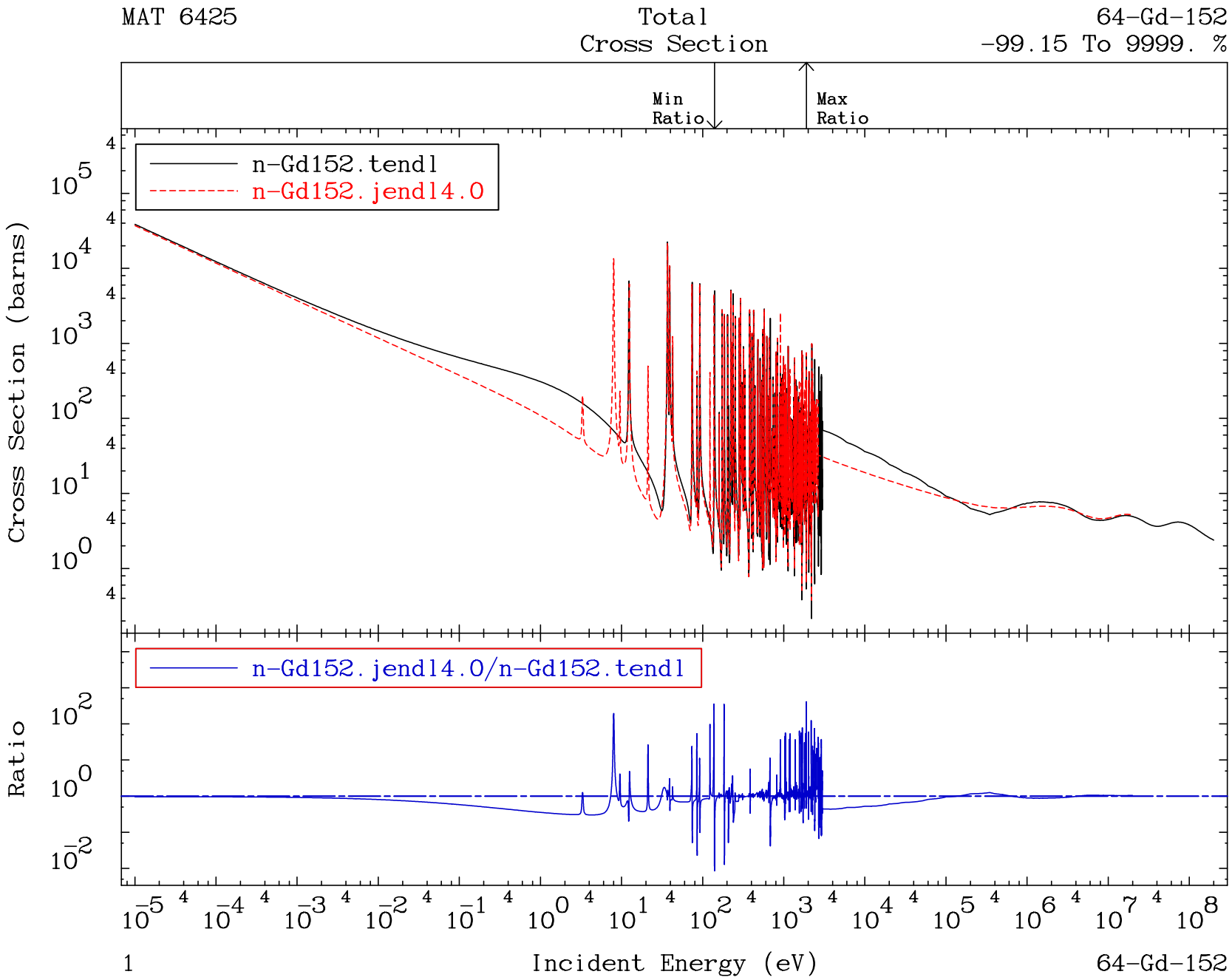
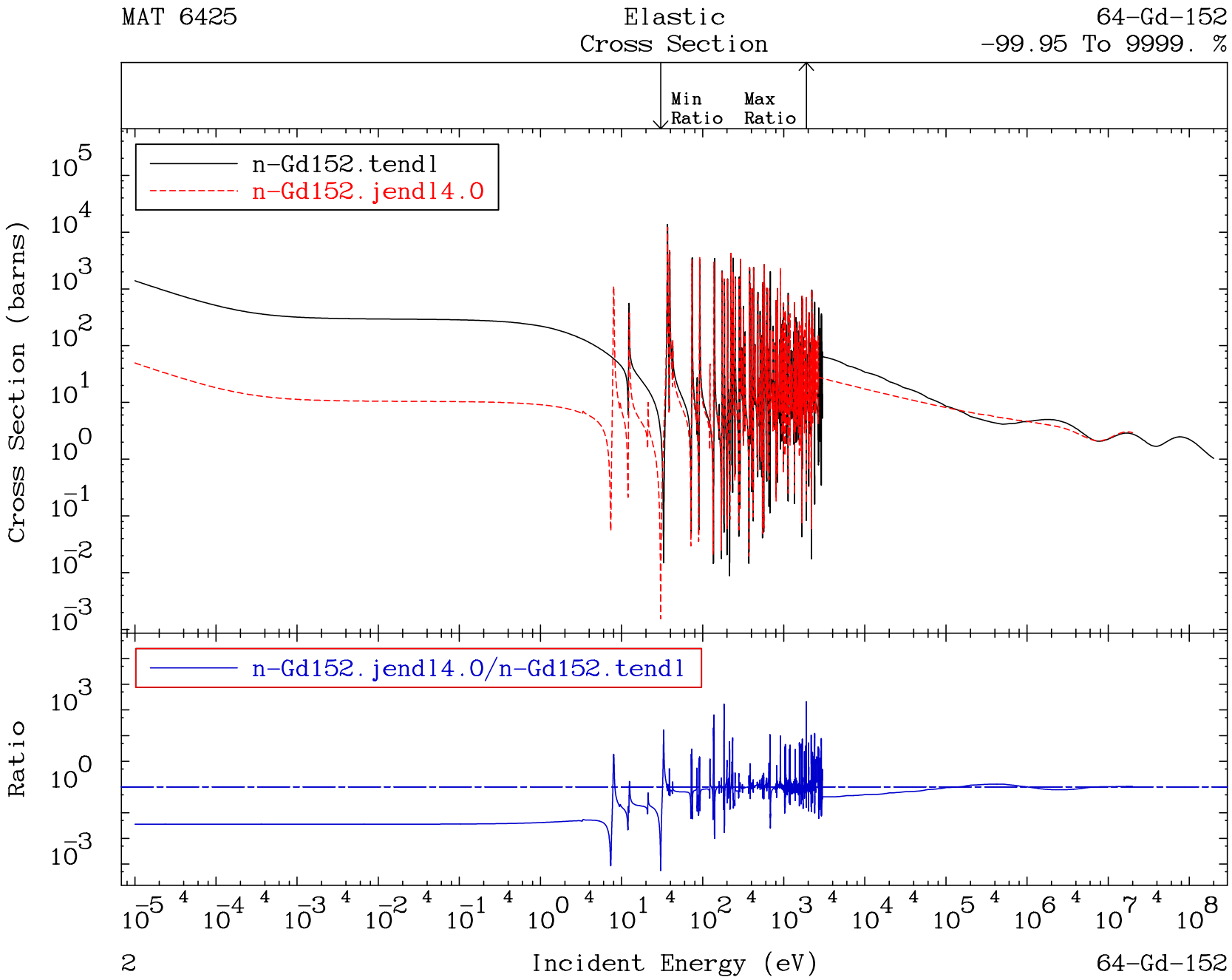
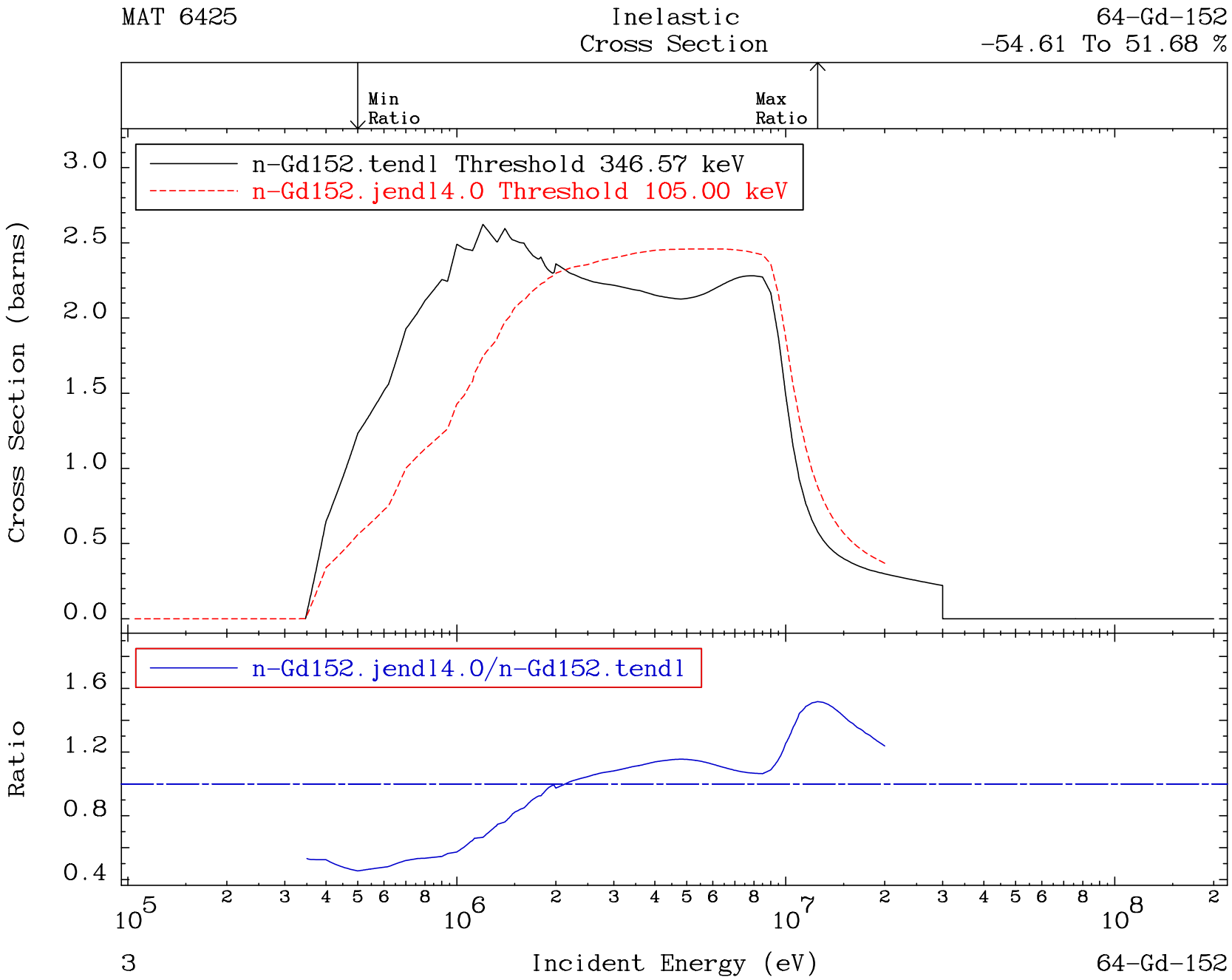
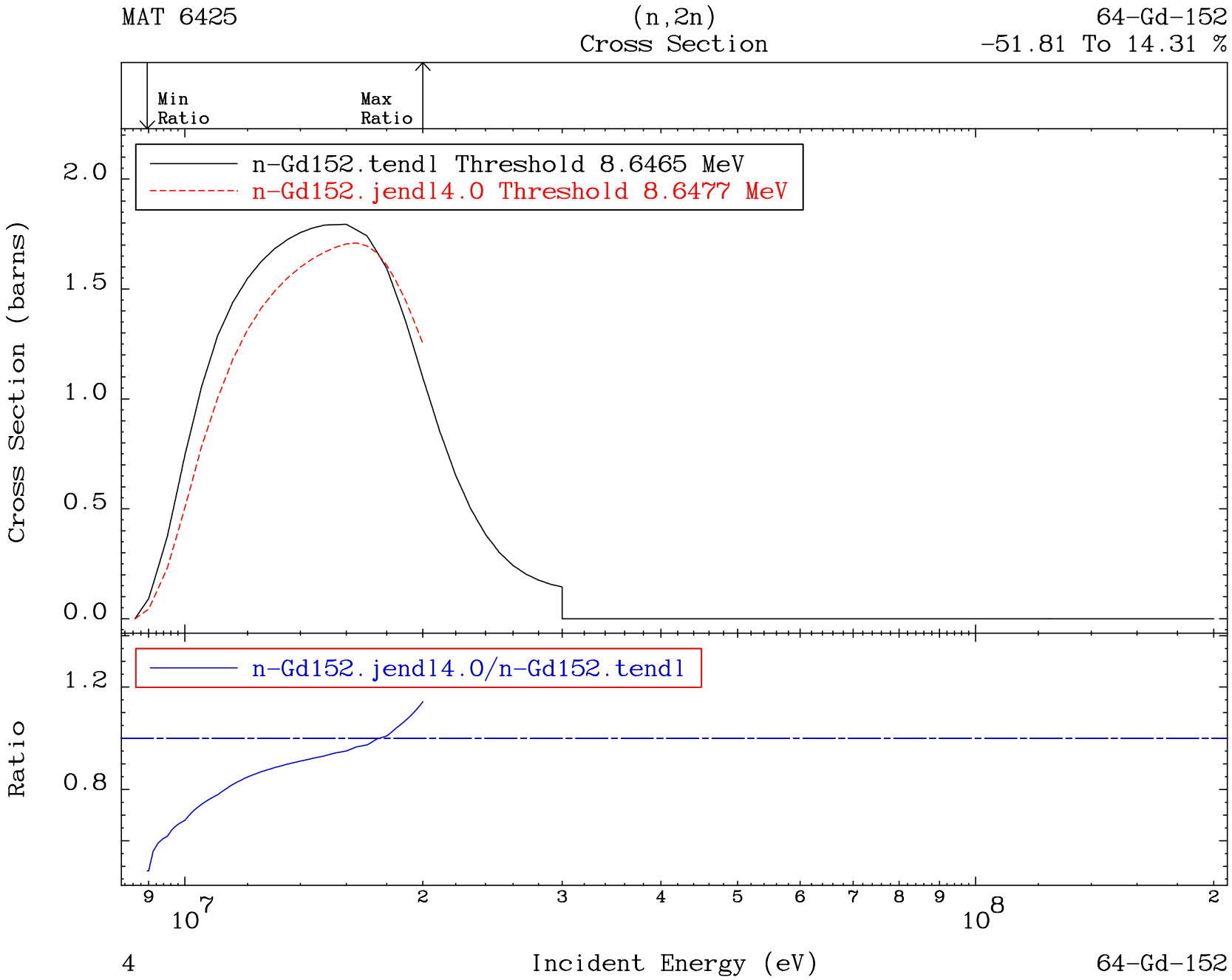
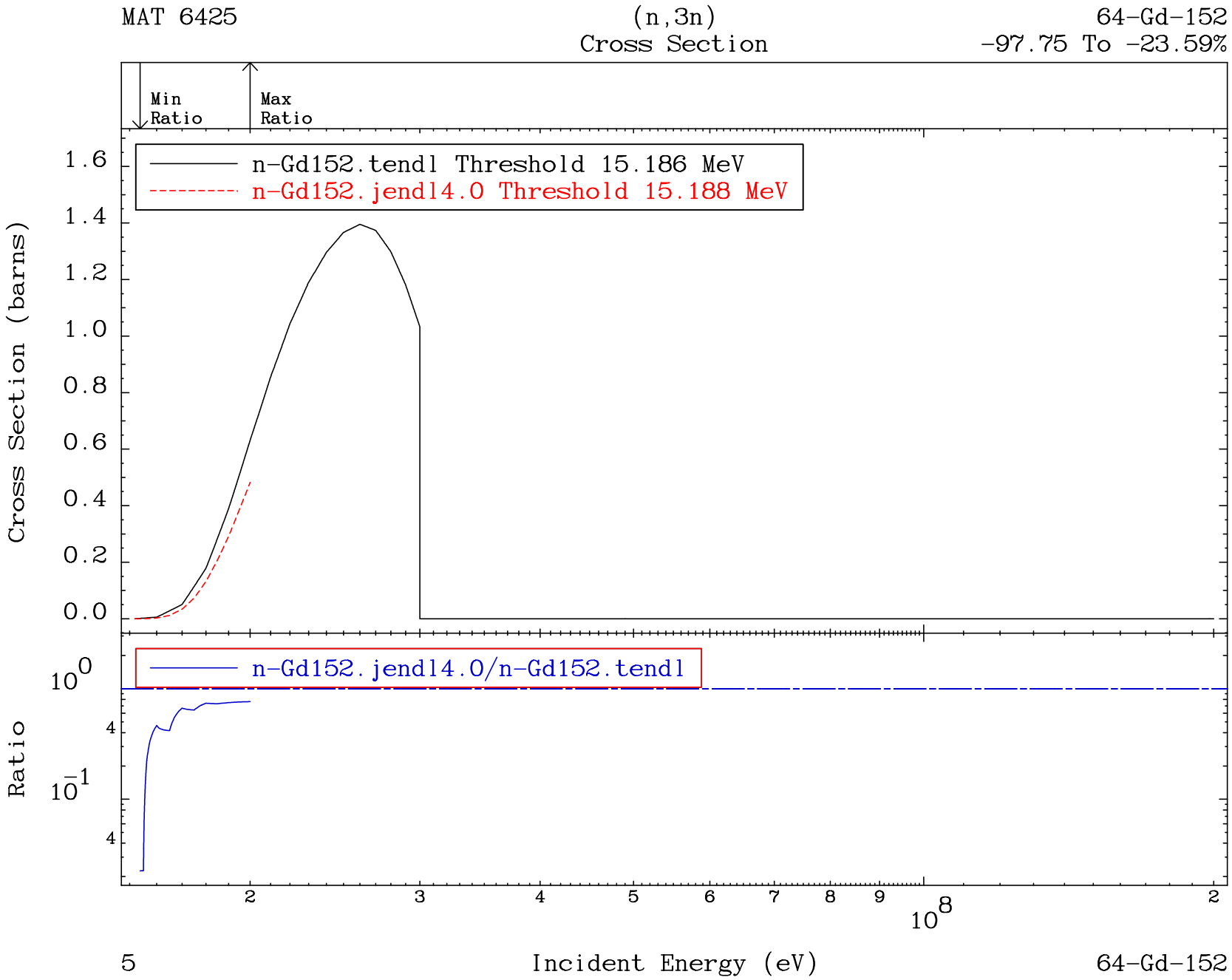
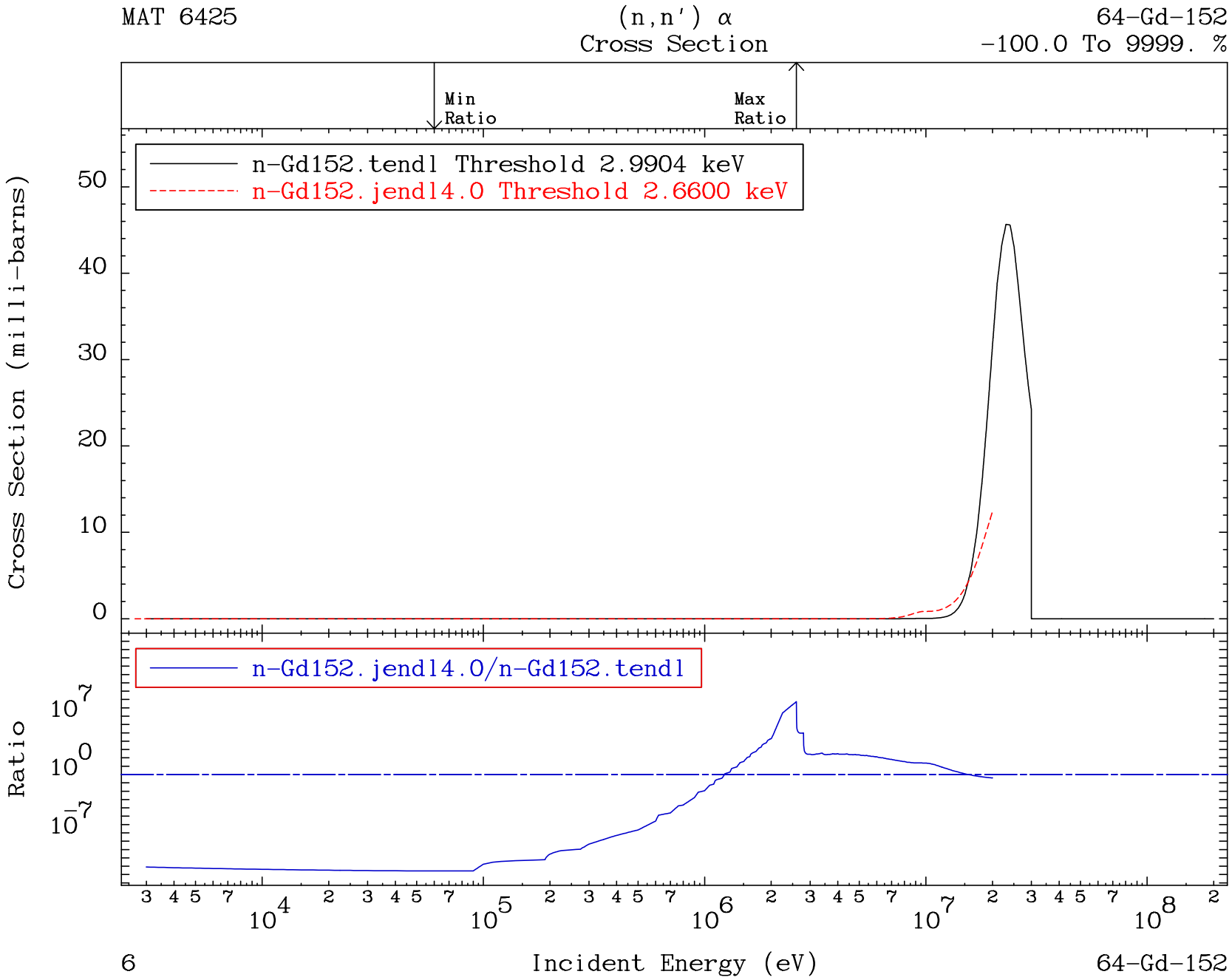

MAT 6425
Total
Cross Section
64-Gd-152
-99.15 To 9999. %
Min
Ratio
Max
Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
1
64-Gd-152

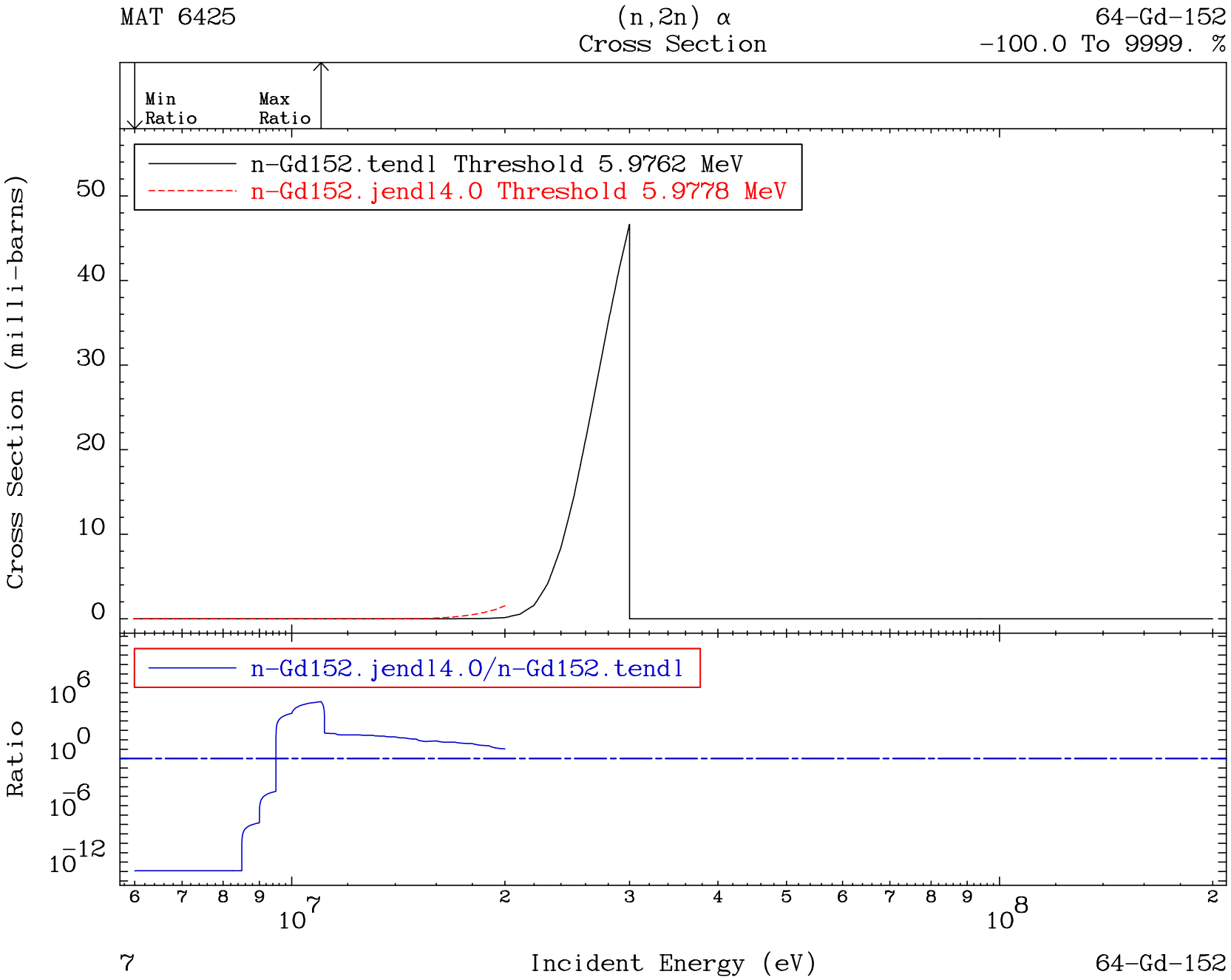

MAT 6425
Elastic
Cross Section
64-Gd-152
-99.95 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
2
64-Gd-152

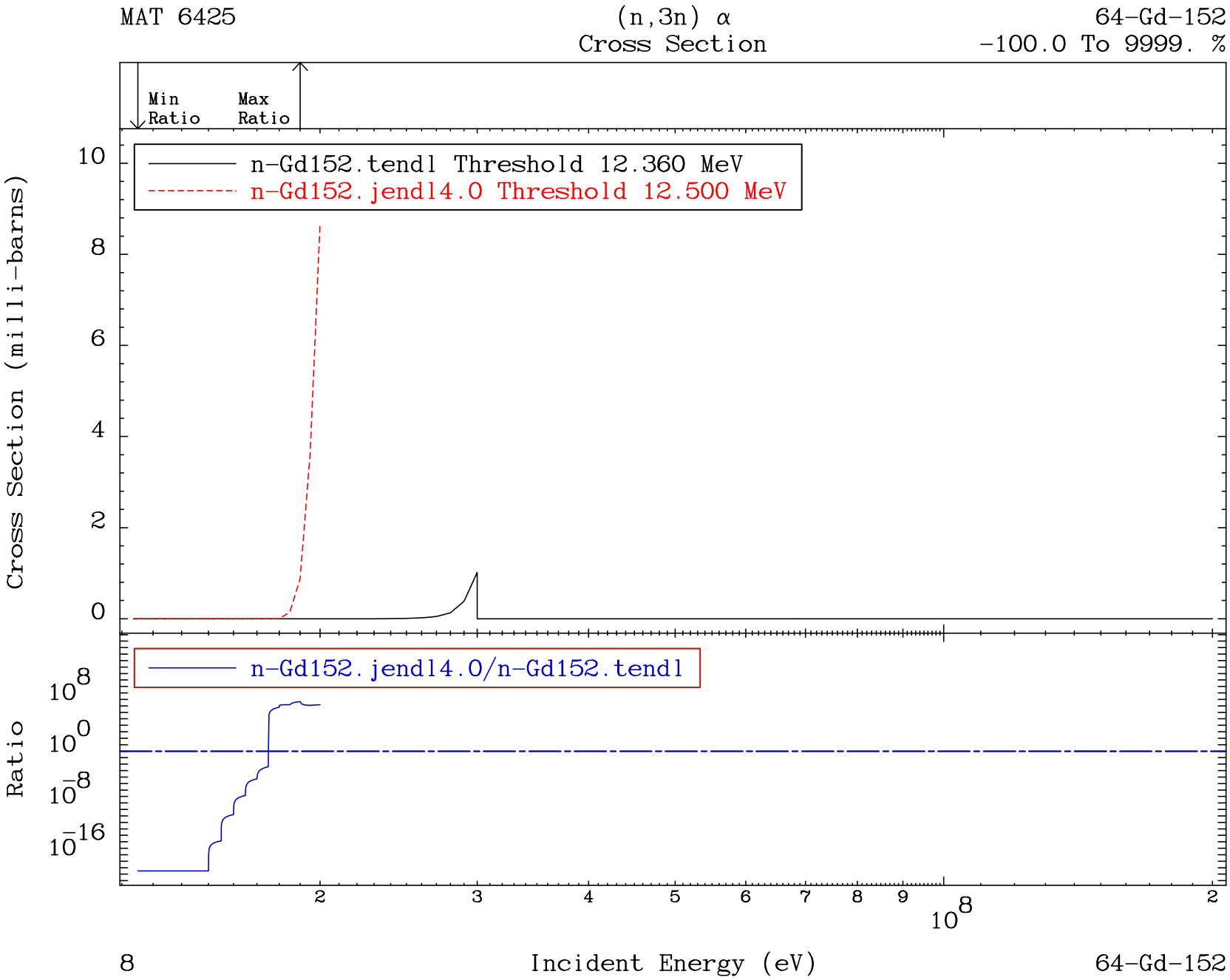

MAT 6425
Inelastic
Cross Section
64-Gd-152
-54.61 To 51.68 %
Min
Ratio
Max
Ratio
n-Gd152.tendl Threshold 346.57 keV
n-Gd152.jendl4.0 Threshold 105.00 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
1.6
1.2
0.8
0.4
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
3
Incident Energy (eV)
64-Gd-152

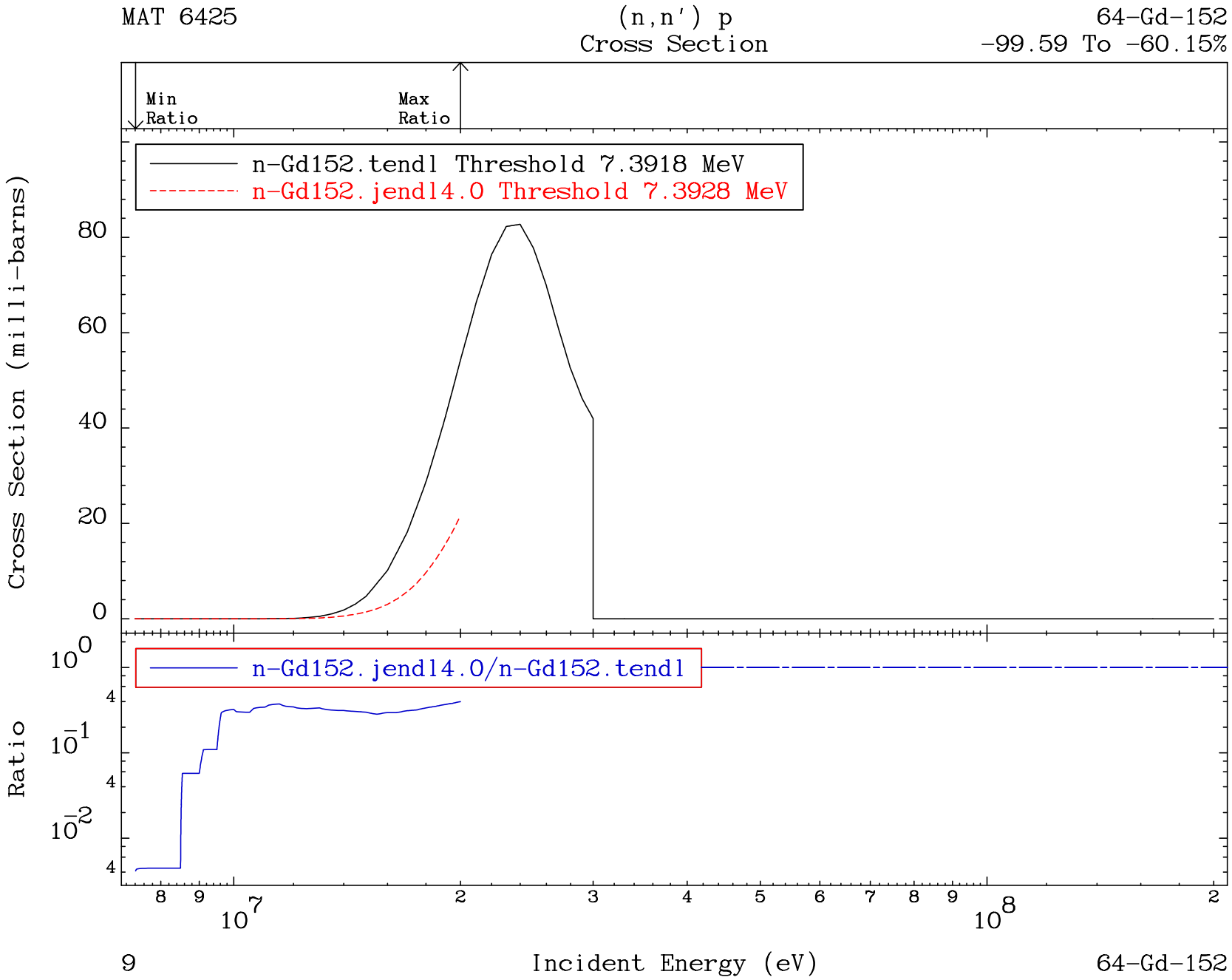

MAT 6425
(n,2n)
Cross Section
64-Gd-152
-51.81 To 14.31 %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 8.6465 MeV
n-Gd152.jendl4.0 Threshold 8.6477 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
1.2
0.8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
64-Gd-152

