Program Complot
(Version 2021-1)
by

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(Present Contact Information)

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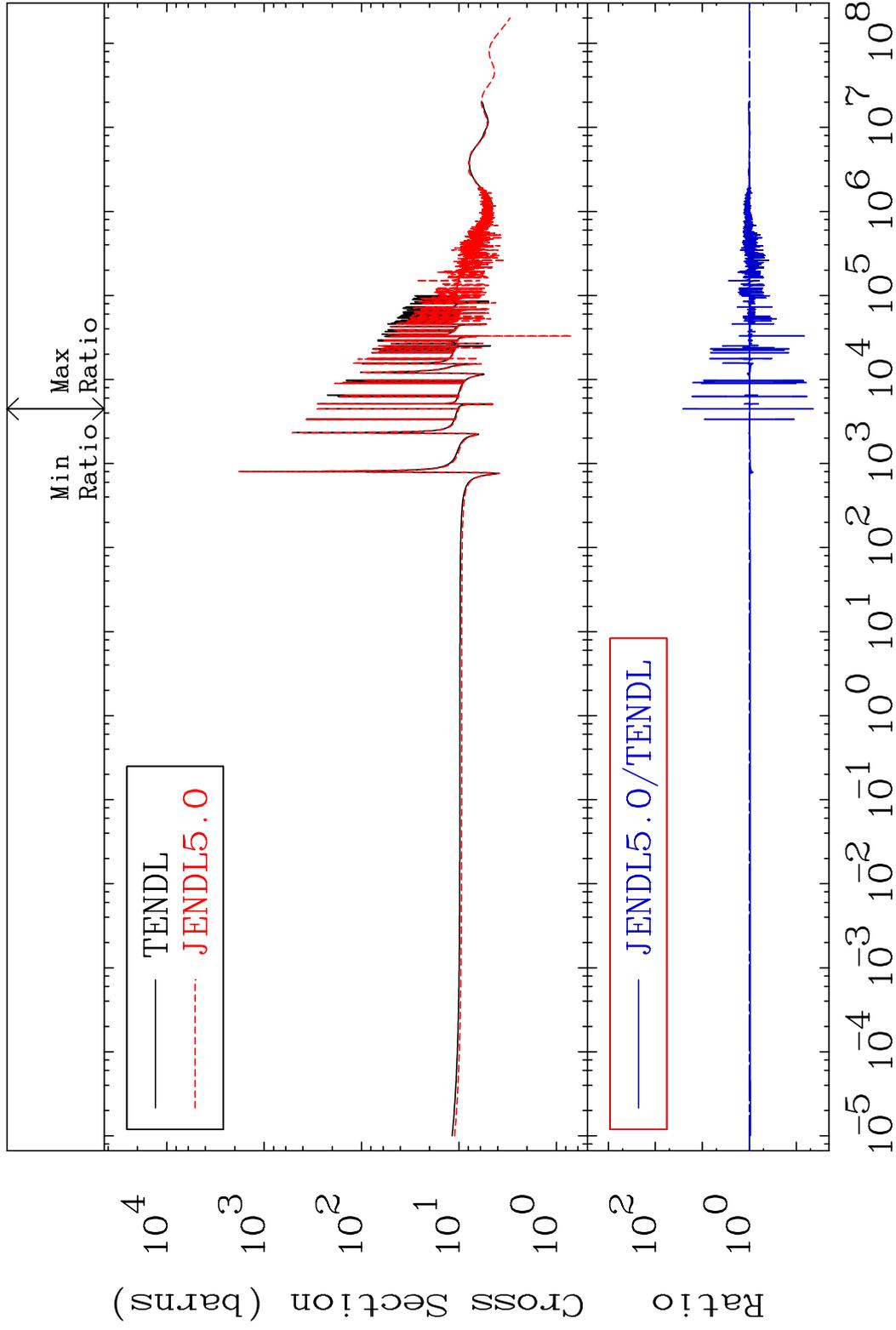E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

Press Mouse Button to Start

Total
Cross Section

MAT 8325

83-Bi-209

-95.62 To 2500. %

Min Ratio   Max Ratio

TENDL
JENDL5.0

Cross Section (barns)

Ratio

JENDL5.0/TENDL

Incident Energy (eV)

83-Bi-209

MAT 8325   Elastic   83-Bi-209
            Cross Section   -97.15 To 2225. %

83-Bi-209

Min Ratio
Max Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Cross Section (barns)

Ratio
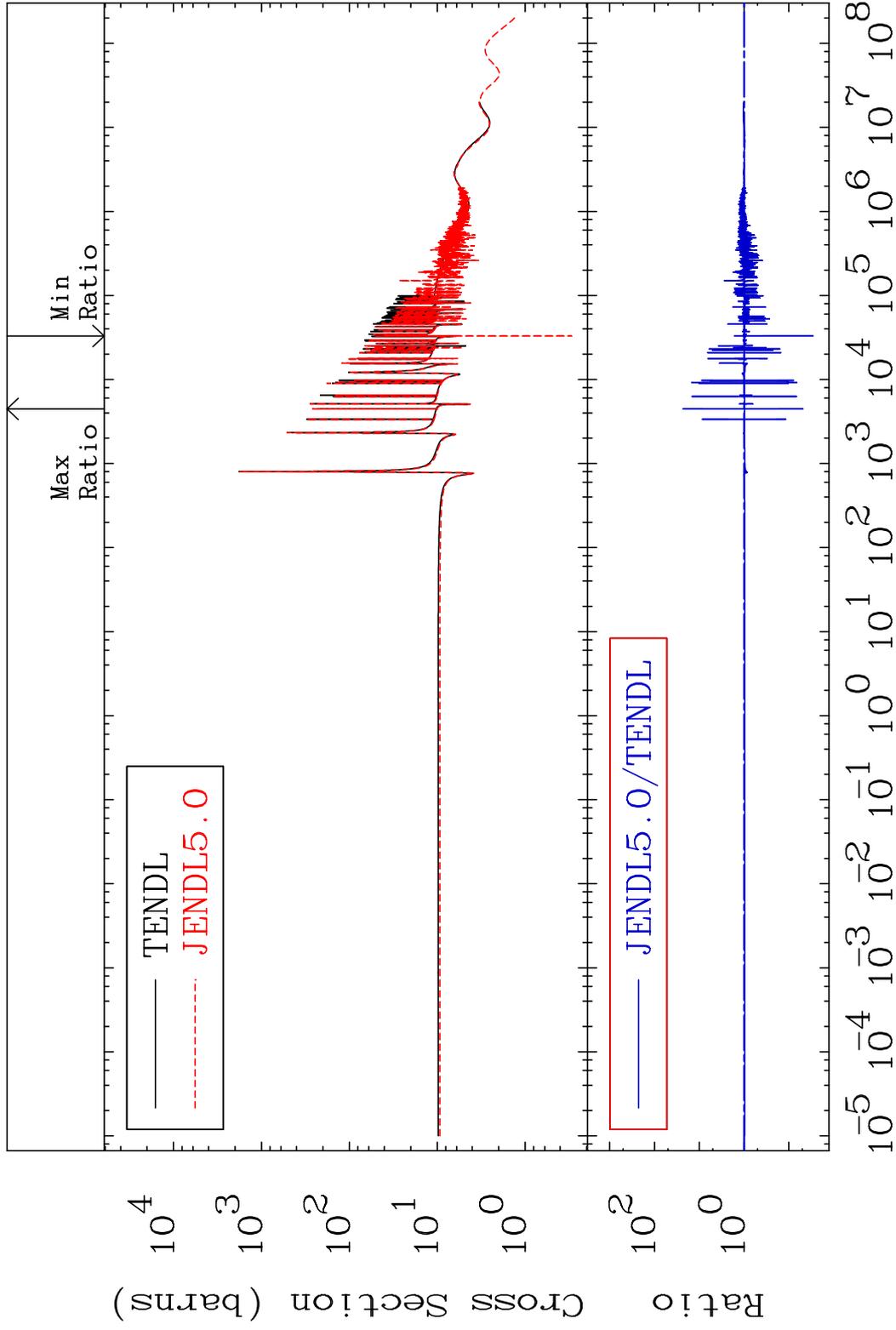
Incident Energy (eV)

MAT 8325   Inelastic   83-Bi-209
Cross Section   -100.0 To 19.28 %

Max Ratio   Min Ratio

TENDL Threshold 900.61 keV
JENDL5.0 Threshold 150.00 keV

Cross Section (barns)

3.0   2.5   2.0   1.5   1.0   0.5   0.0

JENDL5.0/TENDL

Ratio

1.0   0.0

Incident Energy (eV)
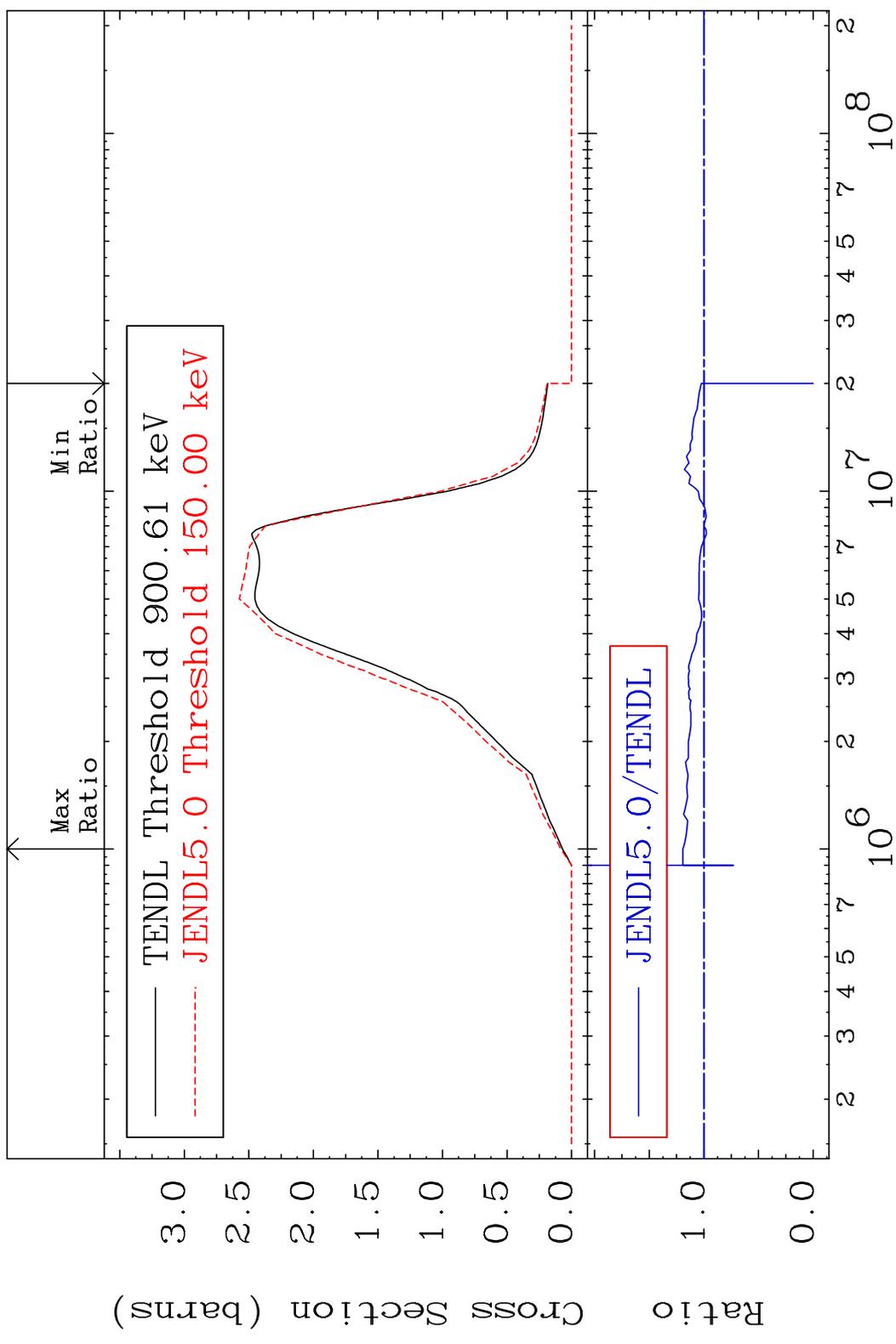
83-Bi-209

MAT 8325   (n,2n)   83-Bi-209
Cross Section -100.0 To 260.1 %
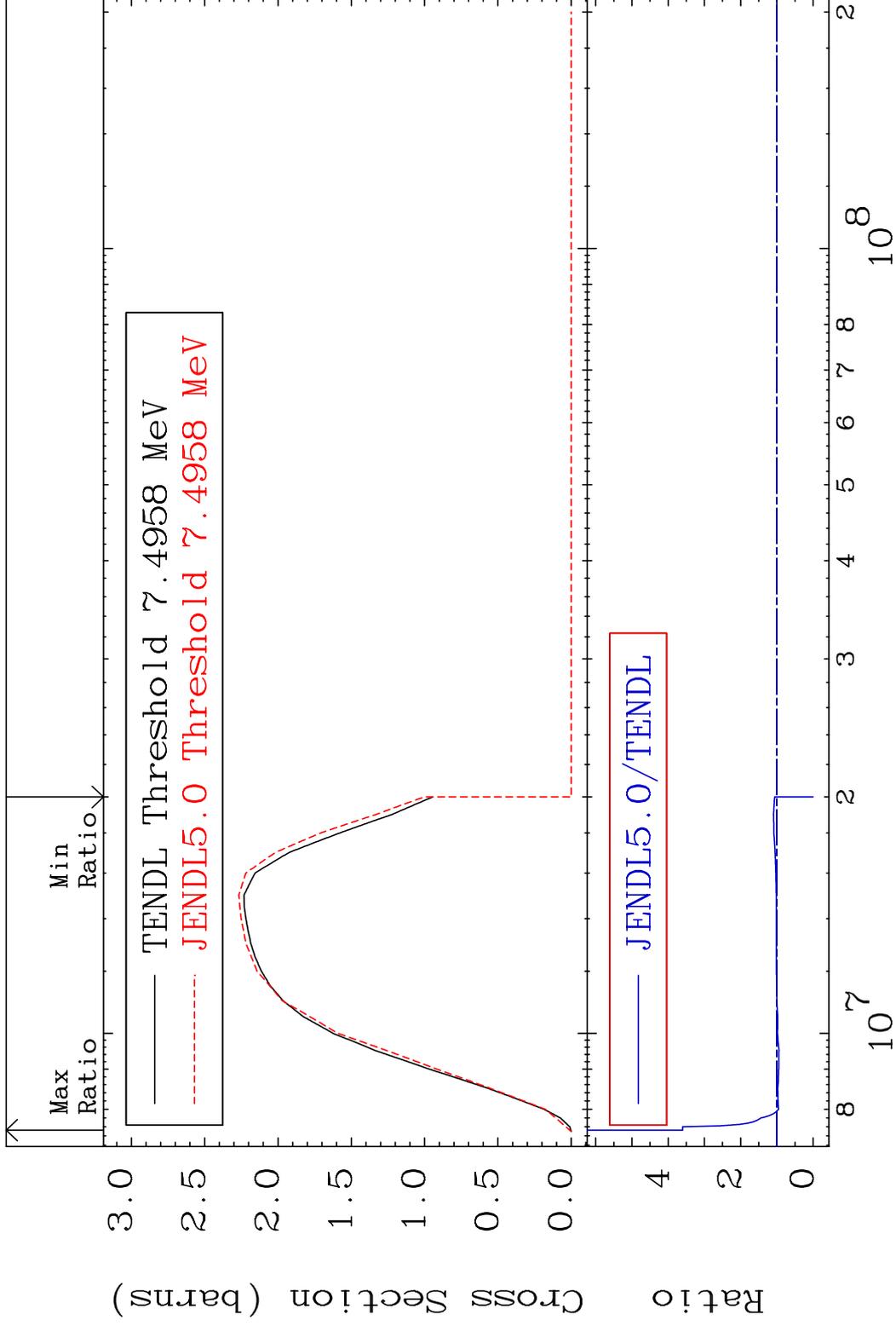
TENDL Threshold 7.4958 MeV
JENDL5.0 Threshold 7.4958 MeV

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

MAT 8325

(n,n') α
Cross Section

83-Bi-209
-100.0 To -2.870%

TENDL
JENDL5.0 Threshold 4.0000 MeV

Max Ratio

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)
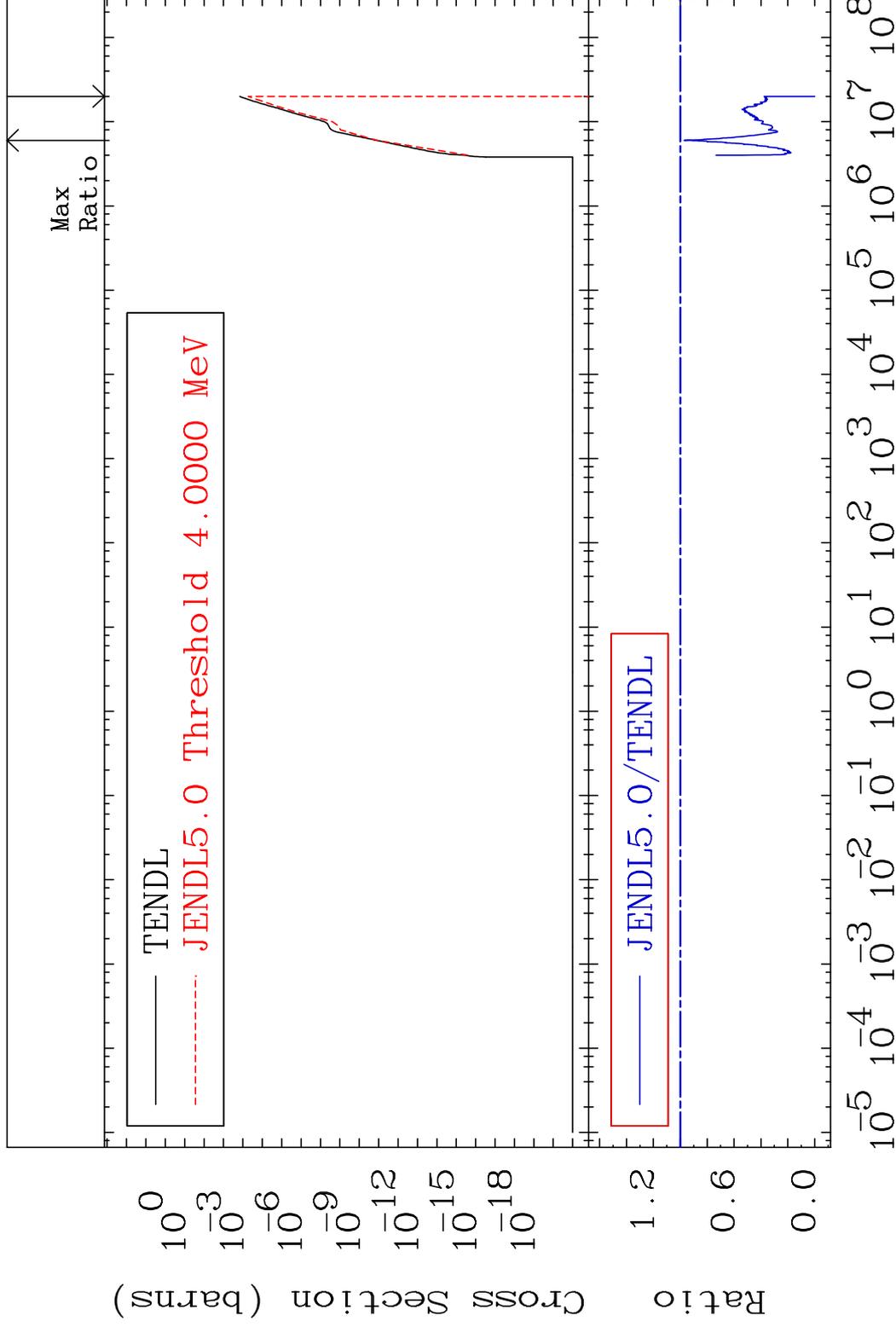
83-Bi-209

