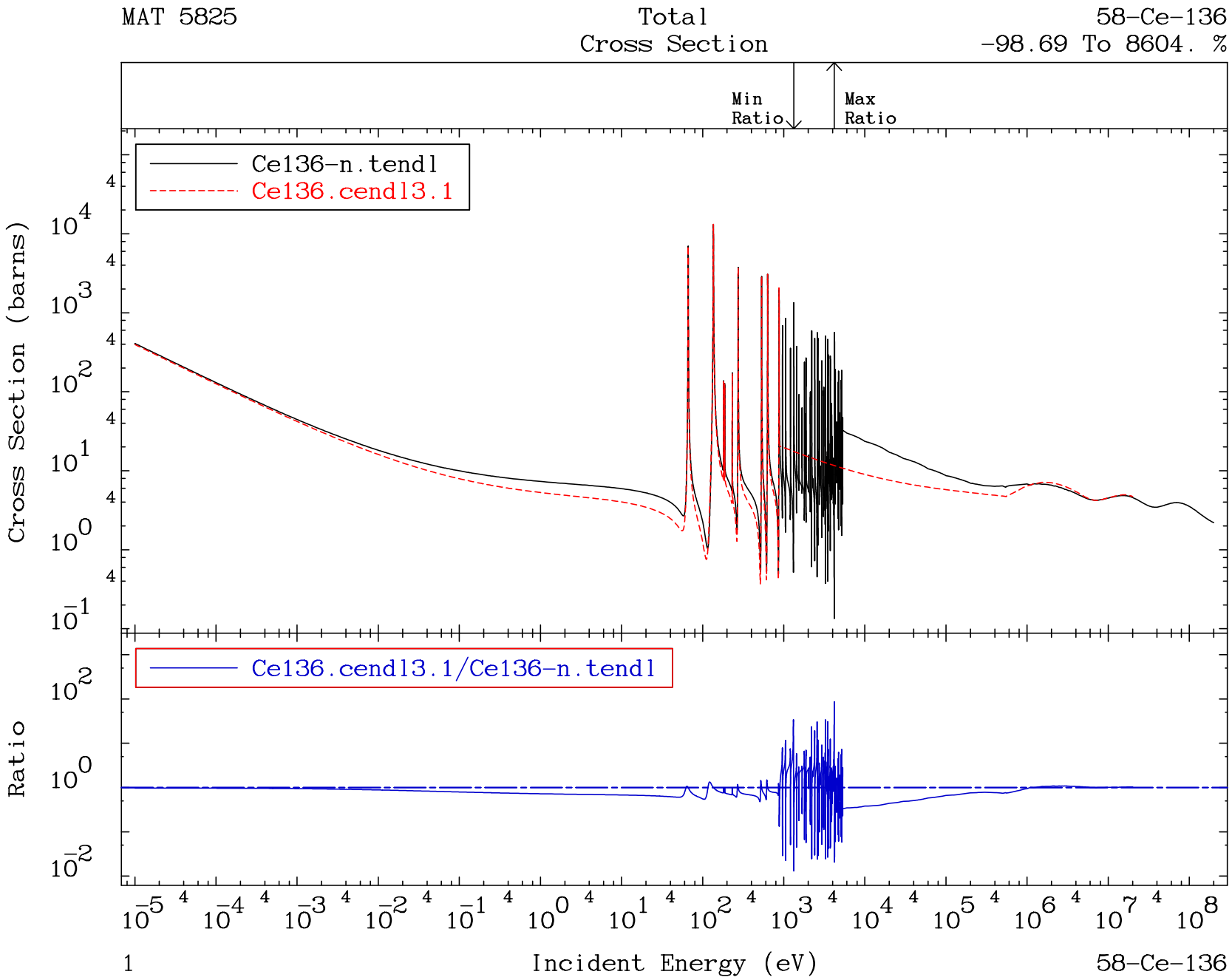
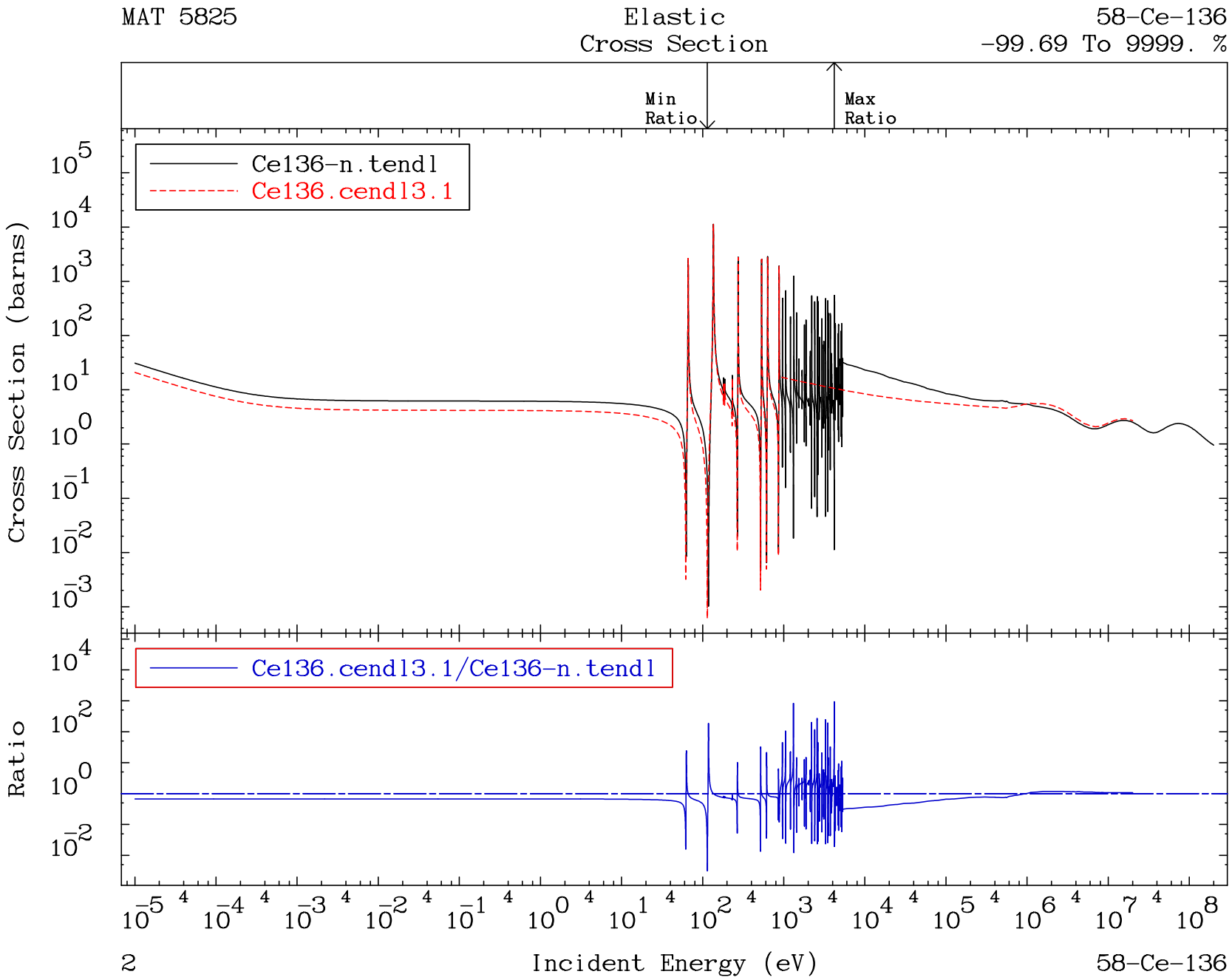
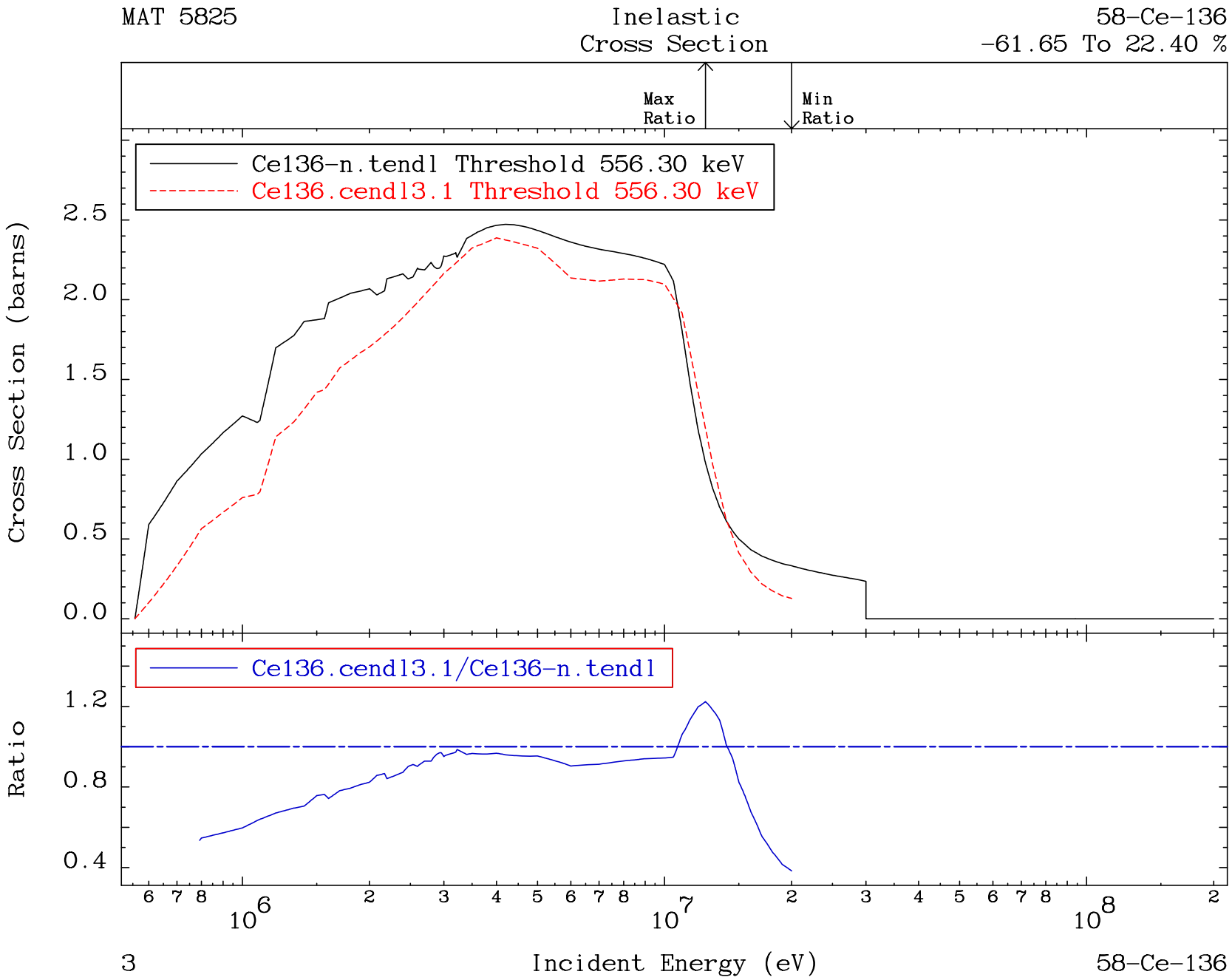
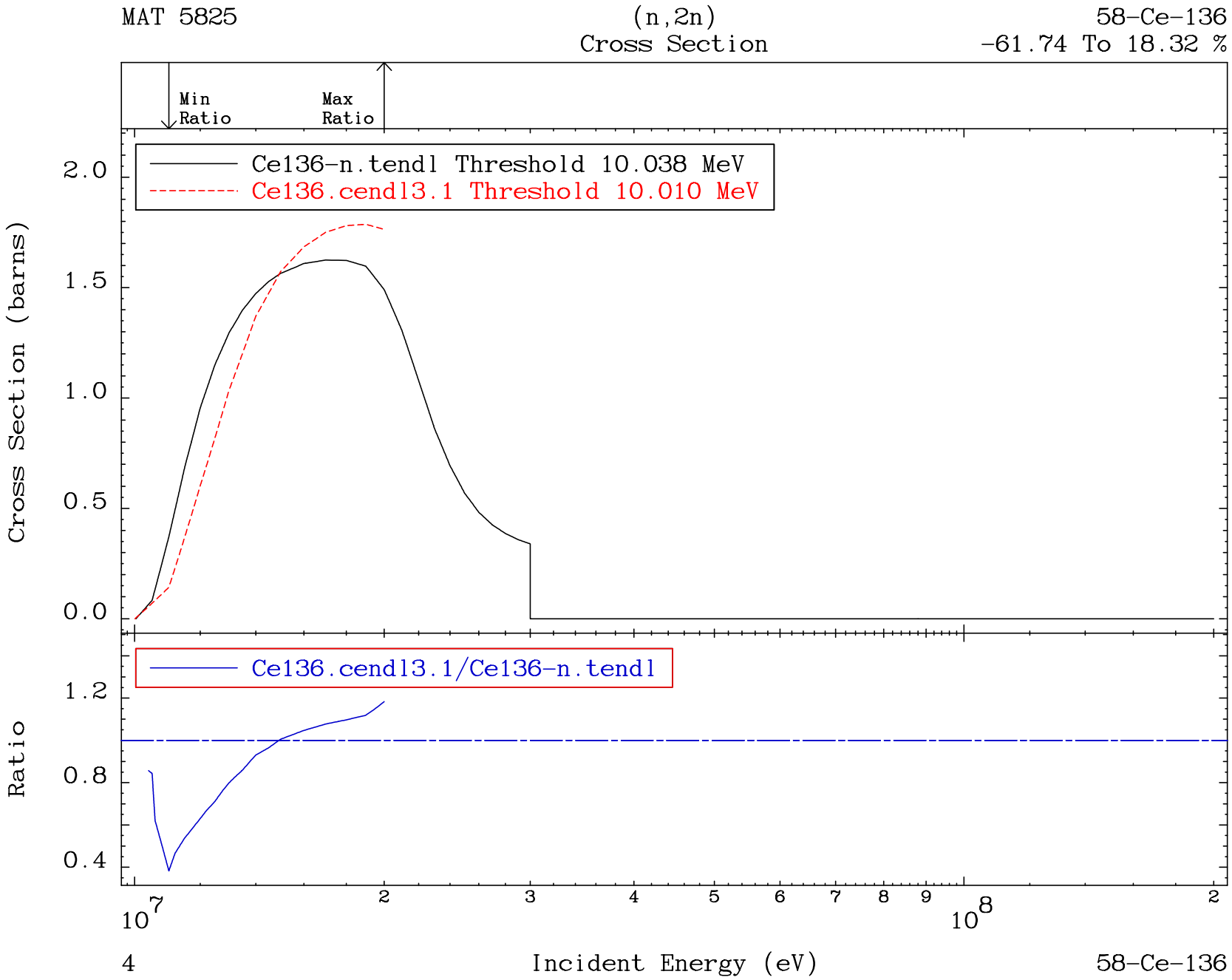
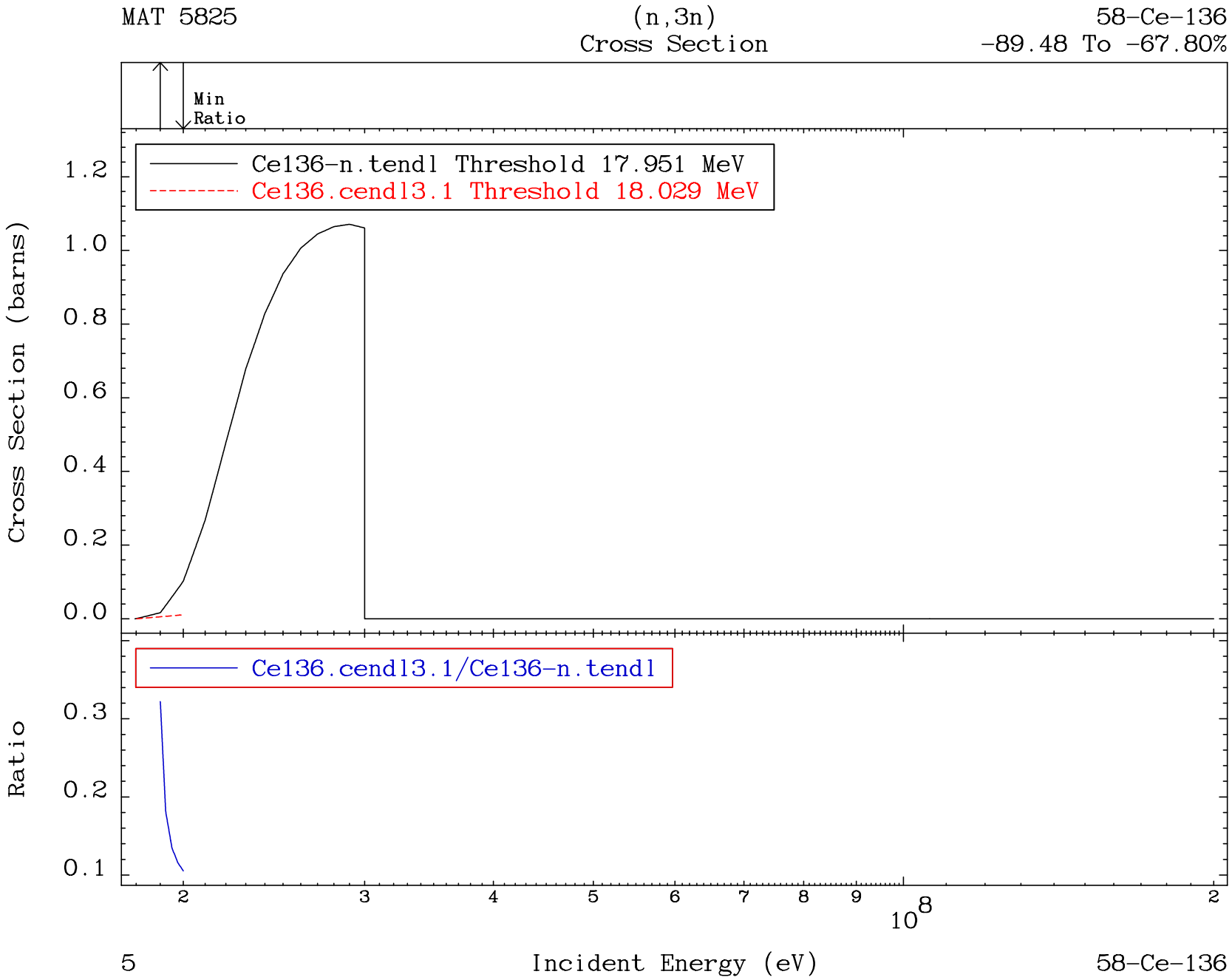
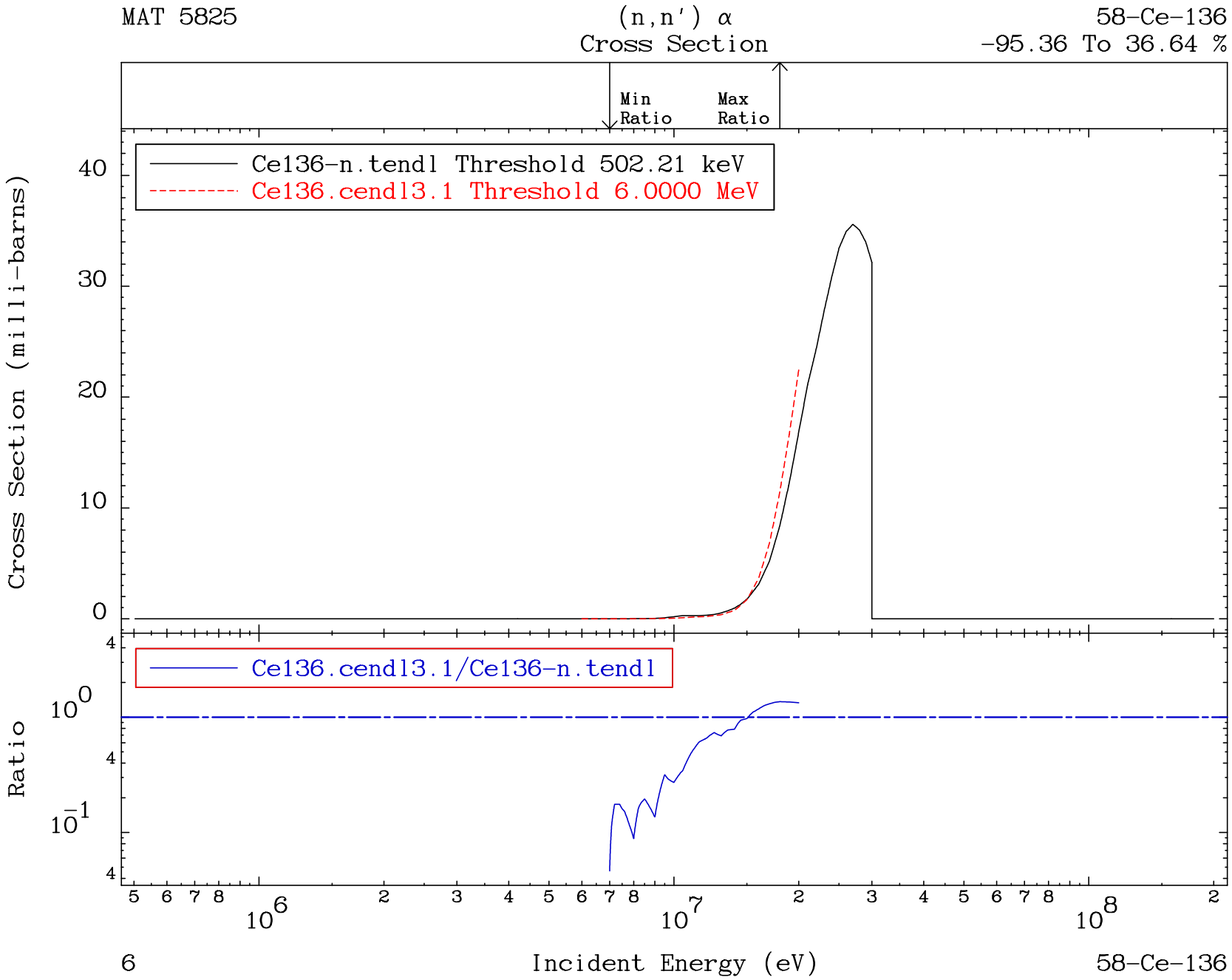

