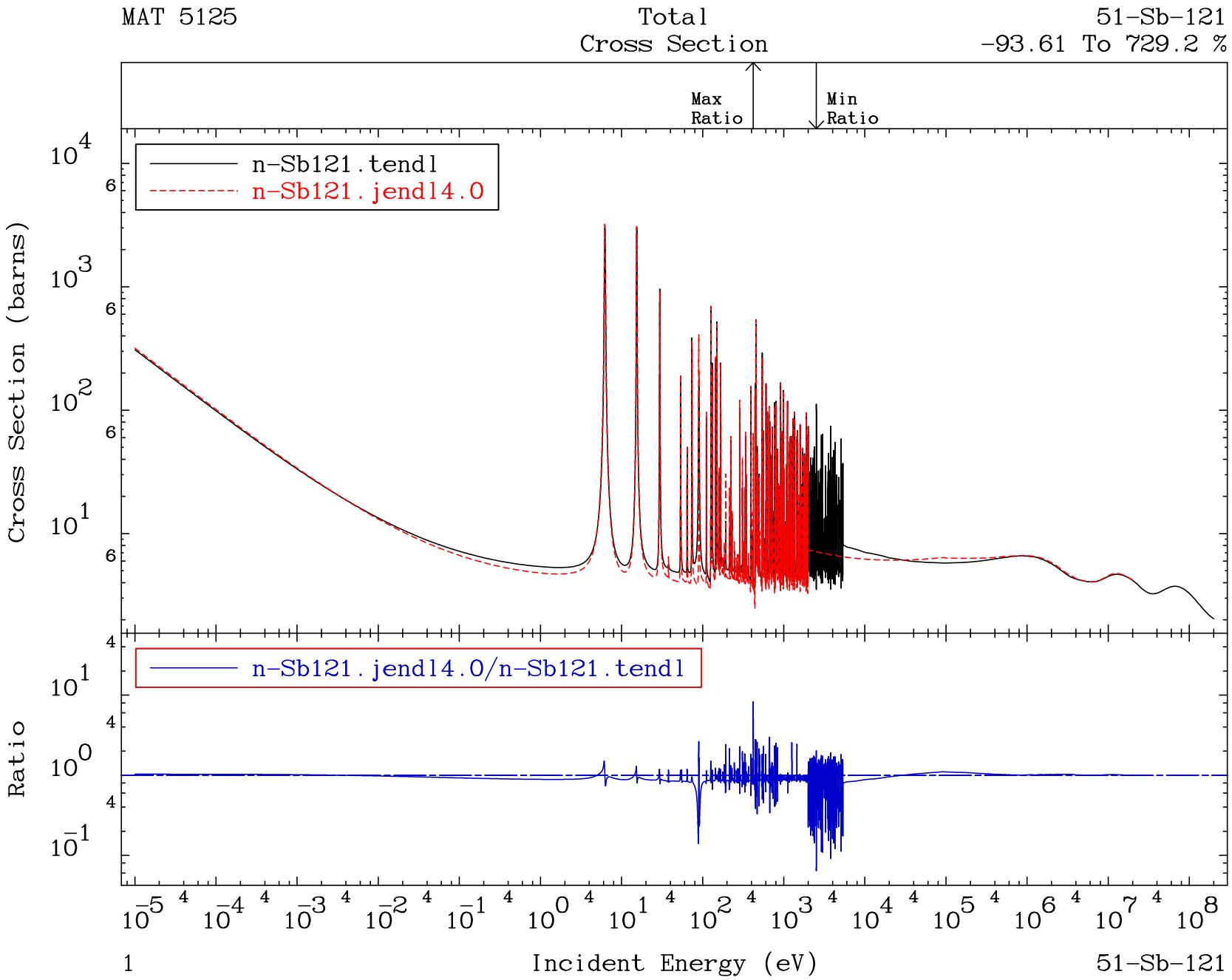
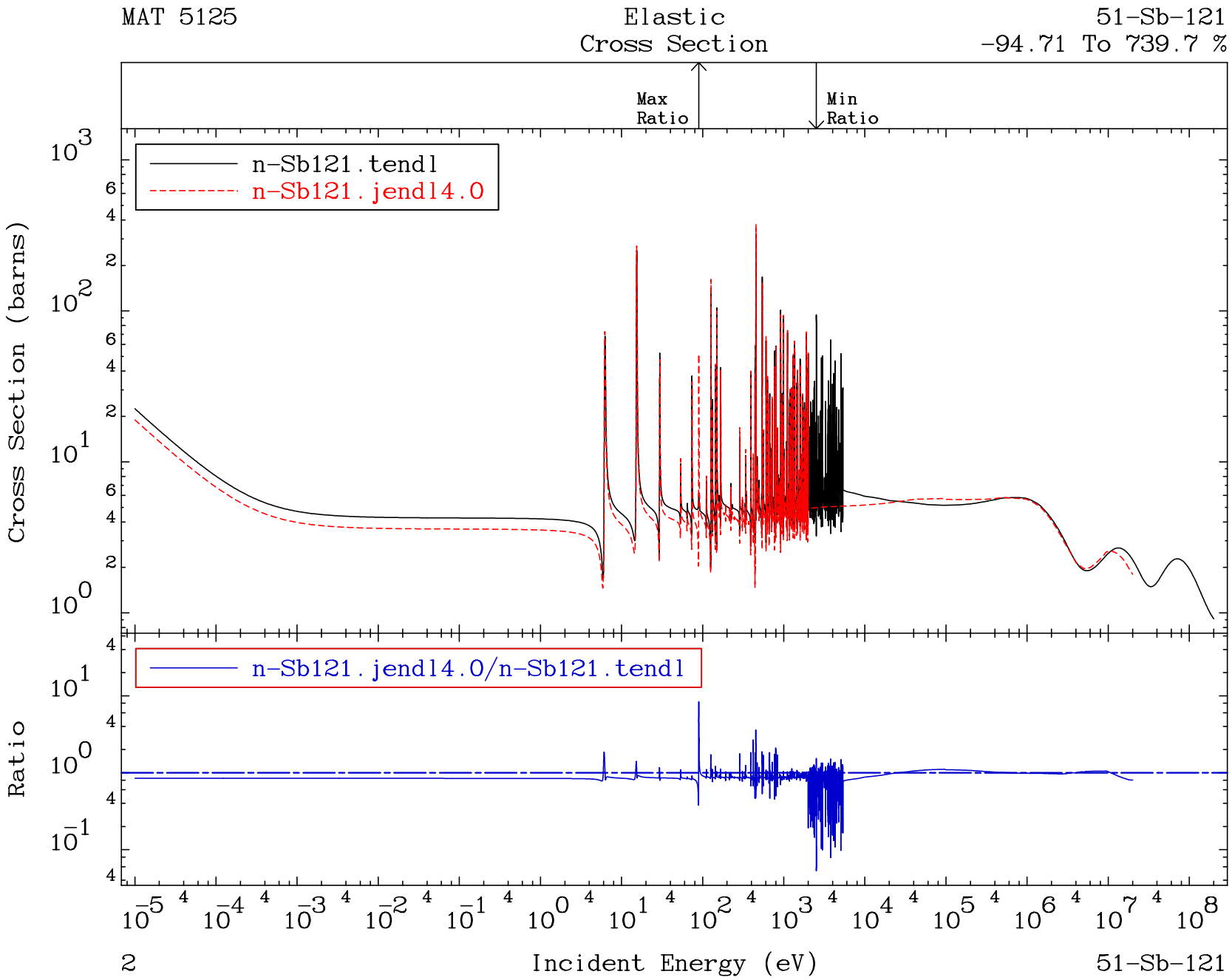
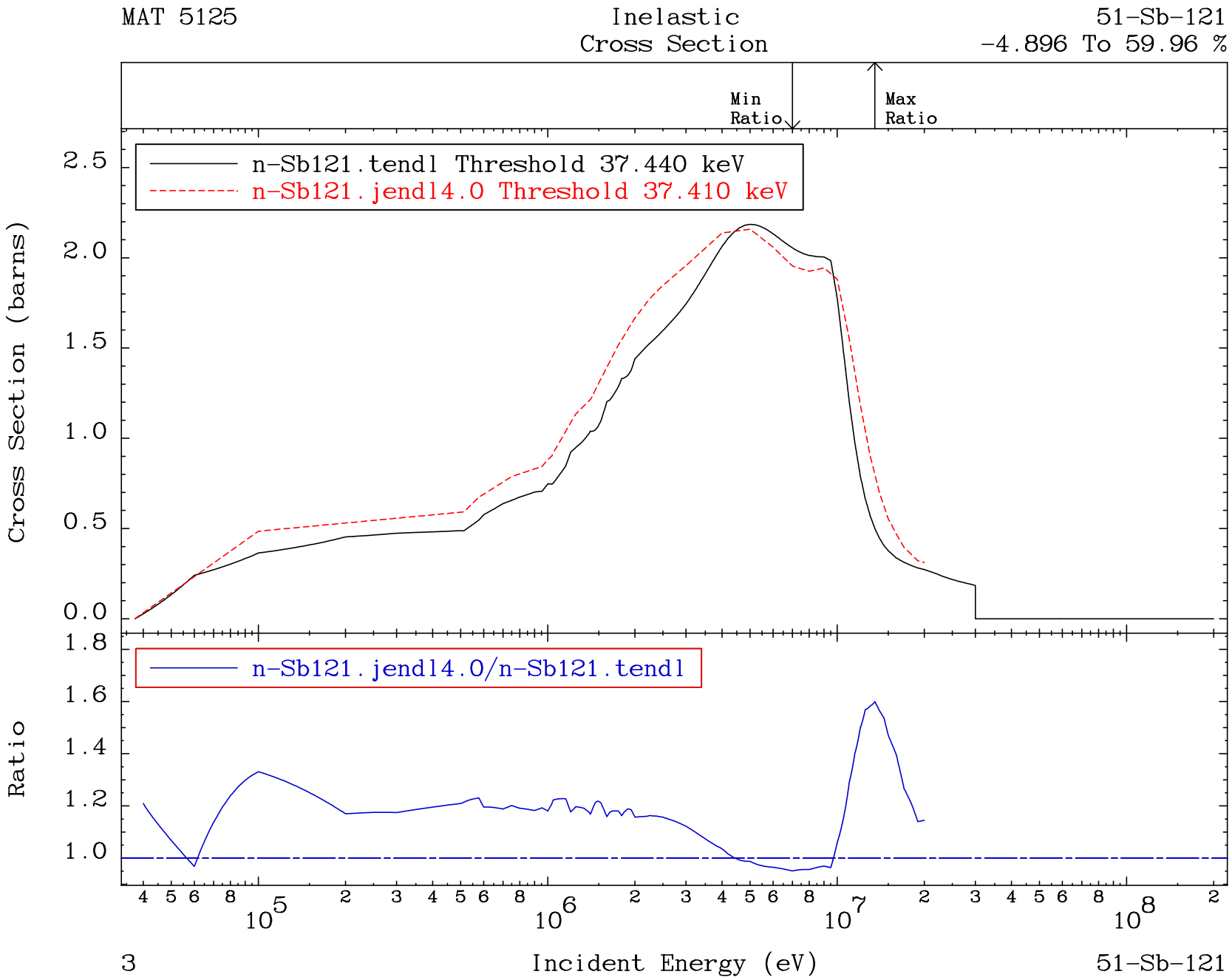
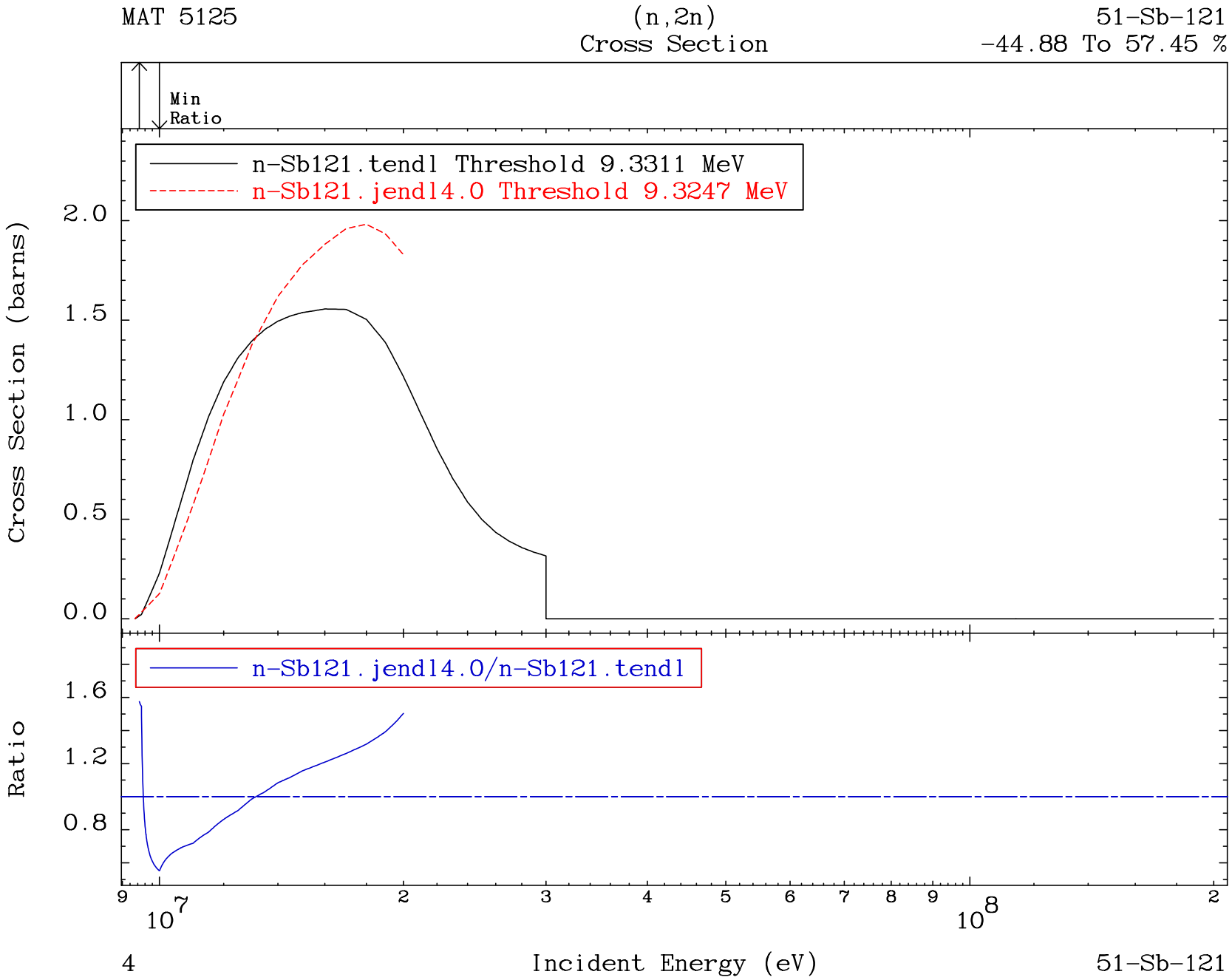
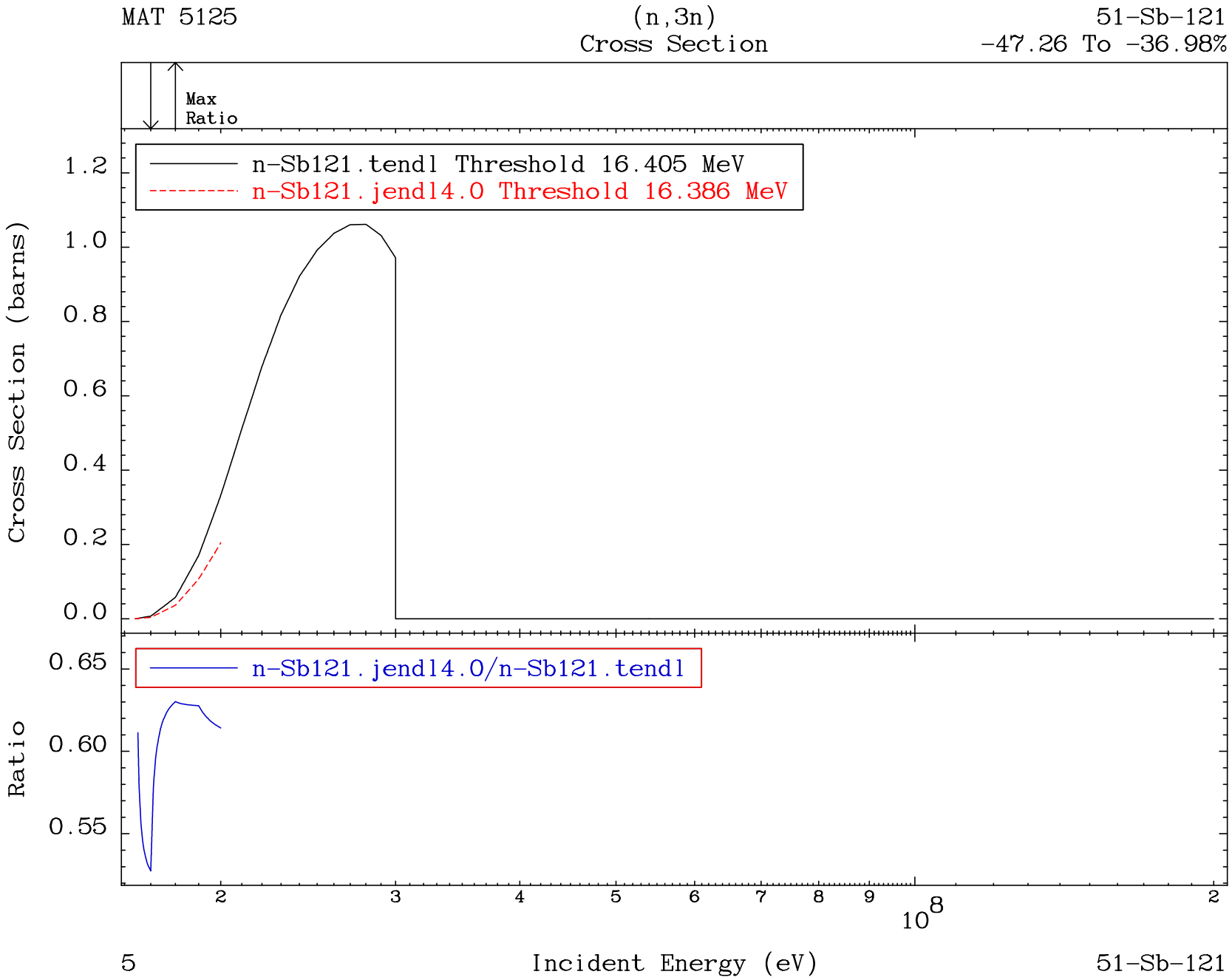
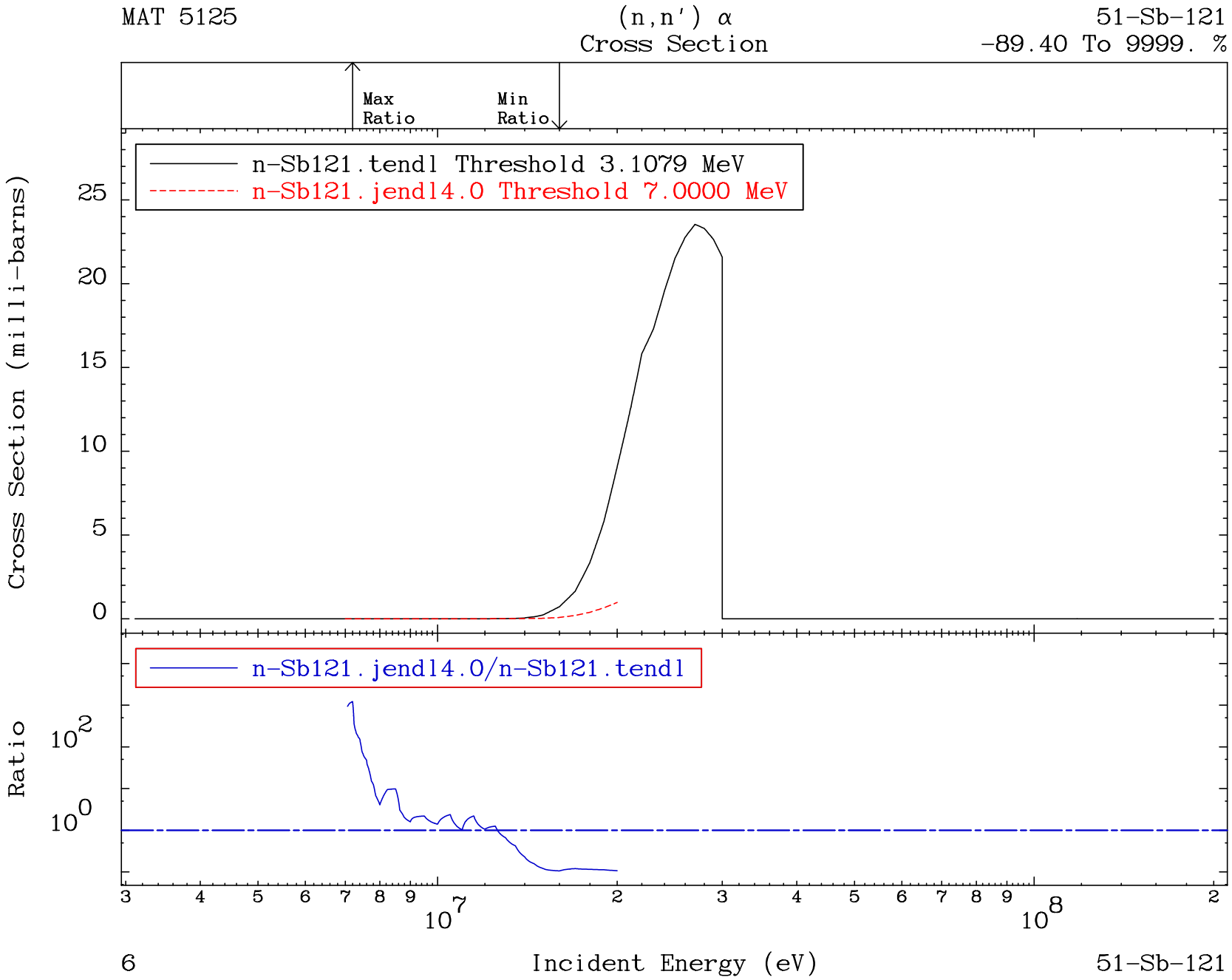

