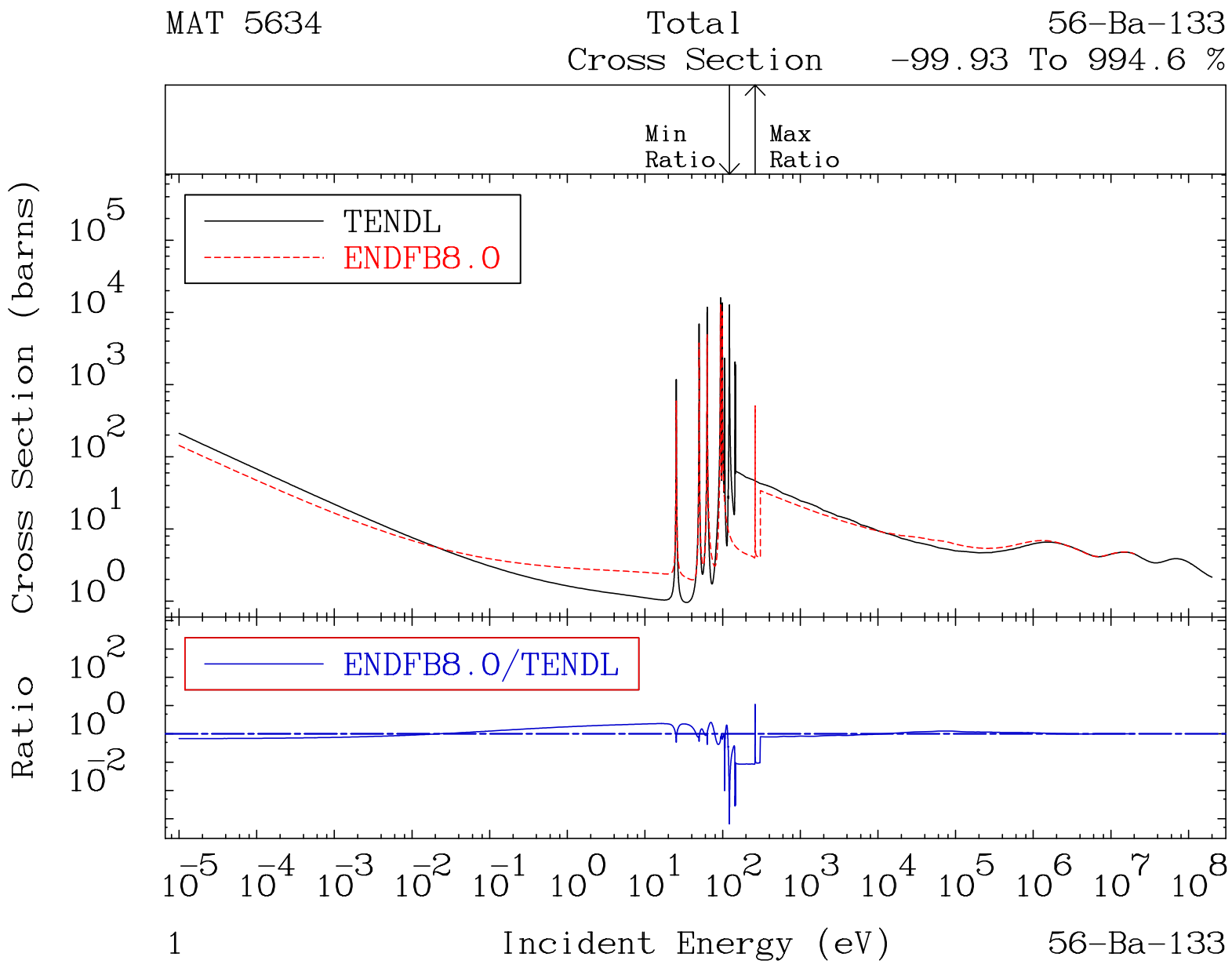
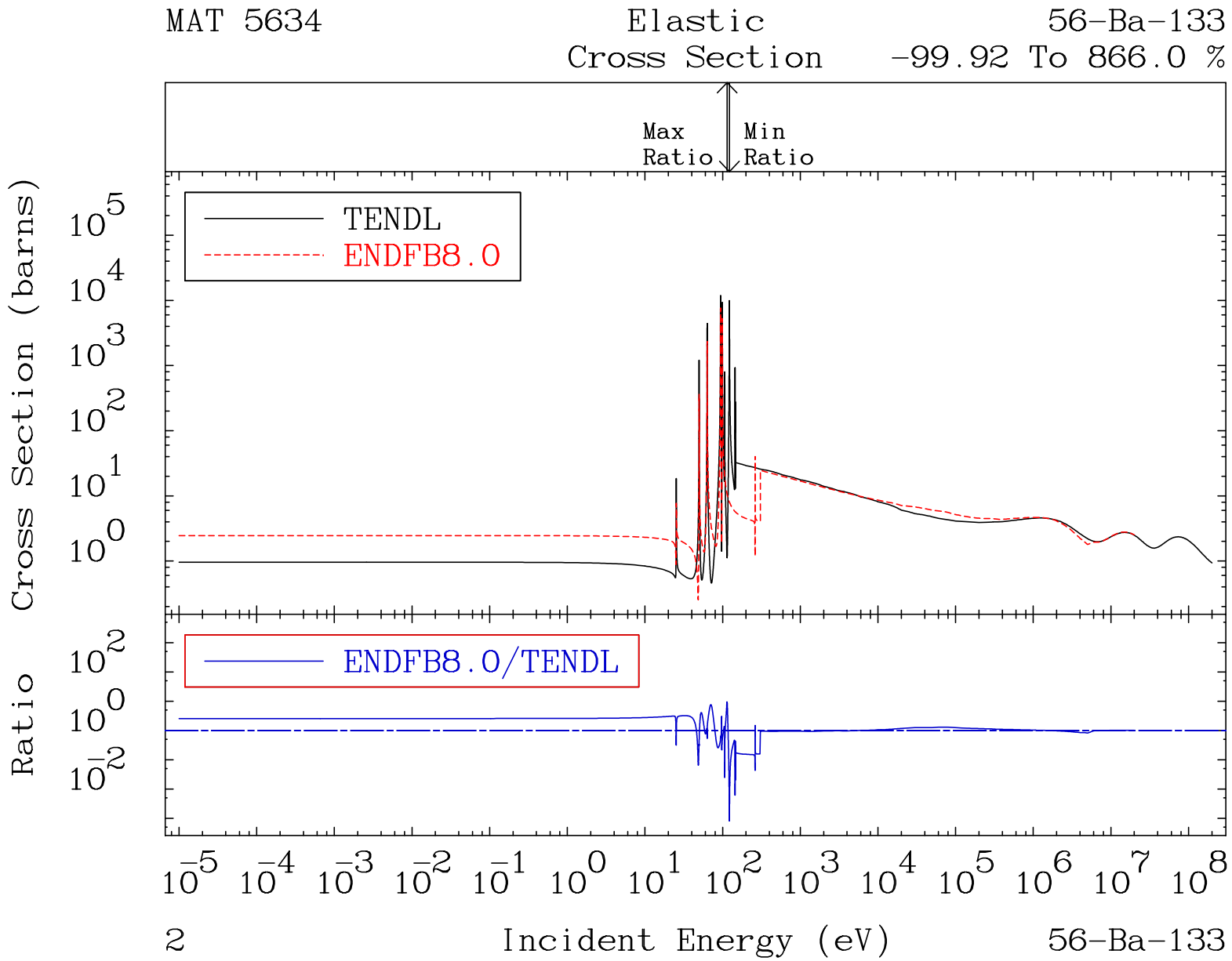
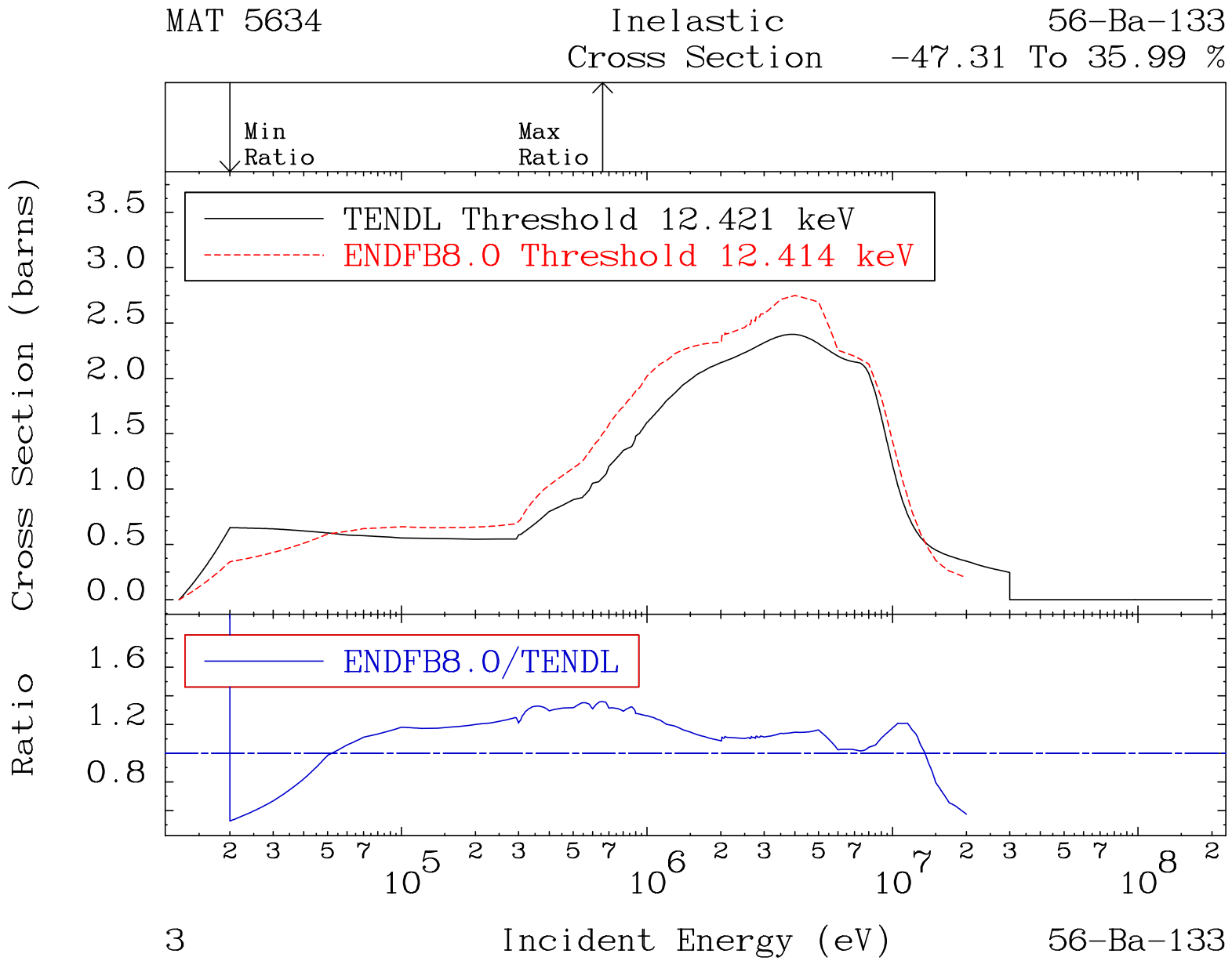
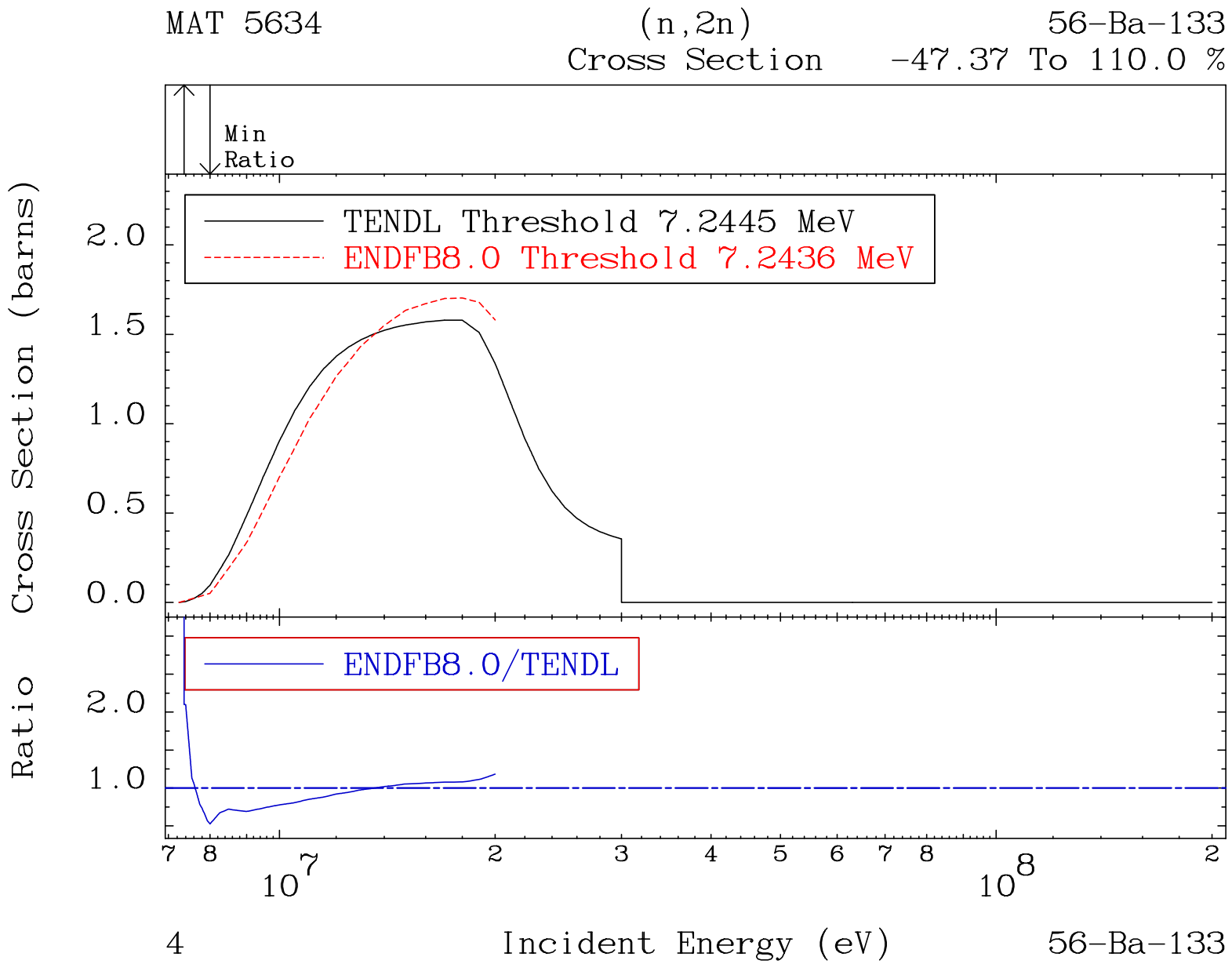
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

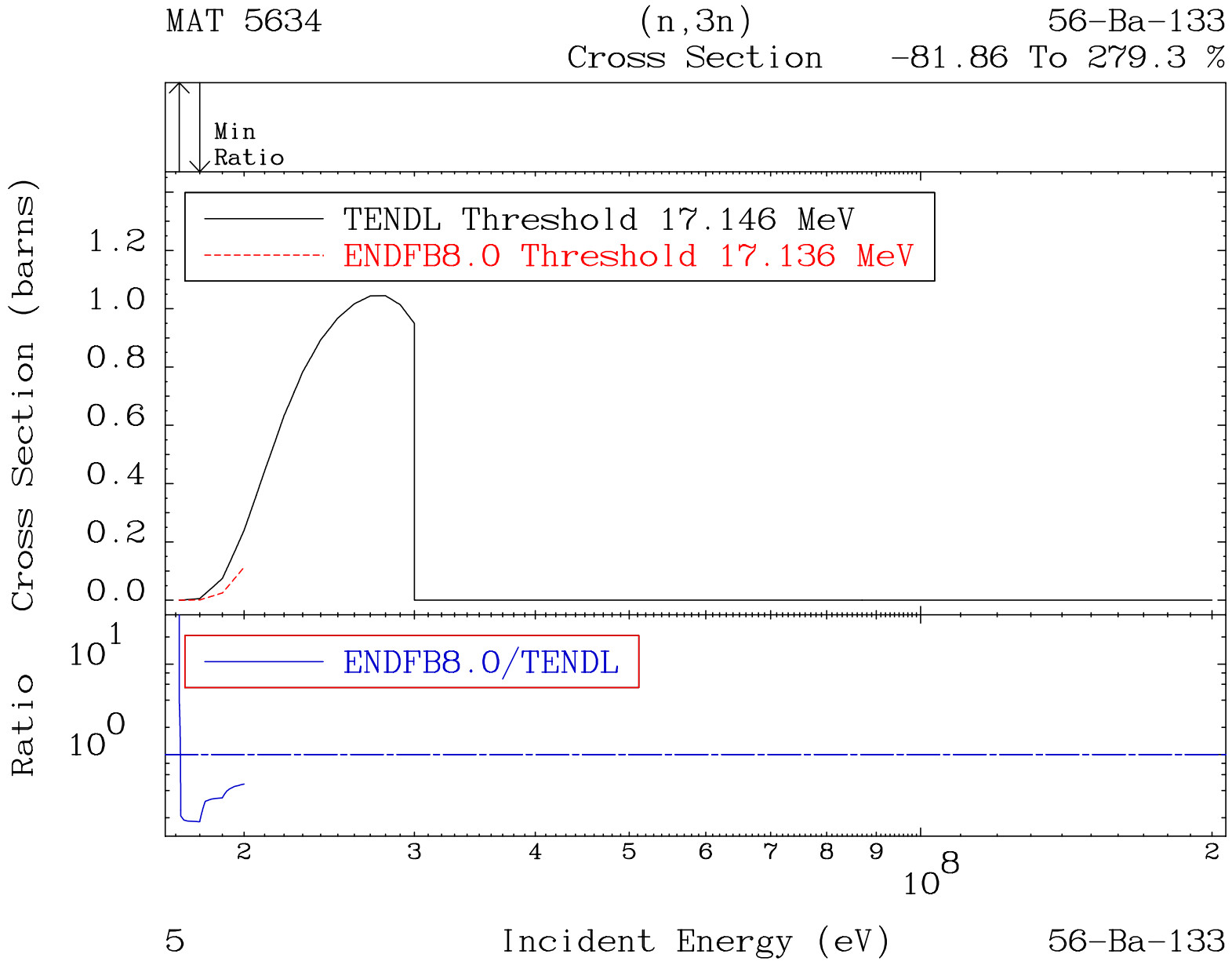
Press Mouse Button to Start

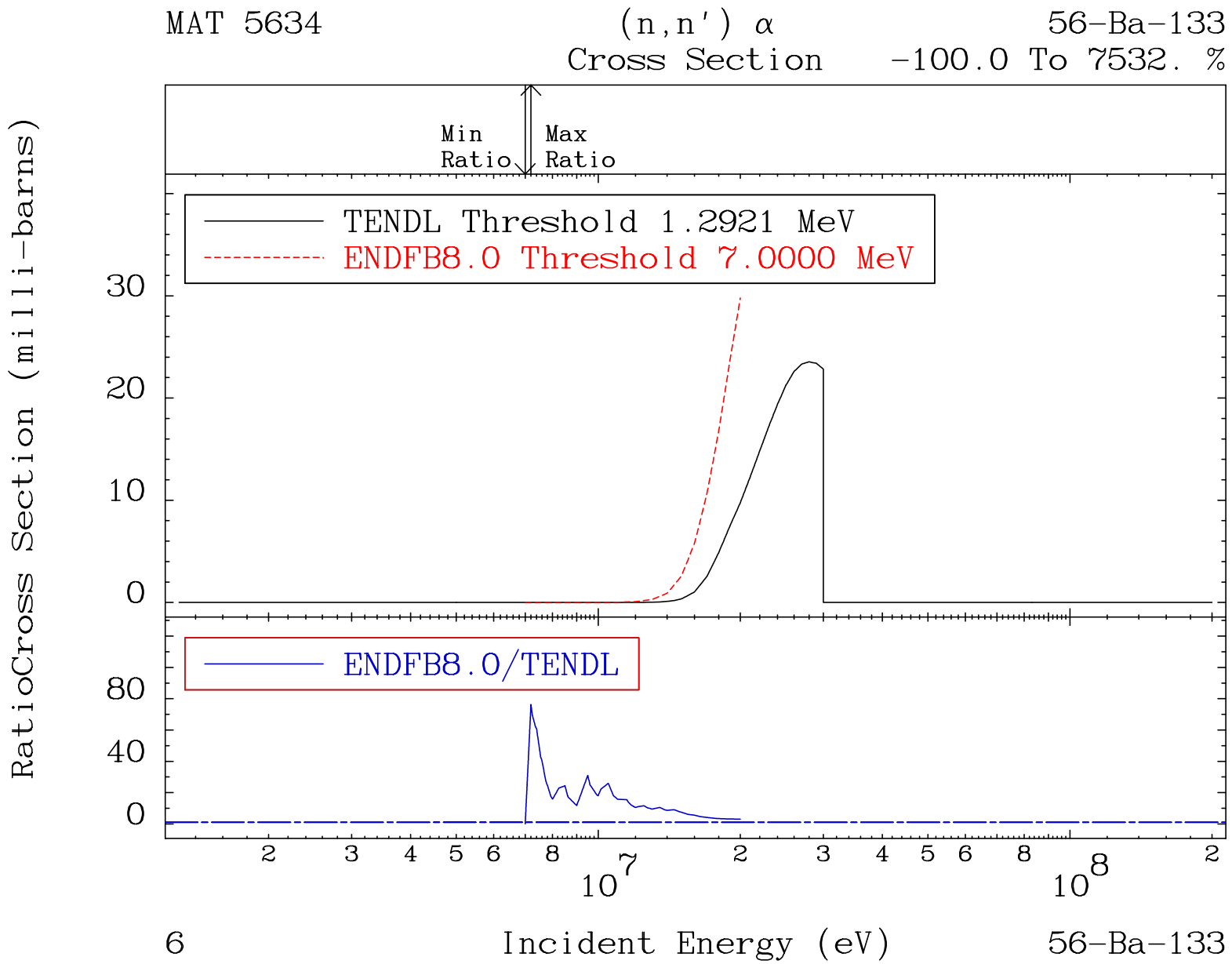

MAT 5634
Total
Cross Section
56-Ba-133
-99.93 To 994.6 %
Min
Ratio
Max
Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
56-Ba-133

