Program Complot
(Version 2018-1)
by
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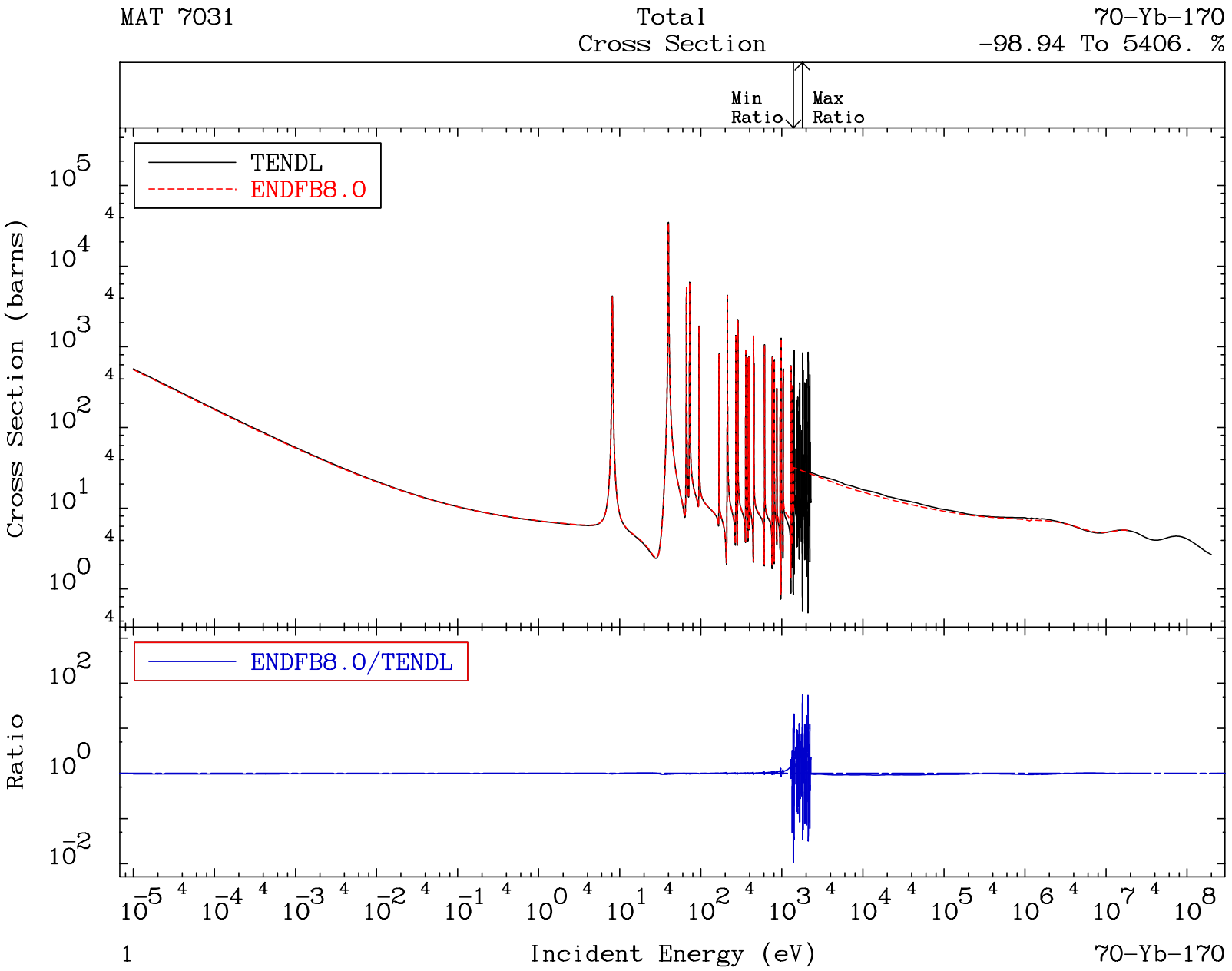
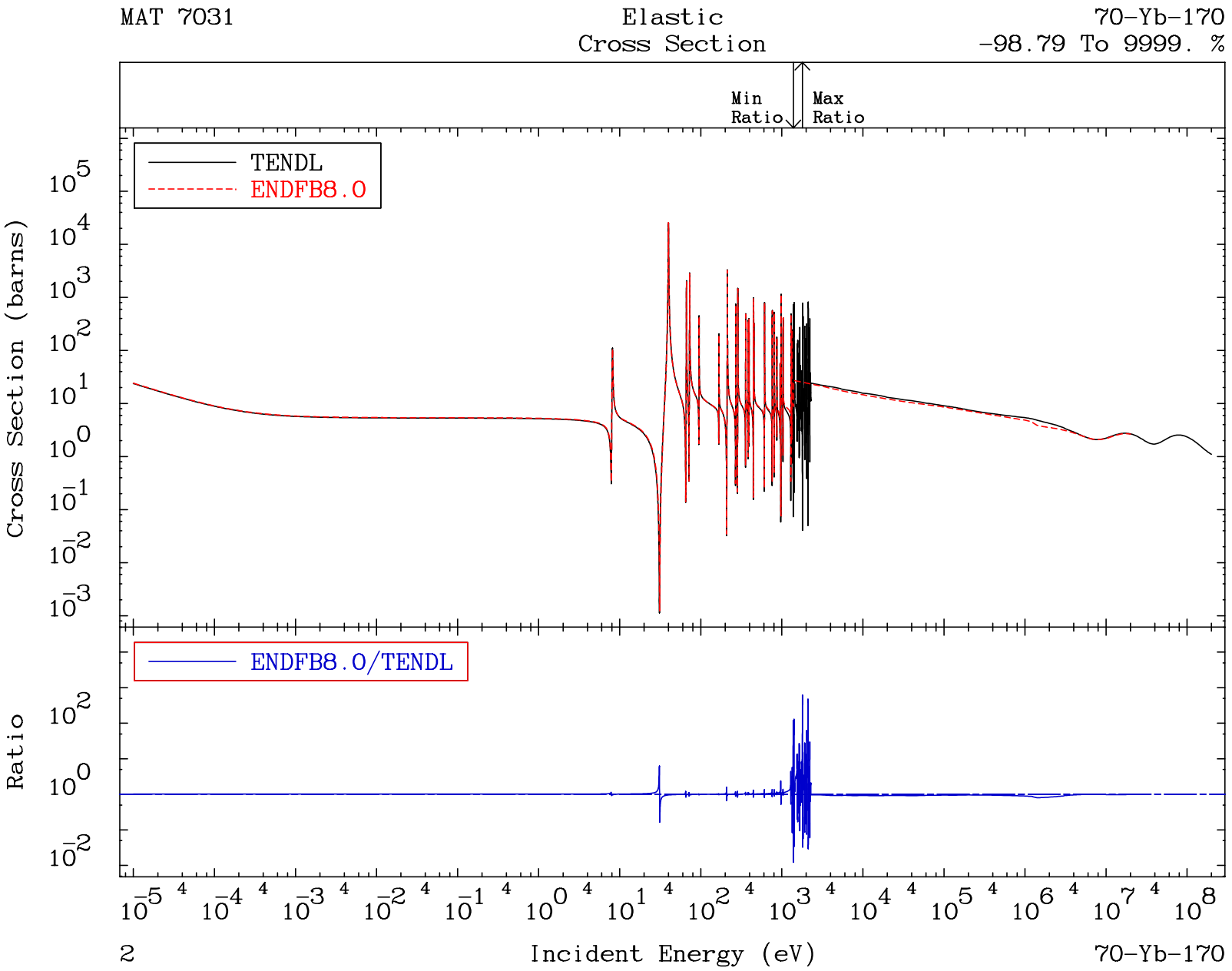
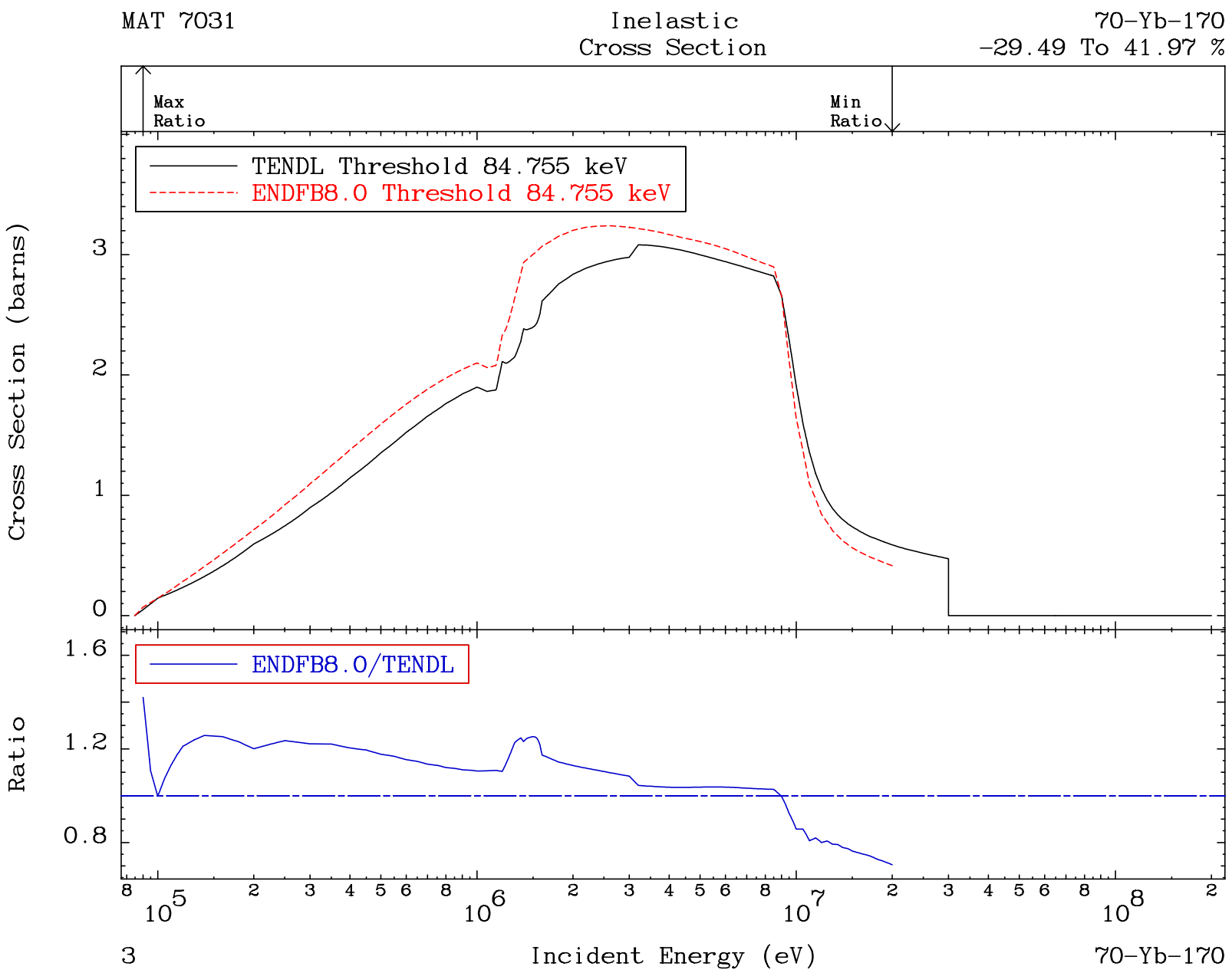
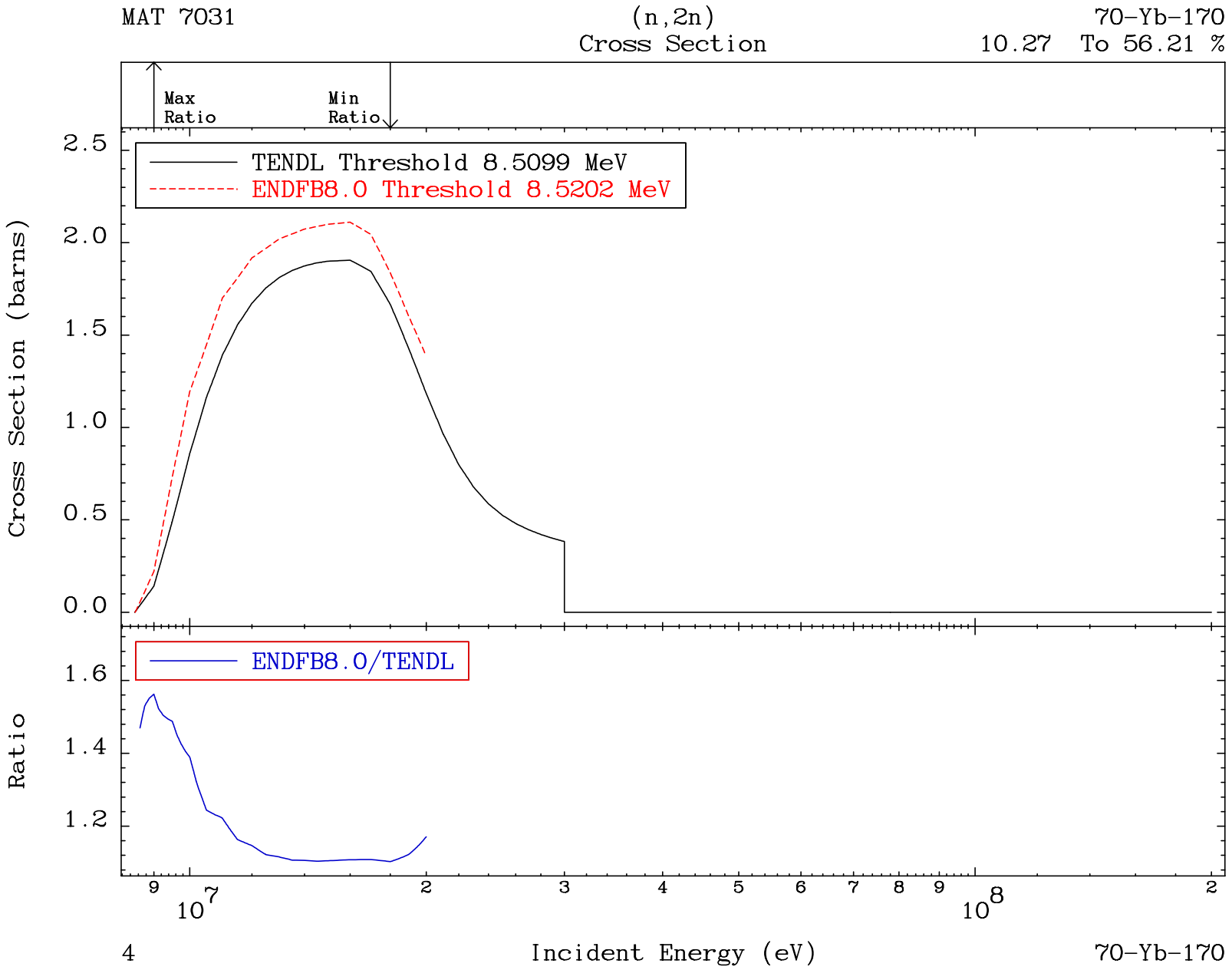
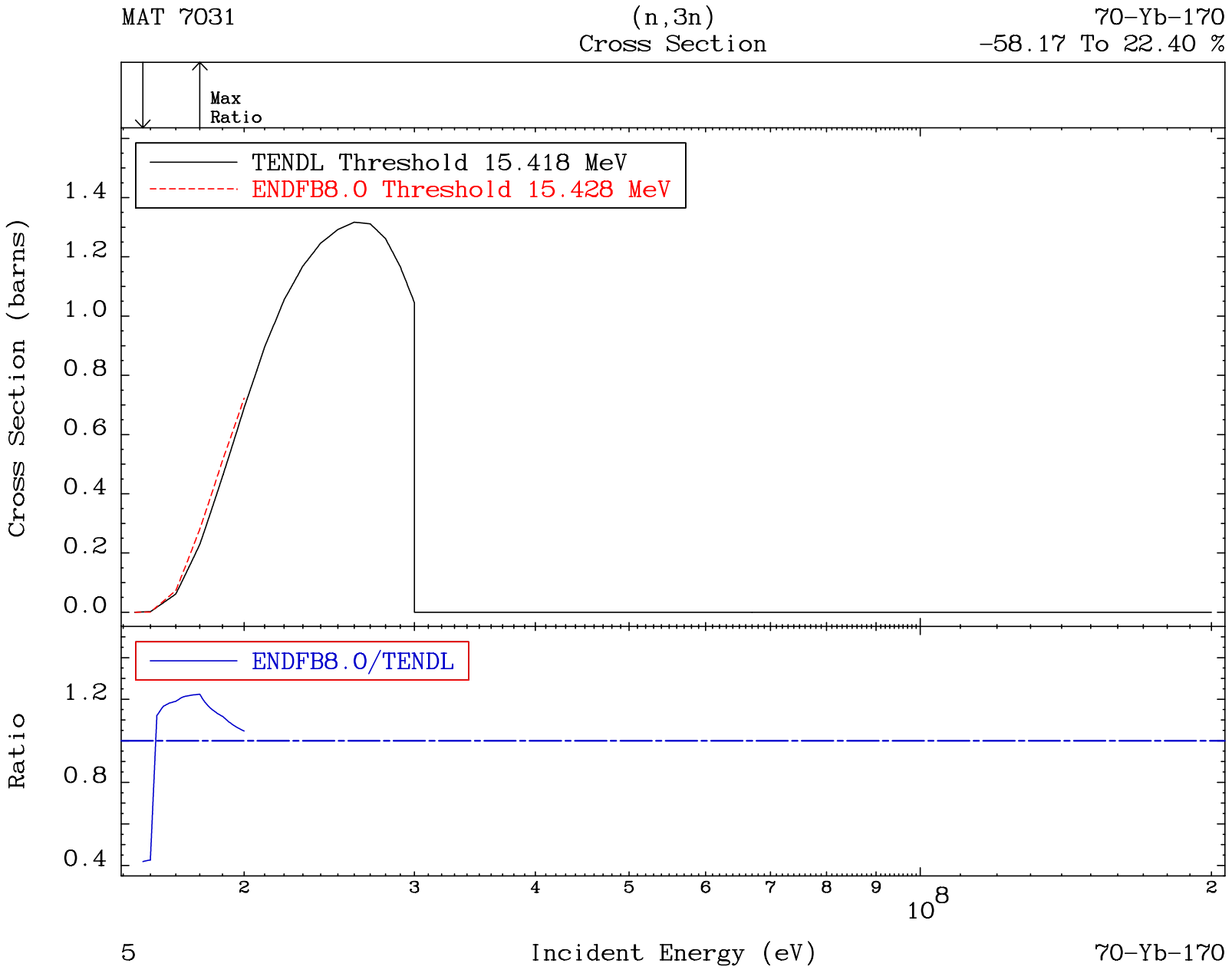
Press Mouse Button to Start

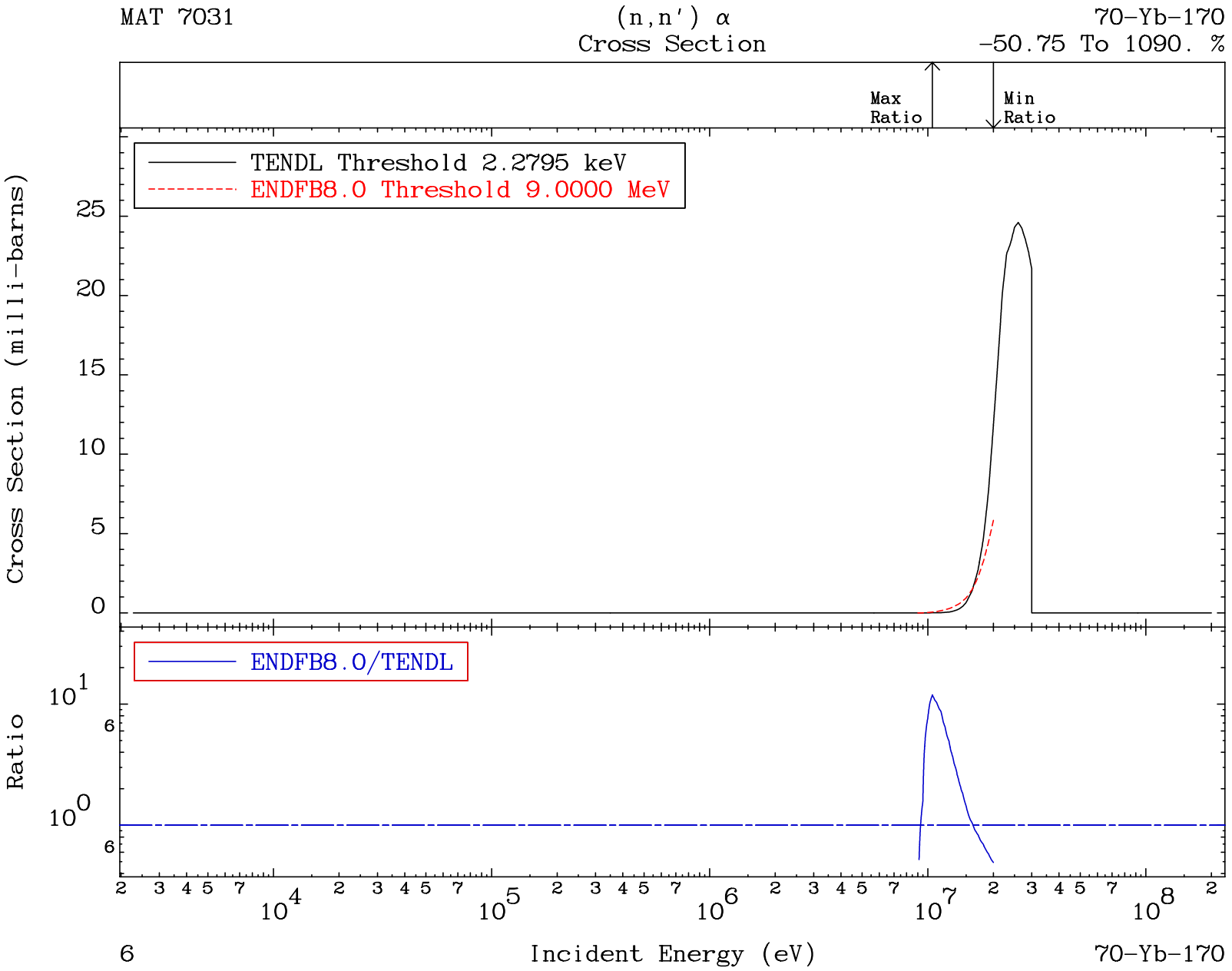

MAT 7031
Total
Cross Section
70-Yb-170
-98.94 To 5406. %
Min
Ratio
Max
Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
1
70-Yb-170

