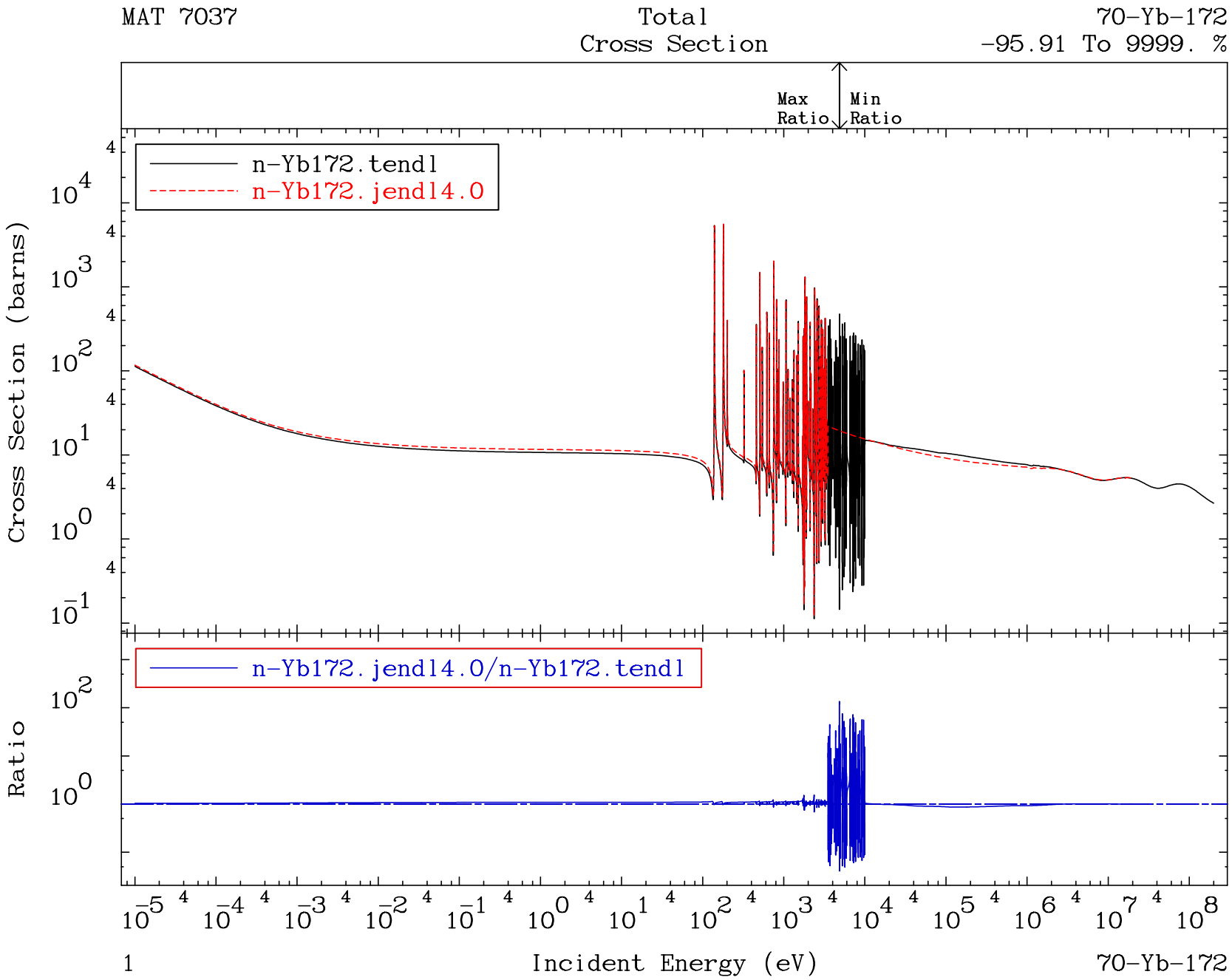
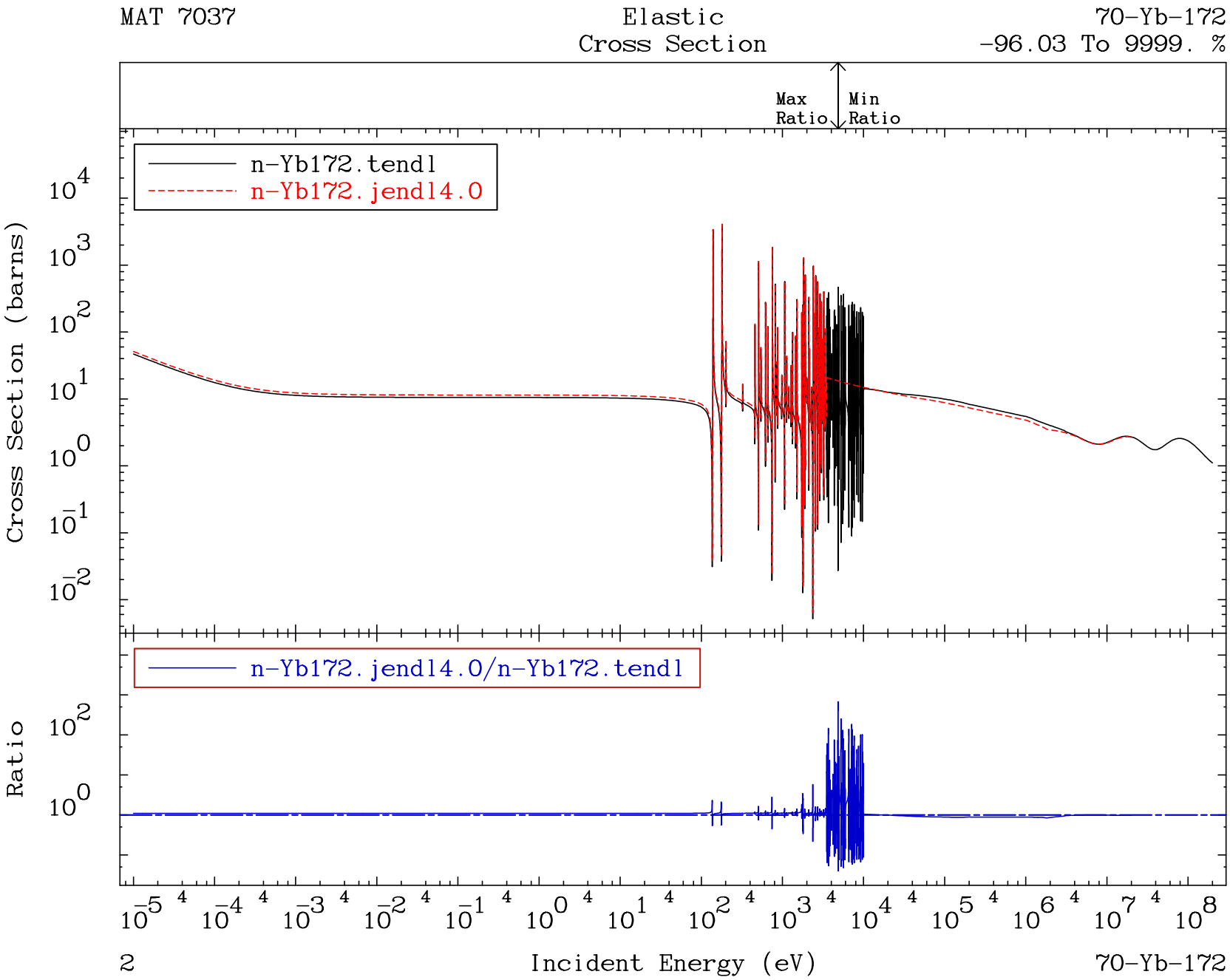
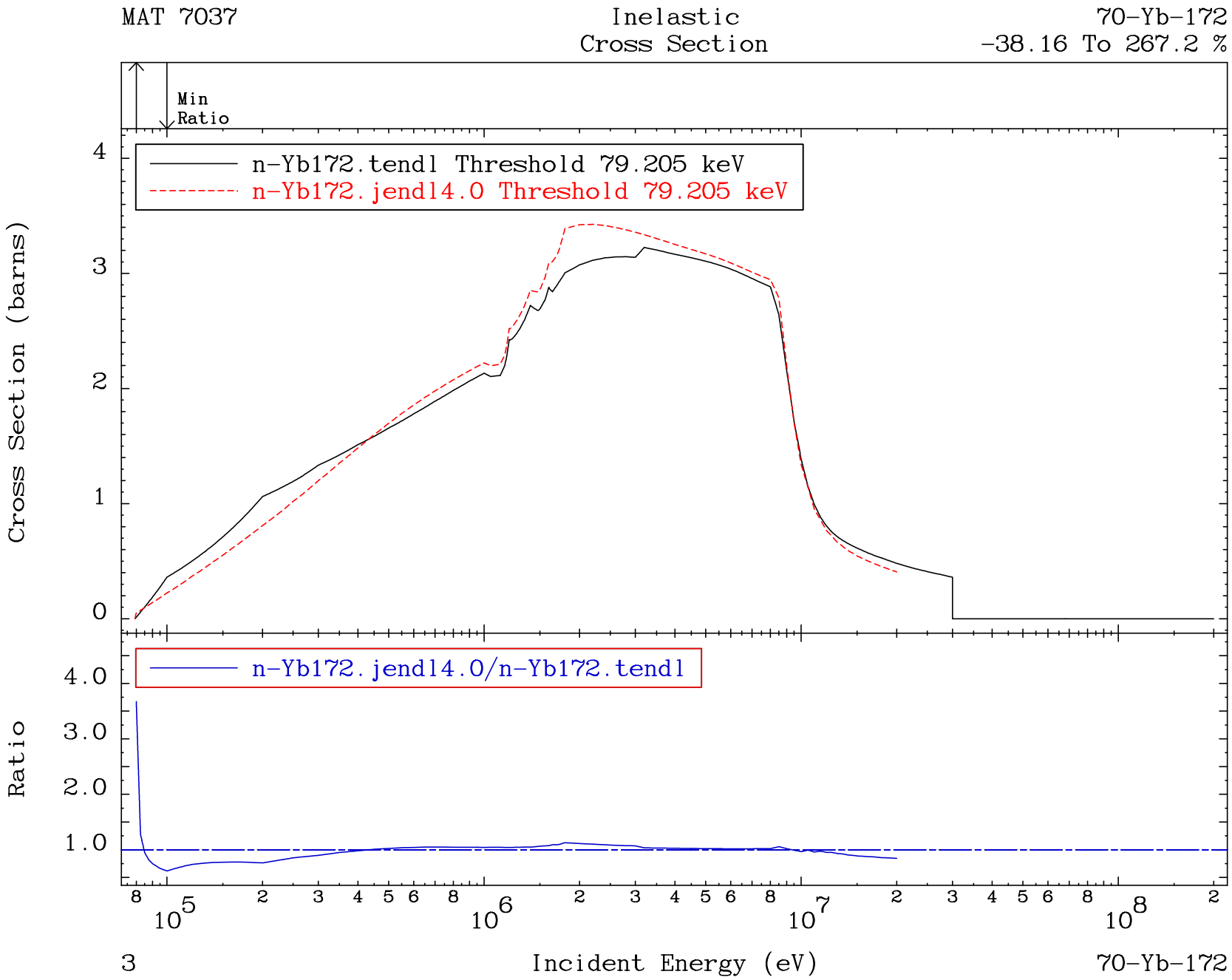
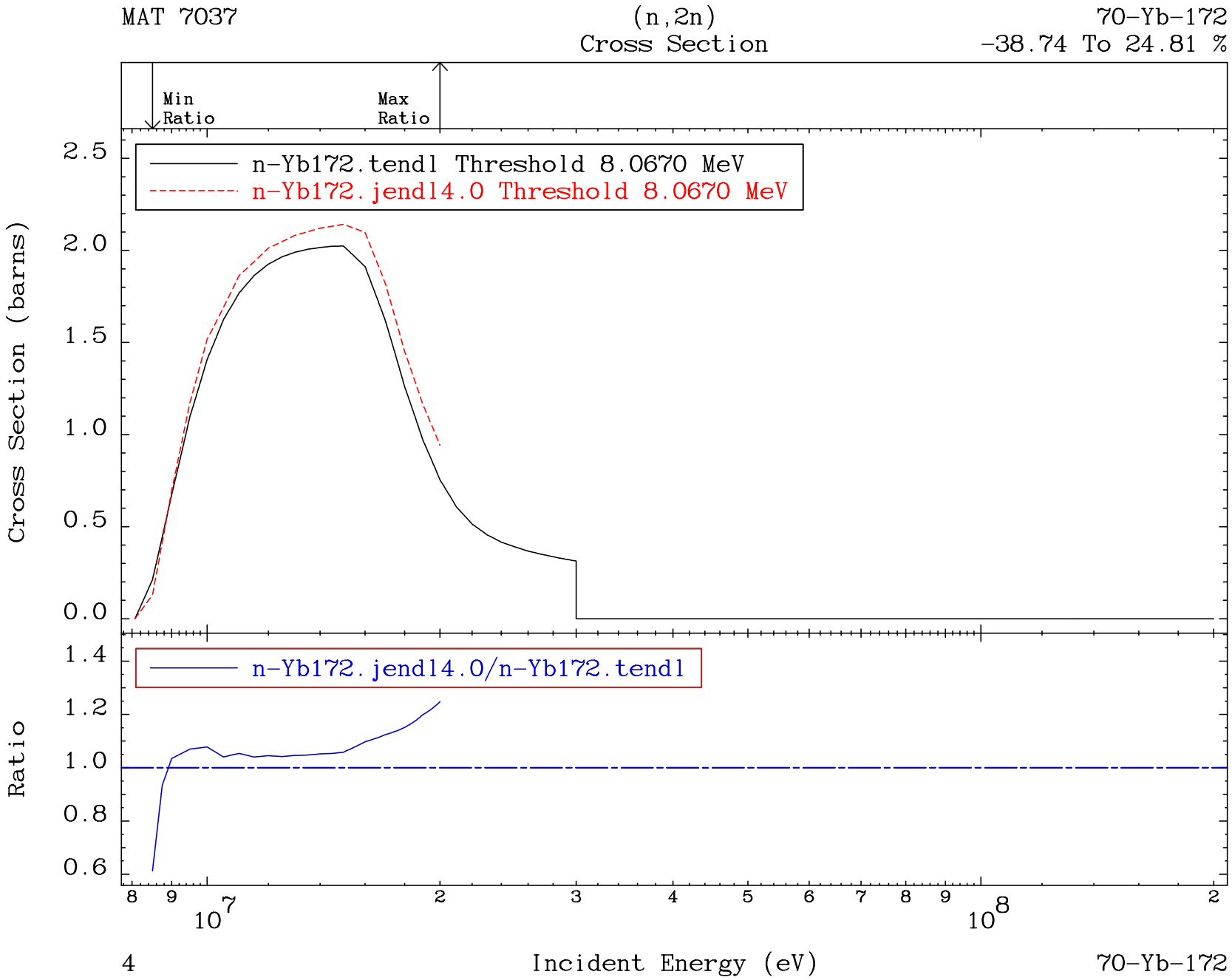
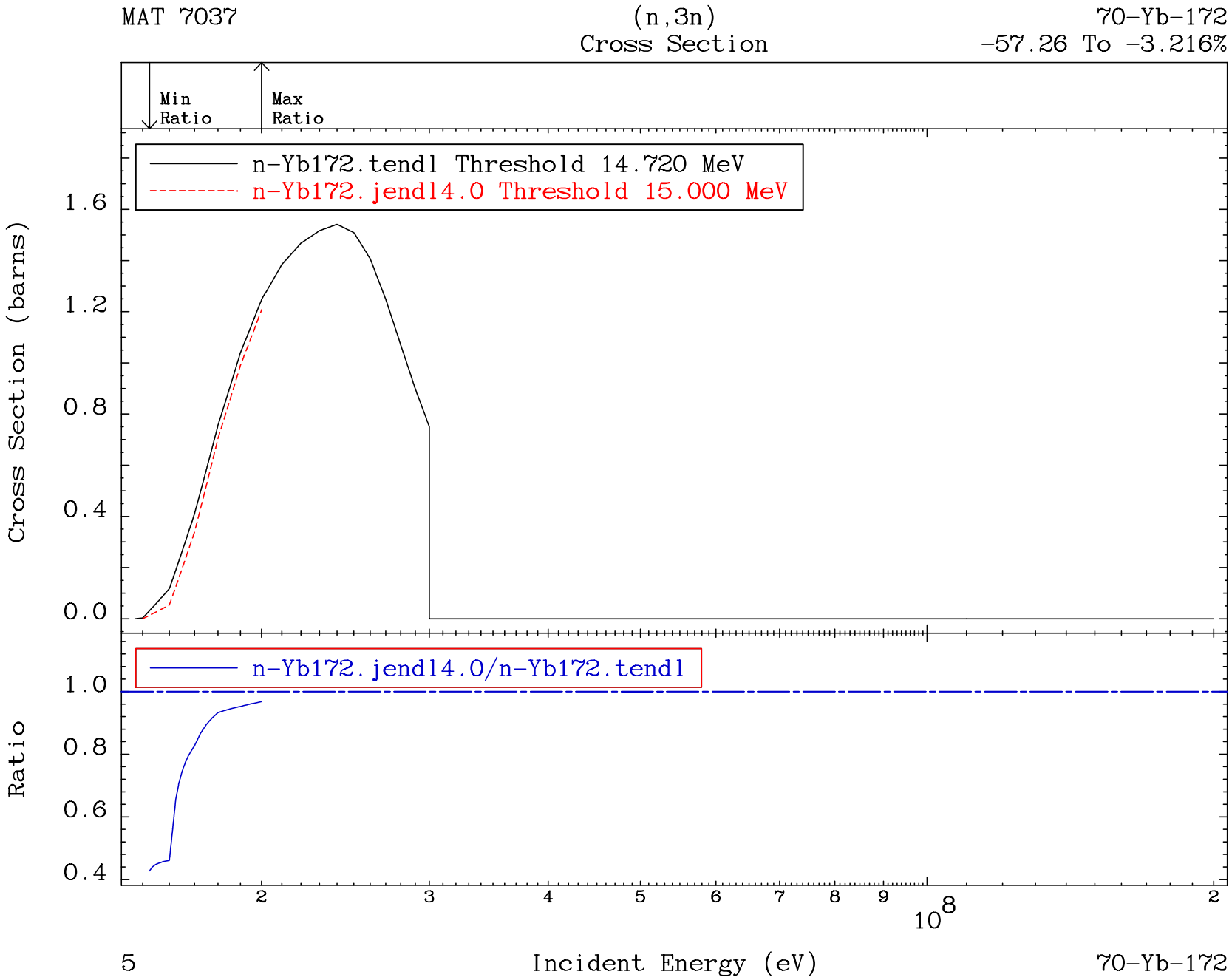
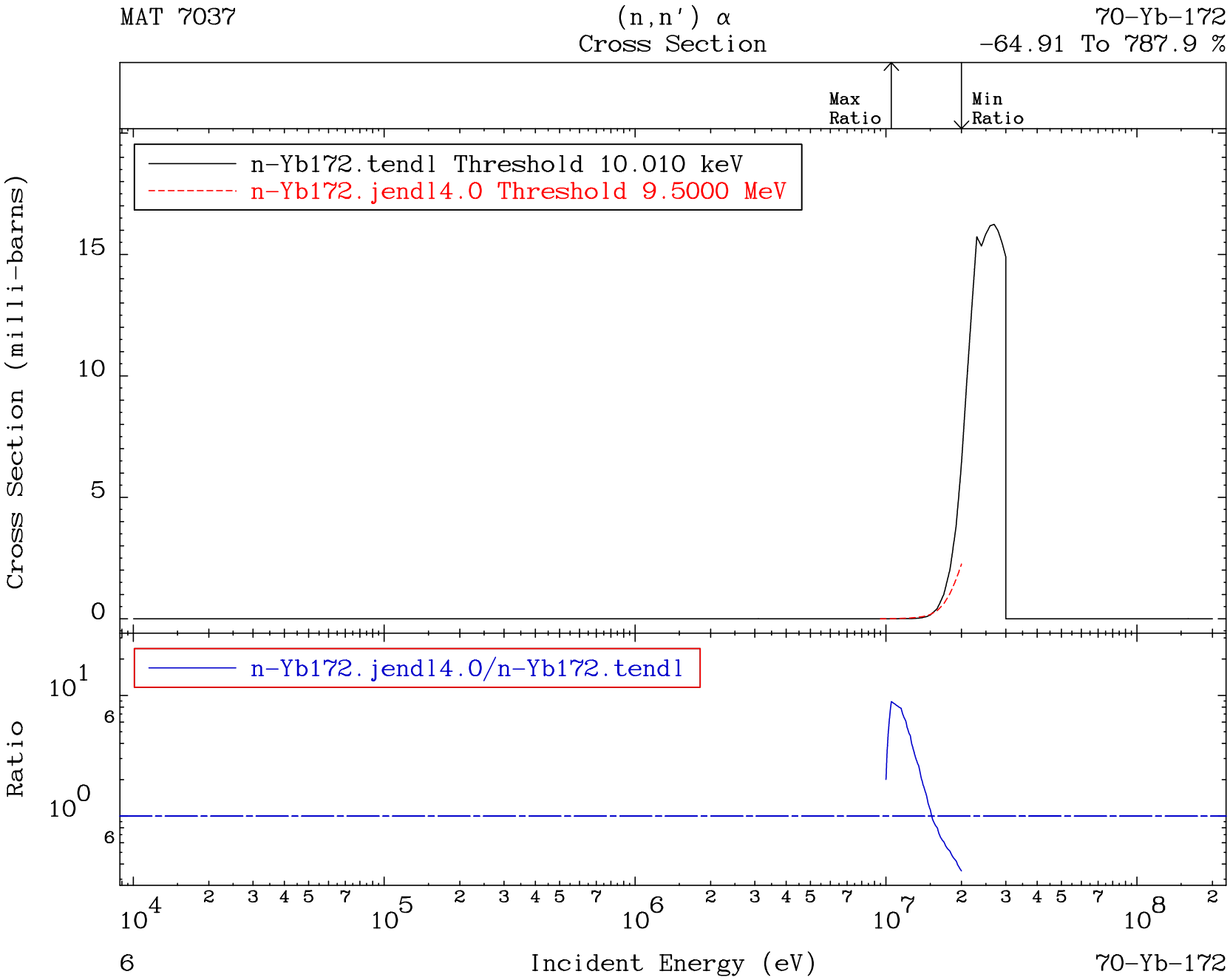

MAT 7037
Total
Cross Section
70-Yb-172
-95.91 To 9999. %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
1
70-Yb-172

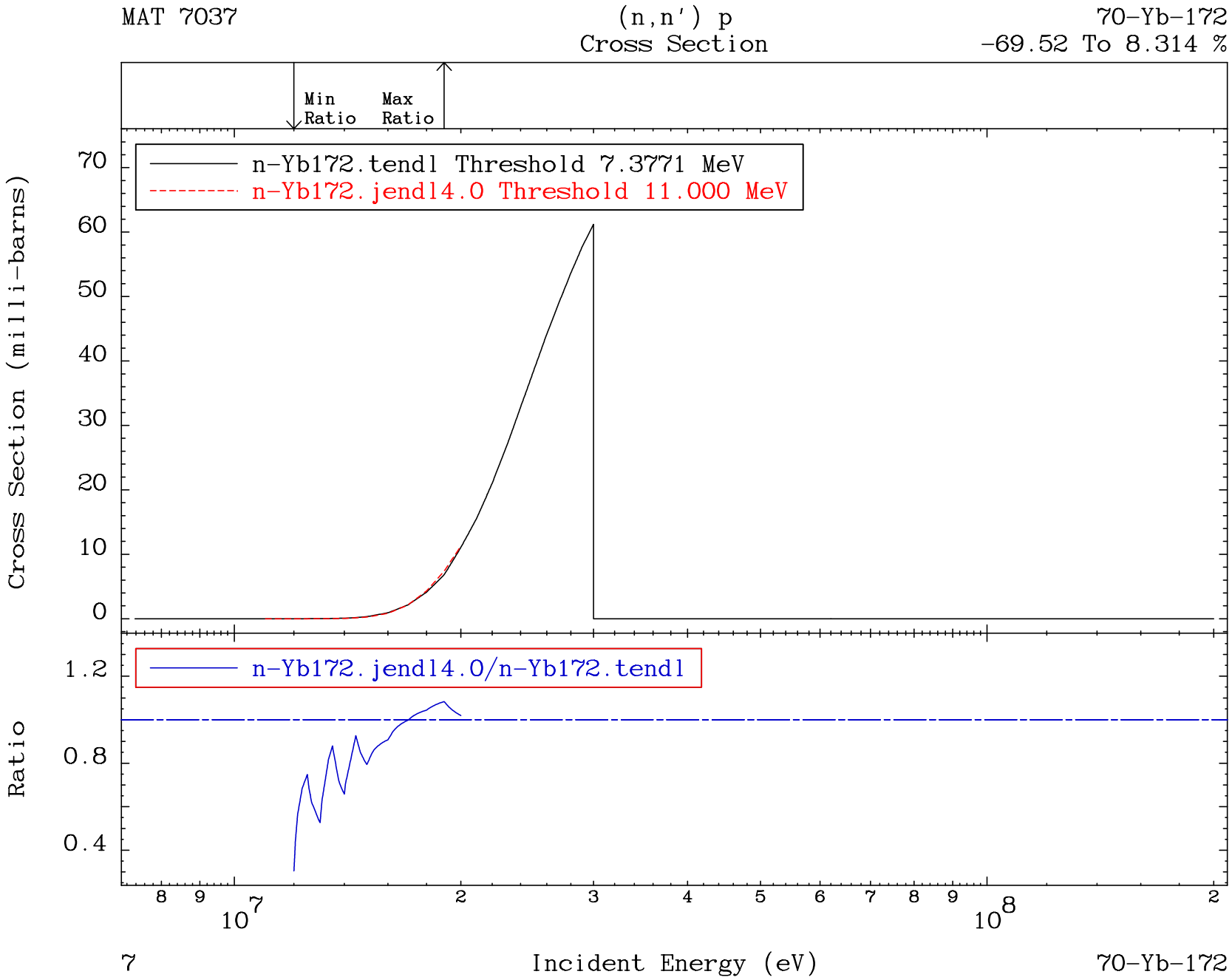

MAT 7037
Elastic
Cross Section
70-Yb-172
-96.03 To 9999. %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
2
70-Yb-172

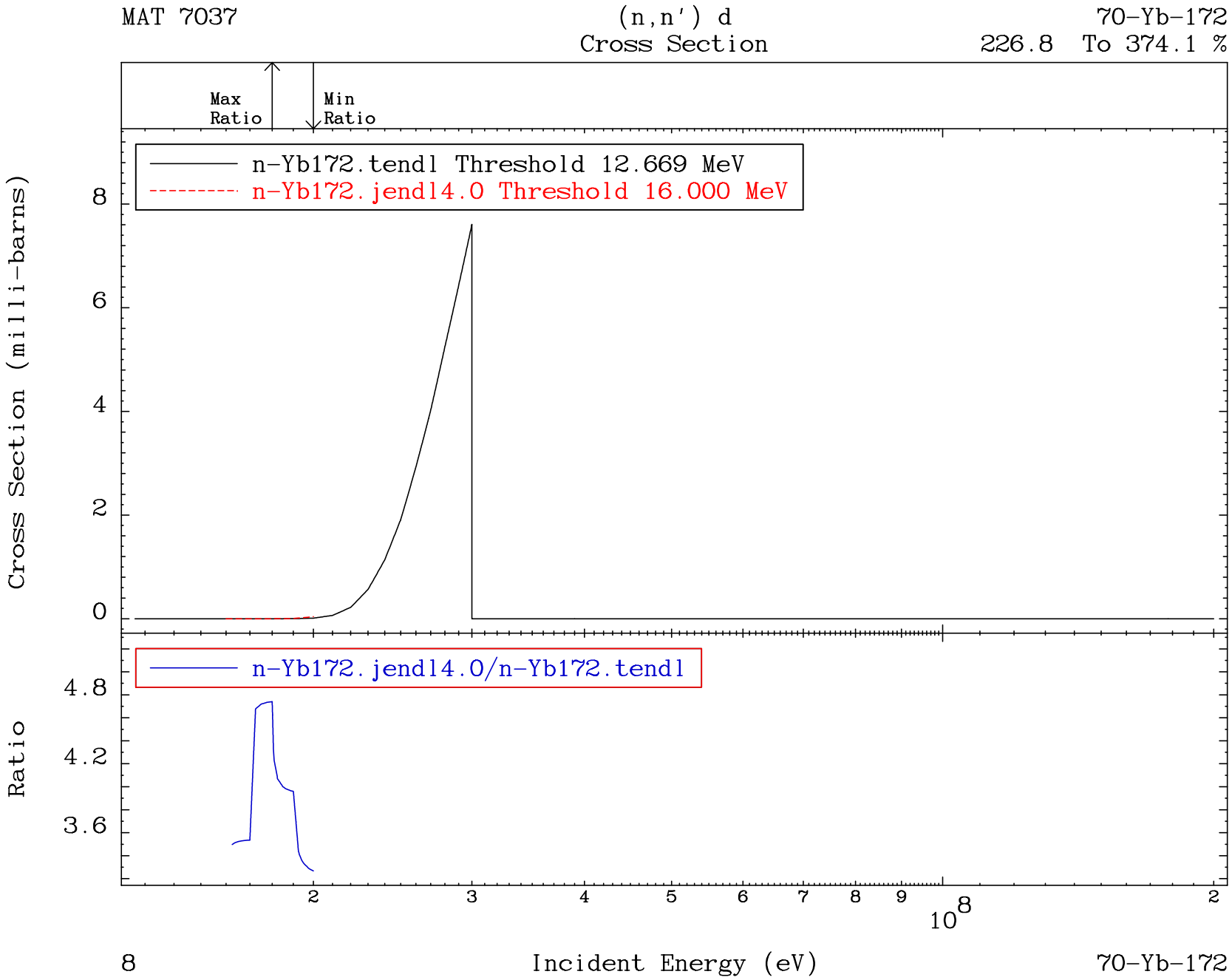

MAT 7037
Inelastic
Cross Section
70-Yb-172
-38.16 To 267.2 %
Min
Ratio
n-Yb172.tendl Threshold 79.205 keV
n-Yb172.jendl4.0 Threshold 79.205 keV
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
3
70-Yb-172

