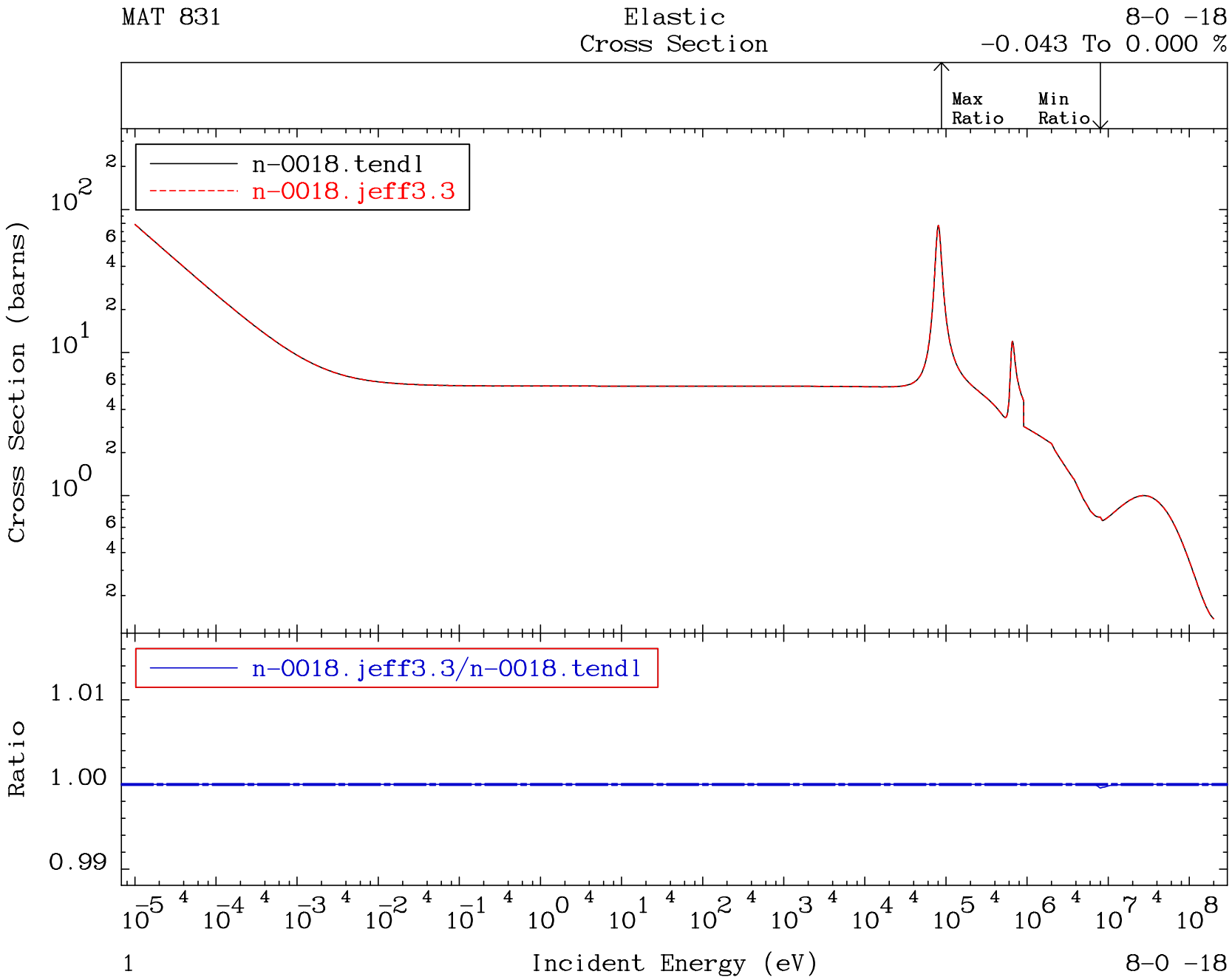
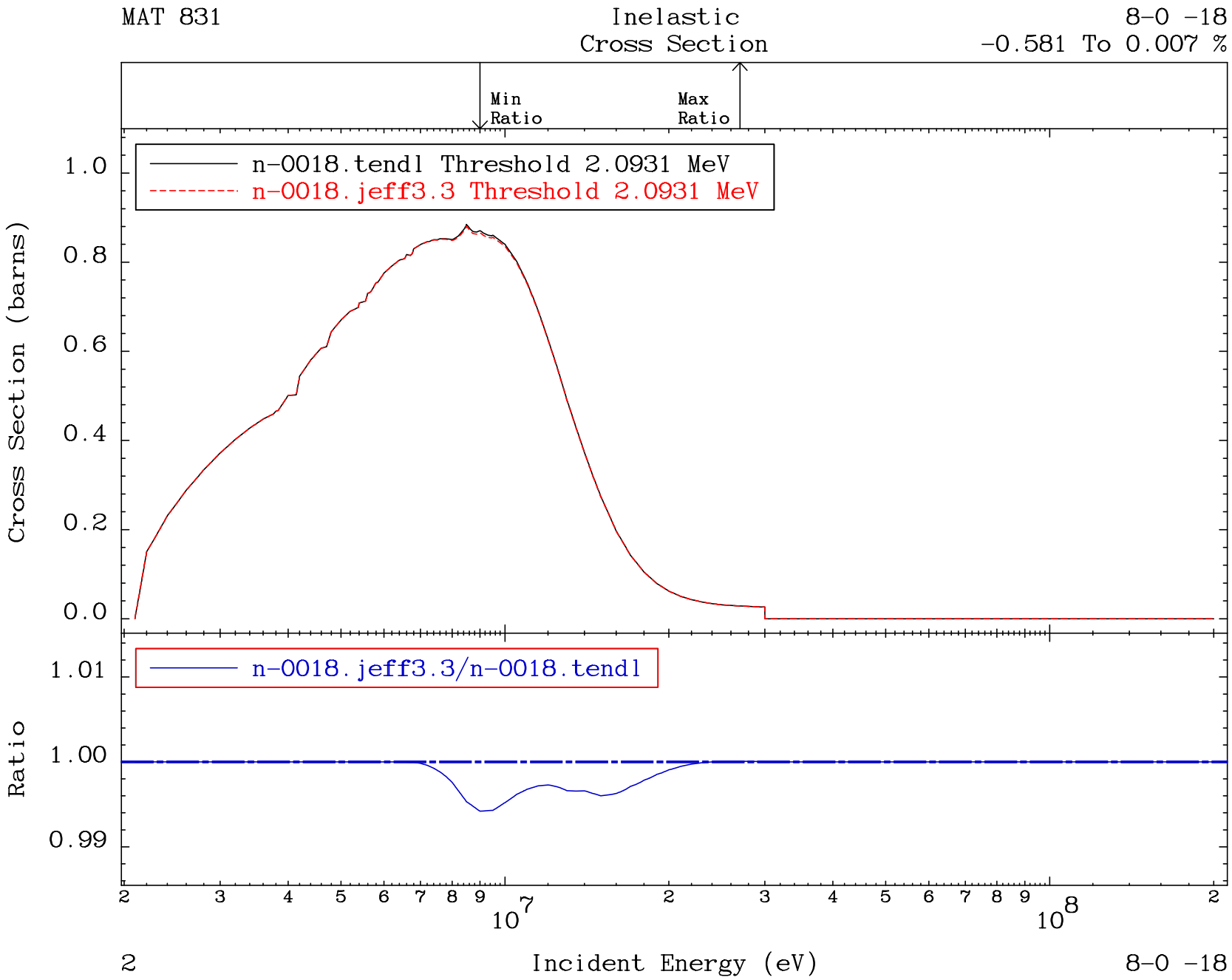
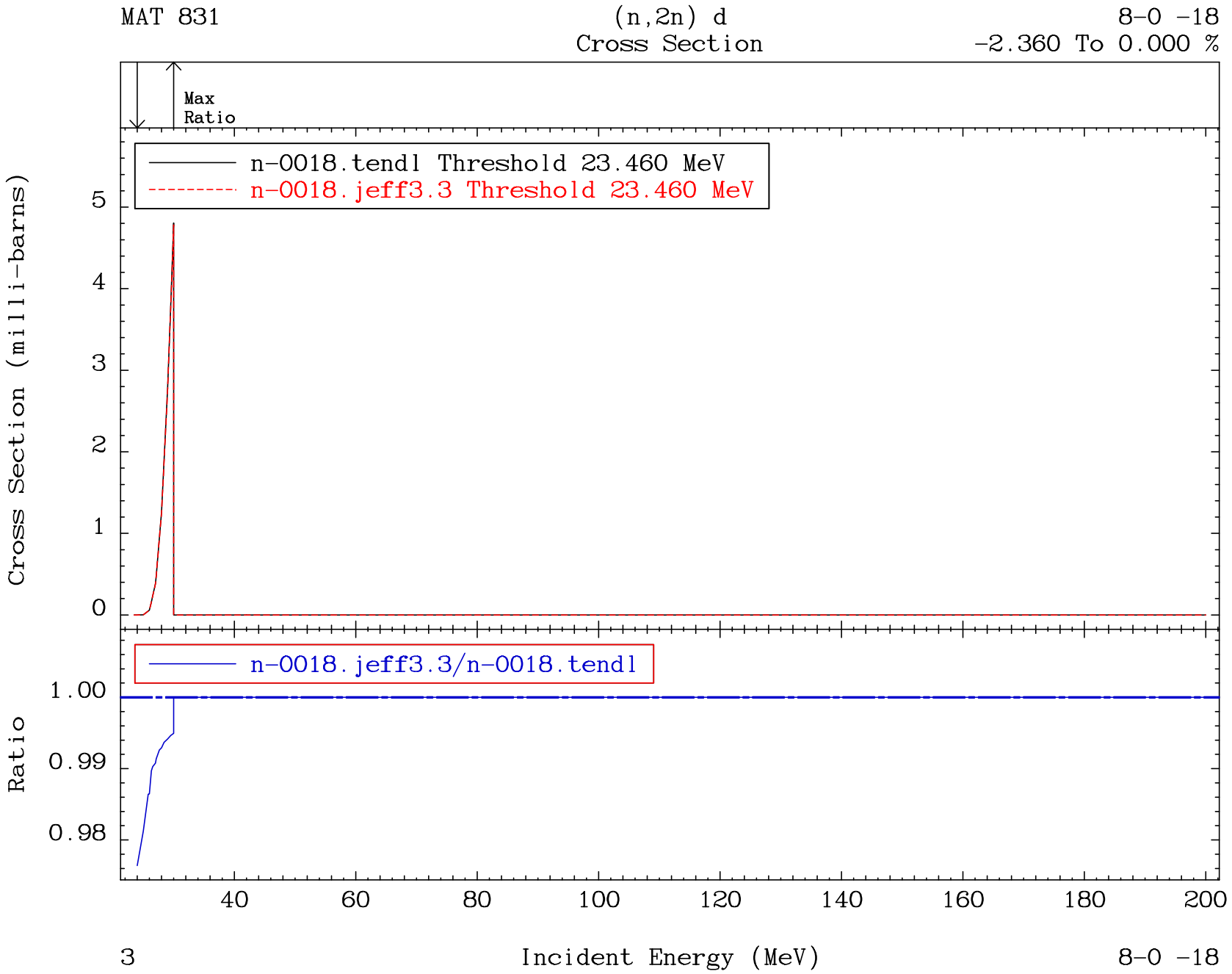
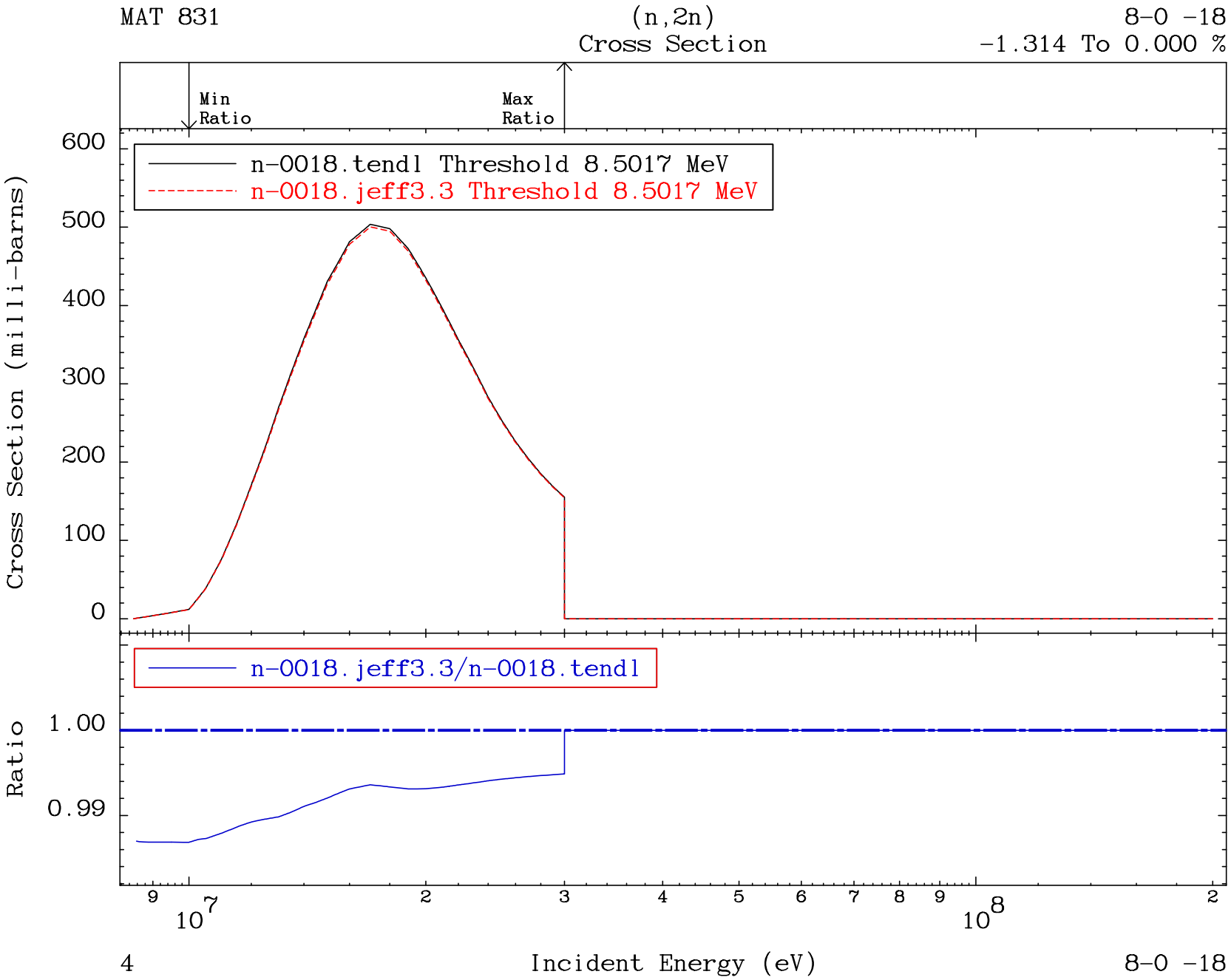
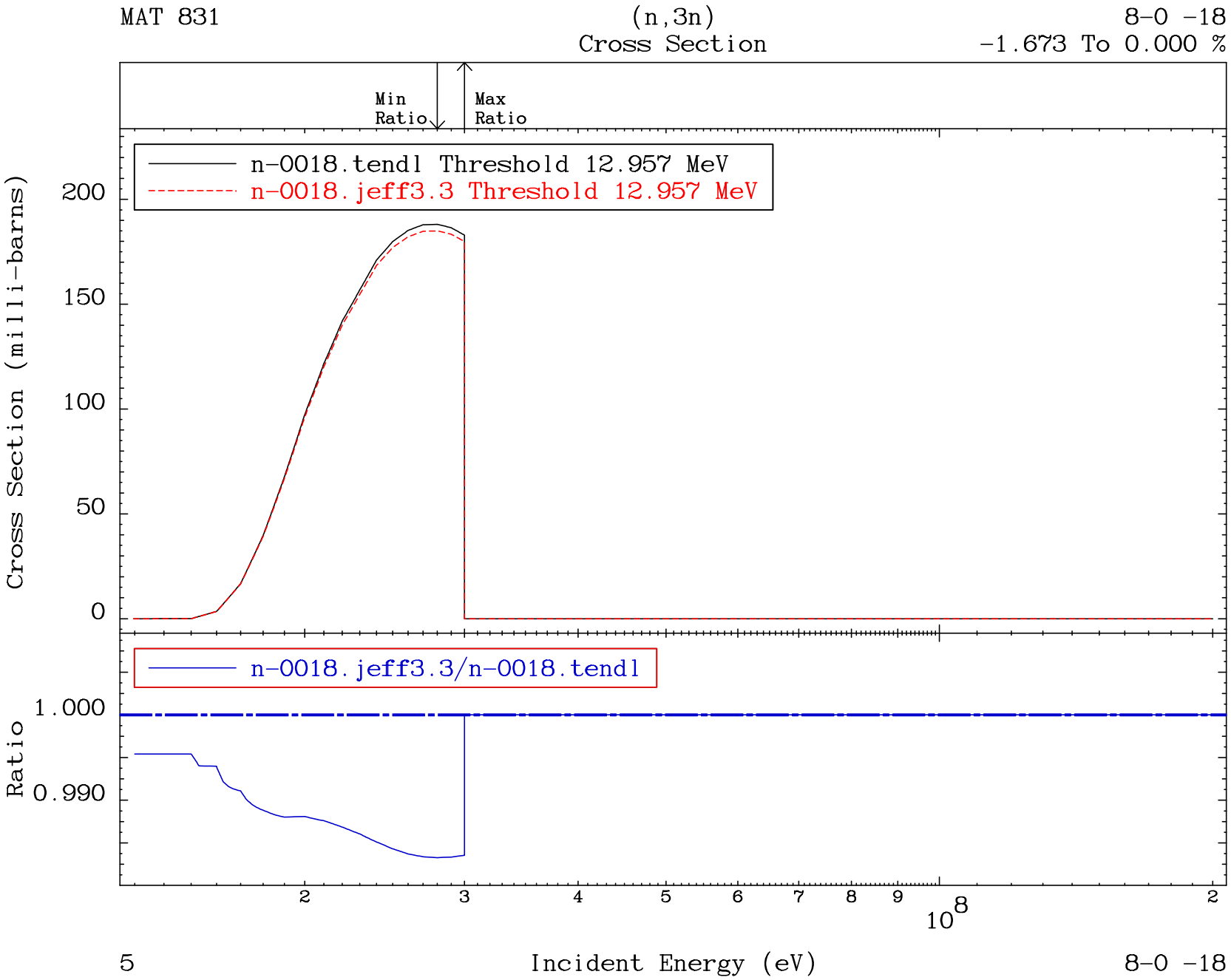
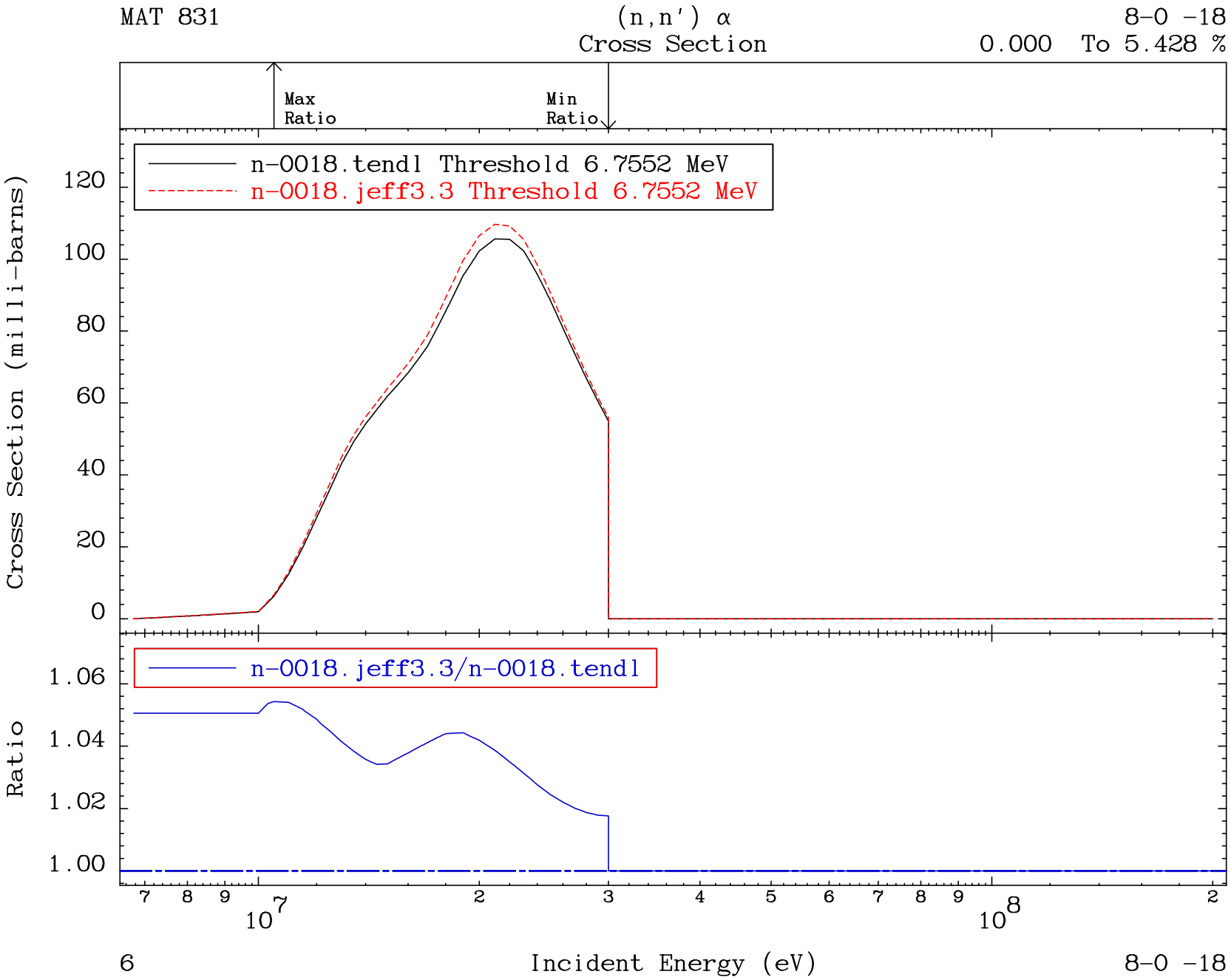

