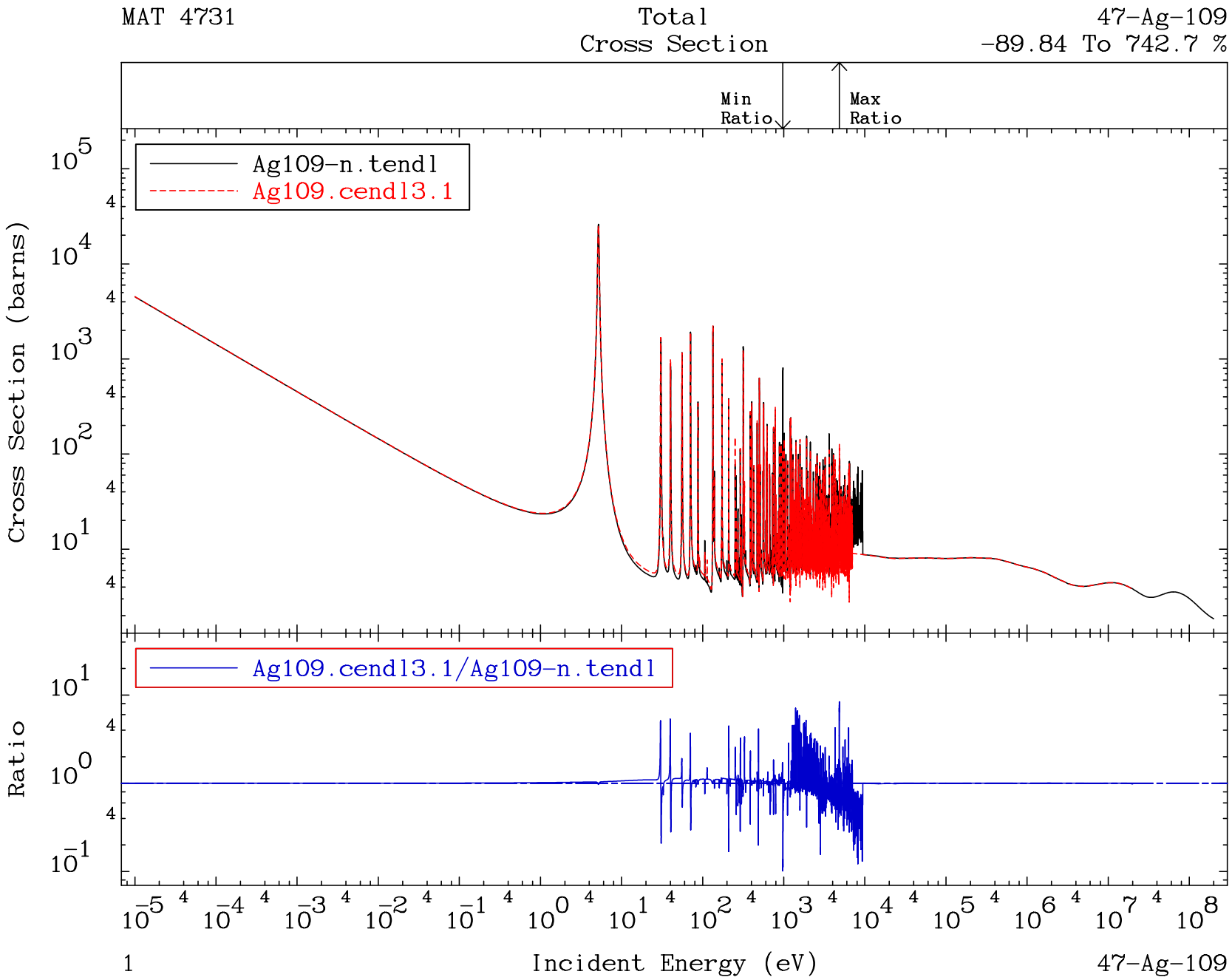
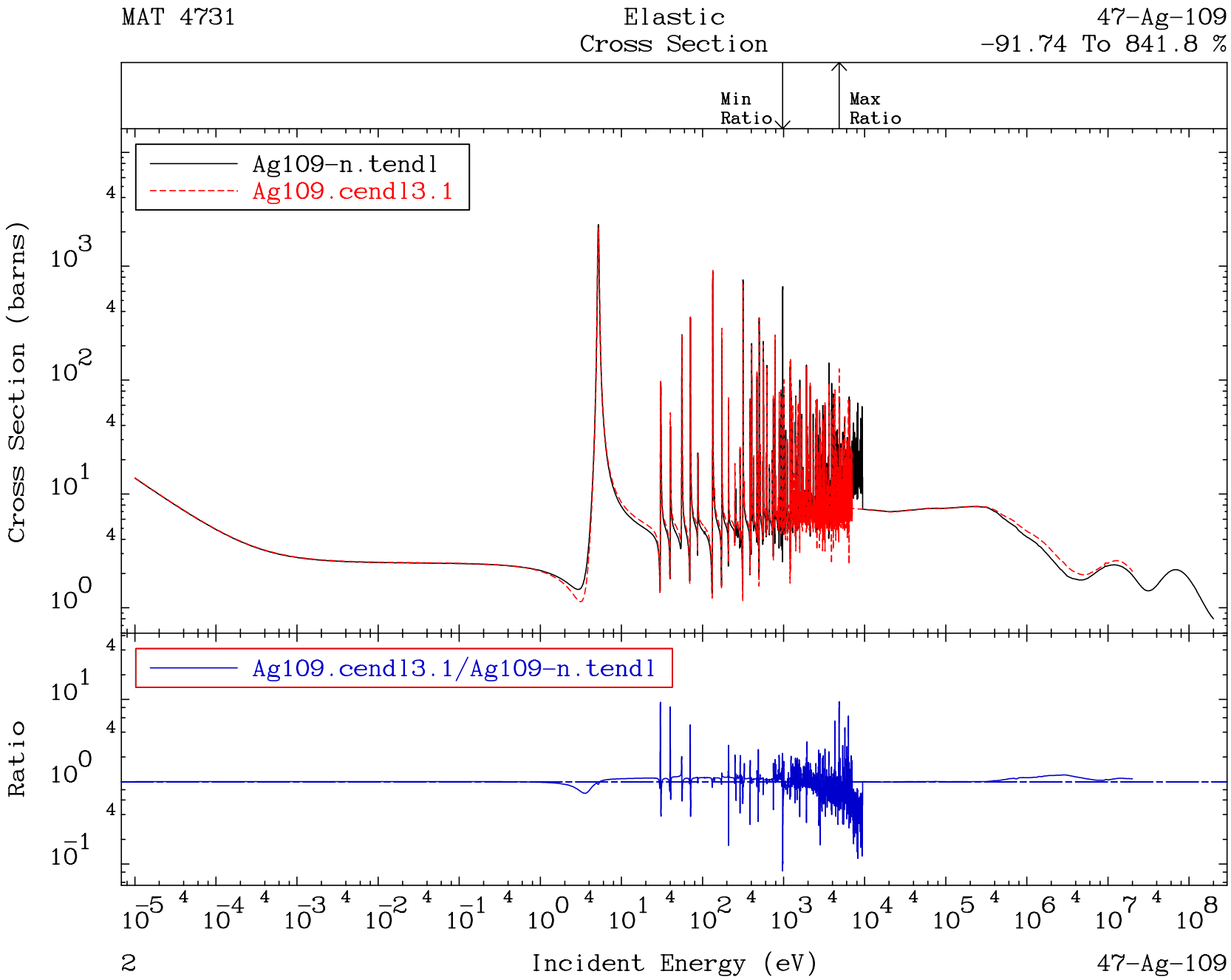
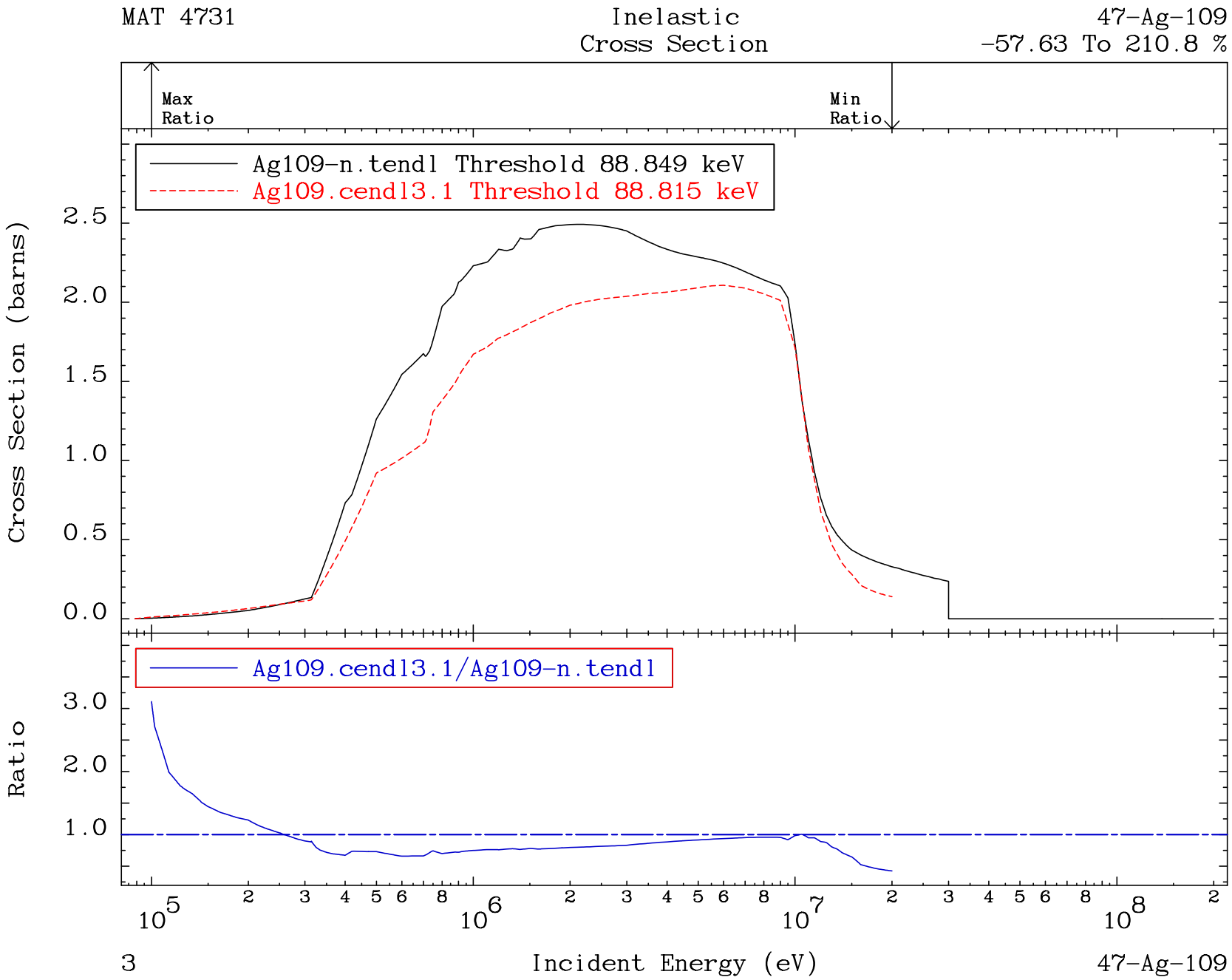
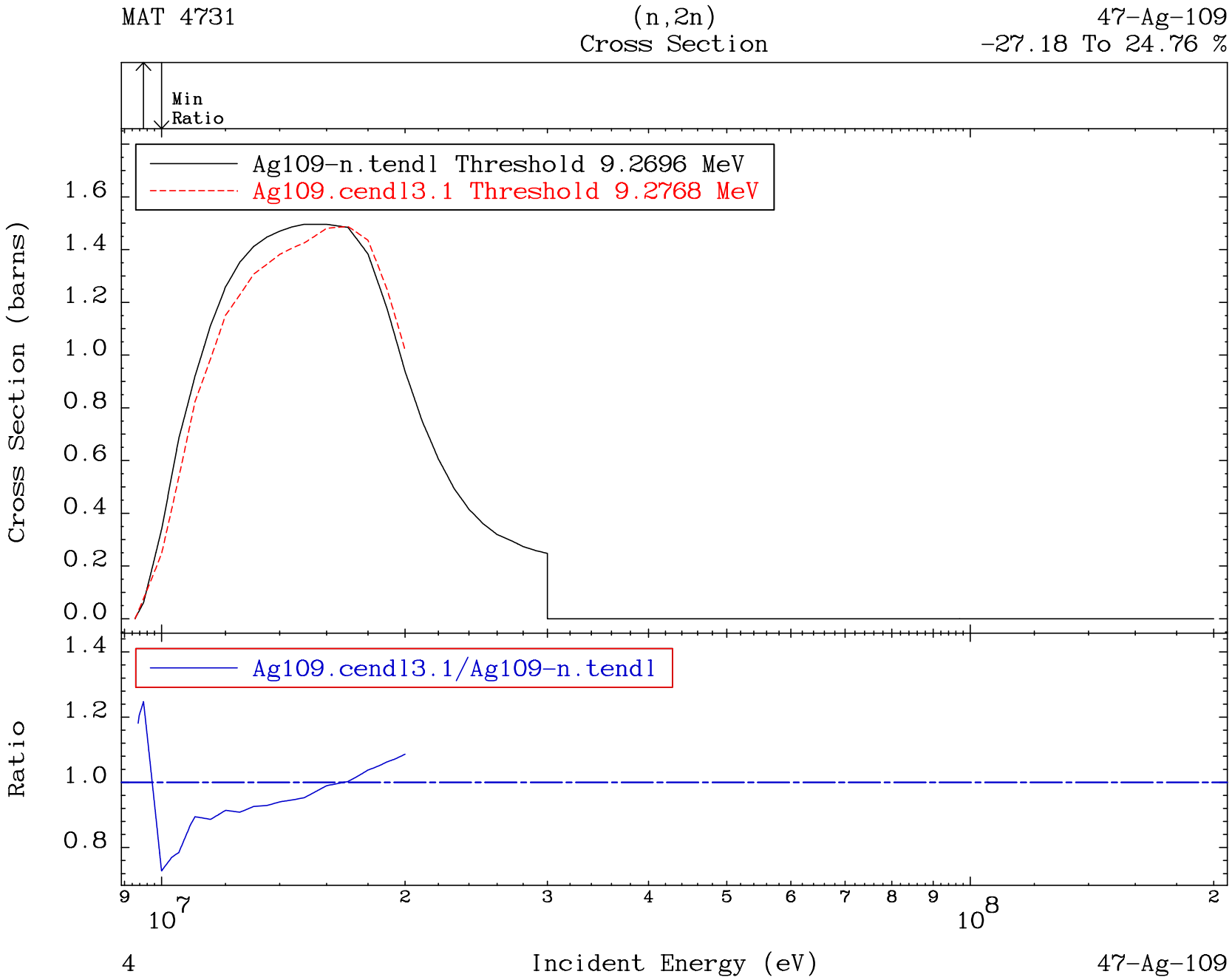
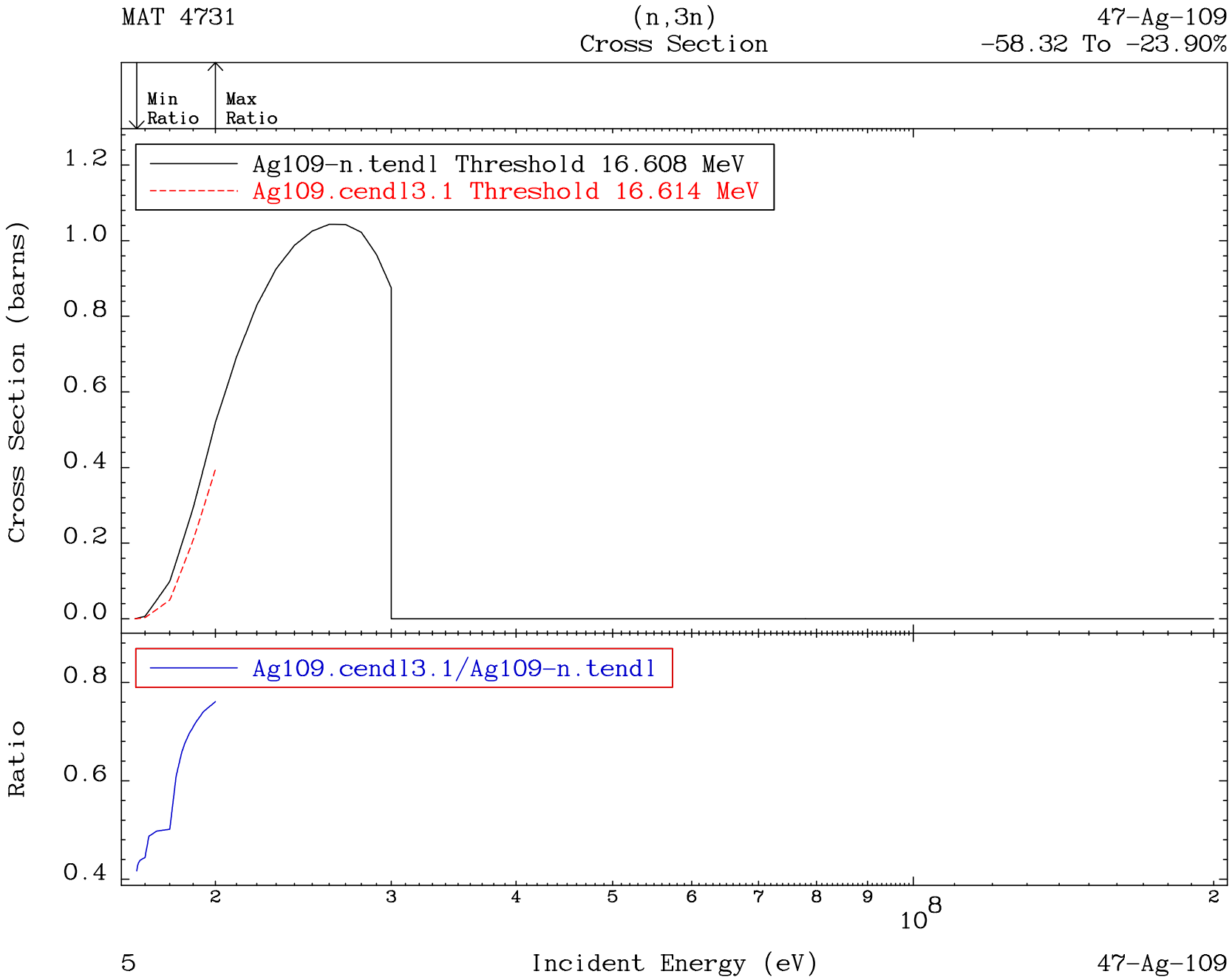
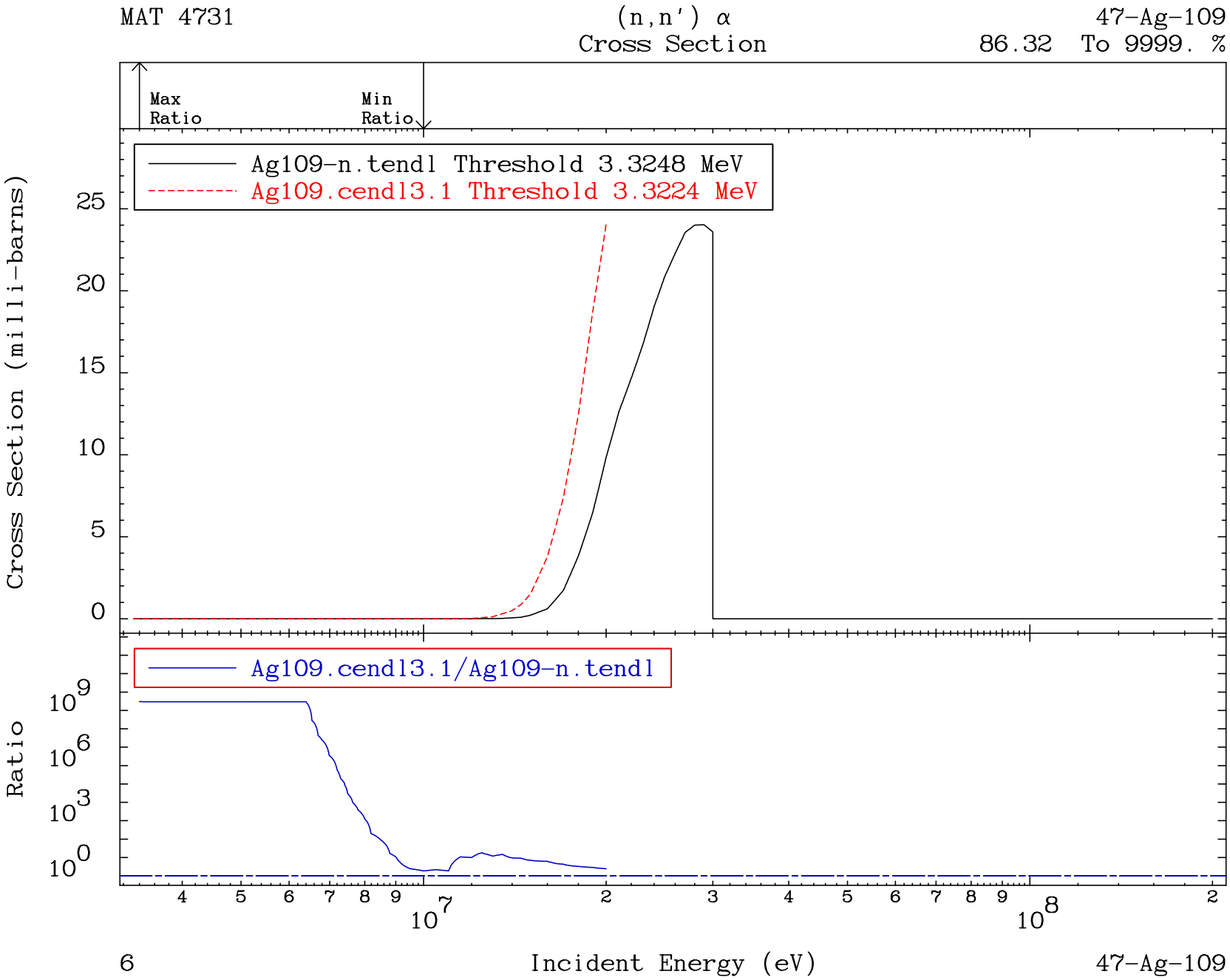