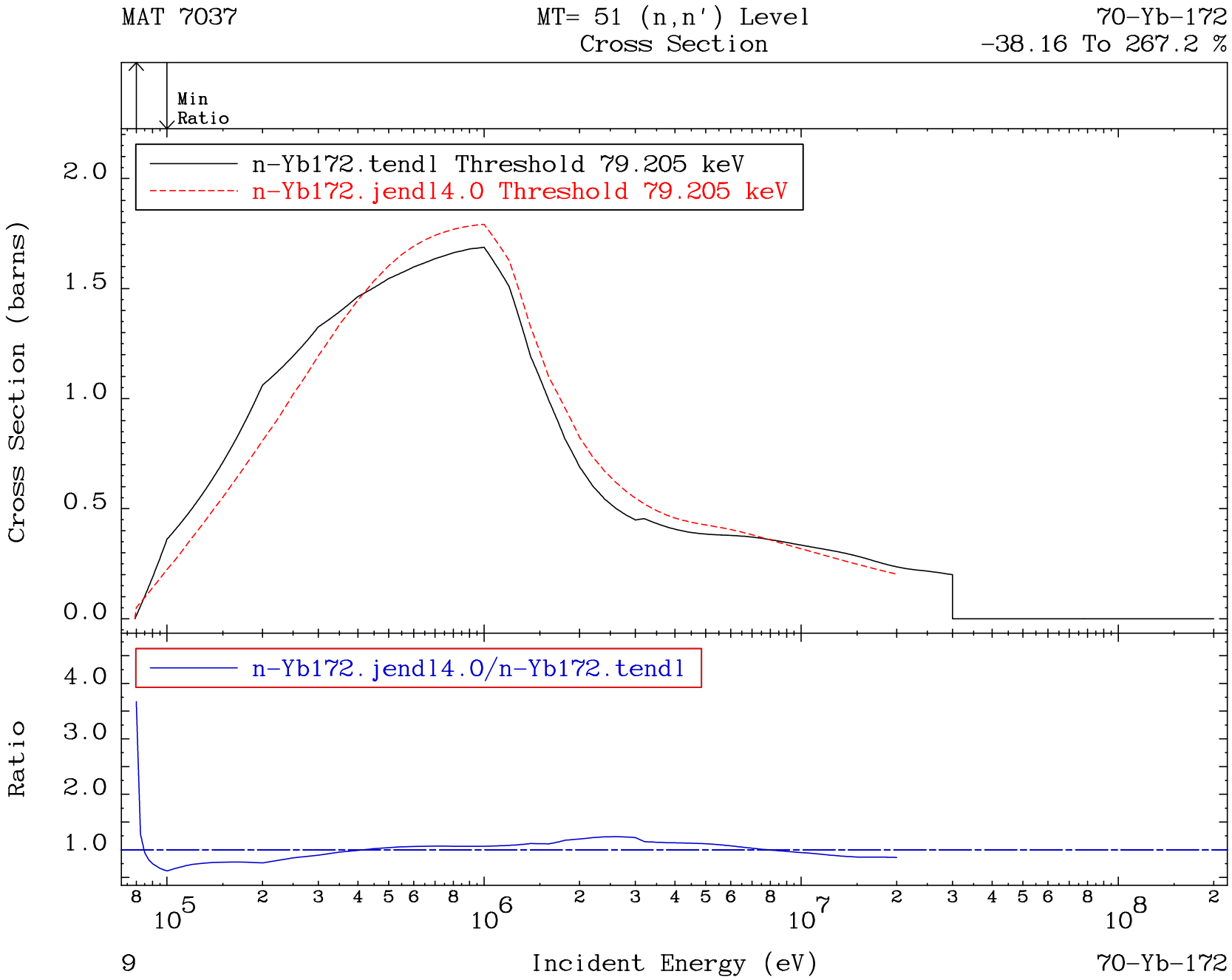

MAT 7037
(n,2n)
Cross Section
70-Yb-172
-38.74 To 24.81 %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 8.0670 MeV
n-Yb172.jendl4.0 Threshold 8.0670 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
1.4
1.2
1.0
0.8
0.6
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
4
Incident Energy (eV)
70-Yb-172

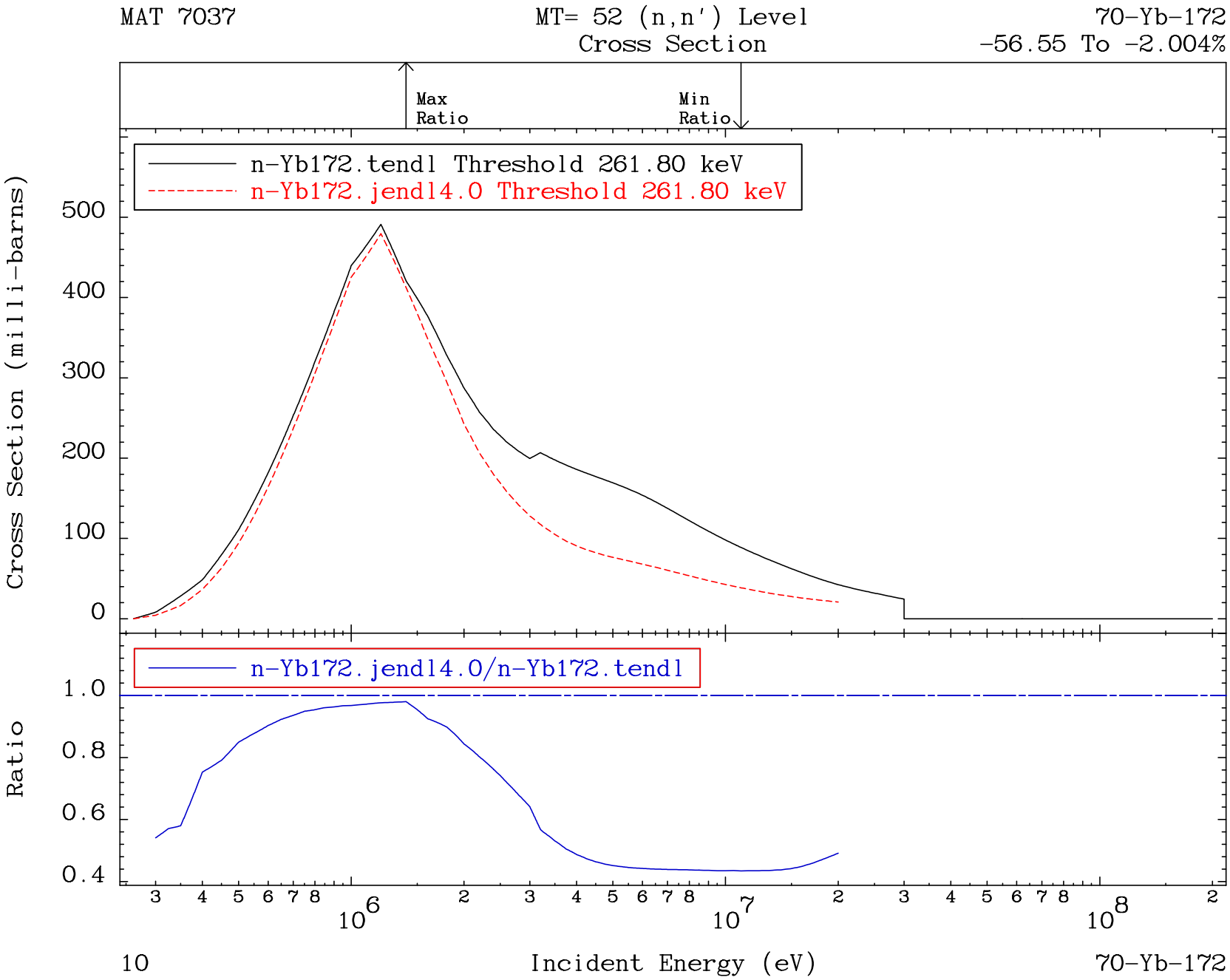

MAT 7037
(n,3n)
Cross Section
70-Yb-172
-57.26 To -3.216%
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 14.720 MeV
n-Yb172.jendl4.0 Threshold 15.000 MeV
Cross Section (barns)
1.6
1.2
0.8
0.4
0.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
1.0
0.8
0.6
0.4
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
70-Yb-172

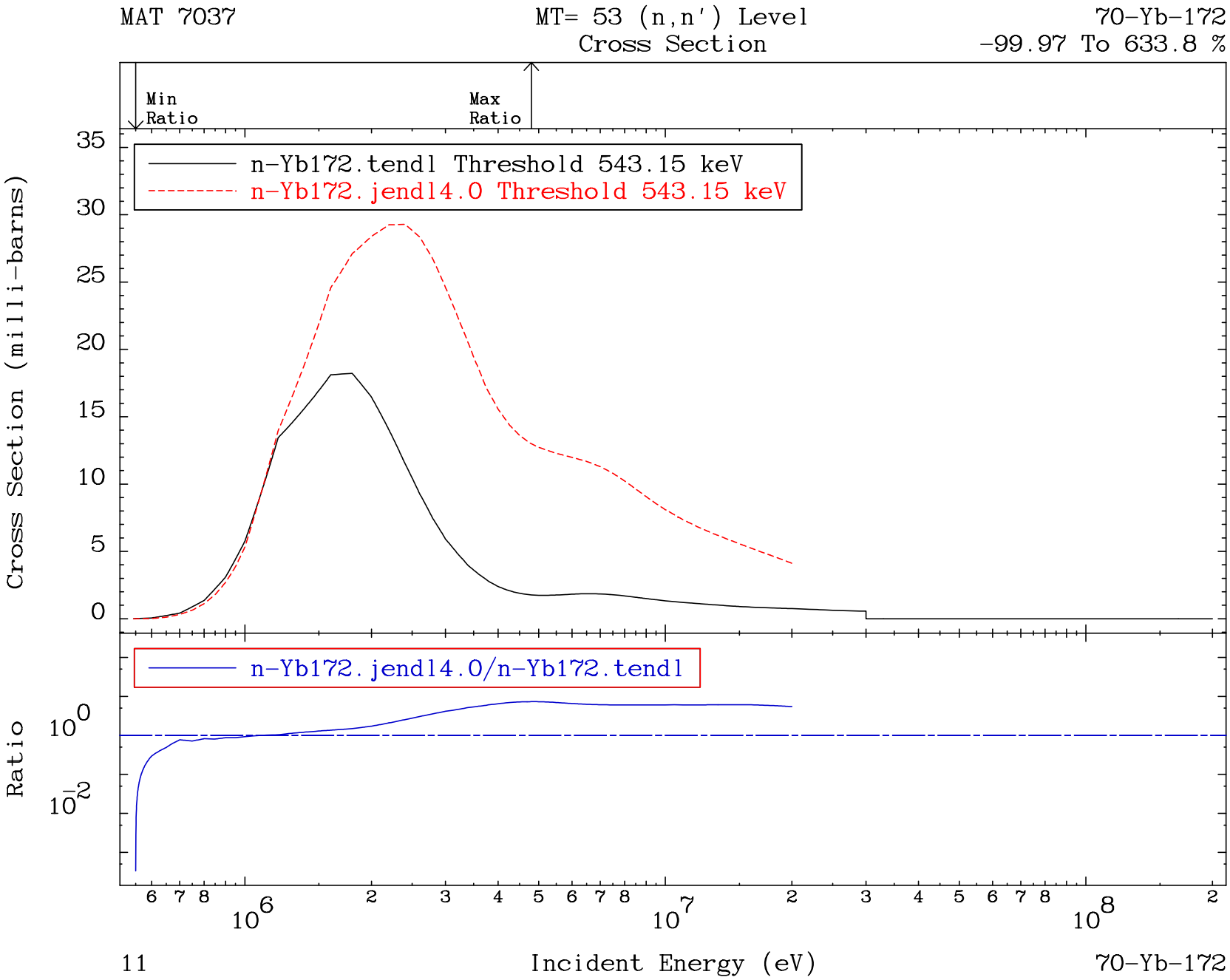

MAT 7037
(n,n') α
Cross Section
70-Yb-172
-64.91 To 787.9 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 10.010 keV
n-Yb172.jendl4.0 Threshold 9.5000 MeV
Cross Section (milli-barns)
15
10
5
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^1
10^0
6
10^4
10^5
10^6
10^7
10^8
Incident Energy (eV)
70-Yb-172

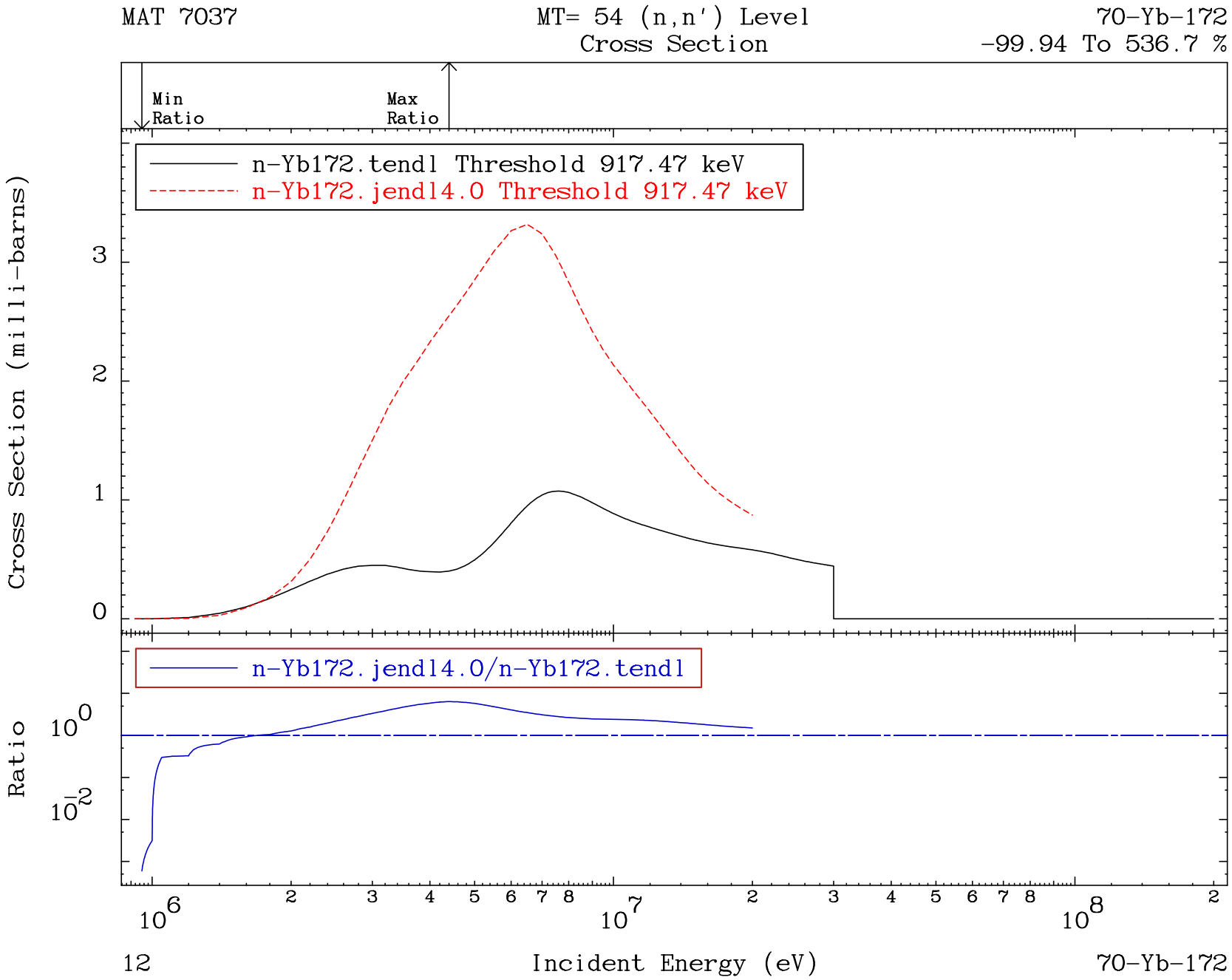

MAT 7037
(n,n') p
Cross Section
70-Yb-172
-69.52 To 8.314 %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 7.3771 MeV
n-Yb172.jendl4.0 Threshold 11.000 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
1.2
0.8
0.4
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
70-Yb-172

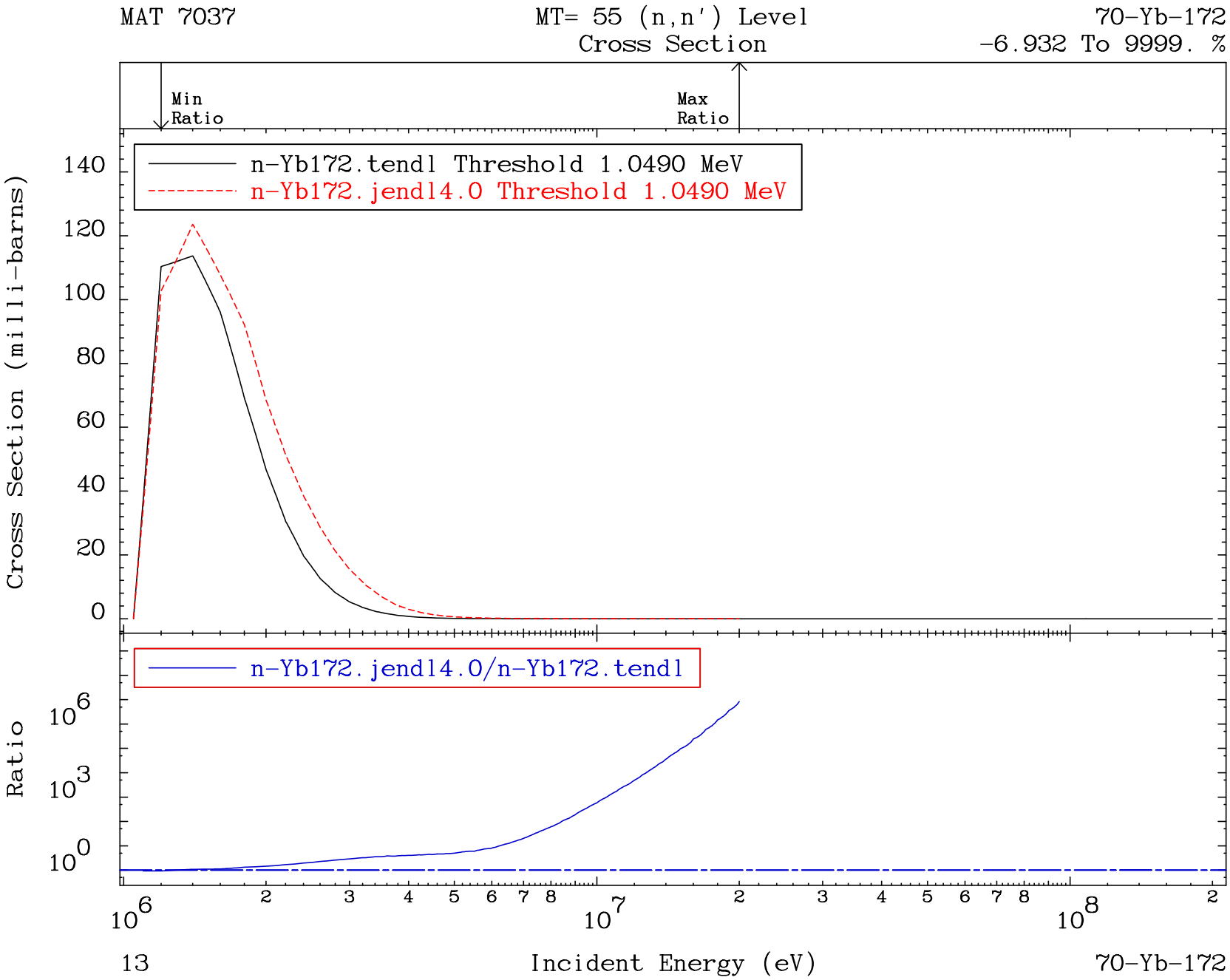

MAT 7037
(n,n') d
Cross Section
70-Yb-172
226.8 To 374.1 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 12.669 MeV
n-Yb172.jendl4.0 Threshold 16.000 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
3.6
4.2
4.8
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
70-Yb-172

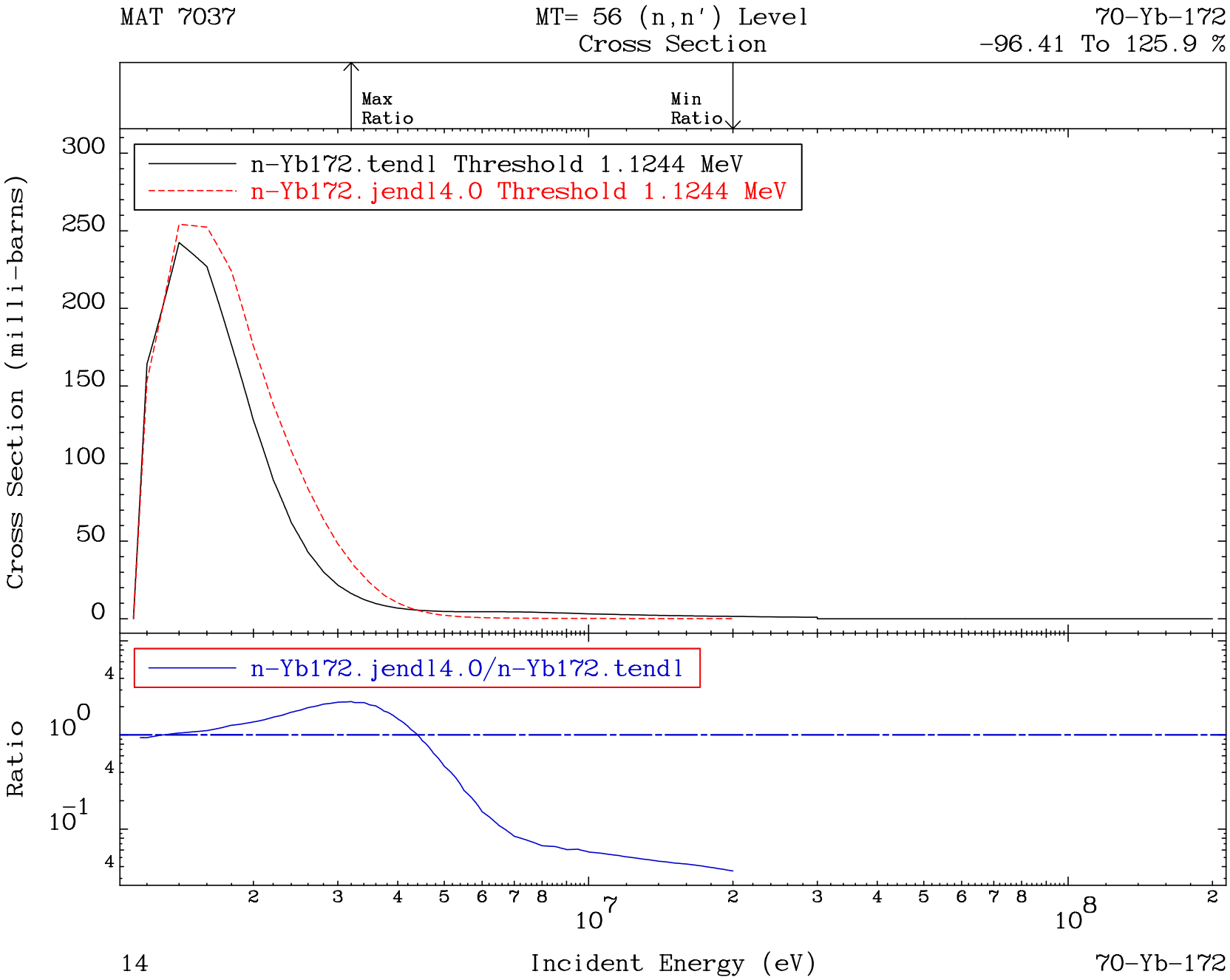

MAT 7037
MT= 51 (n,n') Level
Cross Section
70-Yb-172
-38.16 To 267.2 %
Min
Ratio
n-Yb172.tendl Threshold 79.205 keV
n-Yb172.jendl4.0 Threshold 79.205 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4.0
3.0
2.0
1.0
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
9
Incident Energy (eV)
70-Yb-172

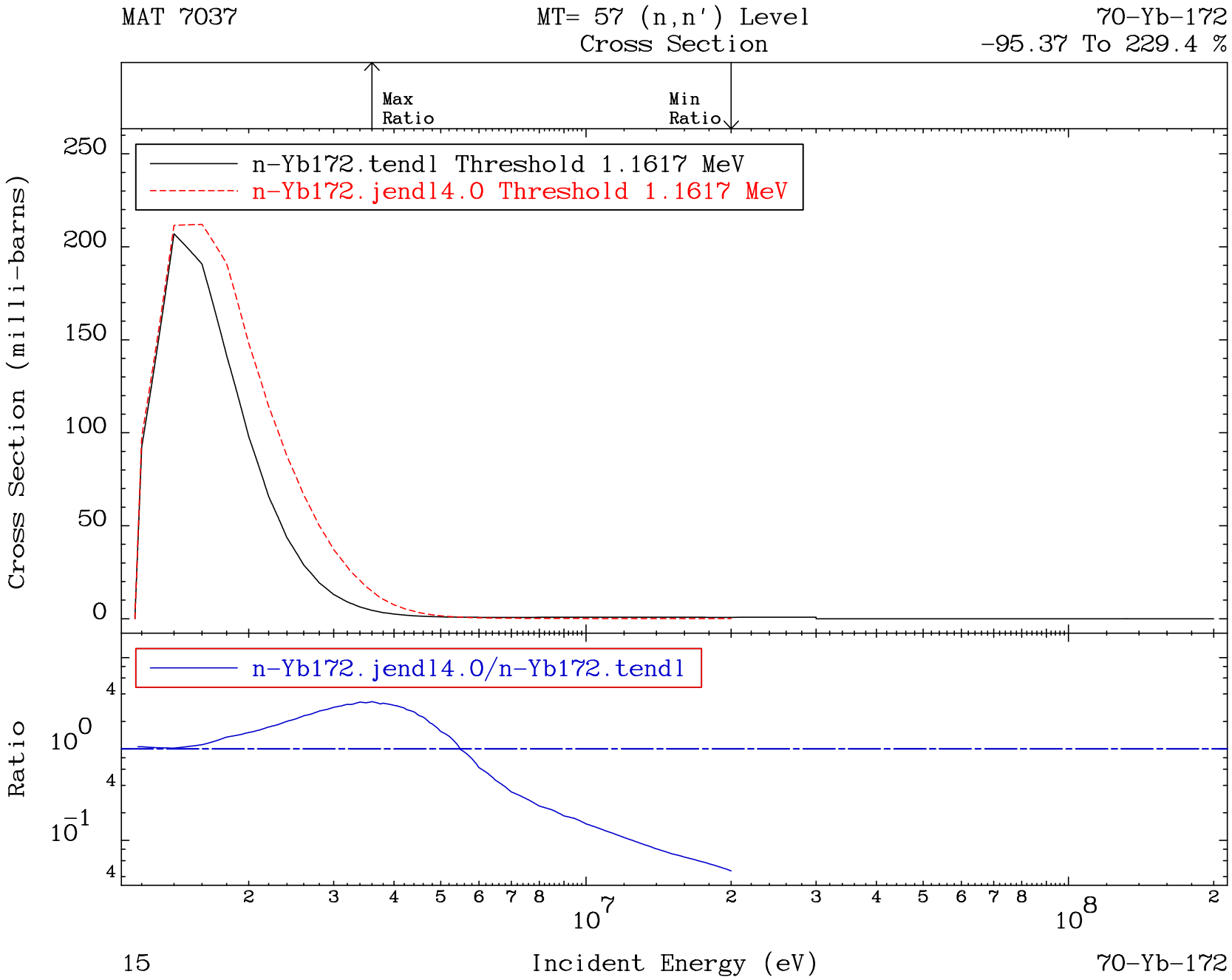

MAT 7037
MT= 52 (n,n') Level
Cross Section
70-Yb-172
-56.55 To -2.004%
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 261.80 keV
n-Yb172.jendl4.0 Threshold 261.80 keV
Cross Section (milli-barns)
500
400
300
200
100
0
n-Yb172.jendl4.0/n-Yb172.tendl
1.0
0.8
0.6
0.4
Ratio
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
10
Incident Energy (eV)
70-Yb-172

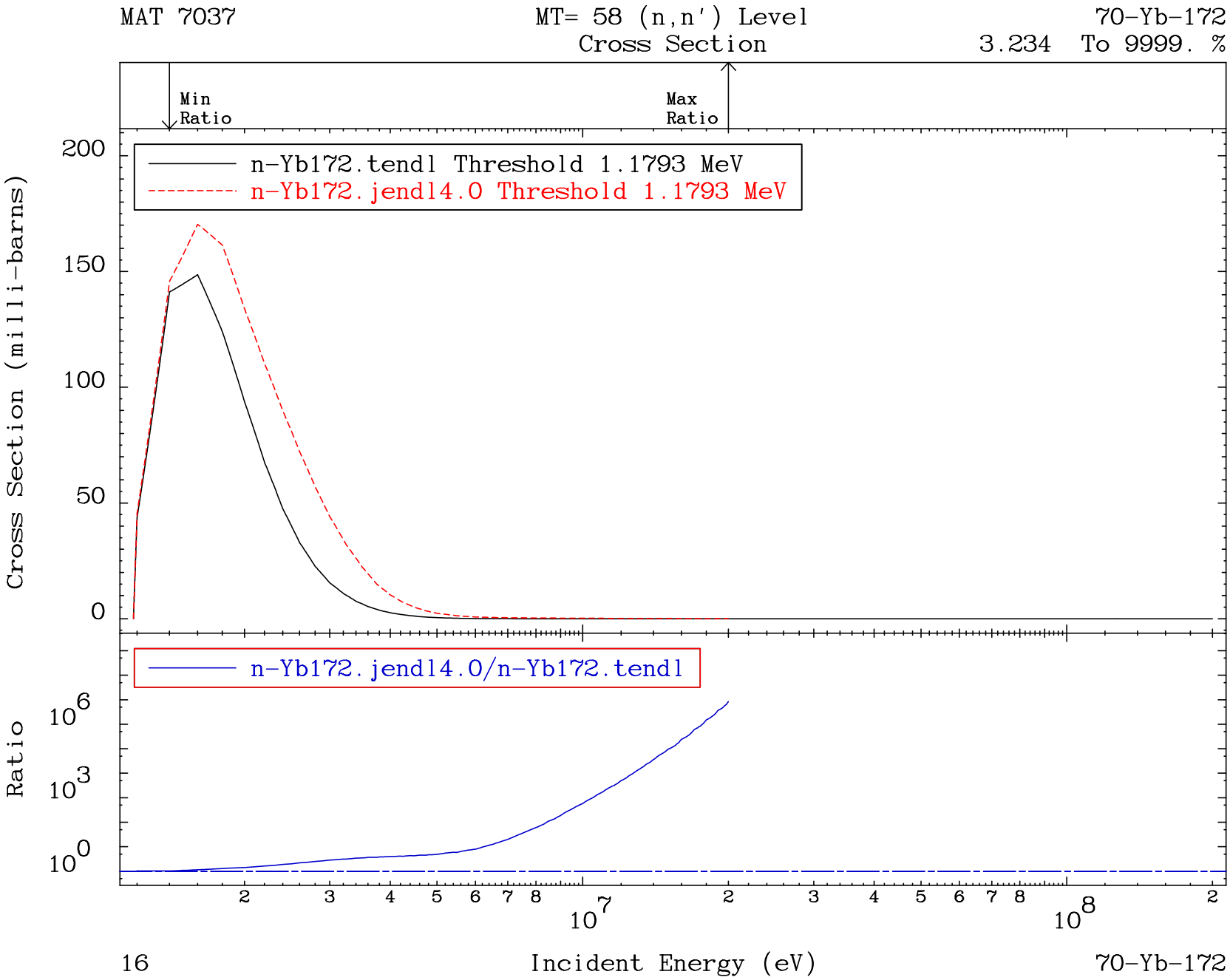

MAT 7037
MT= 53 (n,n') Level
Cross Section
70-Yb-172
-99.97 To 633.8 %
Min
Ratio
Max
Ratio
n-Yb172.tendl Threshold 543.15 keV
n-Yb172.jendl4.0 Threshold 543.15 keV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-2
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
11
Incident Energy (eV)
70-Yb-172