MAT 831
Elastic
Cross Section
8-0 -18
-0.043 To 0.000 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
Incident Energy (eV)
1
8-0 -18

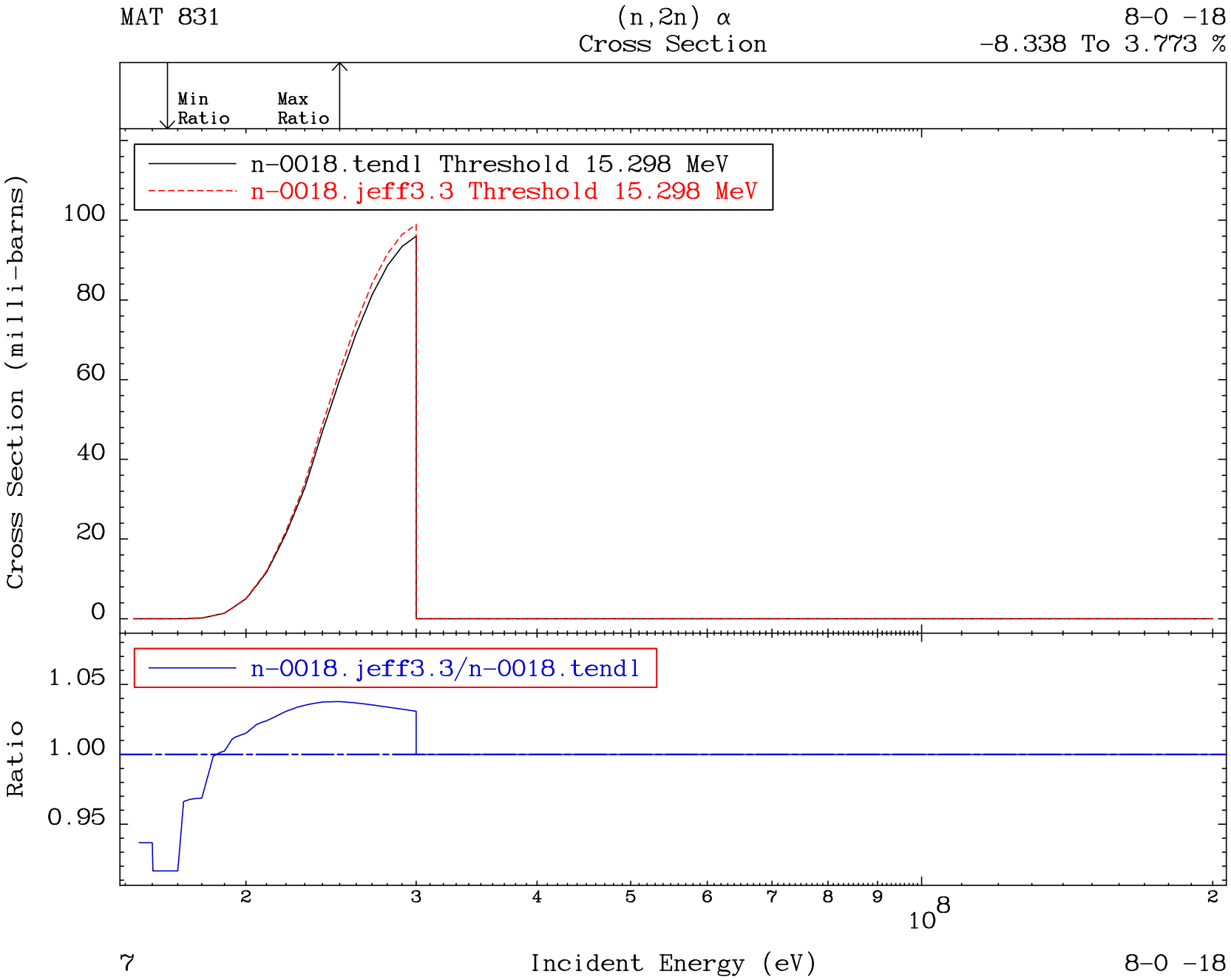

MAT 831
Inelastic
Cross Section
8-0 -18
-0.581 To 0.007 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 2.0931 MeV
n-0018.jeff3.3 Threshold 2.0931 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
2
Incident Energy (eV)
8-0 -18

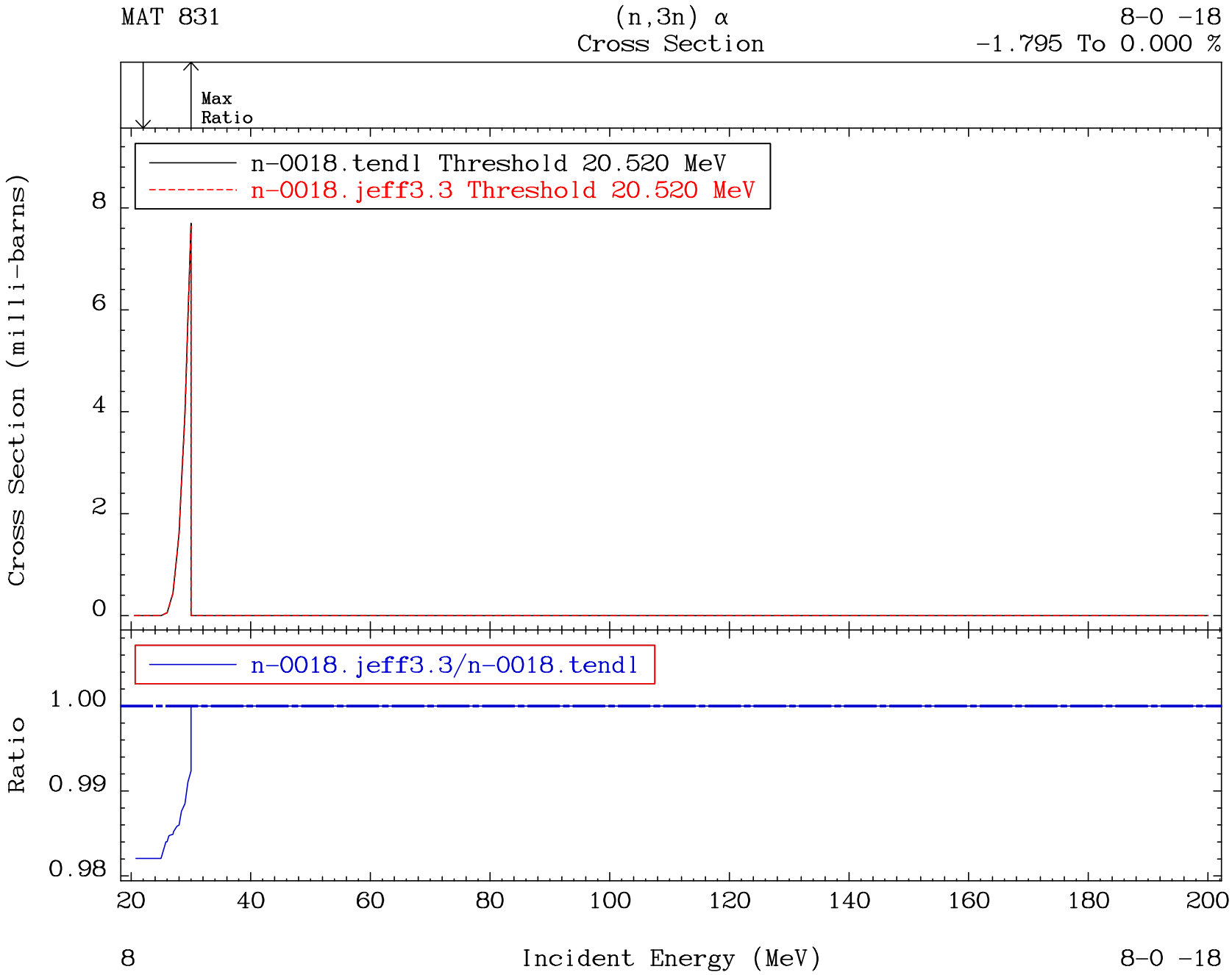

MAT 831
(n,2n) d
Cross Section
8-0 -18
-2.360 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 23.460 MeV
n-0018.jeff3.3 Threshold 23.460 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
n-0018.jeff3.3/n-0018.tendl
Ratio
1.00
0.99
0.98
40
60
80
100
120
140
160
180
200
3
Incident Energy (MeV)
8-0 -18