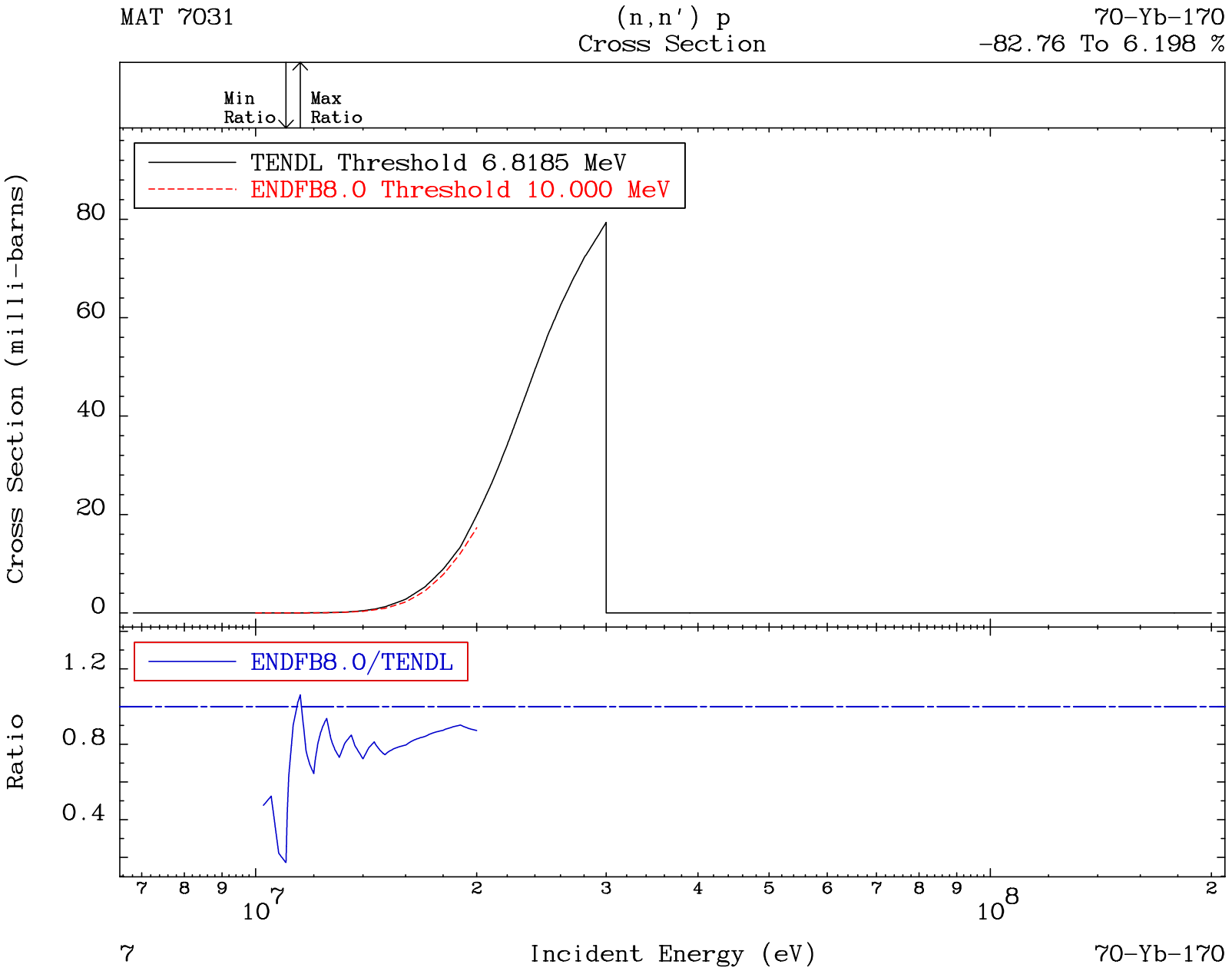

MAT 7031
Elastic
Cross Section
70-Yb-170
-98.79 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
2
70-Yb-170

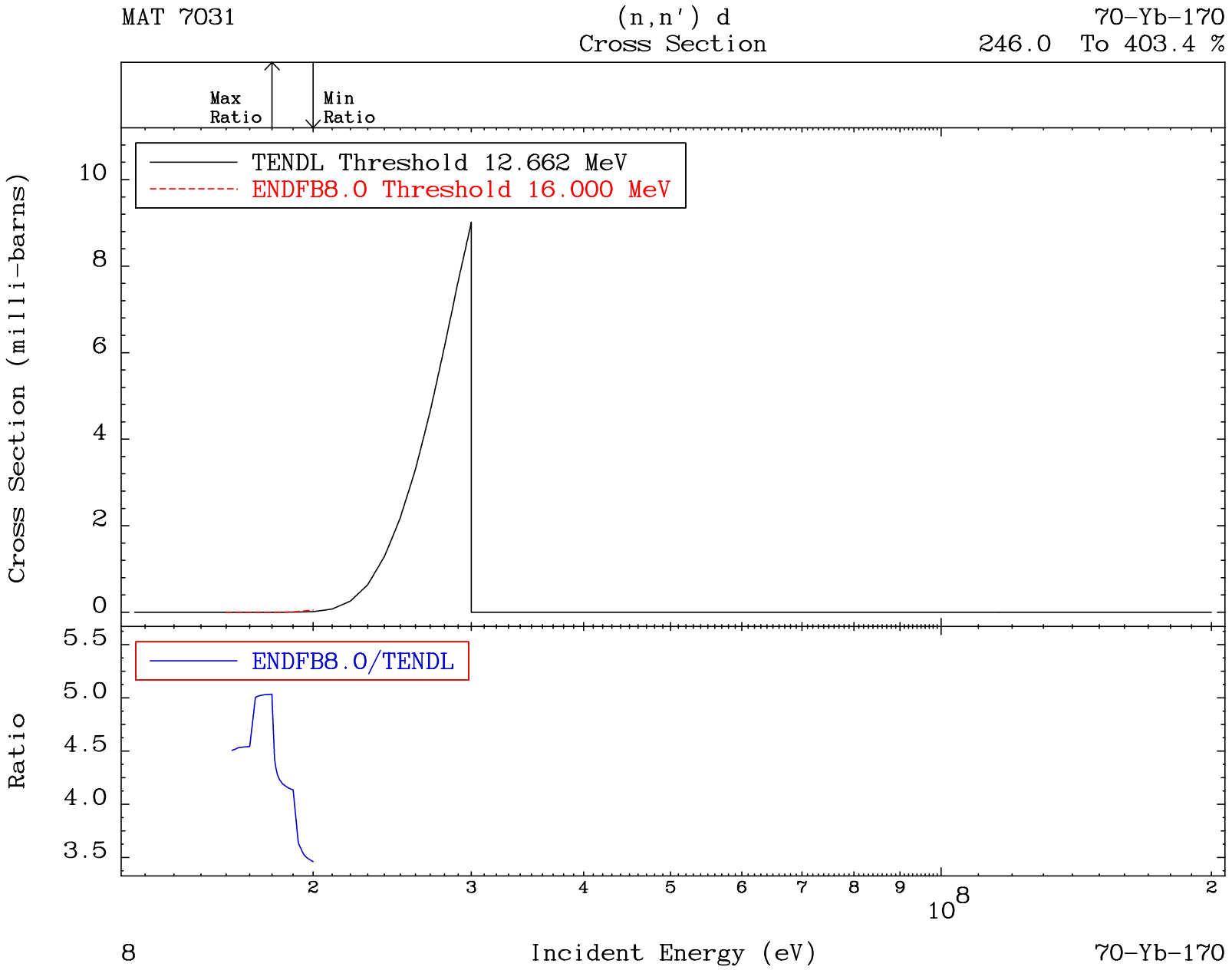

MAT 7031
Inelastic
Cross Section
70-Yb-170
-29.49 To 41.97 %
Max
Ratio
Min
Ratio
TENDL Threshold 84.755 keV
ENDFB8.0 Threshold 84.755 keV
Cross Section (barns)
0
1
2
3
ENDFB8.0/TENDL
Ratio
0.8
1.2
1.6
10^5
10^6
10^7
10^8
Incident Energy (eV)
3
70-Yb-170

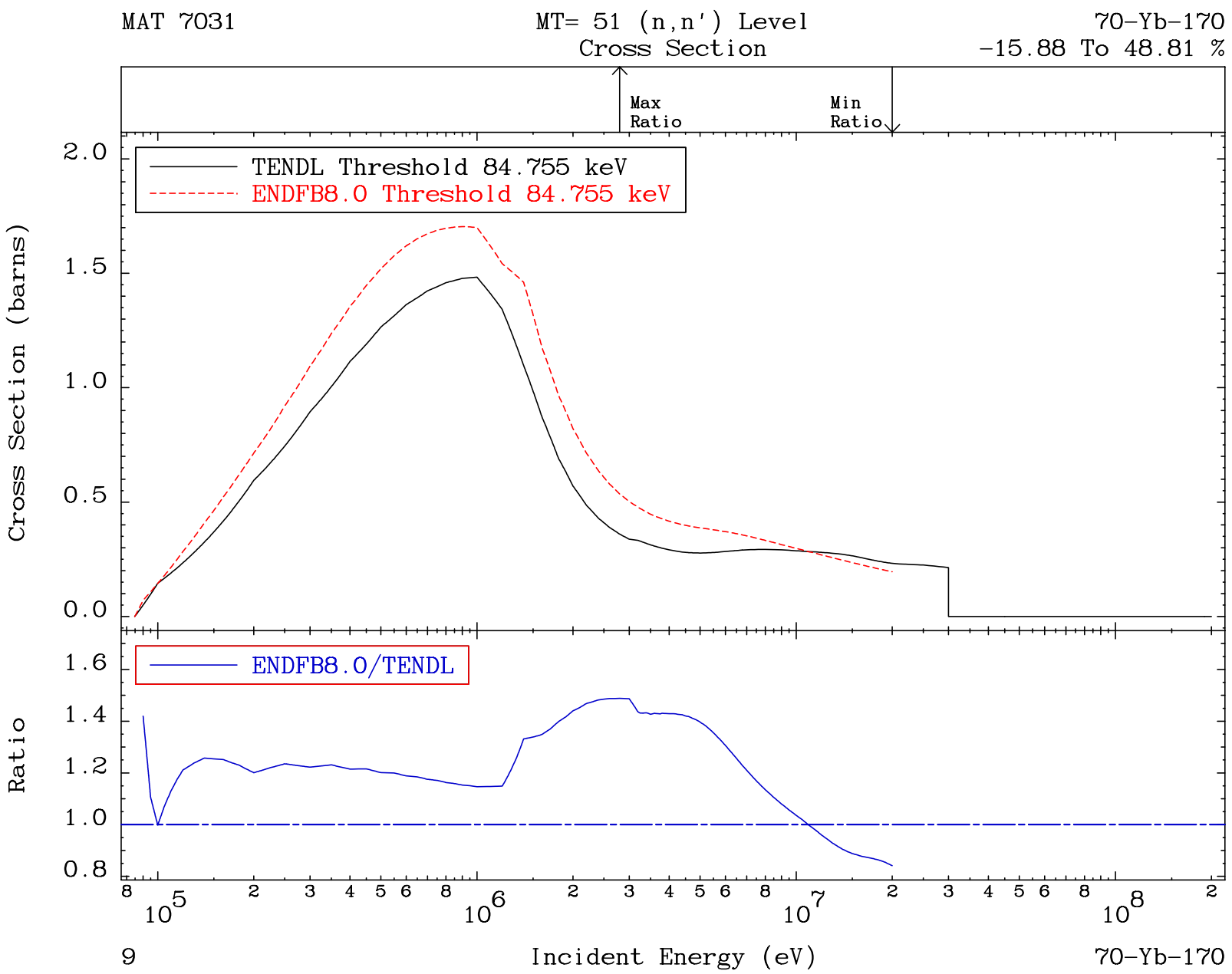

MAT 7031
(n,2n)
Cross Section
70-Yb-170
10.27 To 56.21 %
Max Ratio
Min Ratio
TENDL Threshold 8.5099 MeV
ENDFB8.0 Threshold 8.5202 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
1.6
1.4
1.2
9
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
70-Yb-170

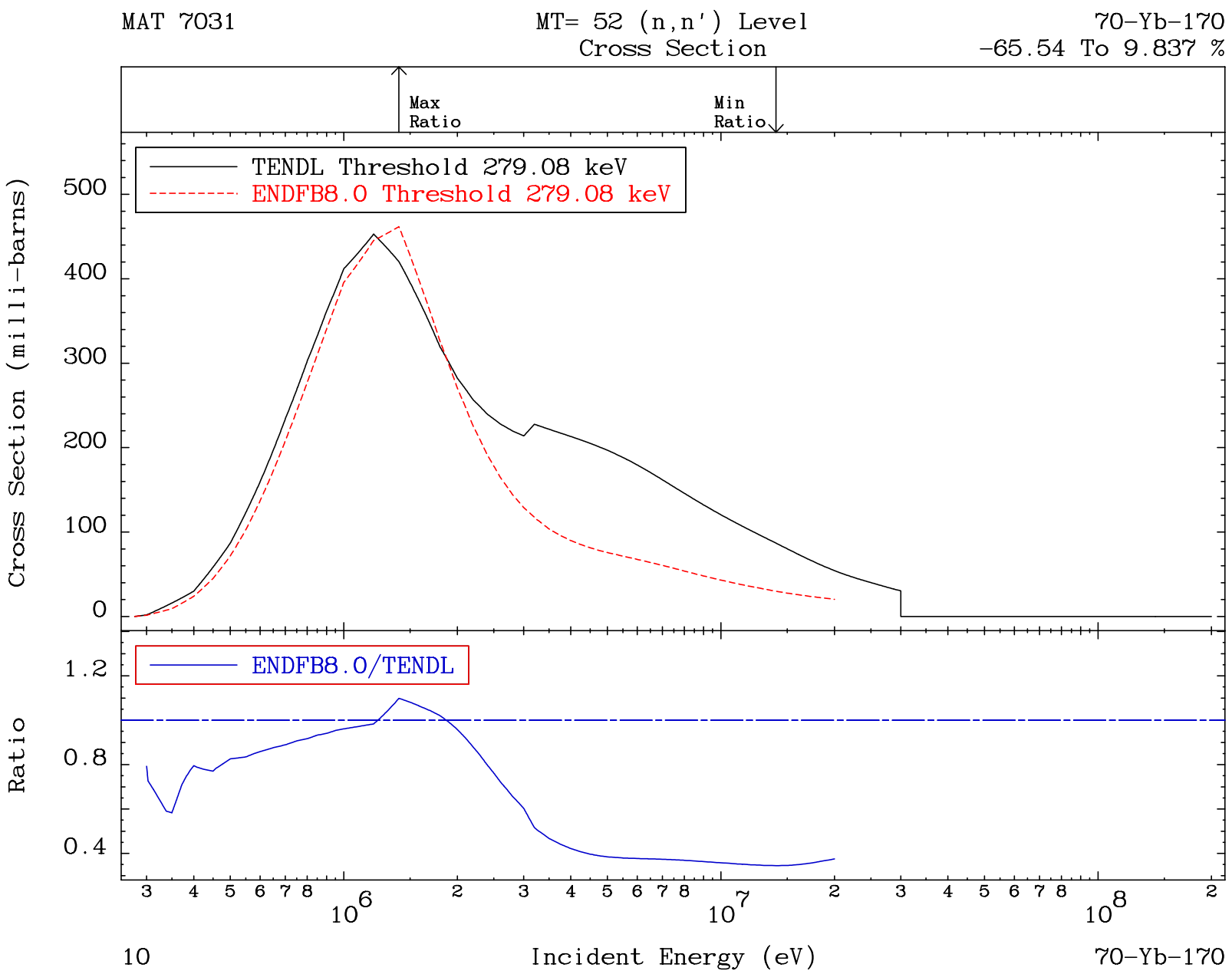

MAT 7031
(n,3n)
Cross Section
70-Yb-170
-58.17 To 22.40 %
Max
Ratio
TENDL Threshold 15.418 MeV
ENDFB8.0 Threshold 15.428 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
ENDFB8.0/TENDL
Ratio
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
70-Yb-170

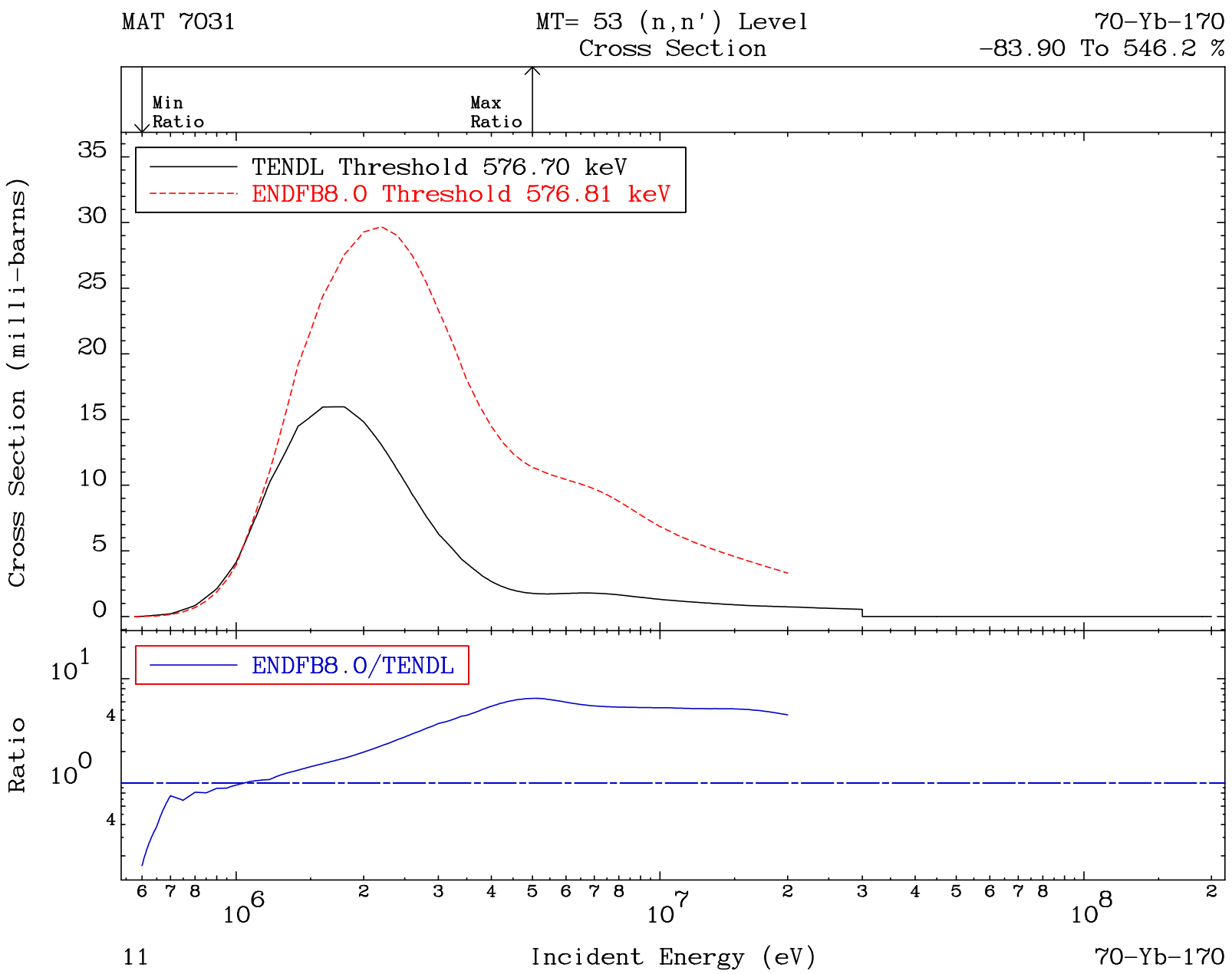

MAT 7031
(n,n') α
Cross Section
70-Yb-170
-50.75 To 1090. %
Max Ratio
Min Ratio
TENDL Threshold 2.2795 keV
ENDFB8.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^1
6
10^0
6
2 3 4 5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
6
Incident Energy (eV)
70-Yb-170

