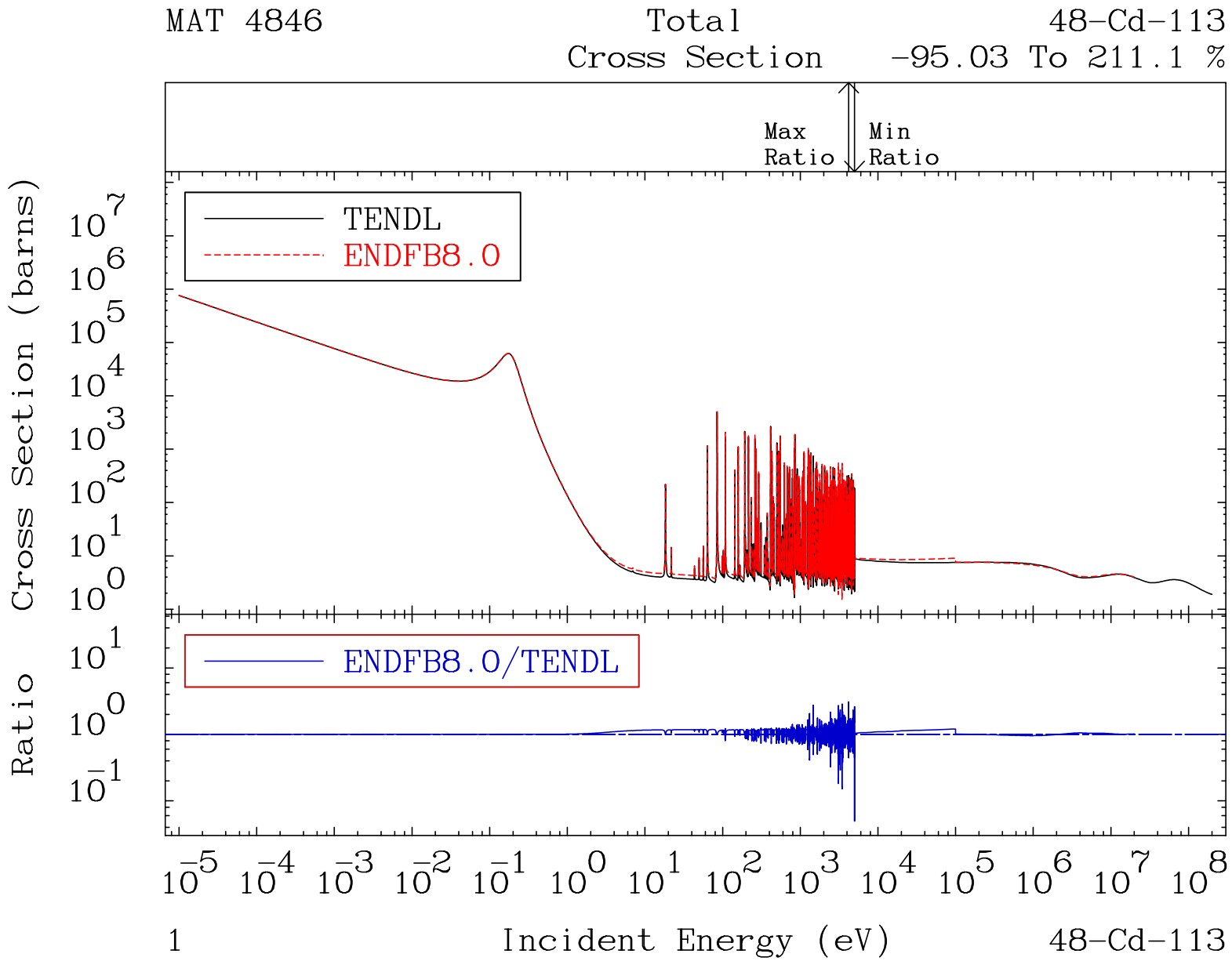
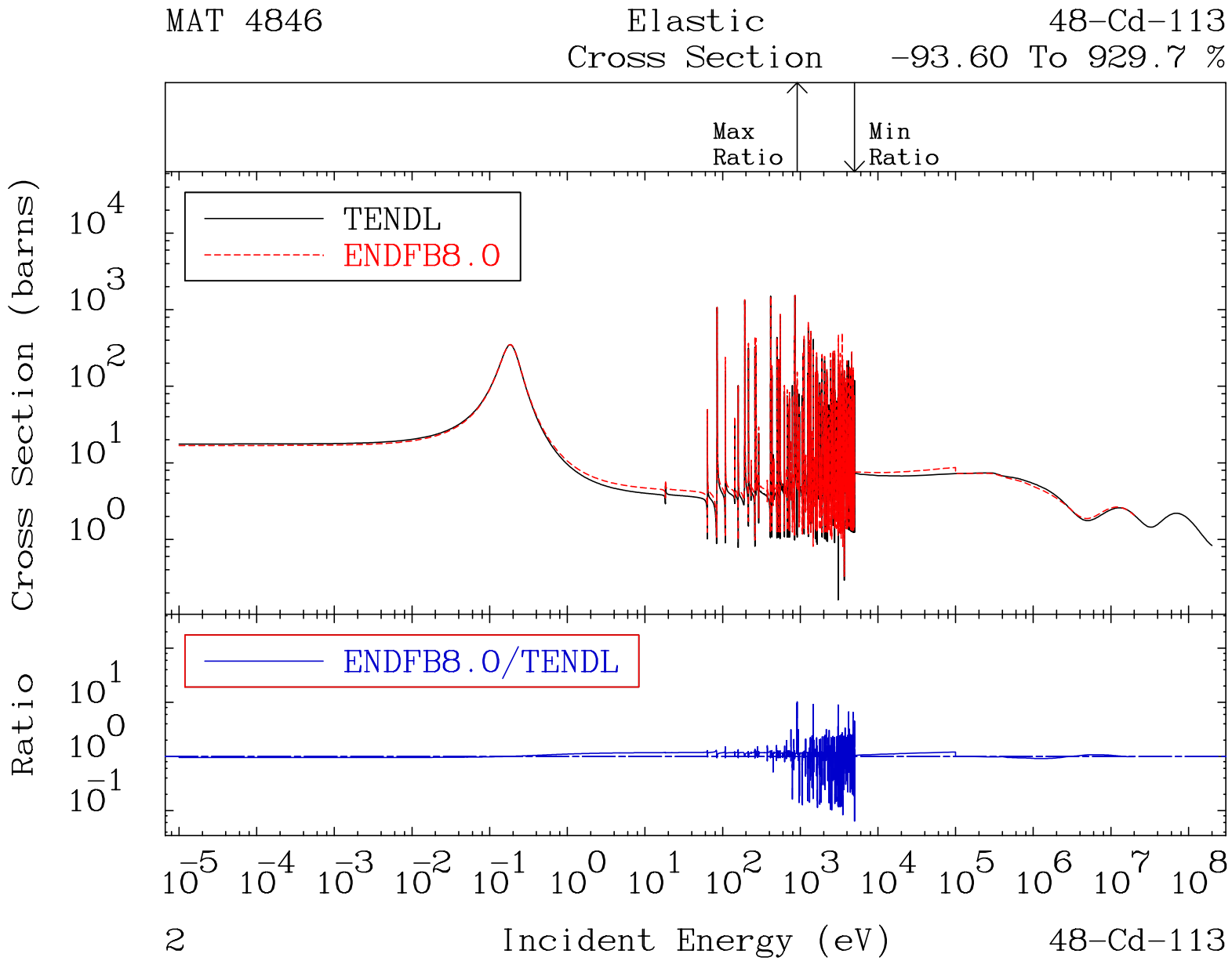
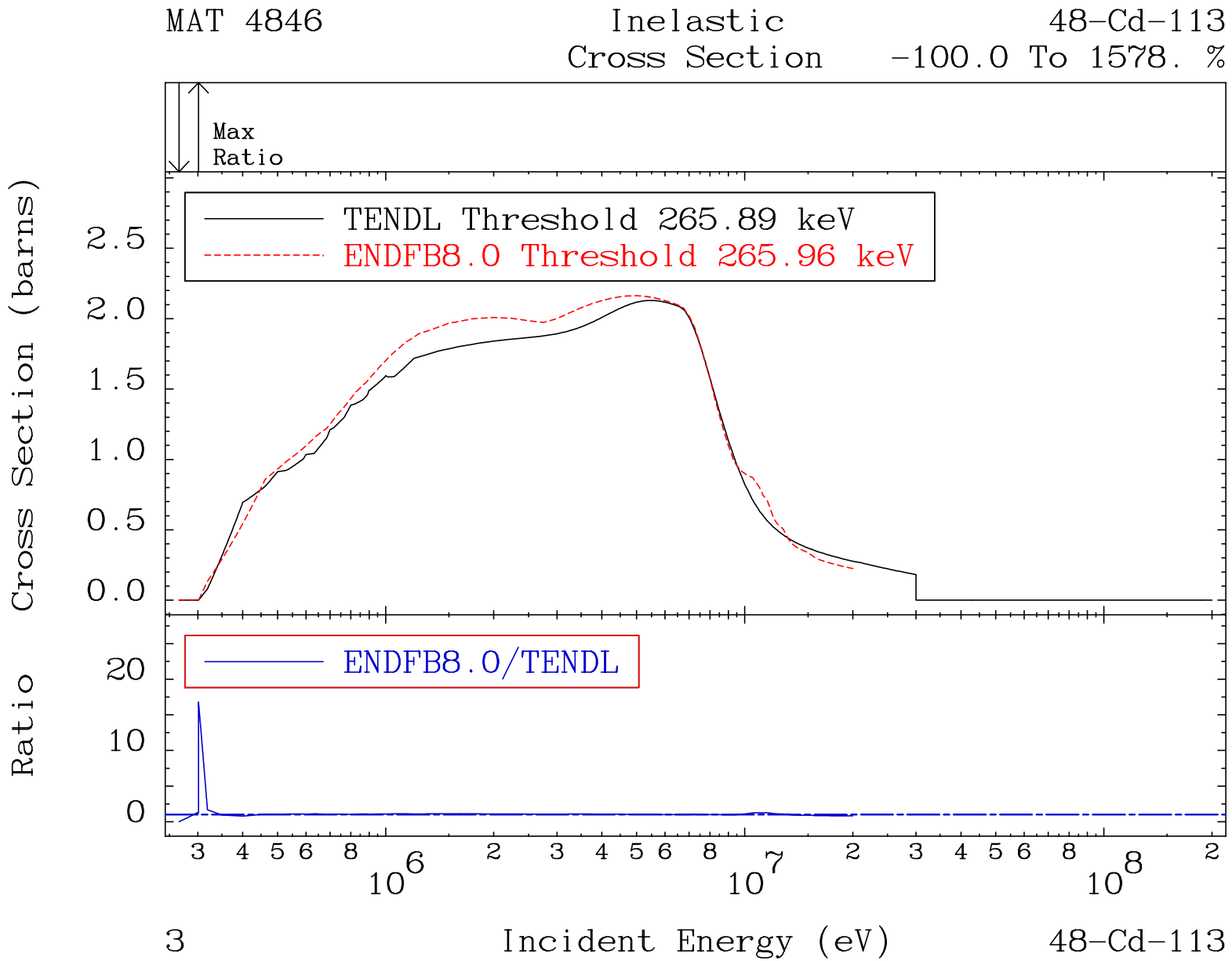
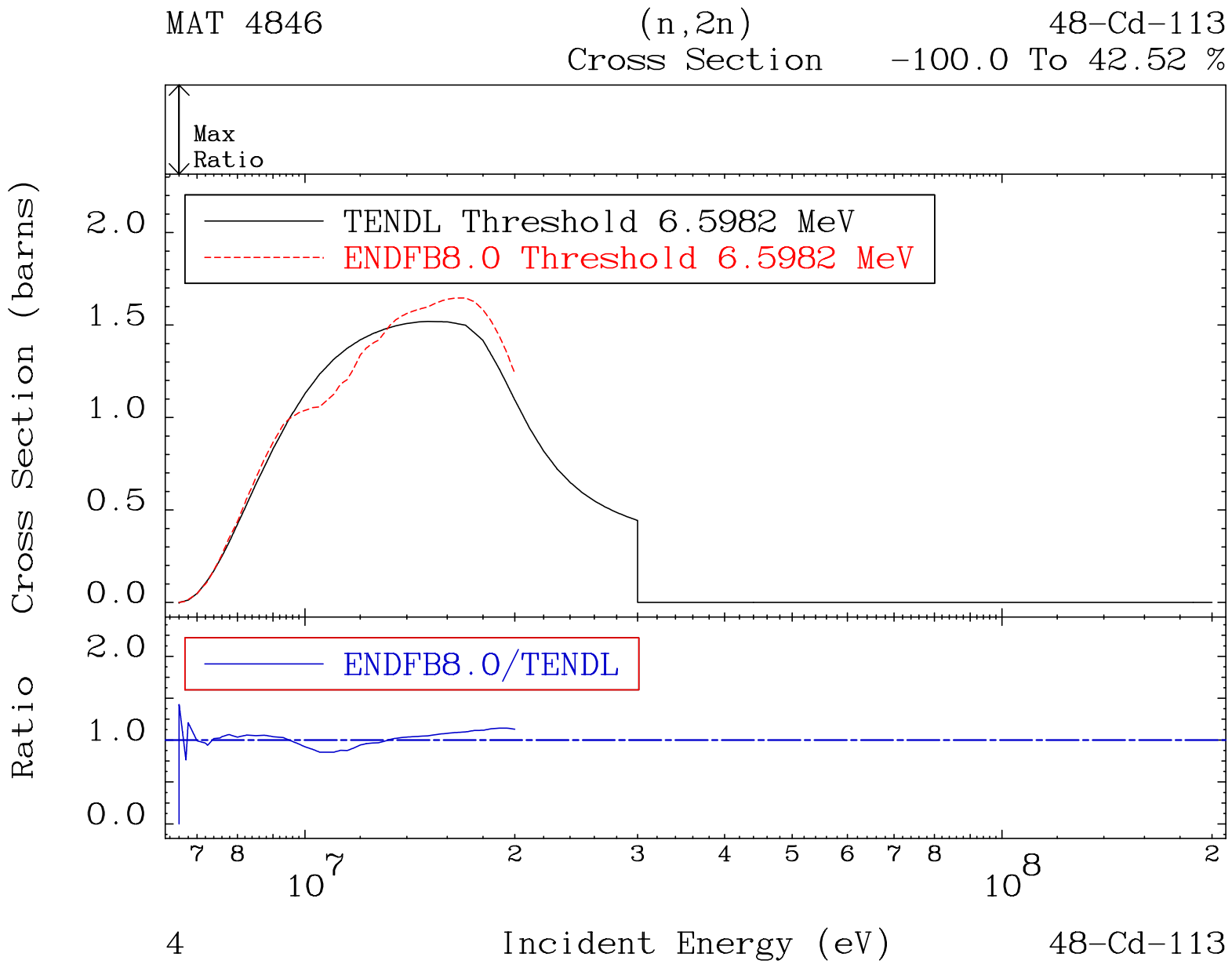
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

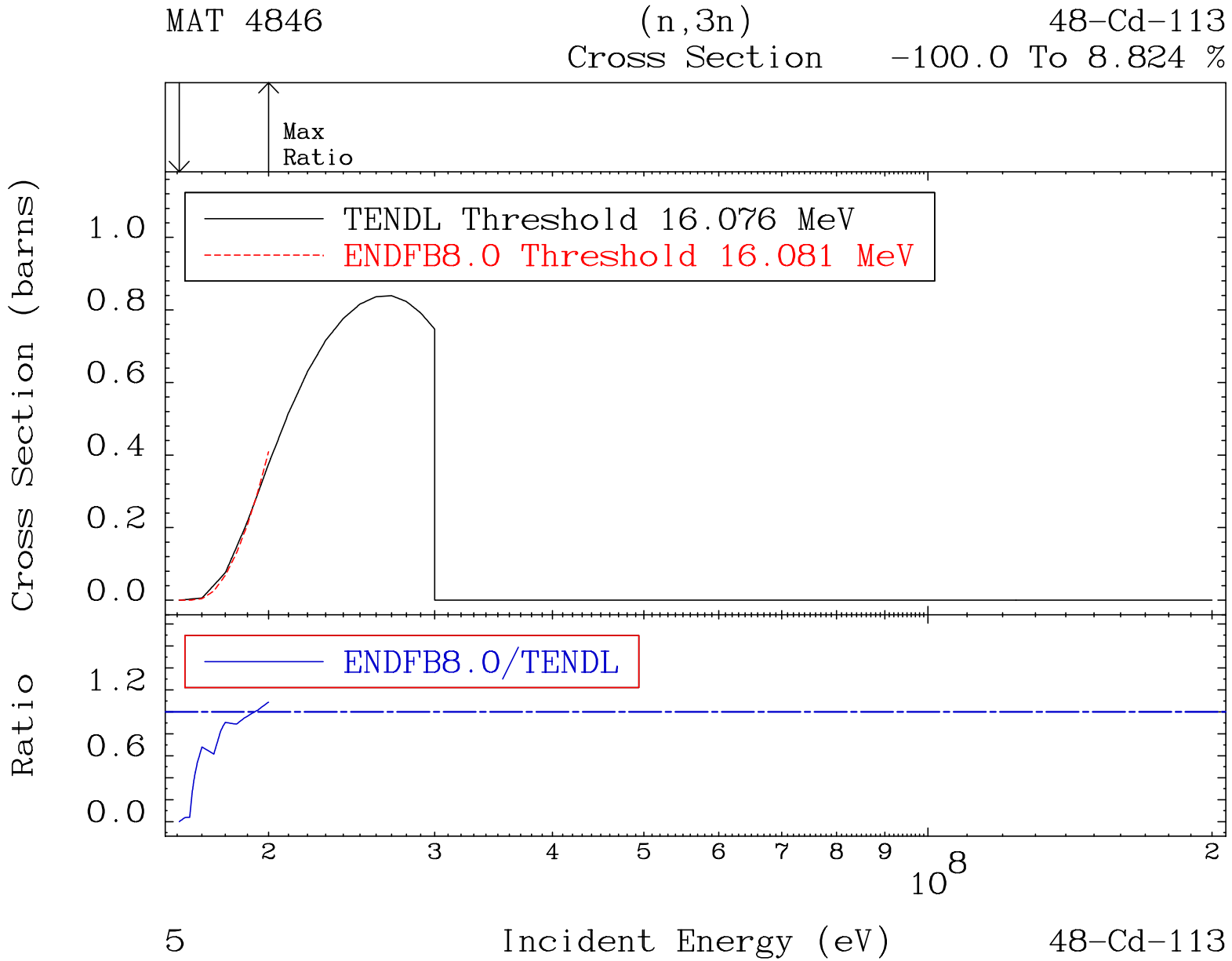
Press Mouse Button to Start

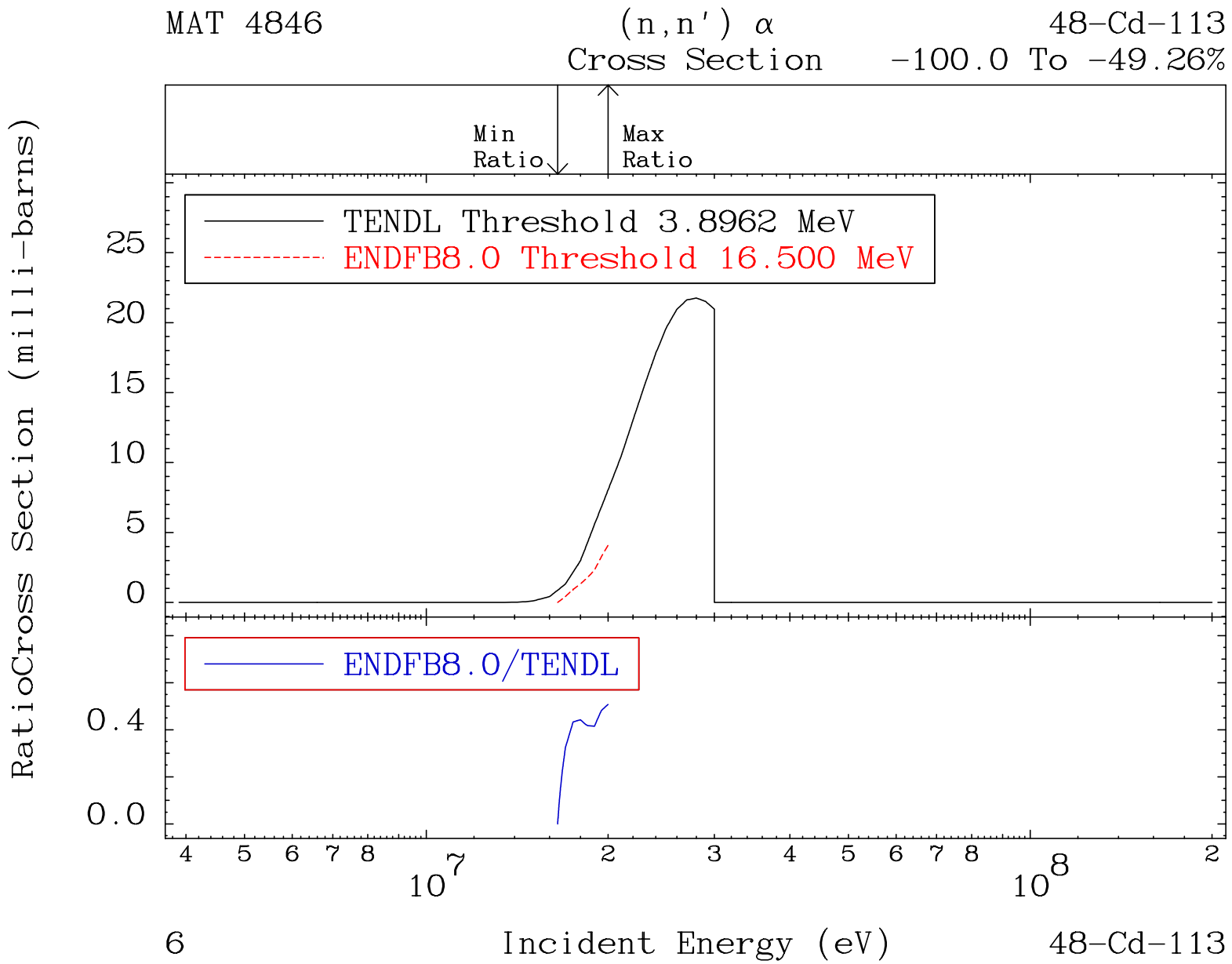

MAT 4846
Total
Cross Section
48-Cd-113
-95.03 To 211.1 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
48-Cd-113

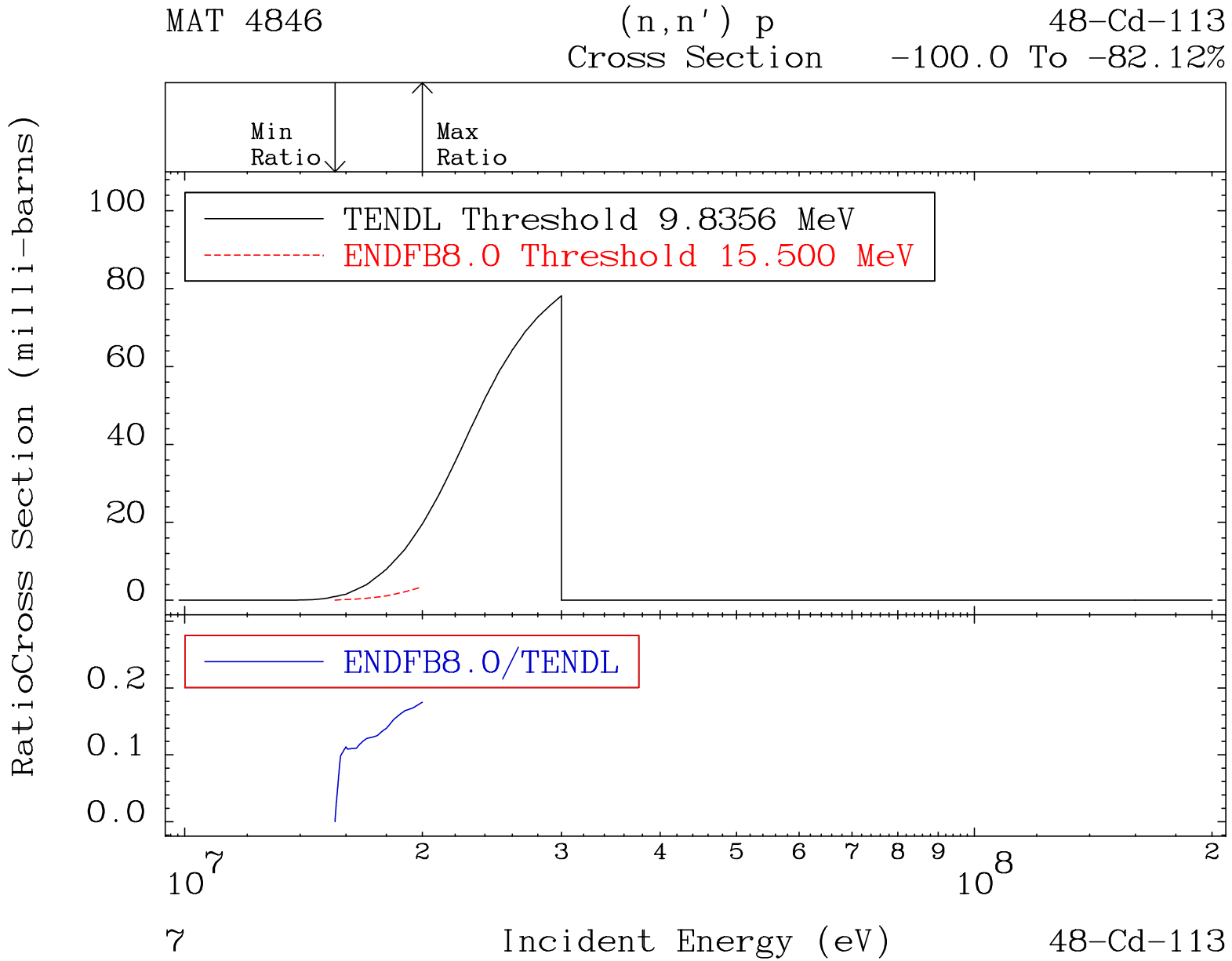

MAT 4846
Elastic
Cross Section
48-Cd-113
-93.60 To 929.7 %
Max
Ratio
Min
Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
48-Cd-113