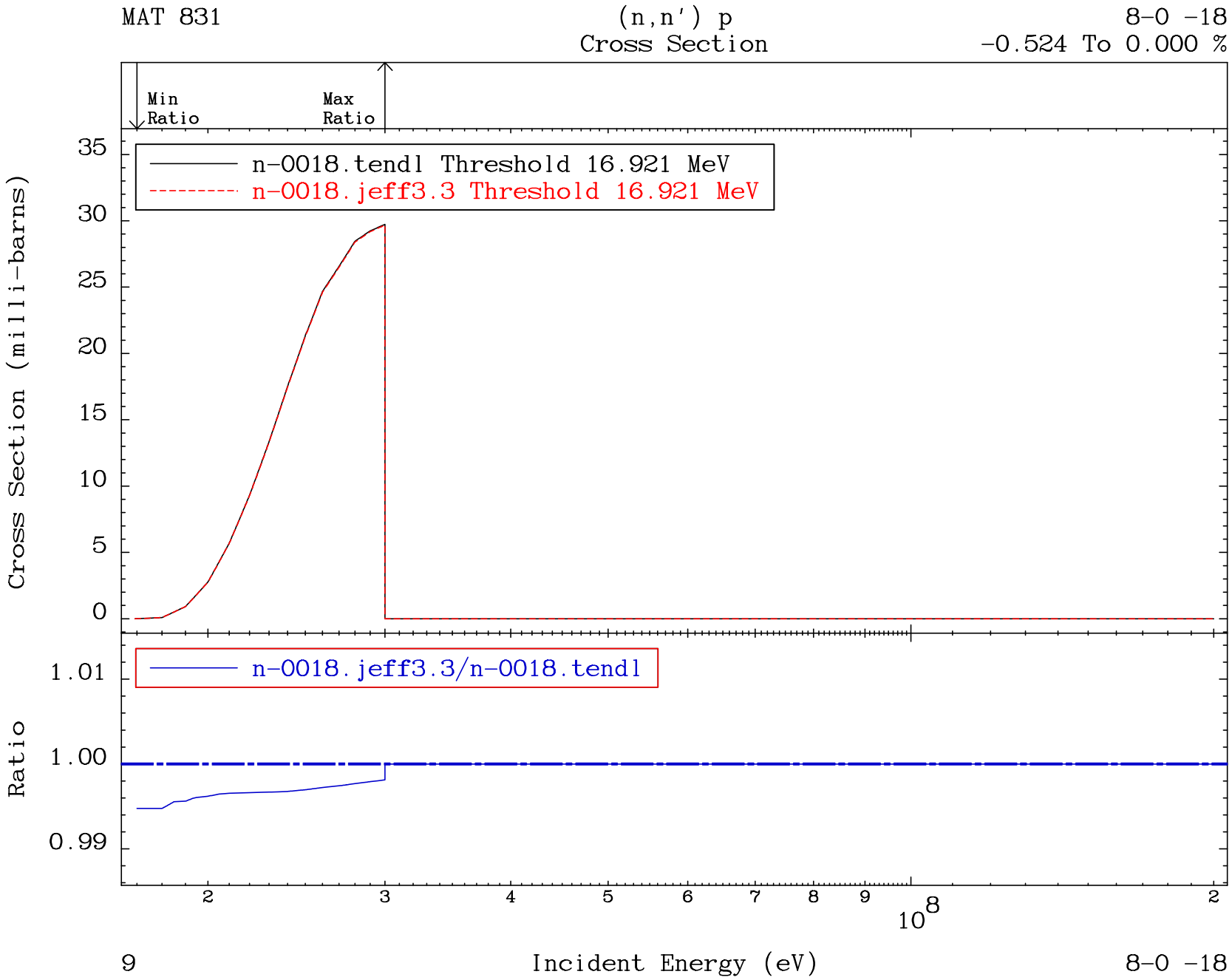

MAT 831
(n,2n)
Cross Section
8-0 -18
-1.314 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.5017 MeV
n-0018.jeff3.3 Threshold 8.5017 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
8-0 -18

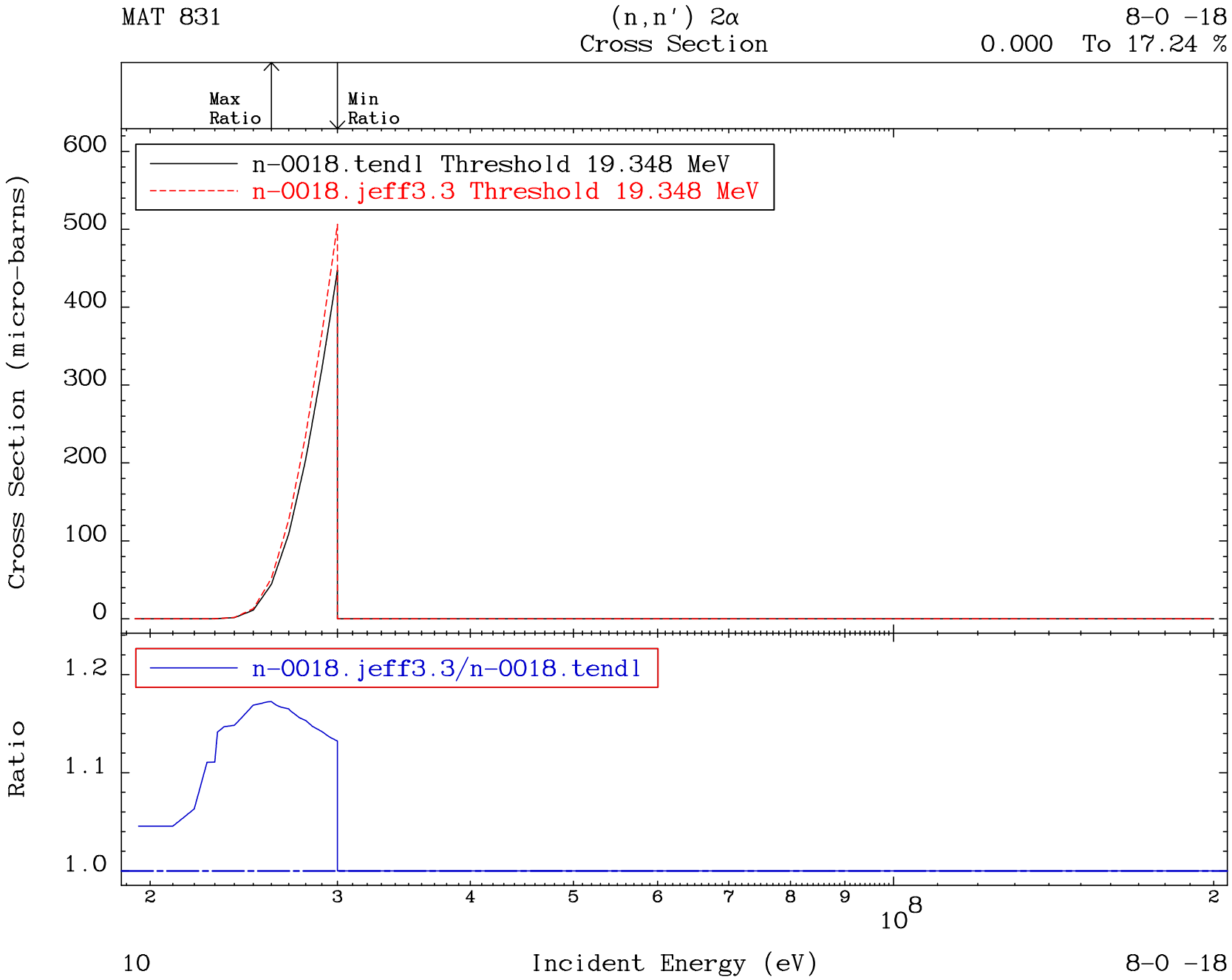

MAT 831
(n,3n)
Cross Section
8-0 -18
-1.673 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 12.957 MeV
n-0018.jeff3.3 Threshold 12.957 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.000
0.990
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
8-0 -18

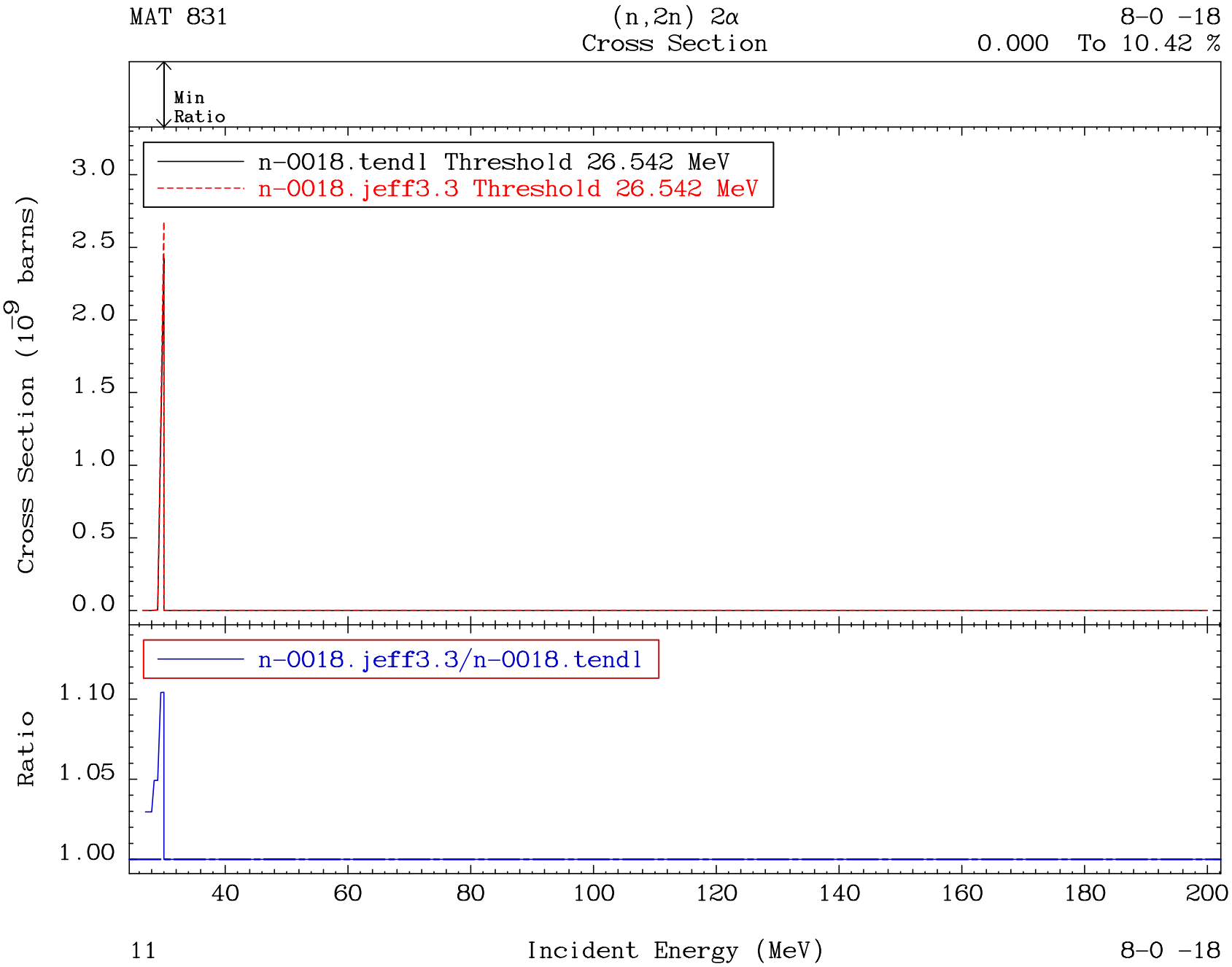

MAT 831
(n,n') α
Cross Section
8-0 -18
0.000 To 5.428 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 6.7552 MeV
n-0018.jeff3.3 Threshold 6.7552 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.06
1.04
1.02
1.00
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
6
Incident Energy (eV)
8-0 -18

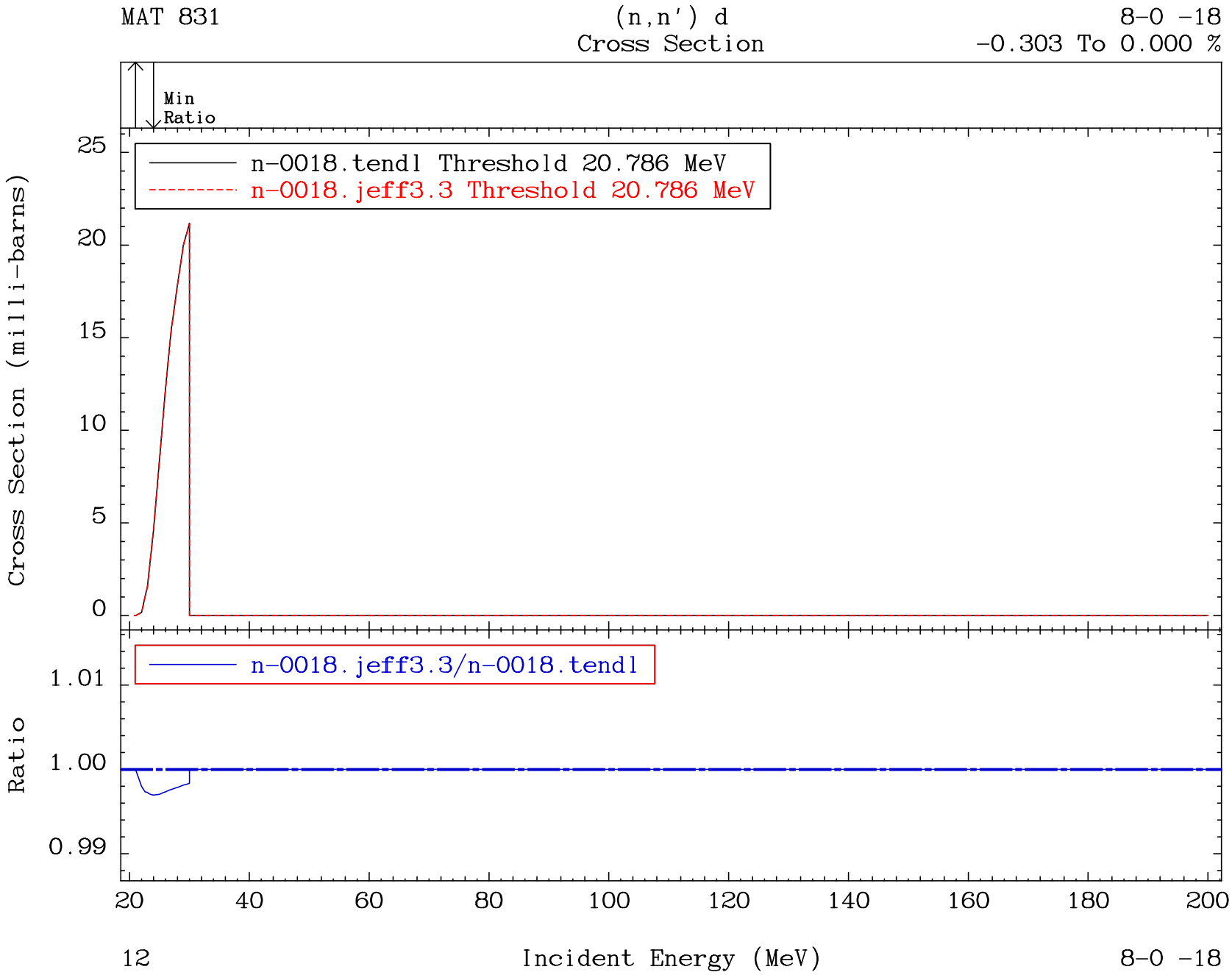

MAT 831
(n,2n) α
Cross Section
8-0 -18
-8.338 To 3.773 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 15.298 MeV
n-0018.jeff3.3 Threshold 15.298 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.05
1.00
0.95
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
8-0 -18

