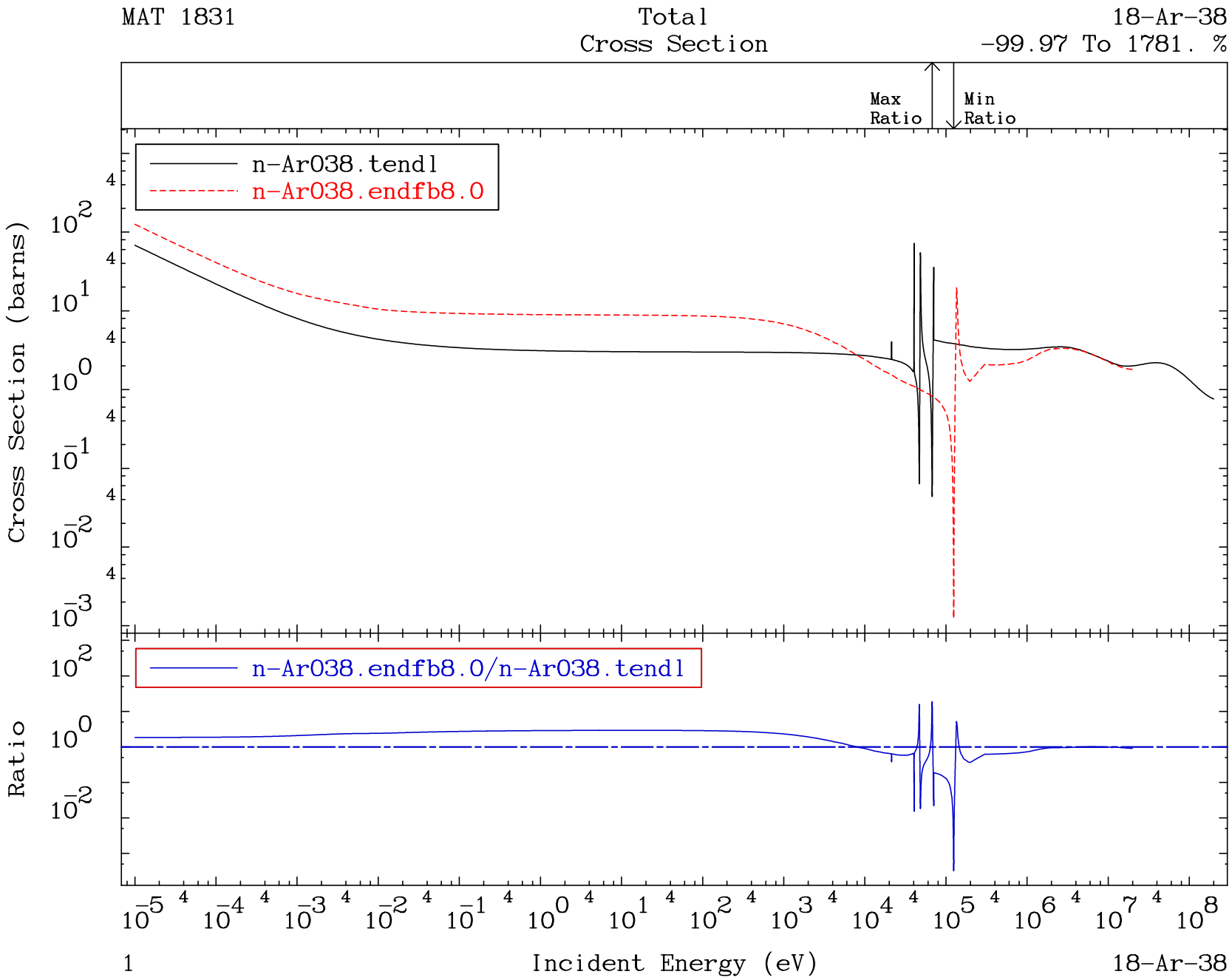
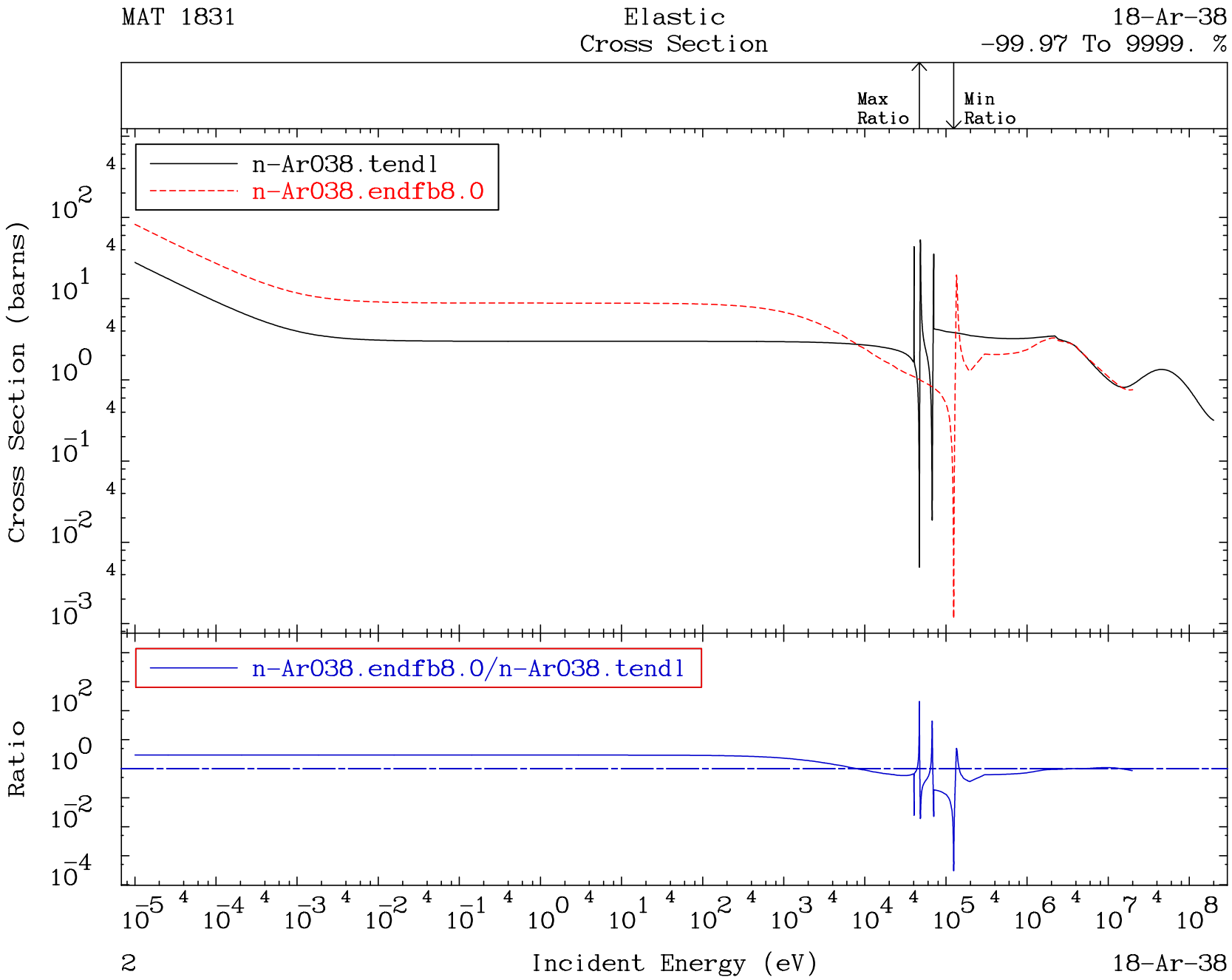
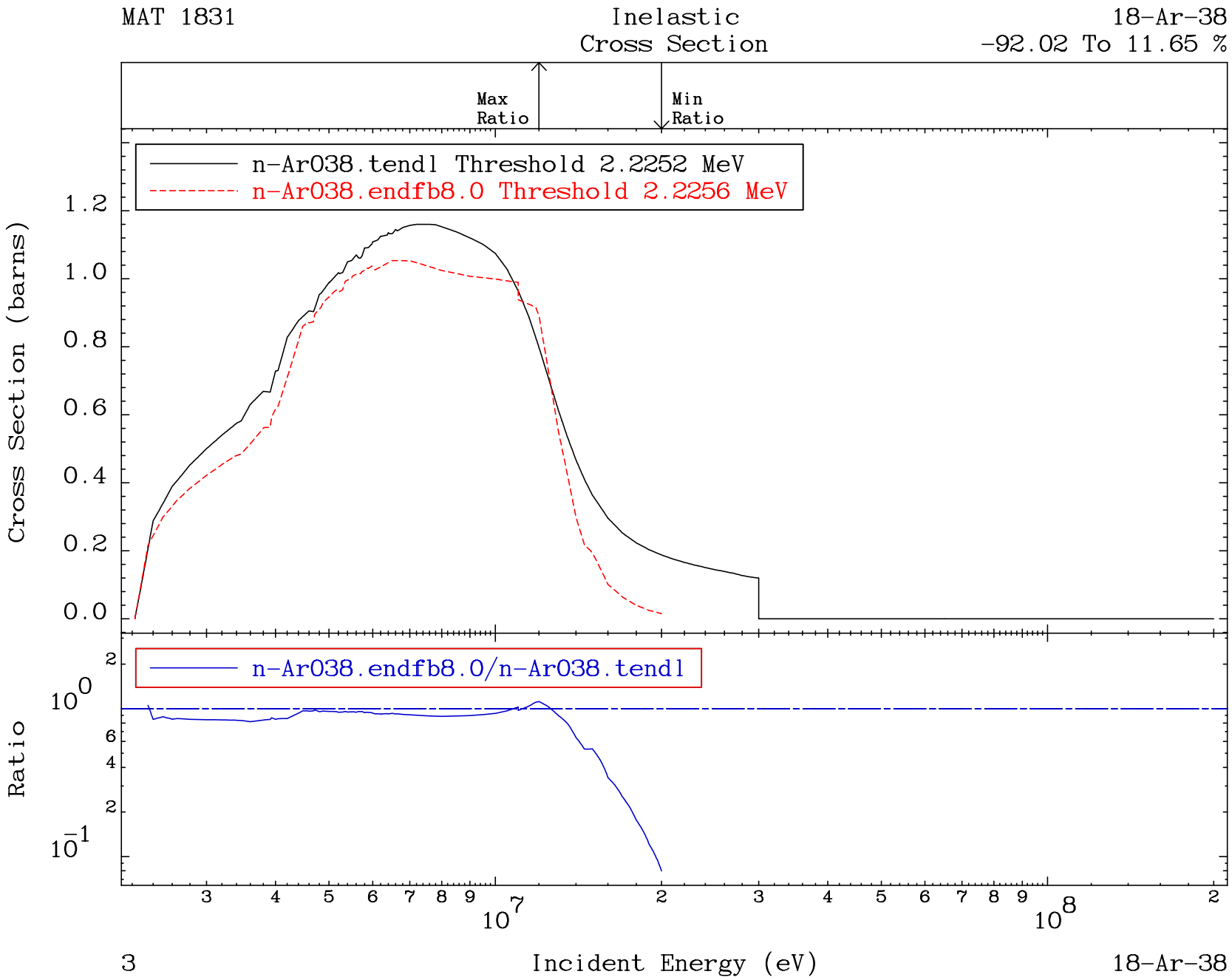
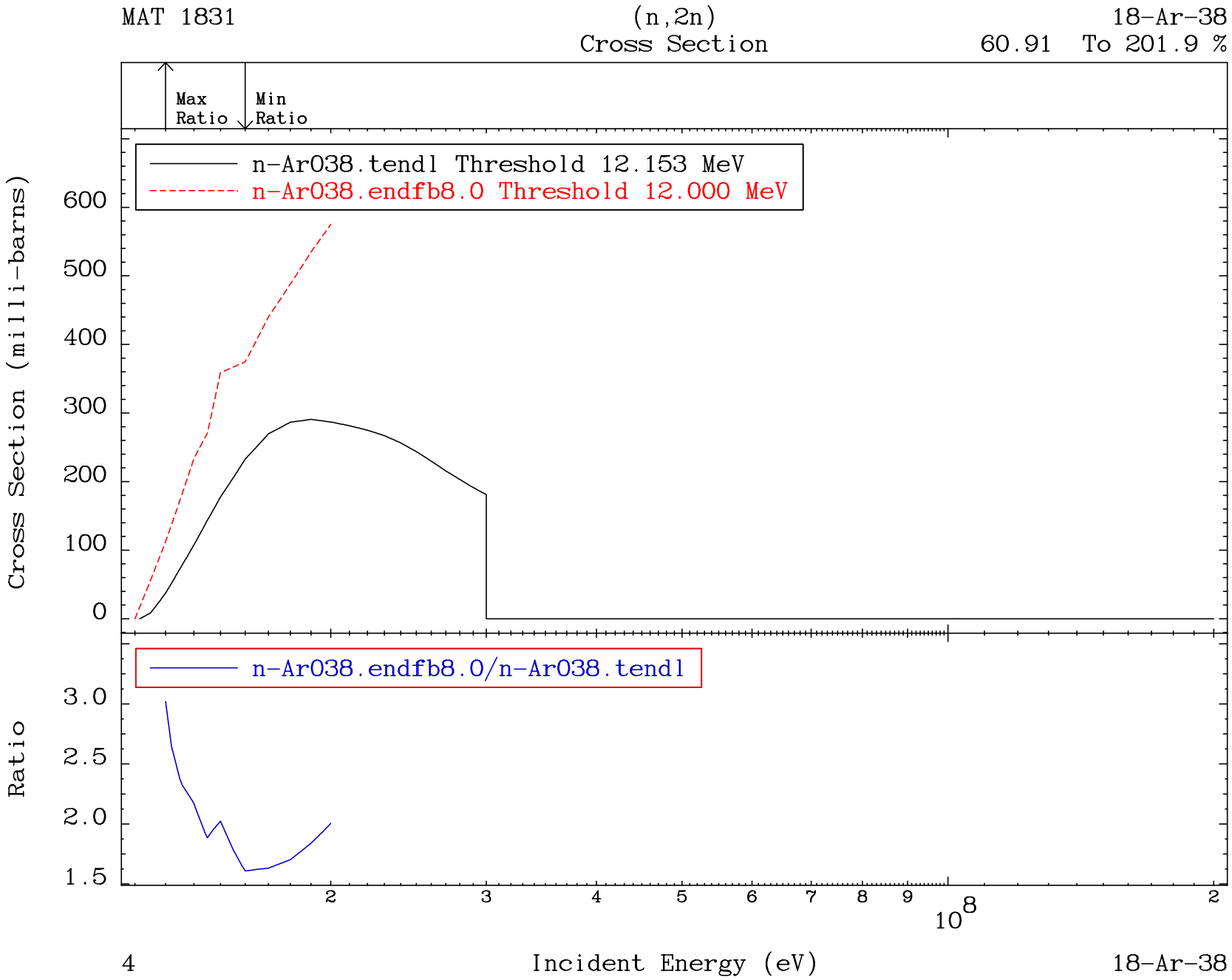
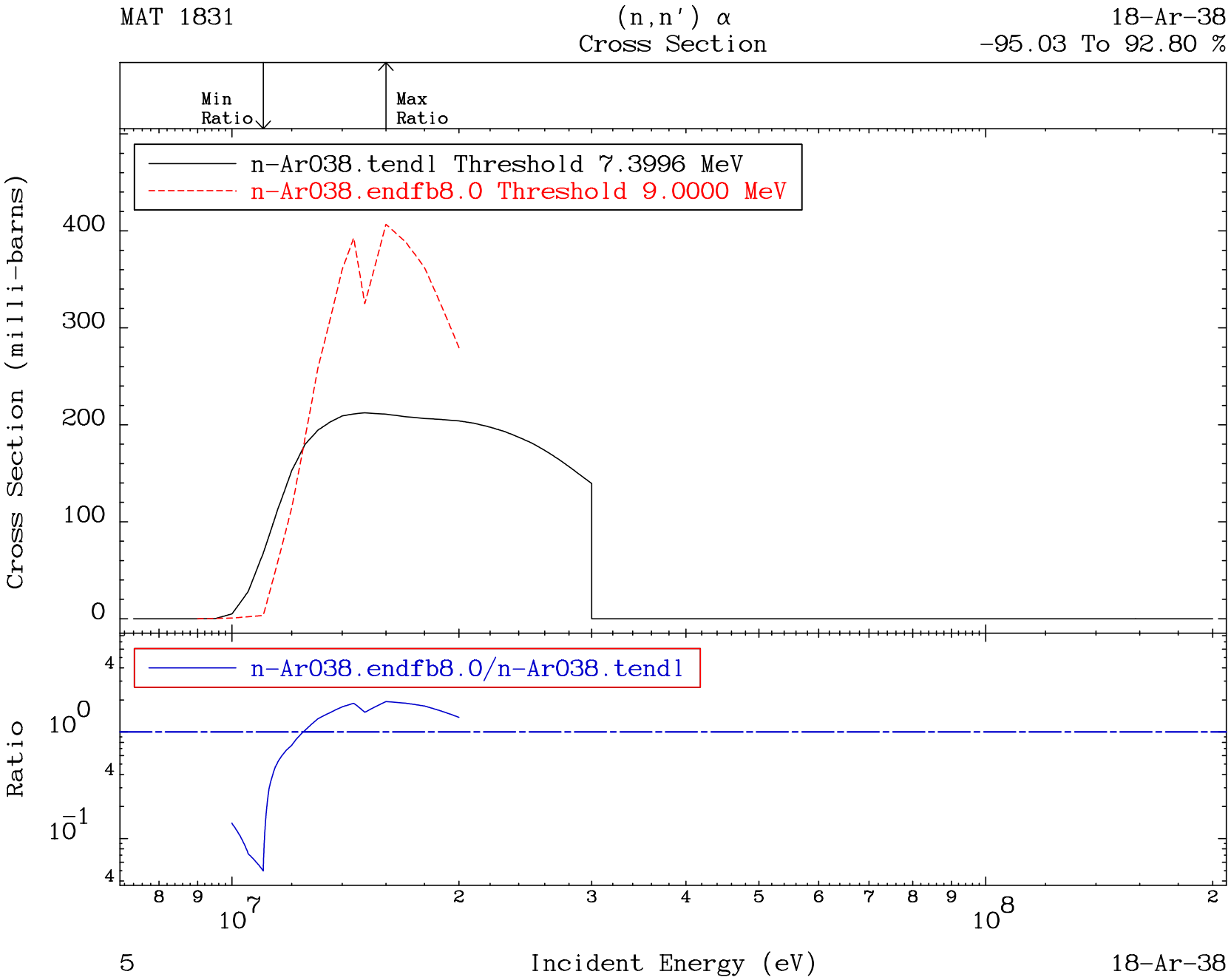
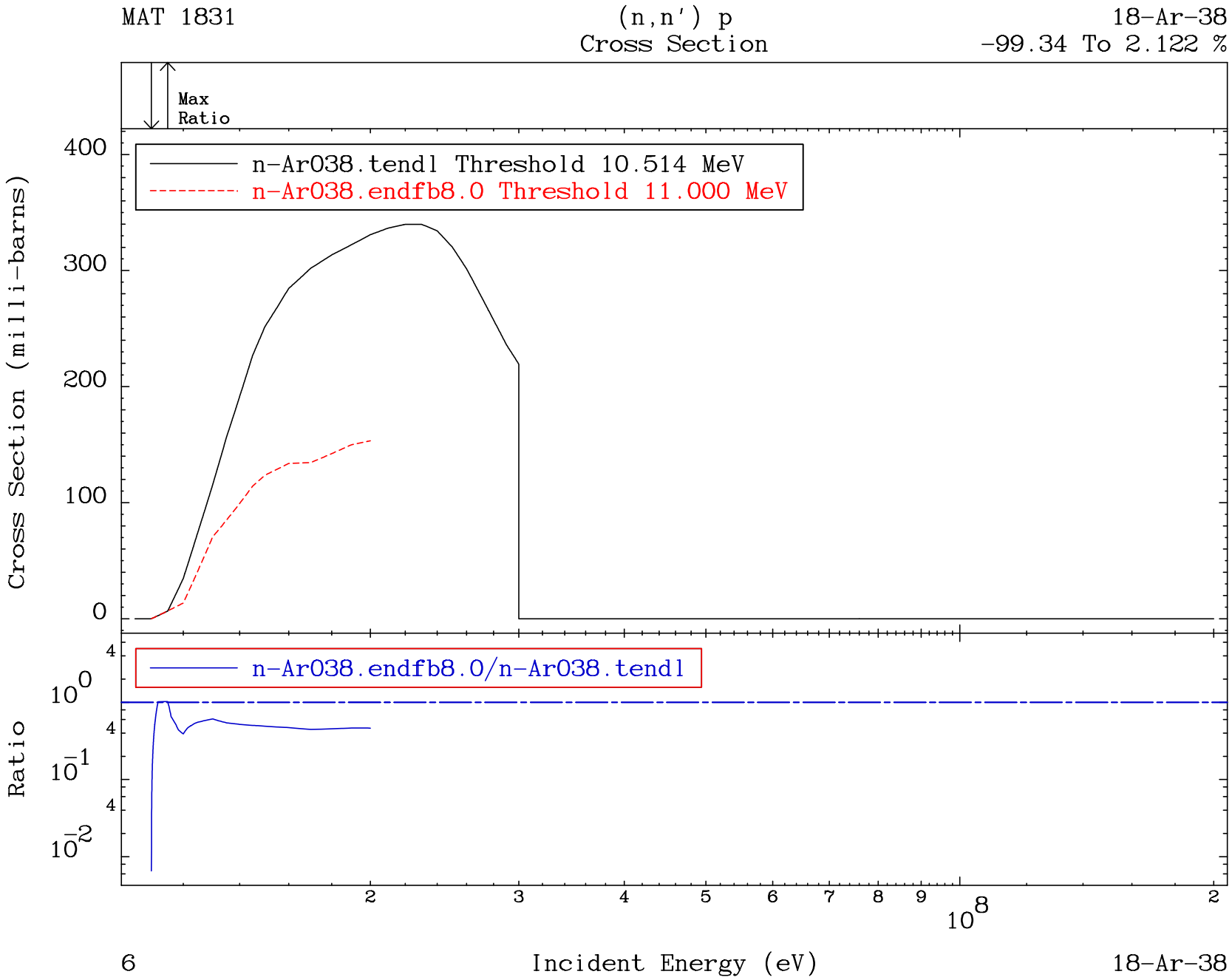

MAT 1831
Total
Cross Section
18-Ar-38
-99.97 To 1781. %
Max
Ratio
Min
Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
1
18-Ar-38

