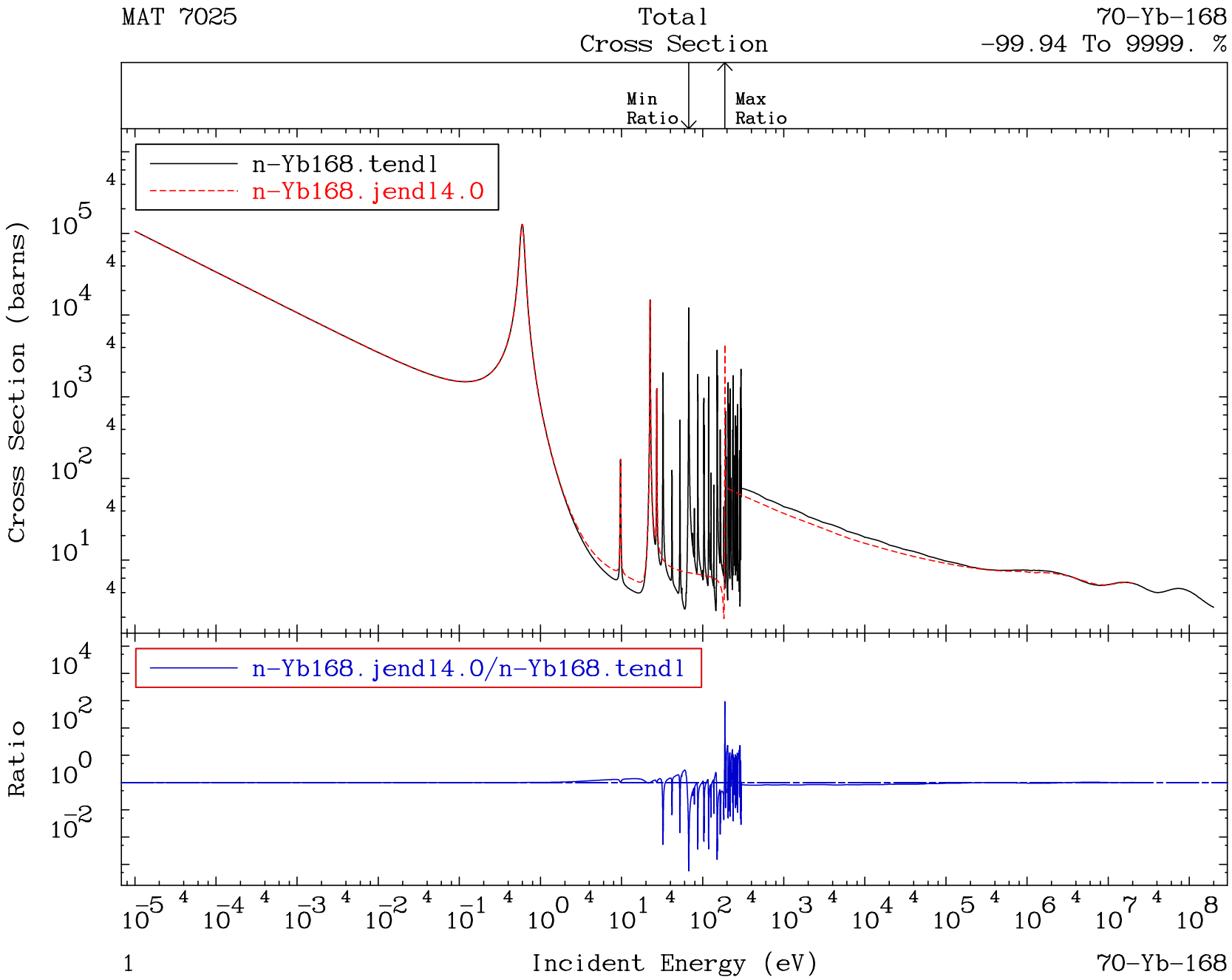
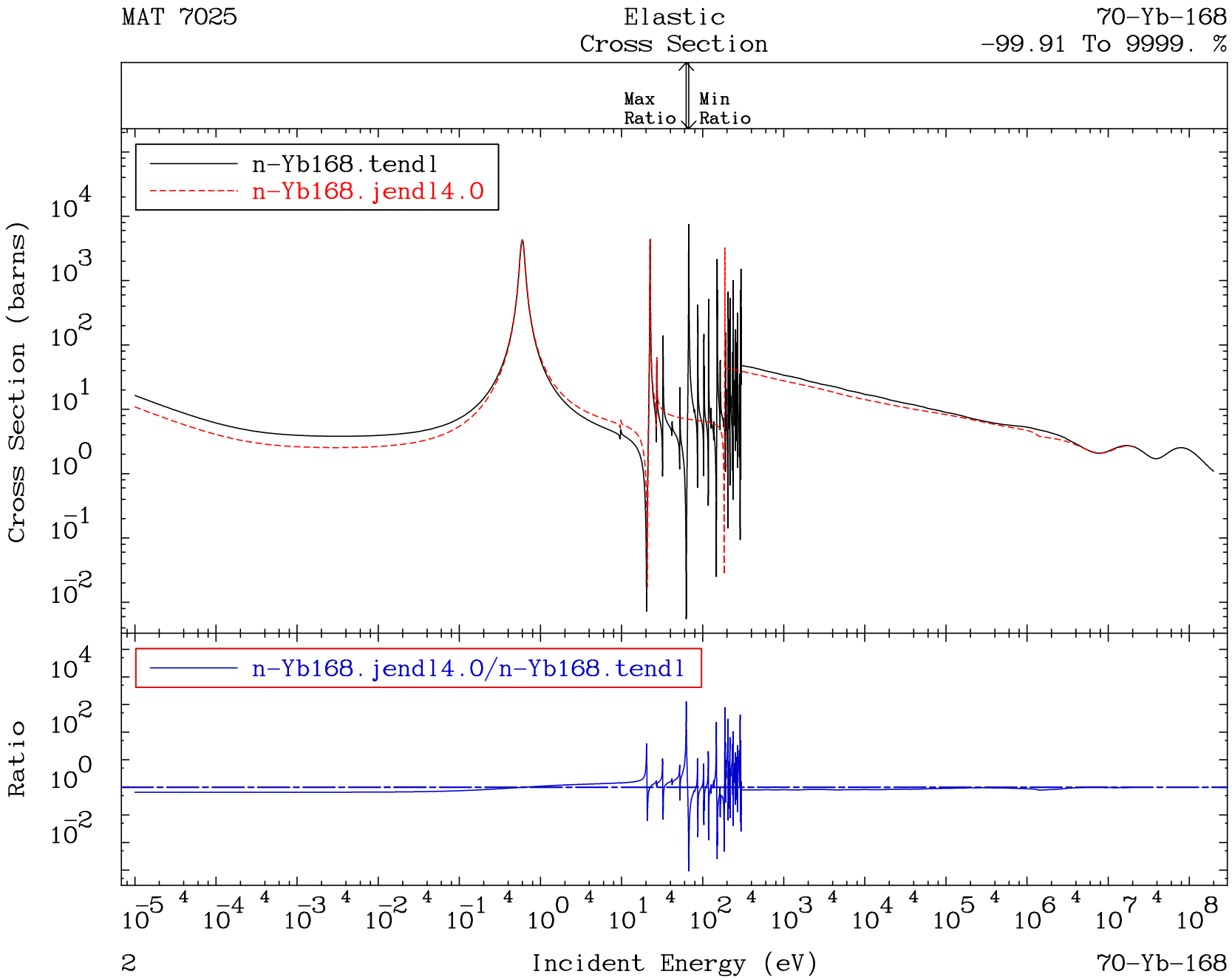
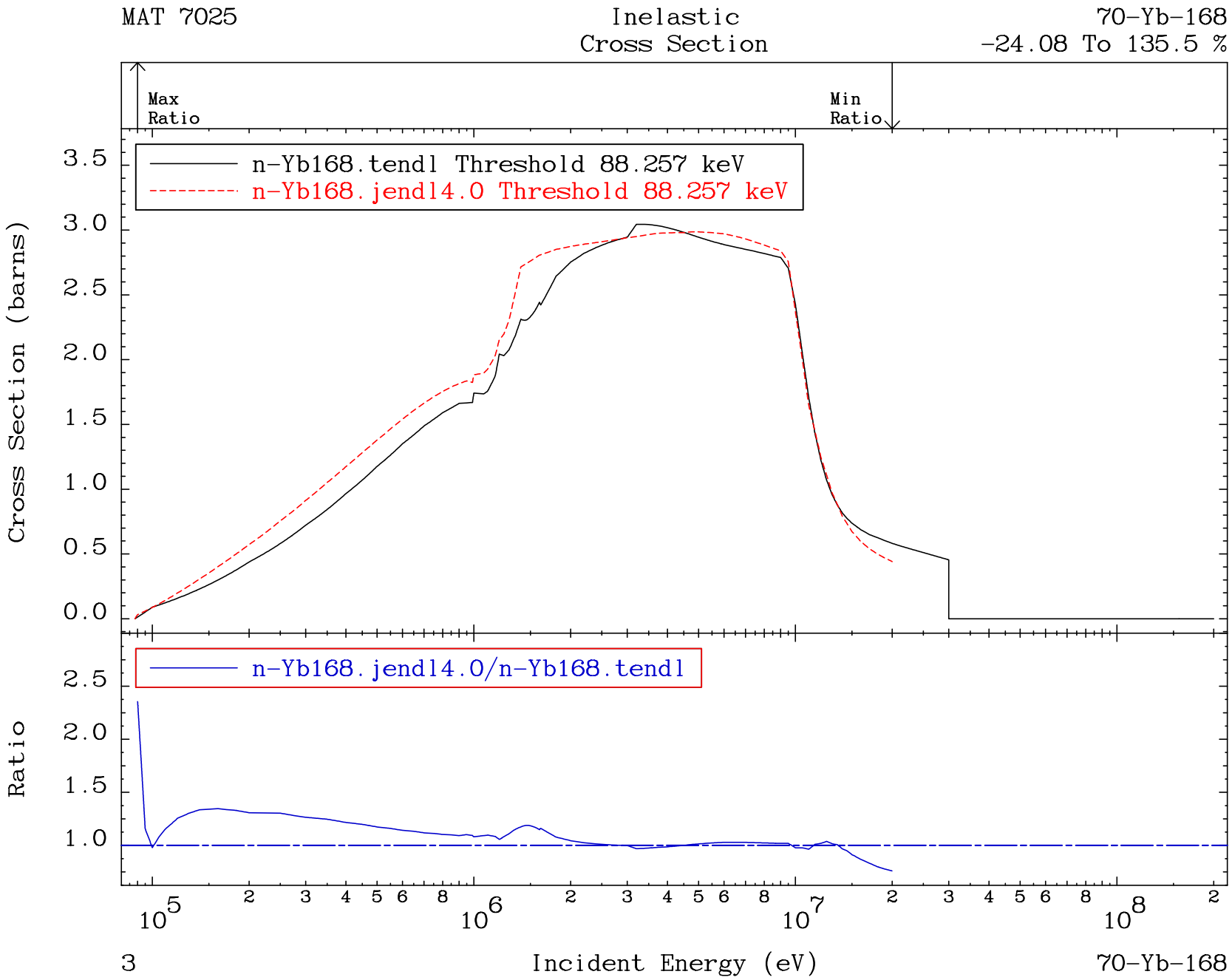
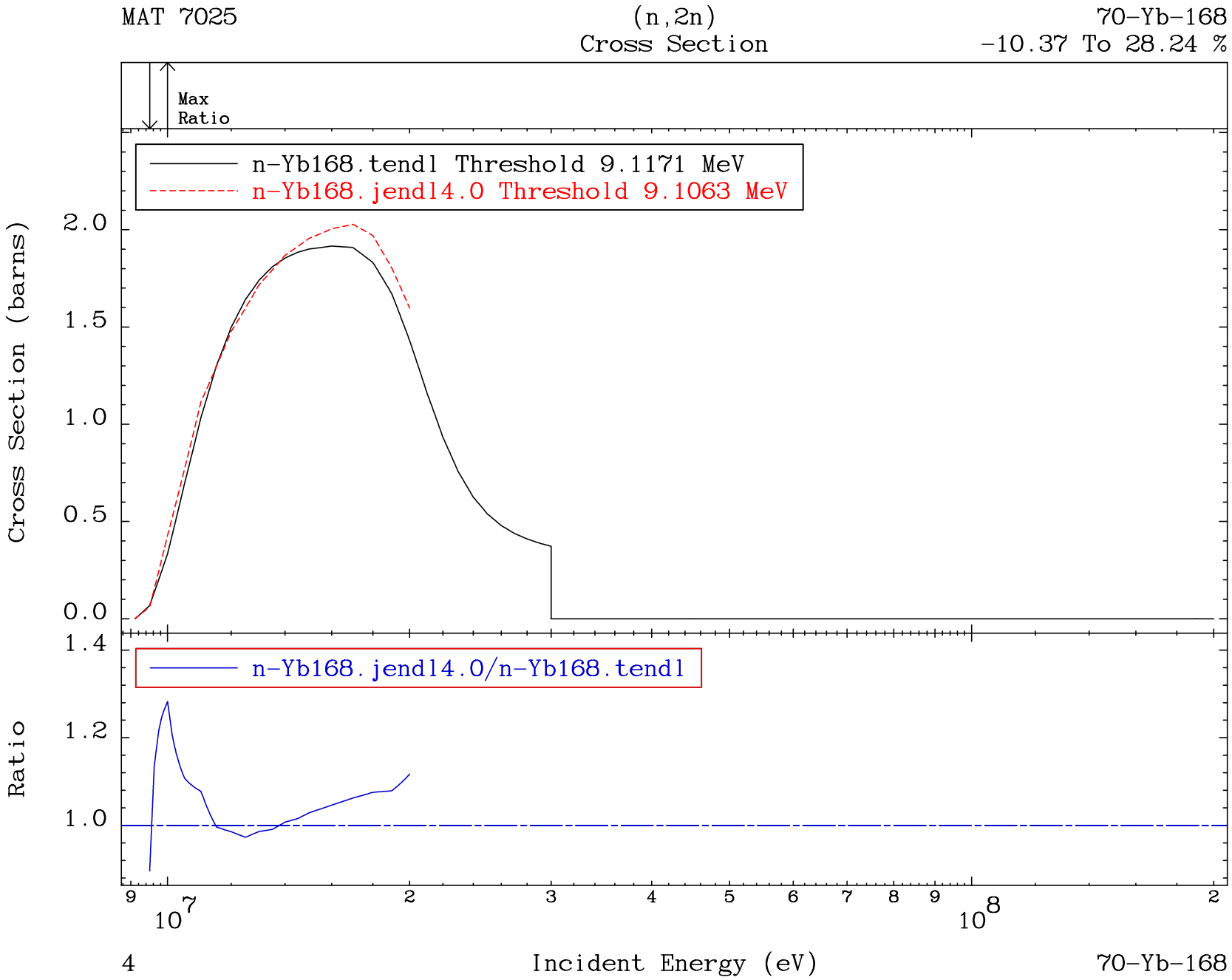
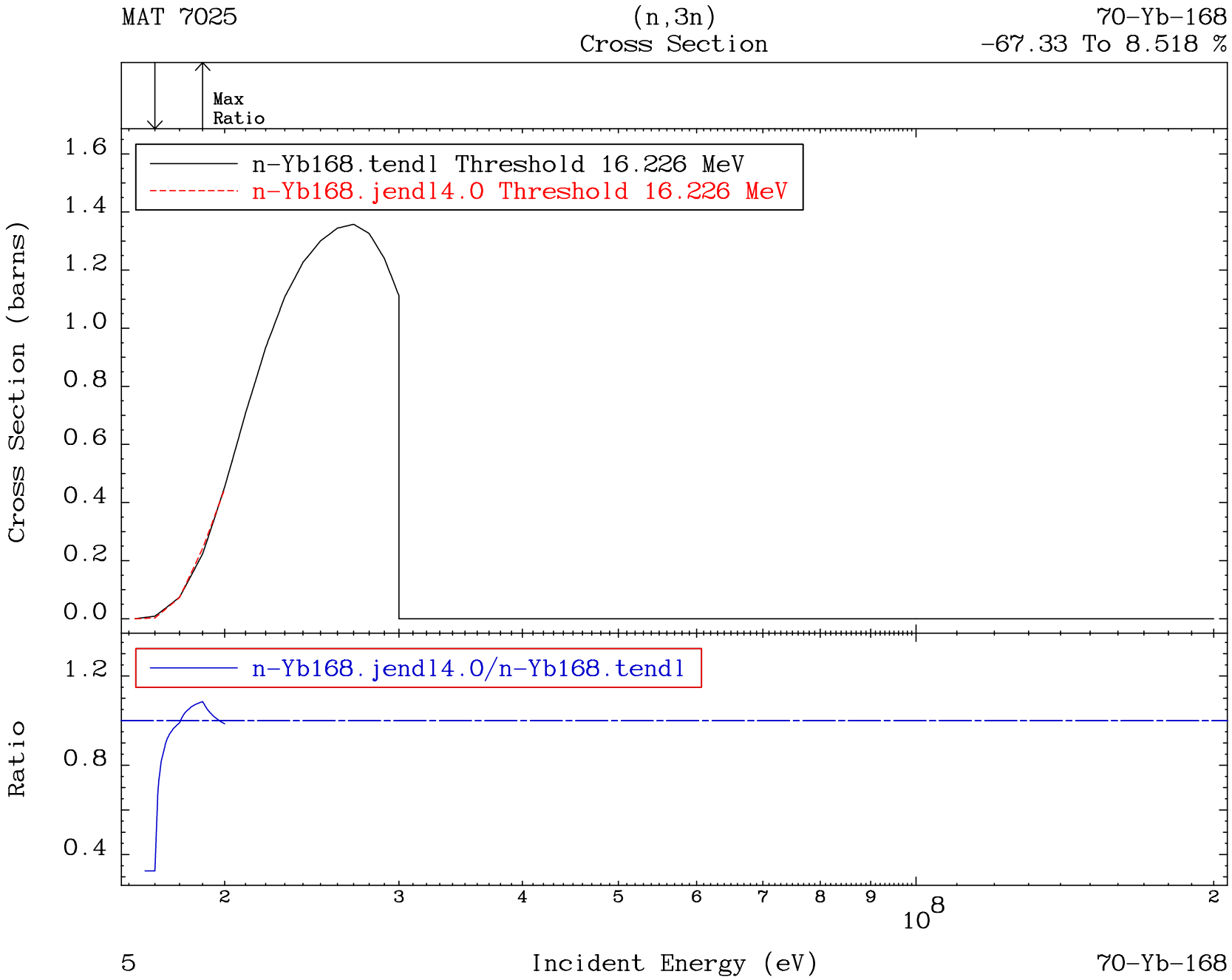
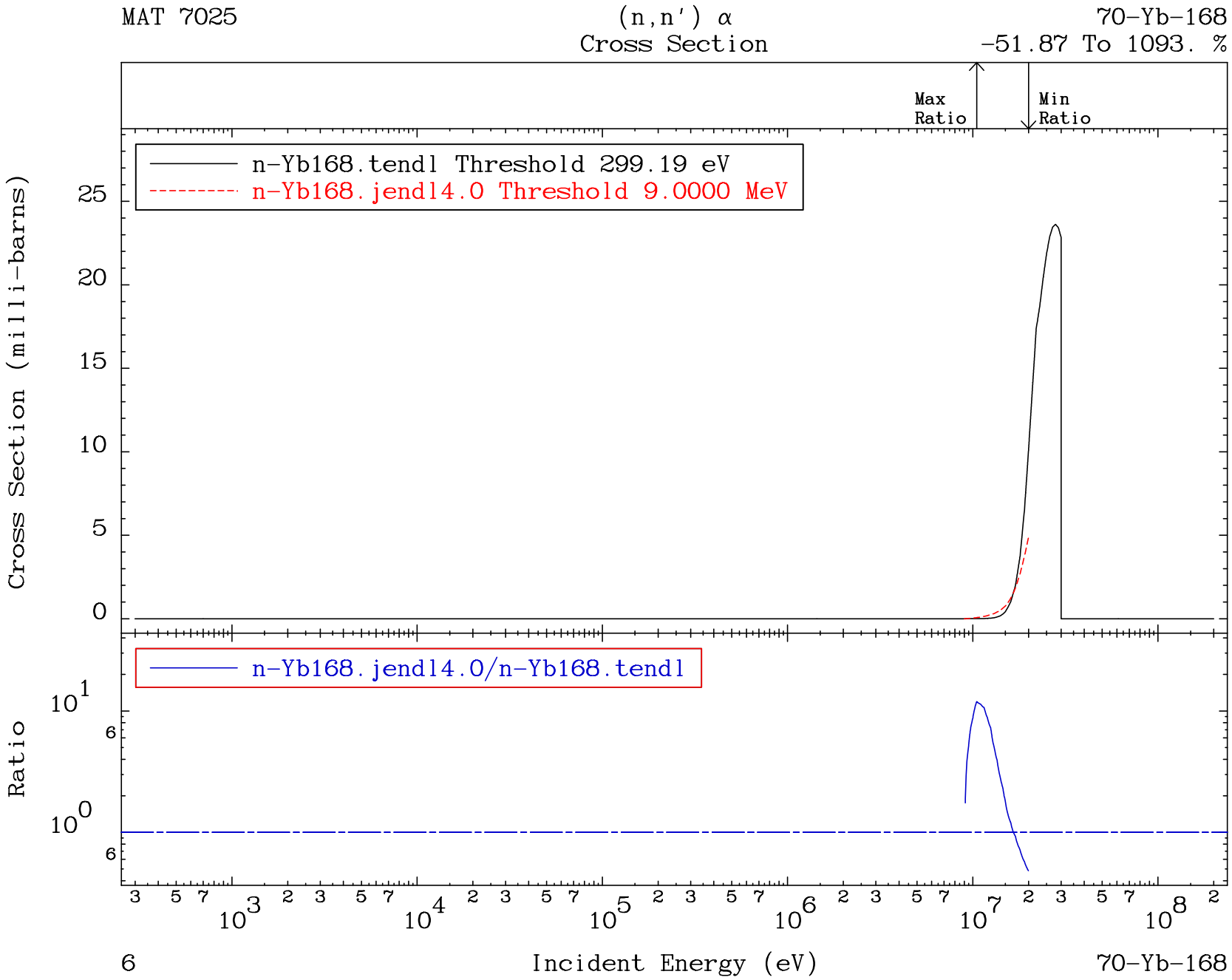

MAT 7025
Total
Cross Section
70-Yb-168
-99.94 To 9999. %
Min
Ratio
Max
Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
1
70-Yb-168

