

Program Complot  
(Version 2018-1)

by

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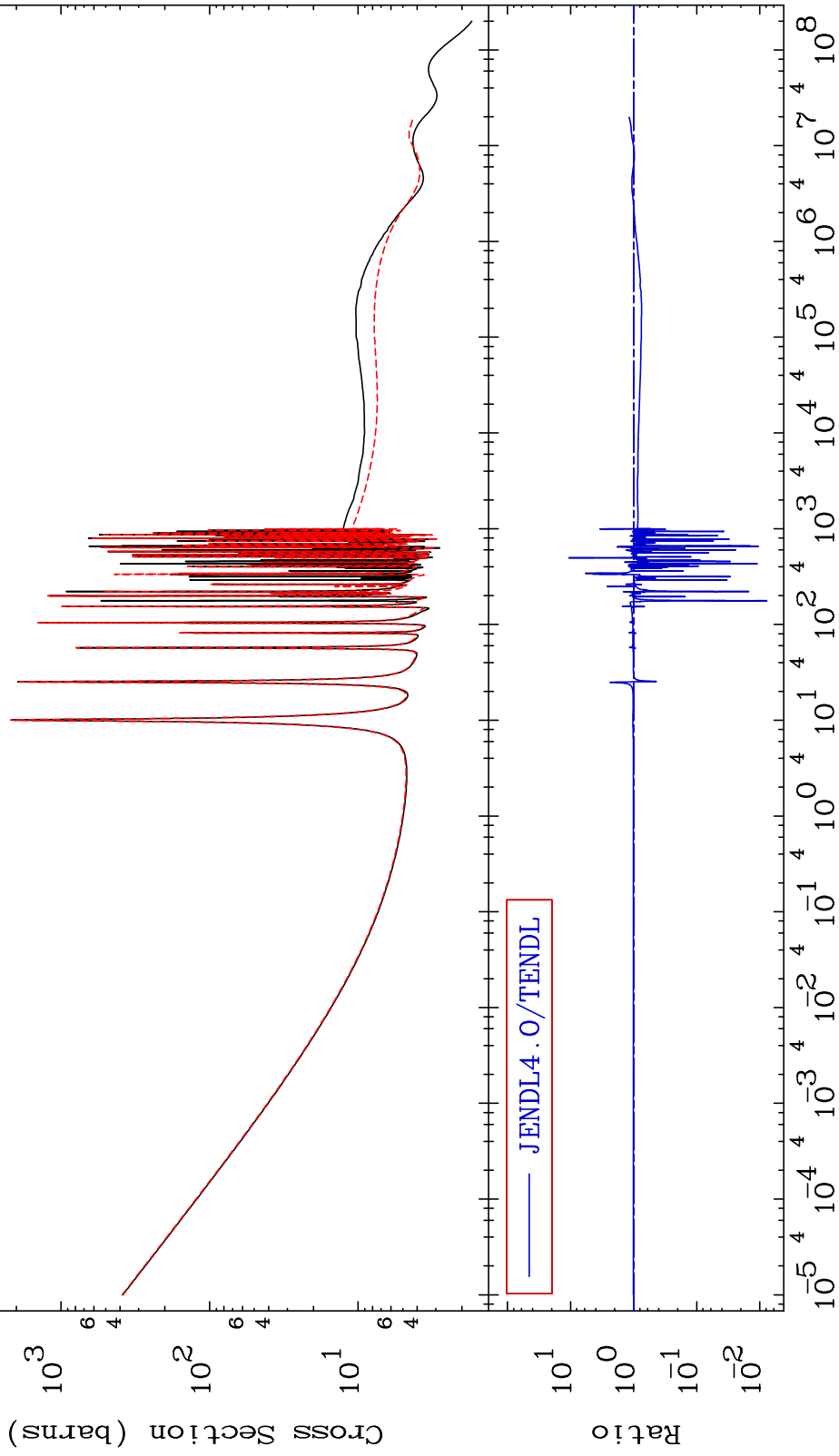
Press Mouse Button to Start

MAT 4434 44-Ru-99 -99.23 To 969.9 %

Total Cross Section

Min Ratio Max Ratio

TENDL  
JENDL4.0



44-Ru-99

Incident Energy (eV)

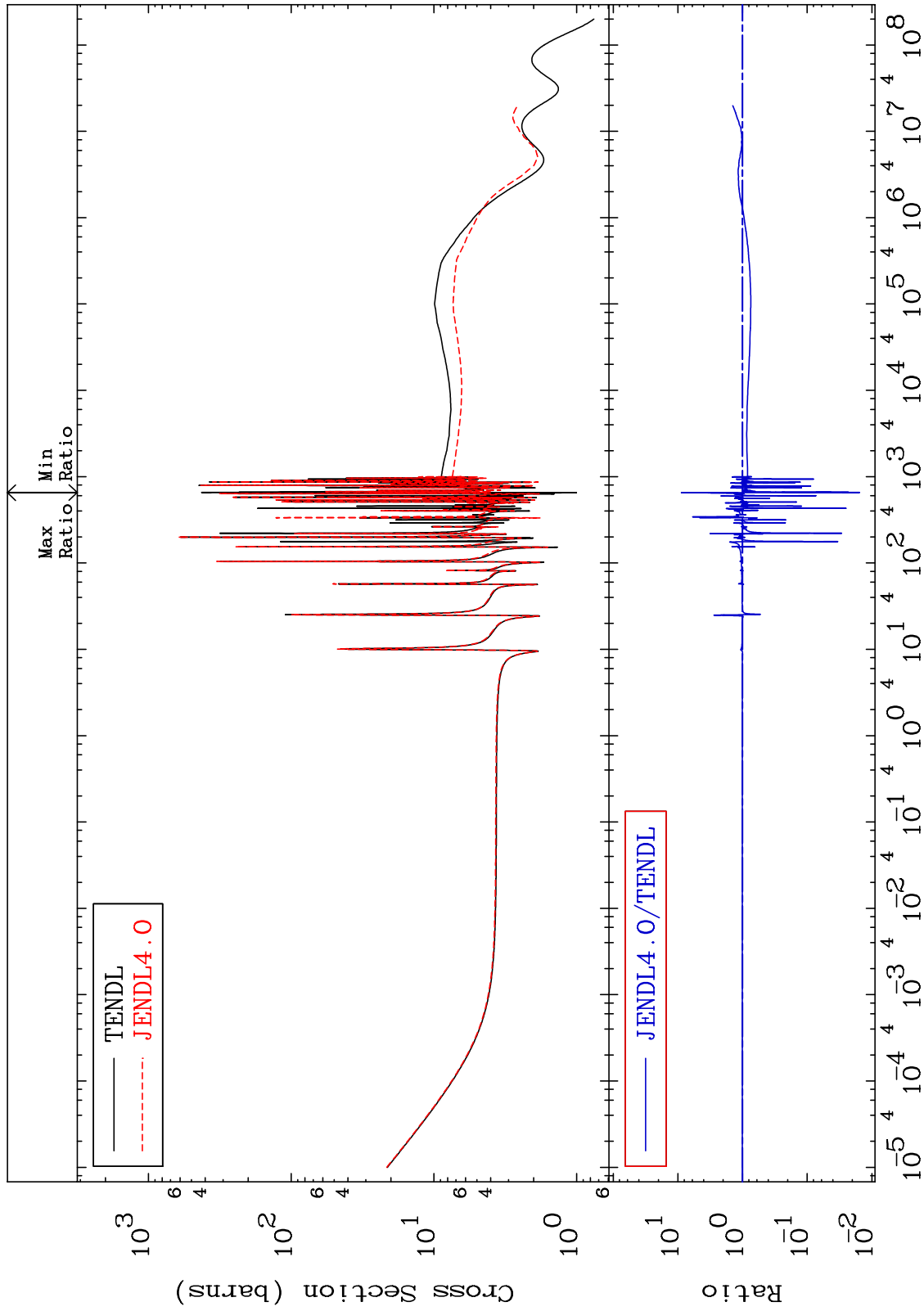
1

MAT 4434

Elastic  
Cross Section

44-Ru-99

-98.46 To 786.7 %



2

Incident Energy (eV)

44-Ru-99

MAT 4434

Inelastic  
Cross Section

44-Ru-99  
-51.81 To 1.157 %

Min  
Ratio

Max  
Ratio

— TENDL Threshold 90.484 keV  
- - - JENDL4.0 Threshold 90.312 keV

Cross Section (barns)

2.0

1.5

1.0

0.5

0.0

Ratio

1.0

0.8

0.6

JENDL4.0/TENDL

10<sup>5</sup>

10<sup>6</sup>

10<sup>7</sup>

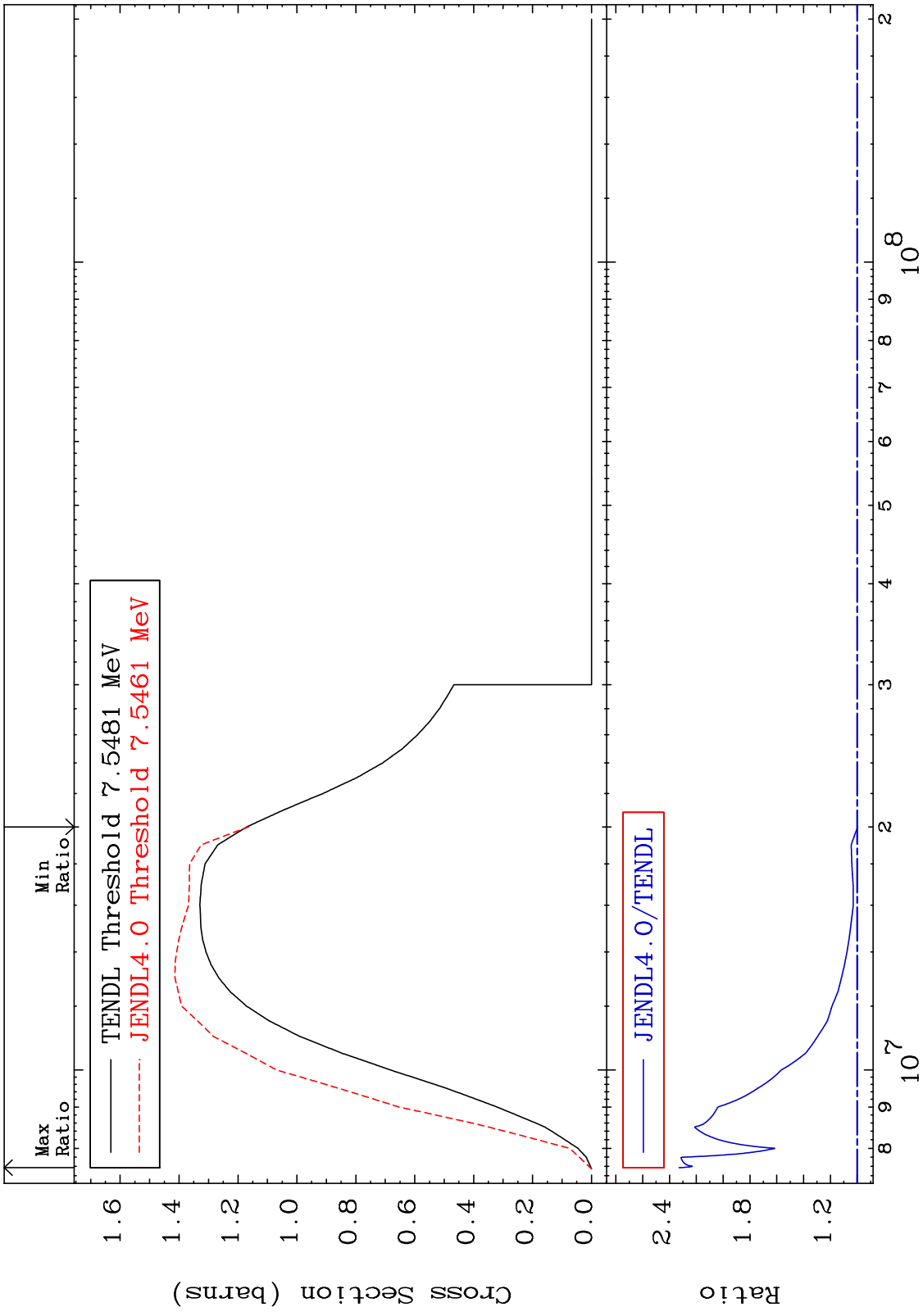
10<sup>8</sup>

3

Incident Energy (eV)

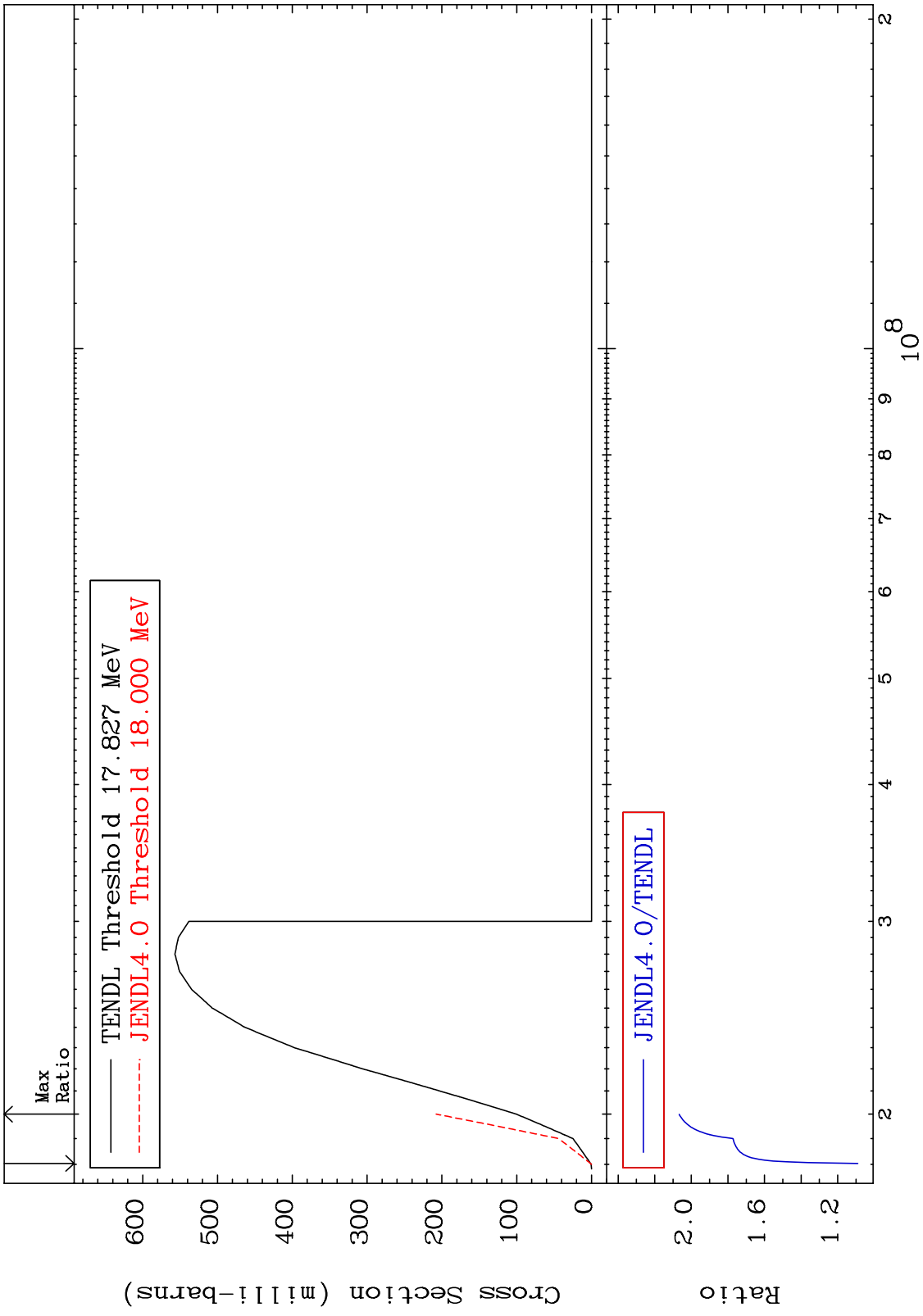
44-Ru-99

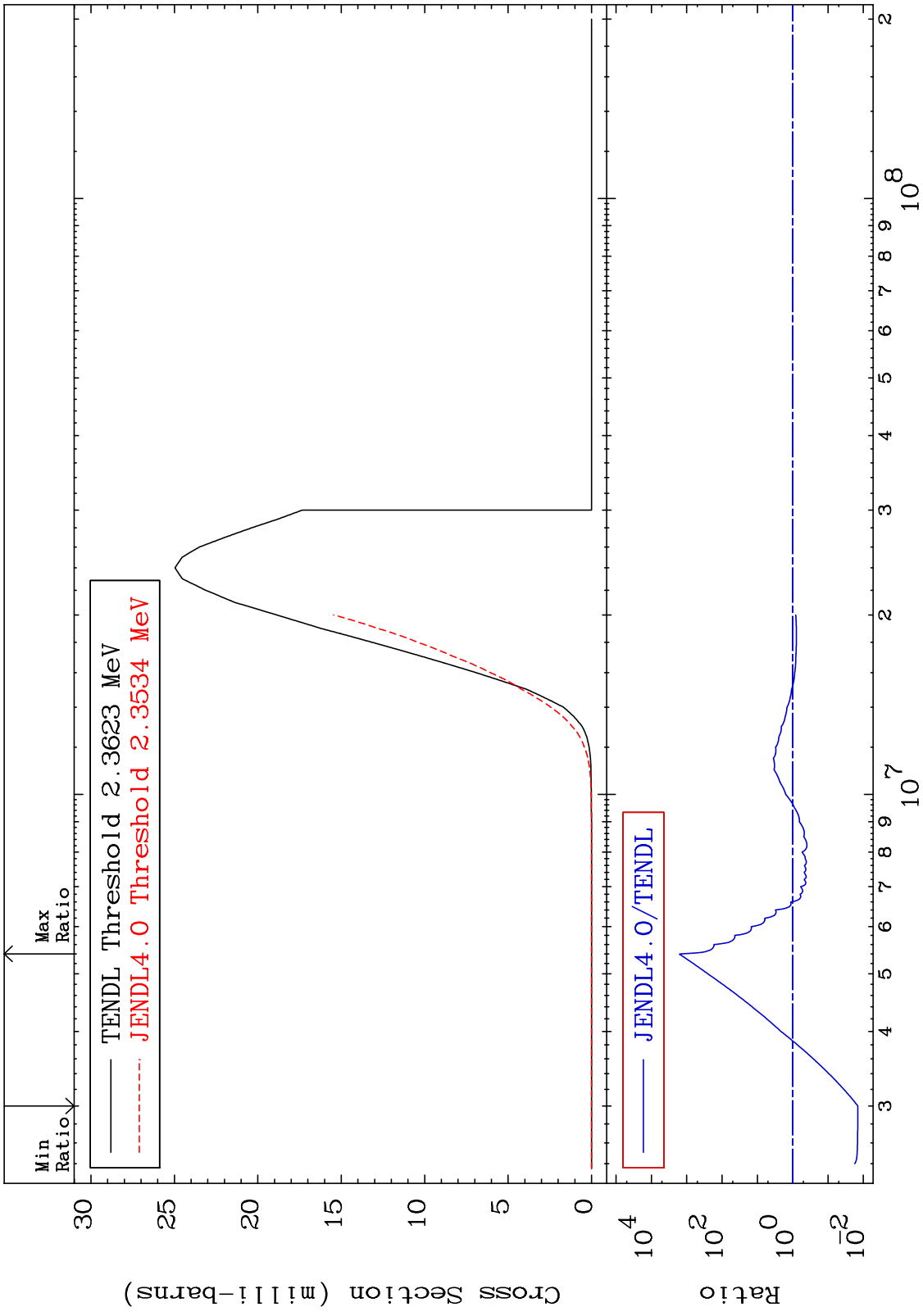
MAT 4434 (n,2n) Cross Section 44-Ru-99 -0.494 To 132.9 %



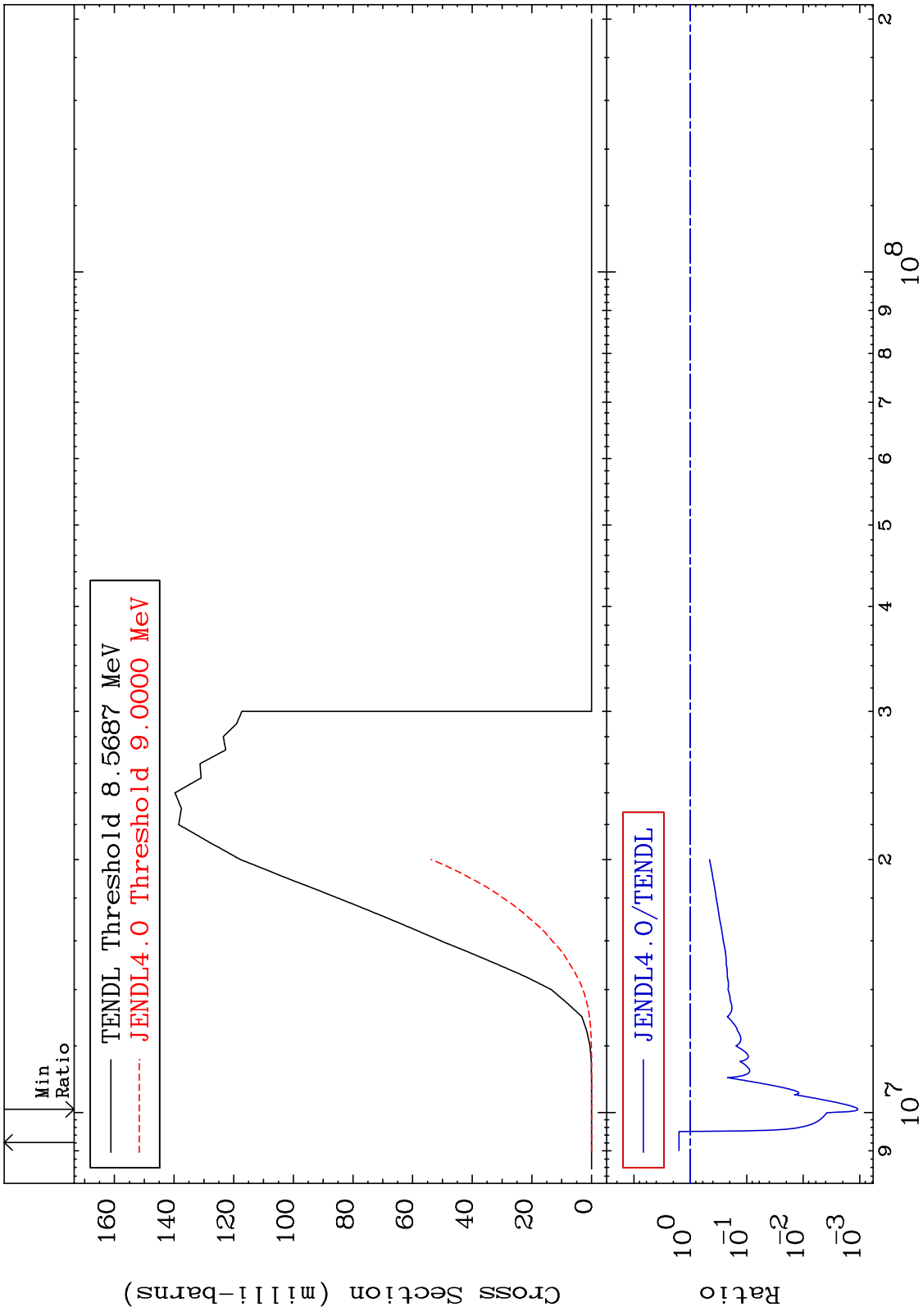
44-Ru-99

MAT 4434 (n,3n) Cross Section 44-Ru-99 8.984 To 106.7 %



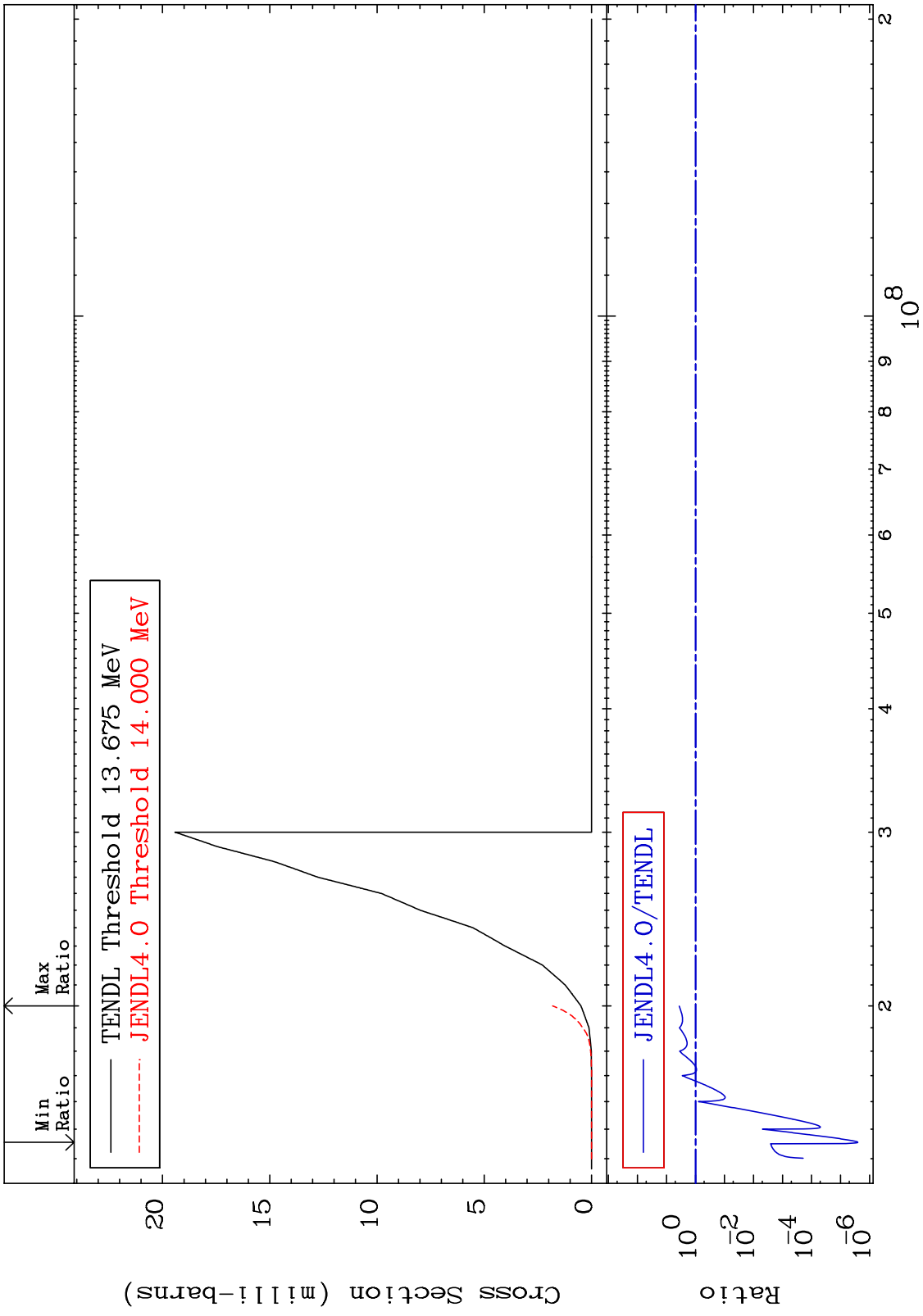


MAT 4434 (n,n') p 44-Ru-99  
Cross Section -99.89 To 58.35 %

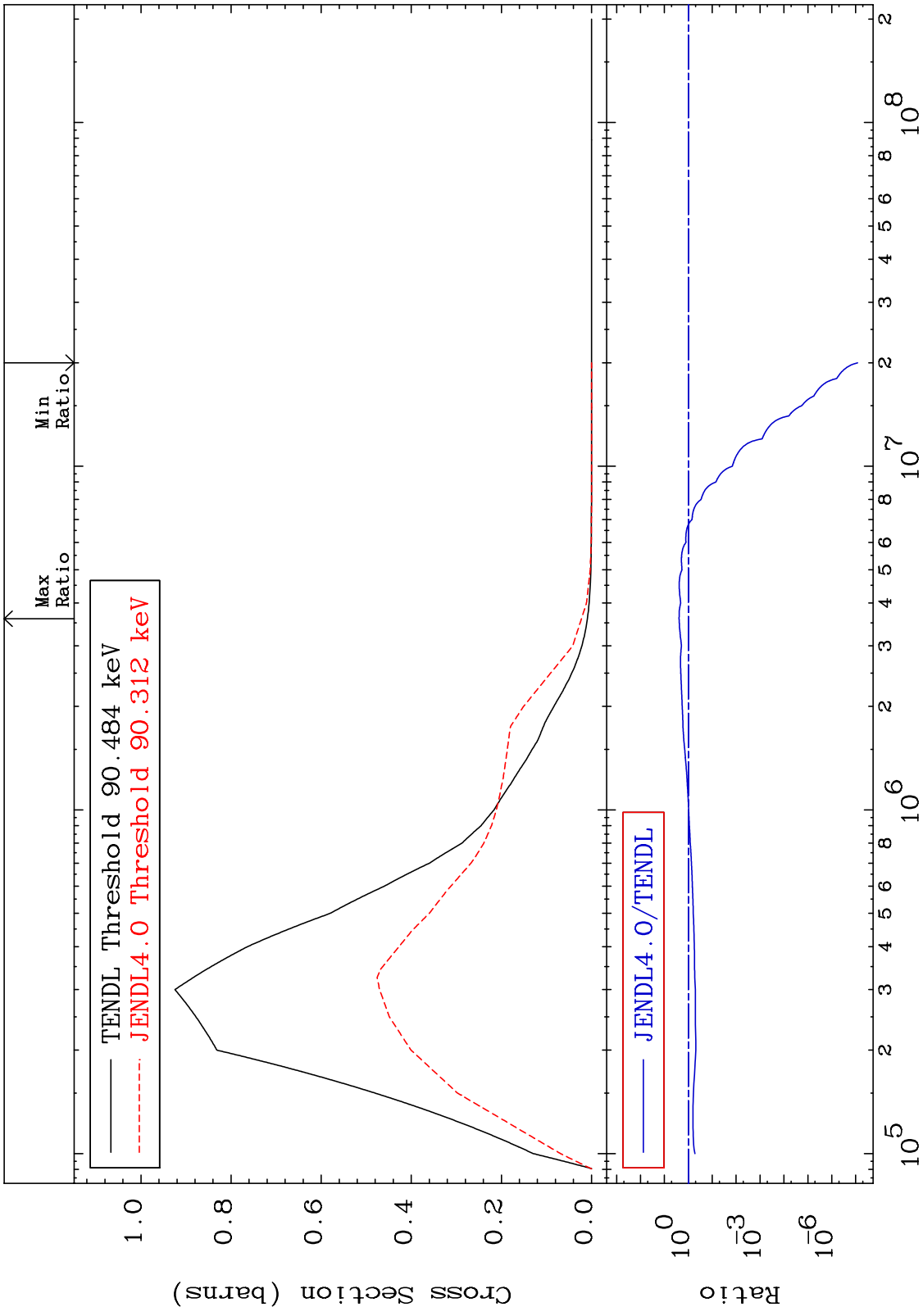


7 Incident Energy (eV) 44-Ru-99

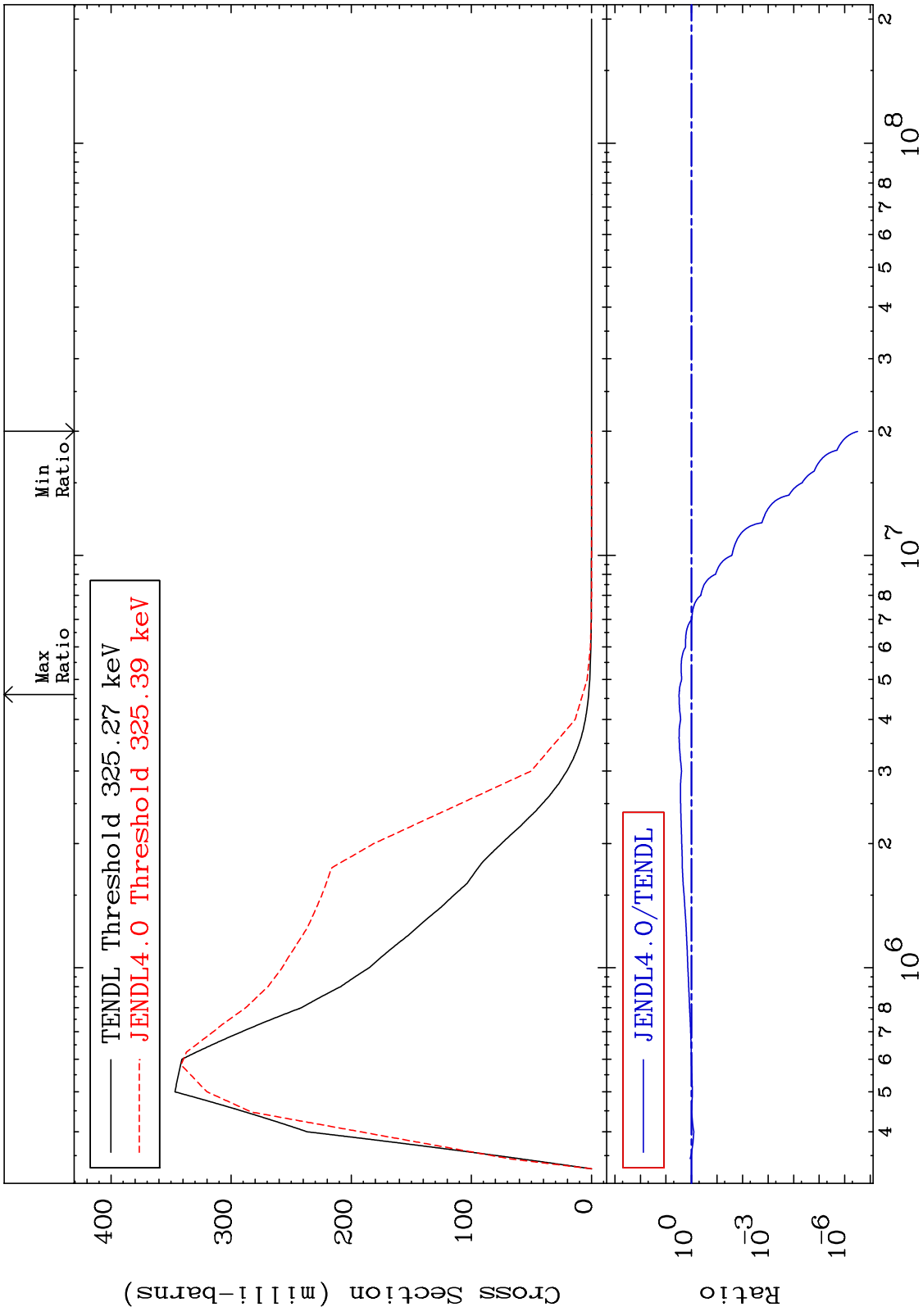




MAT 4434 MT= 51 (n,n') Level Cross Section -100.0 To 144.5 % 44-Ru-99

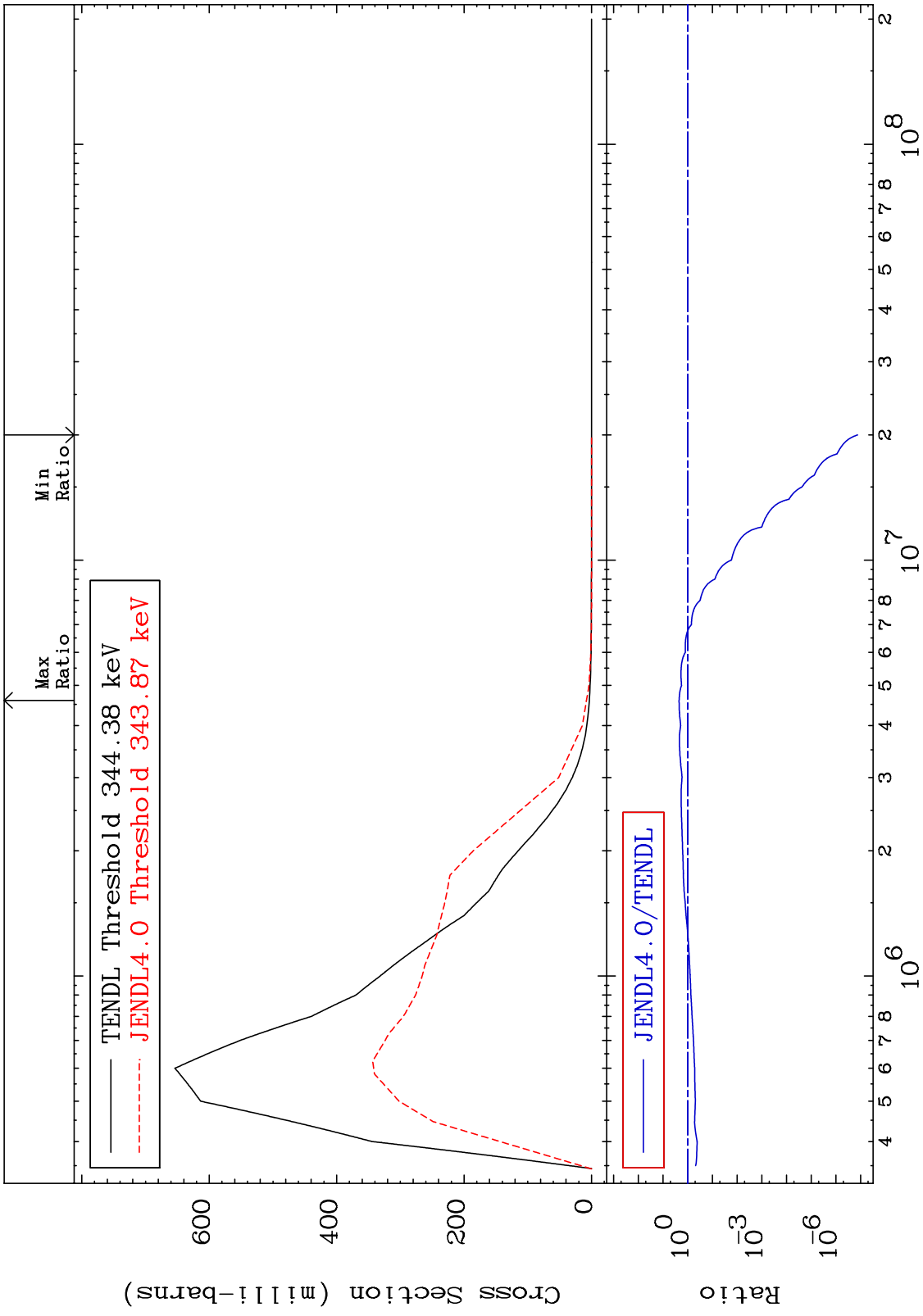


MAT 4434 MT= 52 (n,n') Level Cross Section -100.0 To 207.2 % 44-Ru-99

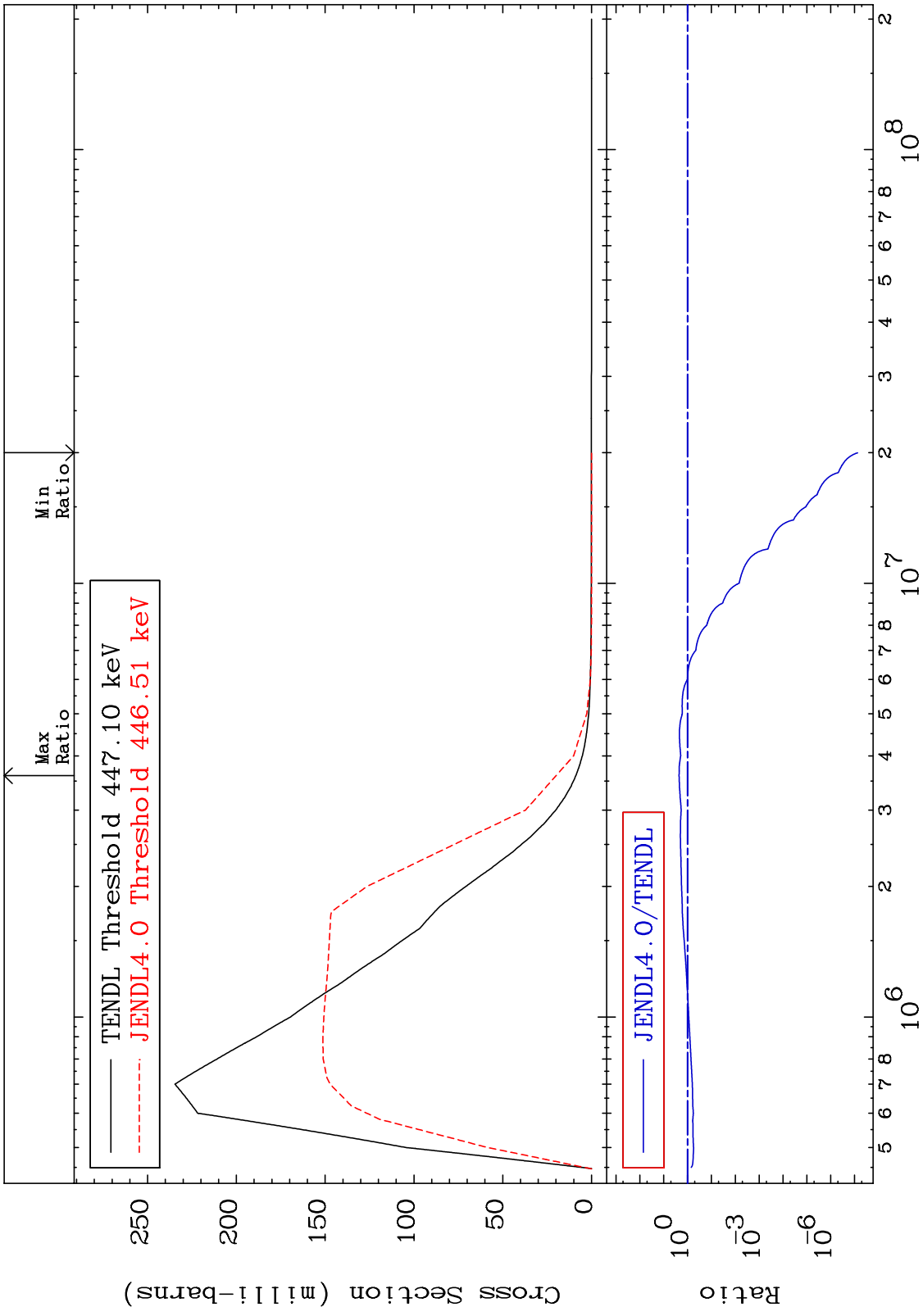


10 44-Ru-99

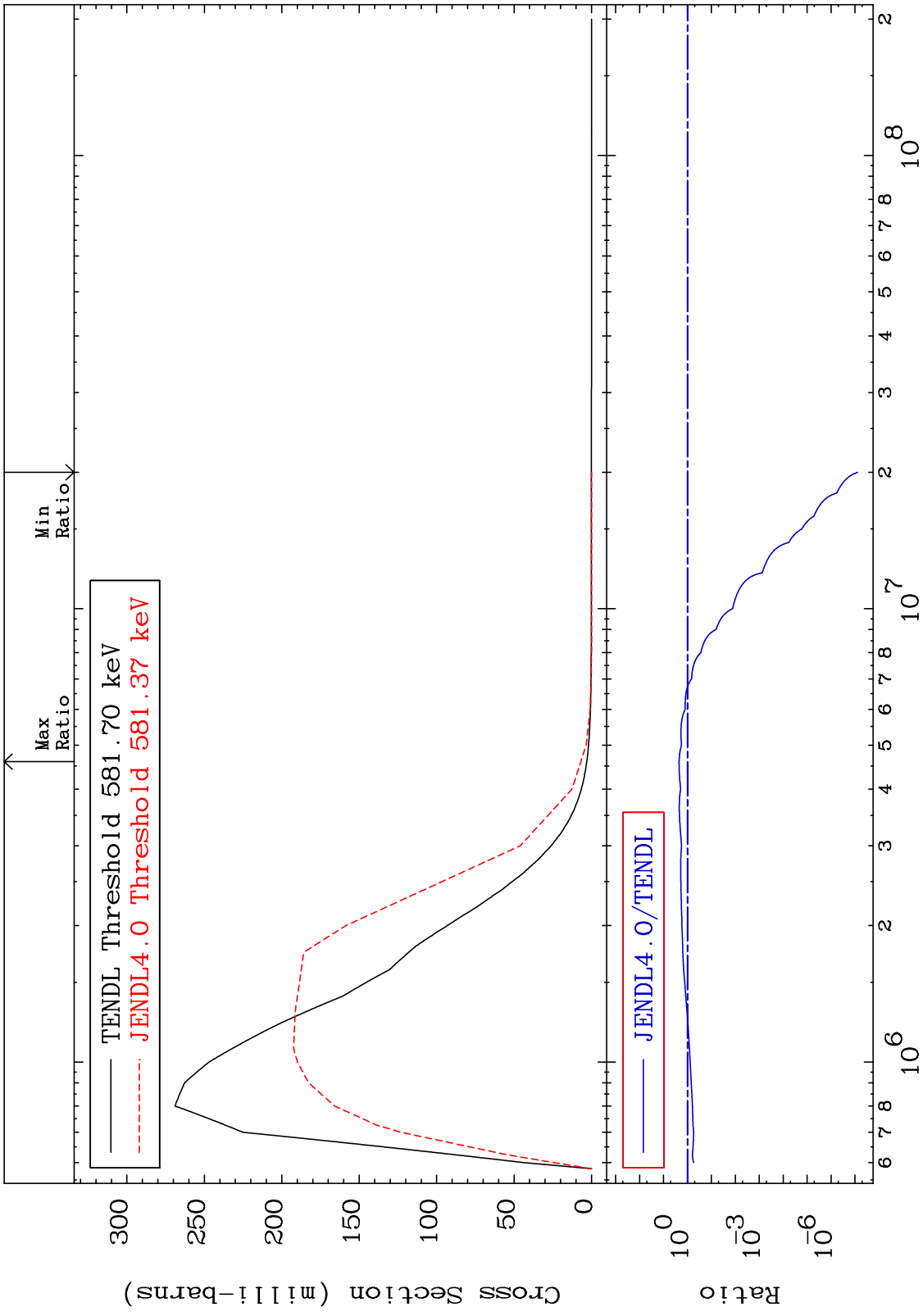
MAT 4434 MT= 53 (n,n') Level Cross Section -100.0 To 125.2 % 44-Ru-99