MAT 5825
Total
Cross Section
58-Ce-136
-98.69 To 8604. %
Min
Ratio
Max
Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
1
58-Ce-136

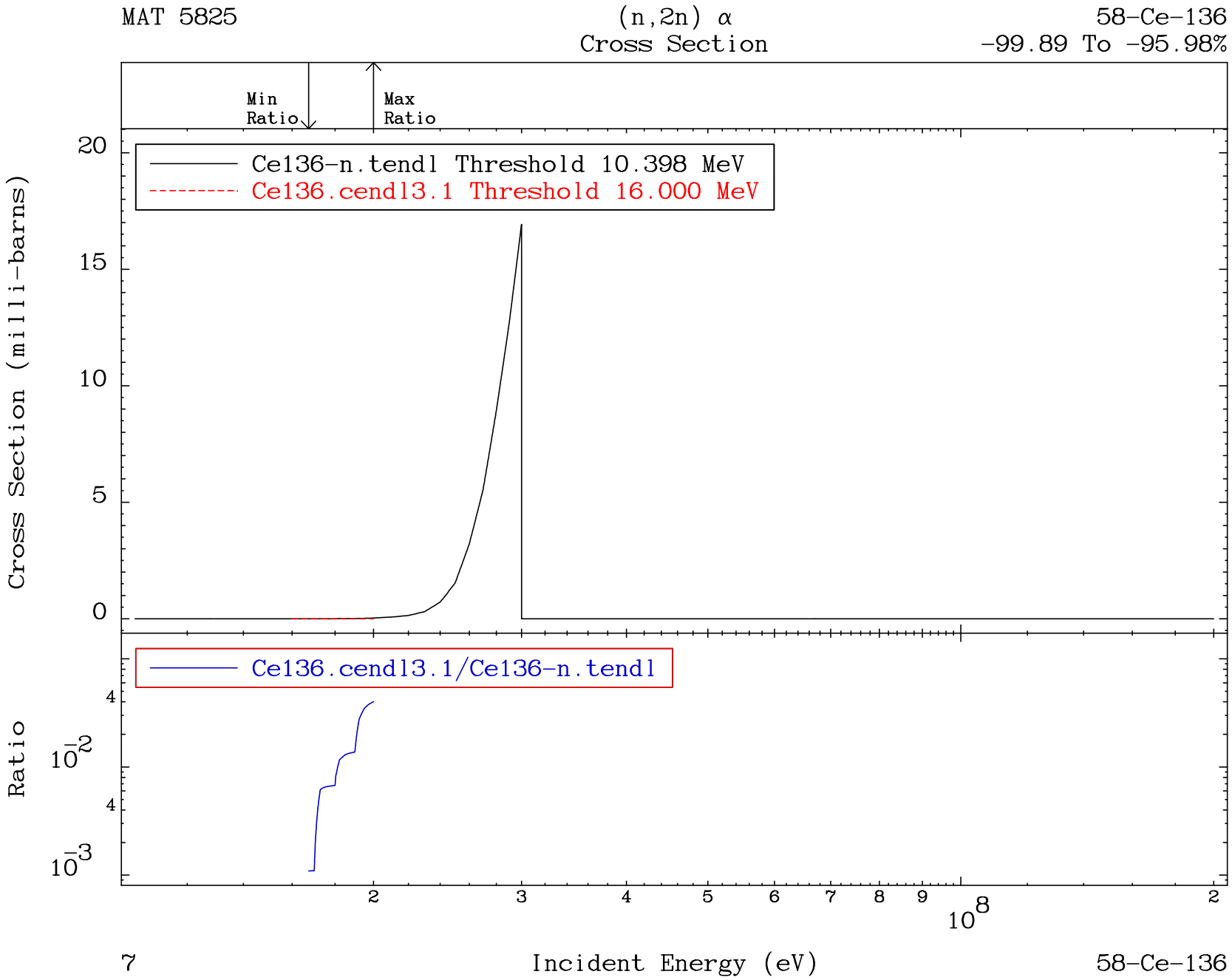

MAT 5825
Elastic
Cross Section
58-Ce-136
-99.69 To 9999. %
Min
Ratio
Max
Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
2
58-Ce-136

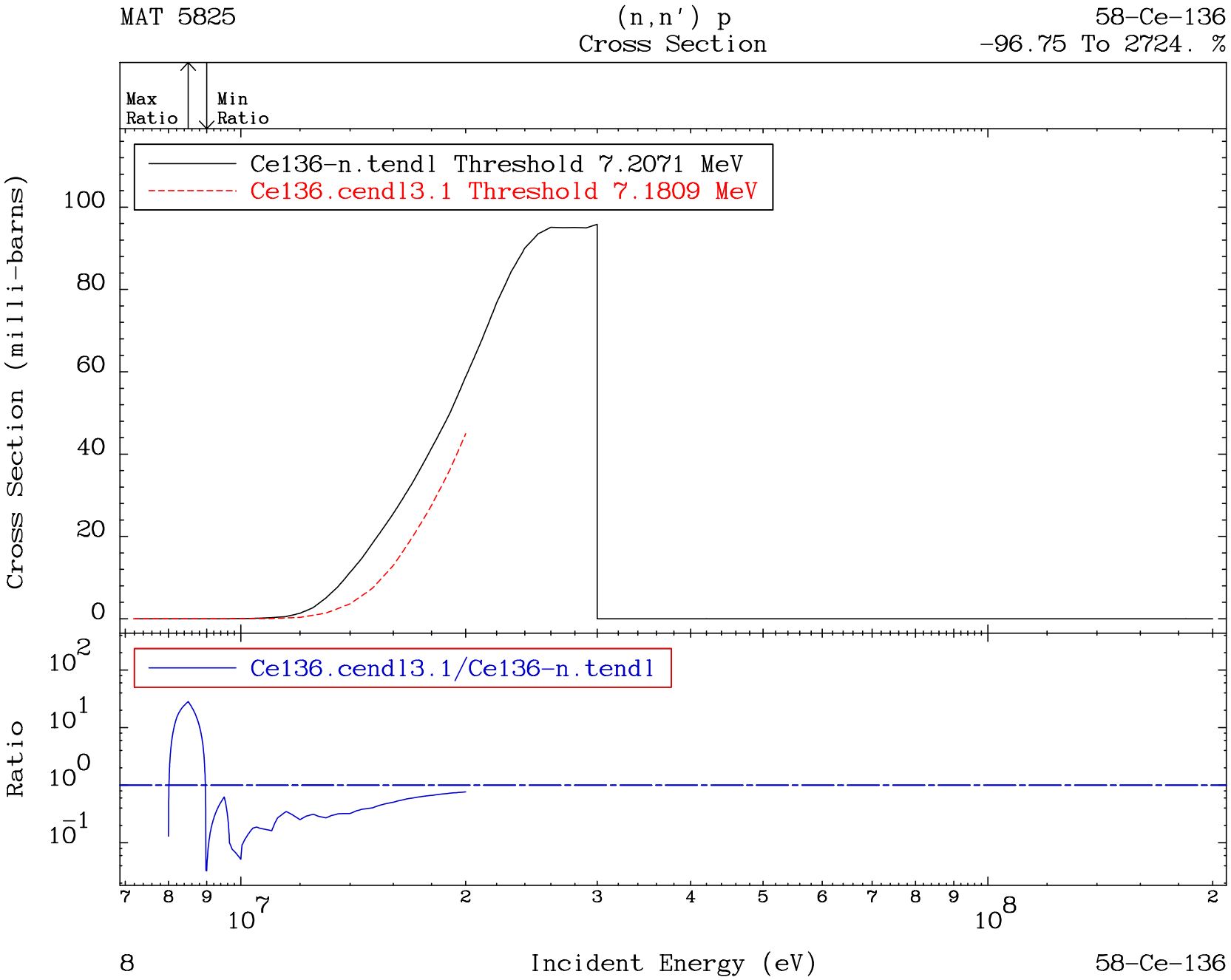

MAT 5825
Inelastic
Cross Section
58-Ce-136
-61.65 To 22.40 %
Max
Ratio
Min
Ratio
Ce136-n.tendl Threshold 556.30 keV
Ce136.cendl3.1 Threshold 556.30 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.2
0.8
0.4
6 7 8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
3
Incident Energy (eV)
58-Ce-136

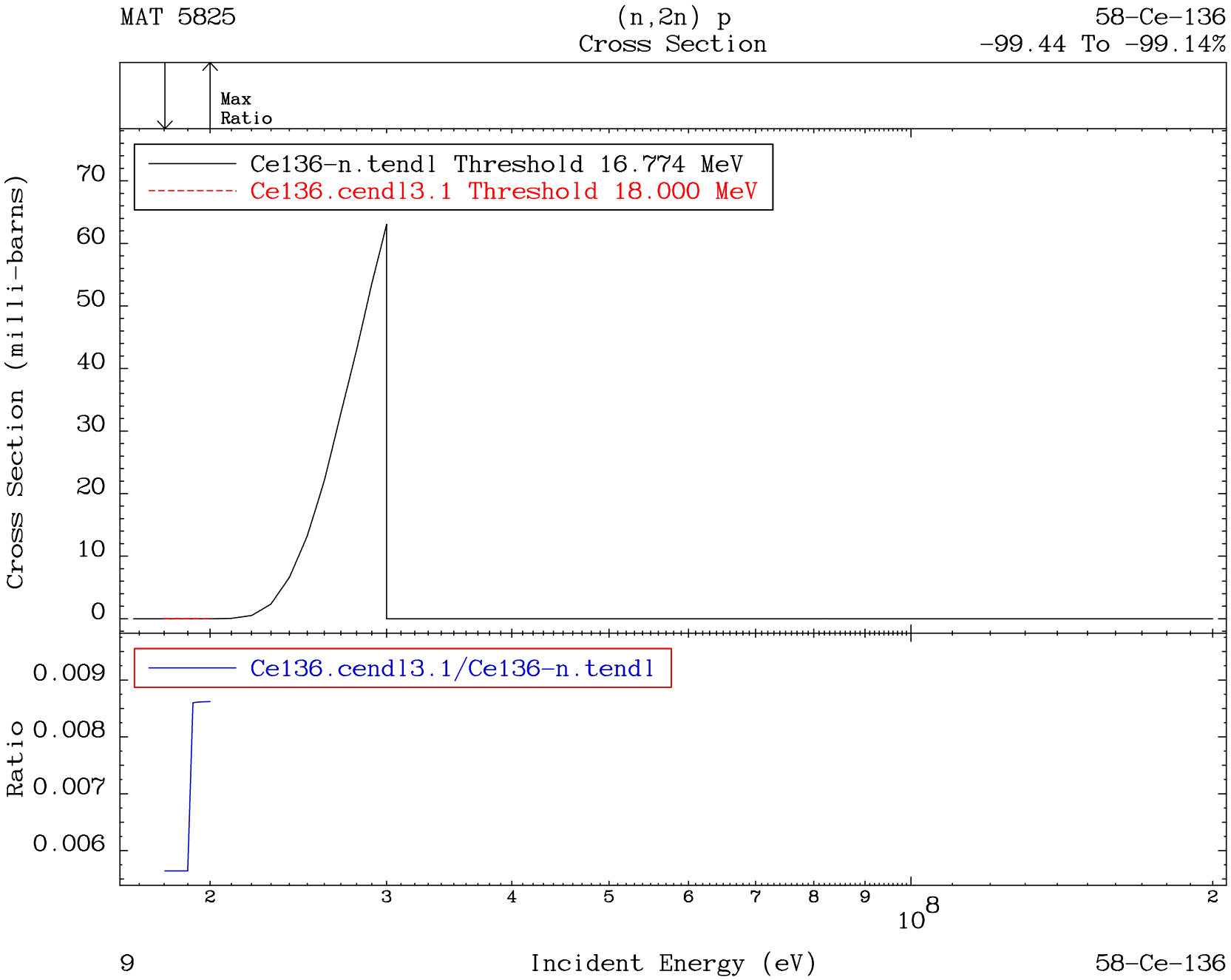

MAT 5825
(n,2n)
Cross Section
58-Ce-136
-61.74 To 18.32 %
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 10.038 MeV
Ce136.cendl3.1 Threshold 10.010 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.2
0.8
0.4
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
58-Ce-136