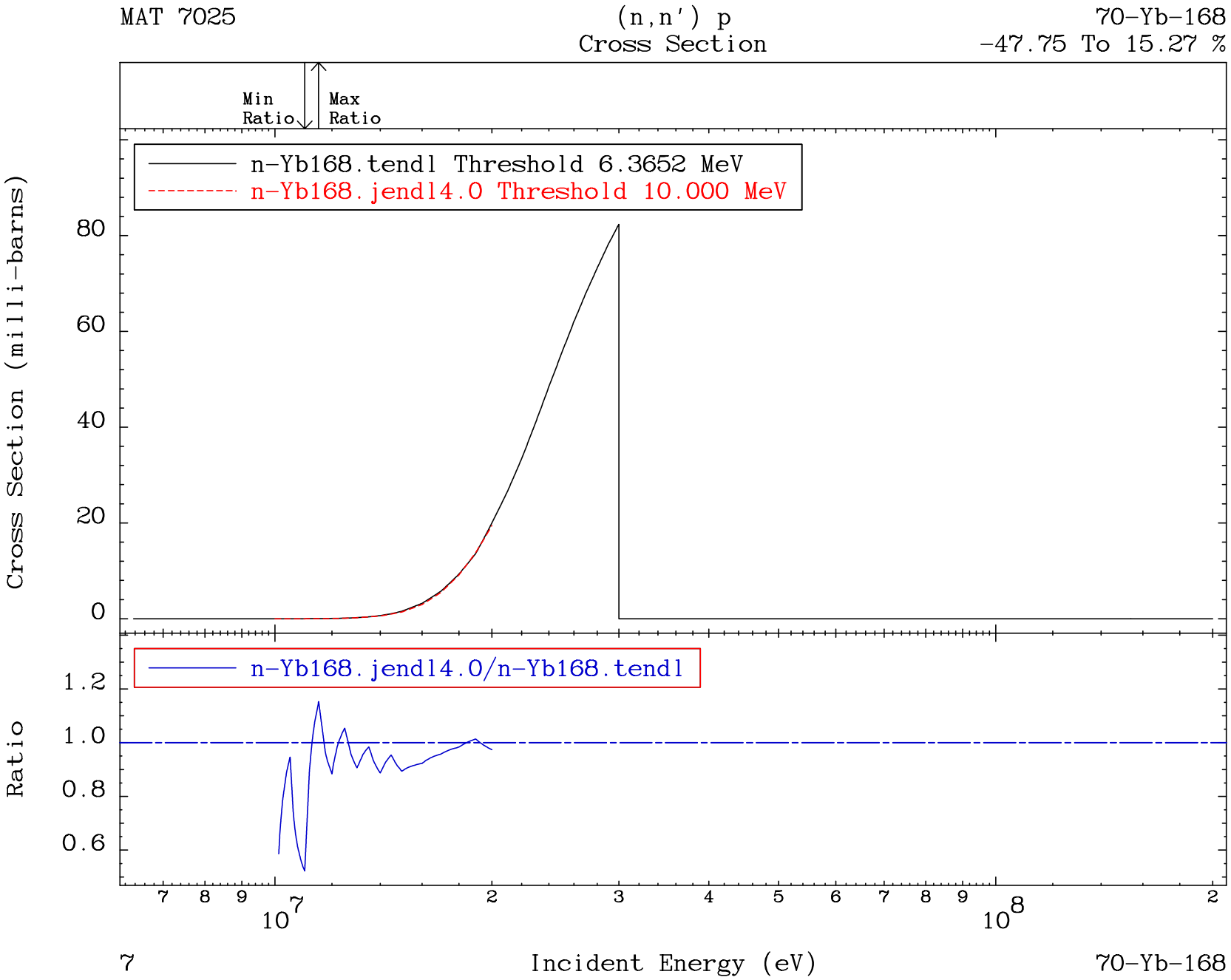

MAT 7025
Elastic
Cross Section
70-Yb-168
-99.91 To 9999. %
Max Ratio
Min Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
2
70-Yb-168

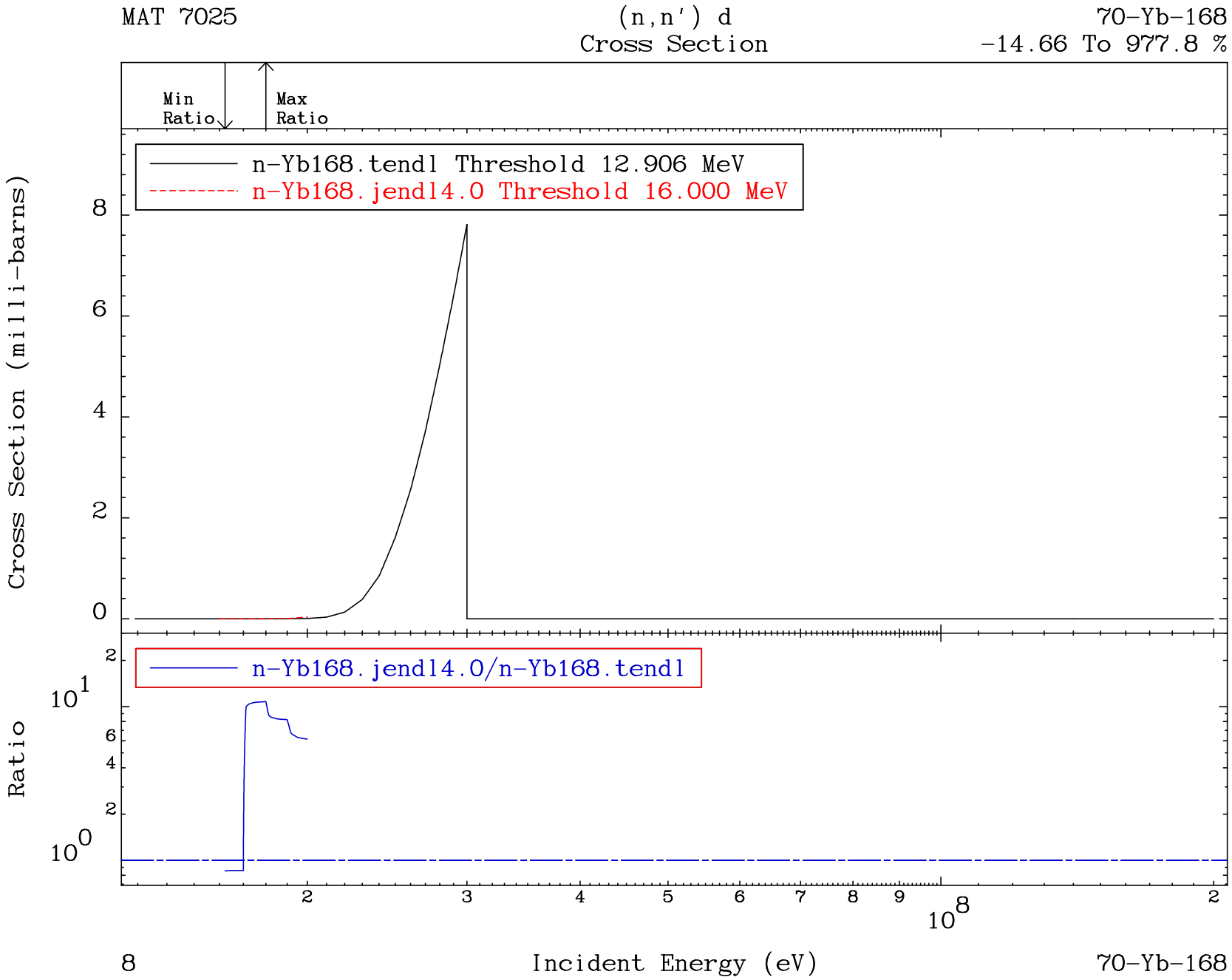

MAT 7025
Inelastic
Cross Section
70-Yb-168
-24.08 To 135.5 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 88.257 keV
n-Yb168.jendl4.0 Threshold 88.257 keV
Cross Section (barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
2.5
2.0
1.5
1.0
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
3
Incident Energy (eV)
70-Yb-168

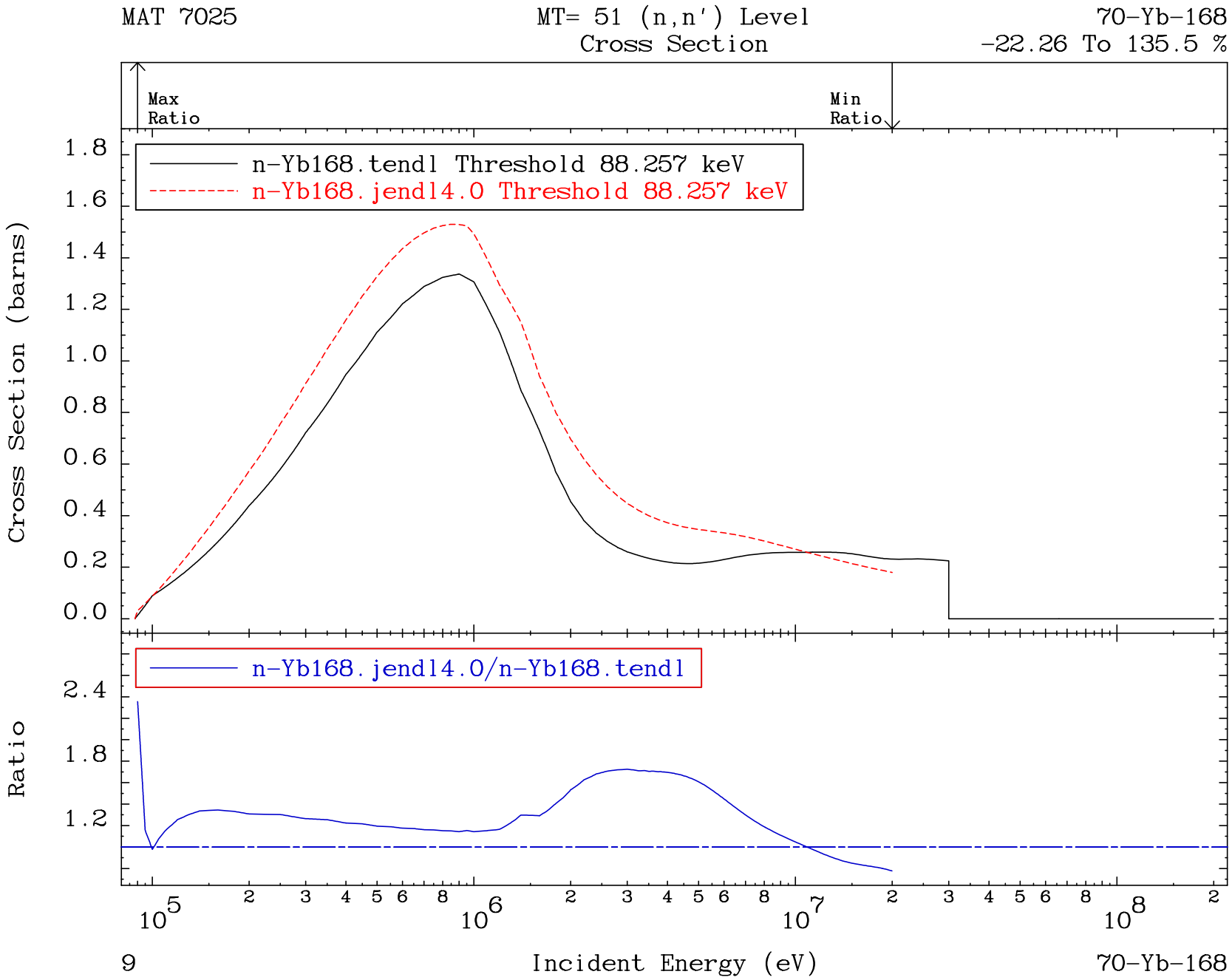

MAT 7025
(n,2n)
Cross Section
70-Yb-168
-10.37 To 28.24 %
Max
Ratio
n-Yb168.tendl Threshold 9.1171 MeV
n-Yb168.jendl4.0 Threshold 9.1063 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
1.4
1.2
1.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
70-Yb-168

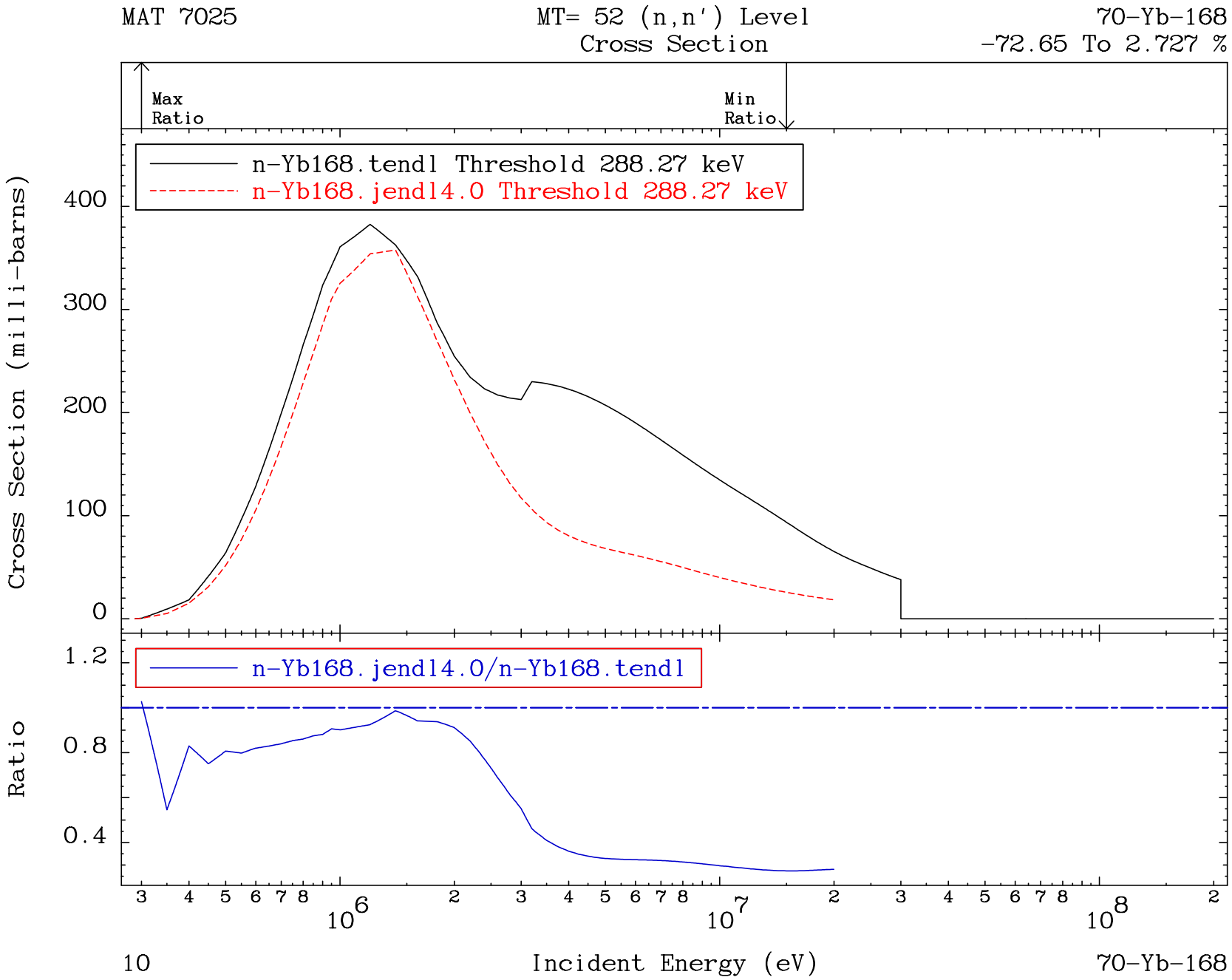

MAT 7025
(n,3n)
Cross Section
70-Yb-168
-67.33 To 8.518 %
Max
Ratio
n-Yb168.tendl Threshold 16.226 MeV
n-Yb168.jendl4.0 Threshold 16.226 MeV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
70-Yb-168

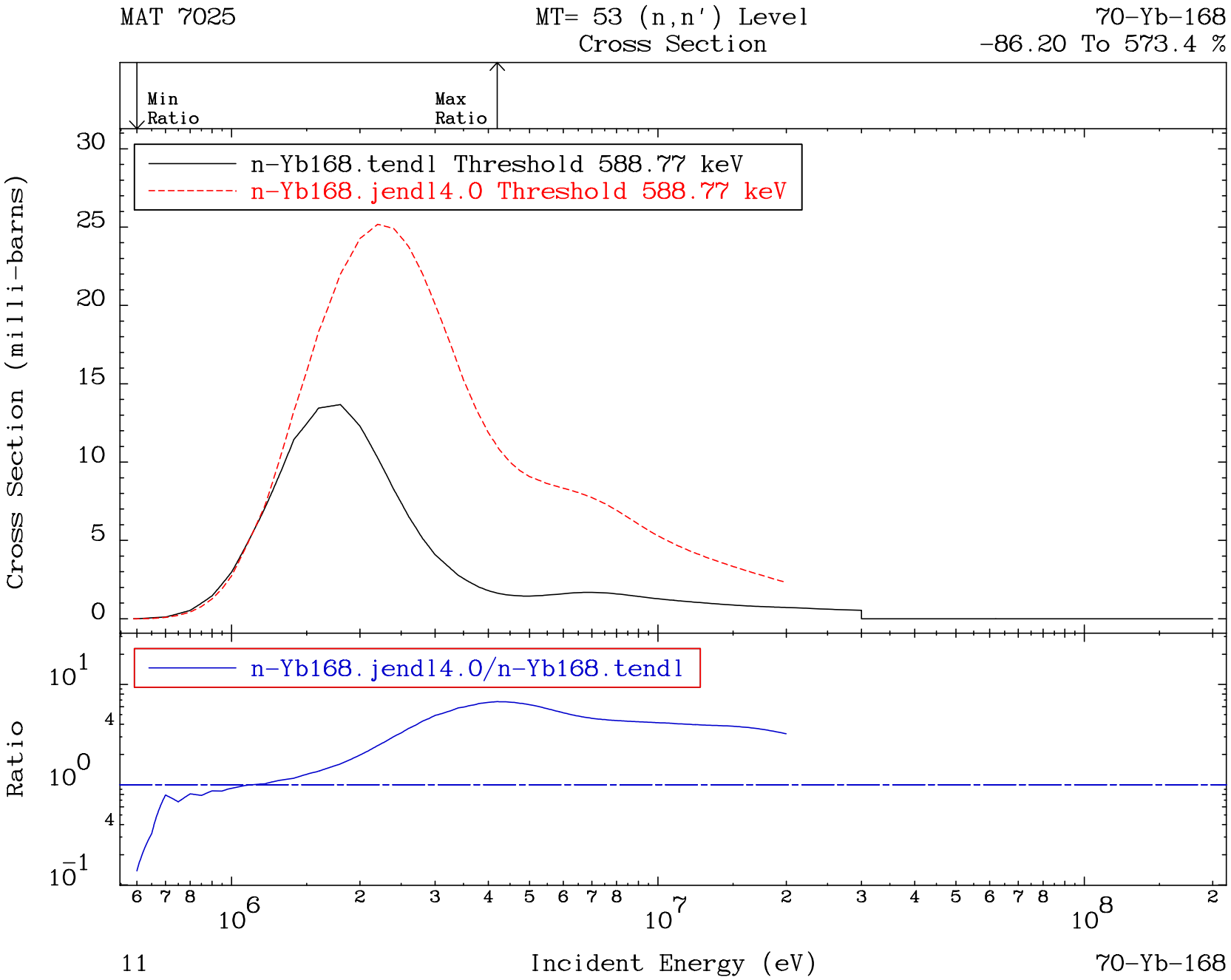

MAT 7025
(n,n') α
Cross Section
70-Yb-168
-51.87 To 1093. %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 299.19 eV
n-Yb168.jendl4.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
0
5
10
15
20
25
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^1
10^0
6
6
10^3
10^4
10^5
10^6
10^7
10^8
Incident Energy (eV)
70-Yb-168

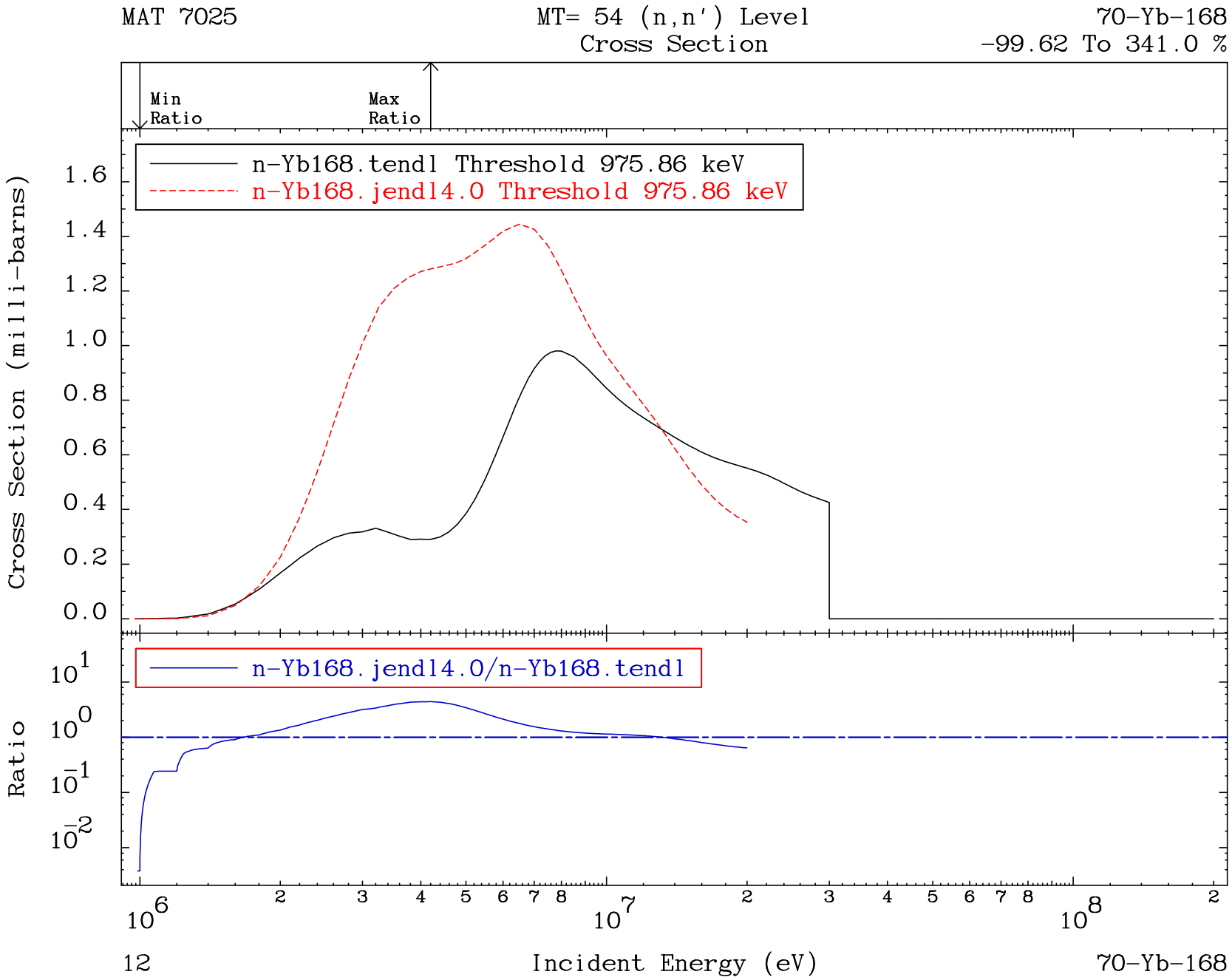

MAT 7025
(n,n') p
Cross Section
70-Yb-168
-47.75 To 15.27 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 6.3652 MeV
n-Yb168.jendl4.0 Threshold 10.000 MeV
Cross Section (milli-barns)
0
20
40
60
80
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
0.6
0.8
1.0
1.2
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
70-Yb-168