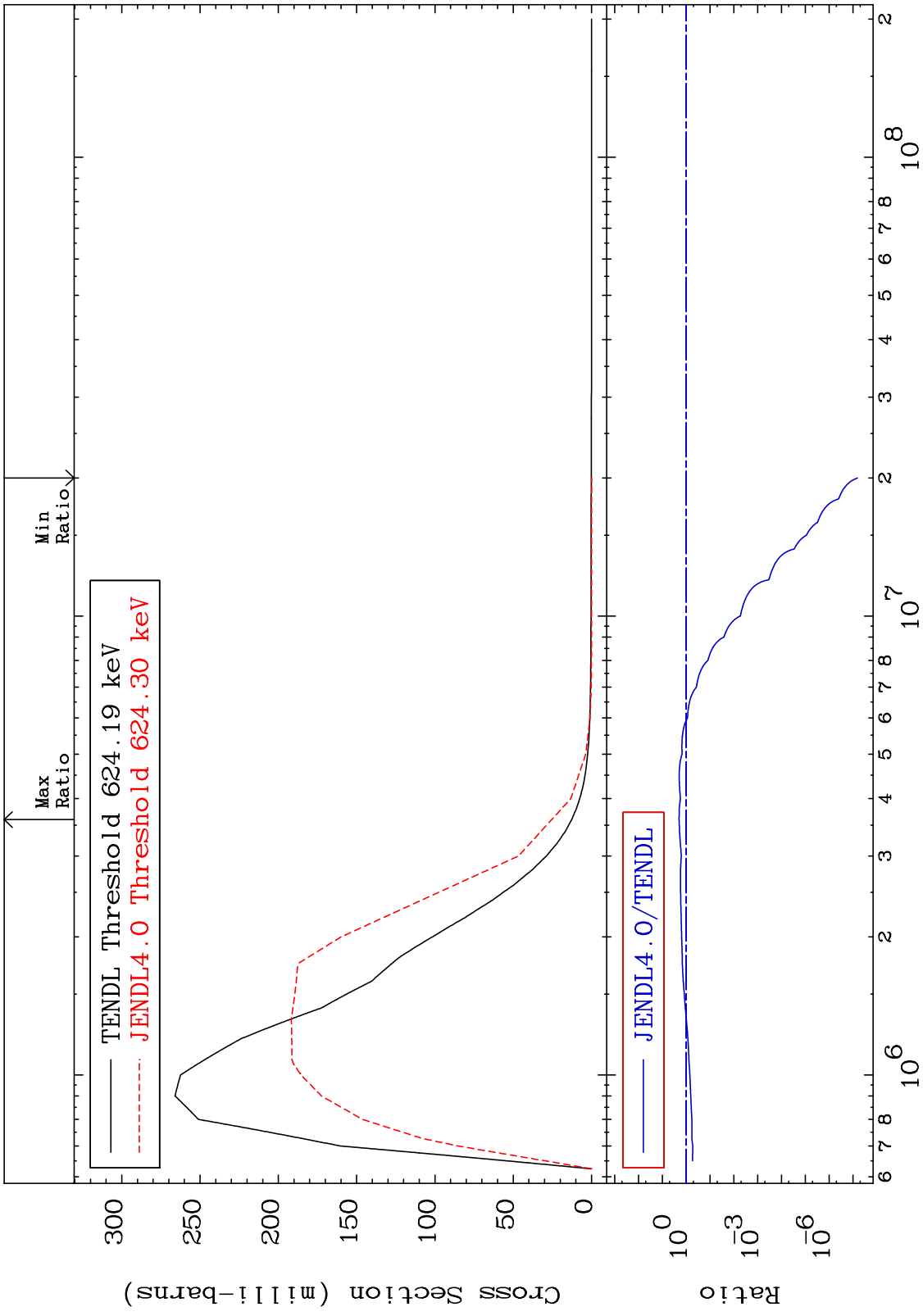
MAT 4434 MT= 54 (n,n') Level Cross Section -100.0 To 126.6 % 44-Ru-99



MAT 4434 MT= 55 (n,n') Level Cross Section -100.0 To 123.9 % 44-Ru-99



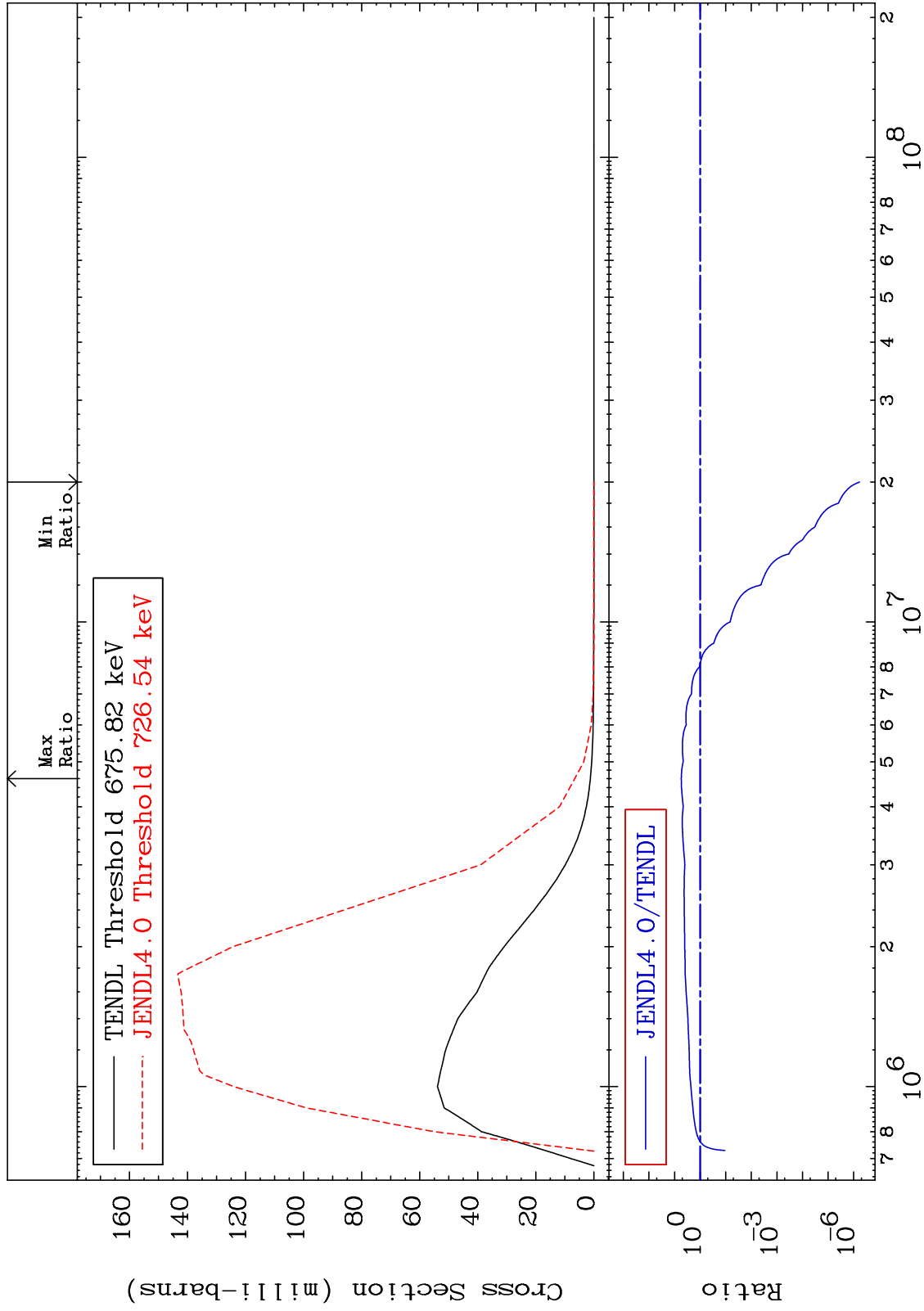
MAT 4434 MT= 56 (n,n') Level Cross Section -100.0 To 101.1 % 44-Ru-99



MAT 4434

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

44-Ru-99  
-100.0 To 447.6 %

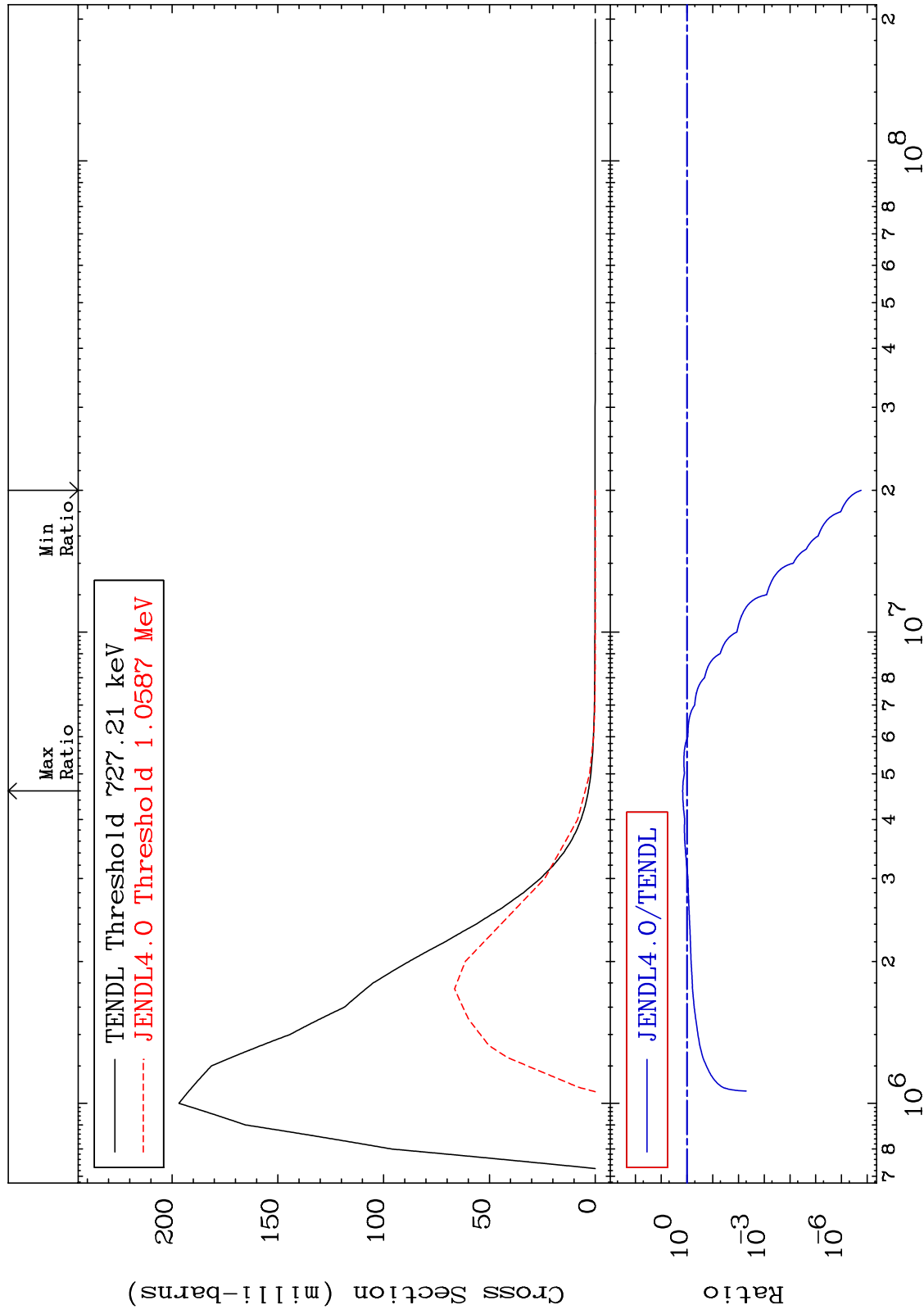




MAT 4434

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

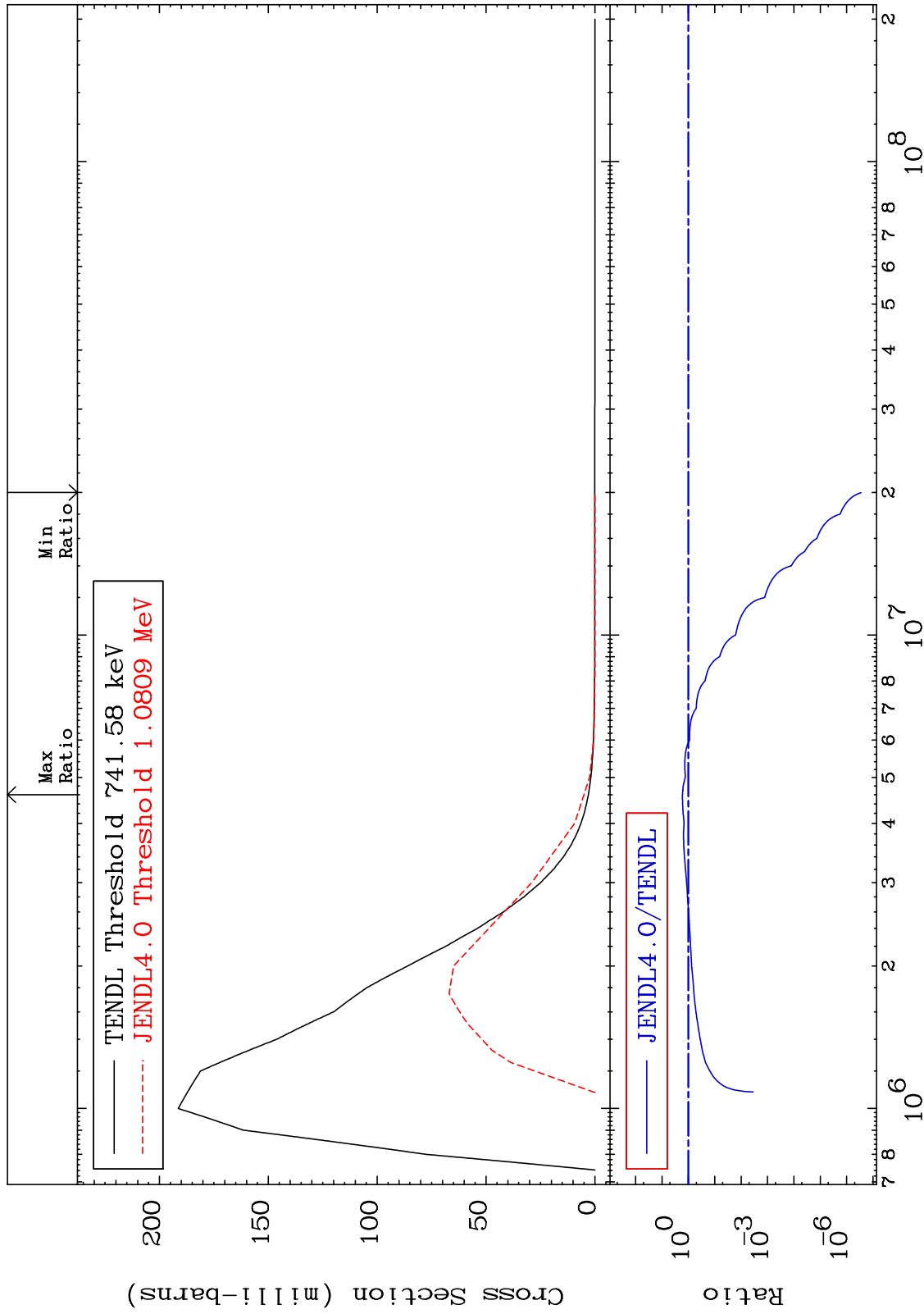
44-Ru-99  
-100.0 To 47.33 %



MAT 4434

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

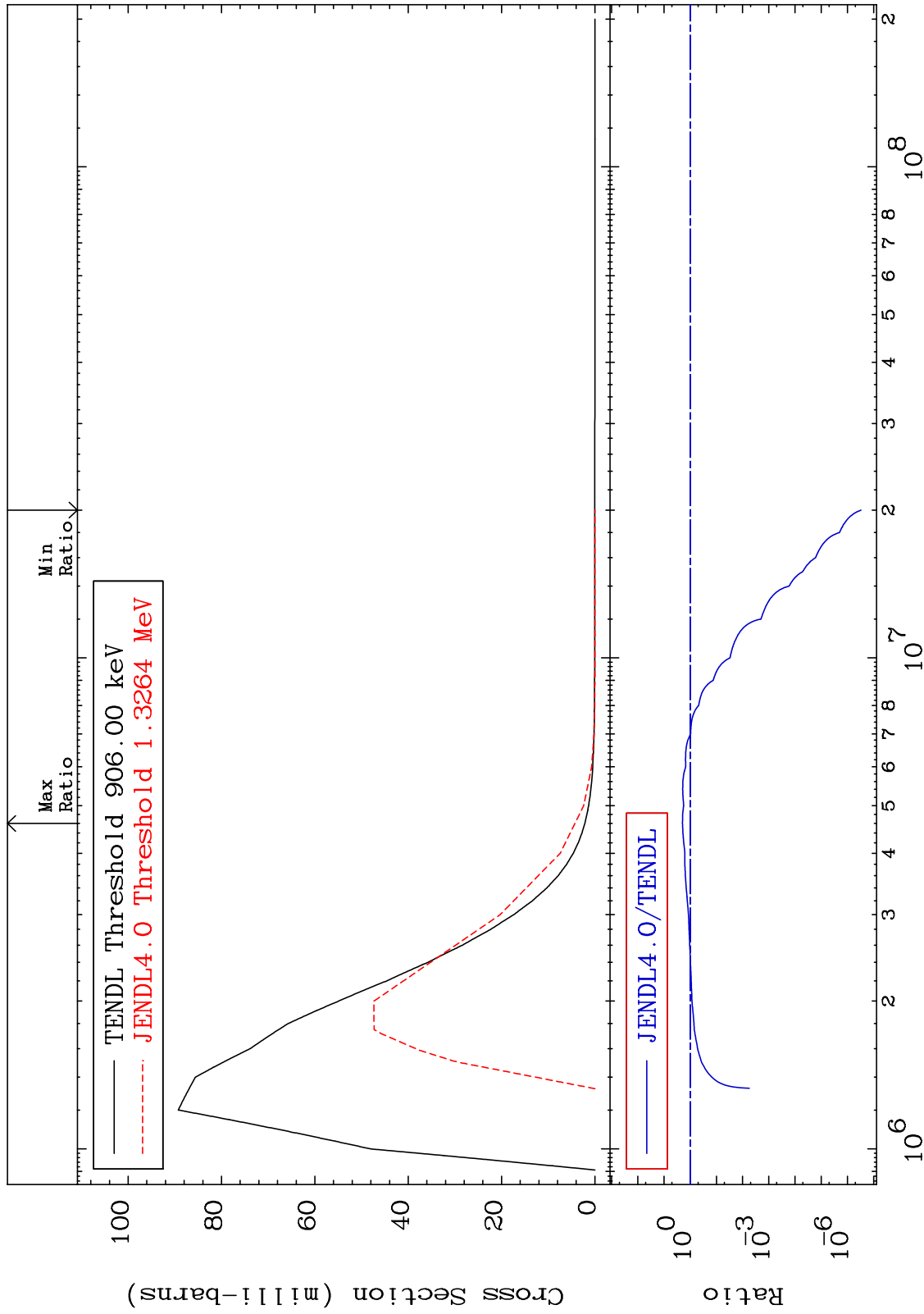
44-Ru-99  
-100.0 To 67.34 %



MAT 4434

MT= 60 (n,n') Level  
Cross Section

44-Ru-99  
-100.0 To 97.82 %



18

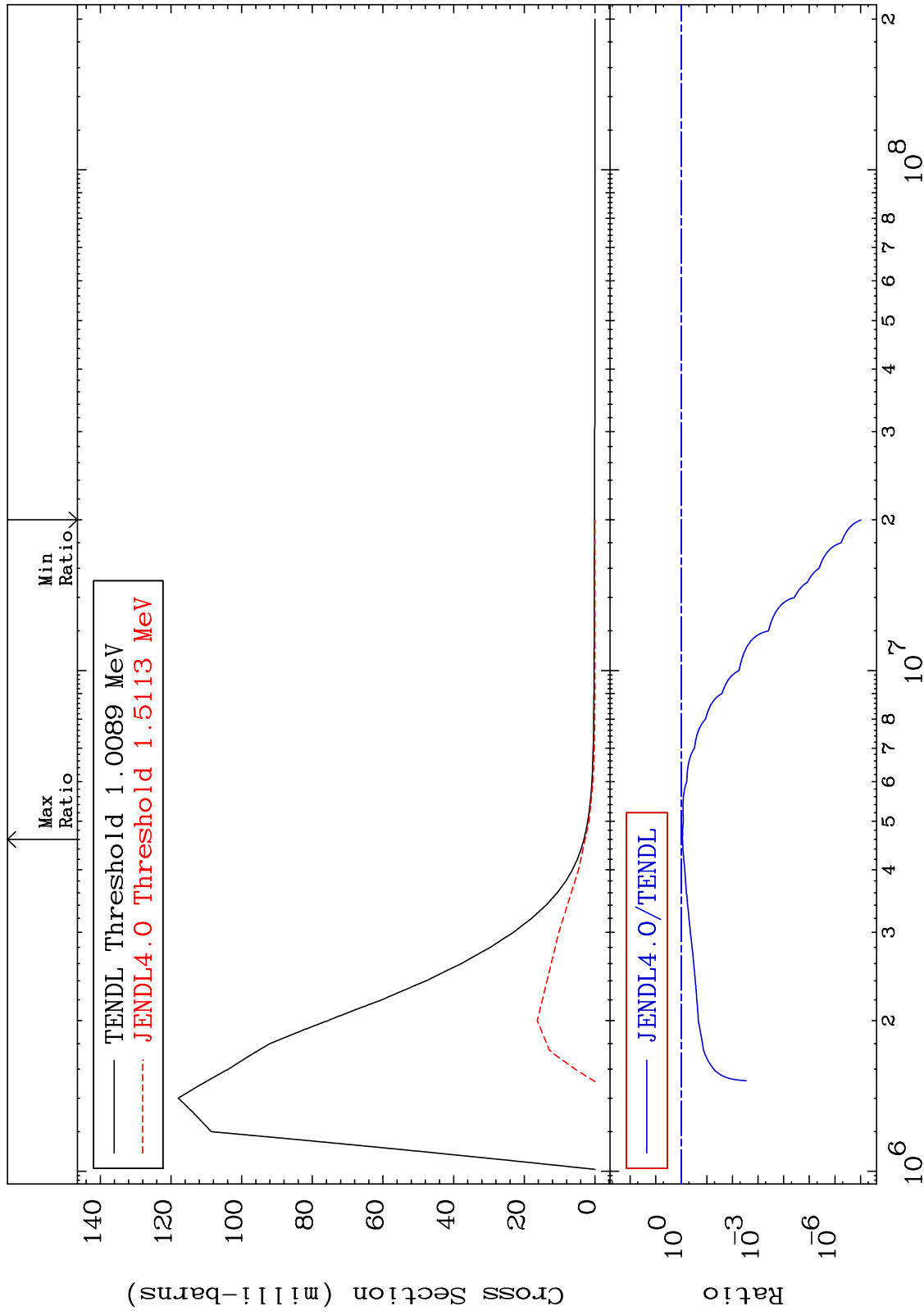
Incident Energy (eV)

44-Ru-99

MAT 4434

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

44-Ru-99  
-100.0 To -10.15%

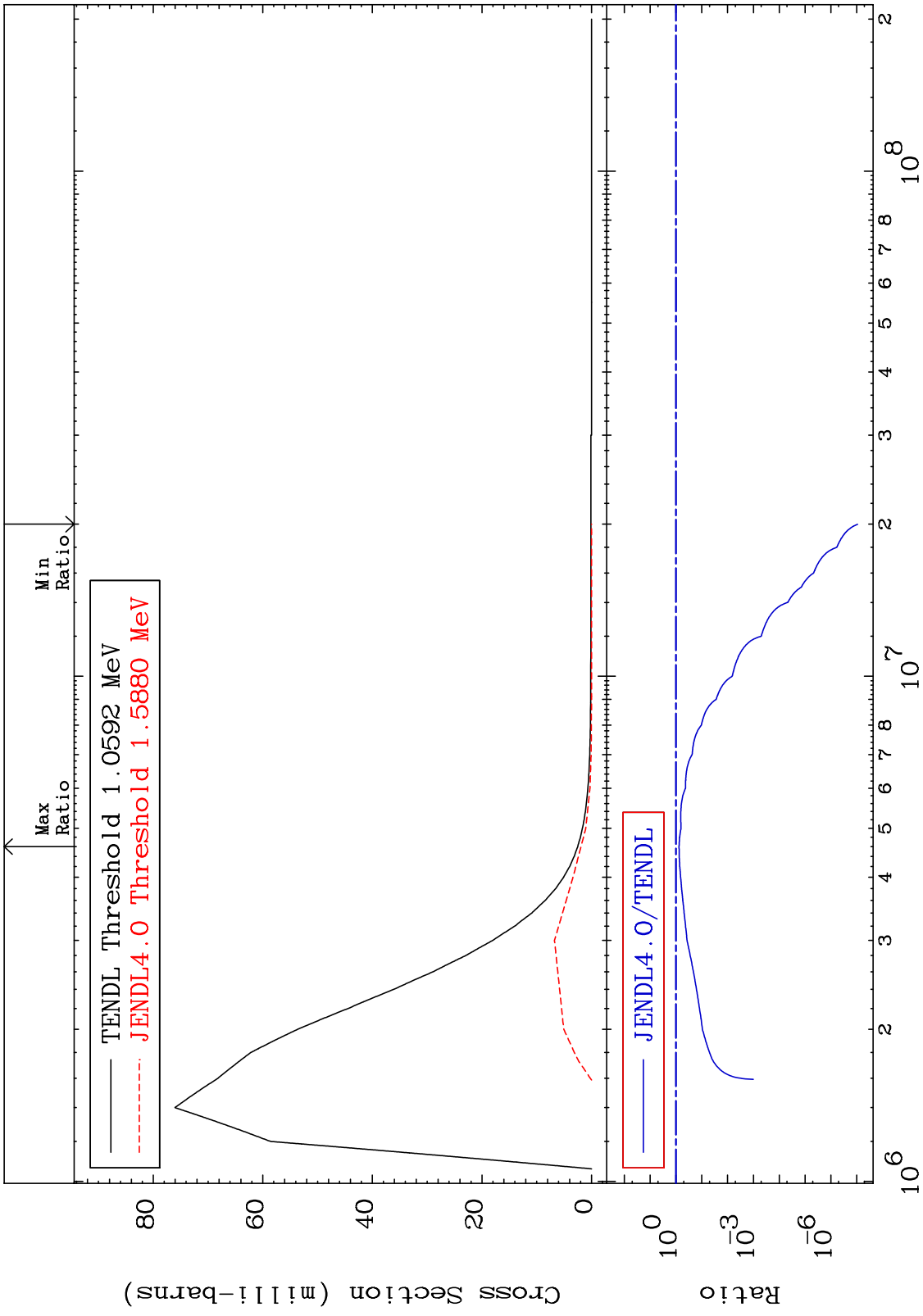


19

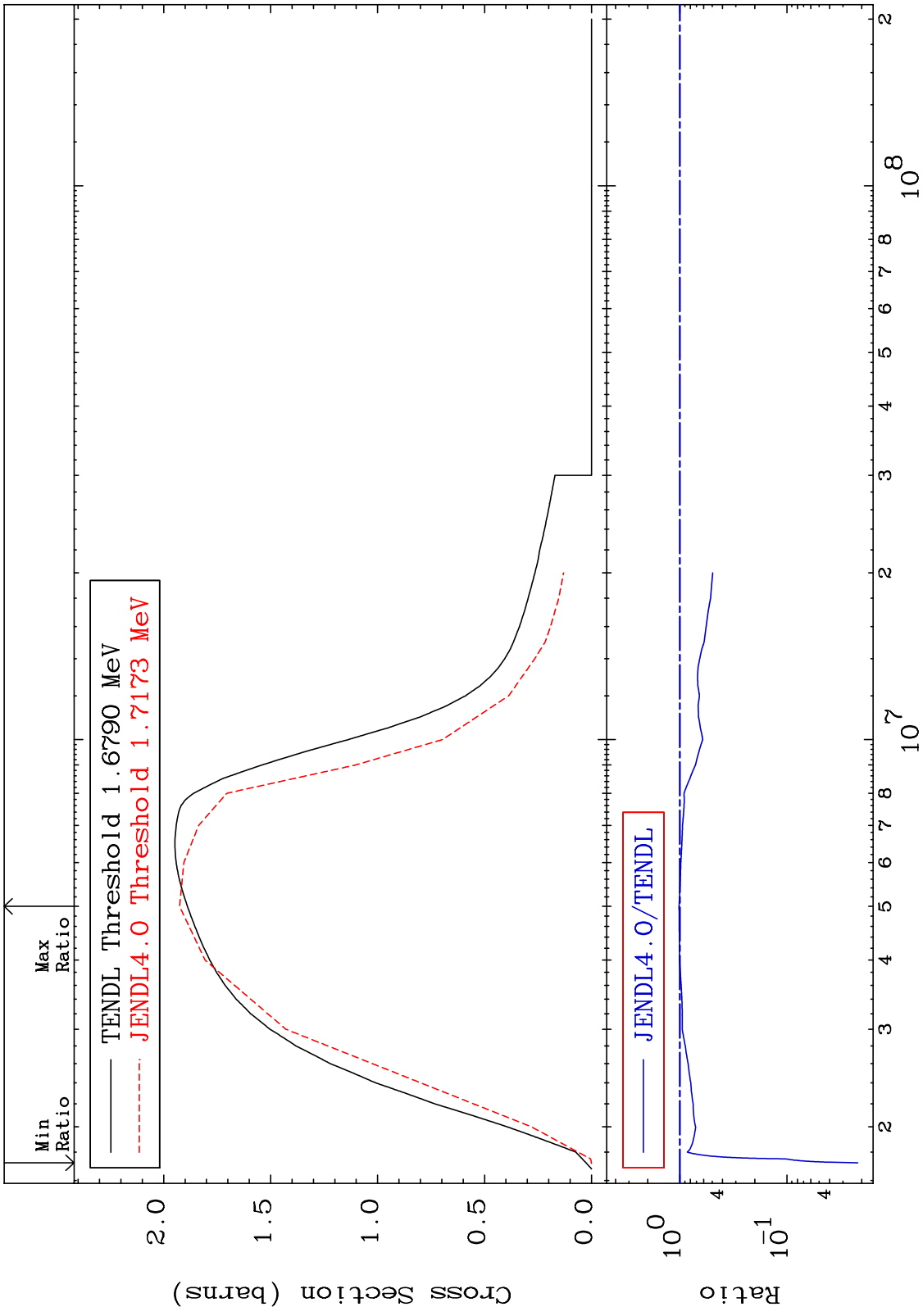
Incident Energy (eV)

44-Ru-99

MAT 4434 MT= 62 (n,n') Level Cross Section 44-Ru-99 -100.0 To -23.82%



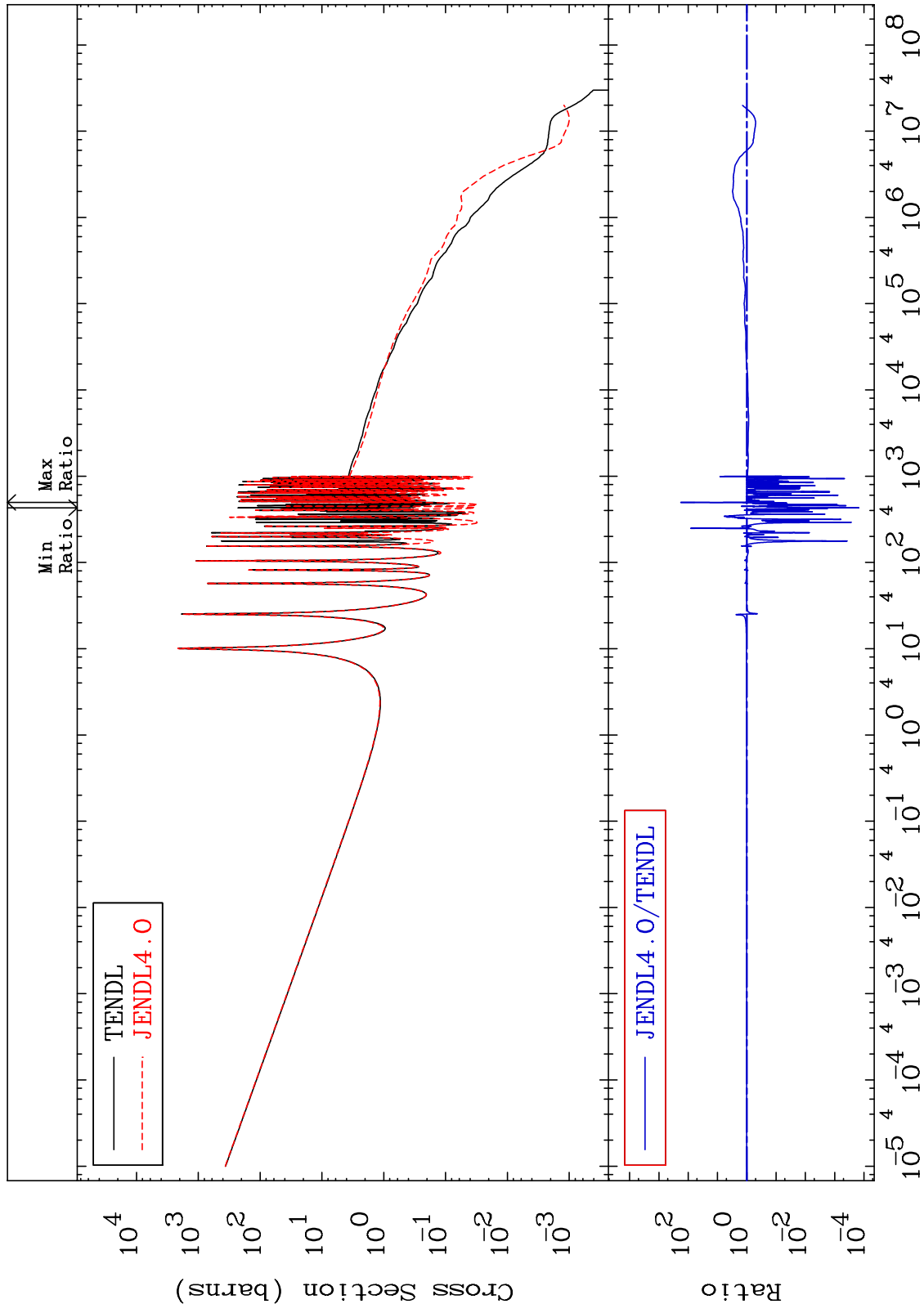
20 Incident Energy (eV) 44-Ru-99



MAT 4434

(n,  $\gamma$ )  
Cross Section

44-Ru-99  
-99.99 To 9999. %



MAT 4434

(n,p)

44-Ru-99

-99.67 To 80.46 %

Cross Section

Max Ratio

Min Ratio

TENDL Threshold 994.60 eV  
JENDL4.0 Threshold 100.00 keV

Cross Section (milli-barns)

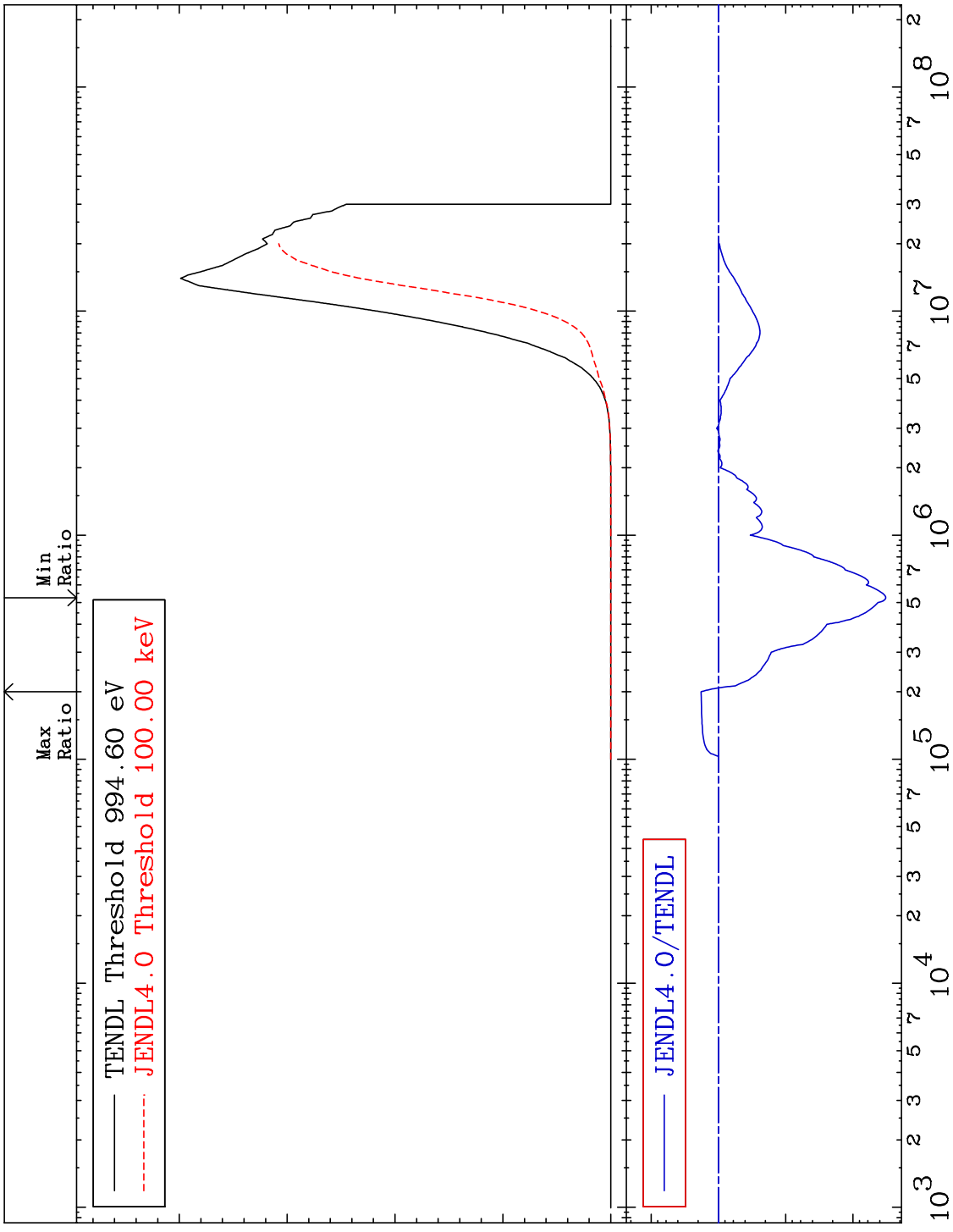
JENDL4.0/TENDL

Ratio

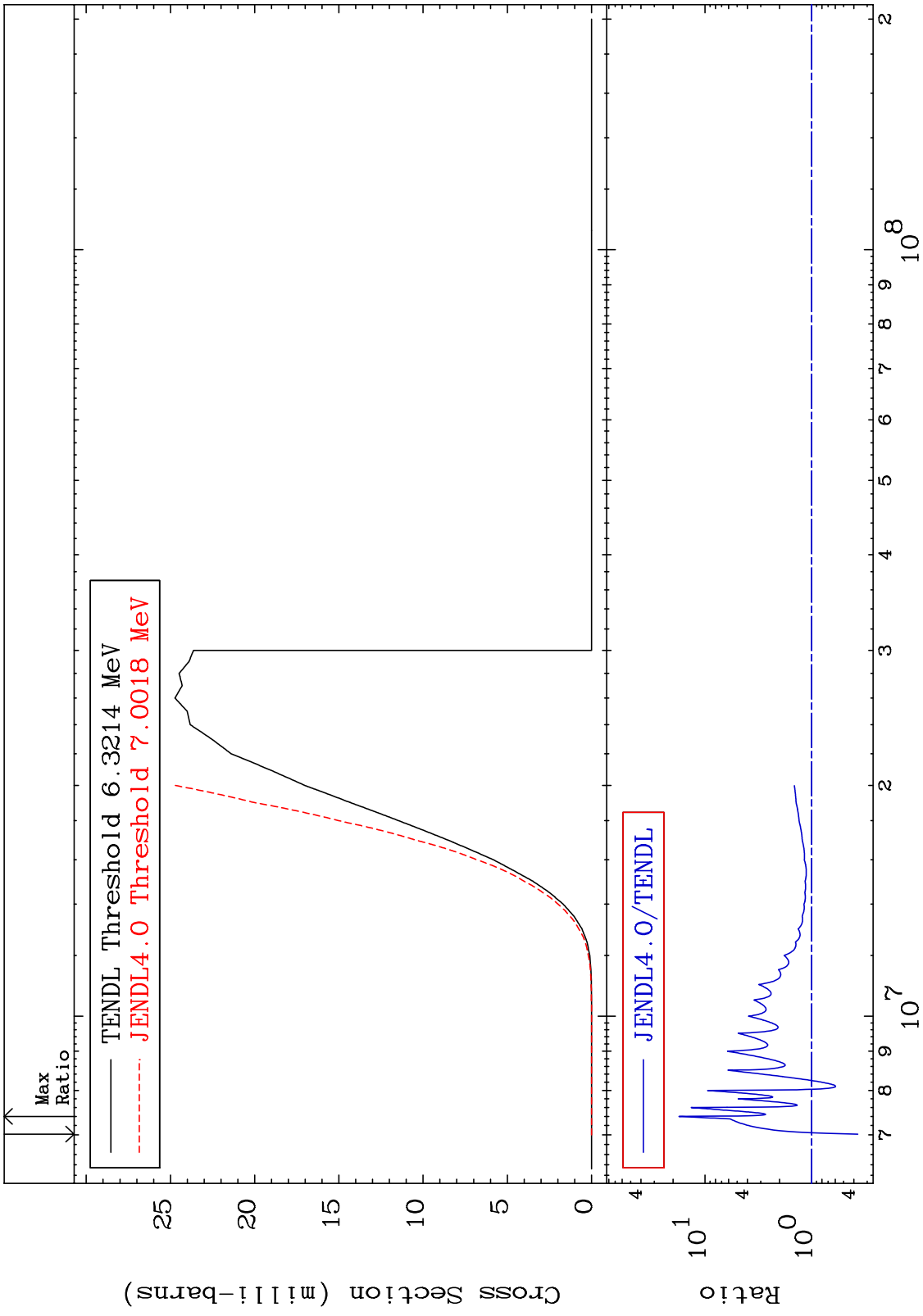
Incident Energy (eV)

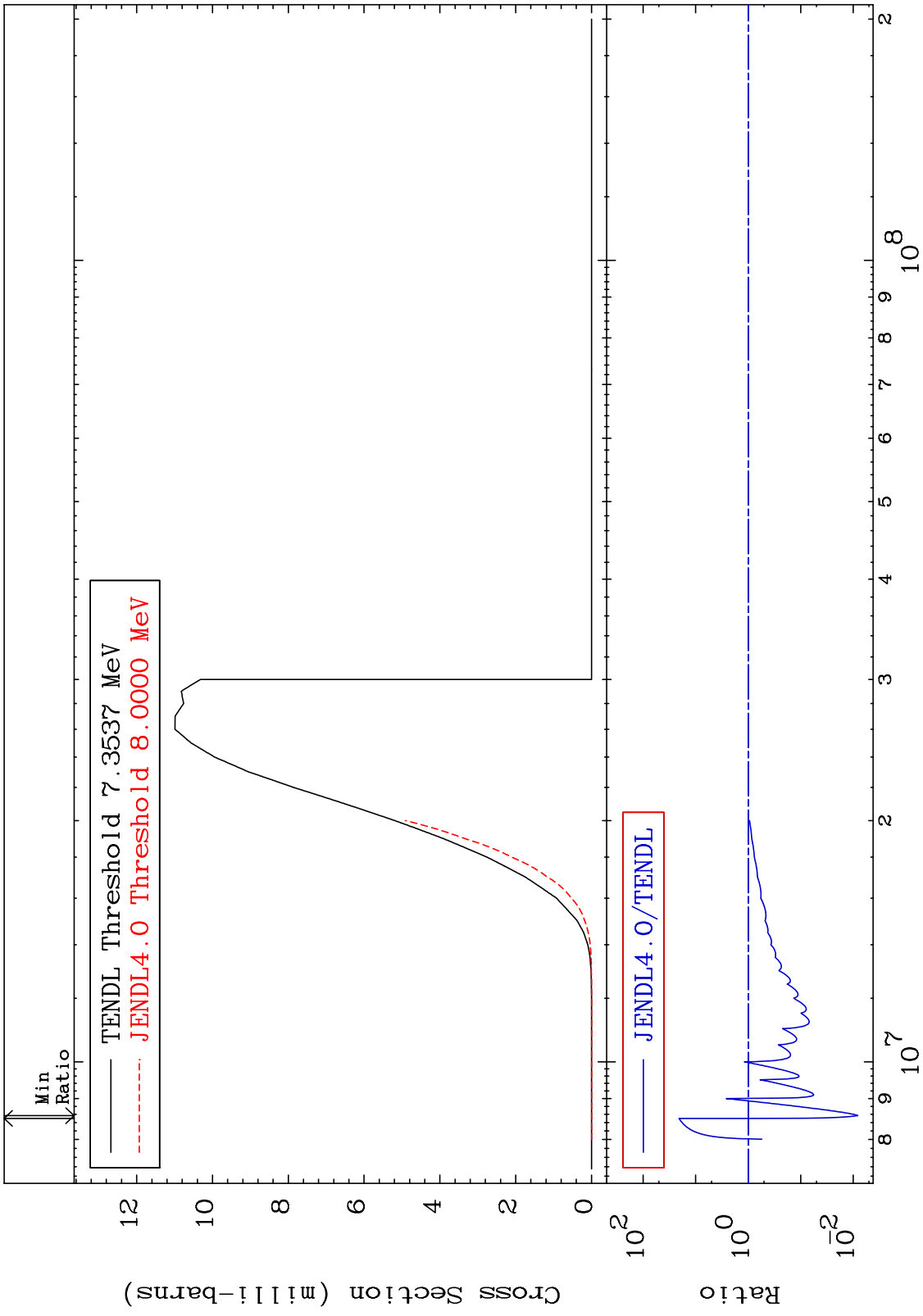
44-Ru-99

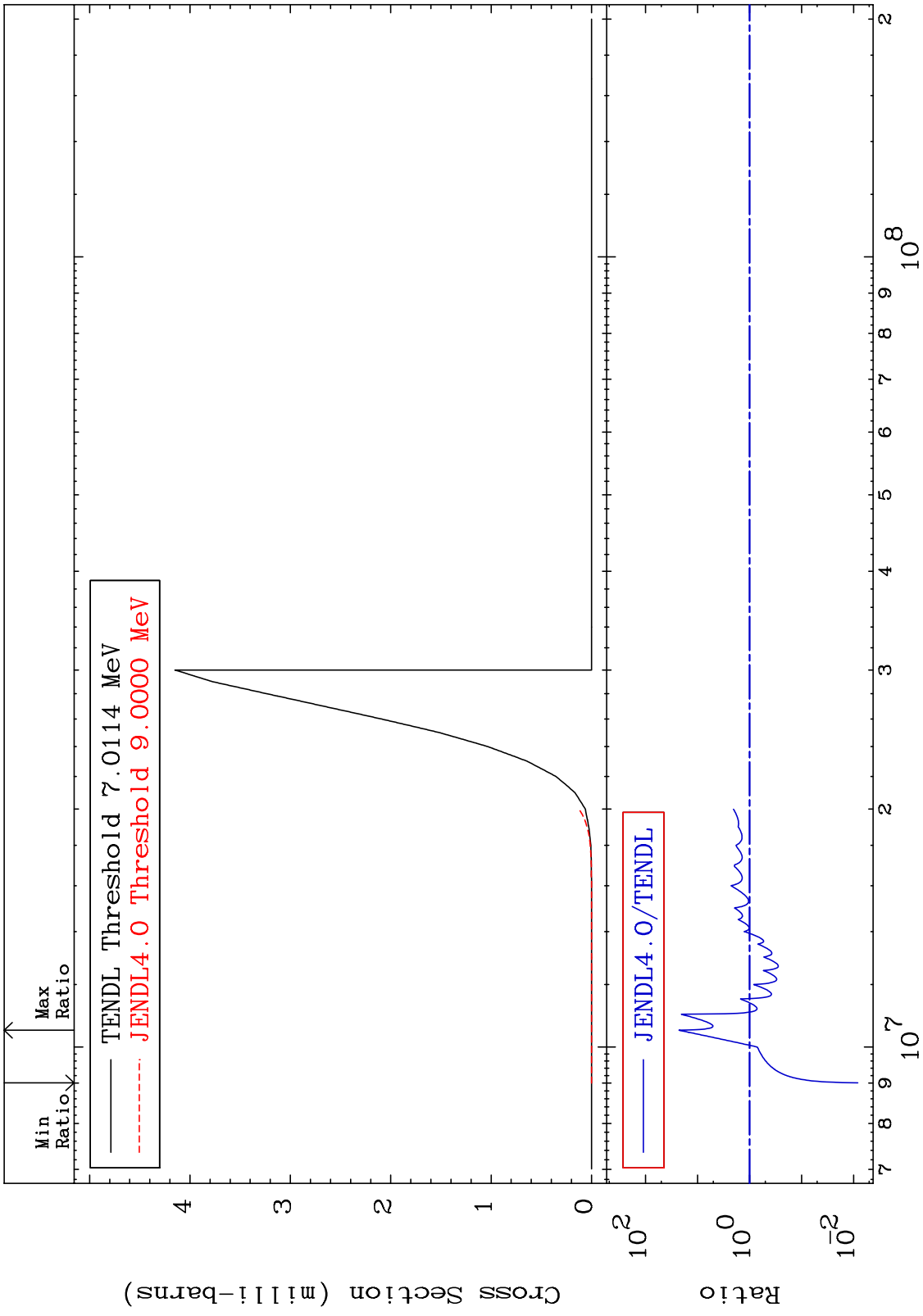
23











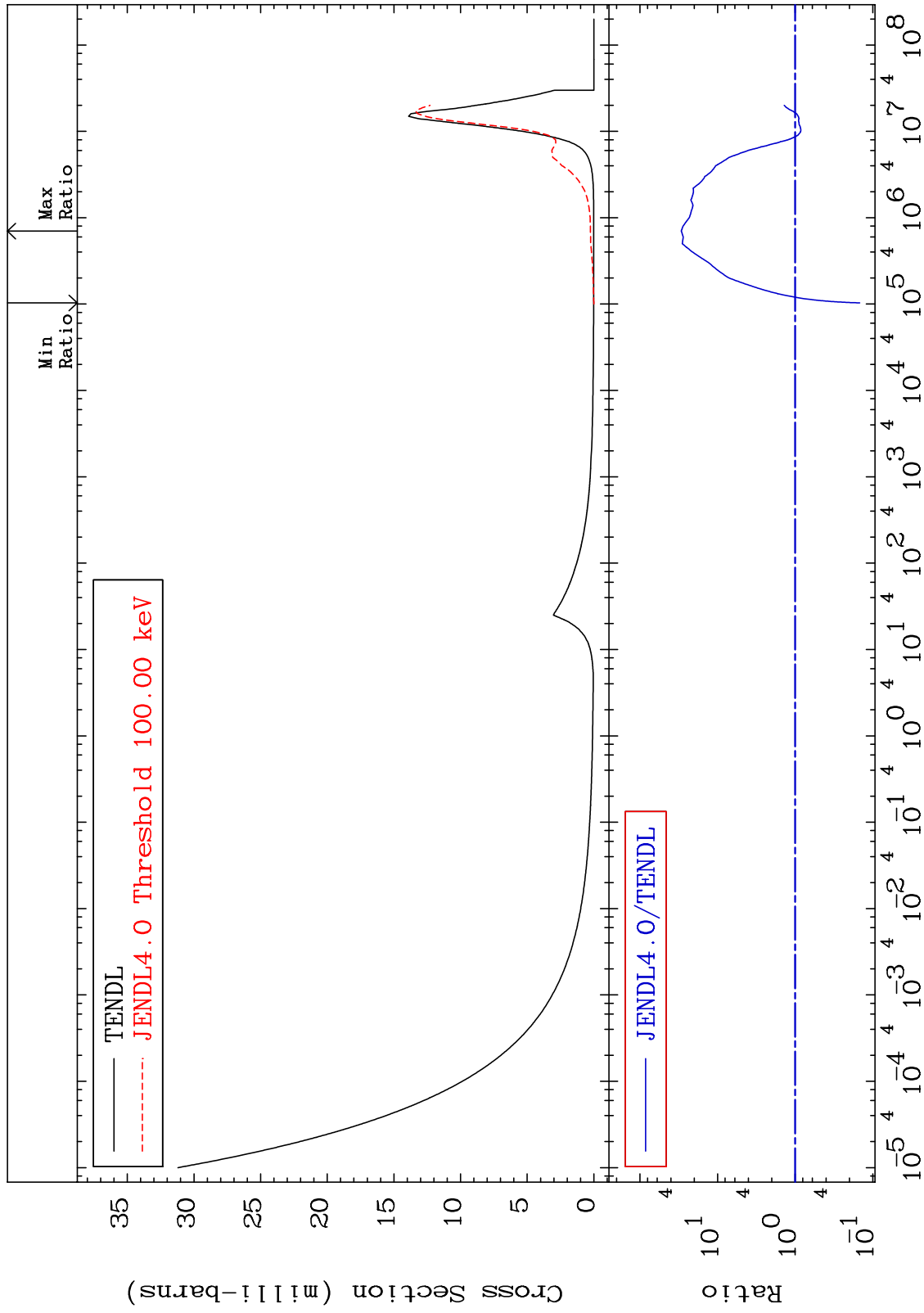
MAT 4434

(n,  $\alpha$ )