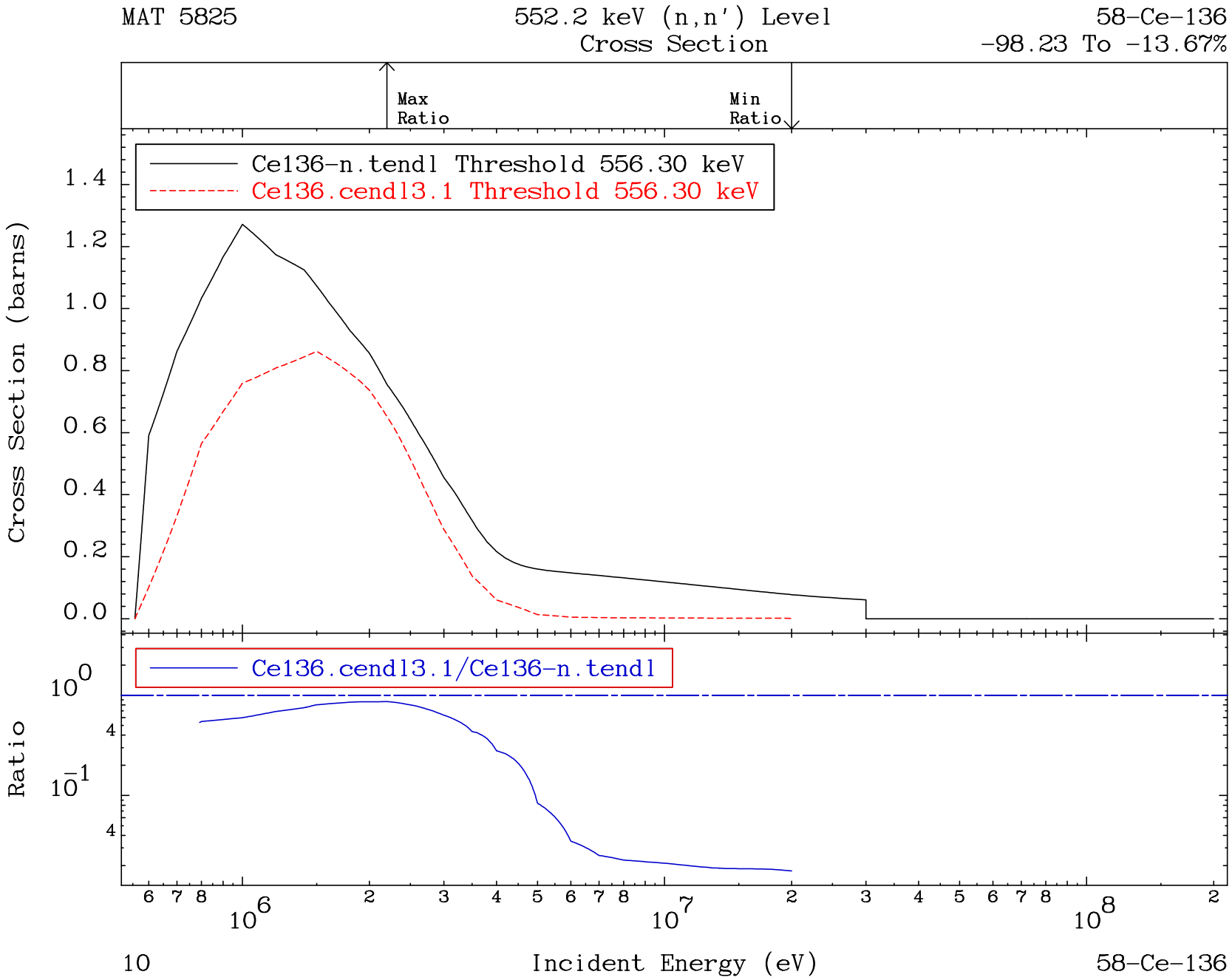

MAT 5825
(n,3n)
Cross Section
58-Ce-136
-89.48 To -67.80%
Min
Ratio
Ce136-n.tendl Threshold 17.951 MeV
Ce136.cendl3.1 Threshold 18.029 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
0.3
0.2
0.1
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
58-Ce-136

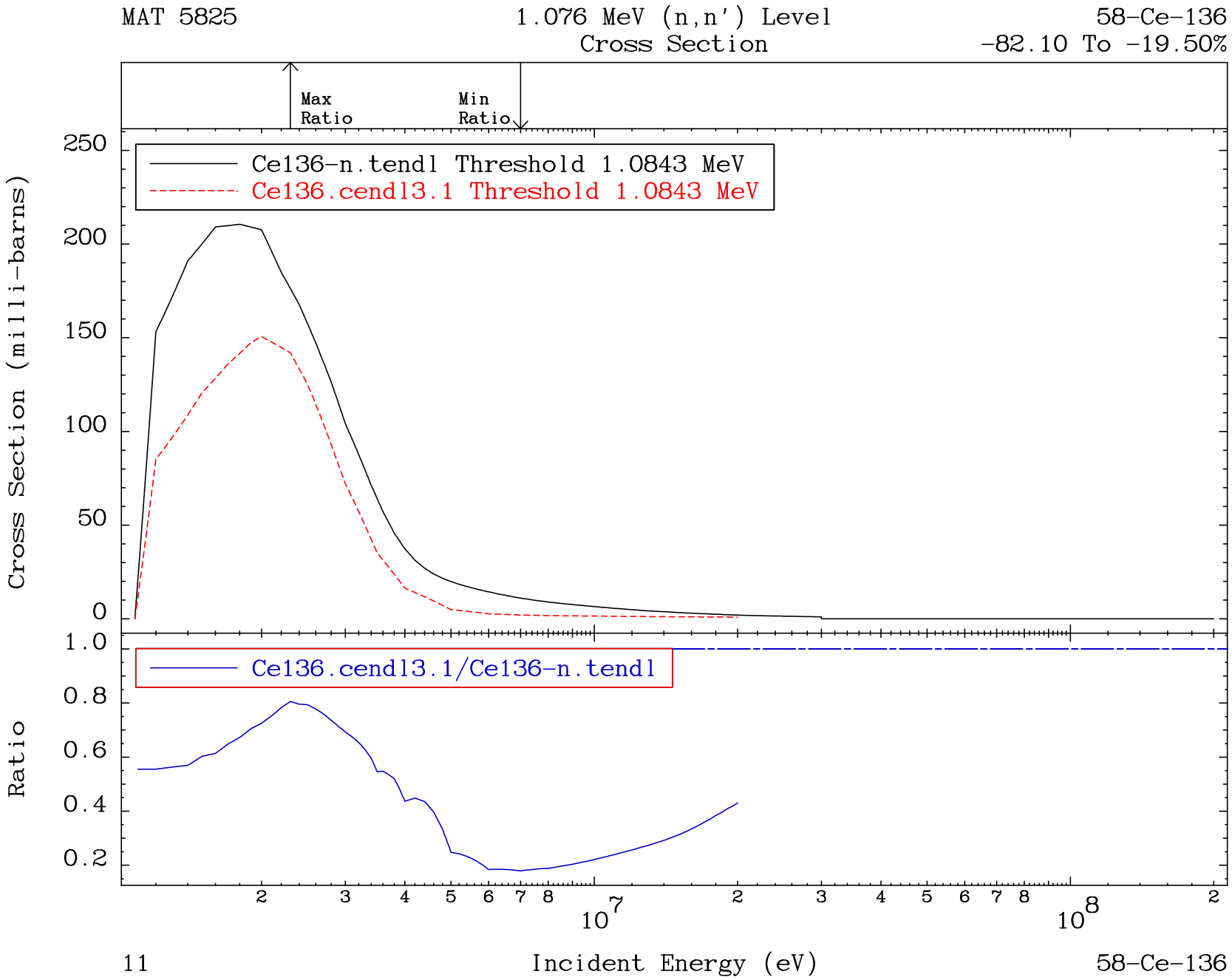

MAT 5825
(n,n') α
Cross Section
58-Ce-136
-95.36 To 36.64 %
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 502.21 keV
Ce136.cendl3.1 Threshold 6.0000 MeV
Cross Section (milli-barns)
40
30
20
10
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
10^0
10^-1
5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
6
Incident Energy (eV)
58-Ce-136

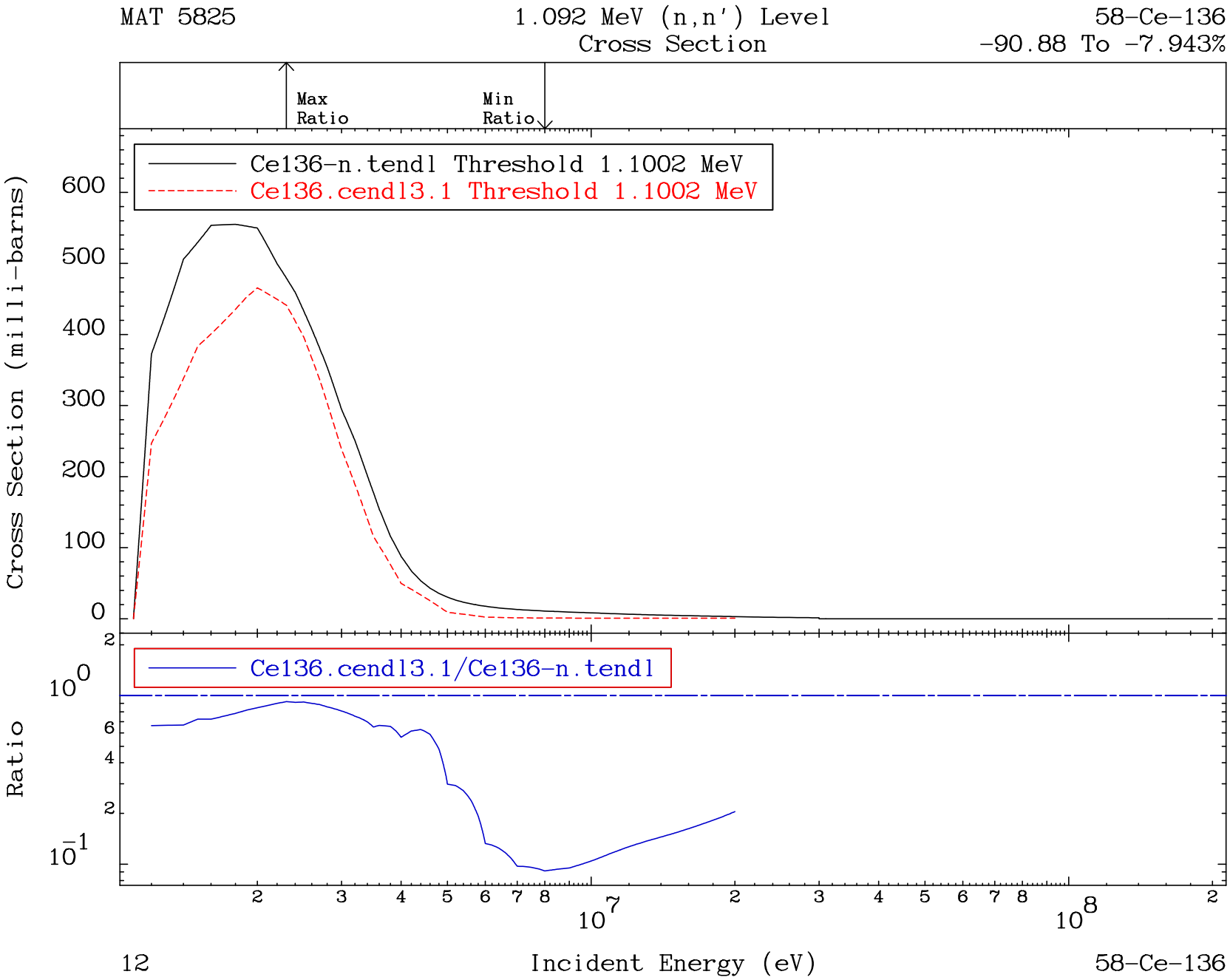

MAT 5825
(n,2n) α
Cross Section
58-Ce-136
-99.89 To -95.98%
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 10.398 MeV
Ce136.cendl3.1 Threshold 16.000 MeV
Cross Section (milli-barns)
20
15
10
5
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
4
10-2
4
10-3
2
3
4
5
6
7
8
9
10 8
2
7
Incident Energy (eV)
58-Ce-136

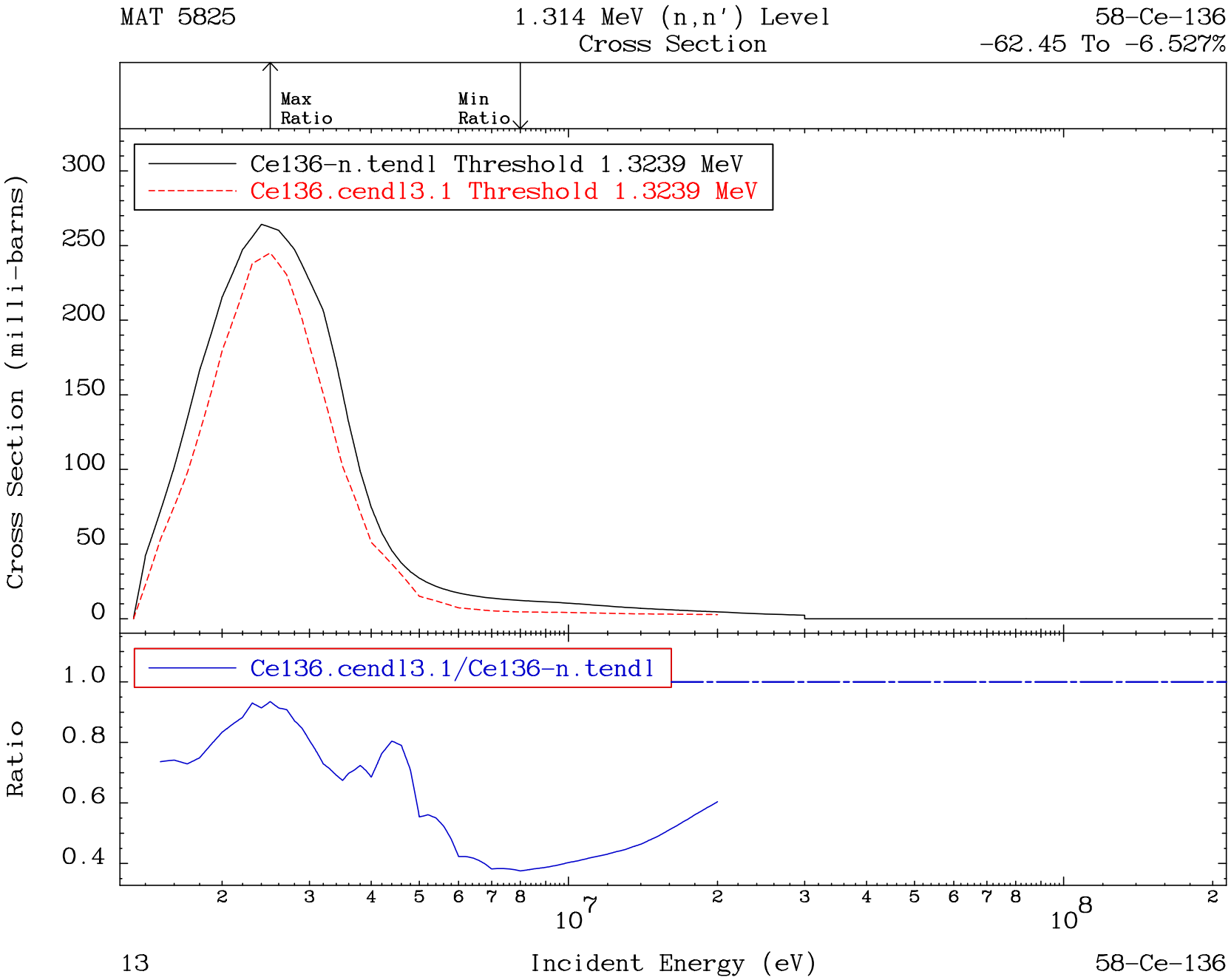

MAT 5825
(n,n') p
Cross Section
58-Ce-136
-96.75 To 2724. %
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 7.2071 MeV
Ce136.cendl3.1 Threshold 7.1809 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
10^2
10^1
10^0
10^-1
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
8
Incident Energy (eV)
58-Ce-136

