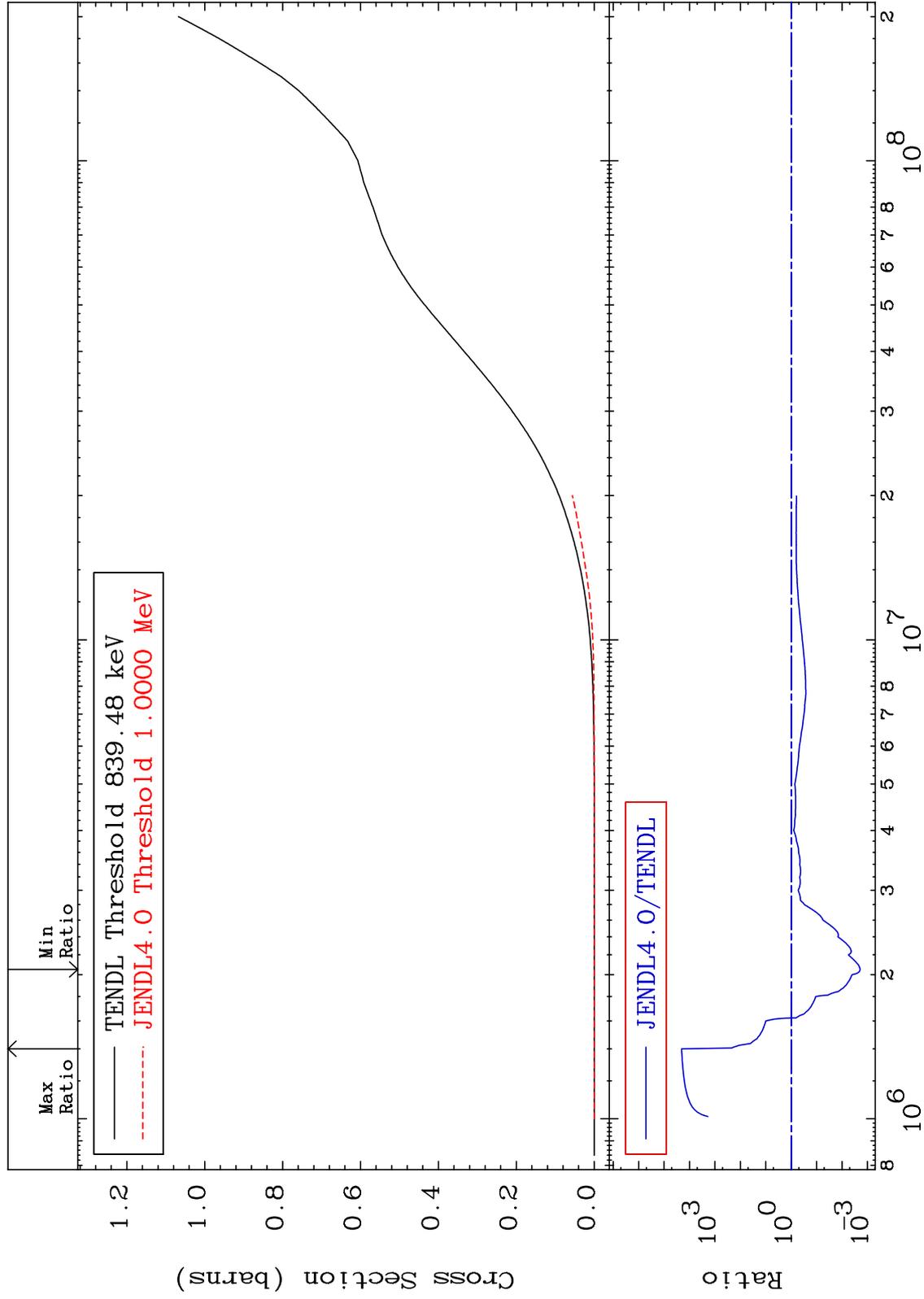
Incident Energy (eV)

44-Ru-101

MAT 4440

Hydrogen Production  
Cross Section

44-Ru-101  
-99.80 To 9999. %



44

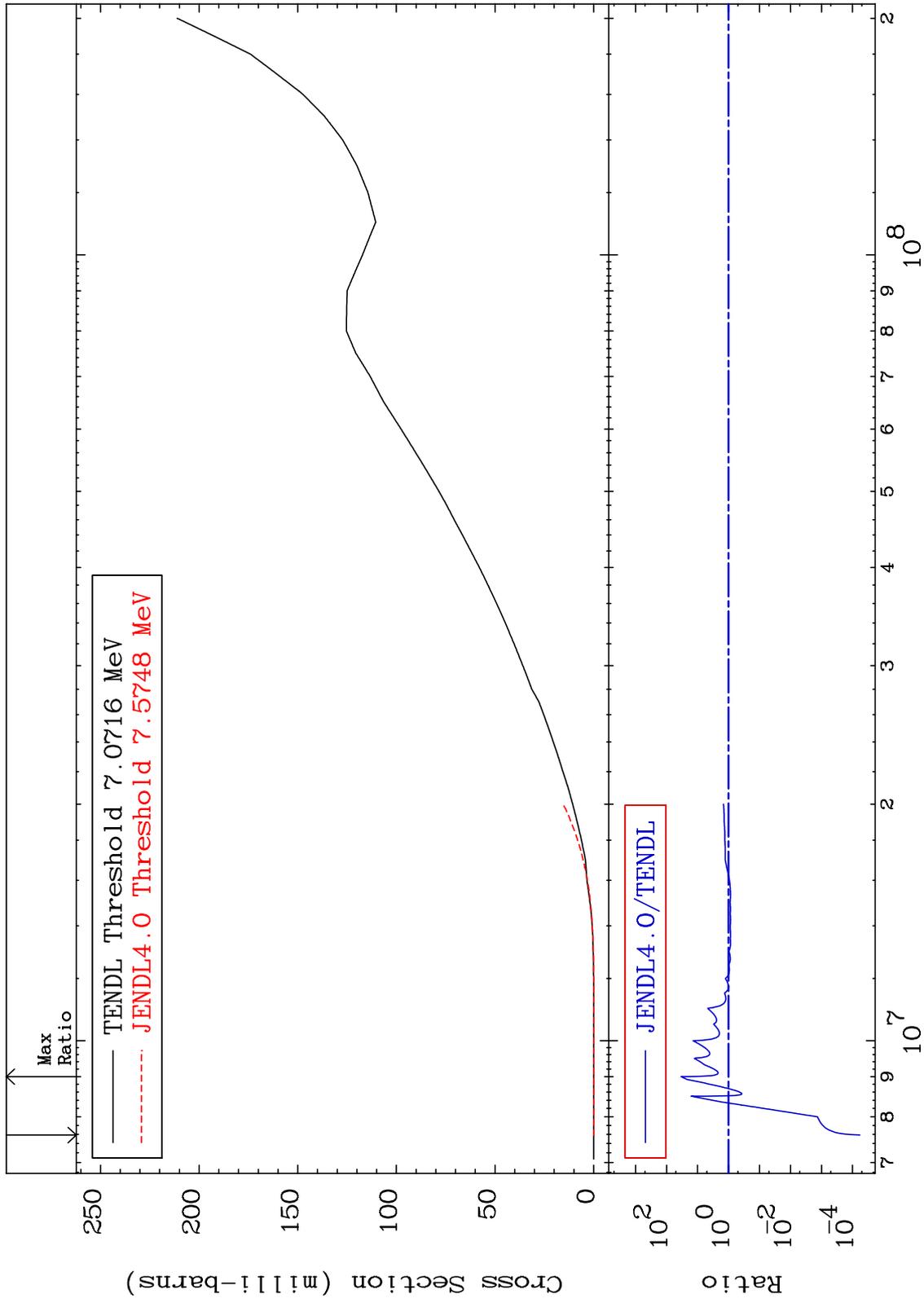
Incident Energy (eV)

44-Ru-101

MAT 4440

Deuterium Production  
Cross Section

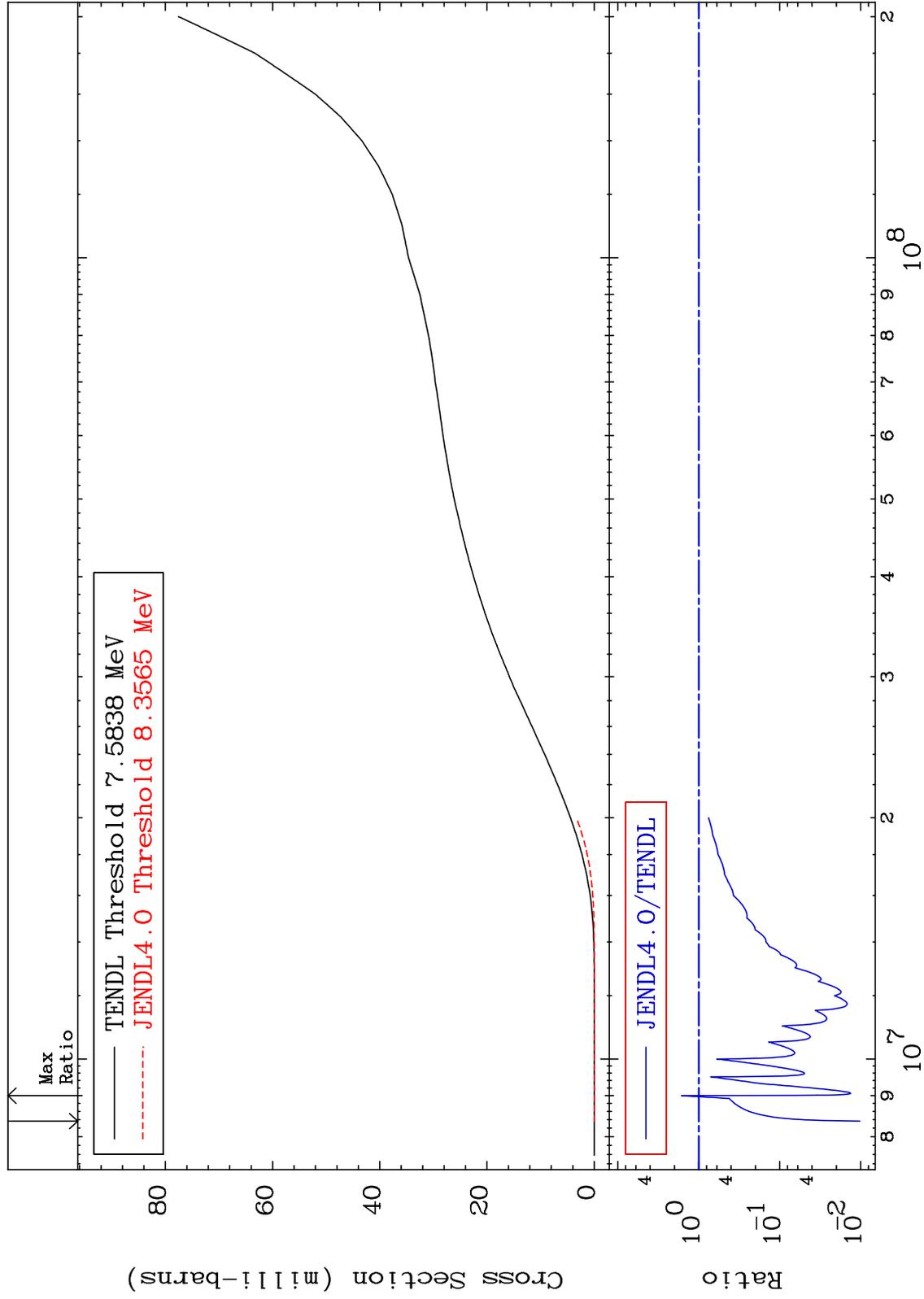
44-Ru-101  
-99.99 To 3286. %



MAT 4440

Tritium Production  
Cross Section

44-Ru-101  
-98.98 To 63.38 %



46

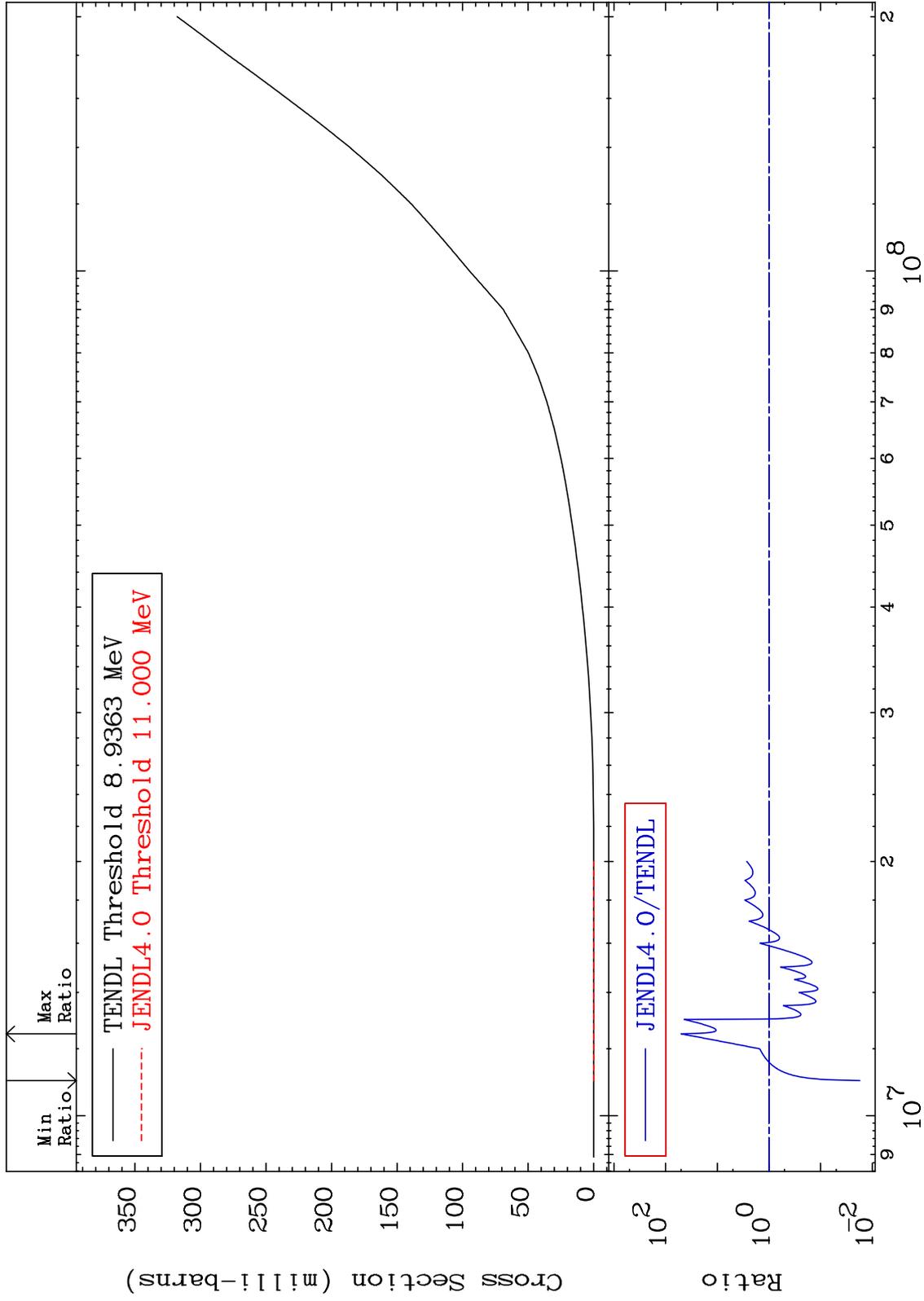
Incident Energy (eV)

44-Ru-101

MAT 4440

He-3 Production  
Cross Section

44-Ru-101  
-98.26 To 4900. %



47

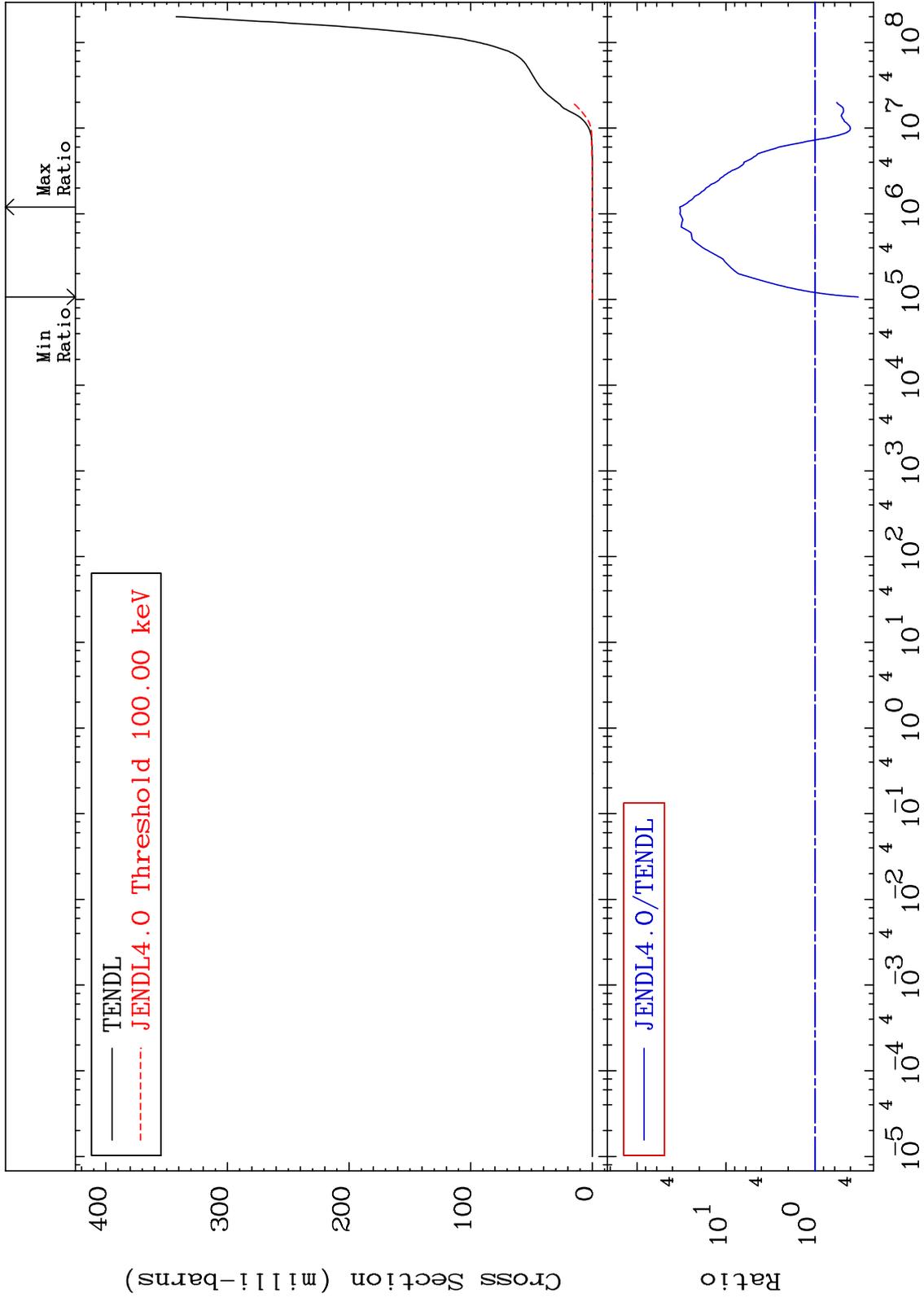
Incident Energy (eV)

44-Ru-101

MAT 4440

He-4 Production  
Cross Section

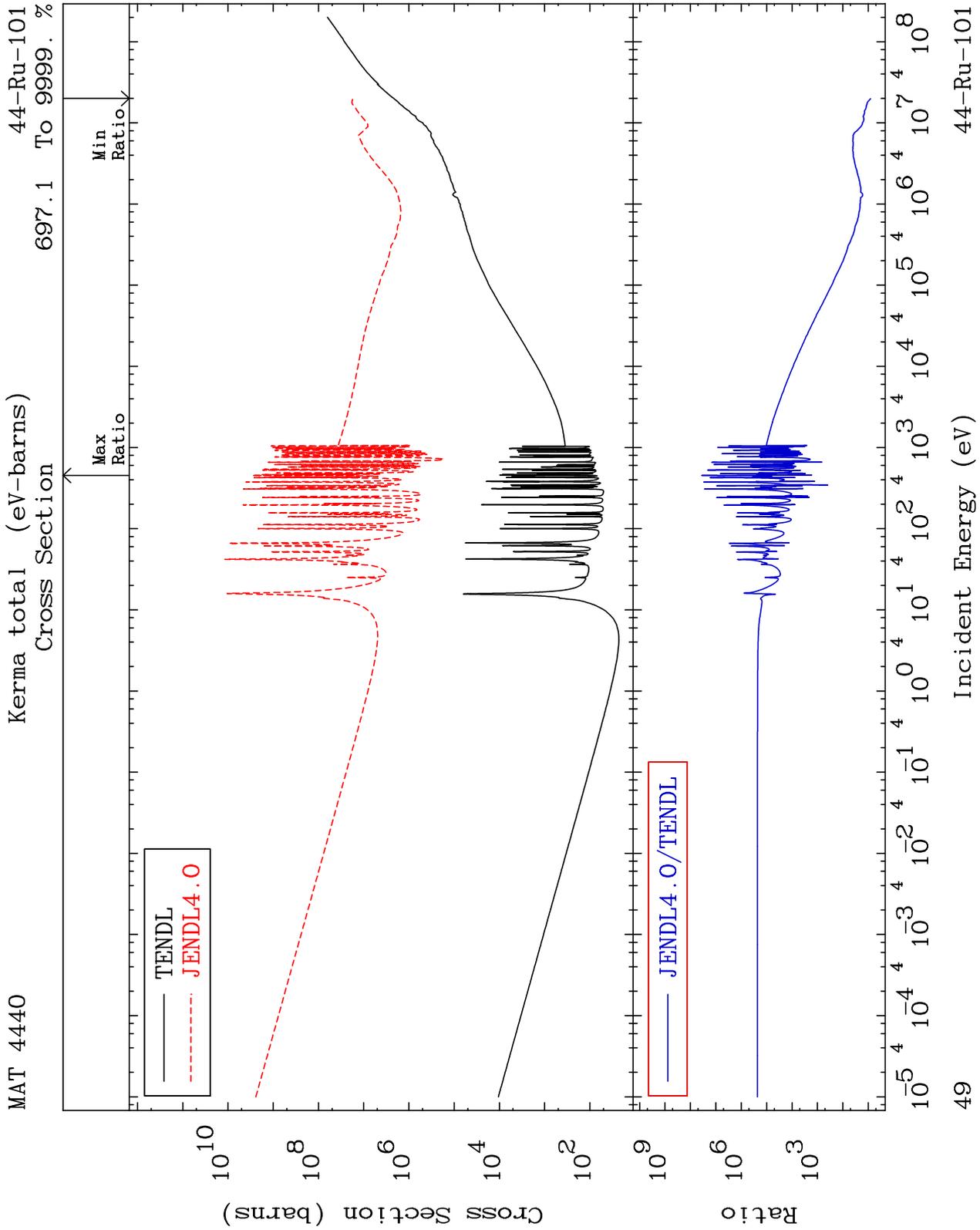
44-Ru-101  
-67.40 To 3211. %



48

Incident Energy (eV)