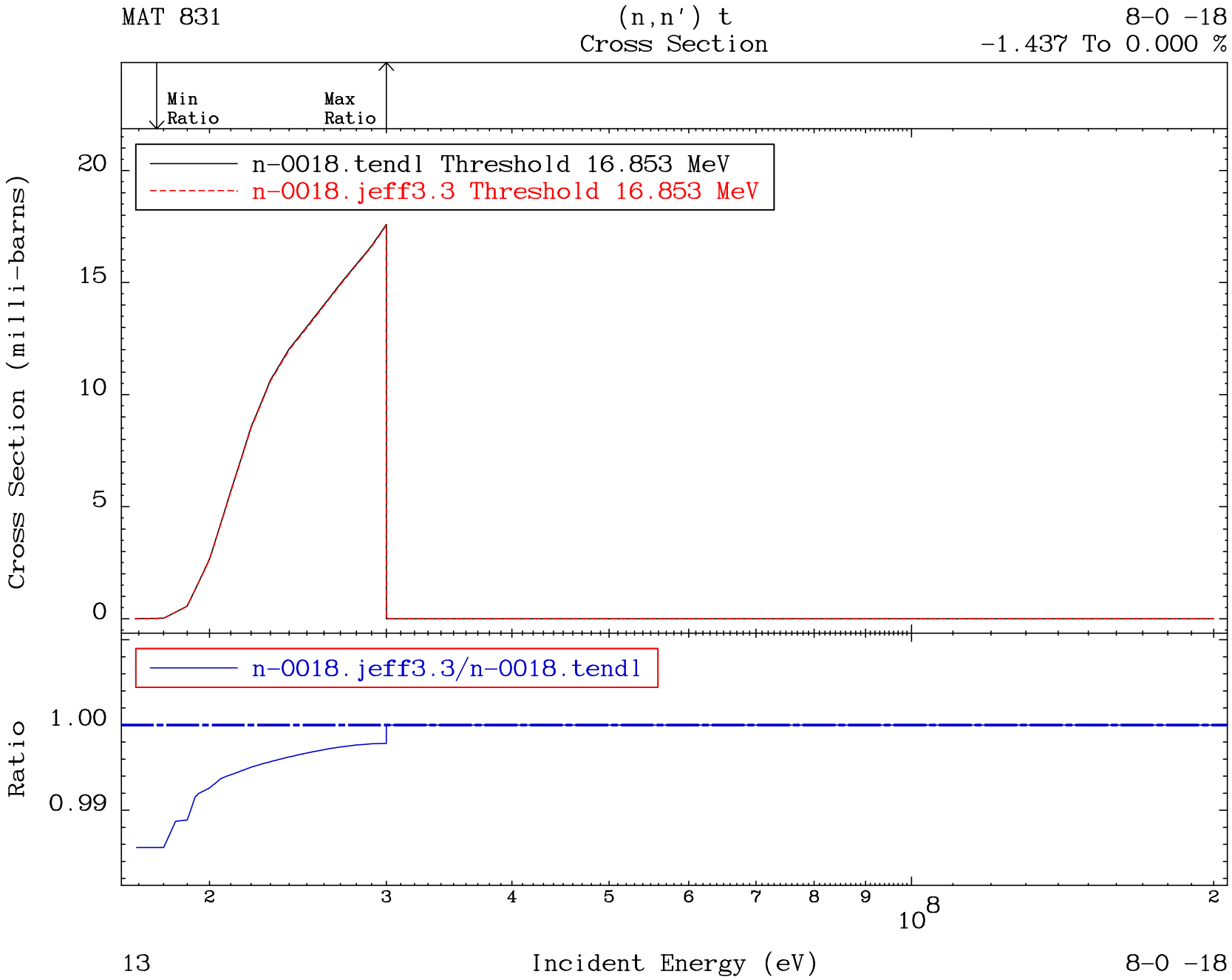

MAT 831
(n,3n) α
Cross Section
8-0 -18
-1.795 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 20.520 MeV
n-0018.jeff3.3 Threshold 20.520 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-0018.jeff3.3/n-0018.tendl
Ratio
0.98
0.99
1.00
20
40
60
80
100
120
140
160
180
200
8
Incident Energy (MeV)
8-0 -18

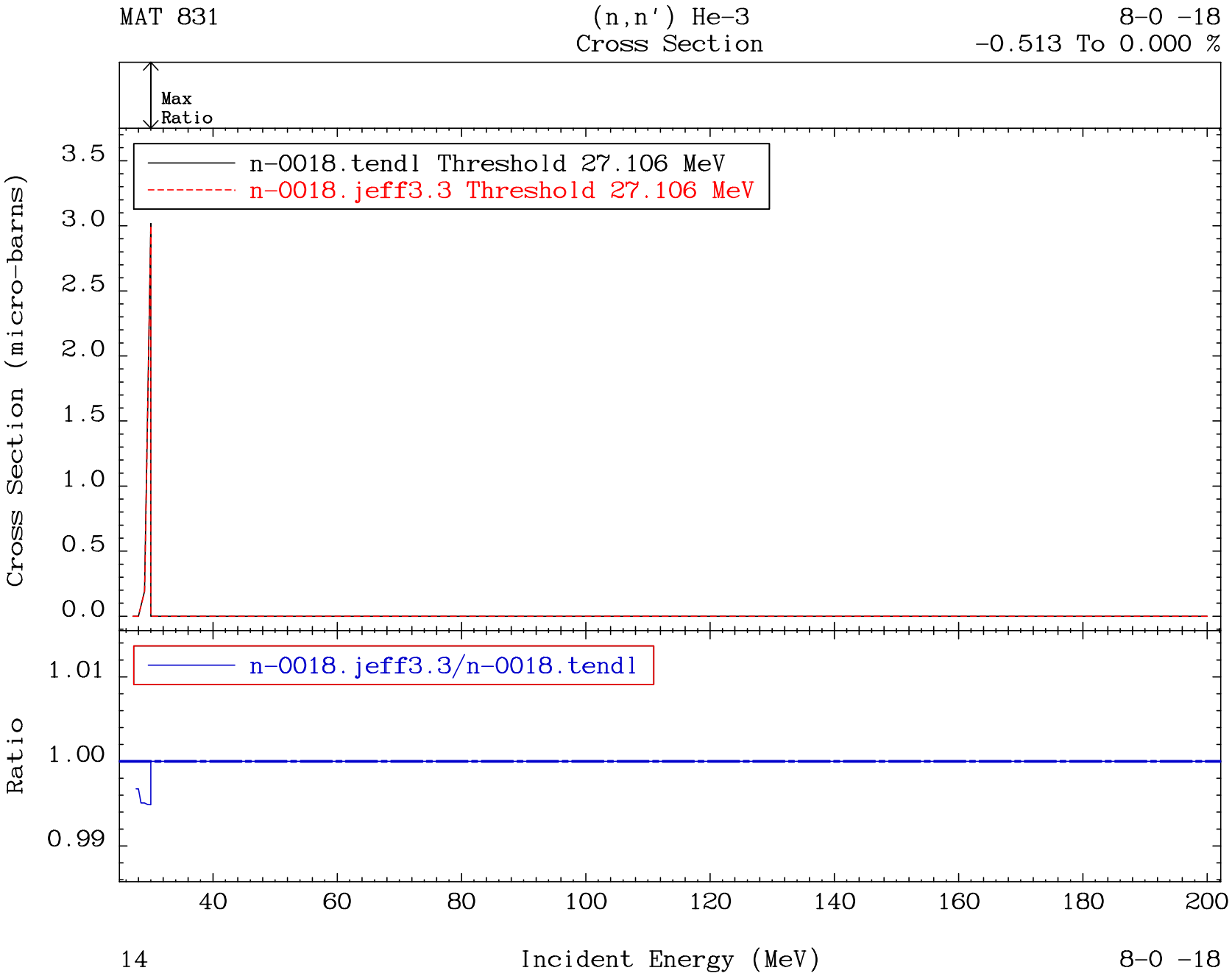

MAT 831
(n,n') p
Cross Section
8-0 -18
-0.524 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 16.921 MeV
n-0018.jeff3.3 Threshold 16.921 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
2
10^8
9
Incident Energy (eV)
8-0 -18

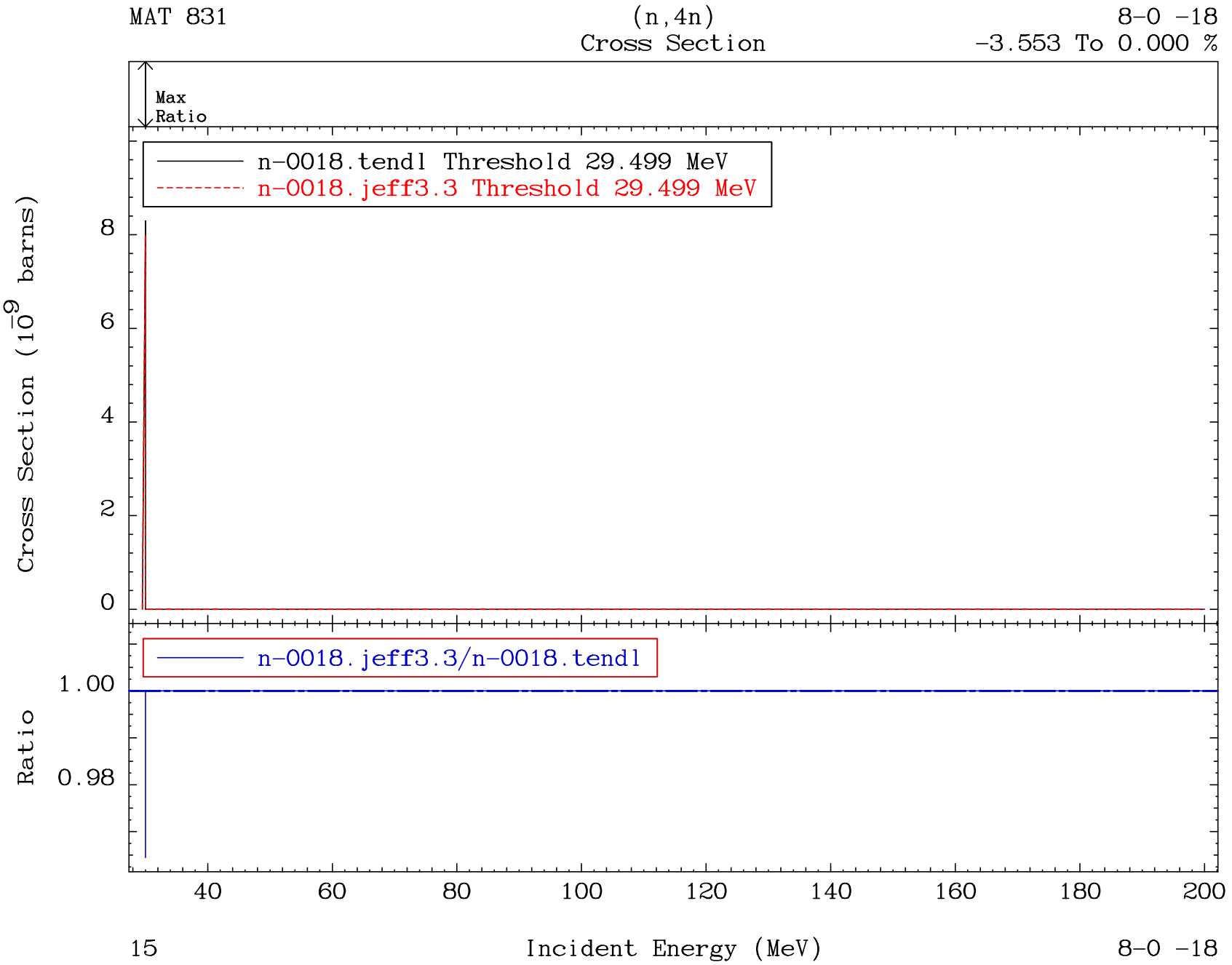

MAT 831
(n,n') 2α
Cross Section
8-0 -18
0.000 To 17.24 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 19.348 MeV
n-0018.jeff3.3 Threshold 19.348 MeV
Cross Section (micro-barns)
600
500
400
300
200
100
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.2
1.1
1.0
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
8-0 -18

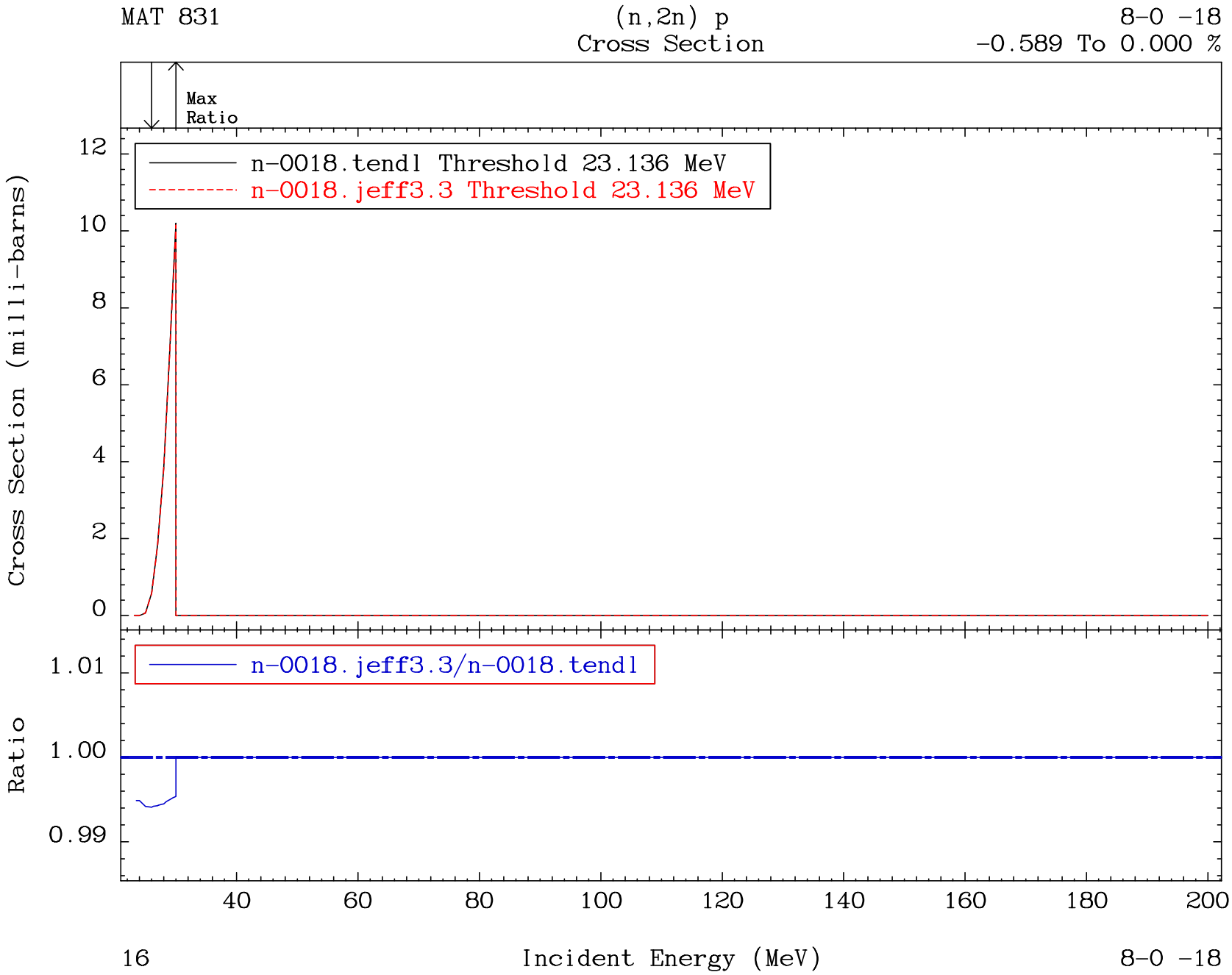

MAT 831
(n,2n) 2α
Cross Section
8-0 -18
0.000 To 10.42 %
Min
Ratio
n-0018.tendl Threshold 26.542 MeV
n-0018.jeff3.3 Threshold 26.542 MeV
Cross Section (10^-9 barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.10
1.05
1.00
40
60
80
100
120
140
160
180
200
11
Incident Energy (MeV)
8-0 -18