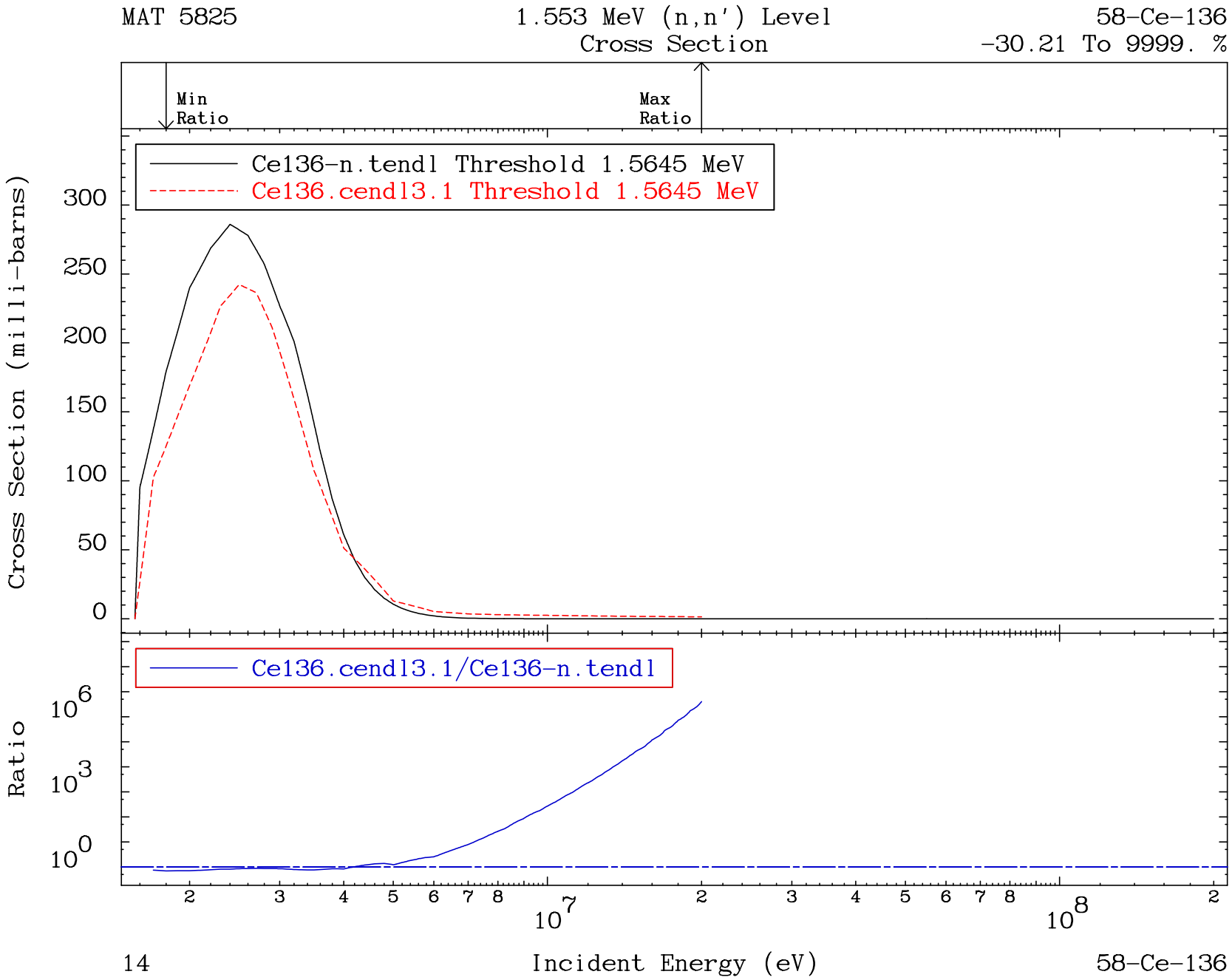

MAT 5825
(n,2n) p
Cross Section
58-Ce-136
-99.44 To -99.14%
Max
Ratio
Ce136-n.tendl Threshold 16.774 MeV
Ce136.cendl3.1 Threshold 18.000 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
0.009
0.008
0.007
0.006
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
58-Ce-136

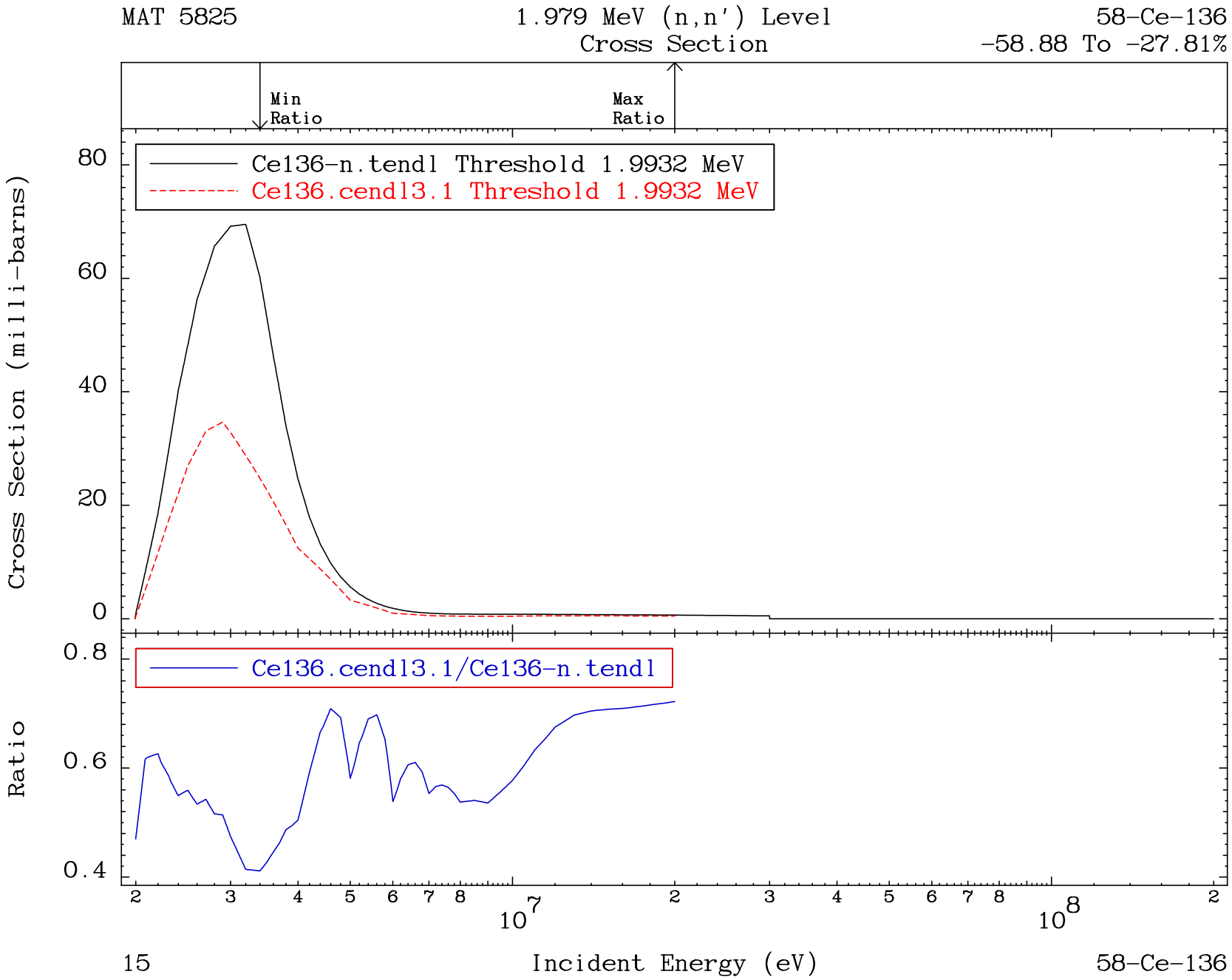

MAT 5825
552.2 keV (n,n') Level
Cross Section
58-Ce-136
-98.23 To -13.67%
Max
Ratio
Min
Ratio
Ce136-n.tendl Threshold 556.30 keV
Ce136.cendl3.1 Threshold 556.30 keV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
10^0
10^-1
4
4
6 7 8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
10
Incident Energy (eV)
58-Ce-136

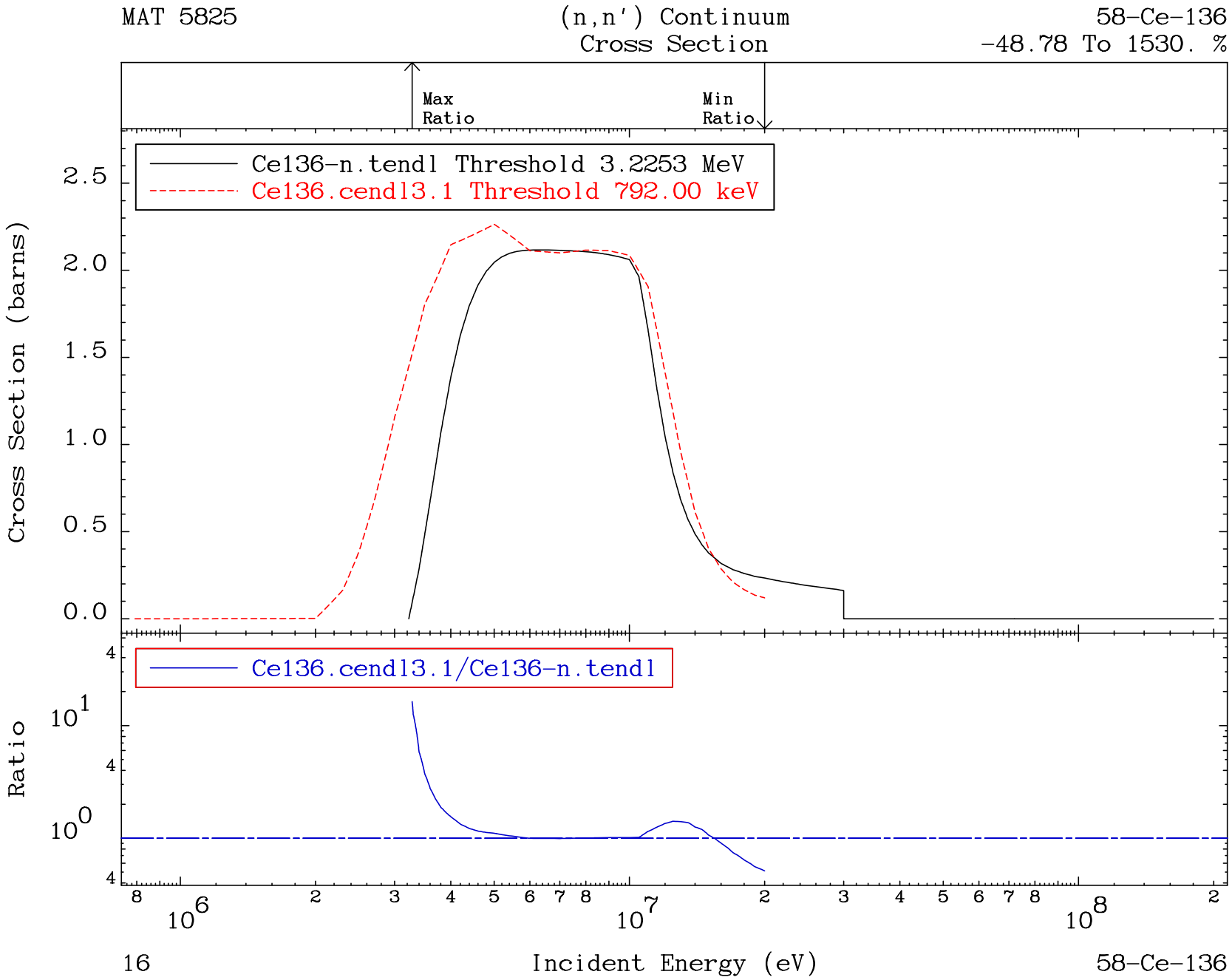

MAT 5825
1.076 MeV (n,n') Level
Cross Section
58-Ce-136
-82.10 To -19.50%
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 1.0843 MeV
Ce136.cendl3.1 Threshold 1.0843 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.0
0.8
0.6
0.4
0.2
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
11
Incident Energy (eV)
58-Ce-136

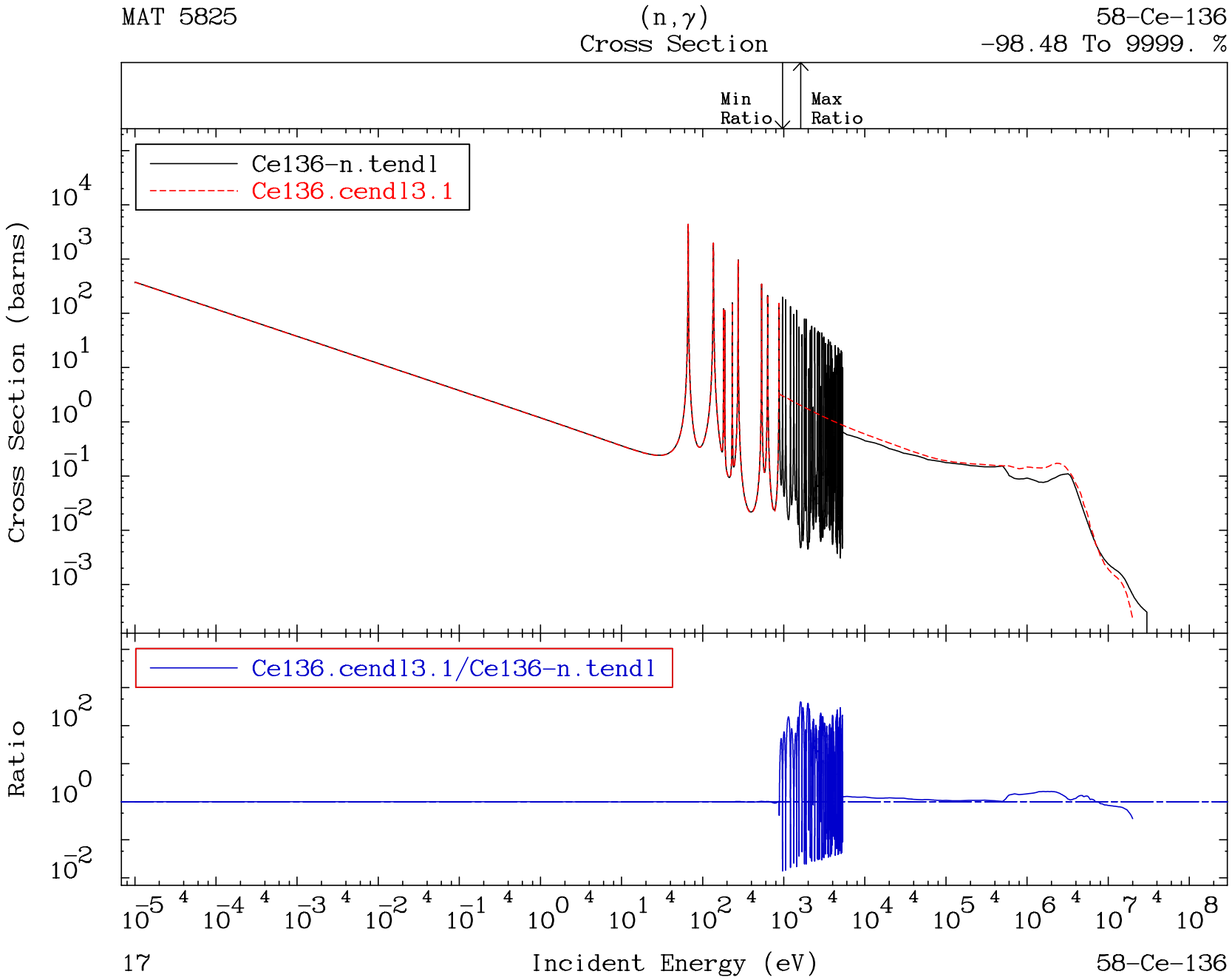

MAT 5825
1.092 MeV (n,n') Level
Cross Section
58-Ce-136
-90.88 To -7.943%
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 1.1002 MeV
Ce136.cendl3.1 Threshold 1.1002 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
2
10^0
6
4
2
10^-1
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
12
Incident Energy (eV)
58-Ce-136