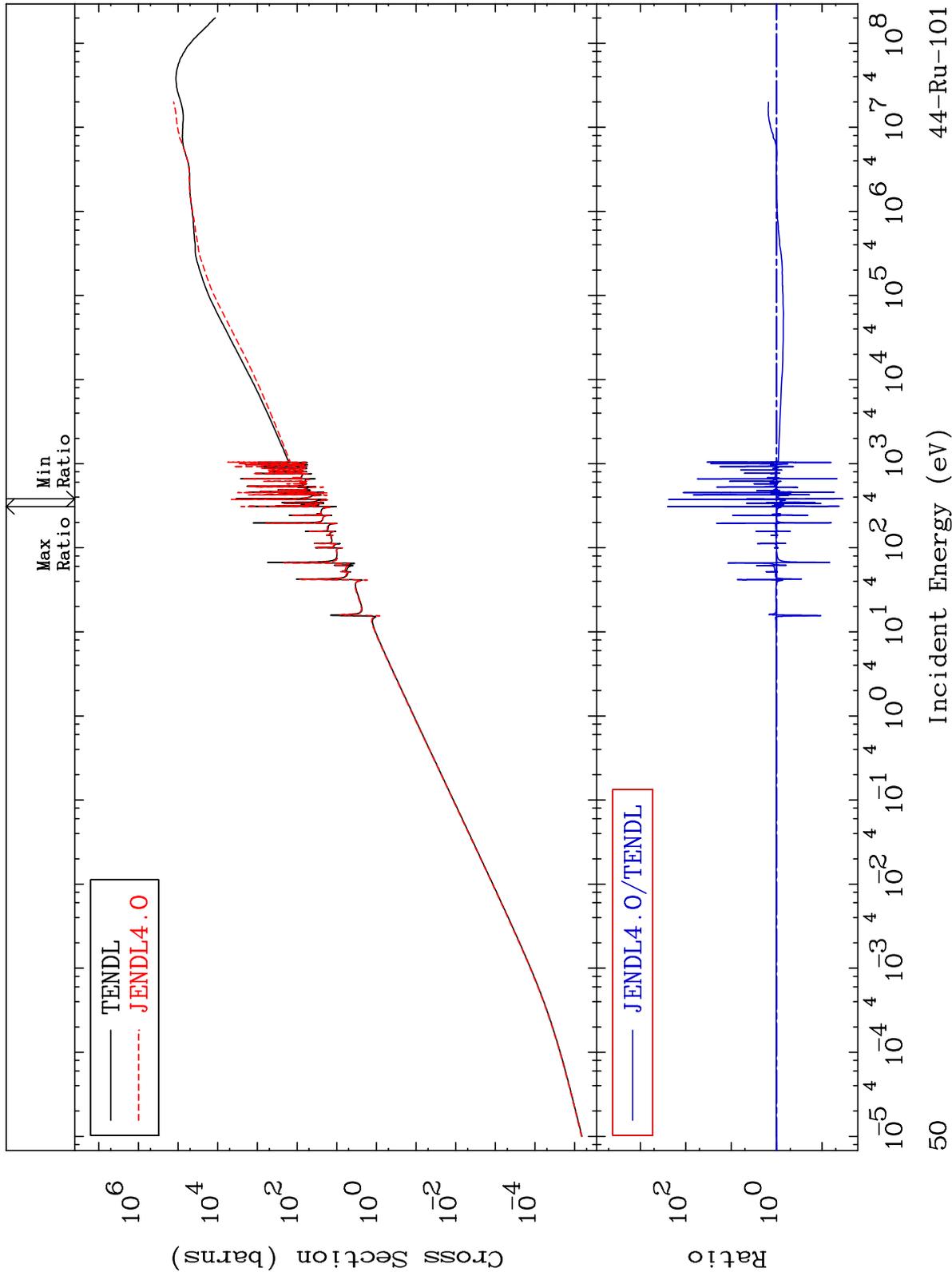
44-Ru-101



MAT 4440

Kerma elastic  
Cross Section

44-Ru-101  
-96.50 To 9999. %



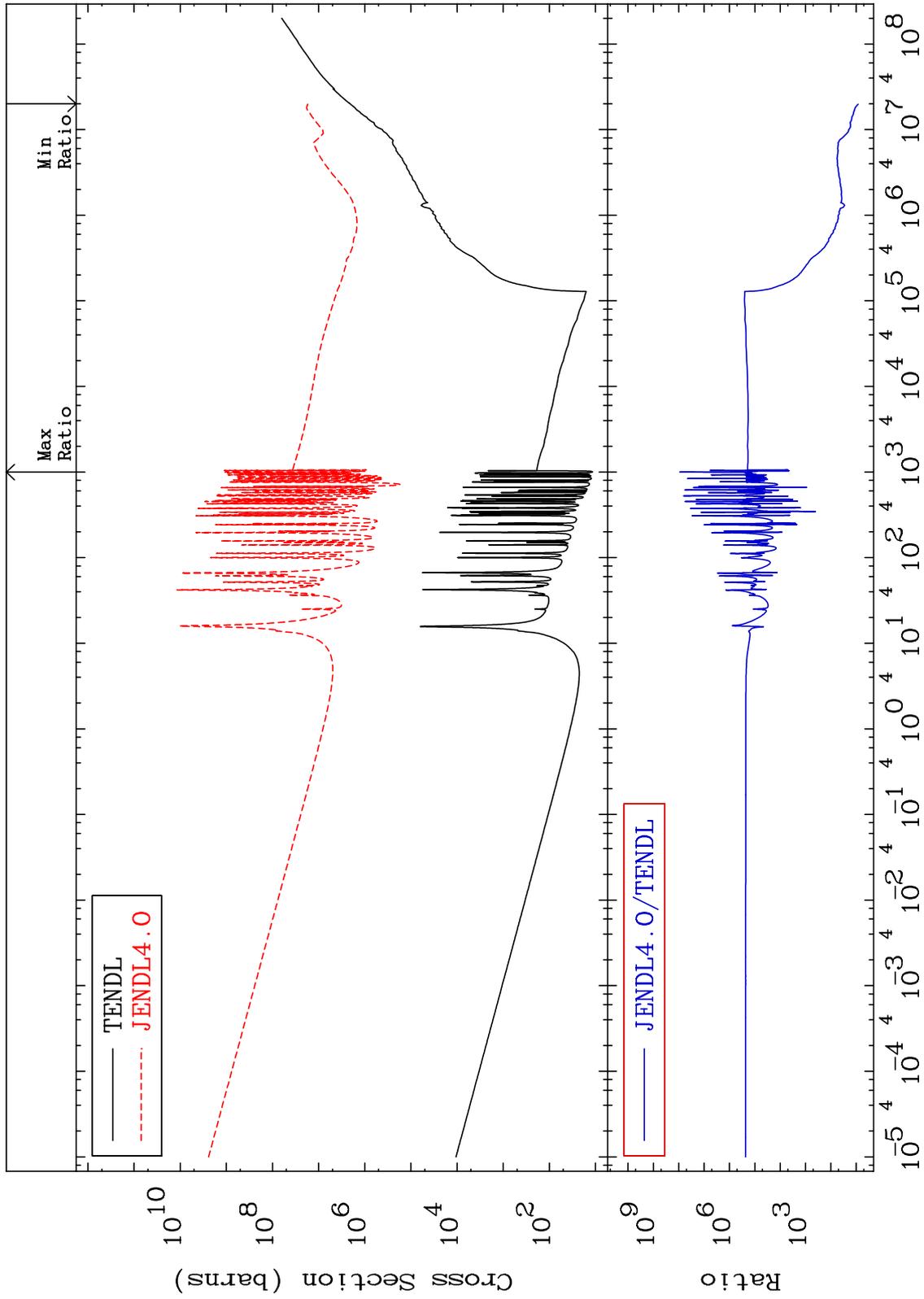
50

44-Ru-101

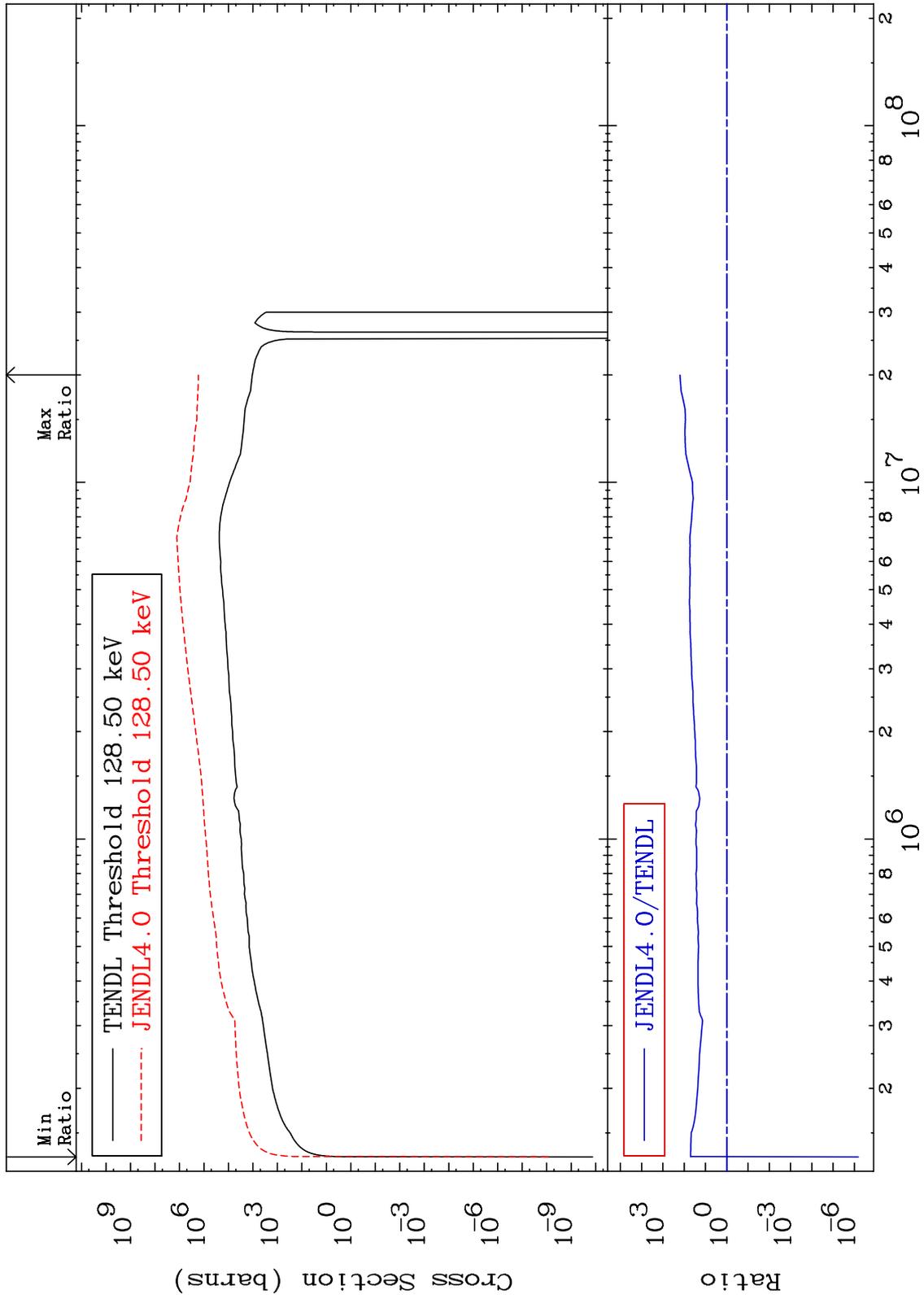
MAT 4440

Kerma non-elastic (all but mt2)  
Cross Section

44-Ru-101  
723.7 To 9999. %



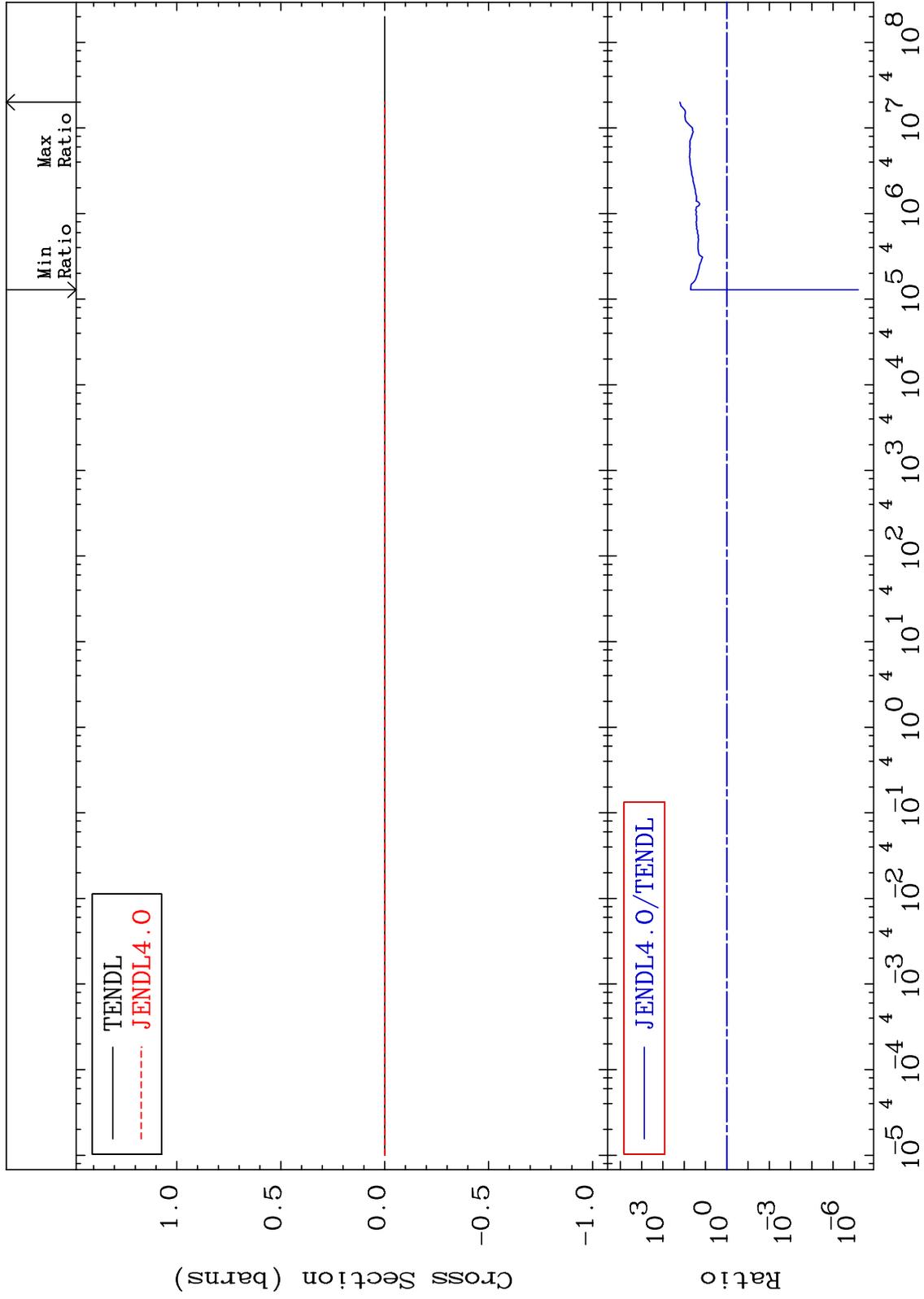
MAT 4440 Kerma inelastic (mt51-91) 44-Ru-101  
 Cross Section -100.0 To 9999. %



MAT 4440

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

44-Ru-101  
-100.0 To 9999. %



53

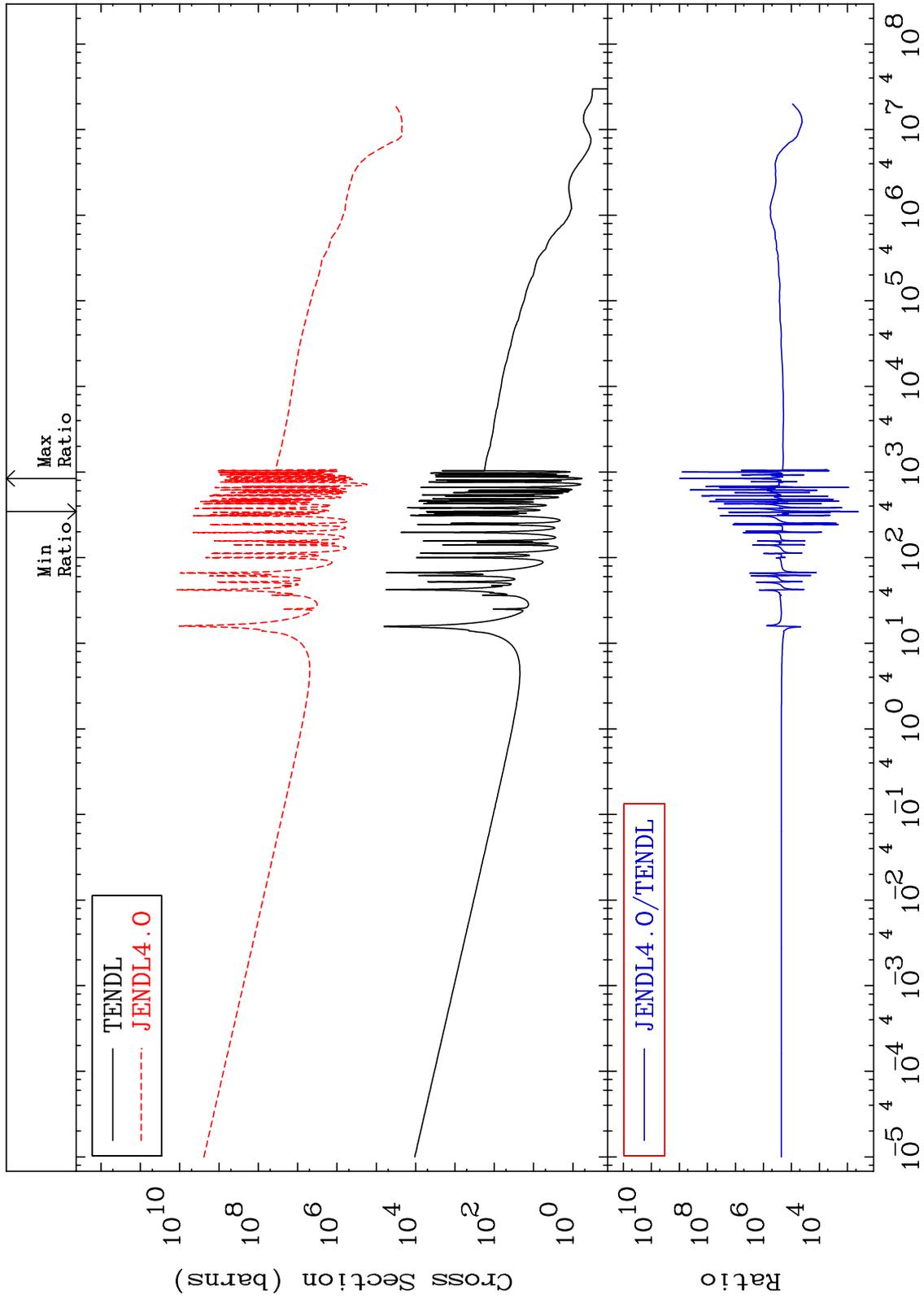
Incident Energy (eV)

