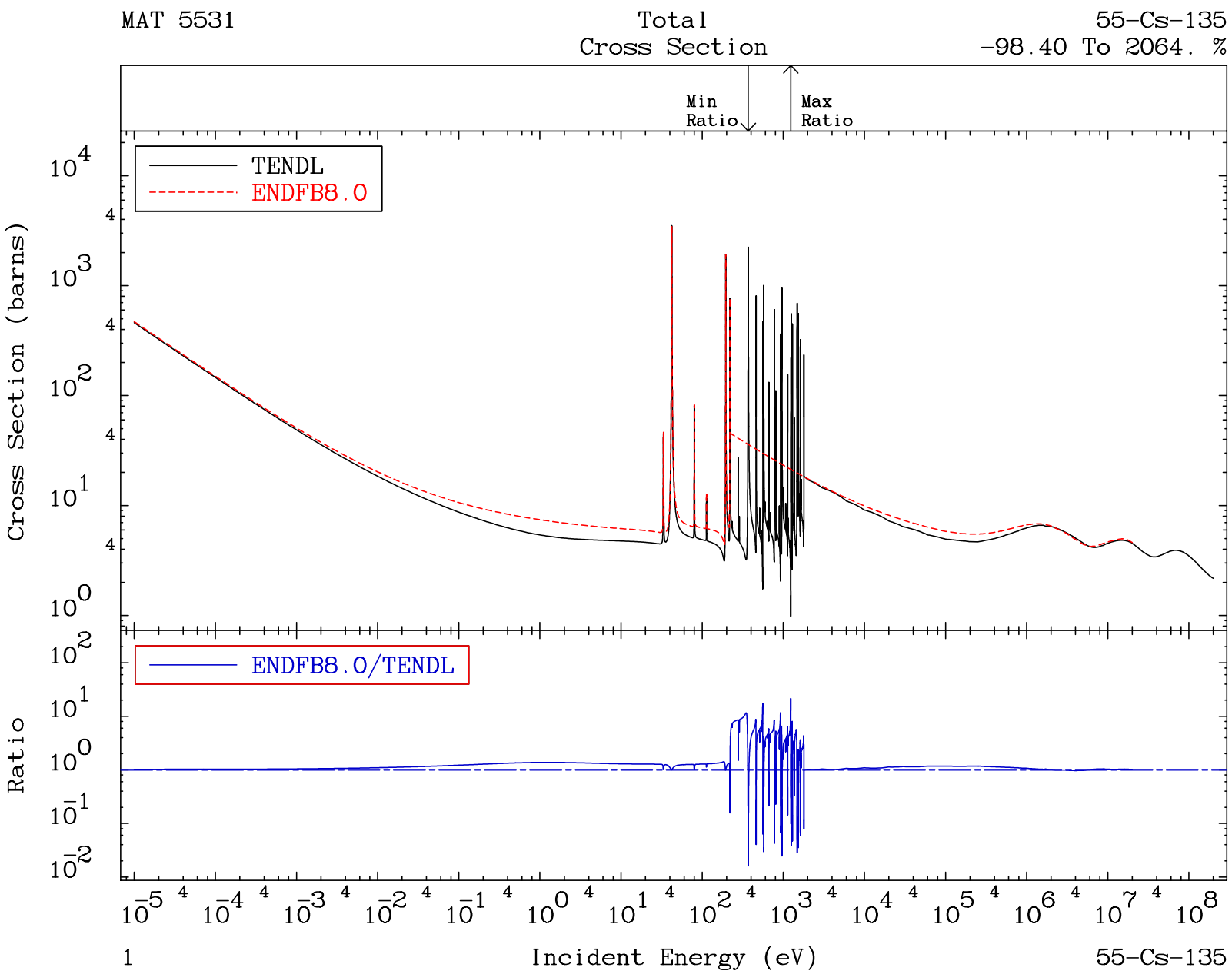
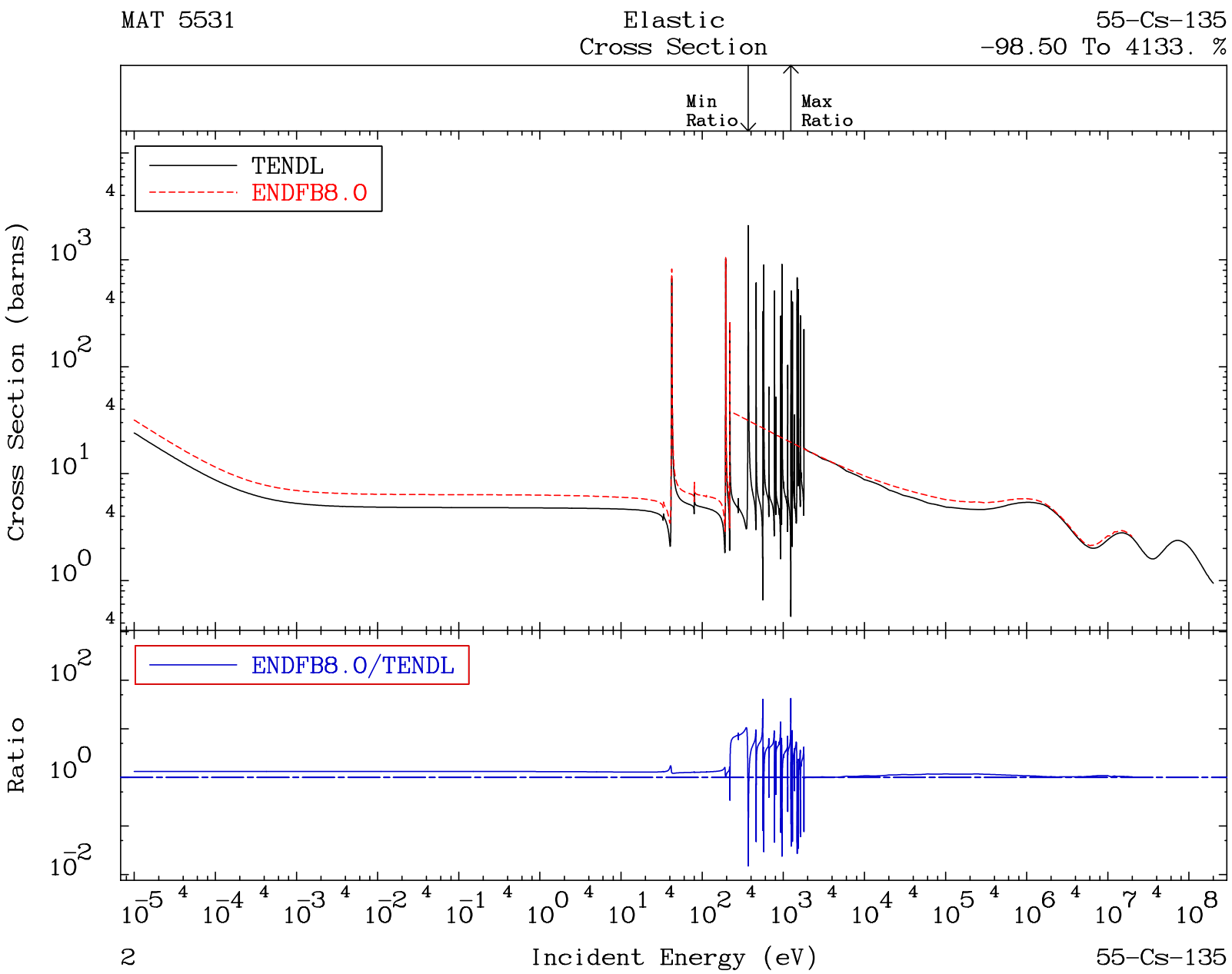
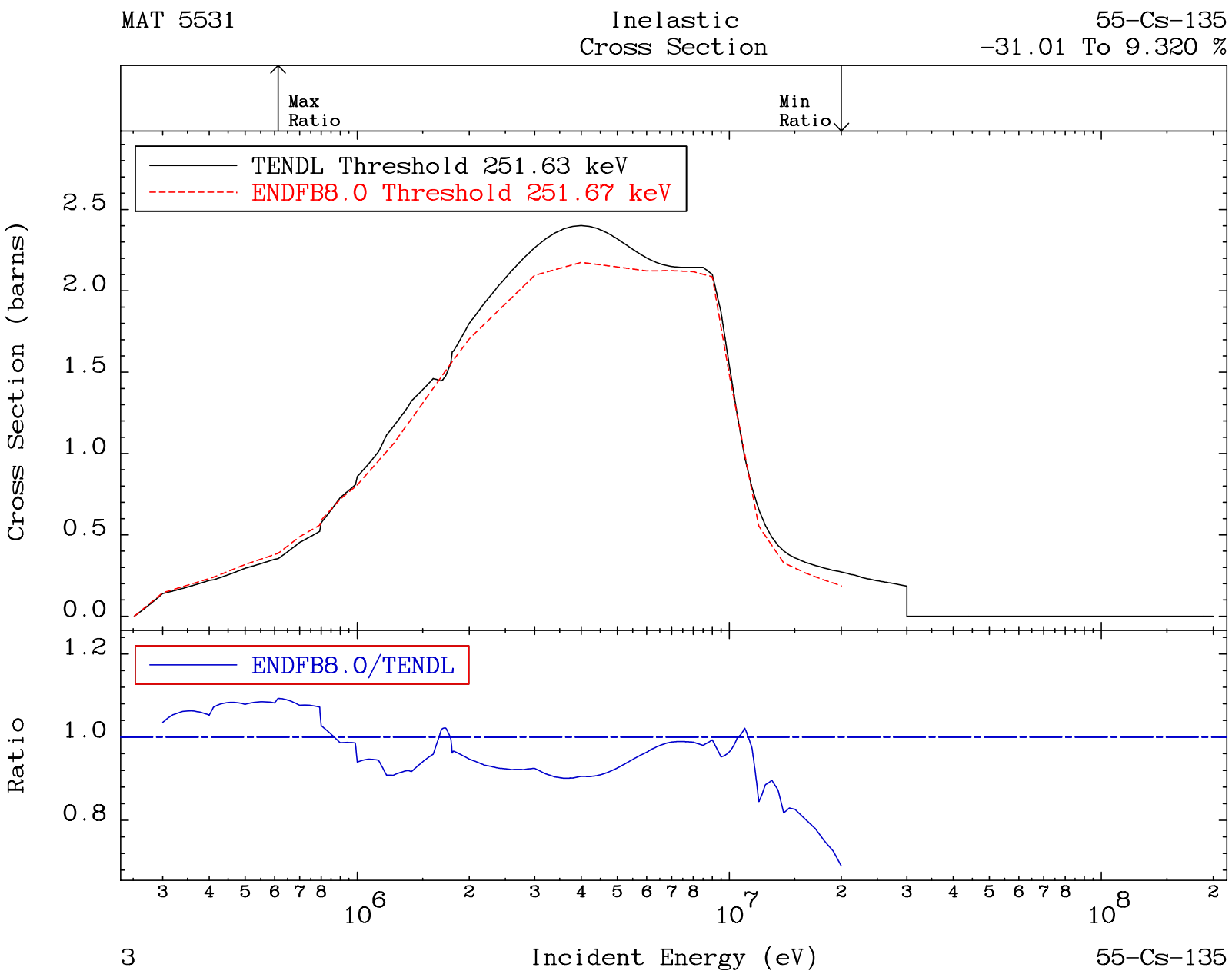
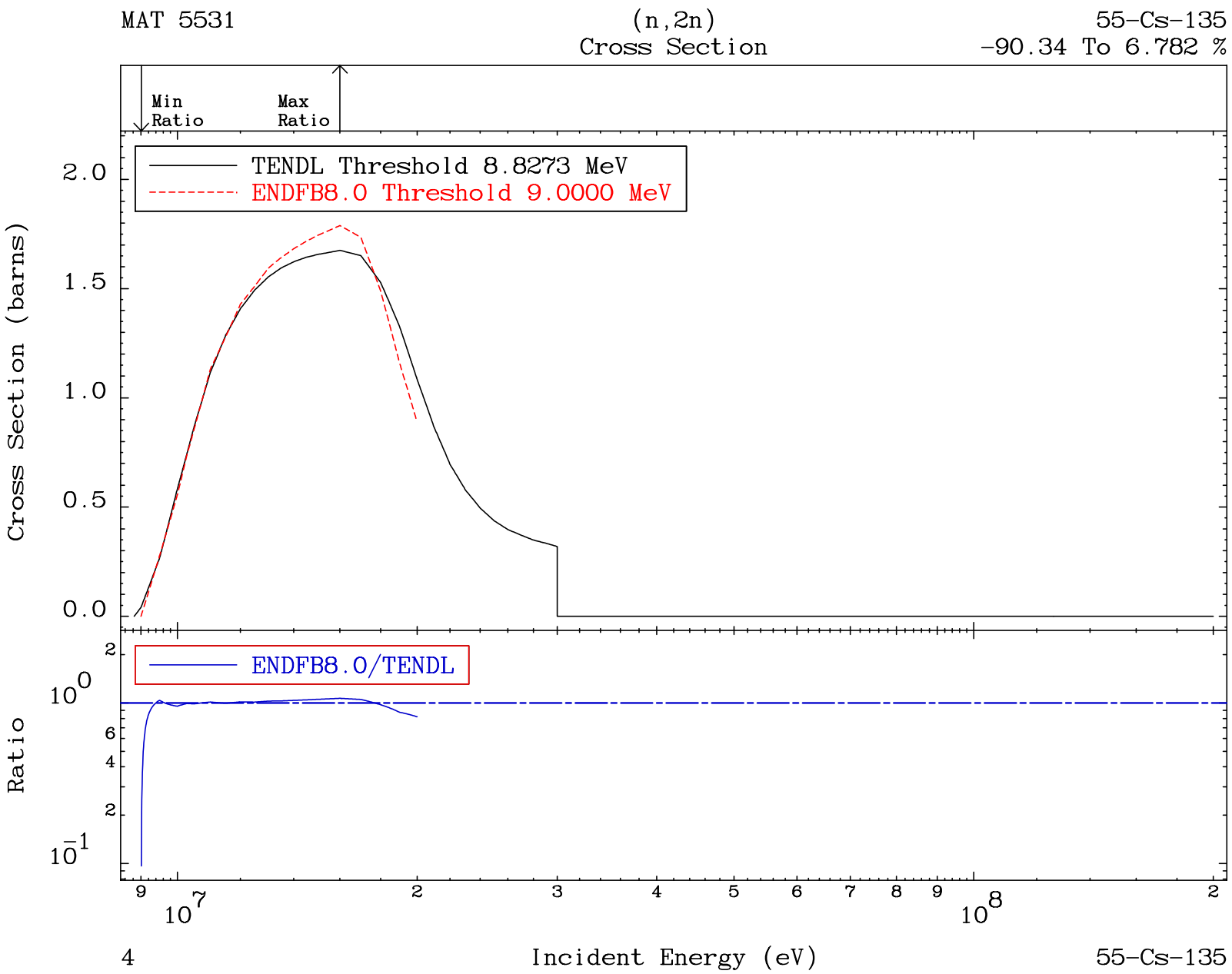
Program Complot
(Version 2018-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