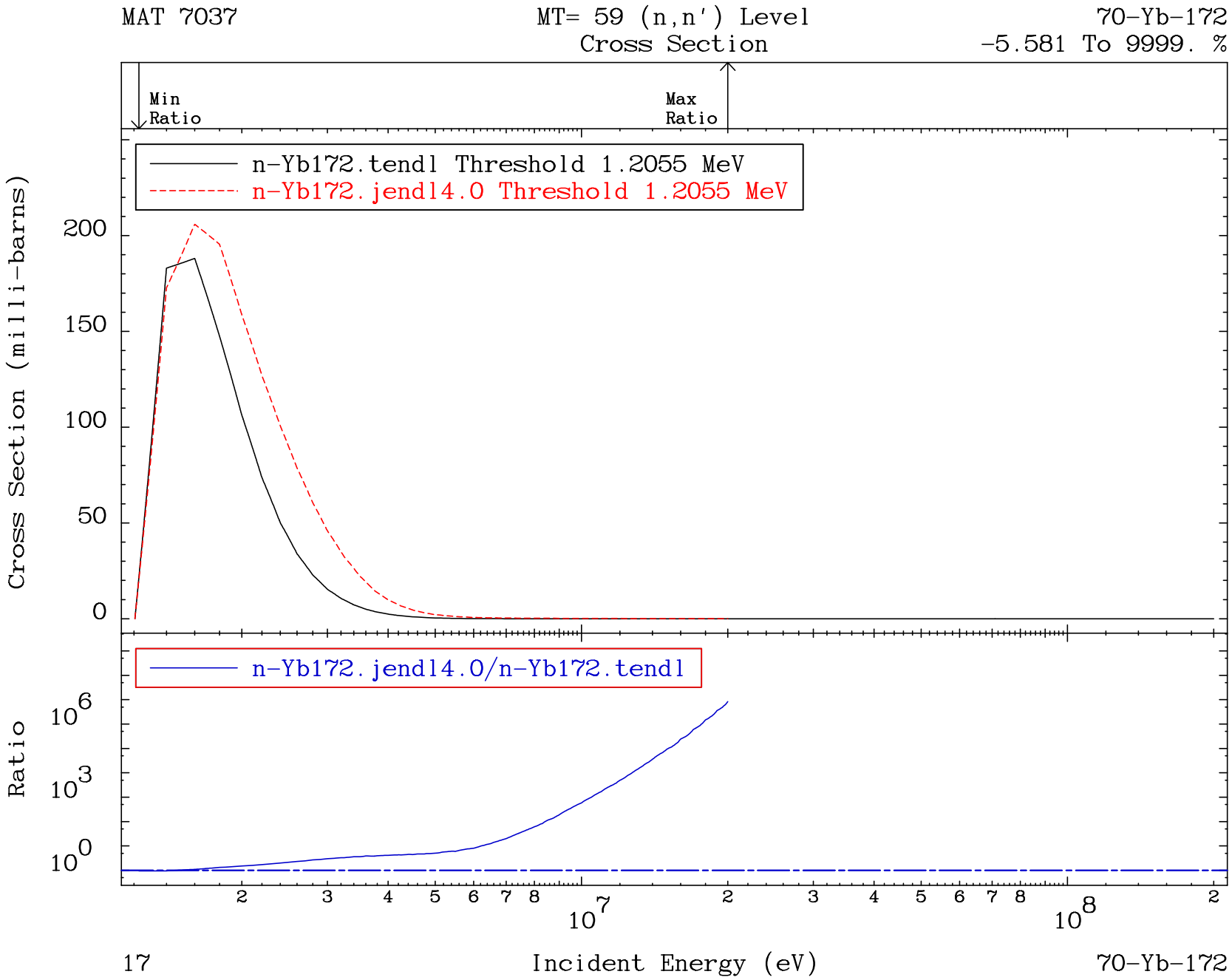

MAT 7037
MT= 54 (n,n') Level
Cross Section
70-Yb-172
-99.94 To 536.7 %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 917.47 keV
n-Yb172.jendl4.0 Threshold 917.47 keV
Cross Section (milli-barns)
0
1
2
3
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-2
10^6
10^7
10^8
Incident Energy (eV)
12
70-Yb-172

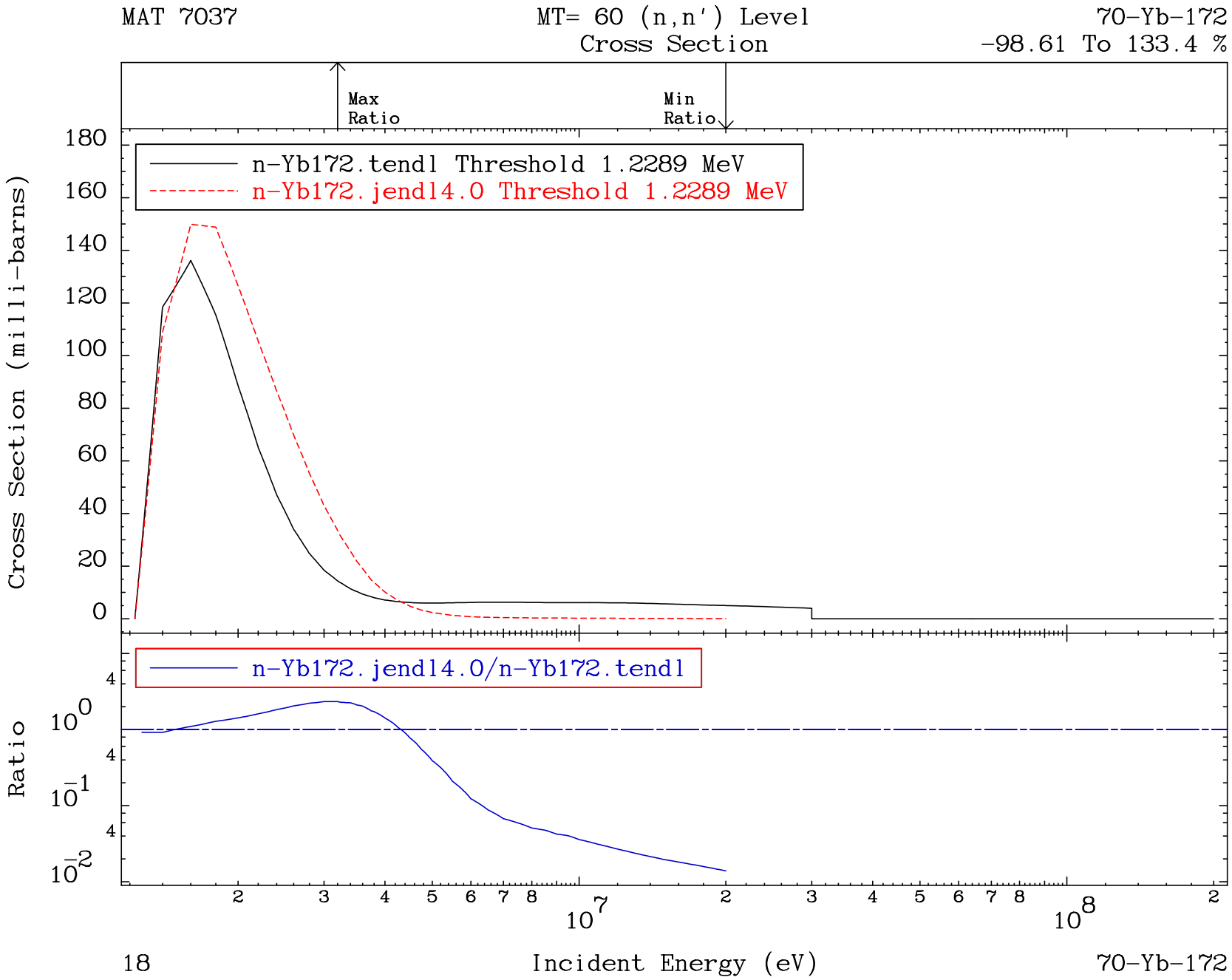

MAT 7037
MT= 55 (n,n') Level
Cross Section
70-Yb-172
-6.932 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.0490 MeV
n-Yb172.jendl4.0 Threshold 1.0490 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
13
Incident Energy (eV)
70-Yb-172

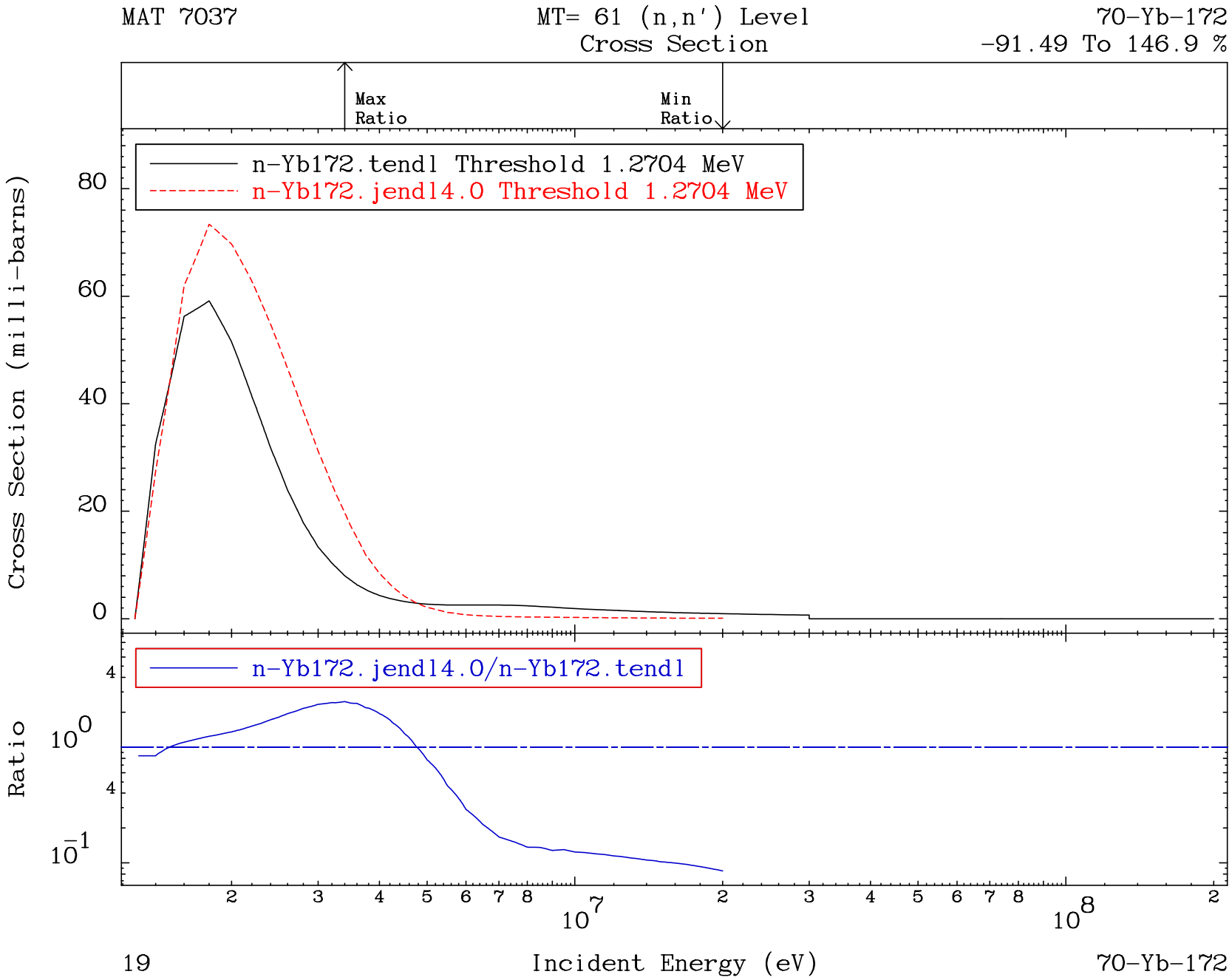

MAT 7037
MT= 56 (n,n') Level
Cross Section
70-Yb-172
-96.41 To 125.9 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.1244 MeV
n-Yb172.jendl4.0 Threshold 1.1244 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-1
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
70-Yb-172

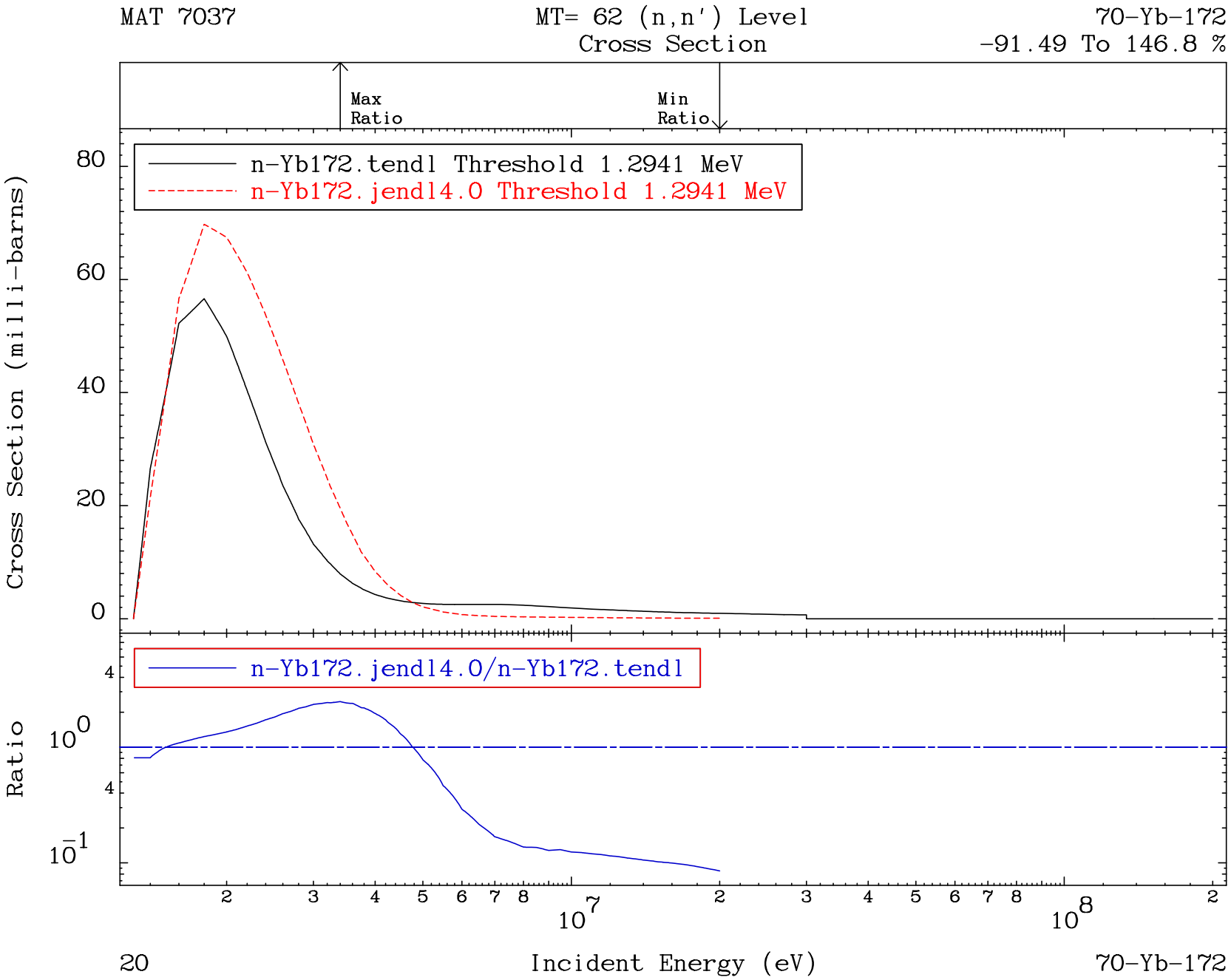

MAT 7037
MT= 57 (n,n') Level
Cross Section
70-Yb-172
-95.37 To 229.4 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.1617 MeV
n-Yb172.jendl4.0 Threshold 1.1617 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4
10^0
4
10^-1
4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
70-Yb-172

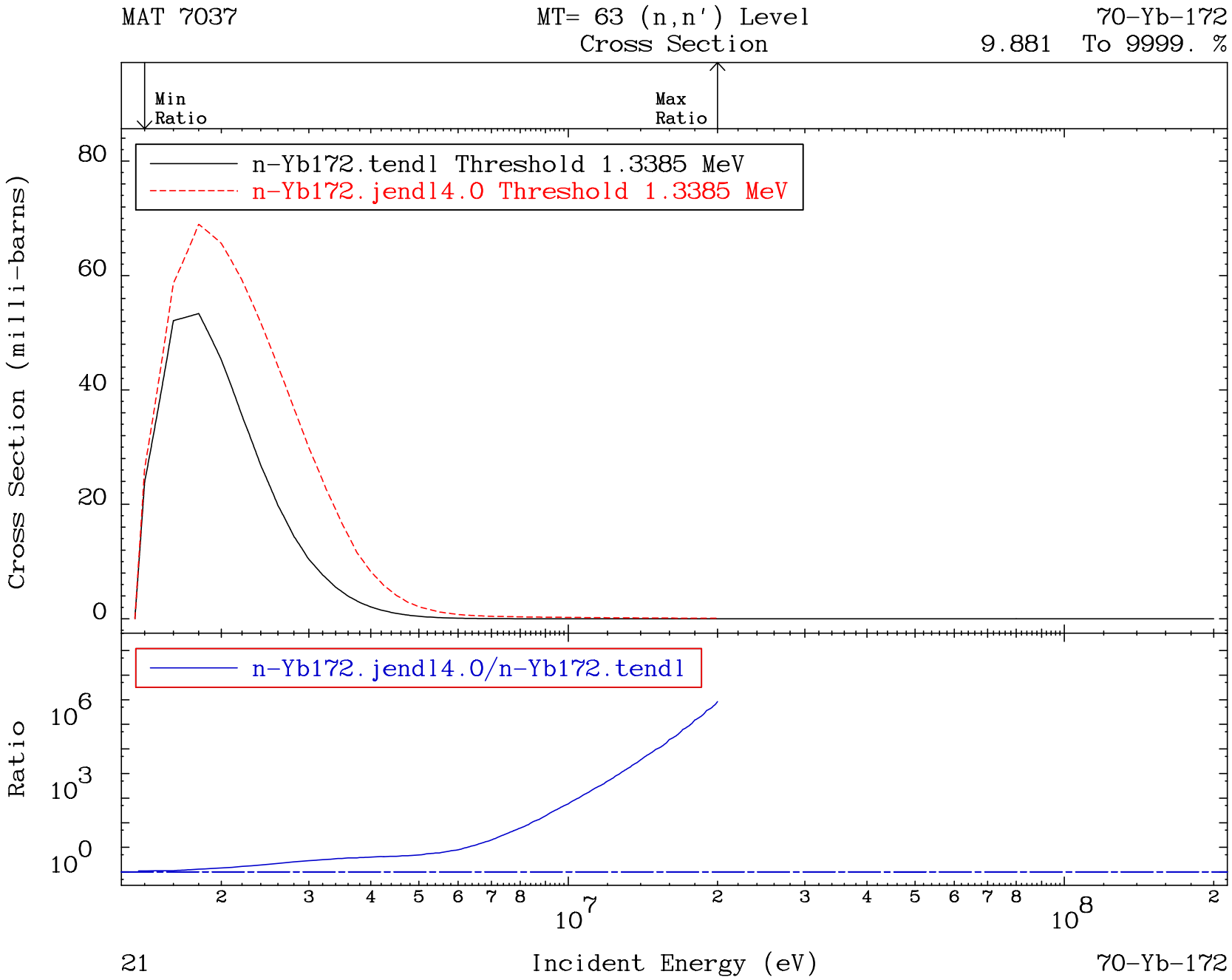

MAT 7037
MT= 58 (n,n') Level
Cross Section
70-Yb-172
3.234 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.1793 MeV
n-Yb172.jendl4.0 Threshold 1.1793 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
70-Yb-172

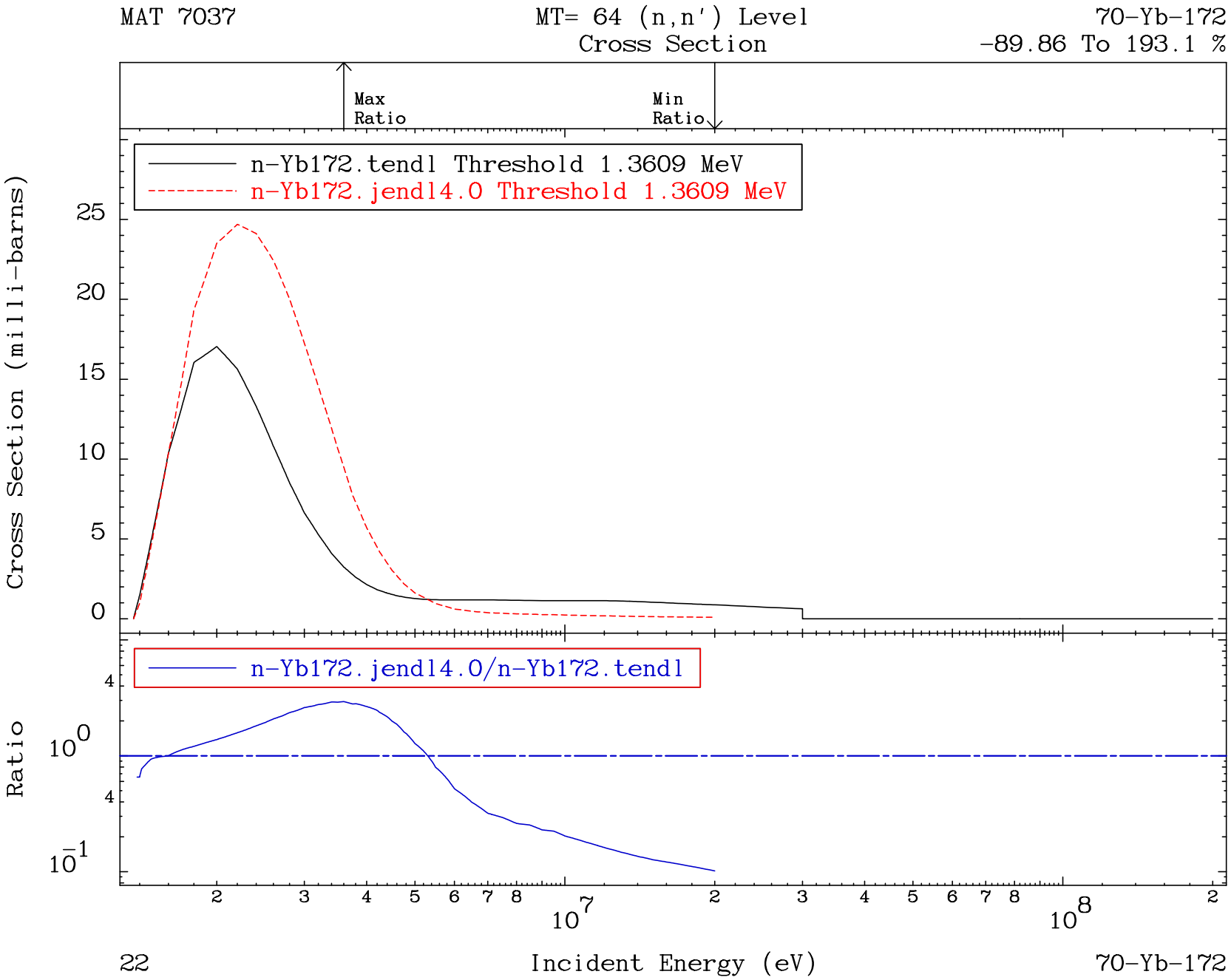

MAT 7037
MT= 59 (n,n') Level
Cross Section
70-Yb-172
-5.581 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.2055 MeV
n-Yb172.jendl4.0 Threshold 1.2055 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
70-Yb-172

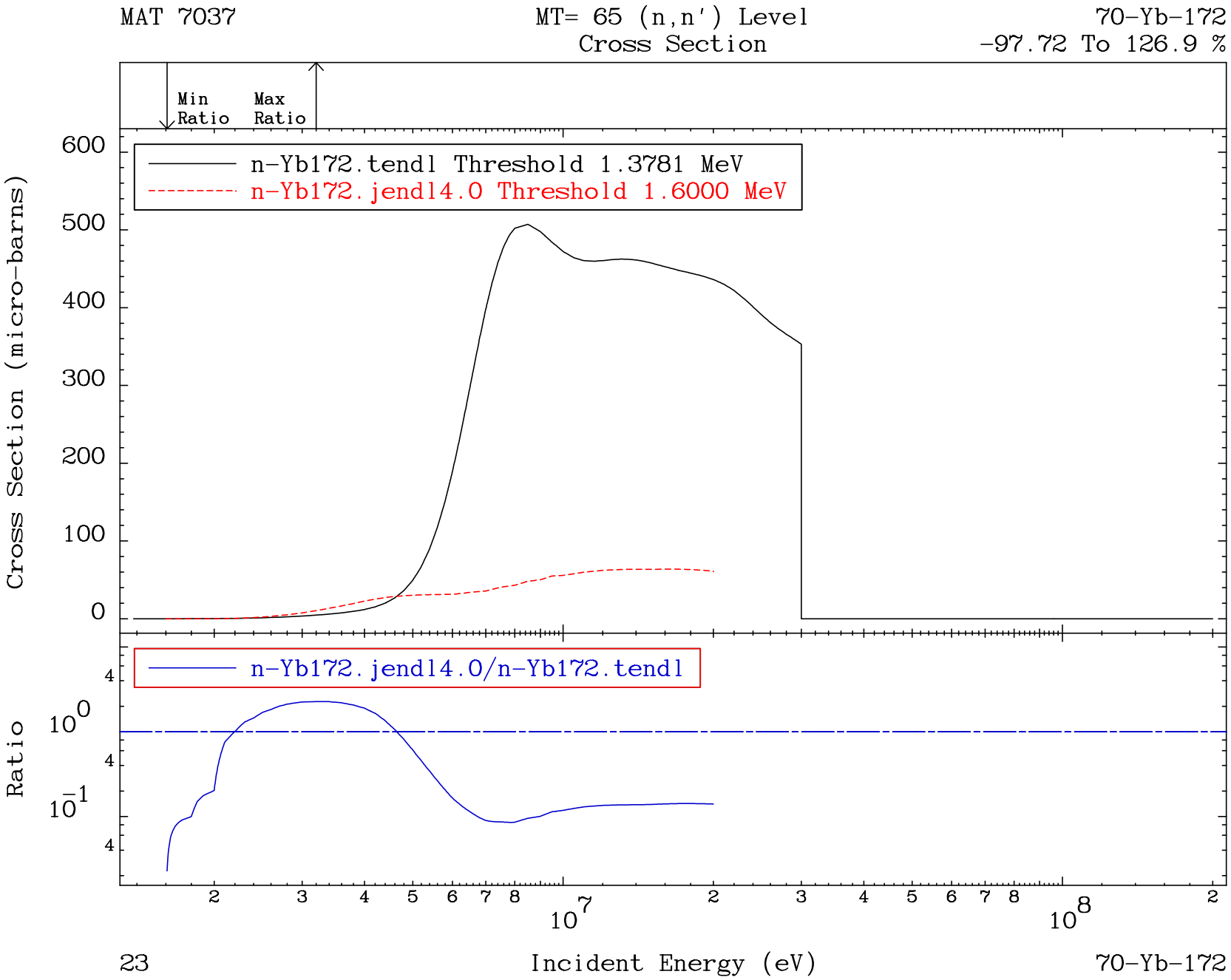

MAT 7037
MT= 60 (n,n') Level
Cross Section
70-Yb-172
-98.61 To 133.4 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.2289 MeV
n-Yb172.jendl4.0 Threshold 1.2289 MeV
Cross Section (milli-barns)
180
160
140
120
100
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^{0}
10^{-1}
10^{-2}
2 3 4 5 6 7 8 10^{7} 2 3 4 5 6 7 8 10^{8} 2
18
Incident Energy (eV)
70-Yb-172

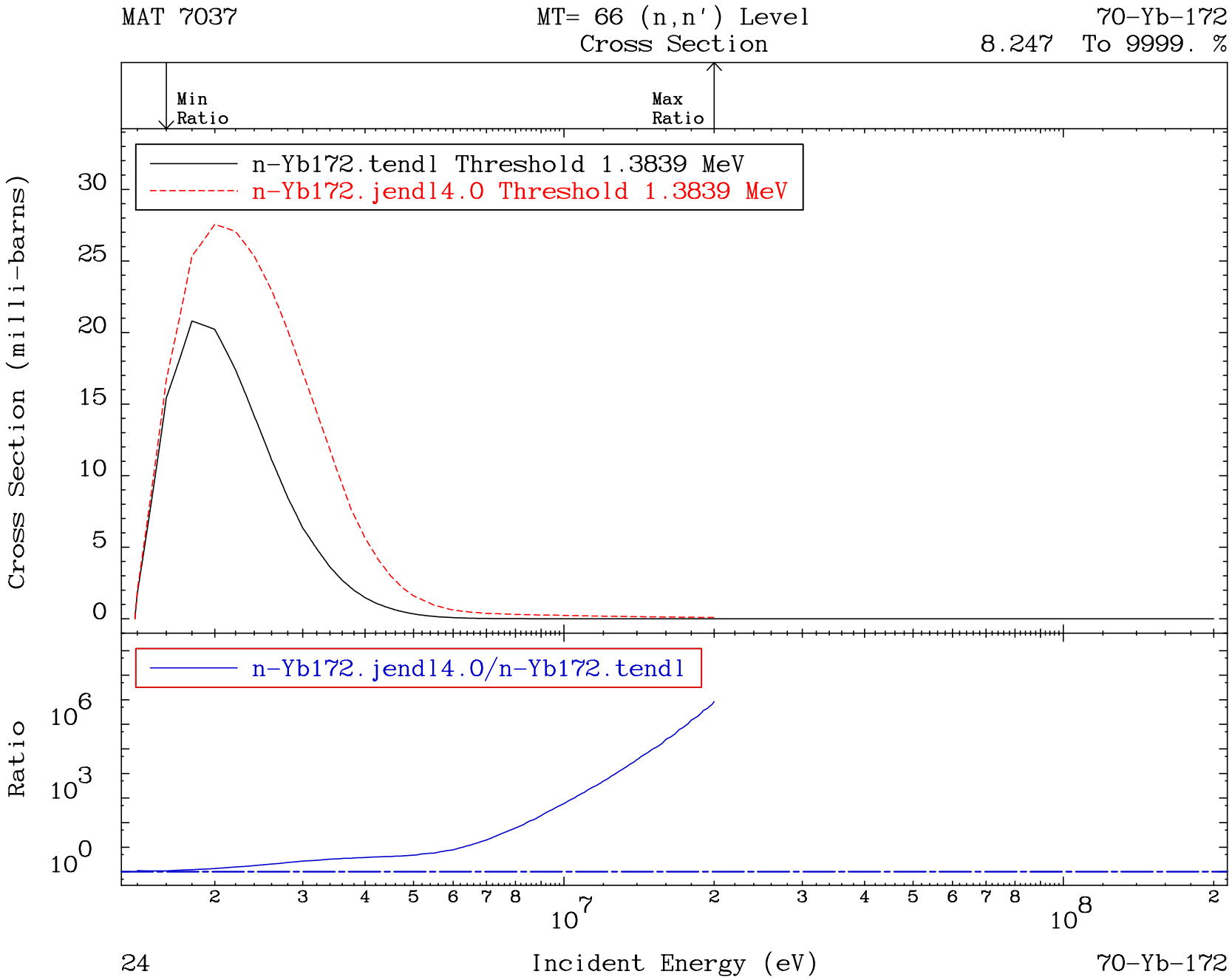

MAT 7037
MT= 61 (n,n') Level
Cross Section
70-Yb-172
-91.49 To 146.9 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.2704 MeV
n-Yb172.jendl4.0 Threshold 1.2704 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4
10^0
4
10^{-1}
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
19
Incident Energy (eV)
70-Yb-172

