

Program Complot  
(Version 2021-1)

by

Dermott E. Cullen  
(Present Contact Information)

Dermott E. Cullen  
1466 Hudson Way  
Livermore, CA 94550

U.S.A.

Tele: 925-443-1911

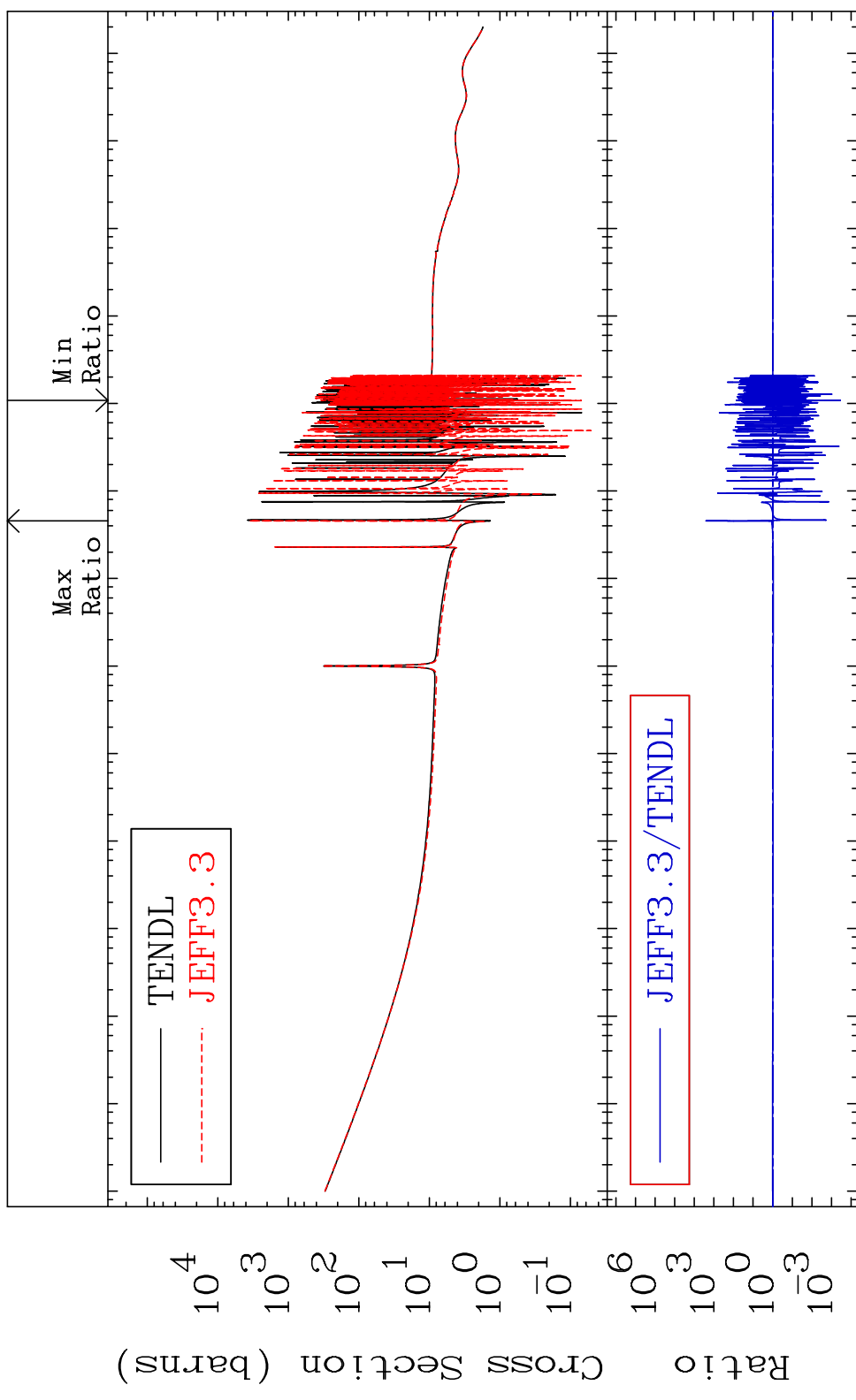
E.Mail:redcullen1@comcast.net

Web:redcullen1.net/HOMEPAGE.NEW

Press Mouse Button to Start

MAT 4437

Total Cross Section  
44-Ru-100  
-99.96 To 9999. %



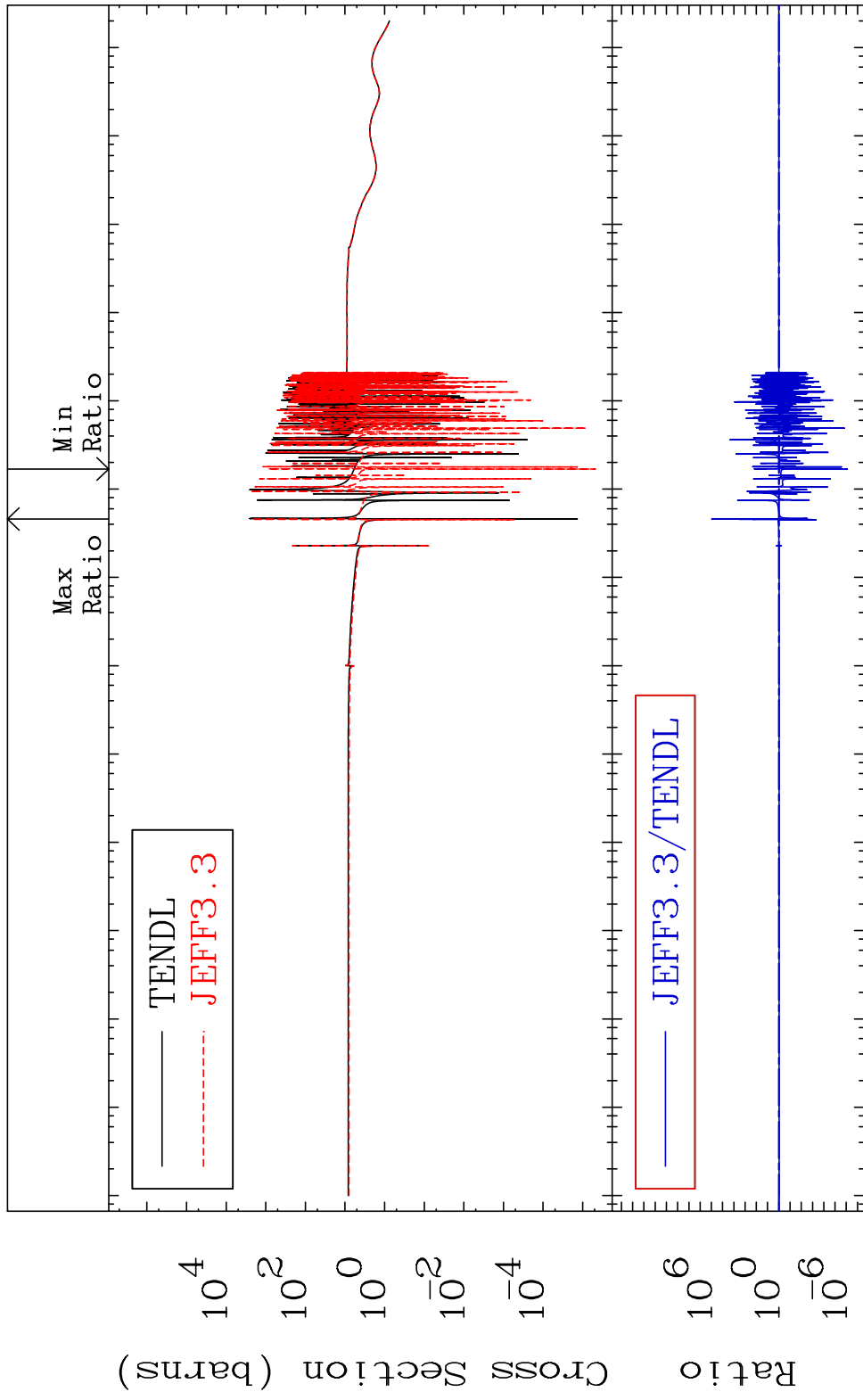
1 Incident Energy (eV) 44-Ru-100

MAT 4437

Elastic

44-Ru-100

Cross Section -100.0 To 9999. %

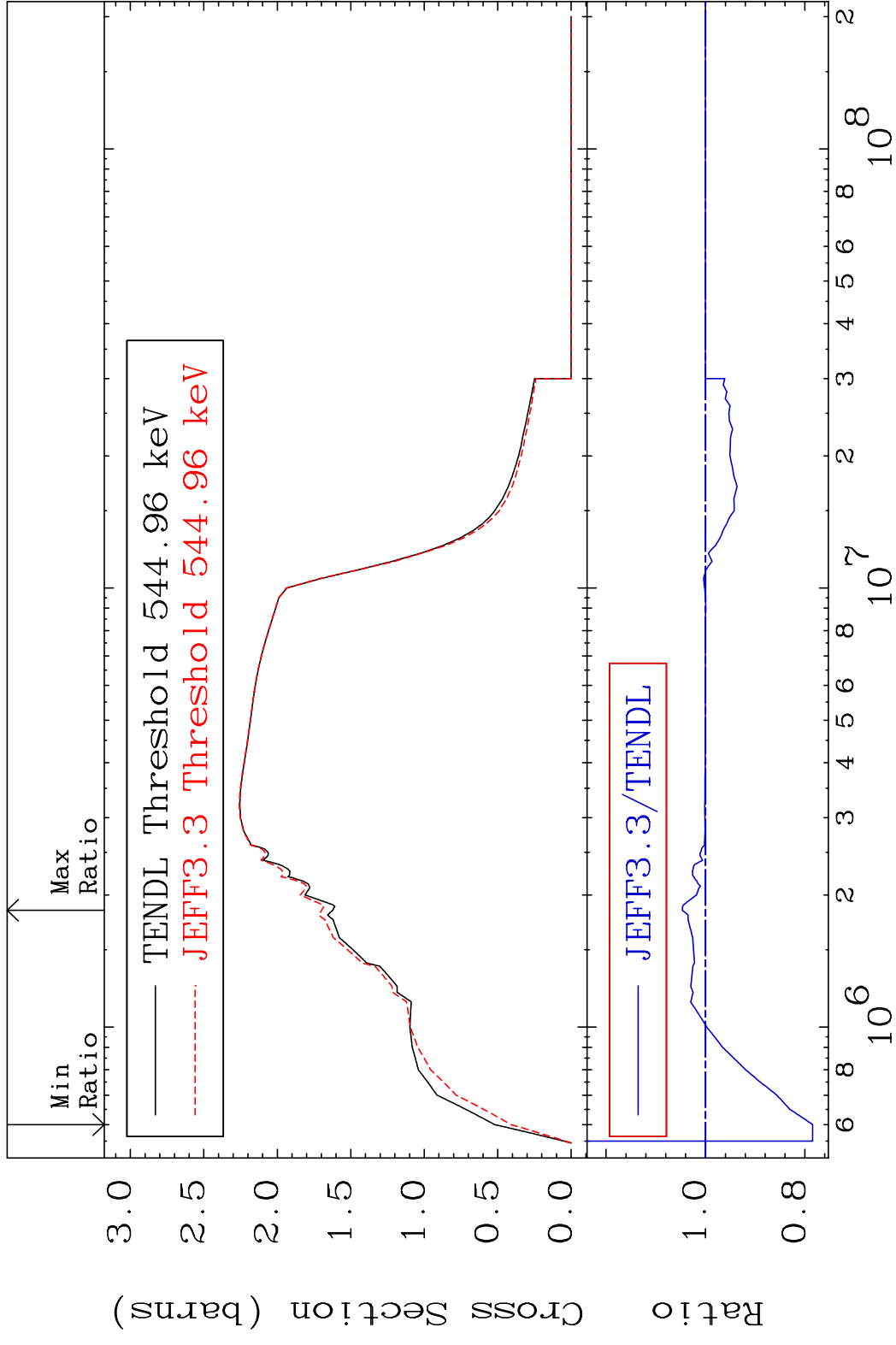


2

Incident Energy (eV)

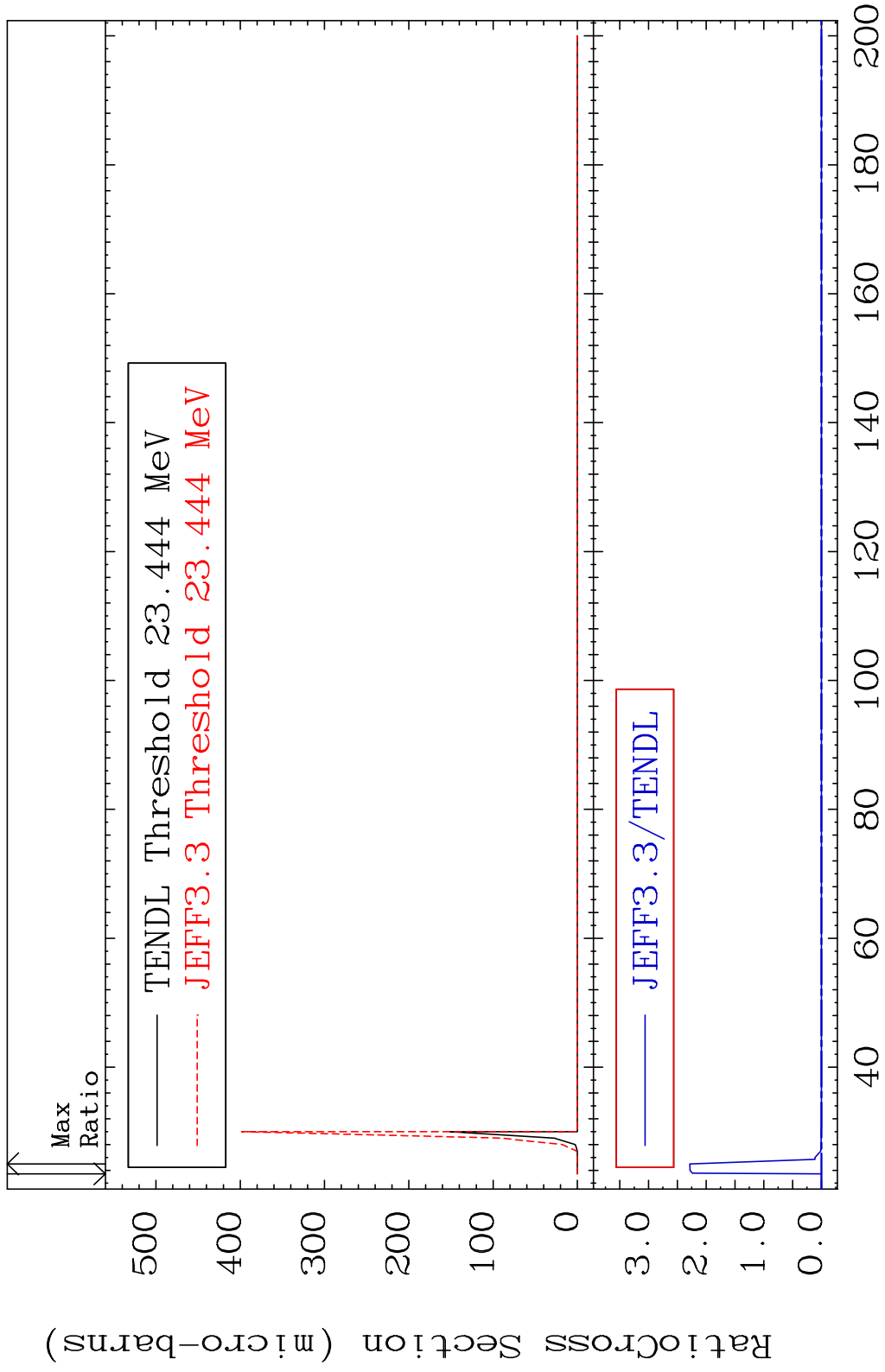
44-Ru-100

MAT 4437 Inelastic 44-Ru-100  
 Cross Section -21.54 To 4.657 %



3 44-Ru-100

MAT 4437 (n,2n) d 44-Ru-100  
 Cross Section -100.0 To 9999. %

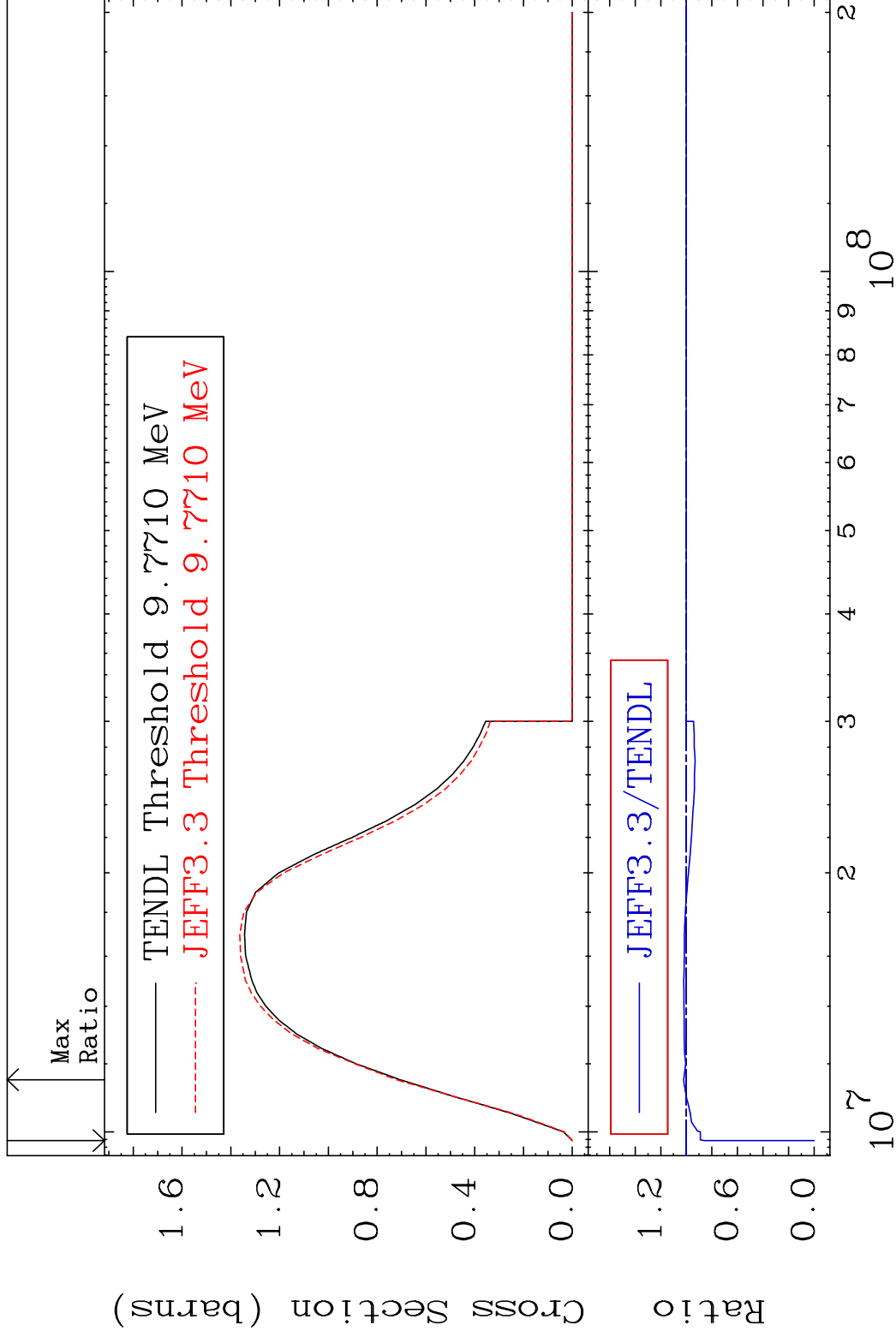


MAT 4437

(n,2n)

44-Ru-100

Cross Section -100.0 To 2.068 %



5

Incident Energy (eV)

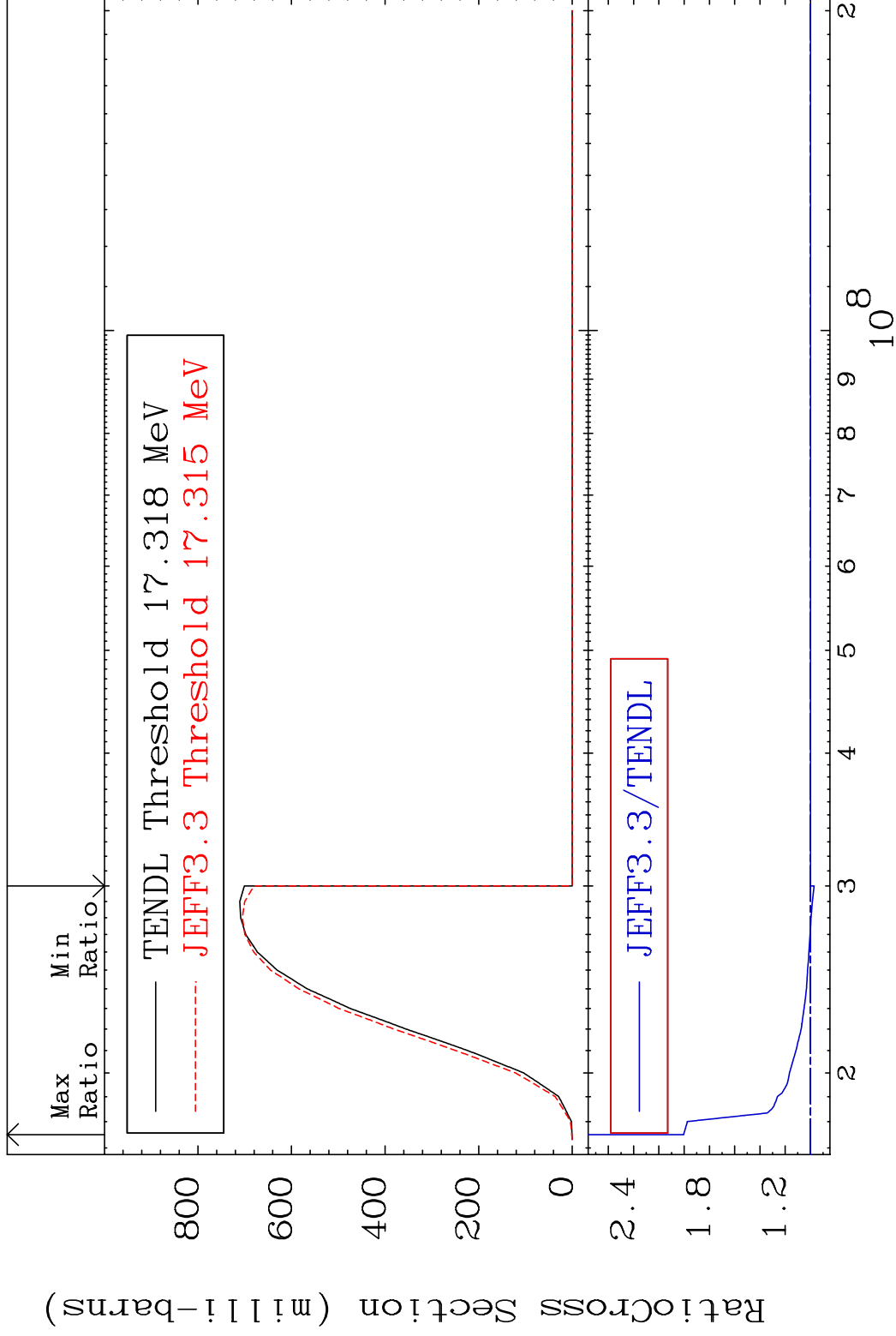
44-Ru-100

MAT 4437

(n,3n)

44-Ru-100

Cross Section -2.905 To 100.4 %

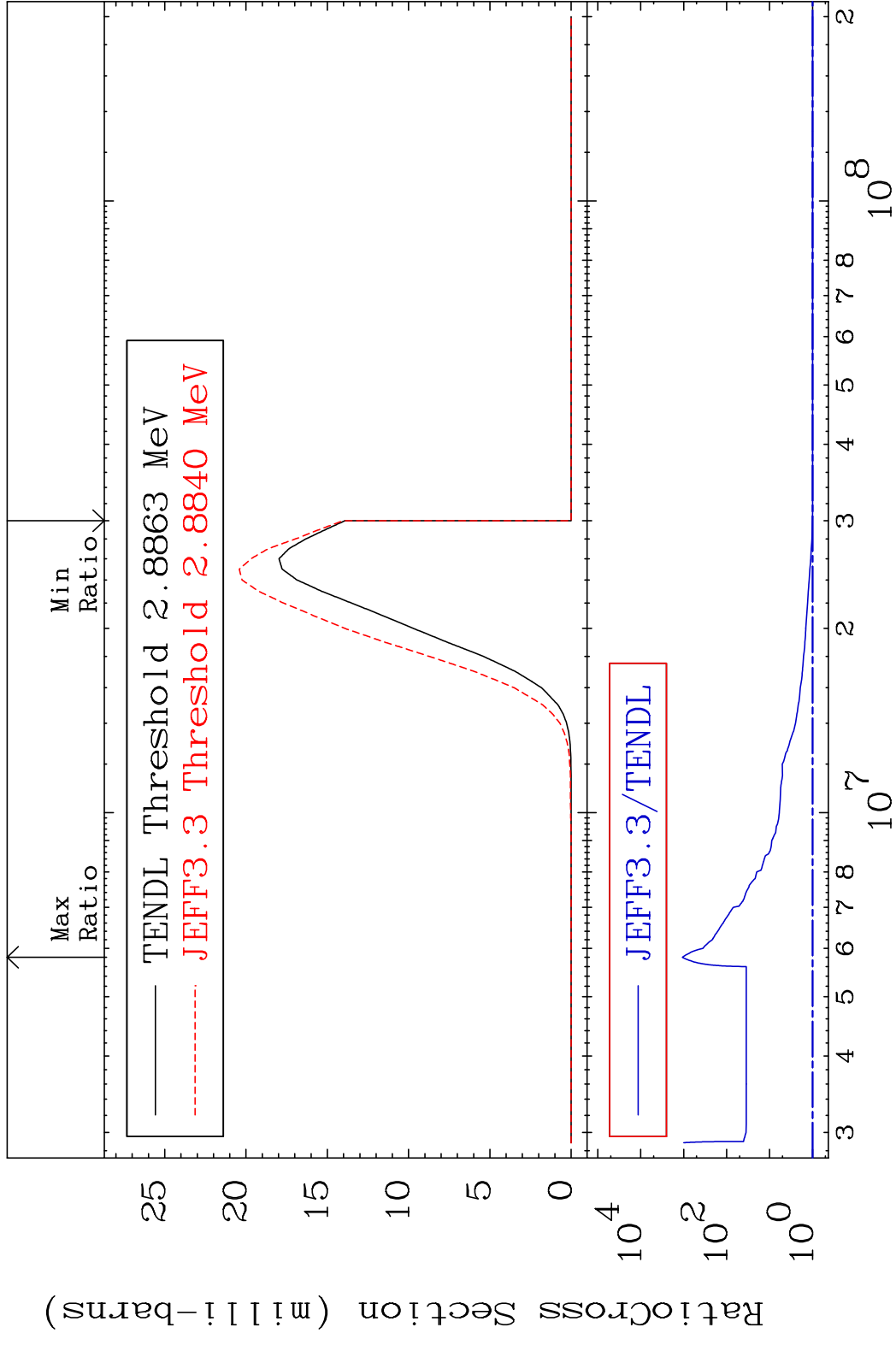


6

Incident Energy (eV)

44-Ru-100

MAT 4437 (n, n')  $\alpha$  44-Ru-100  
 Cross Section 0.000 To 9999. %



7 Incident Energy (eV) 44-Ru-100

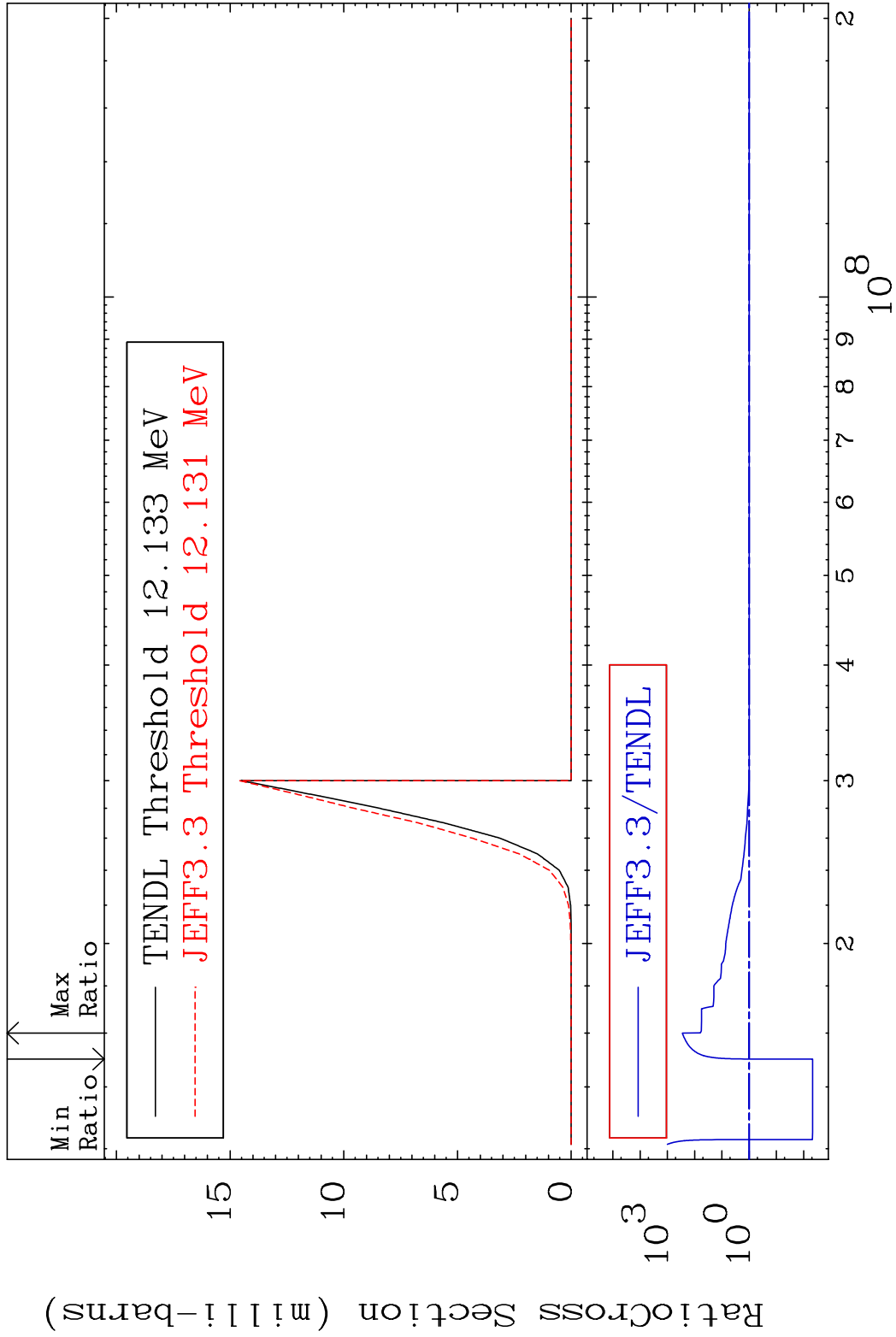


MAT 4437

(n,2n)  $\alpha$

44-Ru-100

Cross Section -99.53 To 9999. %



8

Incident Energy (eV)

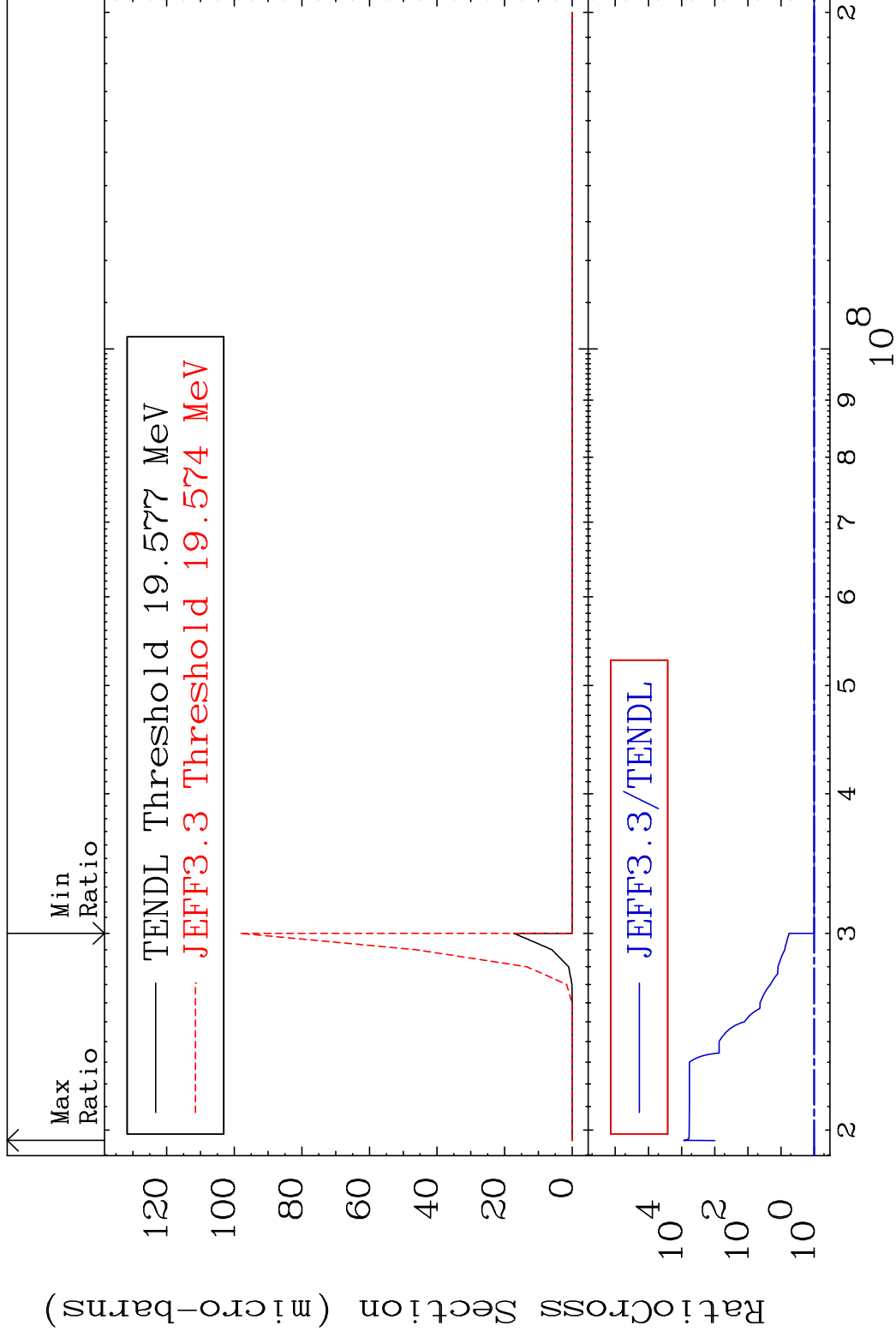
44-Ru-100

MAT 4437

(n,3n)  $\alpha$

44-Ru-100

Cross Section 0.000 To 9999. %

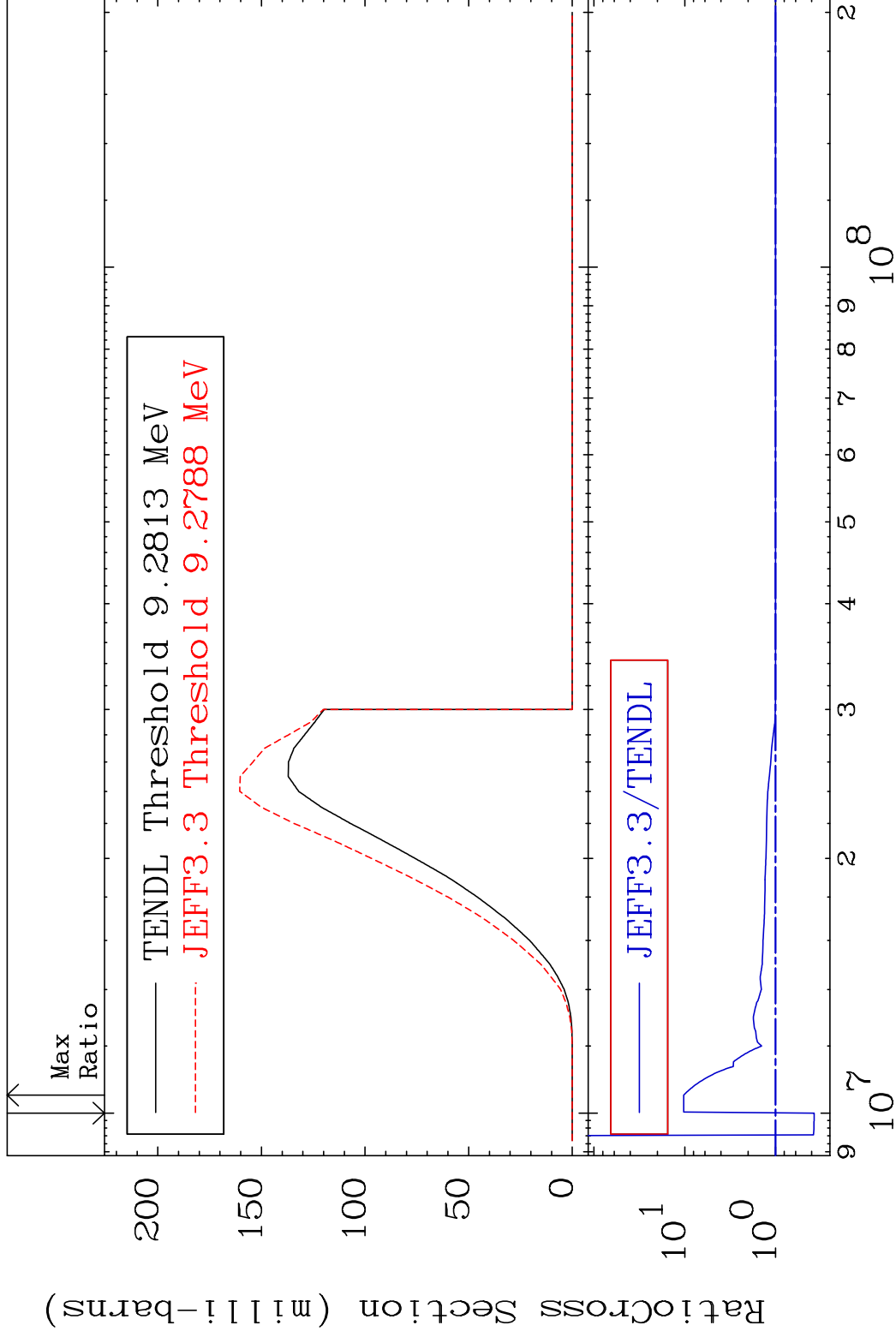


MAT 4437

(n, n') p

44-Ru-100

Cross Section -62.44 To 928.2 %

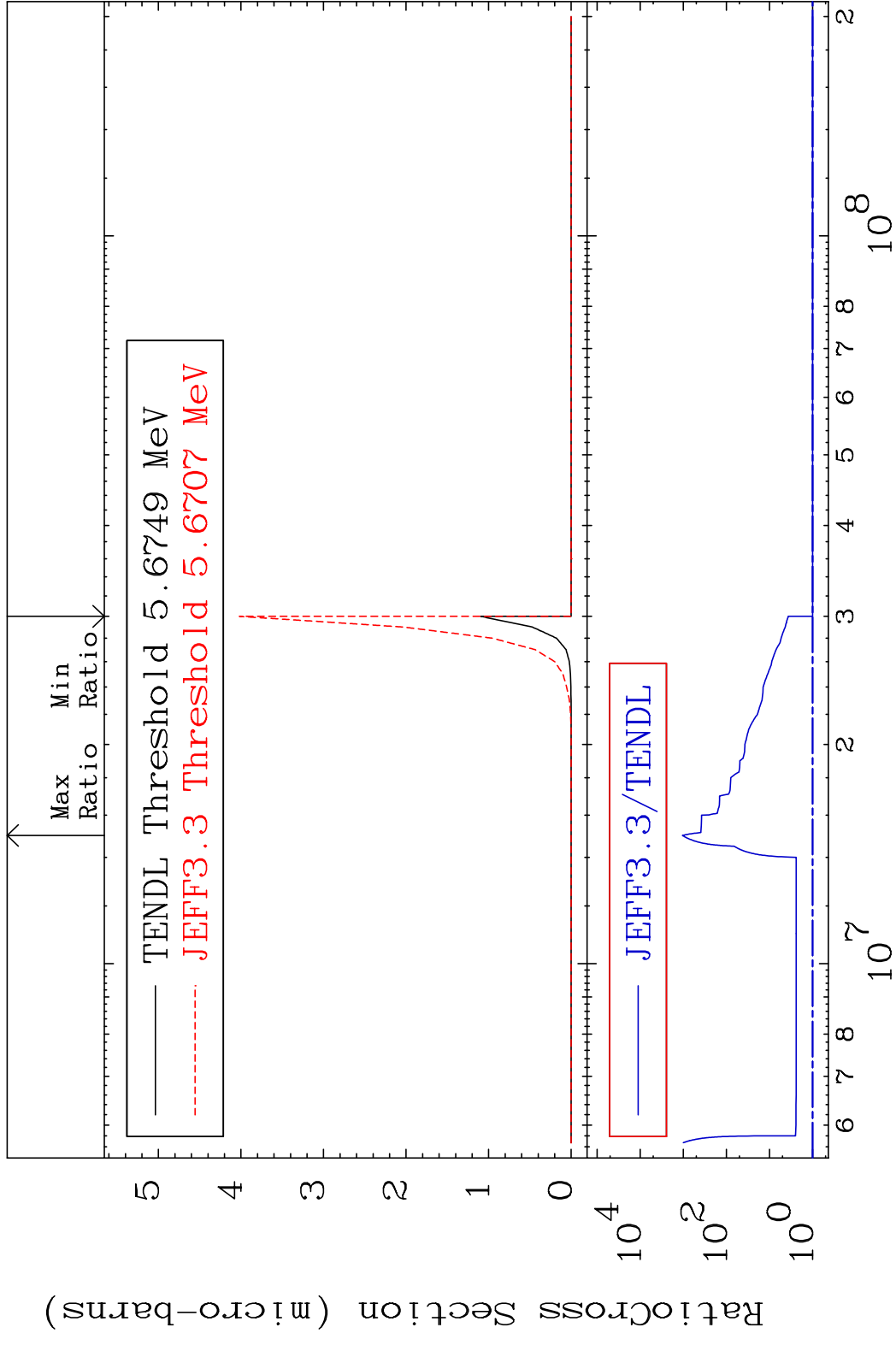


10

Incident Energy (eV)