MAT 8325   (n,n') p   83-Bi-209
                Cross Section   -100.0 To 9999. %
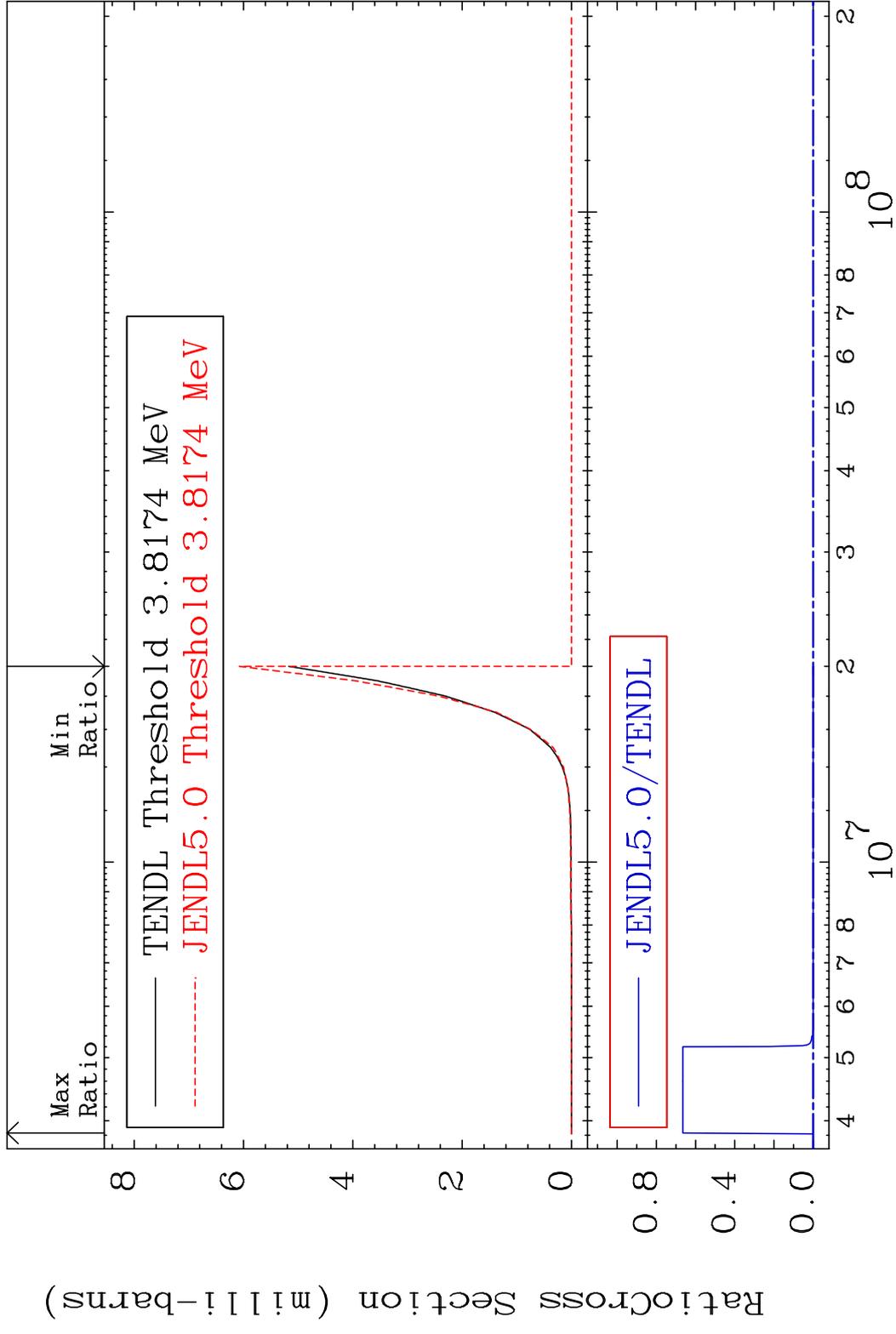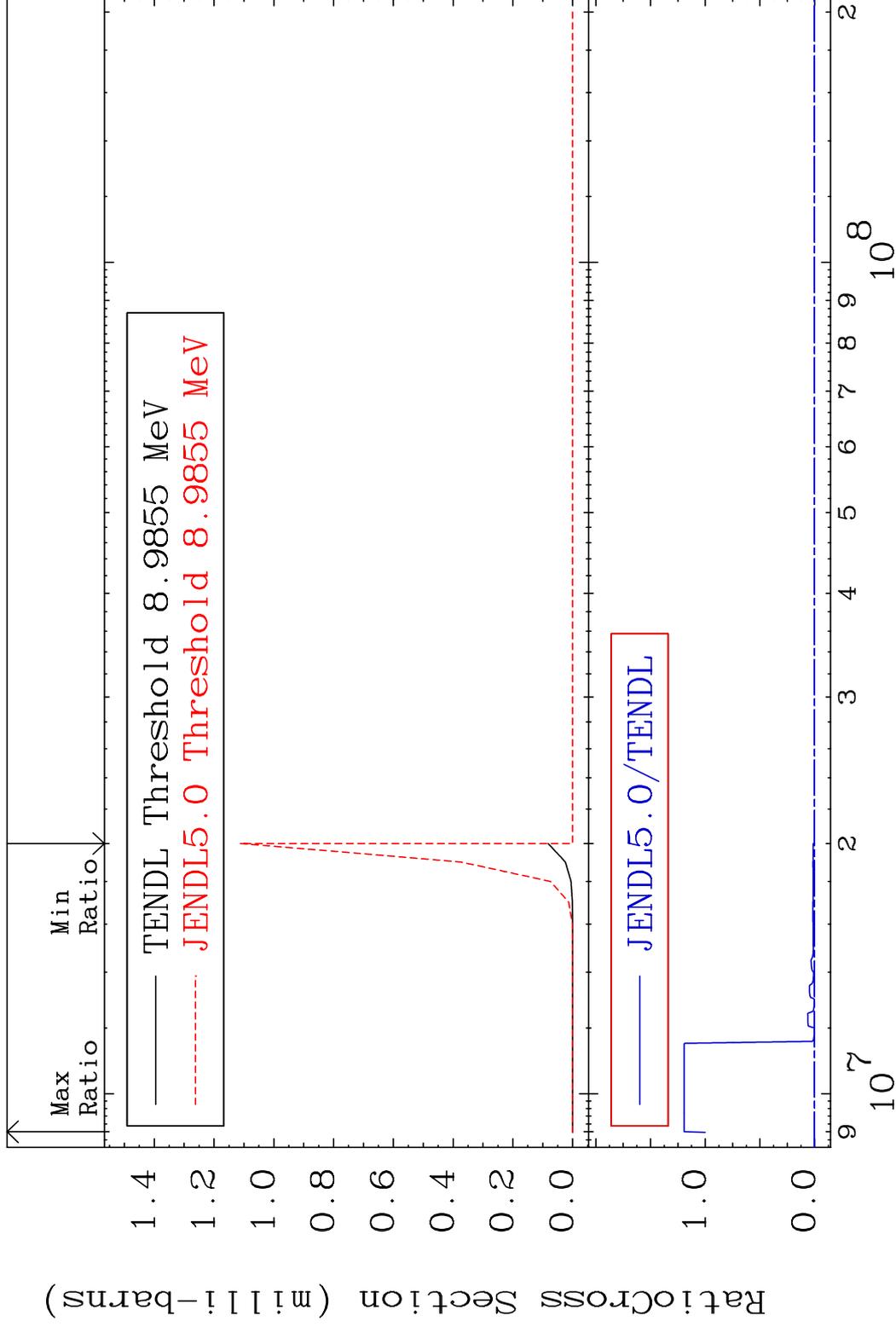
Max Ratio
Min Ratio

TENDL Threshold 3.8174 MeV
JENDL5.0 Threshold 3.8174 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)
Ratio

Incident Energy (eV)

83-Bi-209

(n,n') d
Cross Section   -100.0 To 9999. %
83-Bi-209

MAT 8325

TENDL Threshold 8.9855 MeV
JENDL5.0 Threshold 8.9855 MeV

Max
Ratio

Min
Ratio

JENDL5.0/TENDL

Cross Section (milli-barns)
Ratio
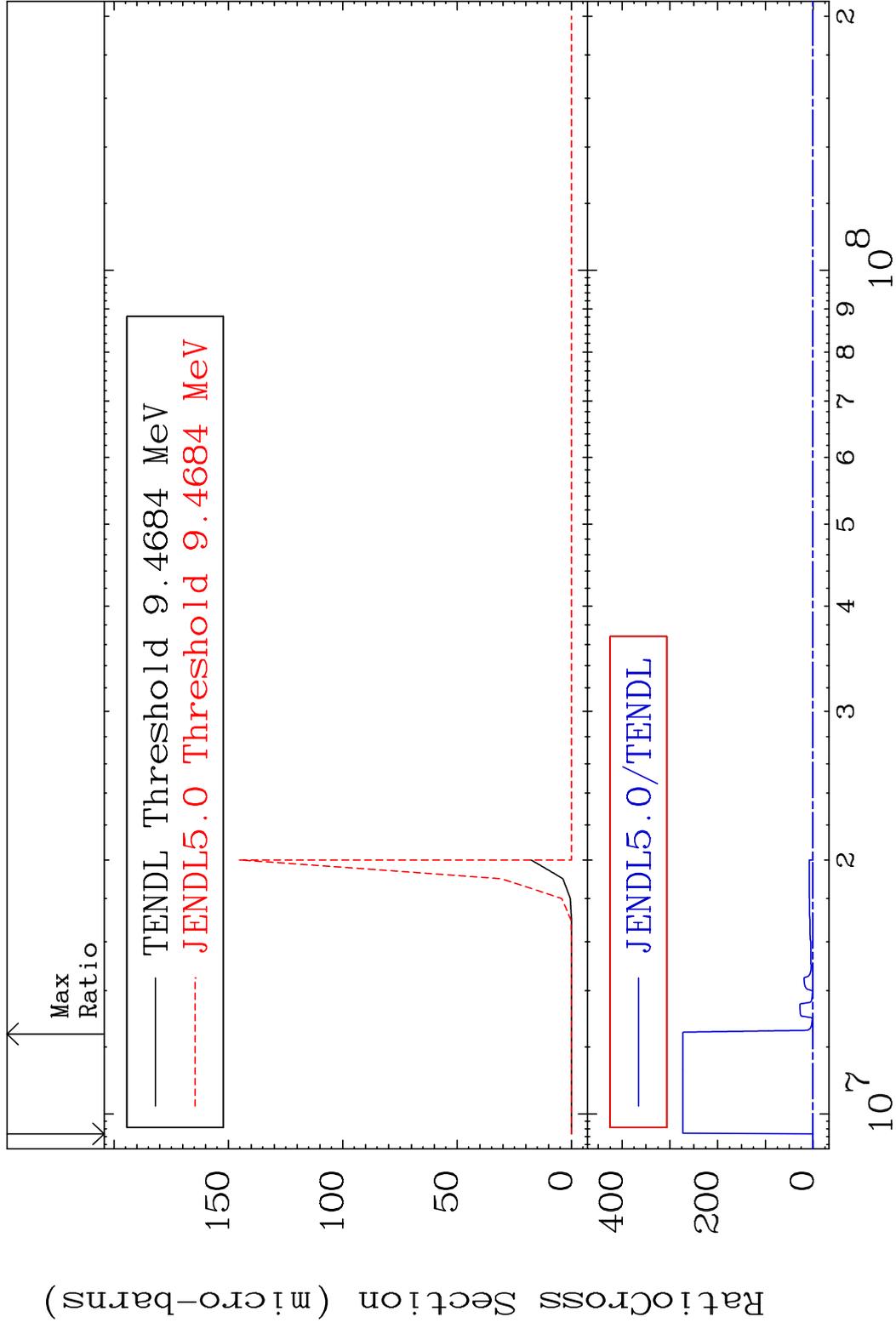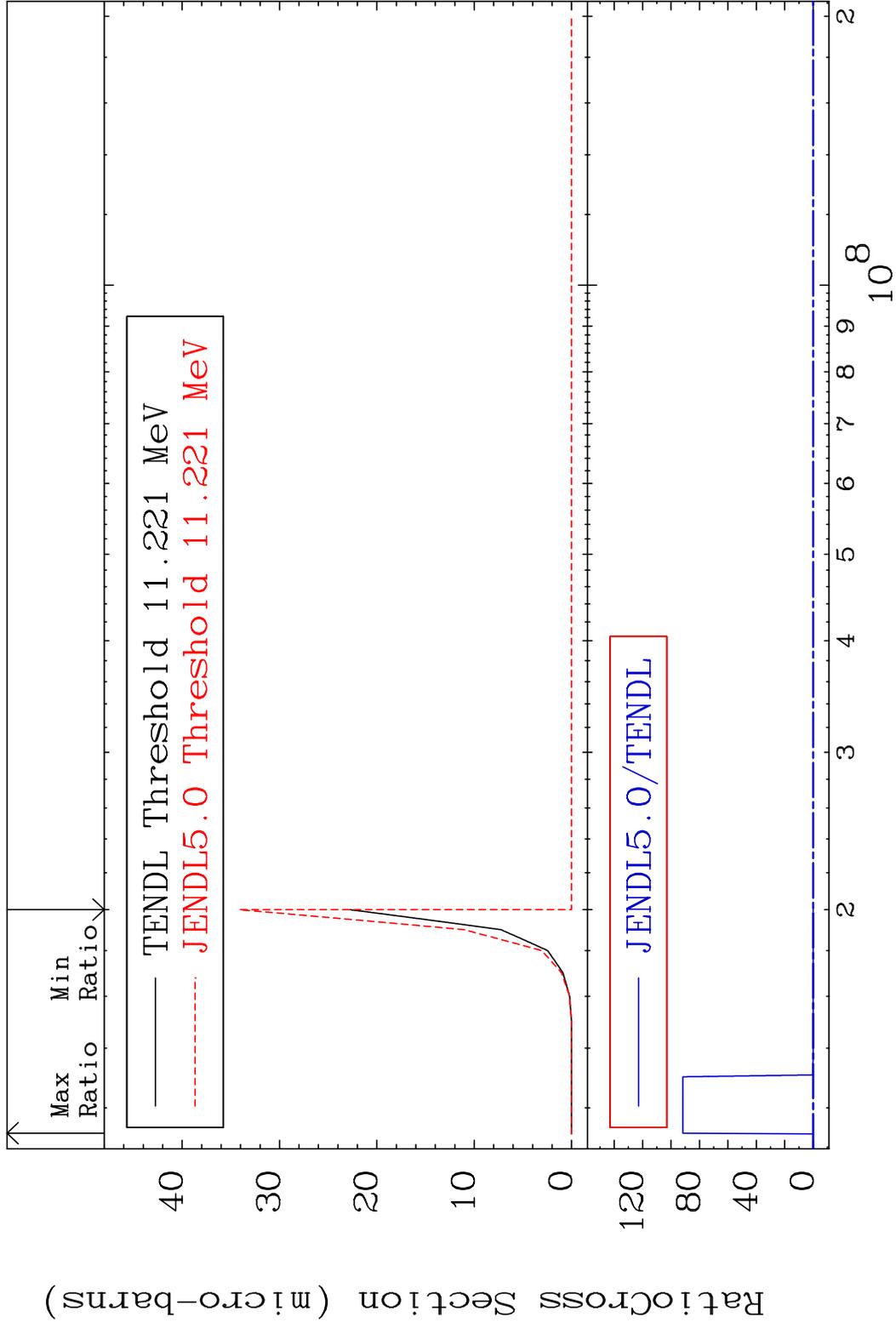
Incident Energy (eV)
83-Bi-209

MAT 8325   MT= 51 (n,n') Level   83-Bi-209
Cross Section   -100.0 To 9999. %

Min Ratio   Max Ratio

TENDL Threshold 900.61 keV
JENDL5.0 Threshold 900.61 keV

JENDL5.0/TENDL

Cross Section (milli-barns)   Ratio
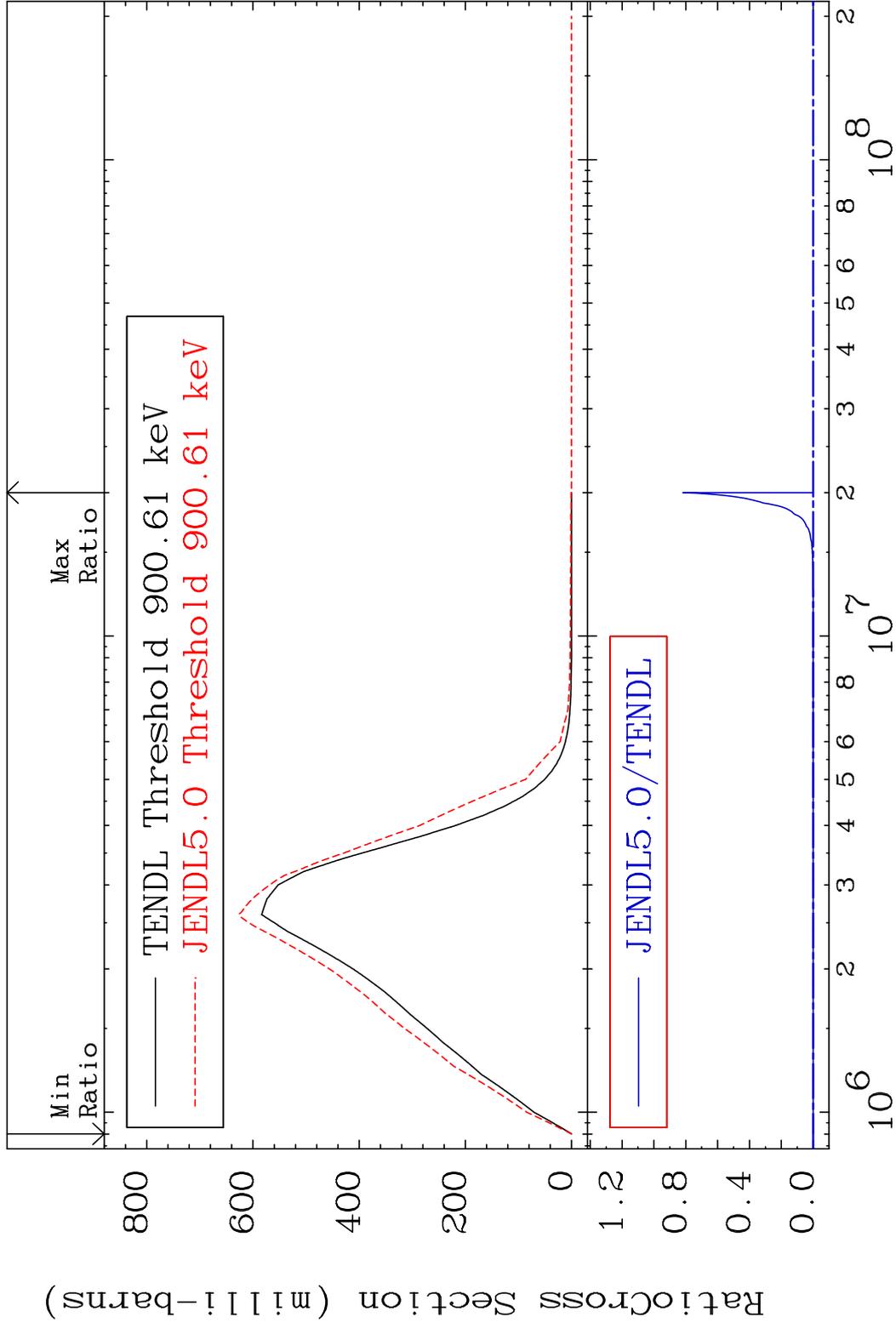
Incident Energy (eV)   83-Bi-209

MAT 8325   MT= 52 (n,n') Level   83-Bi-209
Cross Section   -100.0 To 890.0 %

Min Ratio   Max Ratio

TENDL Threshold 1.6163 MeV
JENDL5.0 Threshold 1.6163 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

MAT 8325   MT= 53 (n,n') Level   83-Bi-209
                  Cross Section -100.0 To 9999. %

83-Bi-209

Incident Energy (eV)