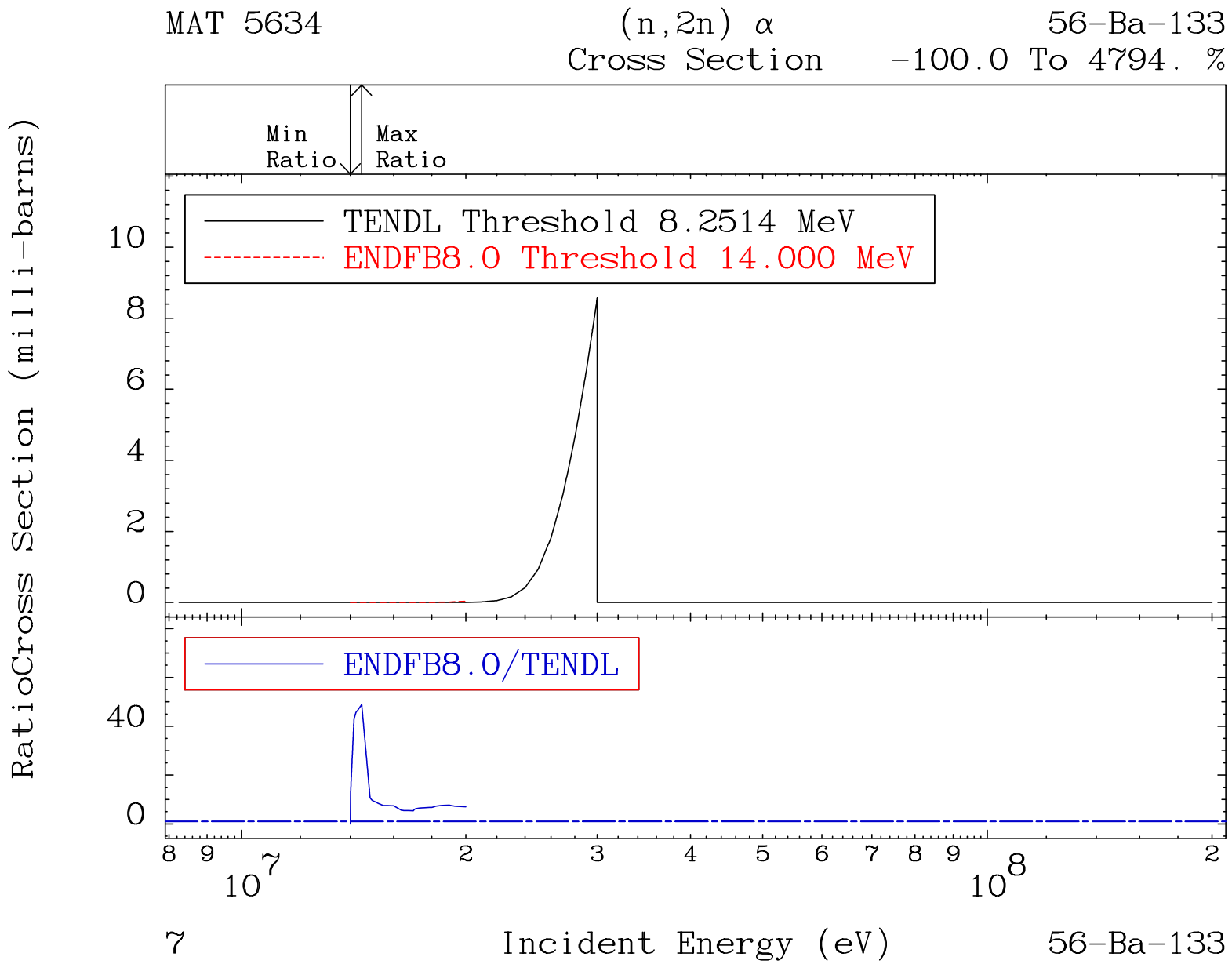

MAT 5634
Elastic
Cross Section
56-Ba-133
-99.92 To 866.0 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
56-Ba-133

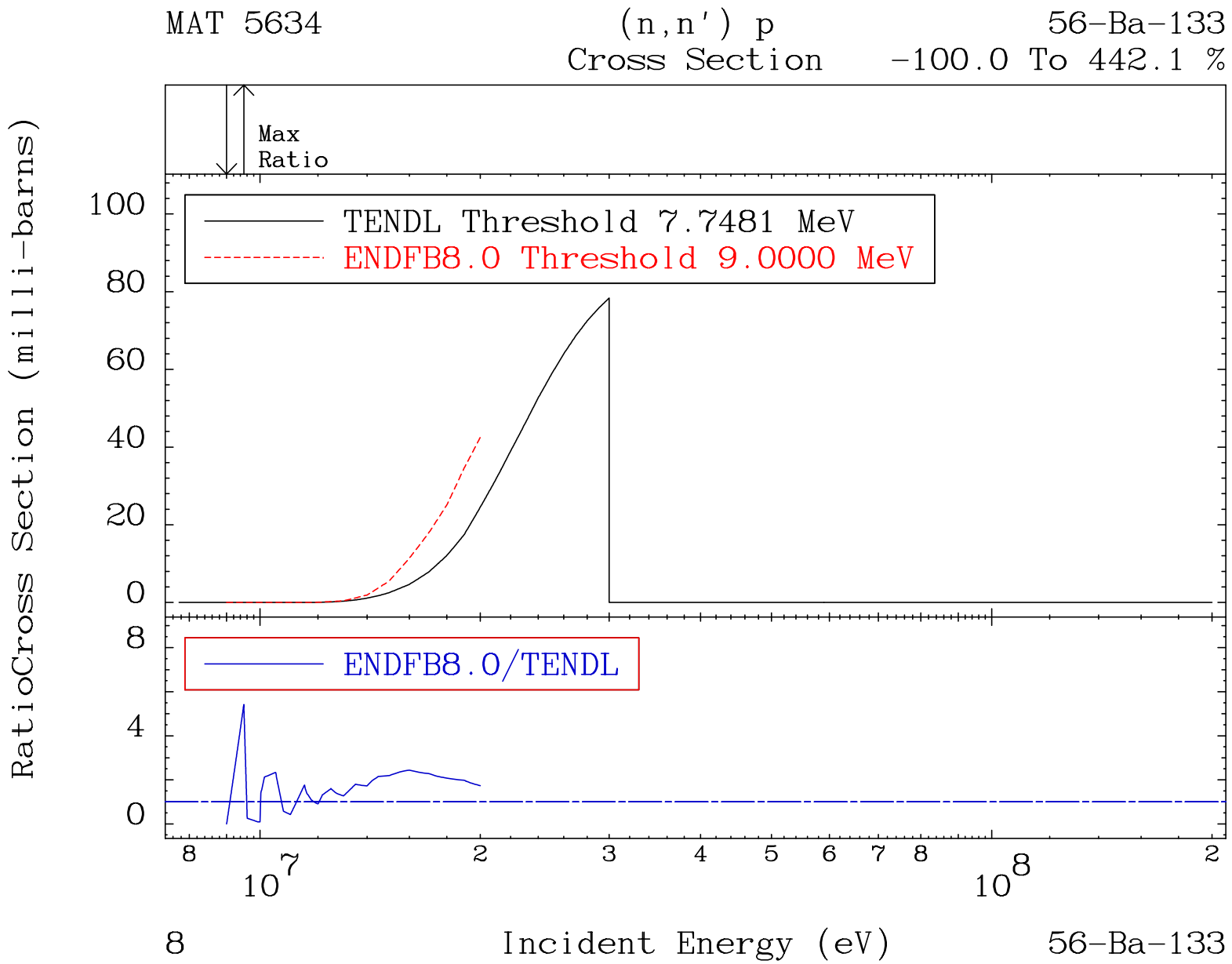

MAT 5634
Inelastic
Cross Section
56-Ba-133
-47.31 To 35.99 %
Min
Ratio
Max
Ratio
TENDL Threshold 12.421 keV
ENDFB8.0 Threshold 12.414 keV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
56-Ba-133

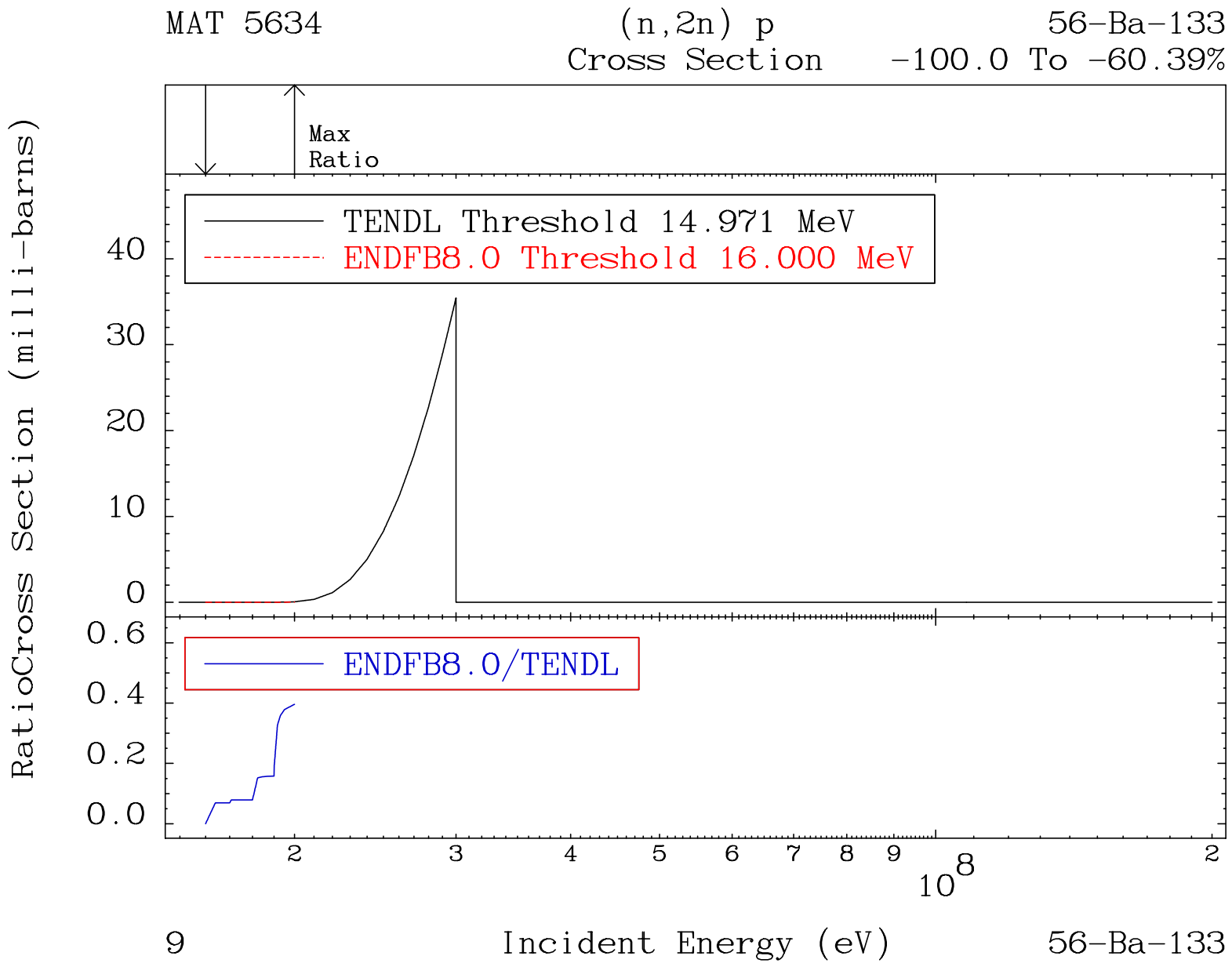

MAT 5634
(n,2n)
Cross Section
56-Ba-133
-47.37 To 110.0 %
Min
Ratio
TENDL Threshold 7.2445 MeV
ENDFB8.0 Threshold 7.2436 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
2.0
1.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
4
Incident Energy (eV)
56-Ba-133

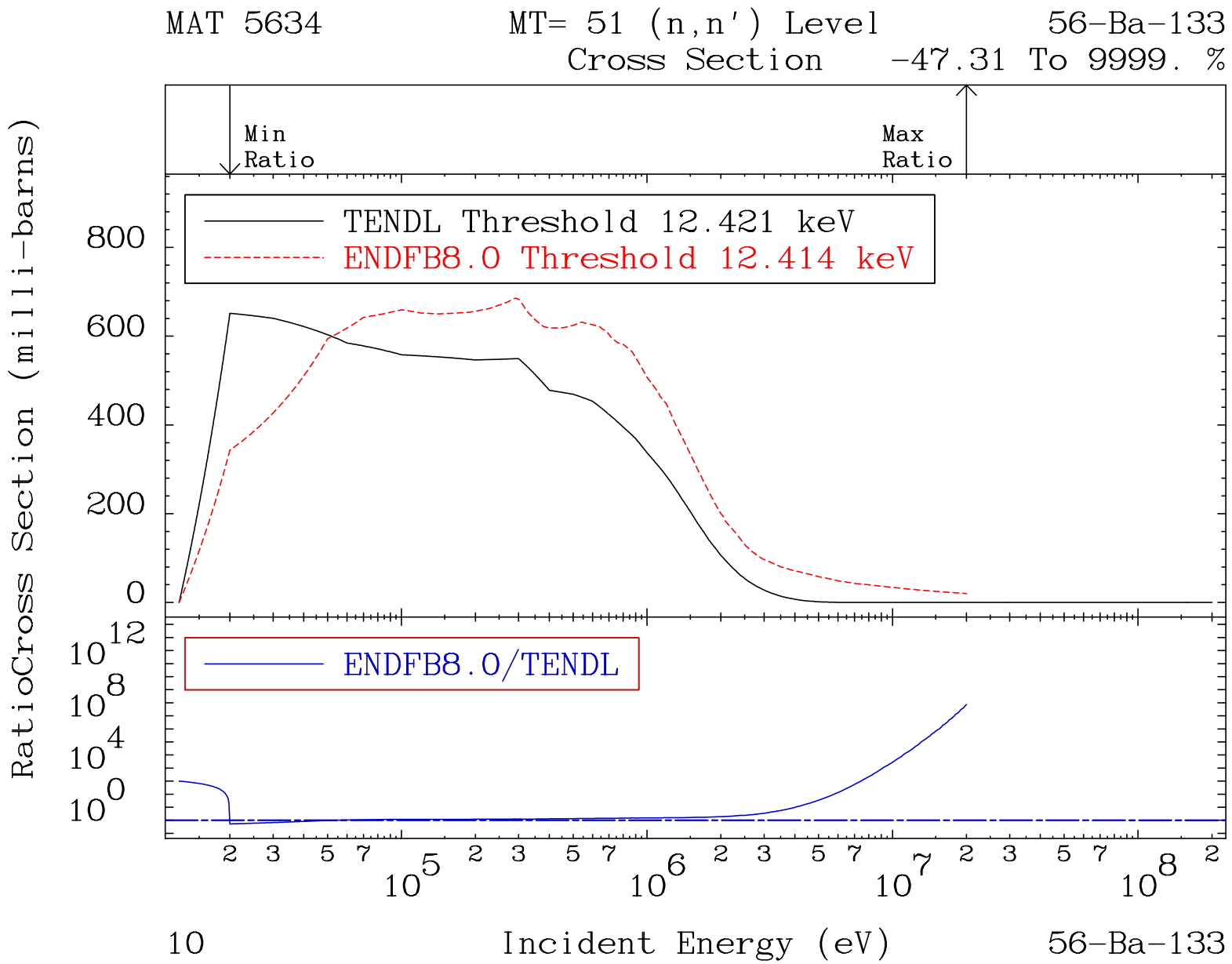

MAT 5634
(n,3n)
56-Ba-133
Cross Section
-81.86 To 279.3 %
Min
Ratio
TENDL Threshold 17.146 MeV
ENDFB8.0 Threshold 17.136 MeV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
56-Ba-133

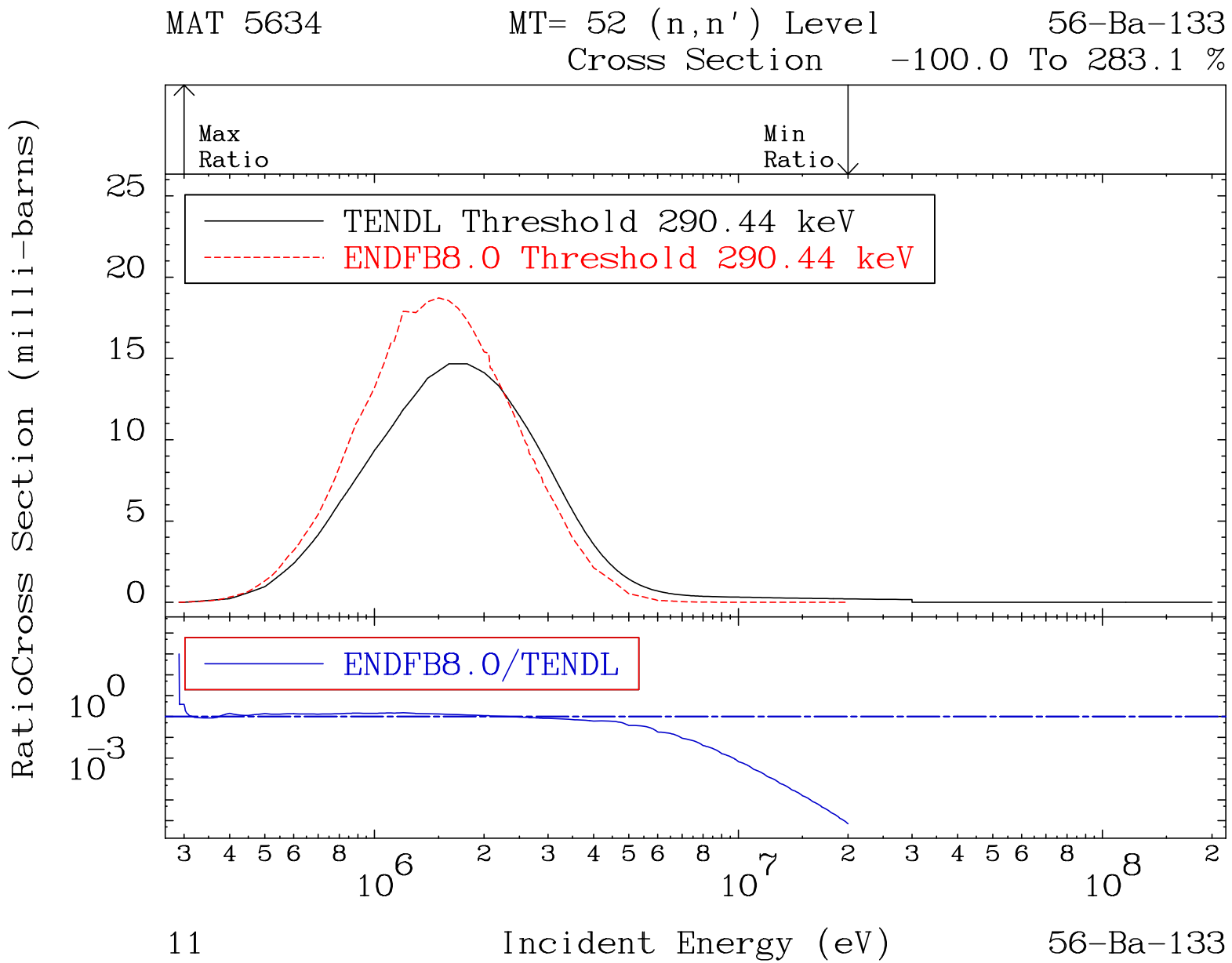

MAT 5634
(n,n') α
56-Ba-133
Cross Section
-100.0 To 7532. %
Min Ratio
Max Ratio
TENDL Threshold 1.2921 MeV
ENDFB8.0 Threshold 7.0000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
30
20
10
0
80
40
0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
6
Incident Energy (eV)
56-Ba-133