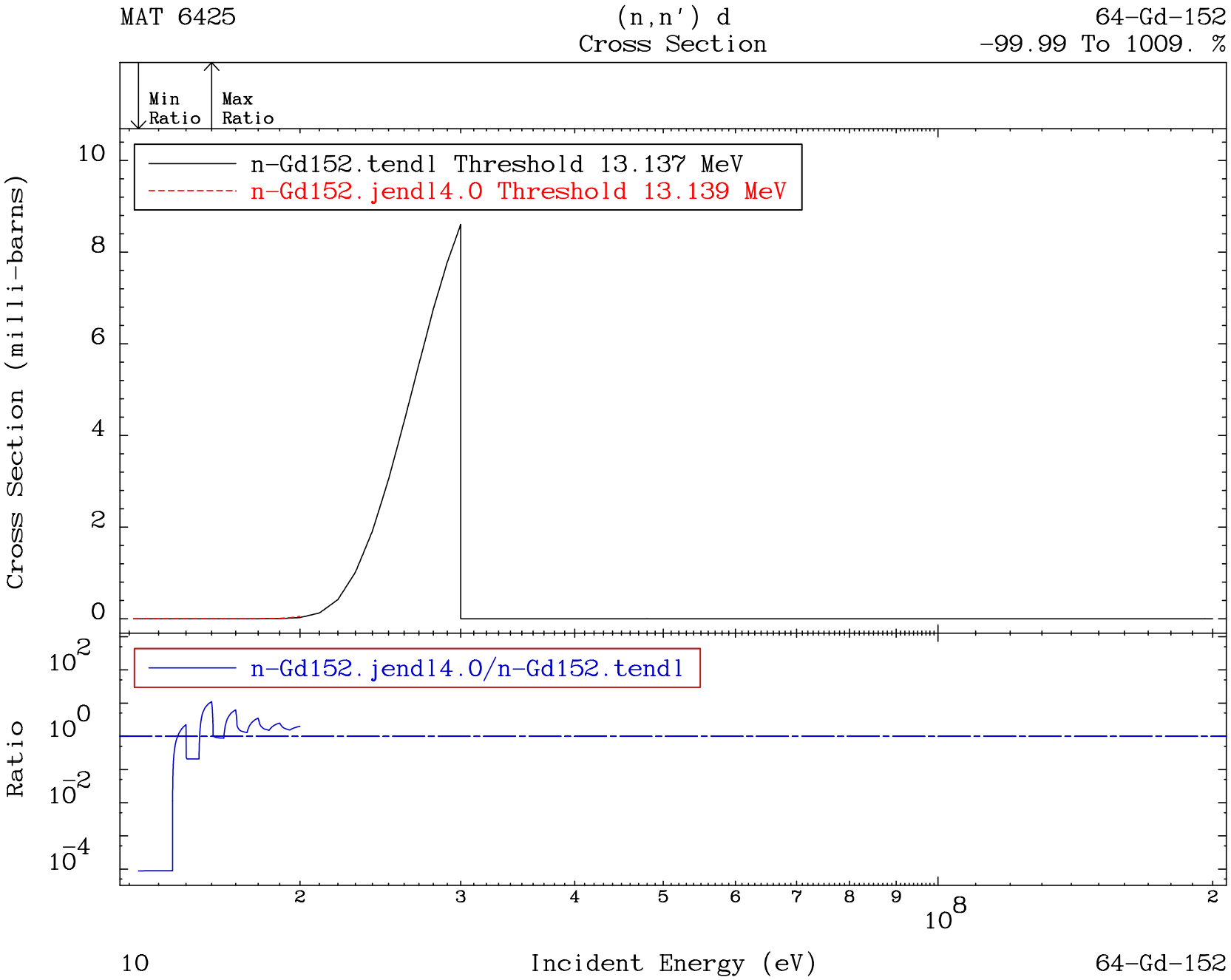

MAT 6425
(n,3n)
Cross Section
64-Gd-152
-97.75 To -23.59%
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 15.186 MeV
n-Gd152.jendl4.0 Threshold 15.188 MeV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
10^-1
4
4
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
64-Gd-152

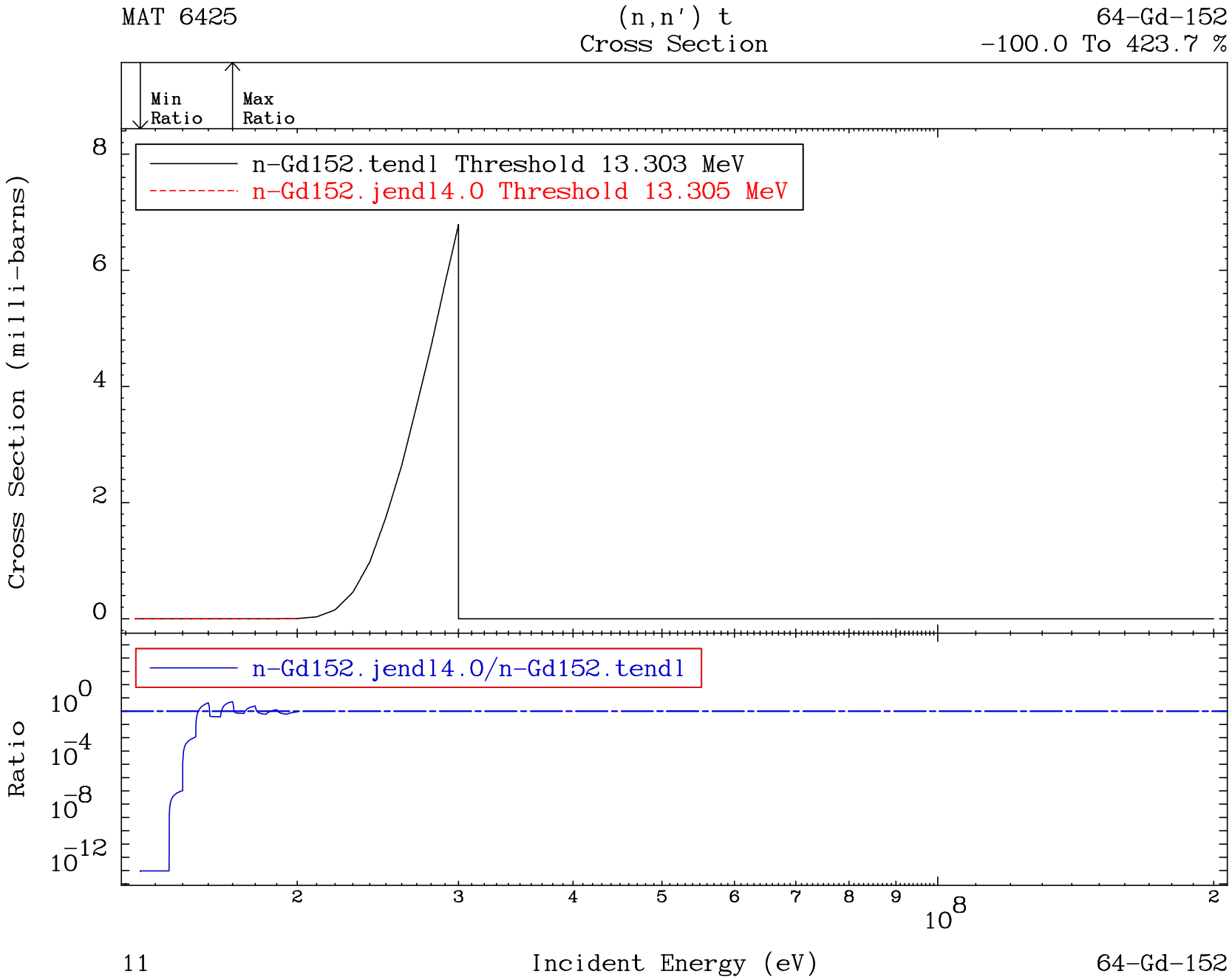

MAT 6425
(n,n') α
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 2.9904 keV
n-Gd152.jendl4.0 Threshold 2.6600 keV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^7
10^0
10^-7
3 4 5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
6
Incident Energy (eV)
64-Gd-152

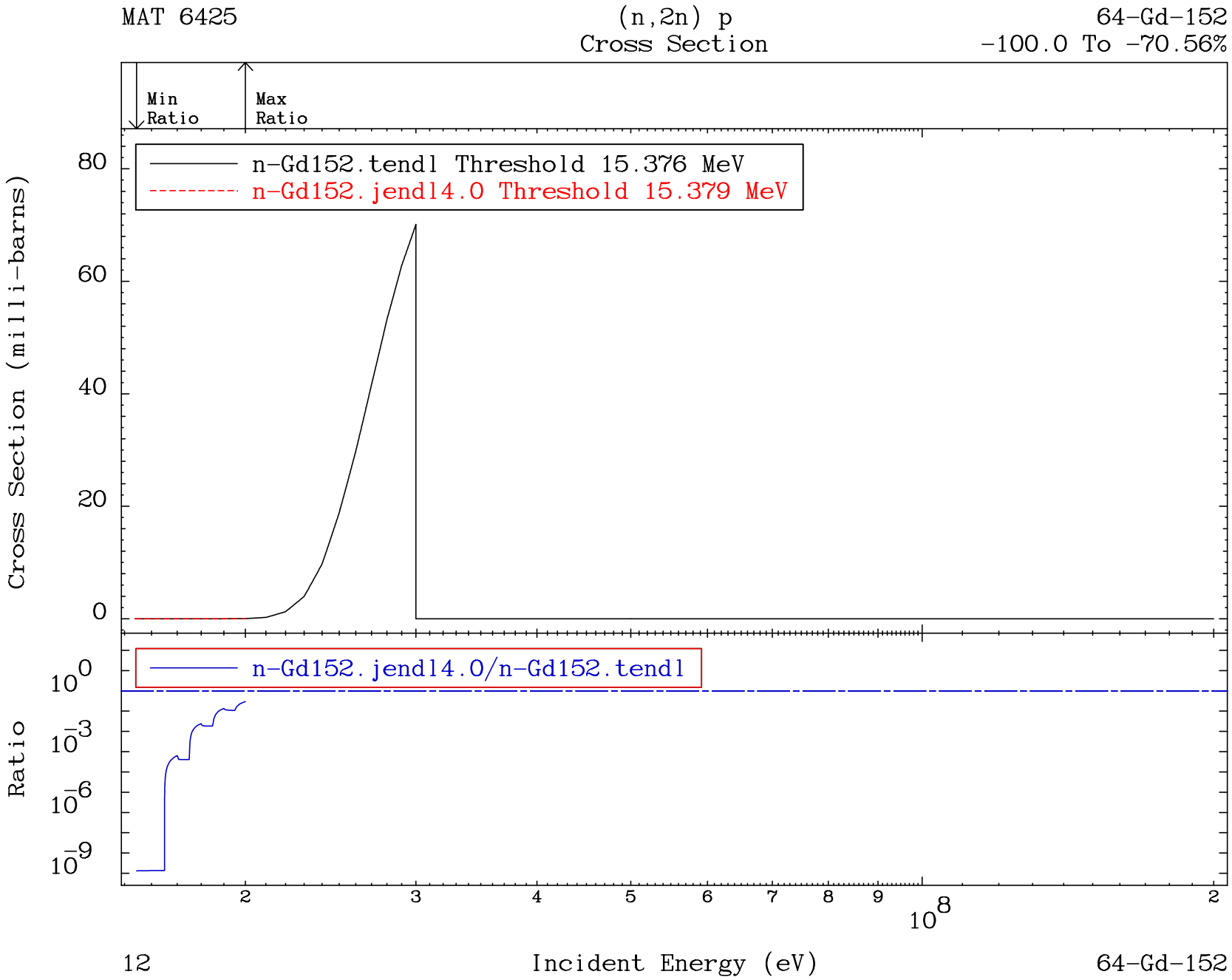

MAT 6425
(n,2n) α
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 5.9762 MeV
n-Gd152.jendl4.0 Threshold 5.9778 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^6
10^0
10^-6
10^-12
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
64-Gd-152

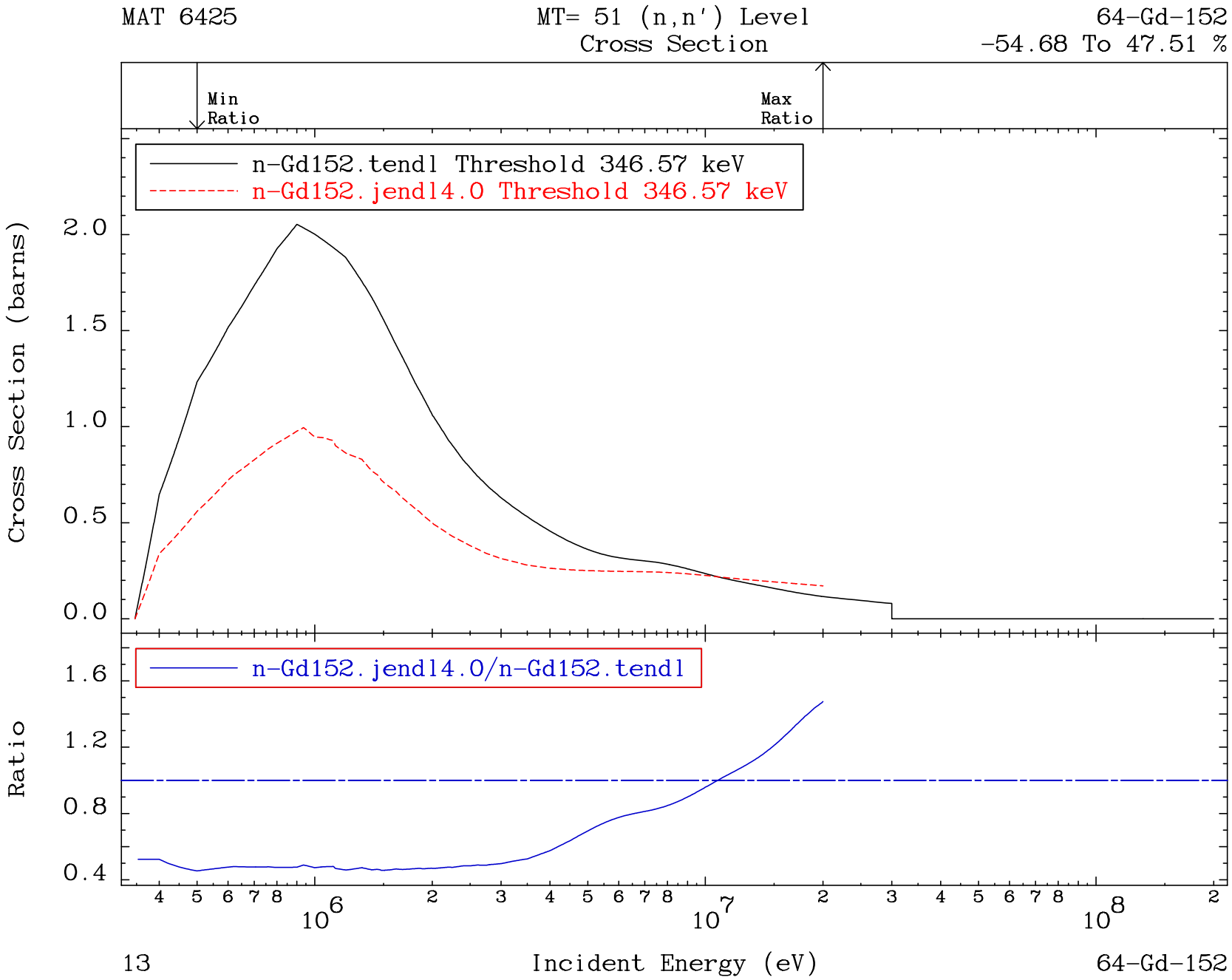

MAT 6425
(n,3n) α
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 12.360 MeV
n-Gd152.jendl4.0 Threshold 12.500 MeV
Cross Section (milli-barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
8
64-Gd-152

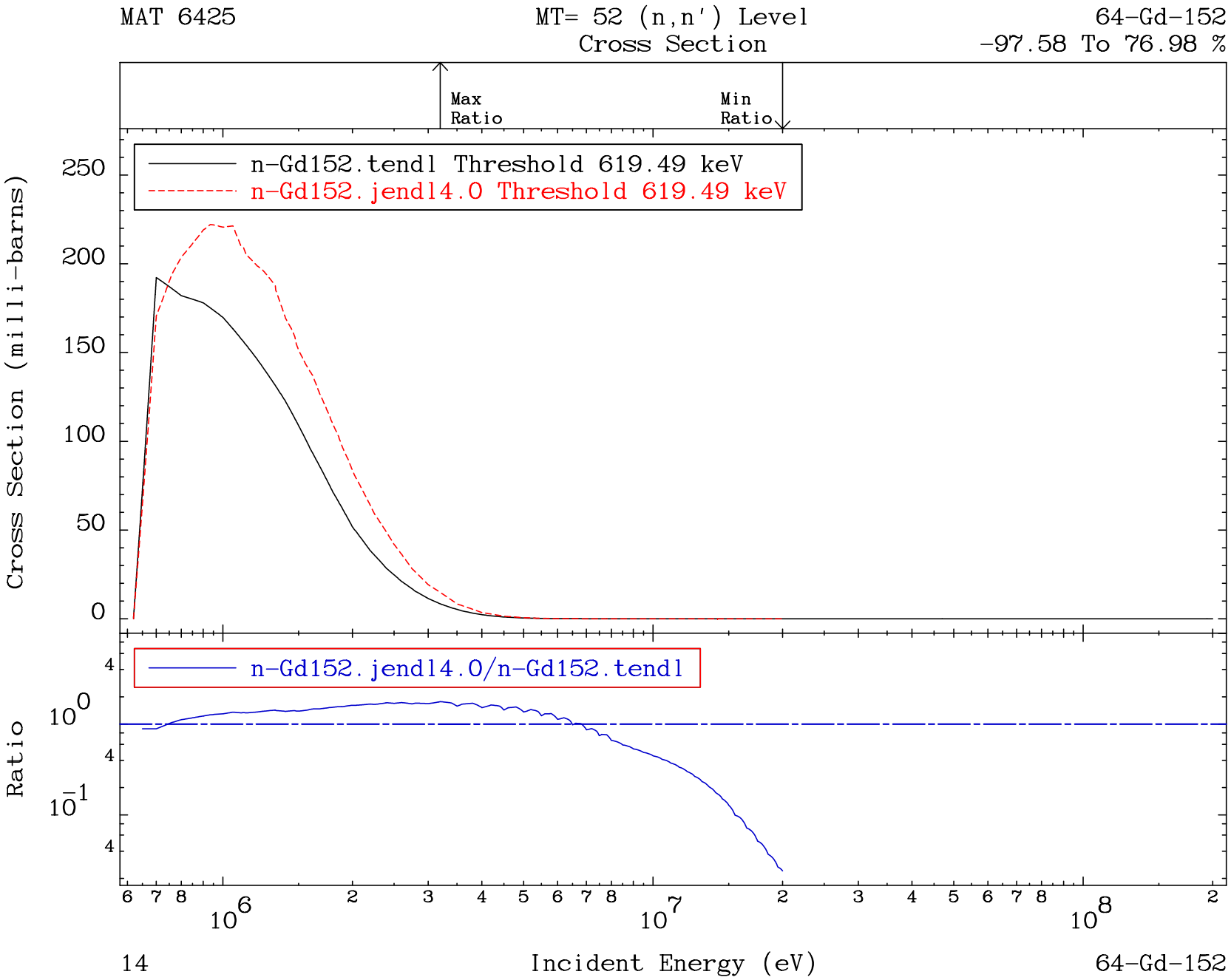

MAT 6425
(n,n') p
Cross Section
64-Gd-152
-99.59 To -60.15%
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 7.3918 MeV
n-Gd152.jendl4.0 Threshold 7.3928 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
10^-1
10^-2
4
4
4
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
9
Incident Energy (eV)
64-Gd-152

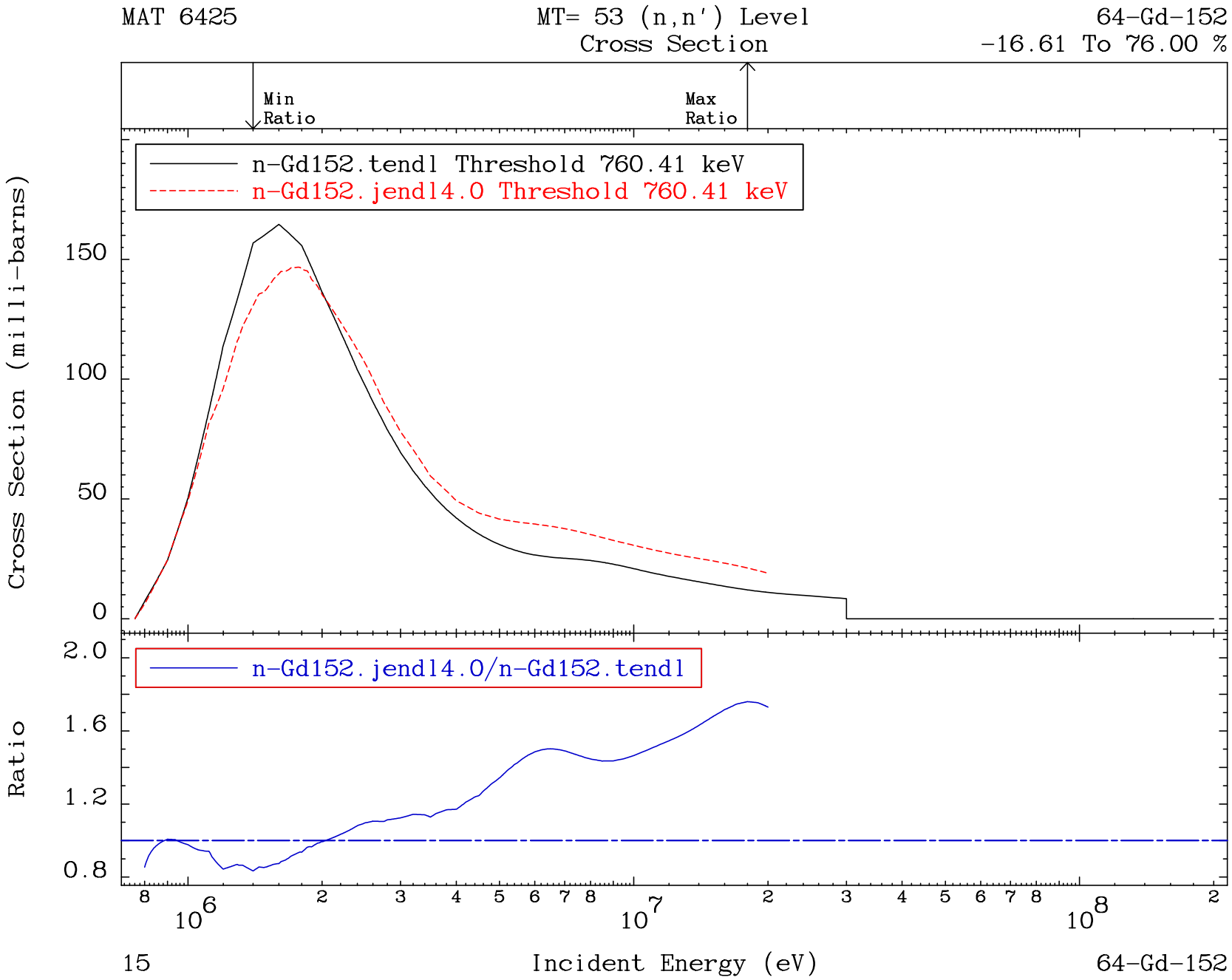

MAT 6425
(n,n') d
Cross Section
64-Gd-152
-99.99 To 1009. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 13.137 MeV
n-Gd152.jendl4.0 Threshold 13.139 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^2
10^0
10^-2
10^-4
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
64-Gd-152

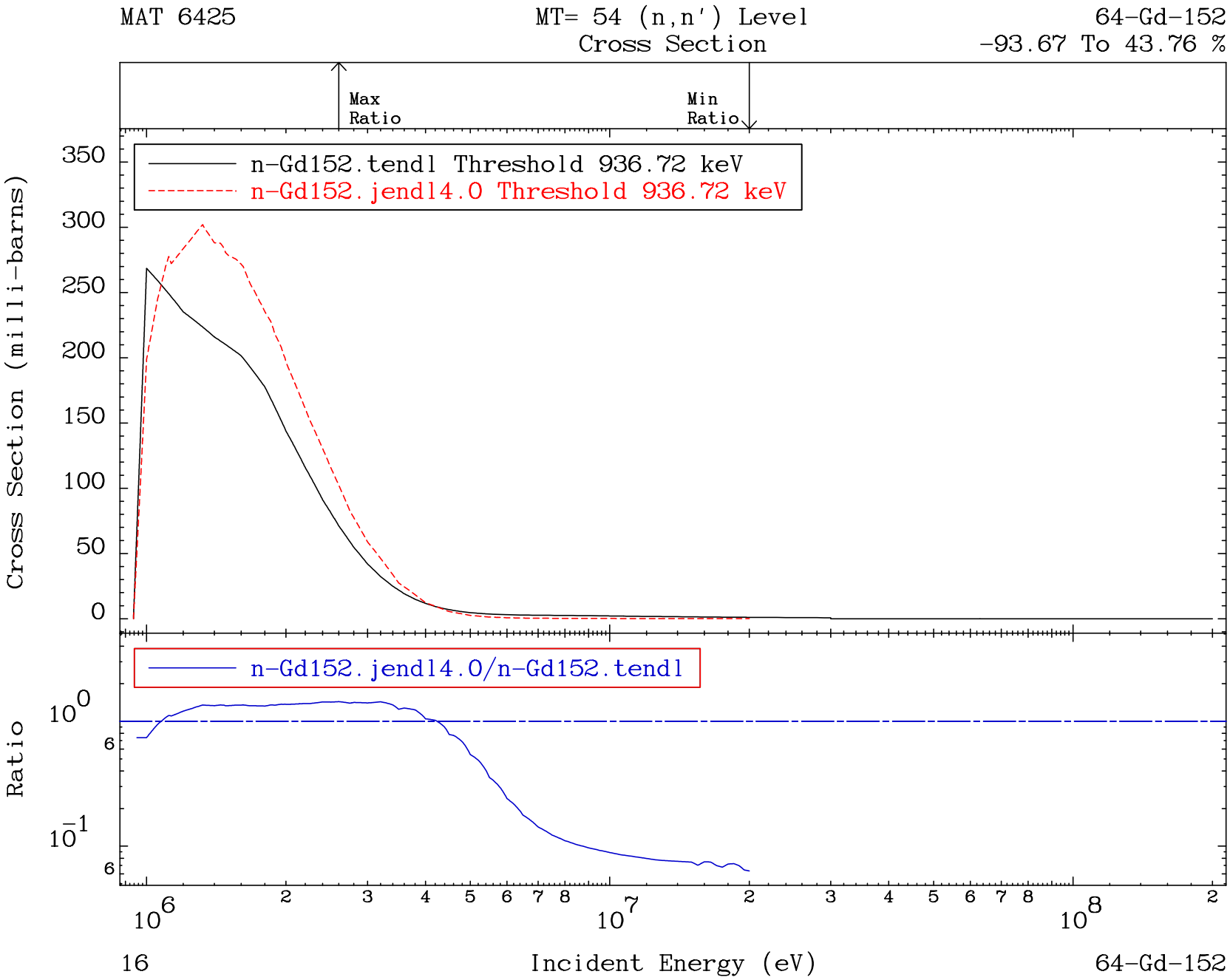

MAT 6425
(n,n') t
Cross Section
64-Gd-152
-100.0 To 423.7 %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 13.303 MeV
n-Gd152.jendl4.0 Threshold 13.305 MeV
Cross Section (milli-barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
11
64-Gd-152

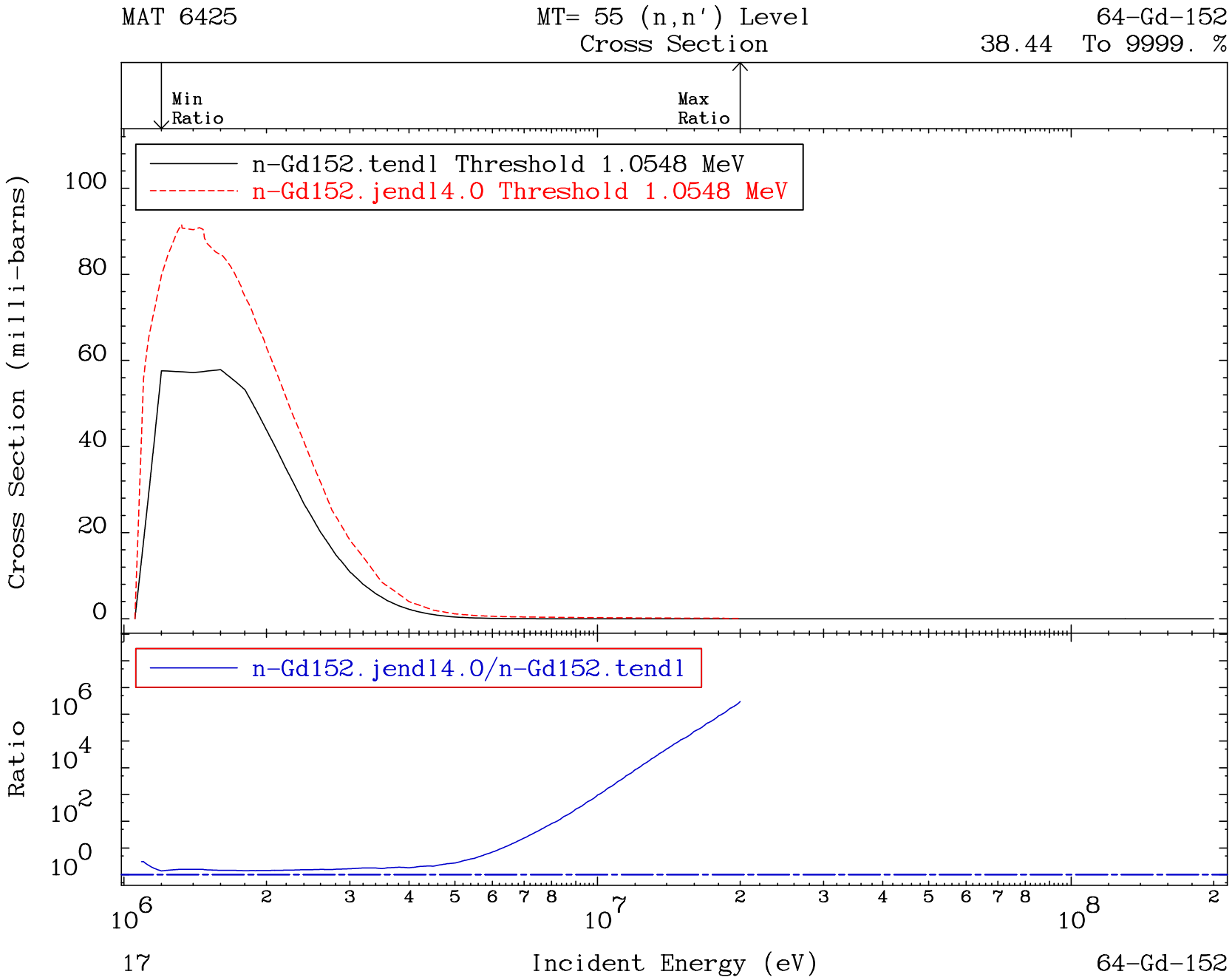

MAT 6425
(n,2n) p
Cross Section
64-Gd-152
-100.0 To -70.56%
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 15.376 MeV
n-Gd152.jendl4.0 Threshold 15.379 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
64-Gd-152