44-Ru-101

MAT 4440

Kerma capture (mt102)  
Cross Section

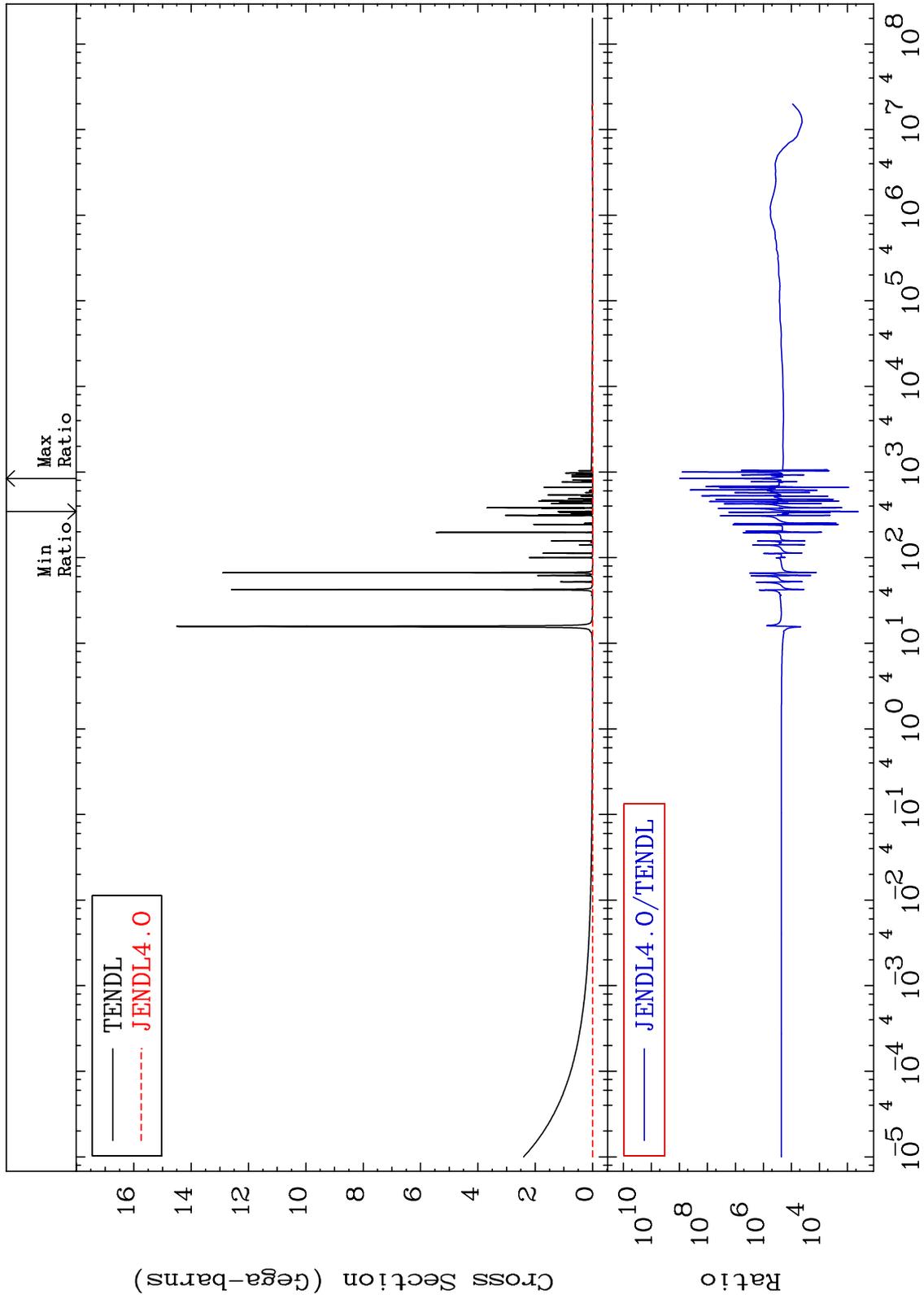
44-Ru-101  
9999. To 9999. %



MAT 4440

Total photon (eV-barns)  
Cross Section

44-Ru-101  
9999. To 9999. %



55

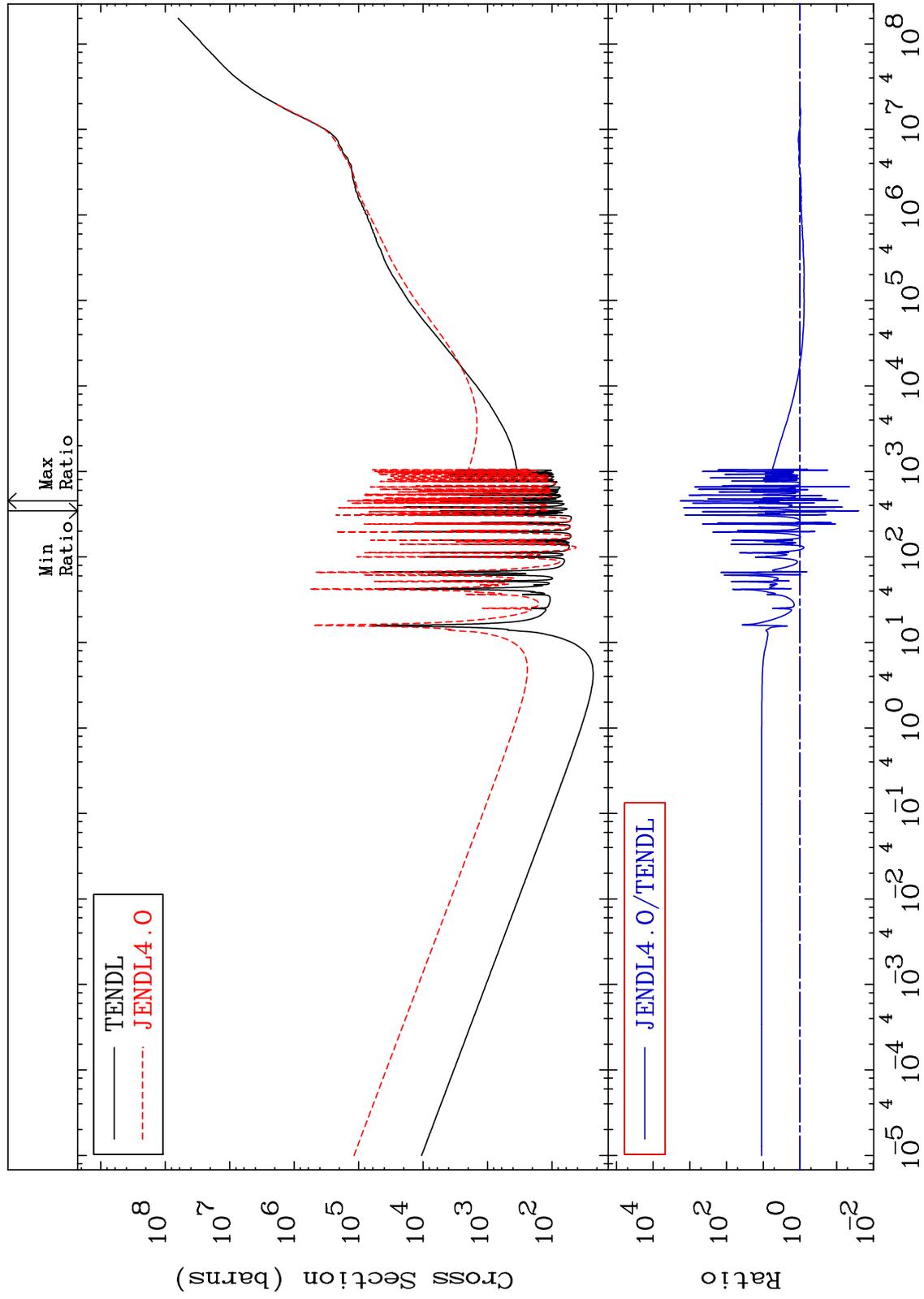
Incident Energy (eV)

44-Ru-101

MAT 4440

Total kinematic kerma (high limit)  
Cross Section

44-Ru-101  
-97.47 To 9999. %



56

Incident Energy (eV)

44-Ru-101

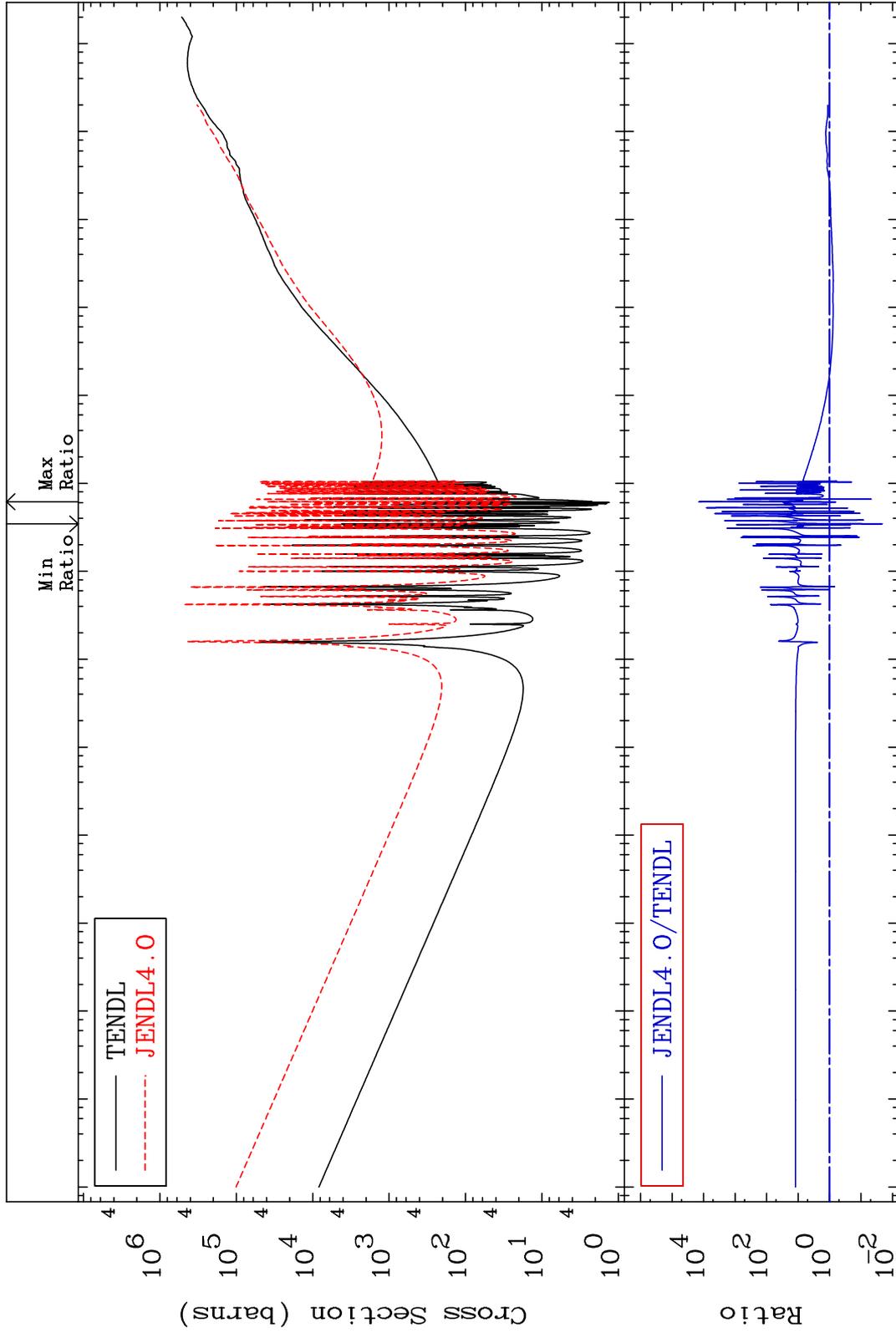
MAT 4440

Dpa total (eV-barns)

44-Ru-101

-97.85 To 9999. %

Cross Section



57

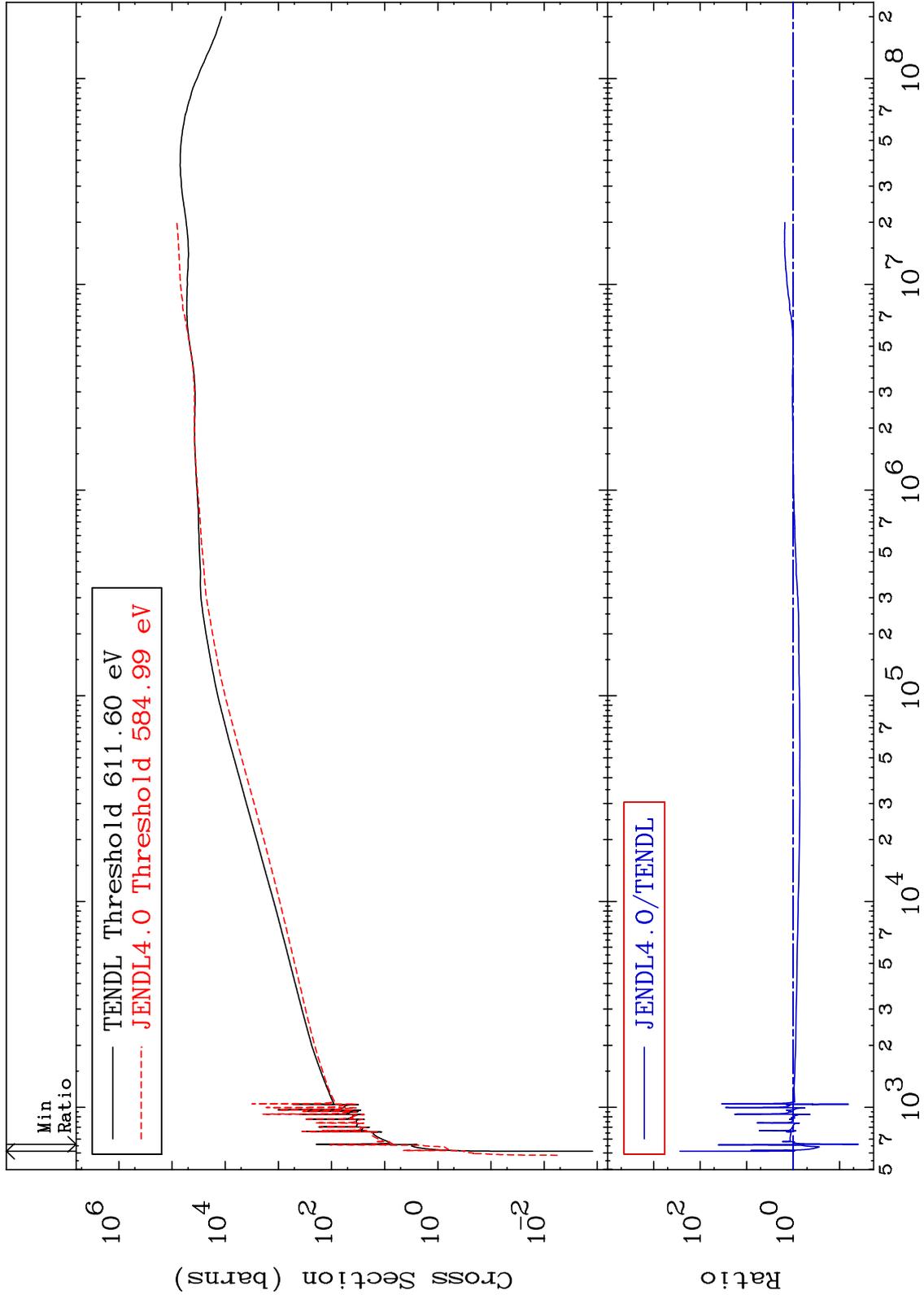
Incident Energy (eV)