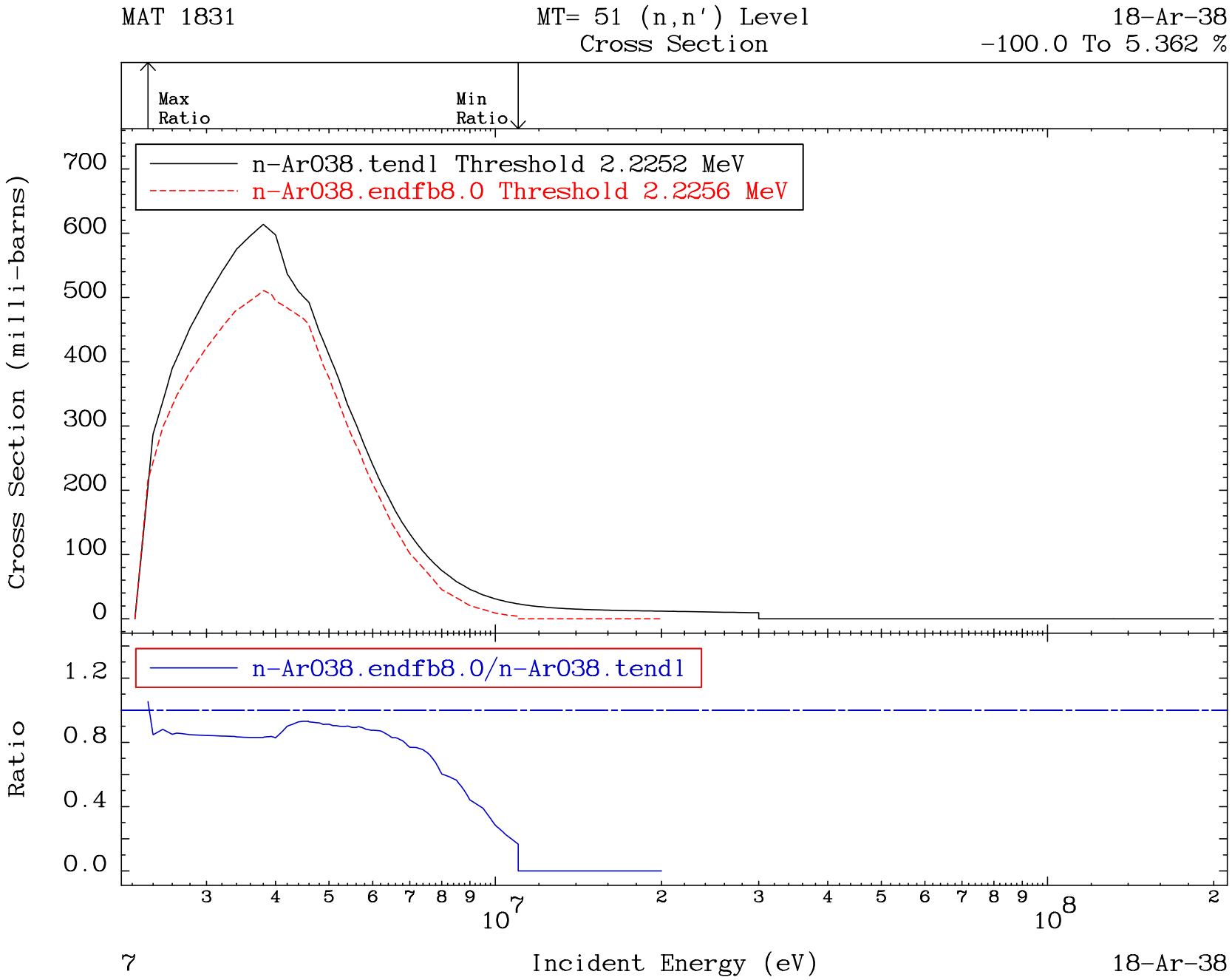

MAT 1831
Elastic
Cross Section
18-Ar-38
-99.97 To 9999. %
Max
Ratio
Min
Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
2
18-Ar-38

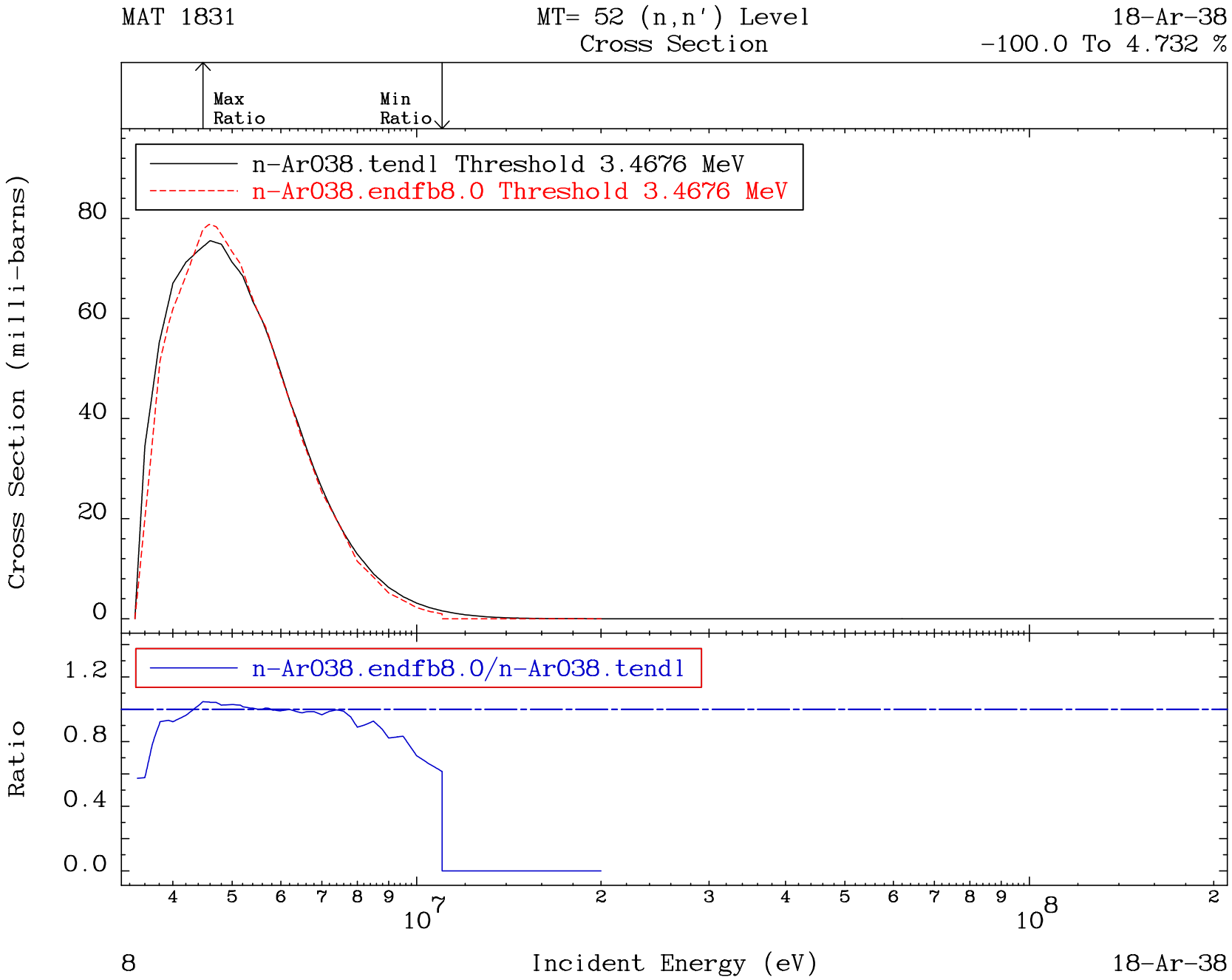

MAT 1831
Inelastic
Cross Section
18-Ar-38
-92.02 To 11.65 %
Max
Ratio
Min
Ratio
n-Ar038.tendl Threshold 2.2252 MeV
n-Ar038.endfb8.0 Threshold 2.2256 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
2
10^0
6
4
2
10^-1
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
3
Incident Energy (eV)
18-Ar-38

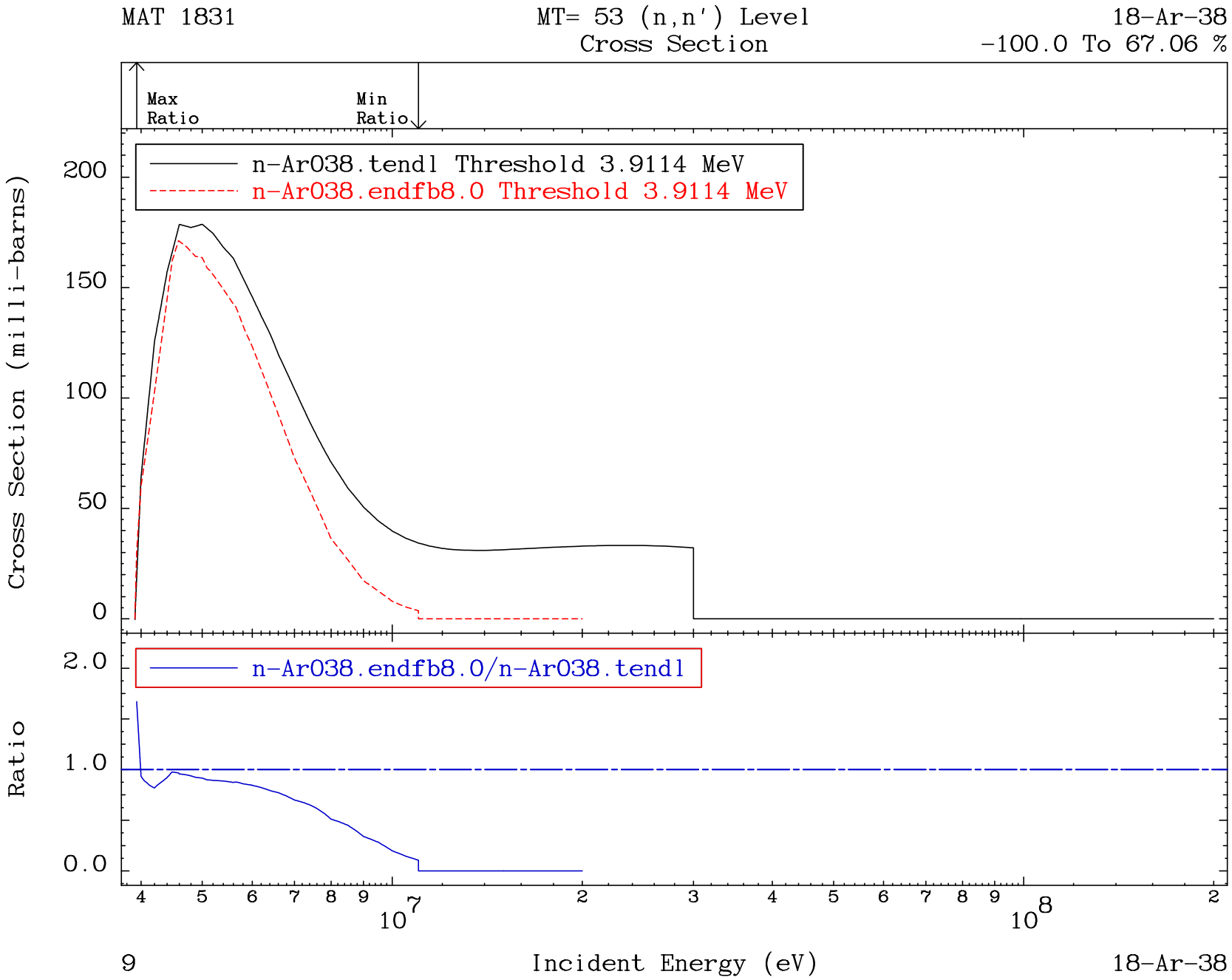

MAT 1831
(n,2n)
Cross Section
18-Ar-38
60.91 To 201.9 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 12.153 MeV
n-Ar038.endfb8.0 Threshold 12.000 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
3.0
2.5
2.0
1.5
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
18-Ar-38

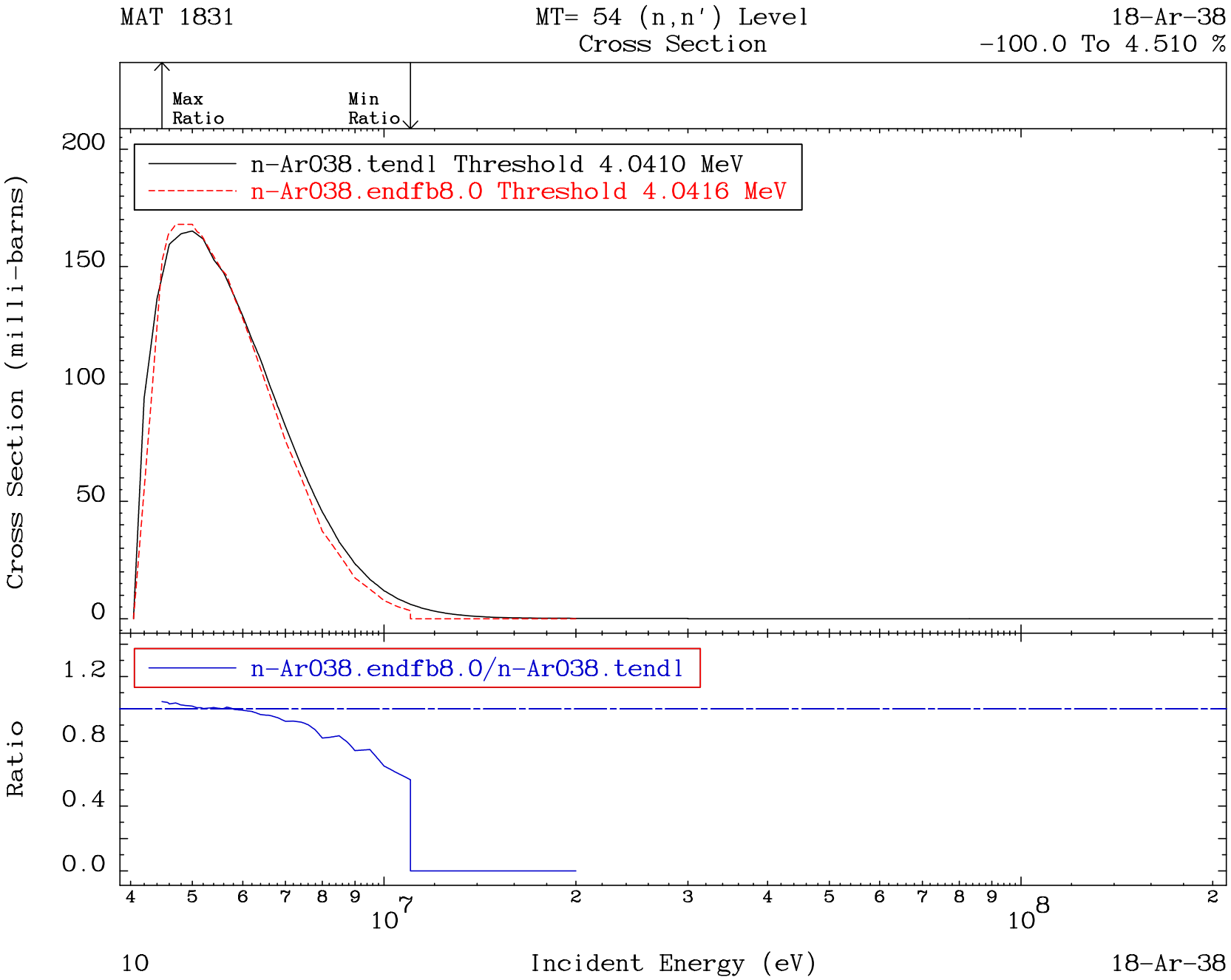

MAT 1831
(n,n') α
Cross Section
18-Ar-38
-95.03 To 92.80 %
Min Ratio
Max Ratio
n-Ar038.tendl Threshold 7.3996 MeV
n-Ar038.endfb8.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^0
10^-1
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
18-Ar-38

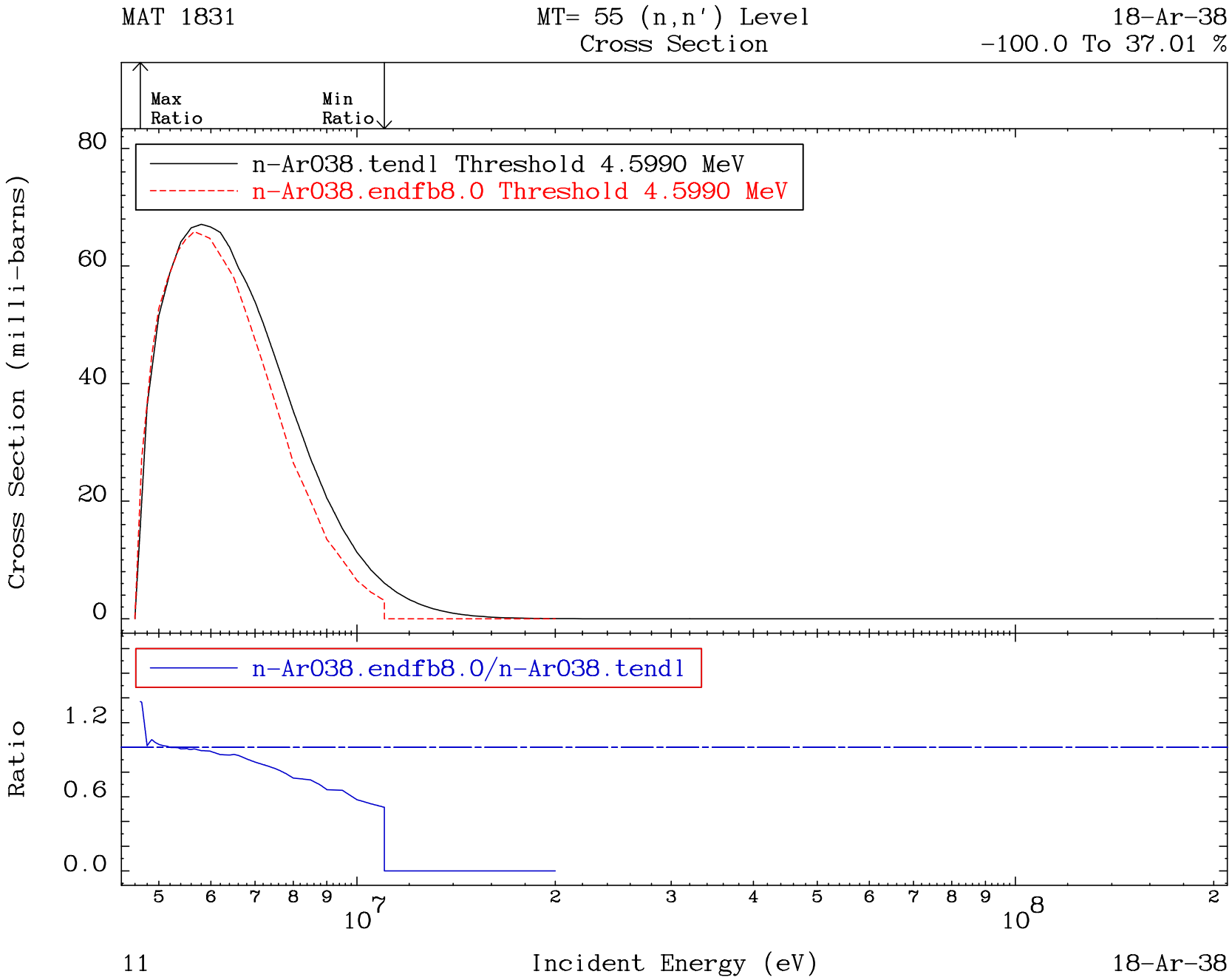

MAT 1831
(n,n') p
Cross Section
18-Ar-38
-99.34 To 2.122 %
Max
Ratio
n-Ar038.tendl Threshold 10.514 MeV
n-Ar038.endfb8.0 Threshold 11.000 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^0
10^-1
10^-2
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
18-Ar-38

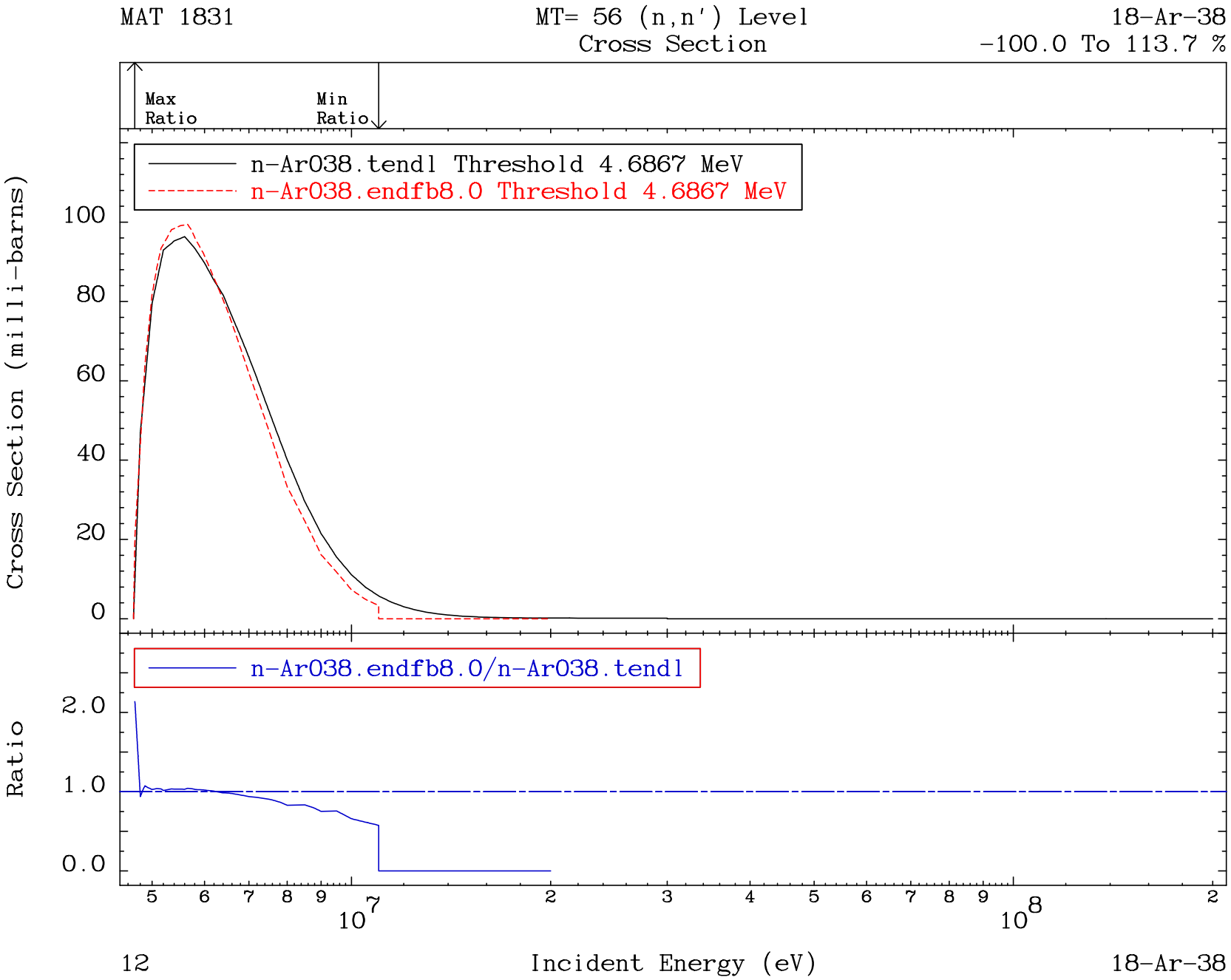

MAT 1831
MT= 51 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 5.362 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 2.2252 MeV
n-Ar038.endfb8.0 Threshold 2.2256 MeV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
18-Ar-38

