

Program Complot
(Version 2018-1)

by

Dermott E. Cullen
(Present Contact Information)

Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550

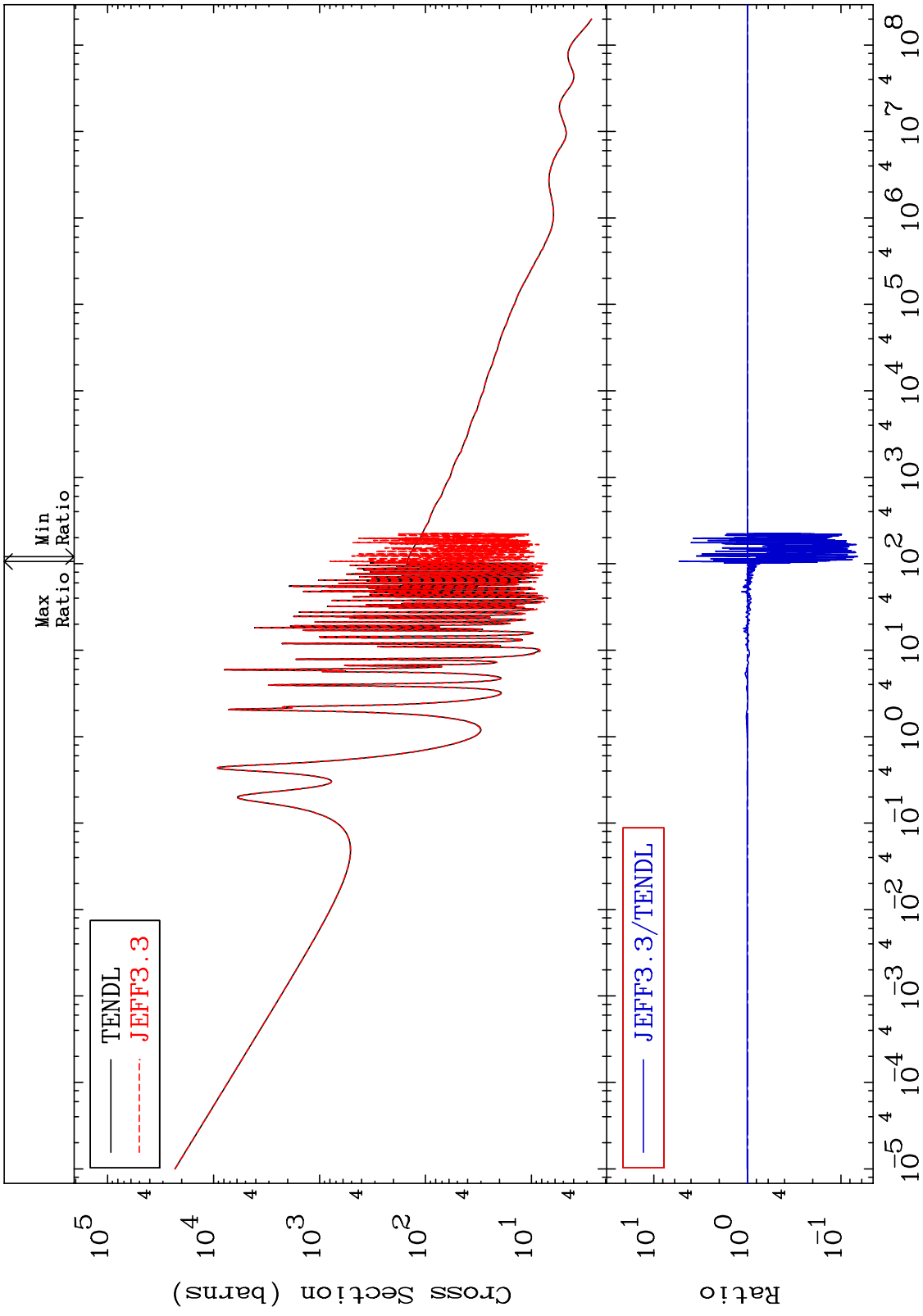
U.S.A.

Tele: 925-443-1911

E.Mail: redcullen1@comcast.net
Web: redcullen1.net/HOMEPAGE.NEW

Press Mouse Button to Start

MAT 7326 73-Ta-180
Total Cross Section -93.41 To 436.6 %



Ratio 73-Ta-180
Incident Energy (eV)

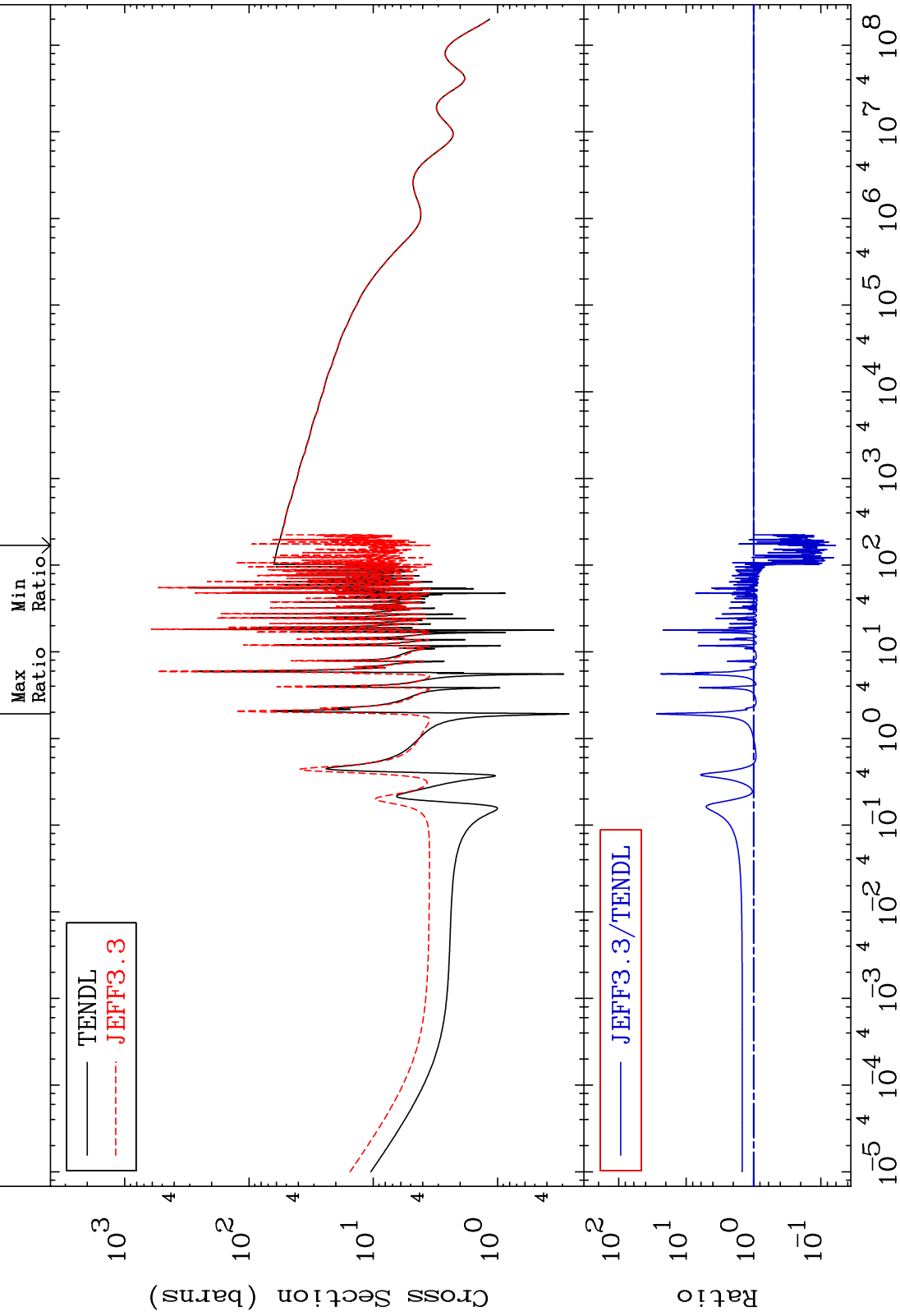
MAT 7326

Elastic

73-Ta-180

-93.94 To 2661. %

Cross Section



2

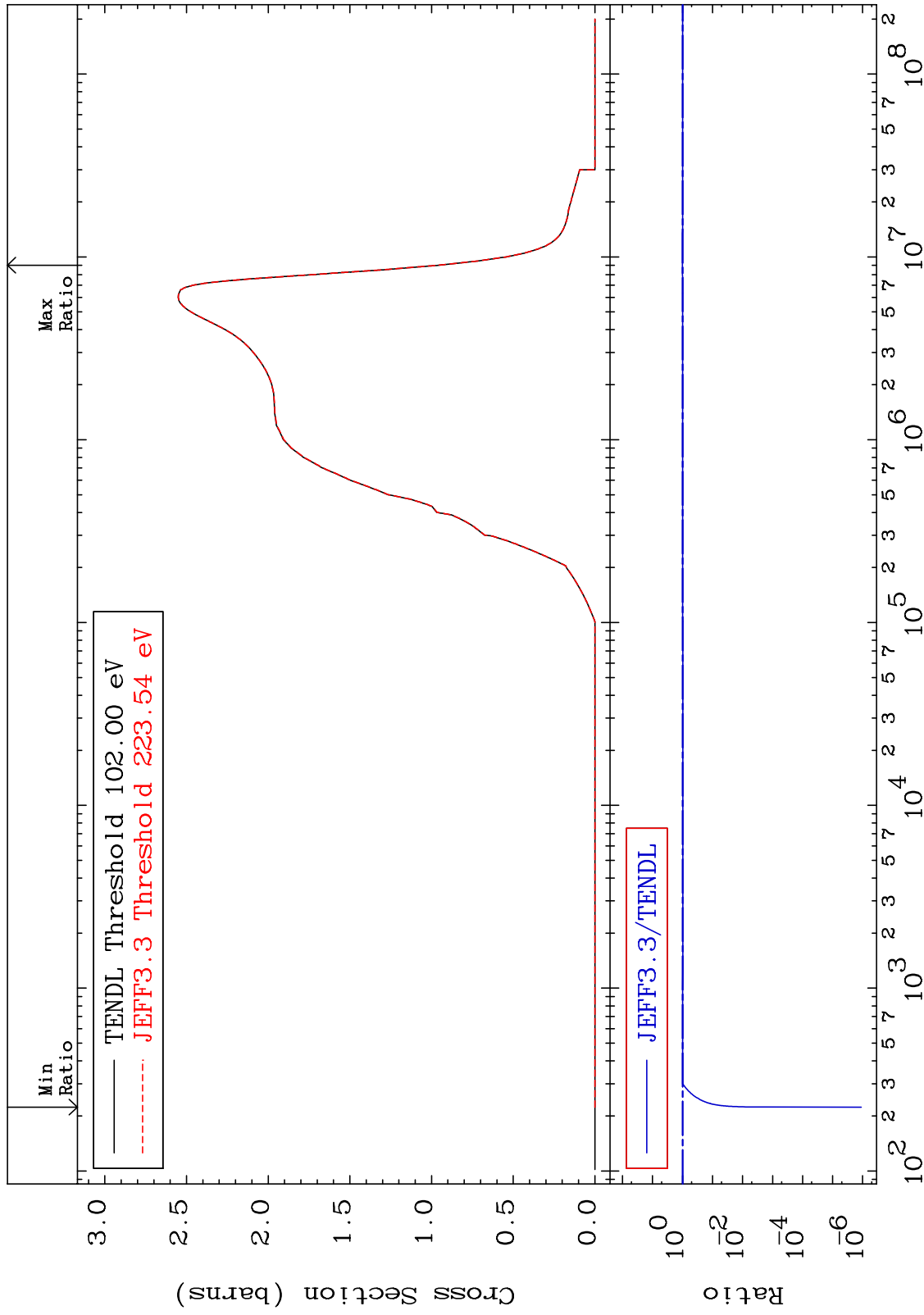
Incident Energy (eV)

73-Ta-180

MAT 7326

Inelastic
Cross Section

73-Ta-180
-100.0 To 0.466 %

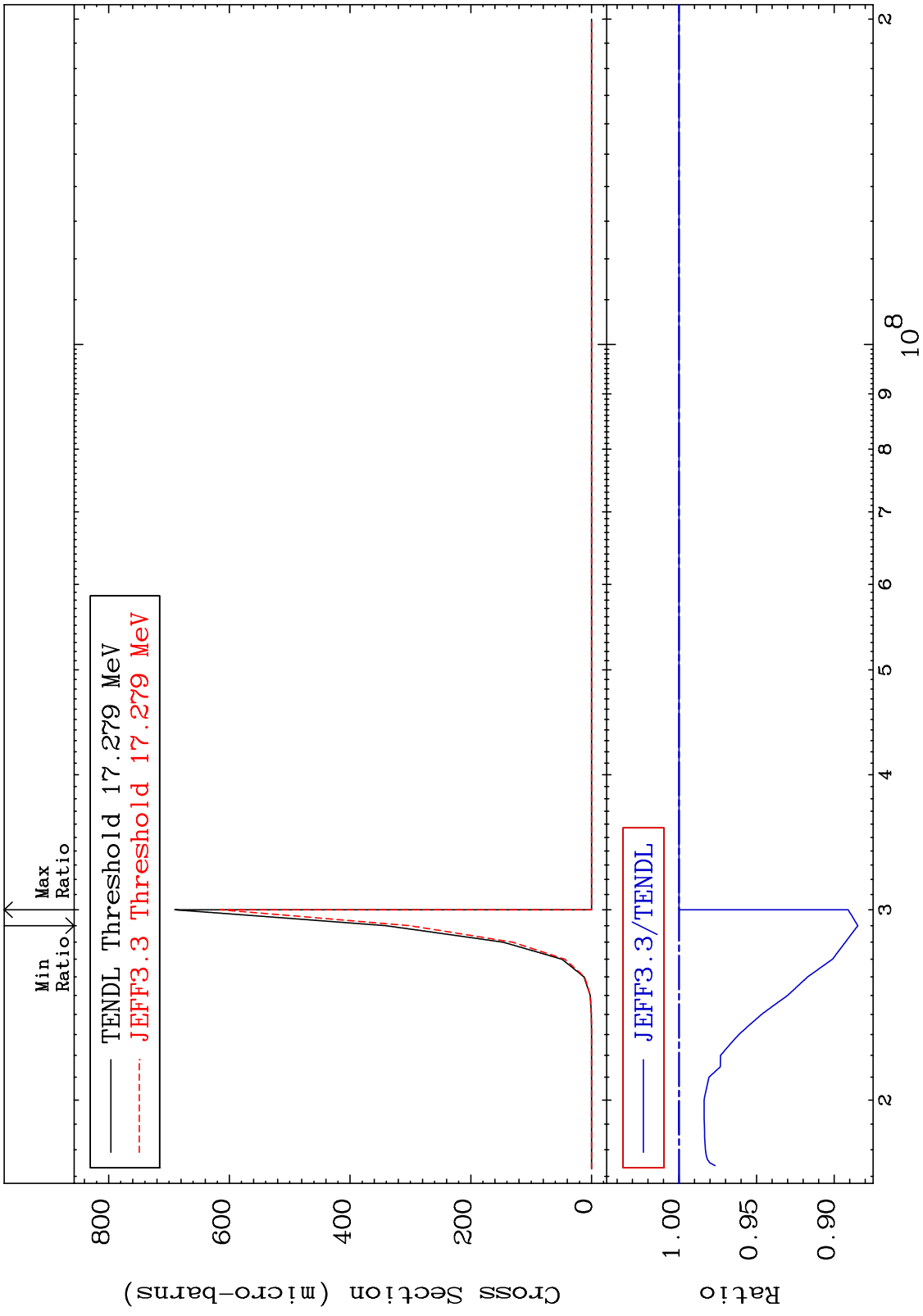


Incident Energy (eV)

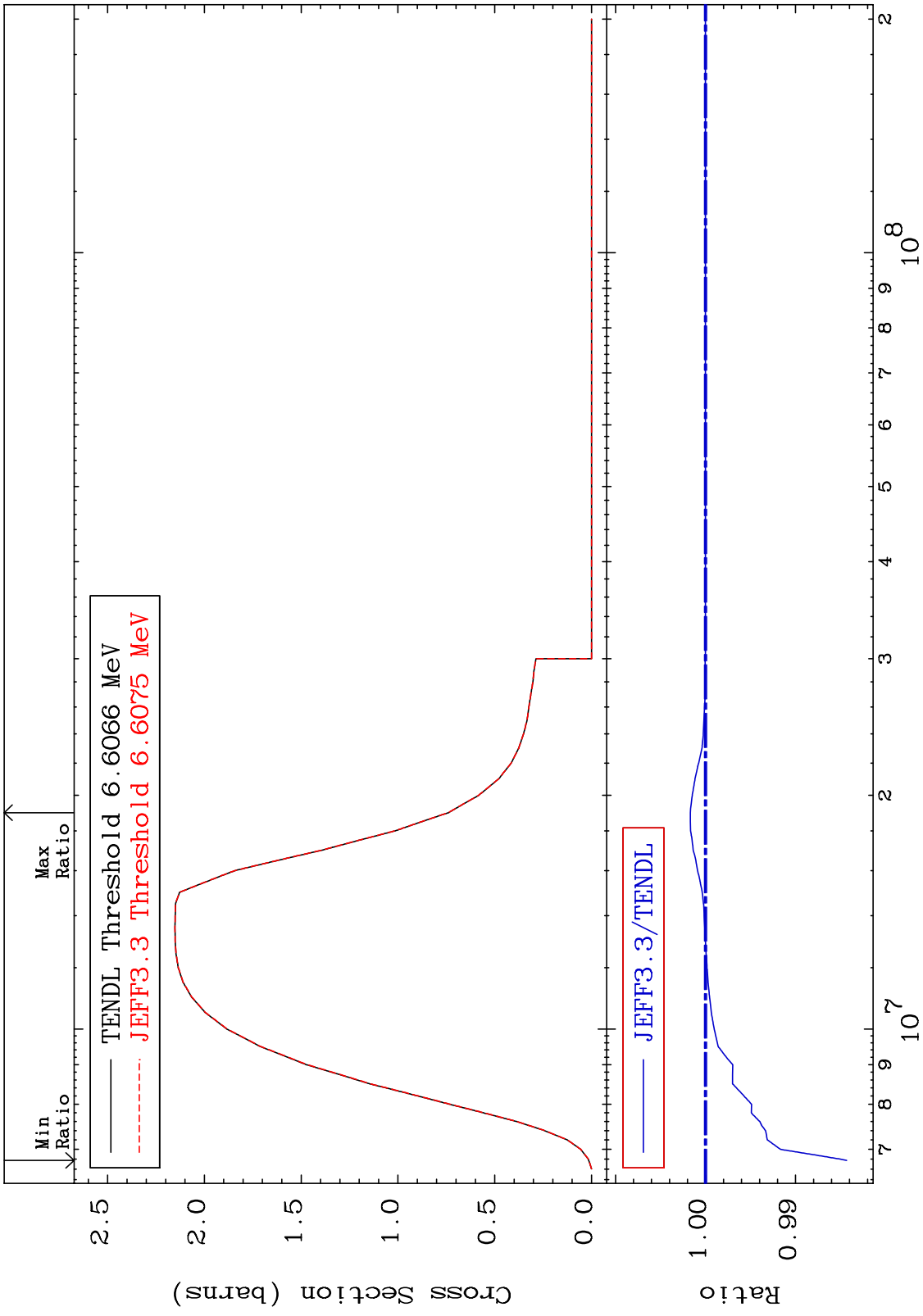
73-Ta-180

3

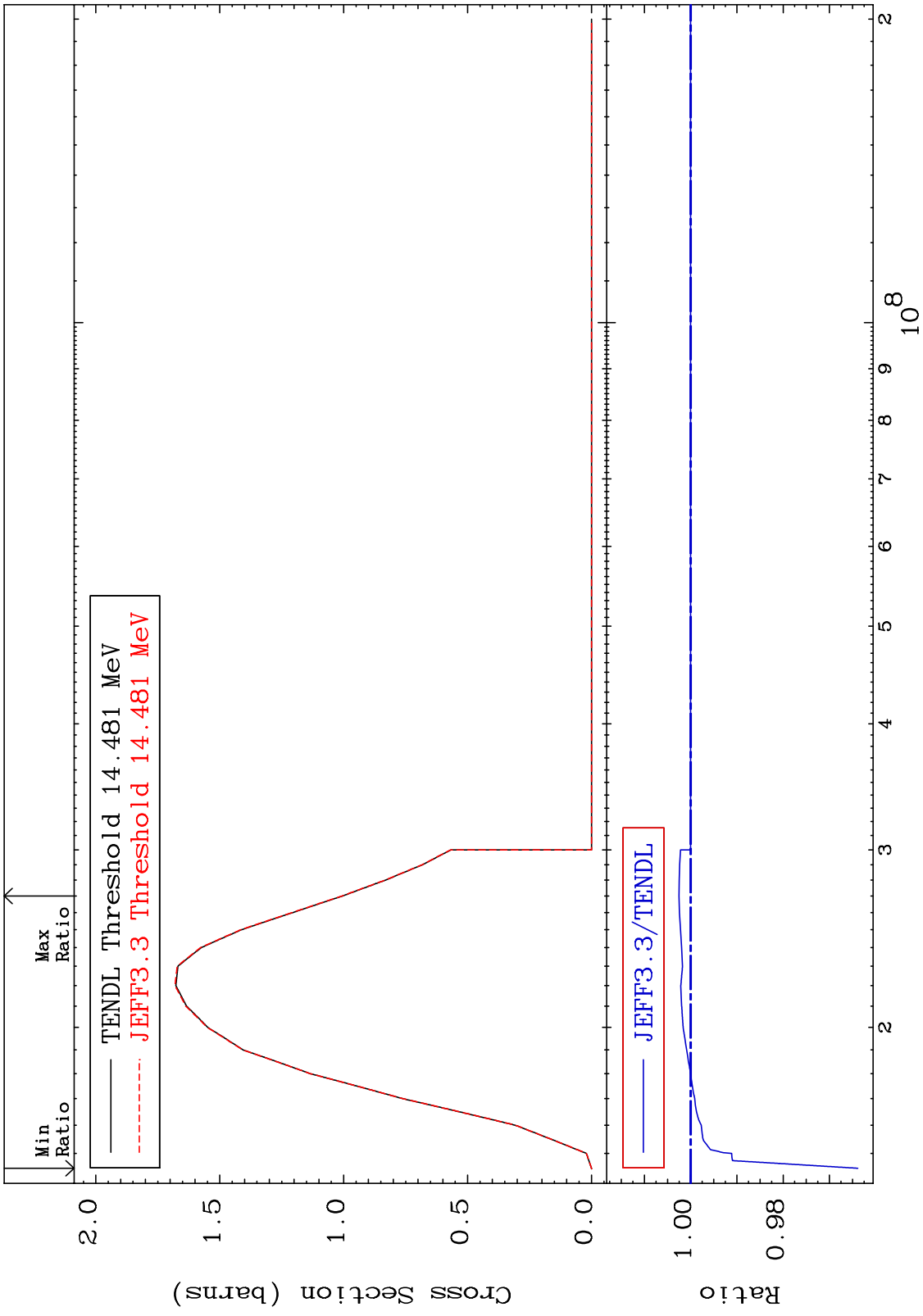
MAT 7326 (n,2n) d 73-Ta-180
 Cross Section -11.53 To 0.000 %



MAT 7326 $(n,2n)$ $^{73}\text{Ta-180}$ -1.567 To 0.169%
 Cross Section



5 $^{73}\text{Ta-180}$



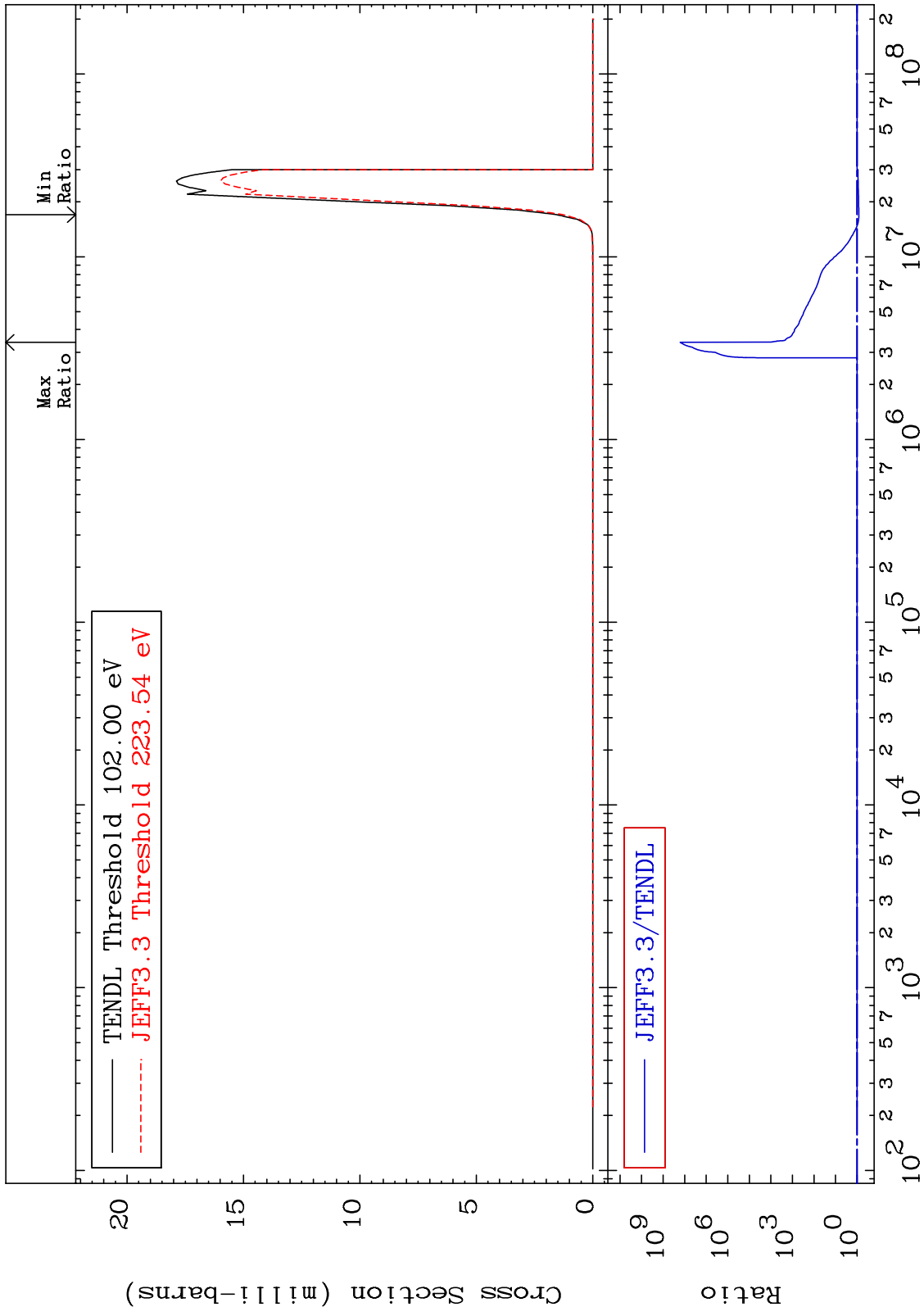
MAT 7326

(n, n') α

73-Ta-180

Cross Section

-17.84 To 9999. %

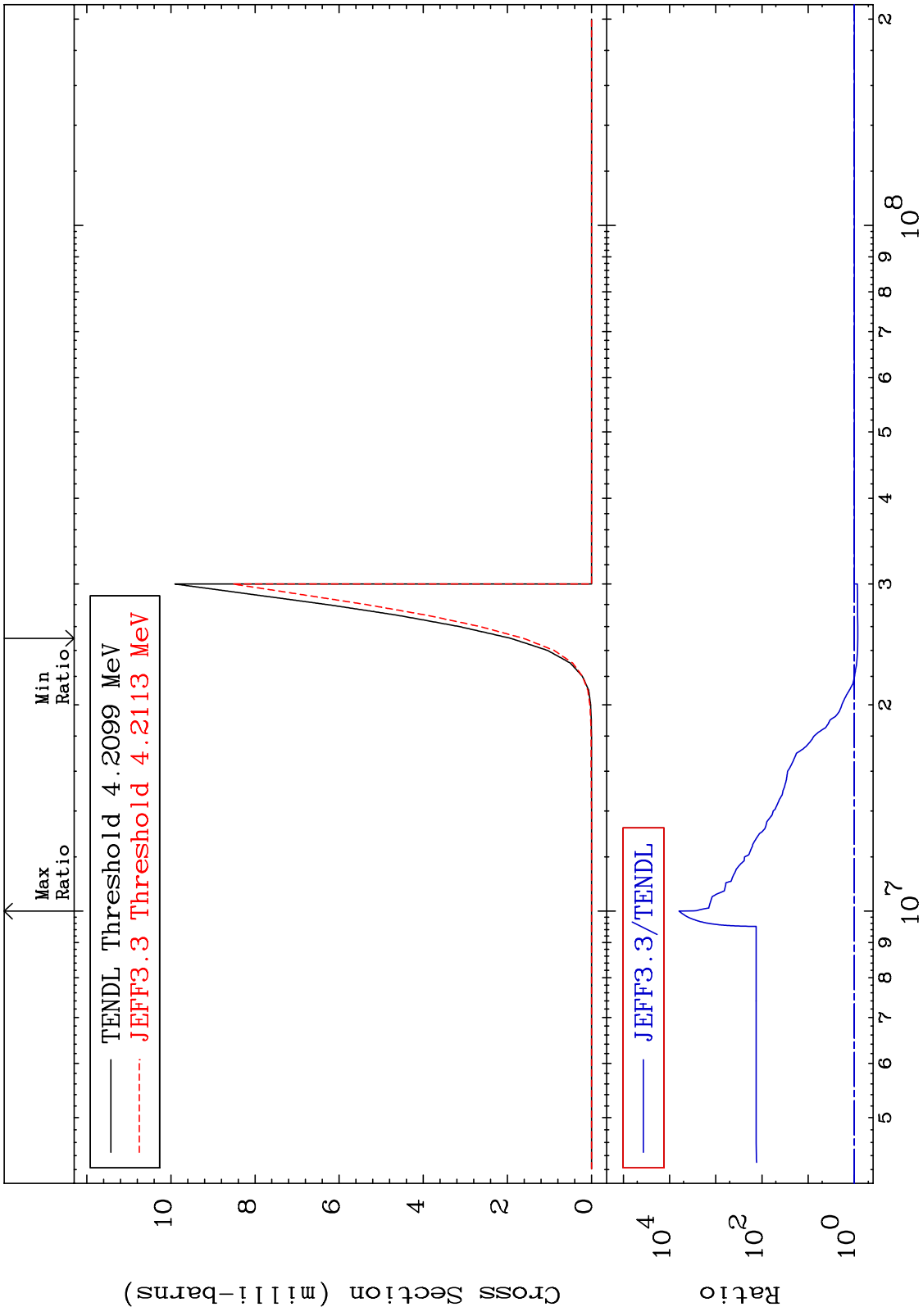


7

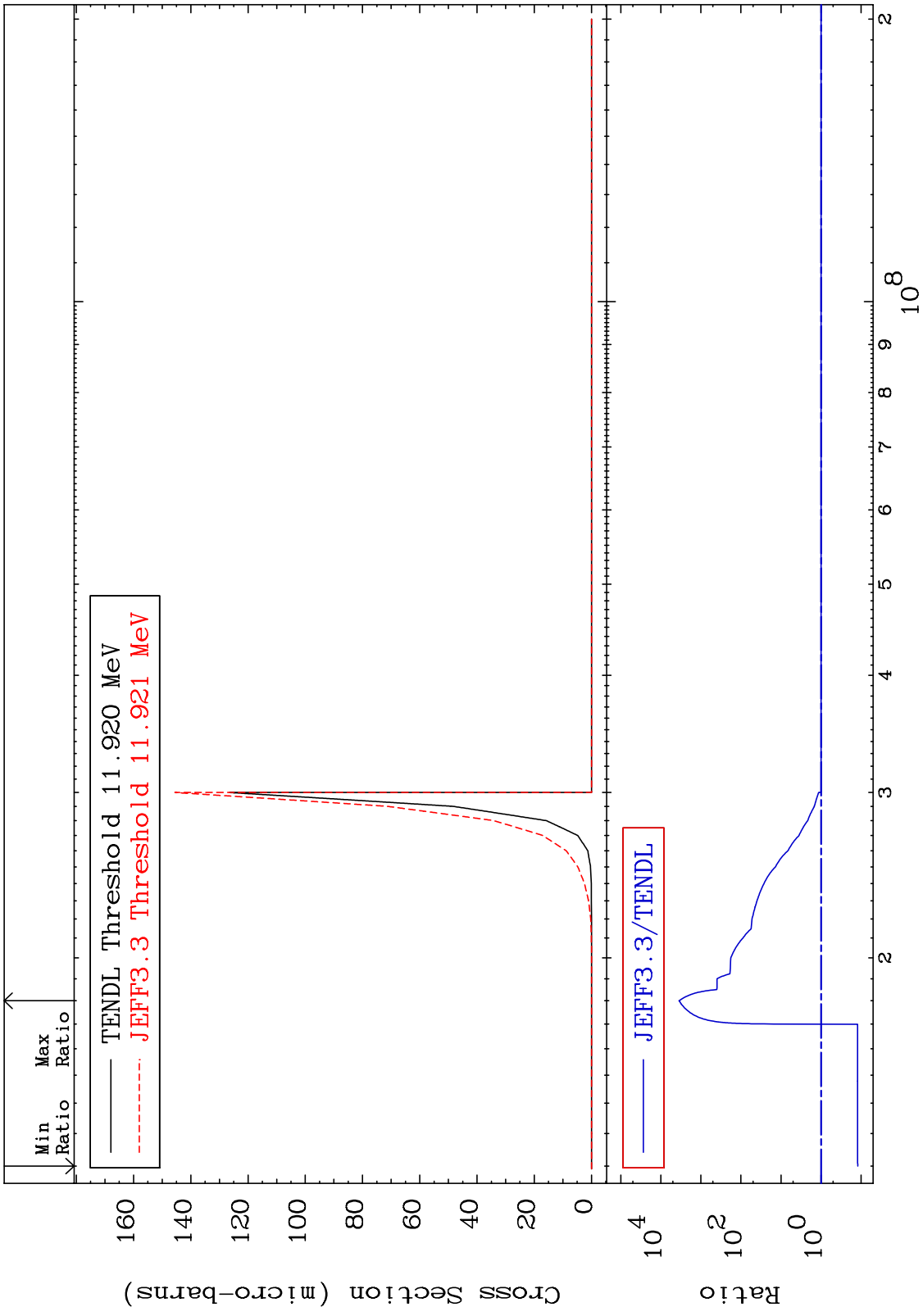
Incident Energy (eV)

73-Ta-180

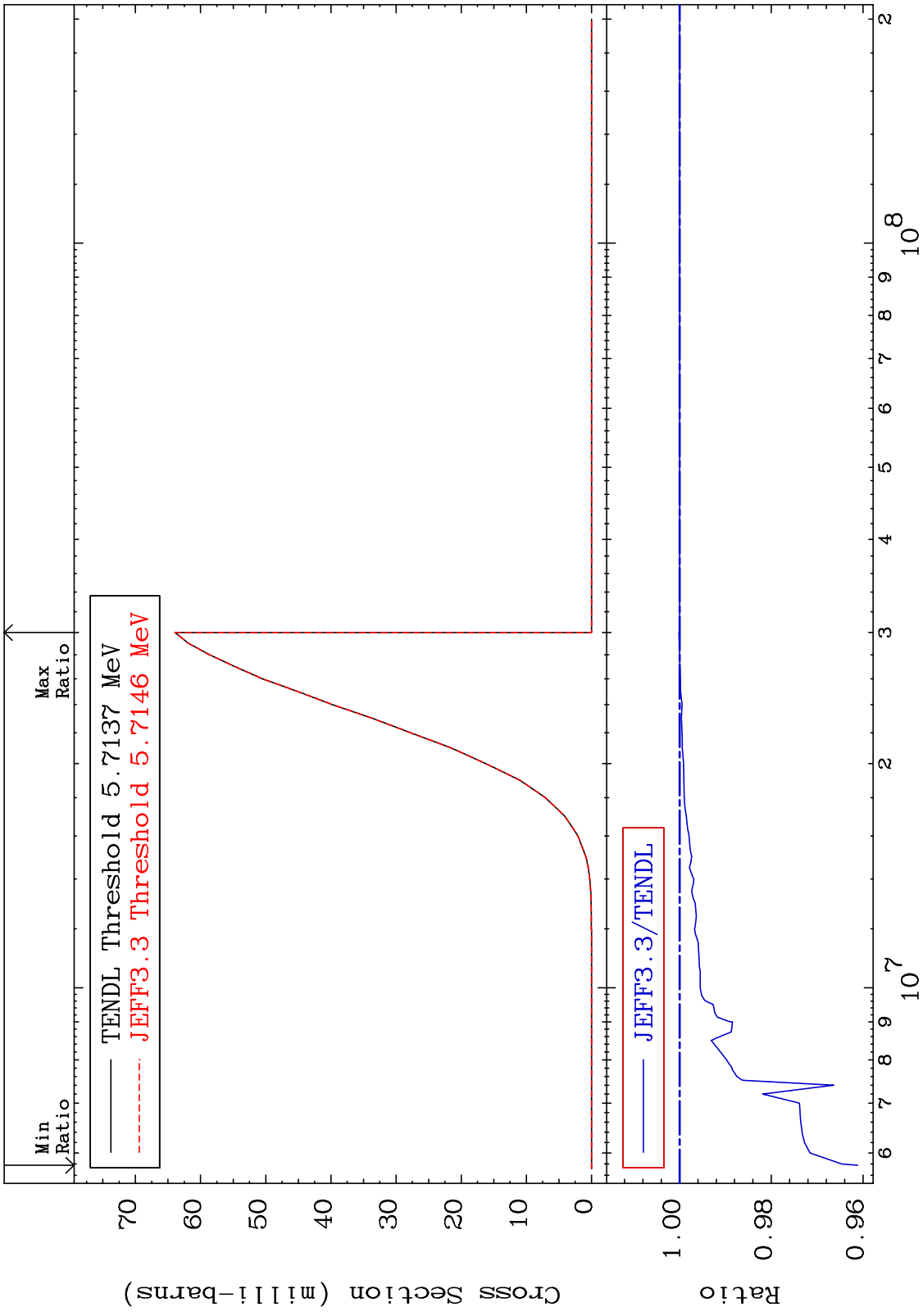
MAT 7326 73-Ta-180
(n,2n) α
Cross Section
-15.88 To 9999. %



MAT 7326 (n,3n) α 73-Ta-180
 Cross Section -87.90 To 9999. %

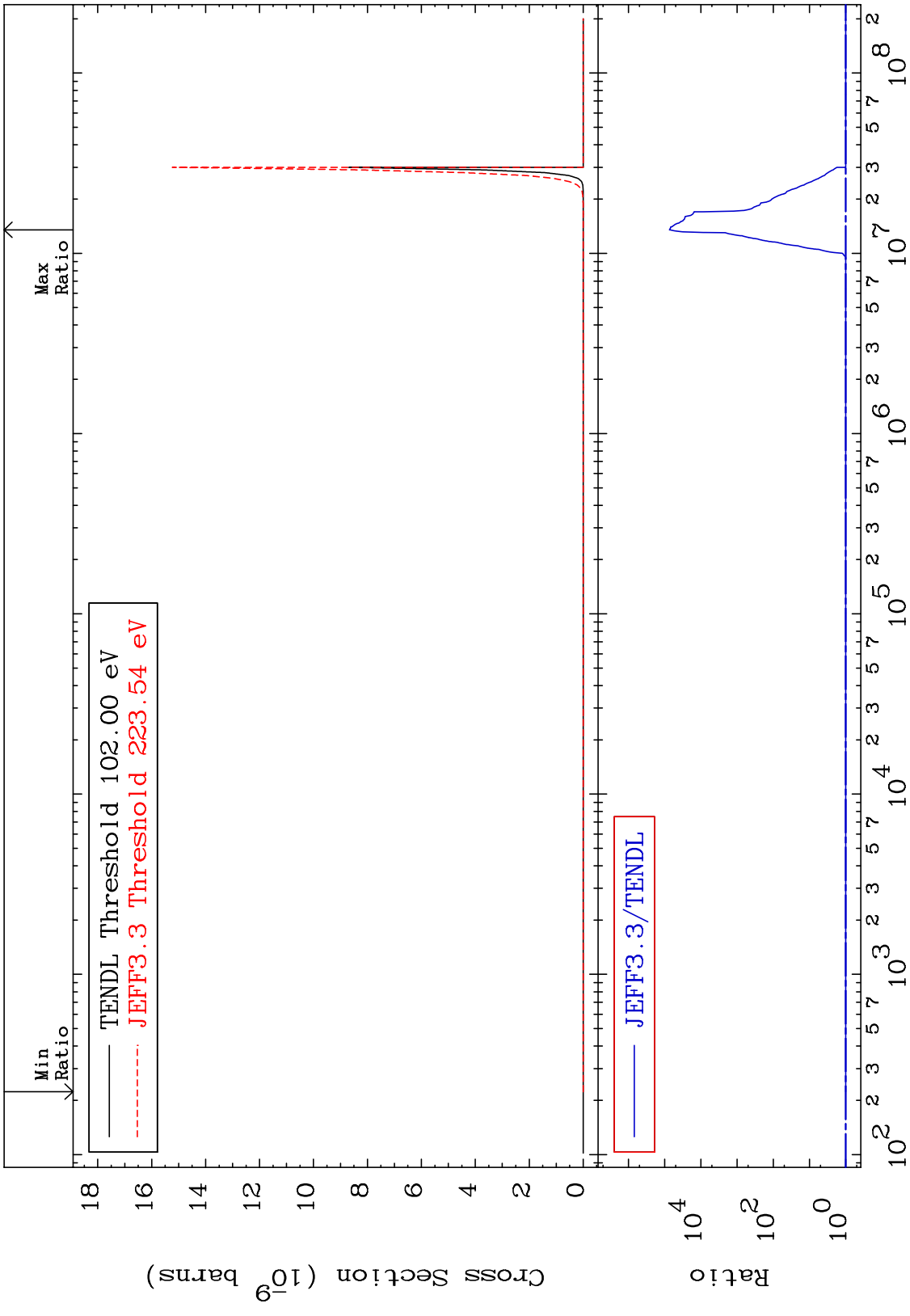


MAT 7326 (n, n') p $^{73}\text{Ta-180}$
Cross Section -3.887 To 0.011 %

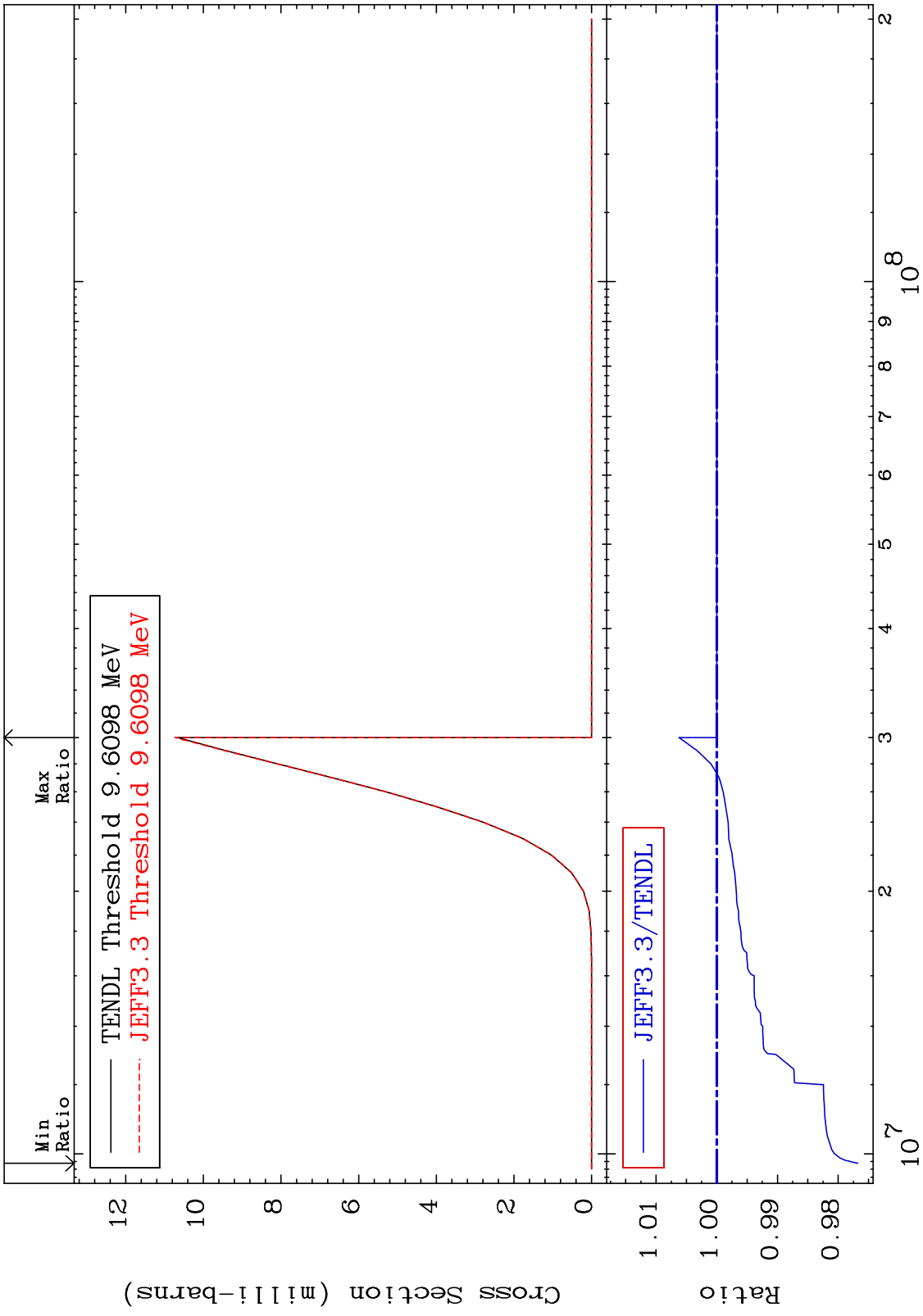


10

MAT 7326 (n,n') 2α Cross Section 73-Ta-180 To 9999. %

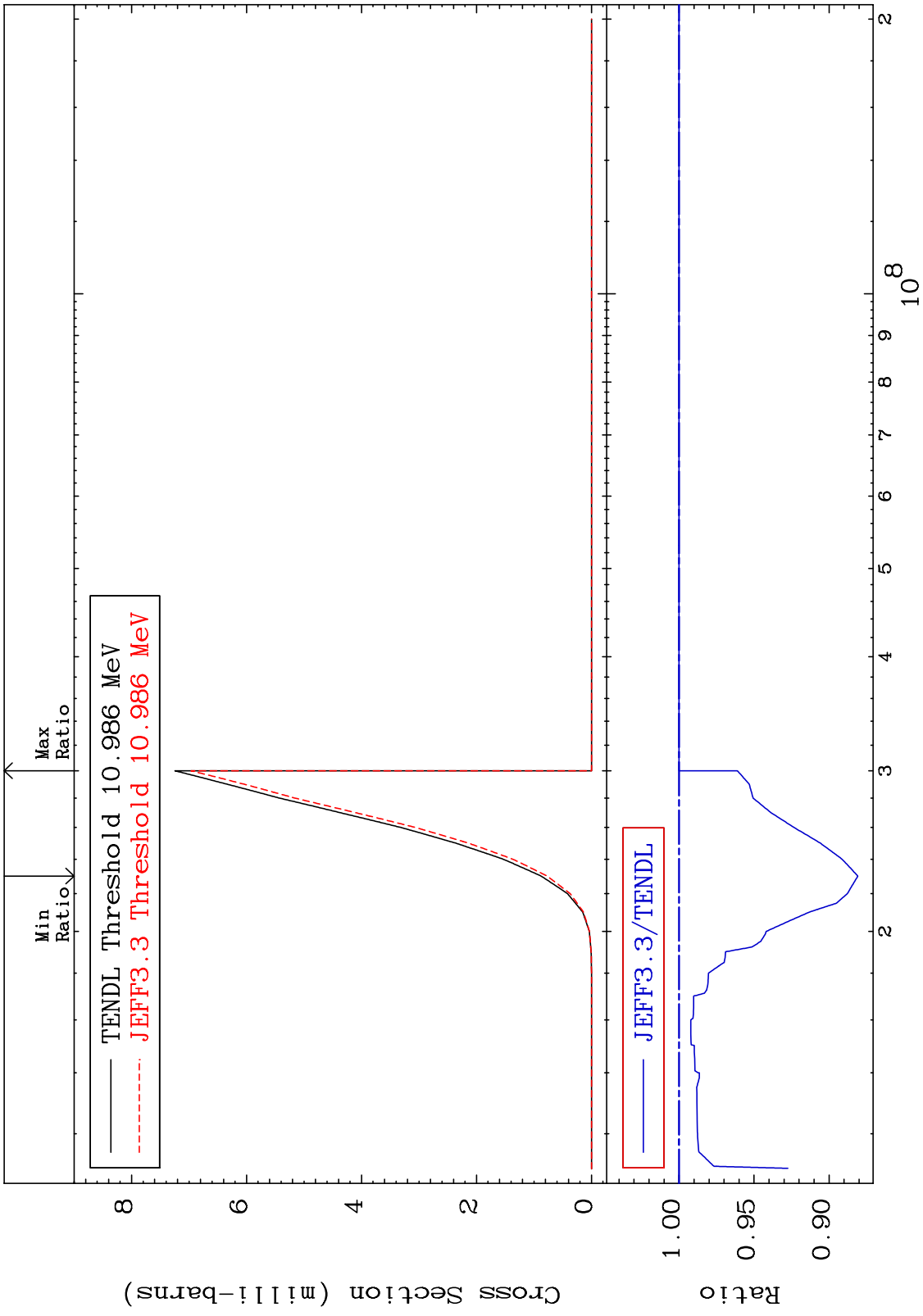


MAT 7326 $(n, n') d$ $^{73}\text{Ta-180}$
 Cross Section -2.324 To 0.622 %

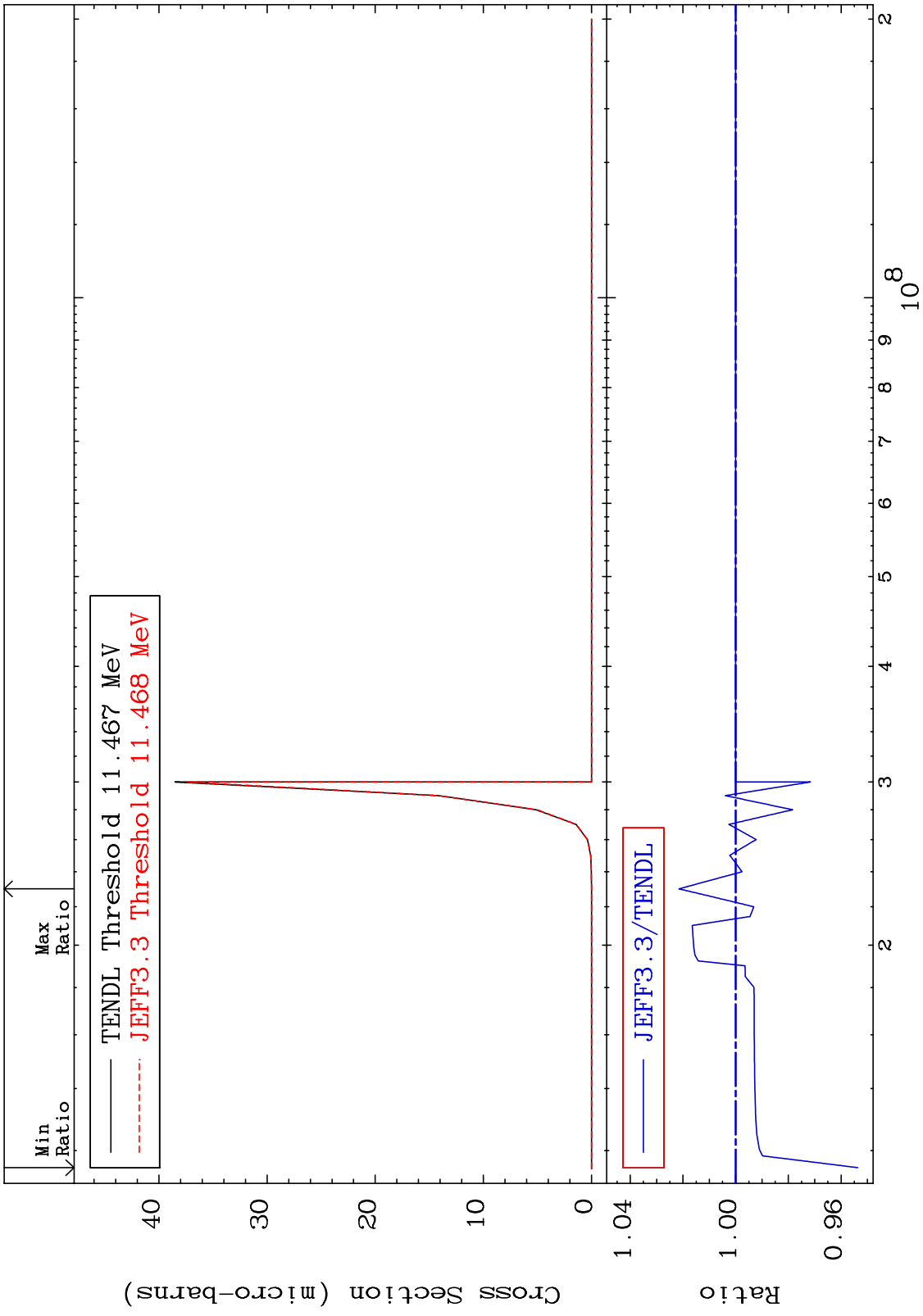


12 10^7 10^8 Incident Energy (eV) $^{73}\text{Ta-180}$

MAT 7326 (n, n') t $^{73}\text{Ta-180}$
 Cross Section -11.92 To 0.000 %



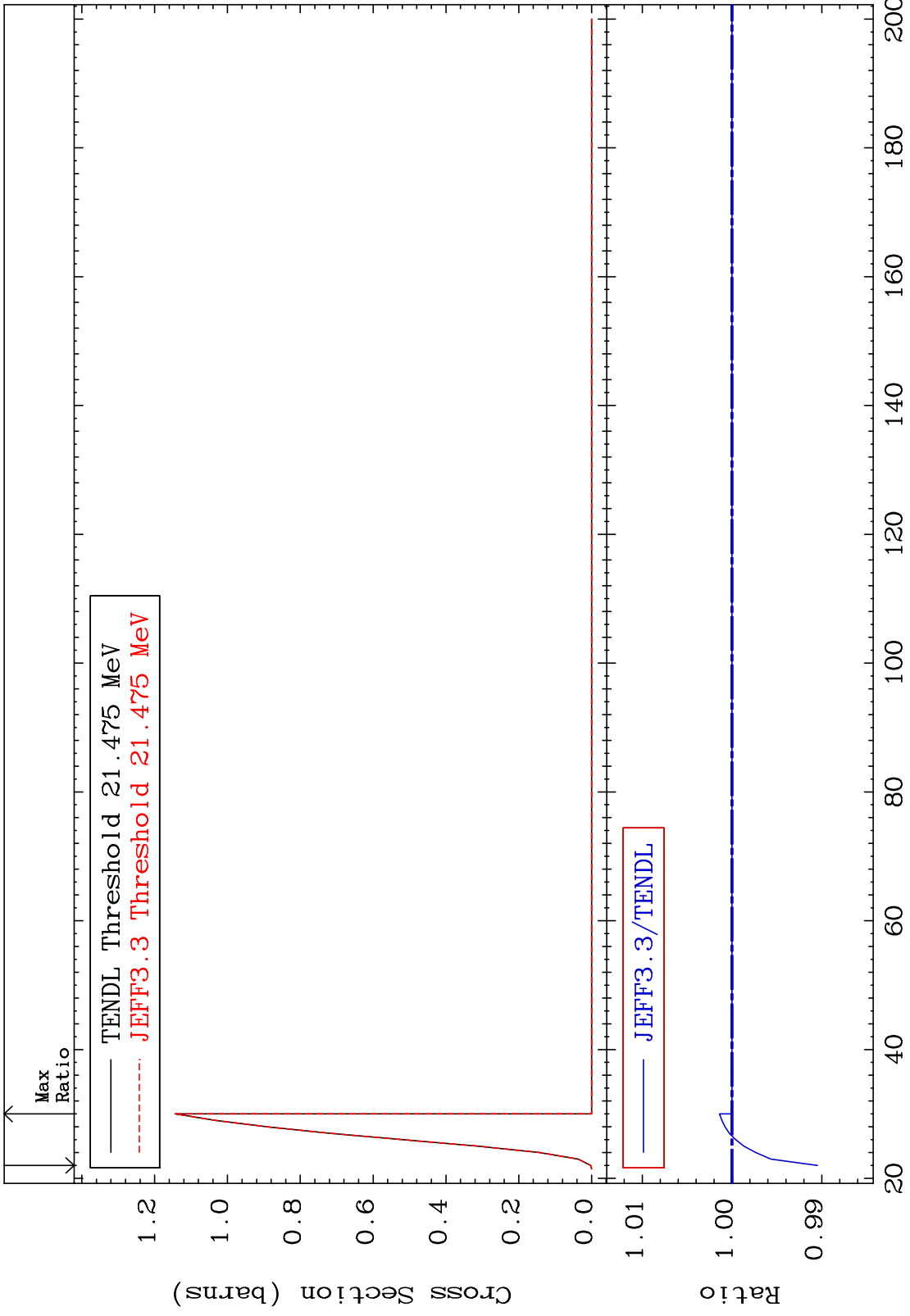
MAT 7326 (n, n') He-3 73-Ta-180
 Cross Section -4.636 To 2.149 %