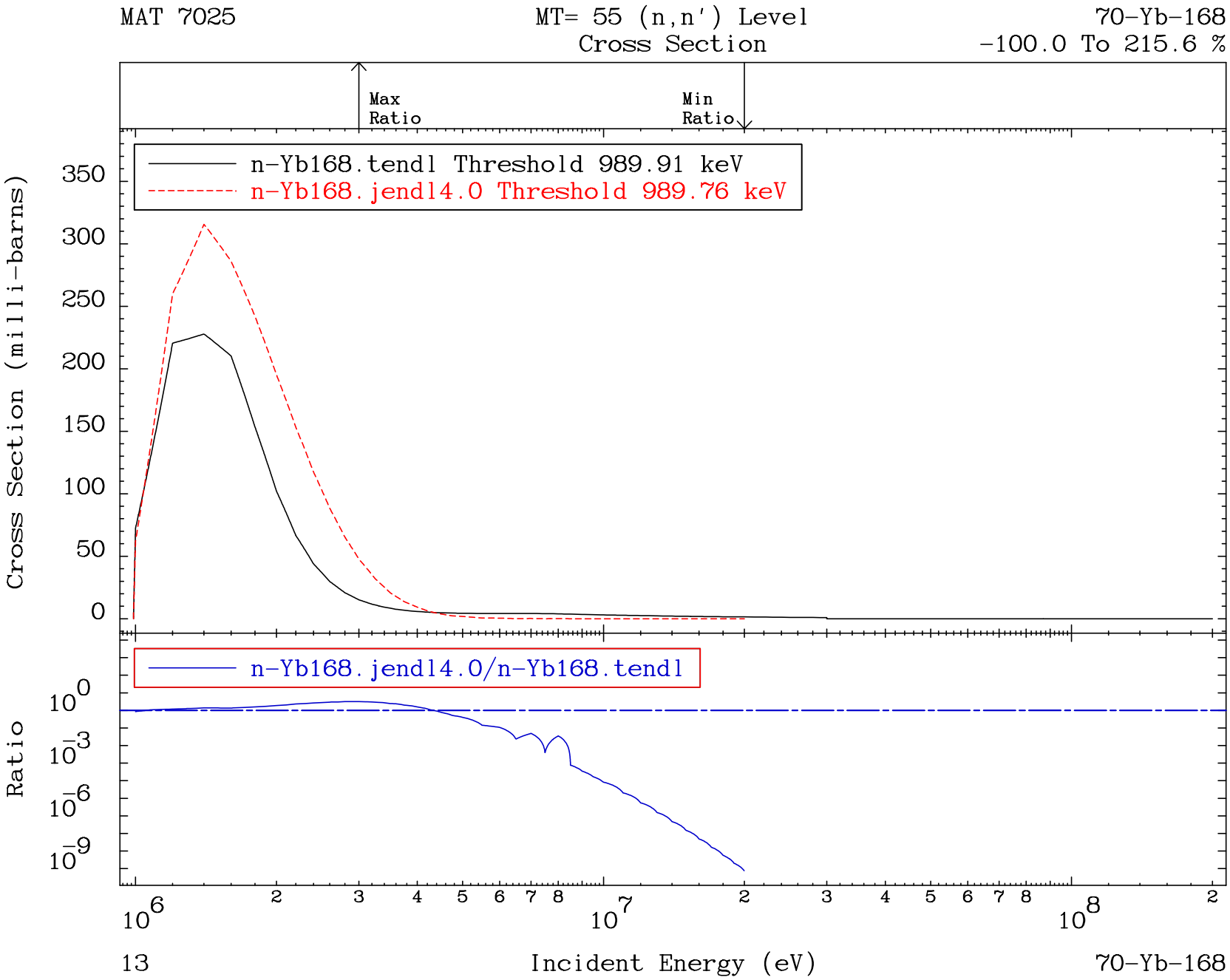

MAT 7025
(n,n') d
Cross Section
70-Yb-168
-14.66 To 977.8 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 12.906 MeV
n-Yb168.jendl4.0 Threshold 16.000 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^1
2
3
4
5
6
7
8
9
10^8
Incident Energy (eV)
8
70-Yb-168

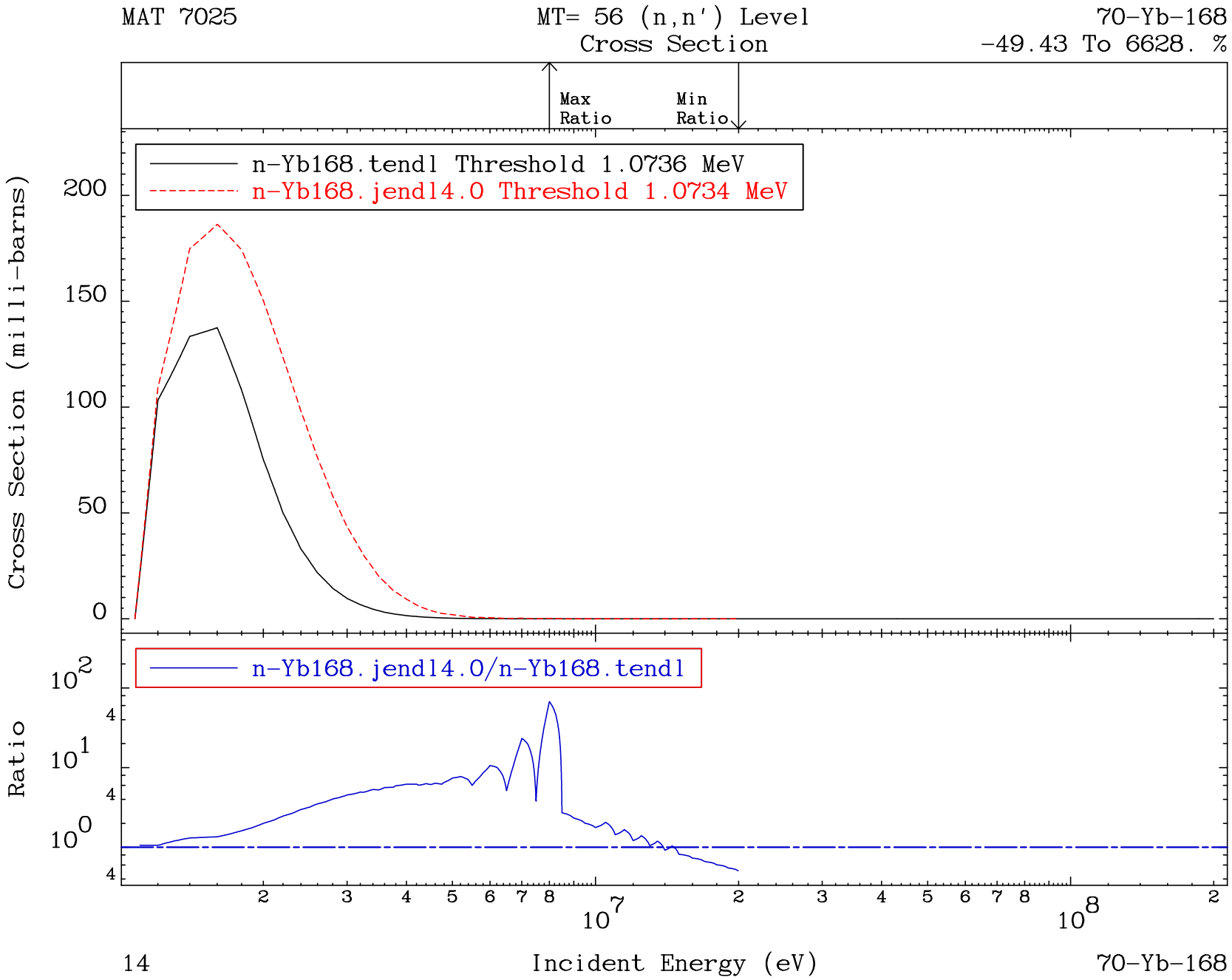

MAT 7025
MT= 51 (n,n') Level
Cross Section
70-Yb-168
-22.26 To 135.5 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 88.257 keV
n-Yb168.jendl4.0 Threshold 88.257 keV
Cross Section (barns)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
2.4
1.8
1.2
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
9
Incident Energy (eV)
70-Yb-168

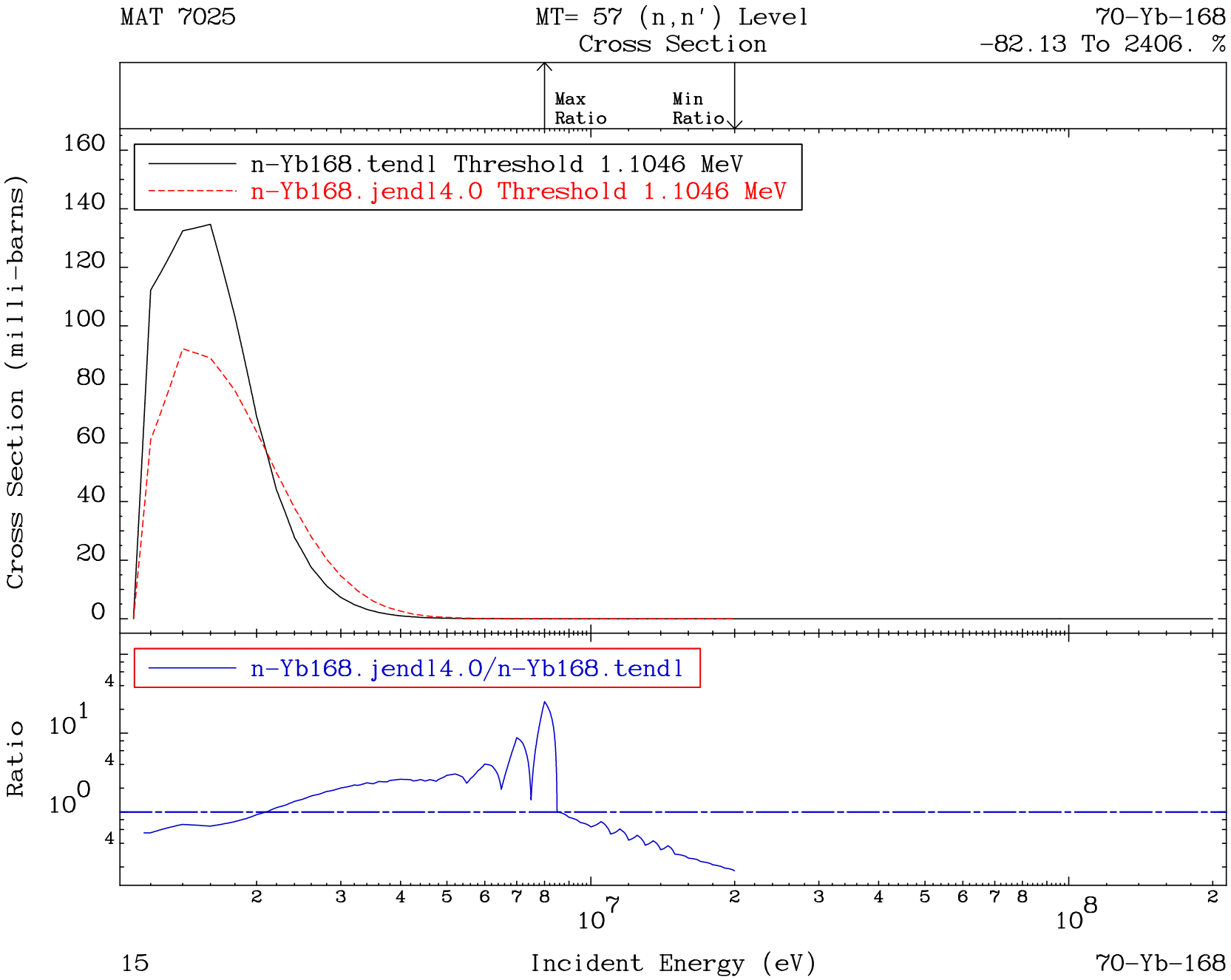

MAT 7025
MT= 52 (n,n') Level
Cross Section
70-Yb-168
-72.65 To 2.727 %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 288.27 keV
n-Yb168.jendl4.0 Threshold 288.27 keV
Cross Section (milli-barns)
400
300
200
100
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
1.2
0.8
0.4
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
10
Incident Energy (eV)
70-Yb-168

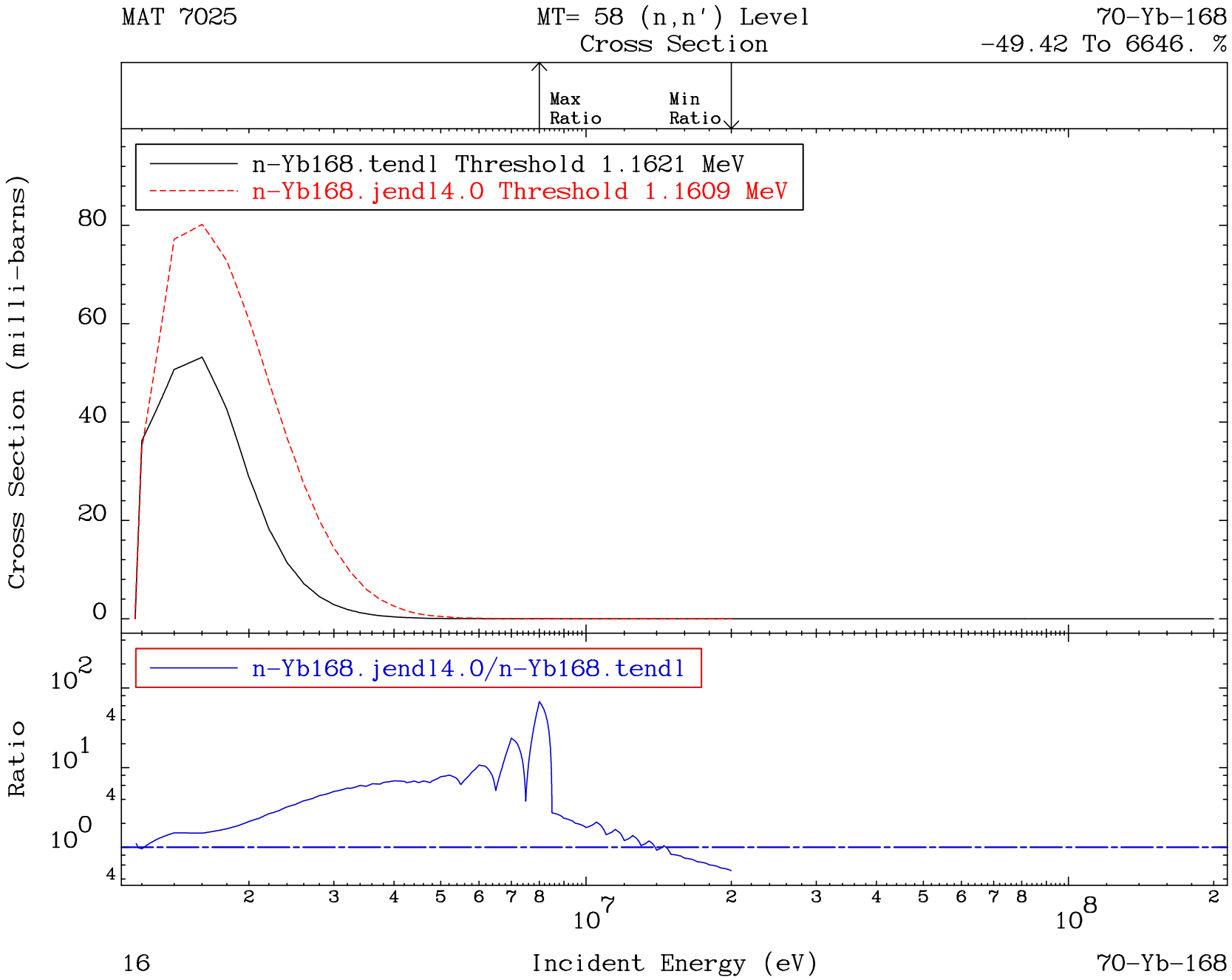

MAT 7025
MT= 53 (n,n') Level
Cross Section
70-Yb-168
-86.20 To 573.4 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 588.77 keV
n-Yb168.jendl4.0 Threshold 588.77 keV
Cross Section (milli-barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
11
70-Yb-168

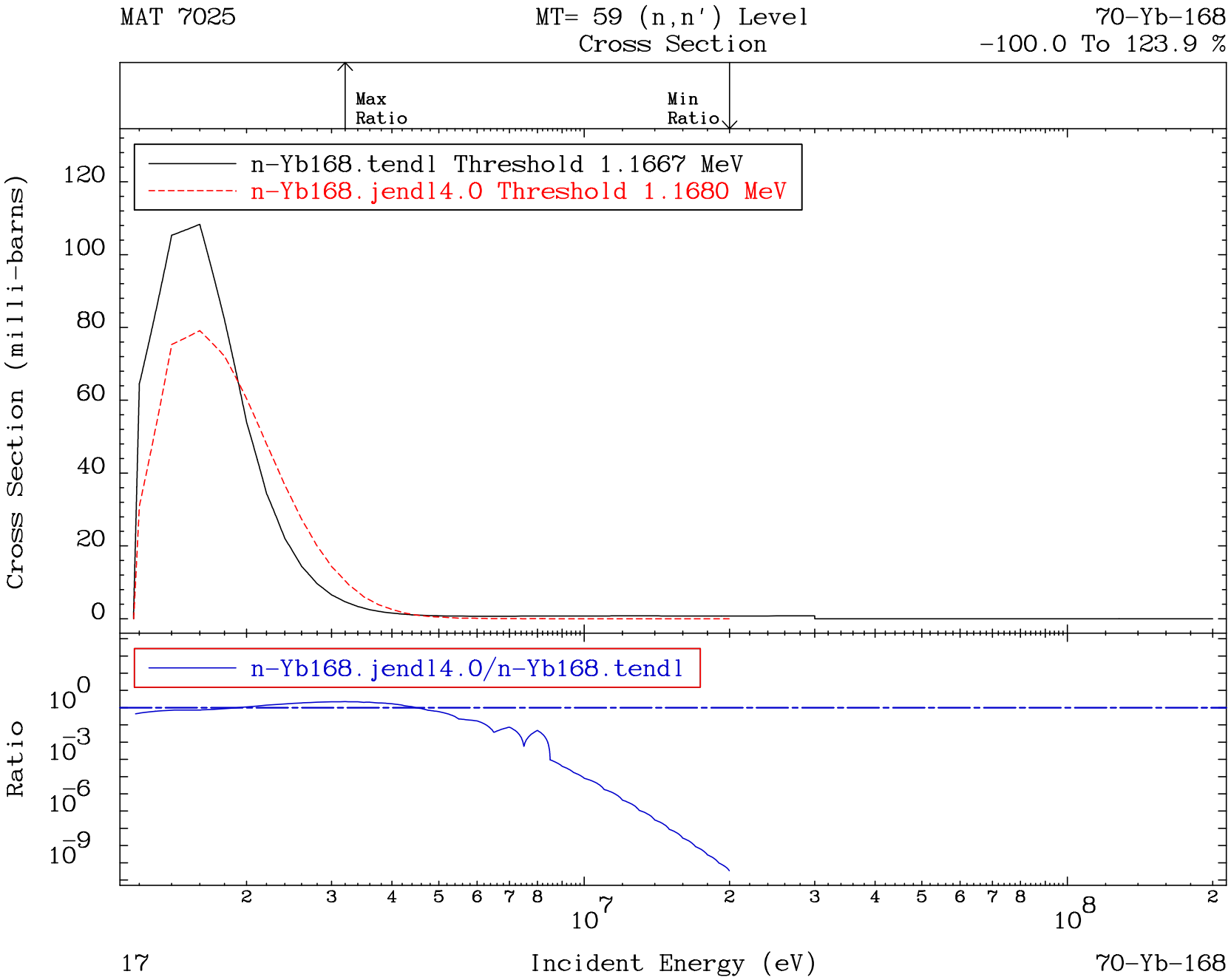

MAT 7025
MT= 54 (n,n') Level
Cross Section
70-Yb-168
-99.62 To 341.0 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 975.86 keV
n-Yb168.jendl4.0 Threshold 975.86 keV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^1
10^0
10^-1
10^-2
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
12
Incident Energy (eV)
70-Yb-168