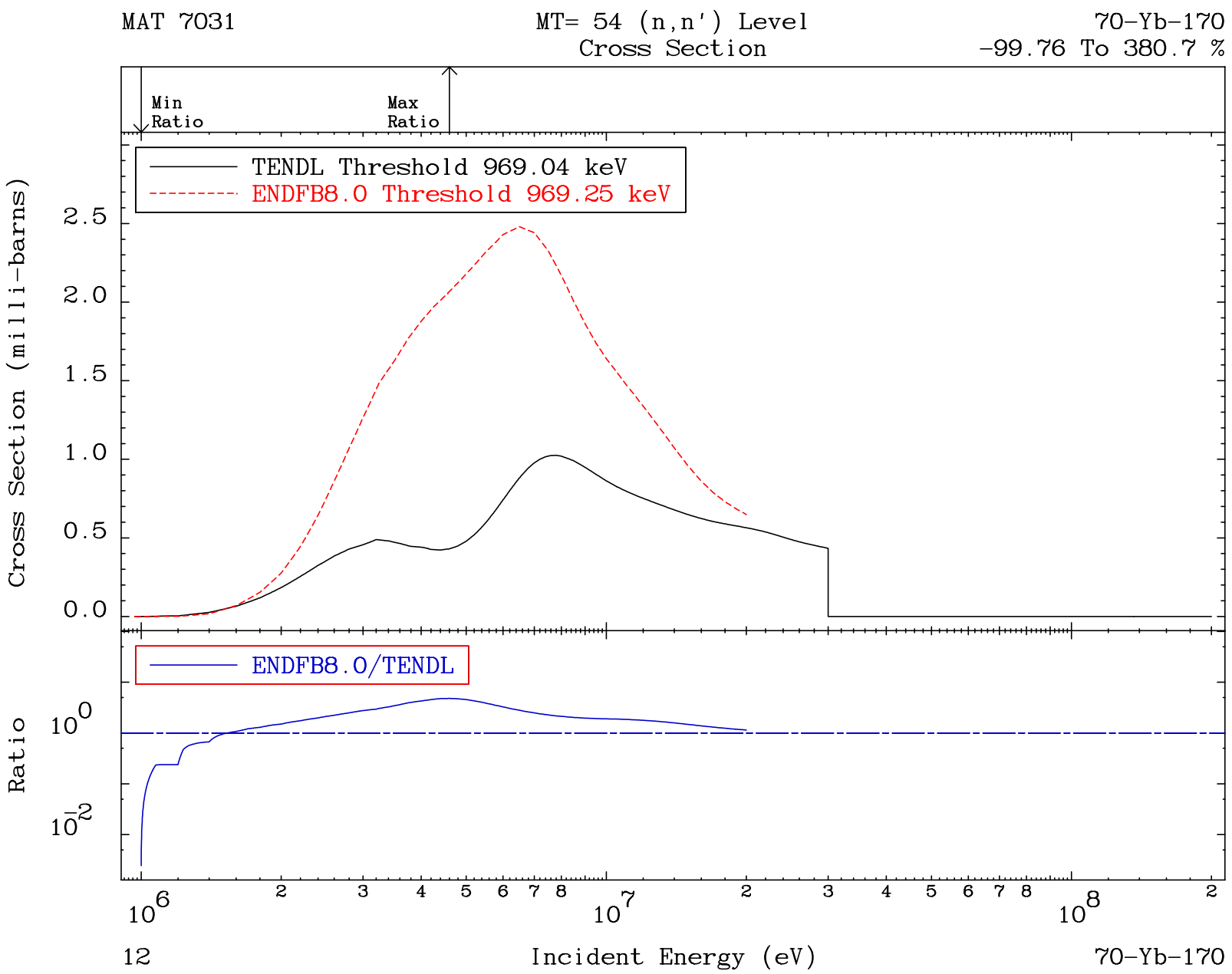

MAT 7031
(n,n') p
Cross Section
70-Yb-170
-82.76 To 6.198 %
Min Ratio
Max Ratio
TENDL Threshold 6.8185 MeV
ENDFB8.0 Threshold 10.000 MeV
Cross Section (milli-barns)
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
1.2
0.8
0.4
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
70-Yb-170

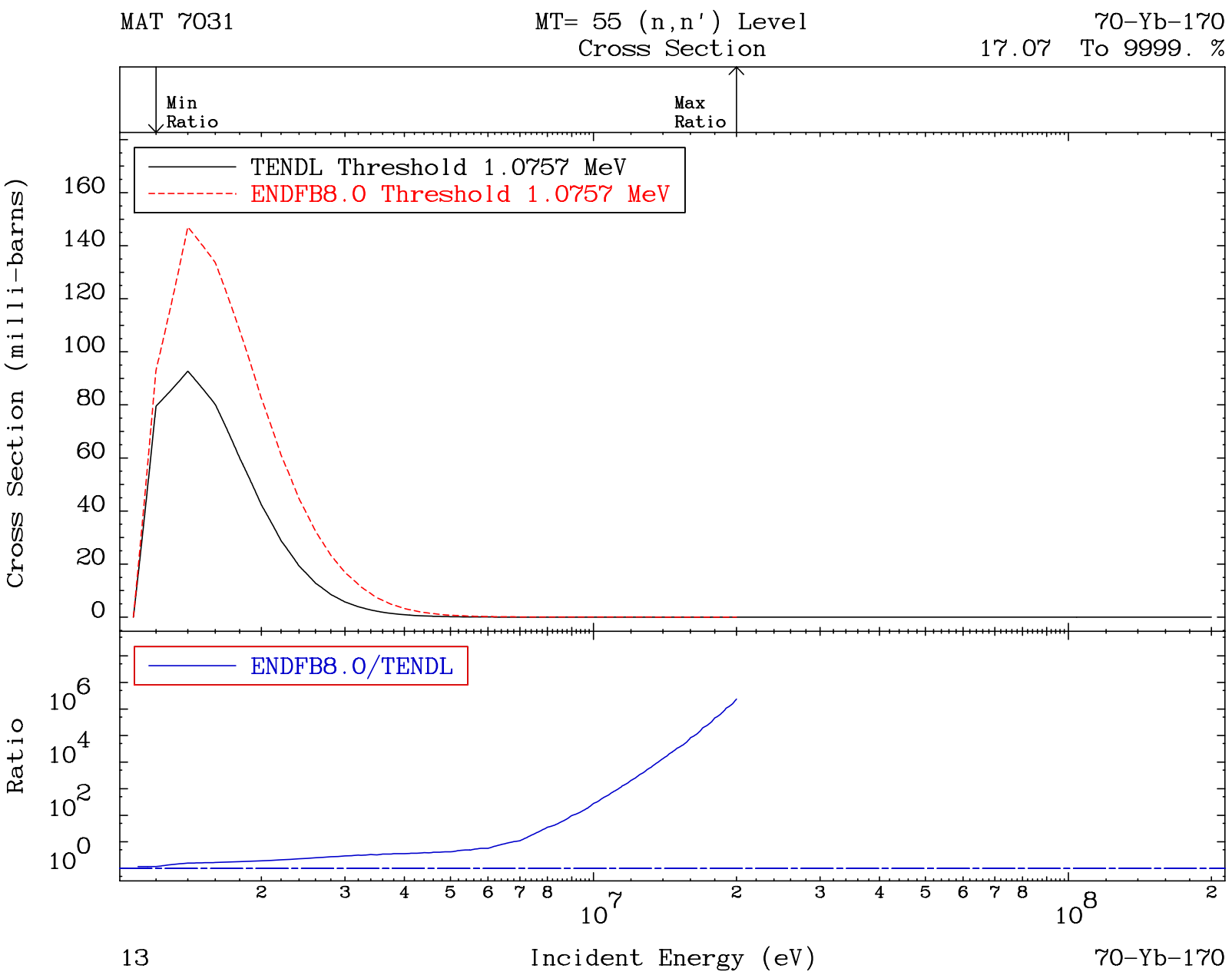

MAT 7031
(n,n') d
Cross Section
70-Yb-170
246.0 To 403.4 %
Max Ratio
Min Ratio
TENDL Threshold 12.662 MeV
ENDFB8.0 Threshold 16.000 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
ENDFB8.0/TENDL
Ratio
5.5
5.0
4.5
4.0
3.5
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
70-Yb-170

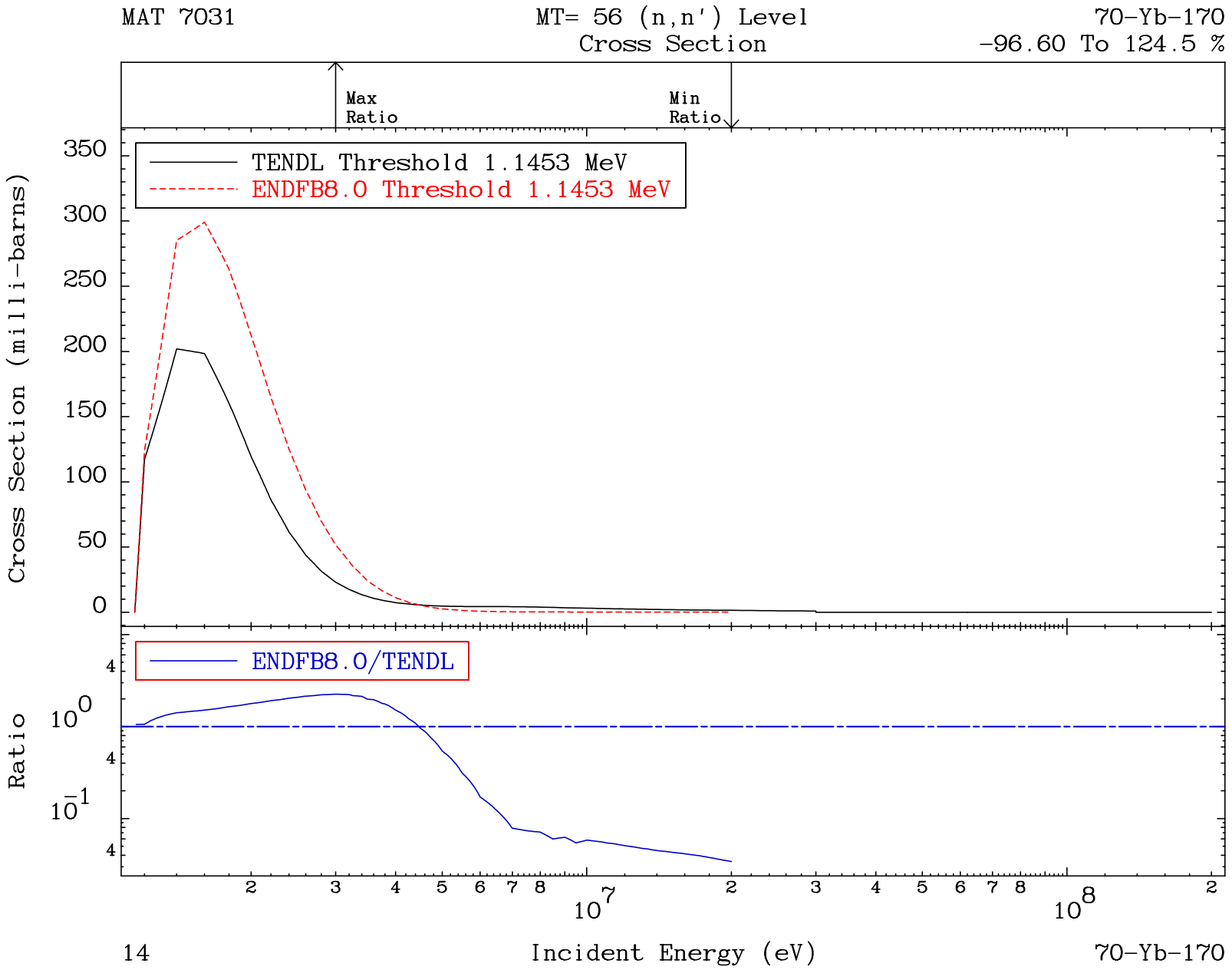

MAT 7031
MT= 51 (n,n') Level
Cross Section
70-Yb-170
-15.88 To 48.81 %
Max
Ratio
Min
Ratio
TENDL Threshold 84.755 keV
ENDFB8.0 Threshold 84.755 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
1.6
1.4
1.2
1.0
0.8
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
9
Incident Energy (eV)
70-Yb-170

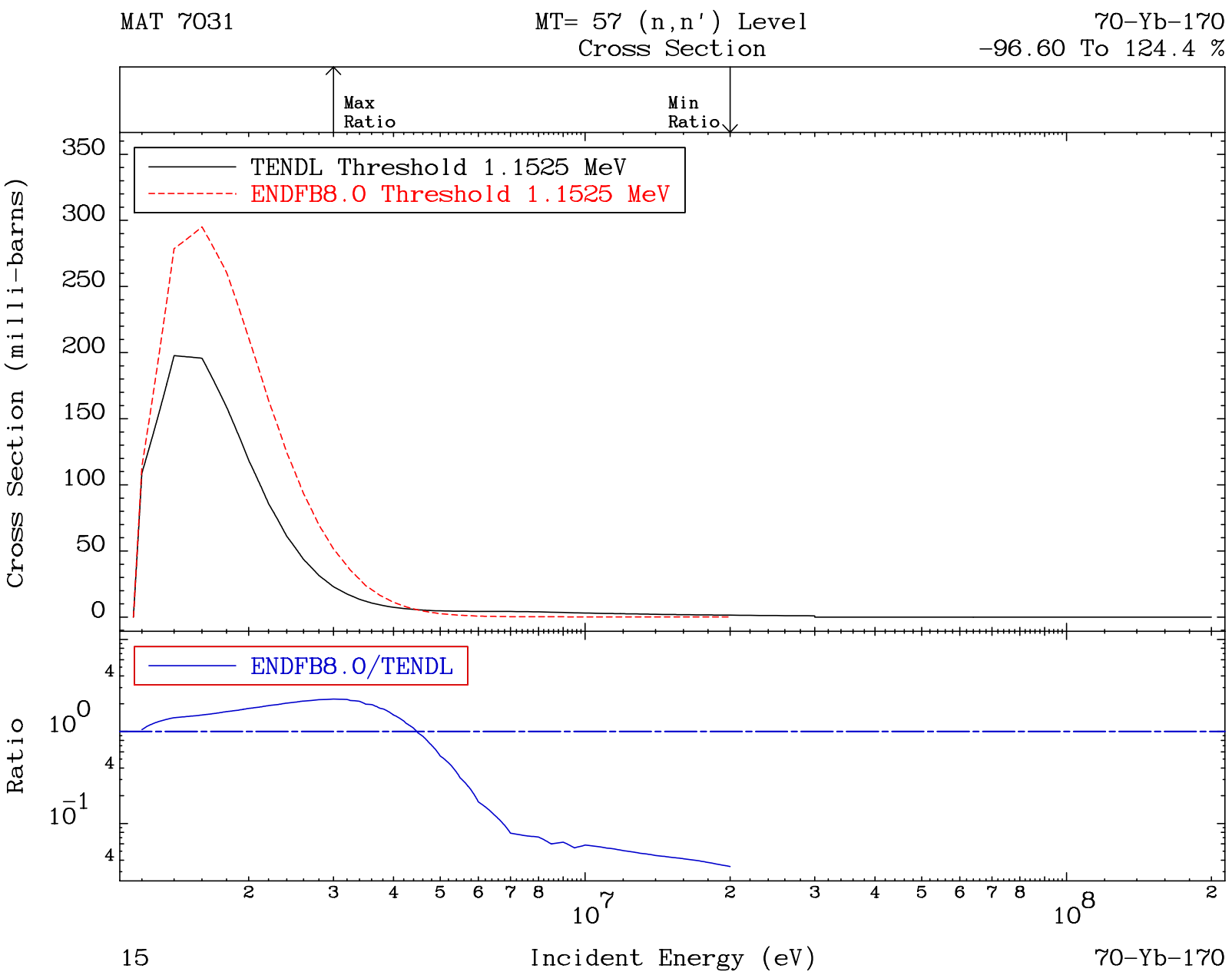

MAT 7031
MT= 52 (n,n') Level
Cross Section
70-Yb-170
-65.54 To 9.837 %
Max
Ratio
Min
Ratio
TENDL Threshold 279.08 keV
ENDFB8.0 Threshold 279.08 keV
Cross Section (milli-barns)
500
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
1.2
0.8
0.4
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
10
Incident Energy (eV)
70-Yb-170

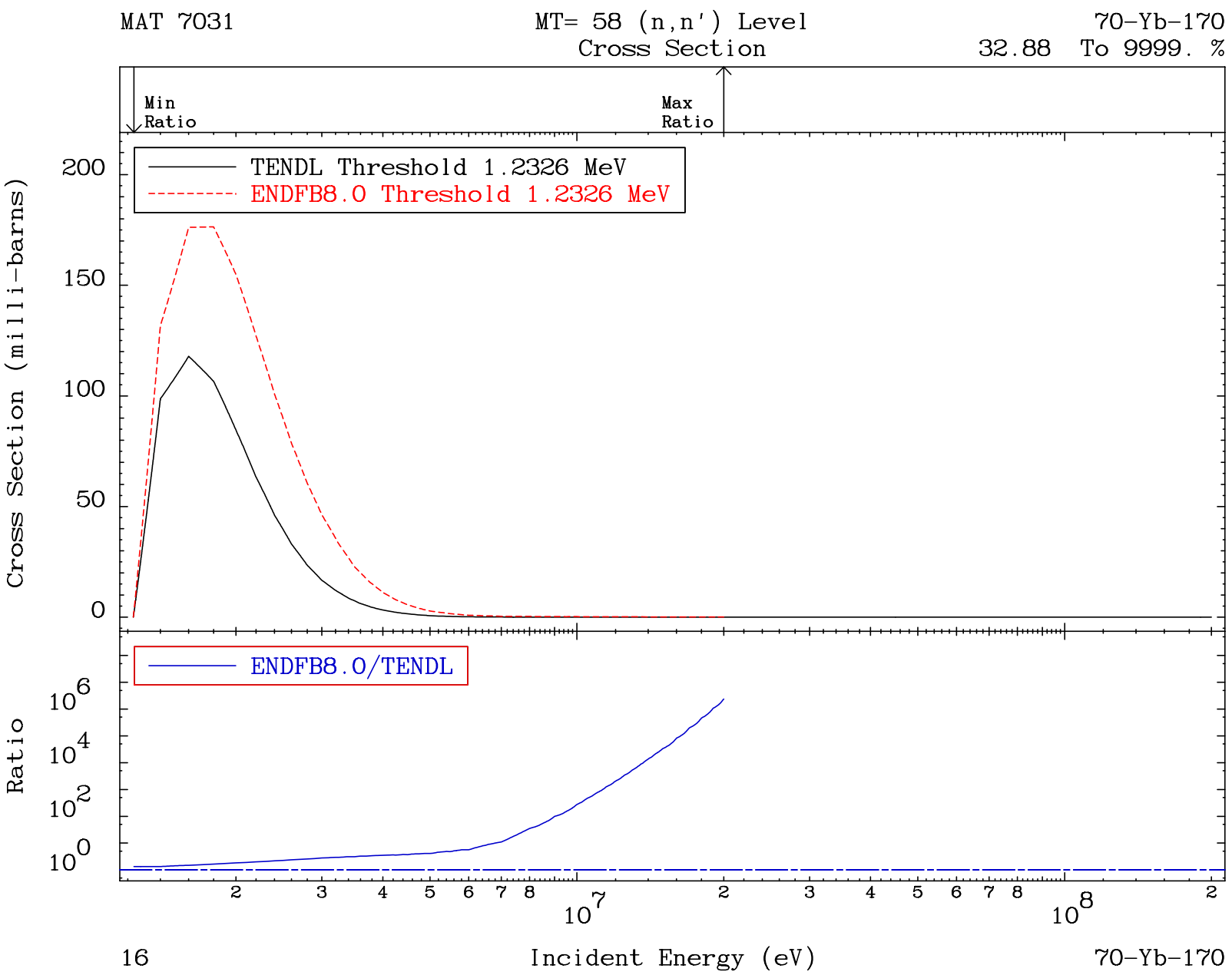

MAT 7031
MT= 53 (n,n') Level
Cross Section
70-Yb-170
-83.90 To 546.2 %
Min
Ratio
Max
Ratio
TENDL Threshold 576.70 keV
ENDFB8.0 Threshold 576.81 keV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^1
10^0
4
4
6 7 8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
11
Incident Energy (eV)
70-Yb-170