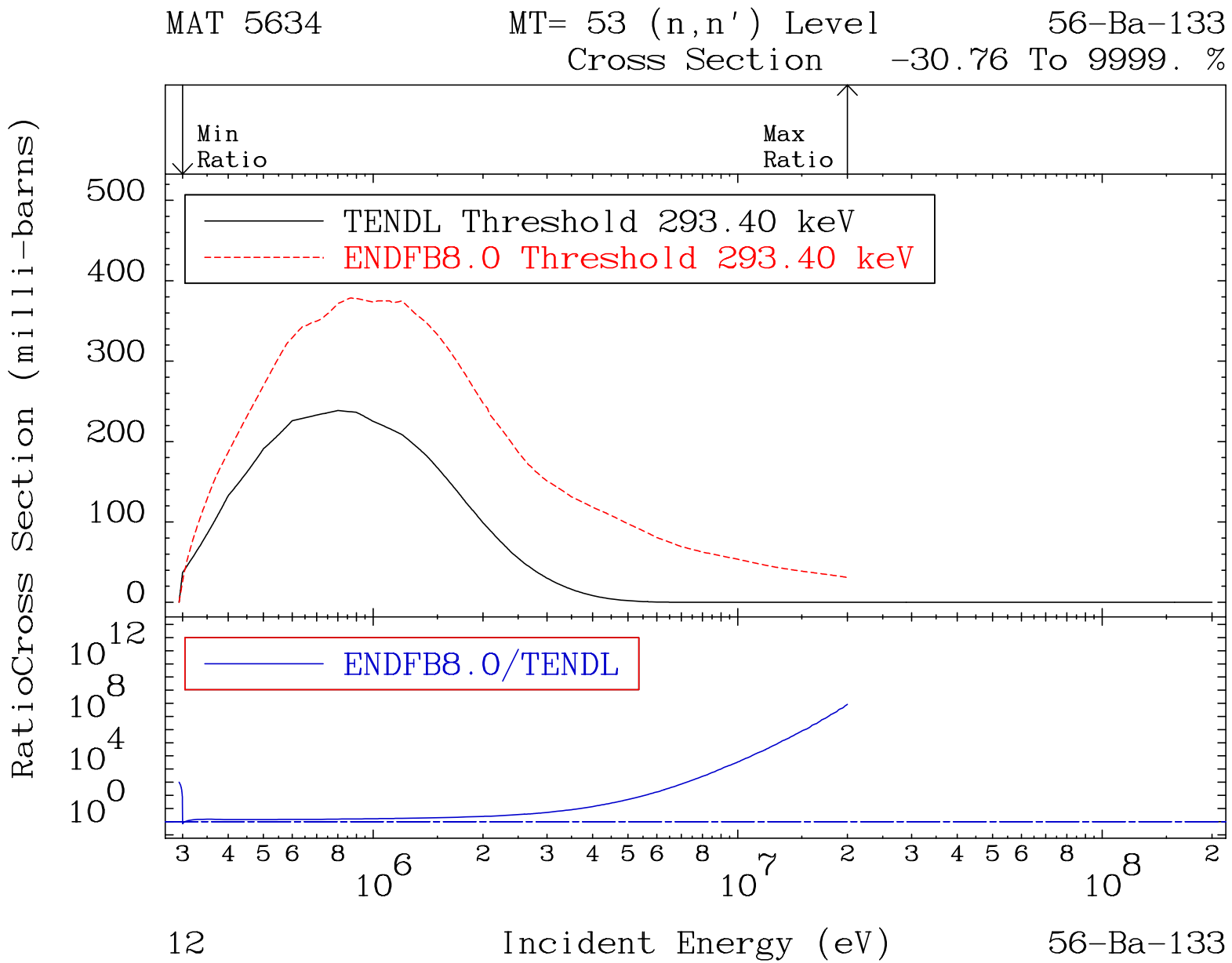

MAT 5634
(n,2n) α
56-Ba-133
Cross Section
-100.0 To 4794. %
Min Ratio
Max Ratio
TENDL Threshold 8.2514 MeV
ENDFB8.0 Threshold 14.000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
40
0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
56-Ba-133

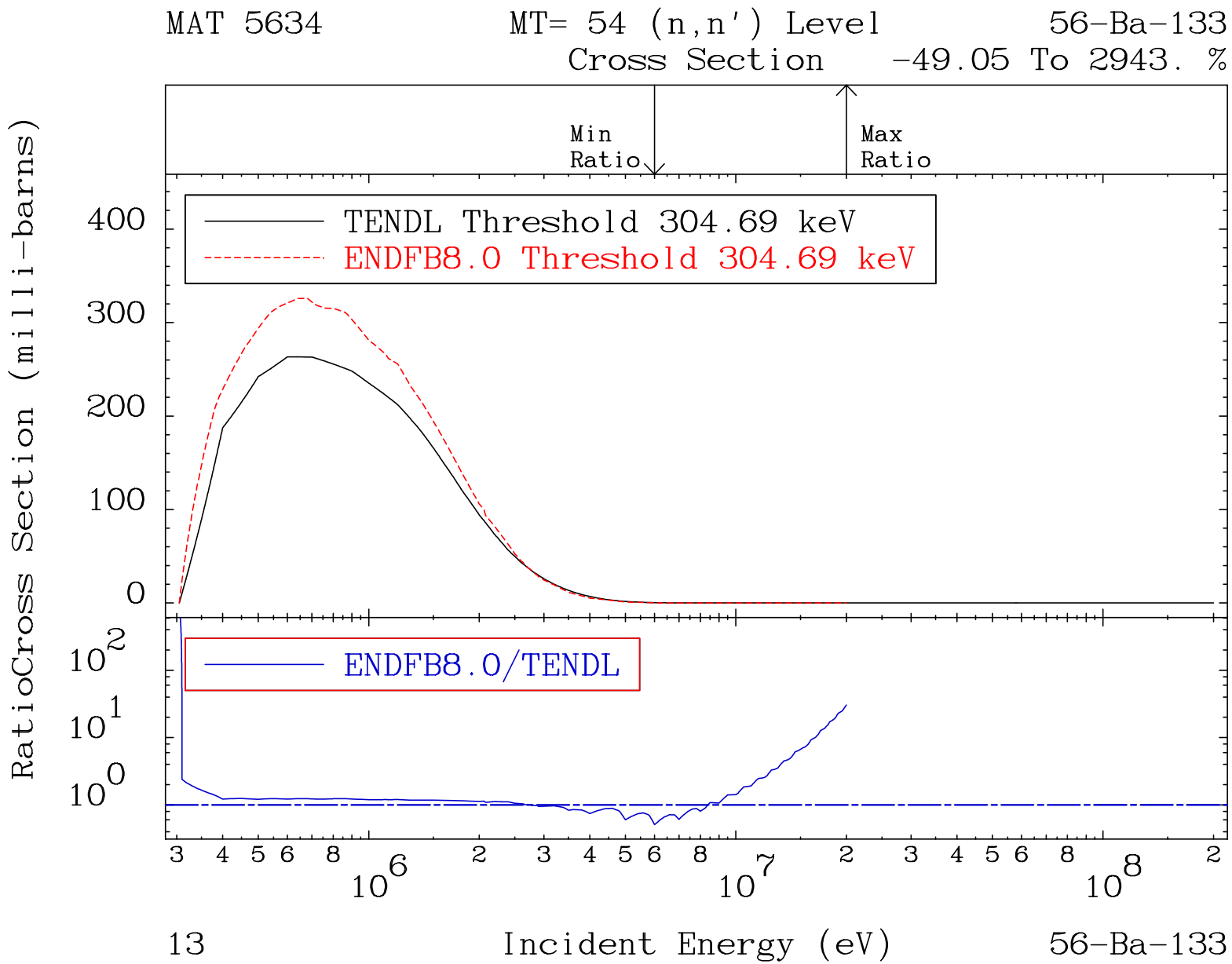

MAT 5634
(n,n') p
Cross Section
56-Ba-133
-100.0 To 442.1 %
Max
Ratio
TENDL Threshold 7.7481 MeV
ENDFB8.0 Threshold 9.0000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
56-Ba-133

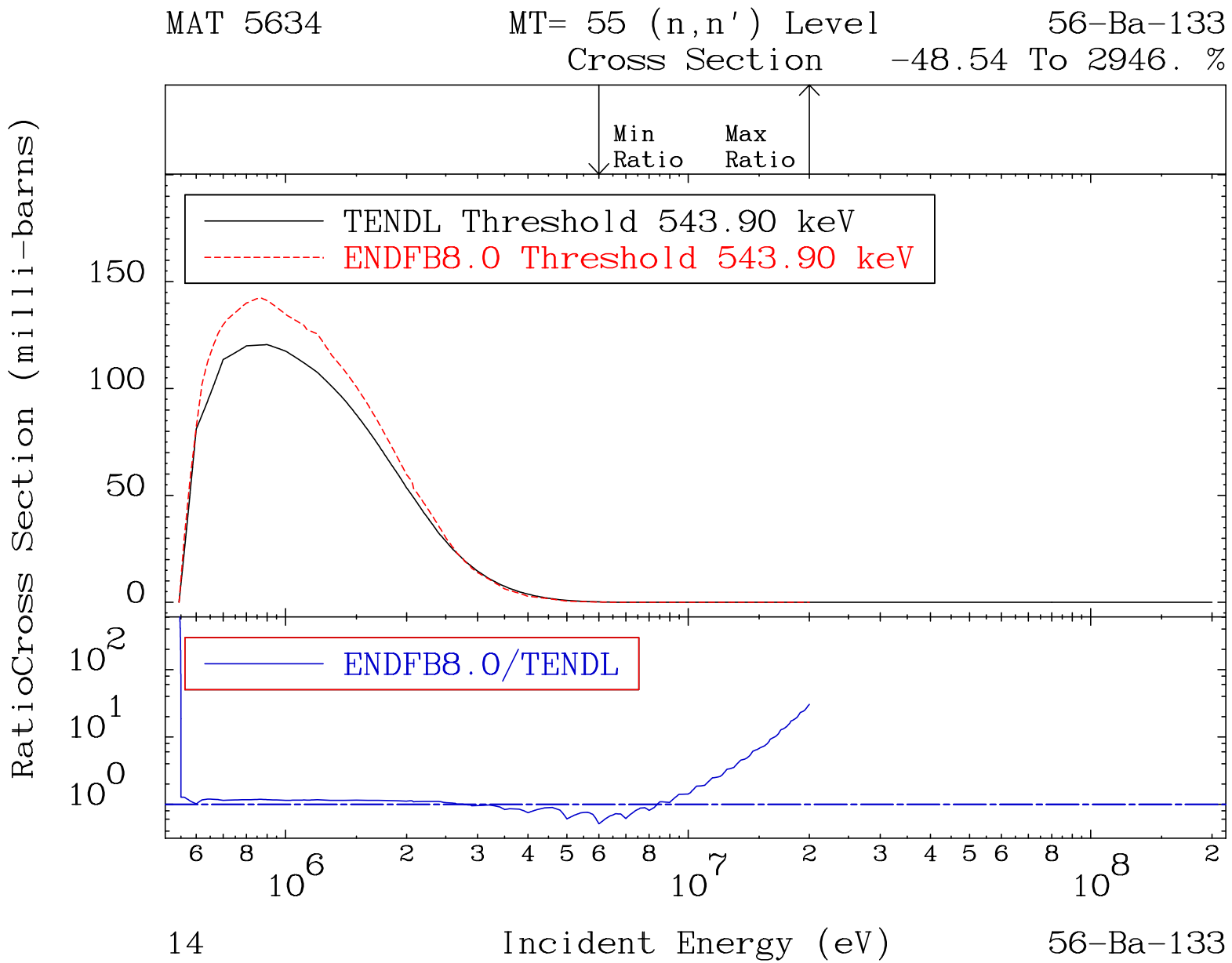

MAT 5634
(n,2n) p
Cross Section
56-Ba-133
-100.0 To -60.39%
Max
Ratio
TENDL Threshold 14.971 MeV
ENDFB8.0 Threshold 16.000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
0.6
0.4
0.2
0.0
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
56-Ba-133

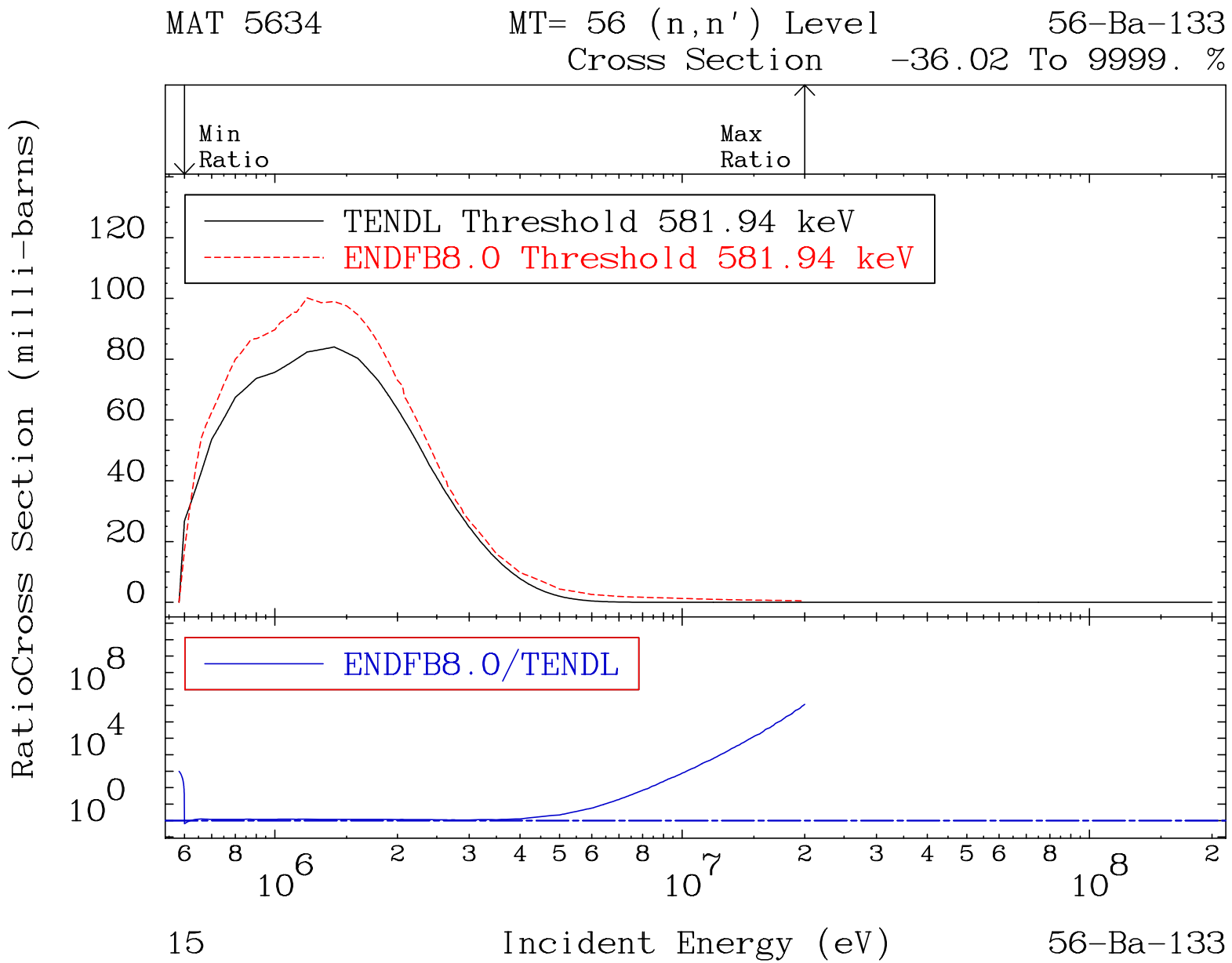

MAT 5634
MT= 51 (n,n') Level
56-Ba-133
Cross Section -47.31 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 12.421 keV
ENDFB8.0 Threshold 12.414 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
800
600
400
200
0
10^{12}
10^{8}
10^{4}
10^{0}
2 3 5 7 10^{5} 2 3 5 7 10^{6} 2 3 5 7 10^{7} 2 3 5 7 10^{8} 2
10
Incident Energy (eV)
56-Ba-133

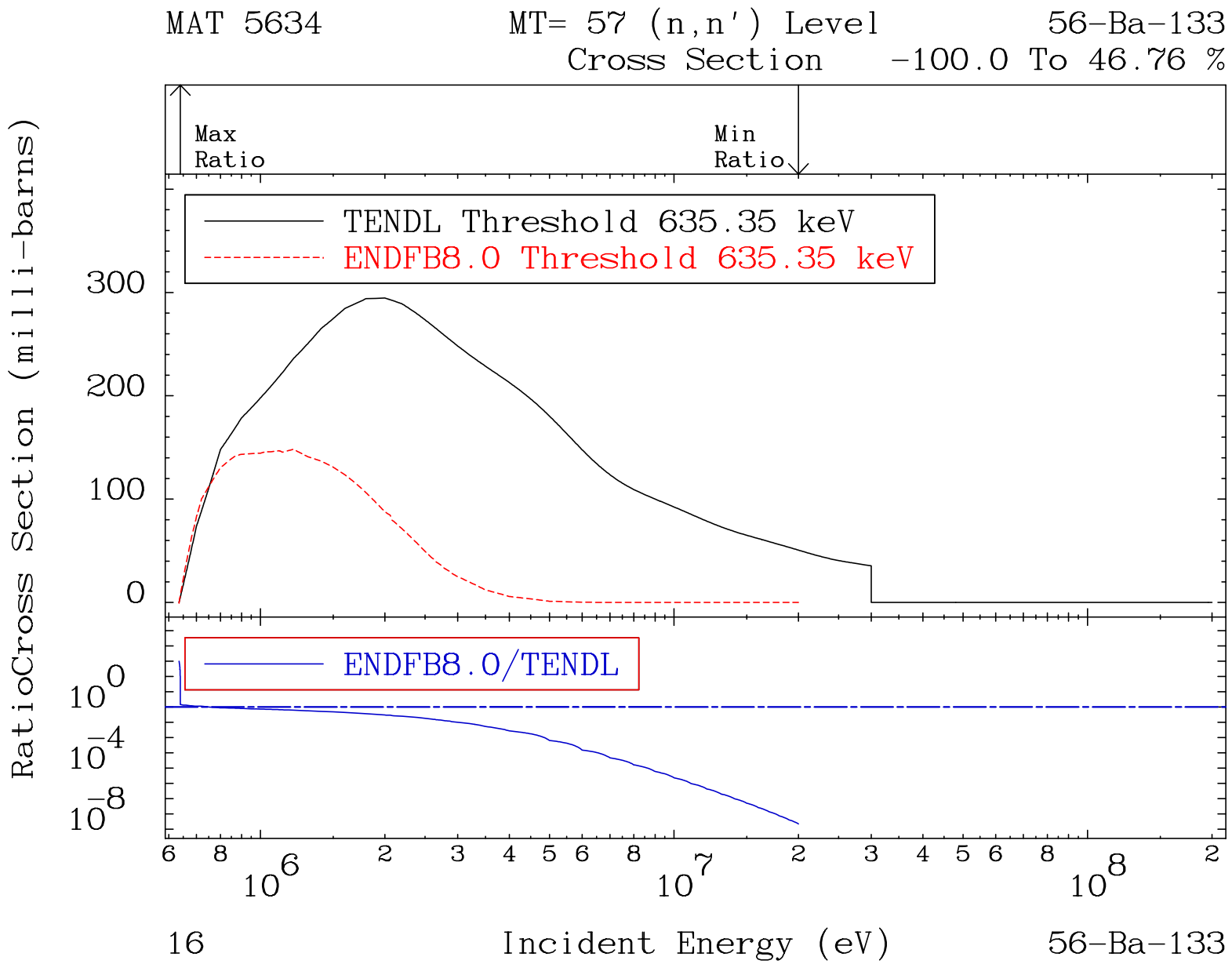

MAT 5634
MT= 52 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 283.1 %
Max Ratio
Min Ratio
TENDL Threshold 290.44 keV
ENDFB8.0 Threshold 290.44 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
11
56-Ba-133

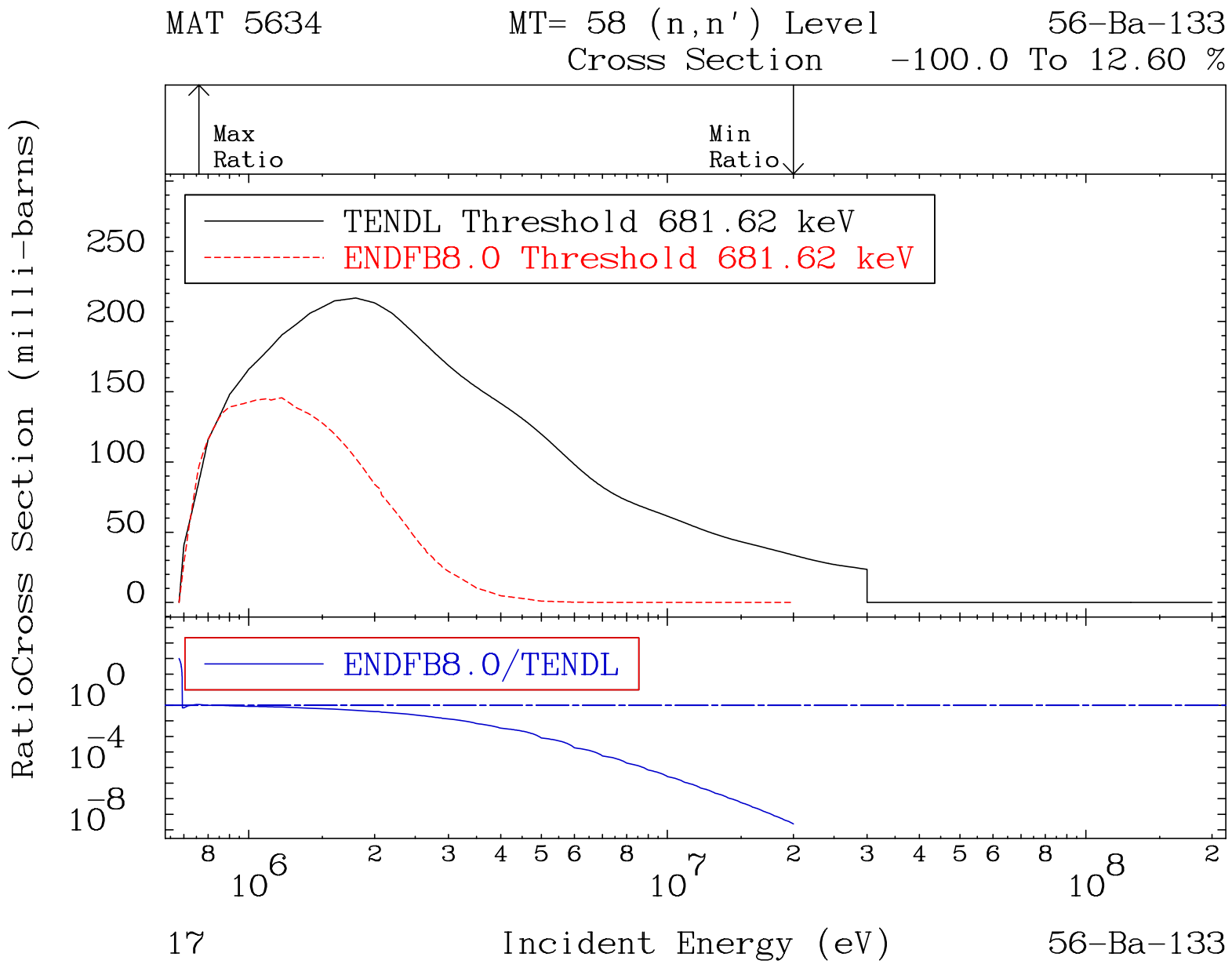

MAT 5634
MT= 53 (n,n') Level
56-Ba-133
Cross Section
-30.76 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 293.40 keV
ENDFB8.0 Threshold 293.40 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
12
56-Ba-133