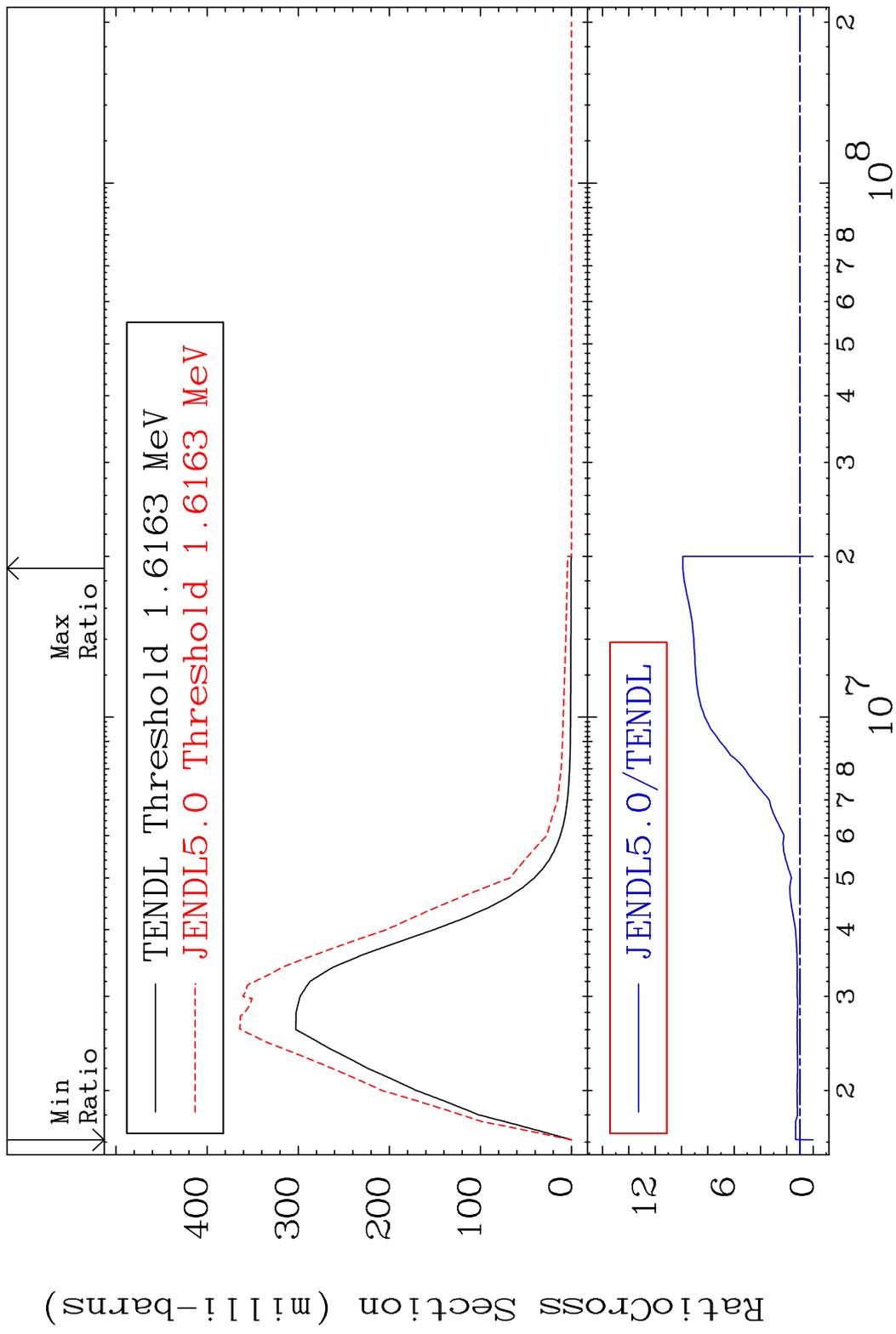Cross Section (milli-barns)

Ratio

TENDL Threshold 2.4547 MeV
JENDL5.0 Threshold 2.4547 MeV

JENDL5.0/TENDL

Max Ratio
Min Ratio

13
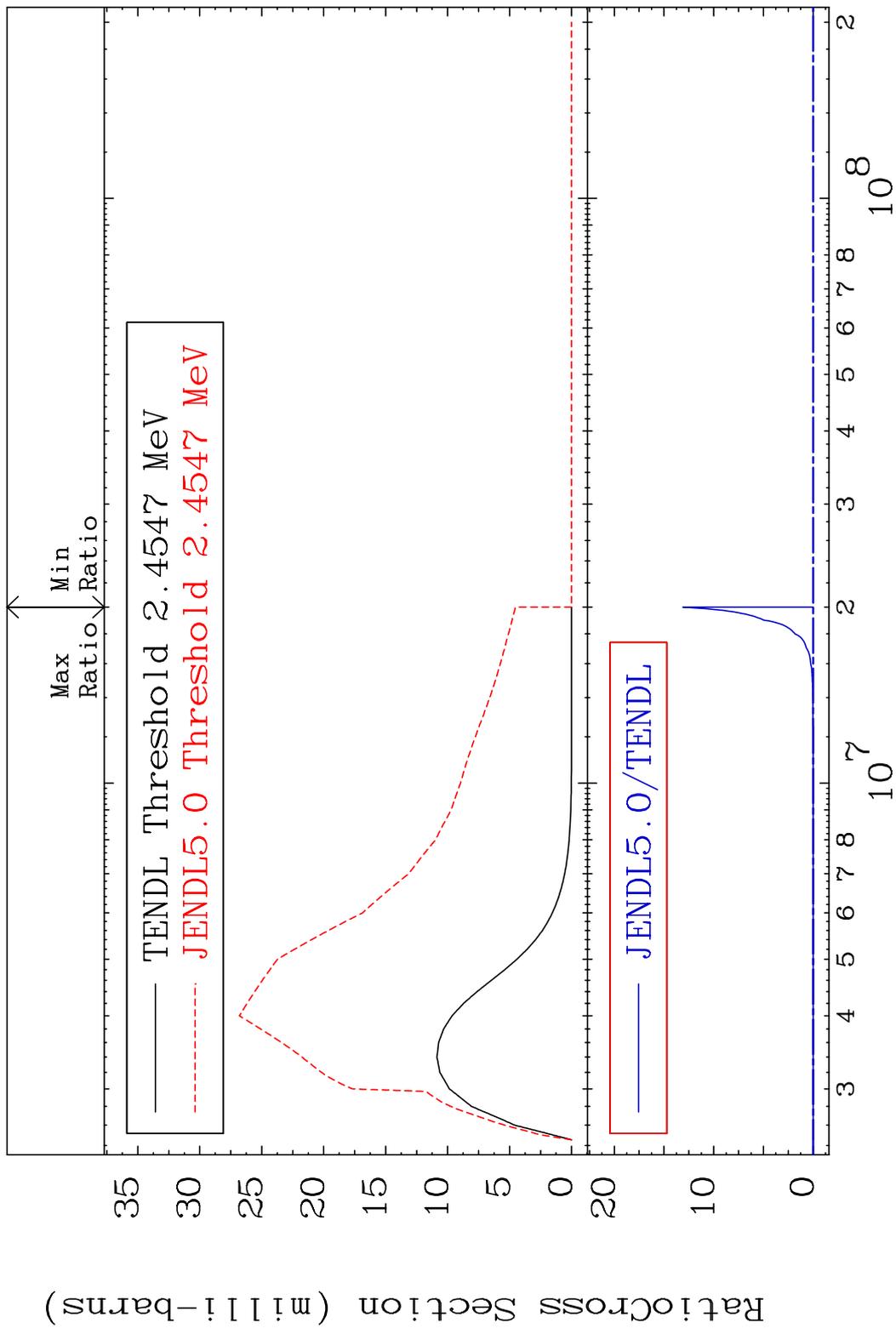
MAT 8325   MT= 54 (n,n') Level   83-Bi-209
                  Cross Section -100.0 To 9999. %

Min Ratio
Max Ratio

TENDL Threshold 2.5049 MeV
JENDL5.0 Threshold 2.5049 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)
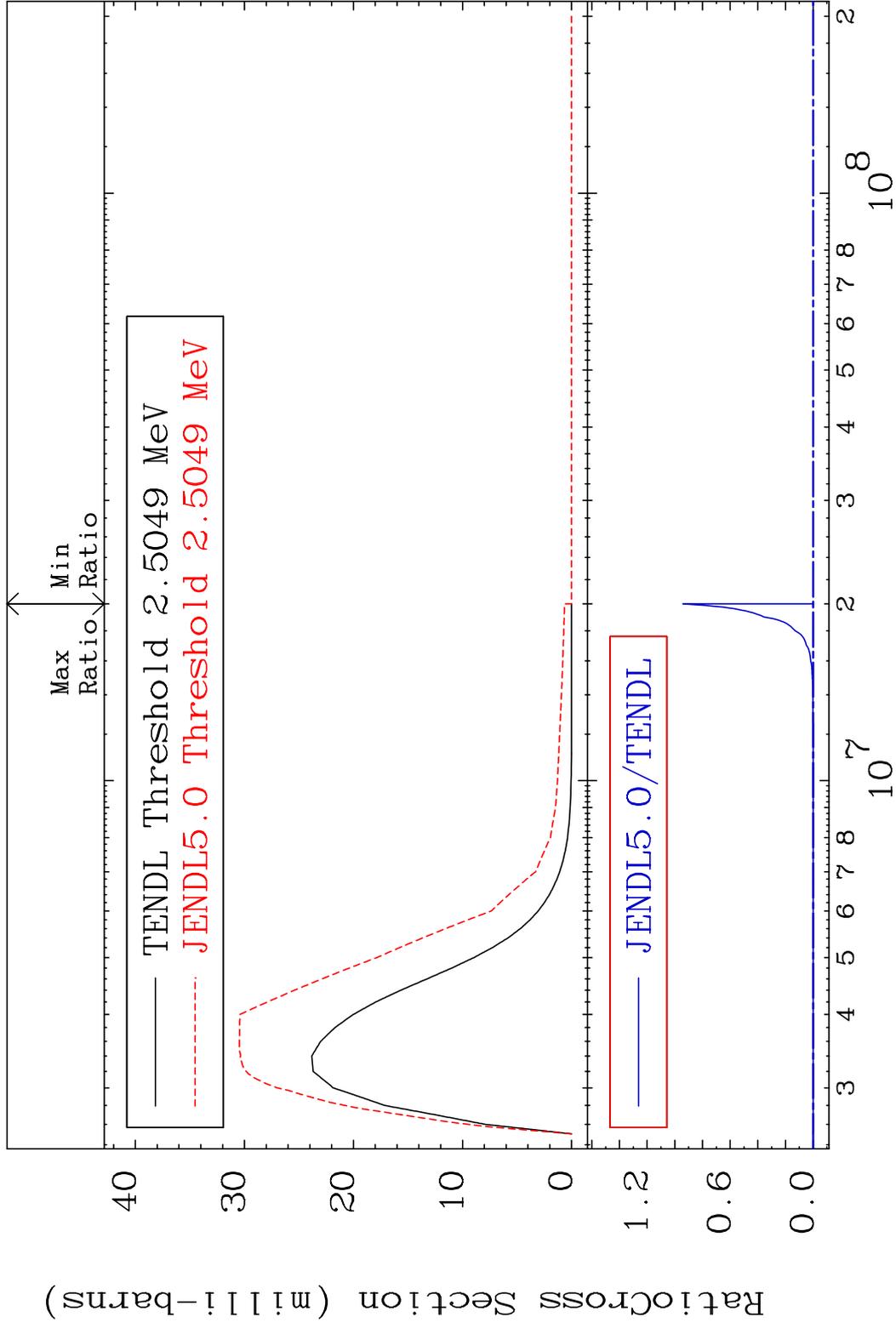
83-Bi-209

MAT 8325   MT= 55 (n,n') Level   83-Bi-209
                  Cross Section -100.0 To 34.39 %

TENDL Threshold 2.5765 MeV
JENDL5.0 Threshold 2.5765 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

MAT 8325   MT= 56 (n,n') Level   83-Bi-209
Cross Section   -100.0 To 45.96 %

Max Ratio

TENDL Threshold 2.5955 MeV
JENDL5.0 Threshold 2.5955 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

MAT 8325   MT= 57 (n,n') Level   83-Bi-209
Cross Section   -100.0 To 840.3 %

Max Ratio   Min Ratio

TENDL Threshold 2.6125 MeV
JENDL5.0 Threshold 2.6125 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)   Ratio

Incident Energy (eV)

83-Bi-209

MAT 8325   MT= 59 (n,n') Level   83-Bi-209
Cross Section   -100.0 To 39.14 %

Max Ratio   Min Ratio

TENDL Threshold 2.6300 MeV
JENDL5.0 Threshold 2.6300 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)
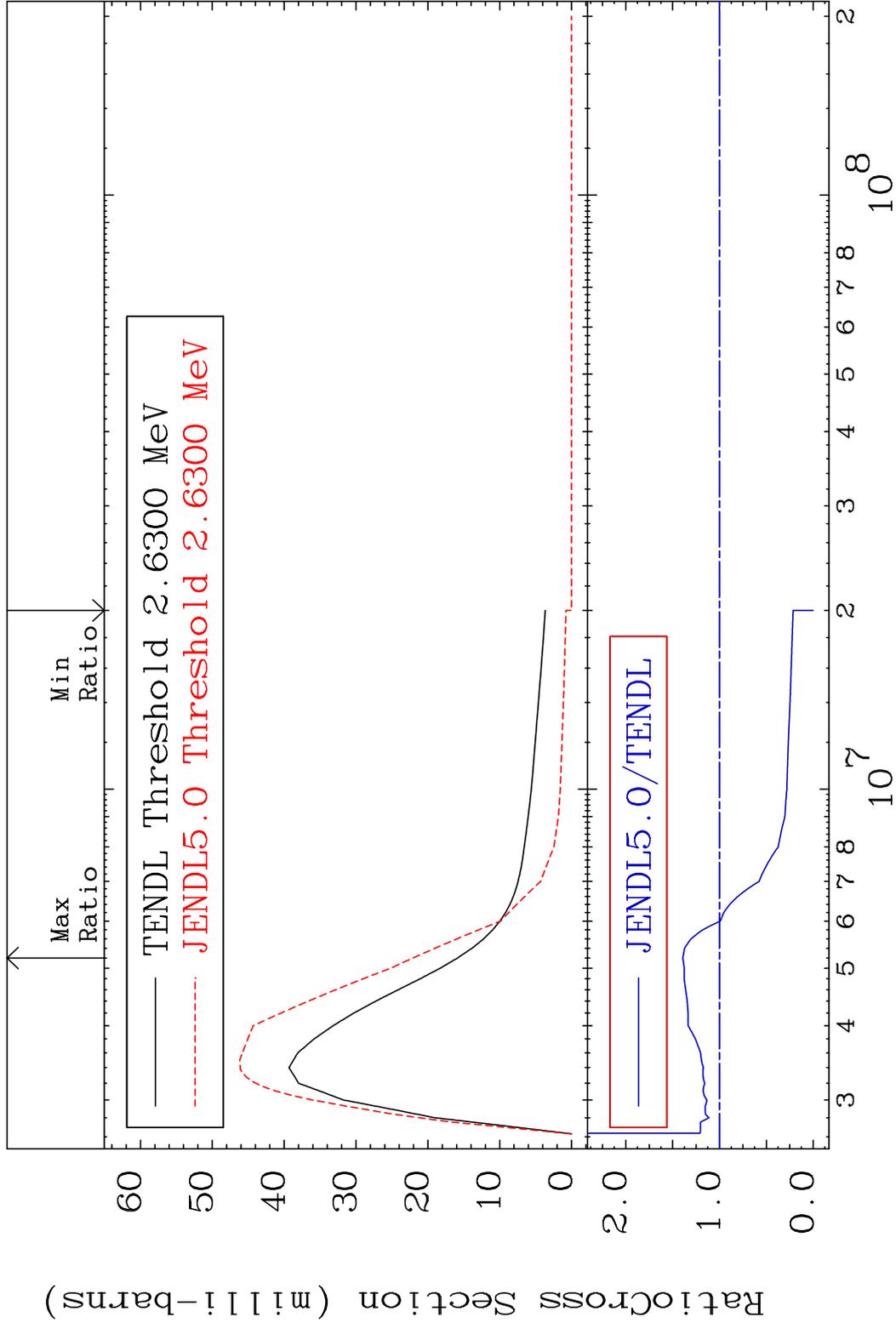
83-Bi-209

MAT 8325   MT= 60 (n,n') Level   83-Bi-209
                  Cross Section -100.0 To 58.38 %
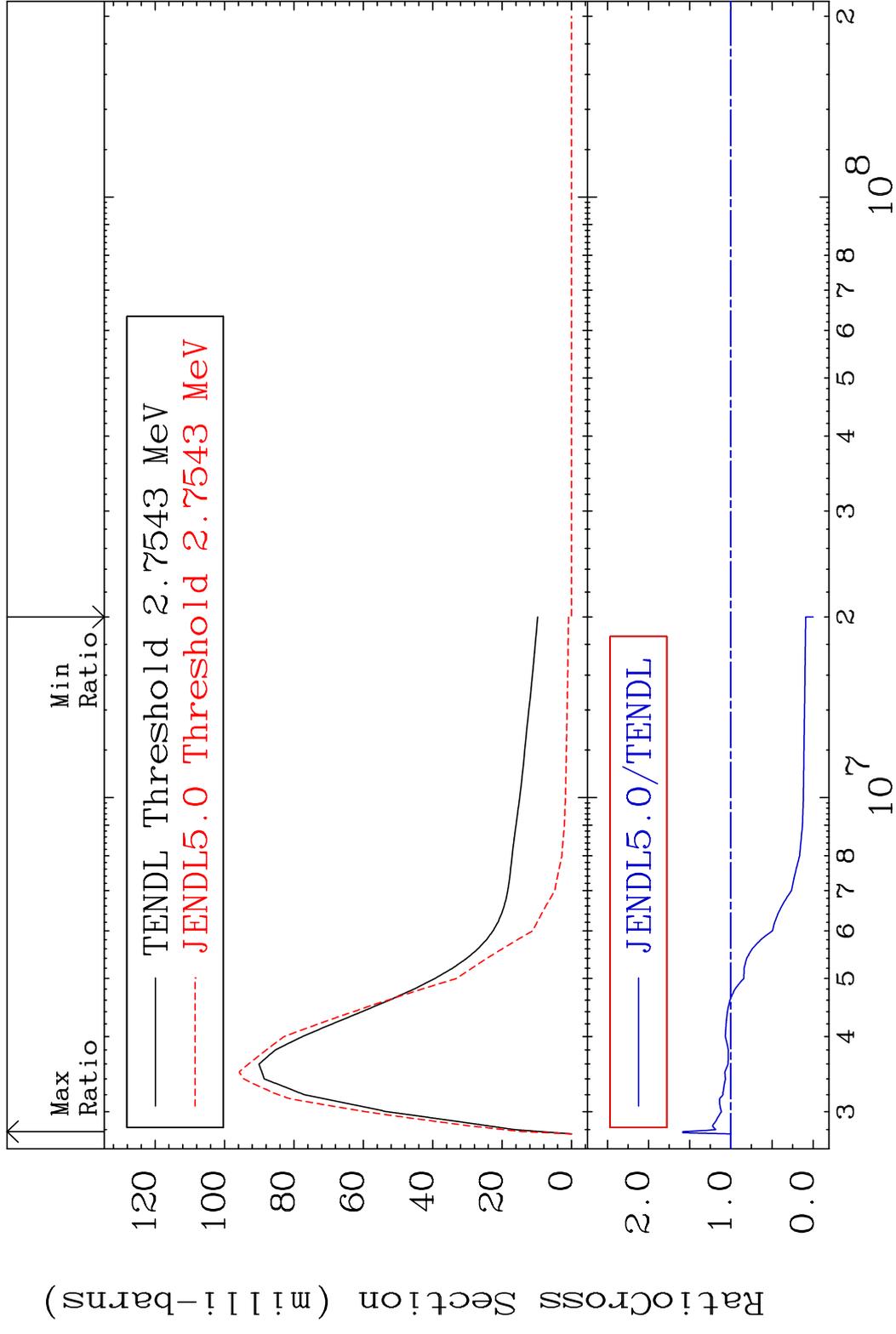
83-Bi-209