MAT 5125
Total
Cross Section
51-Sb-121
-93.61 To 729.2 %
Max
Ratio
Min
Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
1
51-Sb-121

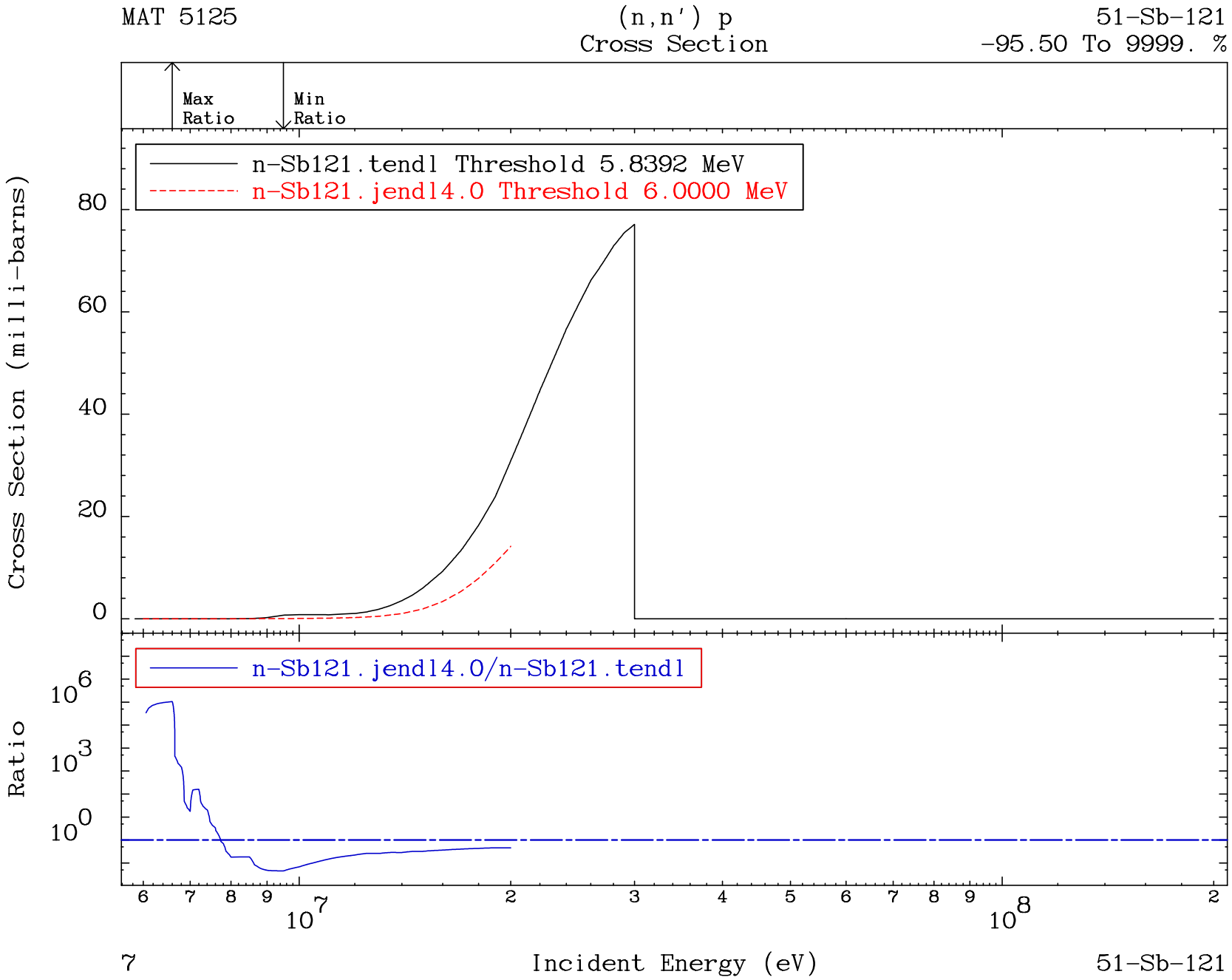

MAT 5125
Elastic
Cross Section
51-Sb-121
-94.71 To 739.7 %
Max
Ratio
Min
Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
2
51-Sb-121

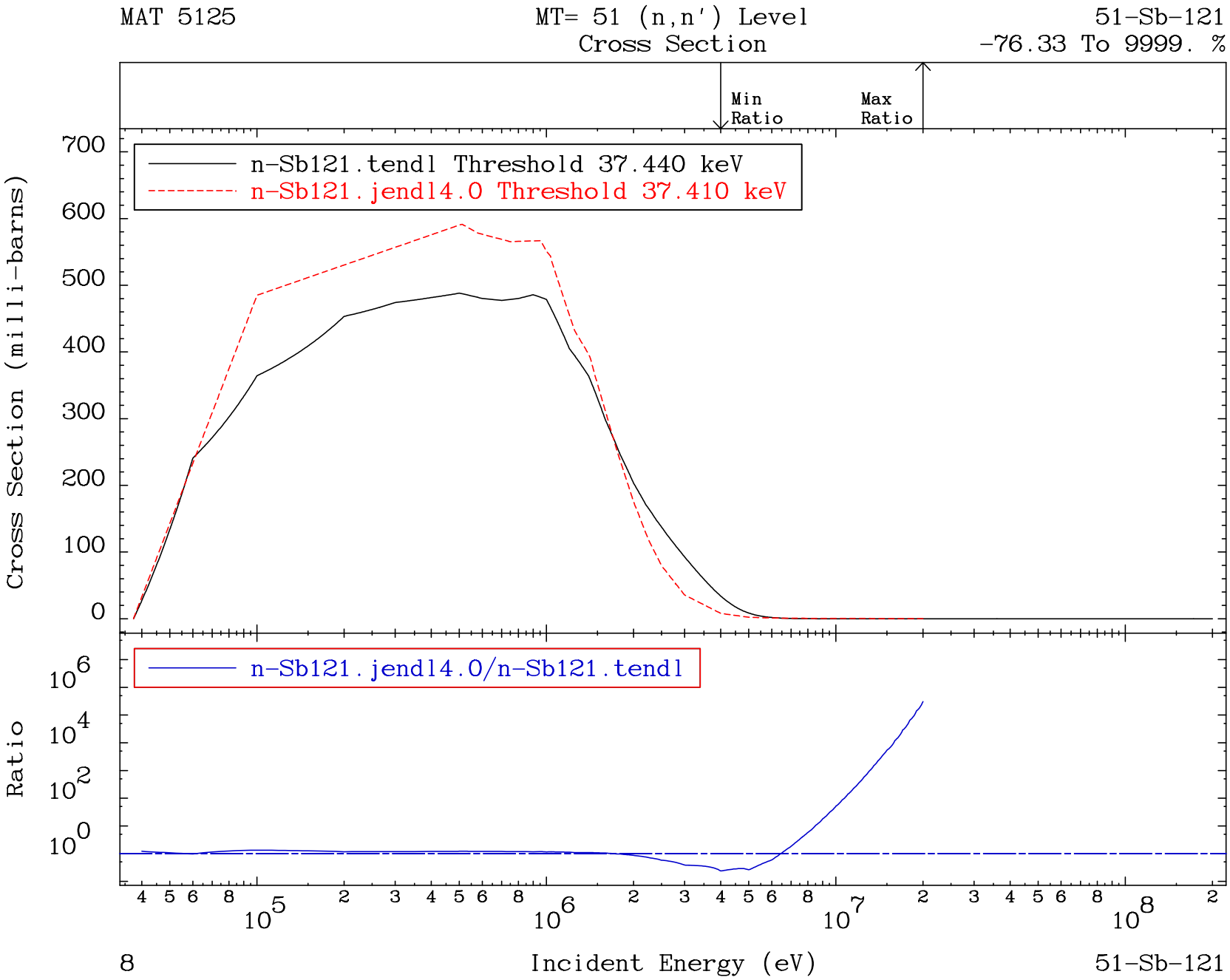

MAT 5125
Inelastic
Cross Section
51-Sb-121
-4.896 To 59.96 %
Min
Ratio
Max
Ratio
n-Sb121.tendl Threshold 37.440 keV
n-Sb121.jendl4.0 Threshold 37.410 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
1.8
1.6
1.4
1.2
1.0
4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
3
51-Sb-121

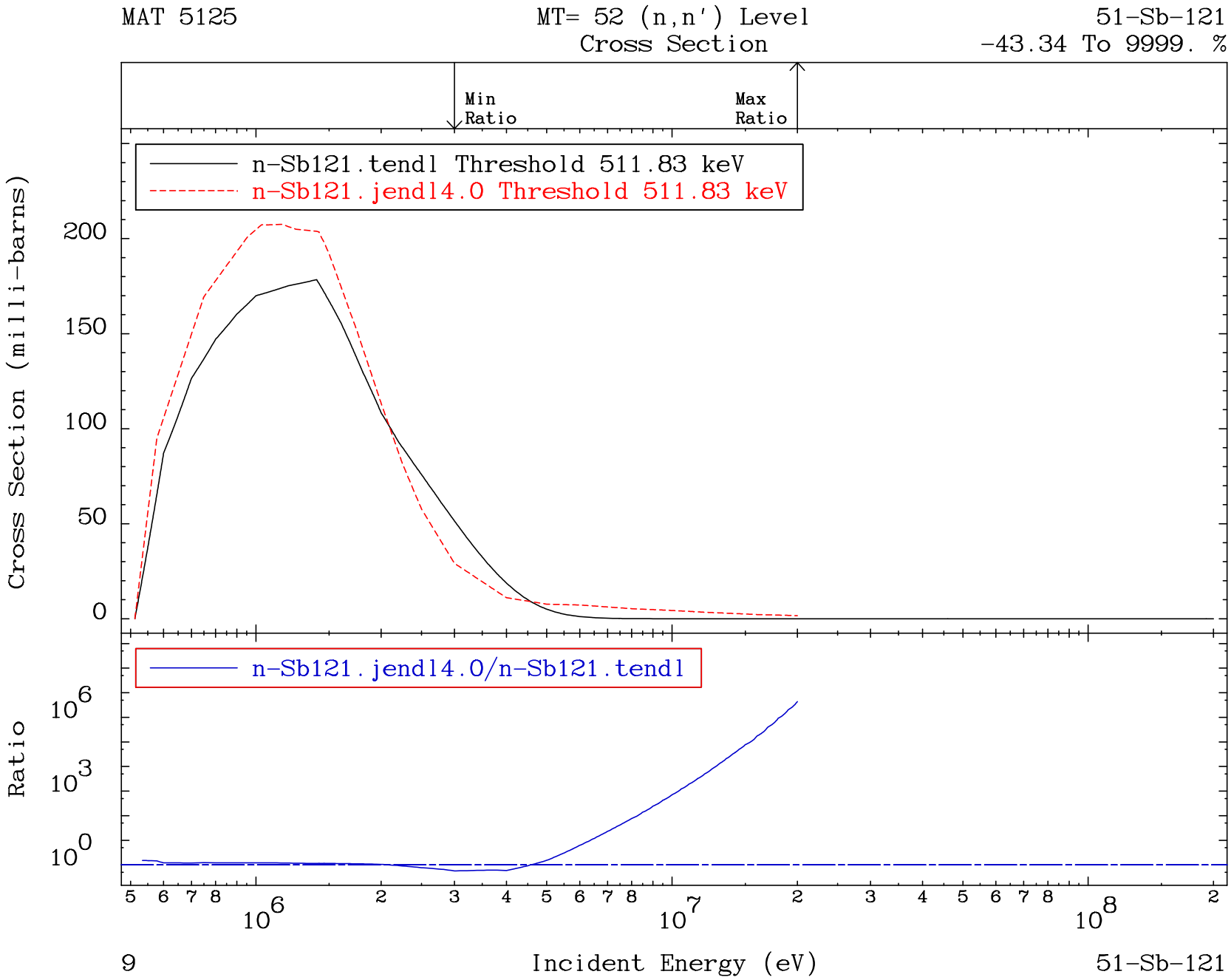

MAT 5125
(n,2n)
Cross Section
51-Sb-121
-44.88 To 57.45 %
Min
Ratio
n-Sb121.tendl Threshold 9.3311 MeV
n-Sb121.jendl4.0 Threshold 9.3247 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
1.6
1.2
0.8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
51-Sb-121

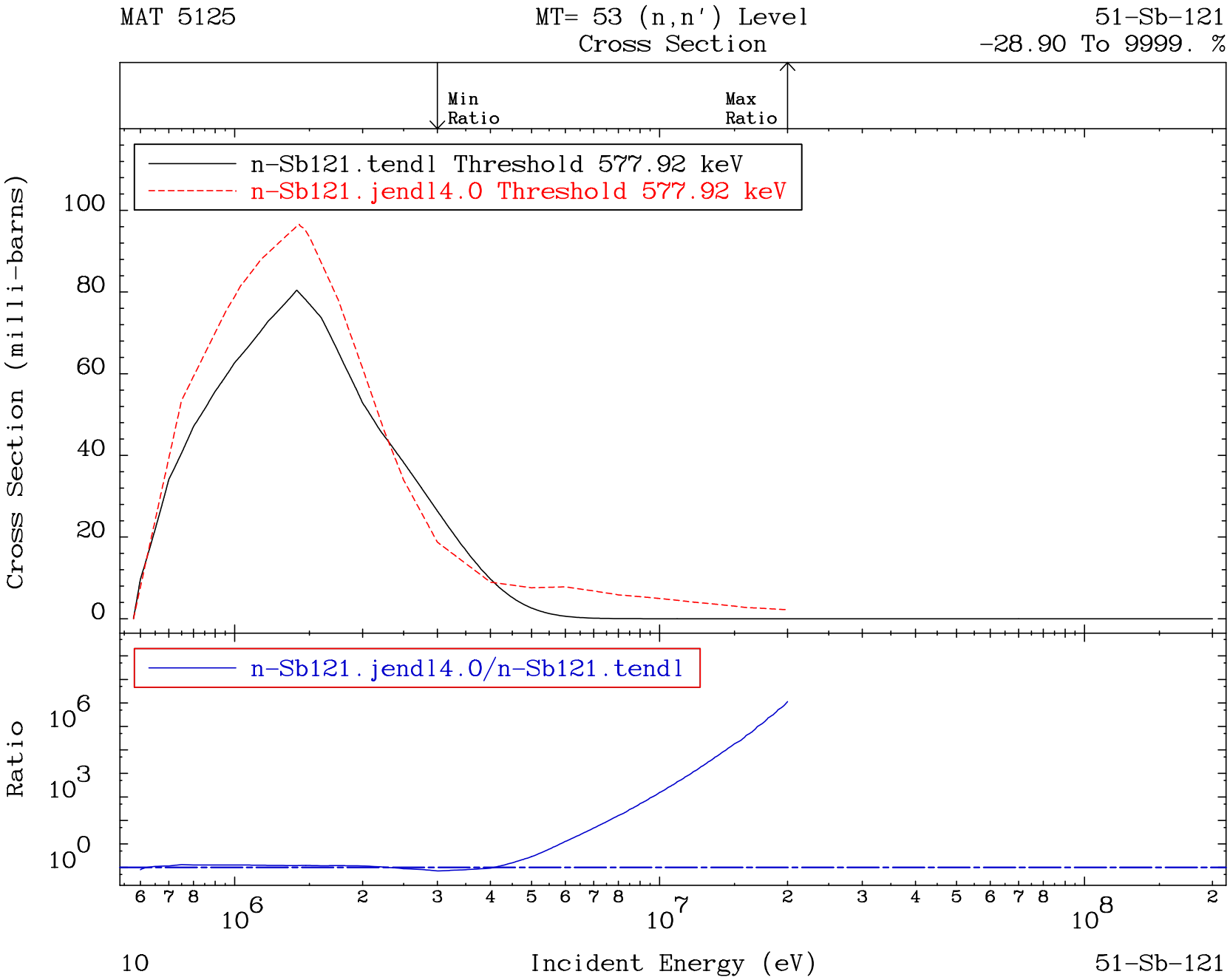

MAT 5125
(n,3n)
Cross Section
51-Sb-121
-47.26 To -36.98%
Max
Ratio
n-Sb121.tendl Threshold 16.405 MeV
n-Sb121.jendl4.0 Threshold 16.386 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
0.65
0.60
0.55
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
51-Sb-121

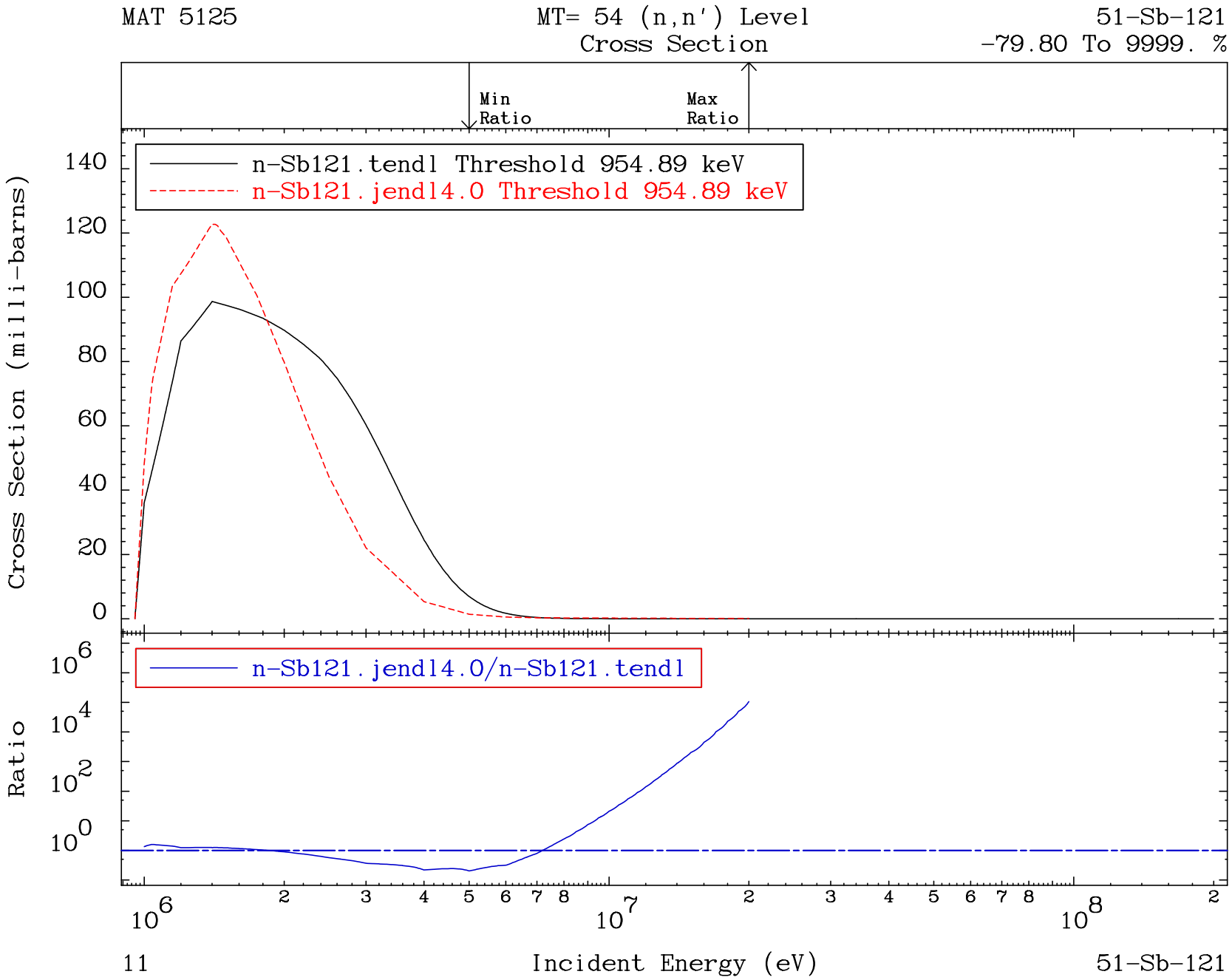

MAT 5125
(n,n') α
Cross Section
51-Sb-121
-89.40 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 3.1079 MeV
n-Sb121.jendl4.0 Threshold 7.0000 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^2
10^0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
6
Incident Energy (eV)
51-Sb-121