MAT 4731
Total
Cross Section
47-Ag-109
-89.84 To 742.7 %
Min
Ratio
Max
Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
1
47-Ag-109

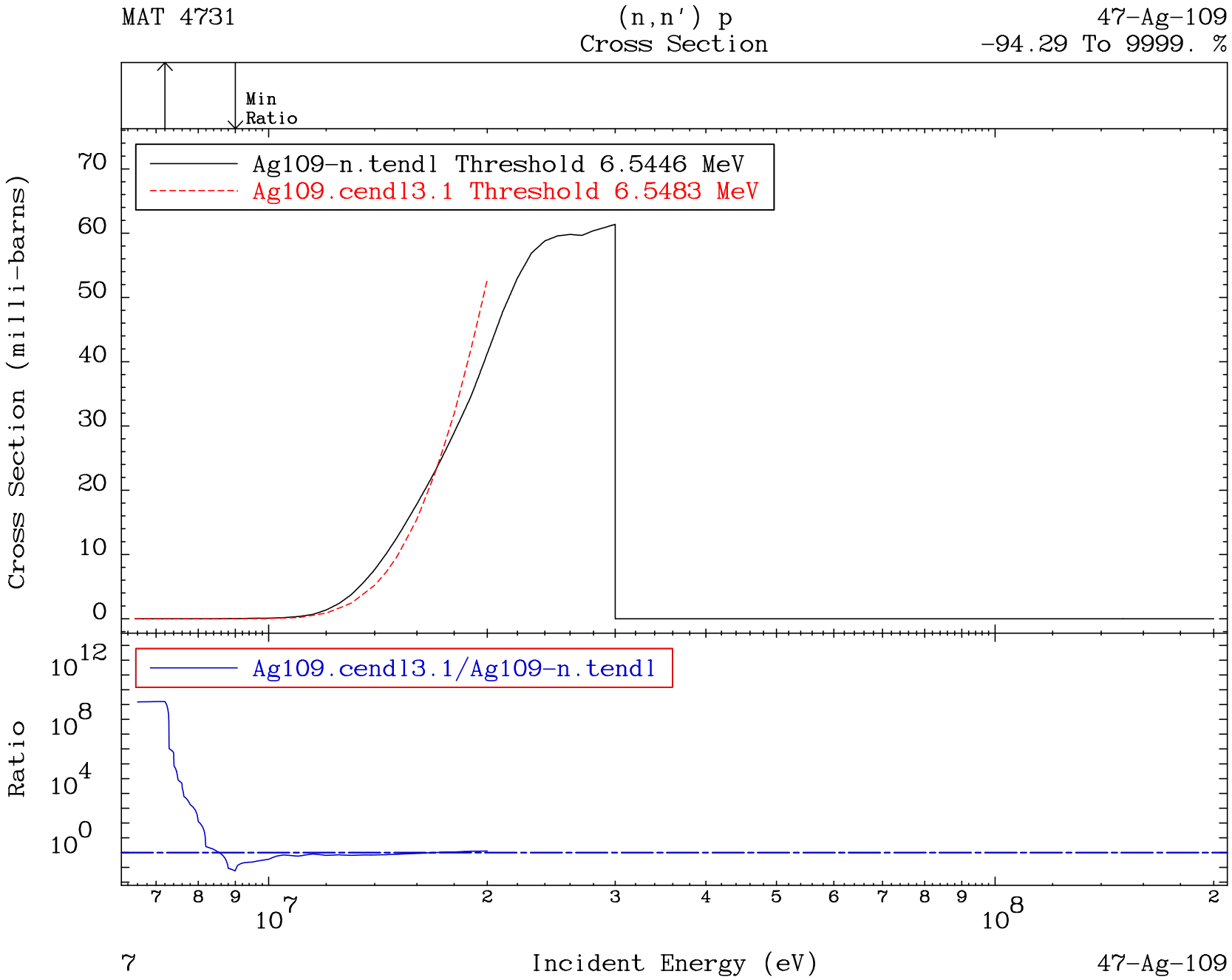

MAT 4731
Elastic
Cross Section
47-Ag-109
-91.74 To 841.8 %
Min
Ratio
Max
Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
2
47-Ag-109

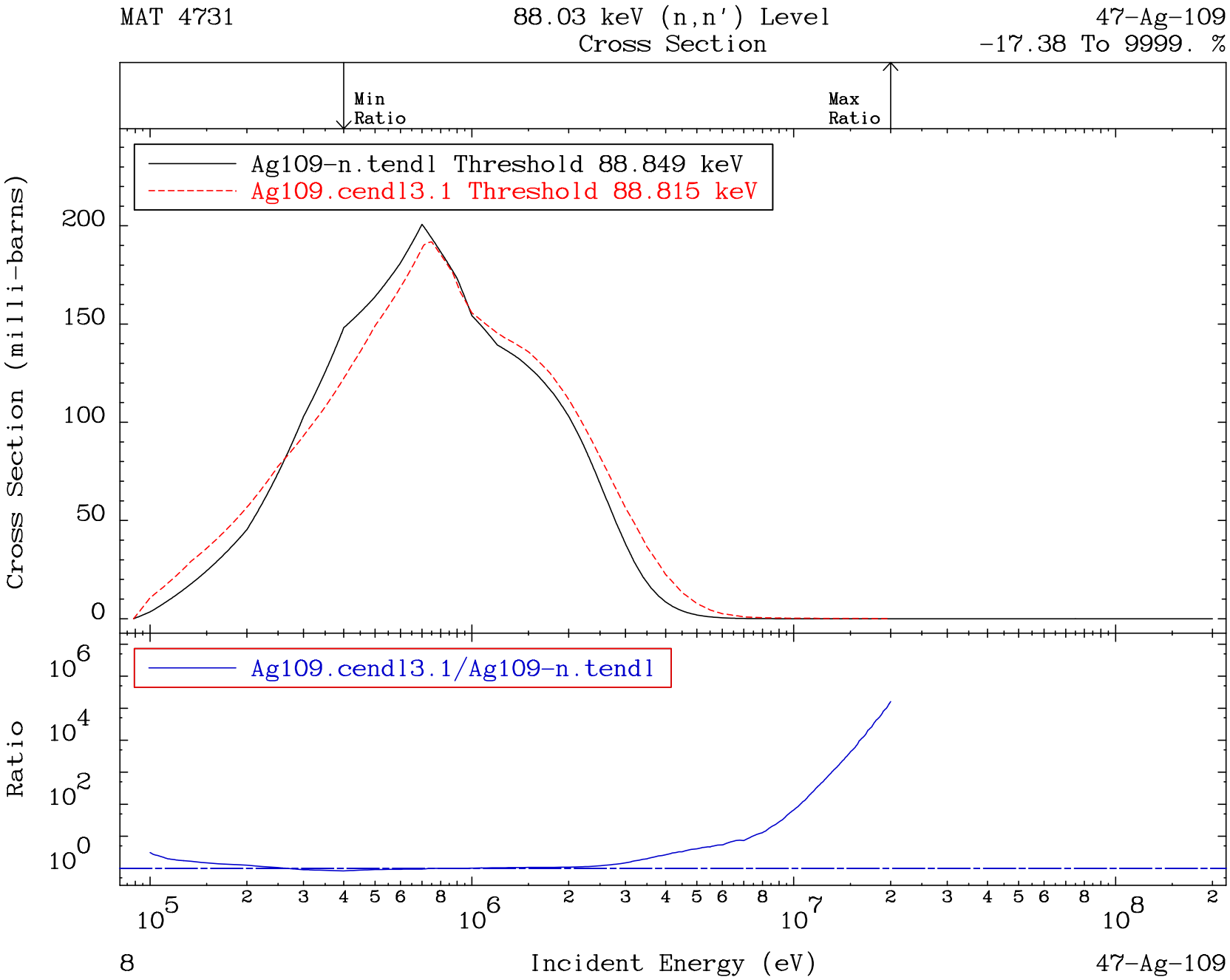

MAT 4731
Inelastic
Cross Section
47-Ag-109
-57.63 To 210.8 %
Max
Ratio
Min
Ratio
Ag109-n.tendl Threshold 88.849 keV
Ag109.cendl3.1 Threshold 88.815 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
3.0
2.0
1.0
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
3
Incident Energy (eV)
47-Ag-109

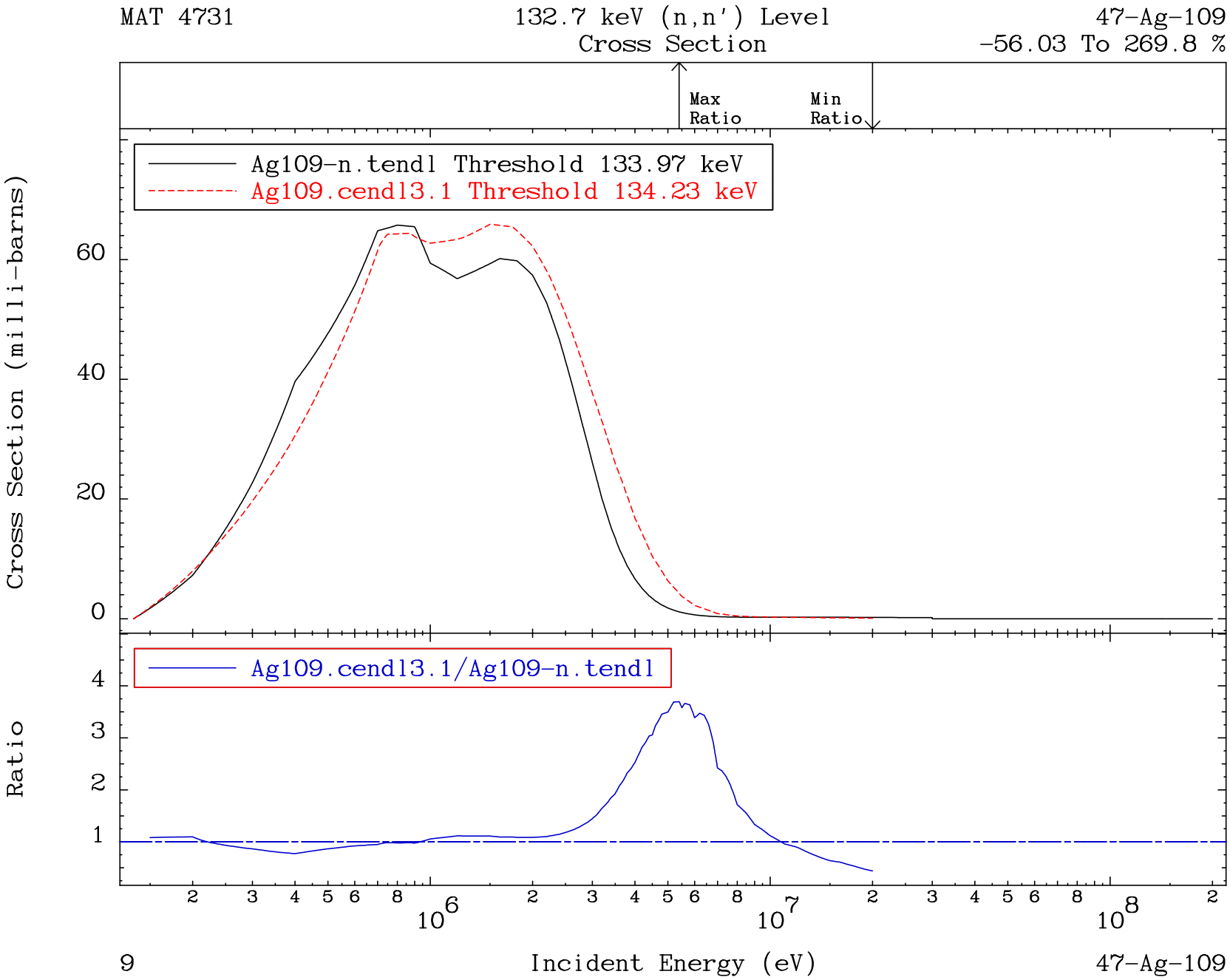

MAT 4731
(n,2n)
Cross Section
47-Ag-109
-27.18 To 24.76 %
Min
Ratio
Ag109-n.tendl Threshold 9.2696 MeV
Ag109.cendl3.1 Threshold 9.2768 MeV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
1.4
1.2
1.0
0.8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
47-Ag-109

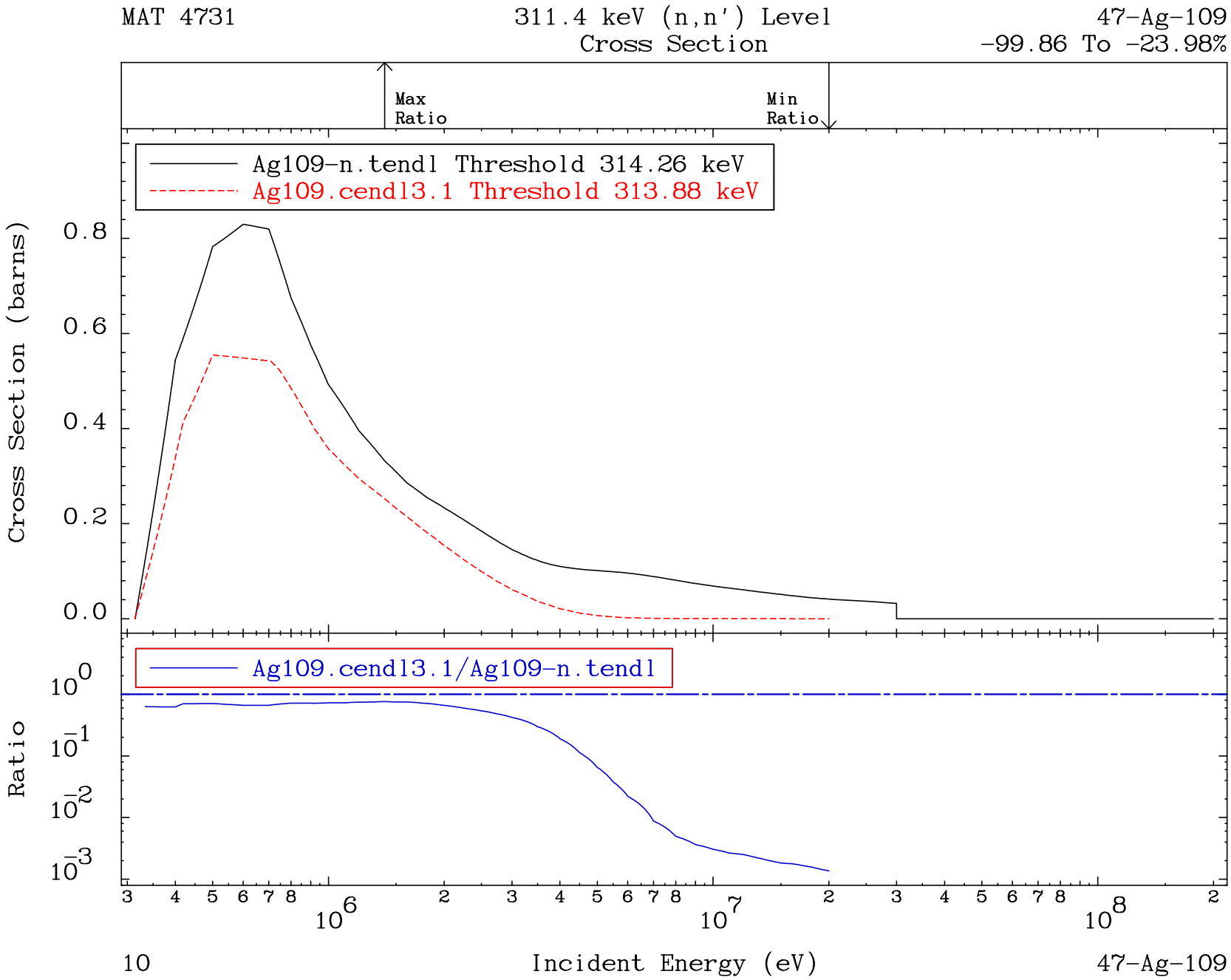

MAT 4731
(n,3n)
Cross Section
47-Ag-109
-58.32 To -23.90%
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 16.608 MeV
Ag109.cendl3.1 Threshold 16.614 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
0.8
0.6
0.4
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
47-Ag-109