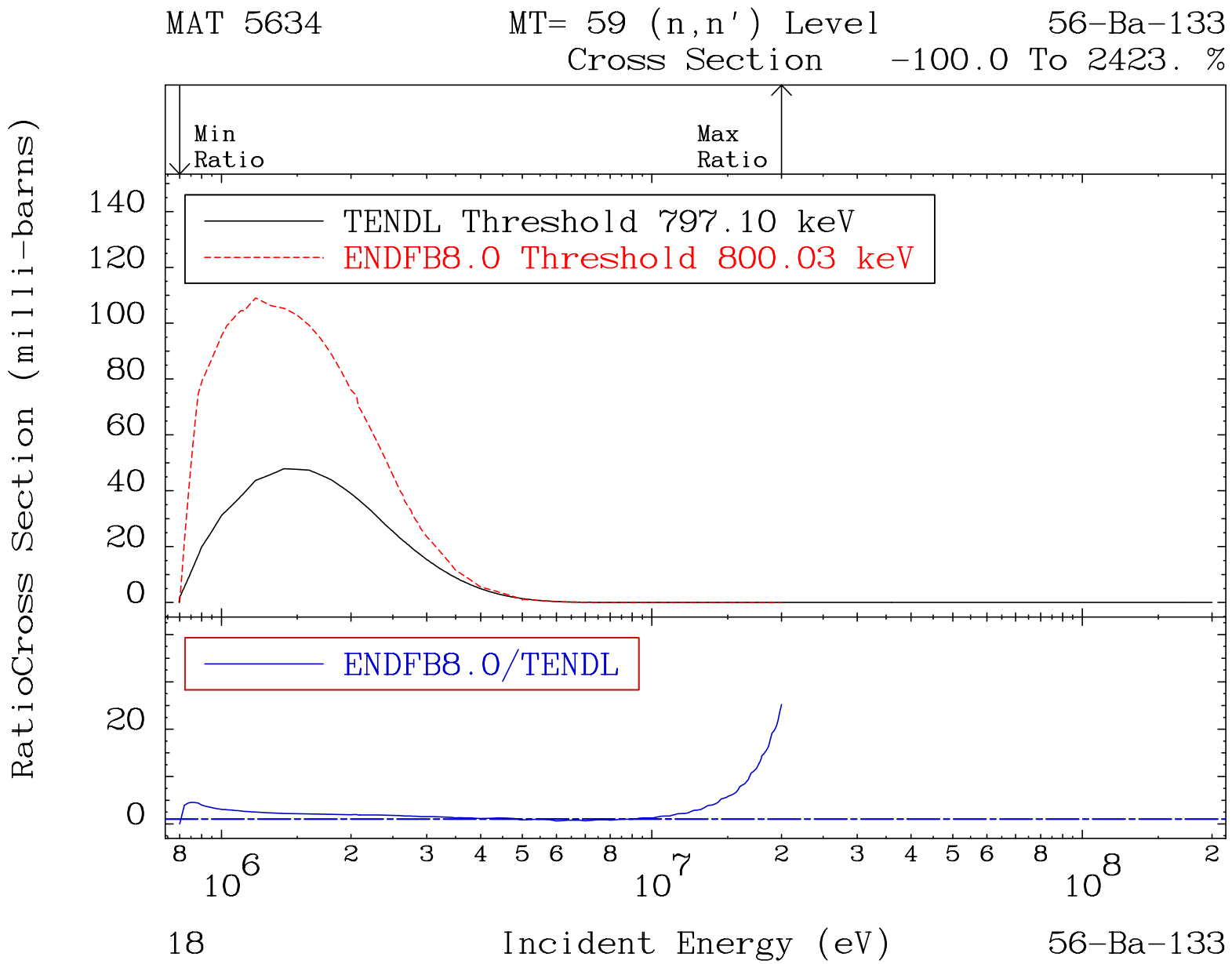

MAT 5634
MT= 54 (n,n') Level
56-Ba-133
Cross Section -49.05 To 2943. %
Min Ratio
Max Ratio
TENDL Threshold 304.69 keV
ENDFB8.0 Threshold 304.69 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
13
56-Ba-133

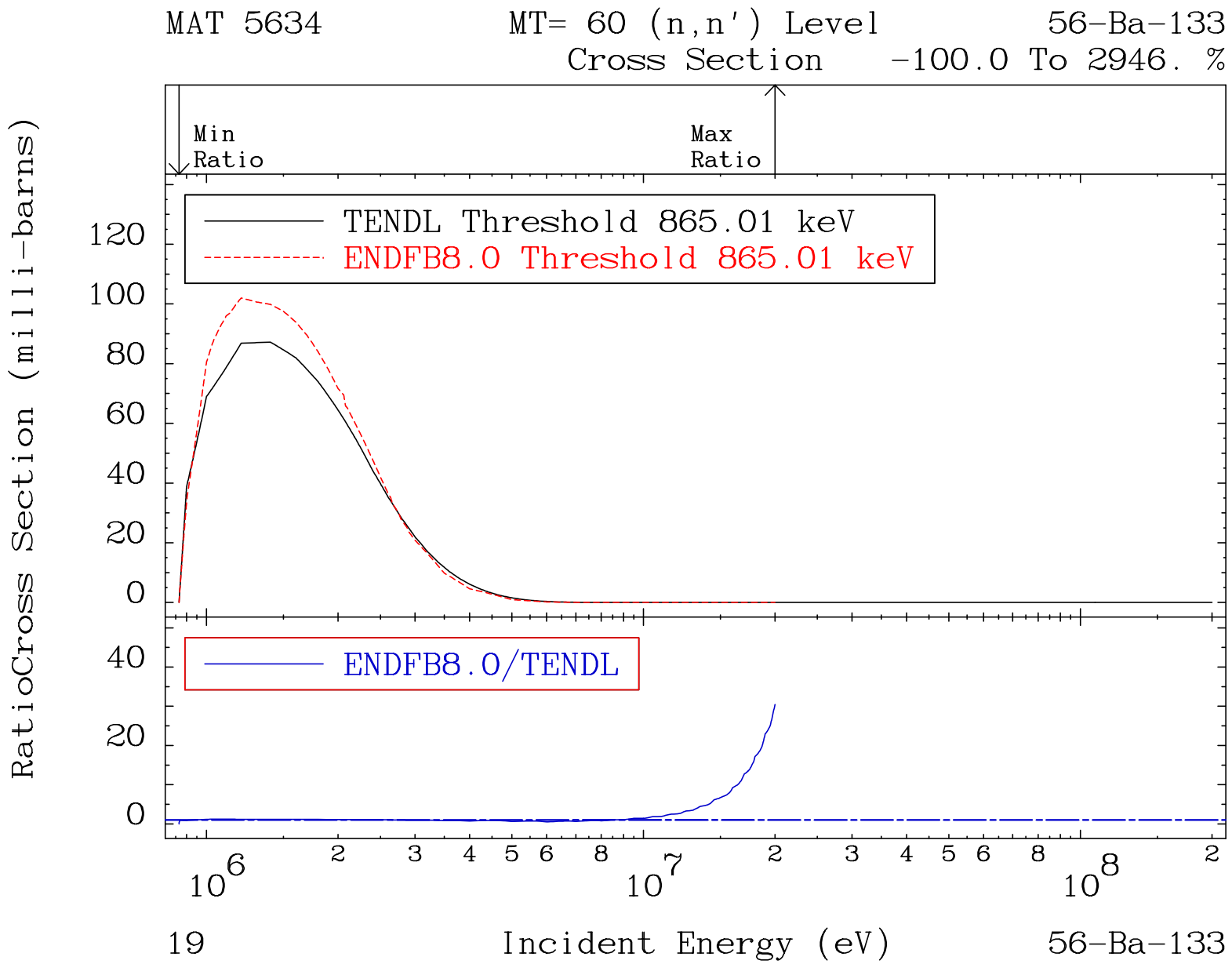

MAT 5634
MT= 55 (n,n') Level
56-Ba-133
Cross Section -48.54 To 2946. %
Min Ratio
Max Ratio
TENDL Threshold 543.90 keV
ENDFB8.0 Threshold 543.90 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
150
100
50
0
10^2
10^1
10^0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
14
Incident Energy (eV)
56-Ba-133

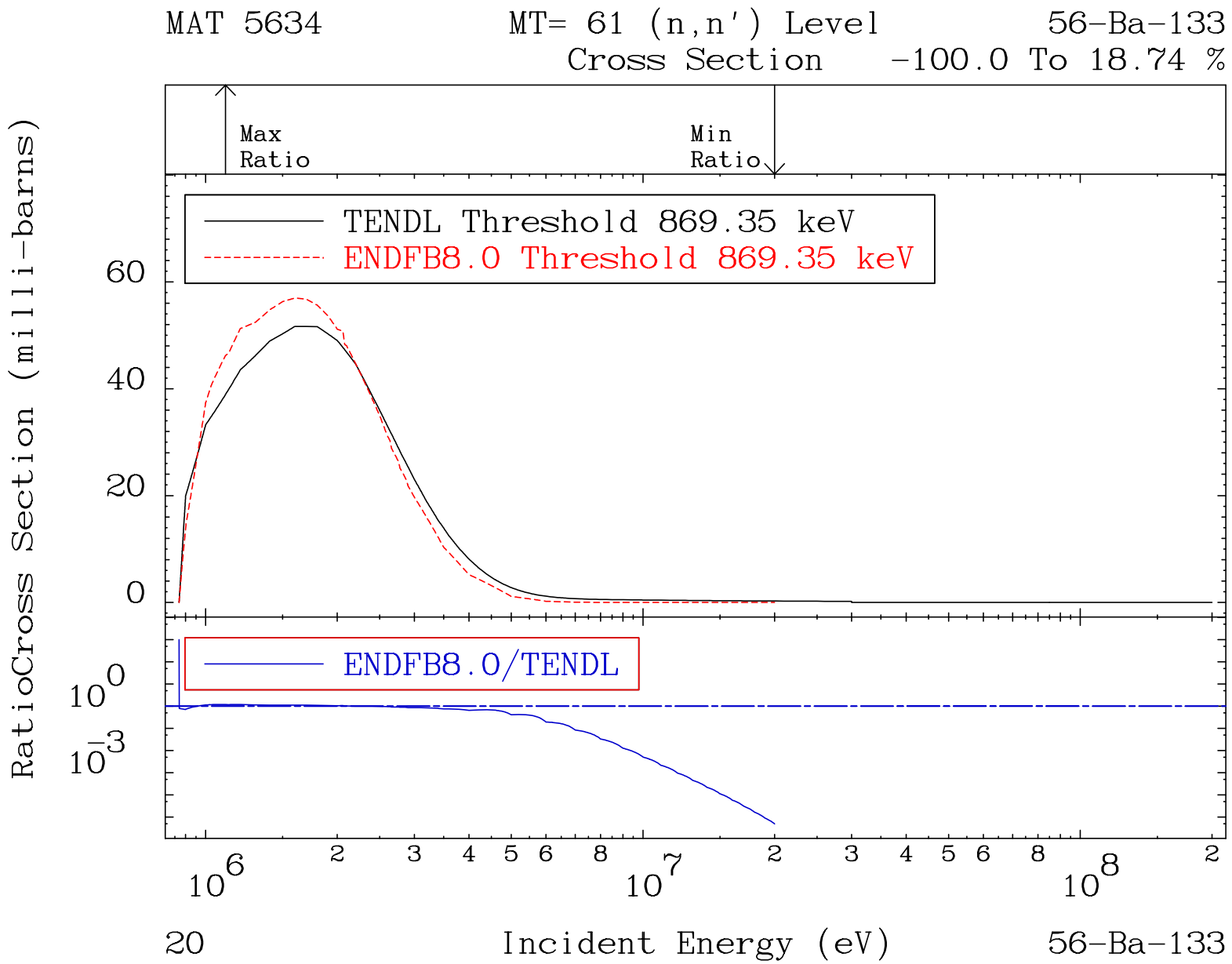

MAT 5634
MT= 56 (n,n') Level
56-Ba-133
Cross Section
-36.02 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 581.94 keV
ENDFB8.0 Threshold 581.94 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
10^8
10^4
10^0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
15
Incident Energy (eV)
56-Ba-133

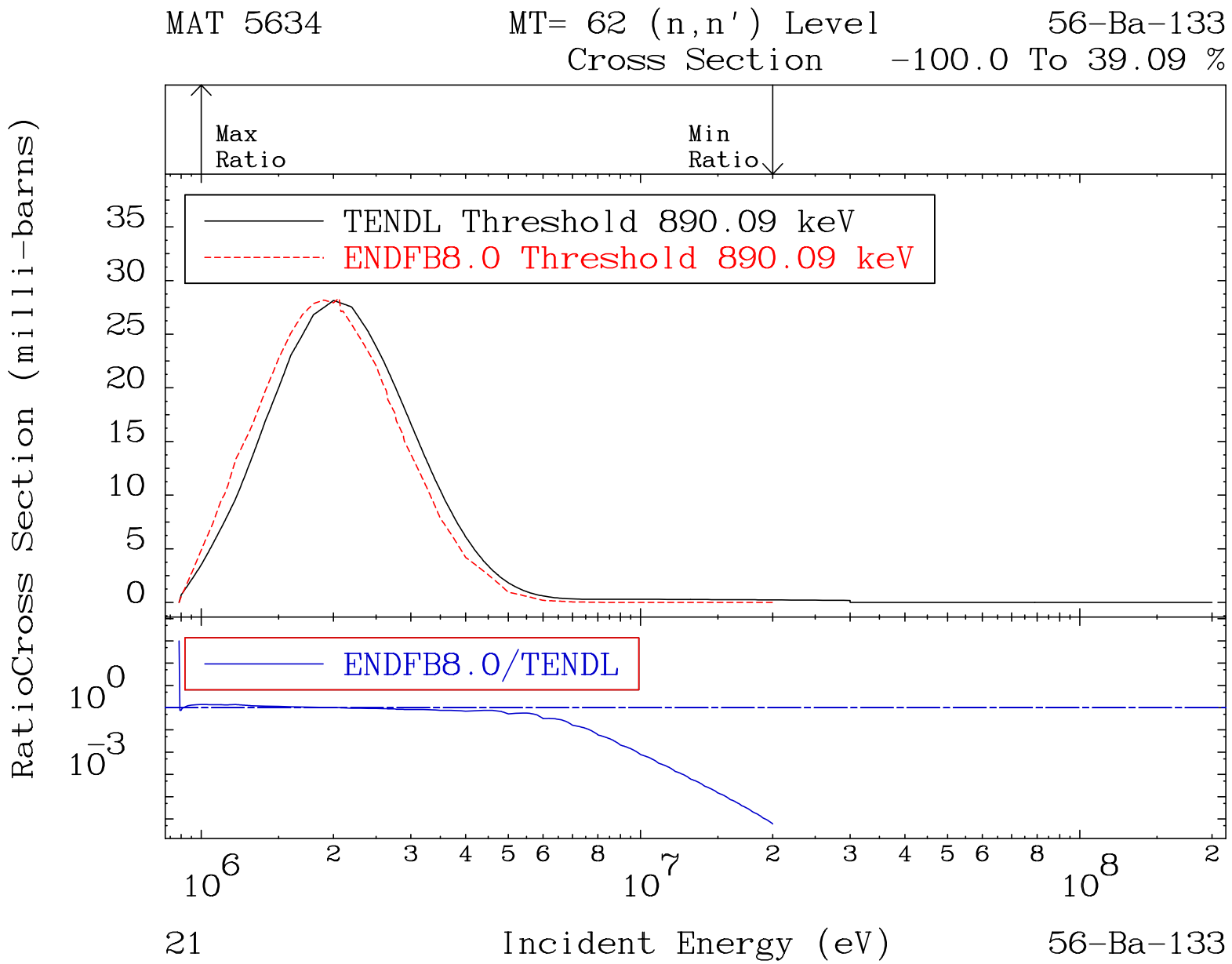

MAT 5634
MT= 57 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 46.76 %
Max Ratio
Min Ratio
TENDL Threshold 635.35 keV
ENDFB8.0 Threshold 635.35 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
10^0
10^-4
10^-8
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
16
Incident Energy (eV)
56-Ba-133

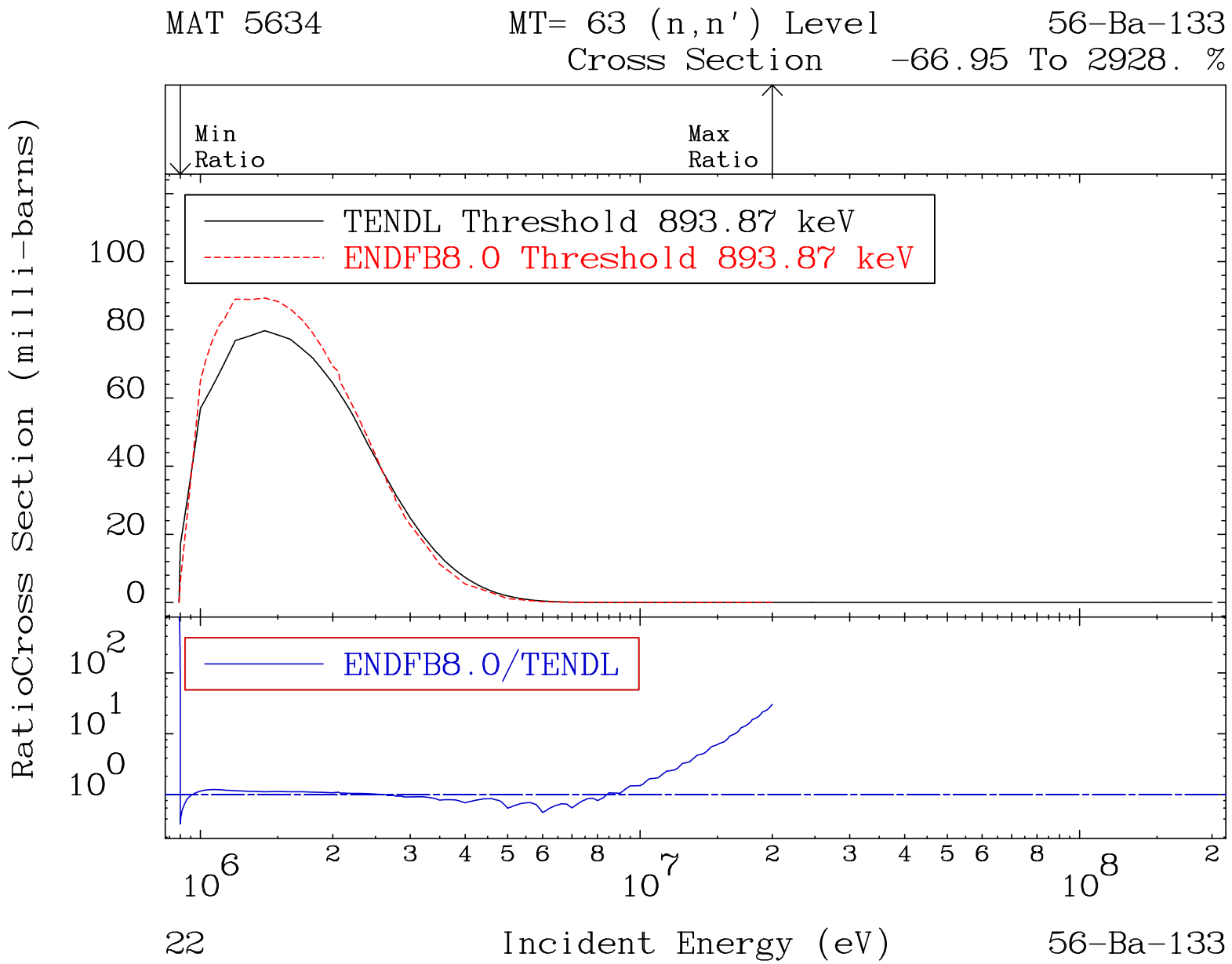

MAT 5634
MT= 58 (n,n') Level
56-Ba-133
Cross Section -100.0 To 12.60 %
Max Ratio
Min Ratio
TENDL Threshold 681.62 keV
ENDFB8.0 Threshold 681.62 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
10^0
10^-4
10^-8
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
17
Incident Energy (eV)
56-Ba-133