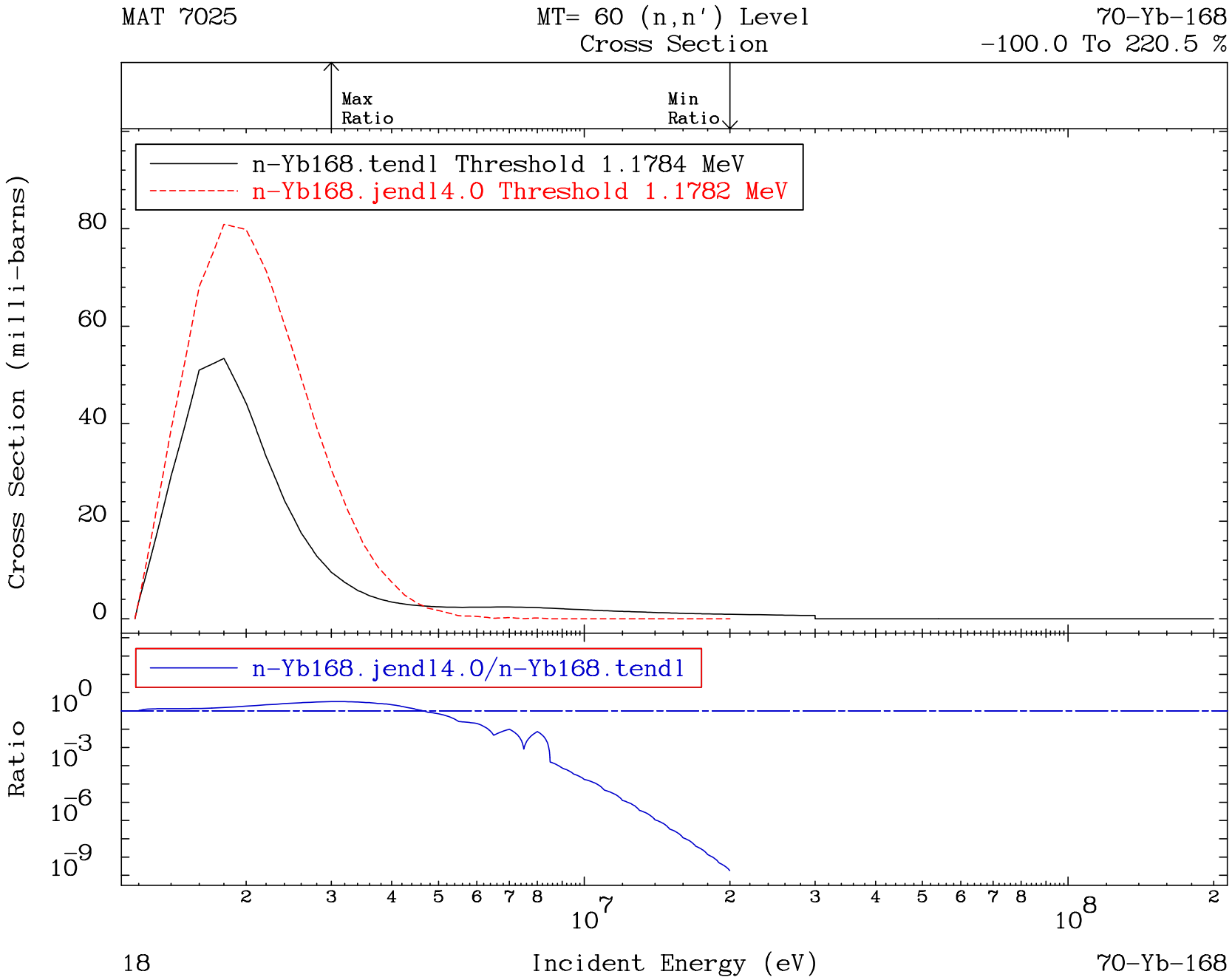

MAT 7025
MT= 55 (n,n') Level
Cross Section
70-Yb-168
-100.0 To 215.6 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 989.91 keV
n-Yb168.jendl4.0 Threshold 989.76 keV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-3
10^-6
10^-9
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
13
Incident Energy (eV)
70-Yb-168

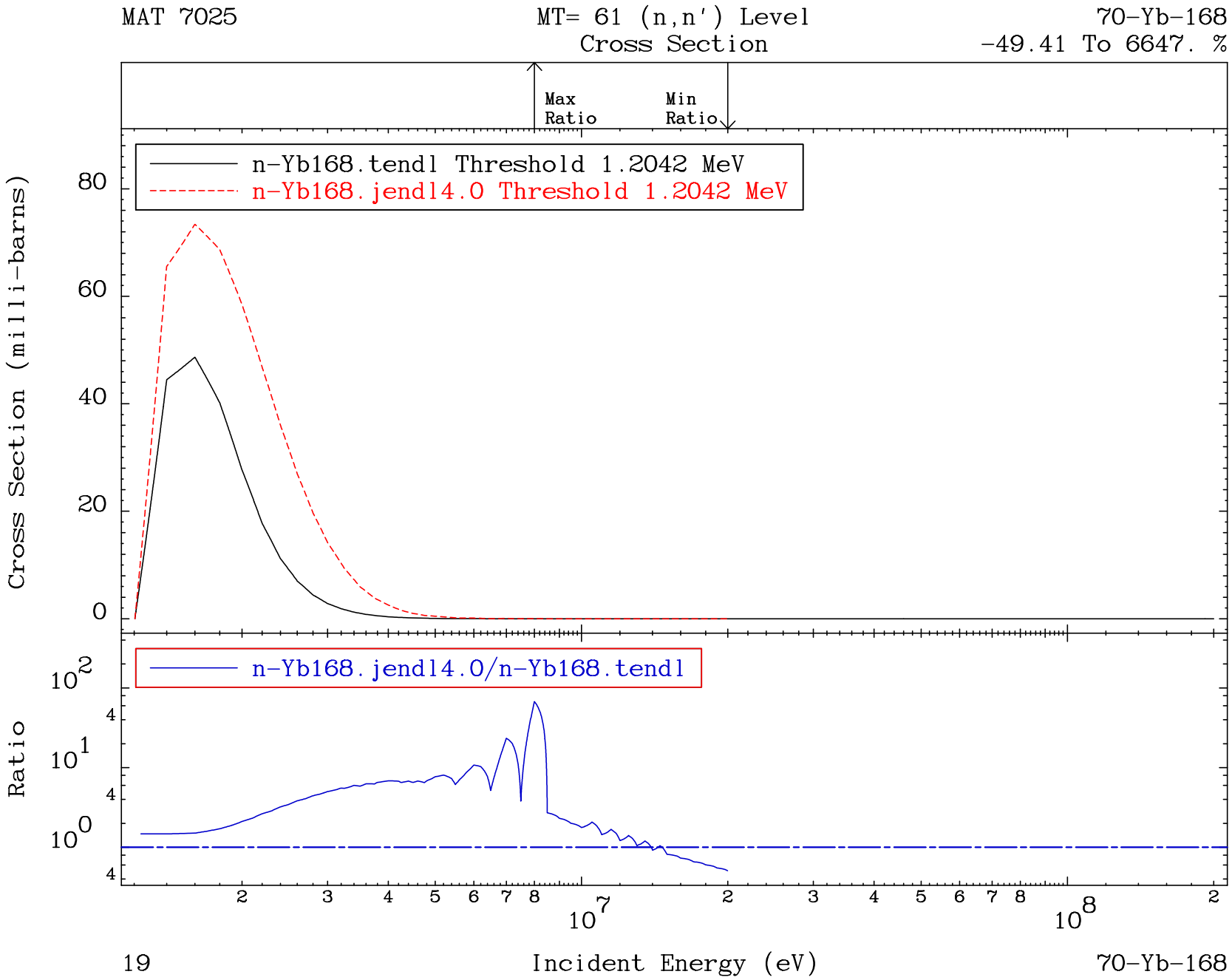

MAT 7025
MT= 56 (n,n') Level
Cross Section
70-Yb-168
-49.43 To 6628. %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 1.0736 MeV
n-Yb168.jendl4.0 Threshold 1.0734 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
70-Yb-168

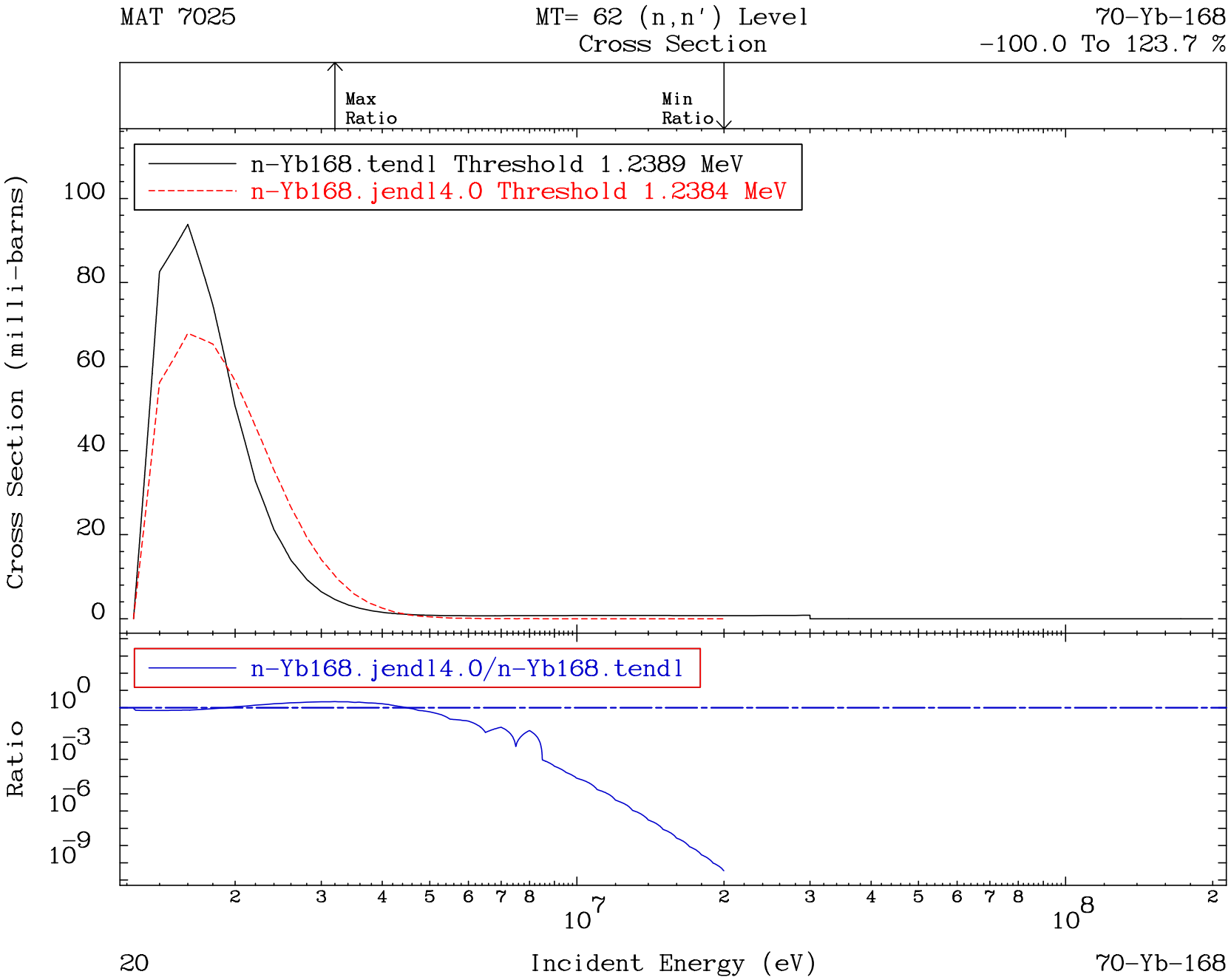

MAT 7025
MT= 57 (n,n') Level
Cross Section
70-Yb-168
-82.13 To 2406. %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 1.1046 MeV
n-Yb168.jendl4.0 Threshold 1.1046 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^1
10^0
4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
70-Yb-168

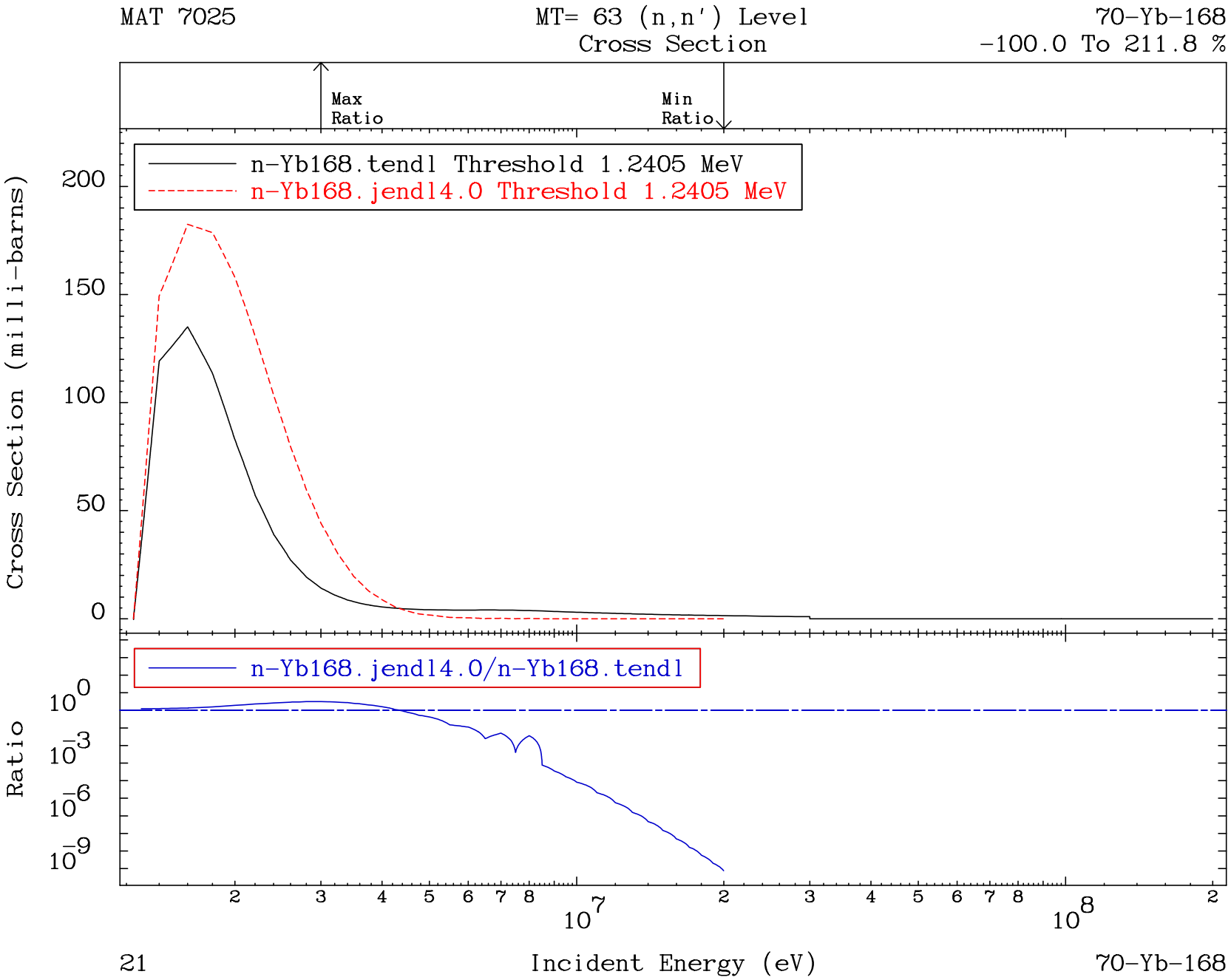

MAT 7025
MT= 58 (n,n') Level
Cross Section
70-Yb-168
-49.42 To 6646. %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 1.1621 MeV
n-Yb168.jendl4.0 Threshold 1.1609 MeV
Cross Section (milli-barns)
0
20
40
60
80
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
70-Yb-168

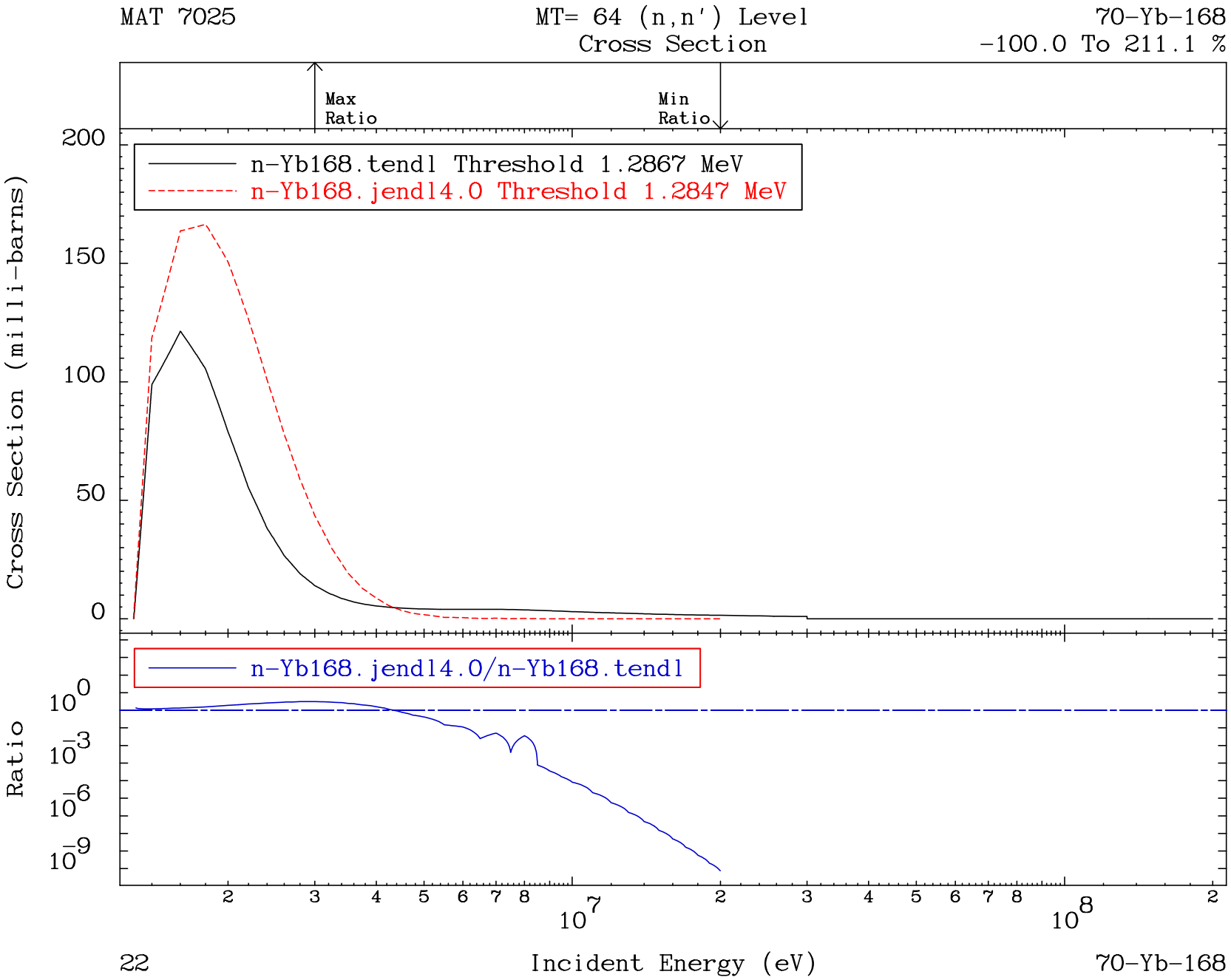

MAT 7025
MT= 59 (n,n') Level
Cross Section
70-Yb-168
-100.0 To 123.9 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 1.1667 MeV
n-Yb168.jendl4.0 Threshold 1.1680 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
17
Incident Energy (eV)
70-Yb-168

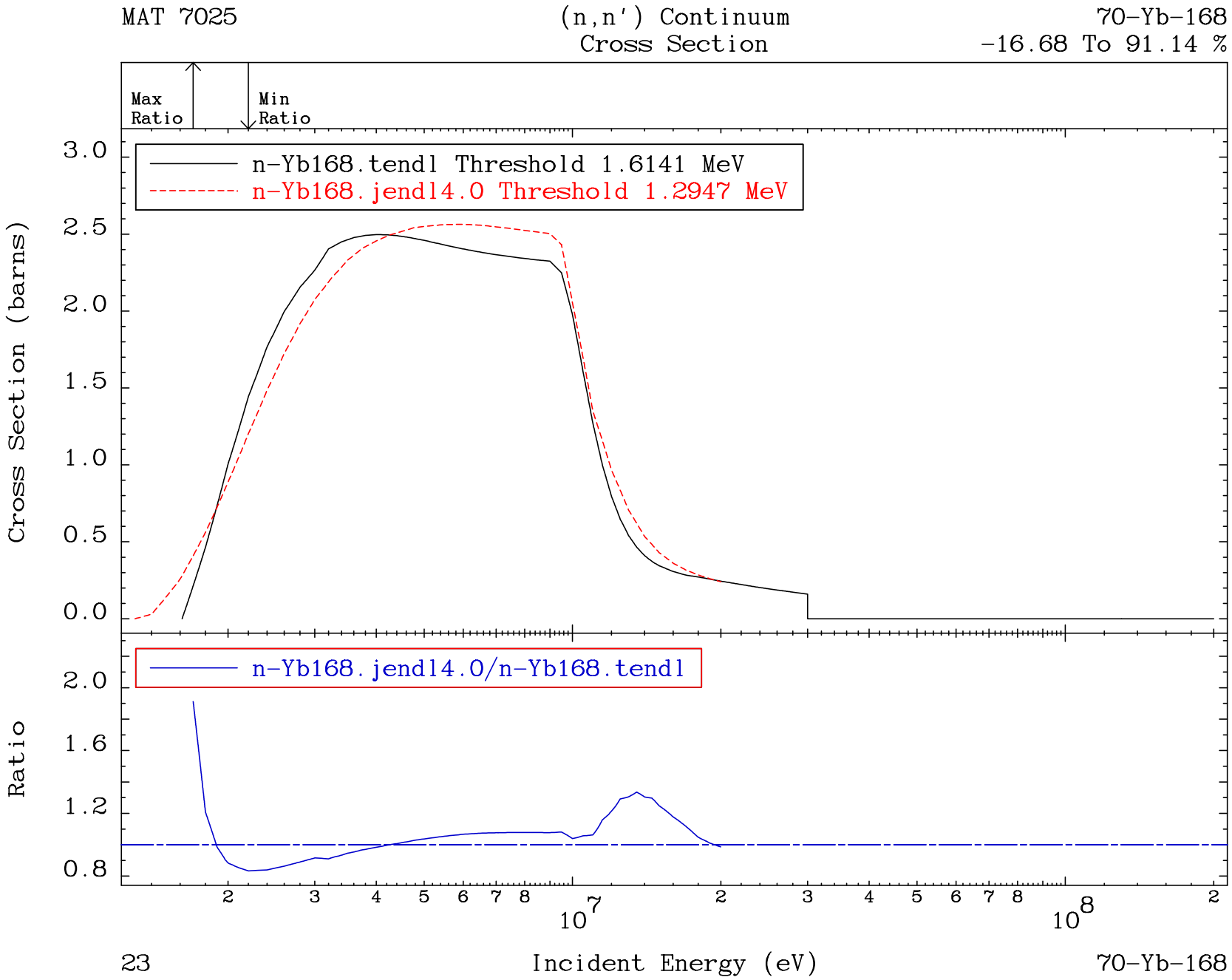

MAT 7025
MT= 60 (n,n') Level
Cross Section
70-Yb-168
-100.0 To 220.5 %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 1.1784 MeV
n-Yb168.jendl4.0 Threshold 1.1782 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
18
Incident Energy (eV)
70-Yb-168