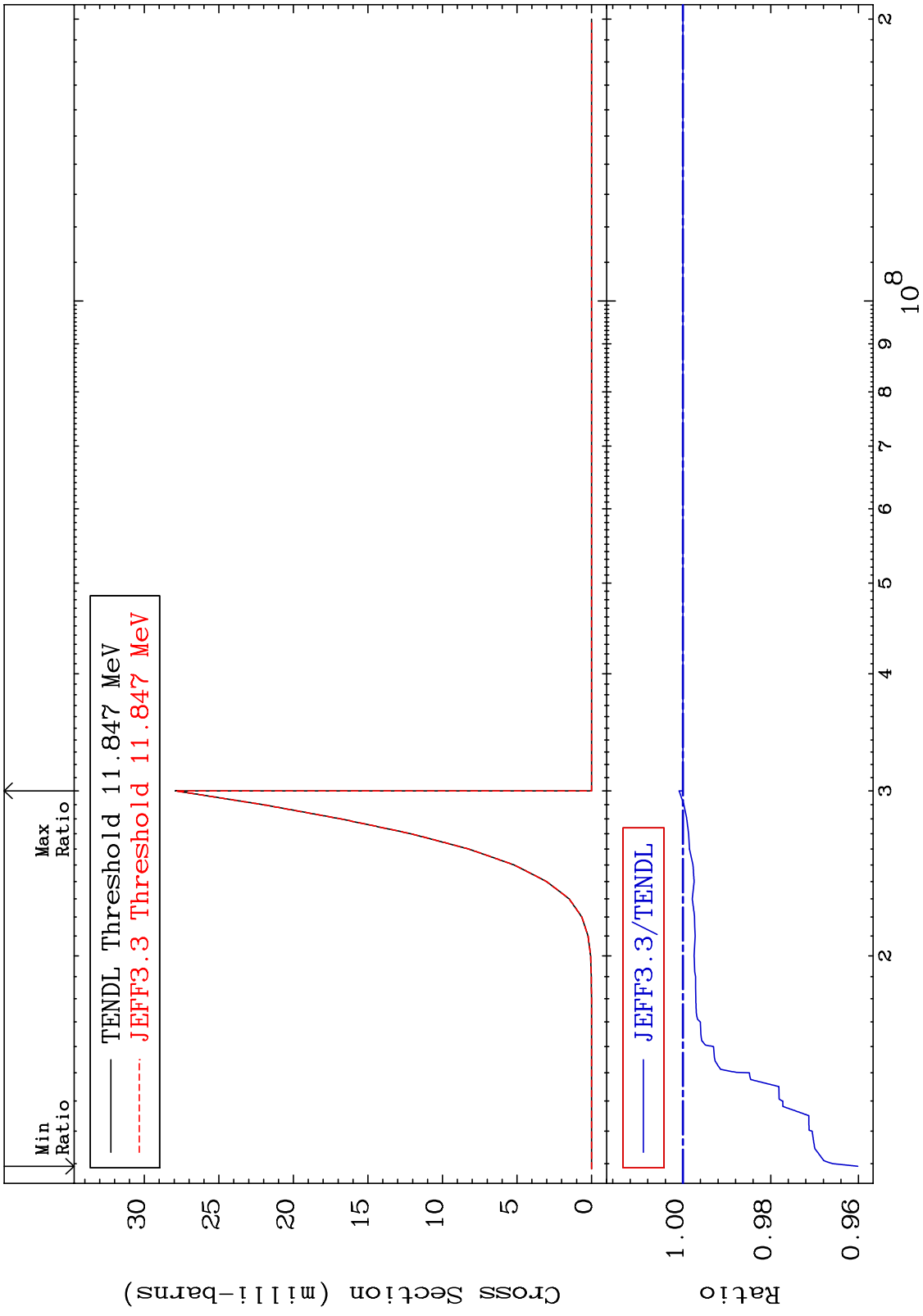
73-Ta-180

Incident Energy (eV)

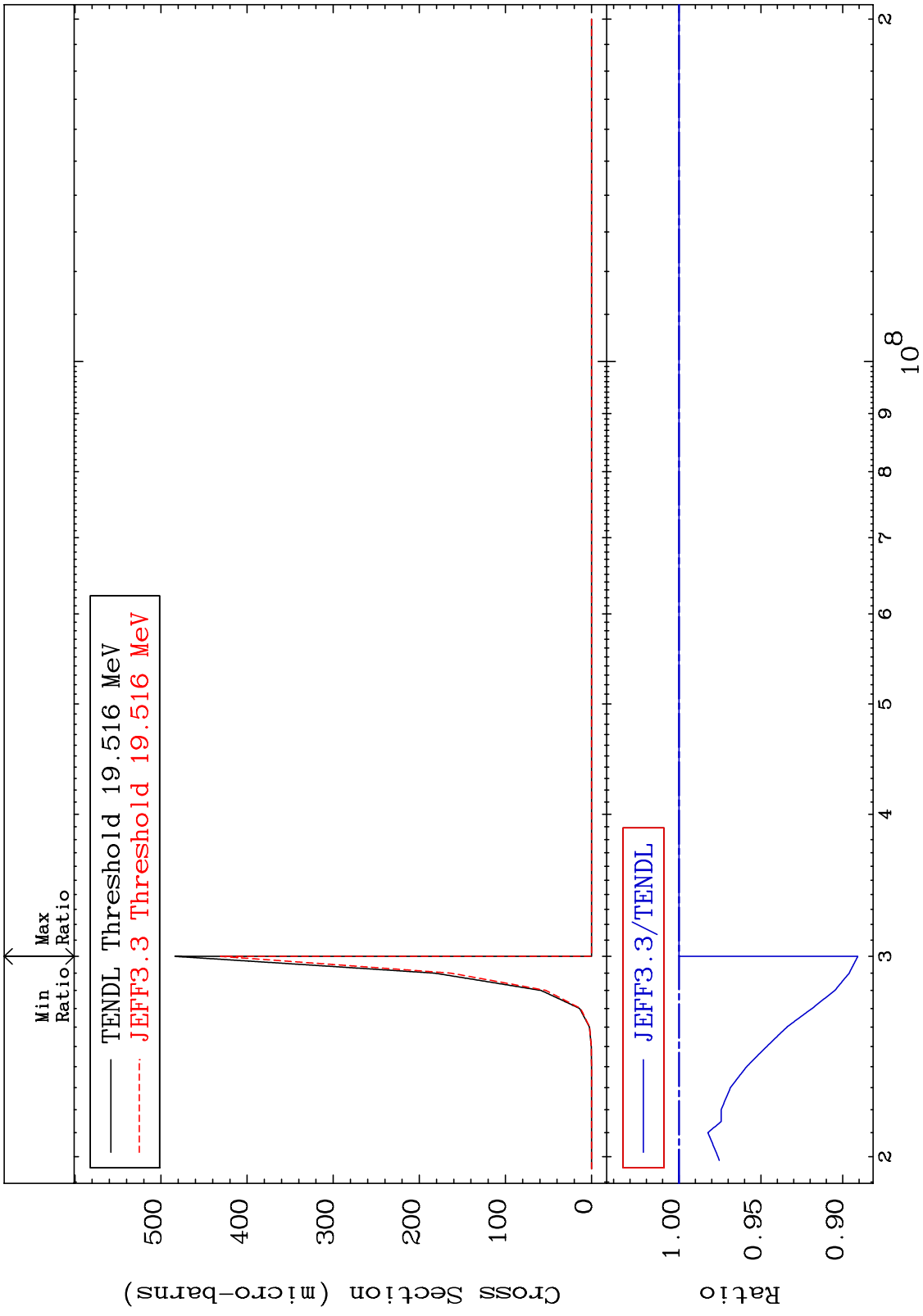
MAT 7326 (n,4n) Cross Section 73-Ta-180 -0.952 To 0.138 %



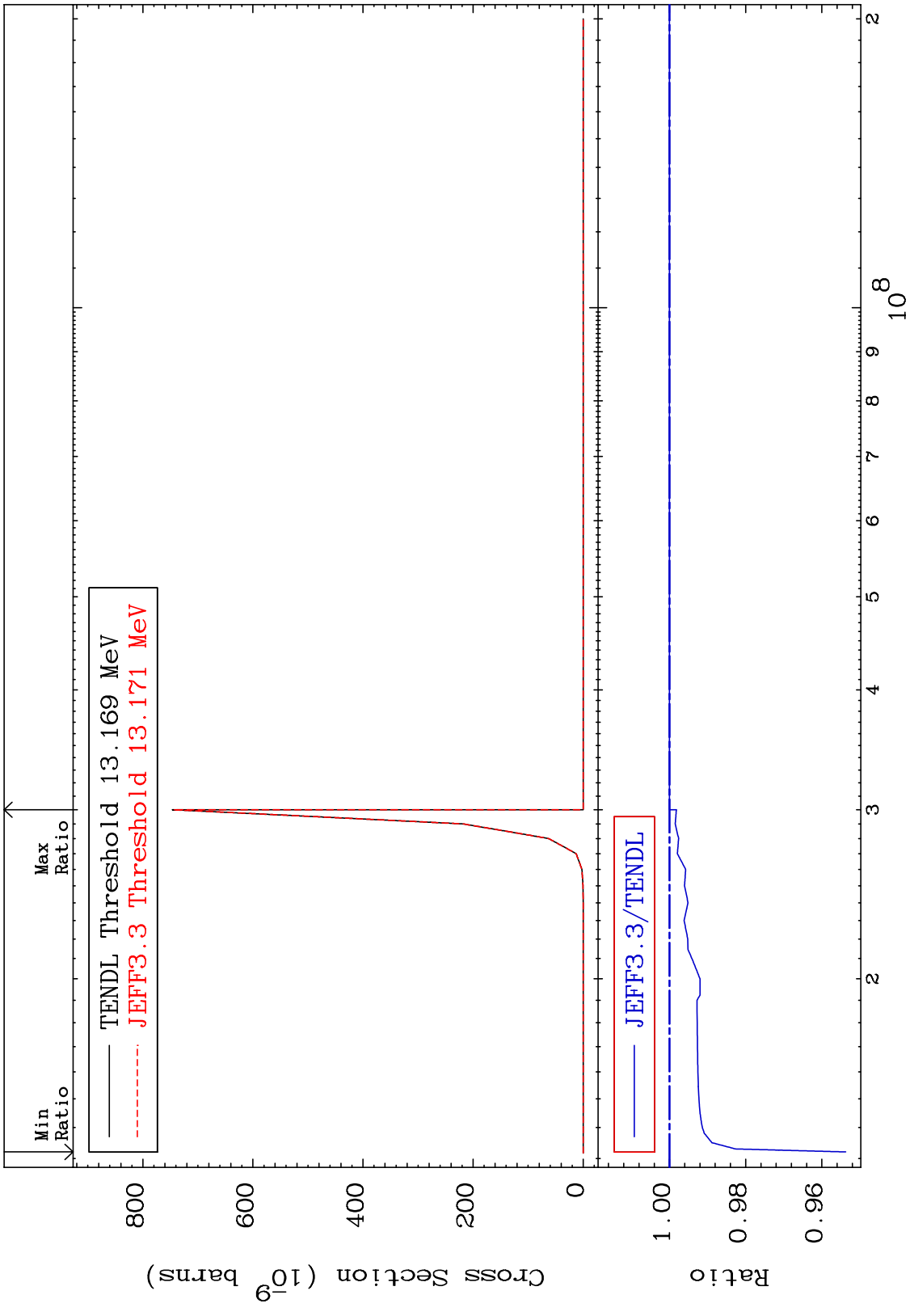
MAT 7326 $(n, 2n)$ p $^{73}\text{Ta-180}$
 Cross Section -3.984 To 0.088 %



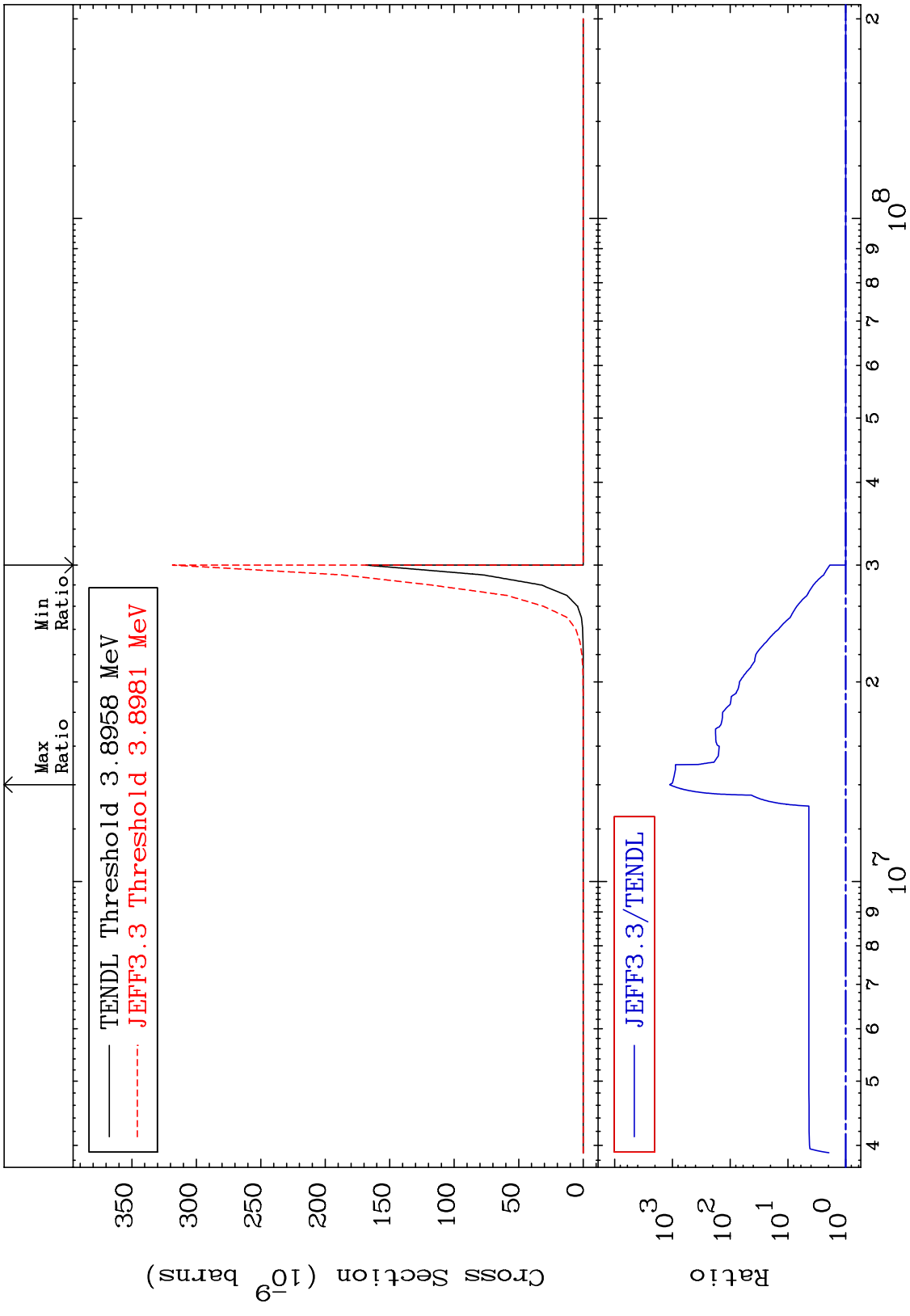
MAT 7326 (n,3n) p 73-Ta-180
 Cross Section -10.92 To 0.000 %



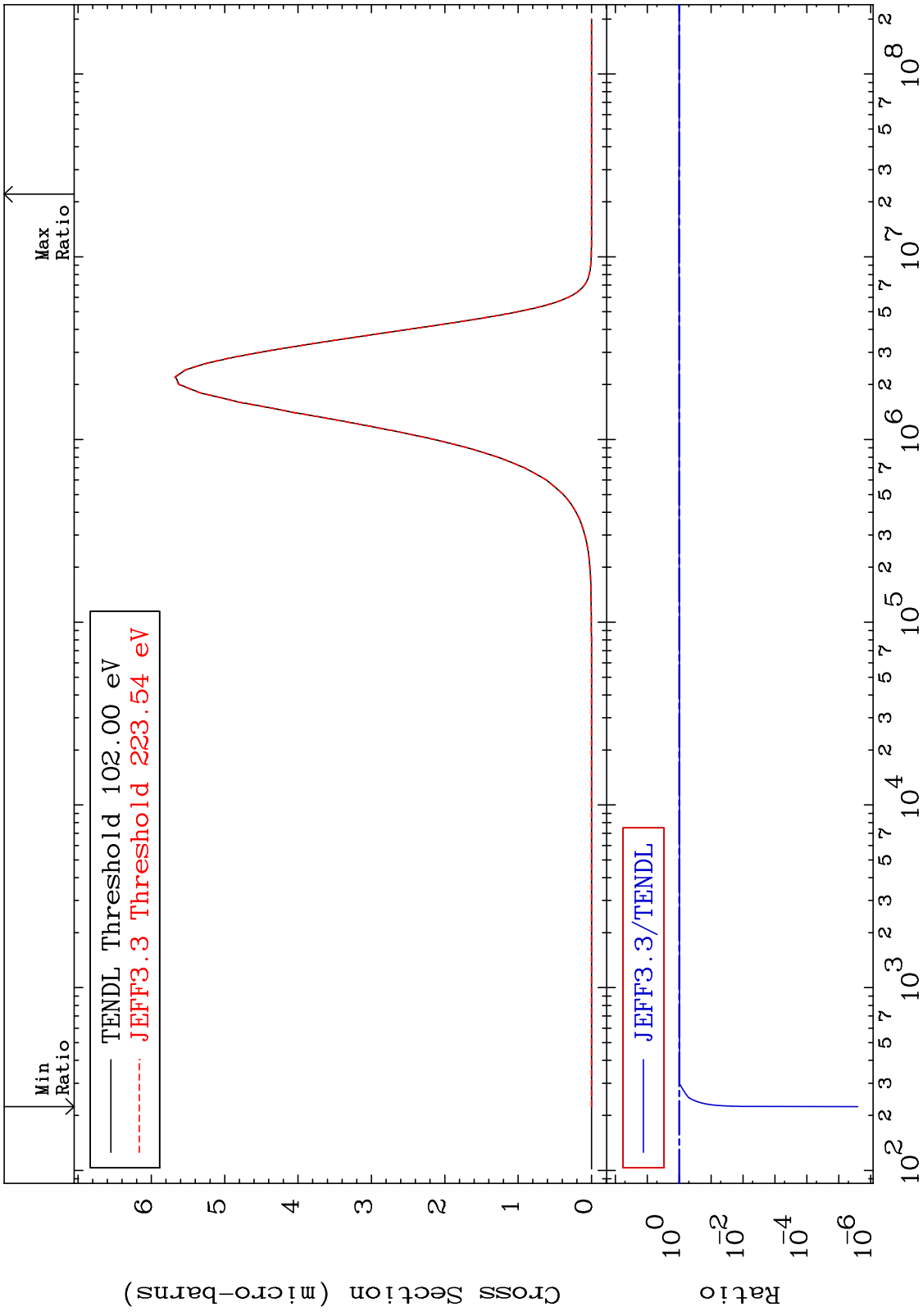
MAT 7326 (n,2n) p 73-Ta-180
 Cross Section -4.627 To 0.000 %



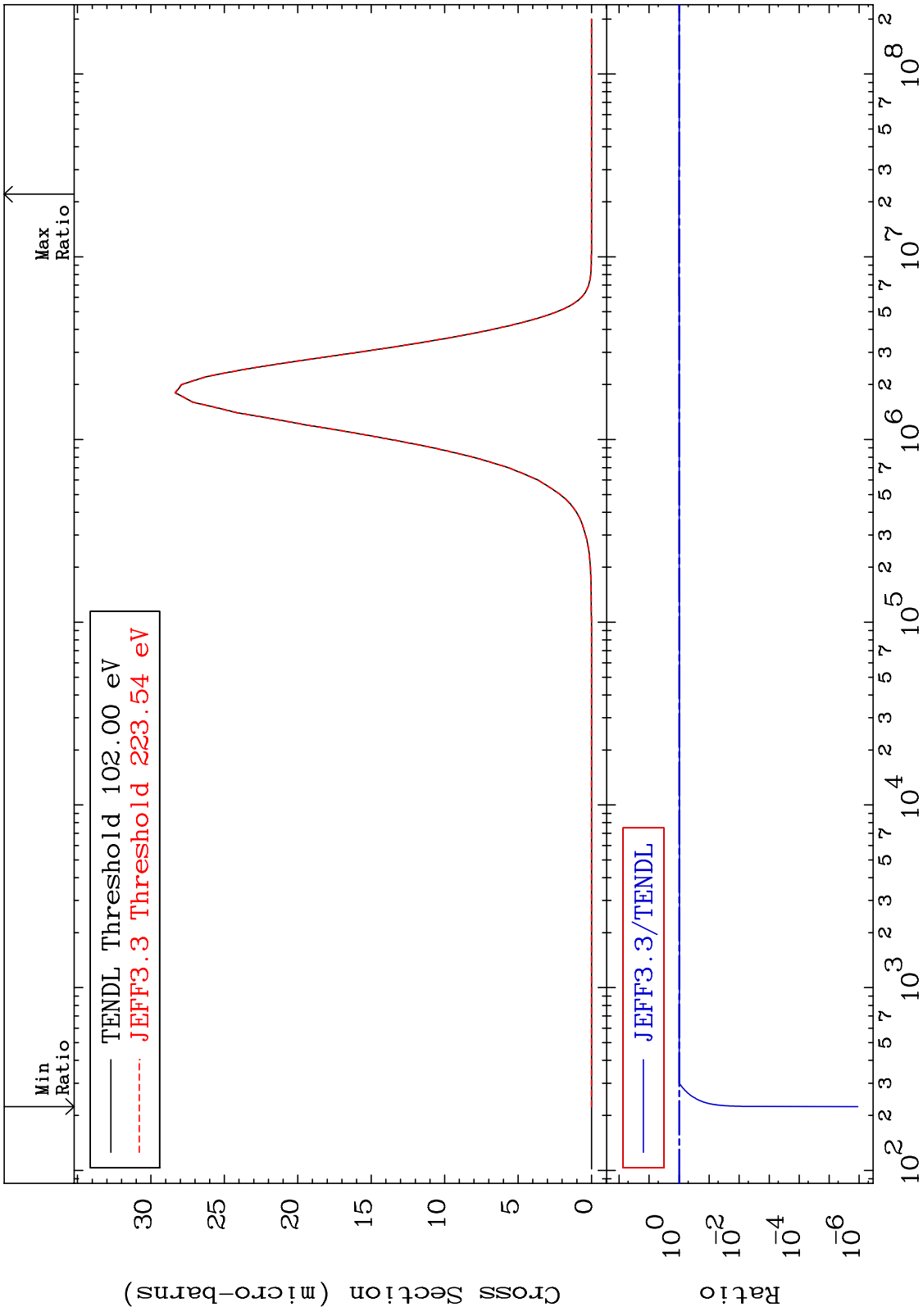
MAT 7326 (n, n') p α 73-Ta-180
 Cross Section 0.000 To 9999. %



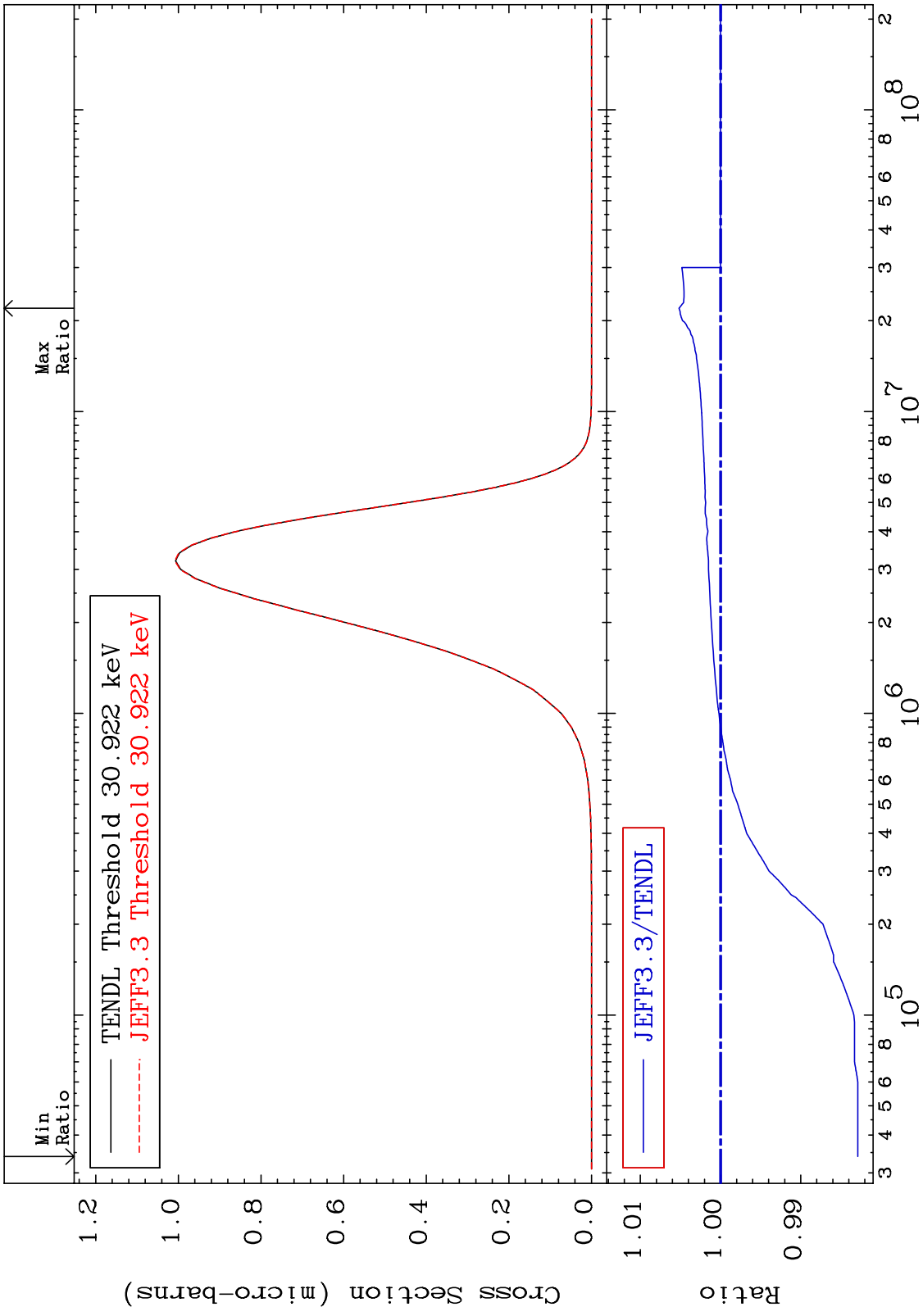
MAT 7326 MT= 51 (n,n') Level Cross Section 73-Ta-180
 -100.0 To 0.518 %



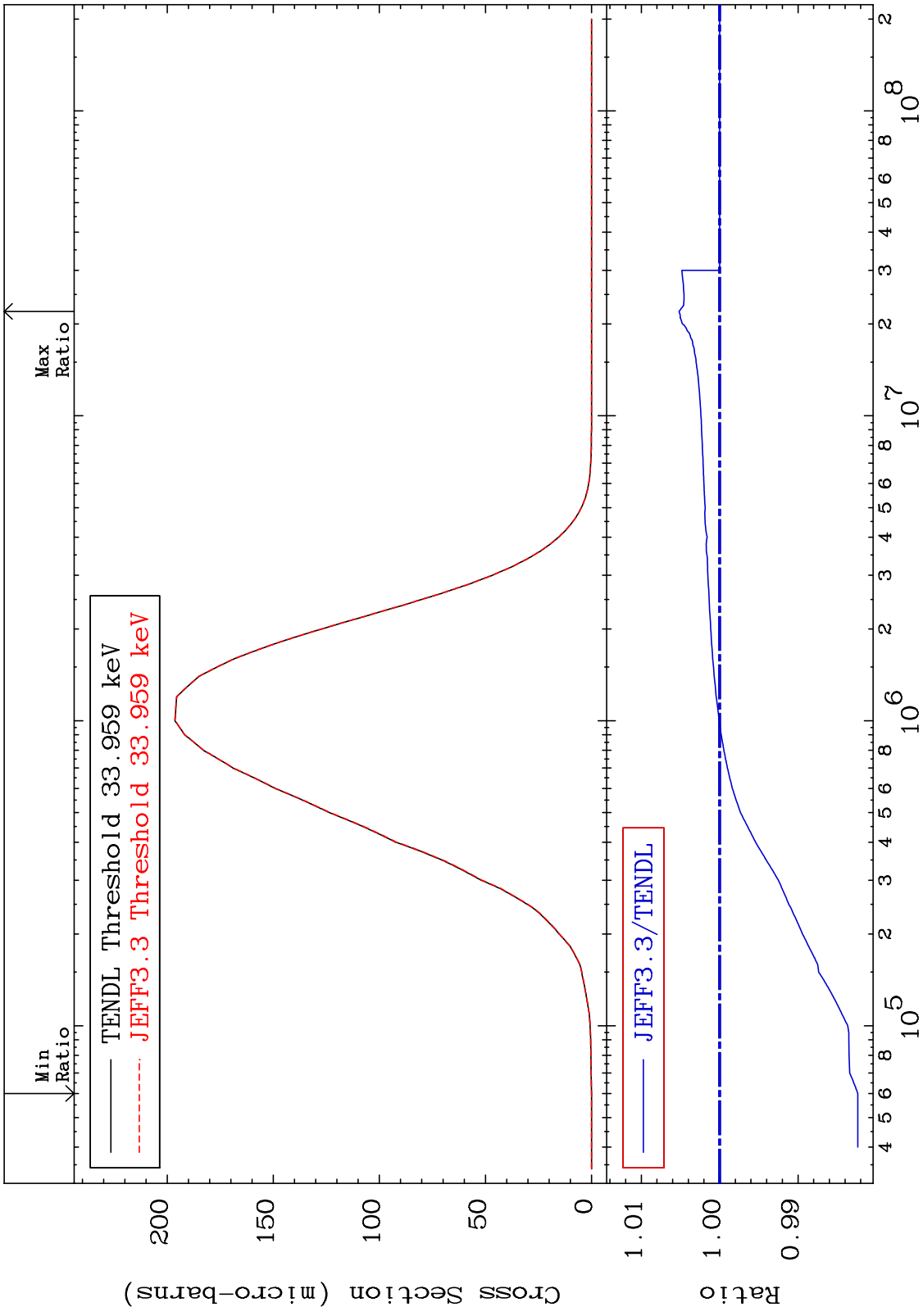
MAT 7326 MT= 52 (n,n') Level Cross Section 73-Ta-180 -100.0 To 0.517 %



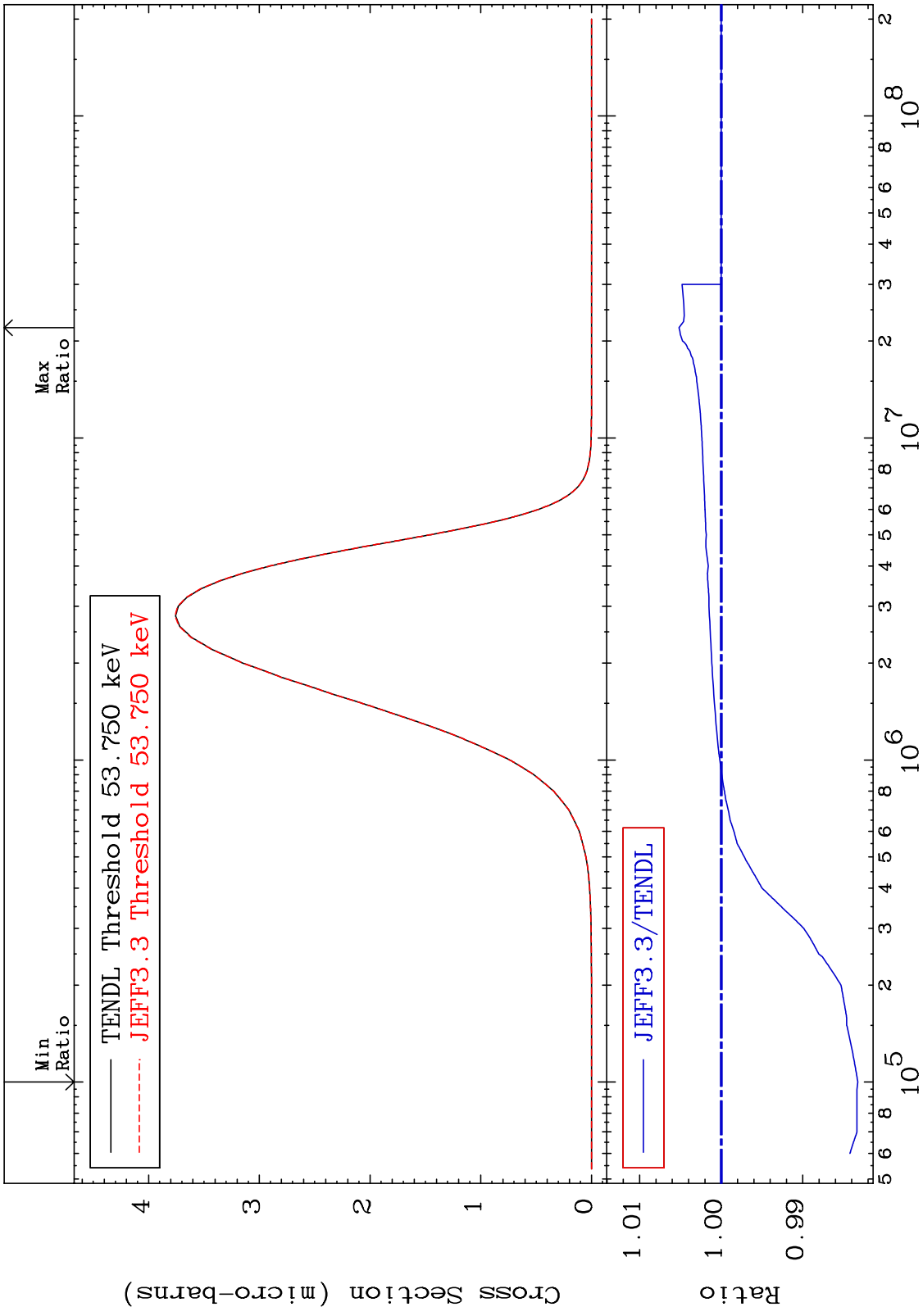
MAT 7326 MT= 53 (n,n') Level Cross Section 73-Ta-180
 -1.712 To 0.518 %



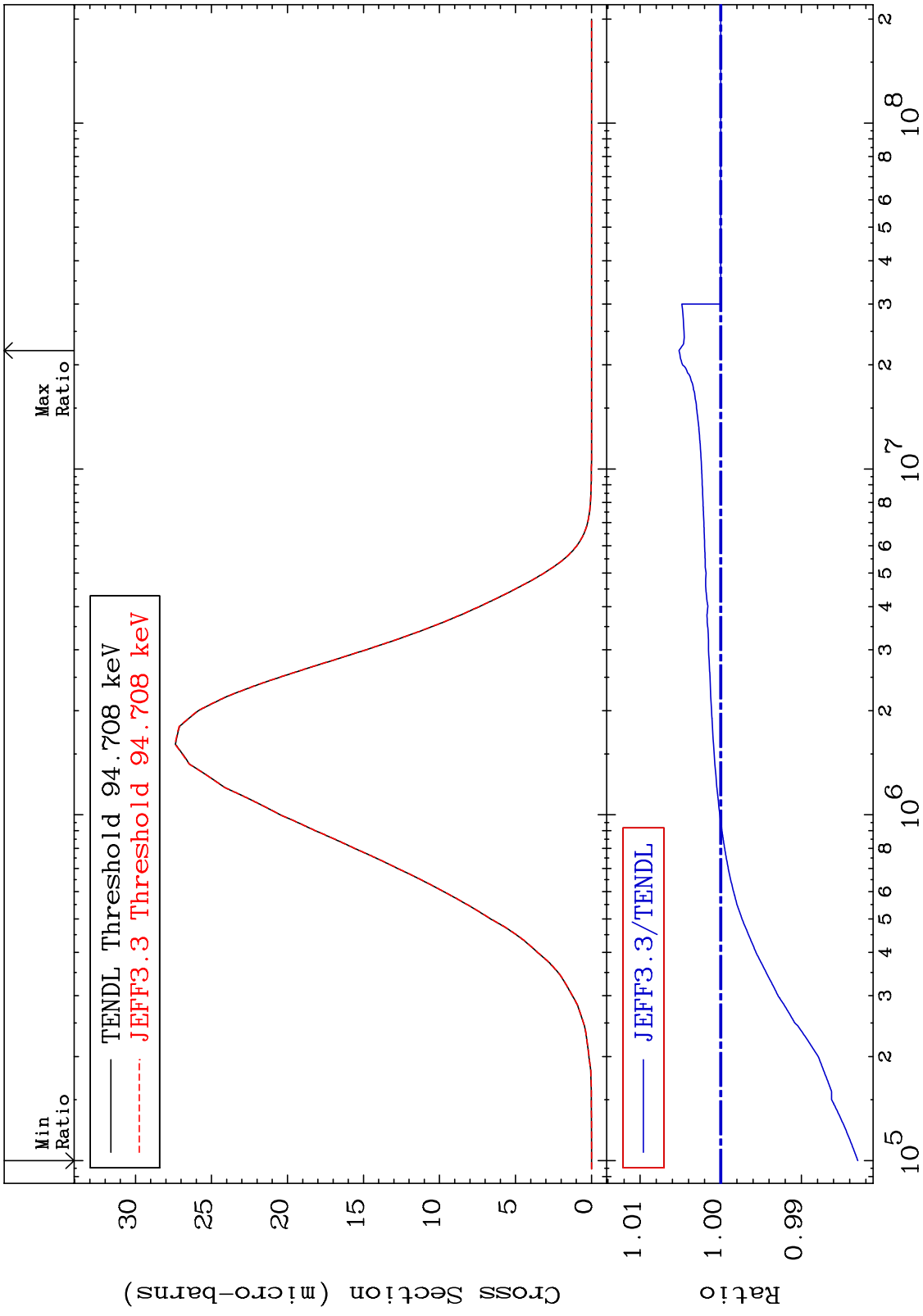
MAT 7326 MT= 54 (n,n') Level Cross Section -1.763 To 0.518 % 73-Ta-180