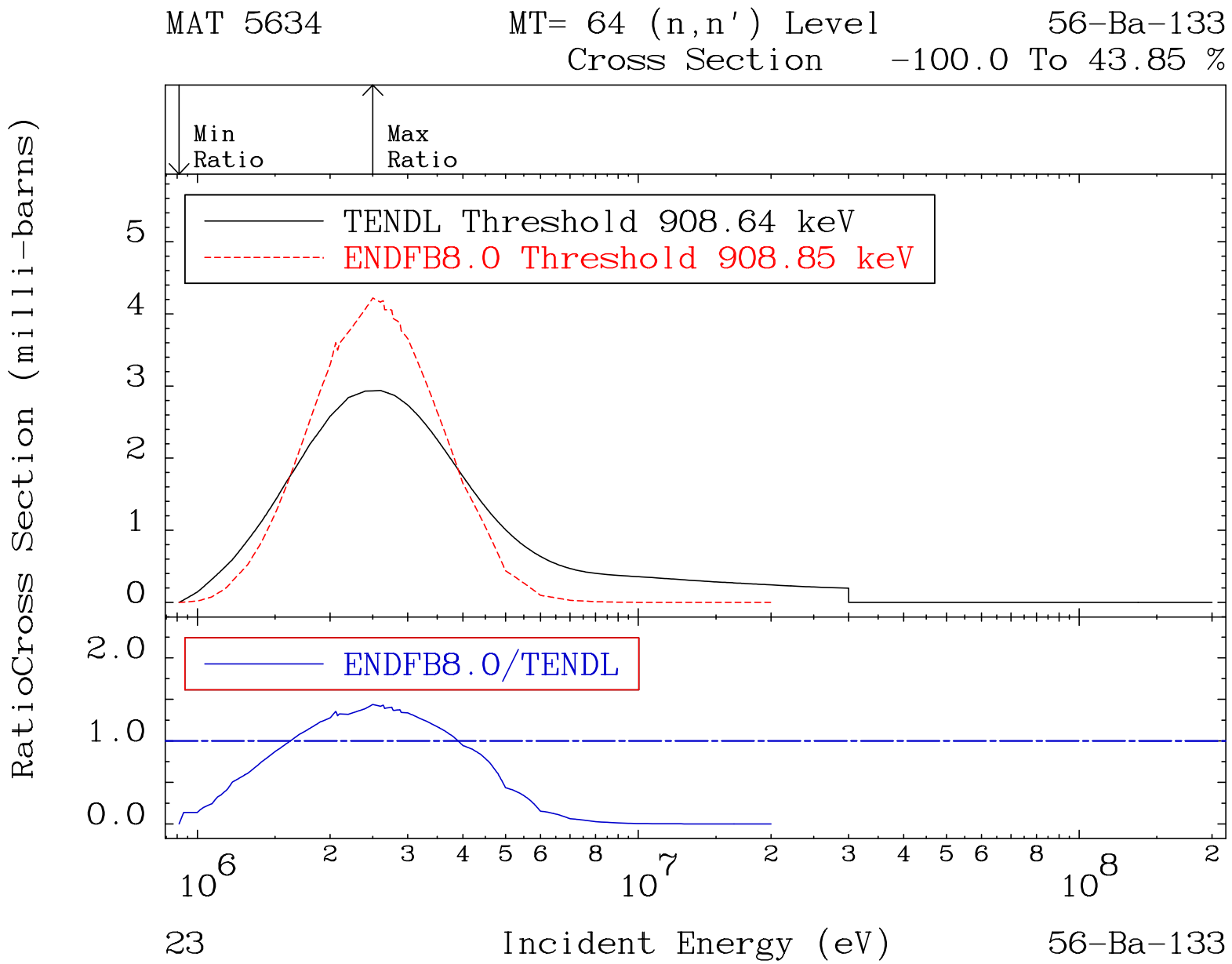

MAT 5634
MT= 59 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 2423. %
Min Ratio
Max Ratio
TENDL Threshold 797.10 keV
ENDFB8.0 Threshold 800.03 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
20
0
8
2
3
4
5
6
8
2
3
4
5
6
8
2
10^6
10^7
10^8
18
Incident Energy (eV)
56-Ba-133

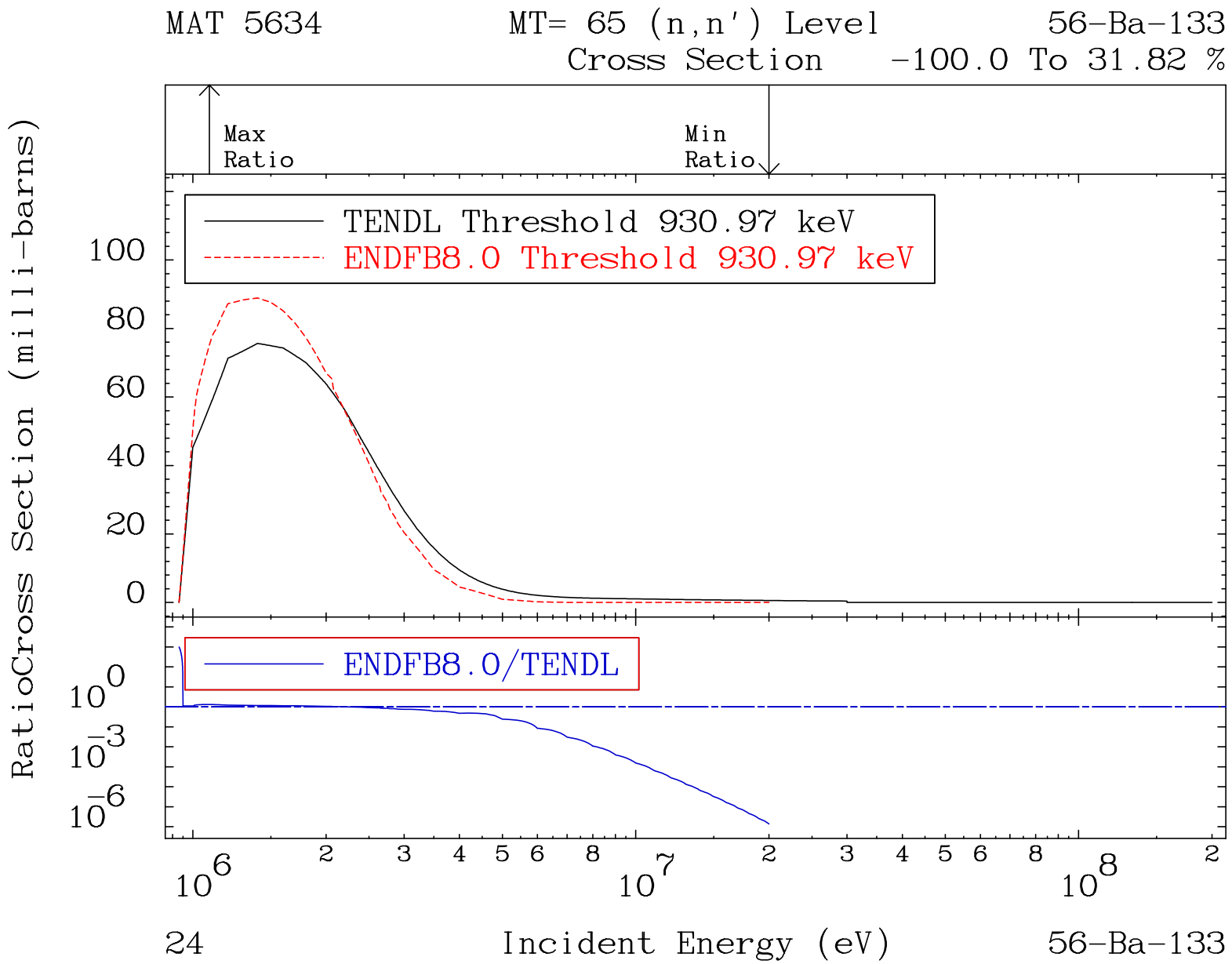

MAT 5634
MT= 60 (n,n') Level
56-Ba-133
Cross Section -100.0 To 2946. %
Min Ratio
Max Ratio
TENDL Threshold 865.01 keV
ENDFB8.0 Threshold 865.01 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
40
20
0
2 3 4 5 6 8
10^6
10^7
10^8
19
Incident Energy (eV)
56-Ba-133

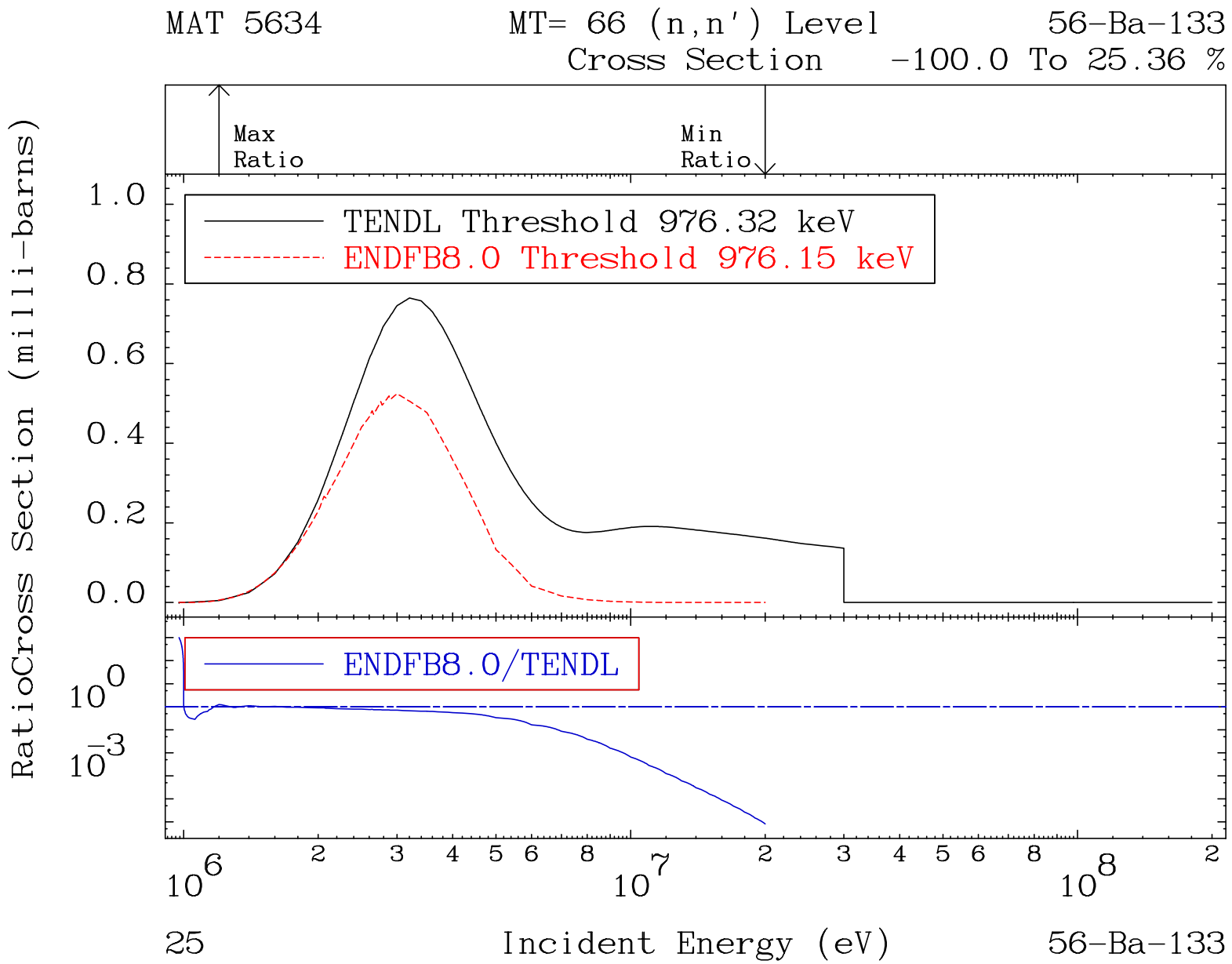

MAT 5634
MT= 61 (n,n') Level
56-Ba-133
Cross Section -100.0 To 18.74 %
Max Ratio
Min Ratio
TENDL Threshold 869.35 keV
ENDFB8.0 Threshold 869.35 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
60
40
20
0
10^0
10^-3
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
20
Incident Energy (eV)
56-Ba-133

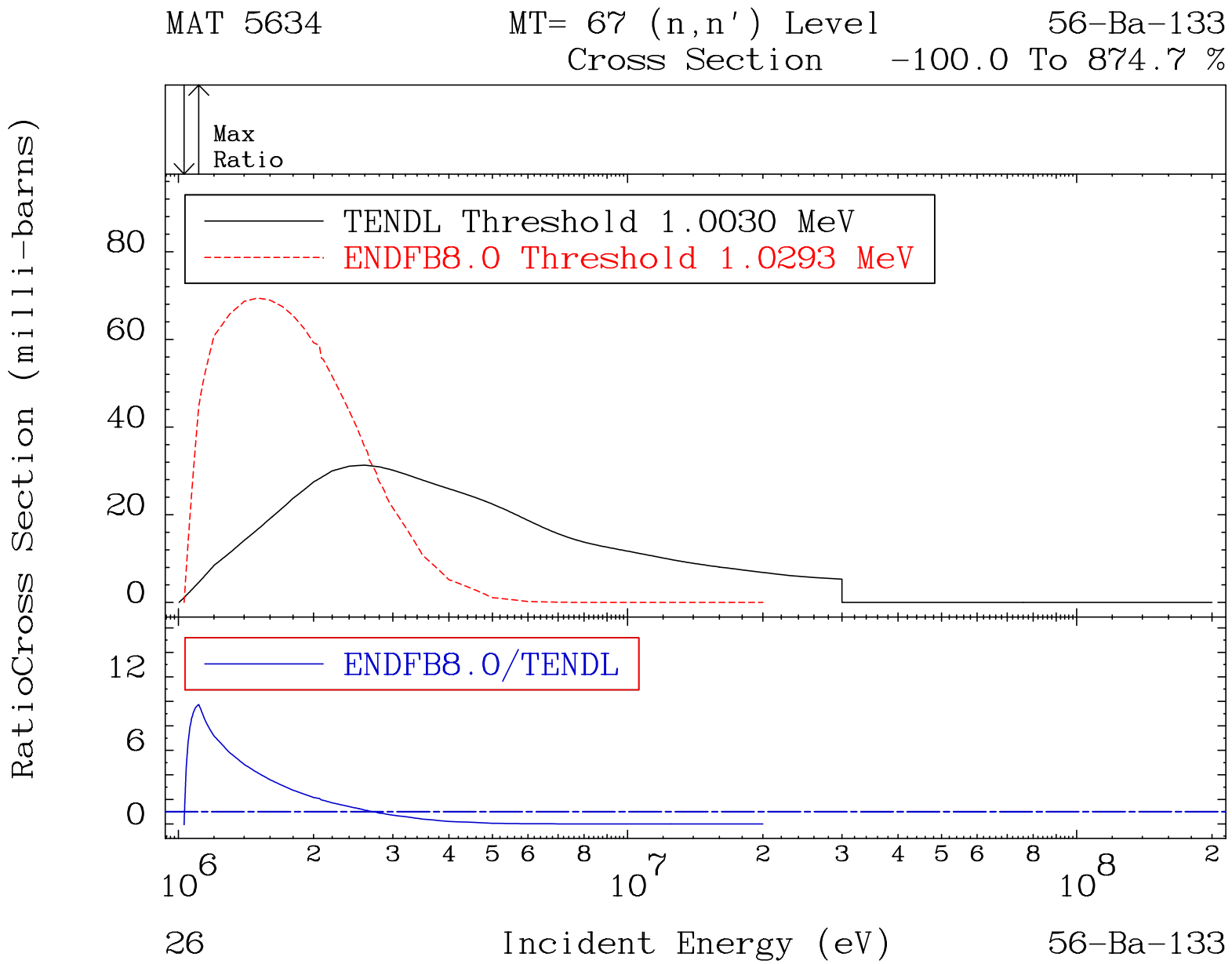

MAT 5634
MT= 62 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 39.09 %
Max Ratio
Min Ratio
TENDL Threshold 890.09 keV
ENDFB8.0 Threshold 890.09 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
21
56-Ba-133

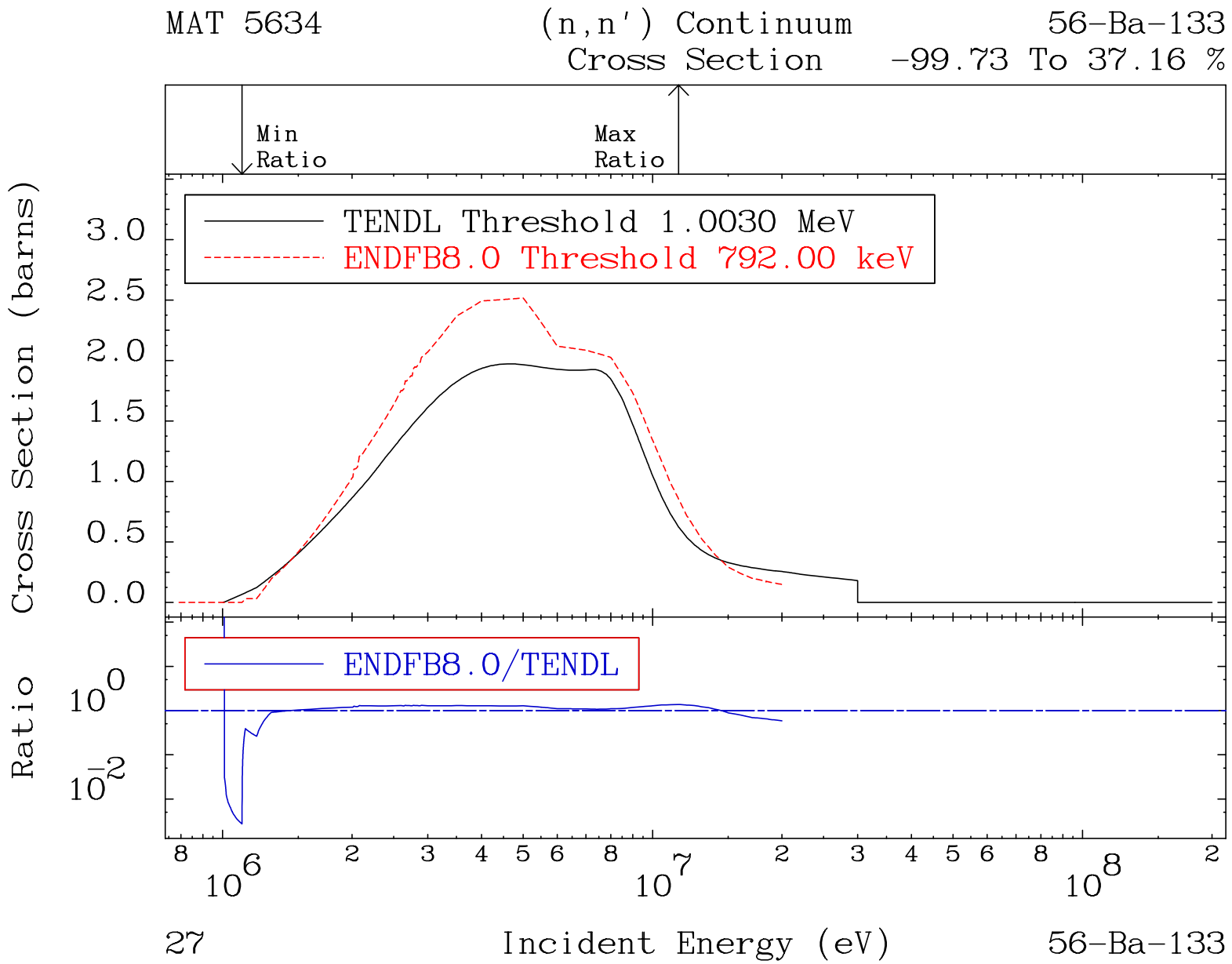

MAT 5634
MT= 63 (n,n') Level
56-Ba-133
Cross Section -66.95 To 2928. %
Min Ratio
Max Ratio
TENDL Threshold 893.87 keV
ENDFB8.0 Threshold 893.87 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
10^2
10^1
10^0
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
22
Incident Energy (eV)
56-Ba-133

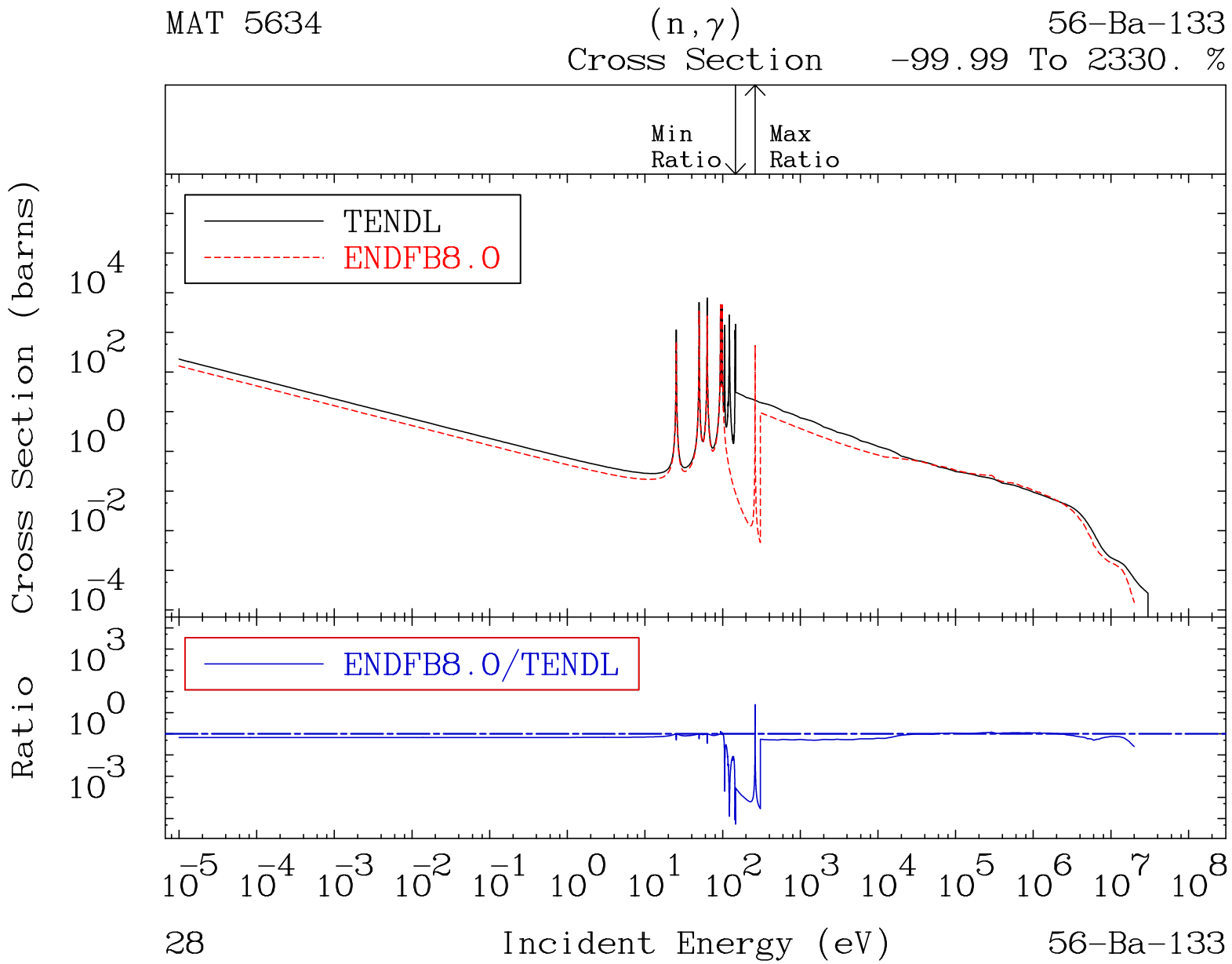

MAT 5634
MT= 64 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 43.85 %
Min Ratio
Max Ratio
TENDL Threshold 908.64 keV
ENDFB8.0 Threshold 908.85 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
23
56-Ba-133