44-Ru-100

MAT 4437 (n, n') 2α 44-Ru-100  
 Cross Section 0.000 To 9999. %

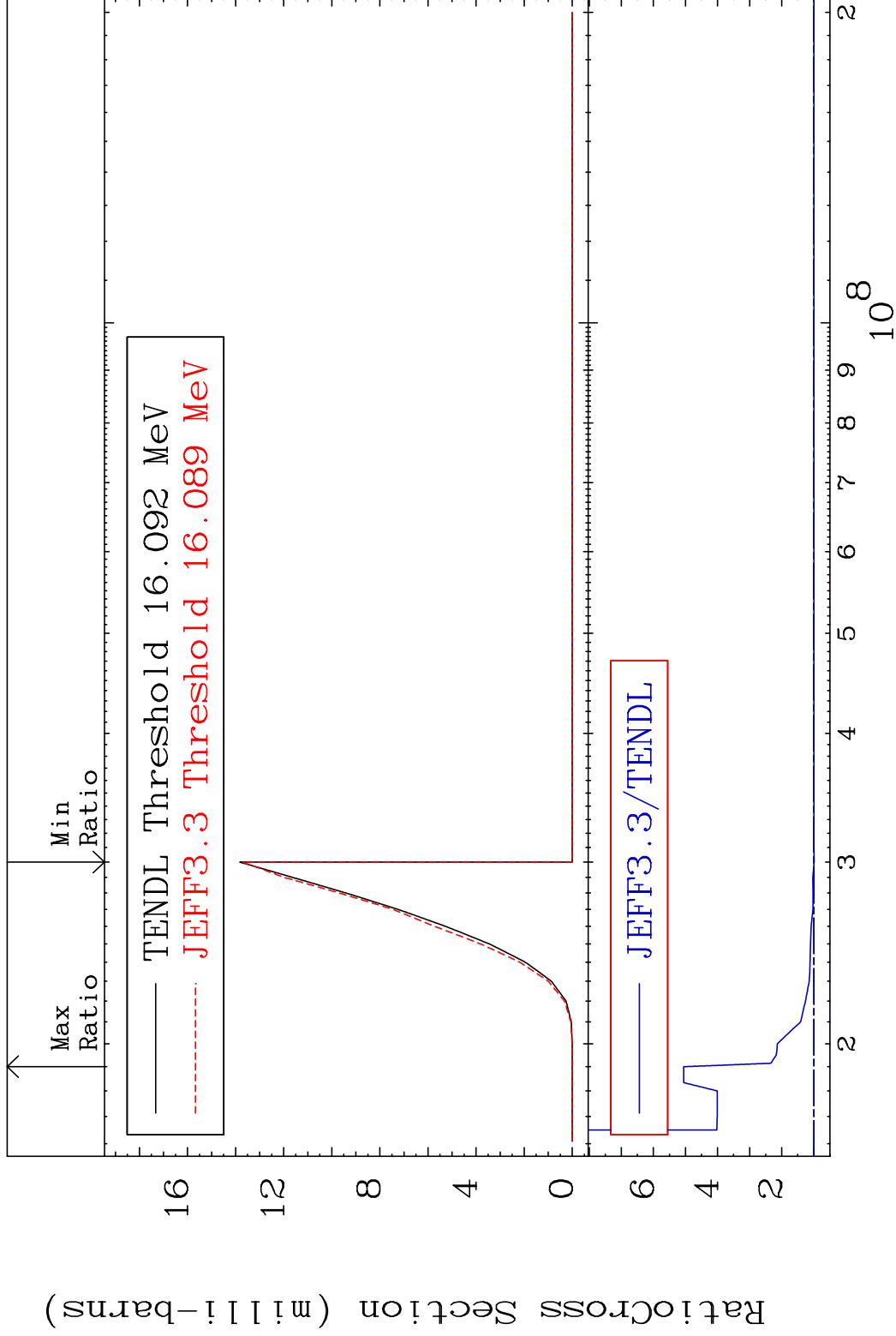


MAT 4437

(n, n') d

44-Ru-100

Cross Section -0.845 To 405.7 %

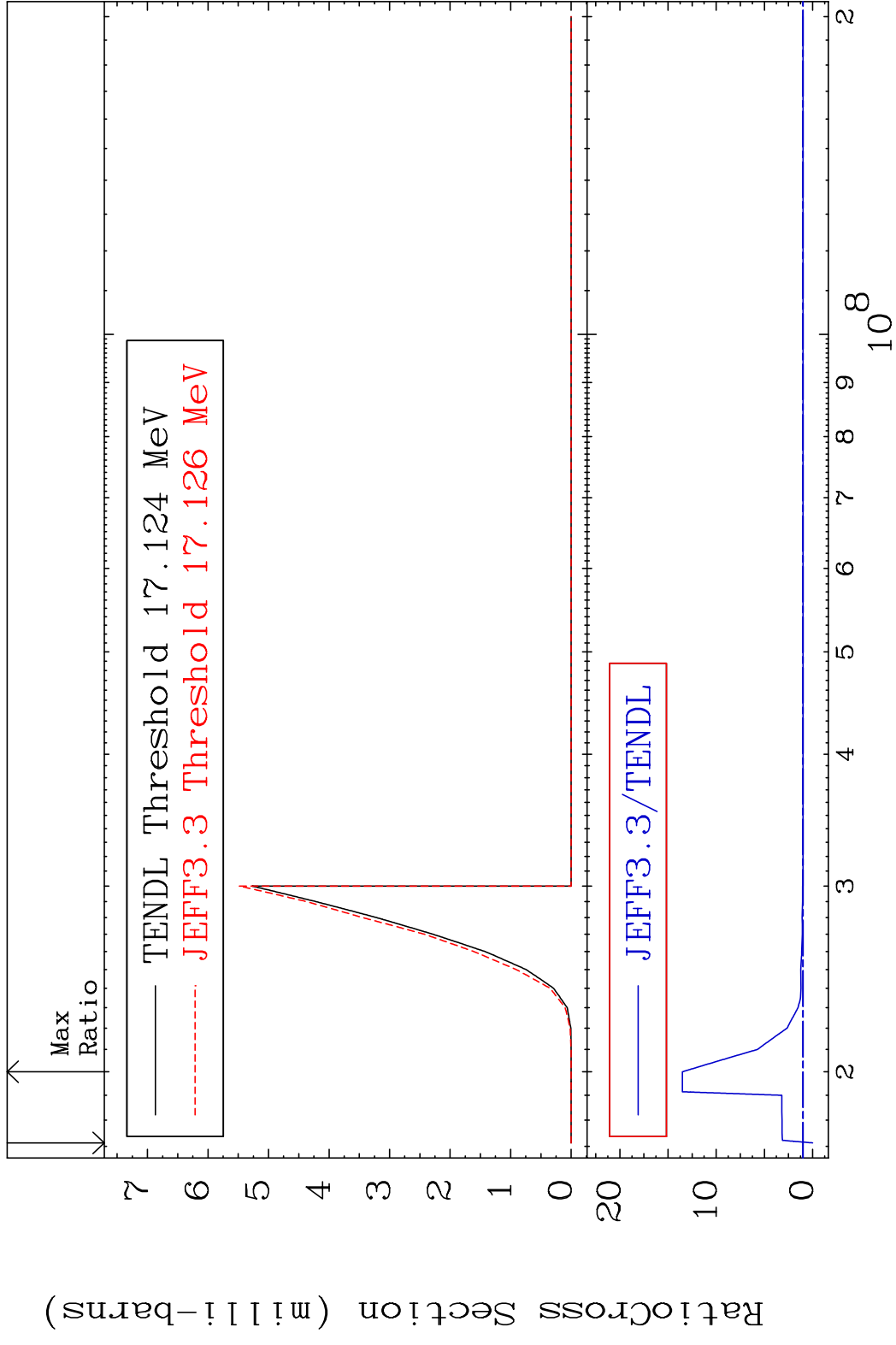


12

Incident Energy (eV)

44-Ru-100

MAT 4437 (n, n') t 44-Ru-100  
 Cross Section -100.0 To 1251. %



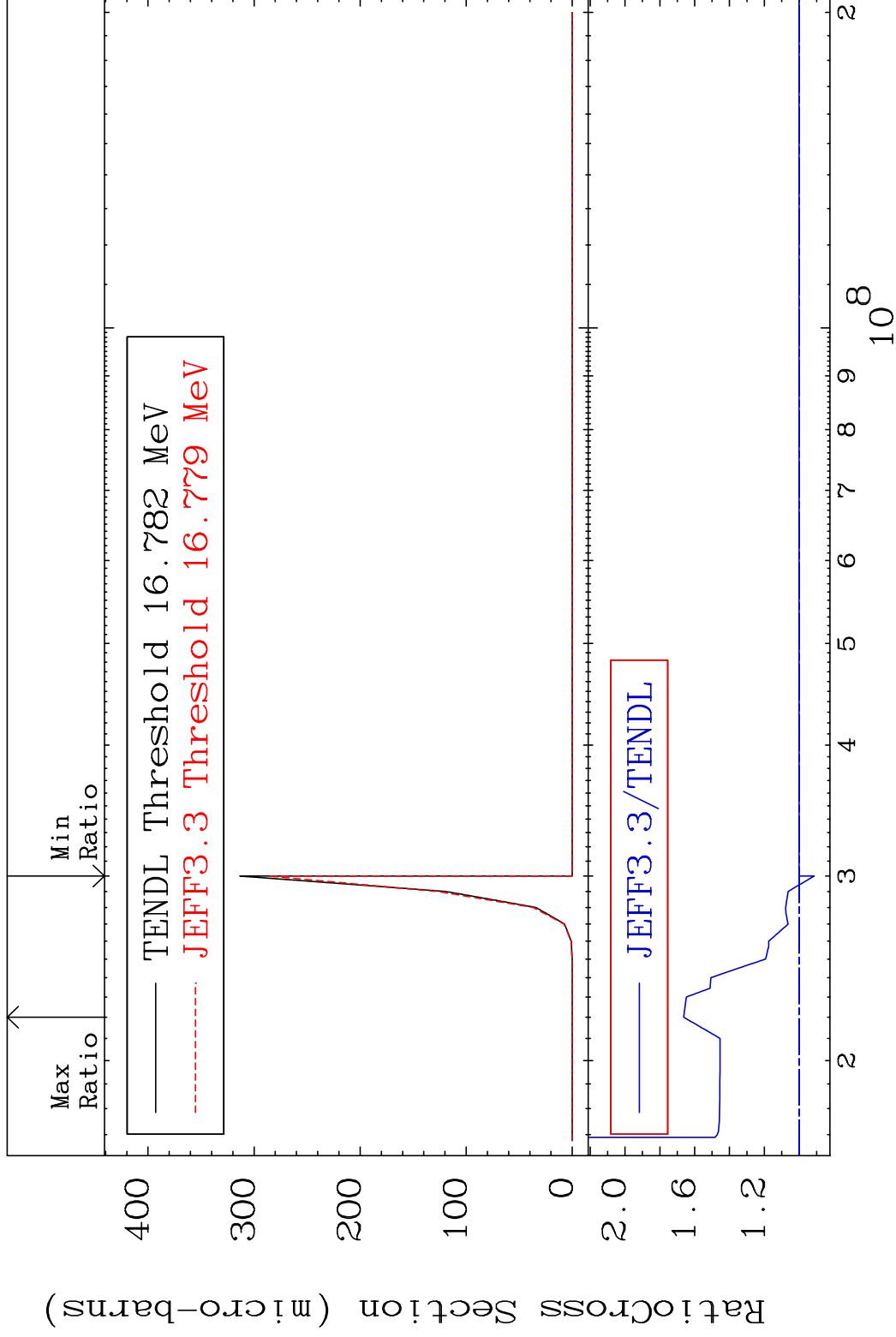
MAT 4437

(n,n') He-3

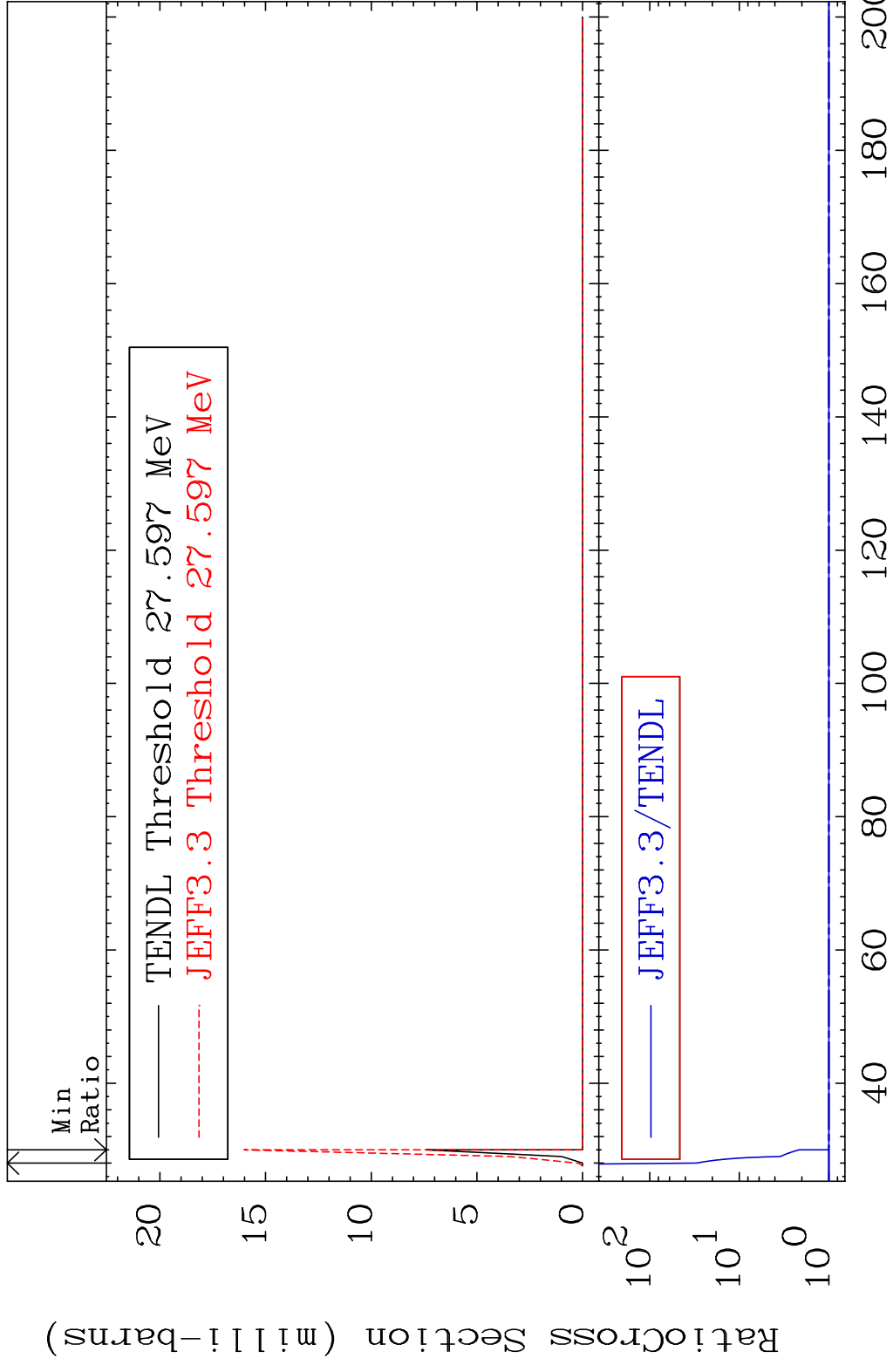
44-Ru-100

Cross Section

-8.586 To 66.32 %

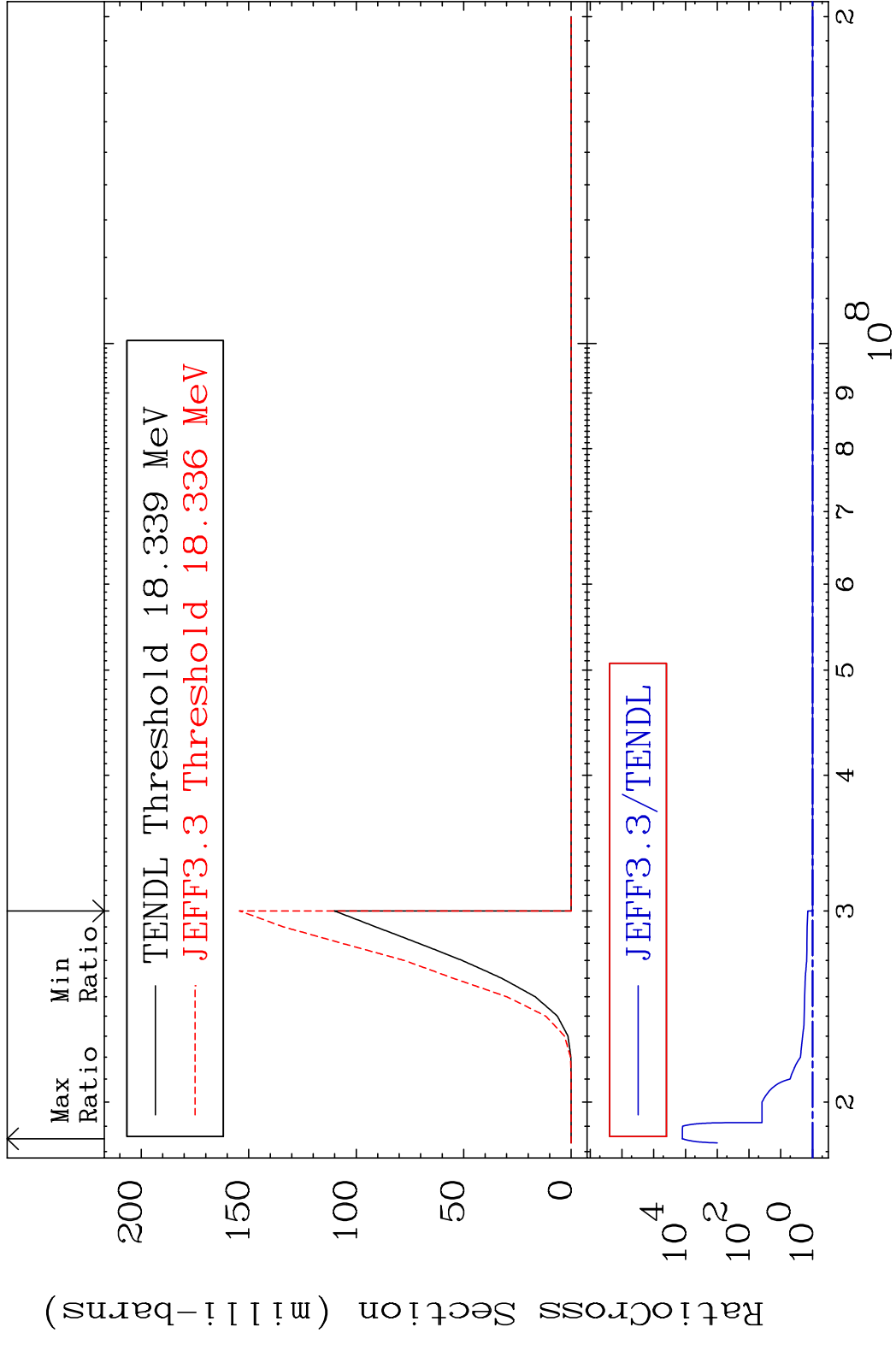


MAT 4437 (n,4n) 44-Ru-100  
 Cross Section 0.000 To 2943. %





MAT 4437 (n,2n) p 44-Ru-100  
 Cross Section 0.000 To 9999. %

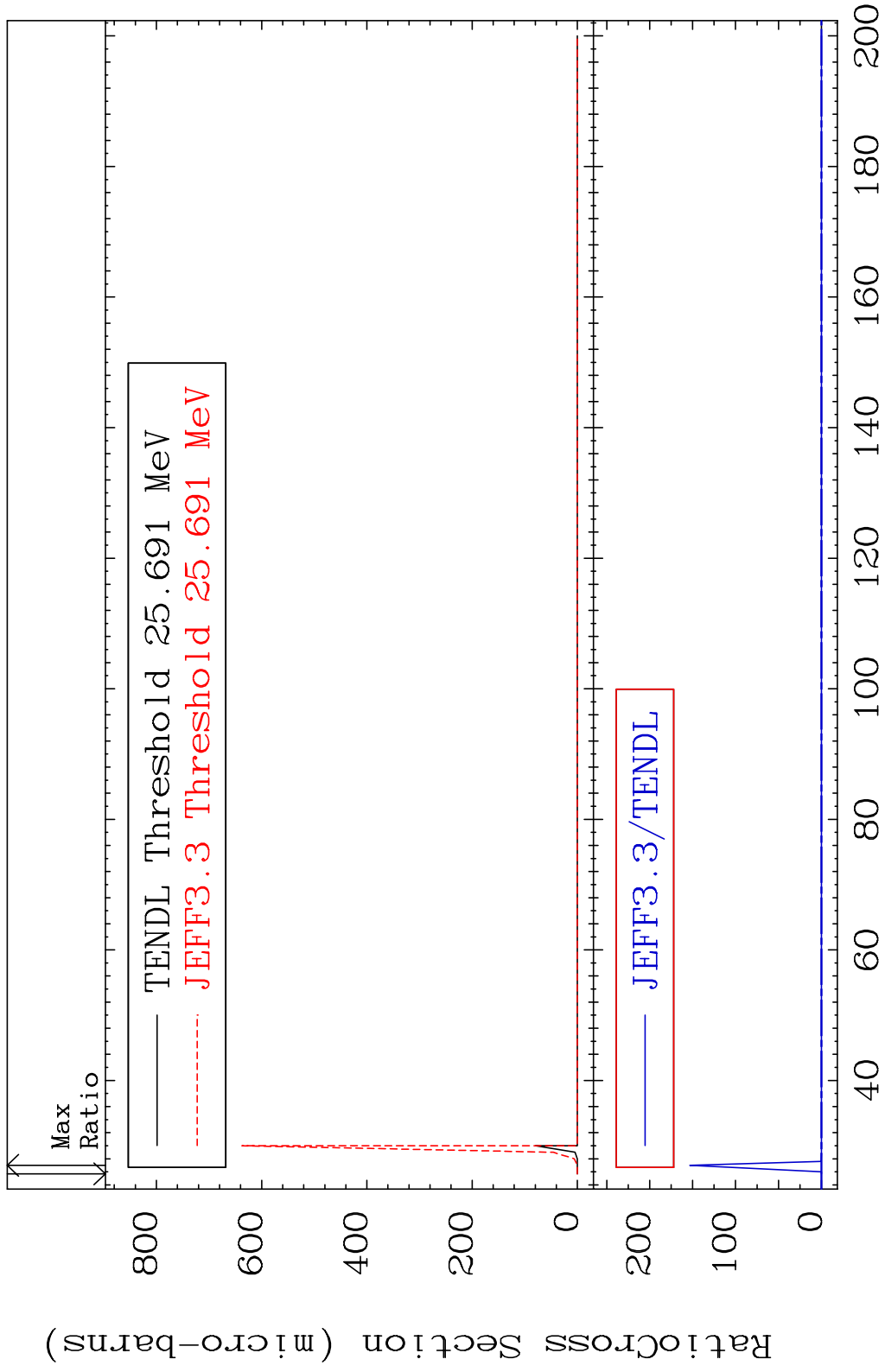


MAT 4437

(n,3n) p

44-Ru-100

Cross Section -100.0 To 9999. %



17

Incident Energy (MeV)

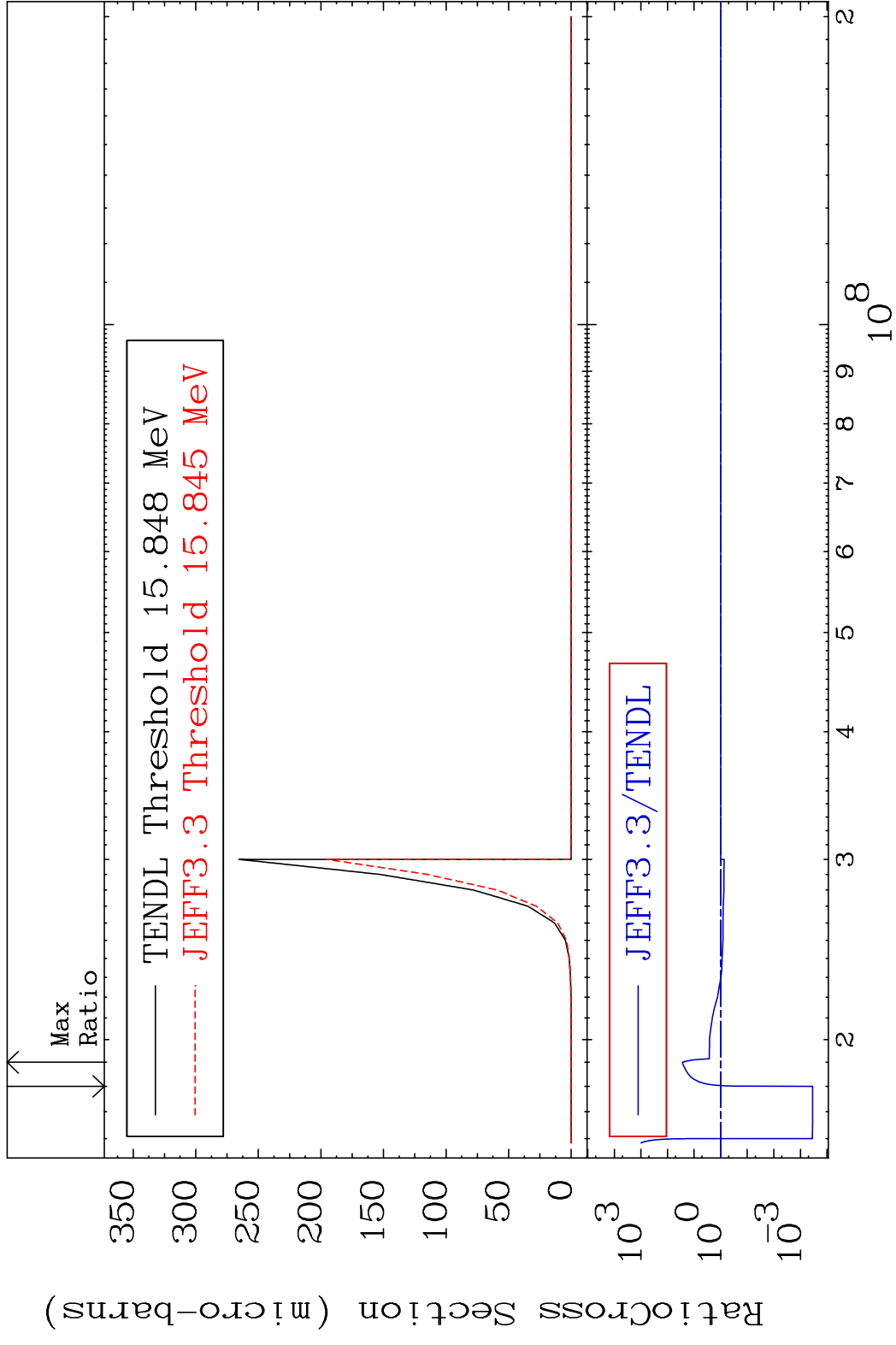
44-Ru-100

MAT 4437

(n,2n) p

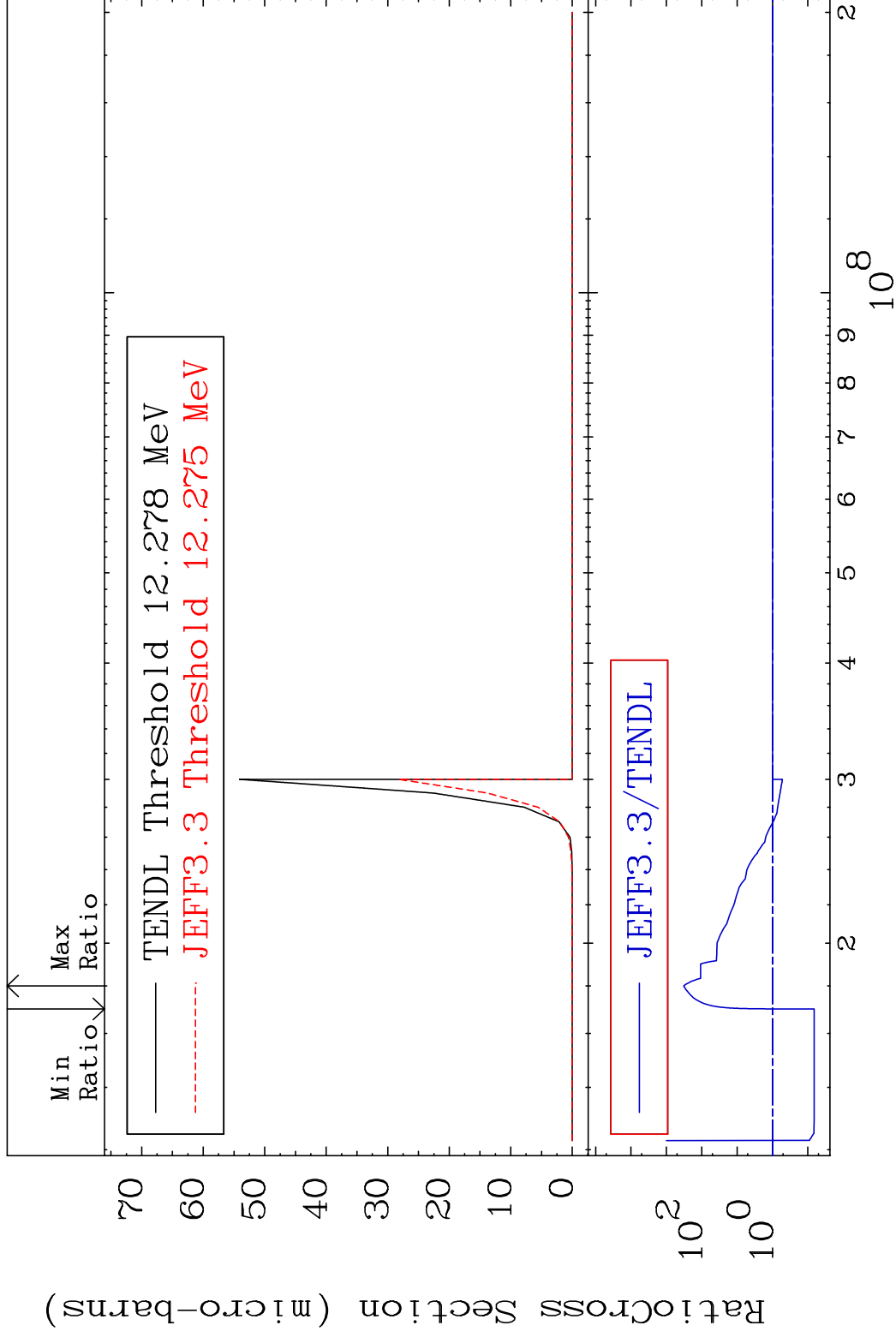
44-Ru-100

Cross Section -99.97 To 2663. %



MAT 4437

(n,n') p  $\alpha$  44-Ru-100  
Cross Section -93.34 To 9999. %

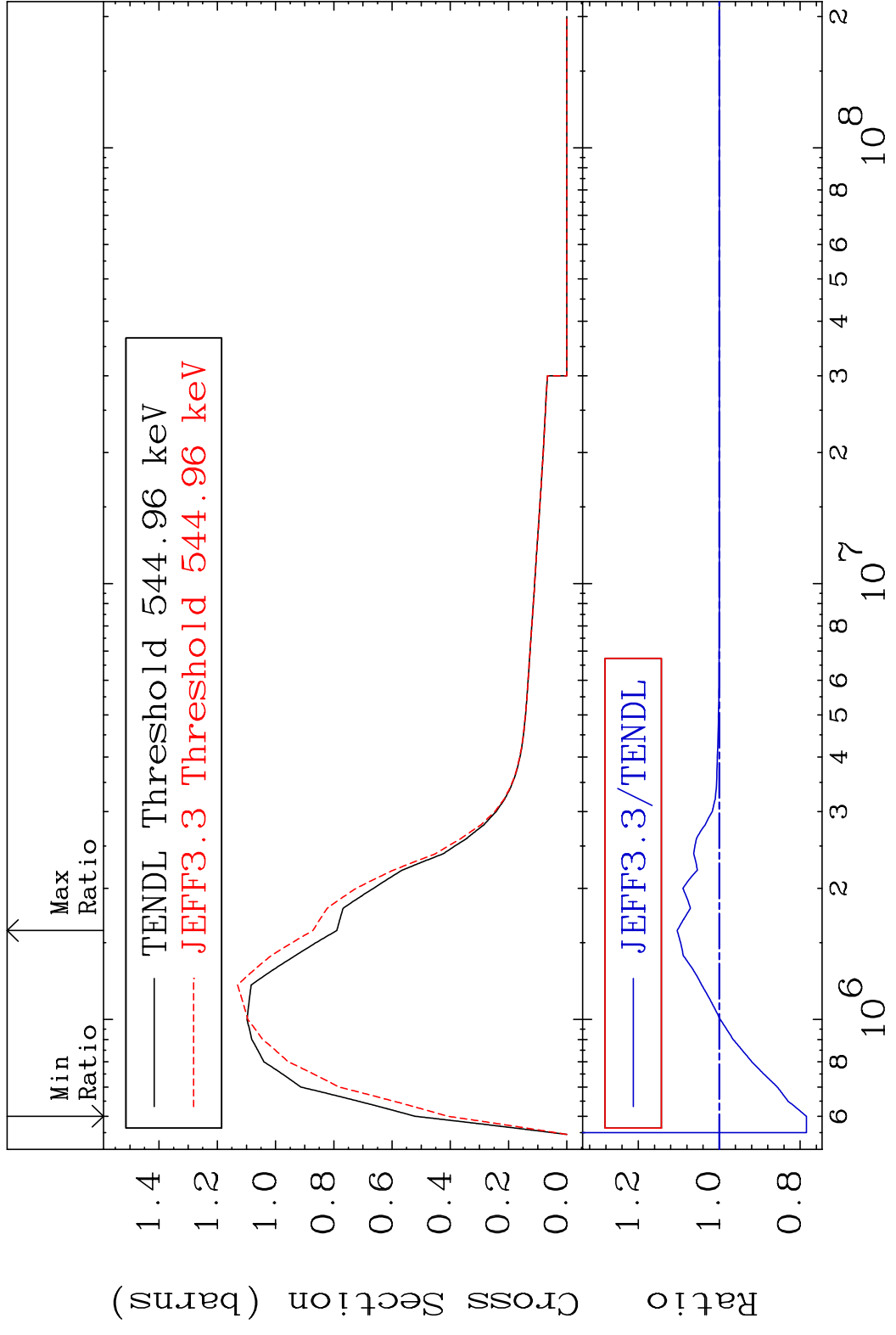


19

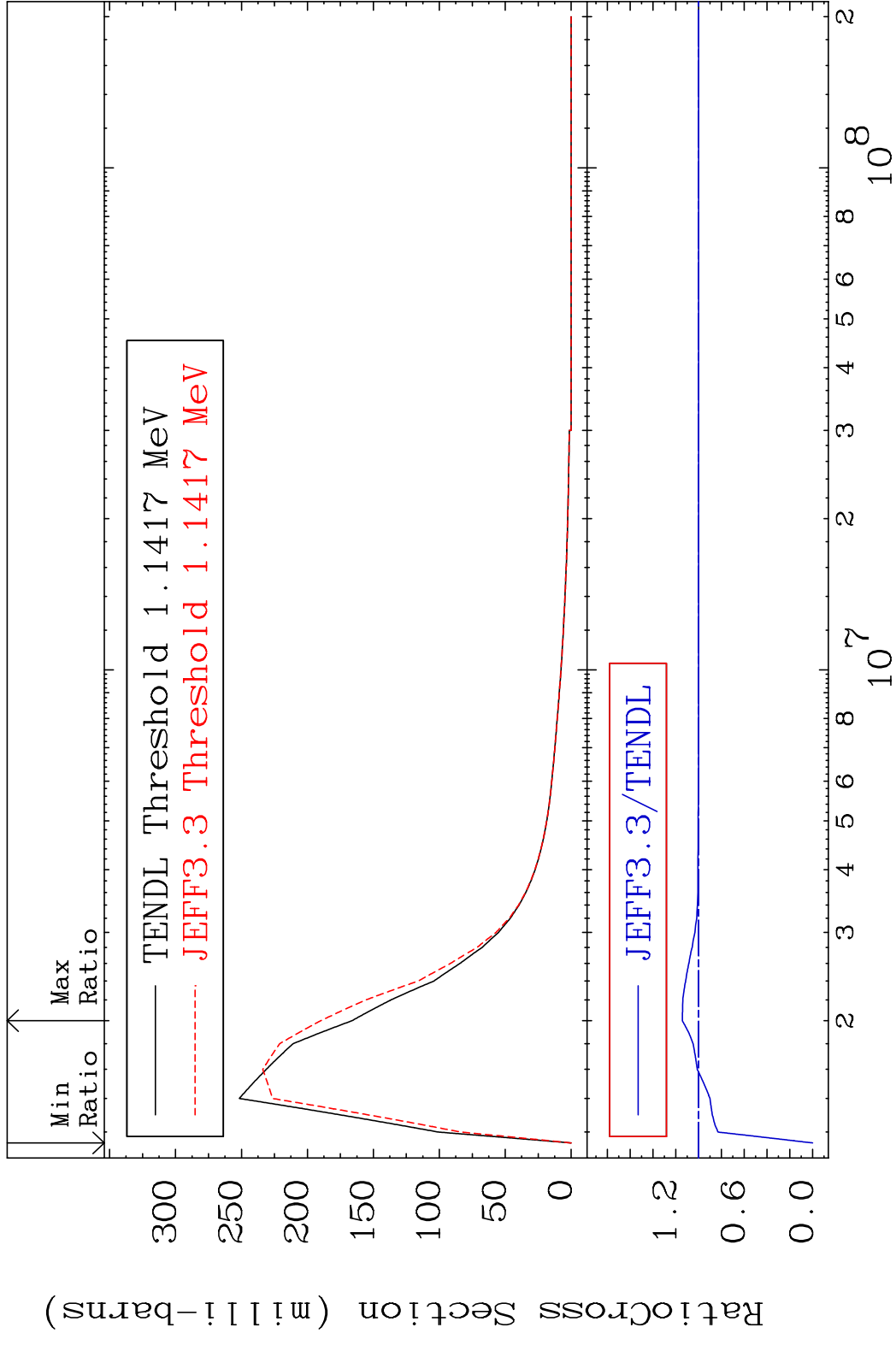
Incident Energy (eV)

44-Ru-100

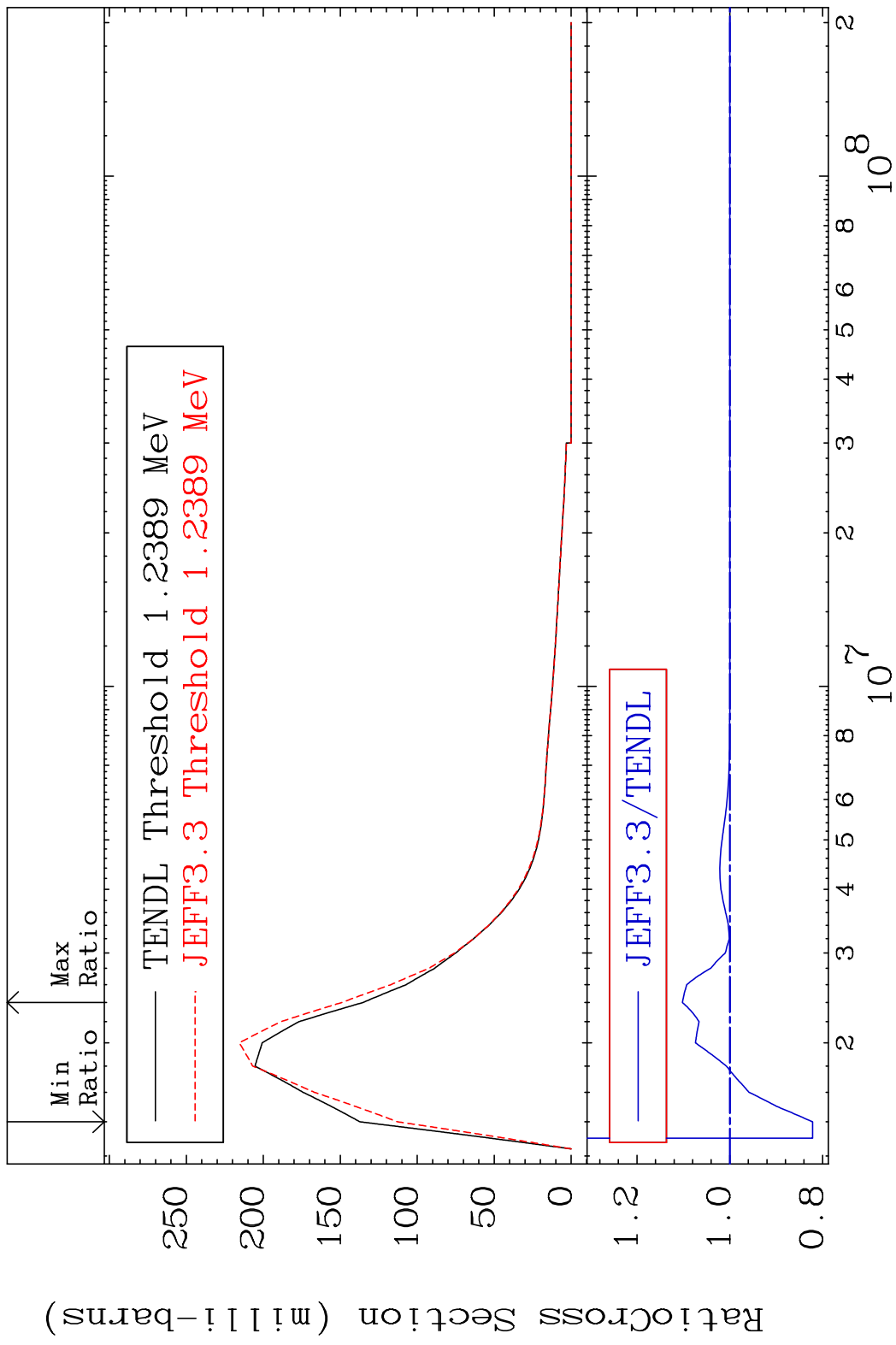
MAT 4437 MT= 51 (n,n') Level 44-Ru-100  
 Cross Section -21.54 To 10.39 %



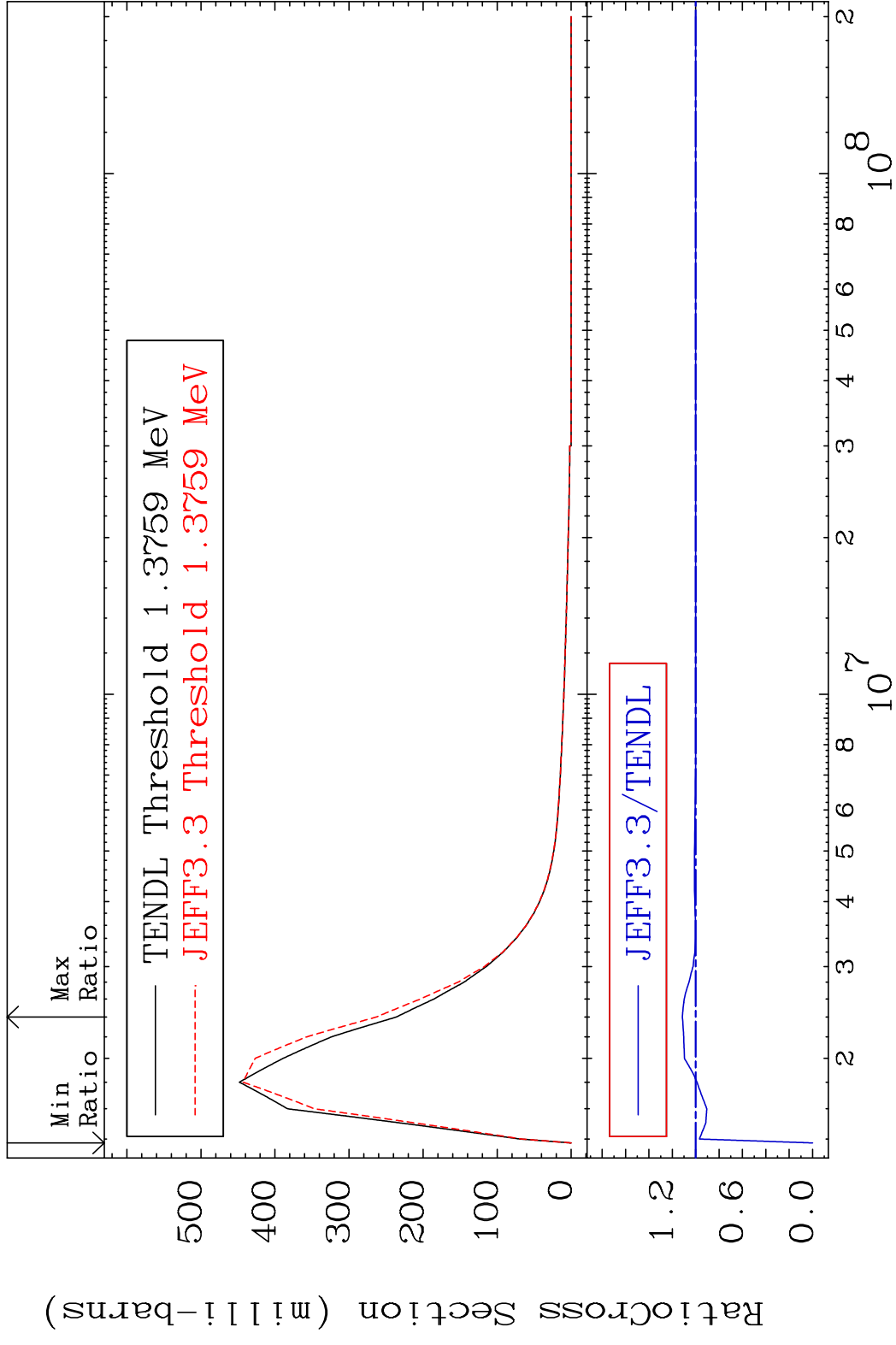
MAT 4437 MT= 52 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 14.24 %