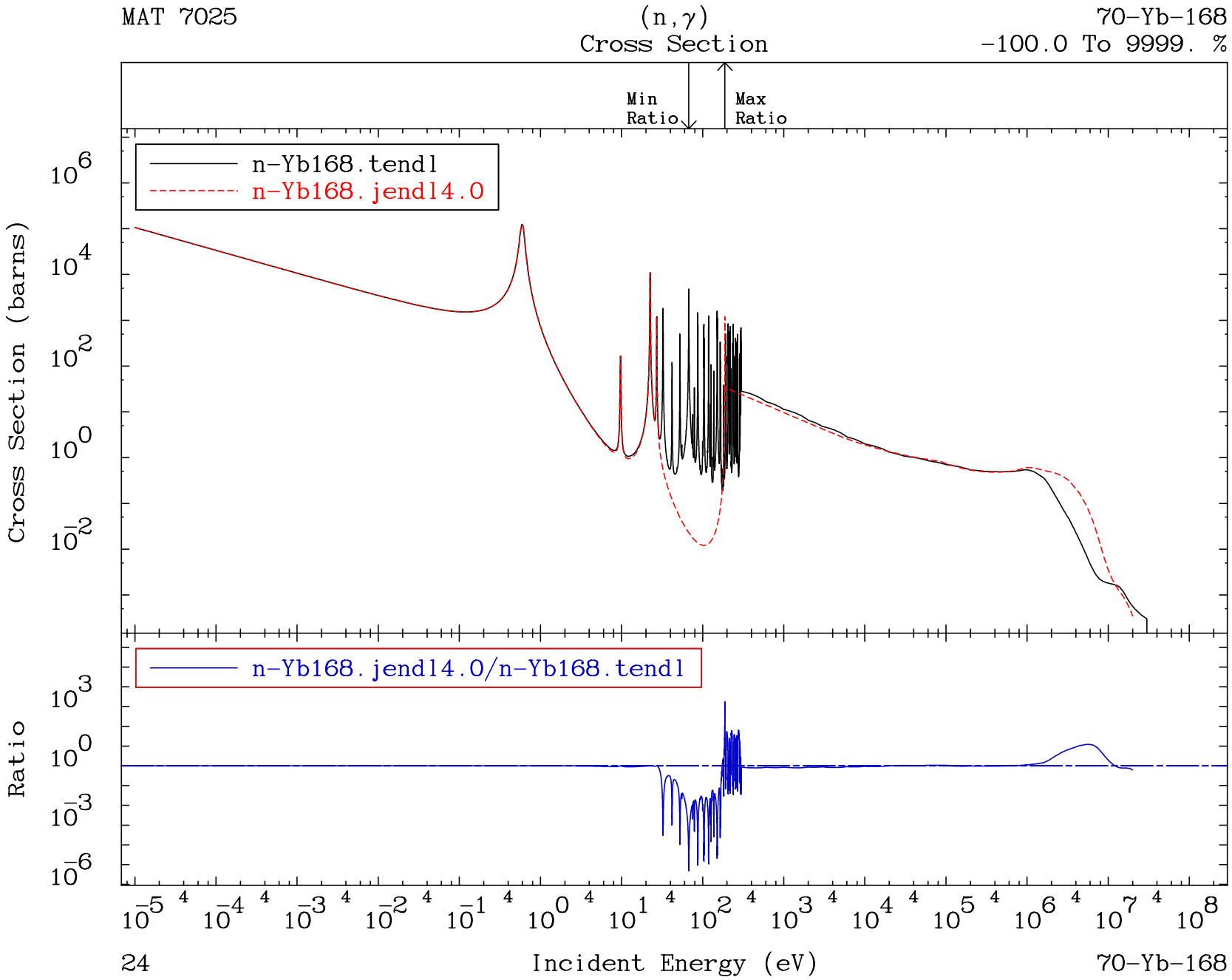

MAT 7025
MT= 61 (n,n') Level
Cross Section
70-Yb-168
-49.41 To 6647. %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 1.2042 MeV
n-Yb168.jendl4.0 Threshold 1.2042 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
70-Yb-168

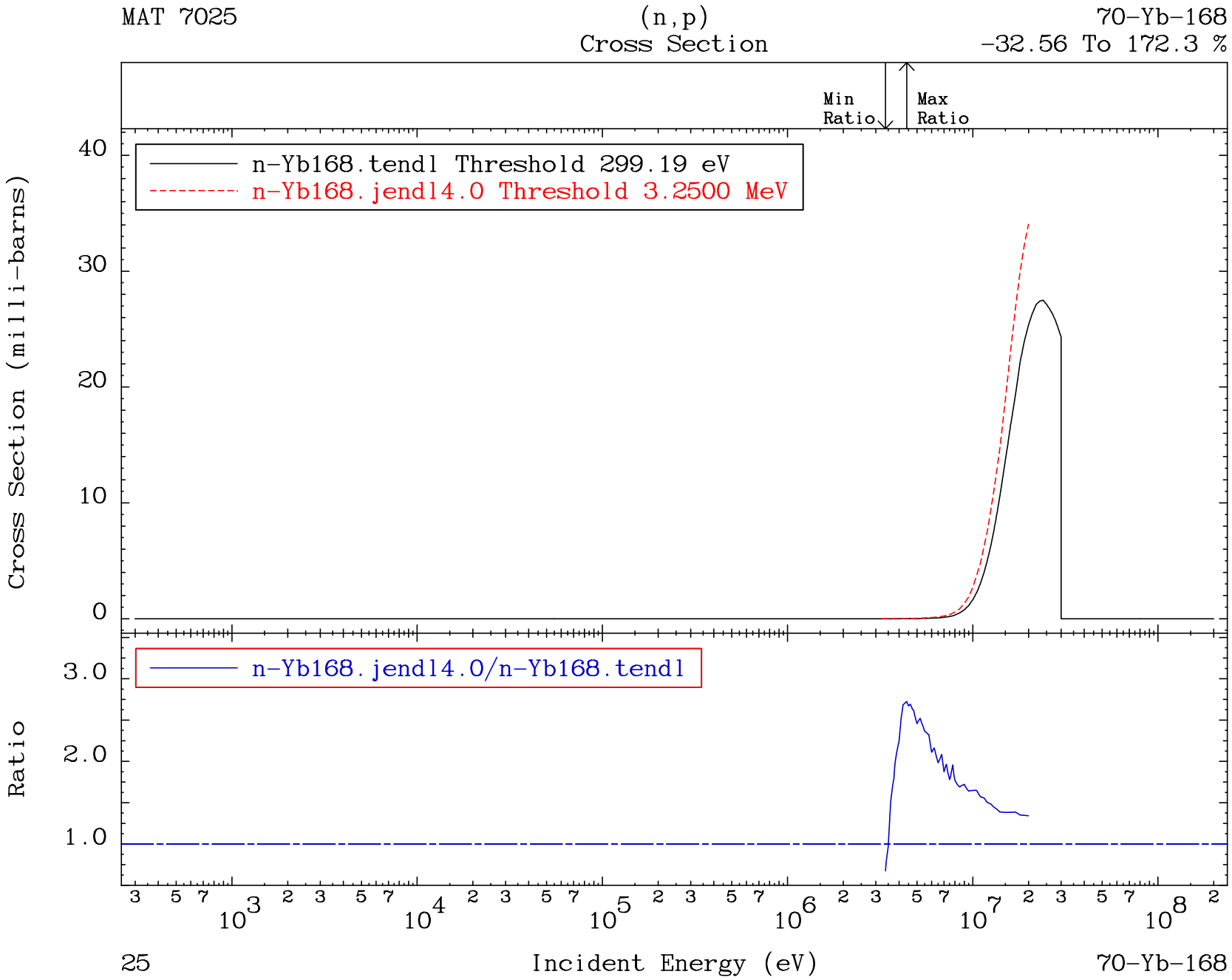

MAT 7025
MT= 62 (n,n') Level
Cross Section
70-Yb-168
-100.0 To 123.7 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 1.2389 MeV
n-Yb168.jendl4.0 Threshold 1.2384 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
20
Incident Energy (eV)
70-Yb-168

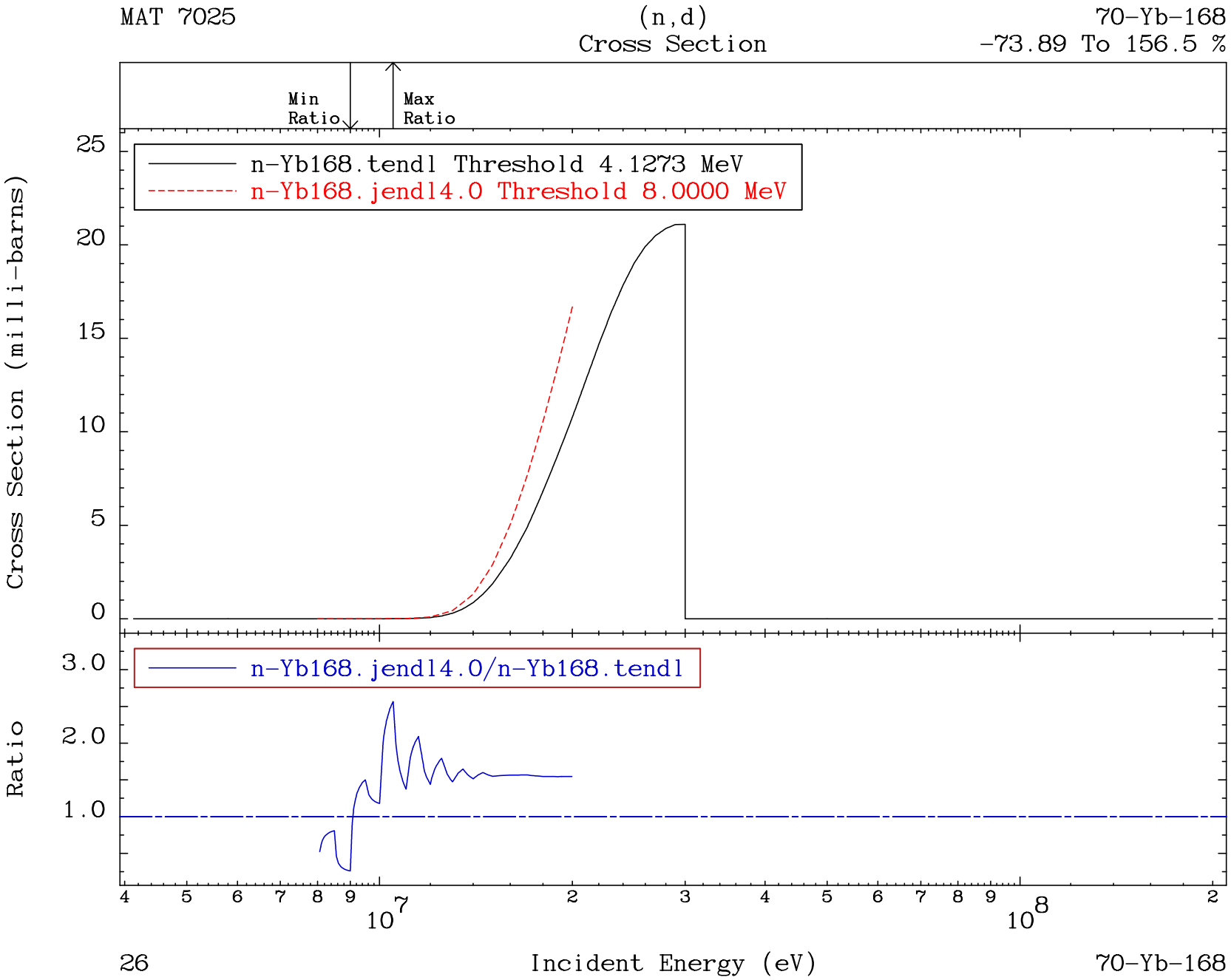

MAT 7025
MT= 63 (n,n') Level
Cross Section
70-Yb-168
-100.0 To 211.8 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 1.2405 MeV
n-Yb168.jendl4.0 Threshold 1.2405 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
21
Incident Energy (eV)
70-Yb-168

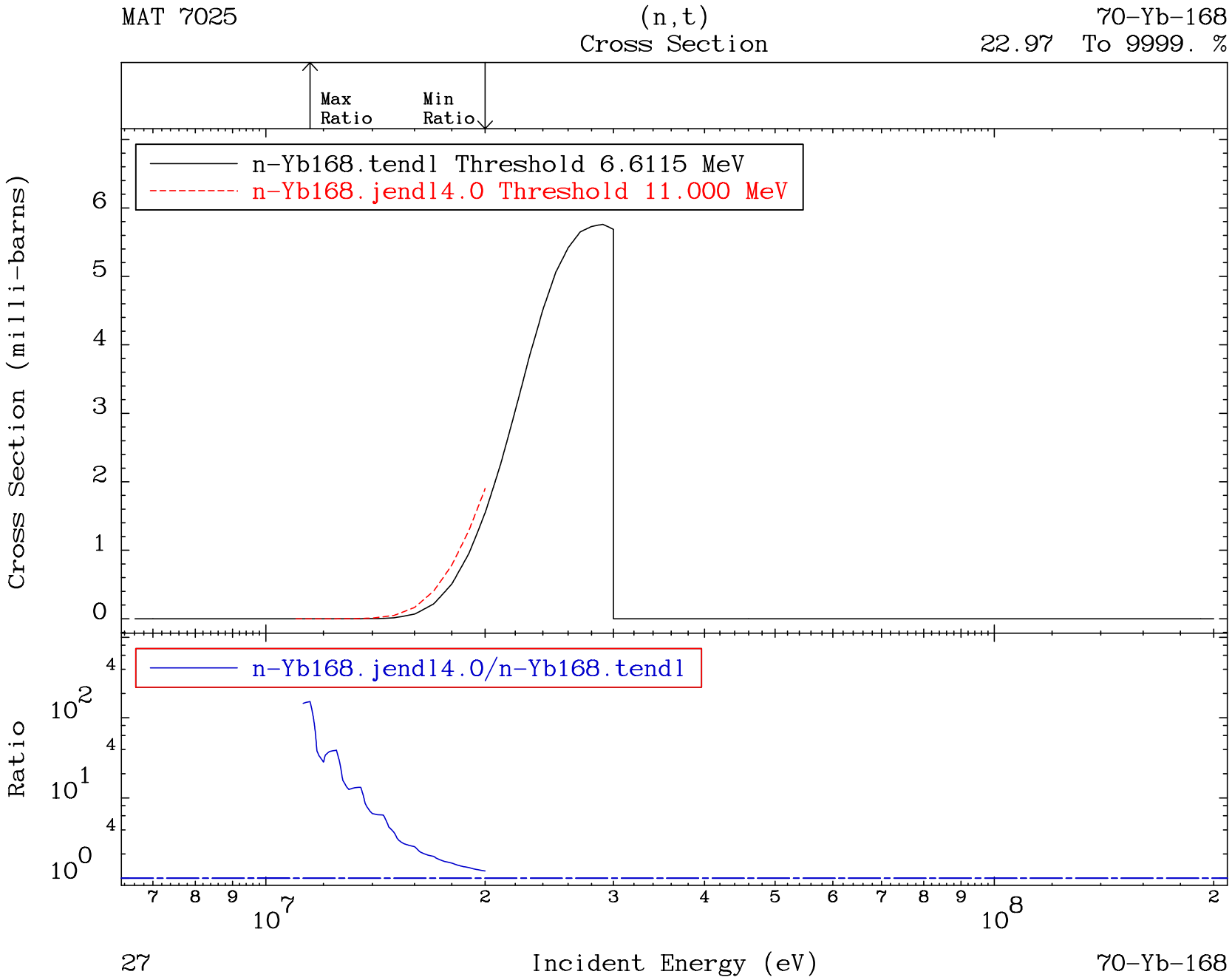

MAT 7025
MT= 64 (n,n') Level
Cross Section
70-Yb-168
-100.0 To 211.1 %
Max
Ratio
Min
Ratio
n-Yb168.tendl Threshold 1.2867 MeV
n-Yb168.jendl4.0 Threshold 1.2847 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
10^8
22
Incident Energy (eV)
70-Yb-168

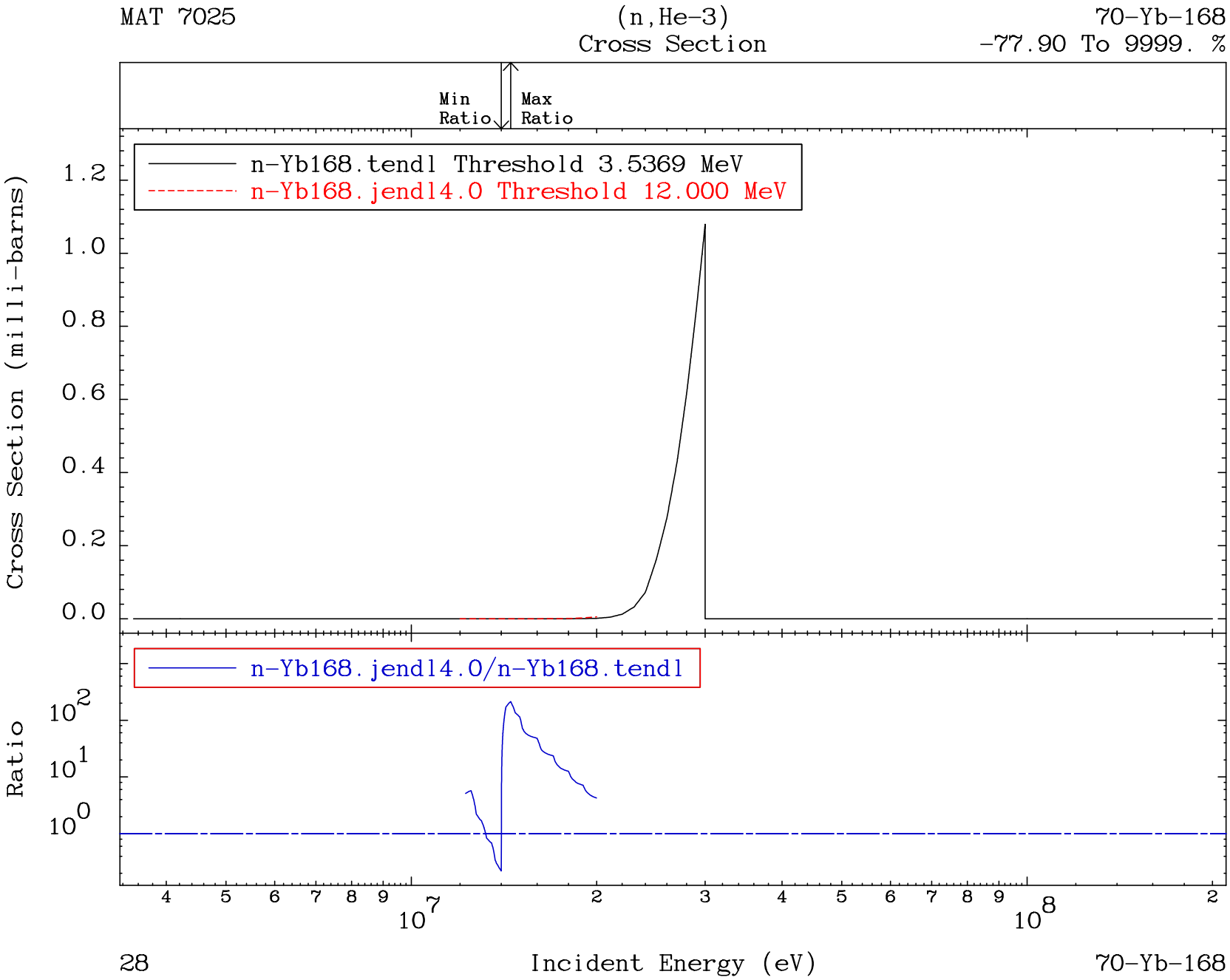

MAT 7025
(n,n') Continuum
Cross Section
70-Yb-168
-16.68 To 91.14 %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 1.6141 MeV
n-Yb168.jendl4.0 Threshold 1.2947 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
2.0
1.6
1.2
0.8
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
70-Yb-168

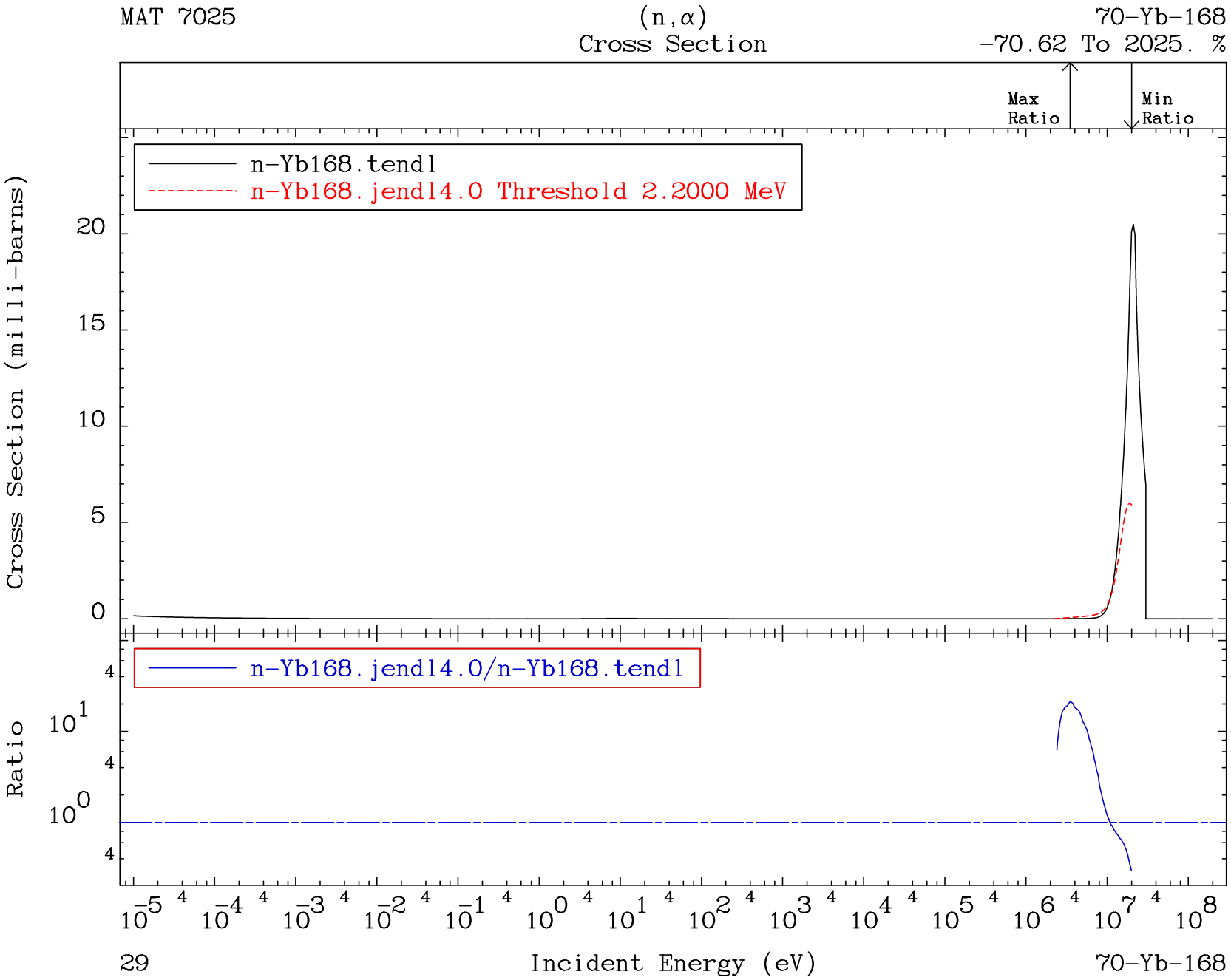

MAT 7025
(n,γ)
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
24
Incident Energy (eV)
70-Yb-168