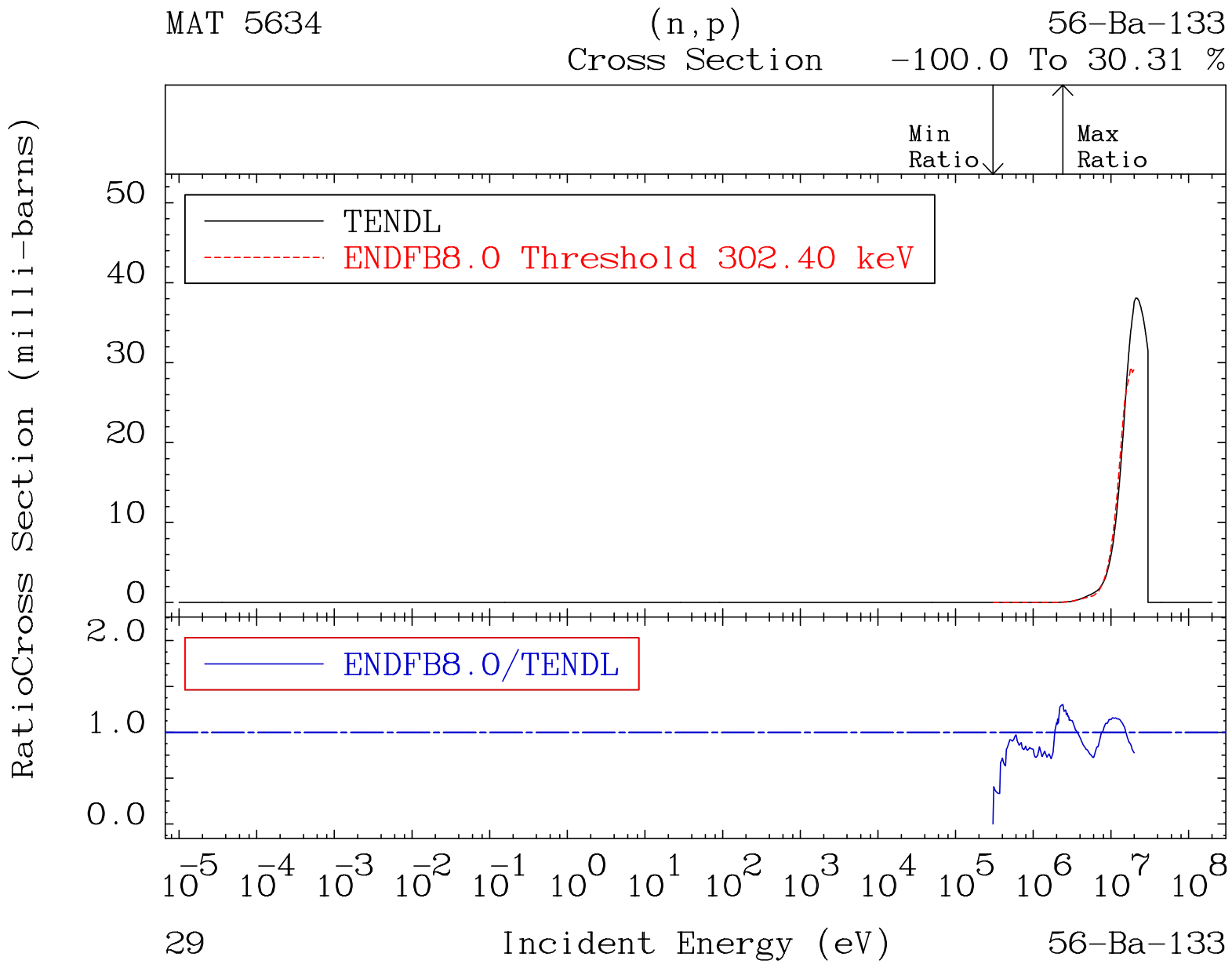

MAT 5634
MT= 65 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 31.82 %
Max Ratio
Min Ratio
TENDL Threshold 930.97 keV
ENDFB8.0 Threshold 930.97 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
24
56-Ba-133

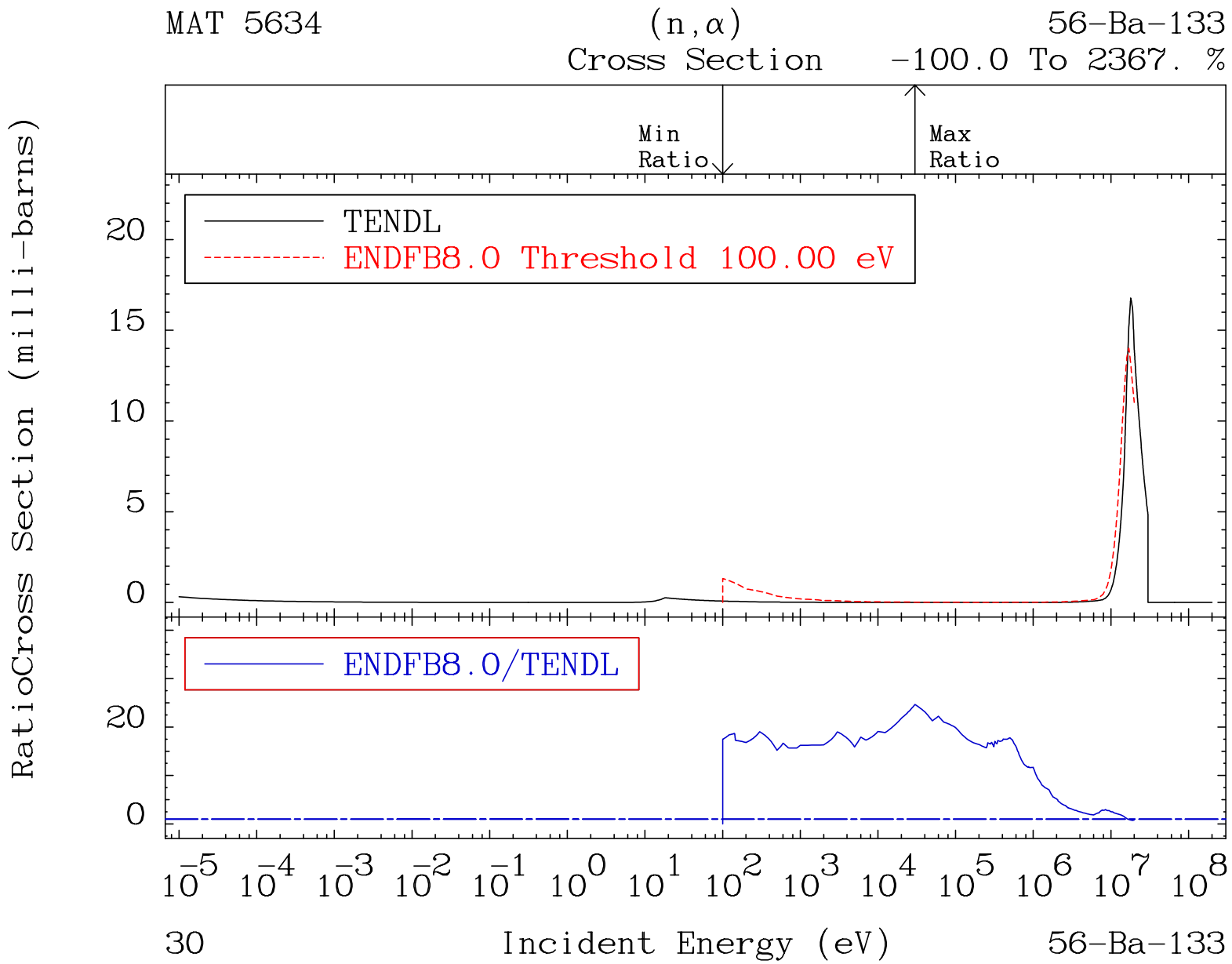

MAT 5634
MT= 66 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 25.36 %
Max Ratio
Min Ratio
TENDL Threshold 976.32 keV
ENDFB8.0 Threshold 976.15 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
10^0
10^-3
10^6
10^7
10^8
Incident Energy (eV)
25
56-Ba-133

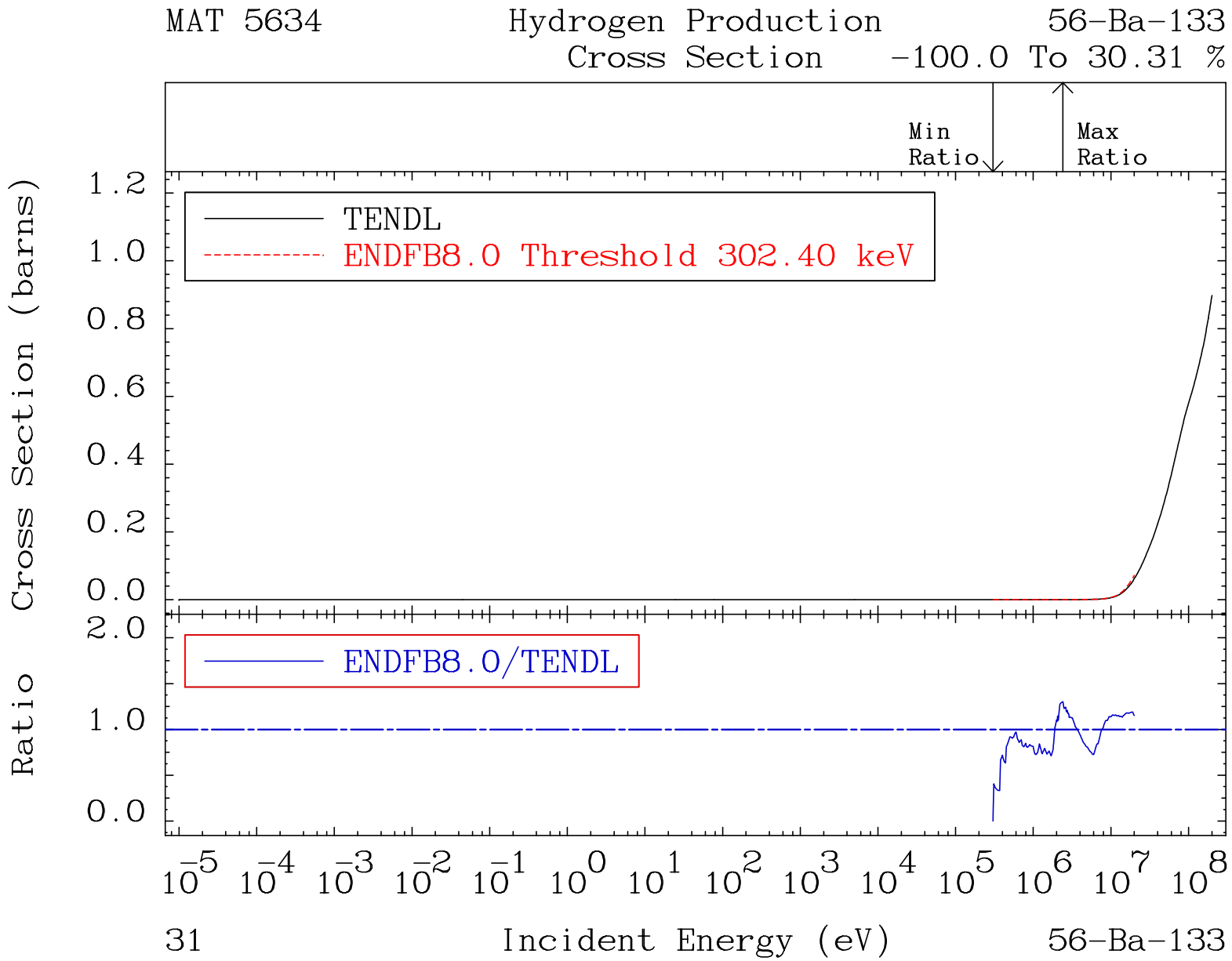

MAT 5634
MT= 67 (n,n') Level
56-Ba-133
Cross Section
-100.0 To 874.7 %
Max
Ratio
TENDL Threshold 1.0030 MeV
ENDFB8.0 Threshold 1.0293 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
12
6
0
2
3
4
5
6
8
10^6
10^7
10^8
26
Incident Energy (eV)
56-Ba-133

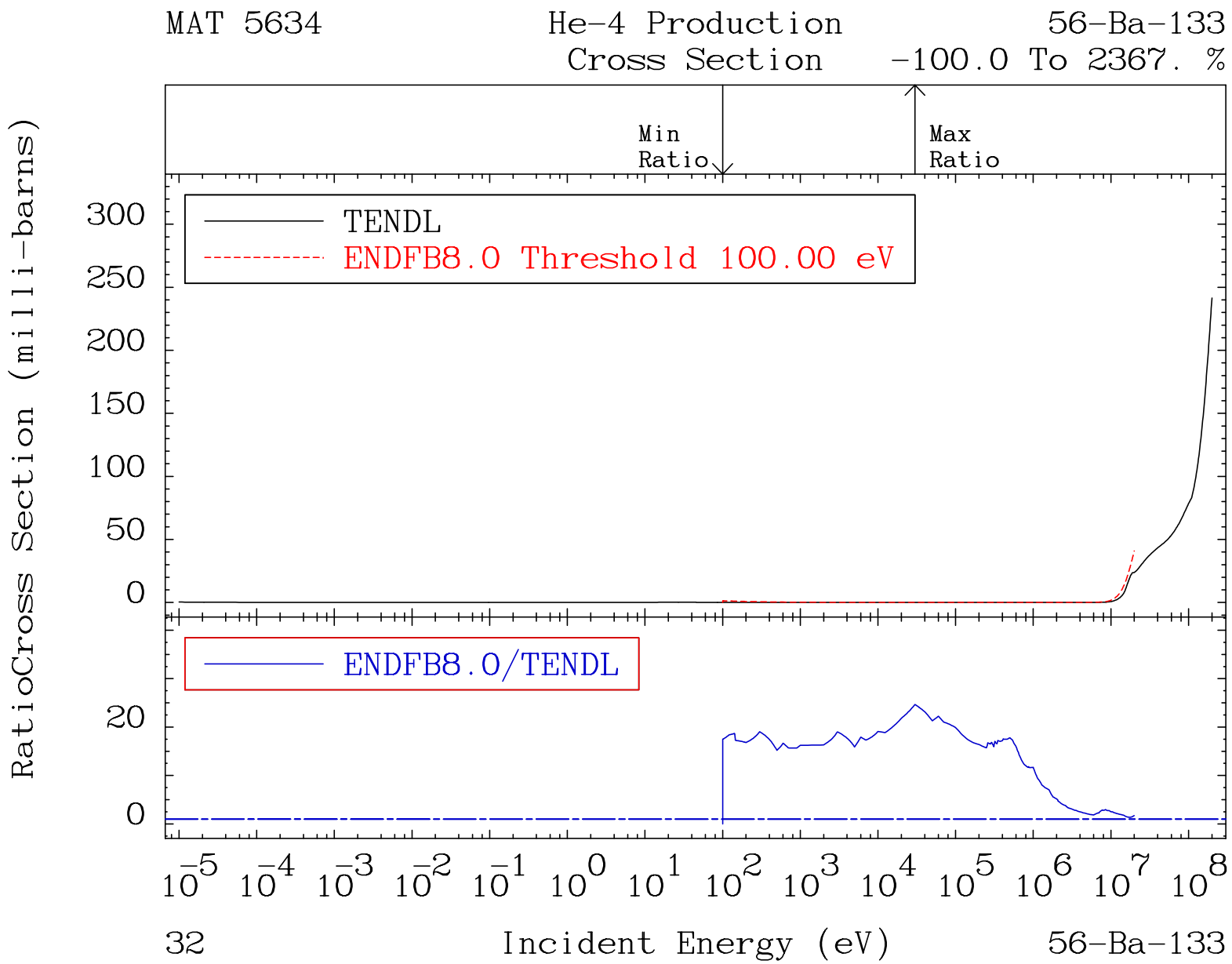

MAT 5634
(n,n') Continuum
Cross Section
56-Ba-133
-99.73 To 37.16 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.0030 MeV
ENDFB8.0 Threshold 792.00 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
27
Incident Energy (eV)
56-Ba-133

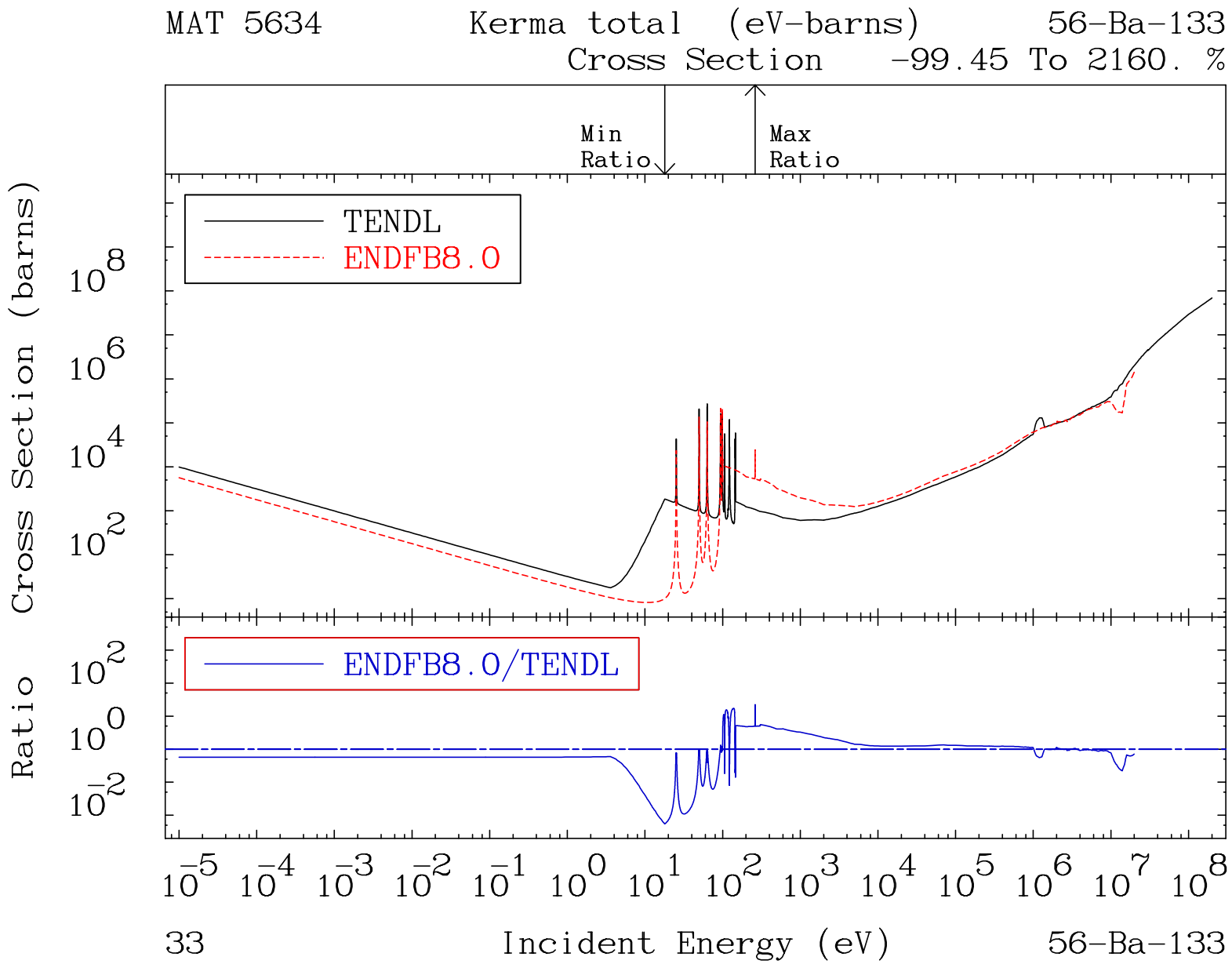

MAT 5634
(n,γ)
56-Ba-133
Cross Section
-99.99 To 2330. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
28
56-Ba-133