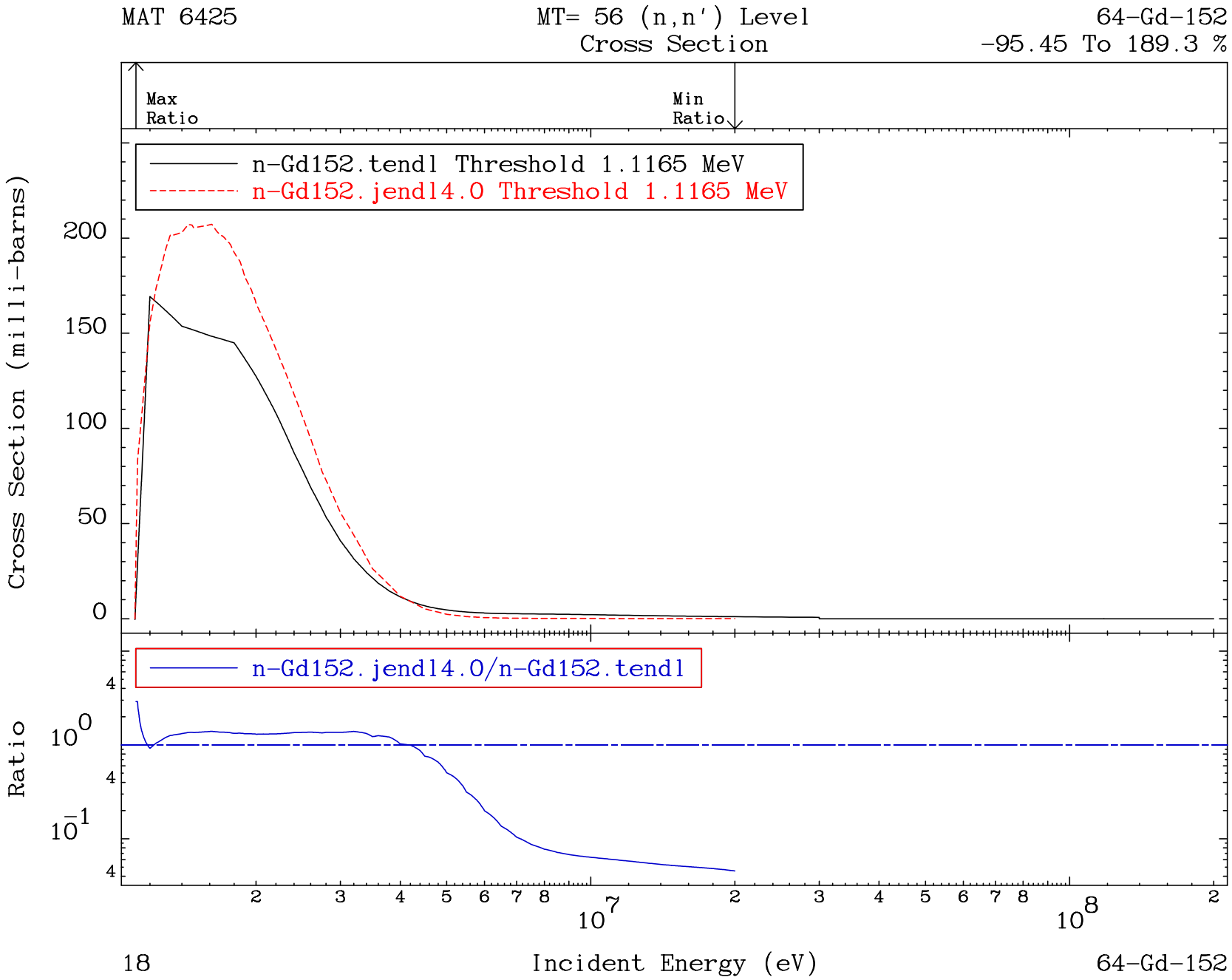

MAT 6425
MT= 51 (n,n') Level
Cross Section
64-Gd-152
-54.68 To 47.51 %
Min
Ratio
Max
Ratio
n-Gd152.tendl Threshold 346.57 keV
n-Gd152.jendl4.0 Threshold 346.57 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
1.6
1.2
0.8
0.4
4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
64-Gd-152

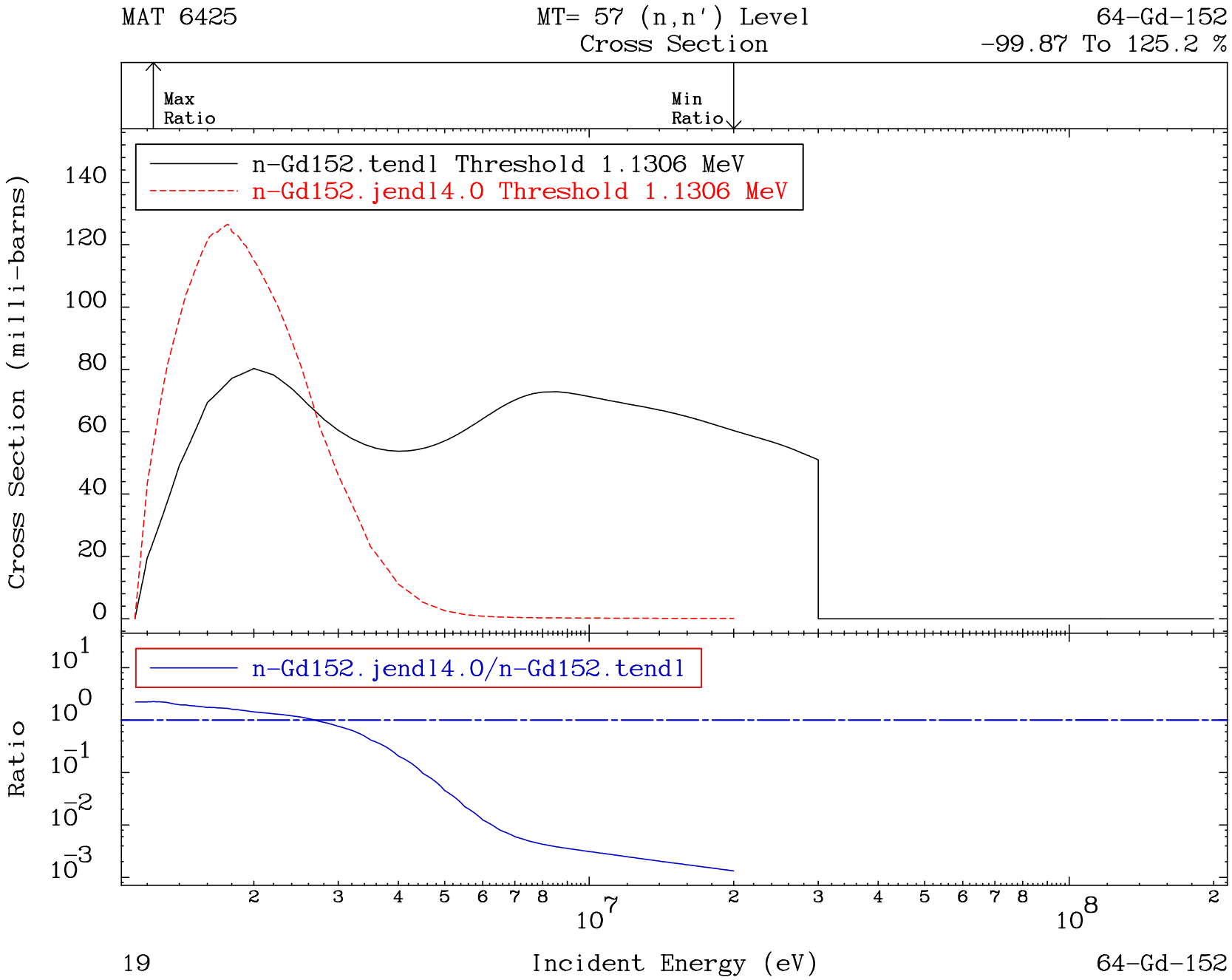

MAT 6425
MT= 52 (n,n') Level
Cross Section
64-Gd-152
-97.58 To 76.98 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 619.49 keV
n-Gd152.jendl4.0 Threshold 619.49 keV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
4
10^0
4
10^-1
4
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
64-Gd-152

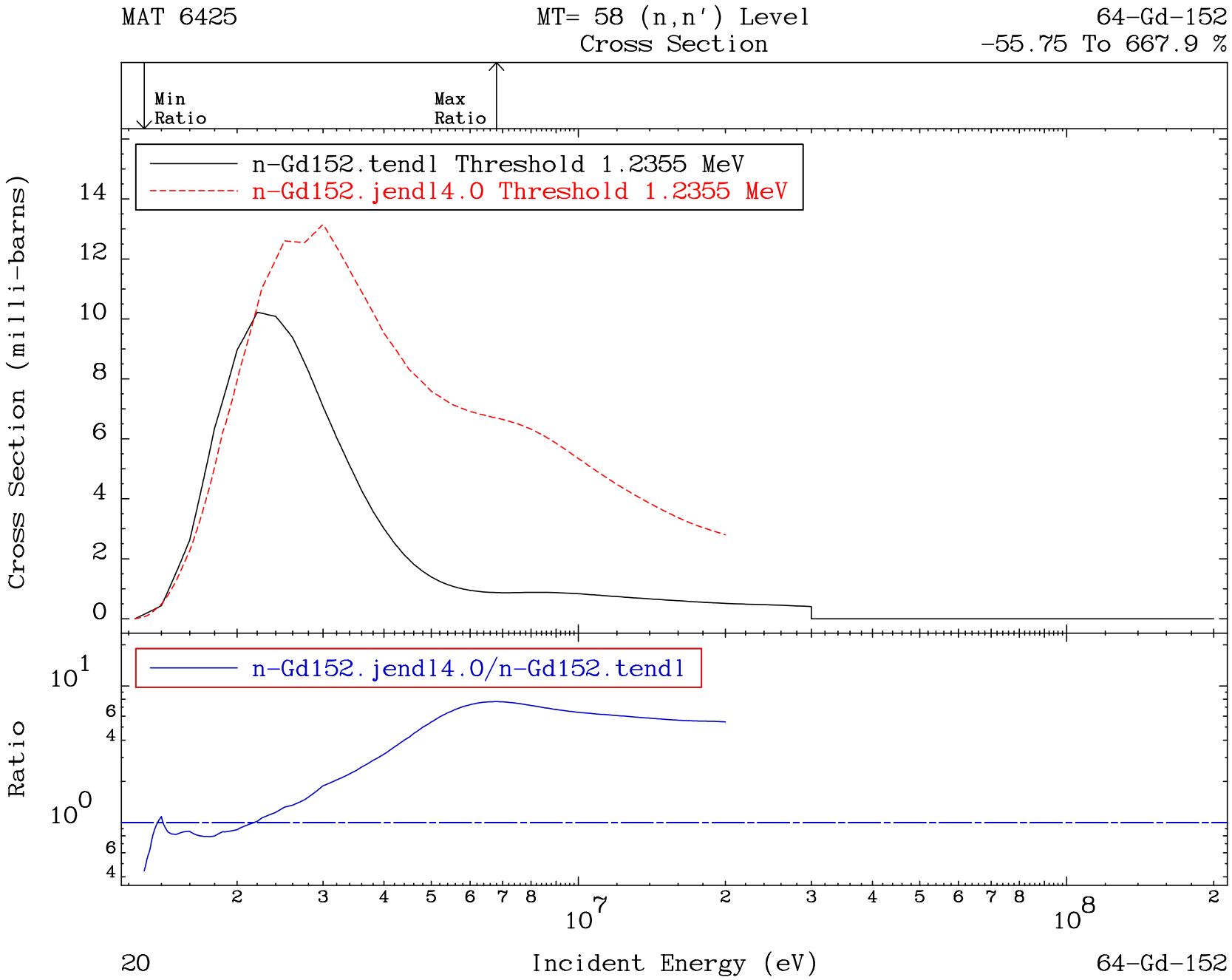

MAT 6425
MT= 53 (n,n') Level
Cross Section
64-Gd-152
-16.61 To 76.00 %
Min
Ratio
Max
Ratio
n-Gd152.tendl Threshold 760.41 keV
n-Gd152.jendl4.0 Threshold 760.41 keV
Cross Section (milli-barns)
150
100
50
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
2.0
1.6
1.2
0.8
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
15
Incident Energy (eV)
64-Gd-152

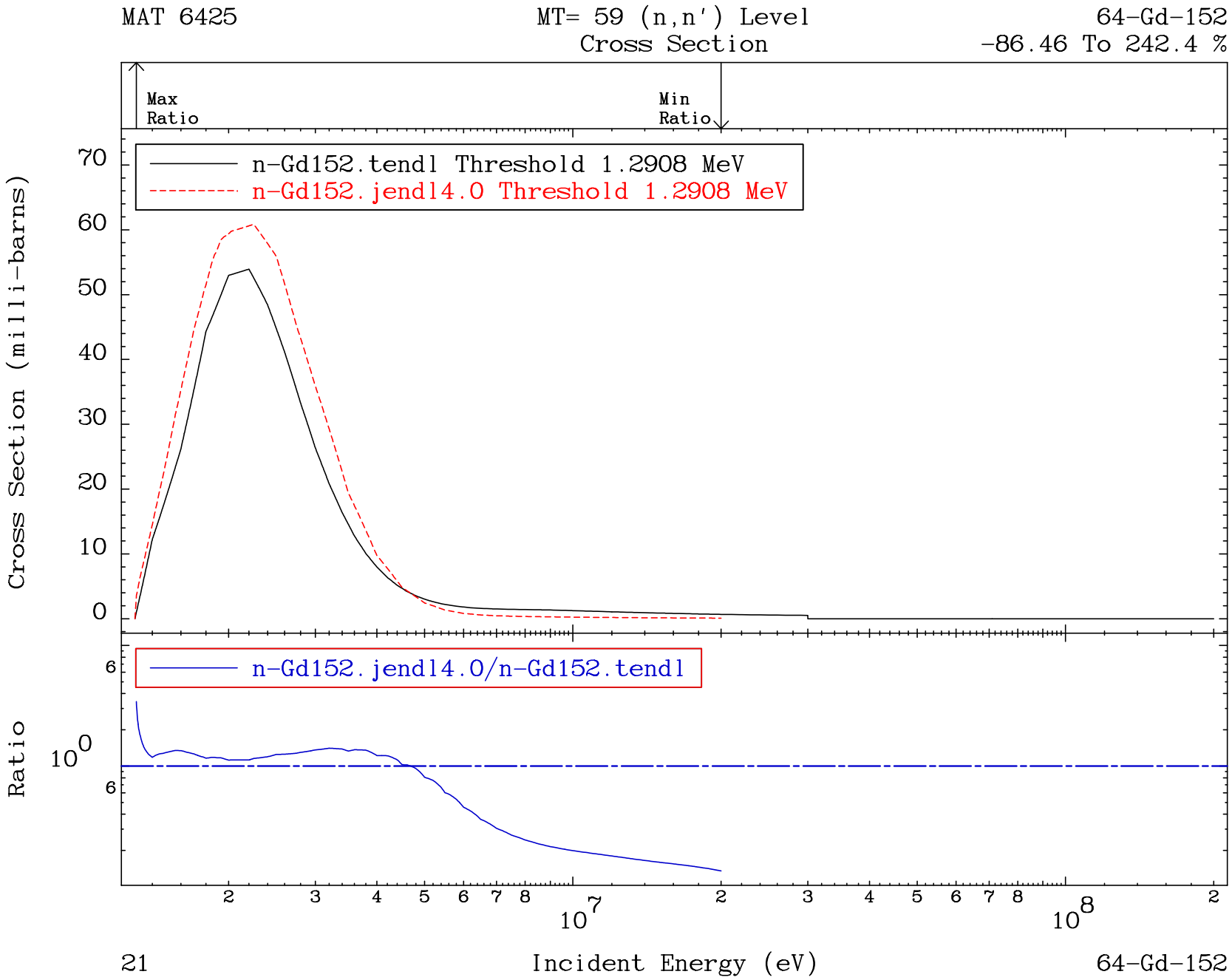

MAT 6425
MT= 54 (n,n') Level
Cross Section
64-Gd-152
-93.67 To 43.76 %
Max
Ratio
Min
Ratio
n-Gd152.tendl Threshold 936.72 keV
n-Gd152.jendl4.0 Threshold 936.72 keV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
6
10^-1
6
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
16
Incident Energy (eV)
64-Gd-152

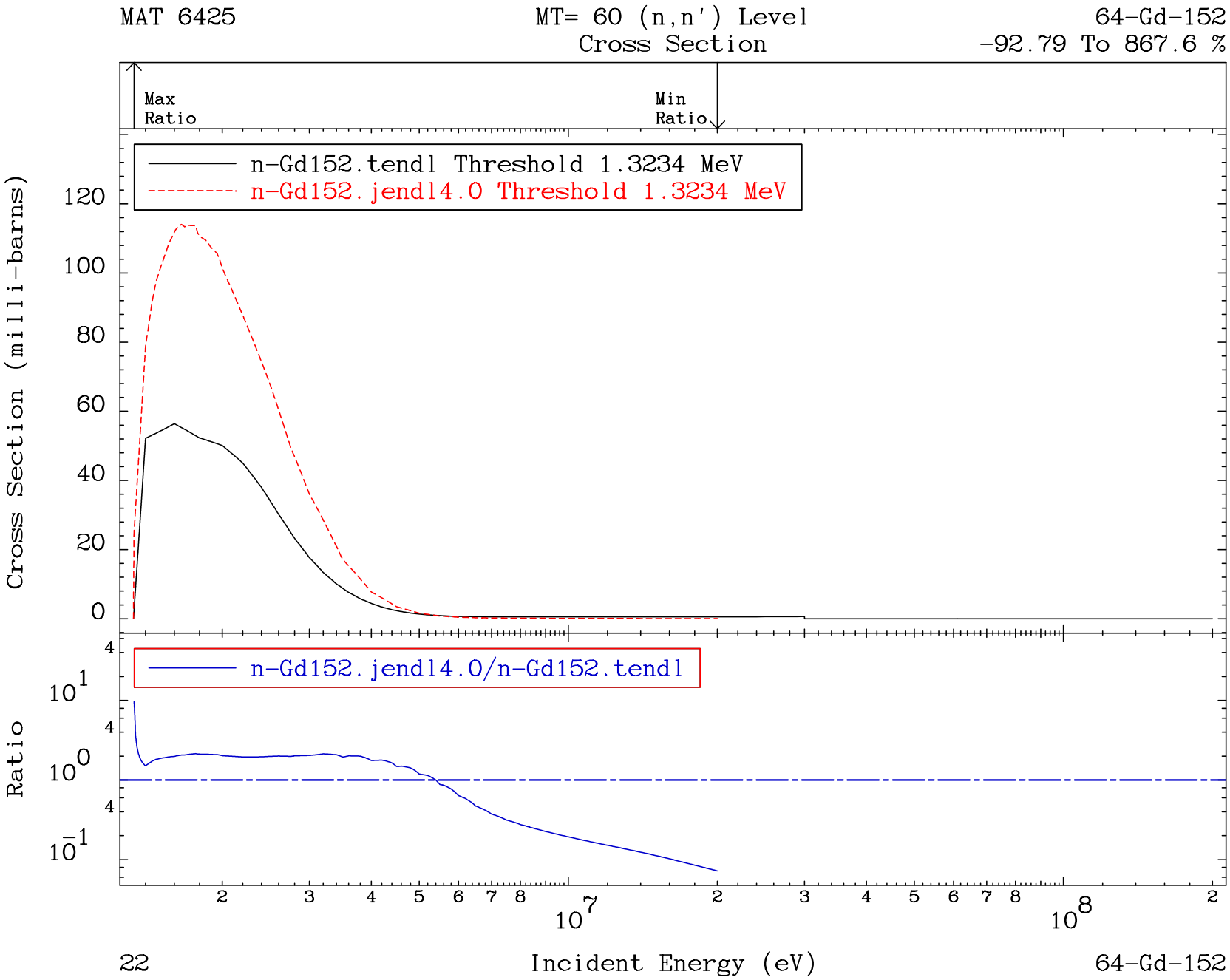

MAT 6425
MT= 55 (n,n') Level
Cross Section
64-Gd-152
38.44 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.0548 MeV
n-Gd152.jendl4.0 Threshold 1.0548 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^6
10^4
10^2
10^0
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
64-Gd-152

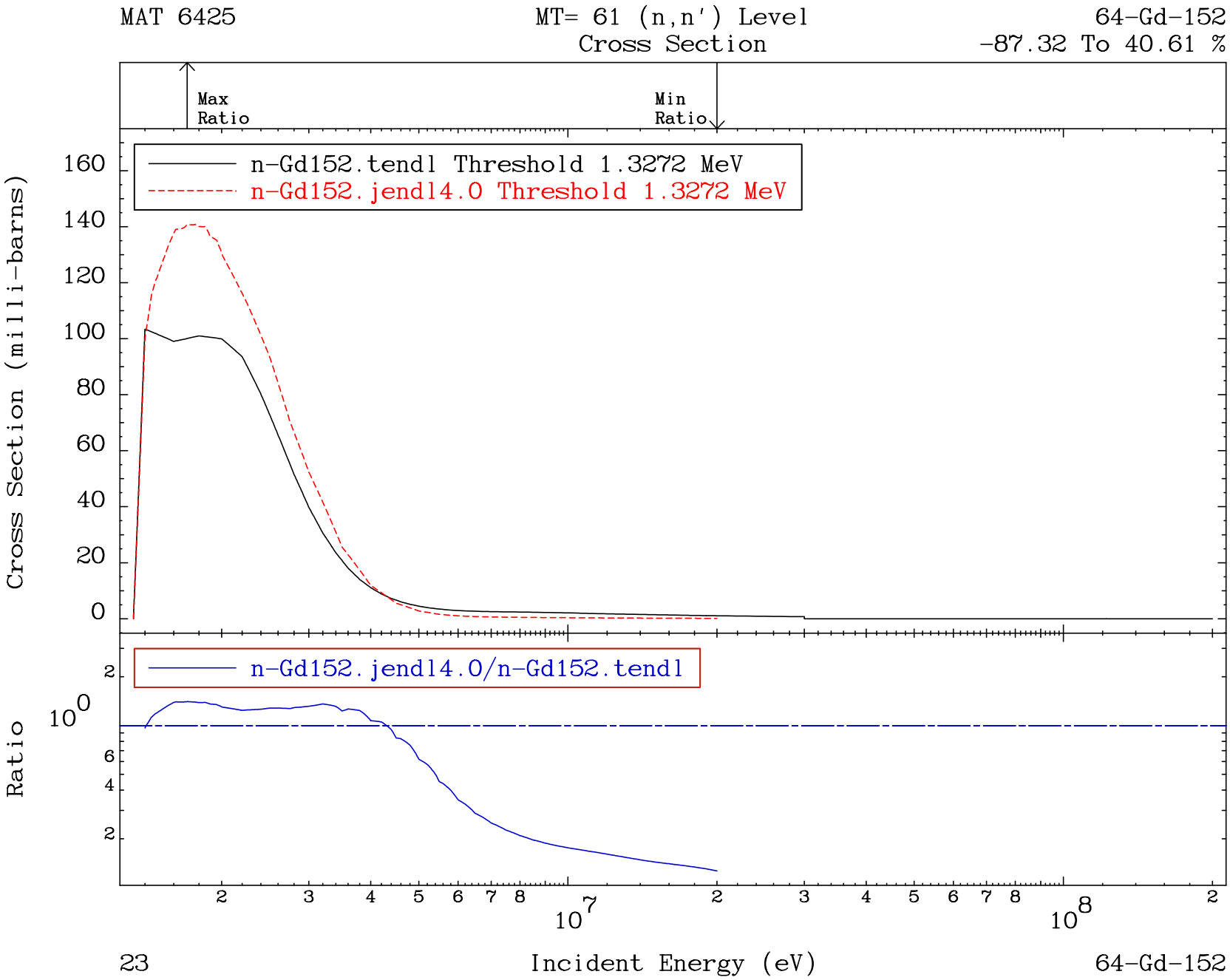

MAT 6425
MT= 56 (n,n') Level
Cross Section
64-Gd-152
-95.45 To 189.3 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.1165 MeV
n-Gd152.jendl4.0 Threshold 1.1165 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
10^-1
4
2 3 4 5 6 7 8
10^7
10^8
18
Incident Energy (eV)
64-Gd-152

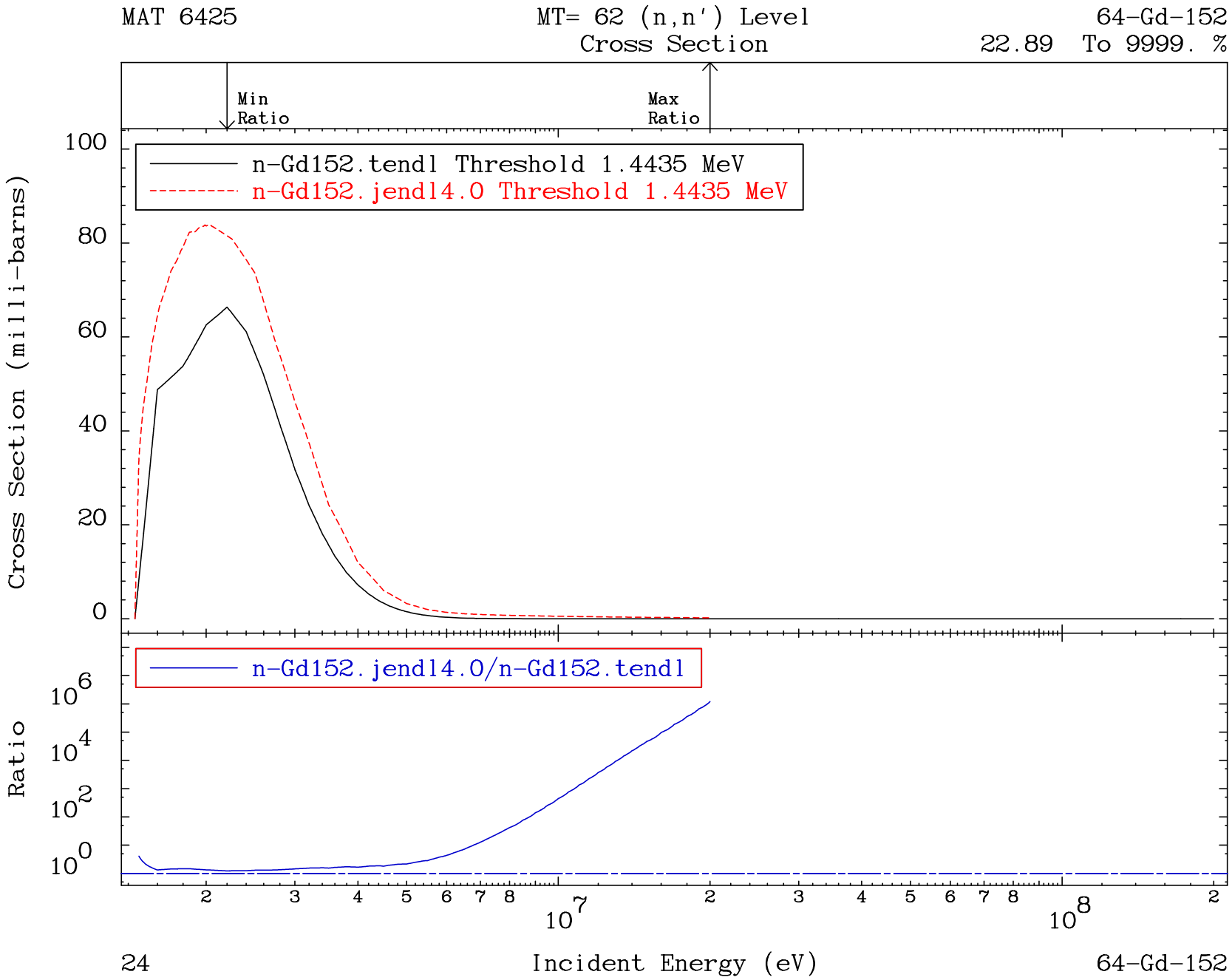

MAT 6425
MT= 57 (n,n') Level
Cross Section
64-Gd-152
-99.87 To 125.2 %
Max
Ratio
Min
Ratio
n-Gd152.tendl Threshold 1.1306 MeV
n-Gd152.jendl4.0 Threshold 1.1306 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^1
10^0
10^-1
10^-2
10^-3
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
64-Gd-152

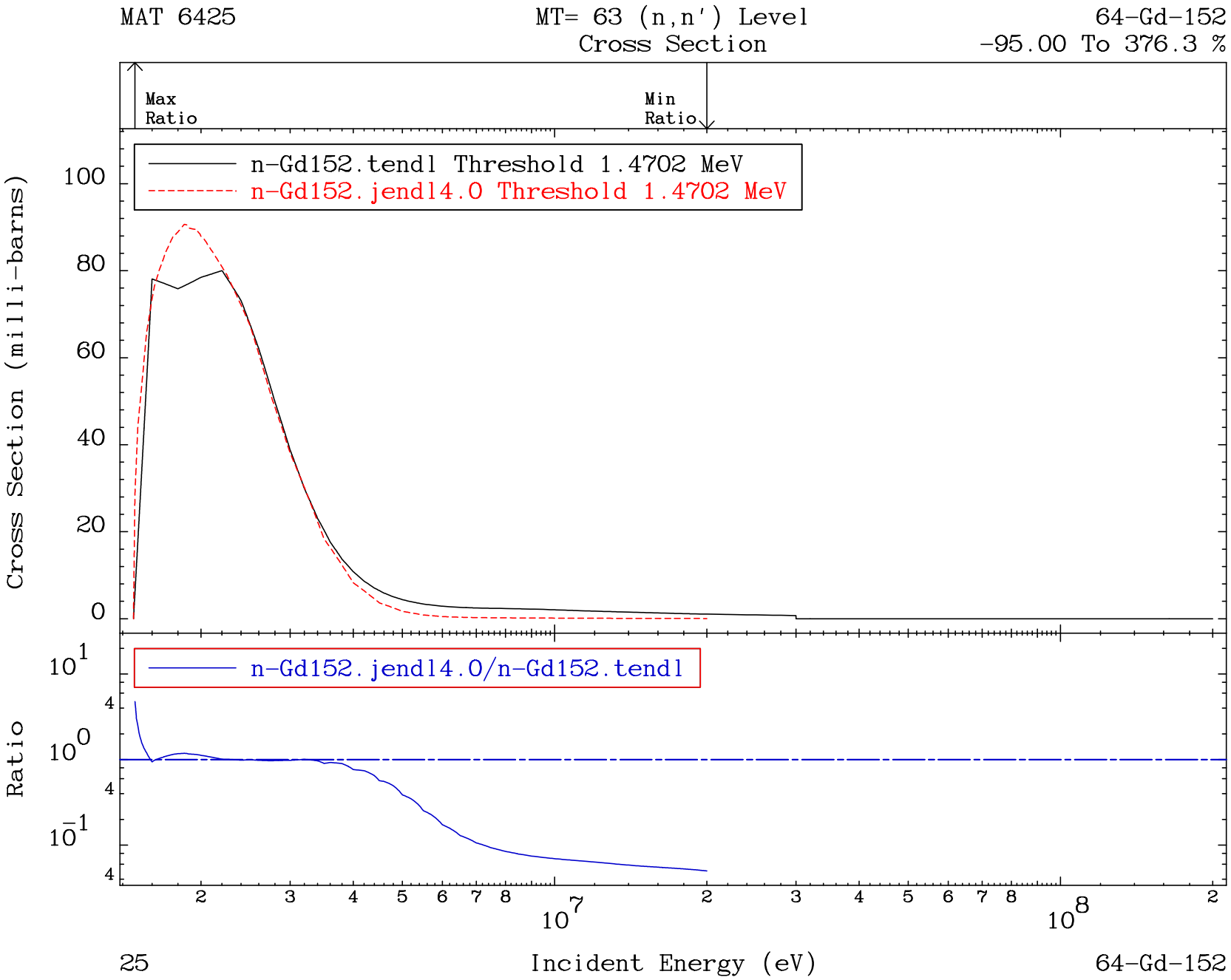

MAT 6425
MT= 58 (n,n') Level
Cross Section
64-Gd-152
-55.75 To 667.9 %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.2355 MeV
n-Gd152.jendl4.0 Threshold 1.2355 MeV
Cross Section (milli-barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
20
64-Gd-152