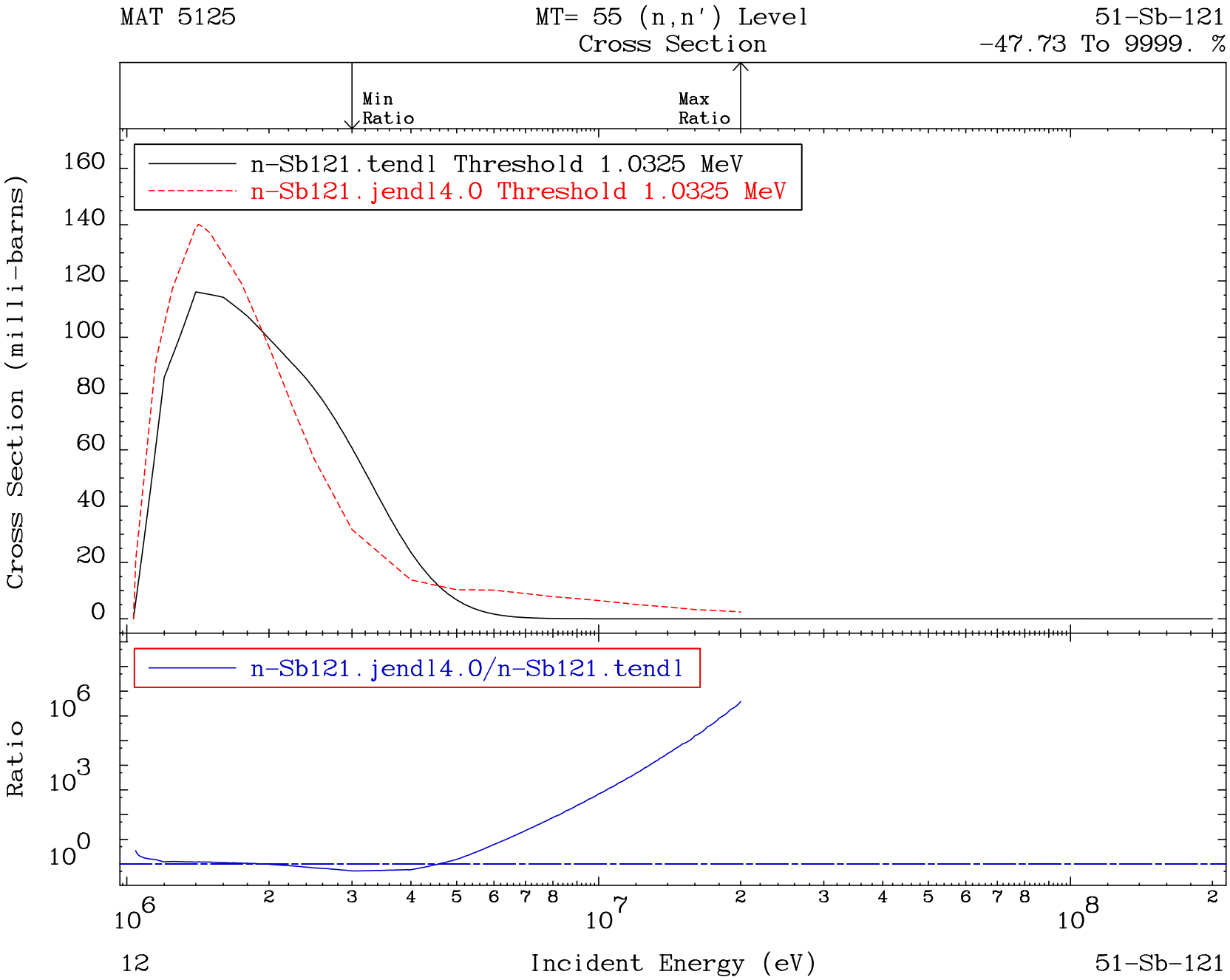

MAT 5125
(n,n') p
Cross Section
51-Sb-121
-95.50 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 5.8392 MeV
n-Sb121.jendl4.0 Threshold 6.0000 MeV
Cross Section (milli-barns)
0
20
40
60
80
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^3
10^0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
7
51-Sb-121

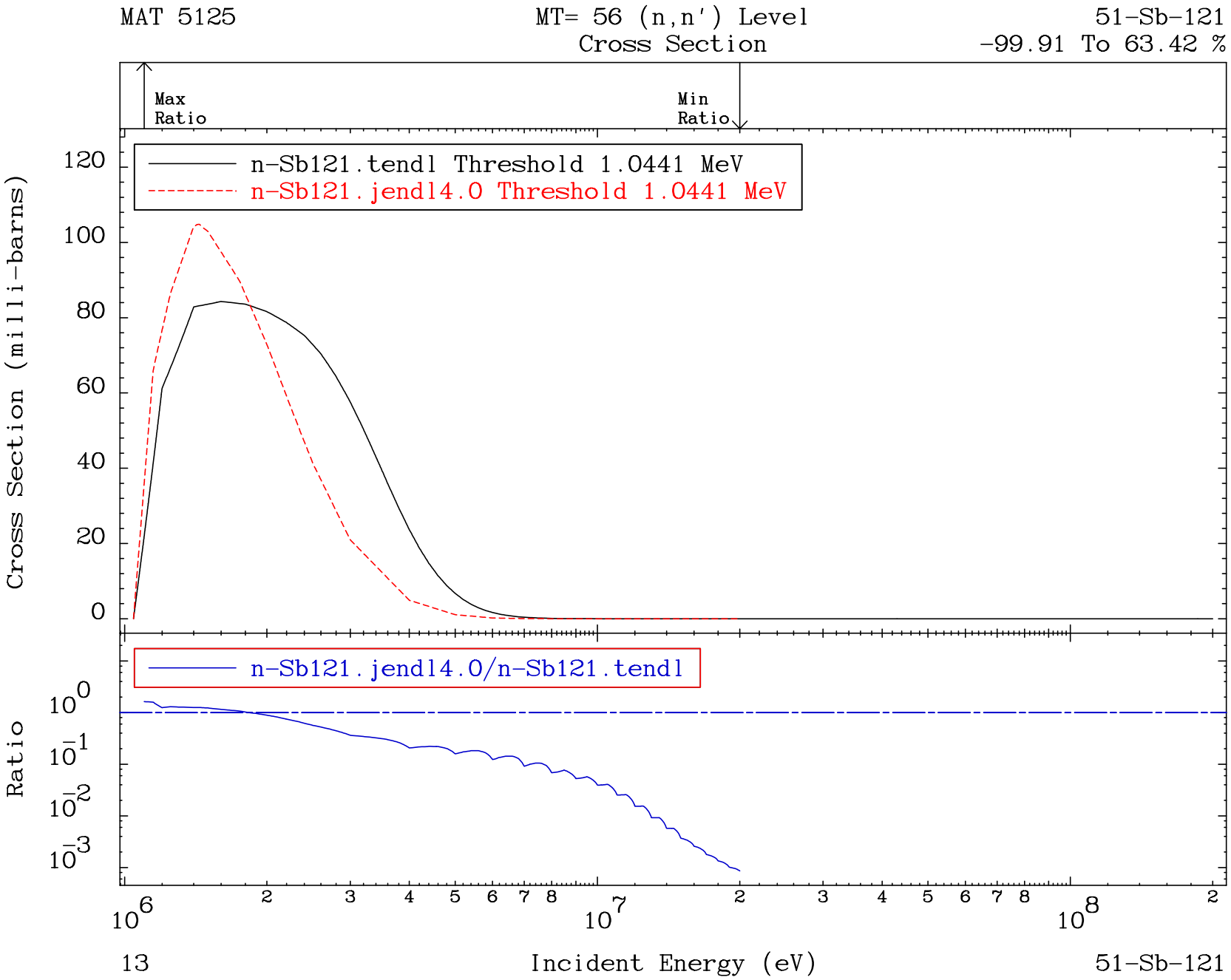

MAT 5125
MT= 51 (n,n') Level
Cross Section
51-Sb-121
-76.33 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 37.440 keV
n-Sb121.jendl4.0 Threshold 37.410 keV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^4
10^2
10^0
4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
8
Incident Energy (eV)
51-Sb-121

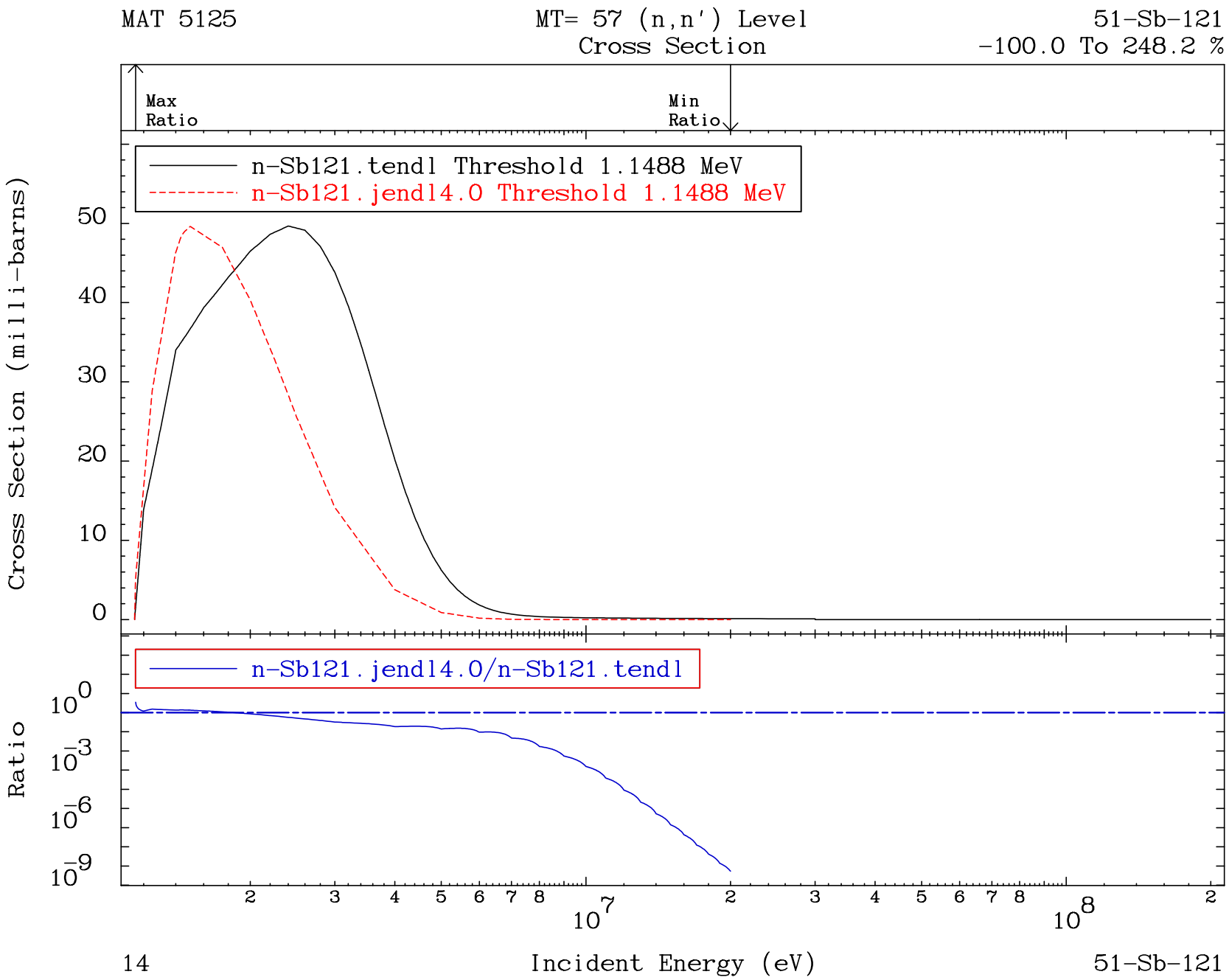

MAT 5125
MT= 52 (n,n') Level
Cross Section
51-Sb-121
-43.34 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 511.83 keV
n-Sb121.jendl4.0 Threshold 511.83 keV
Cross Section (milli-barns)
200
150
100
50
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^3
10^0
5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
9
Incident Energy (eV)
51-Sb-121

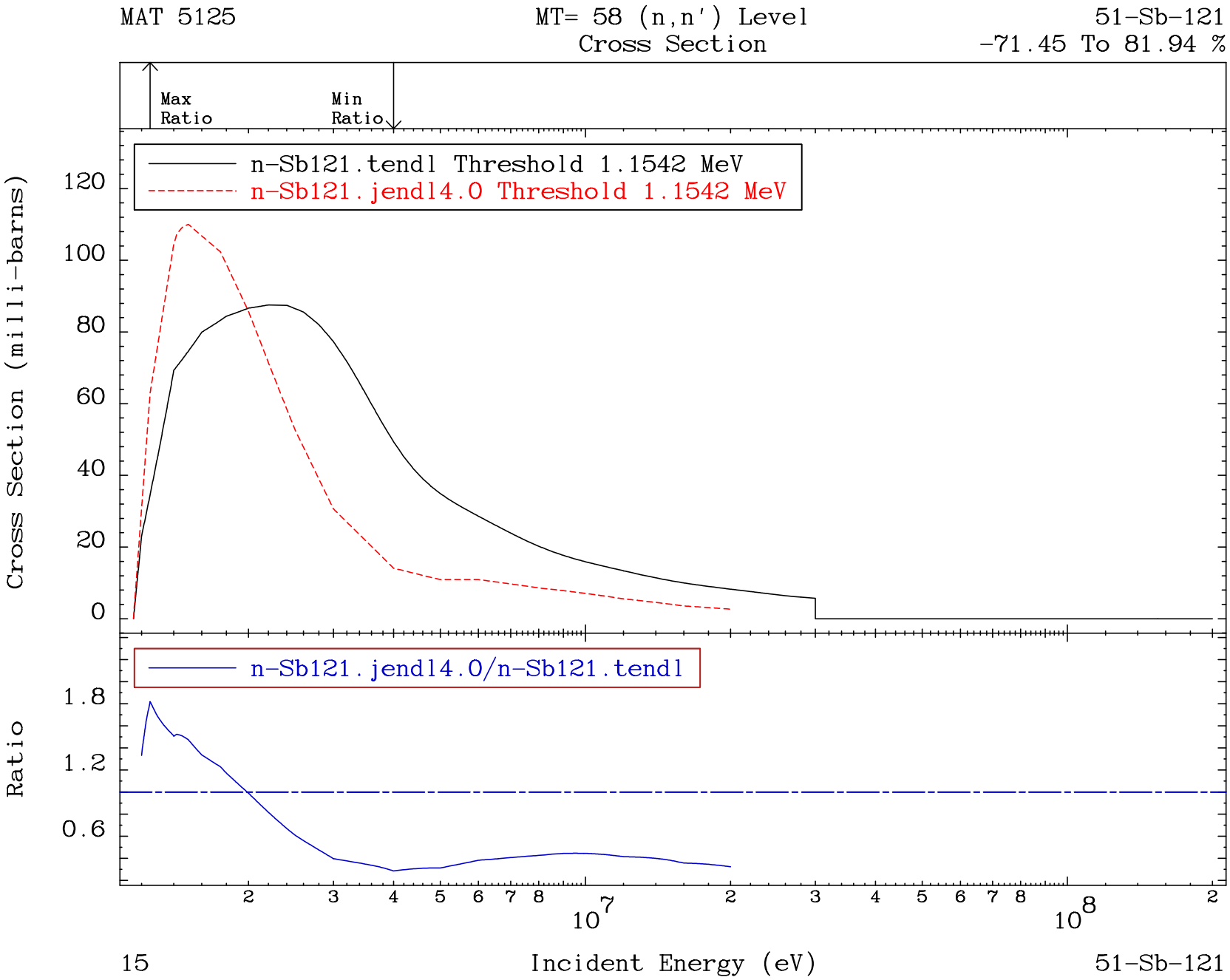

MAT 5125
MT= 53 (n,n') Level
Cross Section
51-Sb-121
-28.90 To 9999. %
Min
Ratio
Max
Ratio
n-Sb121.tendl Threshold 577.92 keV
n-Sb121.jendl4.0 Threshold 577.92 keV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^3
10^0
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
10
Incident Energy (eV)
51-Sb-121

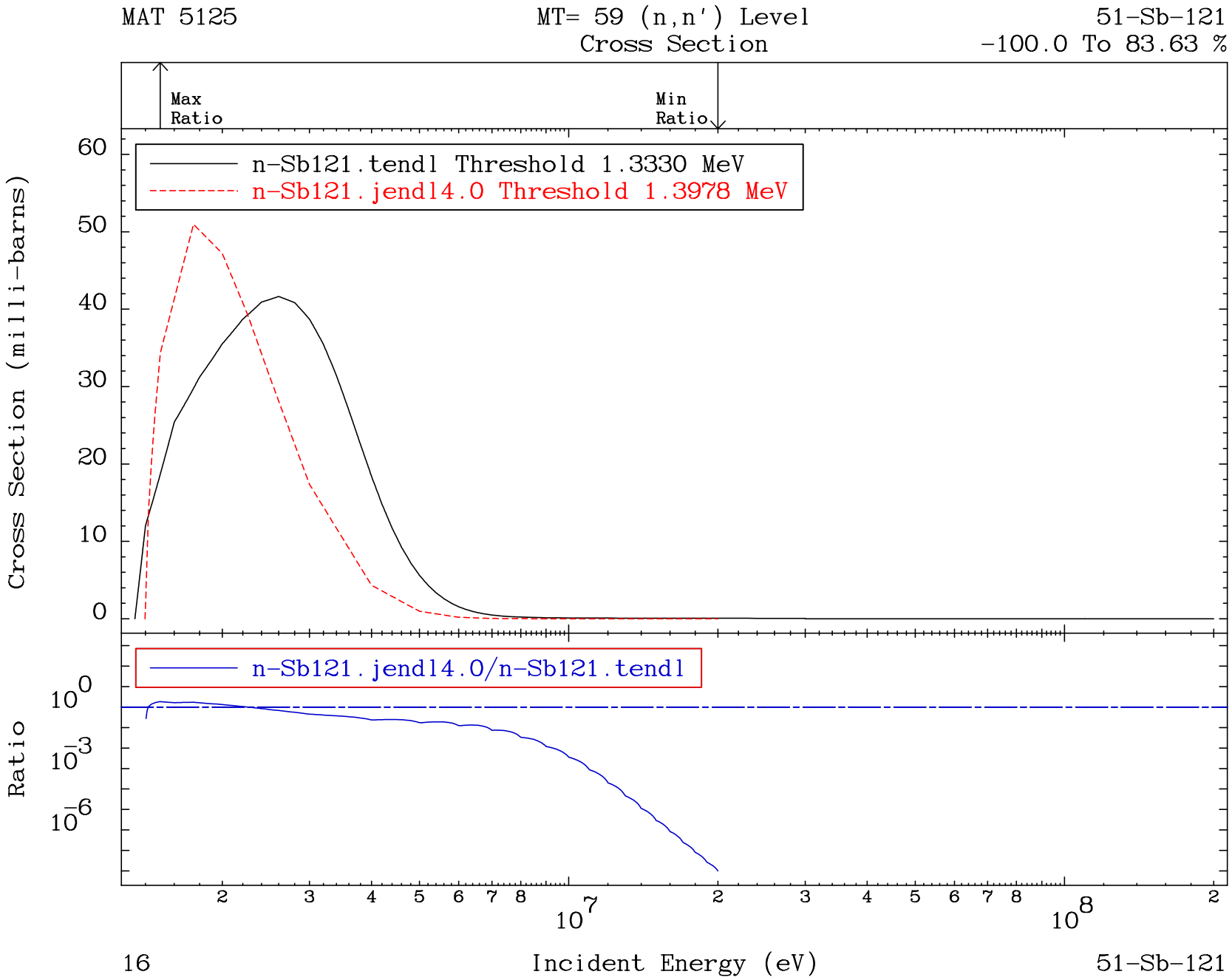

MAT 5125
MT= 54 (n,n') Level
Cross Section
51-Sb-121
-79.80 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 954.89 keV
n-Sb121.jendl4.0 Threshold 954.89 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^4
10^2
10^0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
11
Incident Energy (eV)
51-Sb-121