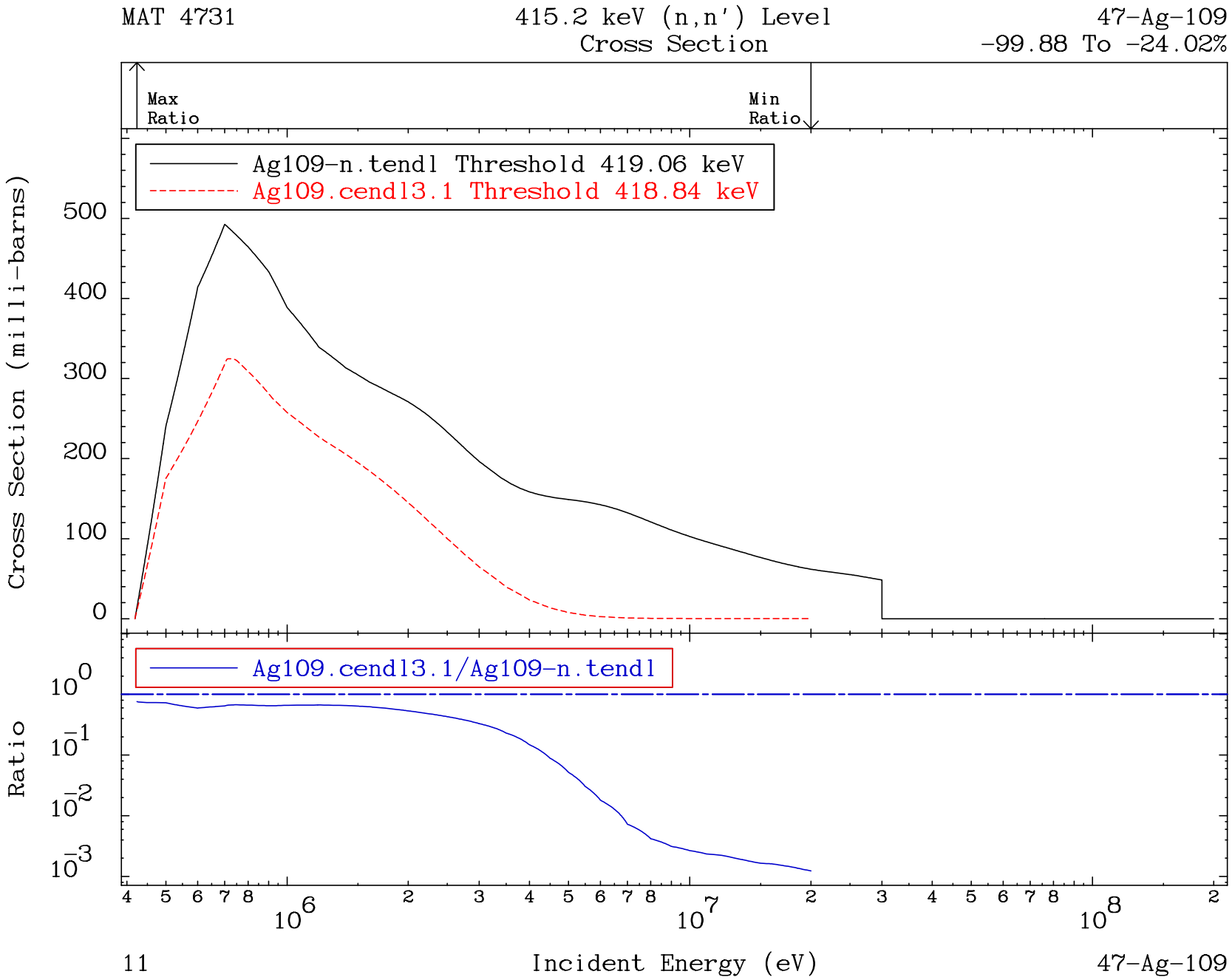

MAT 4731
(n,n') α
Cross Section
47-Ag-109
86.32 To 9999. %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 3.3248 MeV
Ag109.cendl3.1 Threshold 3.3224 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^9
10^6
10^3
10^0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
6
Incident Energy (eV)
47-Ag-109

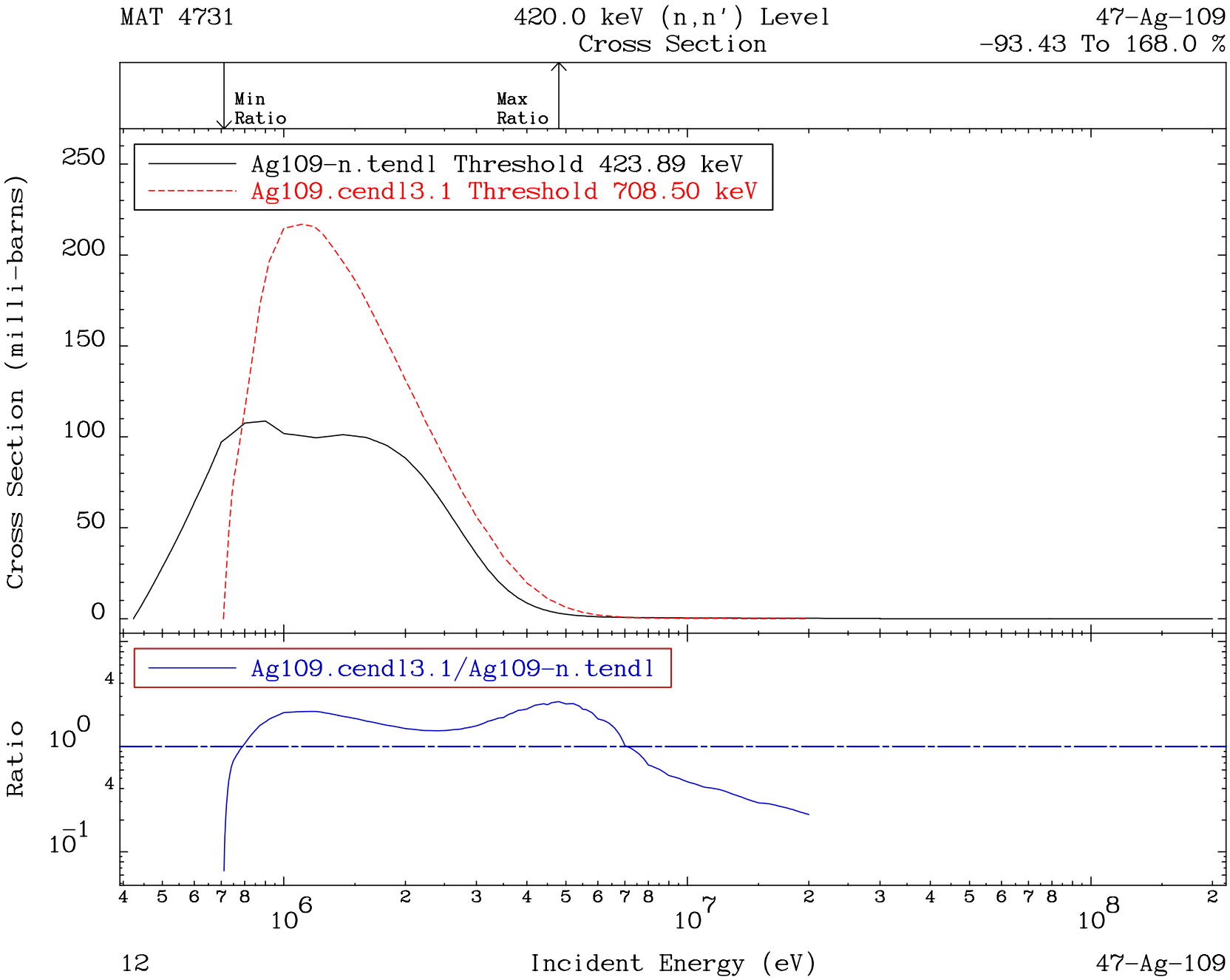

MAT 4731
(n,n') p
Cross Section
47-Ag-109
-94.29 To 9999. %
Min
Ratio
Ag109-n.tendl Threshold 6.5446 MeV
Ag109.cendl3.1 Threshold 6.5483 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^12
10^8
10^4
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
47-Ag-109

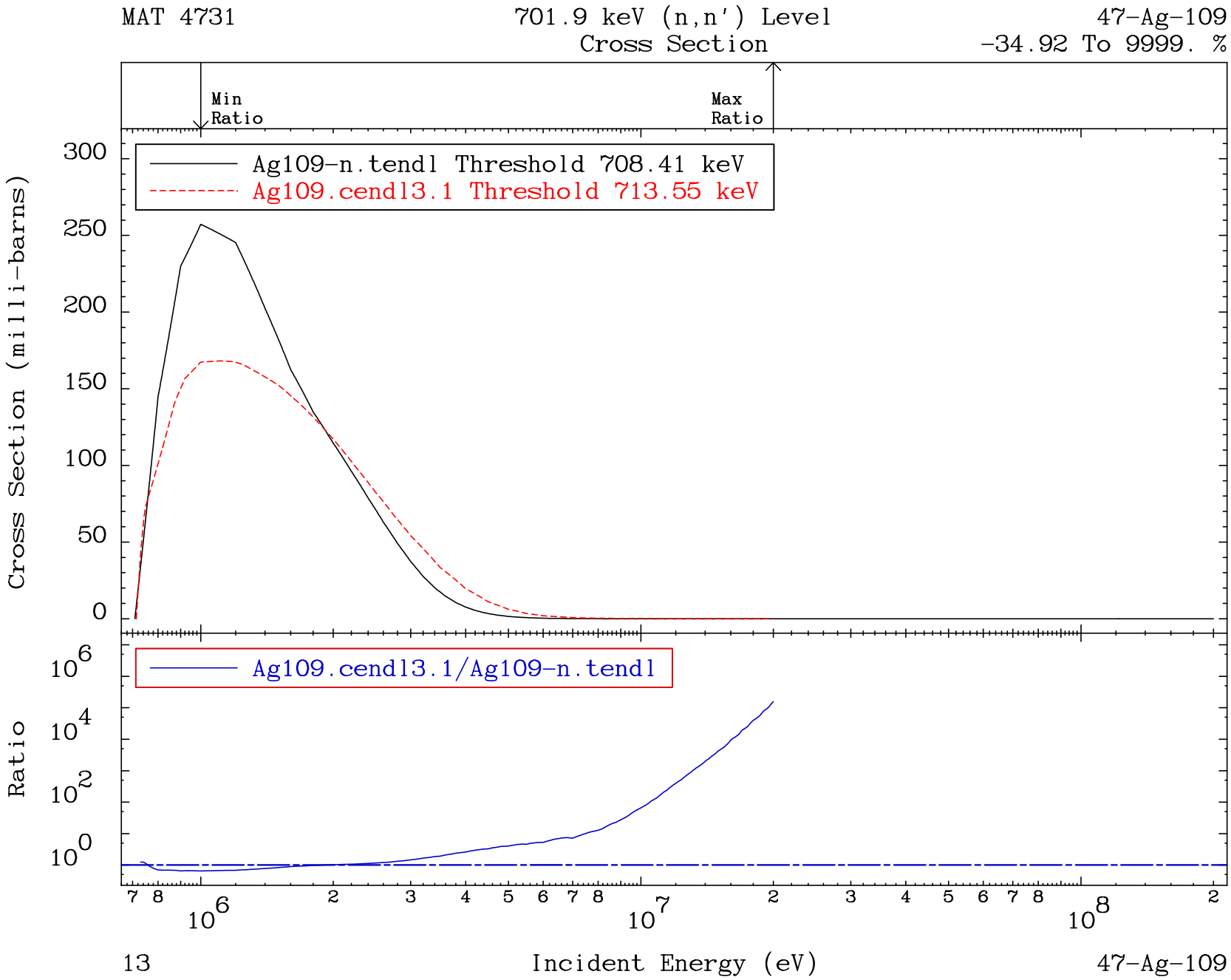

MAT 4731
88.03 keV (n,n') Level
Cross Section
47-Ag-109
-17.38 To 9999. %
Min
Ratio
Max
Ratio
Ag109-n.tendl Threshold 88.849 keV
Ag109.cendl3.1 Threshold 88.815 keV
Cross Section (milli-barns)
200
150
100
50
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^6
10^4
10^2
10^0
10^5
10^6
10^7
10^8
Incident Energy (eV)
8
47-Ag-109

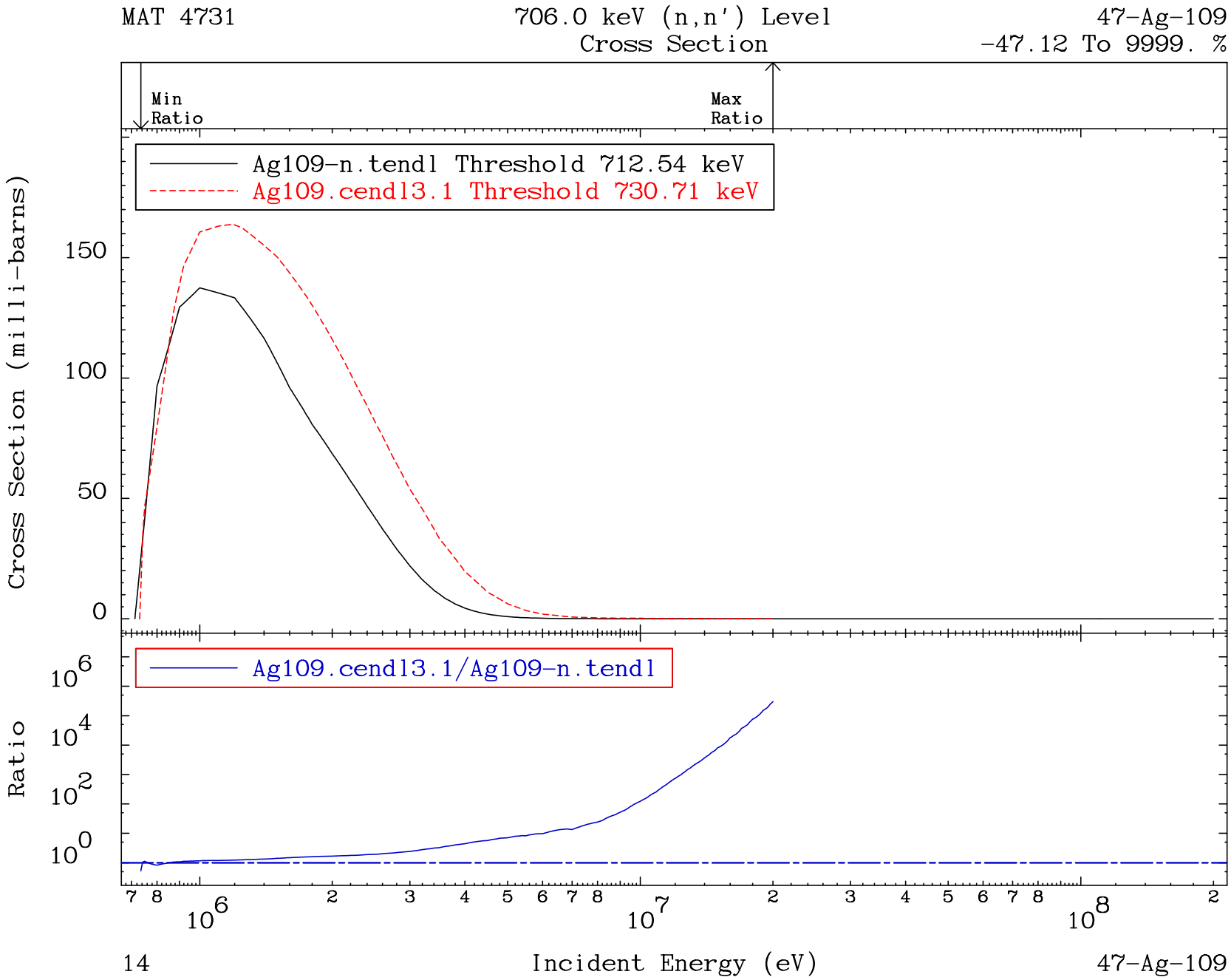

MAT 4731
132.7 keV (n,n') Level
Cross Section
47-Ag-109
-56.03 To 269.8 %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 133.97 keV
Ag109.cendl3.1 Threshold 134.23 keV
Cross Section (milli-barns)
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
4
3
2
1
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
9
Incident Energy (eV)
47-Ag-109

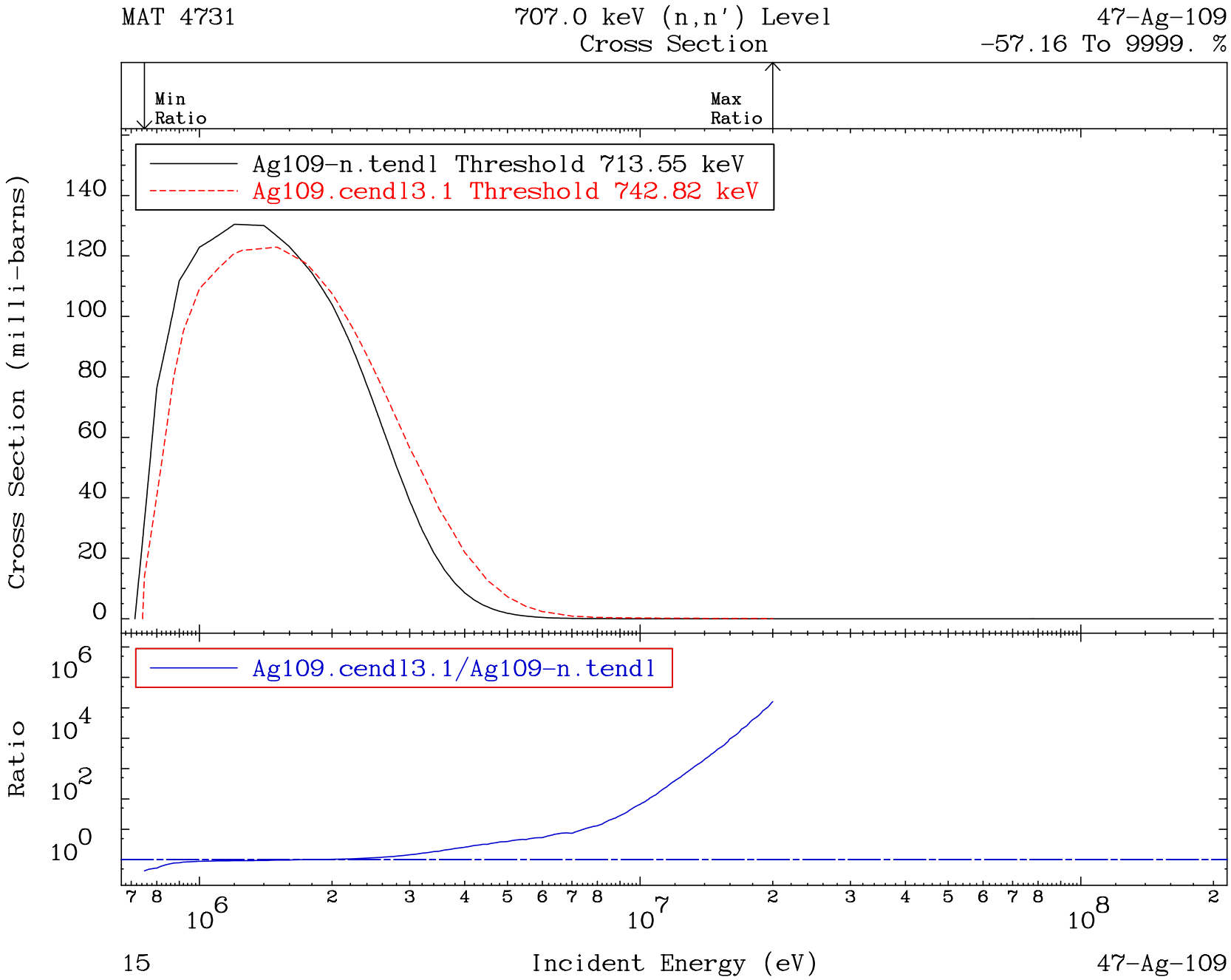

MAT 4731
311.4 keV (n,n') Level
Cross Section
47-Ag-109
-99.86 To -23.98%
Max
Ratio
Min
Ratio
Ag109-n.tendl Threshold 314.26 keV
Ag109.cendl3.1 Threshold 313.88 keV
Cross Section (barns)
0.8
0.6
0.4
0.2
0.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^0
10^-1
10^-2
10^-3
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
10
Incident Energy (eV)
47-Ag-109