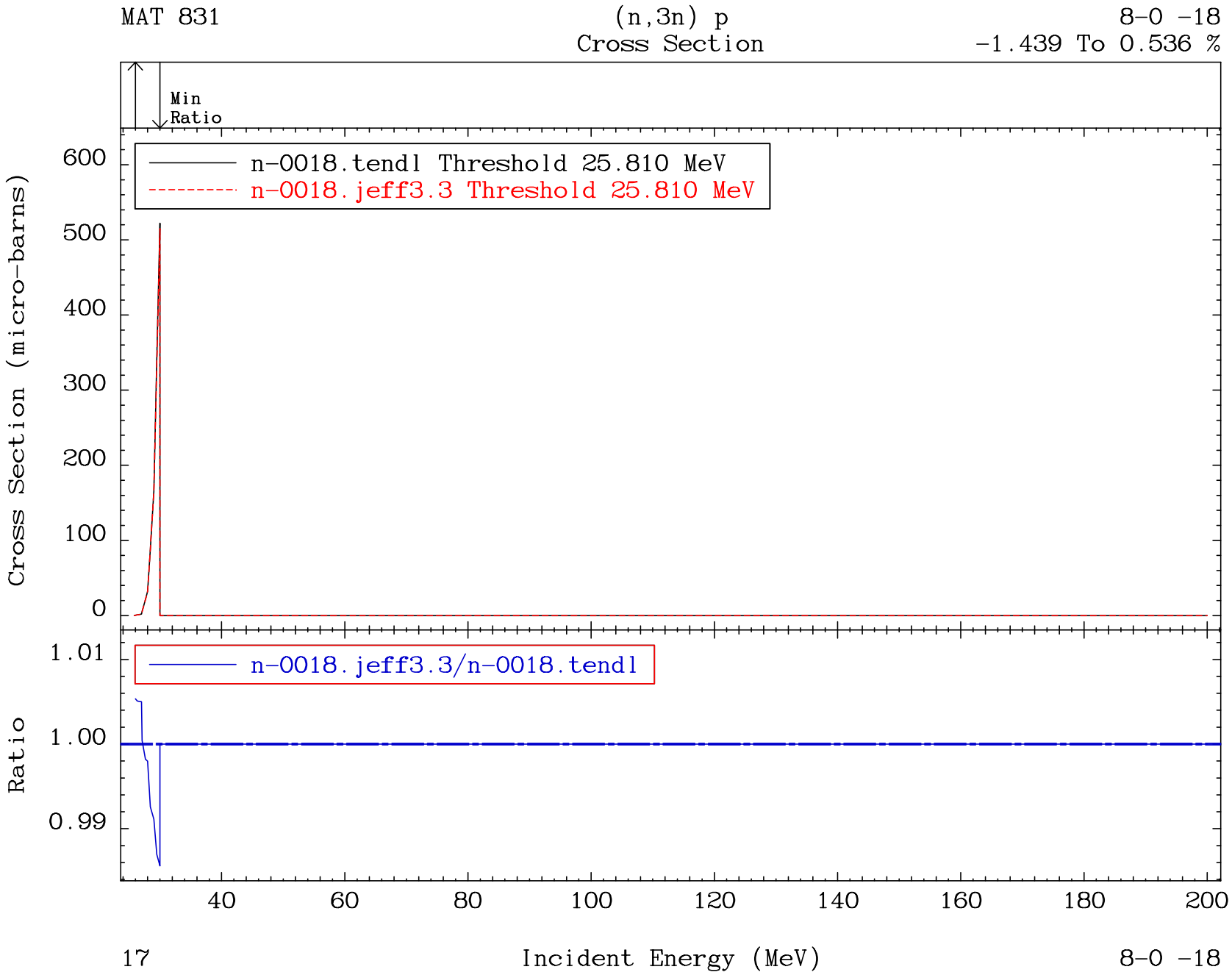

MAT 831
(n,n') d
Cross Section
8-0 -18
-0.303 To 0.000 %
Min
Ratio
n-0018.tendl Threshold 20.786 MeV
n-0018.jeff3.3 Threshold 20.786 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
20
40
60
80
100
120
140
160
180
200
12
Incident Energy (MeV)
8-0 -18

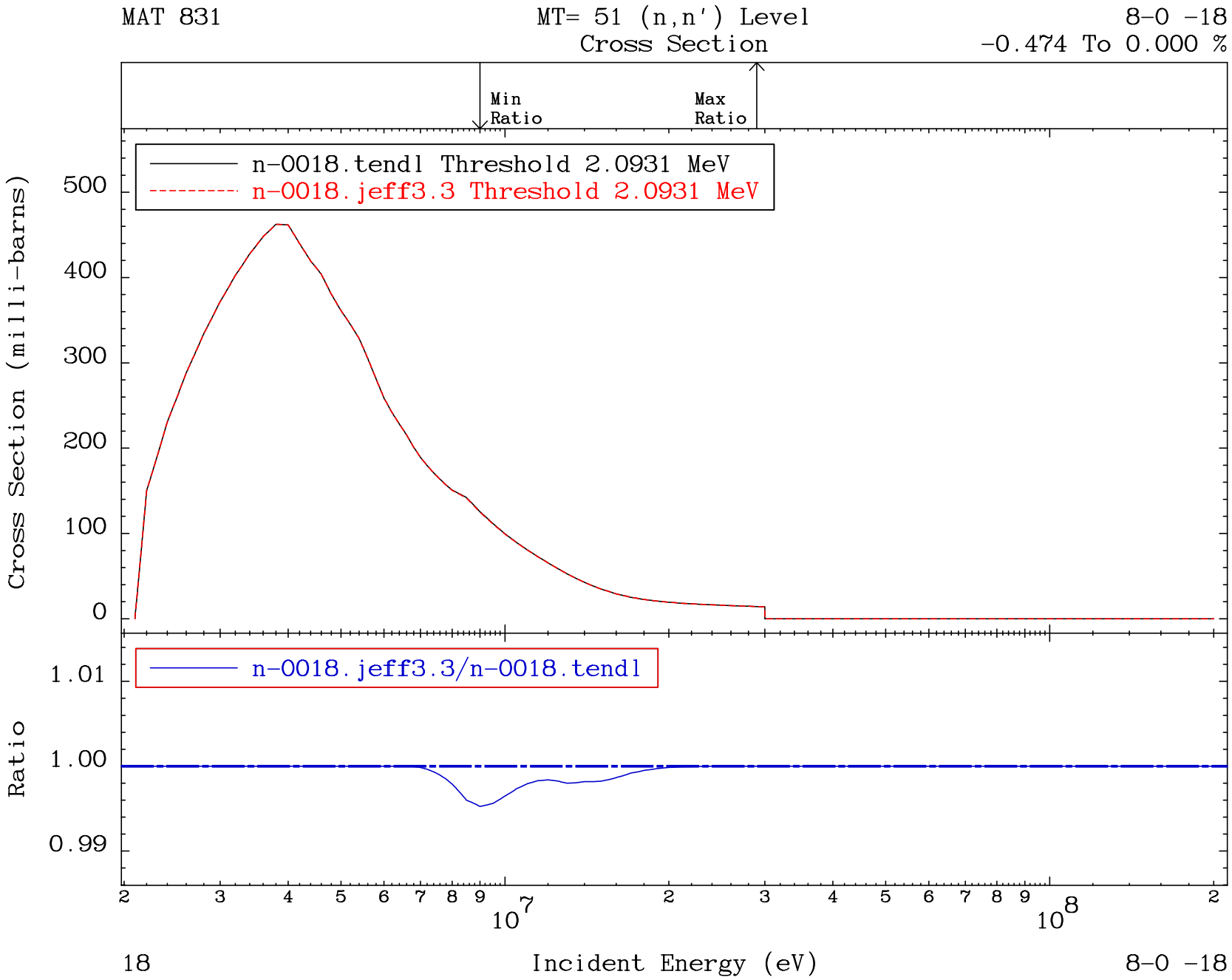

MAT 831
(n,n') t
Cross Section
8-0 -18
-1.437 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 16.853 MeV
n-0018.jeff3.3 Threshold 16.853 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
8-0 -18

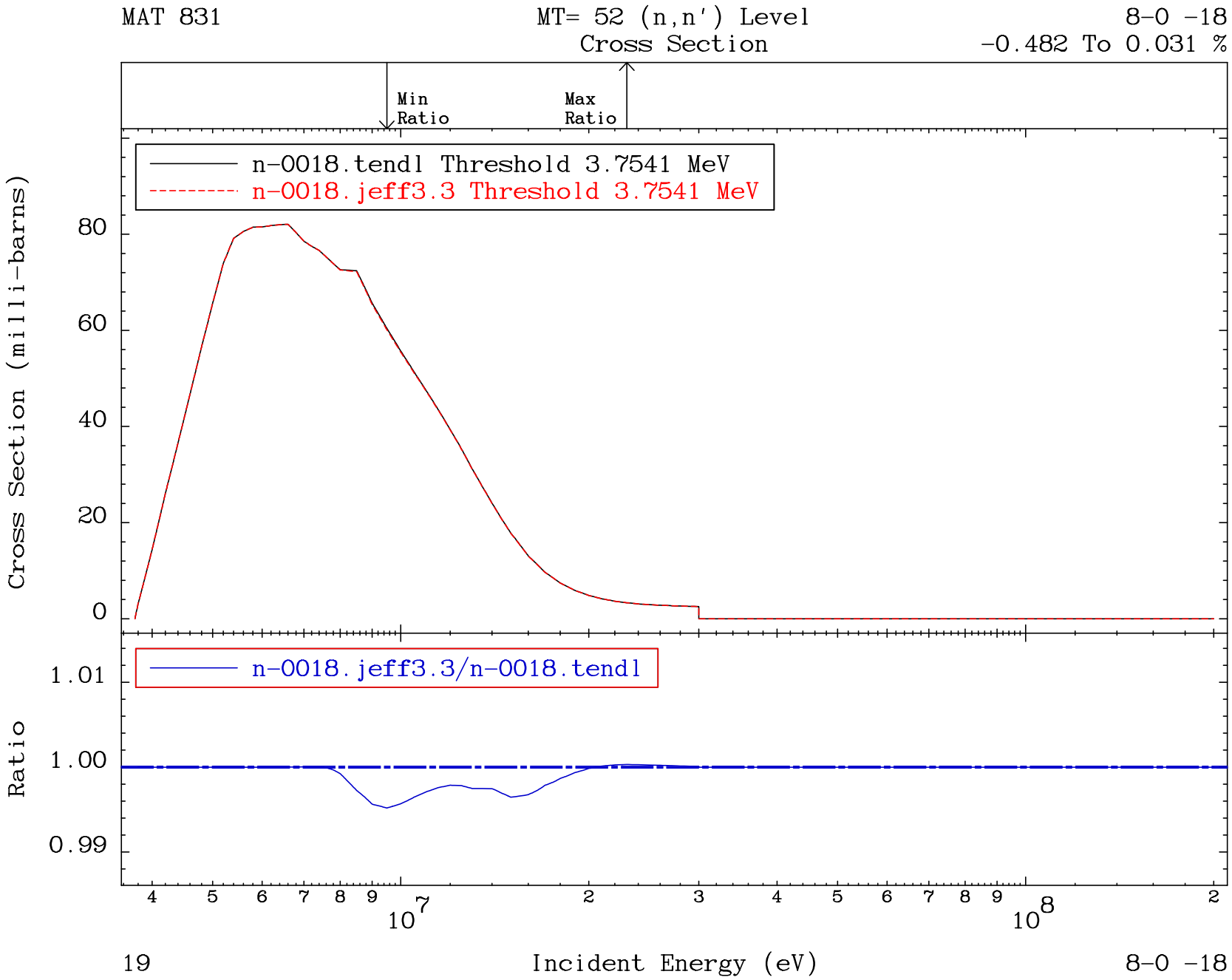

MAT 831
(n,n') He-3
Cross Section
8-0 -18
-0.513 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 27.106 MeV
n-0018.jeff3.3 Threshold 27.106 MeV
Cross Section (micro-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
14
Incident Energy (MeV)
8-0 -18