44-Ru-101

MAT 4440

Dpa elastic (mt2)  
Cross Section

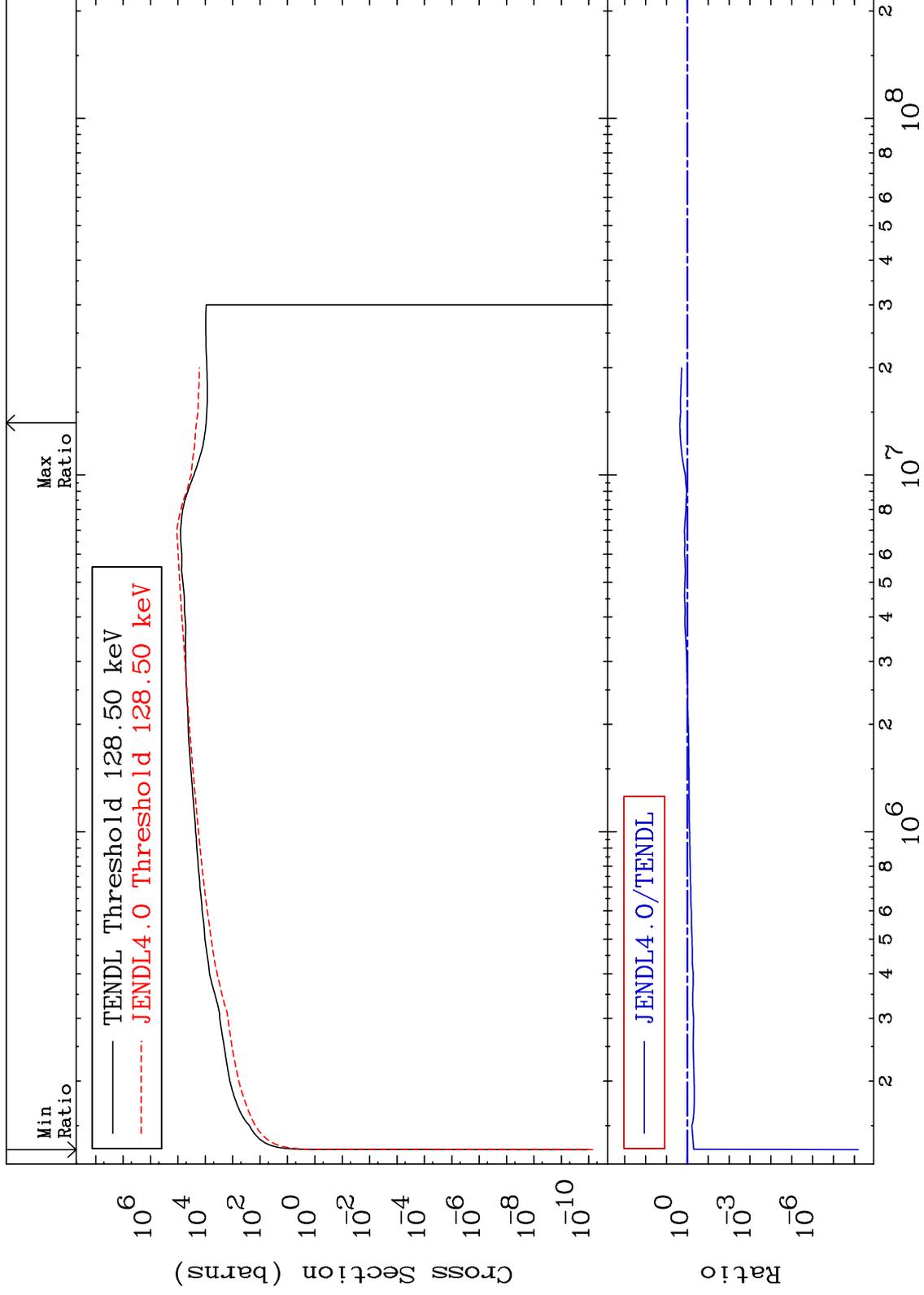
44-Ru-101  
-96.07 To 9999. %



MAT 4440

Dpa inelastic (mt51-91)  
Cross Section

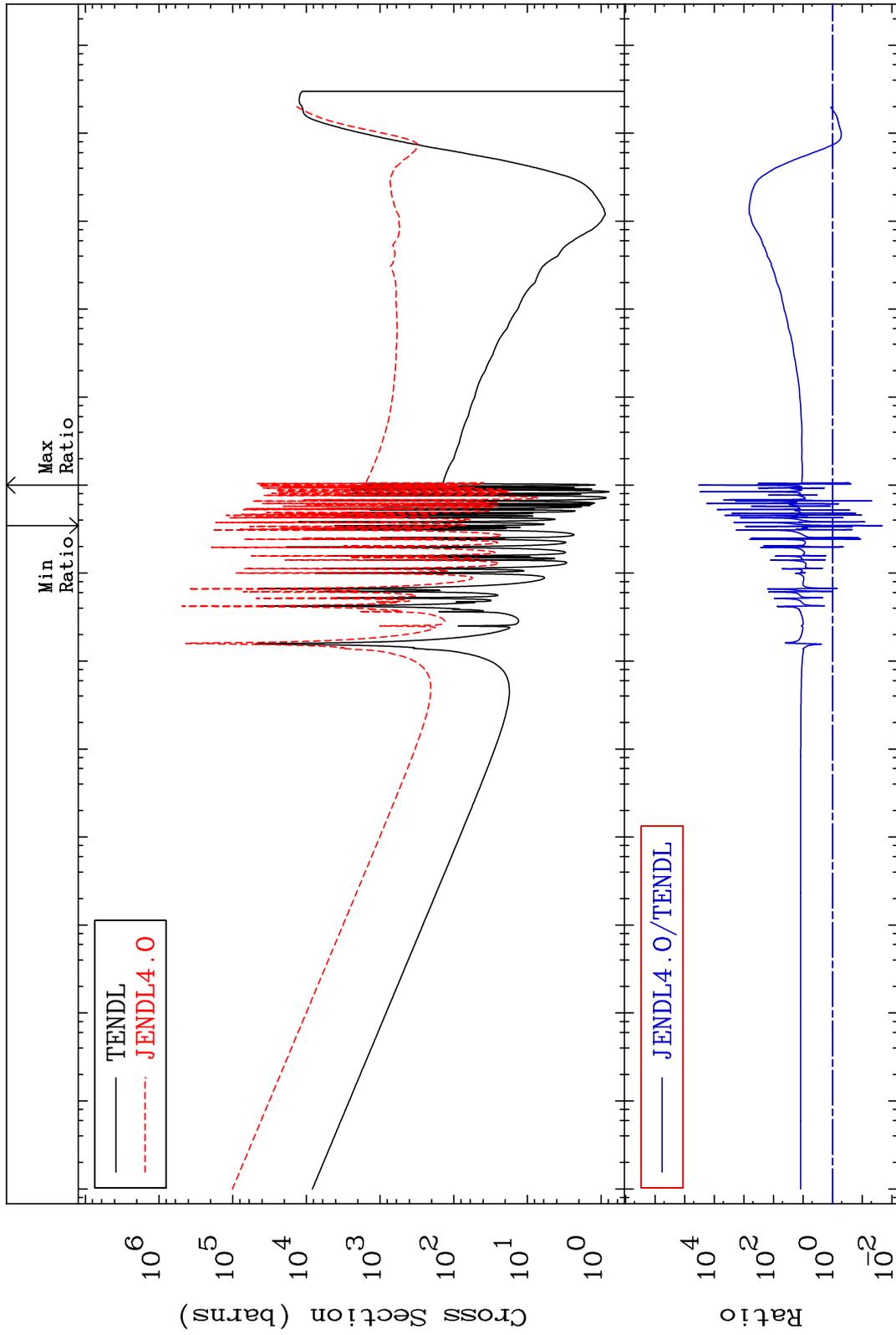
44-Ru-101  
-100.0 To 127.0 %



MAT 4440

Dpa disappearance (mt102 -120)  
Cross Section

44-Ru-101  
-97.85 To 9999. %



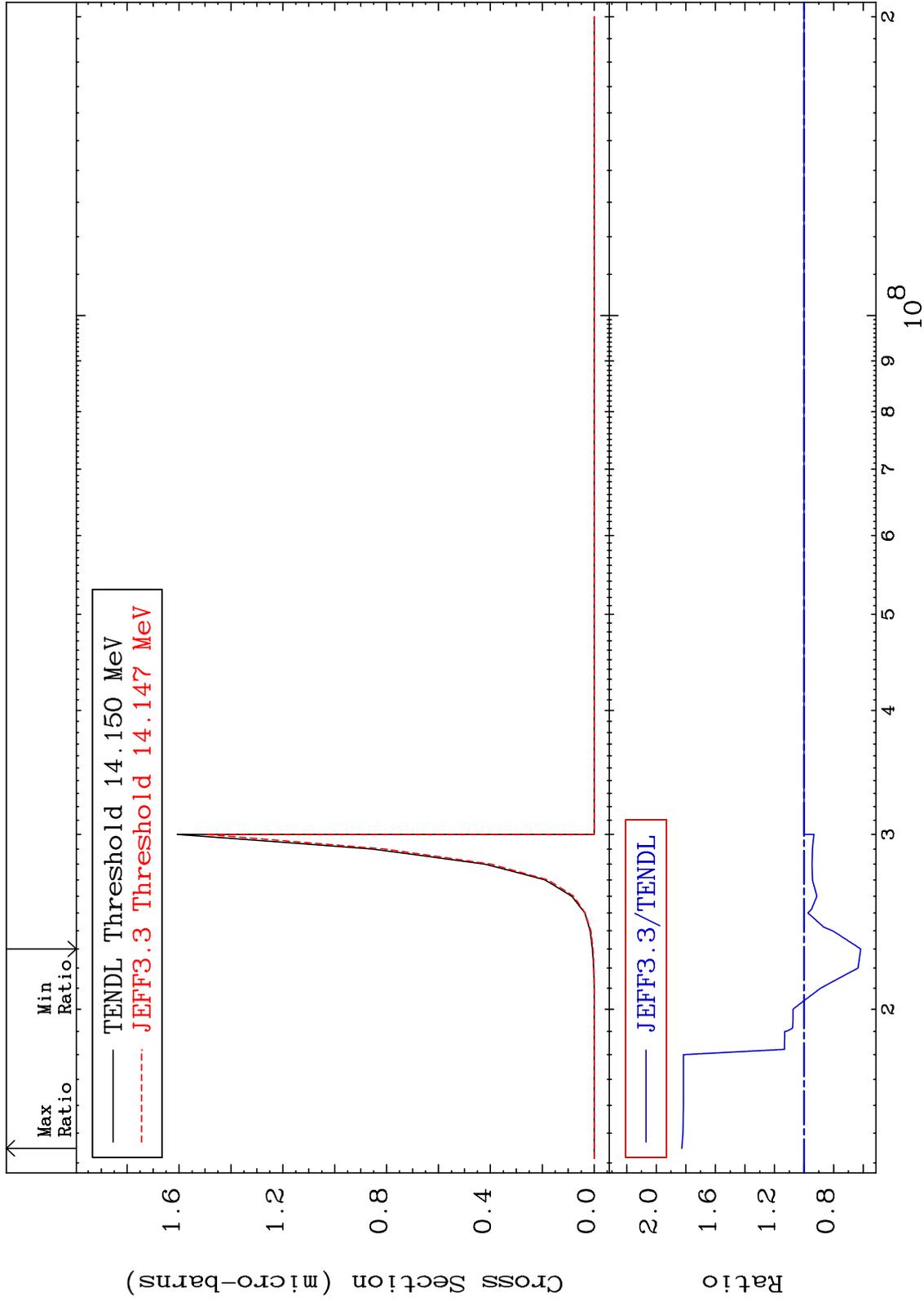
MAT 4440

(n,p) t

44-Ru-101

Cross Section

-38.31 To 82.75 %



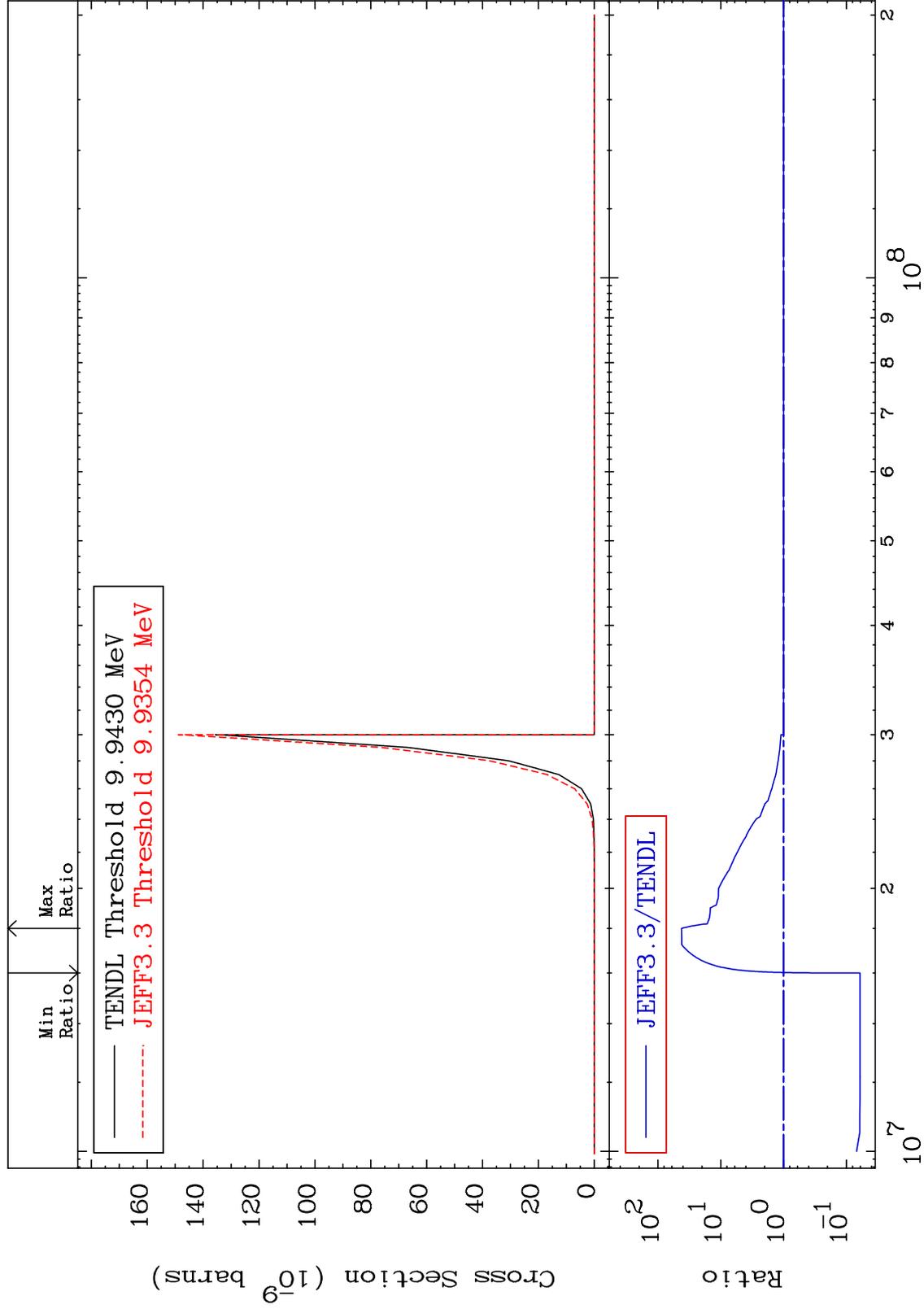
MAT 4440

(n,d)  $\alpha$

44-Ru-101

Cross Section

-93.92 To 4116. %



62

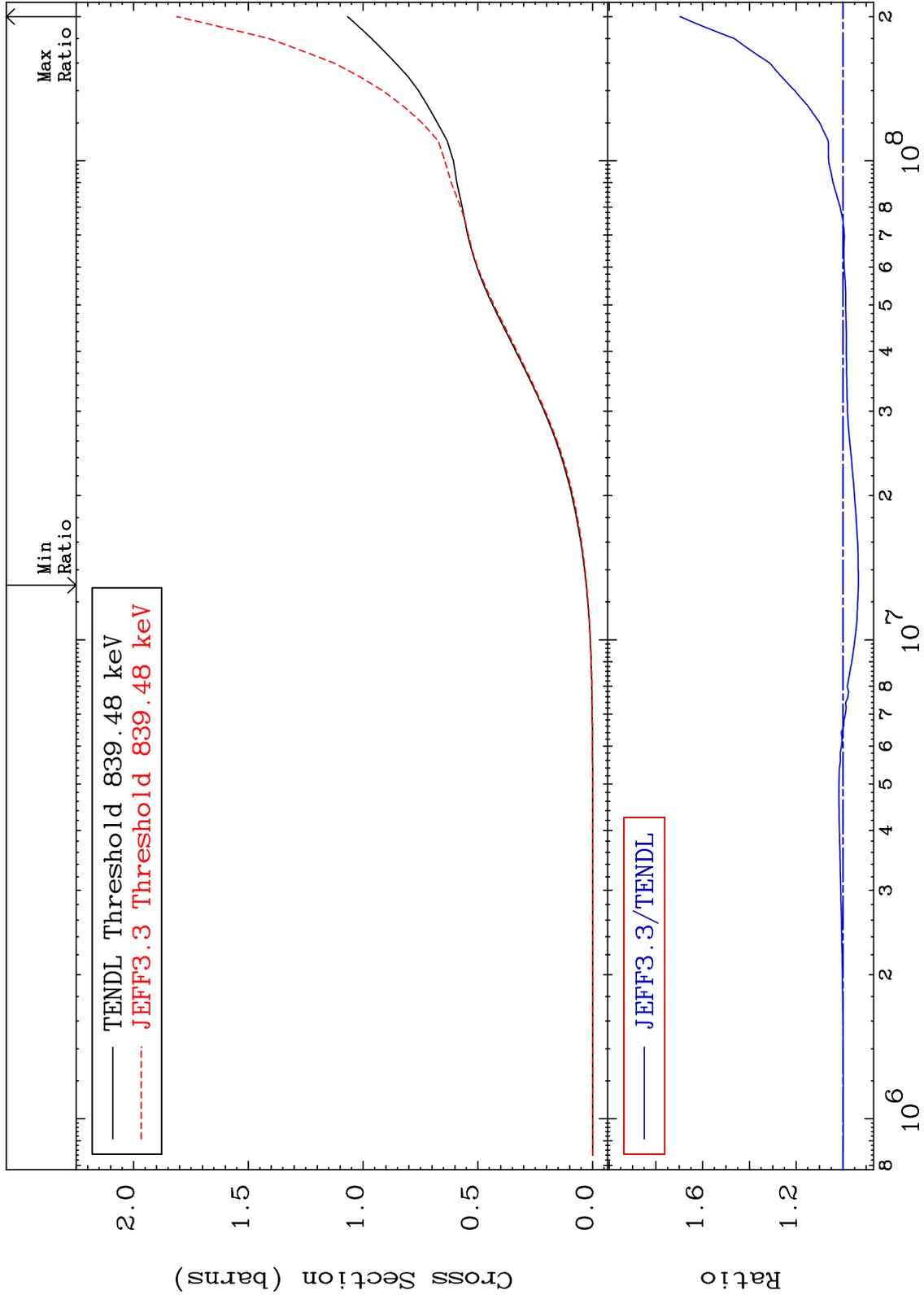
Incident Energy (eV)

44-Ru-101

MAT 4440

Hydrogen Production  
Cross Section

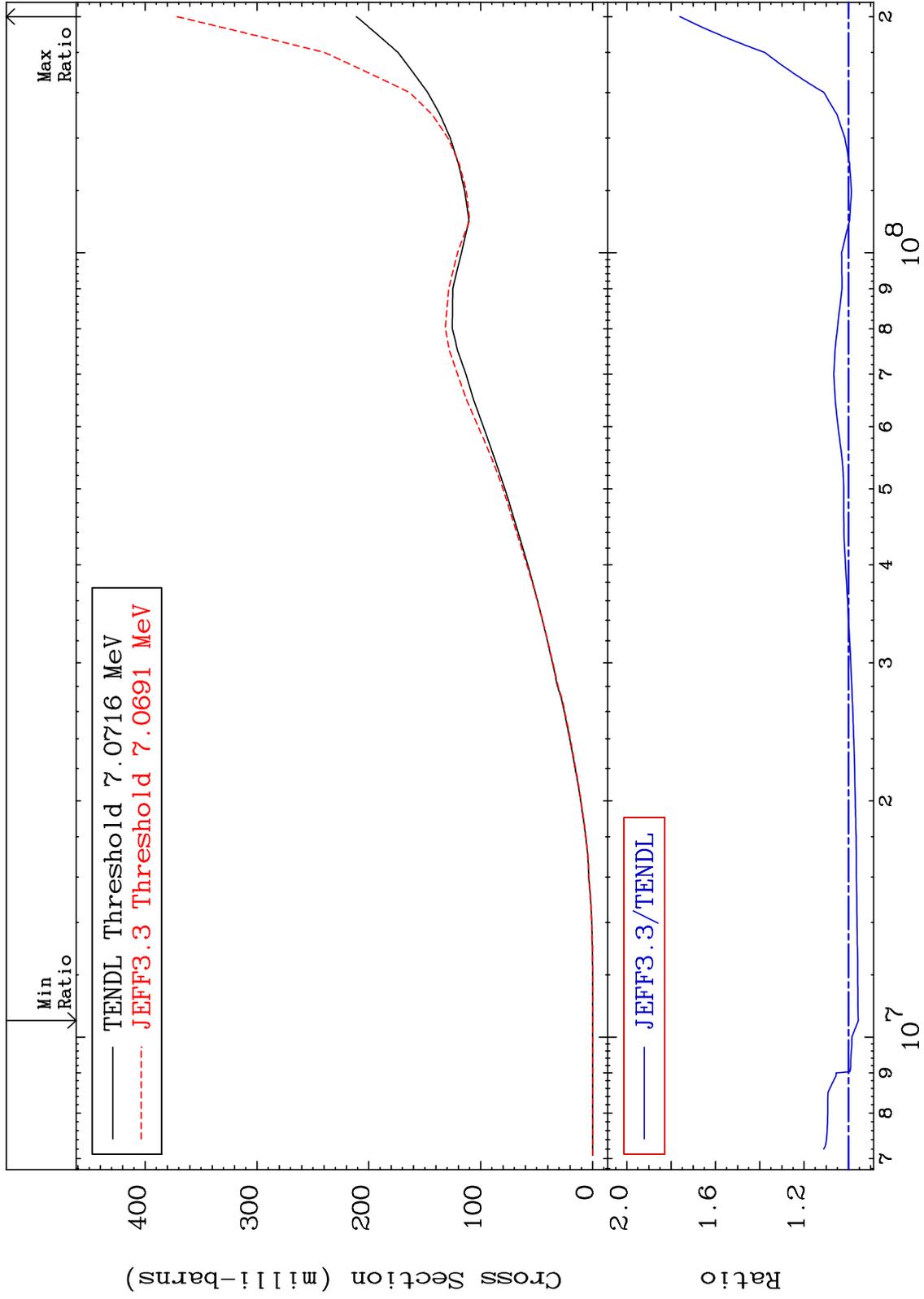
44-Ru-101  
-6.638 To 69.70 %



MAT 4440

Deuterium Production  
Cross Section

44-Ru-101  
-4.495 To 76.00 %



64

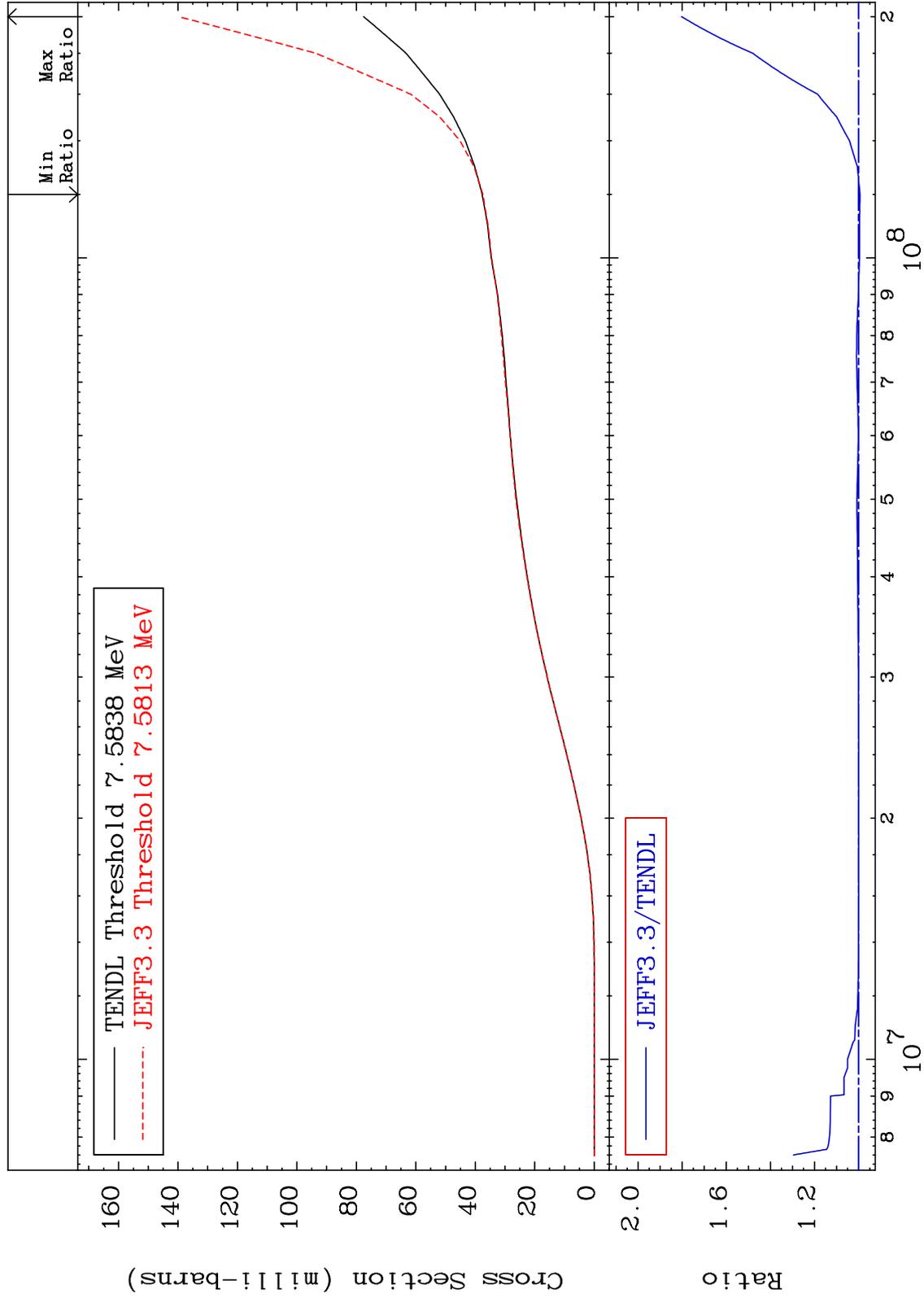
Incident Energy (eV)