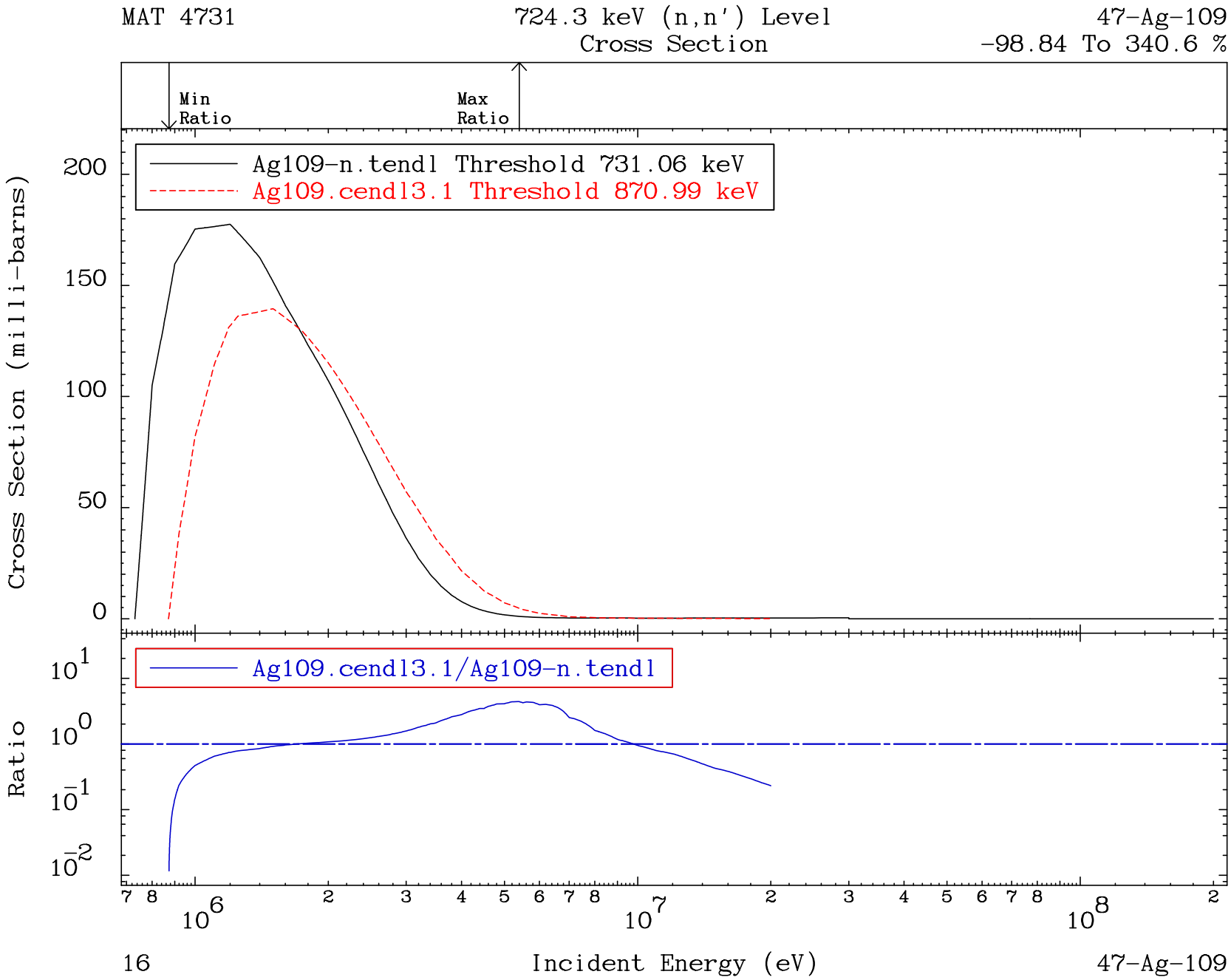

MAT 4731
415.2 keV (n,n') Level
Cross Section
47-Ag-109
-99.88 To -24.02%
Max
Ratio
Min
Ratio
Ag109-n.tendl Threshold 419.06 keV
Ag109.cendl3.1 Threshold 418.84 keV
Cross Section (milli-barns)
500
400
300
200
100
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^0
10^-1
10^-2
10^-3
4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
11
Incident Energy (eV)
47-Ag-109

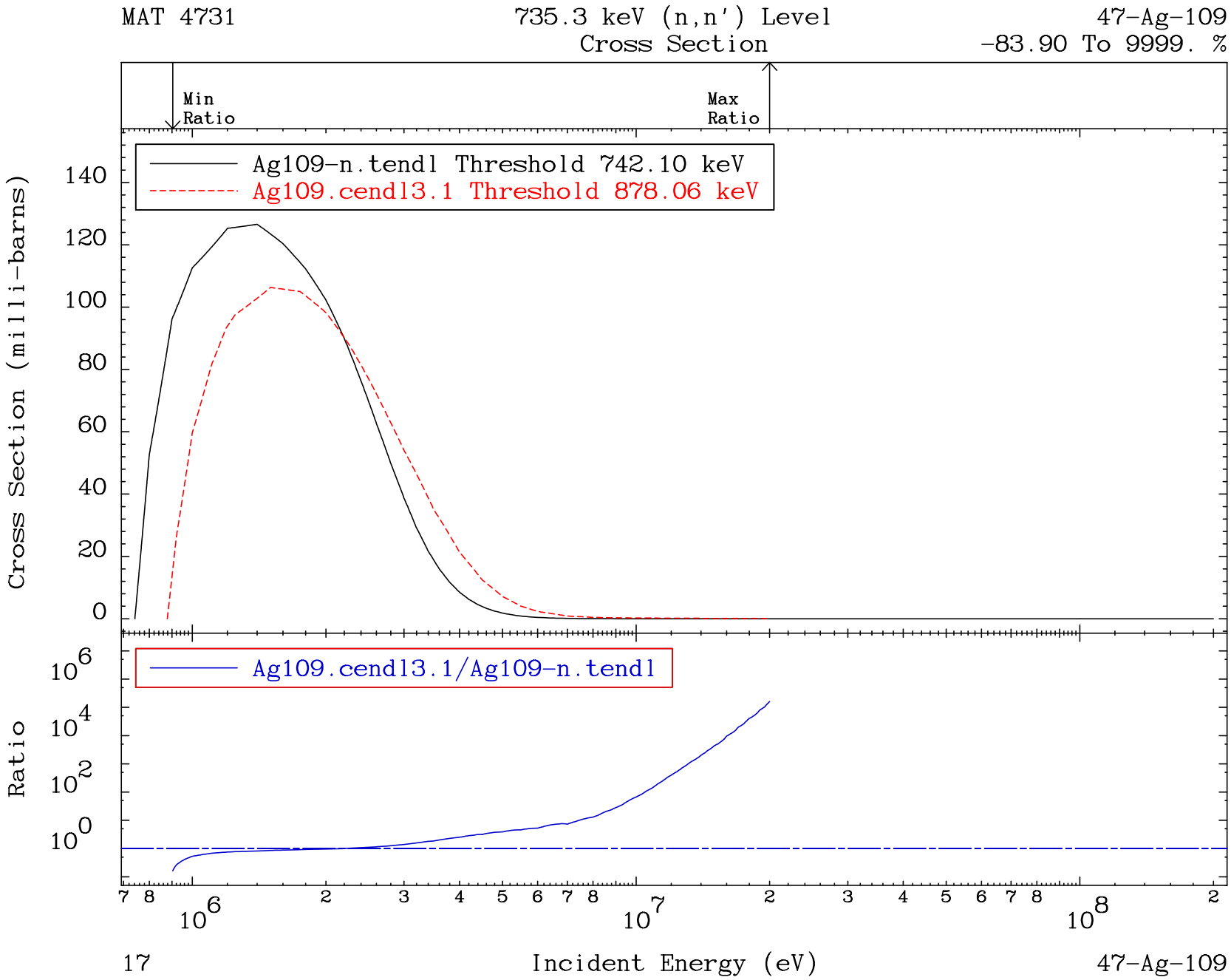

MAT 4731
420.0 keV (n,n') Level
Cross Section
47-Ag-109
-93.43 To 168.0 %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 423.89 keV
Ag109.cendl3.1 Threshold 708.50 keV
Cross Section (milli-barns)
250
200
150
100
50
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
4
10^0
4
10^{-1}
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
12
Incident Energy (eV)
47-Ag-109

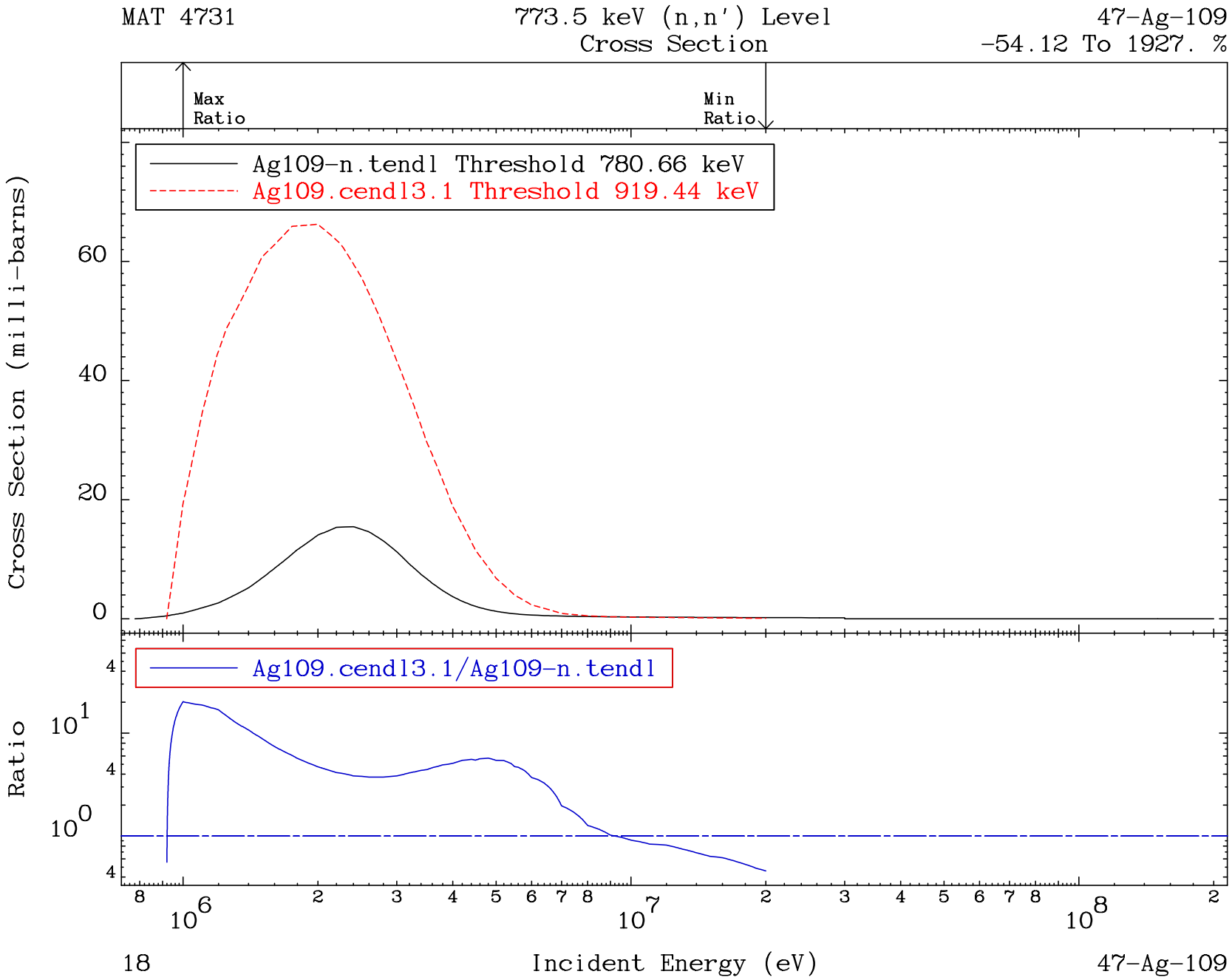

MAT 4731
701.9 keV (n,n') Level
Cross Section
47-Ag-109
-34.92 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 708.41 keV
Ag109.cendl3.1 Threshold 713.55 keV
Cross Section (milli-barns)
300
250
200
150
100
50
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^6
10^4
10^2
10^0
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
13
Incident Energy (eV)
47-Ag-109

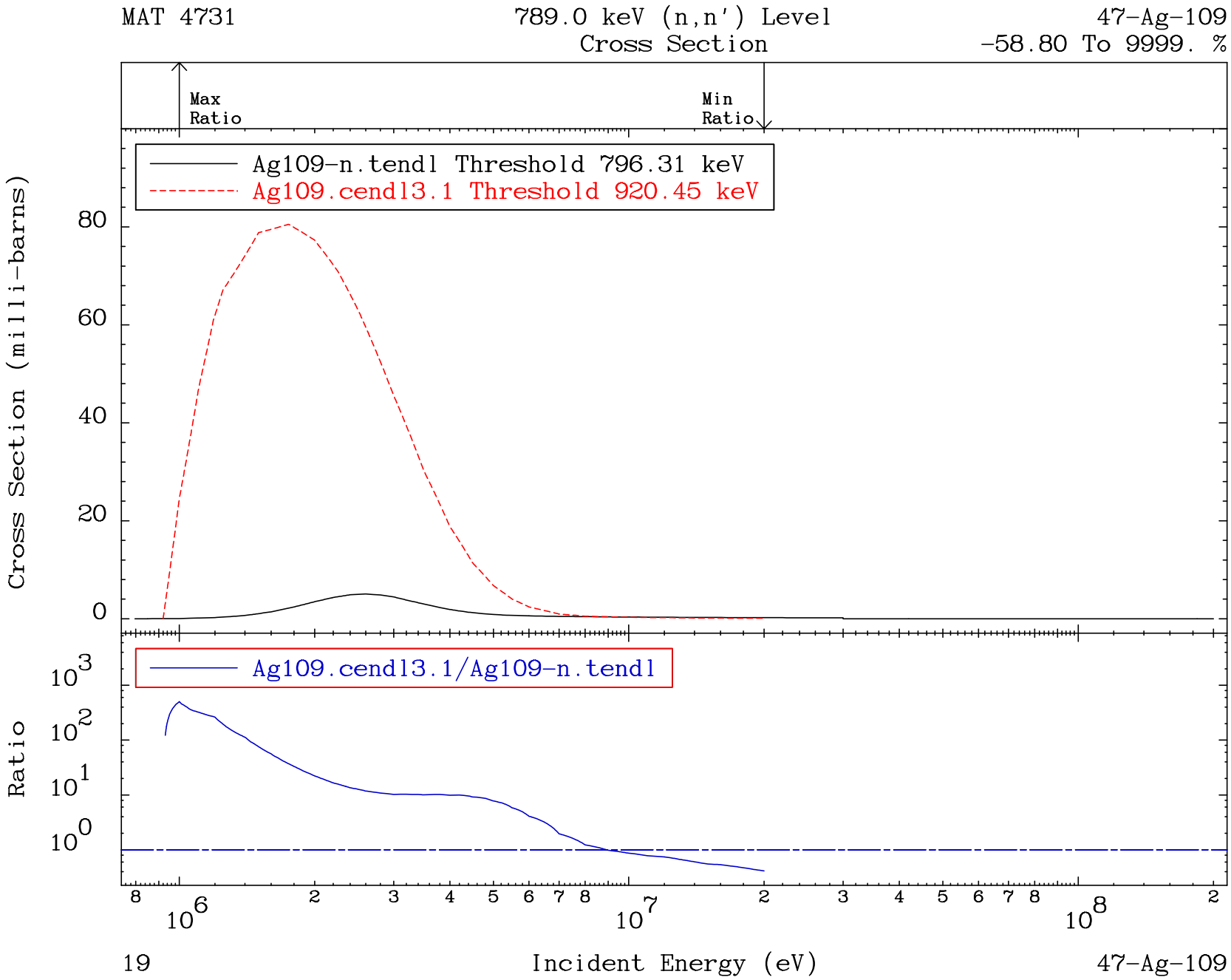

MAT 4731
706.0 keV (n,n') Level
Cross Section
47-Ag-109
-47.12 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 712.54 keV
Ag109.cendl3.1 Threshold 730.71 keV
Cross Section (milli-barns)
150
100
50
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^6
10^4
10^2
10^0
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
47-Ag-109

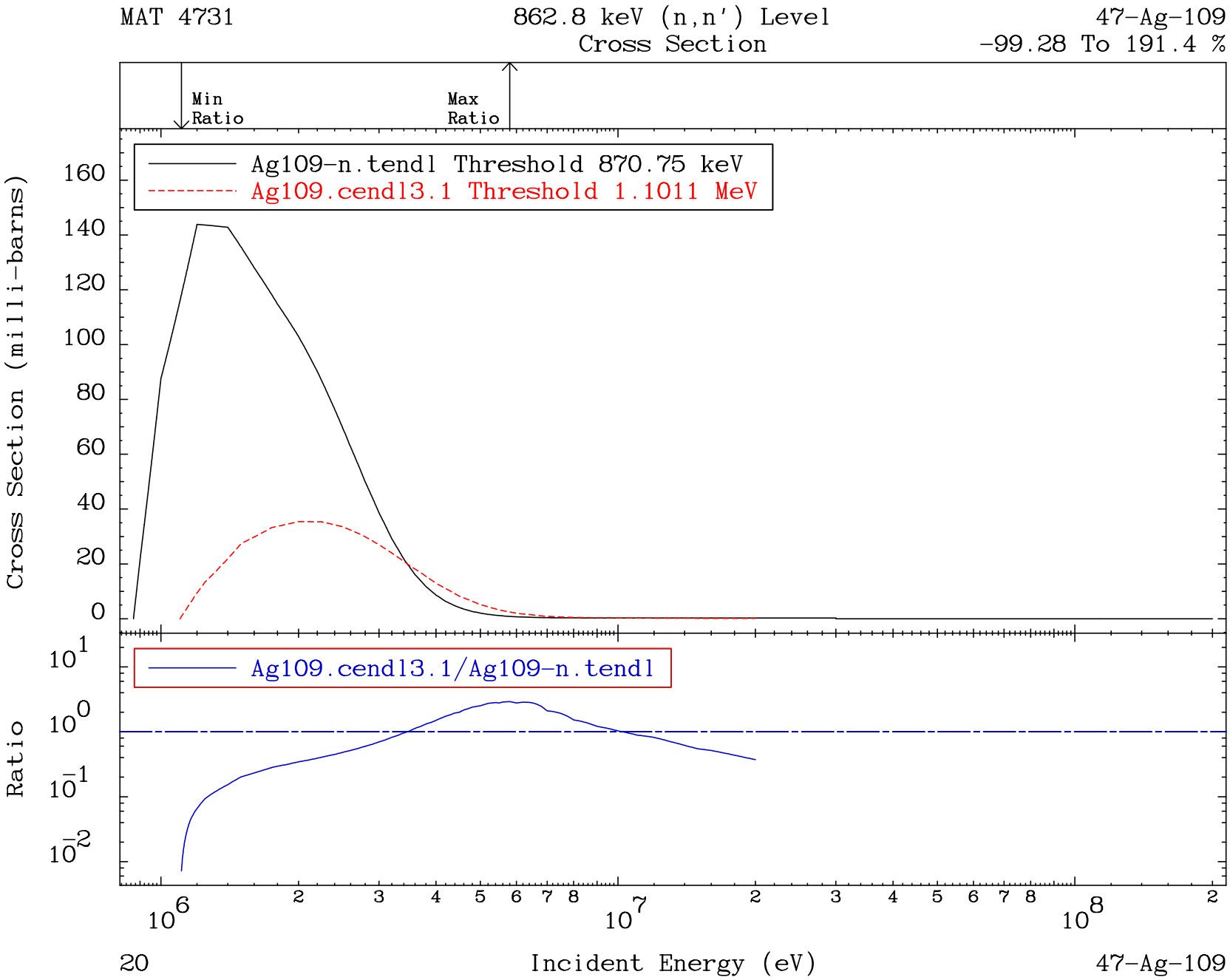

MAT 4731
707.0 keV (n,n') Level
Cross Section
47-Ag-109
-57.16 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 713.55 keV
Ag109.cendl3.1 Threshold 742.82 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^6
10^4
10^2
10^0
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
15
Incident Energy (eV)
47-Ag-109