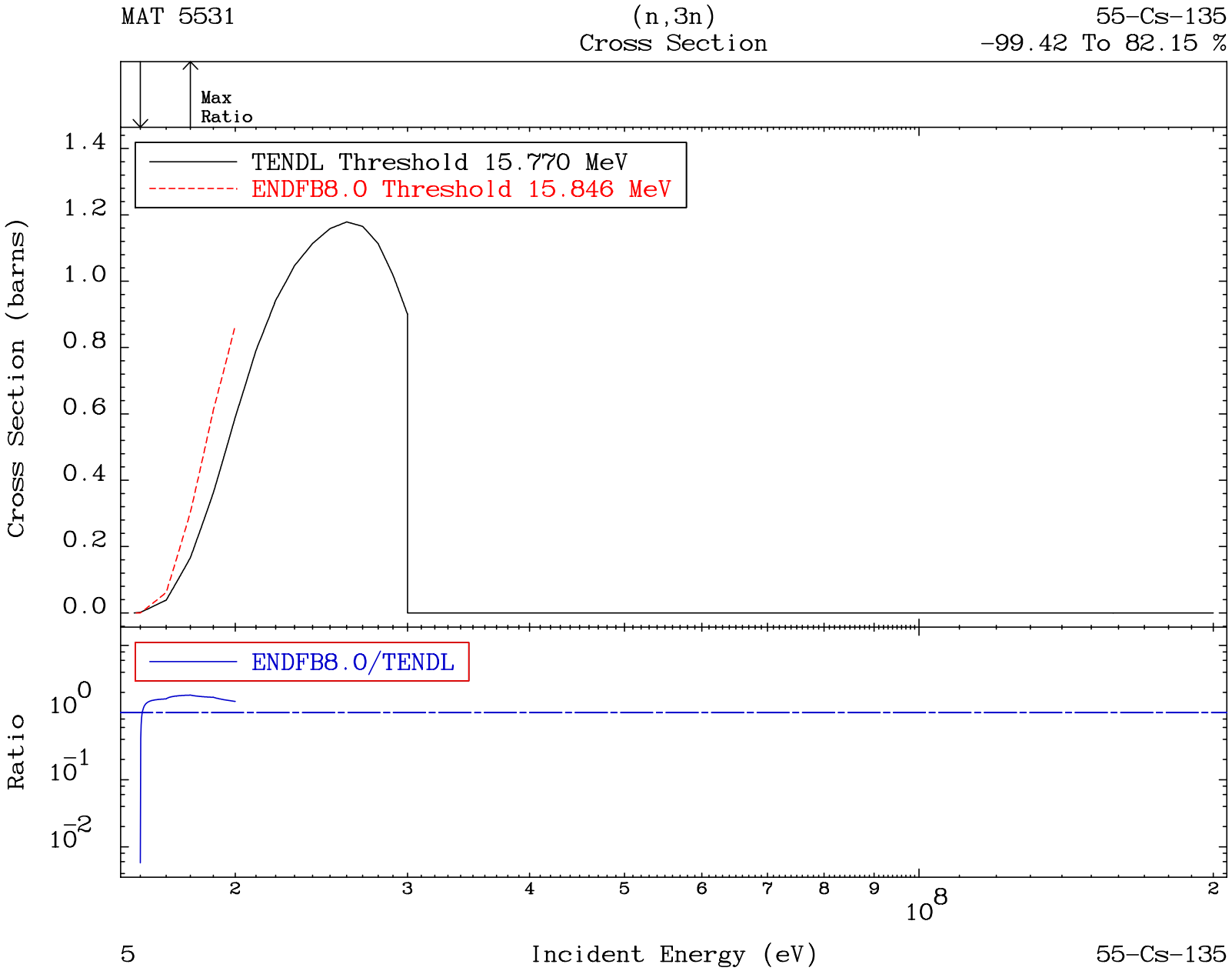
Press Mouse Button to Start

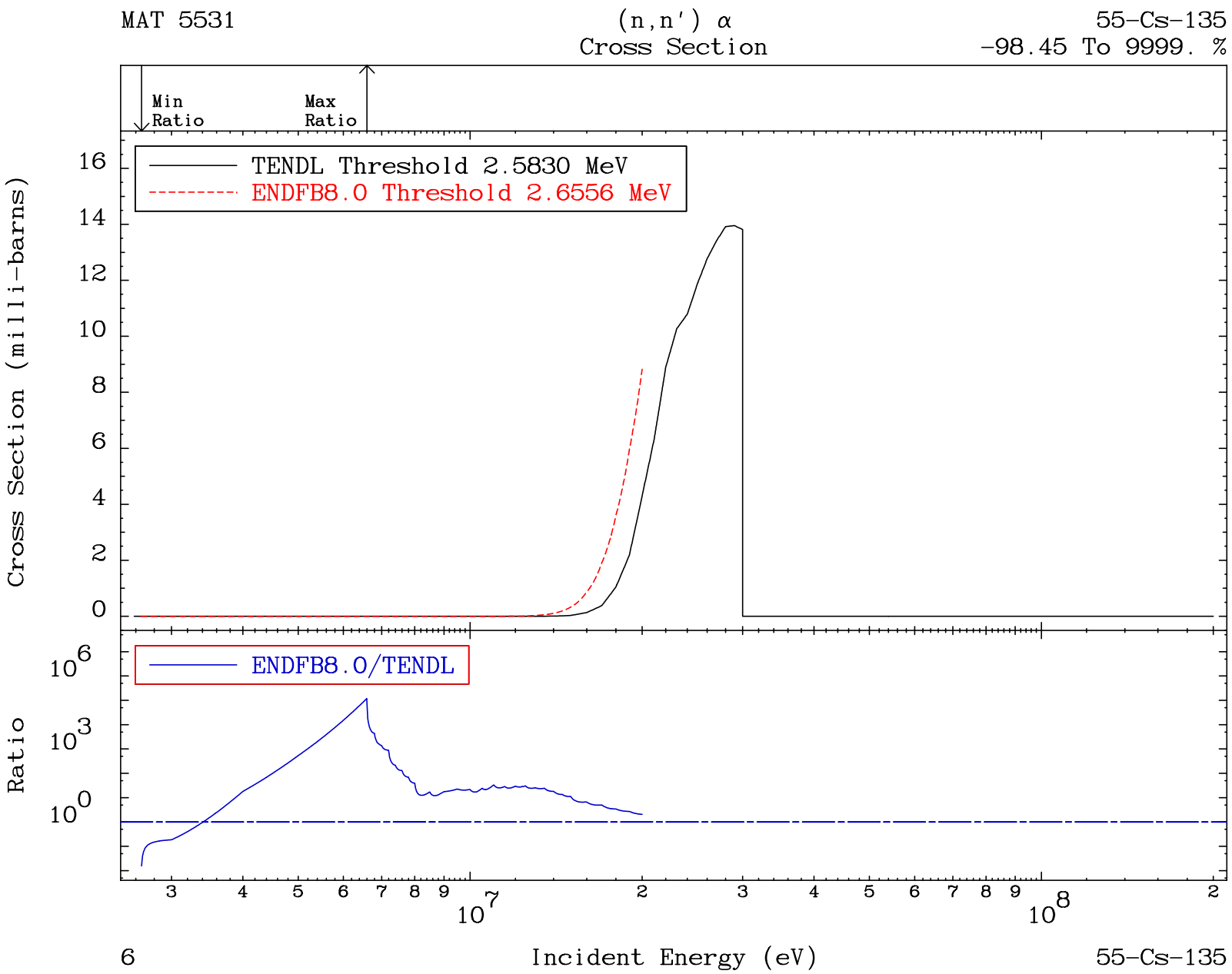

MAT 5531
Total
Cross Section
55-Cs-135
-98.40 To 2064. %
Min
Ratio
Max
Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
1
55-Cs-135

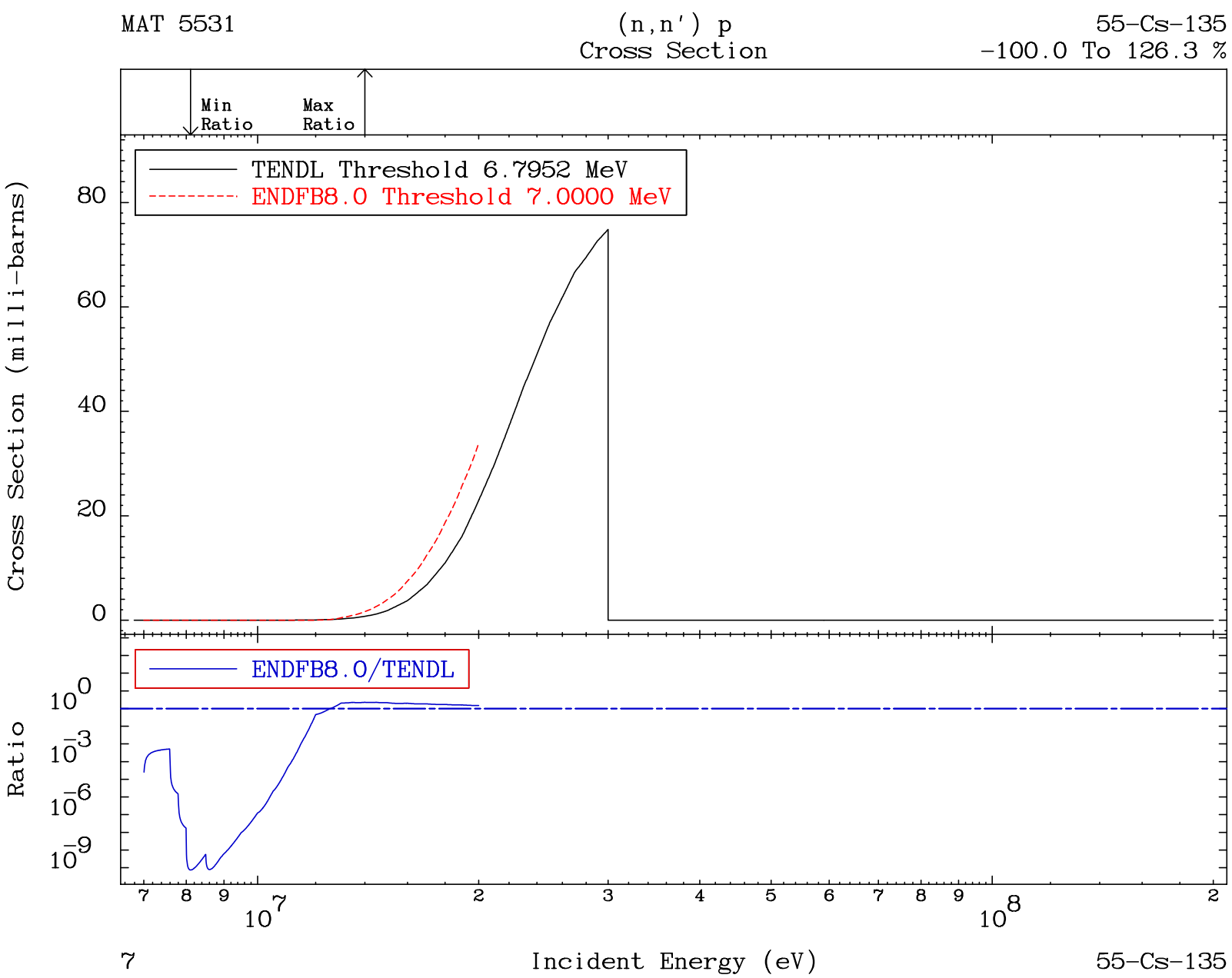

MAT 5531
Elastic
Cross Section
55-Cs-135
-98.50 To 4133. %
Min
Ratio
Max
Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
2
55-Cs-135

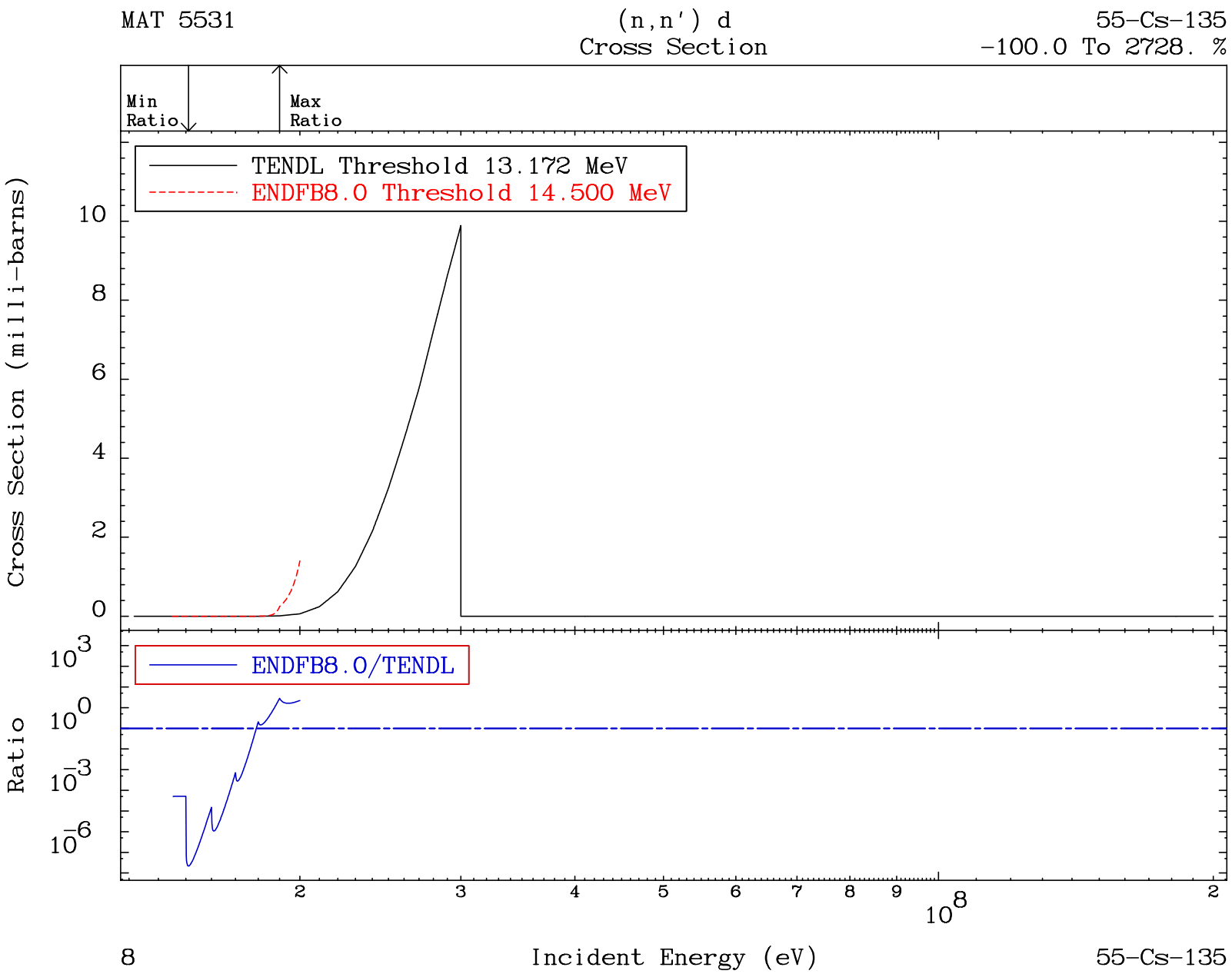

MAT 5531
Inelastic
Cross Section
55-Cs-135
-31.01 To 9.320 %
Max
Ratio
Min
Ratio
TENDL Threshold 251.63 keV
ENDFB8.0 Threshold 251.67 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
1.2
1.0
0.8
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
3
Incident Energy (eV)
55-Cs-135

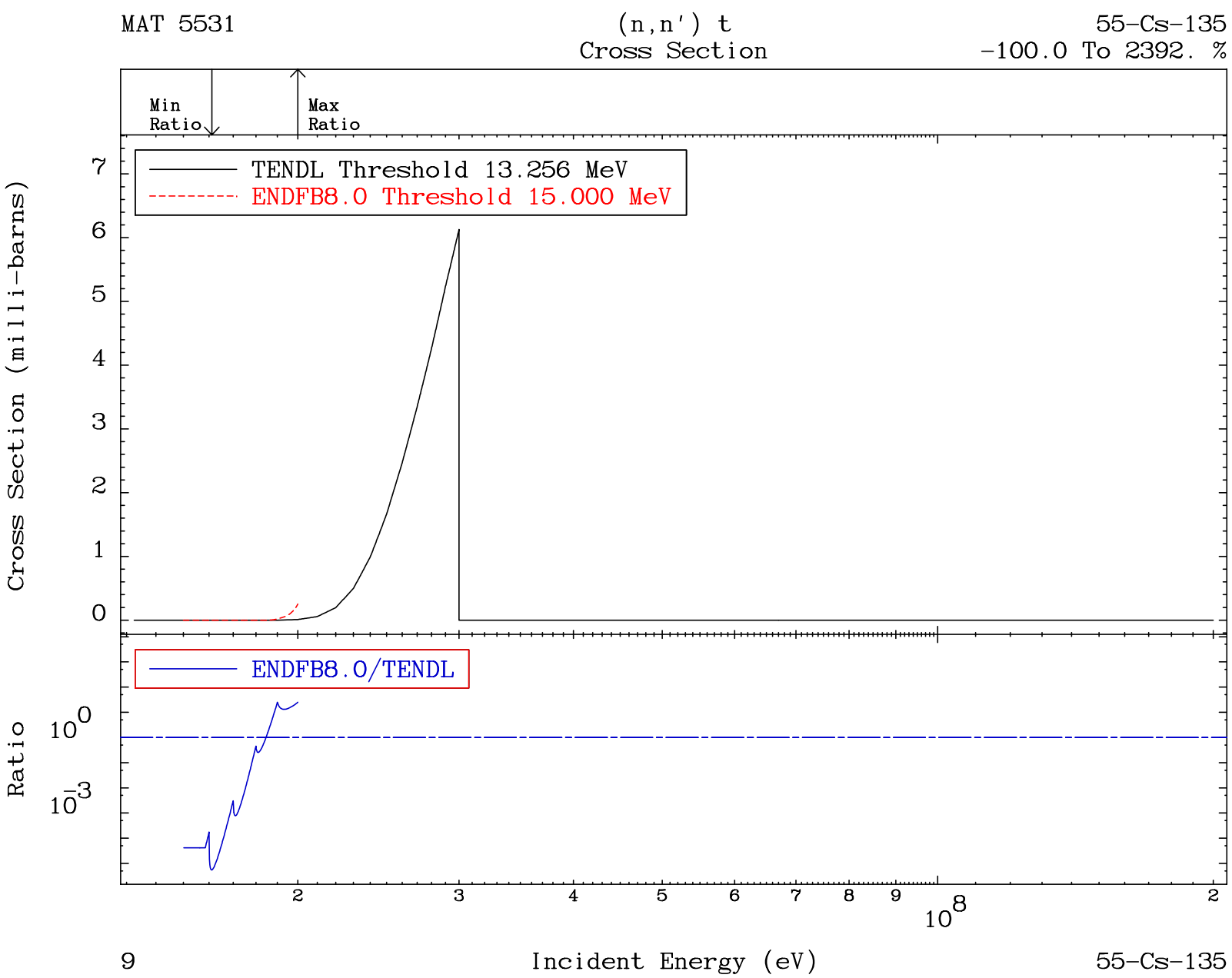

MAT 5531
(n,2n)
Cross Section
55-Cs-135
-90.34 To 6.782 %
Min Ratio
Max Ratio
TENDL Threshold 8.8273 MeV
ENDFB8.0 Threshold 9.0000 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
10^{0}
10^{-1}
10^{7}
10^{8}
Incident Energy (eV)
4
55-Cs-135