44-Ru-101

MAT 4440

Tritium Production  
Cross Section

44-Ru-101  
-0.615 To 80.29 %



65

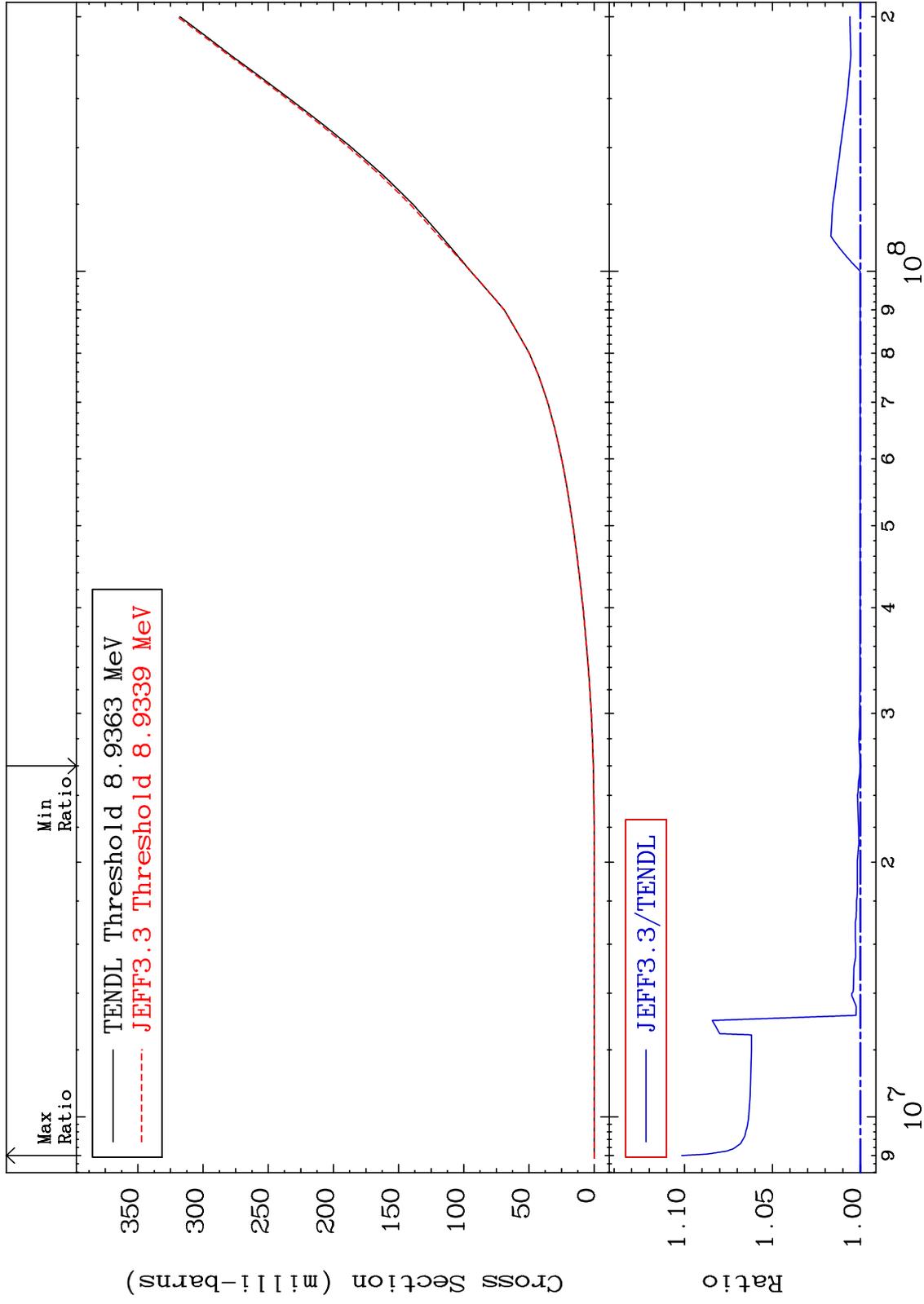
Incident Energy (eV)

44-Ru-101

MAT 4440

He-3 Production  
Cross Section

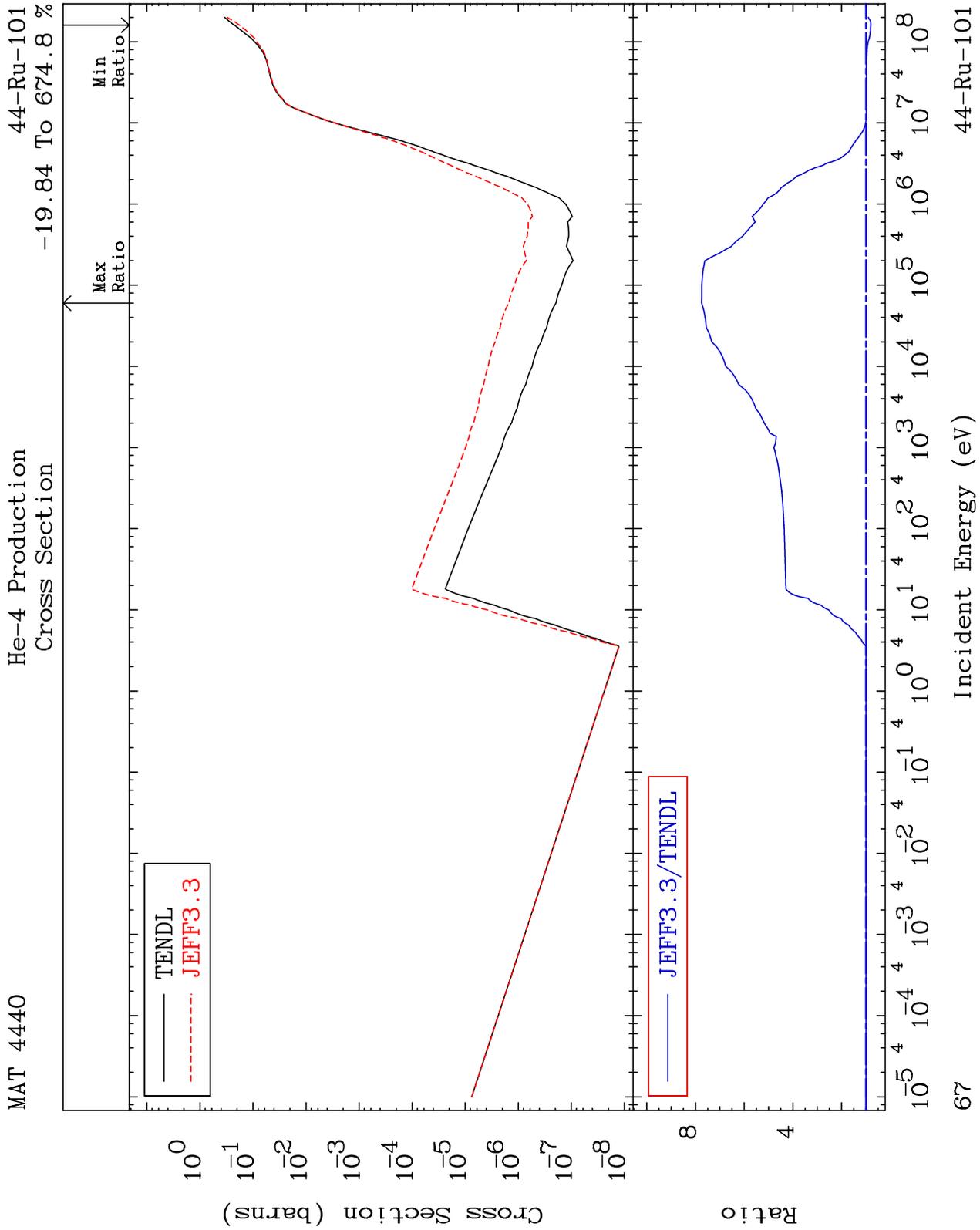
44-Ru-101  
-0.013 To 10.16 %



66

Incident Energy (eV)

44-Ru-101



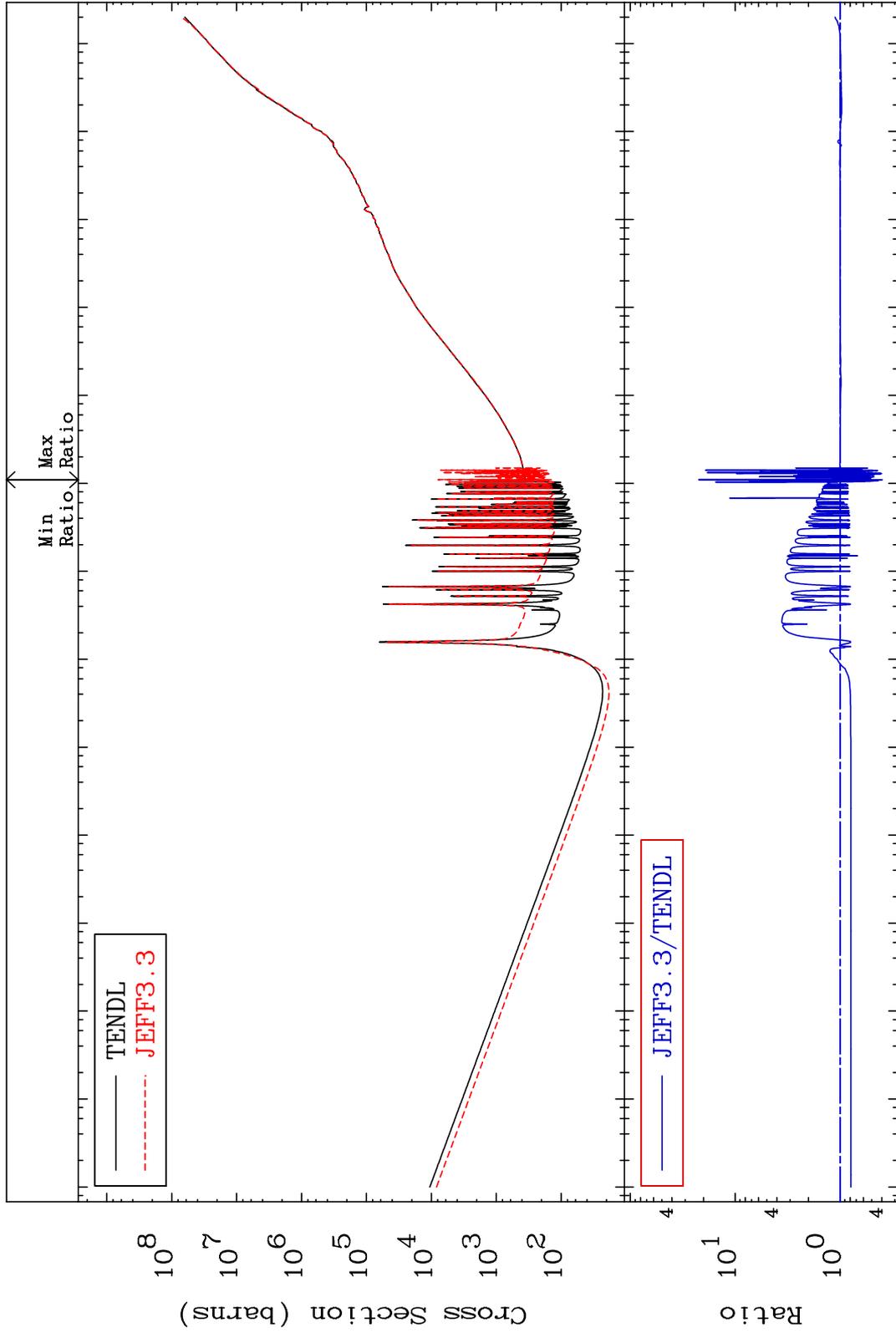
MAT 4440

Kerma total (eV-barns)

44-Ru-101

-60.23 To 2128. %

Cross Section



Incident Energy (eV)

68

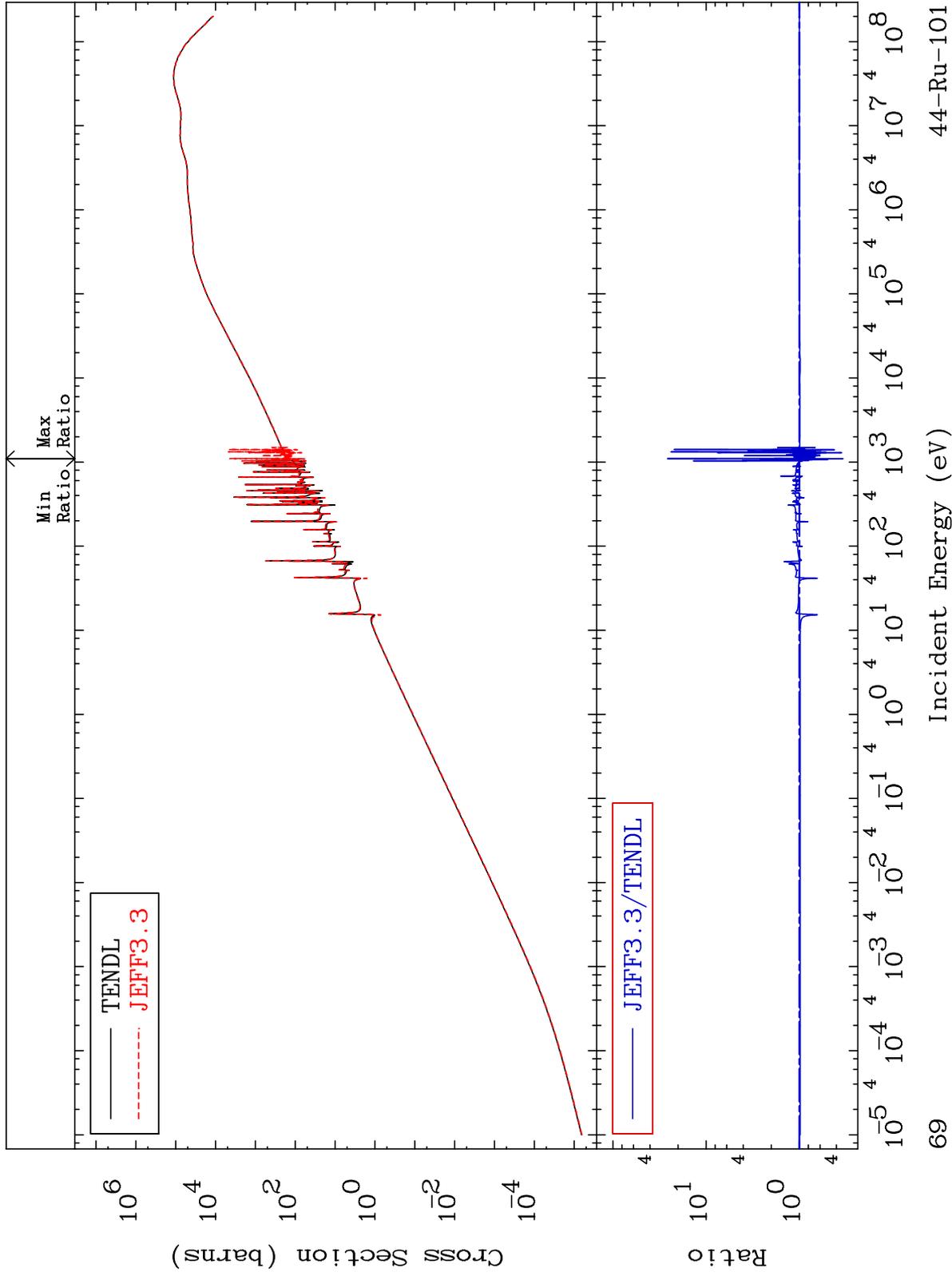
44-Ru-101

44-Ru-101

MAT 4440

Kerma elastic  
Cross Section

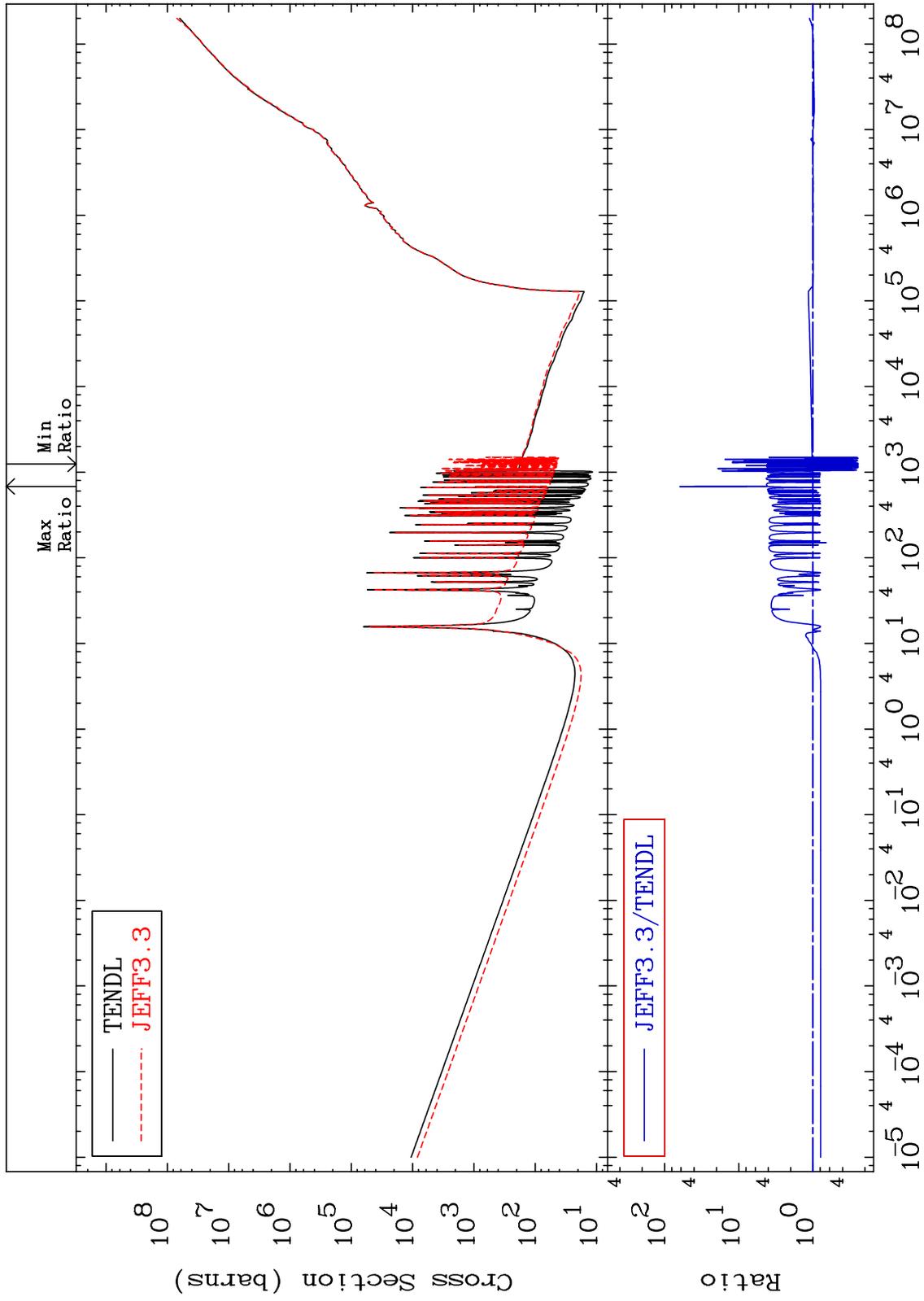
44-Ru-101  
-65.88 To 2484. %



MAT 4440

Kerma non-elastic (all but mt2)  
Cross Section

44-Ru-101  
-75.50 To 6100. %



70

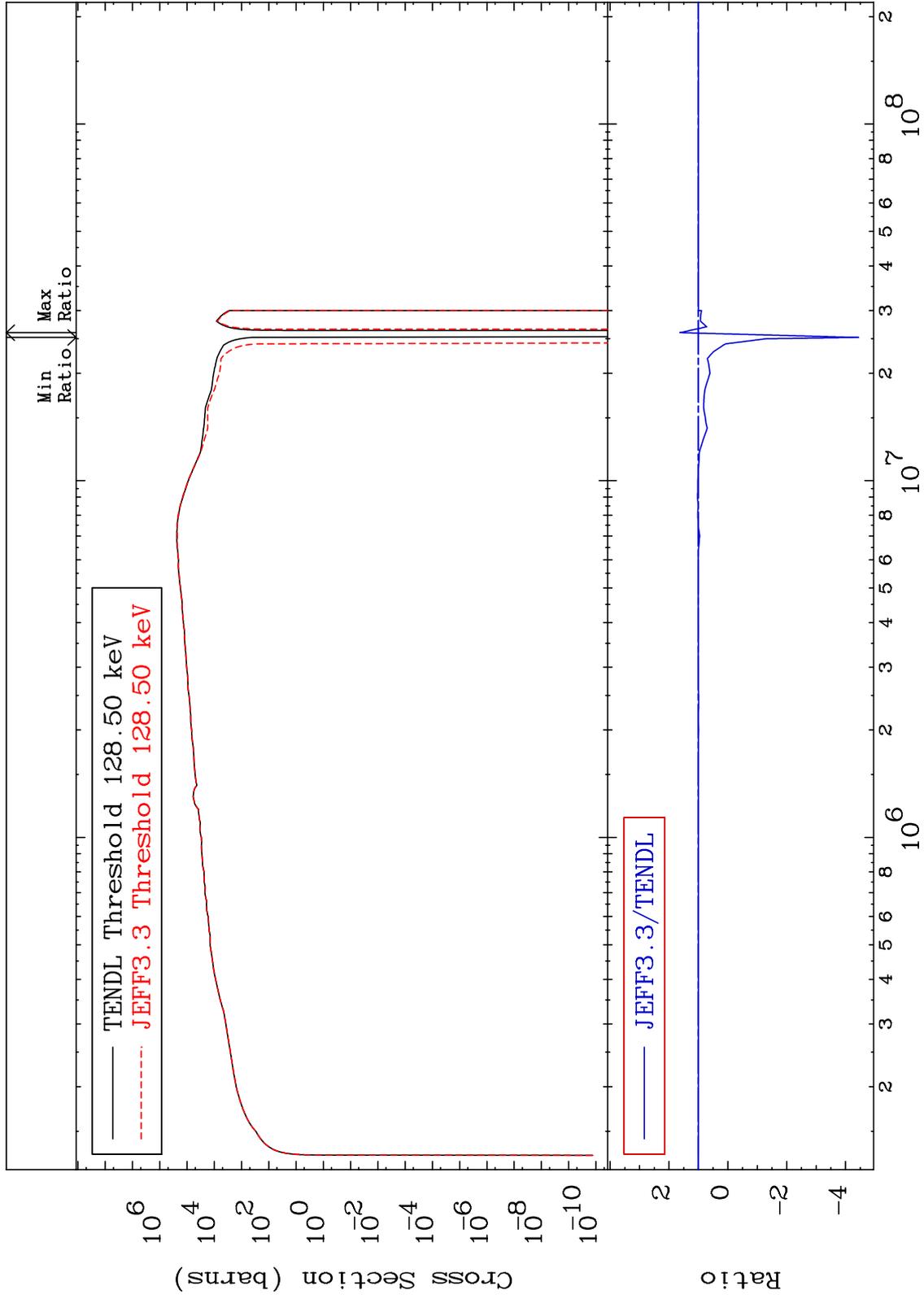
Incident Energy (eV)