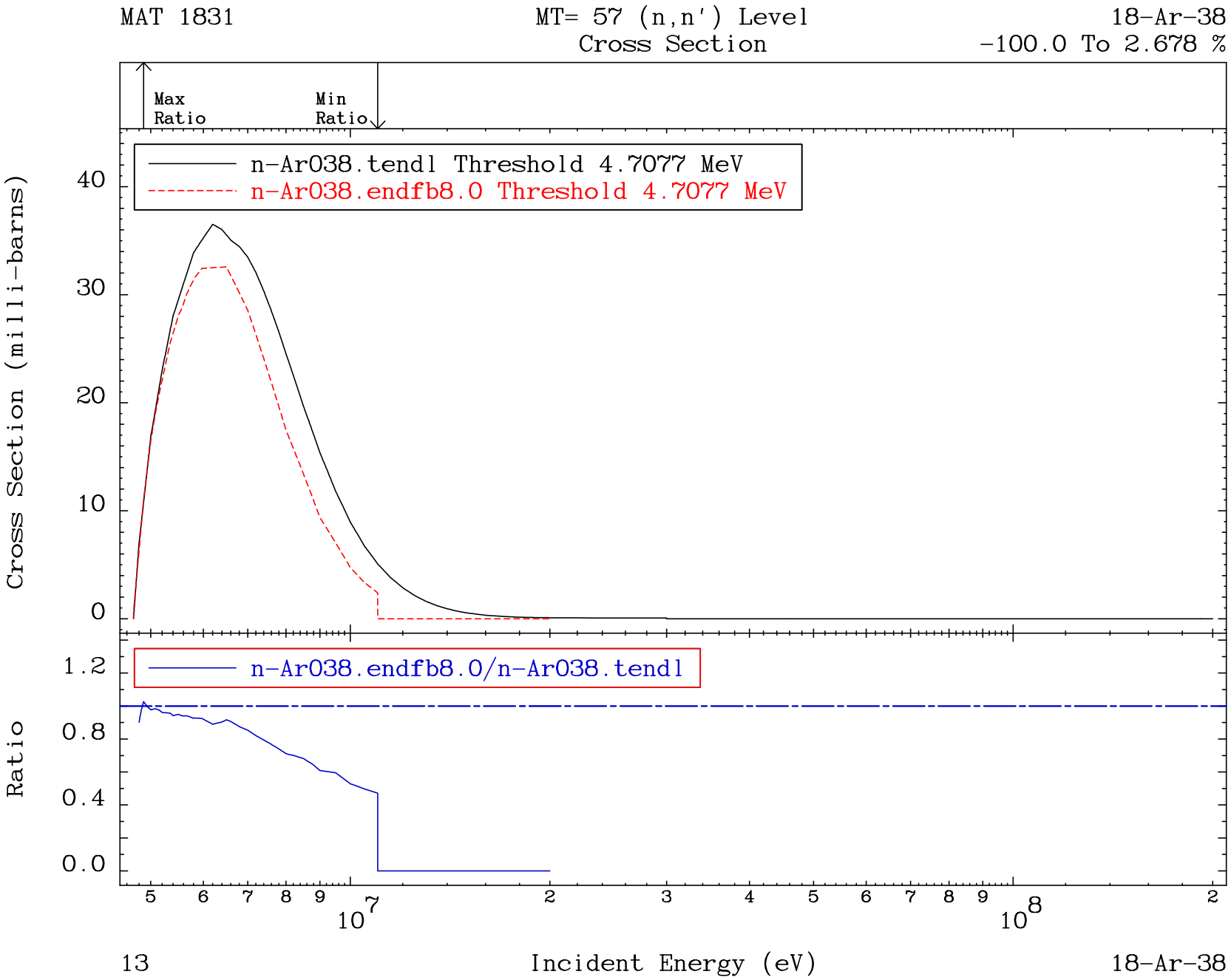

MAT 1831
MT= 52 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 4.732 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 3.4676 MeV
n-Ar038.endfb8.0 Threshold 3.4676 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
8
Incident Energy (eV)
18-Ar-38

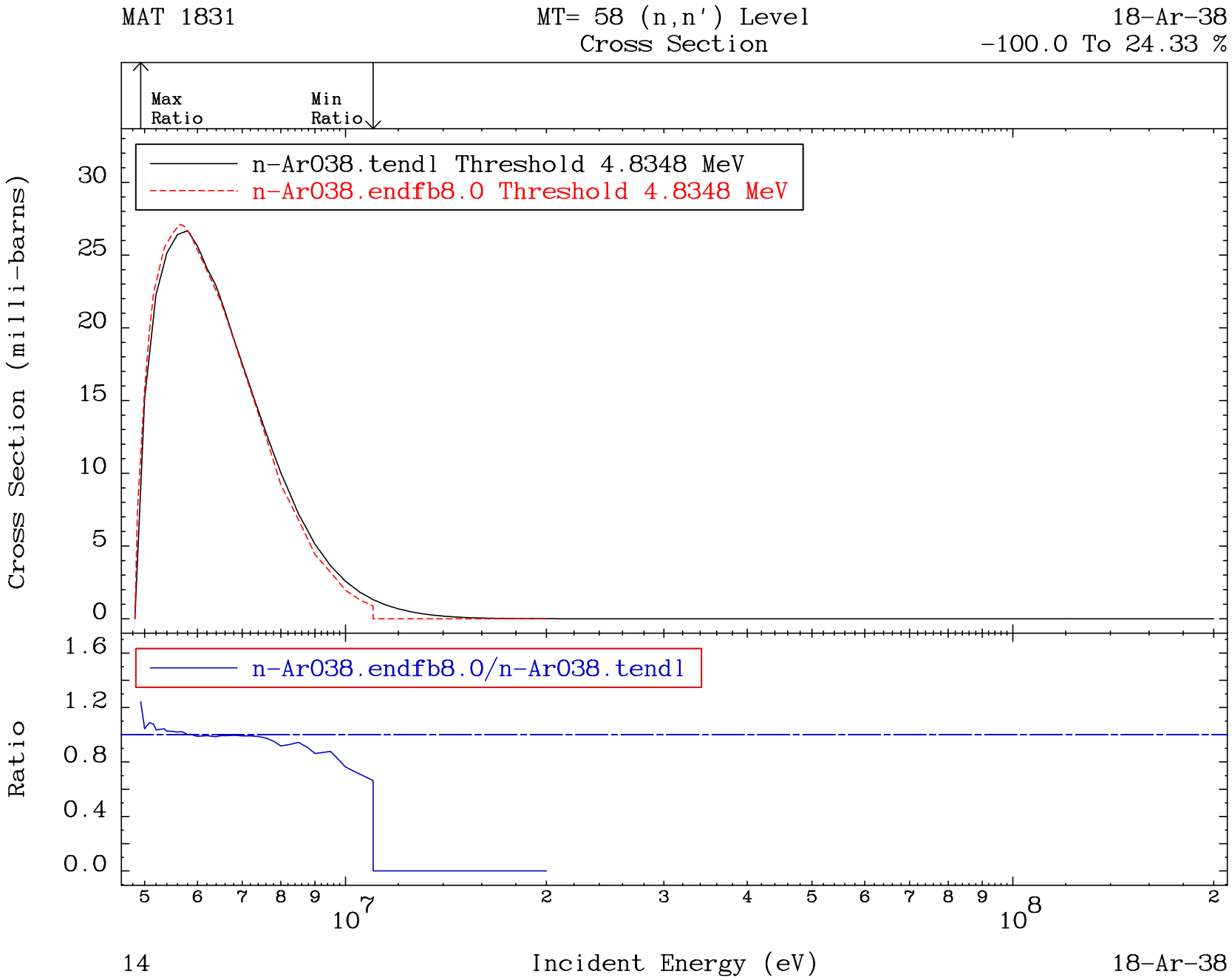

MAT 1831
MT= 53 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 67.06 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 3.9114 MeV
n-Ar038.endfb8.0 Threshold 3.9114 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
2.0
1.0
0.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
9
Incident Energy (eV)
18-Ar-38

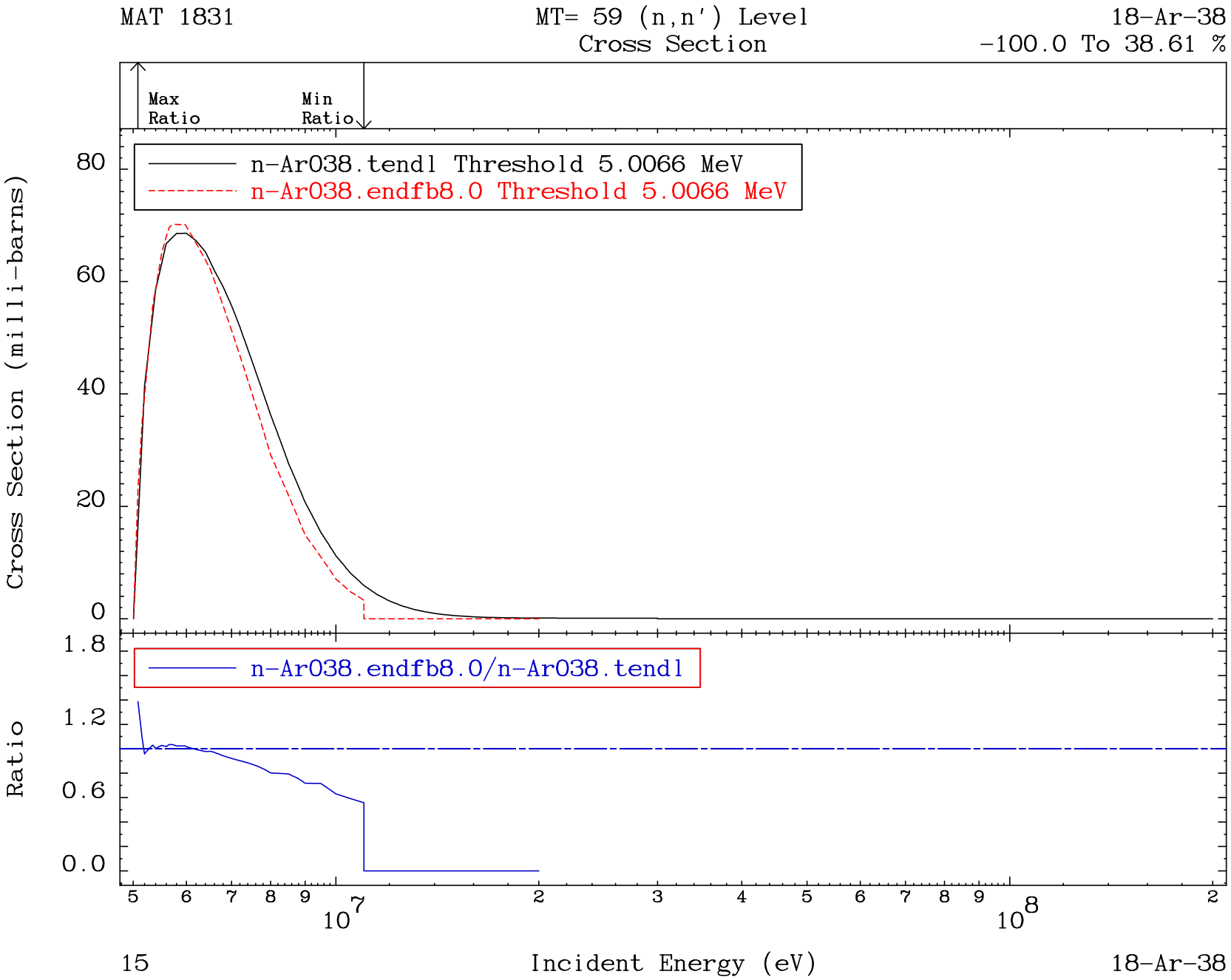

MAT 1831
MT= 54 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 4.510 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.0410 MeV
n-Ar038.endfb8.0 Threshold 4.0416 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
10
Incident Energy (eV)
18-Ar-38

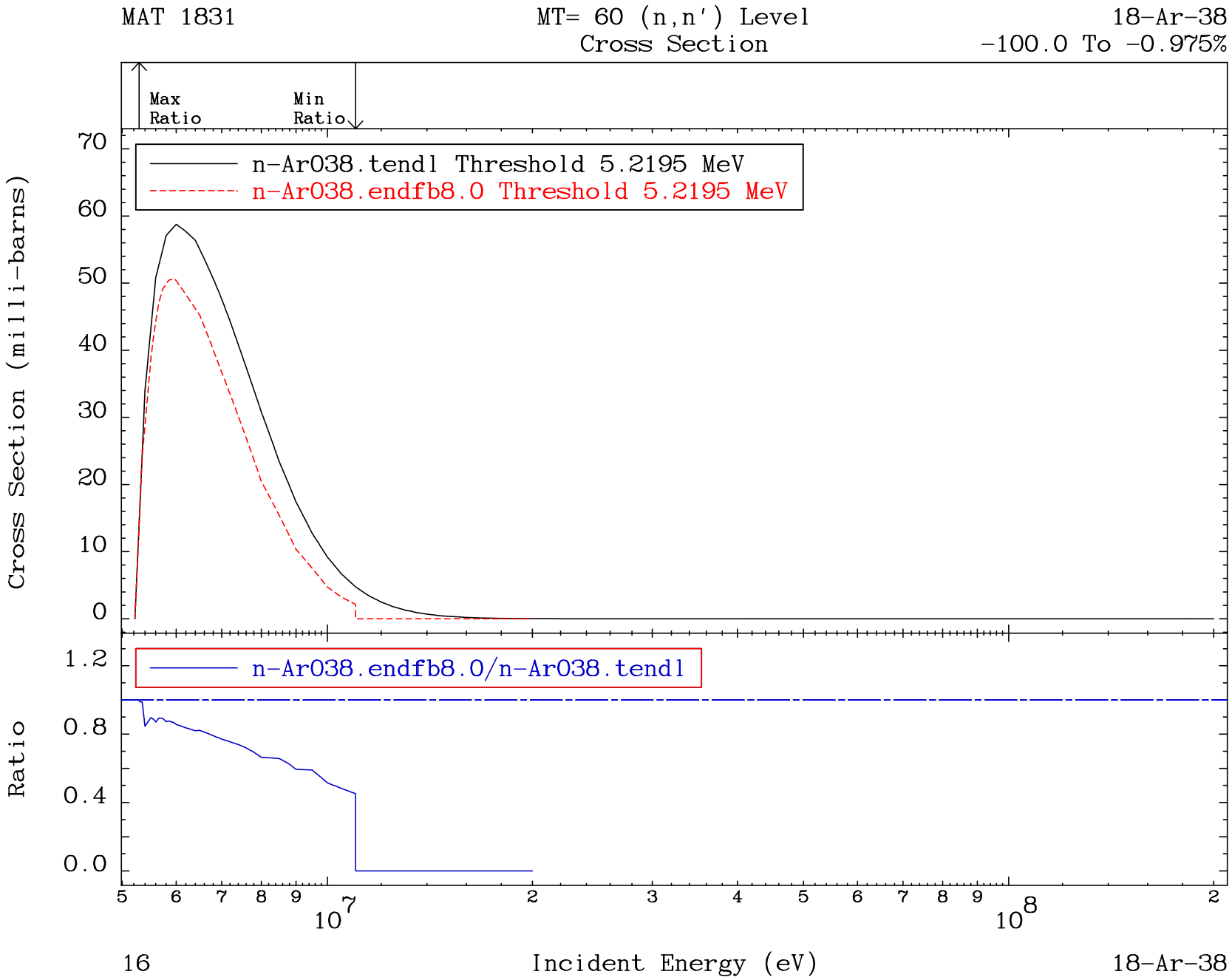

MAT 1831
MT= 55 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 37.01 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.5990 MeV
n-Ar038.endfb8.0 Threshold 4.5990 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.6
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
11
Incident Energy (eV)
18-Ar-38

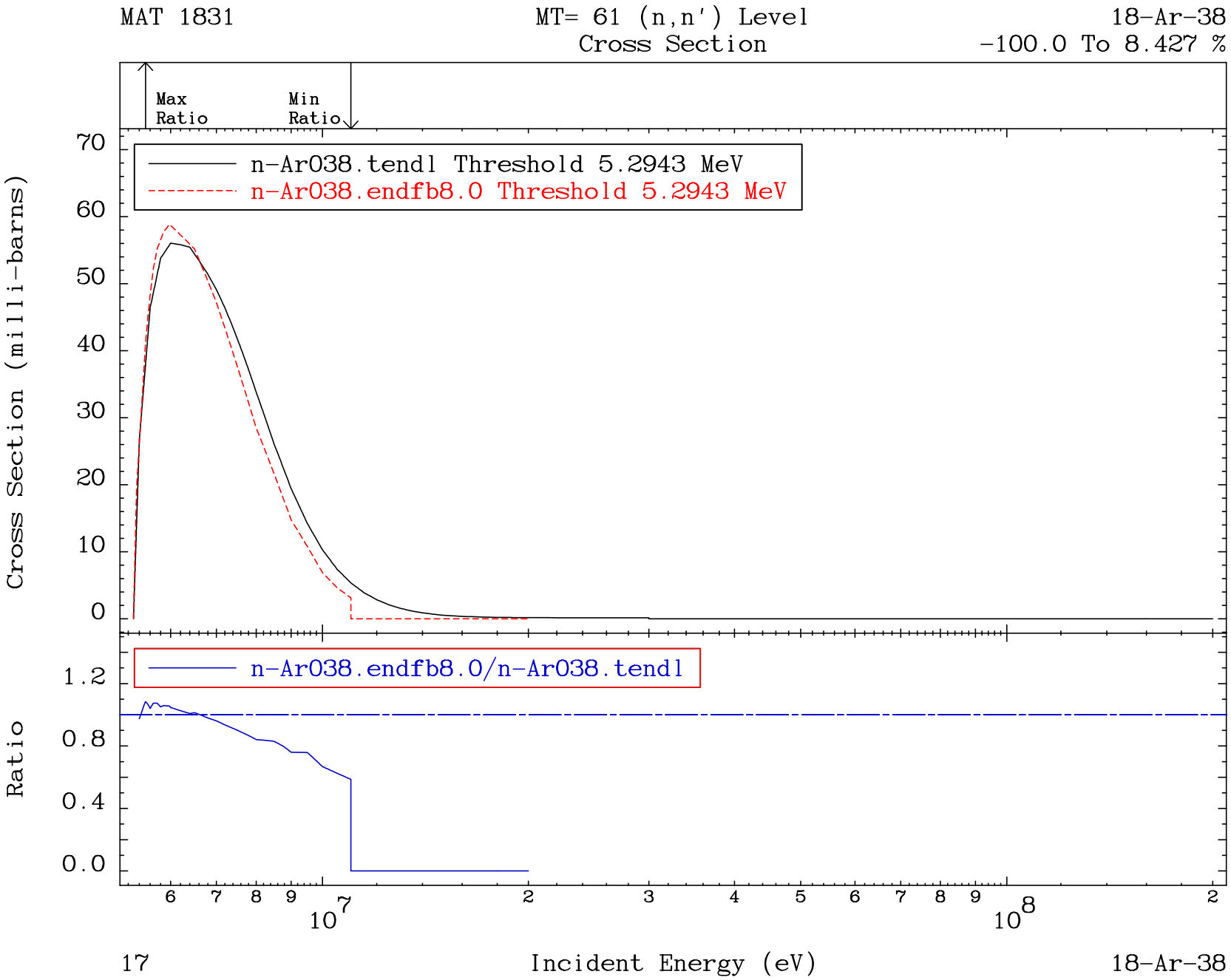

MAT 1831
MT= 56 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 113.7 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.6867 MeV
n-Ar038.endfb8.0 Threshold 4.6867 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
2.0
1.0
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
12
Incident Energy (eV)
18-Ar-38

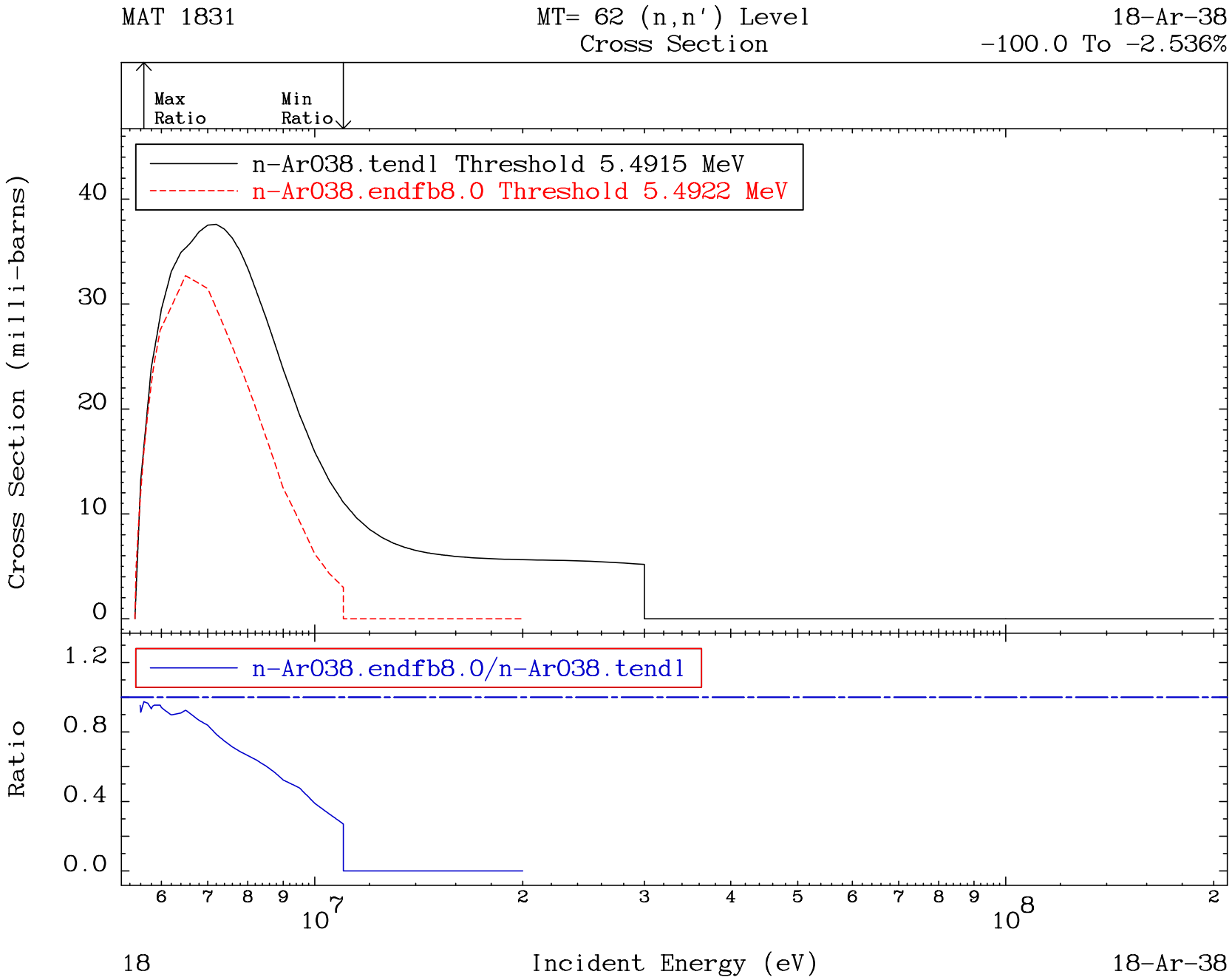

MAT 1831
MT= 57 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 2.678 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.7077 MeV
n-Ar038.endfb8.0 Threshold 4.7077 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
13
Incident Energy (eV)
18-Ar-38