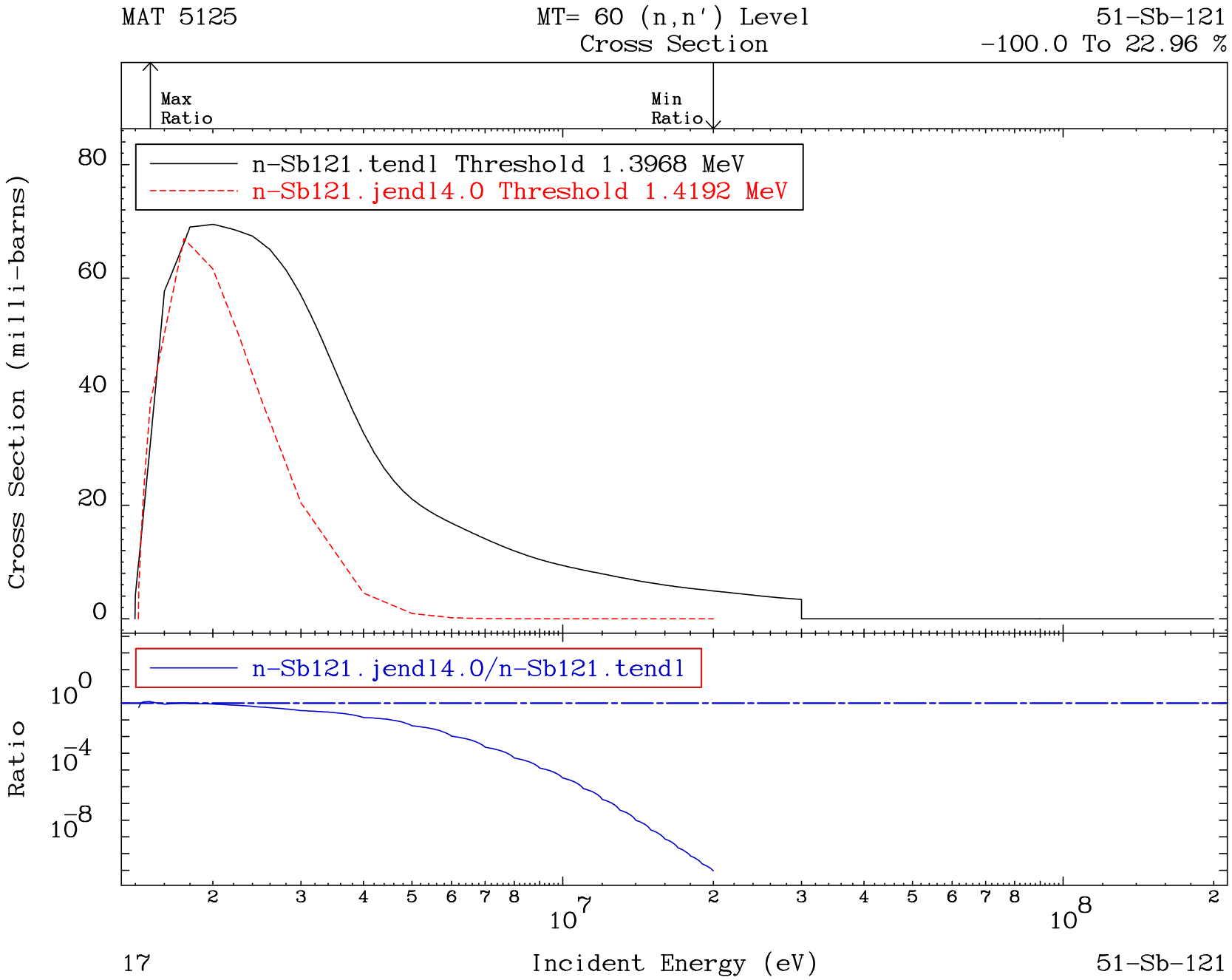

MAT 5125
MT= 55 (n,n') Level
Cross Section
51-Sb-121
-47.73 To 9999. %
Min
Ratio
Max
Ratio
n-Sb121.tendl Threshold 1.0325 MeV
n-Sb121.jendl4.0 Threshold 1.0325 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^3
10^0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
12
Incident Energy (eV)
51-Sb-121

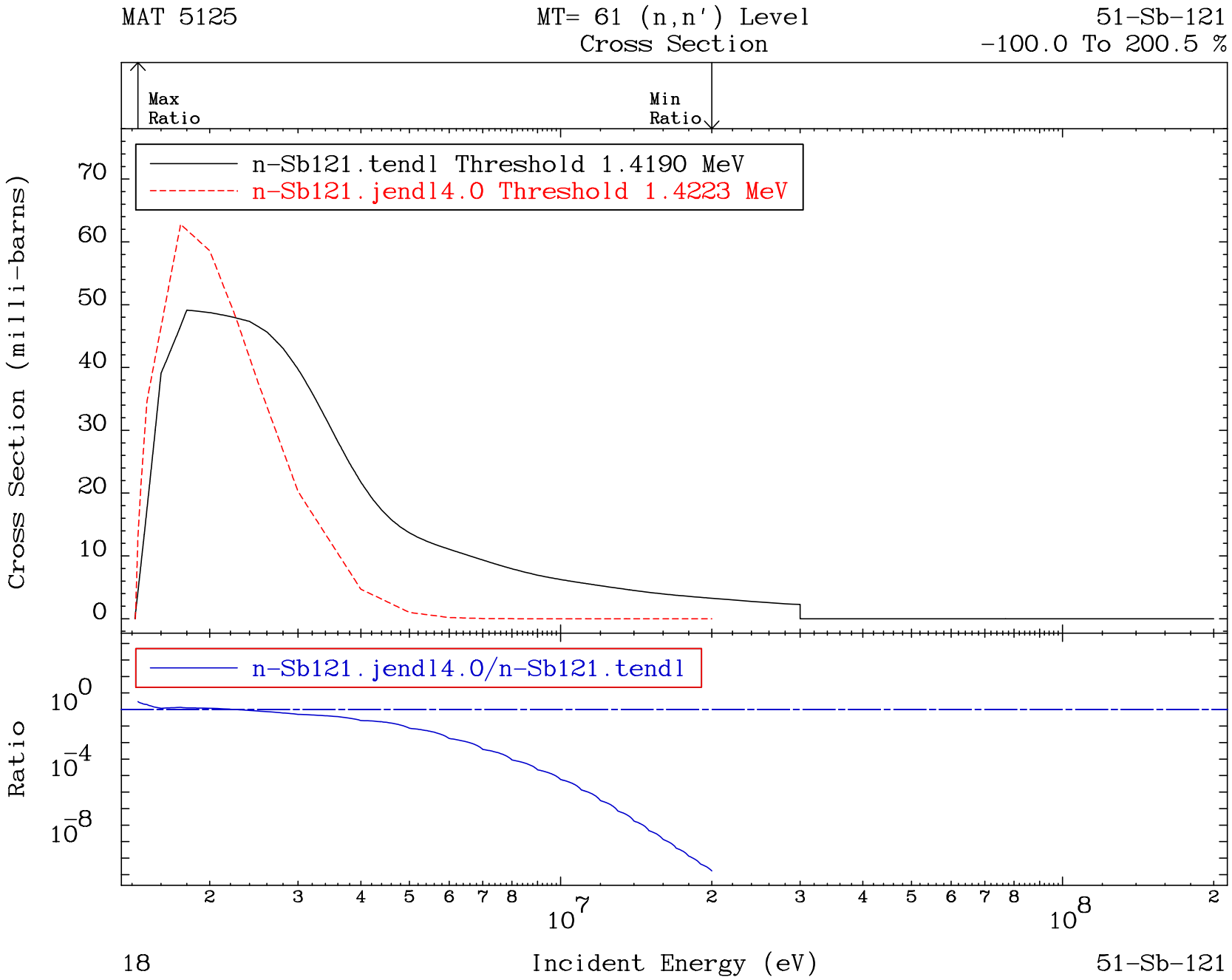

MAT 5125
MT= 56 (n,n') Level
Cross Section
51-Sb-121
-99.91 To 63.42 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.0441 MeV
n-Sb121.jendl4.0 Threshold 1.0441 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-1
10^-2
10^-3
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
51-Sb-121

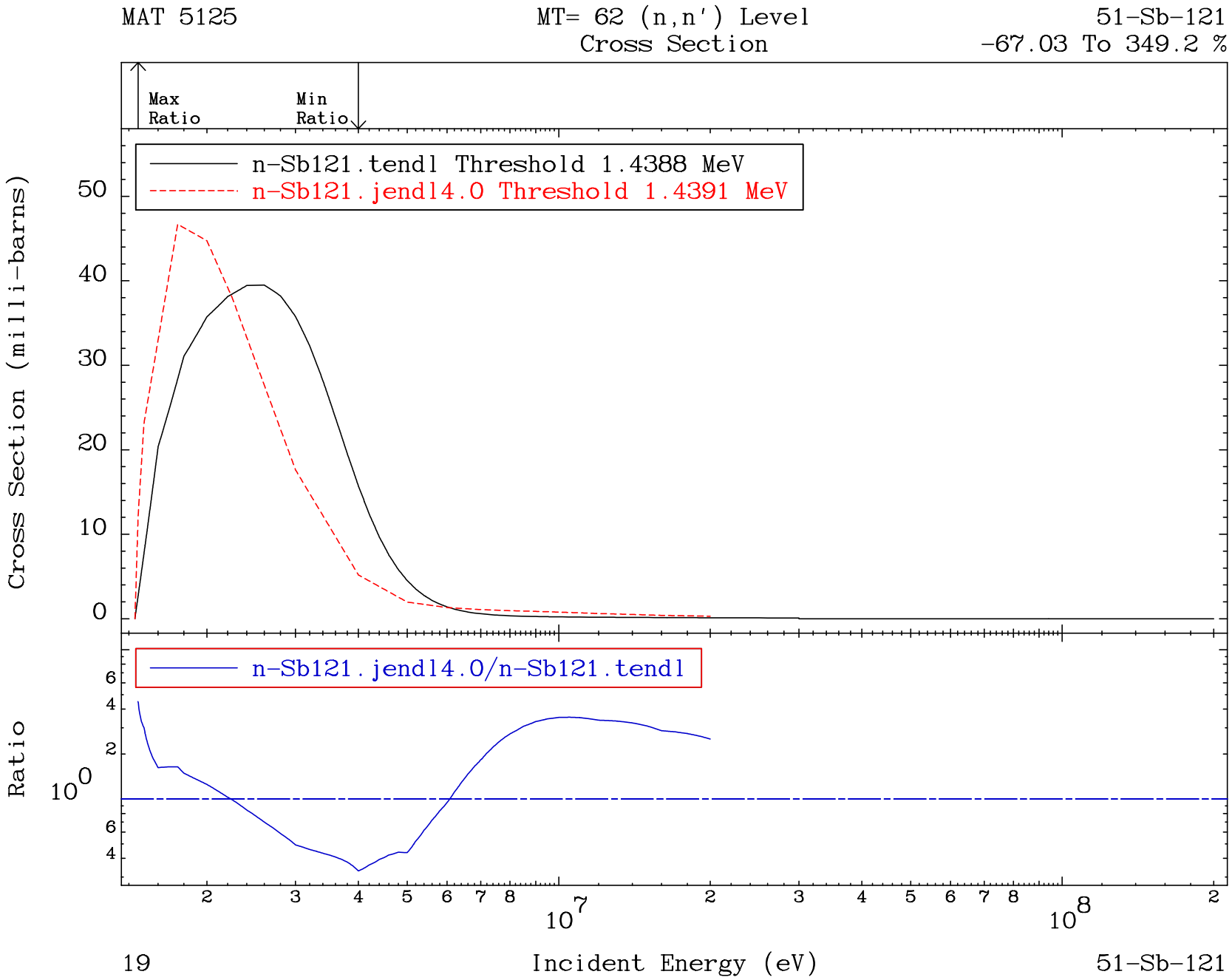

MAT 5125
MT= 57 (n,n') Level
Cross Section
51-Sb-121
-100.0 To 248.2 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.1488 MeV
n-Sb121.jendl4.0 Threshold 1.1488 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
51-Sb-121

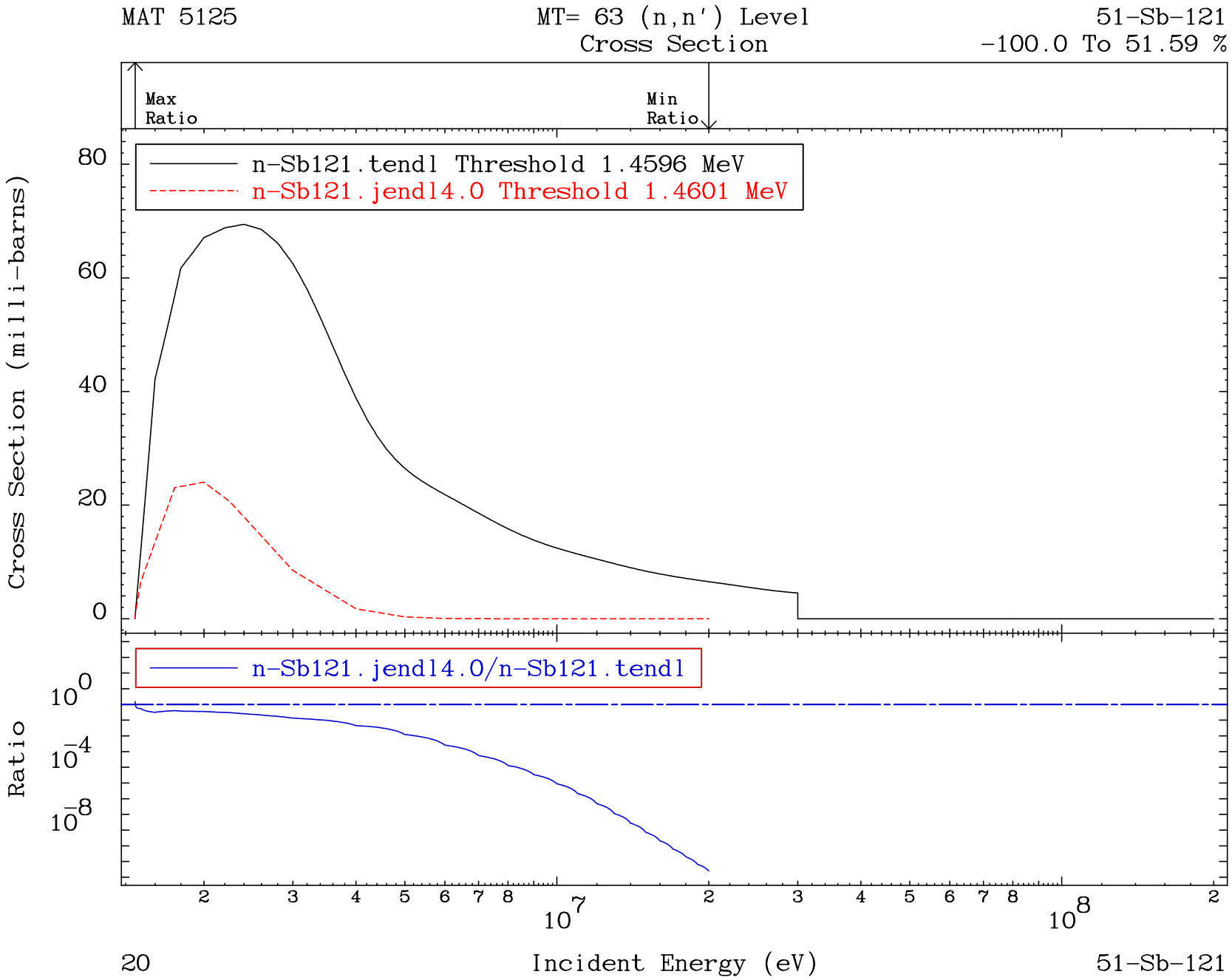

MAT 5125
MT= 58 (n,n') Level
Cross Section
51-Sb-121
-71.45 To 81.94 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.1542 MeV
n-Sb121.jendl4.0 Threshold 1.1542 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
1.8
1.2
0.6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
51-Sb-121

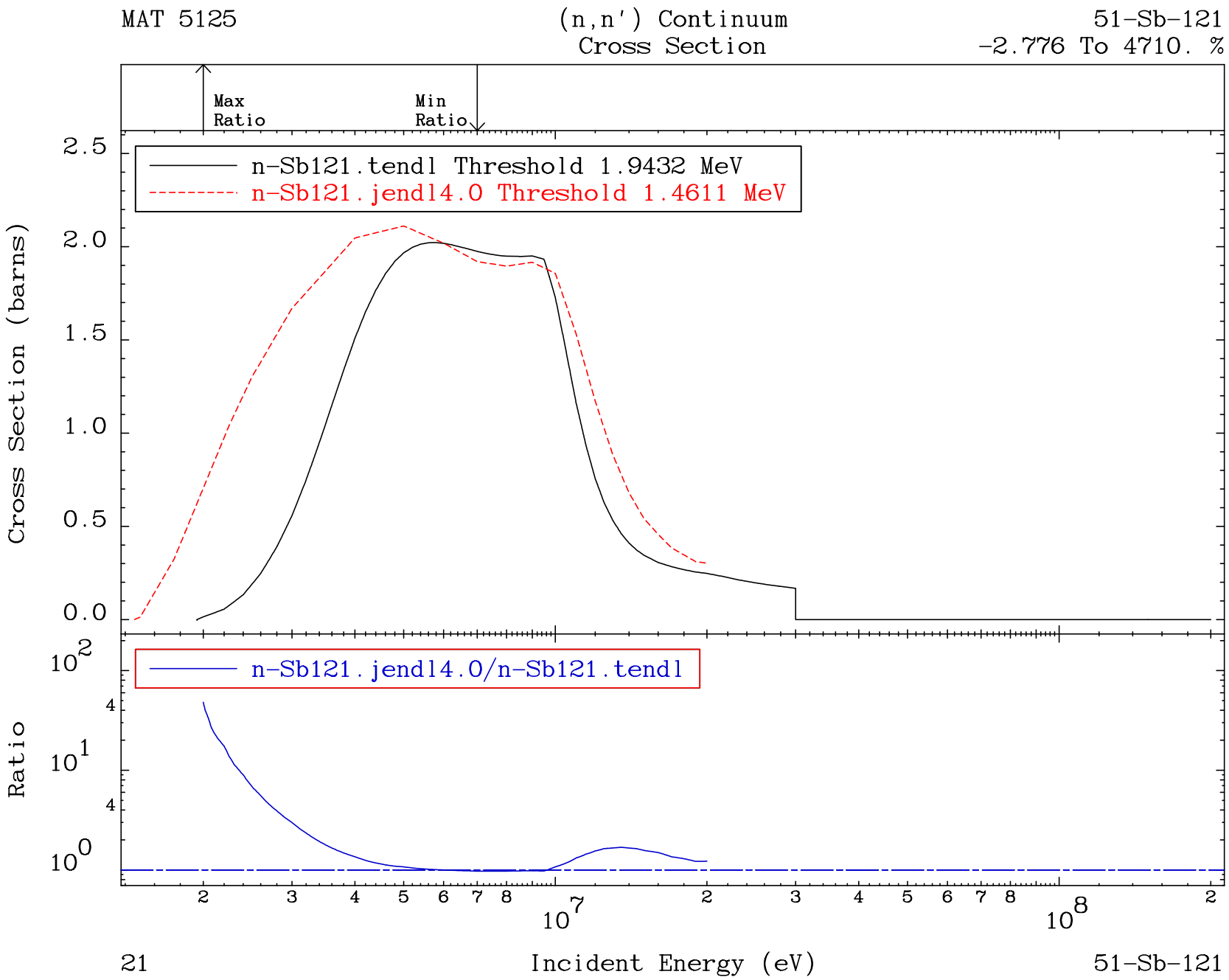

MAT 5125
MT= 59 (n,n') Level
Cross Section
51-Sb-121
-100.0 To 83.63 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.3330 MeV
n-Sb121.jendl4.0 Threshold 1.3978 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-3
10^-6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
51-Sb-121