44-Ru-101

MAT 4440

Kerma inelastic (mt51-91)  
Cross Section

44-Ru-101  
-543.5 To 62.75 %



71

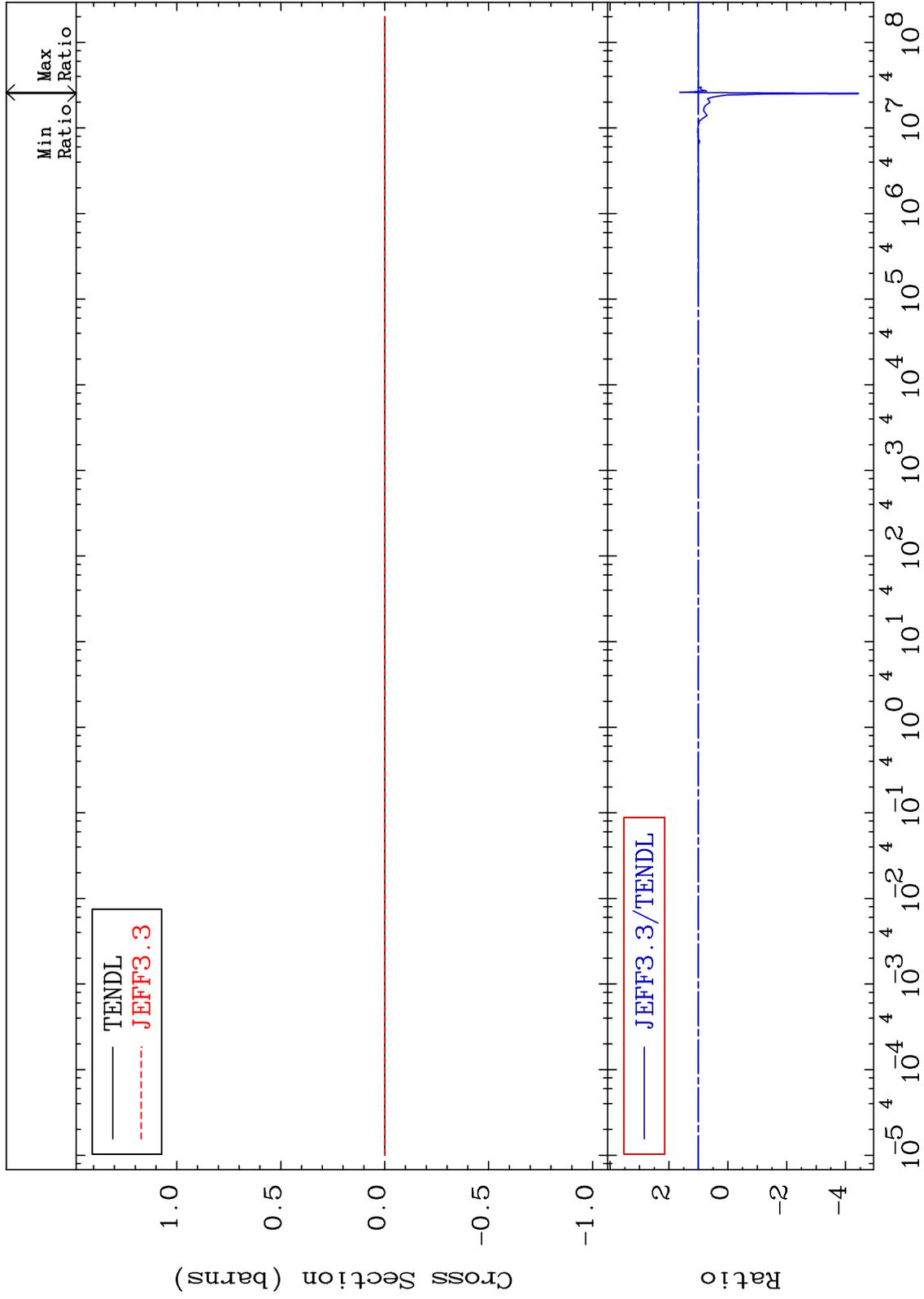
Incident Energy (eV)

44-Ru-101

MAT 4440

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

44-Ru-101  
-543.5 To 62.75 %



72

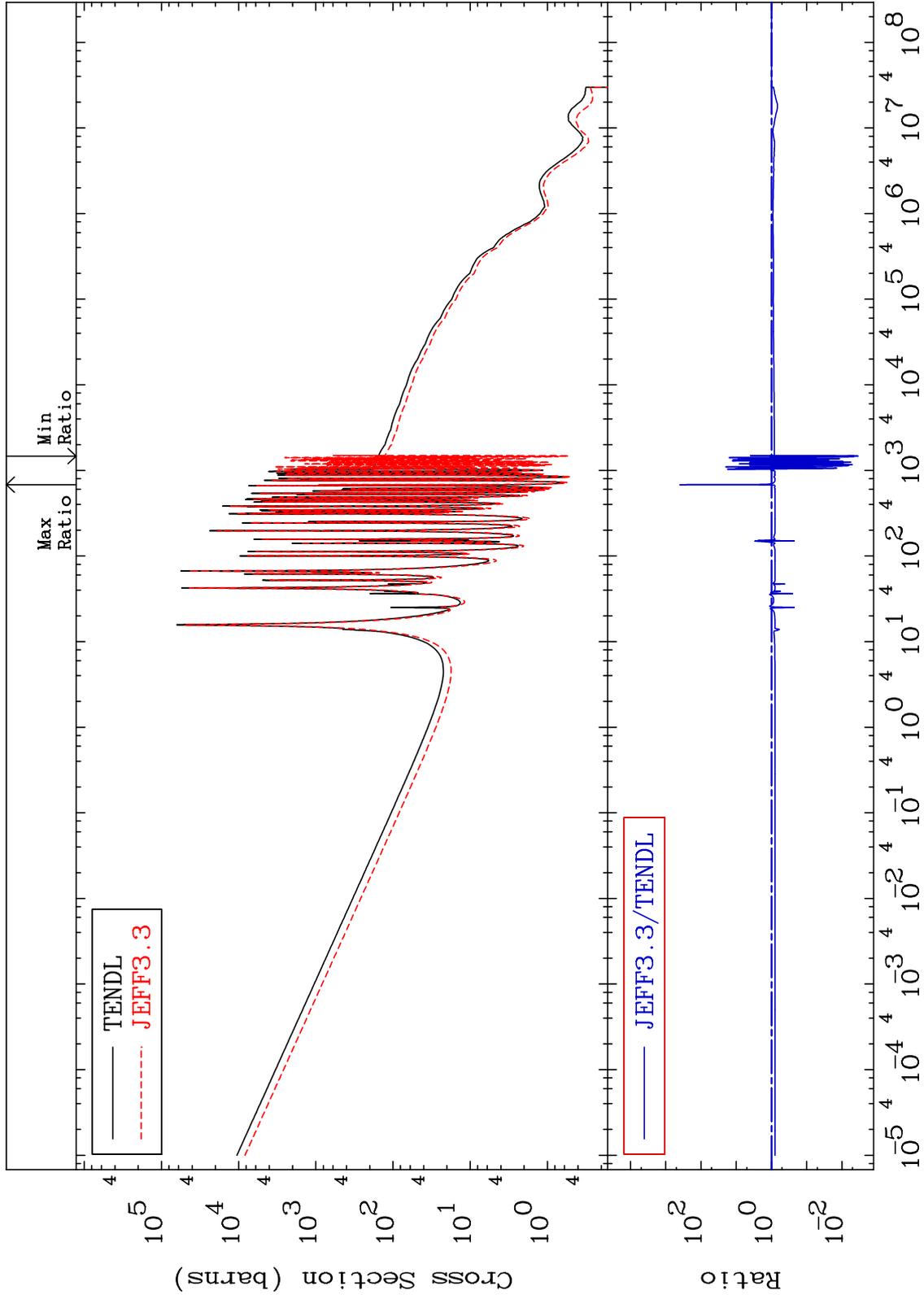
Incident Energy (eV)

44-Ru-101

MAT 4440

Kerma capture (mt102)  
Cross Section

44-Ru-101  
-99.66 To 9999. %



73

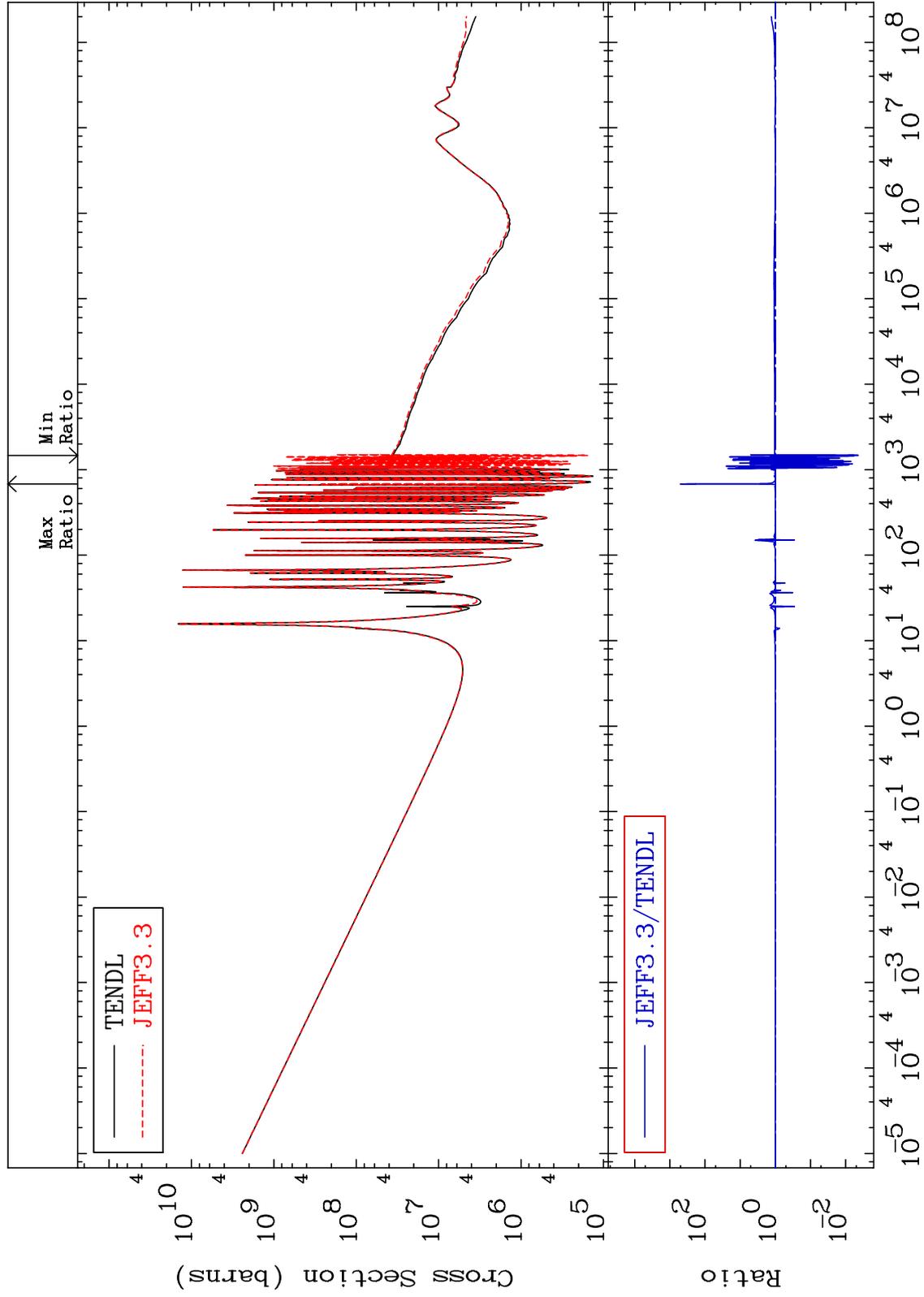
Incident Energy (eV)

44-Ru-101

MAT 4440

Total photon (eV-barns)  
Cross Section

44-Ru-101  
-99.57 To 9999. %



74

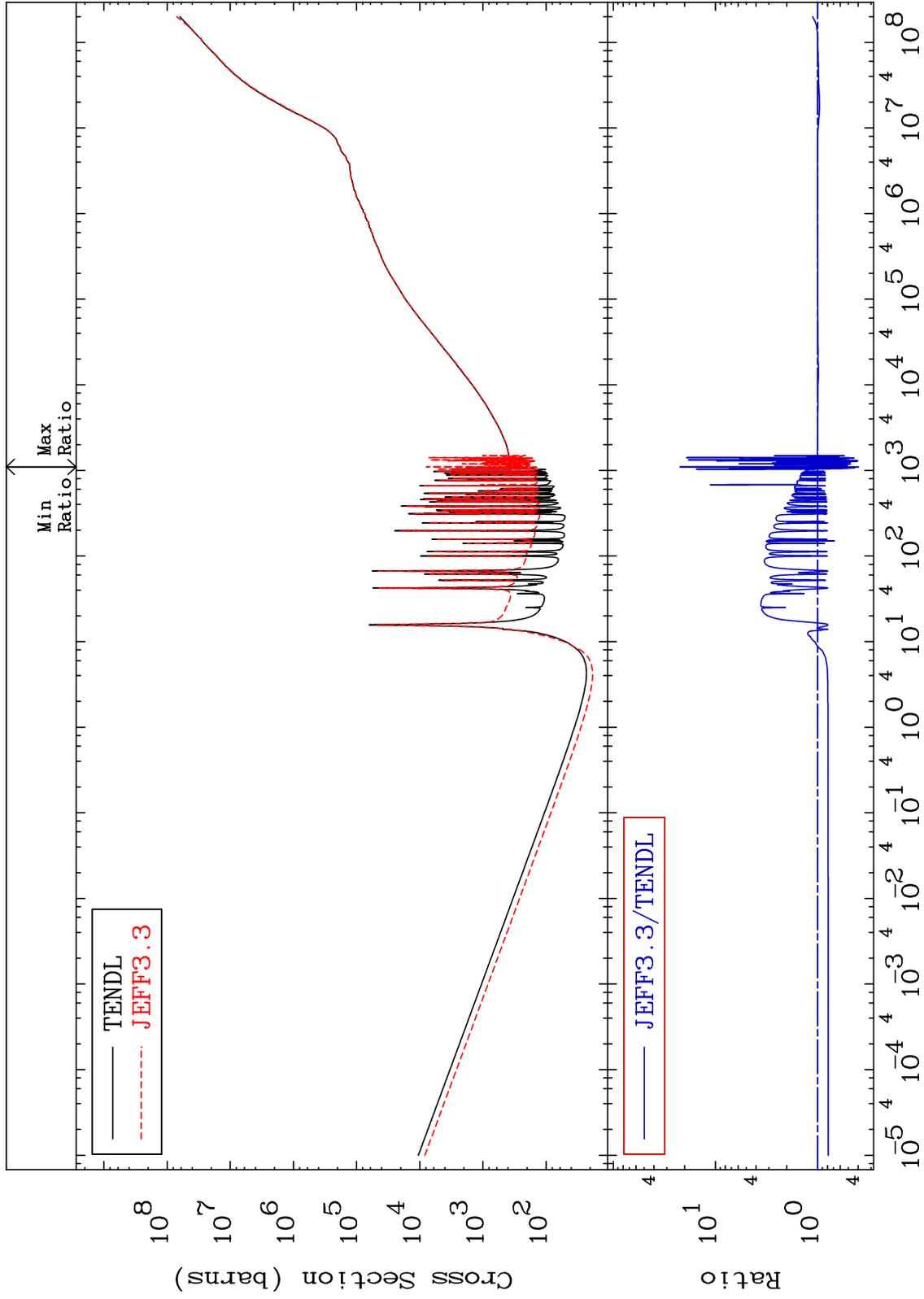
Incident Energy (eV)

44-Ru-101

MAT 4440

Total kinematic kerma (high limit)  
Cross Section

44-Ru-101  
-60.15 To 2127. %



75

Incident Energy (eV)

44-Ru-101

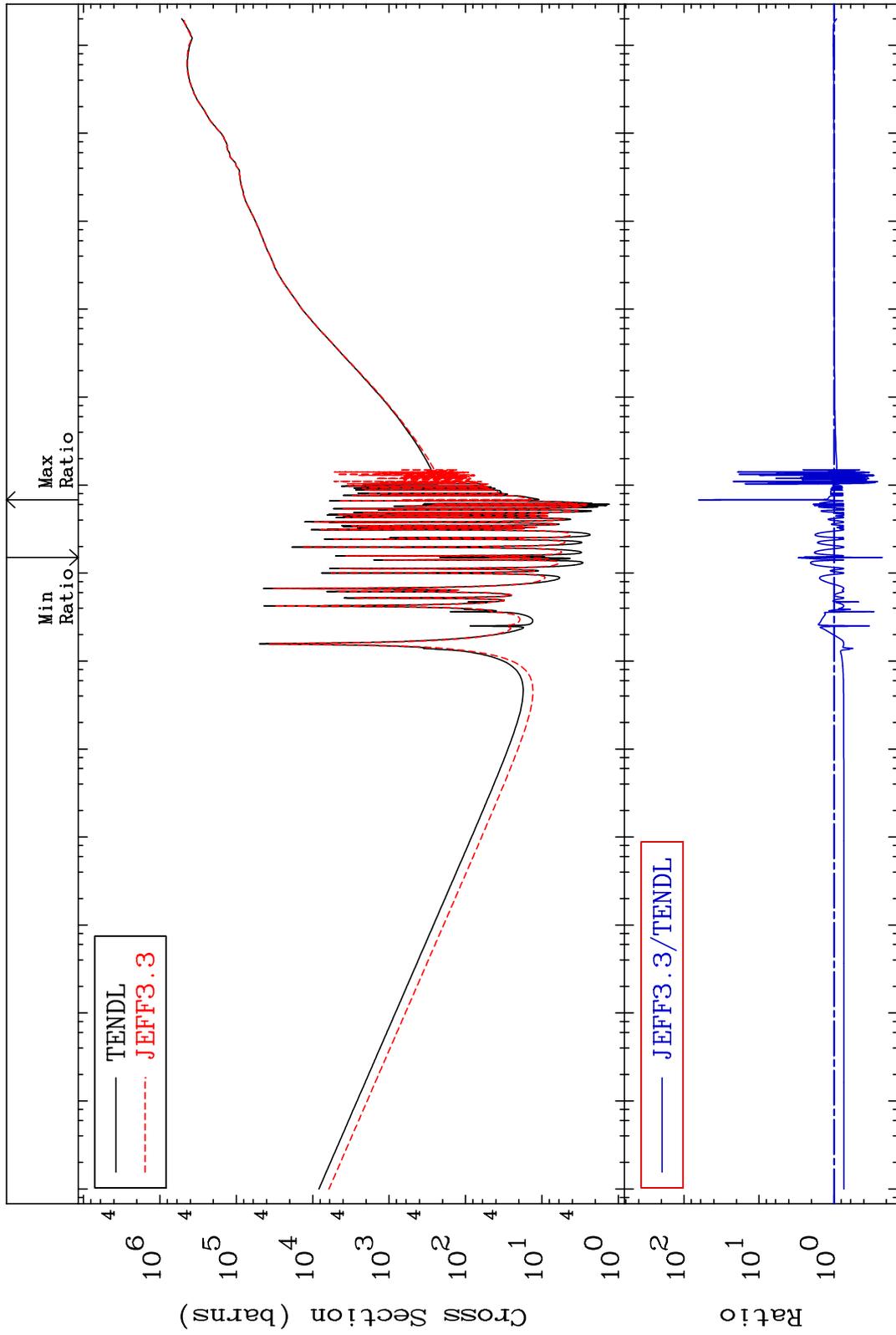
MAT 4440

Dpa total (eV-barns)