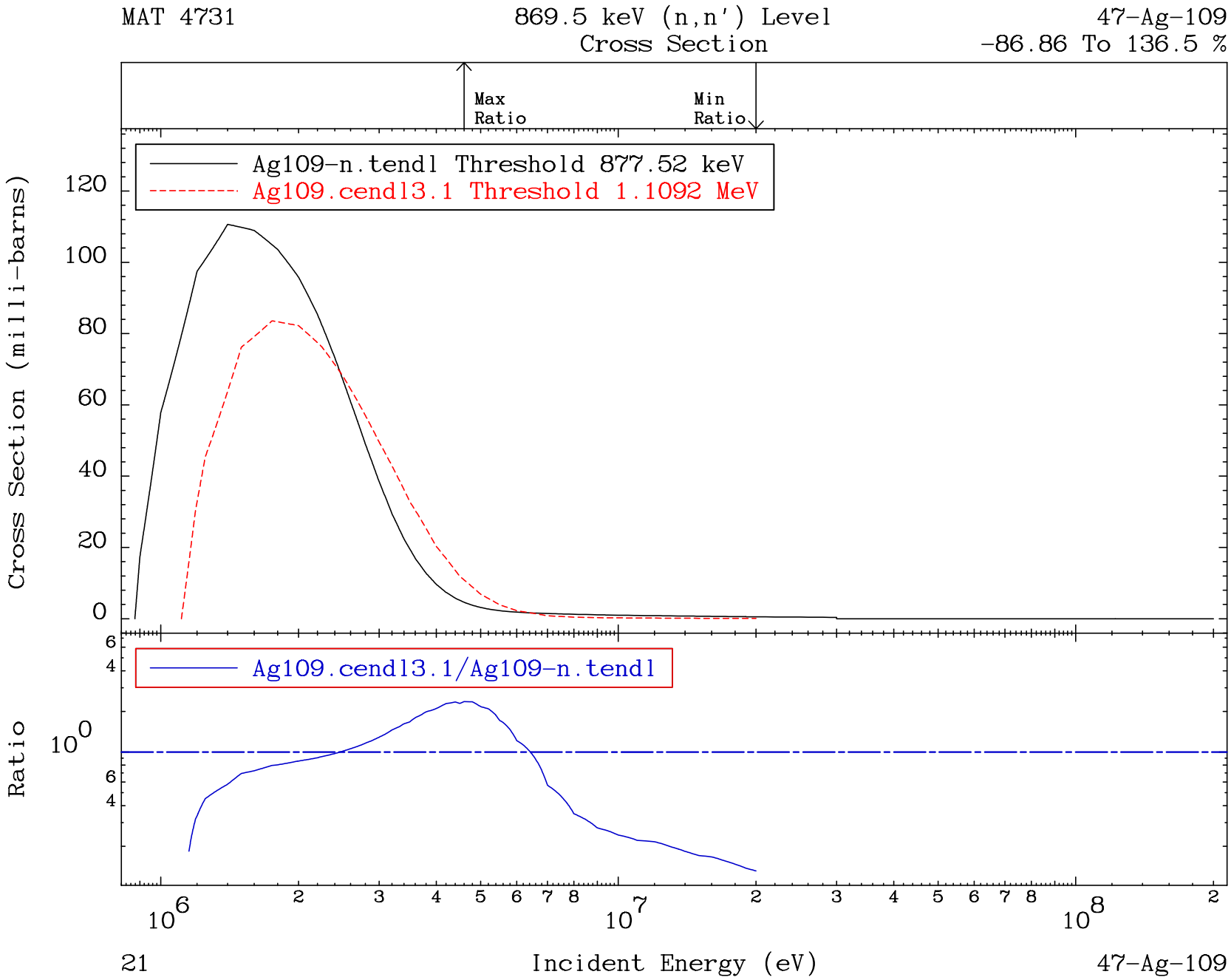

MAT 4731
724.3 keV (n,n') Level
Cross Section
47-Ag-109
-98.84 To 340.6 %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 731.06 keV
Ag109.cendl3.1 Threshold 870.99 keV
Cross Section (milli-barns)
200
150
100
50
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^1
10^0
10^-1
10^-2
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
16
Incident Energy (eV)
47-Ag-109

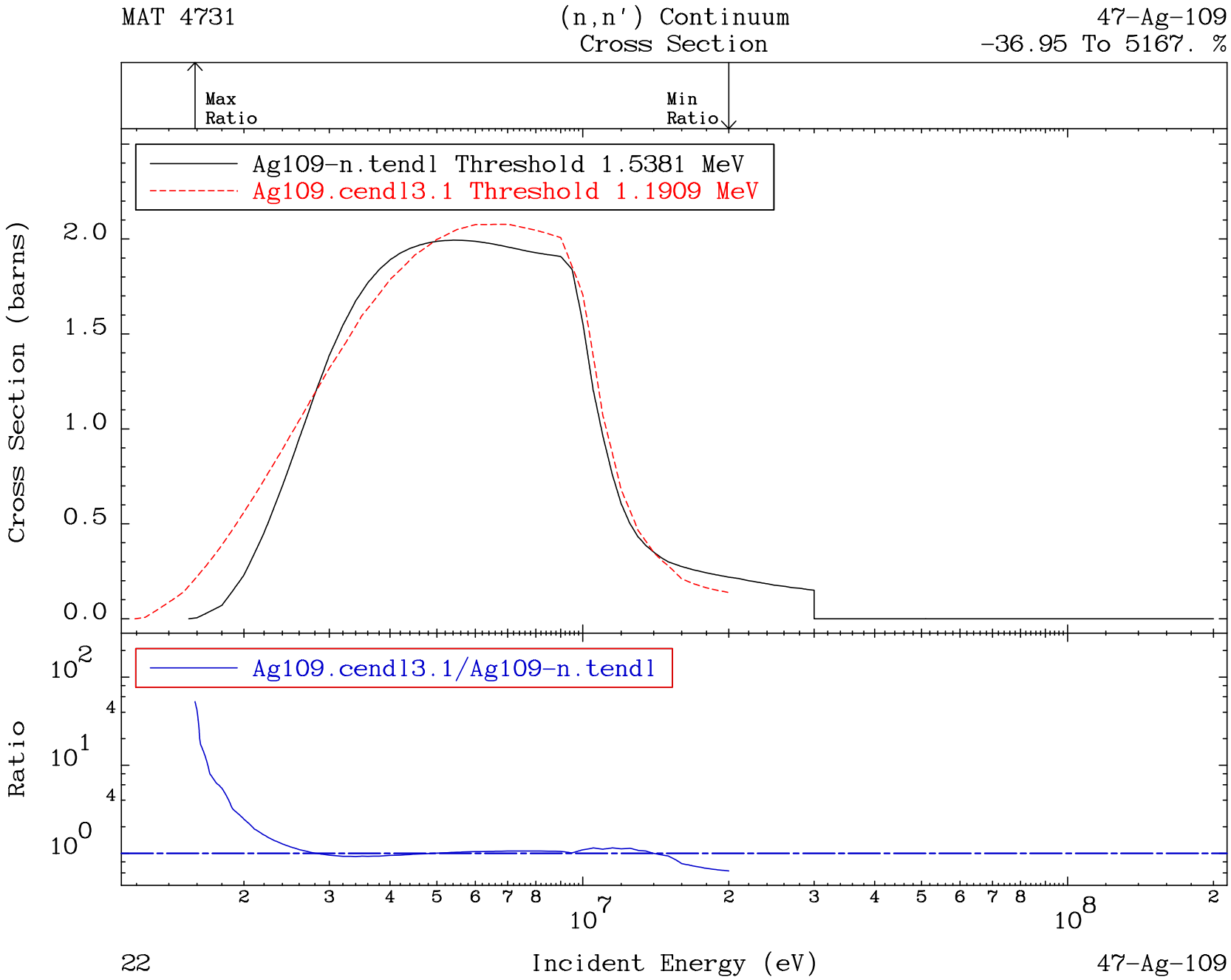

MAT 4731
735.3 keV (n,n') Level
Cross Section
47-Ag-109
-83.90 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 742.10 keV
Ag109.cendl3.1 Threshold 878.06 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^6
10^4
10^2
10^0
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
17
Incident Energy (eV)
47-Ag-109

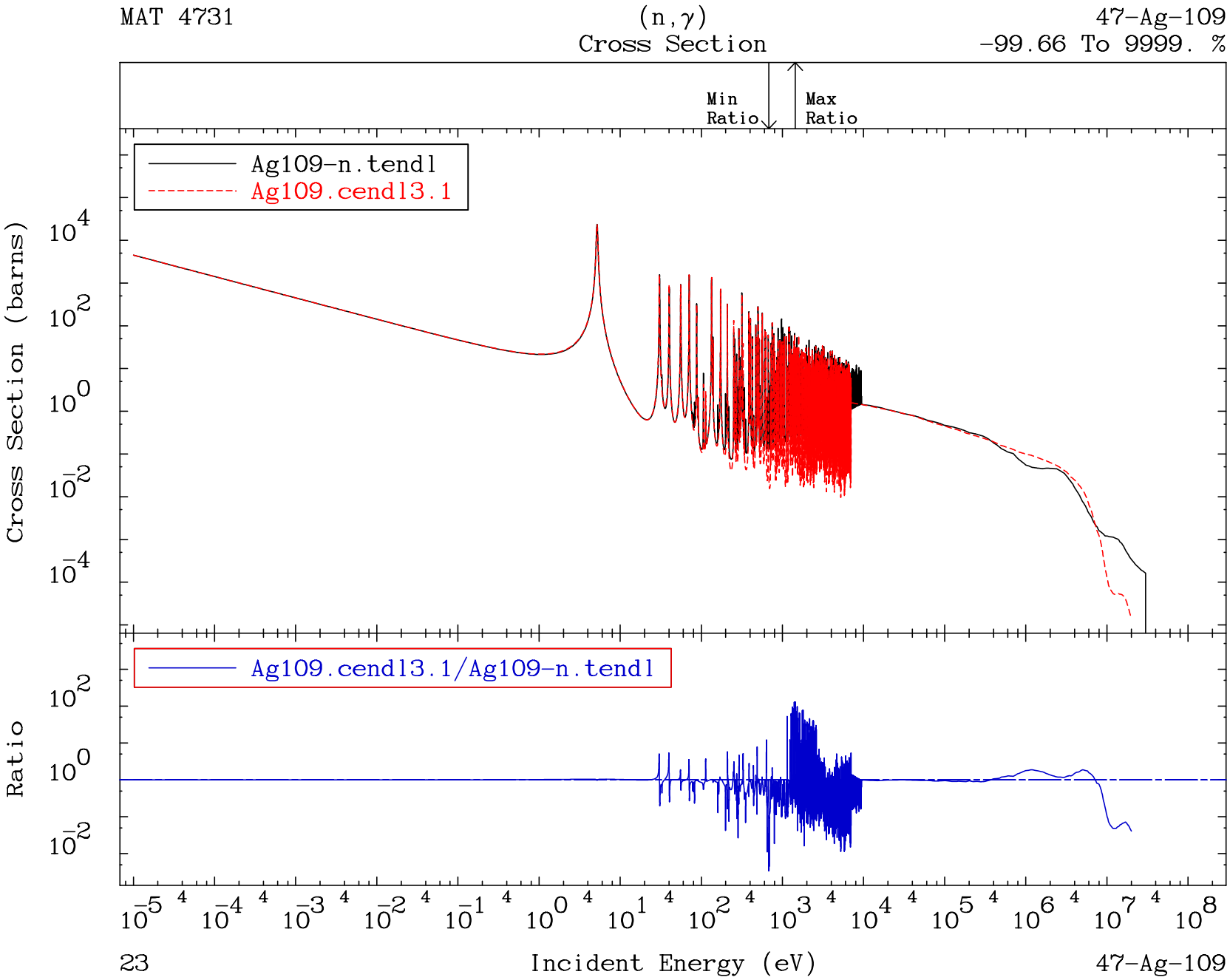

MAT 4731
773.5 keV (n,n') Level
Cross Section
47-Ag-109
-54.12 To 1927. %
Max
Ratio
Min
Ratio
Ag109-n.tendl Threshold 780.66 keV
Ag109.cendl3.1 Threshold 919.44 keV
Cross Section (milli-barns)
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^1
10^0
4
10^6
10^7
10^8
Incident Energy (eV)
18
47-Ag-109

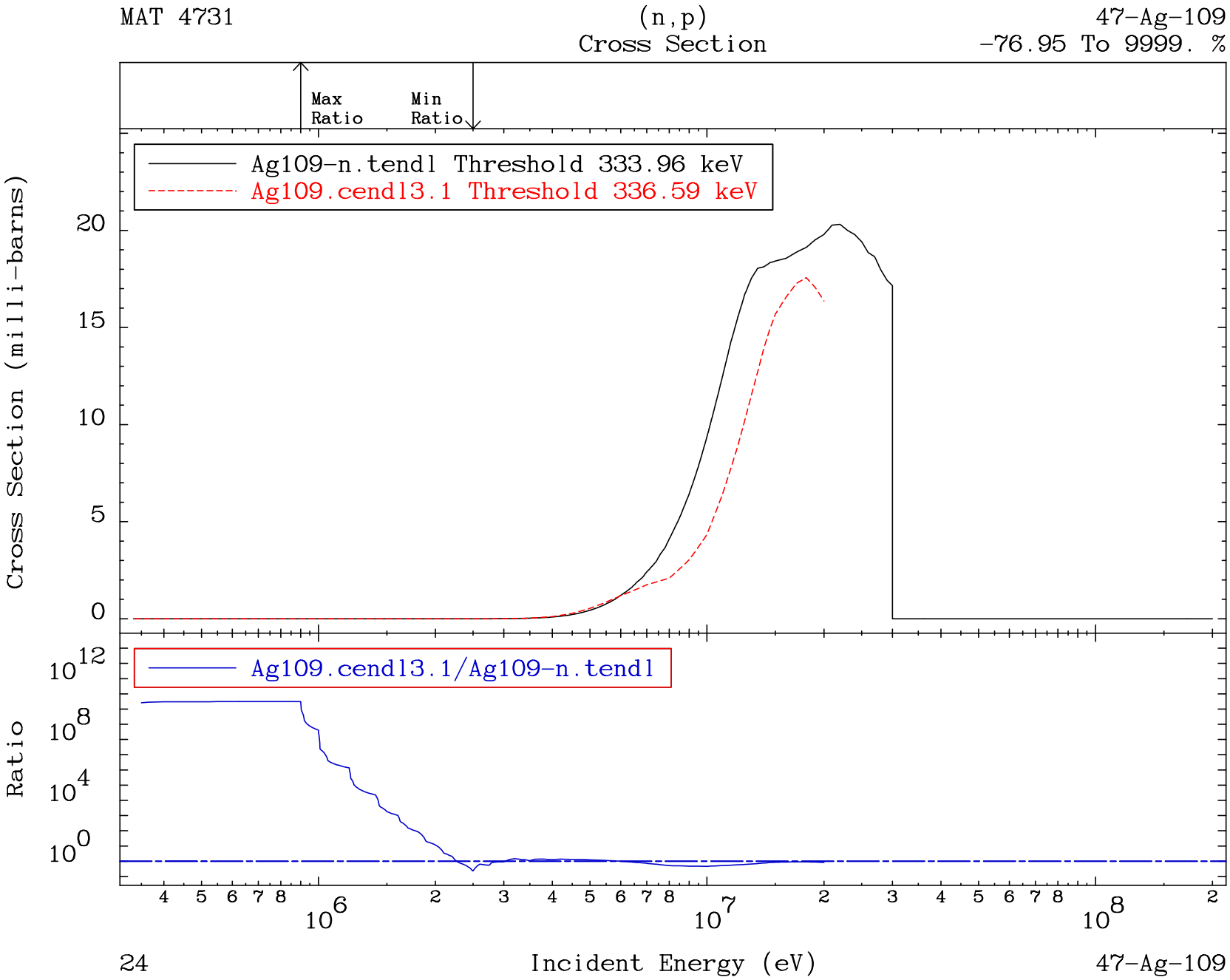

MAT 4731
789.0 keV (n,n') Level
Cross Section
47-Ag-109
-58.80 To 9999. %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 796.31 keV
Ag109.cendl3.1 Threshold 920.45 keV
Cross Section (milli-barns)
80
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^3
10^2
10^1
10^0
8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
19
Incident Energy (eV)
47-Ag-109

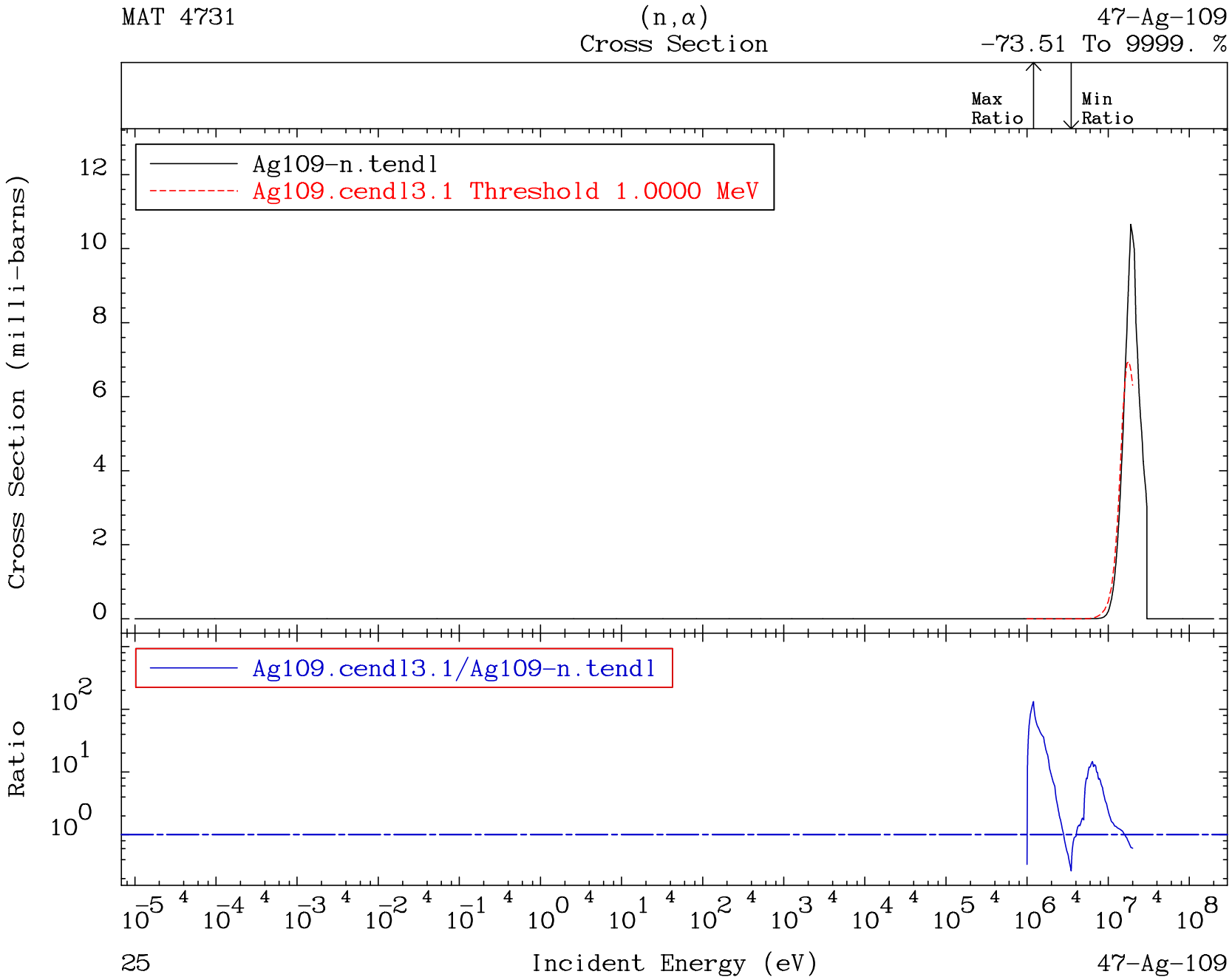

MAT 4731
862.8 keV (n,n') Level
Cross Section
47-Ag-109
-99.28 To 191.4 %
Min Ratio
Max Ratio
Ag109-n.tendl Threshold 870.75 keV
Ag109.cendl3.1 Threshold 1.1011 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^1
10^0
10^-1
10^-2
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
20
Incident Energy (eV)
47-Ag-109