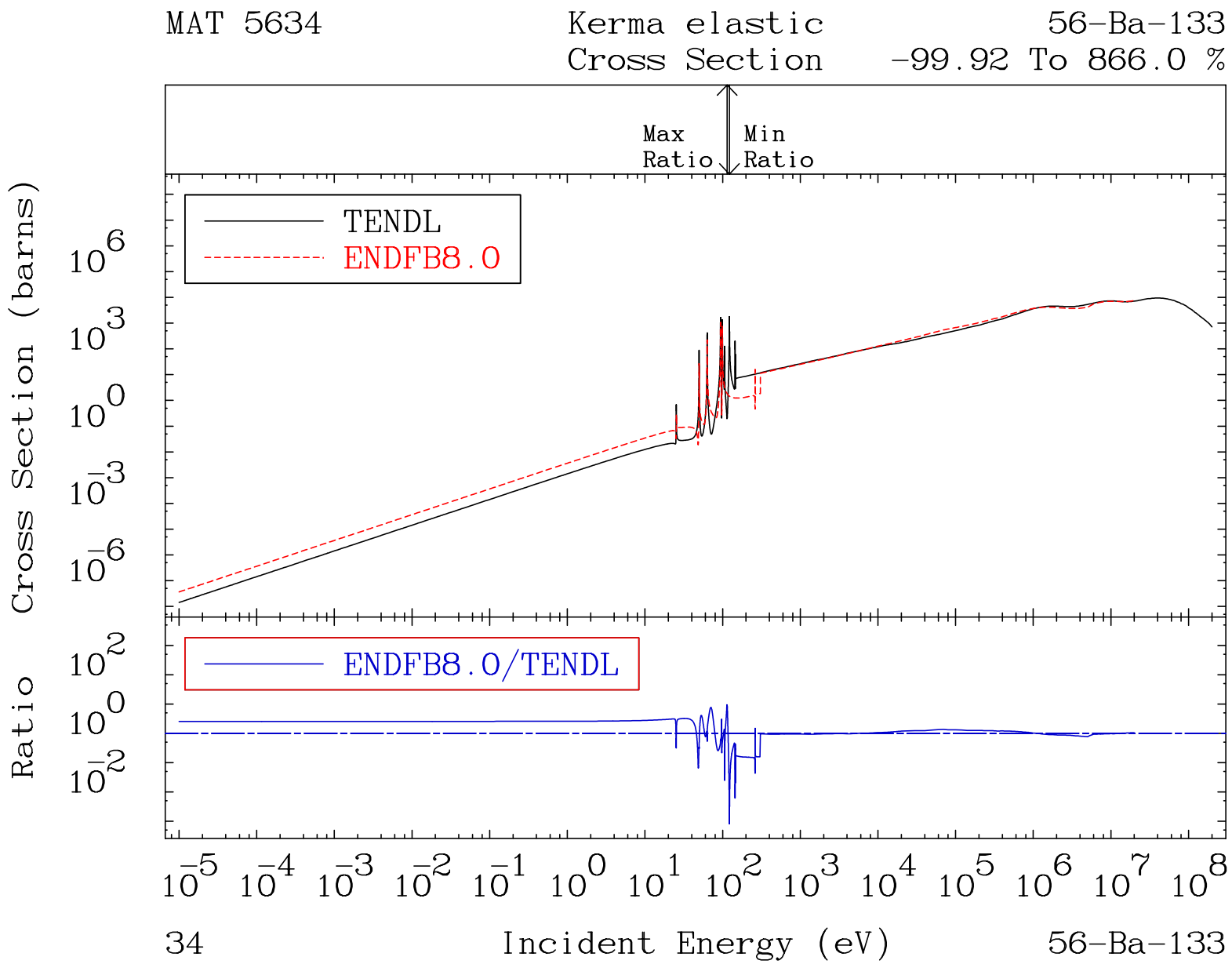

MAT 5634
(n,p)
Cross Section
56-Ba-133
-100.0 To 30.31 %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 302.40 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
56-Ba-133

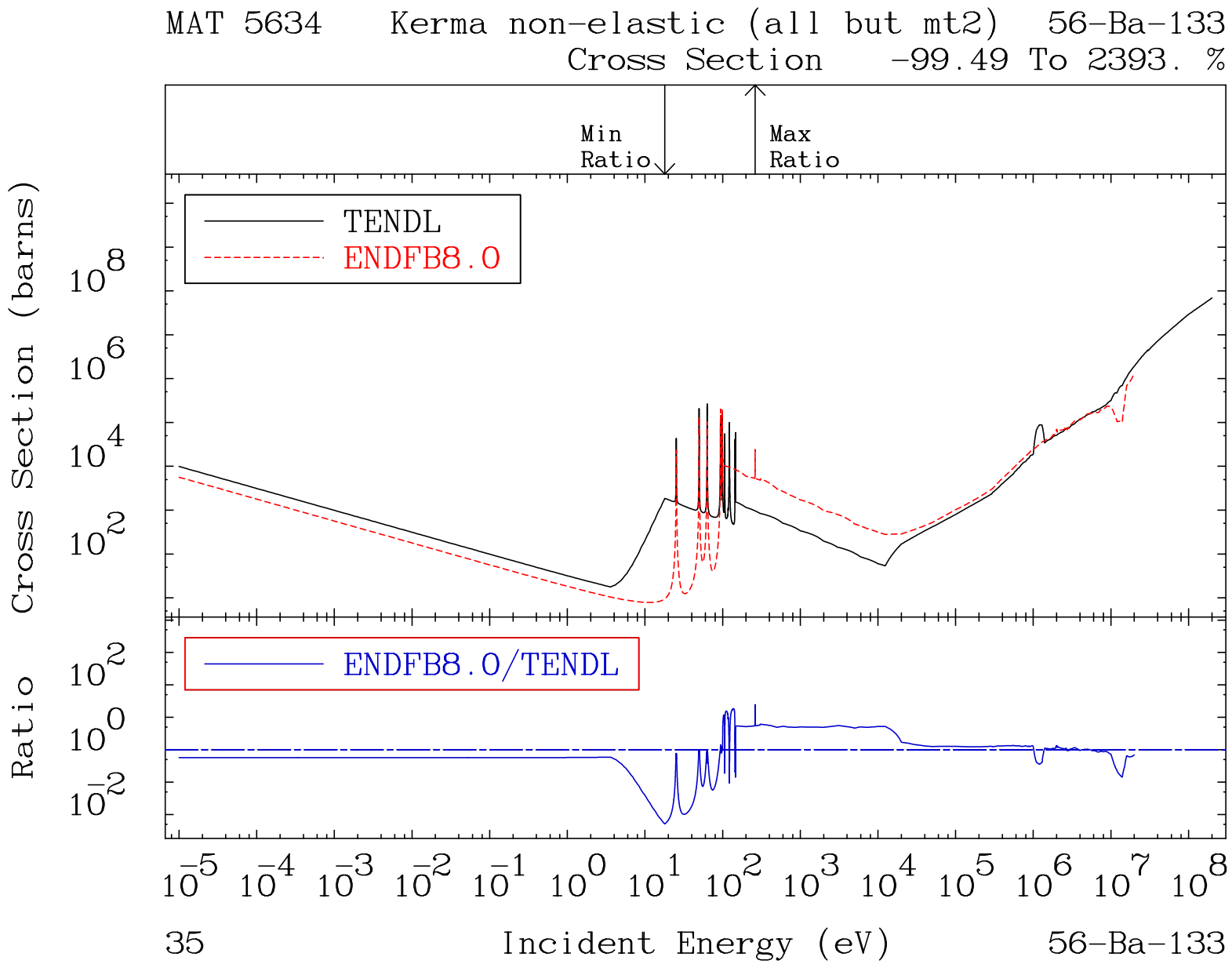

MAT 5634
(n,α)
56-Ba-133
Cross Section
-100.0 To 2367. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 100.00 eV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
30
56-Ba-133

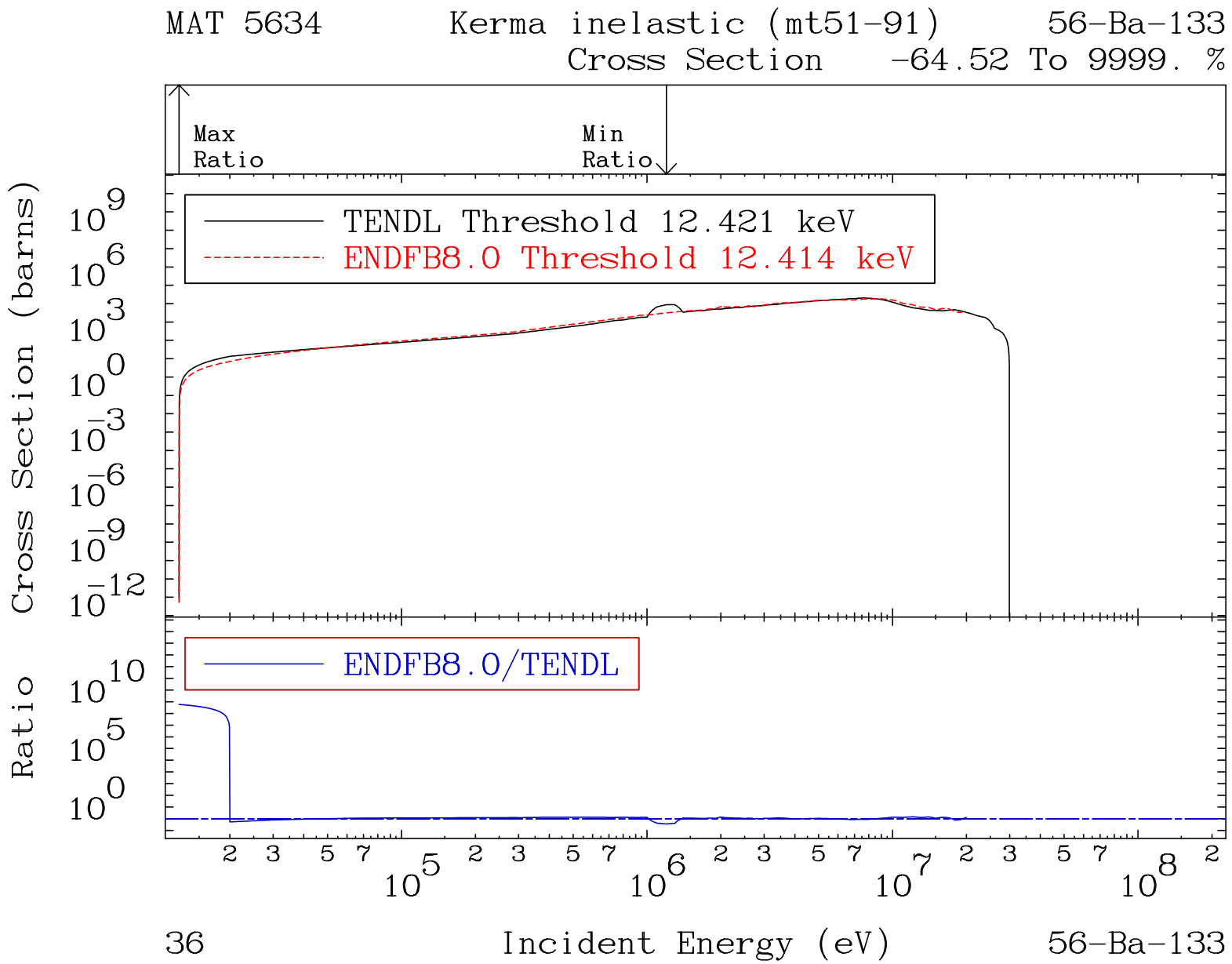

MAT 5634
Hydrogen Production
56-Ba-133
Cross Section
-100.0 To 30.31 %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 302.40 keV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
31
Incident Energy (eV)
56-Ba-133

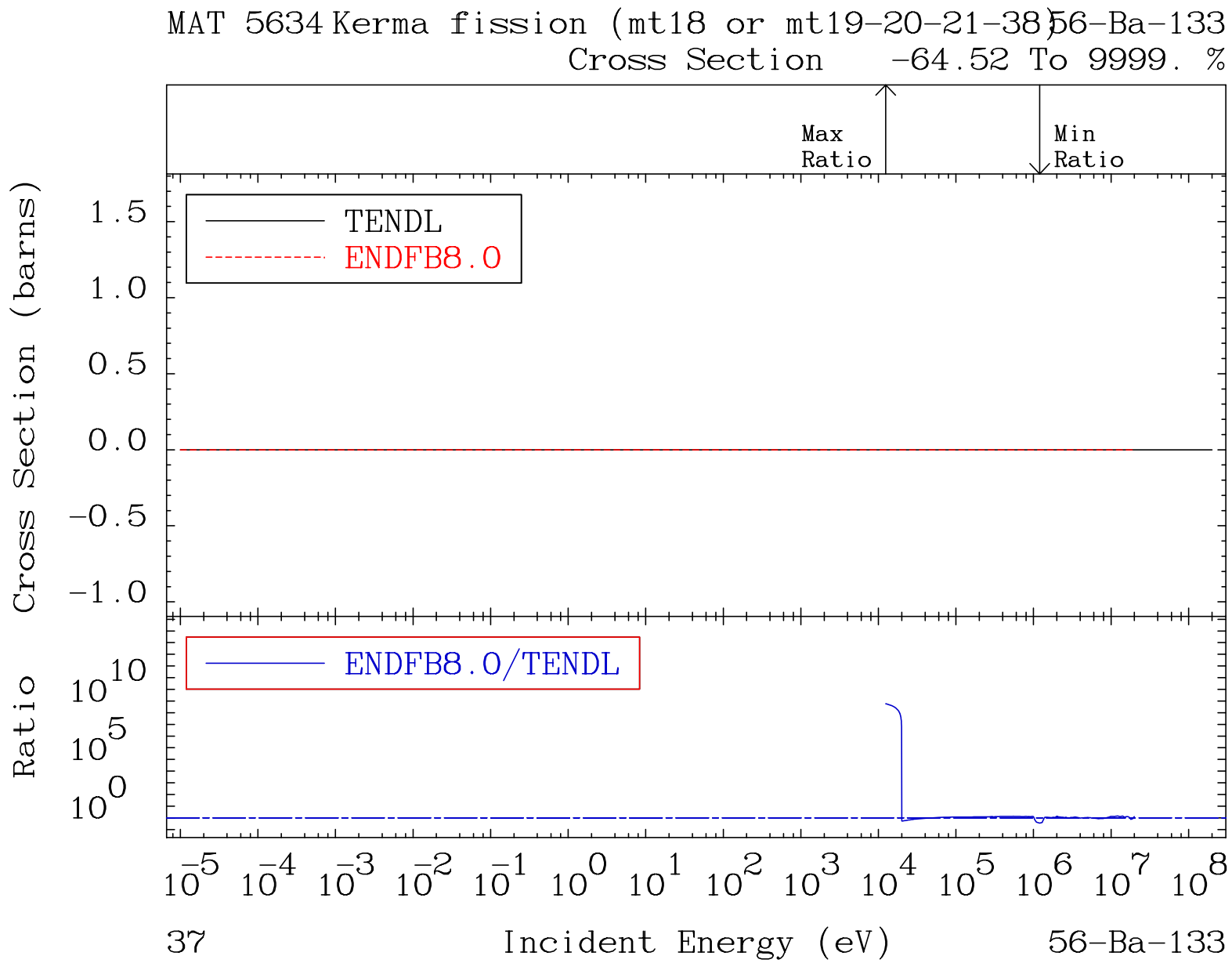

MAT 5634
He-4 Production
Cross Section
56-Ba-133
-100.0 To 2367. %
Min
Ratio
Max
Ratio
TENDL
ENDFB8.0 Threshold 100.00 eV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
20
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
32
Incident Energy (eV)
56-Ba-133

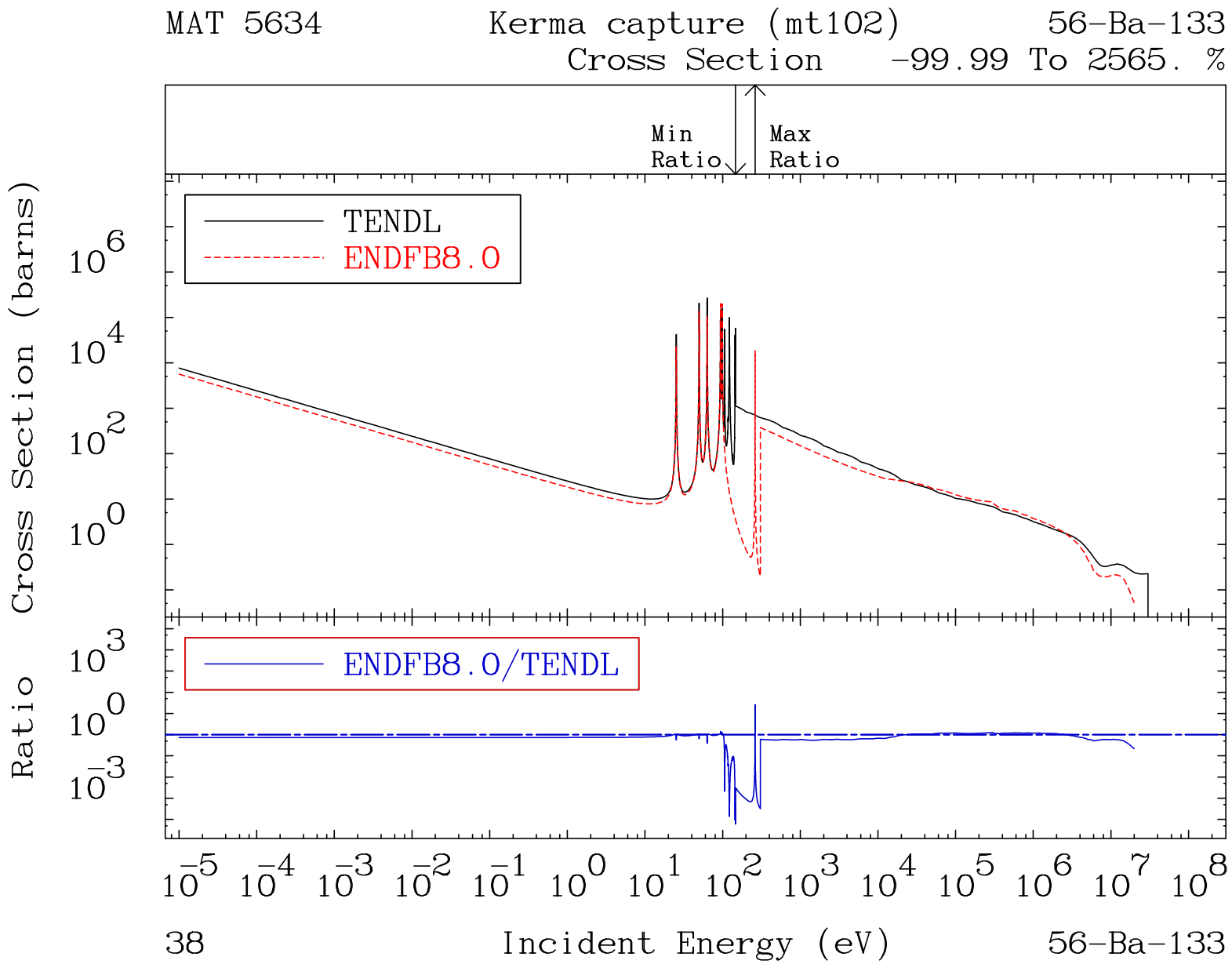

MAT 5634
Kerma total (eV-barns)
56-Ba-133
Cross Section -99.45 To 2160. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
33
56-Ba-133

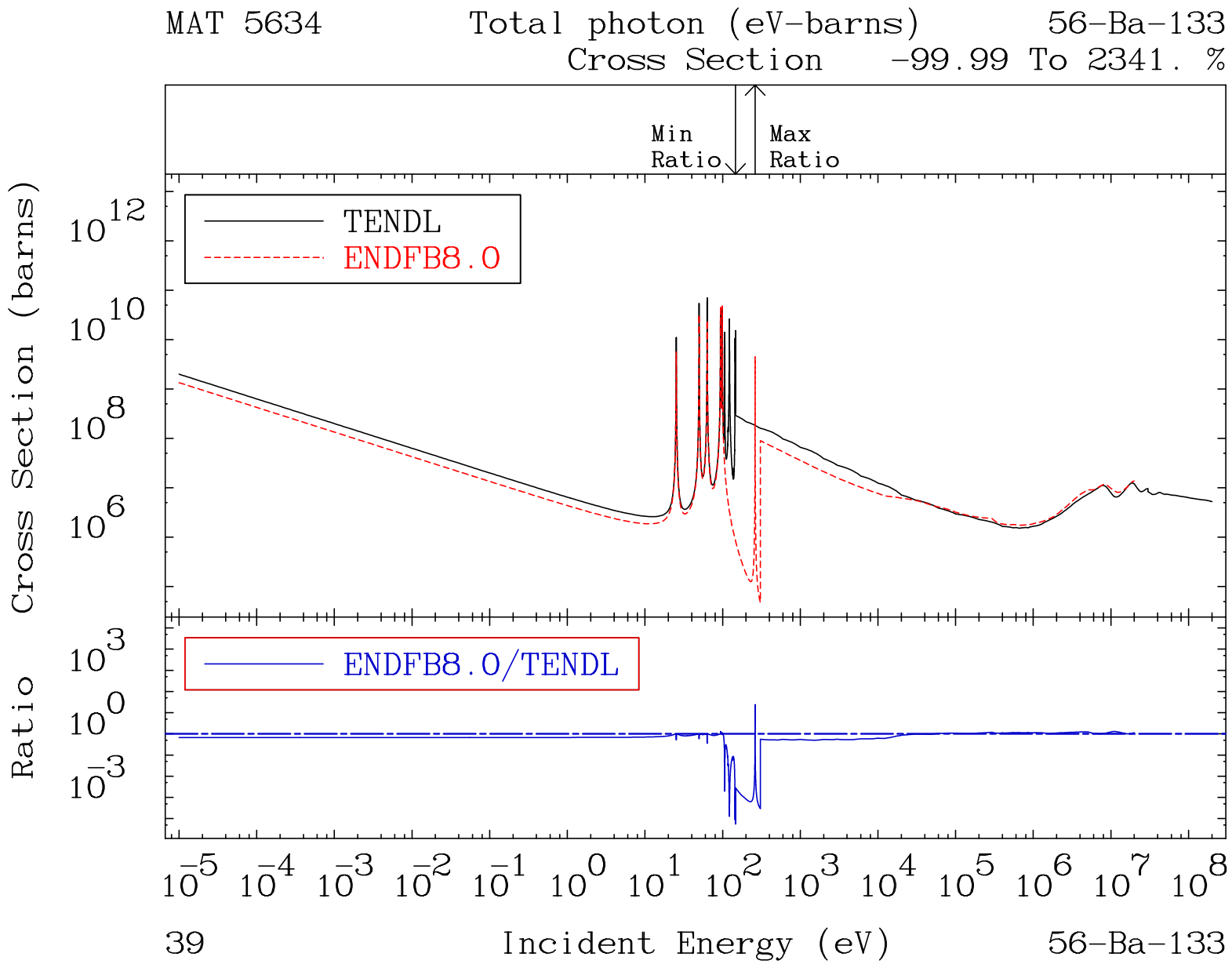

MAT 5634
Kerma elastic
Cross Section
56-Ba-133
-99.92 To 866.0 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
34
56-Ba-133