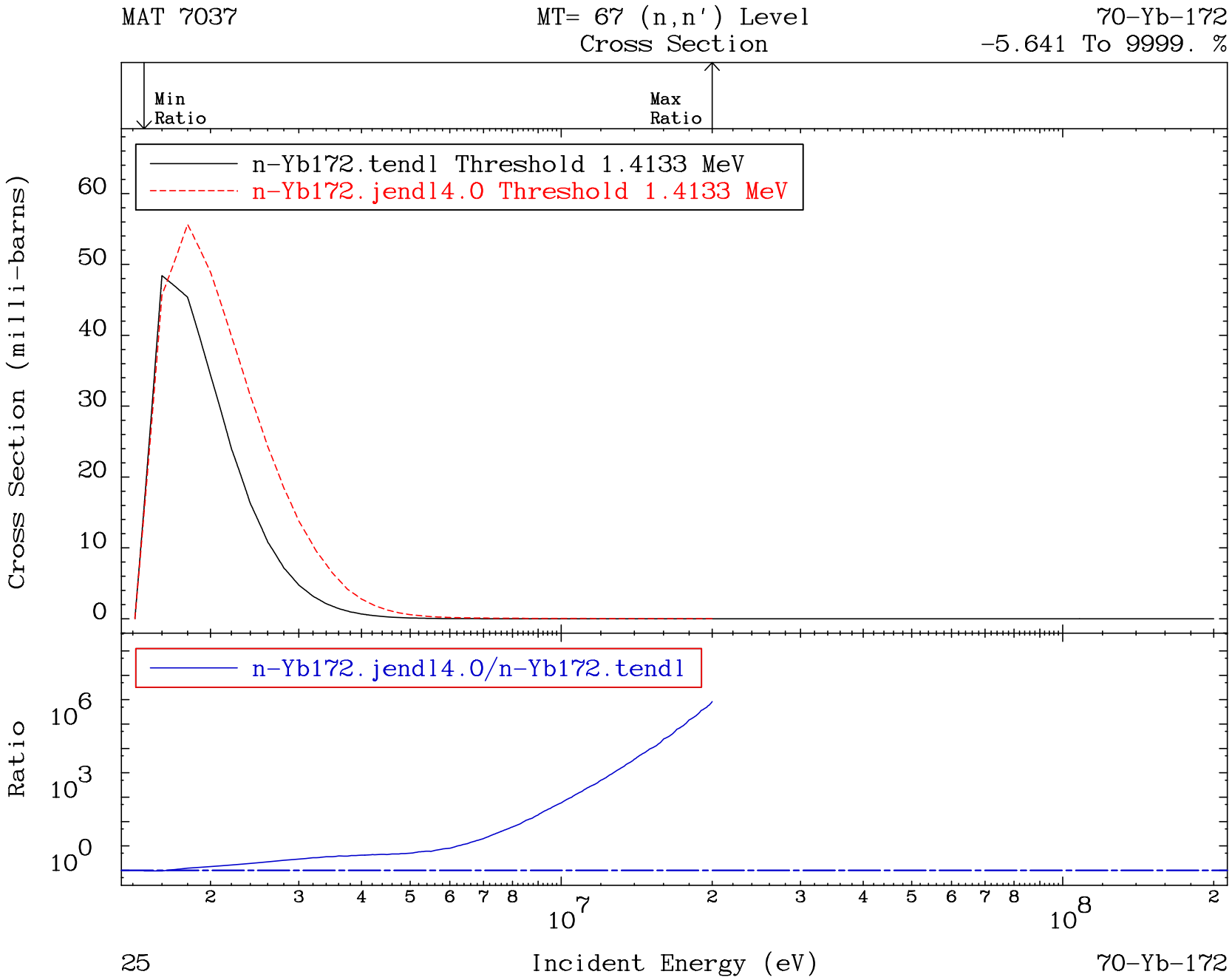

MAT 7037
MT= 62 (n,n') Level
Cross Section
70-Yb-172
-91.49 To 146.8 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.2941 MeV
n-Yb172.jendl4.0 Threshold 1.2941 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4
10^0
4
10^{-1}
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
20
Incident Energy (eV)
70-Yb-172

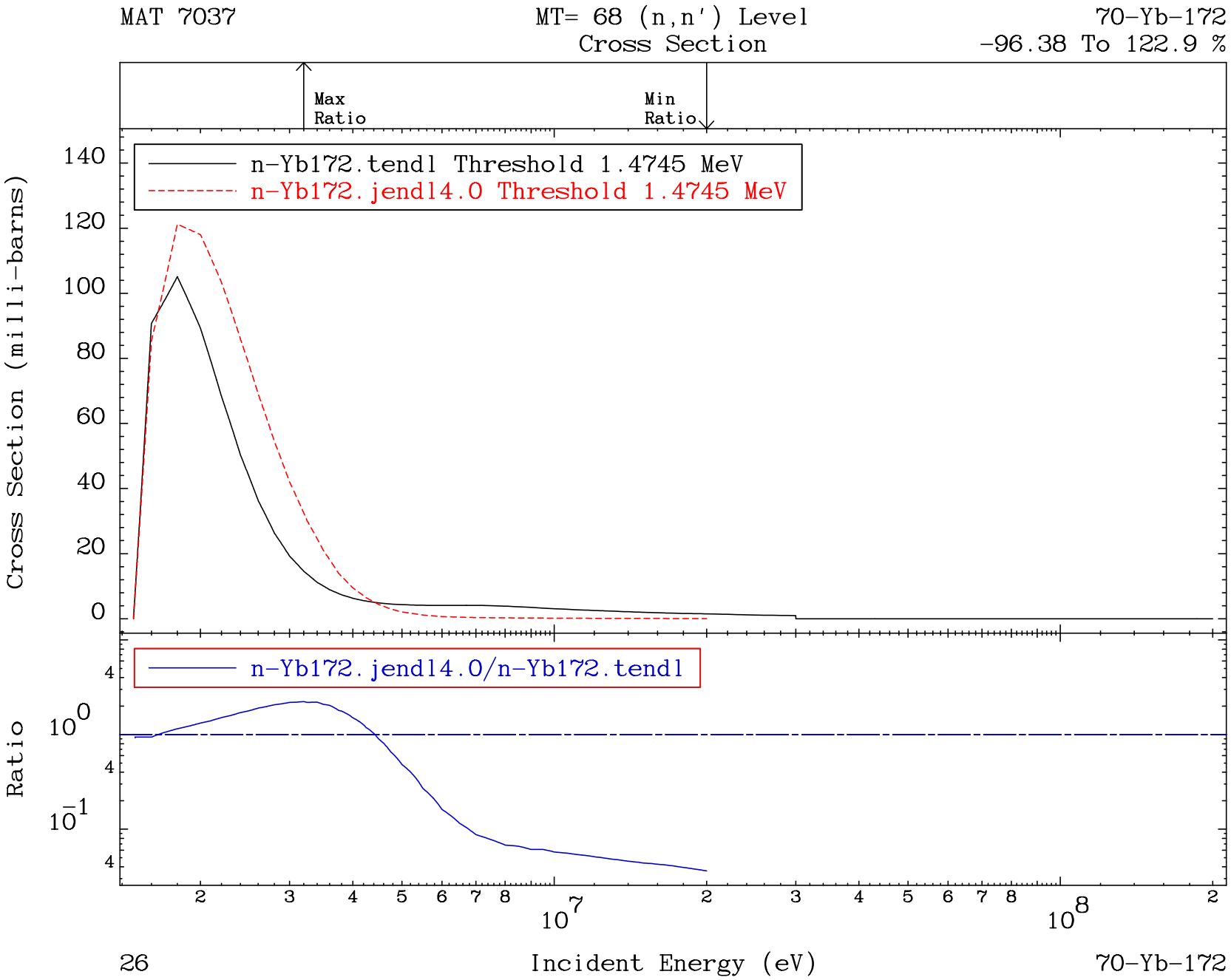

MAT 7037
MT= 63 (n,n') Level
Cross Section
70-Yb-172
9.881 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.3385 MeV
n-Yb172.jendl4.0 Threshold 1.3385 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
70-Yb-172

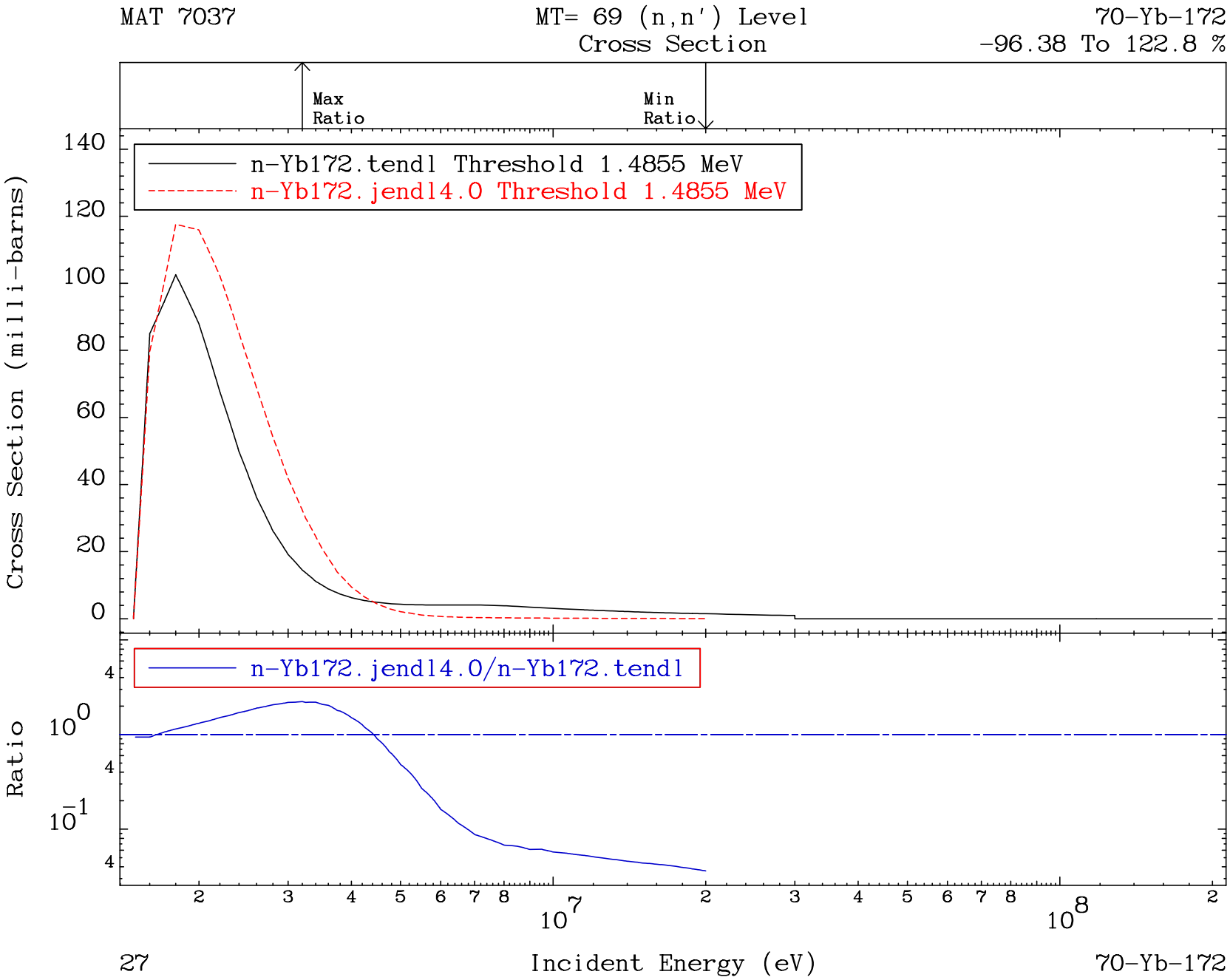

MAT 7037
MT= 64 (n,n') Level
Cross Section
70-Yb-172
-89.86 To 193.1 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.3609 MeV
n-Yb172.jendl4.0 Threshold 1.3609 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4
10^0
4
10^{-1}
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
22
Incident Energy (eV)
70-Yb-172

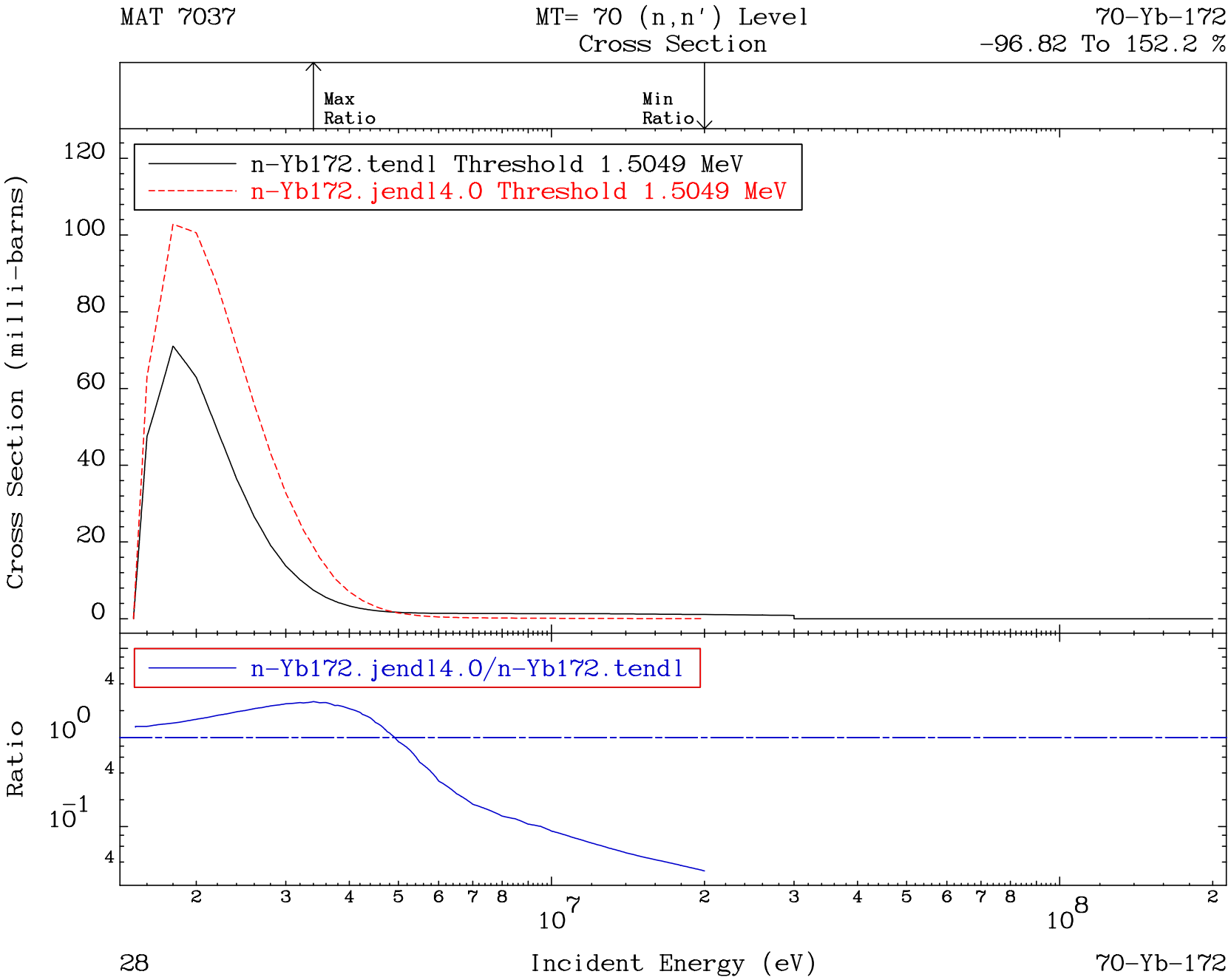

MAT 7037
MT= 65 (n,n') Level
Cross Section
70-Yb-172
-97.72 To 126.9 %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.3781 MeV
n-Yb172.jendl4.0 Threshold 1.6000 MeV
Cross Section (micro-barns)
600
500
400
300
200
100
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-1
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
23
Incident Energy (eV)
70-Yb-172

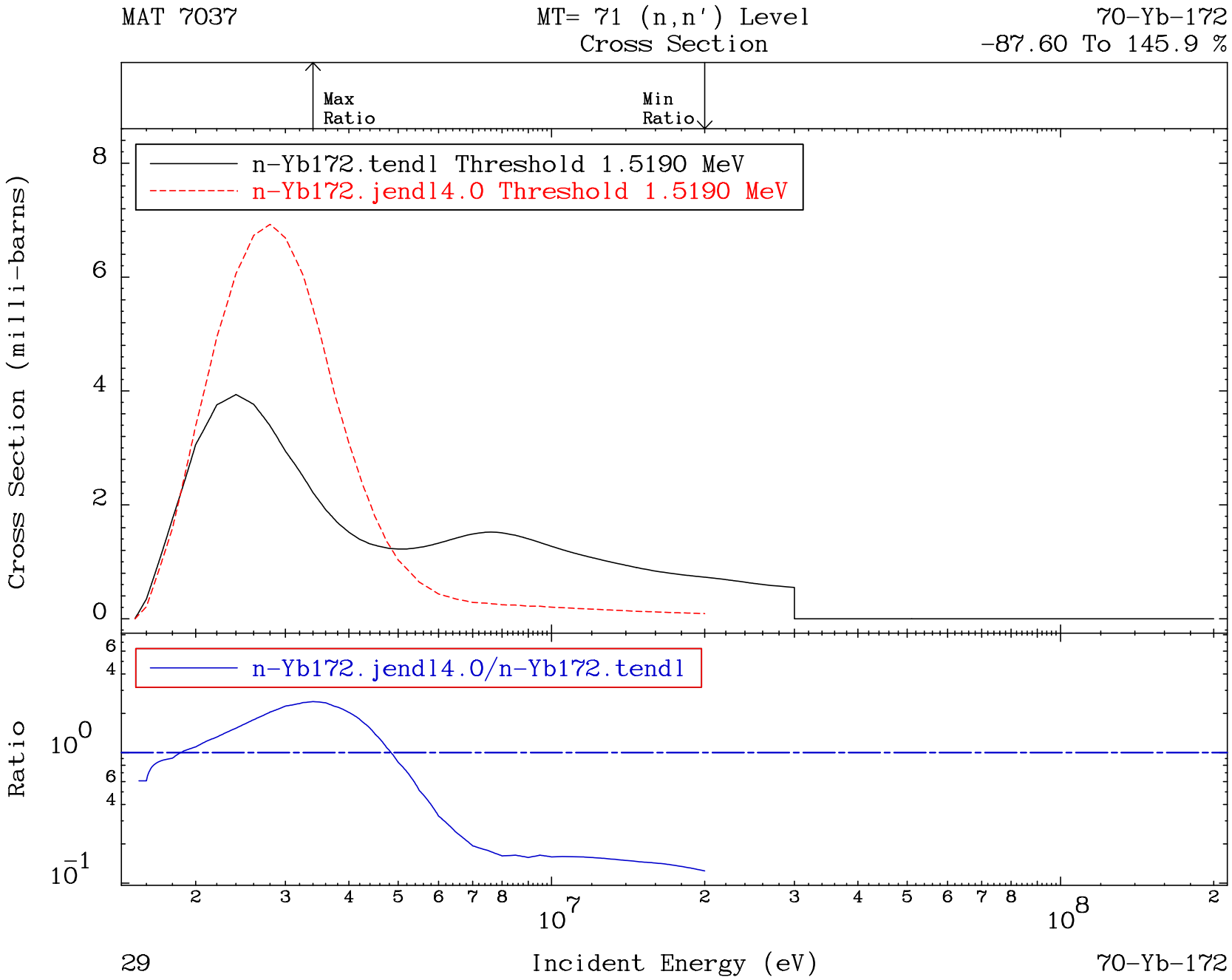

MAT 7037
MT= 66 (n,n') Level
Cross Section
70-Yb-172
8.247 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.3839 MeV
n-Yb172.jendl4.0 Threshold 1.3839 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
70-Yb-172

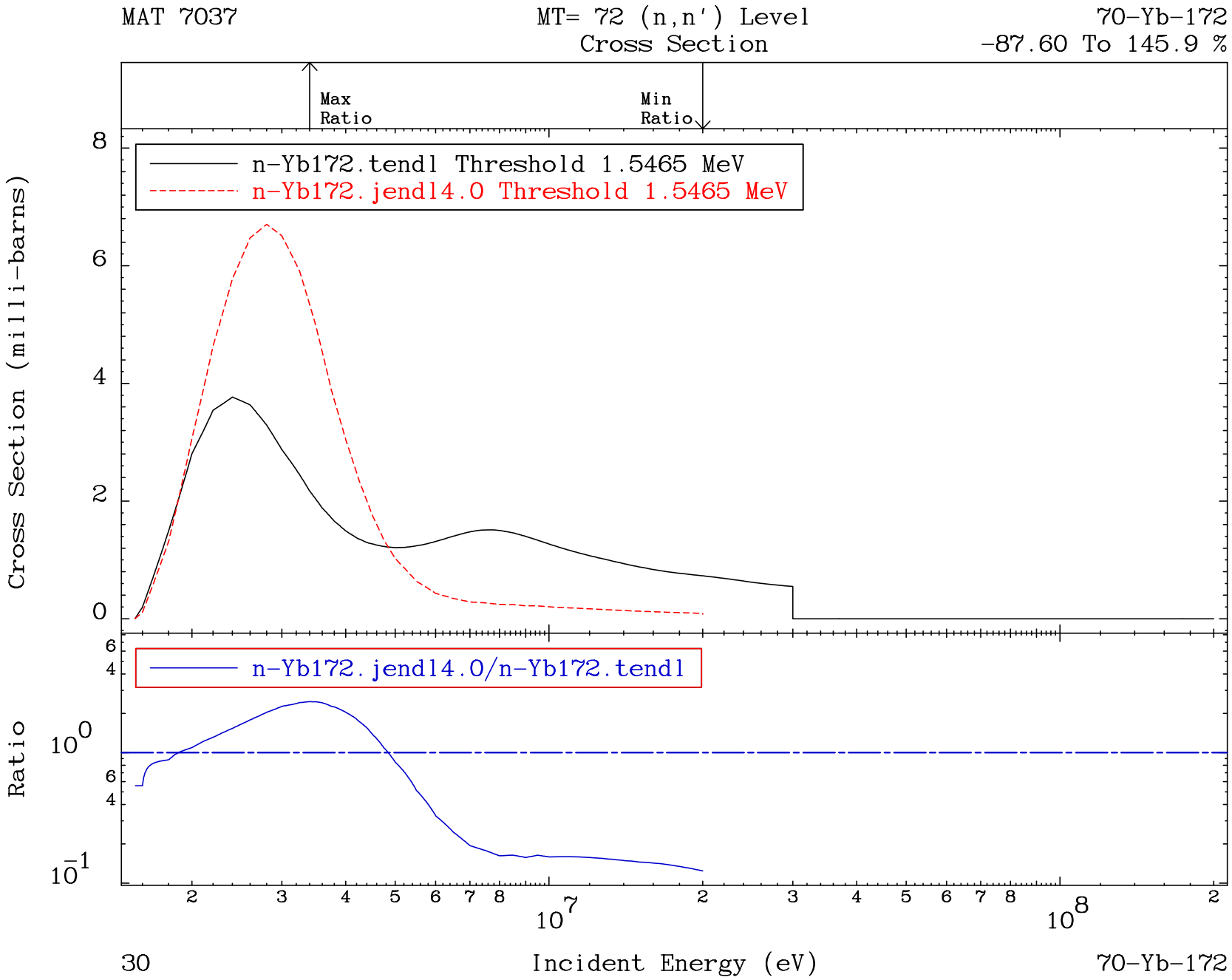

MAT 7037
MT= 67 (n,n') Level
Cross Section
70-Yb-172
-5.641 To 9999. %
Min
Ratio
Max
Ratio
n-Yb172.tendl Threshold 1.4133 MeV
n-Yb172.jendl4.0 Threshold 1.4133 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
25
Incident Energy (eV)
70-Yb-172

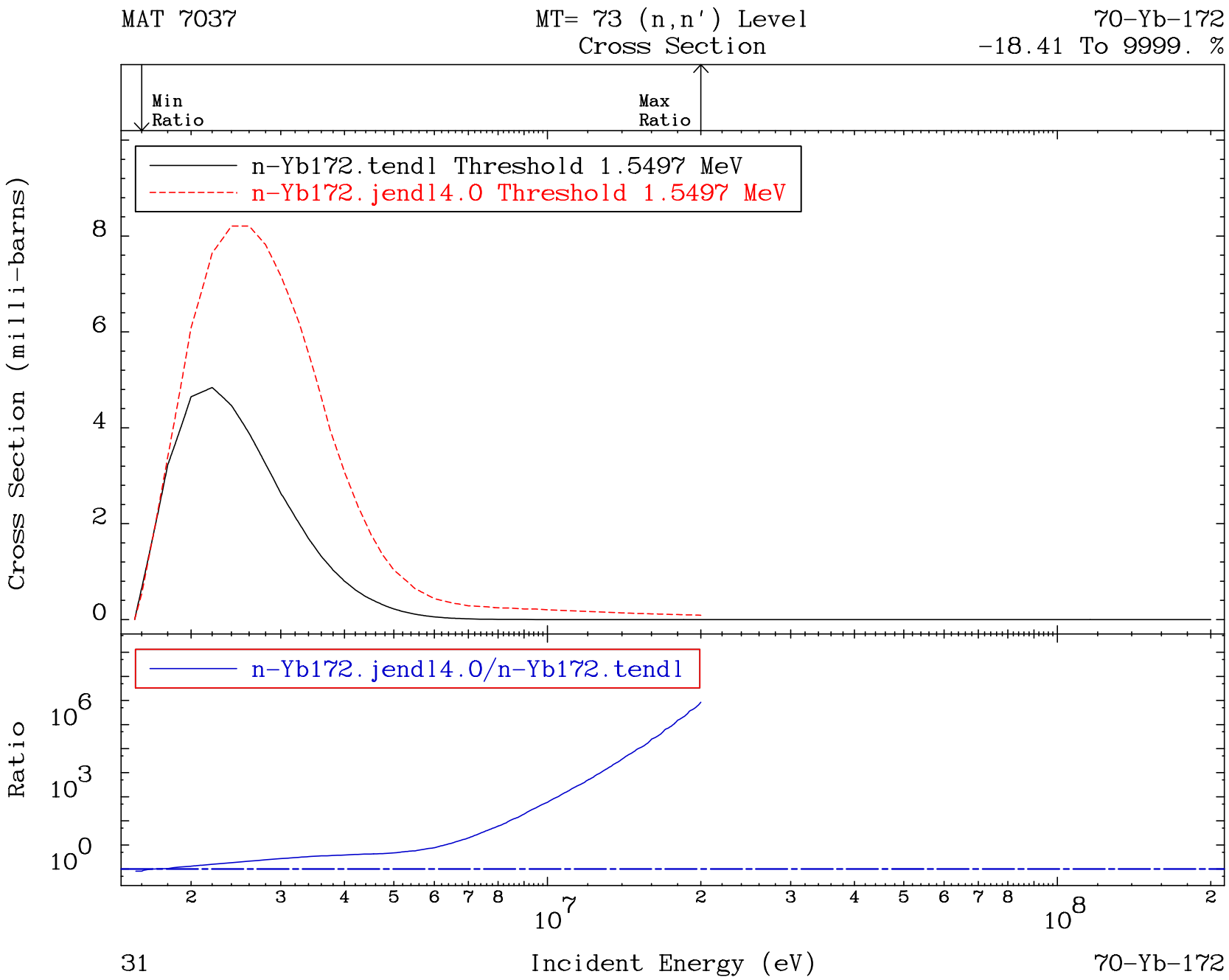

MAT 7037
MT= 68 (n,n') Level
Cross Section
70-Yb-172
-96.38 To 122.9 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.4745 MeV
n-Yb172.jendl4.0 Threshold 1.4745 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^{0}
10^{-1}
4
2
3
4
5
6
7
8
10^{7}
10^{8}
26
Incident Energy (eV)
70-Yb-172