44-Ru-99

Cross Section

-85.27 To 2837. %



27

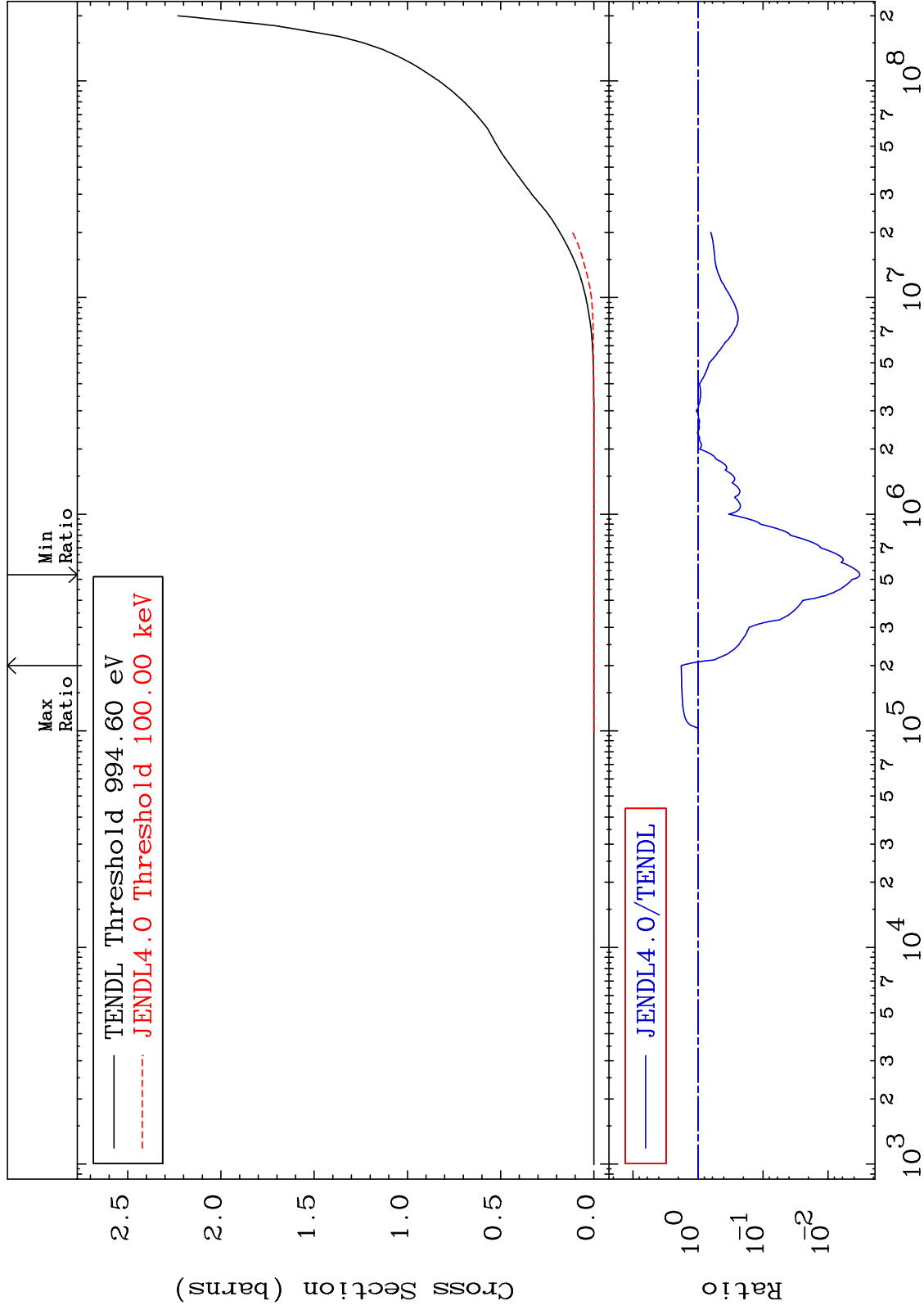
Incident Energy (eV)

44-Ru-99

MAT 4434

Hydrogen Production  
Cross Section

44-Ru-99  
-99.67 To 80.46 %



28

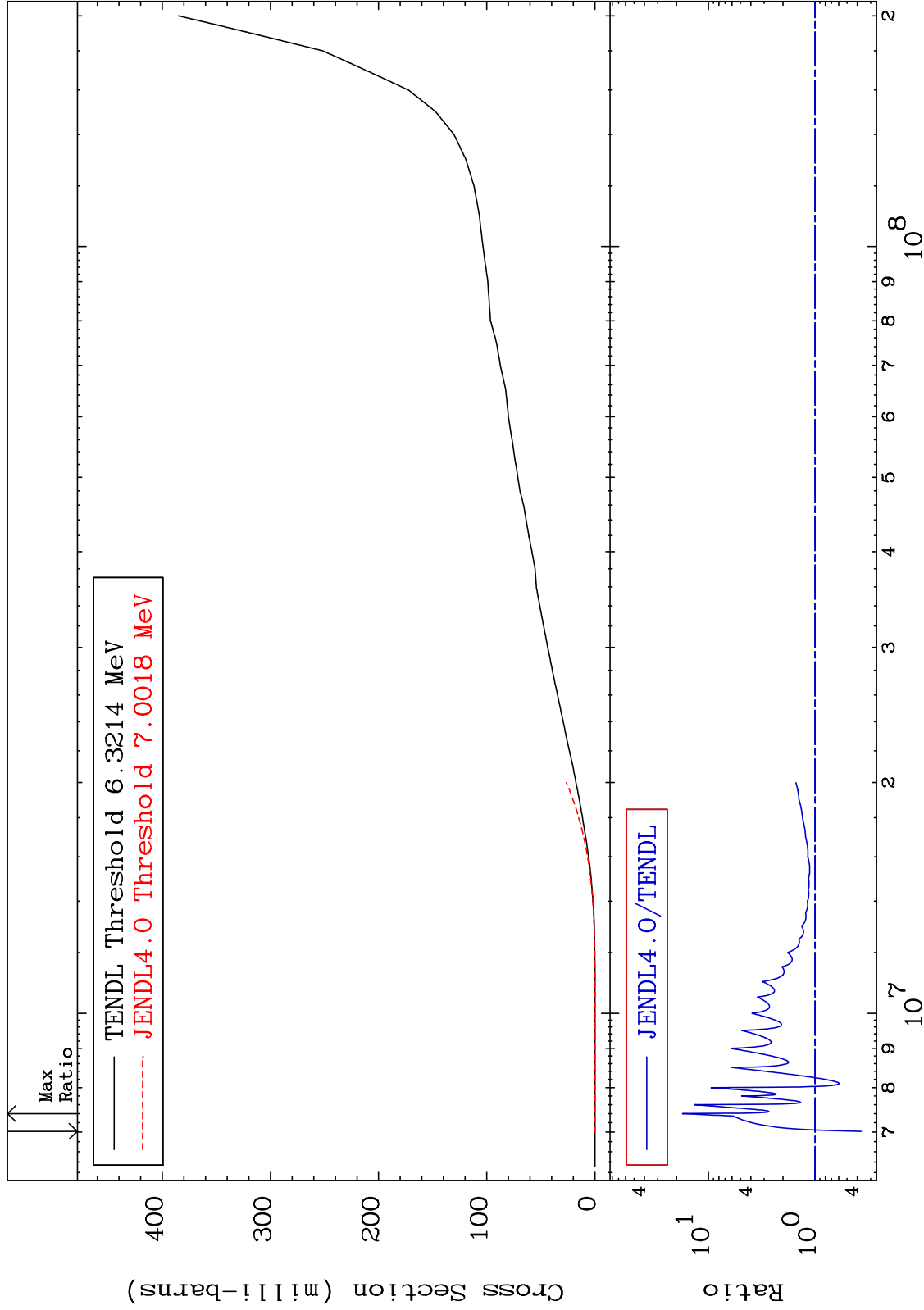
Incident Energy (eV)

44-Ru-99

MAT 4434

Deuterium Production  
Cross Section

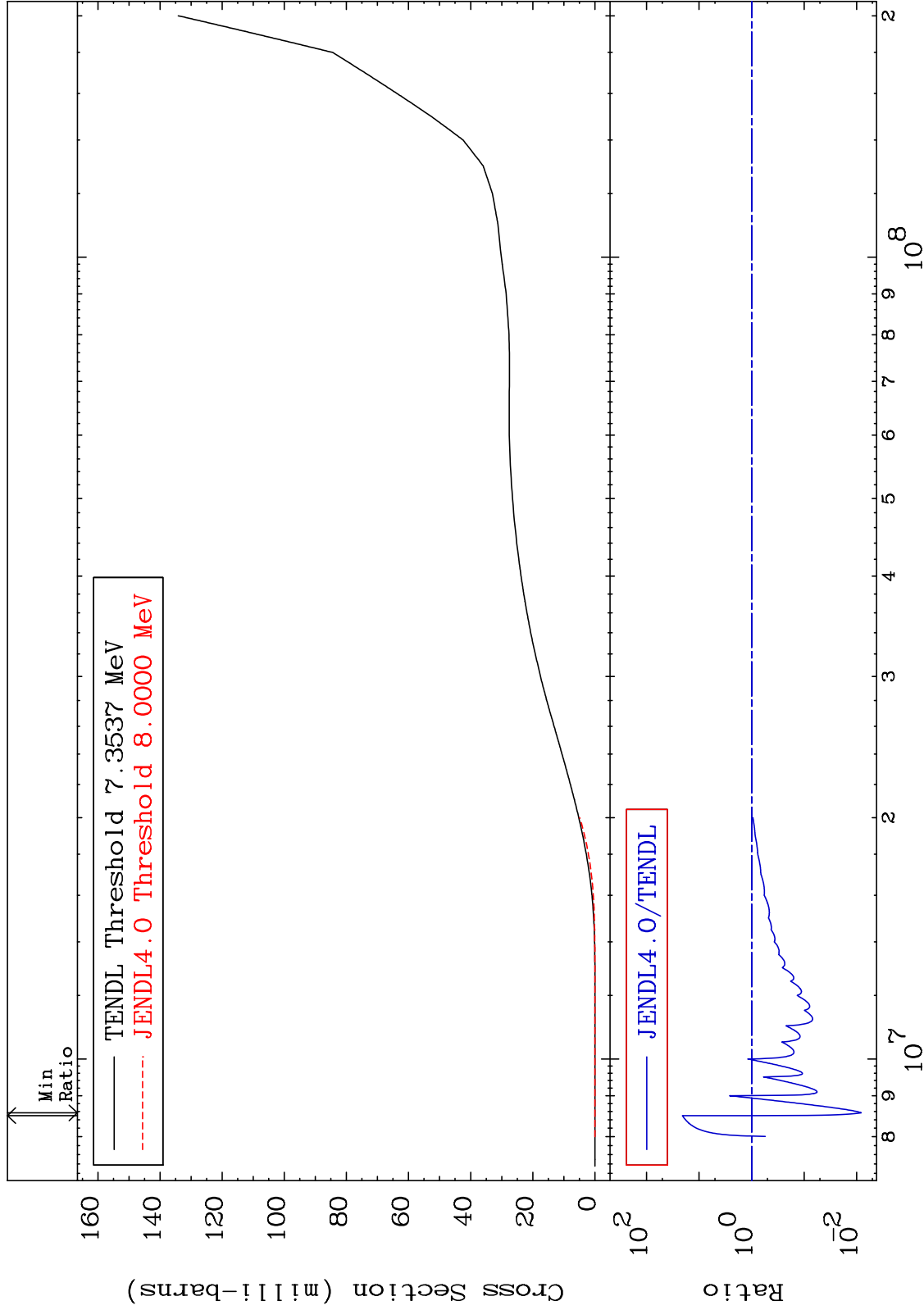
44-Ru-99  
-63.22 To 1656. %



MAT 4434

Tritium Production  
Cross Section

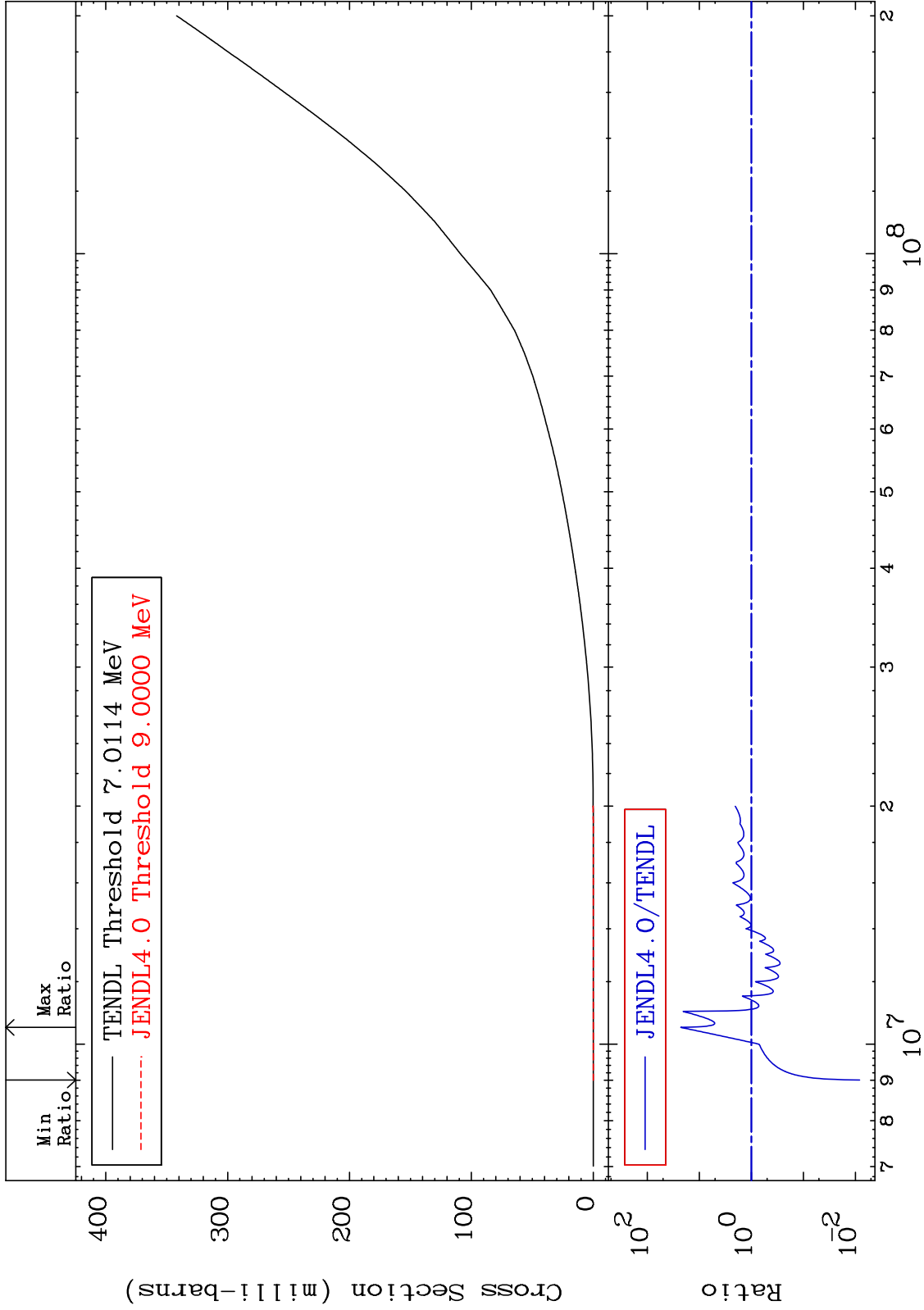
44-Ru-99  
-99.18 To 1972. %



MAT 4434

He-3 Production  
Cross Section

44-Ru-99  
-99.17 To 2174. %

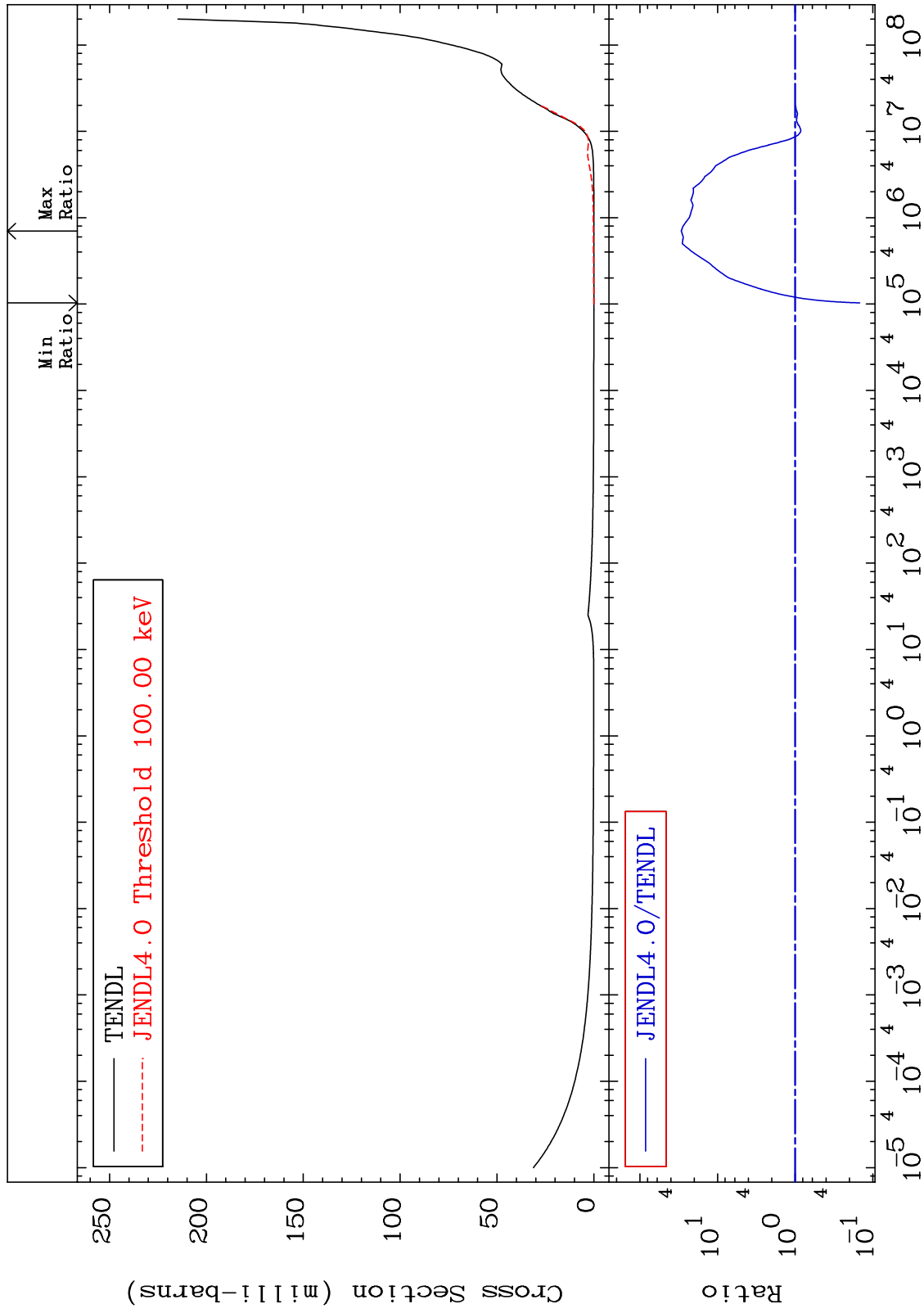




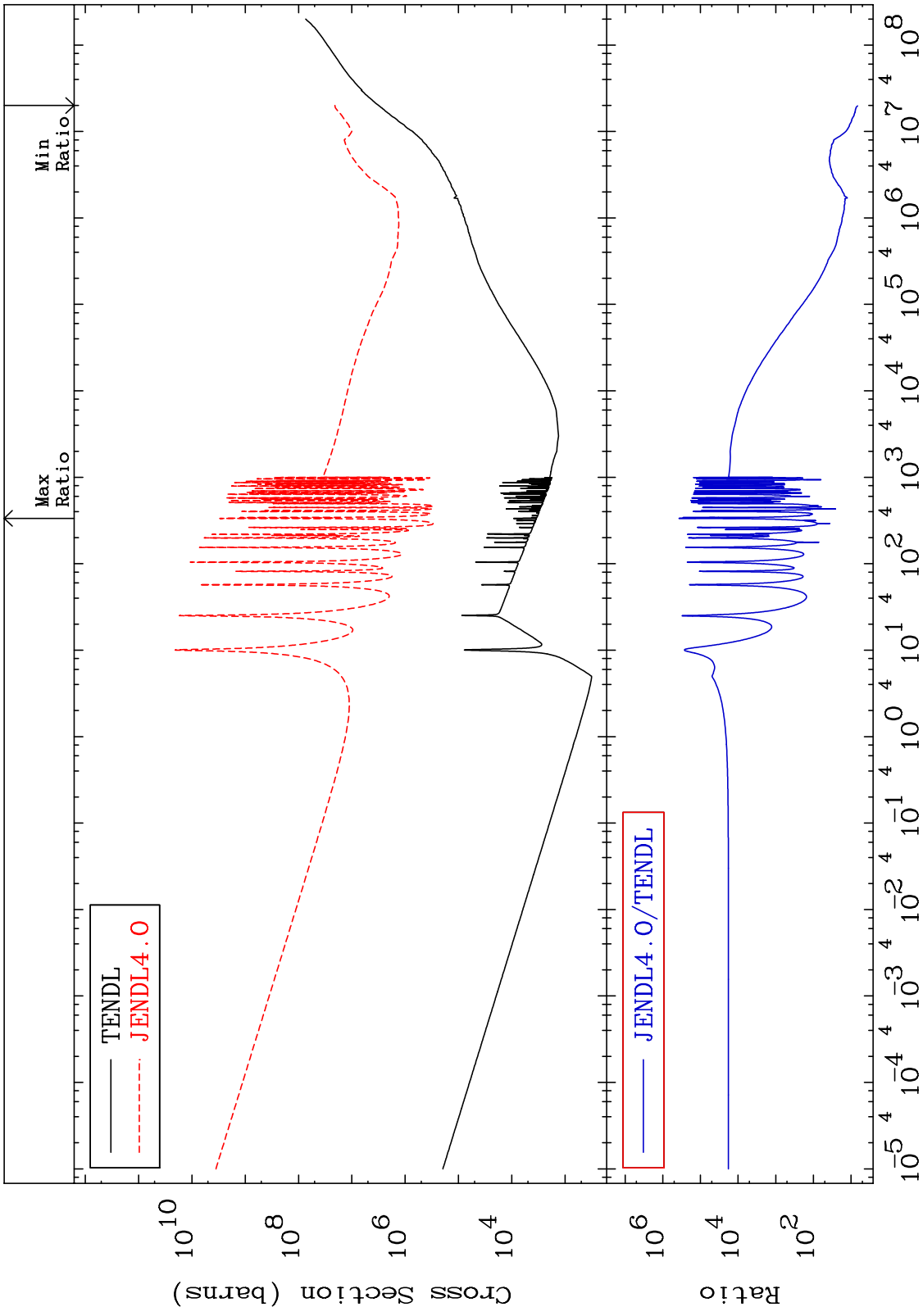
MAT 4434

He-4 Production  
Cross Section

44-Ru-99  
-85.27 To 2837. %



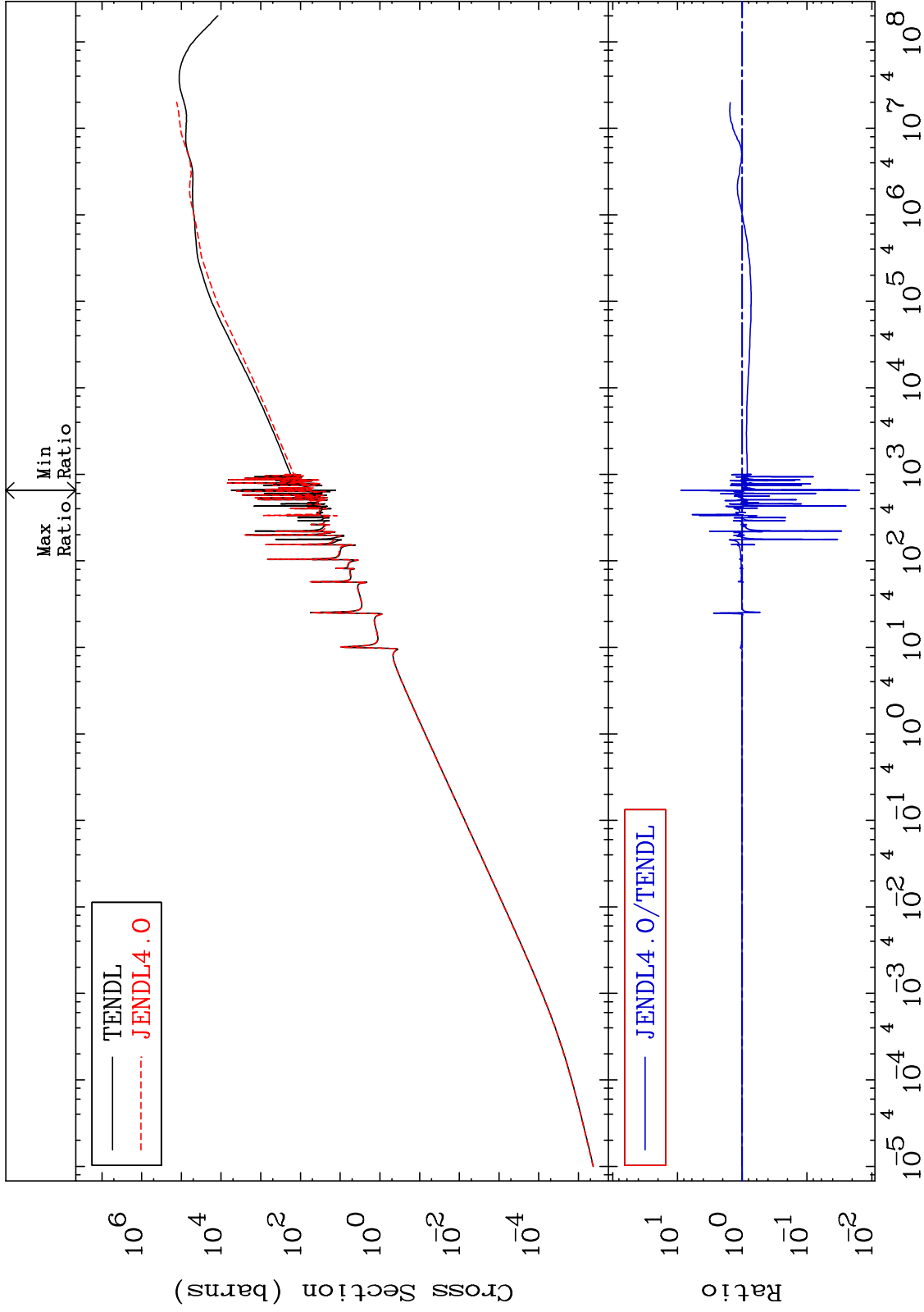
MAT 4434      Kerma total (eV-barns)      44-Ru-99  
 Cross Section      560.4      To 9999. %



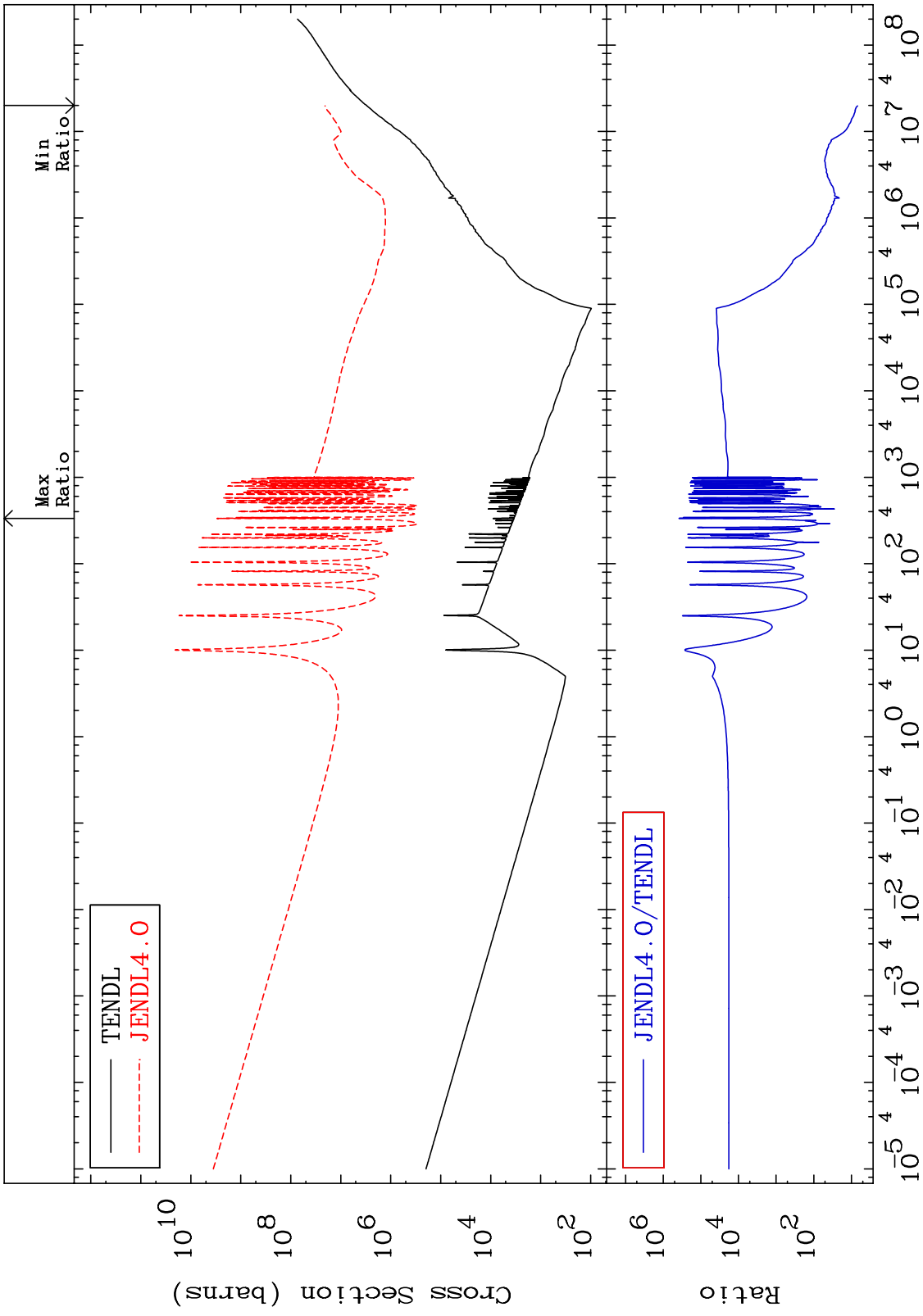
MAT 4434

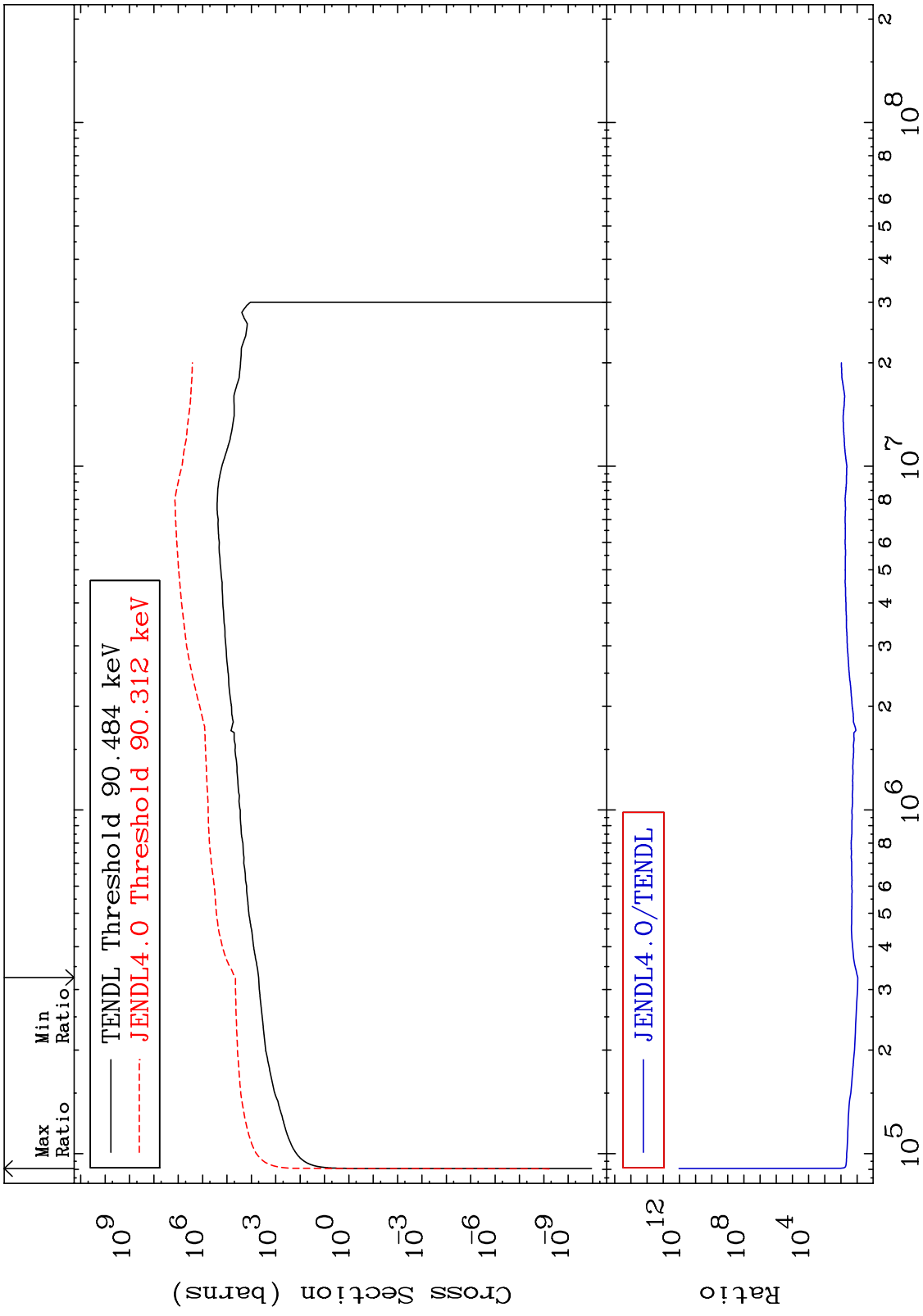
Kerma elastic  
Cross Section

44-Ru-99  
-98.46 To 786.4 %



MAT 4434 Kerma non-elastic (all but mt2) 44-Ru-99  
 Cross Section 574.6 To 9999. %