MAT 4437 MT= 53 (n,n') Level 44-Ru-100  
 Cross Section -17.83 To 10.22 %

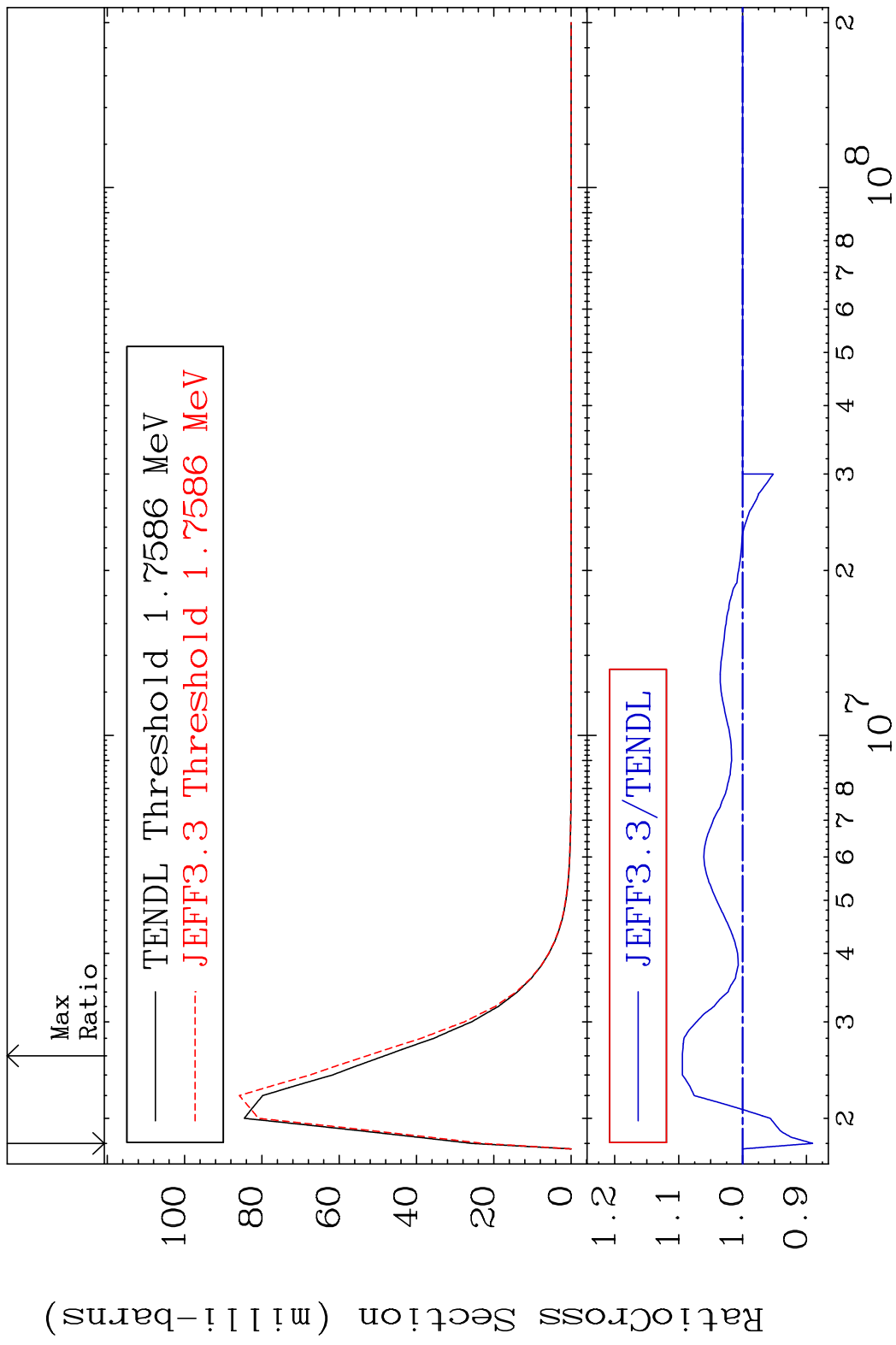


MAT 4437 MT= 54 (n,n') Level 44-Ru-100  
 Cross Section -100.0 To 11.42 %

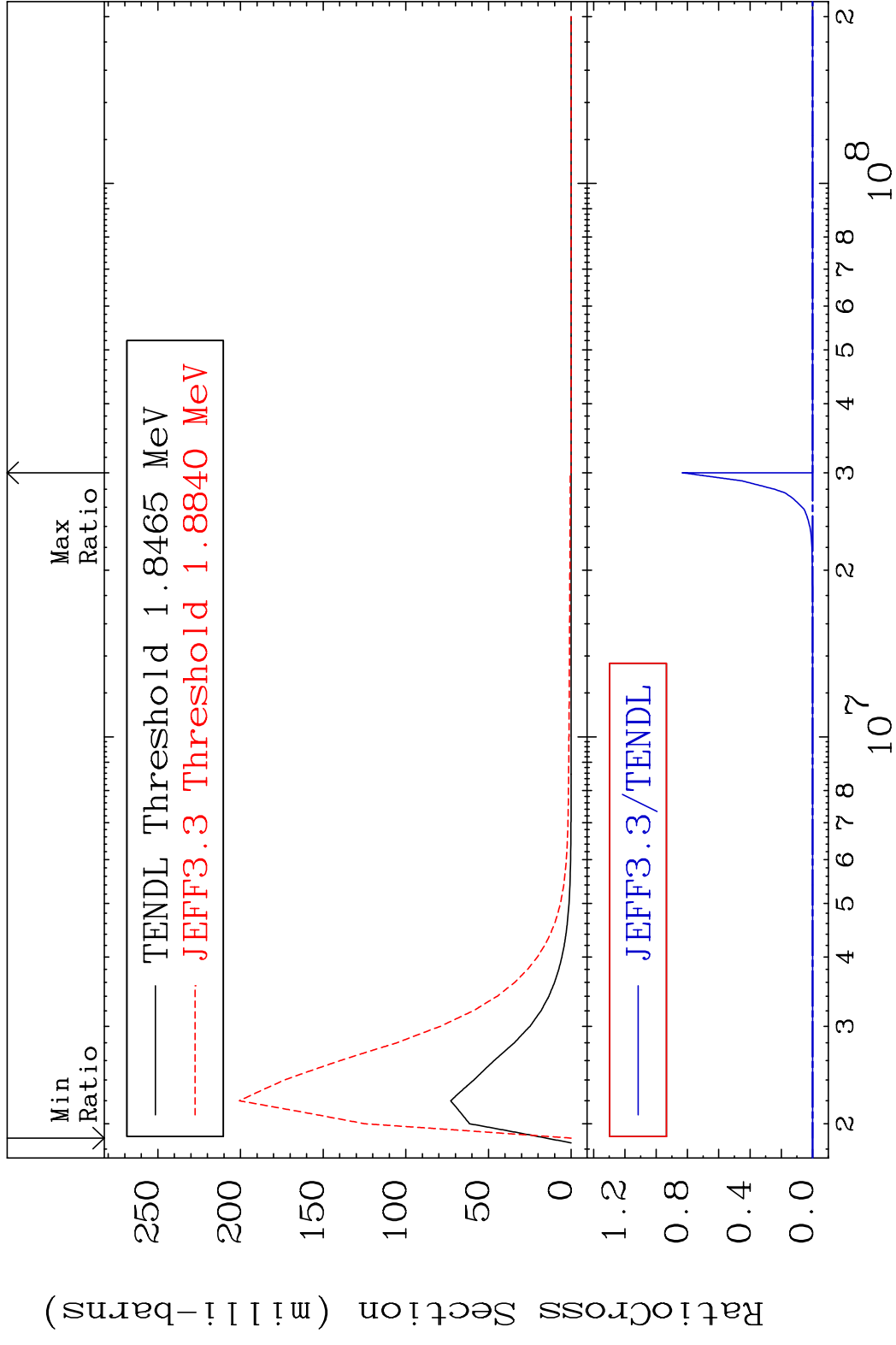




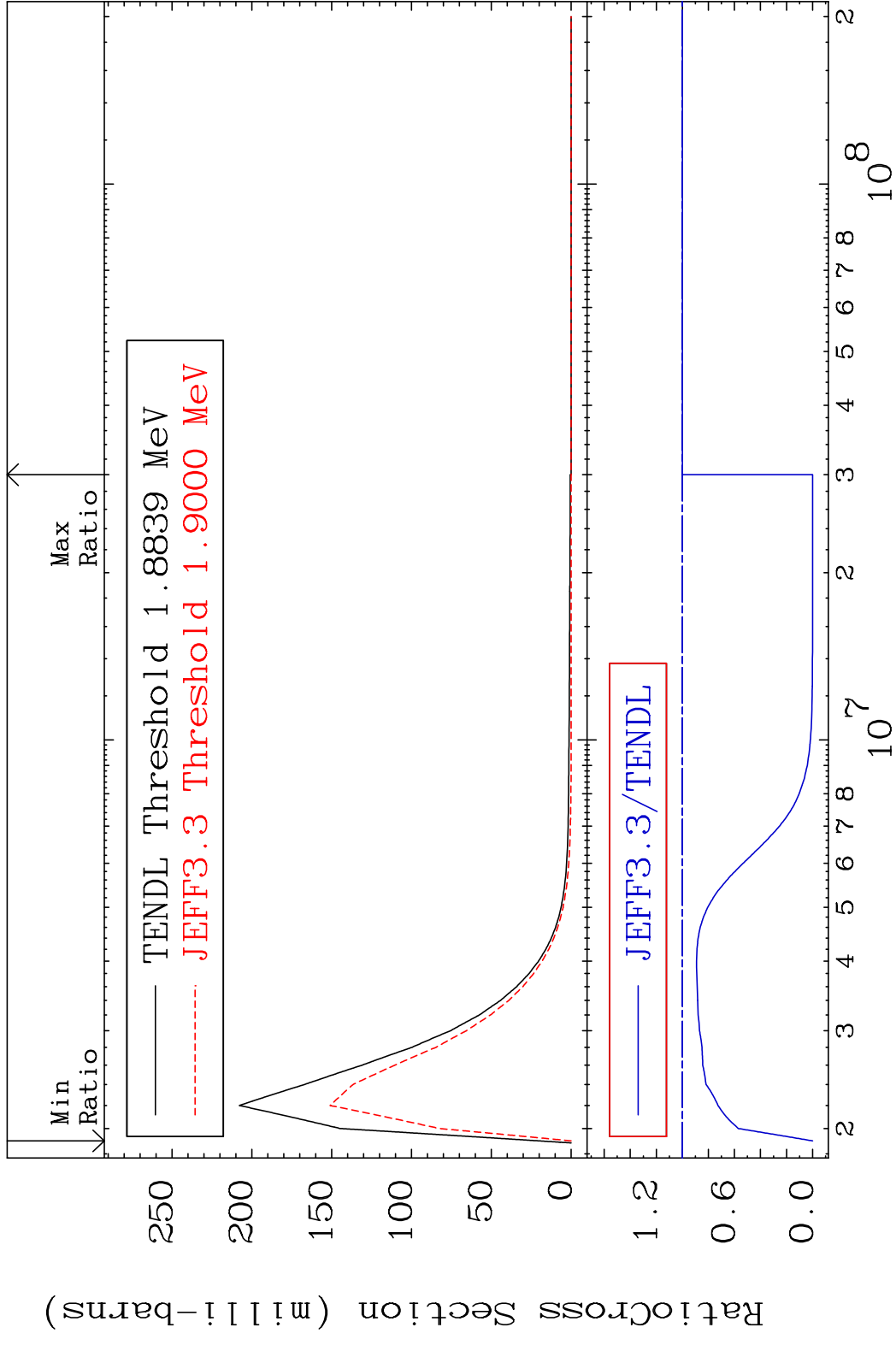
MAT 4437 MT= 55 (n, n') Level 44-Ru-100  
 Cross Section -10.95 To 9.422 %



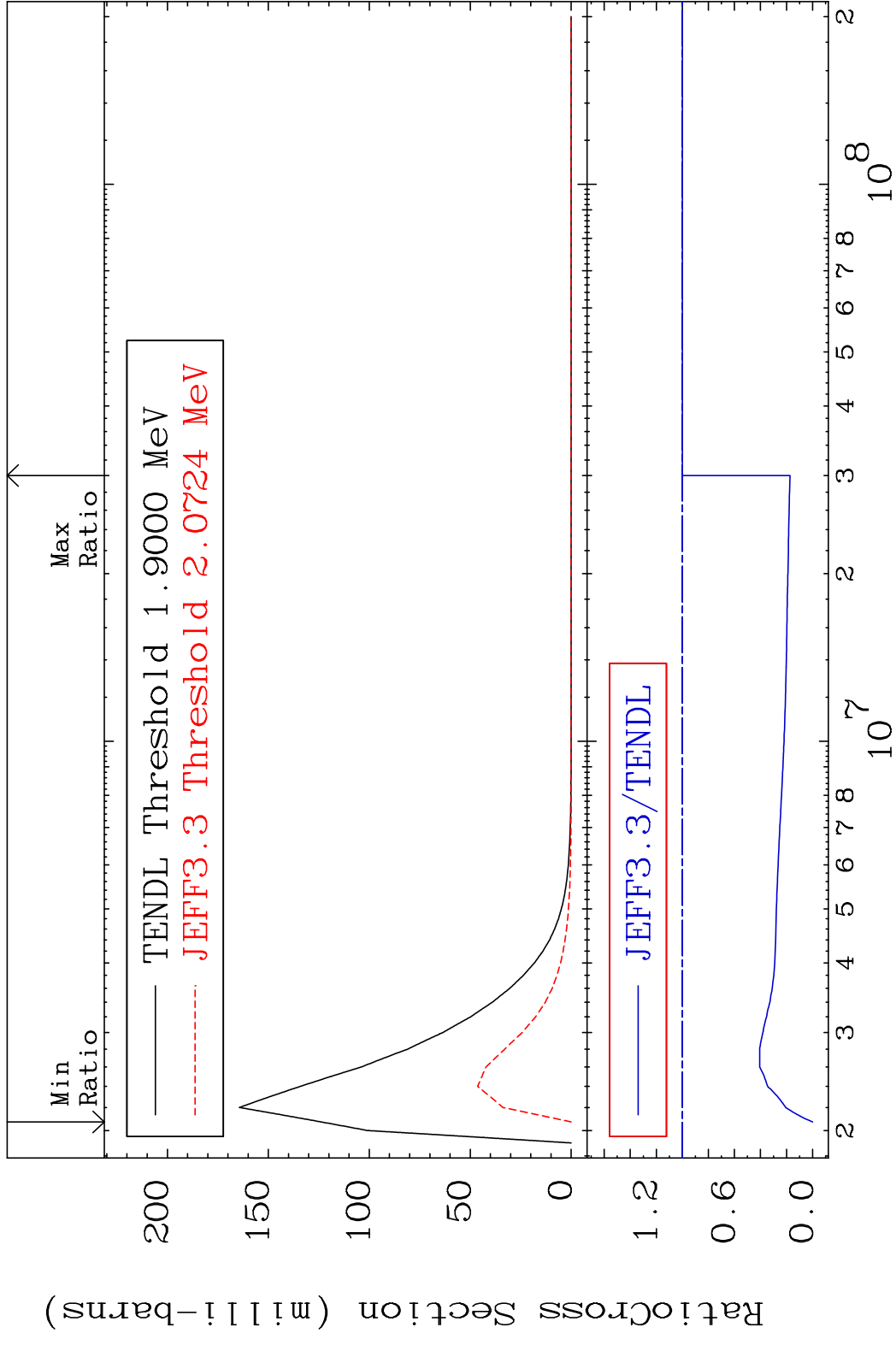
MAT 4437 MT= 56 (n,n') Level 44-Ru-100  
 Cross Section -100.0 To 9999. %



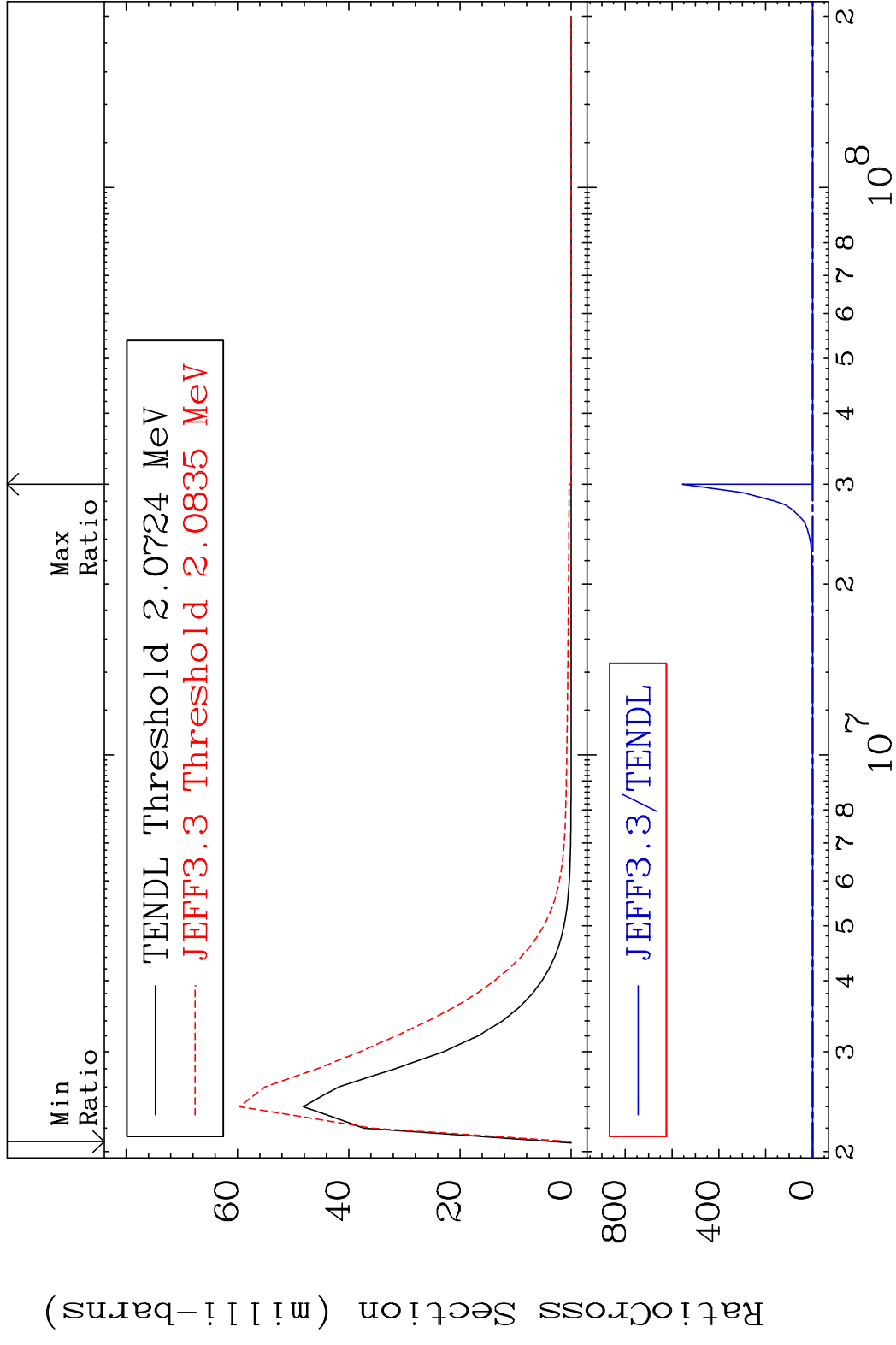
MAT 4437 MT= 57 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 0.000 %



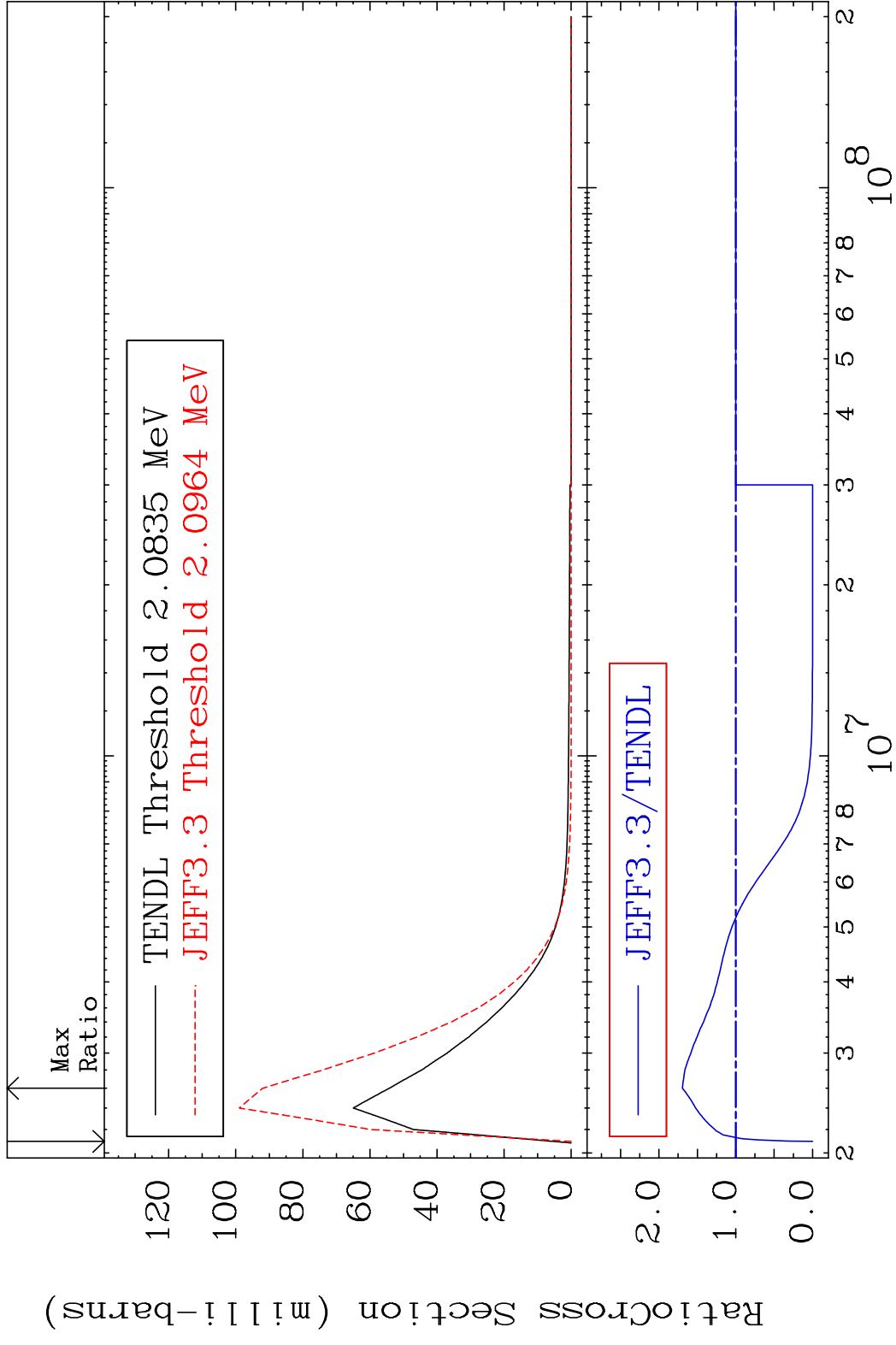
MAT 4437 MT= 58 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 0.000 %



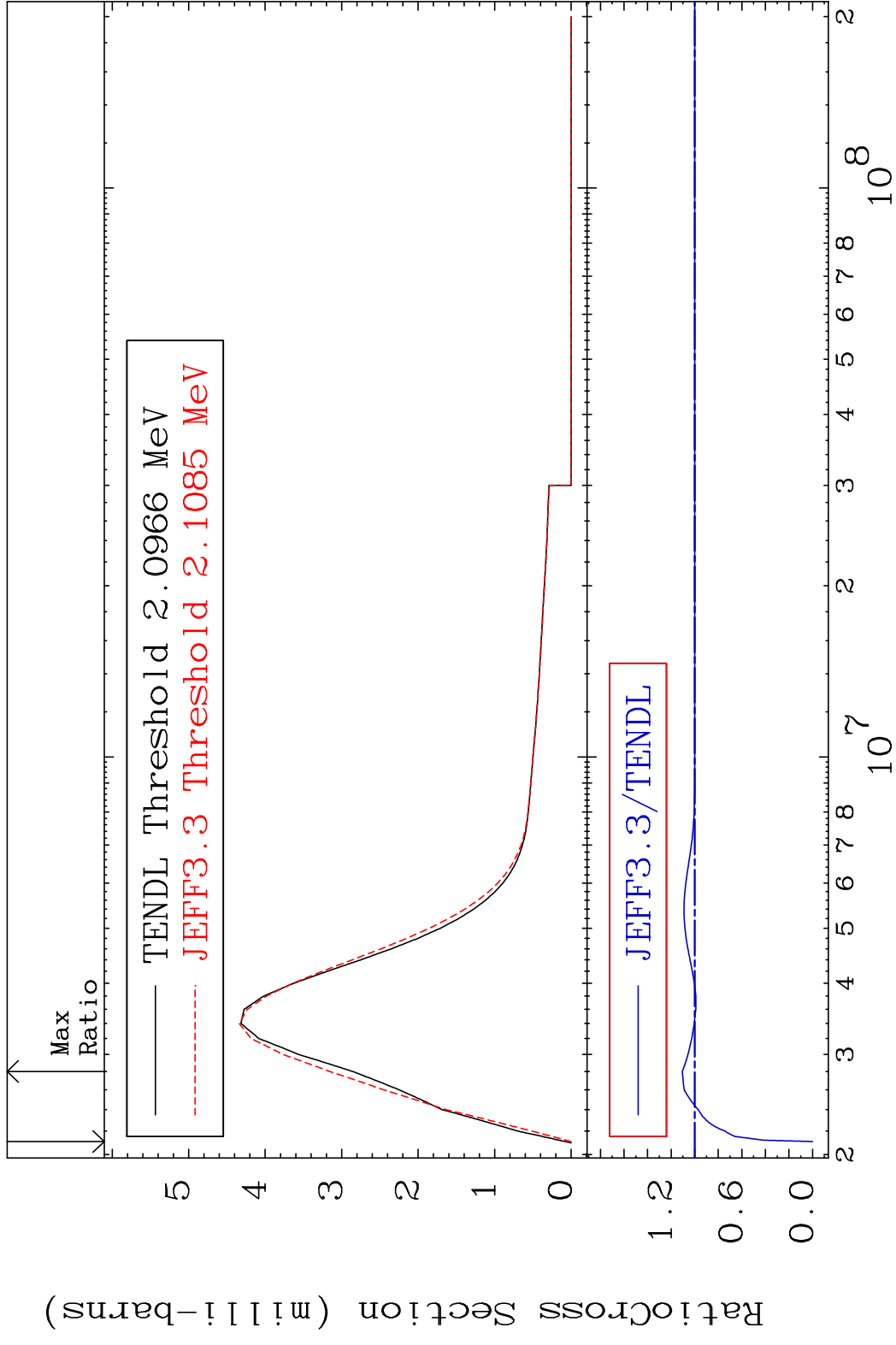
MAT 4437 MT= 59 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 9999. %



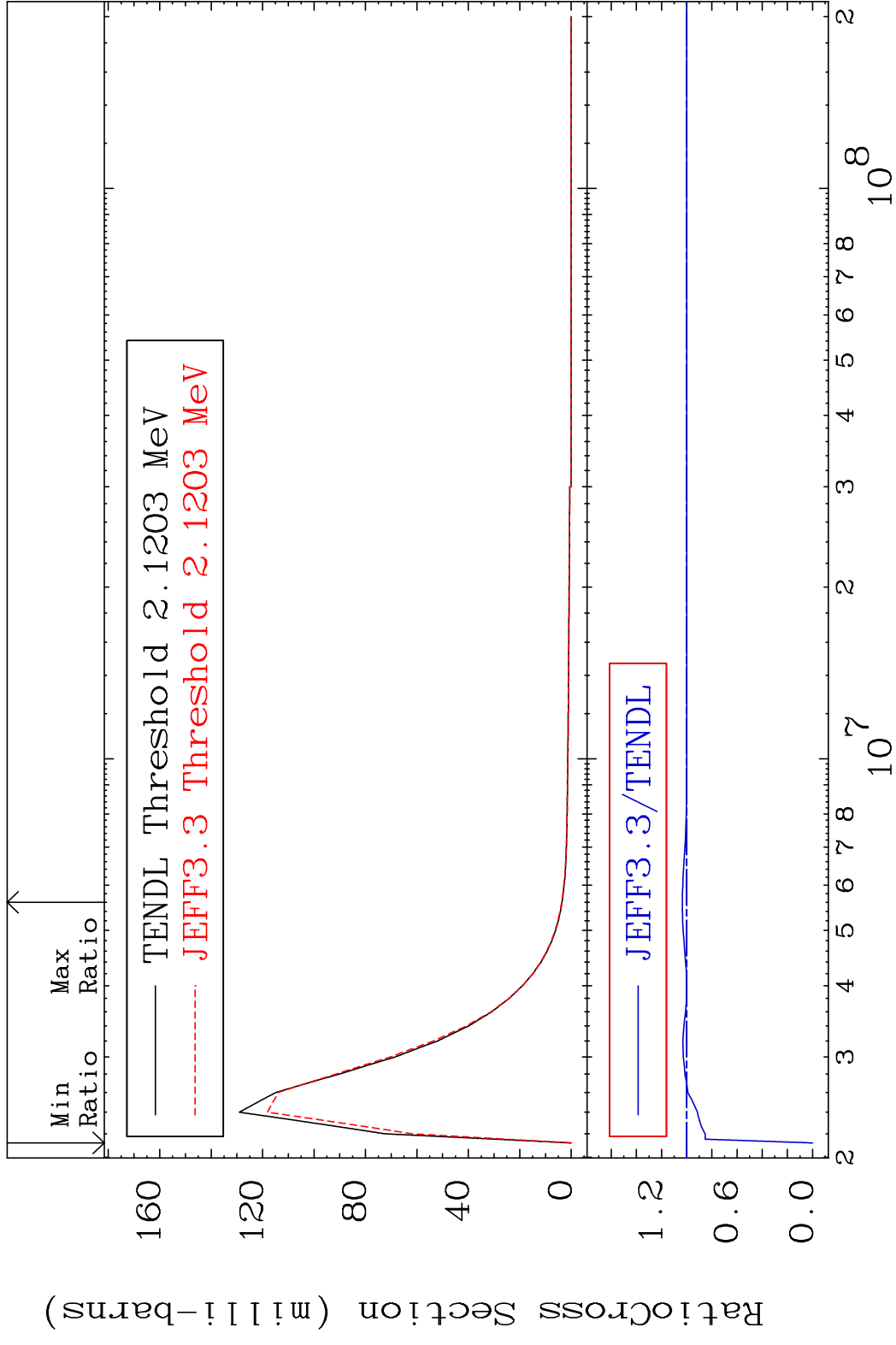
MAT 4437 MT= 60 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 69.53 %



MAT 4437 MT= 61 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 10.51 %

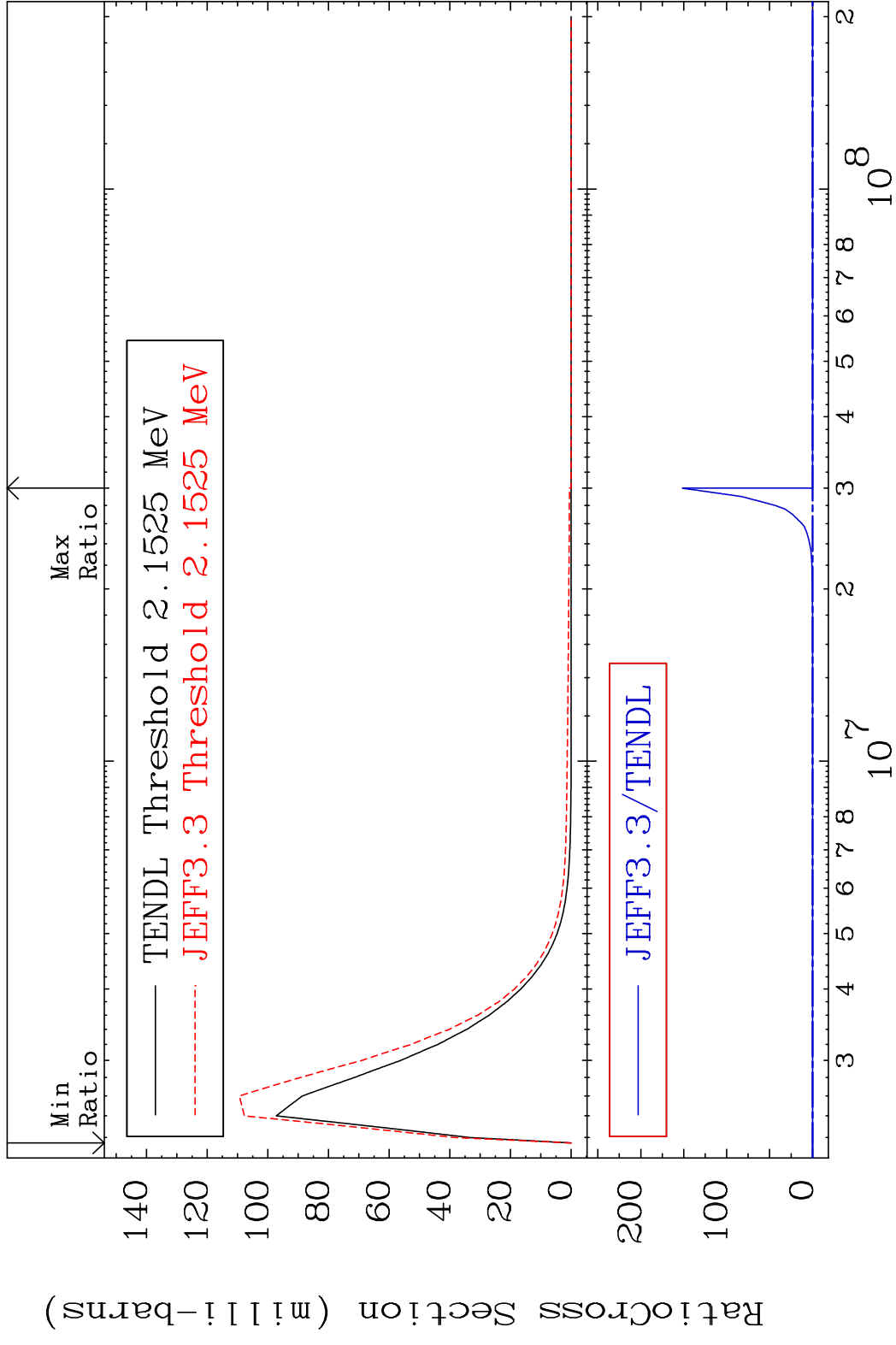


MAT 4437 MT= 62 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 3.483 %

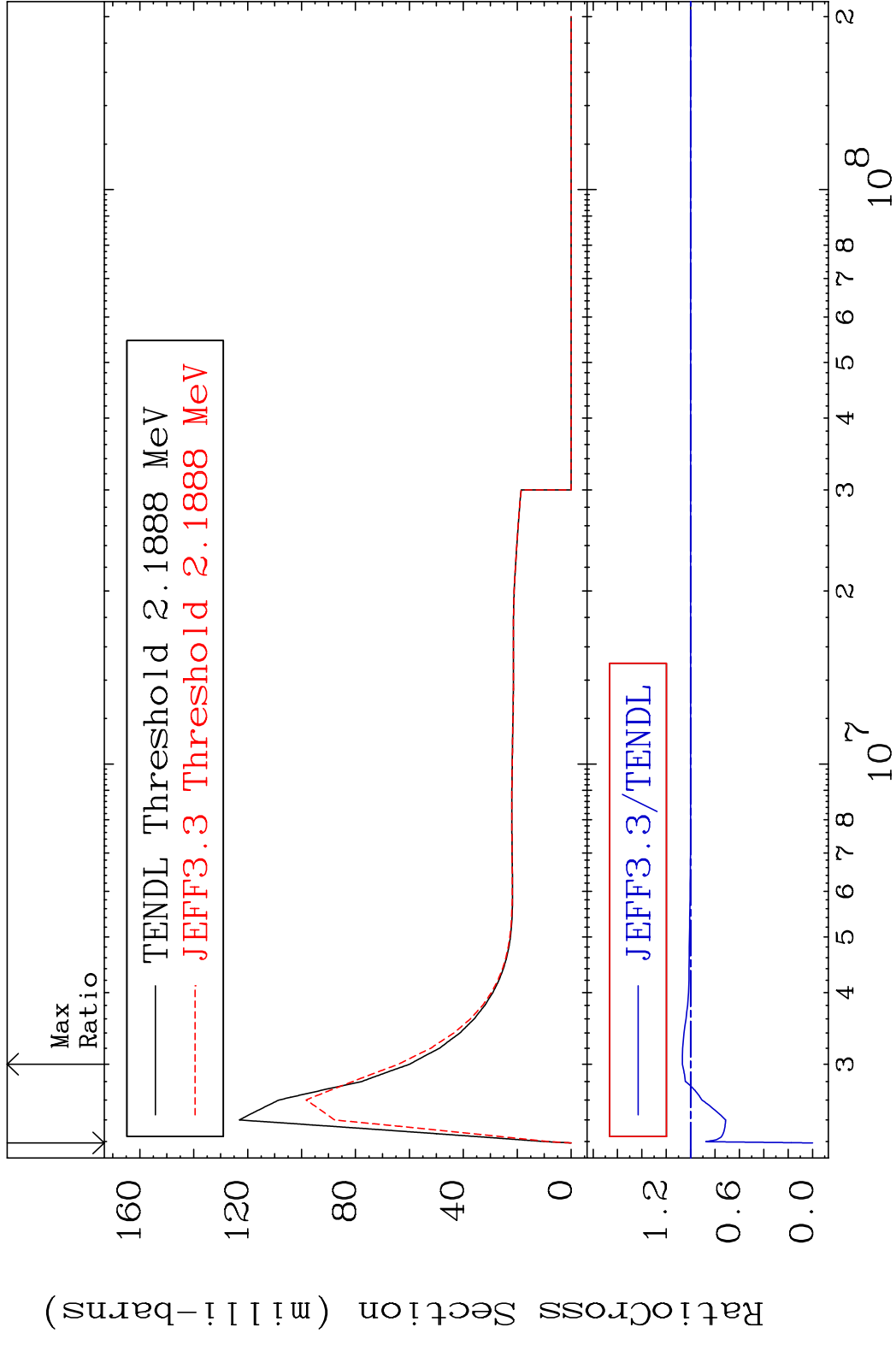




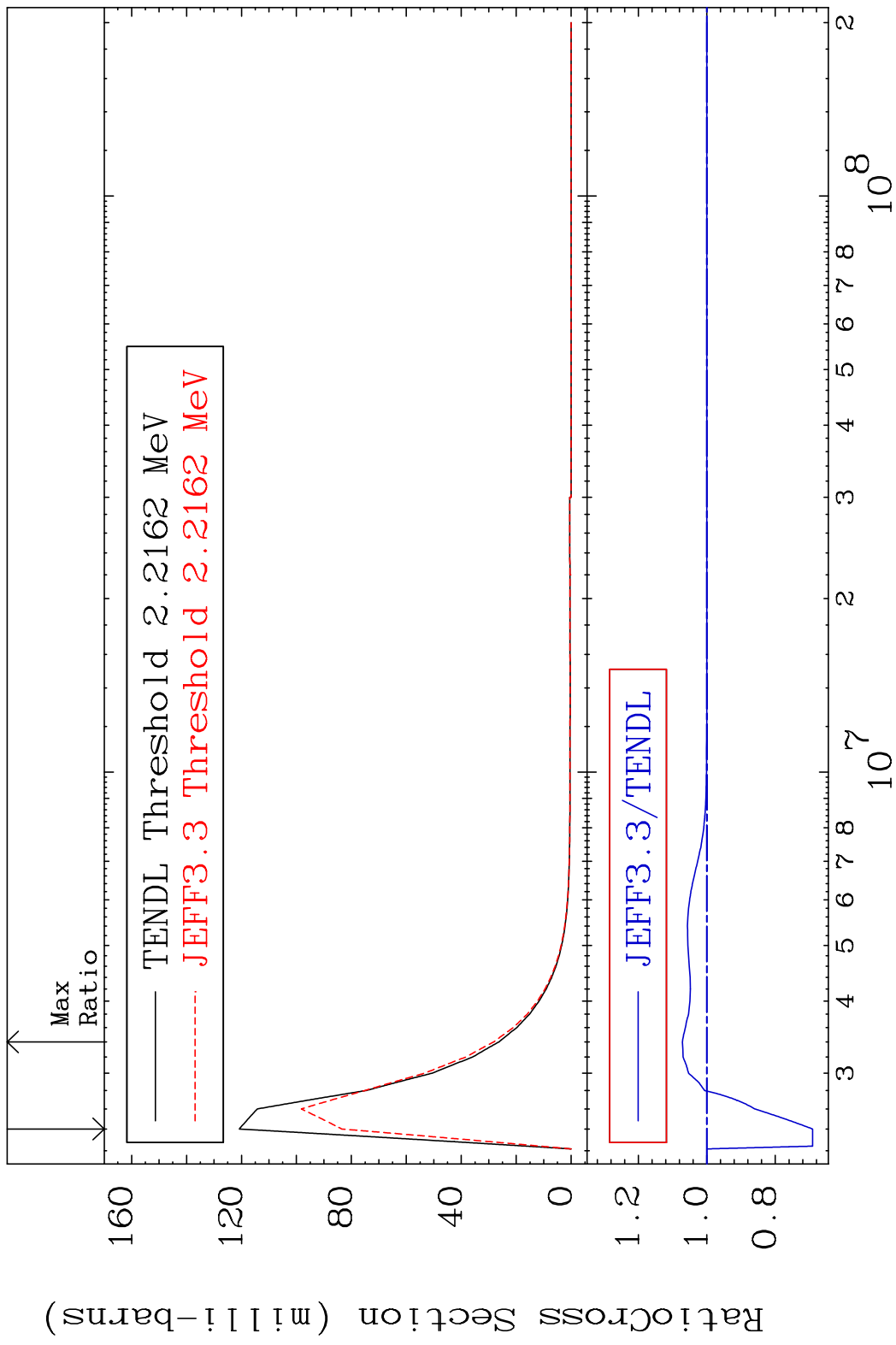
MAT 4437 MT= 63 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 9999. %



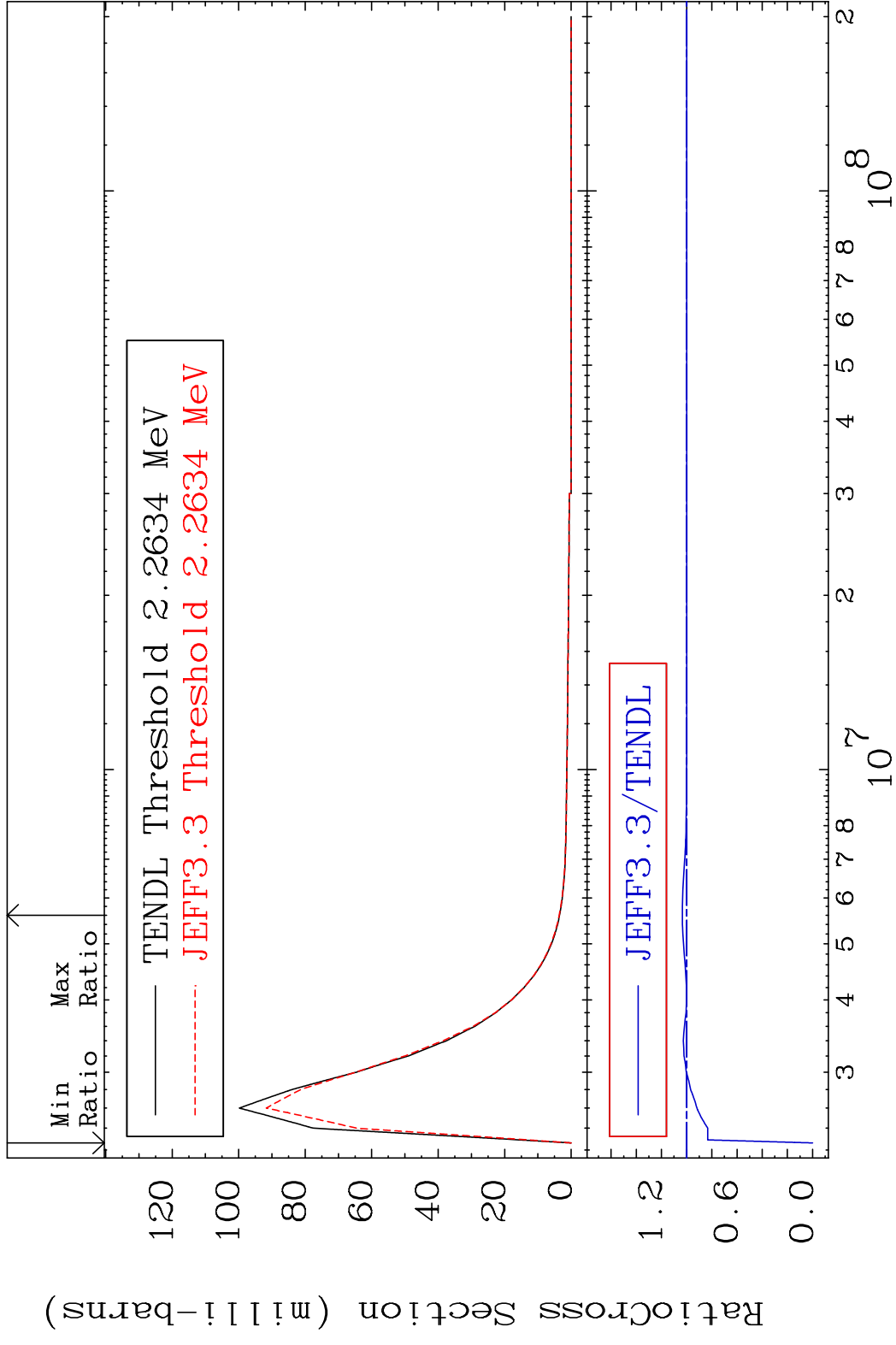
MAT 4437 MT= 64 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 6.804 %