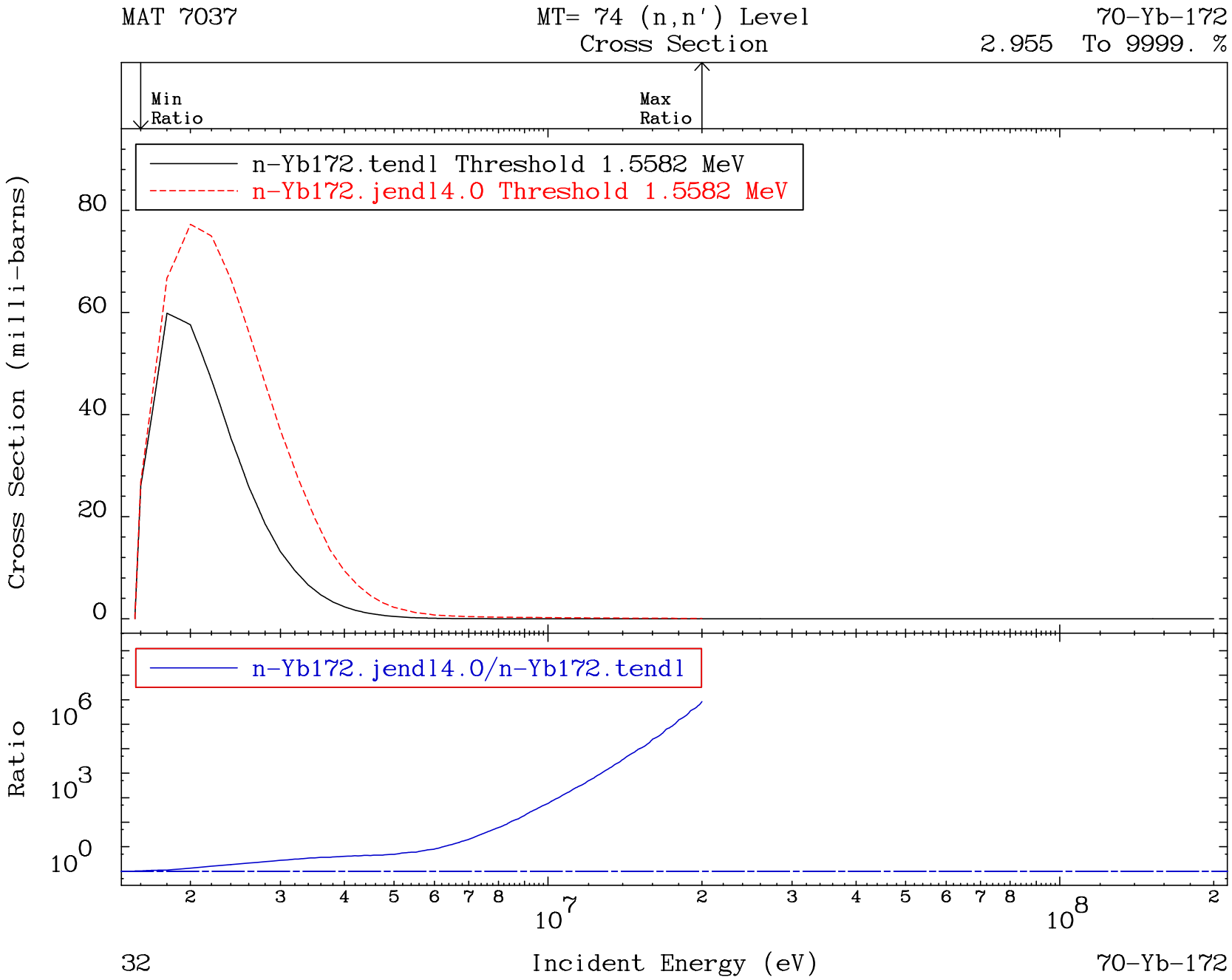

MAT 7037
MT= 69 (n,n') Level
Cross Section
70-Yb-172
-96.38 To 122.8 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.4855 MeV
n-Yb172.jendl4.0 Threshold 1.4855 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-1
2
3
4
5
6
7
8
10^7
10^8
27
Incident Energy (eV)
70-Yb-172

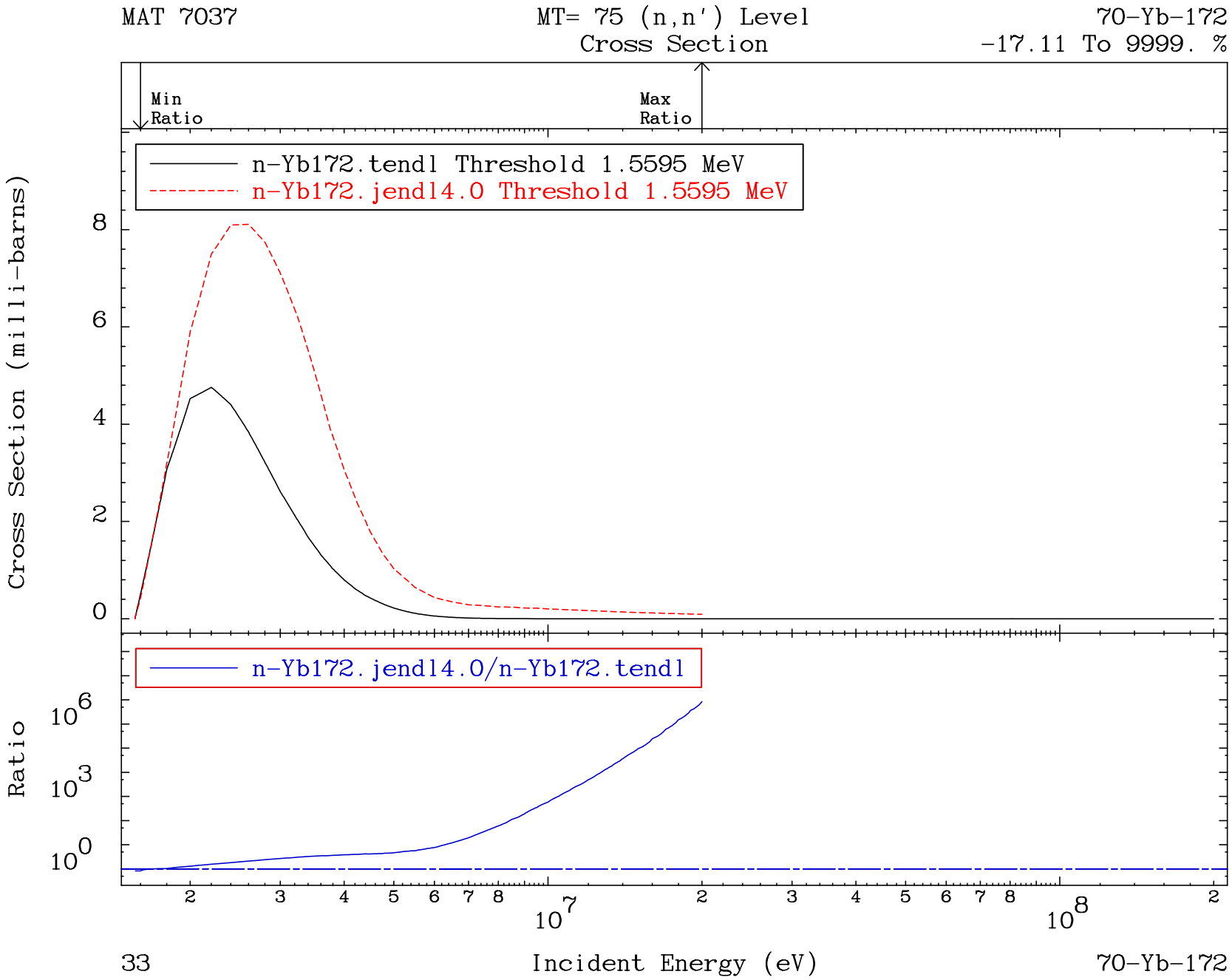

MAT 7037
MT= 70 (n,n') Level
Cross Section
70-Yb-172
-96.82 To 152.2 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.5049 MeV
n-Yb172.jendl4.0 Threshold 1.5049 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^{0}
10^{-1}
4
2 3 4 5 6 7 8
10^{7}
2 3 4 5 6 7 8
10^{8}
2
28
Incident Energy (eV)
70-Yb-172

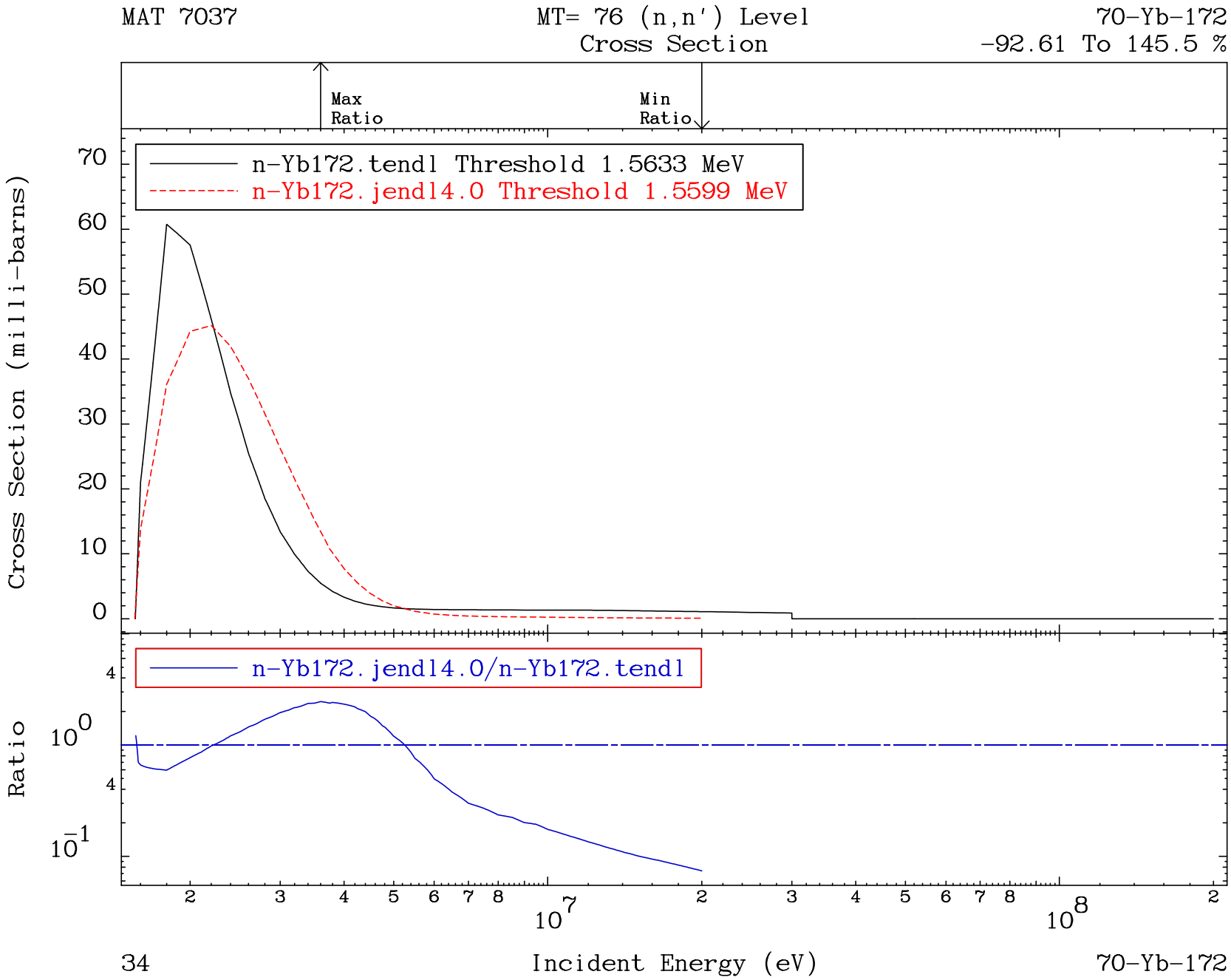

MAT 7037
MT= 71 (n,n') Level
Cross Section
70-Yb-172
-87.60 To 145.9 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.5190 MeV
n-Yb172.jendl4.0 Threshold 1.5190 MeV
Cross Section (milli-barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
29
70-Yb-172

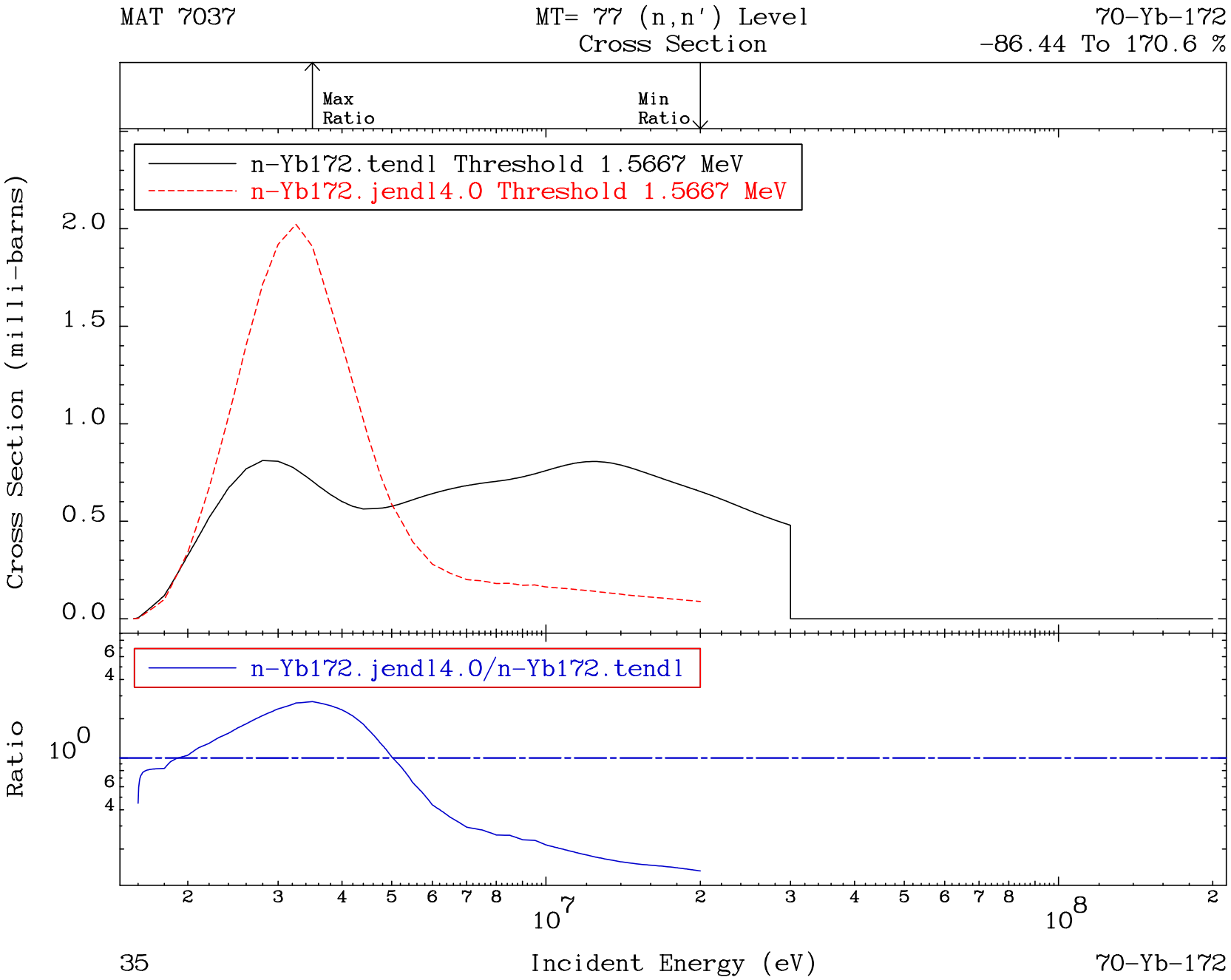

MAT 7037
MT= 72 (n,n') Level
Cross Section
70-Yb-172
-87.60 To 145.9 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.5465 MeV
n-Yb172.jendl4.0 Threshold 1.5465 MeV
Cross Section (milli-barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
30
70-Yb-172

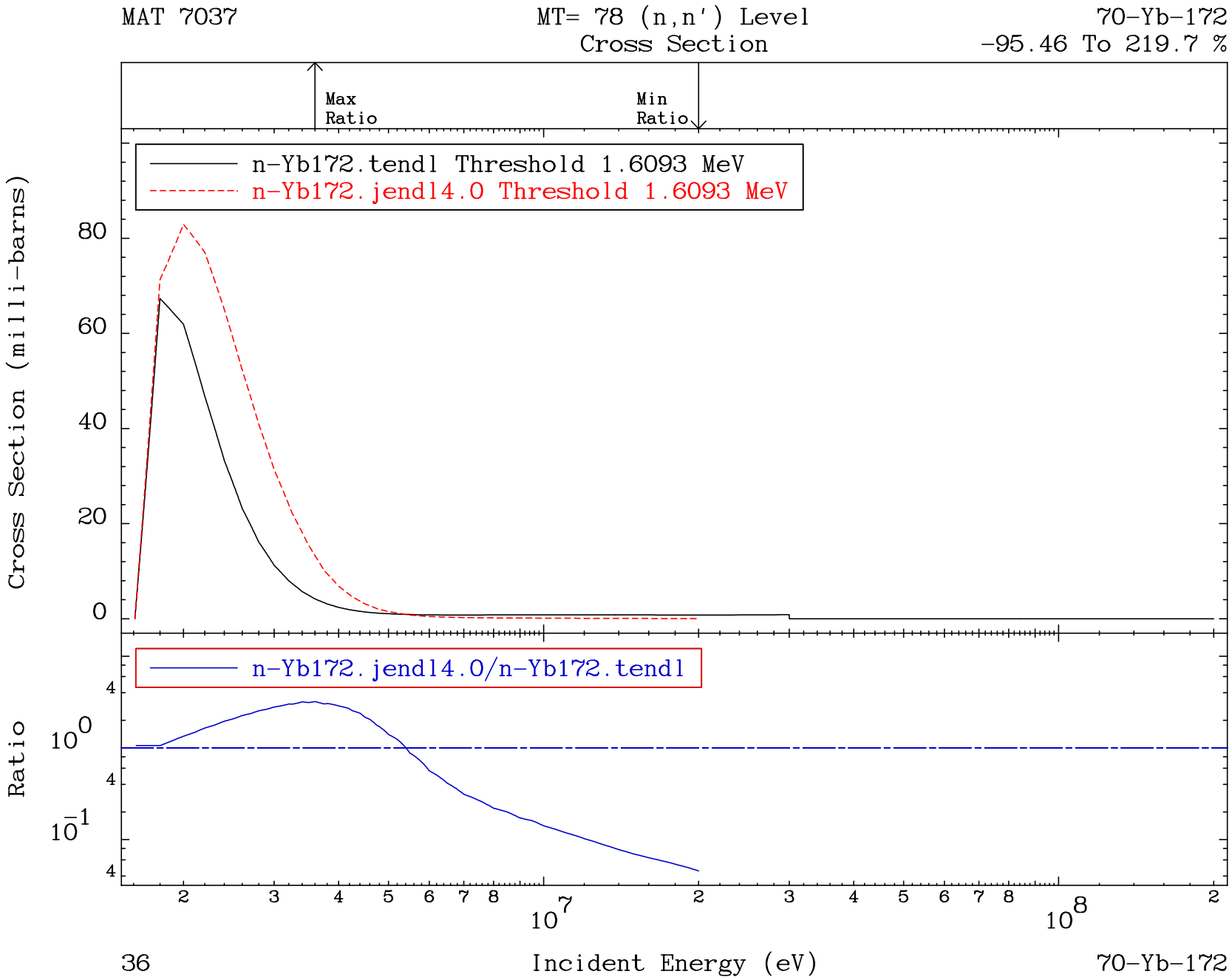

MAT 7037
MT= 73 (n,n') Level
Cross Section
70-Yb-172
-18.41 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.5497 MeV
n-Yb172.jendl4.0 Threshold 1.5497 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^3
10^6
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
31
Incident Energy (eV)
70-Yb-172

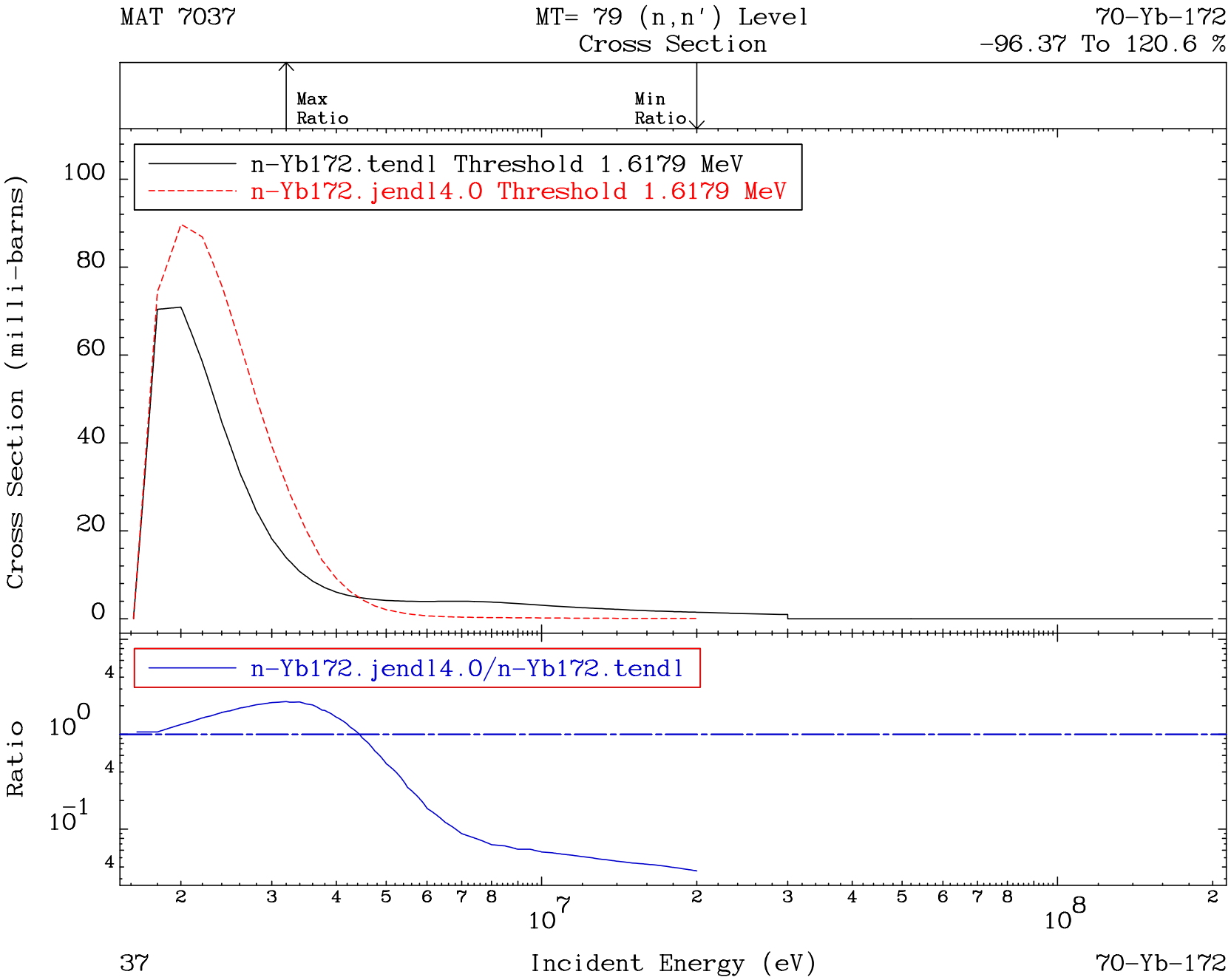

MAT 7037
MT= 74 (n,n') Level
Cross Section
70-Yb-172
2.955 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.5582 MeV
n-Yb172.jendl4.0 Threshold 1.5582 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
32
Incident Energy (eV)
70-Yb-172

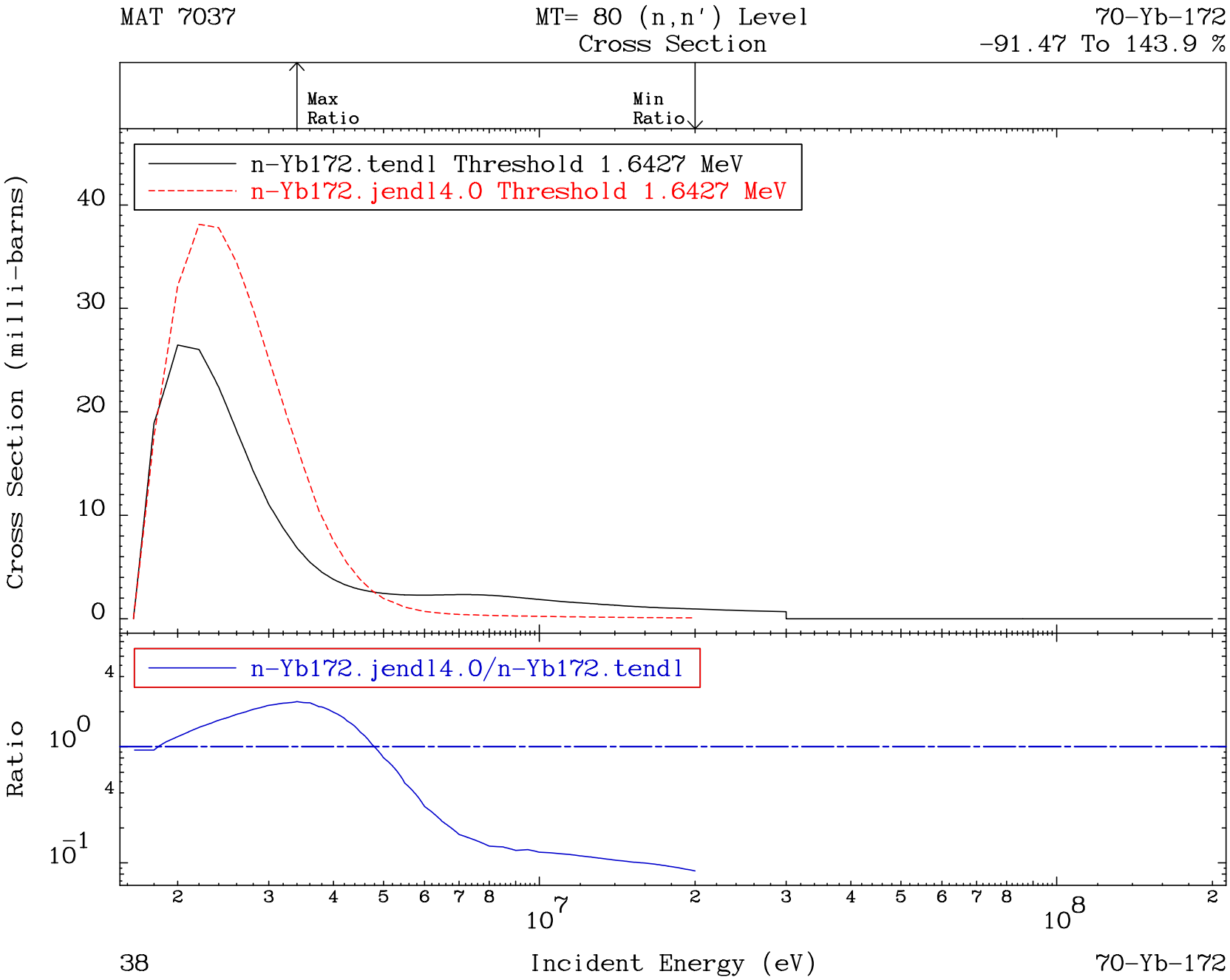

MAT 7037
MT= 75 (n,n') Level
Cross Section
70-Yb-172
-17.11 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.5595 MeV
n-Yb172.jendl4.0 Threshold 1.5595 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^3
10^6
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
33
Incident Energy (eV)
70-Yb-172

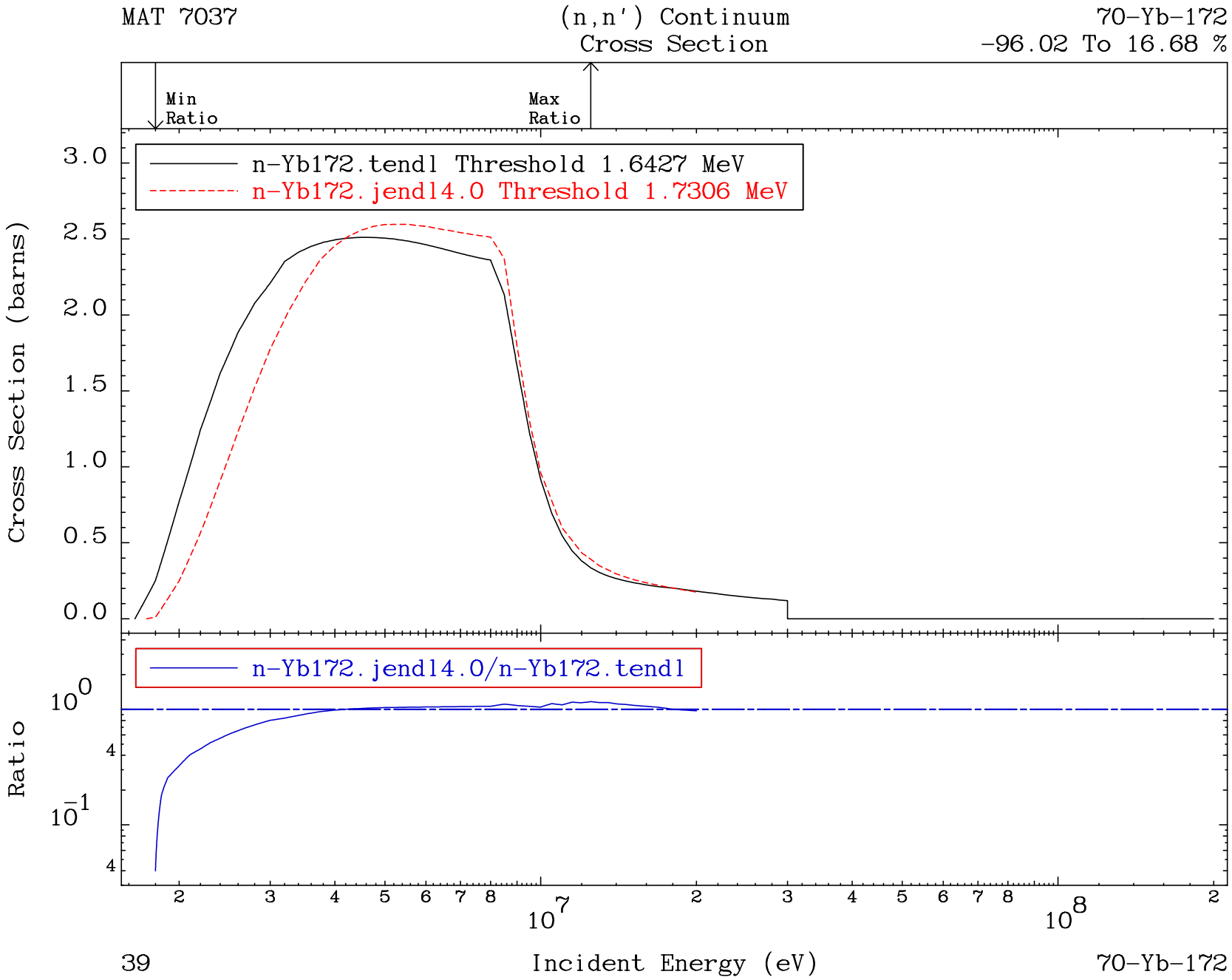

MAT 7037
MT= 76 (n,n') Level
Cross Section
70-Yb-172
-92.61 To 145.5 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.5633 MeV
n-Yb172.jendl4.0 Threshold 1.5599 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4
10^{0}
4
10^{-1}
2
3
4
5
6
7
8
10^{7}
2
3
4
5
6
7
8
10^{8}
2
34
Incident Energy (eV)
70-Yb-172