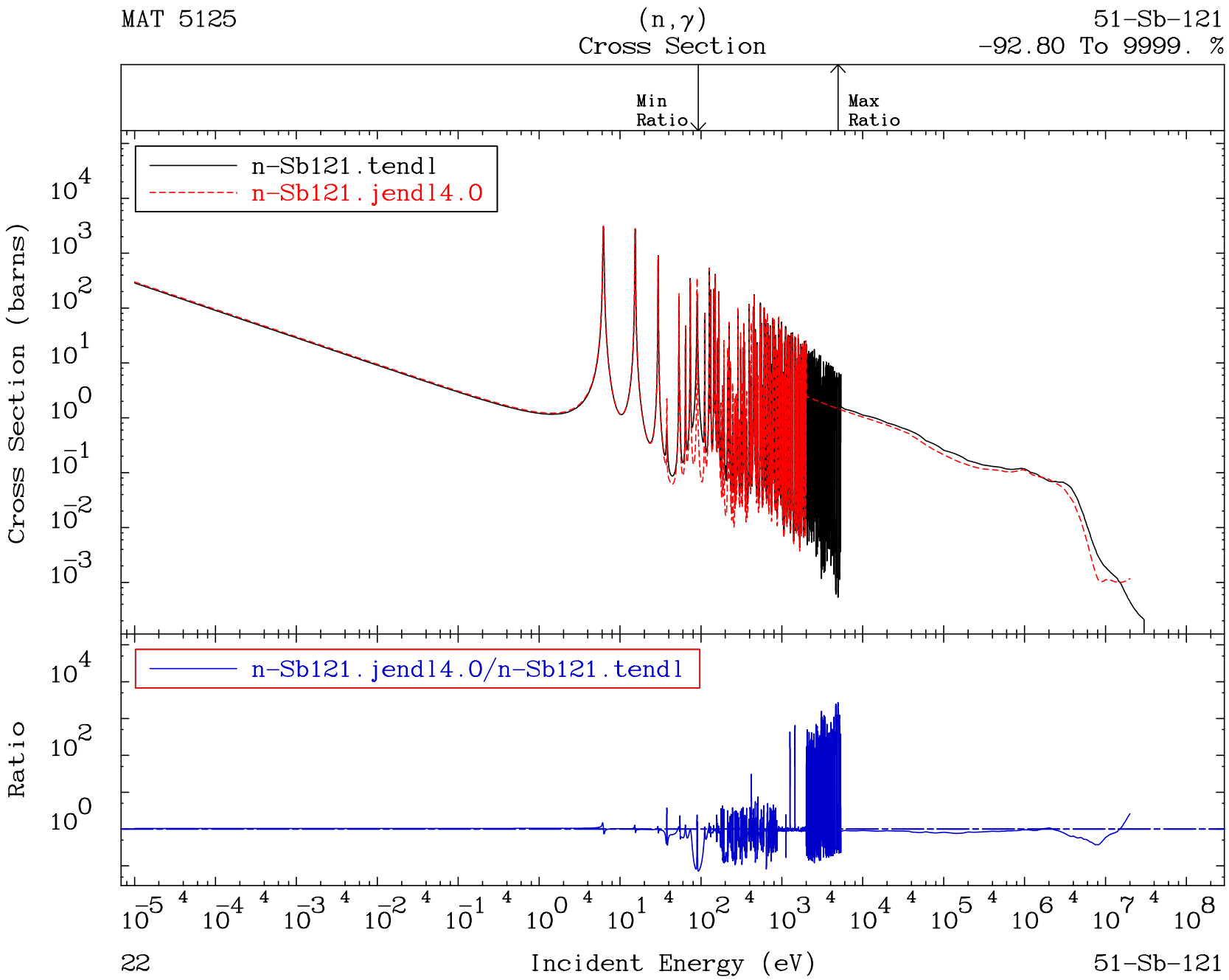

MAT 5125
MT= 60 (n,n') Level
Cross Section
51-Sb-121
-100.0 To 22.96 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.3968 MeV
n-Sb121.jendl4.0 Threshold 1.4192 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-4
10^-8
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
51-Sb-121

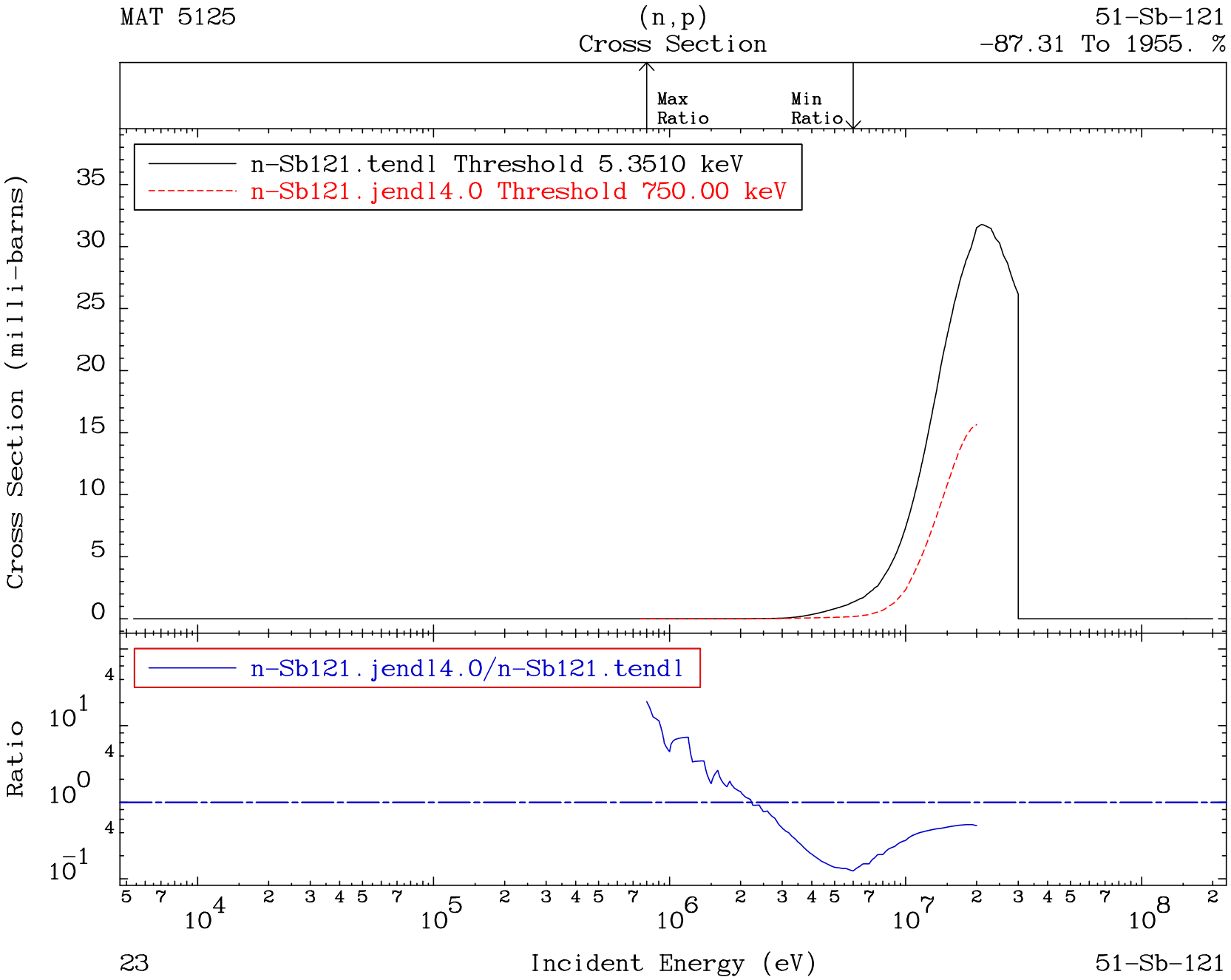

MAT 5125
MT= 61 (n,n') Level
Cross Section
51-Sb-121
-100.0 To 200.5 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.4190 MeV
n-Sb121.jendl4.0 Threshold 1.4223 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-4
10^-8
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
51-Sb-121

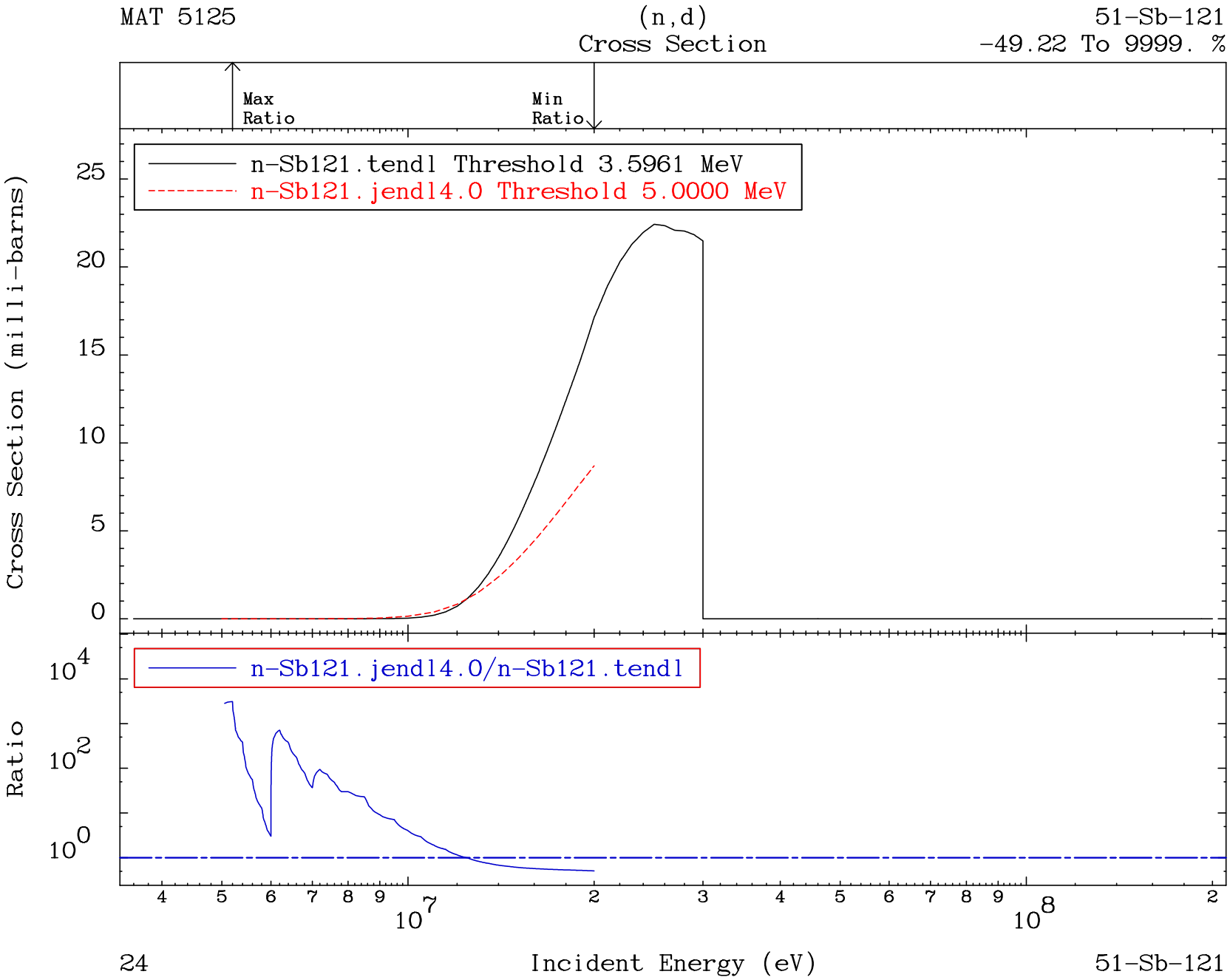

MAT 5125
MT= 62 (n,n') Level
Cross Section
51-Sb-121
-67.03 To 349.2 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.4388 MeV
n-Sb121.jendl4.0 Threshold 1.4391 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
6
4
2
6
4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
19
Incident Energy (eV)
51-Sb-121

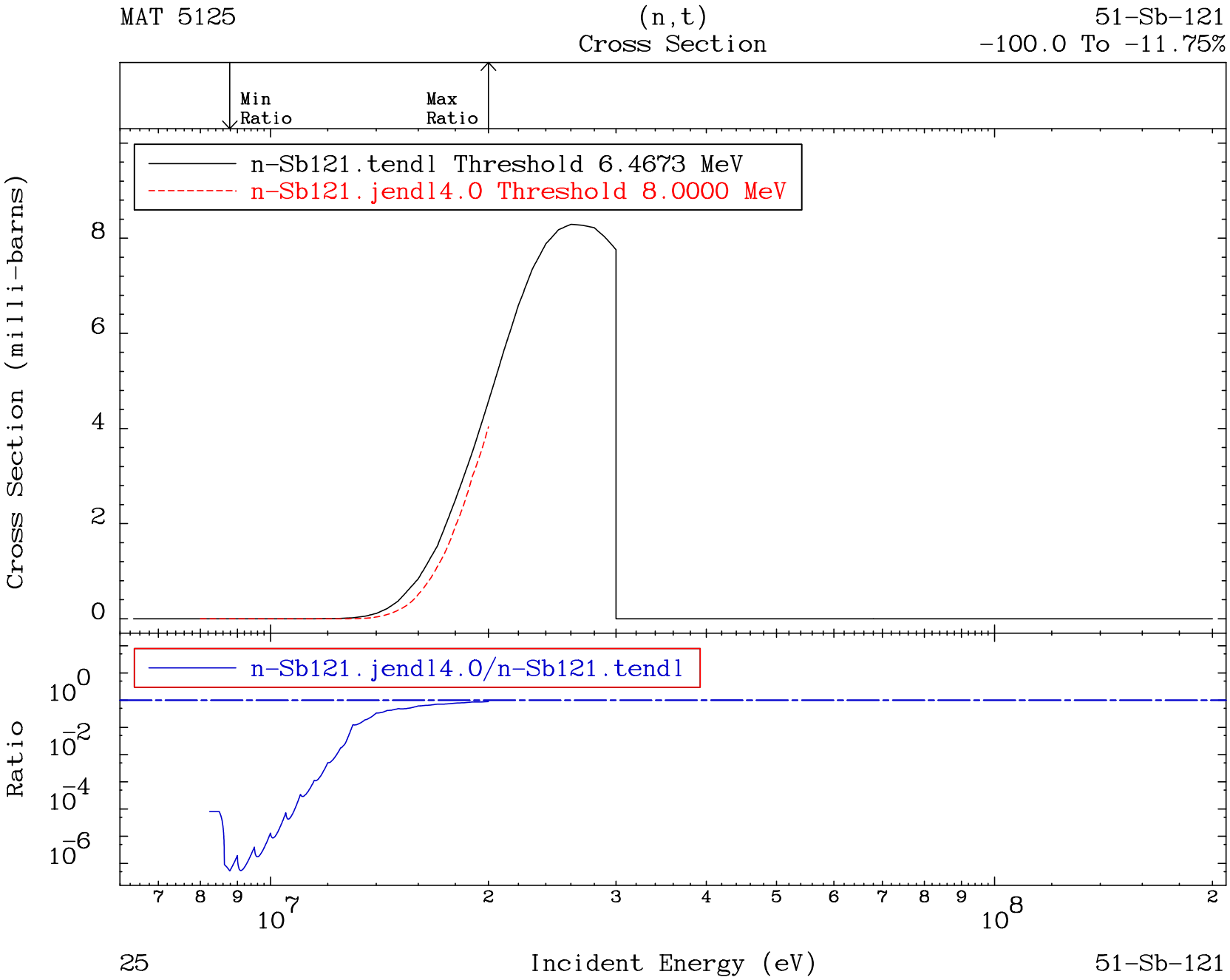

MAT 5125
MT= 63 (n,n') Level
Cross Section
51-Sb-121
-100.0 To 51.59 %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.4596 MeV
n-Sb121.jendl4.0 Threshold 1.4601 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-4
10^-8
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
51-Sb-121

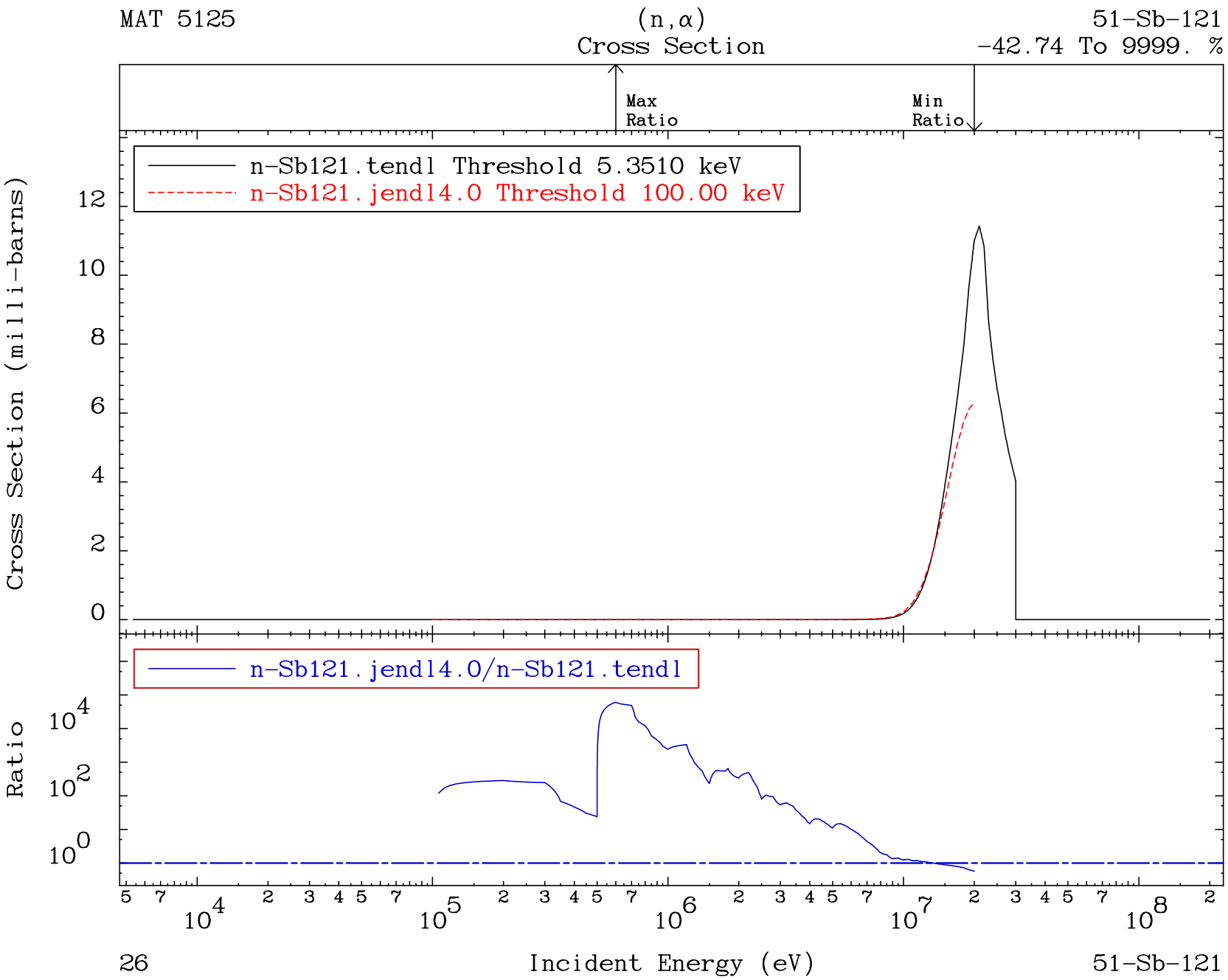

MAT 5125
(n,n') Continuum
Cross Section
51-Sb-121
-2.776 To 4710. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 1.9432 MeV
n-Sb121.jendl4.0 Threshold 1.4611 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^2
4
10^1
4
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
51-Sb-121