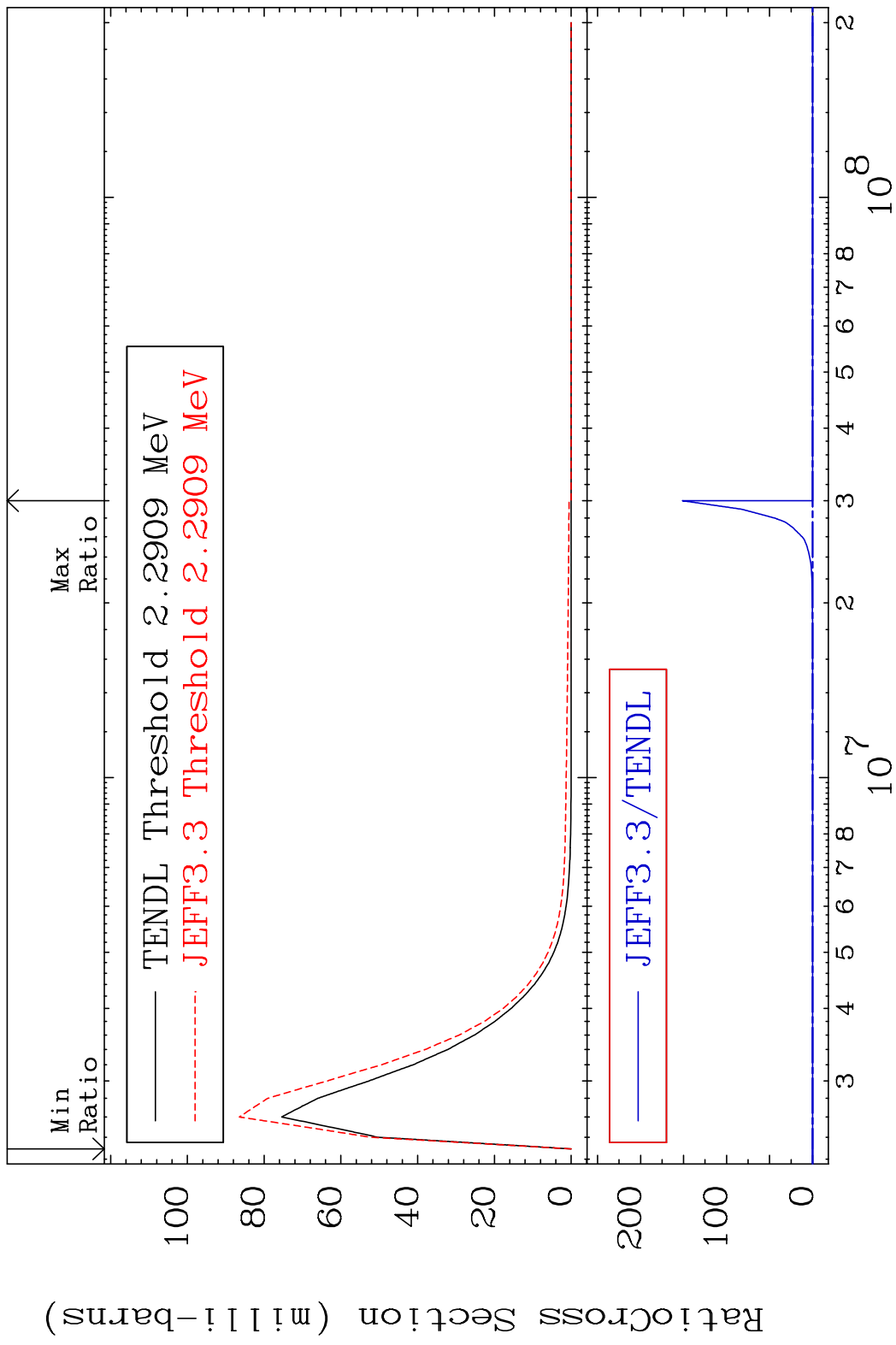
MAT 4437 MT= 65 (n, n') Level 44-Ru-100  
 Cross Section -30.87 To 7.145 %



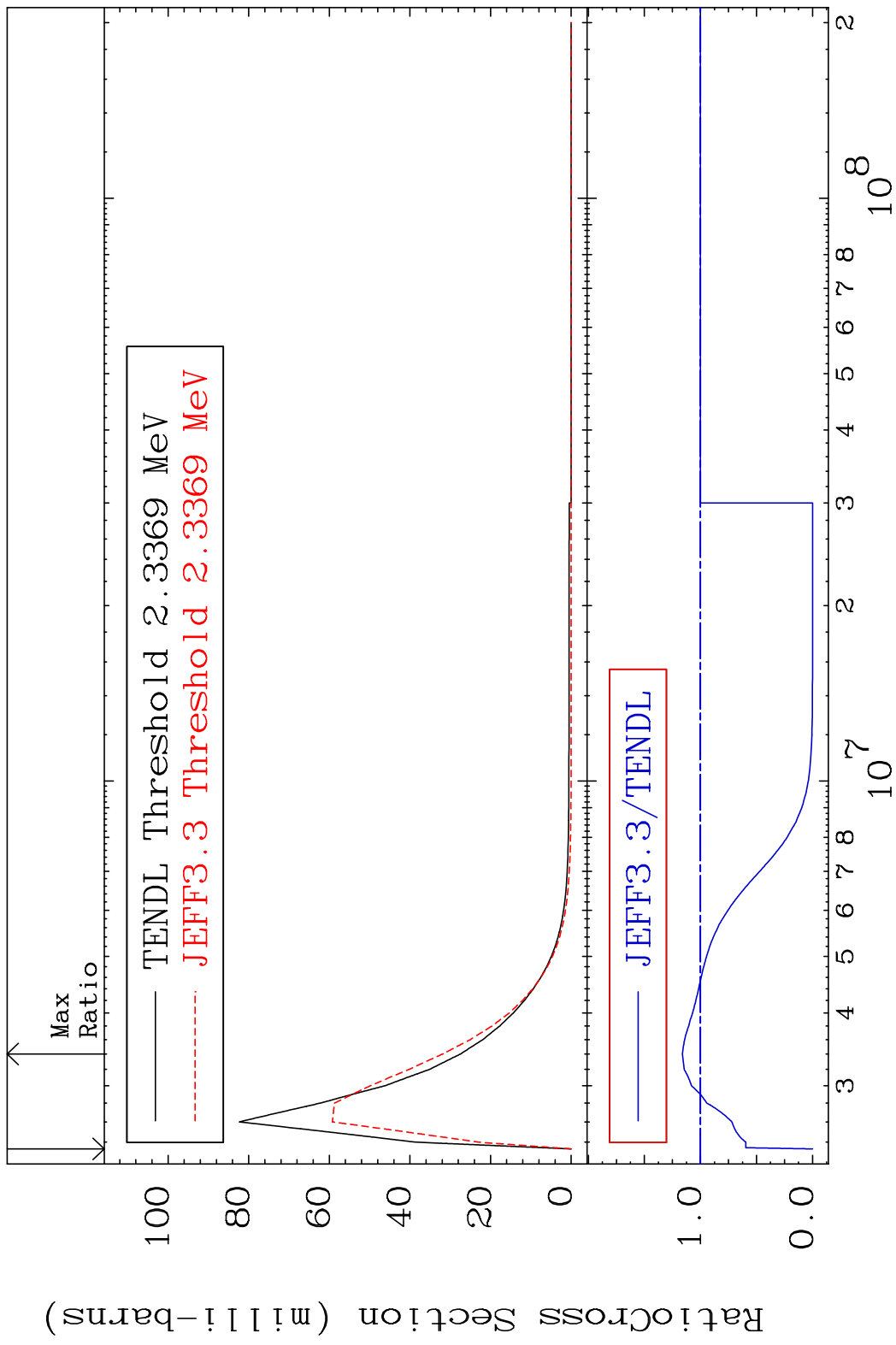
MAT 4437 MT= 66 (n,n') Level 44-Ru-100  
 Cross Section -100.0 To 3.411 %



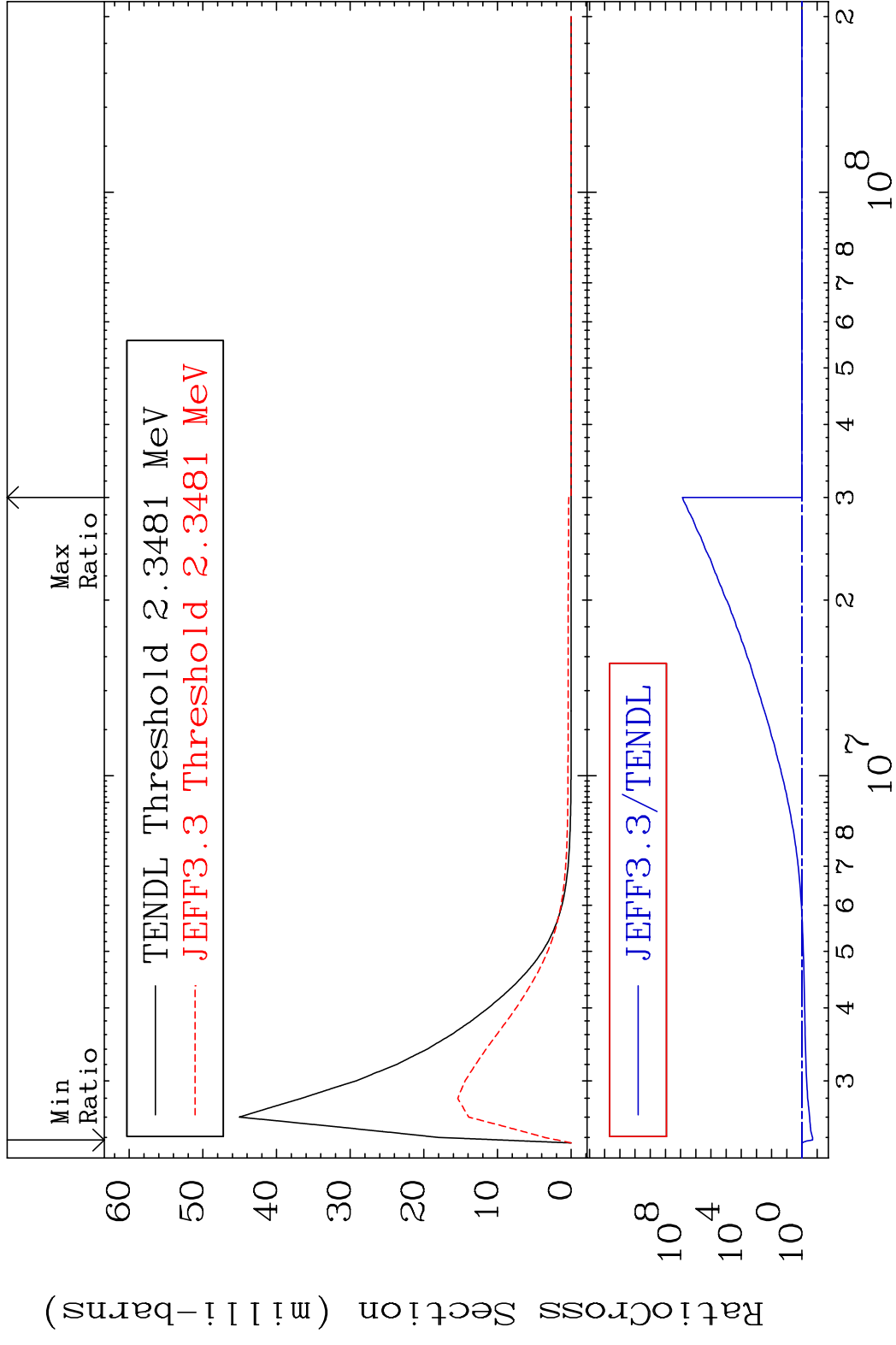
MAT 4437 MT= 67 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 9999. %



MAT 4437 MT= 68 (n,n') Level 44-Ru-100  
 Cross Section -100.0 To 16.15 %



MAT 4437 MT= 69 (n, n') Level 44-Ru-100  
 Cross Section -79.94 To 9999. %

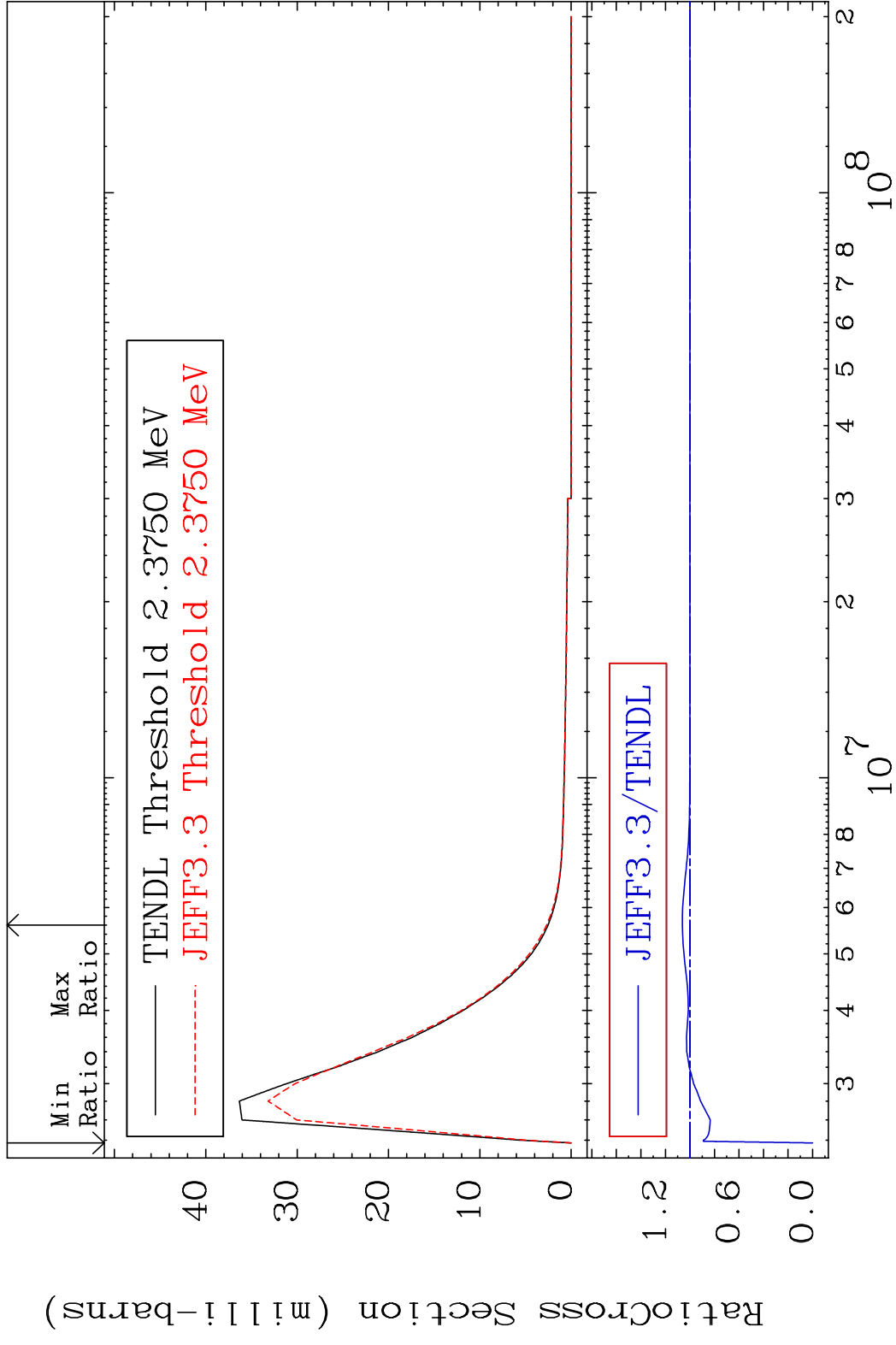


MAT 4437

MT= 70 (n, n') Level

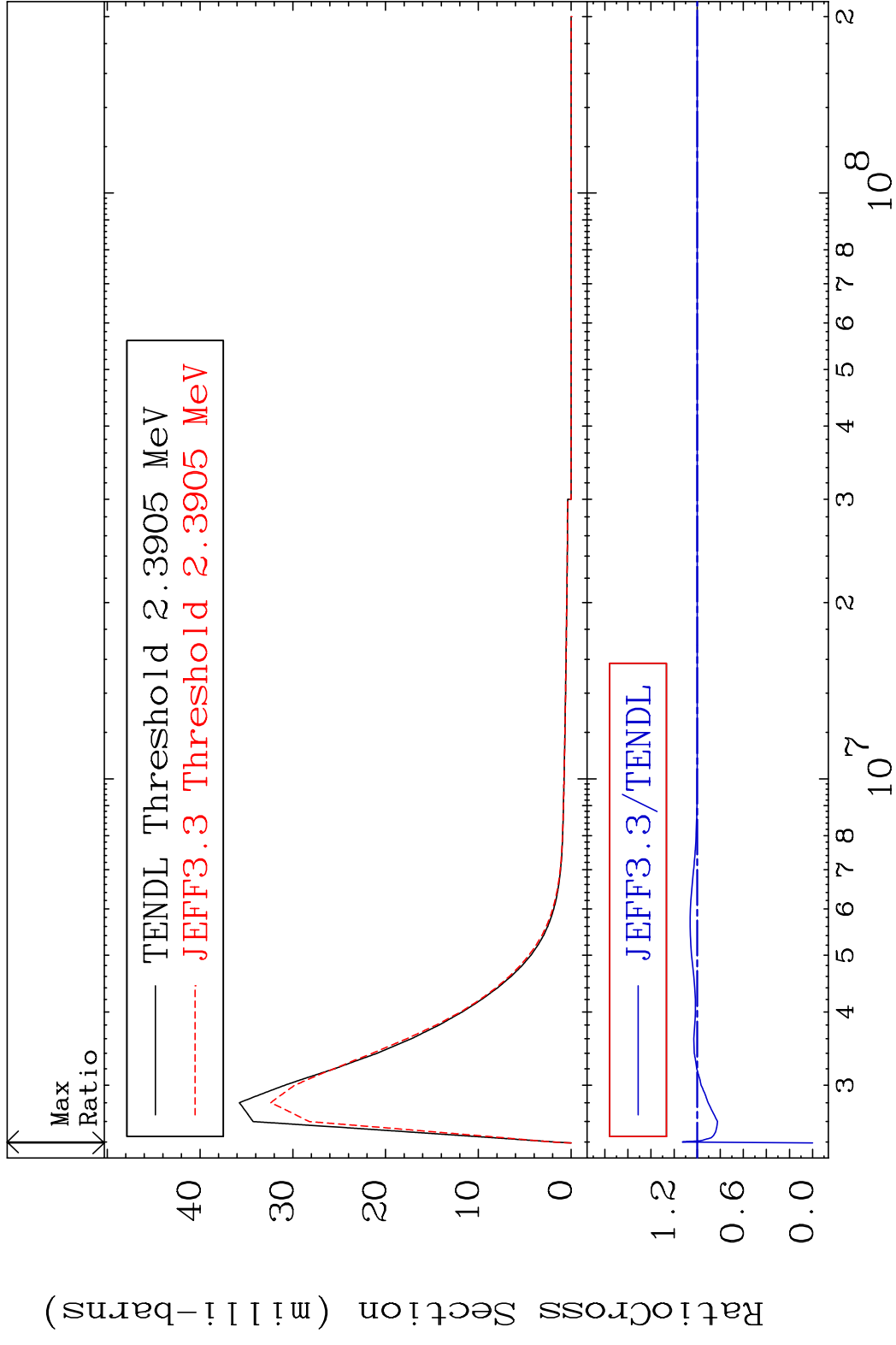
44-Ru-100

Cross Section -100.0 To 6.177 %



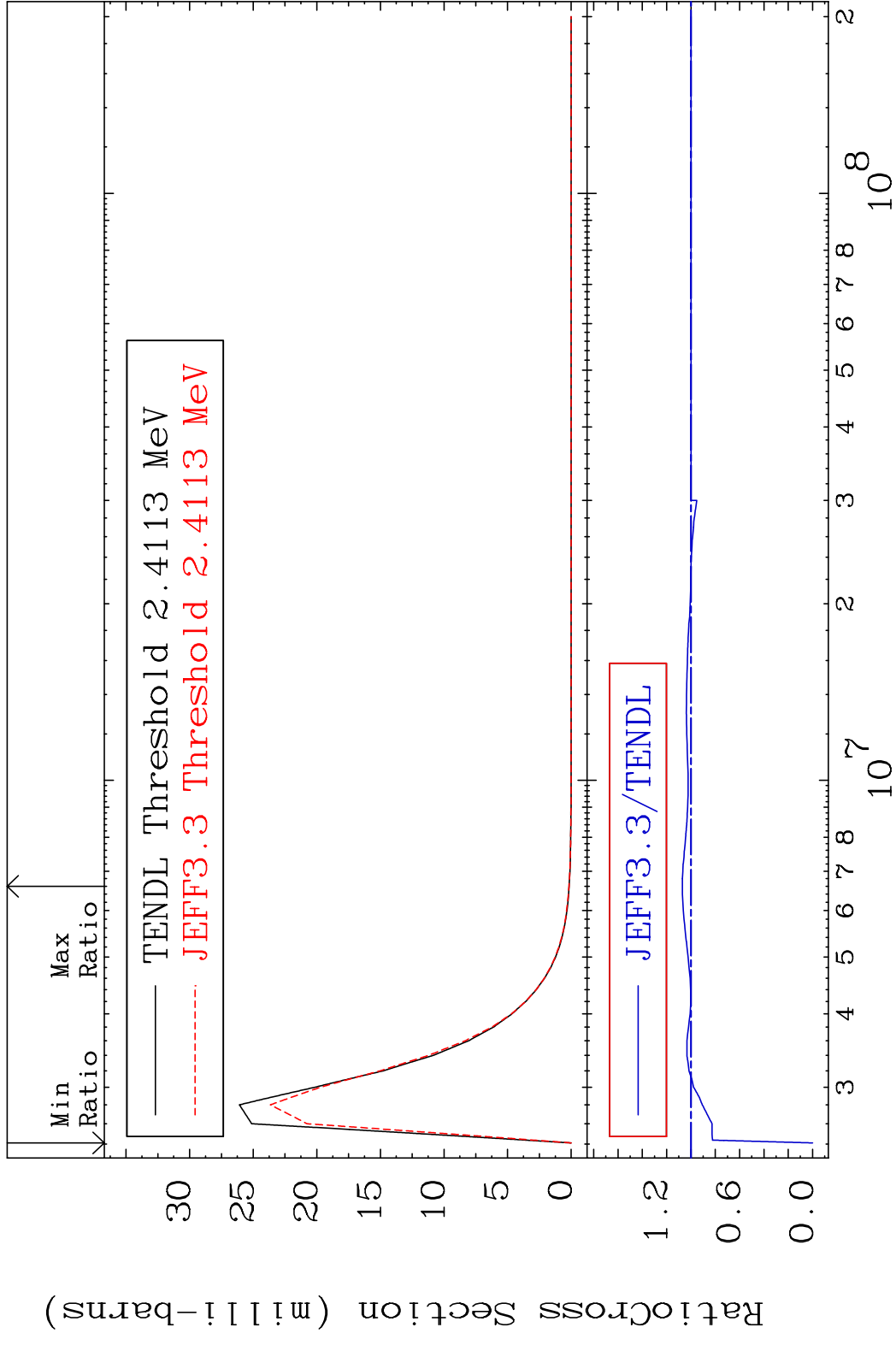


MAT 4437 MT= 71 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 12.84 %



40 44-Ru-100

MAT 4437 MT= 72 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 7.096 %

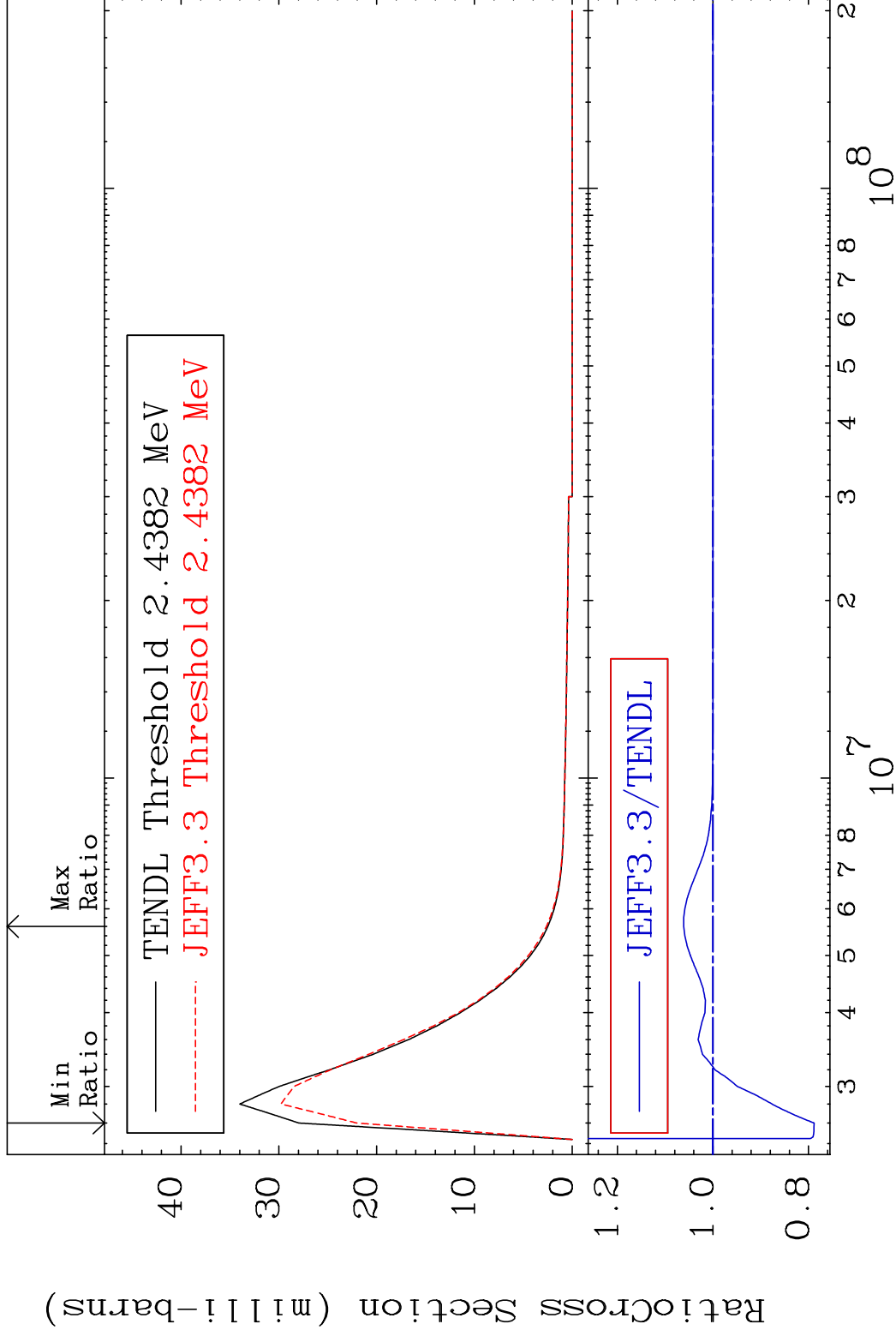


MAT 4437

MT= 73 (n, n') Level

44-Ru-100

Cross Section -21.16 To 6.123 %

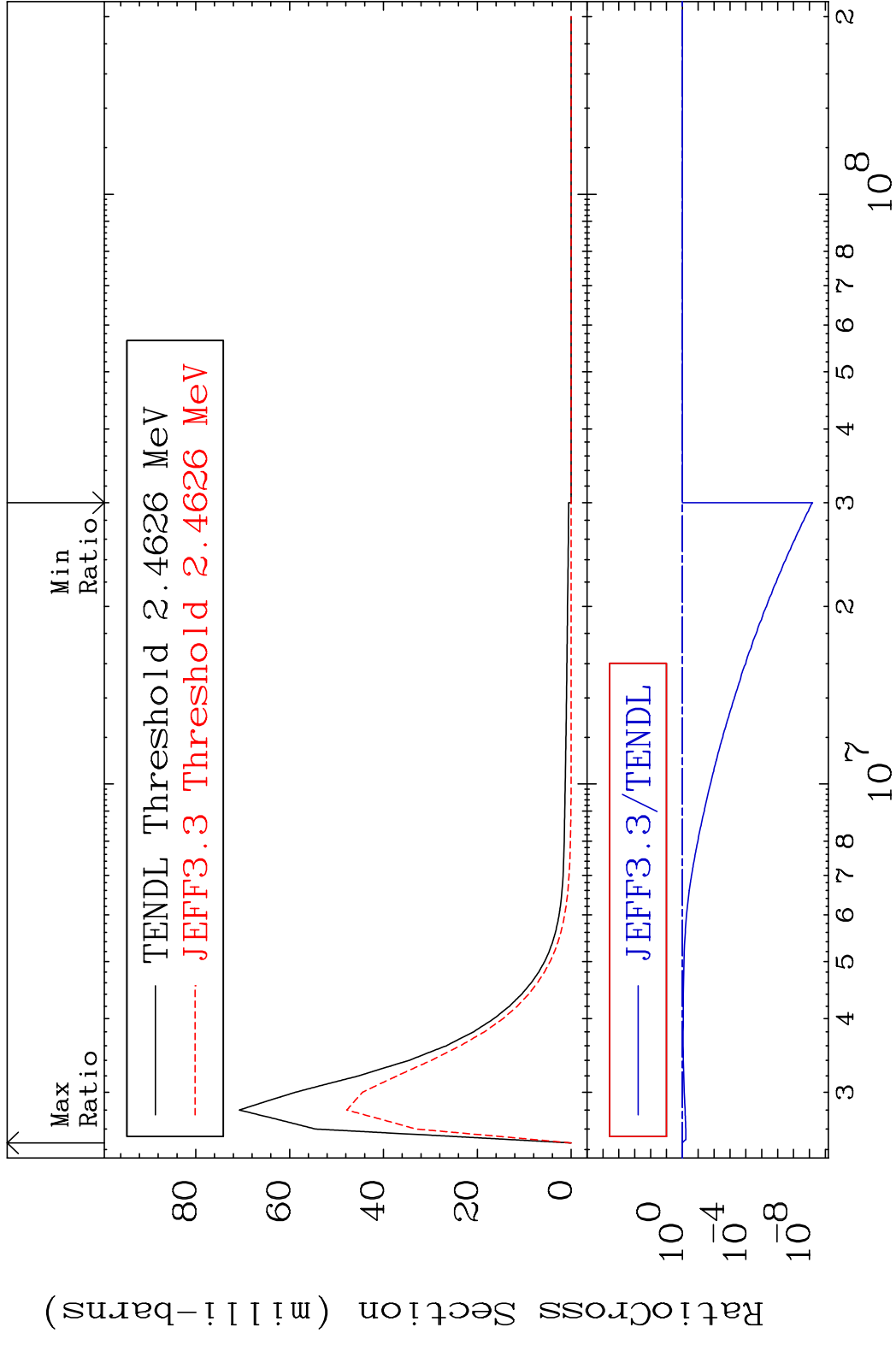


42

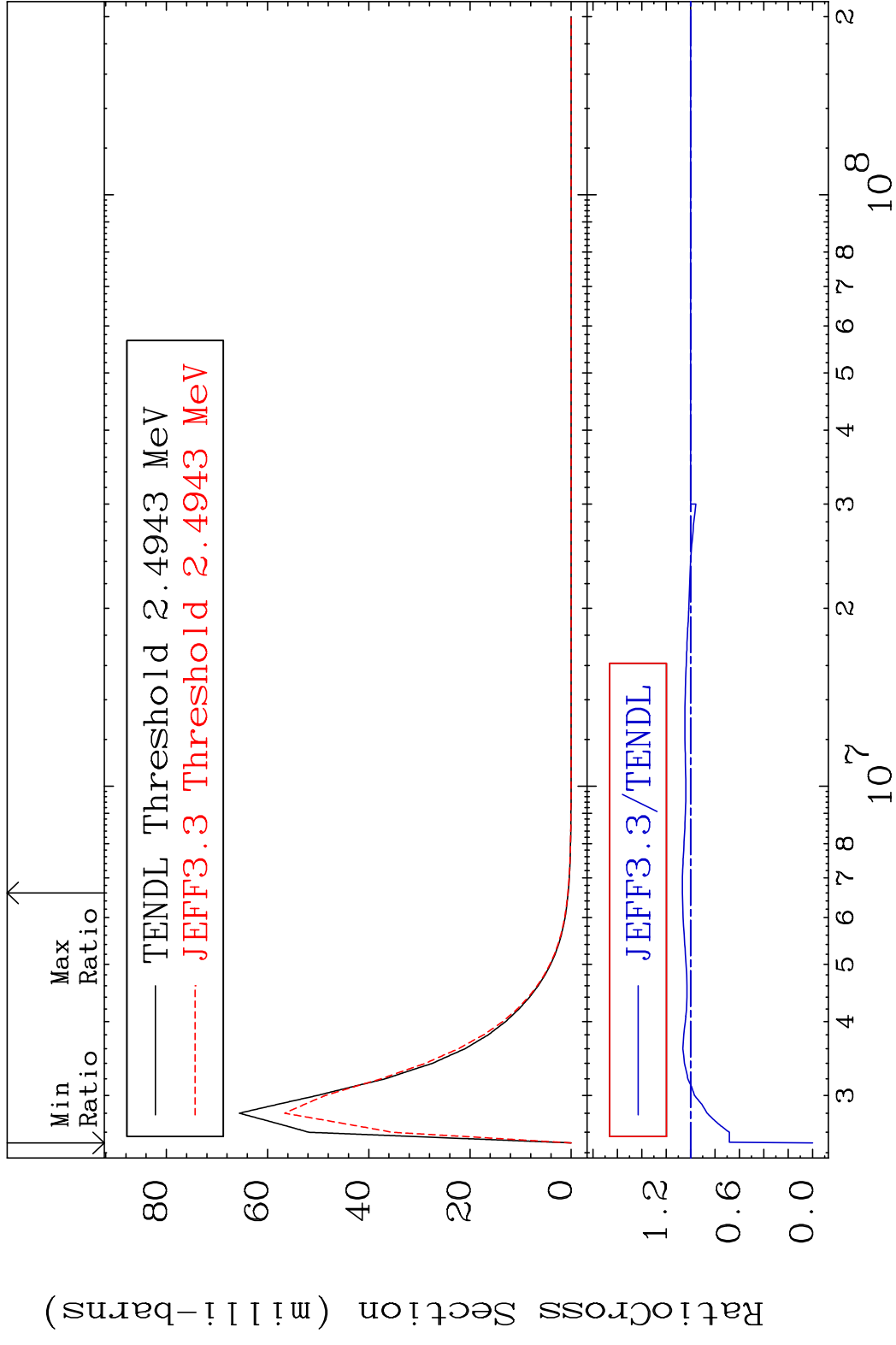
Incident Energy (eV)

44-Ru-100

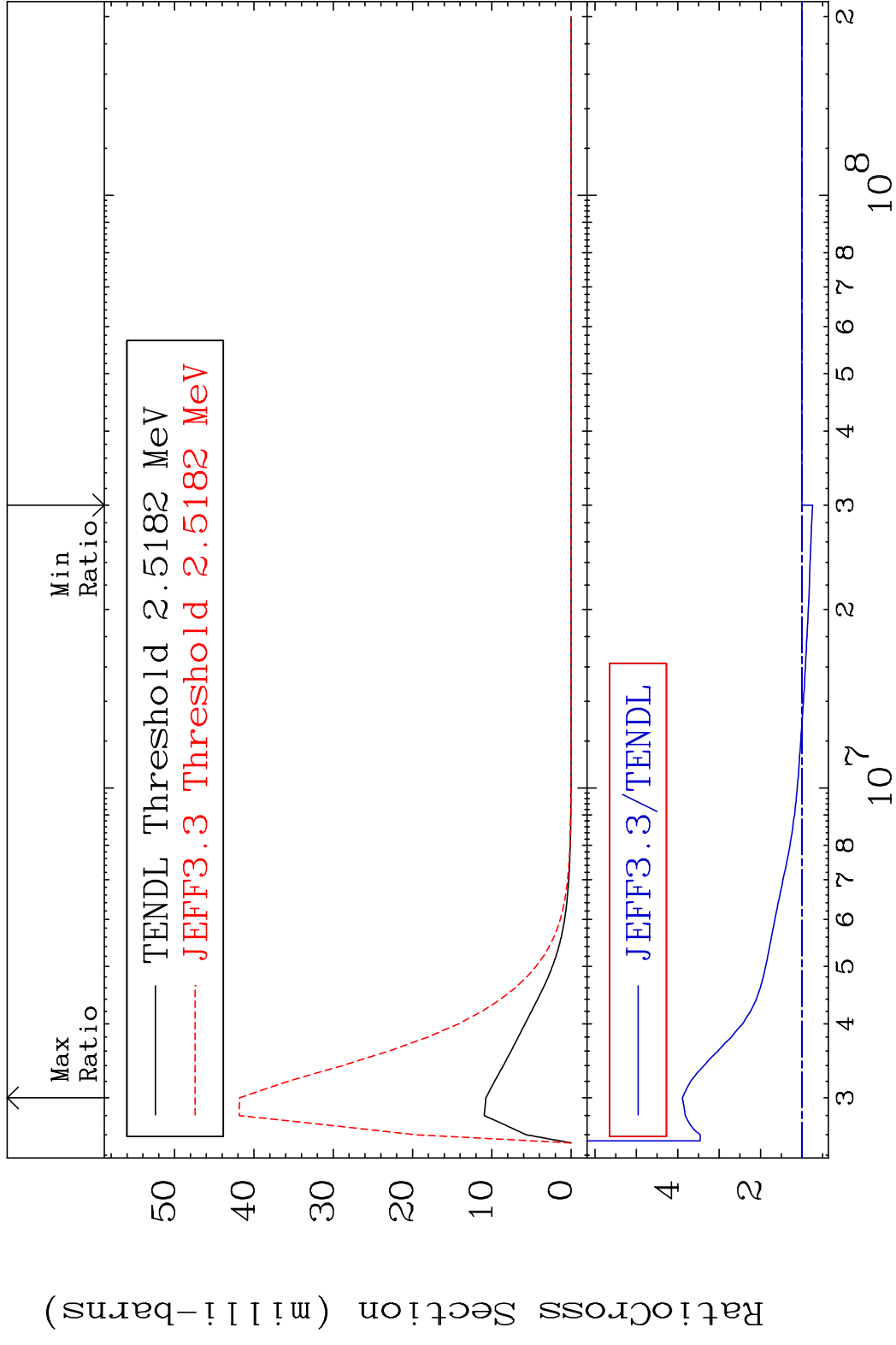
MAT 4437 MT= 74 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 0.000 %



MAT 4437 MT= 75 (n,n') Level 44-Ru-100  
 Cross Section -100.0 To 6.717 %



MAT 4437 MT= 76 (n, n') Level 44-Ru-100  
 Cross Section -25.51 To 289.1 %



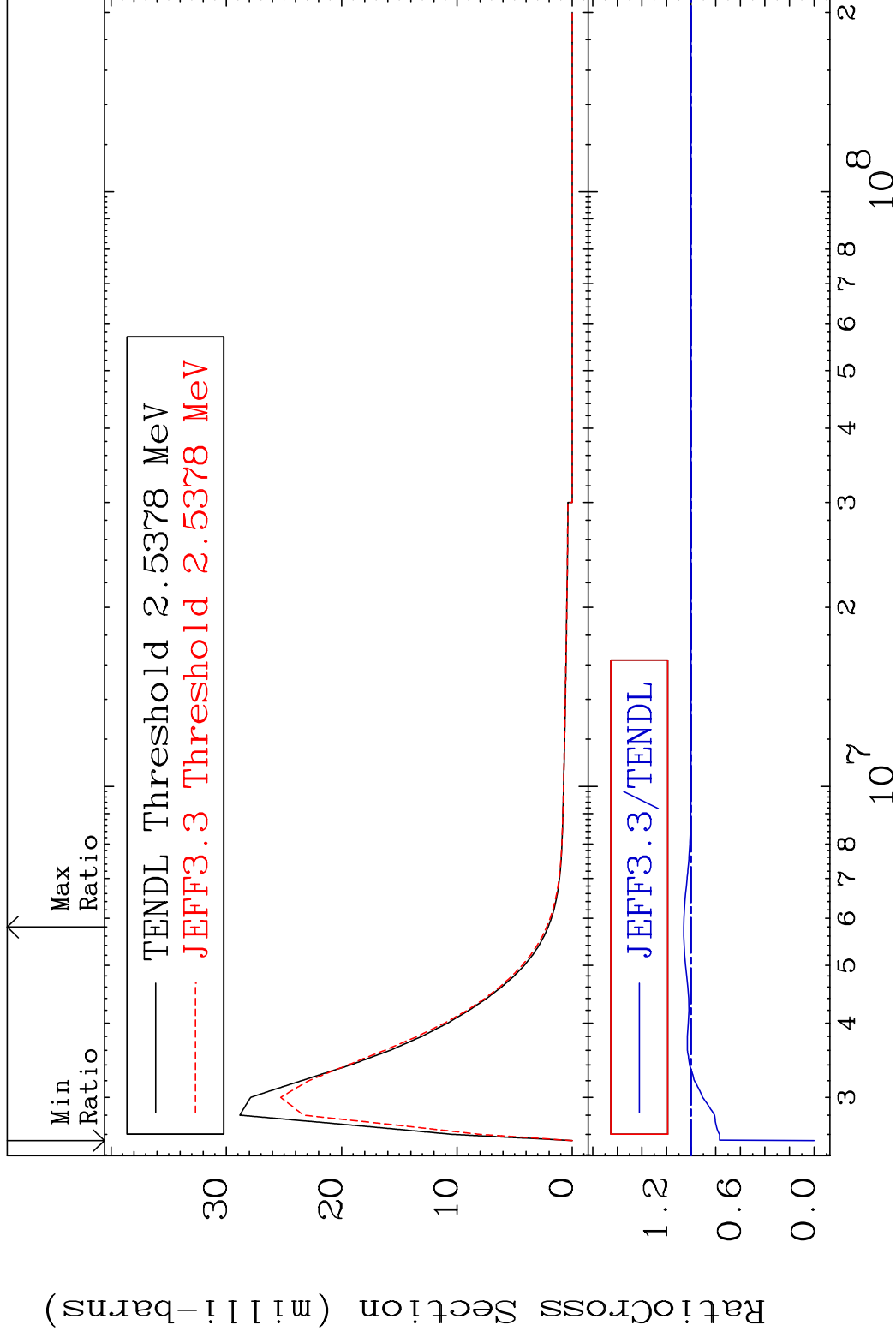
45 Incident Energy (eV) 44-Ru-100

MAT 4437

MT= 77 (n, n') Level

44-Ru-100

Cross Section -100.0 To 6.064 %

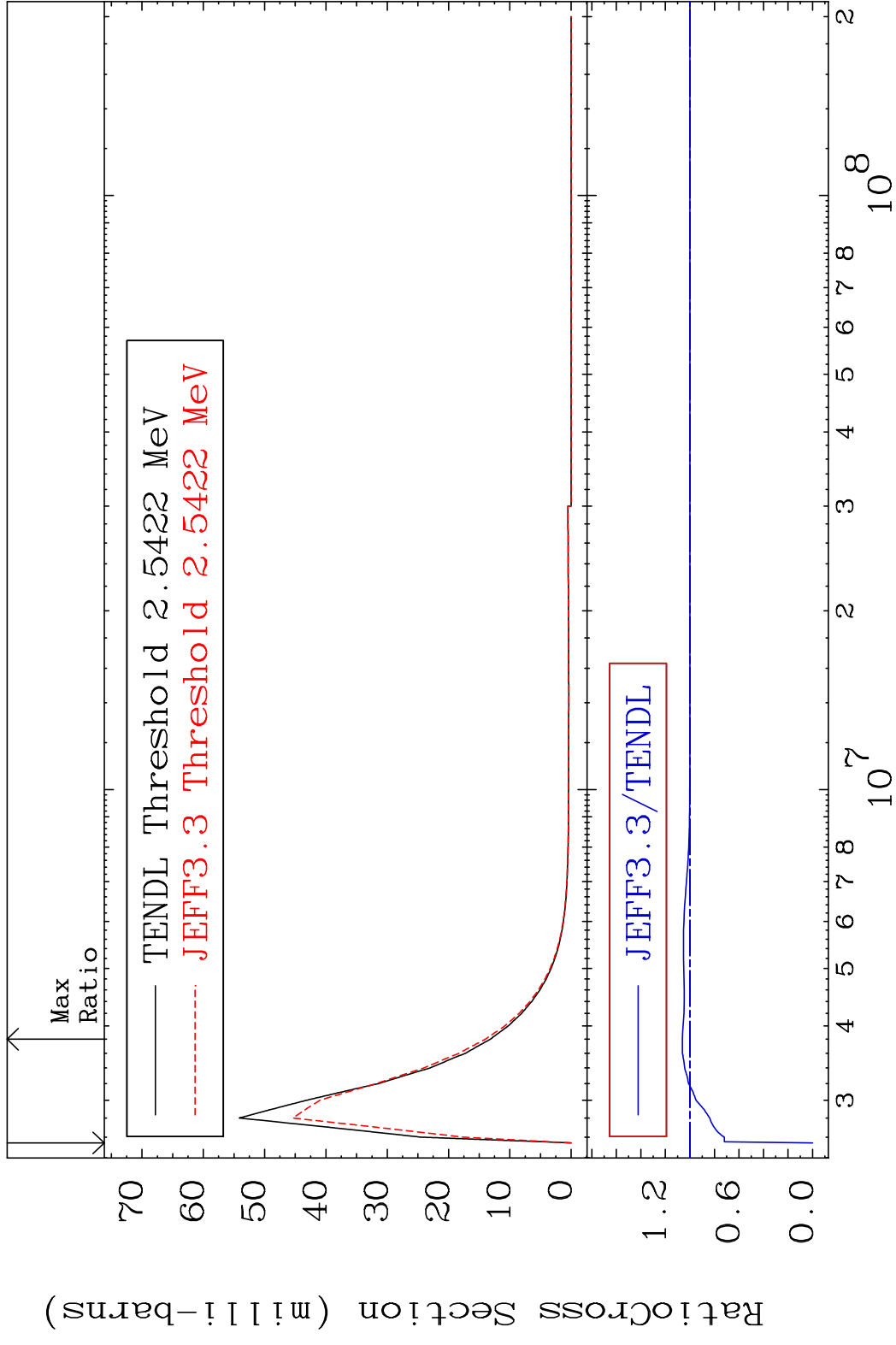


46

Incident Energy (eV)