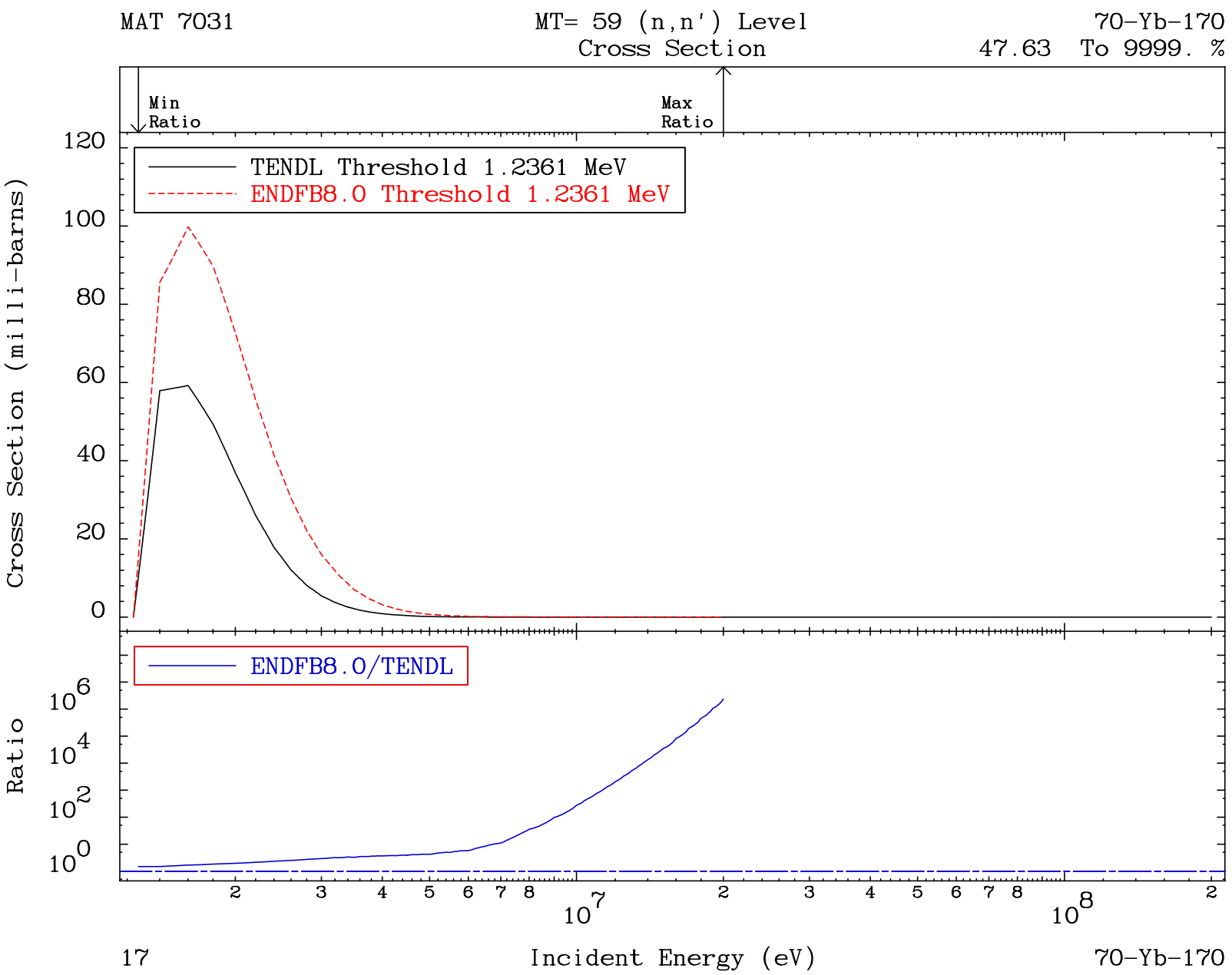

MAT 7031
MT= 54 (n,n') Level
Cross Section
70-Yb-170
-99.76 To 380.7 %
Min
Ratio
Max
Ratio
TENDL Threshold 969.04 keV
ENDFB8.0 Threshold 969.25 keV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
10^0
10^-2
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
12
Incident Energy (eV)
70-Yb-170

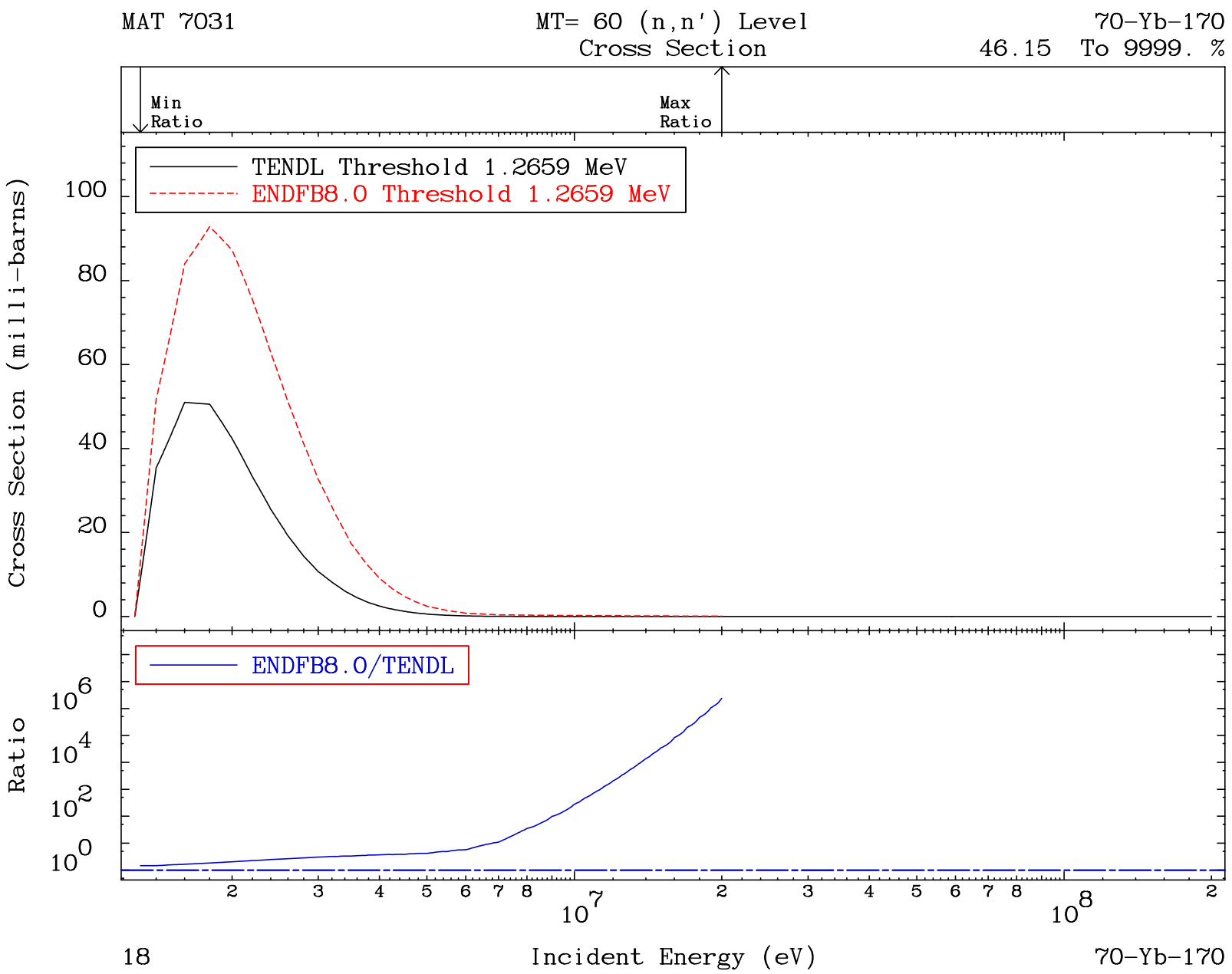

MAT 7031
MT= 55 (n,n') Level
Cross Section
70-Yb-170
17.07 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.0757 MeV
ENDFB8.0 Threshold 1.0757 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
70-Yb-170

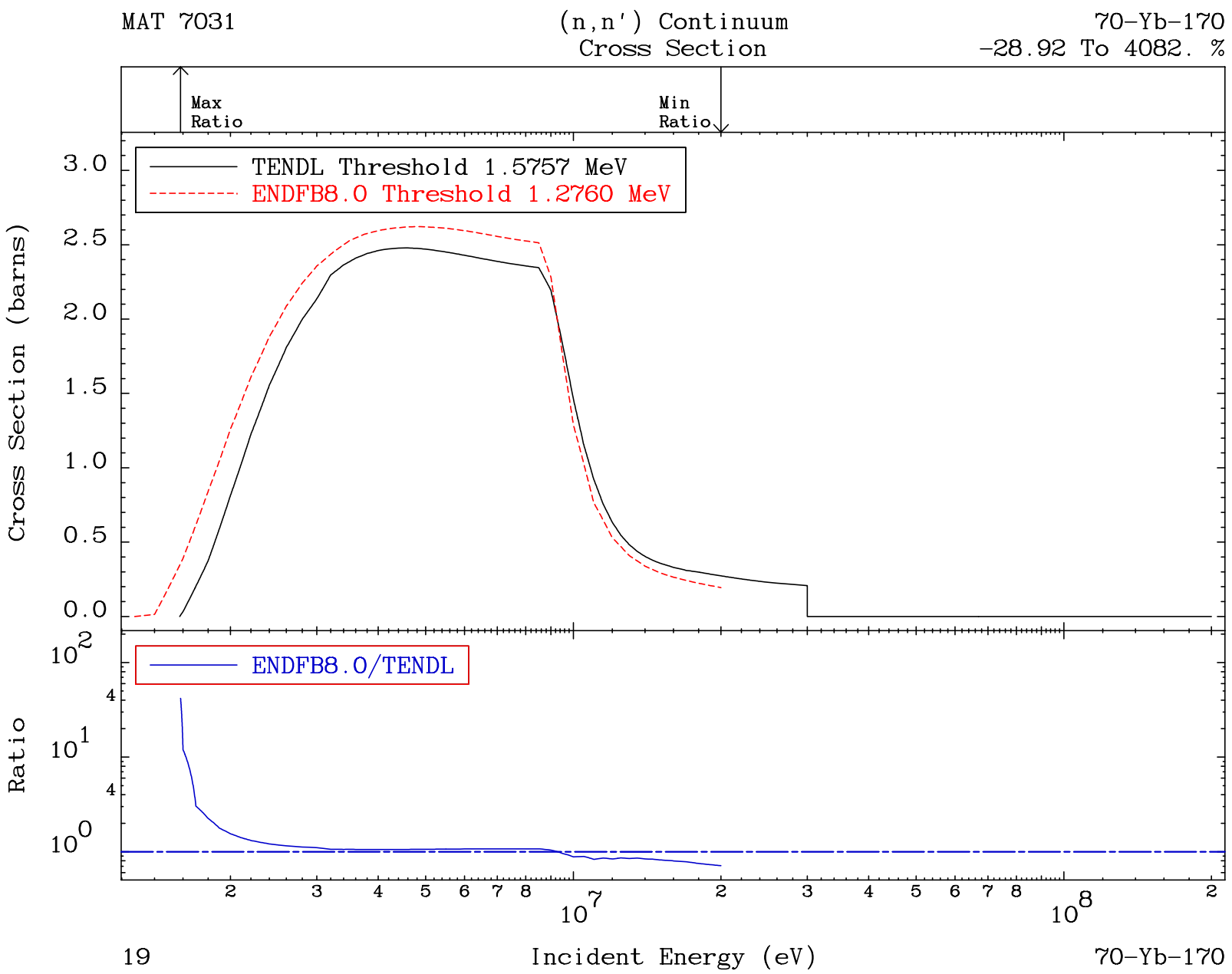

MAT 7031
MT= 56 (n,n') Level
Cross Section
70-Yb-170
-96.60 To 124.5 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.1453 MeV
ENDFB8.0 Threshold 1.1453 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
4
10^0
4
10^-1
4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
70-Yb-170

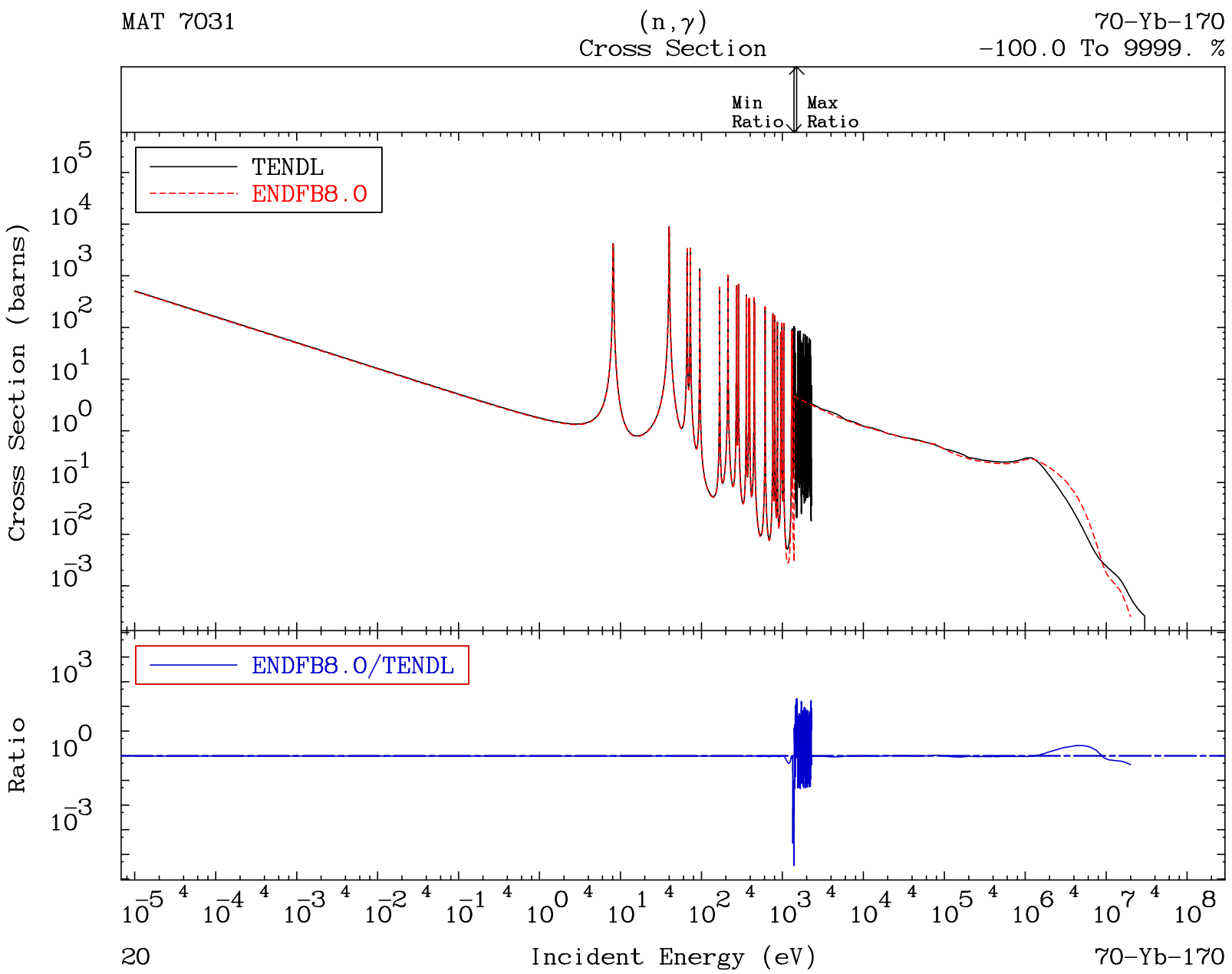

MAT 7031
MT= 57 (n,n') Level
Cross Section
70-Yb-170
-96.60 To 124.4 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.1525 MeV
ENDFB8.0 Threshold 1.1525 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
4
10^0
4
10^-1
4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
70-Yb-170

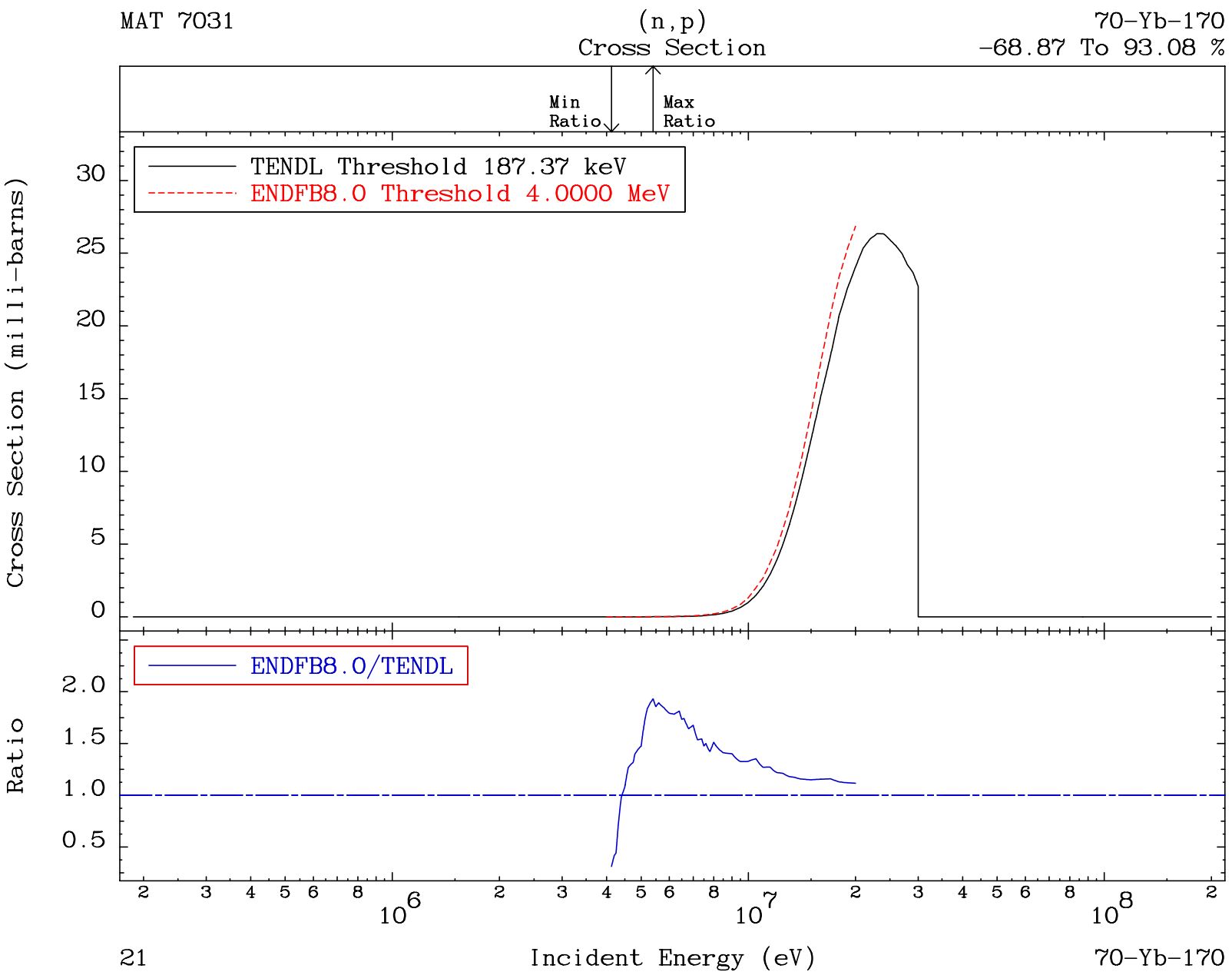

MAT 7031
MT= 58 (n,n') Level
Cross Section
70-Yb-170
32.88 To 9999. %
Min
Ratio
Max
Ratio
TENDL Threshold 1.2326 MeV
ENDFB8.0 Threshold 1.2326 MeV
Cross Section (milli-barns)
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
70-Yb-170