MAT 7326 MT= 55 (n,n') Level Cross Section 73-Ta-180
 -1.675 To 0.517 %

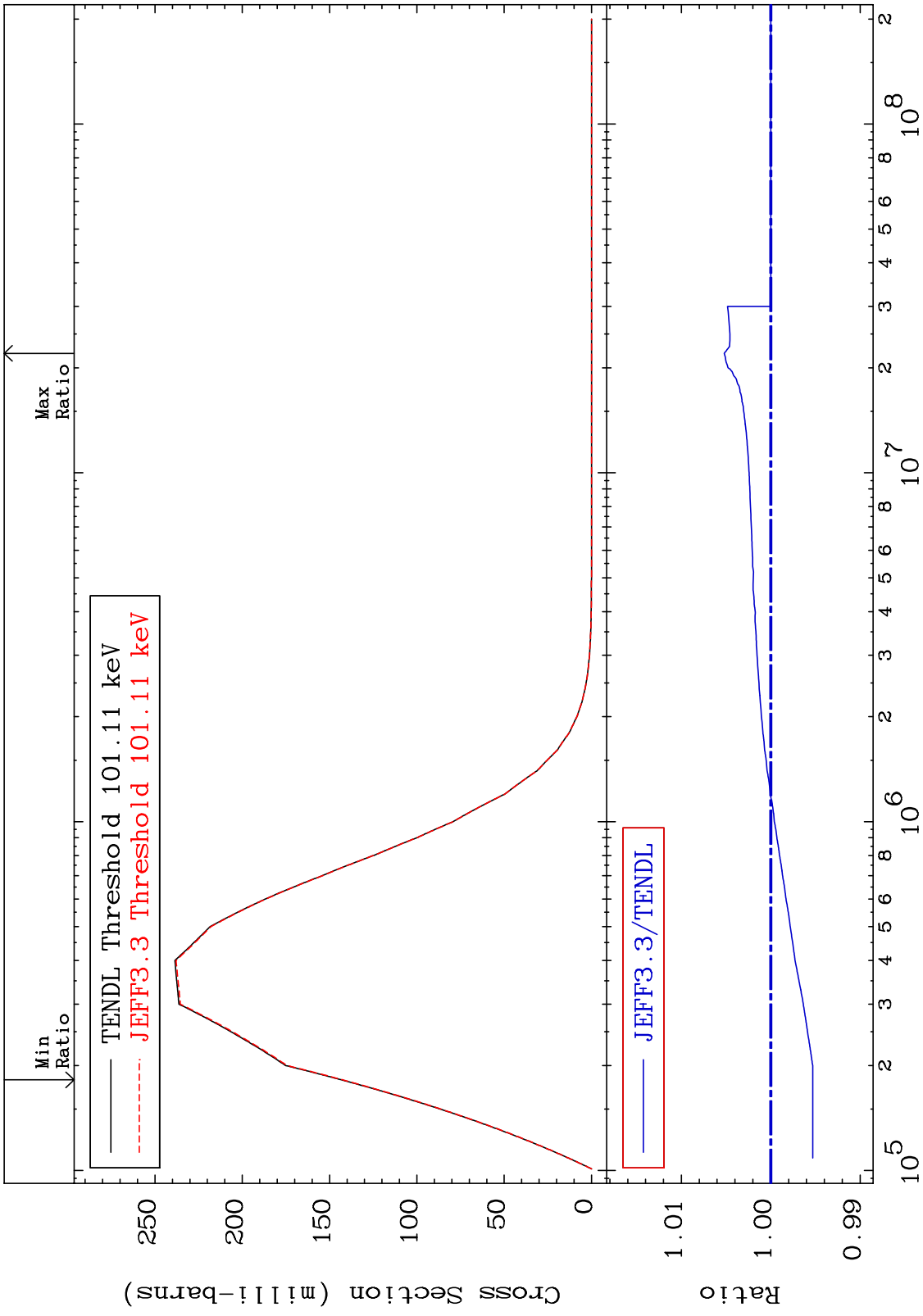


MAT 7326 MT= 56 (n,n') Level Cross Section 73-Ta-180 -1.701 To 0.517 %

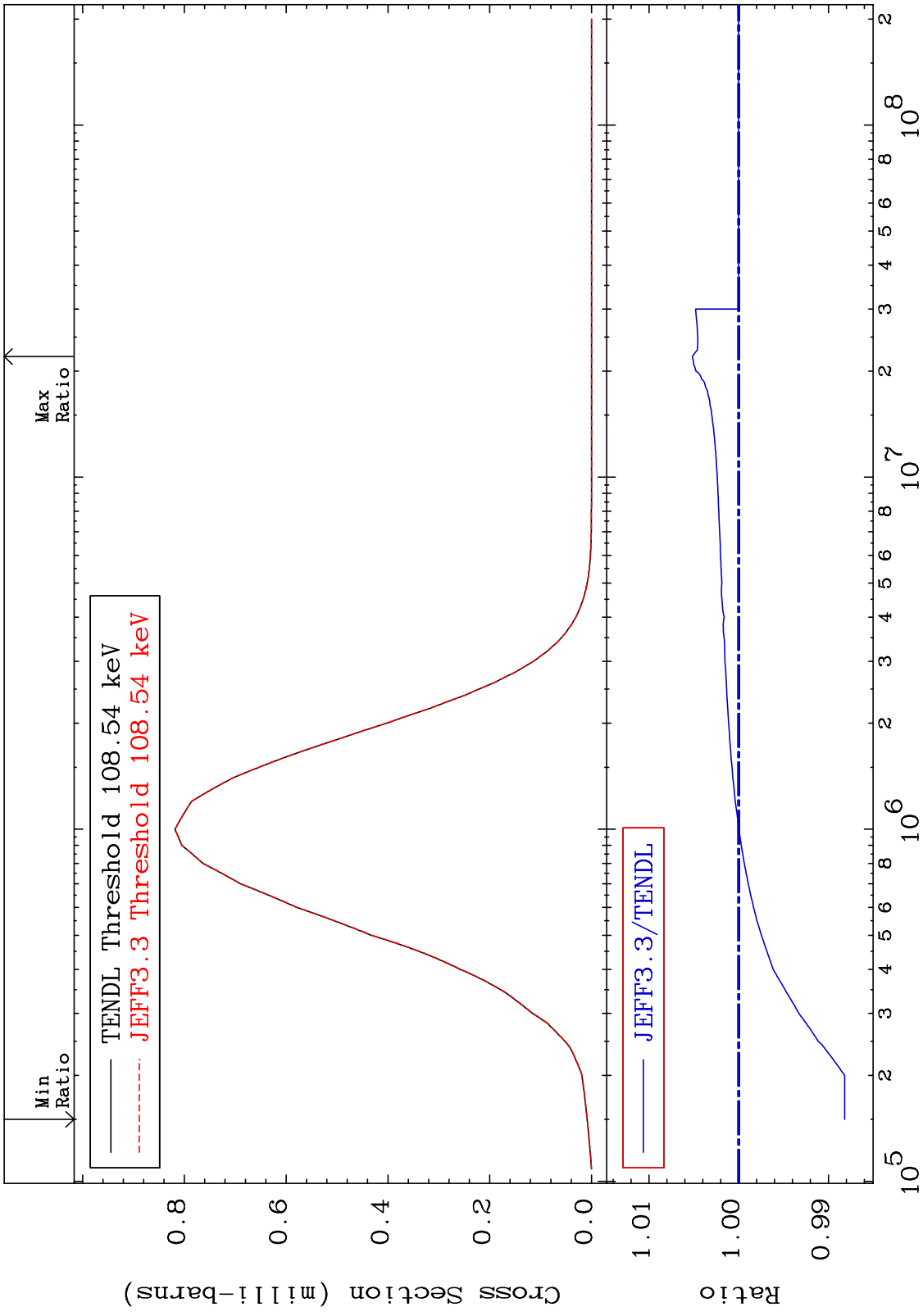


25 Incident Energy (eV) 73-Ta-180

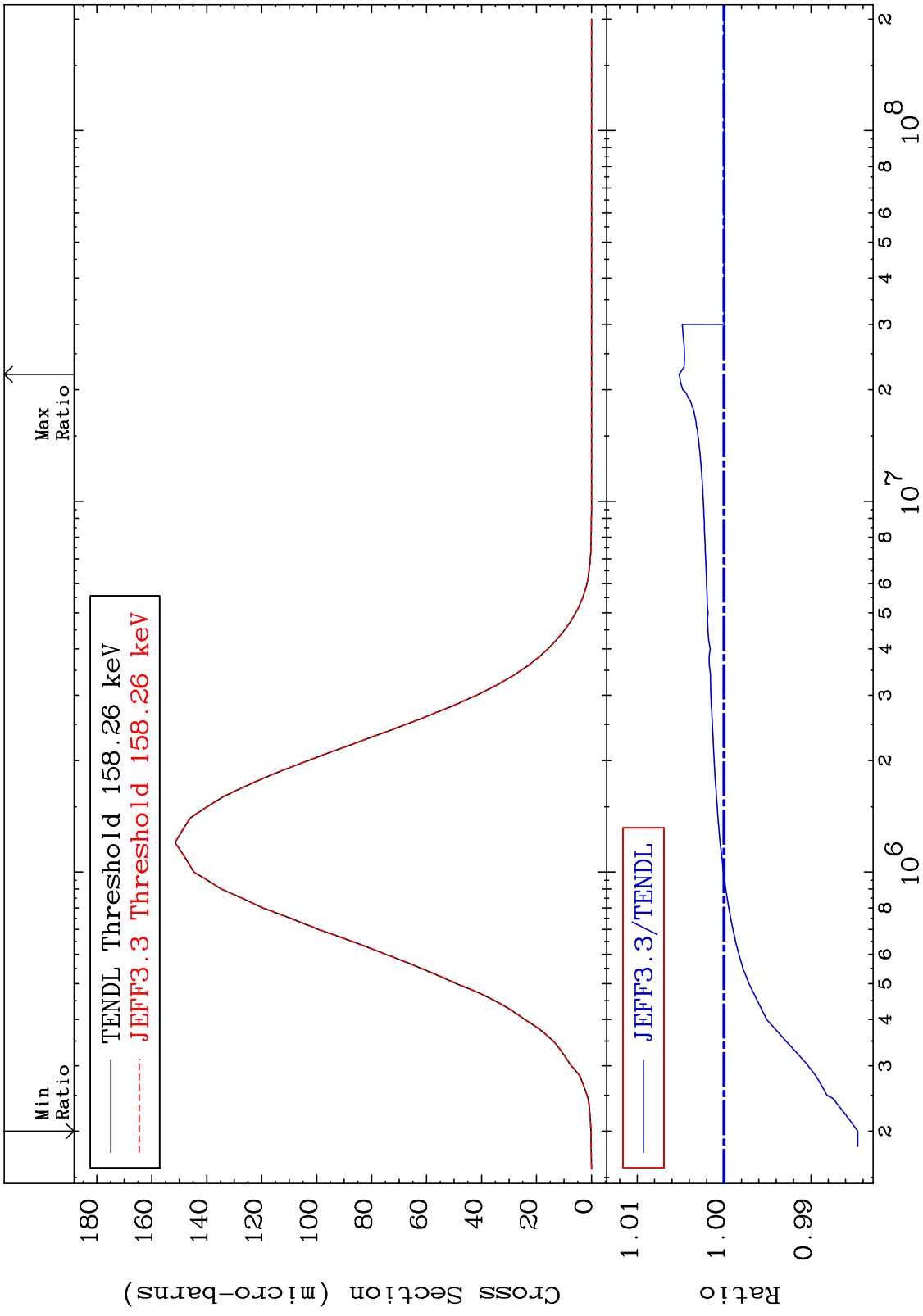
MAT 7326 MT= 57 (n,n') Level Cross Section 73-Ta-180 -0.469 To 0.521 %



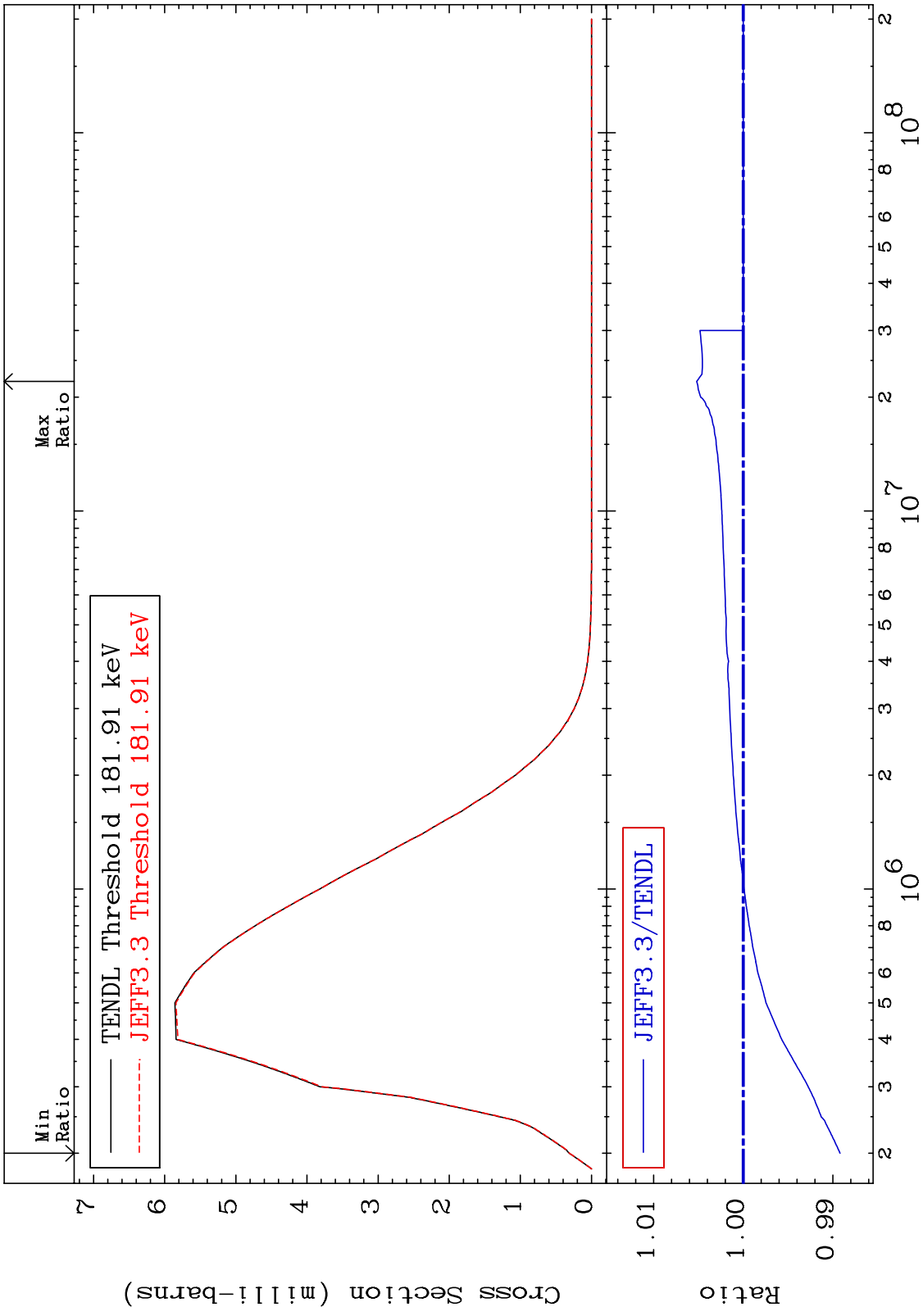
MAT 7326 MT= 58 (n,n') Level Cross Section -1.181 To 0.518 % 73-Ta-180



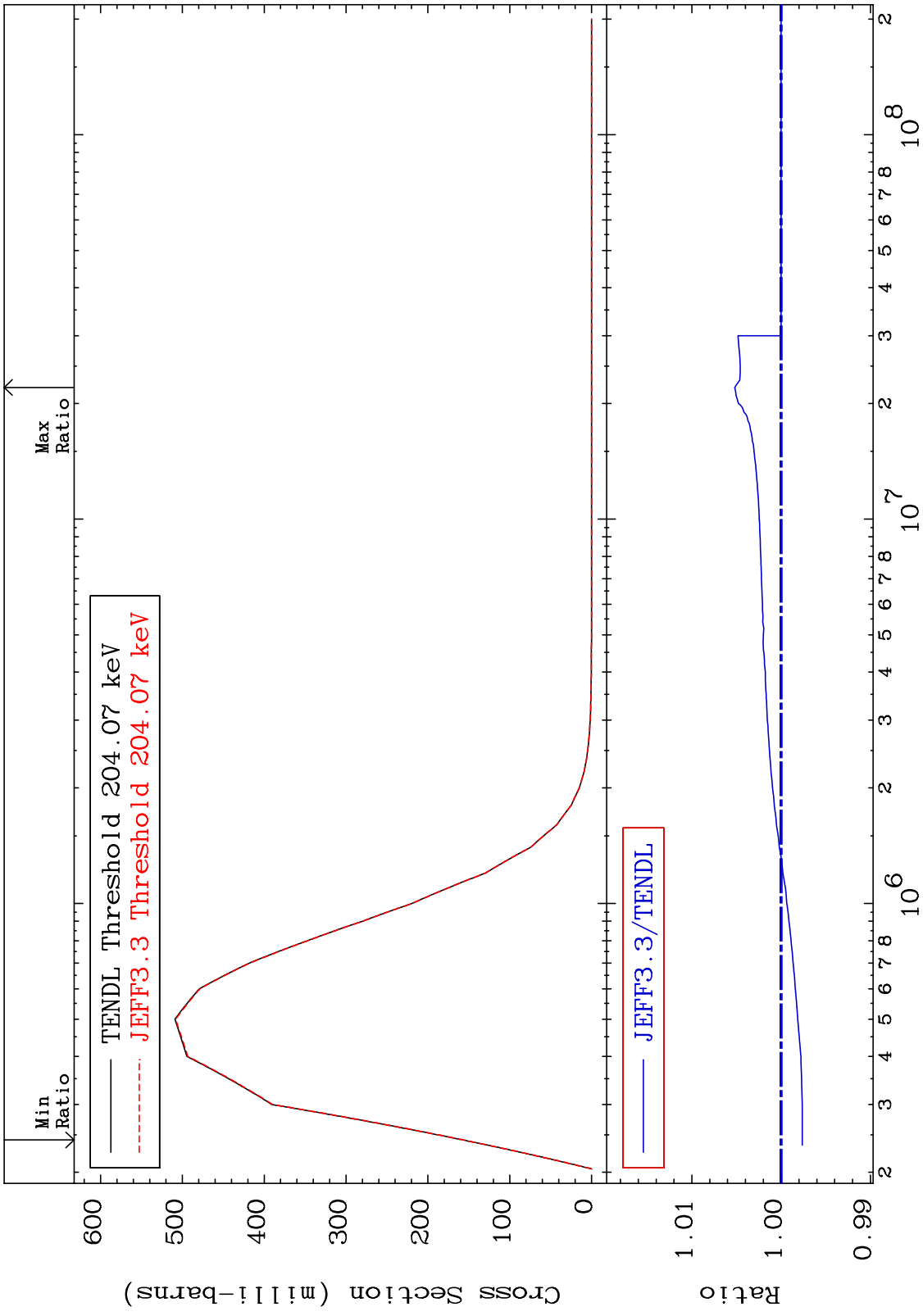
MAT 7326 MT= 59 (n,n') Level Cross Section 73-Ta-180
 -1.540 To 0.518 %



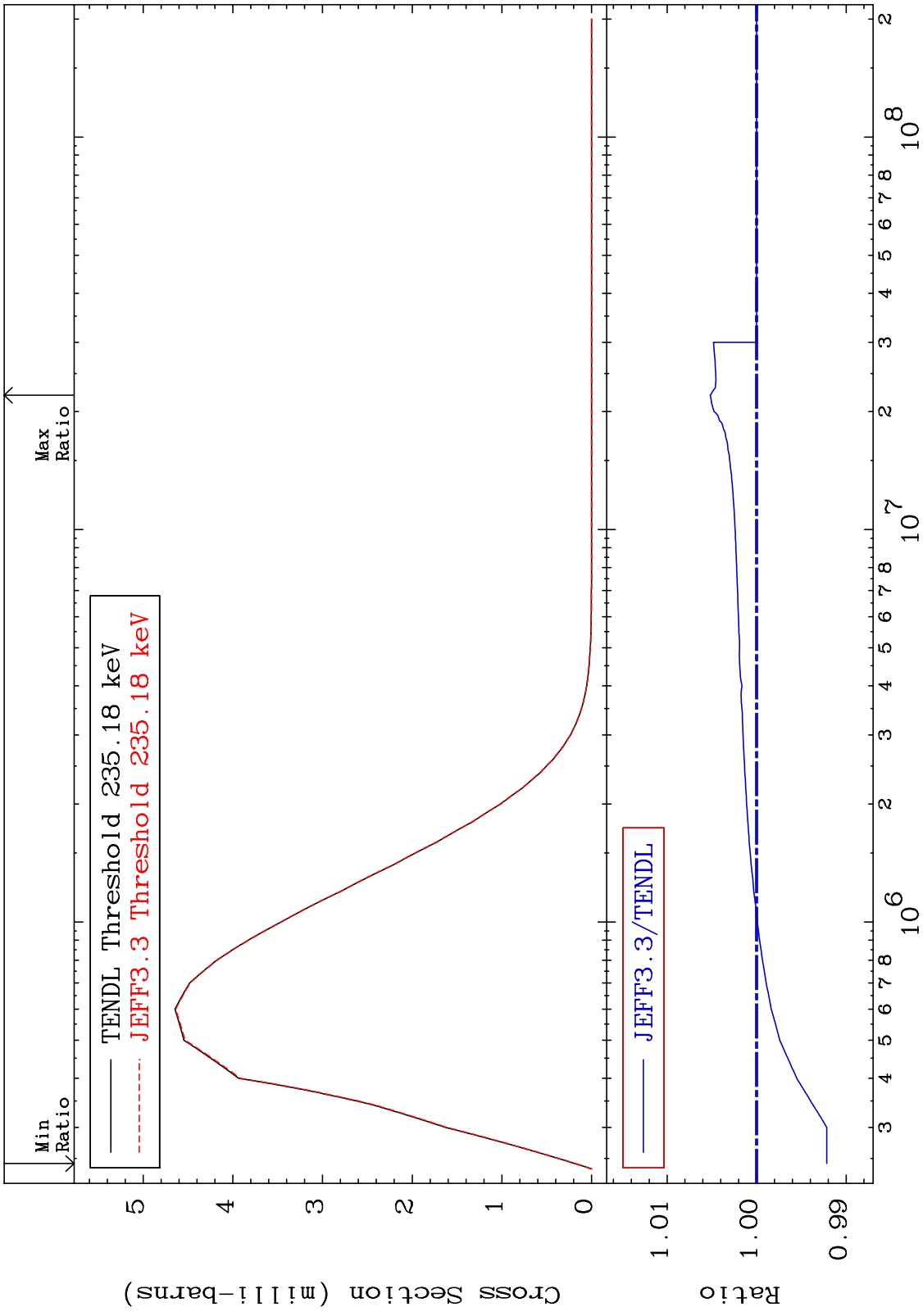
MAT 7326 MT= 60 (n,n') Level Cross Section -1.080 To 0.519 % 73-Ta-180



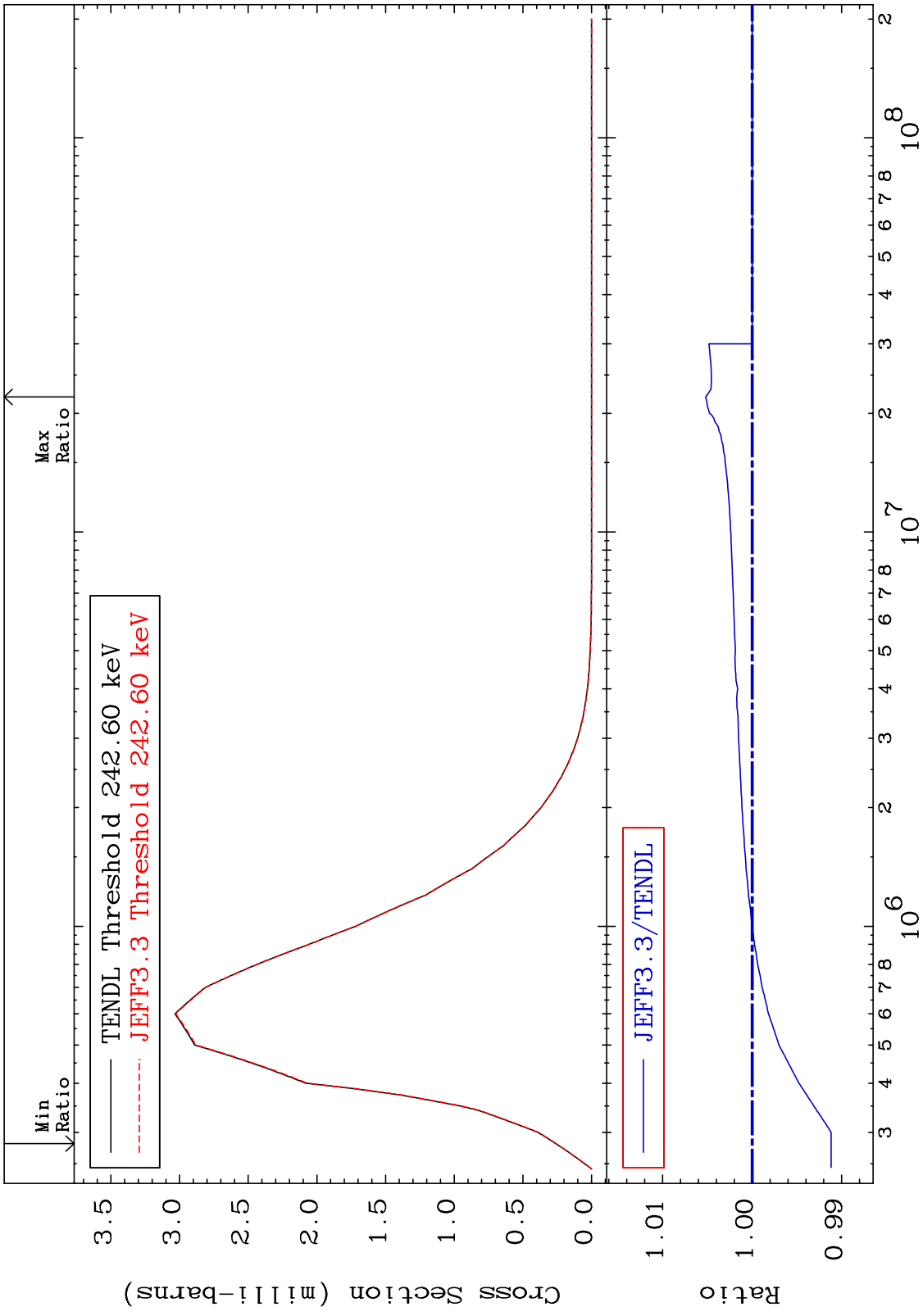
MAT 7326 MT= 61 (n,n') Level Cross Section 73-Ta-180
 -0.237 To 0.521 %



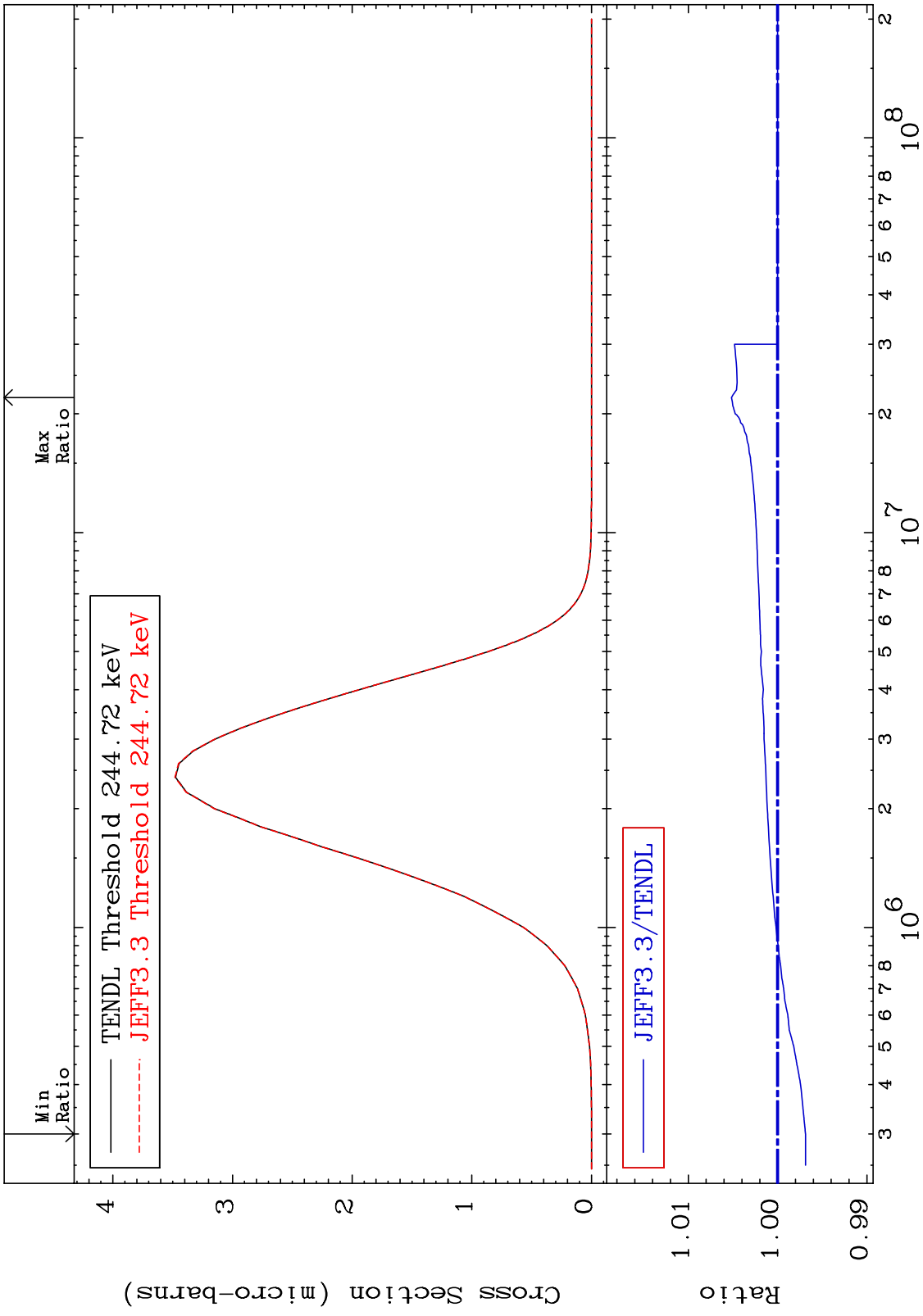
MAT 7326 MT= 62 (n,n') Level Cross Section 73-Ta-180 -0.783 To 0.518 %



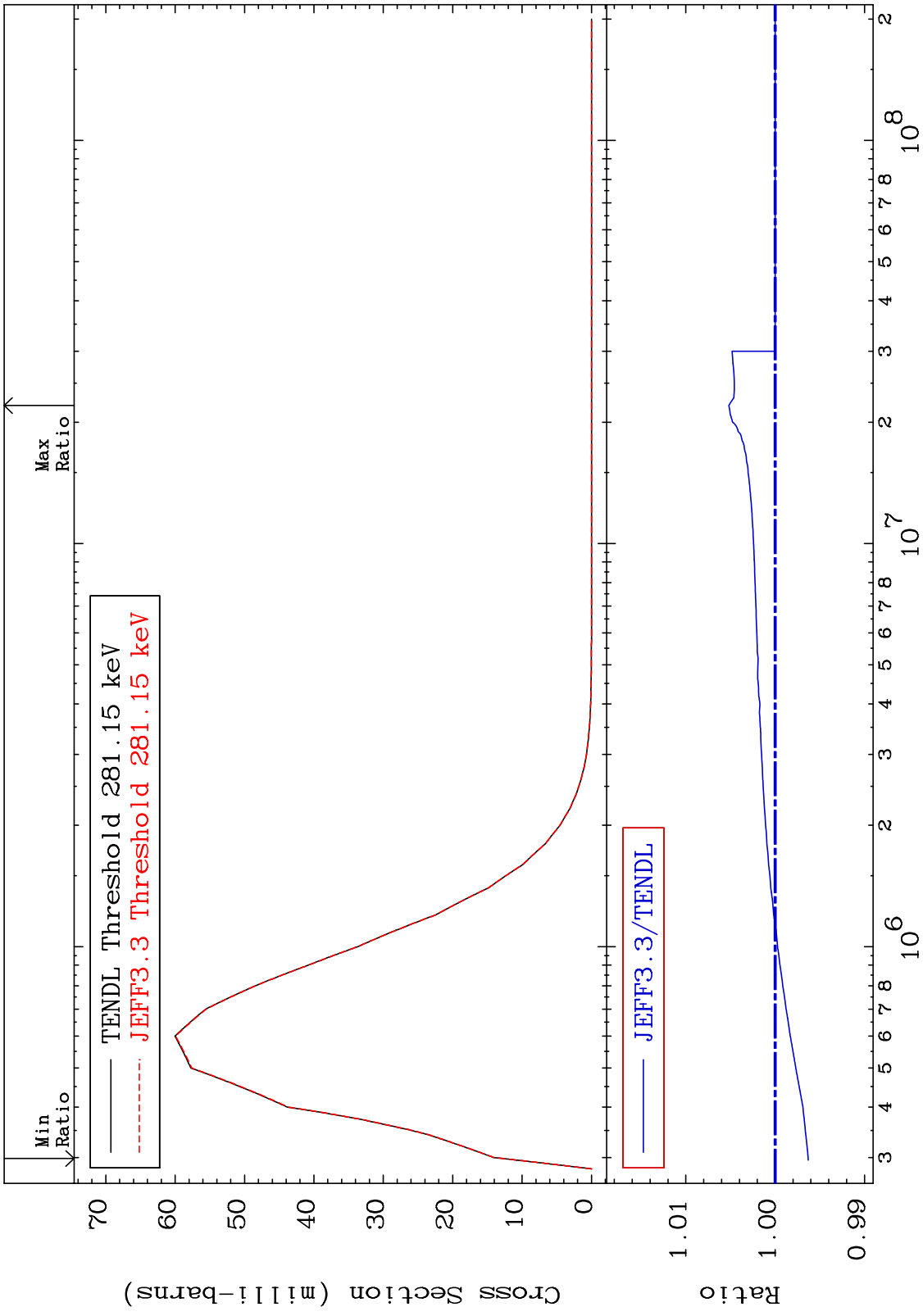
MAT 7326 MT= 63 (n,n') Level Cross Section 73-Ta-180
 -0.882 To 0.518 %



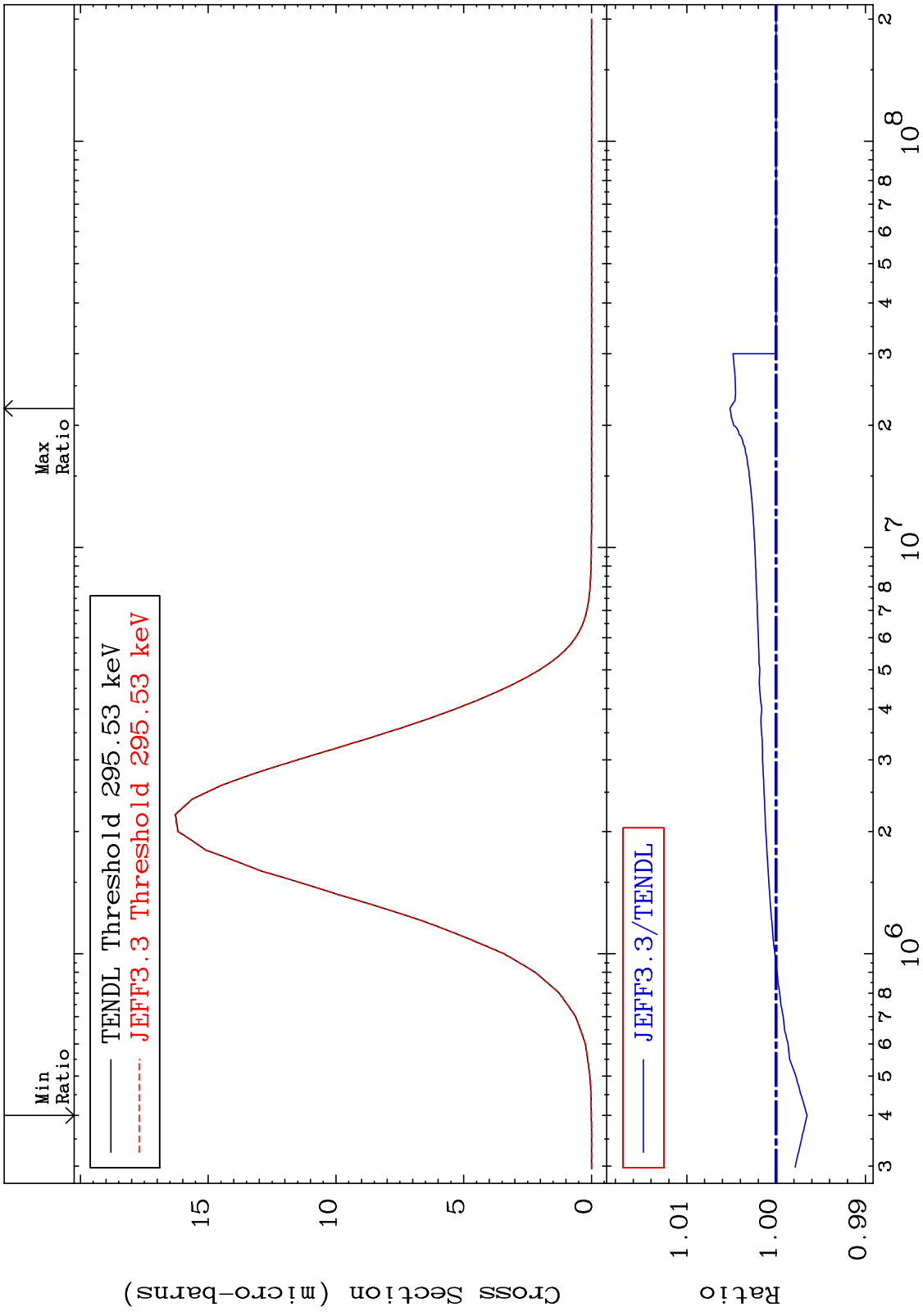
MAT 7326 MT= 64 (n,n') Level Cross Section 73-Ta-180
 -0.312 To 0.517 %



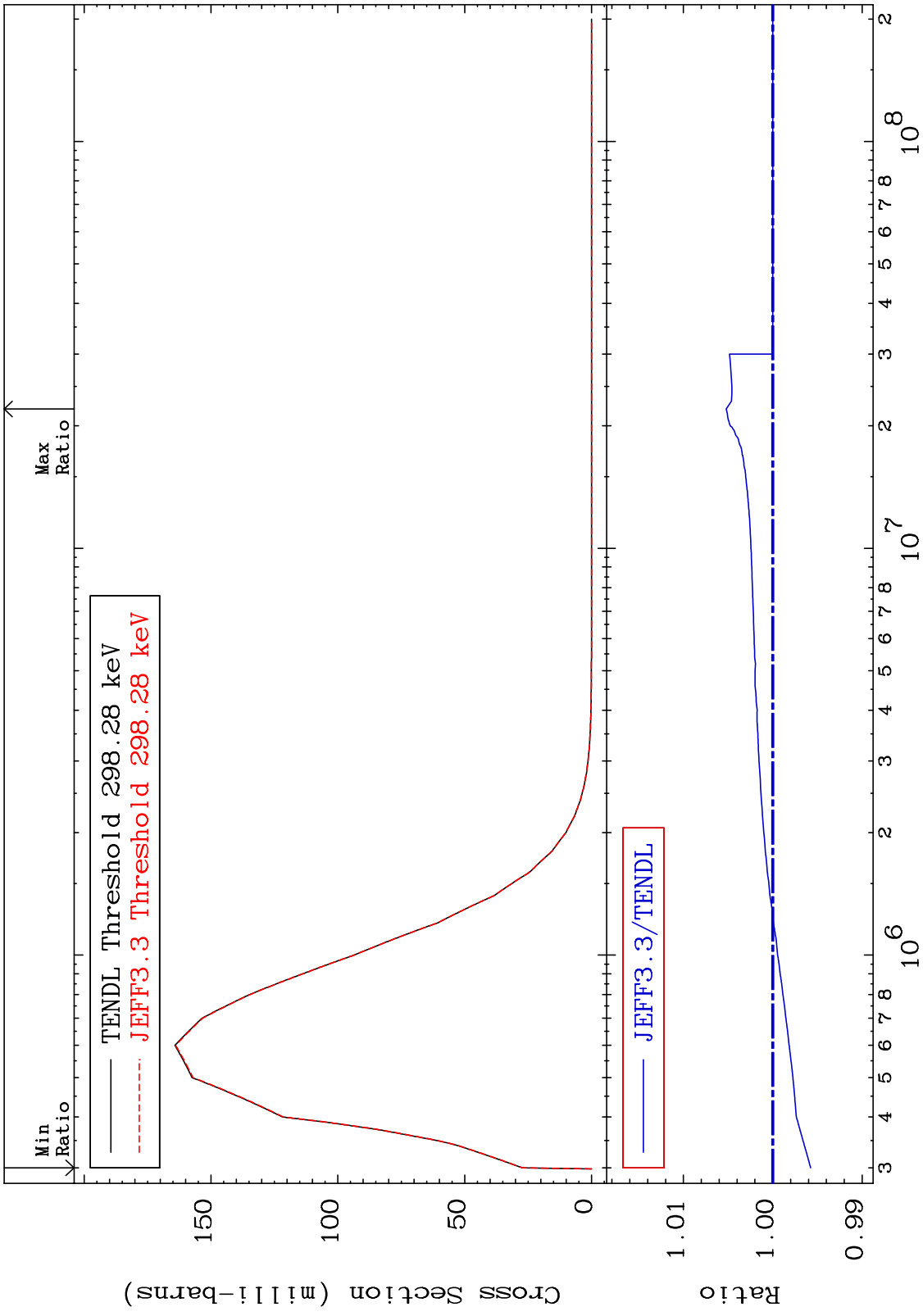
MAT 7326 MT= 65 (n,n') Level Cross Section 73-Ta-180 -0.369 To 0.520 %



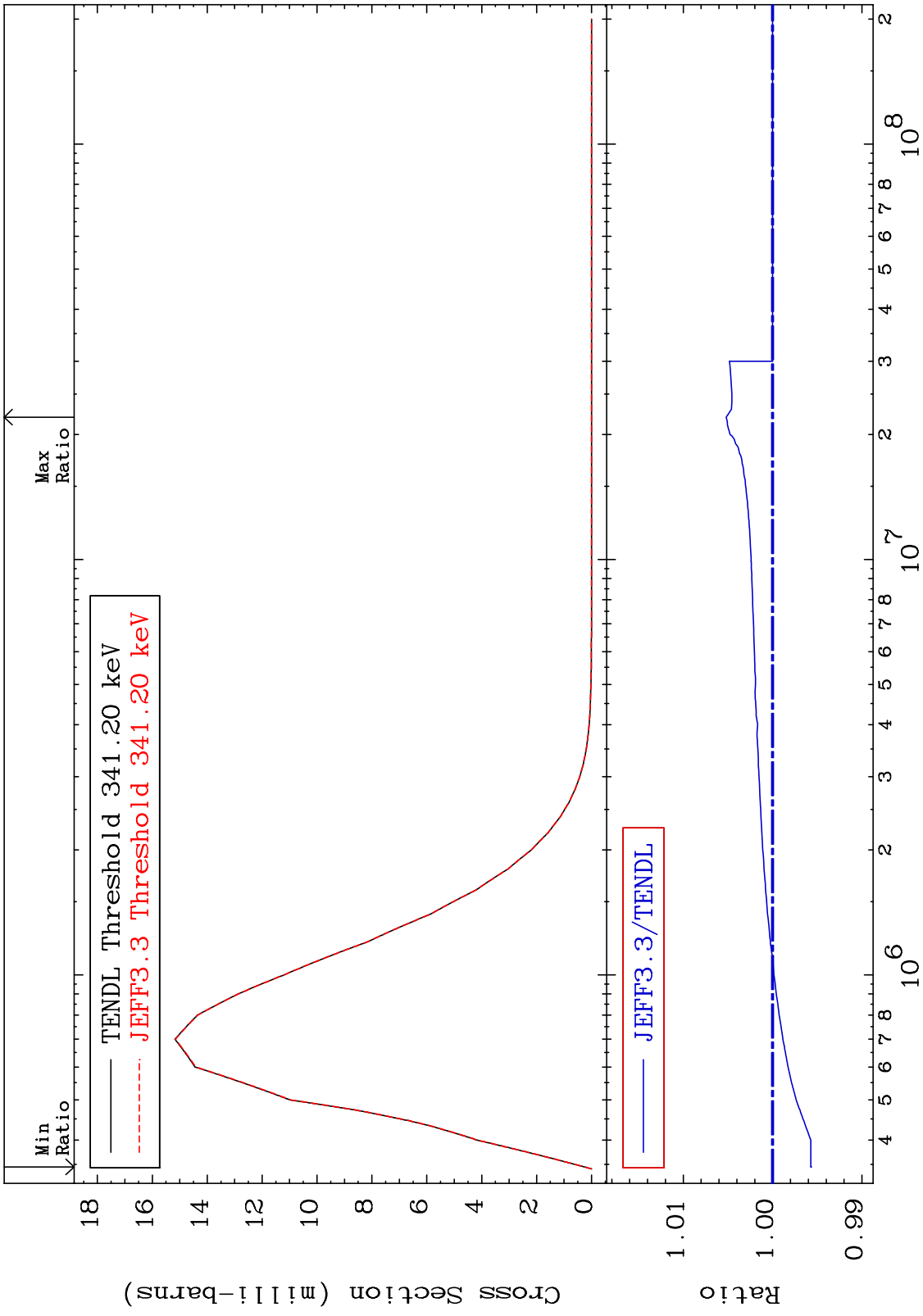
MAT 7326 MT= 66 (n,n') Level Cross Section 73-Ta-180
 -0.346 To 0.518 %



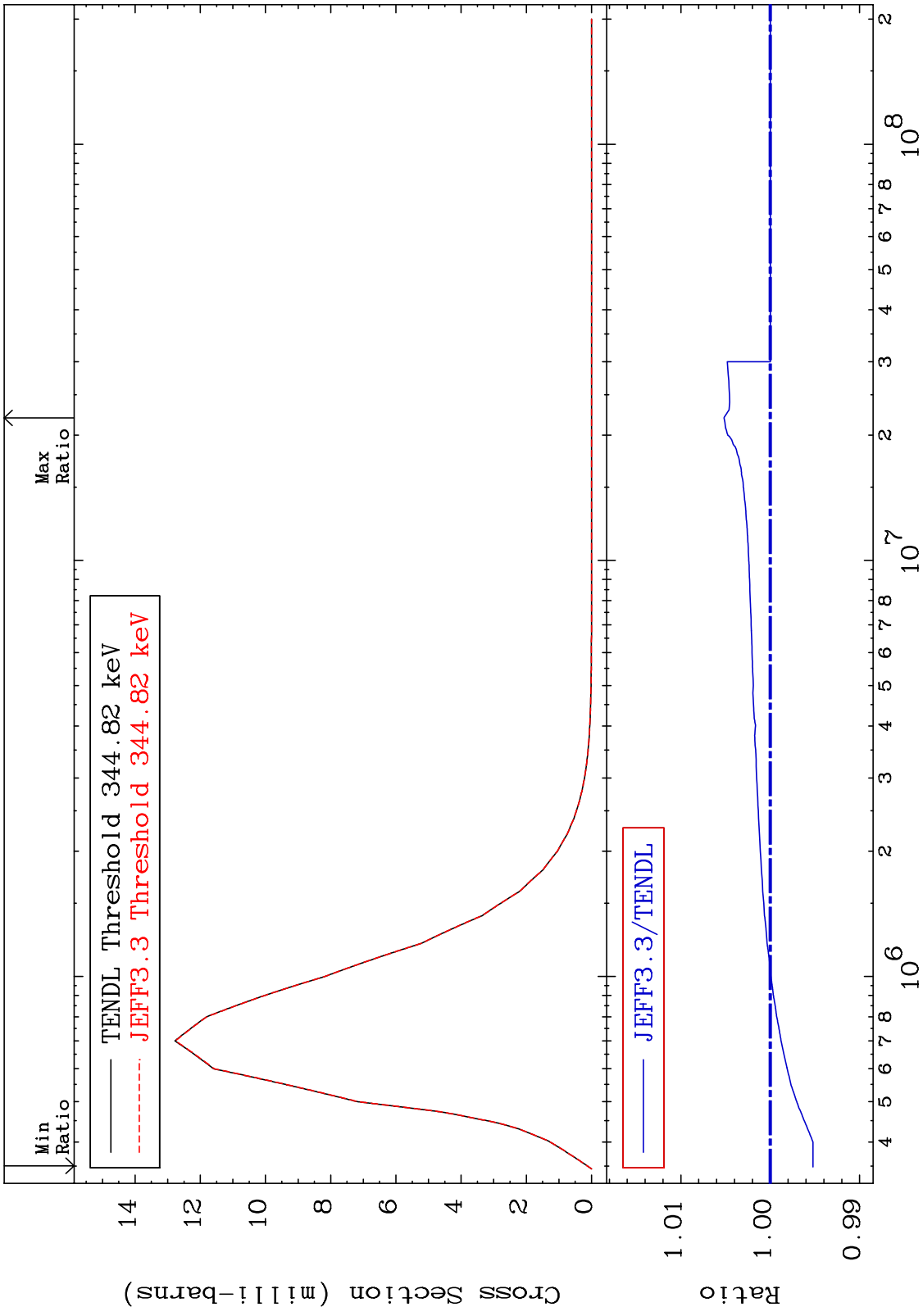
MAT 7326 MT= 67 (n,n') Level Cross Section 73-Ta-180 -0.423 To 0.520 %



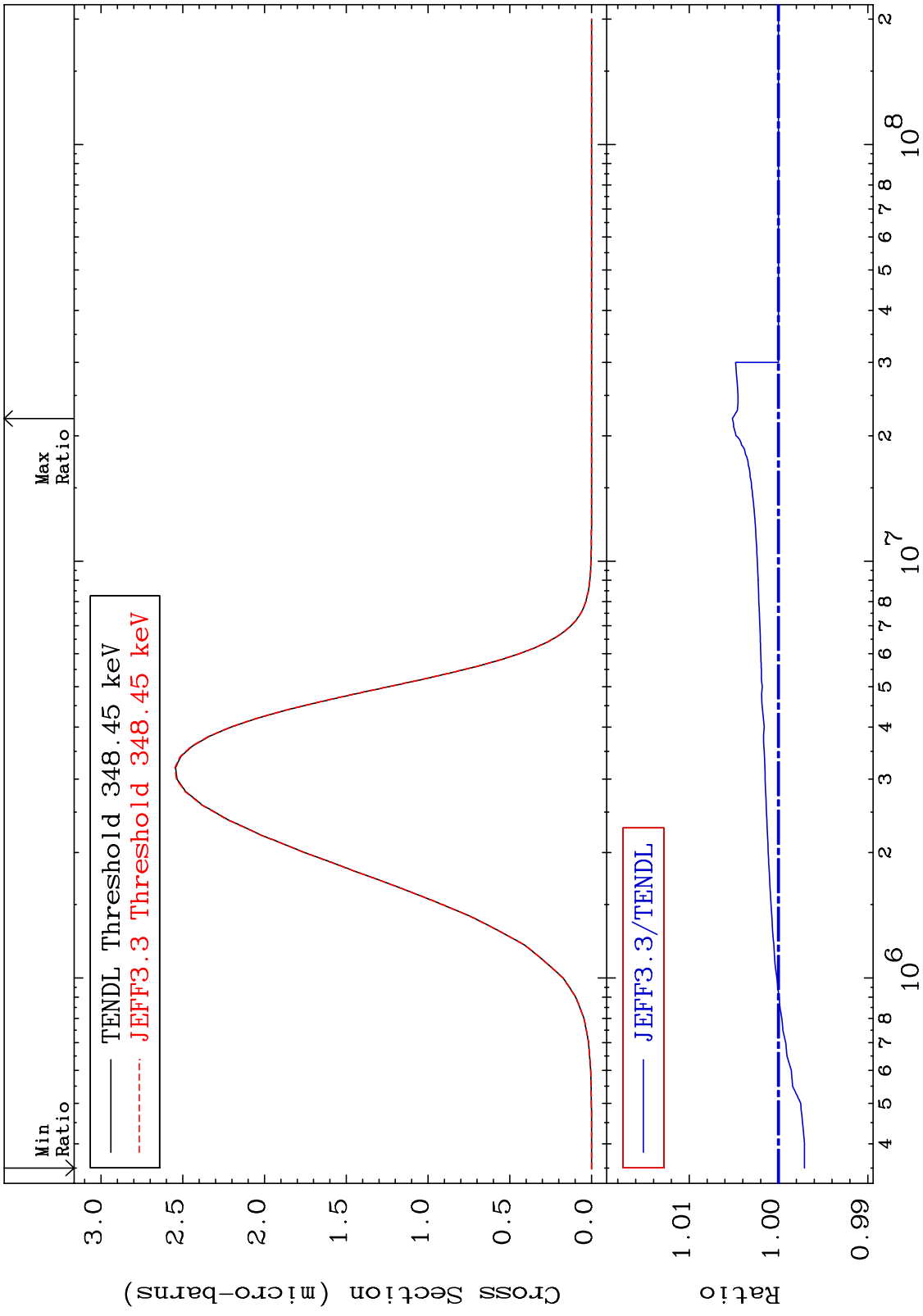
MAT 7326 MT= 68 (n,n') Level Cross Section 73-Ta-180
 -0.427 To 0.520 %