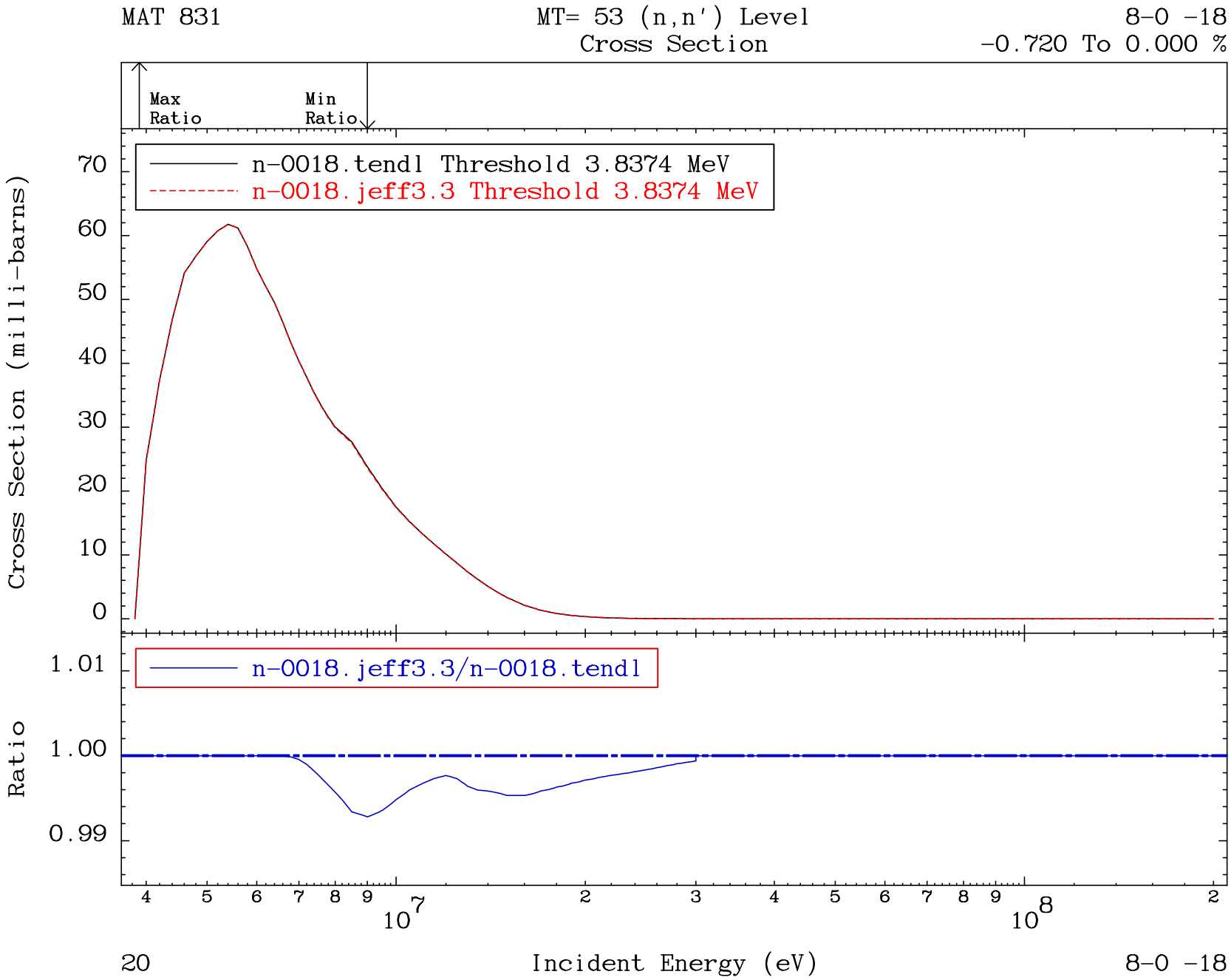

MAT 831
(n,4n)
Cross Section
8-0 -18
-3.553 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 29.499 MeV
n-0018.jeff3.3 Threshold 29.499 MeV
Cross Section (10^-9 barns)
0
2
4
6
8
n-0018.jeff3.3/n-0018.tendl
Ratio
1.00
0.98
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
8-0 -18

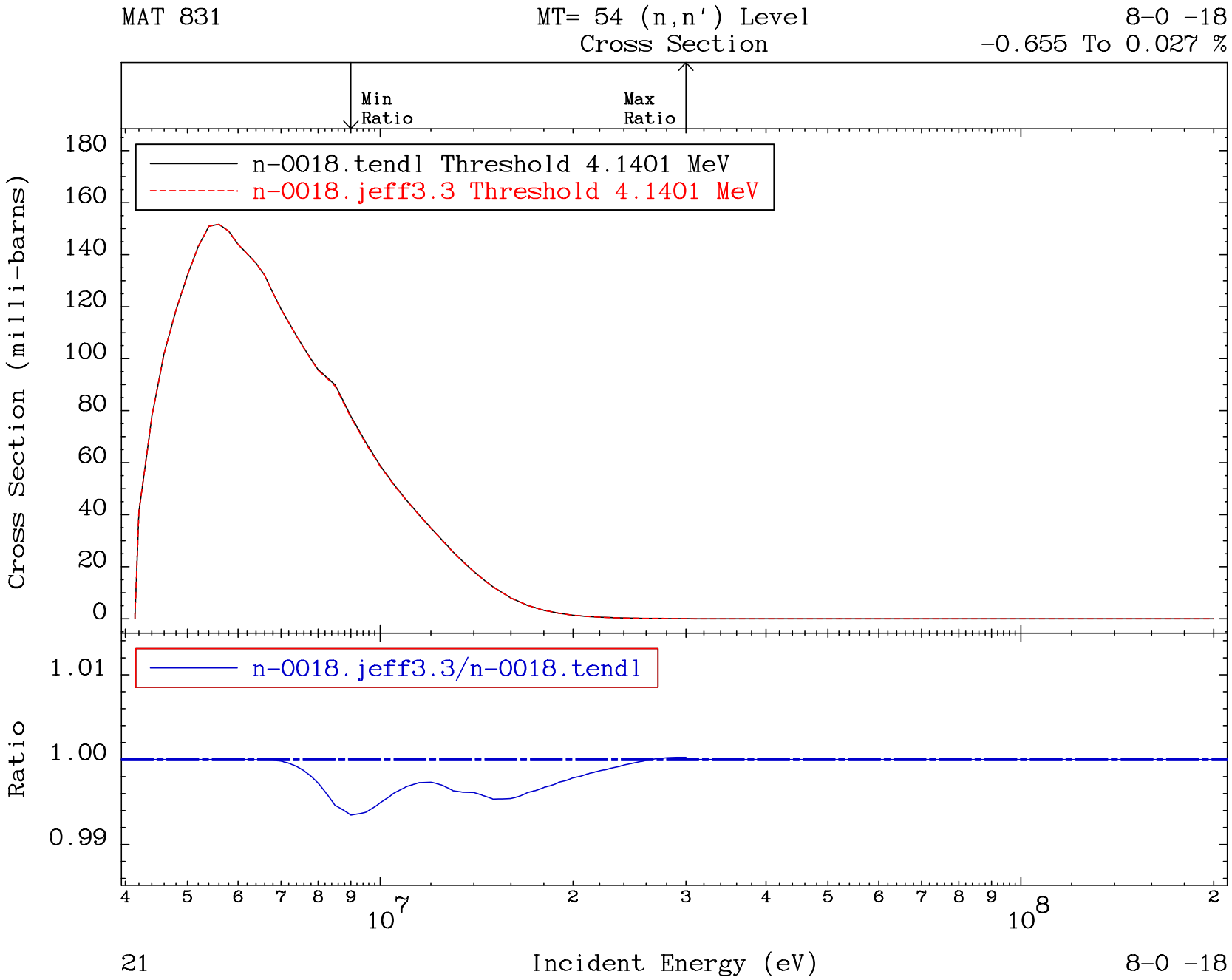

MAT 831
(n,2n) p
Cross Section
8-0 -18
-0.589 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 23.136 MeV
n-0018.jeff3.3 Threshold 23.136 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
8-0 -18

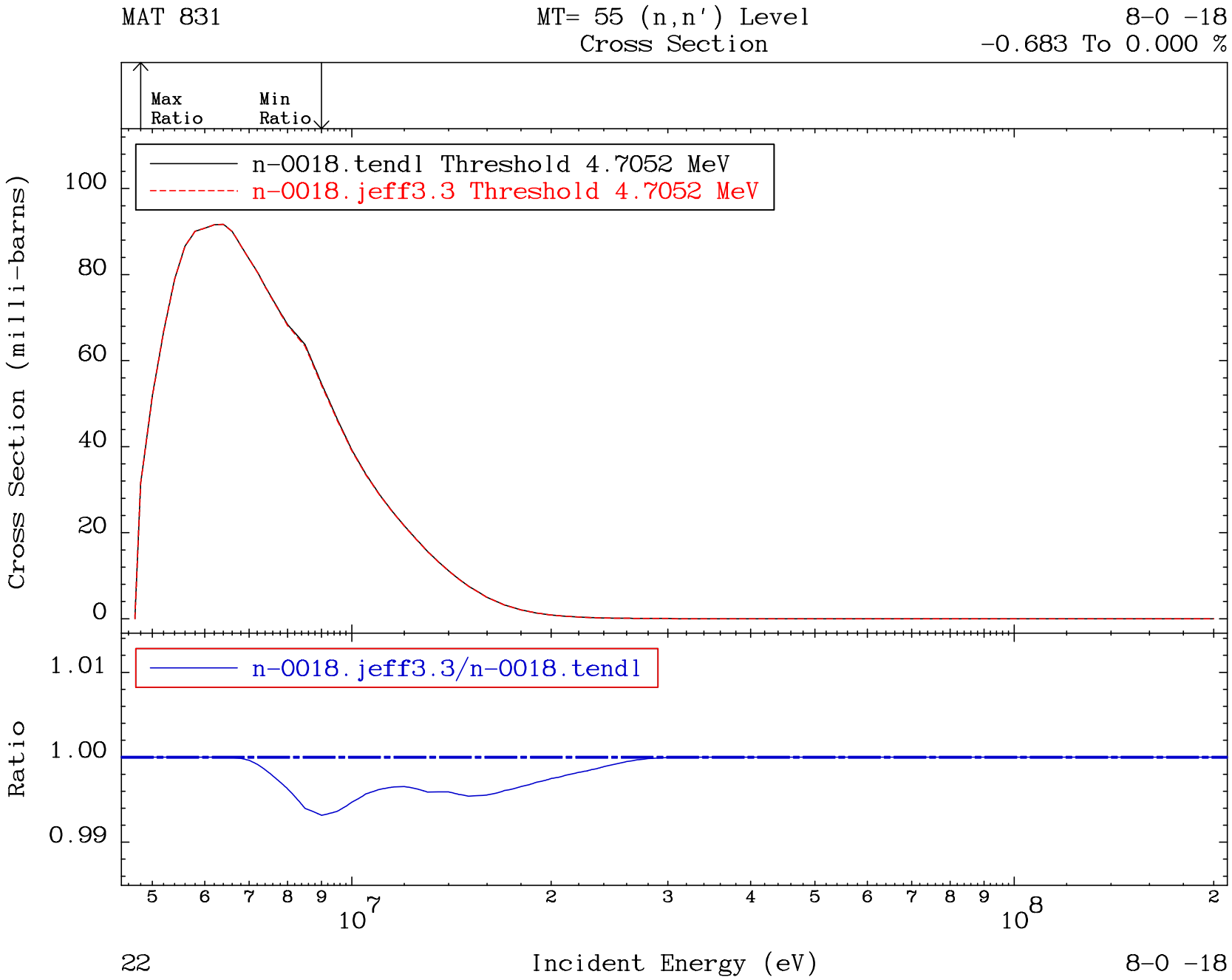

MAT 831
(n,3n) p
Cross Section
8-0 -18
-1.439 To 0.536 %
Min
Ratio
n-0018.tendl Threshold 25.810 MeV
n-0018.jeff3.3 Threshold 25.810 MeV
Cross Section (micro-barns)
600
500
400
300
200
100
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
17
Incident Energy (MeV)
8-0 -18

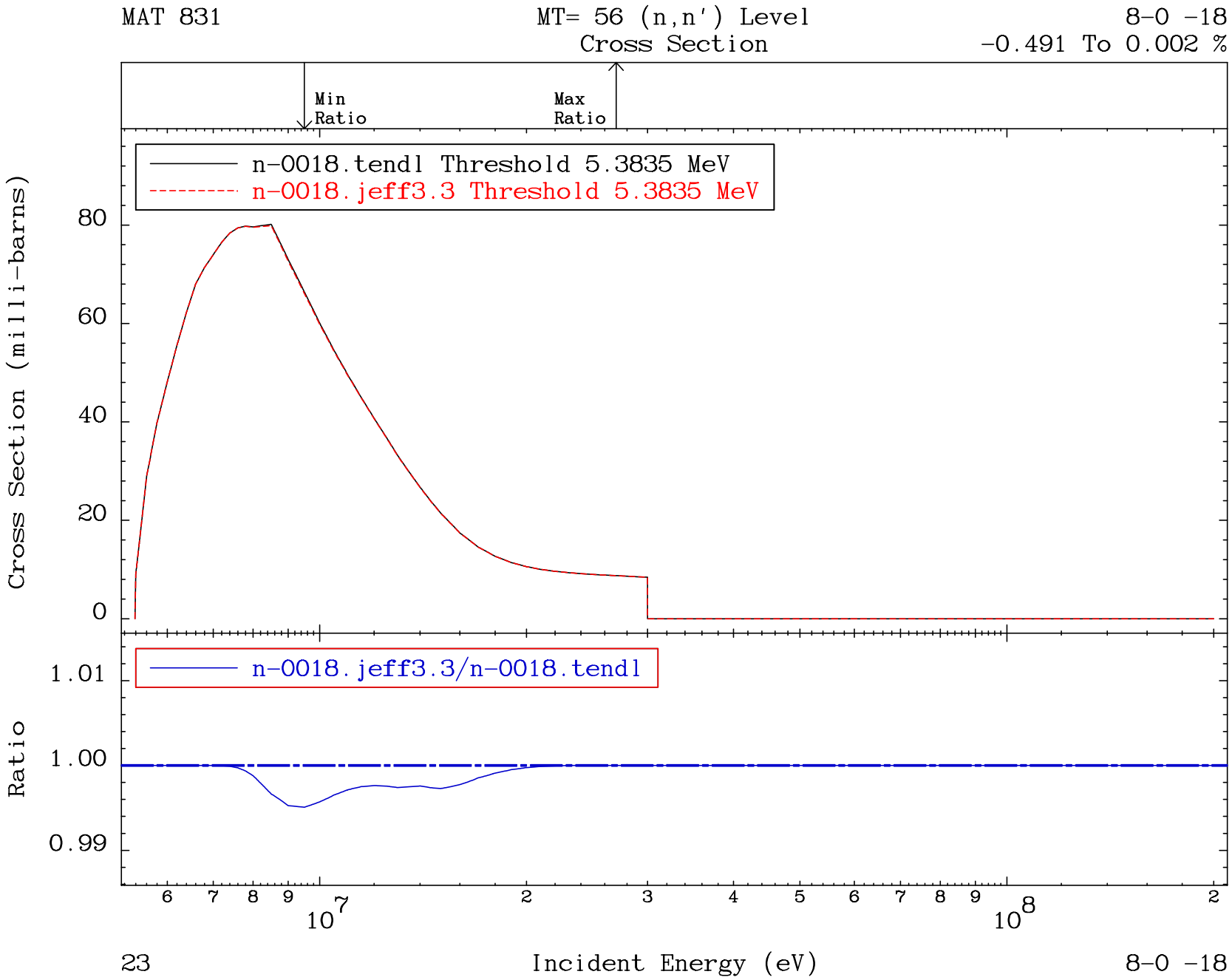

MAT 831
MT= 51 (n,n') Level
Cross Section
8-0 -18
-0.474 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 2.0931 MeV
n-0018.jeff3.3 Threshold 2.0931 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
18
Incident Energy (eV)
8-0 -18