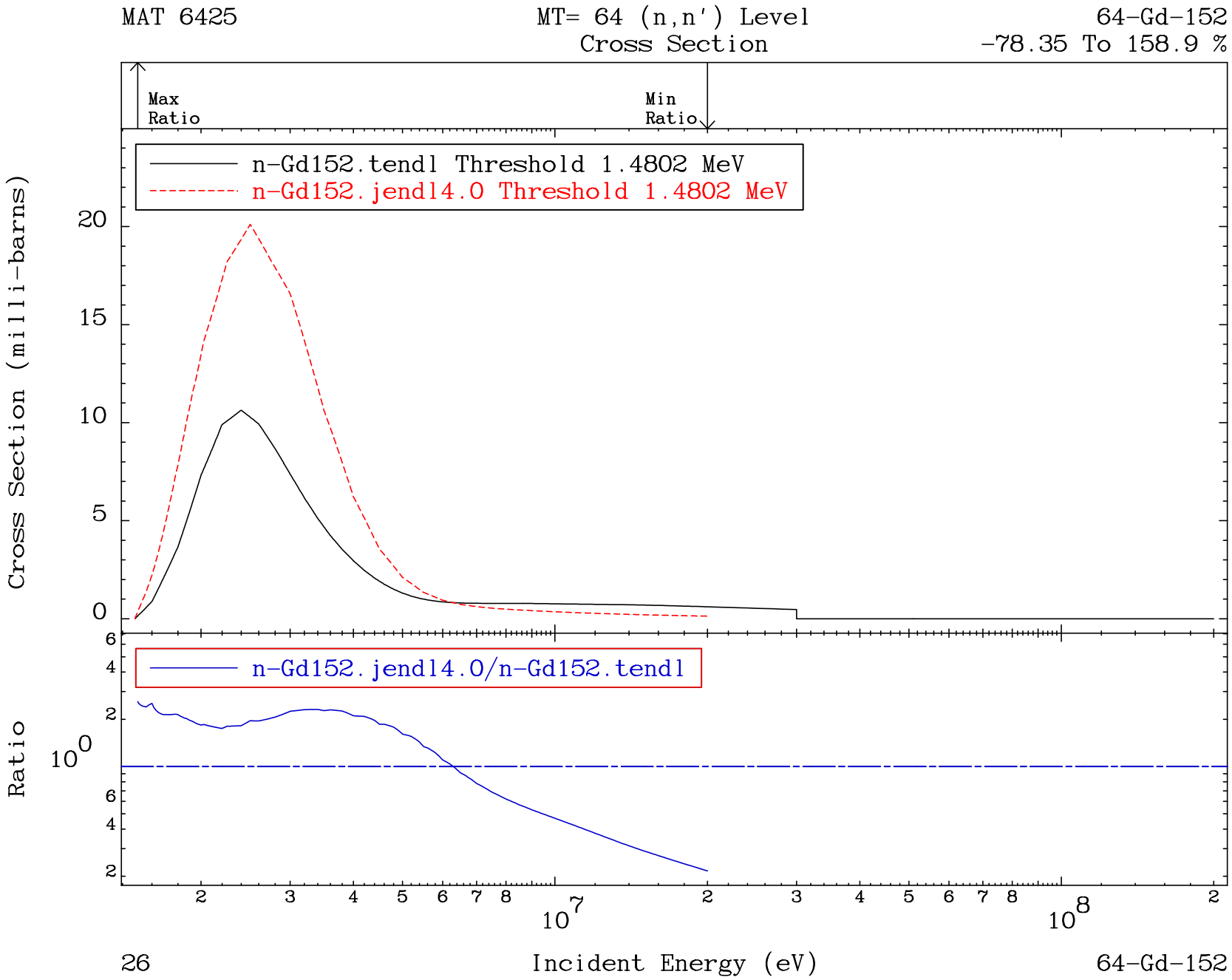

MAT 6425
MT= 59 (n,n') Level
Cross Section
64-Gd-152
-86.46 To 242.4 %
Max
Ratio
Min
Ratio
n-Gd152.tendl Threshold 1.2908 MeV
n-Gd152.jendl4.0 Threshold 1.2908 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
6
10^0
6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
21
Incident Energy (eV)
64-Gd-152

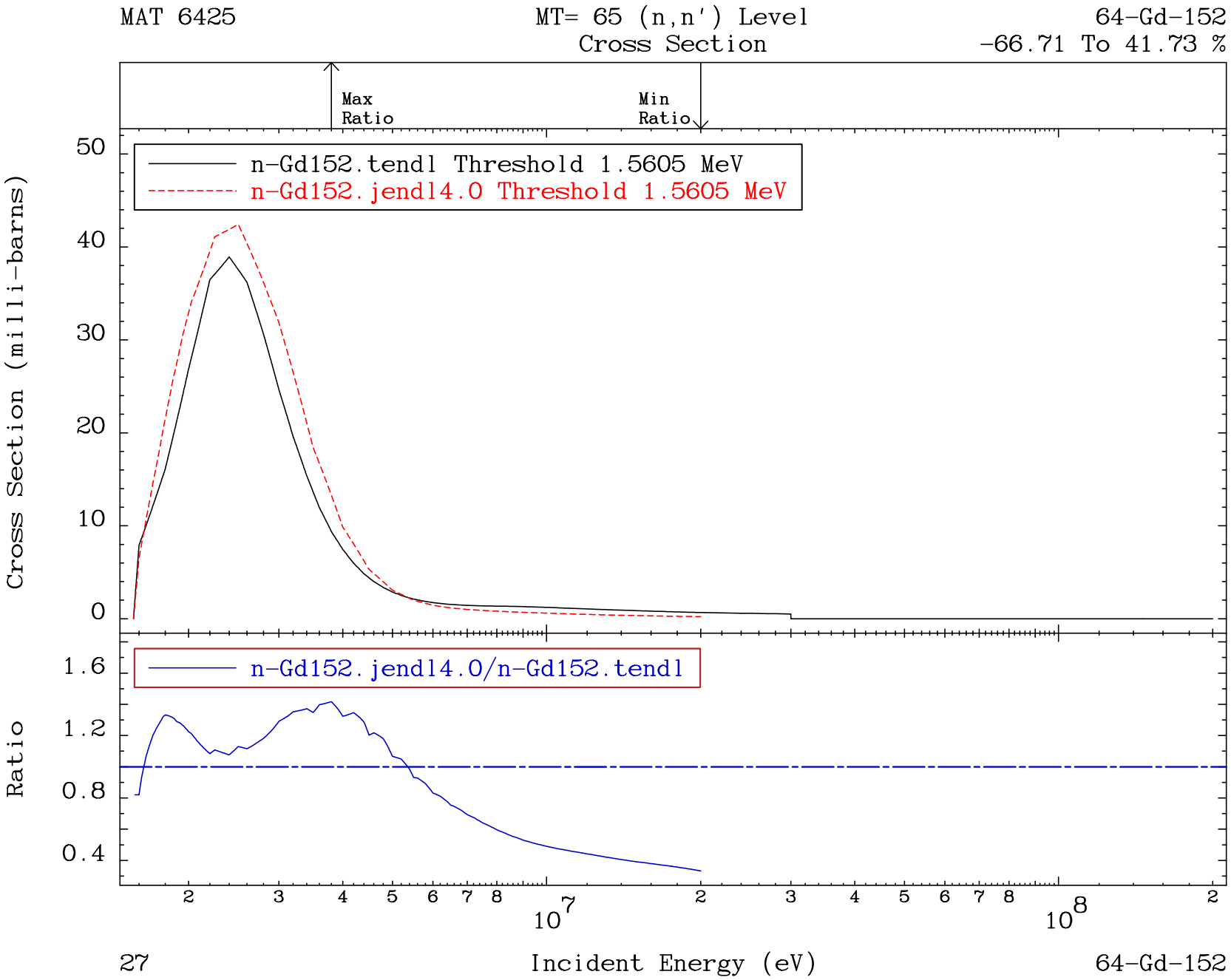

MAT 6425
MT= 60 (n,n') Level
Cross Section
64-Gd-152
-92.79 To 867.6 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.3234 MeV
n-Gd152.jendl4.0 Threshold 1.3234 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^1
10^0
10^-1
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
64-Gd-152

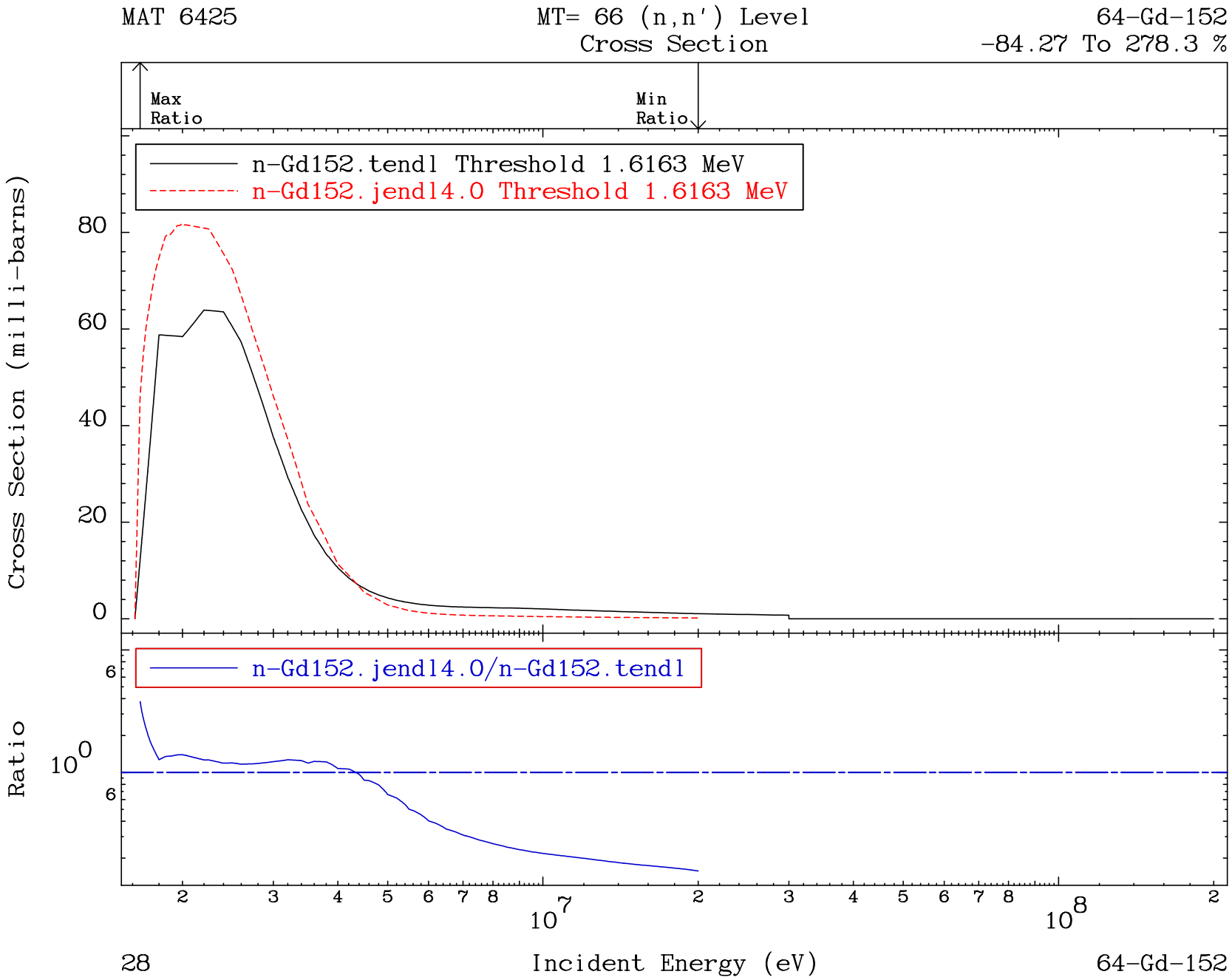

MAT 6425
MT= 61 (n,n') Level
Cross Section
64-Gd-152
-87.32 To 40.61 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.3272 MeV
n-Gd152.jendl4.0 Threshold 1.3272 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
2
10^0
6
4
2
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
64-Gd-152

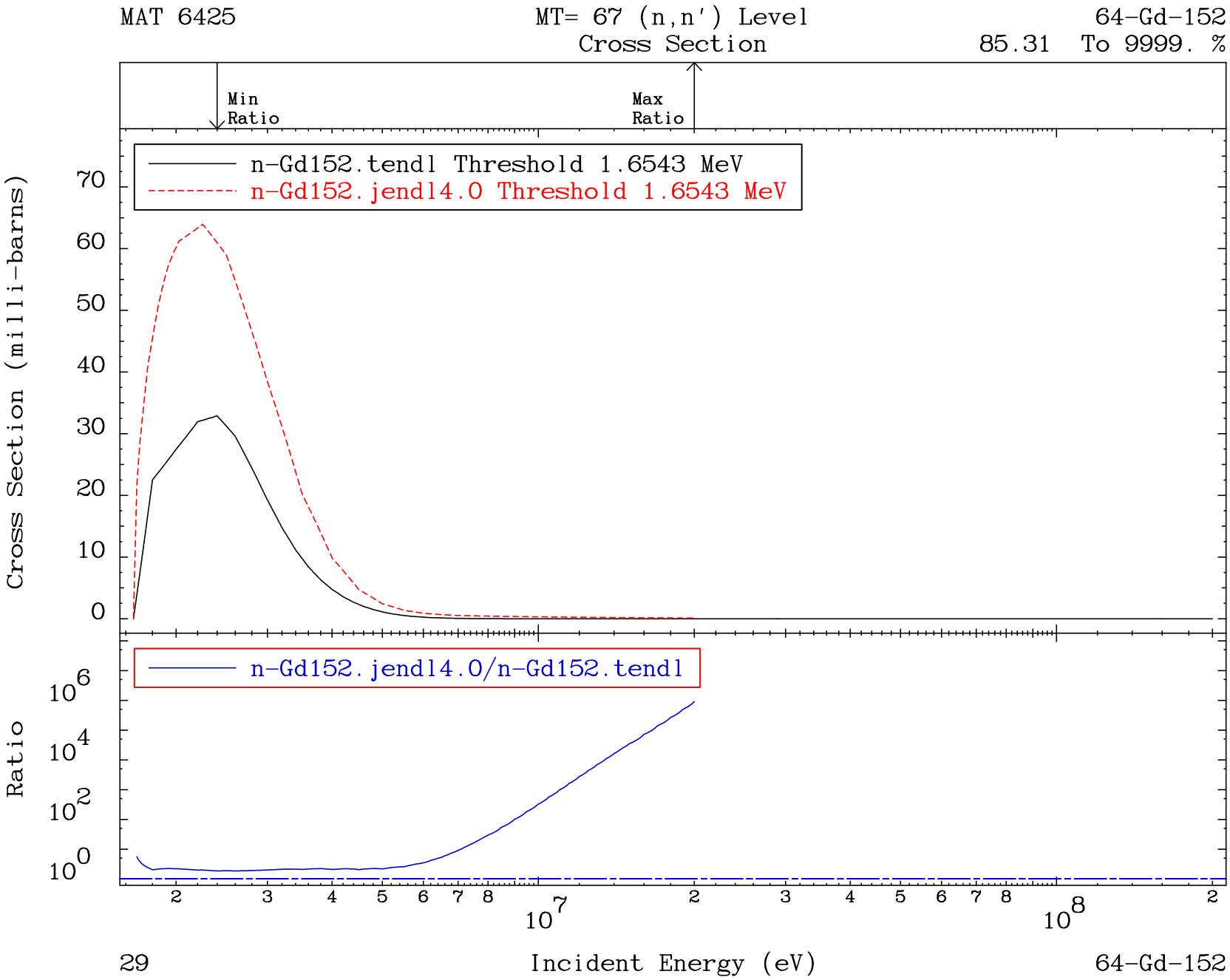

MAT 6425
MT= 62 (n,n') Level
Cross Section
64-Gd-152
22.89 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.4435 MeV
n-Gd152.jendl4.0 Threshold 1.4435 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
24
Incident Energy (eV)
64-Gd-152

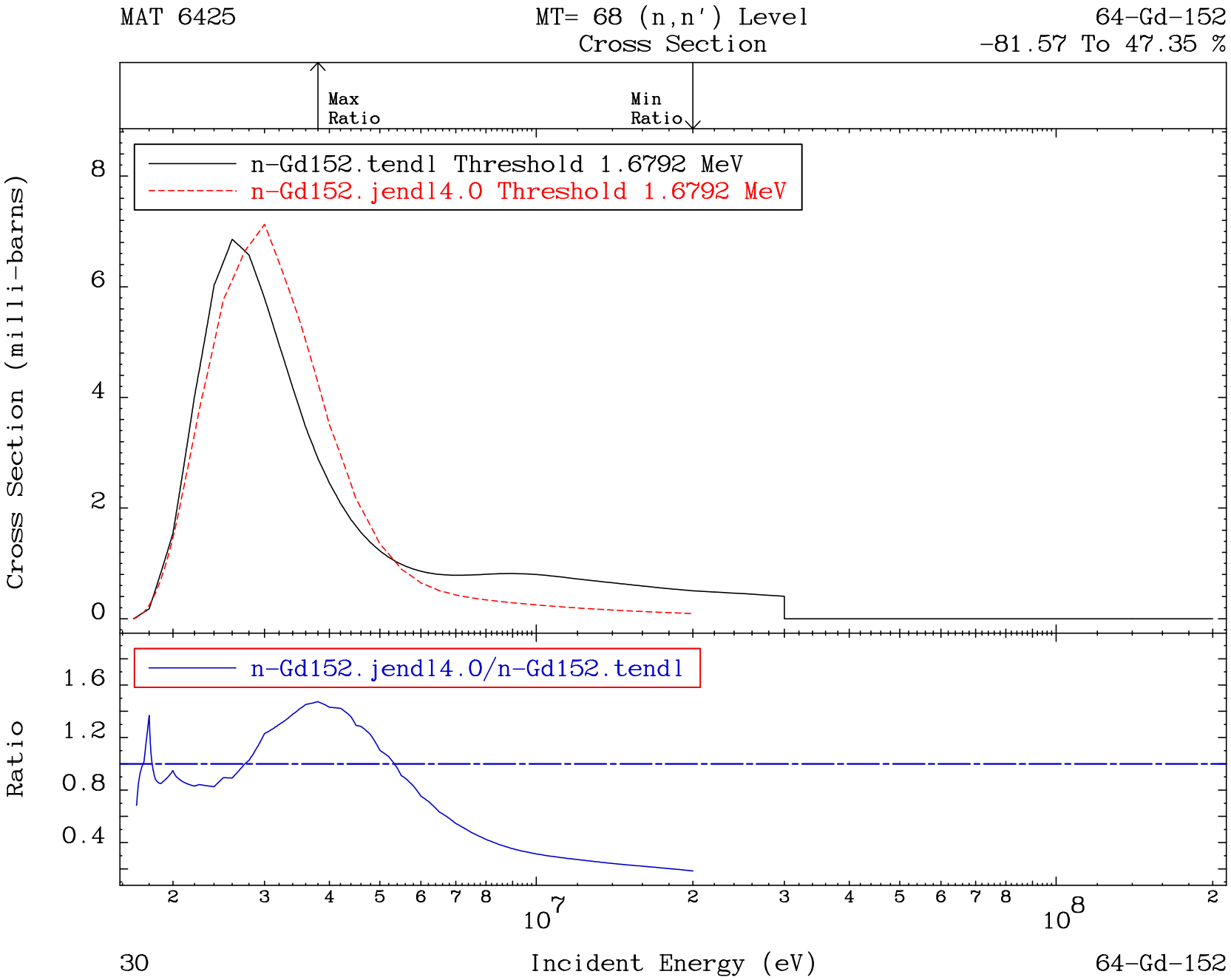

MAT 6425
MT= 63 (n,n') Level
Cross Section
64-Gd-152
-95.00 To 376.3 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.4702 MeV
n-Gd152.jendl4.0 Threshold 1.4702 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^1
10^0
10^-1
2
3
4
5
6
7
8
10^7
10^8
25
Incident Energy (eV)
64-Gd-152

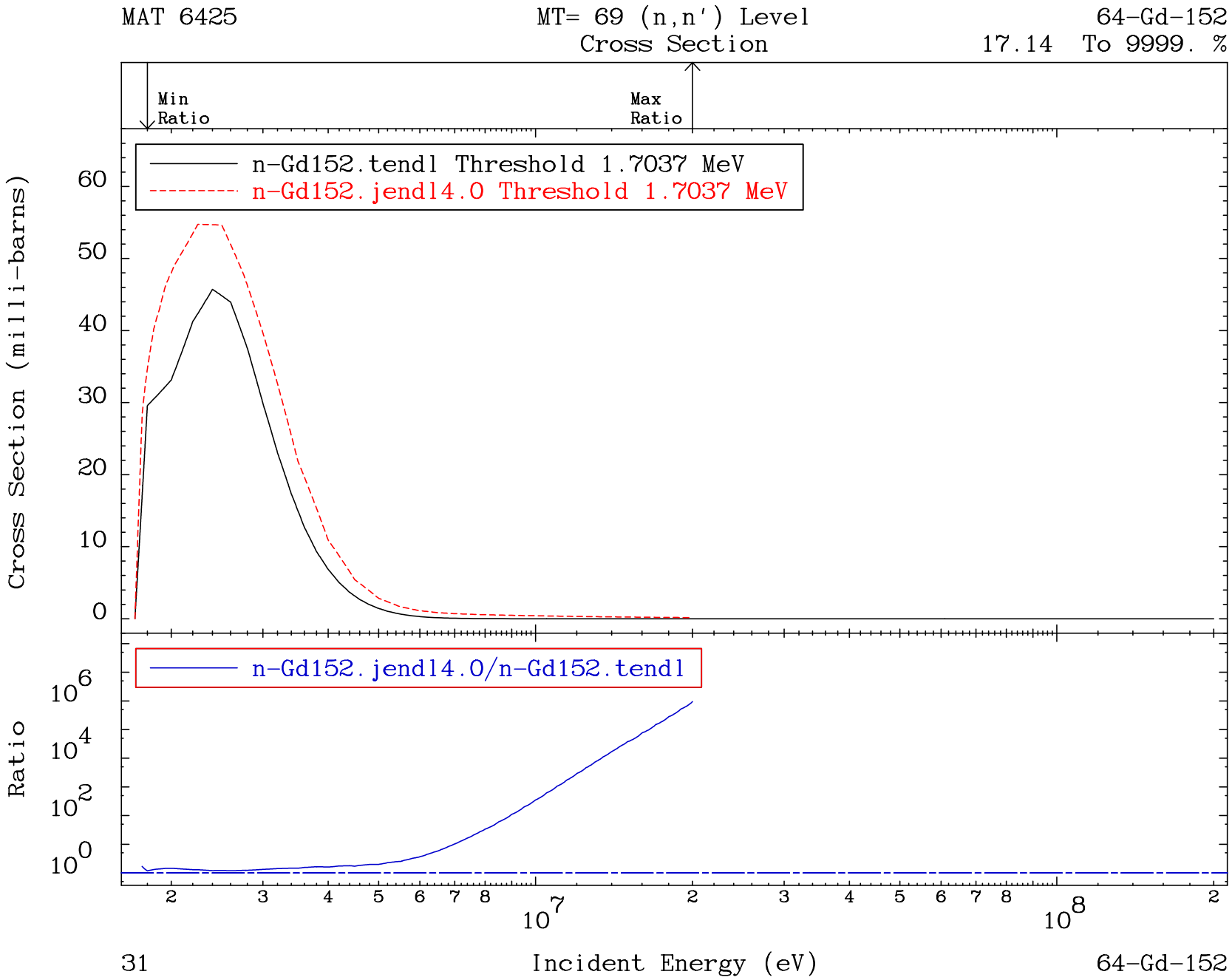

MAT 6425
MT= 64 (n,n') Level
Cross Section
64-Gd-152
-78.35 To 158.9 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.4802 MeV
n-Gd152.jendl4.0 Threshold 1.4802 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
6
4
2
6
4
2
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
64-Gd-152

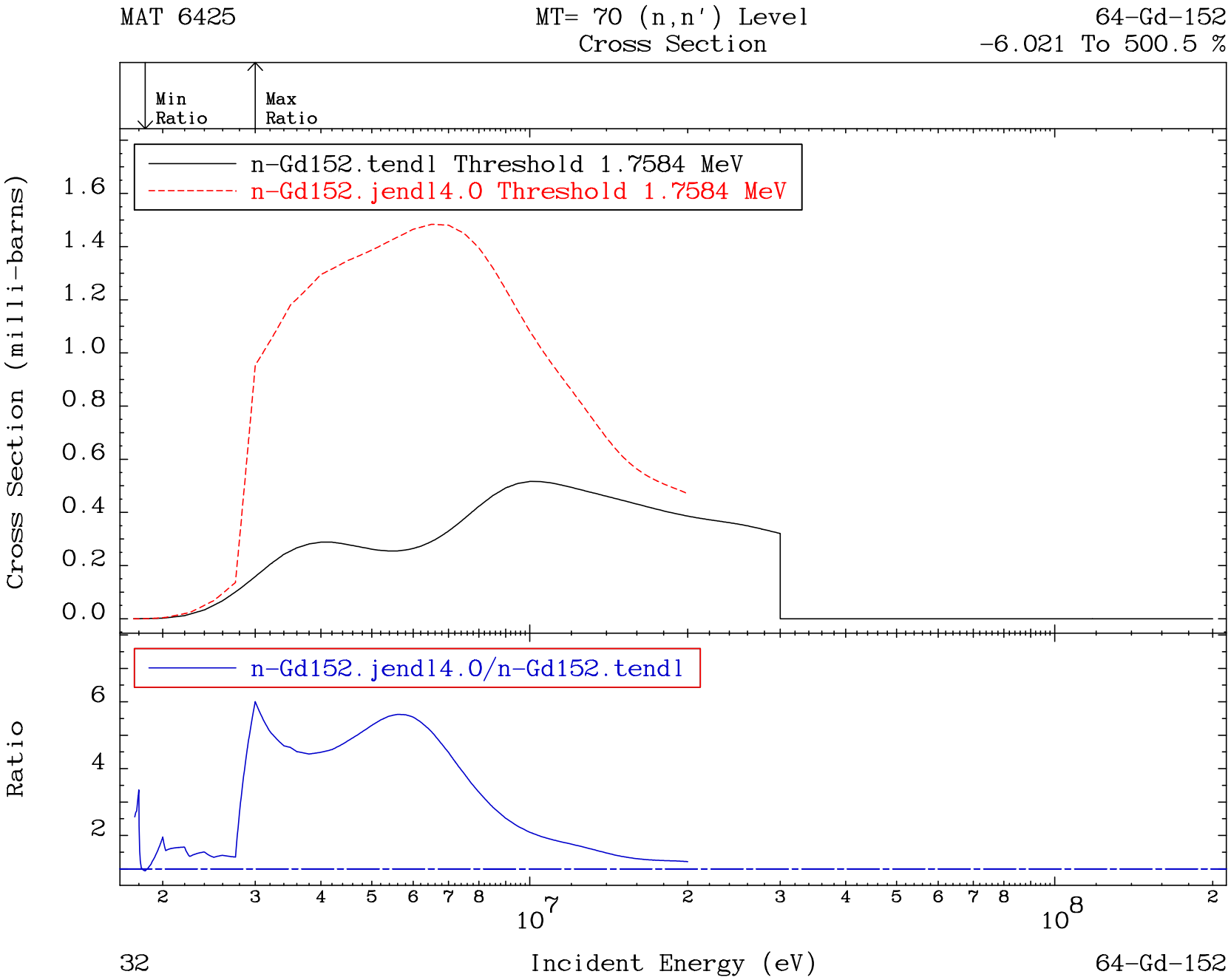

MAT 6425
MT= 65 (n,n') Level
Cross Section
64-Gd-152
-66.71 To 41.73 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.5605 MeV
n-Gd152.jendl4.0 Threshold 1.5605 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
1.6
1.2
0.8
0.4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
27
Incident Energy (eV)
64-Gd-152

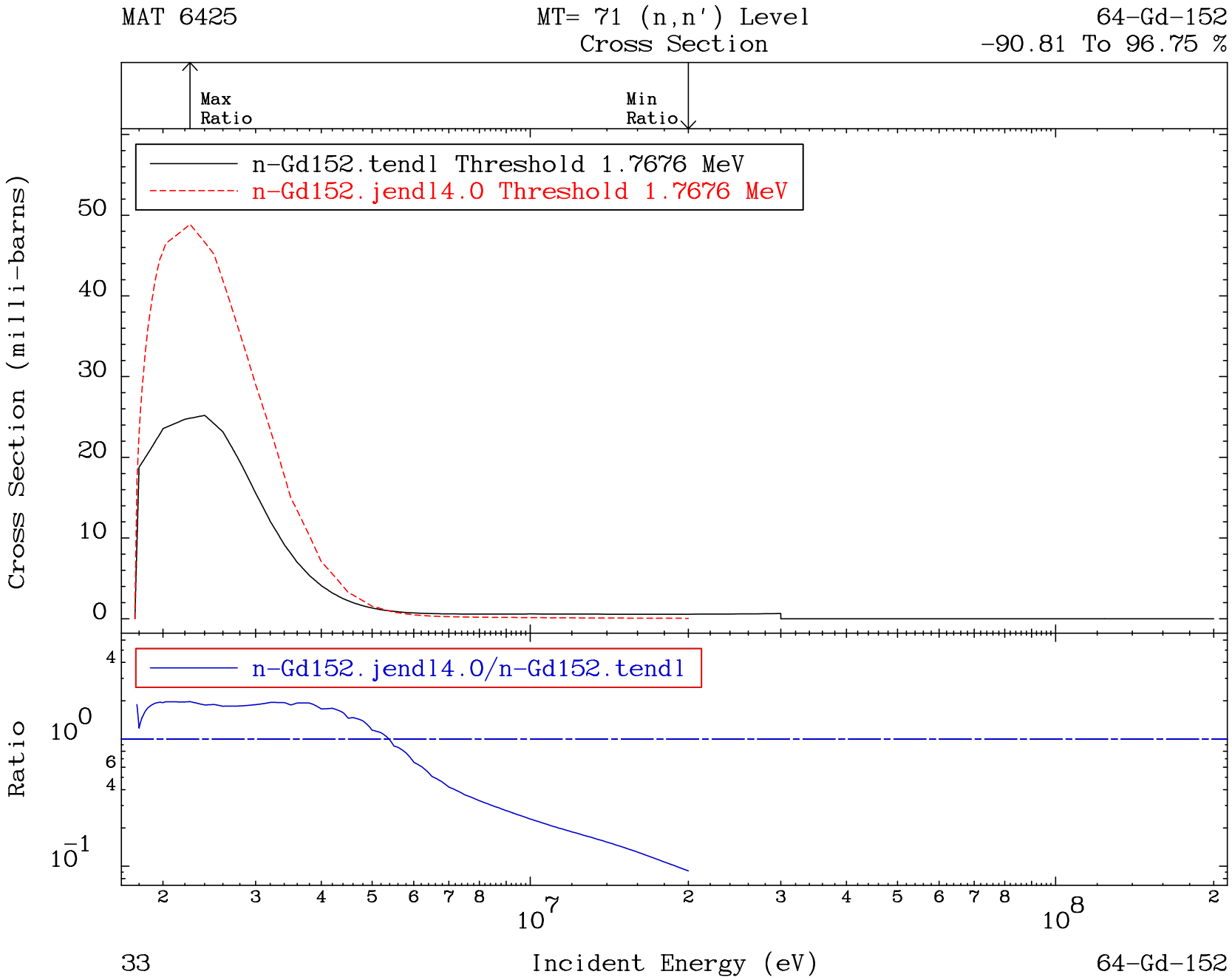

MAT 6425
MT= 66 (n,n') Level
Cross Section
64-Gd-152
-84.27 To 278.3 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.6163 MeV
n-Gd152.jendl4.0 Threshold 1.6163 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
6
10^0
6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
64-Gd-152

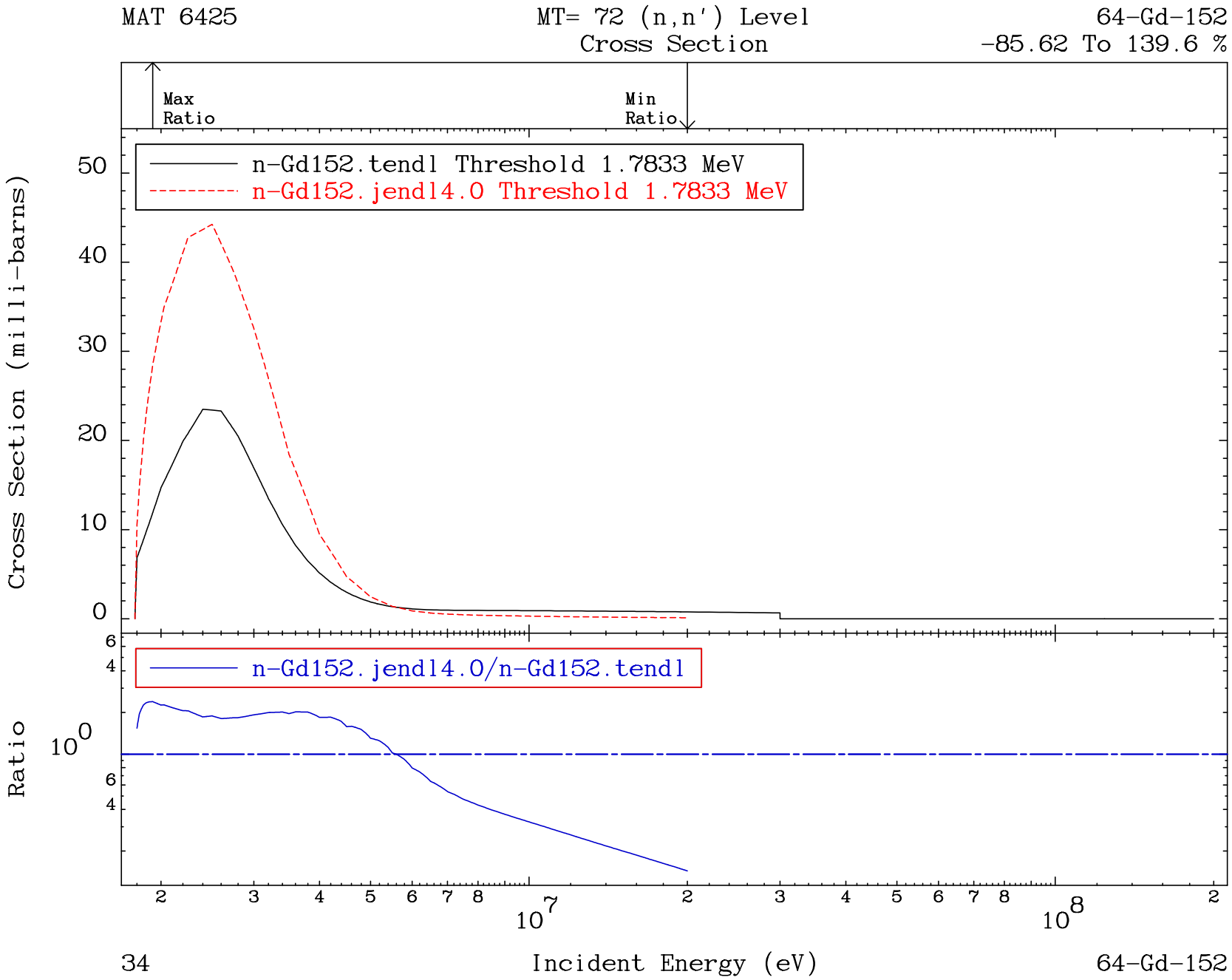

MAT 6425
MT= 67 (n,n') Level
Cross Section
64-Gd-152
85.31 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.6543 MeV
n-Gd152.jendl4.0 Threshold 1.6543 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
29
Incident Energy (eV)
64-Gd-152