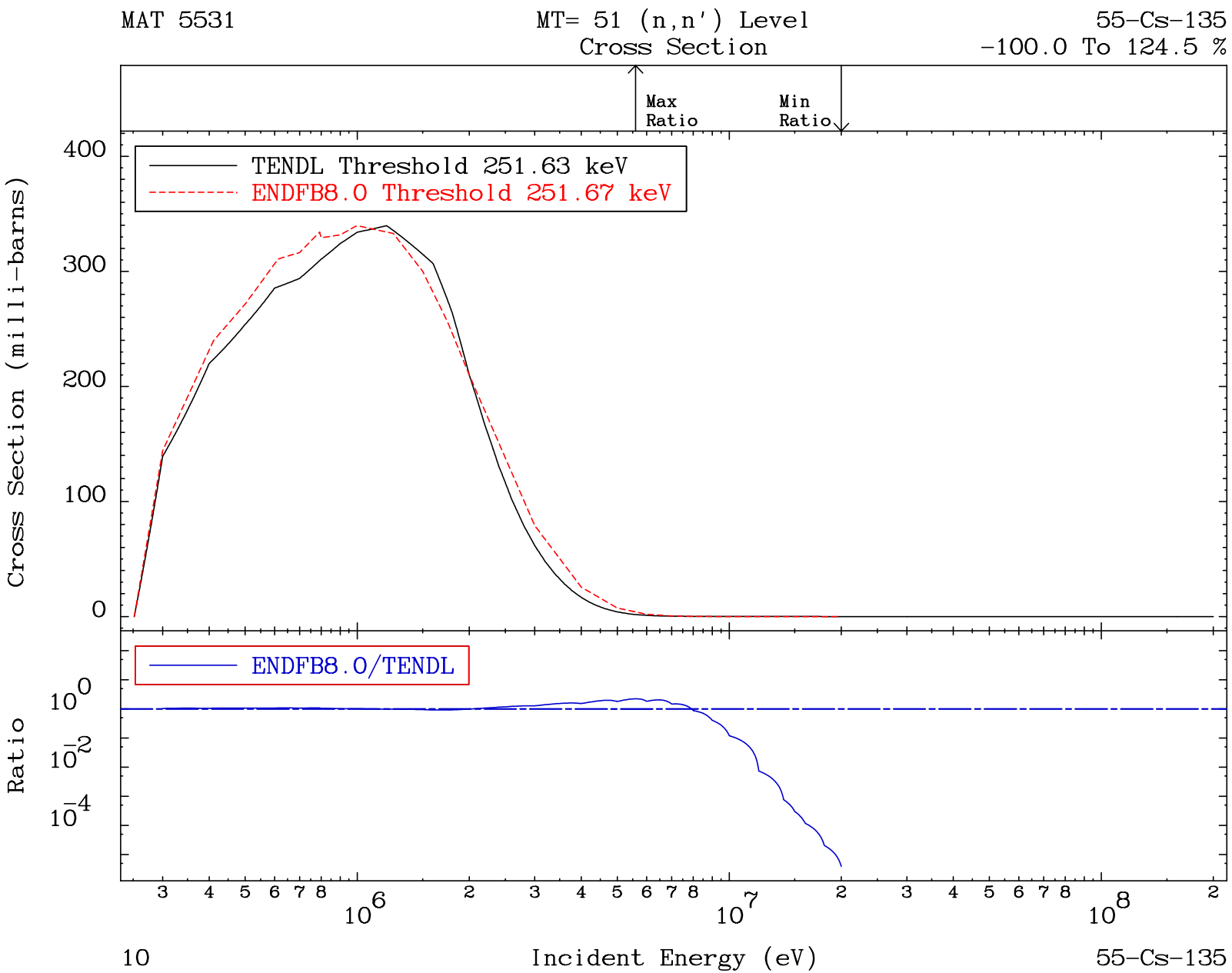

MAT 5531
(n,3n)
Cross Section
55-Cs-135
-99.42 To 82.15 %
Max
Ratio
TENDL Threshold 15.770 MeV
ENDFB8.0 Threshold 15.846 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
ENDFB8.0/TENDL
Ratio
10^0
10^-1
10^-2
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
55-Cs-135

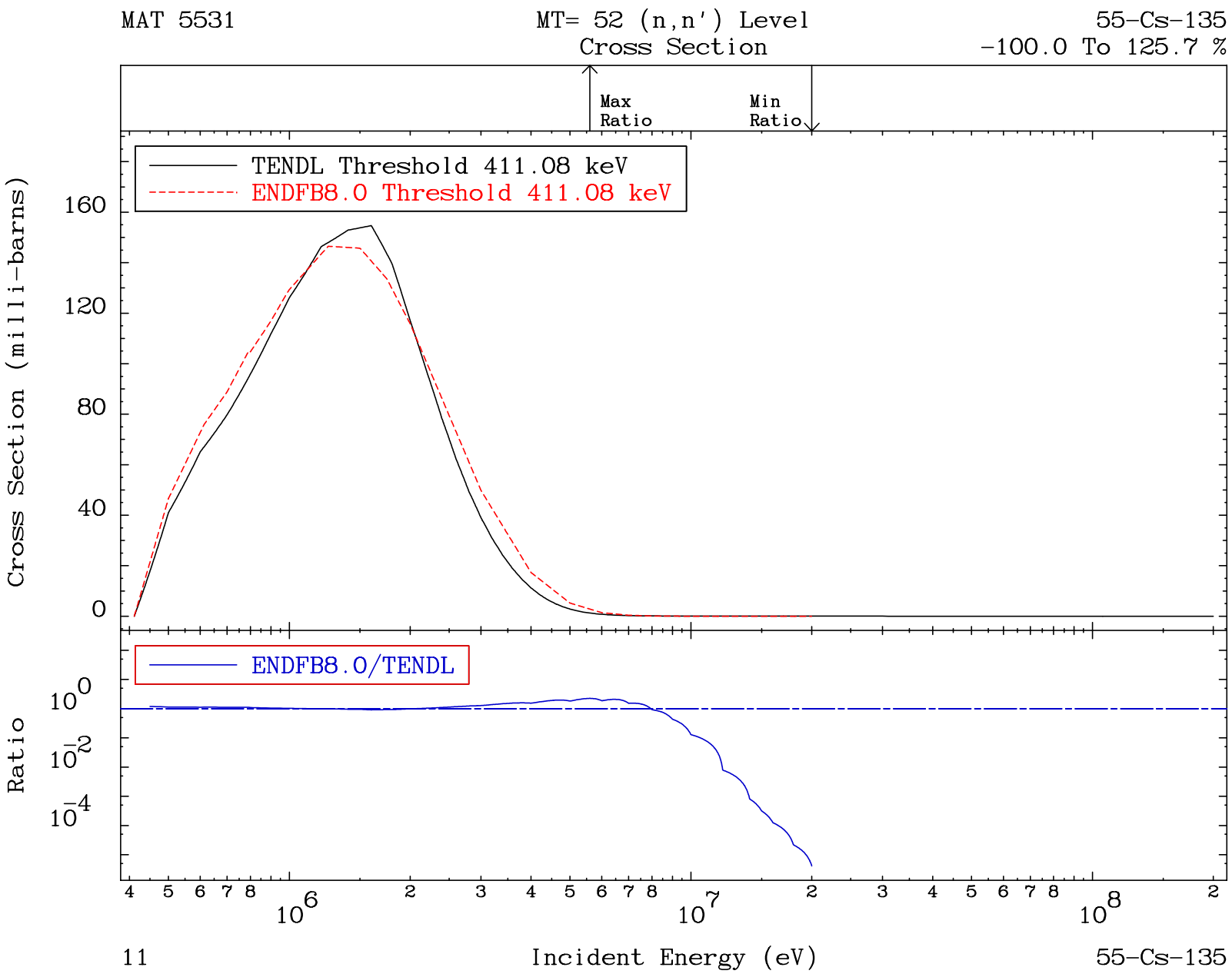

MAT 5531
(n,n') α
Cross Section
55-Cs-135
-98.45 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.5830 MeV
ENDFB8.0 Threshold 2.6556 MeV
Cross Section (milli-barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
6
55-Cs-135

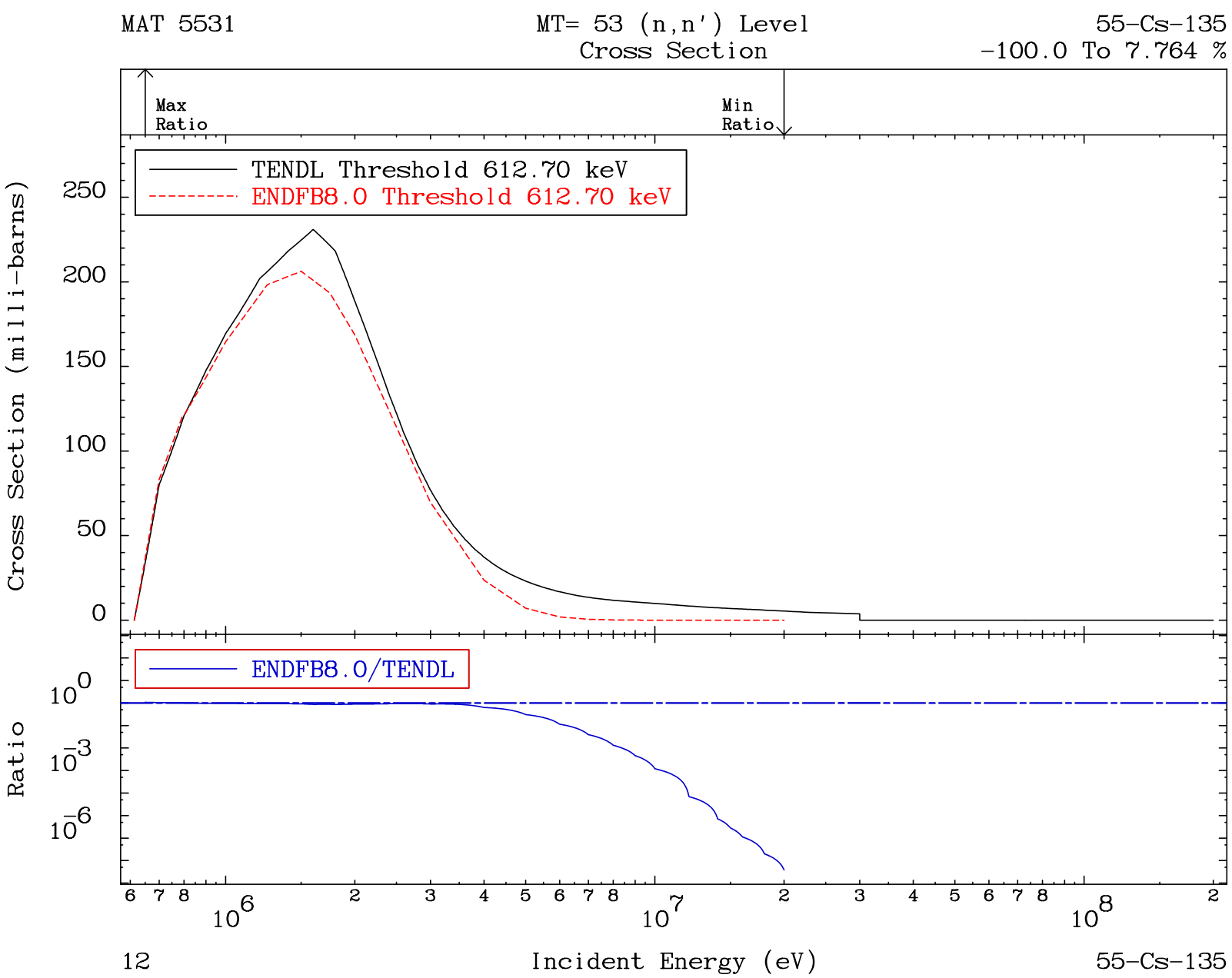

MAT 5531
(n,n') p
Cross Section
55-Cs-135
-100.0 To 126.3 %
Min Ratio
Max Ratio
TENDL Threshold 6.7952 MeV
ENDFB8.0 Threshold 7.0000 MeV
Cross Section (milli-barns)
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
55-Cs-135

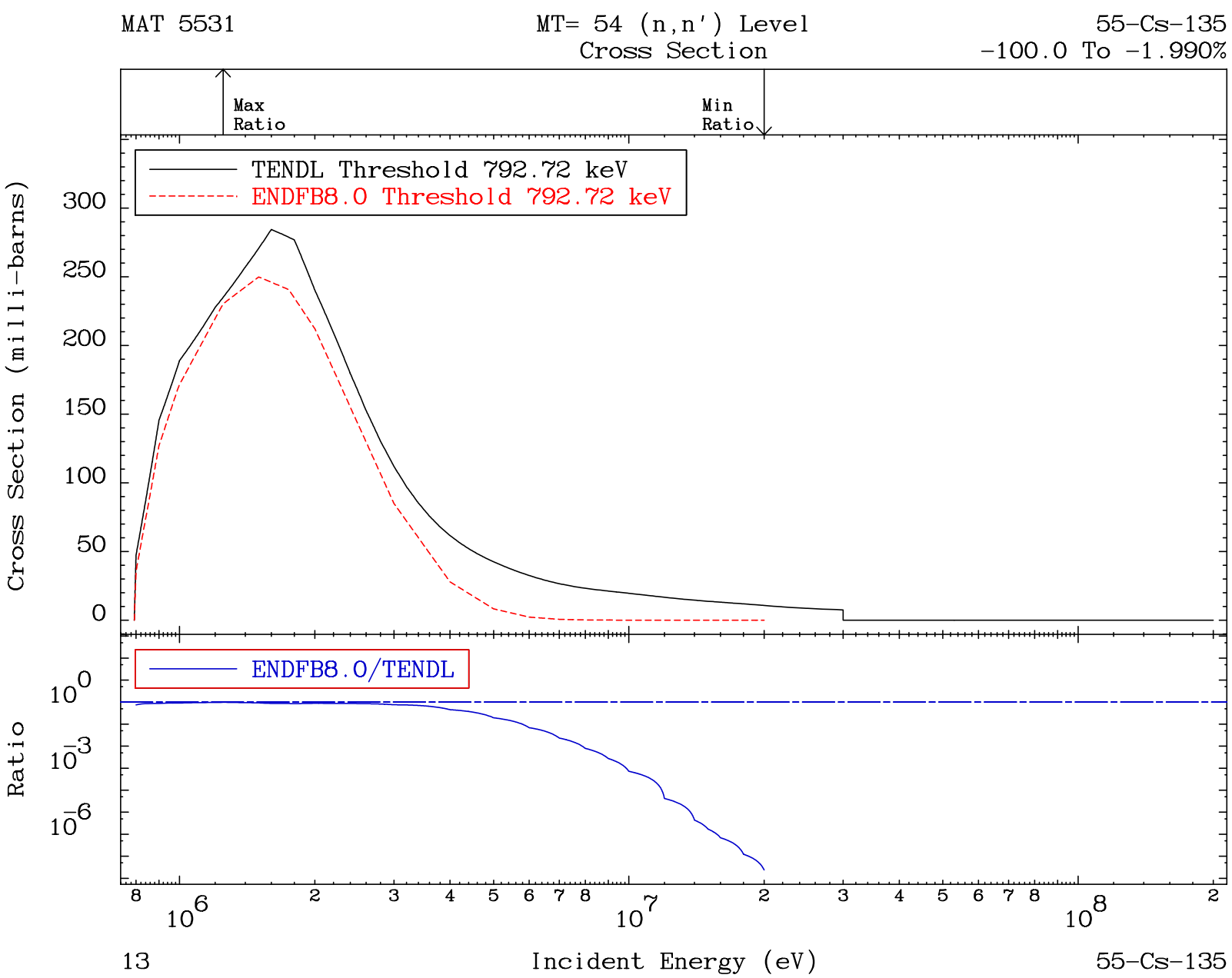

MAT 5531
(n,n') d
Cross Section
55-Cs-135
-100.0 To 2728. %
Min Ratio
Max Ratio
TENDL Threshold 13.172 MeV
ENDFB8.0 Threshold 14.500 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
ENDFB8.0/TENDL
Ratio
10^3
10^0
10^-3
10^-6
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
55-Cs-135