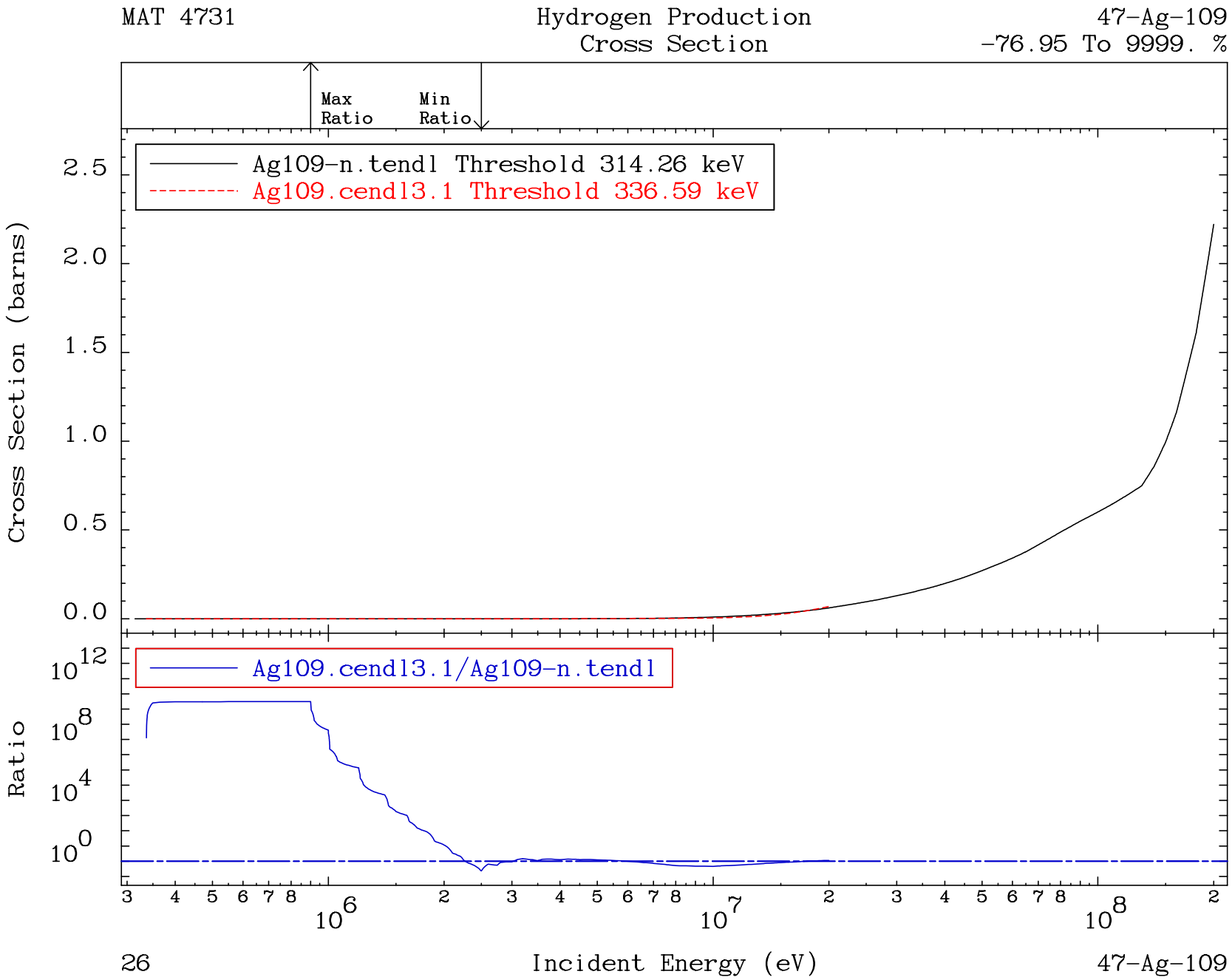

MAT 4731
869.5 keV (n,n') Level
Cross Section
47-Ag-109
-86.86 To 136.5 %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 877.52 keV
Ag109.cendl3.1 Threshold 1.1092 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
6
4
10^0
6
4
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
21
Incident Energy (eV)
47-Ag-109

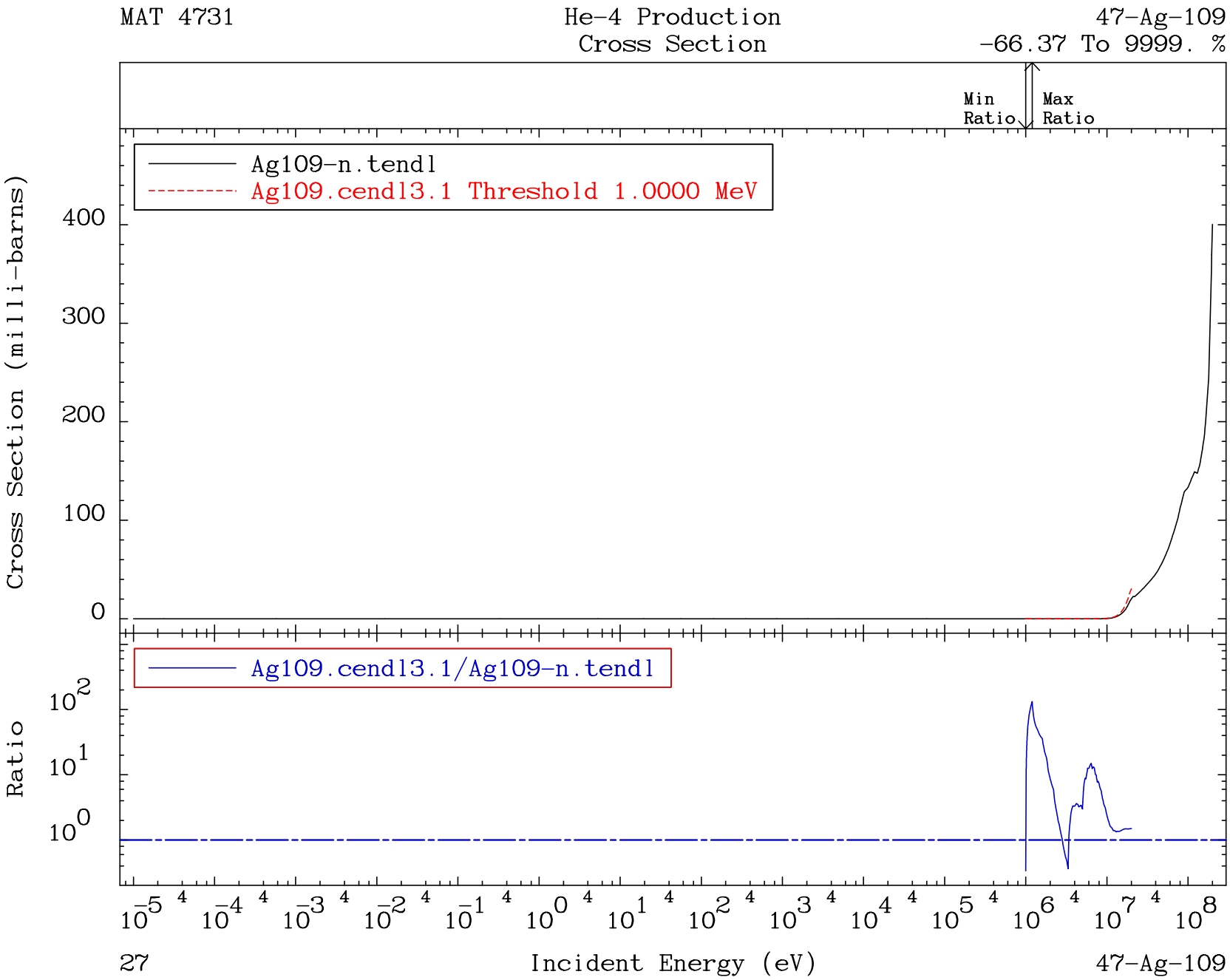

MAT 4731
(n,n') Continuum
Cross Section
47-Ag-109
-36.95 To 5167. %
Max
Ratio
Min
Ratio
Ag109-n.tendl Threshold 1.5381 MeV
Ag109.cendl3.1 Threshold 1.1909 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
47-Ag-109

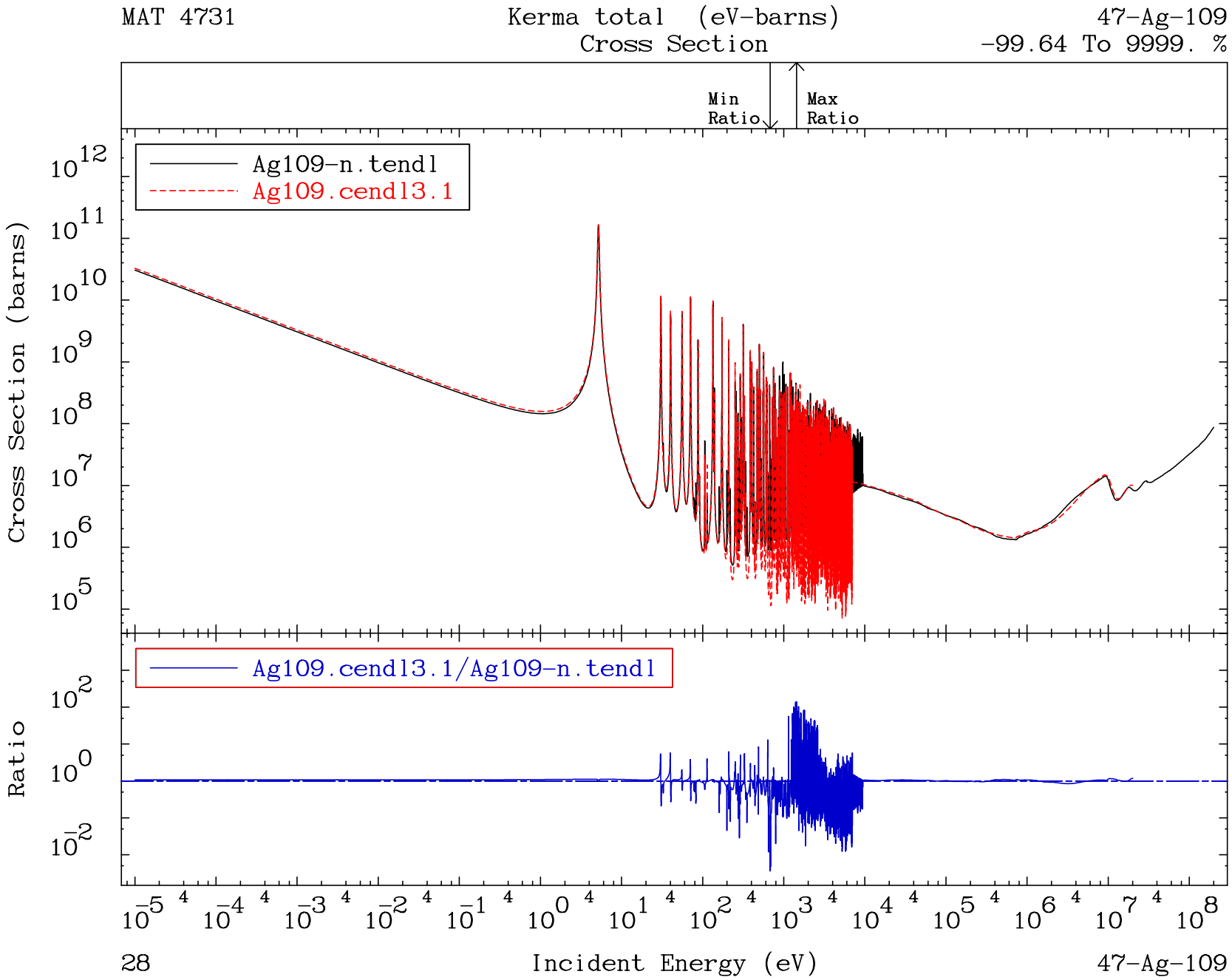

MAT 4731
(n,γ)
Cross Section
47-Ag-109
-99.66 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
23
47-Ag-109

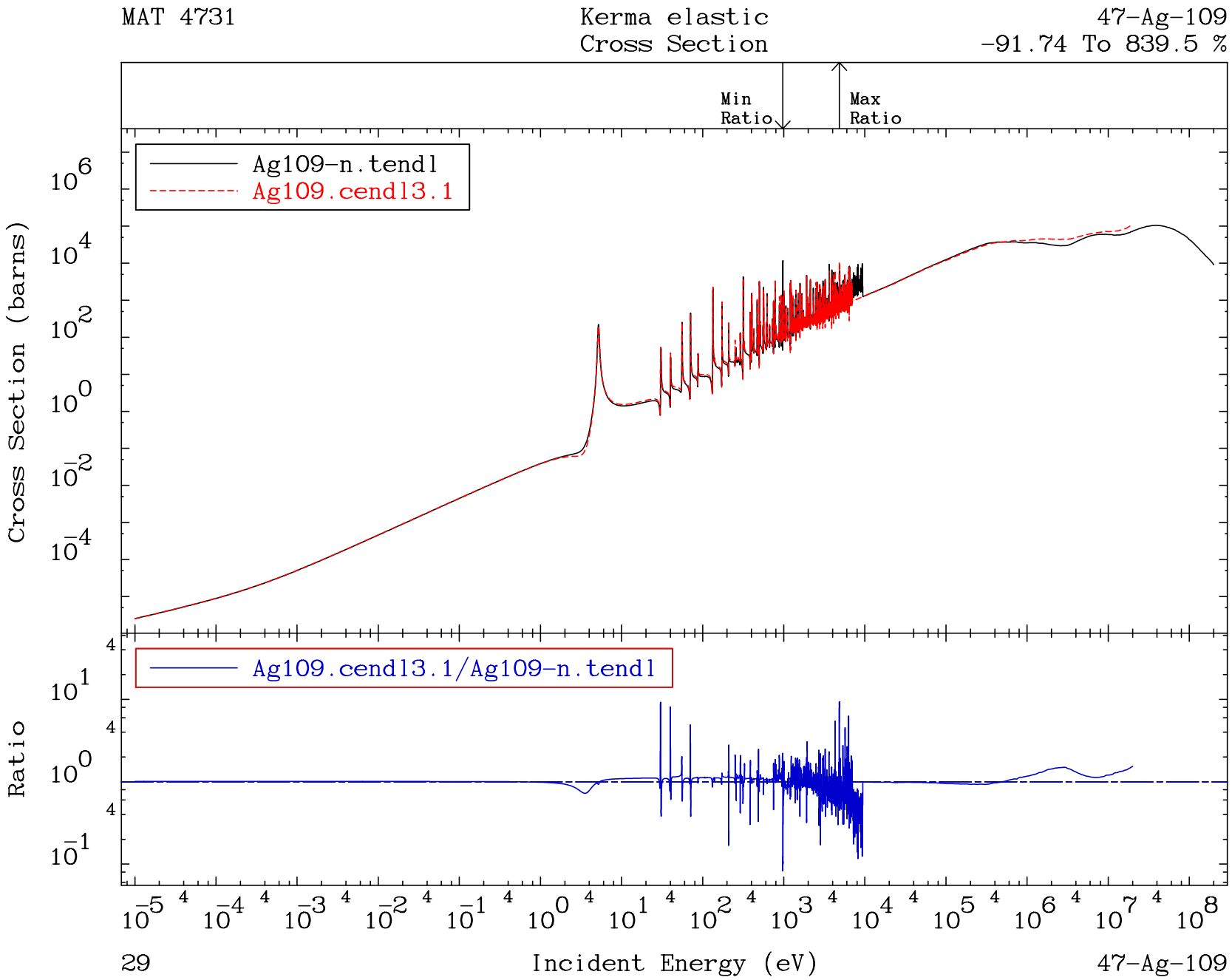

MAT 4731
(n,p)
Cross Section
47-Ag-109
-76.95 To 9999. %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 333.96 keV
Ag109.cendl3.1 Threshold 336.59 keV
Cross Section (milli-barns)
0
5
10
15
20
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^{0}
10^{4}
10^{8}
10^{12}
4 5 6 7 8 10^{6} 2 3 4 5 6 7 8 10^{7} 2 3 4 5 6 7 8 10^{8} 2
24
Incident Energy (eV)
47-Ag-109