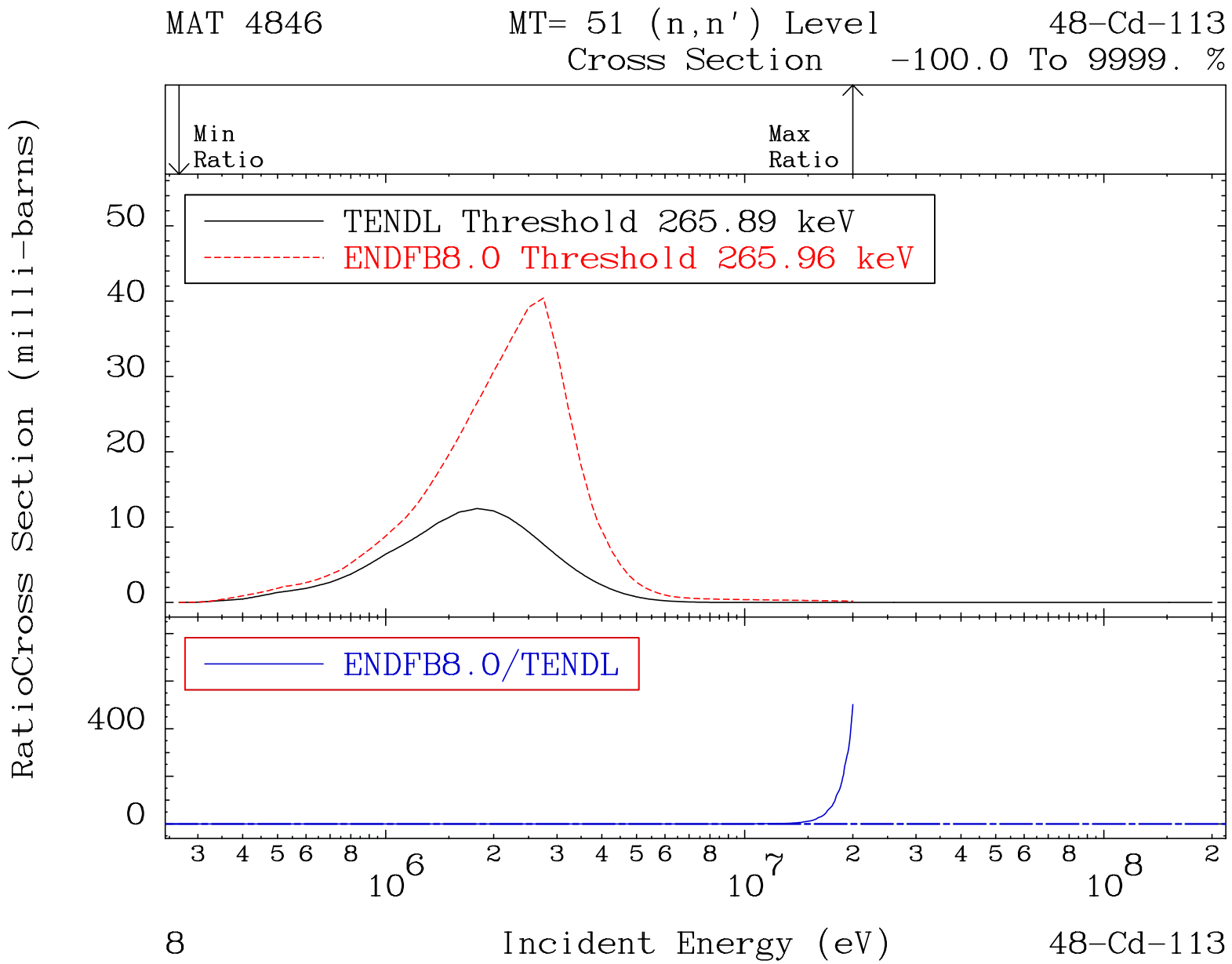

MAT 4846
Inelastic
Cross Section
48-Cd-113
-100.0 To 1578. %
Max
Ratio
TENDL Threshold 265.89 keV
ENDFB8.0 Threshold 265.96 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
20
10
0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
3
Incident Energy (eV)
48-Cd-113

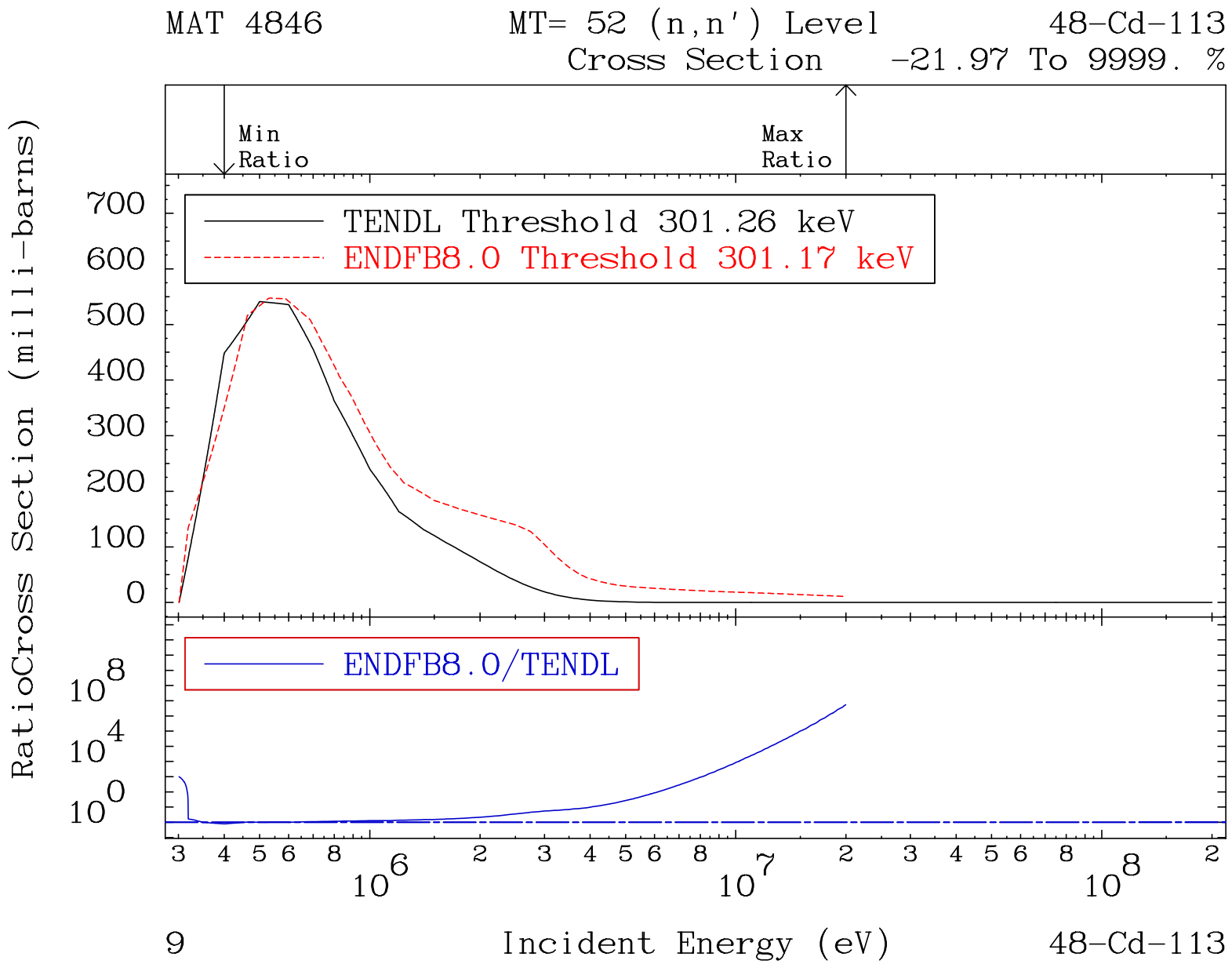

MAT 4846
(n,2n)
Cross Section
48-Cd-113
-100.0 To 42.52 %
Max
Ratio
TENDL Threshold 6.5982 MeV
ENDFB8.0 Threshold 6.5982 MeV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
4
48-Cd-113

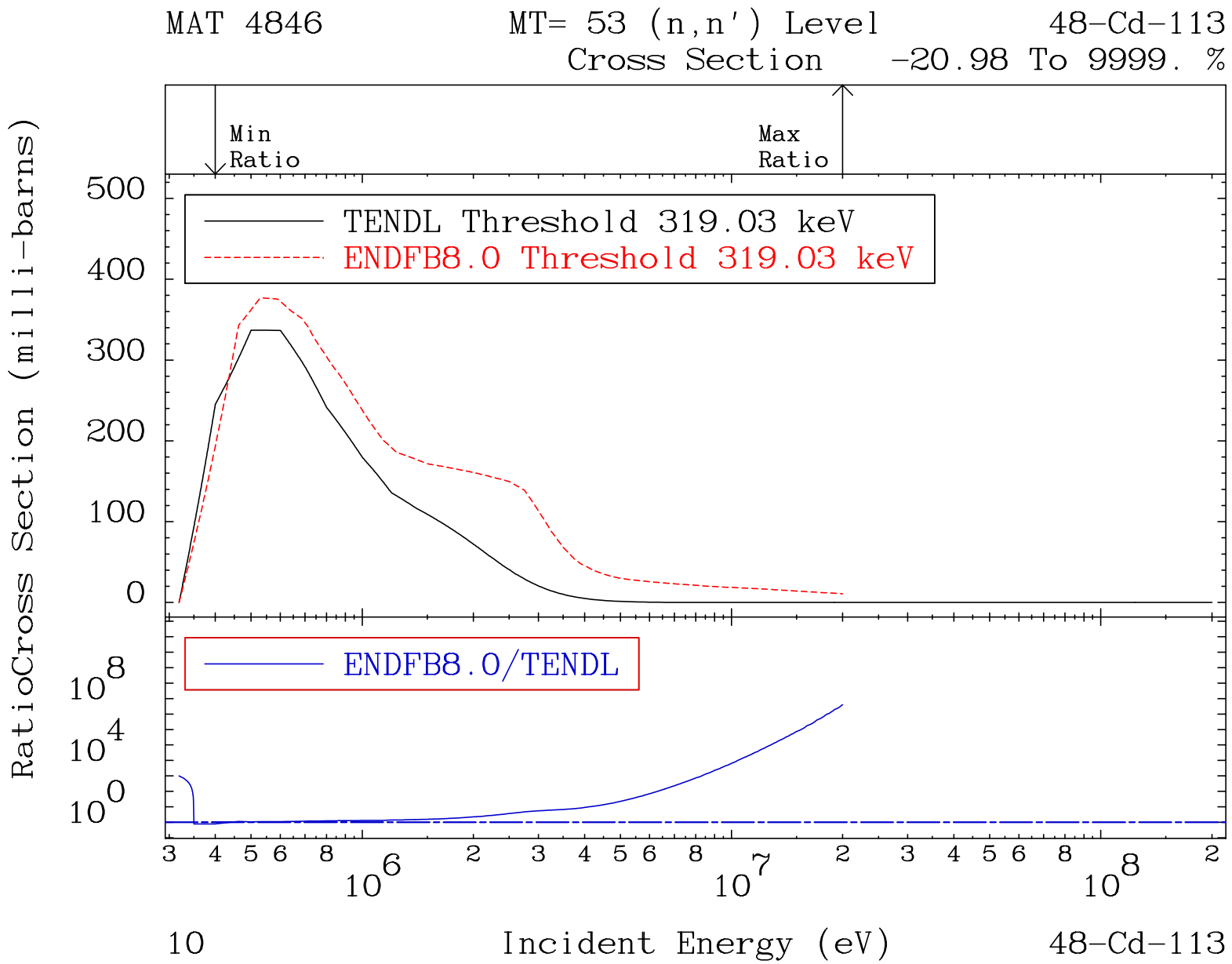

MAT 4846
(n,3n)
48-Cd-113
Cross Section
-100.0 To 8.824 %
Max
Ratio
TENDL Threshold 16.076 MeV
ENDFB8.0 Threshold 16.081 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
ENDFB8.0/TENDL
Ratio
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
48-Cd-113

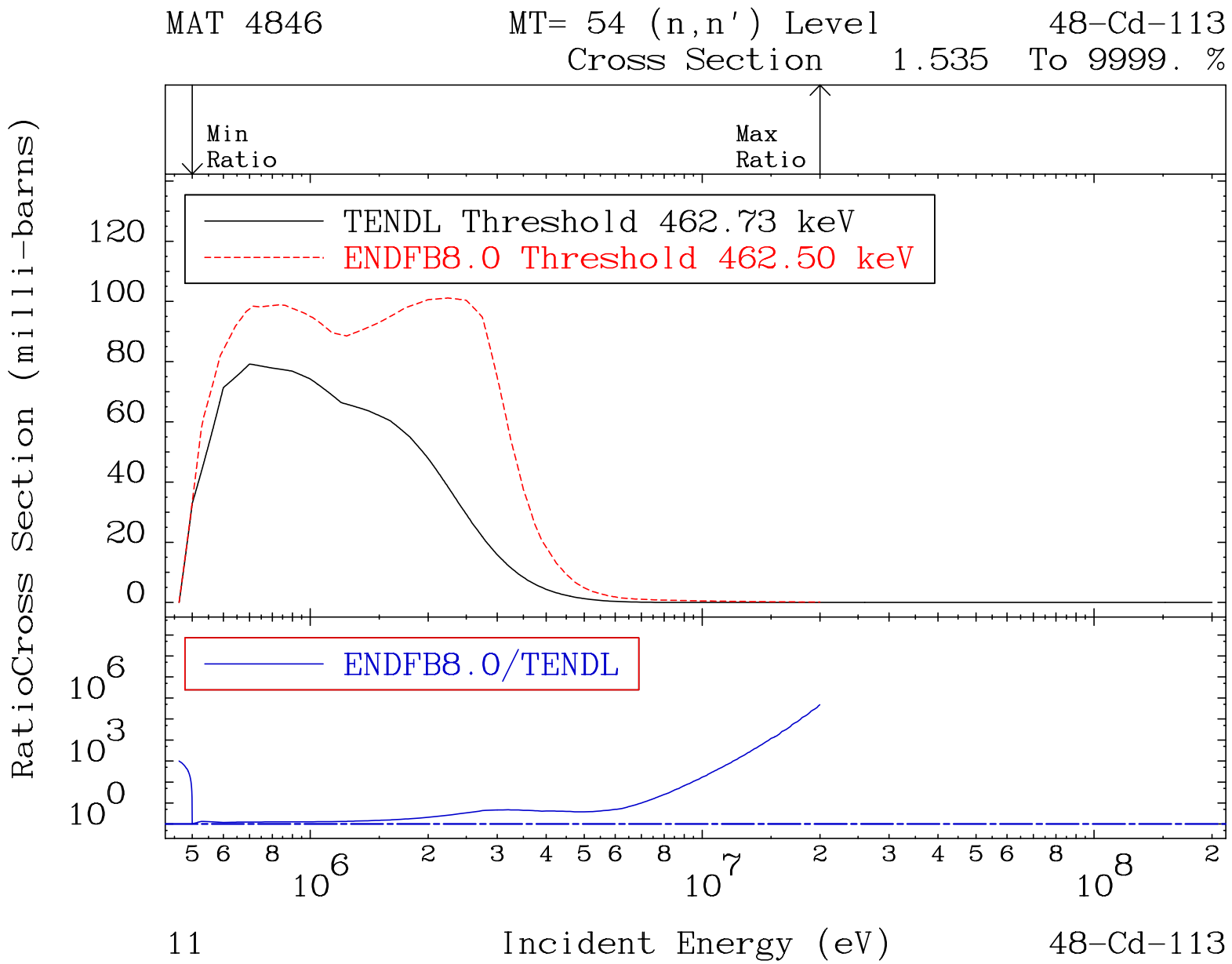

MAT 4846
(n,n') α
Cross Section
48-Cd-113
-100.0 To -49.26%
Min Ratio
Max Ratio
TENDL Threshold 3.8962 MeV
ENDFB8.0 Threshold 16.500 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
0.4
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
6
Incident Energy (eV)
48-Cd-113

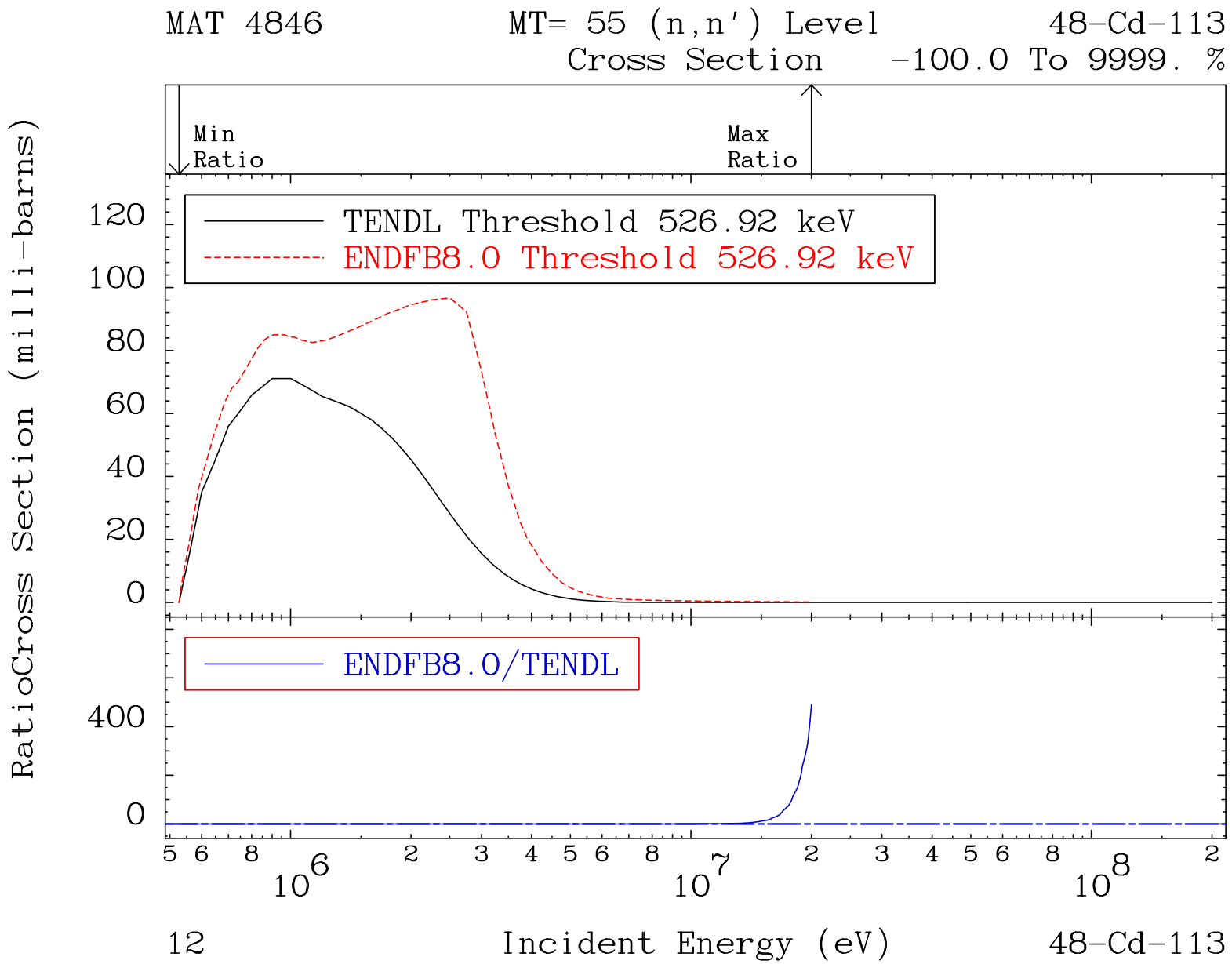

MAT 4846
(n,n') p
Cross Section
48-Cd-113
-100.0 To -82.12%
Min Ratio
Max Ratio
TENDL Threshold 9.8356 MeV
ENDFB8.0 Threshold 15.500 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
0.2
0.1
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
48-Cd-113

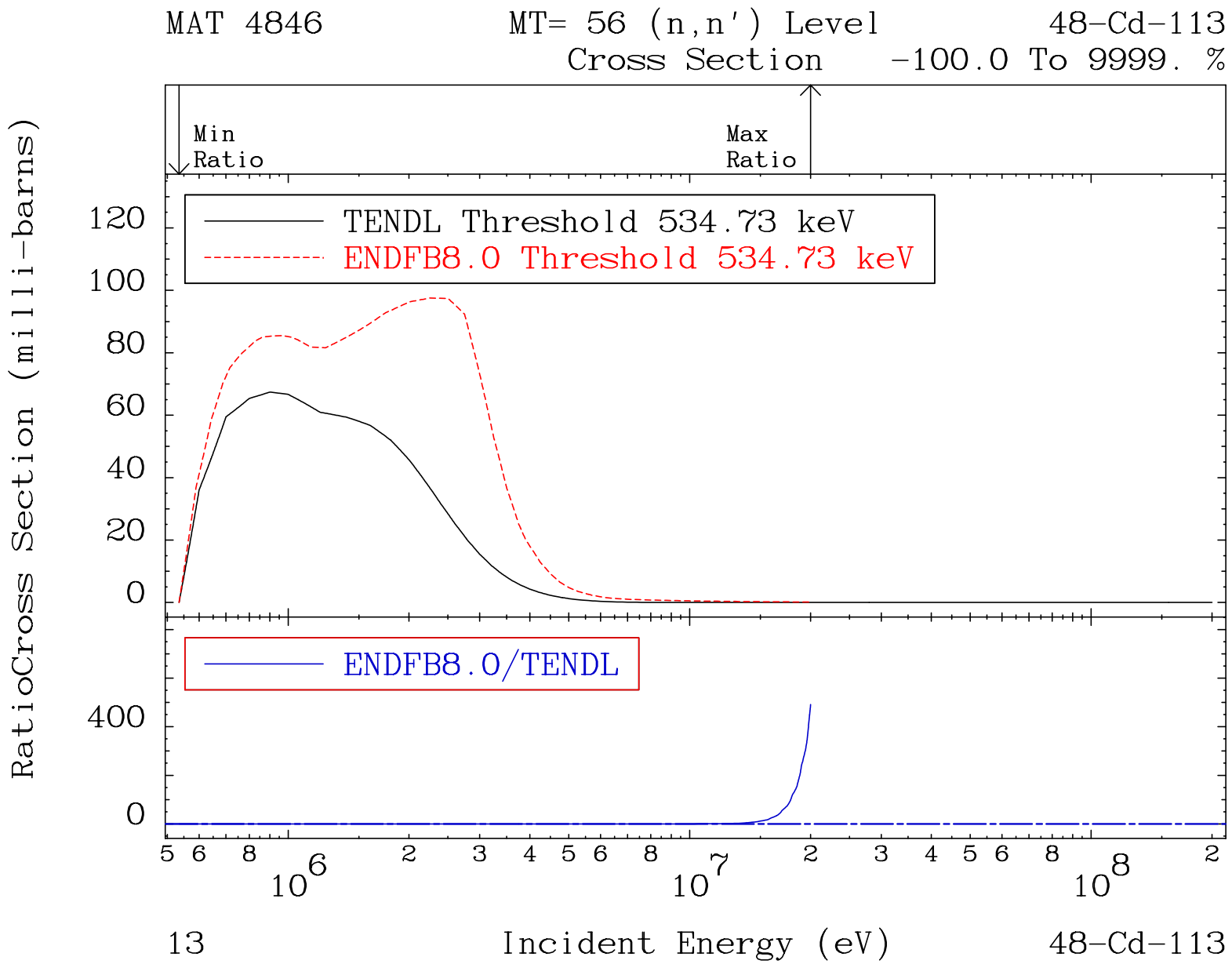

MAT 4846
MT= 51 (n,n') Level
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 265.89 keV
ENDFB8.0 Threshold 265.96 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
400
0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
8
48-Cd-113