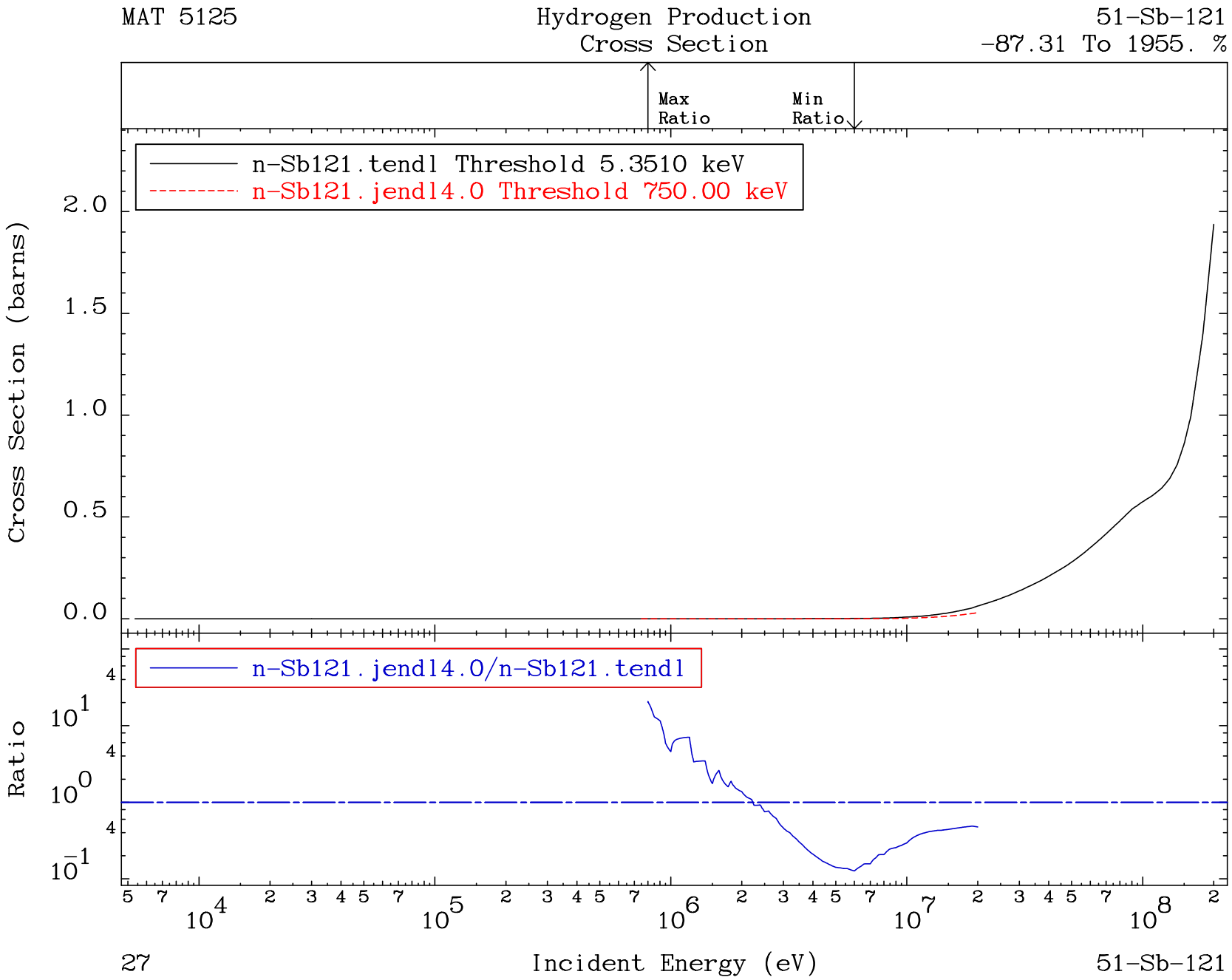

MAT 5125
(n,γ)
Cross Section
51-Sb-121
-92.80 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
22
Incident Energy (eV)
51-Sb-121

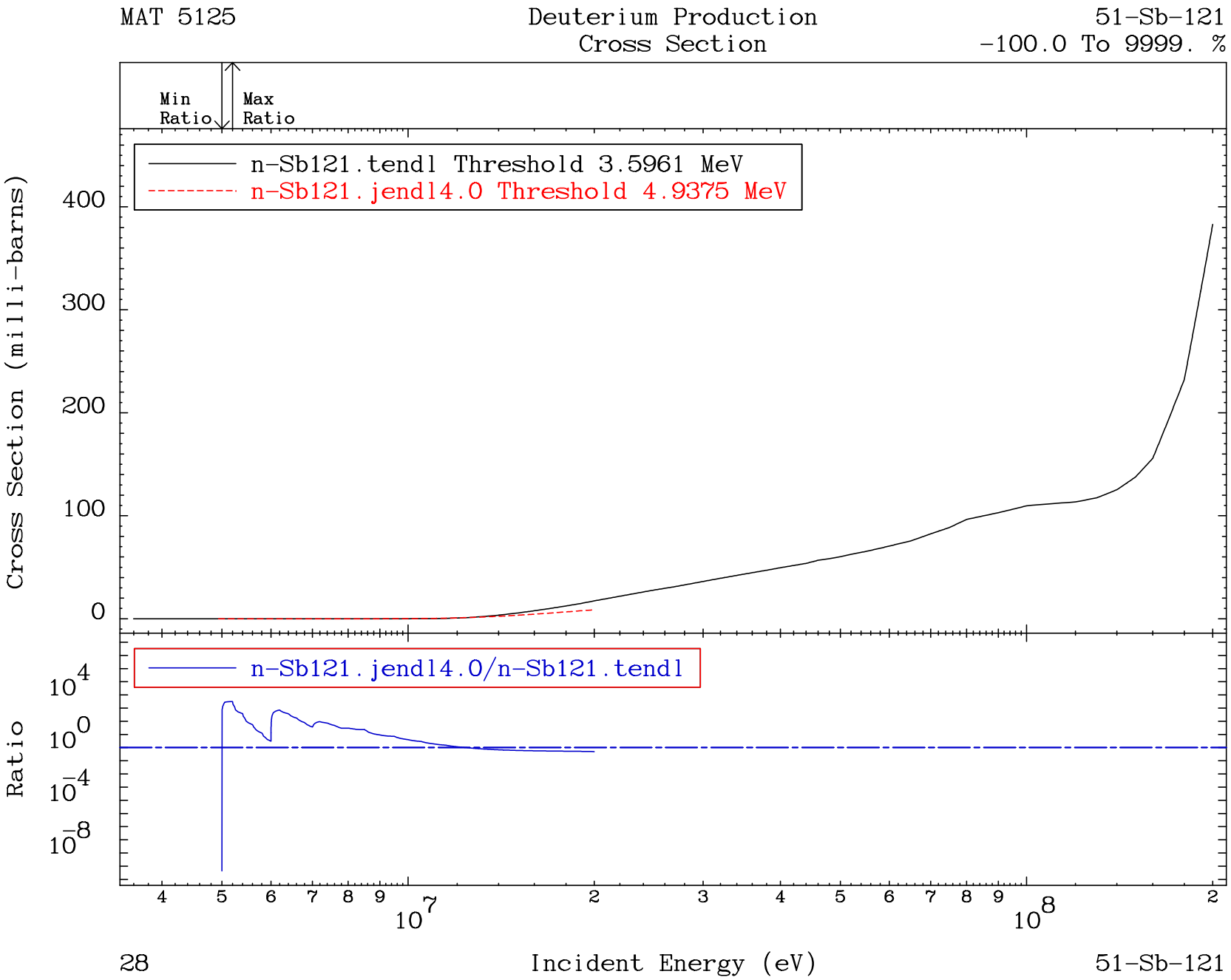

MAT 5125
(n,p)
Cross Section
51-Sb-121
-87.31 To 1955. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 5.3510 keV
n-Sb121.jendl4.0 Threshold 750.00 keV
Cross Section (milli-barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
23
51-Sb-121

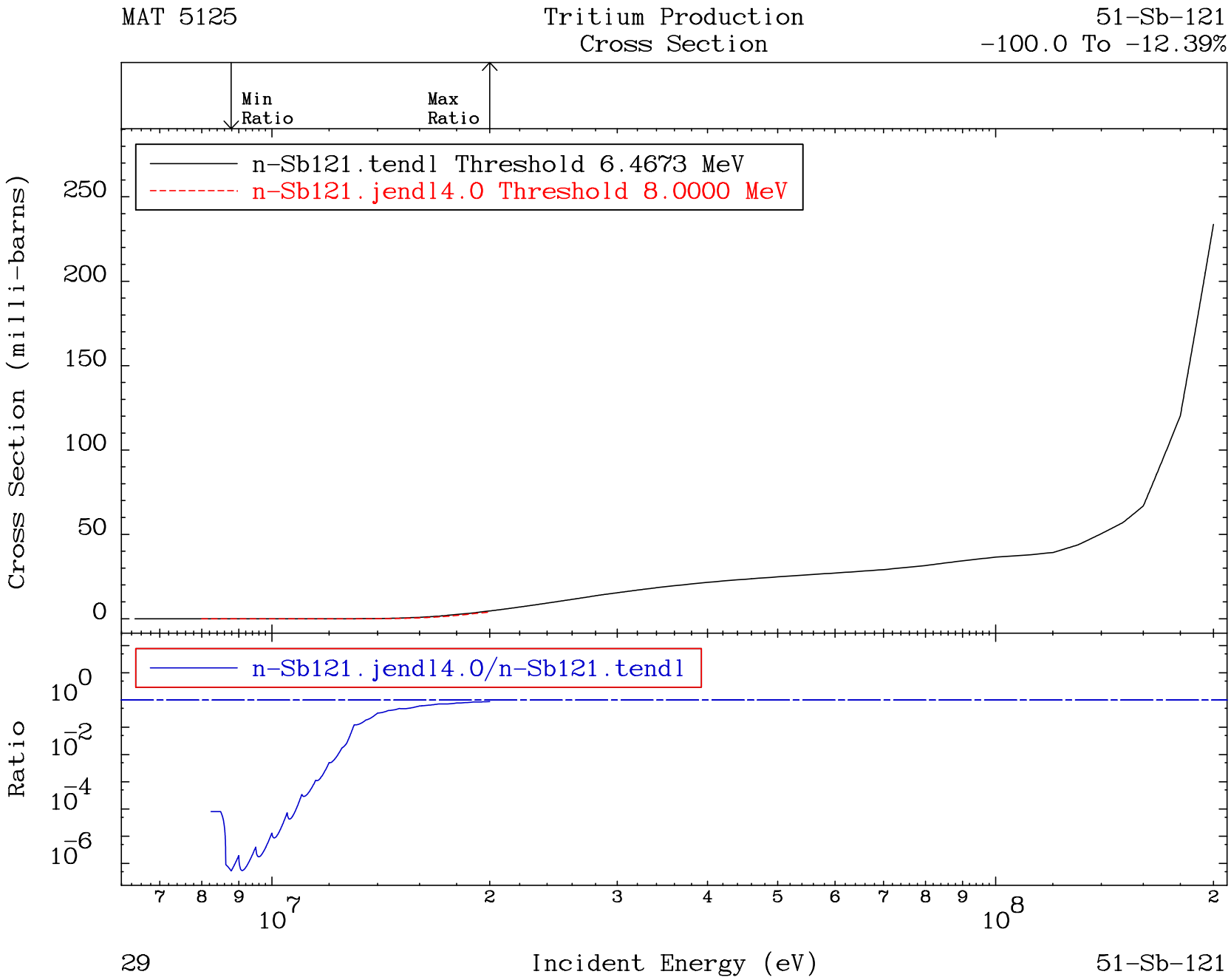

MAT 5125
(n,d)
Cross Section
51-Sb-121
-49.22 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 3.5961 MeV
n-Sb121.jendl4.0 Threshold 5.0000 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^4
10^2
10^0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
51-Sb-121

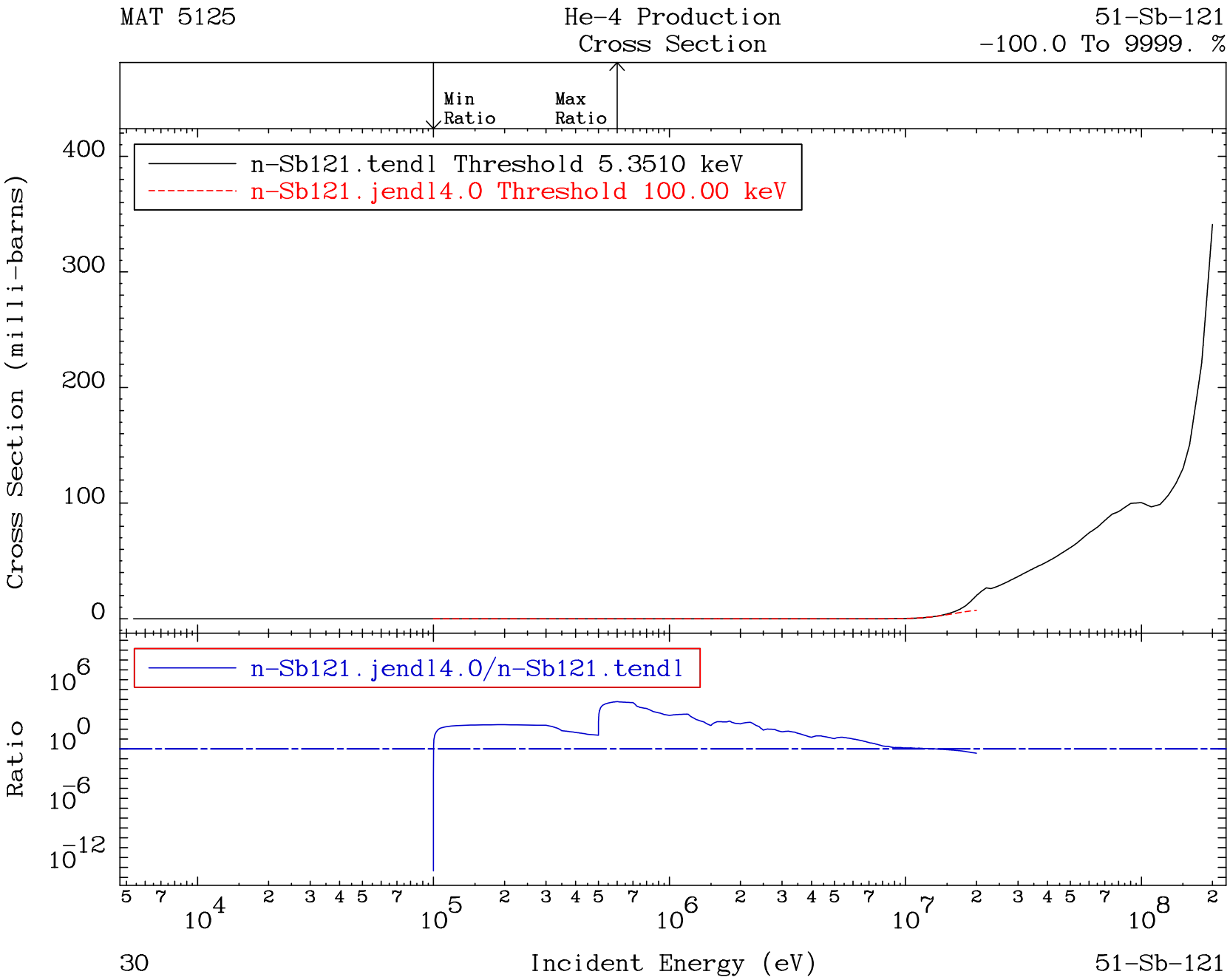

MAT 5125
(n,t)
Cross Section
51-Sb-121
-100.0 To -11.75%
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 6.4673 MeV
n-Sb121.jendl4.0 Threshold 8.0000 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-2
10^-4
10^-6
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
51-Sb-121

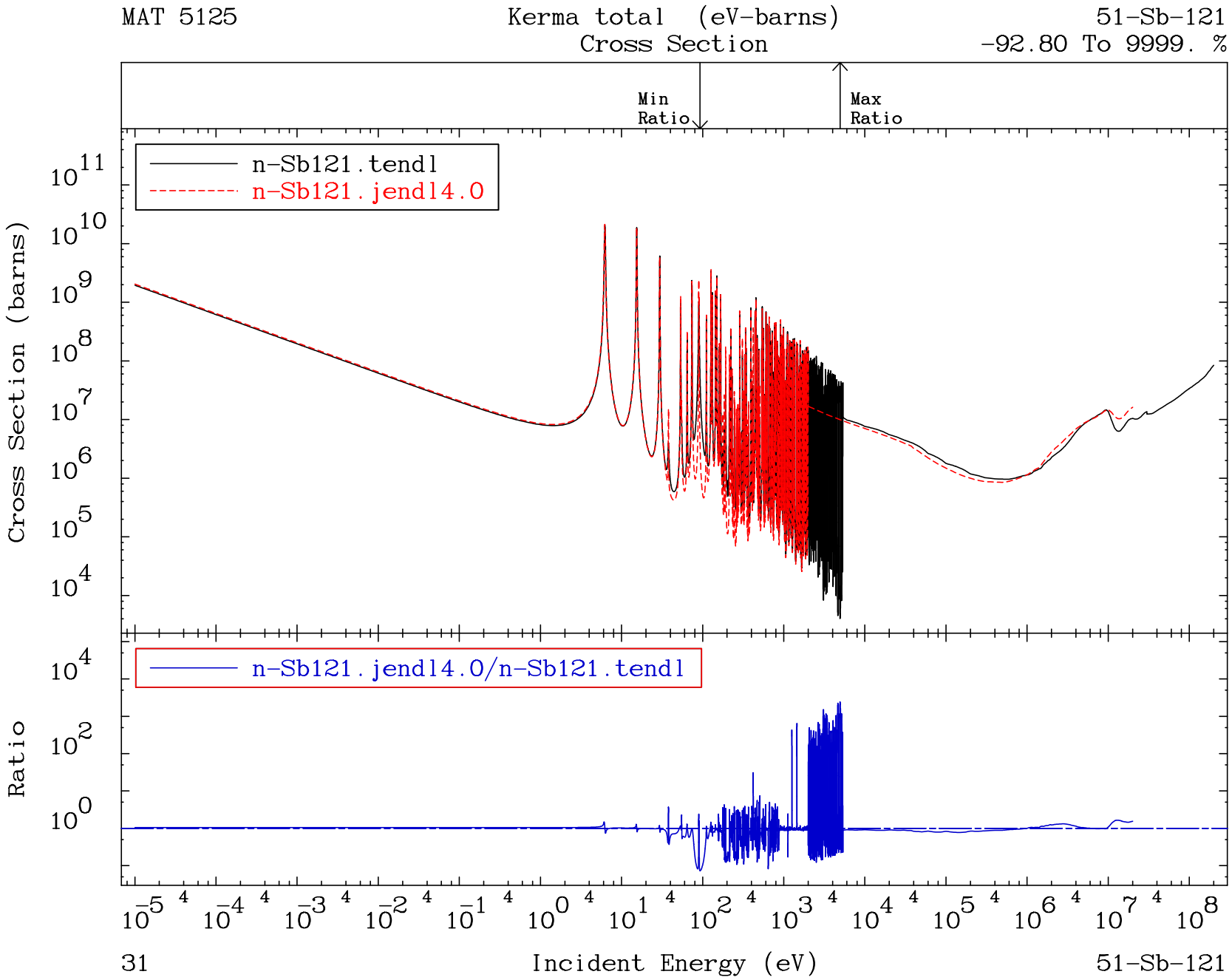

MAT 5125
(n,α)
Cross Section
51-Sb-121
-42.74 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 5.3510 keV
n-Sb121.jendl4.0 Threshold 100.00 keV
Cross Section (milli-barns)
0
2
4
6
8
10
12
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^2
10^4
5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
26
Incident Energy (eV)
51-Sb-121

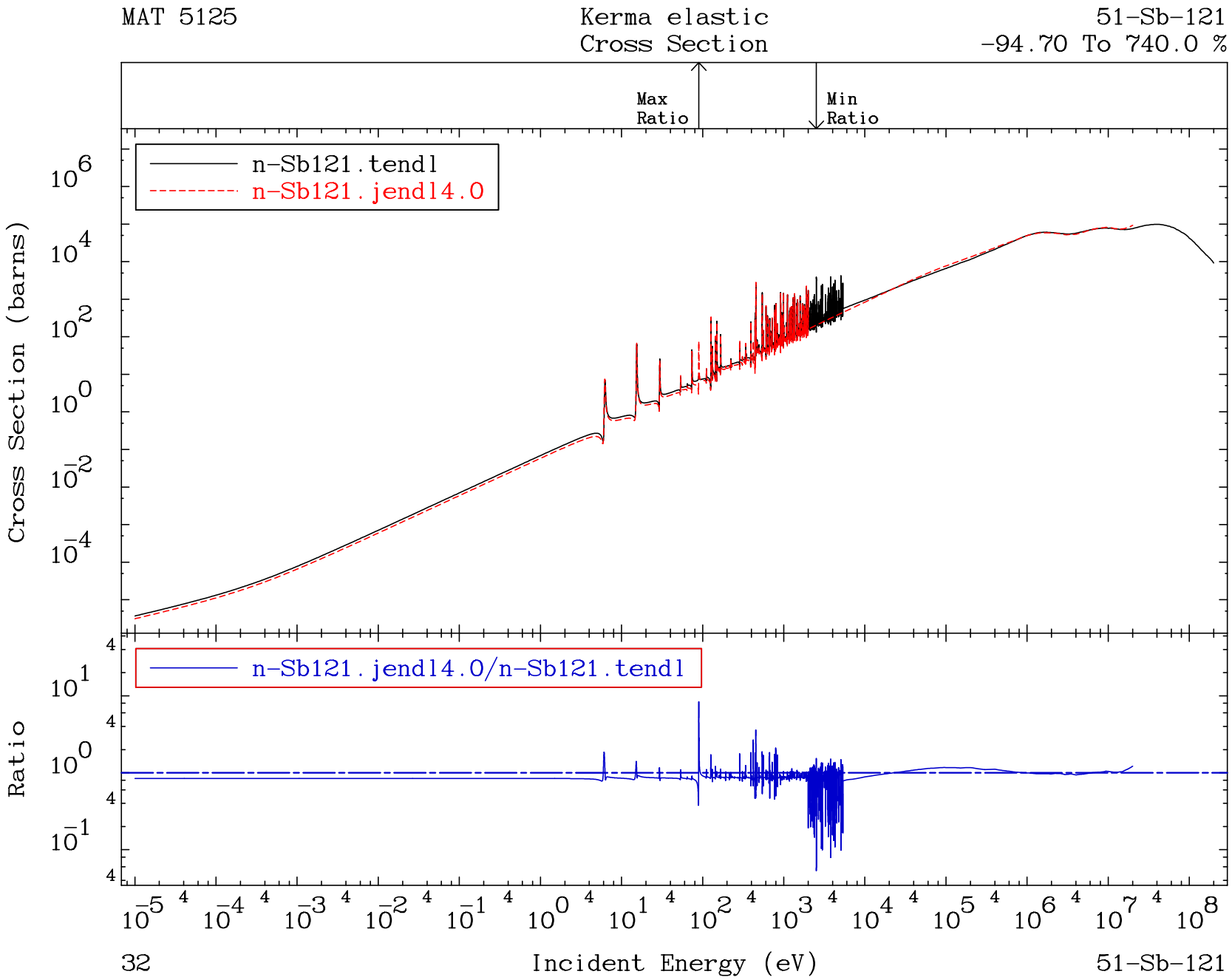

MAT 5125
Hydrogen Production
Cross Section
51-Sb-121
-87.31 To 1955. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 5.3510 keV
n-Sb121.jendl4.0 Threshold 750.00 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^{1}
10^{0}
10^{-1}
10^{4}
10^{5}
10^{6}
10^{7}
10^{8}
Incident Energy (eV)
27
51-Sb-121