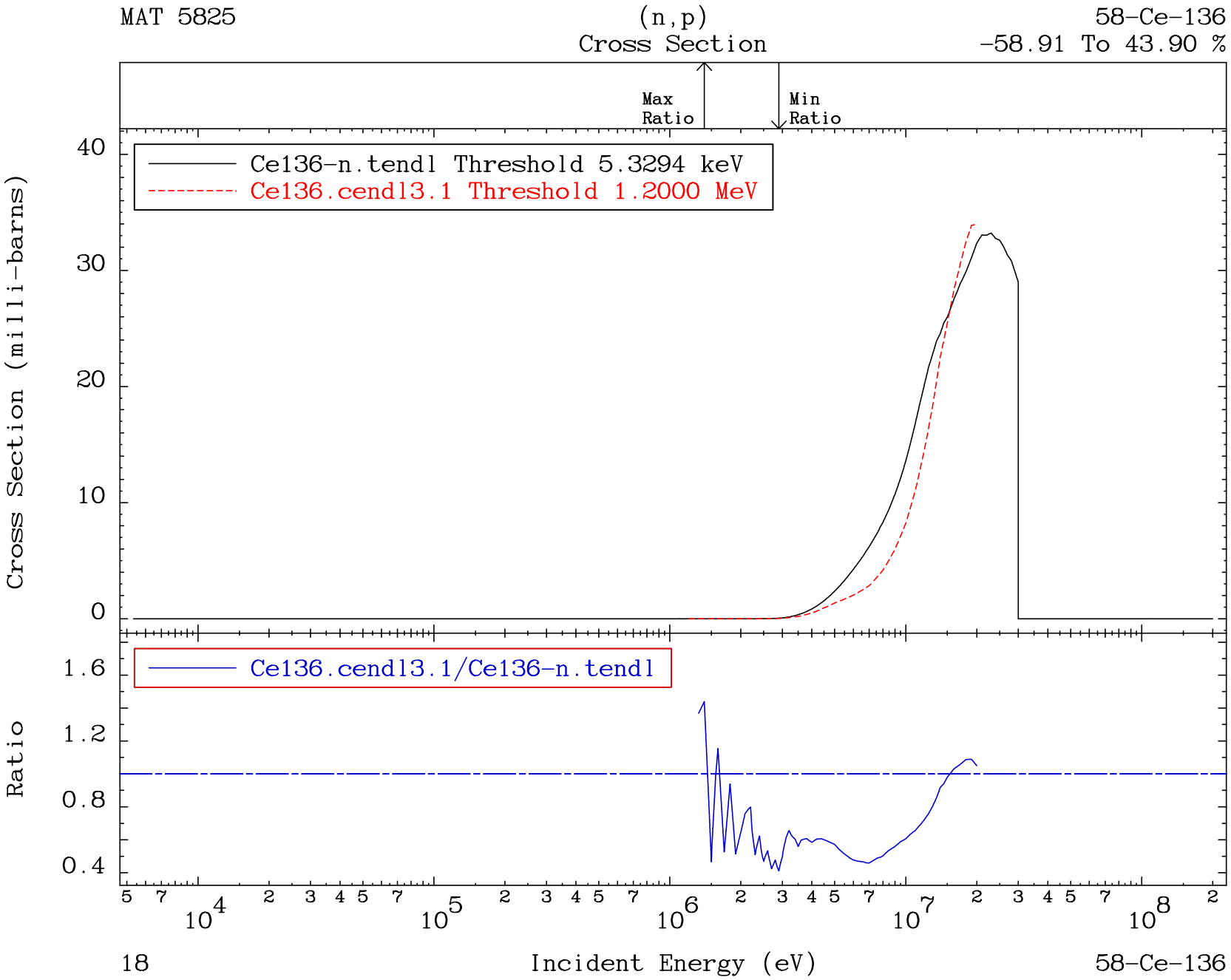

MAT 5825
1.314 MeV (n,n') Level
Cross Section
58-Ce-136
-62.45 To -6.527%
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 1.3239 MeV
Ce136.cendl3.1 Threshold 1.3239 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.0
0.8
0.6
0.4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
58-Ce-136

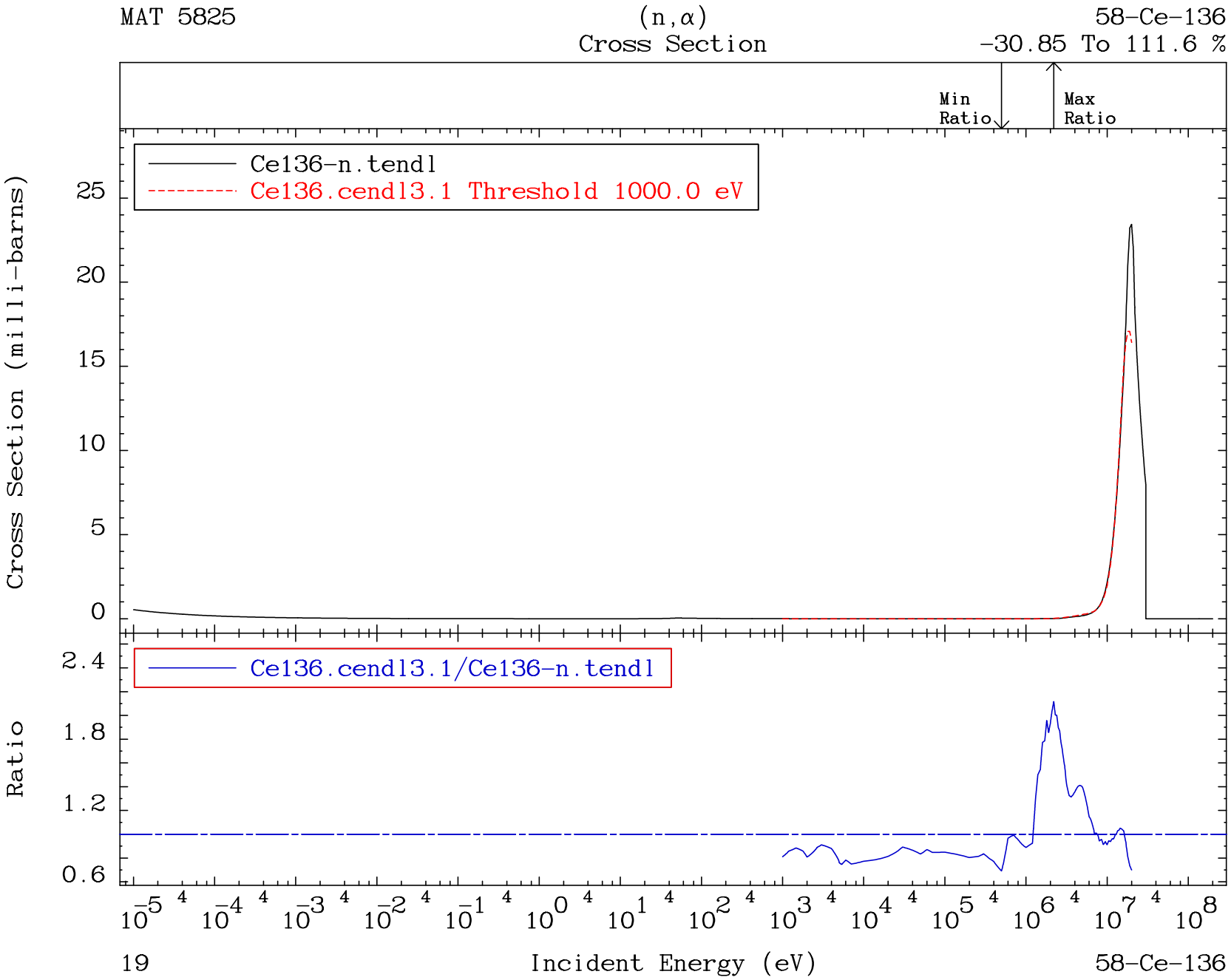

MAT 5825
1.553 MeV (n,n') Level
Cross Section
58-Ce-136
-30.21 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 1.5645 MeV
Ce136.cendl3.1 Threshold 1.5645 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
58-Ce-136

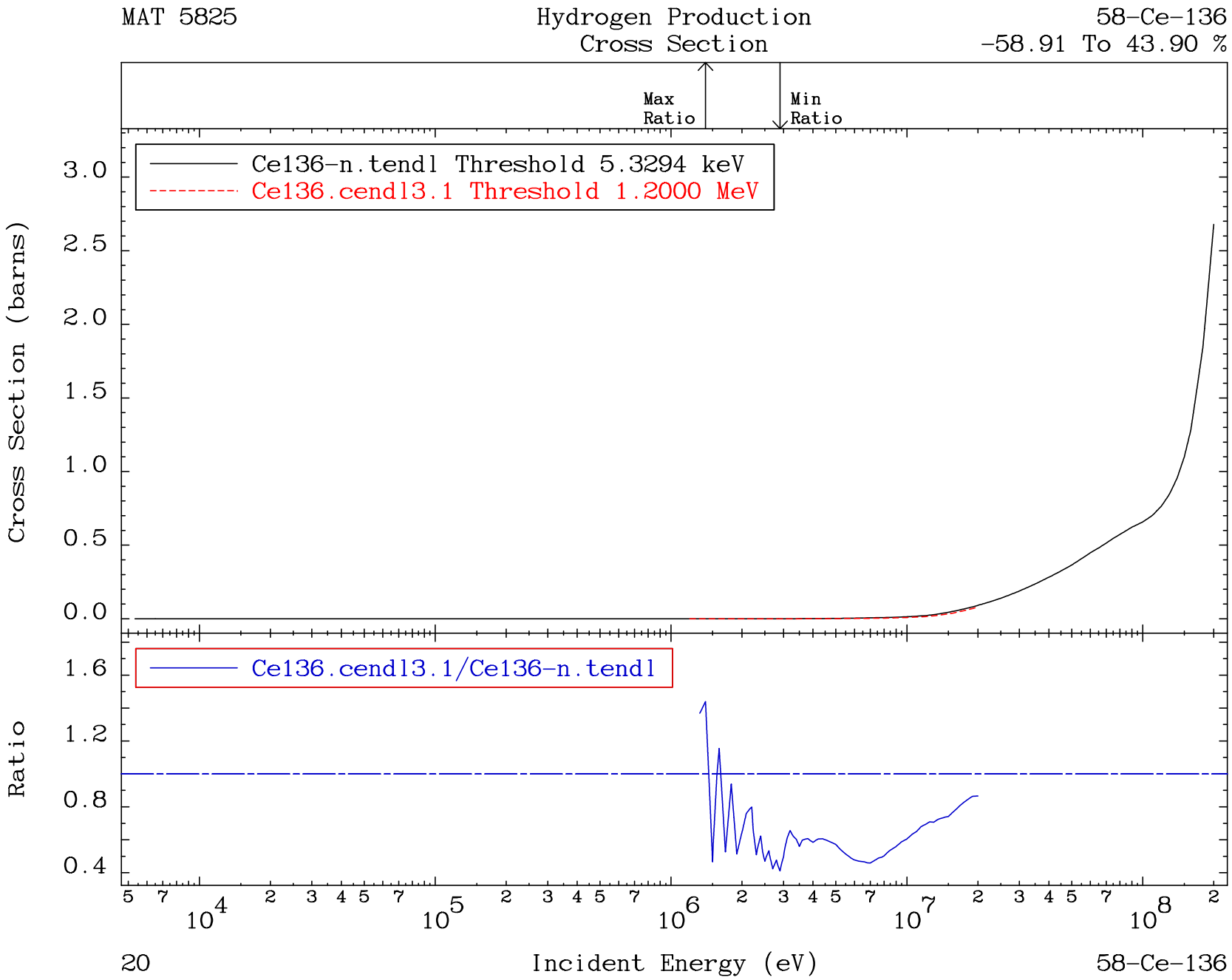

MAT 5825
1.979 MeV (n,n') Level
Cross Section
58-Ce-136
-58.88 To -27.81%
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 1.9932 MeV
Ce136.cendl3.1 Threshold 1.9932 MeV
Cross Section (milli-barns)
80
60
40
20
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
0.8
0.6
0.4
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
15
Incident Energy (eV)
58-Ce-136

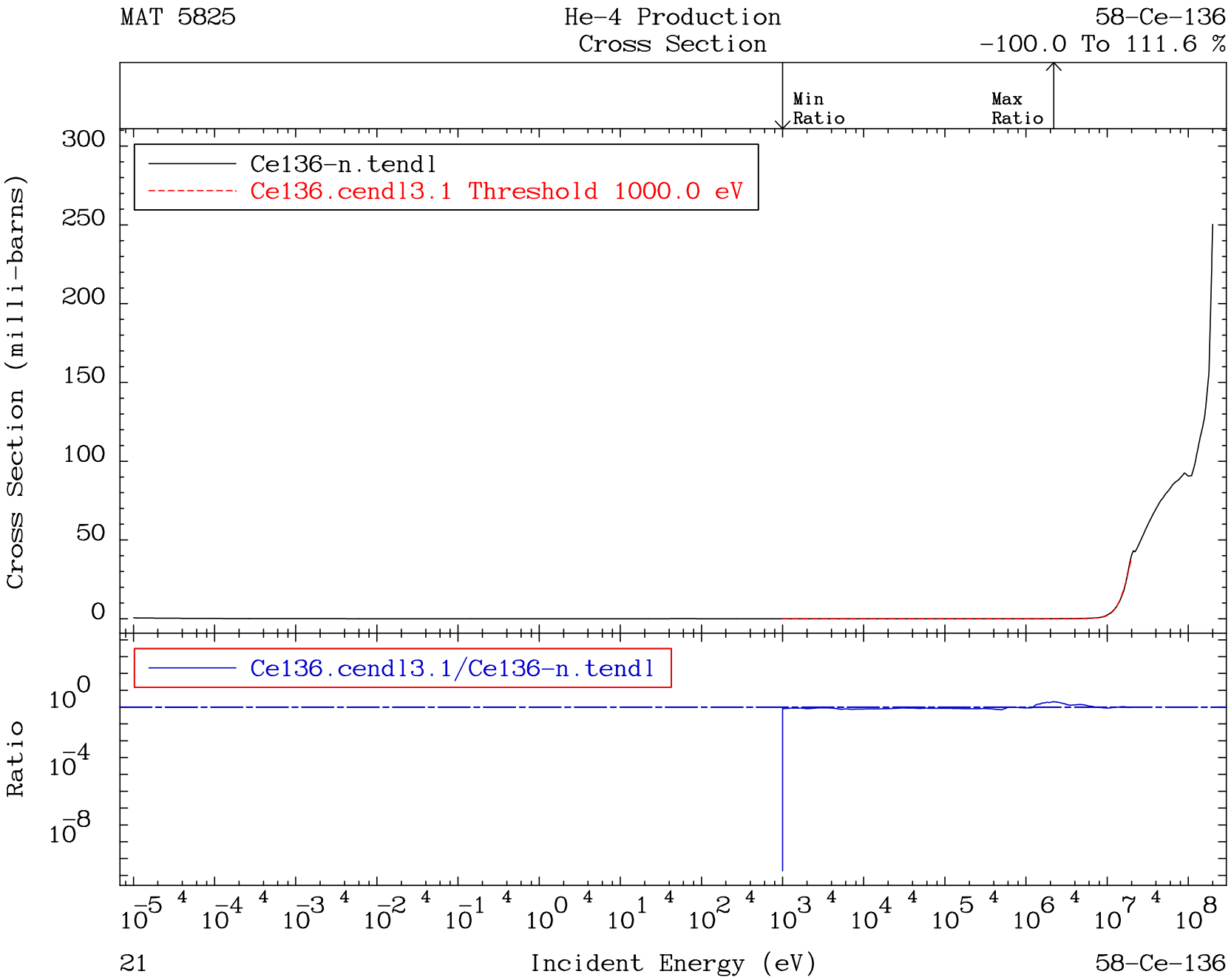

MAT 5825
(n,n') Continuum
Cross Section
58-Ce-136
-48.78 To 1530. %
Max
Ratio
Min
Ratio
Ce136-n.tendl Threshold 3.2253 MeV
Ce136.cendl3.1 Threshold 792.00 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
10^1
10^0
4
8
2
3
4
5
6
7
8
10^6
10^7
10^8
16
Incident Energy (eV)
58-Ce-136