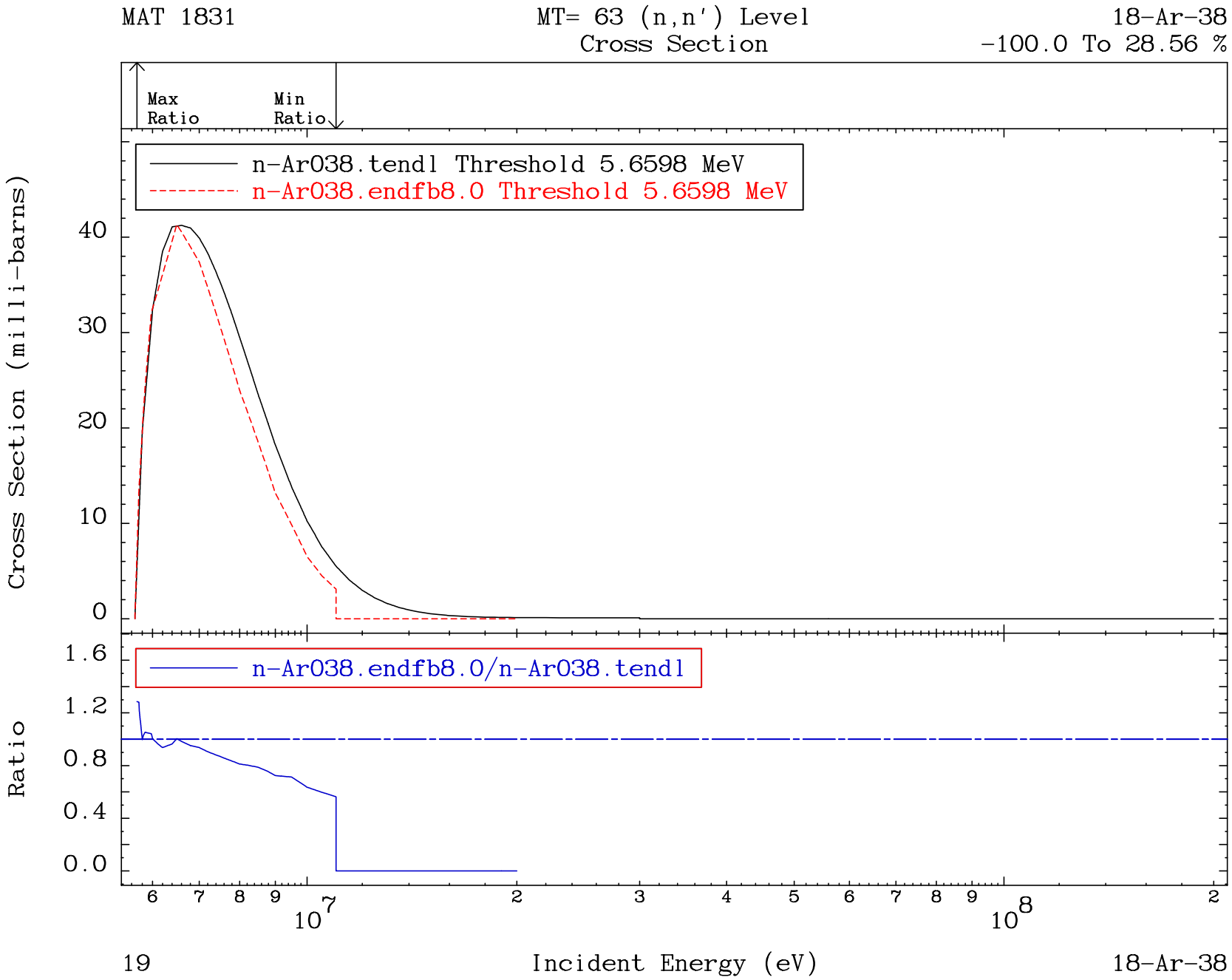

MAT 1831
MT= 58 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 24.33 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.8348 MeV
n-Ar038.endfb8.0 Threshold 4.8348 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.6
1.2
0.8
0.4
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
14
Incident Energy (eV)
18-Ar-38

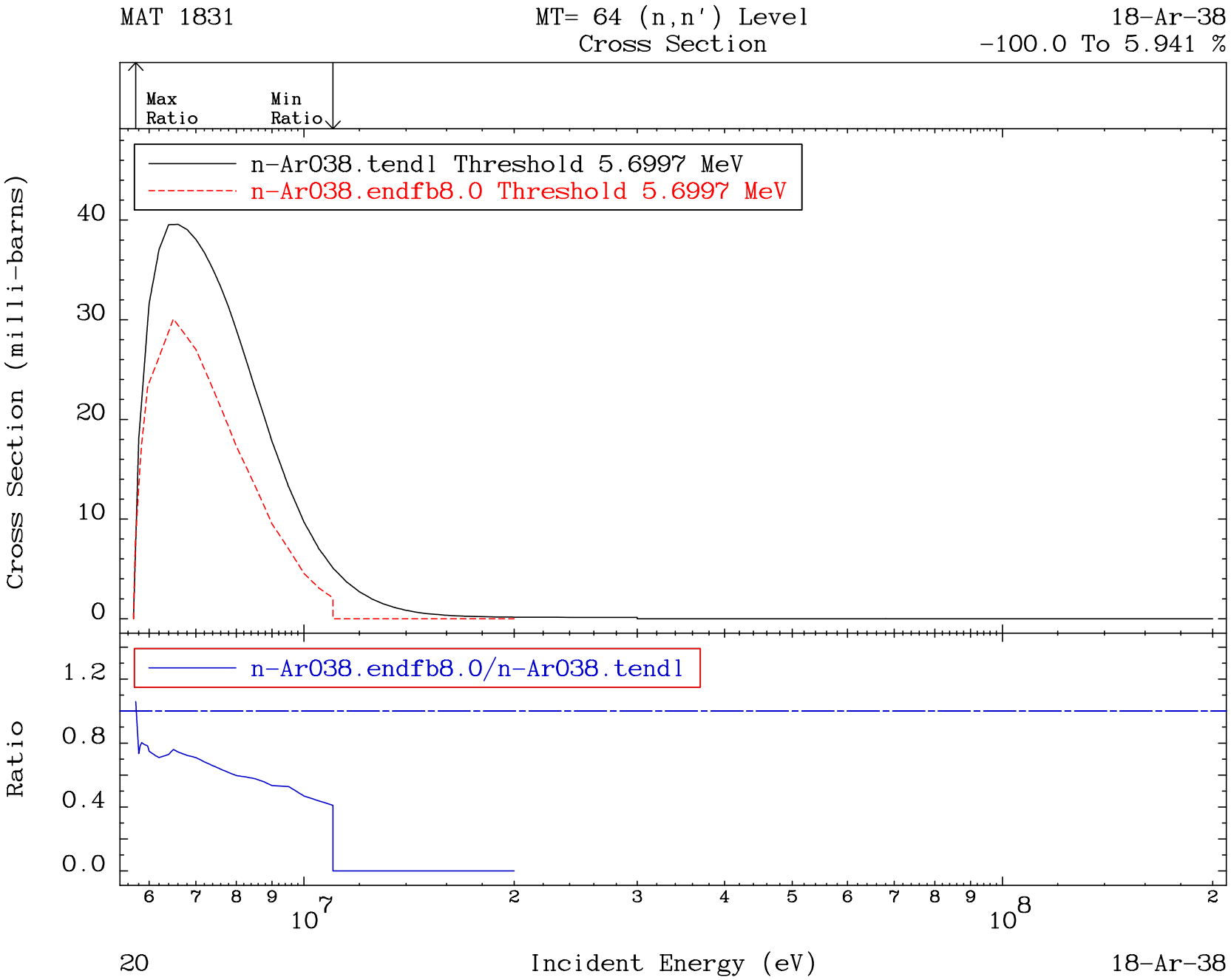

MAT 1831
MT= 59 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 38.61 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.0066 MeV
n-Ar038.endfb8.0 Threshold 5.0066 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.8
1.2
0.6
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
15
Incident Energy (eV)
18-Ar-38

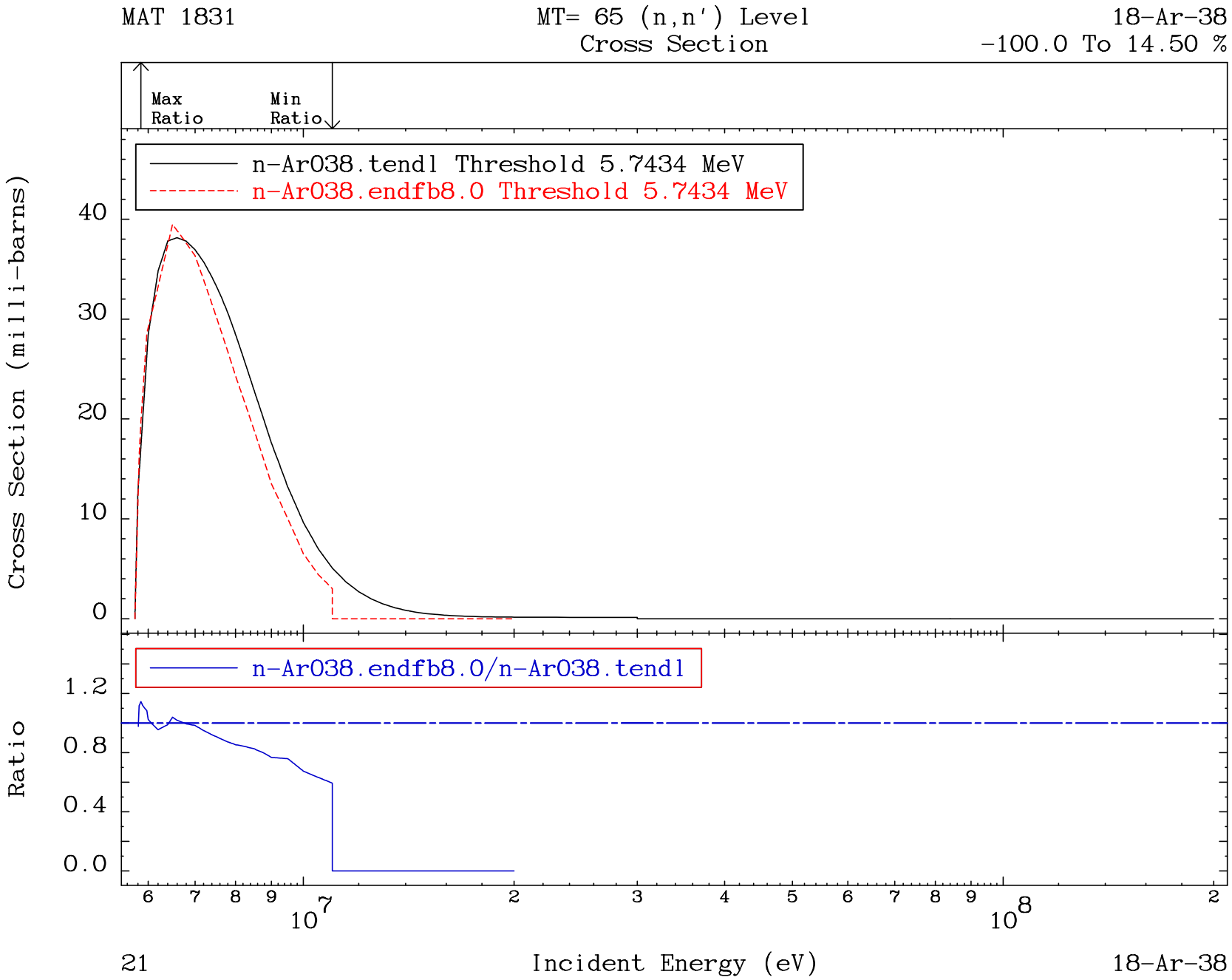

MAT 1831
MT= 60 (n,n') Level
Cross Section
18-Ar-38
-100.0 To -0.975%
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.2195 MeV
n-Ar038.endfb8.0 Threshold 5.2195 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
16
Incident Energy (eV)
18-Ar-38

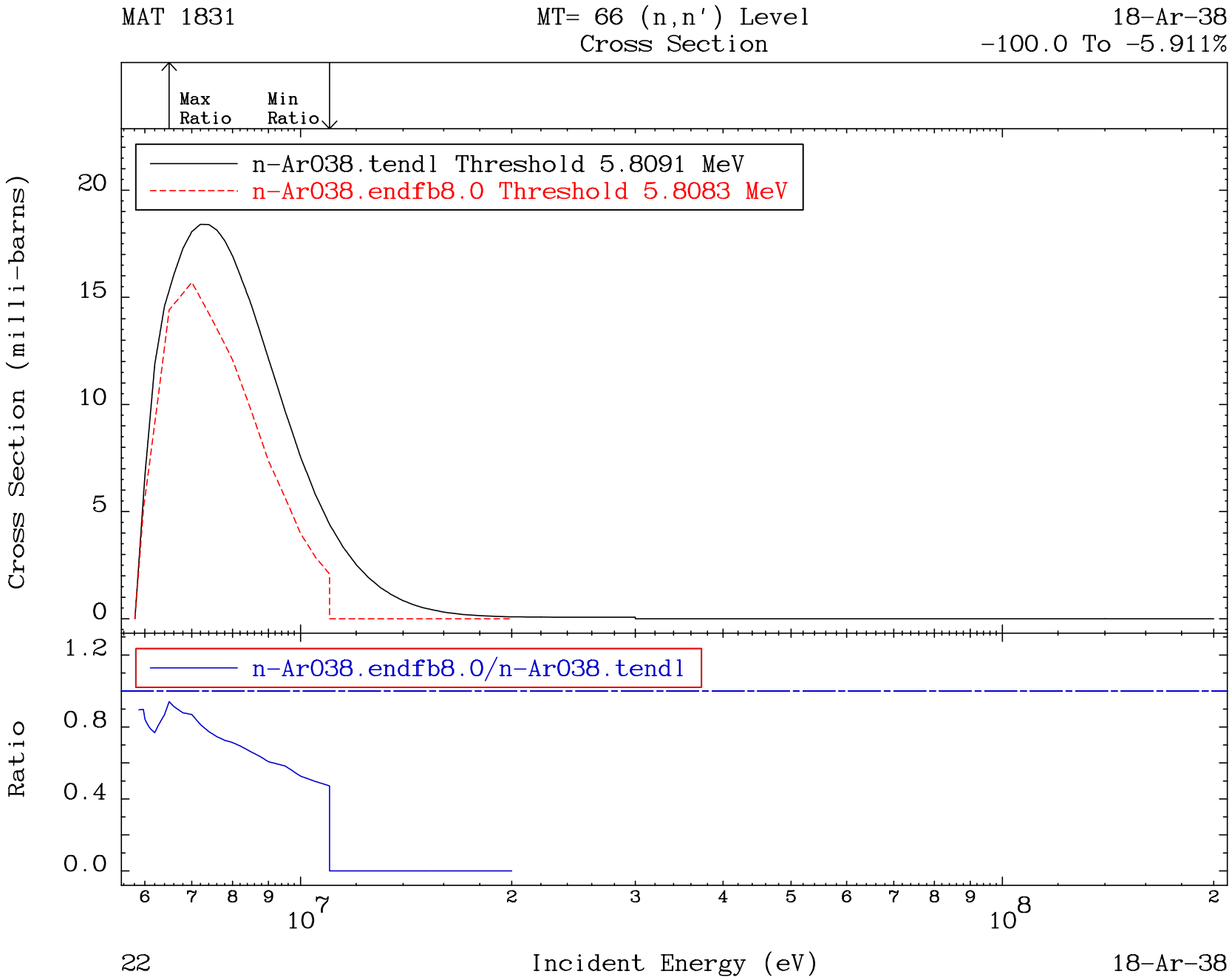

MAT 1831
MT= 61 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 8.427 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.2943 MeV
n-Ar038.endfb8.0 Threshold 5.2943 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
17
Incident Energy (eV)
18-Ar-38

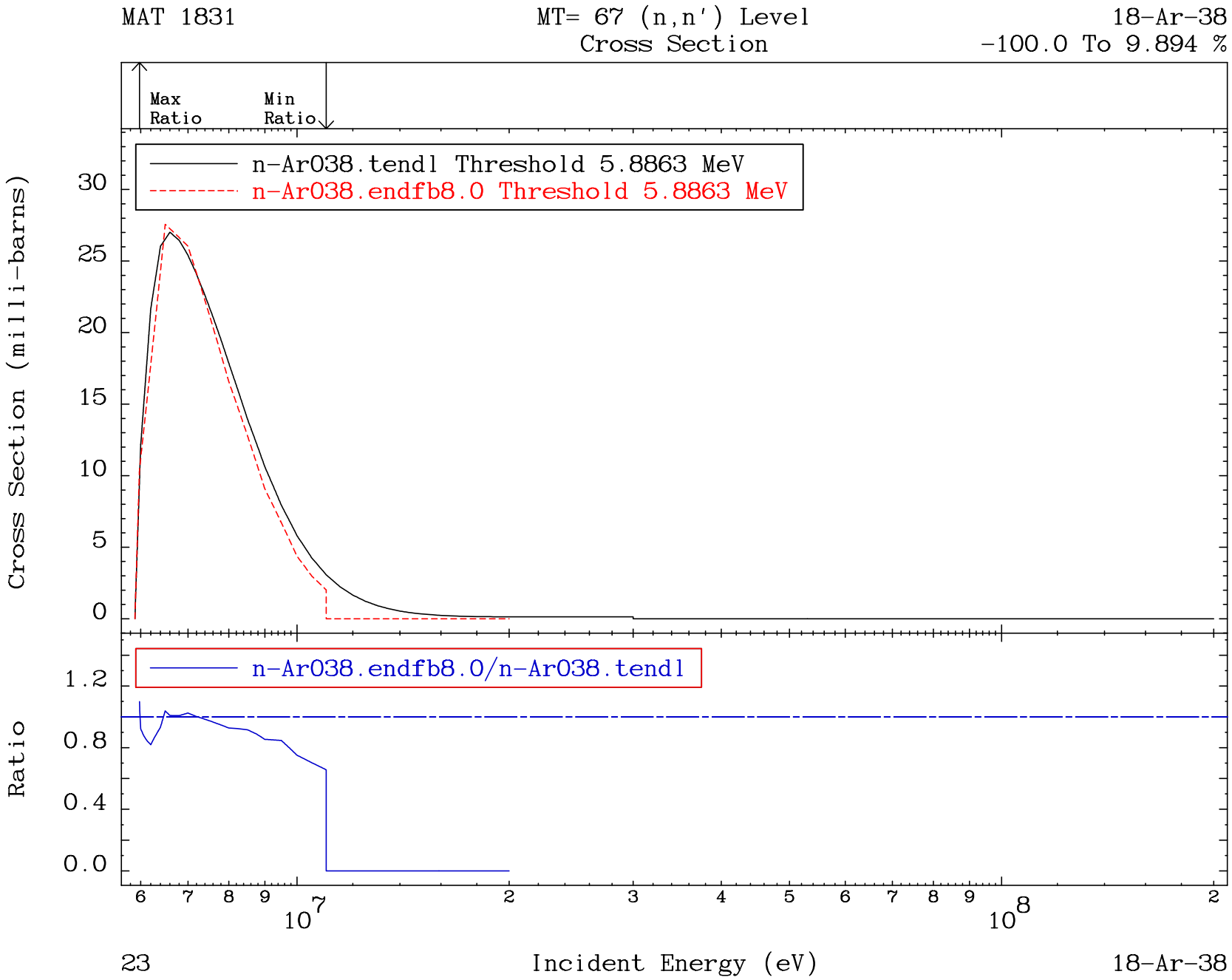

MAT 1831
MT= 62 (n,n') Level
Cross Section
18-Ar-38
-100.0 To -2.536%
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.4915 MeV
n-Ar038.endfb8.0 Threshold 5.4922 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
18
Incident Energy (eV)
18-Ar-38