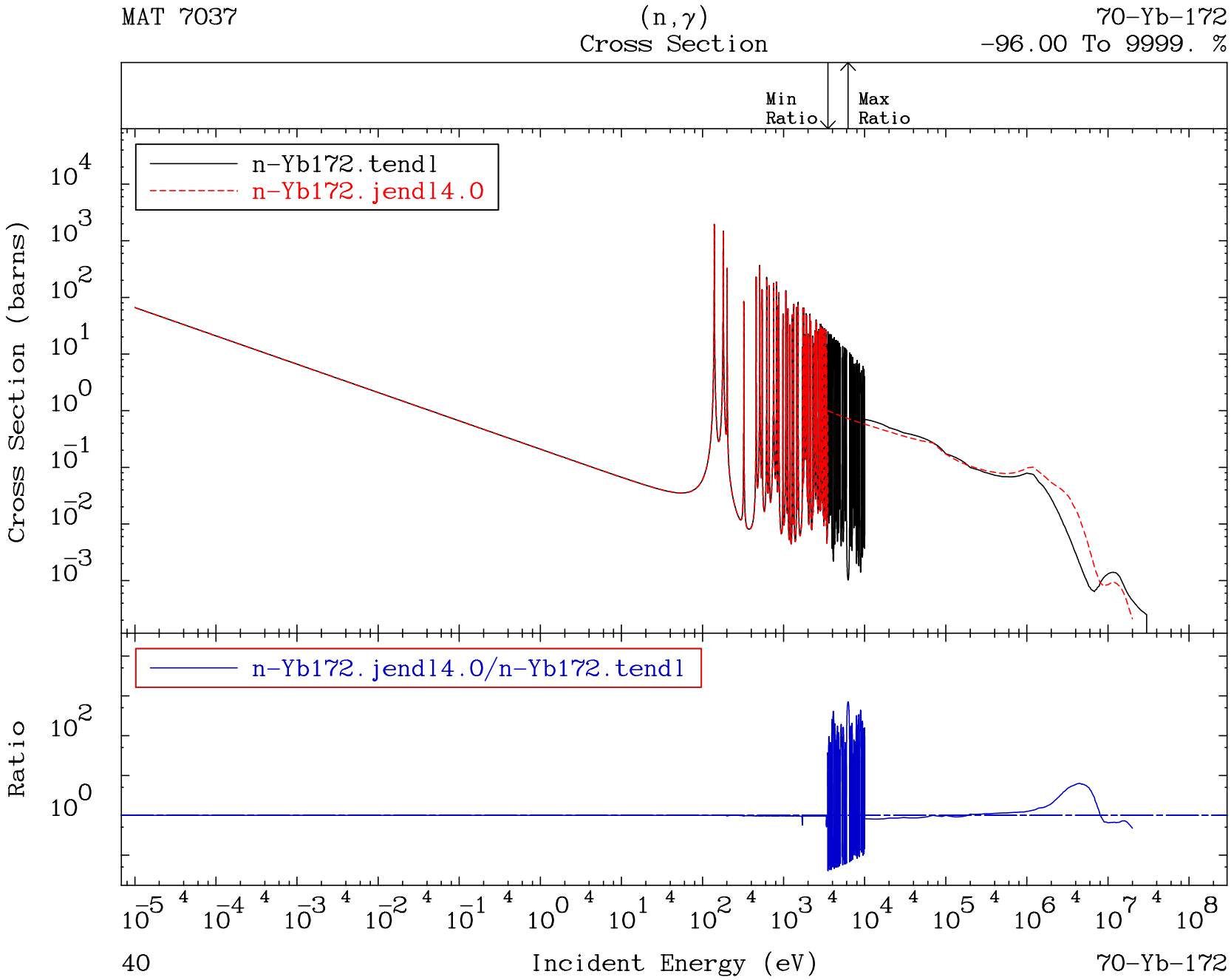

MAT 7037
MT= 77 (n,n') Level
Cross Section
70-Yb-172
-86.44 To 170.6 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.5667 MeV
n-Yb172.jendl4.0 Threshold 1.5667 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
6
4
10^0
6
4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
35
Incident Energy (eV)
70-Yb-172

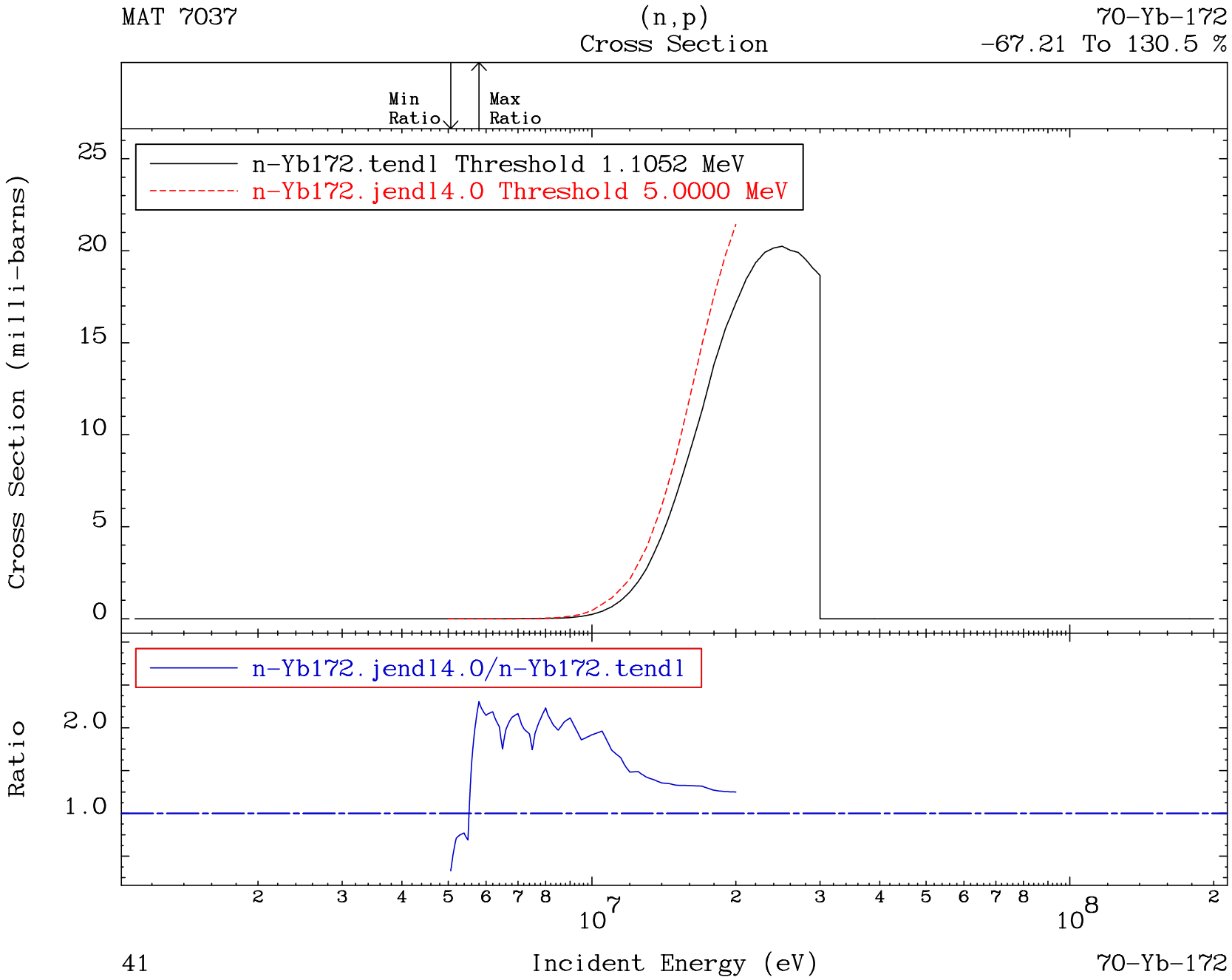

MAT 7037
MT= 78 (n,n') Level
Cross Section
70-Yb-172
-95.46 To 219.7 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.6093 MeV
n-Yb172.jendl4.0 Threshold 1.6093 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-1
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
36
Incident Energy (eV)
70-Yb-172

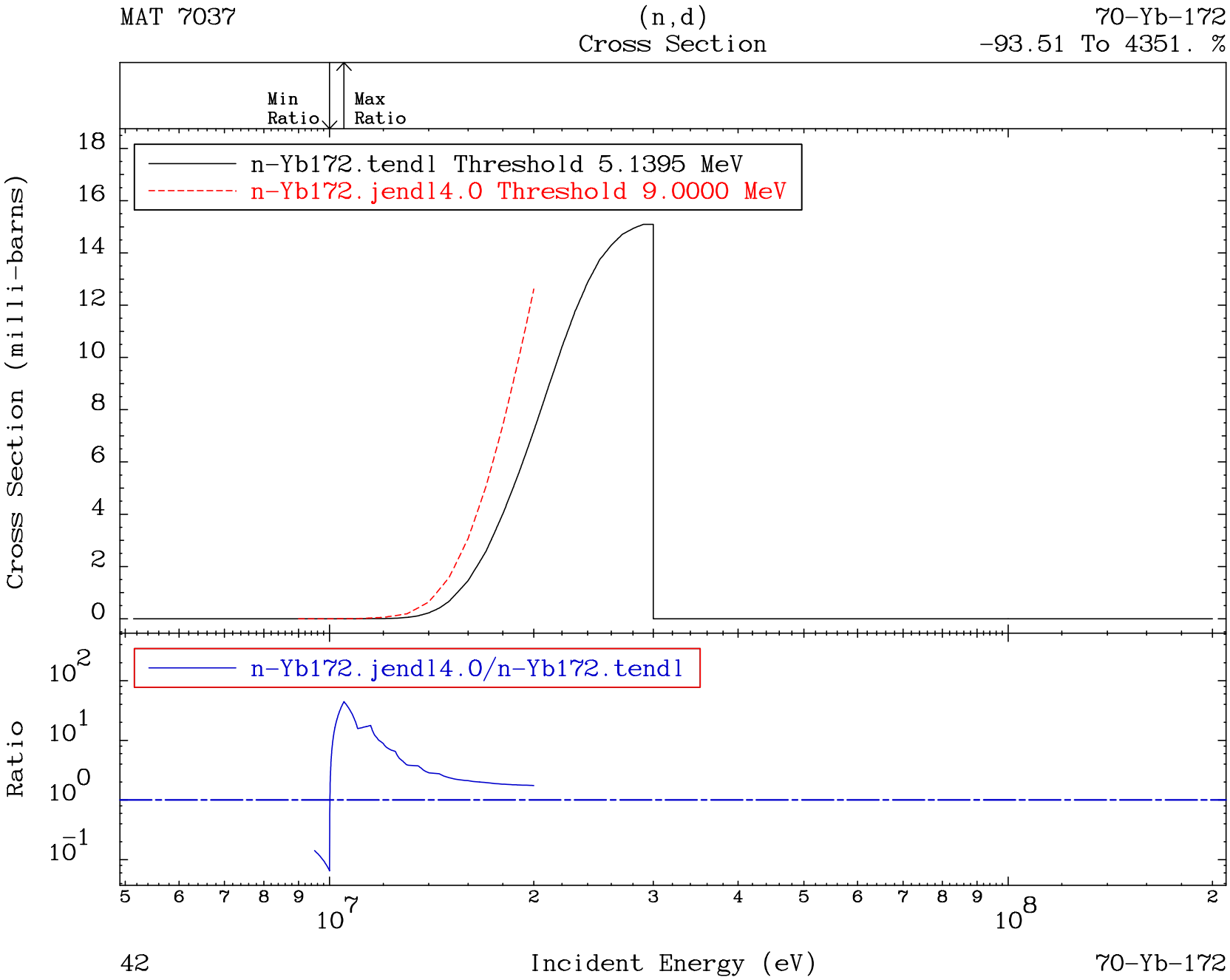

MAT 7037
MT= 79 (n,n') Level
Cross Section
70-Yb-172
-96.37 To 120.6 %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.6179 MeV
n-Yb172.jendl4.0 Threshold 1.6179 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^{0}
10^{-1}
4
2
3
4
5
6
7
8
10^{7}
10^{8}
37
Incident Energy (eV)
70-Yb-172

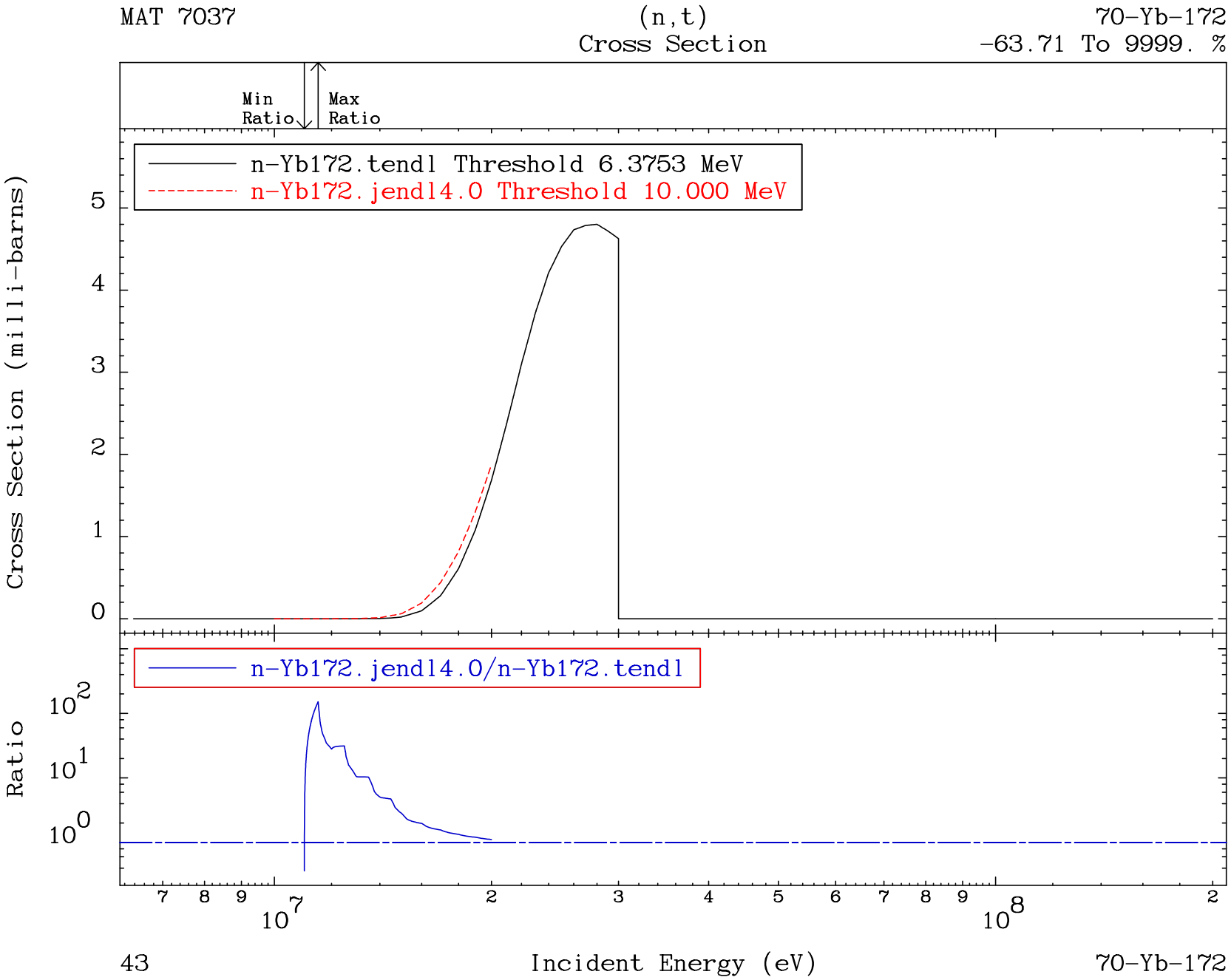

MAT 7037
MT= 80 (n,n') Level
Cross Section
70-Yb-172
-91.47 To 143.9 %
Max
Ratio
Min
Ratio
n-Yb172.tendl Threshold 1.6427 MeV
n-Yb172.jendl4.0 Threshold 1.6427 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4
10^0
4
10^{-1}
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
38
Incident Energy (eV)
70-Yb-172

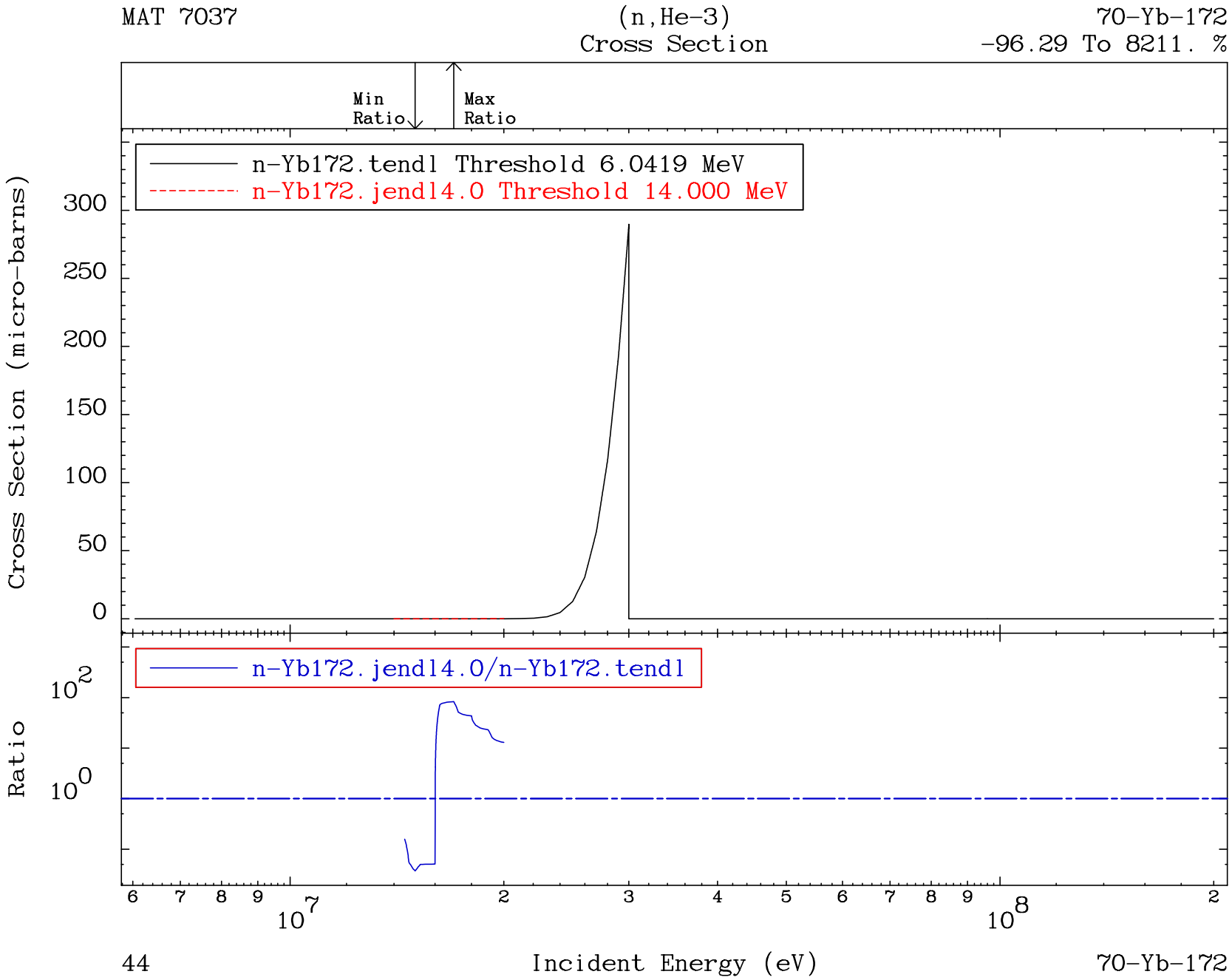

MAT 7037
(n,n') Continuum
Cross Section
70-Yb-172
-96.02 To 16.68 %
Min
Ratio
Max
Ratio
n-Yb172.tendl Threshold 1.6427 MeV
n-Yb172.jendl4.0 Threshold 1.7306 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^-1
4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
39
Incident Energy (eV)
70-Yb-172

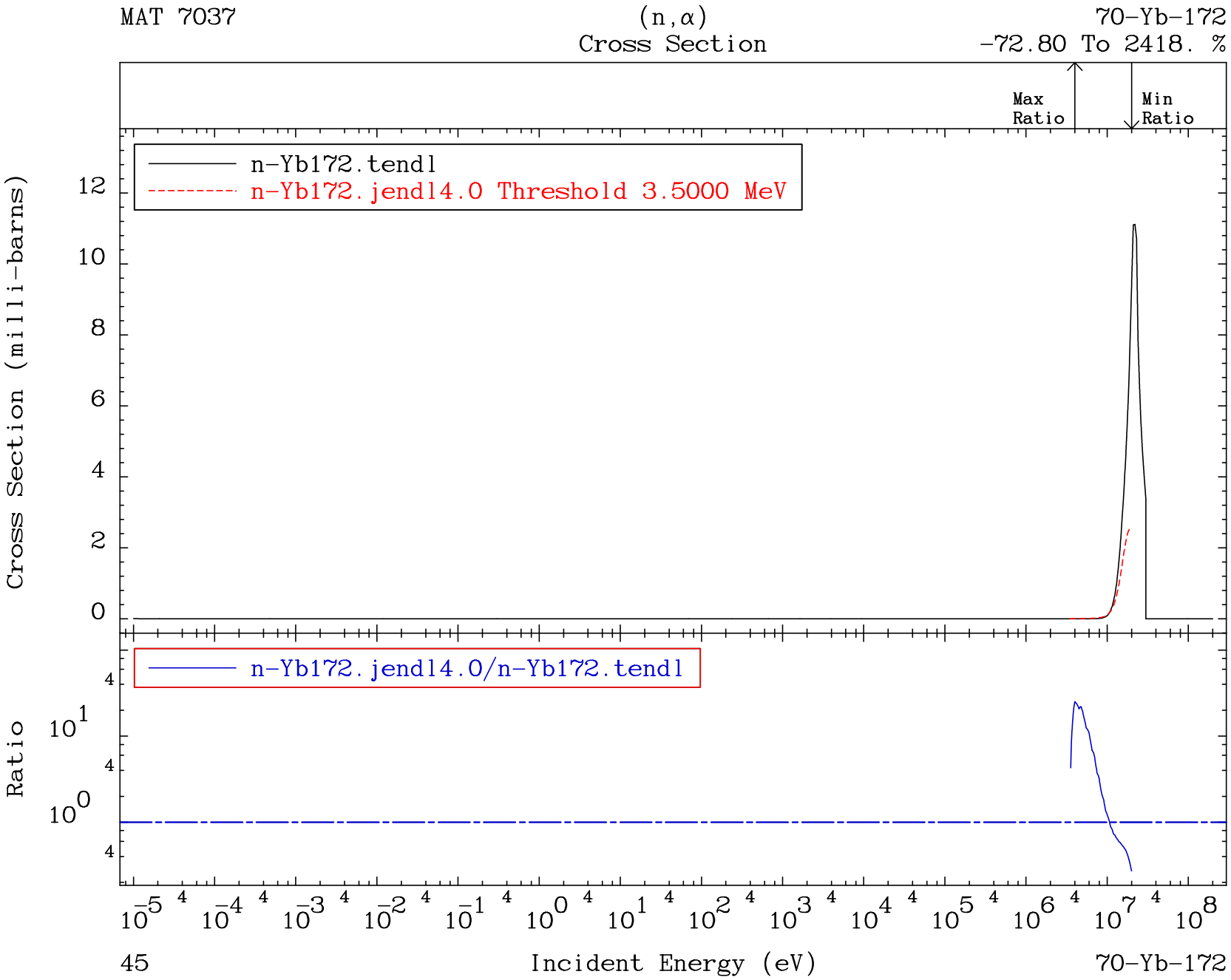

MAT 7037
(n,γ)
Cross Section
70-Yb-172
-96.00 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
40
Incident Energy (eV)
70-Yb-172

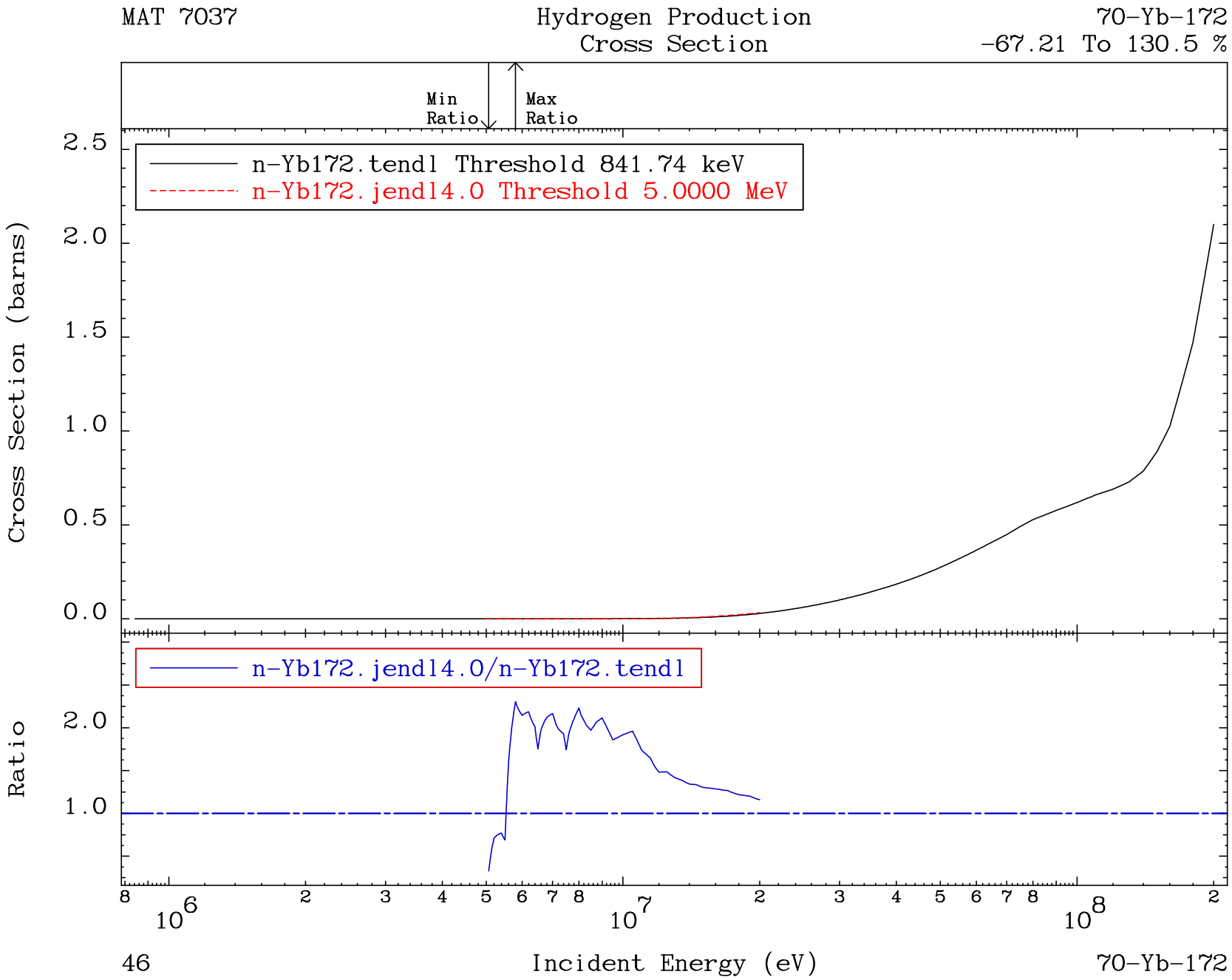

MAT 7037
(n,p)
Cross Section
70-Yb-172
-67.21 To 130.5 %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 1.1052 MeV
n-Yb172.jendl4.0 Threshold 5.0000 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
2.0
1.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
41
Incident Energy (eV)
70-Yb-172

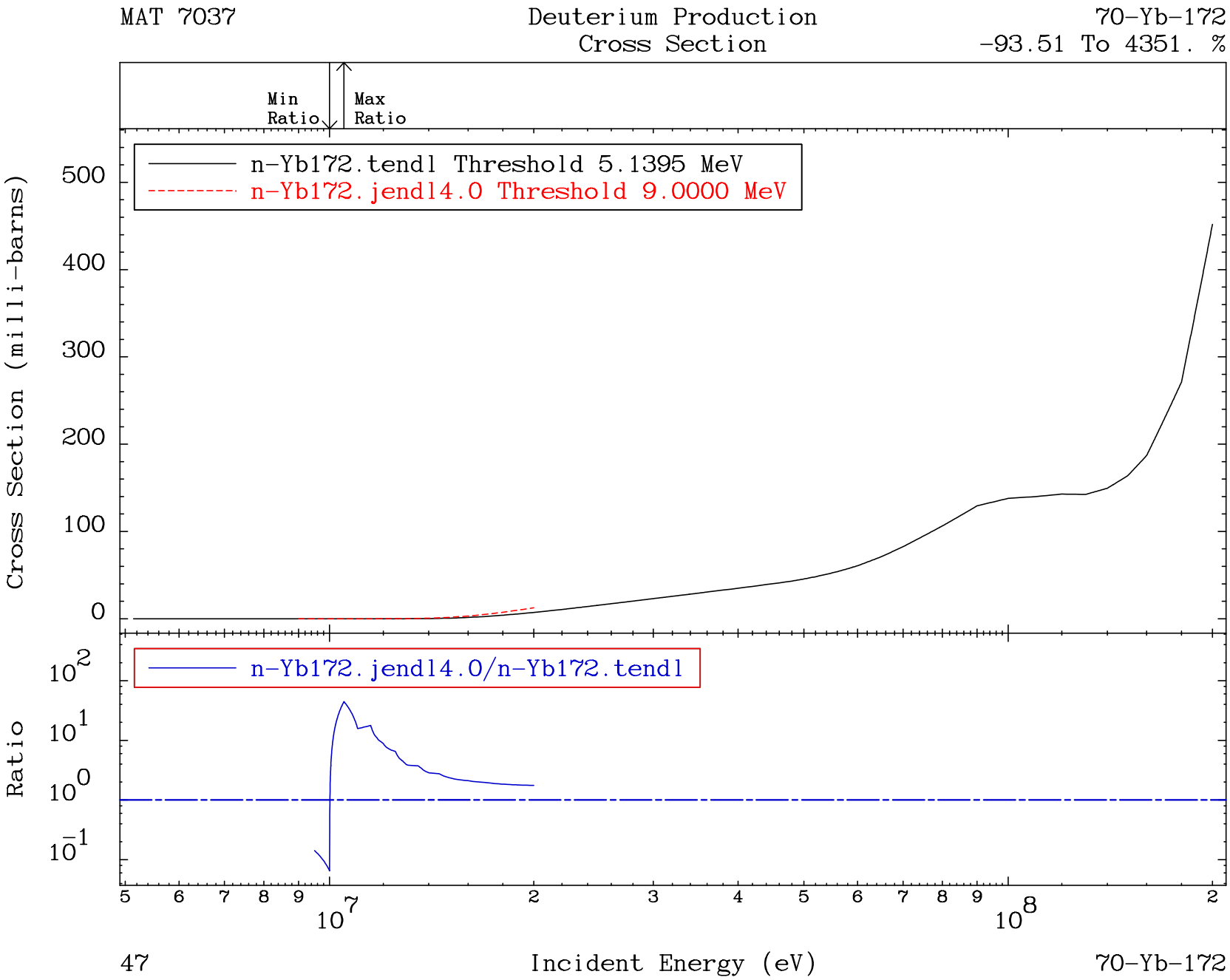

MAT 7037
(n,d)
Cross Section
70-Yb-172
-93.51 To 4351. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 5.1395 MeV
n-Yb172.jendl4.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
42
70-Yb-172