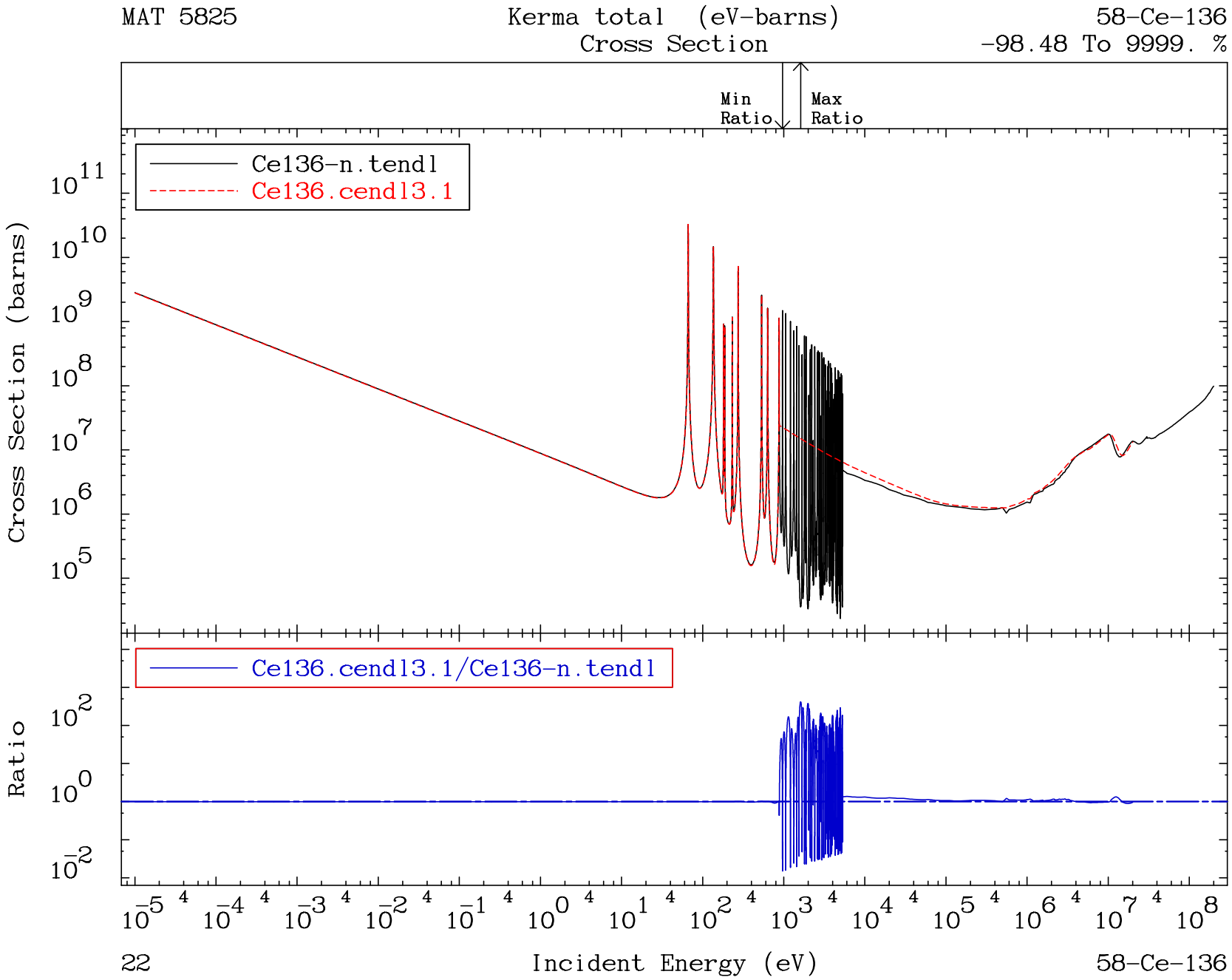

MAT 5825
(n,γ)
Cross Section
58-Ce-136
-98.48 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
17
58-Ce-136

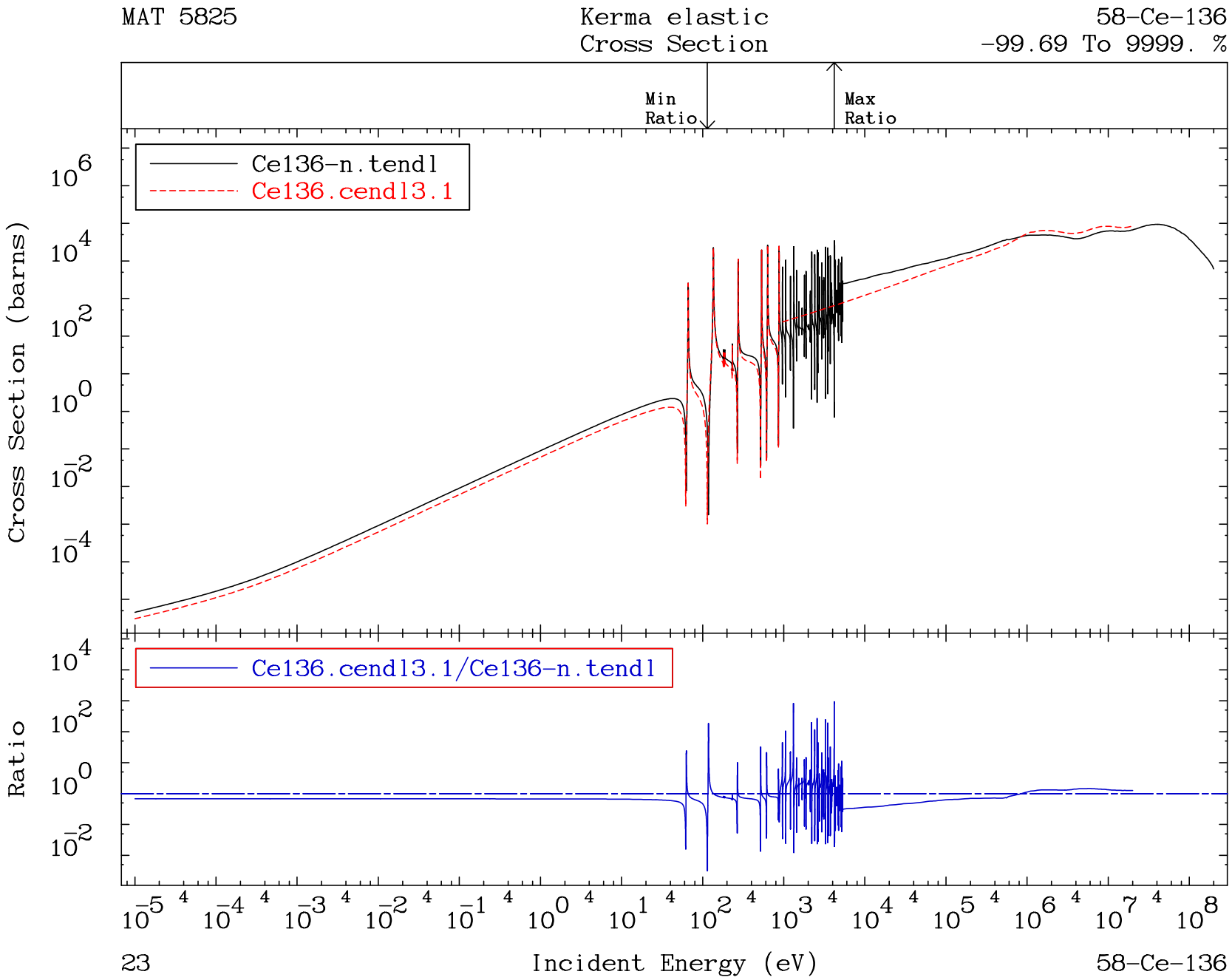

MAT 5825
(n,p)
Cross Section
58-Ce-136
-58.91 To 43.90 %
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 5.3294 keV
Ce136.cendl3.1 Threshold 1.2000 MeV
Cross Section (milli-barns)
40
30
20
10
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.6
1.2
0.8
0.4
5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
18
Incident Energy (eV)
58-Ce-136

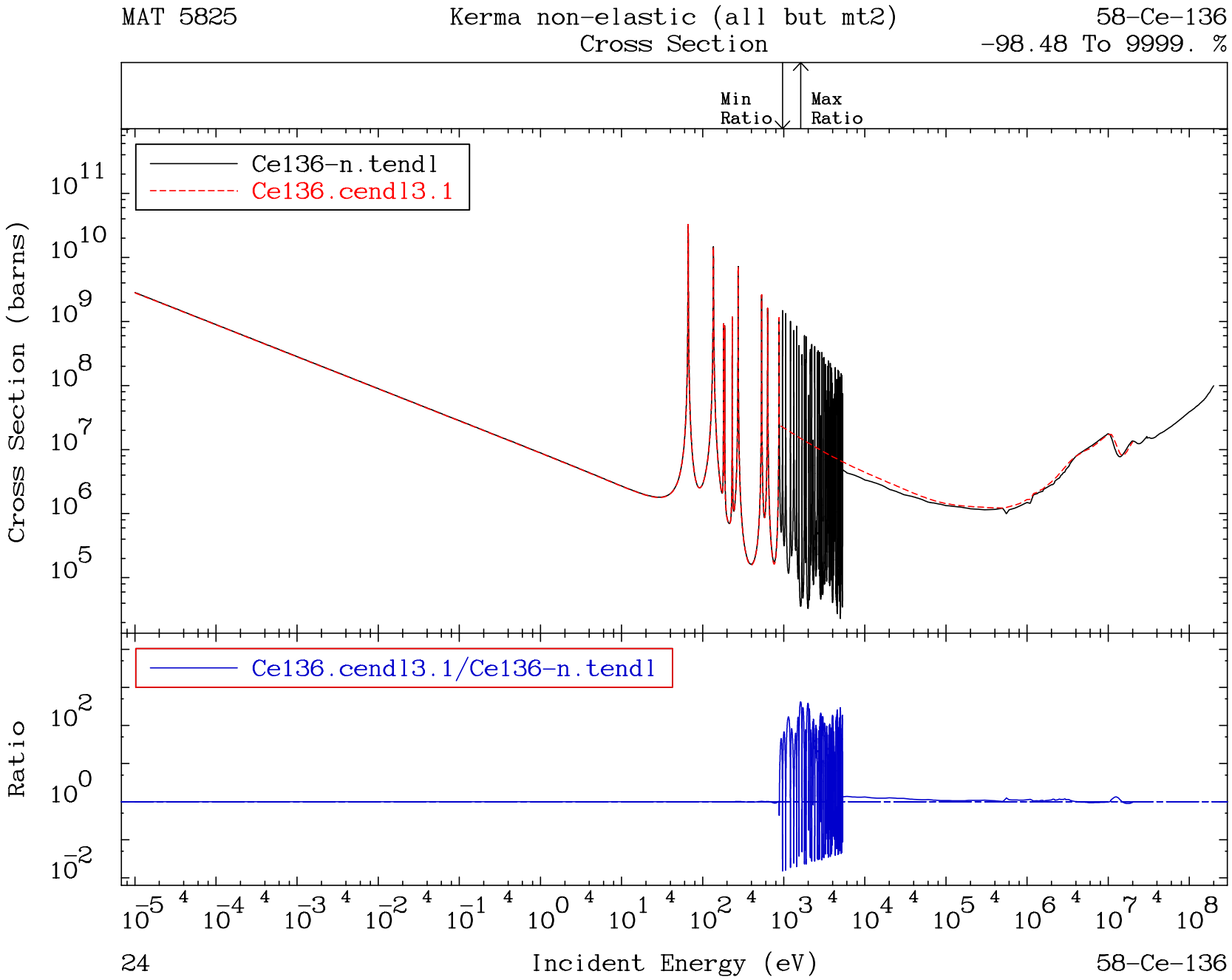

MAT 5825
(n,α)
Cross Section
58-Ce-136
-30.85 To 111.6 %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1 Threshold 1000.0 eV
Cross Section (milli-barns)
25
20
15
10
5
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
2.4
1.8
1.2
0.6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
19
Incident Energy (eV)
58-Ce-136

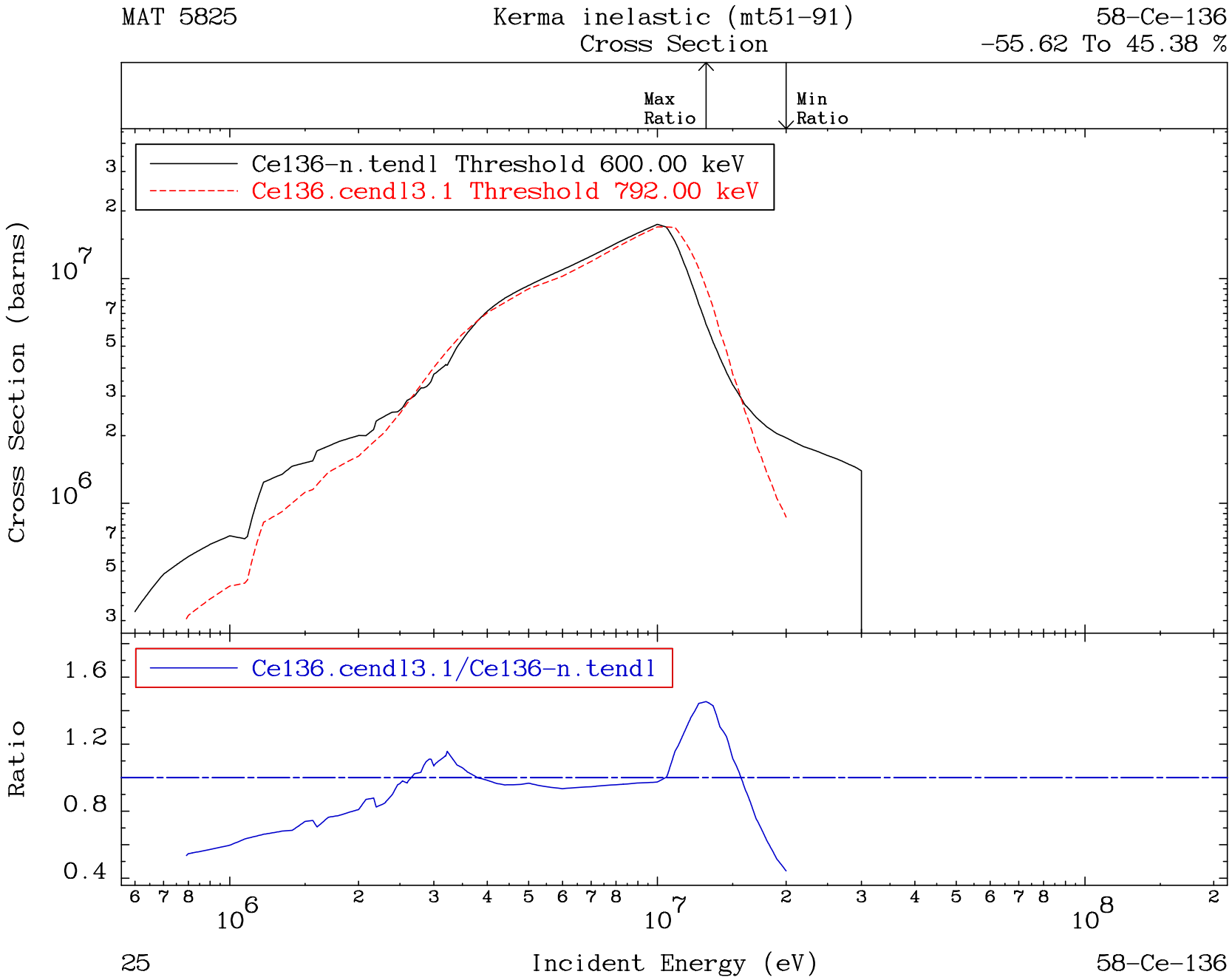

MAT 5825
Hydrogen Production
Cross Section
58-Ce-136
-58.91 To 43.90 %
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 5.3294 keV
Ce136.cendl3.1 Threshold 1.2000 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.6
1.2
0.8
0.4
5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
20
Incident Energy (eV)
58-Ce-136