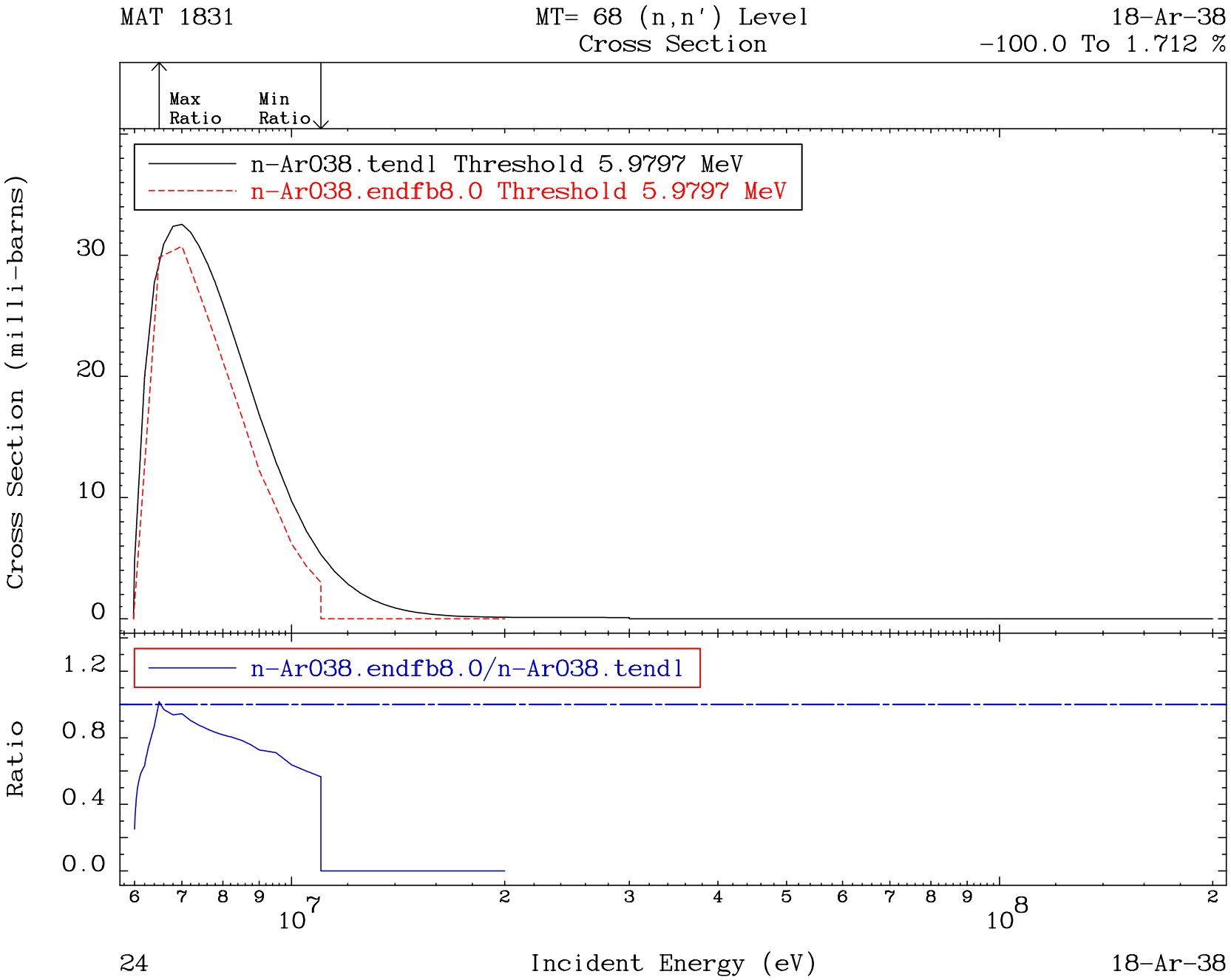

MAT 1831
MT= 63 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 28.56 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.6598 MeV
n-Ar038.endfb8.0 Threshold 5.6598 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.6
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
19
Incident Energy (eV)
18-Ar-38

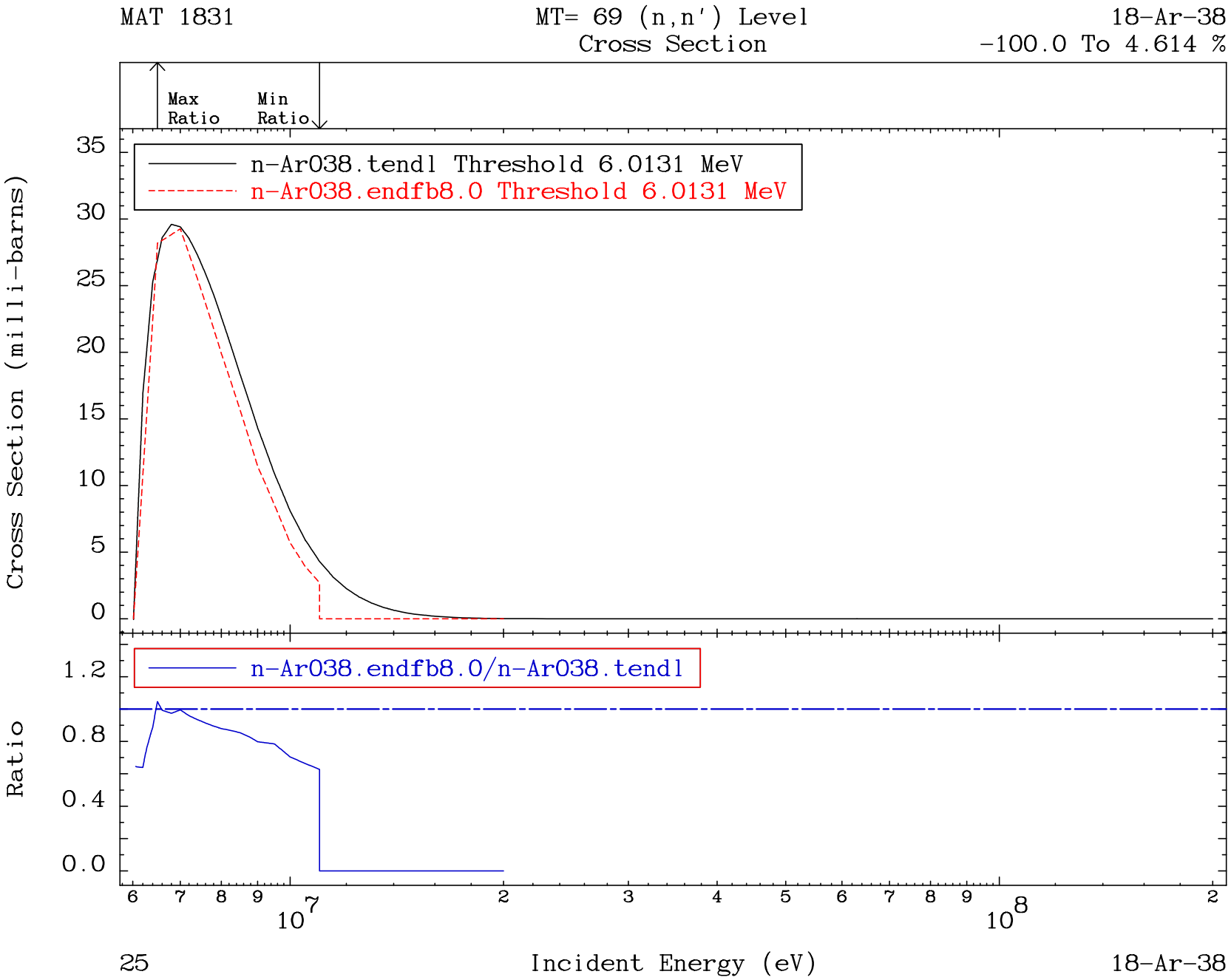

MAT 1831
MT= 64 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 5.941 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.6997 MeV
n-Ar038.endfb8.0 Threshold 5.6997 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
18-Ar-38

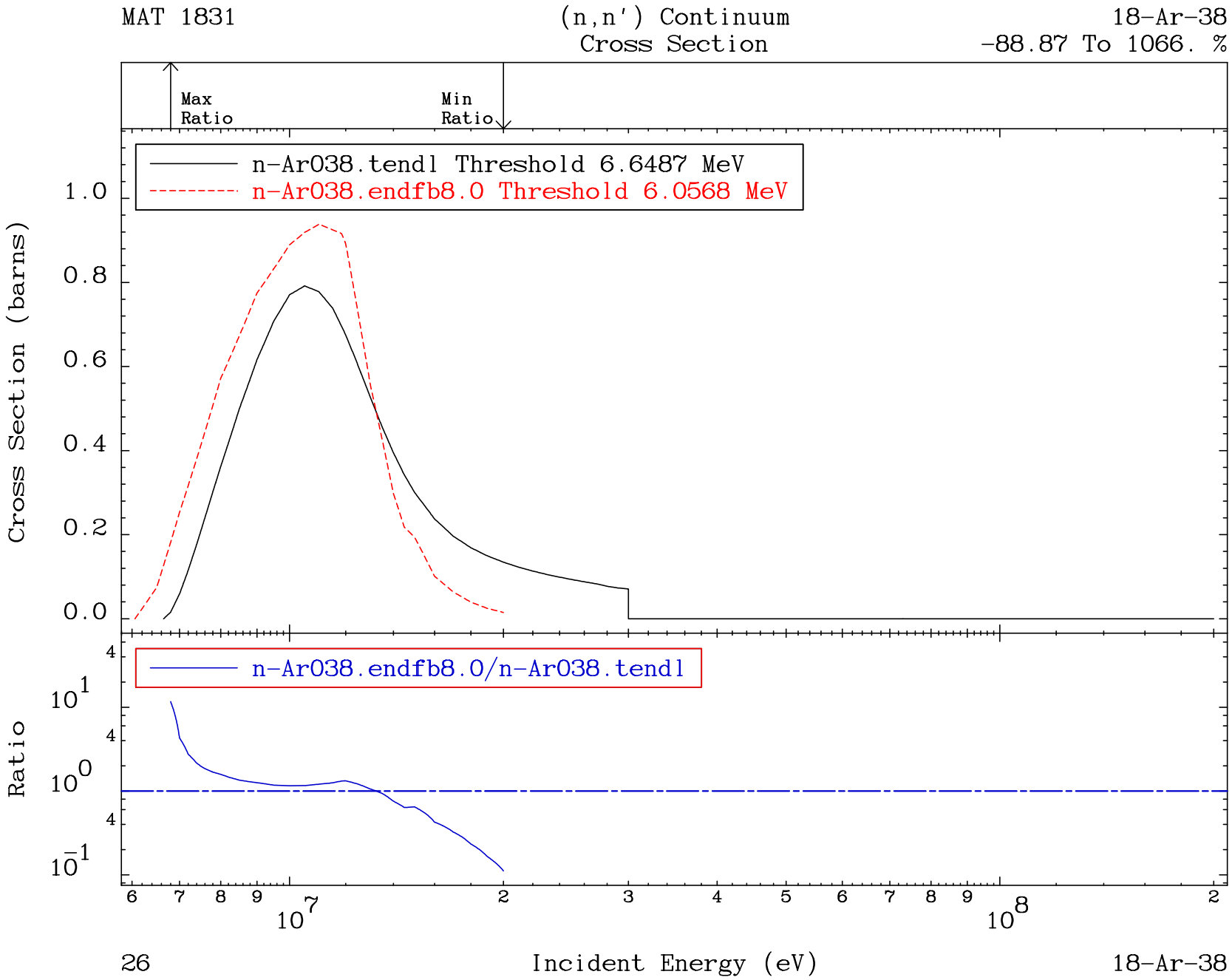

MAT 1831
MT= 65 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 14.50 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.7434 MeV
n-Ar038.endfb8.0 Threshold 5.7434 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
21
Incident Energy (eV)
18-Ar-38

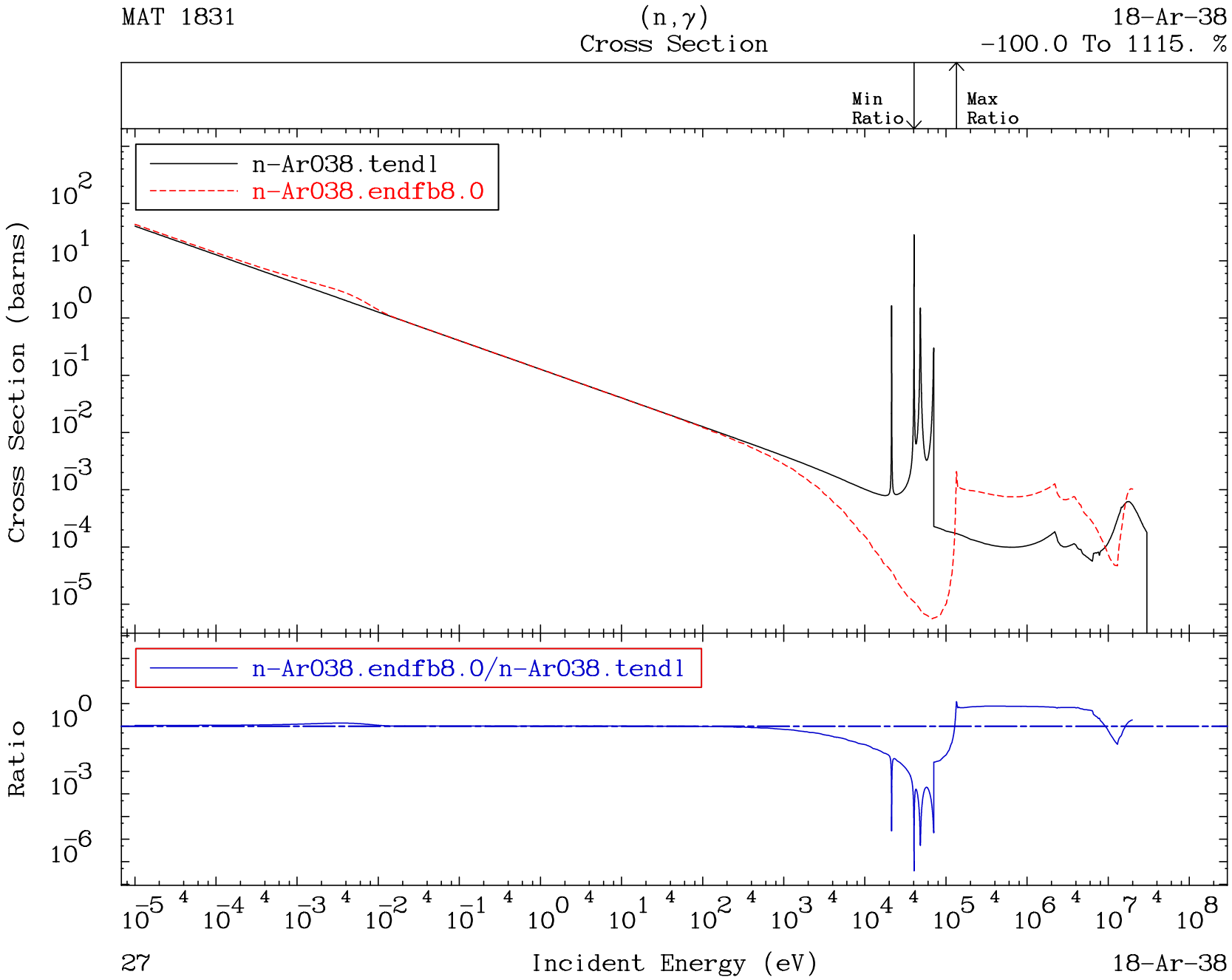

MAT 1831
MT= 66 (n,n') Level
Cross Section
18-Ar-38
-100.0 To -5.911%
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.8091 MeV
n-Ar038.endfb8.0 Threshold 5.8083 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
18-Ar-38

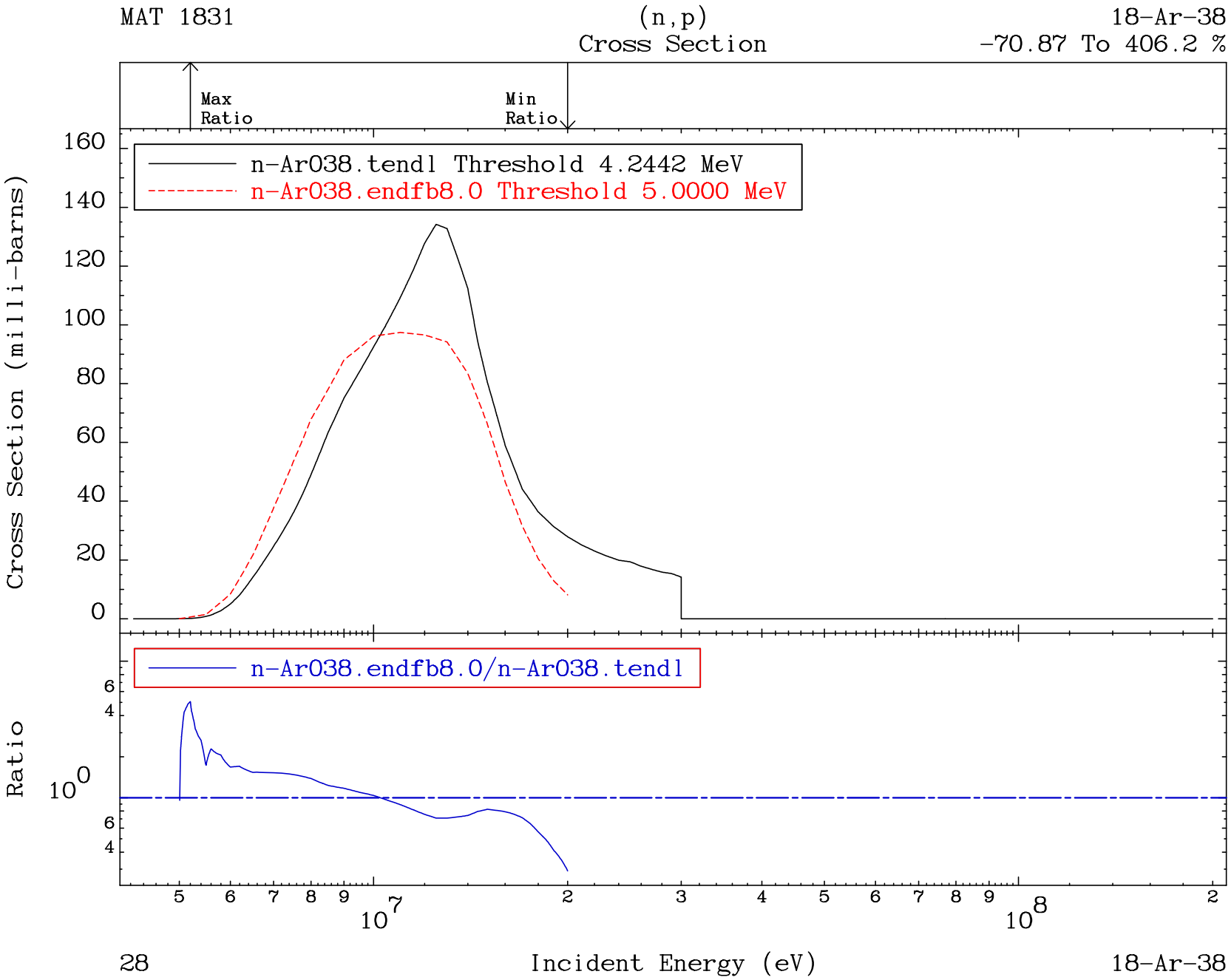

MAT 1831
MT= 67 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 9.894 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.8863 MeV
n-Ar038.endfb8.0 Threshold 5.8863 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
23
Incident Energy (eV)
18-Ar-38

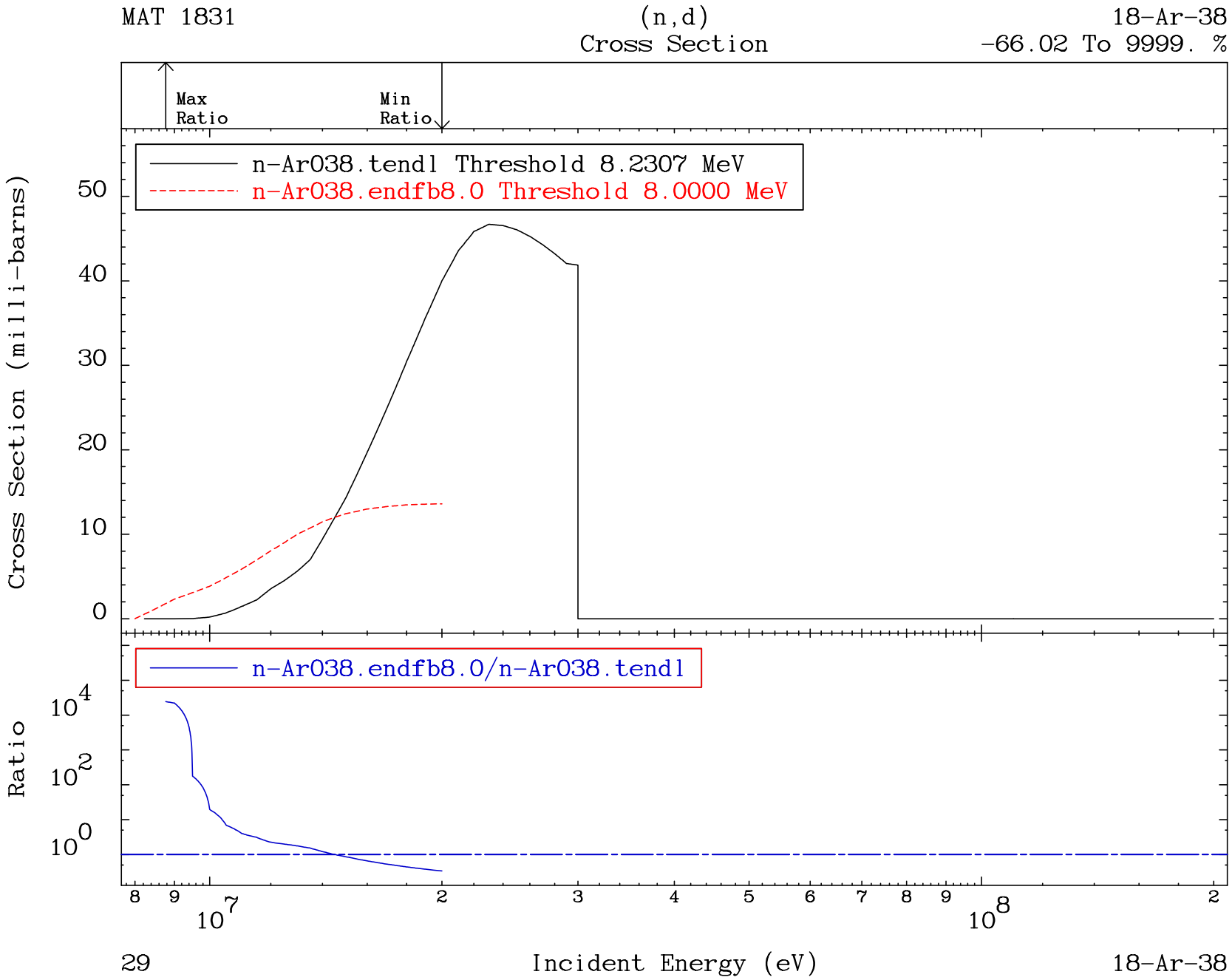

MAT 1831
MT= 68 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 1.712 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 5.9797 MeV
n-Ar038.endfb8.0 Threshold 5.9797 MeV
Cross Section (milli-barns)
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
18-Ar-38