44-Ru-101

-77.16 To 6270. %

Cross Section



76

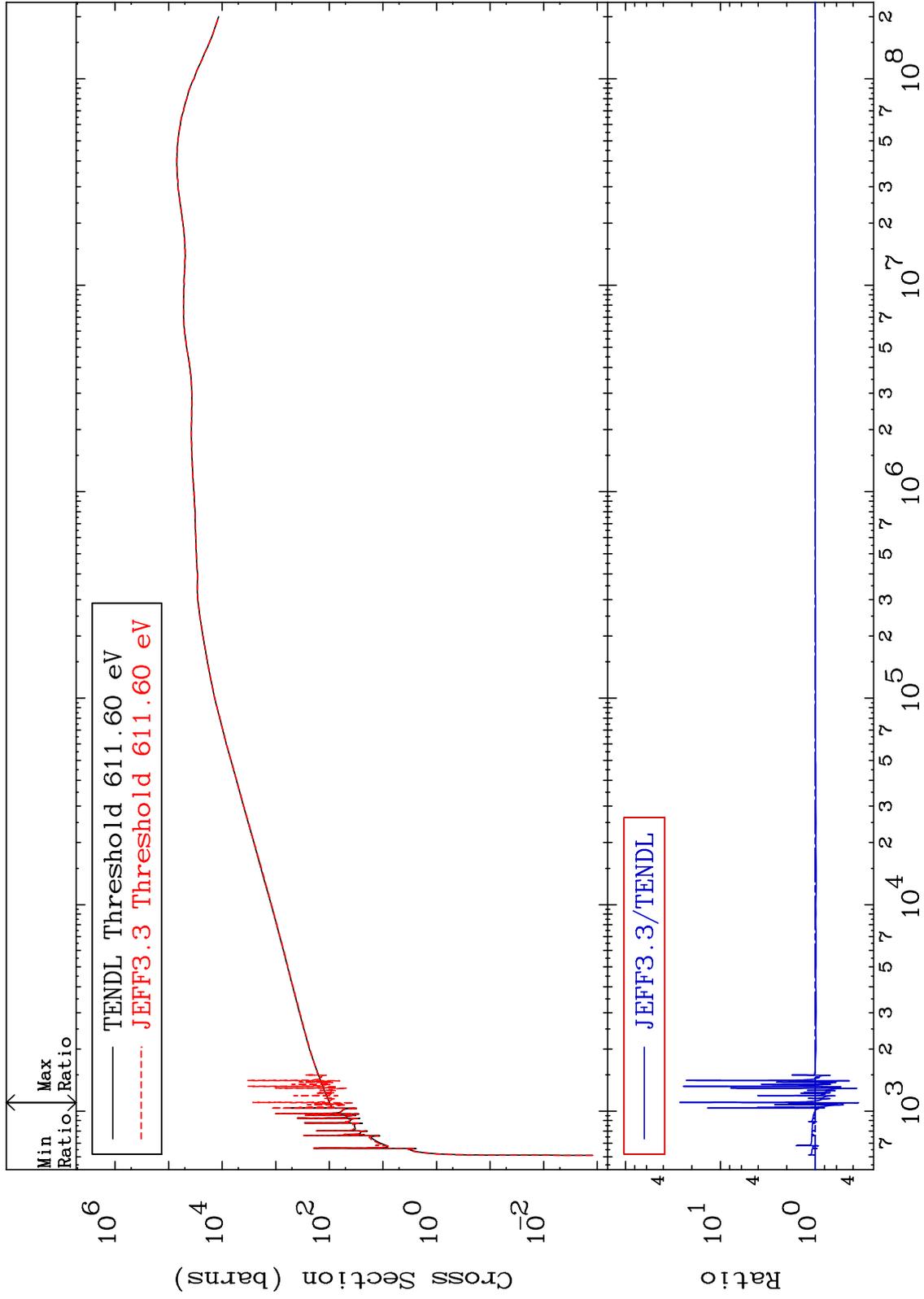
Incident Energy (eV)

44-Ru-101

MAT 4440

Dpa elastic (mt2)  
Cross Section

44-Ru-101  
-64.78 To 2571. %



77

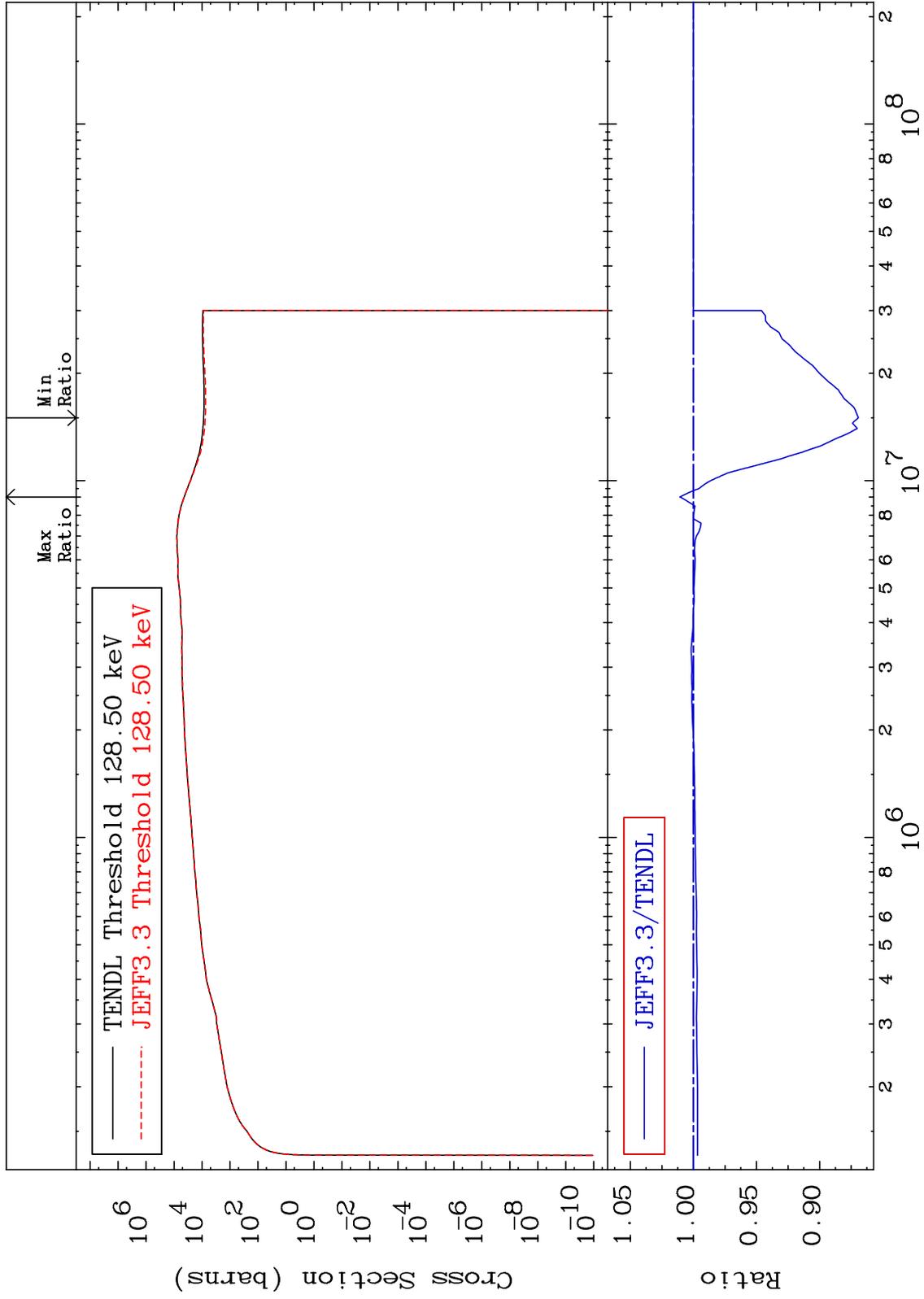
44-Ru-101

44-Ru-101

MAT 4440

Dpa inelastic (mt51-91)  
Cross Section

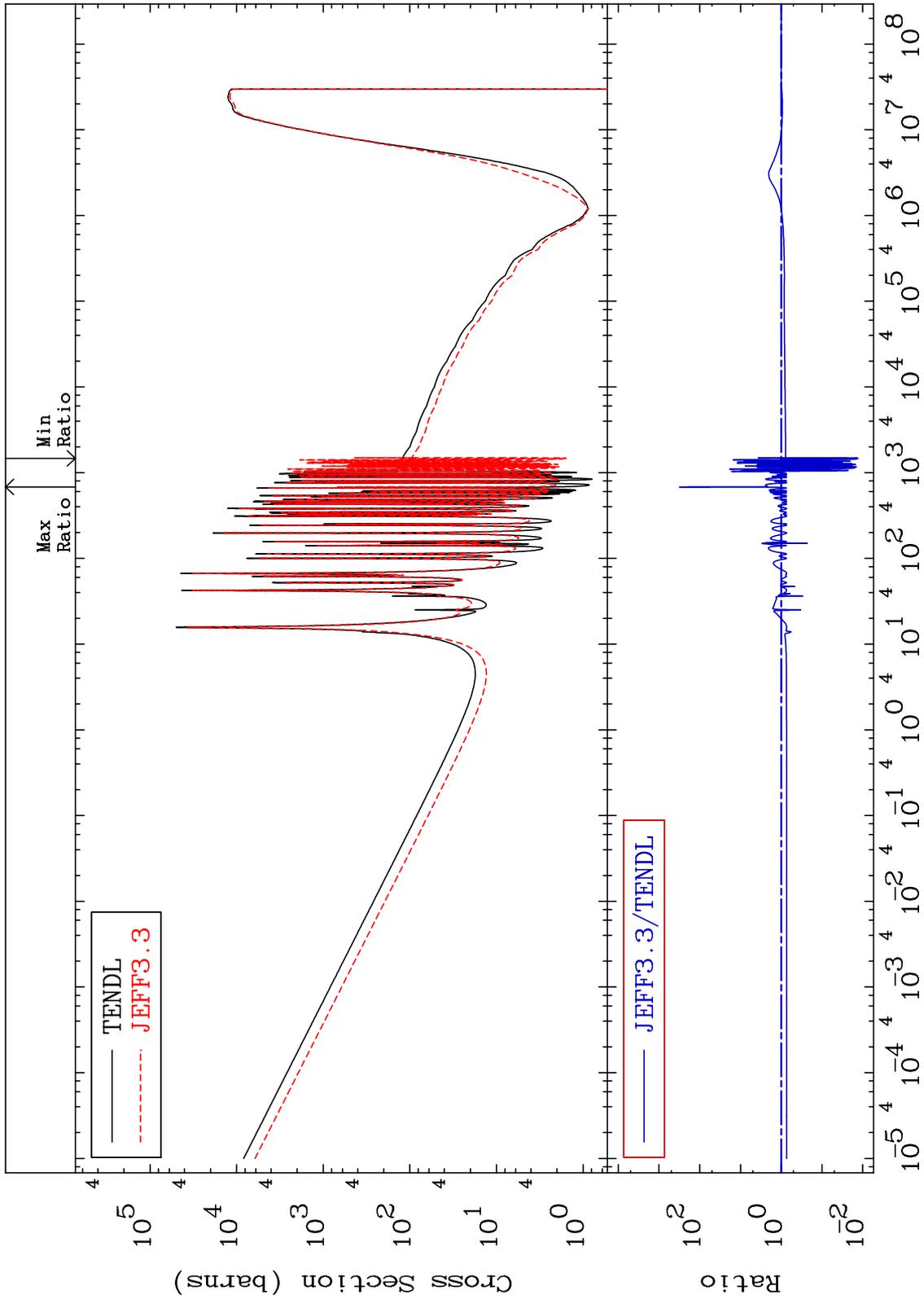
44-Ru-101  
-13.07 To 1.071 %



MAT 4440

Dpa disappearance (mt102 -120)  
Cross Section

44-Ru-101  
-98.72 To 9999. %



79

Incident Energy (eV)

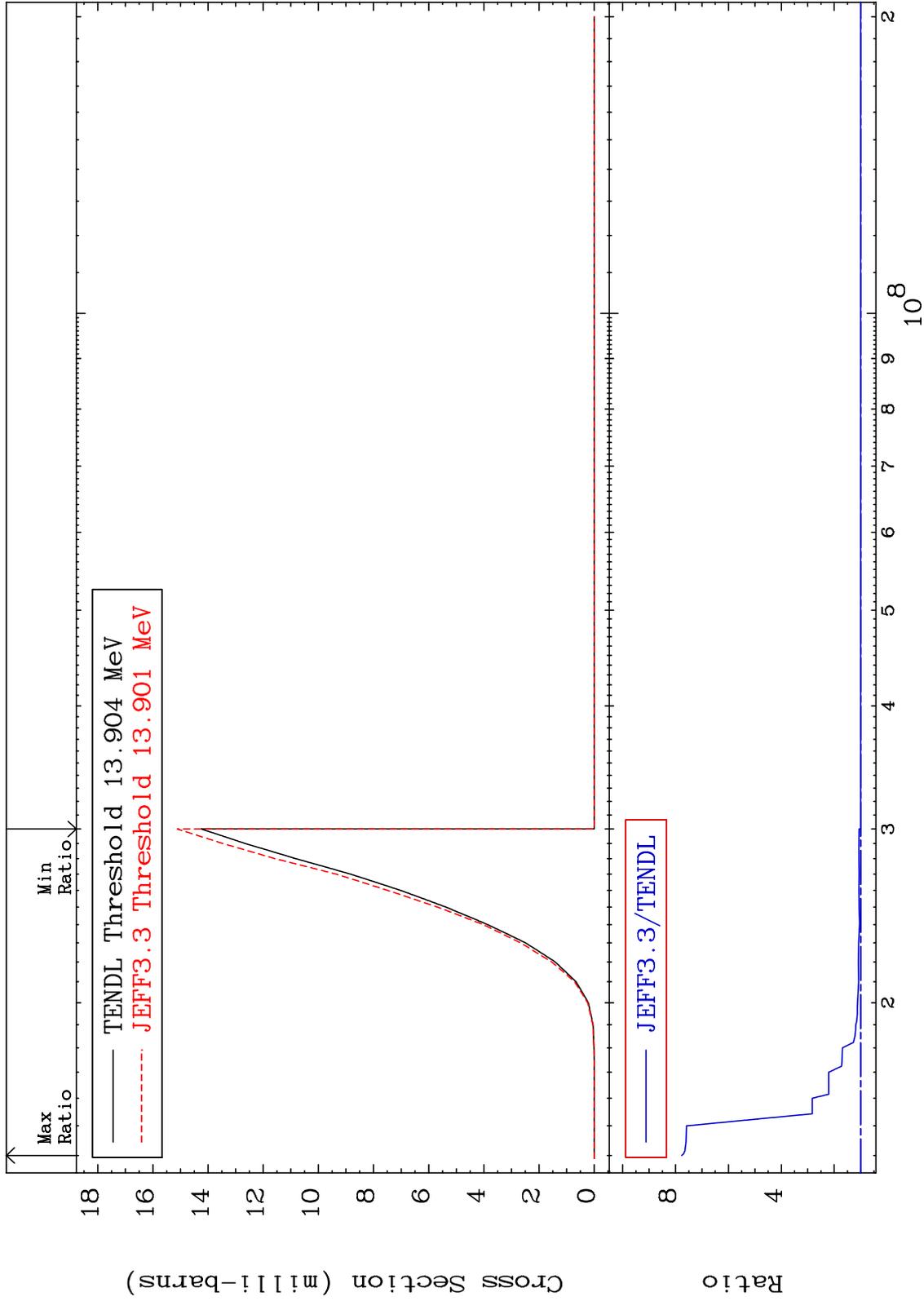
44-Ru-101

MAT 4440

(n, n') d: 43-Tc-99g

44-Ru-101

Radionuclide Production Cross Section 0.000 To 676.7 %



80

Incident Energy (eV)