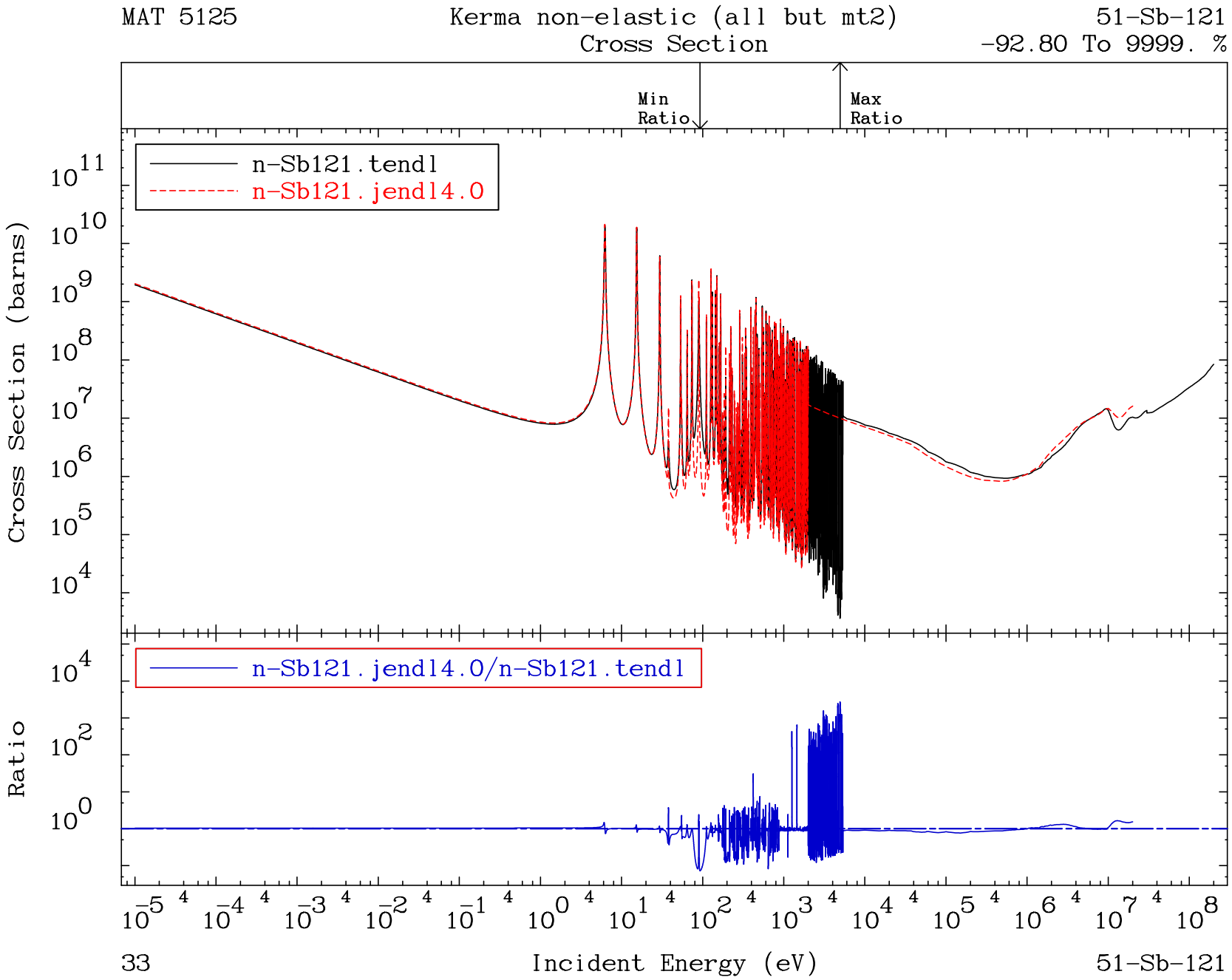

MAT 5125
Deuterium Production
Cross Section
51-Sb-121
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 3.5961 MeV
n-Sb121.jendl4.0 Threshold 4.9375 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^4
10^0
10^-4
10^-8
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
51-Sb-121

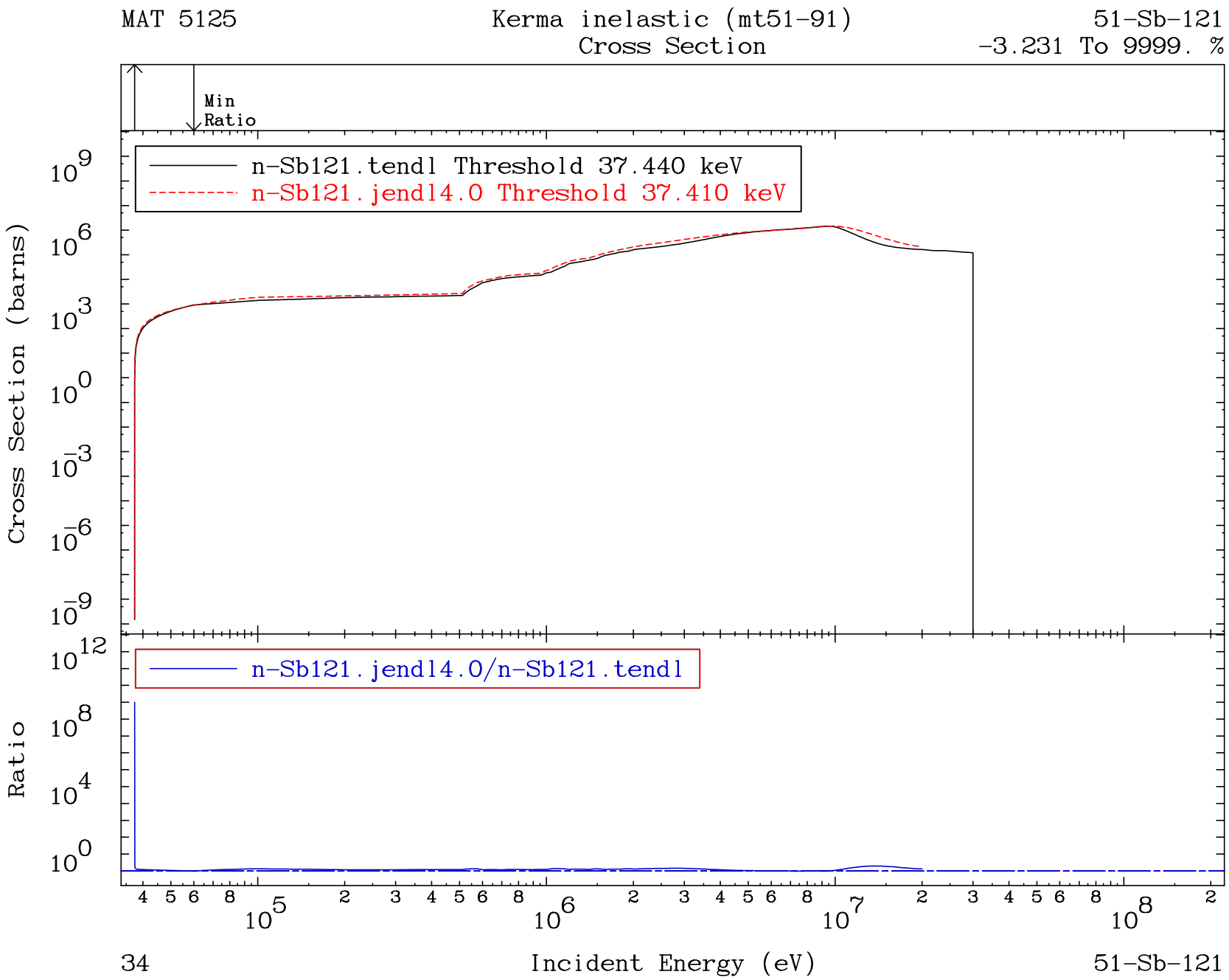

MAT 5125
Tritium Production
Cross Section
51-Sb-121
-100.0 To -12.39%
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 6.4673 MeV
n-Sb121.jendl4.0 Threshold 8.0000 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^0
10^-2
10^-4
10^-6
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
51-Sb-121

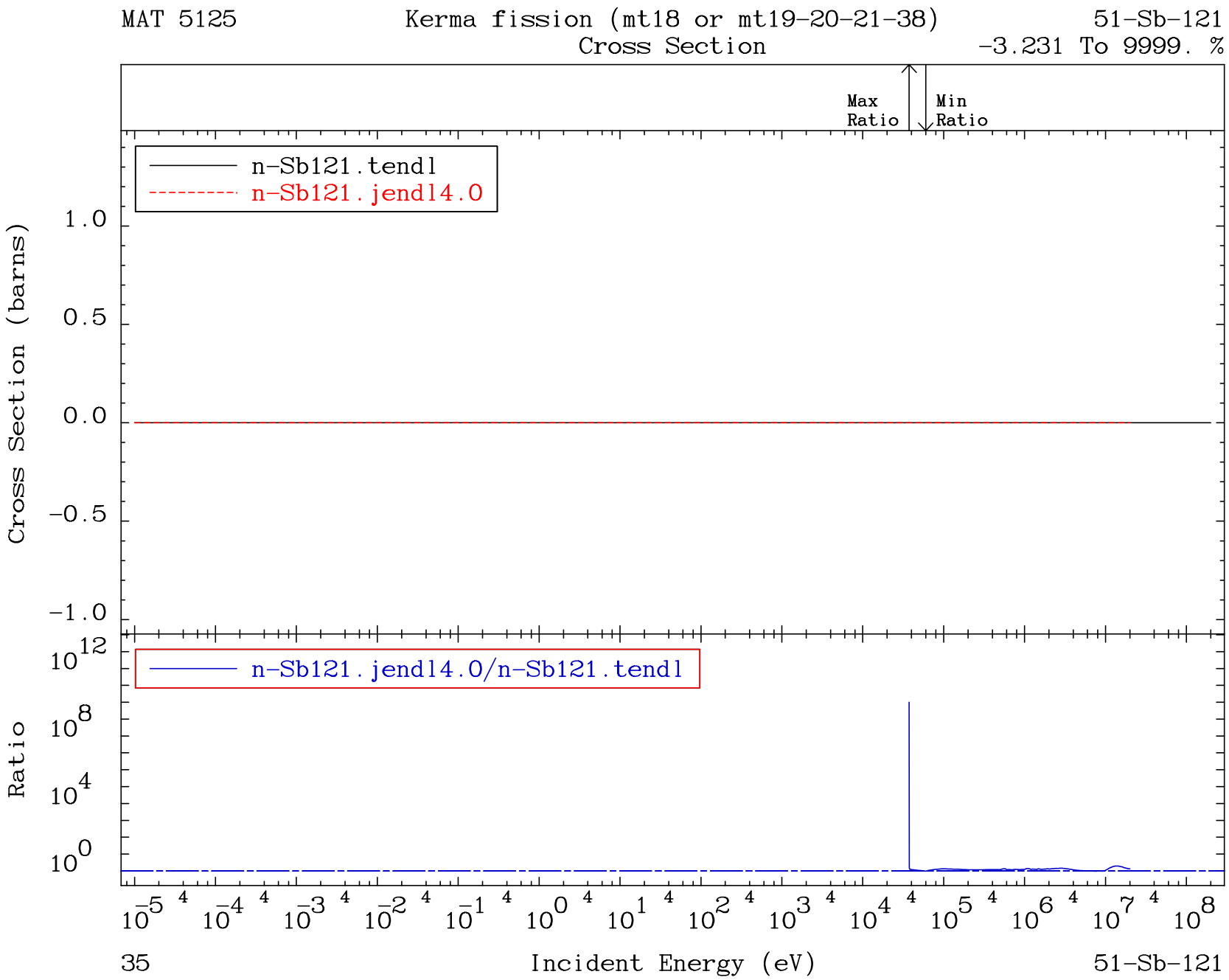

MAT 5125
He-4 Production
Cross Section
51-Sb-121
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl Threshold 5.3510 keV
n-Sb121.jendl4.0 Threshold 100.00 keV
Cross Section (milli-barns)
400
300
200
100
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^6
10^0
10^-6
10^-12
5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
30
Incident Energy (eV)
51-Sb-121

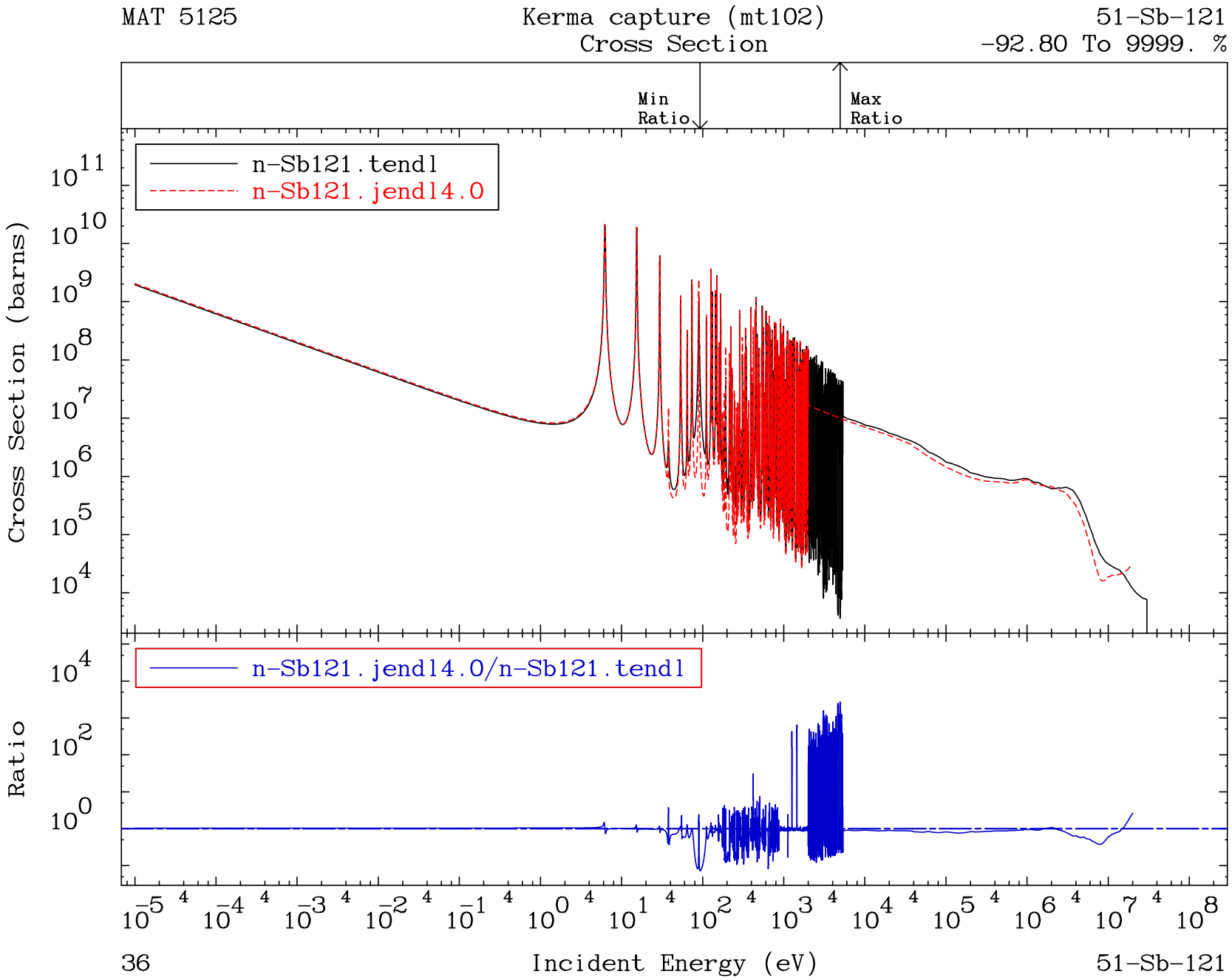

MAT 5125
Kerma total (eV-barns)
Cross Section
51-Sb-121
-92.80 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
31
51-Sb-121

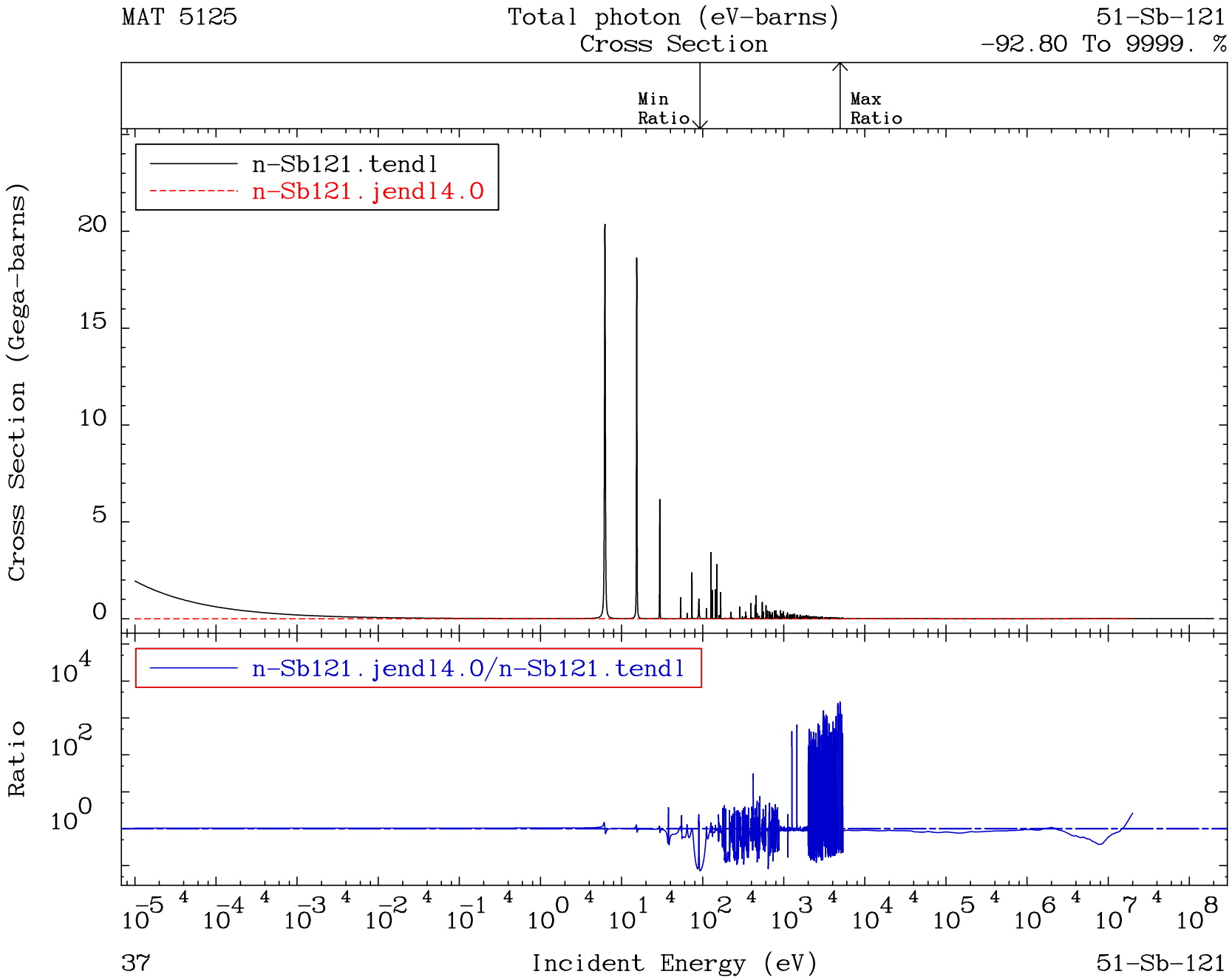

MAT 5125
Kerma elastic
Cross Section
51-Sb-121
-94.70 To 740.0 %
Max
Ratio
Min
Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
32
51-Sb-121