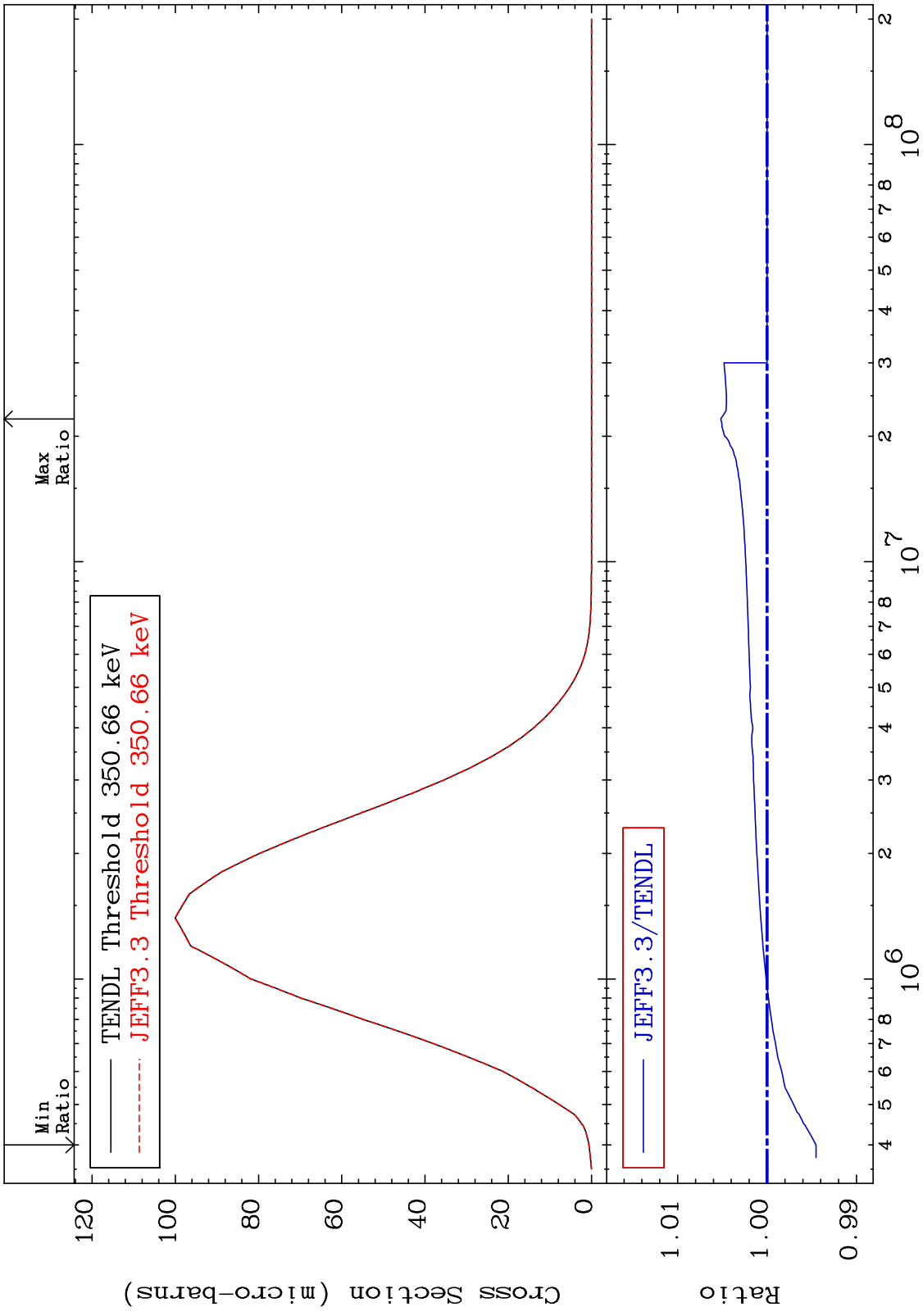
MAT 7326 MT= 69 (n,n') Level Cross Section 73-Ta-180 -0.478 To 0.518 %



MAT 7326 MT= 70 (n,n') Level Cross Section 73-Ta-180
 -0.291 To 0.517 %

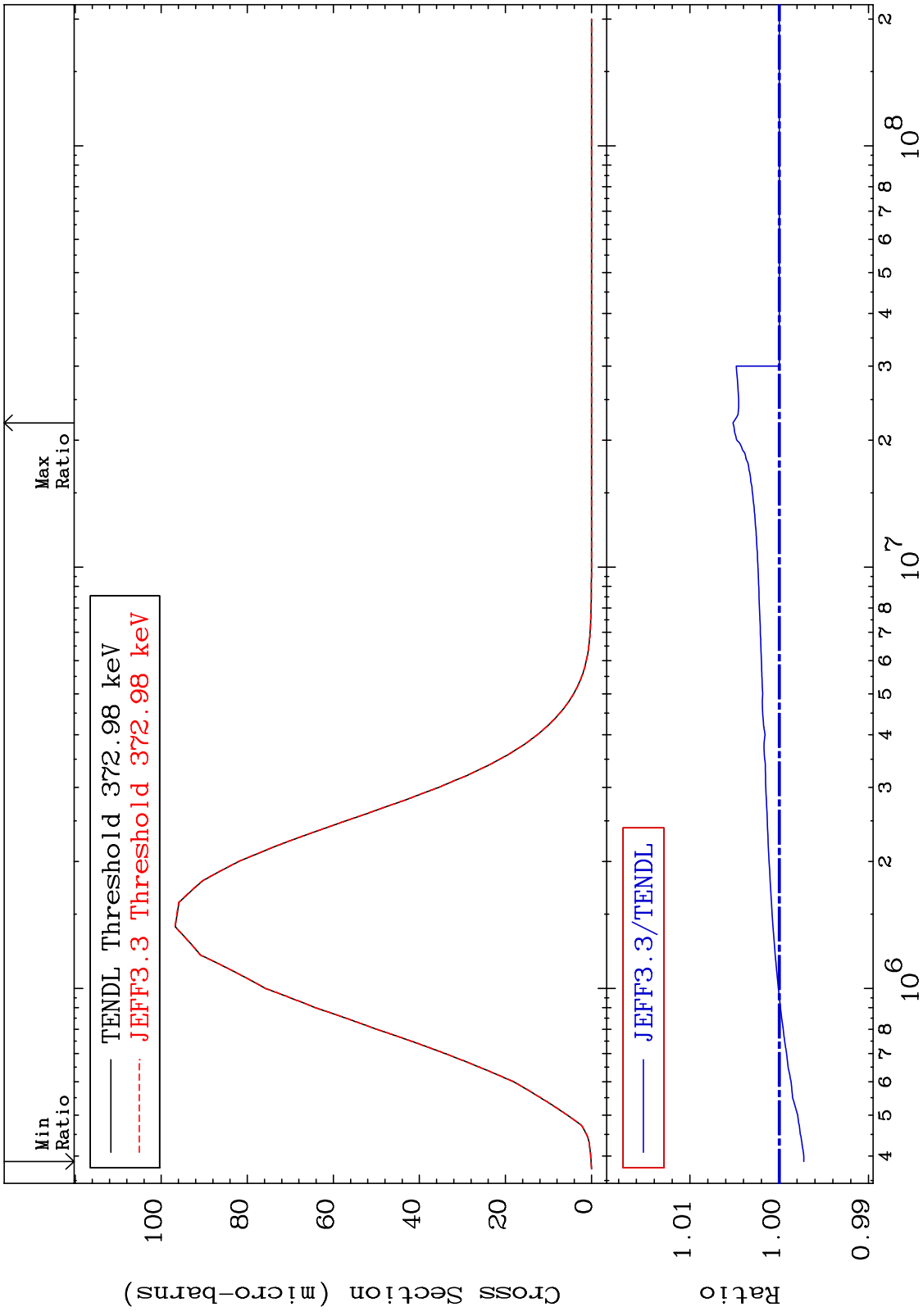


MAT 7326 MT= 71 (n,n') Level Cross Section 73-Ta-180 -0.548 To 0.518 %

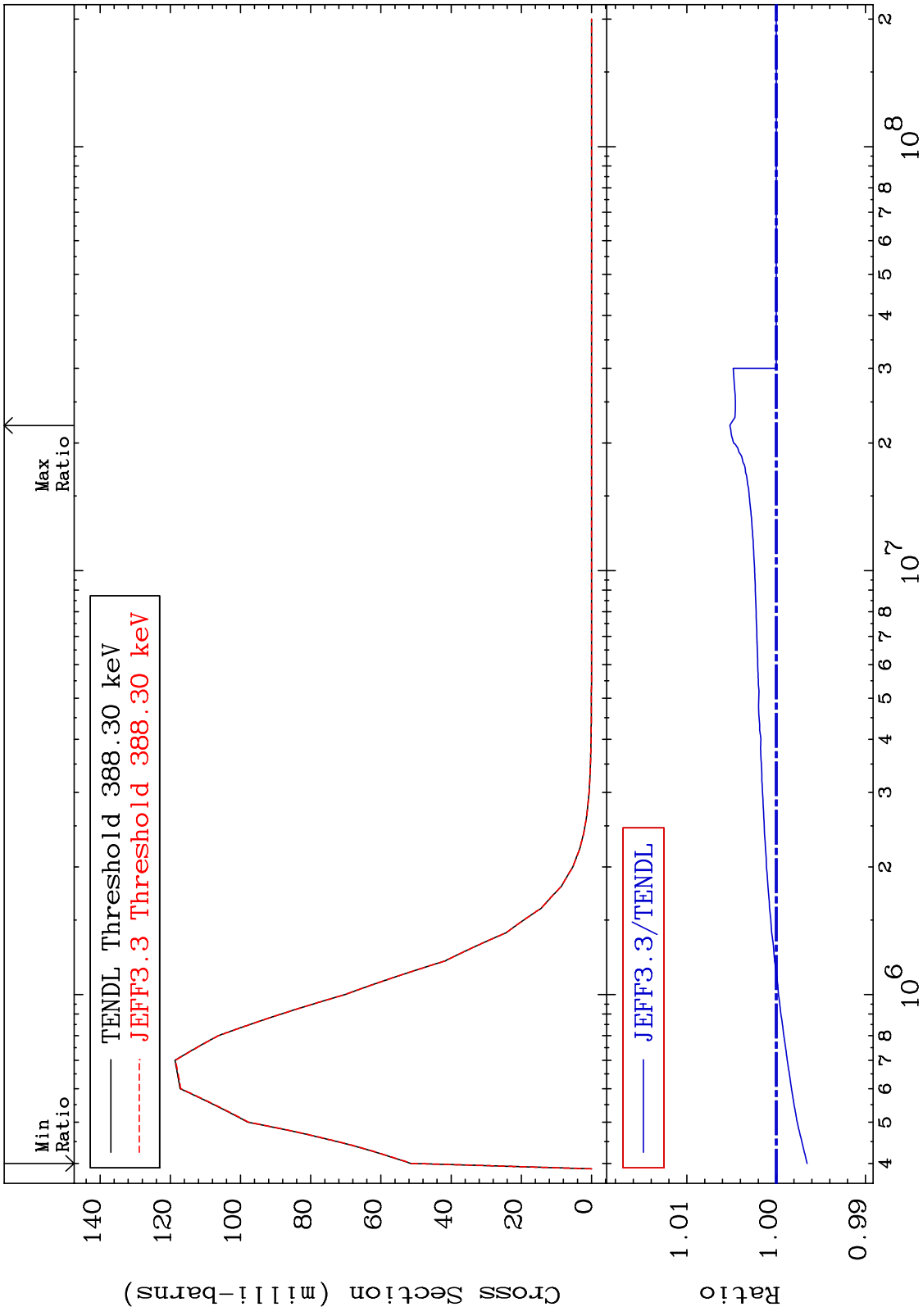


40 Incident Energy (eV) 73-Ta-180

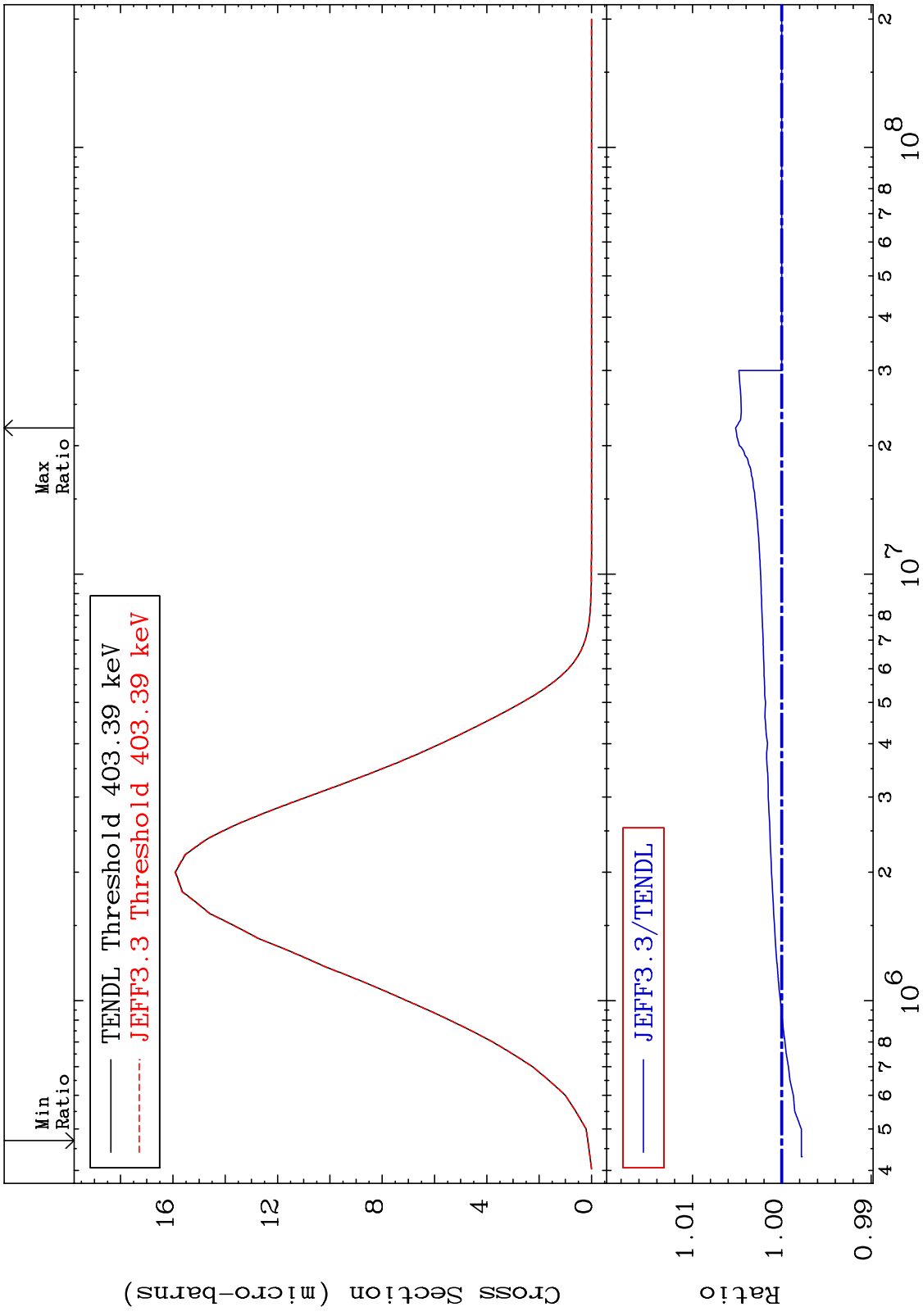
MAT 7326 MT= 72 (n,n') Level Cross Section 73-Ta-180
 -0.276 To 0.518 %



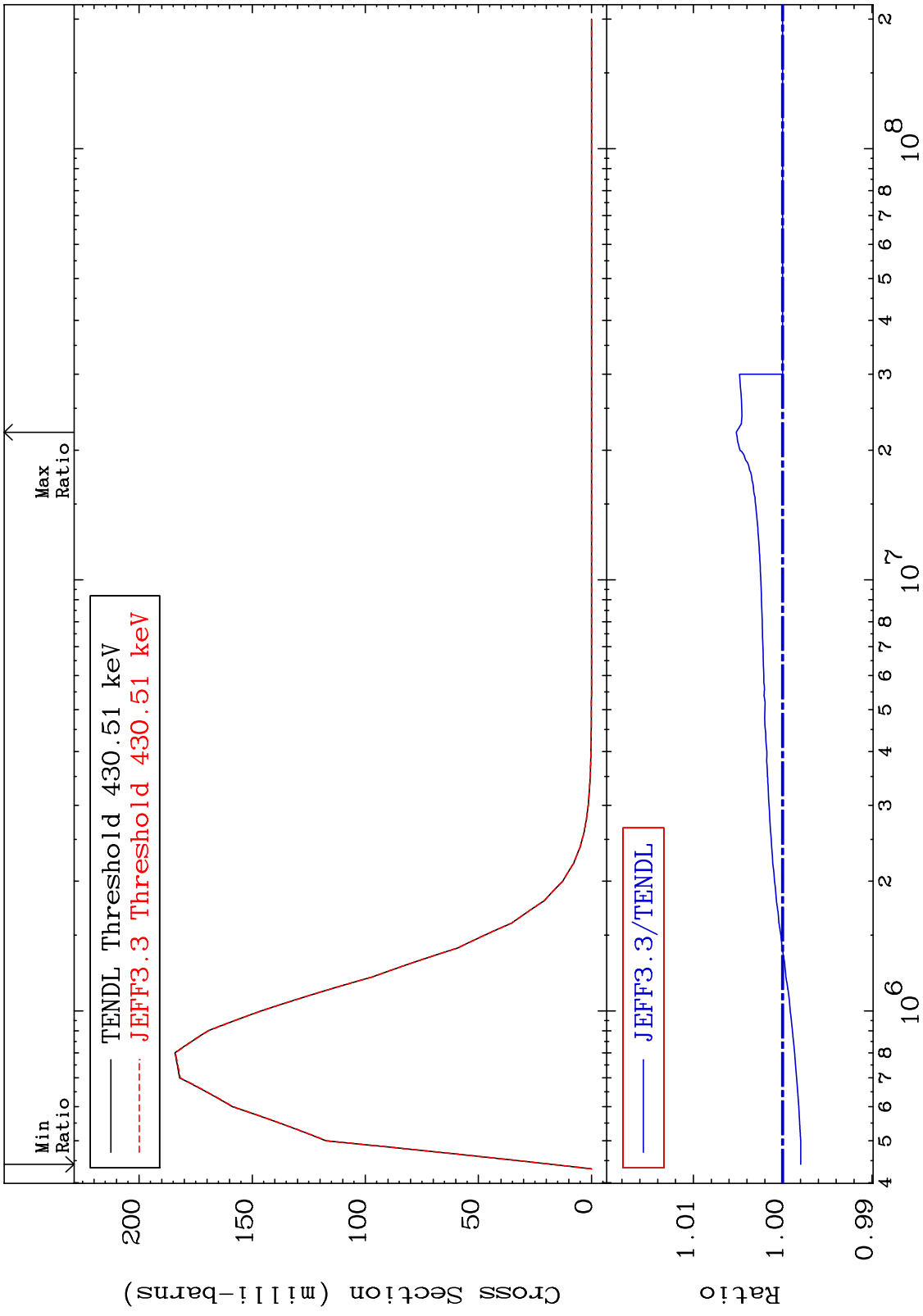
MAT 7326 MT= 73 (n,n') Level Cross Section 73-Ta-180
 -0.346 To 0.519 %



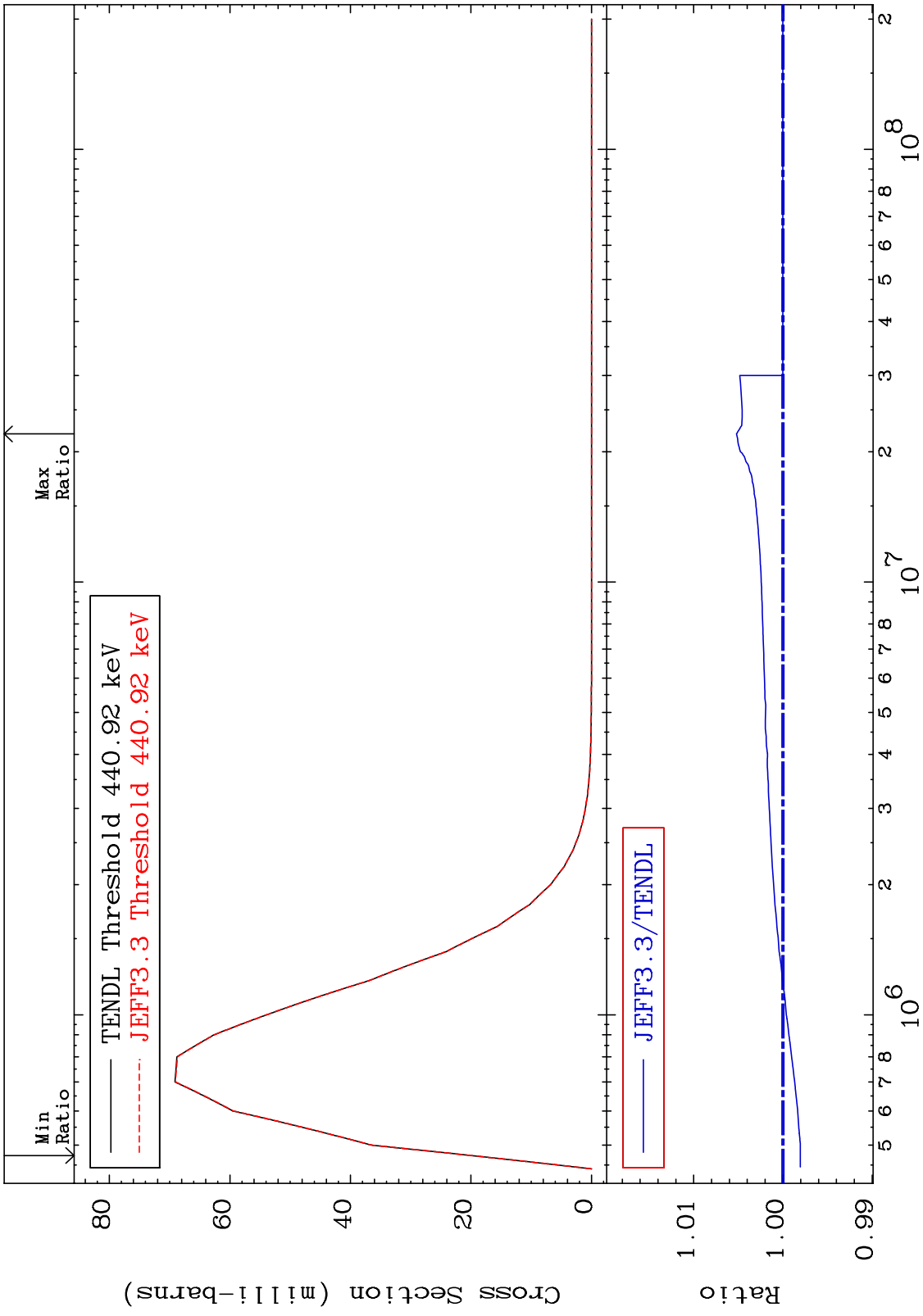
MAT 7326 MT= 74 (n,n') Level Cross Section 73-Ta-180
 -0.218 To 0.517 %



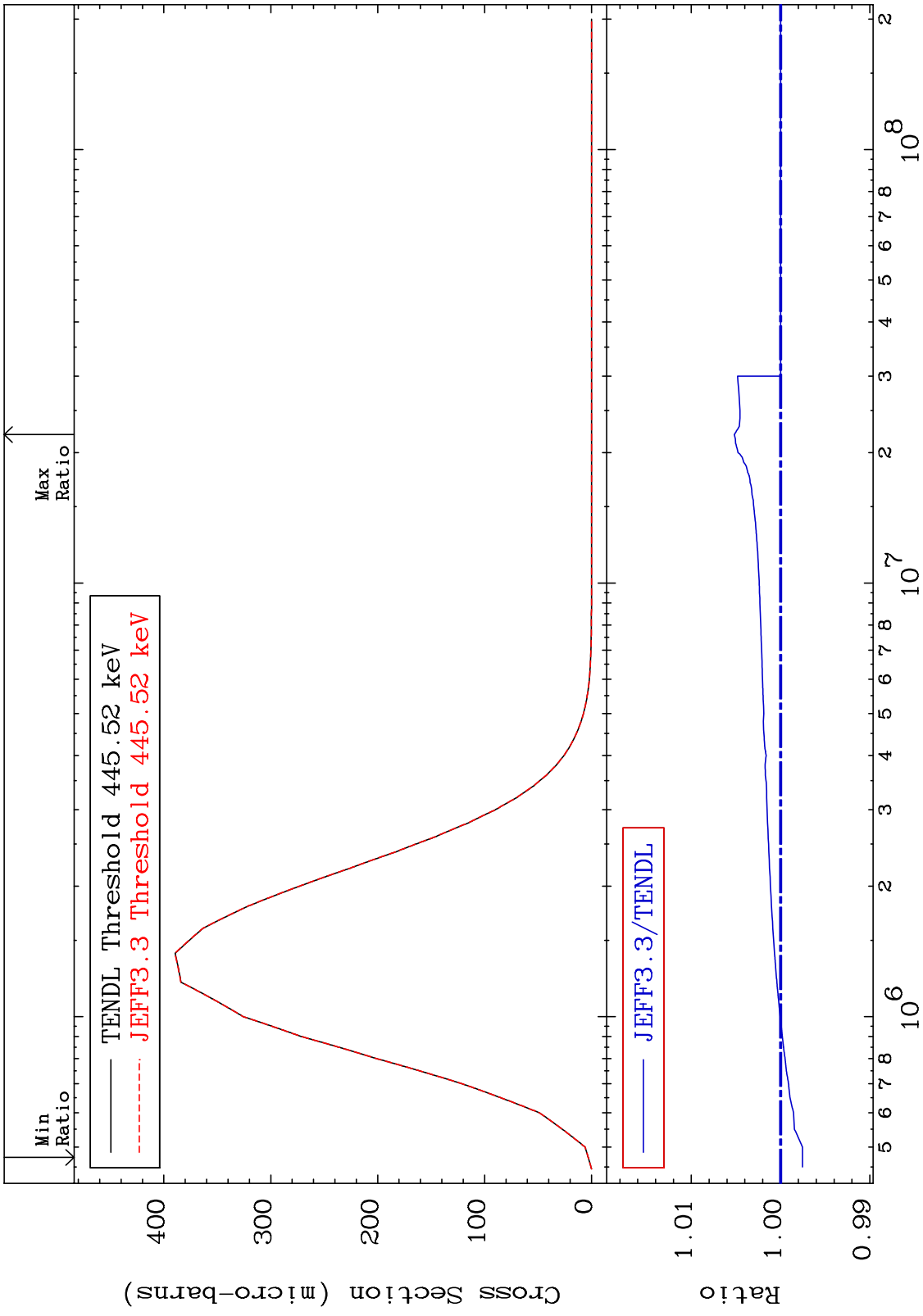
MAT 7326 MT= 75 (n,n') Level Cross Section 73-Ta-180
 -0.202 To 0.521 %



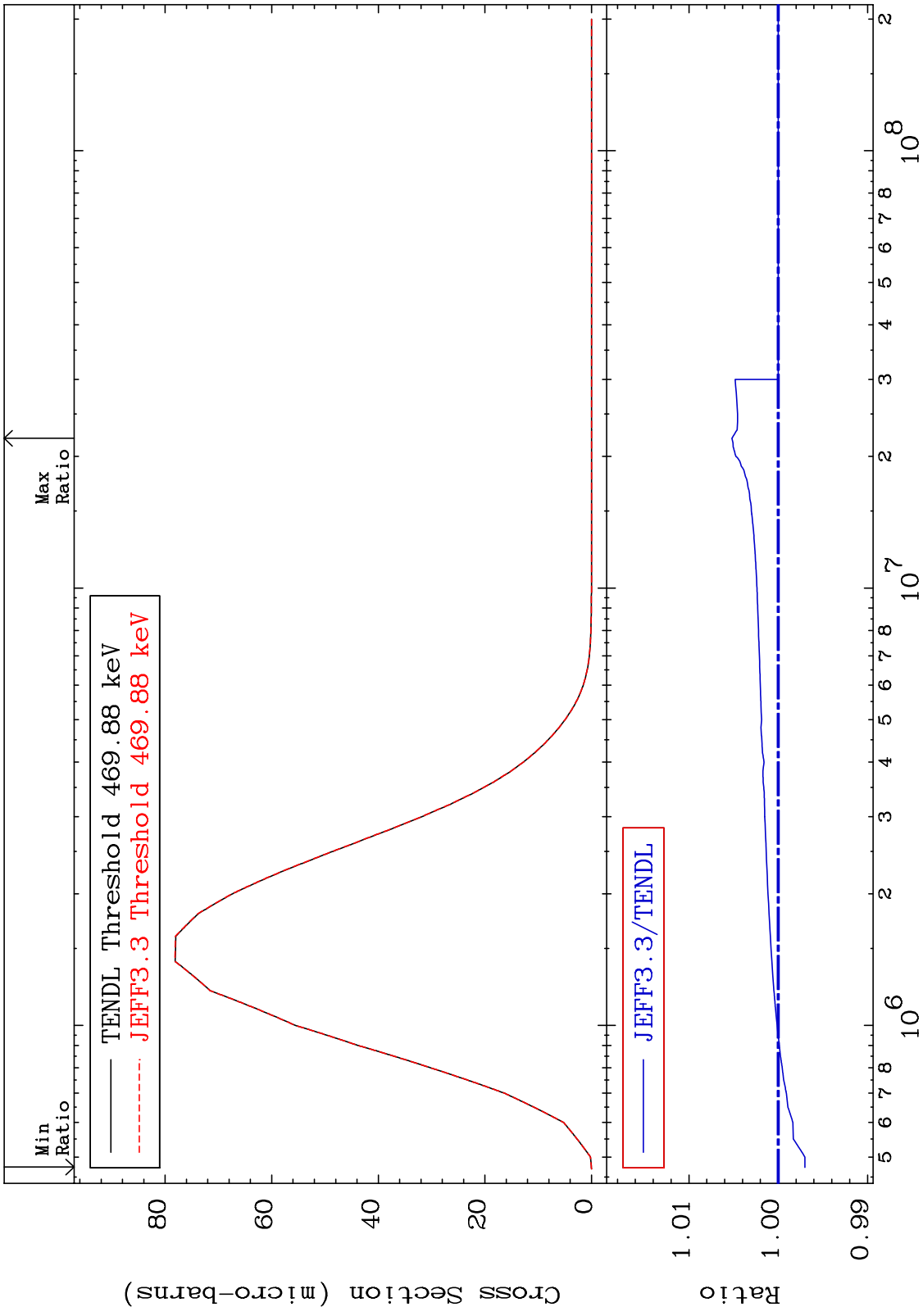
MAT 7326 MT= 76 (n,n') Level Cross Section 73-Ta-180
 -0.196 To 0.520 %



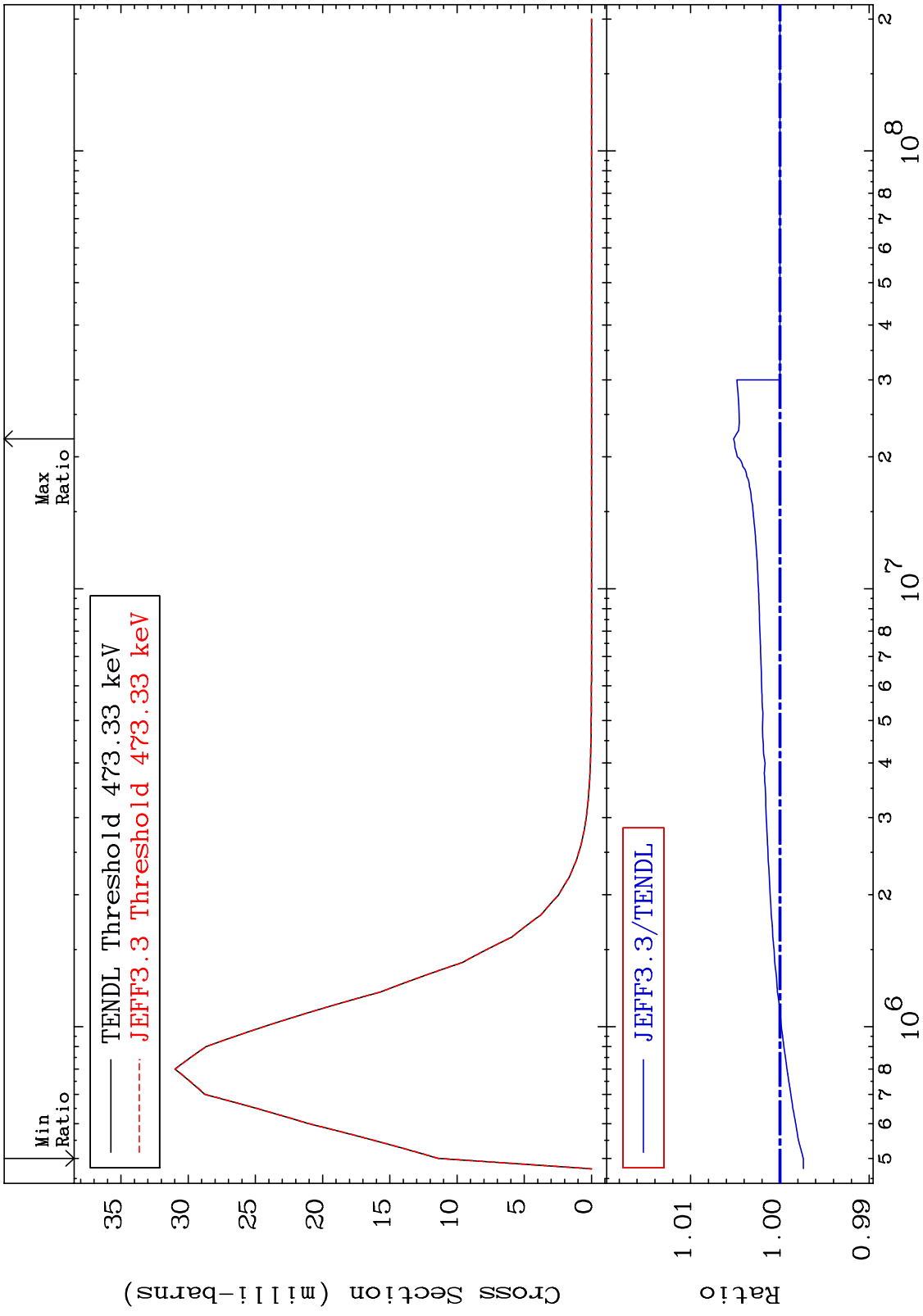
MAT 7326 MT= 77 (n,n') Level Cross Section 73-Ta-180
 -0.247 To 0.518 %



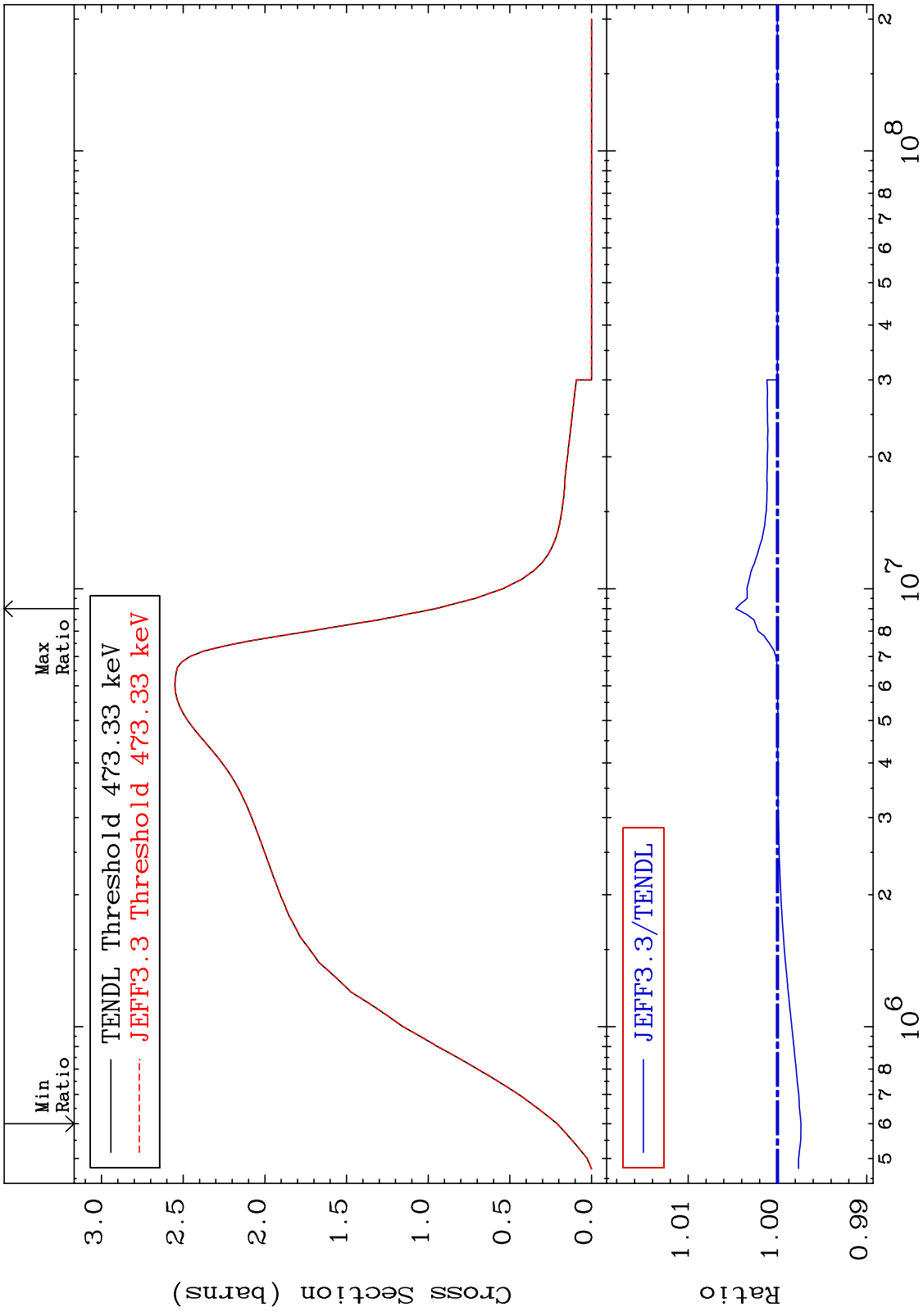
MAT 7326 MT= 78 (n,n') Level Cross Section 73-Ta-180
 -0.299 To 0.518 %



MAT 7326 MT= 79 (n,n') Level Cross Section 73-Ta-180
 -0.261 To 0.519 %



MAT 7326 (n, n') Continuum Cross Section 73-Ta-180
 -0.264 To 0.466 %



MAT 7326

(n, γ)

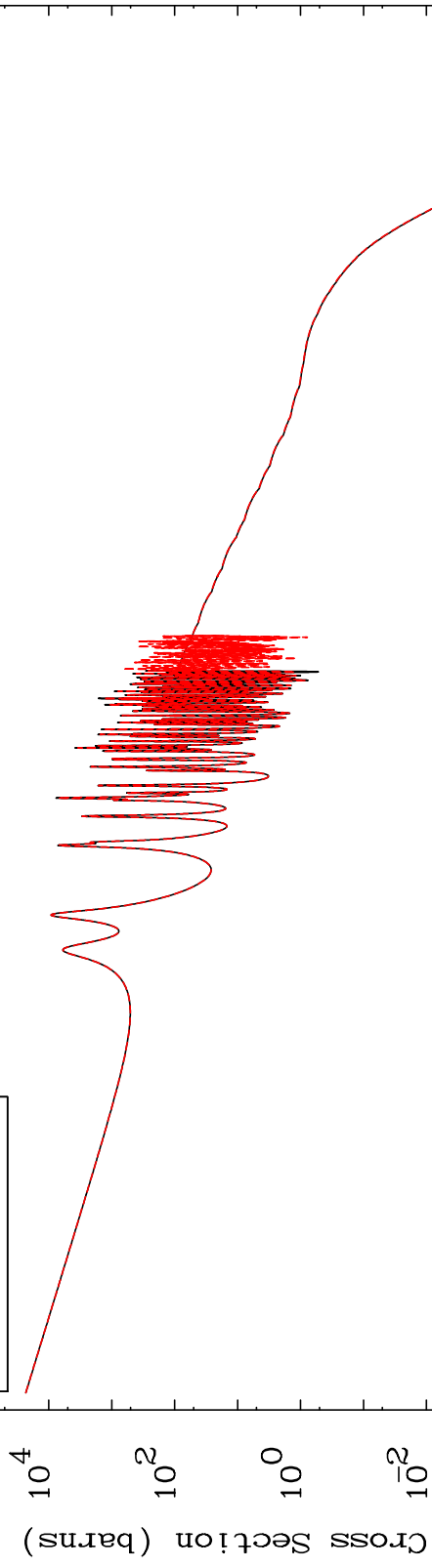
73-Ta-180

-98.55 To 679.9 %

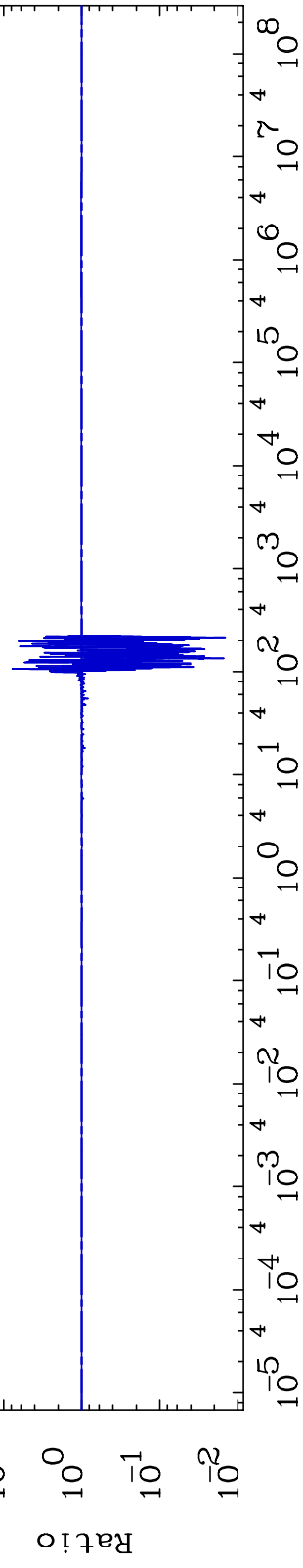
Cross Section

Max Ratio
Min Ratio

— TENDL
- - - JEFF3.3



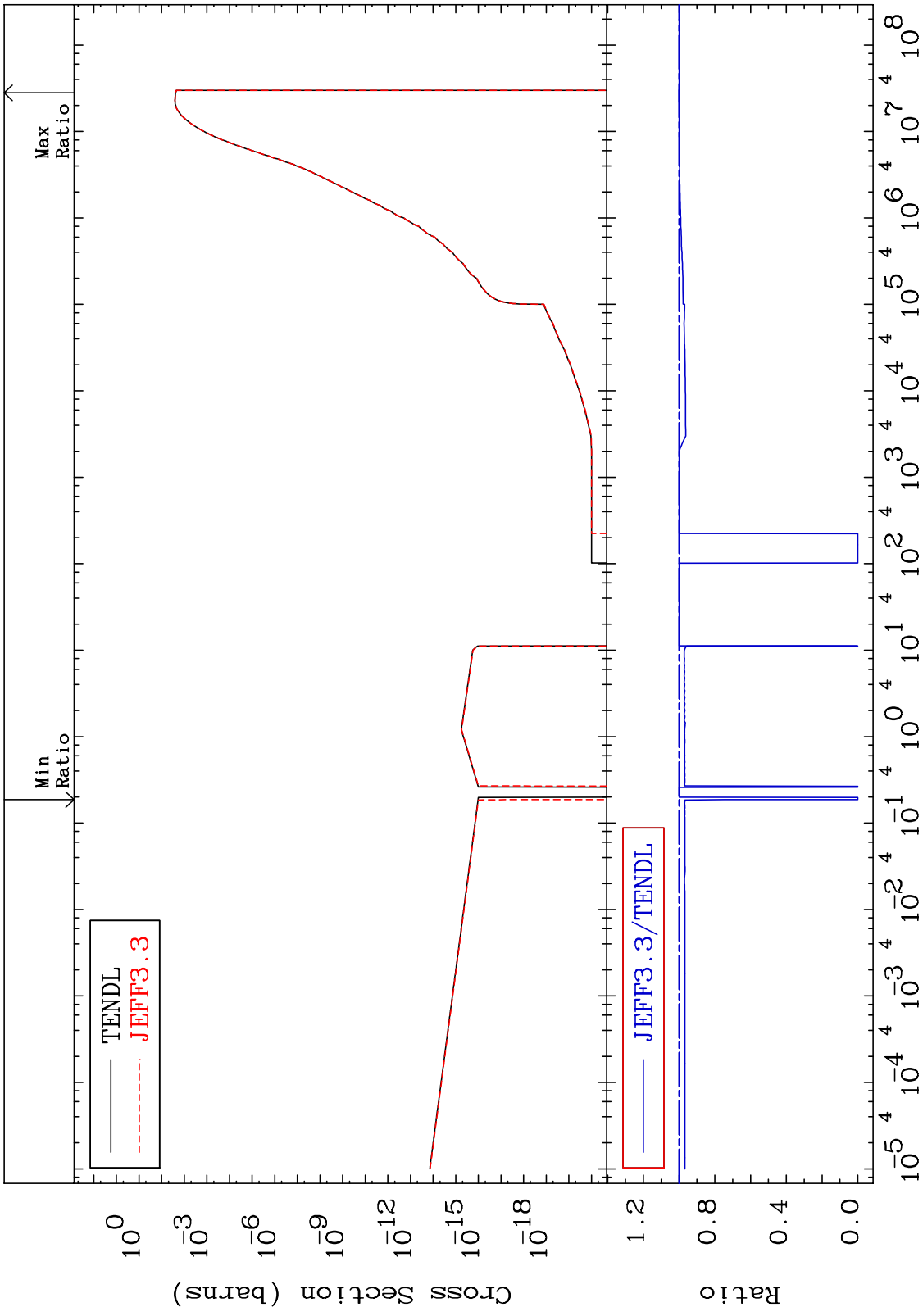
— JEFF3.3/TENDL



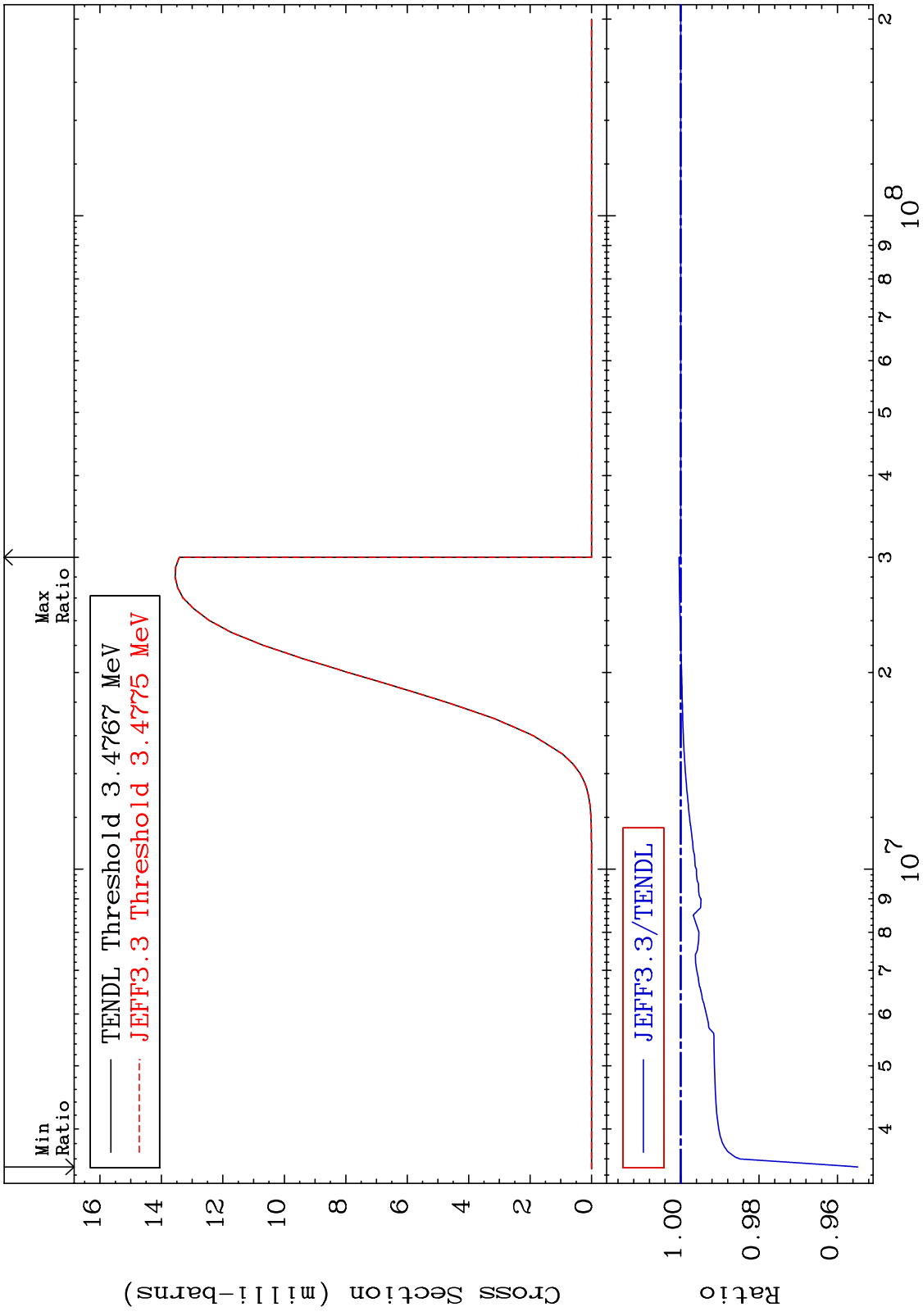
Incident Energy (eV)

73-Ta-180

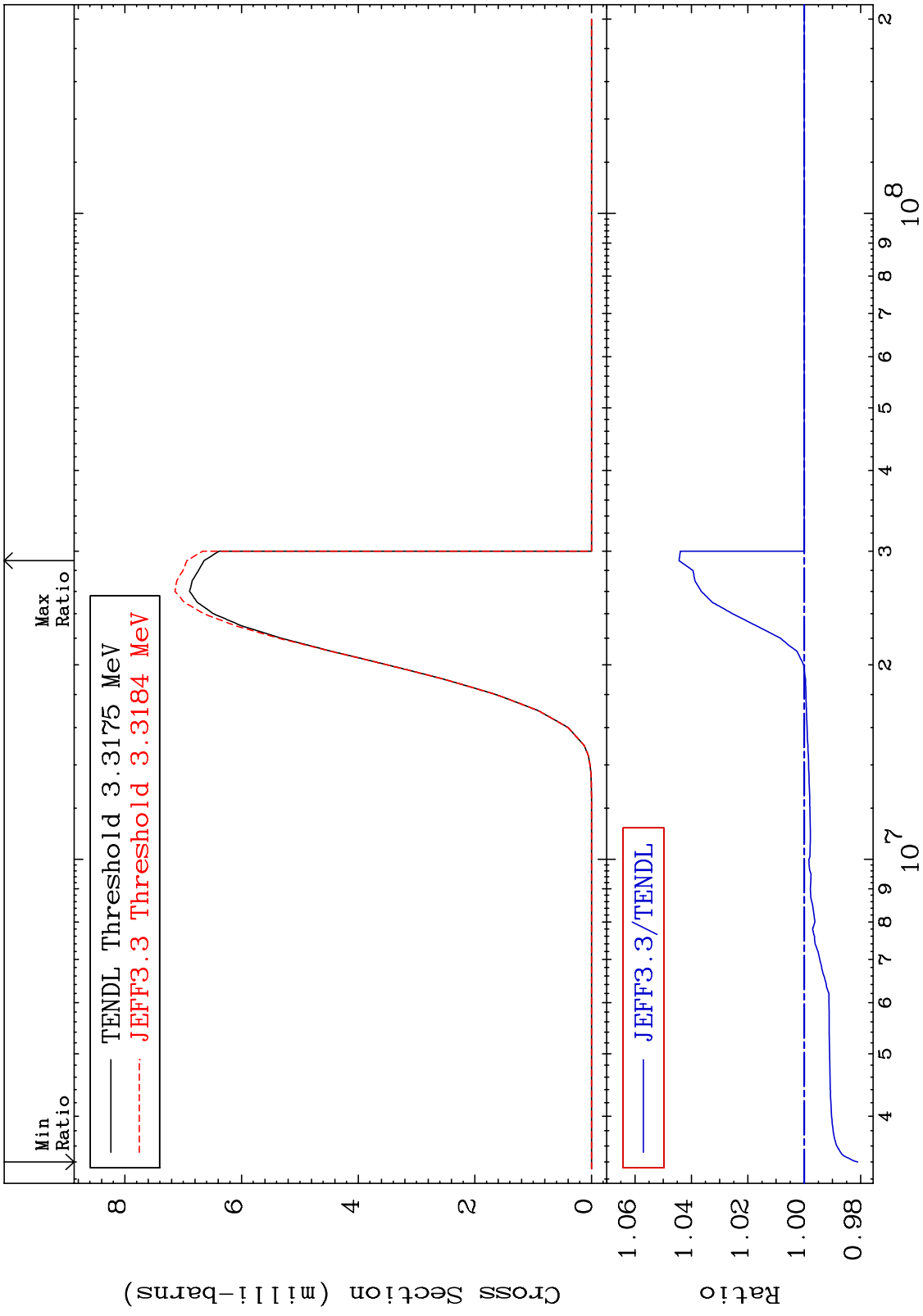
MAT 7326 (n,p) Cross Section 73-Ta-180 -100.0 To 0.048 %