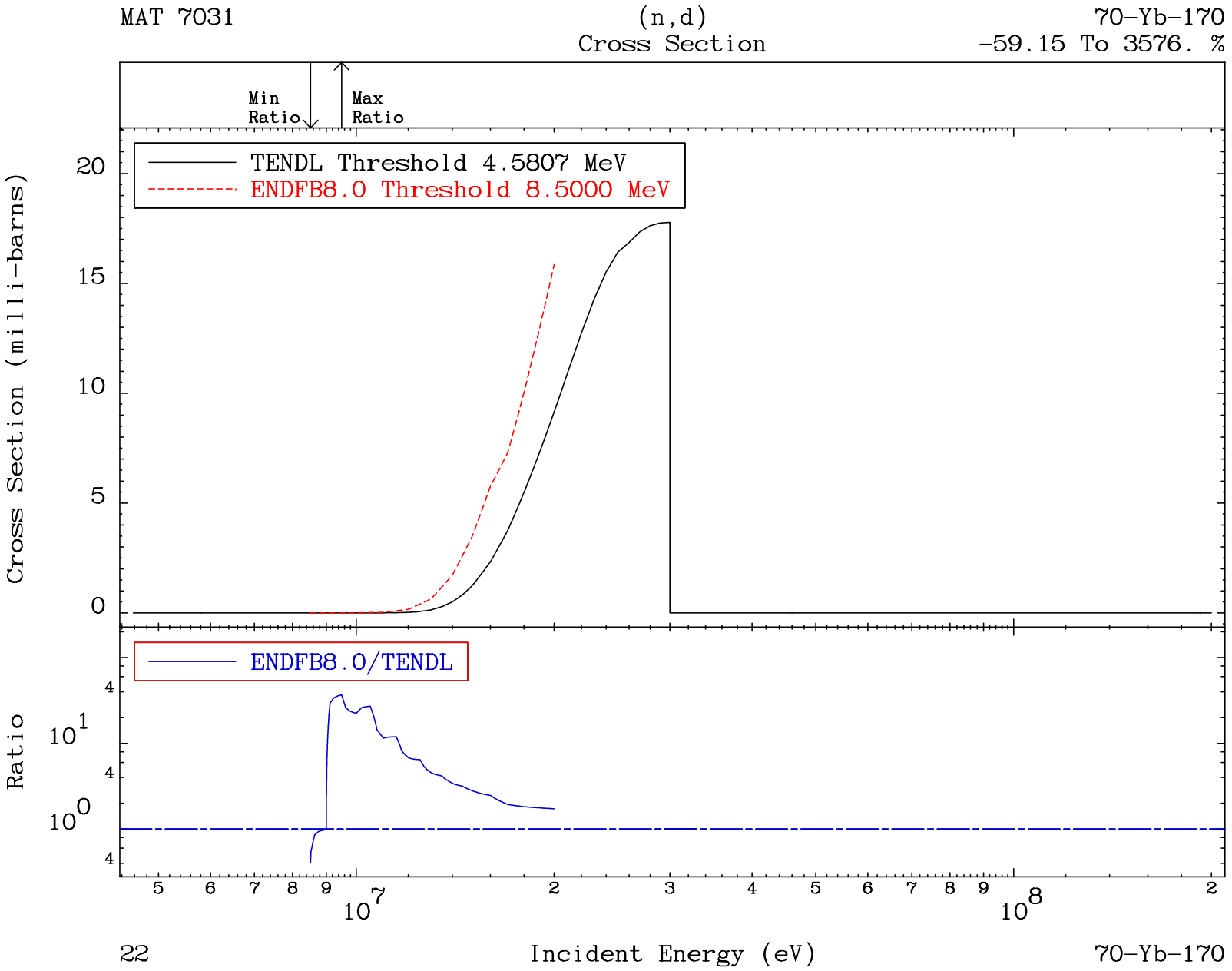

MAT 7031
MT= 59 (n,n') Level
Cross Section
70-Yb-170
47.63 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.2361 MeV
ENDFB8.0 Threshold 1.2361 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
70-Yb-170

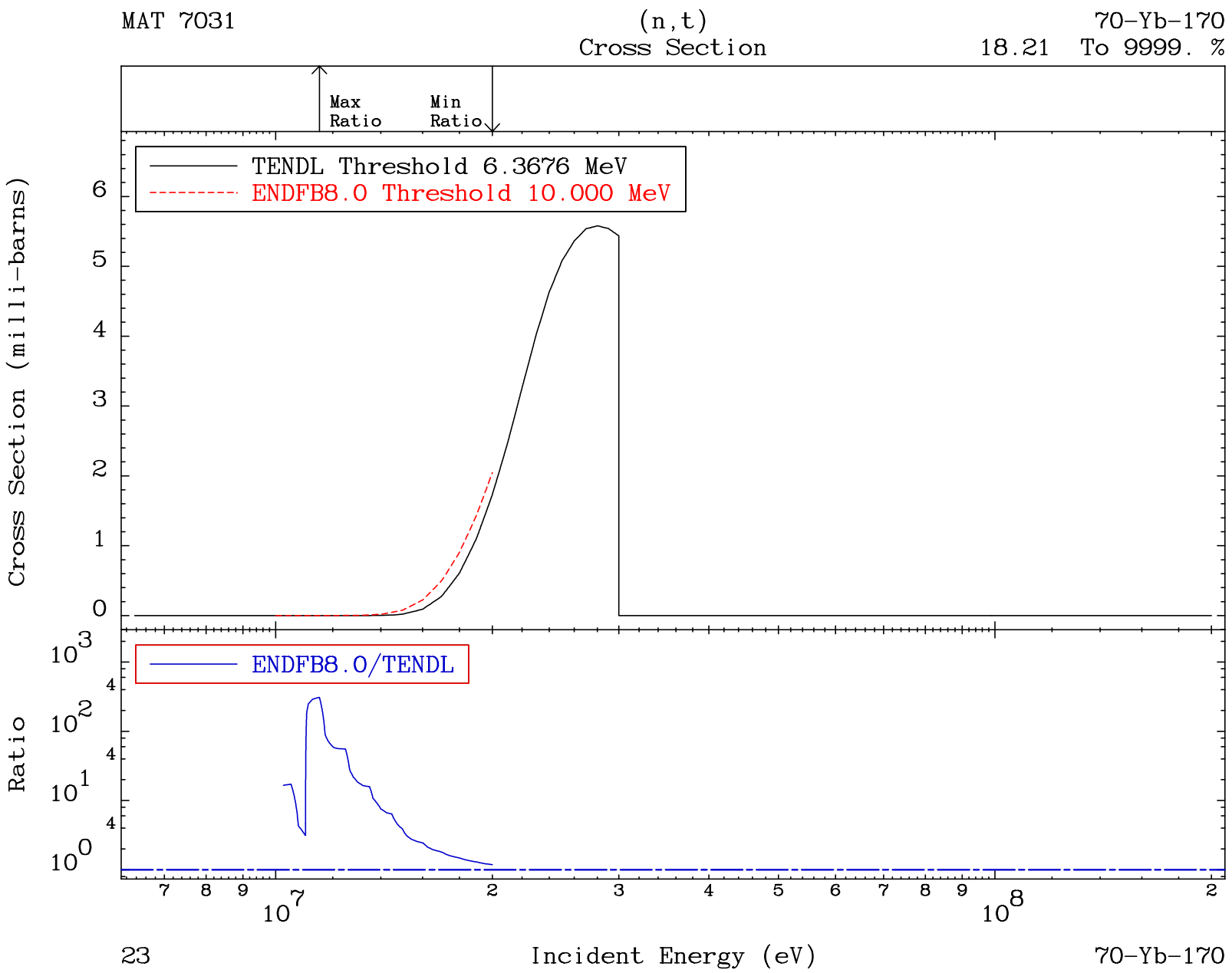

MAT 7031
MT= 60 (n,n') Level
Cross Section
70-Yb-170
46.15 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.2659 MeV
ENDFB8.0 Threshold 1.2659 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
70-Yb-170

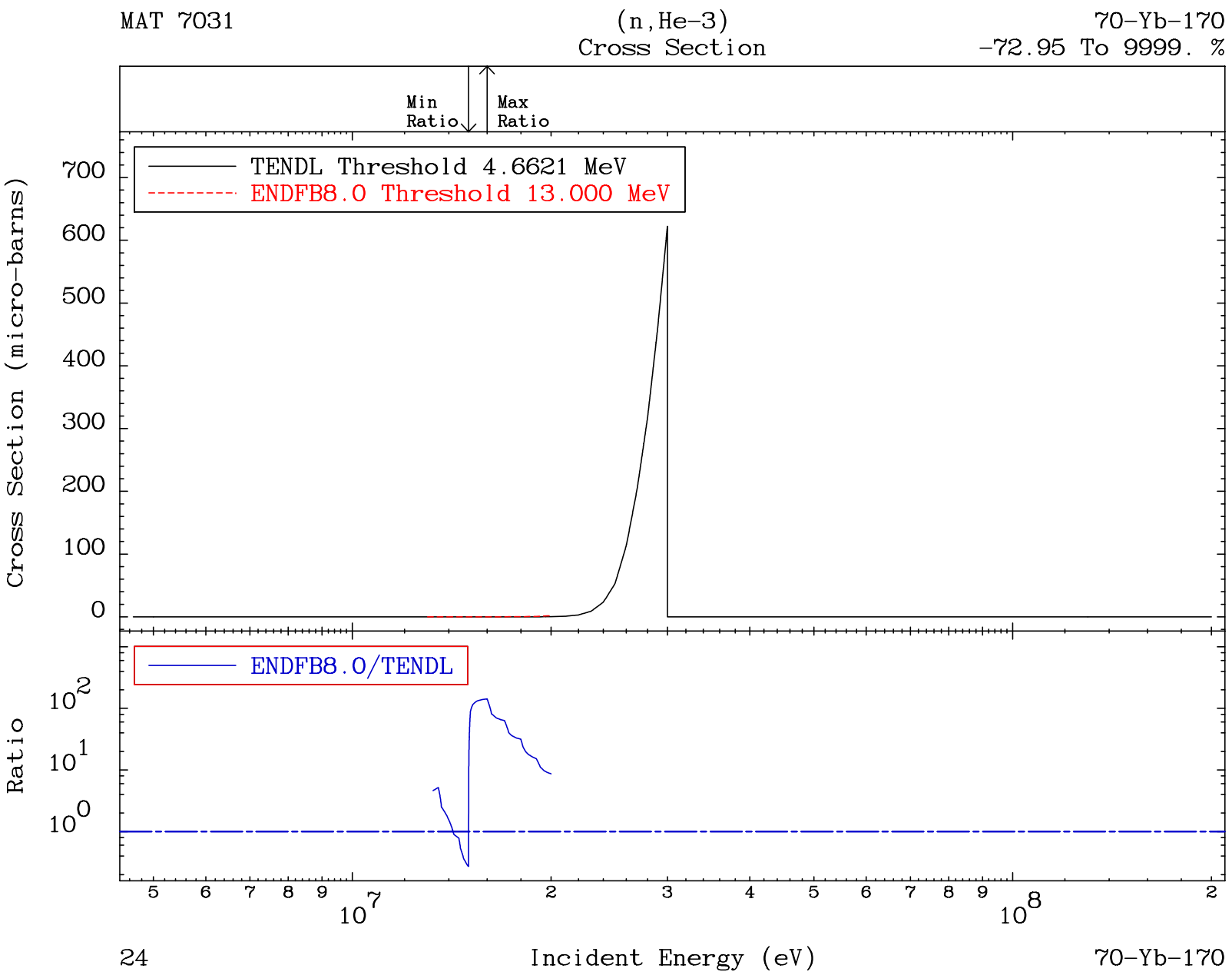

MAT 7031
(n,n') Continuum
Cross Section
70-Yb-170
-28.92 To 4082. %
Max
Ratio
Min
Ratio
TENDL Threshold 1.5757 MeV
ENDFB8.0 Threshold 1.2760 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
70-Yb-170

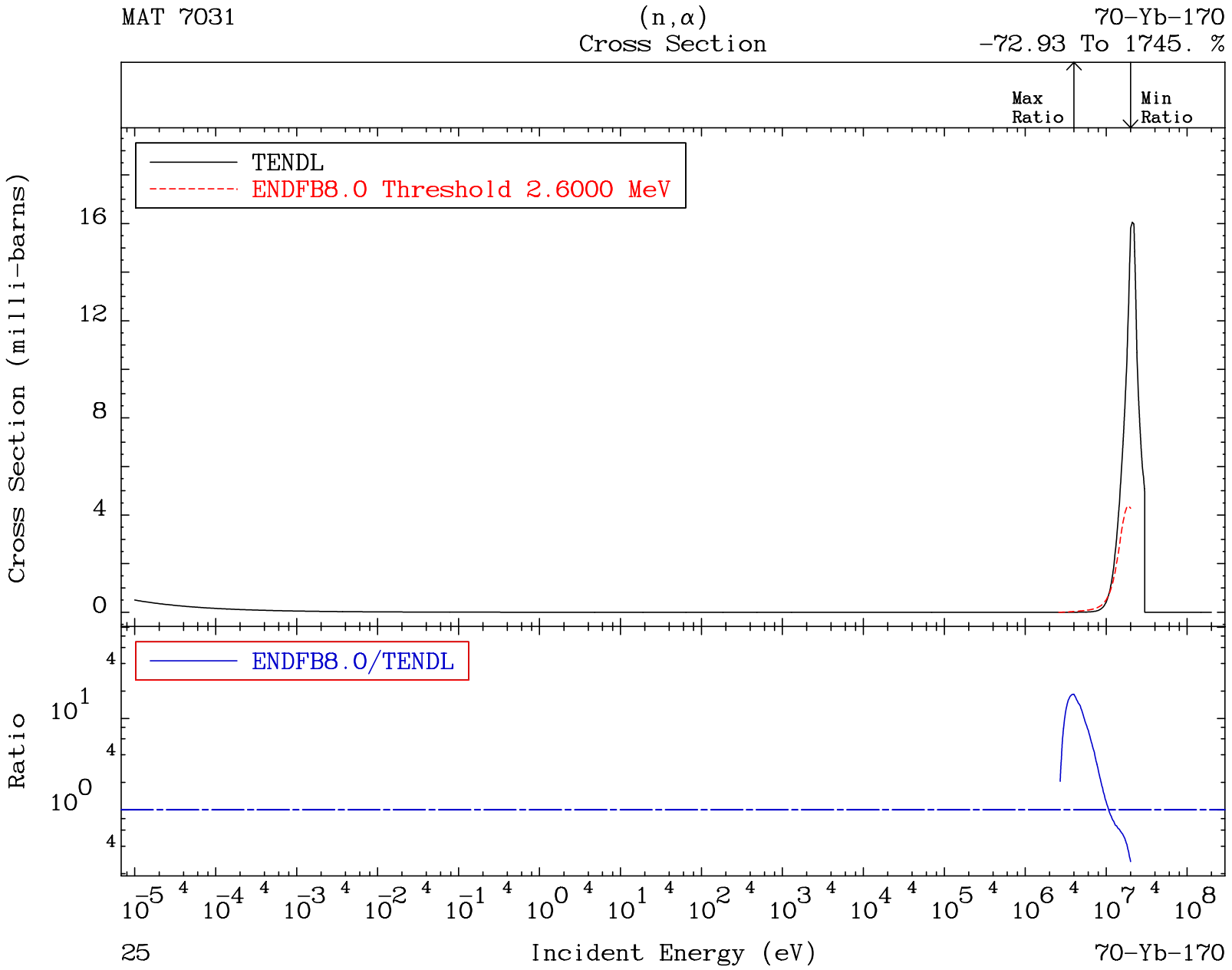

MAT 7031
(n,γ)
Cross Section
70-Yb-170
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
20
70-Yb-170

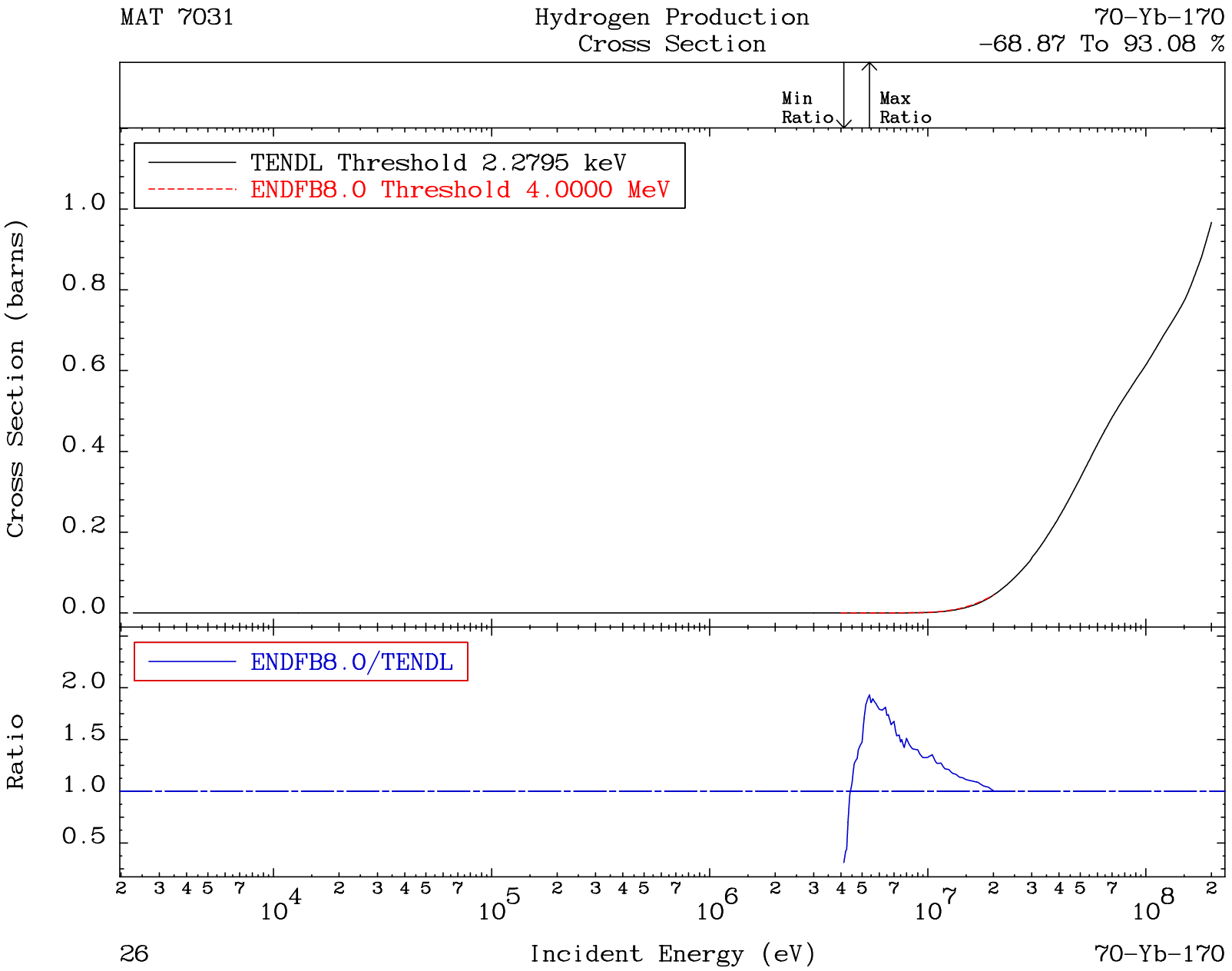

MAT 7031
(n,p)
Cross Section
70-Yb-170
-68.87 To 93.08 %
Min Ratio
Max Ratio
TENDL Threshold 187.37 keV
ENDFB8.0 Threshold 4.0000 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
2.0
1.5
1.0
0.5
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
21
Incident Energy (eV)
70-Yb-170