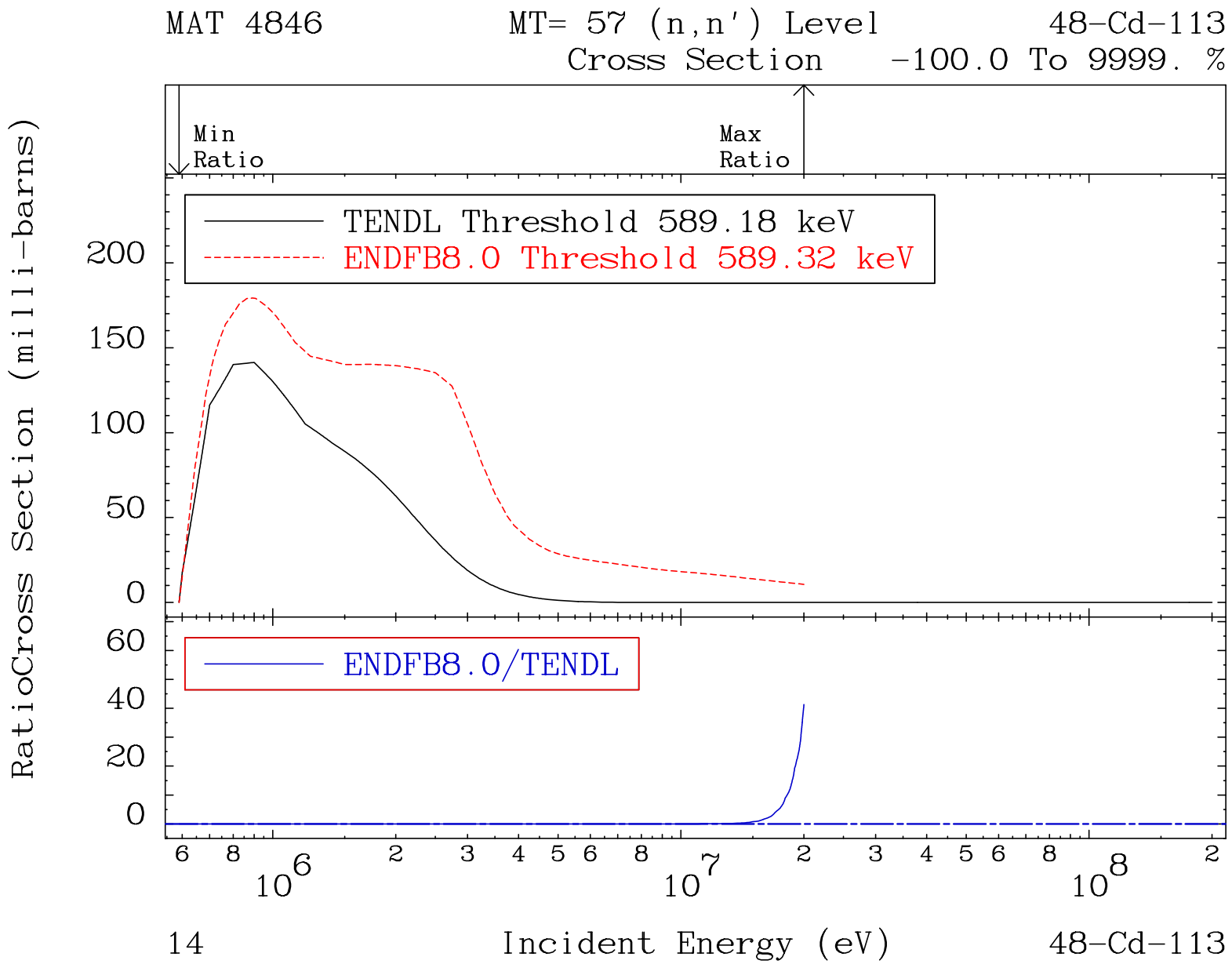

MAT 4846
MT= 52 (n,n') Level
48-Cd-113
Cross Section -21.97 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 301.26 keV
ENDFB8.0 Threshold 301.17 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
700
600
500
400
300
200
100
0
10^8
10^4
10^0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
9
48-Cd-113

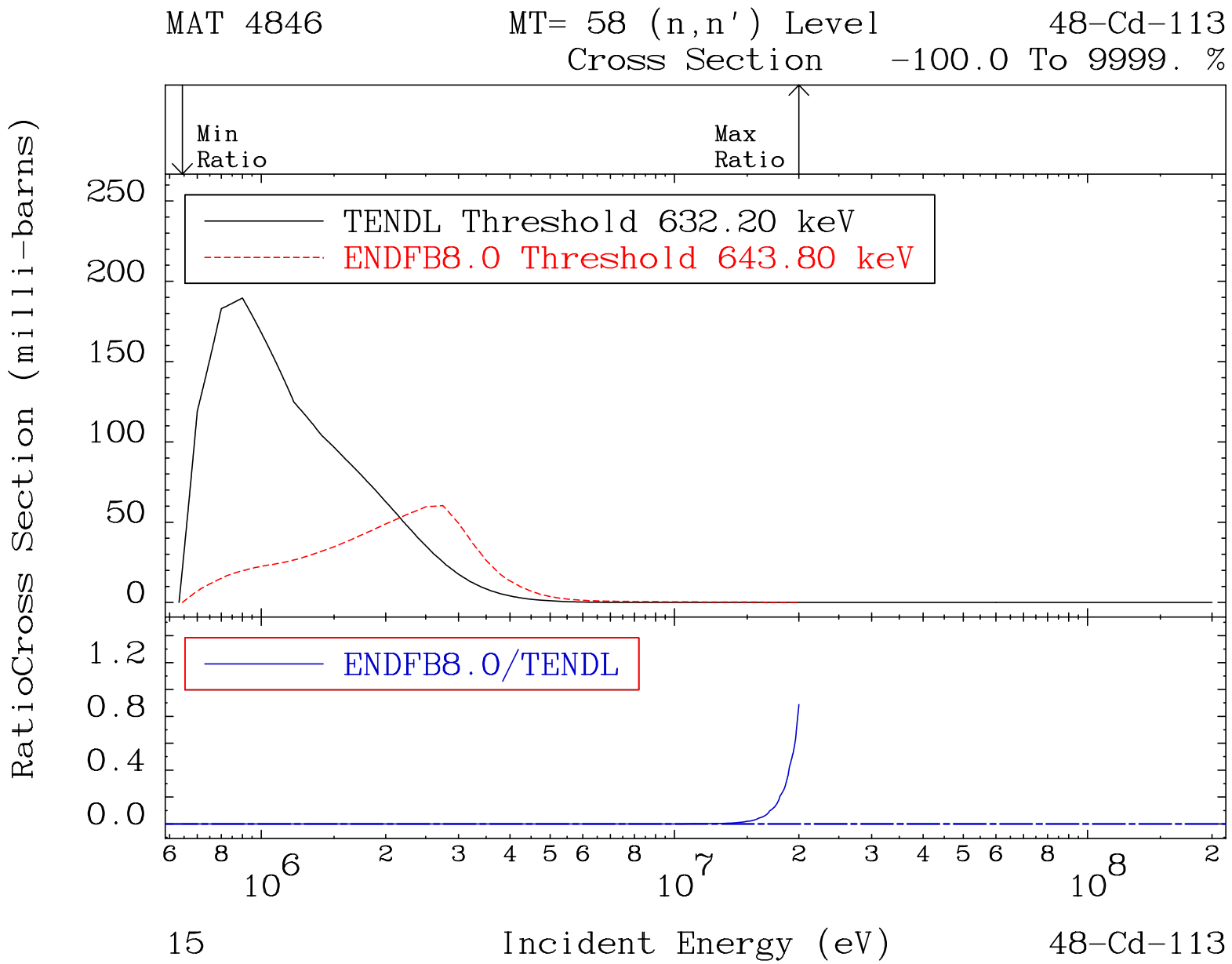

MAT 4846
MT= 53 (n,n') Level
Cross Section
48-Cd-113
-20.98 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 319.03 keV
ENDFB8.0 Threshold 319.03 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
10^8
10^4
10^0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
10
Incident Energy (eV)
48-Cd-113

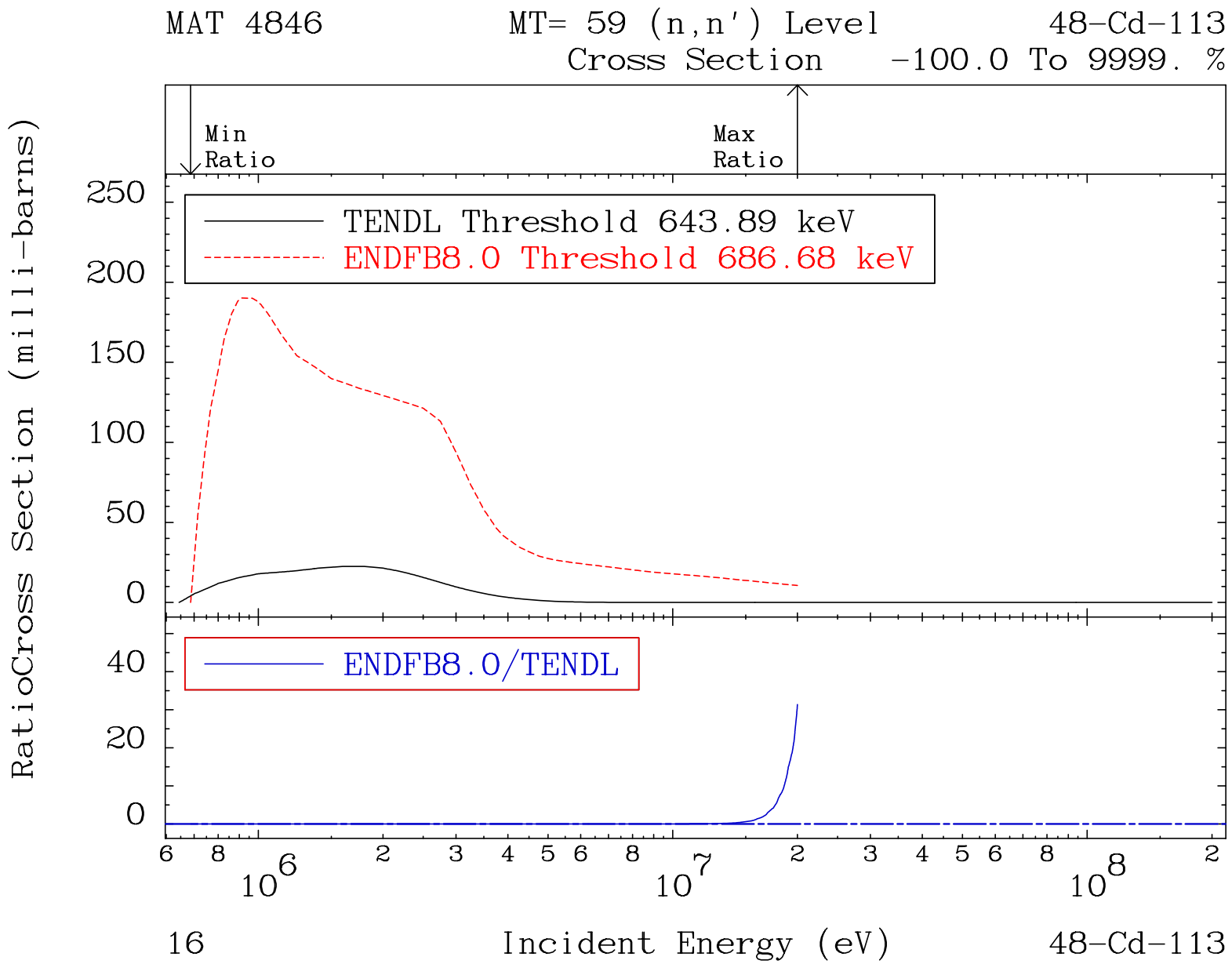

MAT 4846
MT= 54 (n,n') Level
48-Cd-113
Cross Section 1.535 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 462.73 keV
ENDFB8.0 Threshold 462.50 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
10^6
10^3
10^0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
11
Incident Energy (eV)
48-Cd-113

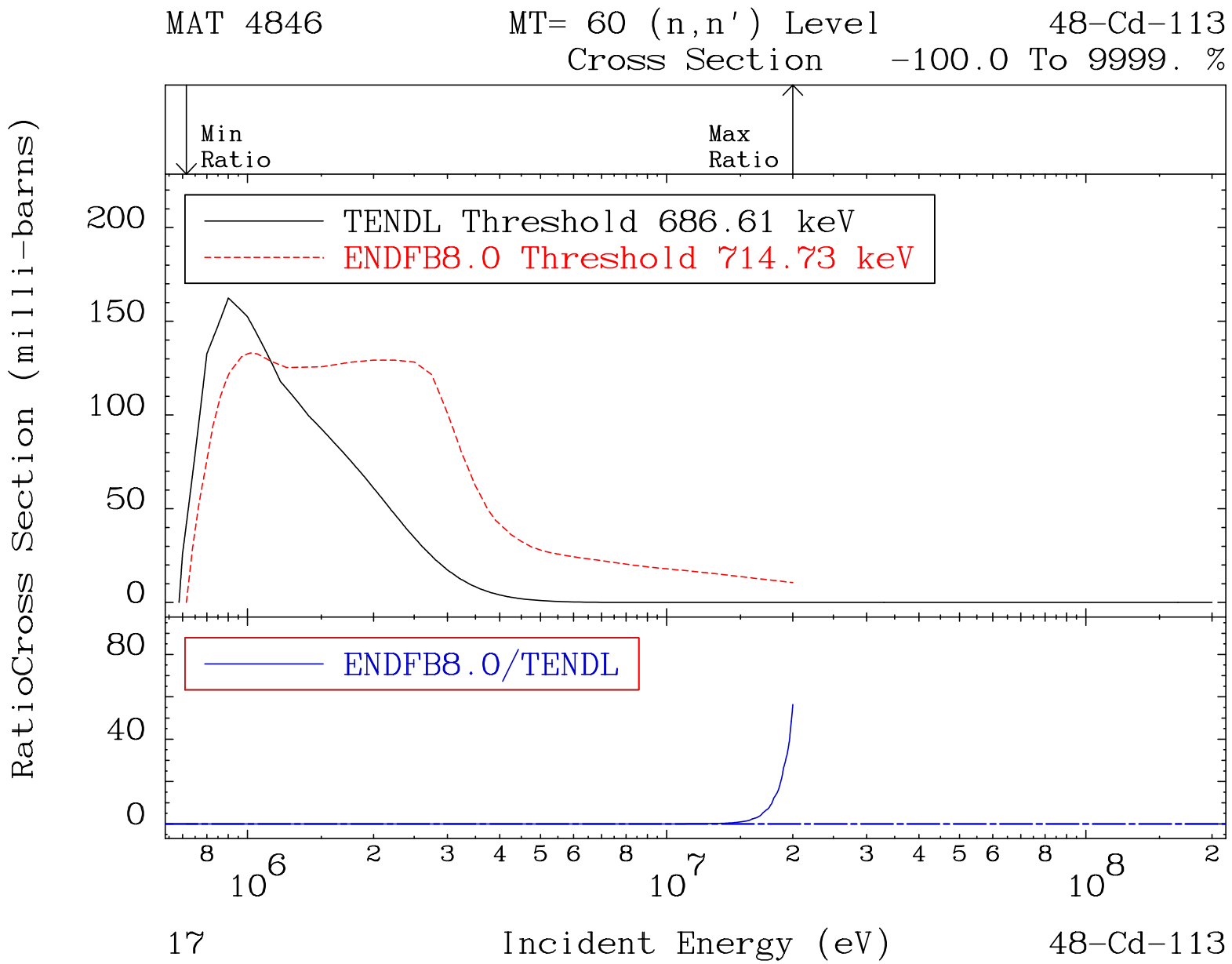

MAT 4846
MT= 55 (n,n') Level
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 526.92 keV
ENDFB8.0 Threshold 526.92 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
400
0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
48-Cd-113

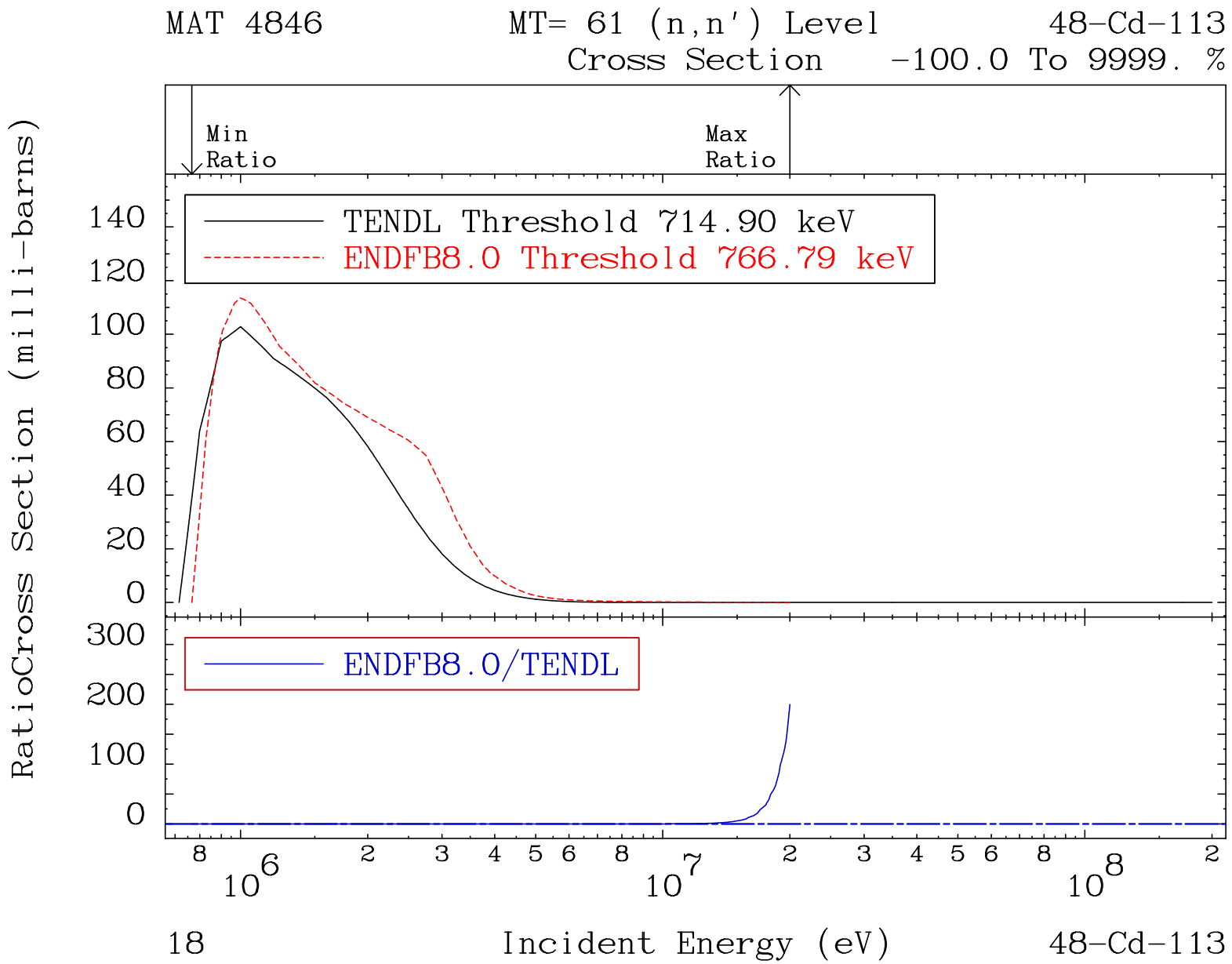

MAT 4846
MT= 56 (n,n') Level
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 534.73 keV
ENDFB8.0 Threshold 534.73 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
400
0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
13
Incident Energy (eV)
48-Cd-113

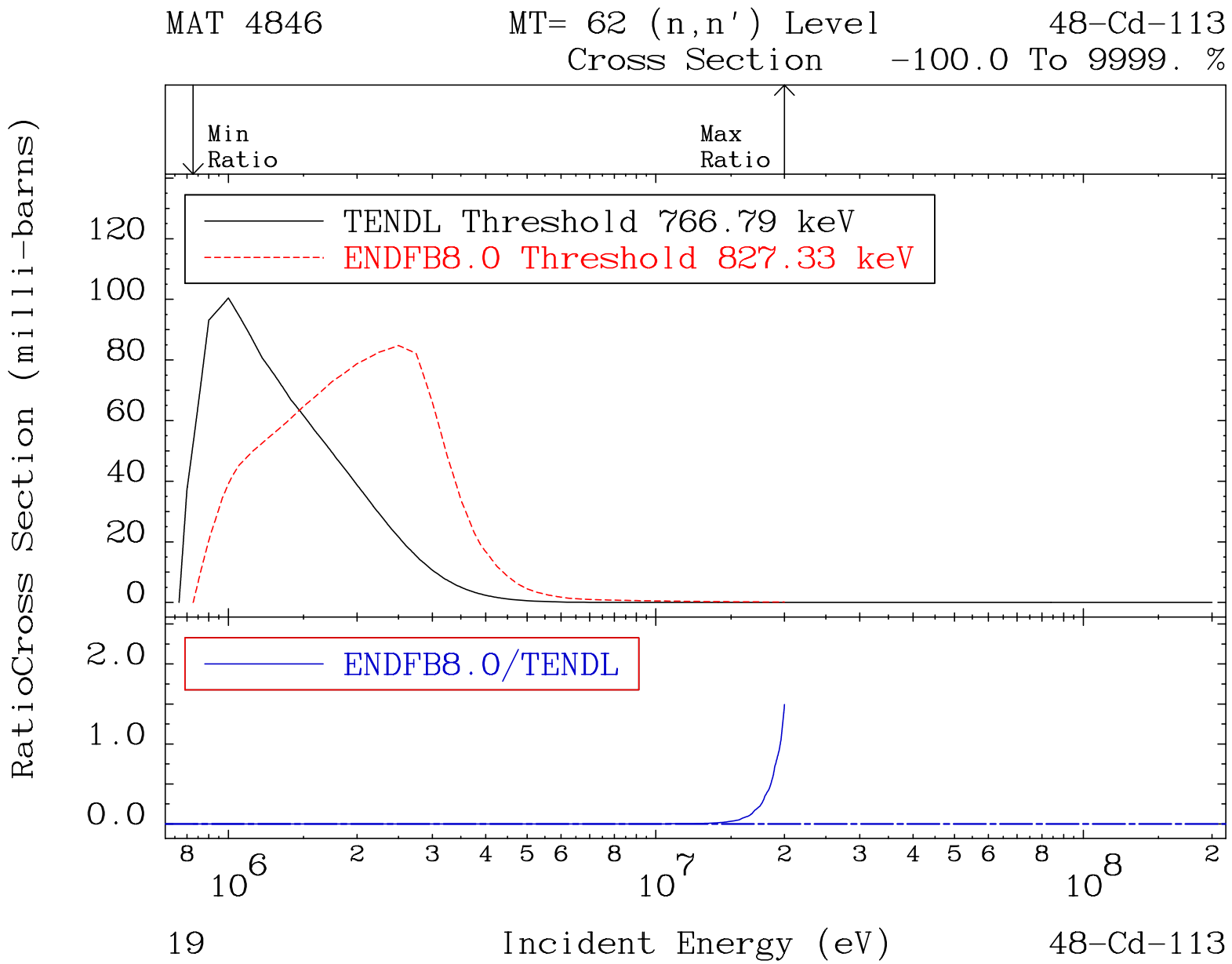

MAT 4846
MT= 57 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 589.18 keV
ENDFB8.0 Threshold 589.32 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
60
40
20
0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
14
Incident Energy (eV)
48-Cd-113