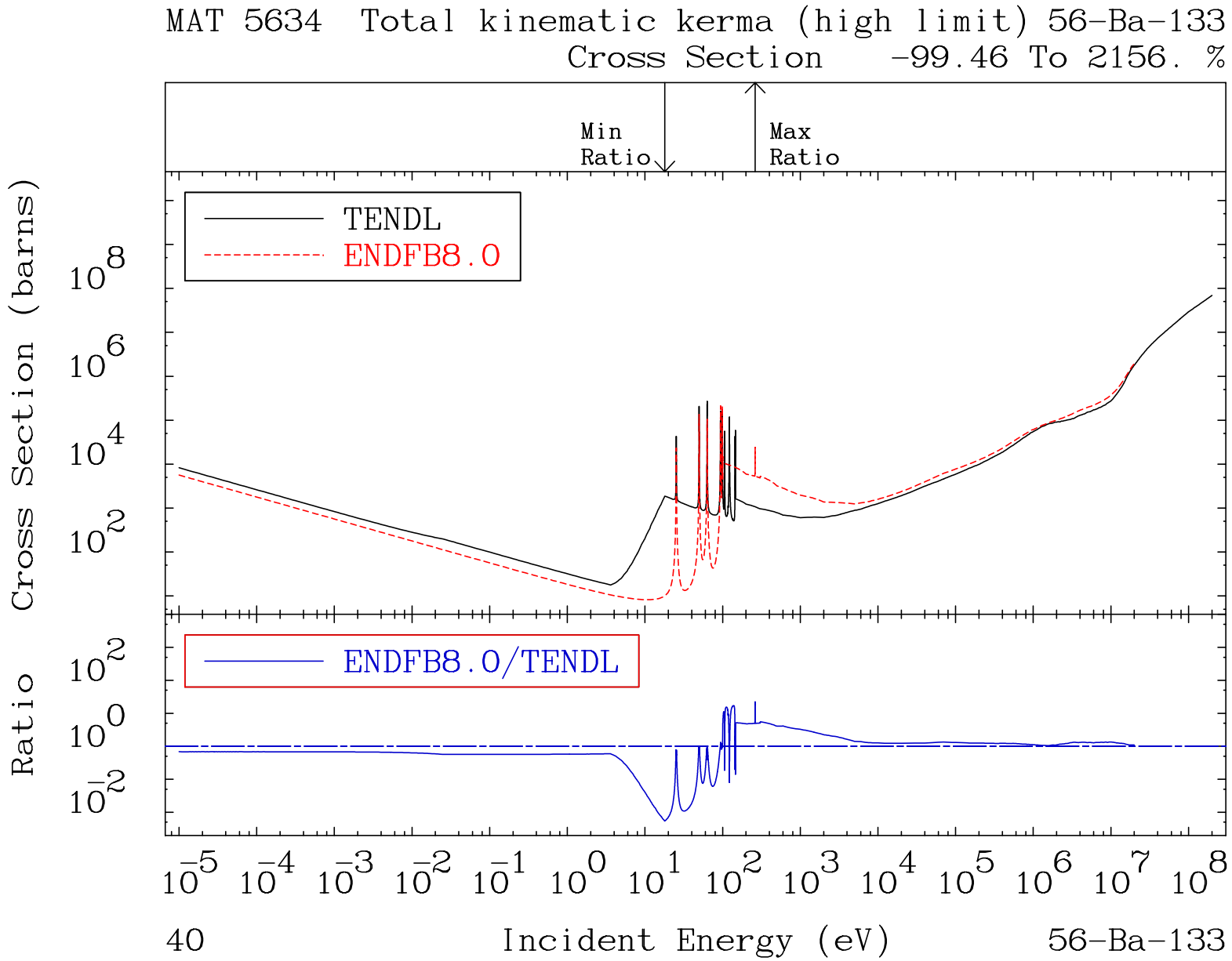

MAT 5634 Kerma non-elastic (all but mt2) 56-Ba-133
Cross Section -99.49 To 2393. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
35
56-Ba-133

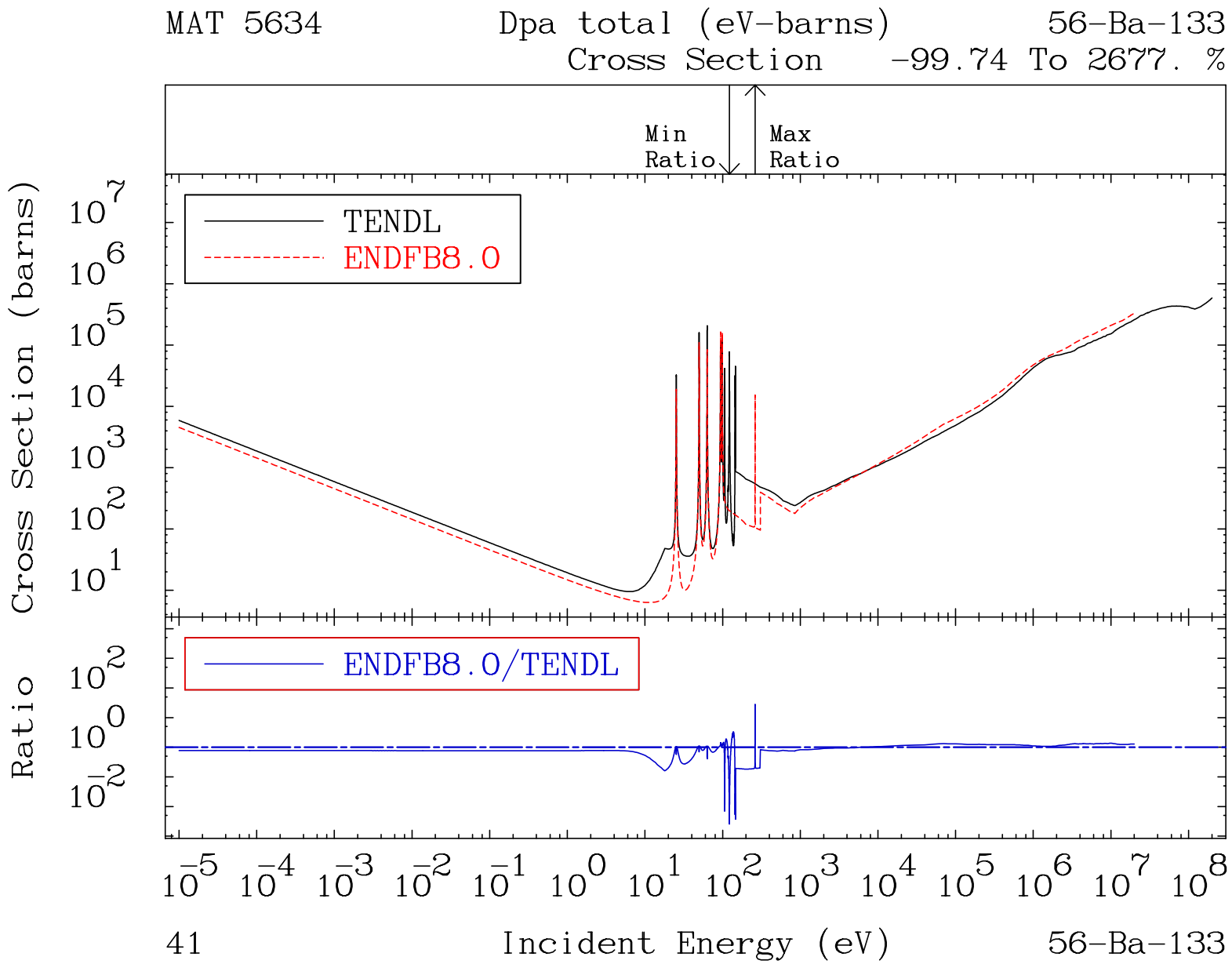

MAT 5634
Kerma inelastic (mt51-91)
56-Ba-133
Cross Section -64.52 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 12.421 keV
ENDFB8.0 Threshold 12.414 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
36
56-Ba-133

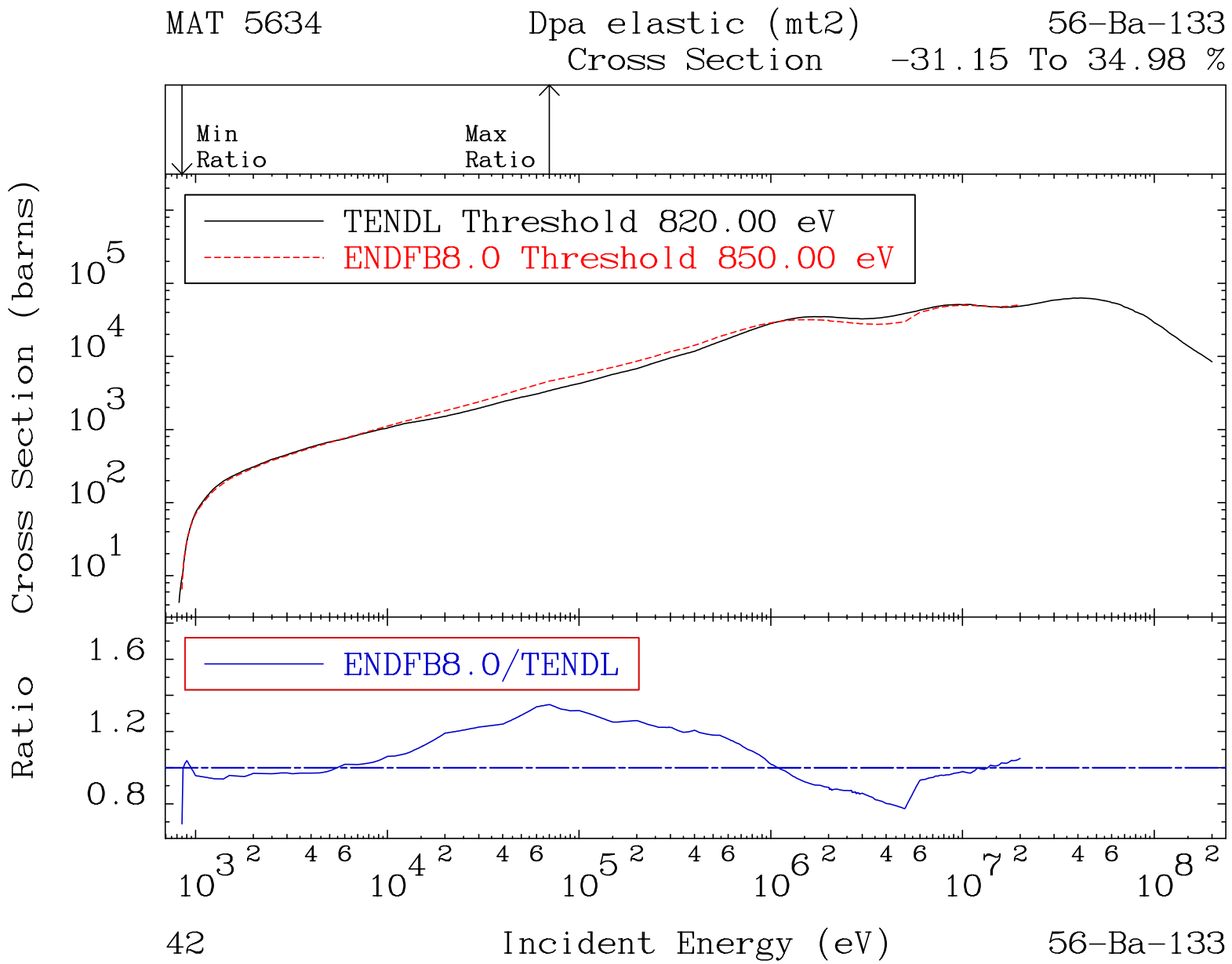

MAT 5634 Kerma fission (mt18 or mt19-20-21-38) 56-Ba-133
Cross Section -64.52 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{10}
10^{5}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
37
Incident Energy (eV)
56-Ba-133

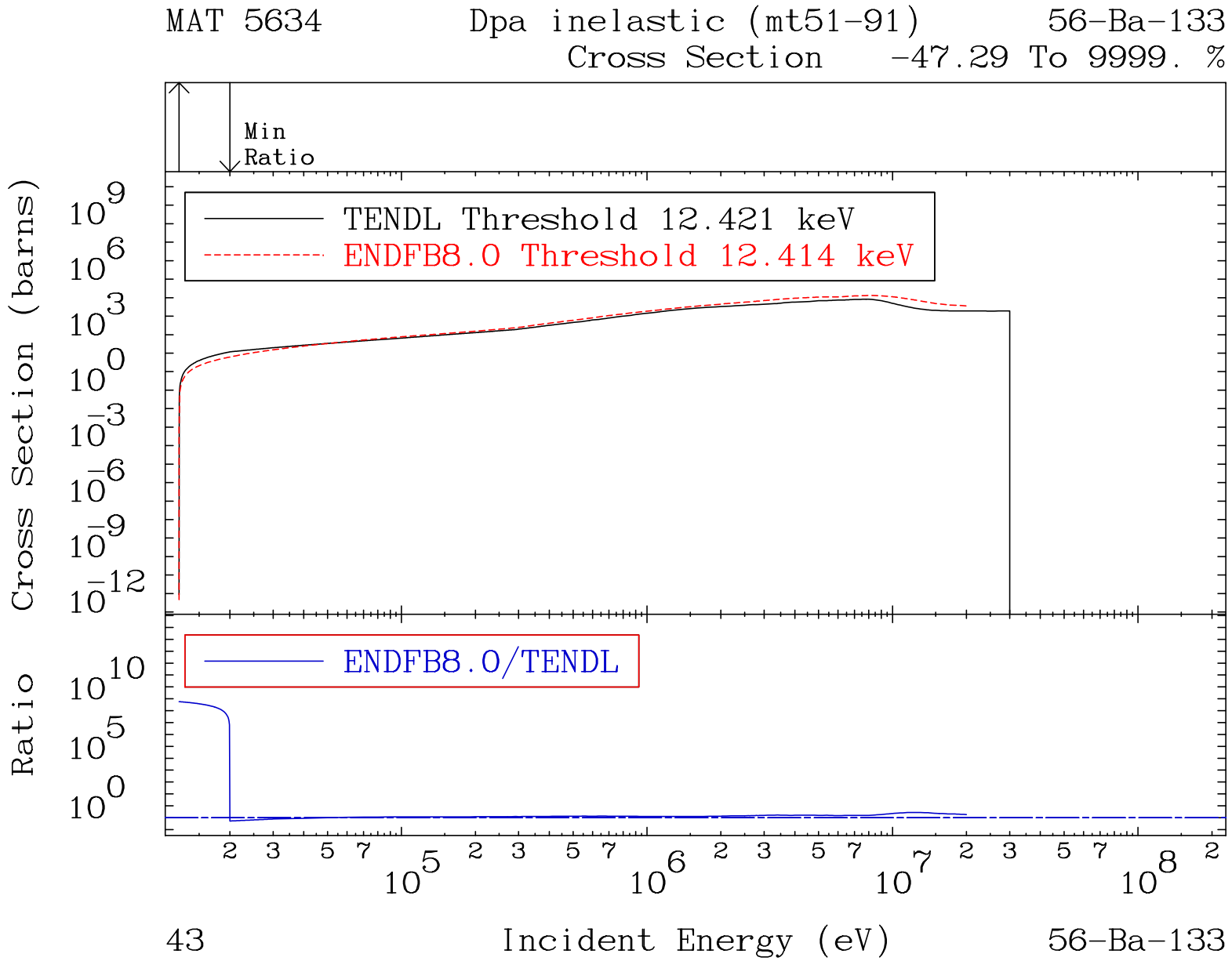

MAT 5634
Kerma capture (mt102)
56-Ba-133
Cross Section -99.99 To 2565. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
38
56-Ba-133

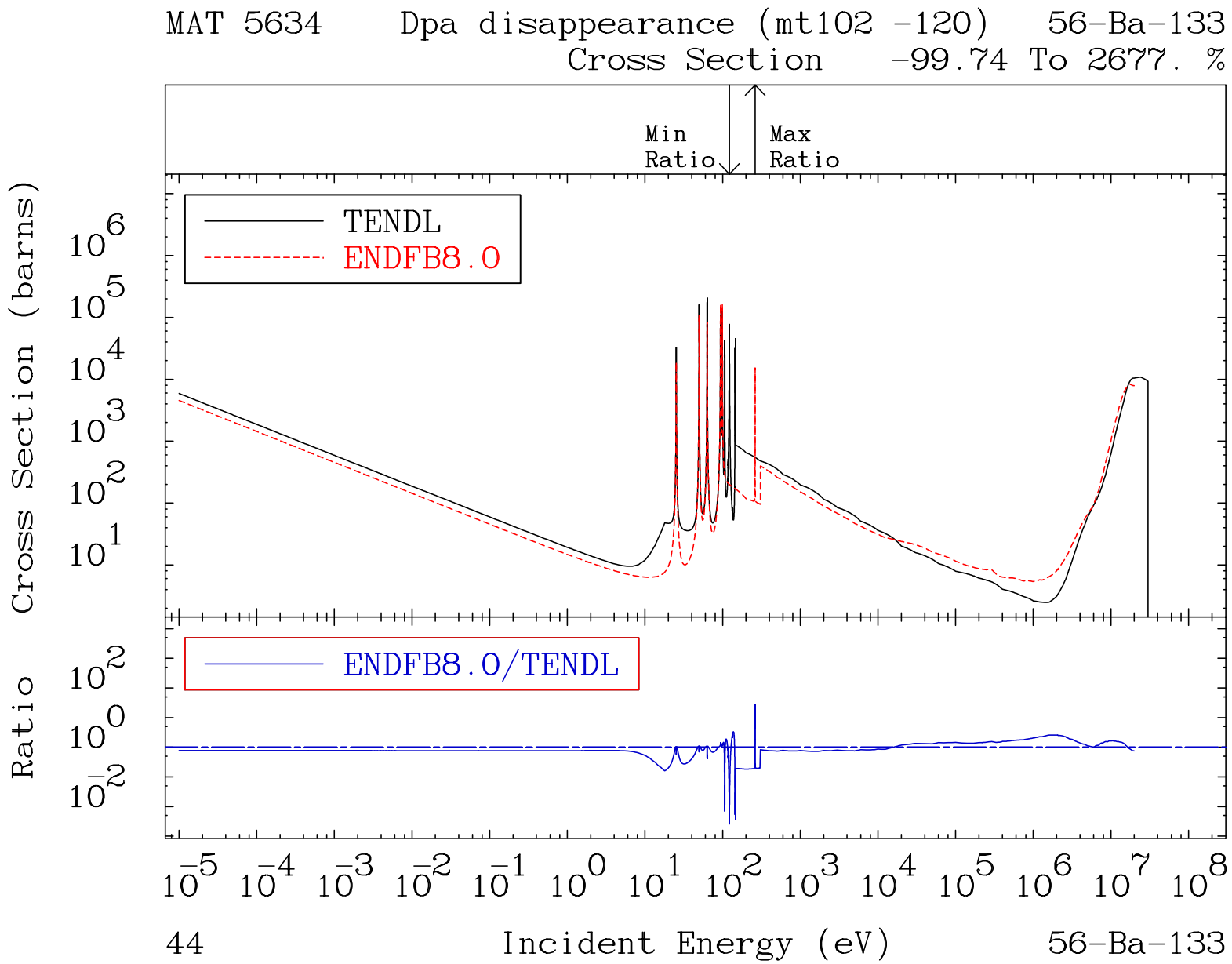

MAT 5634
Total photon (eV-barns)
56-Ba-133
Cross Section -99.99 To 2341. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
56-Ba-133


MAT 5634 Total kinematic kerma (high limit) 56-Ba-133
Cross Section -99.46 To 2156. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
56-Ba-133


MAT 5634
Dpa total (eV-barns)
56-Ba-133
Cross Section -99.74 To 2677. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
41
56-Ba-133


MAT 5634
Dpa elastic (mt2)
Cross Section
56-Ba-133
-31.15 To 34.98 %
Min Ratio
Max Ratio
TENDL Threshold 820.00 eV
ENDFB8.0 Threshold 850.00 eV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
42
56-Ba-133


MAT 5634
Dpa inelastic (mt51-91)
56-Ba-133
Cross Section -47.29 To 9999. %
Min
Ratio
TENDL Threshold 12.421 keV
ENDFB8.0 Threshold 12.414 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
43
Incident Energy (eV)
56-Ba-133


MAT 5634 Dpa disappearance (mt102 -120) 56-Ba-133
Cross Section -99.74 To 2677. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
44
56-Ba-133