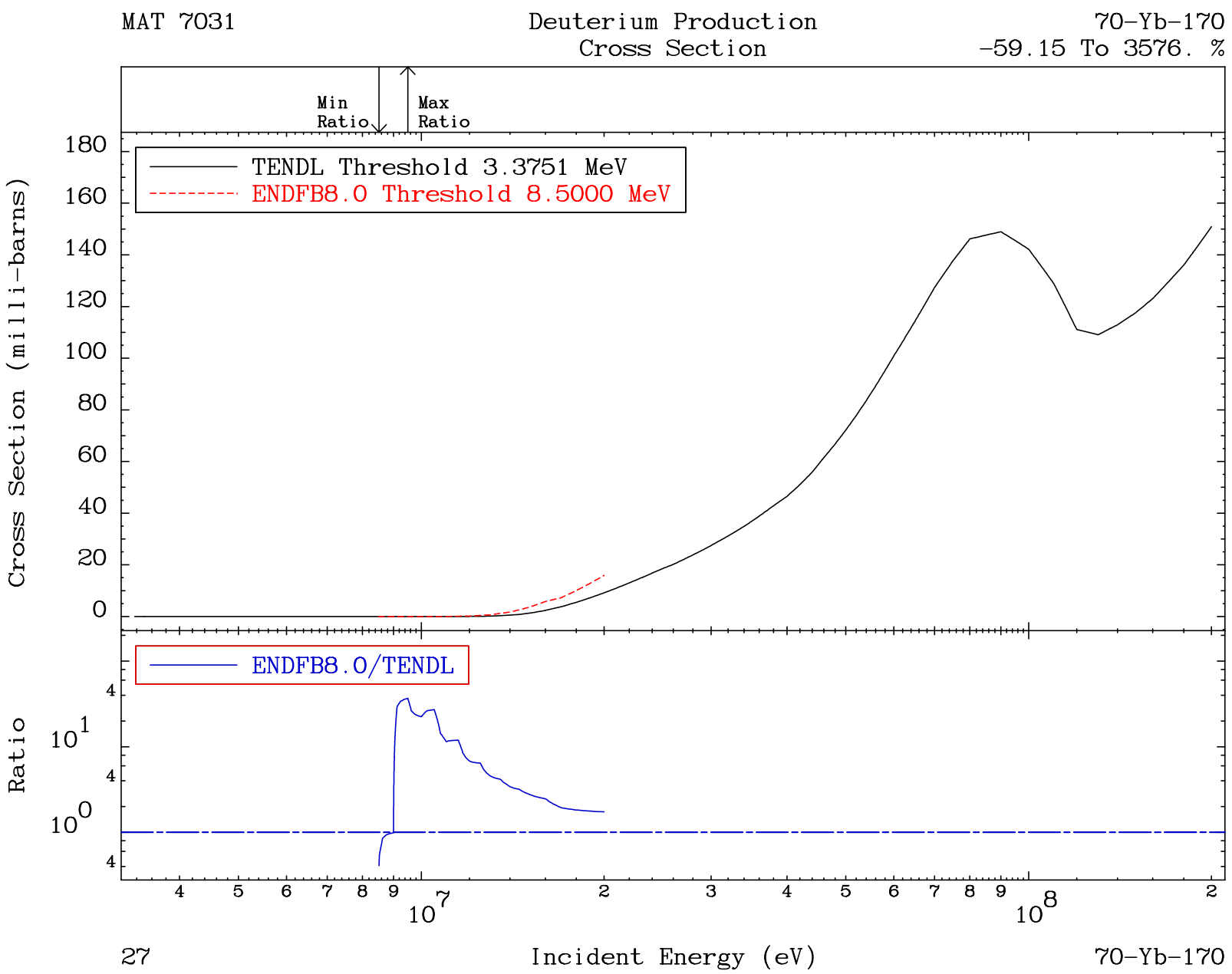

MAT 7031
(n,d)
Cross Section
70-Yb-170
-59.15 To 3576. %
Min Ratio
Max Ratio
TENDL Threshold 4.5807 MeV
ENDFB8.0 Threshold 8.5000 MeV
Cross Section (milli-barns)
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^1
10^0
4
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
70-Yb-170

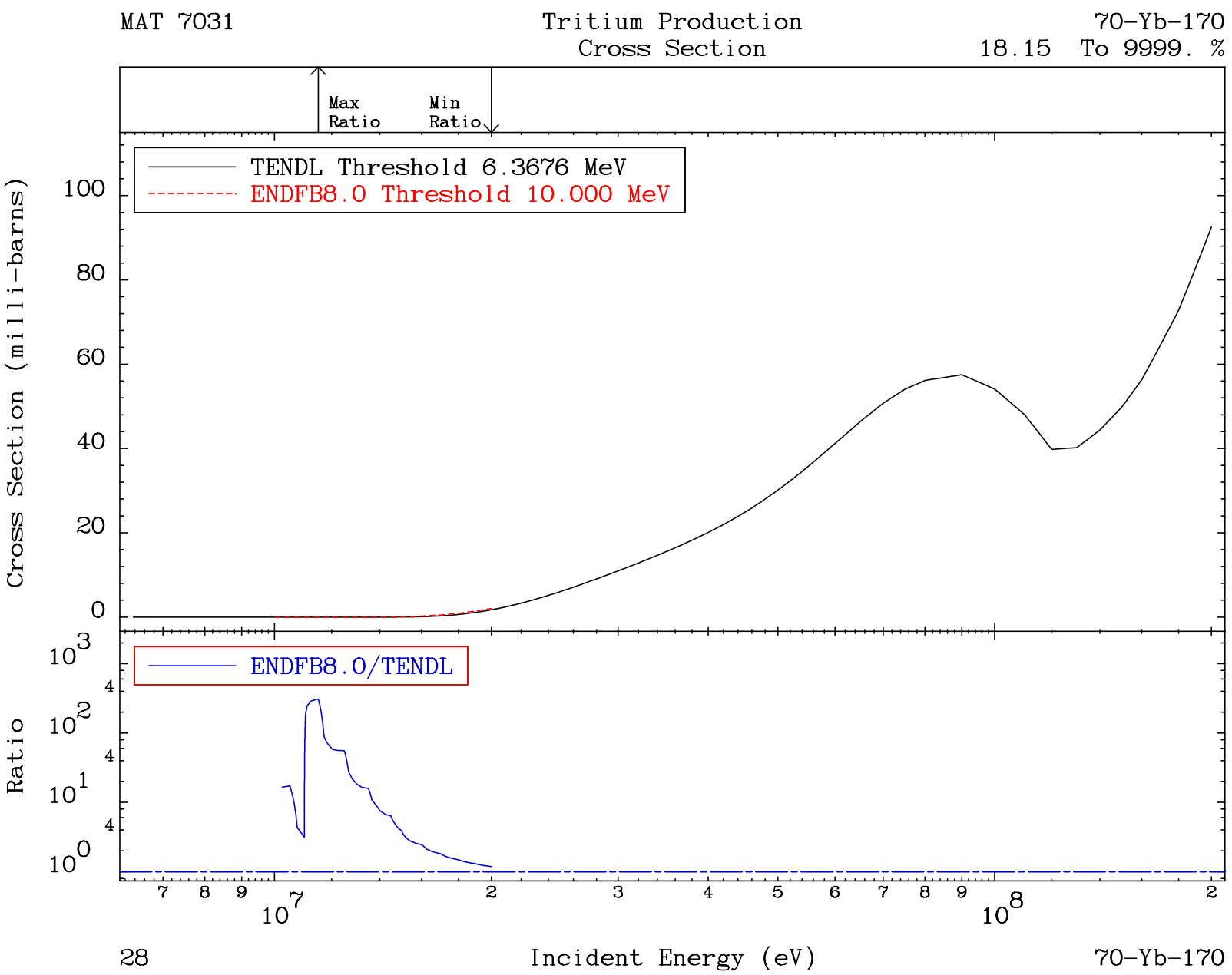

MAT 7031
(n,t)
Cross Section
70-Yb-170
18.21 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.3676 MeV
ENDFB8.0 Threshold 10.000 MeV
Cross Section (milli-barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
23
70-Yb-170

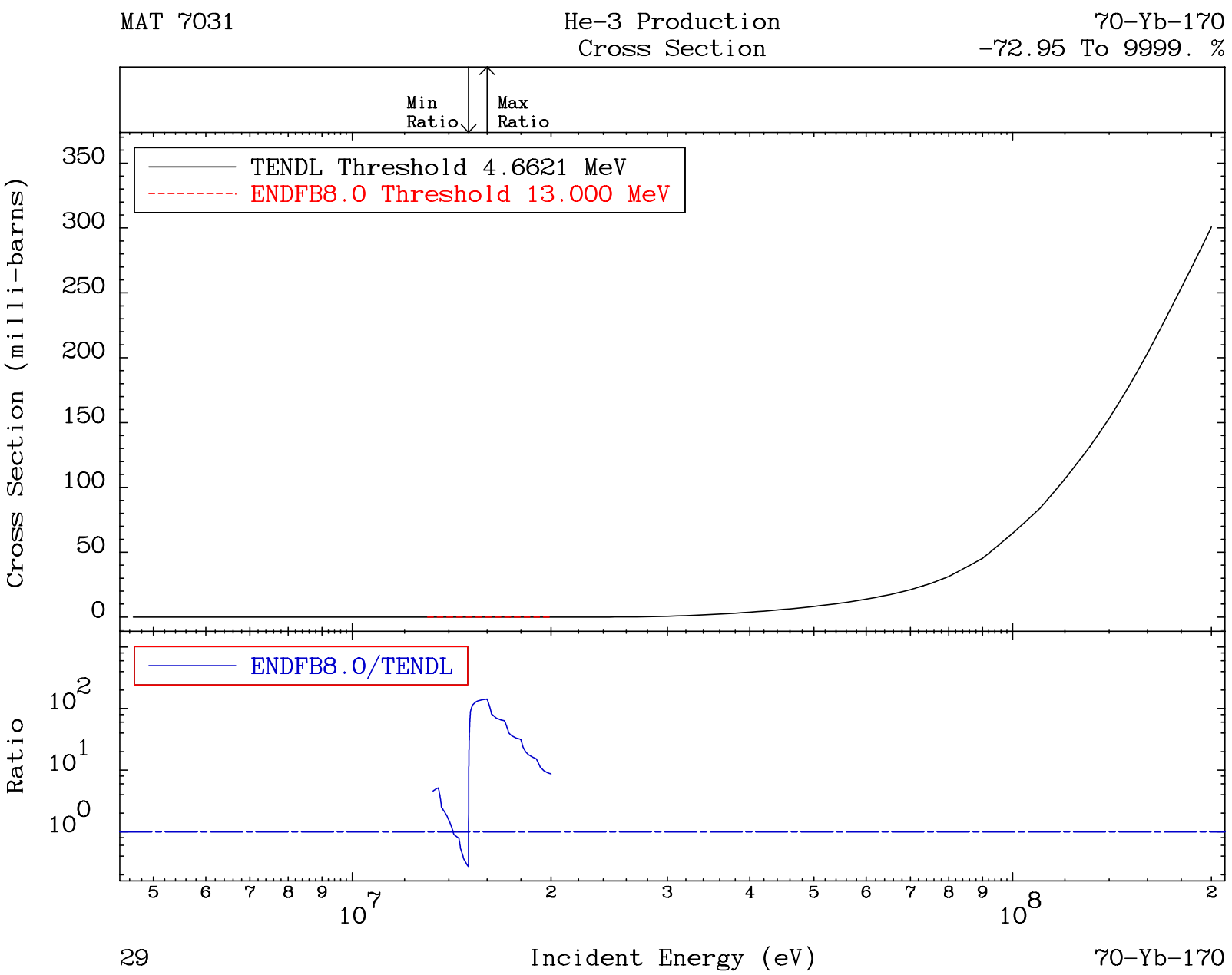

MAT 7031
(n,He-3)
Cross Section
70-Yb-170
-72.95 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 4.6621 MeV
ENDFB8.0 Threshold 13.000 MeV
Cross Section (micro-barns)
700
600
500
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
24
Incident Energy (eV)
70-Yb-170

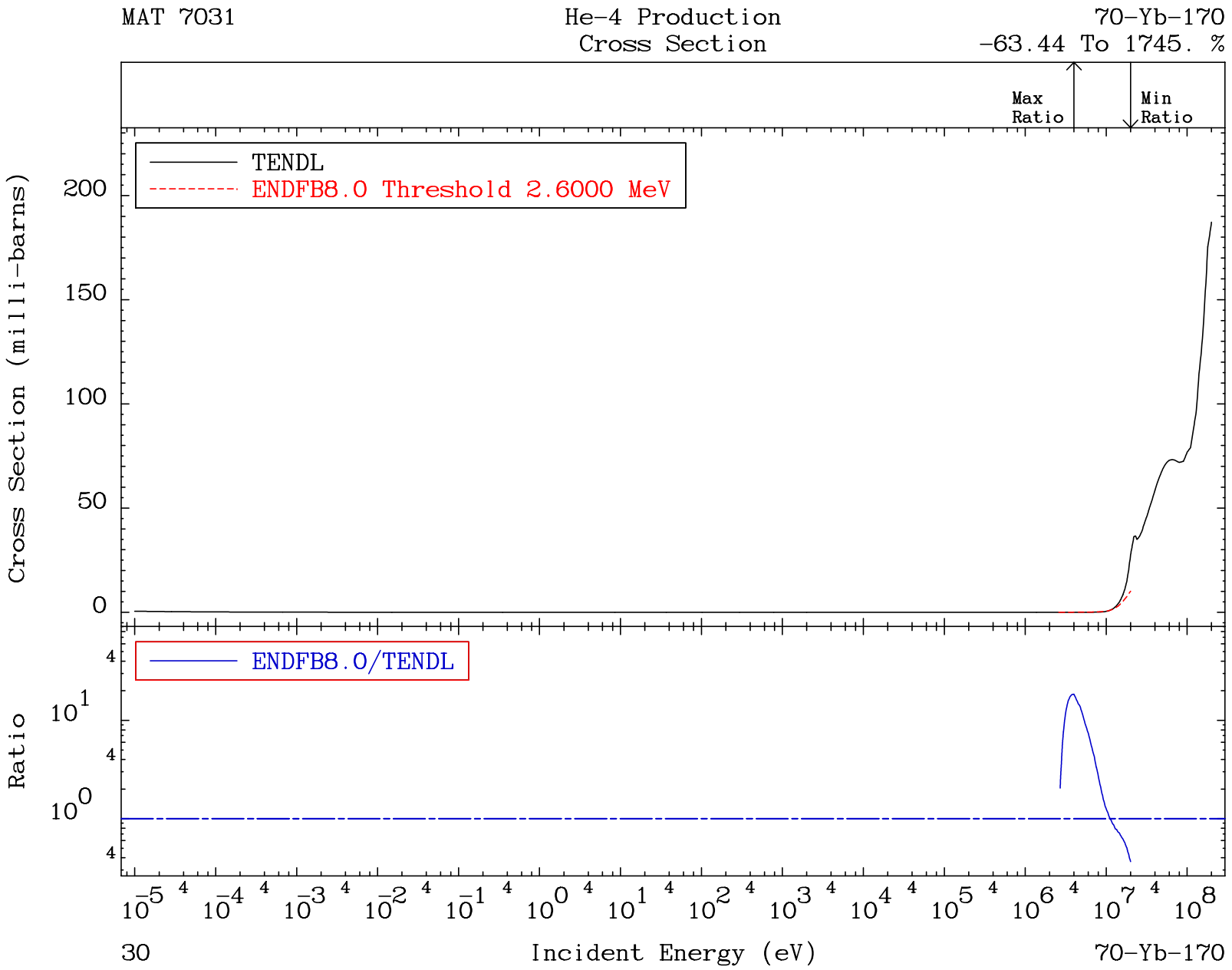

MAT 7031
(n,α)
Cross Section
70-Yb-170
-72.93 To 1745. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0 Threshold 2.6000 MeV
Cross Section (milli-barns)
16
12
8
4
0
ENDFB8.0/TENDL
Ratio
10^1
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
Incident Energy (eV)
25
70-Yb-170

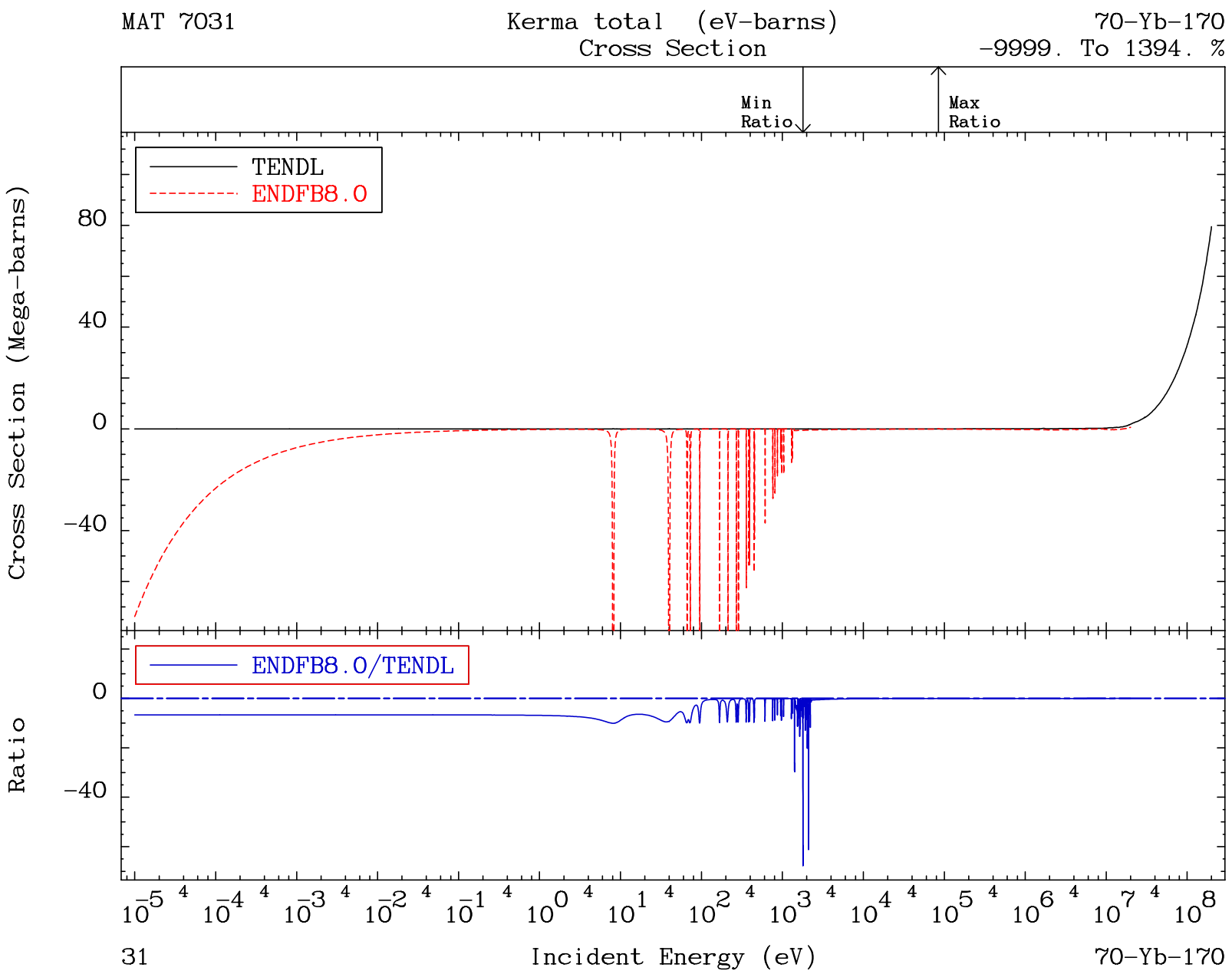

MAT 7031
Hydrogen Production
Cross Section
70-Yb-170
-68.87 To 93.08 %
Min Ratio
Max Ratio
TENDL Threshold 2.2795 keV
ENDFB8.0 Threshold 4.0000 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
ENDFB8.0/TENDL
Ratio
2.0
1.5
1.0
0.5
2 3 4 5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
26
Incident Energy (eV)
70-Yb-170

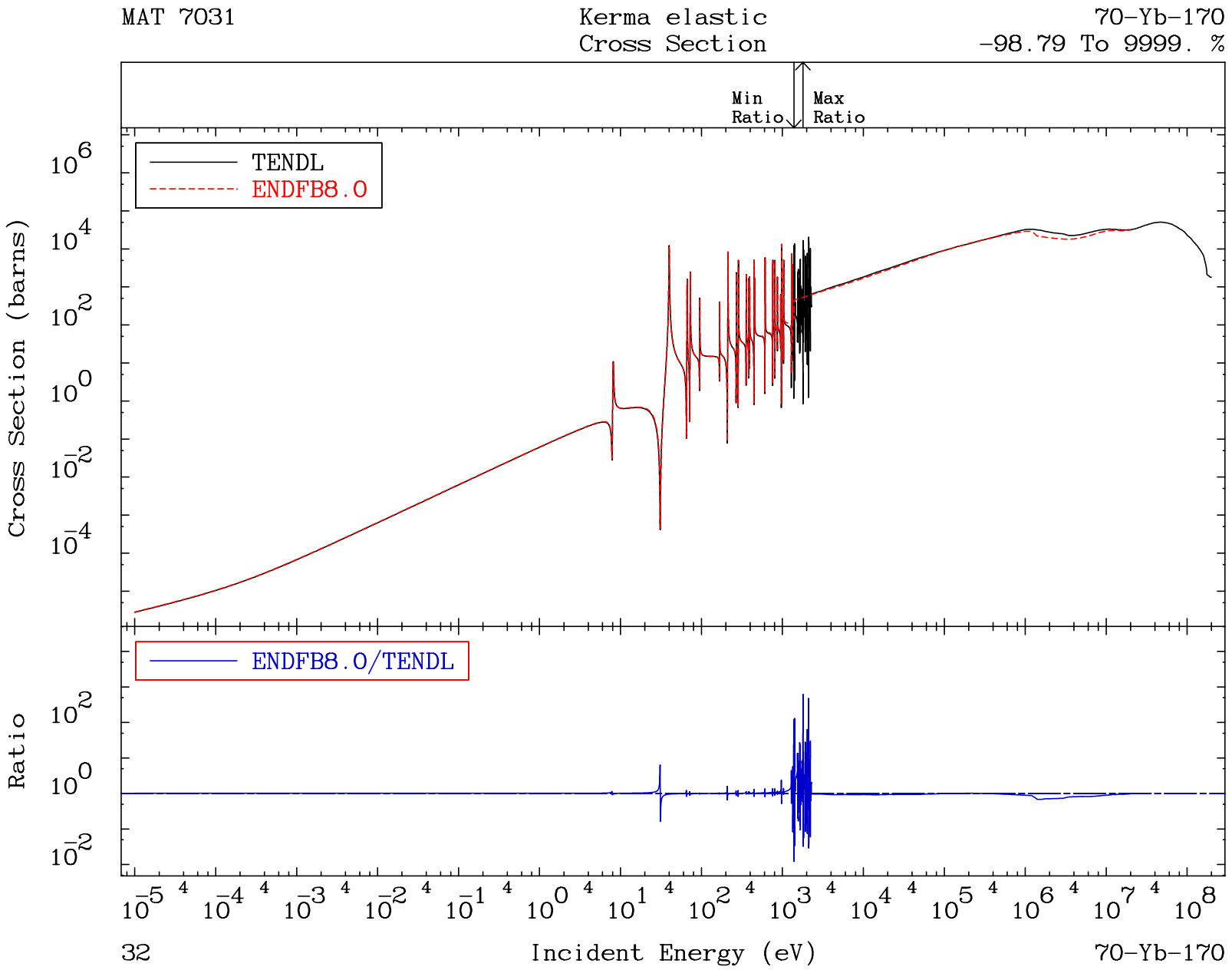

MAT 7031
Deuterium Production
Cross Section
70-Yb-170
-59.15 To 3576. %
Min Ratio
Max Ratio
TENDL Threshold 3.3751 MeV
ENDFB8.0 Threshold 8.5000 MeV
Cross Section (milli-barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
27
70-Yb-170