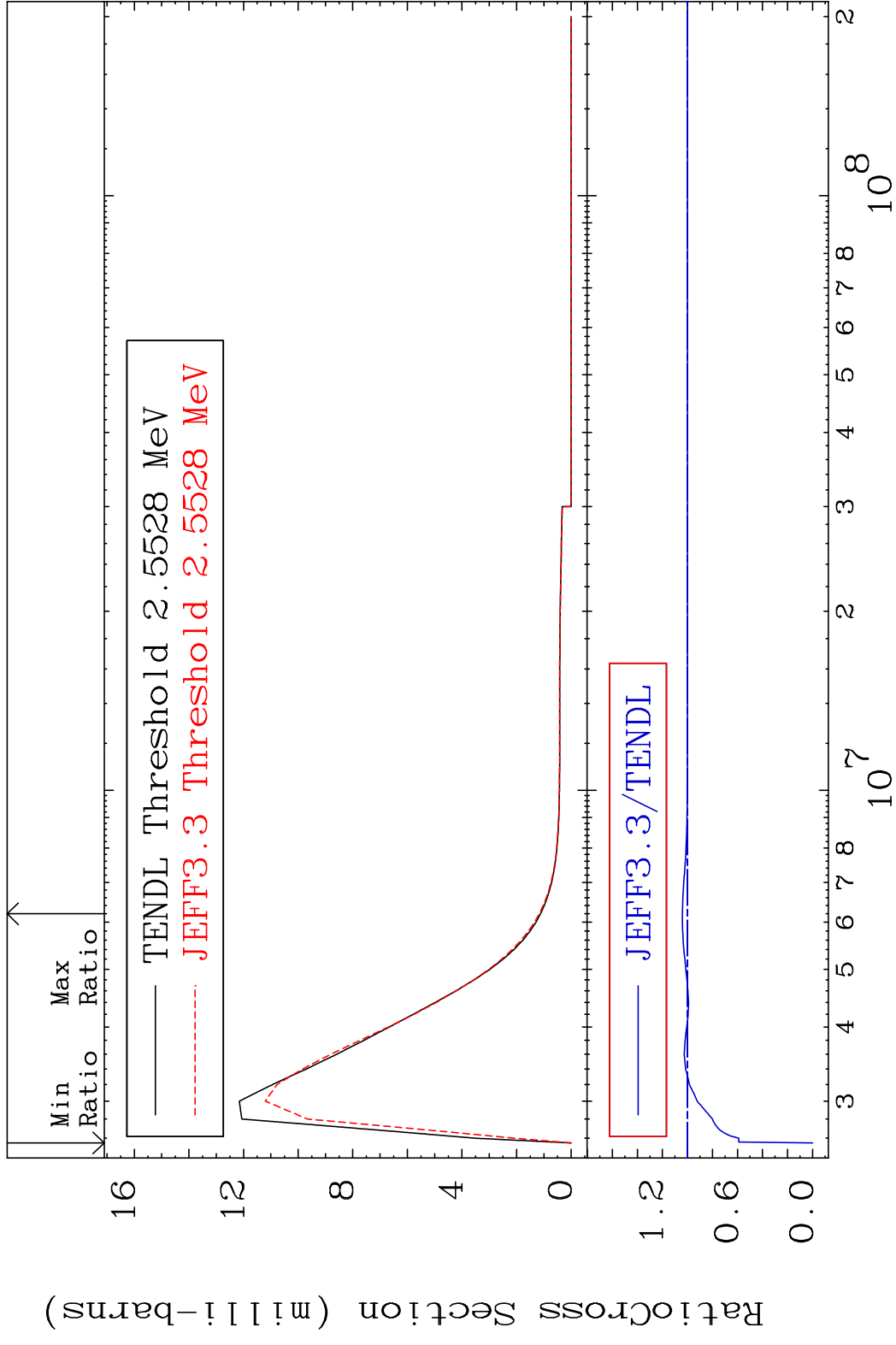
44-Ru-100

MAT 4437 MT= 78 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 6.169 %

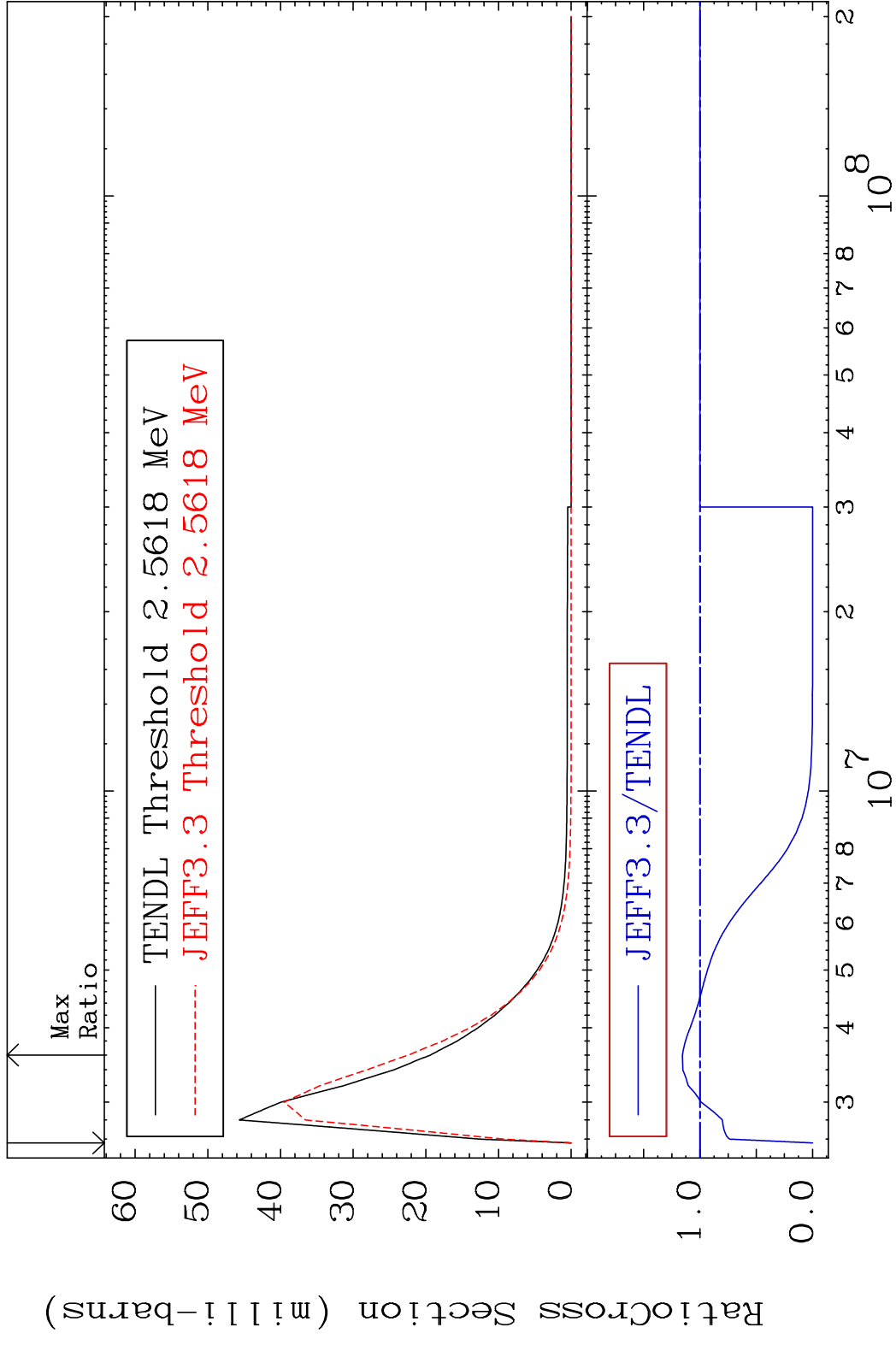




MAT 4437 MT= 79 (n,n') Level 44-Ru-100  
 Cross Section -100.0 To 4.058 %

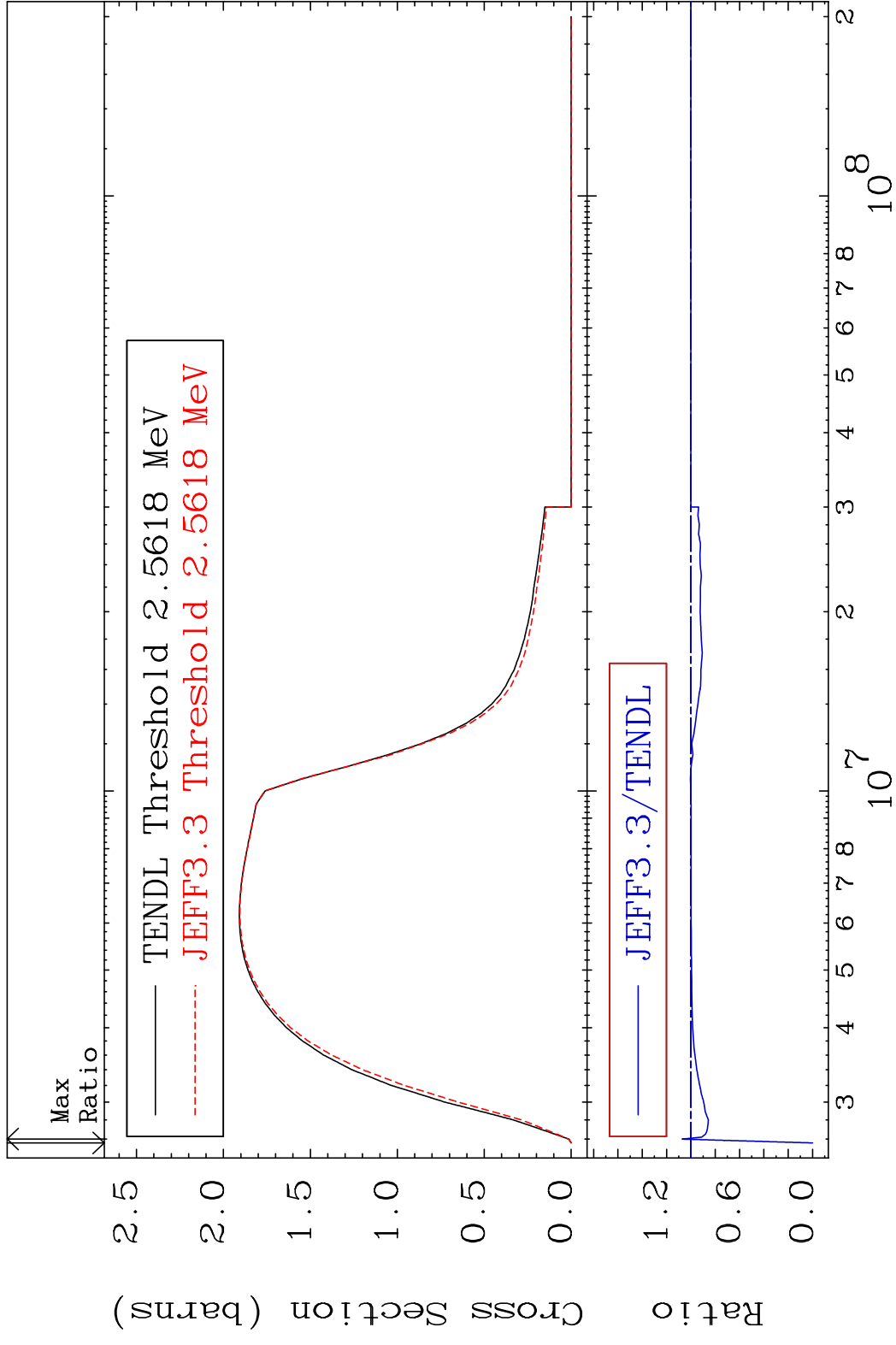


MAT 4437 MT= 80 (n, n') Level 44-Ru-100  
 Cross Section -100.0 To 15.67 %



49 Incident Energy (eV) 44-Ru-100

MAT 4437 (n,n') Continuum 44-Ru-100  
 Cross Section -100.0 To 7.024 %

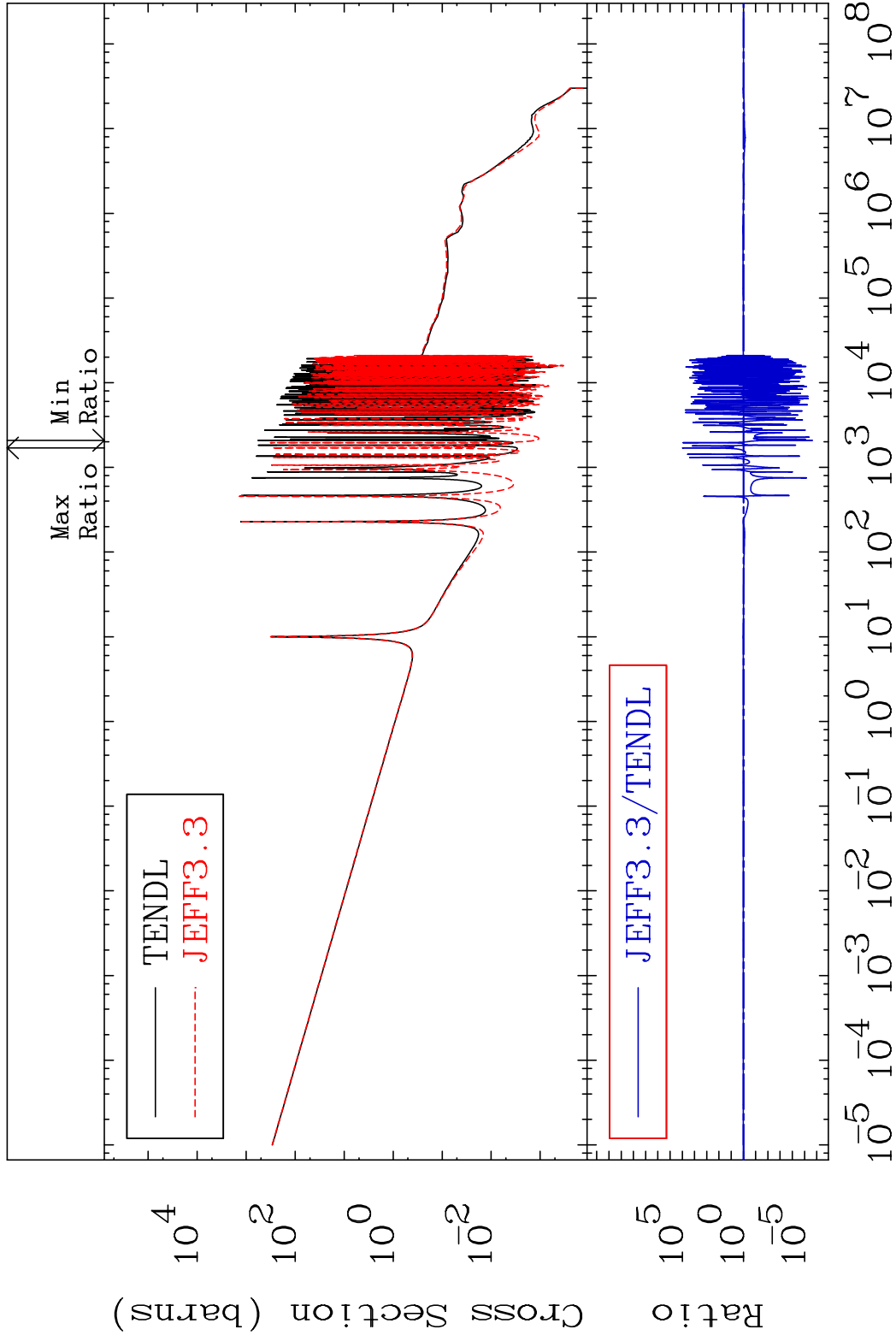


MAT 4437

(n,  $\gamma$ )

44-Ru-100

Cross Section -100.0 To 9999. %

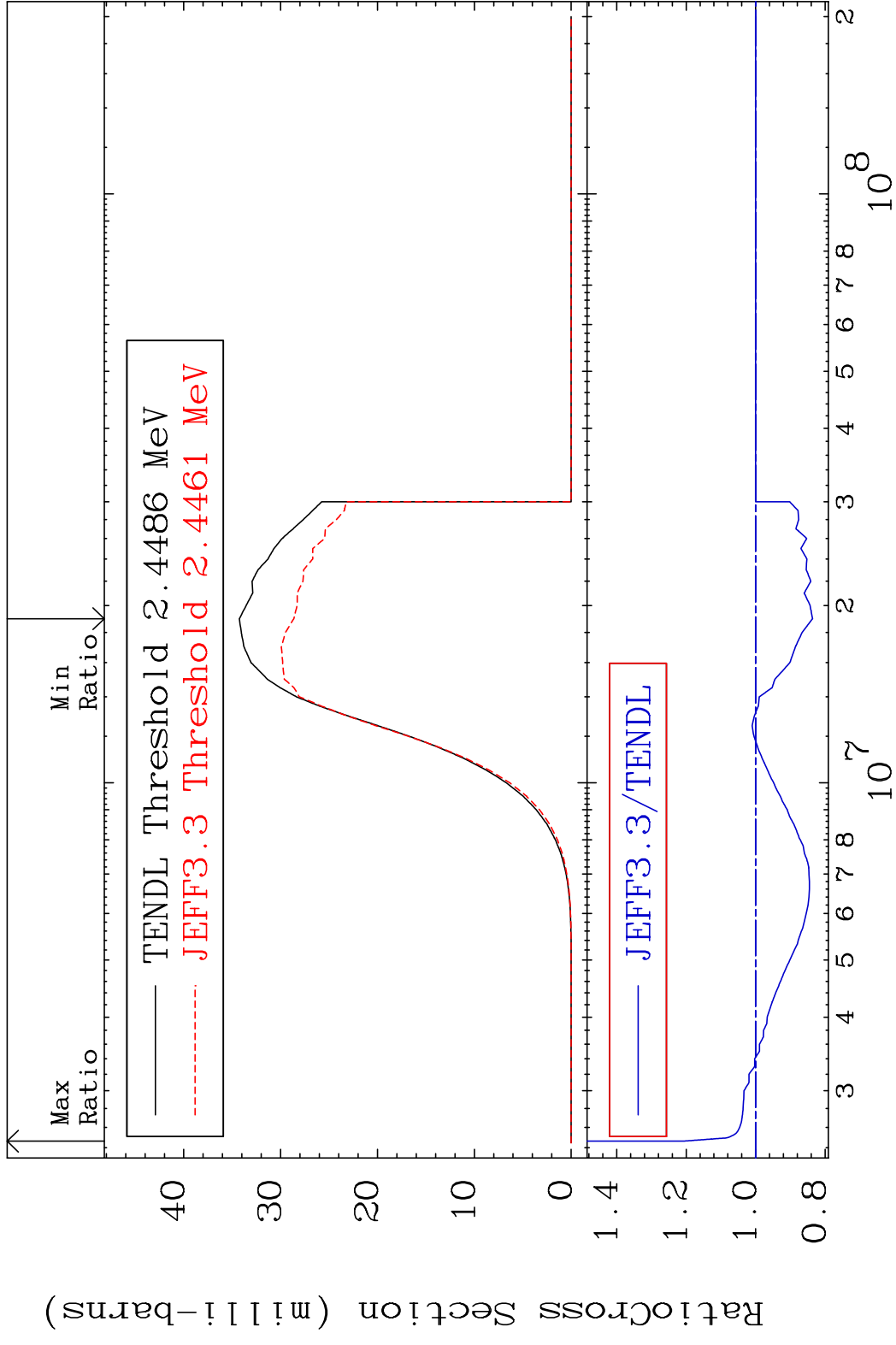


51

Incident Energy (eV)

44-Ru-100

MAT 4437 (n,p) 44-Ru-100  
 Cross Section -16.40 To 21.11 %

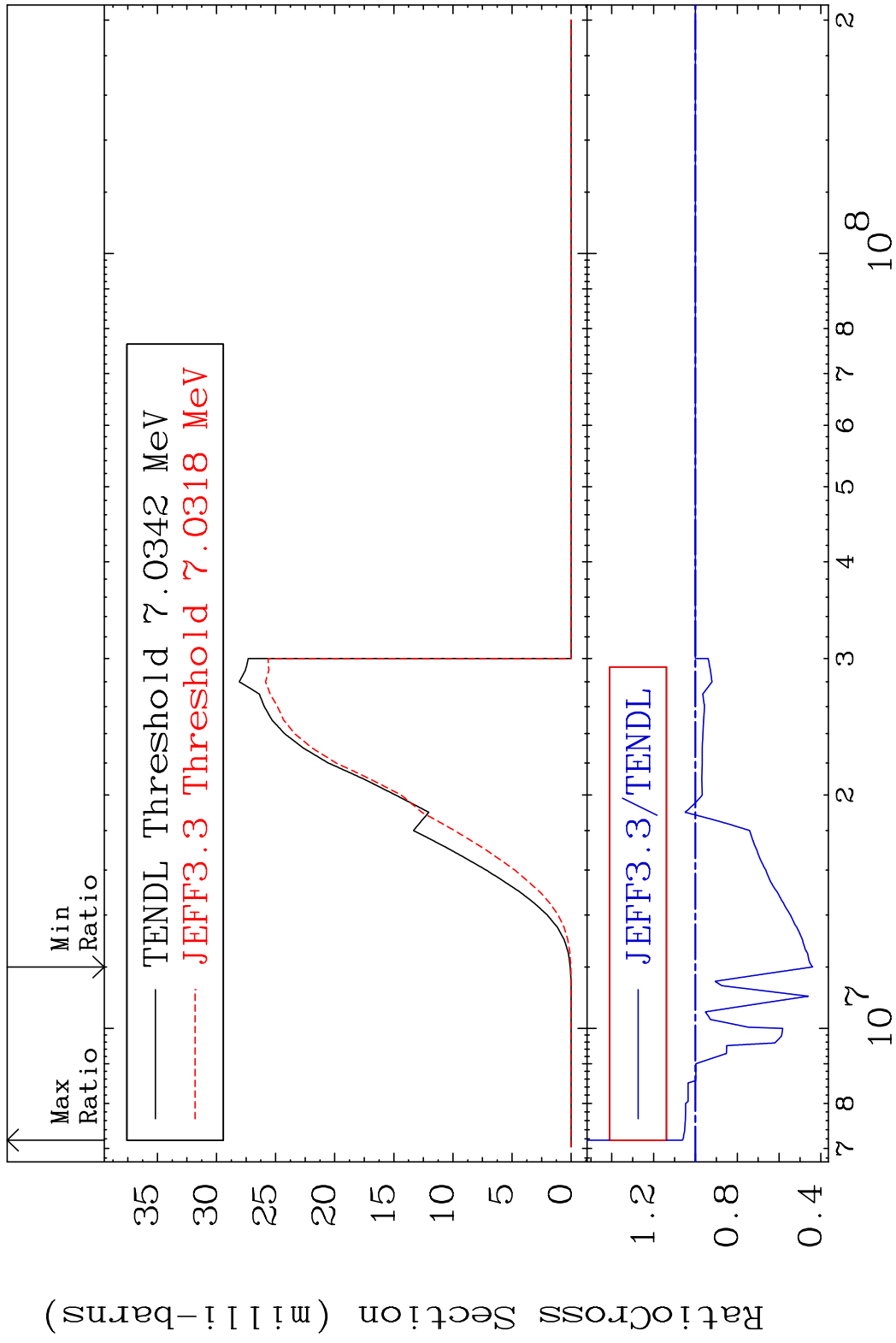


MAT 4437

(n,d)

44-Ru-100

Cross Section -56.01 To 6.257 %



53

Incident Energy (eV)

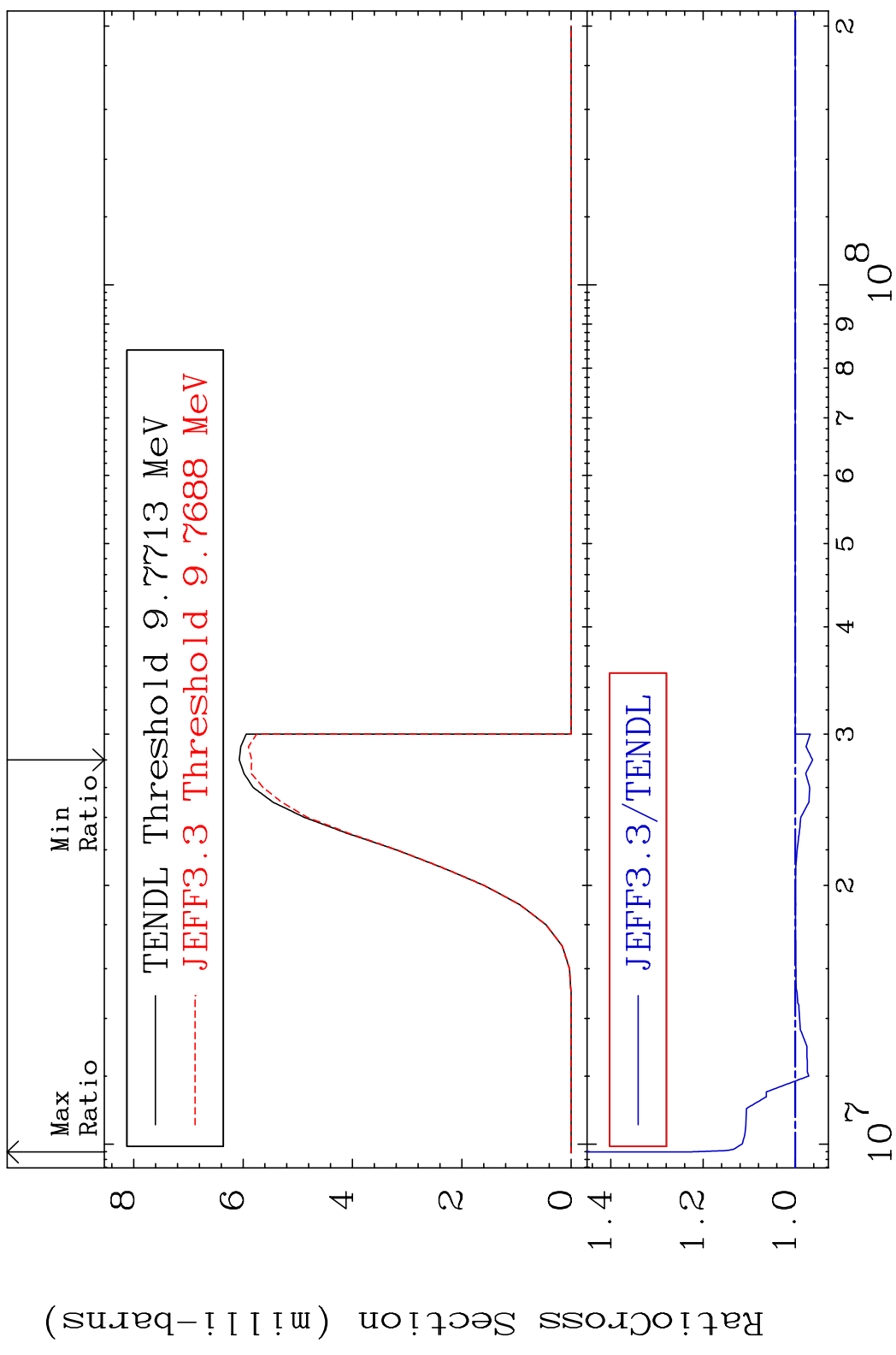
44-Ru-100

MAT 4437

(n, t)

44-Ru-100

Cross Section -3.725 To 24.49 %



54

Incident Energy (eV)

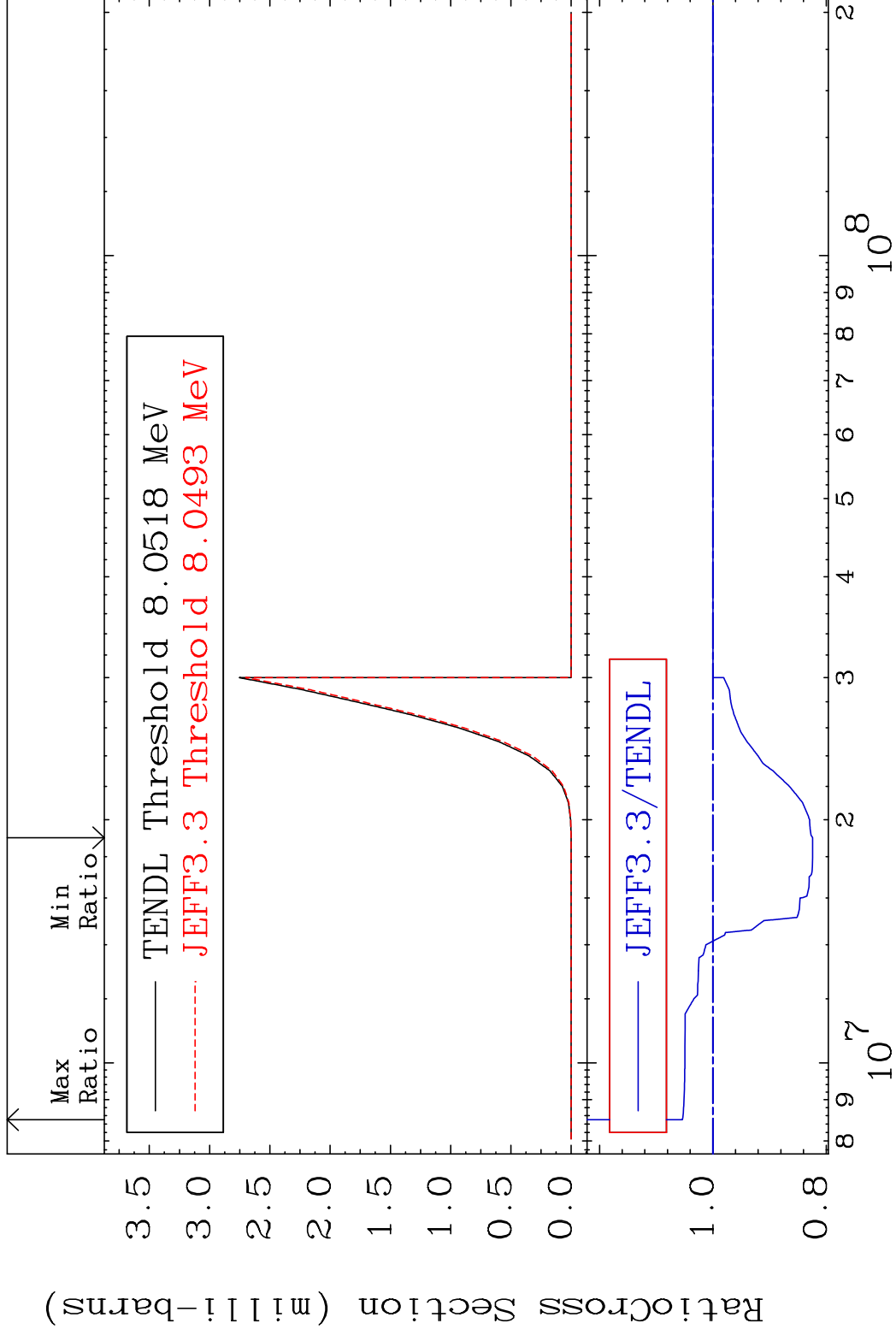
44-Ru-100

MAT 4437

(n, He-3)

44-Ru-100

Cross Section -17.59 To 5.385 %



55

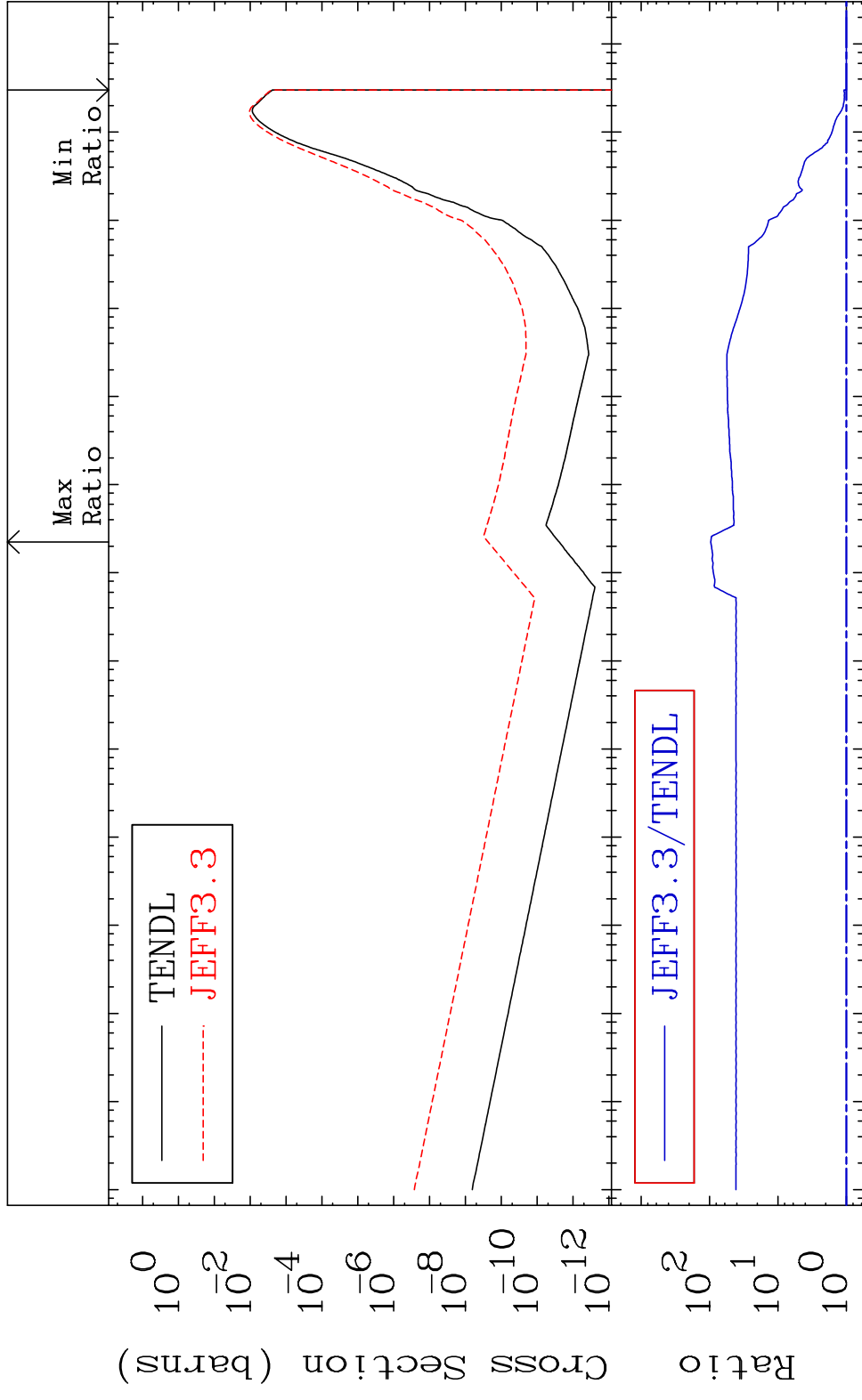
Incident Energy (eV)

44-Ru-100



MAT 4437

(n,  $\alpha$ )  
Cross Section 0.000 To 9534. %  
44-Ru-100



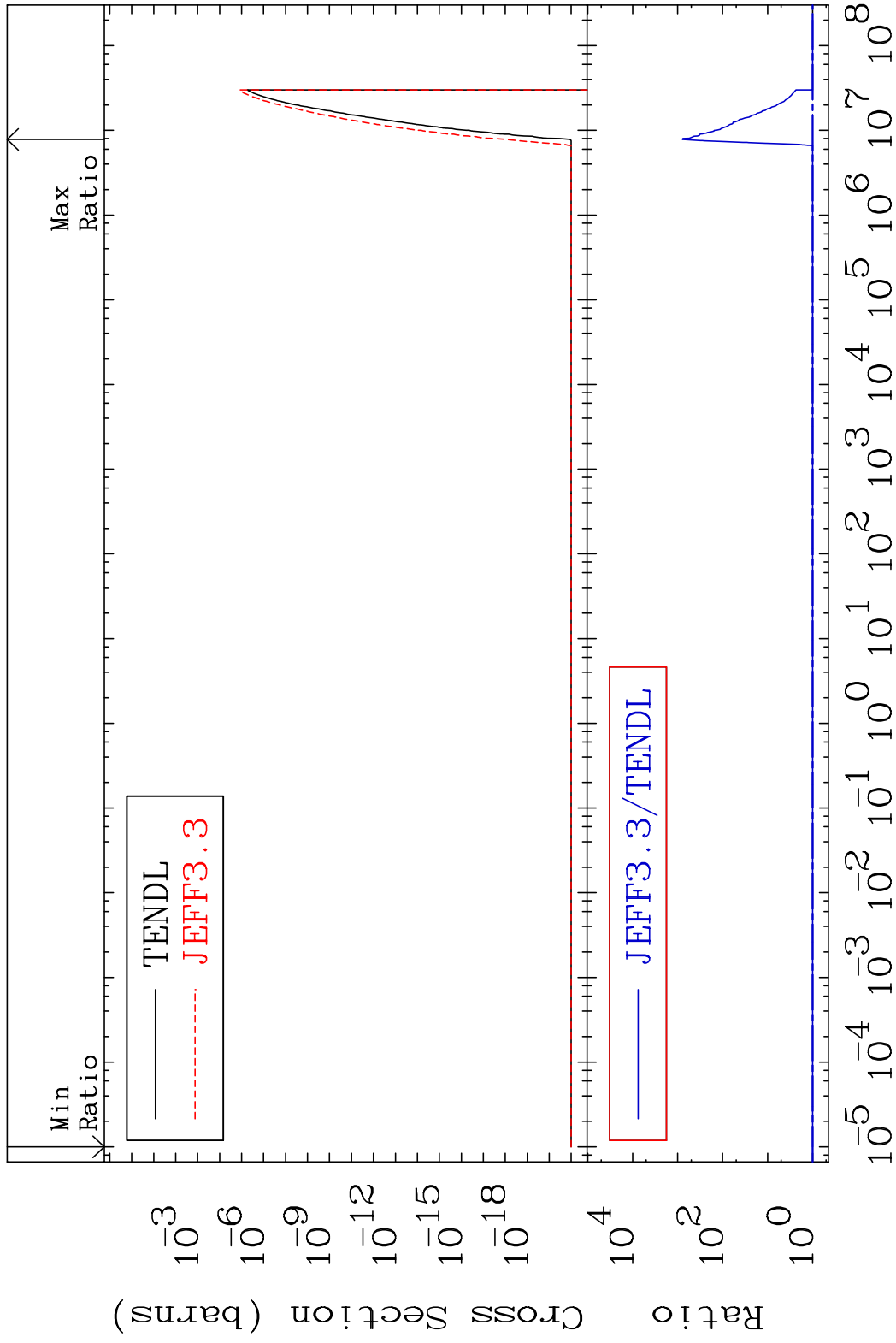
10<sup>-5</sup> 10<sup>-4</sup> 10<sup>-3</sup> 10<sup>-2</sup> 10<sup>-1</sup> 10<sup>0</sup> 10<sup>1</sup> 10<sup>2</sup> 10<sup>3</sup> 10<sup>4</sup> 10<sup>5</sup> 10<sup>6</sup> 10<sup>7</sup> 10<sup>8</sup>  
Incident Energy (eV)

MAT 4437

(n,2α)

44-Ru-100

Cross Section 0.000 To 9999. %



57

Incident Energy (eV)

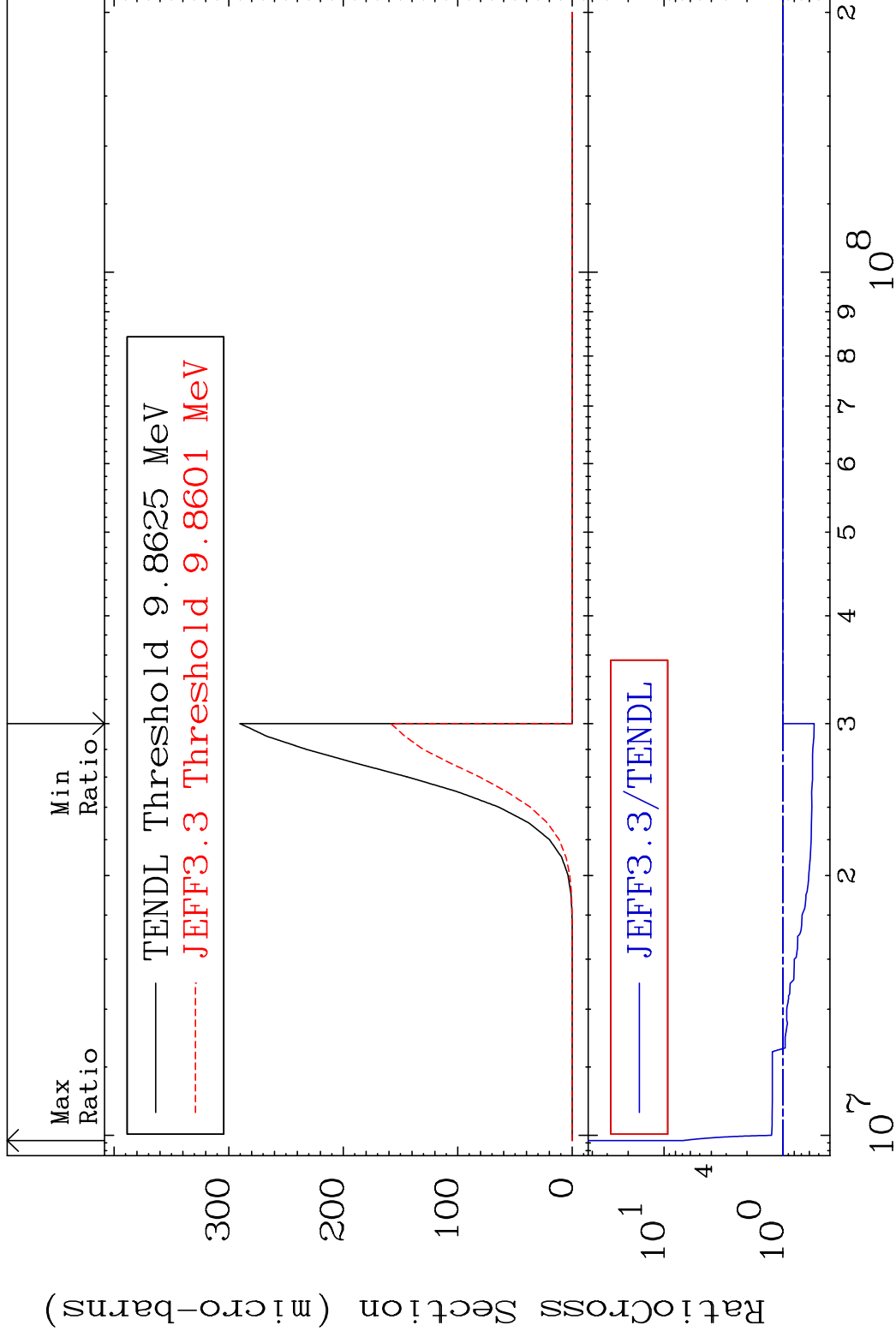
44-Ru-100

MAT 4437

(n,2p)