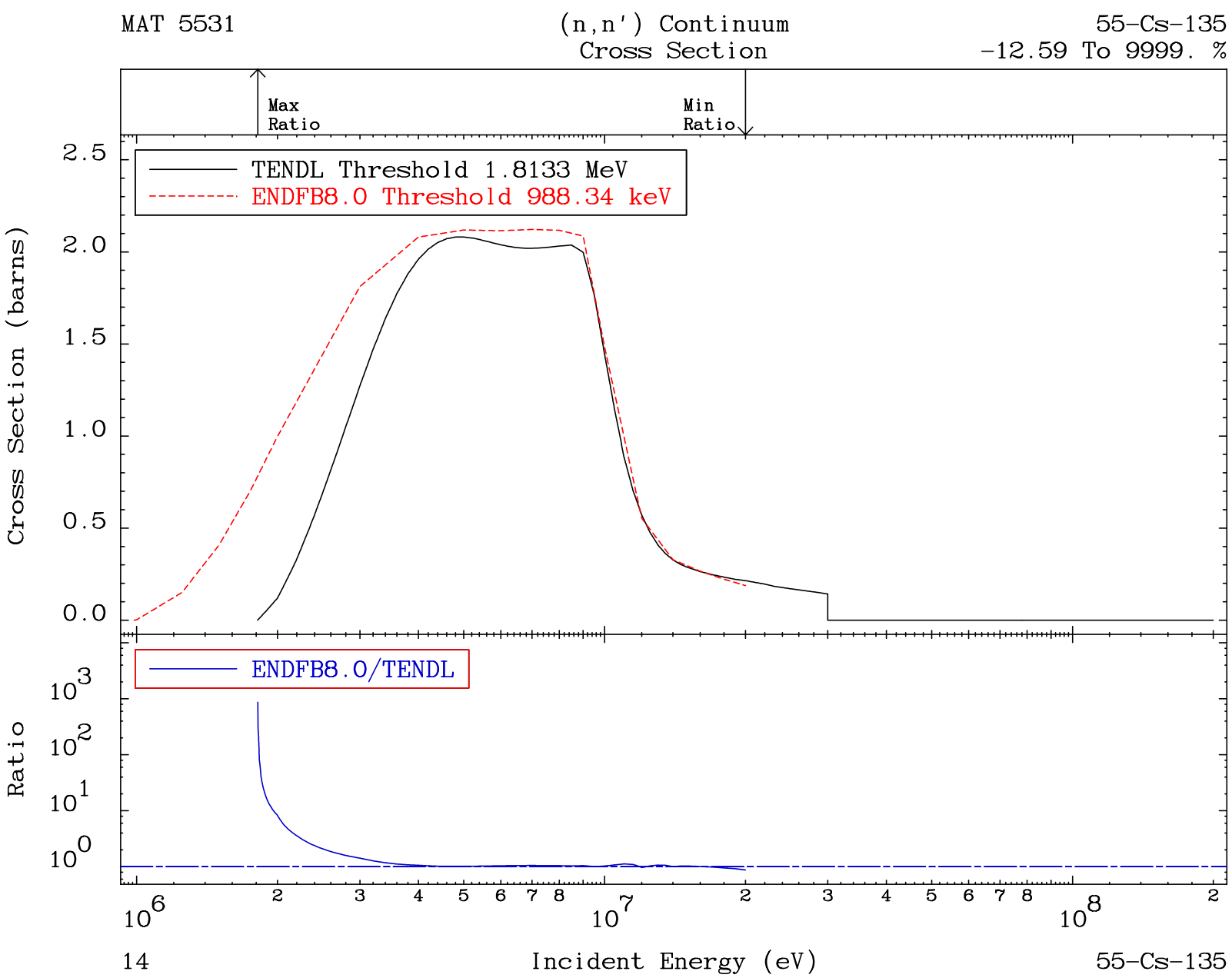

MAT 5531
(n,n') t
Cross Section
55-Cs-135
-100.0 To 2392. %
Min Ratio
Max Ratio
TENDL Threshold 13.256 MeV
ENDFB8.0 Threshold 15.000 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
7
ENDFB8.0/TENDL
Ratio
10^0
10^-3
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
55-Cs-135

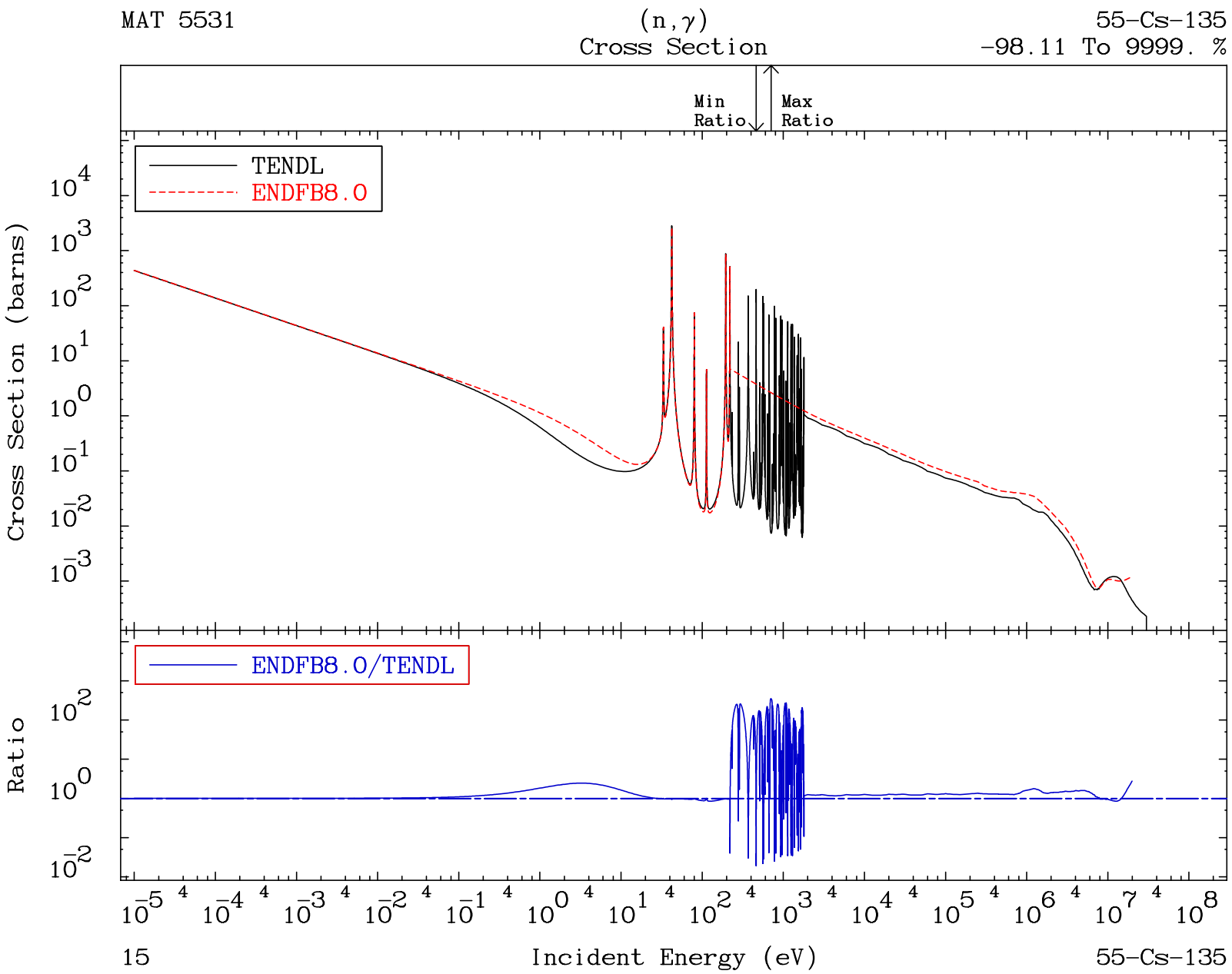

MAT 5531
MT= 51 (n,n') Level
Cross Section
55-Cs-135
-100.0 To 124.5 %
Max Ratio
Min Ratio
TENDL Threshold 251.63 keV
ENDFB8.0 Threshold 251.67 keV
Cross Section (milli-barns)
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^-4
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
10
Incident Energy (eV)
55-Cs-135

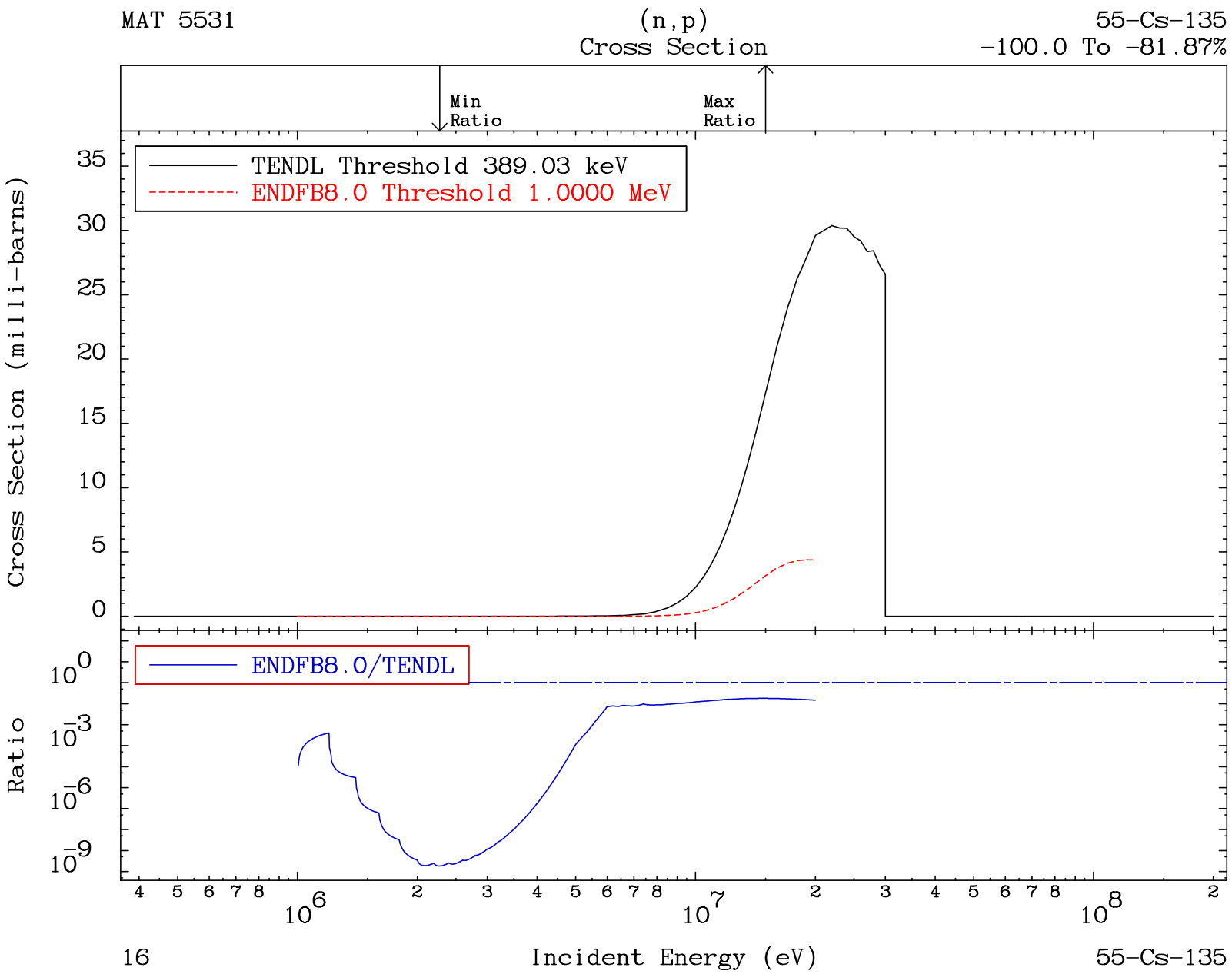

MAT 5531
MT= 52 (n,n') Level
Cross Section
55-Cs-135
-100.0 To 125.7 %
Max Ratio
Min Ratio
TENDL Threshold 411.08 keV
ENDFB8.0 Threshold 411.08 keV
Cross Section (milli-barns)
160
120
80
40
0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^-4
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
11
Incident Energy (eV)
55-Cs-135

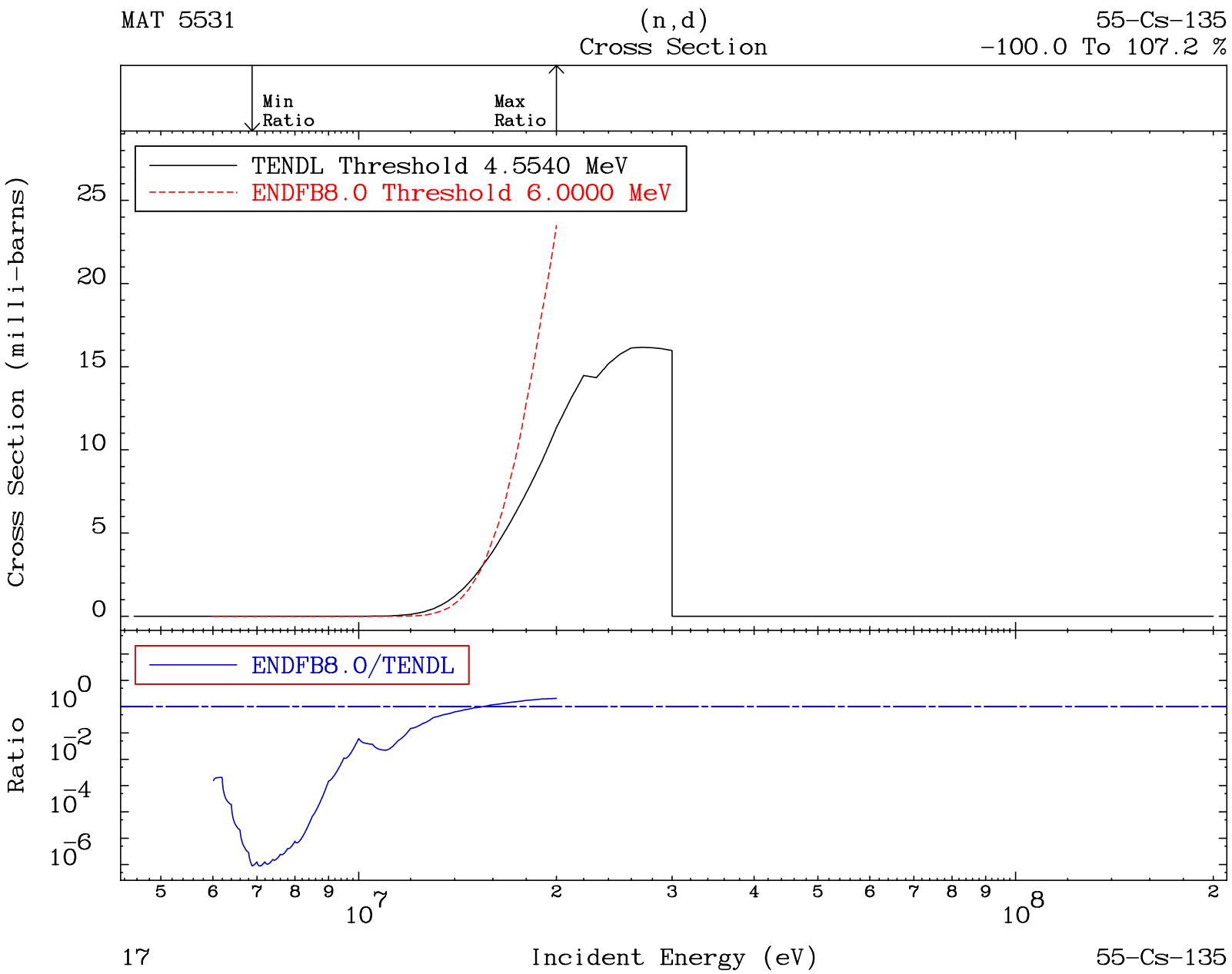

MAT 5531
MT= 53 (n,n') Level
Cross Section
55-Cs-135
-100.0 To 7.764 %
Max
Ratio
Min
Ratio
TENDL Threshold 612.70 keV
ENDFB8.0 Threshold 612.70 keV
Cross Section (milli-barns)
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^0
10^-3
10^-6
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
12
Incident Energy (eV)
55-Cs-135

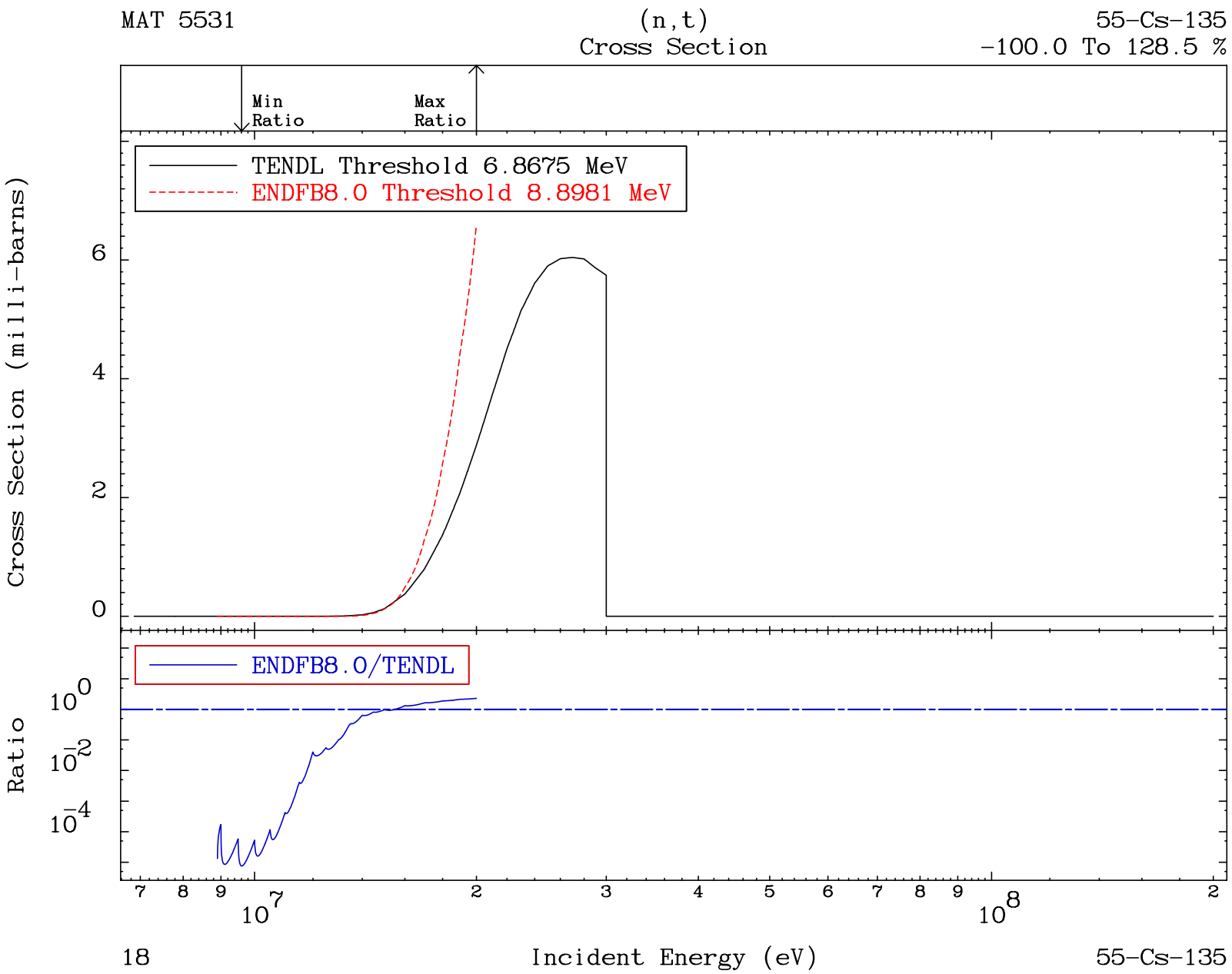

MAT 5531
MT= 54 (n,n') Level
Cross Section
55-Cs-135
-100.0 To -1.990%
Max
Ratio
Min
Ratio
TENDL Threshold 792.72 keV
ENDFB8.0 Threshold 792.72 keV
Cross Section (milli-barns)
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^0
10^-3
10^-6
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
13
Incident Energy (eV)
55-Cs-135