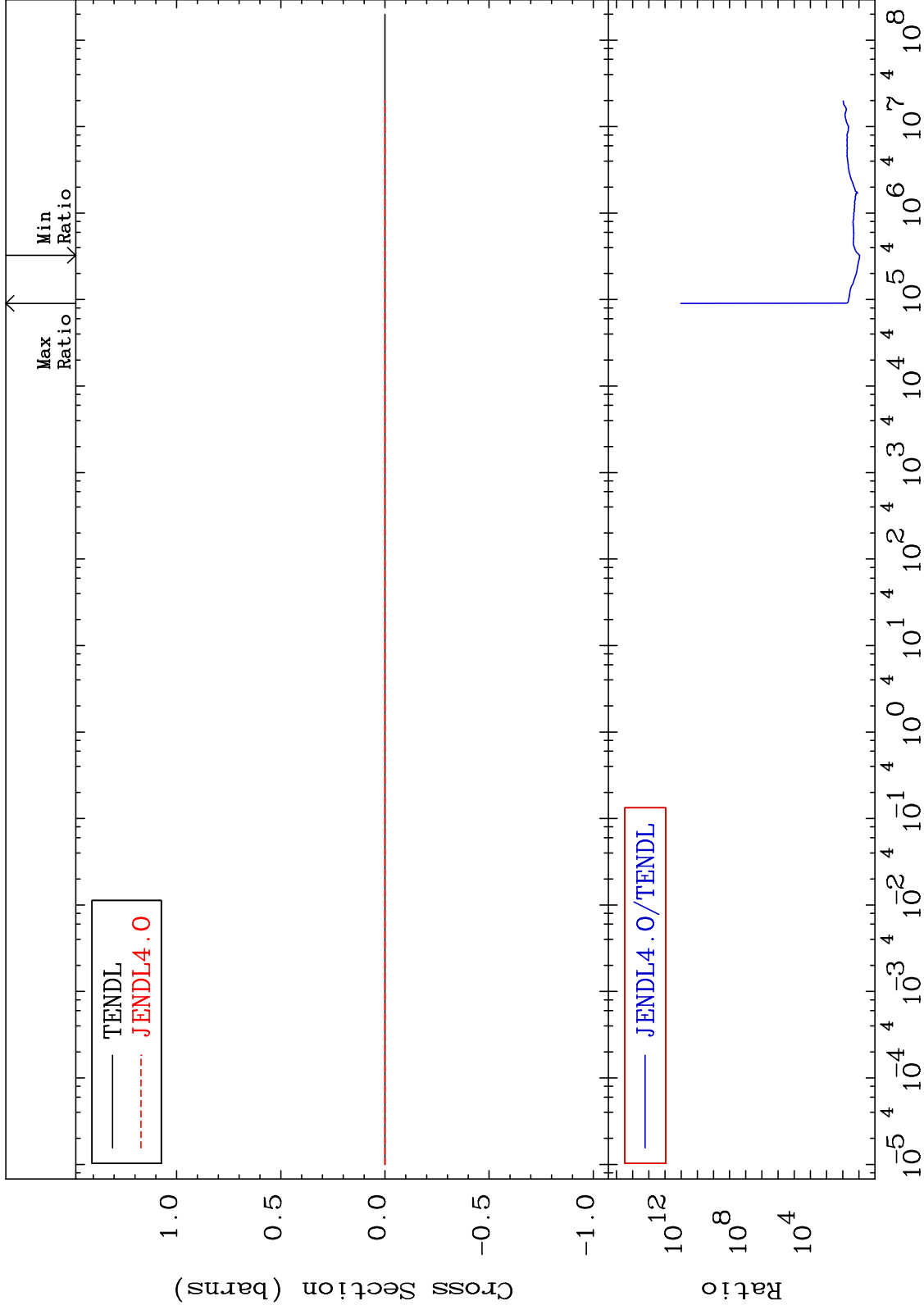




MAT 4434

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

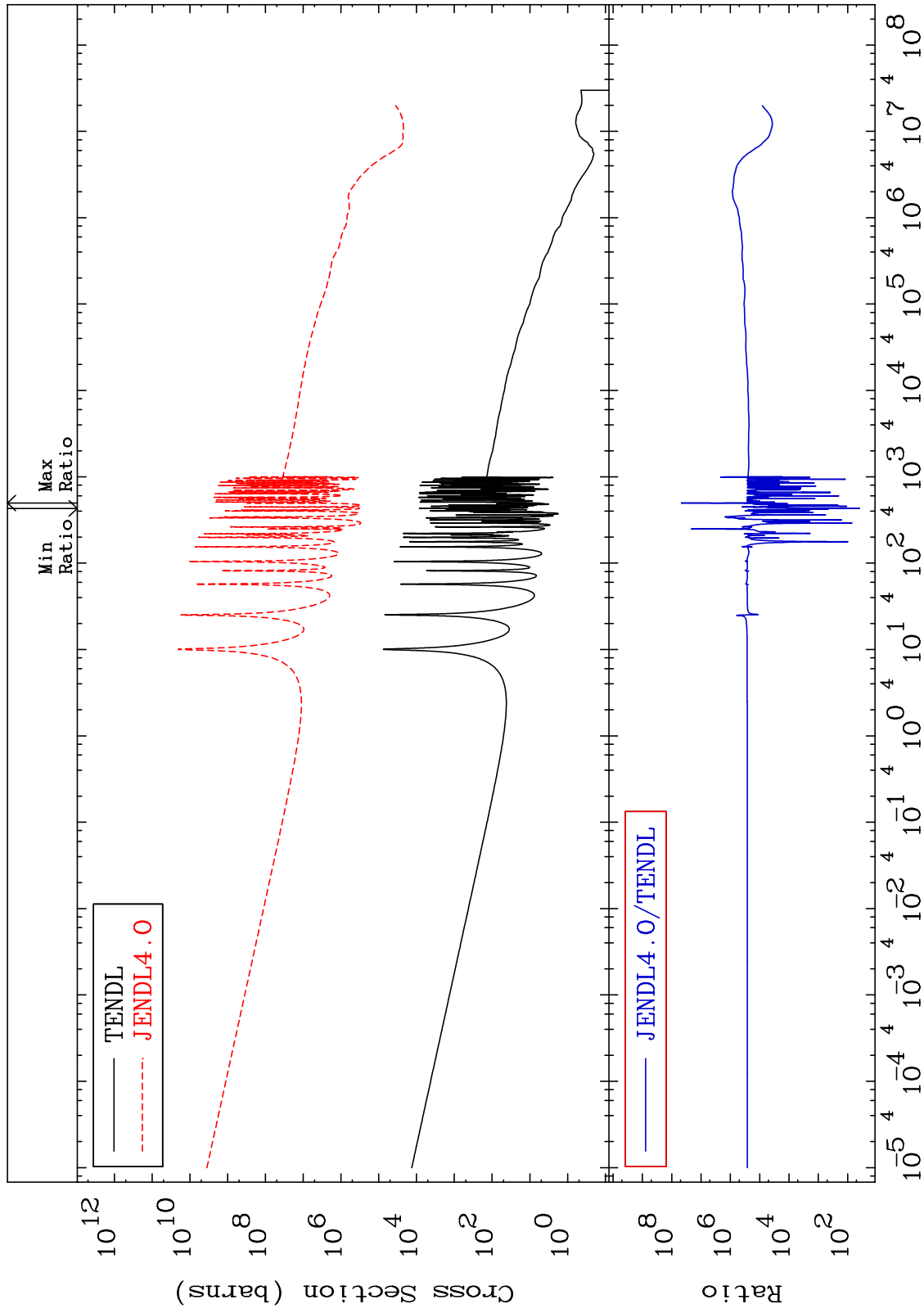
44-Ru-99  
797.8 To 9999. %



MAT 4434

Kerma capture (mt102)  
Cross Section

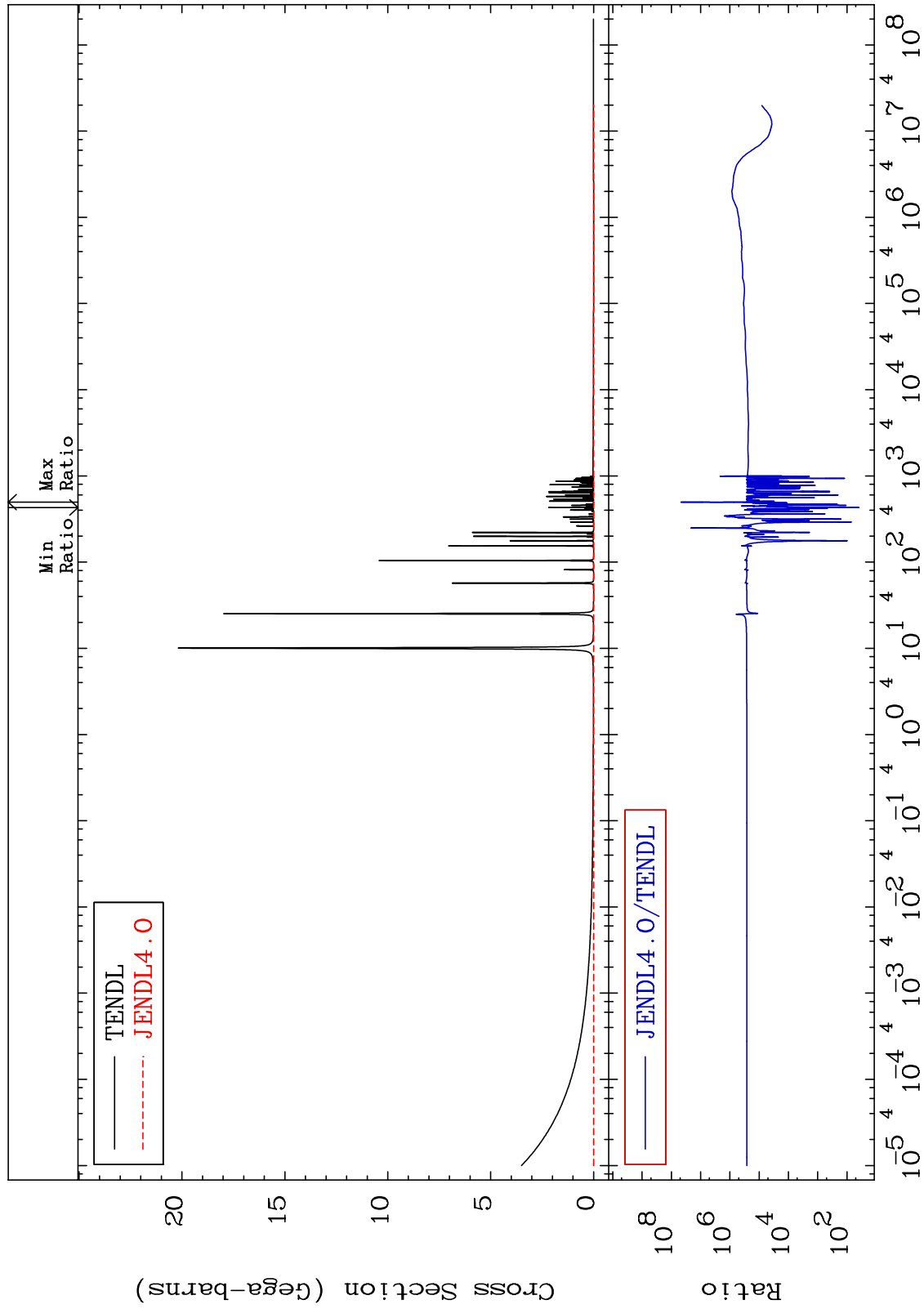
44-Ru-99  
3761. To 9999. %



MAT 4434

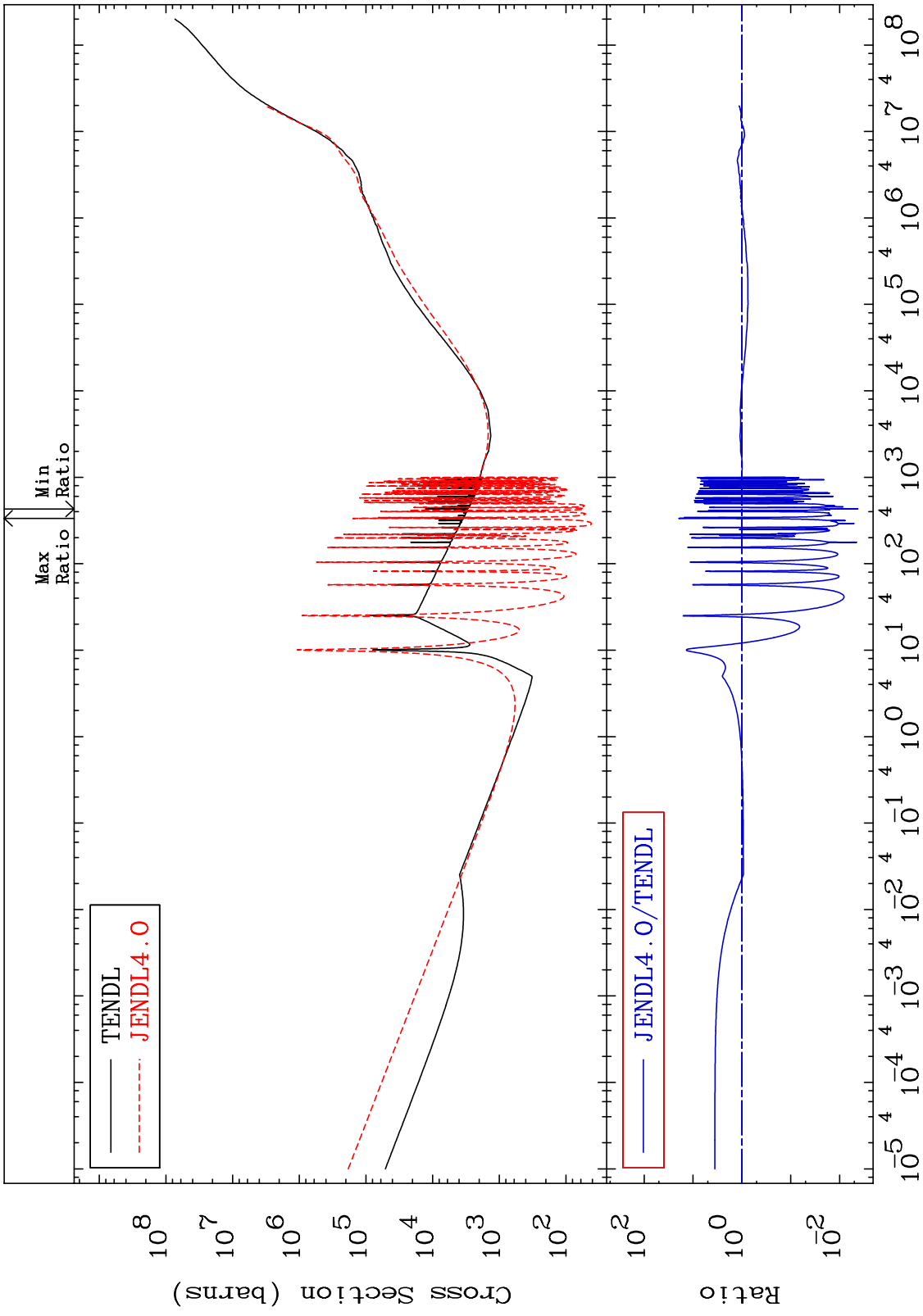
Total photon (eV-barns)  
Cross Section

44-Ru-99  
3761. To 9999. %



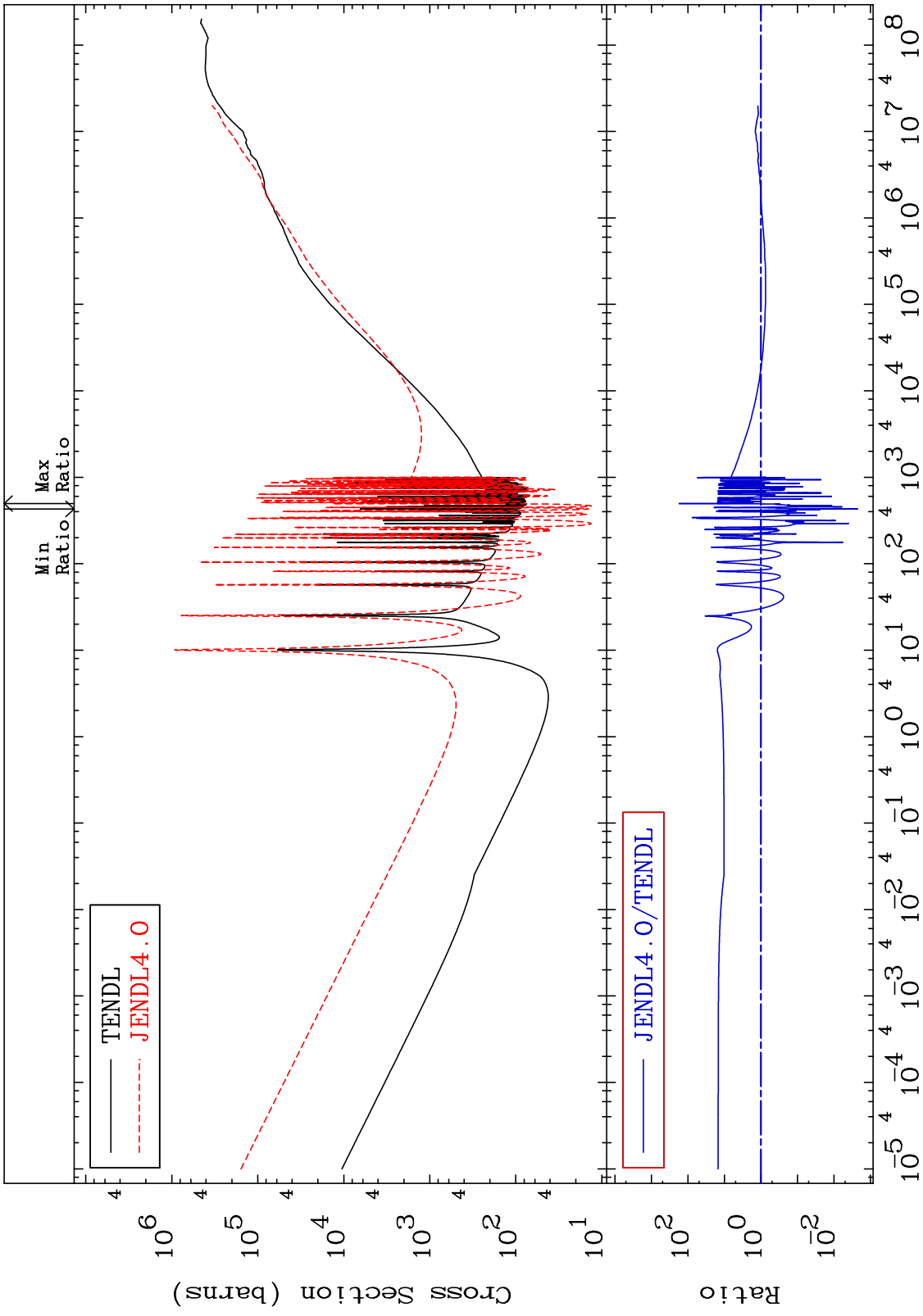


MAT 4434 Total kinematic kerma (high limit) 44-Ru-99  
 Cross Section -99.58 To 1835. %



40 44-Ru-99

MAT 4434      Dpa total (eV-barns)      44-Ru-99  
 -99.78 To 9999. %

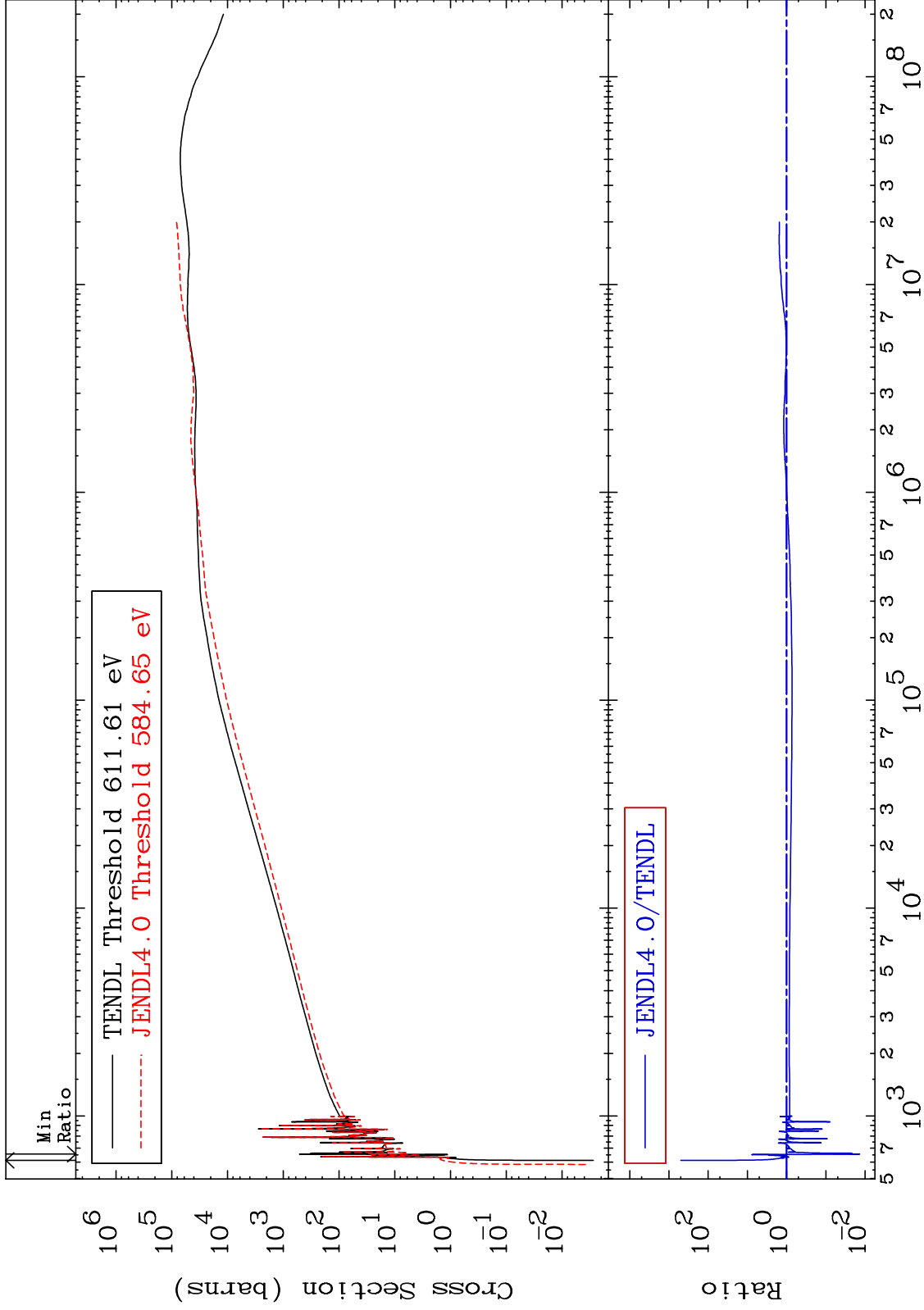


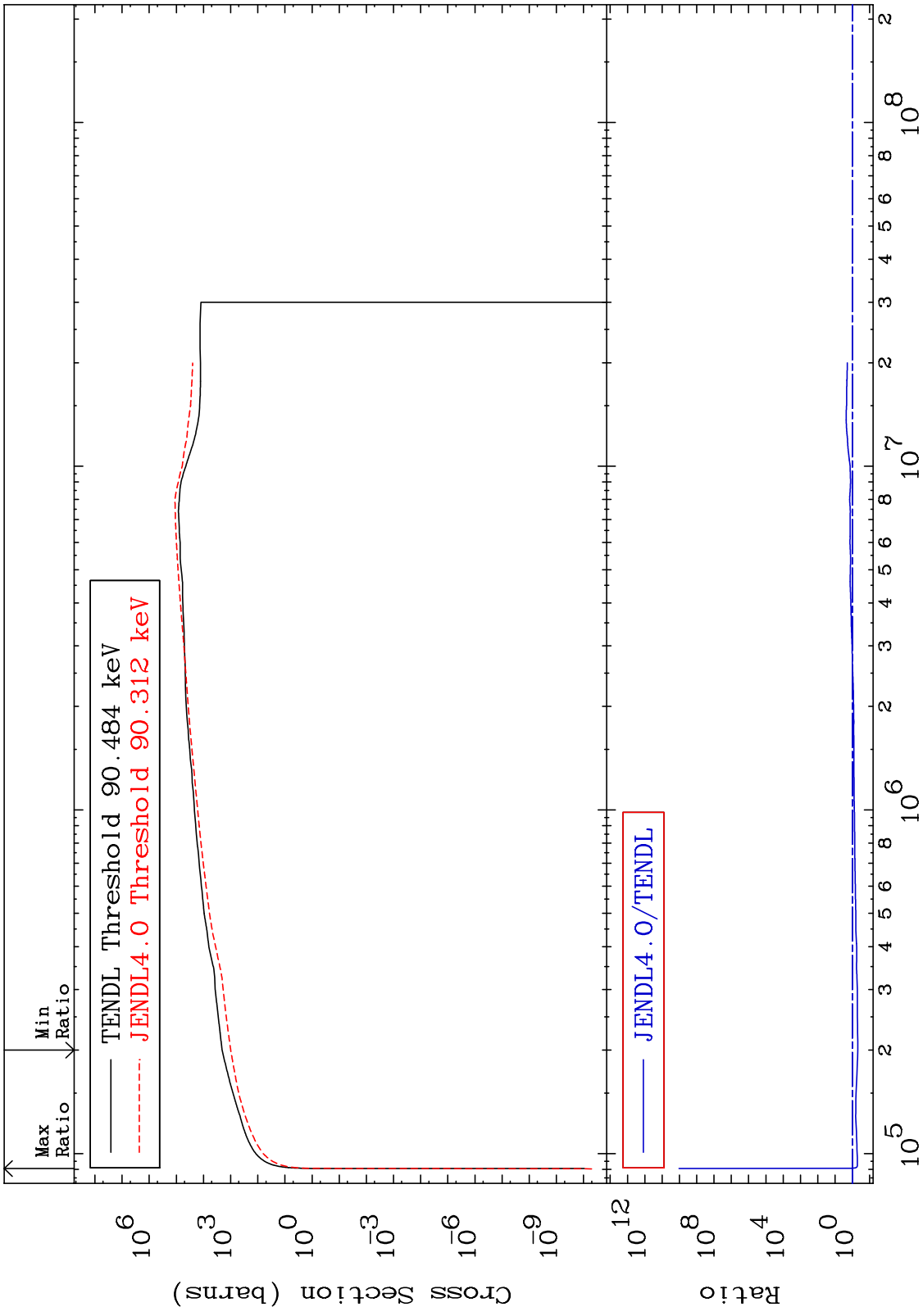
41      Incident Energy (eV)      44-Ru-99

MAT 4434

Dpa elastic (mt2)  
Cross Section

44-Ru-99  
-98.62 To 9999. %

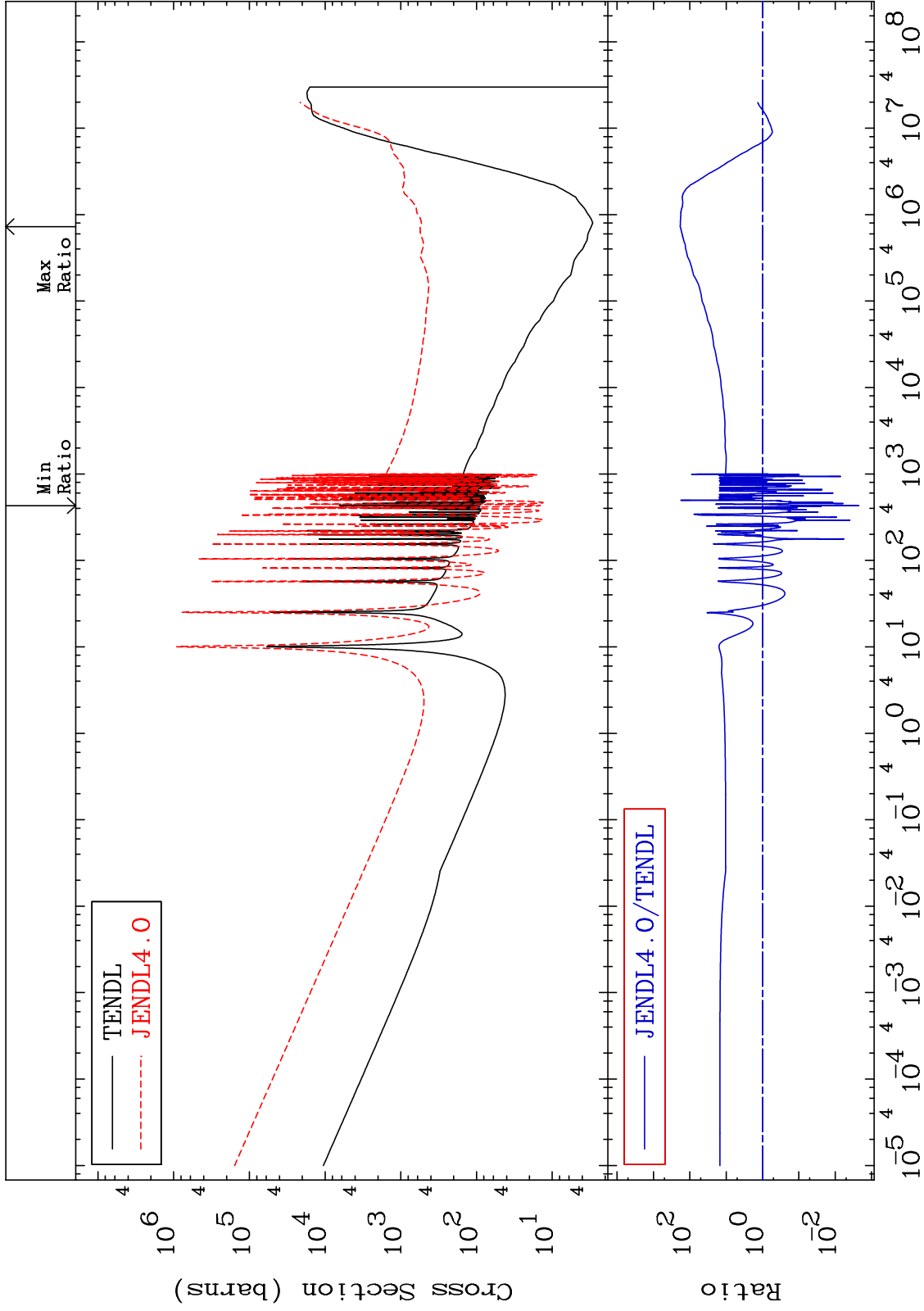




MAT 4434

Dpa disappearance (mt102 -120)  
Cross Section

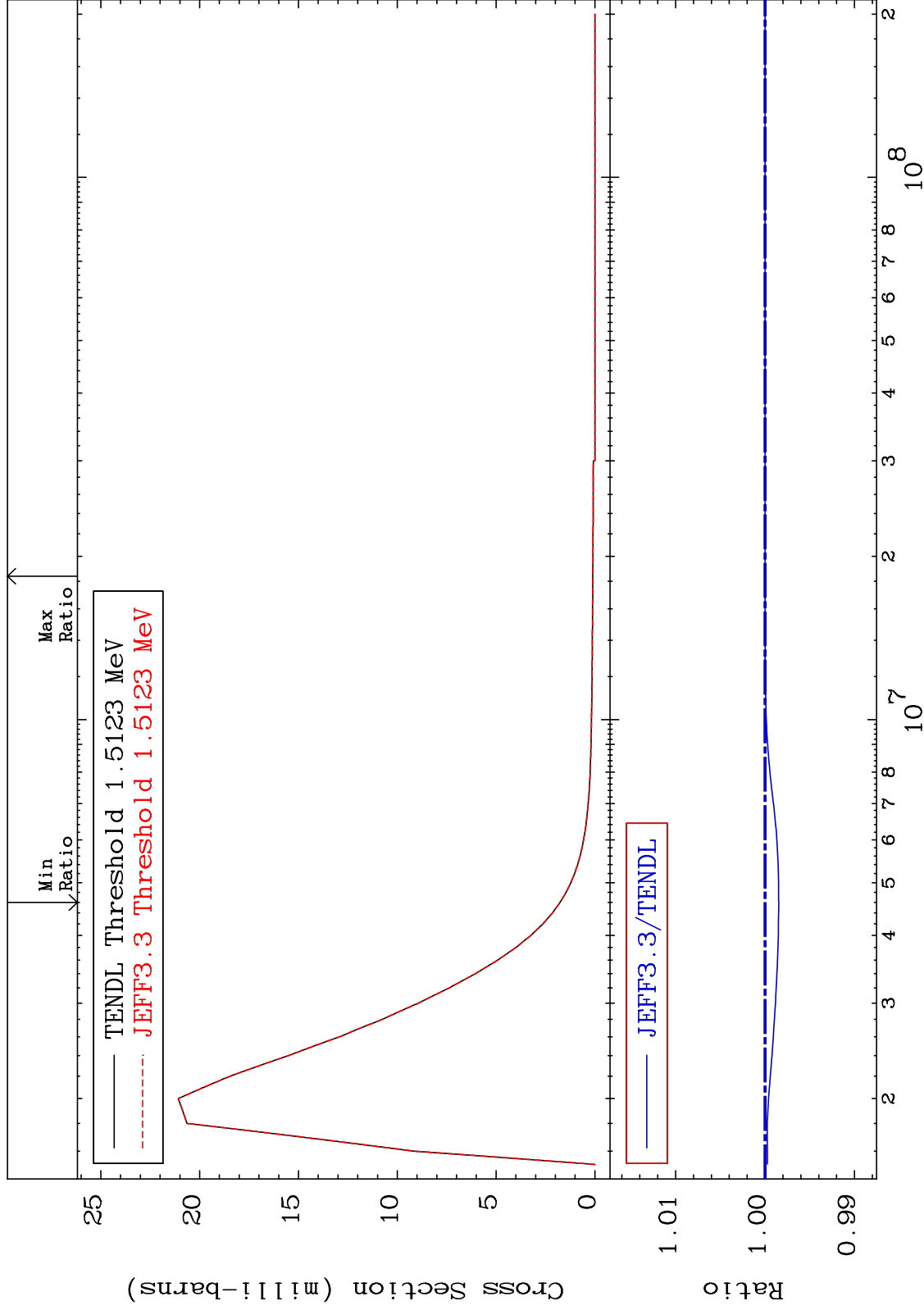
44-Ru-99  
-99.78 To 9999. %



MAT 4434

MT= 75 (n,n') Level  
Cross Section

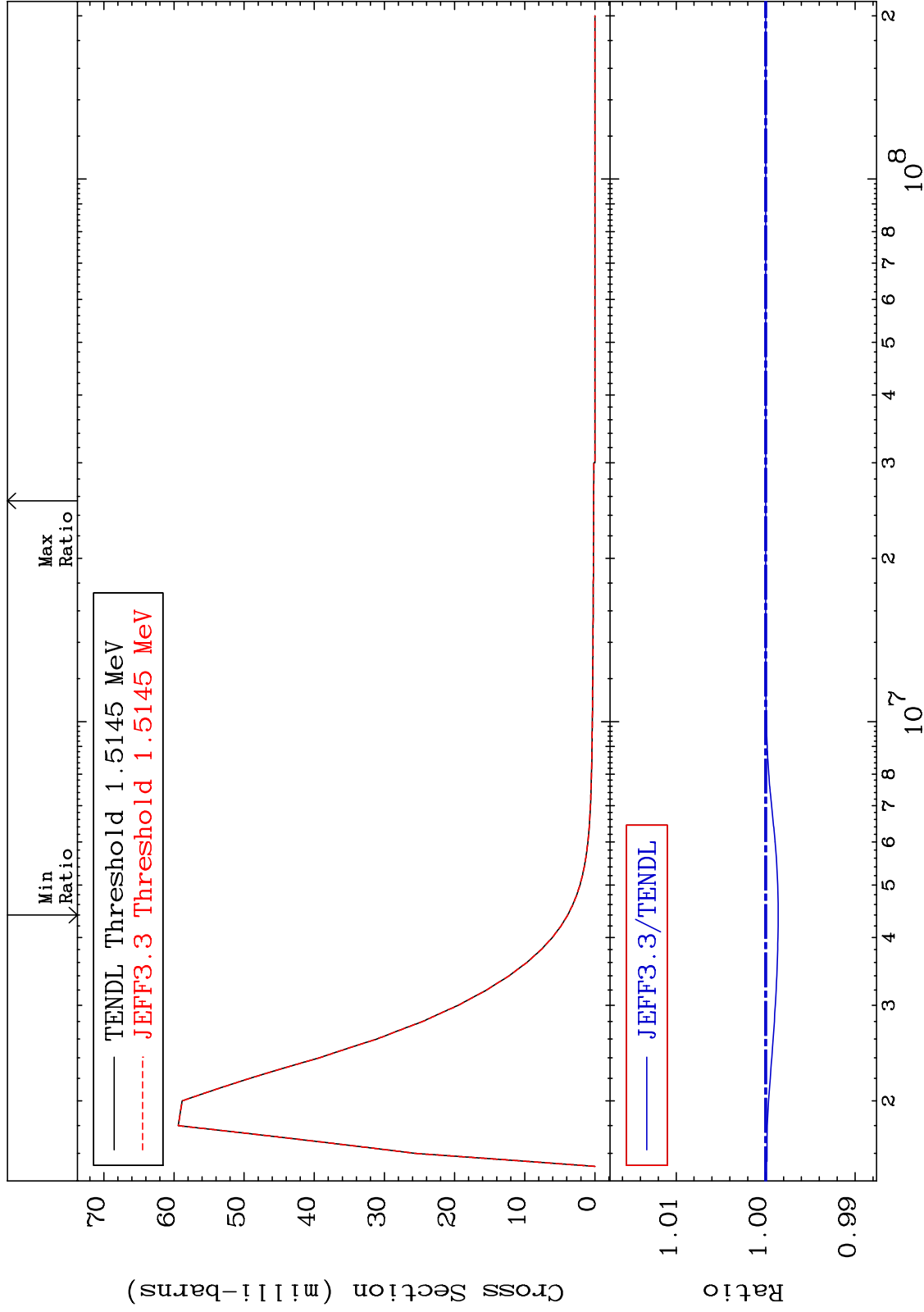
44-Ru-99  
-0.153 To 0.000 %



MAT 4434

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

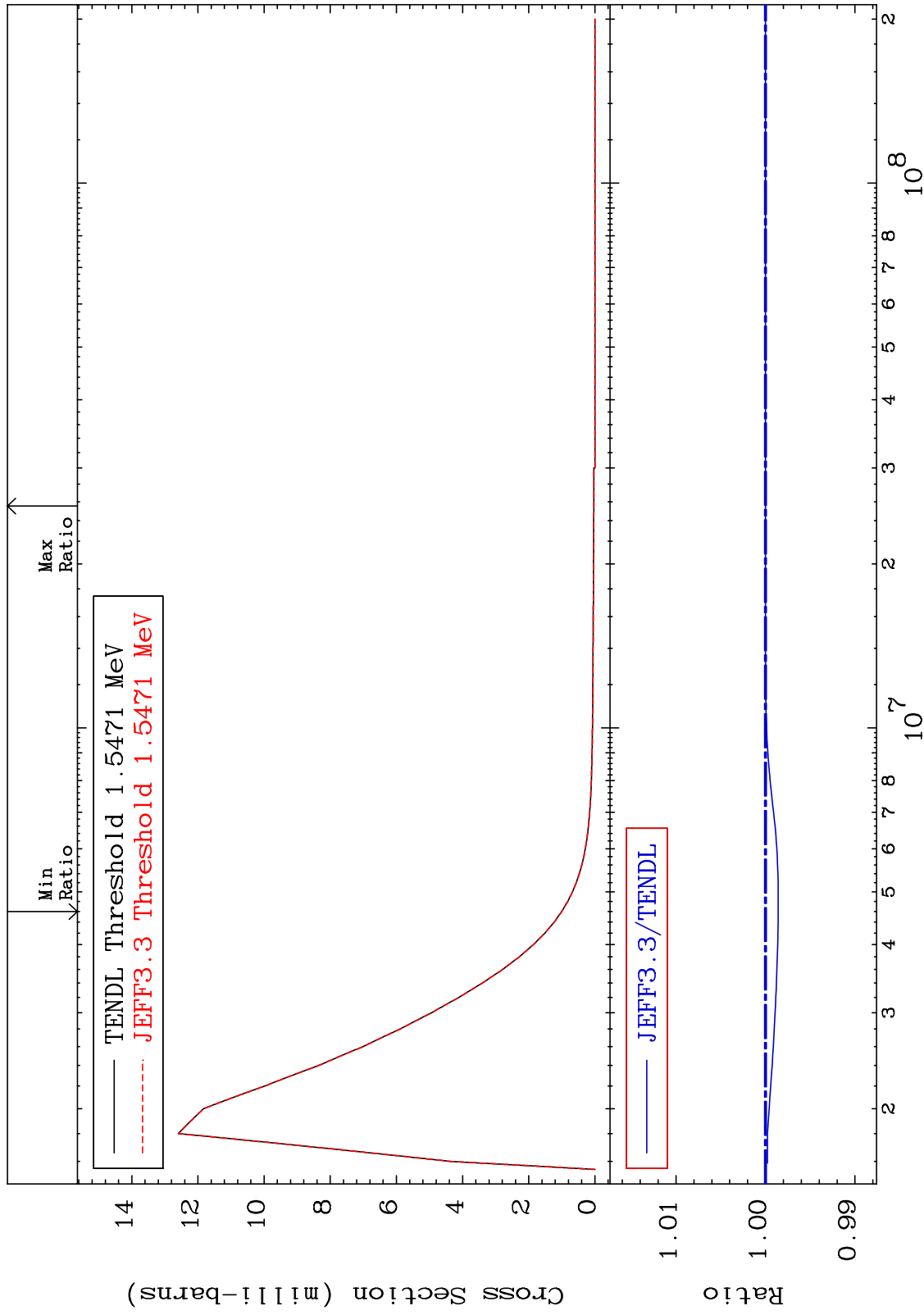
44-Ru-99  
-0.139 To 0.000 %



MAT 4434

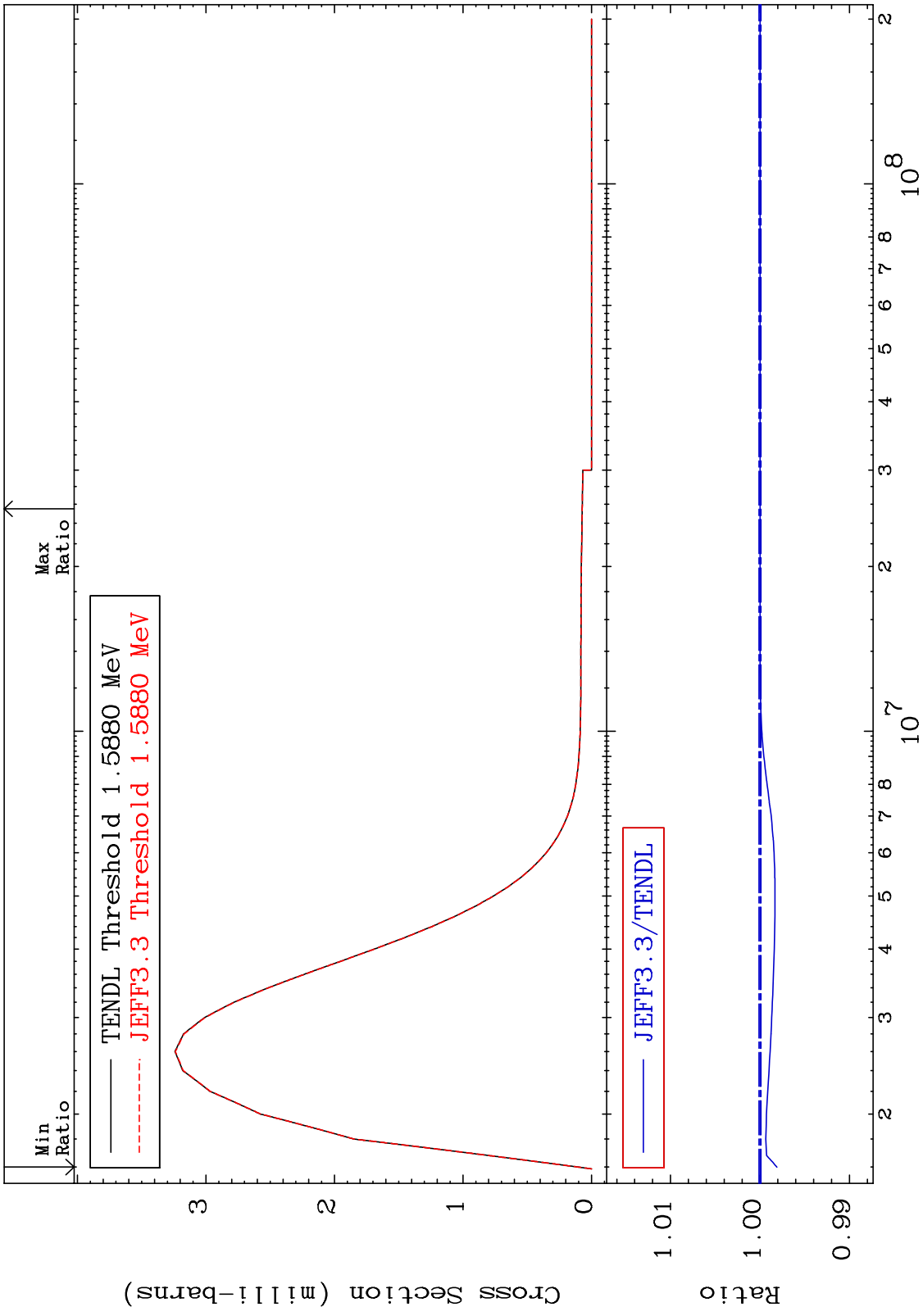
MT= 77 (n,n') Level  
Cross Section

44-Ru-99  
-0.142 To 0.000 %





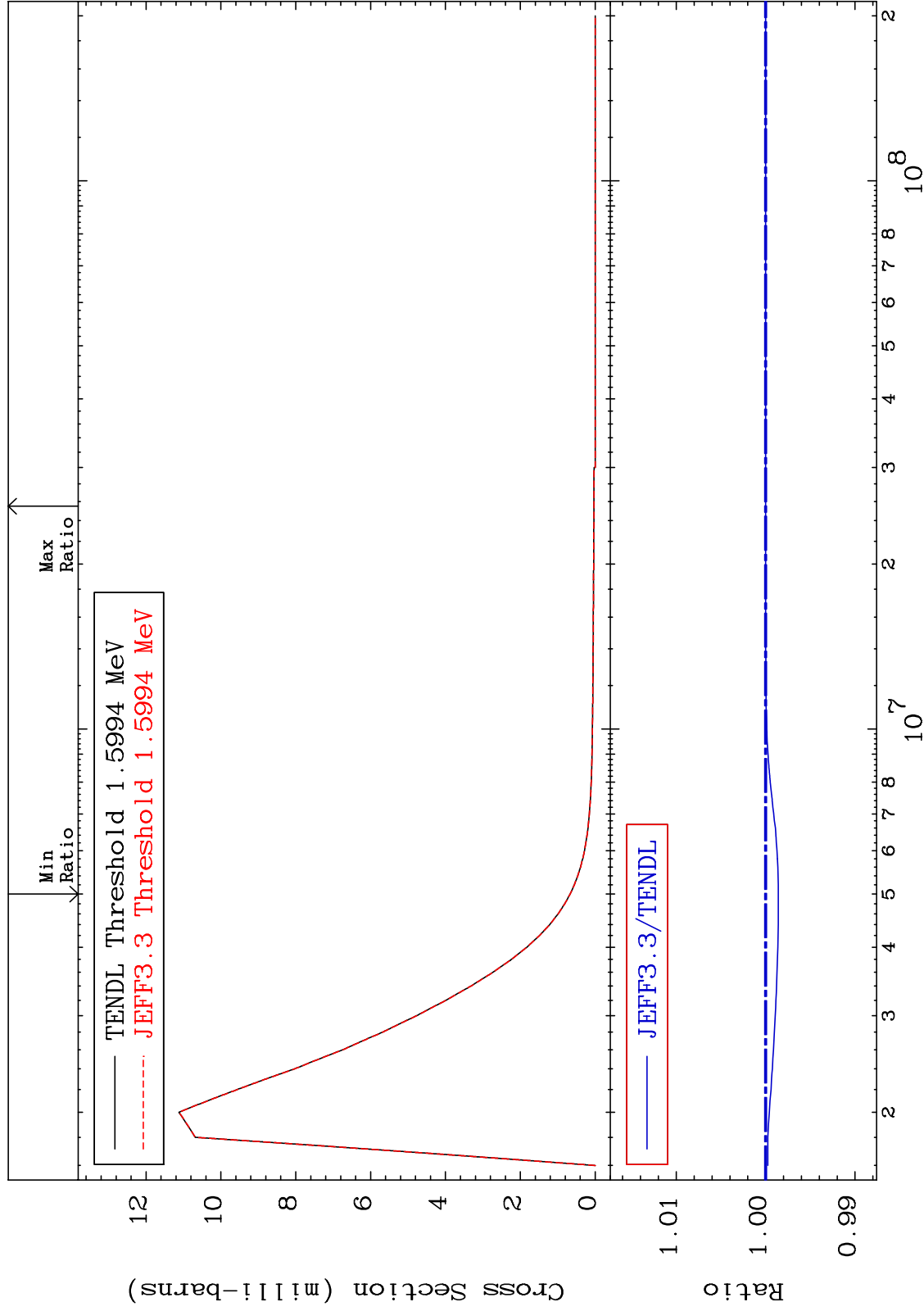
MAT 4434 MT= 78 (n,n') Level Cross Section 44-Ru-99  
 -0.189 To 0.000 %



MAT 4434

MT= 79 (n,n') Level  
Cross Section

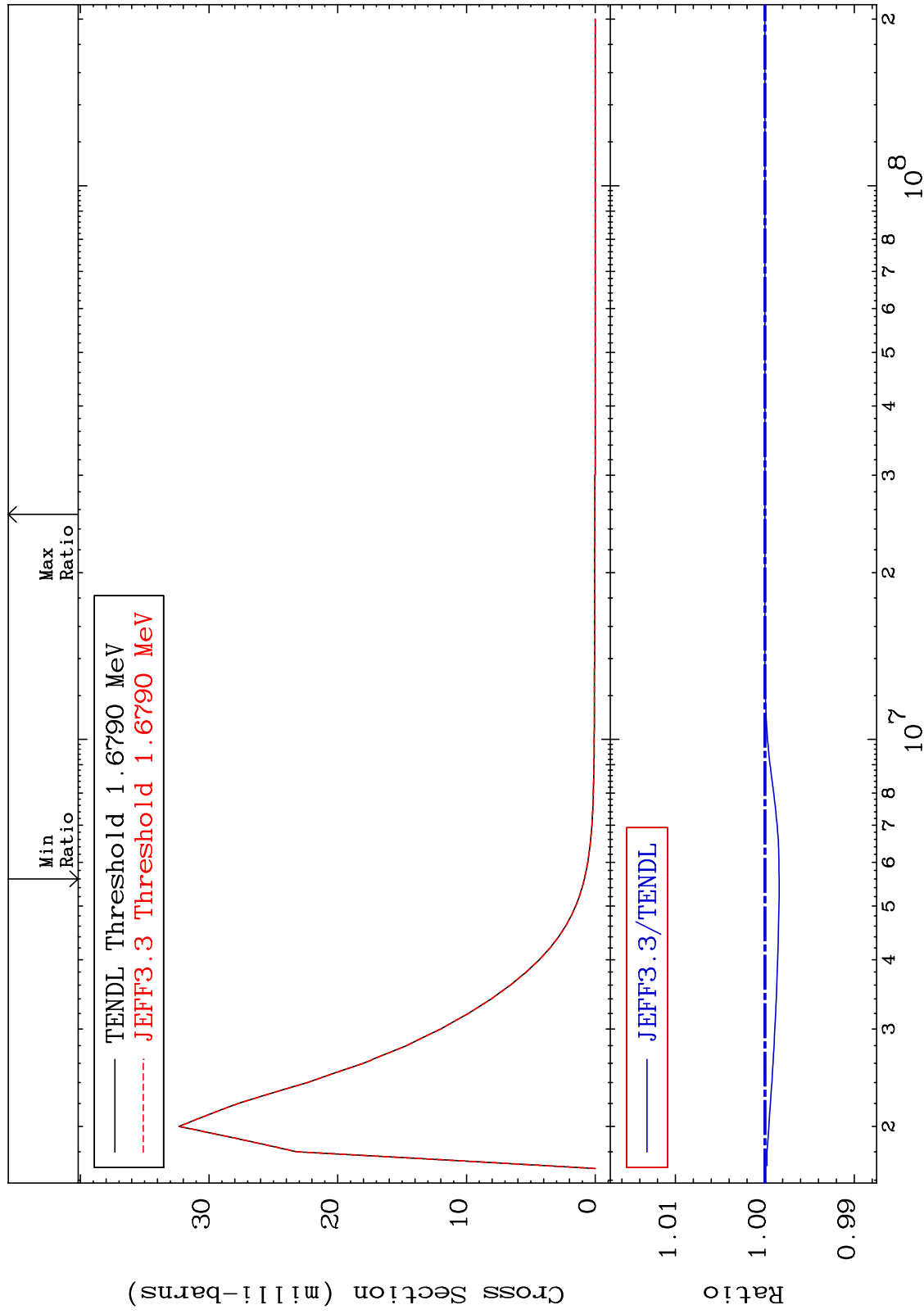
44-Ru-99  
-0.142 To 0.000 %



MAT 4434

MT= 80 (n,n') Level  
Cross Section

44-Ru-99  
-0.160 To 0.000 %



50

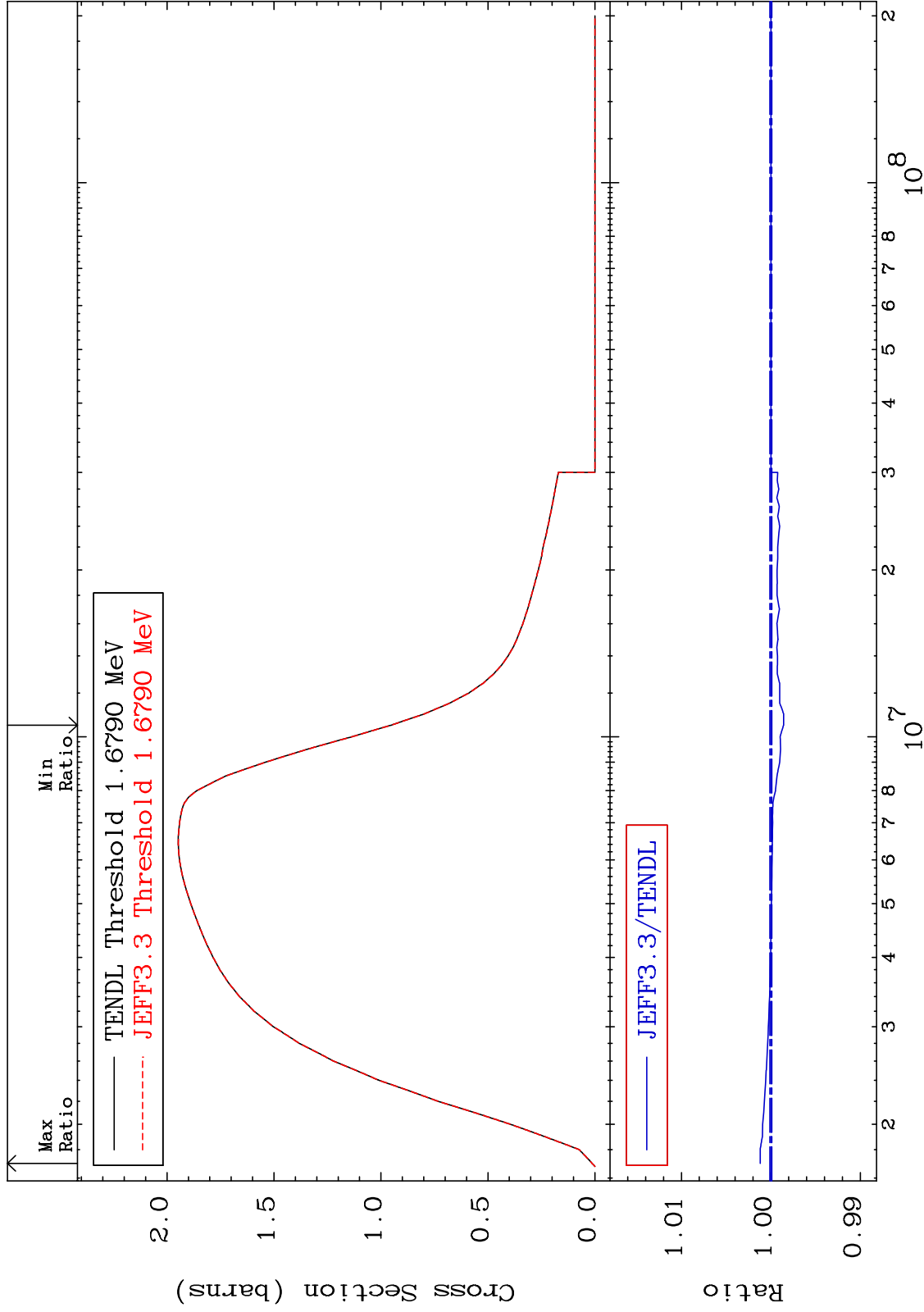
Incident Energy (eV)