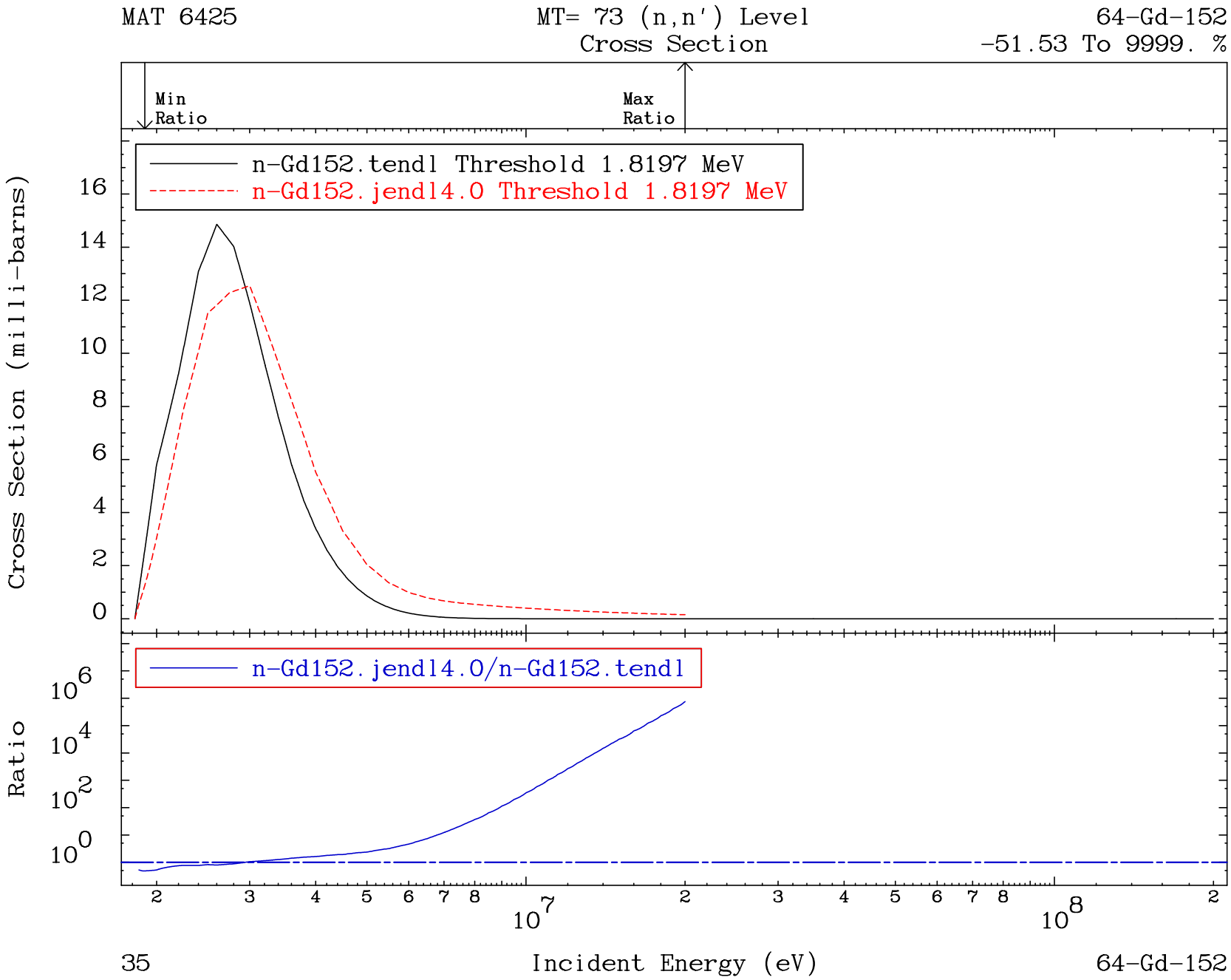

MAT 6425
MT= 68 (n,n') Level
Cross Section
64-Gd-152
-81.57 To 47.35 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.6792 MeV
n-Gd152.jendl4.0 Threshold 1.6792 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
0.4
0.8
1.2
1.6
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
30
Incident Energy (eV)
64-Gd-152

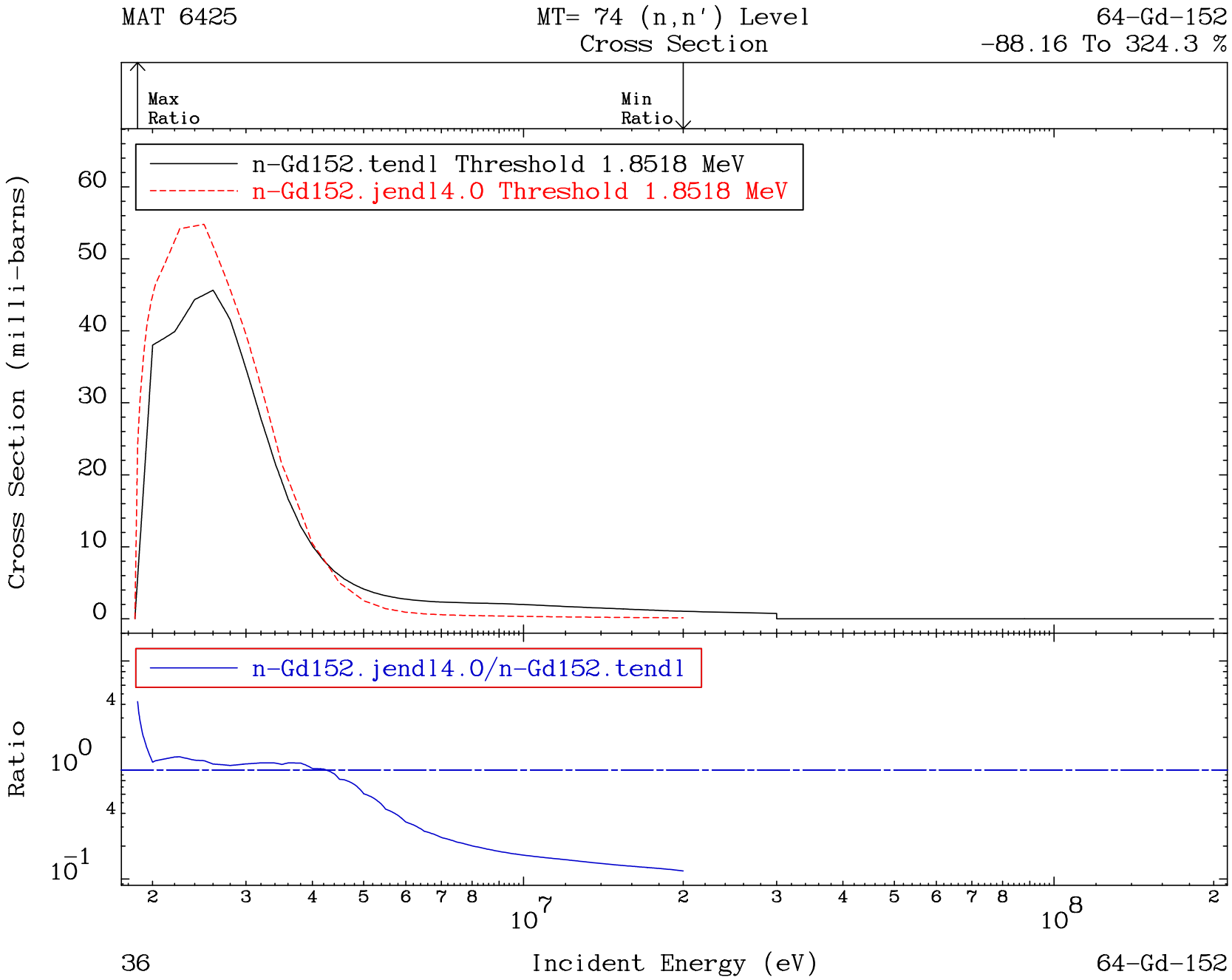

MAT 6425
MT= 69 (n,n') Level
Cross Section
64-Gd-152
17.14 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.7037 MeV
n-Gd152.jendl4.0 Threshold 1.7037 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
31
Incident Energy (eV)
64-Gd-152

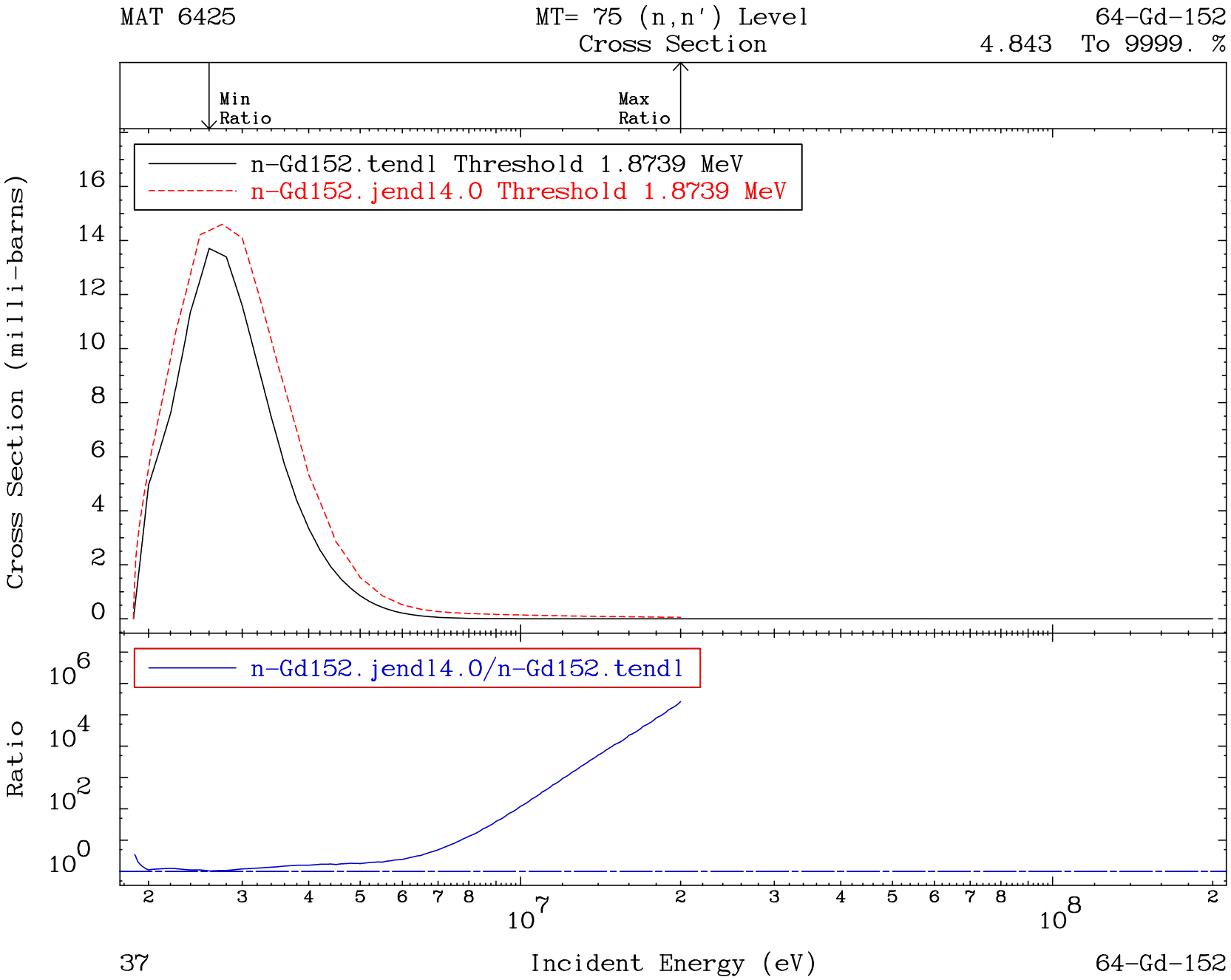

MAT 6425
MT= 70 (n,n') Level
Cross Section
64-Gd-152
-6.021 To 500.5 %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.7584 MeV
n-Gd152.jendl4.0 Threshold 1.7584 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
6
4
2
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
32
Incident Energy (eV)
64-Gd-152

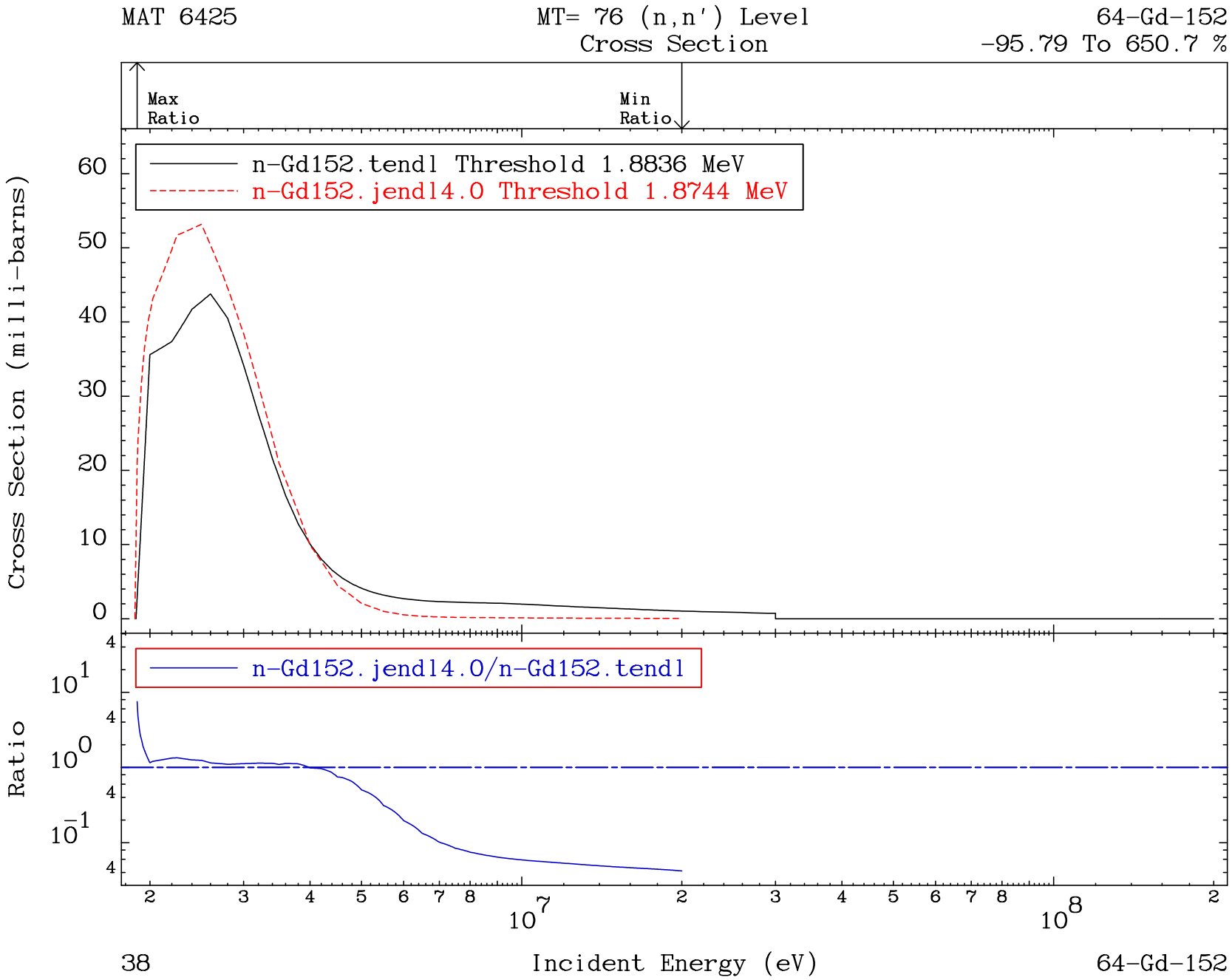

MAT 6425
MT= 71 (n,n') Level
Cross Section
64-Gd-152
-90.81 To 96.75 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.7676 MeV
n-Gd152.jendl4.0 Threshold 1.7676 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
4
10^{0}
6
4
10^{-1}
2
3
4
5
6
7
8
10^{7}
2
3
4
5
6
7
8
10^{8}
2
33
Incident Energy (eV)
64-Gd-152

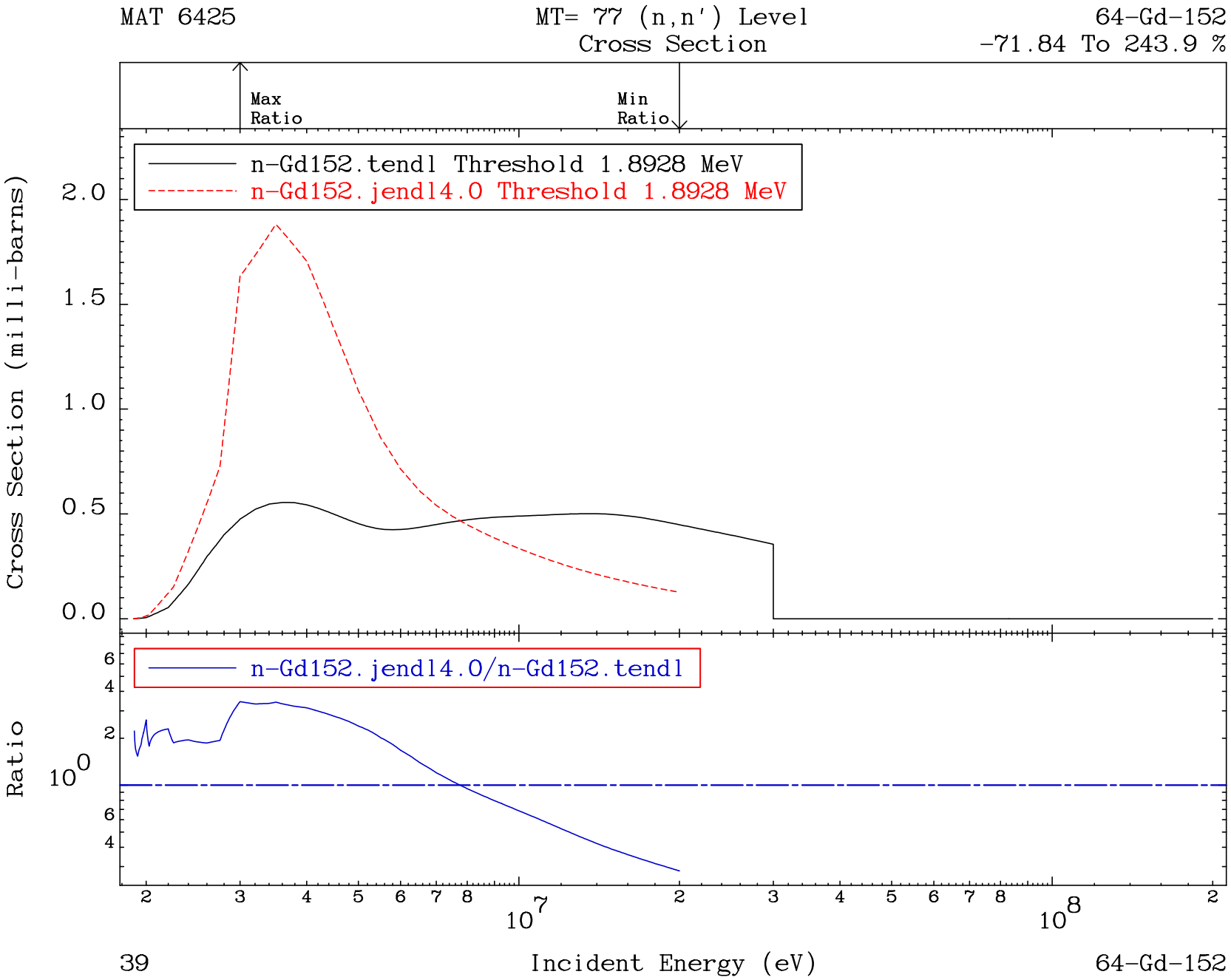

MAT 6425
MT= 72 (n,n') Level
Cross Section
64-Gd-152
-85.62 To 139.6 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.7833 MeV
n-Gd152.jendl4.0 Threshold 1.7833 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
6
4
10^0
6
4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
34
Incident Energy (eV)
64-Gd-152

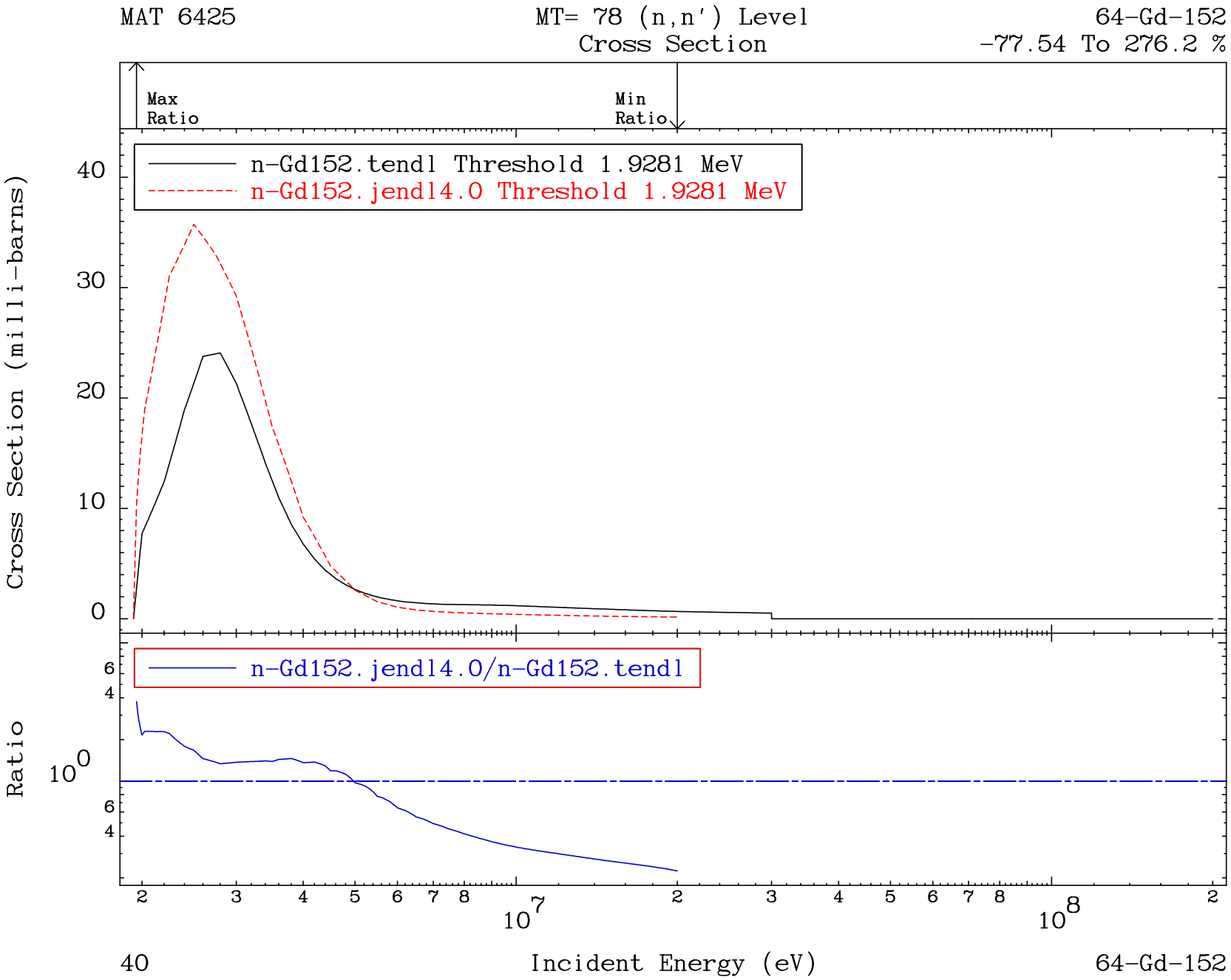

MAT 6425
MT= 73 (n,n') Level
Cross Section
64-Gd-152
-51.53 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.8197 MeV
n-Gd152.jendl4.0 Threshold 1.8197 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
14
16
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
10^2
10^4
10^6
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
35
Incident Energy (eV)
64-Gd-152

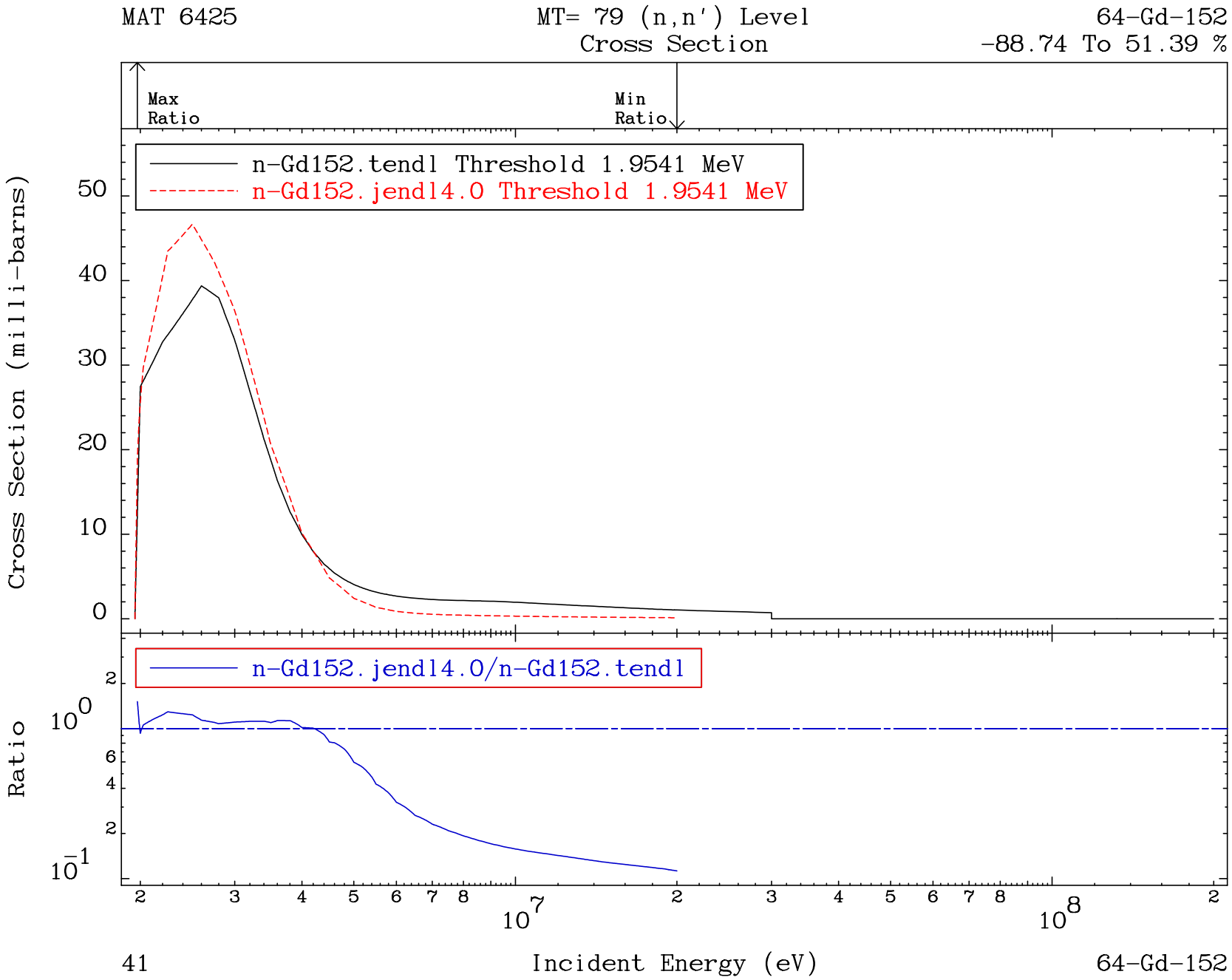

MAT 6425
MT= 74 (n,n') Level
Cross Section
64-Gd-152
-88.16 To 324.3 %
Max
Ratio
Min
Ratio
n-Gd152.tendl Threshold 1.8518 MeV
n-Gd152.jendl4.0 Threshold 1.8518 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
4
10^{0}
4
10^{-1}
2
3
4
5
6
7
8
10^{7}
2
3
4
5
6
7
8
10^{8}
2
36
Incident Energy (eV)
64-Gd-152

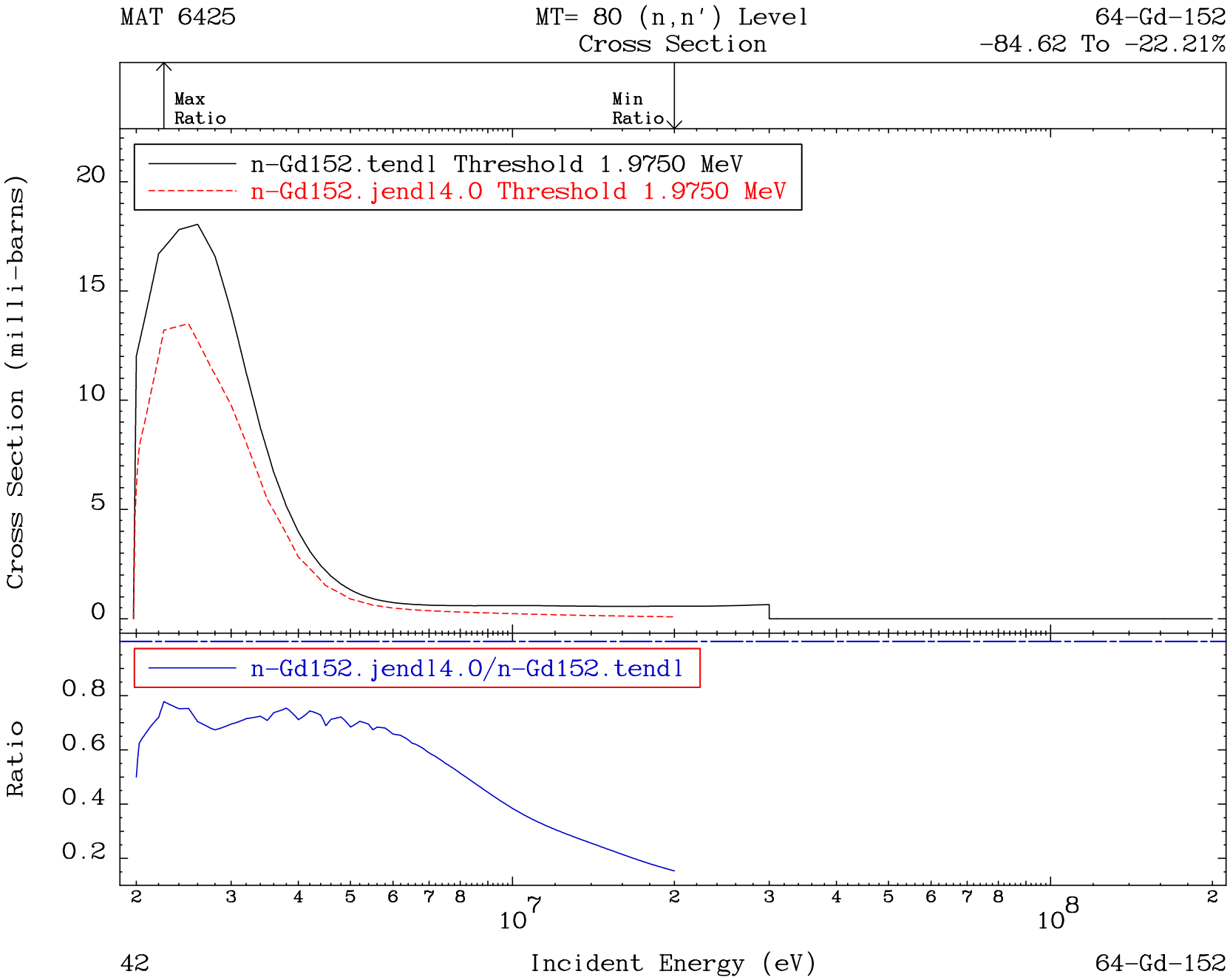

MAT 6425
MT= 75 (n,n') Level
Cross Section
64-Gd-152
4.843 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 1.8739 MeV
n-Gd152.jendl4.0 Threshold 1.8739 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
14
16
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^0
10^2
10^4
10^6
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
37
Incident Energy (eV)
64-Gd-152