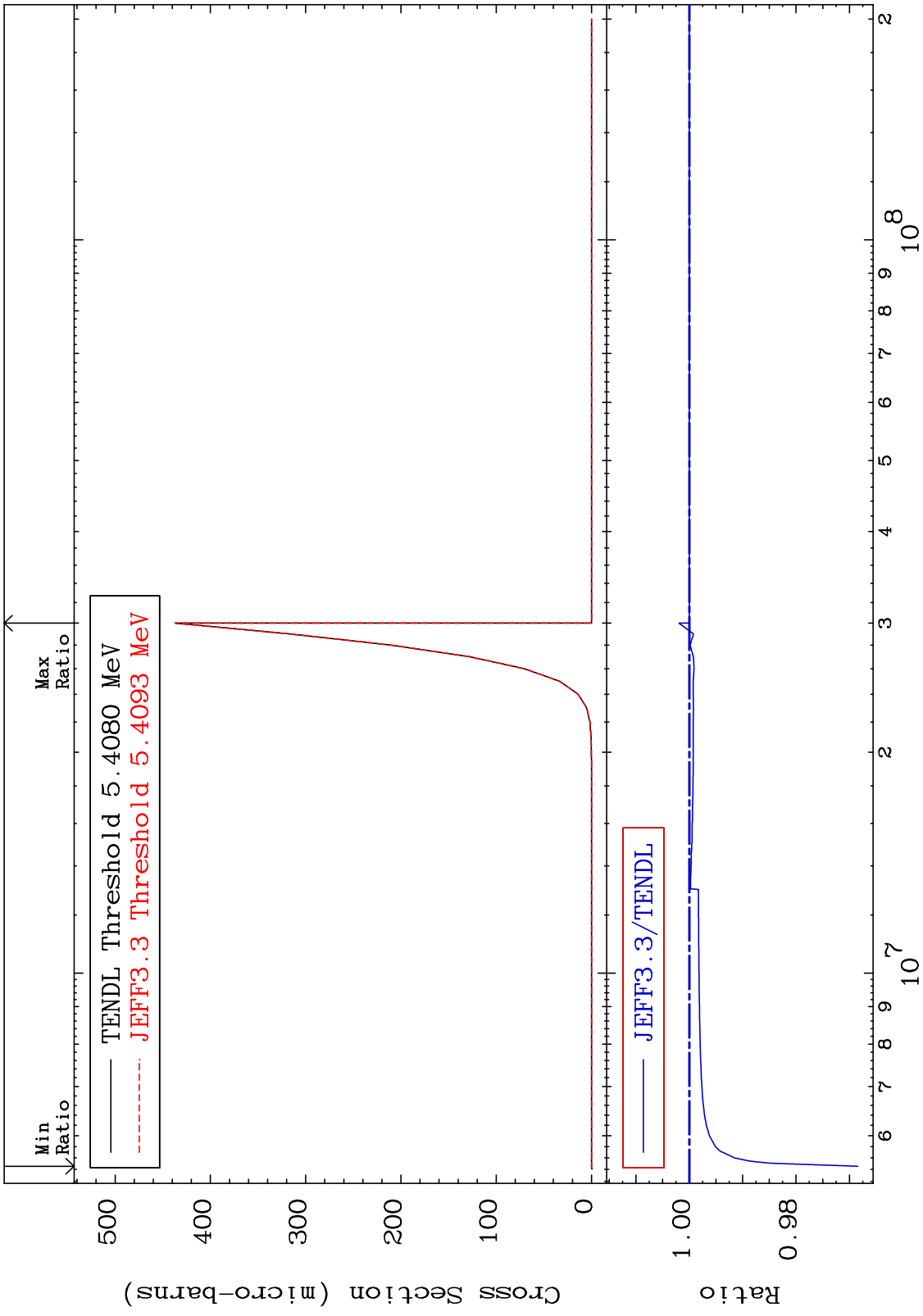
MAT 7326 (n,d) Cross Section 73-Ta-180
 -4.521 To 0.043 %



MAT 7326 (n, t) 73-Ta-180
Cross Section -1.899 To 4.439 %



MAT 7326 (n, He-3) 73-Ta-180
 Cross Section -3.158 To 0.192 %



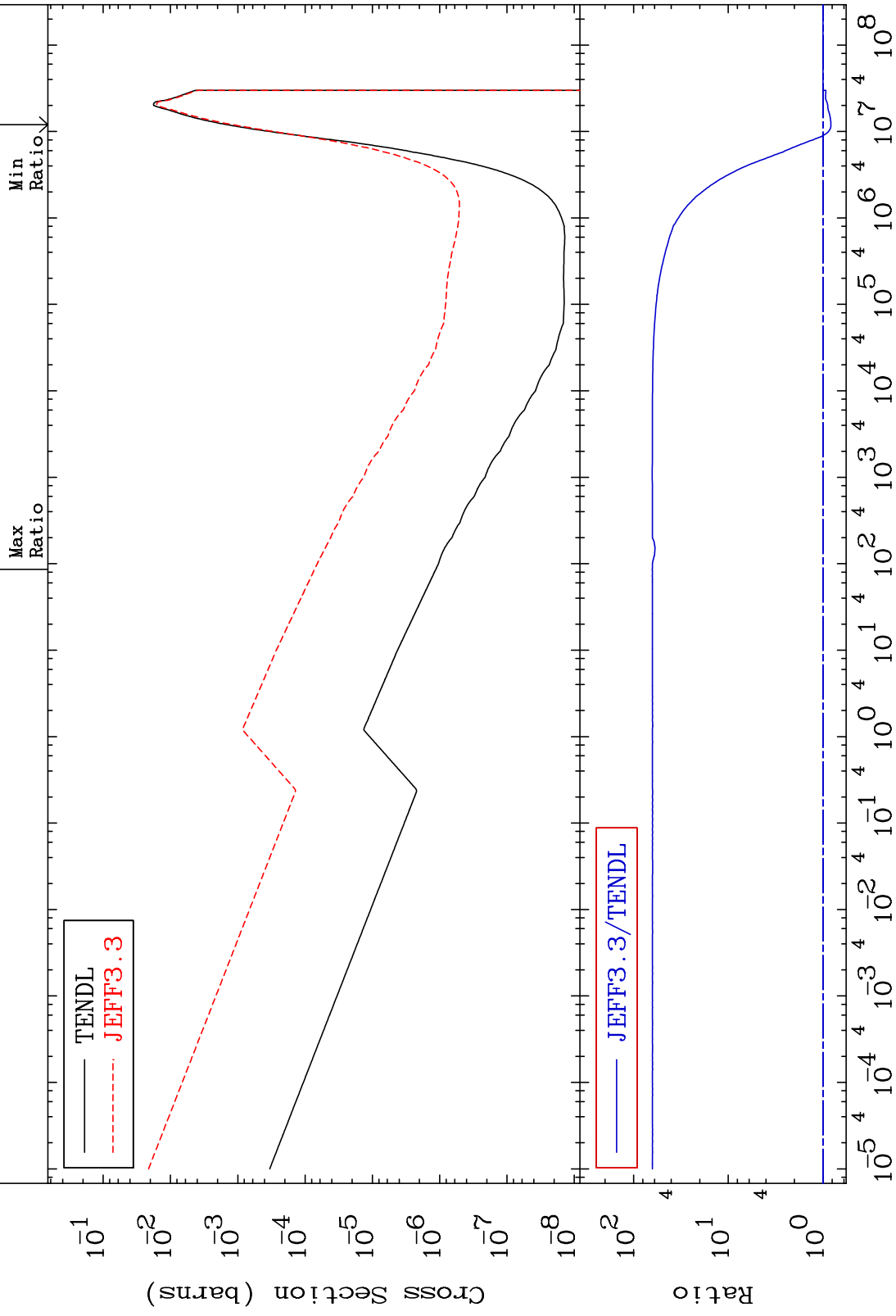
MAT 7326

(n, α)

73-Ta-180

-17.58 To 6241. %

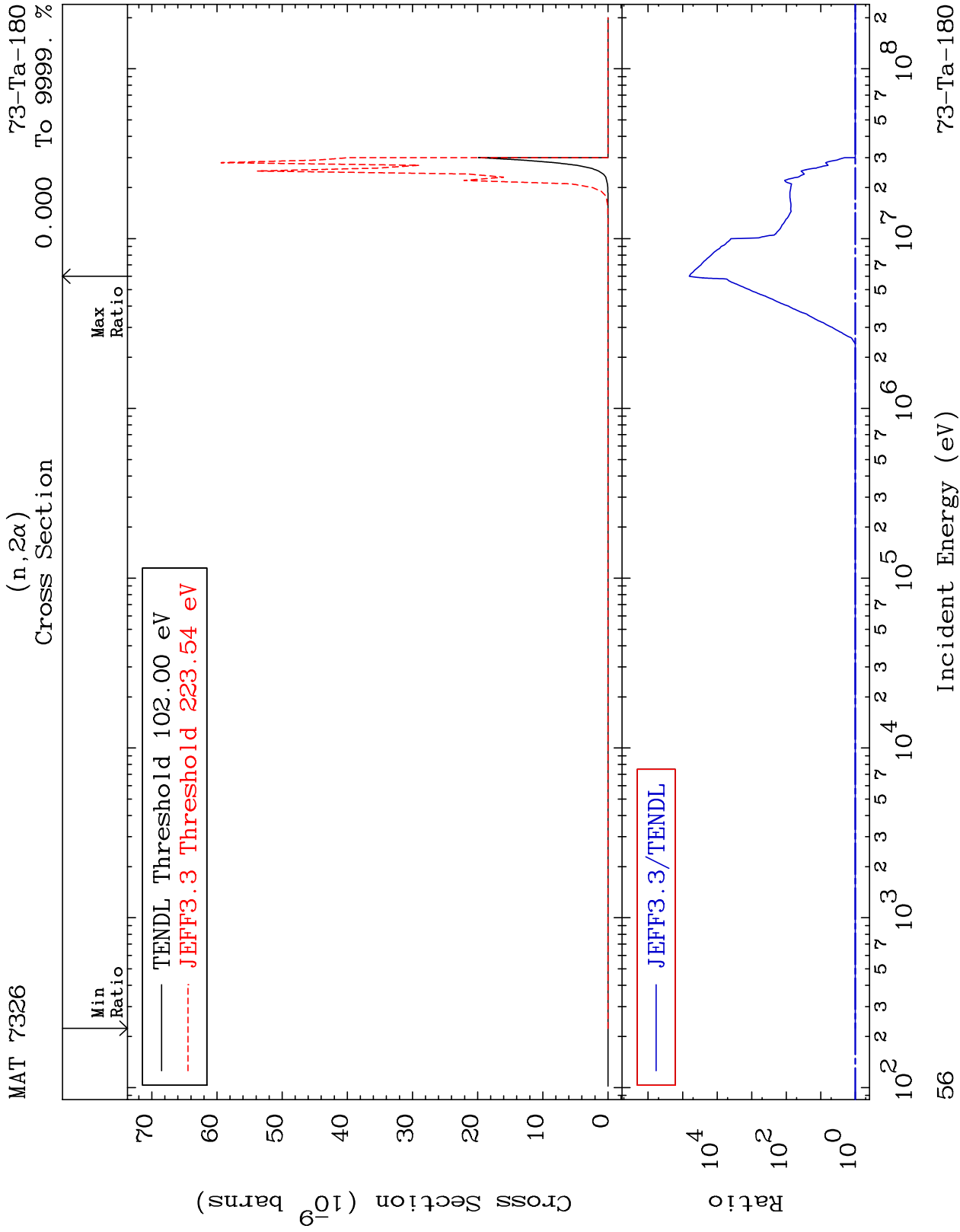
Cross Section



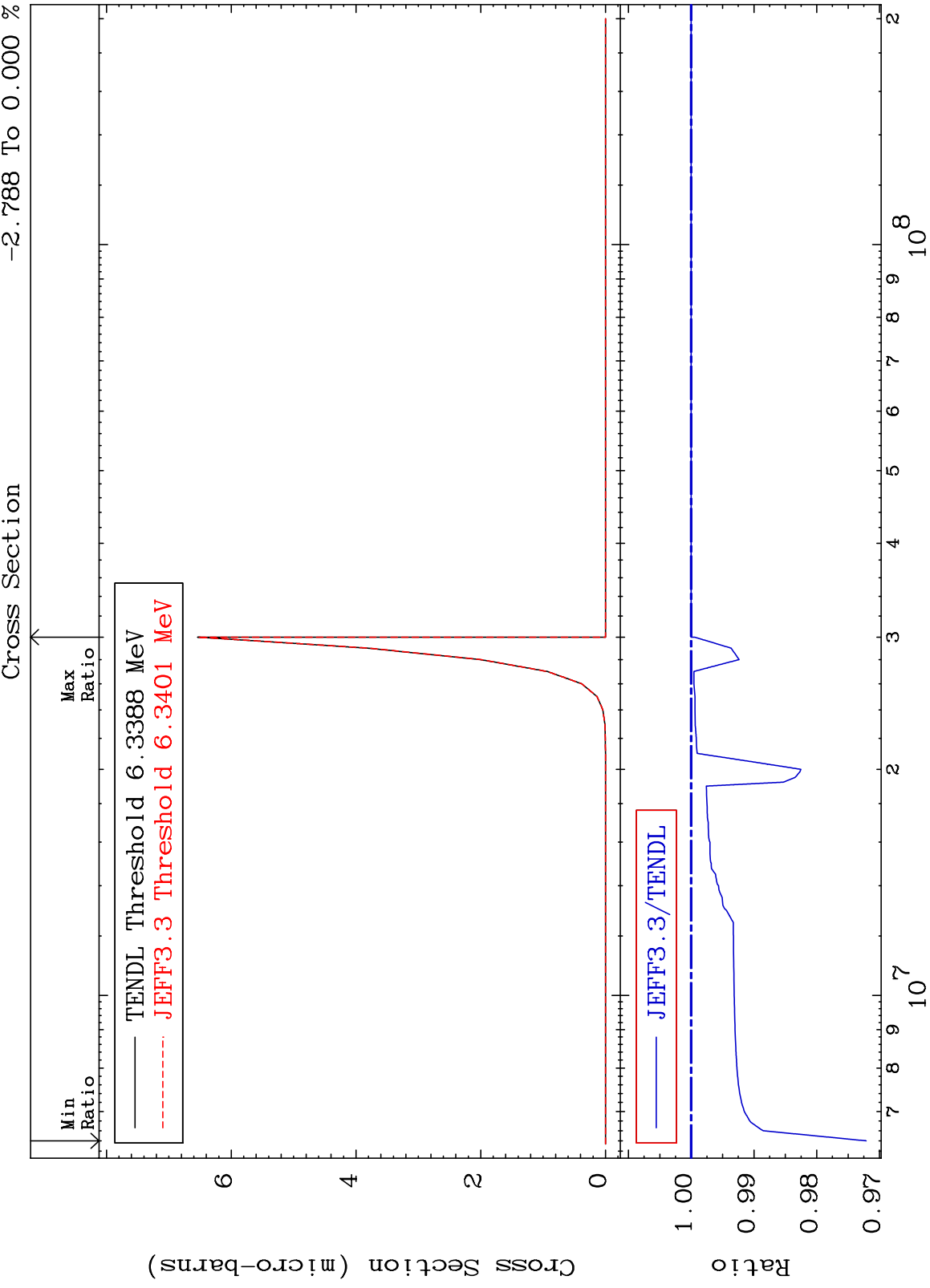
Incident Energy (eV)

73-Ta-180

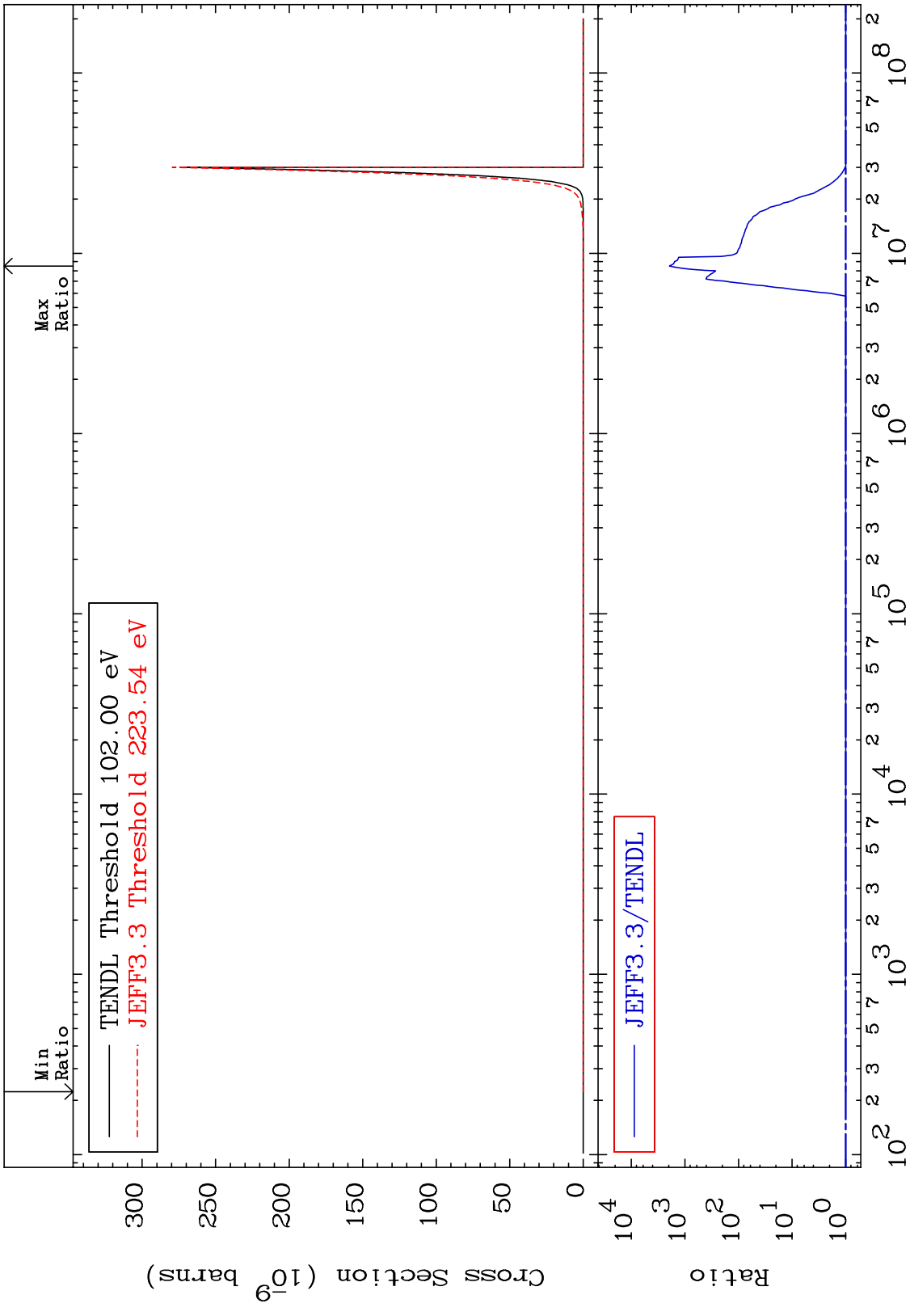
55



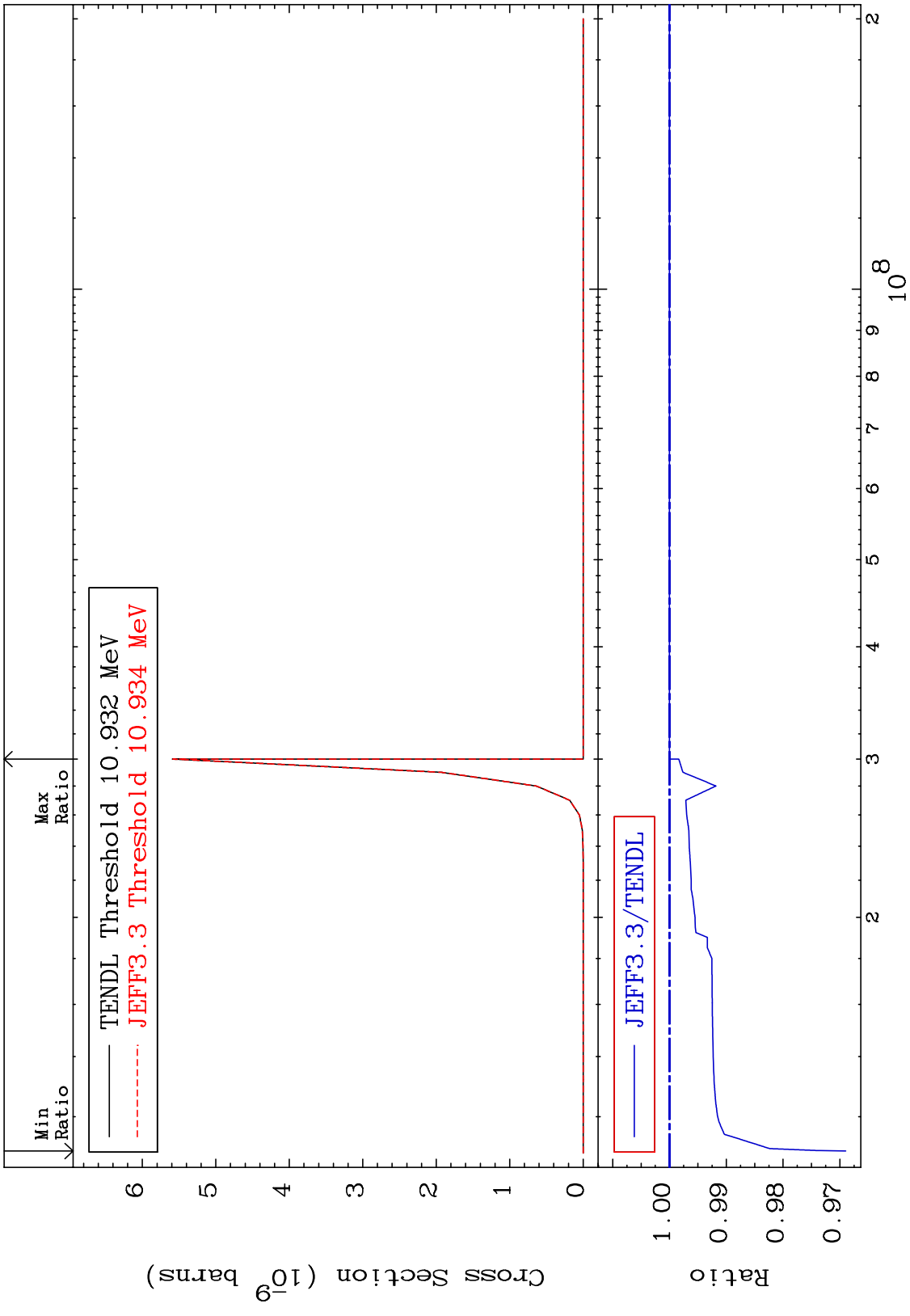
MAT 7326 (n,2p) 73-Ta-180 -2.788 To 0.000 %



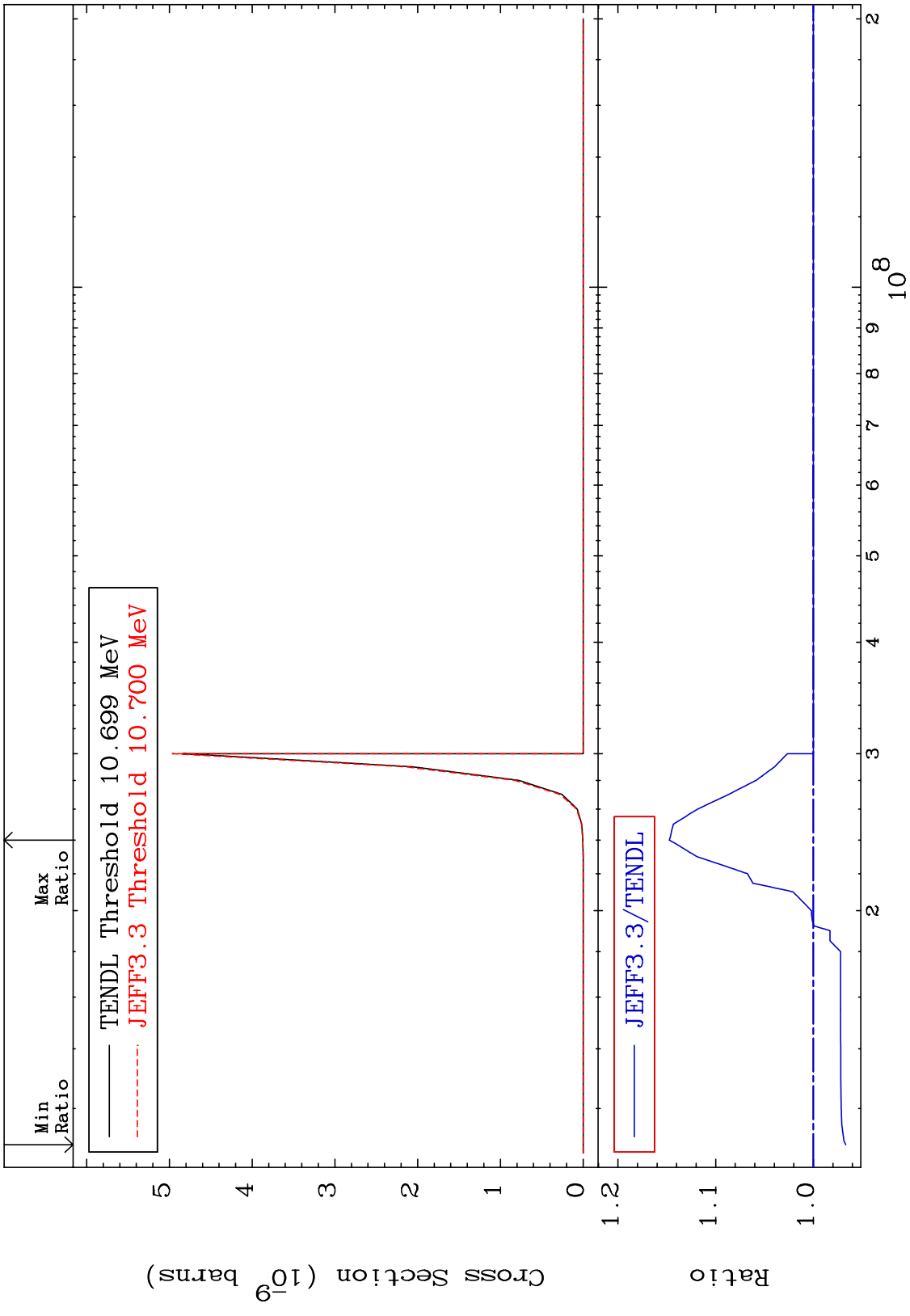
MAT 7326 (n,p) α Cross Section 73-Ta-180 To 9999. %



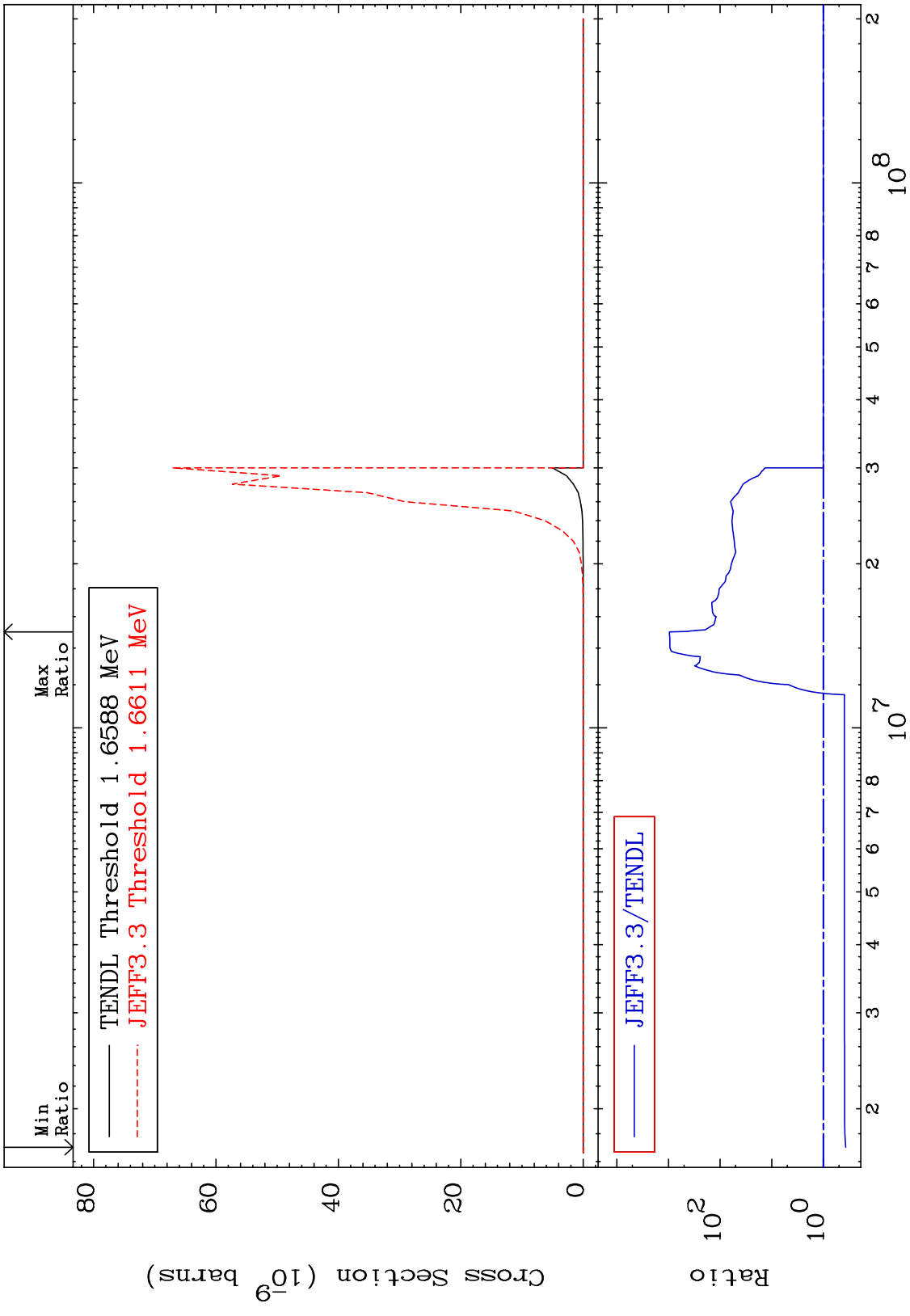
MAT 7326 (n,p) d 73-Ta-180
 Cross Section -3.103 To 0.000 %



MAT 7326 (n,p) t 73-Ta-180
 Cross Section -3.316 To 14.73 %



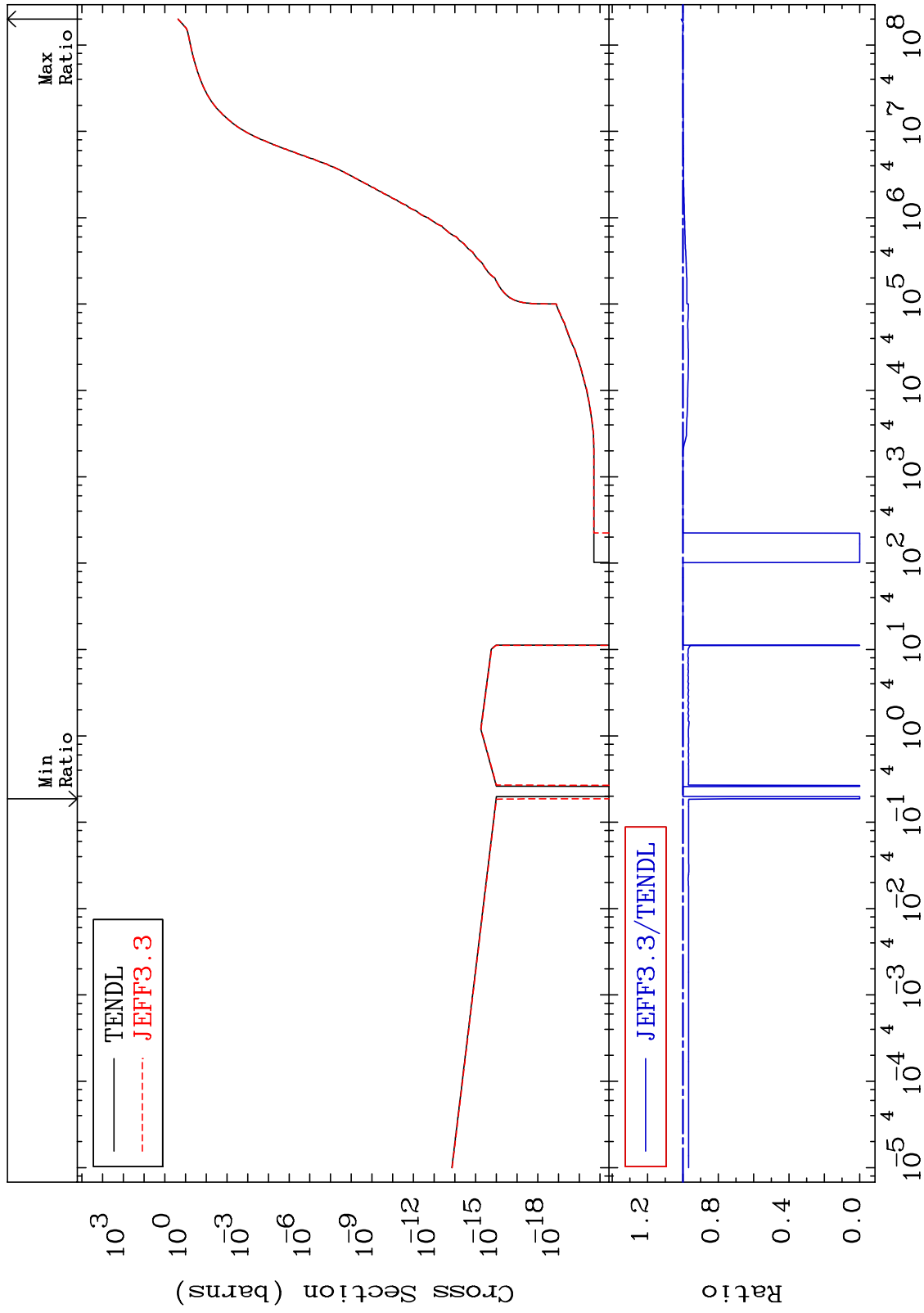
MAT 7326 73-Ta-180
-63.10 To 9999. %
 (n,d) α
 Cross Section



MAT 7326

Hydrogen Production
Cross Section

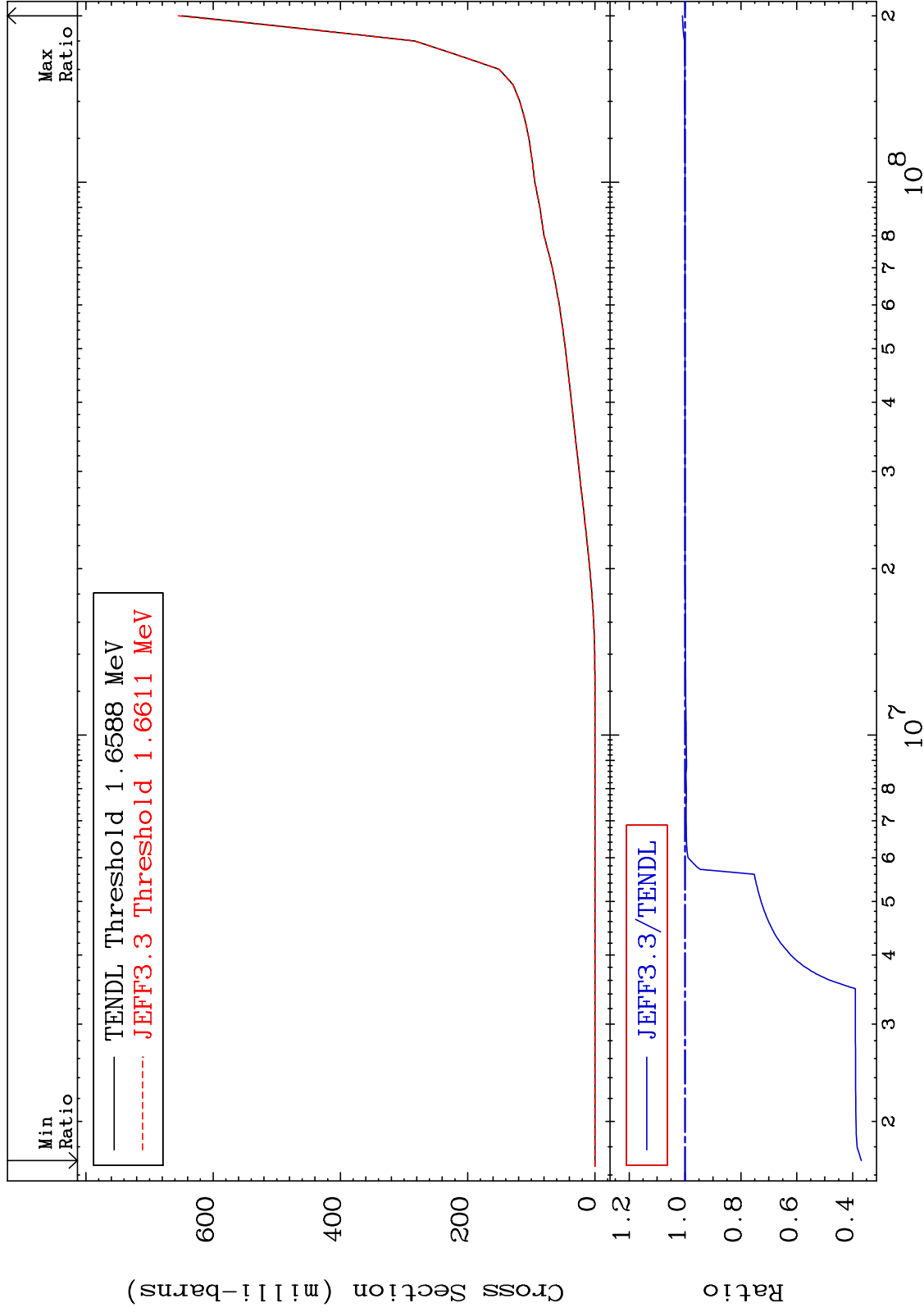
73-Ta-180
-100.0 To 0.980 %



MAT 7326

Deuterium Production
Cross Section

73-Ta-180
-63.10 To 0.917 %



63

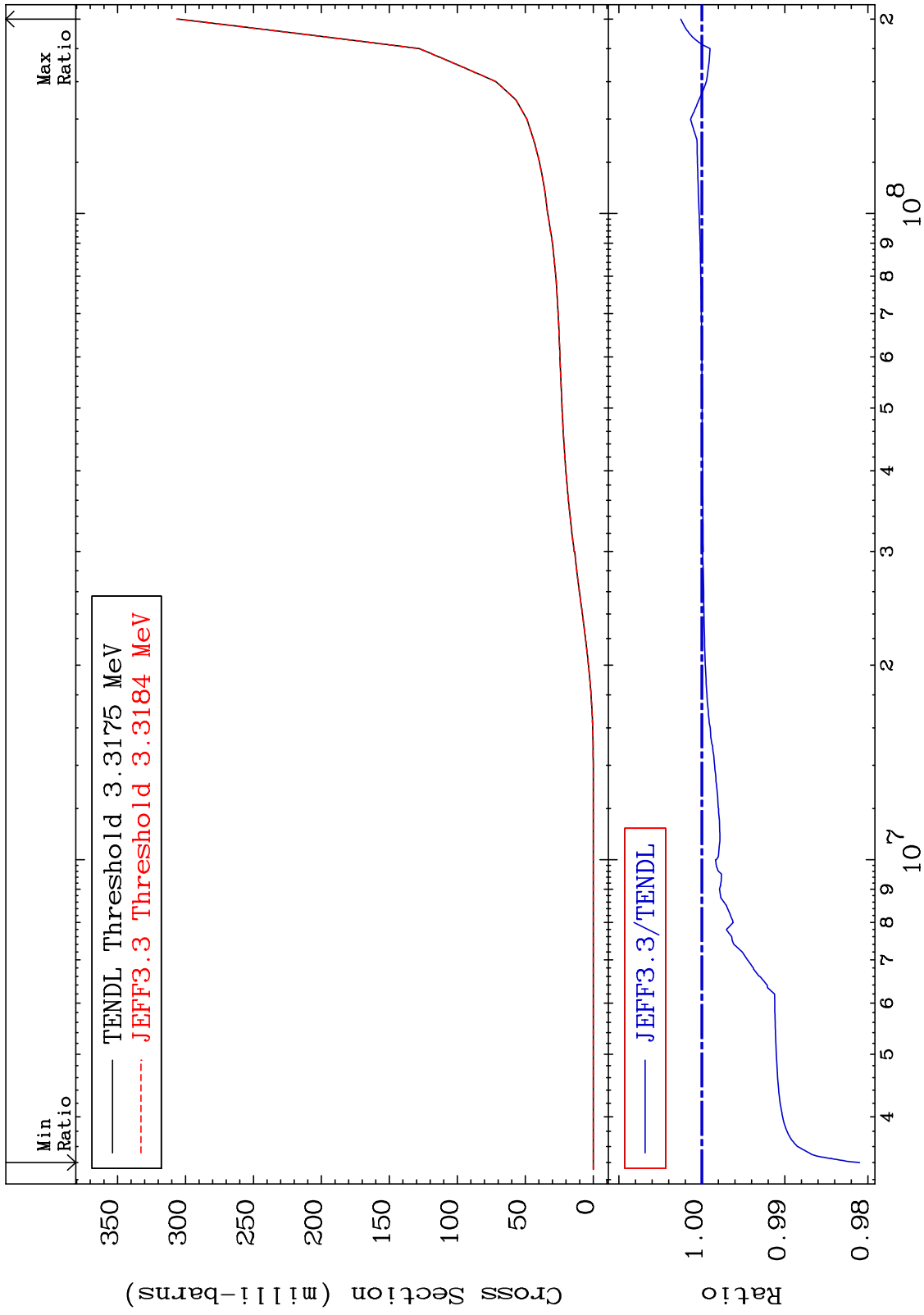
Incident Energy (eV)

73-Ta-180

MAT 7326

Tritium Production
Cross Section

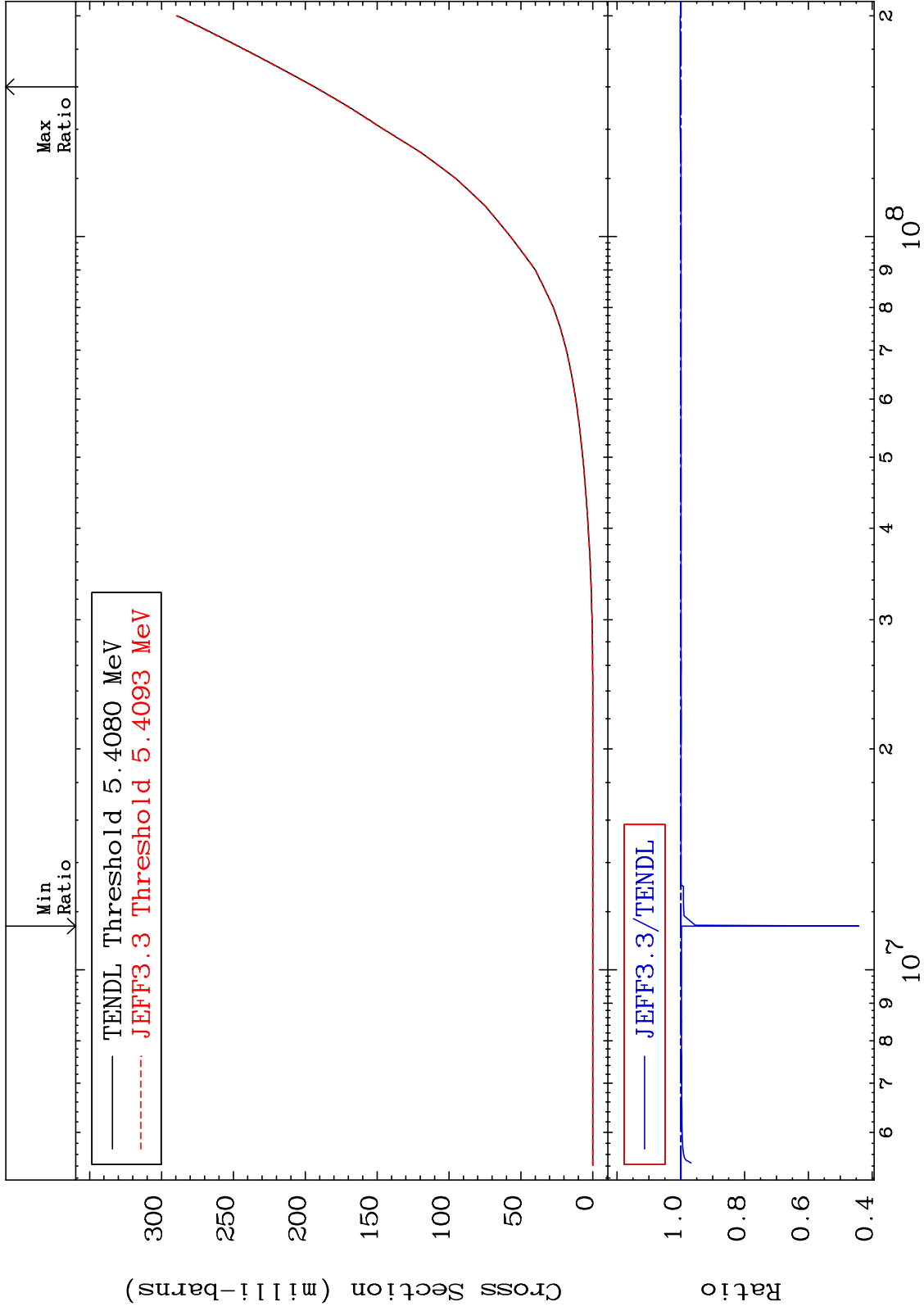
73-Ta-180
-1.899 To 0.253 %



MAT 7326

He-3 Production
Cross Section

73-Ta-180
-55.81 To 0.212 %



65

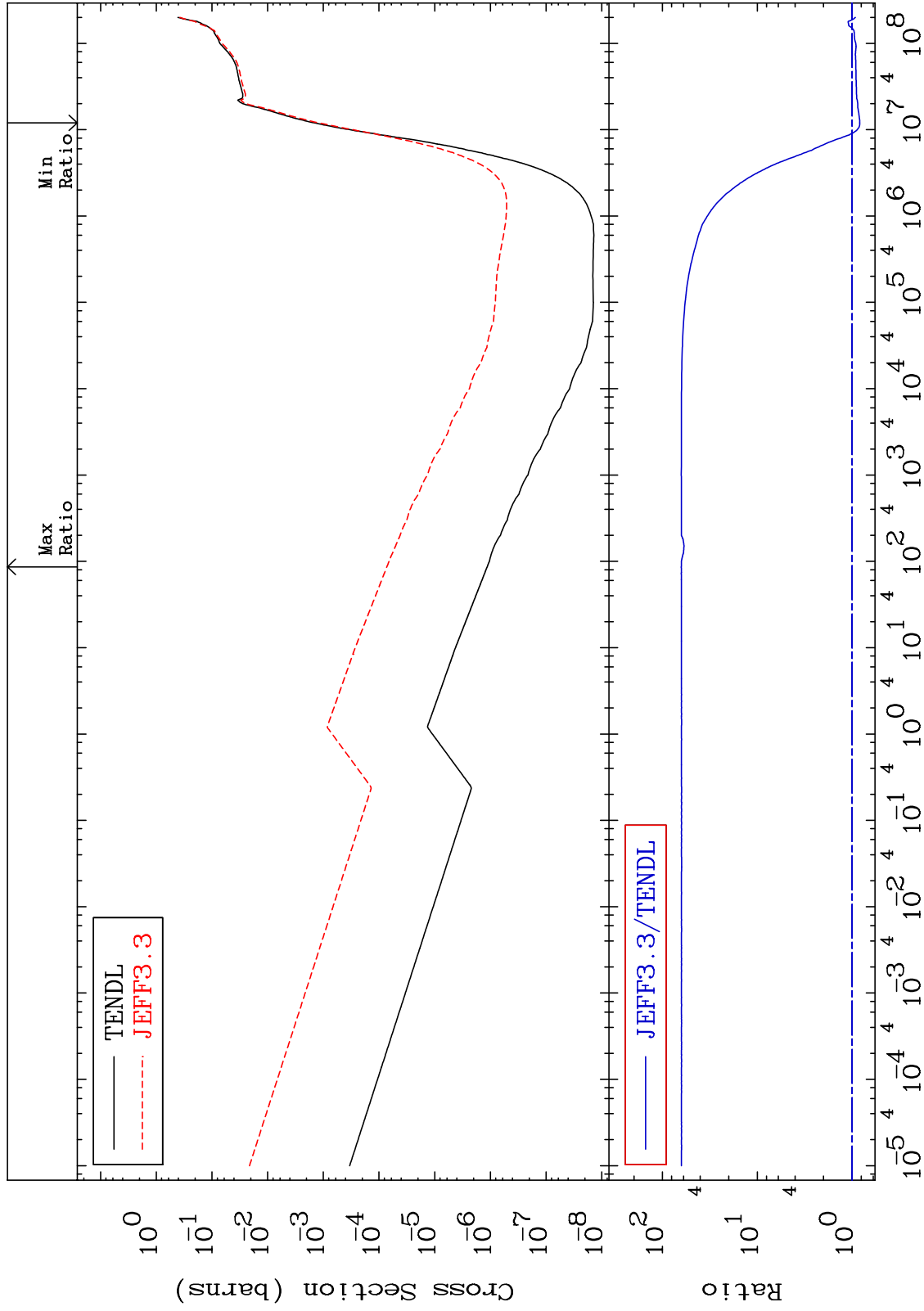
Incident Energy (eV)