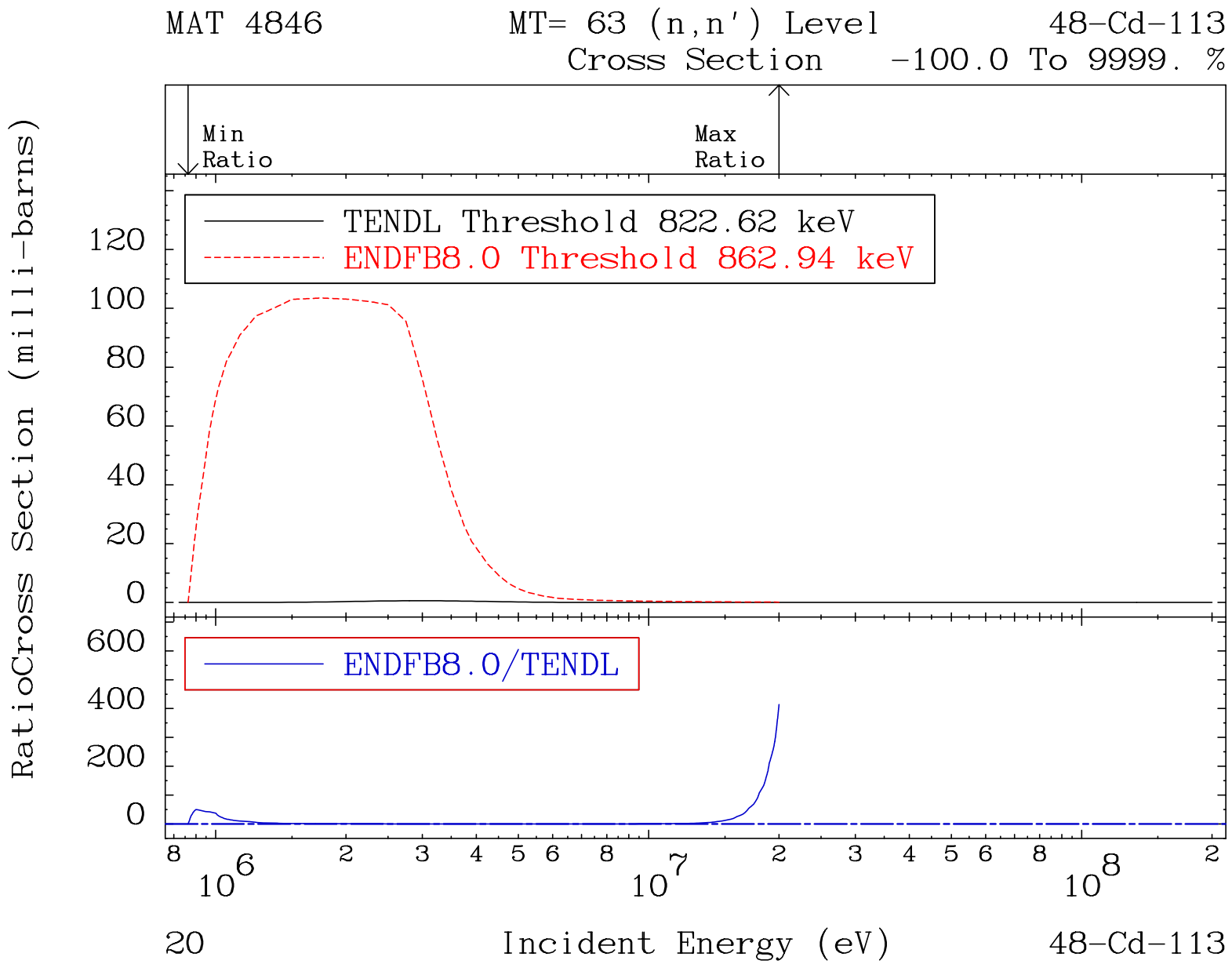

MAT 4846
MT= 58 (n,n') Level
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 632.20 keV
ENDFB8.0 Threshold 643.80 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
1.2
0.8
0.4
0.0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
15
Incident Energy (eV)
48-Cd-113

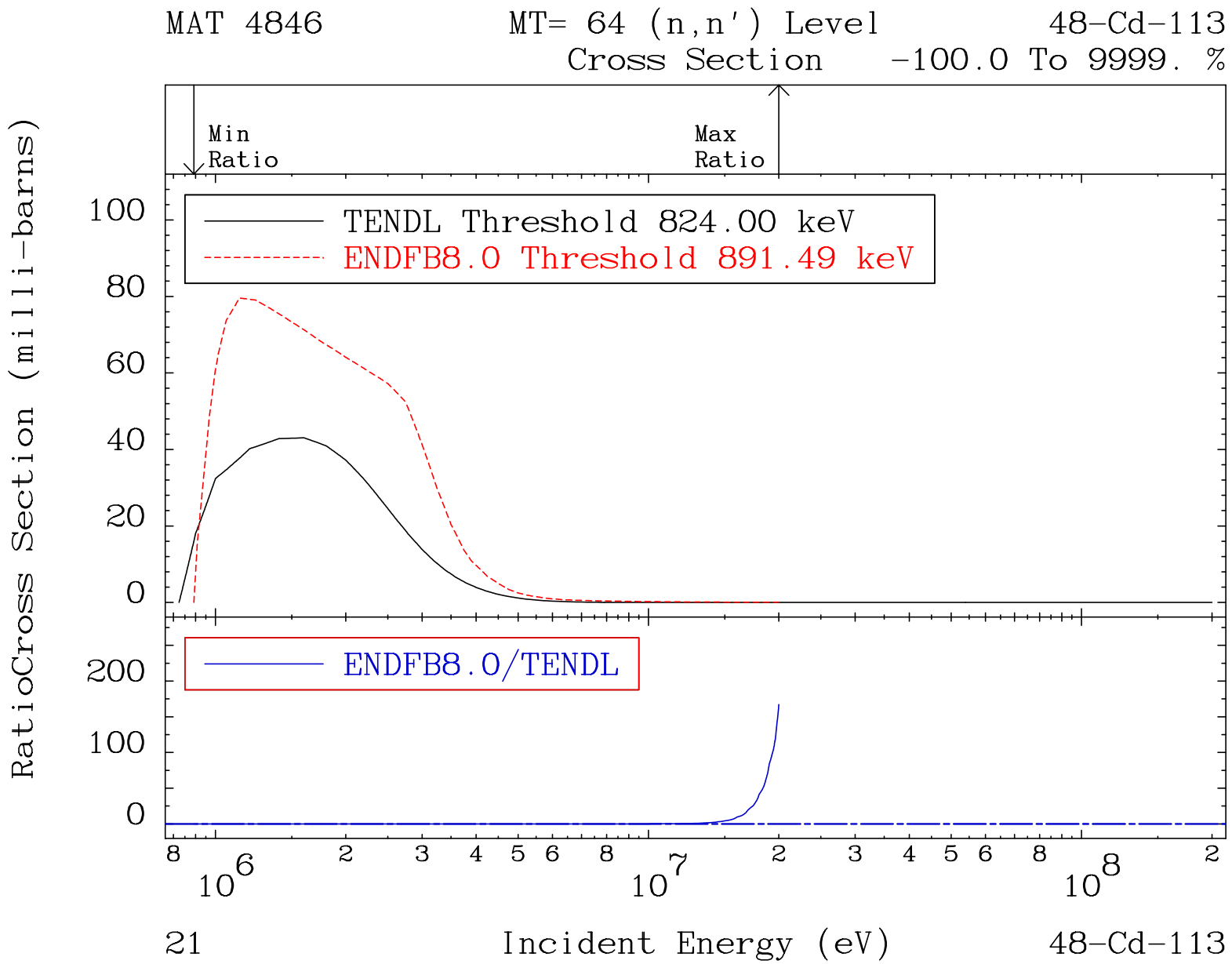

MAT 4846
MT= 59 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 643.89 keV
ENDFB8.0 Threshold 686.68 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
40
20
0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
16
Incident Energy (eV)
48-Cd-113

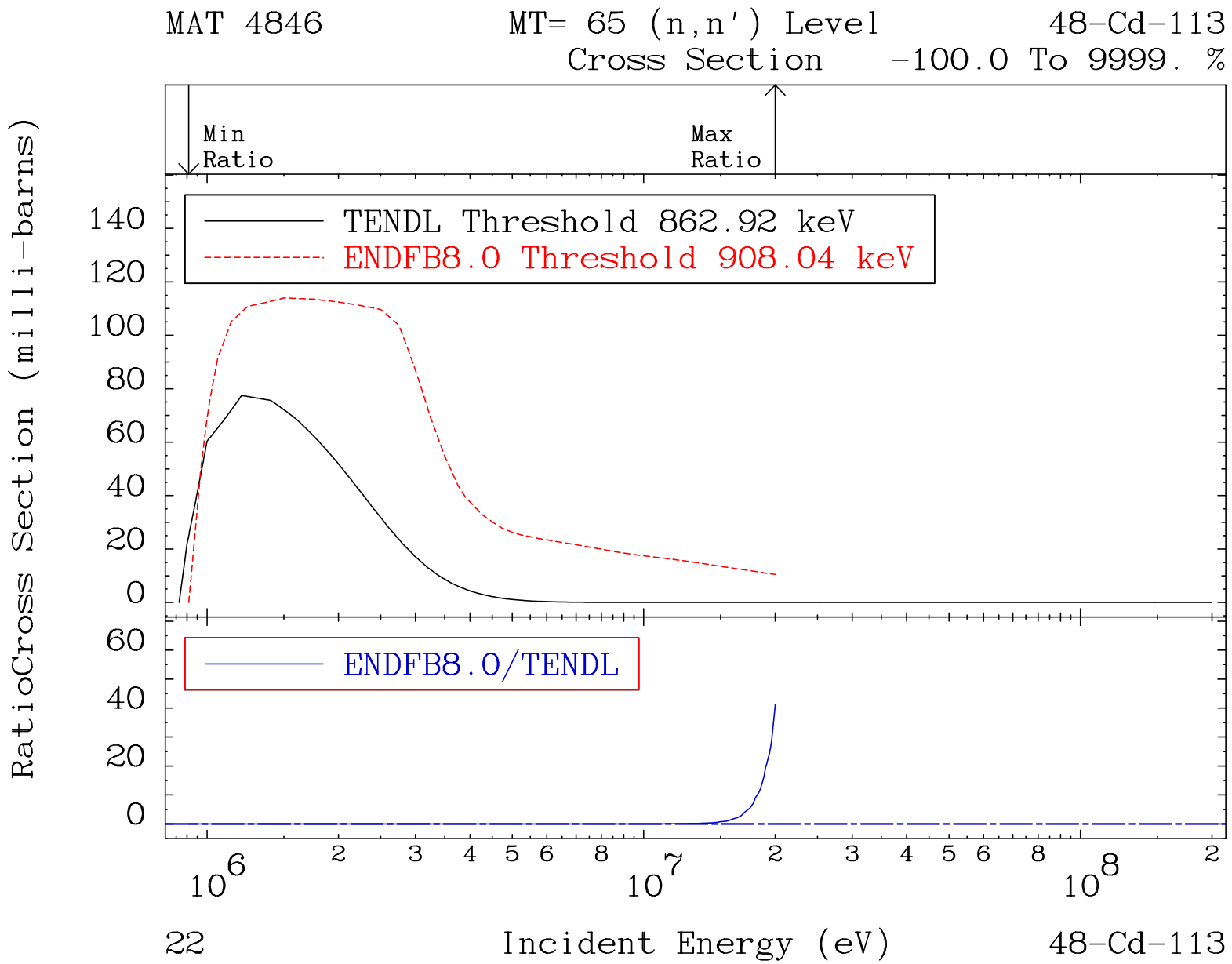

MAT 4846
MT= 60 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 686.61 keV
ENDFB8.0 Threshold 714.73 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
80
40
0
8
2
3
4
5
6
8
10^6
10^7
10^8
17
Incident Energy (eV)
48-Cd-113

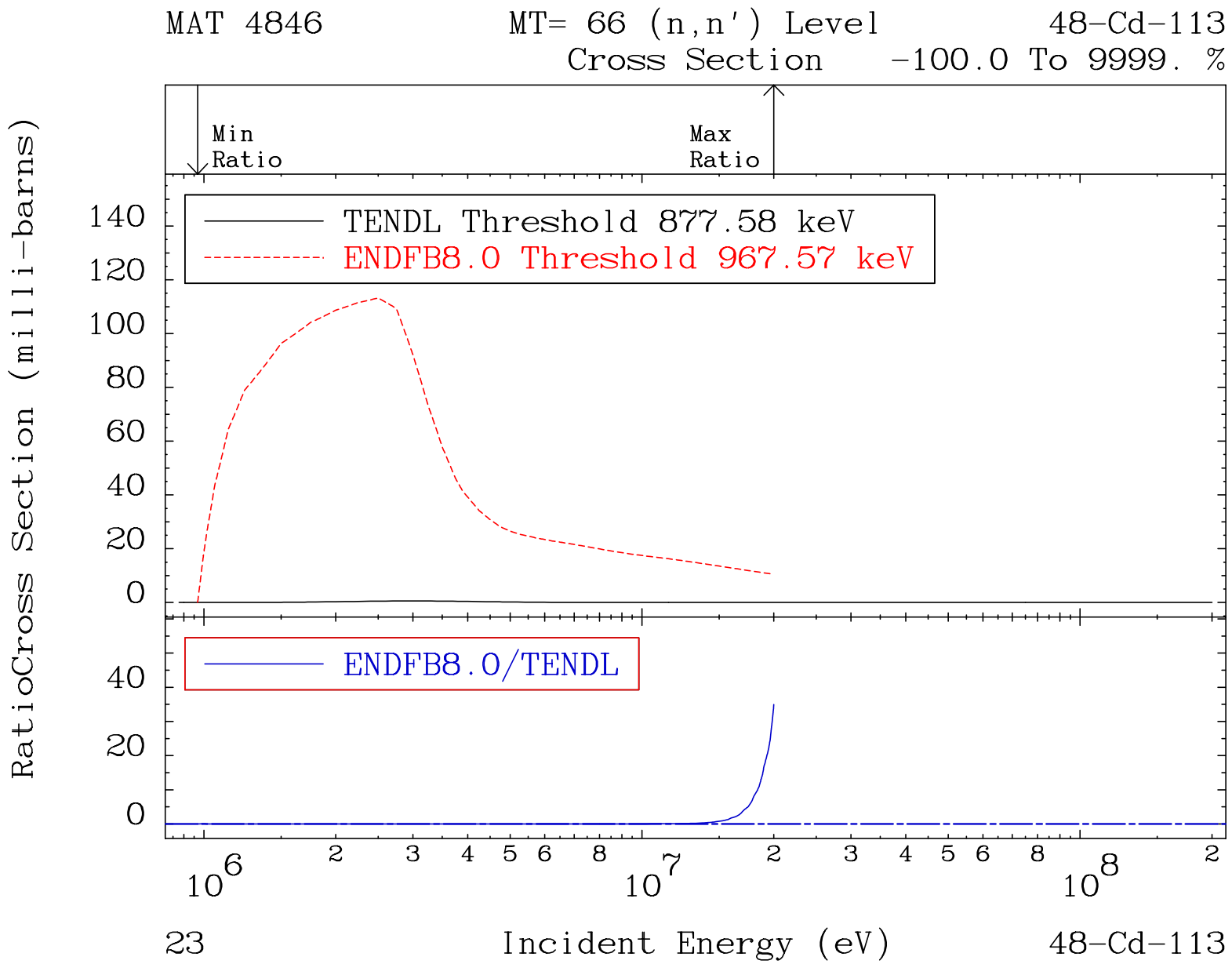

MAT 4846
MT= 61 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 714.90 keV
ENDFB8.0 Threshold 766.79 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
300
200
100
0
8
2
3
4
5
6
8
2
3
4
5
6
8
2
10^6
10^7
10^8
18
Incident Energy (eV)
48-Cd-113

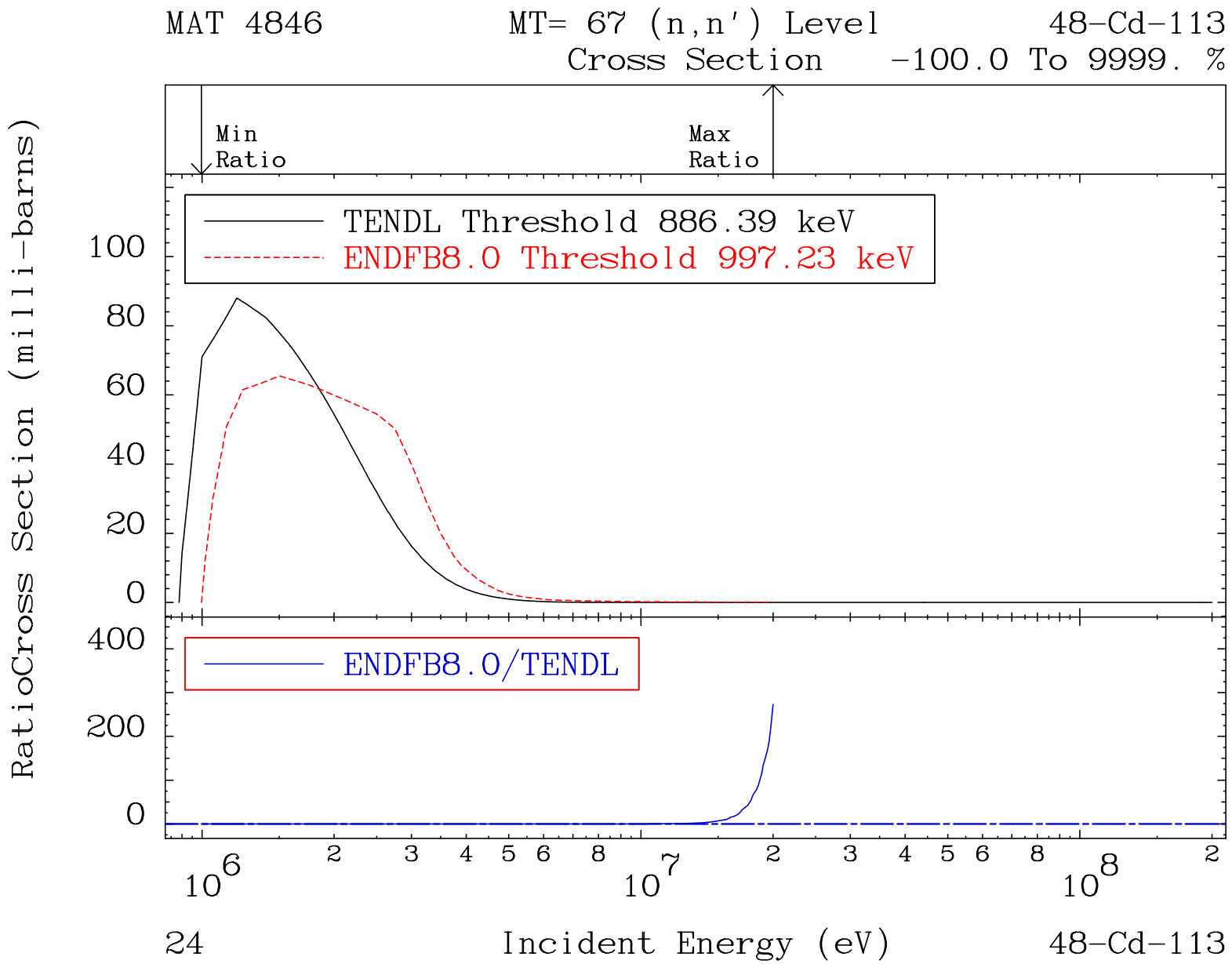

MAT 4846
MT= 62 (n,n') Level
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 766.79 keV
ENDFB8.0 Threshold 827.33 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
2.0
1.0
0.0
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
19
Incident Energy (eV)
48-Cd-113

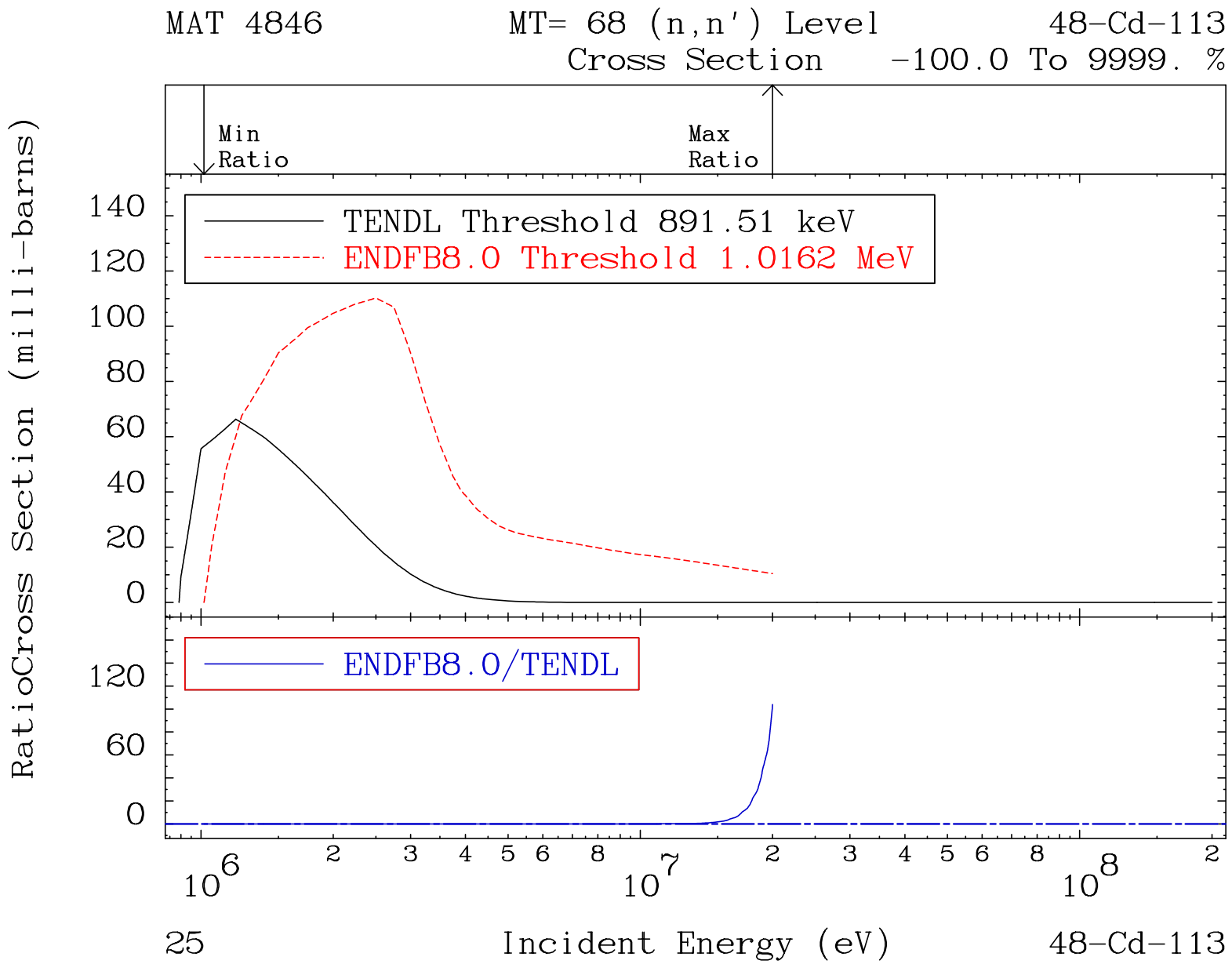

MAT 4846
MT= 63 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 822.62 keV
ENDFB8.0 Threshold 862.94 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
600
400
200
0
8
2
3
4
5
6
8
10^6
10^7
10^8
20
Incident Energy (eV)
48-Cd-113