MAT 8325   MT= 61 (n,n') Level   83-Bi-209
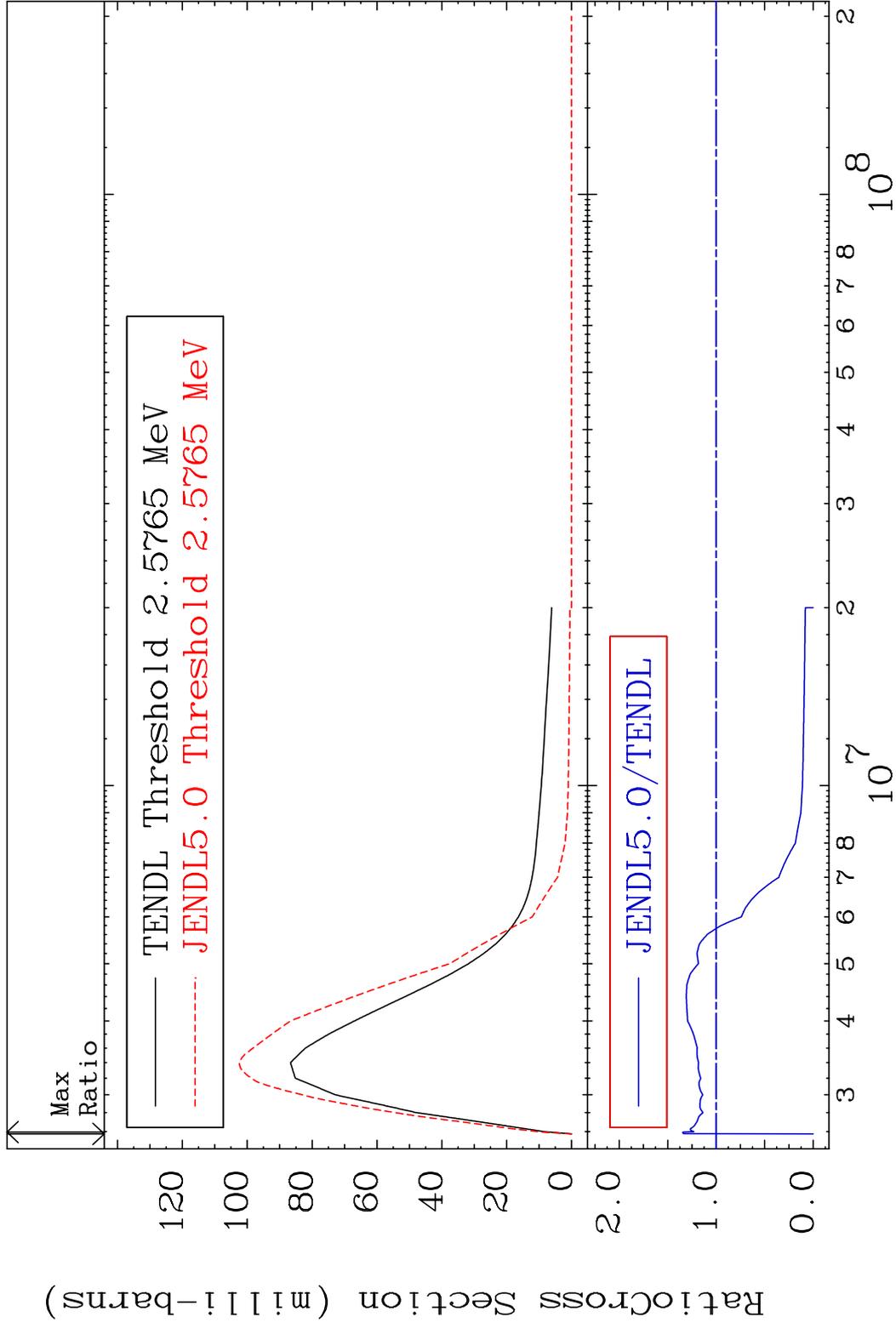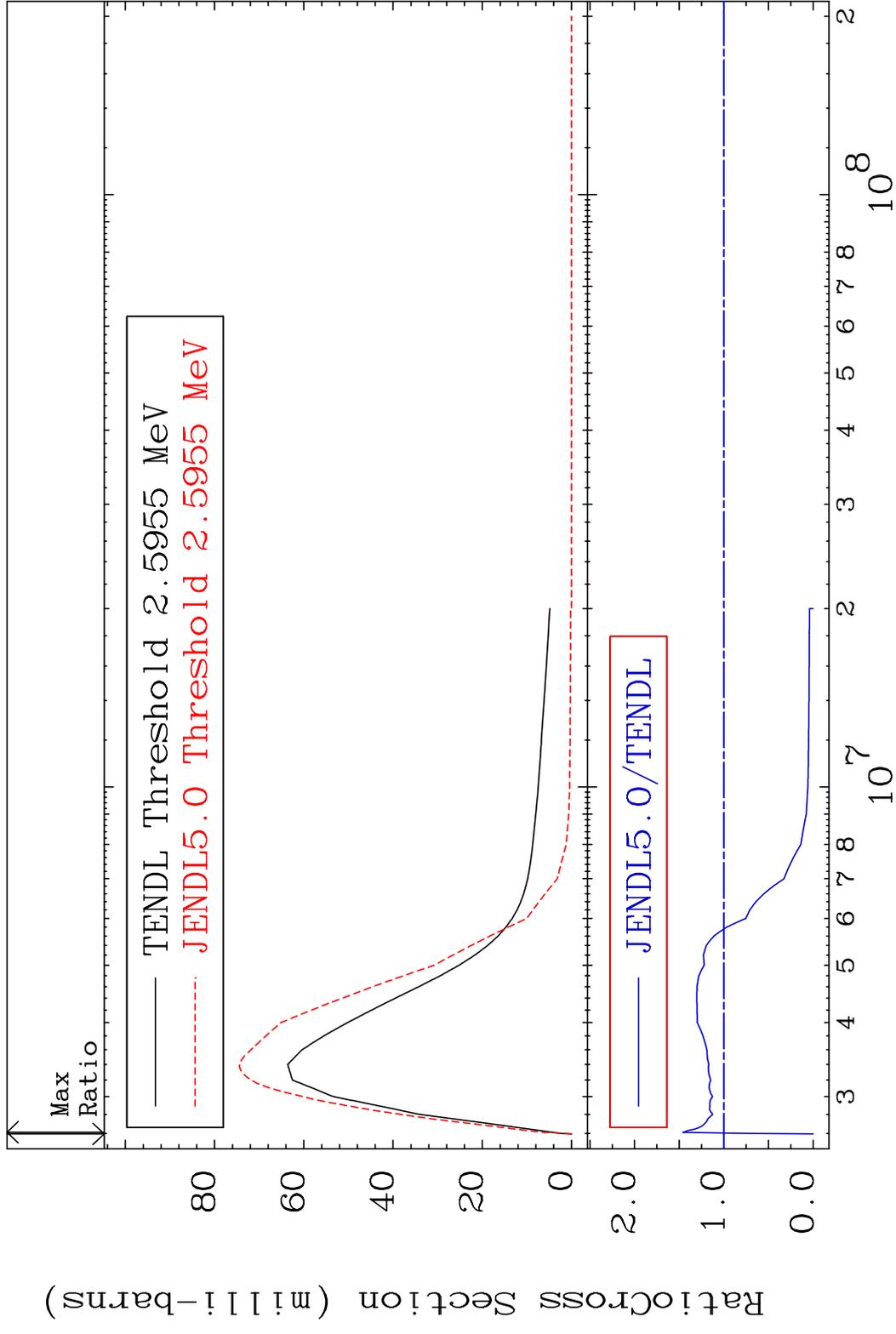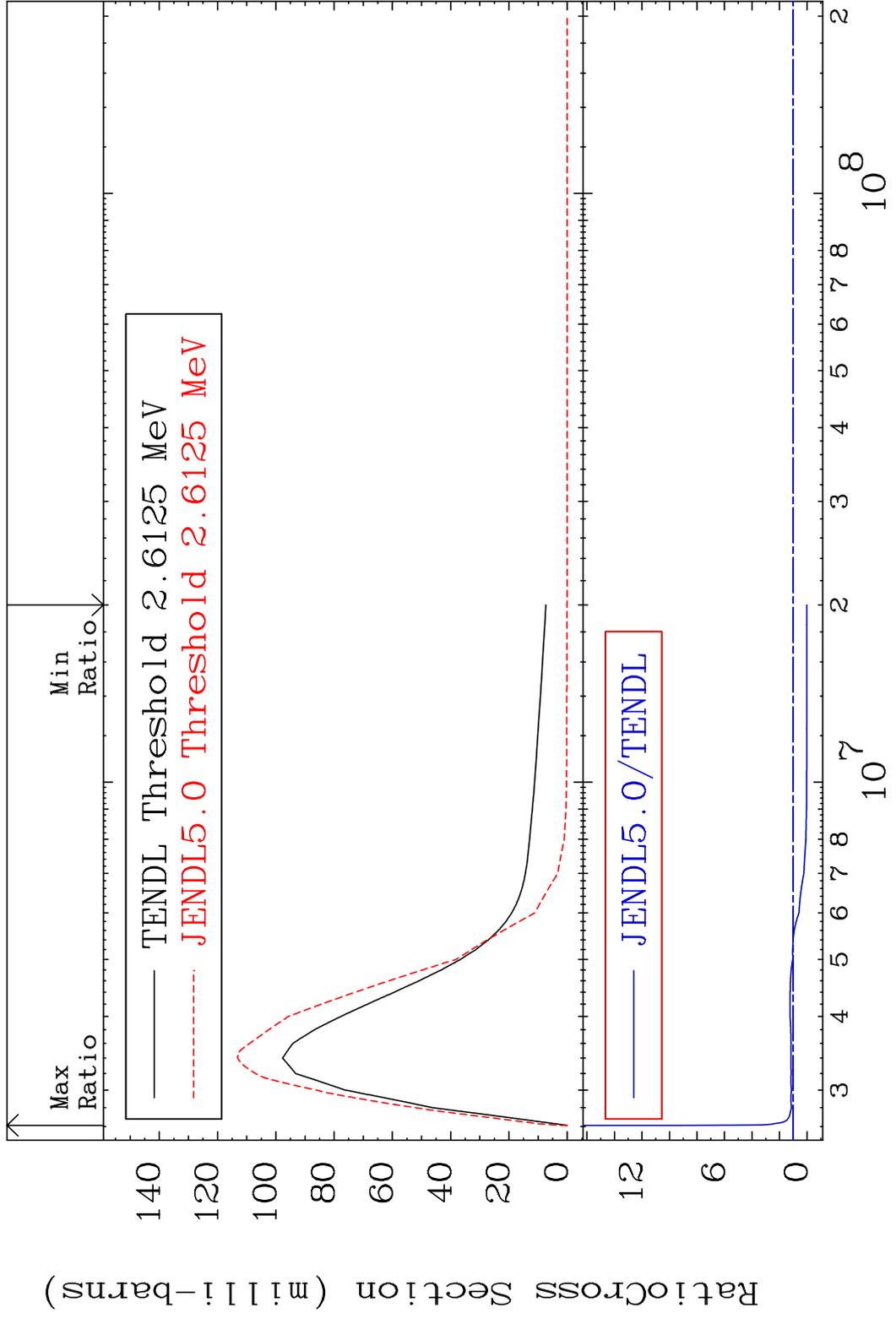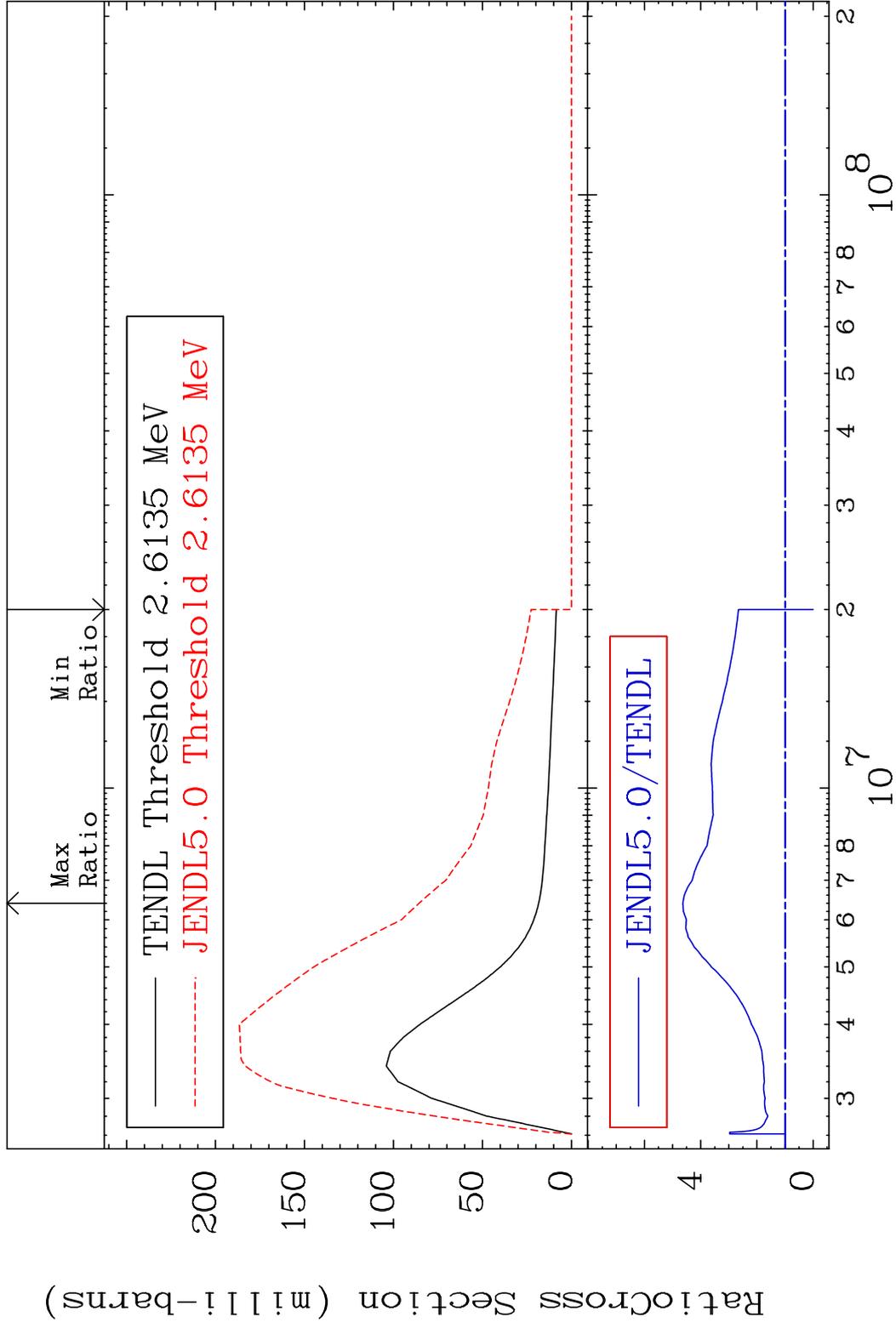Cross Section   -100.0 To 37.67 %

Max Ratio   Min Ratio

TENDL Threshold 2.7800 MeV
JENDL5.0 Threshold 2.7800 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)
Ratio

Incident Energy (eV)
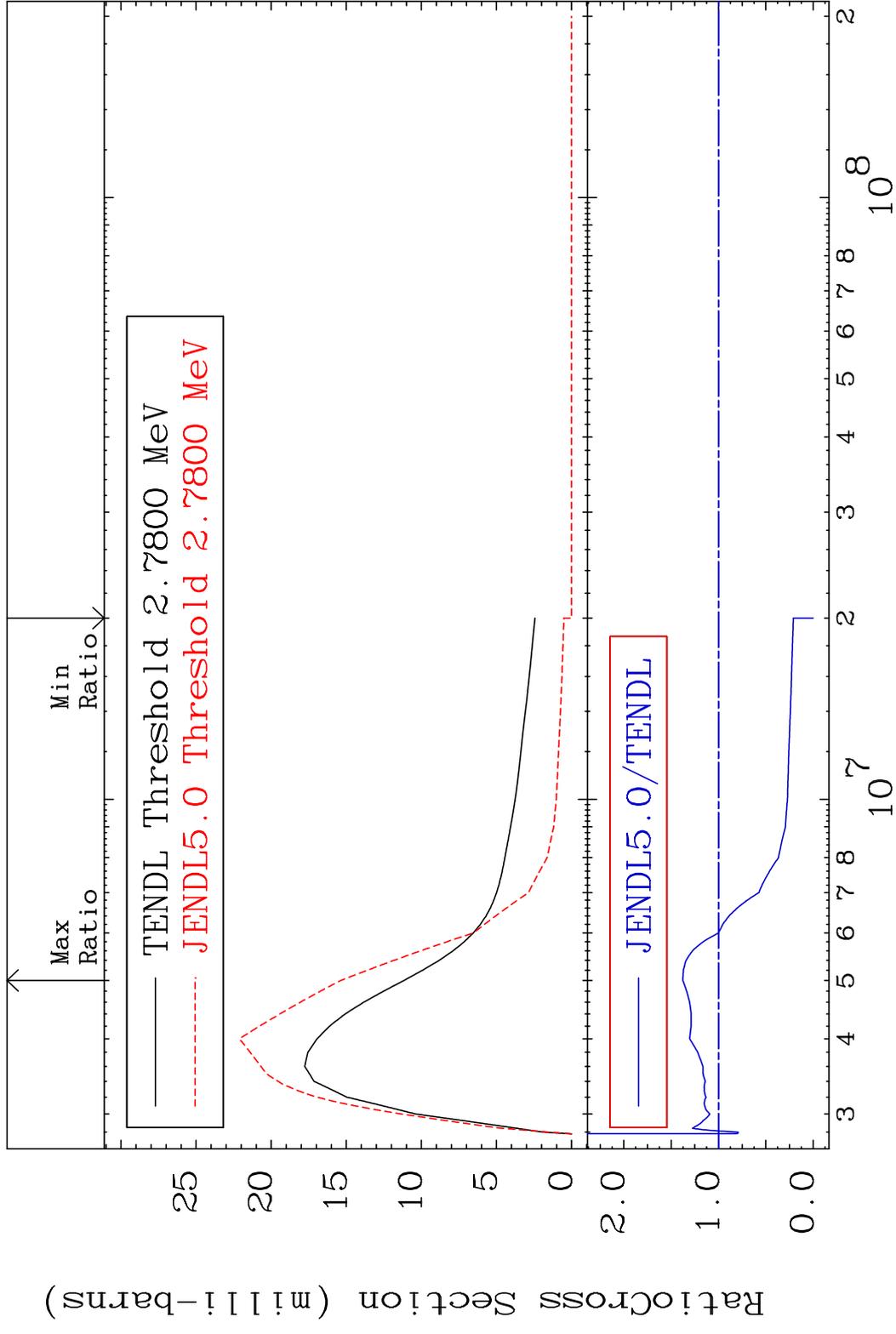
83-Bi-209

MAT 8325   MT= 62 (n,n') Level   83-Bi-209
            Cross Section -100.0 To 9999. %

TENDL Threshold 2.8397 MeV
JENDL5.0 Threshold 2.8397 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

22
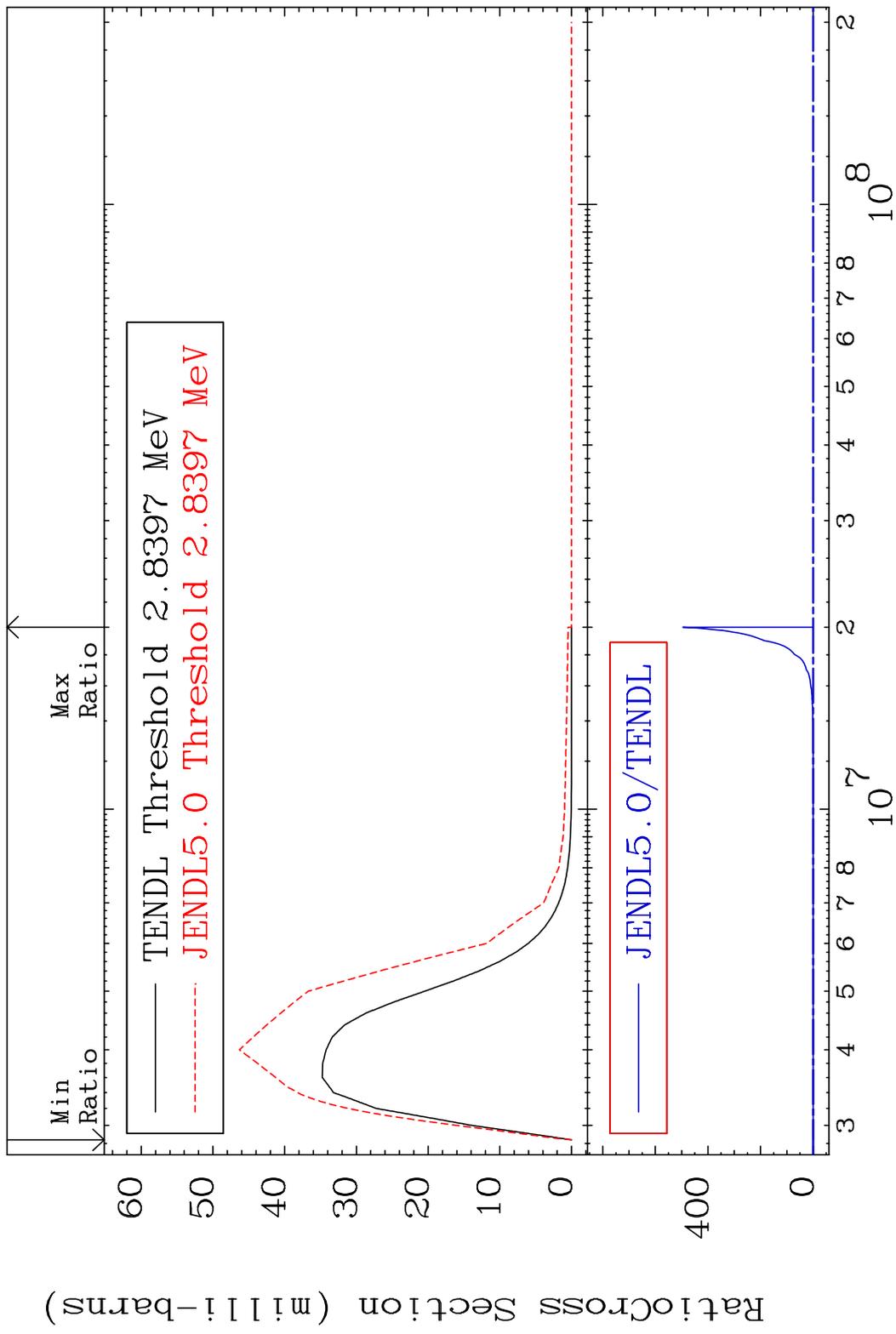
MAT 8325   MT= 63 (n,n') Level   83-Bi-209

Cross Section   -100.0 To 9999. %

TENDL Threshold 2.8589 MeV
JENDL5.0 Threshold 2.8589 MeV

JENDL5.0/TENDL

Incident Energy (eV)   83-Bi-209

Cross Section (milli-barns)