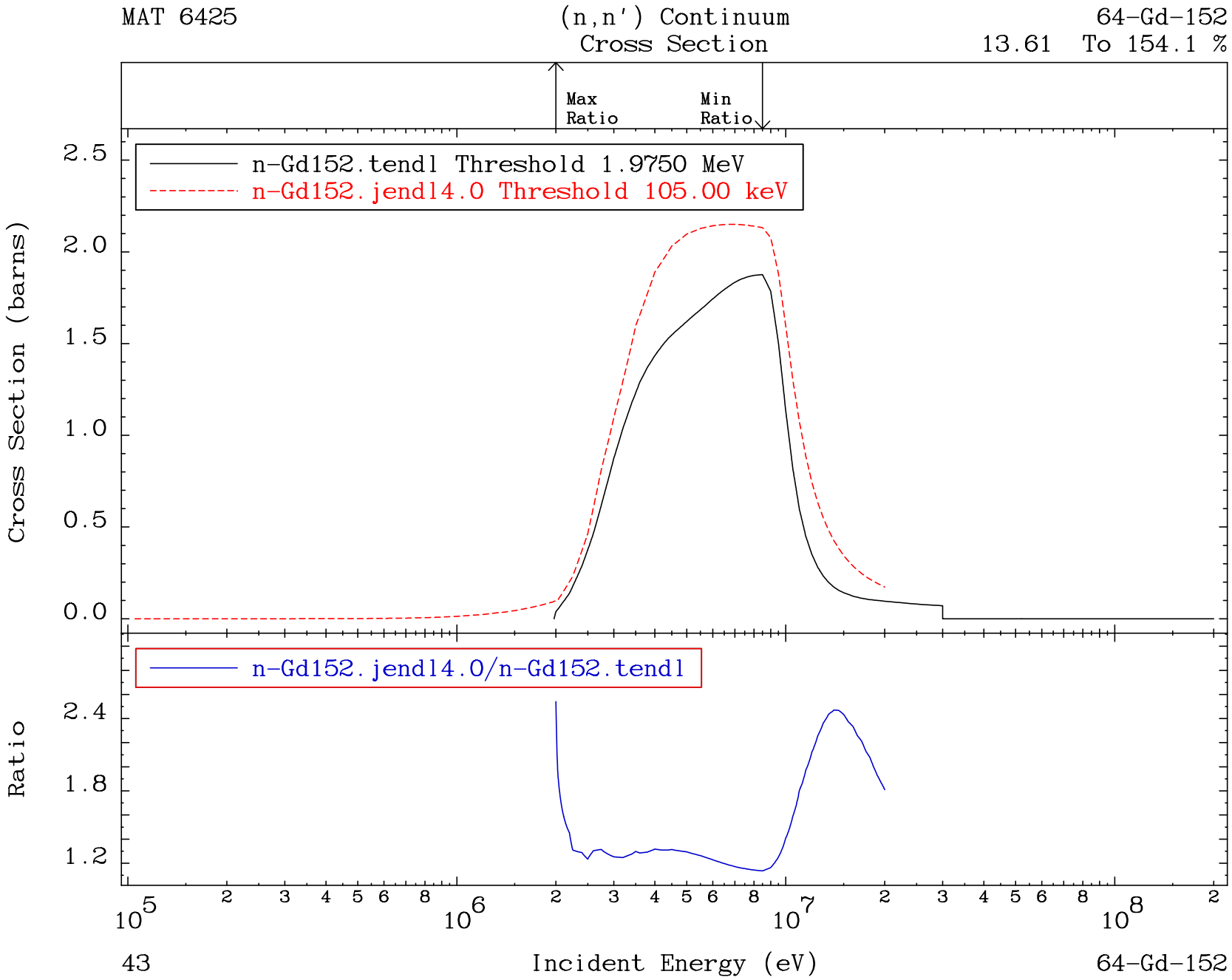

MAT 6425
MT= 76 (n,n') Level
Cross Section
64-Gd-152
-95.79 To 650.7 %
Max
Ratio
Min
Ratio
n-Gd152.tendl Threshold 1.8836 MeV
n-Gd152.jendl4.0 Threshold 1.8744 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^1
10^0
10^-1
2
3
4
5
6
7
8
10^7
10^8
38
Incident Energy (eV)
64-Gd-152

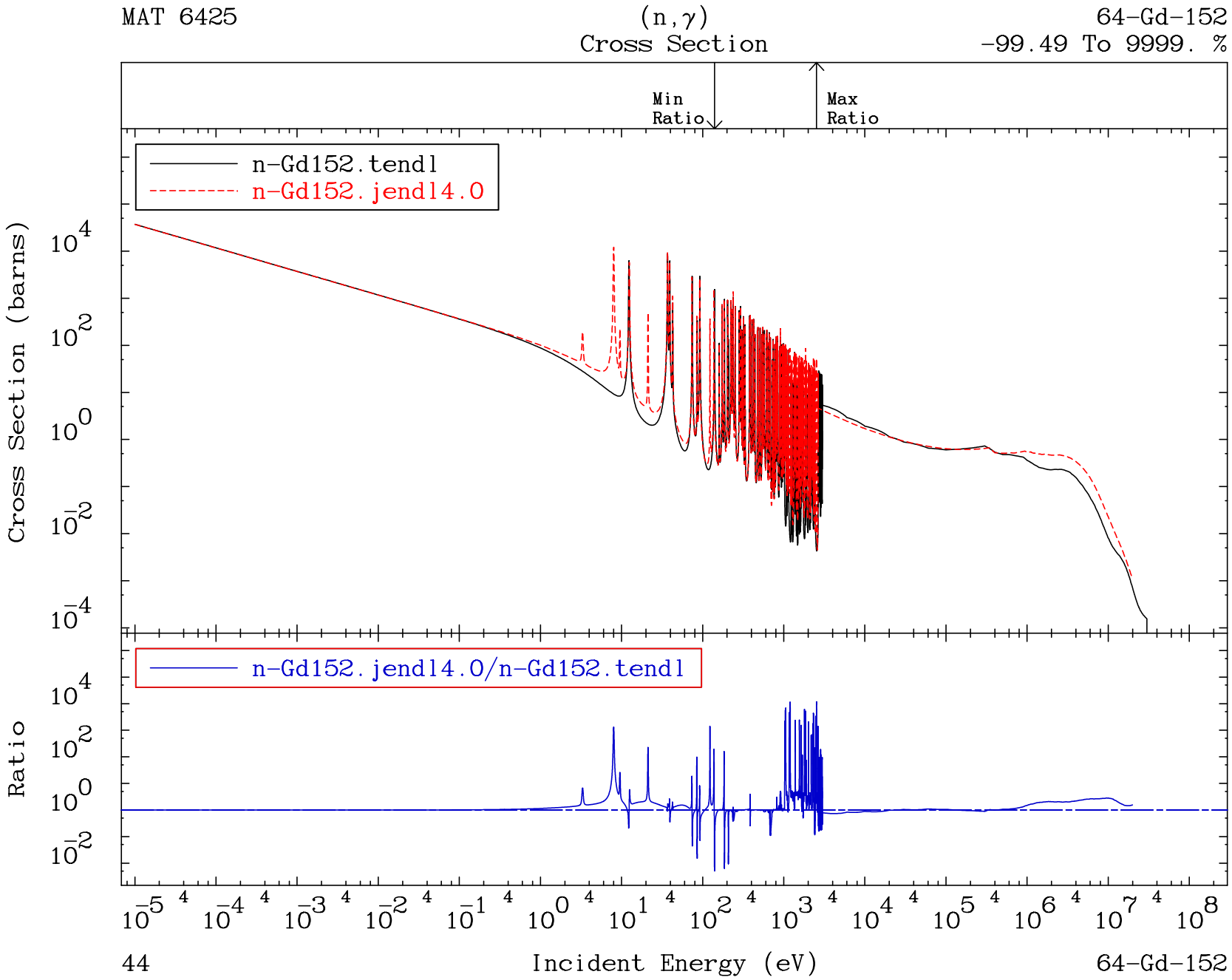

MAT 6425
MT= 77 (n,n') Level
Cross Section
64-Gd-152
-71.84 To 243.9 %
Max
Ratio
Min
Ratio
n-Gd152.tendl Threshold 1.8928 MeV
n-Gd152.jendl4.0 Threshold 1.8928 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
6
4
2
10^0
6
4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
39
Incident Energy (eV)
64-Gd-152

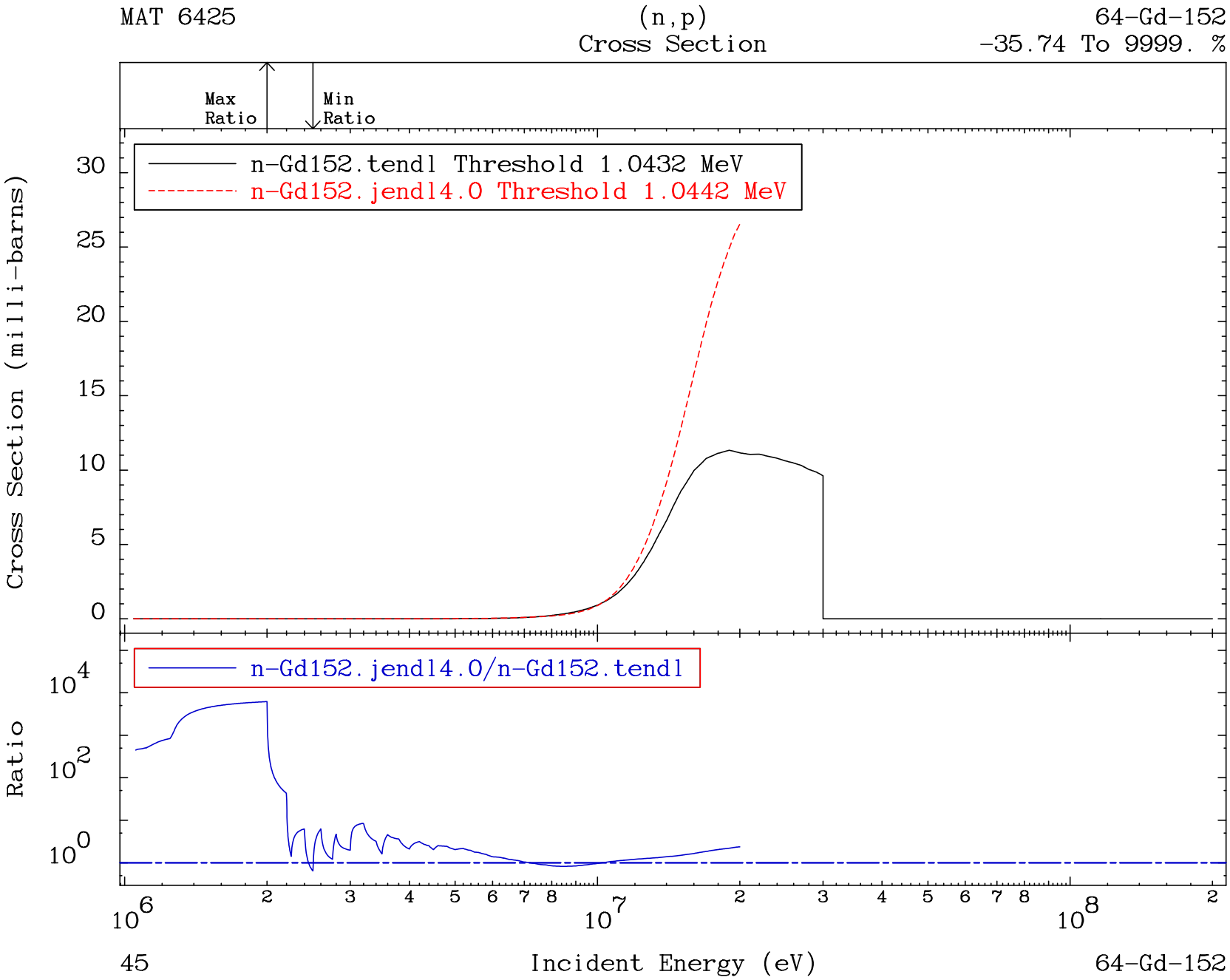

MAT 6425
MT= 78 (n,n') Level
Cross Section
64-Gd-152
-77.54 To 276.2 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.9281 MeV
n-Gd152.jendl4.0 Threshold 1.9281 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
6
4
10^0
6
4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
40
Incident Energy (eV)
64-Gd-152

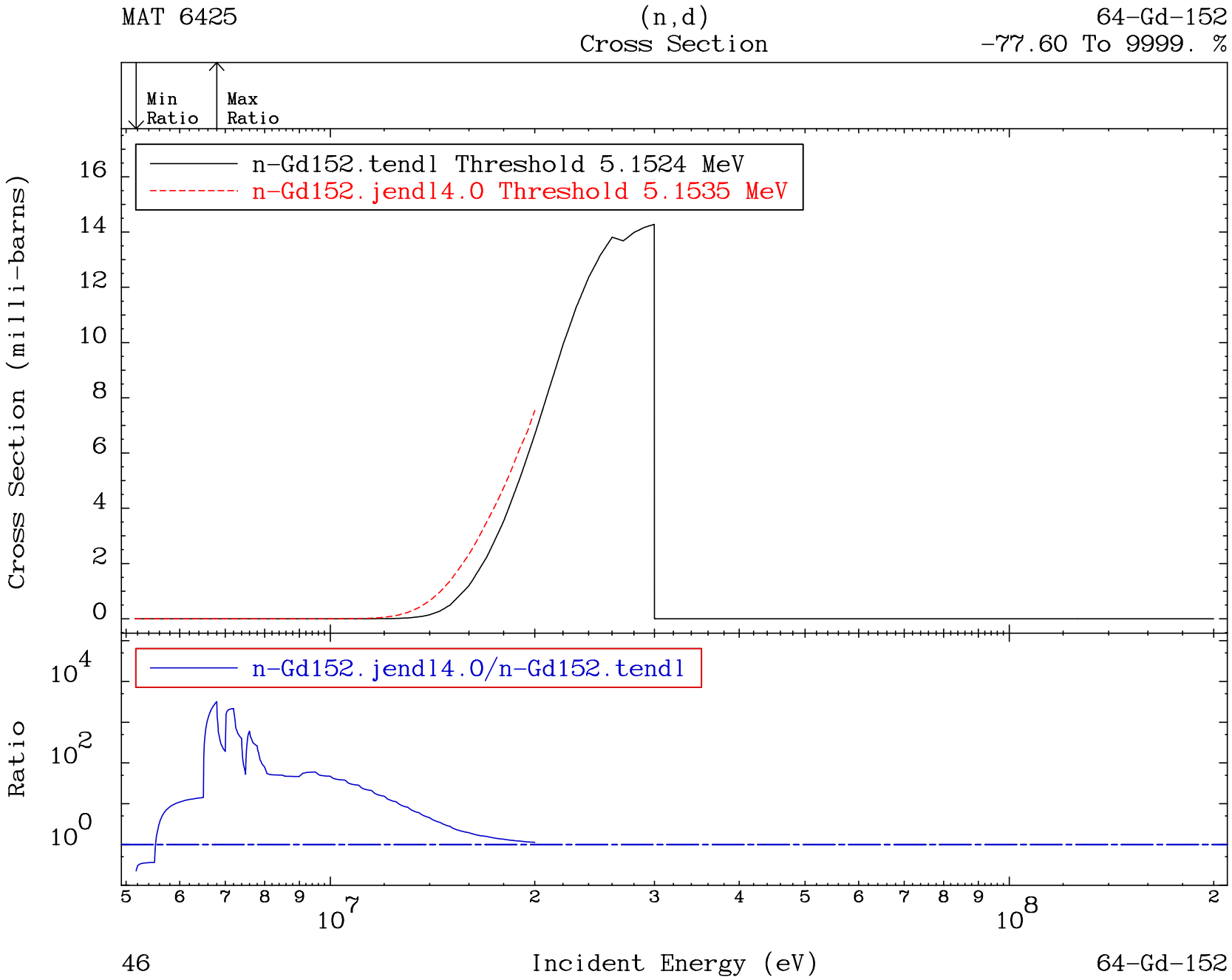

MAT 6425
MT= 79 (n,n') Level
Cross Section
64-Gd-152
-88.74 To 51.39 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.9541 MeV
n-Gd152.jendl4.0 Threshold 1.9541 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
2
10^0
6
4
2
10^{-1}
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
41
Incident Energy (eV)
64-Gd-152

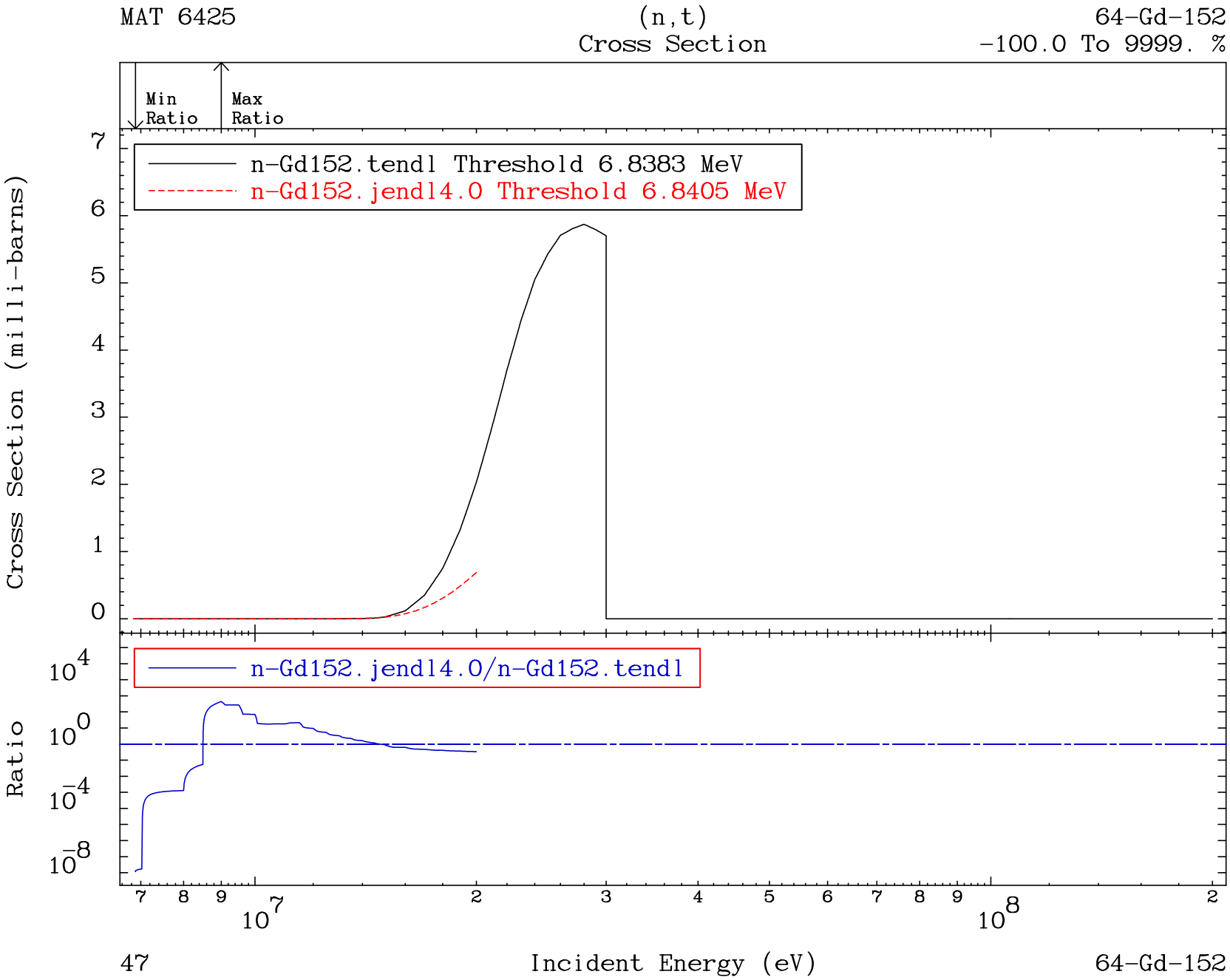

MAT 6425
MT= 80 (n,n') Level
Cross Section
64-Gd-152
-84.62 To -22.21%
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.9750 MeV
n-Gd152.jendl4.0 Threshold 1.9750 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
0.8
0.6
0.4
0.2
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
42
Incident Energy (eV)
64-Gd-152

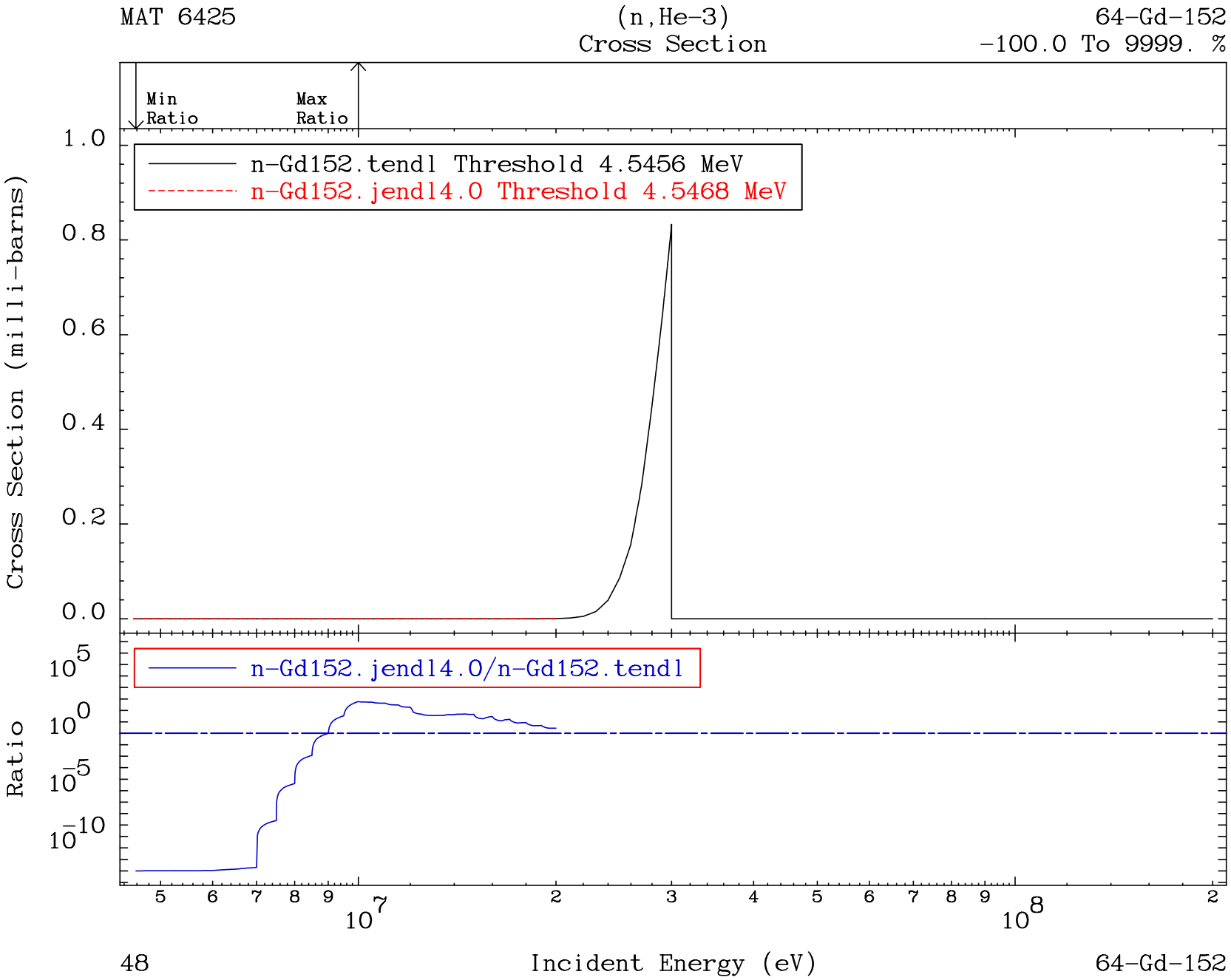

MAT 6425
(n,n') Continuum
Cross Section
64-Gd-152
13.61 To 154.1 %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.9750 MeV
n-Gd152.jendl4.0 Threshold 105.00 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
2.4
1.8
1.2
10^5
10^6
10^7
10^8
Incident Energy (eV)
43
64-Gd-152

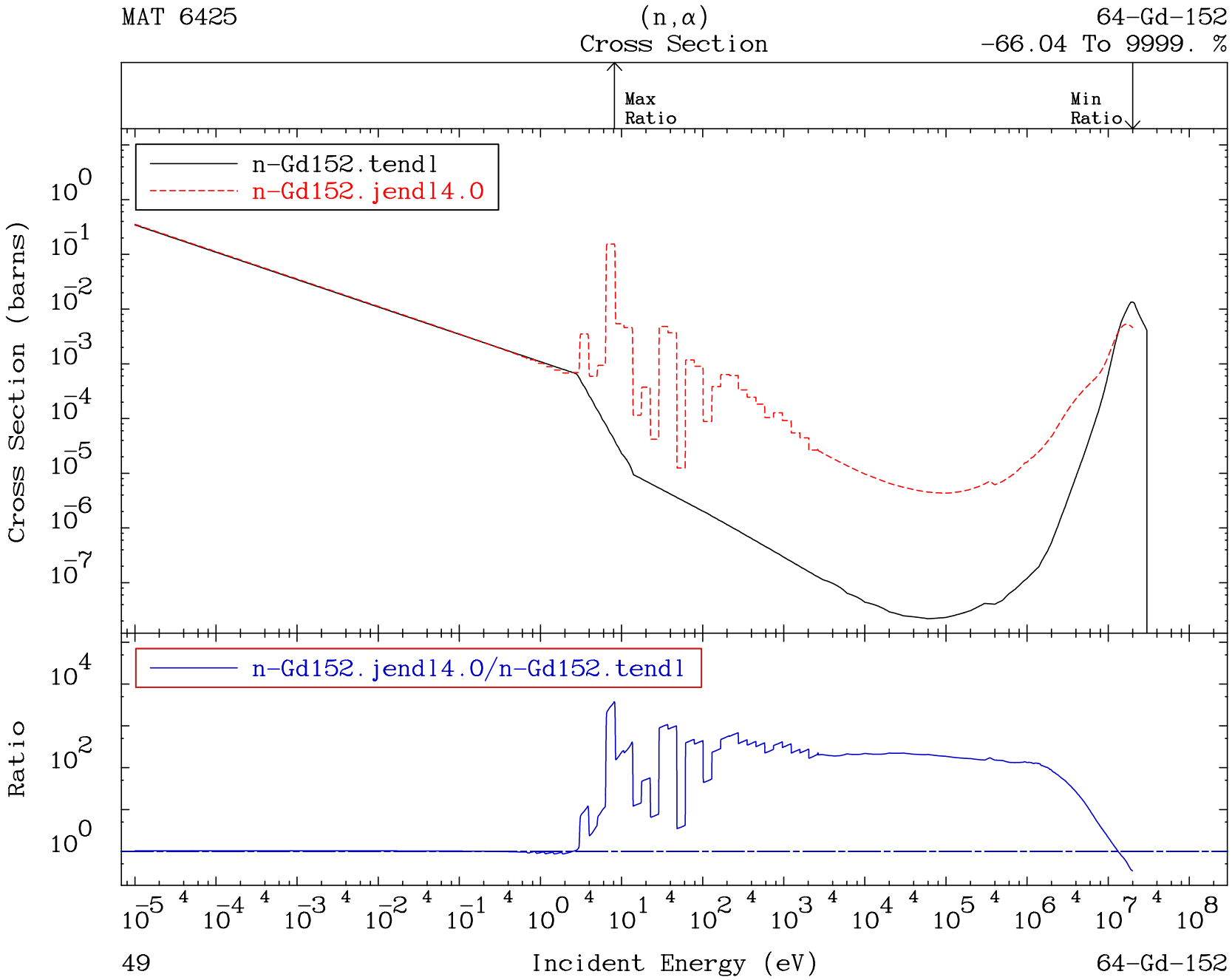

MAT 6425
(n,γ)
Cross Section
64-Gd-152
-99.49 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
44
64-Gd-152

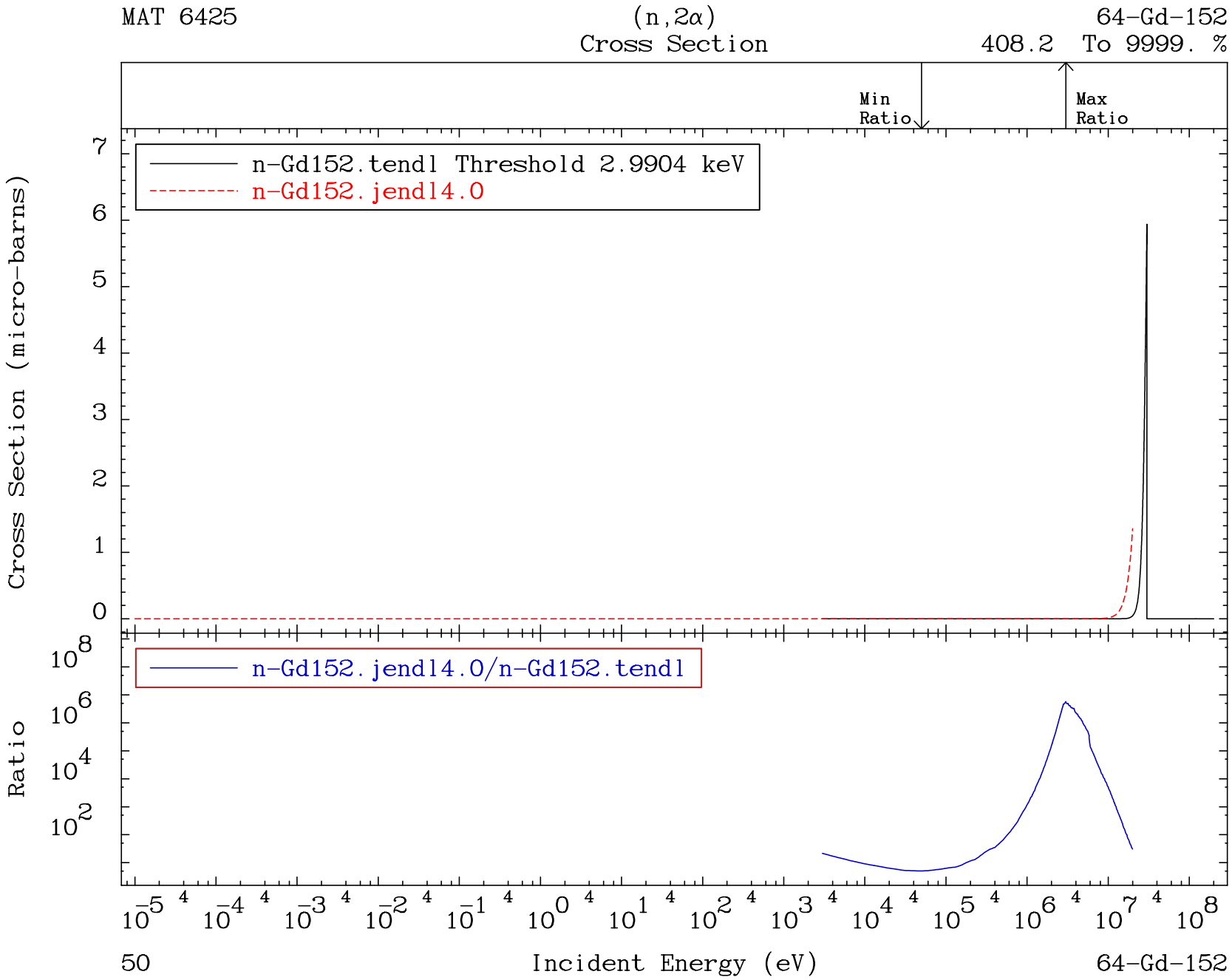

MAT 6425
(n,p)
Cross Section
64-Gd-152
-35.74 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 1.0432 MeV
n-Gd152.jendl4.0 Threshold 1.0442 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^4
10^2
10^0
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
45
Incident Energy (eV)
64-Gd-152