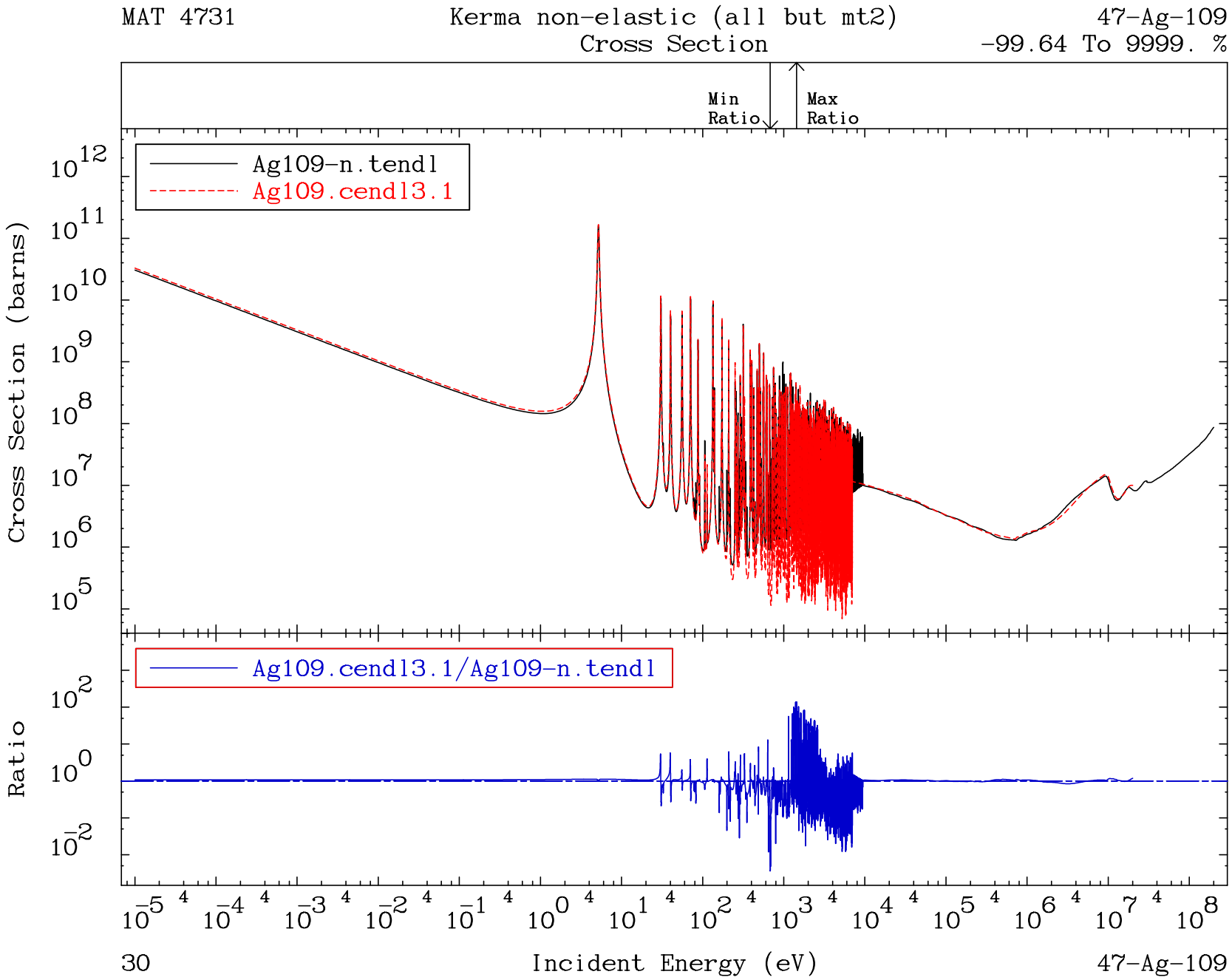

MAT 4731
(n,α)
Cross Section
47-Ag-109
-73.51 To 9999. %
Max Ratio
Min Ratio
Ag109-n.tendl
Ag109.cendl3.1 Threshold 1.0000 MeV
Cross Section (milli-barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
25
47-Ag-109

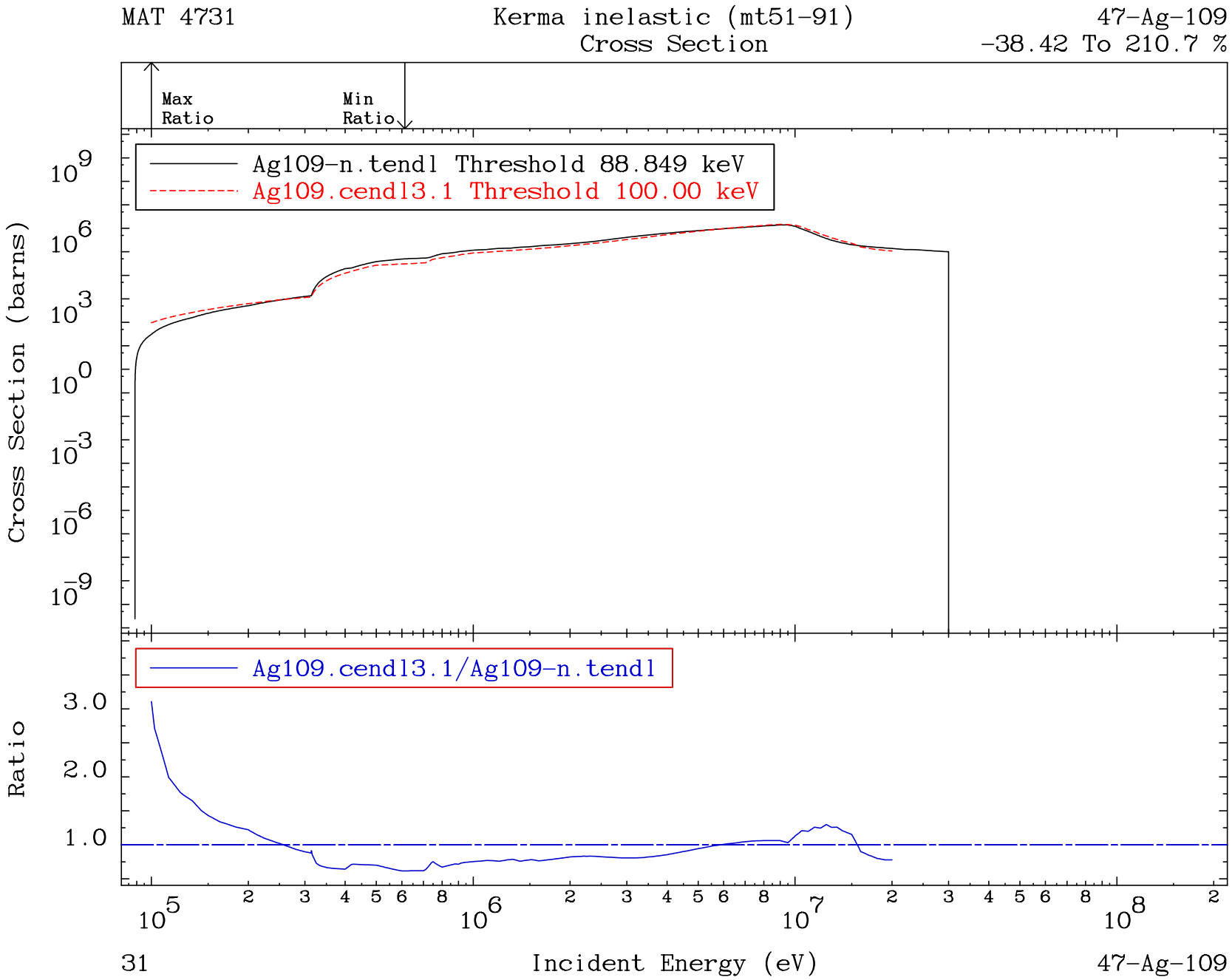

MAT 4731
Hydrogen Production
Cross Section
47-Ag-109
-76.95 To 9999. %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 314.26 keV
Ag109.cendl3.1 Threshold 336.59 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^12
10^8
10^4
10^0
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
47-Ag-109

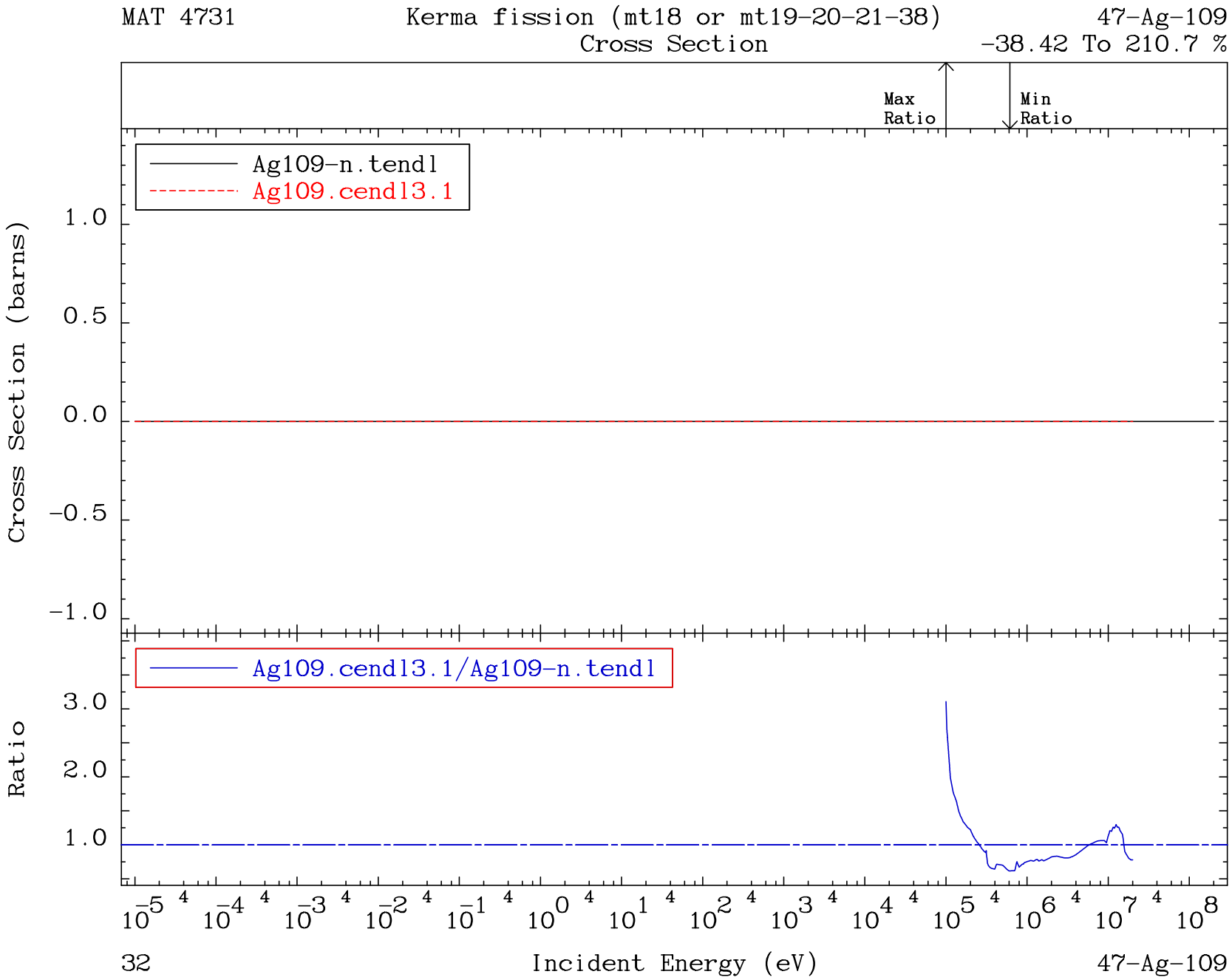

MAT 4731
He-4 Production
Cross Section
47-Ag-109
-66.37 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1 Threshold 1.0000 MeV
Cross Section (milli-barns)
400
300
200
100
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^2
10^1
10^0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
27
Incident Energy (eV)
47-Ag-109

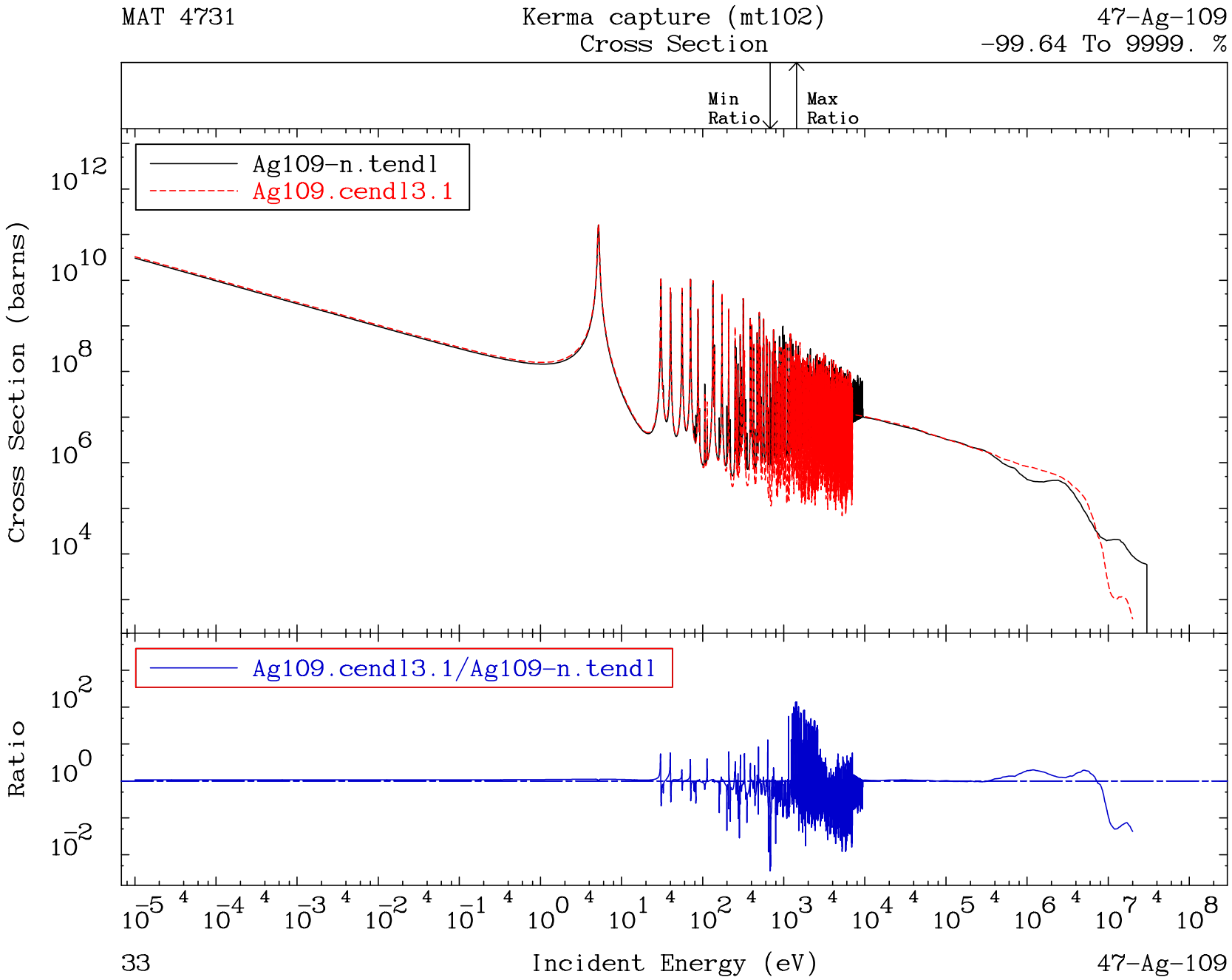

MAT 4731
Kerma total (eV-barns)
Cross Section
47-Ag-109
-99.64 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
28
47-Ag-109

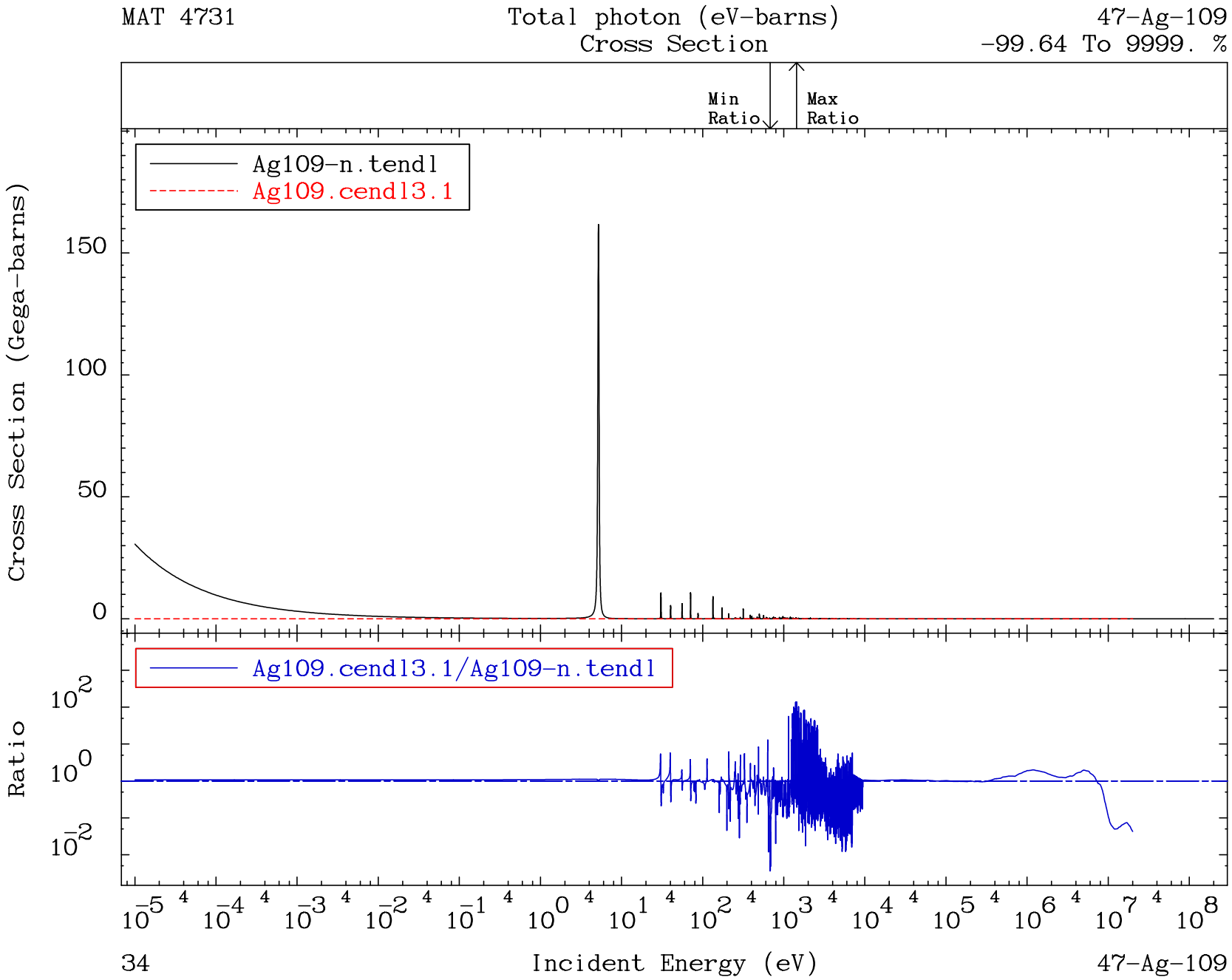

MAT 4731
Kerma elastic
Cross Section
47-Ag-109
-91.74 To 839.5 %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
29
47-Ag-109