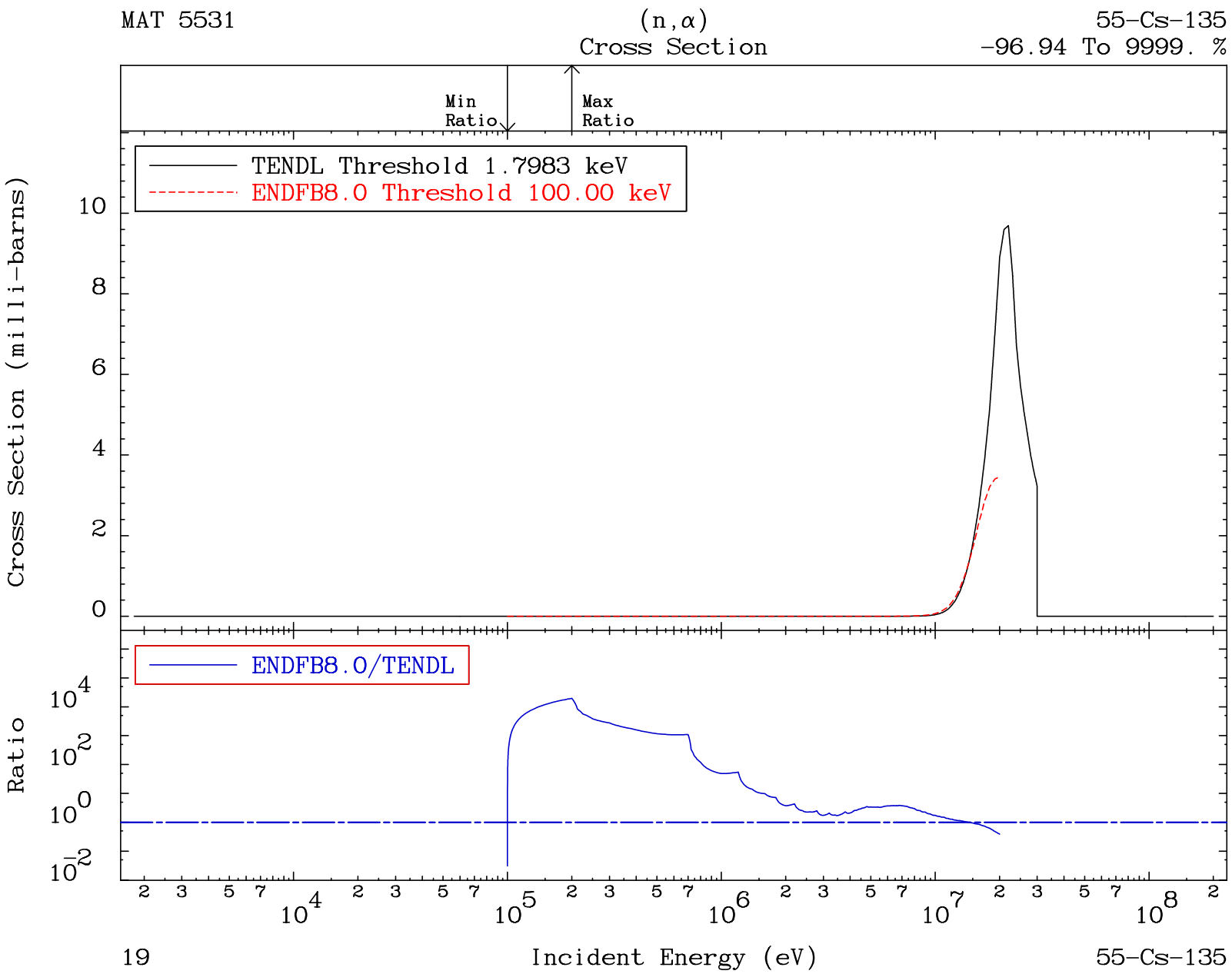

MAT 5531
(n,n') Continuum
Cross Section
55-Cs-135
-12.59 To 9999. %
Max
Ratio
Min
Ratio
TENDL Threshold 1.8133 MeV
ENDFB8.0 Threshold 988.34 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
10^3
10^2
10^1
10^0
10^6
10^7
10^8
2 3 4 5 6 7 8
14
Incident Energy (eV)
55-Cs-135

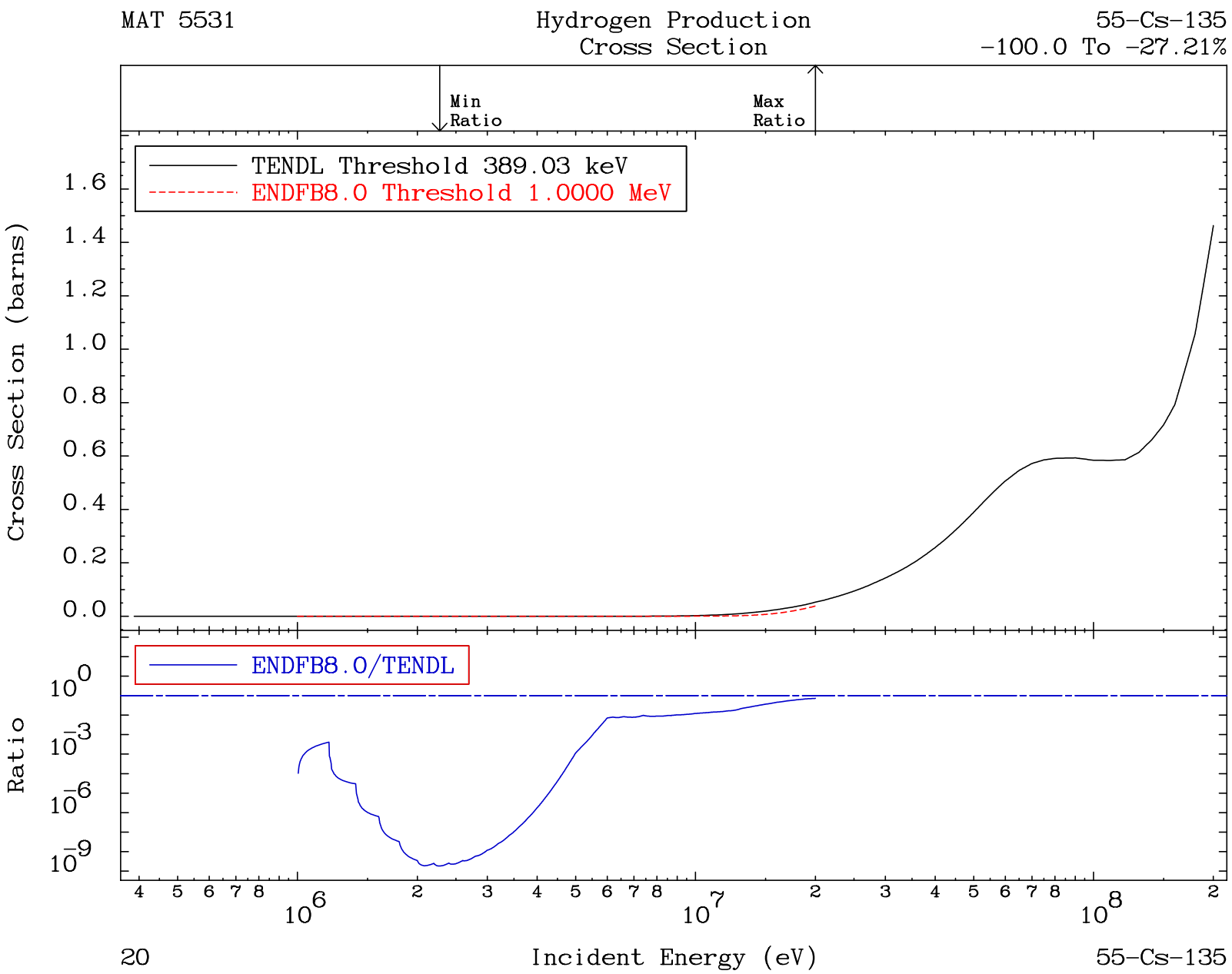

MAT 5531
(n,γ)
Cross Section
55-Cs-135
-98.11 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
15
55-Cs-135

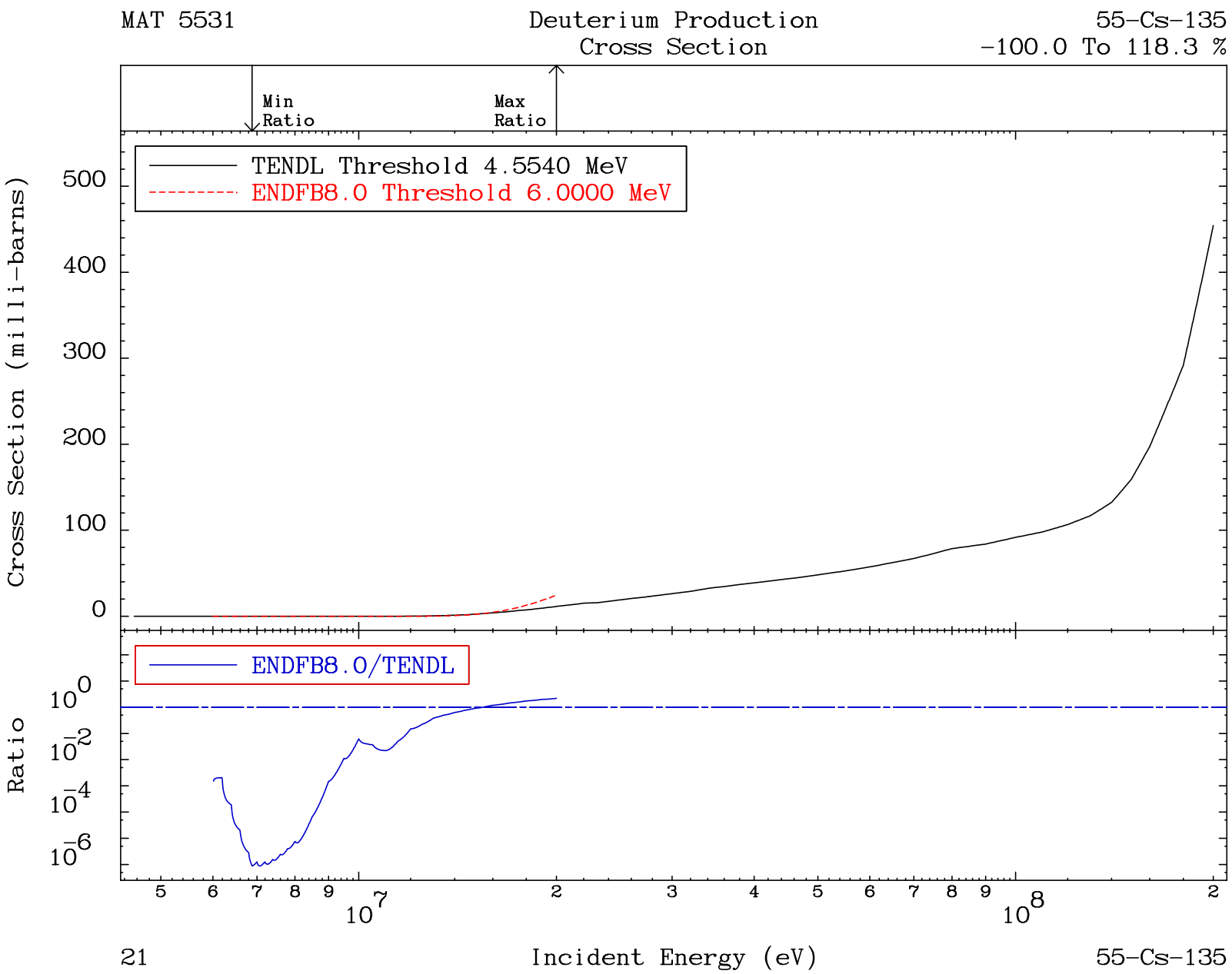

MAT 5531
(n,p)
Cross Section
55-Cs-135
-100.0 To -81.87%
Min Ratio
Max Ratio
TENDL Threshold 389.03 keV
ENDFB8.0 Threshold 1.0000 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
55-Cs-135

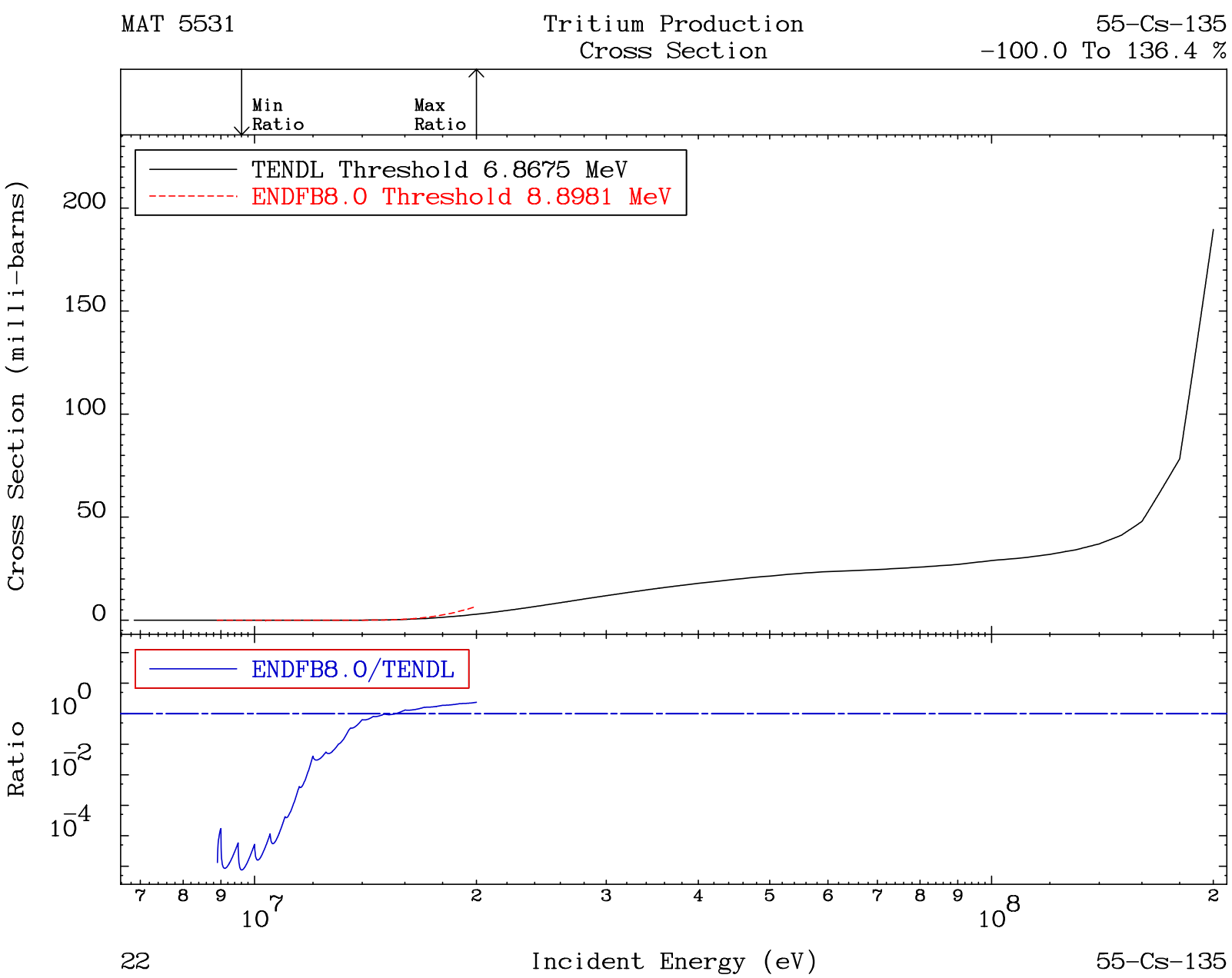

MAT 5531
(n,d)
Cross Section
55-Cs-135
-100.0 To 107.2 %
Min Ratio
Max Ratio
TENDL Threshold 4.5540 MeV
ENDFB8.0 Threshold 6.0000 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^-4
10^-6
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
17
Incident Energy (eV)
55-Cs-135