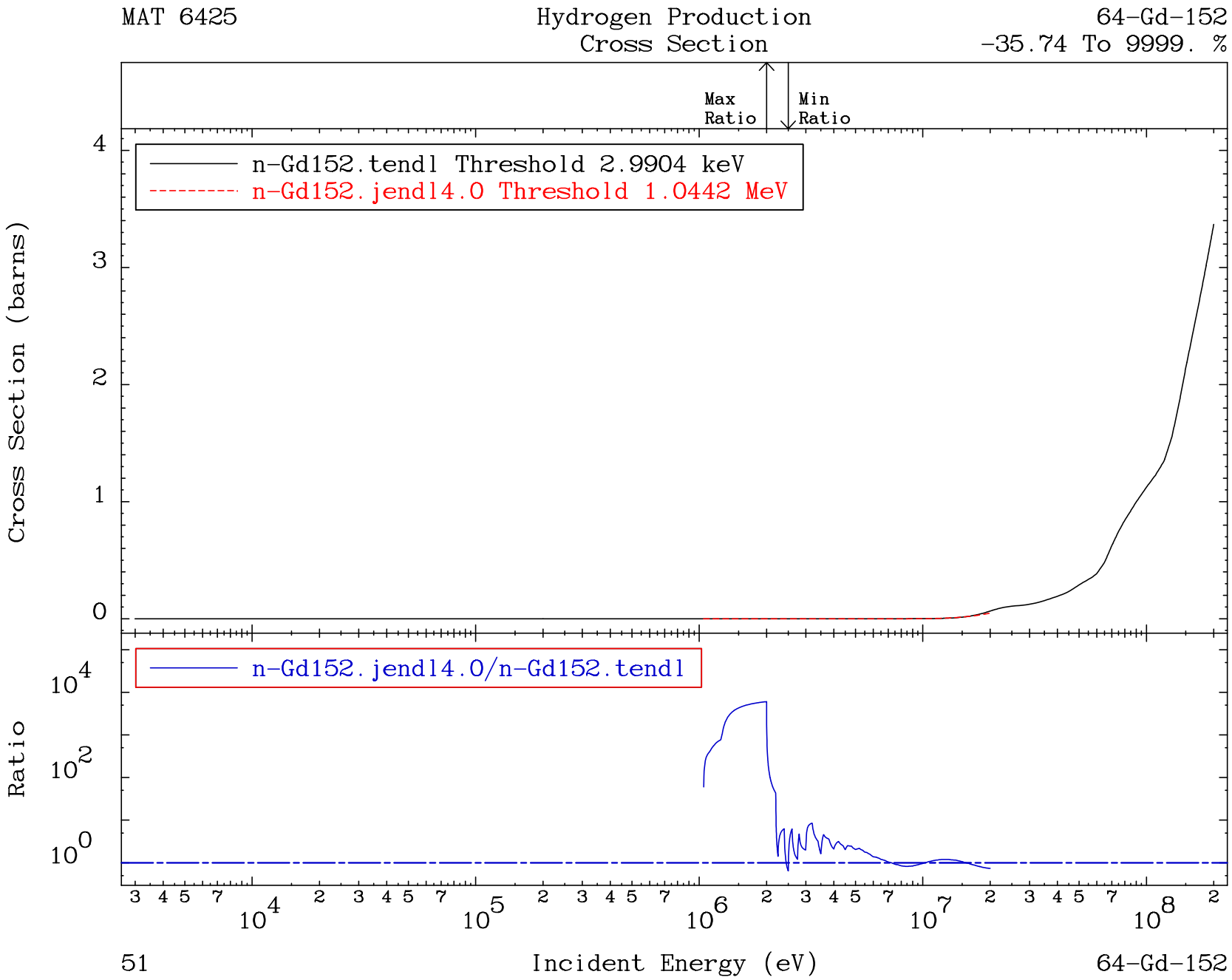

MAT 6425
(n,d)
Cross Section
64-Gd-152
-77.60 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 5.1524 MeV
n-Gd152.jendl4.0 Threshold 5.1535 MeV
Cross Section (milli-barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
46
64-Gd-152

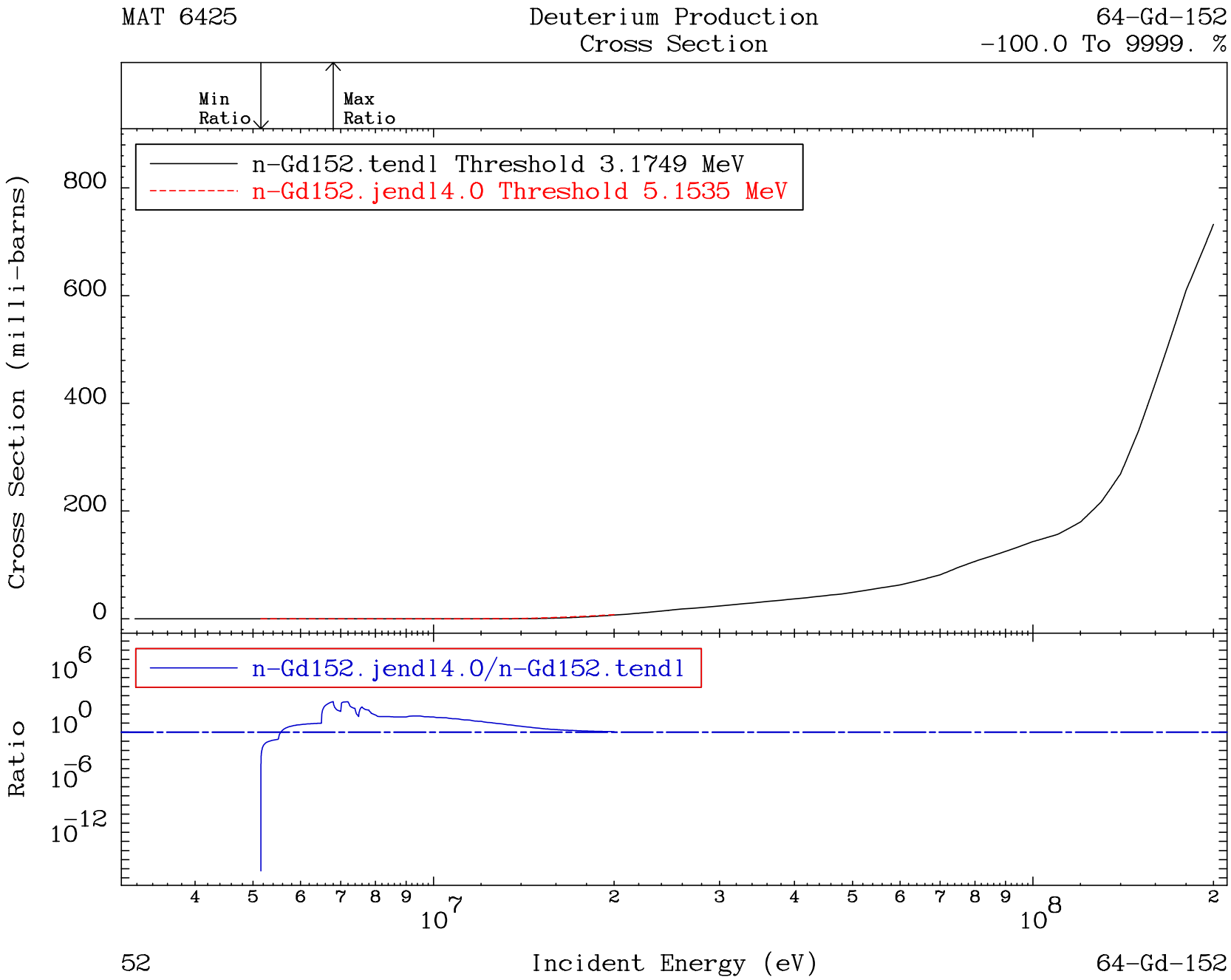

MAT 6425
(n,t)
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 6.8383 MeV
n-Gd152.jendl4.0 Threshold 6.8405 MeV
Cross Section (milli-barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
47
64-Gd-152

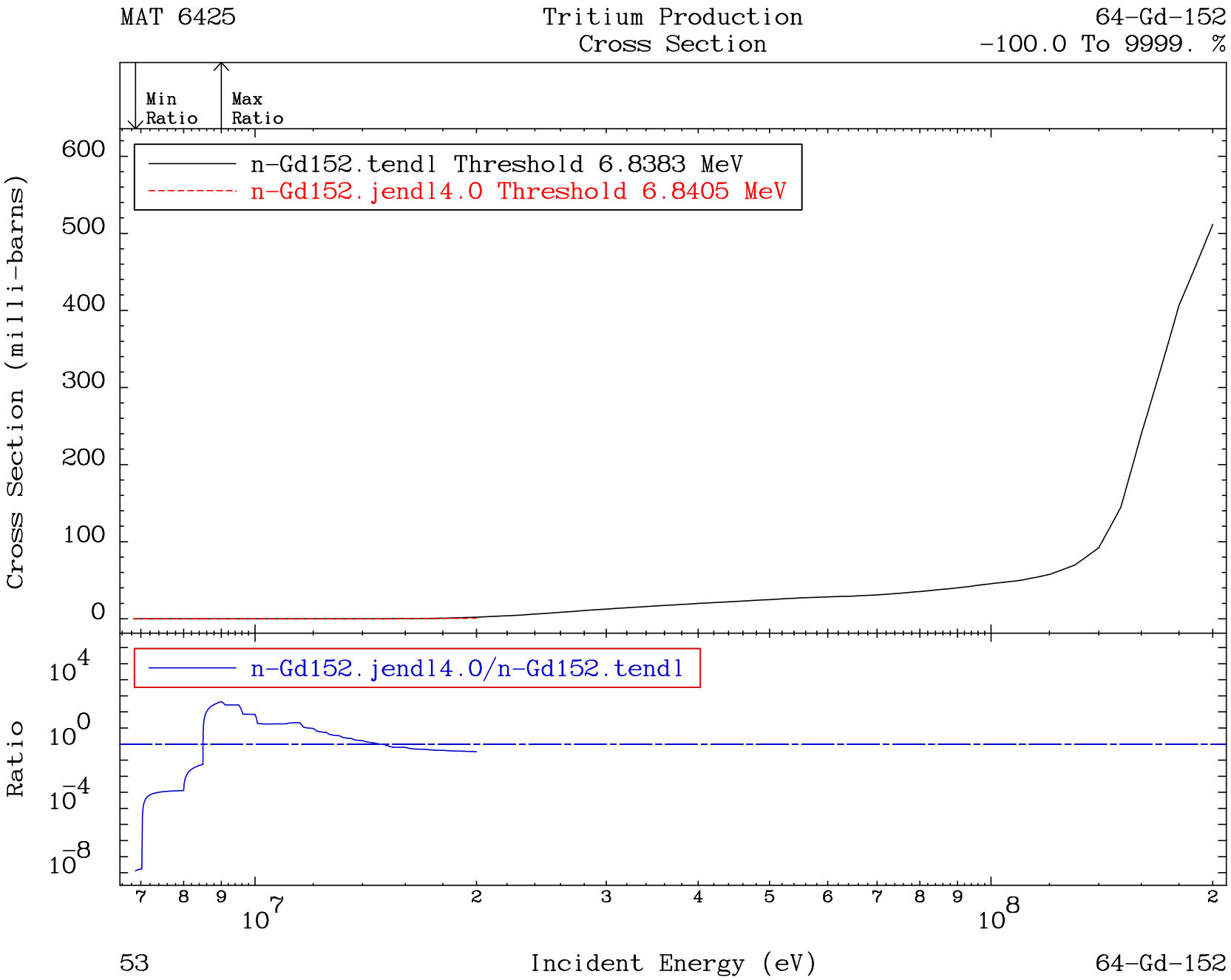

MAT 6425
(n,He-3)
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 4.5456 MeV
n-Gd152.jendl4.0 Threshold 4.5468 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^5
10^0
10^-5
10^-10
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
64-Gd-152

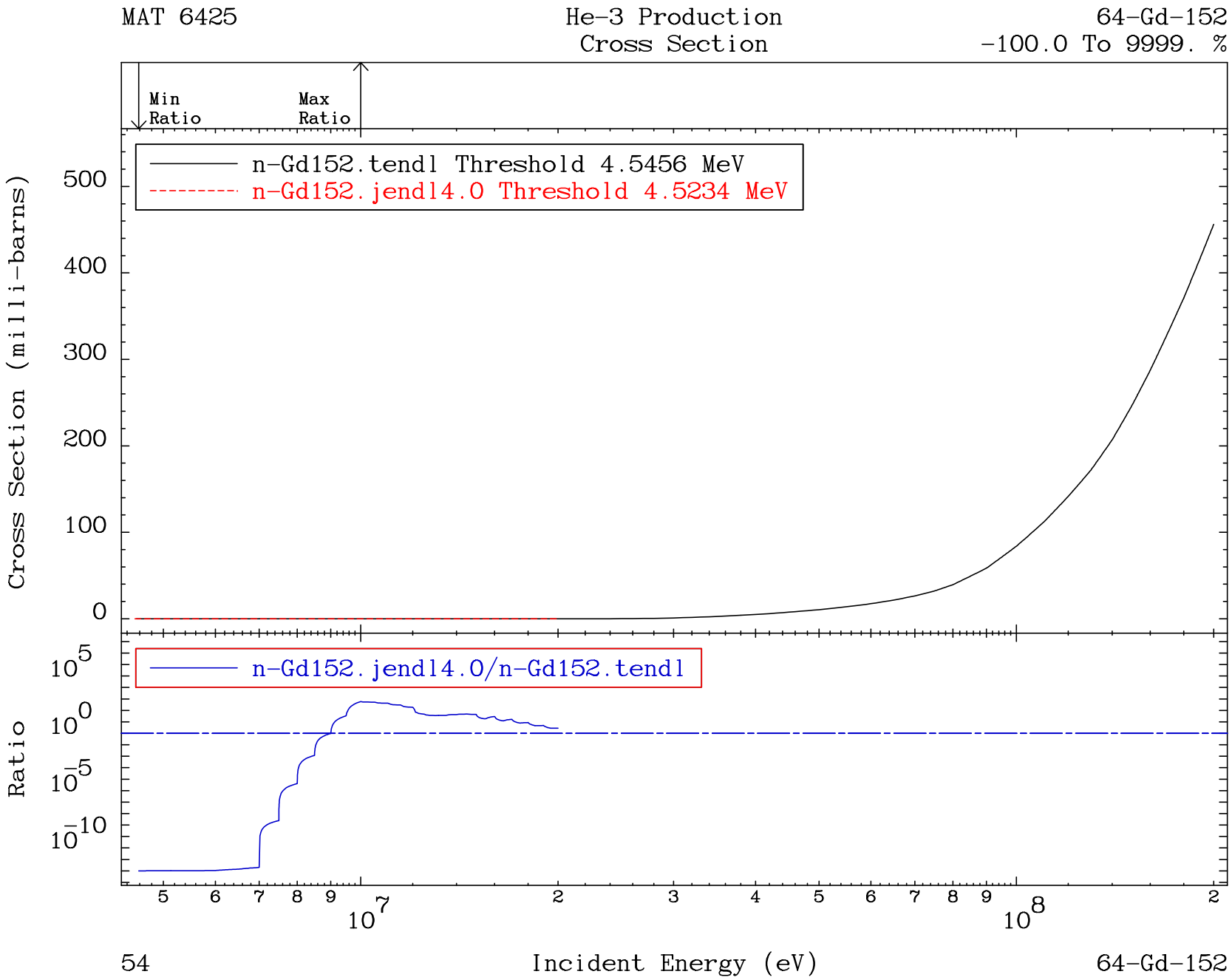

MAT 6425
(n,α)
Cross Section
64-Gd-152
-66.04 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
49
Incident Energy (eV)
64-Gd-152

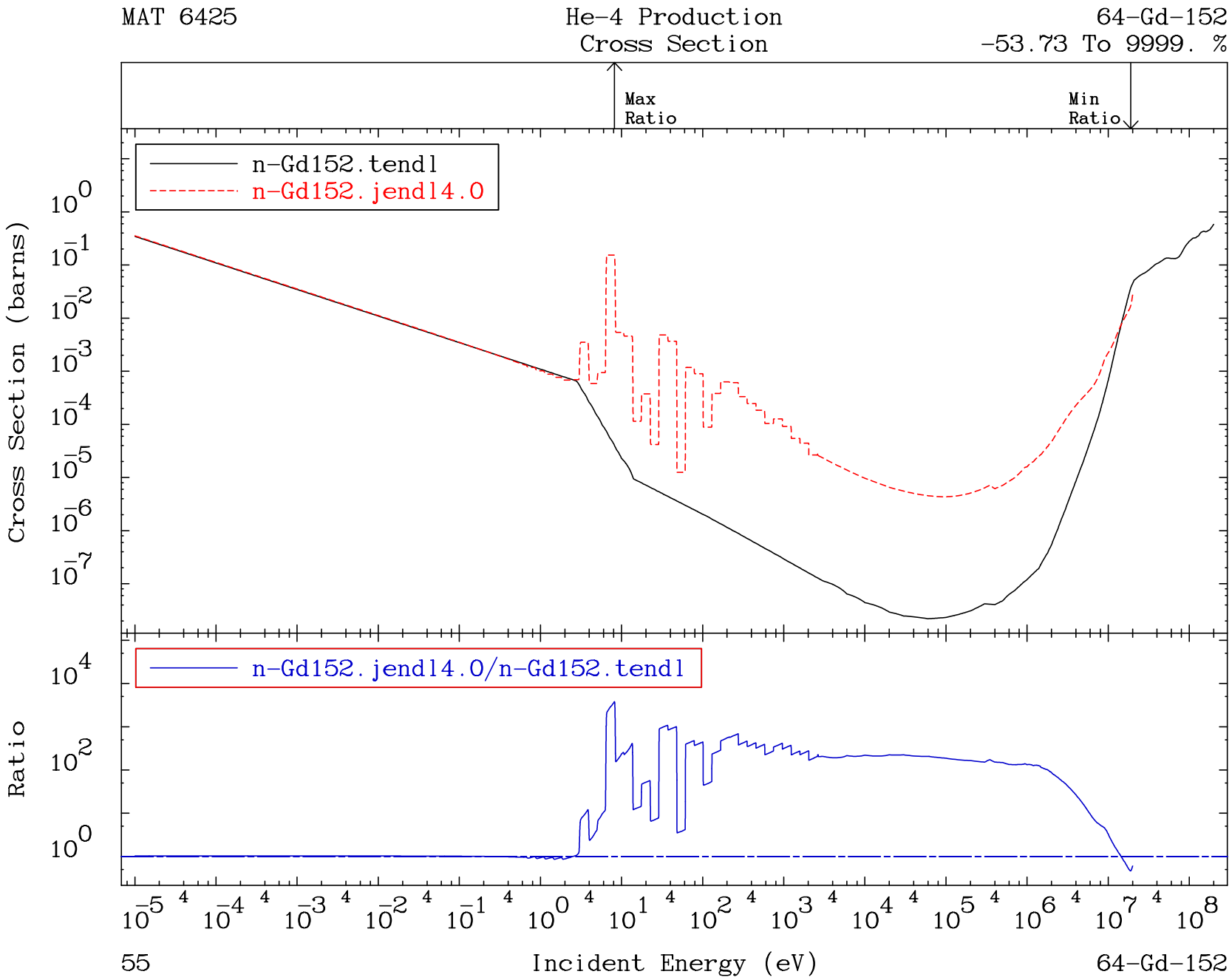

MAT 6425
(n,2α)
Cross Section
64-Gd-152
408.2 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 2.9904 keV
n-Gd152.jendl4.0
Cross Section (micro-barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
50
64-Gd-152

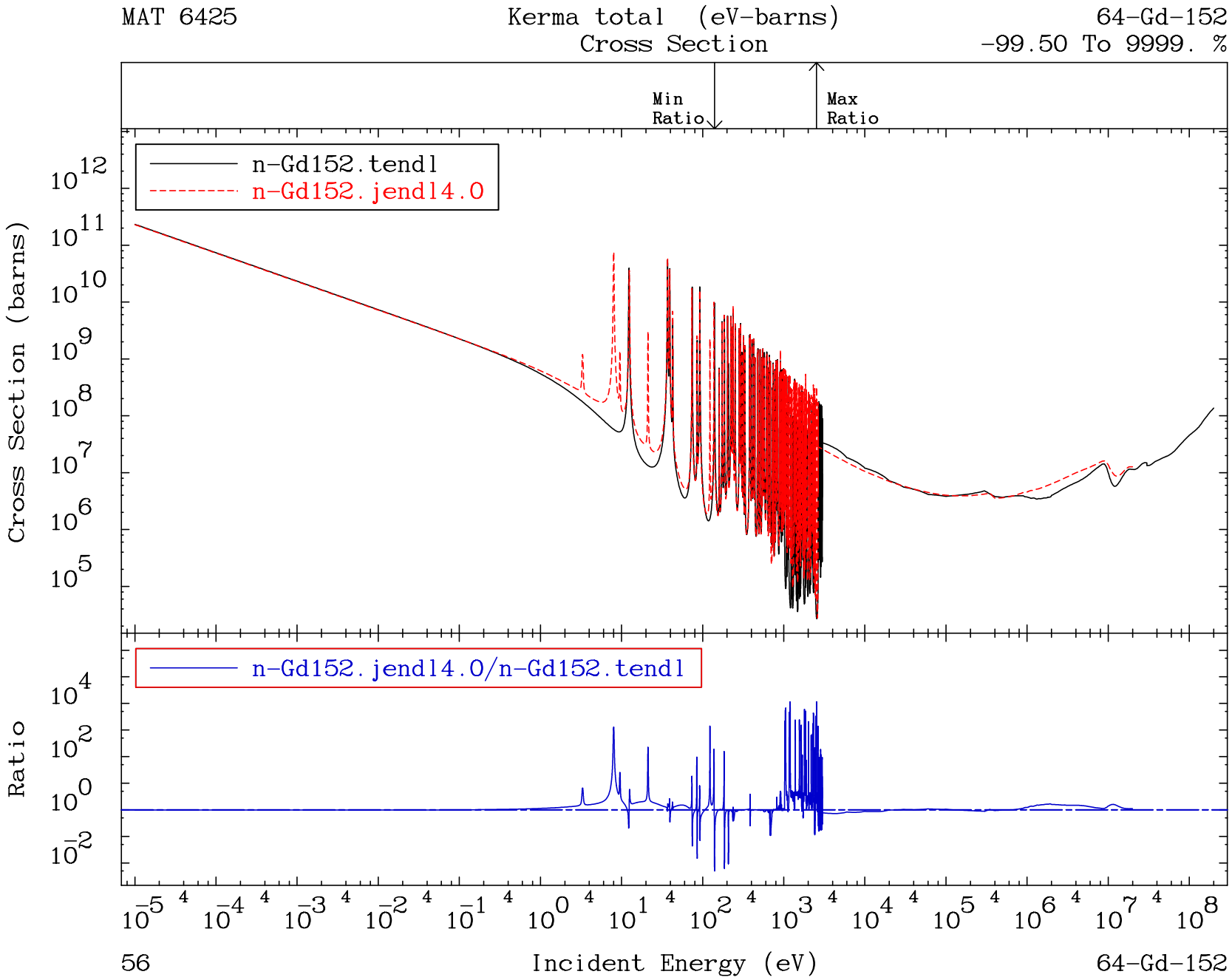

MAT 6425
Hydrogen Production
Cross Section
64-Gd-152
-35.74 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 2.9904 keV
n-Gd152.jendl4.0 Threshold 1.0442 MeV
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
51
64-Gd-152

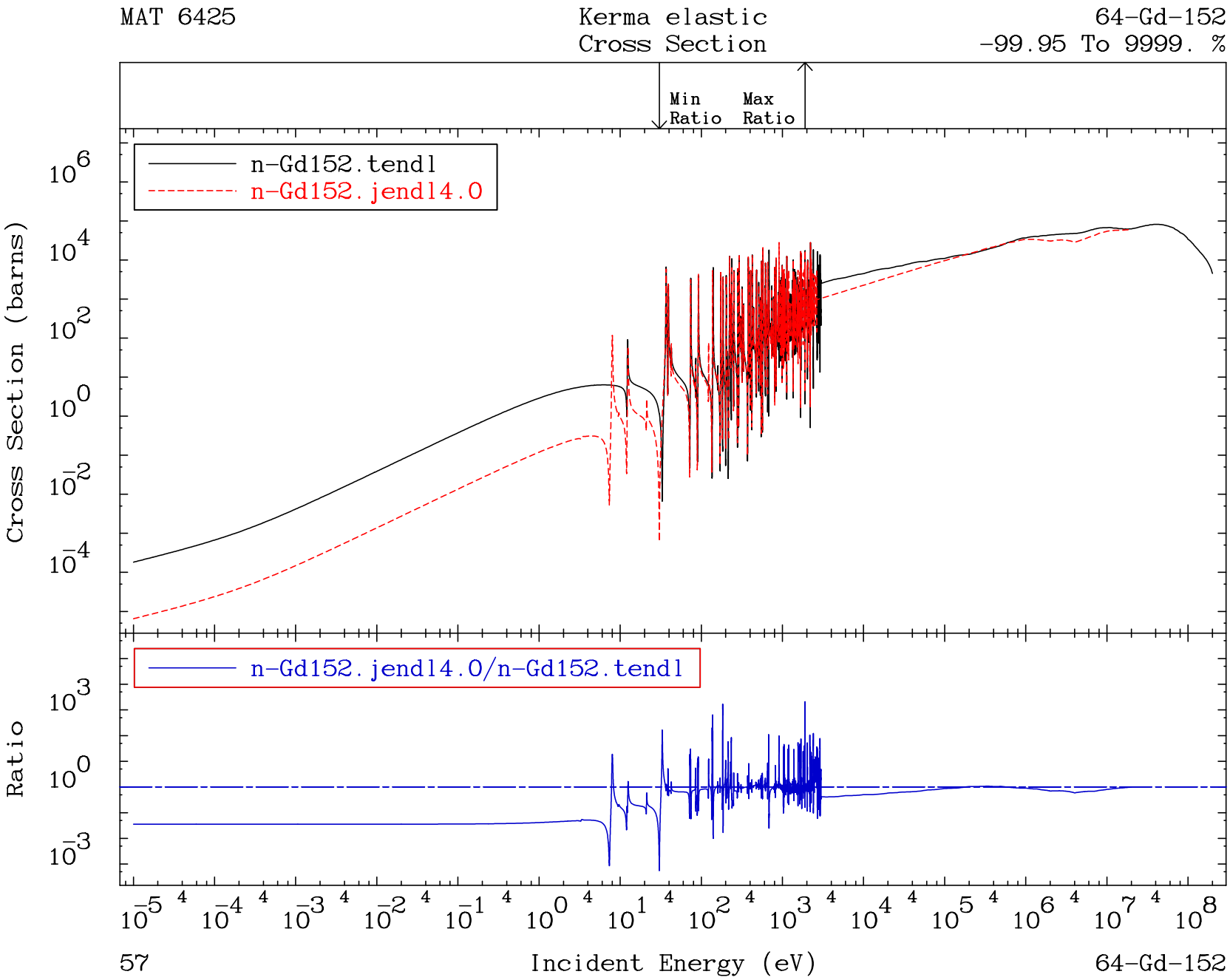

MAT 6425
Deuterium Production
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 3.1749 MeV
n-Gd152.jendl4.0 Threshold 5.1535 MeV
Cross Section (milli-barns)
800
600
400
200
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^6
10^0
10^-6
10^-12
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
52
Incident Energy (eV)
64-Gd-152

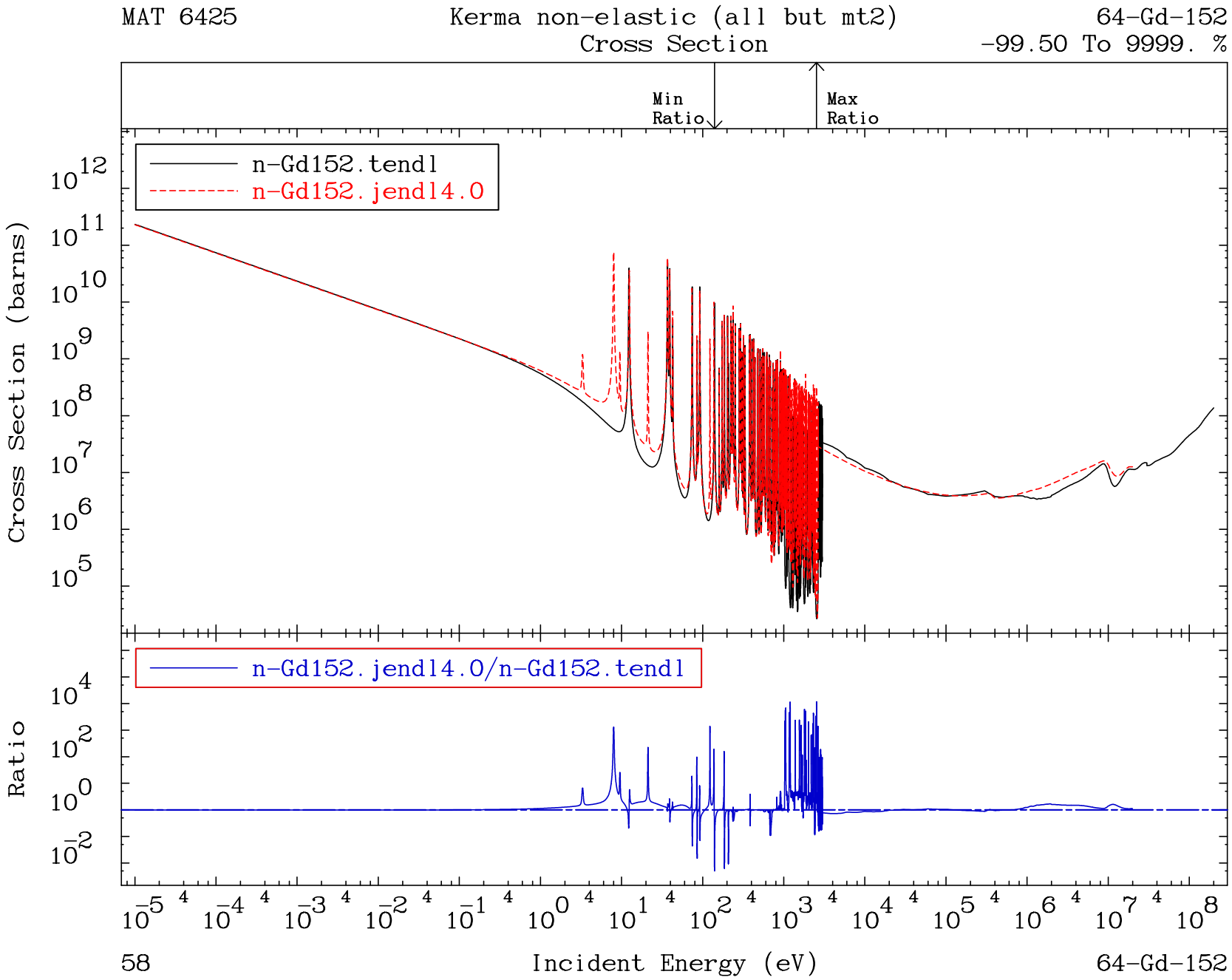

MAT 6425
Tritium Production
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 6.8383 MeV
n-Gd152.jendl4.0 Threshold 6.8405 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^4
10^0
10^-4
10^-8
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
53
Incident Energy (eV)
64-Gd-152

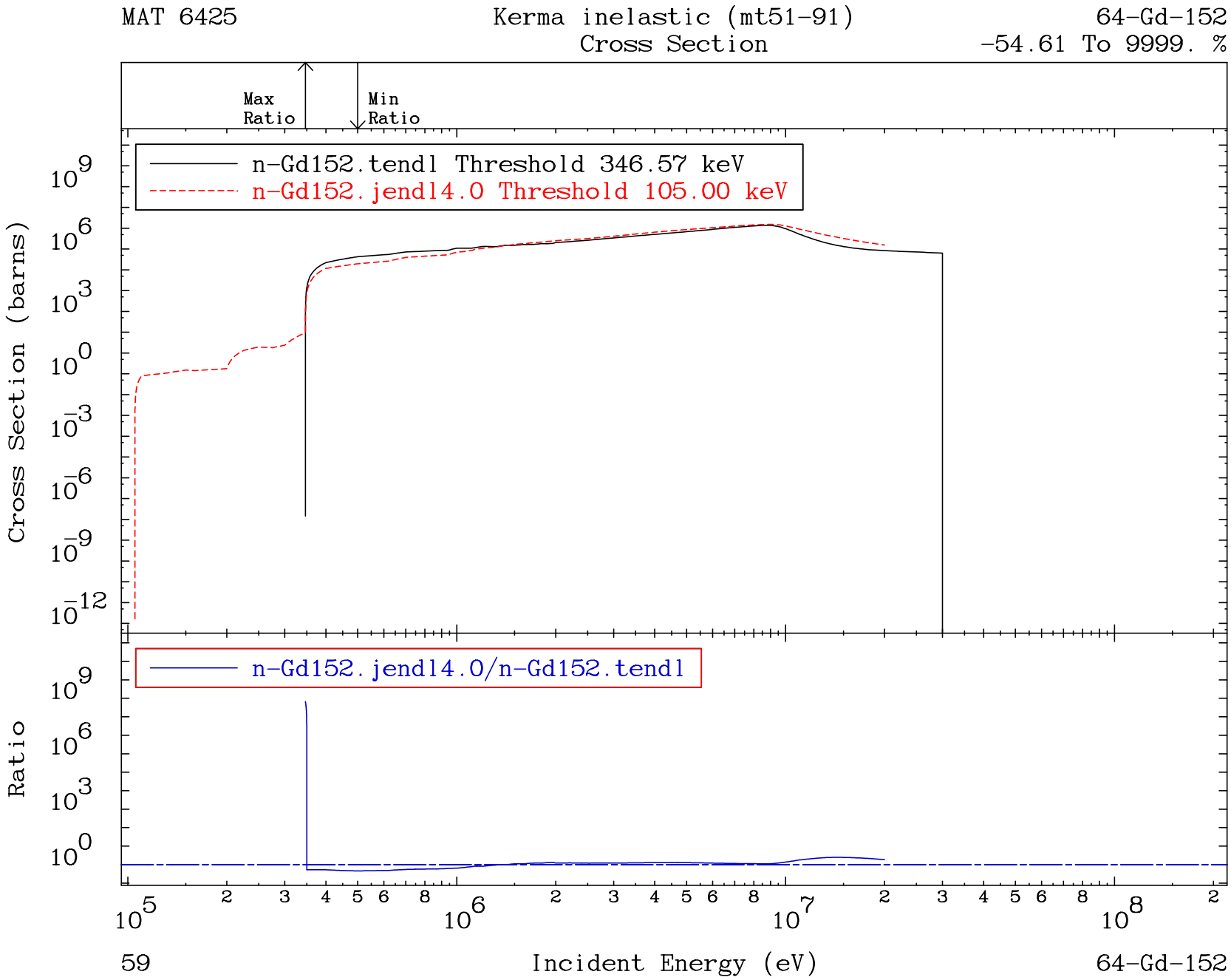

MAT 6425
He-3 Production
Cross Section
64-Gd-152
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl Threshold 4.5456 MeV
n-Gd152.jendl4.0 Threshold 4.5234 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^5
10^0
10^-5
10^-10
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
54
Incident Energy (eV)
64-Gd-152