44-Ru-99

MAT 4434

(n, n') Continuum  
Cross Section

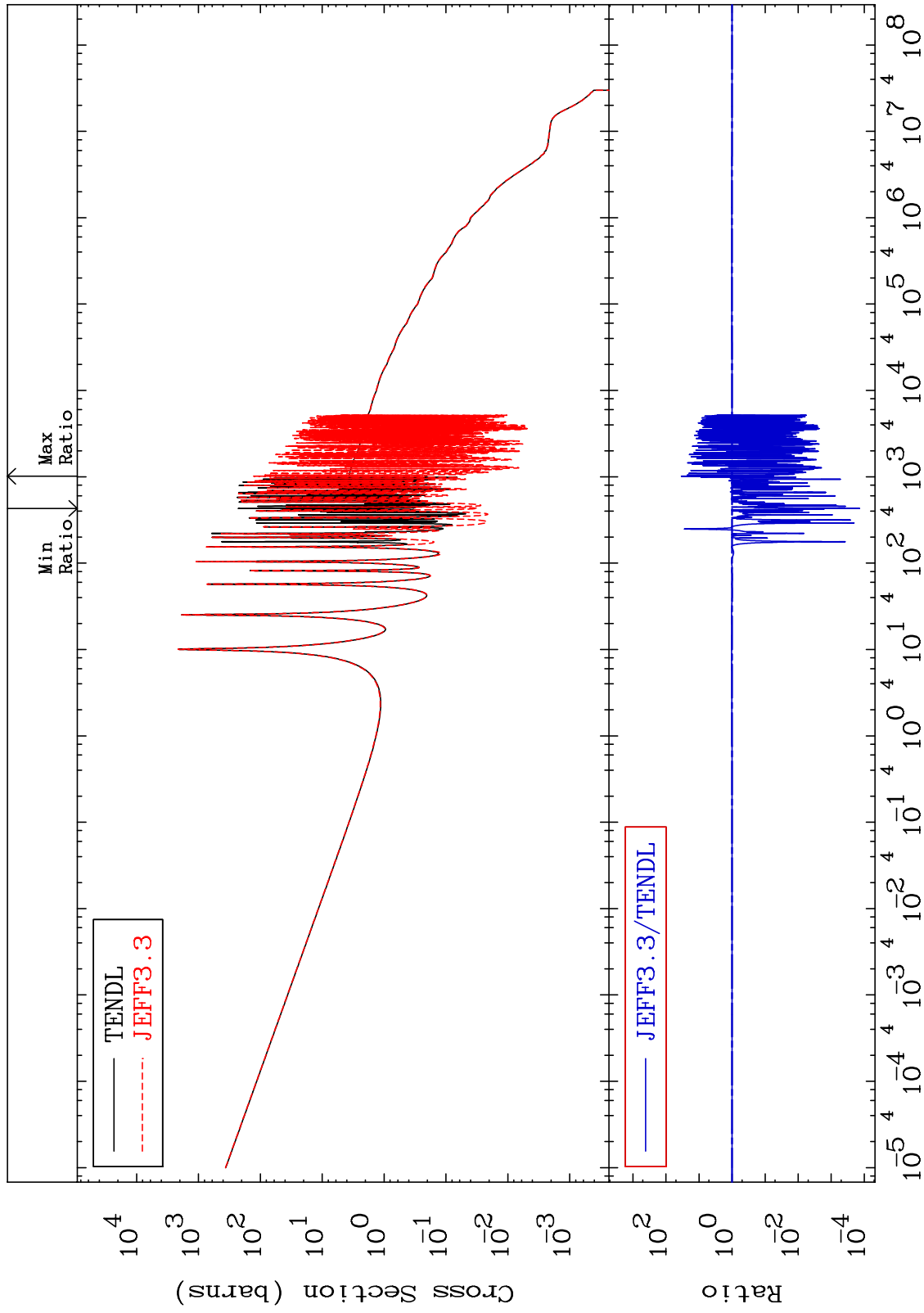
44-Ru-99  
-0.143 To 0.119 %



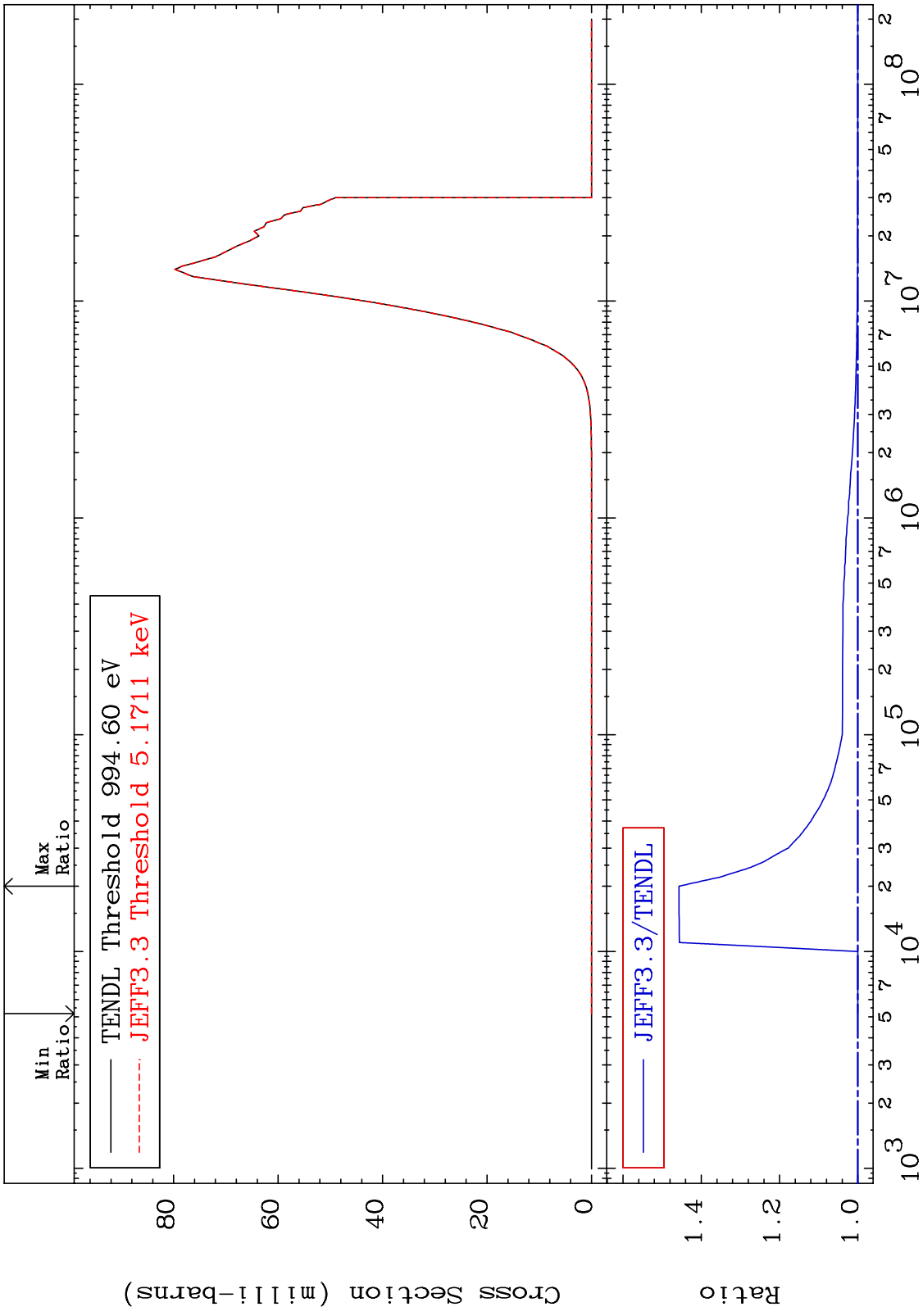
MAT 4434

(n,  $\gamma$ )  
Cross Section

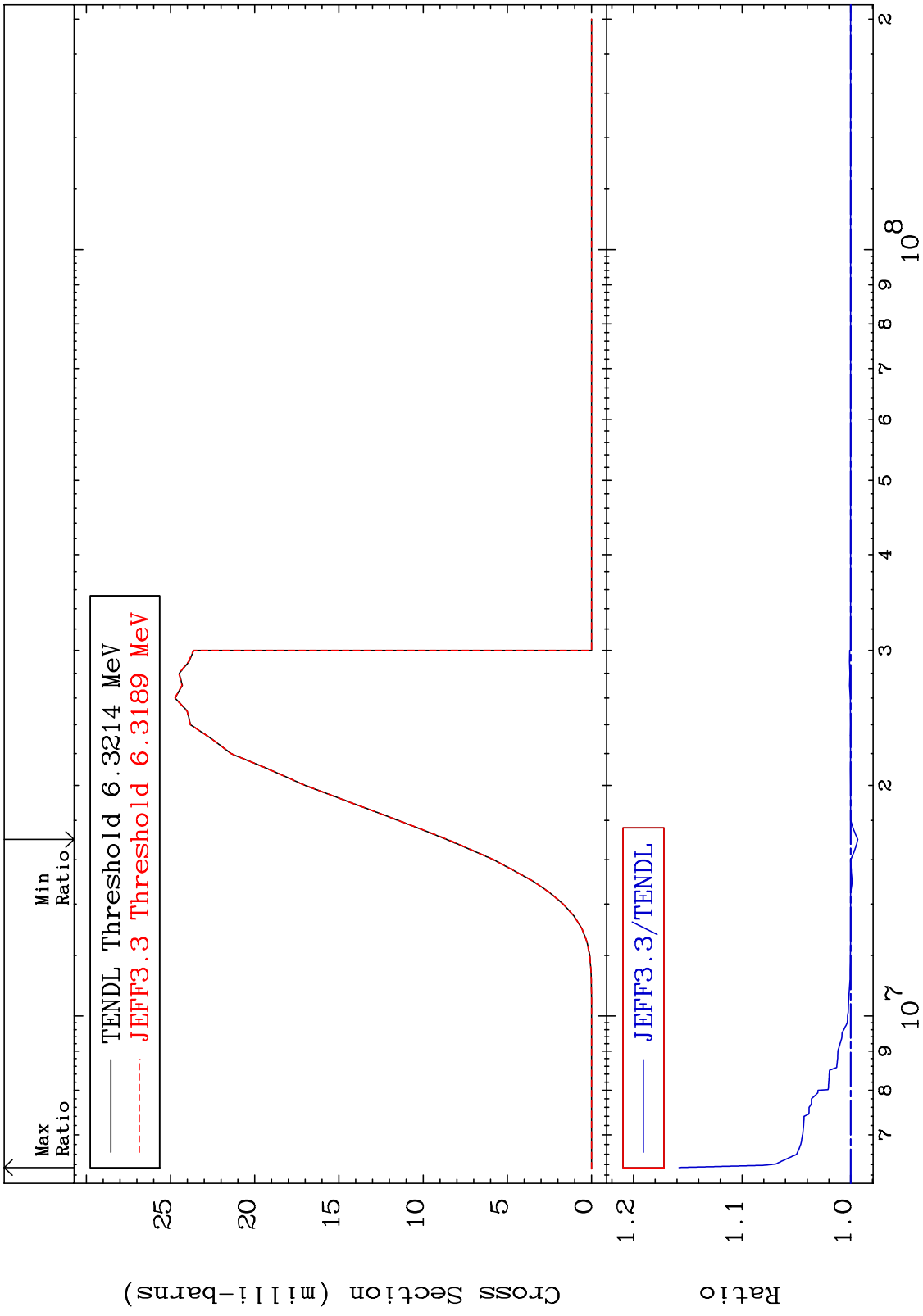
44-Ru-99  
-99.99 To 3345. %



MAT 4434 (n,p) Cross Section 44-Ru-99 To 45.68 %



MAT 4434 (n,d) 44-Ru-99  
Cross Section -0.661 To 15.81 %



MAT 4434

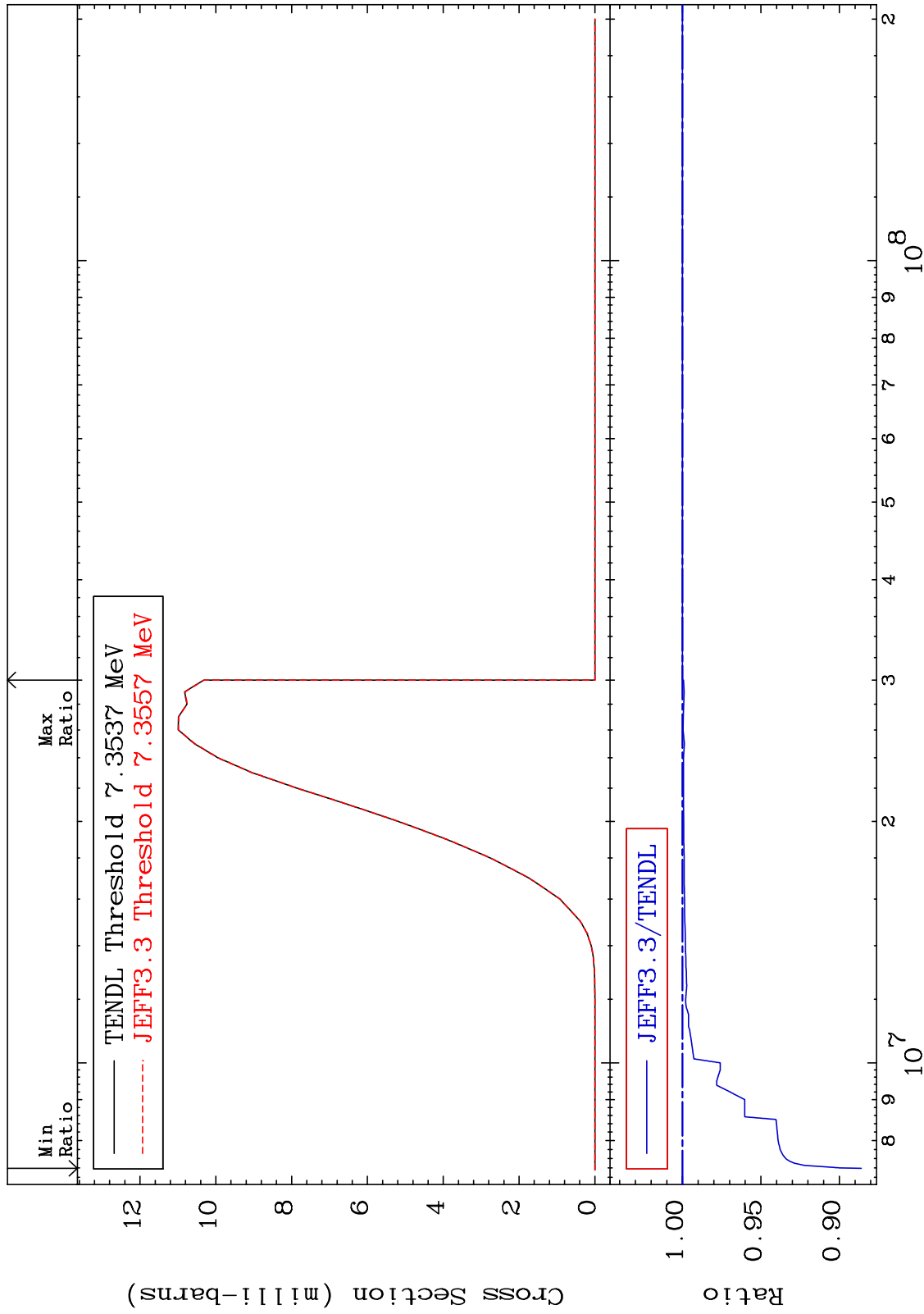
44-Ru-99

(n, t)

Cross Section

Cross Section

-11.40 To 0.000 %



55

Incident Energy (eV)

44-Ru-99



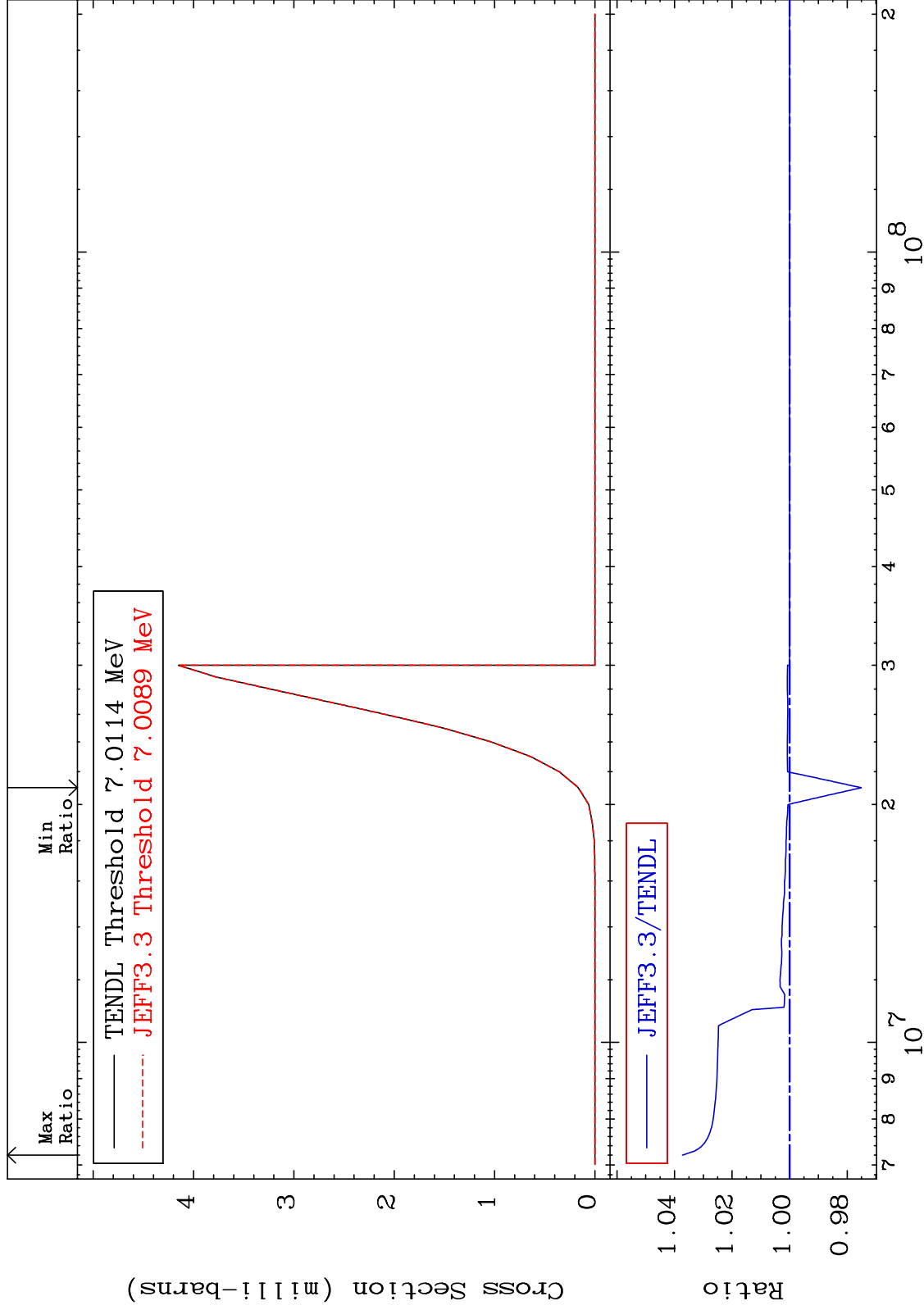
MAT 4434

(n, He-3)

44-Ru-99

Cross Section

-2.491 To 3.724 %



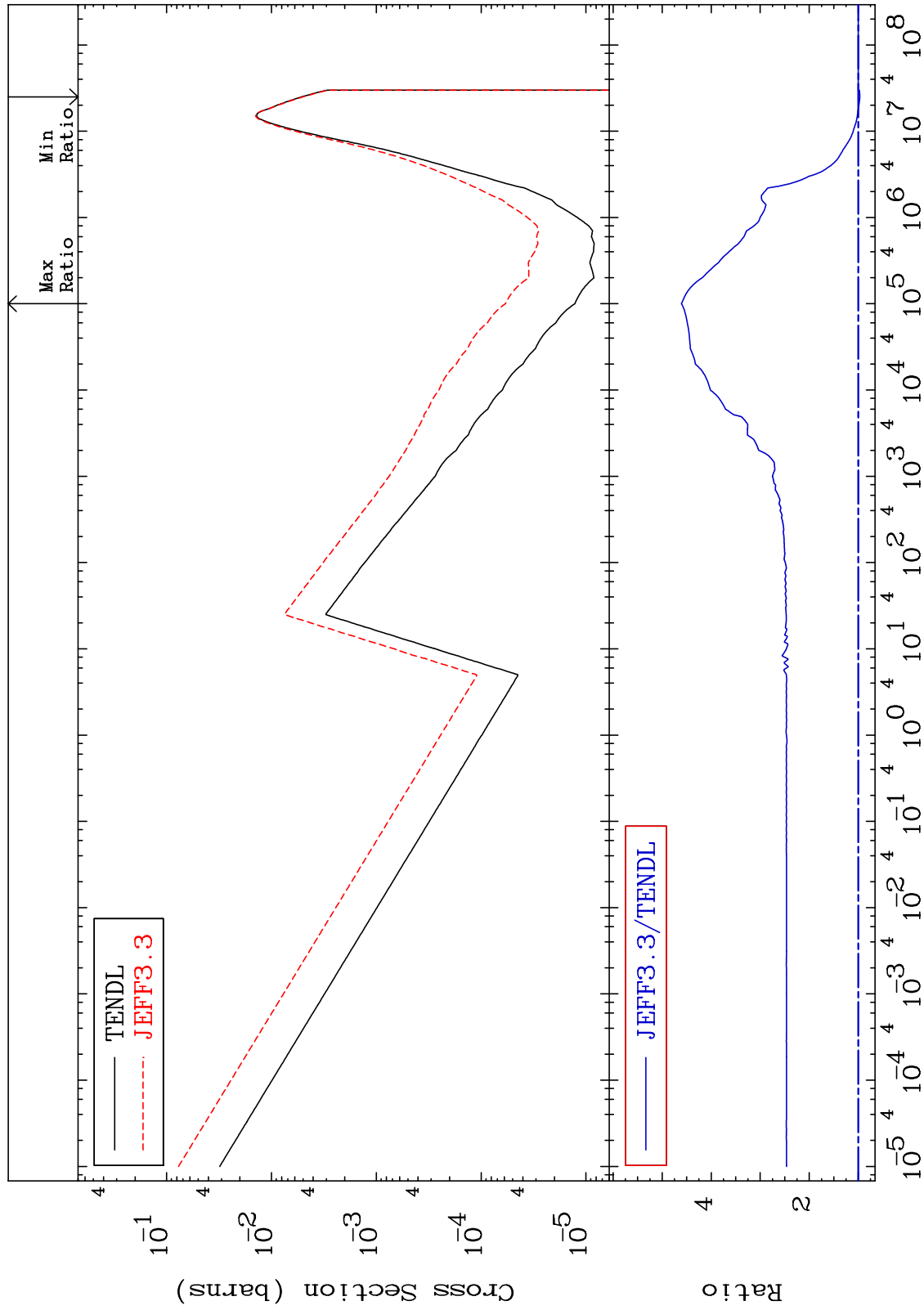
MAT 4434

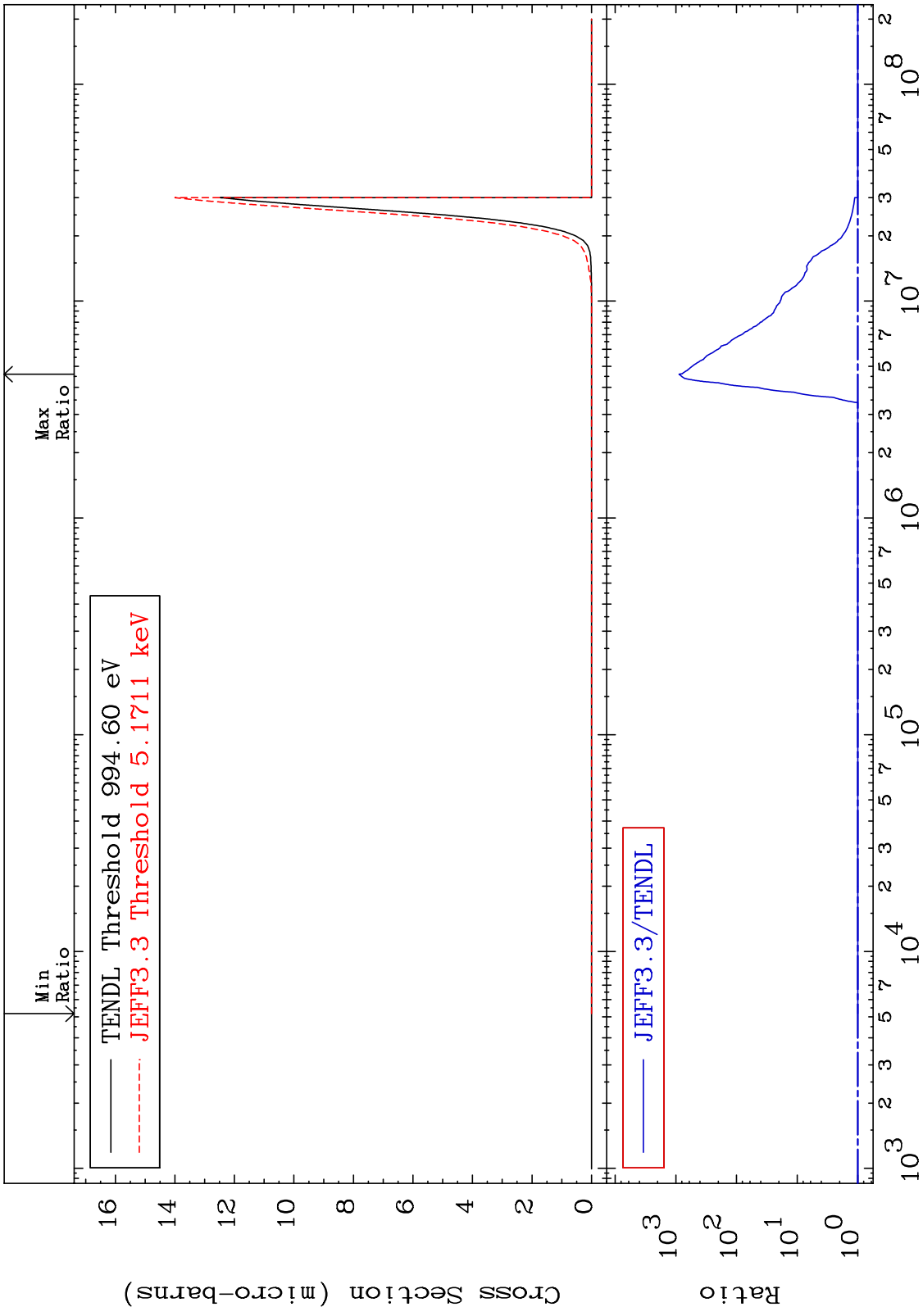
(n,  $\alpha$ )

44-Ru-99

Cross Section

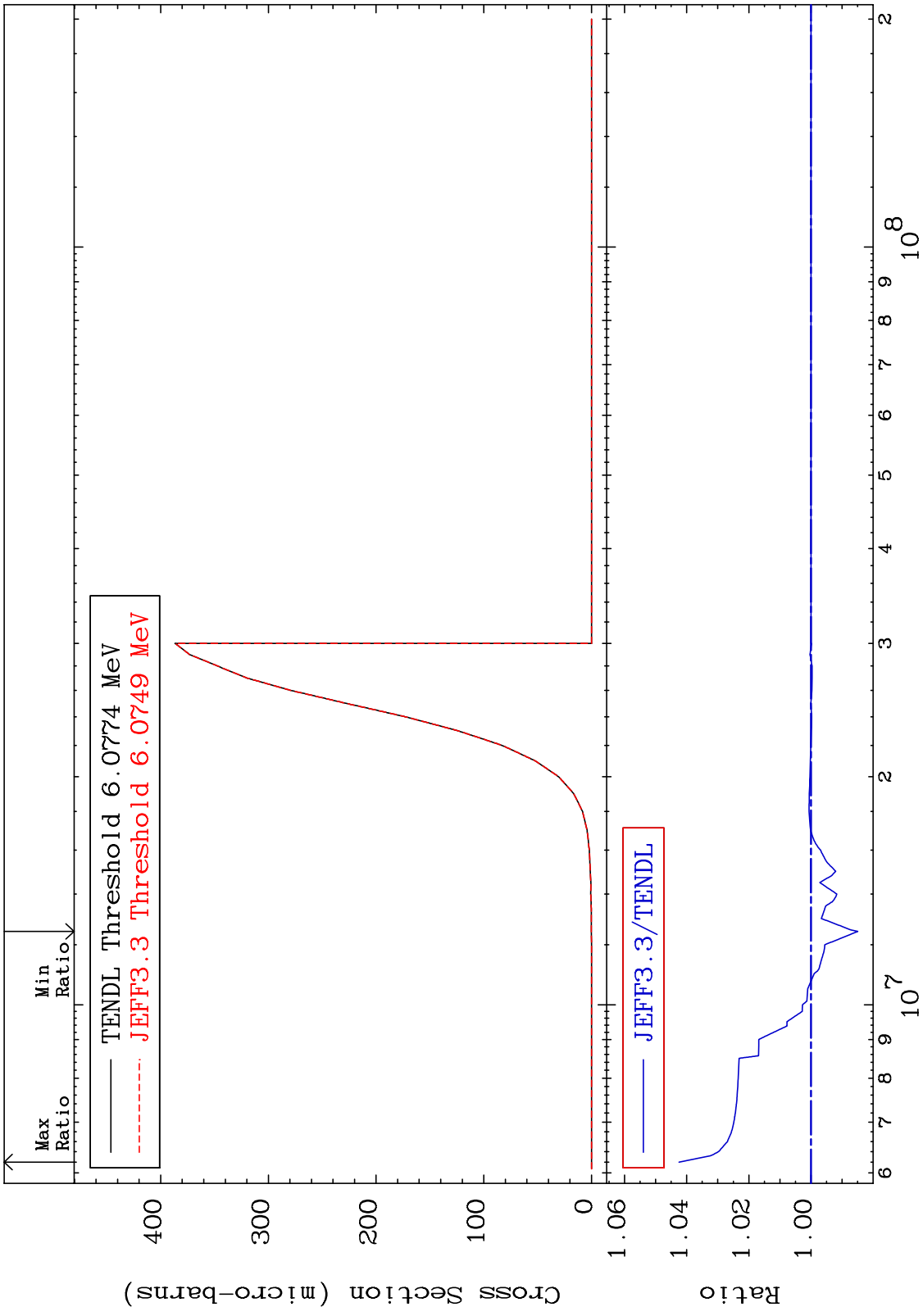
-3.122 To 360.6 %





Min Ratio  
 TENDL Threshold 994.60 eV  
 JEFF3.3 Threshold 5.1711 keV

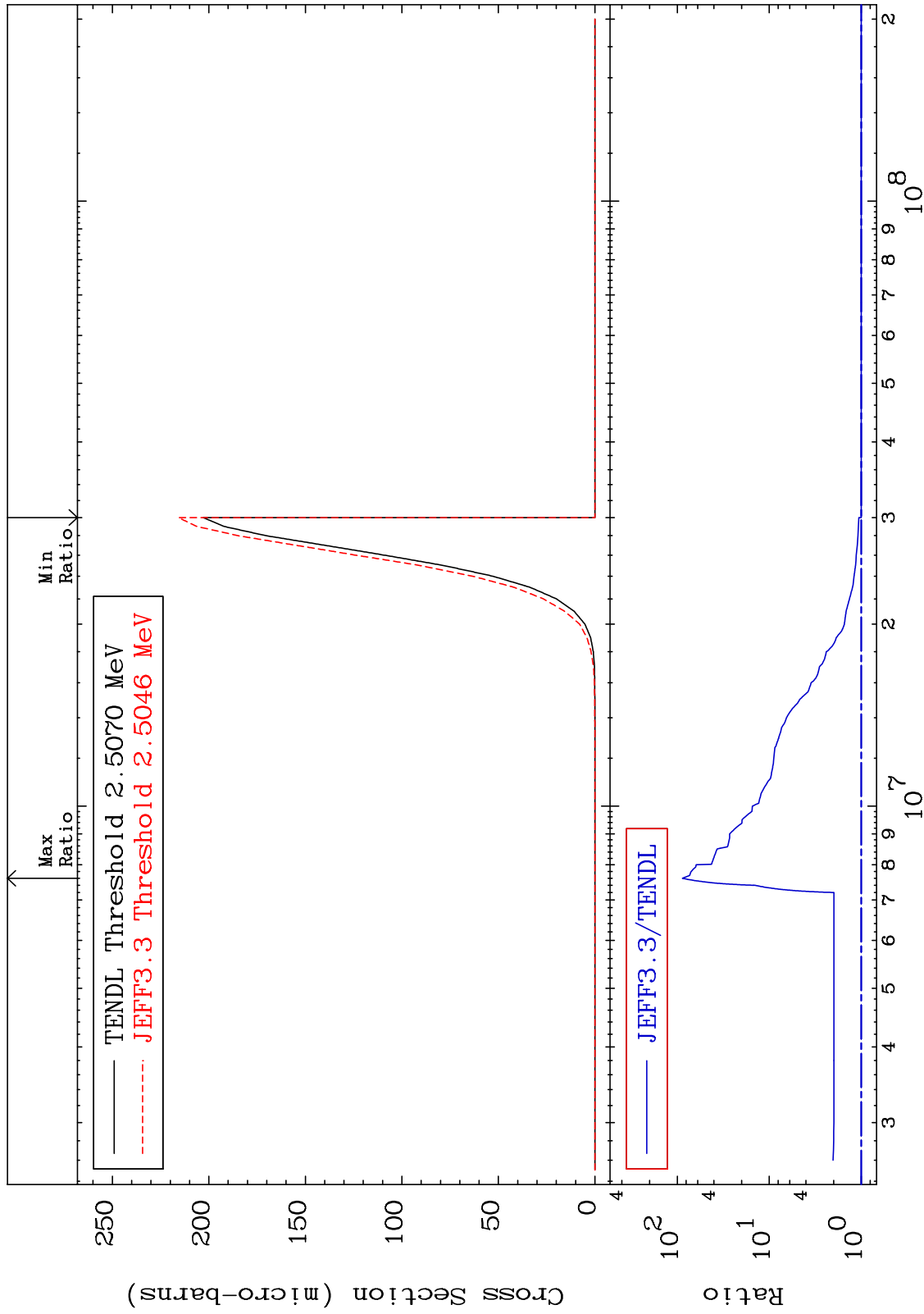
JEFF3.3/TENDL



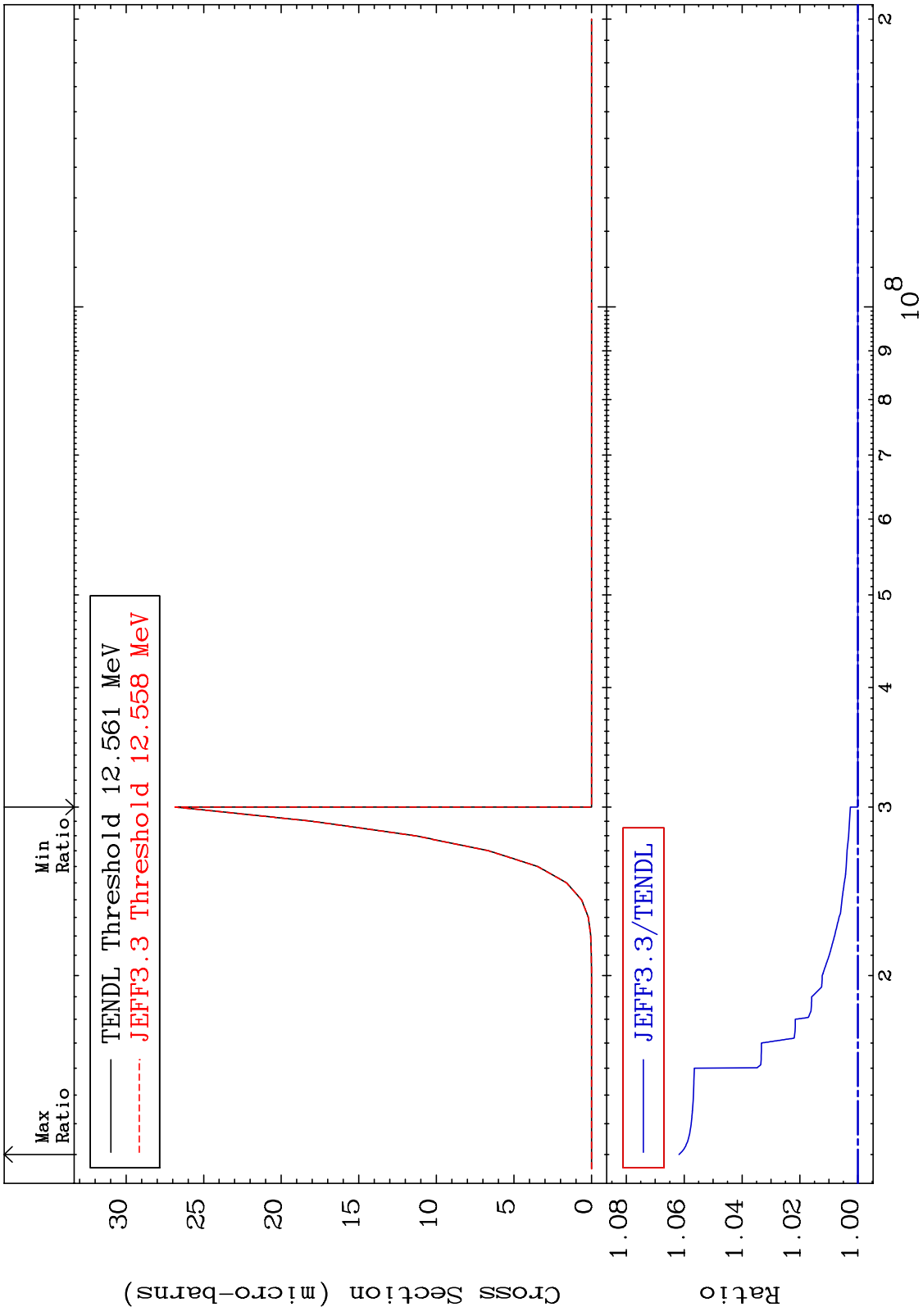
MAT 4434

(n,p)  $\alpha$   
Cross Section

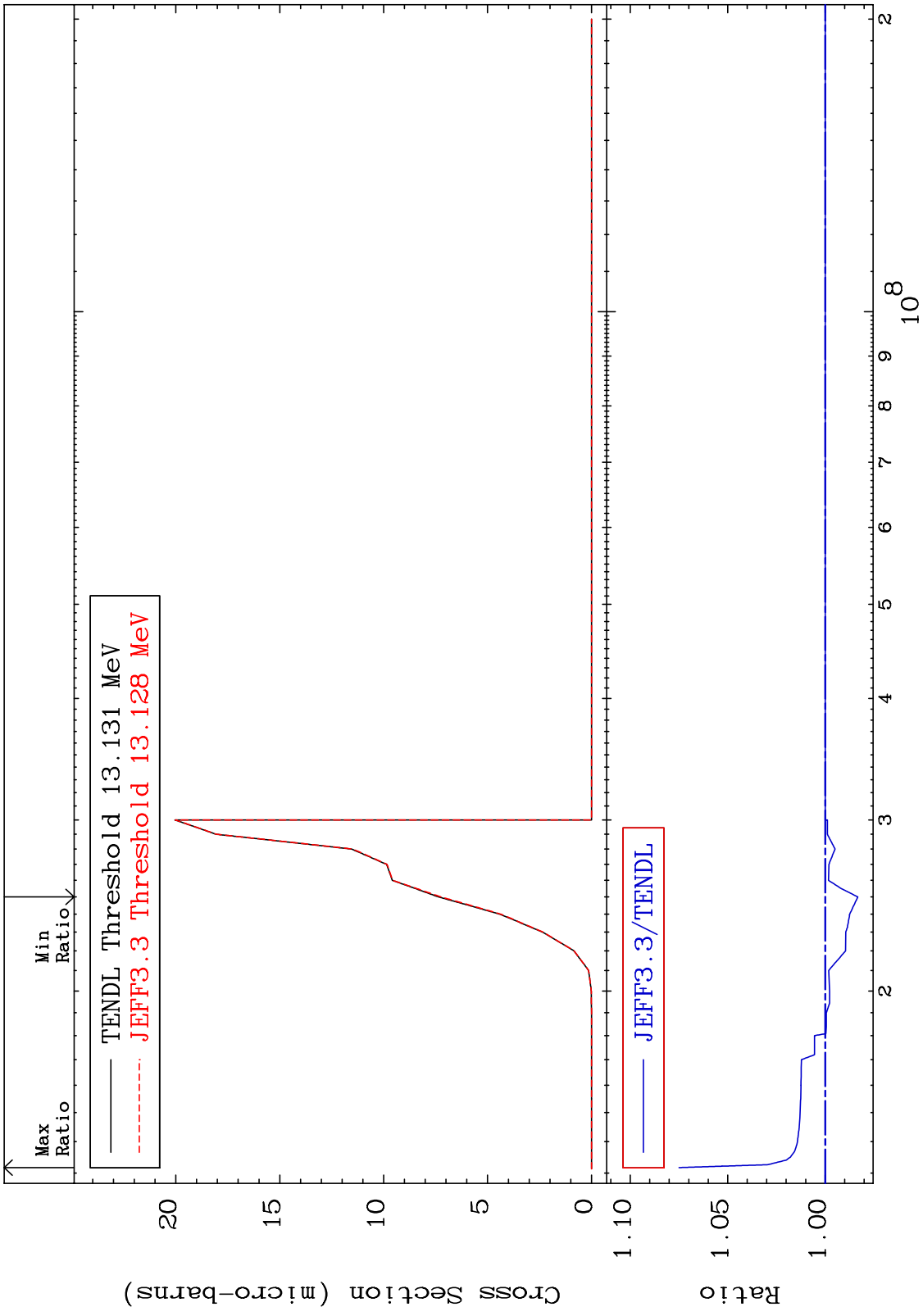
44-Ru-99  
0.000 To 8683. %



MAT 4434 (n,p) d 44-Ru-99  
 Cross Section 0.000 To 6.178 %



MAT 4434 (n,p) t 44-Ru-99  
 Cross Section -1.675 To 7.496 %



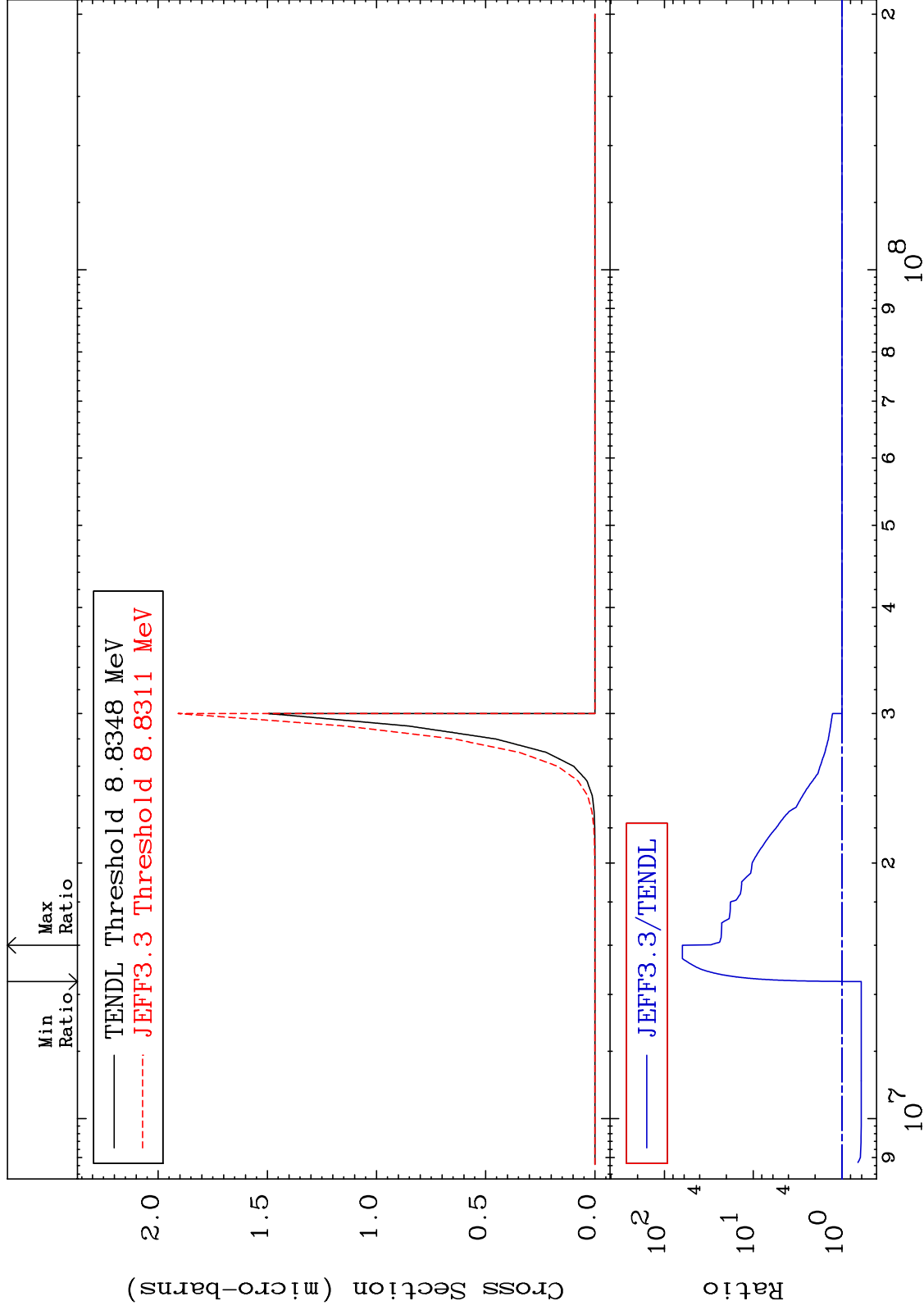
MAT 4434

(n,d)  $\alpha$

44-Ru-99

Cross Section

-39.49 To 6157. %



63

Incident Energy (eV)