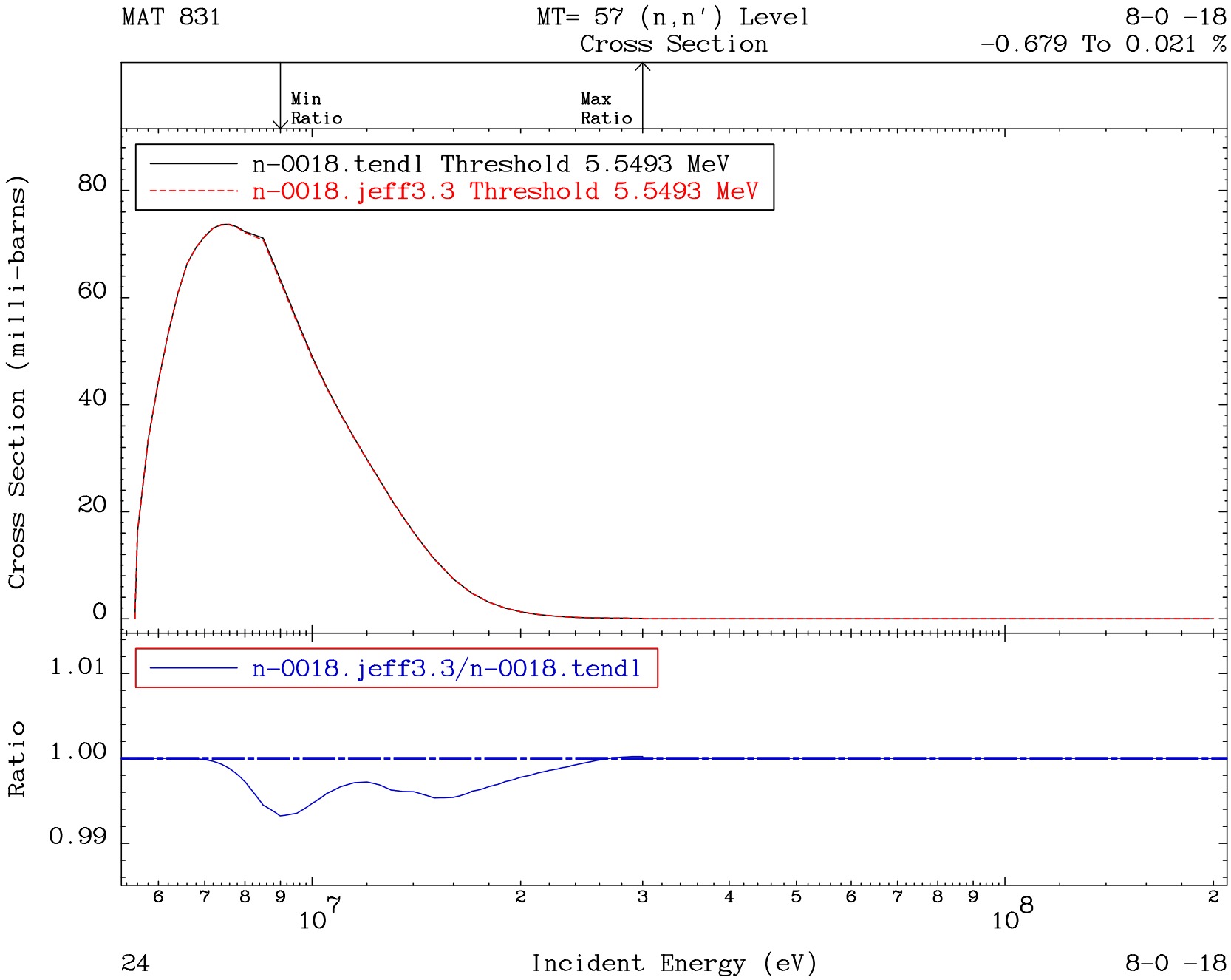

MAT 831
MT= 52 (n,n') Level
Cross Section
8-0 -18
-0.482 To 0.031 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 3.7541 MeV
n-0018.jeff3.3 Threshold 3.7541 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
19
Incident Energy (eV)
8-0 -18

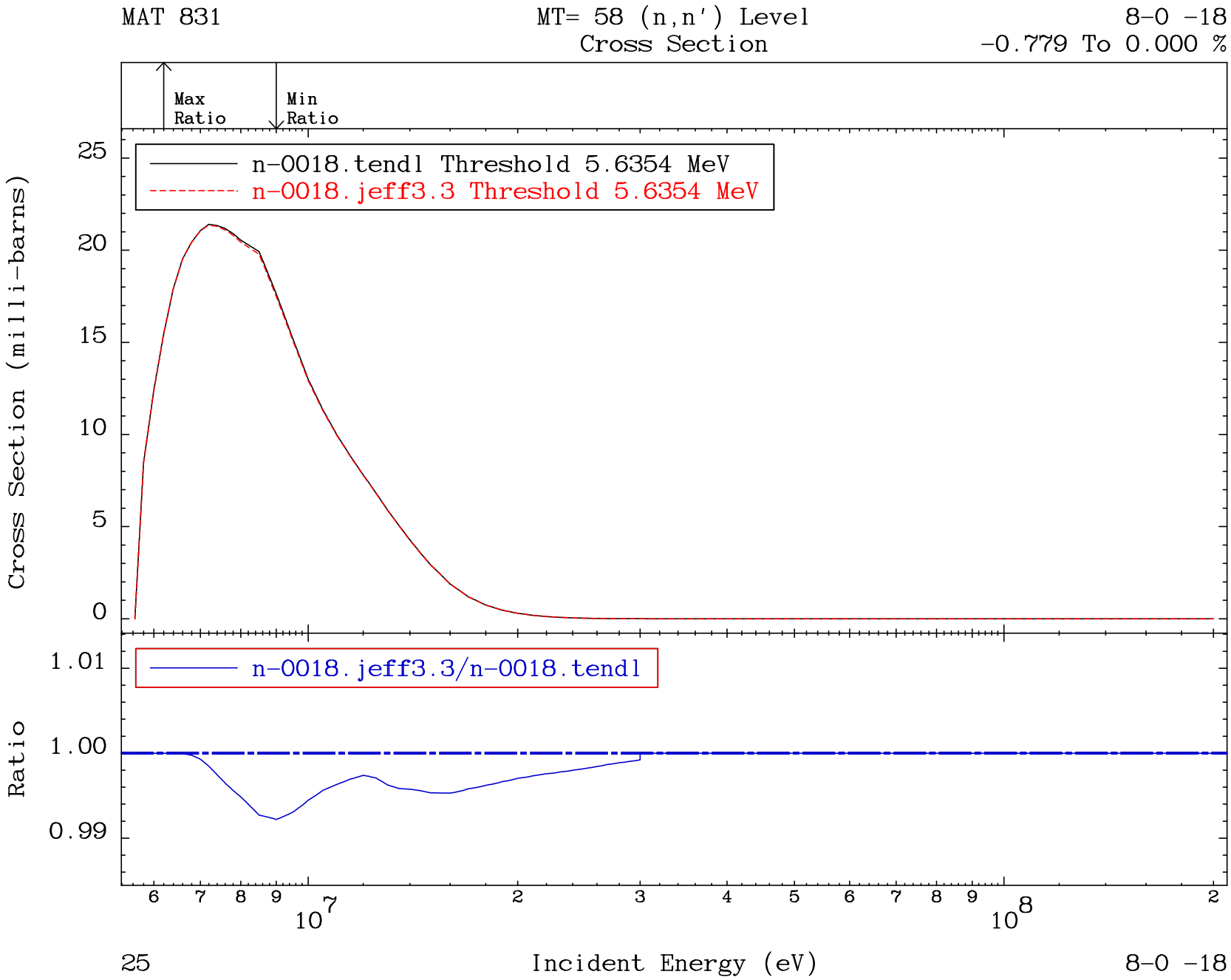

MAT 831
MT= 53 (n,n') Level
Cross Section
8-0 -18
-0.720 To 0.000 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 3.8374 MeV
n-0018.jeff3.3 Threshold 3.8374 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
8-0 -18

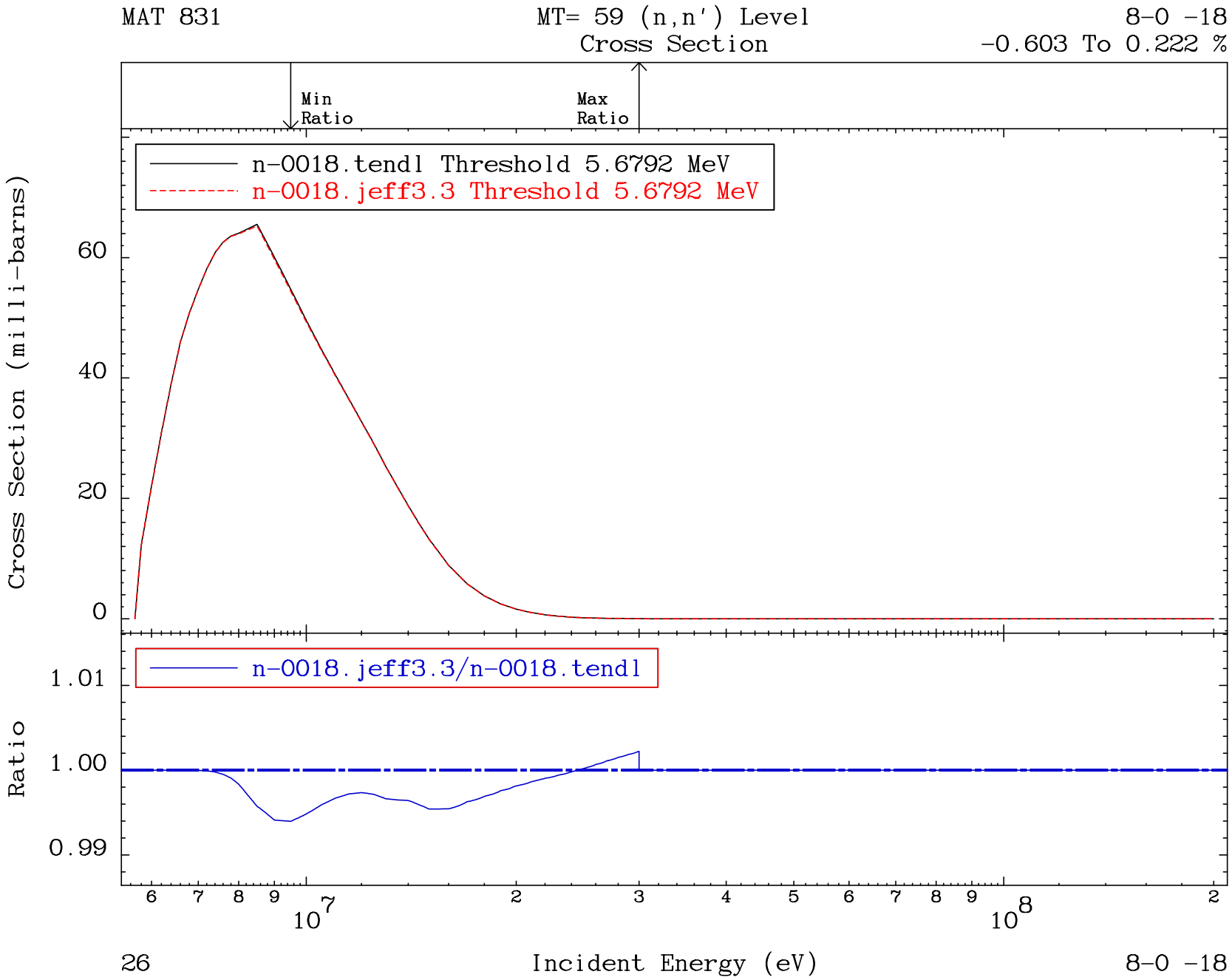

MAT 831
MT= 54 (n,n') Level
Cross Section
8-0 -18
-0.655 To 0.027 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 4.1401 MeV
n-0018.jeff3.3 Threshold 4.1401 MeV
Cross Section (milli-barns)
180
160
140
120
100
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
21
Incident Energy (eV)
8-0 -18

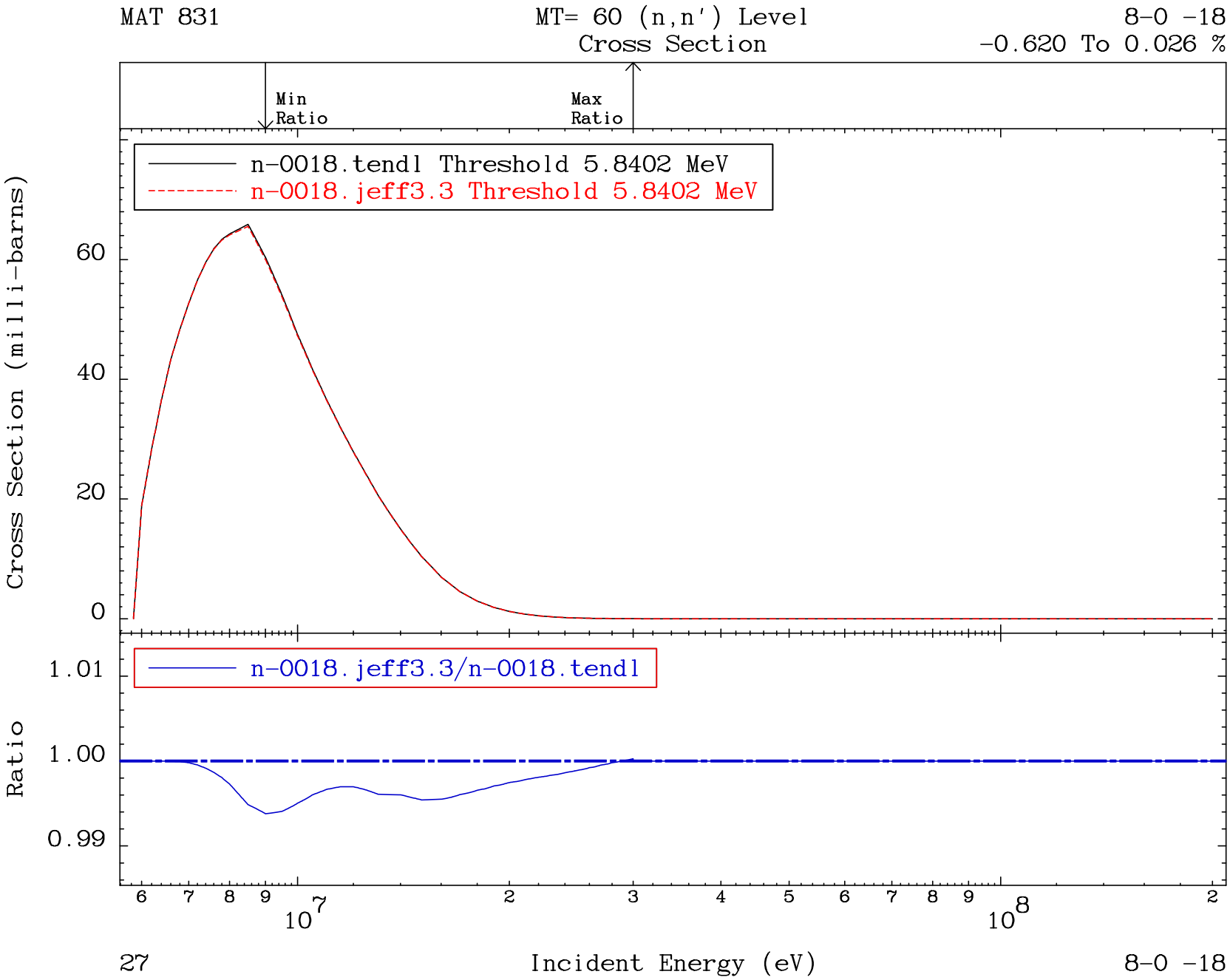

MAT 831
MT= 55 (n,n') Level
Cross Section
8-0 -18
-0.683 To 0.000 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 4.7052 MeV
n-0018.jeff3.3 Threshold 4.7052 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
8-0 -18