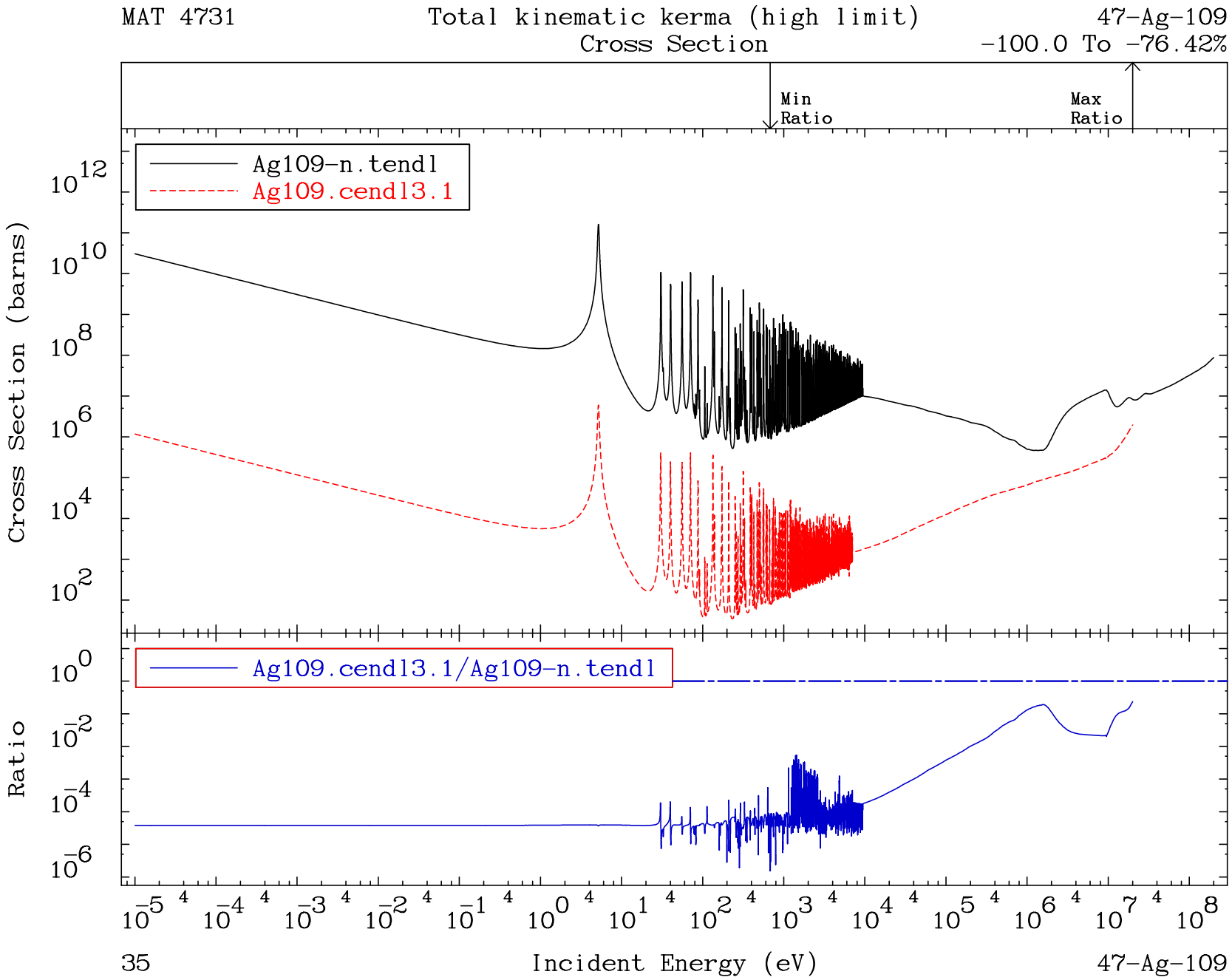

MAT 4731
Kerma non-elastic (all but mt2)
Cross Section
47-Ag-109
-99.64 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
30
47-Ag-109

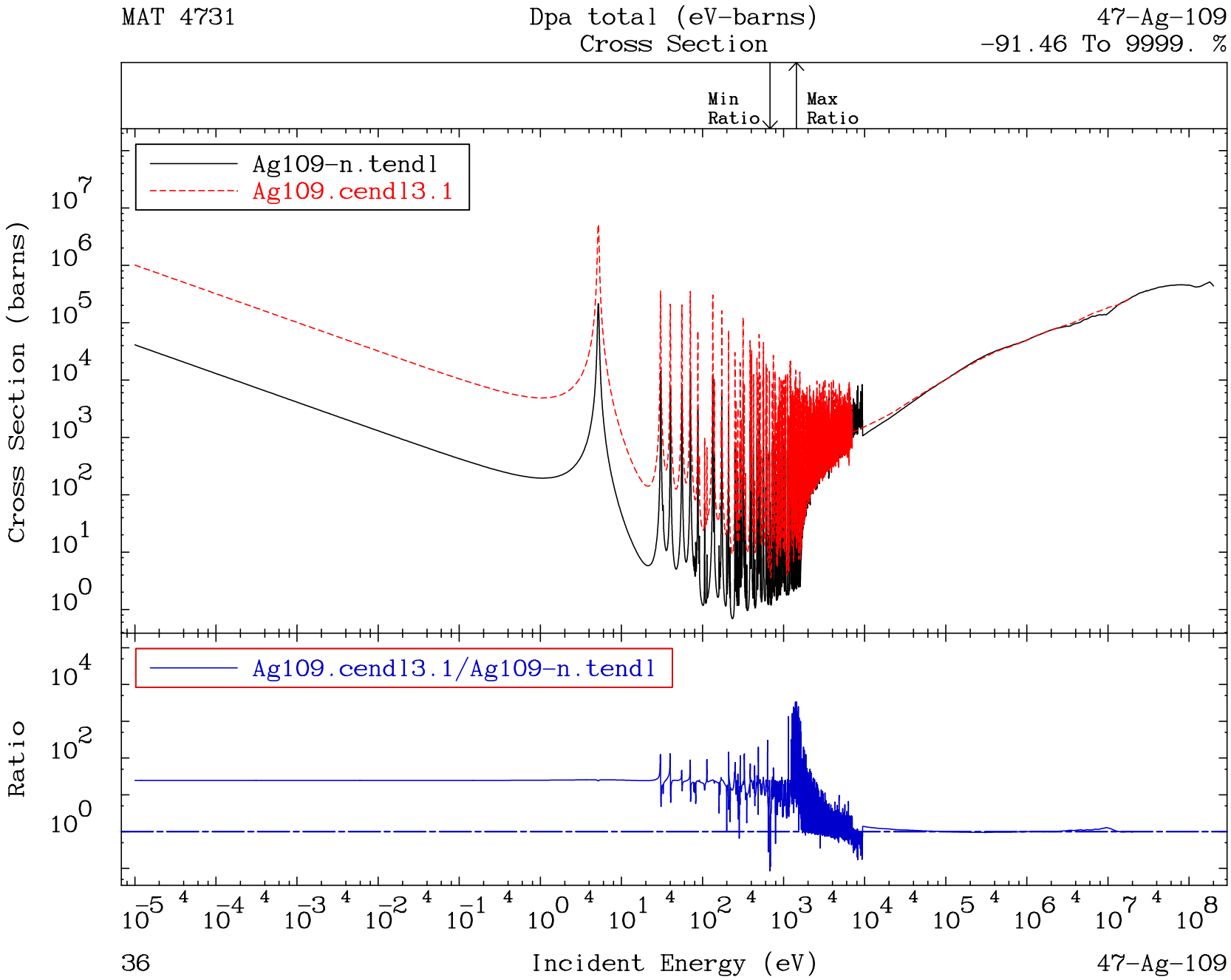

MAT 4731
Kerma inelastic (mt51-91)
Cross Section
47-Ag-109
-38.42 To 210.7 %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 88.849 keV
Ag109.cendl3.1 Threshold 100.00 keV
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
31
47-Ag-109

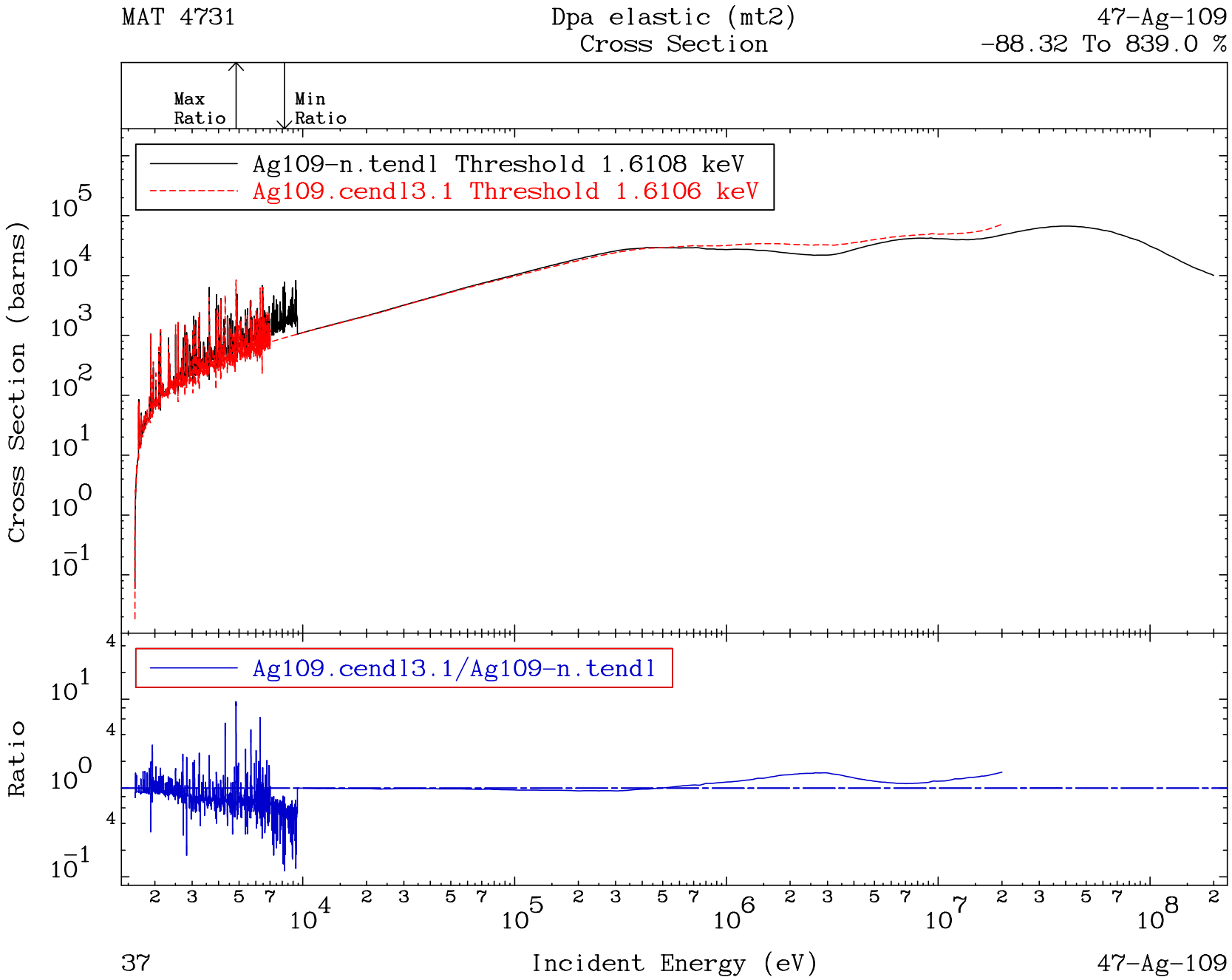

MAT 4731
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
47-Ag-109
-38.42 To 210.7 %
Max Ratio
Min Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
3.0
2.0
1.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
32
Incident Energy (eV)
47-Ag-109

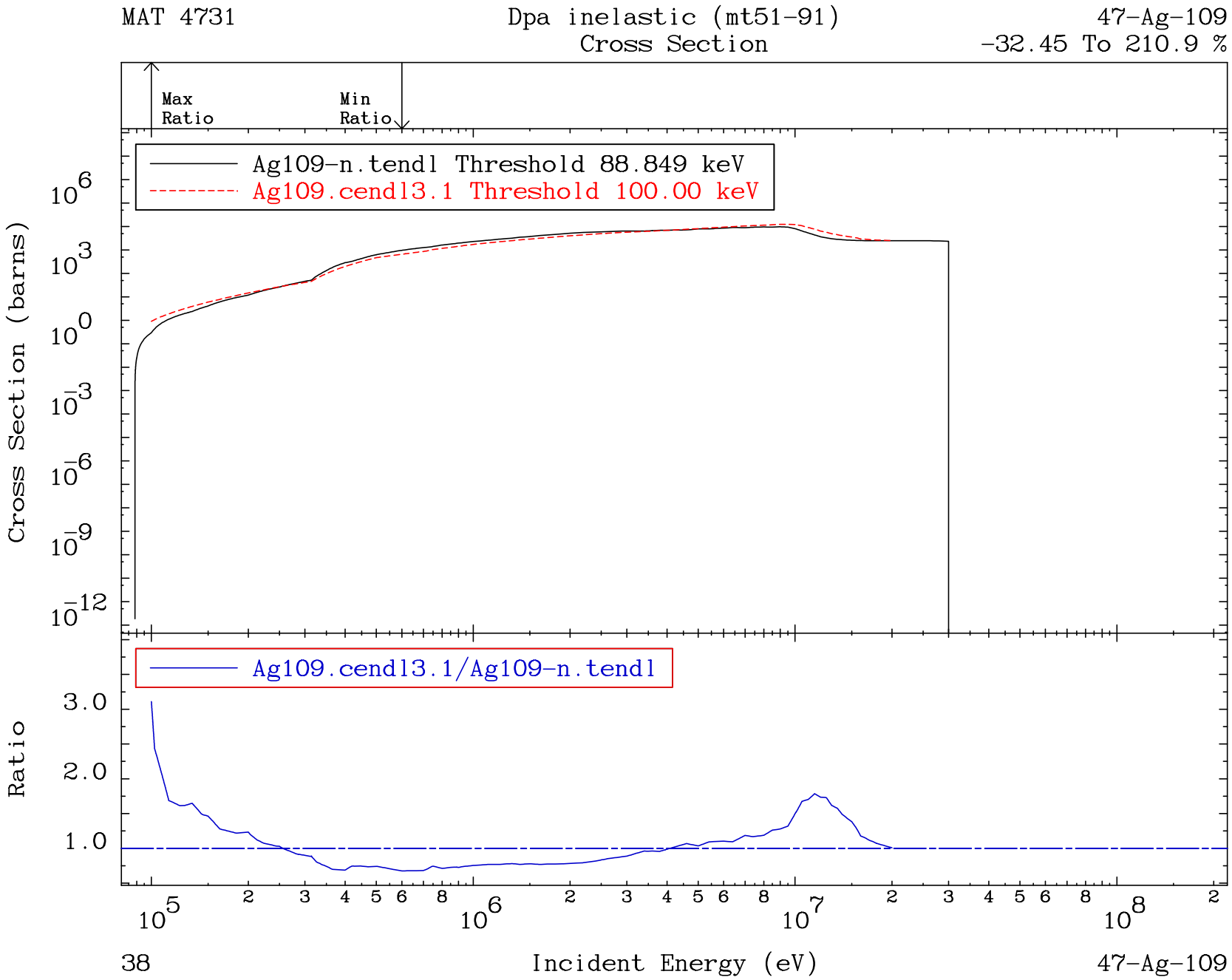

MAT 4731
Kerma capture (mt102)
Cross Section
47-Ag-109
-99.64 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
33
47-Ag-109

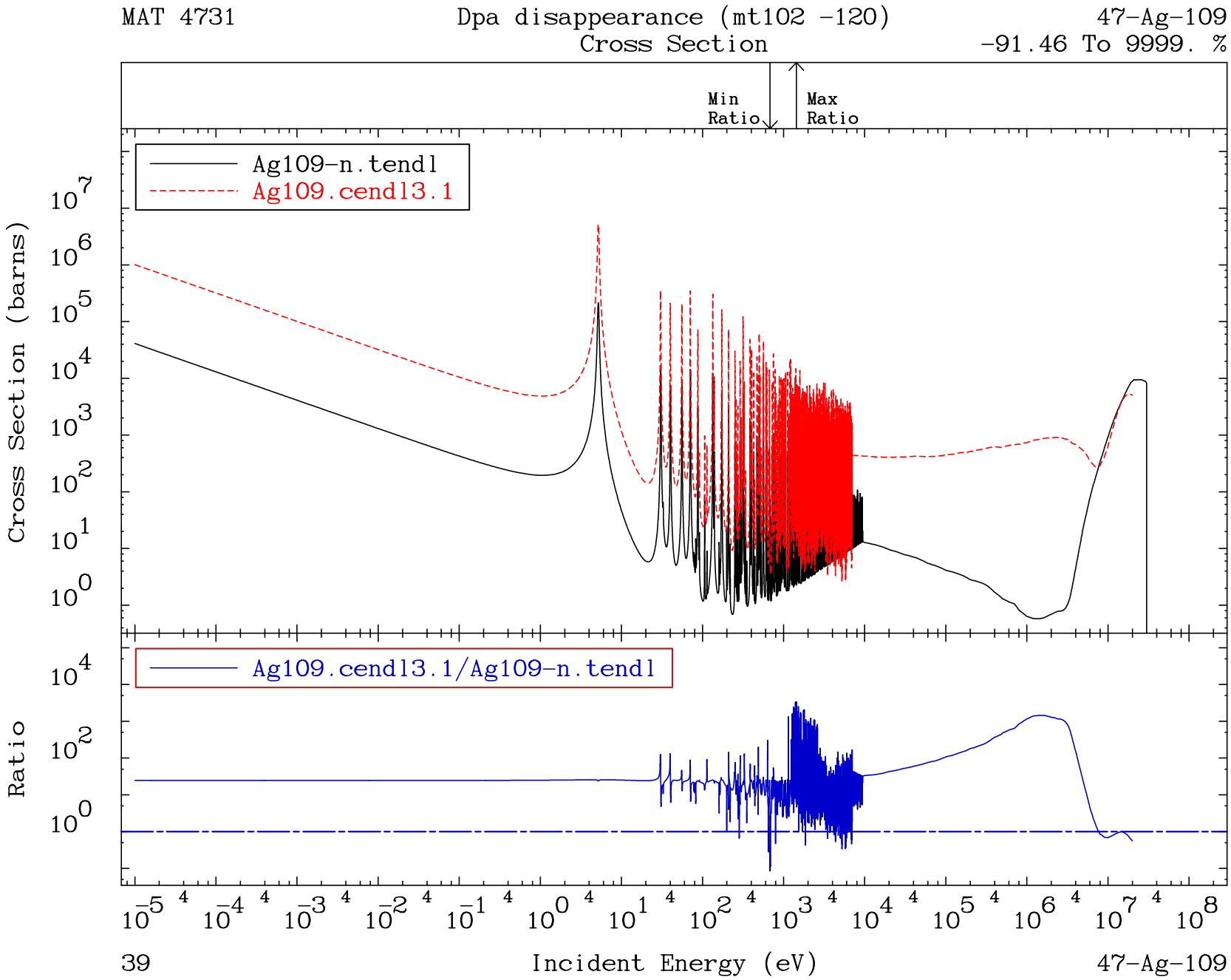

MAT 4731
Total photon (eV-barns)
Cross Section
47-Ag-109
-99.64 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (Giga-barns)
150
100
50
0
Ag109.cendl3.1/Ag109-n.tendl
Ratio
10^{2}
10^{0}
10^{-2}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
34
Incident Energy (eV)
47-Ag-109


MAT 4731
Total kinematic kerma (high limit)
Cross Section
47-Ag-109
-100.0 To -76.42%
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
35
47-Ag-109


MAT 4731
Dpa total (eV-barns)
Cross Section
47-Ag-109
-91.46 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
36
47-Ag-109


MAT 4731
Dpa elastic (mt2)
Cross Section
47-Ag-109
-88.32 To 839.0 %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 1.6108 keV
Ag109.cendl3.1 Threshold 1.6106 keV
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
37
47-Ag-109


MAT 4731
Dpa inelastic (mt51-91)
Cross Section
47-Ag-109
-32.45 To 210.9 %
Max Ratio
Min Ratio
Ag109-n.tendl Threshold 88.849 keV
Ag109.cendl3.1 Threshold 100.00 keV
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
Incident Energy (eV)
38
47-Ag-109


MAT 4731
Dpa disappearance (mt102 -120)
Cross Section
47-Ag-109
-91.46 To 9999. %
Min Ratio
Max Ratio
Ag109-n.tendl
Ag109.cendl3.1
Cross Section (barns)
Ag109.cendl3.1/Ag109-n.tendl
Ratio
39
Incident Energy (eV)
47-Ag-109