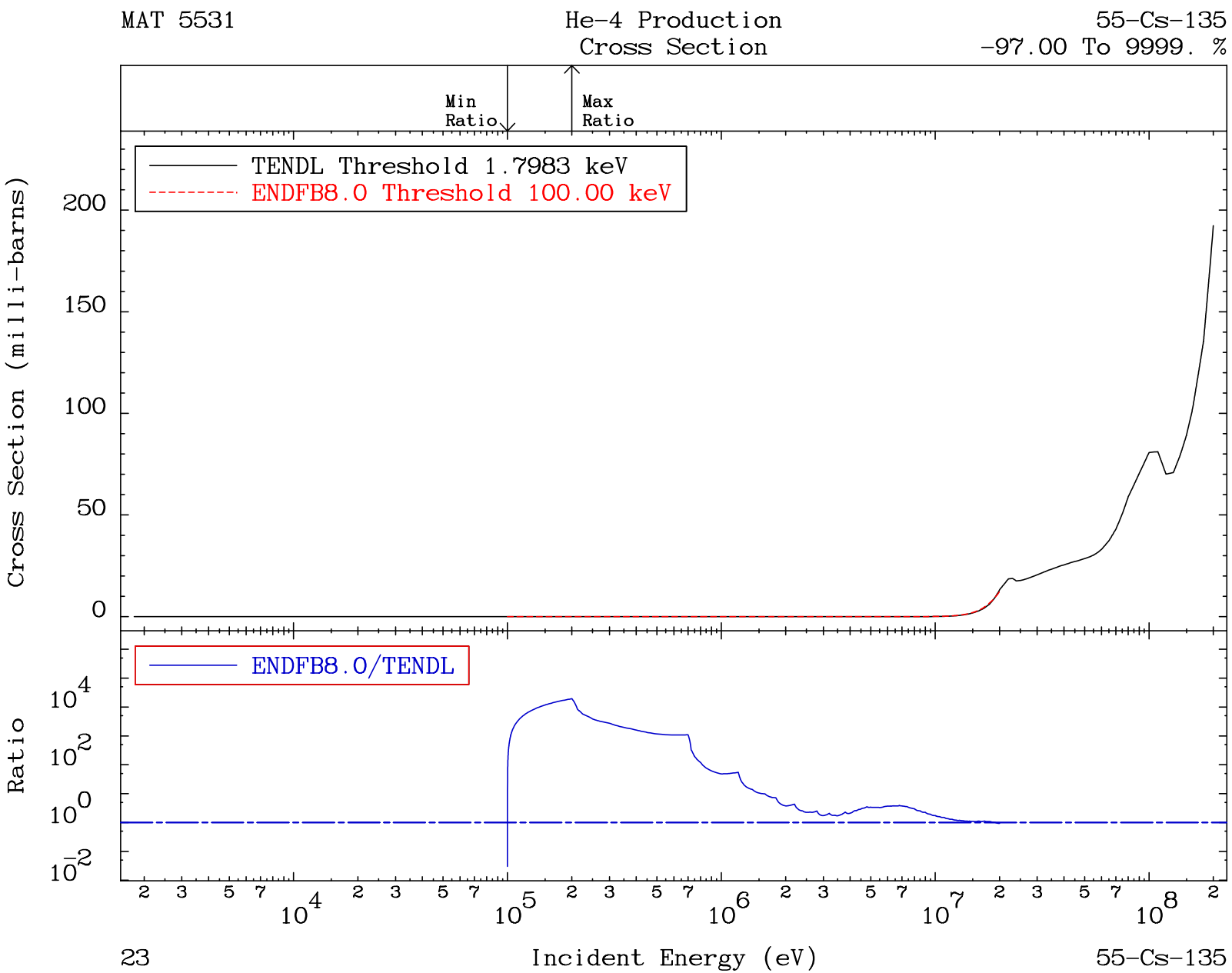

MAT 5531
(n,t)
Cross Section
55-Cs-135
-100.0 To 128.5 %
Min Ratio
Max Ratio
TENDL Threshold 6.8675 MeV
ENDFB8.0 Threshold 8.8981 MeV
Cross Section (milli-barns)
0
2
4
6
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^-4
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
18
Incident Energy (eV)
55-Cs-135

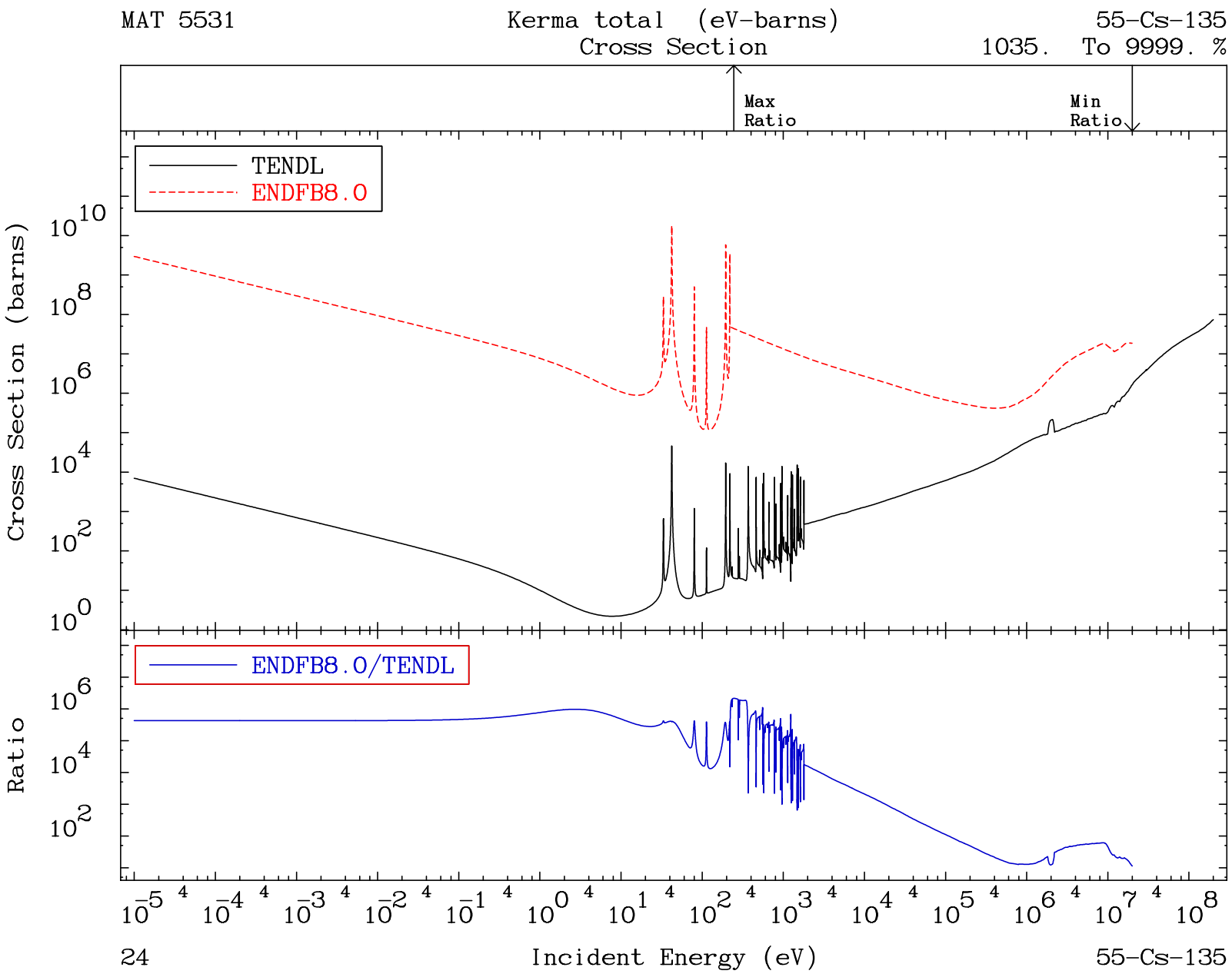

MAT 5531
(n,α)
Cross Section
55-Cs-135
-96.94 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.7983 keV
ENDFB8.0 Threshold 100.00 keV
Cross Section (milli-barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
19
55-Cs-135

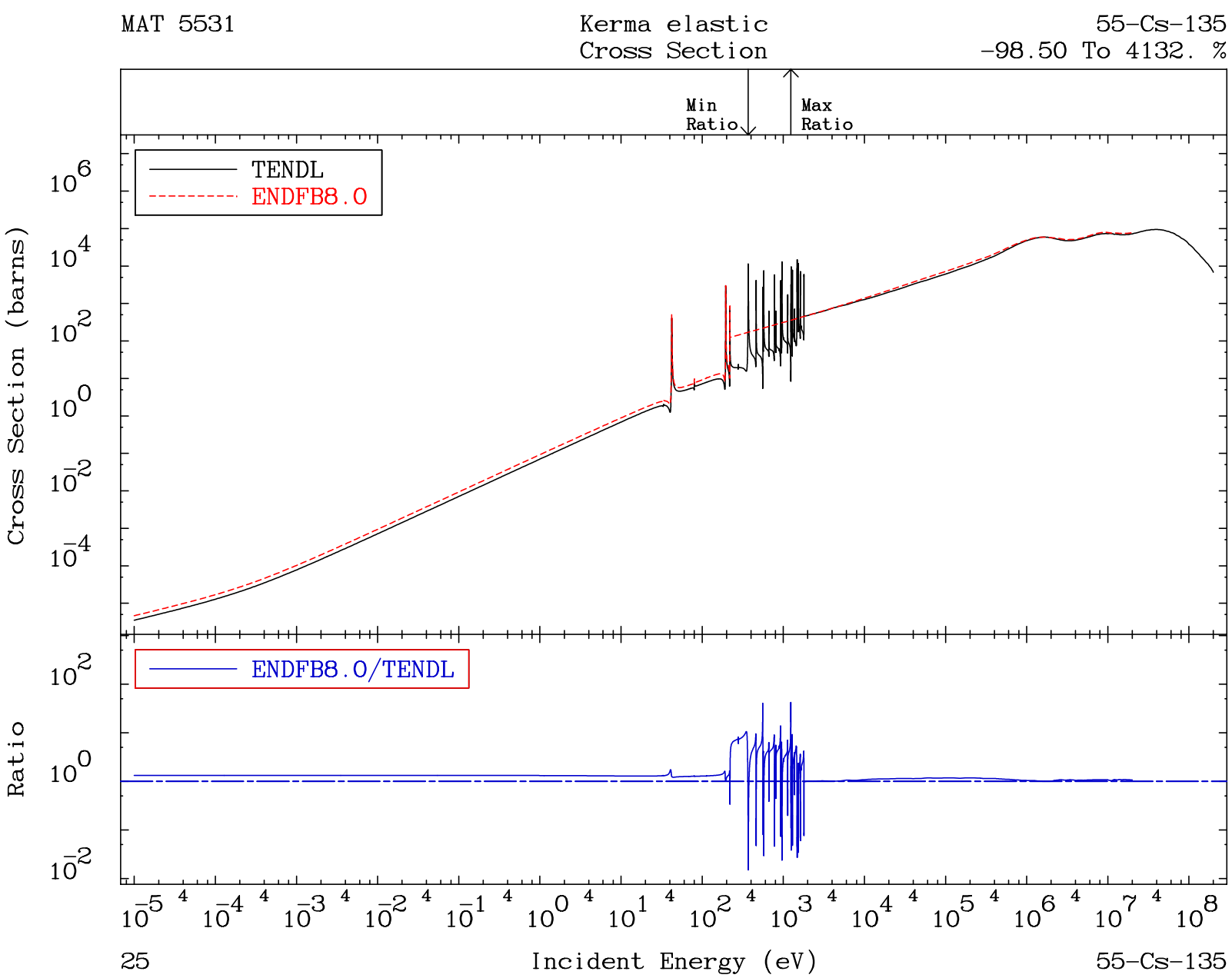

MAT 5531
Hydrogen Production
Cross Section
55-Cs-135
-100.0 To -27.21%
Min
Ratio
Max
Ratio
TENDL Threshold 389.03 keV
ENDFB8.0 Threshold 1.0000 MeV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
ENDFB8.0/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
55-Cs-135

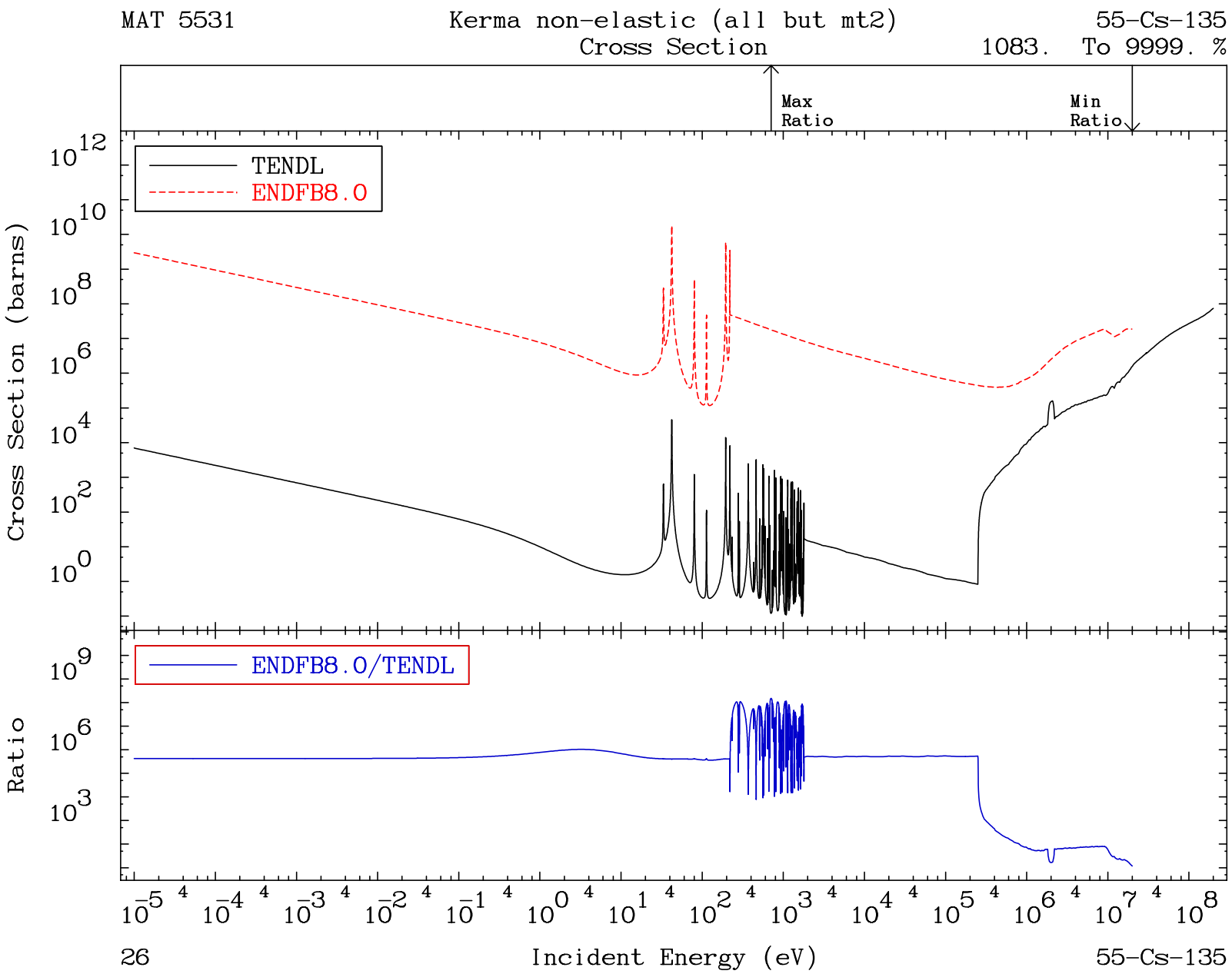

MAT 5531
Deuterium Production
Cross Section
55-Cs-135
-100.0 To 118.3 %
Min Ratio
Max Ratio
TENDL Threshold 4.5540 MeV
ENDFB8.0 Threshold 6.0000 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^-4
10^-6
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
21
Incident Energy (eV)
55-Cs-135