73-Ta-180

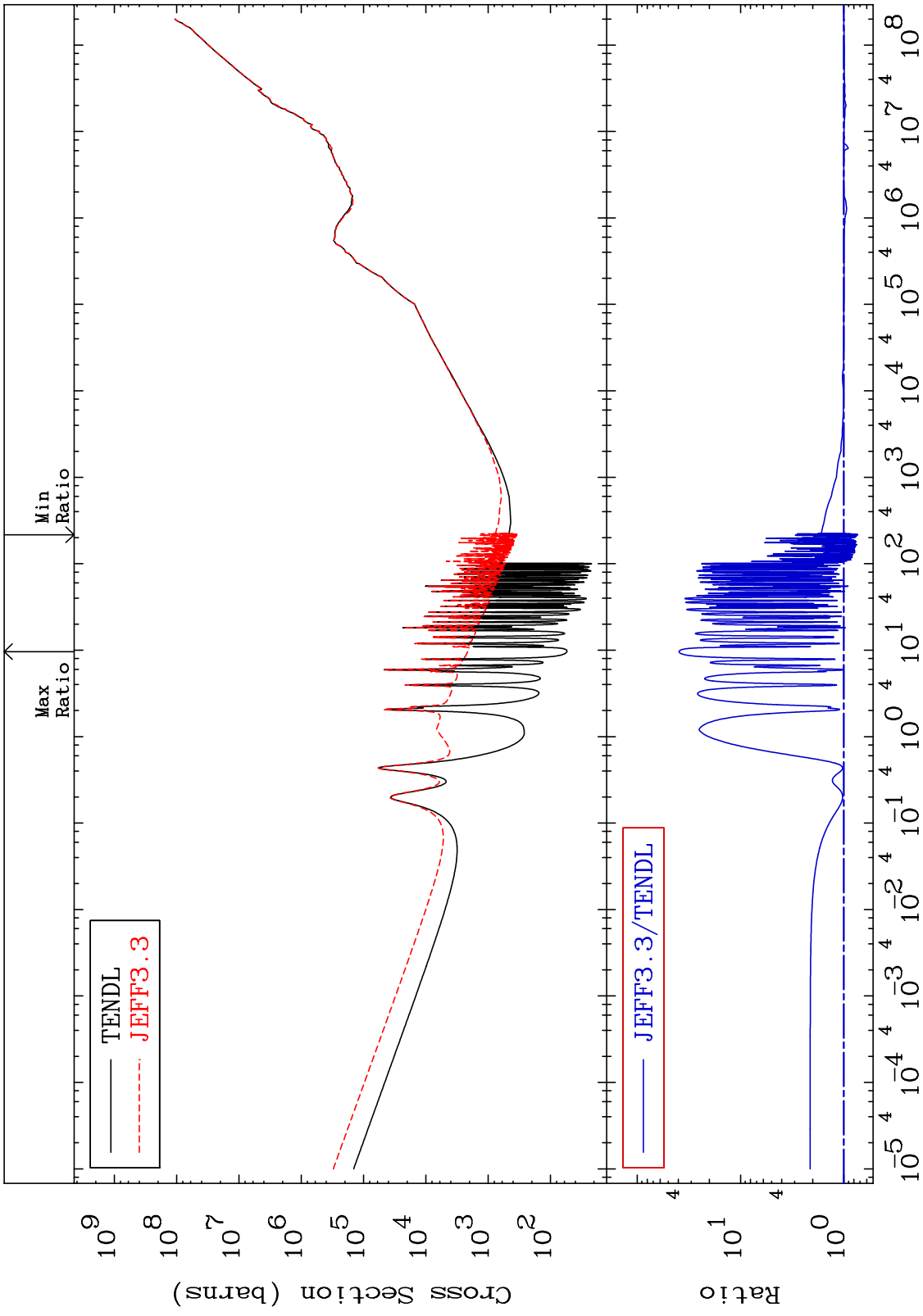
MAT 7326

He-4 Production
Cross Section

73-Ta-180
-16.92 To 6241. %



MAT 7326 Kerma total (eV-barns) 73-Ta-180
 Cross Section -26.73 To 3834. %

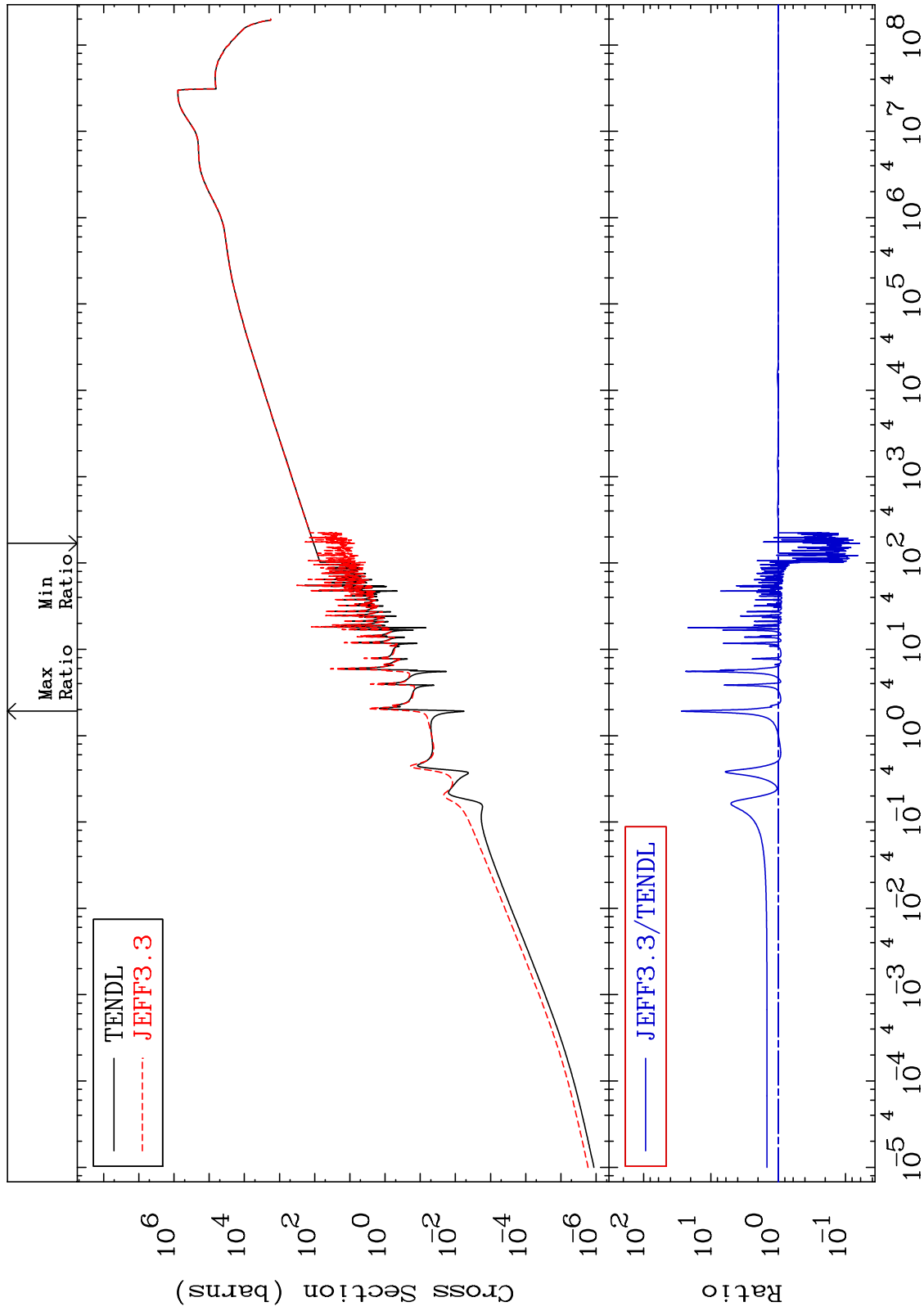


67 Incident Energy (eV) 73-Ta-180

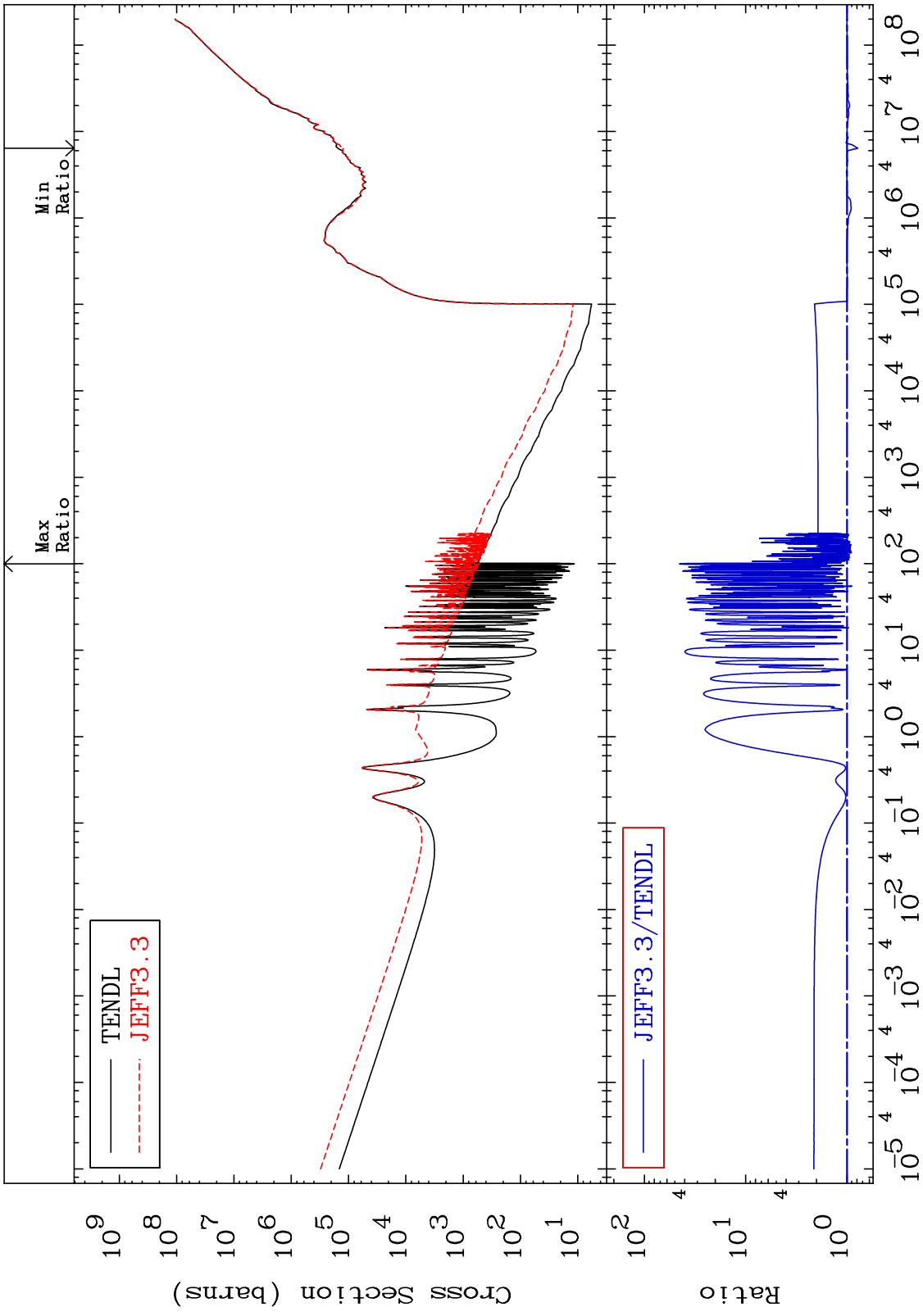
MAT 7326

Kerma elastic
Cross Section

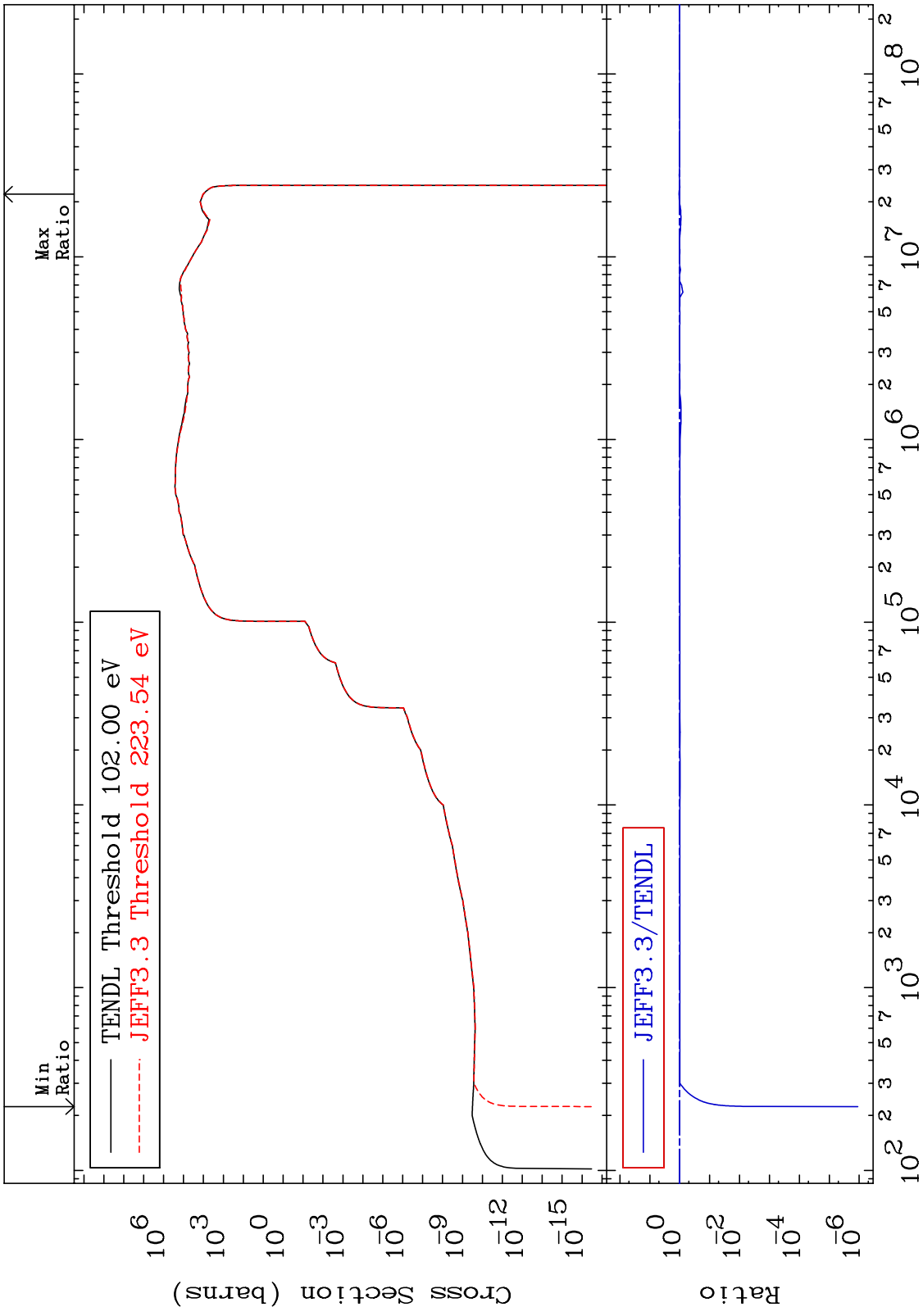
73-Ta-180
-93.85 To 2661. %



MAT 7326 Kerma non-elastic (all but mt2) 73-Ta-180
 -21.83 To 4449. %
 Cross Section

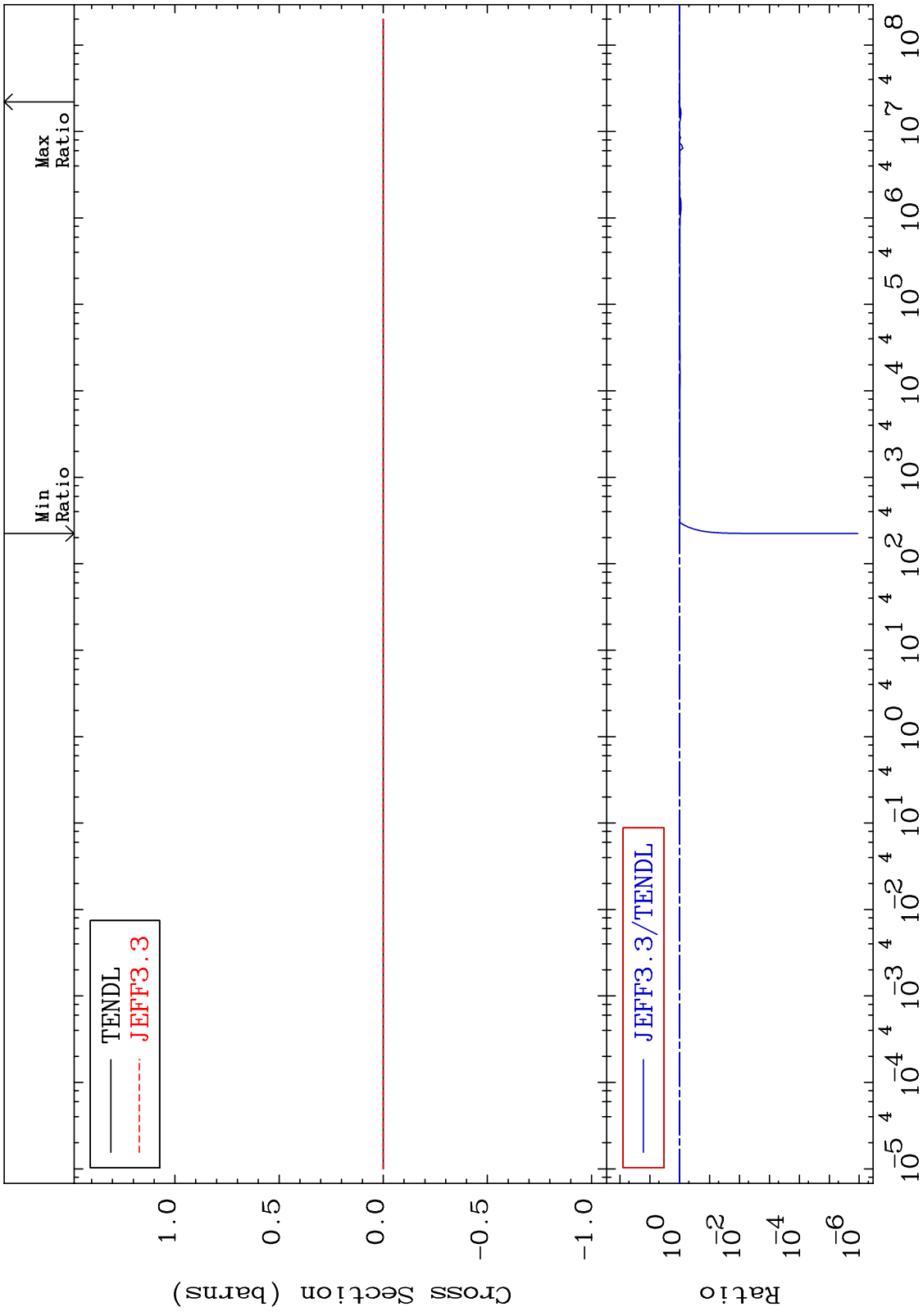


MAT 7326 Kerma inelastic (mt51-91) 73-Ta-180
 Cross Section -100.0 To 5.344 %



70 73-Ta-180

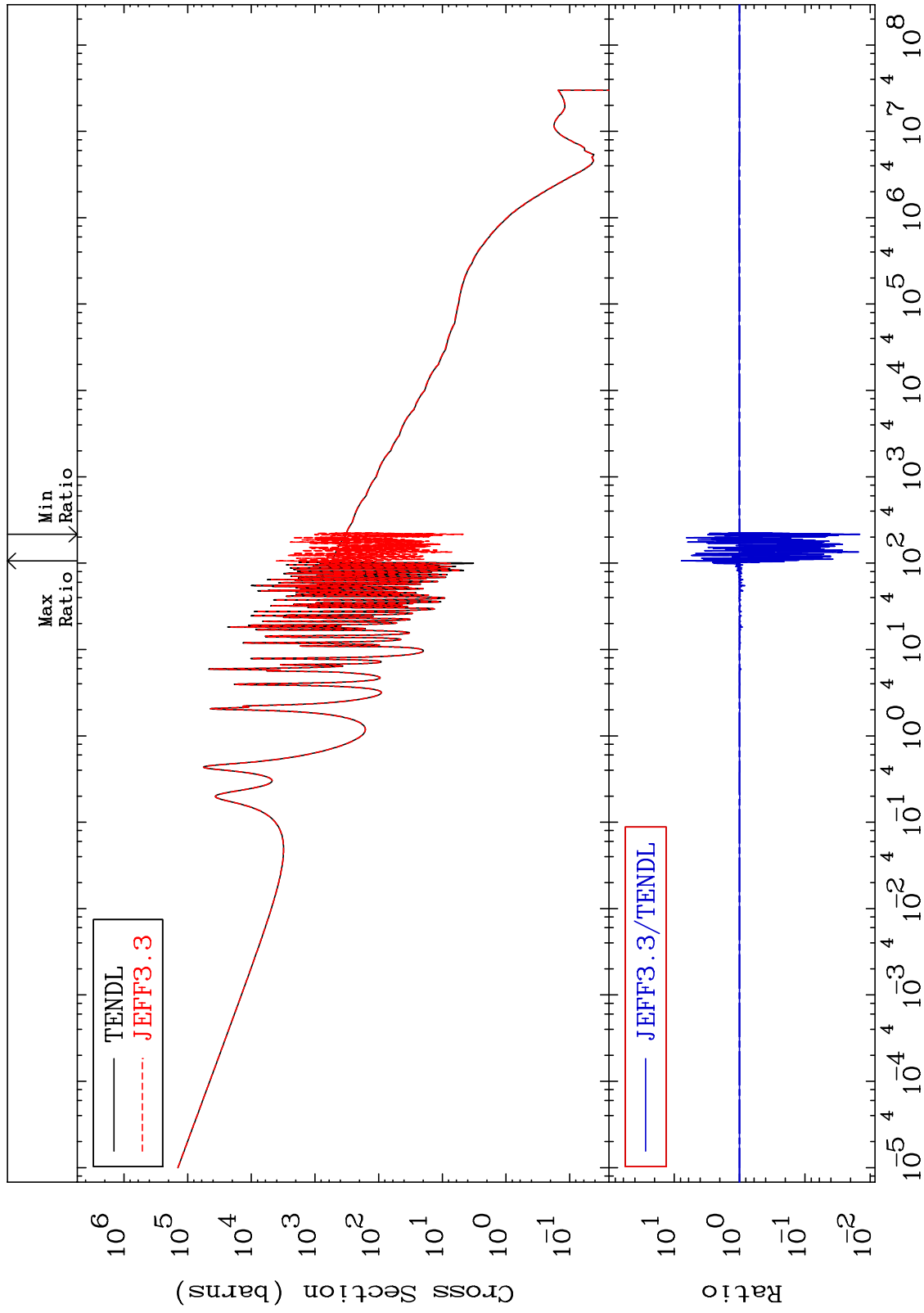
MAT 7326 Kerma fission (mt18 or mt19-20-21-38) 73-Ta-180
 Cross Section -100.0 To 5.344 %



MAT 7326

Kerma capture (mt102)
Cross Section

73-Ta-180
-98.55 To 679.9 %



72

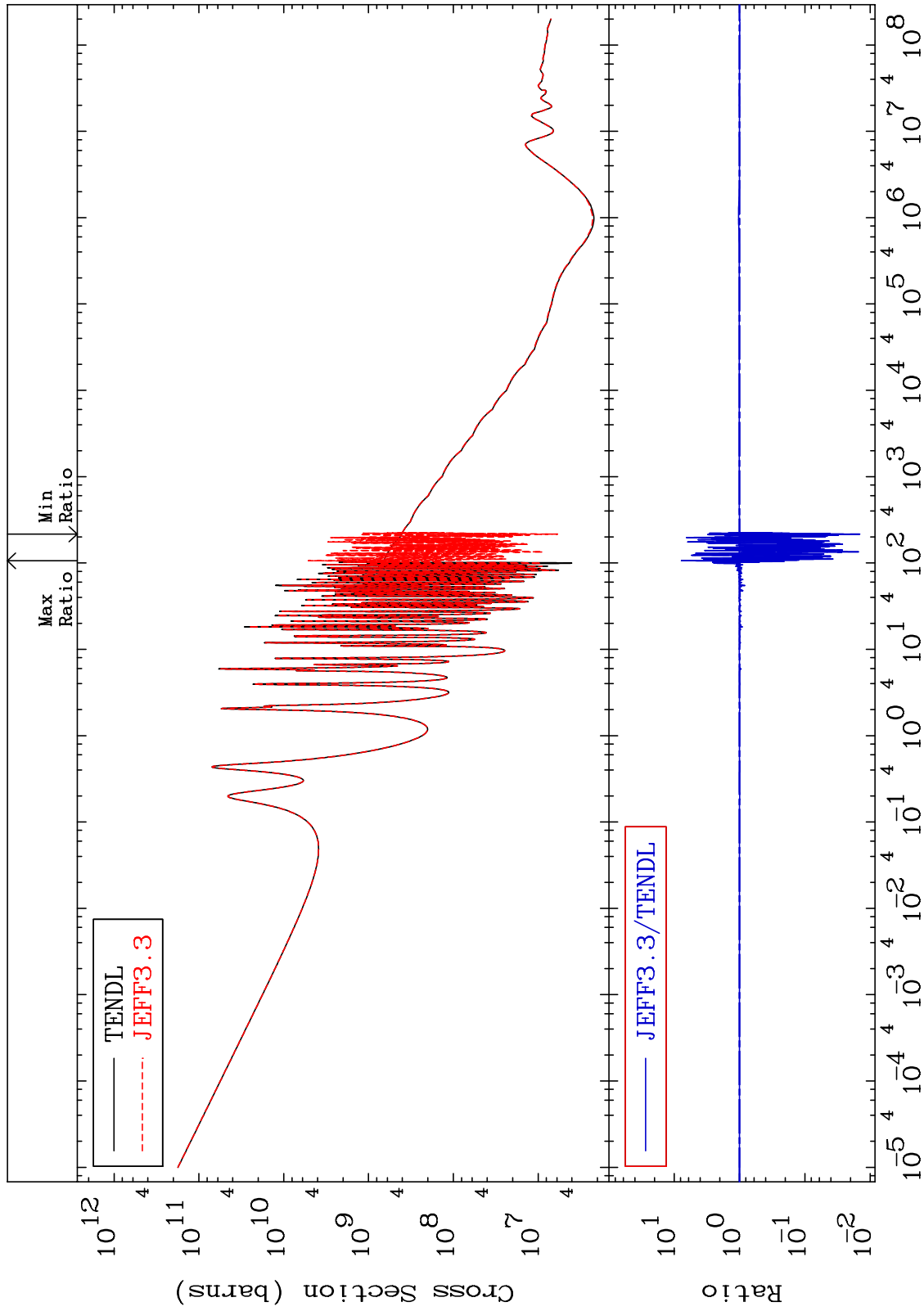
Incident Energy (eV)

73-Ta-180

MAT 7326

Total photon (eV-barns)
Cross Section

73-Ta-180
-98.55 To 679.9 %

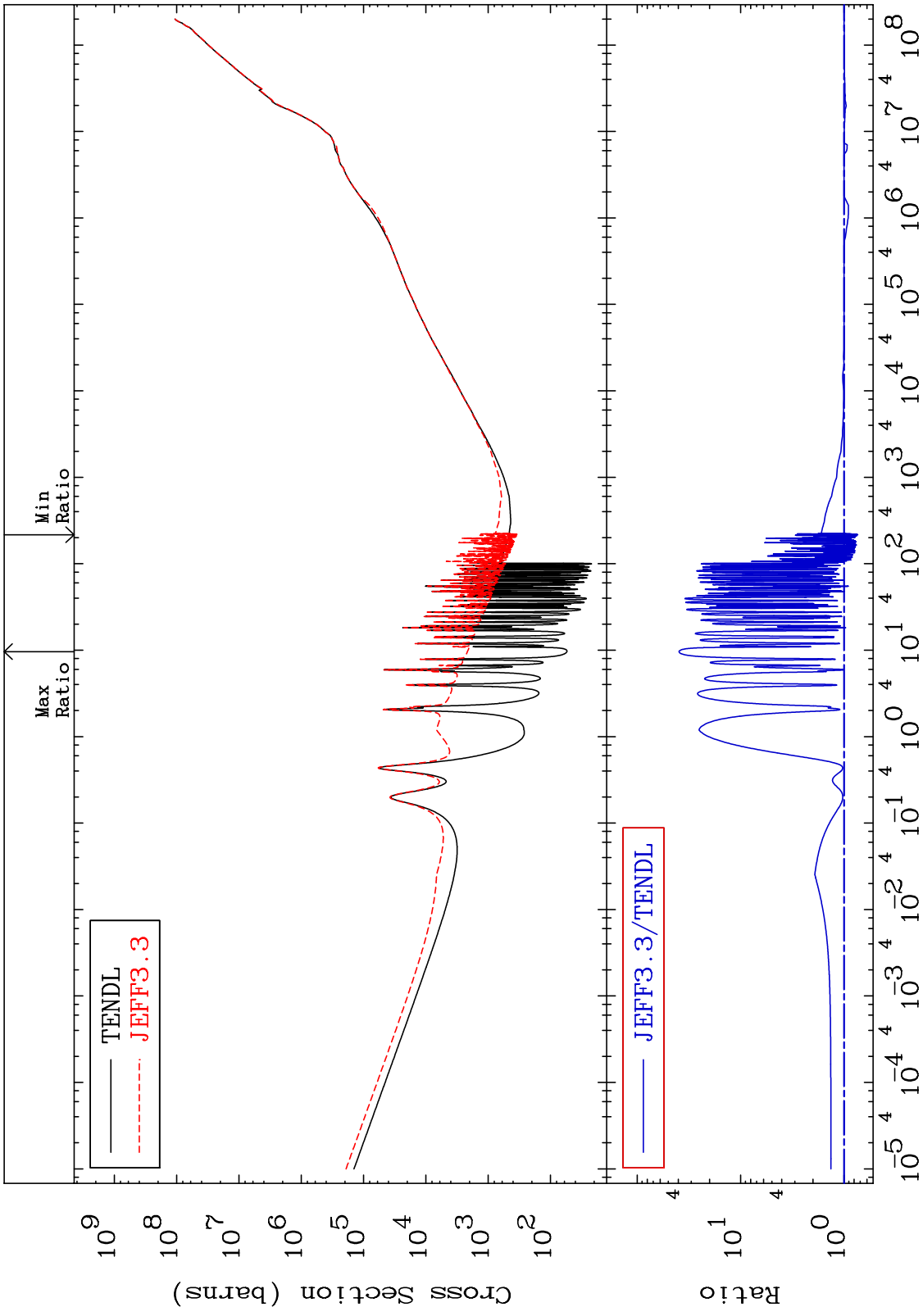


73

Incident Energy (eV)

73-Ta-180

MAT 7326 Total kinematic kerma (high limit) 73-Ta-180
 Cross Section -26.39 To 3842. %

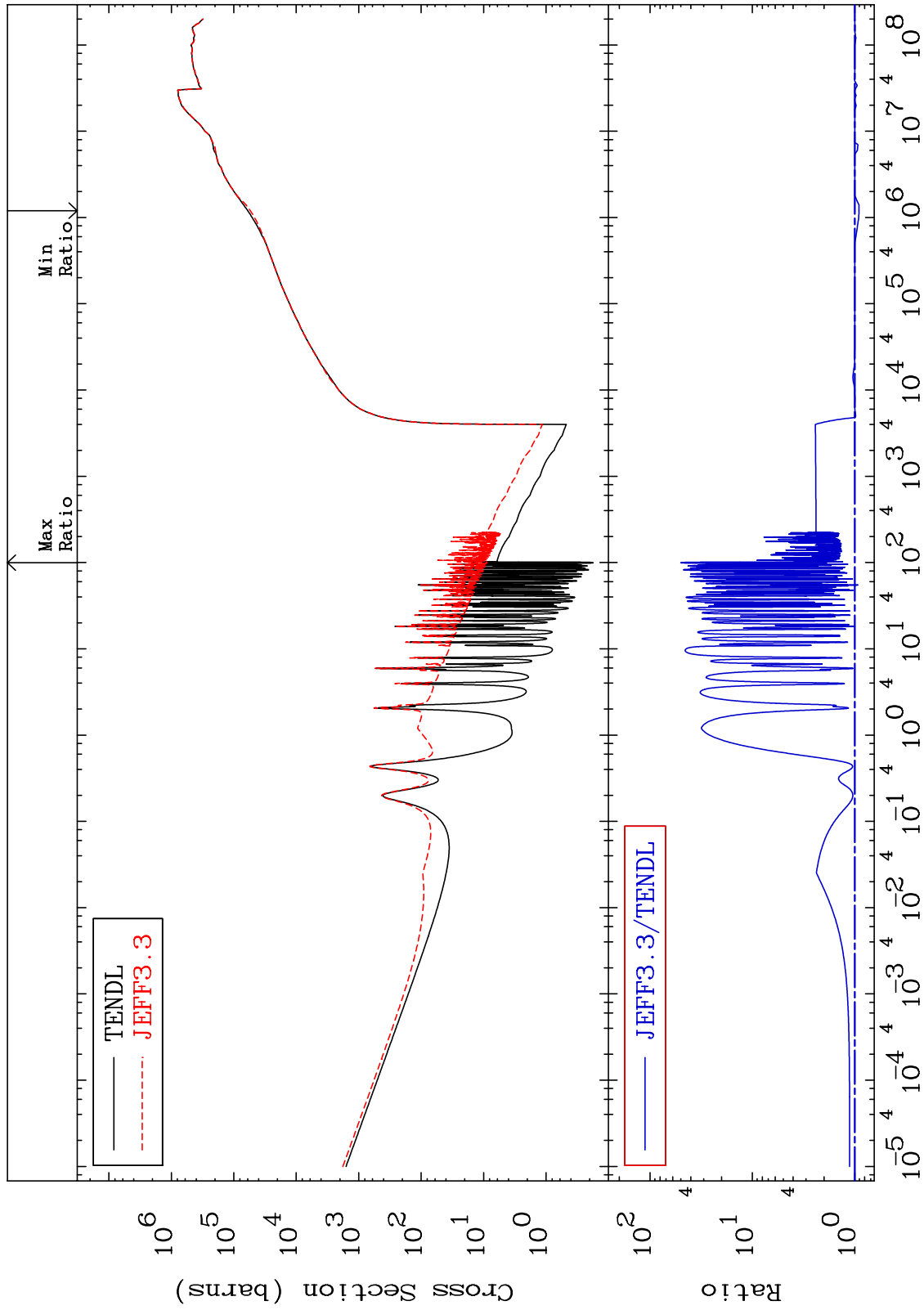


74 73-Ta-180

MAT 7326

Dpa total (eV-barns)
Cross Section

73-Ta-180
-9.057 To 4927. %

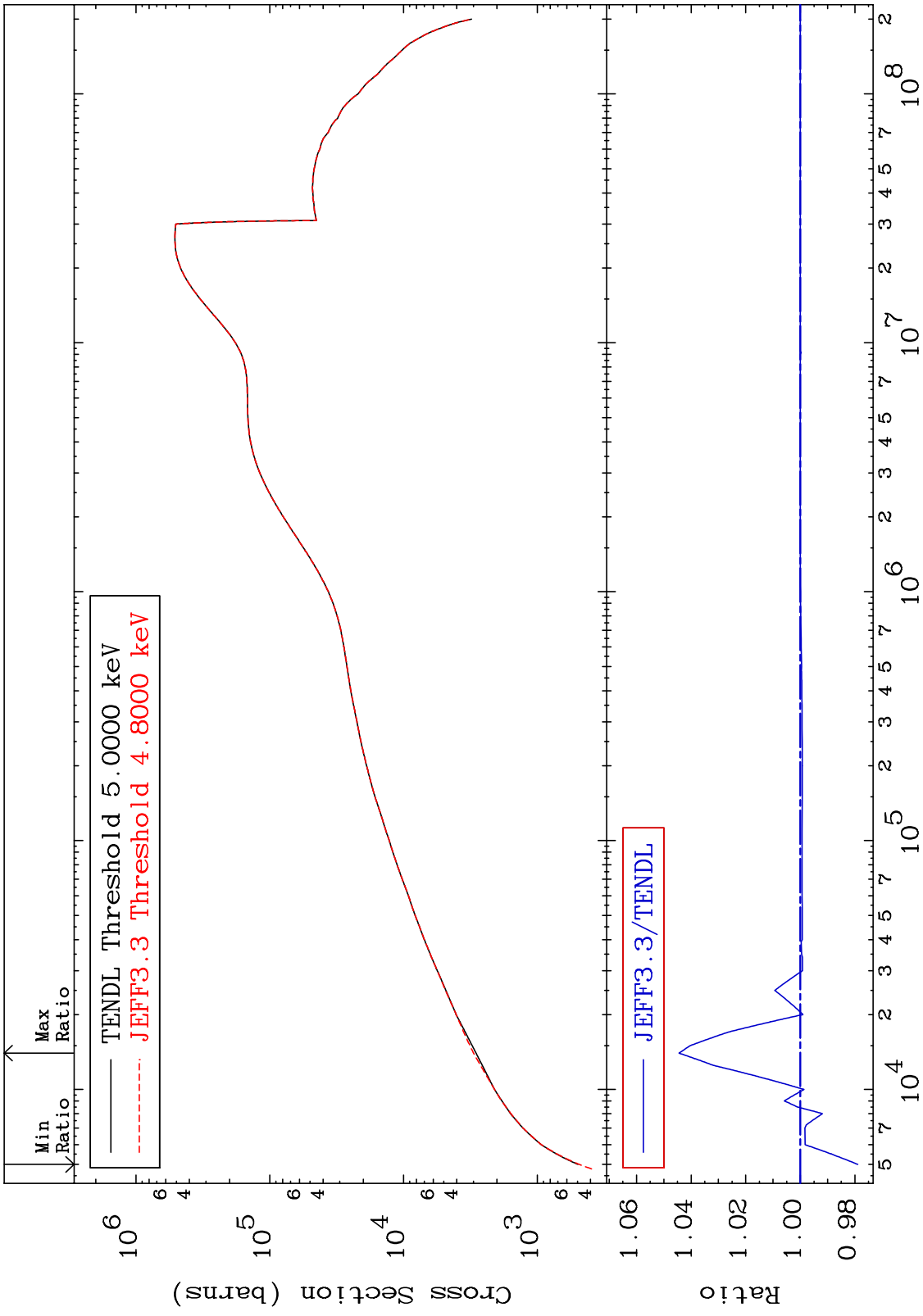


75

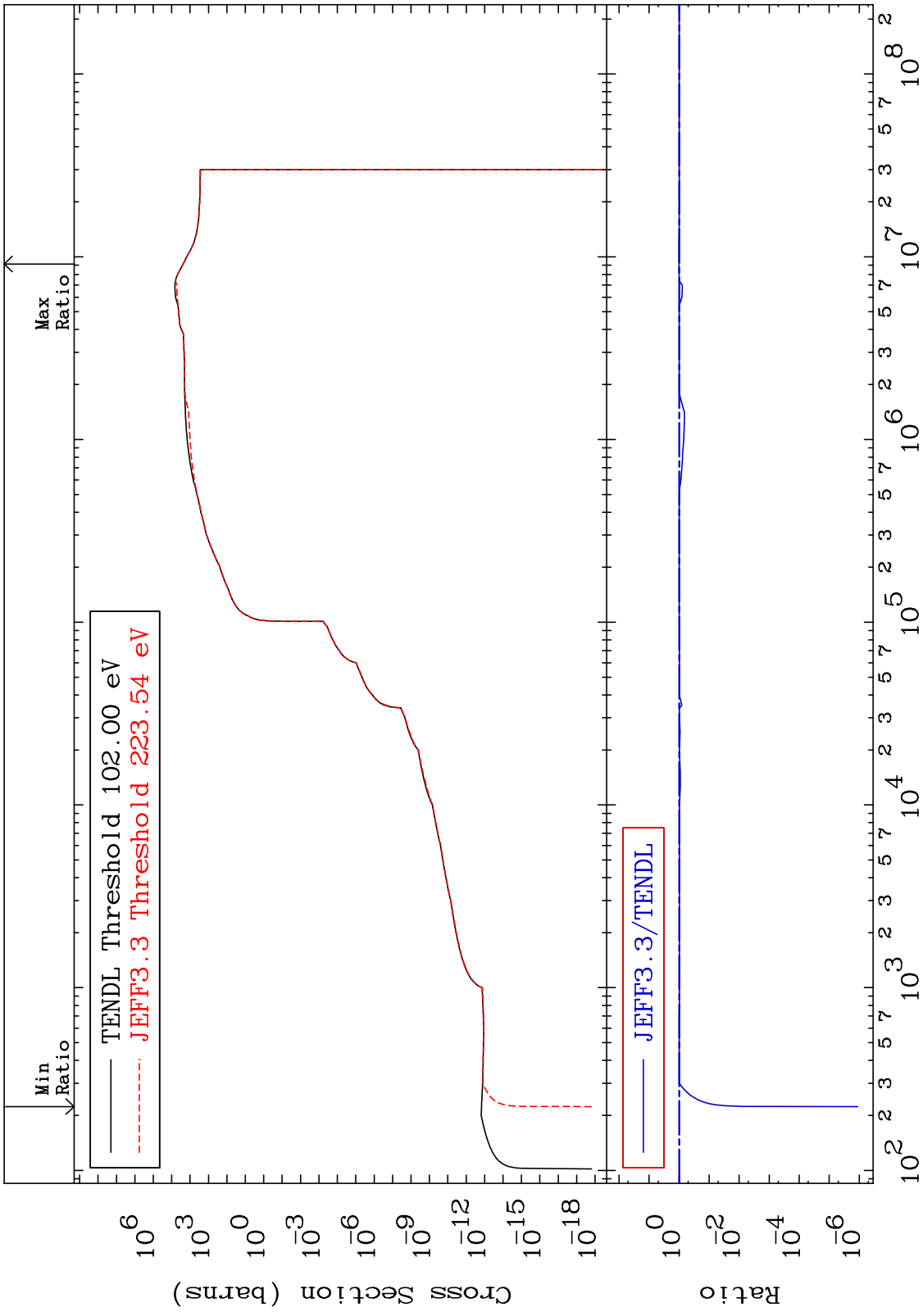
Incident Energy (eV)

73-Ta-180

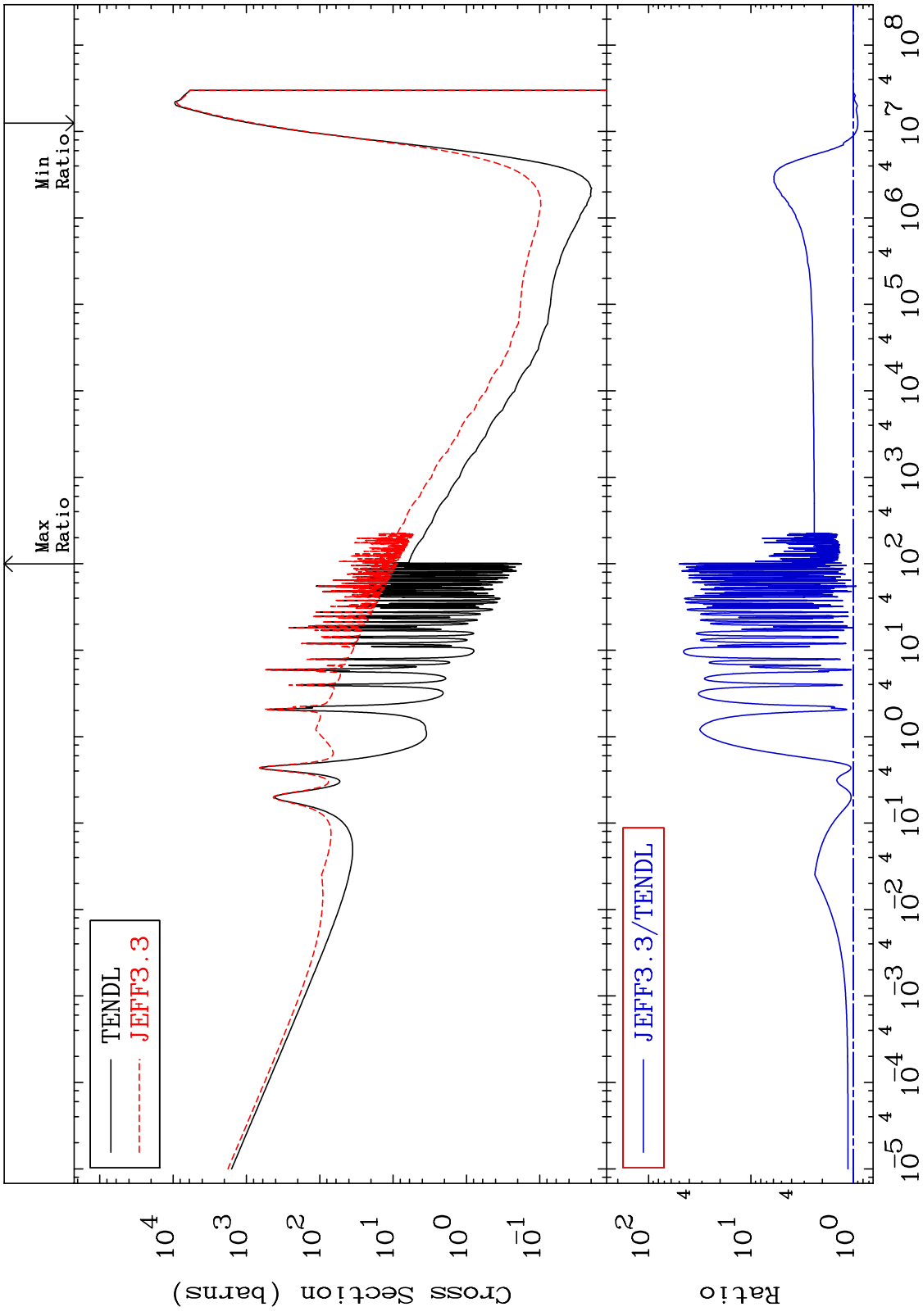
MAT 7326 73-Ta-180
 Dpa elastic (mt2) -2.107 To 4.443 %
 Cross Section



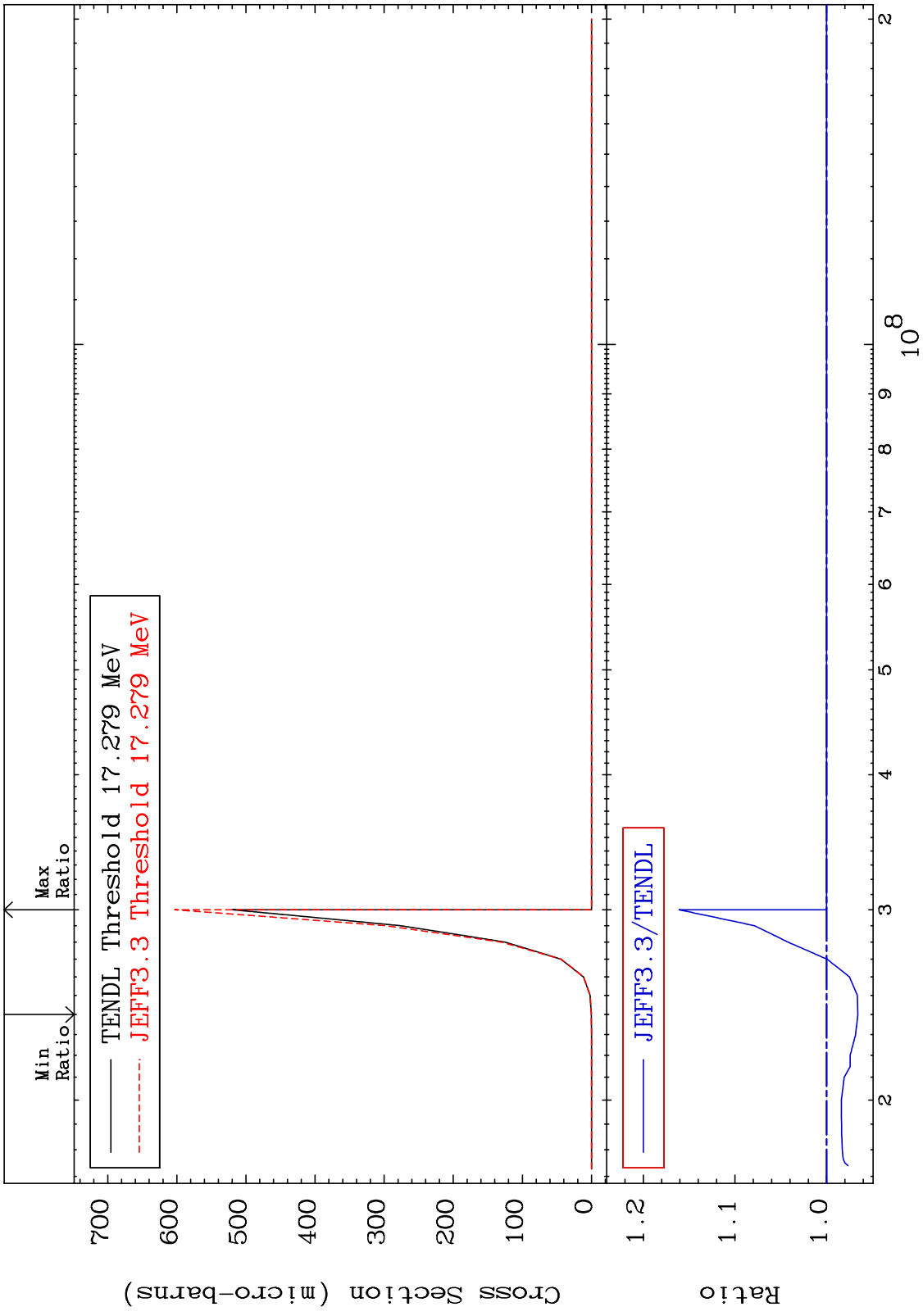
MAT 7326 Dpa inelastic (mt51-91) 73-Ta-180
 Cross Section -100.0 To 0.539 %