Ratio
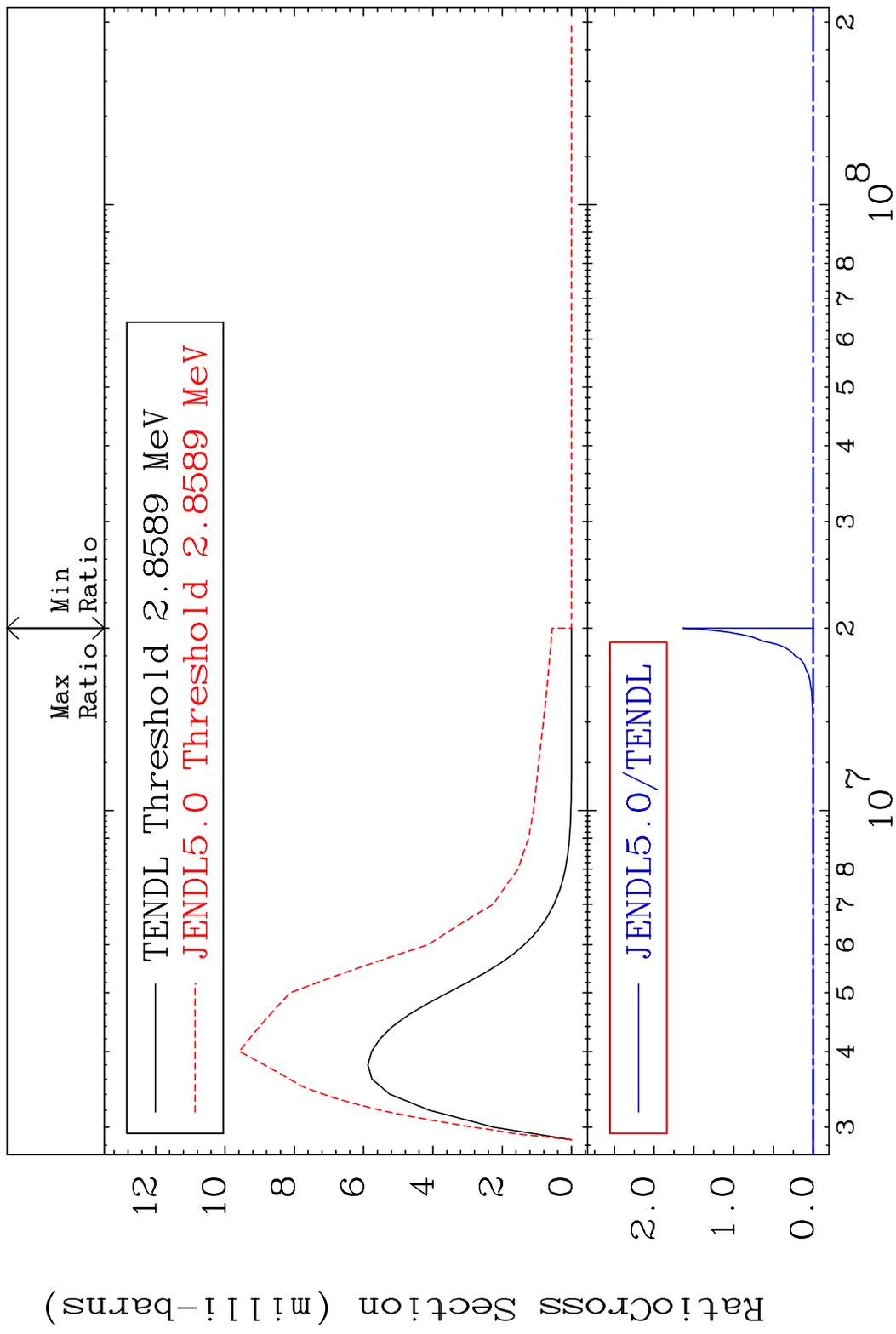
MAT 8325   MT= 64 (n,n') Level   83-Bi-209
                  Cross Section   -100.0 To 9999. %

Max Min
Ratio Ratio

TENDL Threshold 2.9307 MeV
JENDL5.0 Threshold 2.9307 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)
Ratio

Incident Energy (eV)

83-Bi-209

24
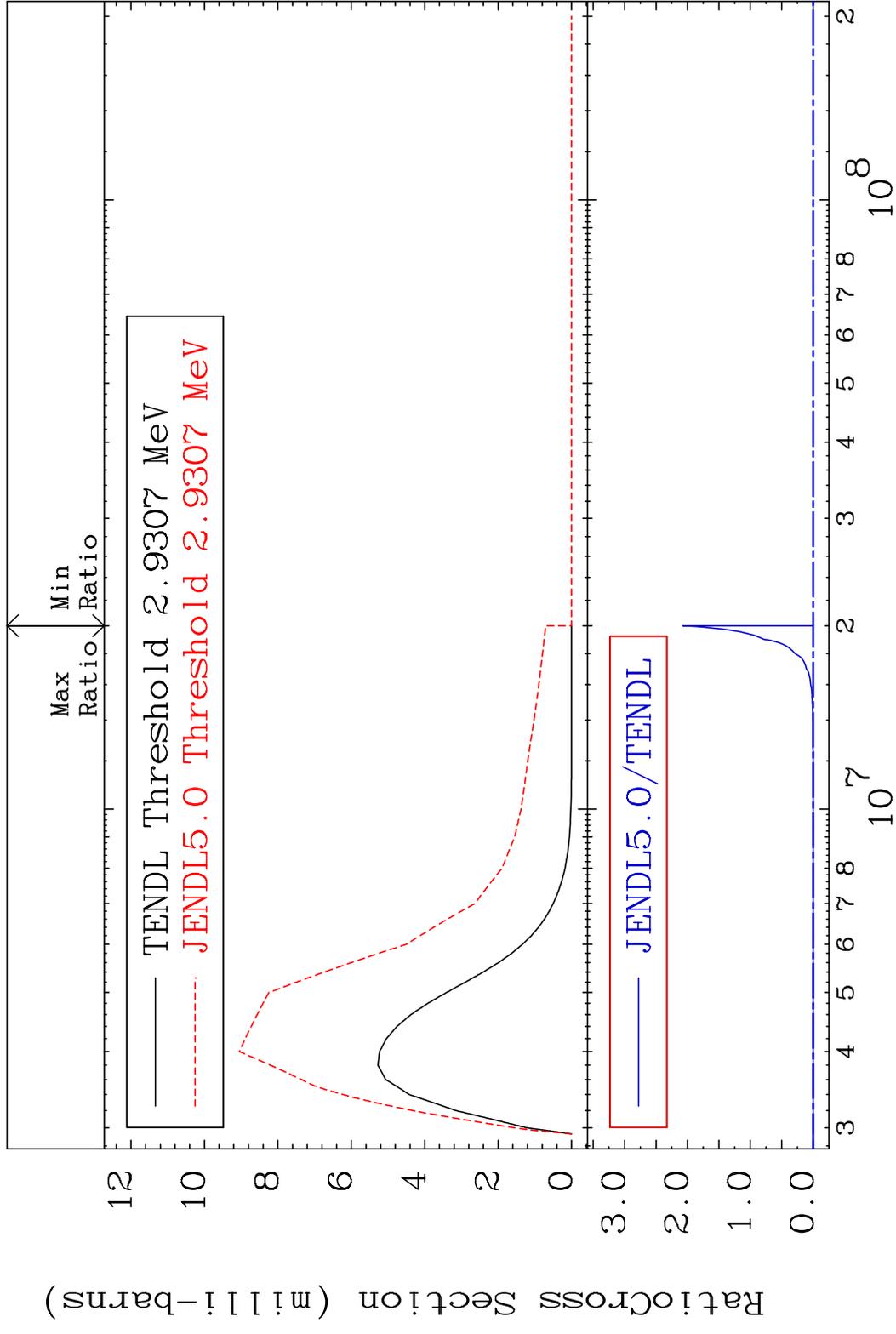
MAT 8325   MT= 65 (n,n') Level   83-Bi-209
                  Cross Section   -100.0 To 9999. %

Max Ratio | Min Ratio

TENDL Threshold 2.9702 MeV
JENDL5.0 Threshold 2.9702 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)
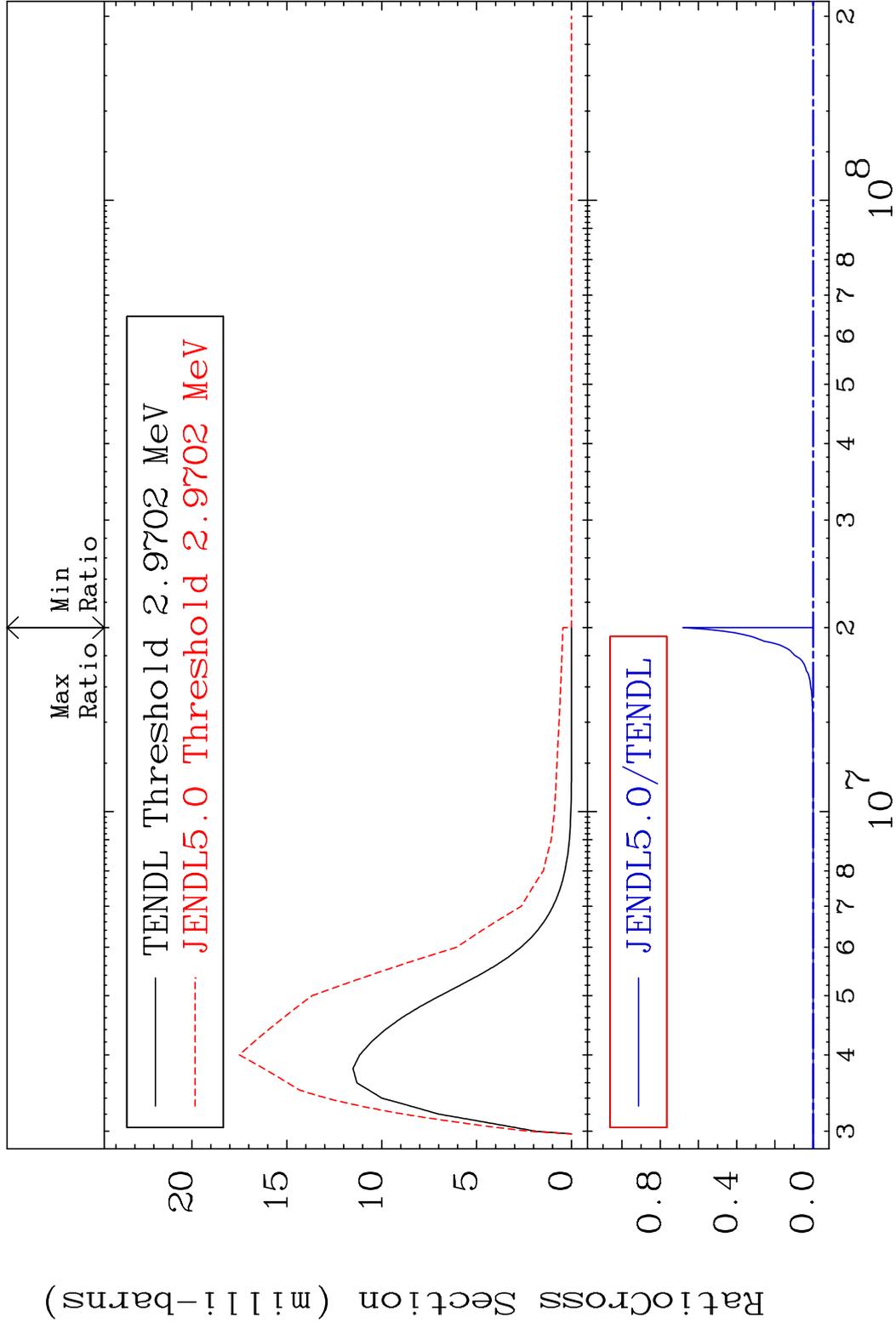
83-Bi-209

MAT 8325   (n,n') Continuum   83-Bi-209
Cross Section   -100.0 To 38.31 %
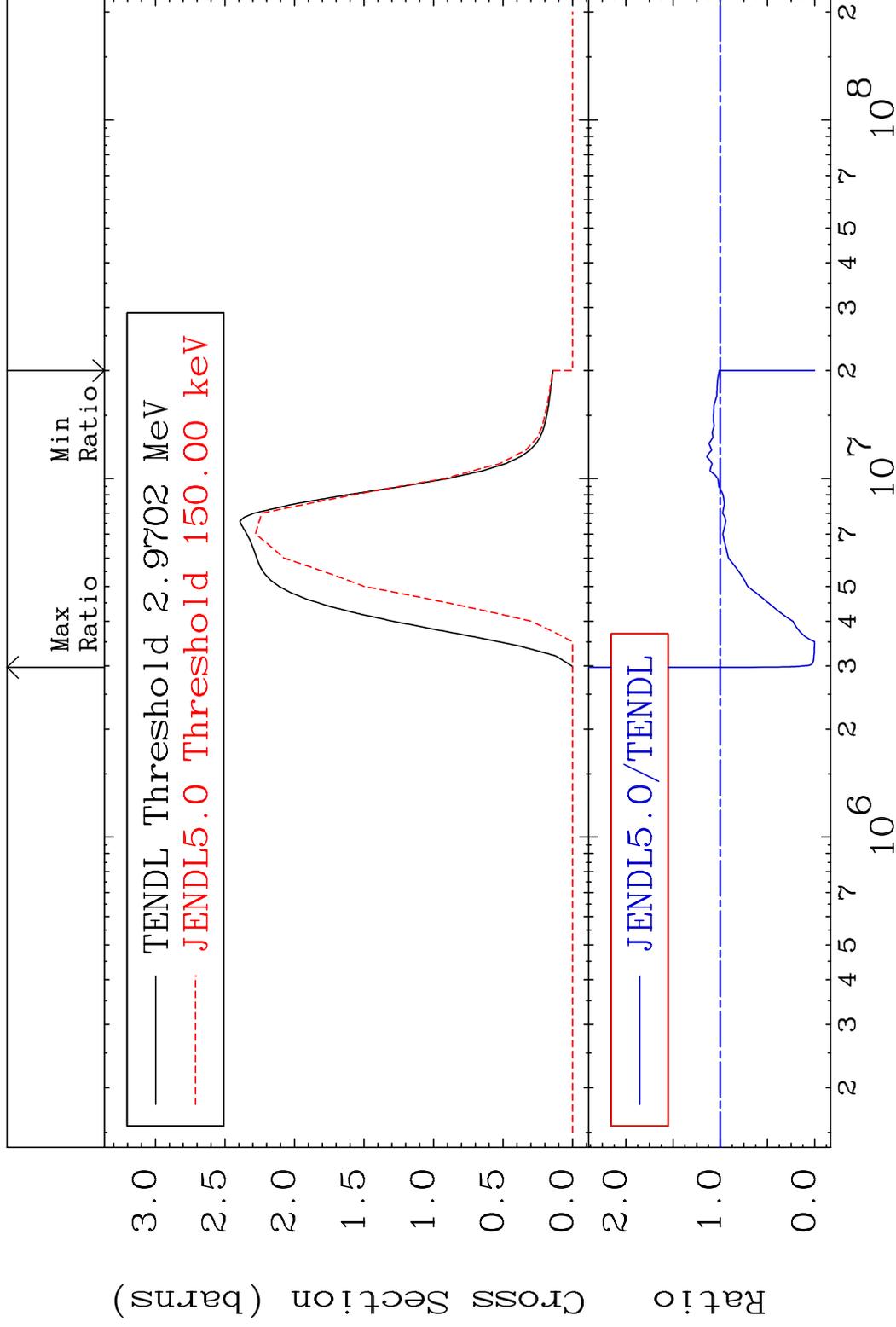
TENDL Threshold 2.9702 MeV
JENDL5.0 Threshold 150.00 keV

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

26

MAT 8325   (n,γ)   83-Bi-209

Cross Section   -100.0 To 9999. %

83-Bi-209

27
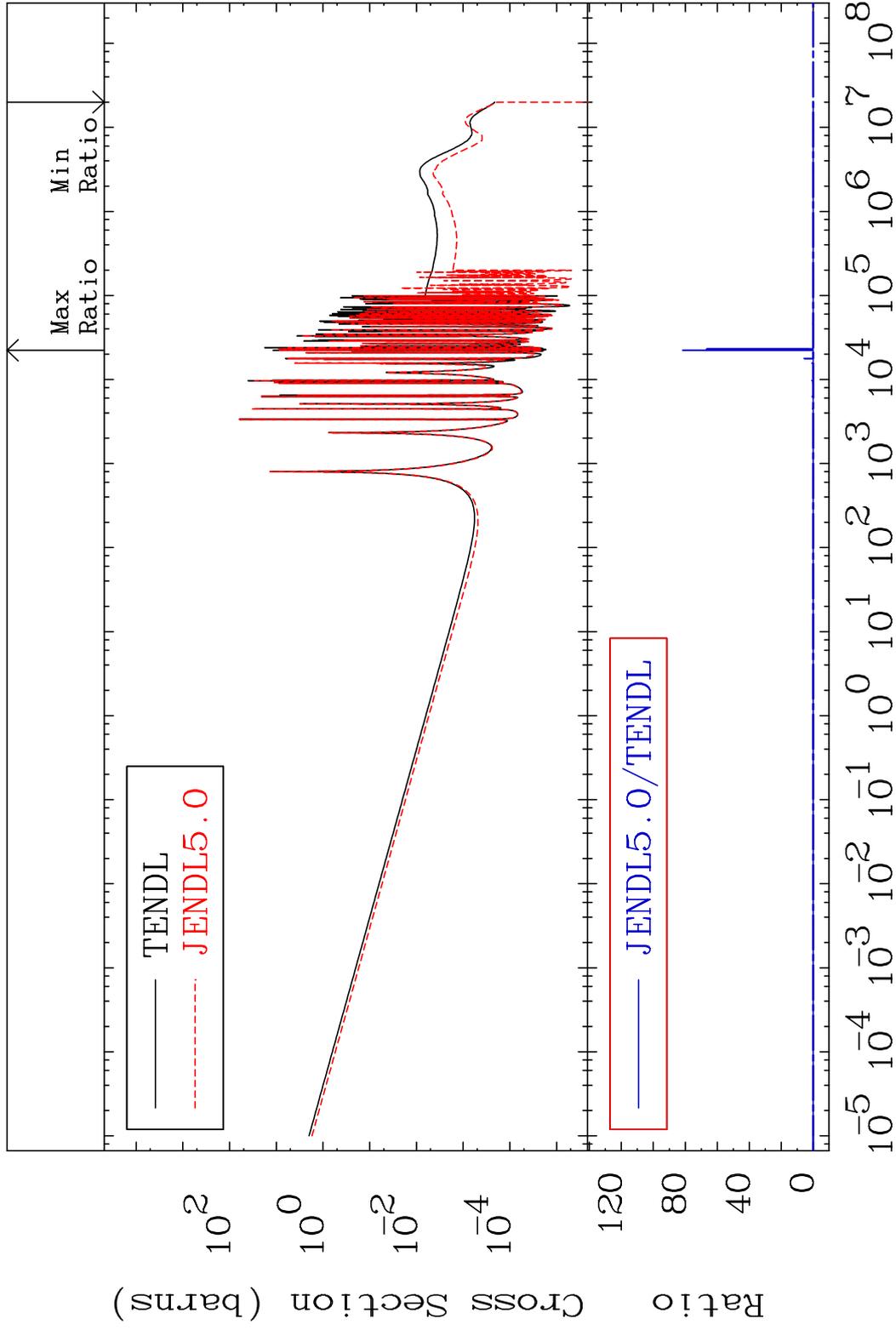
MAT 8325　　　　　　(n,p)　　　　83-Bi-209
　　　　　　　　　Cross Section　-100.0 To 9999. %
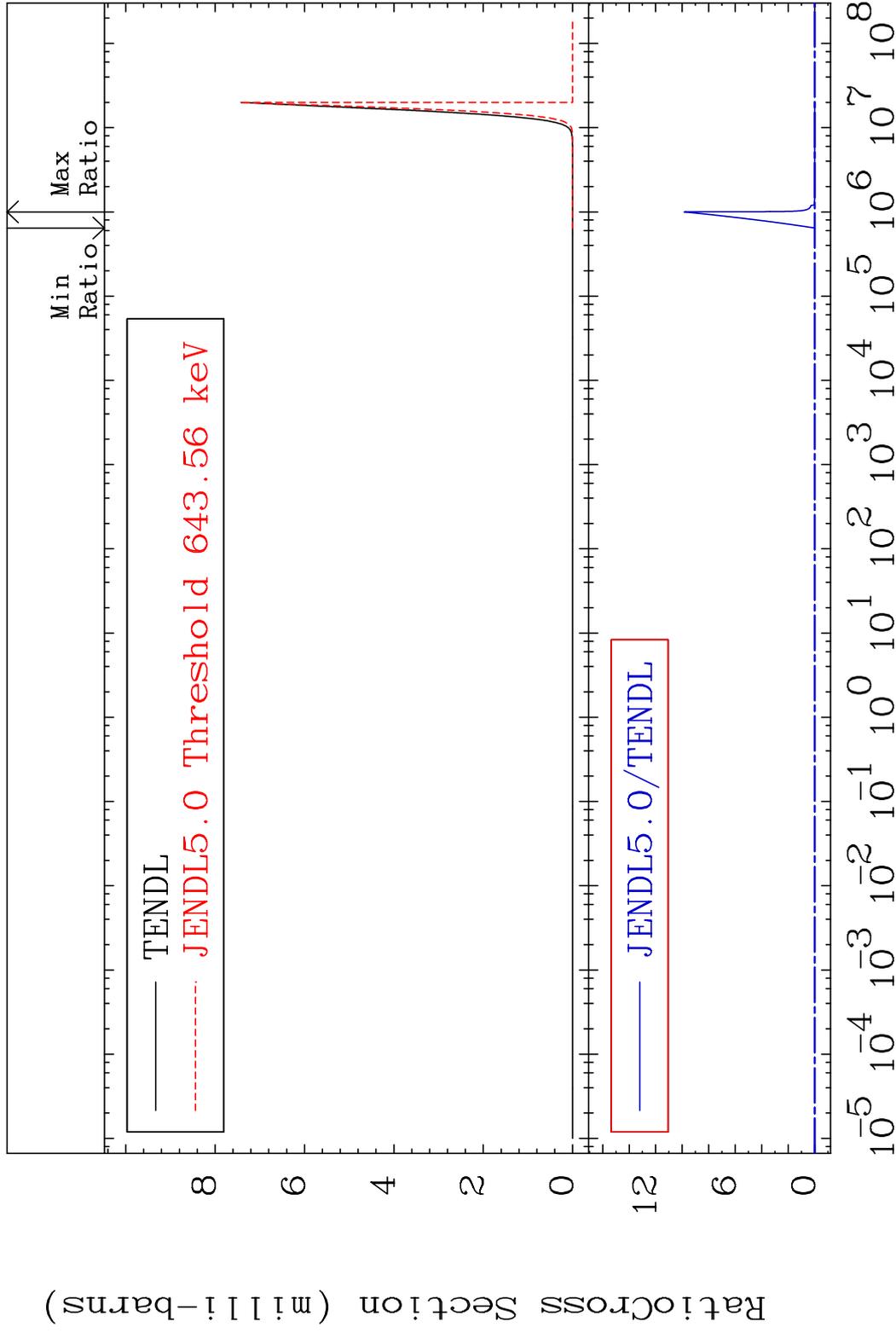
TENDL
JENDL5.0 Threshold 643.56 keV