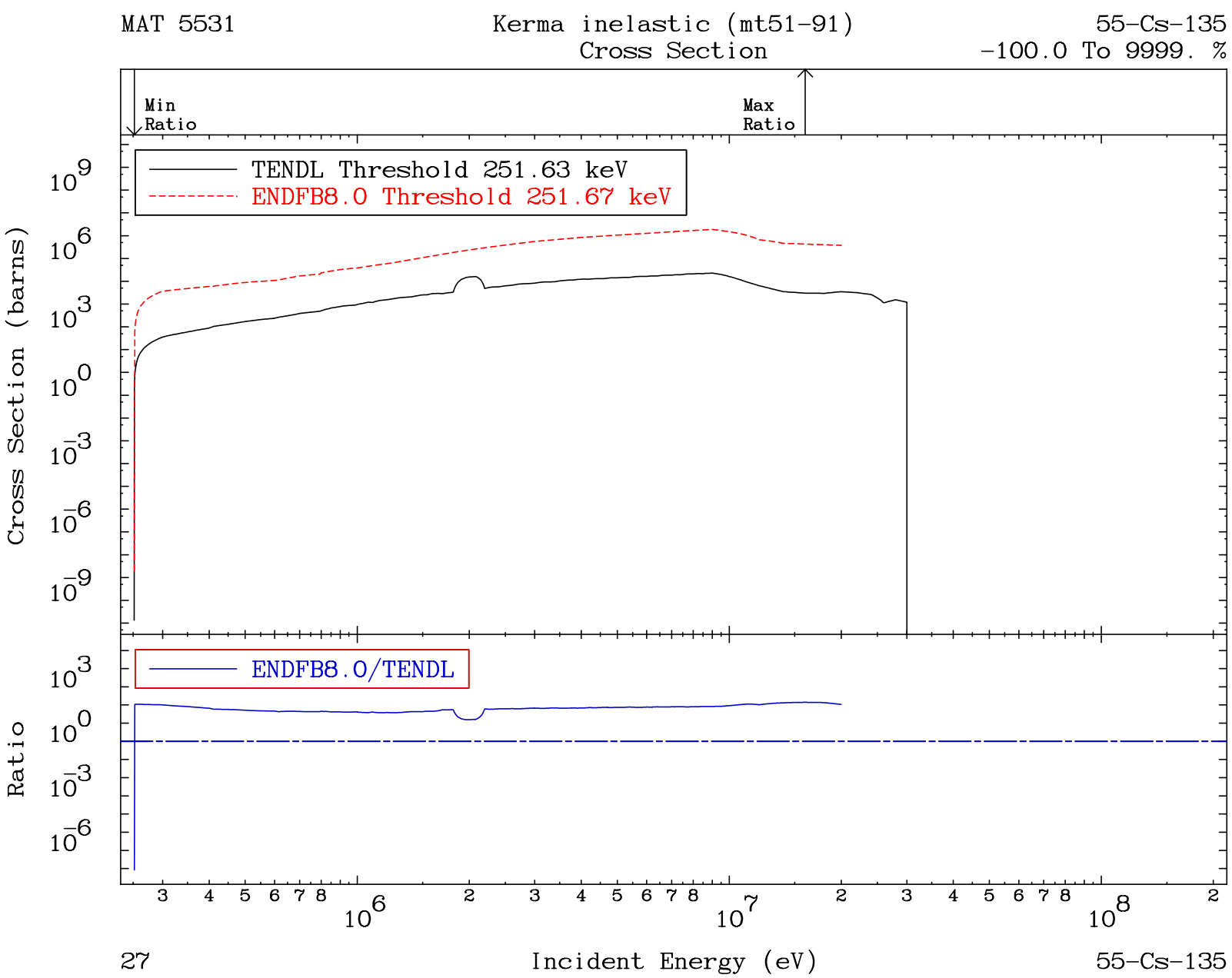

MAT 5531
Tritium Production
Cross Section
55-Cs-135
-100.0 To 136.4 %
Min Ratio
Max Ratio
TENDL Threshold 6.8675 MeV
ENDFB8.0 Threshold 8.8981 MeV
Cross Section (milli-barns)
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^-4
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
55-Cs-135

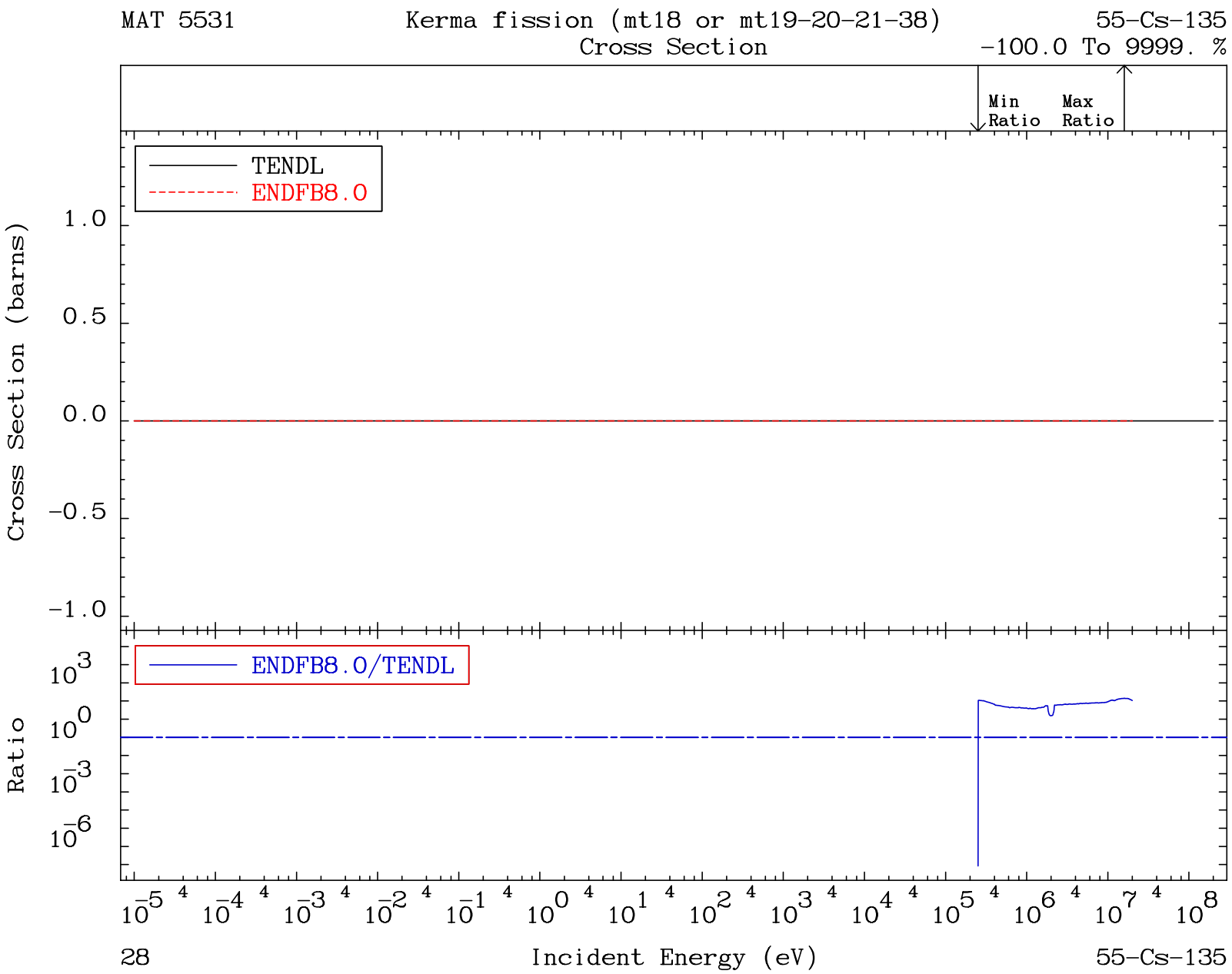

MAT 5531
He-4 Production
Cross Section
55-Cs-135
-97.00 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.7983 keV
ENDFB8.0 Threshold 100.00 keV
Cross Section (milli-barns)
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^4
10^2
10^0
10^-2
2 3 5 7 10^4 2 3 5 7 10^5 2 3 5 7 10^6 2 3 5 7 10^7 2 3 5 7 10^8 2
23
Incident Energy (eV)
55-Cs-135

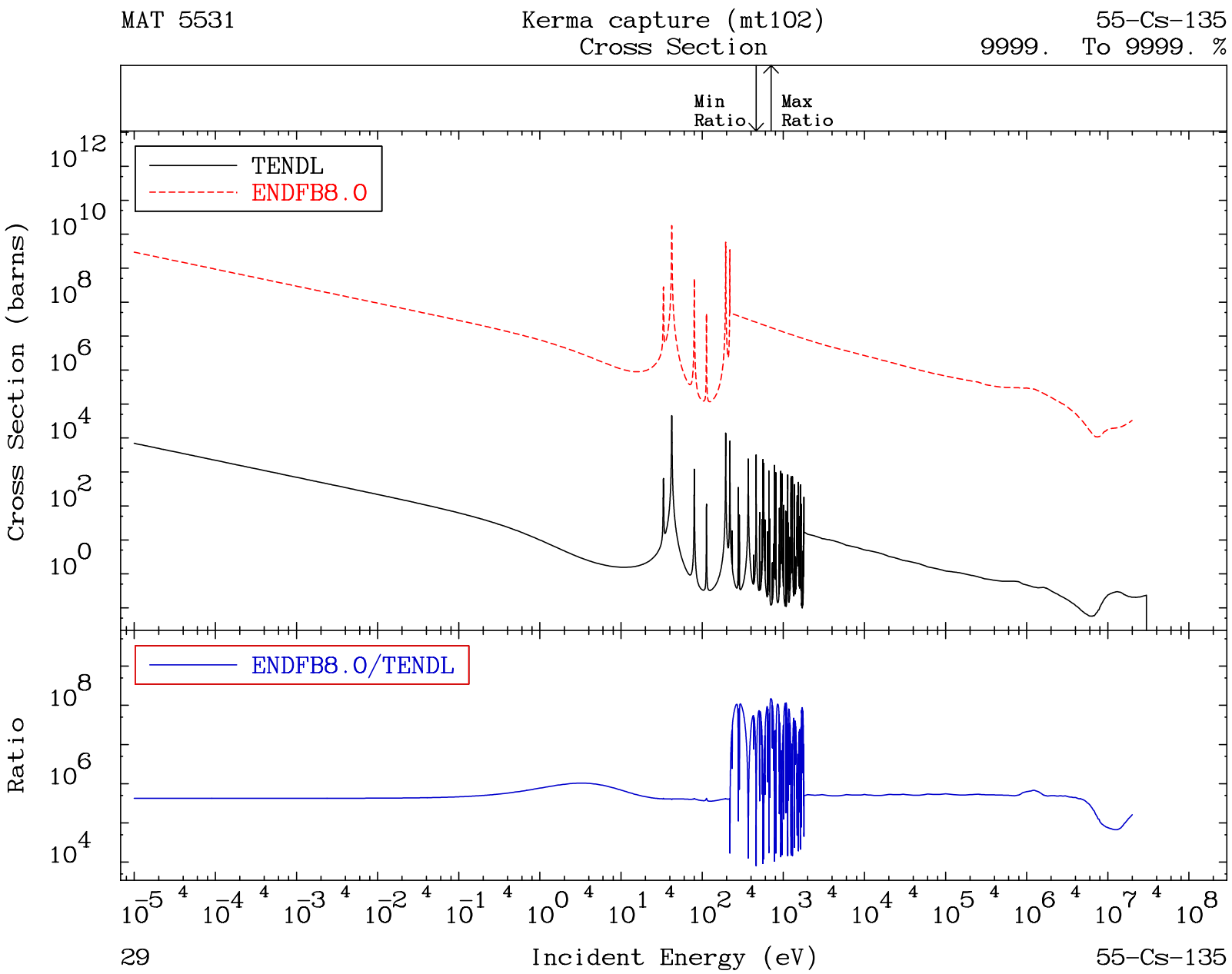

MAT 5531
Kerma total (eV-barns)
Cross Section
55-Cs-135
1035. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
24
55-Cs-135

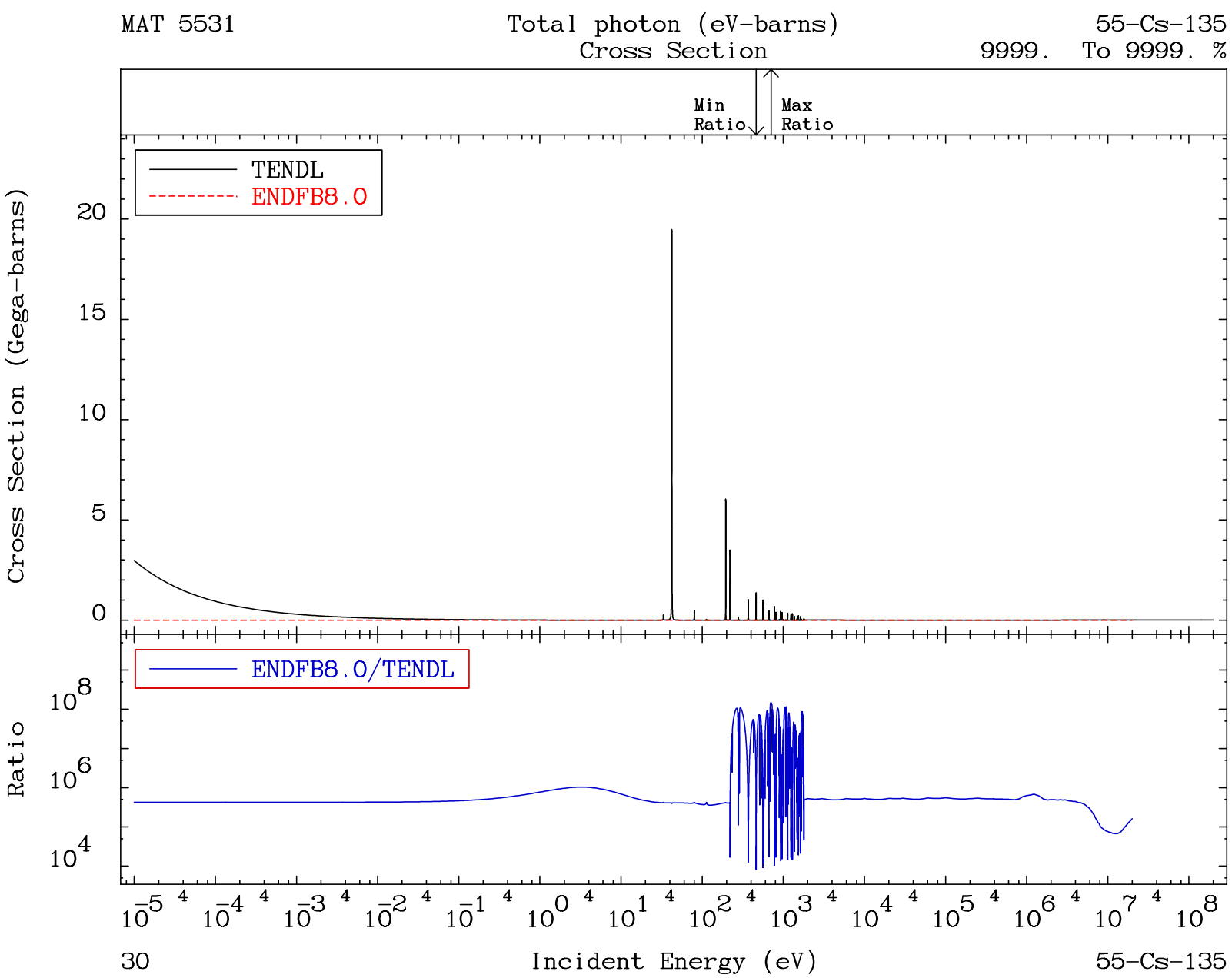

MAT 5531
Kerma elastic
Cross Section
55-Cs-135
-98.50 To 4132. %
Min
Ratio
Max
Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
25
55-Cs-135

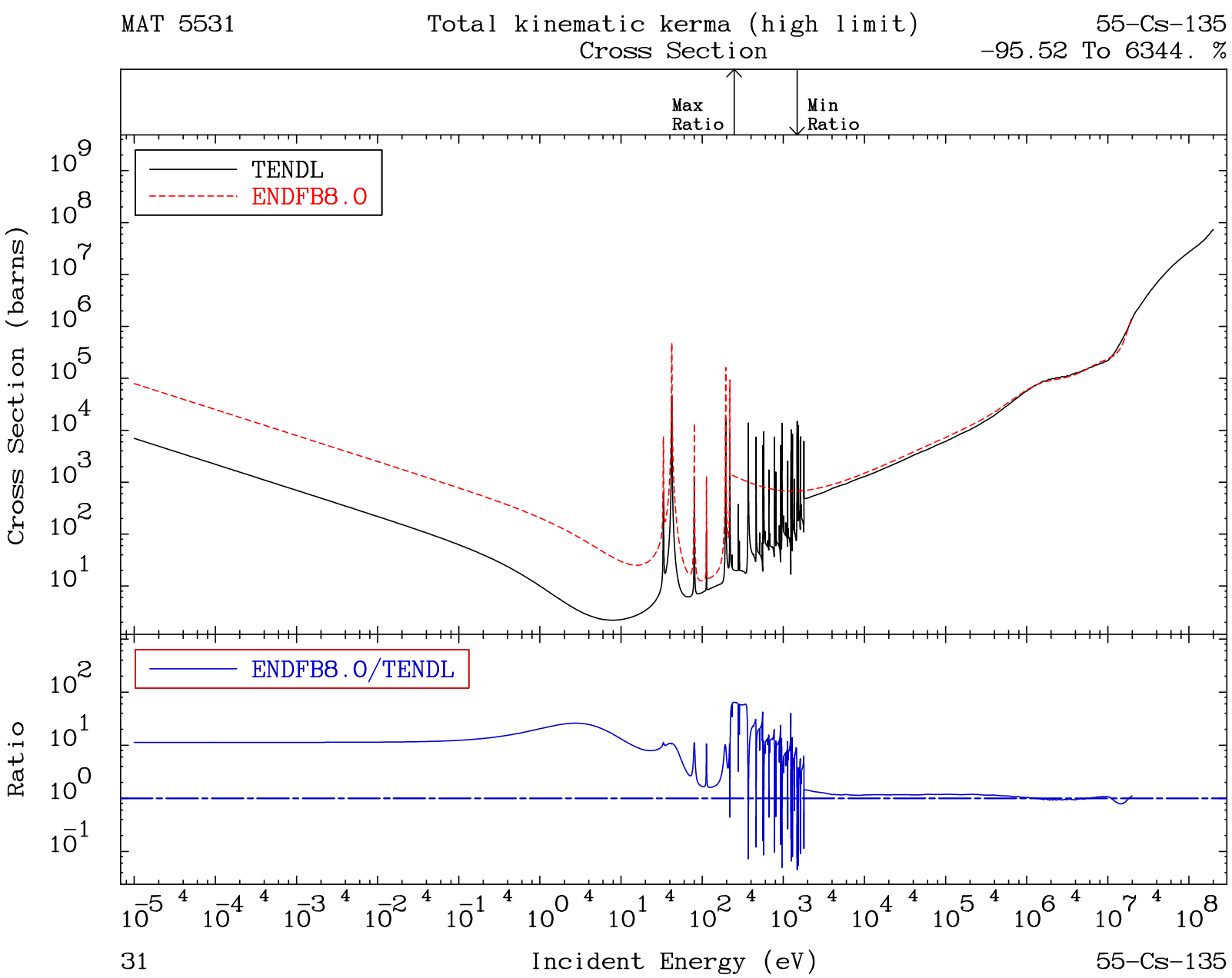

MAT 5531
Kerma non-elastic (all but mt2)
Cross Section
55-Cs-135
1083. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
26
55-Cs-135