MAT 7326 Dpa disappearance (mt102 -120) 73-Ta-180
 Cross Section -10.12 To 4927. %



MAT 7326 (n,2n) d:72-Hf-177g 73-Ta-180
 Radionuclide Production Cross Section -3.406 To 16.10 %

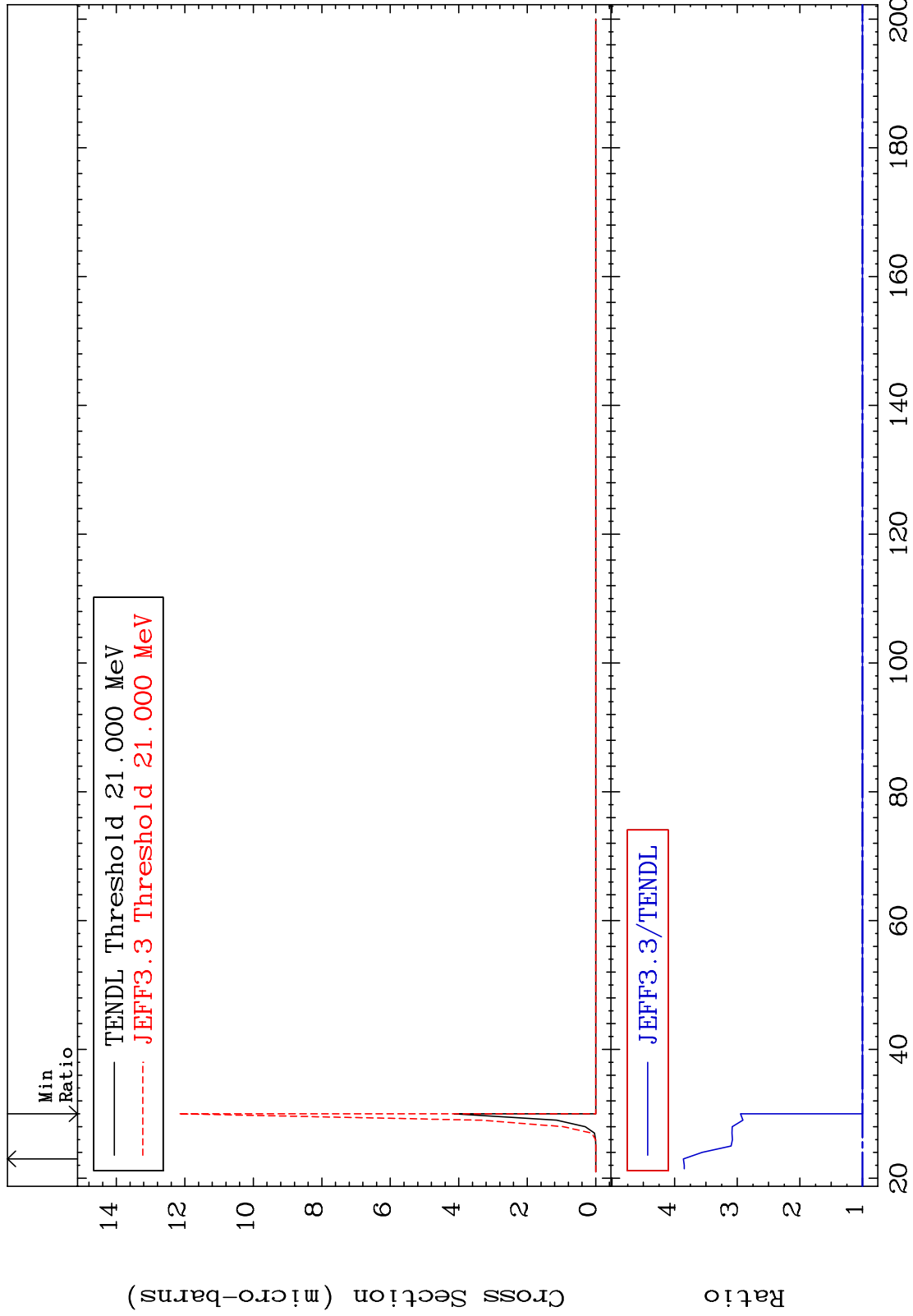


MAT 7326

(n,2n) d:72-Hf-177m10

73-Ta-180

Radionuclide Production Cross Section 0.000 To 286.0 %

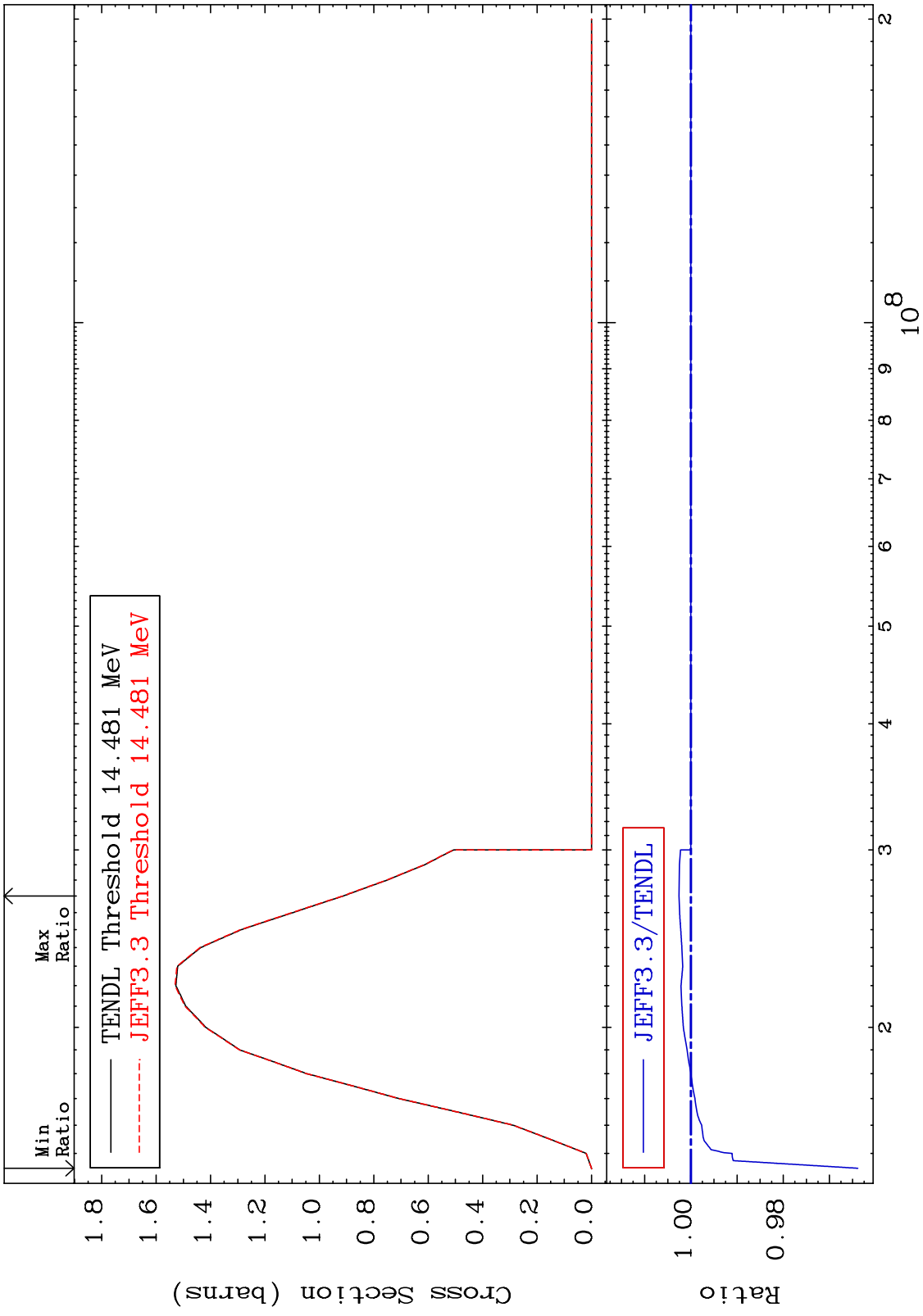


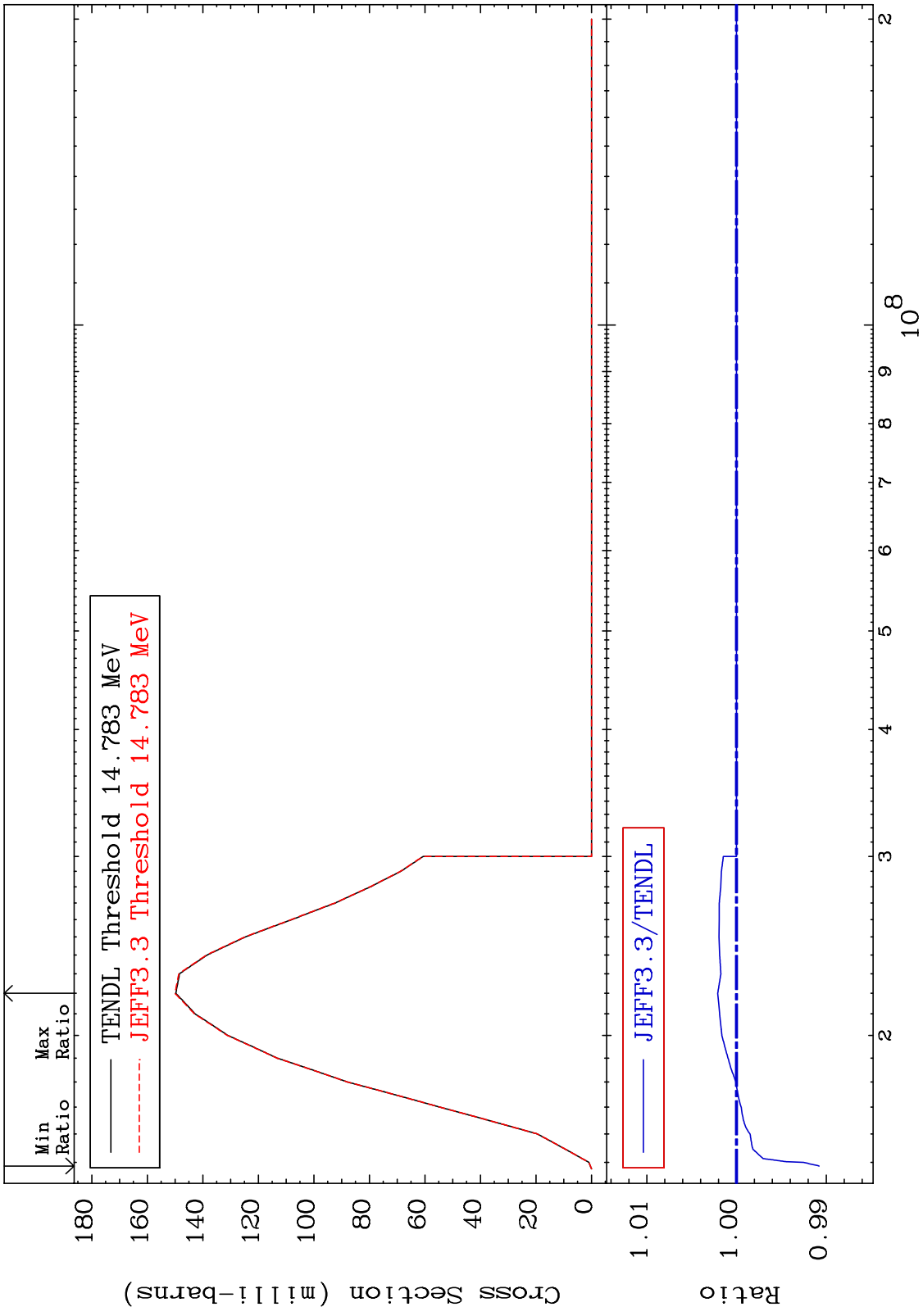
80

Incident Energy (MeV)

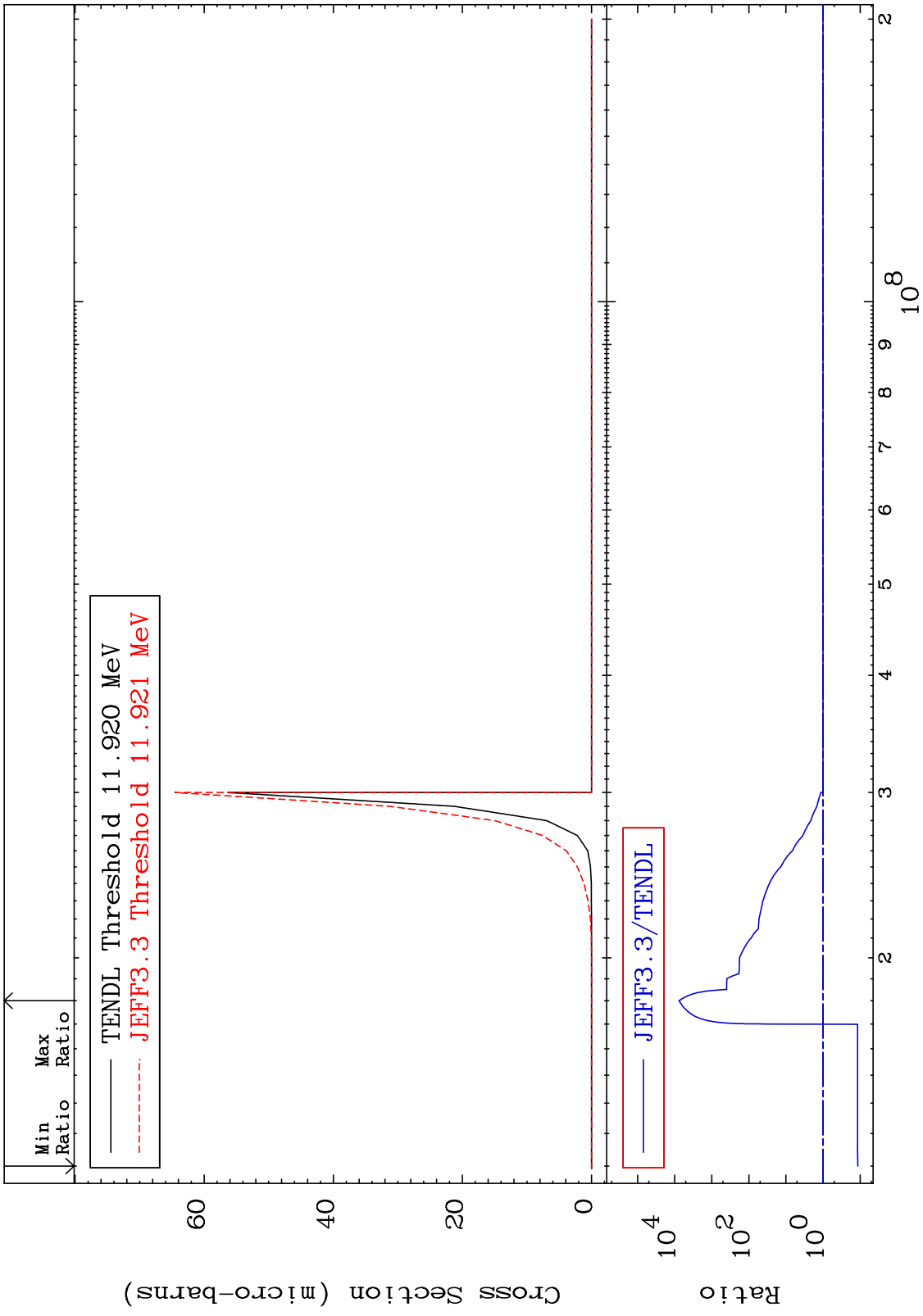
73-Ta-180

MAT 7326 (n,3n):73-Ta-178g 73-Ta-180
 Radionuclide Production Cross Section -3.615 To 0.256 %

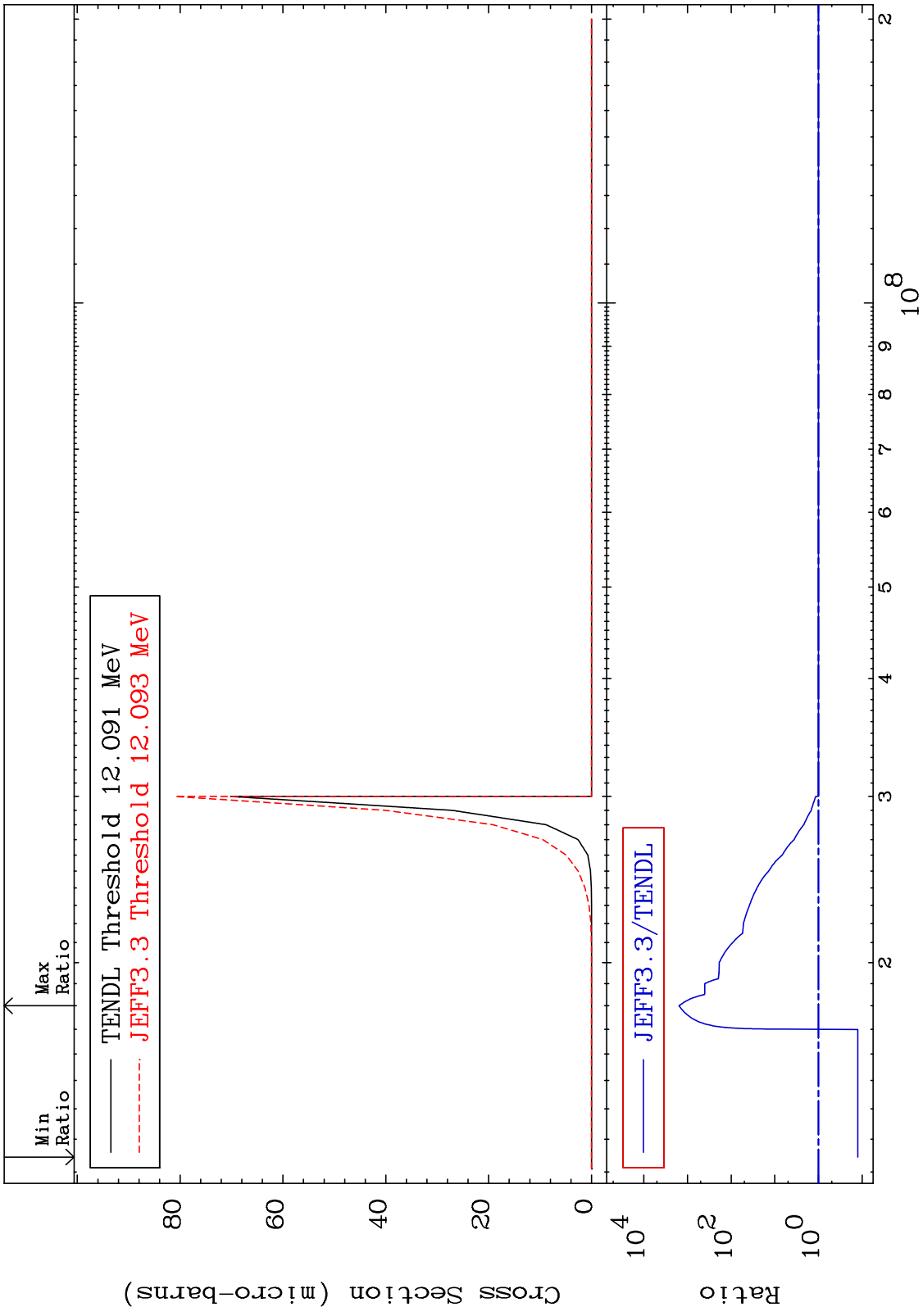




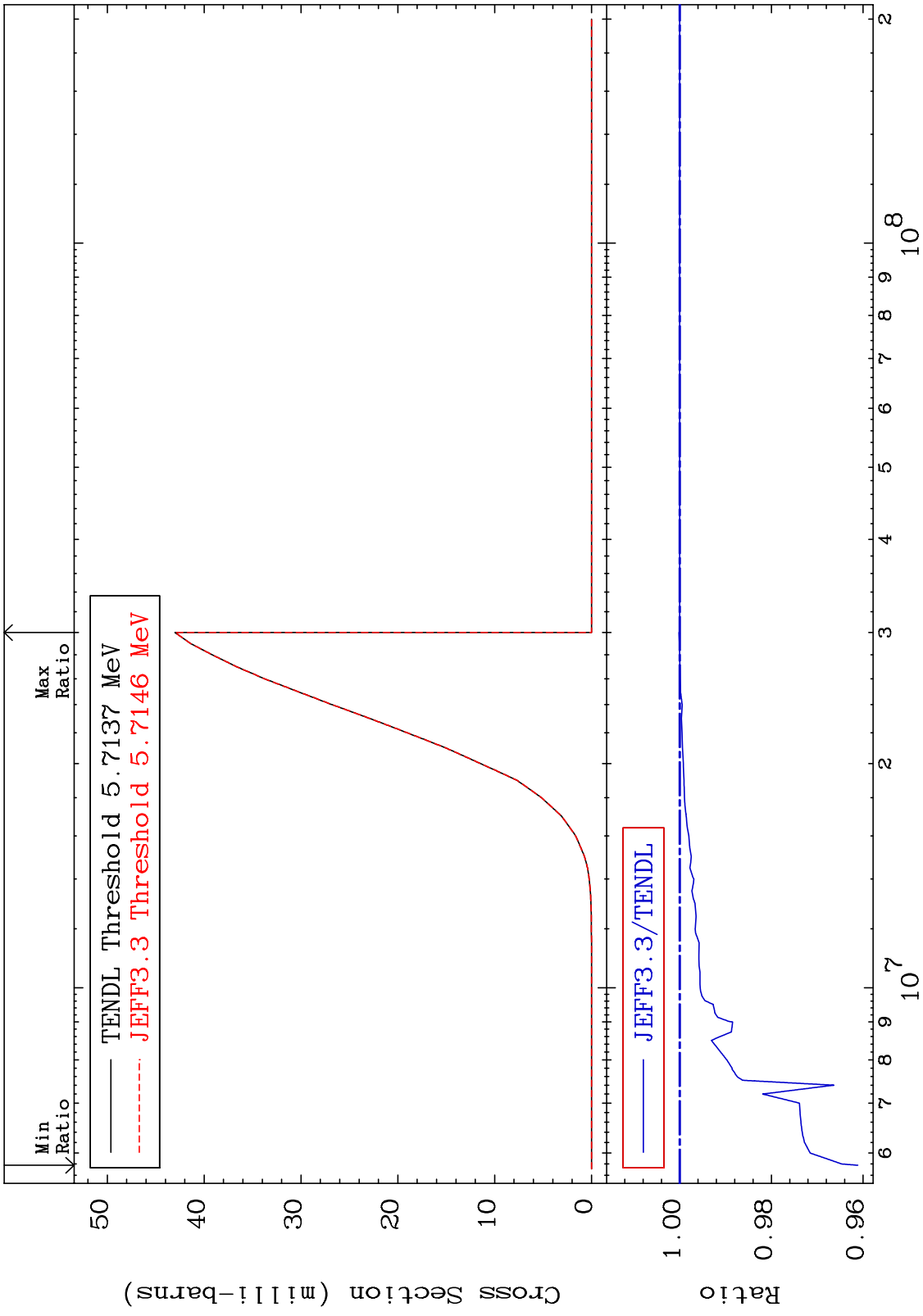
MAT 7326 (n,3n) α : 71-Lu-174g 73-Ta-180
 Radionuclide Production Cross Section -88.50 To 9999. %



MAT 7326 (n,3n) α :71-Lu-174m3 73-Ta-180
 Radionuclide Production Cross Section -87.38 To 9999. %



MAT 7326 (n, n') p:72-Hf-179g 73-Ta-180
 Radionuclide Production Cross Section -3.887 To 0.015 %

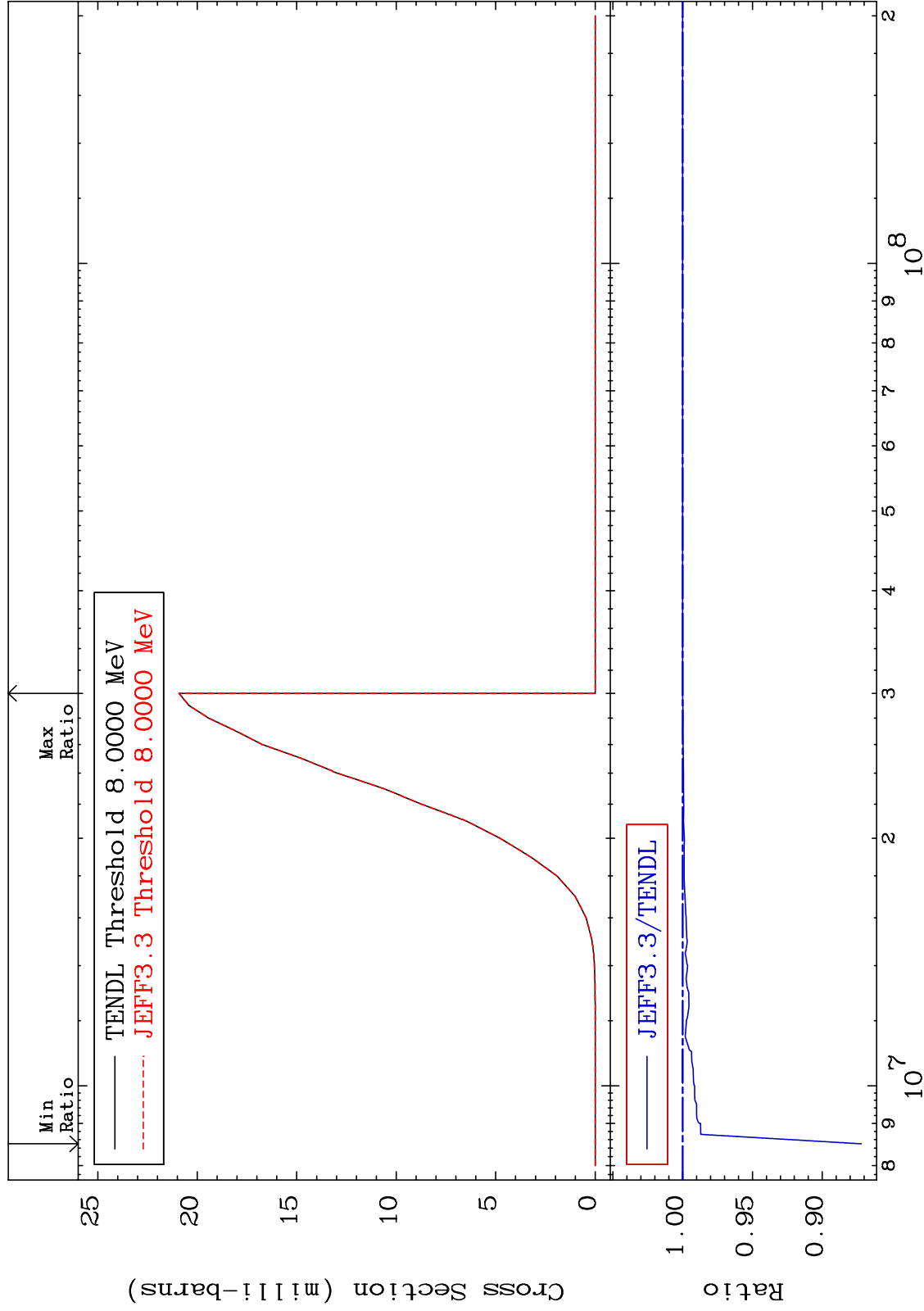


MAT 7326

(n,n') p:72-Hf-179m5

73-Ta-180

Radionuclide Production Cross Section -12.80 To 0.003 %



86

Incident Energy (eV)

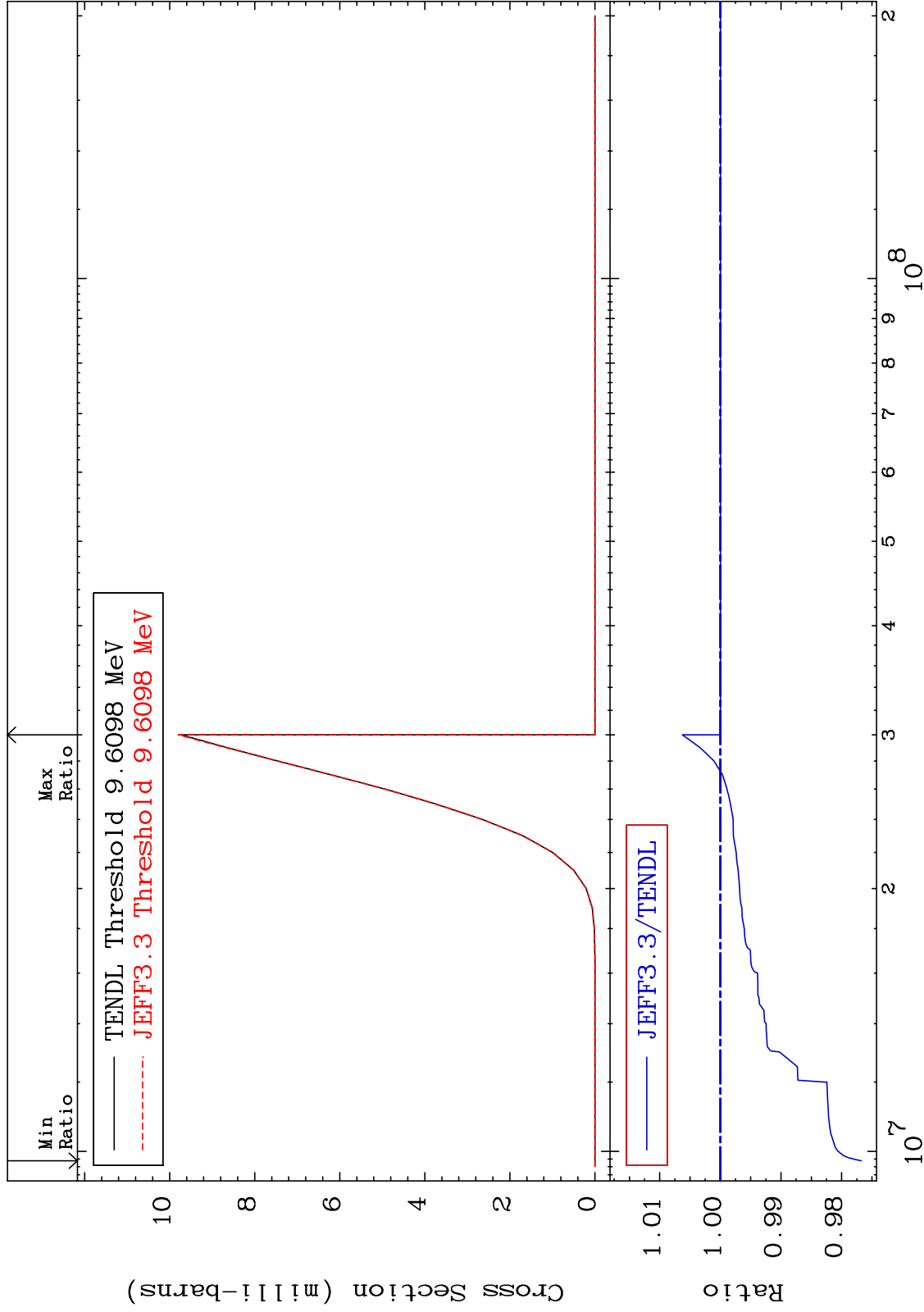
73-Ta-180

MAT 7326

(n, n') d:72-Hf-178g

73-Ta-180

Radionuclide Production Cross Section -2.324 To 0.625 %



87

Incident Energy (eV)

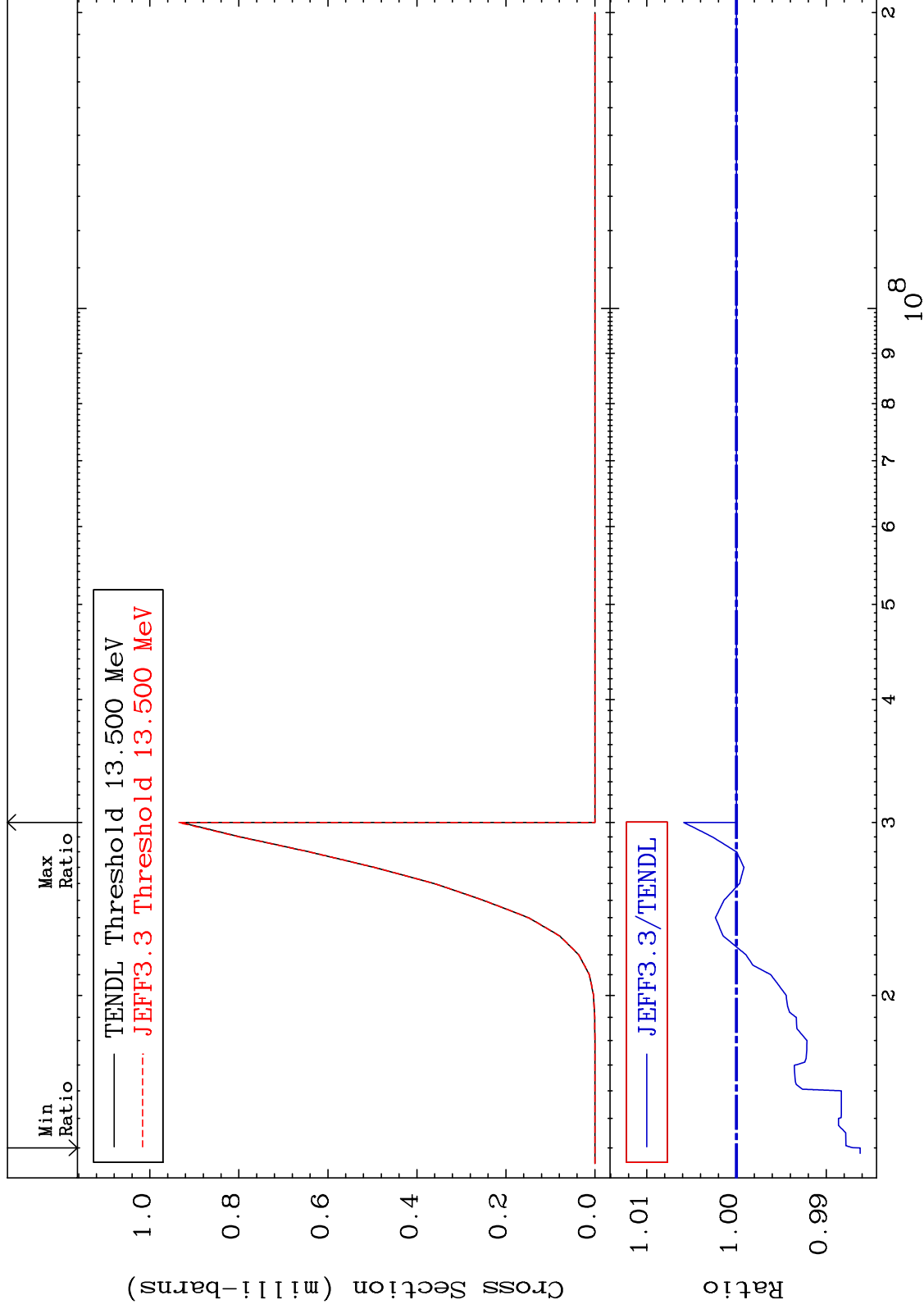
73-Ta-180

MAT 7326

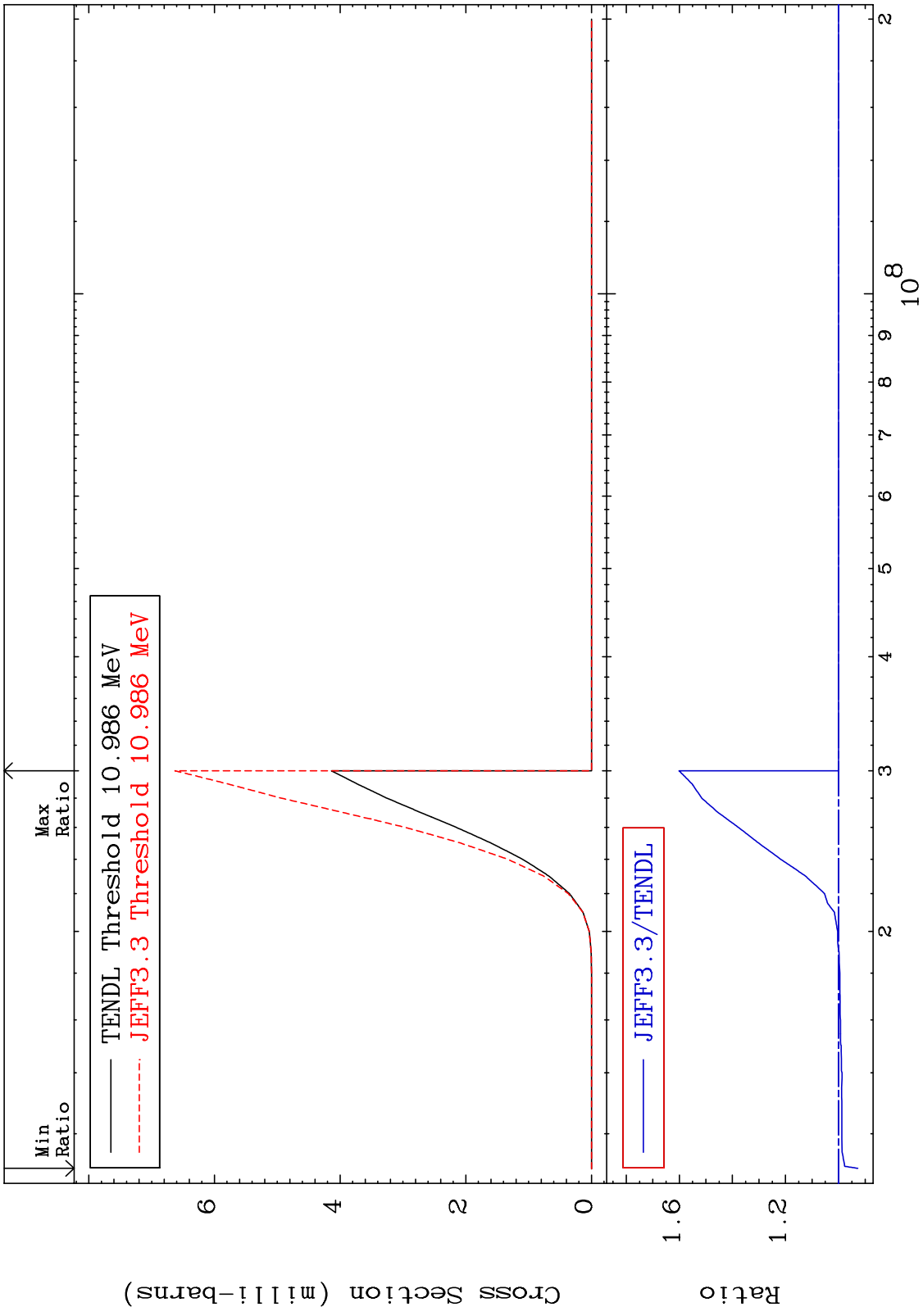
(n,n') d:72-Hf-178m5

73-Ta-180

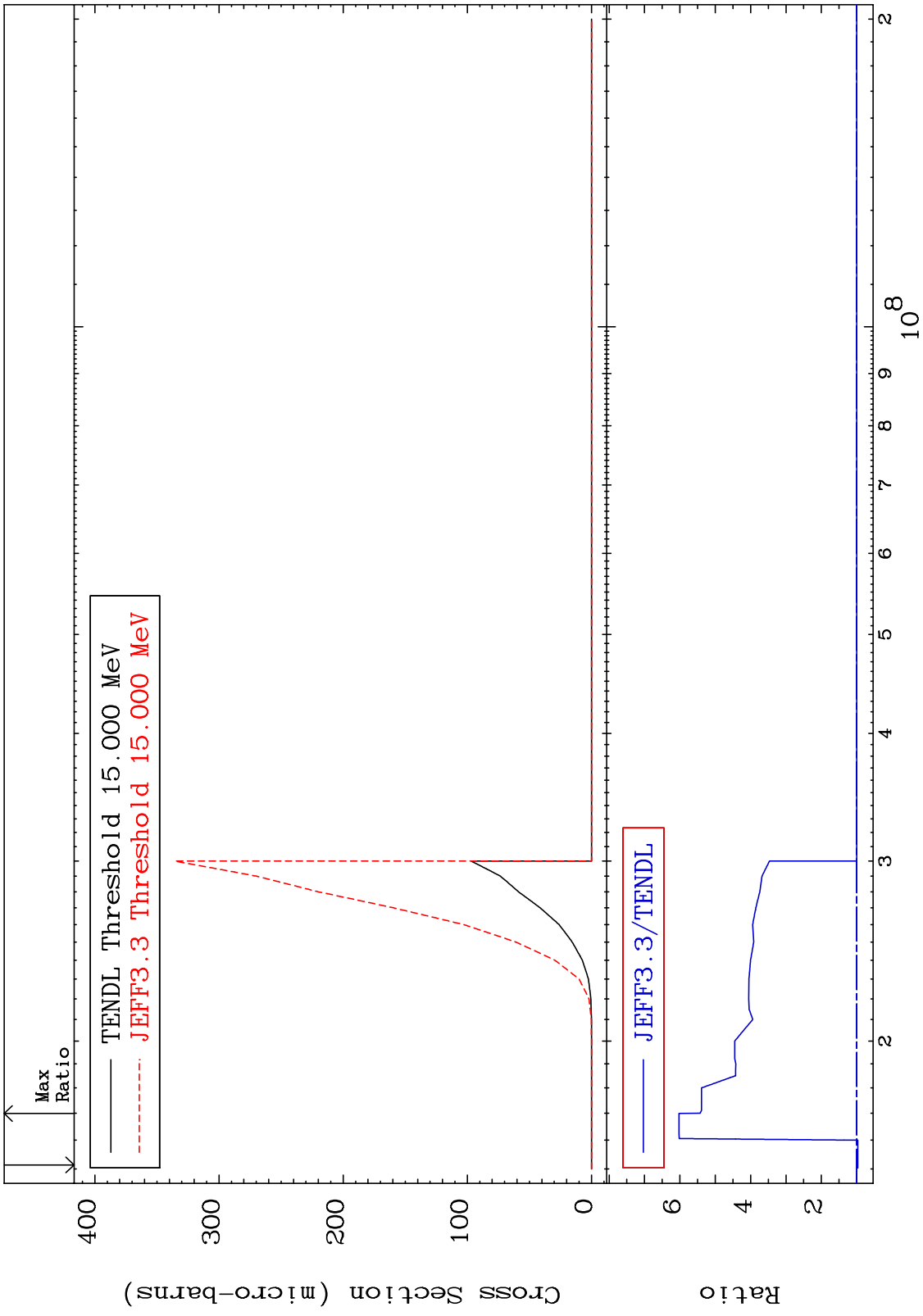
Radionuclide Production Cross Section -1.378 To 0.588 %



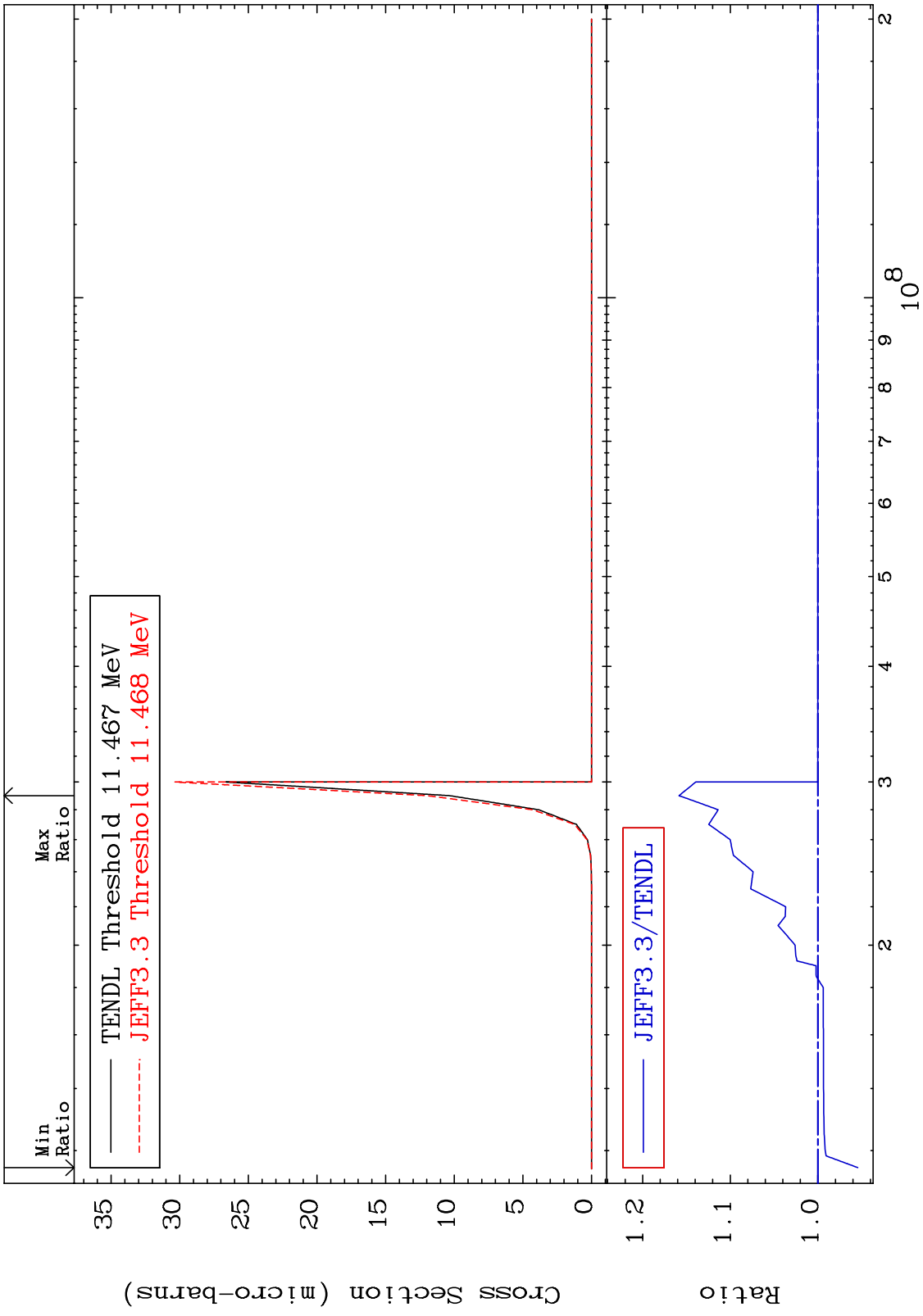
MAT 7326 (n, n') t: 72-Hf-177g 73-Ta-180
 Radionuclide Production Cross Section -7.258 To 60.11 %



MAT 7326 (n,n') t:72-Hf-177m10 73-Ta-180
 Radionuclide Production Cross Section -3.099 To 502.4 %



MAT 7326 (n, n') He-3:71-Lu-177g 73-Ta-180
 Radionuclide Production Cross Section -4.561 To 15.84 %