44-Ru-100

Cross Section -45.39 To 582.7 %



58

Incident Energy (eV)

44-Ru-100

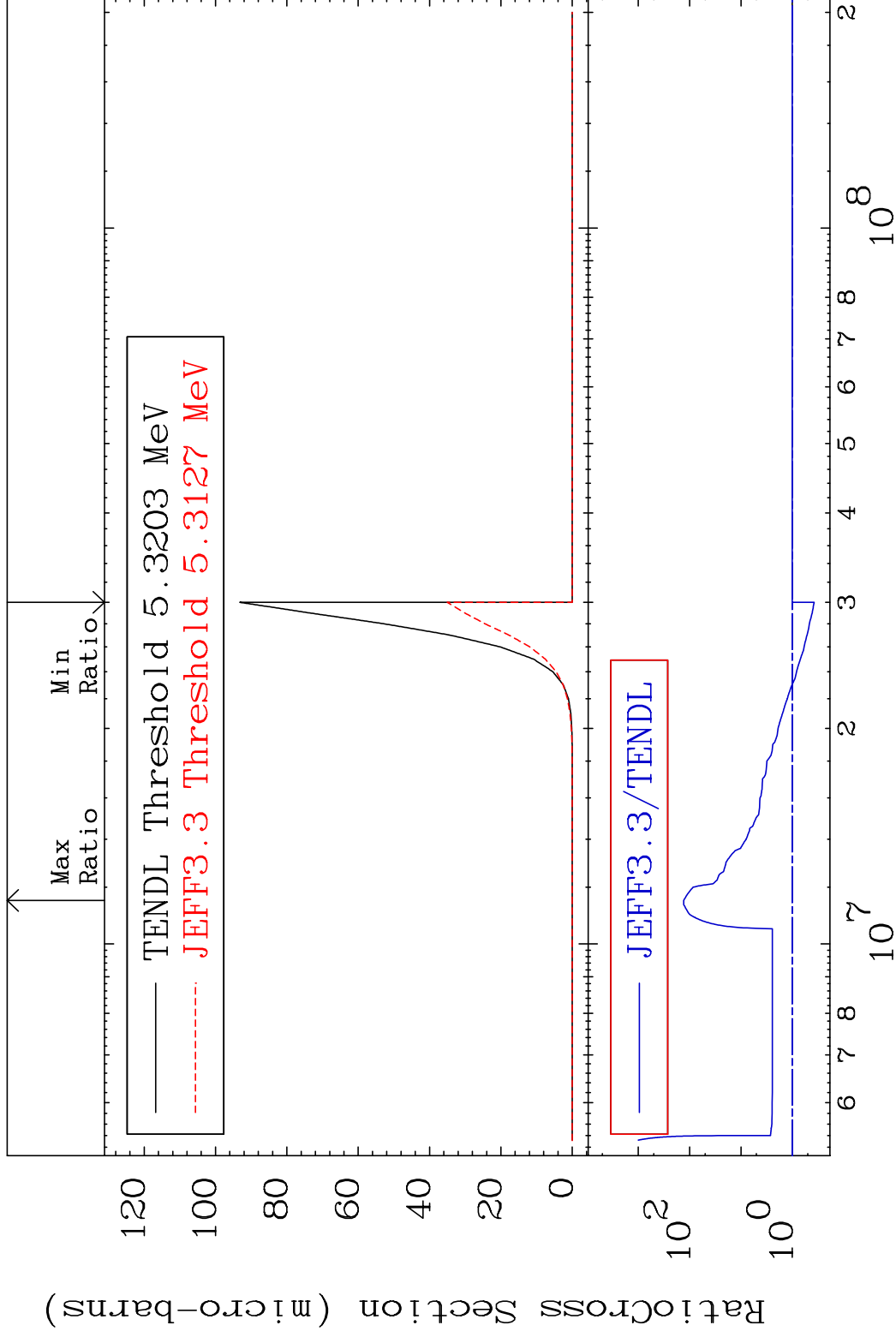
MAT 4437

(n,p)  $\alpha$

44-Ru-100

Cross Section

-62.40 To 9999. %



59

Incident Energy (eV)

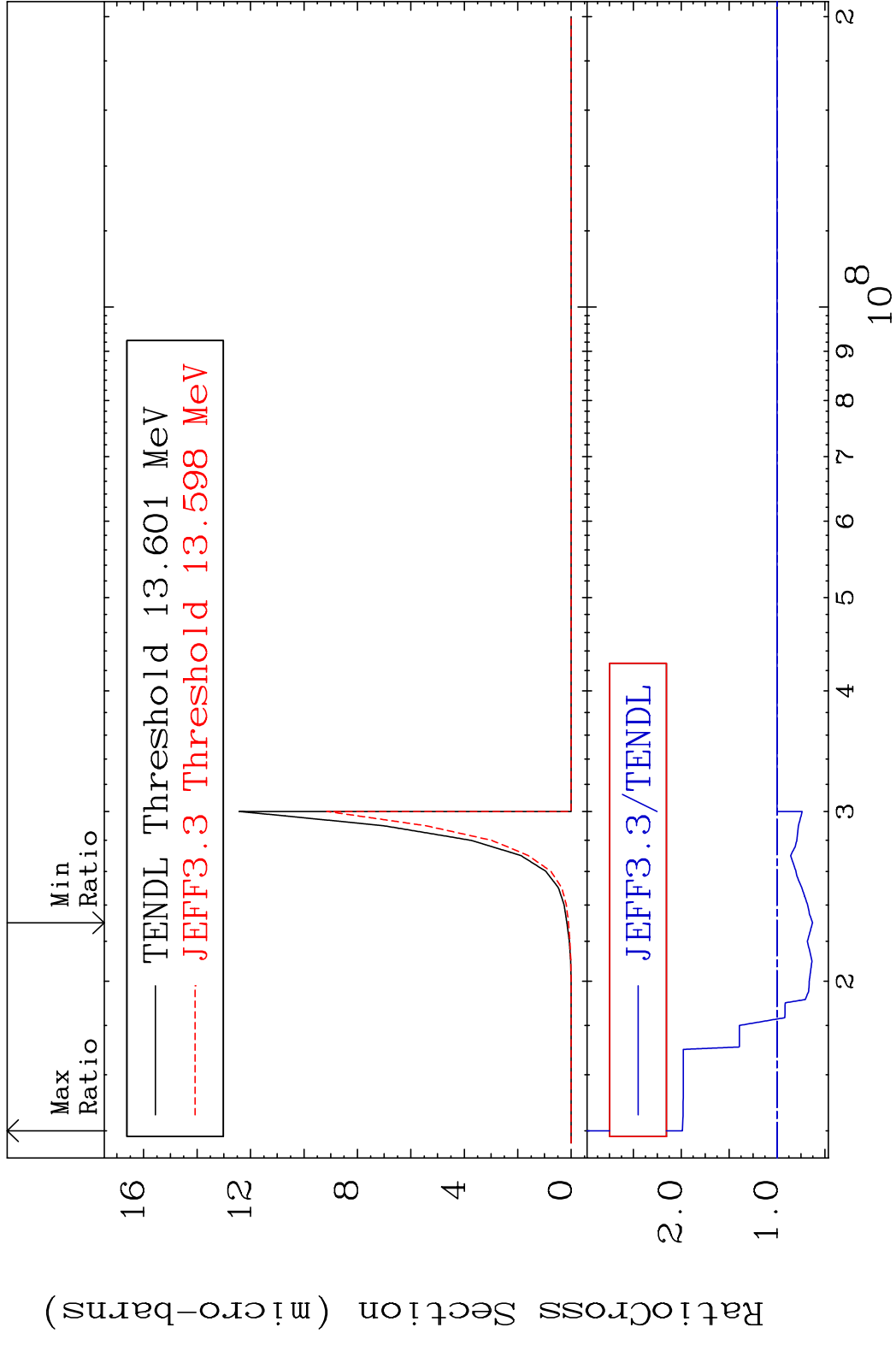
44-Ru-100

MAT 4437

(n,p) d

44-Ru-100

Cross Section -37.18 To 98.83 %



60

Incident Energy (eV)

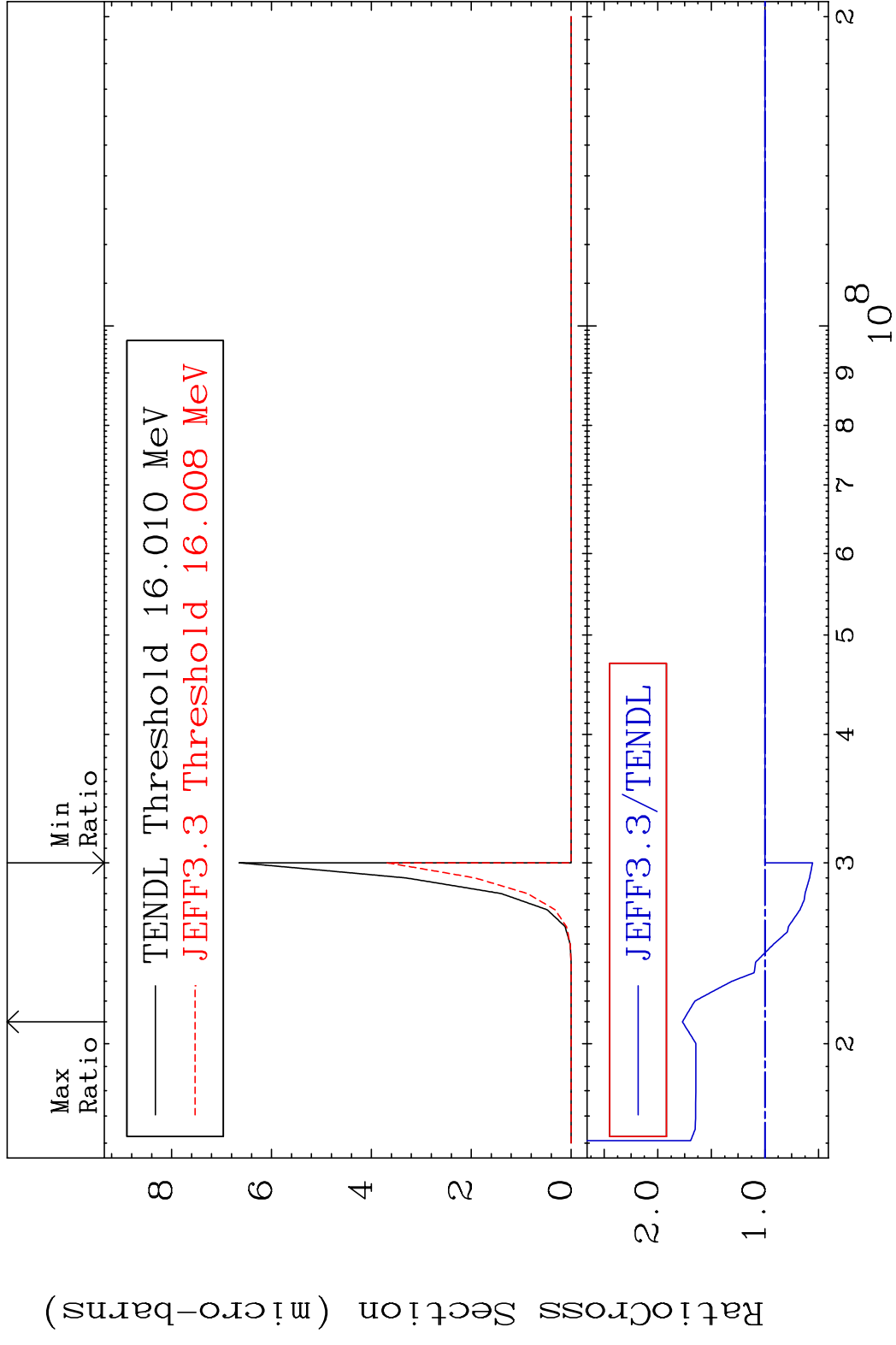
44-Ru-100

MAT 4437

(n,p) t

44-Ru-100

Cross Section -44.52 To 77.07 %

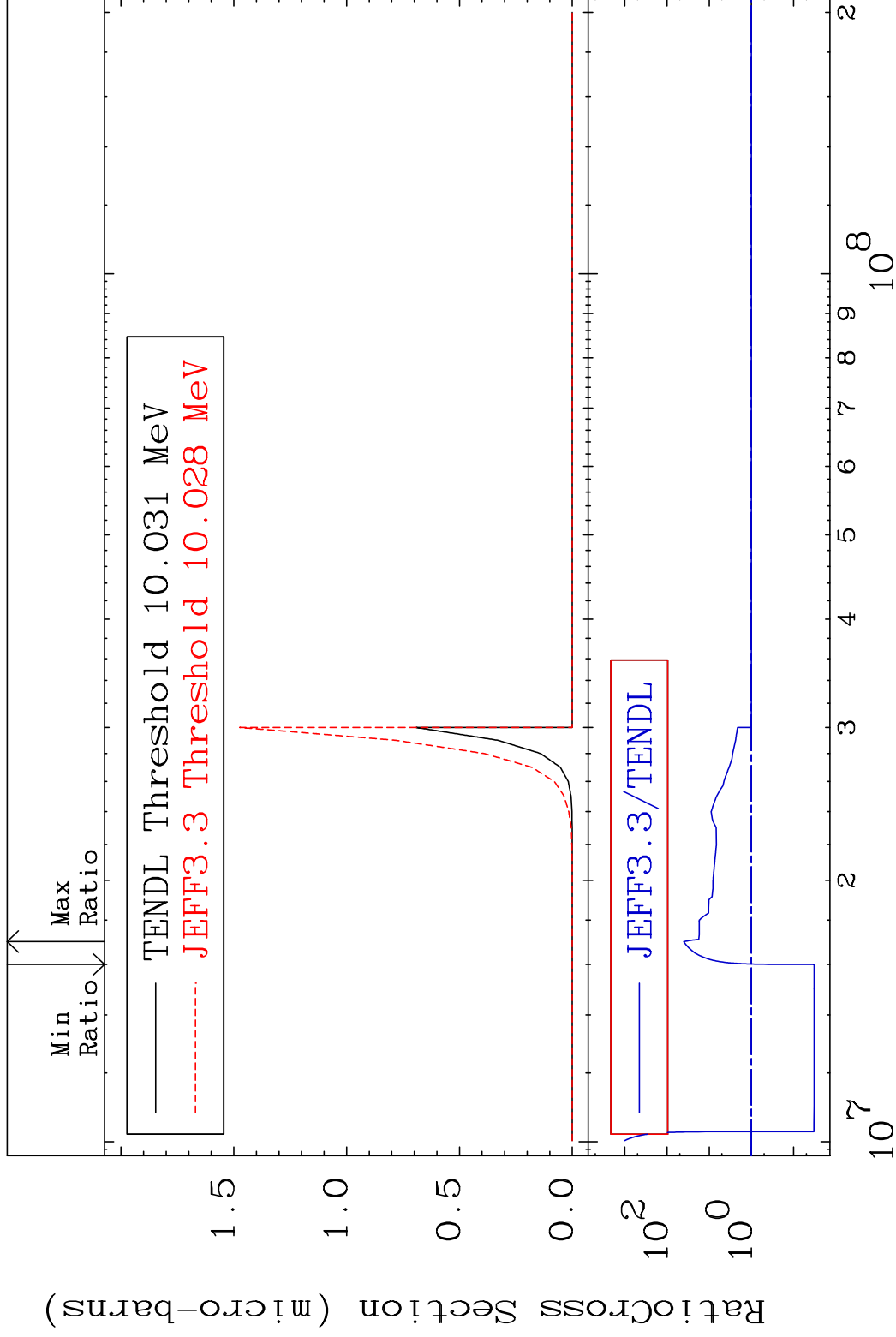


MAT 4437

(n,d)  $\alpha$

44-Ru-100

Cross Section -96.73 To 3929. %



62

Incident Energy (eV)

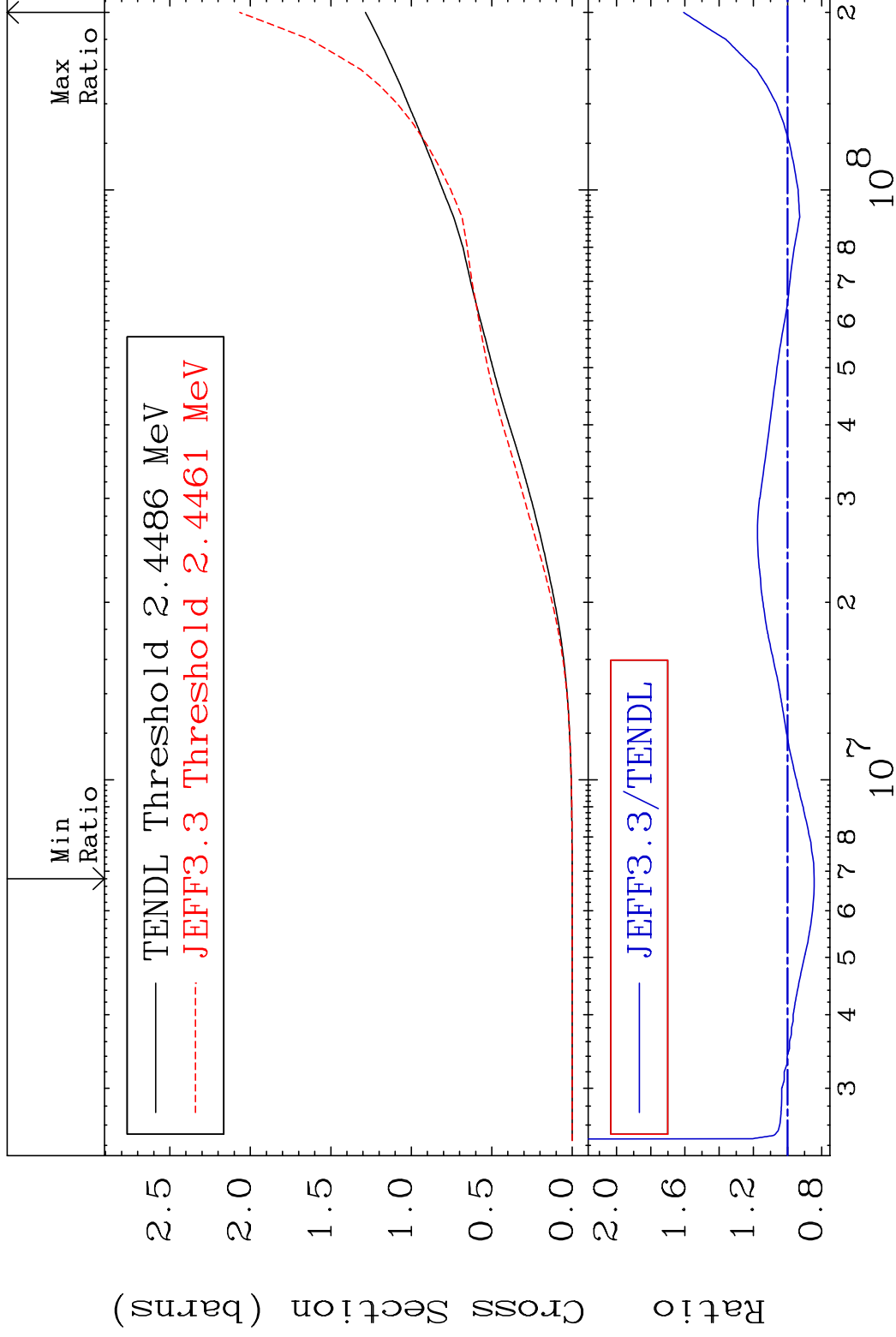
44-Ru-100

MAT 4437

Hydrogen Production

44-Ru-100

Cross Section -15.53 To 60.75 %



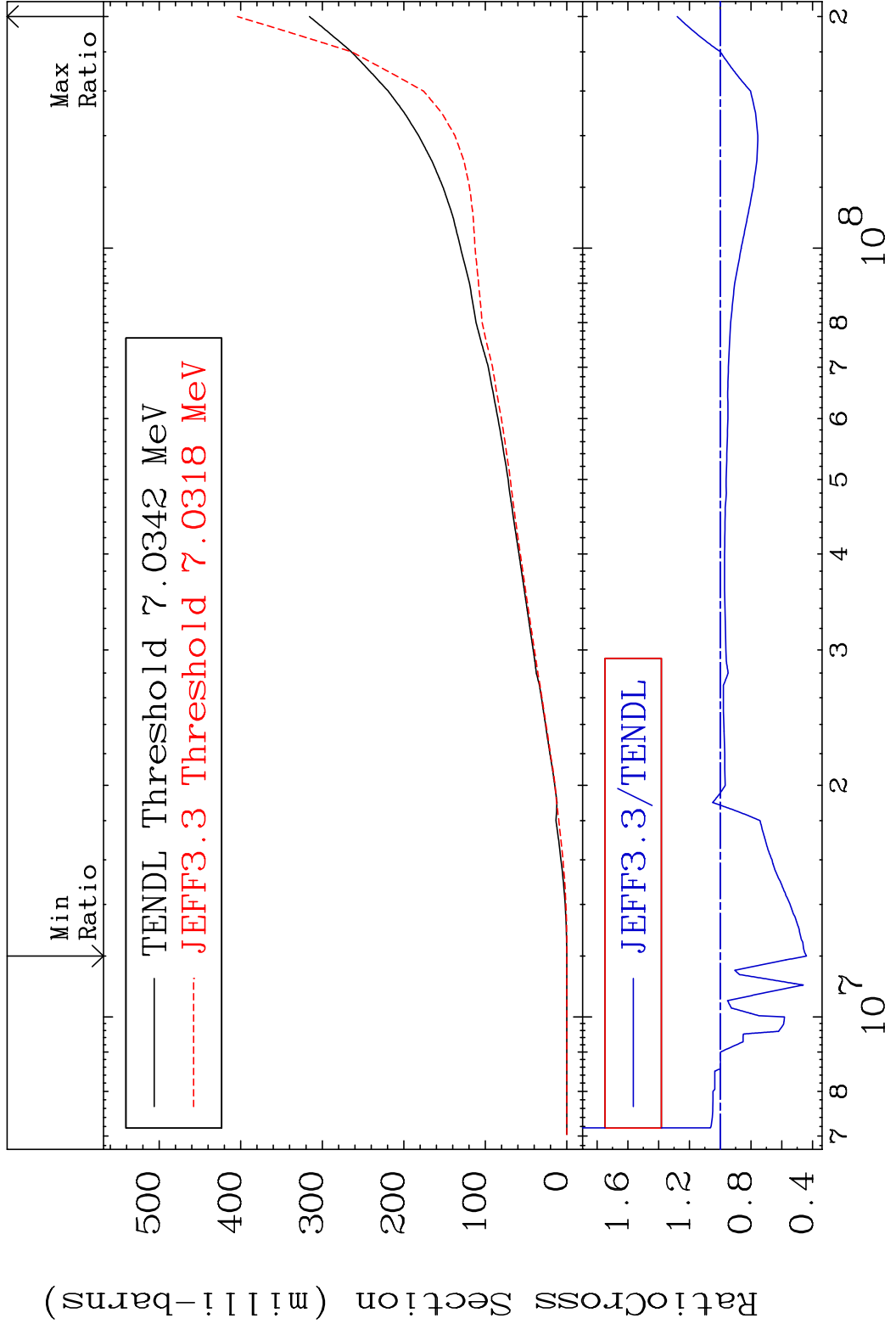
63

Incident Energy (eV)

44-Ru-100



MAT 4437 Deuterium Production 44-Ru-100  
 Cross Section -56.01 To 27.95 %

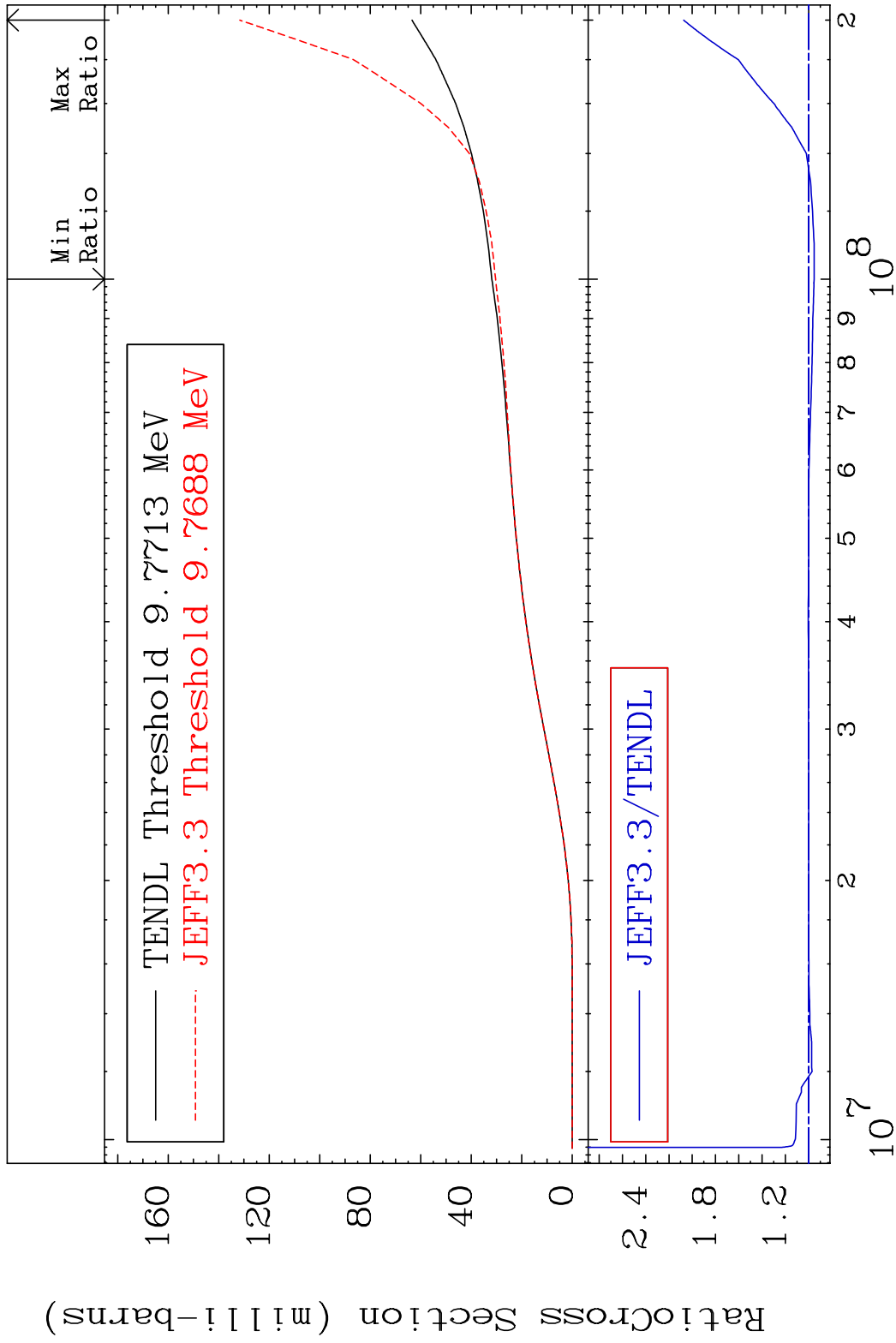


MAT 4437

Tritium Production

44-Ru-100

Cross Section -4.646 To 107.4 %

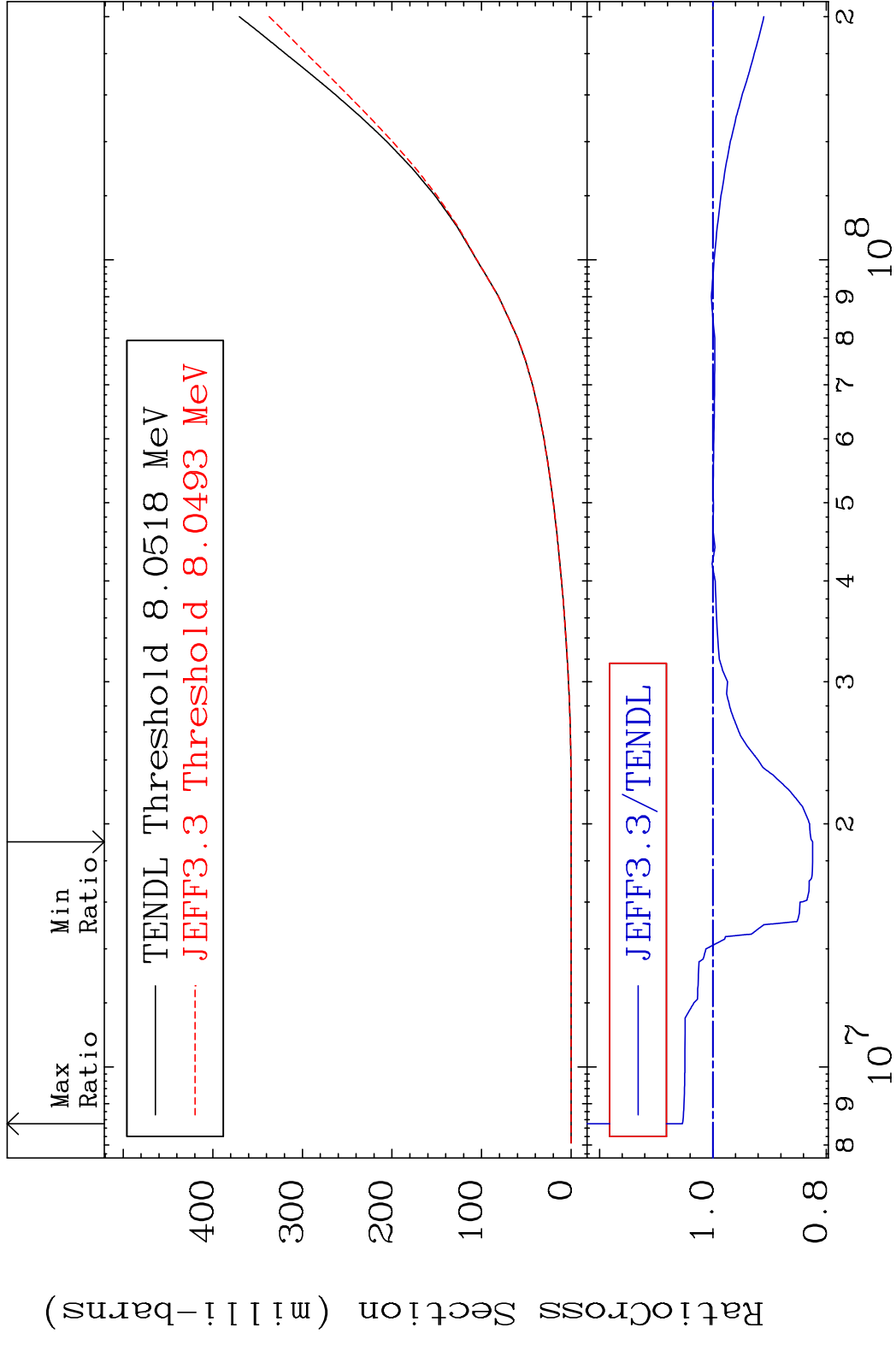


MAT 4437

He-3 Production

44-Ru-100

Cross Section -17.59 To 5.385 %

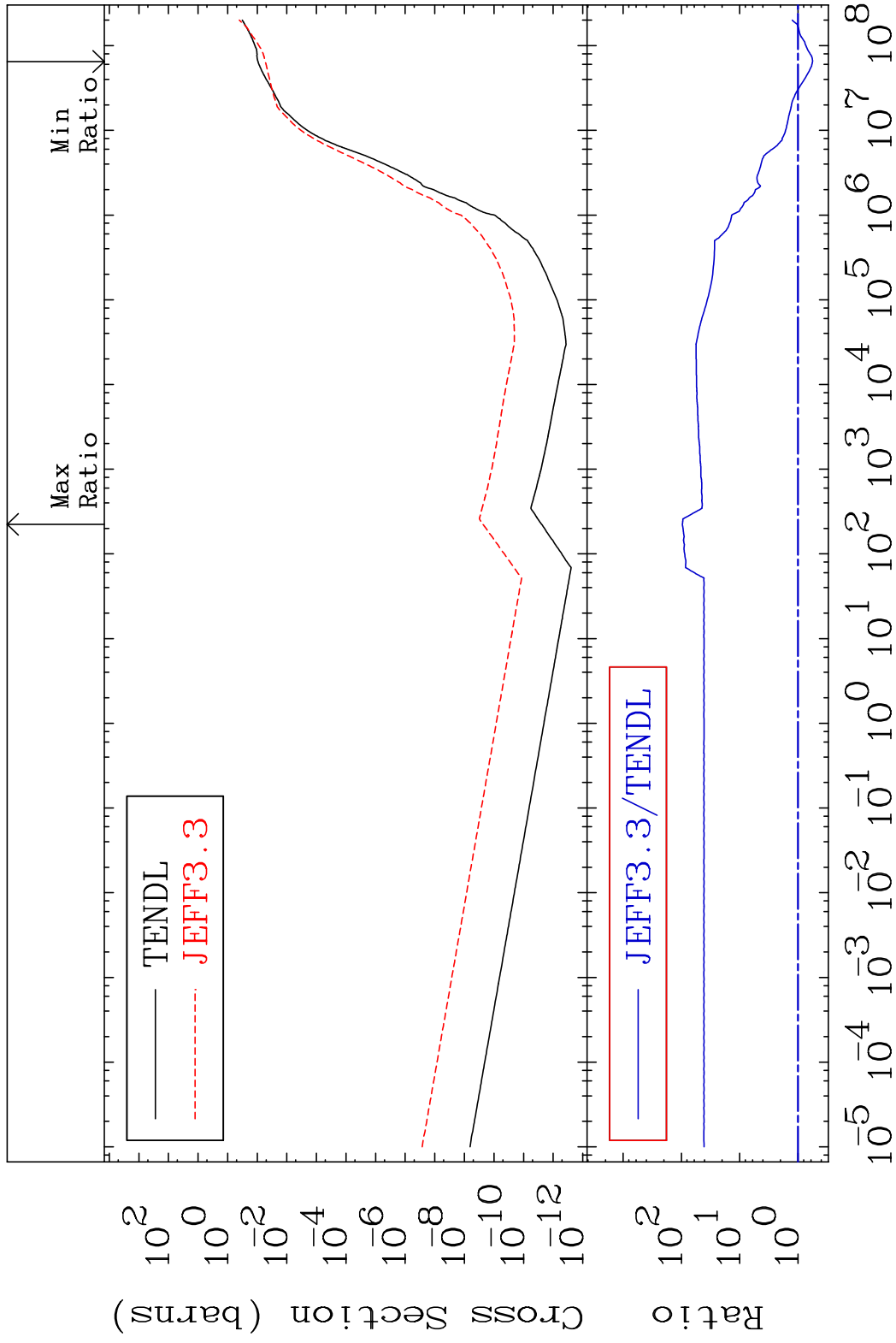


MAT 4437

He-4 Production

44-Ru-100

Cross Section -43.76 To 9534. %



67

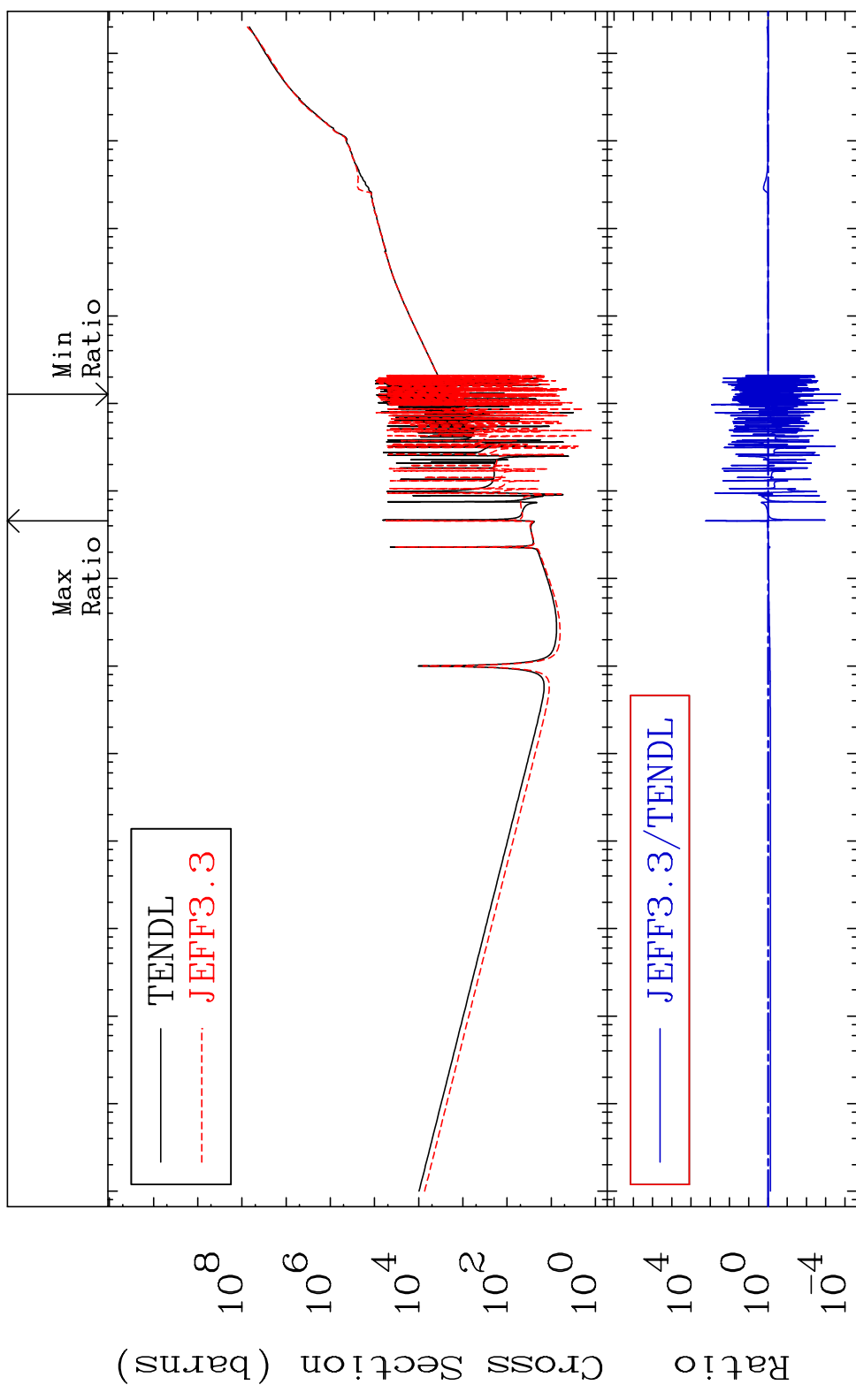
Incident Energy (eV)

44-Ru-100

MAT 4437

Kerma total (eV-barns) 44-Ru-100

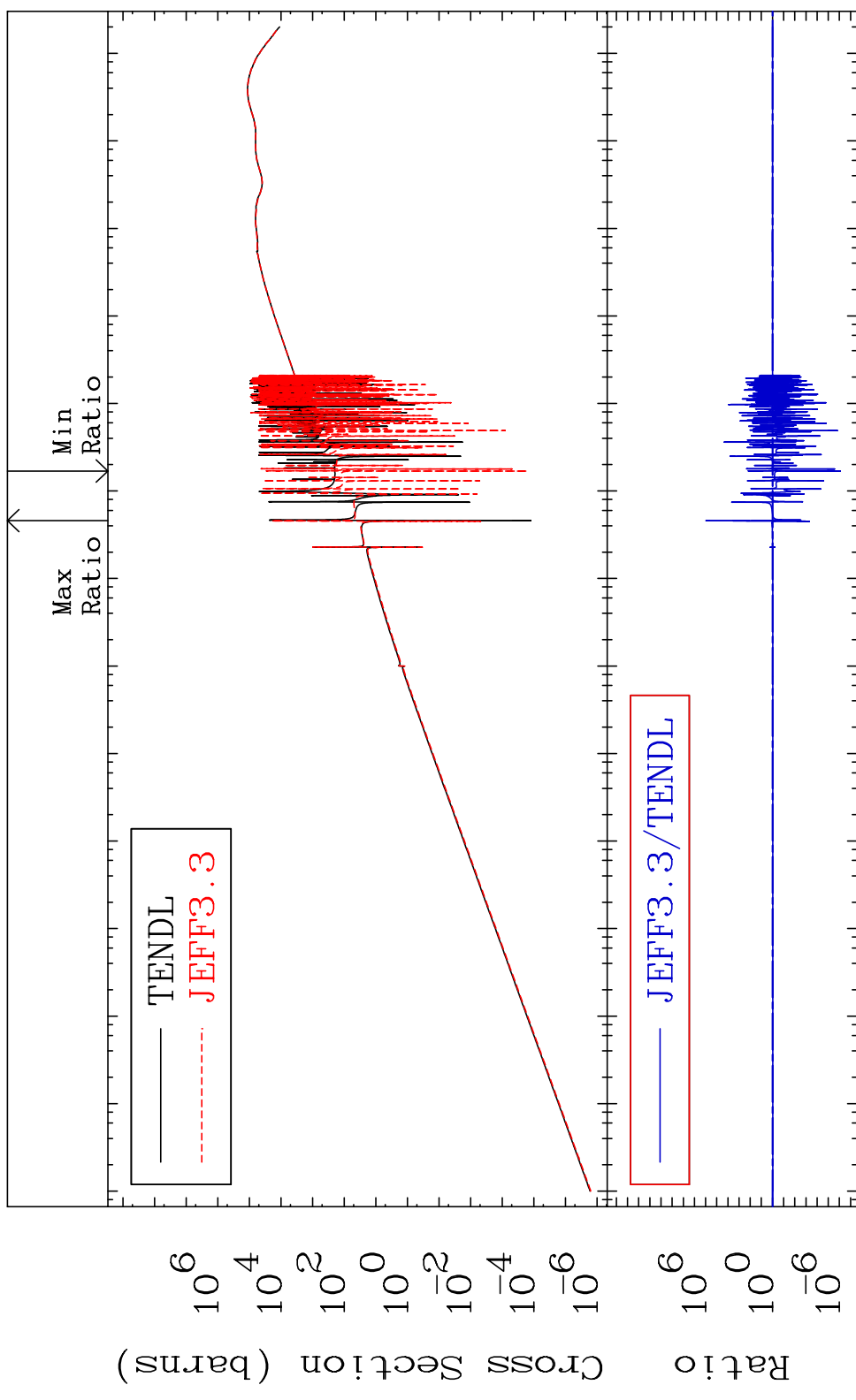
Cross Section -99.98 To 9999. %



Ratio  
10<sup>8</sup>  
10<sup>6</sup>  
10<sup>4</sup>  
10<sup>2</sup>  
10<sup>0</sup>  
10<sup>-4</sup>  
10<sup>-5</sup> 10<sup>-4</sup> 10<sup>-3</sup> 10<sup>-2</sup> 10<sup>-1</sup> 10<sup>0</sup> 10<sup>1</sup> 10<sup>2</sup> 10<sup>3</sup> 10<sup>4</sup> 10<sup>5</sup> 10<sup>6</sup> 10<sup>7</sup> 10<sup>8</sup>