JENDL5.0/TENDL

Cross Section (milli-barns)
Ratio

Incident Energy (eV)

83-Bi-209

28
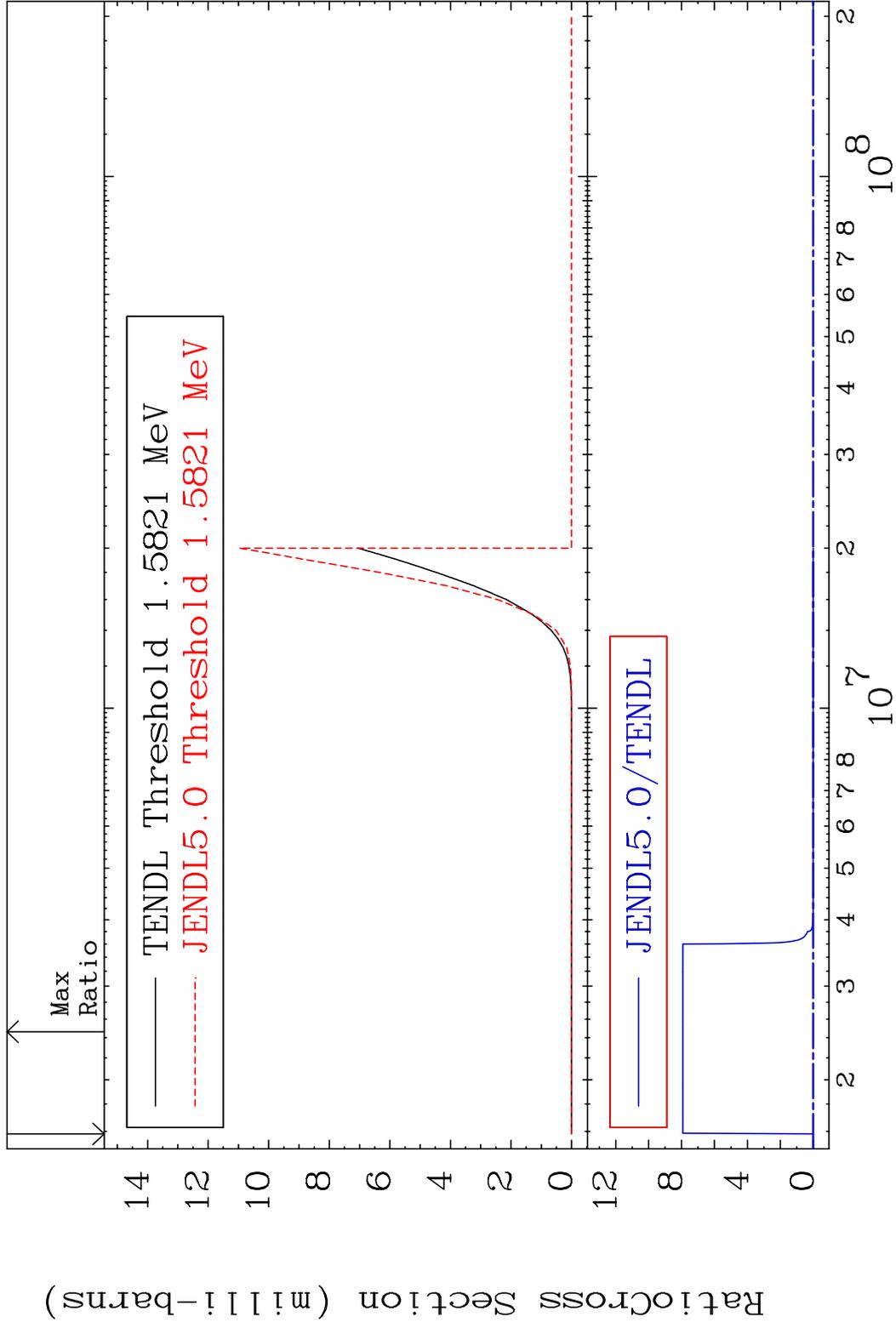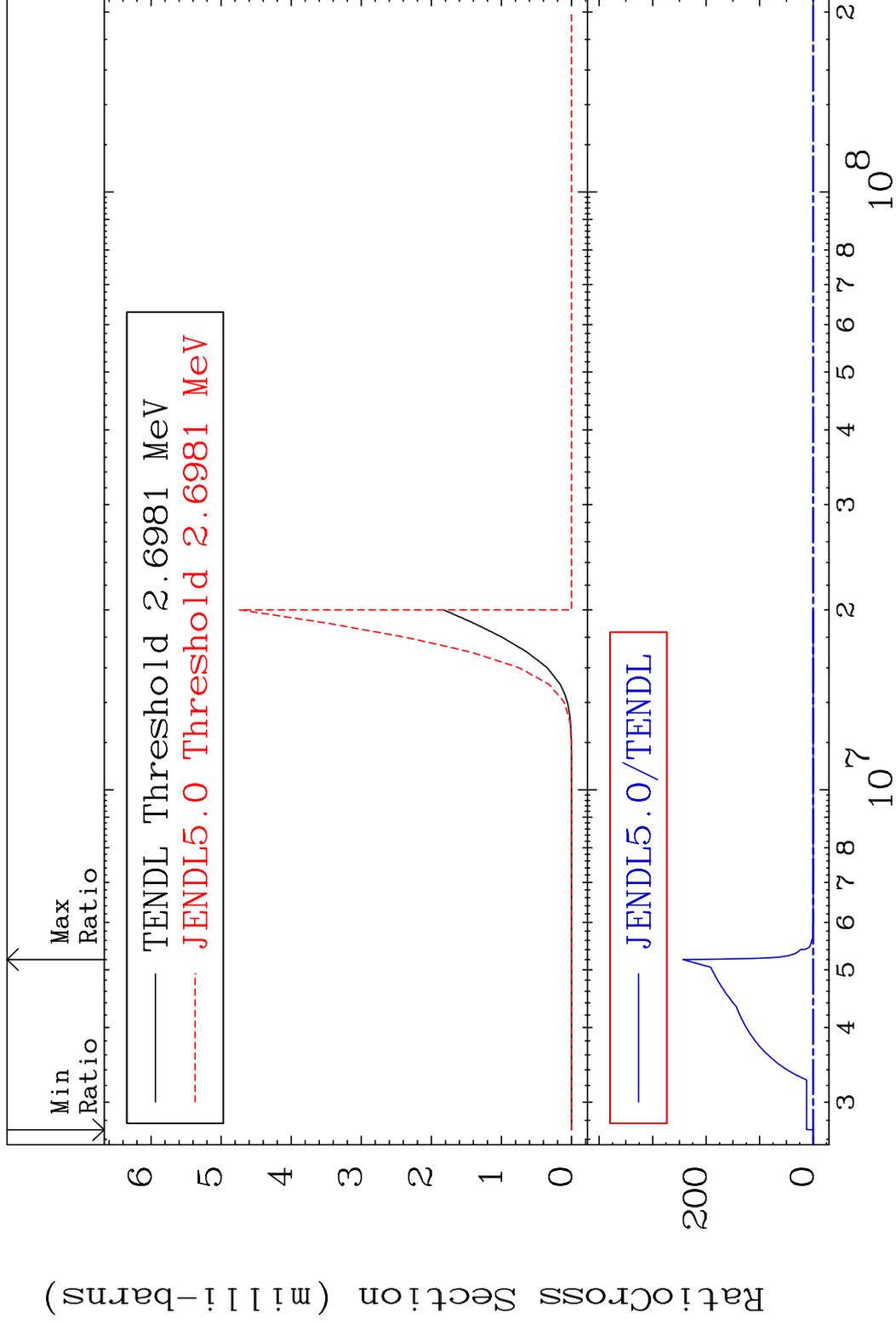
MAT 8325   (n,He-3)   83-Bi-209
           Cross Section   -100.0 To 9999. %
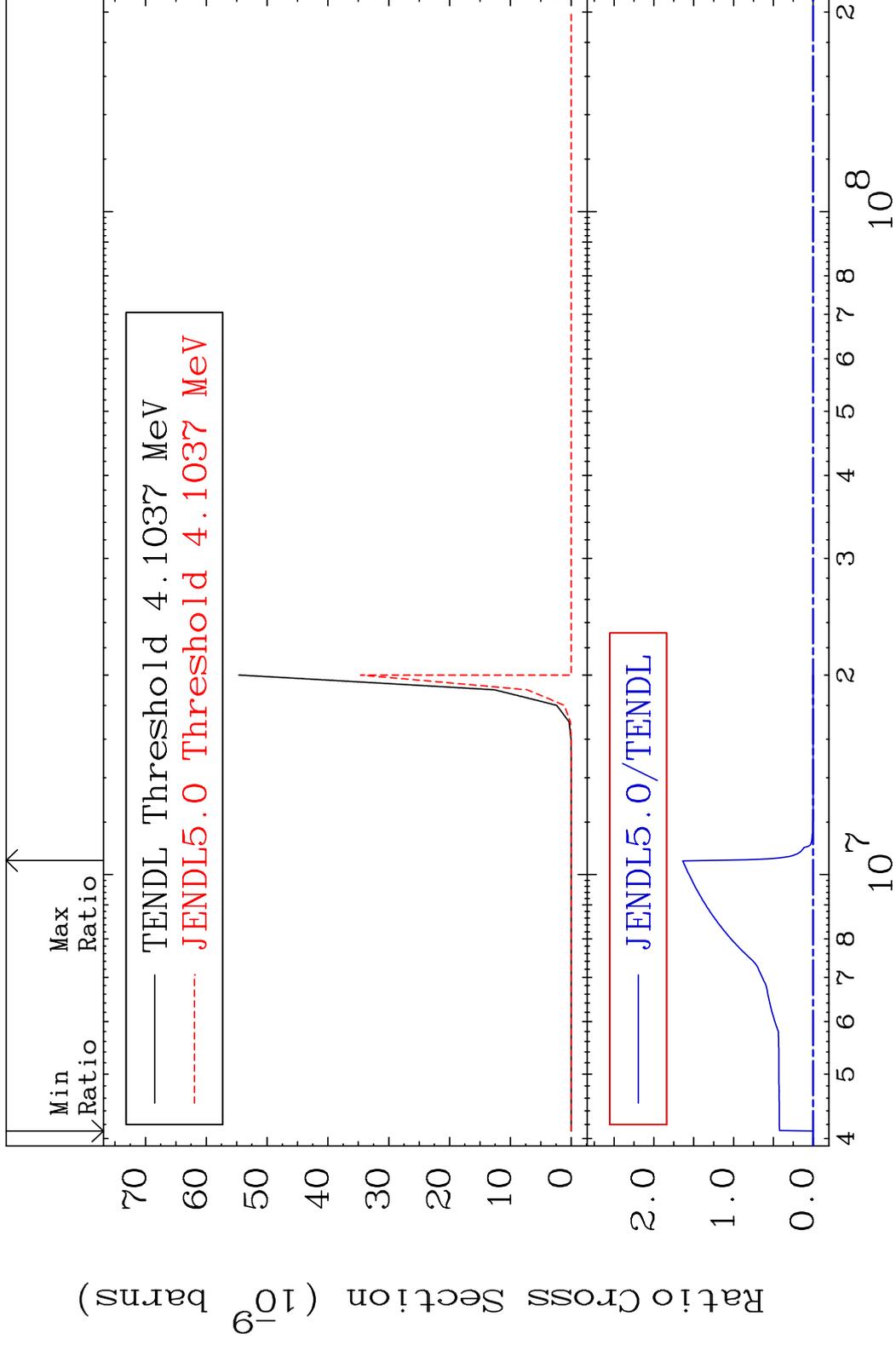
83-Bi-209

Incident Energy (eV)

Cross Section (10^{-9} barns)

Ratio

TENDL Threshold 4.1037 MeV
JENDL5.0 Threshold 4.1037 MeV

JENDL5.0/TENDL

Min Ratio
Max Ratio

31

MAT 8325   (n,α)   83-Bi-209
                      Cross Section   -100.0 To 35.88 %

83-Bi-209

Max
Ratio

TENDL
JENDL5.0

Cross Section (barns)

10^{-2} 10^{-4} 10^{-6} 10^{-8} 10^{-10}

JENDL5.0/TENDL

Ratio

2.0   1.0   0.0

10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}

Incident Energy (eV)

83-Bi-209

32

Hydrogen Production Cross Section −100.0 To 9999. %

83-Bi-209

MAT 8325

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

TENDL
JENDL5.0 Threshold 643.56 keV

JENDL5.0/TENDL

Max Ratio
Min Ratio

33
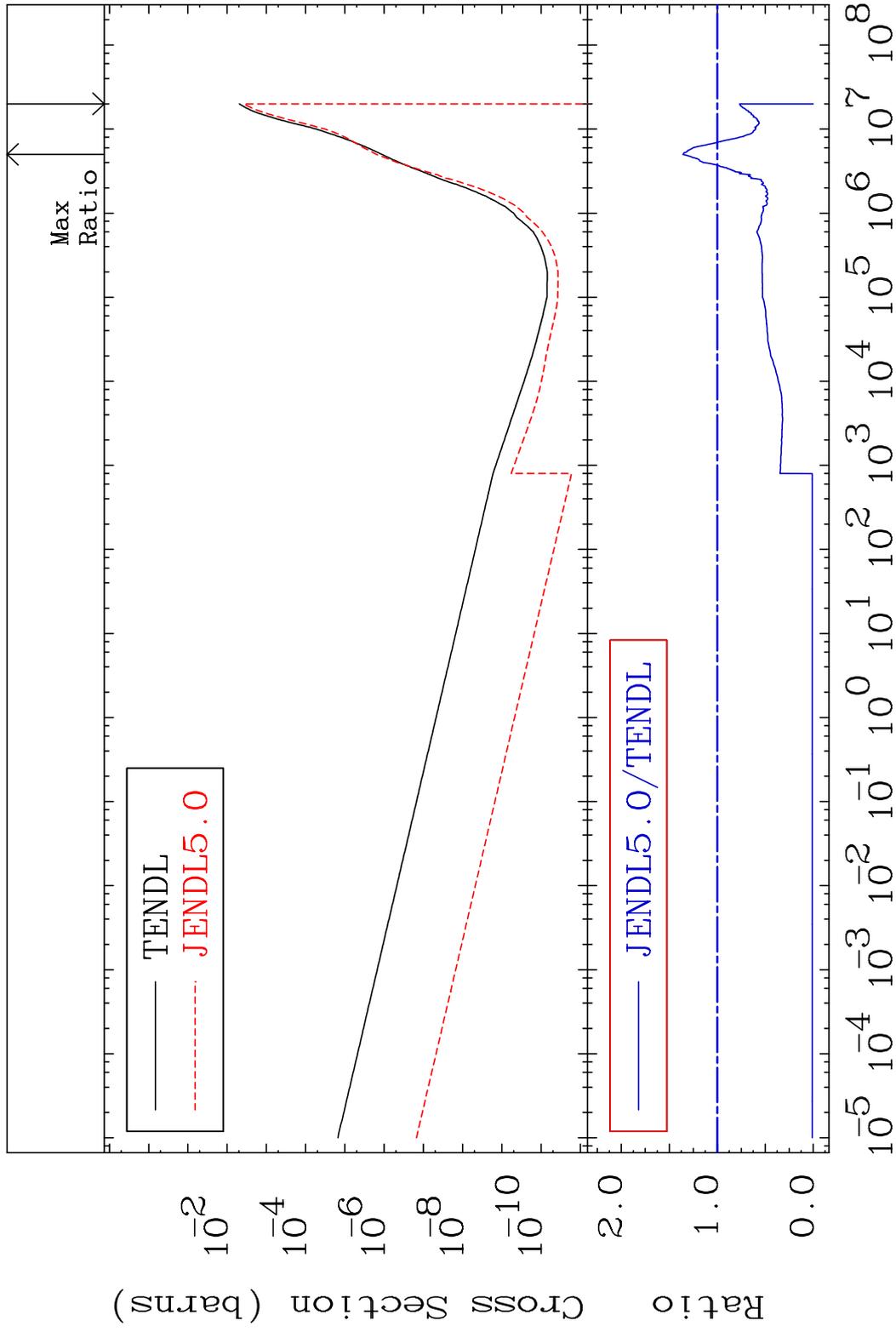
Deuterium Production 83-Bi-209
Cross Section -100.0 To 9999. %

MAT 8325

Max
Ratio

TENDL Threshold 1.5821 MeV
JENDL5.0 Threshold 1.5821 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

34

Tritium Production 83-Bi-209
Cross Section -100.0 To 9999. %

MAT 8325

Min Ratio

Max Ratio

TENDL Threshold 2.6981 MeV
JENDL5.0 Threshold 2.6981 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

He-3 Production
Cross Section   -100.0 To 9999. %

83-Bi-209

MAT 8325

Min
Ratio

Max
Ratio

TENDL Threshold 4.1037 MeV
JENDL5.0 Threshold 4.1037 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

83-Bi-209

36

He-4 Production
Cross Section

83-Bi-209

MAT 8325

-99.02 To 73.24 %

Min Ratio   Max Ratio

Cross Section (barns)

Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Incident Energy (eV)

37   83-Bi-209

Kerma total (eV-barns) Cross Section

83-Bi-209

MAT 8325

-97.00 To 2303. %

Min Ratio

Max Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

38

MAT 8325   Kerma elastic   83-Bi-209
            Cross Section   -97.15 To 2224. %

83-Bi-209

Incident Energy (eV)

Cross Section (barns)

Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Min Ratio
Max Ratio
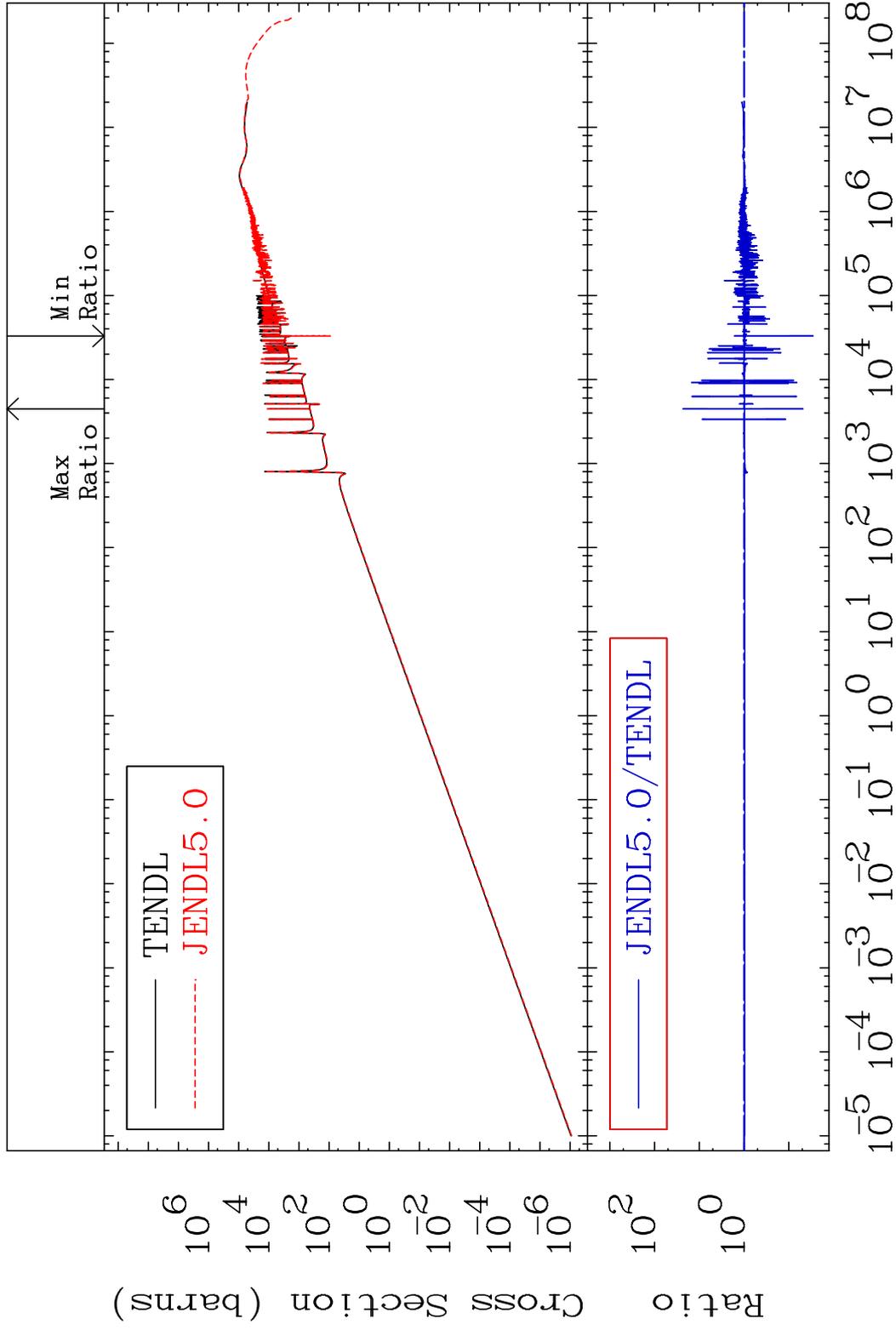
39

MAT 8325   Kerma non-elastic (all but mt2)   83-Bi-209
Cross Section   -100.0 To 9999. %

Min Ratio   Max Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

Kerma inelastic (mt51-91)   83-Bi-209
Cross Section   -9999. To 9999. %

MAT 8325

Min Ratio   Max Ratio

TENDL Threshold 900.61 keV
JENDL5.0 Threshold 150.00 keV

JENDL5.0/TENDL

Ratio Cross Section (kilo-barns)

Incident Energy (eV)

83-Bi-209

41
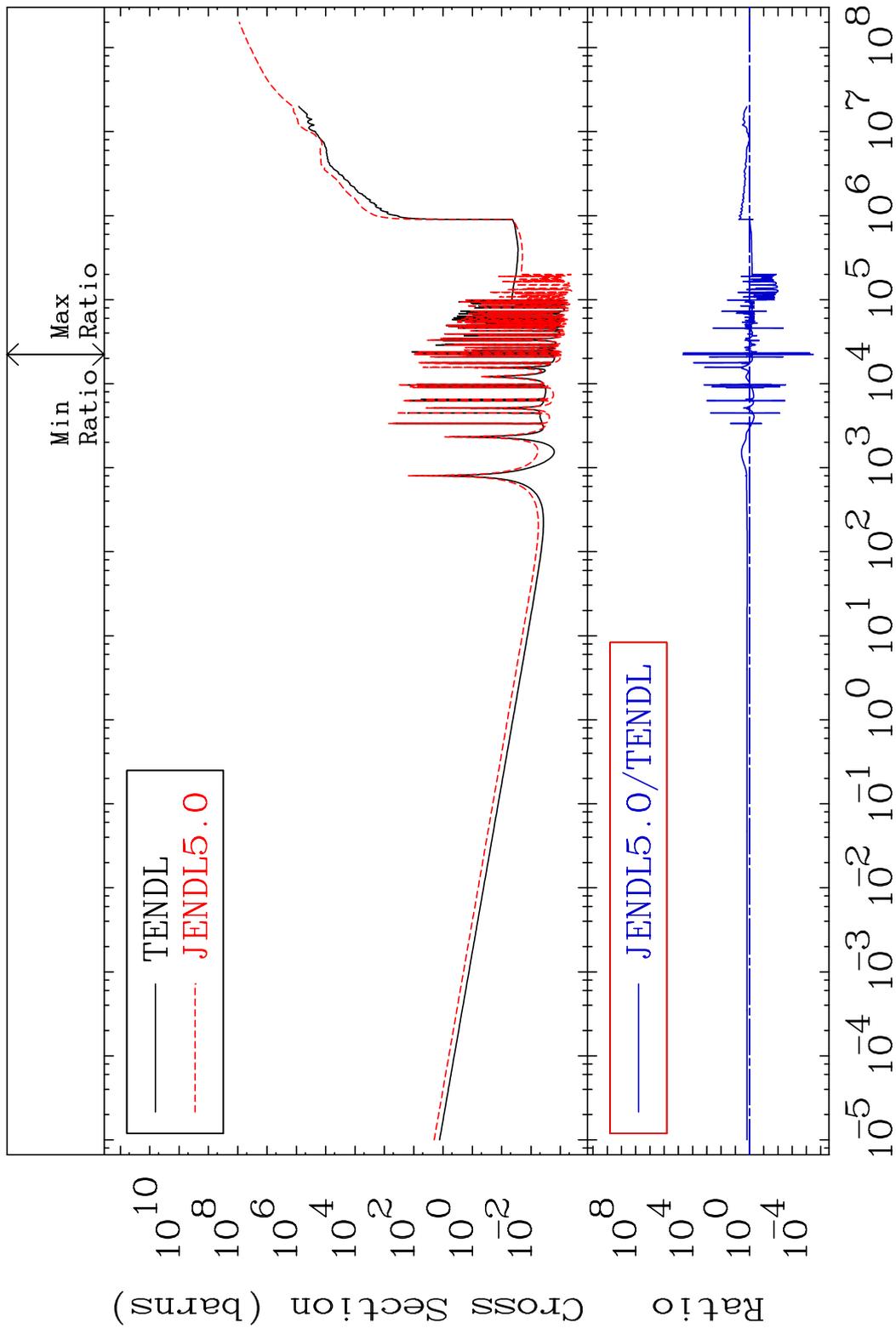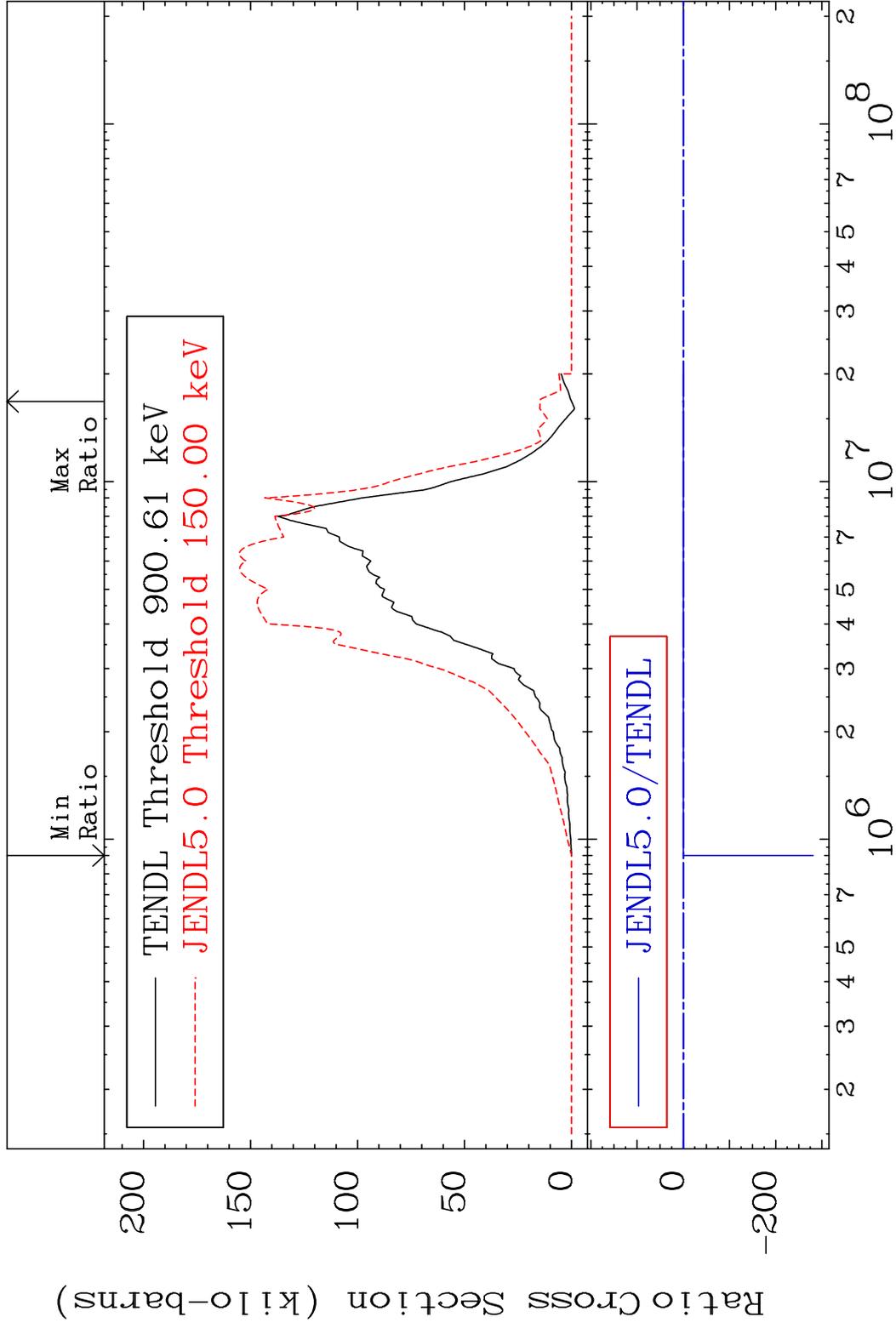
MAT 8325 Kerma fission (mt18 or mt19-20-21-38)83-Bi-209
Cross Section   -9999. To 9999. %
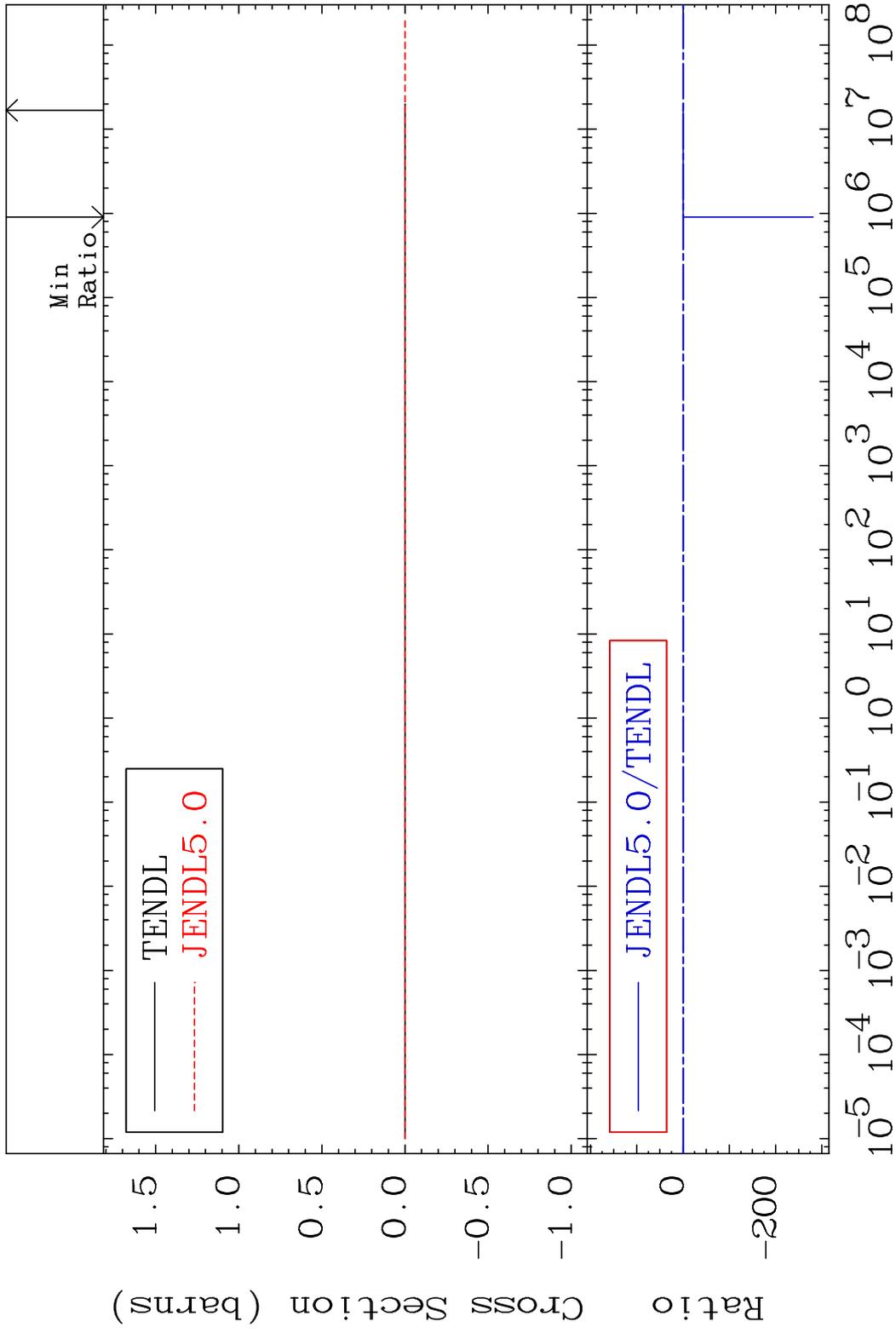
Min
Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

42

Kerma capture (mt102) Cross Section 83-Bi-209

MAT 8325

TENDL

JENDL5.0

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)

83-Bi-209

43
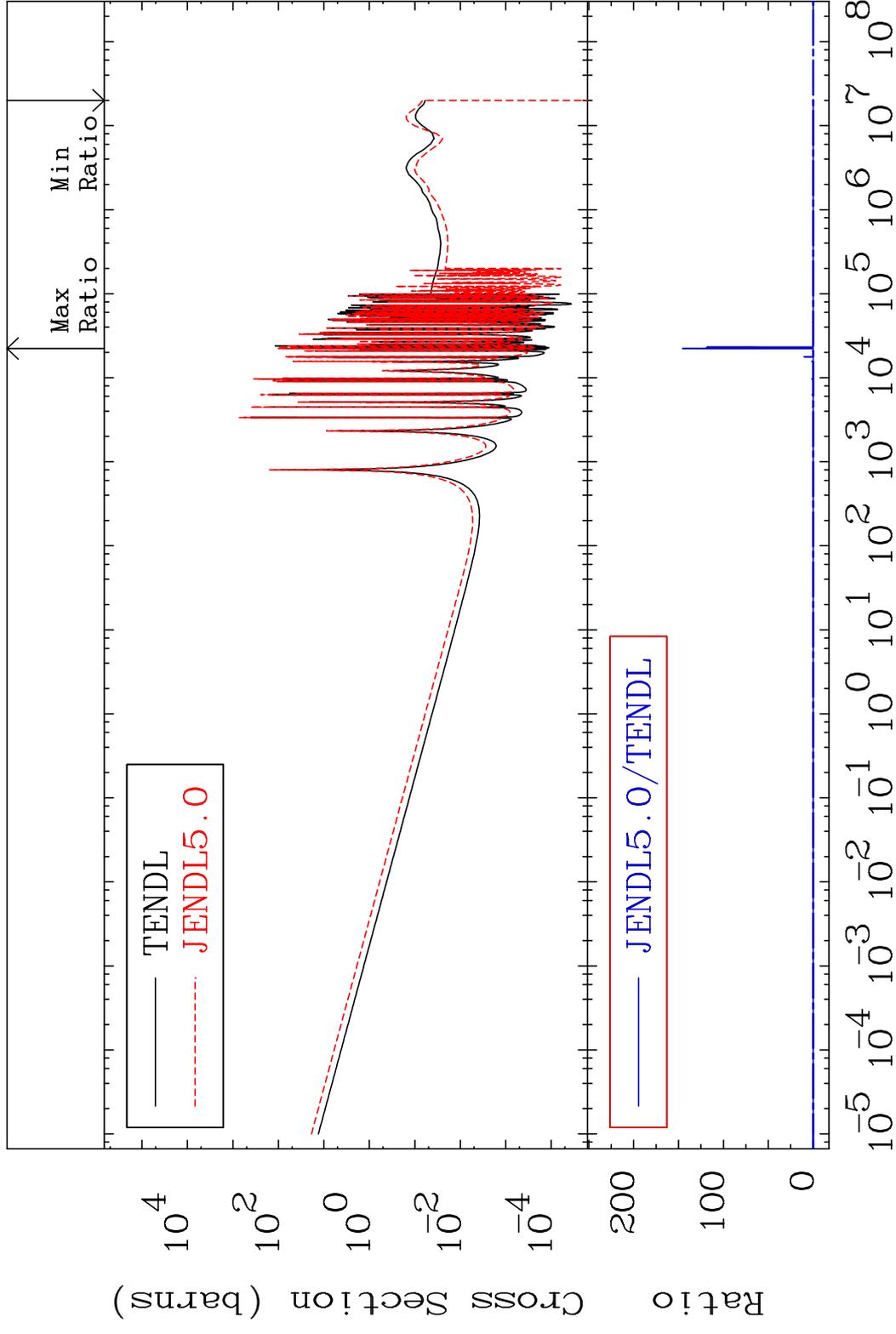
MAT 8325   Total photon (eV-barns)   83-Bi-209
Cross Section   -100.0 To 9999. %

83-Bi-209

44
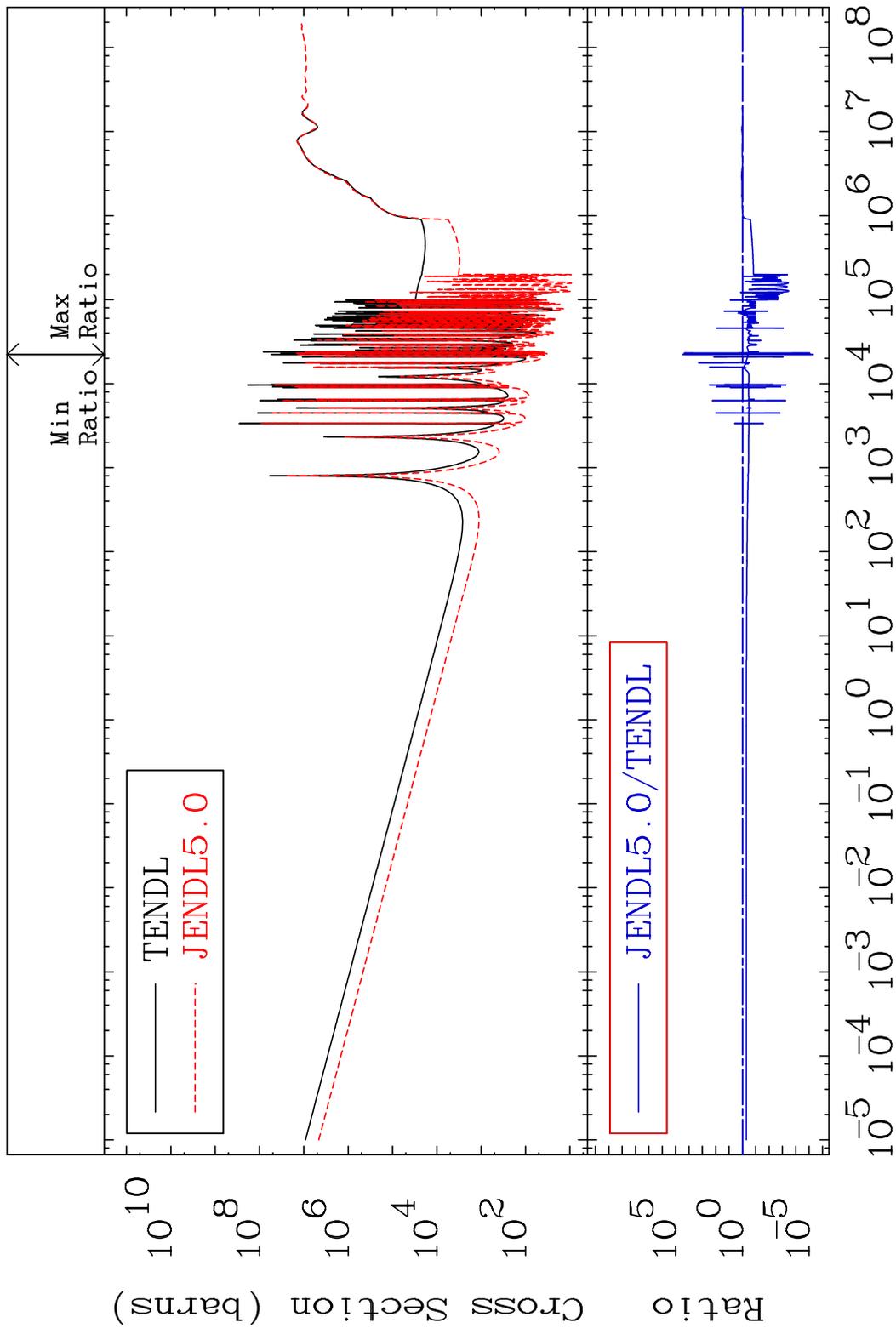
MAT 8325 Total kinematic kerma (high limit) 83-Bi-209
Cross Section -97.00 To 2303. %