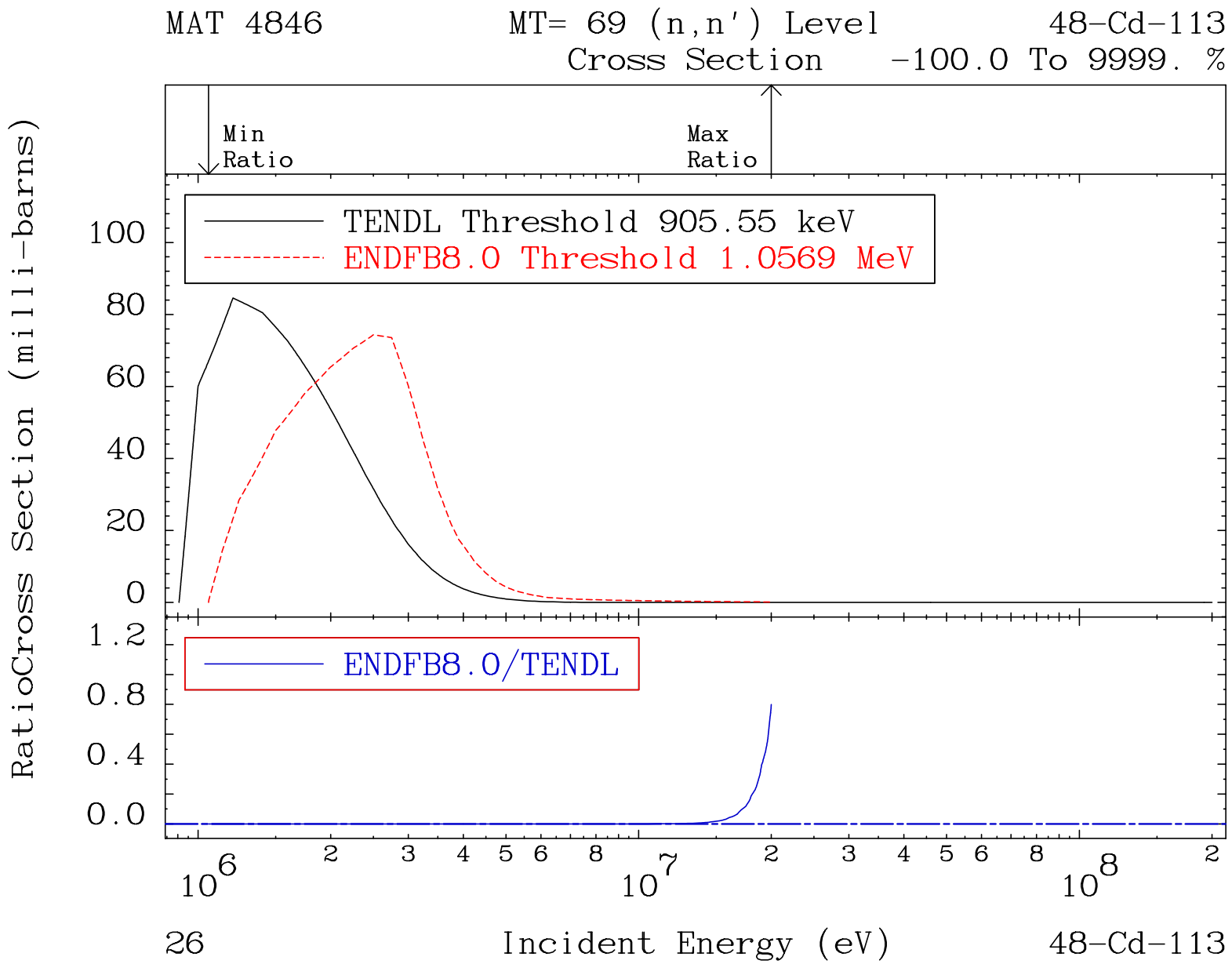

MAT 4846
MT= 64 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 824.00 keV
ENDFB8.0 Threshold 891.49 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
200
100
0
8
2
3
4
5
6
8
10^6
10^7
10^8
21
Incident Energy (eV)
48-Cd-113

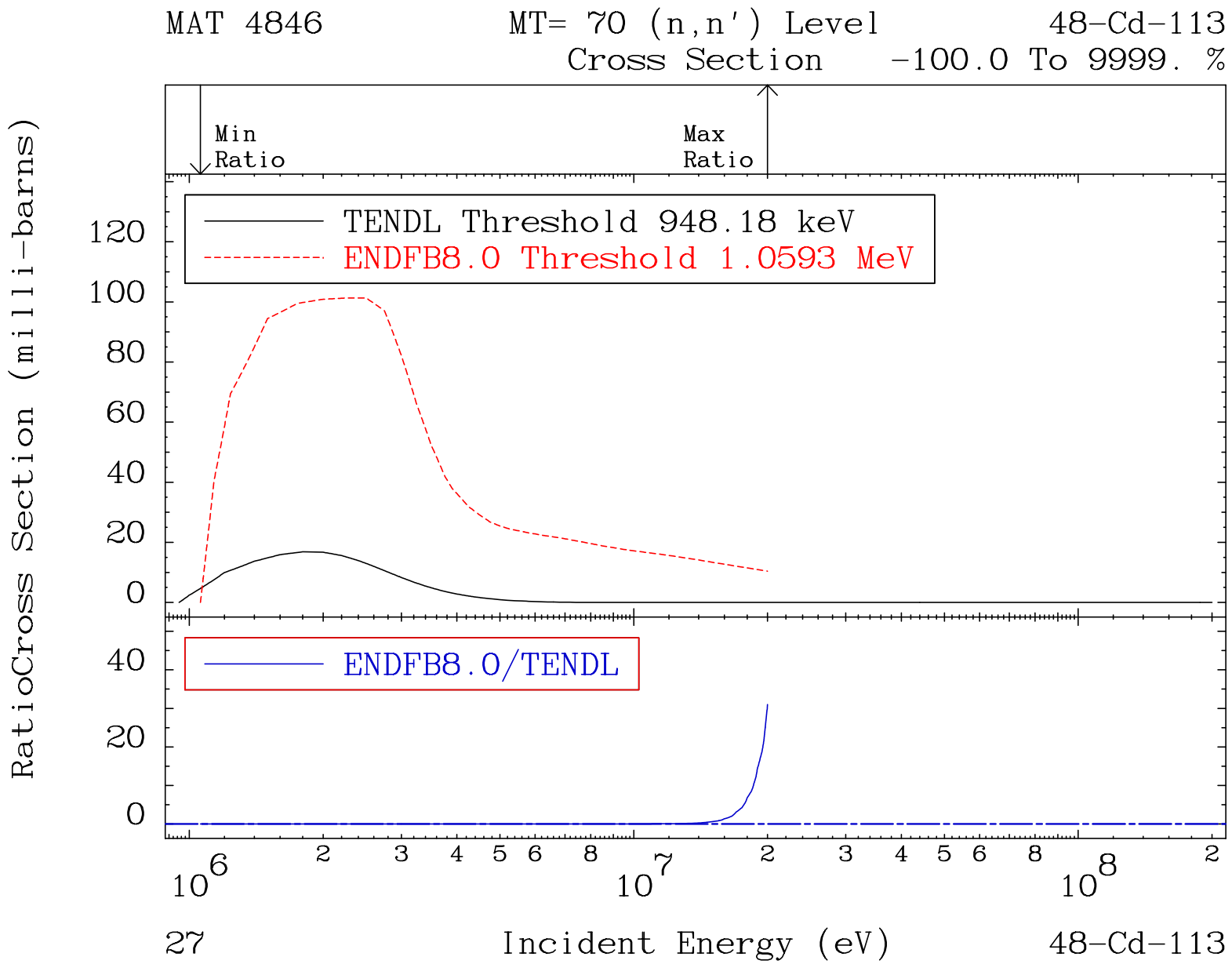

MAT 4846
MT= 65 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 862.92 keV
ENDFB8.0 Threshold 908.04 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
60
40
20
0
2 3 4 5 6 8
10^6
10^7
10^8
22
Incident Energy (eV)
48-Cd-113

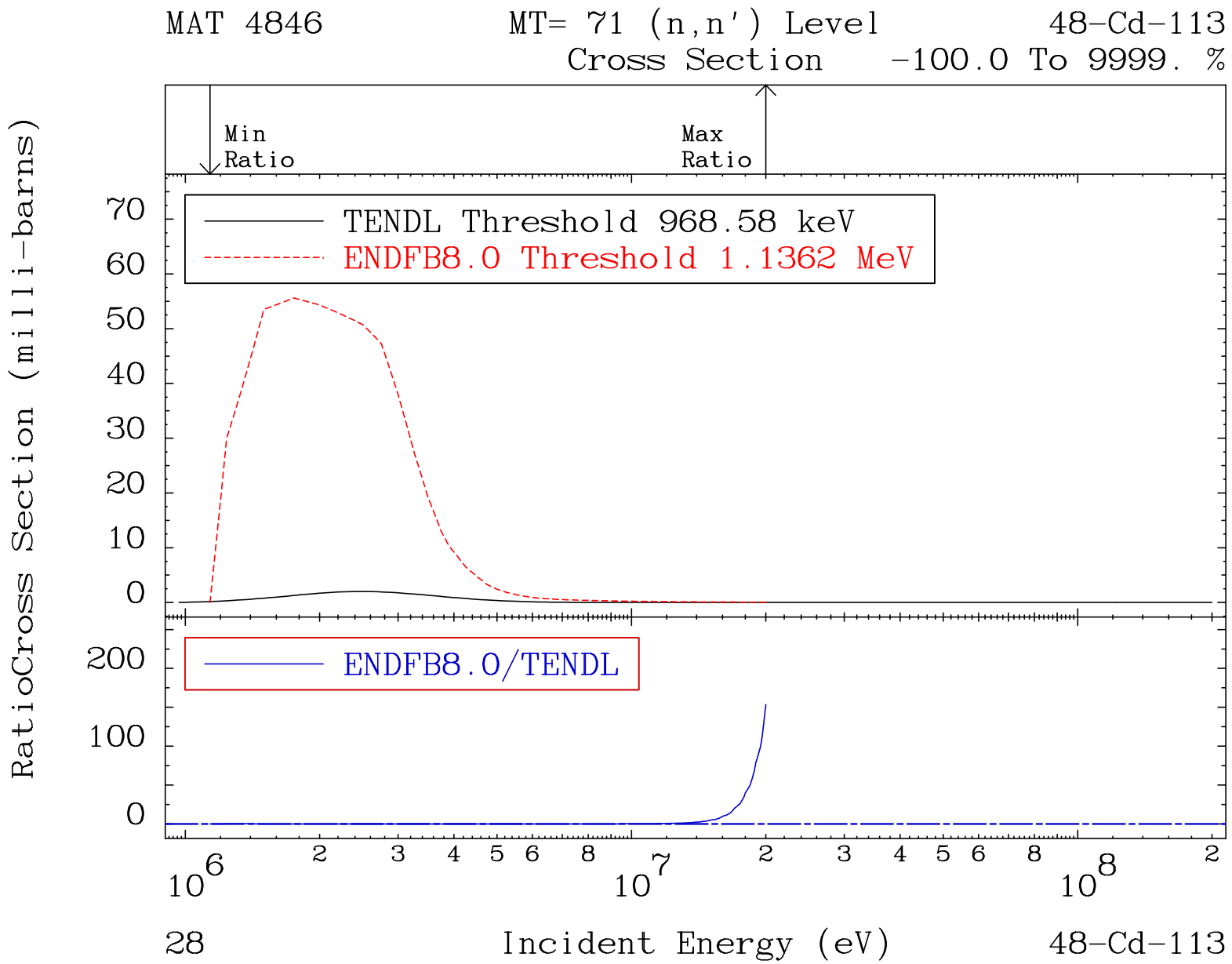

MAT 4846
MT= 66 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 877.58 keV
ENDFB8.0 Threshold 967.57 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
40
20
0
2
3
4
5
6
8
10^6
10^7
10^8
23
Incident Energy (eV)
48-Cd-113

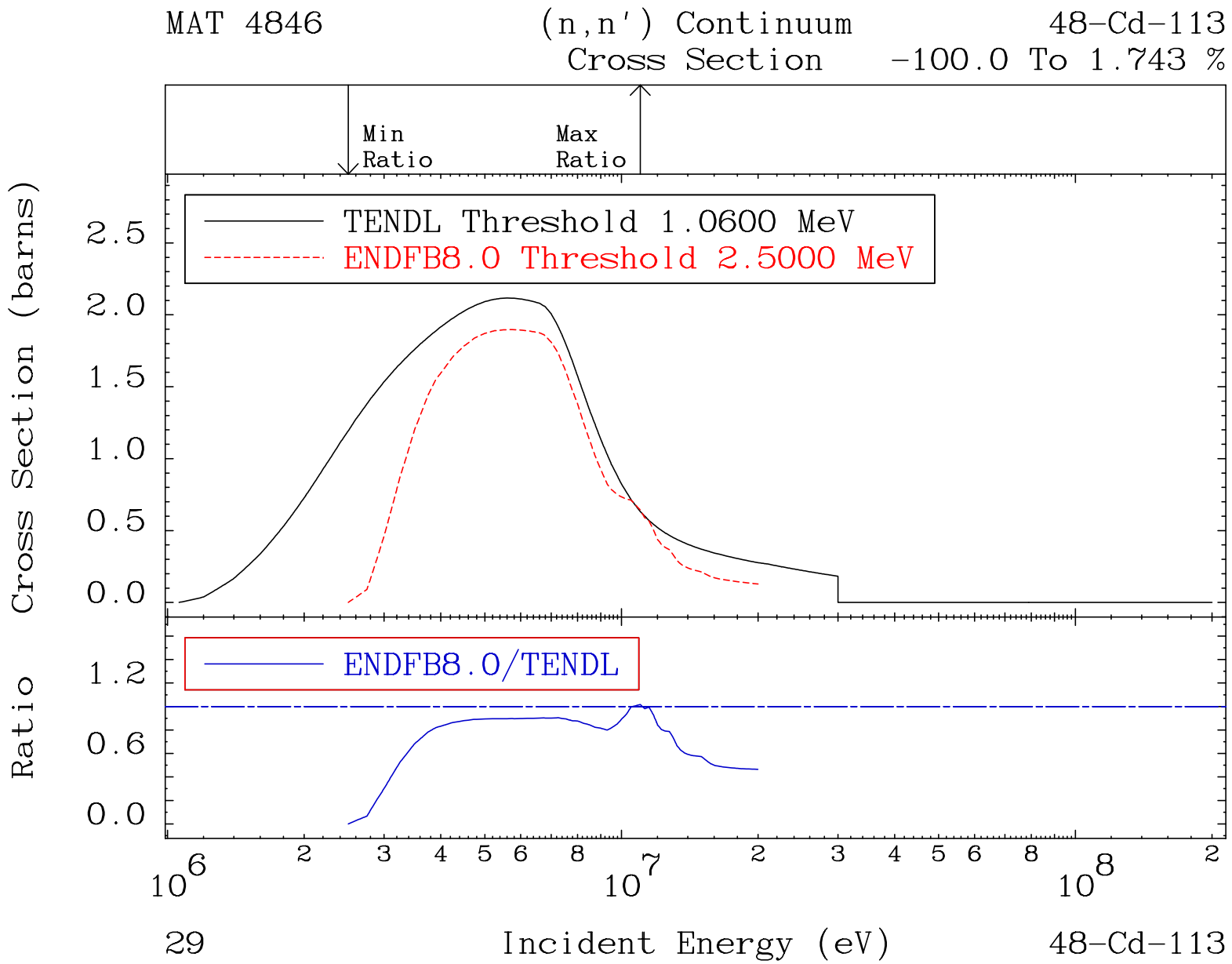

MAT 4846
MT= 67 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 886.39 keV
ENDFB8.0 Threshold 997.23 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
400
200
0
10^6
10^7
10^8
2 3 4 5 6 8
Incident Energy (eV)
24
48-Cd-113

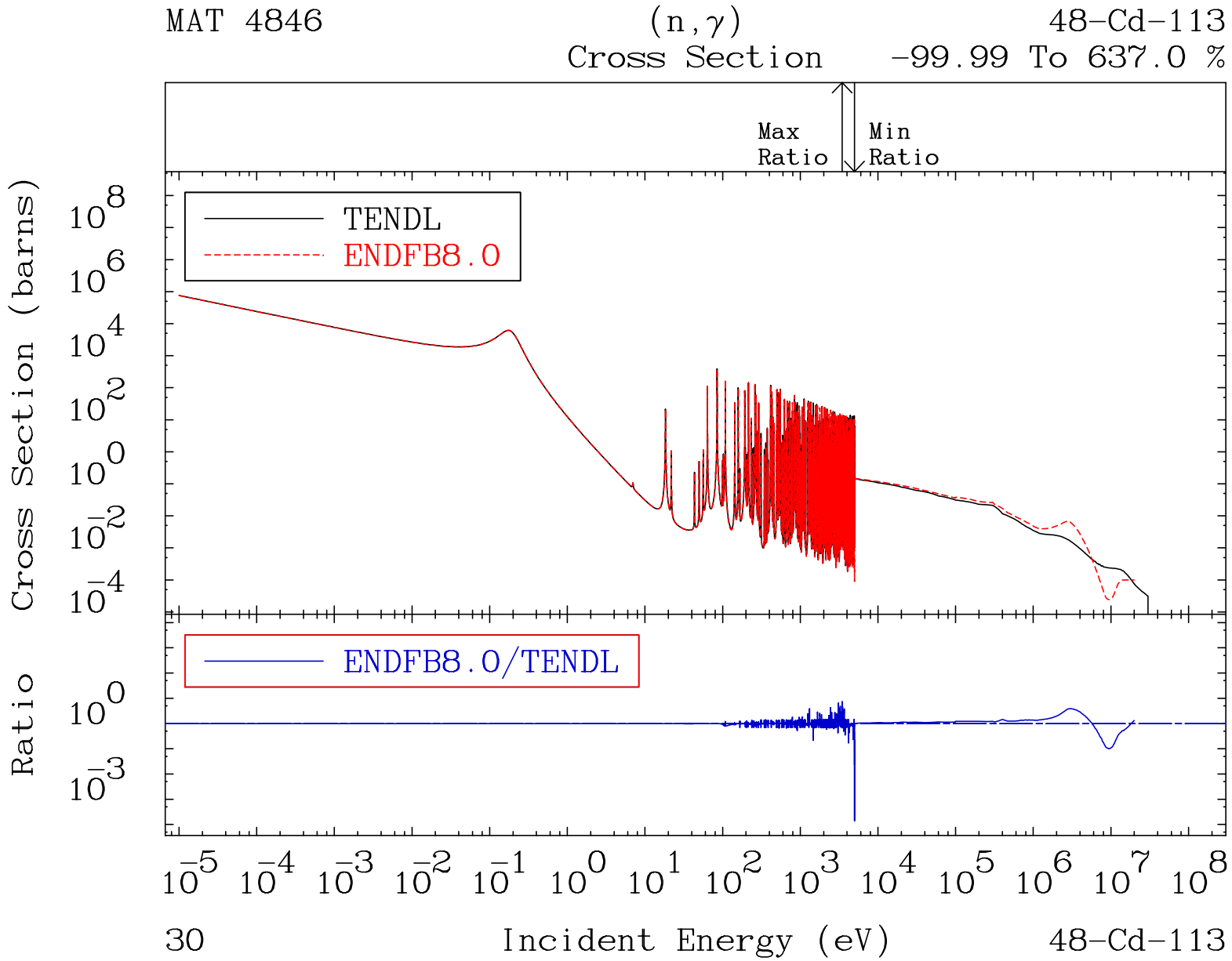

MAT 4846
MT= 68 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 891.51 keV
ENDFB8.0 Threshold 1.0162 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
120
60
0
10^6
10^7
10^8
2 3 4 5 6 8
Incident Energy (eV)
25
48-Cd-113

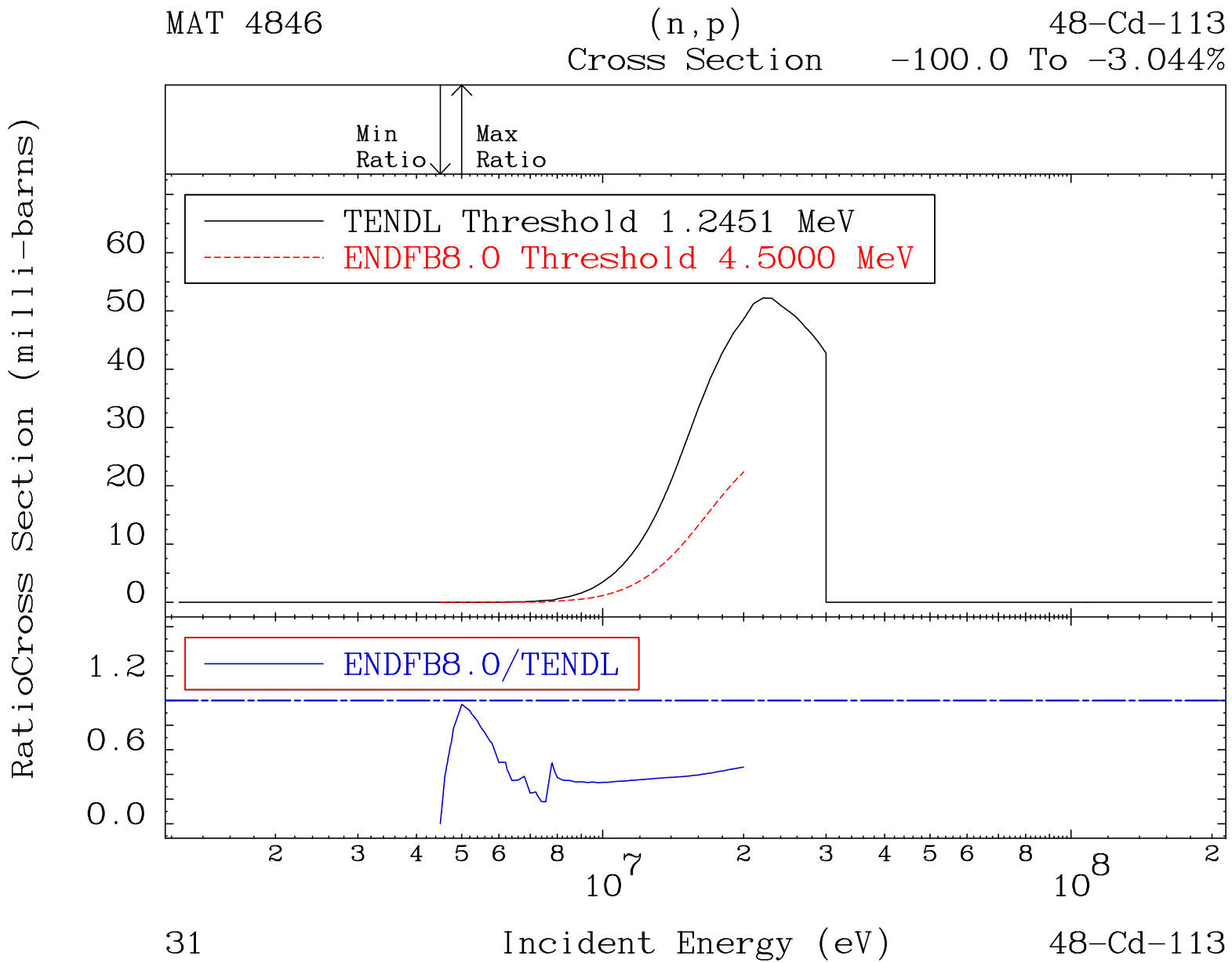

MAT 4846
MT= 69 (n,n') Level
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 905.55 keV
ENDFB8.0 Threshold 1.0569 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
1.2
0.8
0.4
0.0
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
26
Incident Energy (eV)
48-Cd-113

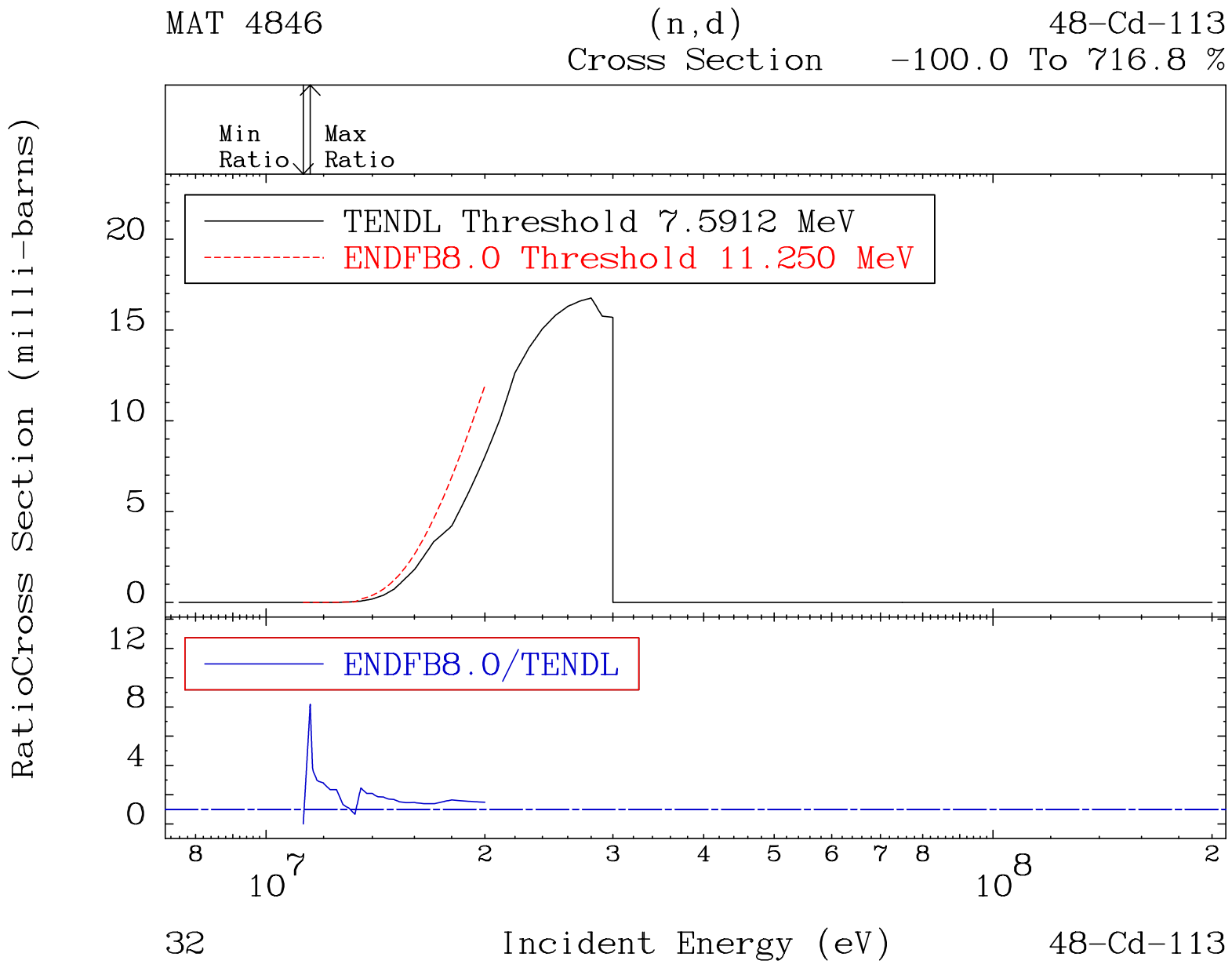

MAT 4846
MT= 70 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 948.18 keV
ENDFB8.0 Threshold 1.0593 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
40
20
0
2 3 4 5 6 8
10^6
10^7
10^8
27
Incident Energy (eV)
48-Cd-113