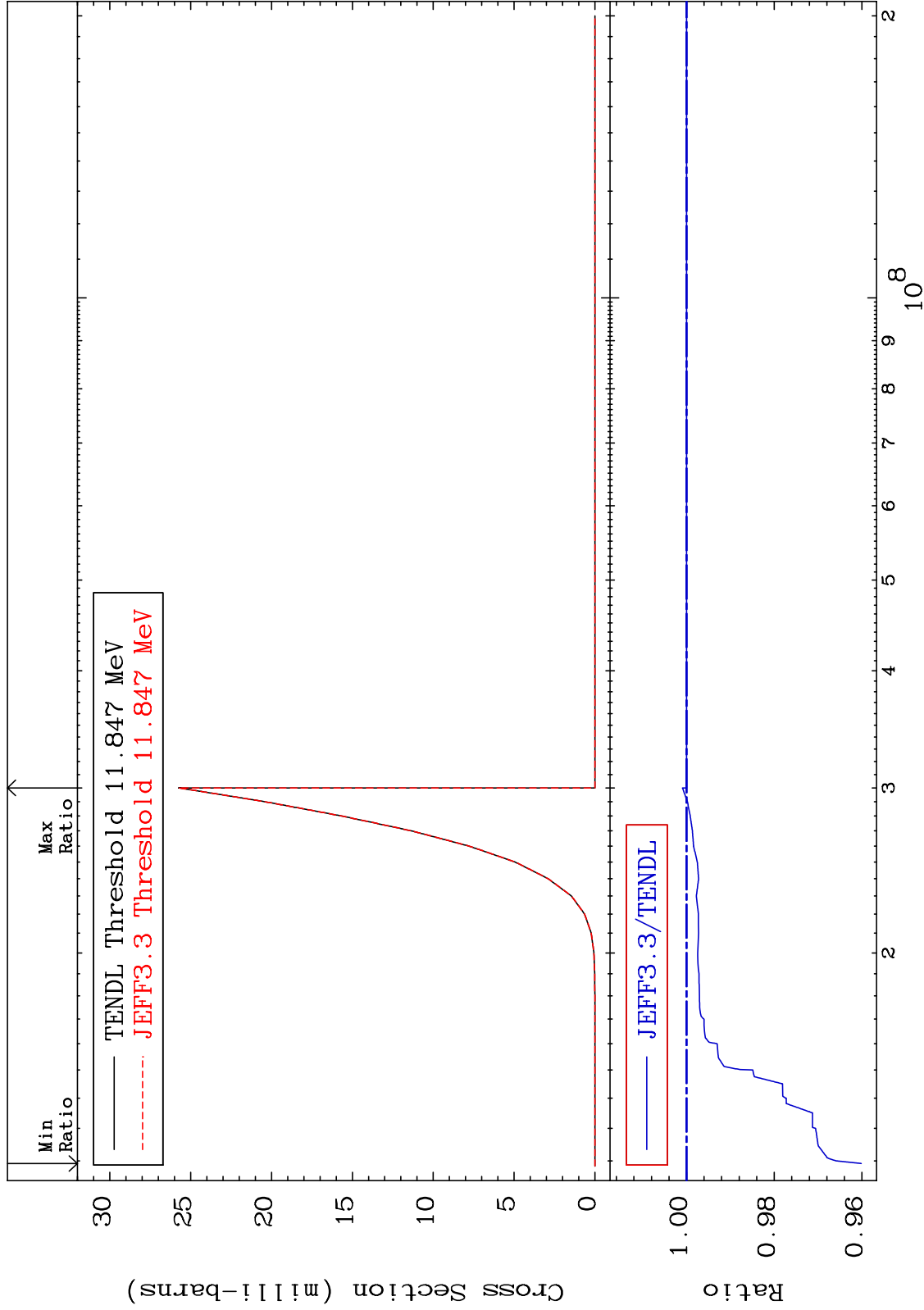


MAT 7326

(n,2n) p:72-Hf-178g

73-Ta-180

Radionuclide Production Cross Section -3.984 To 0.093 %

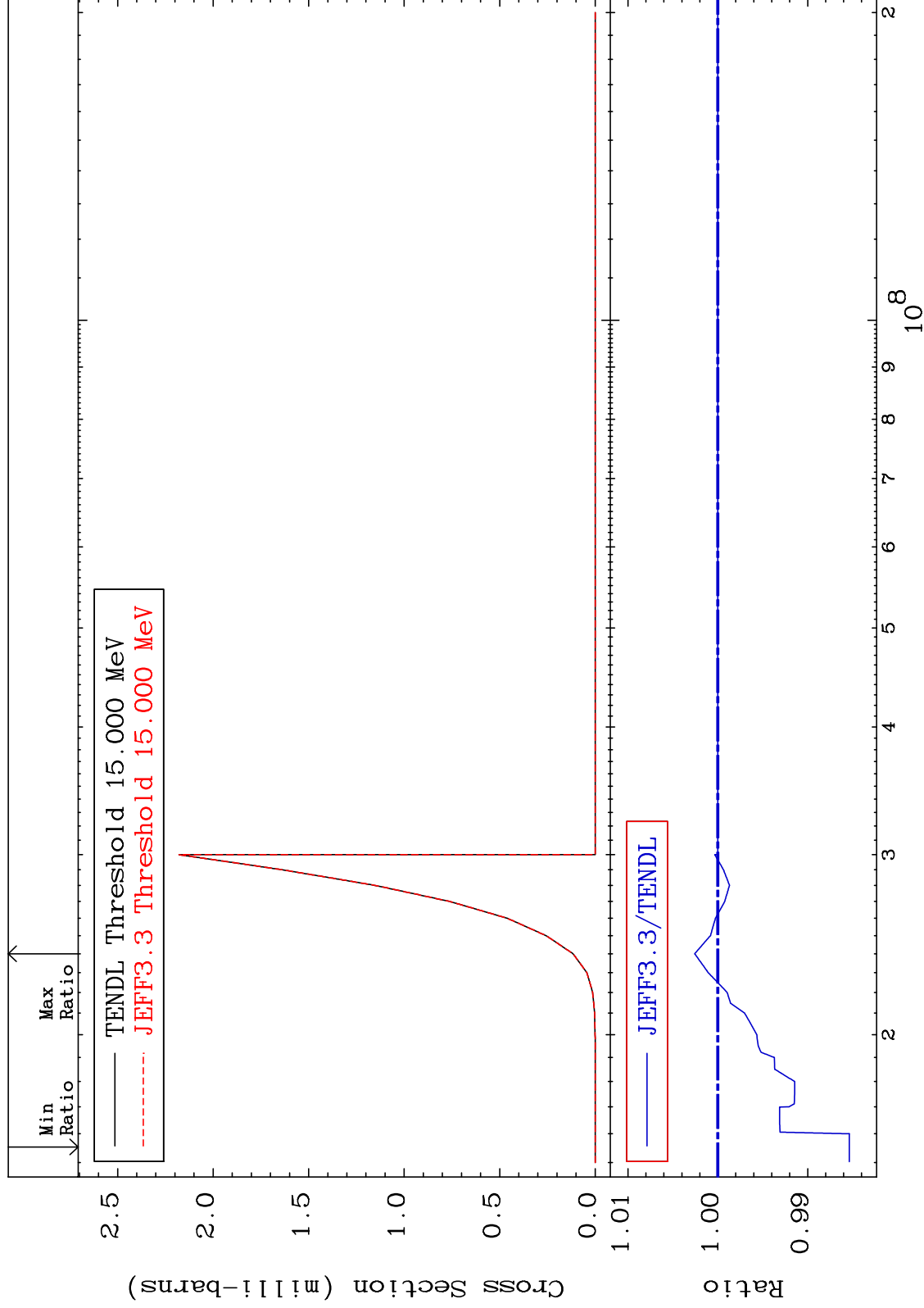


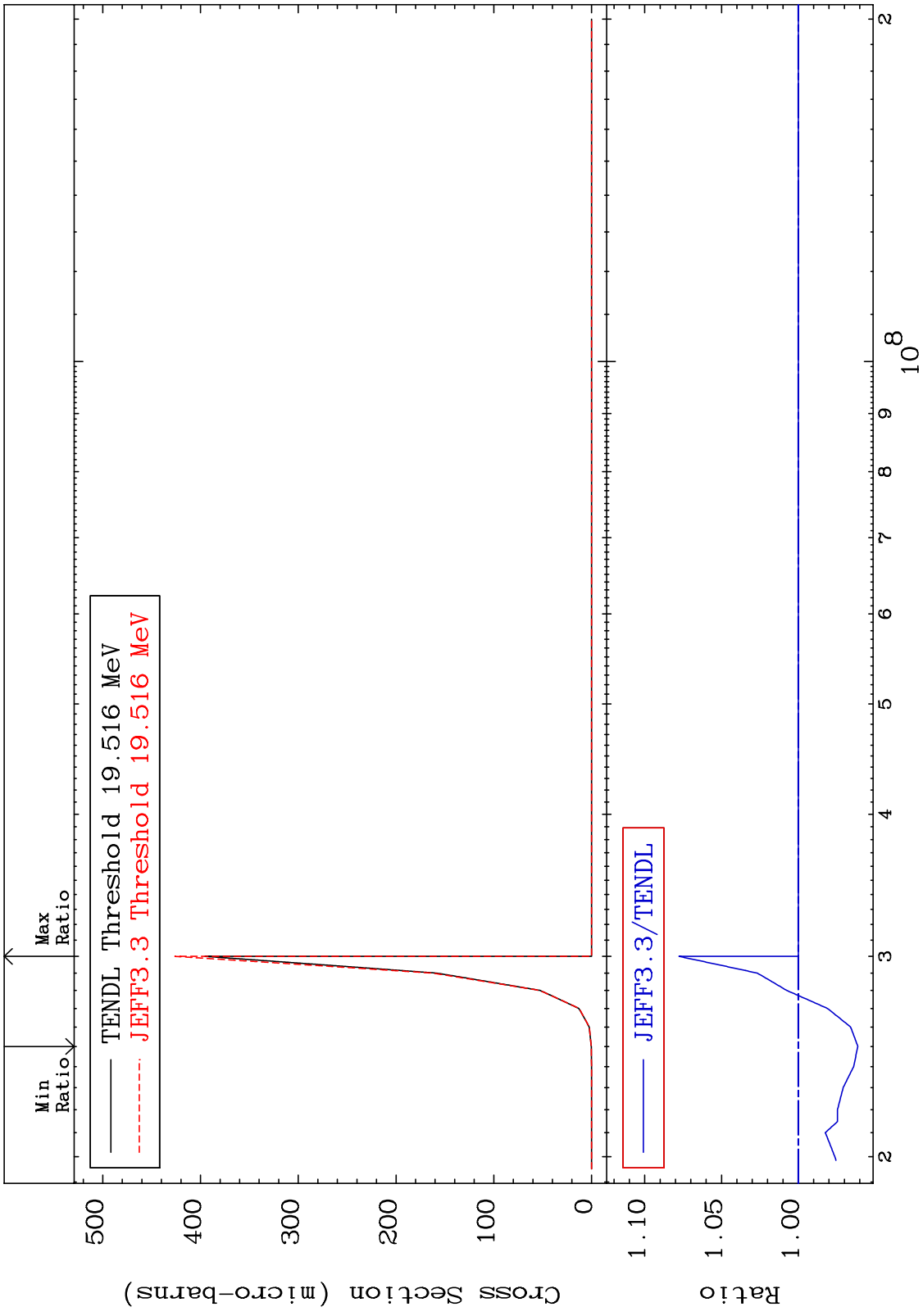
MAT 7326

(n,2n) p:72-Hf-178m5

73-Ta-180

Radionuclide Production Cross Section -1.463 To 0.257 %



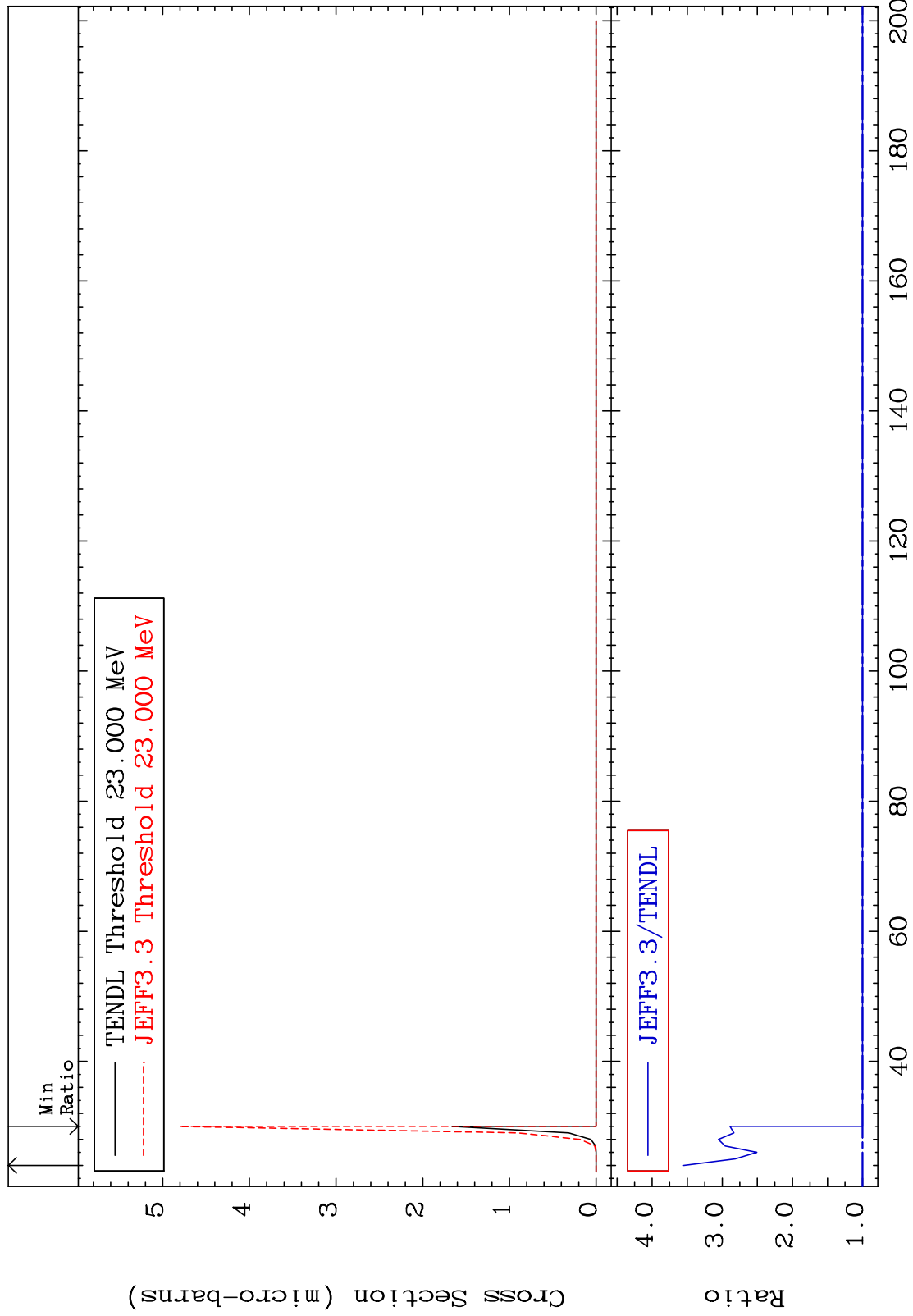


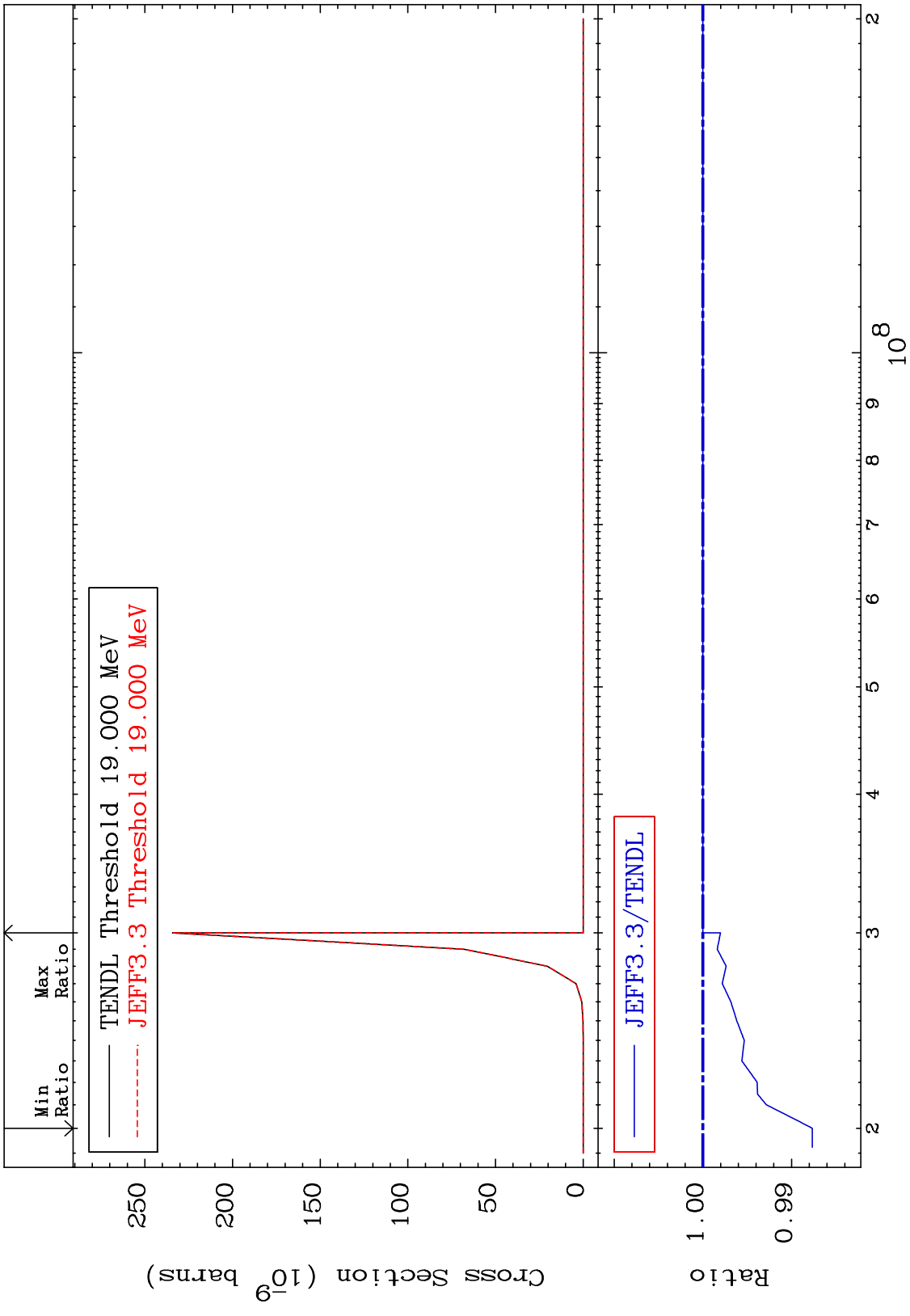
MAT 7326

(n,3n) p:72-Hf-177m10

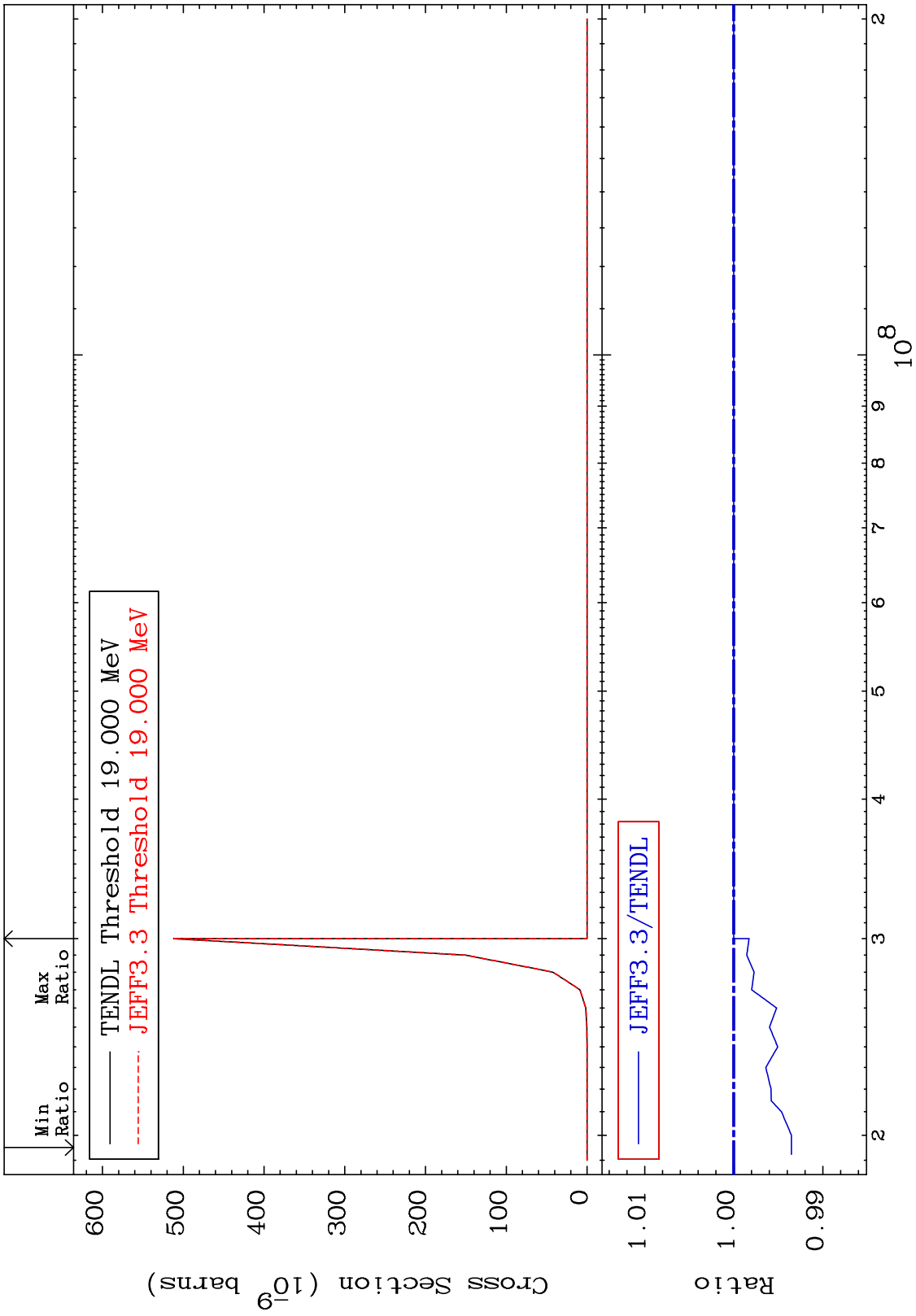
73-Ta-180

Radionuclide Production Cross Section 0.000 To 255.1 %





MAT 7326 (n,2n) p:71-Lu-178m3 73-Ta-180
 Radionuclide Production Cross Section -0.648 To 0.000 %

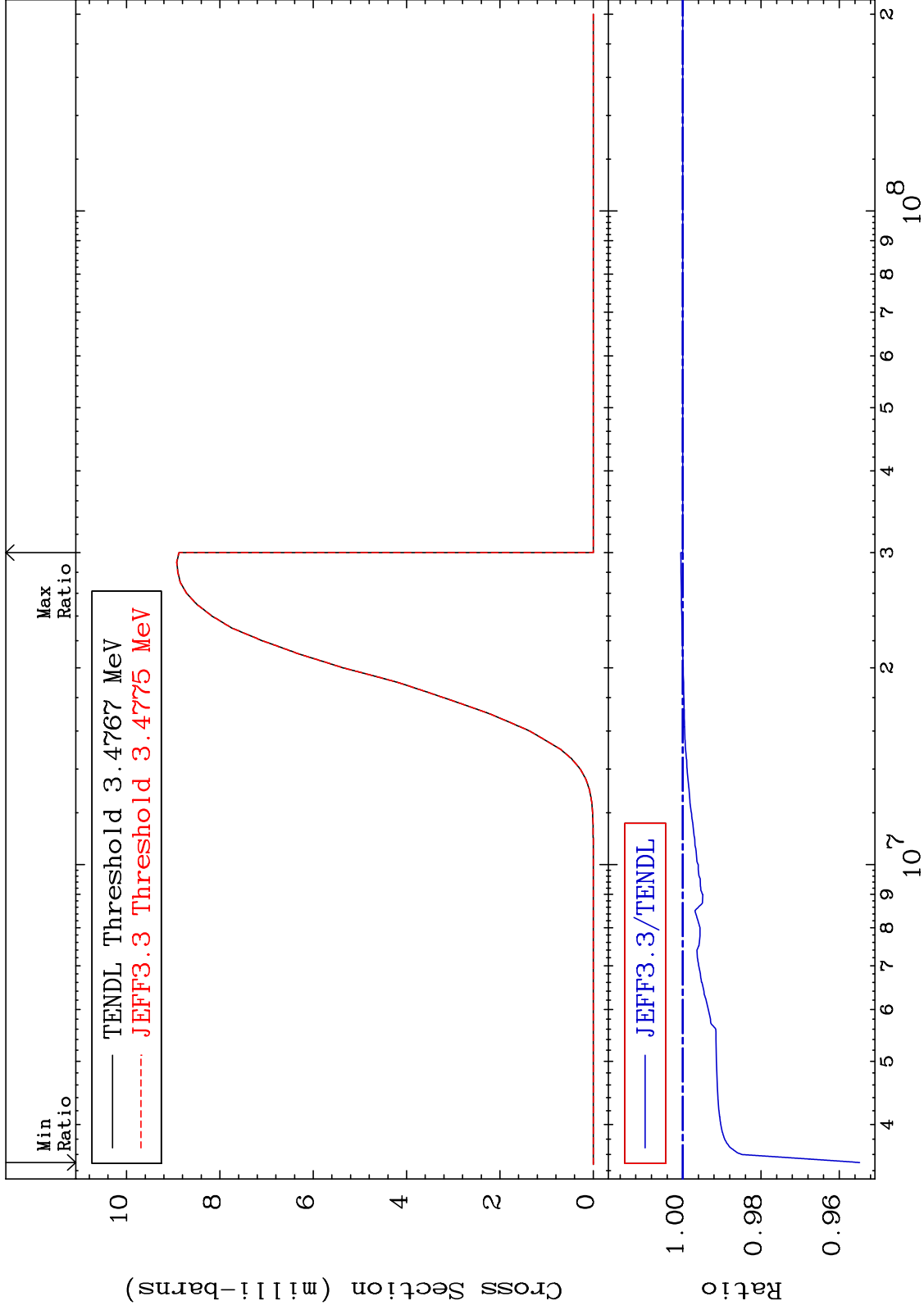


MAT 7326

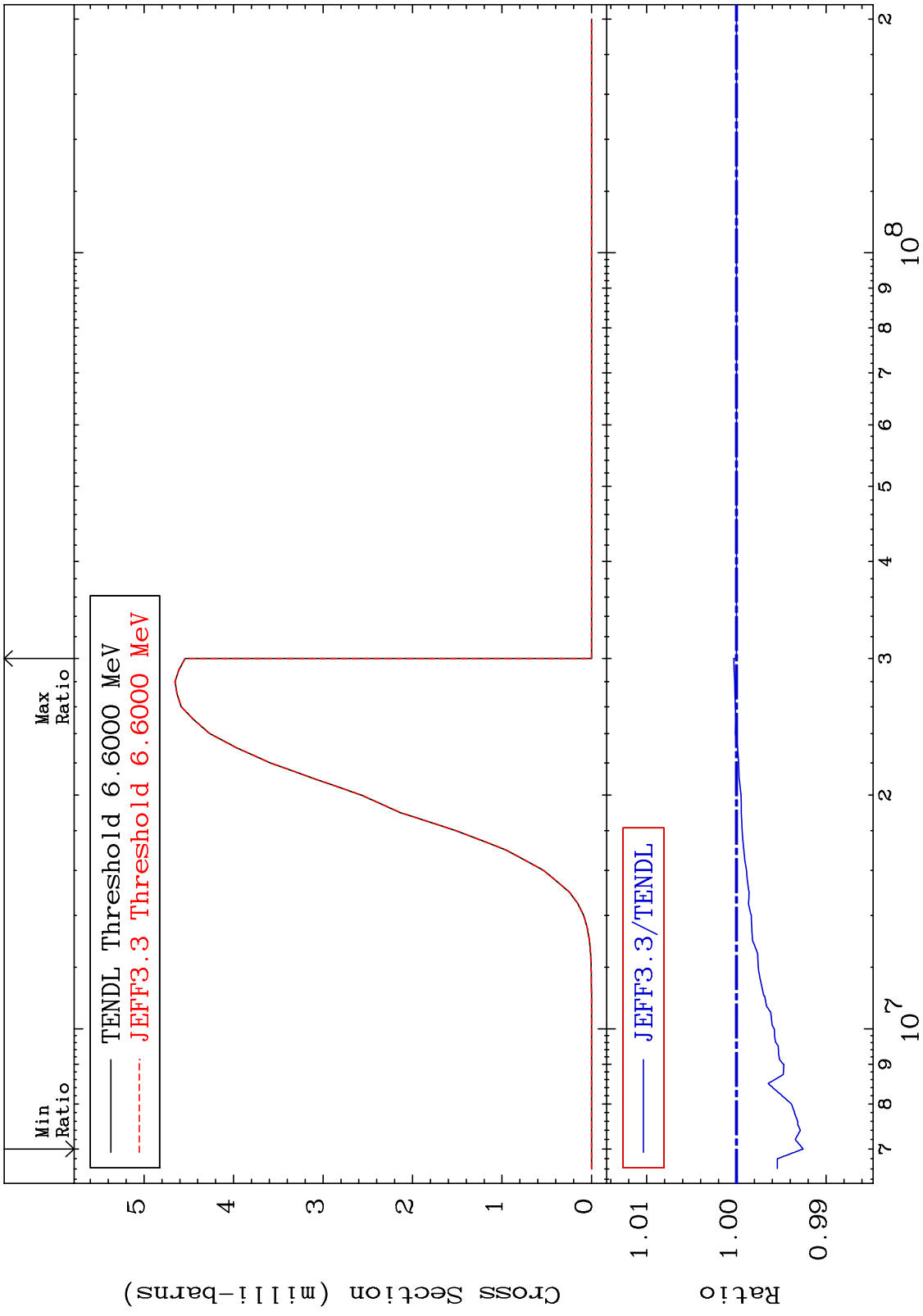
(n,d):72-Hf-179g

73-Ta-180

Radionuclide Production Cross Section -4.521 To 0.050 %

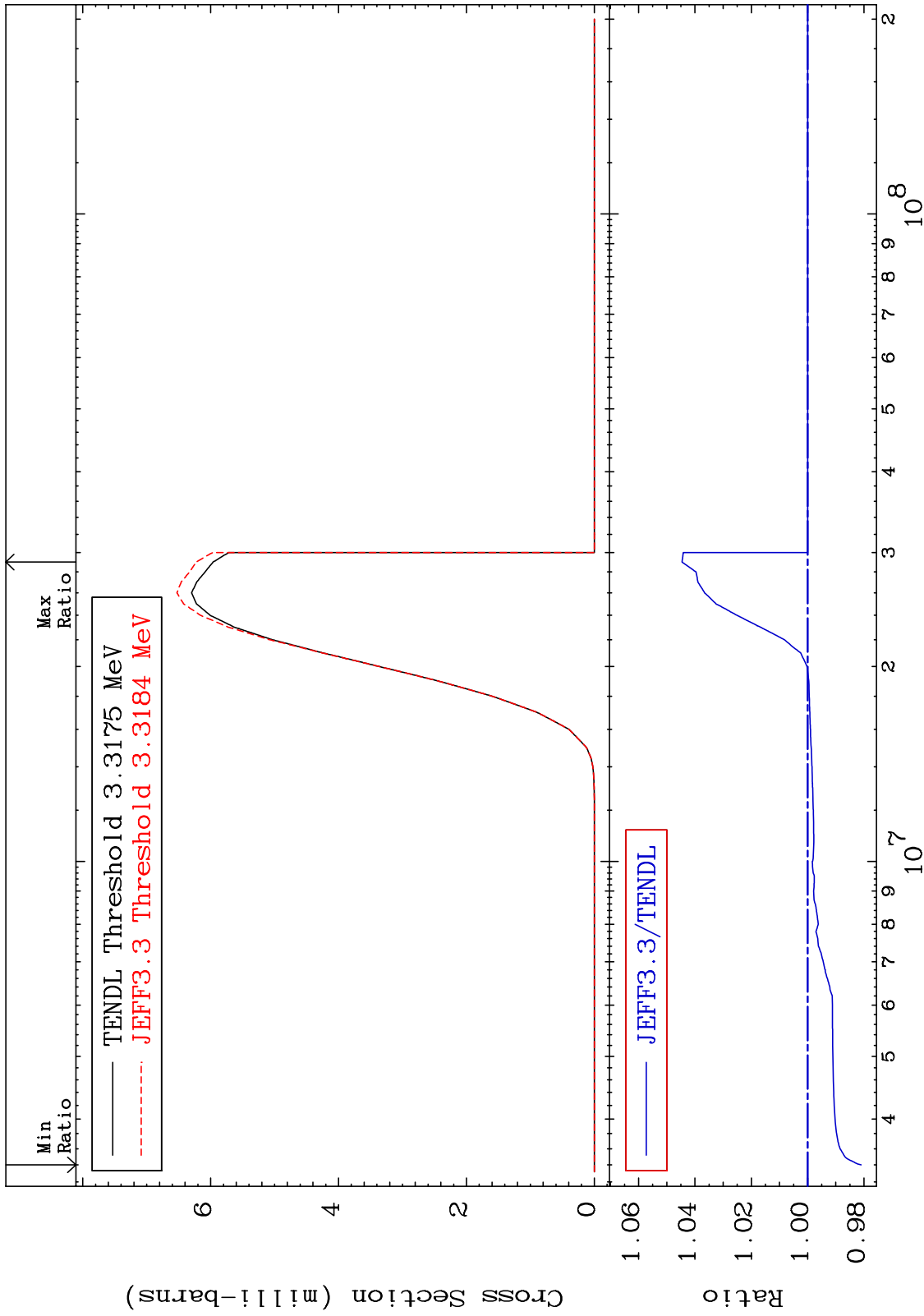


MAT 7326 (n,d):72-Hf-179m5 73-Ta-180
 Radionuclide Production Cross Section -0.744 To 0.030 %



MAT 7326

(n,t):72-Hf-178g 73-Ta-180
Radionuclide Production Cross Section -1.899 To 4.458 %



100

Incident Energy (eV)

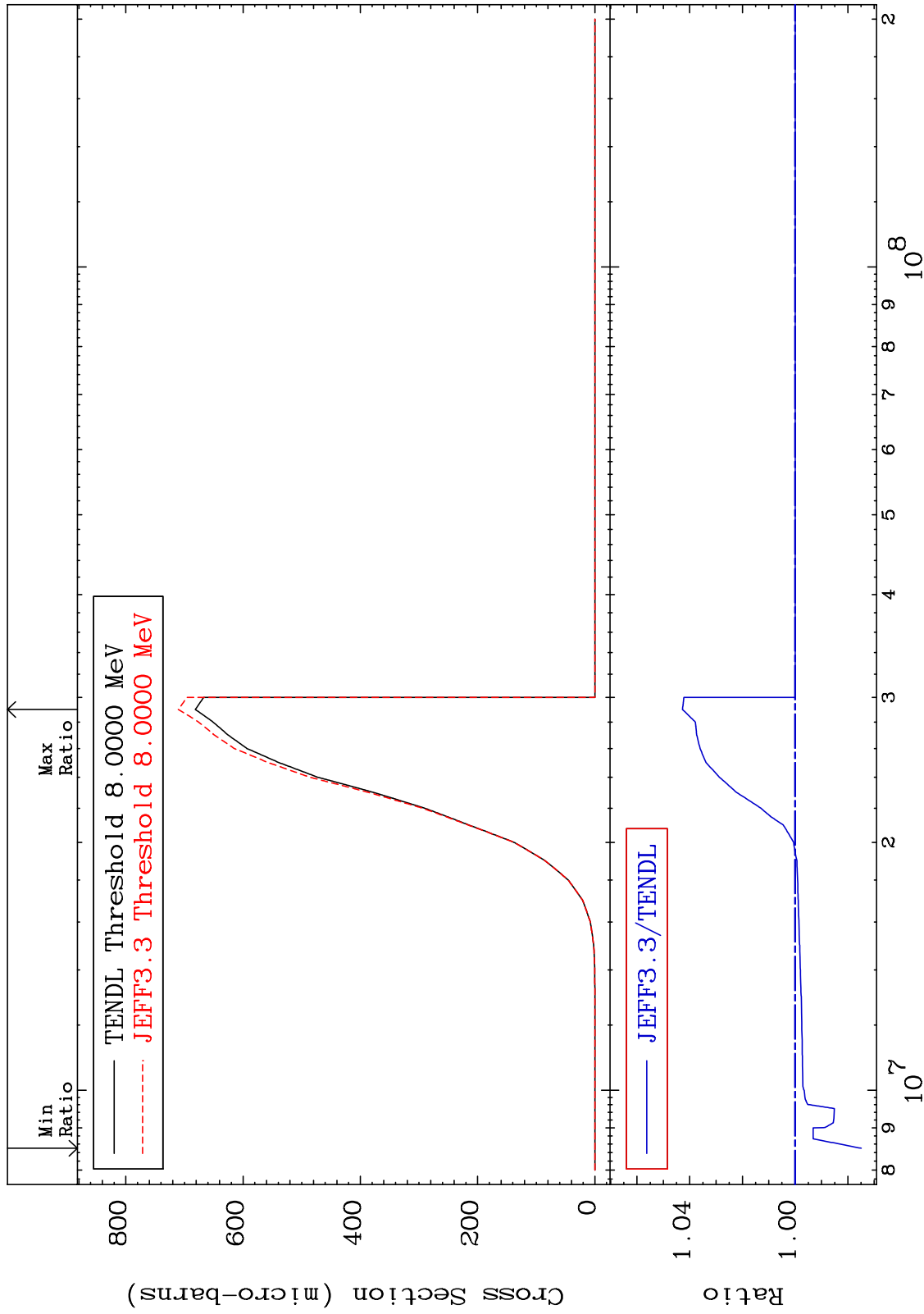
73-Ta-180

MAT 7326

(n, t): 72-Hf-178m5

73-Ta-180

Radionuclide Production Cross Section -2.509 To 4.275 %

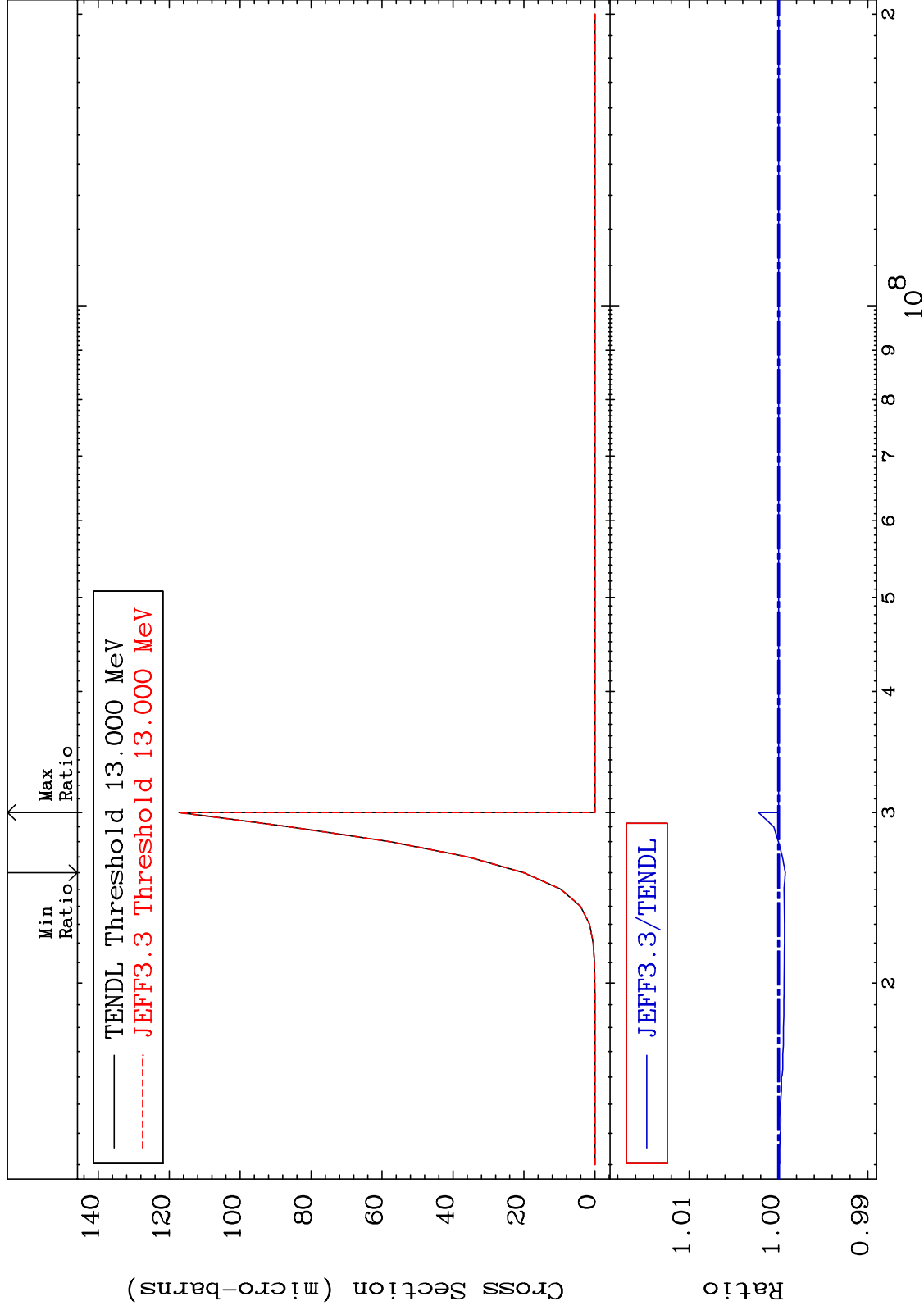


MAT 7326

(n, He-3) : 71-Lu-178g

73-Ta-180

Radionuclide Production Cross Section -0.076 To 0.225 %



102

Incident Energy (eV)

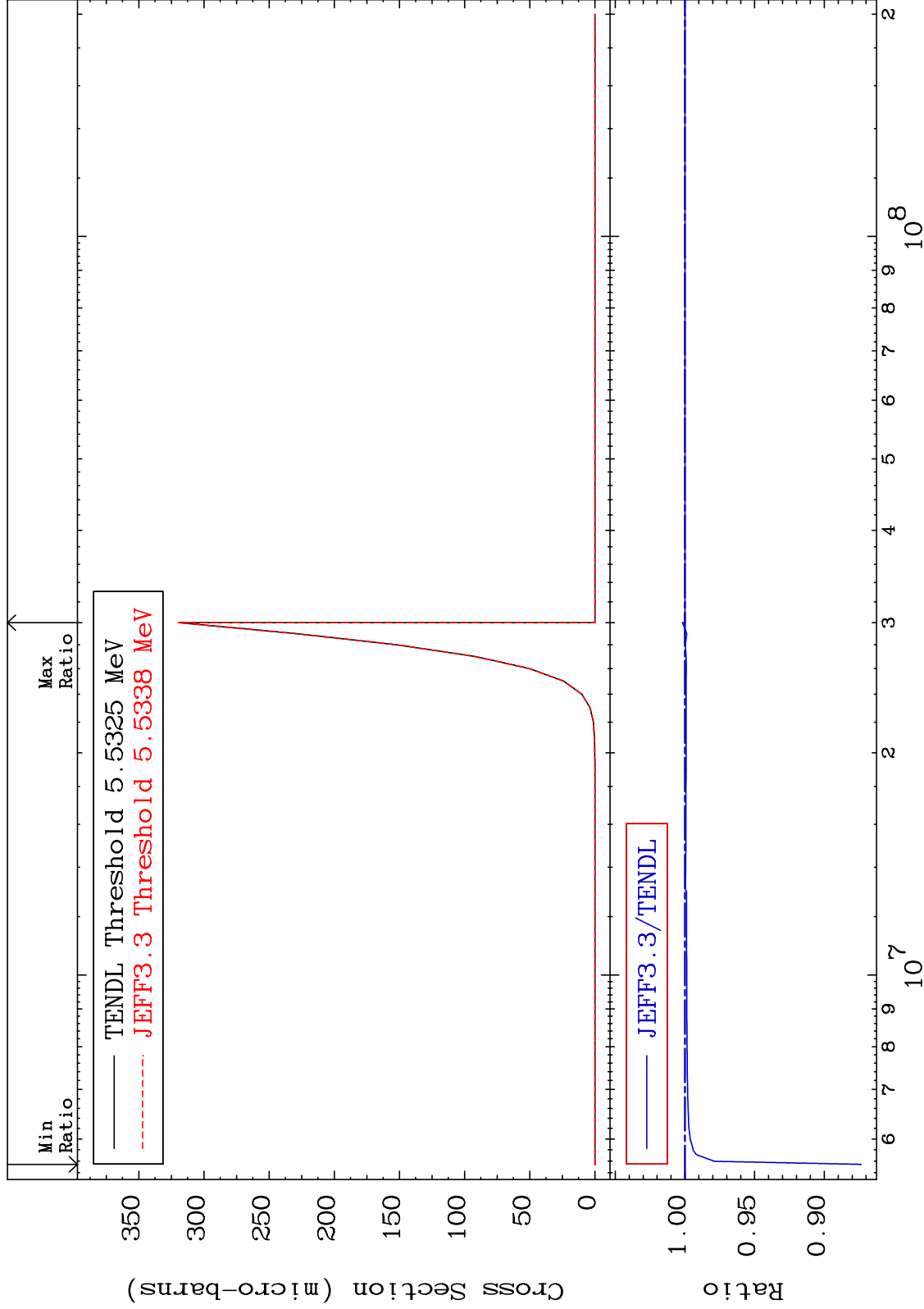
73-Ta-180

MAT 7326

(n,He-3) : 71-Lu-178m3

73-Ta-180

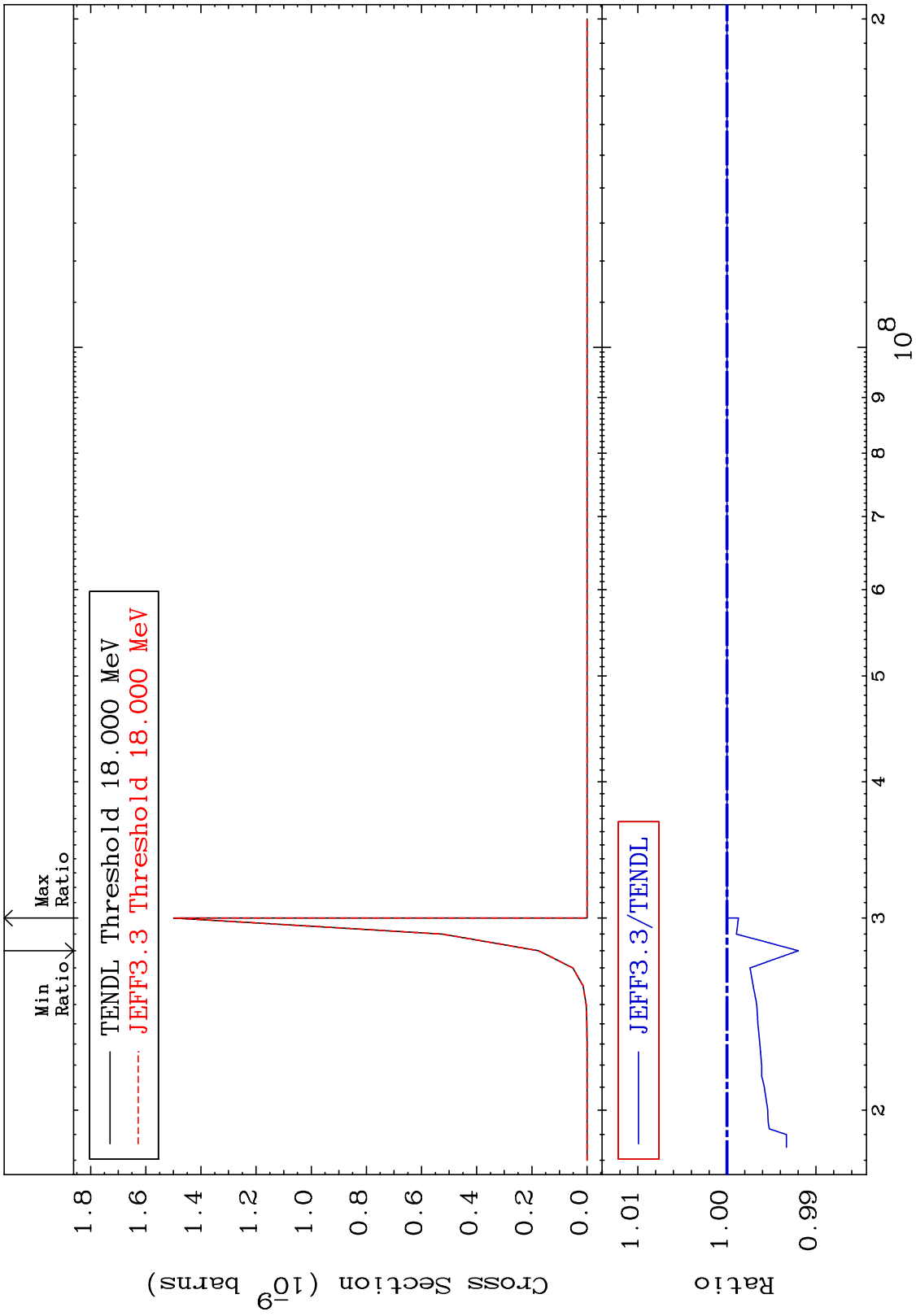
Radionuclide Production Cross Section -12.65 To 0.179 %



103

Incident Energy (eV)

73-Ta-180

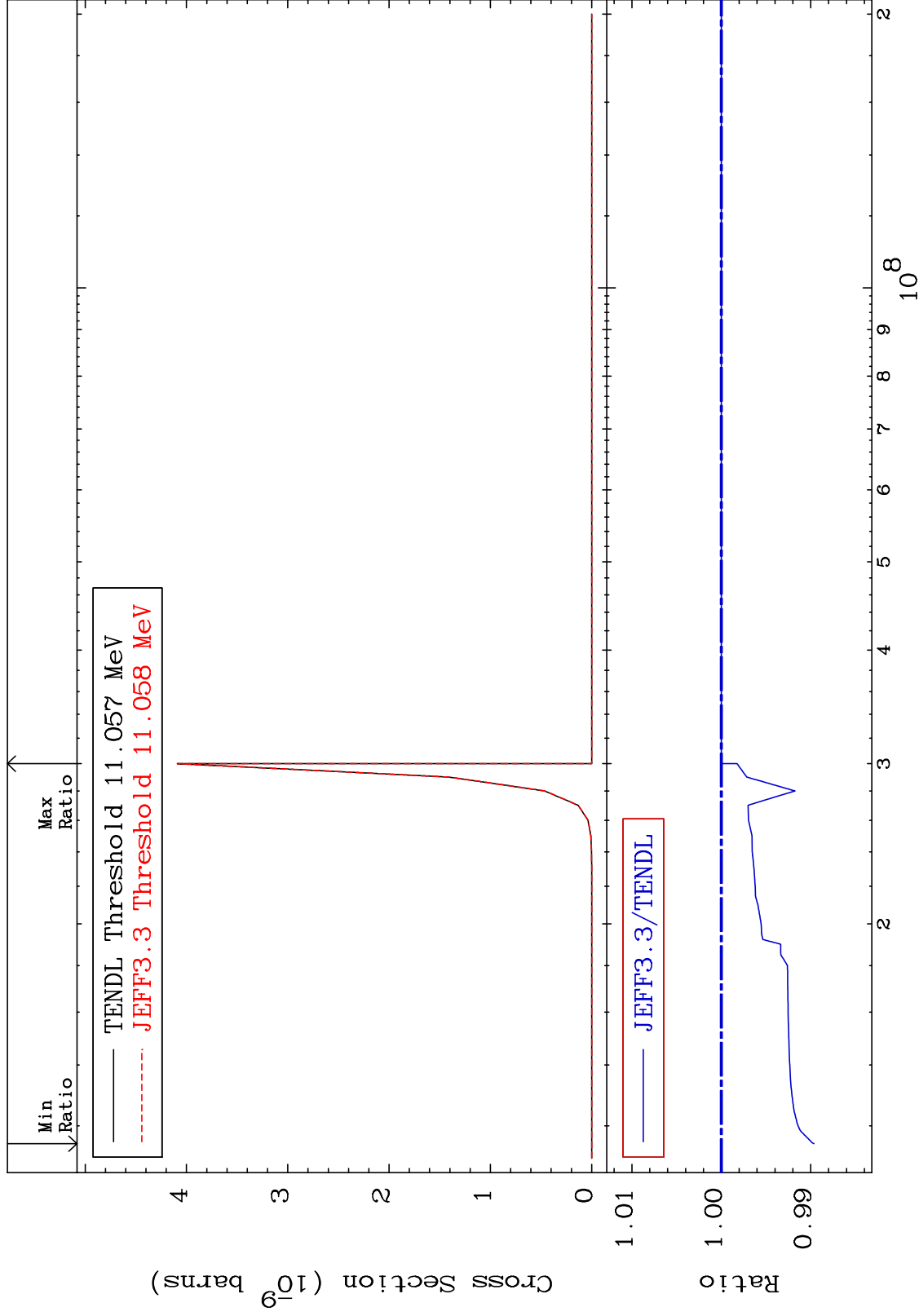


MAT 7326

(n, p) d:71-Lu-178m3

73-Ta-180

Radionuclide Production Cross Section -1.037 To 0.000 %



105

Incident Energy (eV)

73-Ta-180

MAT 7326

(n,p) t:71-Lu-177g

73-Ta-180

Radionuclide Production Cross Section -3.294 To 37.87 %