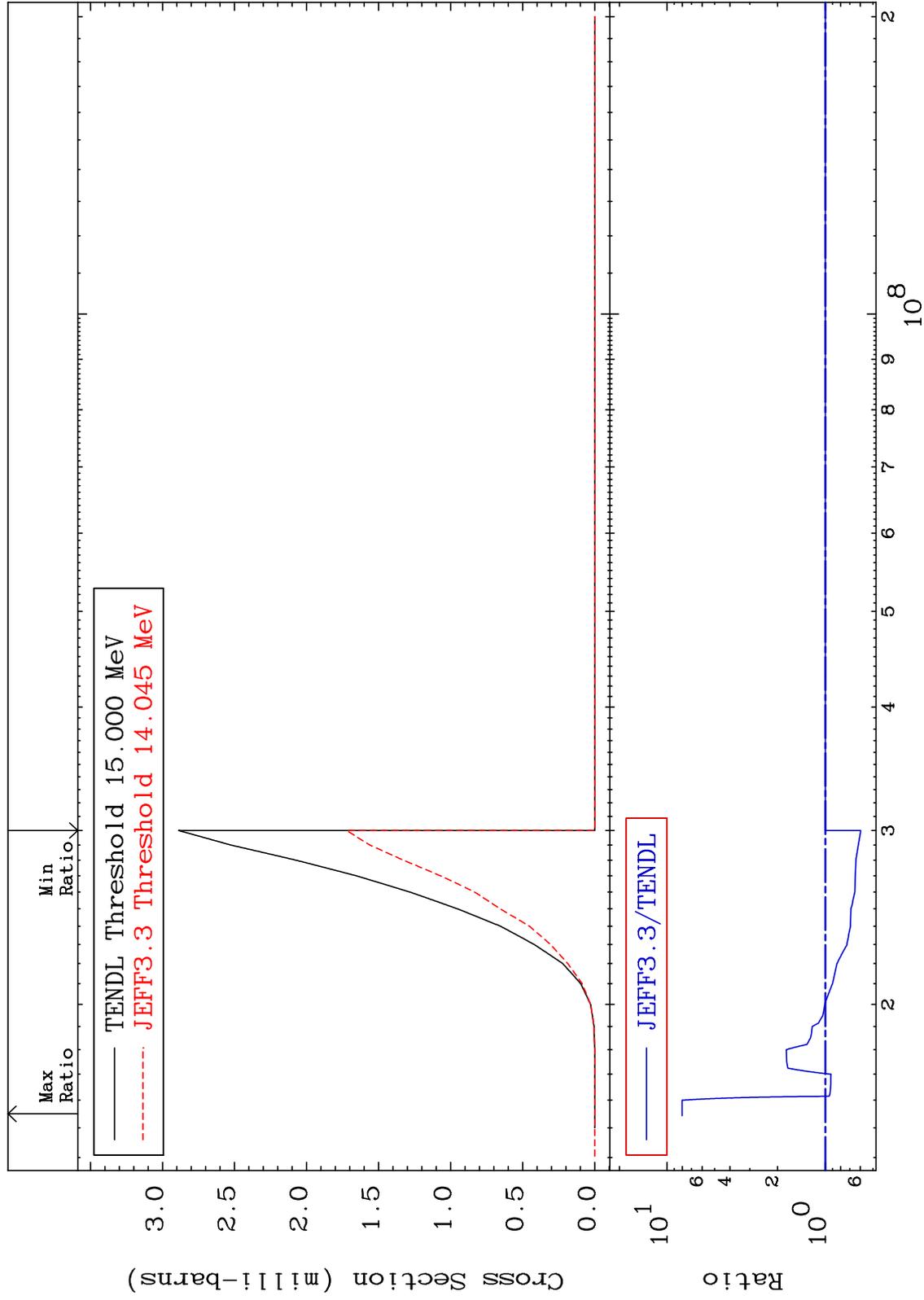
44-Ru-101

MAT 4440

(n, n') d:43-Tc-99m2

44-Ru-101

Radionuclide Production Cross Section -40.36 To 702.1 %

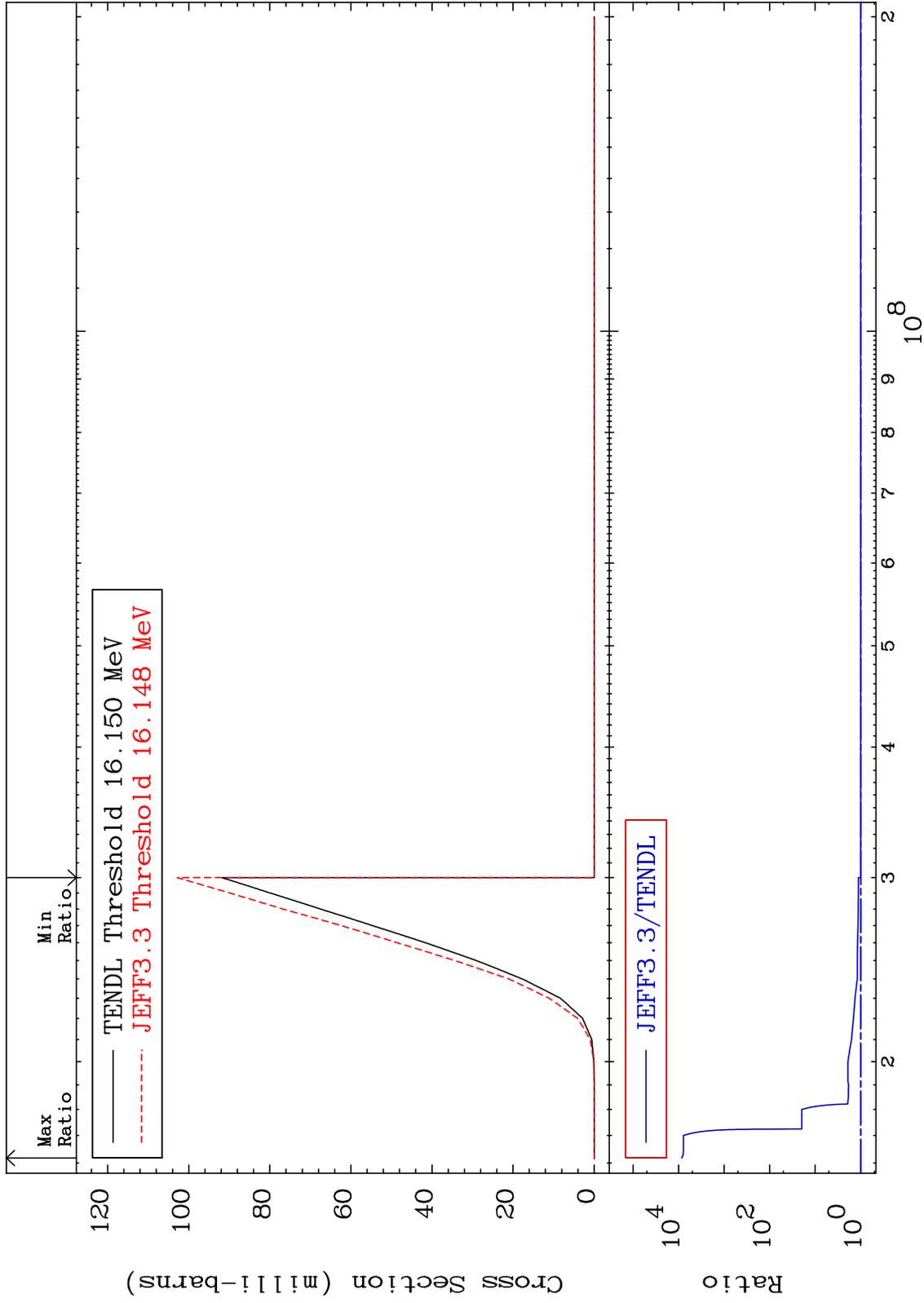


MAT 4440

(n,2n) p: 43-Tc-99g

44-Ru-101

Radionuclide Production Cross Section 0.000 To 9999. %

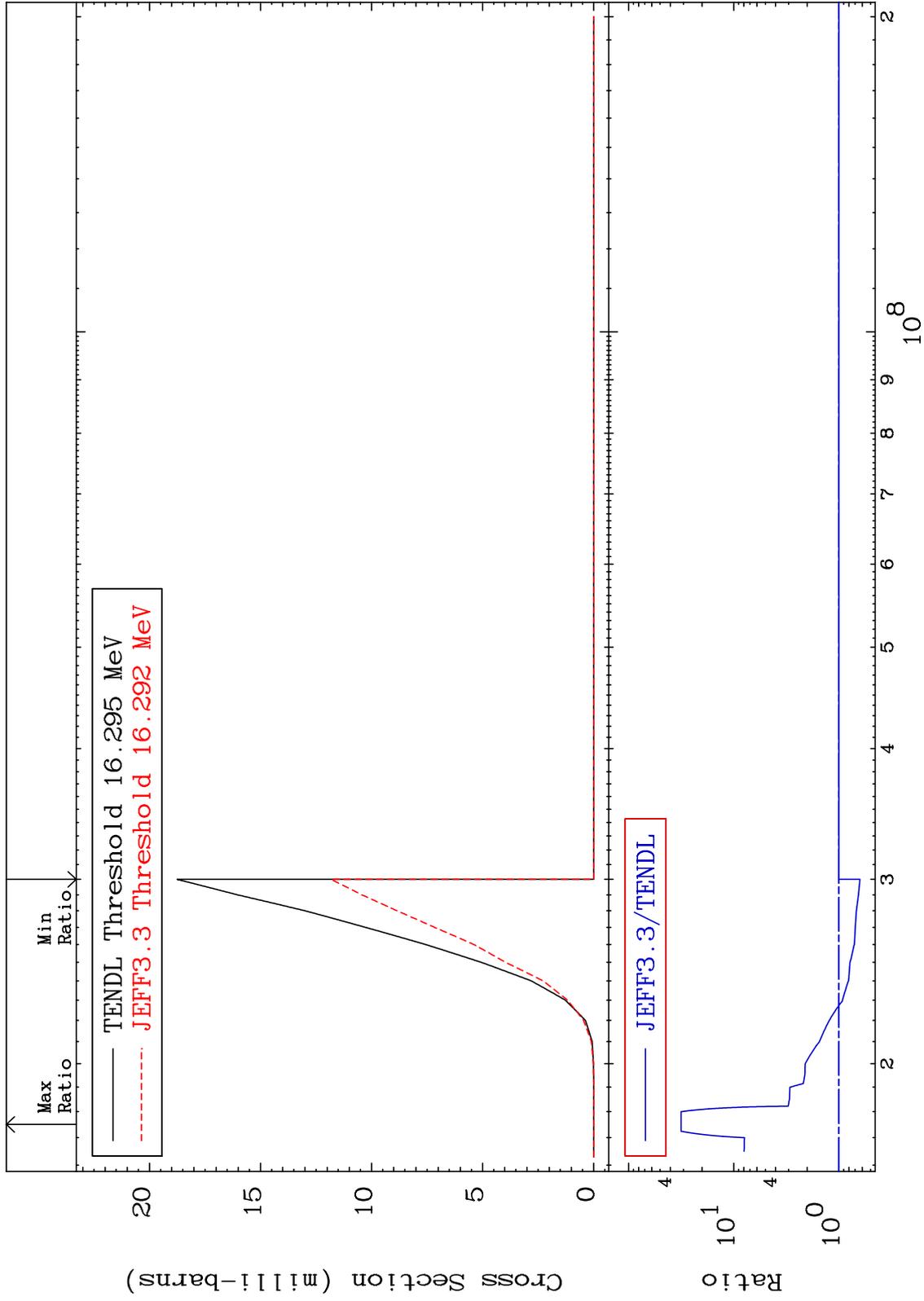


MAT 4440

(n,2n) p:43-Tc-99m2

44-Ru-101

Radionuclide Production Cross Section -36.95 To 3059. %



Max Ratio

Min Ratio

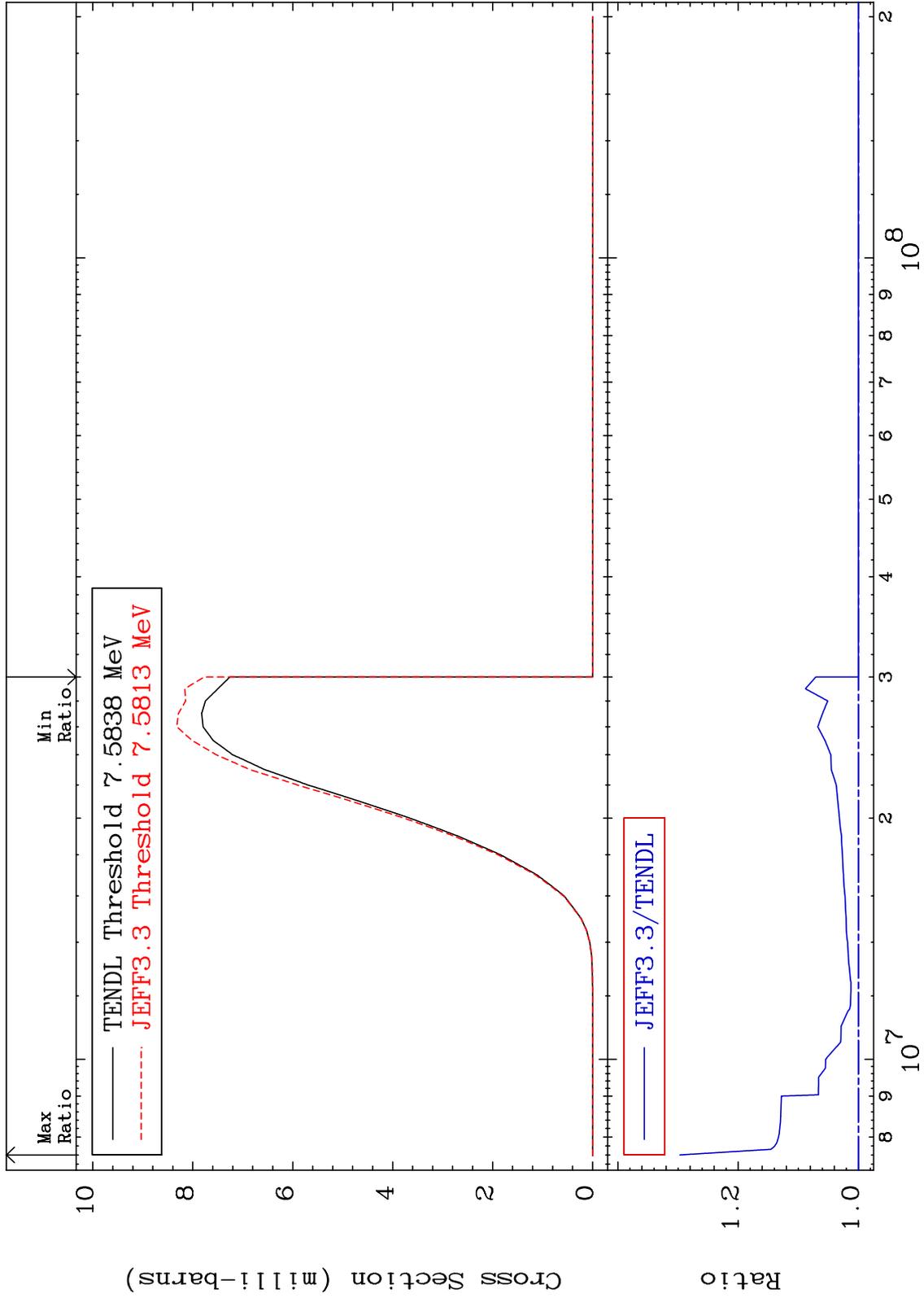
TENDL Threshold 16.295 MeV

JEFF3.3 Threshold 16.292 MeV

JEFF3.3/TENDL

MAT 4440

(n, t) : 43-Tc-99g 44-Ru-101  
Radionuclide Production Cross Section 0.000 To 29.69 %

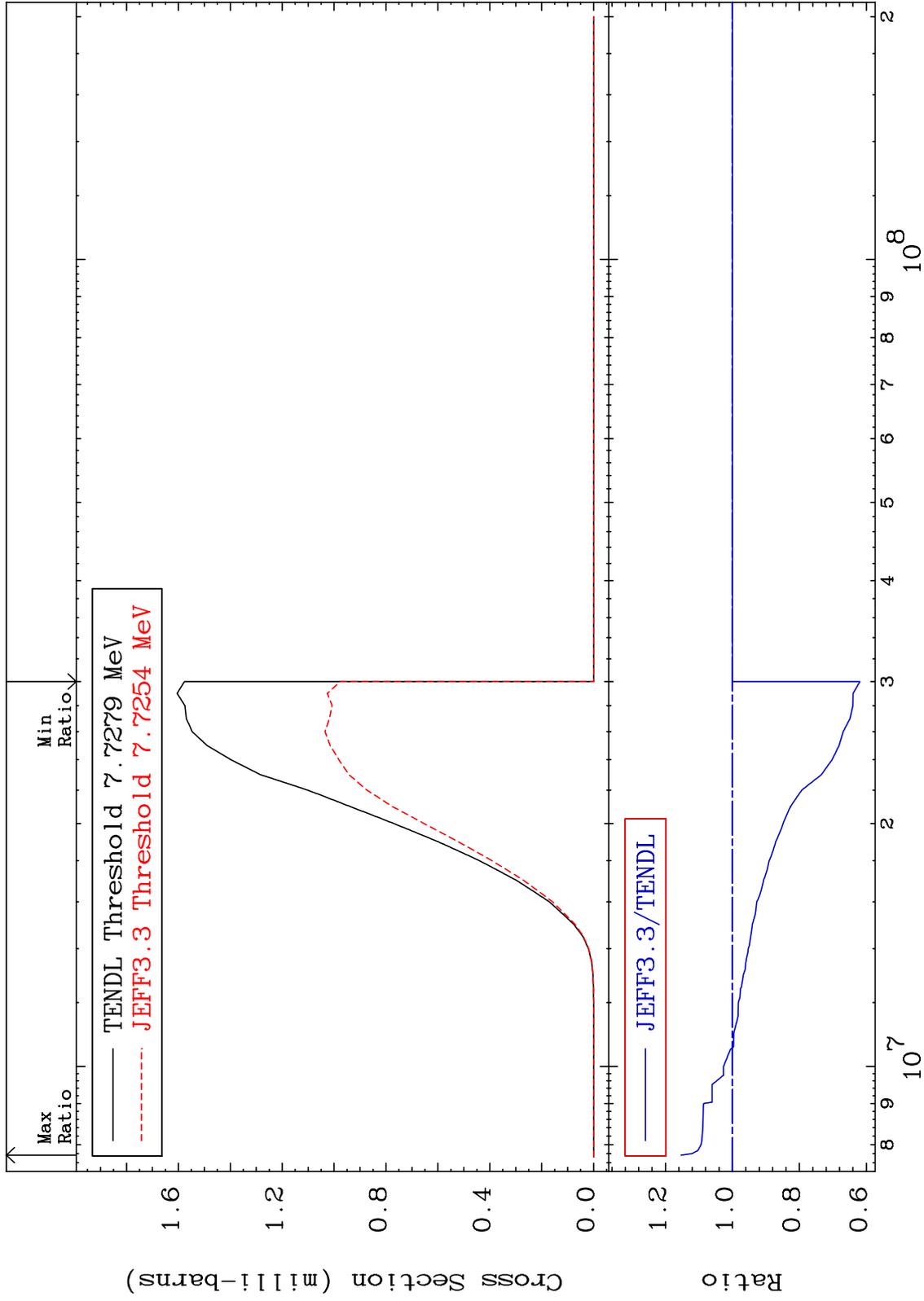


MAT 4440

(n, t): 43-Tc-99m2

44-Ru-101

Radionuclide Production Cross Section -38.08 To 15.32 %



85

Incident Energy (eV)

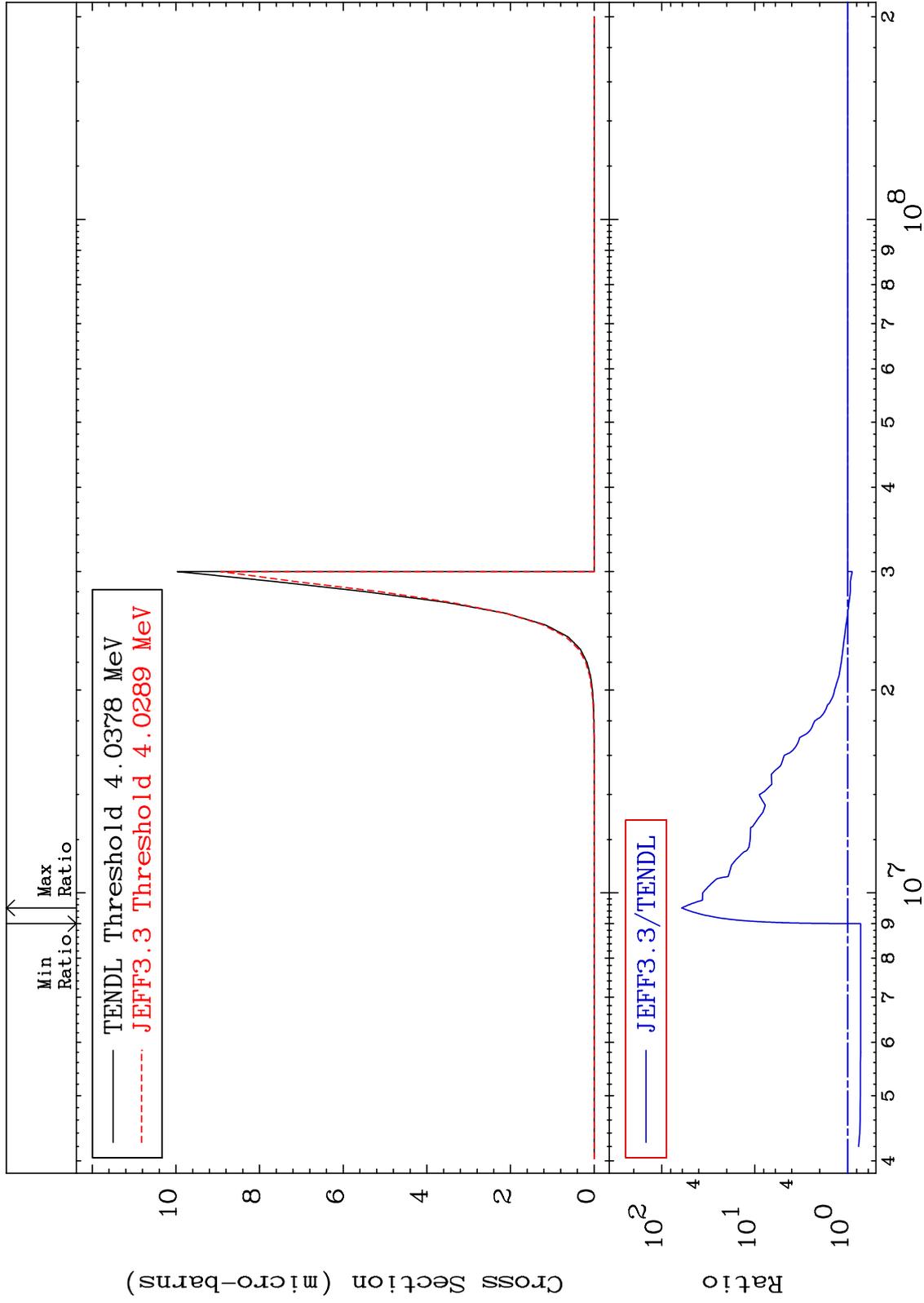
44-Ru-101

MAT 4440

(n, p)  $\alpha$ :41-Nb-97g

44-Ru-101

Radionuclide Production Cross Section -27.45 To 5988. %

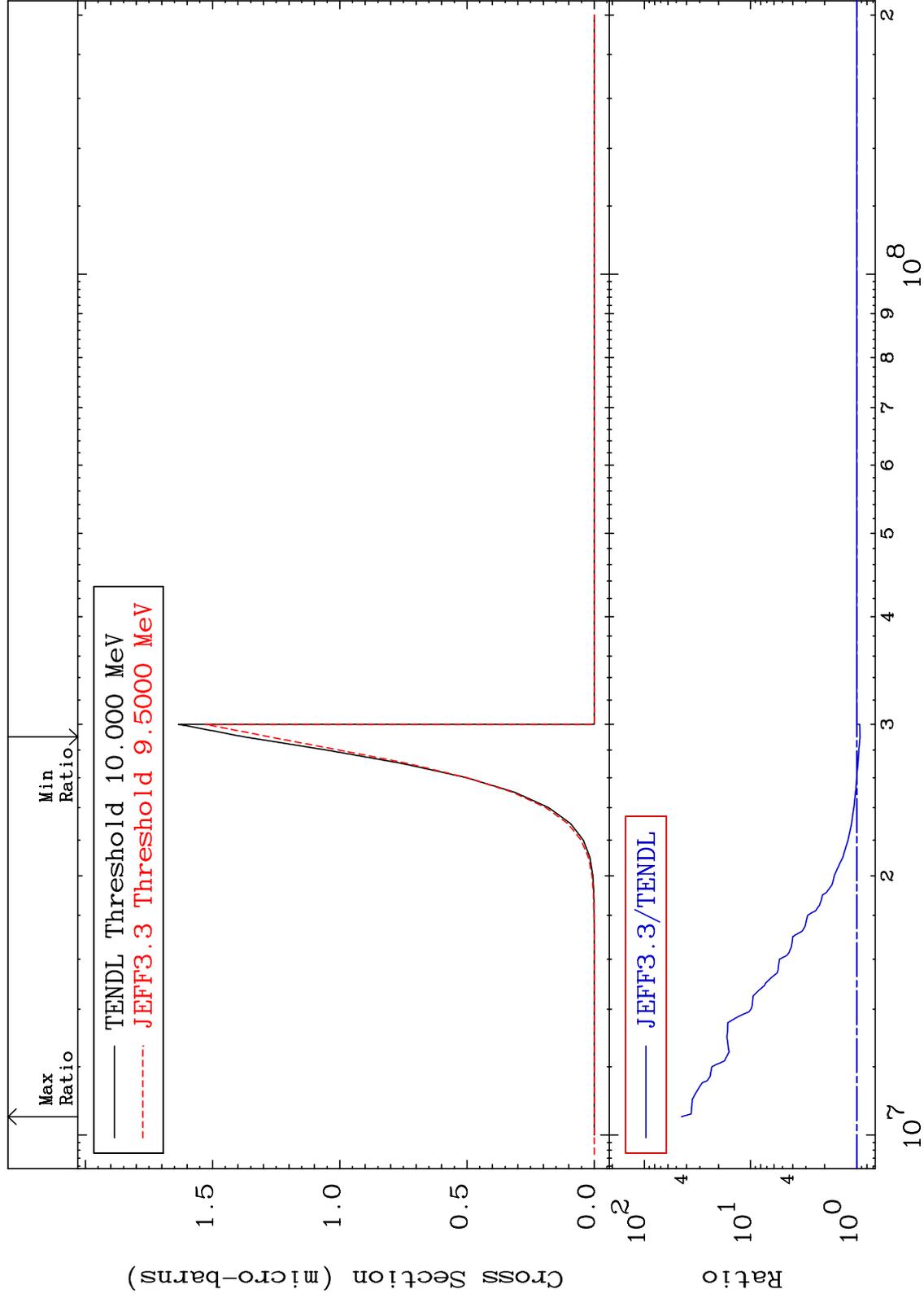


MAT 4440

(n, p)  $\alpha$ : 41-Nb-97m1

44-Ru-101

Radionuclide Production Cross Section -7.137 To 4360. %



87

Incident Energy (eV)

44-Ru-101