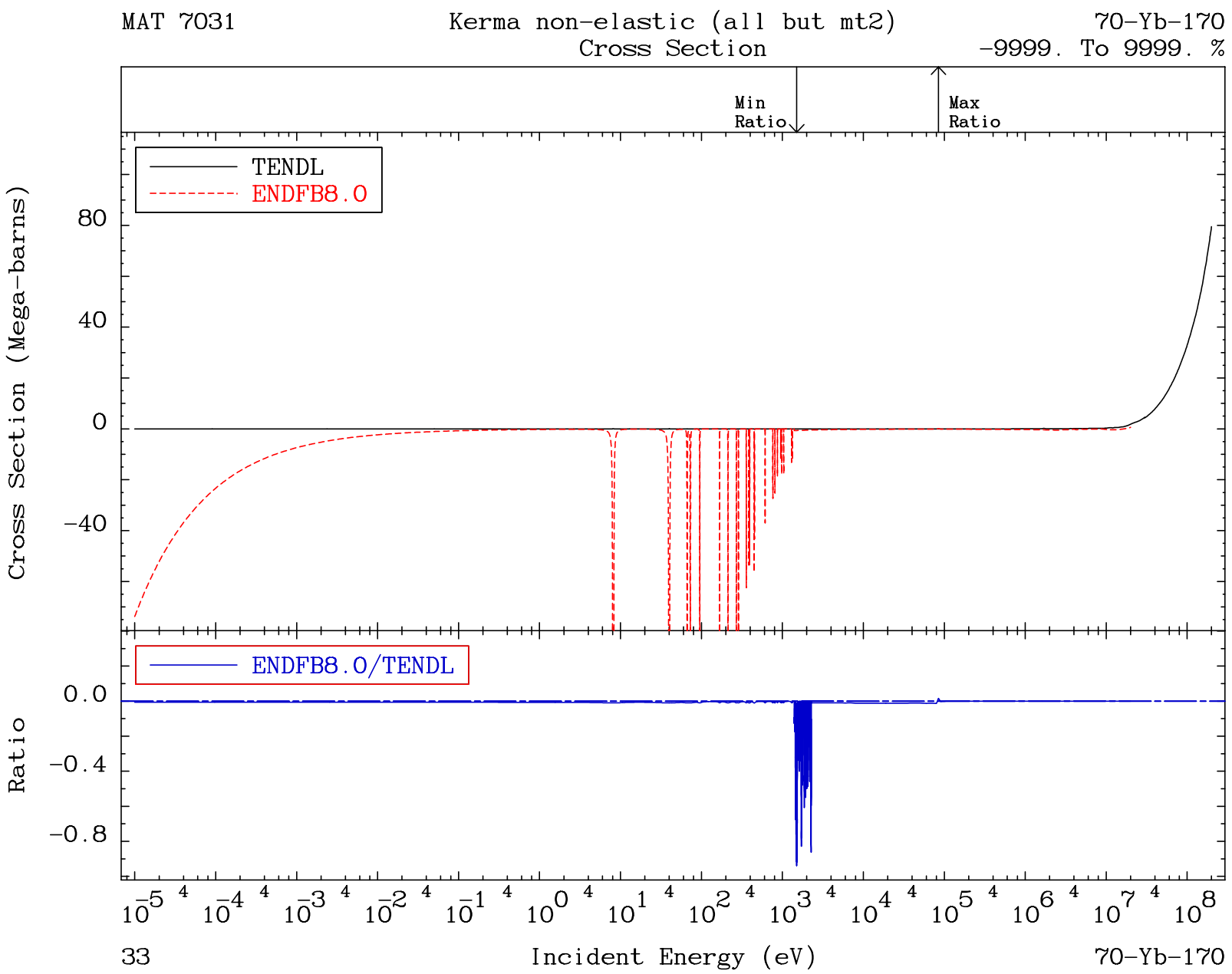

MAT 7031
Tritium Production
Cross Section
70-Yb-170
18.15 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.3676 MeV
ENDFB8.0 Threshold 10.000 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^3
10^2
10^1
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
70-Yb-170

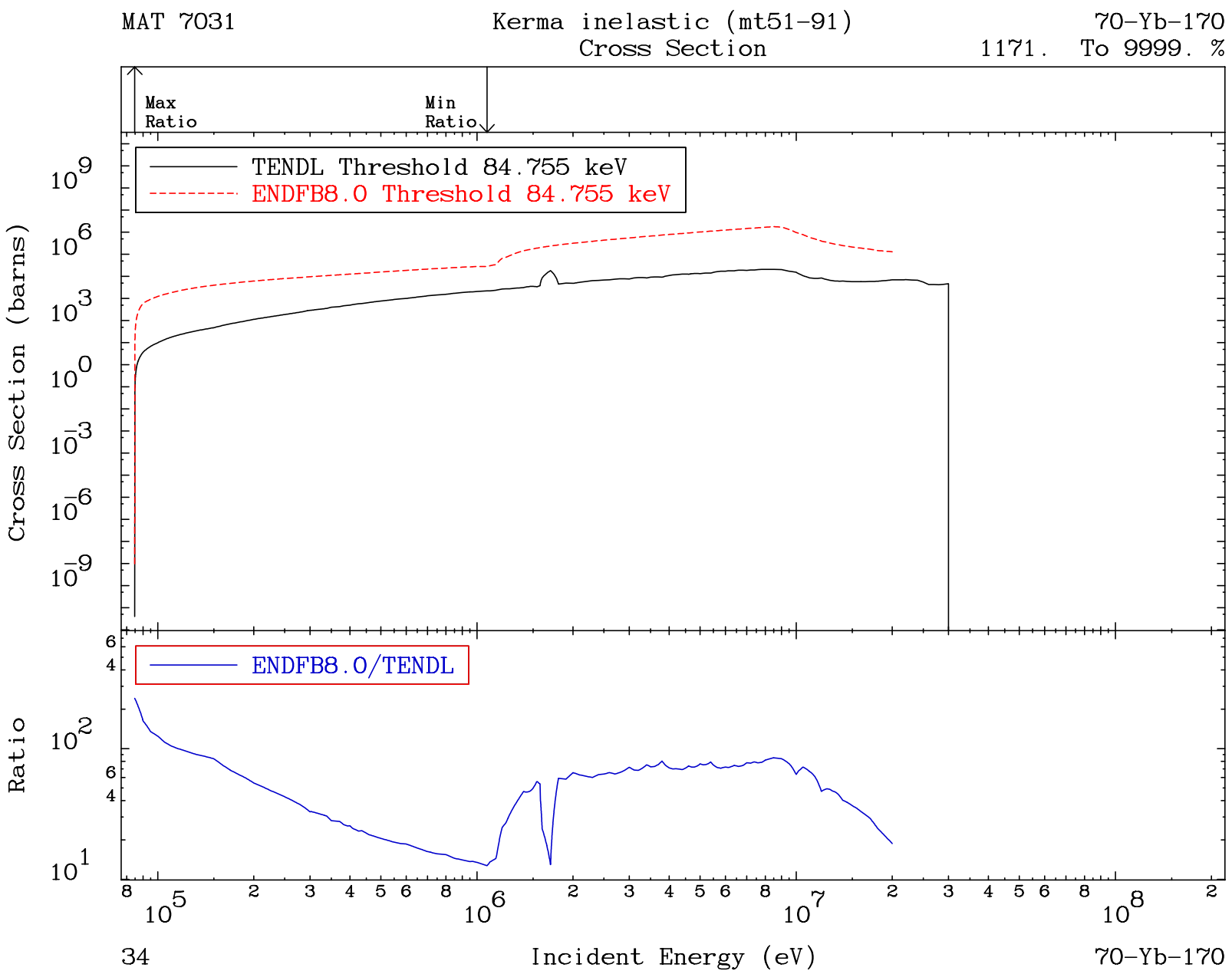

MAT 7031
He-3 Production
Cross Section
70-Yb-170
-72.95 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 4.6621 MeV
ENDFB8.0 Threshold 13.000 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
70-Yb-170

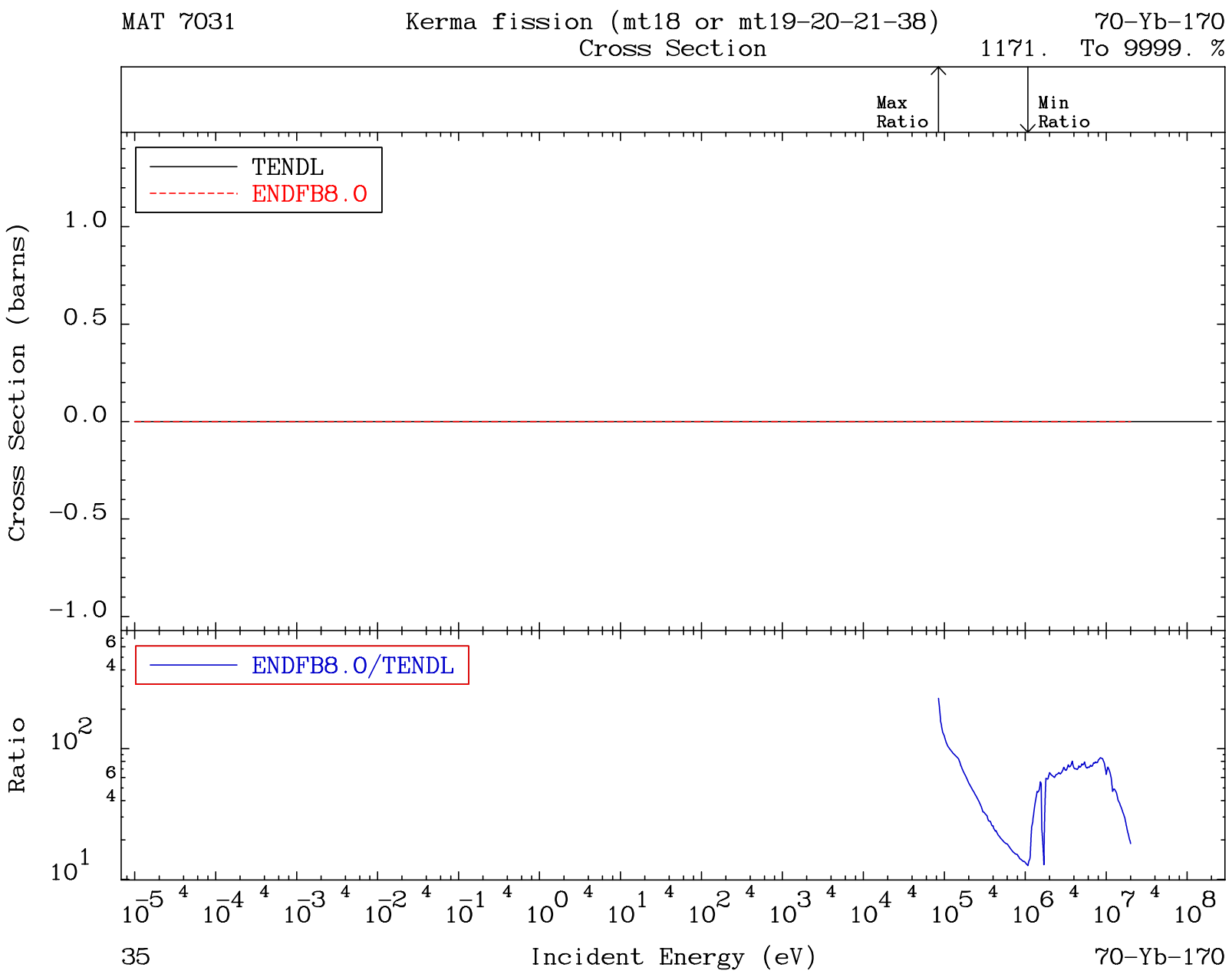

MAT 7031
He-4 Production
Cross Section
70-Yb-170
-63.44 To 1745. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0 Threshold 2.6000 MeV
Cross Section (milli-barns)
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^1
10^0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
Incident Energy (eV)
30
70-Yb-170

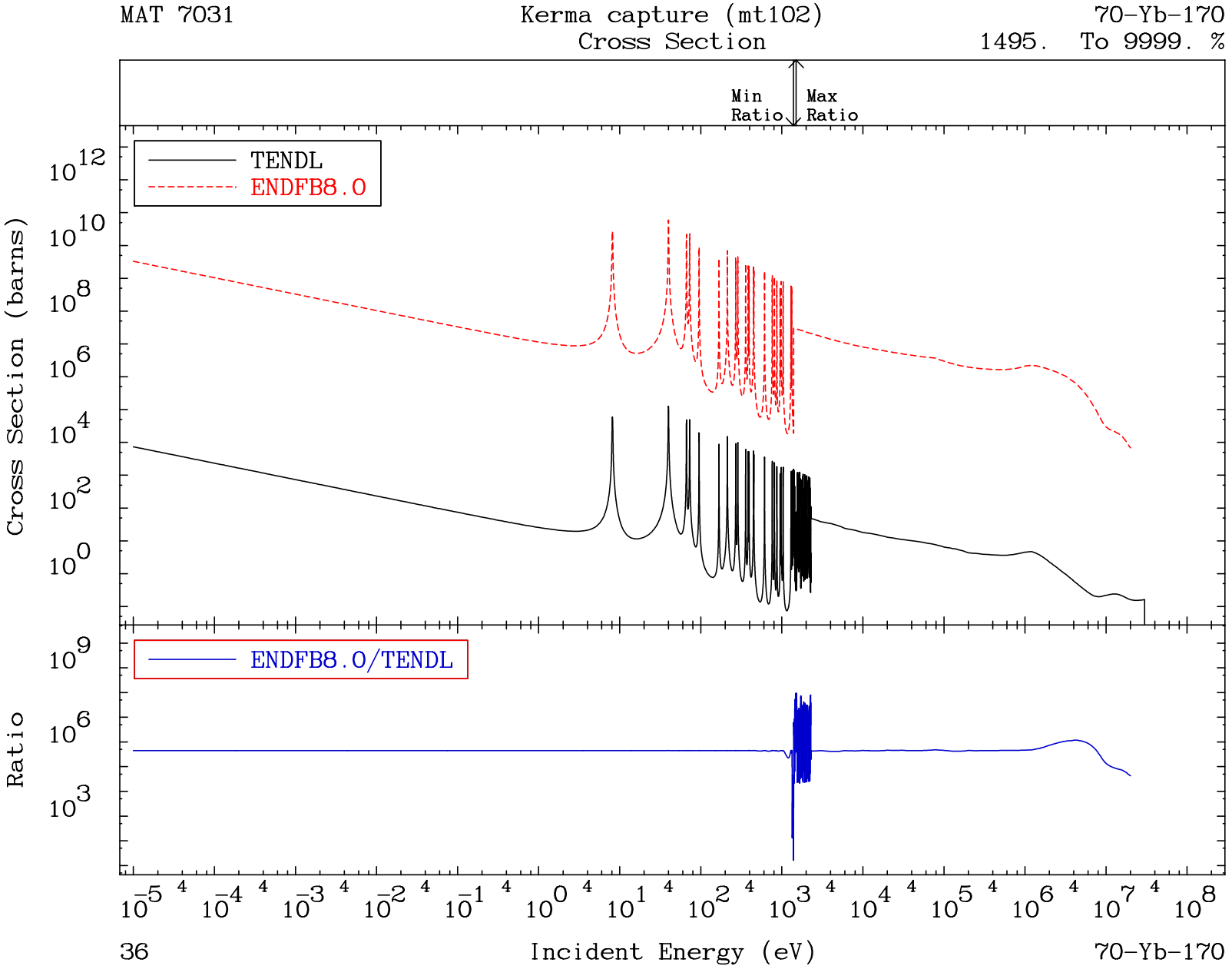

MAT 7031
Kerma total (eV-barns)
Cross Section
70-Yb-170
-9999. To 1394. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
80
40
0
-40
Cross Section (Mega-barns)
ENDFB8.0/TENDL
0
-40
Ratio
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
31
Incident Energy (eV)
70-Yb-170

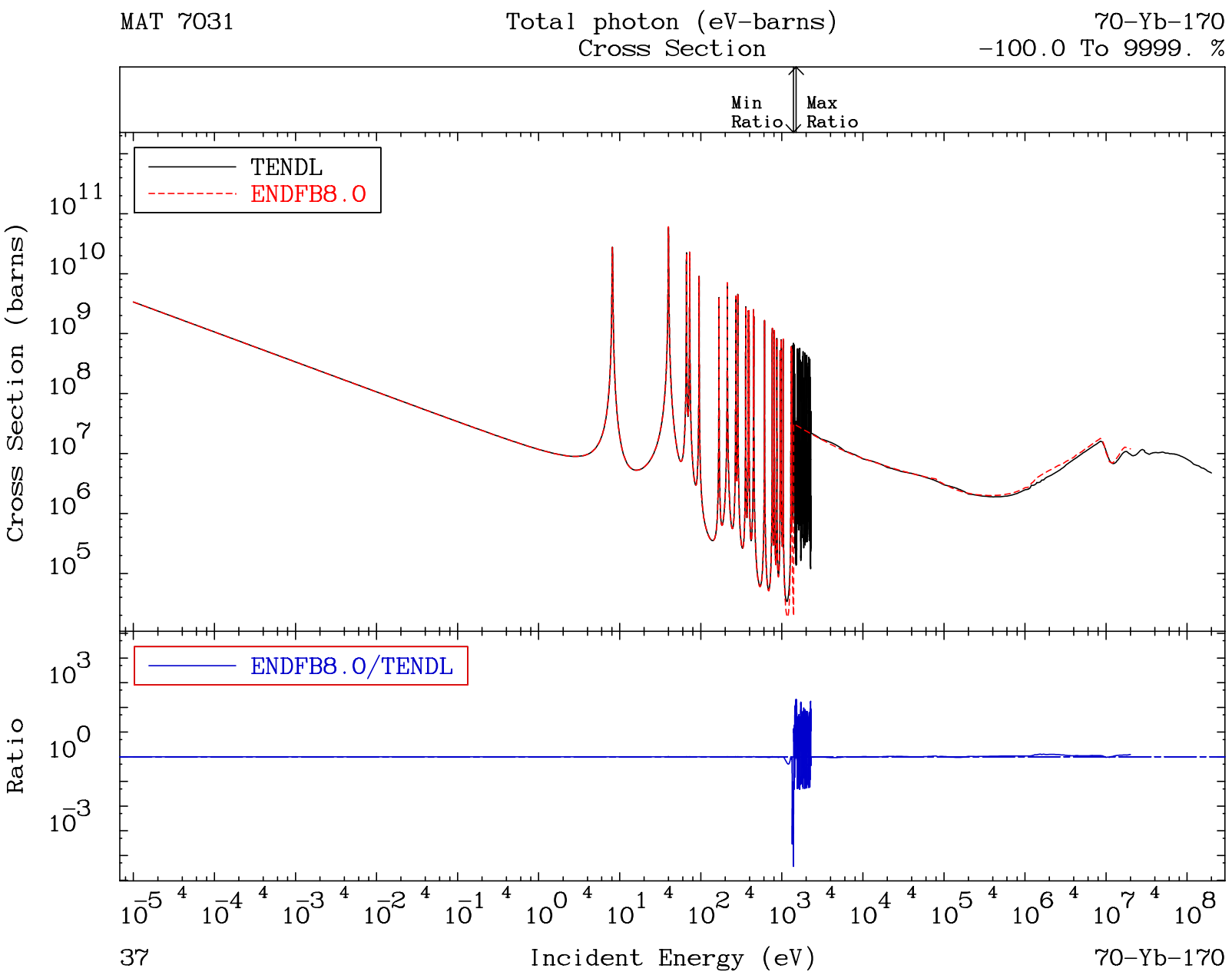

MAT 7031
Kerma elastic
Cross Section
70-Yb-170
-98.79 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
32
70-Yb-170