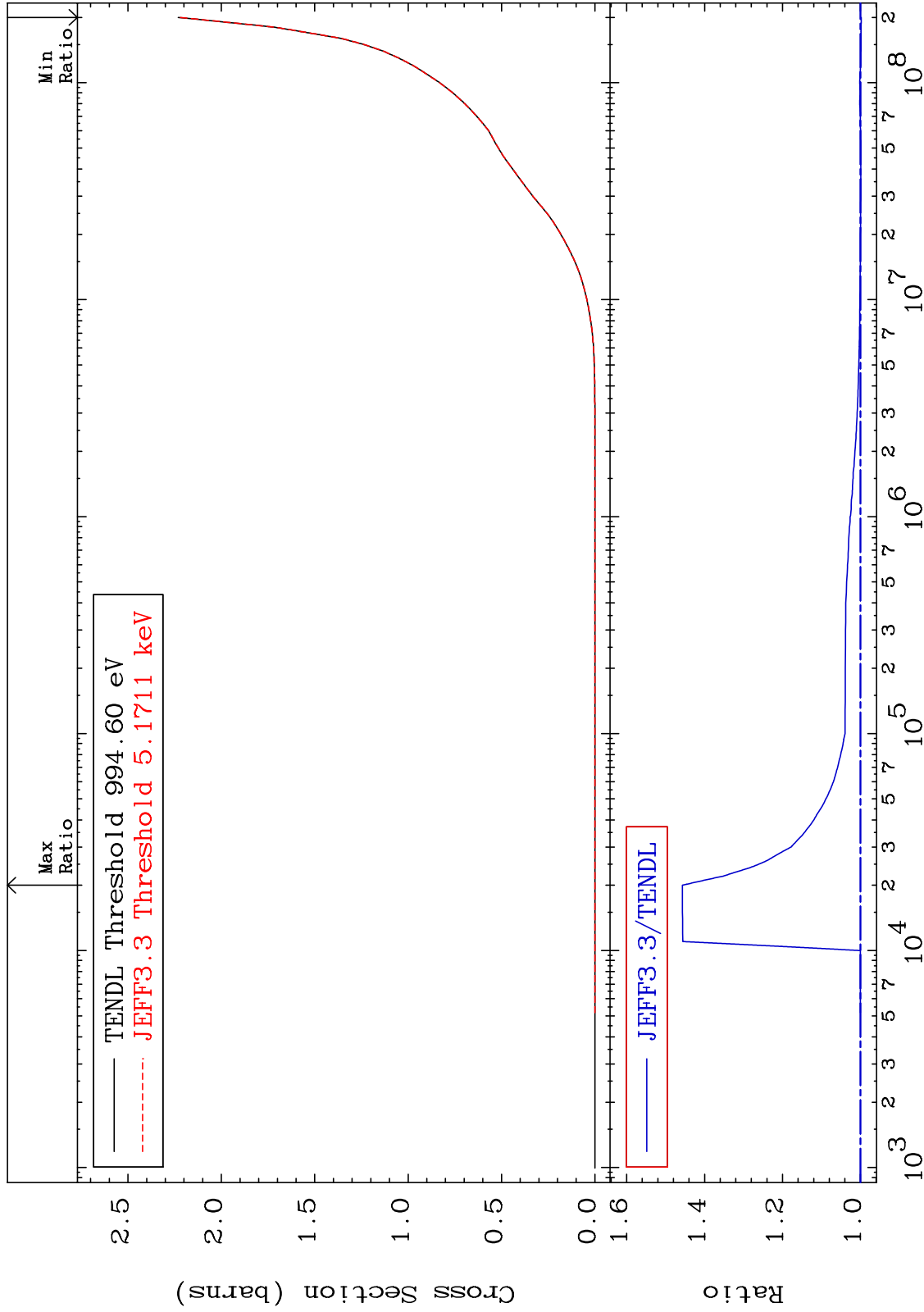
44-Ru-99



MAT 4434

Hydrogen Production  
Cross Section

44-Ru-99  
-0.212 To 45.68 %

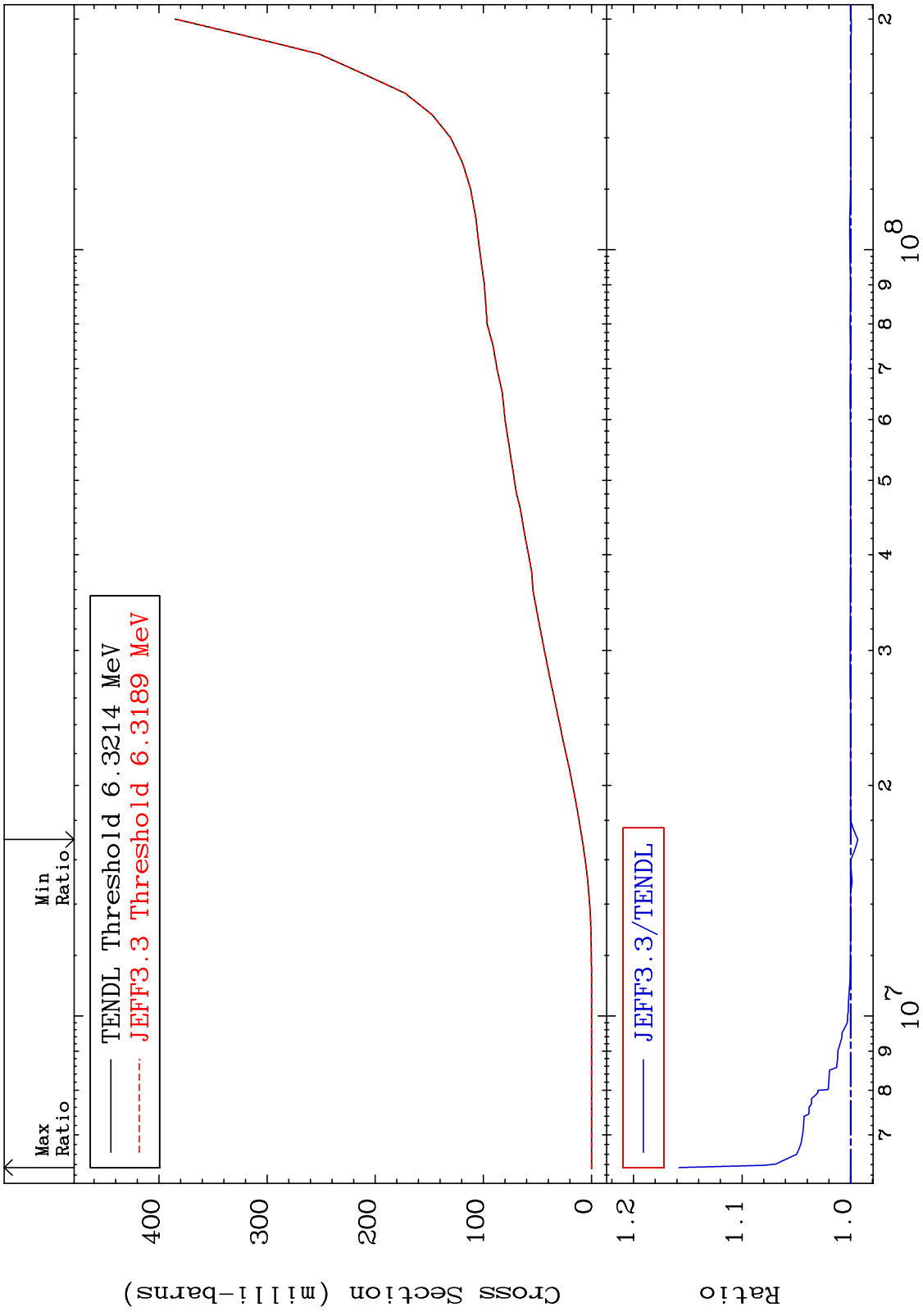


64

Incident Energy (eV)

44-Ru-99

MAT 4434 Deuterium Production Cross Section 44-Ru-99 -0.661 To 15.81 %

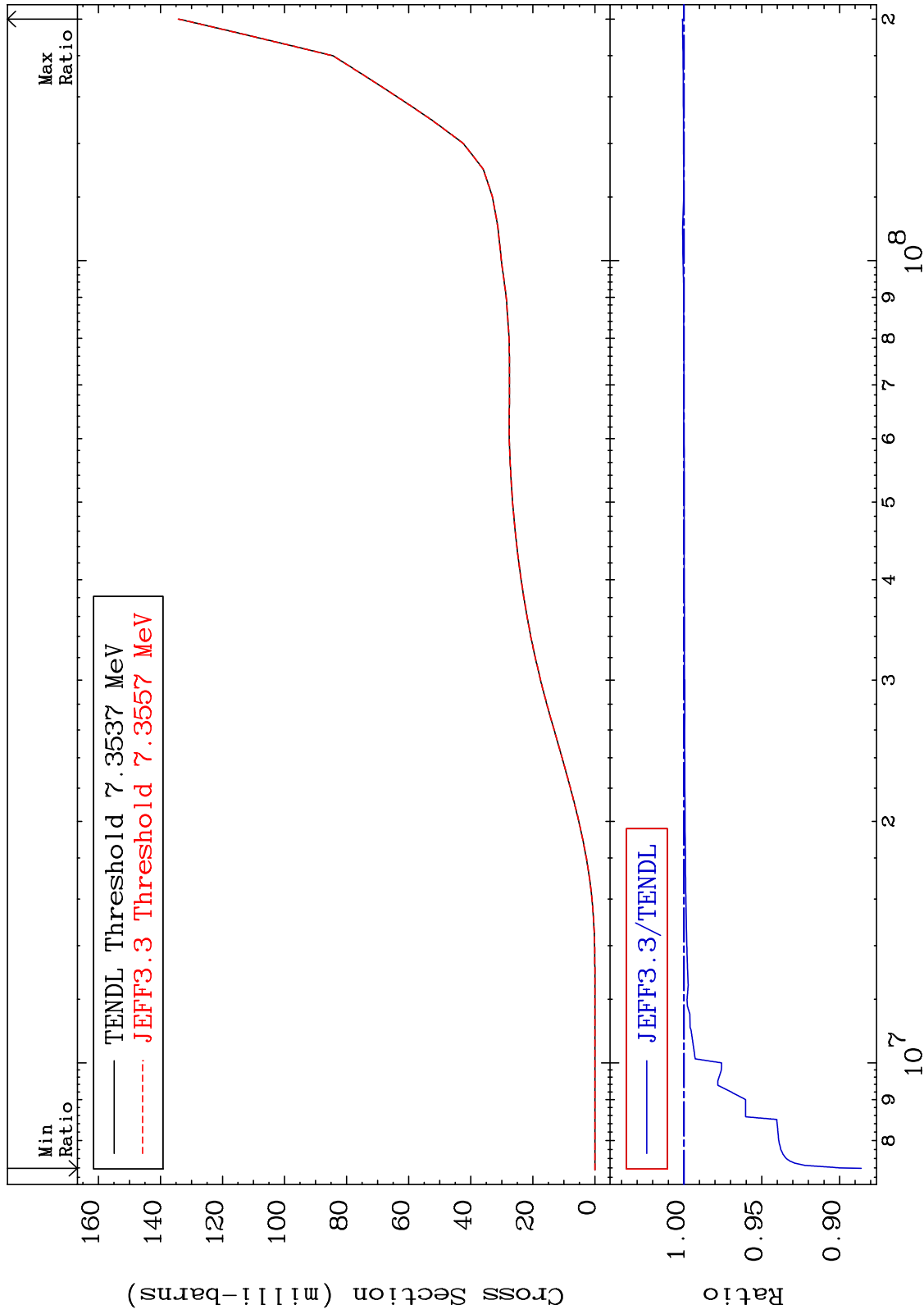


65 44-Ru-99

MAT 4434

Tritium Production  
Cross Section

44-Ru-99  
-11.40 To 0.092 %



66

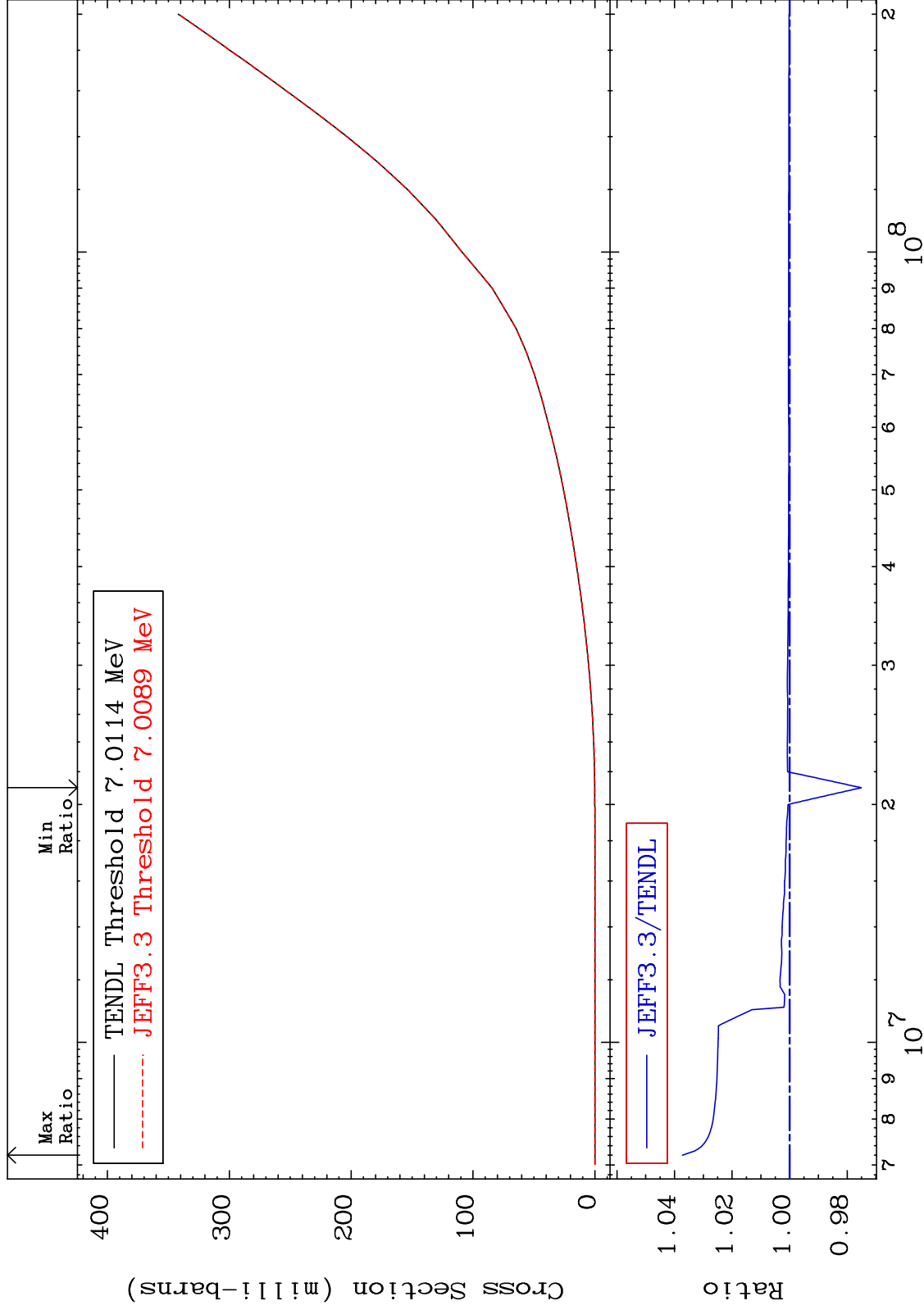
Incident Energy (eV)

44-Ru-99

MAT 4434

He-3 Production  
Cross Section

44-Ru-99  
-2.491 To 3.724 %



67

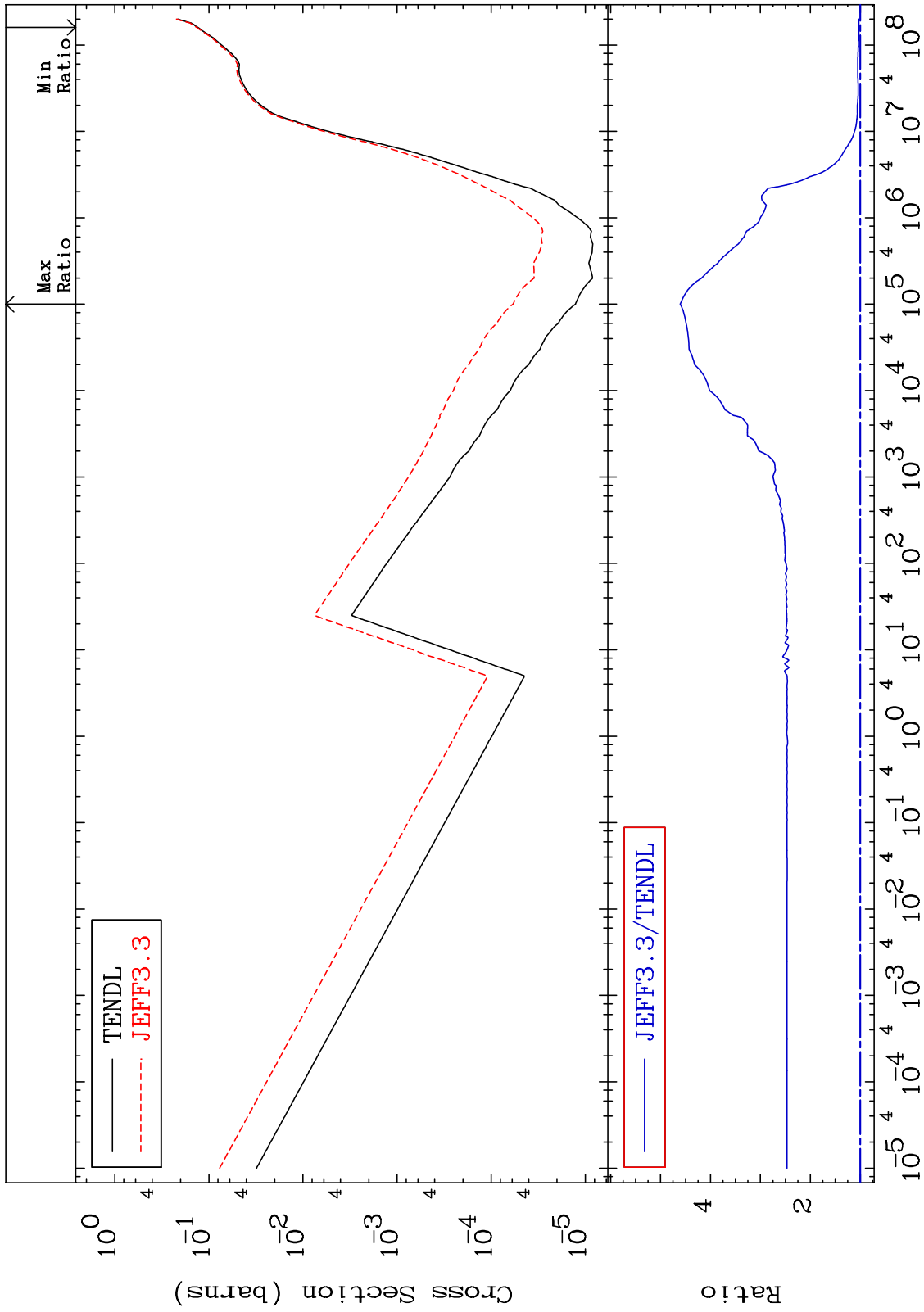
Incident Energy (eV)

44-Ru-99

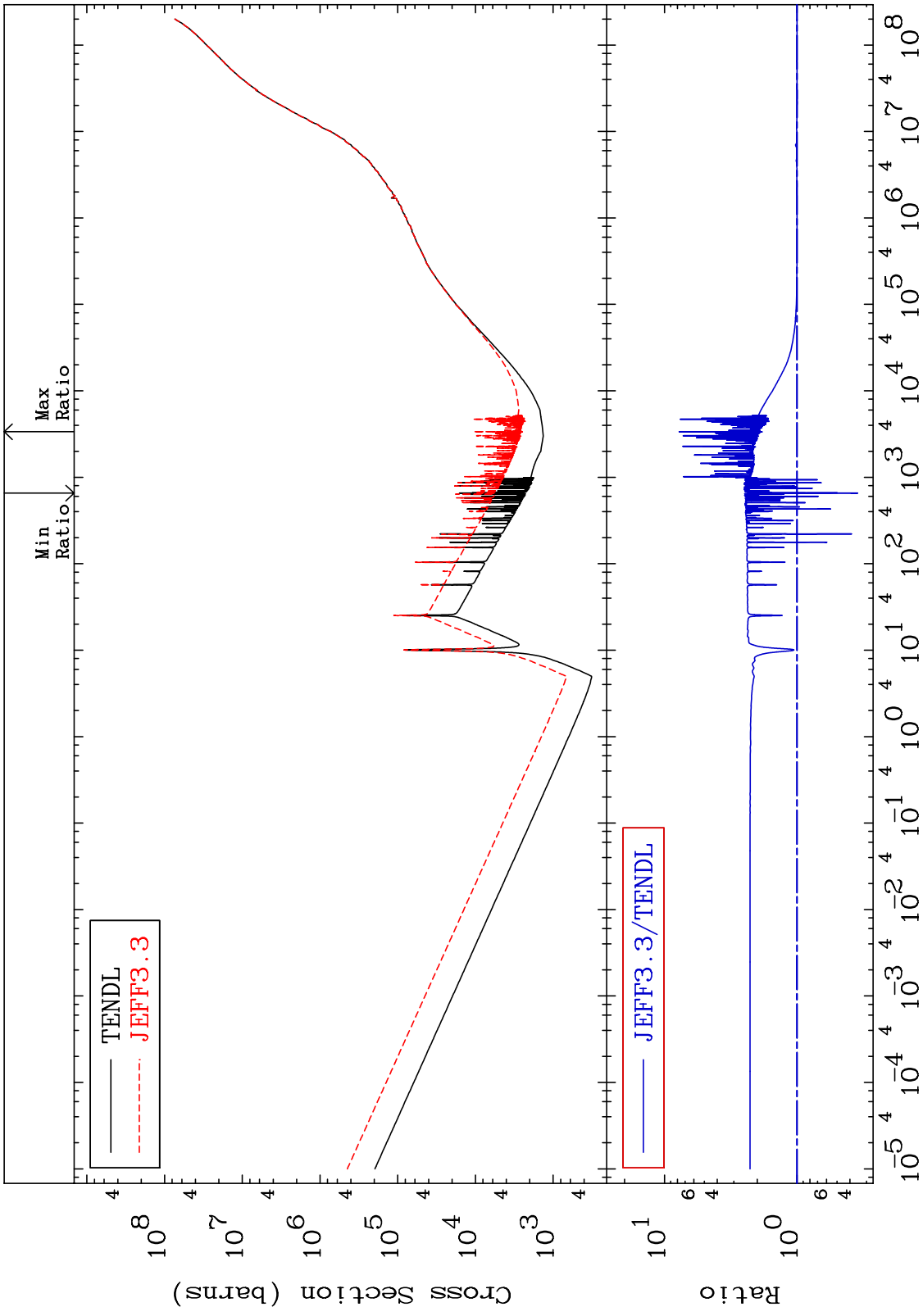
MAT 4434

He-4 Production  
Cross Section

44-Ru-99  
2.756 To 360.6 %



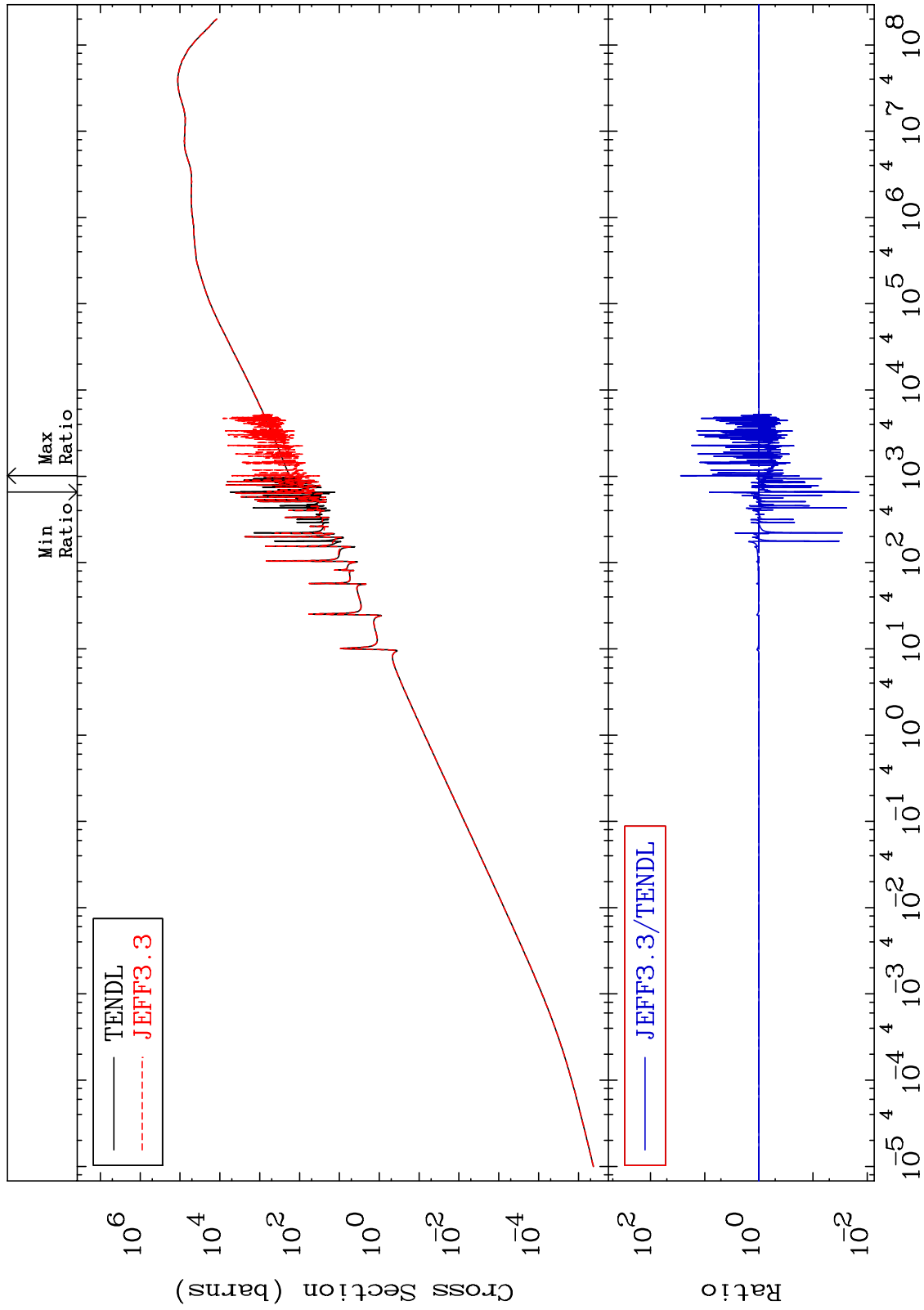
MAT 4434      Kerma total (eV-barns)      44-Ru-99  
 -65.15 To 676.9 %  
 Cross Section



MAT 4434

Kerma elastic  
Cross Section

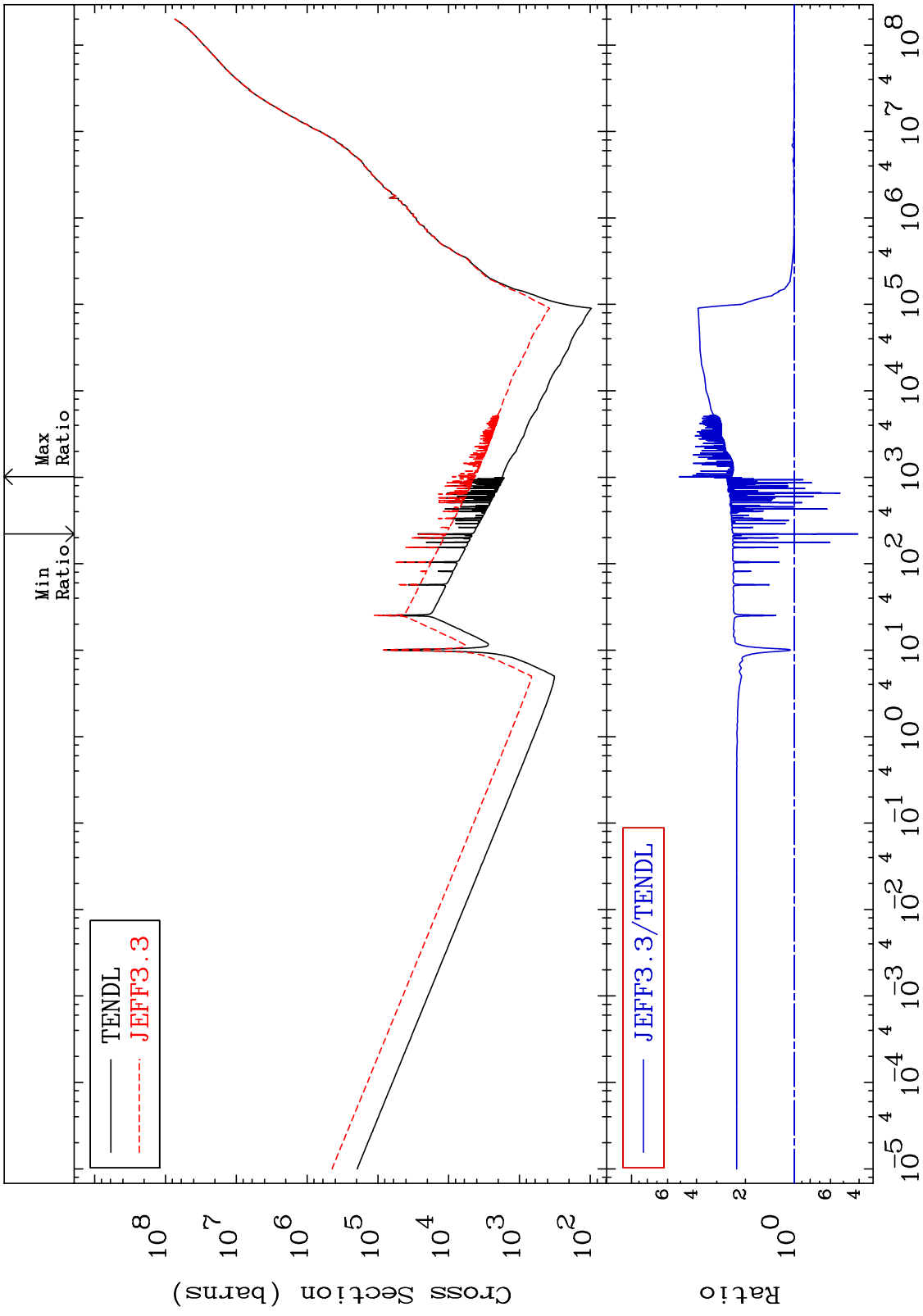
44-Ru-99  
-98.59 To 2681. %



70

44-Ru-99

MAT 4434      Kerma non-elastic (all but mt2)      44-Ru-99  
 -59.28 To 411.1 %  
 Cross Section

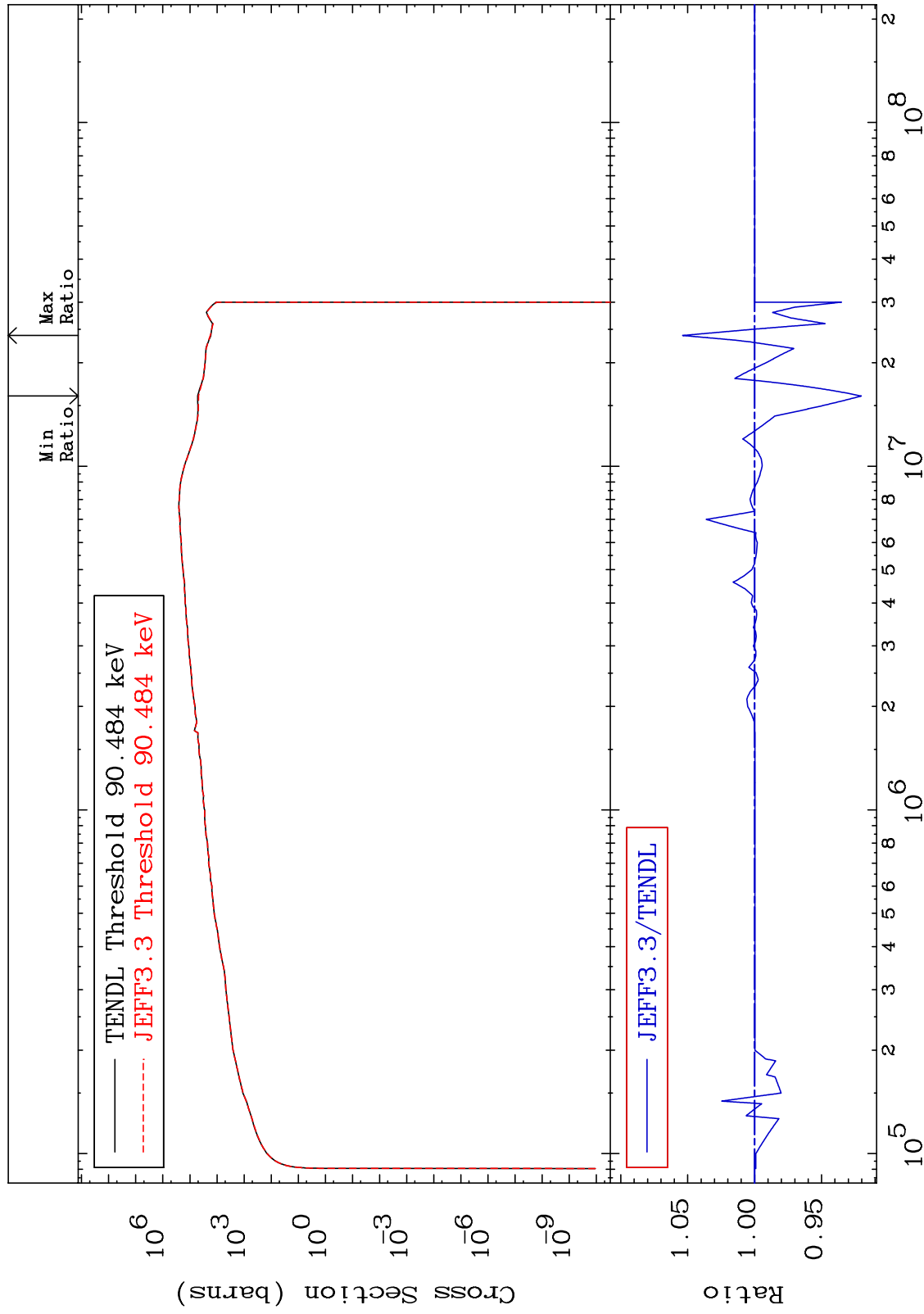




MAT 4434

Kerma inelastic (mt51-91)  
Cross Section

44-Ru-99  
-7.972 To 5.377 %



72

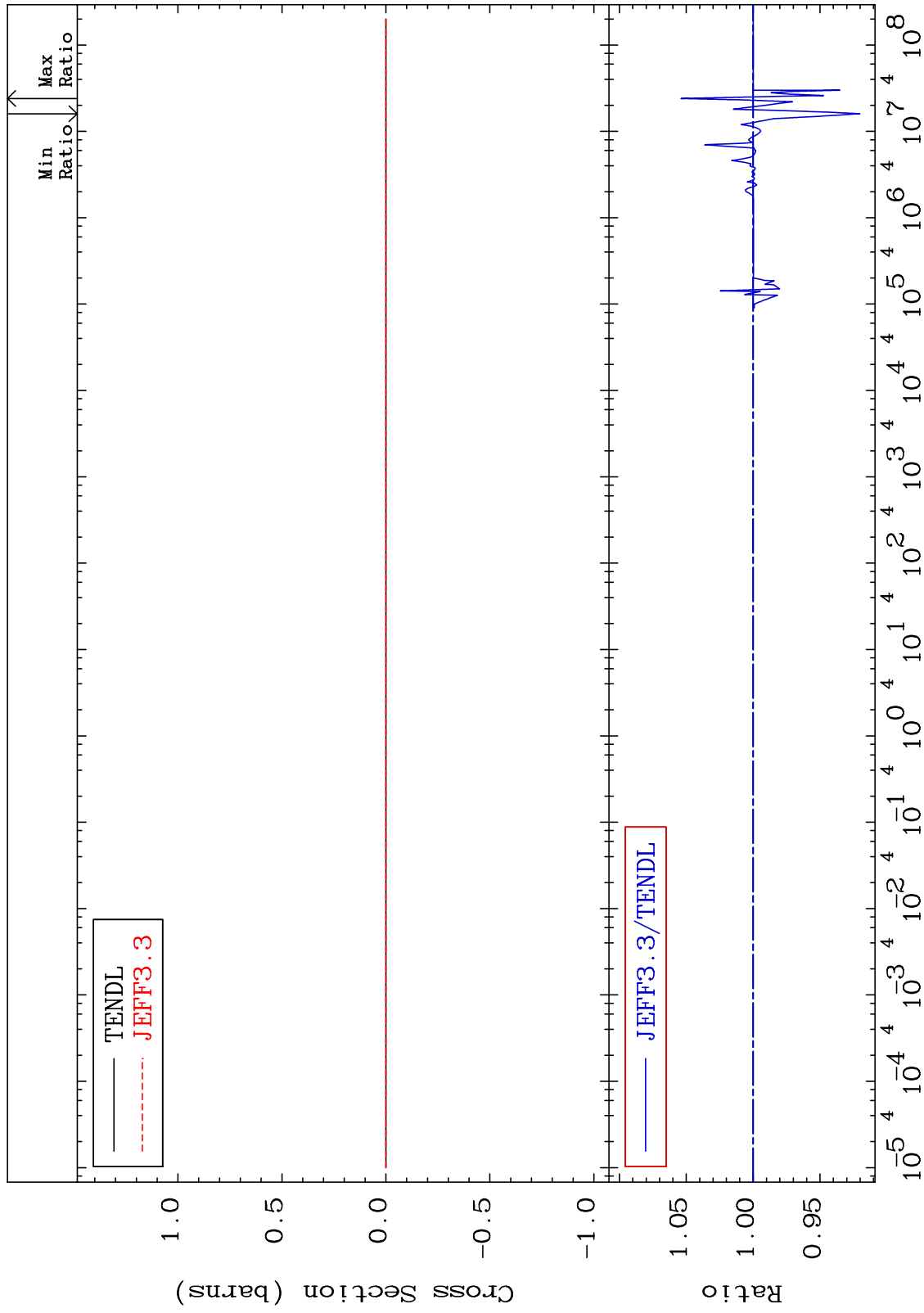
Incident Energy (eV)

44-Ru-99

MAT 4434

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

44-Ru-99  
-7.972 To 5.377 %



73

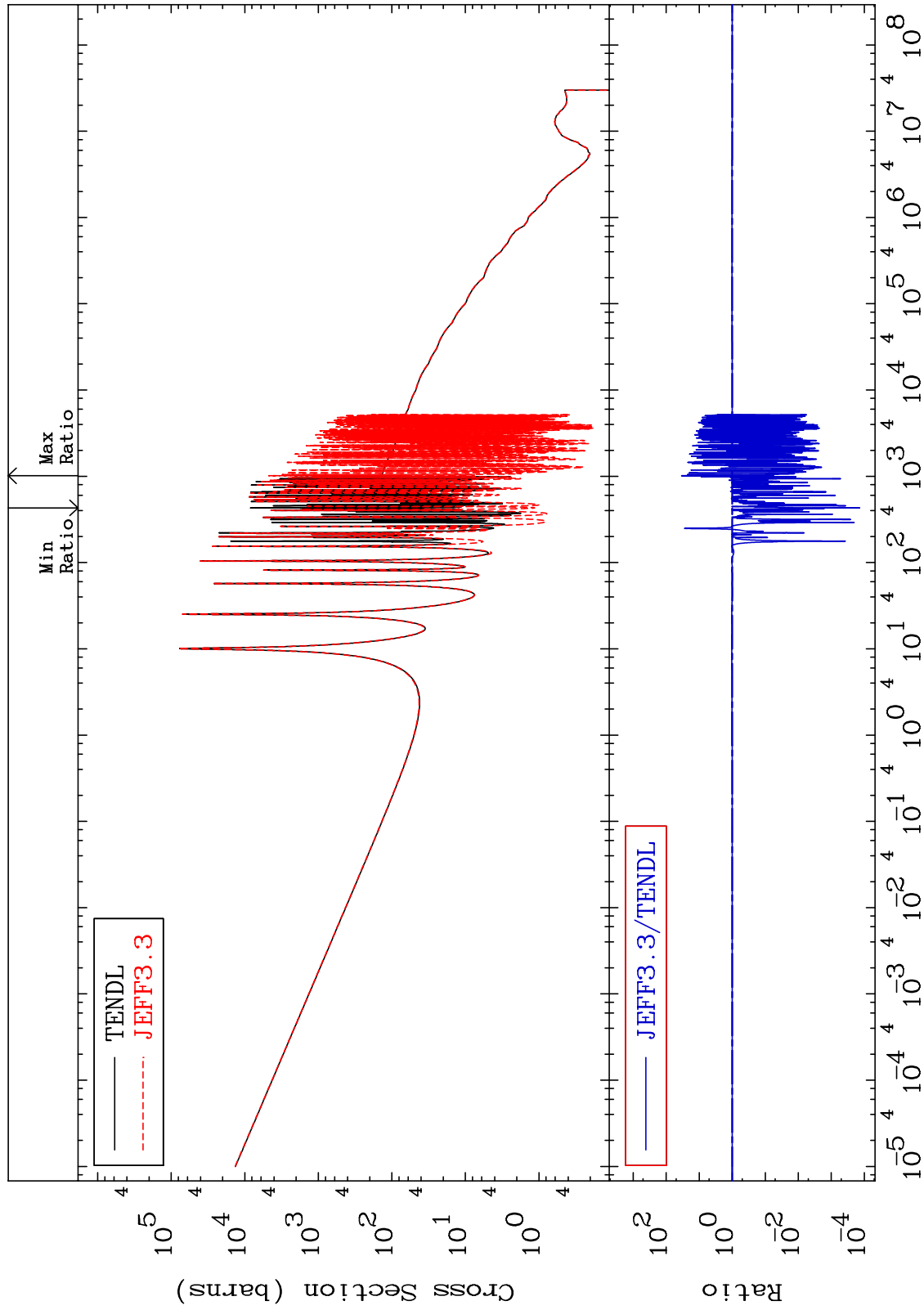
Incident Energy (eV)

44-Ru-99

MAT 4434

Kerma capture (mt102)  
Cross Section

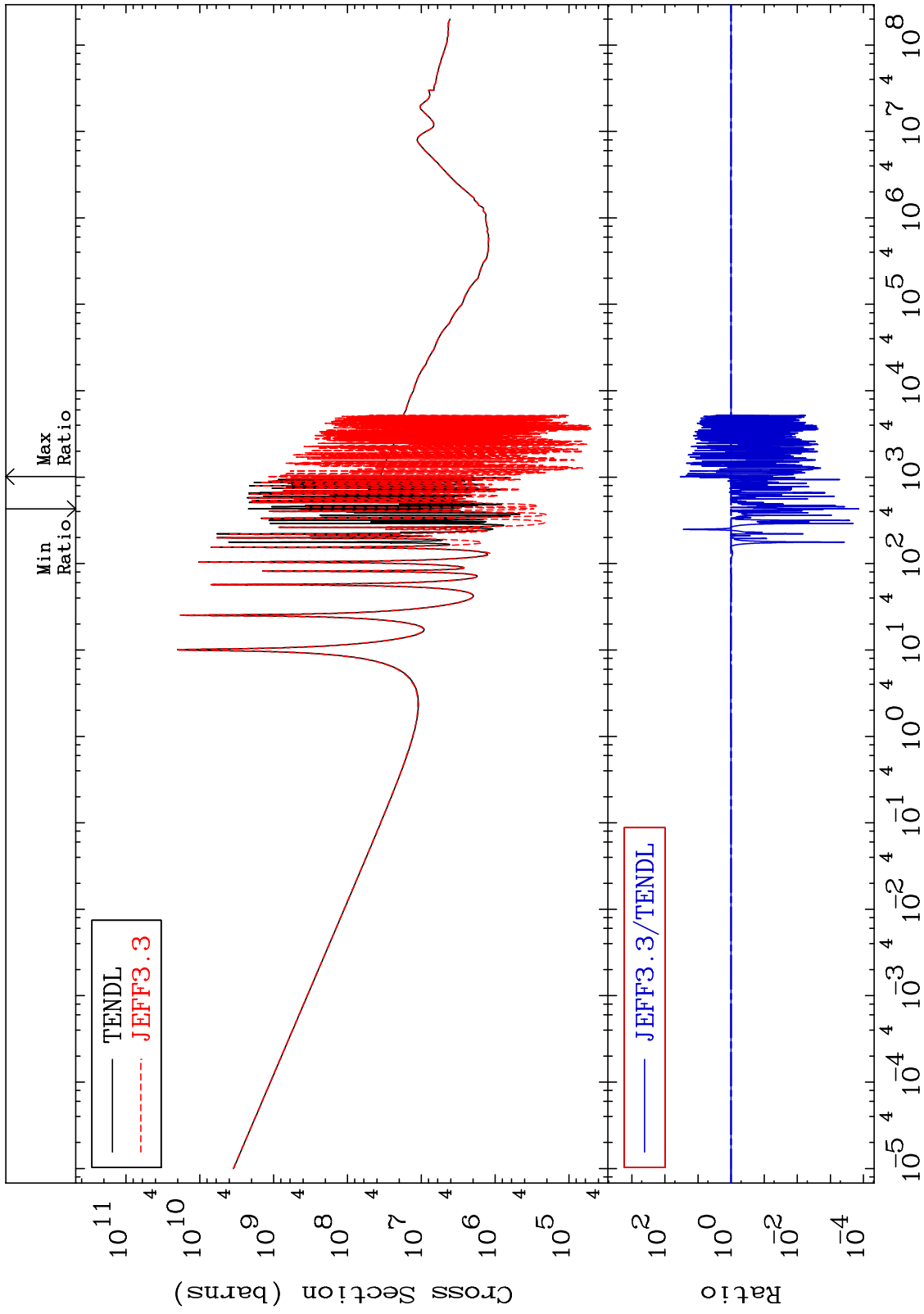
44-Ru-99  
-99.99 To 3345. %



MAT 4434

Total photon (eV-barns)  
Cross Section

44-Ru-99  
-99.99 To 3345. %

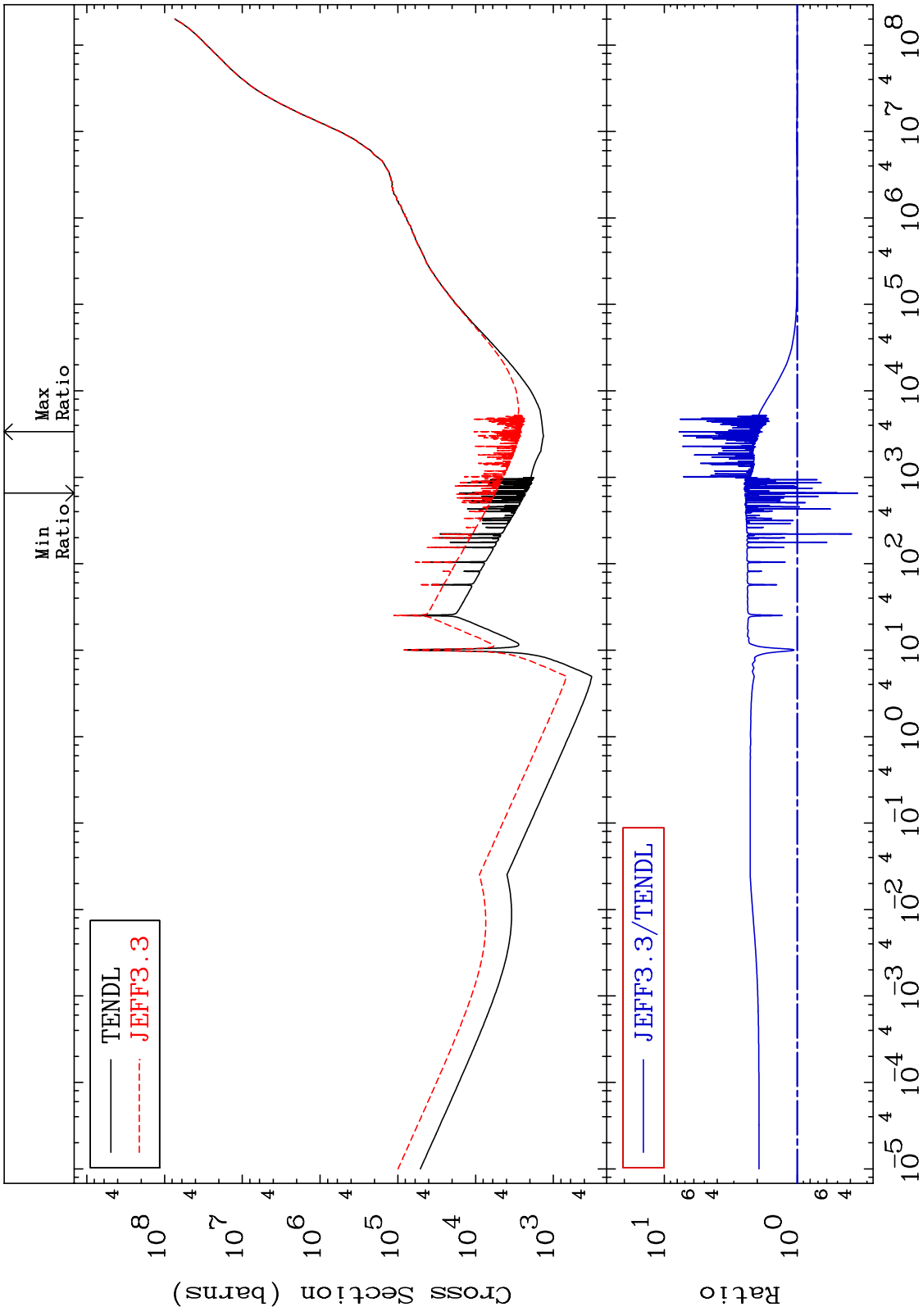


75

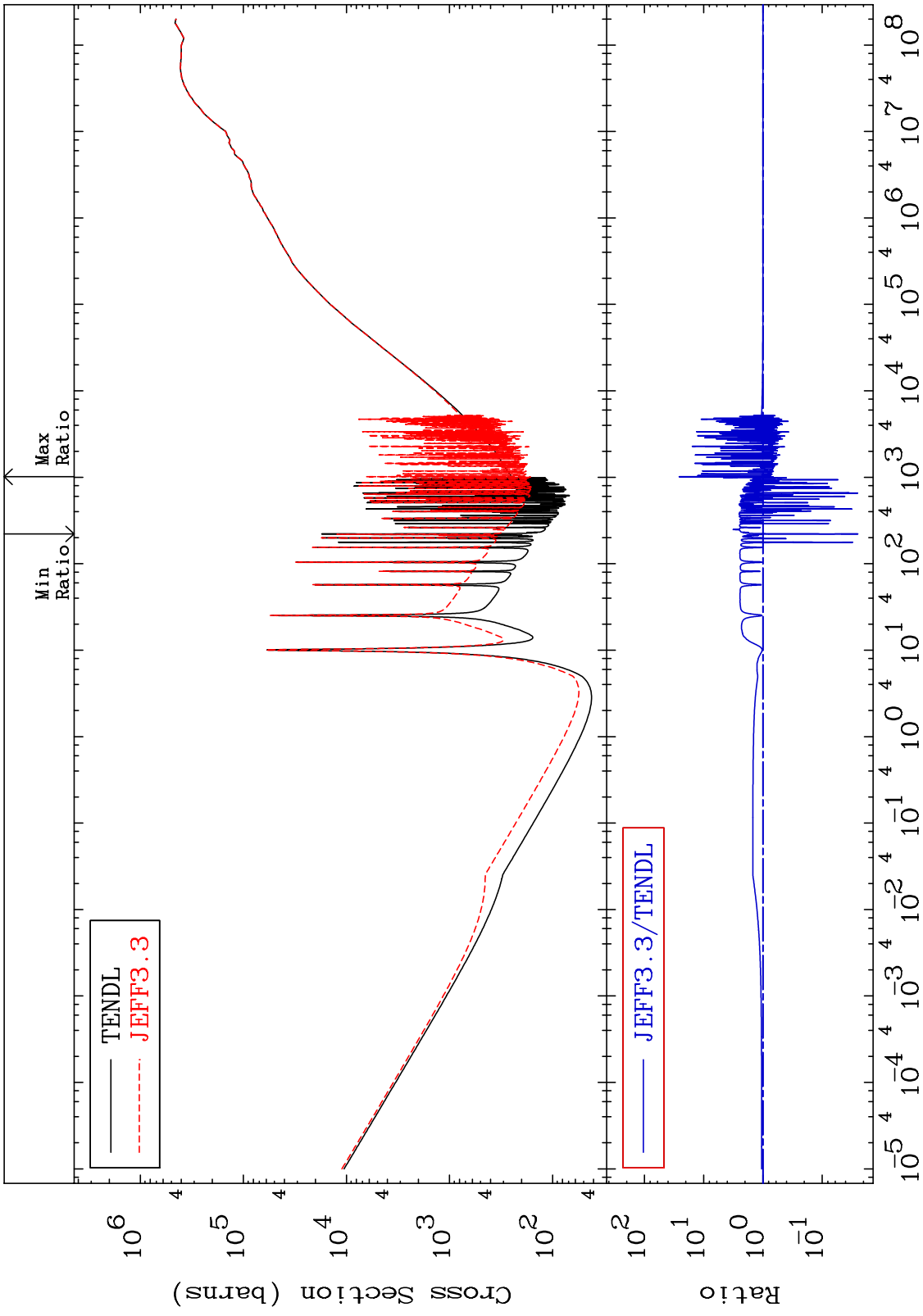
Incident Energy (eV)