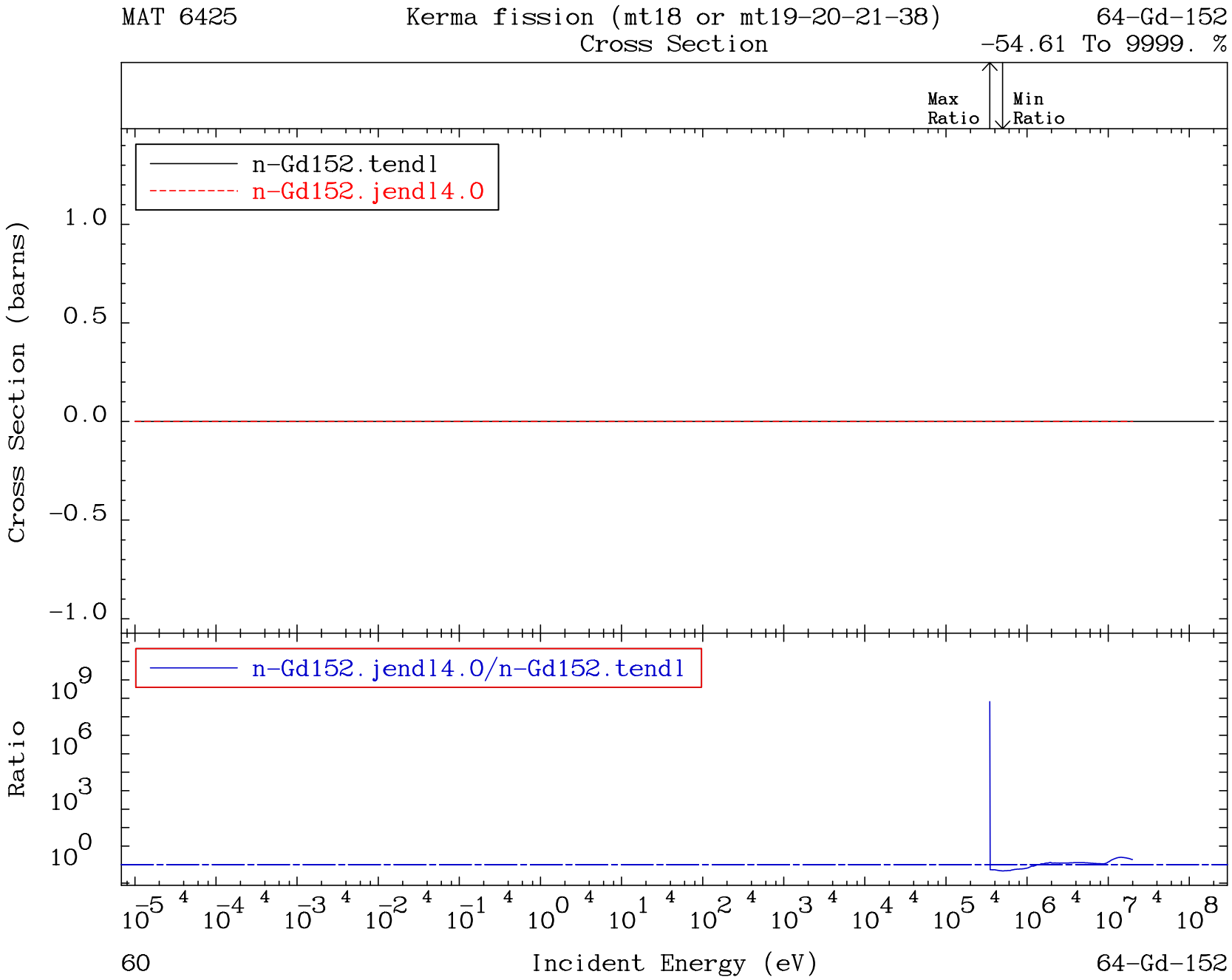

MAT 6425
He-4 Production
Cross Section
64-Gd-152
-53.73 To 9999. %
Max
Ratio
Min
Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
55
64-Gd-152

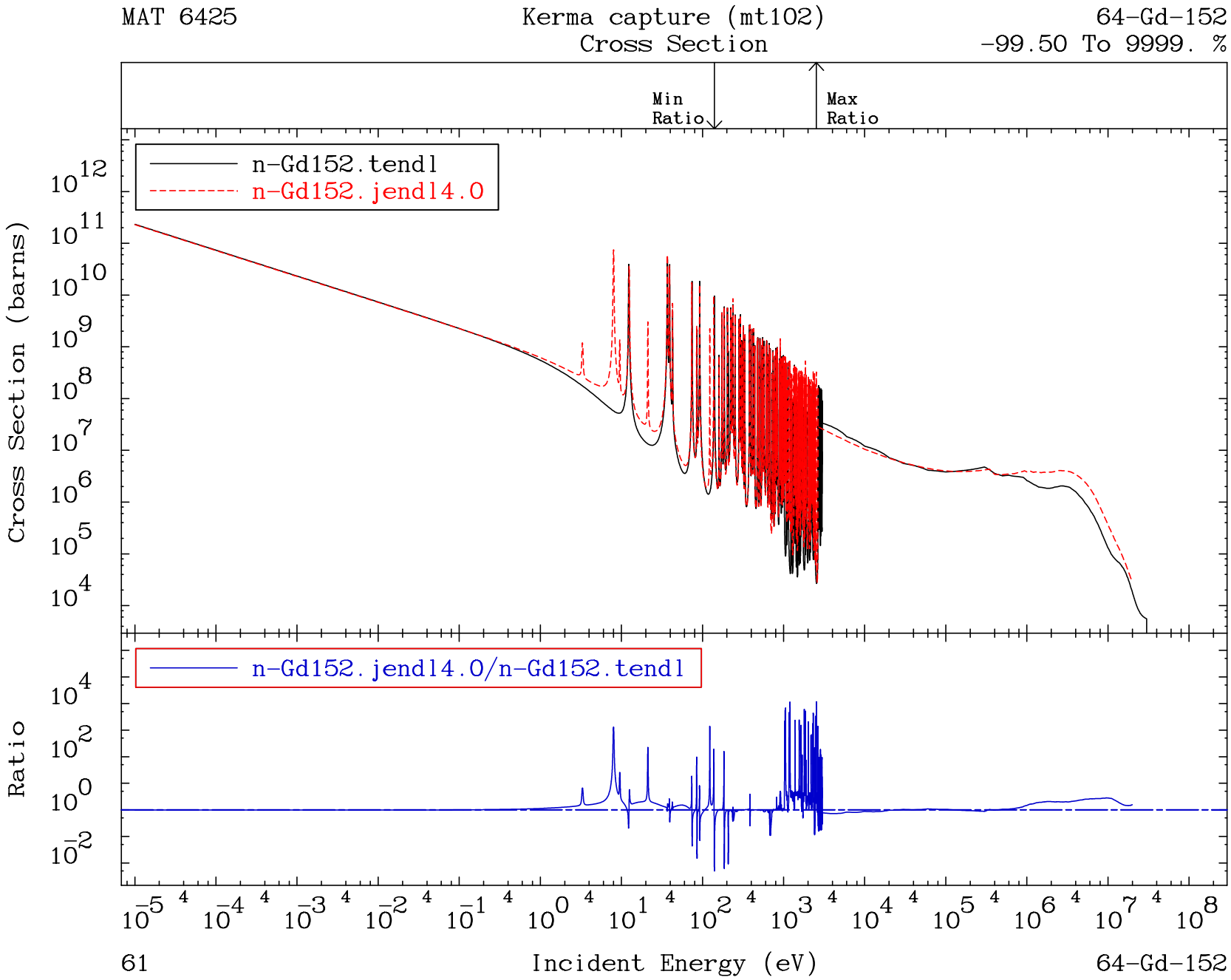

MAT 6425
Kerma total (eV-barns)
Cross Section
64-Gd-152
-99.50 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
56
Incident Energy (eV)
64-Gd-152

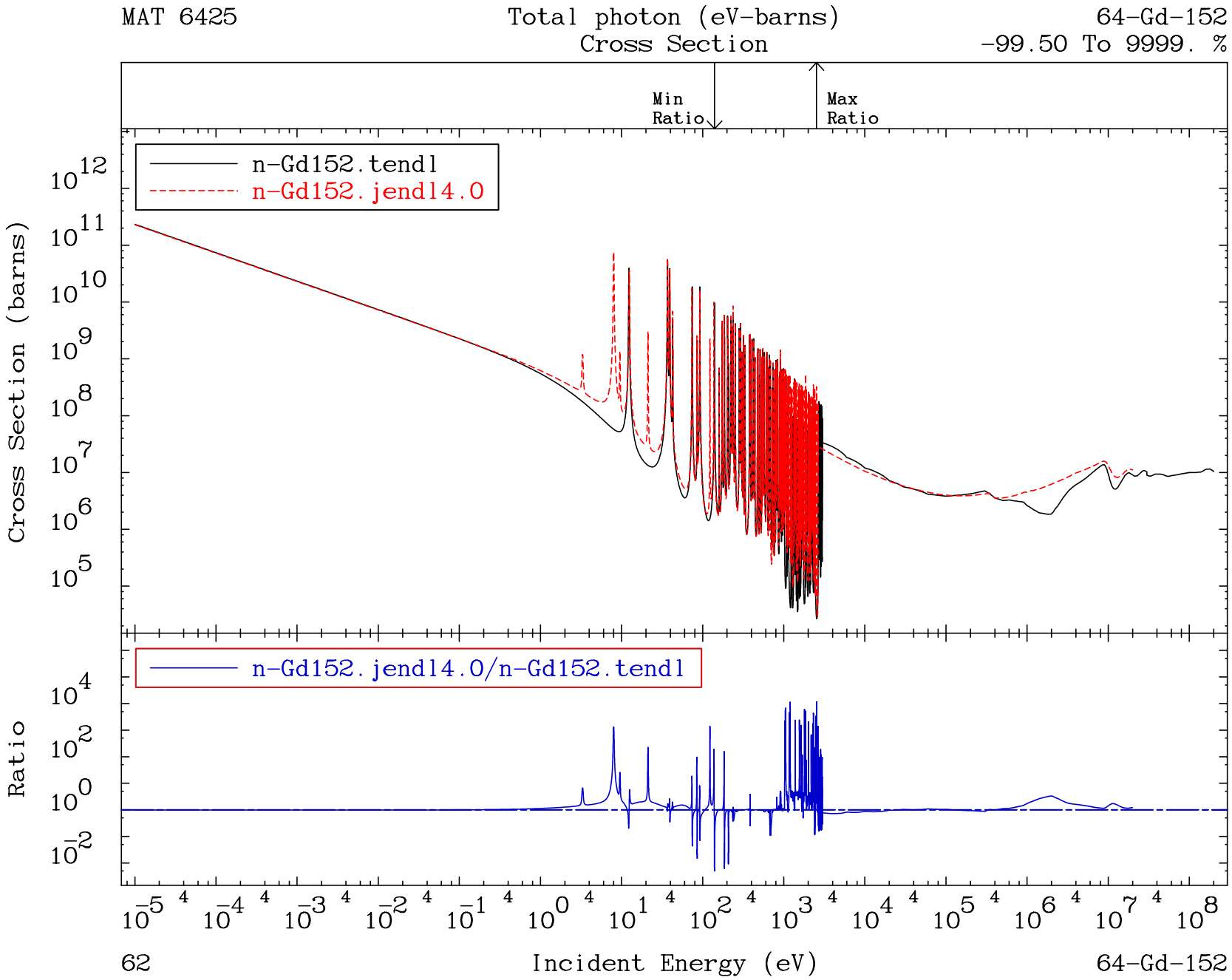

MAT 6425
Kerma elastic
Cross Section
64-Gd-152
-99.95 To 9999. %
Min
Ratio
Max
Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
57
Incident Energy (eV)
64-Gd-152

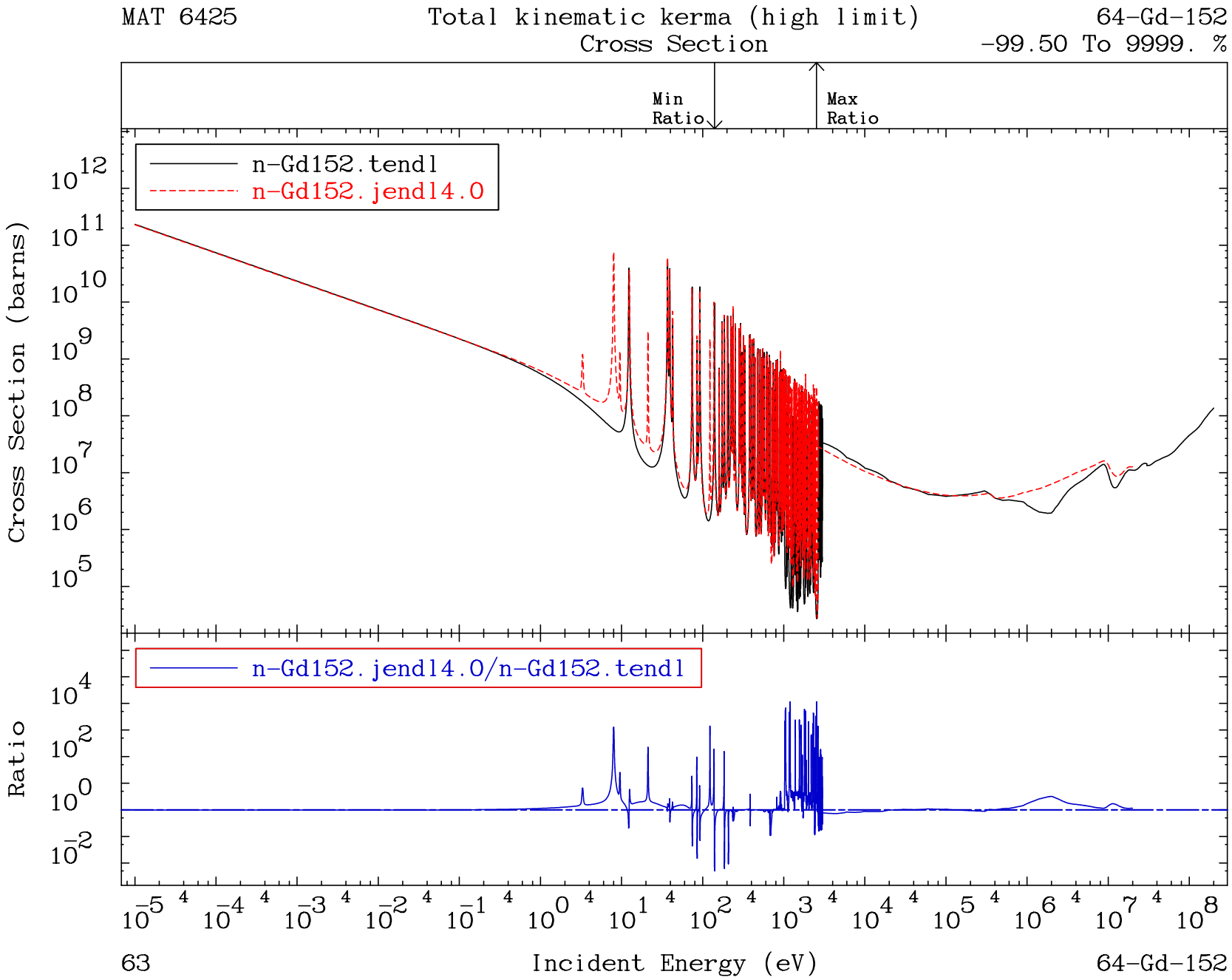

MAT 6425
Kerma non-elastic (all but mt2)
Cross Section
64-Gd-152
-99.50 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
58
64-Gd-152

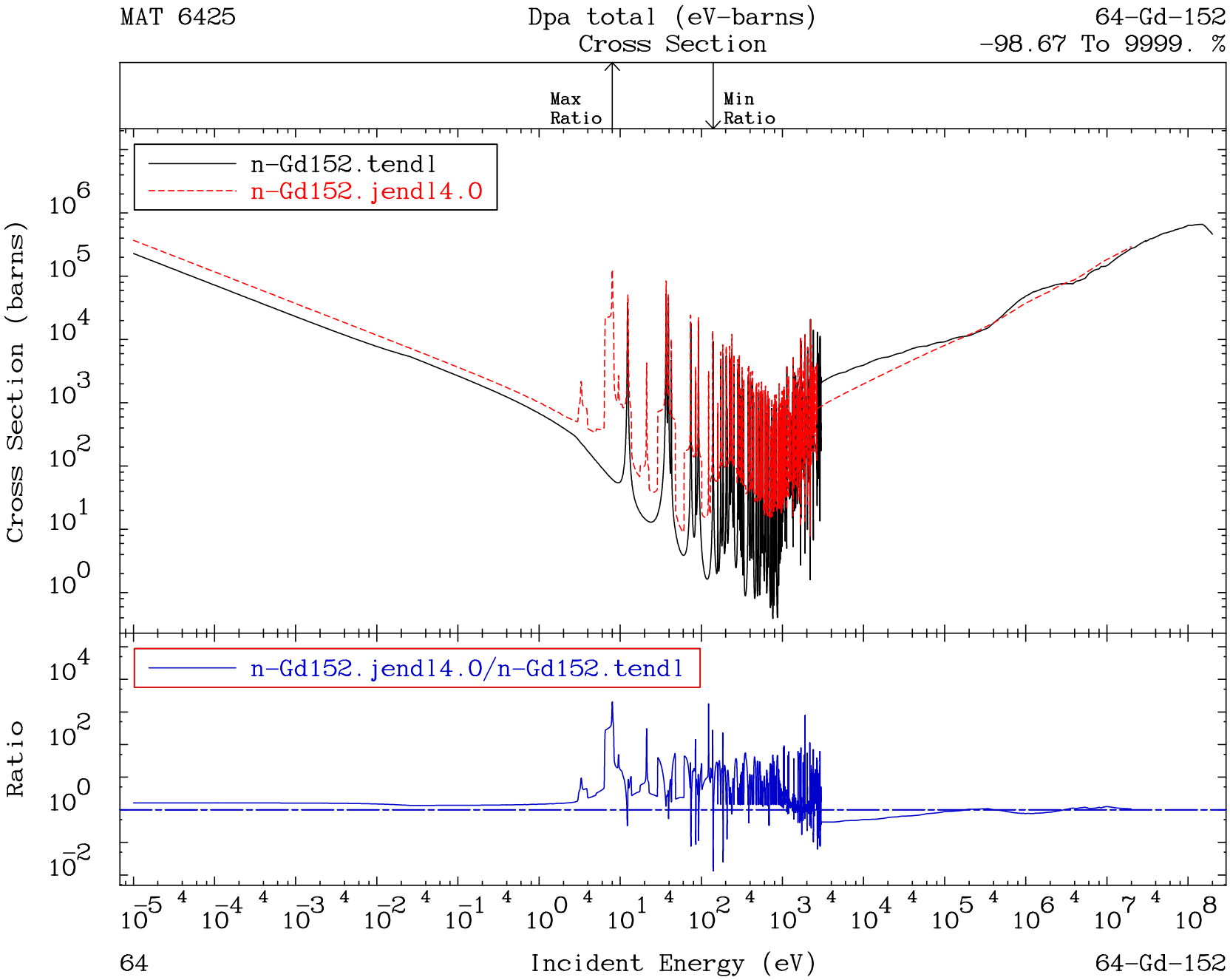

MAT 6425
Kerma inelastic (mt51-91)
Cross Section
64-Gd-152
-54.61 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 346.57 keV
n-Gd152.jendl4.0 Threshold 105.00 keV
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
59
64-Gd-152

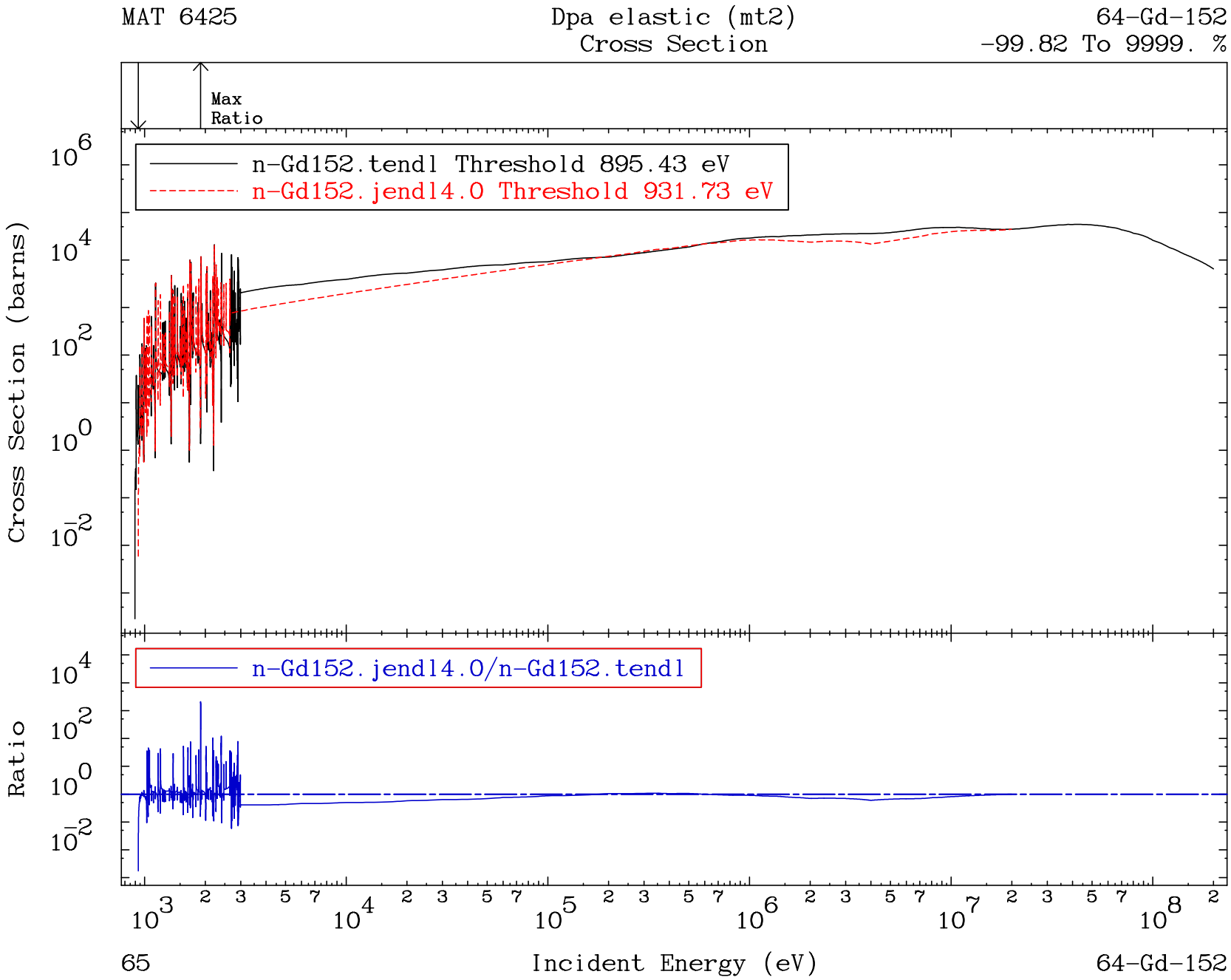

MAT 6425
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
64-Gd-152
-54.61 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
10^9
10^6
10^3
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
60
Incident Energy (eV)
64-Gd-152

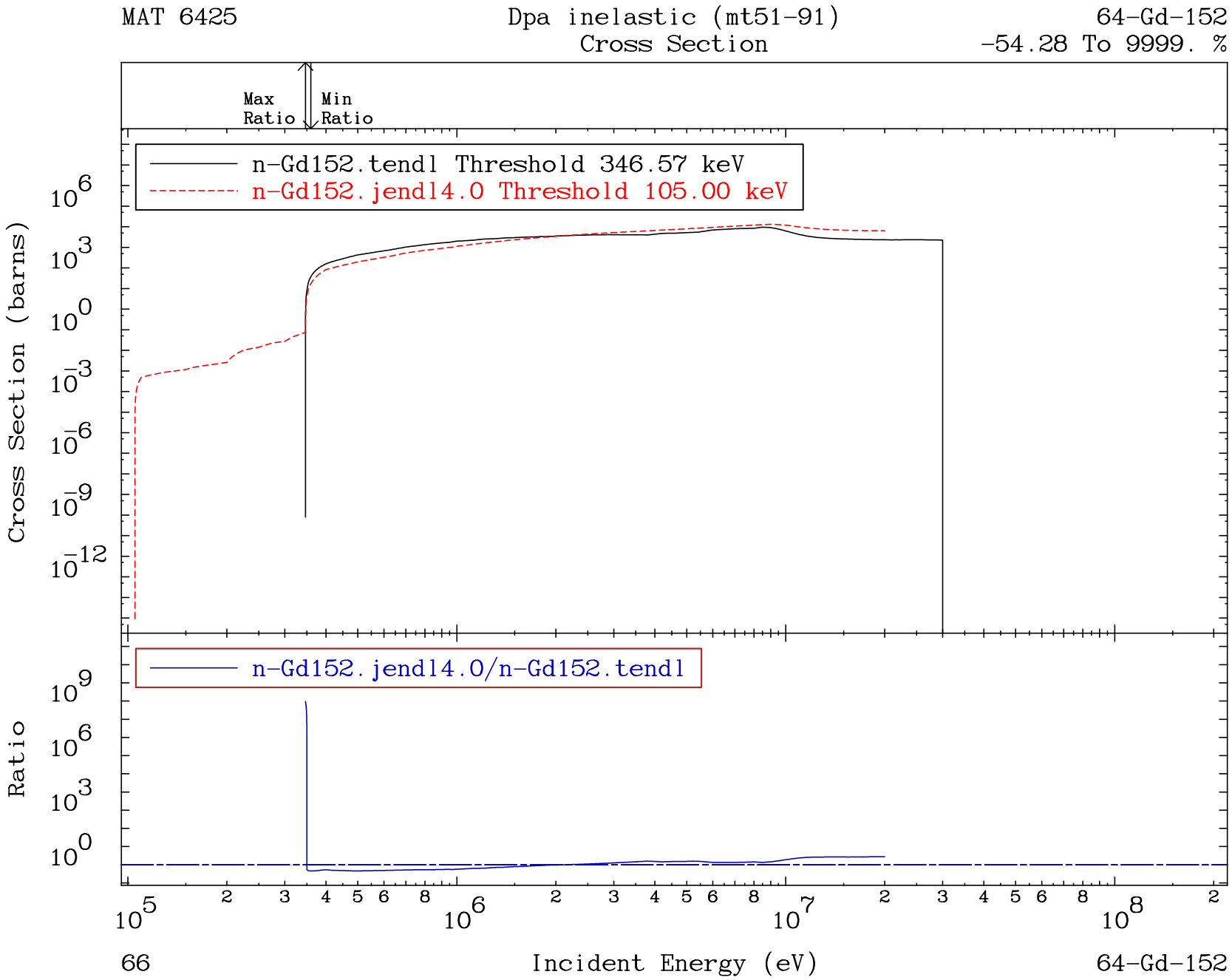

MAT 6425
Kerma capture (mt102)
Cross Section
64-Gd-152
-99.50 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
61
Incident Energy (eV)
64-Gd-152

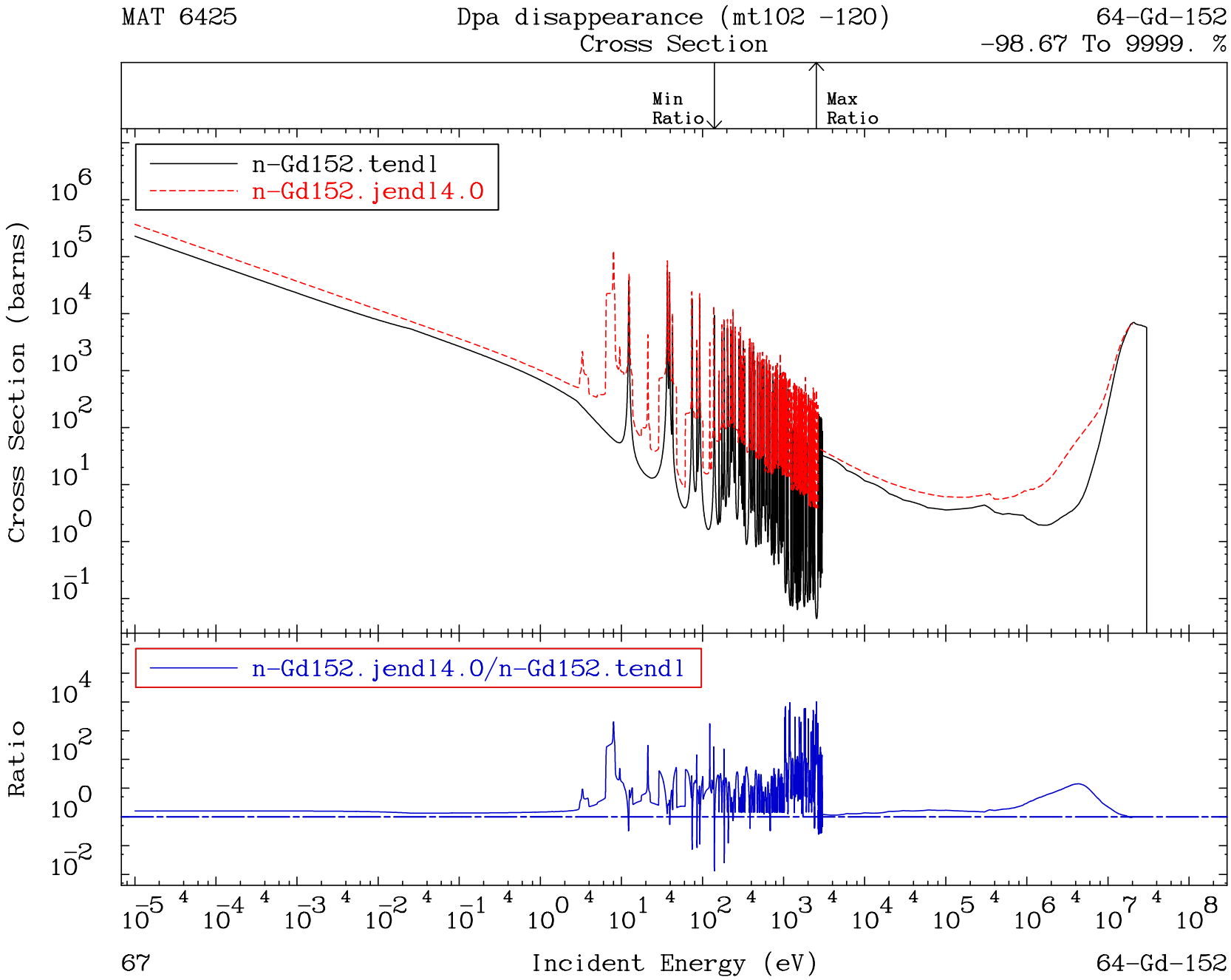

MAT 6425
Total photon (eV-barns)
Cross Section
64-Gd-152
-99.50 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
62
Incident Energy (eV)
64-Gd-152


MAT 6425
Total kinematic kerma (high limit)
Cross Section
64-Gd-152
-99.50 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
63
64-Gd-152


MAT 6425
Dpa total (eV-barns)
Cross Section
64-Gd-152
-98.67 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
64
64-Gd-152


MAT 6425
Dpa elastic (mt2)
Cross Section
64-Gd-152
-99.82 To 9999. %
Max
Ratio
n-Gd152.tendl Threshold 895.43 eV
n-Gd152.jendl4.0 Threshold 931.73 eV
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
65
64-Gd-152


MAT 6425
Dpa inelastic (mt51-91)
Cross Section
64-Gd-152
-54.28 To 9999. %
Max Ratio
Min Ratio
n-Gd152.tendl Threshold 346.57 keV
n-Gd152.jendl4.0 Threshold 105.00 keV
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
66
64-Gd-152


MAT 6425
Dpa disappearance (mt102 -120)
Cross Section
64-Gd-152
-98.67 To 9999. %
Min Ratio
Max Ratio
n-Gd152.tendl
n-Gd152.jendl4.0
Cross Section (barns)
n-Gd152.jendl4.0/n-Gd152.tendl
Ratio
Incident Energy (eV)
67
64-Gd-152