MAT 4437

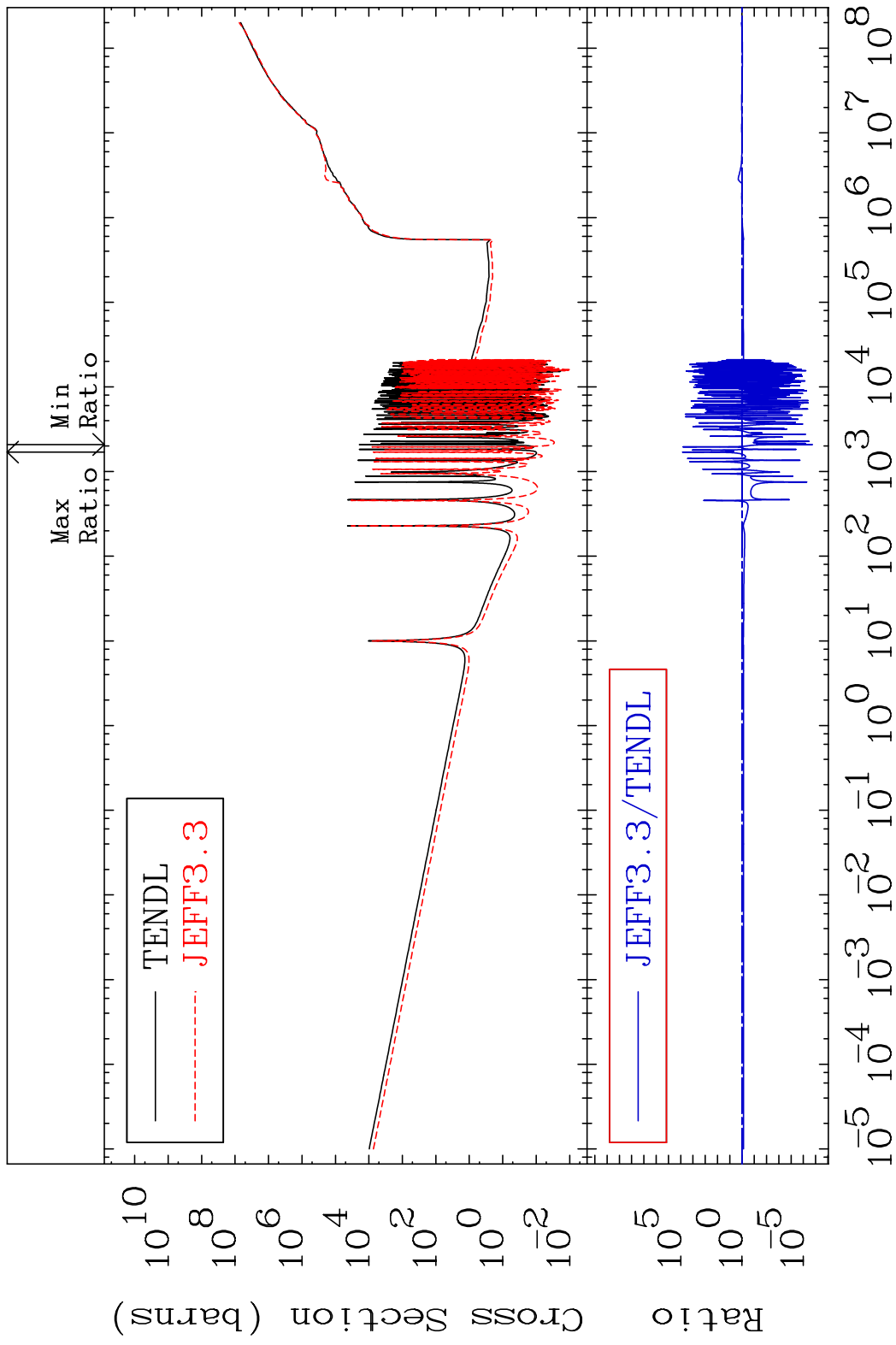
Kerma elastic Cross Section -100.0 To 9999. %  
44-Ru-100



69

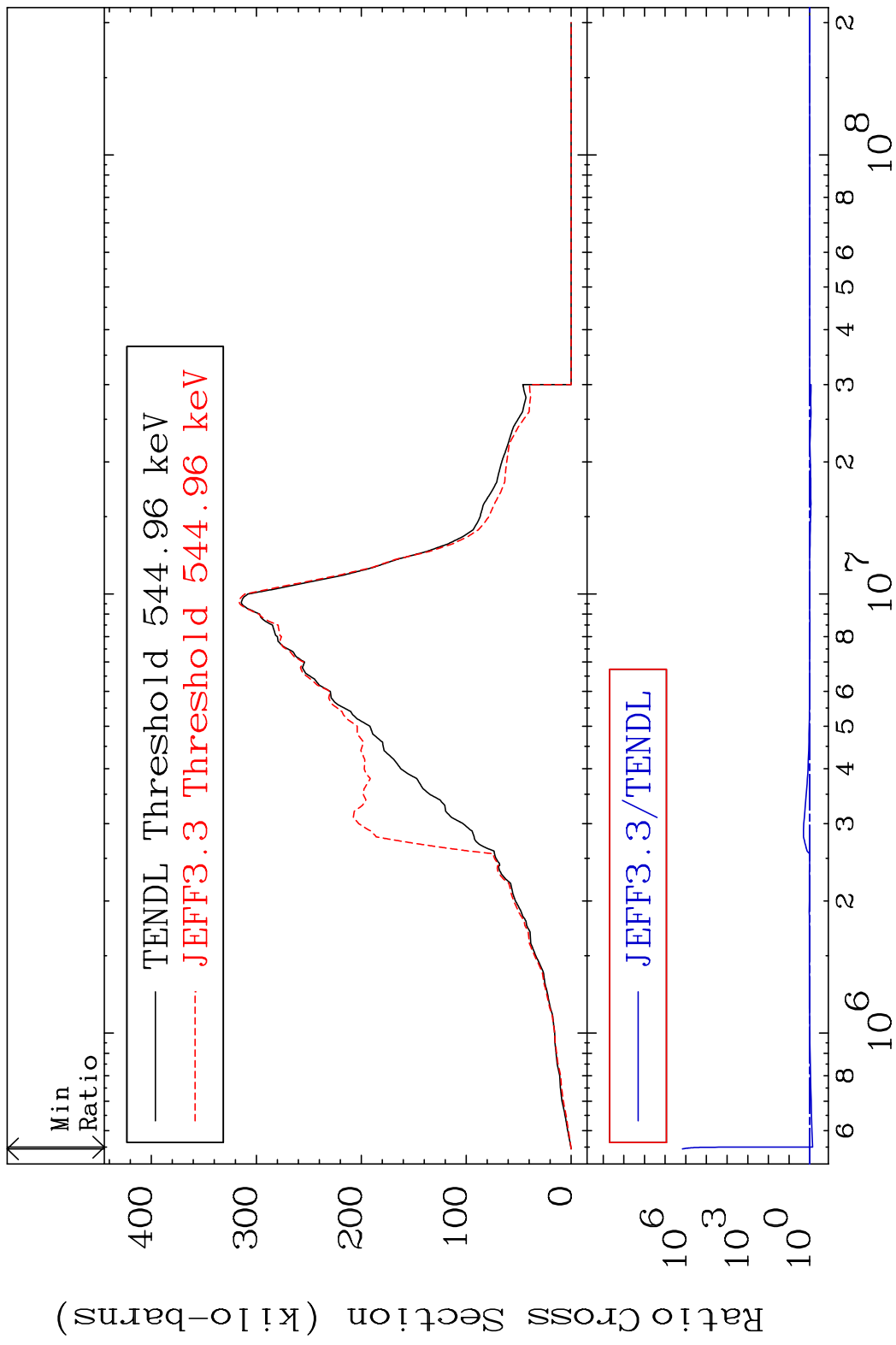
Incident Energy (eV) 44-Ru-100

MAT 4437 Kerma non-elastic (all but mt2) 44-Ru-100  
 Cross Section -100.0 To 9999. %



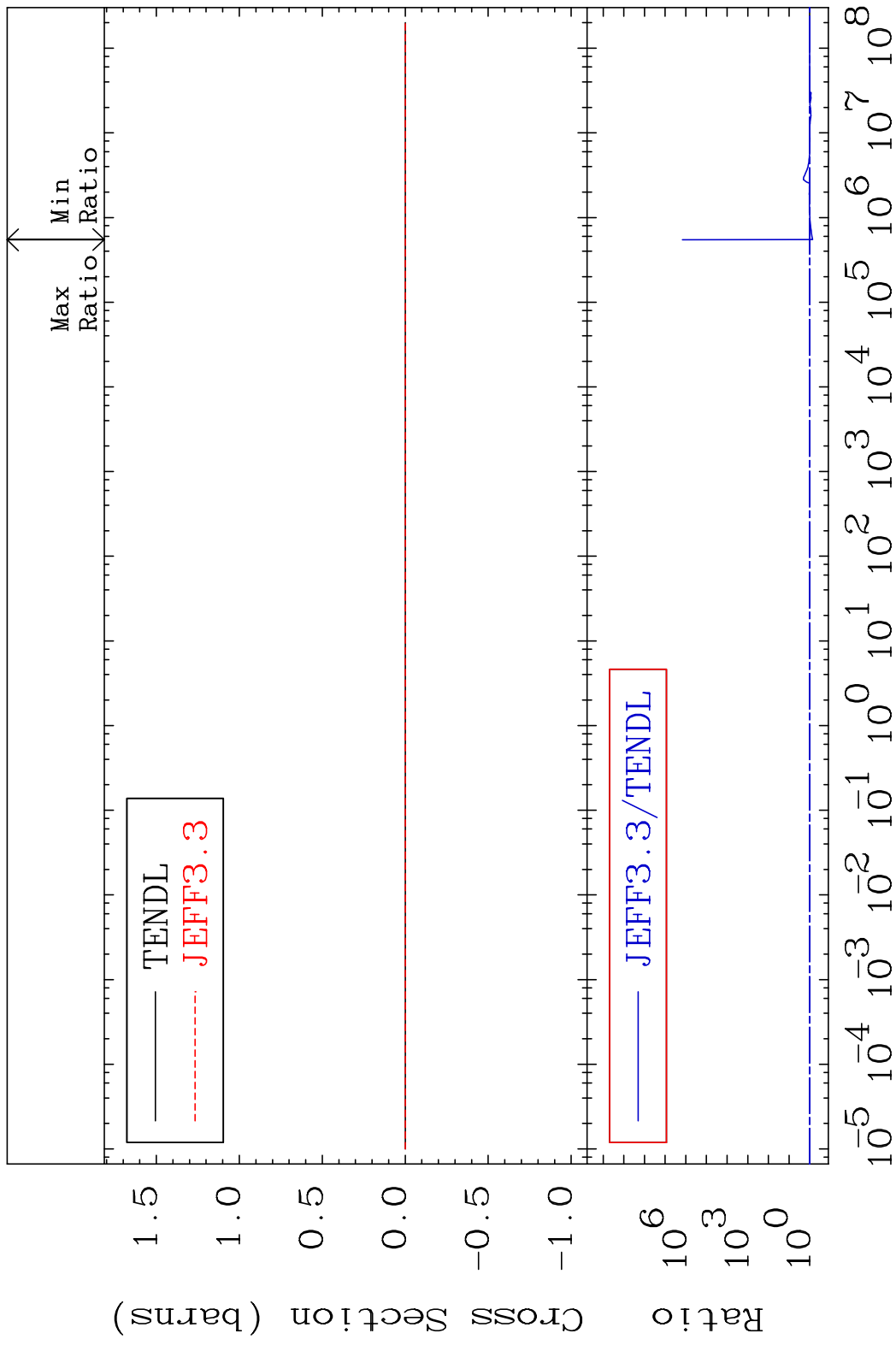
70 44-Ru-100

MAT 4437 Kerma inelastic (mt51-91) 44-Ru-100  
 Cross Section -26.96 To 9999. %



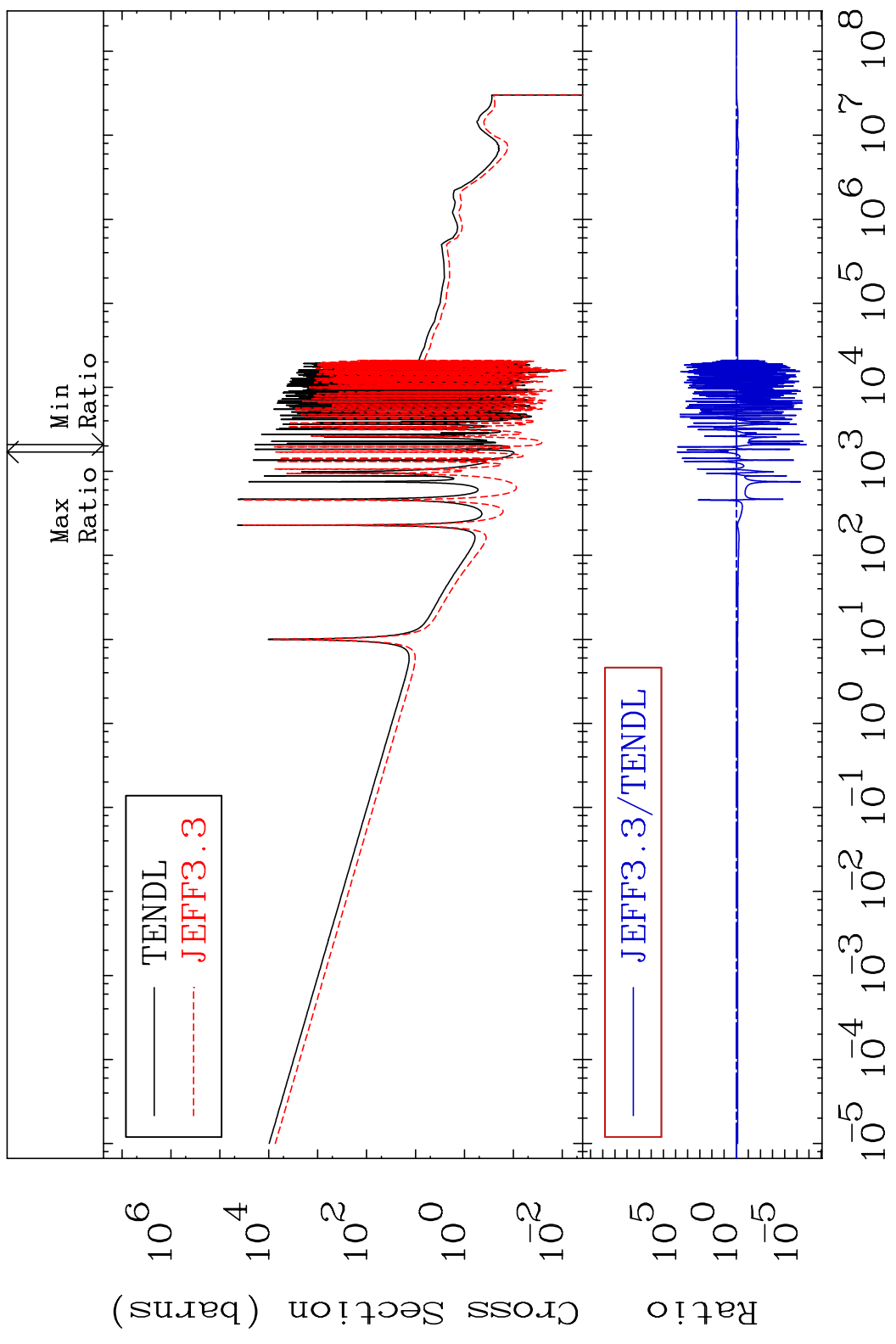


MAT 4437 Kerma fission (mt18 or mt19-20-21-38) 44-Ru-100  
 Cross Section -26.96 To 9999. %



MAT 4437

Kerma capture (mt102) 44-Ru-100  
Cross Section -100.0 To 9999. %

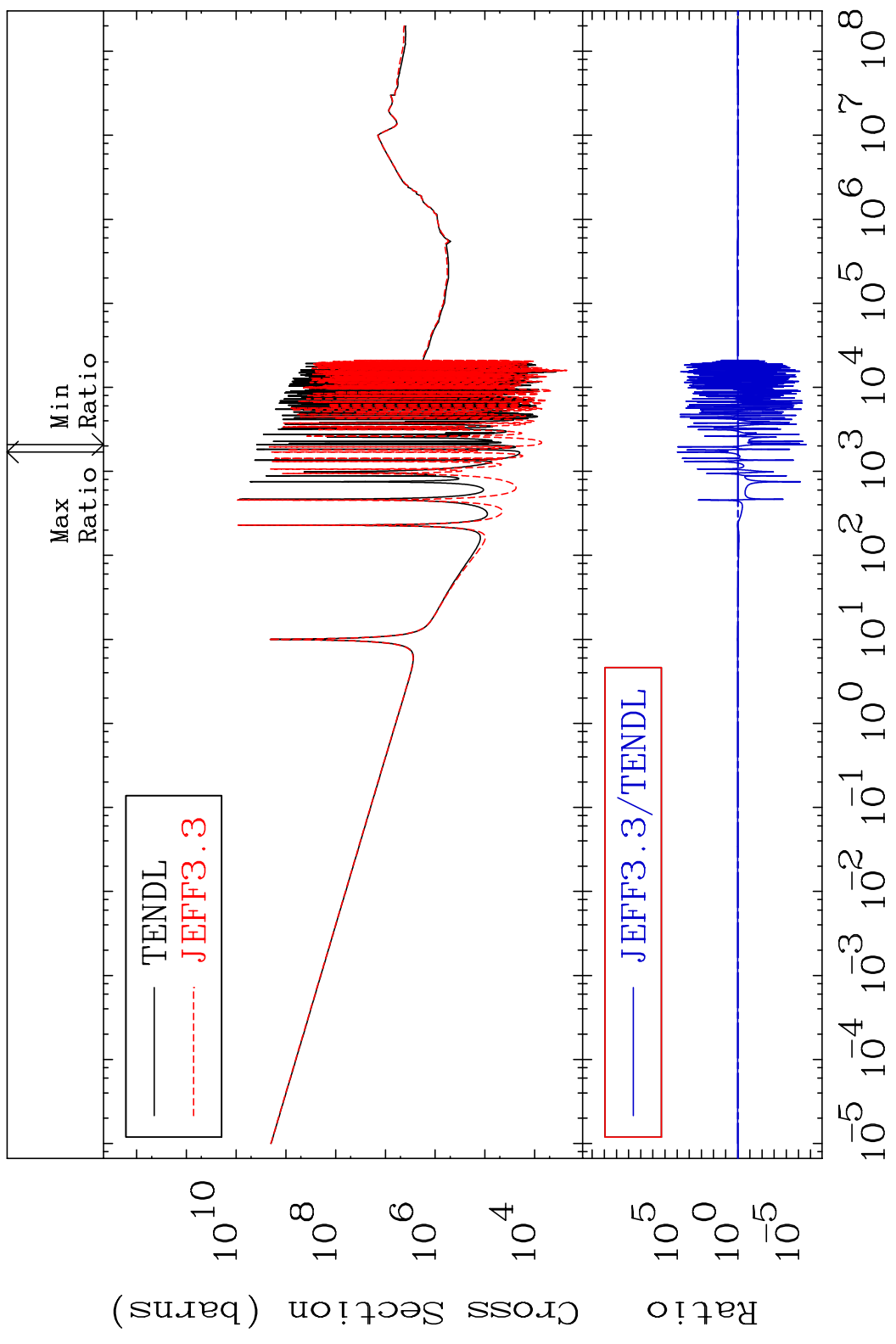


73

Incident Energy (eV) 44-Ru-100

MAT 4437

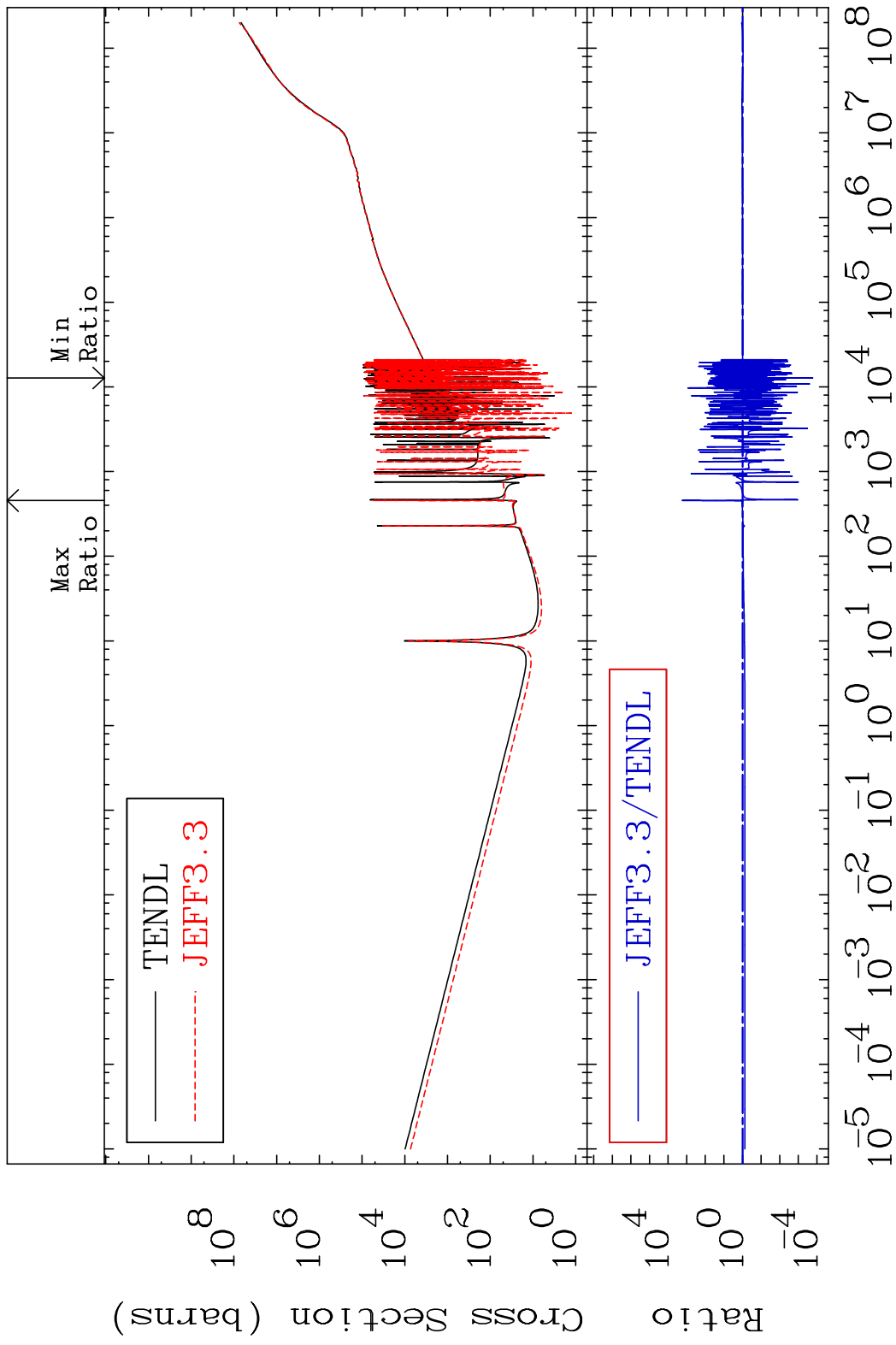
Total photon (eV-barns) 44-Ru-100  
Cross Section -100.0 To 9999. %



74

Incident Energy (eV) 44-Ru-100

MAT 4437 Total kinematic kerma (high limit) 44-Ru-100  
 Cross Section -99.98 To 9999. %



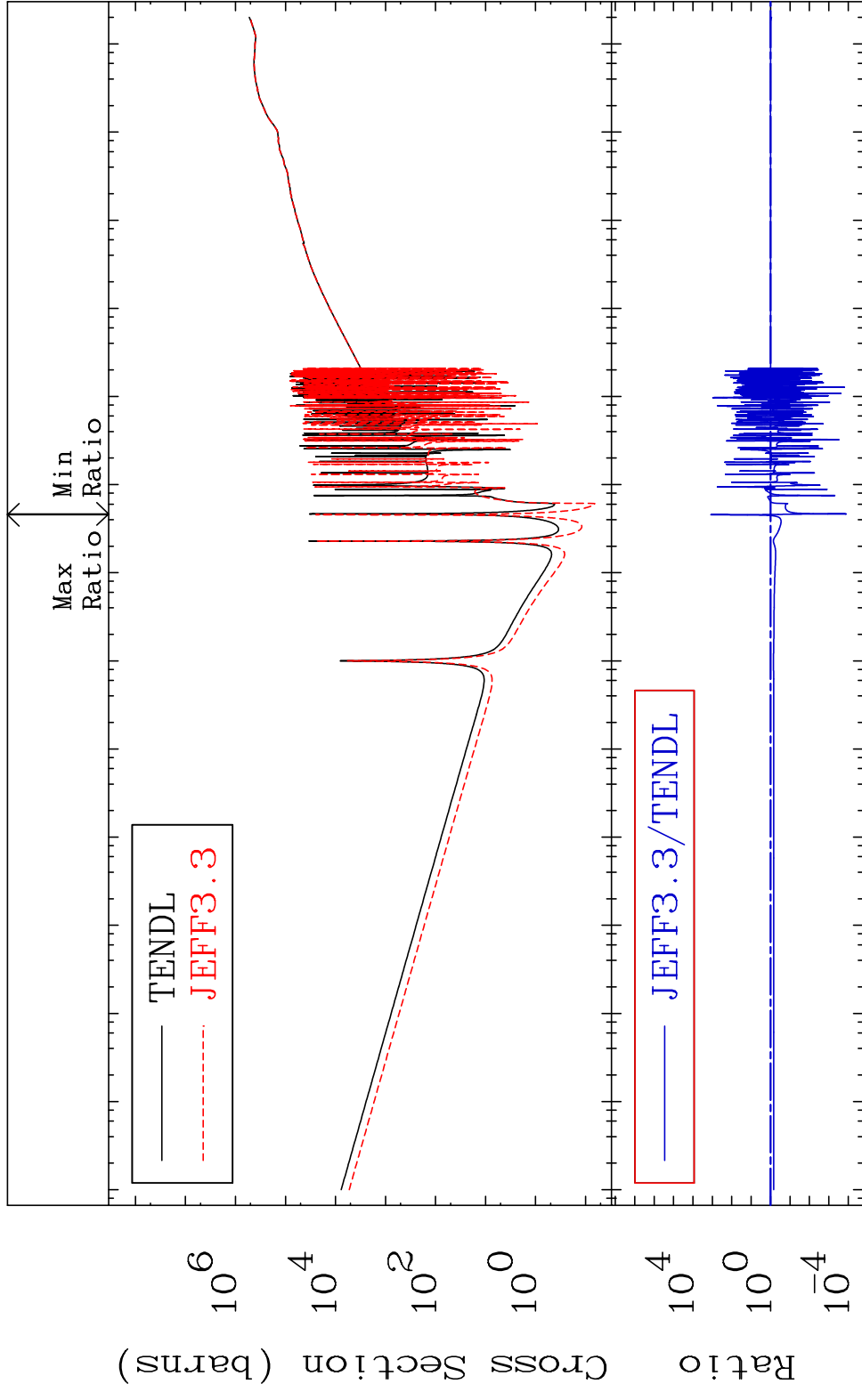
MAT 4437

Dpa total (eV-barns)

44-Ru-100

Cross Section

-99.99 To 9999. %



76

Incident Energy (eV)

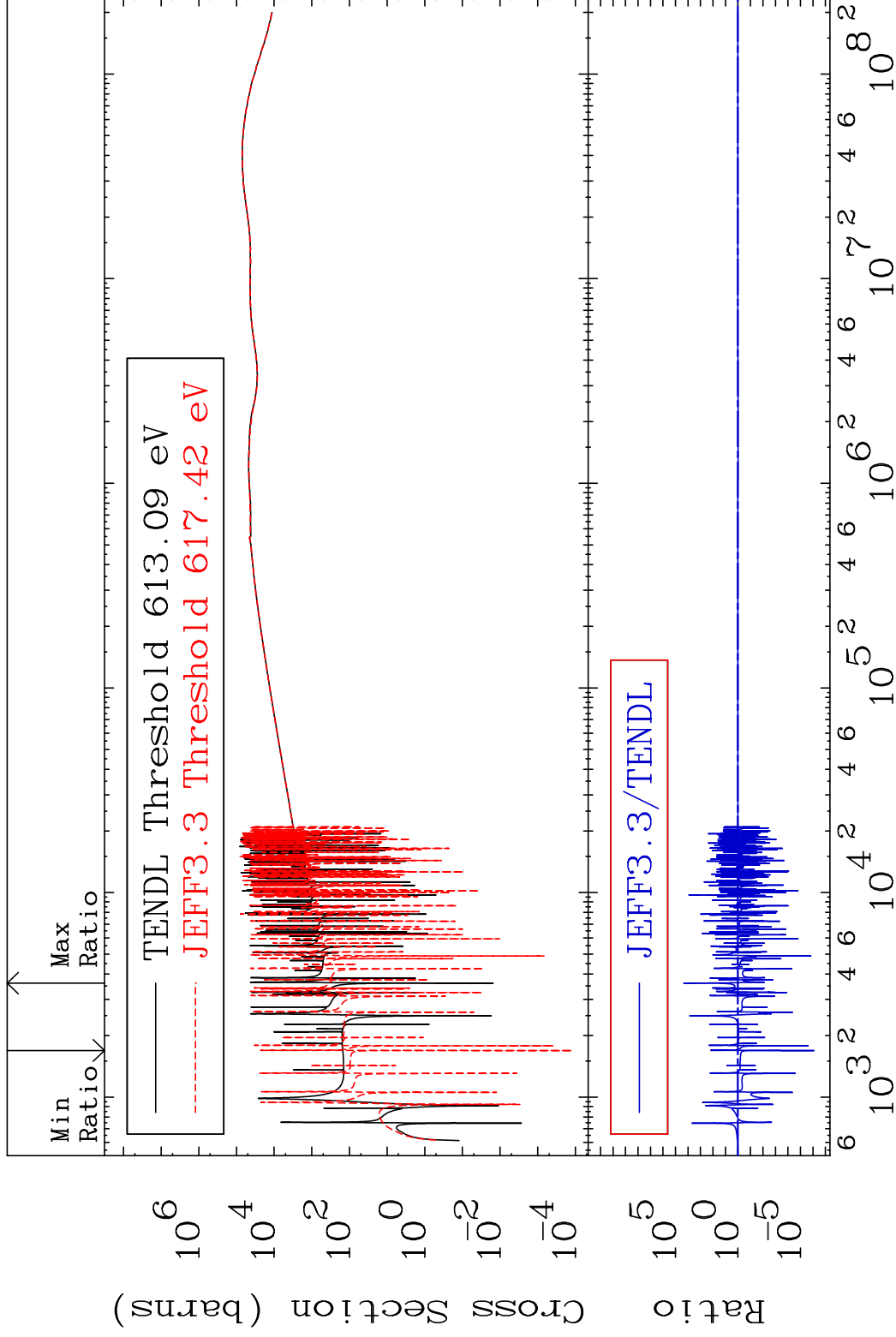
44-Ru-100

MAT 4437

Dpa elastic (mt2)

44-Ru-100

Cross Section -100.0 To 9999. %

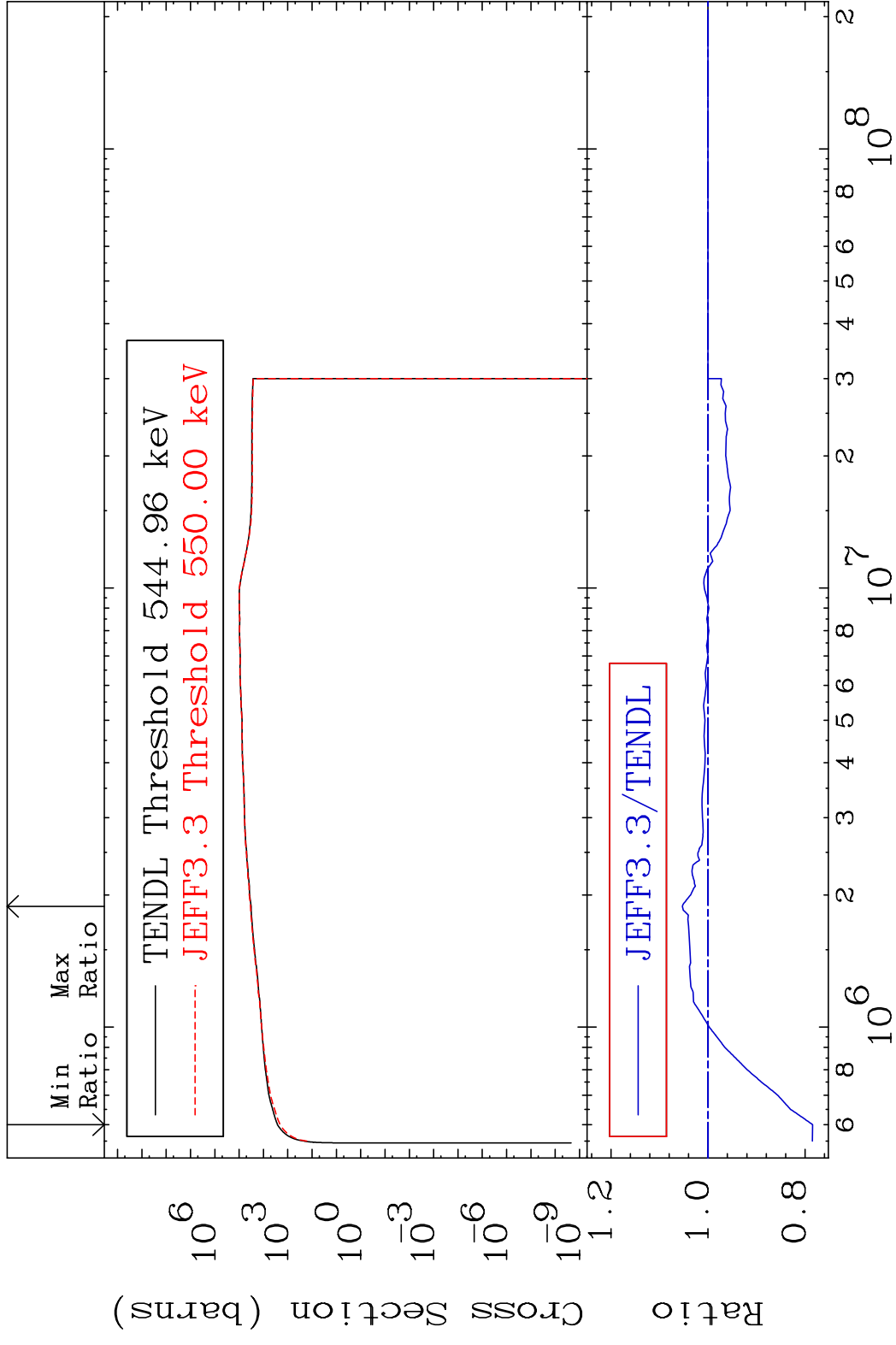


77

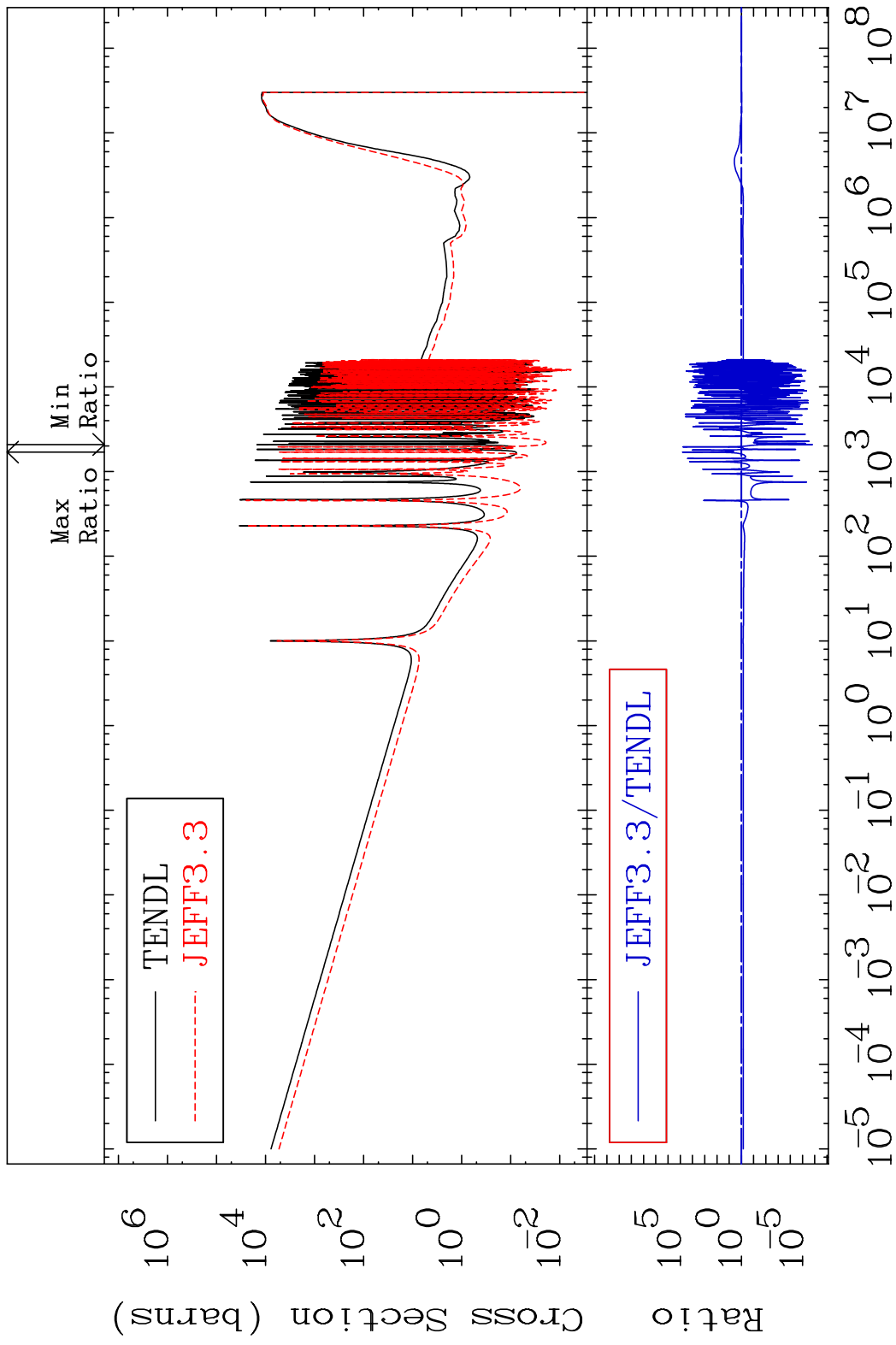
Incident Energy (eV)

44-Ru-100

MAT 4437 Dpa inelastic (mt51-91) 44-Ru-100  
 Cross Section -21.56 To 5.295 %



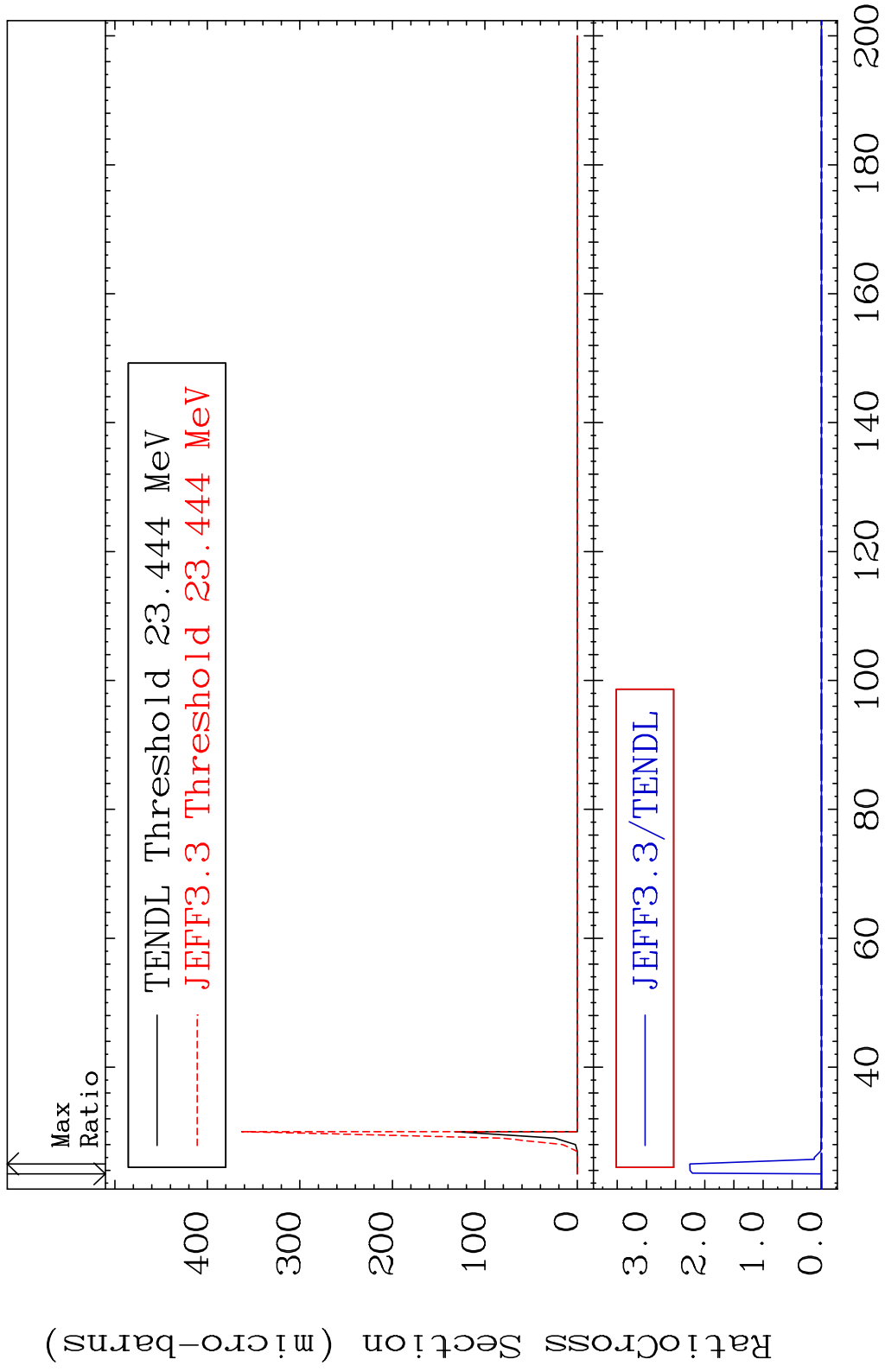
MAT 4437 Dpa disappearance (mt102 -120) 44-Ru-100  
 Cross Section -100.0 To 9999. %



79 Incident Energy (eV) 44-Ru-100

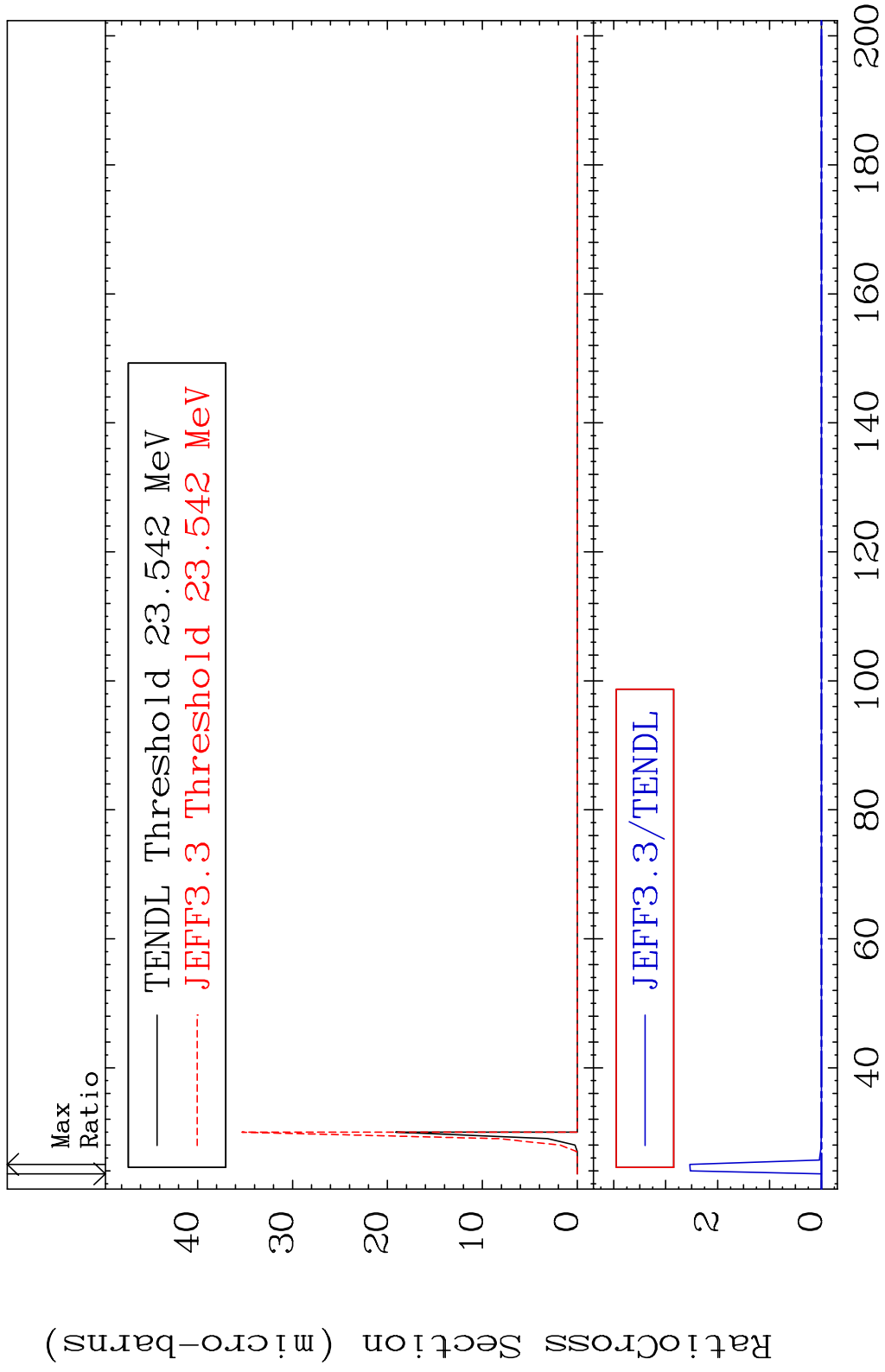


MAT 4437 (n,2n) d:43-Tc-97g 44-Ru-100  
 Radionuclide Production Cross Section Ratio 9999. %