44-Ru-99

MAT 4434      Total kinematic kerma (high limit)      44-Ru-99  
 -64.92 To 674.5 %  
 Cross Section



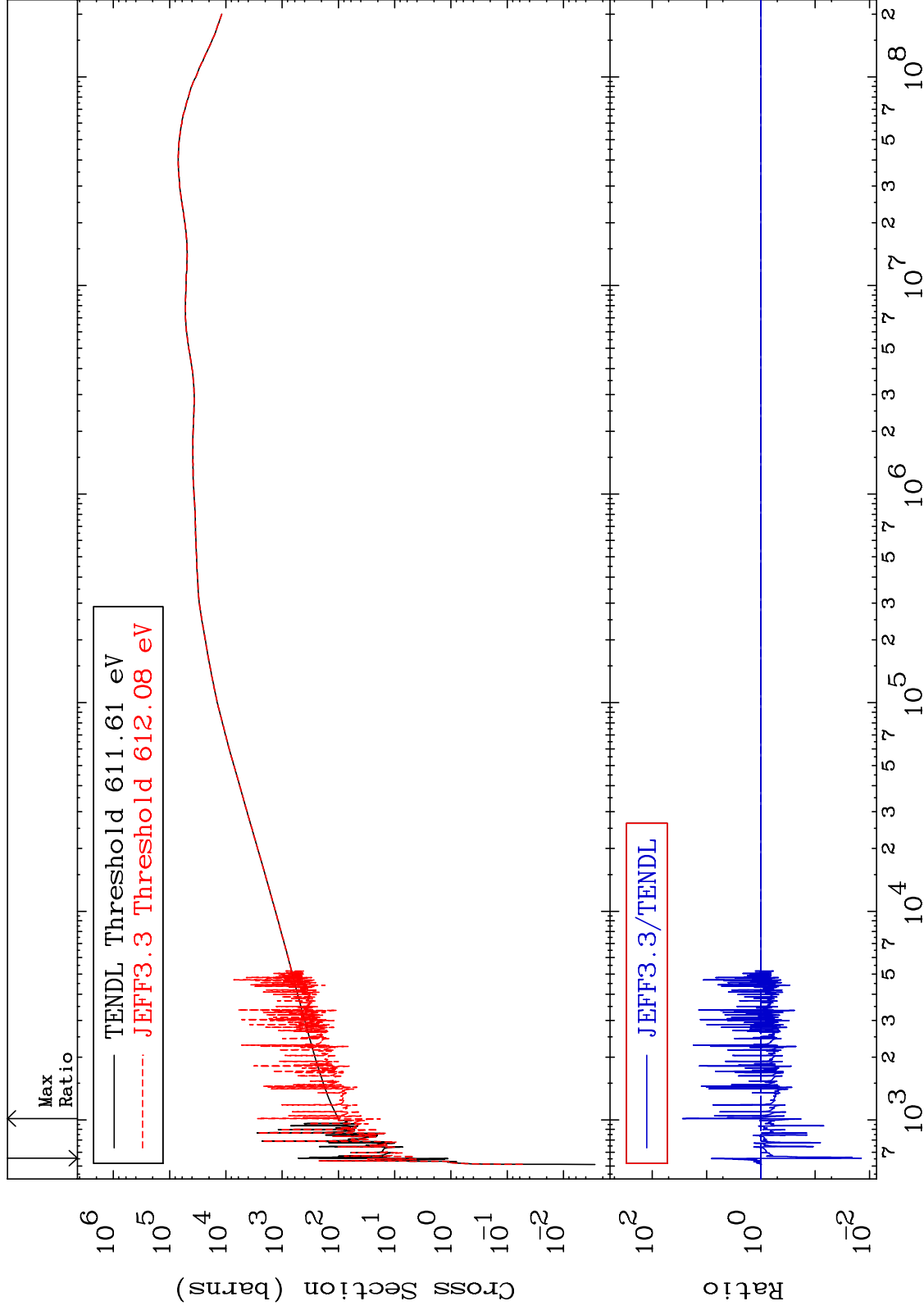
MAT 4434      Dpa total (eV-barns)      44-Ru-99  
 Cross Section      -97.51 To 2506. %



MAT 4434

Dpa elastic (mt2)  
Cross Section

44-Ru-99  
-98.59 To 2678. %

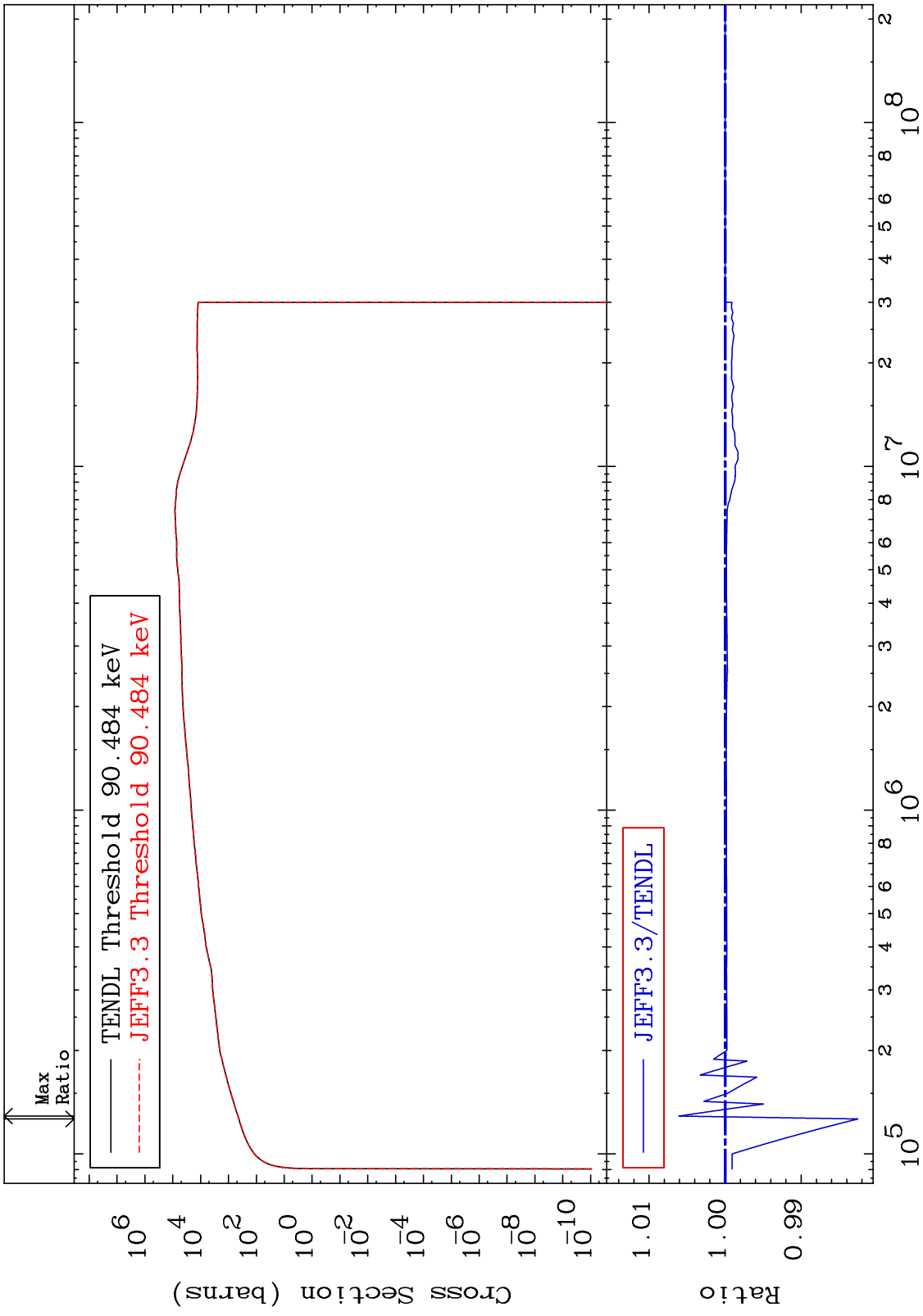


78

44-Ru-99

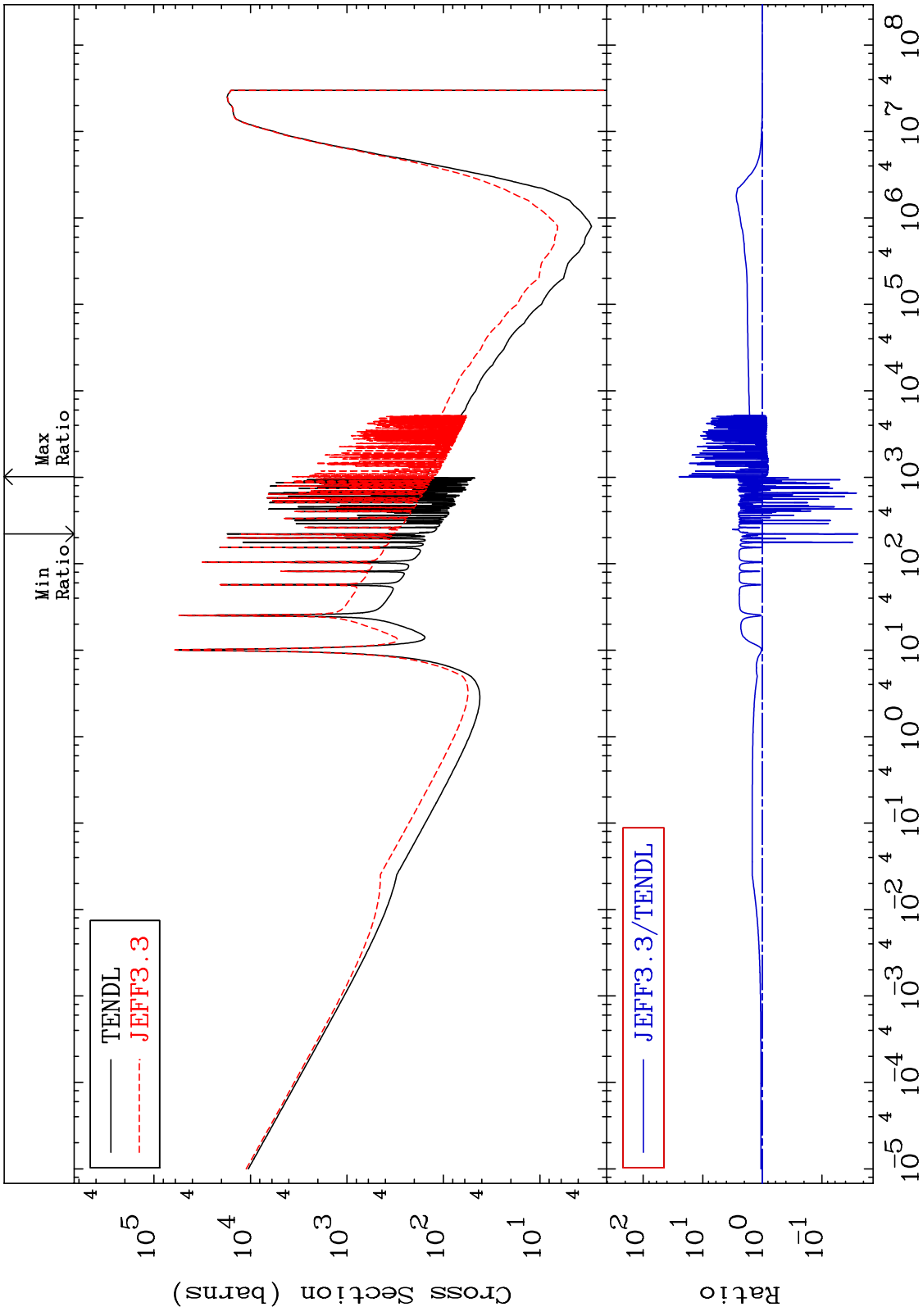
44-Ru-99

MAT 4434      Dpa inelastic (mt51-91)      44-Ru-99  
Cross Section      -1.745 To 0.606 %





MAT 4434      Dpa disappearance (mt102 -120)      44-Ru-99  
 Cross Section      -97.51 To 2397. %

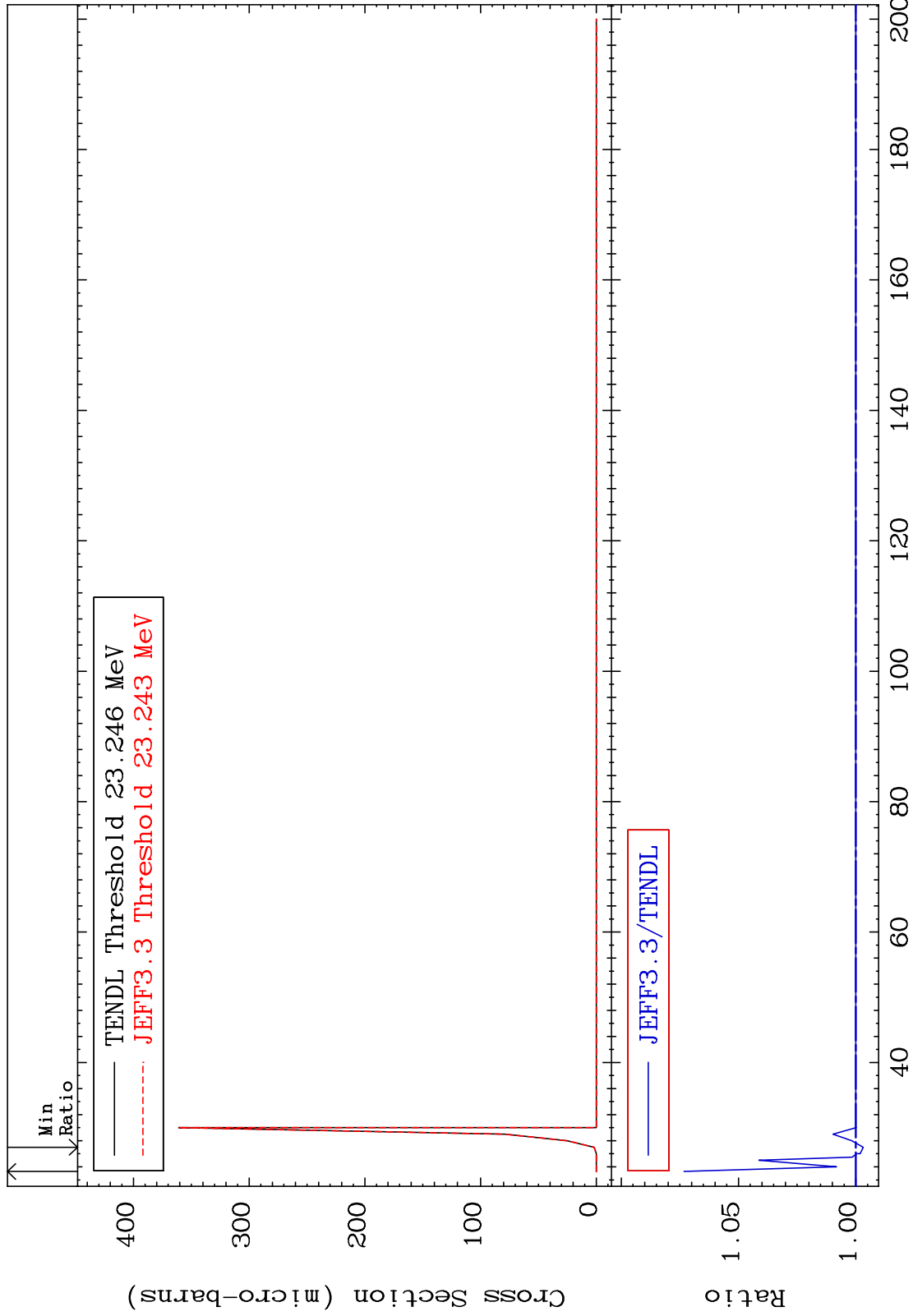


MAT 4434

(n,2n) d:43-Tc-96g

44-Ru-99

Radionuclide Production Cross Section -0.319 To 7.322 %

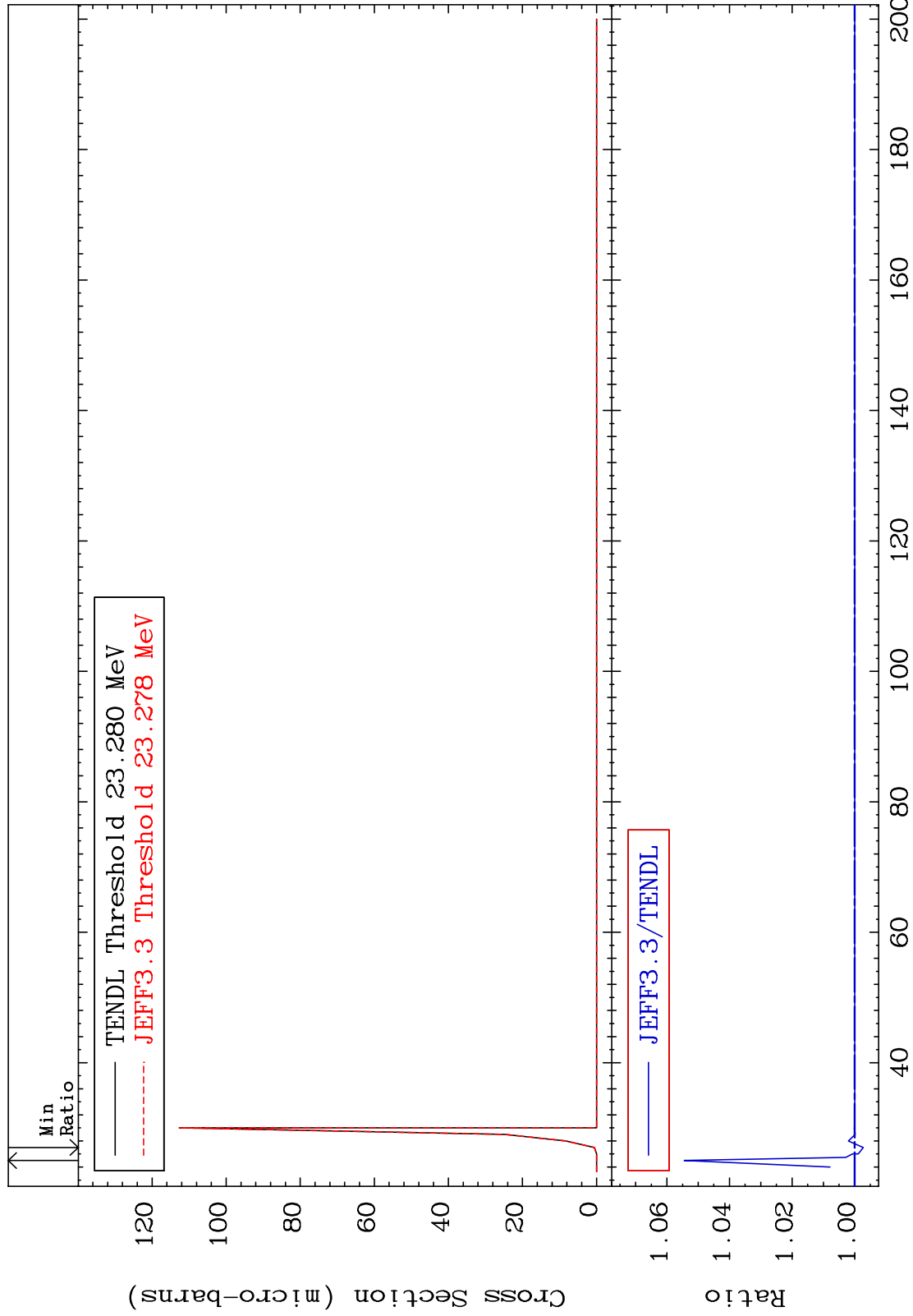


MAT 4434

(n,2n) d:43-Tc-96m1

44-Ru-99

Radionuclide Production Cross Section -0.278 To 5.446 %

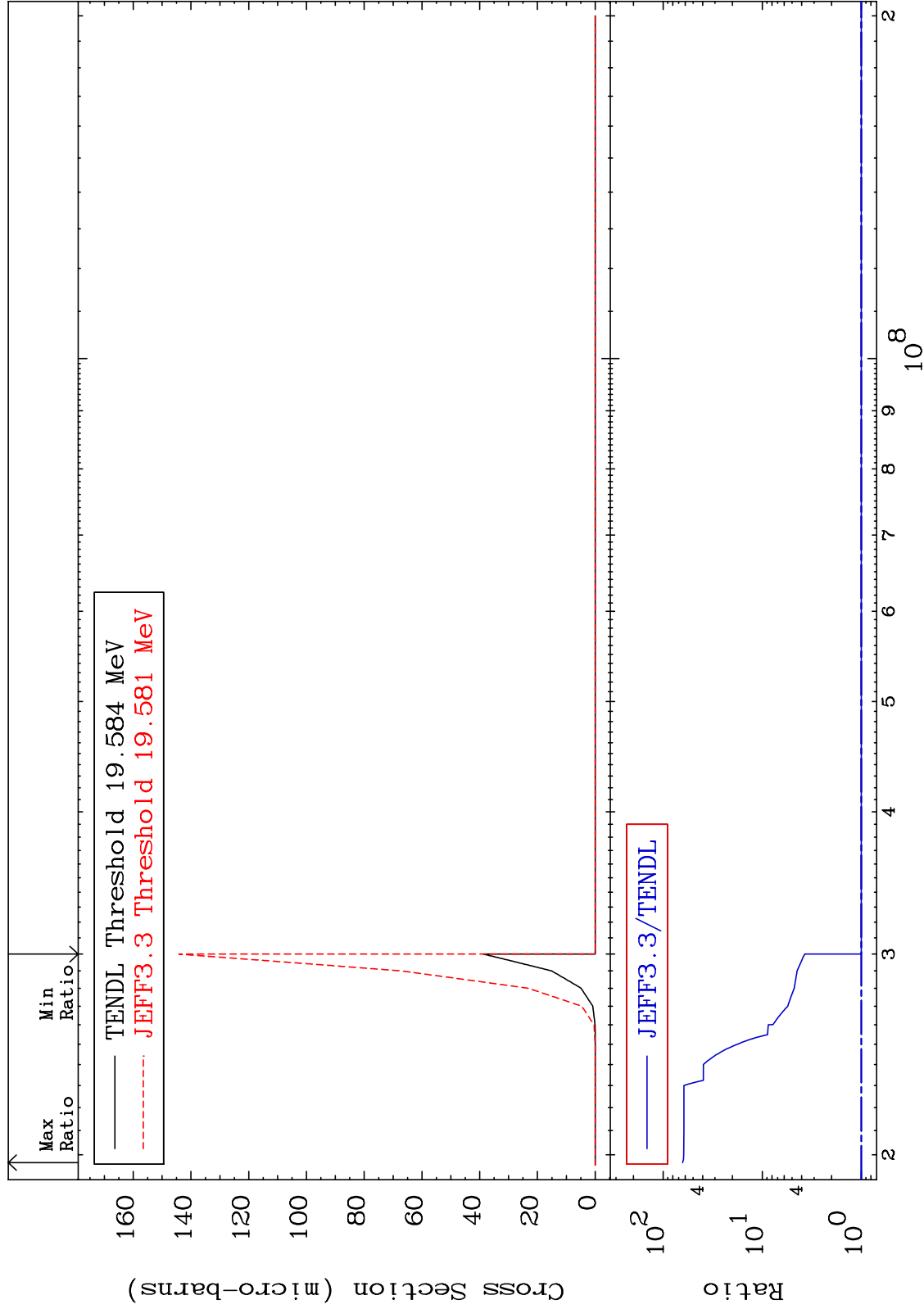


MAT 4434

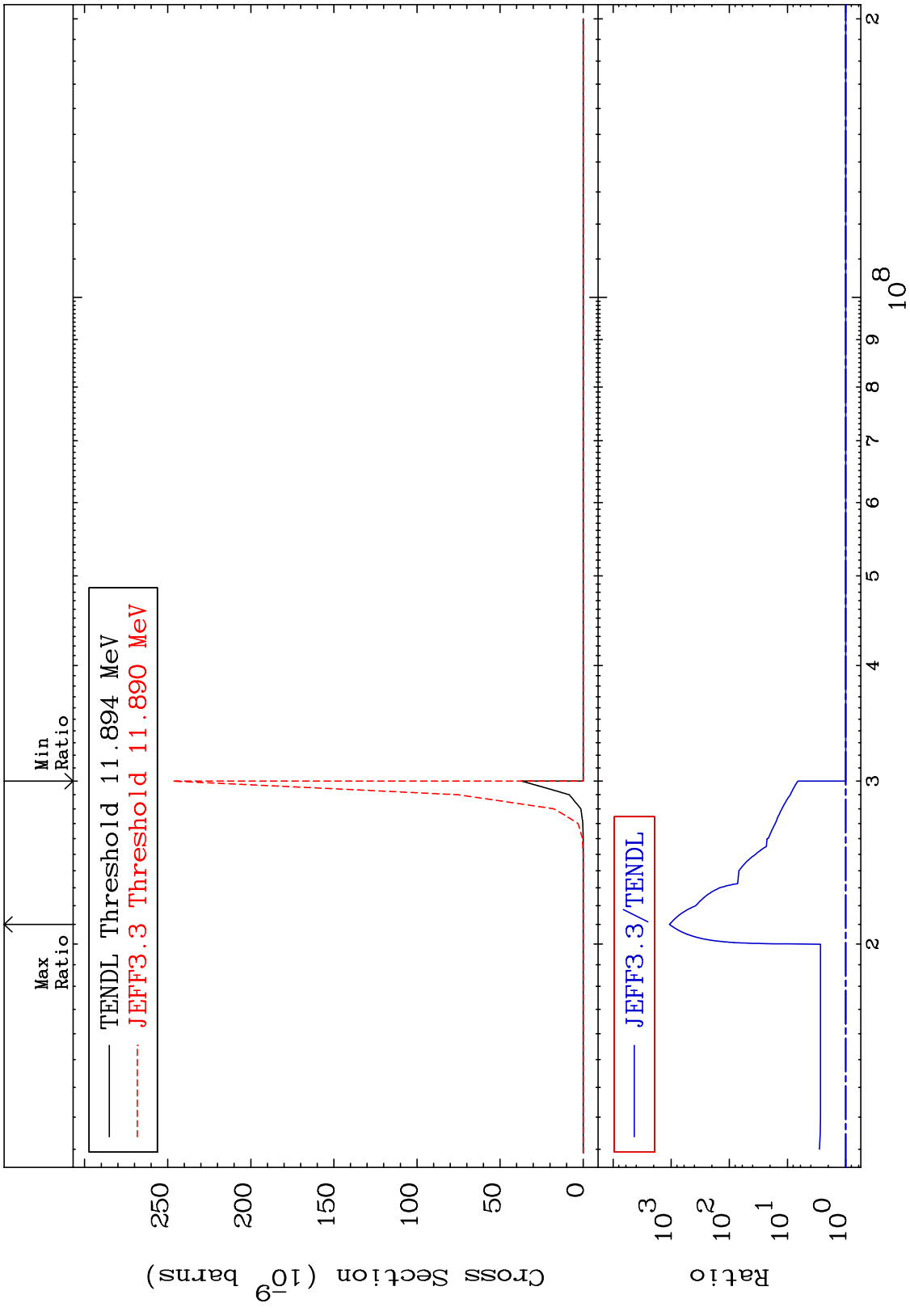
(n,3n)  $\alpha$ : 42-Mo-93g

44-Ru-99

Radionuclide Production Cross Section 0.000 To 6265. %



MAT 4434 (n,2n) 2α:40-Zr-90g 44-Ru-99  
 Radionuclide Production Cross Section 0.000 To 9999. %

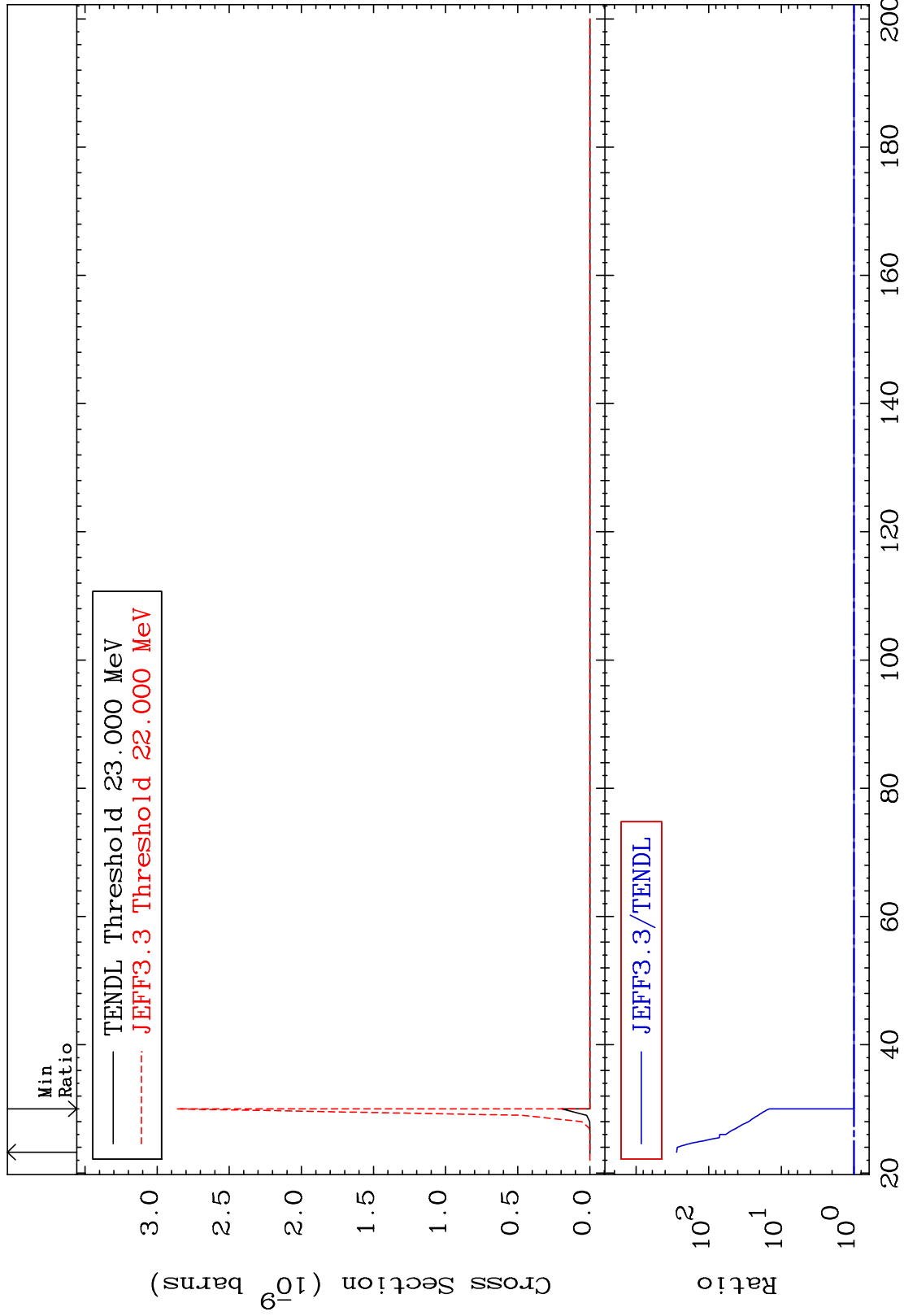


MAT 4434

(n,2n) 2α:40-Zr-90m3

44-Ru-99

Radionuclide Production Cross Section 0.000 To 9999. %

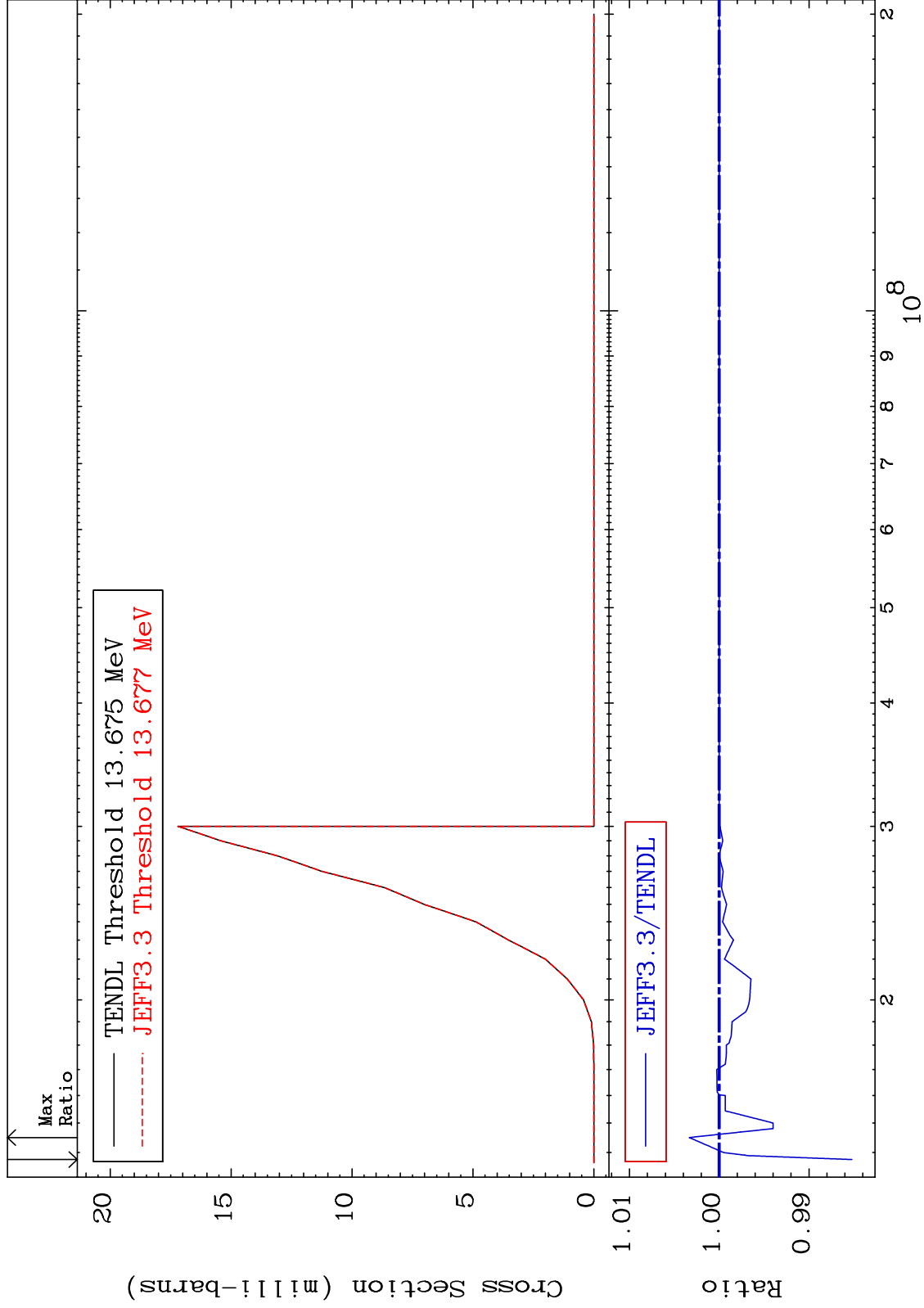


MAT 4434

(n, n') d:43-Tc-97g

44-Ru-99

Radionuclide Production Cross Section -1.477 To 0.335 %

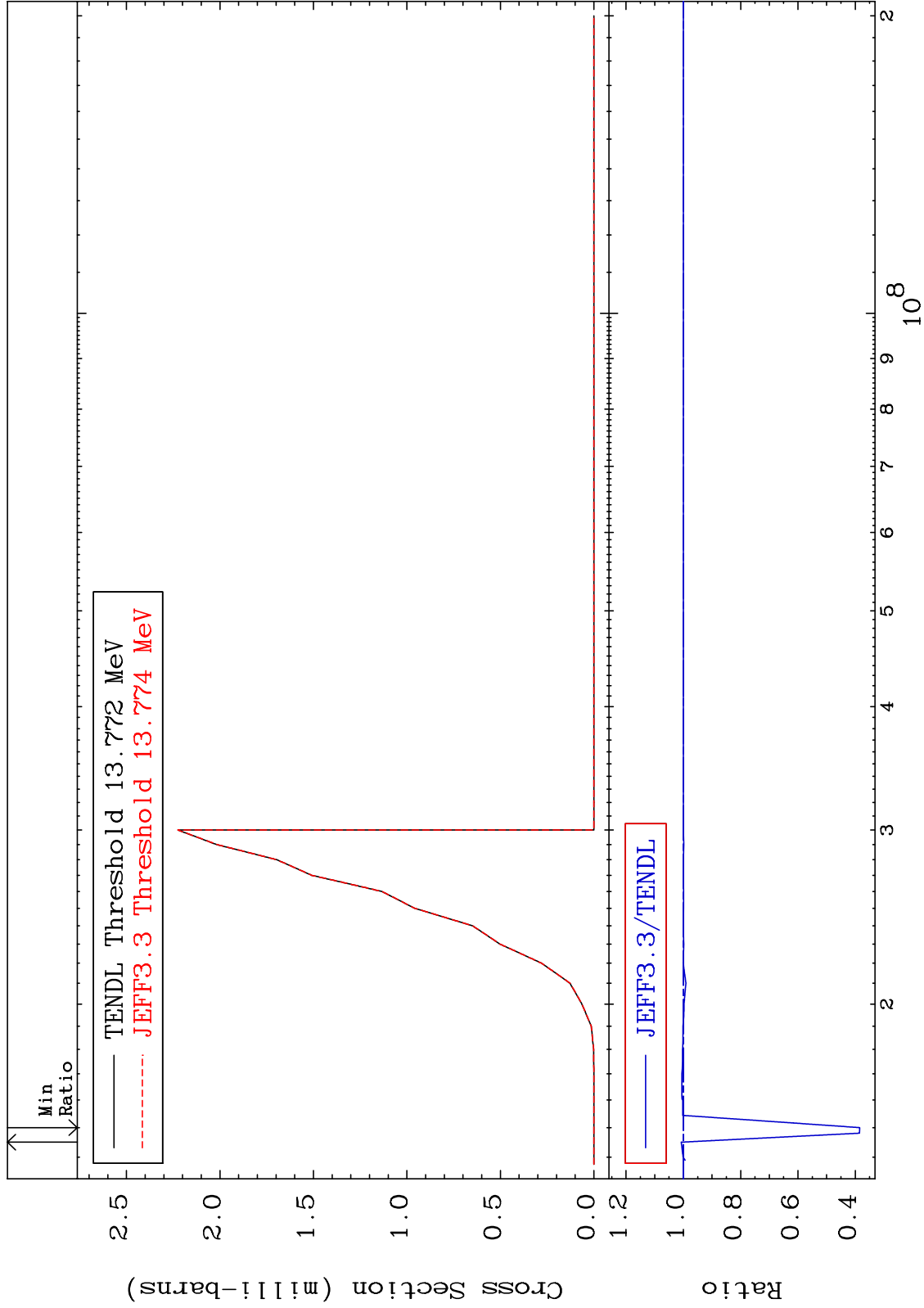


MAT 4434

(n, n') d:43-Tc-97m1

44-Ru-99

Radionuclide Production Cross Section -61.56 To 0.732 %



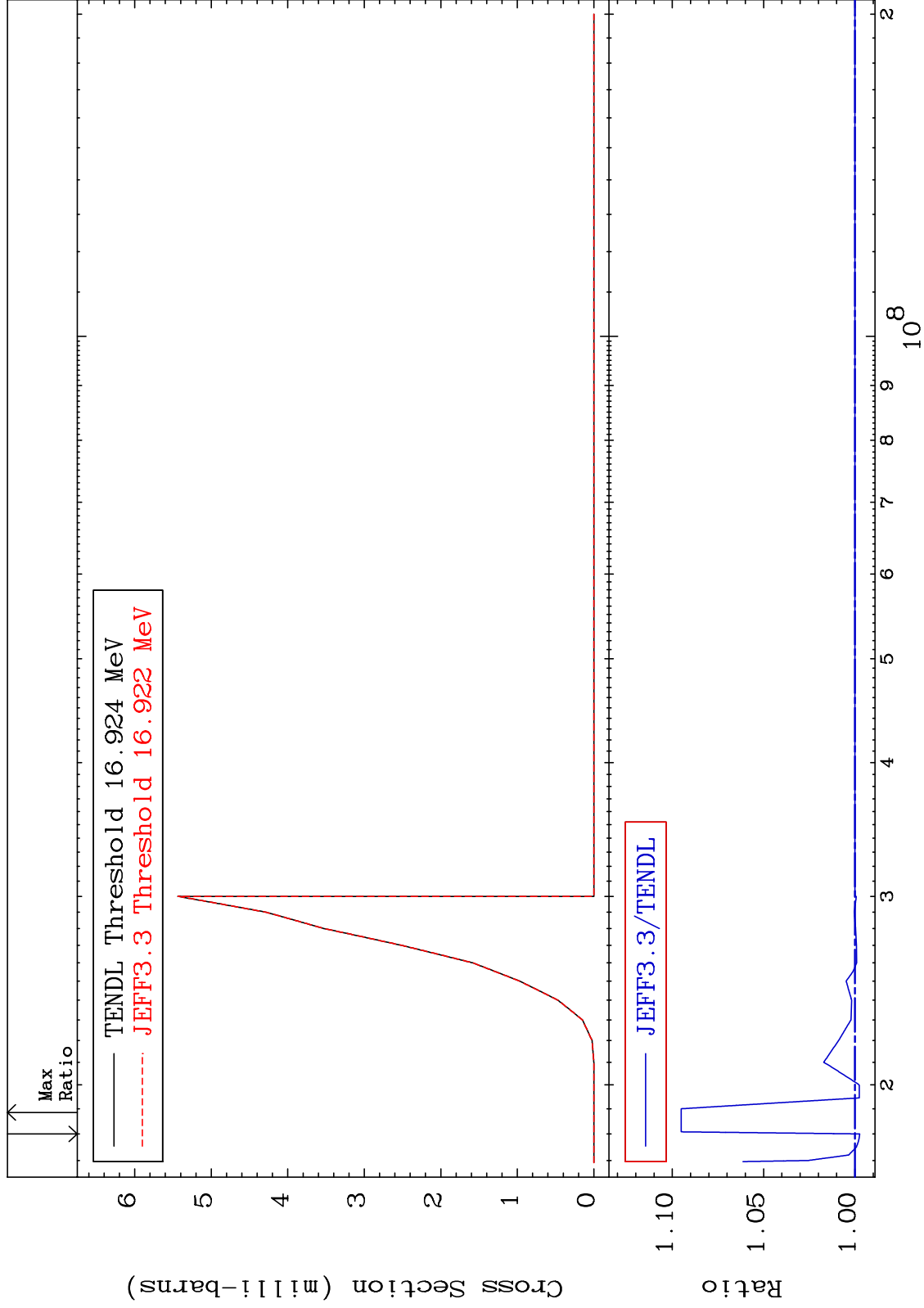


MAT 4434

(n, n') t: 43-Tc-96g

44-Ru-99

Radionuclide Production Cross Section -0.263 To 9.511 %



88

Incident Energy (eV)