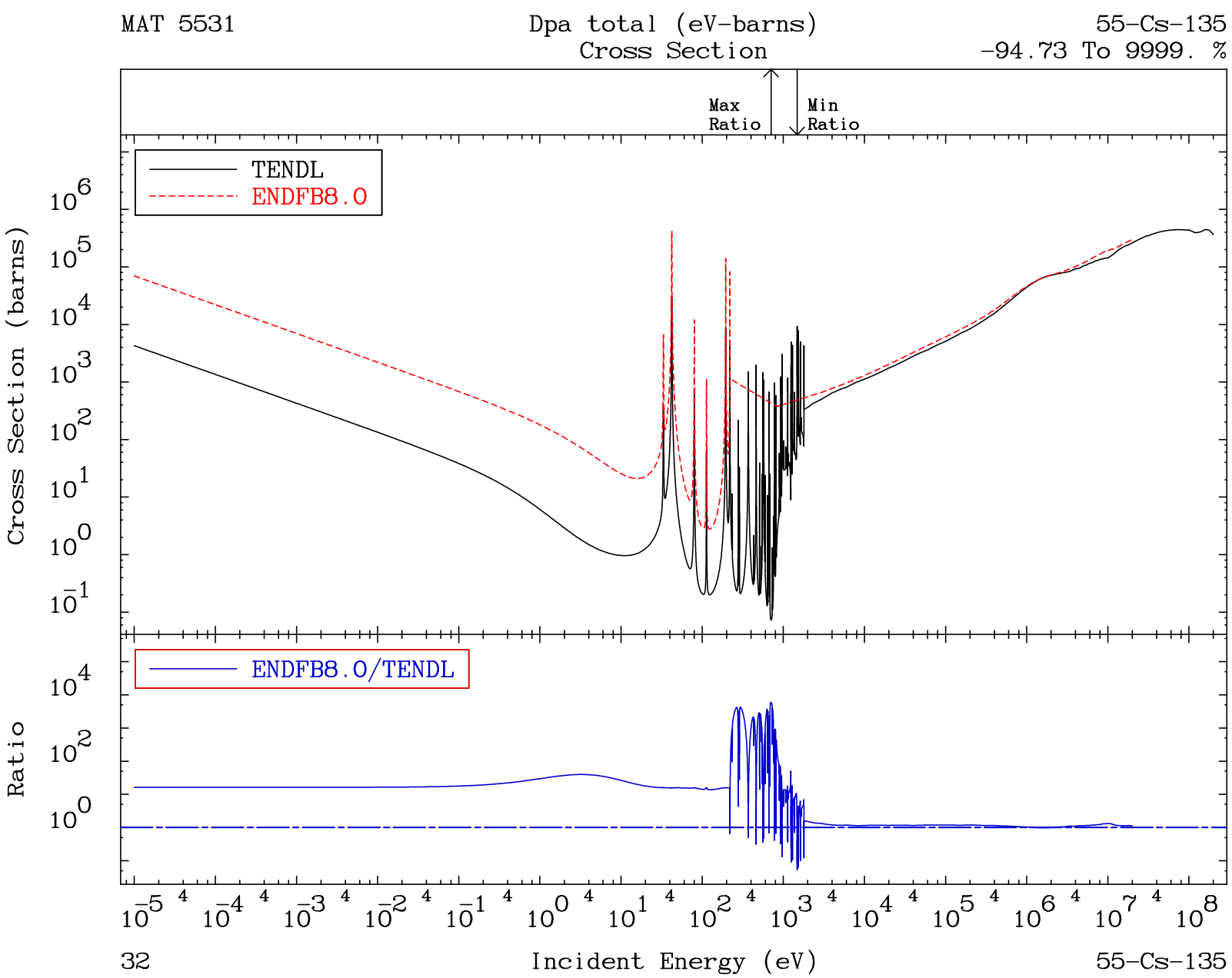

MAT 5531
Kerma inelastic (mt51-91)
Cross Section
55-Cs-135
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 251.63 keV
ENDFB8.0 Threshold 251.67 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
27
55-Cs-135

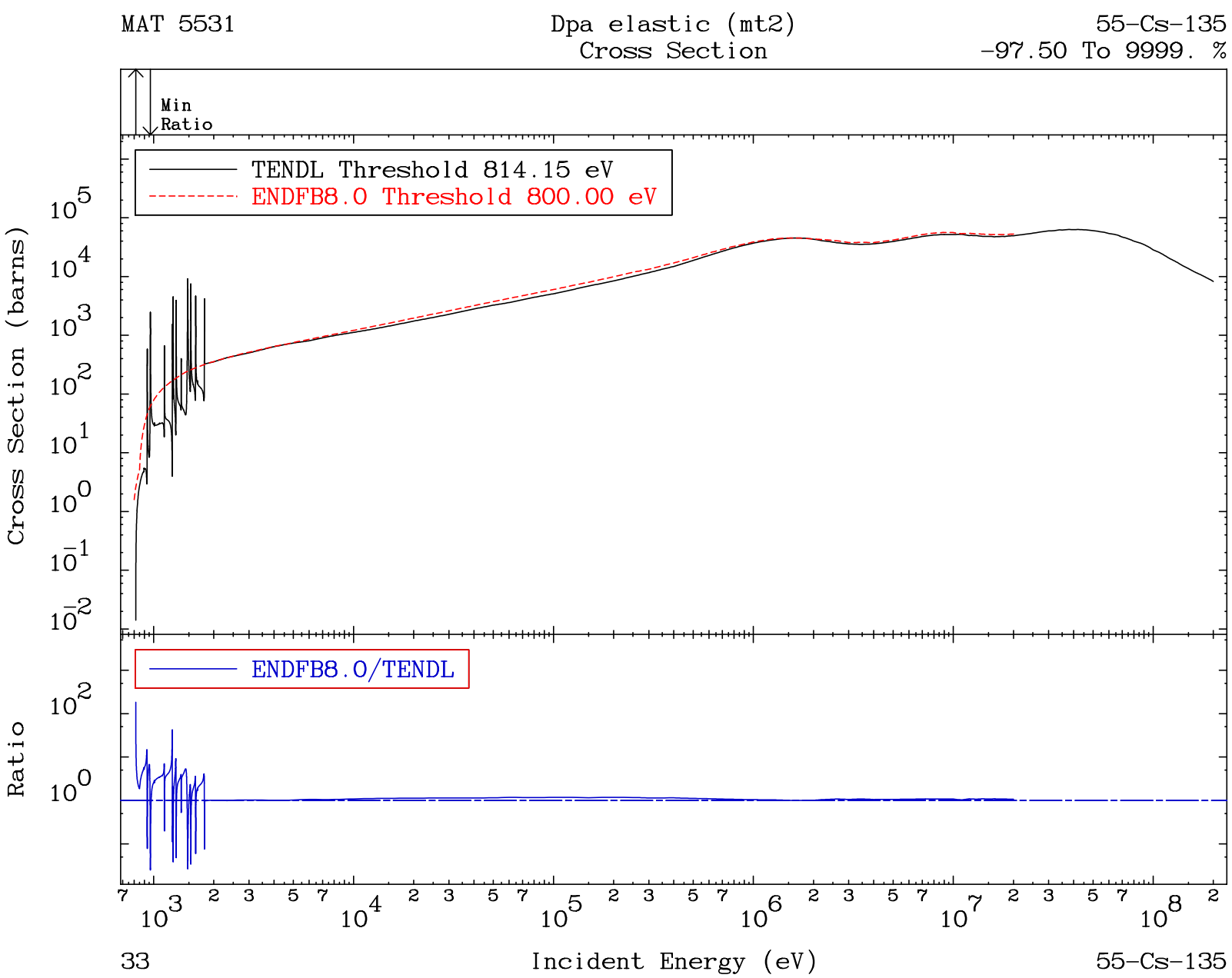

MAT 5531
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
55-Cs-135
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
ENDFB8.0/TENDL
Ratio
10^3
10^0
10^-3
10^-6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
28
Incident Energy (eV)
55-Cs-135

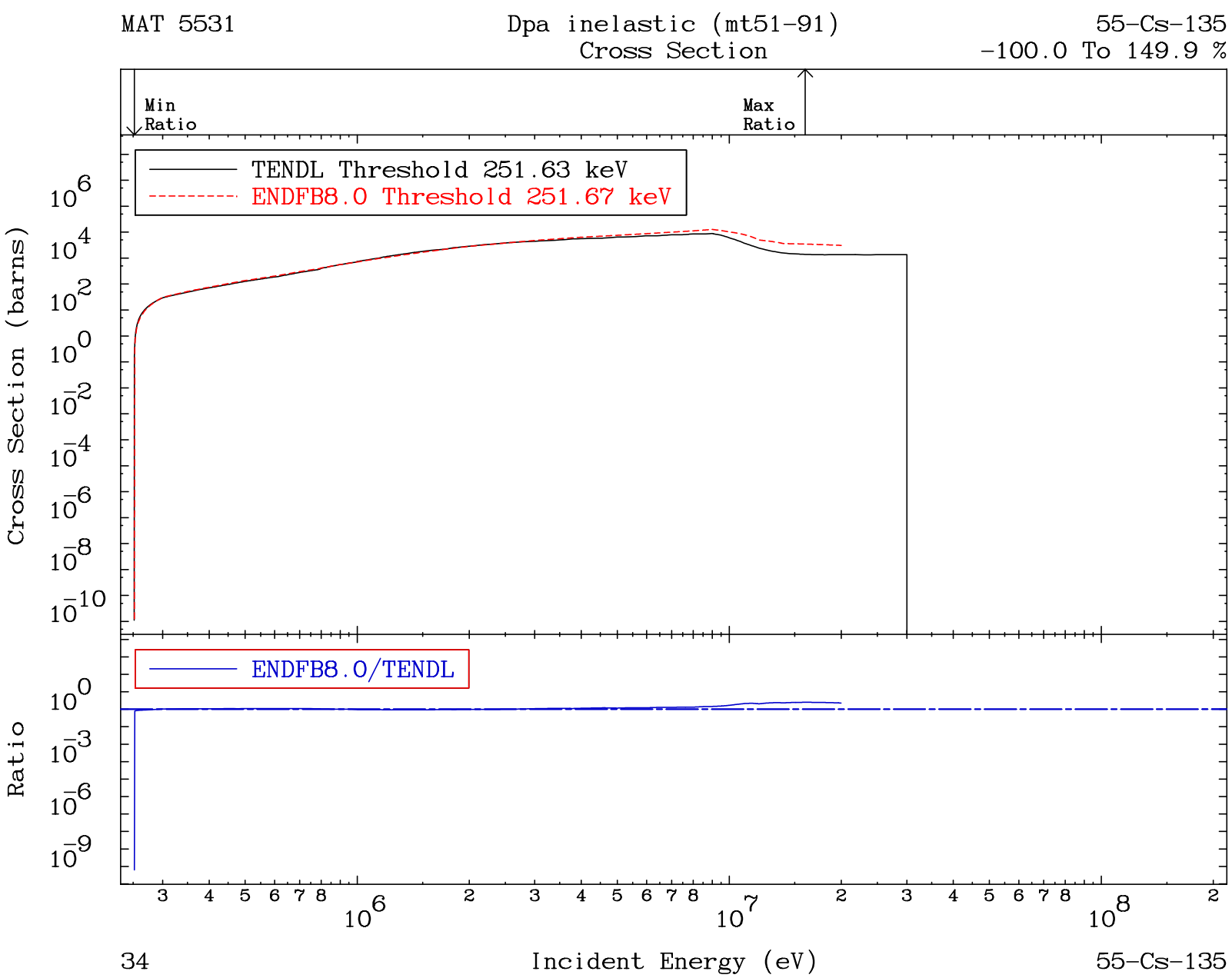

MAT 5531
Kerma capture (mt102)
Cross Section
55-Cs-135
9999. To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
29
55-Cs-135

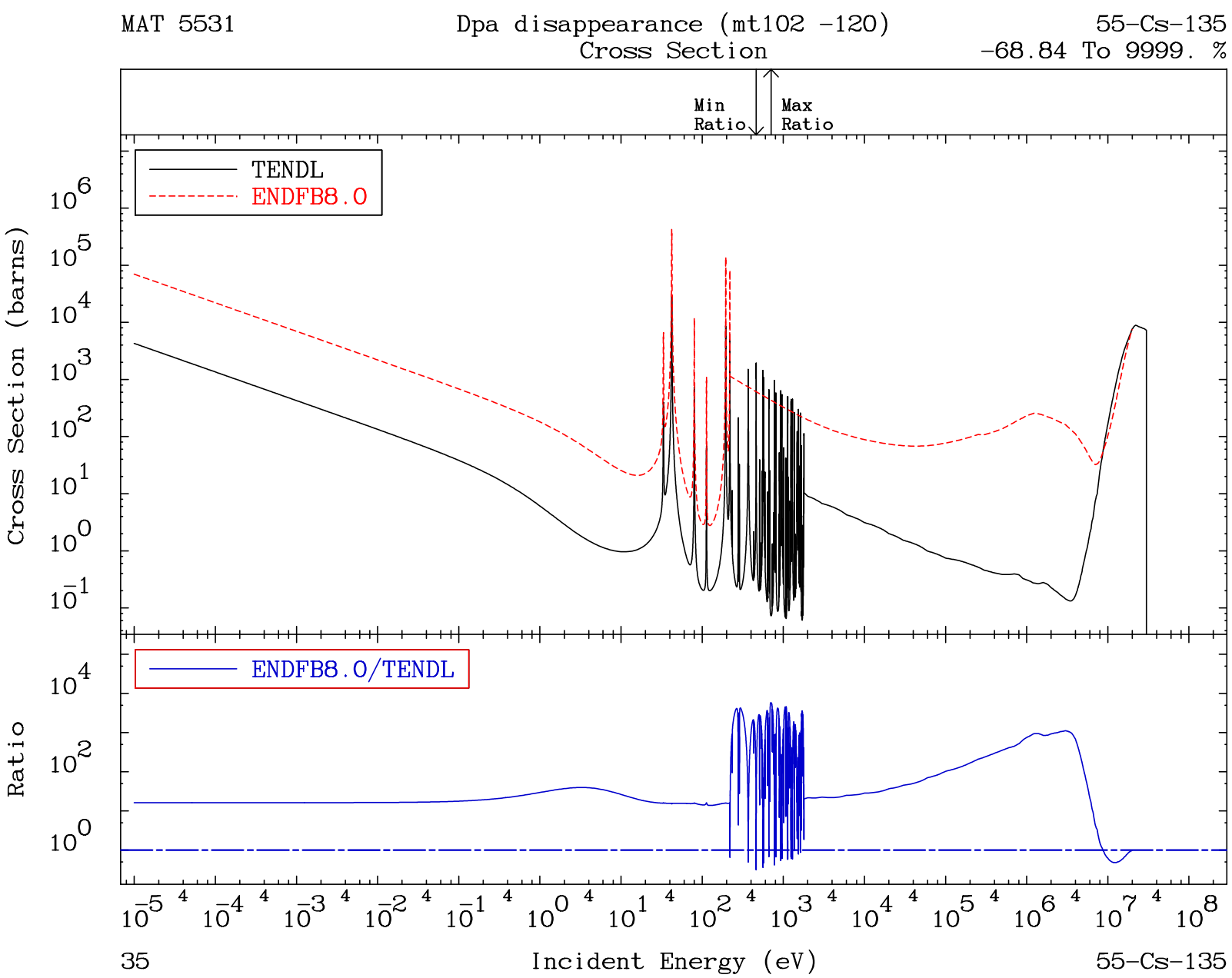

MAT 5531
Total photon (eV-barns)
Cross Section
55-Cs-135
9999. To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (Giga-barns)
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^8
10^6
10^4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
30
Incident Energy (eV)
55-Cs-135


MAT 5531
Total kinematic kerma (high limit)
Cross Section
55-Cs-135
-95.52 To 6344. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
31
55-Cs-135


MAT 5531
Dpa total (eV-barns)
Cross Section
55-Cs-135
-94.73 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
32
55-Cs-135


MAT 5531
Dpa elastic (mt2)
Cross Section
55-Cs-135
-97.50 To 9999. %
Min
Ratio
TENDL Threshold 814.15 eV
ENDFB8.0 Threshold 800.00 eV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
33
55-Cs-135


MAT 5531
Dpa inelastic (mt51-91)
Cross Section
55-Cs-135
-100.0 To 149.9 %
Min Ratio
Max Ratio
TENDL Threshold 251.63 keV
ENDFB8.0 Threshold 251.67 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
34
55-Cs-135


MAT 5531
Dpa disappearance (mt102 -120)
Cross Section
55-Cs-135
-68.84 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
35
55-Cs-135