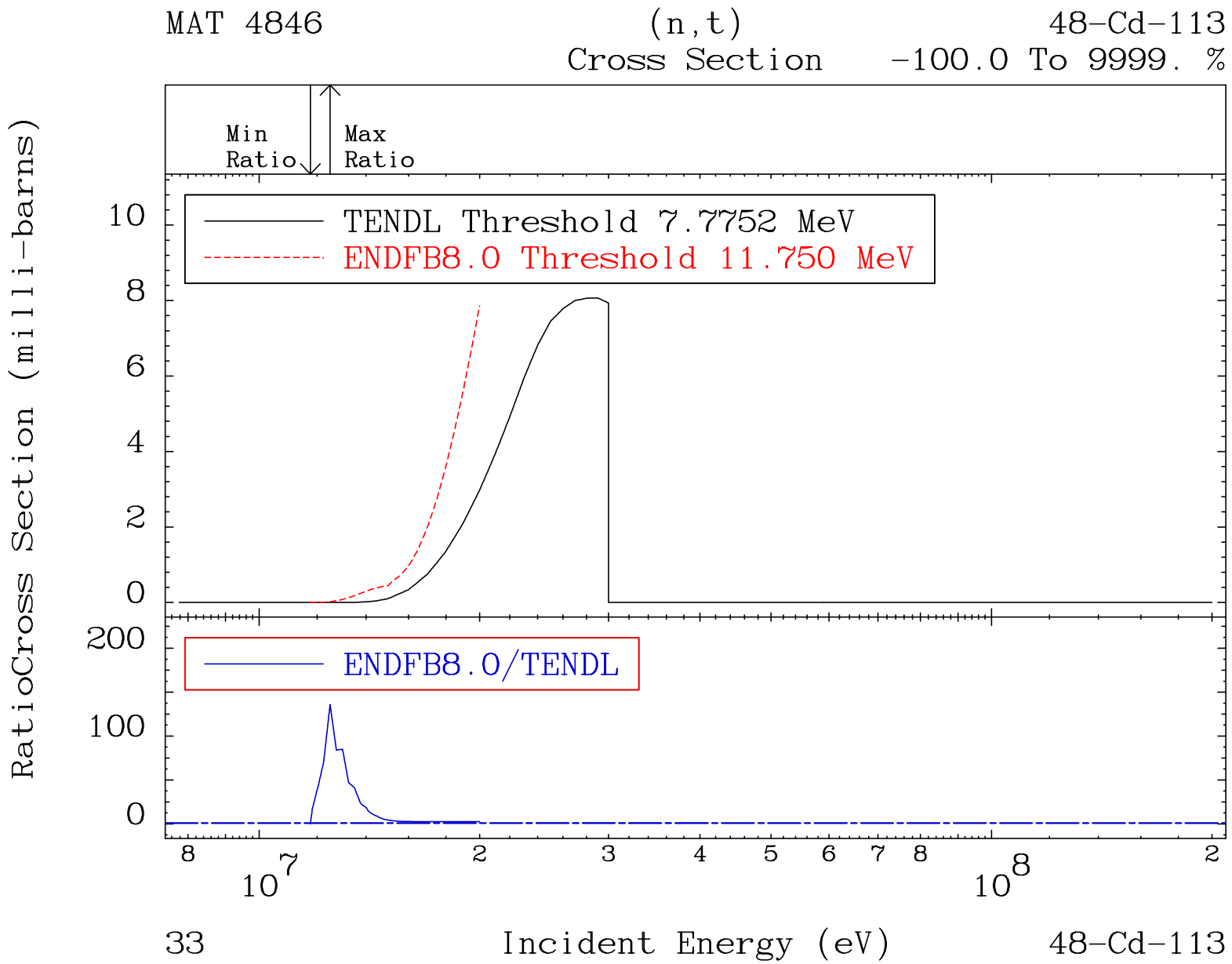

MAT 4846
MT= 71 (n,n') Level
48-Cd-113
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 968.58 keV
ENDFB8.0 Threshold 1.1362 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
200
100
0
10^6
2 3 4 5 6 8
10^7
2 3 4 5 6 8
10^8
2
28
Incident Energy (eV)
48-Cd-113

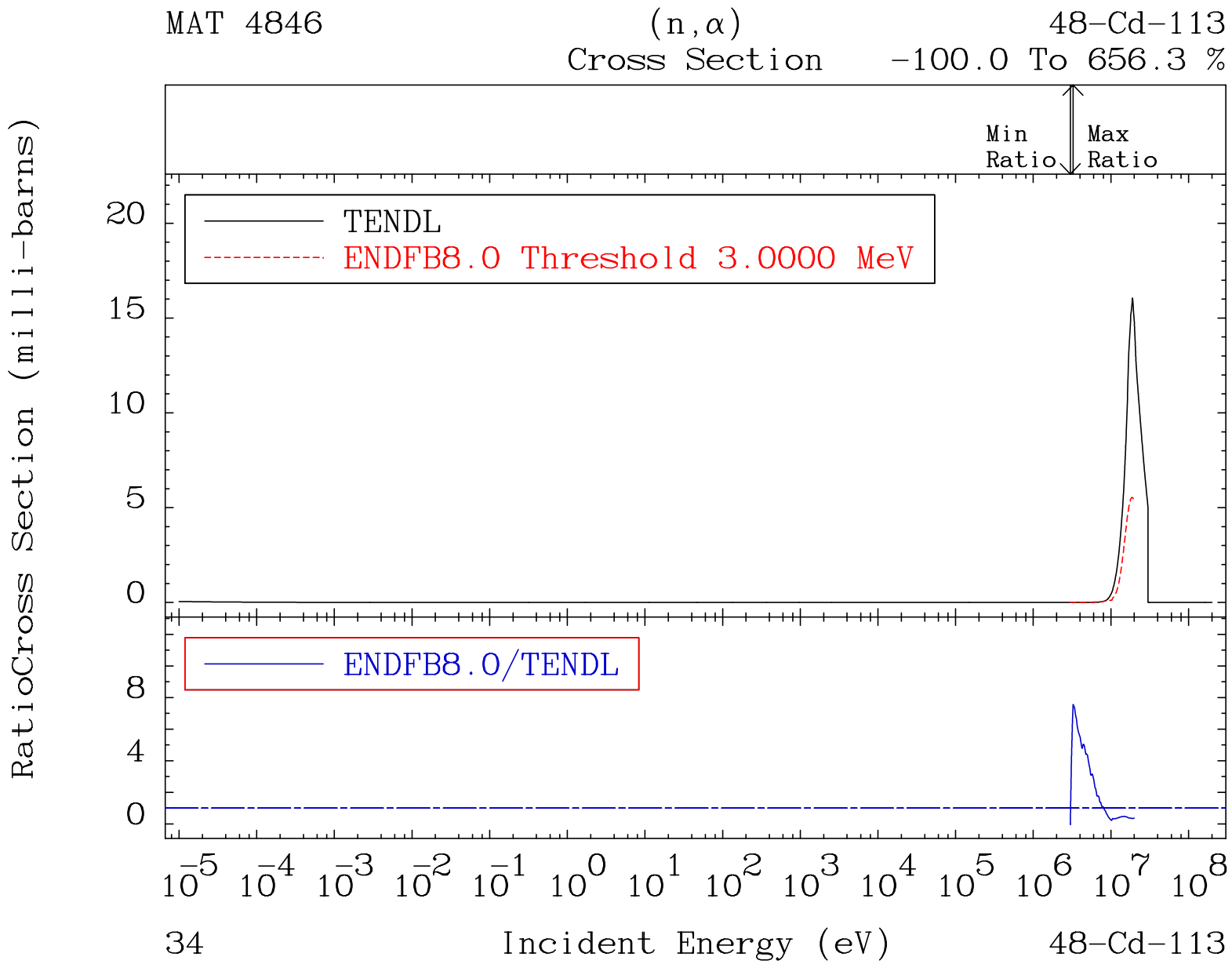

MAT 4846
(n,n') Continuum
Cross Section
48-Cd-113
-100.0 To 1.743 %
Min Ratio
Max Ratio
TENDL Threshold 1.0600 MeV
ENDFB8.0 Threshold 2.5000 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
1.2
0.6
0.0
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
29
Incident Energy (eV)
48-Cd-113

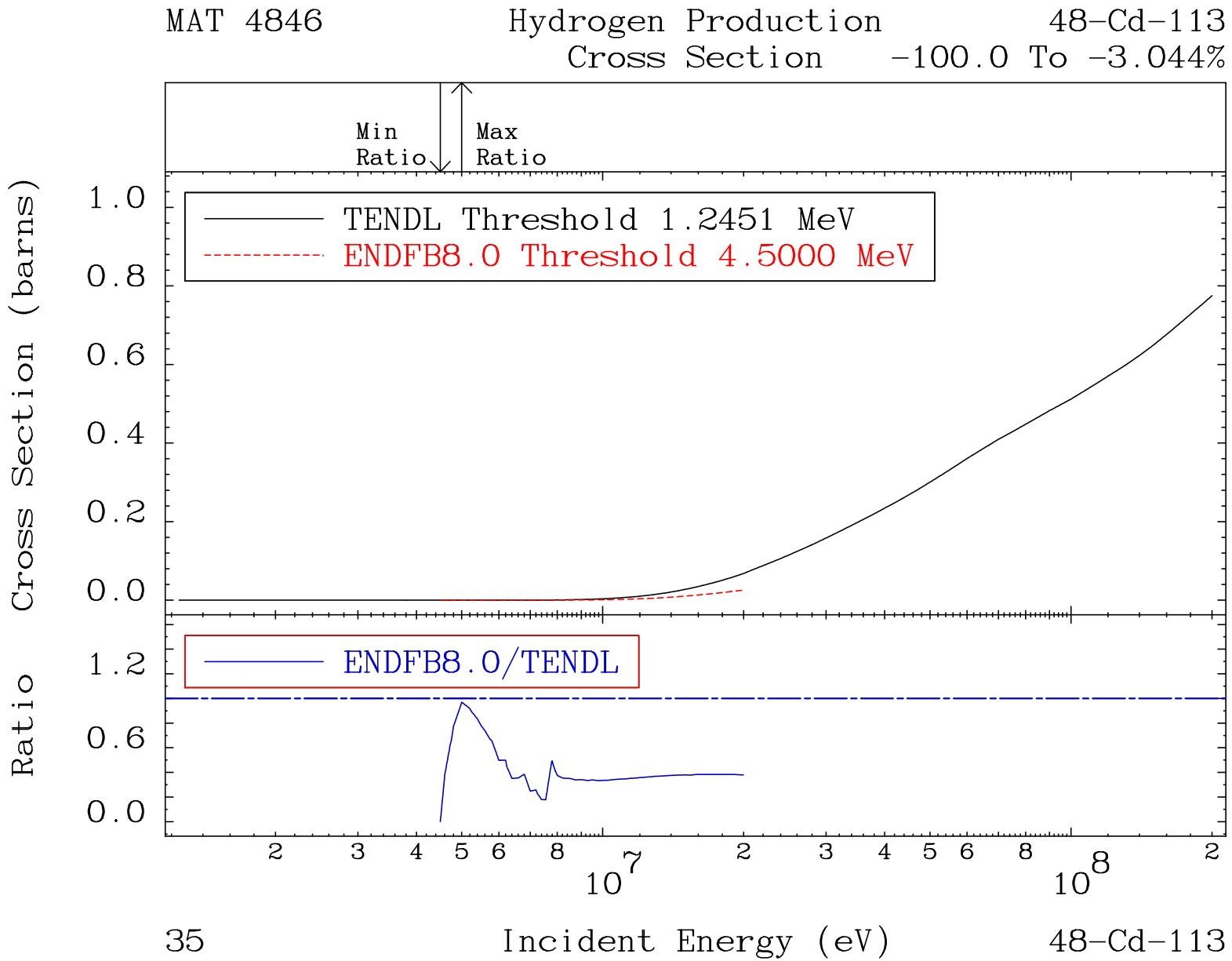

MAT 4846
(n,γ)
Cross Section
48-Cd-113
-99.99 To 637.0 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
30
48-Cd-113

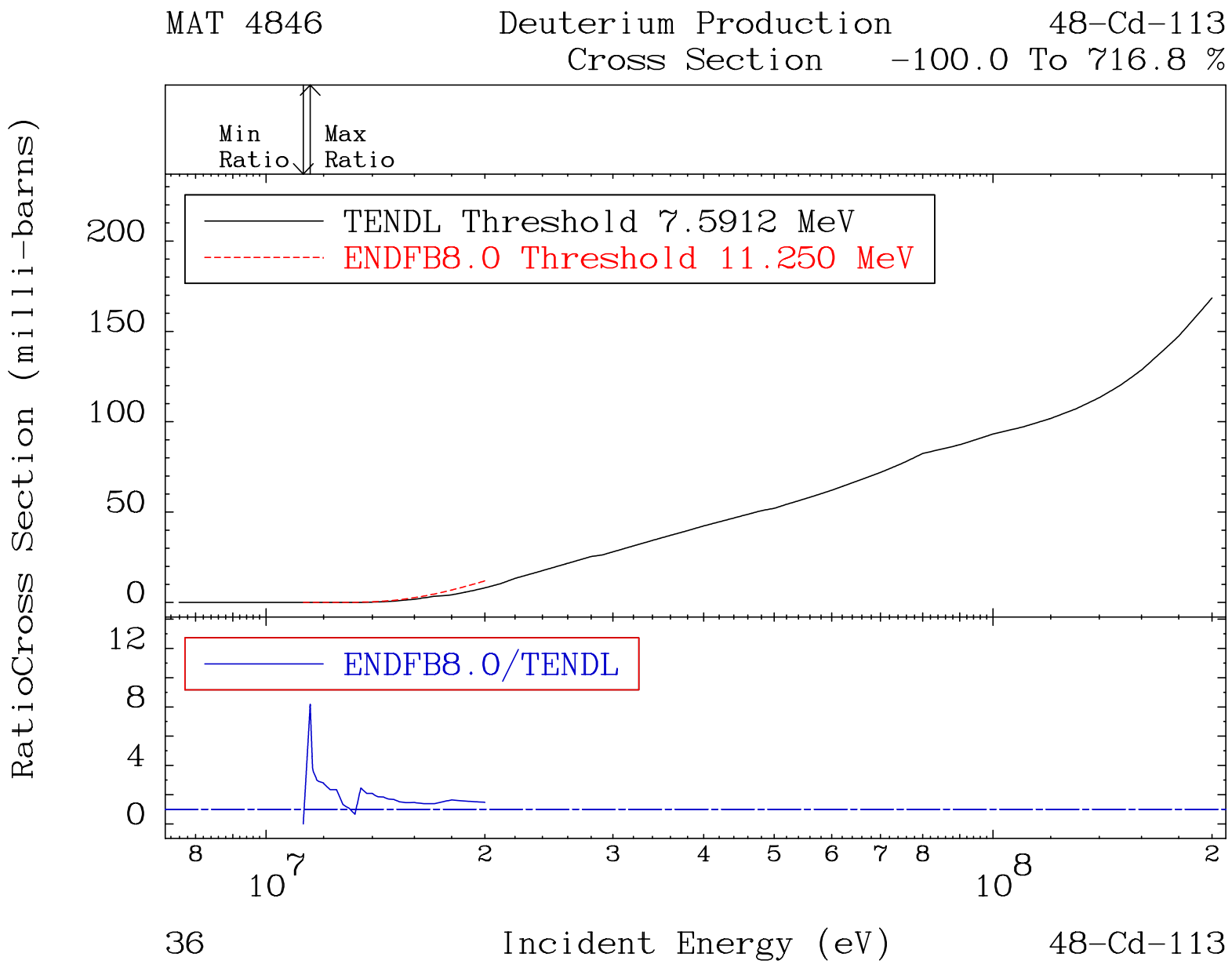

MAT 4846
(n,p)
48-Cd-113
Cross Section
-100.0 To -3.044%
Min Ratio
Max Ratio
TENDL Threshold 1.2451 MeV
ENDFB8.0 Threshold 4.5000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
1.2
0.6
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
31
Incident Energy (eV)
48-Cd-113

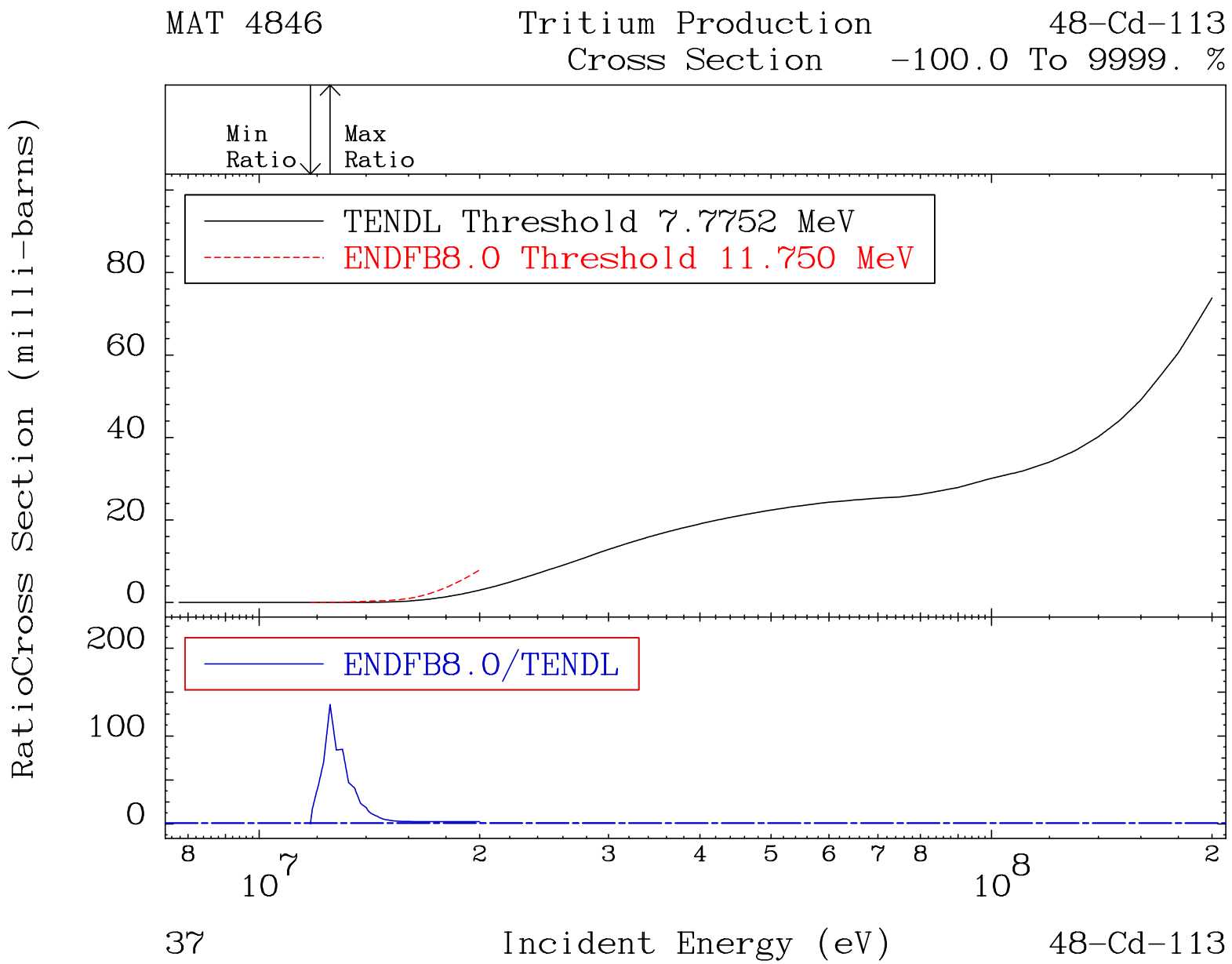

MAT 4846
(n,d)
48-Cd-113
Cross Section
-100.0 To 716.8 %
Min Ratio
Max Ratio
TENDL Threshold 7.5912 MeV
ENDFB8.0 Threshold 11.250 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
12
8
4
0
8
10^7
2
3
4
5
6
7
8
10^8
2
32
Incident Energy (eV)
48-Cd-113

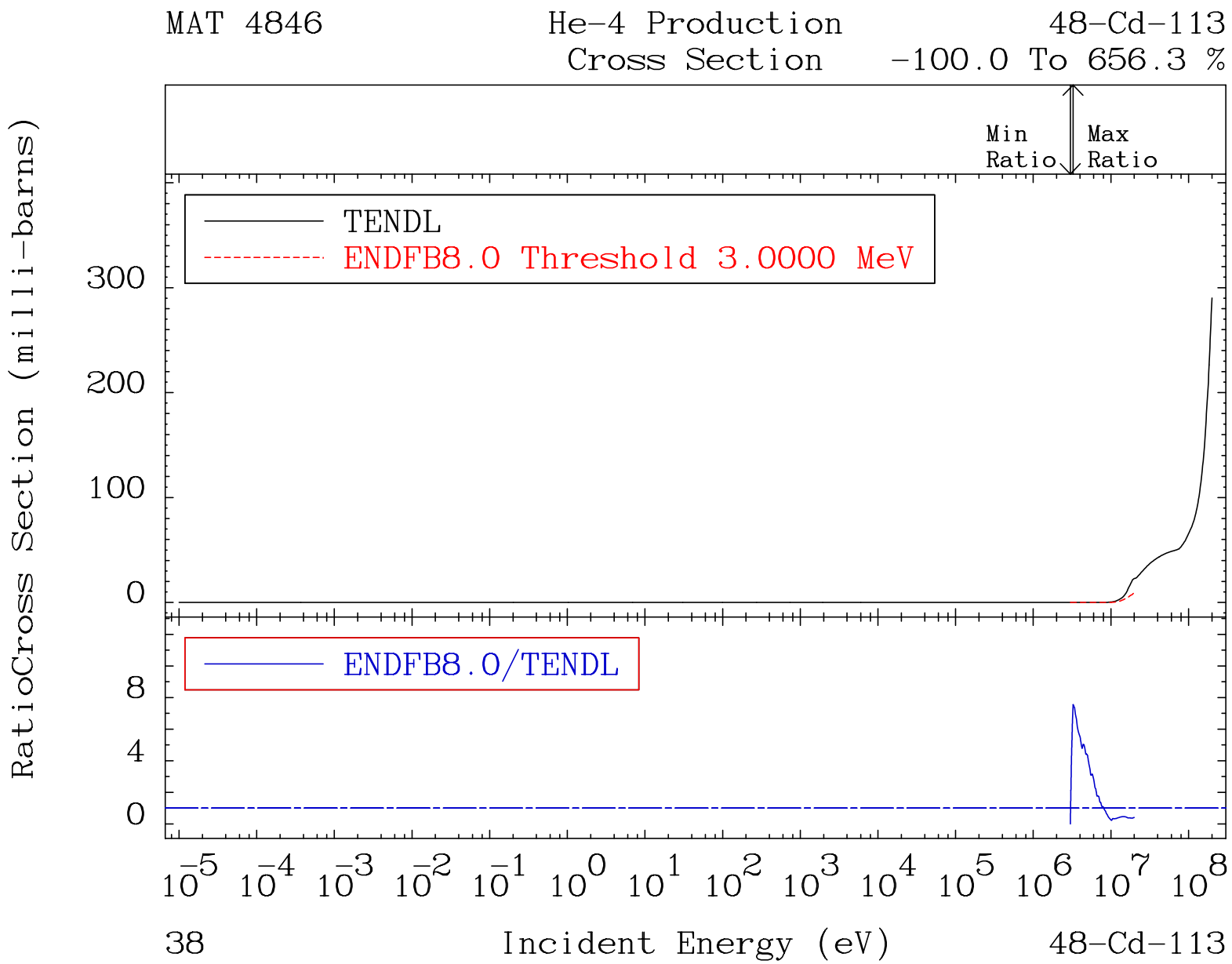

MAT 4846
(n,t)
Cross Section
48-Cd-113
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 7.7752 MeV
ENDFB8.0 Threshold 11.750 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
200
100
0
8
10^7
2
3
4
5
6
7
8
10^8
2
33
Incident Energy (eV)
48-Cd-113