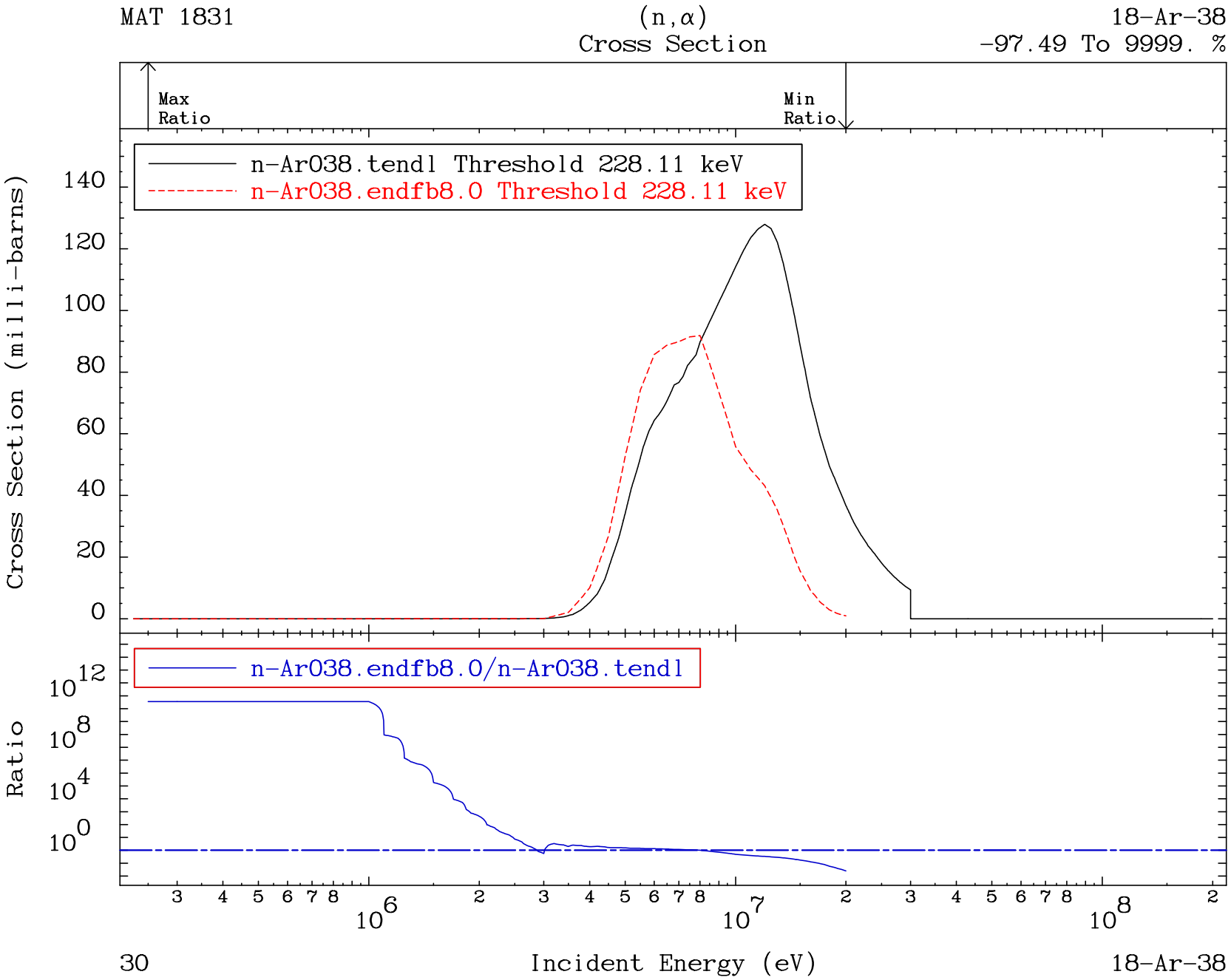

MAT 1831
MT= 69 (n,n') Level
Cross Section
18-Ar-38
-100.0 To 4.614 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 6.0131 MeV
n-Ar038.endfb8.0 Threshold 6.0131 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
0.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
18-Ar-38

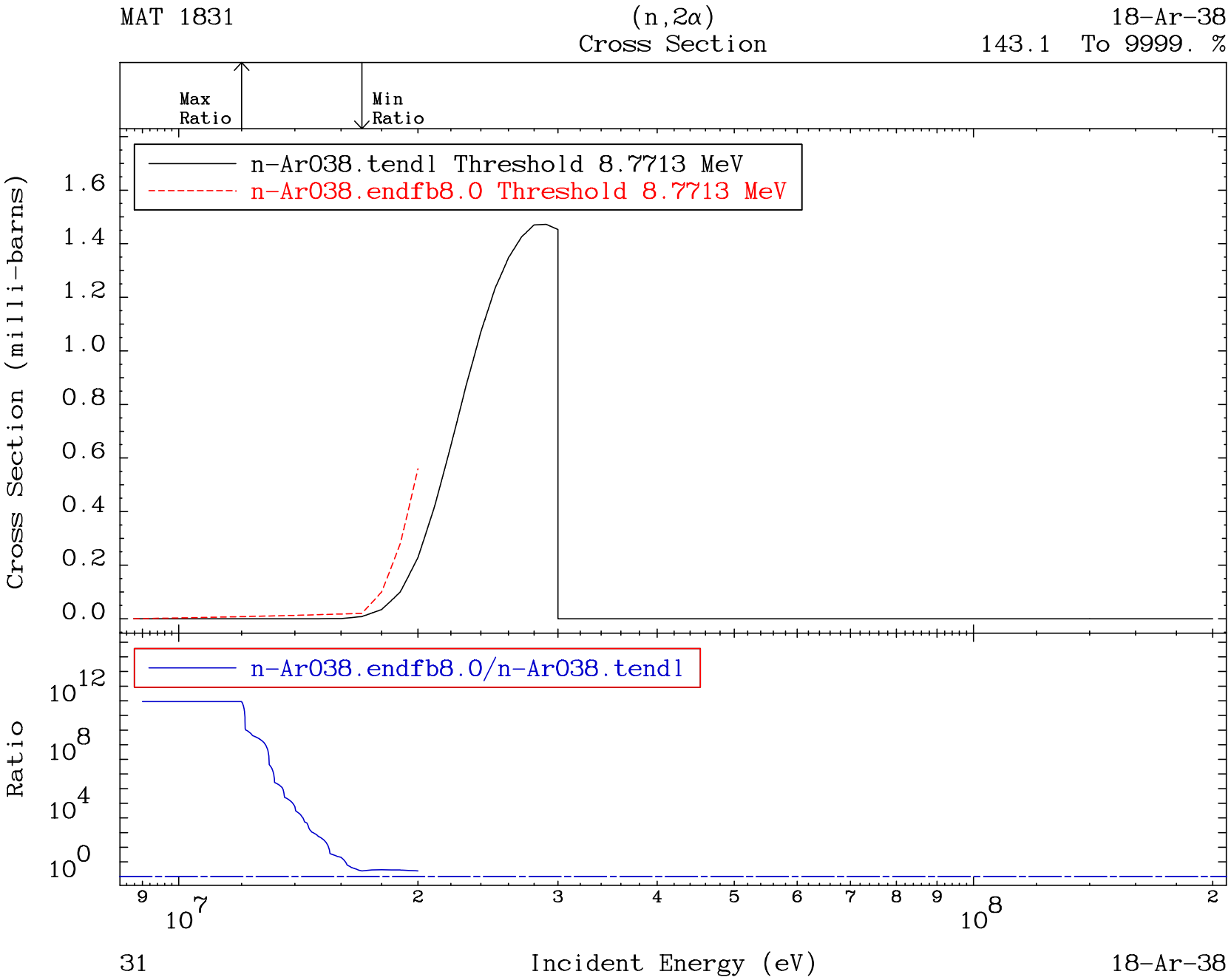

MAT 1831
(n,n') Continuum
Cross Section
18-Ar-38
-88.87 To 1066. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 6.6487 MeV
n-Ar038.endfb8.0 Threshold 6.0568 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^1
10^0
10^-1
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
18-Ar-38

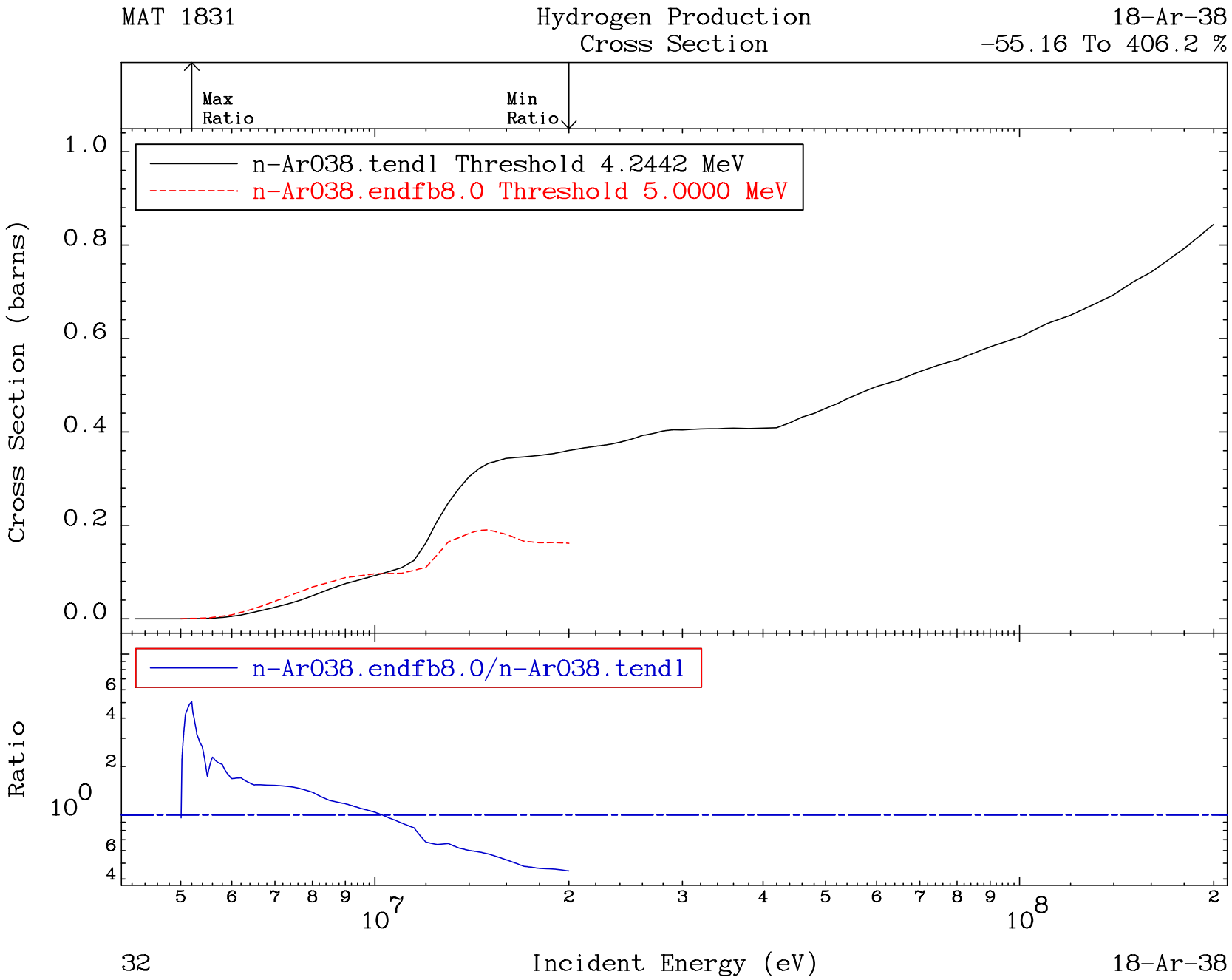

MAT 1831
(n,γ)
Cross Section
18-Ar-38
-100.0 To 1115. %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
27
18-Ar-38

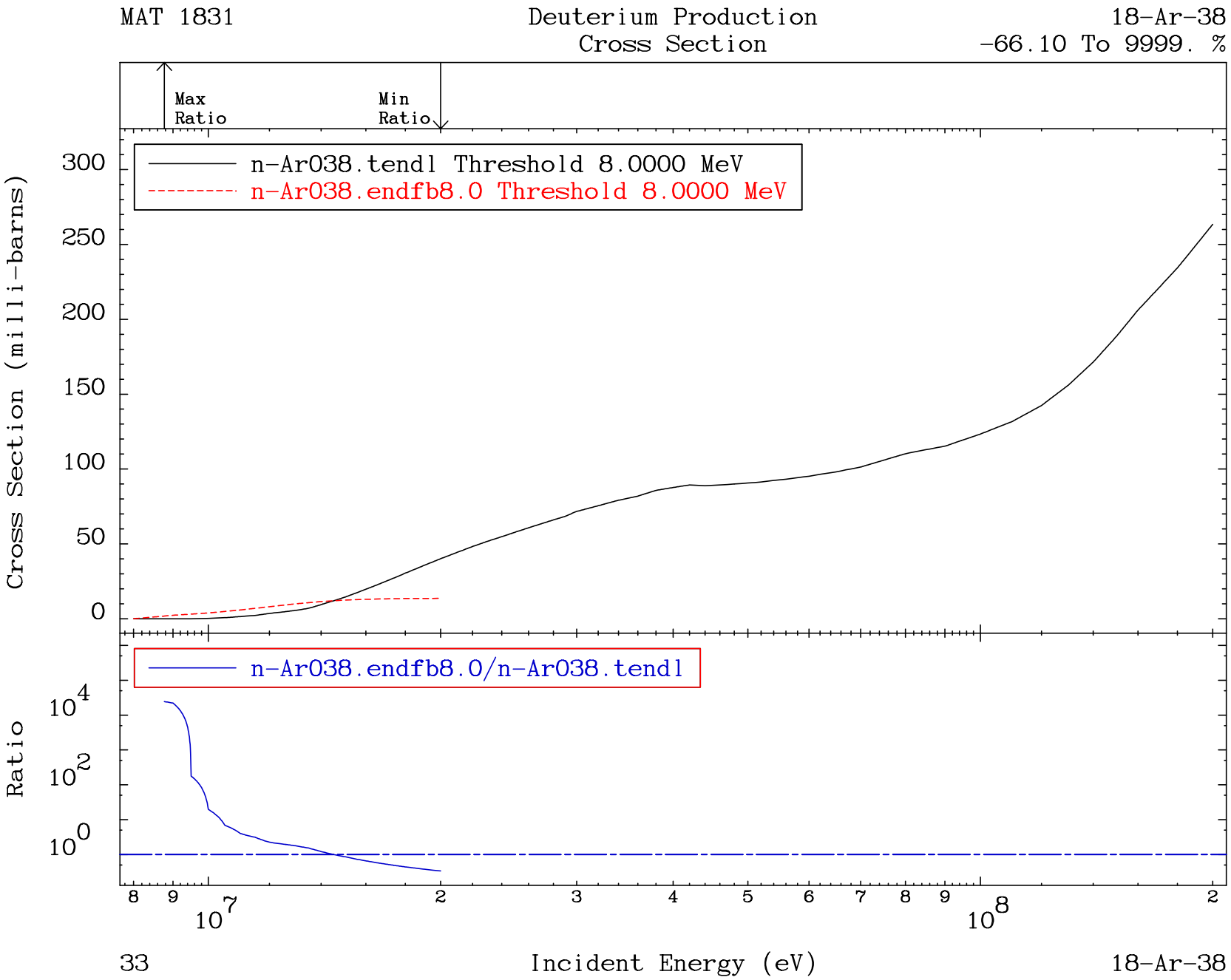

MAT 1831
(n,p)
Cross Section
18-Ar-38
-70.87 To 406.2 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.2442 MeV
n-Ar038.endfb8.0 Threshold 5.0000 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
6
4
10^0
6
4
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
18-Ar-38

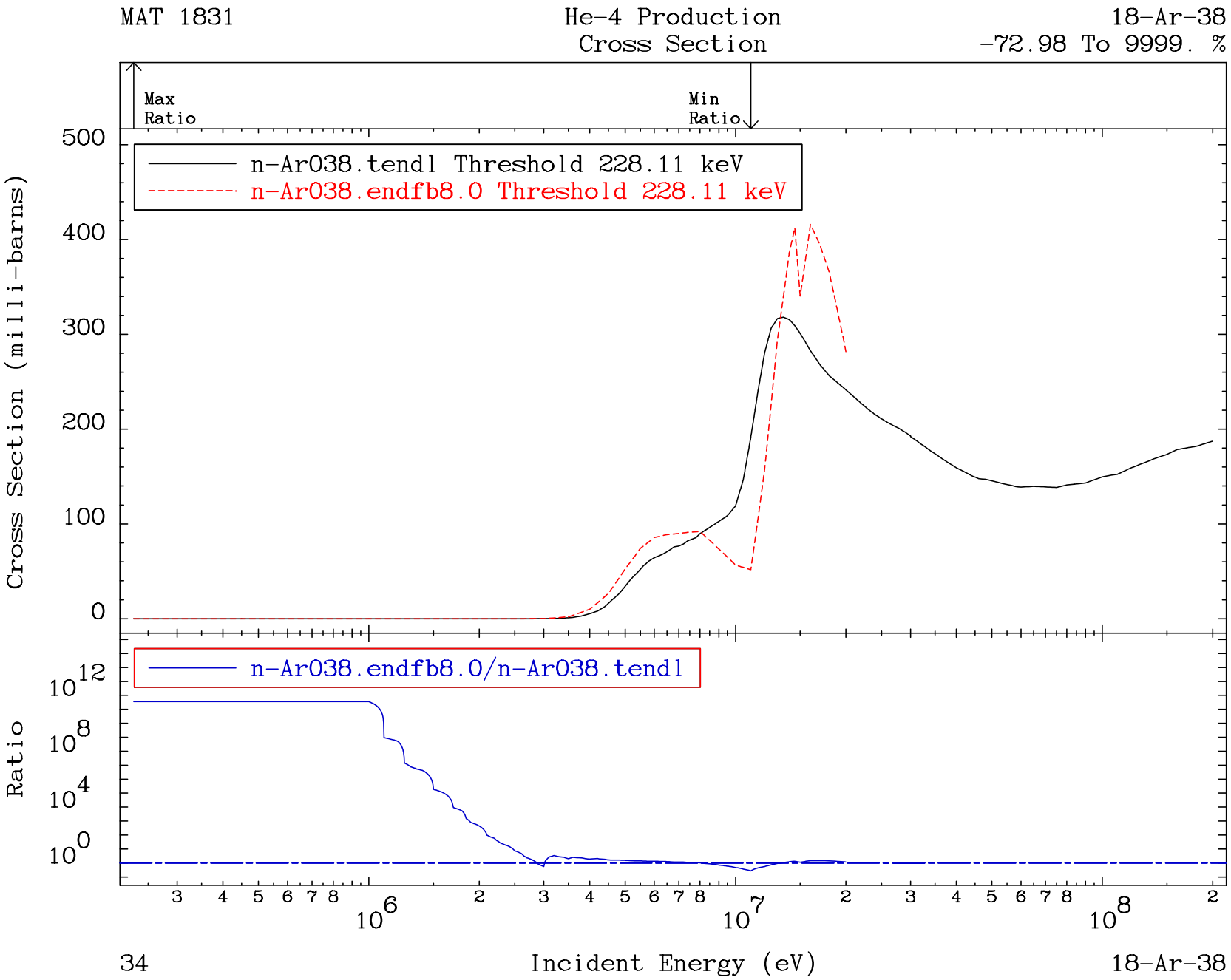

MAT 1831
(n,d)
Cross Section
18-Ar-38
-66.02 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 8.2307 MeV
n-Ar038.endfb8.0 Threshold 8.0000 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^4
10^2
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
18-Ar-38

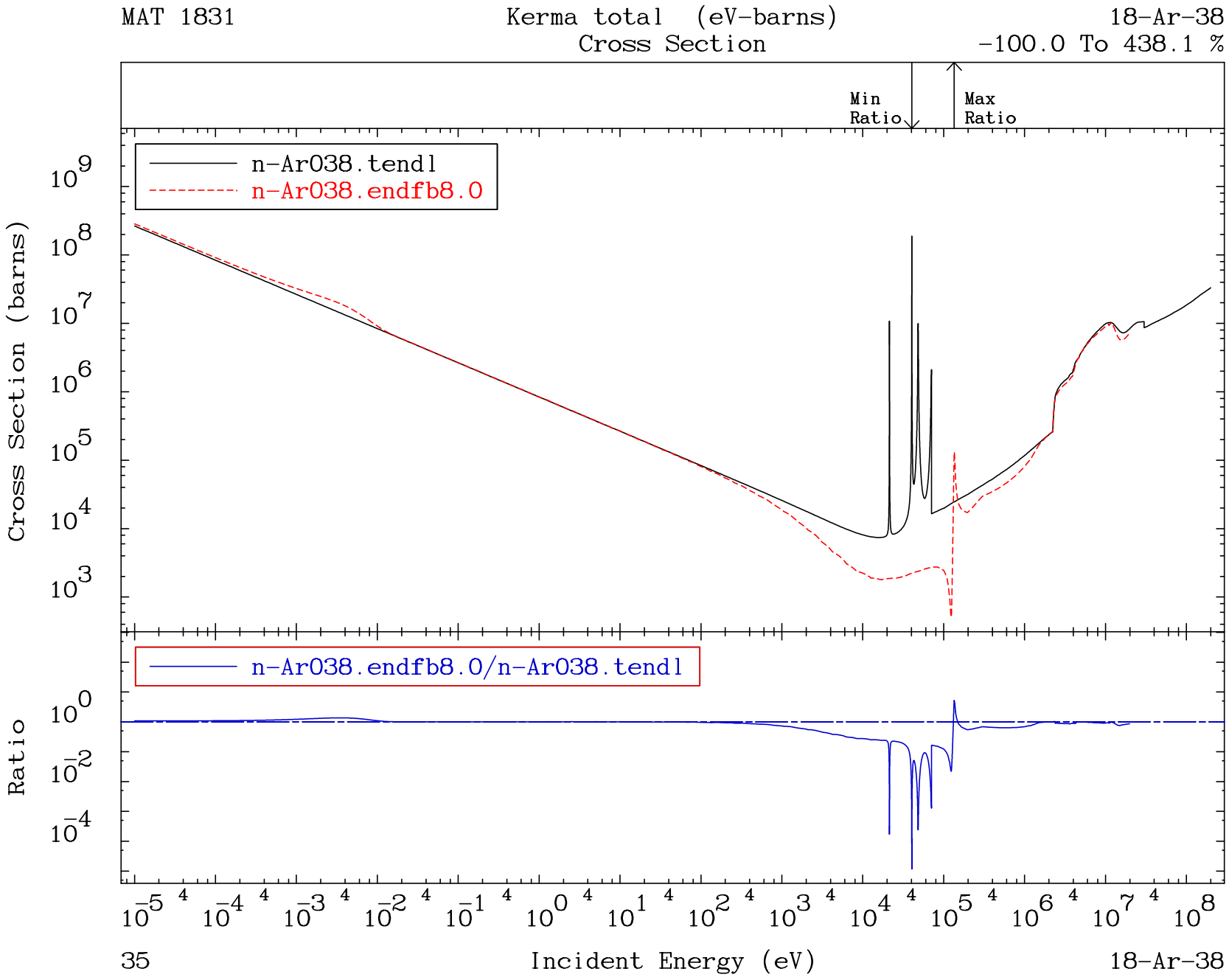

MAT 1831
(n,α)
Cross Section
18-Ar-38
-97.49 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 228.11 keV
n-Ar038.endfb8.0 Threshold 228.11 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^12
10^8
10^4
10^0
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
18-Ar-38