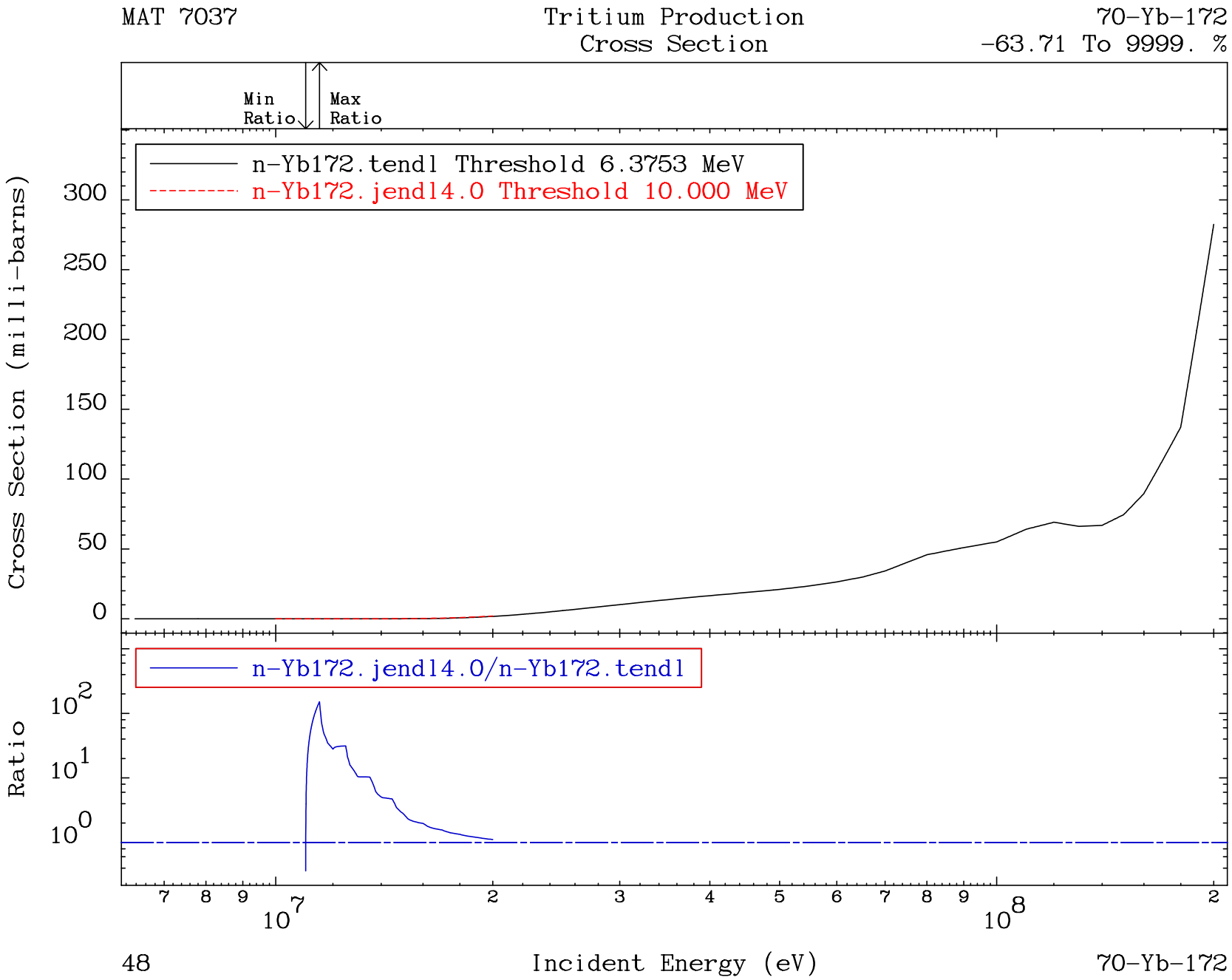

MAT 7037
(n,t)
Cross Section
70-Yb-172
-63.71 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 6.3753 MeV
n-Yb172.jendl4.0 Threshold 10.000 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^2
10^1
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
70-Yb-172

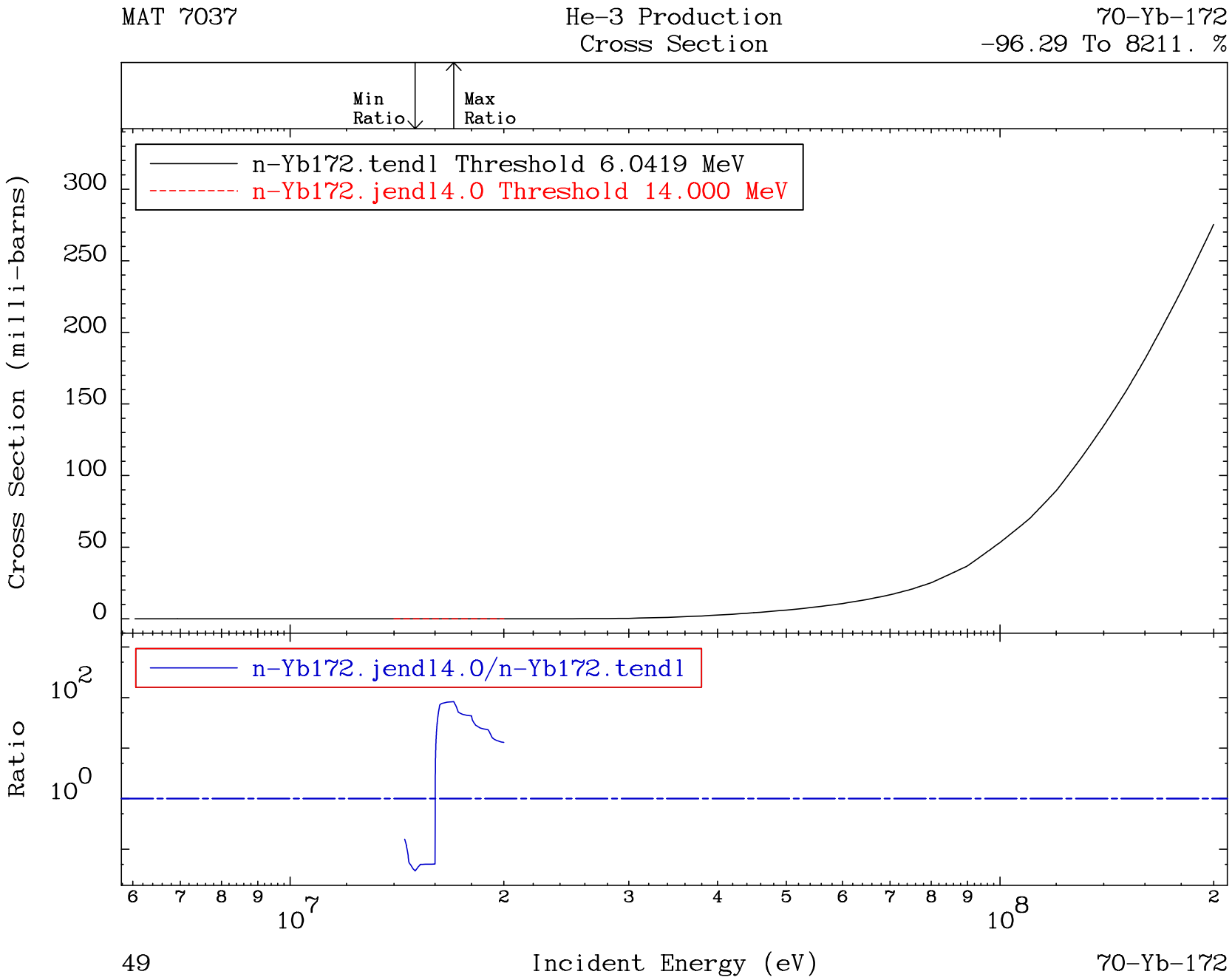

MAT 7037
(n,He-3)
Cross Section
70-Yb-172
-96.29 To 8211. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 6.0419 MeV
n-Yb172.jendl4.0 Threshold 14.000 MeV
Cross Section (micro-barns)
300
250
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^2
10^0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
44
Incident Energy (eV)
70-Yb-172

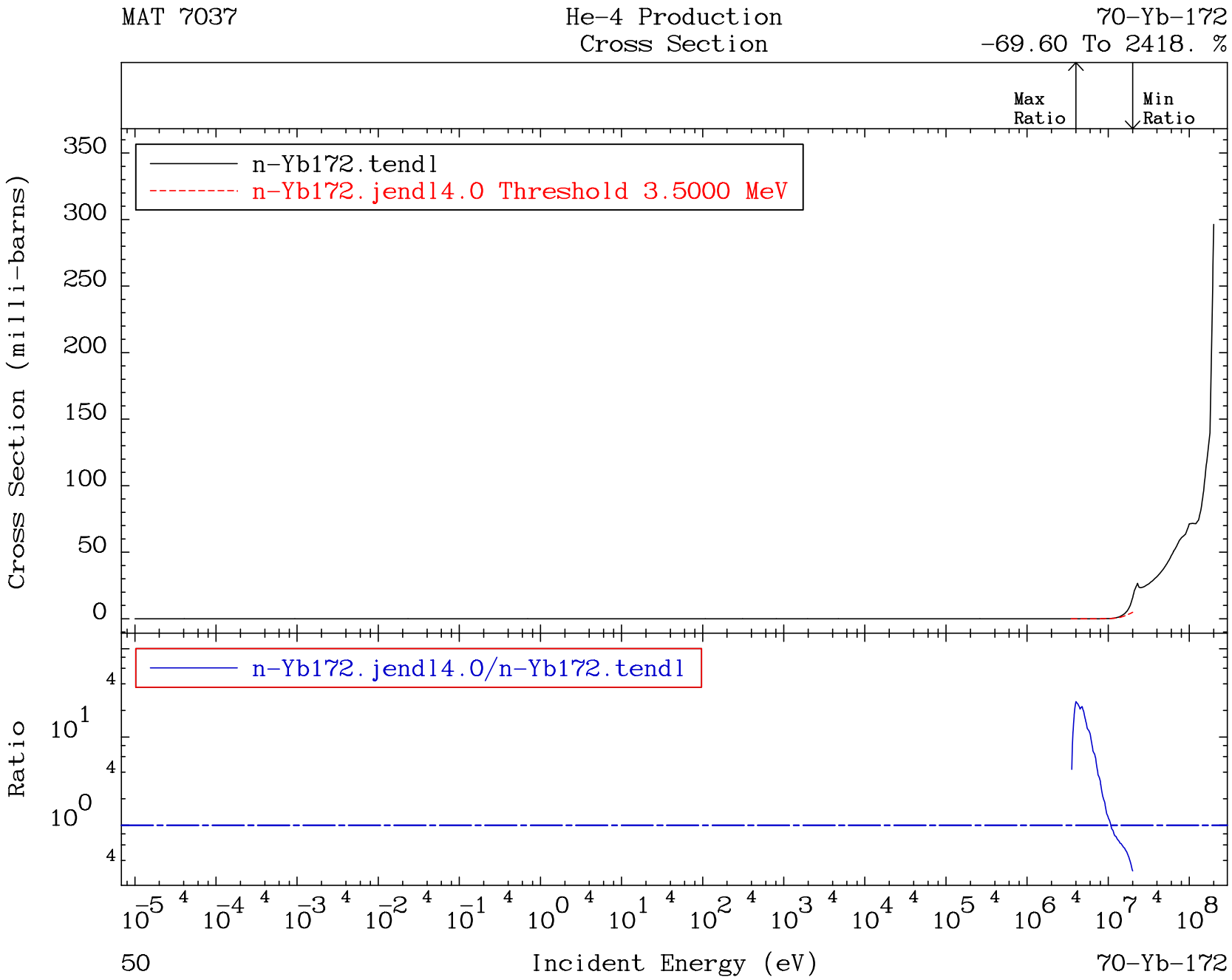

MAT 7037
(n,α)
Cross Section
70-Yb-172
-72.80 To 2418. %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0 Threshold 3.5000 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^0
10^1
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
45
Incident Energy (eV)
70-Yb-172

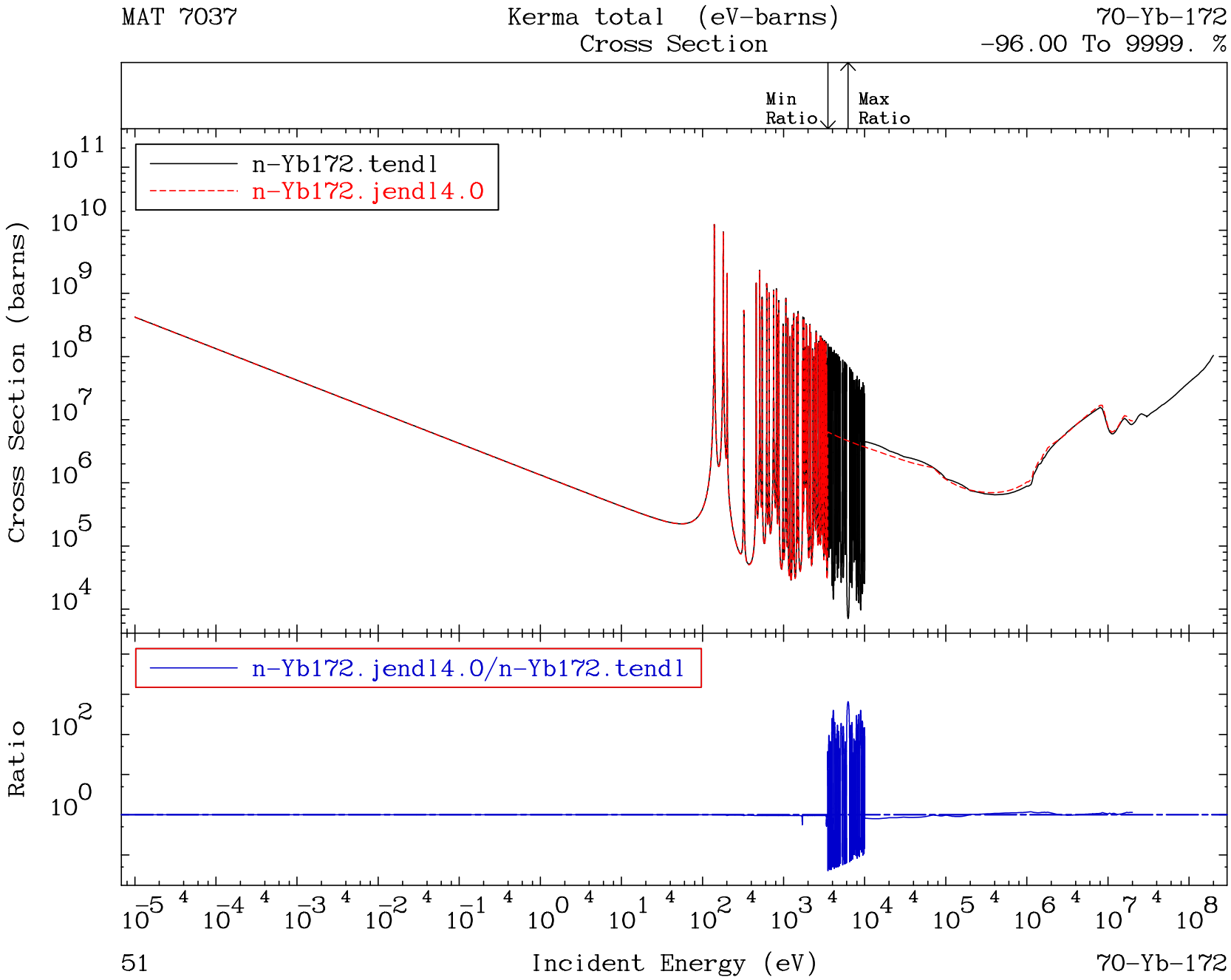

MAT 7037
Hydrogen Production
Cross Section
70-Yb-172
-67.21 To 130.5 %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 841.74 keV
n-Yb172.jendl4.0 Threshold 5.0000 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
2.0
1.0
8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
46
Incident Energy (eV)
70-Yb-172

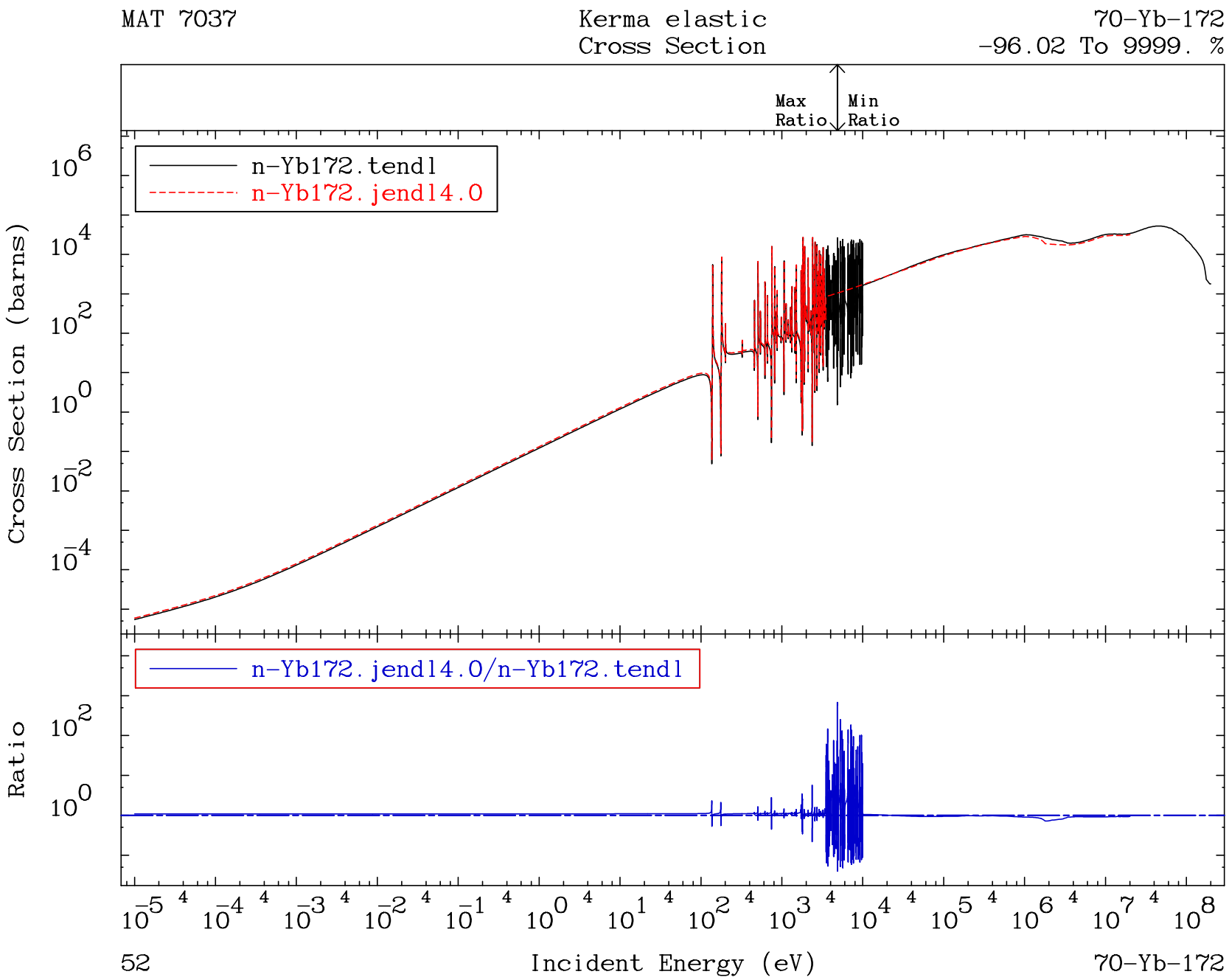

MAT 7037
Deuterium Production
Cross Section
70-Yb-172
-93.51 To 4351. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 5.1395 MeV
n-Yb172.jendl4.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^2
10^1
10^0
10^-1
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
70-Yb-172

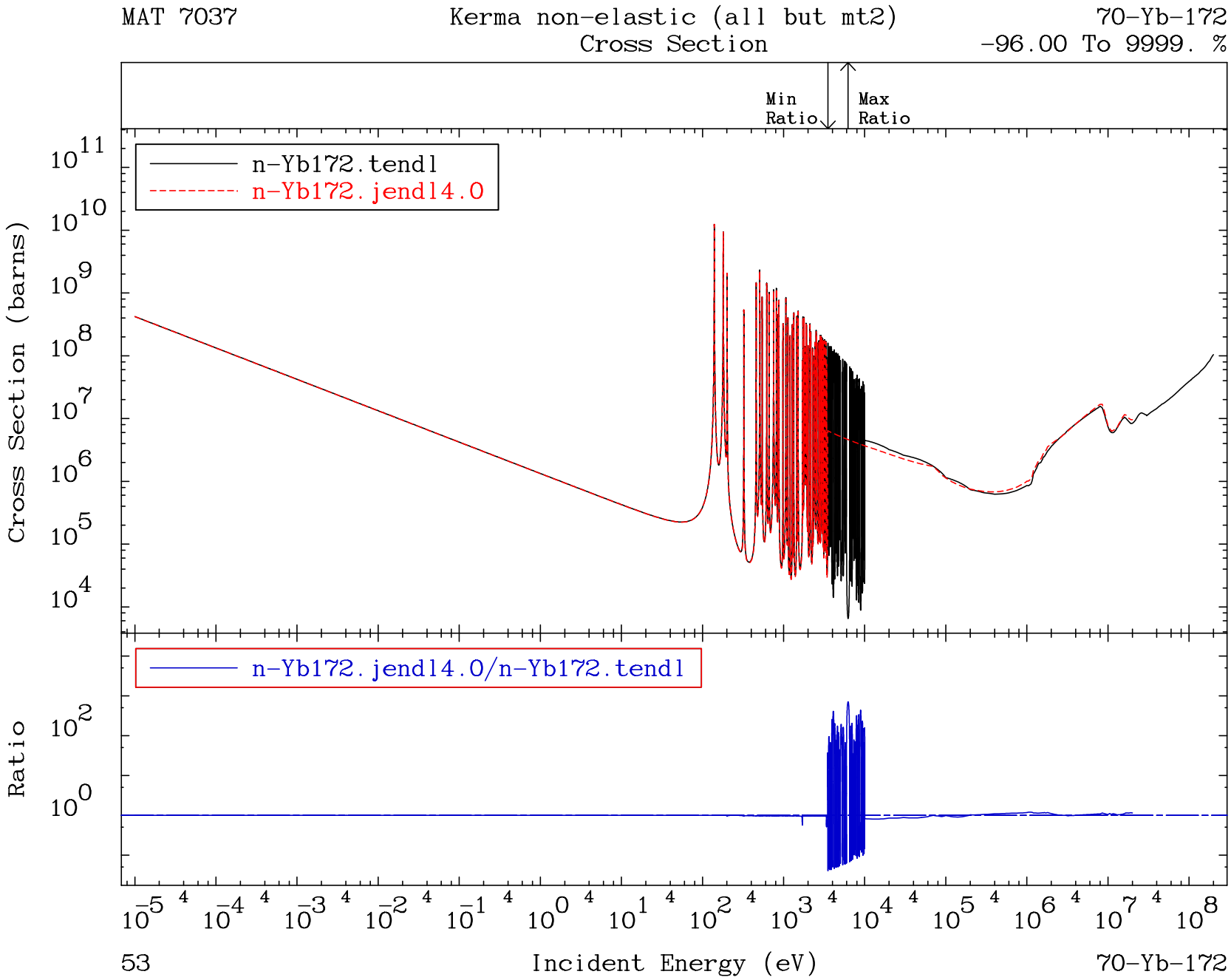

MAT 7037
Tritium Production
Cross Section
70-Yb-172
-63.71 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 6.3753 MeV
n-Yb172.jendl4.0 Threshold 10.000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^2
10^1
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
70-Yb-172

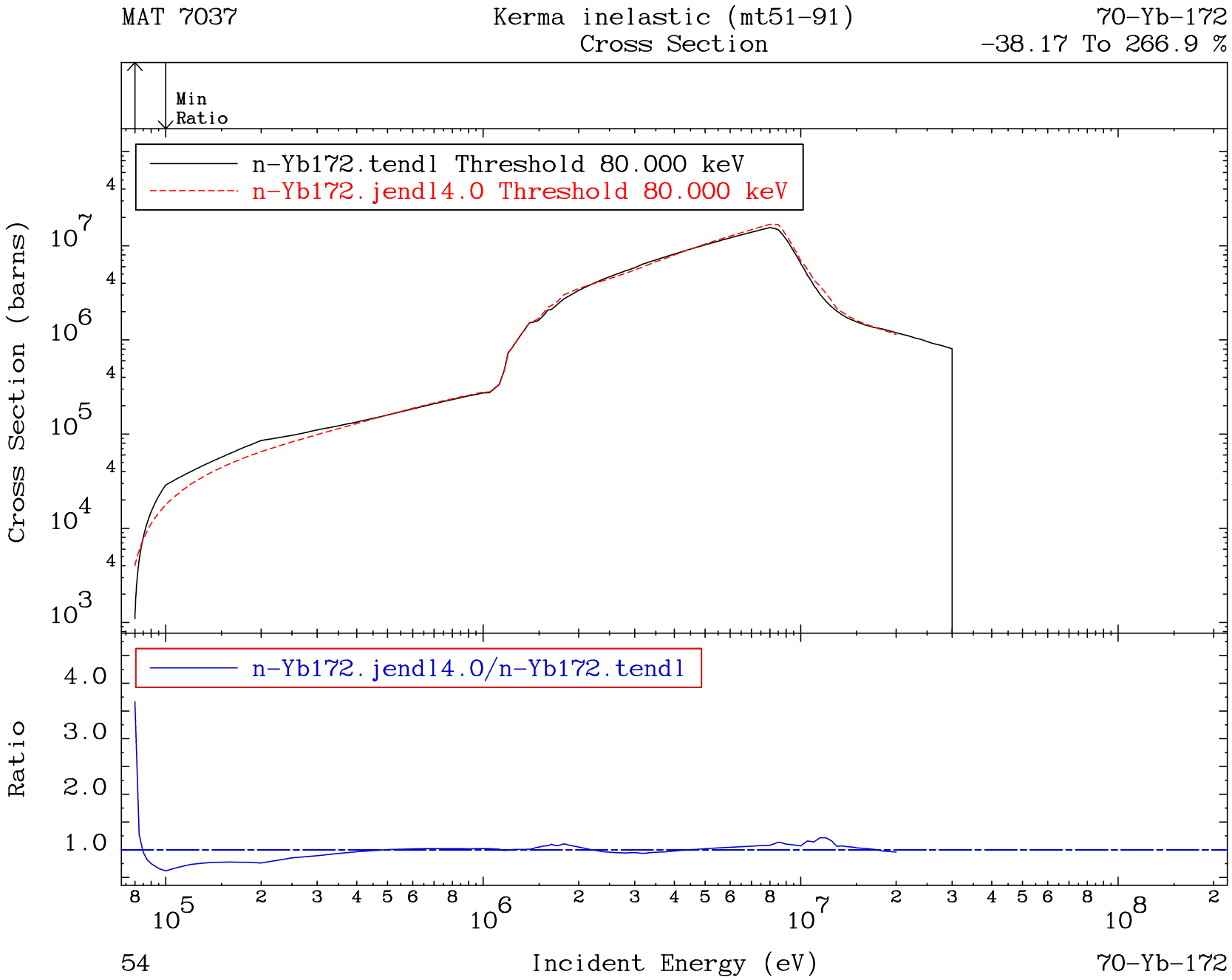

MAT 7037
He-3 Production
Cross Section
70-Yb-172
-96.29 To 8211. %
Min Ratio
Max Ratio
n-Yb172.tendl Threshold 6.0419 MeV
n-Yb172.jendl4.0 Threshold 14.000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^2
10^0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
49
Incident Energy (eV)
70-Yb-172