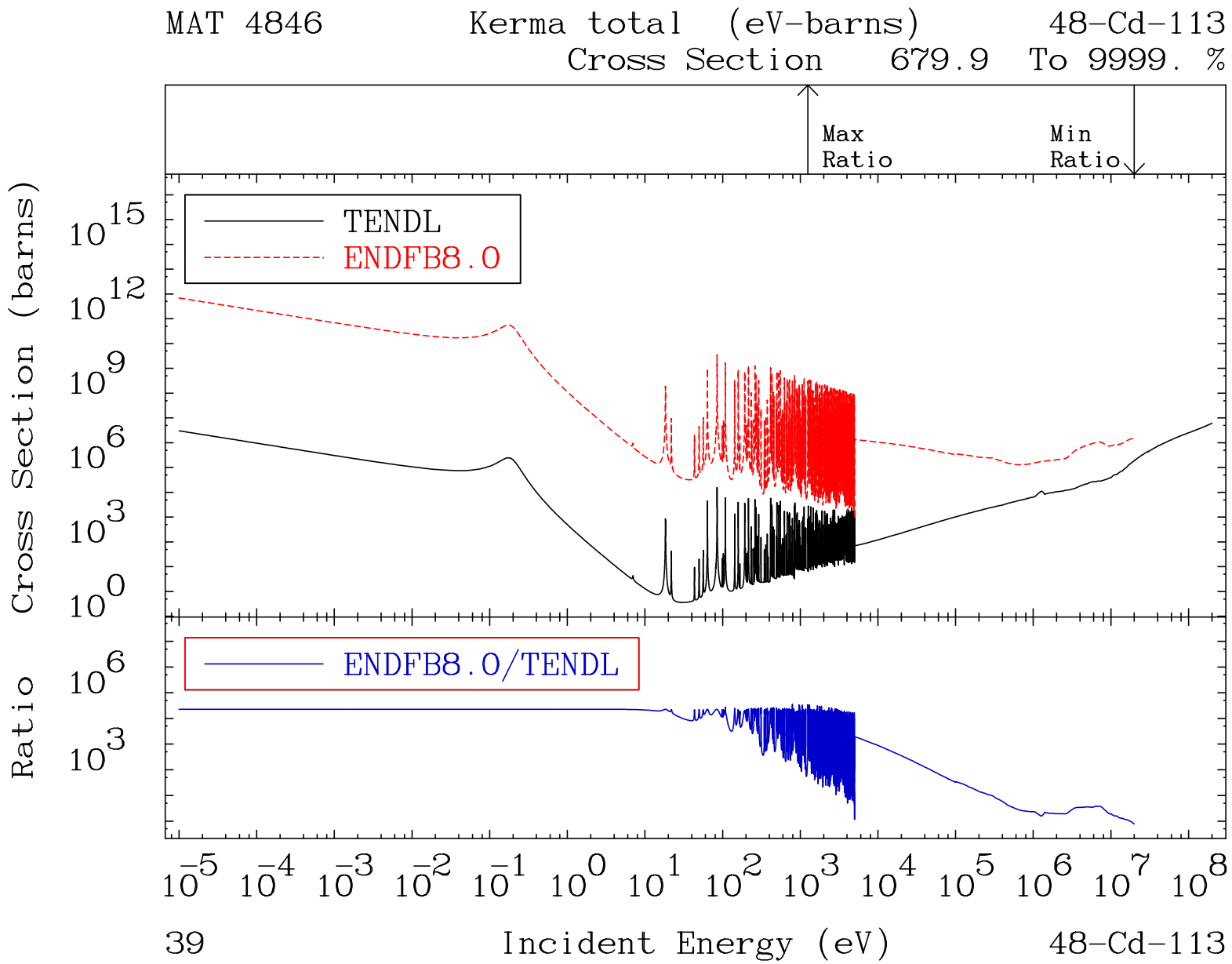

MAT 4846
(n,α)
48-Cd-113
Cross Section
-100.0 To 656.3 %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 3.0000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
8
4
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
34
Incident Energy (eV)
48-Cd-113

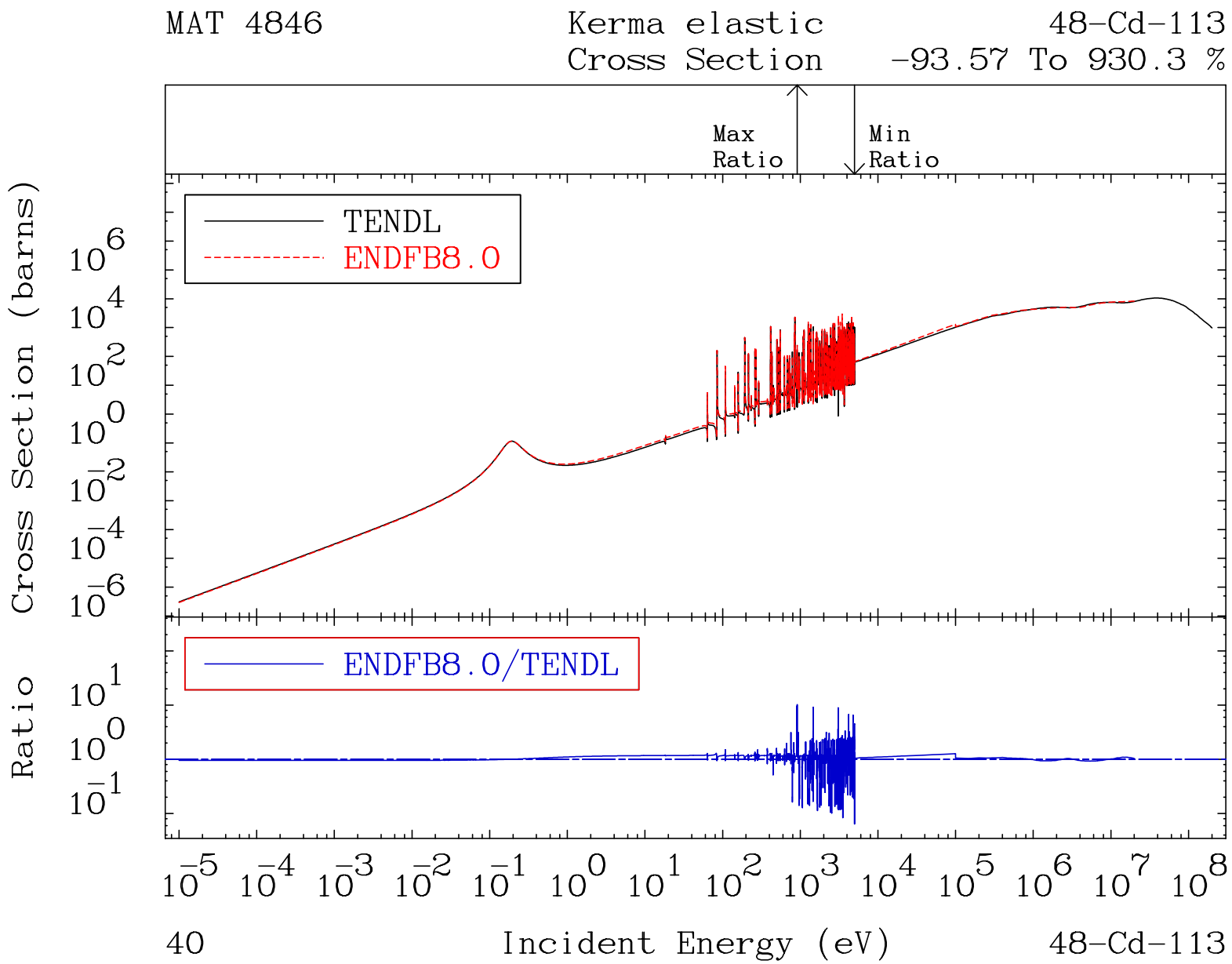

MAT 4846
Hydrogen Production
48-Cd-113
Cross Section
-100.0 To -3.044%
Min Ratio
Max Ratio
TENDL Threshold 1.2451 MeV
ENDFB8.0 Threshold 4.5000 MeV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
1.2
0.6
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
35
Incident Energy (eV)
48-Cd-113

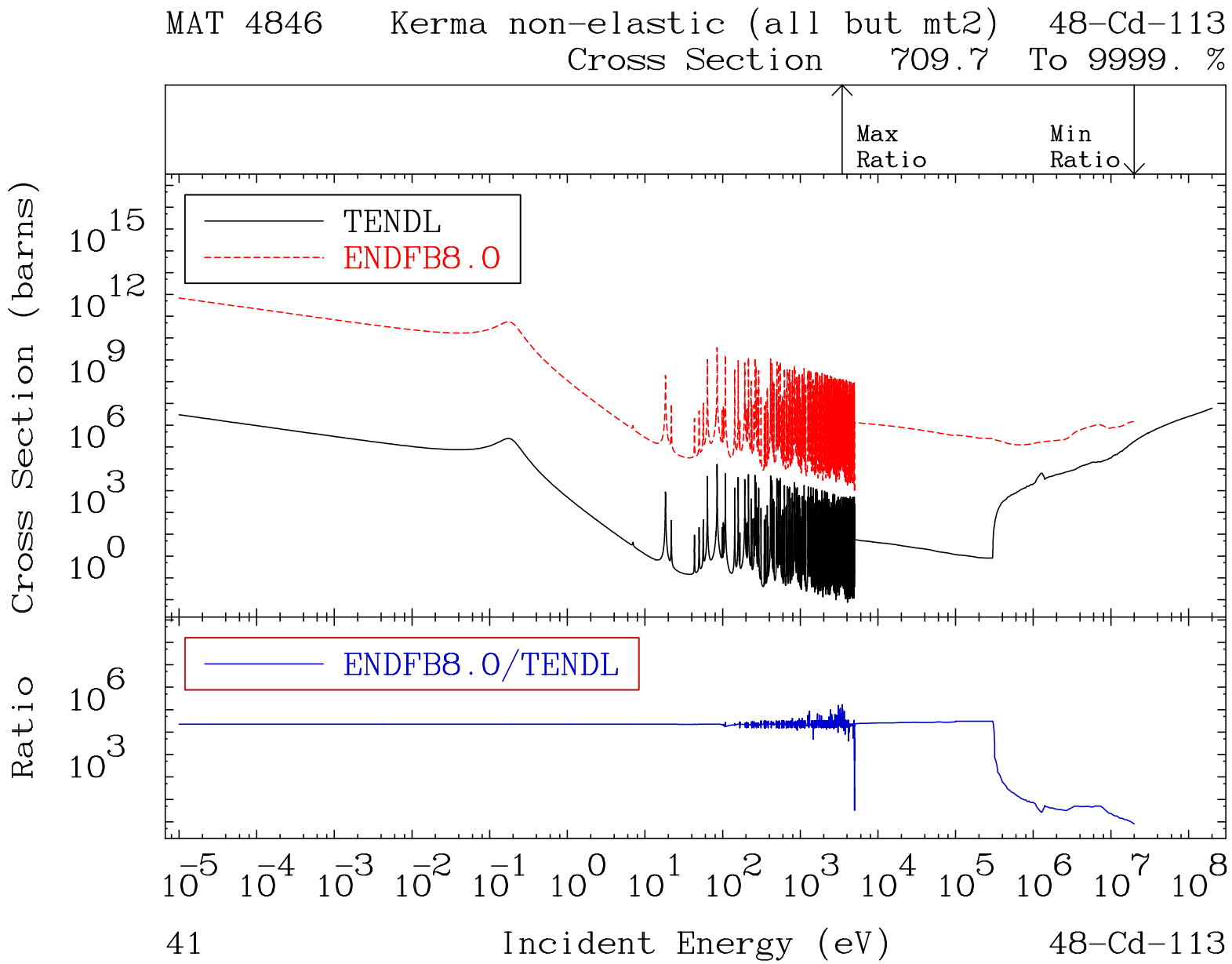

MAT 4846
Deuterium Production
48-Cd-113
Cross Section
-100.0 To 716.8 %
Min Ratio
Max Ratio
TENDL Threshold 7.5912 MeV
ENDFB8.0 Threshold 11.250 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
12
8
4
0
8
10^7
2
3
4
5
6
7
8
10^8
2
36
Incident Energy (eV)
48-Cd-113

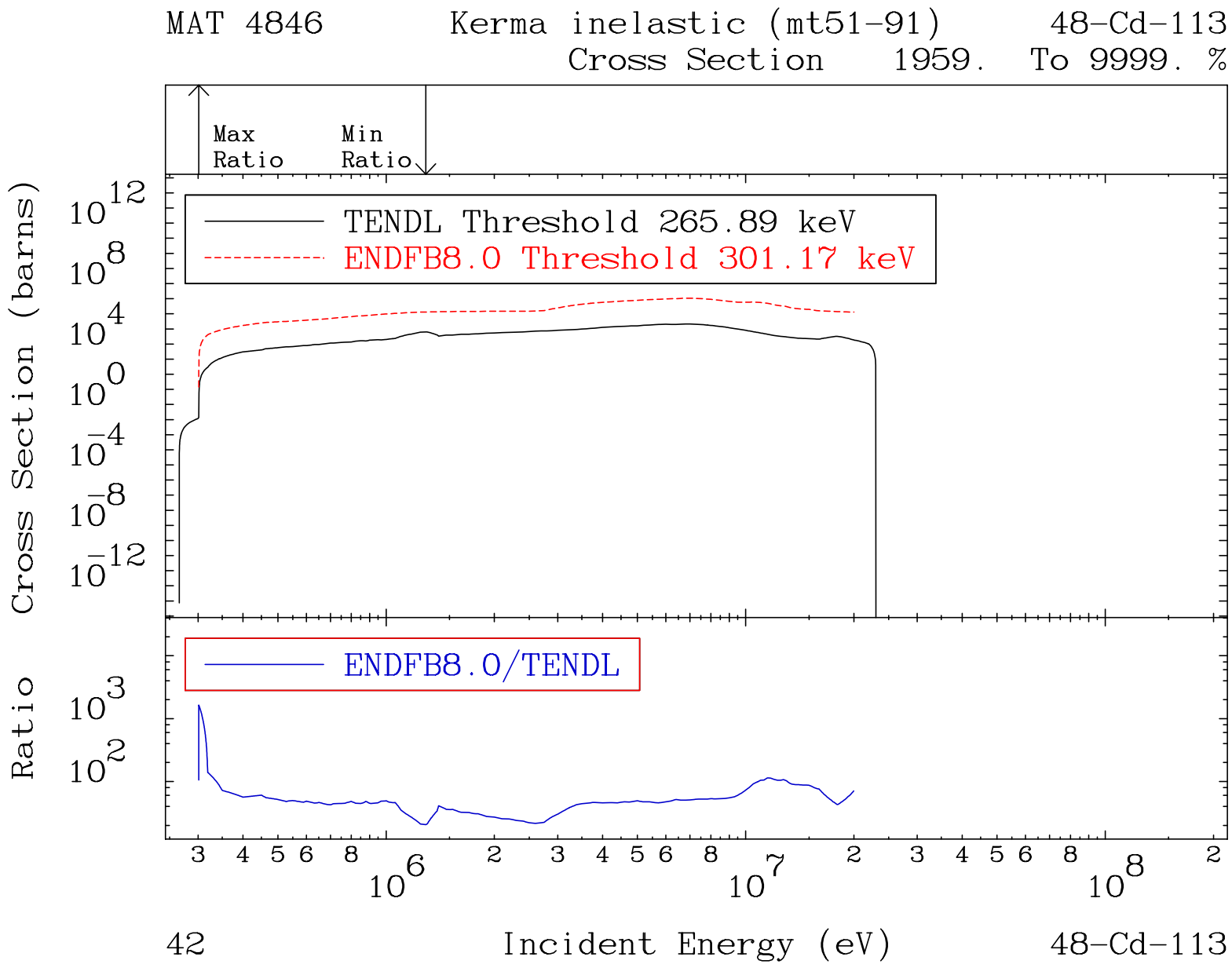

MAT 4846
Tritium Production
48-Cd-113
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 7.7752 MeV
ENDFB8.0 Threshold 11.750 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
200
100
0
8
10^7
2
3
4
5
6
7
8
10^8
2
37
Incident Energy (eV)
48-Cd-113

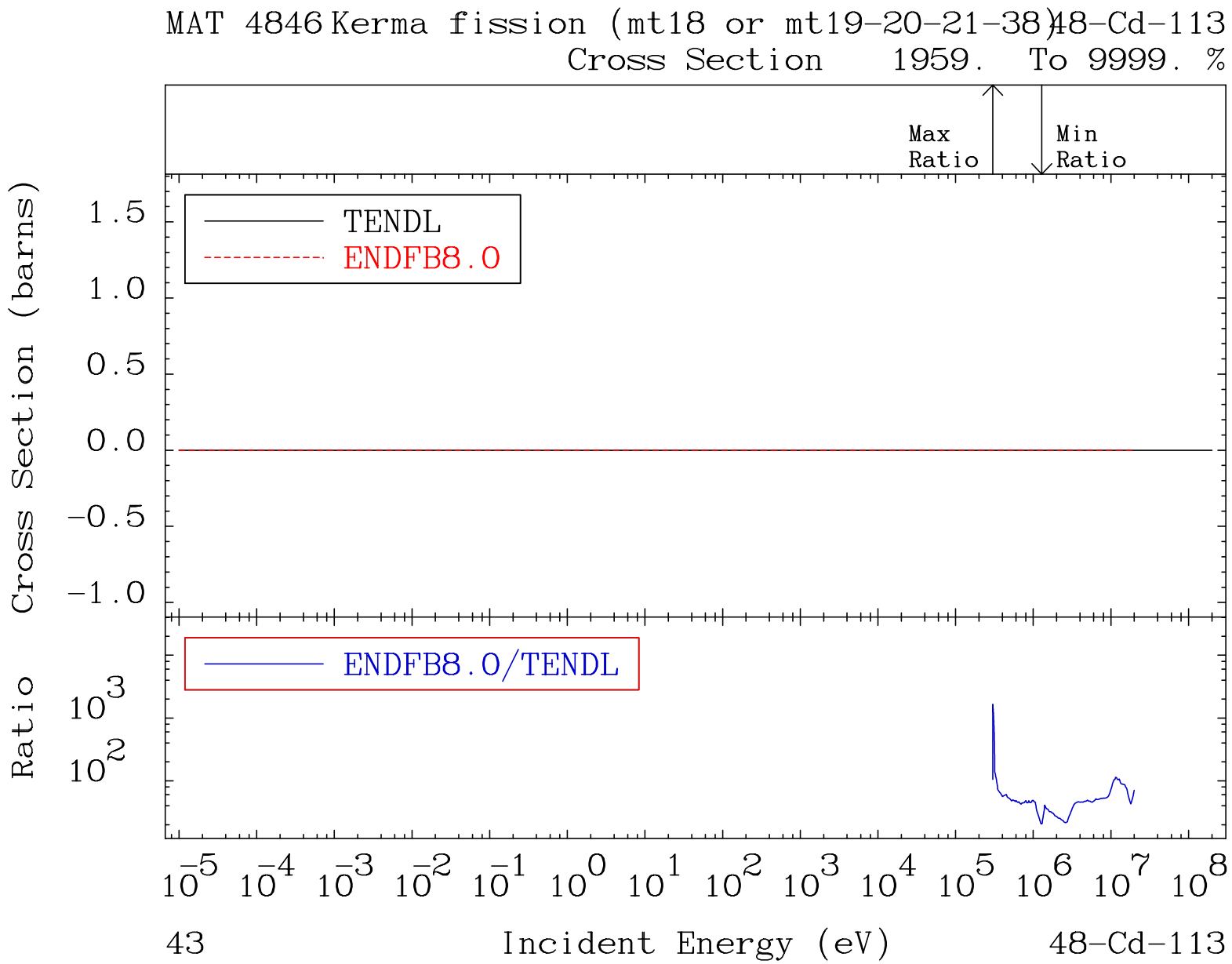

MAT 4846
He-4 Production
Cross Section
48-Cd-113
-100.0 To 656.3 %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 3.0000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
8
4
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
38
Incident Energy (eV)
48-Cd-113

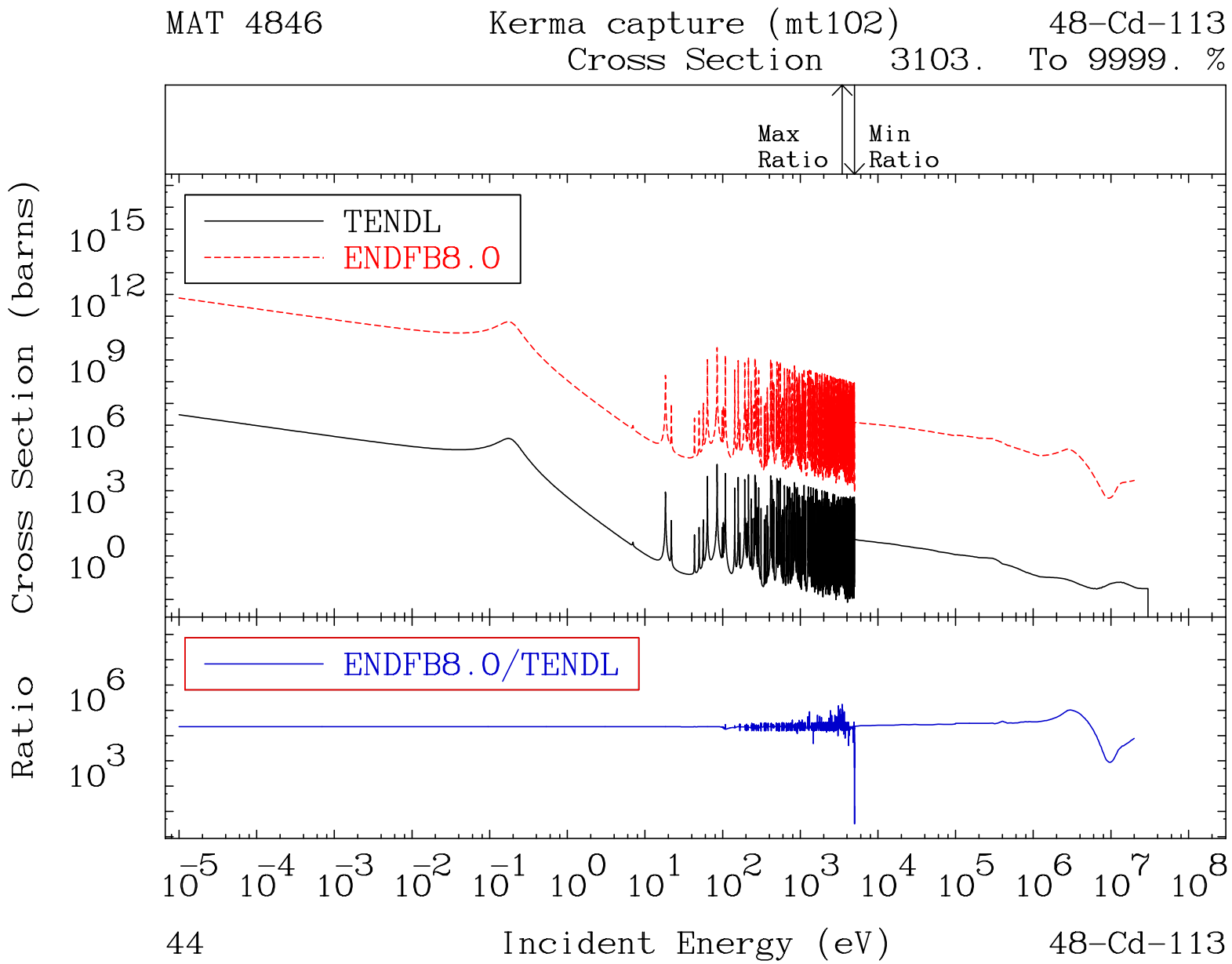

MAT 4846
Kerma total (eV-barns)
48-Cd-113
Cross Section 679.9 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
48-Cd-113