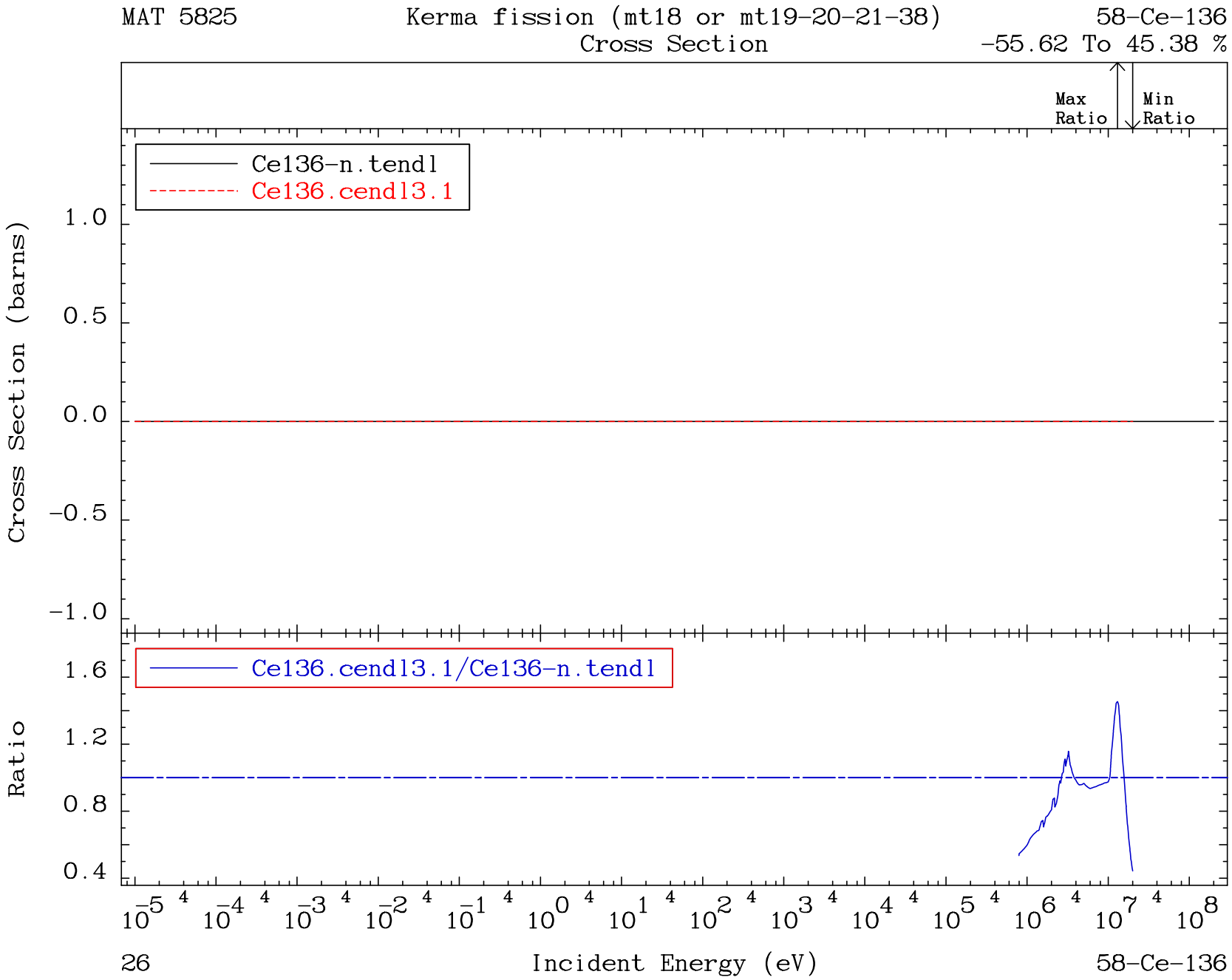

MAT 5825
He-4 Production
Cross Section
58-Ce-136
-100.0 To 111.6 %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1 Threshold 1000.0 eV
Cross Section (milli-barns)
300
250
200
150
100
50
0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
10^0
10^-4
10^-8
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
21
Incident Energy (eV)
58-Ce-136

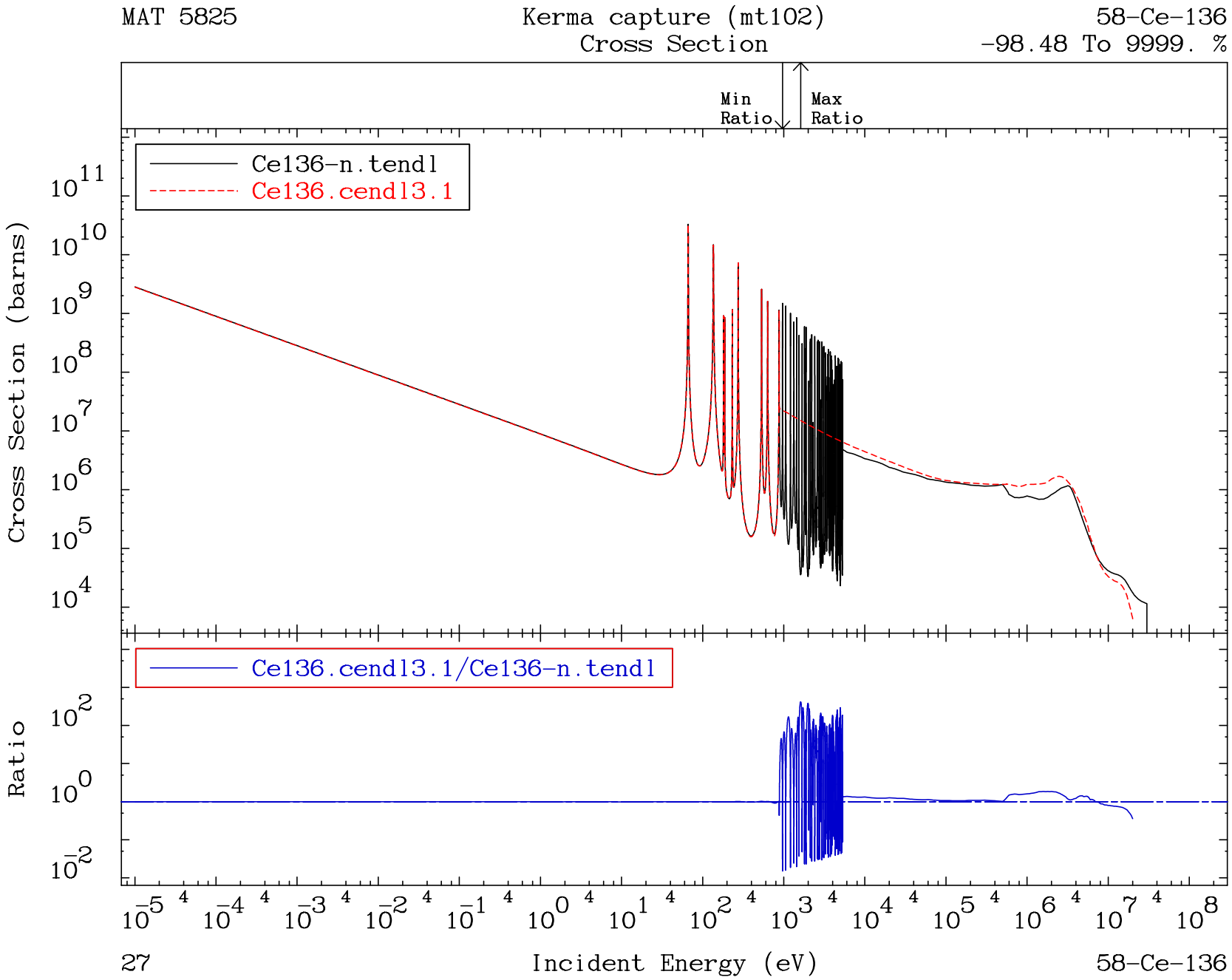

MAT 5825
Kerma total (eV-barns)
Cross Section
58-Ce-136
-98.48 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
22
58-Ce-136

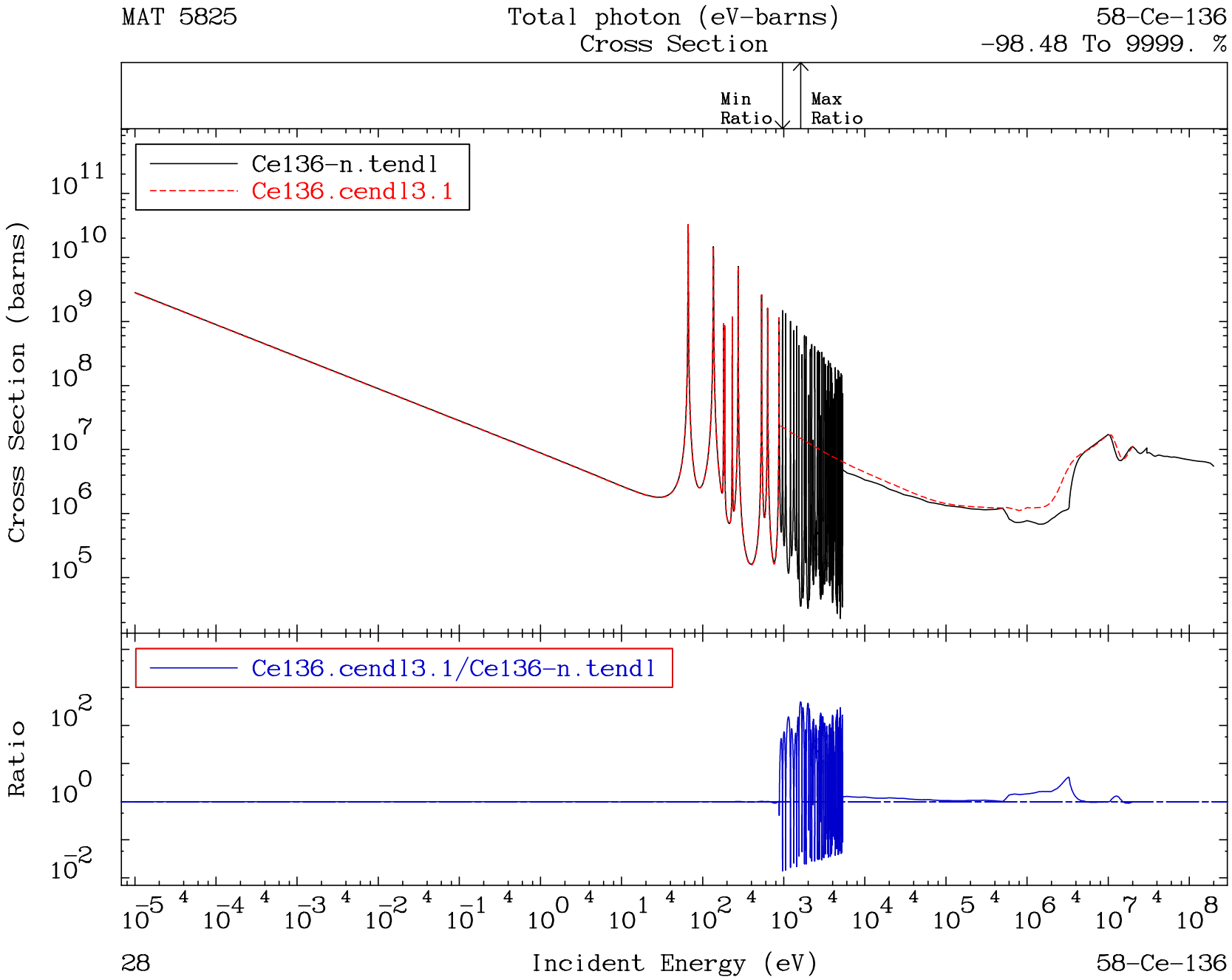

MAT 5825
Kerma elastic
Cross Section
58-Ce-136
-99.69 To 9999. %
Min
Ratio
Max
Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
23
58-Ce-136

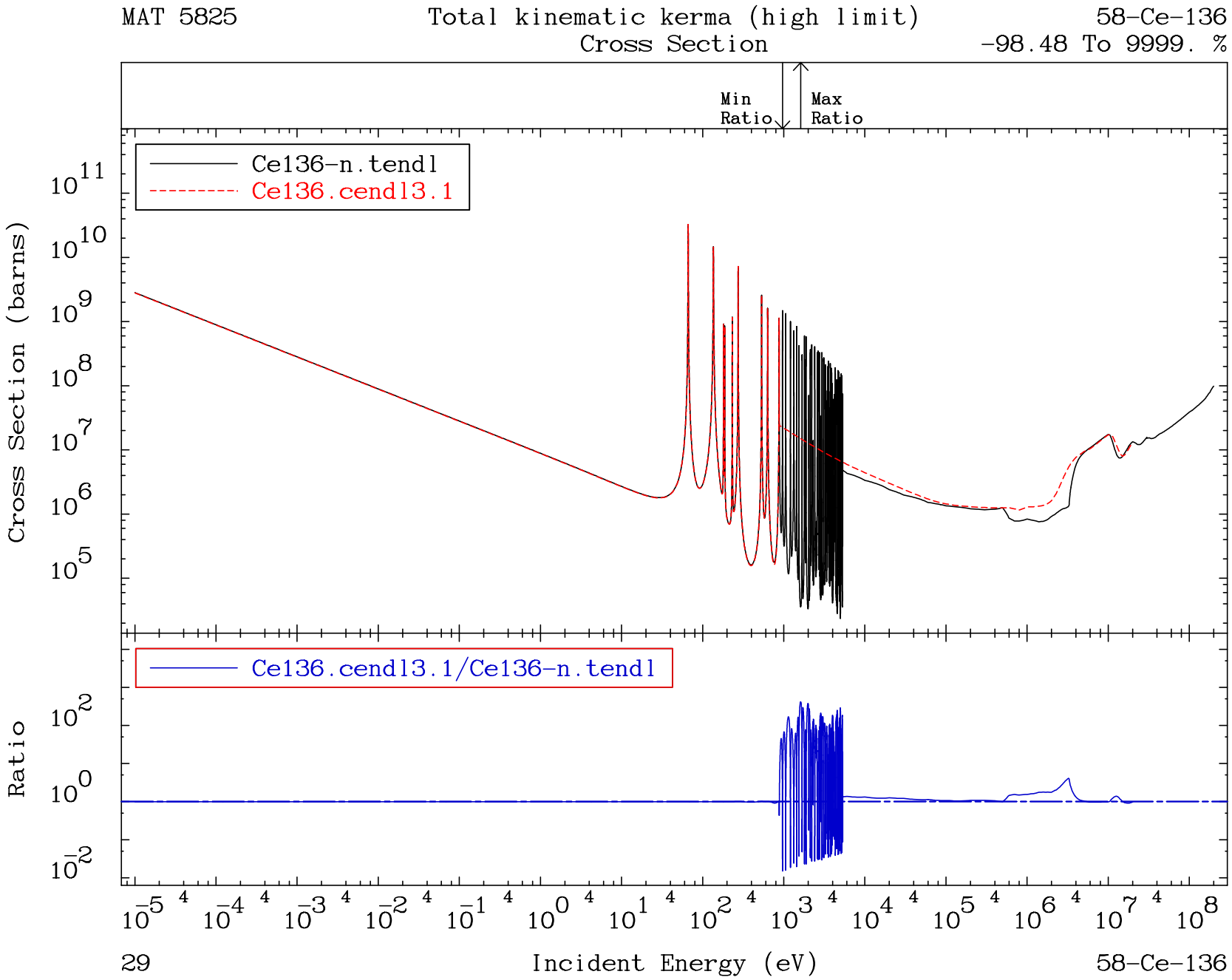

MAT 5825
Kerma non-elastic (all but mt2)
Cross Section
58-Ce-136
-98.48 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
24
58-Ce-136