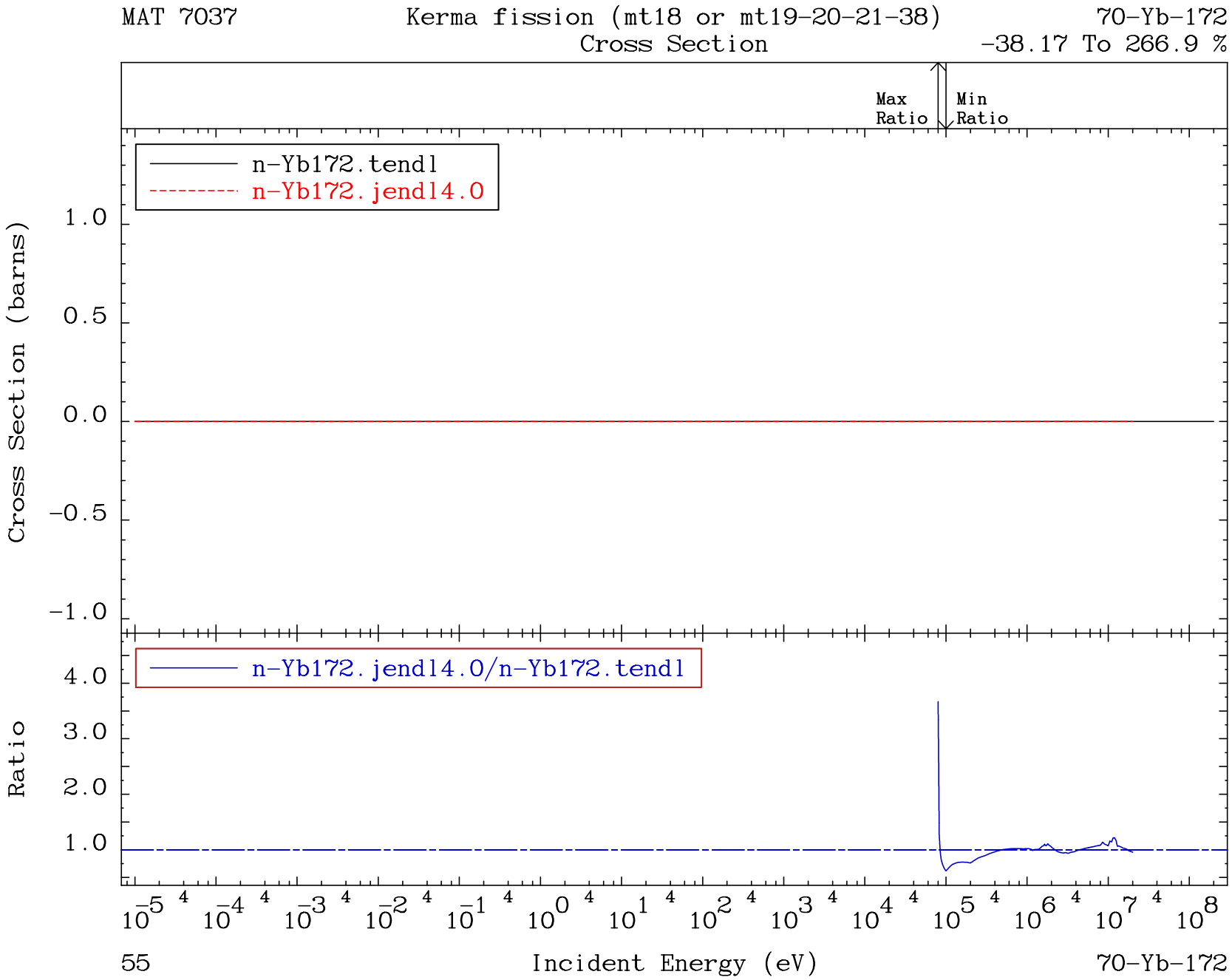

MAT 7037
He-4 Production
Cross Section
70-Yb-172
-69.60 To 2418. %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0 Threshold 3.5000 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^1
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
50
Incident Energy (eV)
70-Yb-172

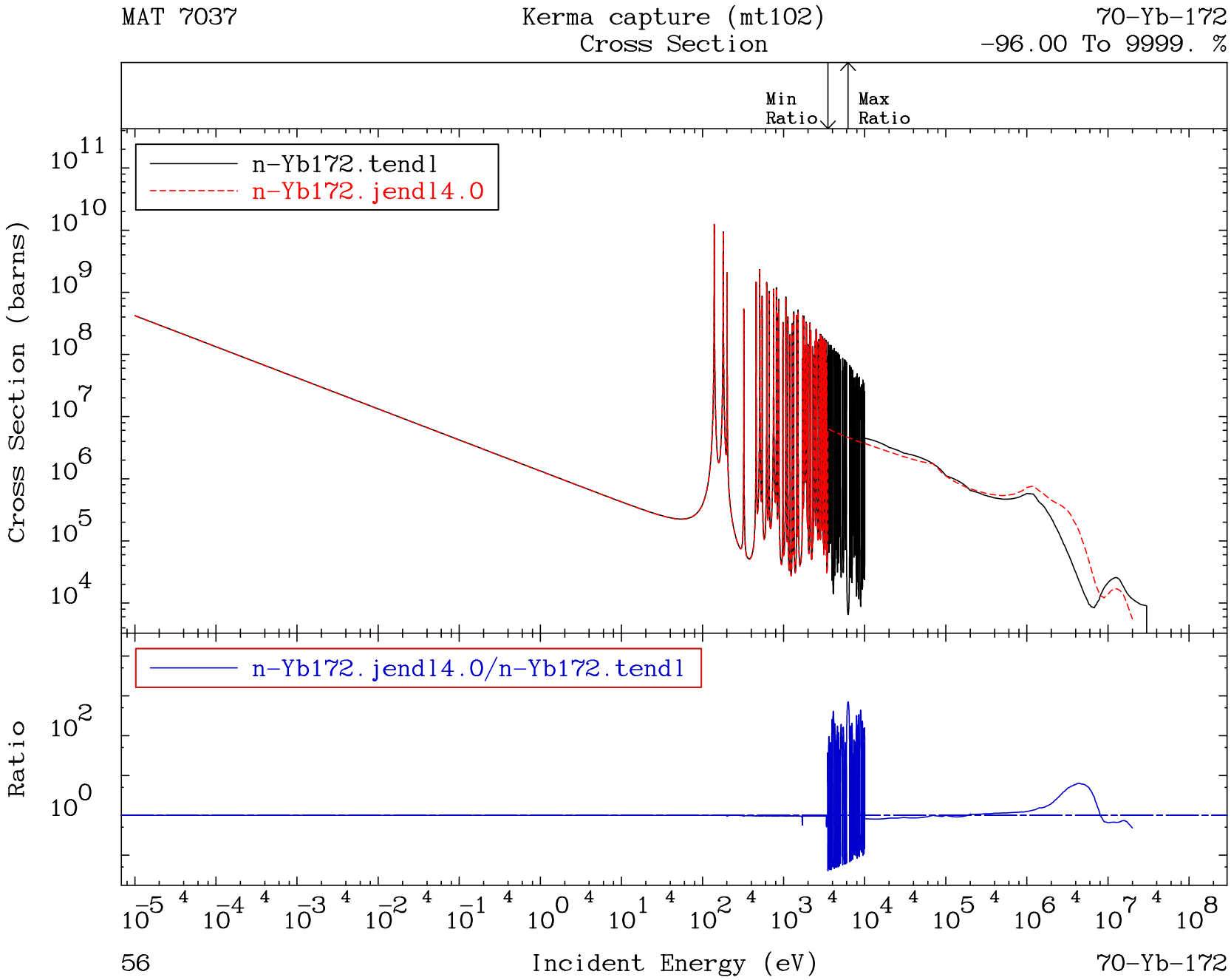

MAT 7037
Kerma total (eV-barns)
Cross Section
70-Yb-172
-96.00 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
51
70-Yb-172

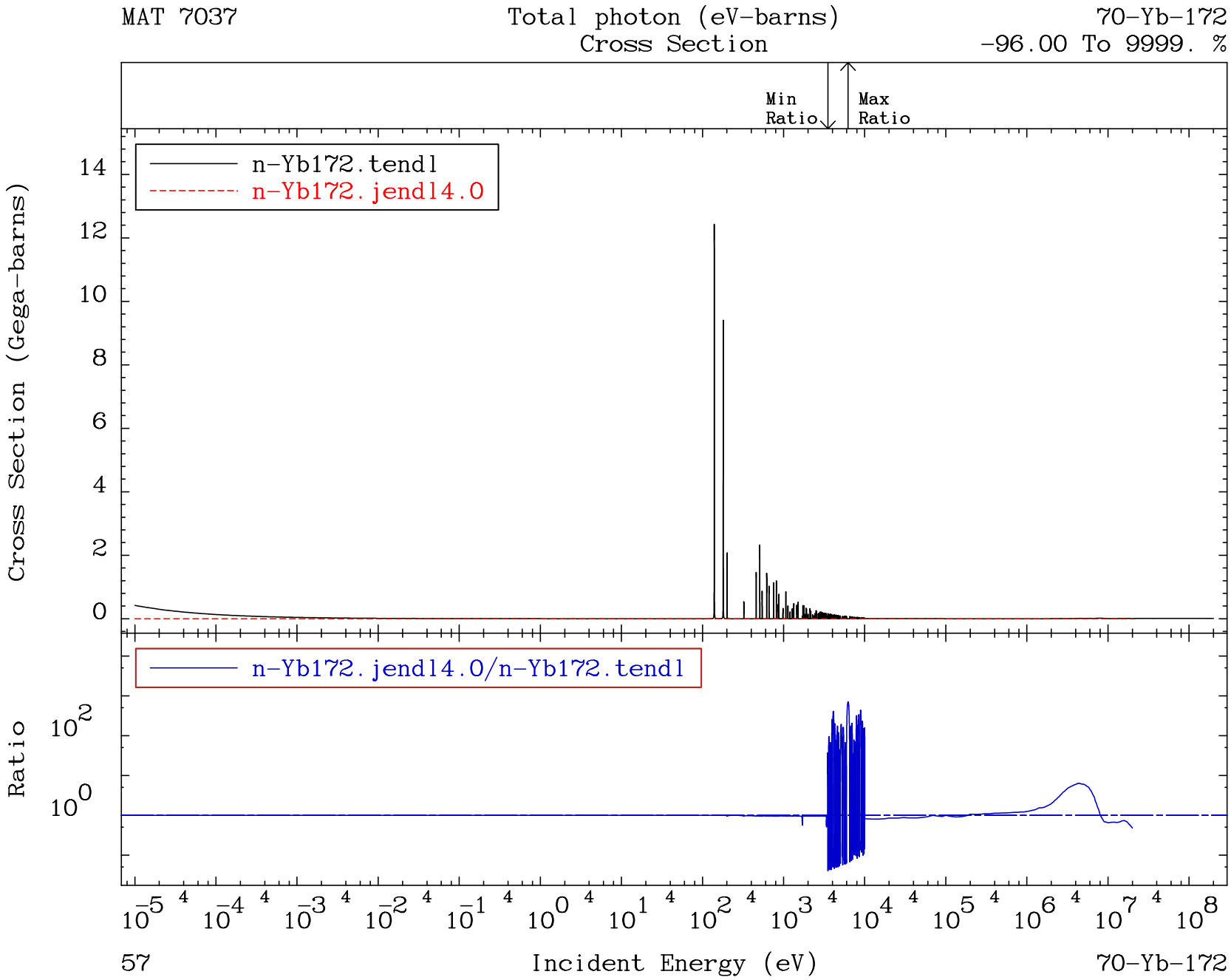

MAT 7037
Kerma elastic
Cross Section
70-Yb-172
-96.02 To 9999. %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
52
70-Yb-172

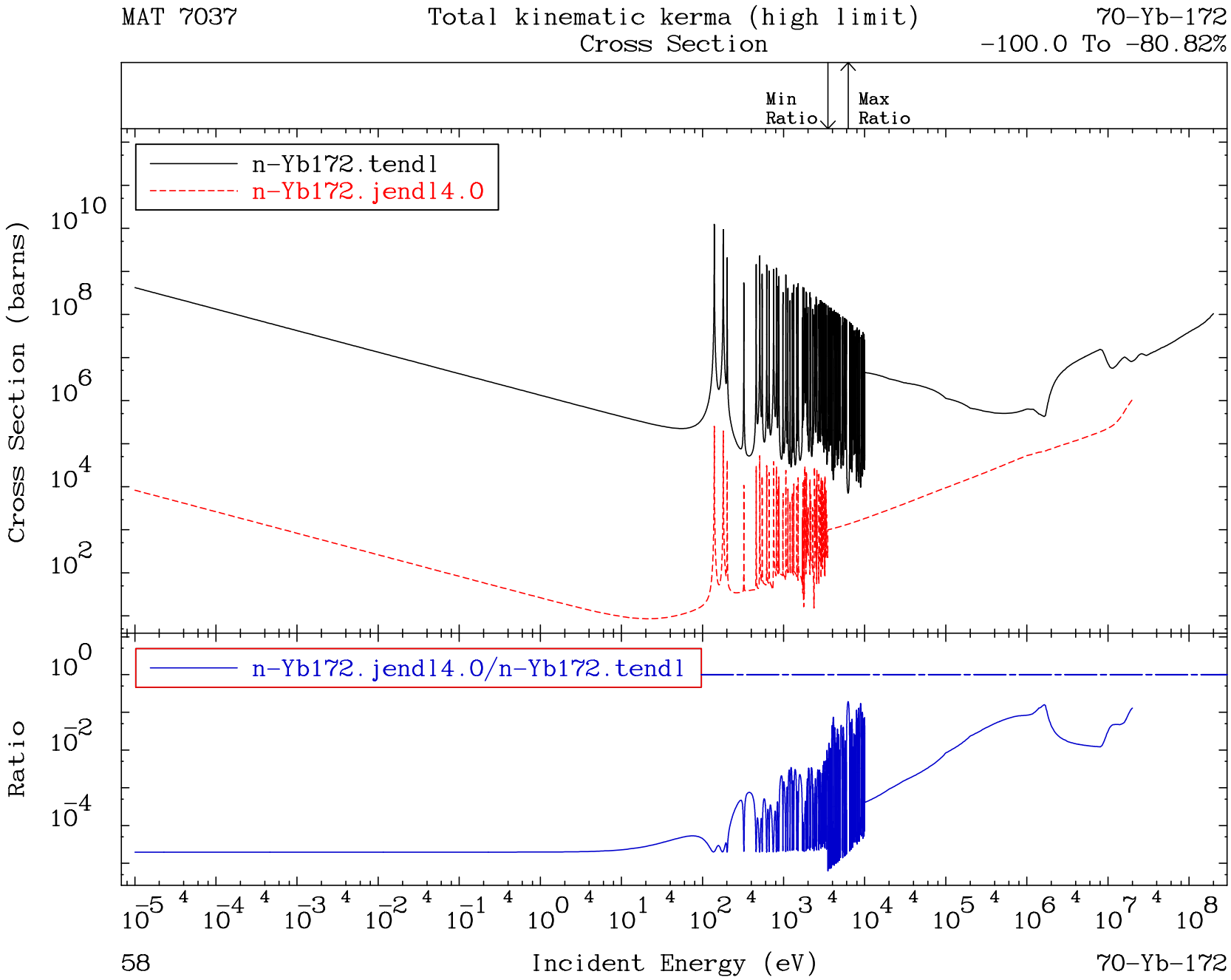

MAT 7037
Kerma non-elastic (all but mt2)
Cross Section
70-Yb-172
-96.00 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
53
Incident Energy (eV)
70-Yb-172

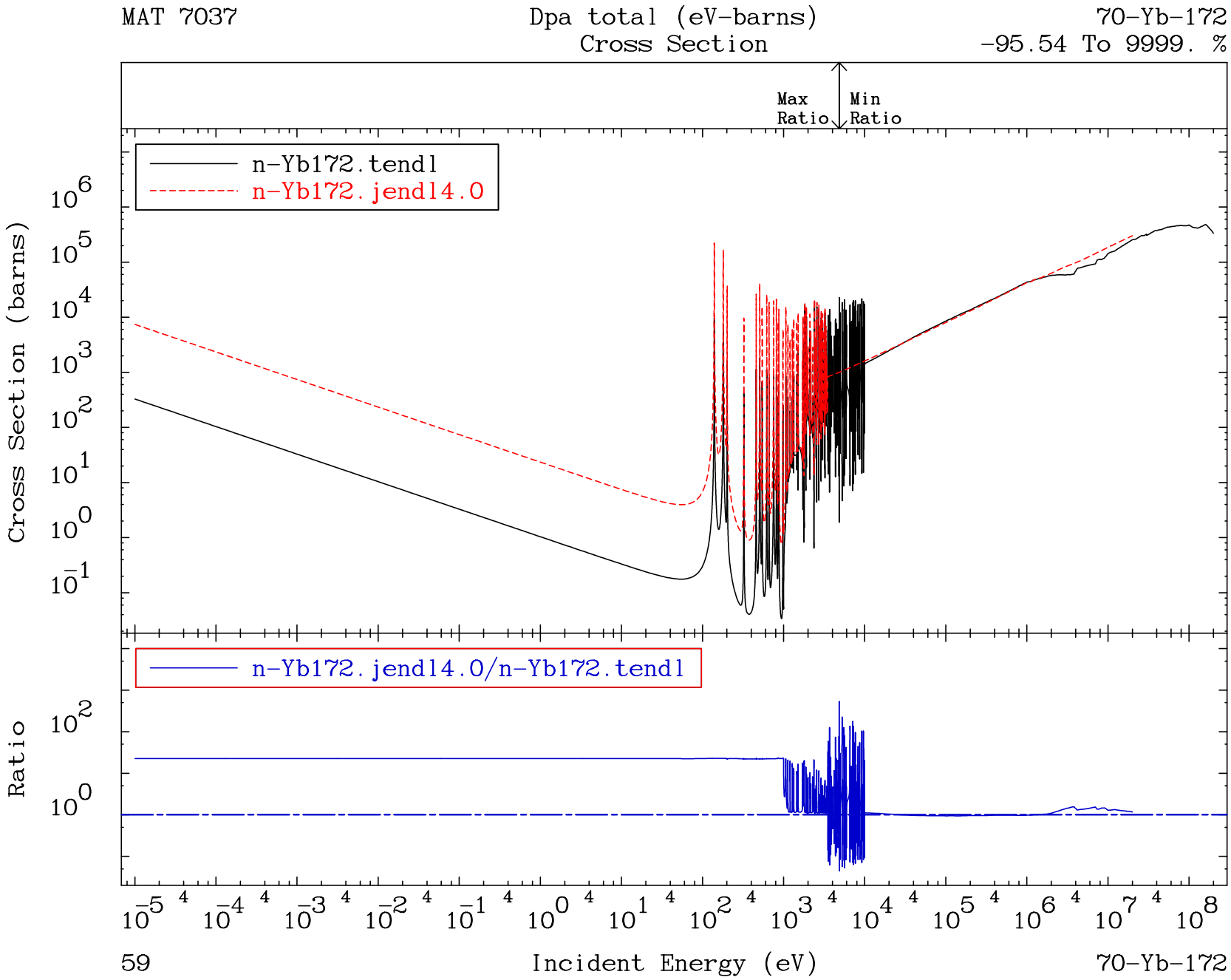

MAT 7037
Kerma inelastic (mt51-91)
Cross Section
70-Yb-172
-38.17 To 266.9 %
Min
Ratio
n-Yb172.tendl Threshold 80.000 keV
n-Yb172.jendl4.0 Threshold 80.000 keV
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
54
70-Yb-172

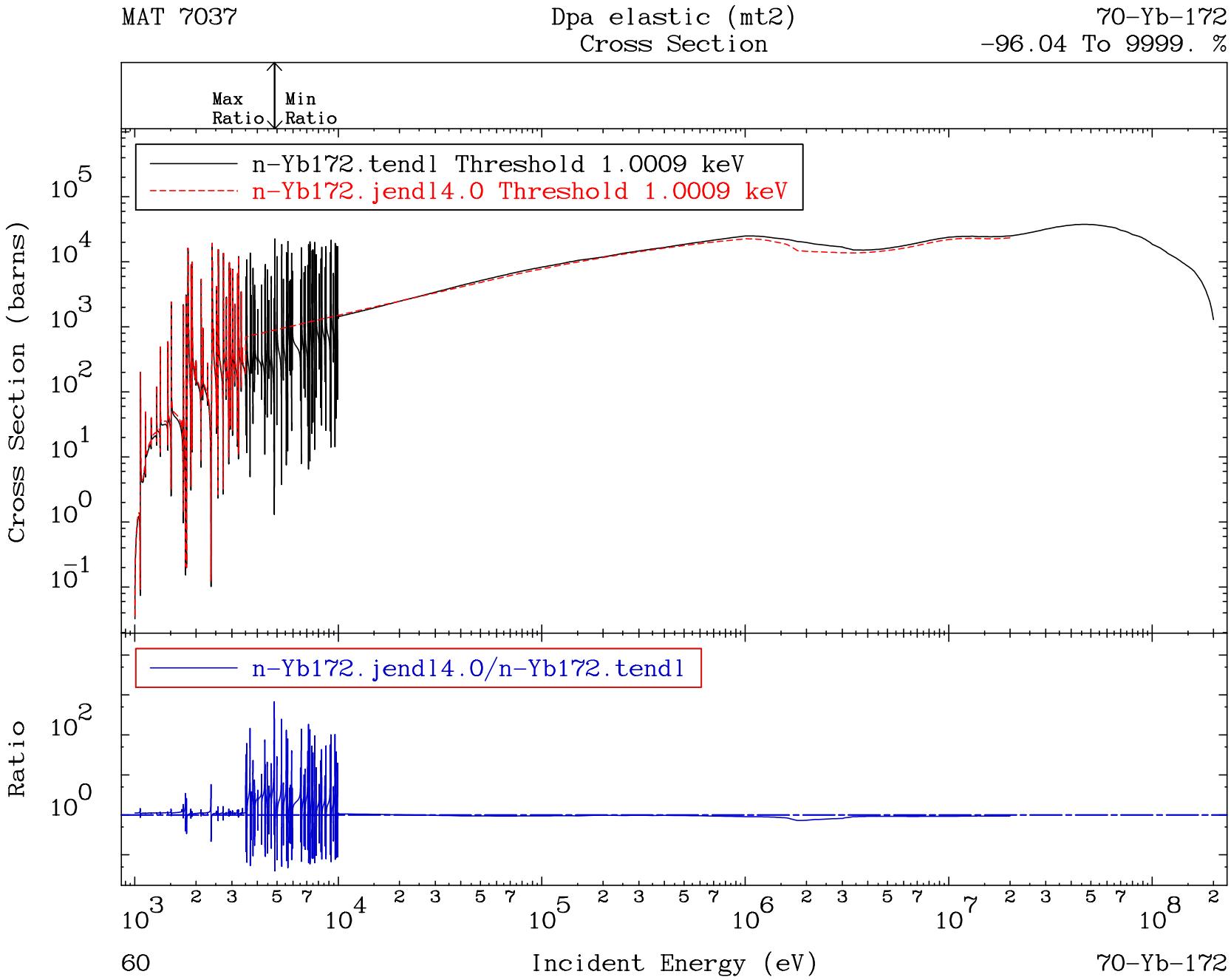

MAT 7037
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
70-Yb-172
-38.17 To 266.9 %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
4.0
3.0
2.0
1.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
55
Incident Energy (eV)
70-Yb-172

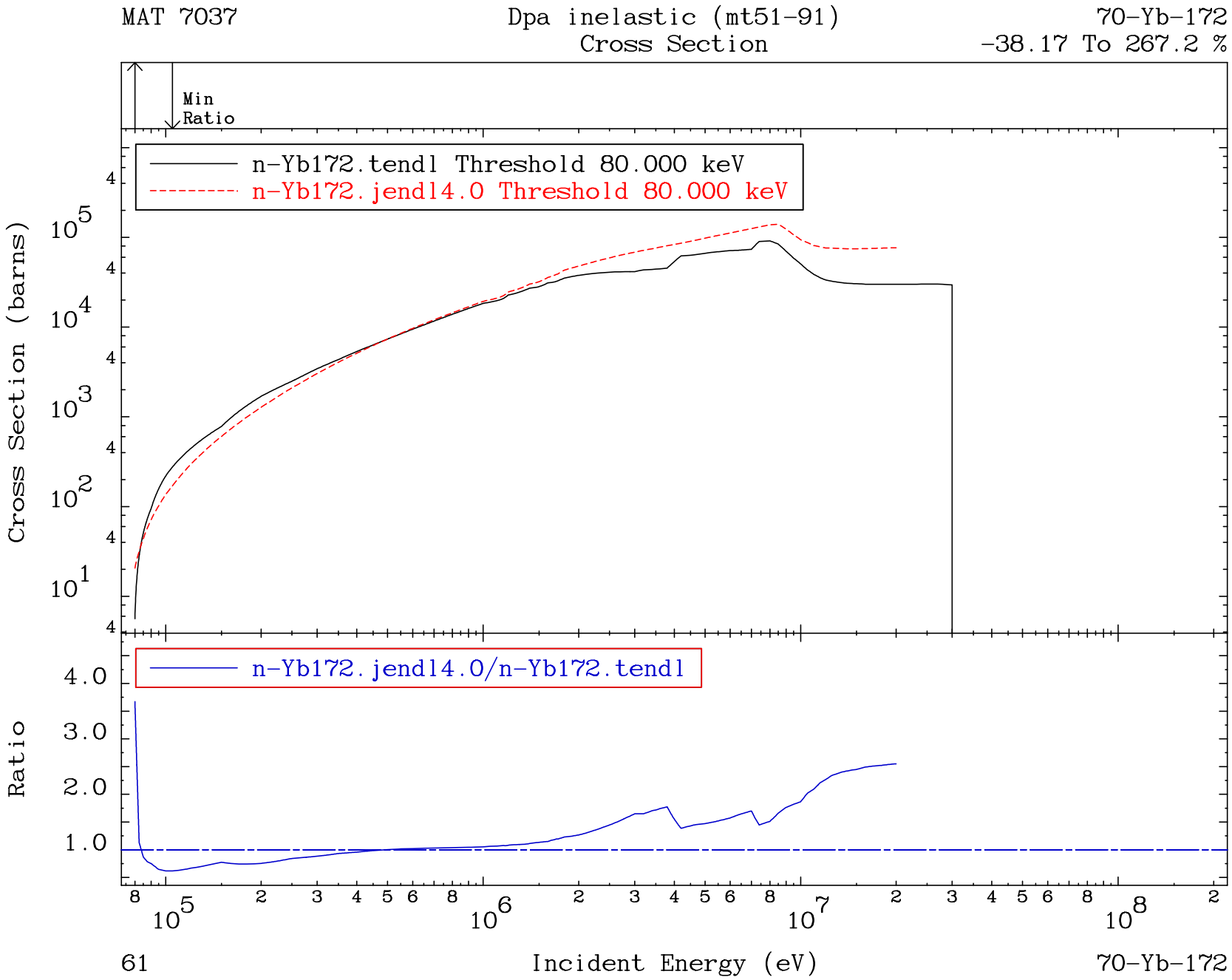

MAT 7037
Kerma capture (mt102)
Cross Section
70-Yb-172
-96.00 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
56
70-Yb-172

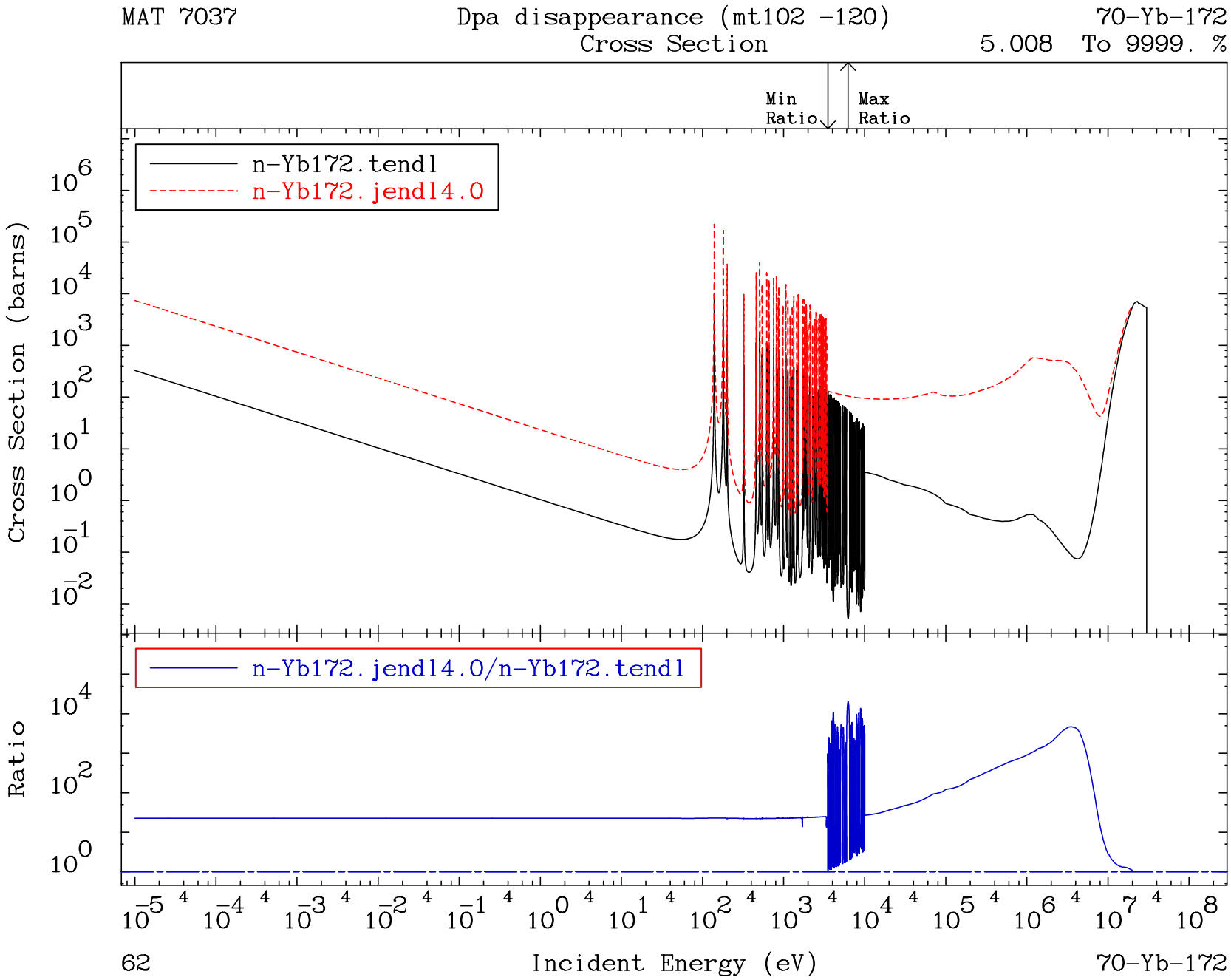

MAT 7037
Total photon (eV-barns)
Cross Section
70-Yb-172
-96.00 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (Giga-barns)
0
2
4
6
8
10
12
14
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
10^{2}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
57
Incident Energy (eV)
70-Yb-172


MAT 7037
Total kinematic kerma (high limit)
Cross Section
70-Yb-172
-100.0 To -80.82%
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
Ratio
n-Yb172.jendl4.0/n-Yb172.tendl
Incident Energy (eV)
58
70-Yb-172


MAT 7037
Dpa total (eV-barns)
Cross Section
70-Yb-172
-95.54 To 9999. %
Max Ratio
Min Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
59
Incident Energy (eV)
70-Yb-172


MAT 7037
Dpa elastic (mt2)
Cross Section
70-Yb-172
-96.04 To 9999. %
Max Ratio
Min Ratio
n-Yb172.tendl Threshold 1.0009 keV
n-Yb172.jendl4.0 Threshold 1.0009 keV
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
60
70-Yb-172


MAT 7037
Dpa inelastic (mt51-91)
Cross Section
70-Yb-172
-38.17 To 267.2 %
Min
Ratio
n-Yb172.tendl Threshold 80.000 keV
n-Yb172.jendl4.0 Threshold 80.000 keV
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
61
70-Yb-172


MAT 7037
Dpa disappearance (mt102 -120)
Cross Section
70-Yb-172
5.008 To 9999. %
Min Ratio
Max Ratio
n-Yb172.tendl
n-Yb172.jendl4.0
Cross Section (barns)
n-Yb172.jendl4.0/n-Yb172.tendl
Ratio
Incident Energy (eV)
62
70-Yb-172