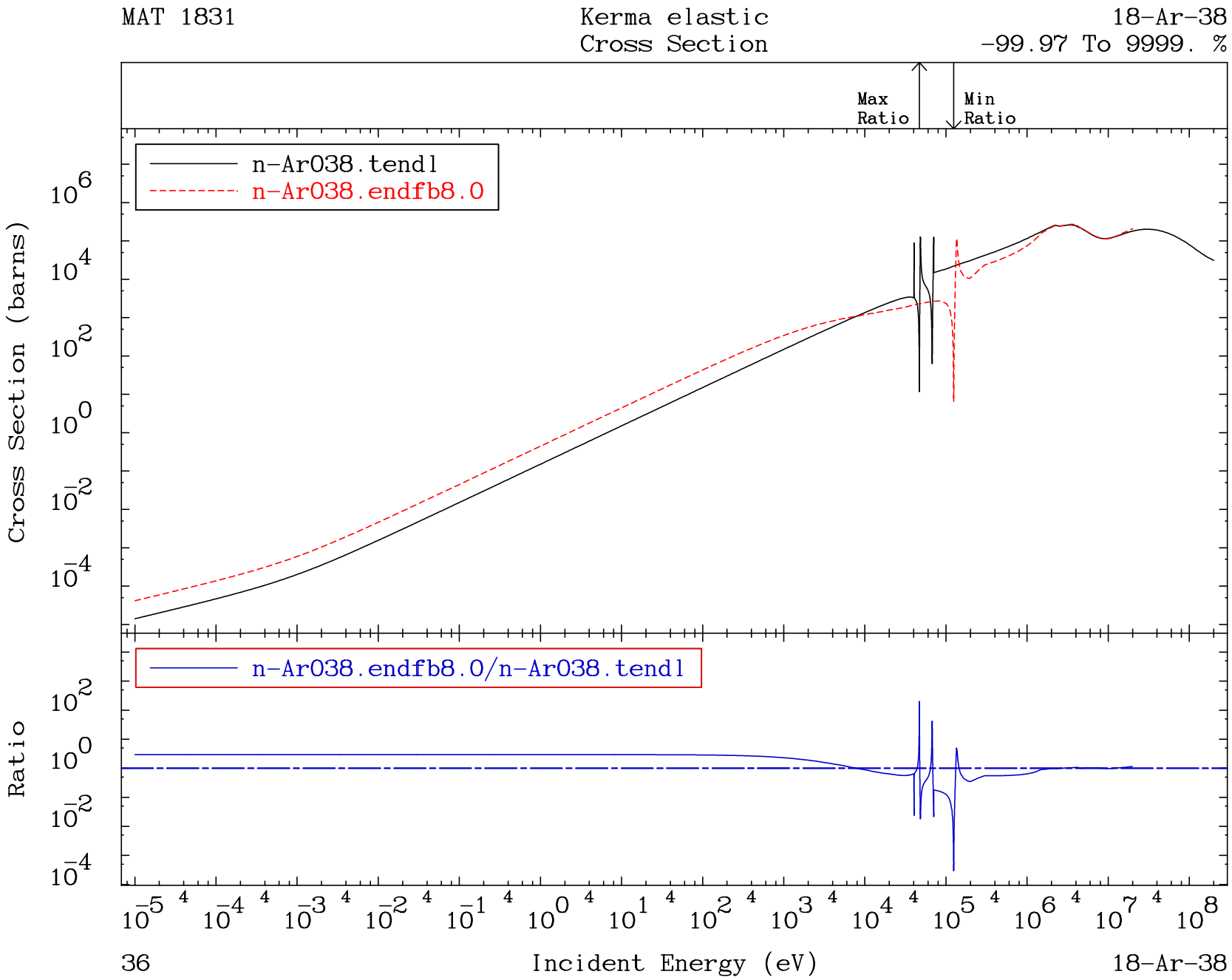

MAT 1831
(n,2α)
Cross Section
18-Ar-38
143.1 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 8.7713 MeV
n-Ar038.endfb8.0 Threshold 8.7713 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^12
10^8
10^4
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
31
Incident Energy (eV)
18-Ar-38

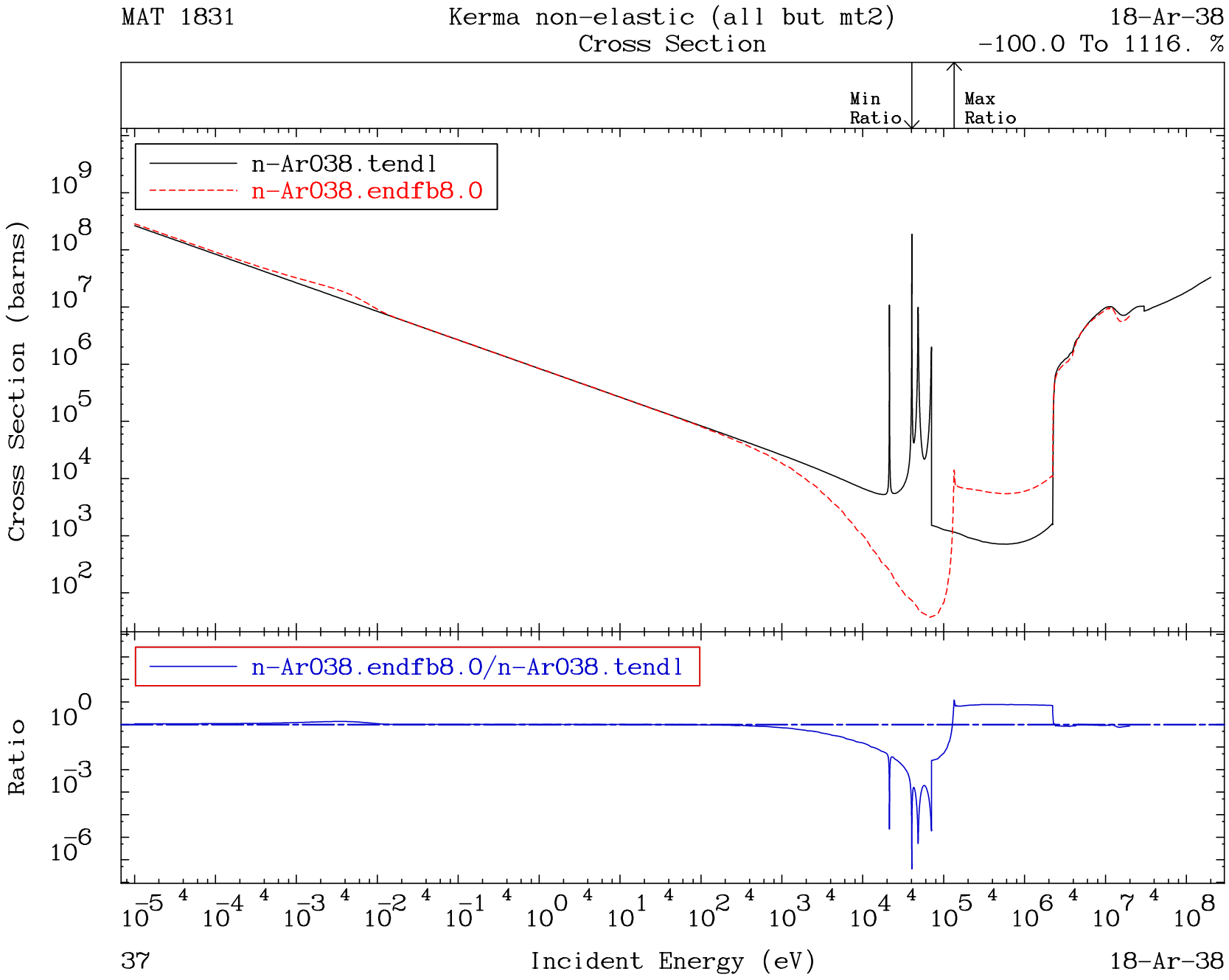

MAT 1831
Hydrogen Production
Cross Section
18-Ar-38
-55.16 To 406.2 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 4.2442 MeV
n-Ar038.endfb8.0 Threshold 5.0000 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^0
6
4
2
6
4
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
32
Incident Energy (eV)
18-Ar-38

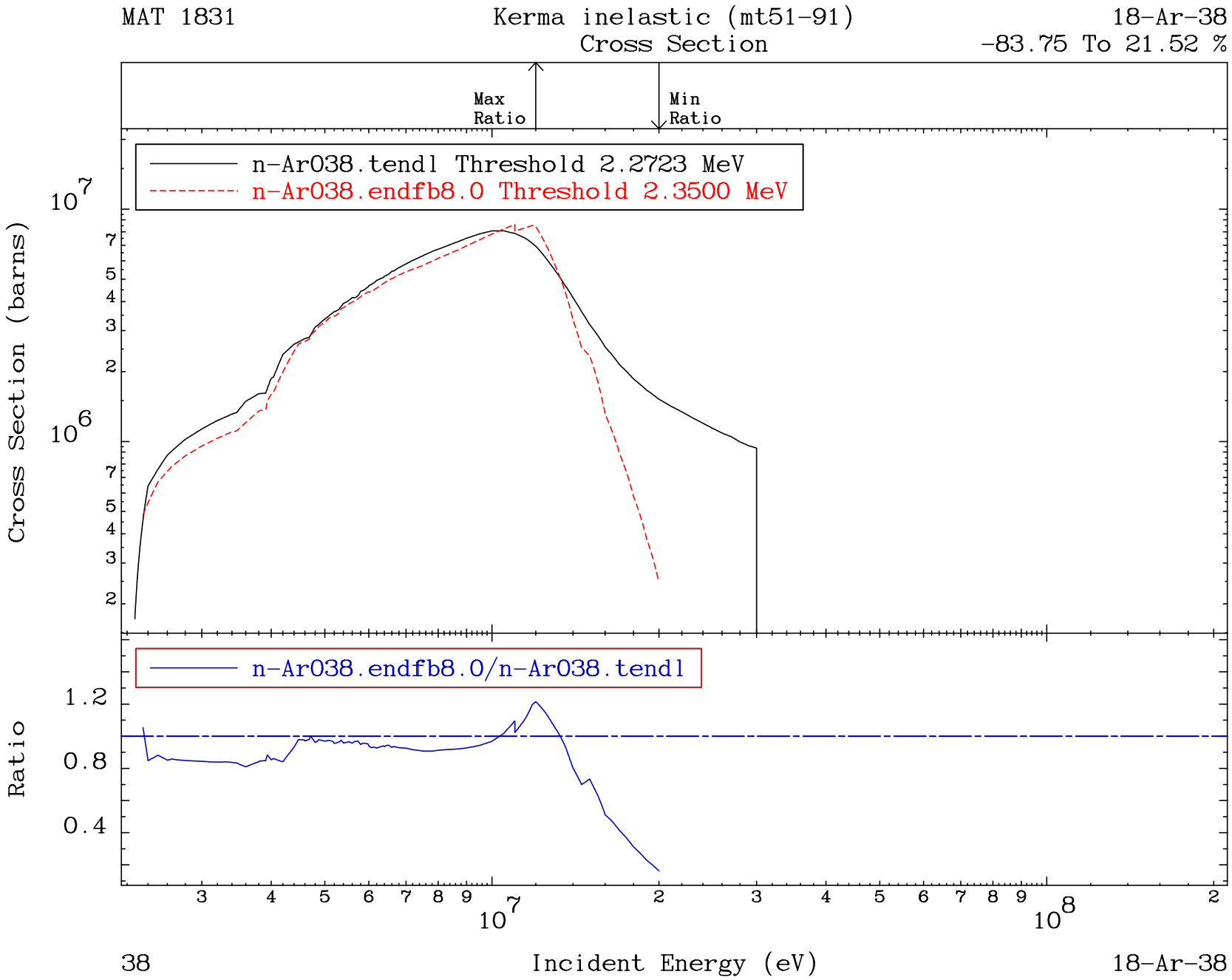

MAT 1831
Deuterium Production
Cross Section
18-Ar-38
-66.10 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 8.0000 MeV
n-Ar038.endfb8.0 Threshold 8.0000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^4
10^2
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
33
Incident Energy (eV)
18-Ar-38

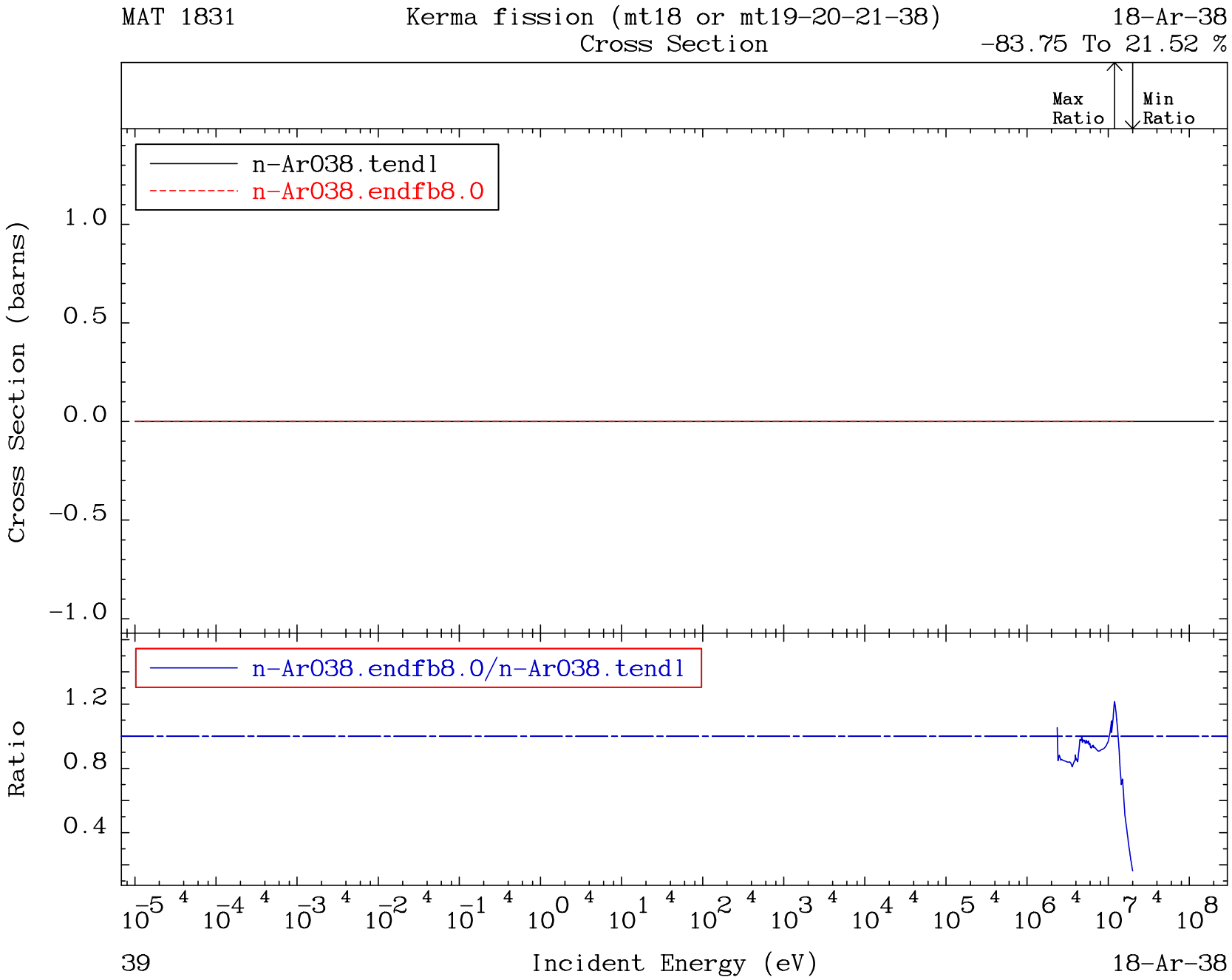

MAT 1831
He-4 Production
Cross Section
18-Ar-38
-72.98 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 228.11 keV
n-Ar038.endfb8.0 Threshold 228.11 keV
Cross Section (milli-barns)
500
400
300
200
100
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^12
10^8
10^4
10^0
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
34
Incident Energy (eV)
18-Ar-38

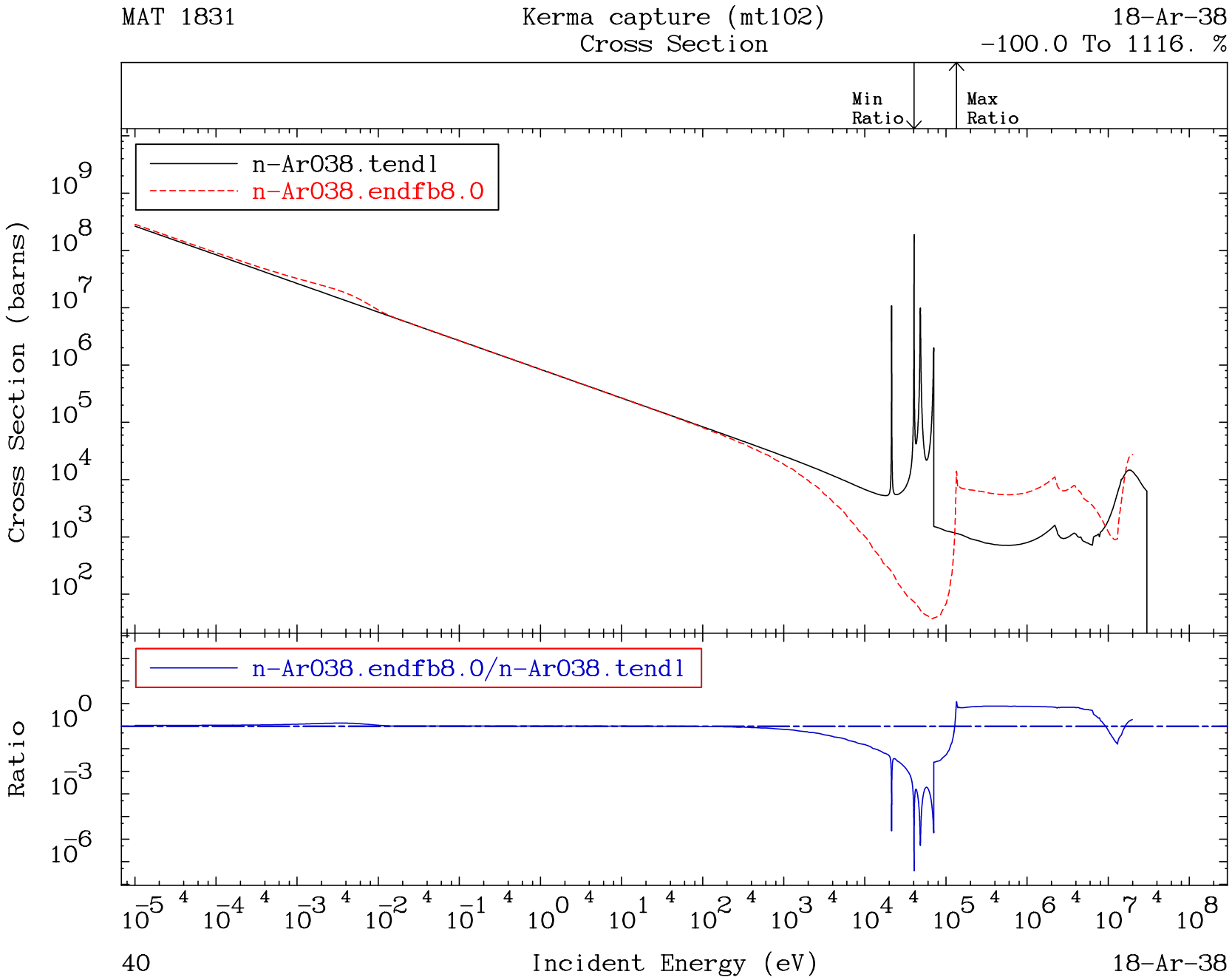

MAT 1831
Kerma total (eV-barns)
Cross Section
18-Ar-38
-100.0 To 438.1 %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
35
18-Ar-38