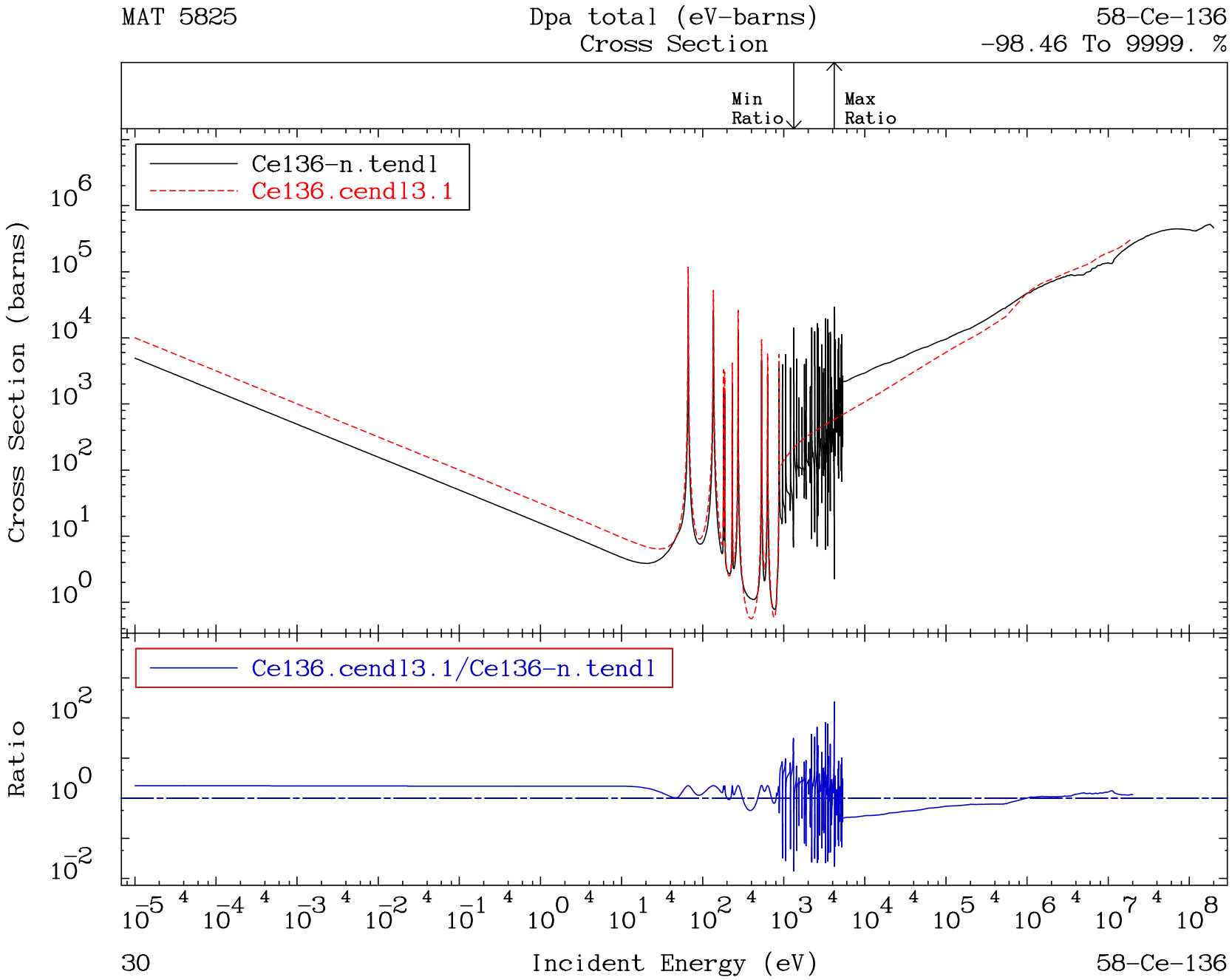

MAT 5825
Kerma inelastic (mt51-91)
Cross Section
58-Ce-136
-55.62 To 45.38 %
Max Ratio
Min Ratio
Ce136-n.tendl Threshold 600.00 keV
Ce136.cendl3.1 Threshold 792.00 keV
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
25
58-Ce-136

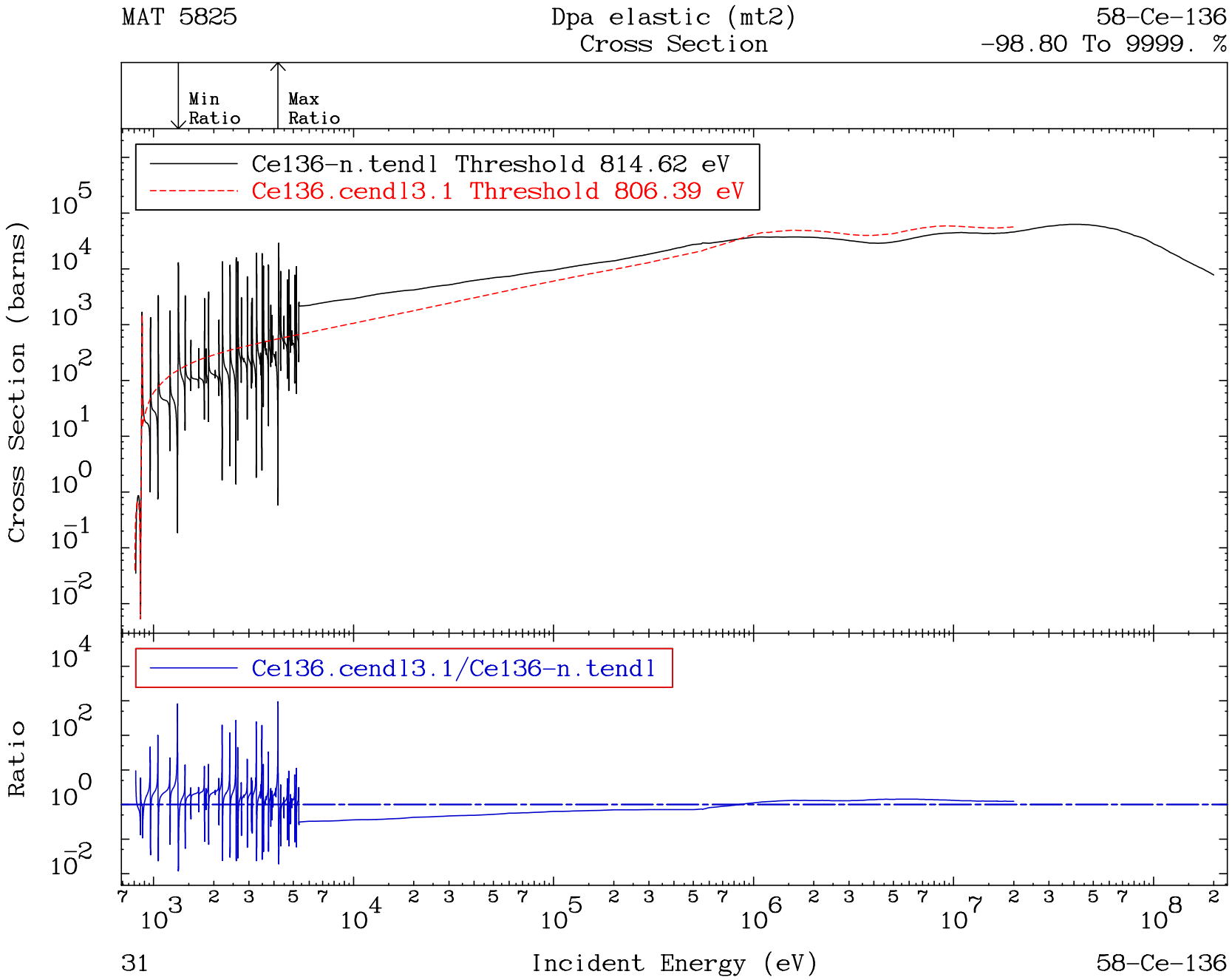

MAT 5825
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
58-Ce-136
-55.62 To 45.38 %
Max Ratio
Min Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
Ce136.cendl3.1/Ce136-n.tendl
Ratio
1.6
1.2
0.8
0.4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
26
Incident Energy (eV)
58-Ce-136

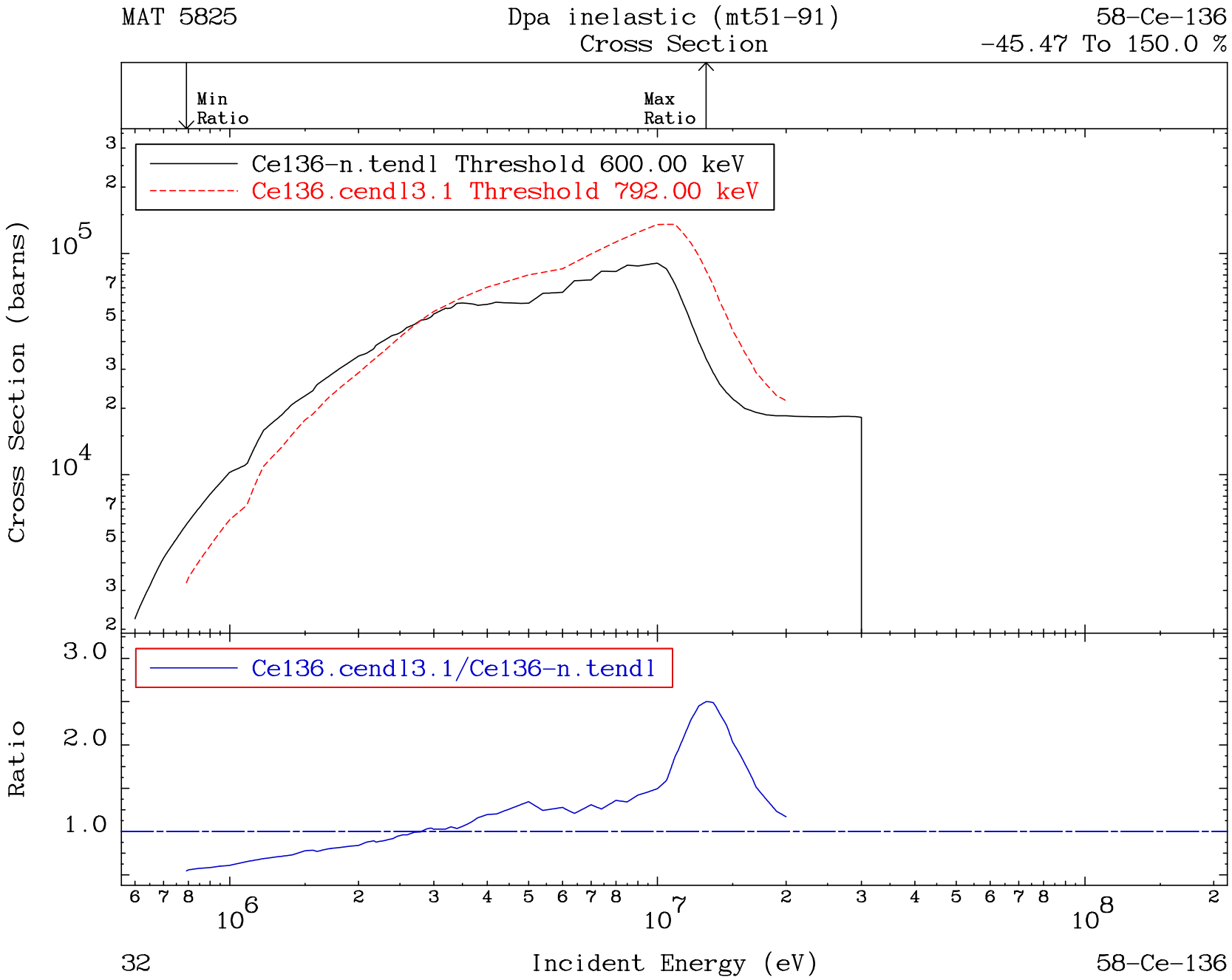

MAT 5825
Kerma capture (mt102)
Cross Section
58-Ce-136
-98.48 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
27
58-Ce-136

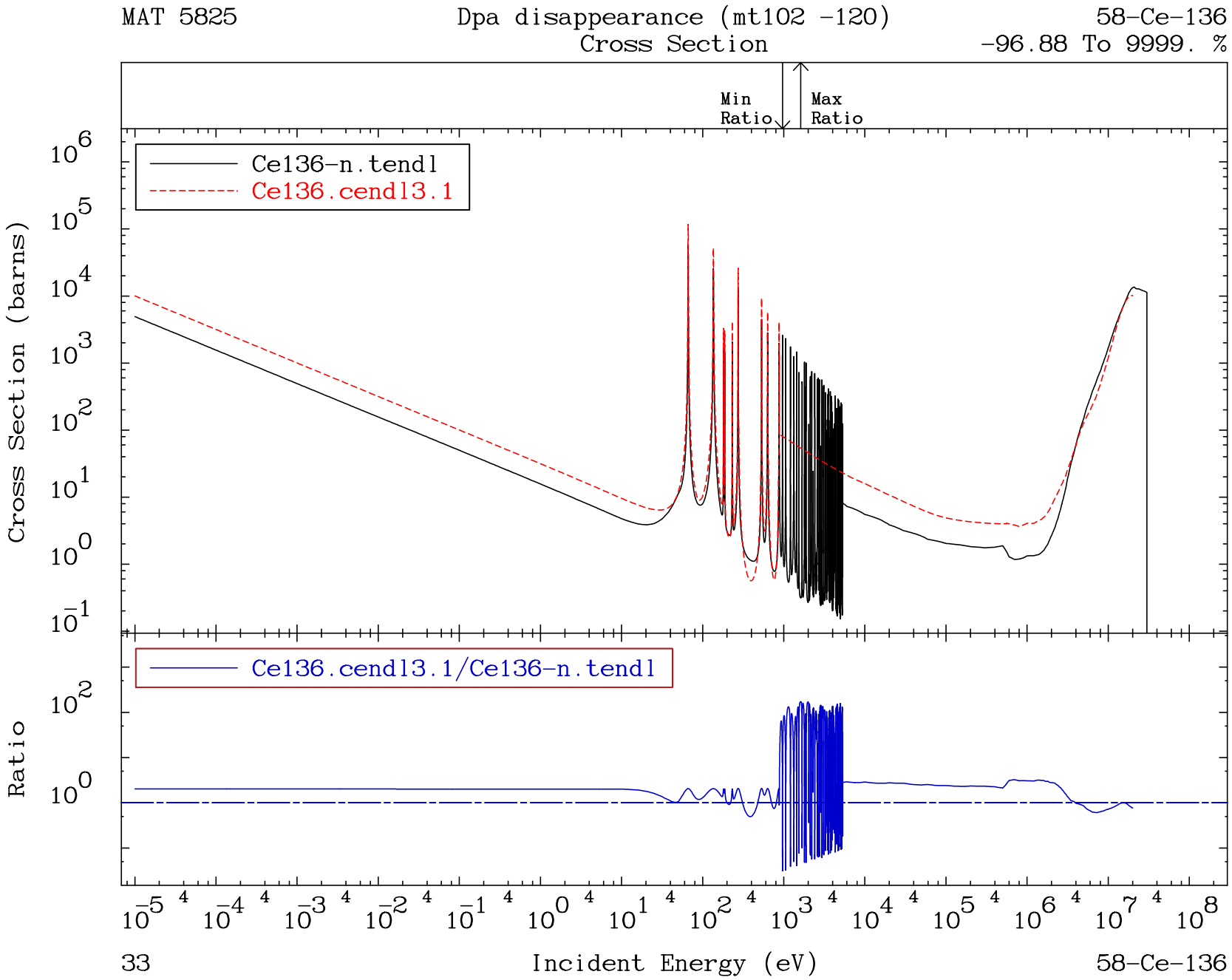

MAT 5825
Total photon (eV-barns)
Cross Section
58-Ce-136
-98.48 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
28
58-Ce-136


MAT 5825
Total kinematic kerma (high limit)
Cross Section
58-Ce-136
-98.48 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
29
58-Ce-136


MAT 5825
Dpa total (eV-barns)
Cross Section
58-Ce-136
-98.46 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
30
58-Ce-136


MAT 5825
Dpa elastic (mt2)
Cross Section
58-Ce-136
-98.80 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 814.62 eV
Ce136.cendl3.1 Threshold 806.39 eV
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
31
58-Ce-136


MAT 5825
Dpa inelastic (mt51-91)
Cross Section
58-Ce-136
-45.47 To 150.0 %
Min Ratio
Max Ratio
Ce136-n.tendl Threshold 600.00 keV
Ce136.cendl3.1 Threshold 792.00 keV
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
32
58-Ce-136


MAT 5825
Dpa disappearance (mt102 -120)
Cross Section
58-Ce-136
-96.88 To 9999. %
Min Ratio
Max Ratio
Ce136-n.tendl
Ce136.cendl3.1
Cross Section (barns)
Ce136.cendl3.1/Ce136-n.tendl
Ratio
Incident Energy (eV)
33
58-Ce-136