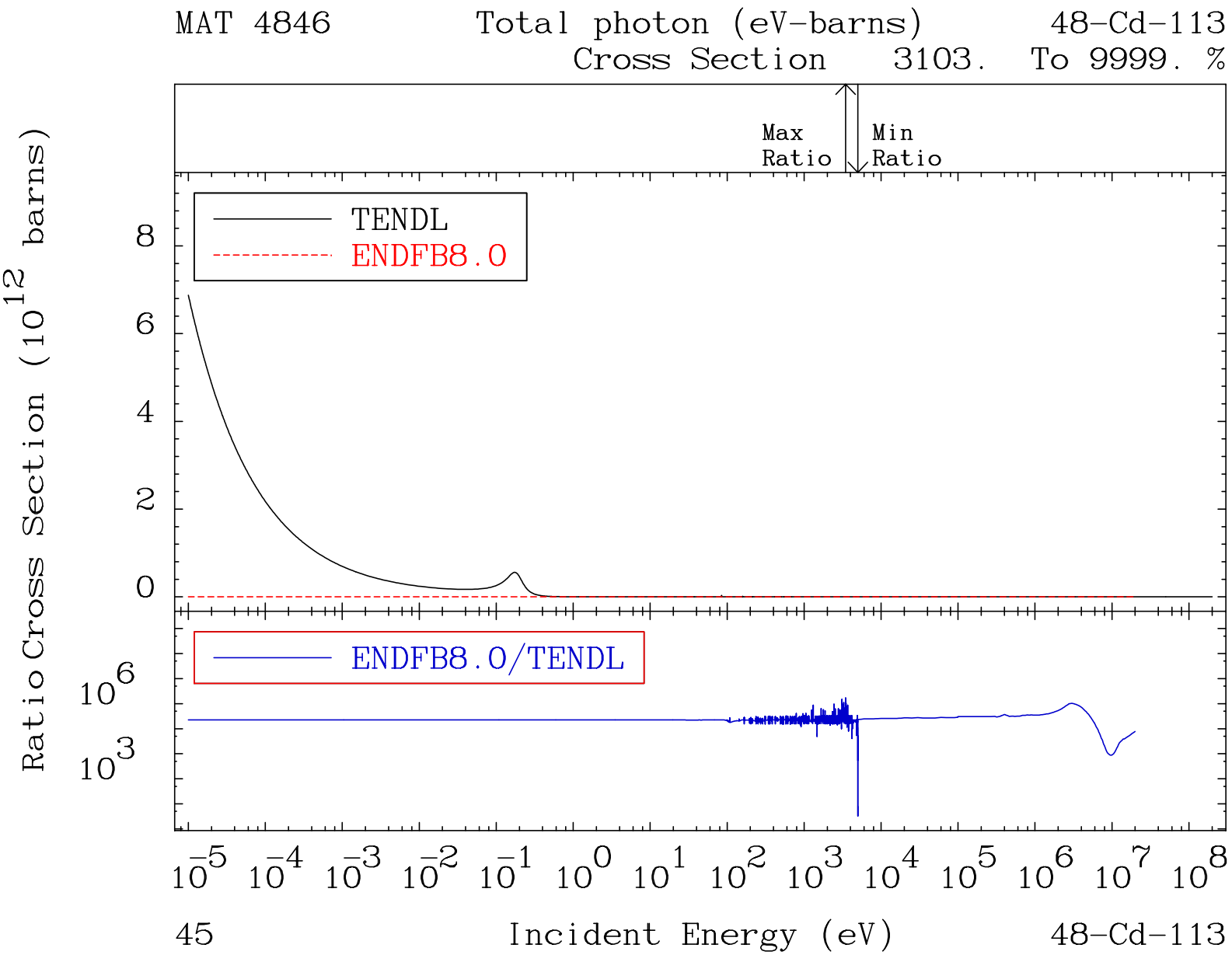

MAT 4846
Kerma elastic
Cross Section
48-Cd-113
-93.57 To 930.3 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
48-Cd-113

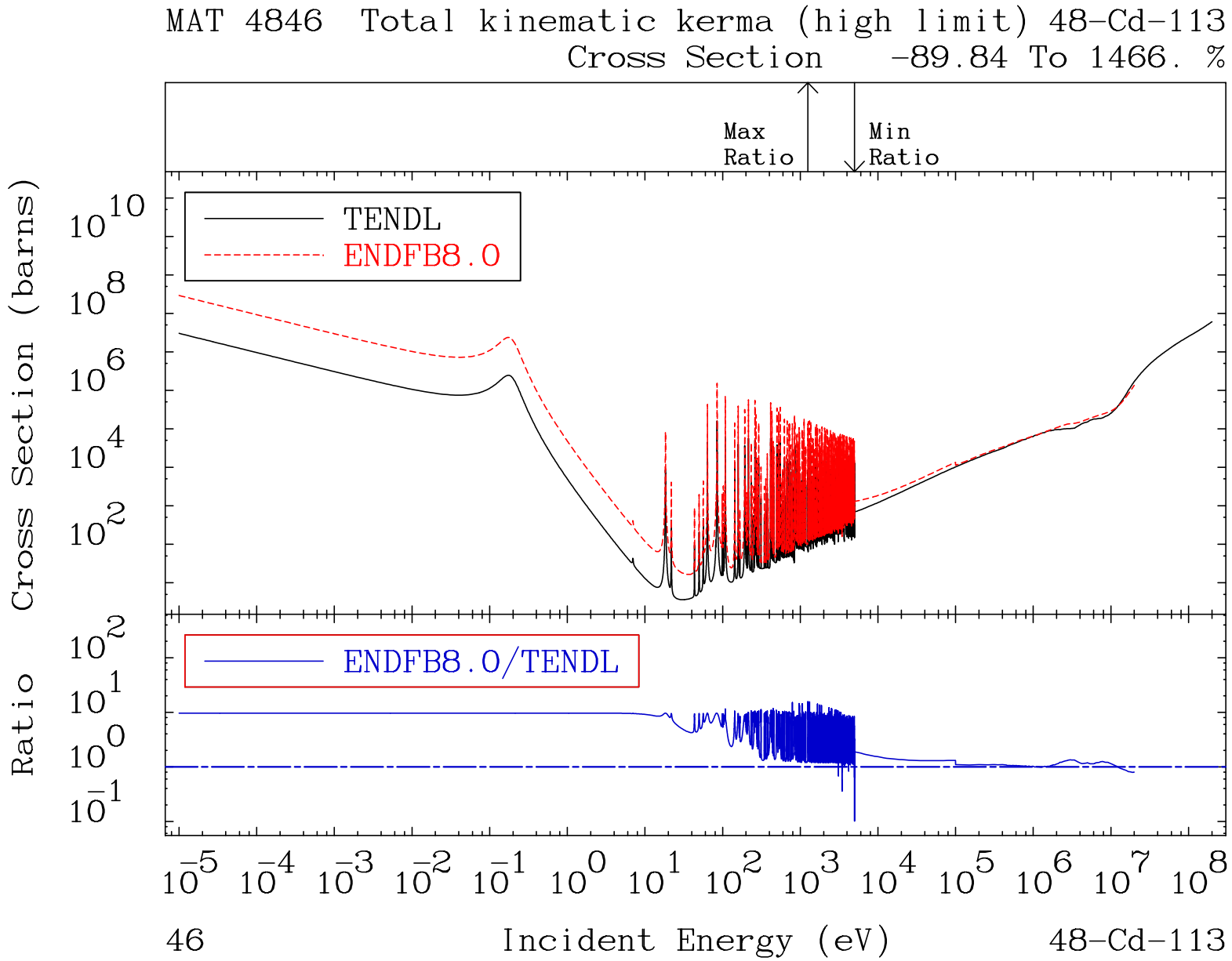

MAT 4846 Kerma non-elastic (all but mt2) 48-Cd-113
Cross Section 709.7 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
48-Cd-113

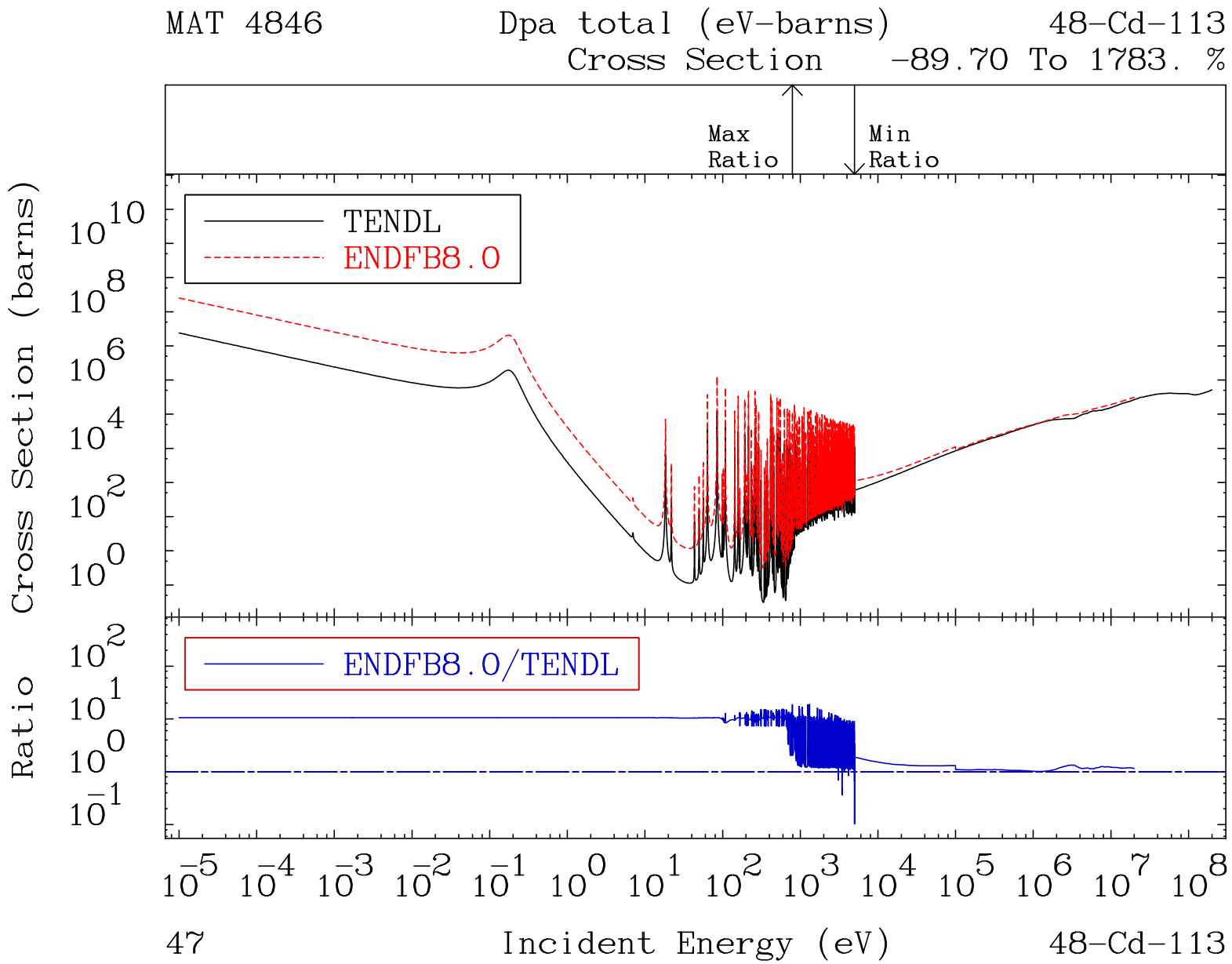

MAT 4846
Kerma inelastic (mt51-91)
48-Cd-113
Cross Section 1959. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 265.89 keV
ENDFB8.0 Threshold 301.17 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
42
48-Cd-113

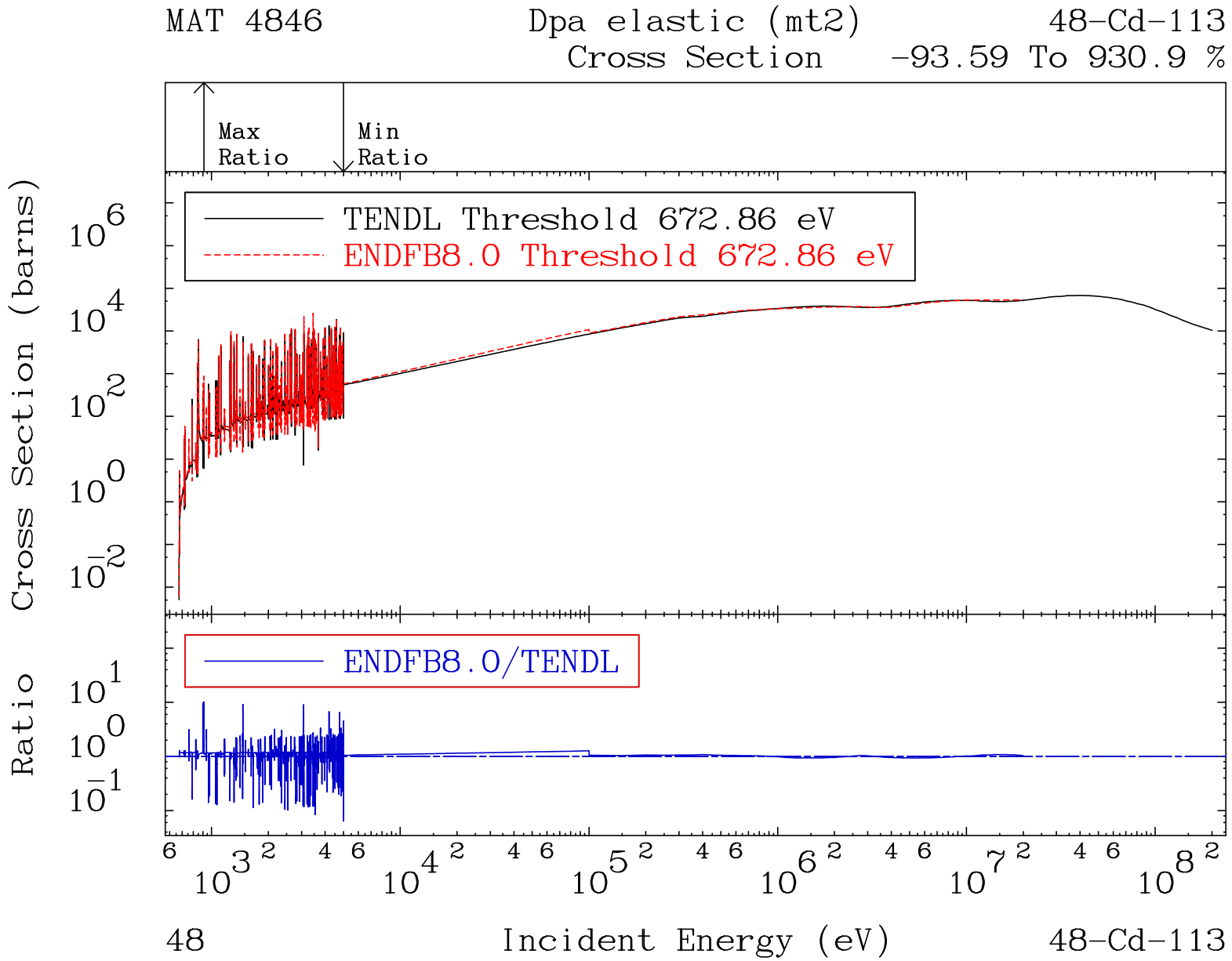

MAT 4846 Kerma fission (mt18 or mt19-20-21-38) 48-Cd-113
Cross Section 1959. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^3
10^2
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
43
Incident Energy (eV)
48-Cd-113

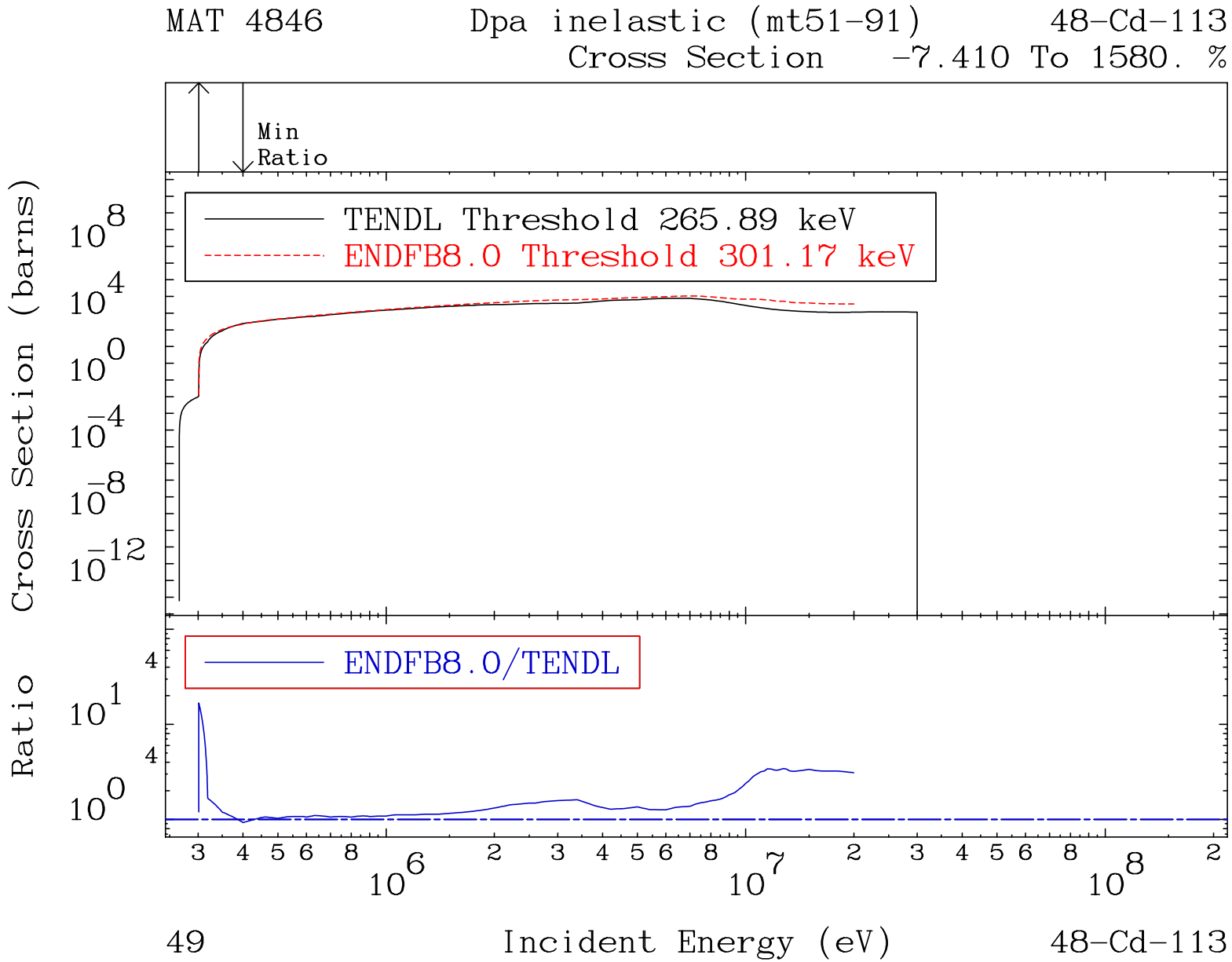

MAT 4846
Kerma capture (mt102)
48-Cd-113
Cross Section 3103. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
44
48-Cd-113

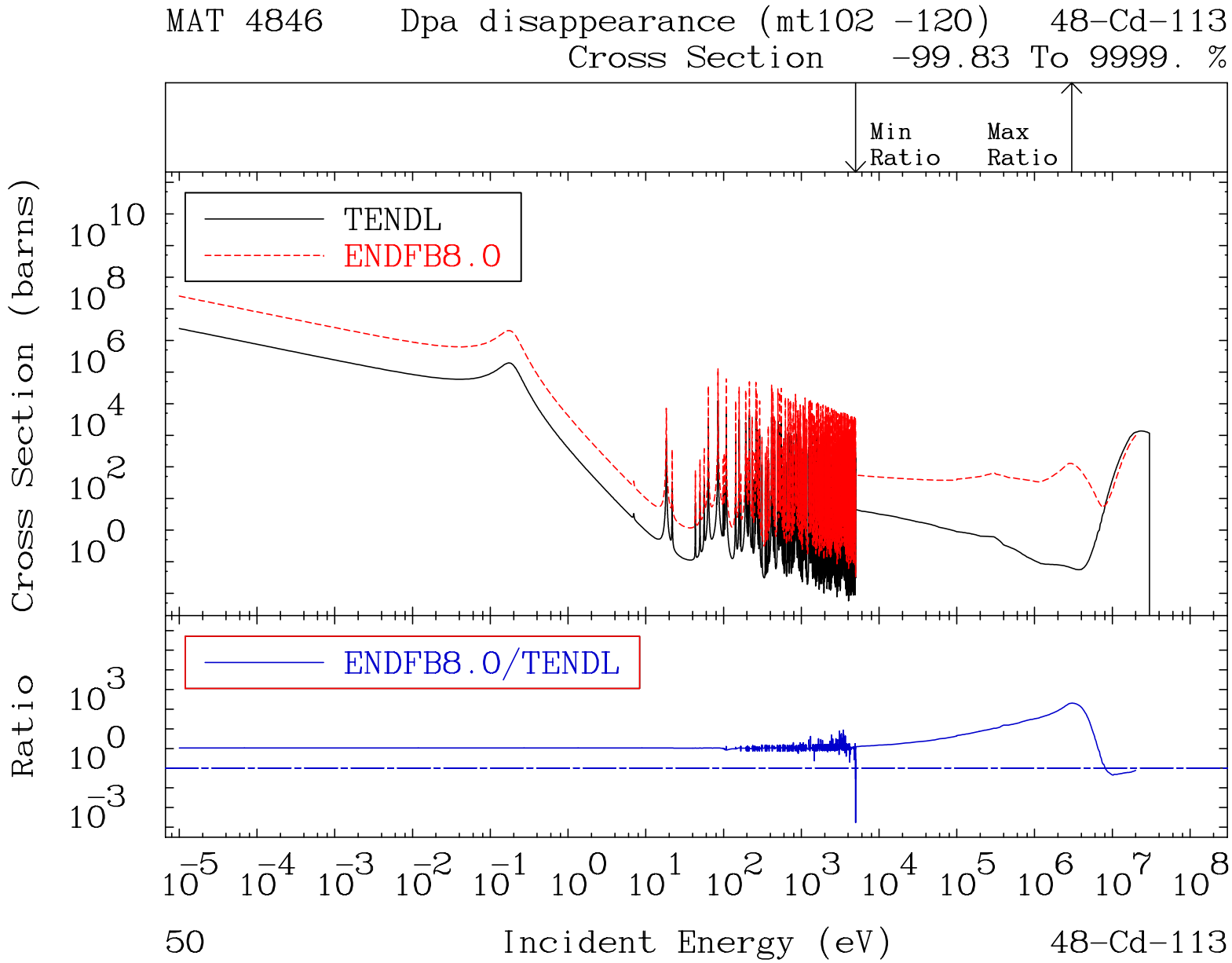

MAT 4846
Total photon (eV-barns)
48-Cd-113
Cross Section 3103. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Ratio Cross Section (10^{12} barns)
0
2
4
6
8
10^{6}
10^{3}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
45
Incident Energy (eV)
48-Cd-113


MAT 4846 Total kinematic kerma (high limit) 48-Cd-113
Cross Section -89.84 To 1466. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
46
48-Cd-113


MAT 4846
Dpa total (eV-barns)
48-Cd-113
Cross Section -89.70 To 1783. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
48-Cd-113


MAT 4846
Dpa elastic (mt2)
Cross Section
48-Cd-113
-93.59 To 930.9 %
Max Ratio
Min Ratio
TENDL Threshold 672.86 eV
ENDFB8.0 Threshold 672.86 eV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
48
48-Cd-113


MAT 4846
Dpa inelastic (mt51-91)
48-Cd-113
Cross Section -7.410 To 1580. %
Min
Ratio
TENDL Threshold 265.89 keV
ENDFB8.0 Threshold 301.17 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
49
48-Cd-113


MAT 4846 Dpa disappearance (mt102 -120) 48-Cd-113
Cross Section -99.83 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
50
48-Cd-113