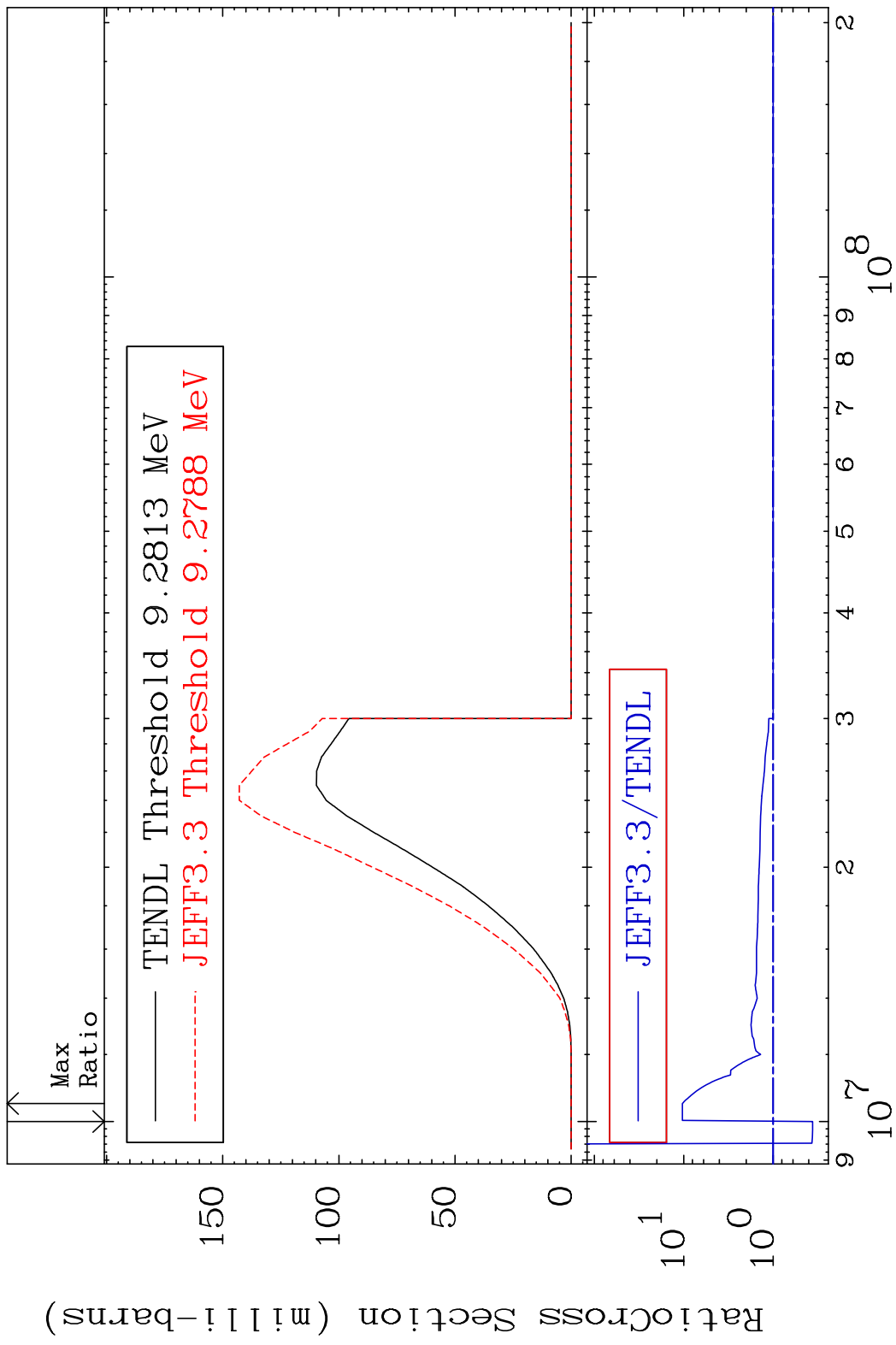


80 Incident Energy (MeV) 44-Ru-100

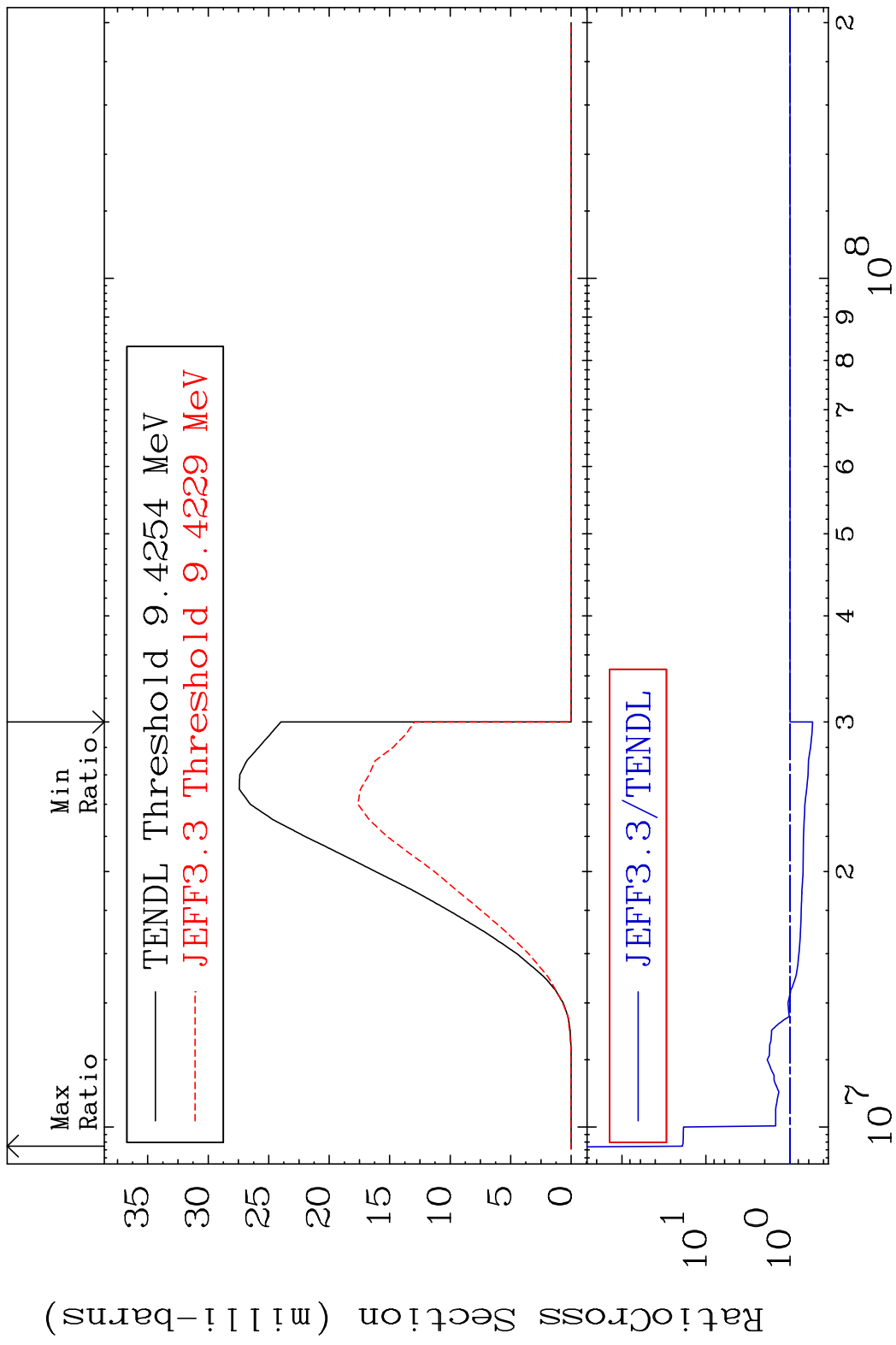
MAT 4437 (n,2n) d:43-Tc-97m1 44-Ru-100  
 Radionuclide Production Cross Section Ratio 9999. %



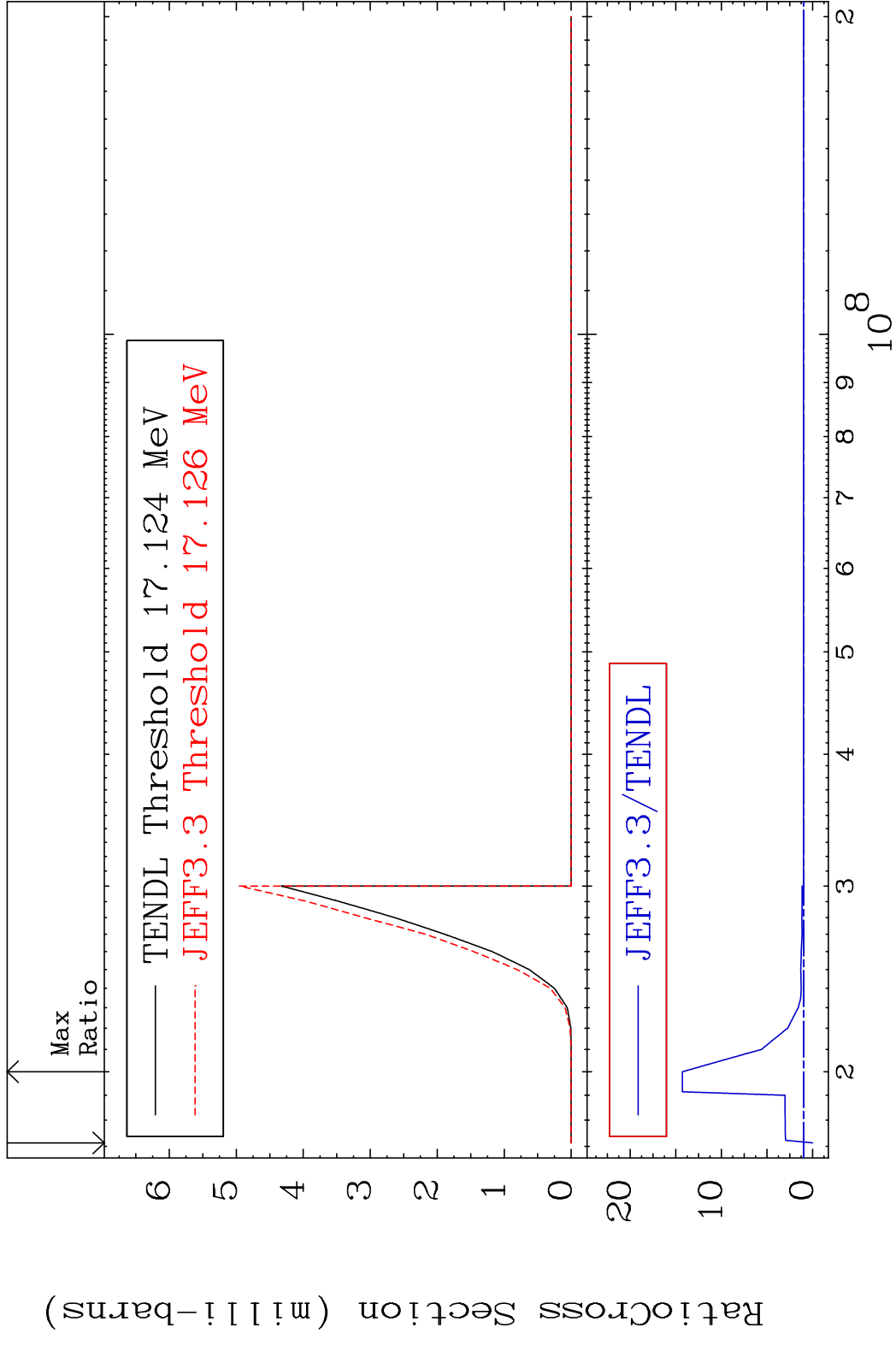
MAT 4437 (n, n') p:43-Tc-99g 44-Ru-100  
 Radionuclide Production Cross Section 937.5 %



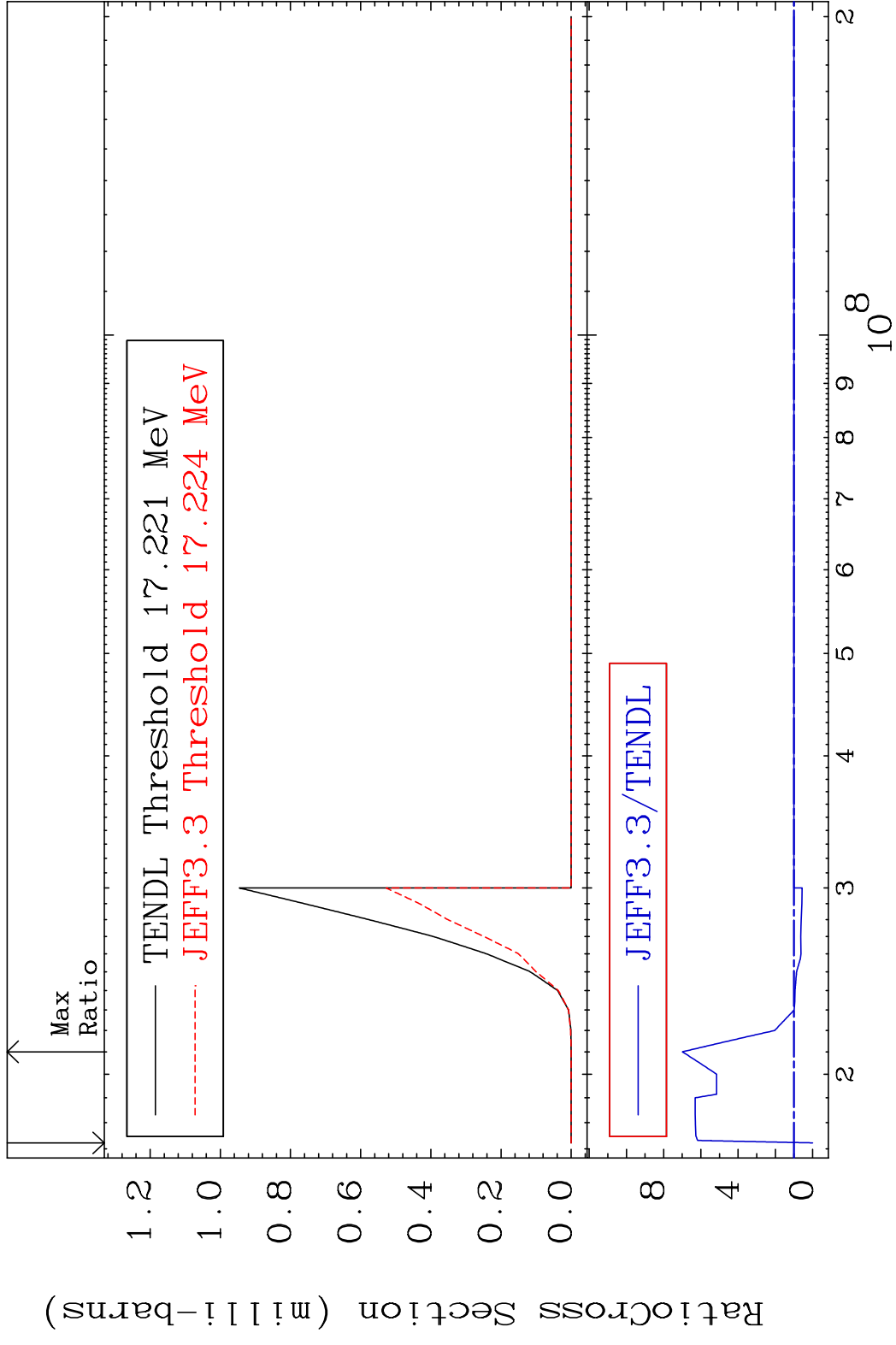
MAT 4437 (n, n') p:43-Tc-99m2 44-Ru-100  
 Radionuclide Production Cross Section 1808. %



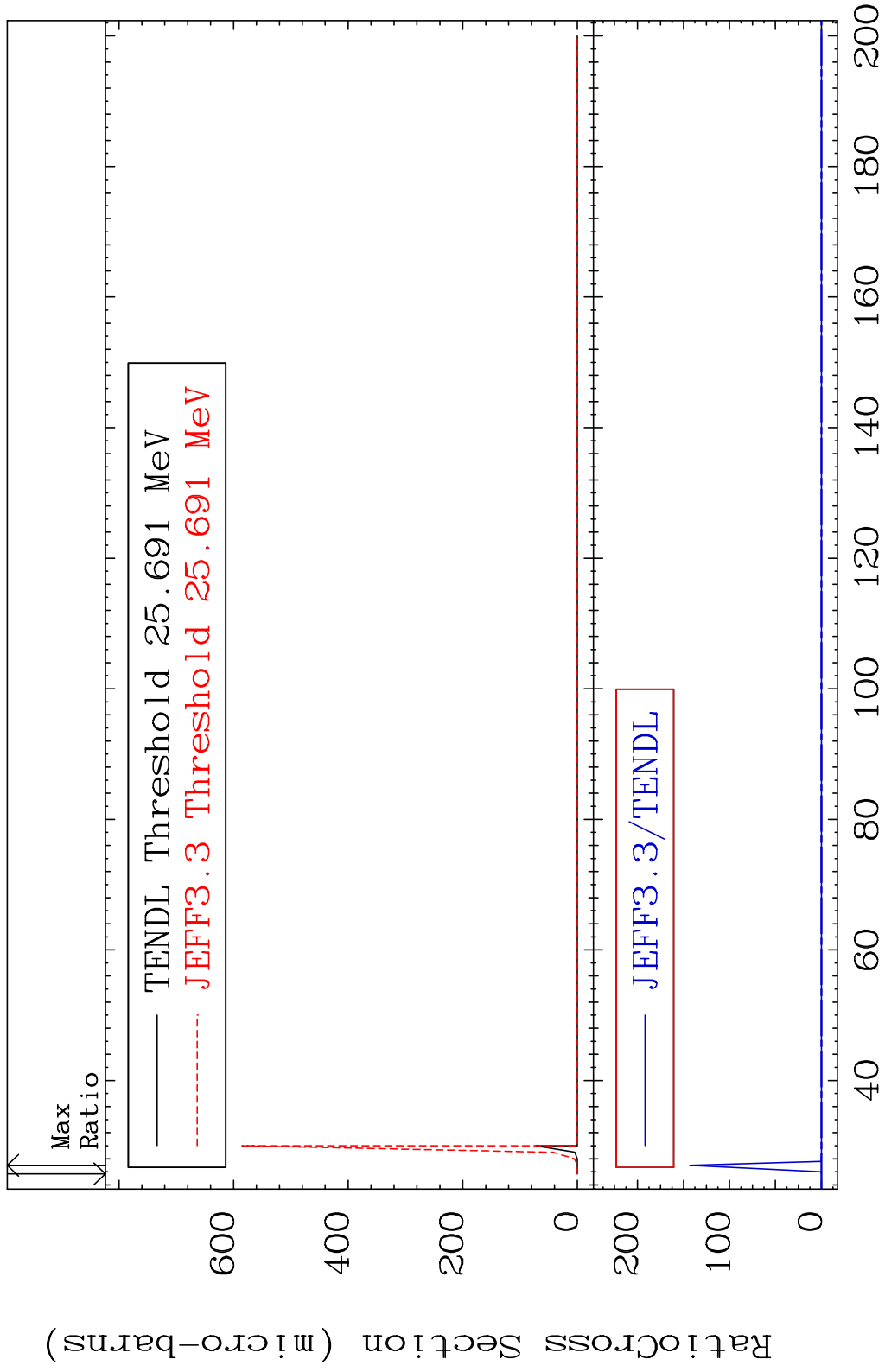
MAT 4437 (n, n') t:43-Tc-97g 44-Ru-100  
 Radionuclide Production Cross Section 1327. %



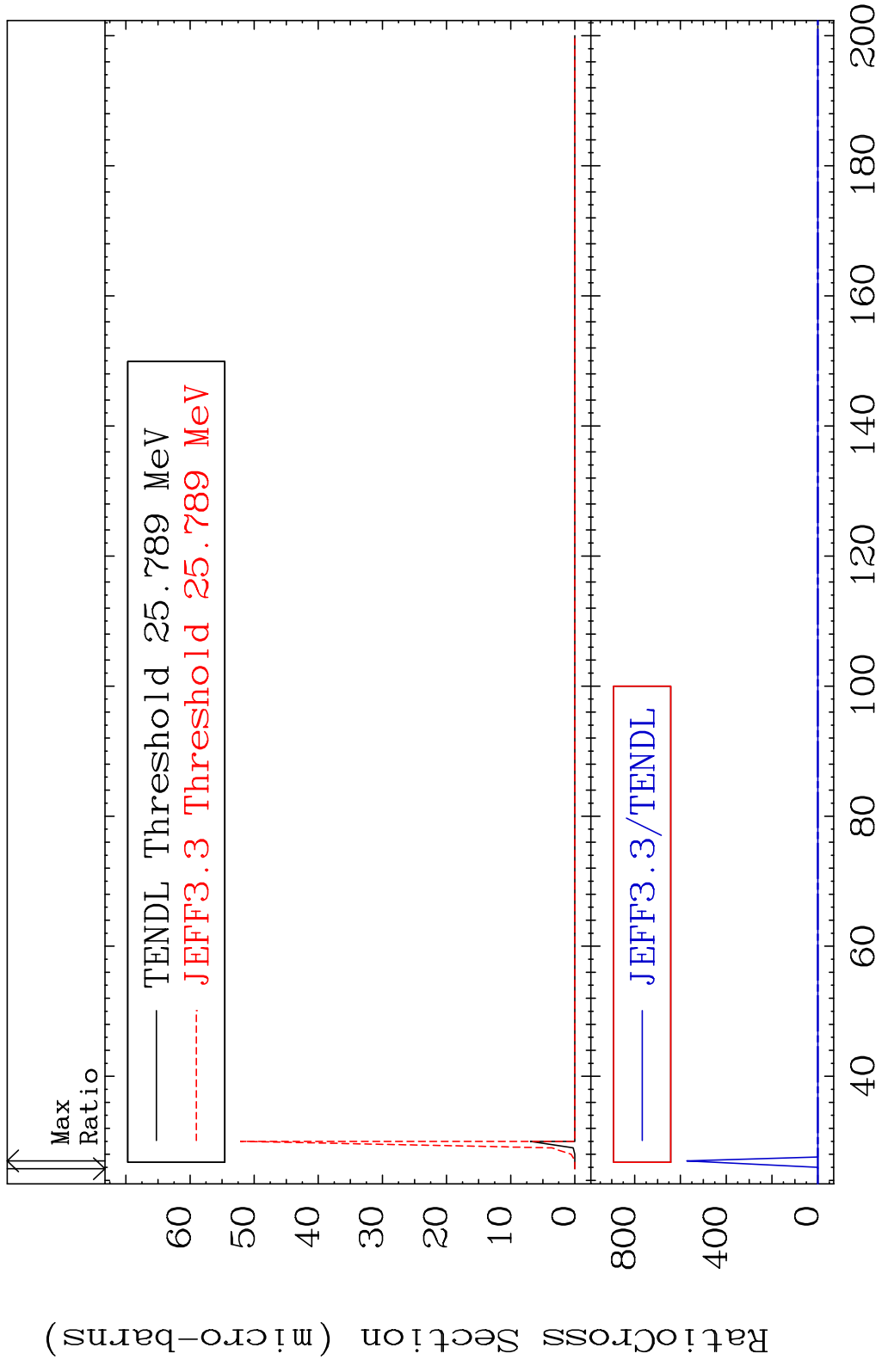
MAT 4437 (n, n') t:43-Tc-97m1 44-Ru-100  
 Radionuclide Production Cross Section 180.01 dth 599.5 %



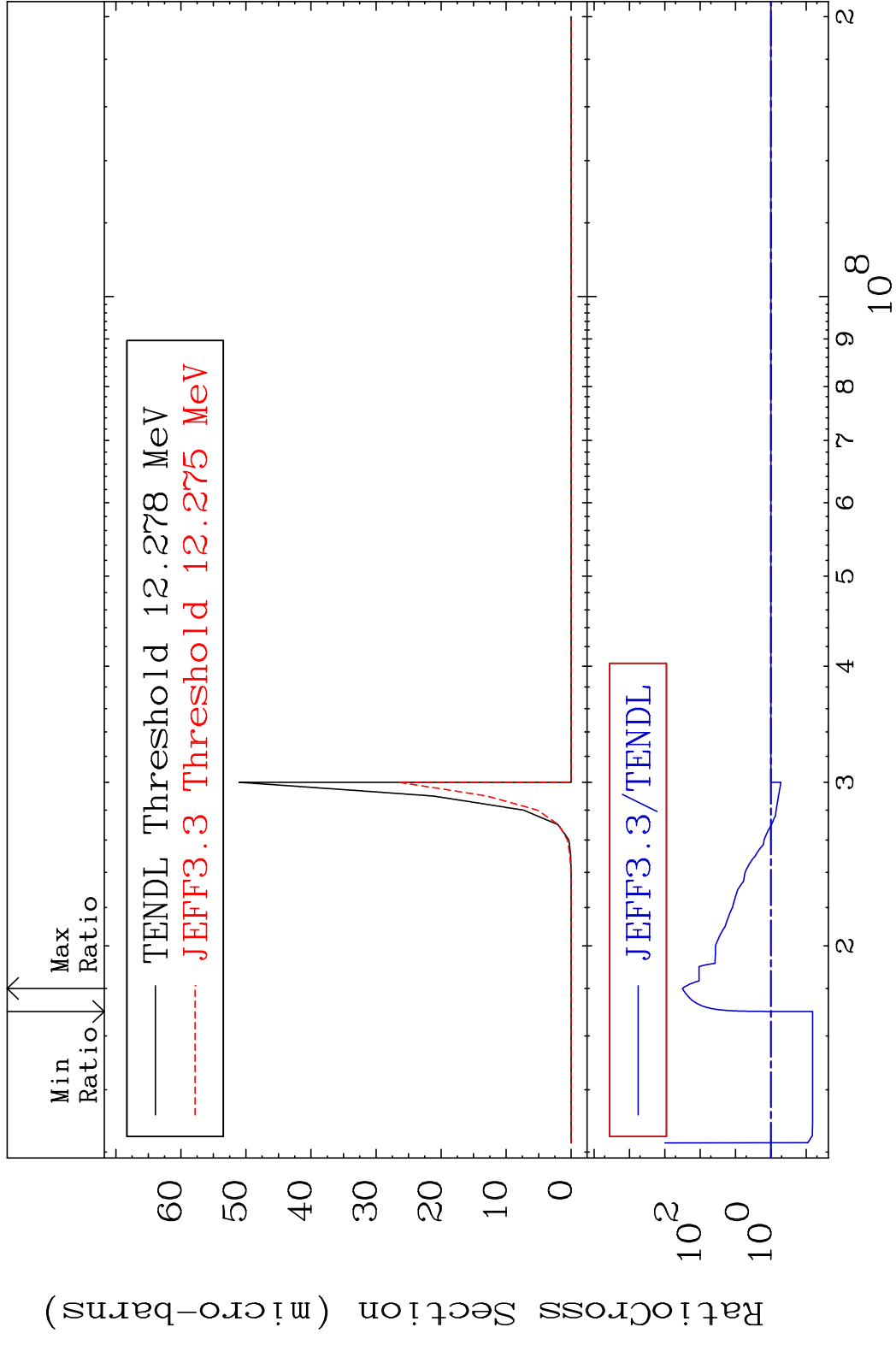
MAT 4437 (n, 3n) p:43-Tc-97g 44-Ru-100  
 Radionuclide Production Cross Section 100.00 %



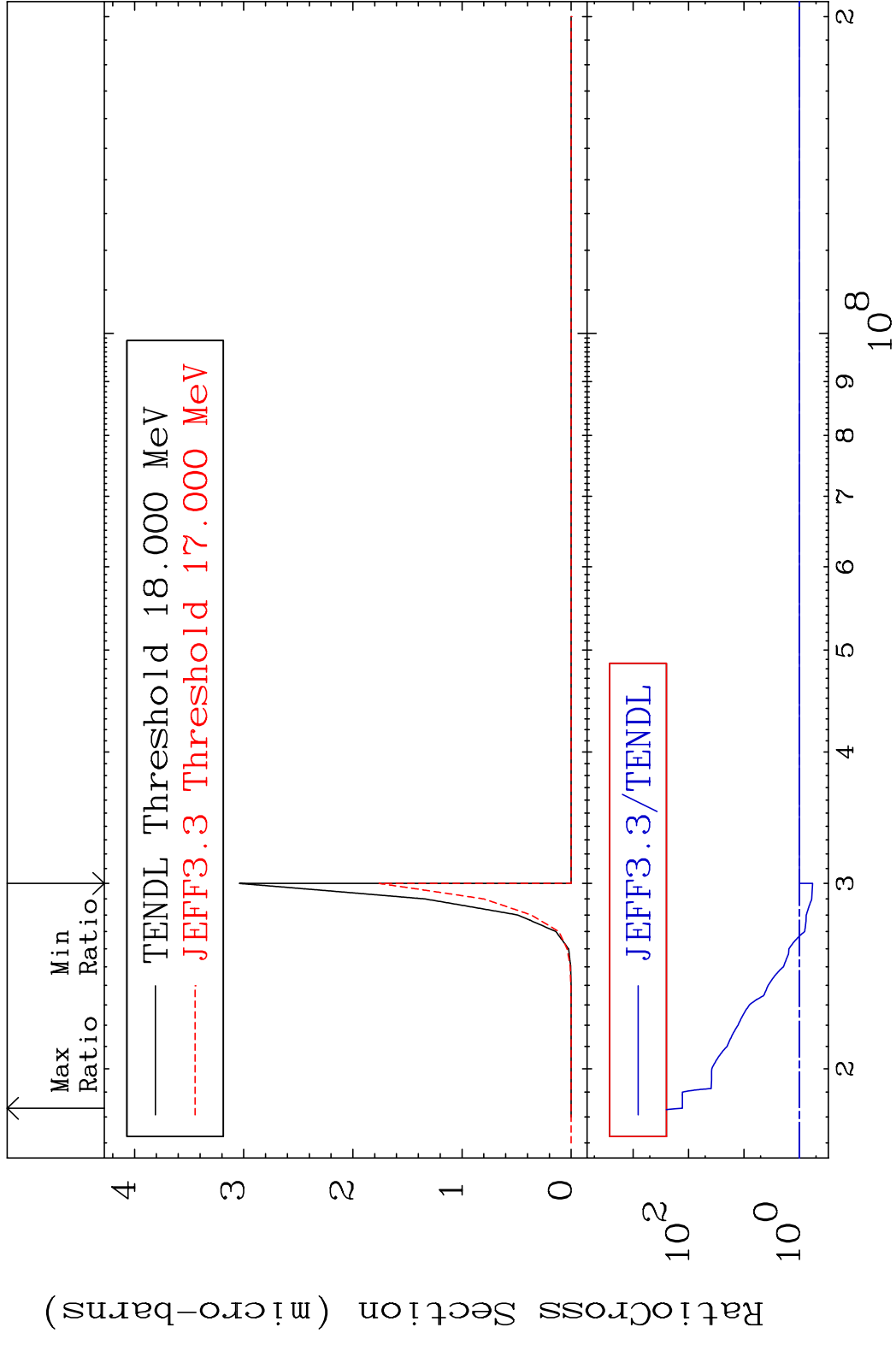
MAT 4437 (n,3n) p:43-Tc-97m1 44-Ru-100  
 Radionuclide Production Cross Section 100.00 %



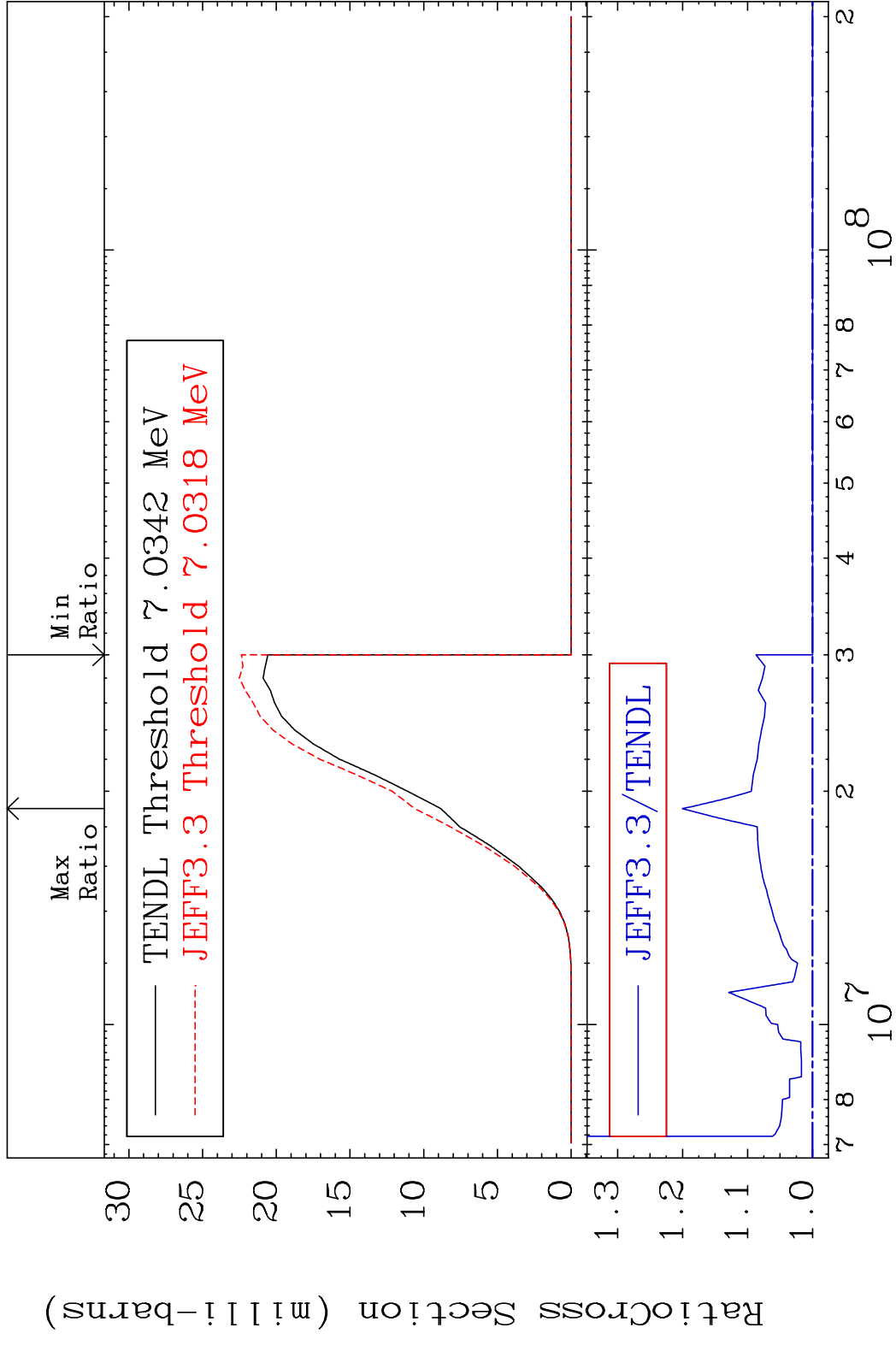


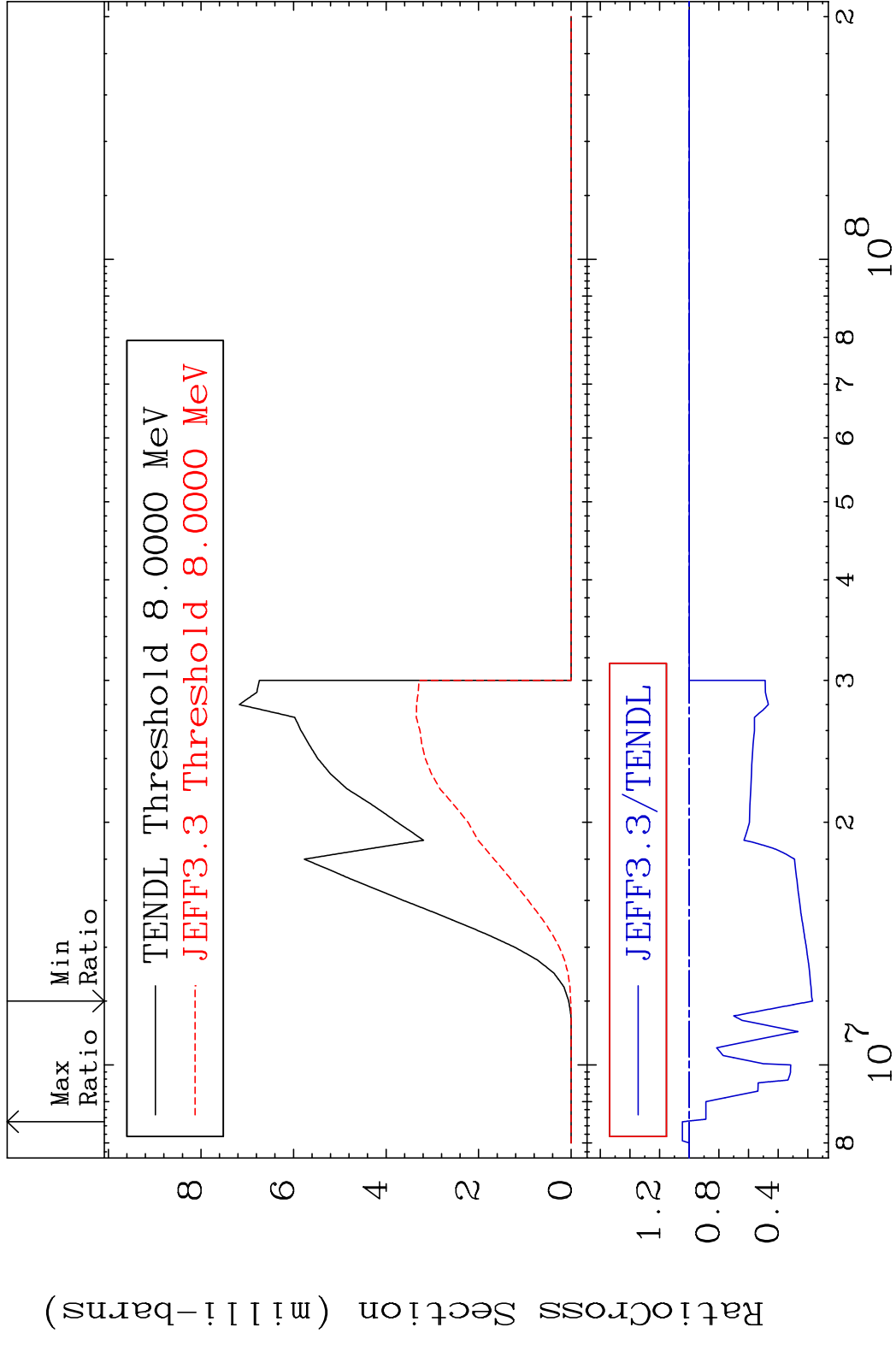


MAT 4437 (n, n') p  $\alpha$ : 41-Nb-95m1 44-Ru-100  
 Radionuclide Production Cross Section to 9999. %

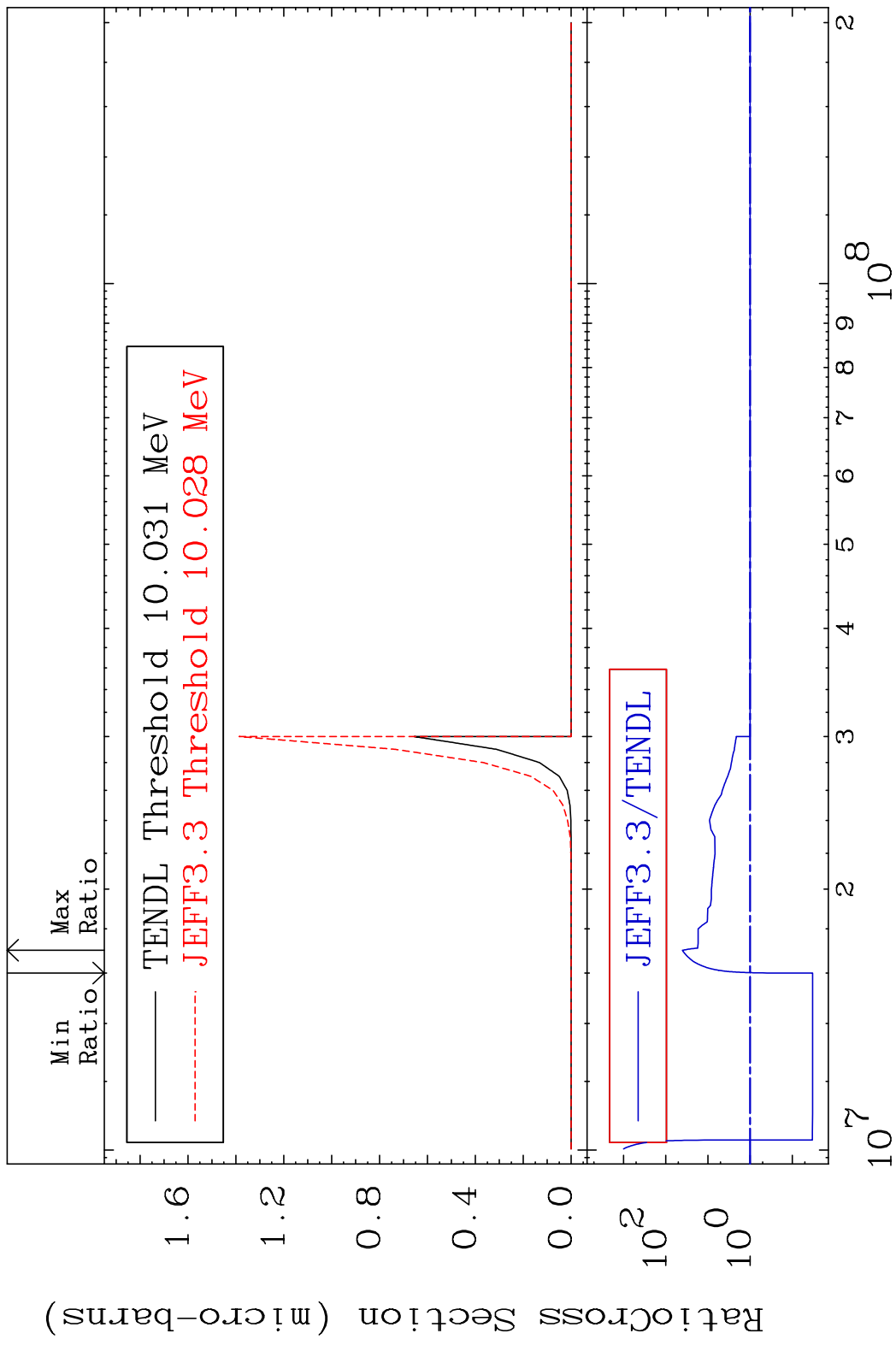


MAT 4437 (n,d):43-Tc-99g 44-Ru-100  
 Radionuclide Production Cross Section 20.03 %





MAT 4437 (n, d)  $\alpha$ :41-Nb-95g 44-Ru-100  
 Radionuclide Production Cross Section 3922. %



MAT 4437 (n, d)  $\alpha$ :41-Nb-95m1 44-Ru-100  
 Radionuclide Production Cross Section 100% 4150. %