83-Bi-209

Incident Energy (eV)

Cross Section (barns)

Ratio

TENDL
JENDL5.0

JENDL5.0/TENDL

Min Ratio
Max Ratio

45
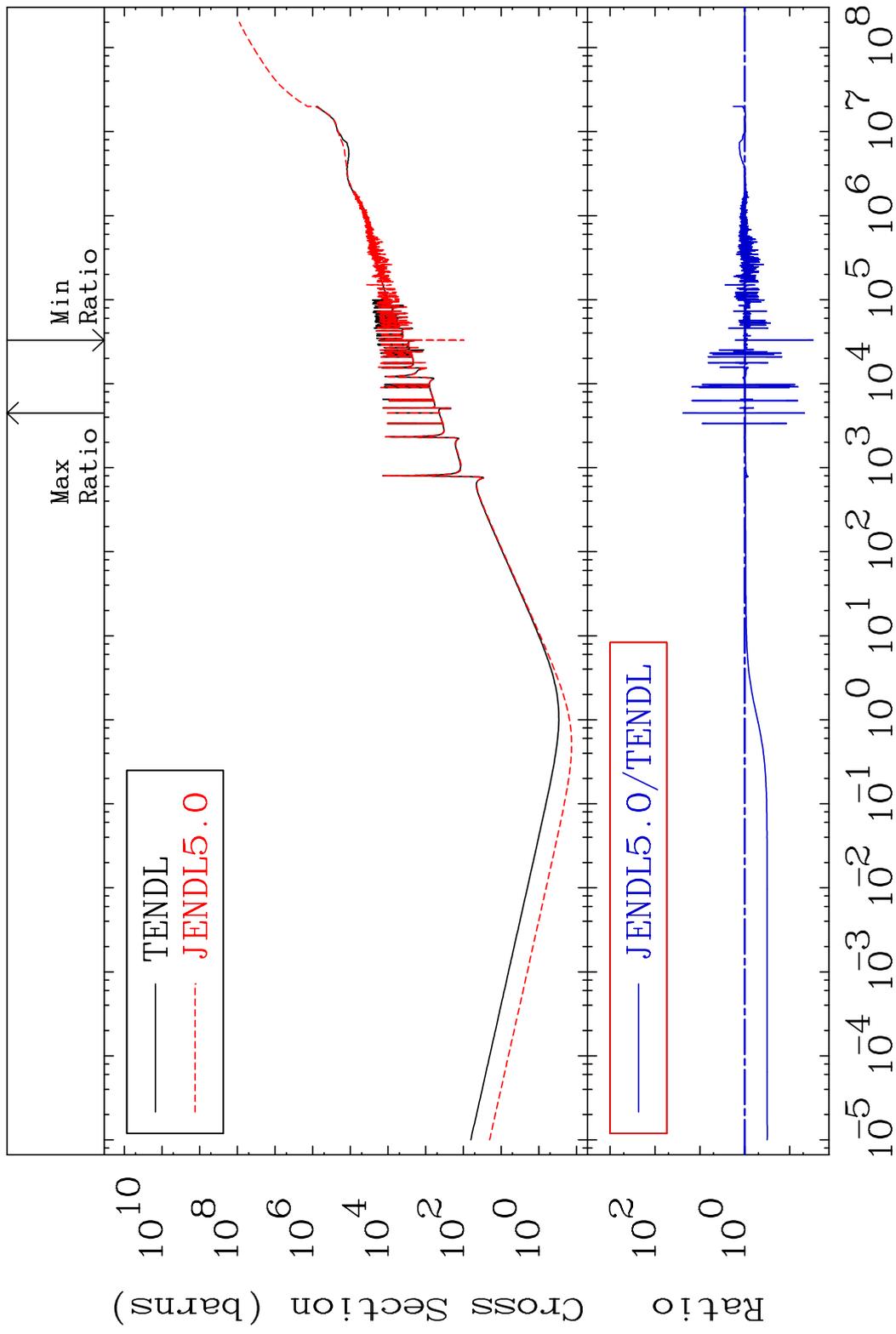
MAT 8325   Dpa total (eV-barns)   83-Bi-209
           Cross Section   -97.05 To 2283. %

83-Bi-209

Incident Energy (eV)

46

TENDL
JENDL5.0

JENDL5.0/TENDL

Min
Ratio

Max
Ratio

Cross Section (barns)

Ratio
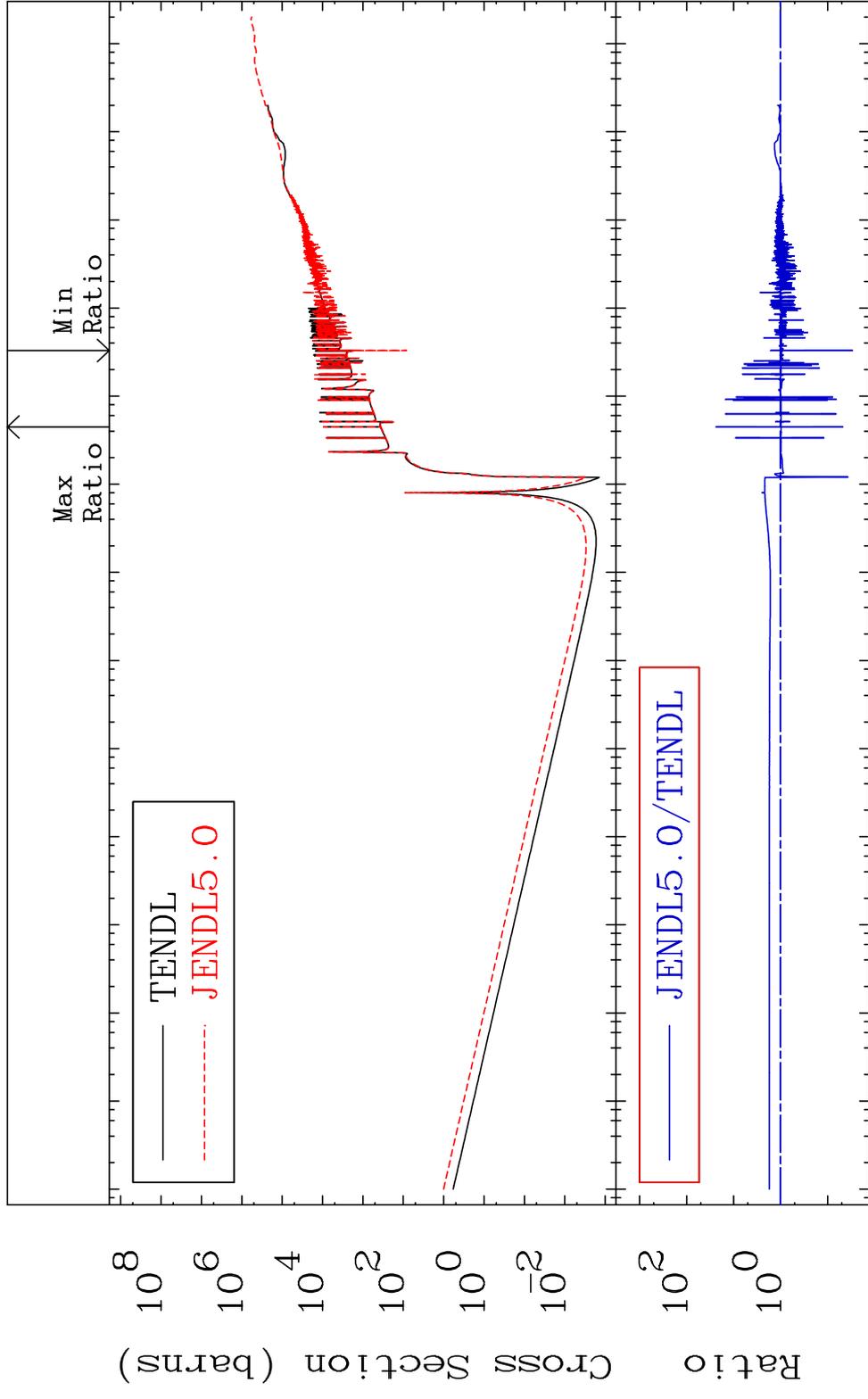
Dpa elastic (mt2)   83-Bi-209
Cross Section   -97.15 To 2225. %

MAT 8325

Min Ratio

Max Ratio

TENDL Threshold 1.2031 keV
JENDL5.0 Threshold 1.2188 keV

Cross Section (barns)

JENDL5.0/TENDL

Ratio

Incident Energy (eV)

83-Bi-209

47

MAT 8325   Dpa inelastic (mt51-91)   83-Bi-209
                 Cross Section   -100.0 To 227.7 %

TENDL Threshold 900.84 keV
JENDL5.0 Threshold 150.00 keV

Max
Ratio   Min
        Ratio

JENDL5.0/TENDL

Cross Section (barns)

Ratio

Incident Energy (eV)
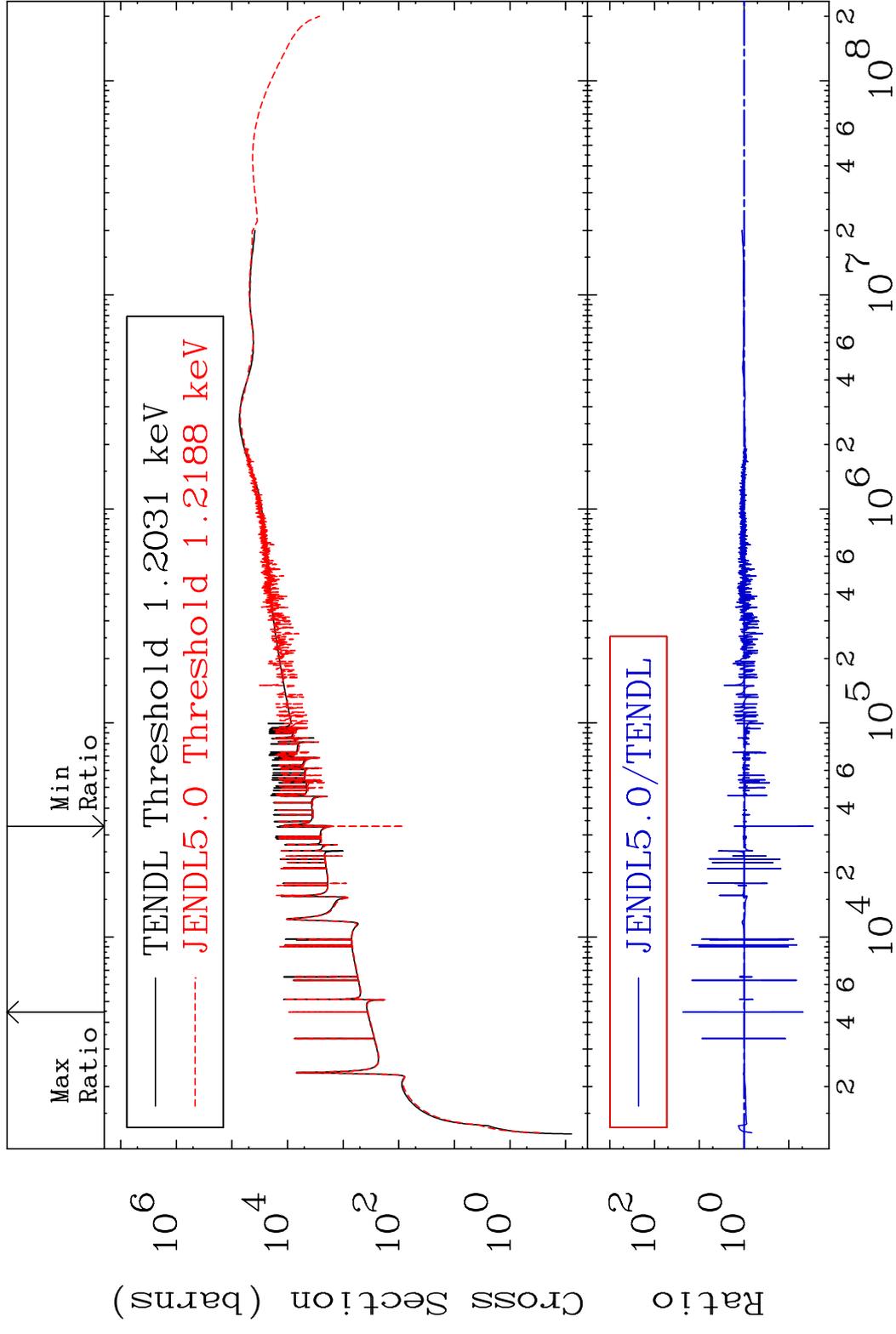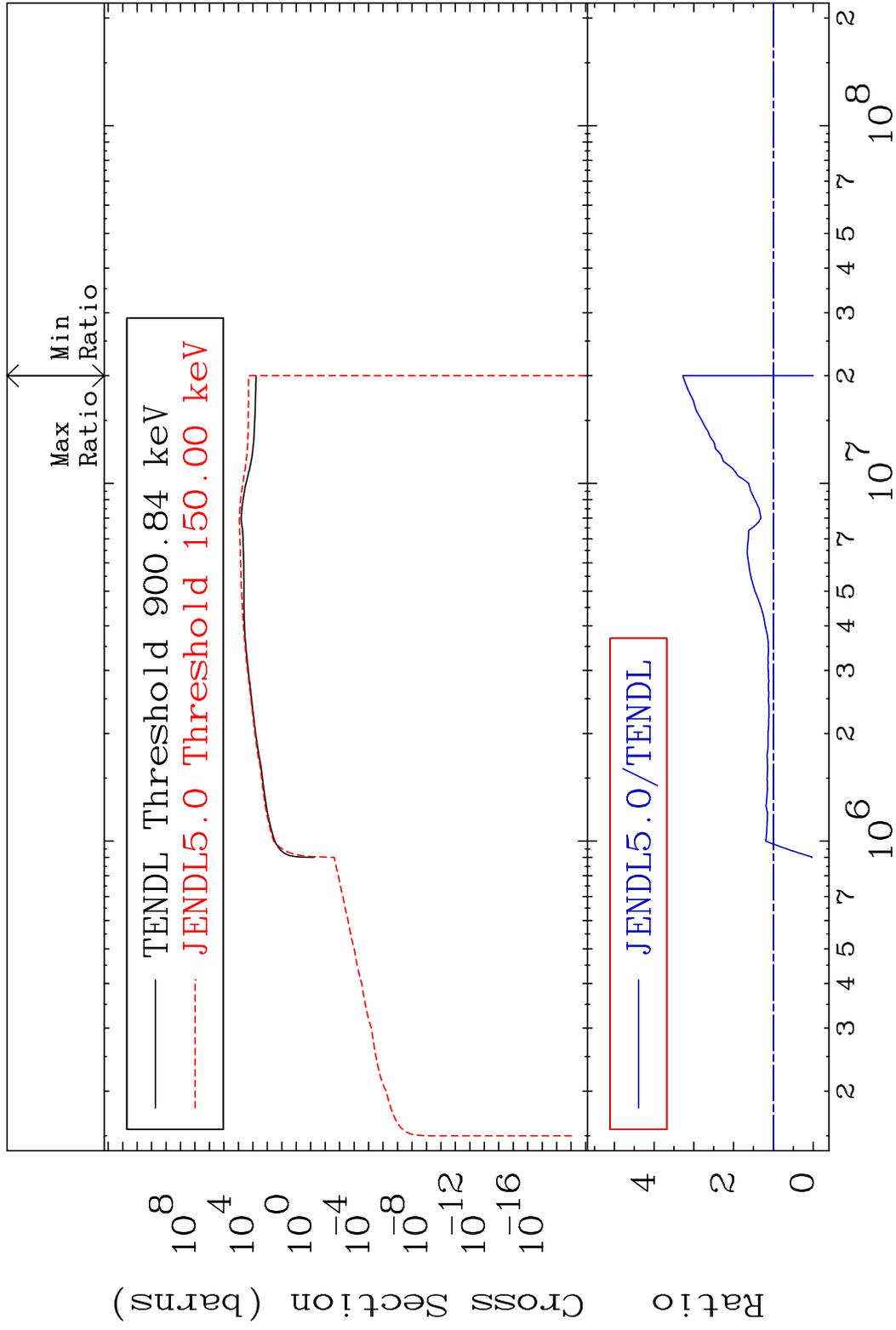
83-Bi-209

MAT 8325   Dpa disappearance (mt102 -120)   83-Bi-209
Cross Section   -100.0 To 9999. %

Min Ratio
Max Ratio

TENDL
JENDL5.0

Cross Section (barns)

10^4
10^2
10^0
10^{-2}
10^{-4}

JENDL5.0/TENDL

Ratio

200
100
0

10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8

Incident Energy (eV)

83-Bi-209

49

MAT 8325   (n,n') d:82-Pb-207g   83-Bi-209

Radionuclide Production Cross Section 1.0 to 9999. %

83-Bi-209

Incident Energy (eV)

Cross Section (milli-barns)

Ratio

TENDL Threshold 8.9855 MeV

JENDL5.0 Threshold 8.9855 MeV

JENDL5.0/TENDL

Min Ratio

Max Ratio

MAT 8325   (n,n') d:82-Pb-207m3   83-Bi-209
                  Radionuclide Production Cross Section to 8205. %

TENDL Threshold 13.000 MeV
JENDL5.0 Threshold 11.000 MeV

JENDL5.0/TENDL

Incident Energy (eV)

83-Bi-209

51

Cross Section (micro-barns)

Ratio

MAT 8325 (n,2n) p:82-Pb-207g 83-Bi-209
Radionuclide Production Cross Section do 4385. %

Cross Section (micro-barns)

Ratio

Incident Energy (eV)

83-Bi-209

TENDL Threshold 11.221 MeV
JENDL5.0 Threshold 11.221 MeV

JENDL5.0/TENDL

Max Ratio
Min Ratio

MAT 8325　　　　　　　(n,2n) p:82-Pb-207m3　　　83-Bi-209
Radionuclide Production Cross Section do 9999. %

Max Ratio

Min Ratio

TENDL Threshold 14.000 MeV
JENDL5.0 Threshold 12.862 MeV

JENDL5.0/TENDL

Cross Section (micro-barns)
Ratio

Incident Energy (eV)

83-Bi-209

MAT 8325   (n,t):82-Pb-207g   83-Bi-209
Radionuclide Production Cross Section to 9999. %

Max
Ratio

TENDL Threshold 2.6981 MeV
JENDL5.0 Threshold 3.5067 MeV

JENDL5.0/TENDL

Cross Section (milli-barns)
Ratio

Incident Energy (eV)

83-Bi-209

54

MAT 8325   (n,t):82-Pb-207m3   83-Bi-209
Radionuclide Production Cross Section Ratio to 9999. %

83-Bi-209

Cross Section (milli-barns)

Ratio

Incident Energy (eV)

TENDL Threshold 6.4000 MeV
JENDL5.0 Threshold 5.0000 MeV

JENDL5.0/TENDL

MAT 8325   (n,He-3):81-Tl-207g   83-Bi-209
Radionuclide Production Cross Section : dto 22.54 %

TENDL Threshold 4.1037 MeV
JENDL5.0 Threshold 7.0000 MeV

Max Ratio
Min Ratio

JENDL5.0/TENDL

Cross Section (10^{-9} barns)

Ratio

Incident Energy (eV)

56   83-Bi-209

MAT 8325   (n,He-3):81-Tl-207m2   83-Bi-209

Radionuclide Production Cross Section to 333.6 %