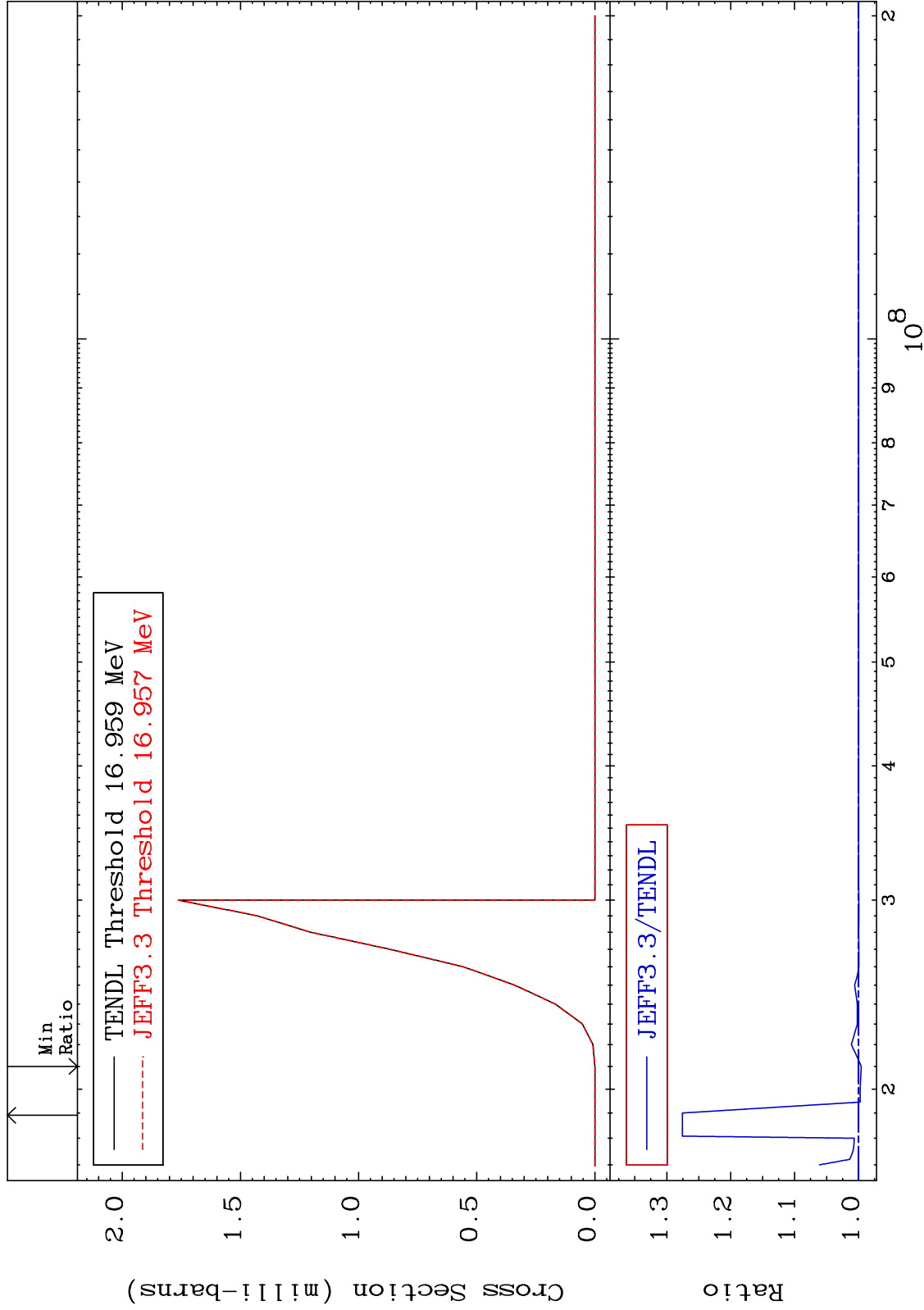
44-Ru-99

MAT 4434

(n, n') t:43-Tc-96m1

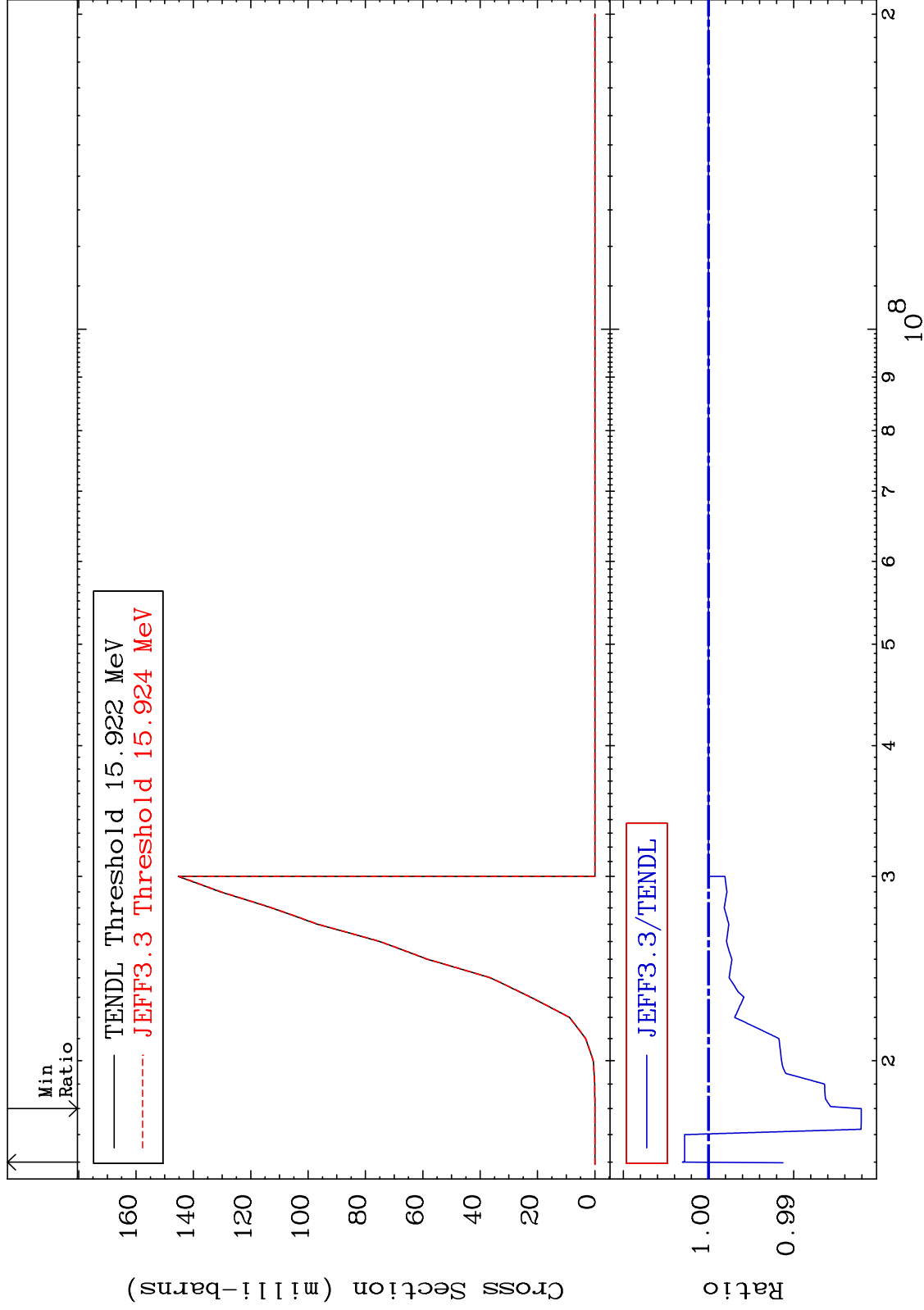
44-Ru-99

Radionuclide Production Cross Section -0.427 To 27.55 %



MAT 4434

(n,2n) p:43-Tc-97g 44-Ru-99  
Radionuclide Production Cross Section -1.793 To 0.306 %



90

Incident Energy (eV)

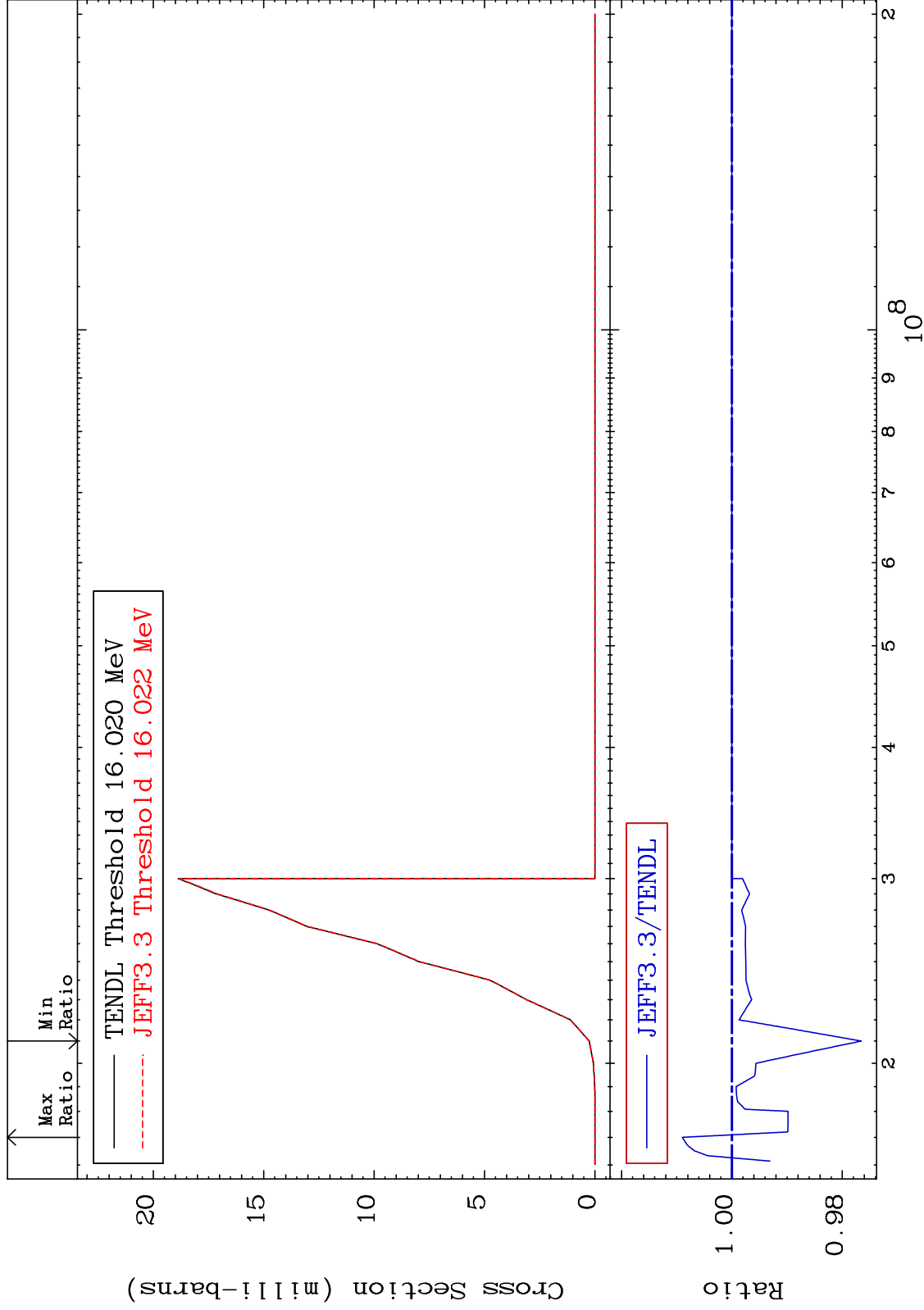
44-Ru-99

MAT 4434

(n,2n) p:43-Tc-97m1

44-Ru-99

Radionuclide Production Cross Section -2.344 To 0.896 %

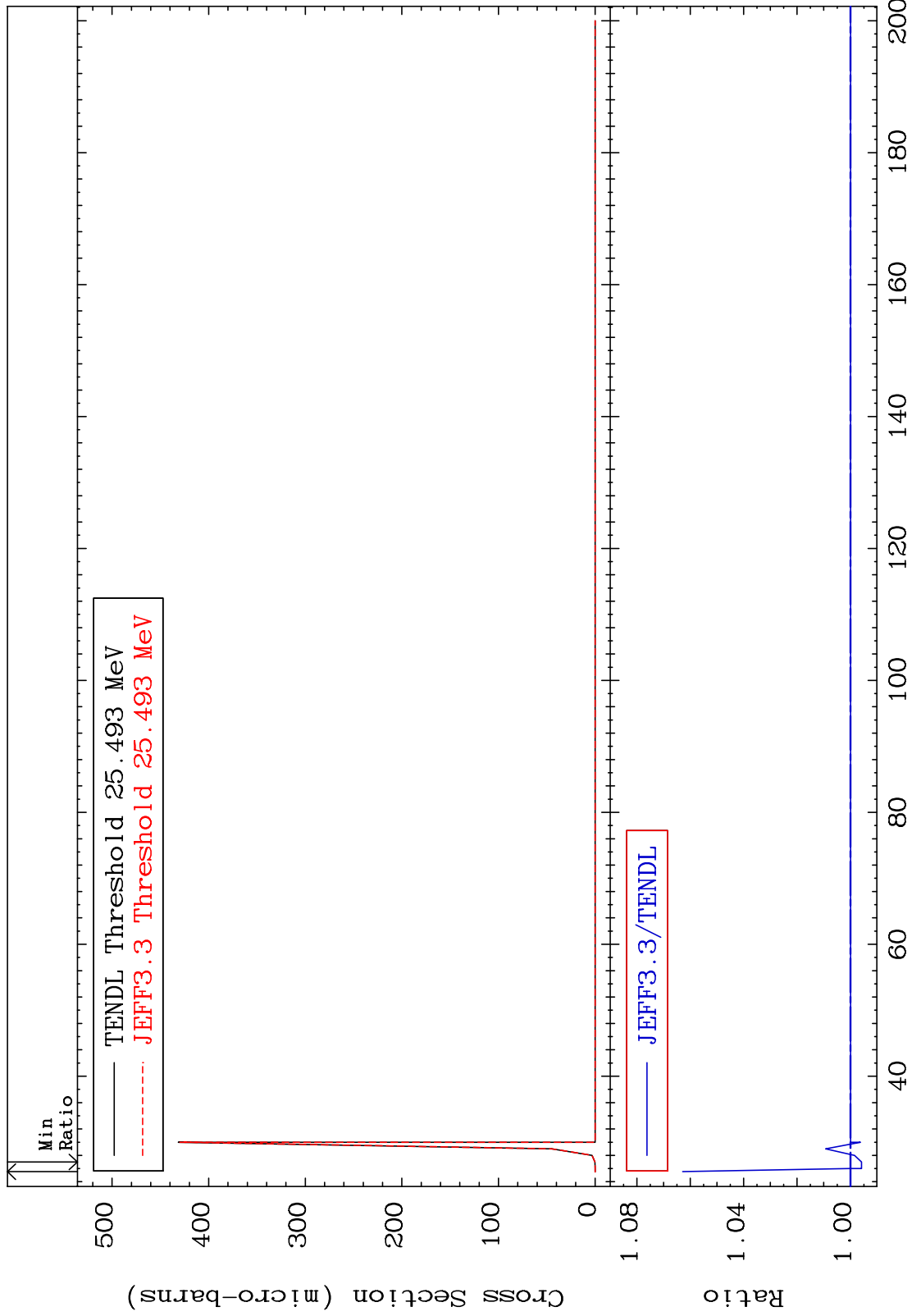


MAT 4434

(n, 3n) p:43-Tc-96g

44-Ru-99

Radionuclide Production Cross Section -0.415 To 6.287 %



92

Incident Energy (MeV)

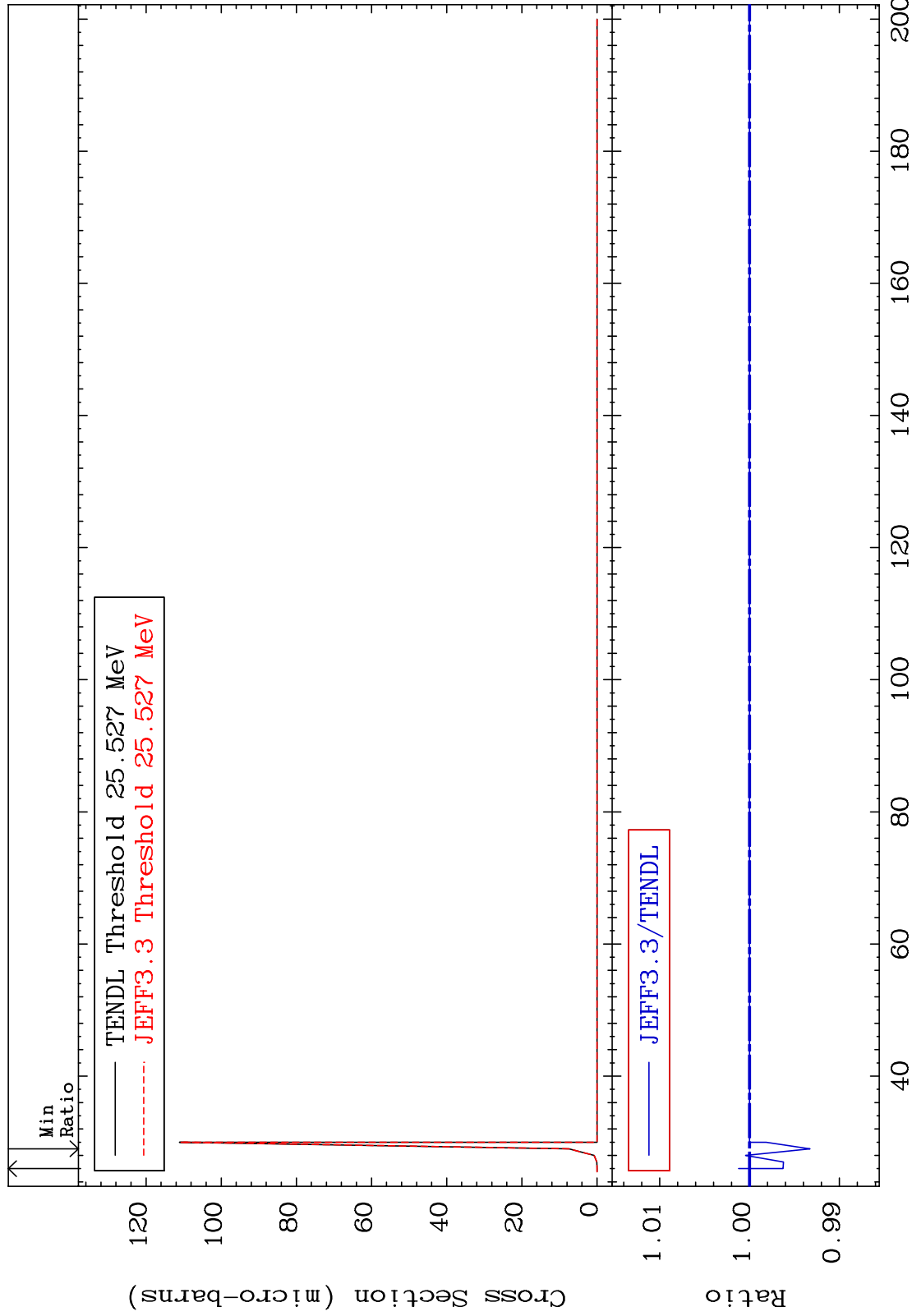
44-Ru-99

MAT 4434

(n,3n) p:43-Tc-96m1

44-Ru-99

Radionuclide Production Cross Section -0.673 To 0.123 %



93

Incident Energy (MeV)

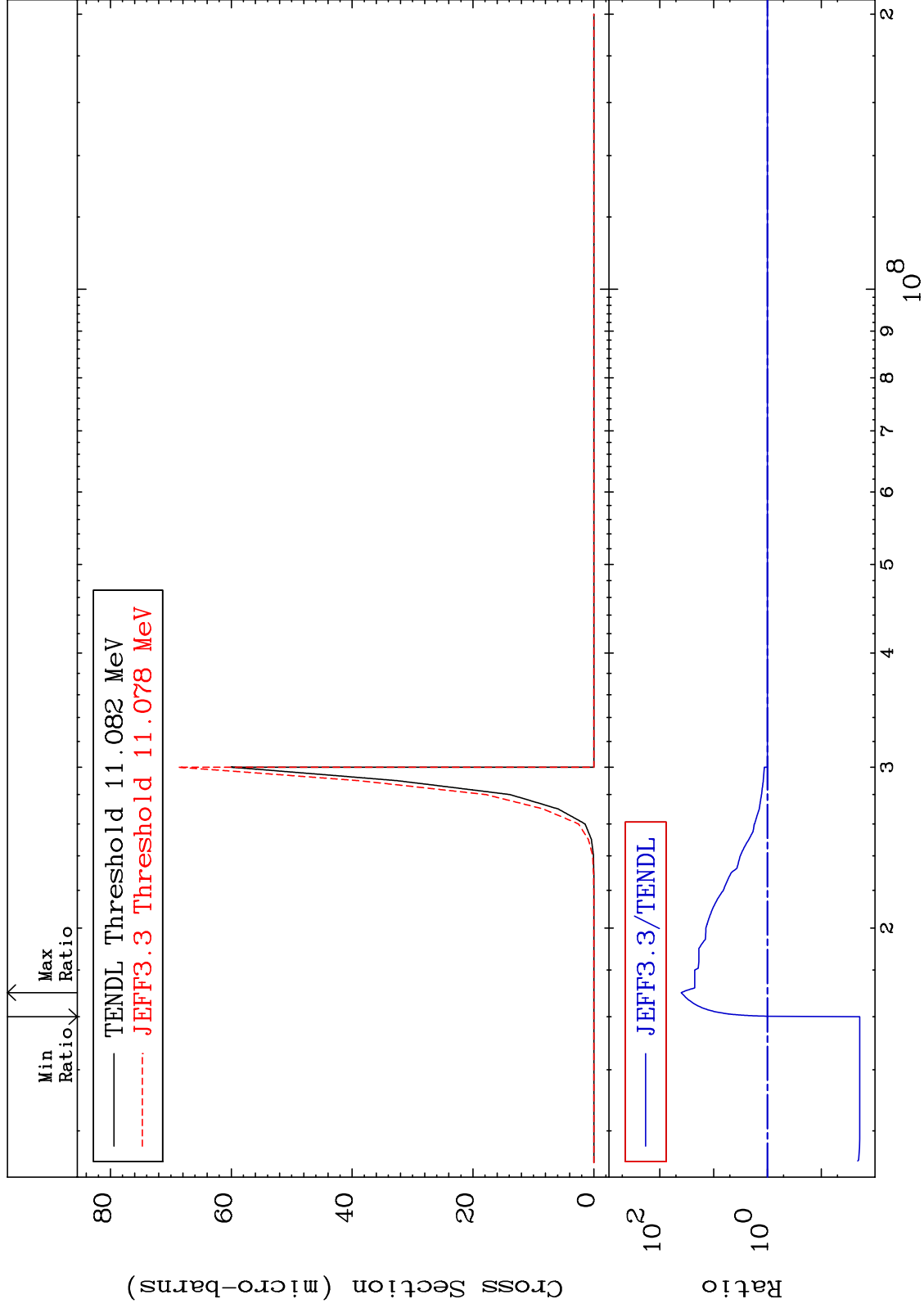
44-Ru-99

MAT 4434

(n,n') p  $\alpha$ :41-Nb-94g

44-Ru-99

Radionuclide Production Cross Section -98.08 To 3898. %



94

Incident Energy (eV)

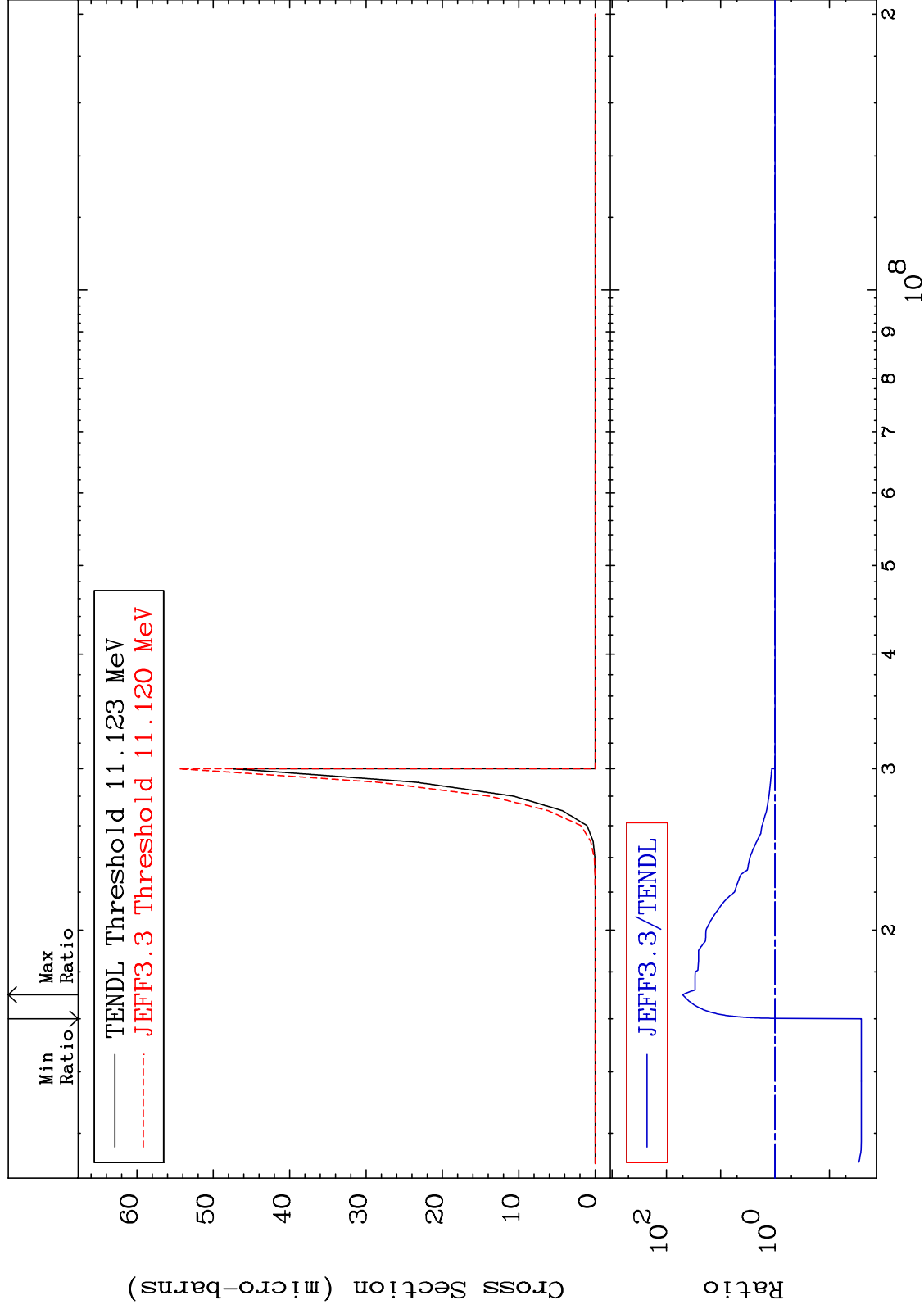
44-Ru-99

MAT 4434

(n,n') p  $\alpha$ :41-Nb-94m1

44-Ru-99

Radionuclide Production Cross Section -97.42 To 4915. %



95

Incident Energy (eV)

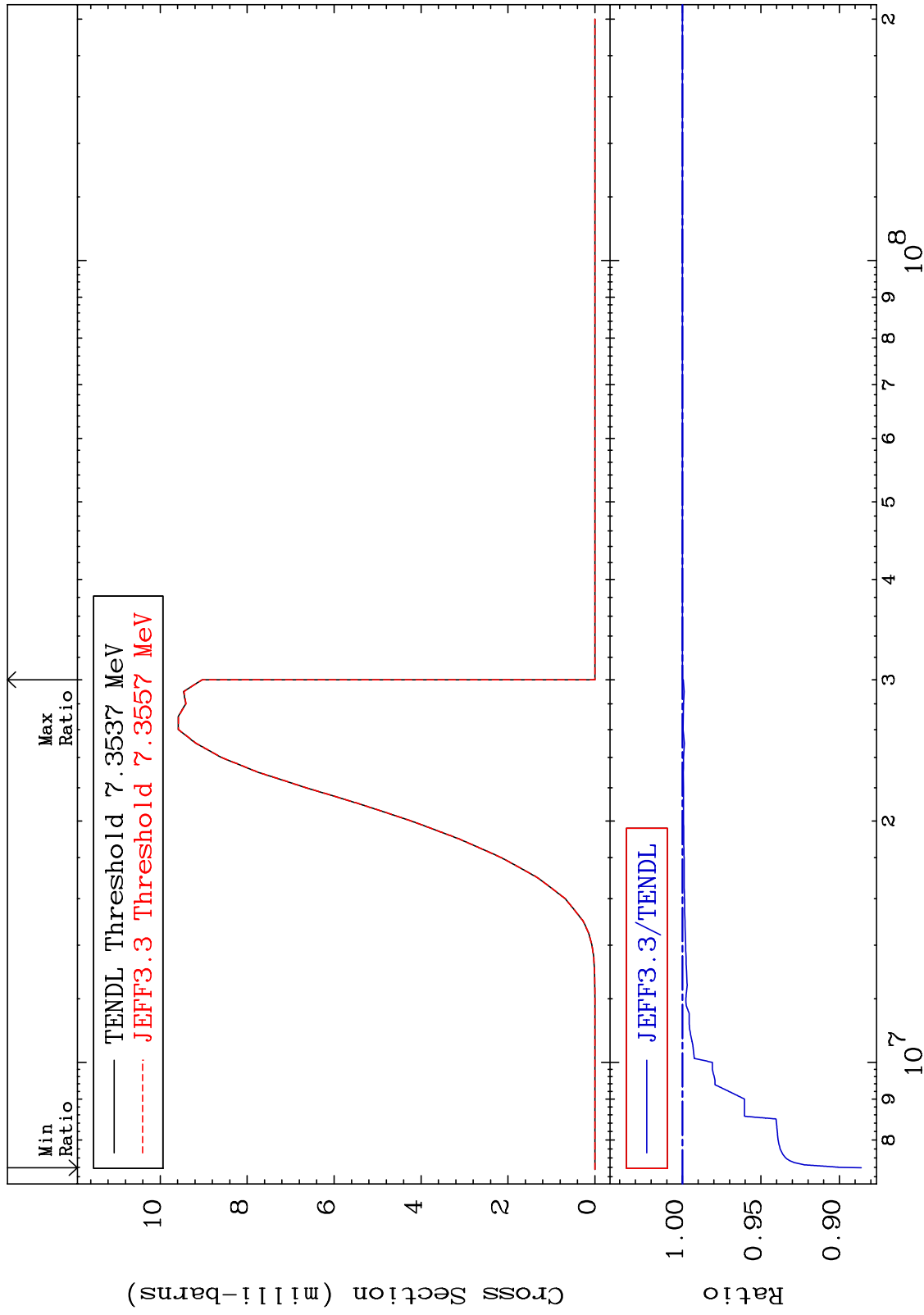
44-Ru-99



MAT 4434

(n, t) : 43-Tc-97g  
Radionuclide Production Cross Section -11.39 To 0.000 %

44-Ru-99



96

Incident Energy (eV)

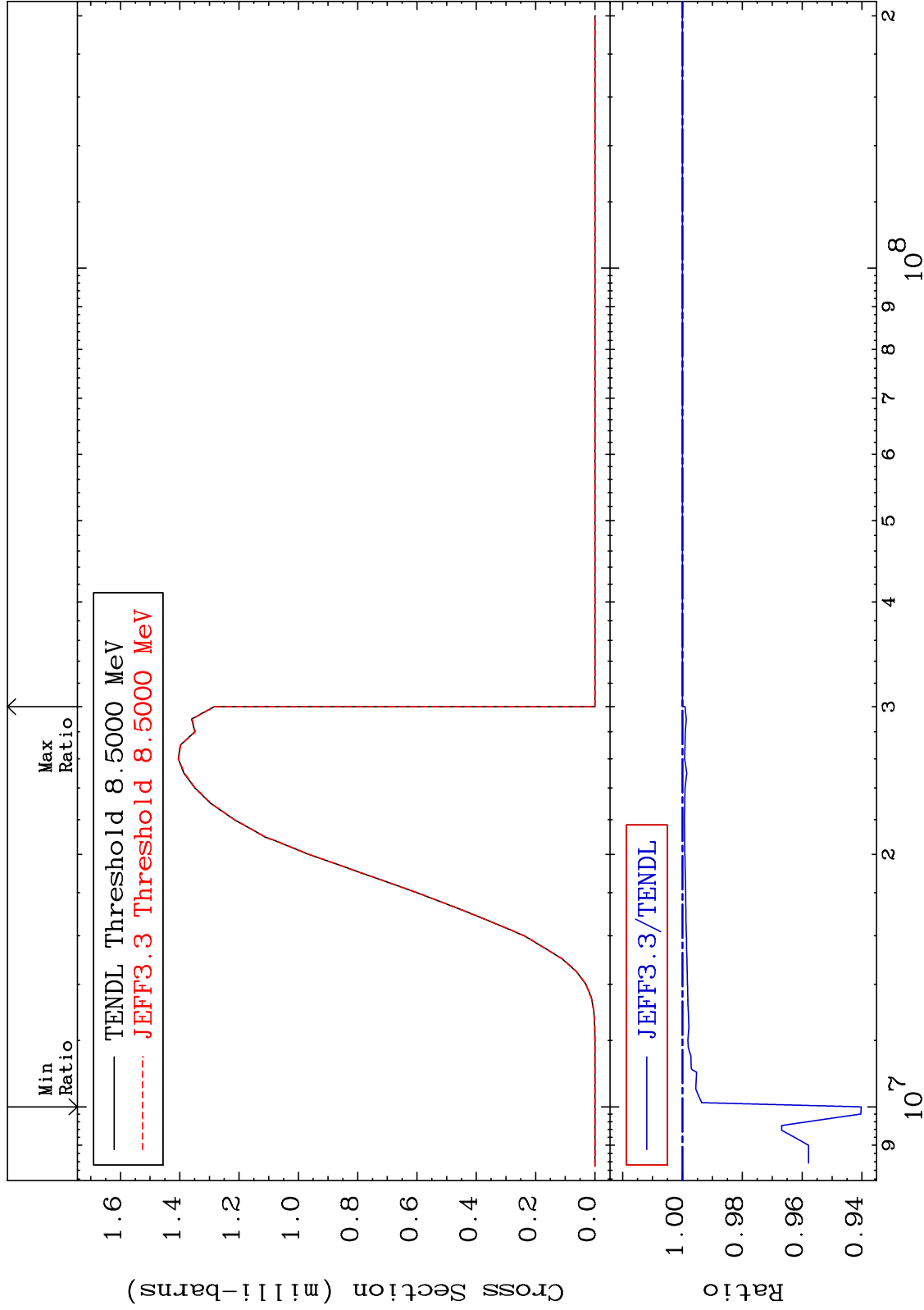
44-Ru-99

MAT 4434

(n, t) : 43-Tc-97m1

44-Ru-99

Radionuclide Production Cross Section -5.976 To 0.000 %



97

Incident Energy (eV)

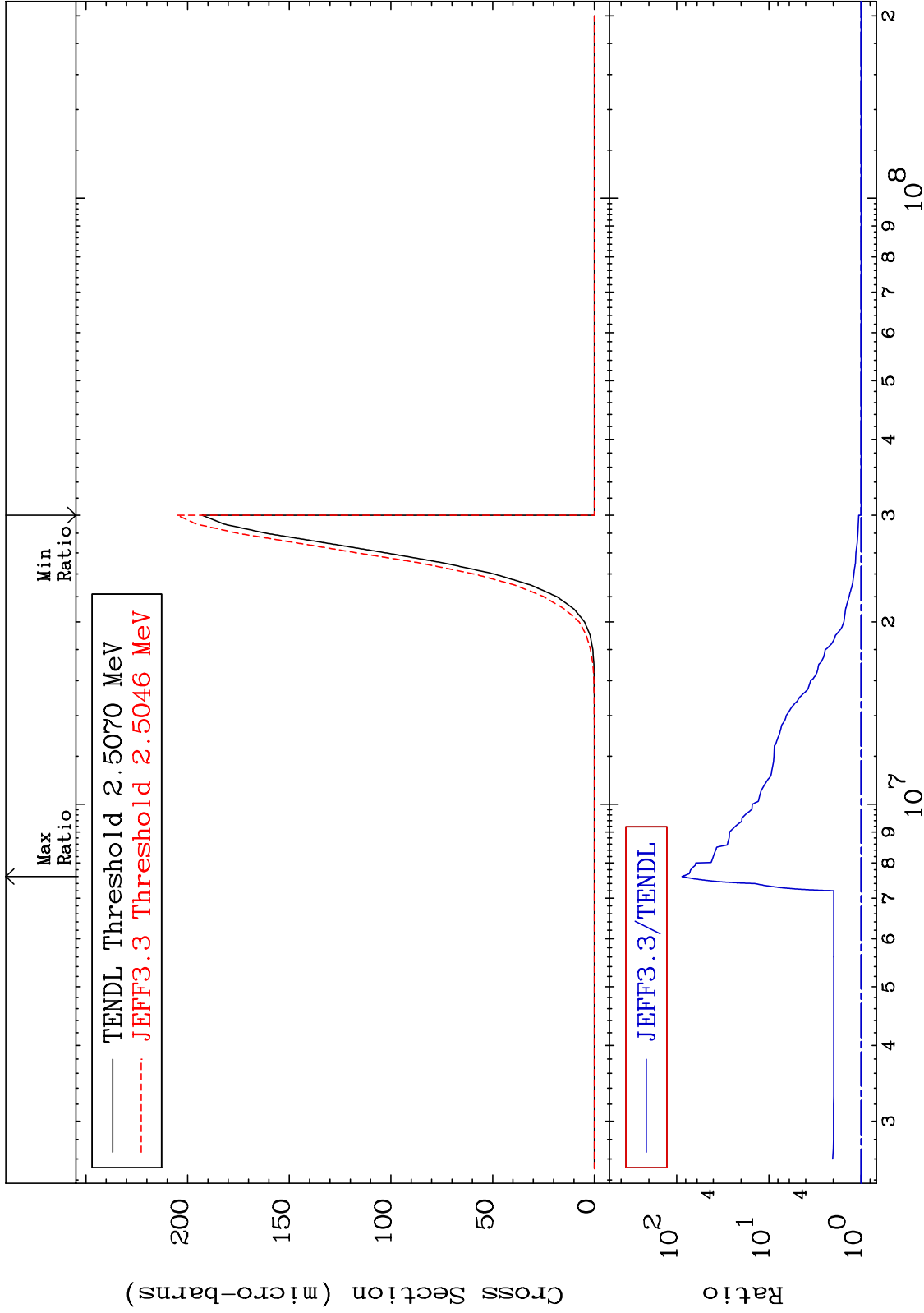
44-Ru-99

MAT 4434

(n, p)  $\alpha$ : 41-Nb-95g

44-Ru-99

Radionuclide Production Cross Section 0.000 To 8650. %

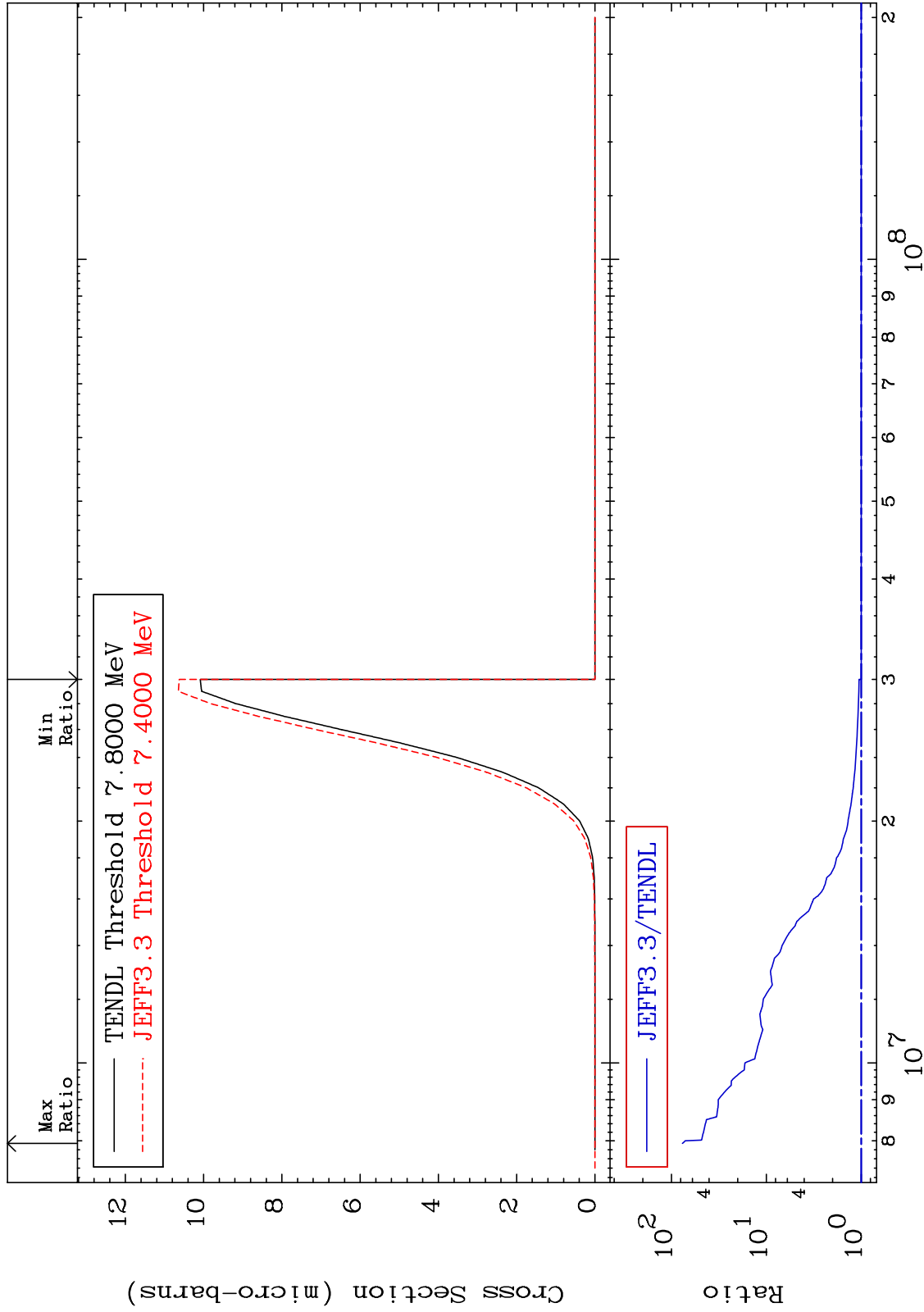


MAT 4434

(n,p)  $\alpha$ : 41-Nb-95m1

44-Ru-99

Radionuclide Production Cross Section 0.000 To 7540. %



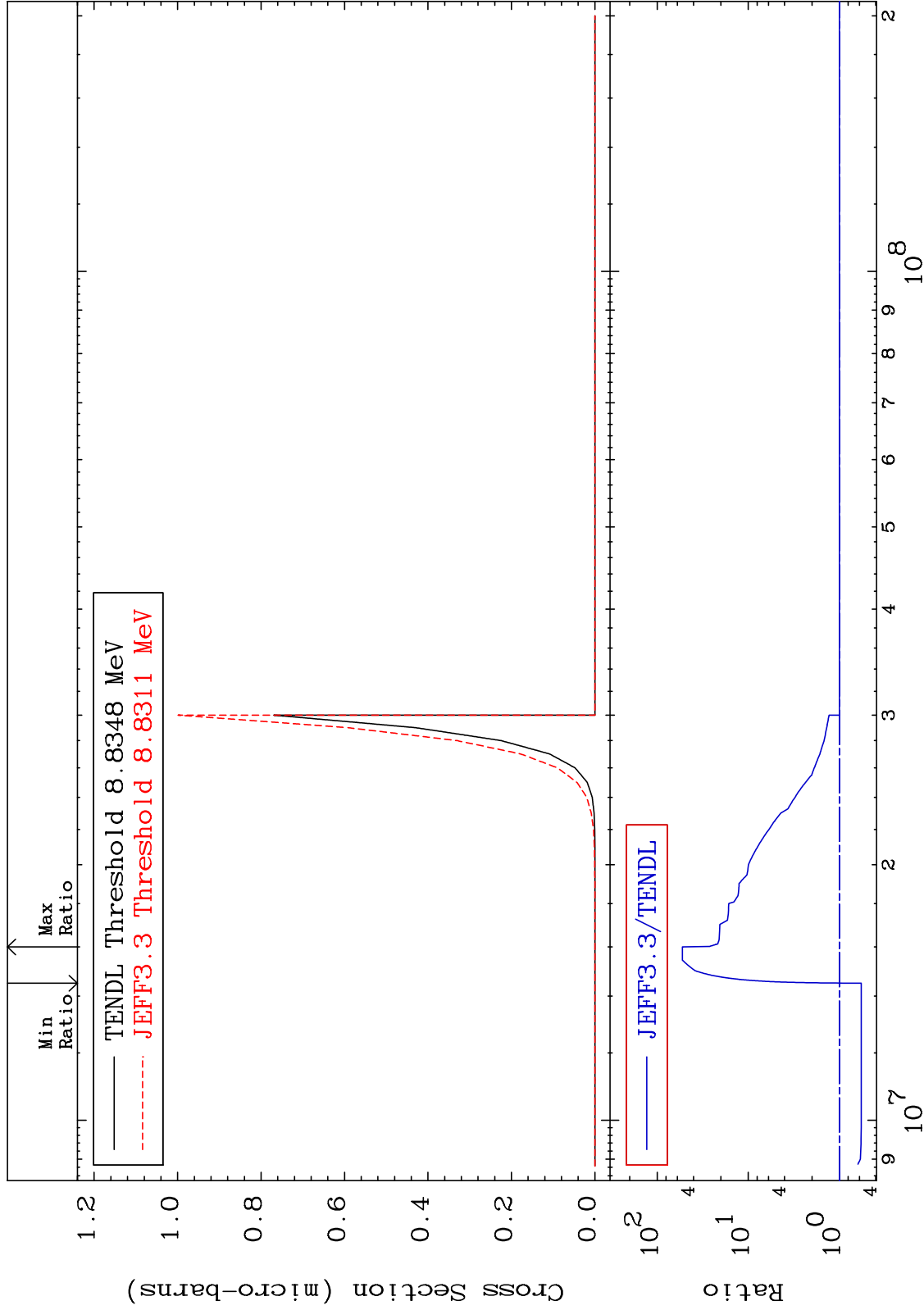
99

MAT 4434

(n, d)  $\alpha$ : 41-Nb-94g

44-Ru-99

Radionuclide Production Cross Section -42.55 To 5183. %



100

Incident Energy (eV)

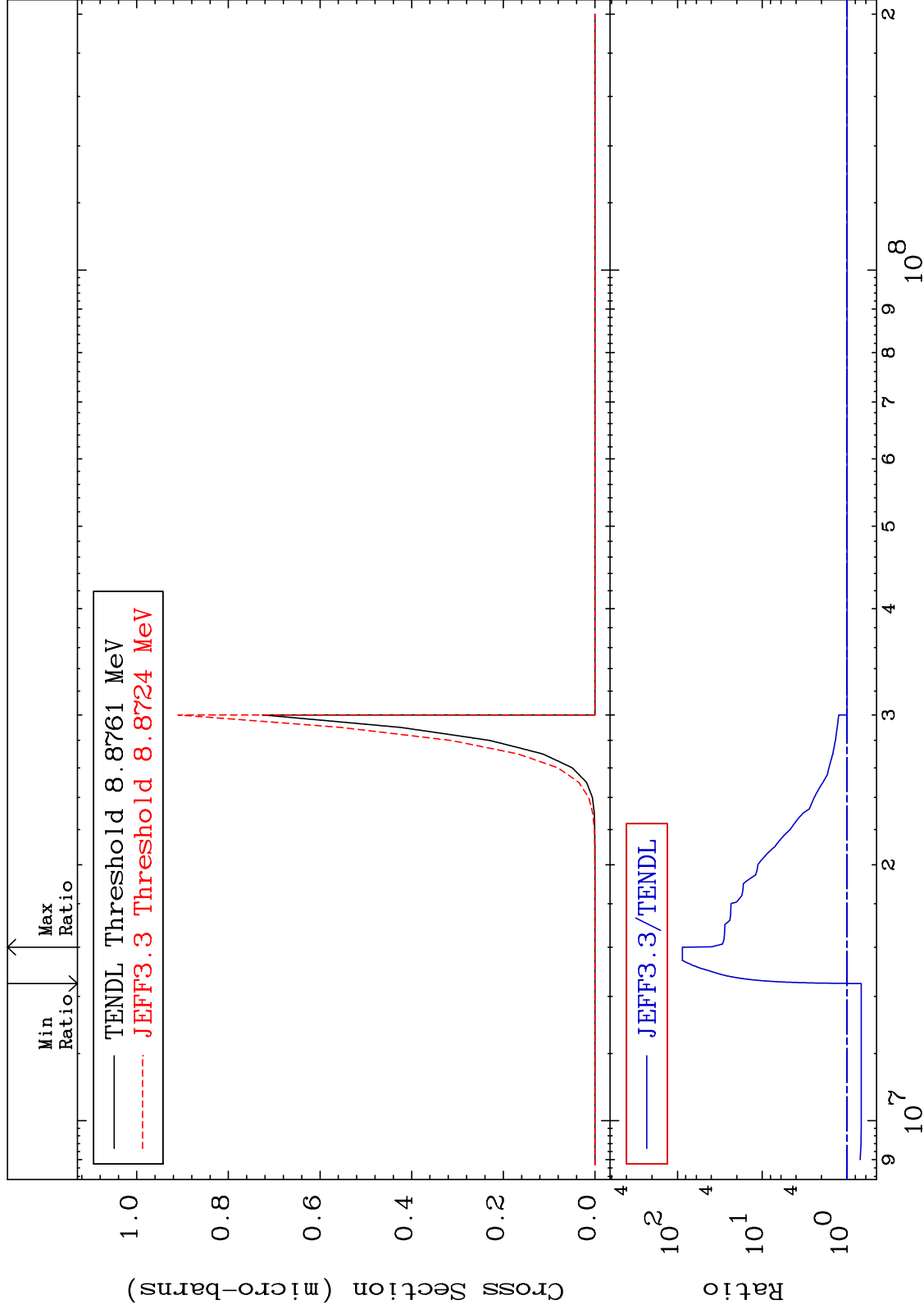
44-Ru-99

MAT 4434

(n, d)  $\alpha$ : 41-Nb-94m1

44-Ru-99

Radionuclide Production Cross Section -32.03 To 8645. %



101

Incident Energy (eV)

44-Ru-99