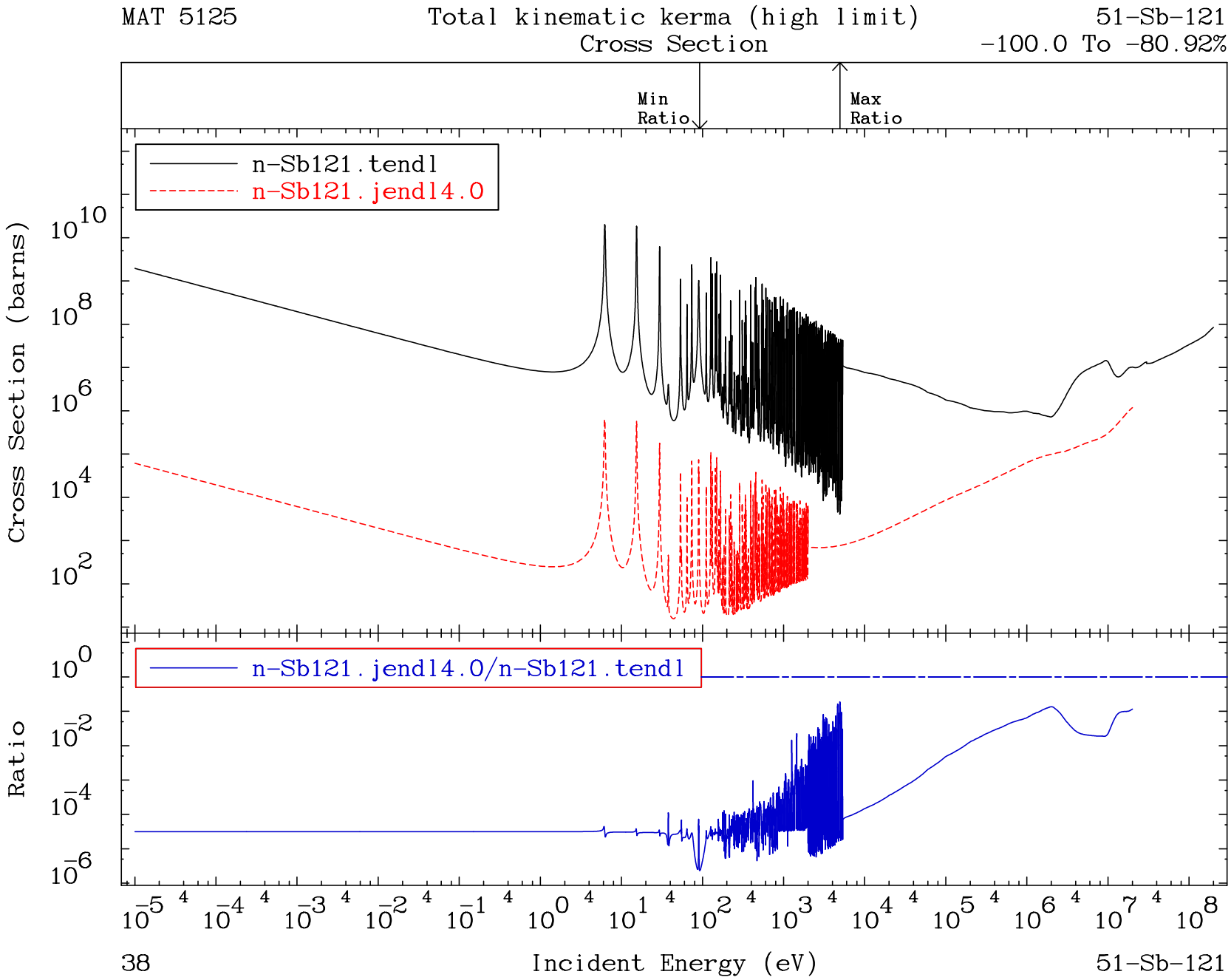

MAT 5125
Kerma non-elastic (all but mt2)
Cross Section
51-Sb-121
-92.80 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
33
51-Sb-121

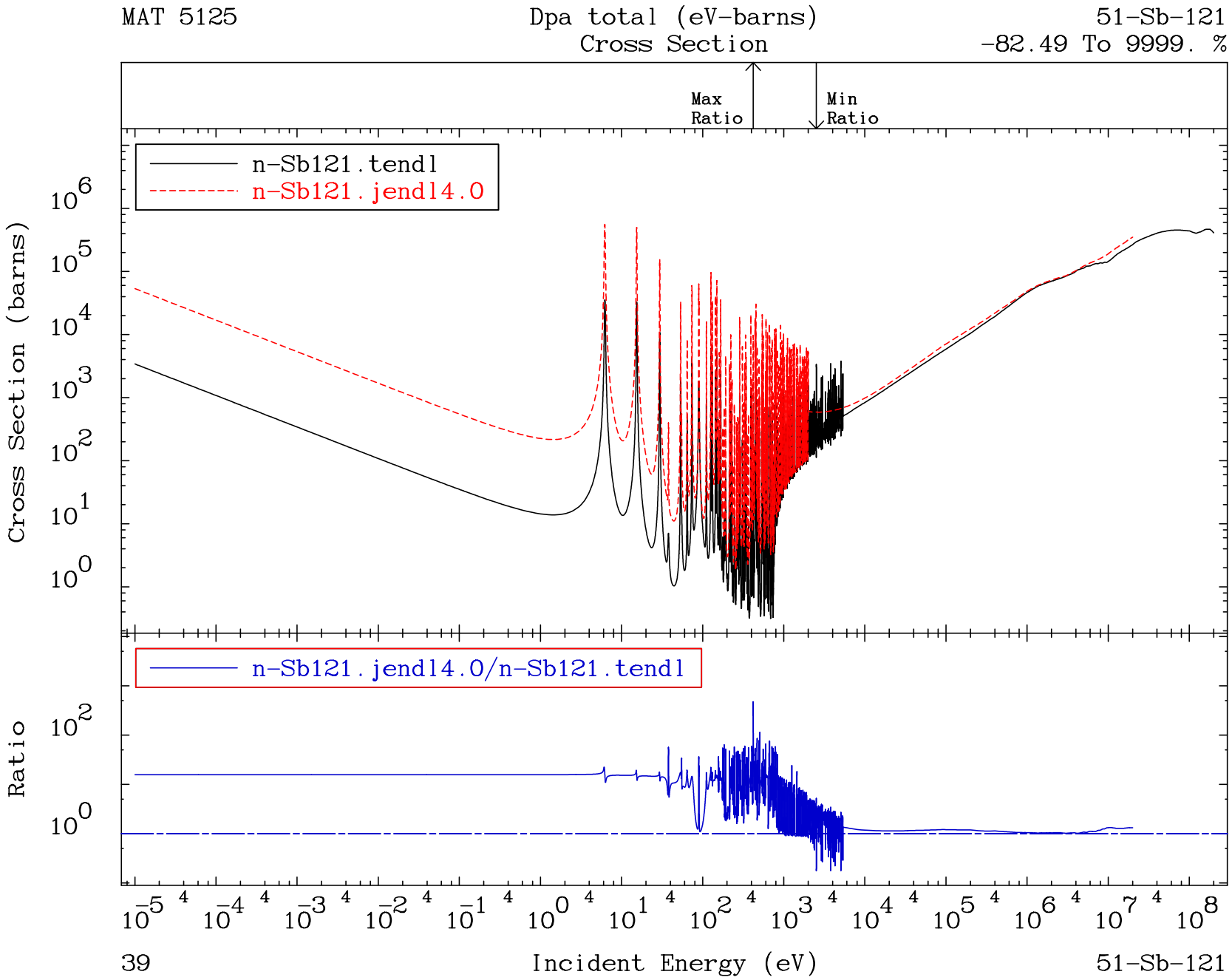

MAT 5125
Kerma inelastic (mt51-91)
Cross Section
51-Sb-121
-3.231 To 9999. %
Min
Ratio
n-Sb121.tendl Threshold 37.440 keV
n-Sb121.jendl4.0 Threshold 37.410 keV
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
34
51-Sb-121

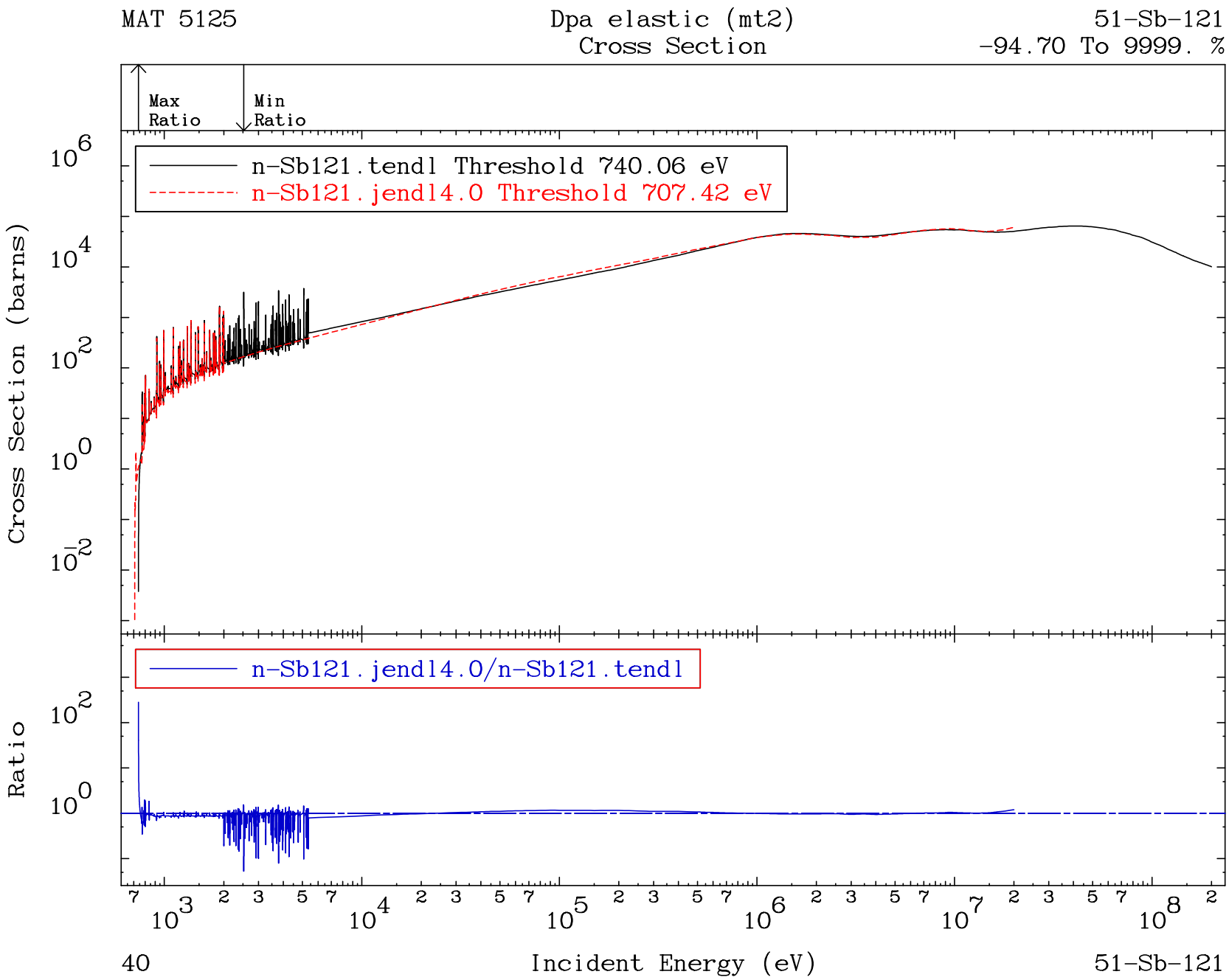

MAT 5125
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
51-Sb-121
-3.231 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^12
10^8
10^4
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
35
Incident Energy (eV)
51-Sb-121

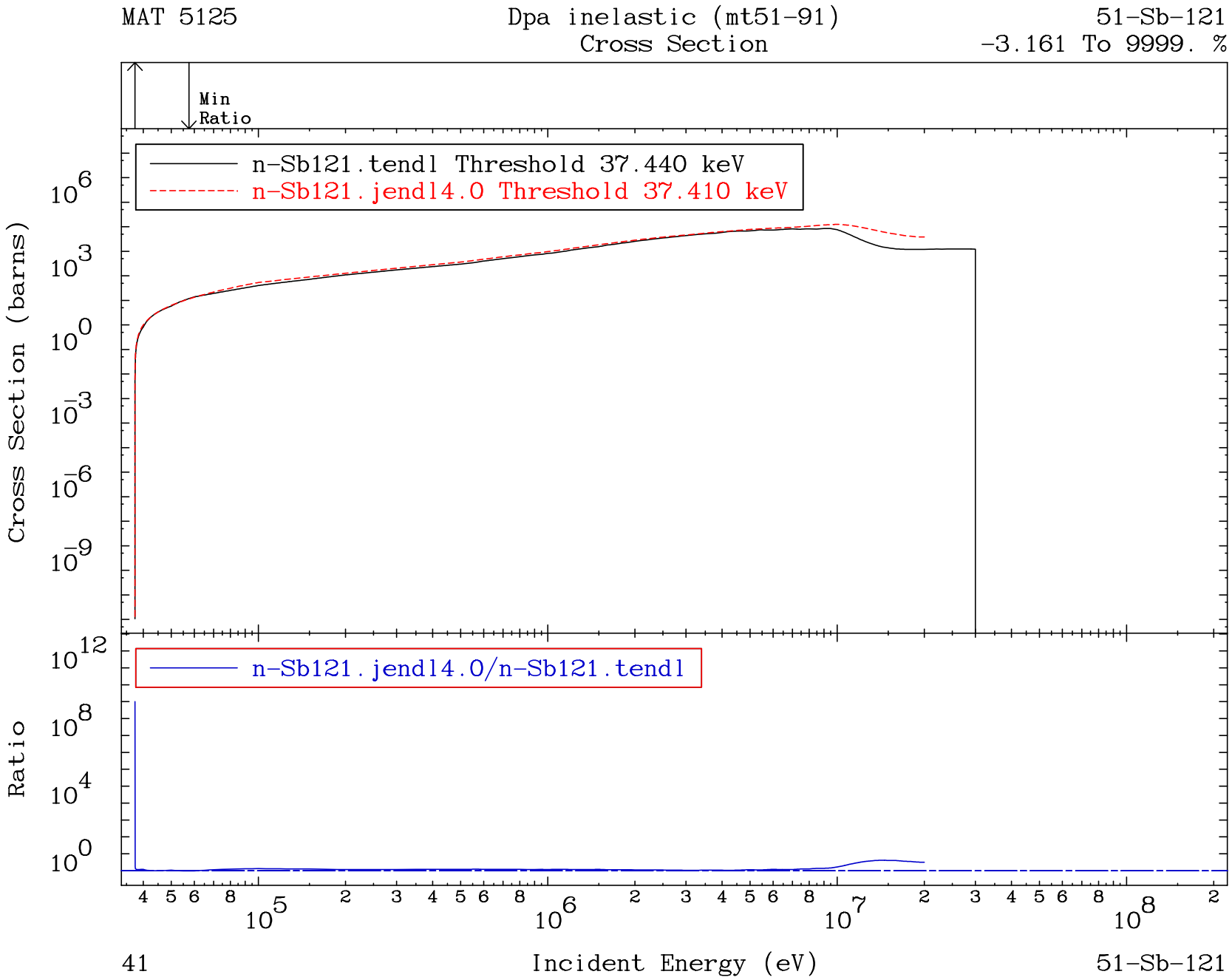

MAT 5125
Kerma capture (mt102)
Cross Section
51-Sb-121
-92.80 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
36
51-Sb-121

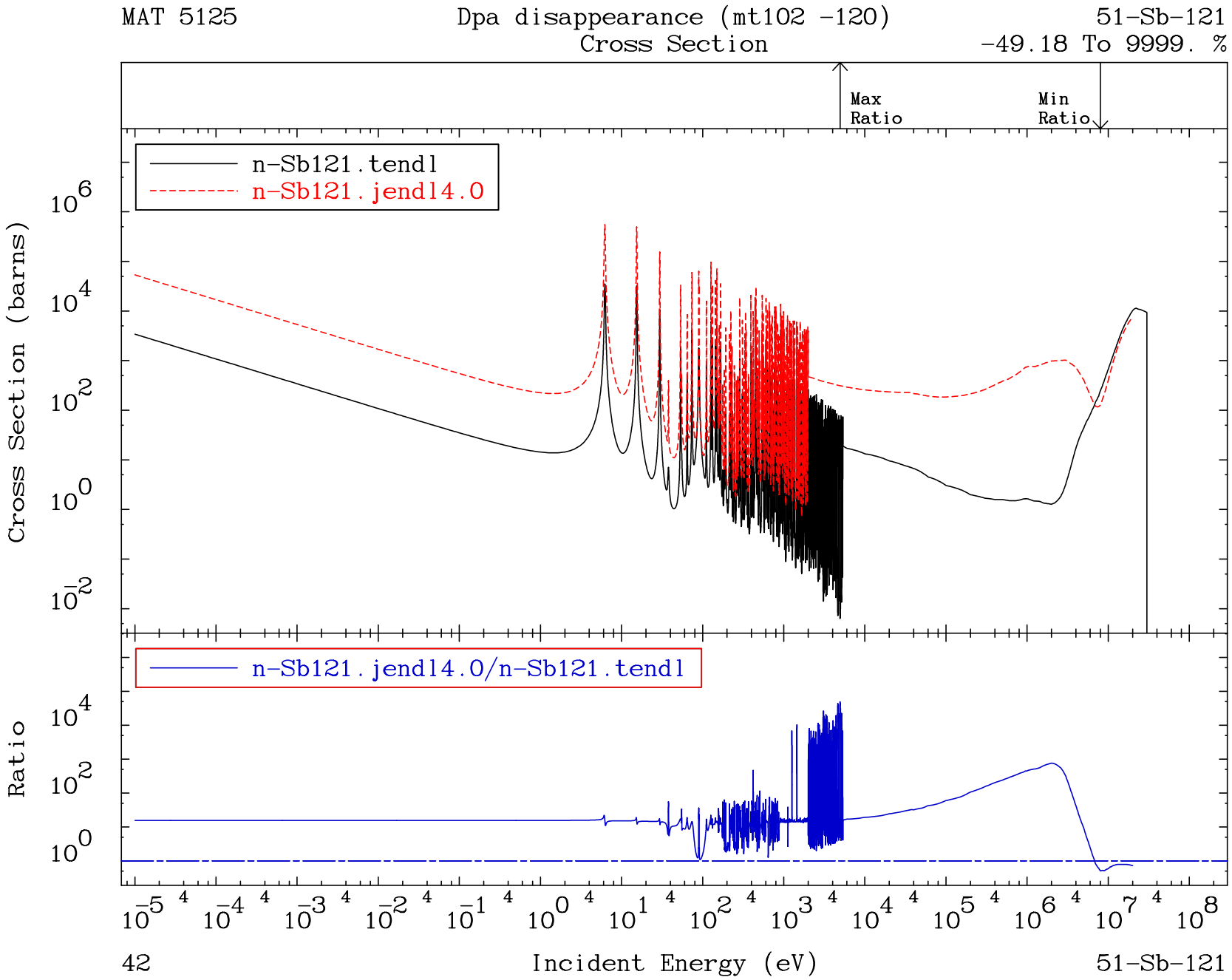

MAT 5125
Total photon (eV-barns)
Cross Section
51-Sb-121
-92.80 To 9999. %
Min Ratio
Max Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (Gega-barns)
20
15
10
5
0
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
10^4
10^2
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
37
Incident Energy (eV)
51-Sb-121


MAT 5125
Total kinematic kerma (high limit)
Cross Section
51-Sb-121
-100.0 To -80.92%
Min Ratio
Max Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
Ratio
n-Sb121.jendl4.0/n-Sb121.tendl
Incident Energy (eV)
38
51-Sb-121


MAT 5125
Dpa total (eV-barns)
Cross Section
51-Sb-121
-82.49 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
39
51-Sb-121


MAT 5125
Dpa elastic (mt2)
Cross Section
51-Sb-121
-94.70 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl Threshold 740.06 eV
n-Sb121.jendl4.0 Threshold 707.42 eV
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
40
51-Sb-121


MAT 5125
Dpa inelastic (mt51-91)
Cross Section
51-Sb-121
-3.161 To 9999. %
Min
Ratio
n-Sb121.tendl Threshold 37.440 keV
n-Sb121.jendl4.0 Threshold 37.410 keV
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
41
51-Sb-121


MAT 5125
Dpa disappearance (mt102 -120)
Cross Section
51-Sb-121
-49.18 To 9999. %
Max Ratio
Min Ratio
n-Sb121.tendl
n-Sb121.jendl4.0
Cross Section (barns)
n-Sb121.jendl4.0/n-Sb121.tendl
Ratio
Incident Energy (eV)
42
51-Sb-121