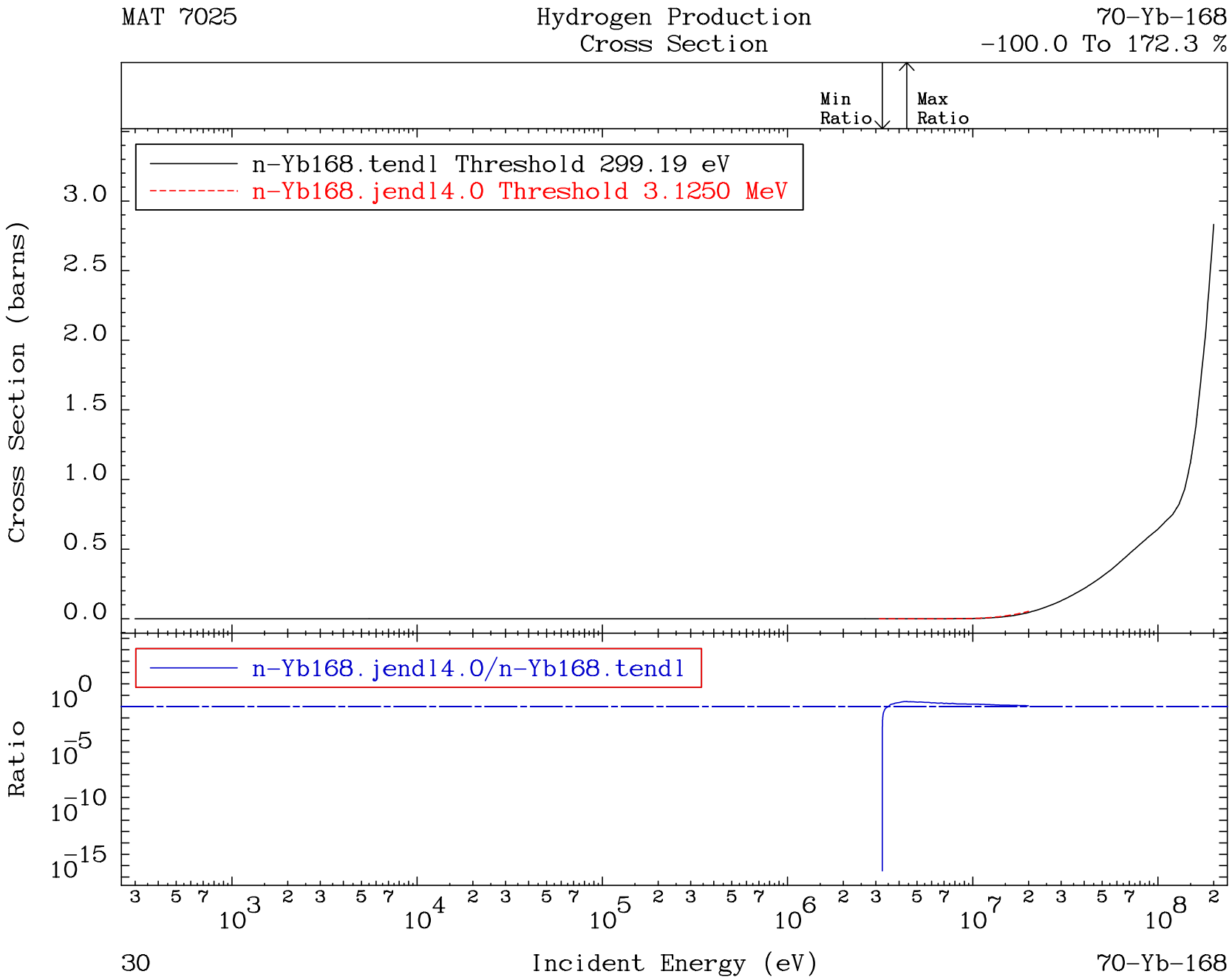

MAT 7025
(n,p)
Cross Section
70-Yb-168
-32.56 To 172.3 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 299.19 eV
n-Yb168.jendl4.0 Threshold 3.2500 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
3.0
2.0
1.0
3 5 7 10^3 2 3 5 7 10^4 2 3 5 7 10^5 2 3 5 7 10^6 2 3 5 7 10^7 2 3 5 7 10^8 2
25
Incident Energy (eV)
70-Yb-168

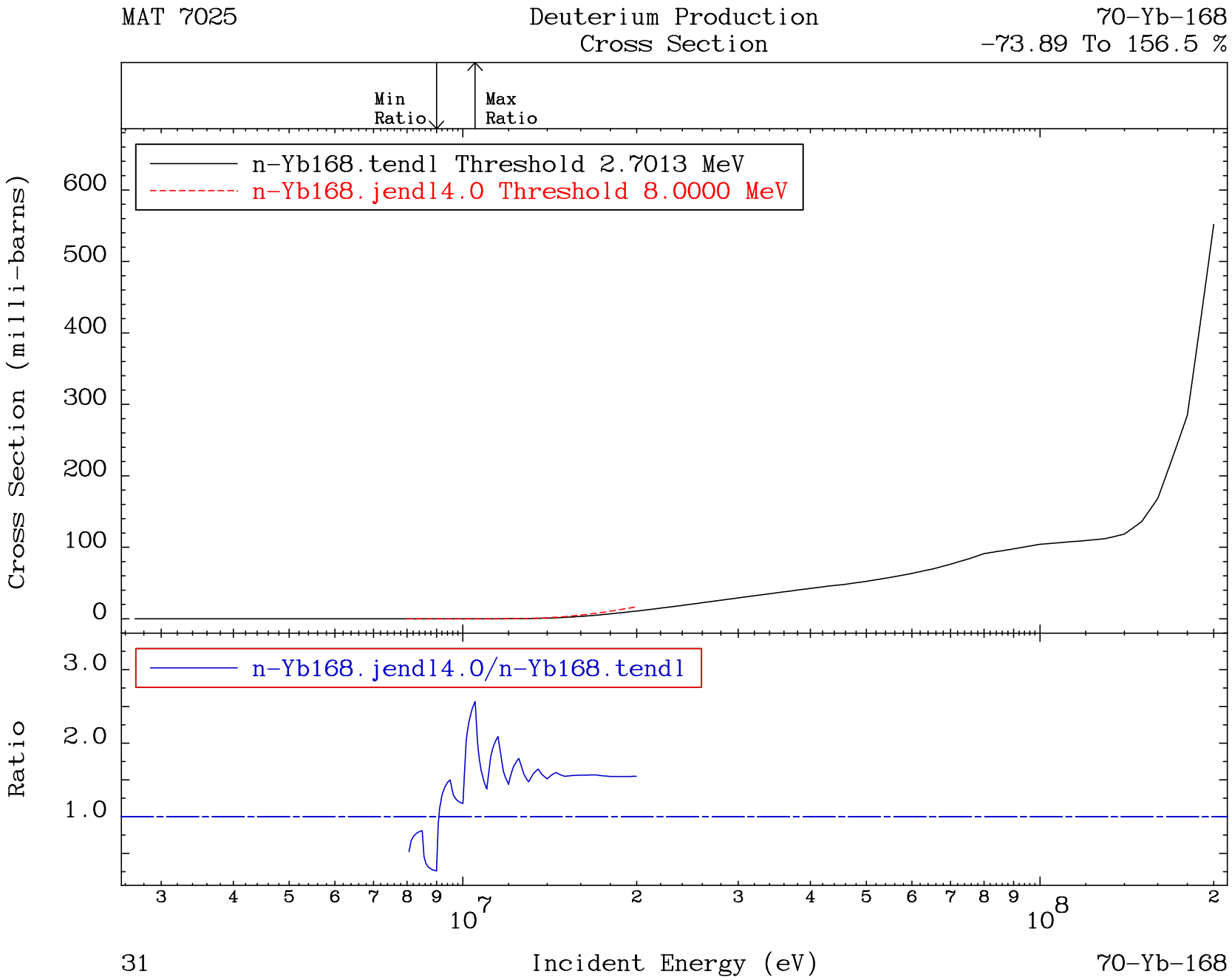

MAT 7025
(n,d)
Cross Section
70-Yb-168
-73.89 To 156.5 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 4.1273 MeV
n-Yb168.jendl4.0 Threshold 8.0000 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
3.0
2.0
1.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
70-Yb-168

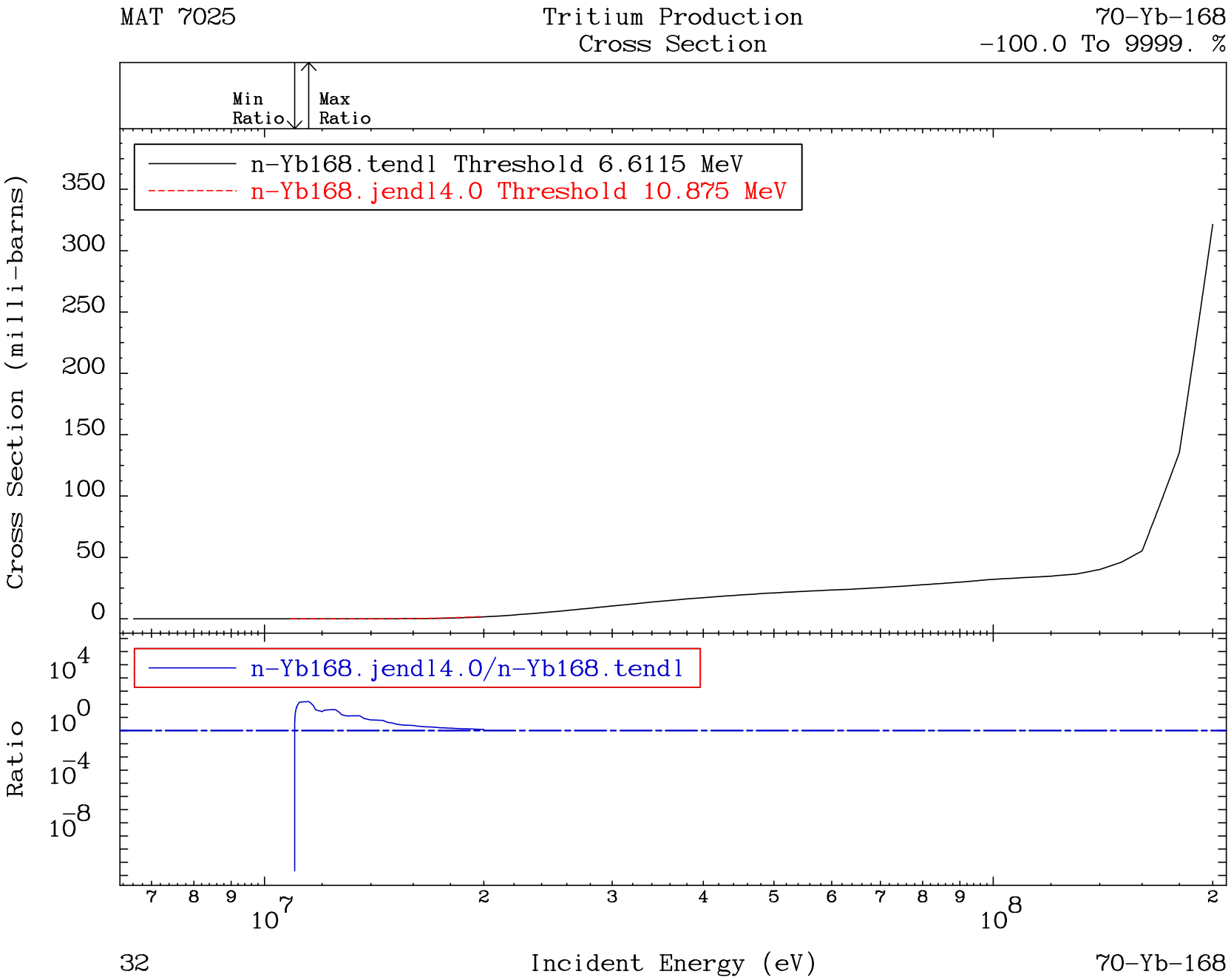

MAT 7025
(n,t)
Cross Section
70-Yb-168
22.97 To 9999. %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 6.6115 MeV
n-Yb168.jendl4.0 Threshold 11.000 MeV
Cross Section (milli-barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
27
70-Yb-168

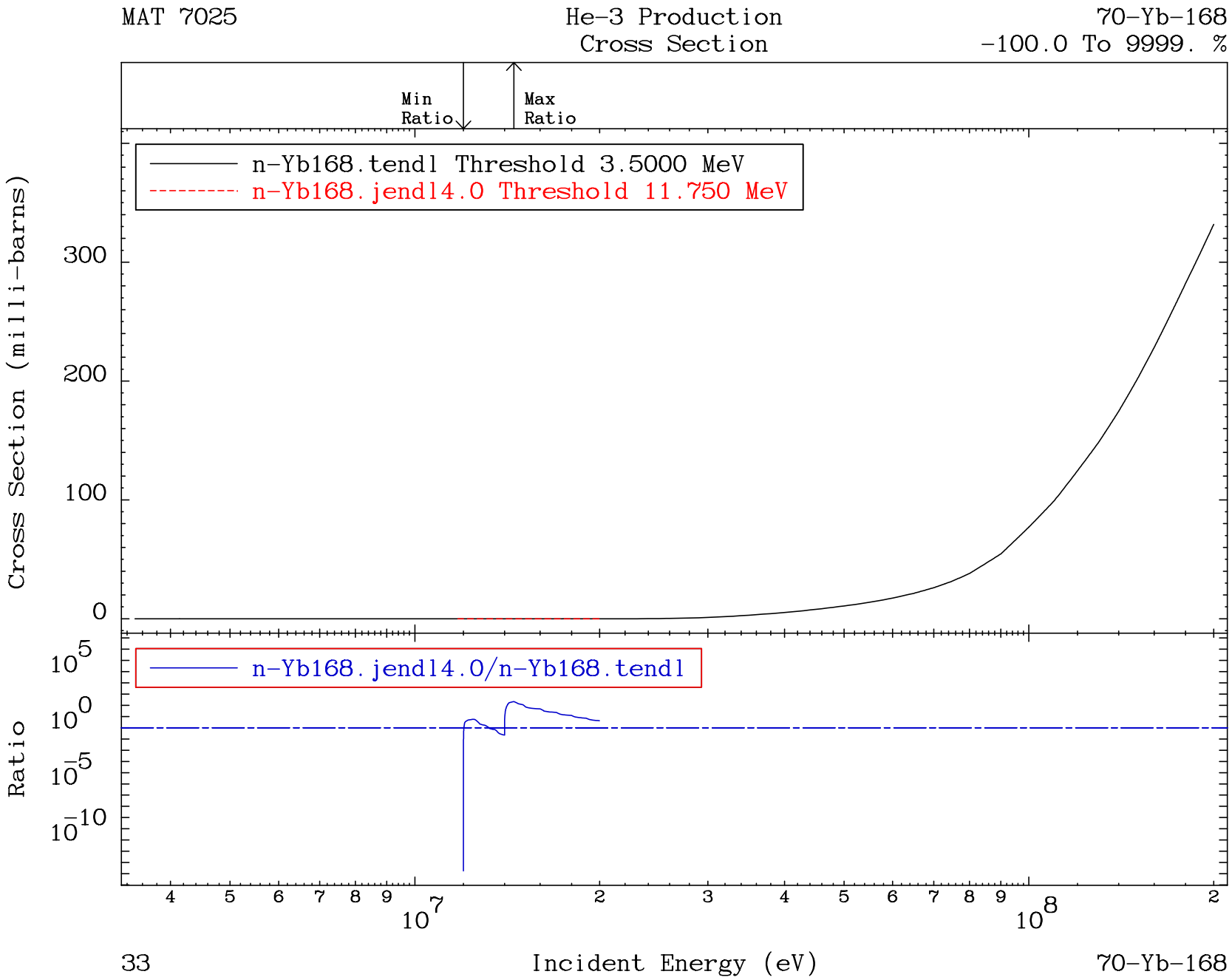

MAT 7025
(n,He-3)
Cross Section
70-Yb-168
-77.90 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 3.5369 MeV
n-Yb168.jendl4.0 Threshold 12.000 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^2
10^1
10^0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
70-Yb-168

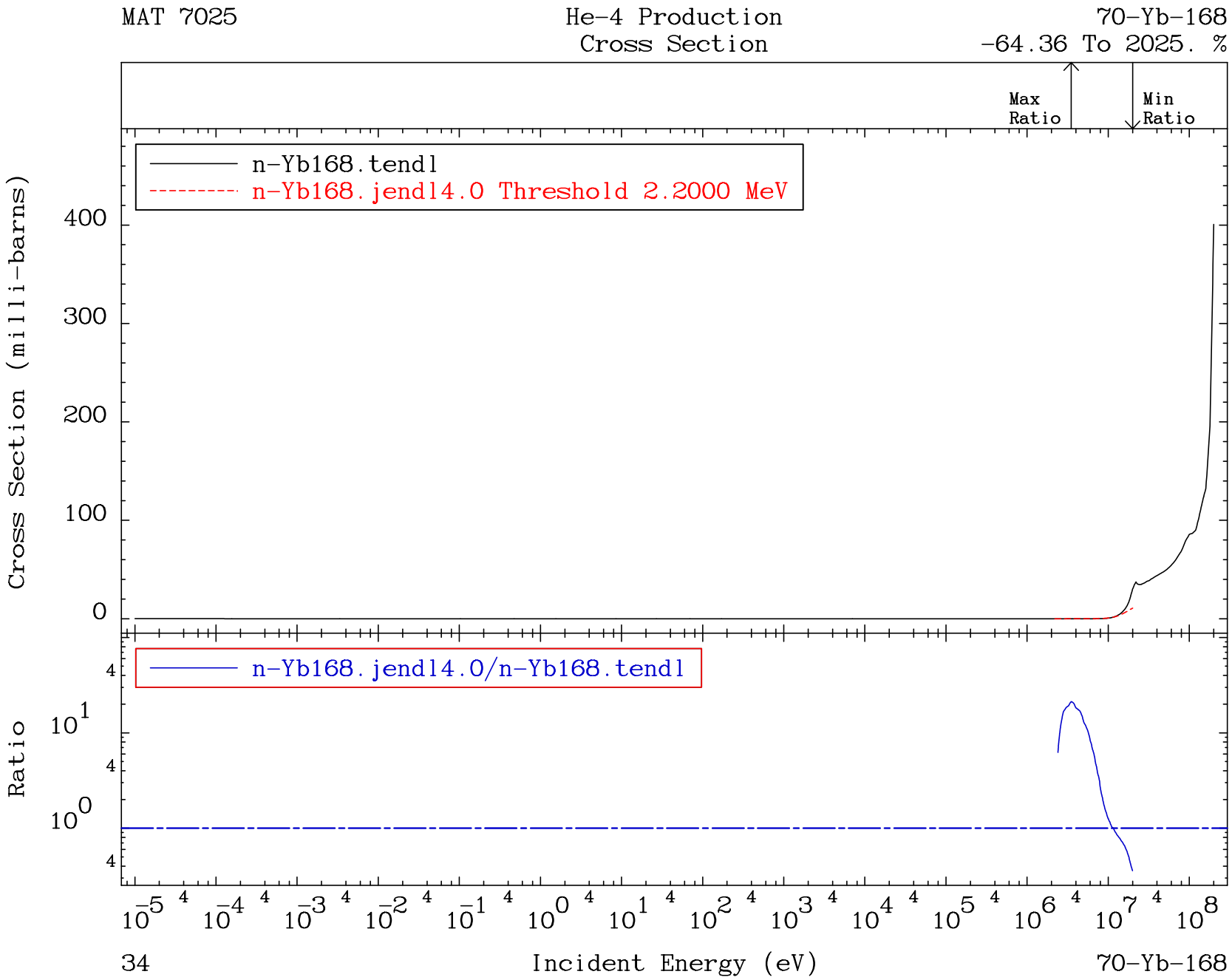

MAT 7025
(n,α)
Cross Section
70-Yb-168
-70.62 To 2025. %
Max Ratio
Min Ratio
n-Yb168.tendl
n-Yb168.jendl4.0 Threshold 2.2000 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^1
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
70-Yb-168

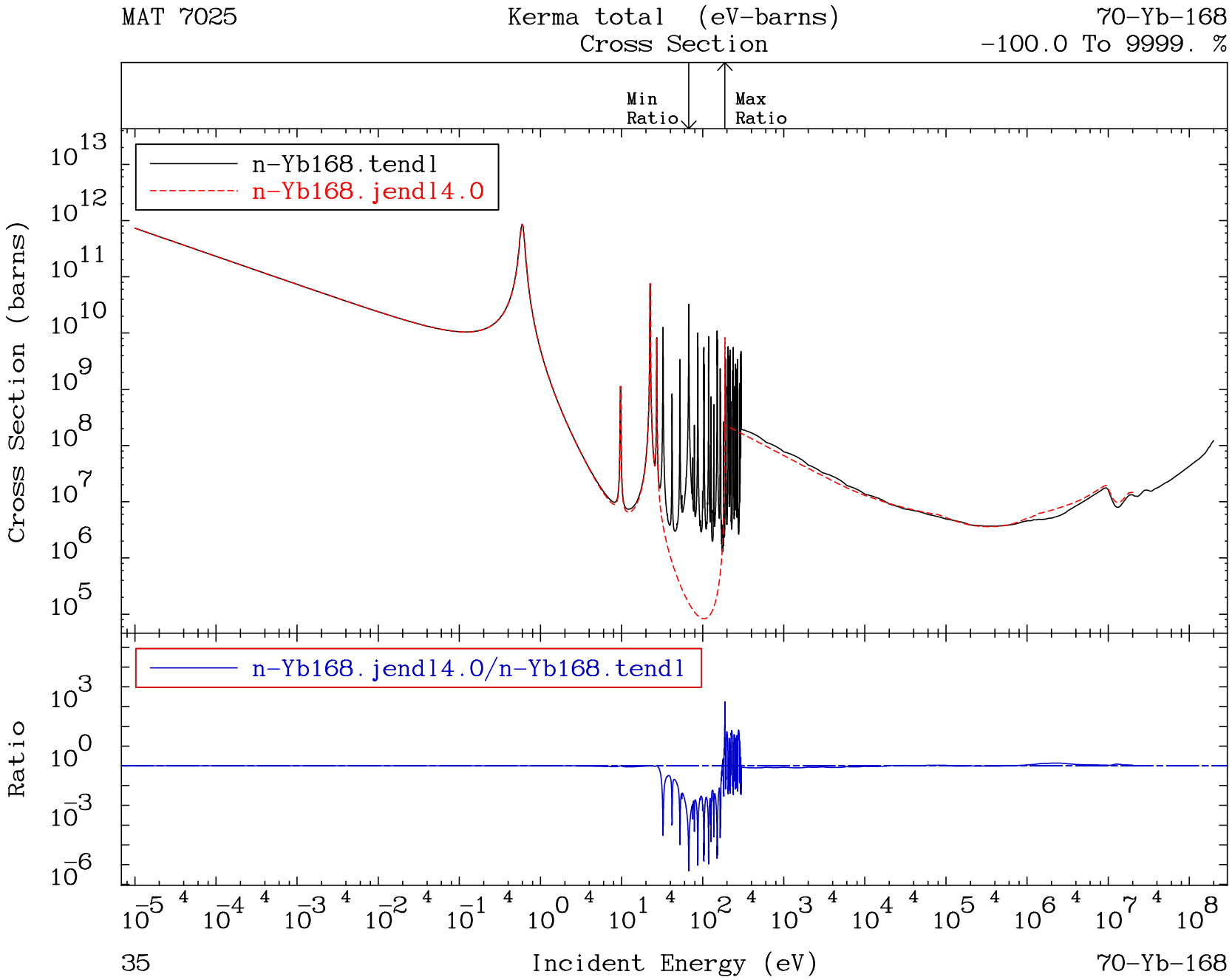

MAT 7025
Hydrogen Production
Cross Section
70-Yb-168
-100.0 To 172.3 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 299.19 eV
n-Yb168.jendl4.0 Threshold 3.1250 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^0
10^-5
10^-10
10^-15
3 5 7 10^3 2 3 5 7 10^4 2 3 5 7 10^5 2 3 5 7 10^6 2 3 5 7 10^7 2 3 5 7 10^8 2
30
Incident Energy (eV)
70-Yb-168