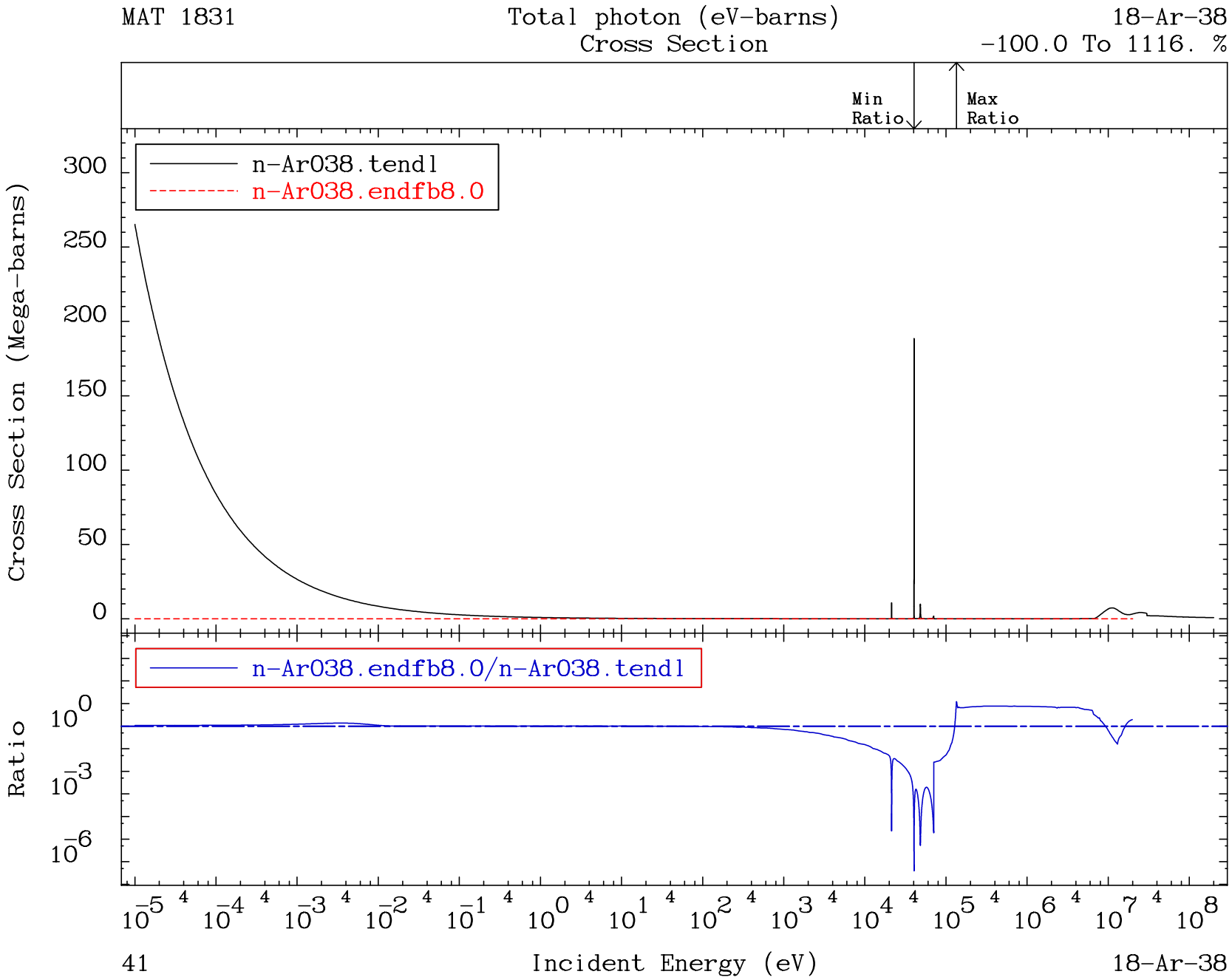

MAT 1831
Kerma elastic
Cross Section
18-Ar-38
-99.97 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
36
18-Ar-38

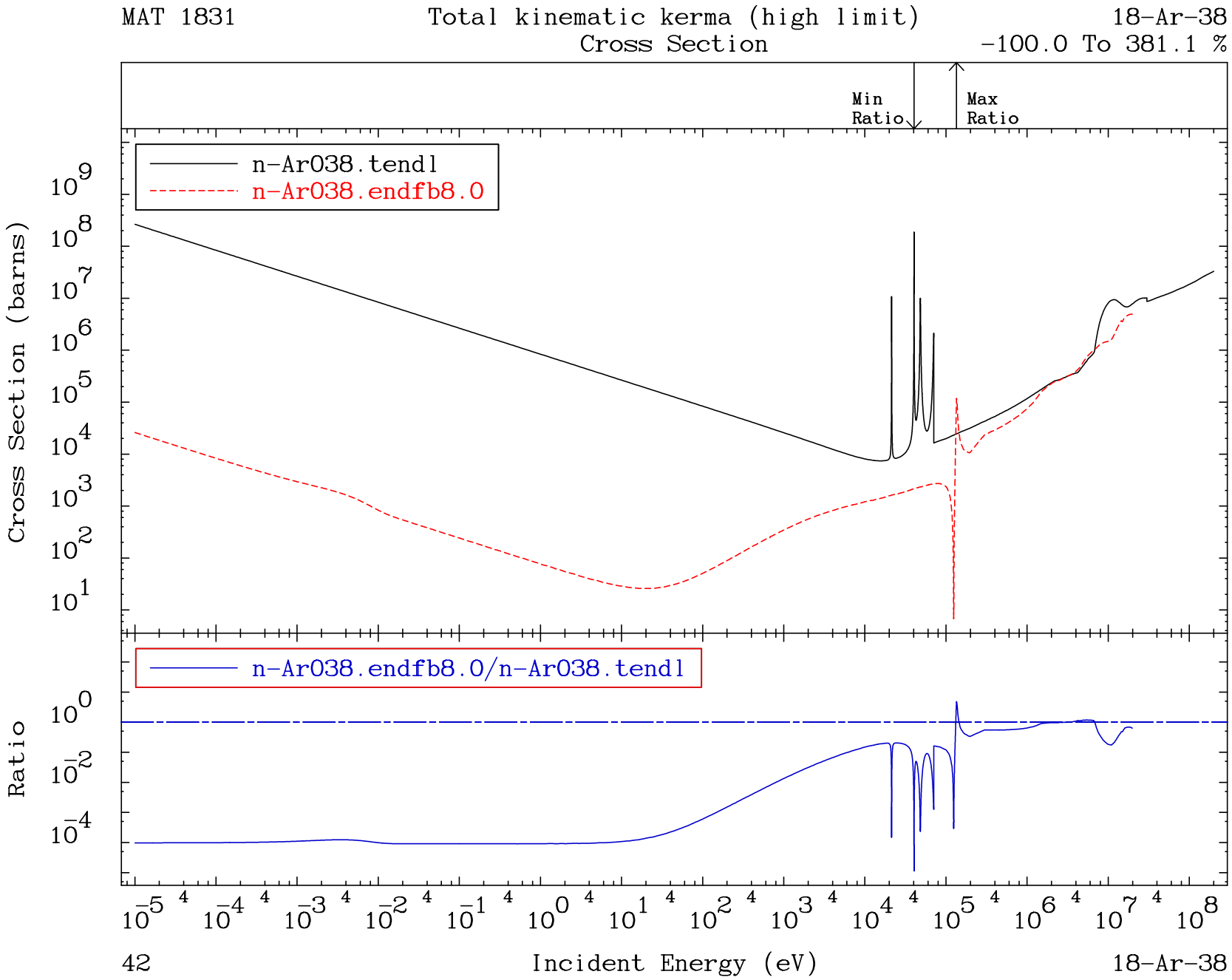

MAT 1831
Kerma non-elastic (all but mt2)
Cross Section
18-Ar-38
-100.0 To 1116. %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
37
18-Ar-38

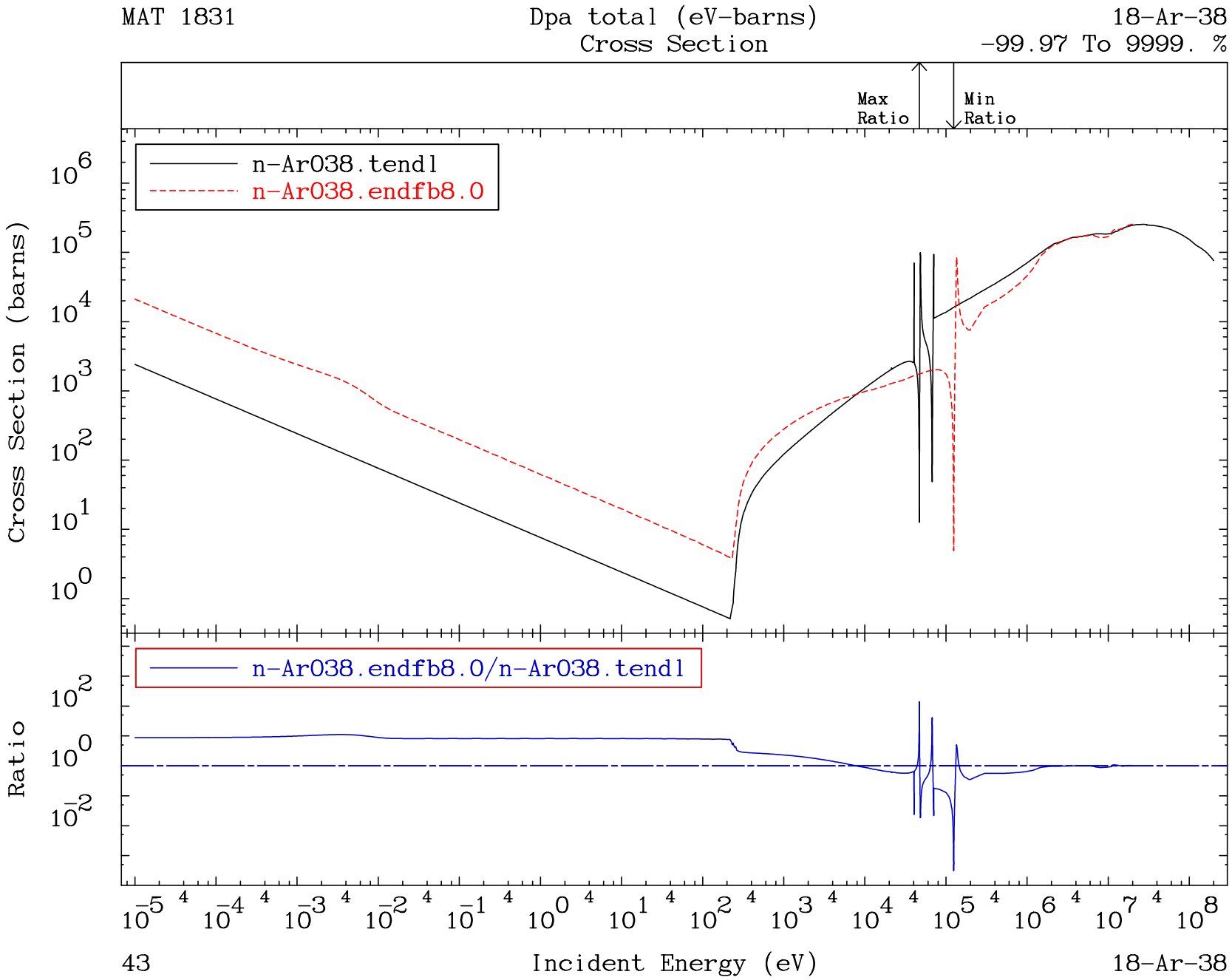

MAT 1831
Kerma inelastic (mt51-91)
Cross Section
18-Ar-38
-83.75 To 21.52 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 2.2723 MeV
n-Ar038.endfb8.0 Threshold 2.3500 MeV
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
38
18-Ar-38

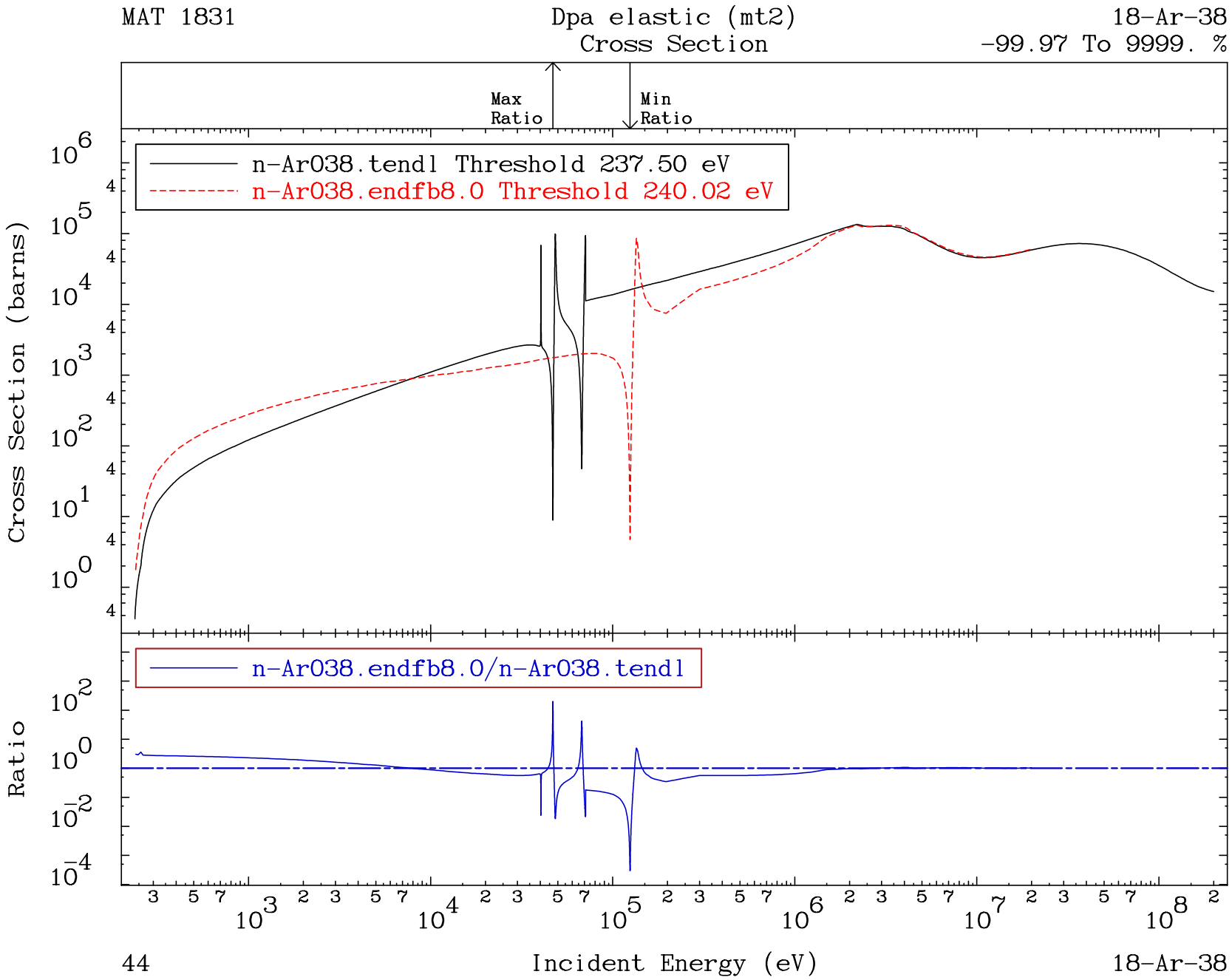

MAT 1831
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
18-Ar-38
-83.75 To 21.52 %
Max Ratio
Min Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
1.2
0.8
0.4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
39
Incident Energy (eV)
18-Ar-38

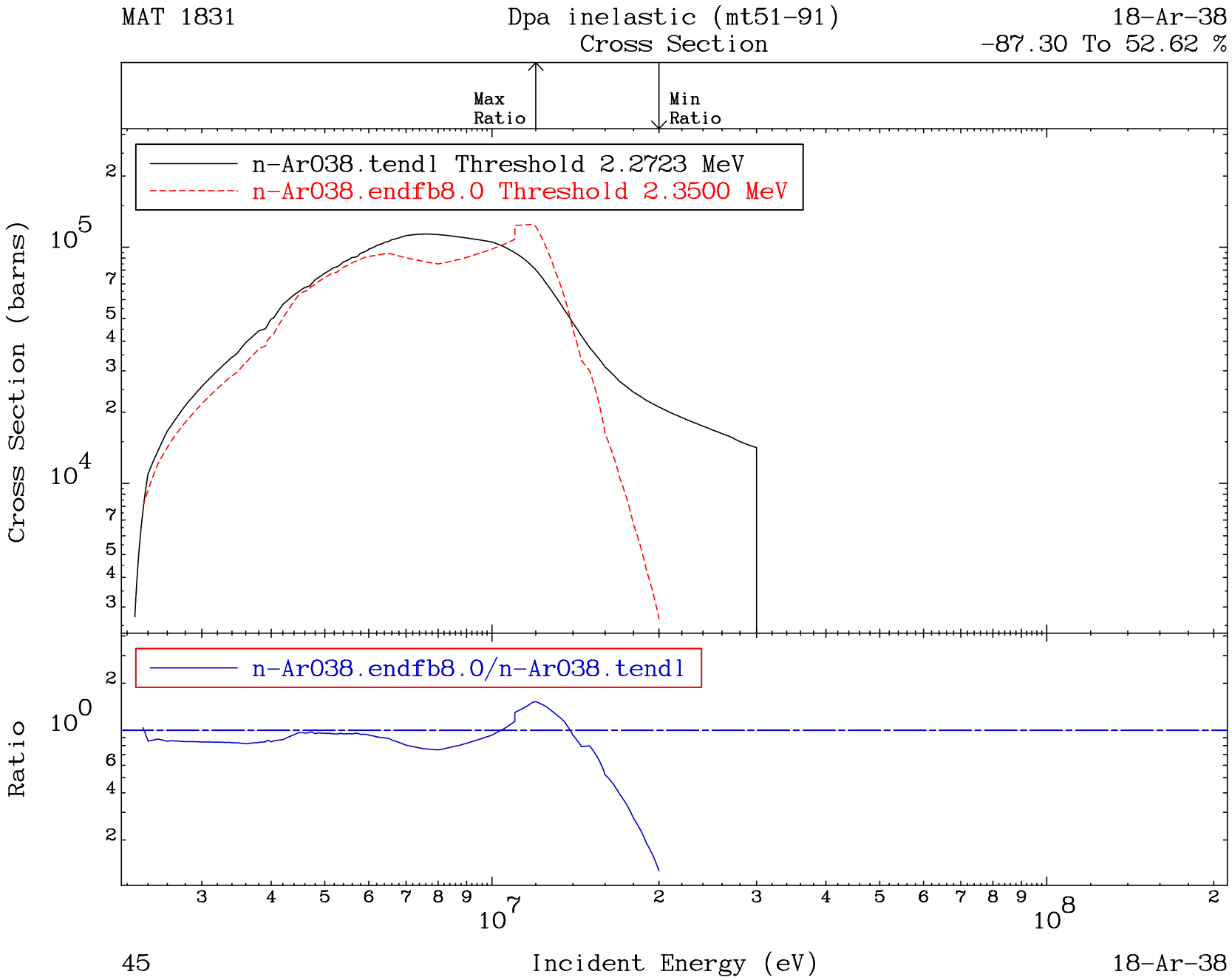

MAT 1831
Kerma capture (mt102)
Cross Section
18-Ar-38
-100.0 To 1116. %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
40
18-Ar-38

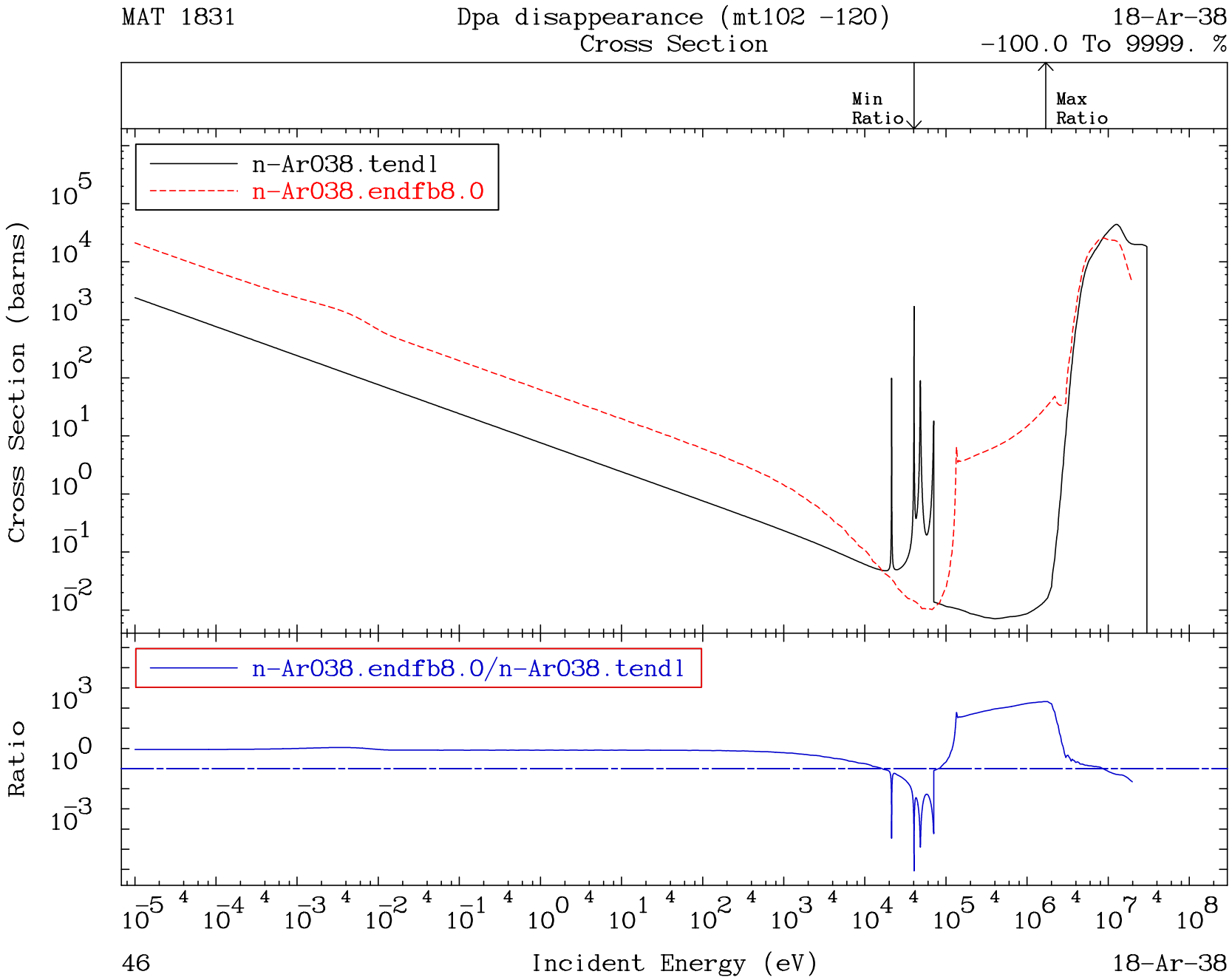

MAT 1831
Total photon (eV-barns)
Cross Section
18-Ar-38
-100.0 To 1116. %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (Mega-barns)
300
250
200
150
100
50
0
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
10^0
10^-3
10^-6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
41
Incident Energy (eV)
18-Ar-38


MAT 1831
Total kinematic kerma (high limit)
Cross Section
18-Ar-38
-100.0 To 381.1 %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
42
18-Ar-38


MAT 1831
Dpa total (eV-barns)
Cross Section
18-Ar-38
-99.97 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
43
18-Ar-38


MAT 1831
Dpa elastic (mt2)
Cross Section
18-Ar-38
-99.97 To 9999. %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 237.50 eV
n-Ar038.endfb8.0 Threshold 240.02 eV
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
44
18-Ar-38


MAT 1831
Dpa inelastic (mt51-91)
Cross Section
18-Ar-38
-87.30 To 52.62 %
Max Ratio
Min Ratio
n-Ar038.tendl Threshold 2.2723 MeV
n-Ar038.endfb8.0 Threshold 2.3500 MeV
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
45
18-Ar-38


MAT 1831
Dpa disappearance (mt102 -120)
Cross Section
18-Ar-38
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Ar038.tendl
n-Ar038.endfb8.0
Cross Section (barns)
n-Ar038.endfb8.0/n-Ar038.tendl
Ratio
Incident Energy (eV)
46
18-Ar-38