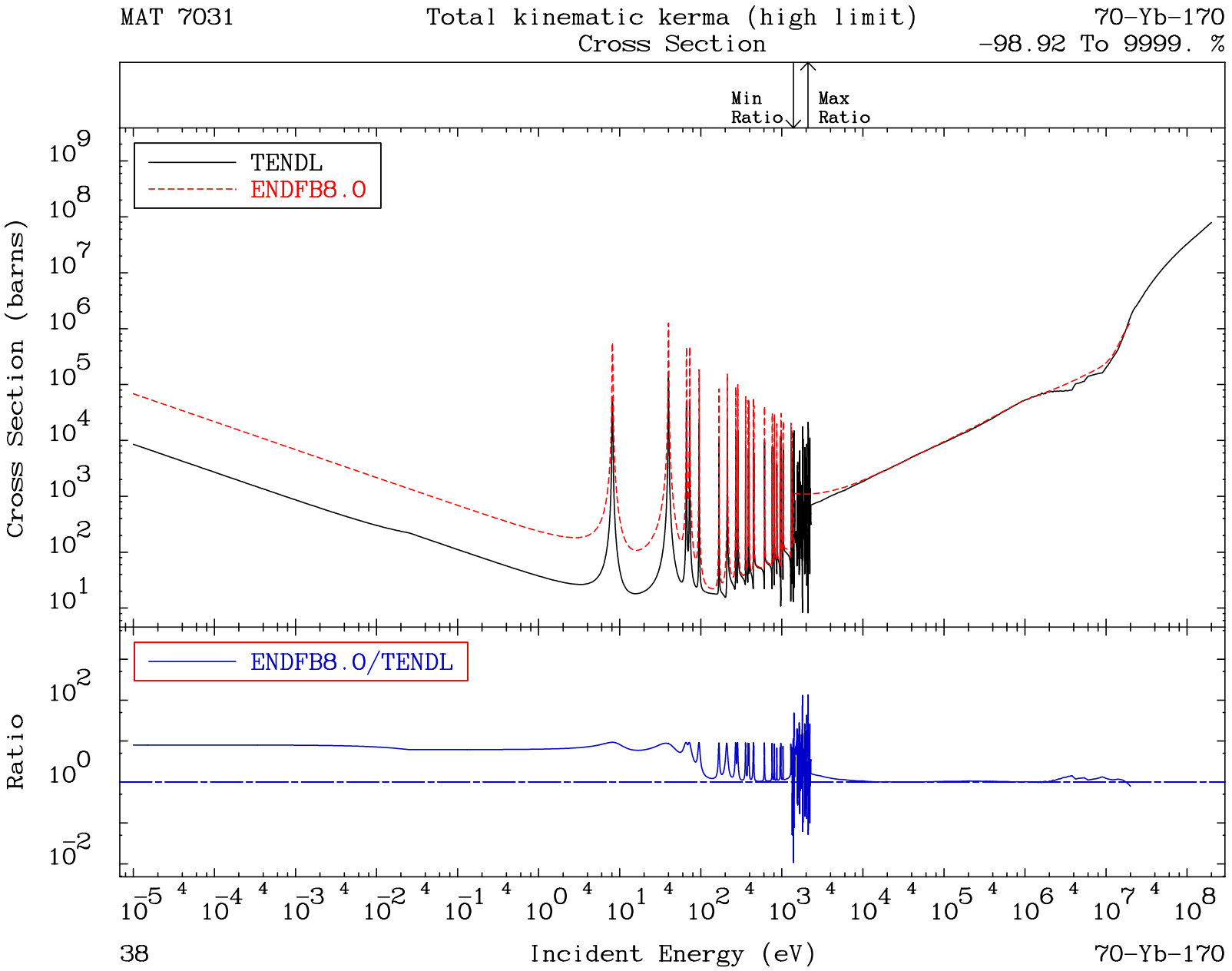

MAT 7031
Kerma non-elastic (all but mt2)
Cross Section
70-Yb-170
-9999. To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (Mega-barns)
80
40
0
-40
ENDFB8.0/TENDL
Ratio
0.0
-0.4
-0.8
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
33
Incident Energy (eV)
70-Yb-170

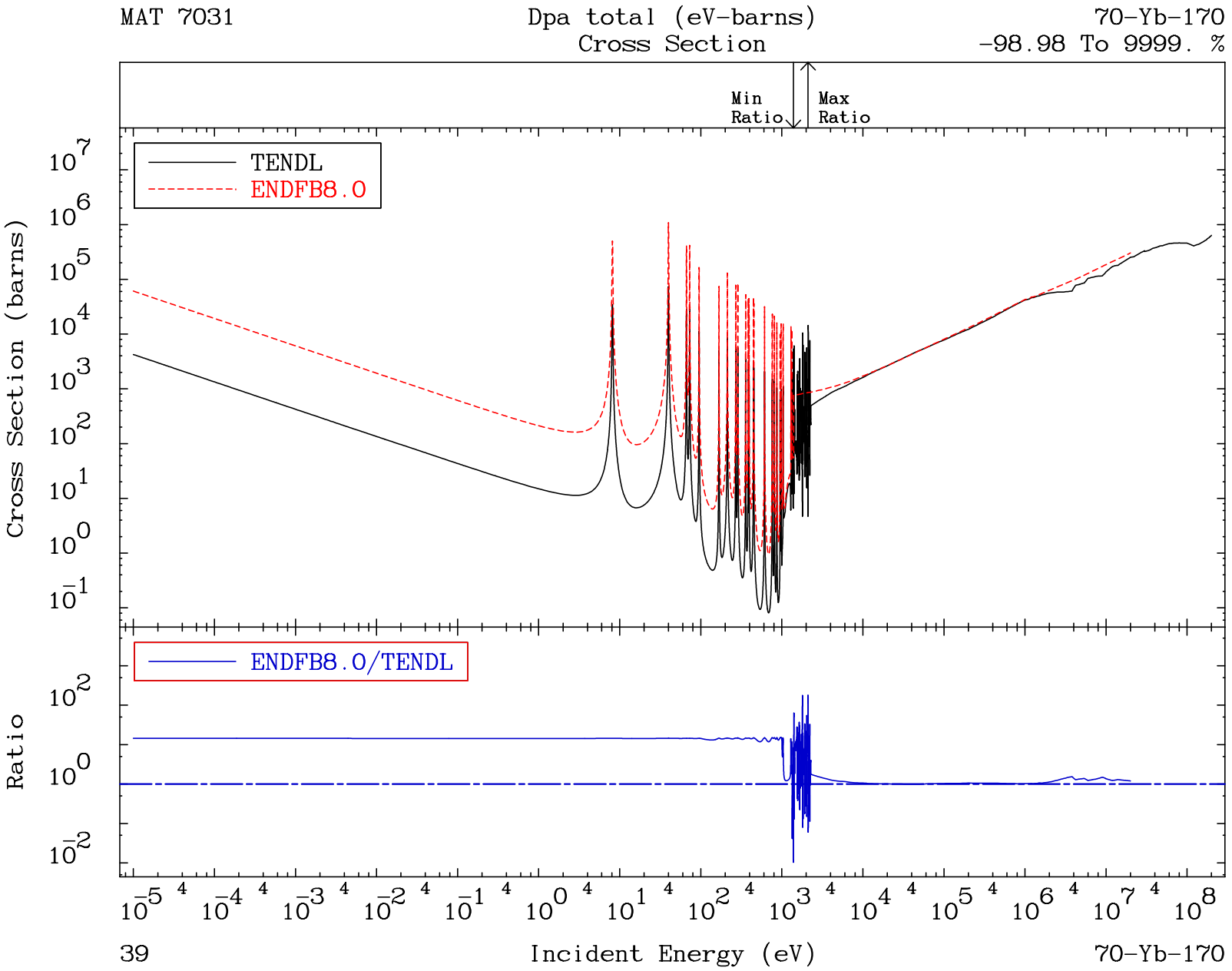

MAT 7031
Kerma inelastic (mt51-91)
Cross Section
70-Yb-170
1171. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 84.755 keV
ENDFB8.0 Threshold 84.755 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
34
70-Yb-170

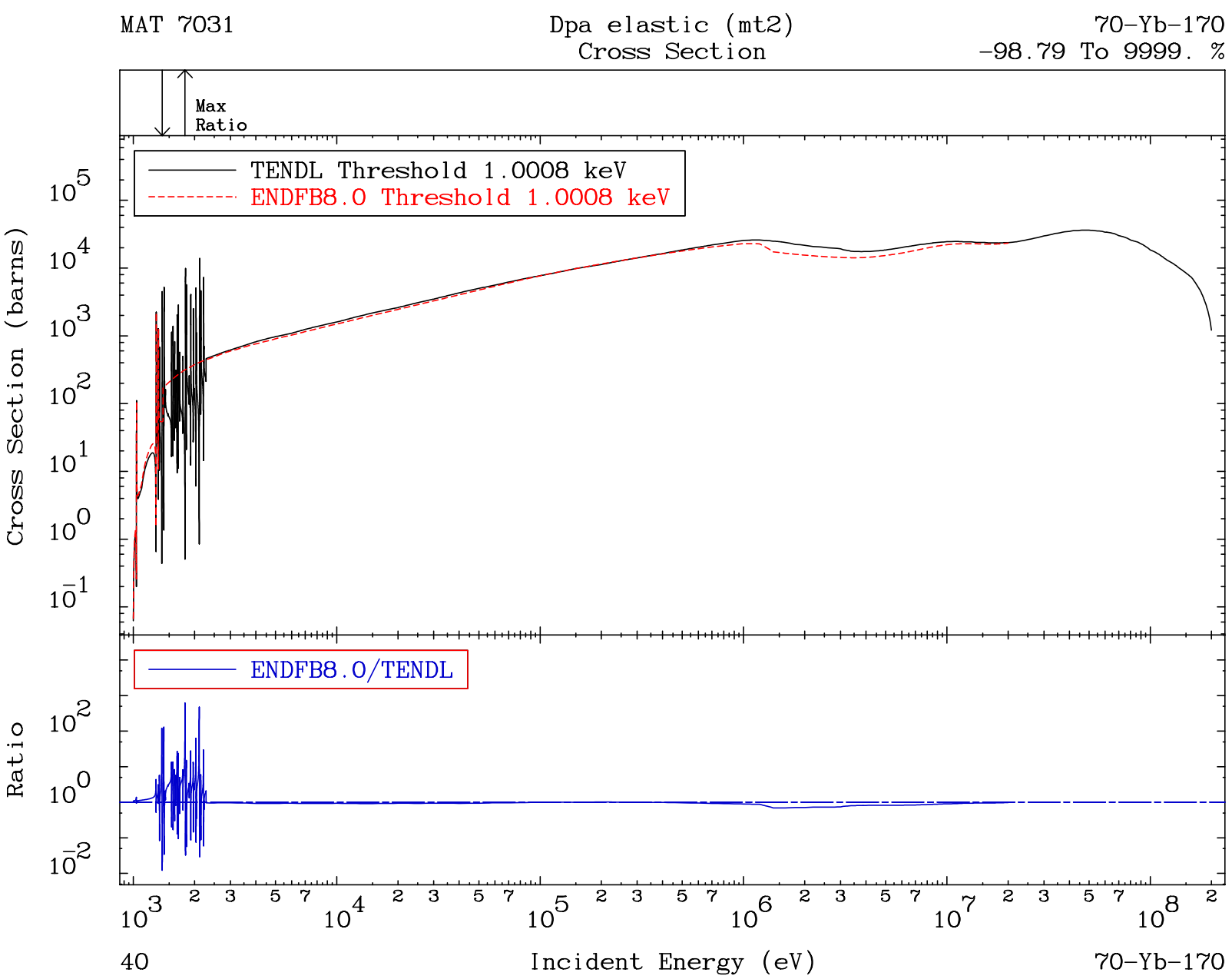

MAT 7031
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
70-Yb-170
1171. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
35
Incident Energy (eV)
70-Yb-170

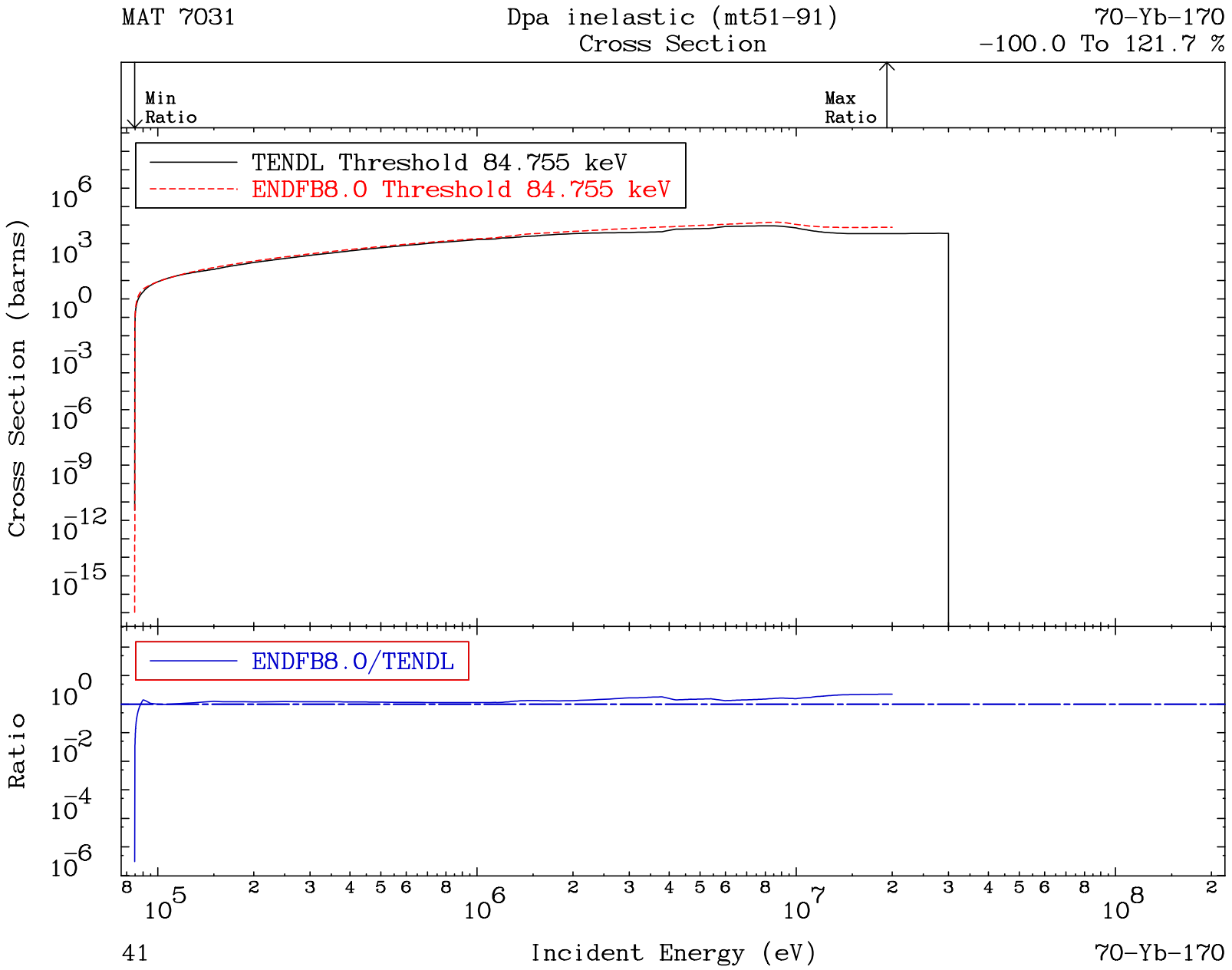

MAT 7031
Kerma capture (mt102)
Cross Section
70-Yb-170
1495. To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
36
70-Yb-170

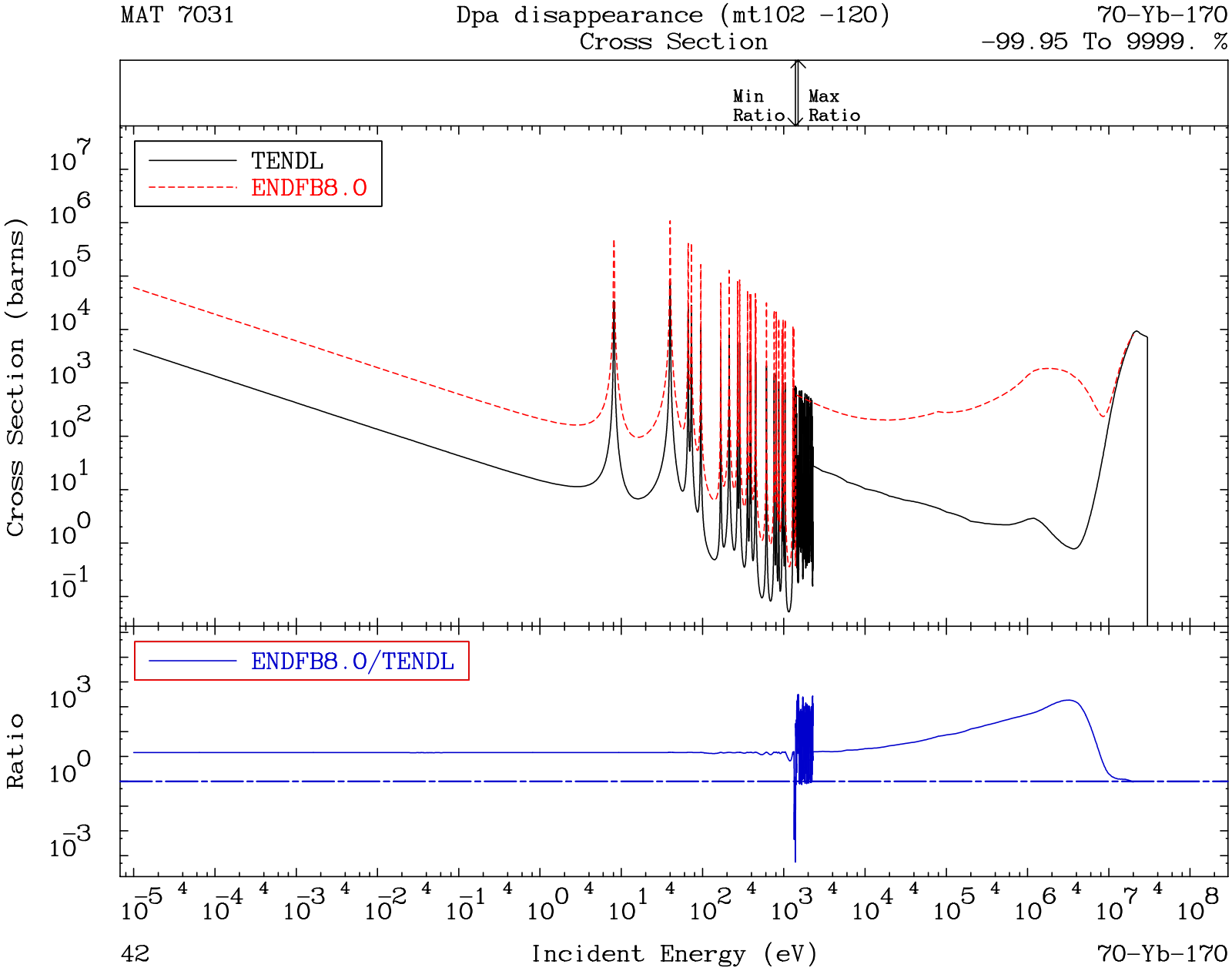

MAT 7031
Total photon (eV-barns)
Cross Section
70-Yb-170
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
37
70-Yb-170


MAT 7031
Total kinematic kerma (high limit)
Cross Section
70-Yb-170
-98.92 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
38
70-Yb-170


MAT 7031
Dpa total (eV-barns)
Cross Section
70-Yb-170
-98.98 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
39
70-Yb-170


MAT 7031
Dpa elastic (mt2)
Cross Section
70-Yb-170
-98.79 To 9999. %
Max
Ratio
TENDL Threshold 1.0008 keV
ENDFB8.0 Threshold 1.0008 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
40
70-Yb-170


MAT 7031
Dpa inelastic (mt51-91)
Cross Section
70-Yb-170
-100.0 To 121.7 %
Min Ratio
Max Ratio
TENDL Threshold 84.755 keV
ENDFB8.0 Threshold 84.755 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
41
70-Yb-170


MAT 7031
Dpa disappearance (mt102 -120)
Cross Section
70-Yb-170
-99.95 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
42
70-Yb-170