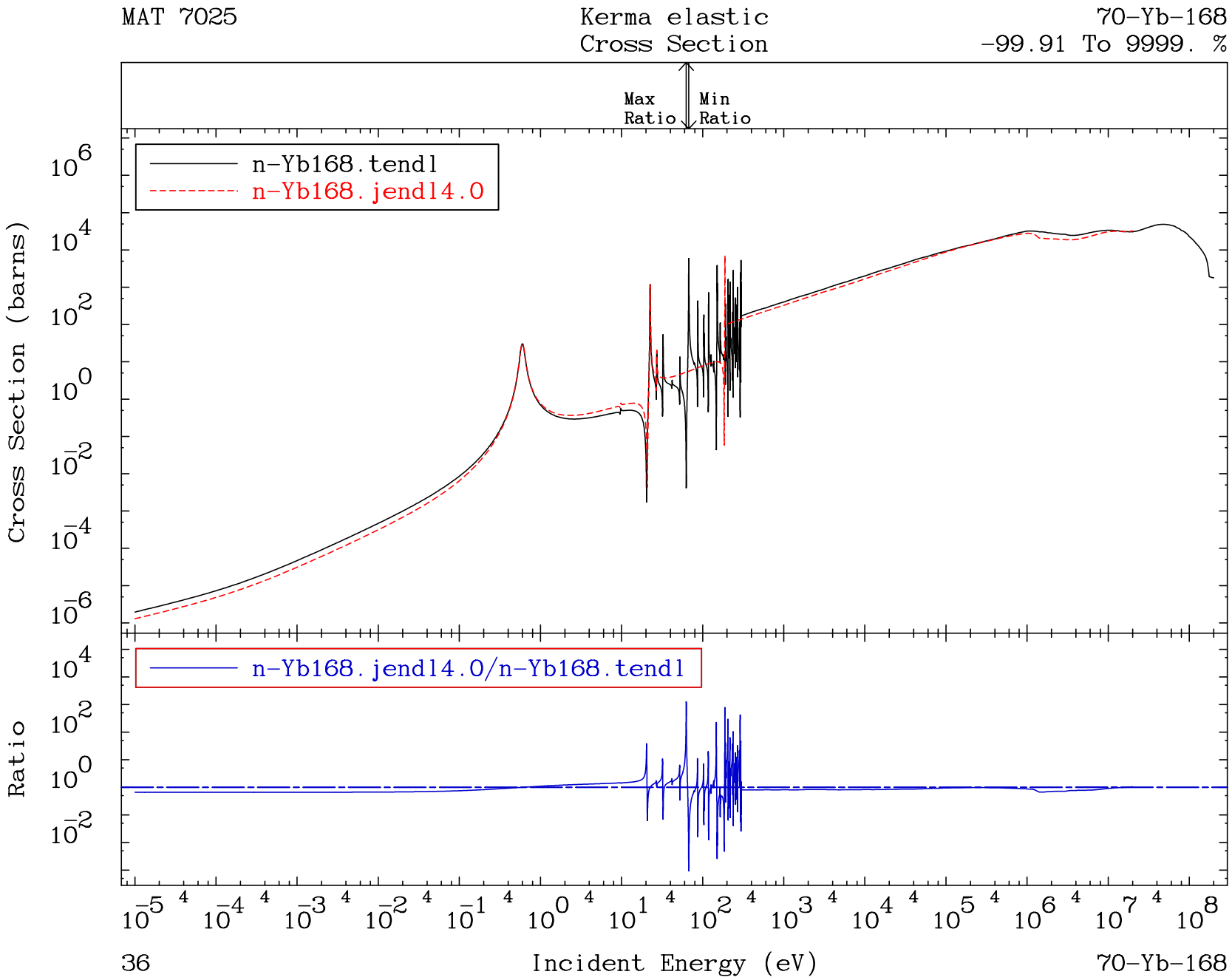

MAT 7025
Deuterium Production
Cross Section
70-Yb-168
-73.89 To 156.5 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 2.7013 MeV
n-Yb168.jendl4.0 Threshold 8.0000 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
3.0
2.0
1.0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
31
Incident Energy (eV)
70-Yb-168

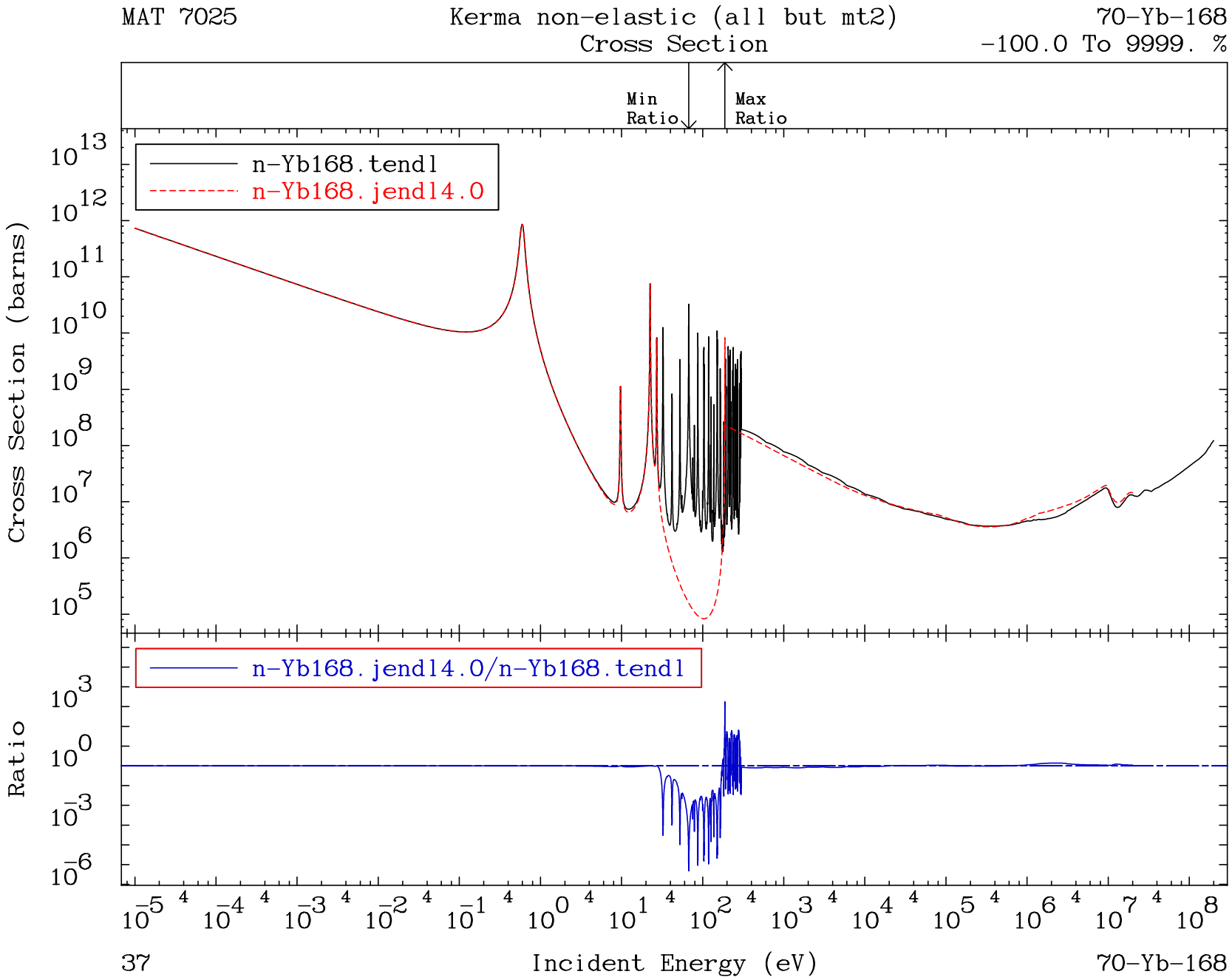

MAT 7025
Tritium Production
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 6.6115 MeV
n-Yb168.jendl4.0 Threshold 10.875 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^4
10^0
10^-4
10^-8
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
32
Incident Energy (eV)
70-Yb-168

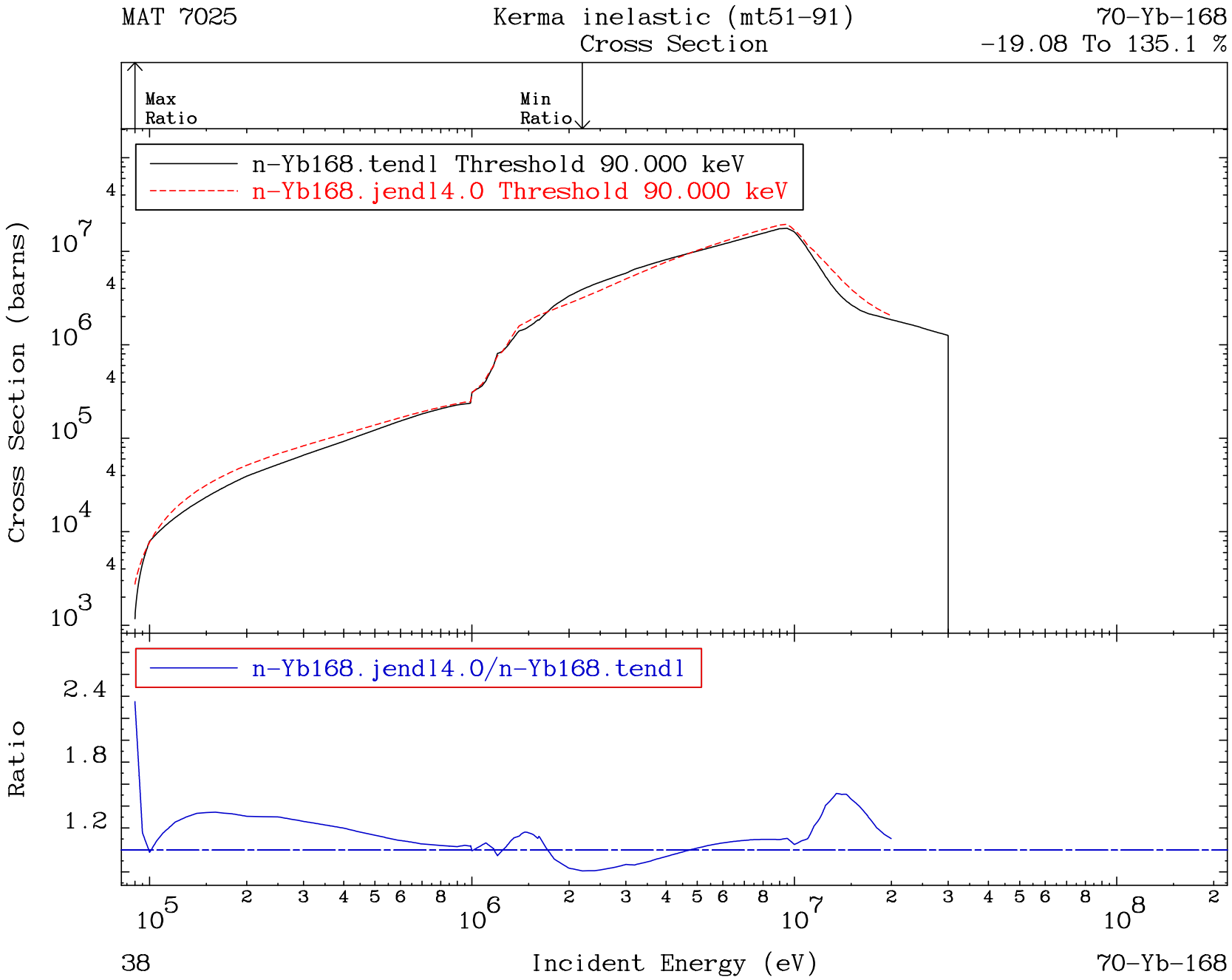

MAT 7025
He-3 Production
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 3.5000 MeV
n-Yb168.jendl4.0 Threshold 11.750 MeV
Cross Section (milli-barns)
300
200
100
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^5
10^0
10^-5
10^-10
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
33
Incident Energy (eV)
70-Yb-168

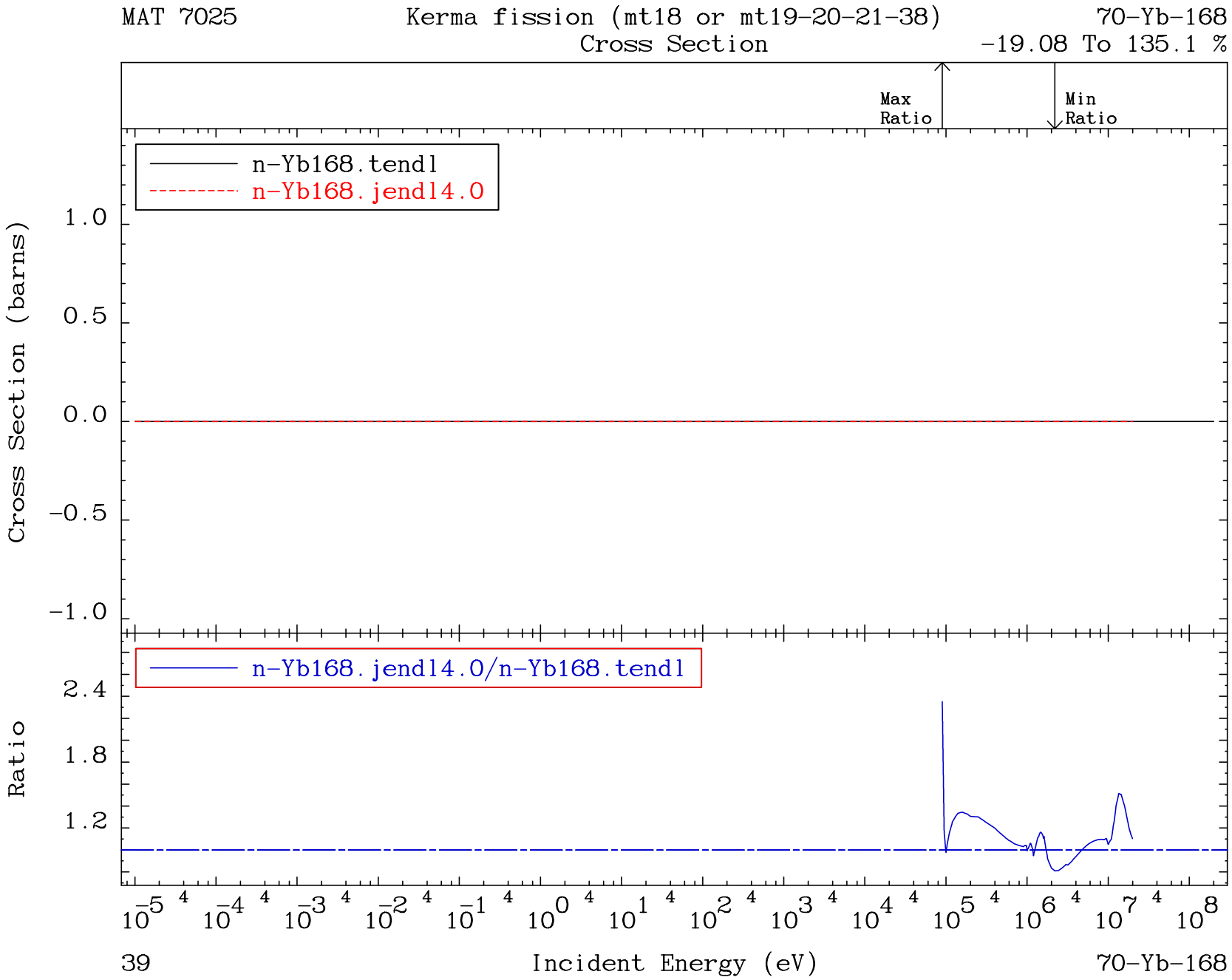

MAT 7025
He-4 Production
Cross Section
70-Yb-168
-64.36 To 2025. %
Max Ratio
Min Ratio
n-Yb168.tendl
n-Yb168.jendl4.0 Threshold 2.2000 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^1
10^0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
34
Incident Energy (eV)
70-Yb-168

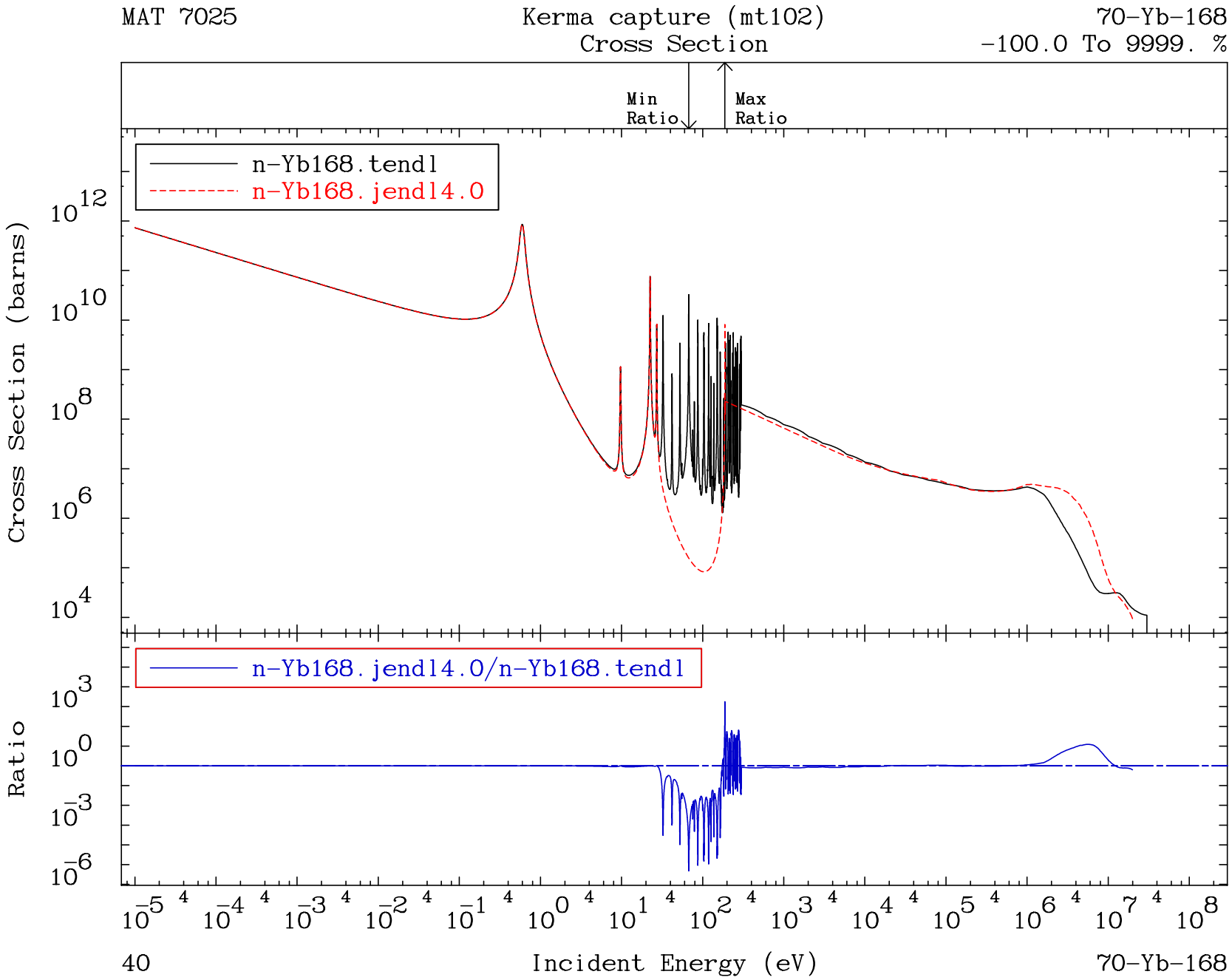

MAT 7025
Kerma total (eV-barns)
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
35
70-Yb-168

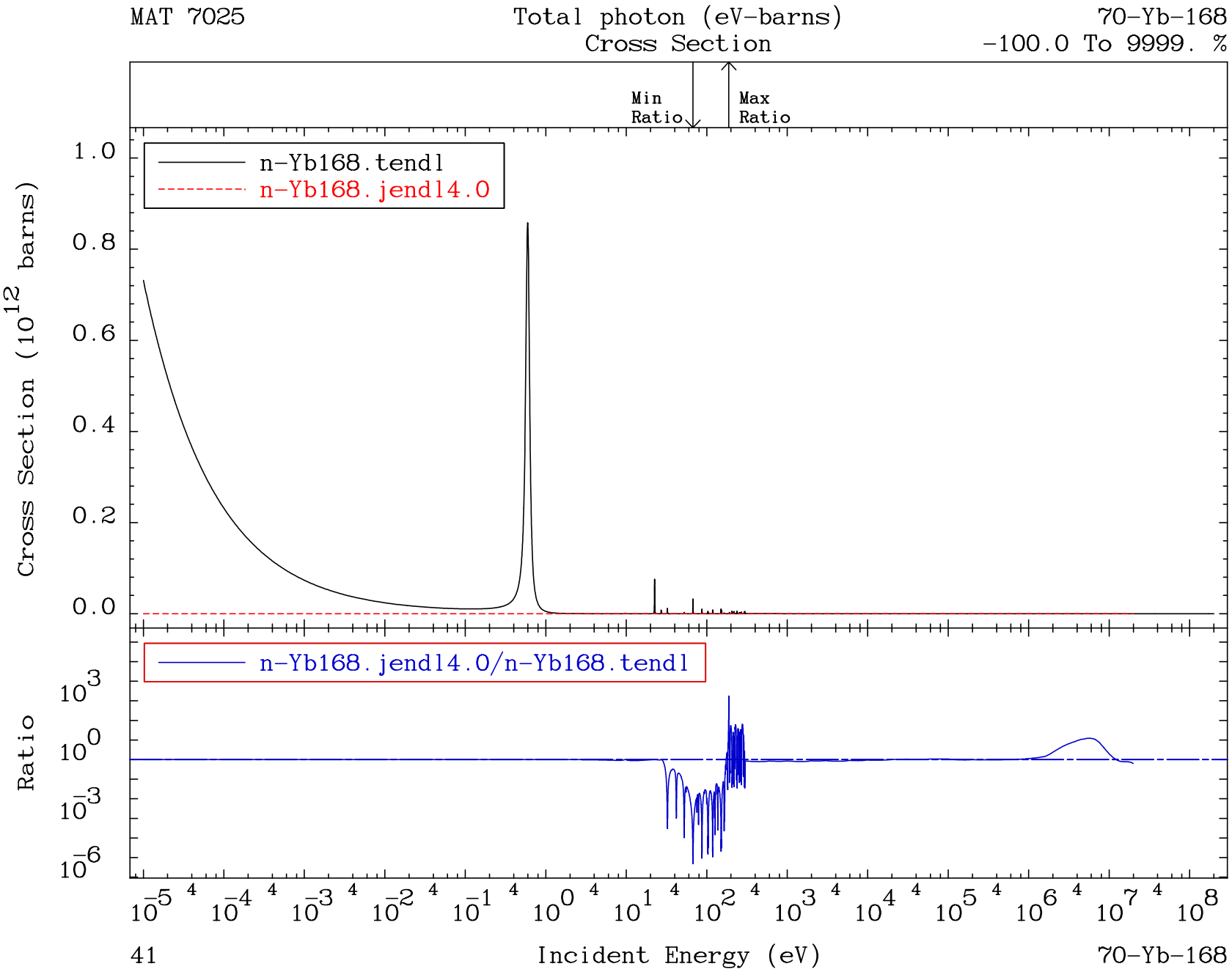

MAT 7025
Kerma elastic
Cross Section
70-Yb-168
-99.91 To 9999. %
Max Ratio
Min Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
36
70-Yb-168

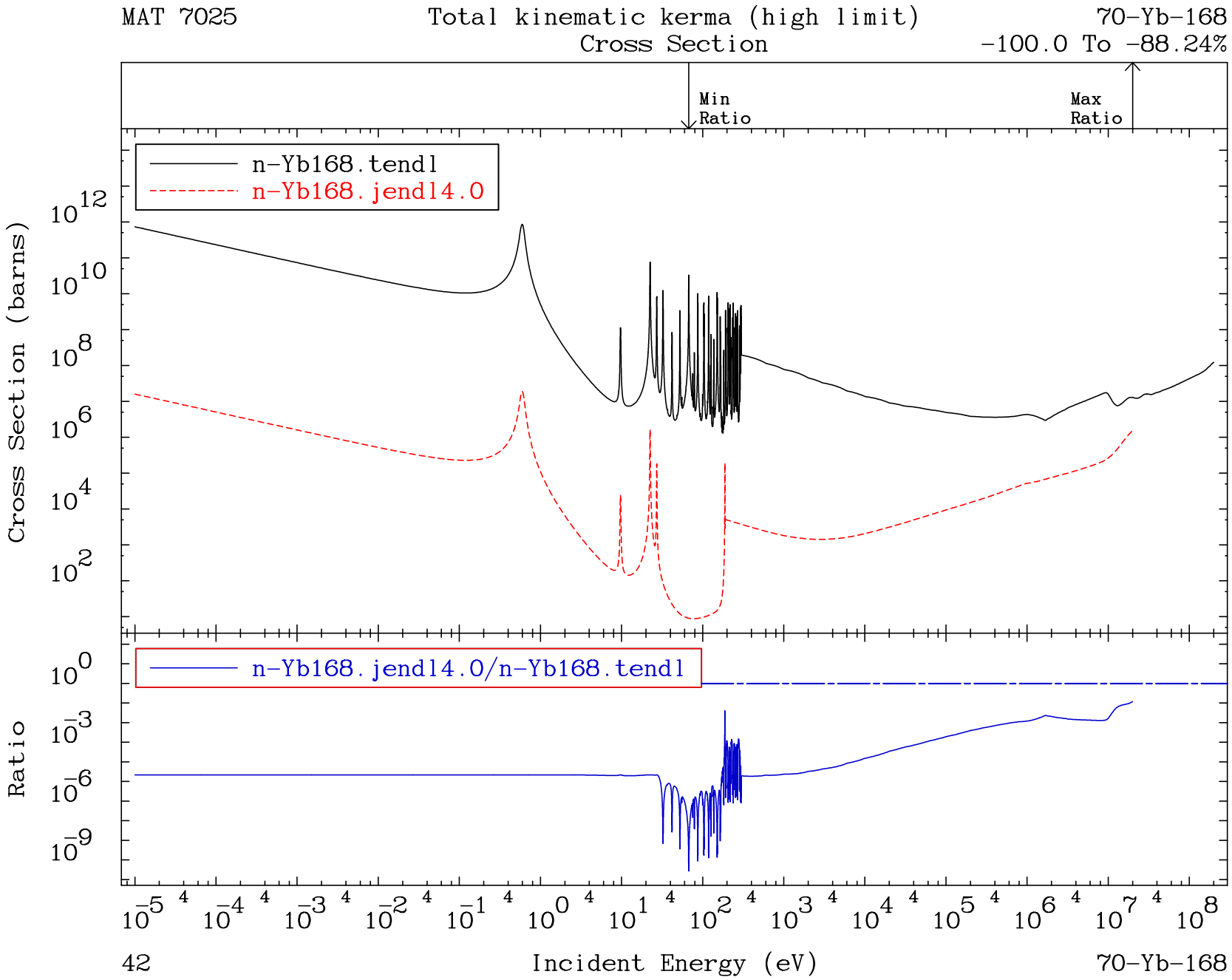

MAT 7025
Kerma non-elastic (all but mt2)
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
37
70-Yb-168

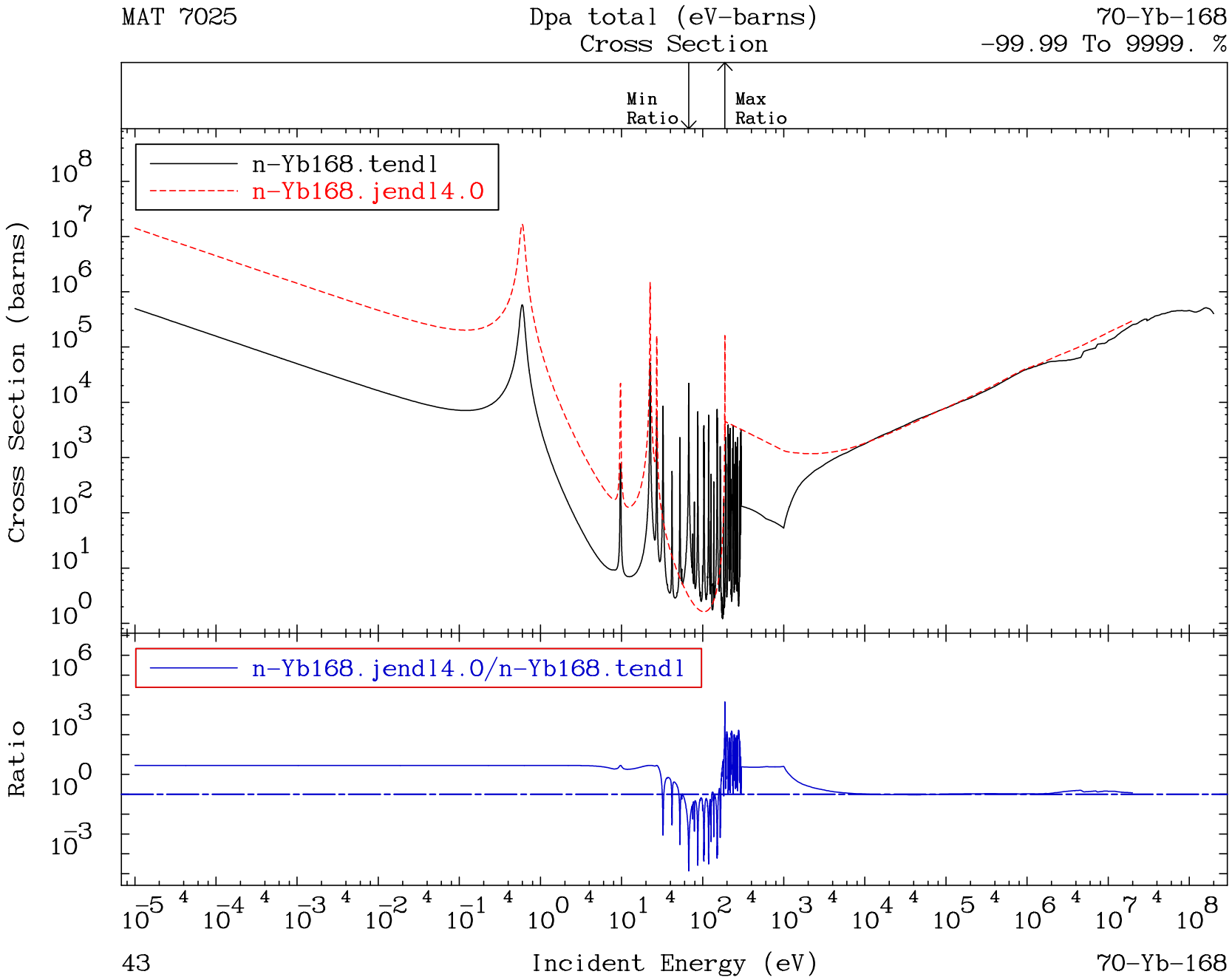

MAT 7025
Kerma inelastic (mt51-91)
Cross Section
70-Yb-168
-19.08 To 135.1 %
Max Ratio
Min Ratio
n-Yb168.tendl Threshold 90.000 keV
n-Yb168.jendl4.0 Threshold 90.000 keV
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
38
70-Yb-168

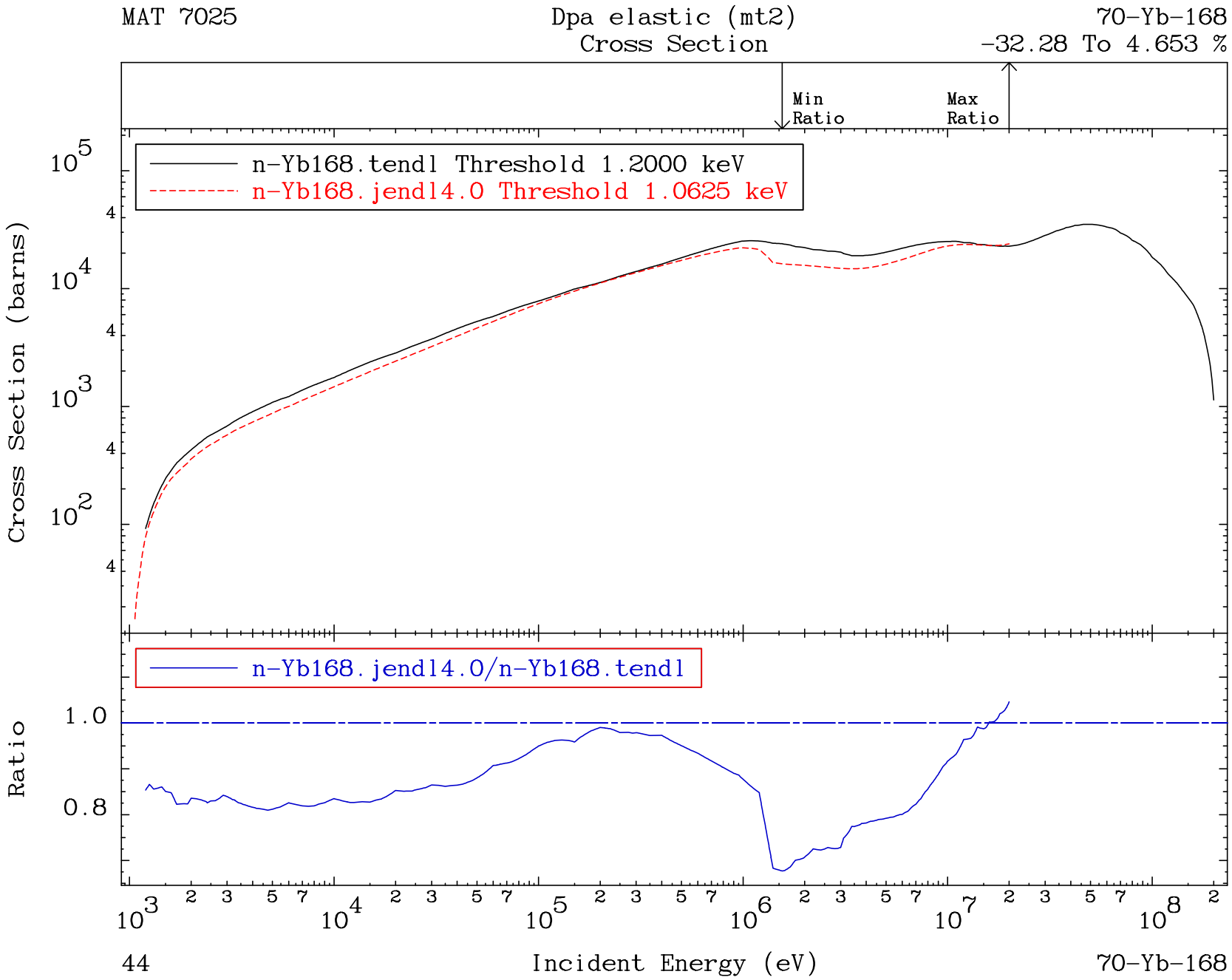

MAT 7025
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
70-Yb-168
-19.08 To 135.1 %
Max Ratio
Min Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
2.4
1.8
1.2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
39
Incident Energy (eV)
70-Yb-168

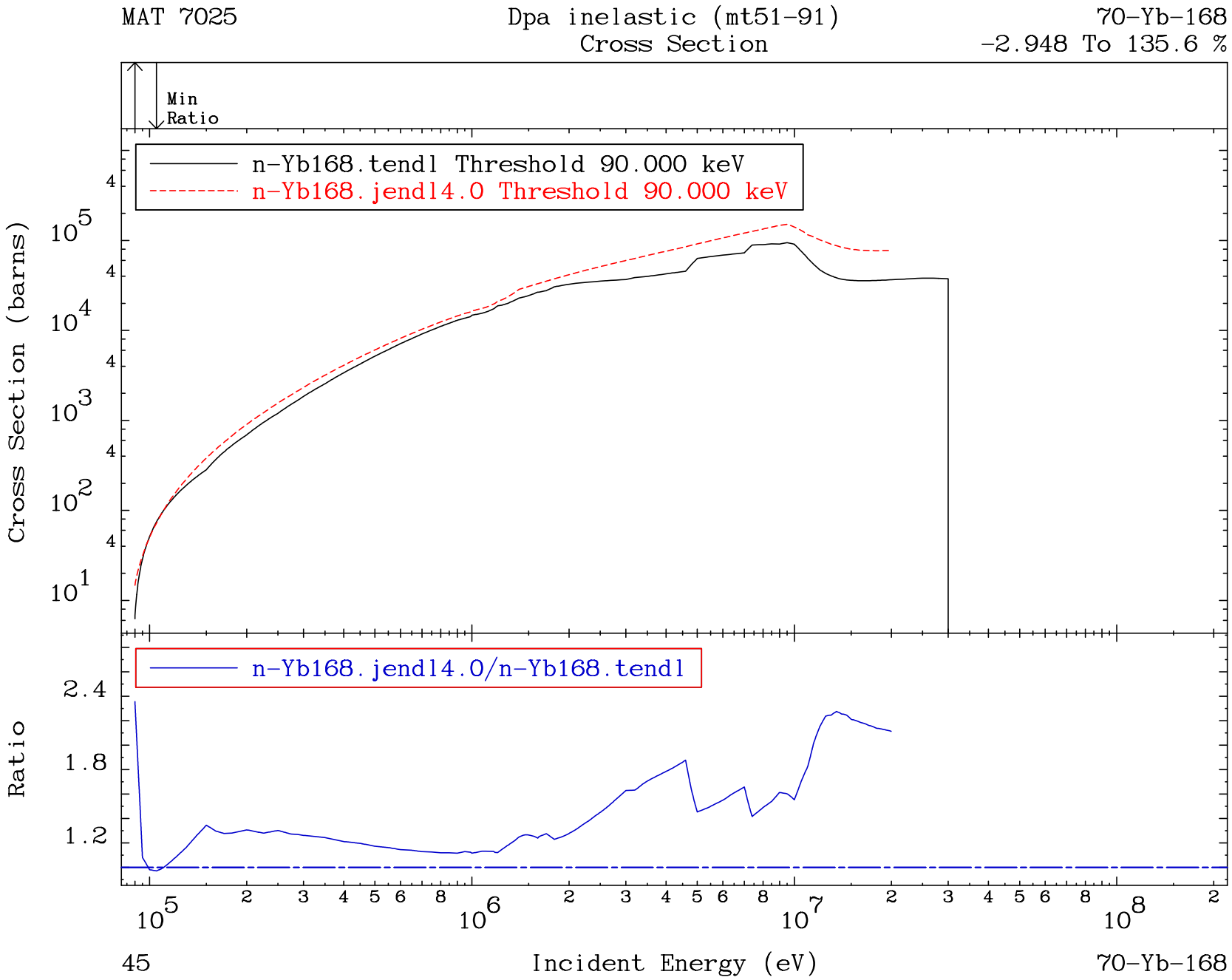

MAT 7025
Kerma capture (mt102)
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
40
70-Yb-168

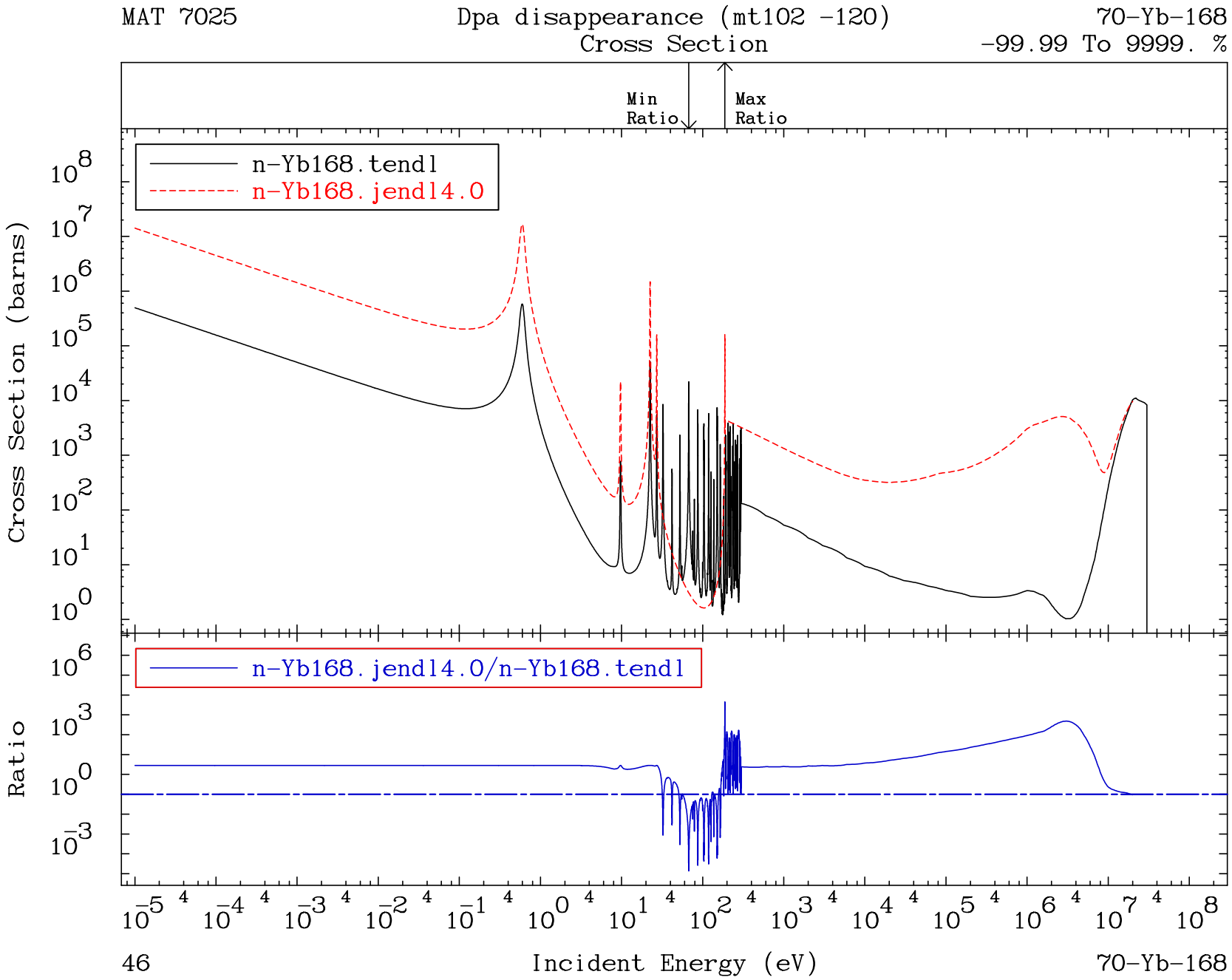

MAT 7025
Total photon (eV-barns)
Cross Section
70-Yb-168
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (10^{12} barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
10^{3}
10^{0}
10^{-3}
10^{-6}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
41
Incident Energy (eV)
70-Yb-168


MAT 7025
Total kinematic kerma (high limit)
Cross Section
70-Yb-168
-100.0 To -88.24%
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
42
70-Yb-168


MAT 7025
Dpa total (eV-barns)
Cross Section
70-Yb-168
-99.99 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
43
70-Yb-168


MAT 7025
Dpa elastic (mt2)
Cross Section
70-Yb-168
-32.28 To 4.653 %
Min Ratio
Max Ratio
n-Yb168.tendl Threshold 1.2000 keV
n-Yb168.jendl4.0 Threshold 1.0625 keV
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
44
70-Yb-168


MAT 7025
Dpa inelastic (mt51-91)
Cross Section
70-Yb-168
-2.948 To 135.6 %
Min
Ratio
n-Yb168.tendl Threshold 90.000 keV
n-Yb168.jendl4.0 Threshold 90.000 keV
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
45
70-Yb-168


MAT 7025
Dpa disappearance (mt102 -120)
Cross Section
70-Yb-168
-99.99 To 9999. %
Min Ratio
Max Ratio
n-Yb168.tendl
n-Yb168.jendl4.0
Cross Section (barns)
n-Yb168.jendl4.0/n-Yb168.tendl
Ratio
Incident Energy (eV)
46
70-Yb-168