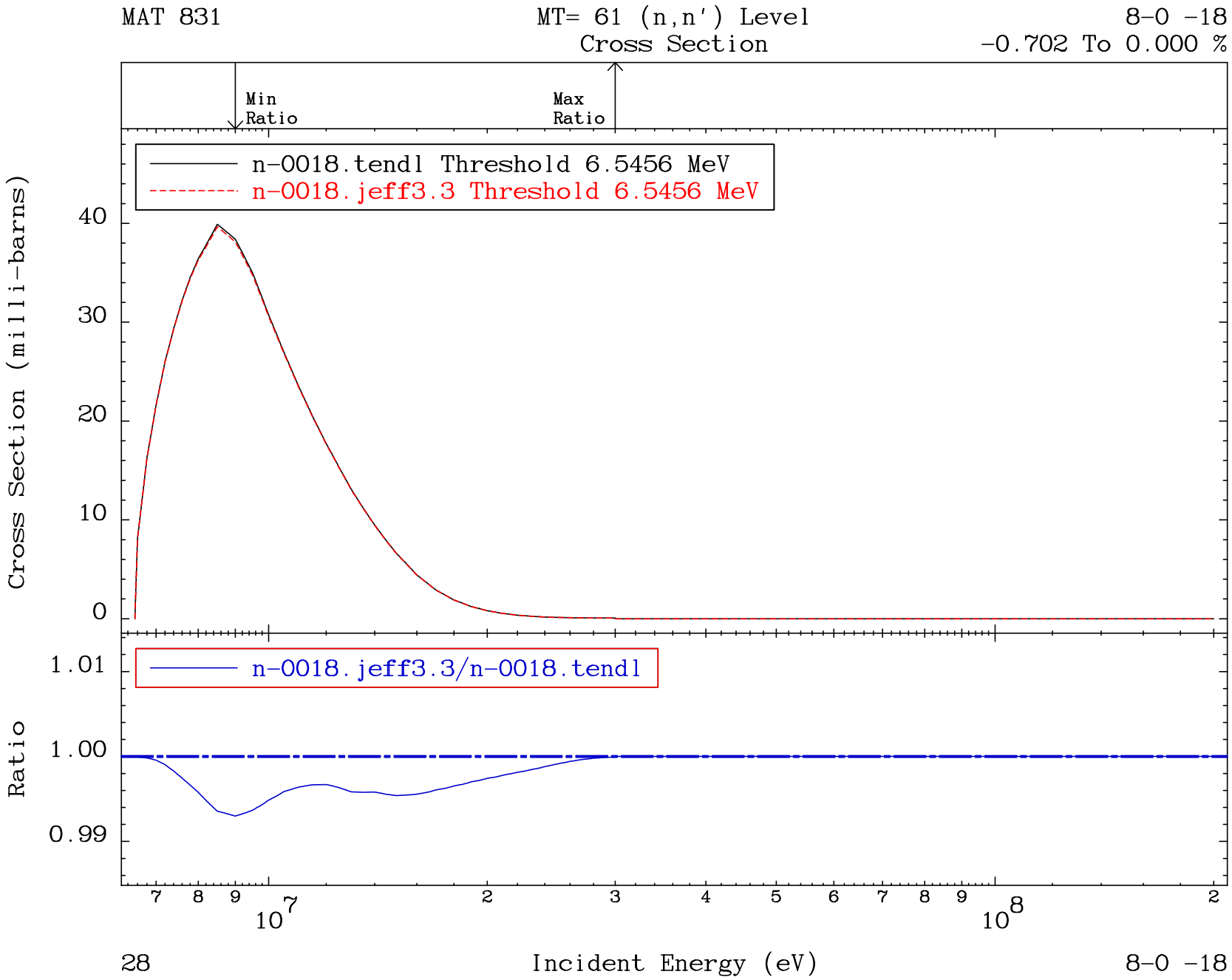

MAT 831
MT= 56 (n,n') Level
Cross Section
8-0 -18
-0.491 To 0.002 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 5.3835 MeV
n-0018.jeff3.3 Threshold 5.3835 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
23
Incident Energy (eV)
8-0 -18

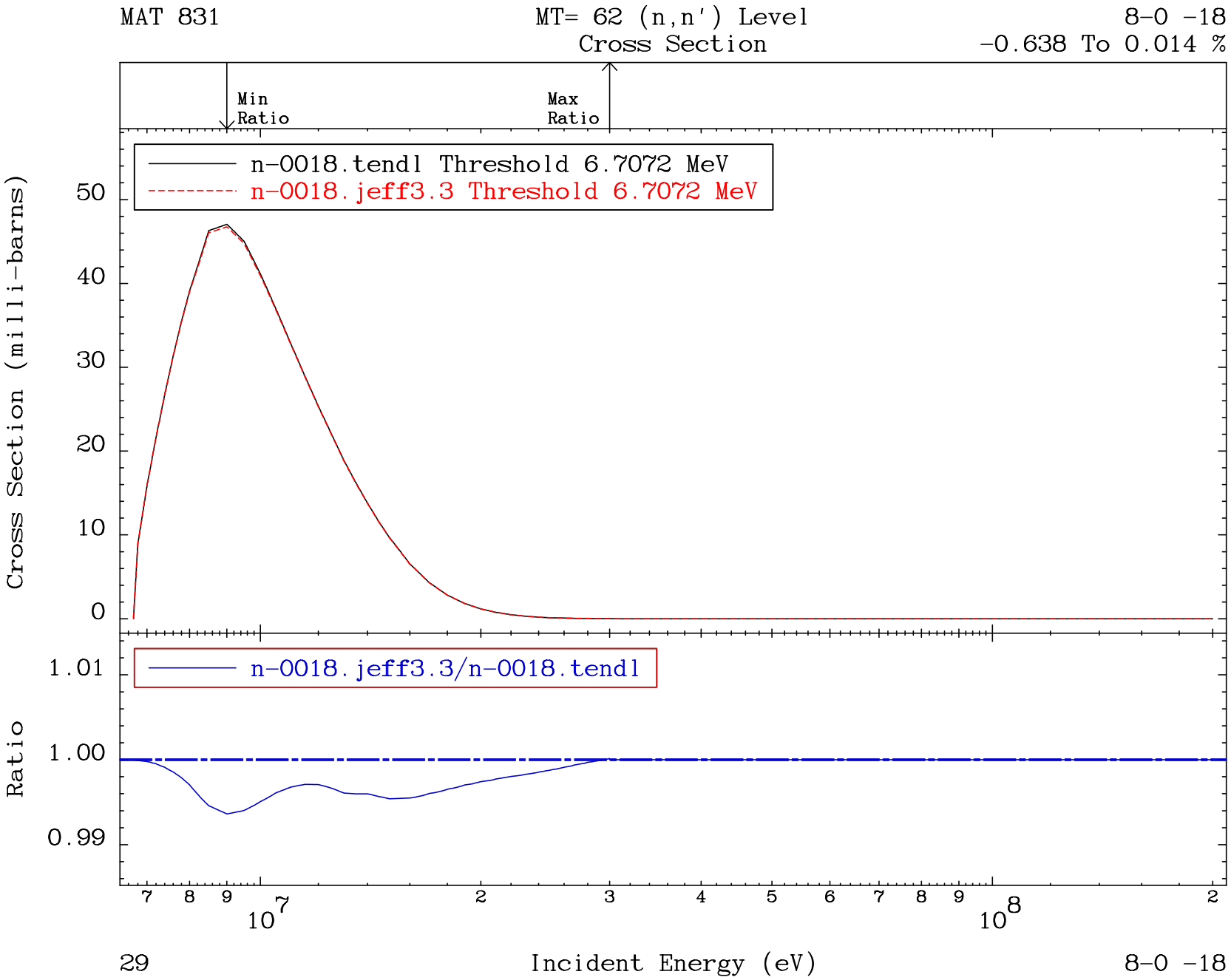

MAT 831
MT= 57 (n,n') Level
Cross Section
8-0 -18
-0.679 To 0.021 %
Min
Ratio
Max
Ratio
n-0018.tendl Threshold 5.5493 MeV
n-0018.jeff3.3 Threshold 5.5493 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
8-0 -18

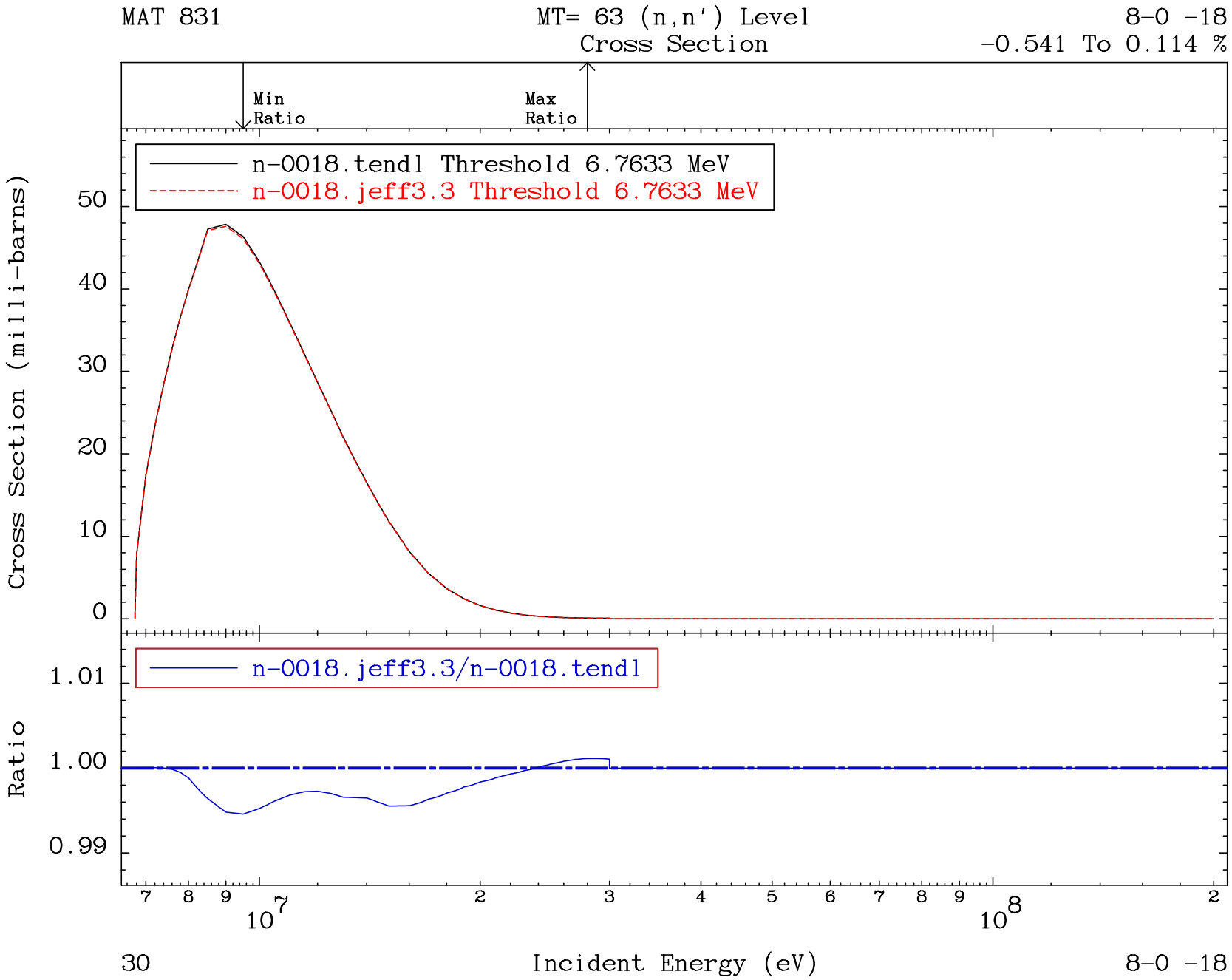

MAT 831
MT= 58 (n,n') Level
Cross Section
8-0 -18
-0.779 To 0.000 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 5.6354 MeV
n-0018.jeff3.3 Threshold 5.6354 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
8-0 -18

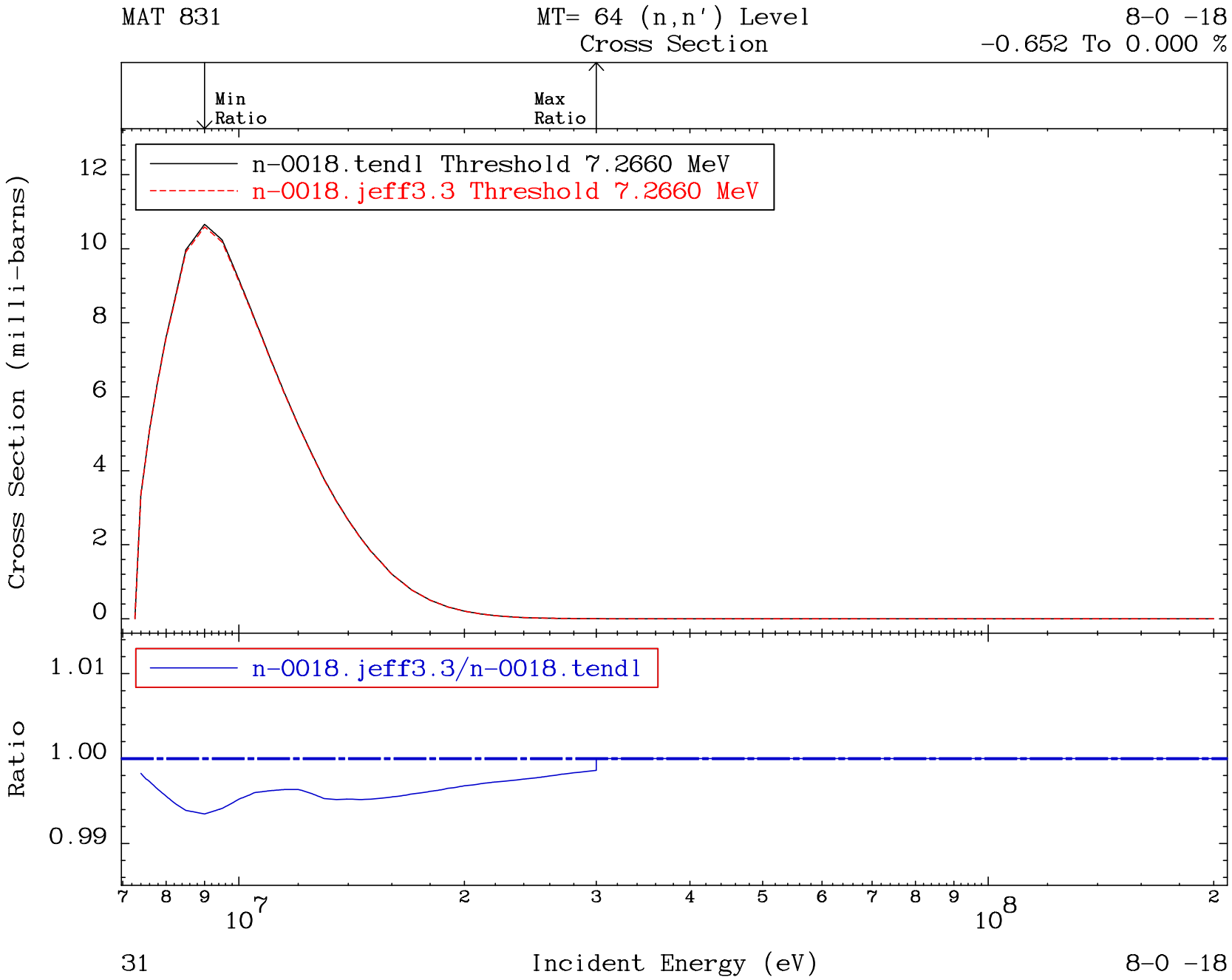

MAT 831
MT= 59 (n,n') Level
Cross Section
8-0 -18
-0.603 To 0.222 %
Min
Ratio
Max
Ratio
n-0018.tendl Threshold 5.6792 MeV
n-0018.jeff3.3 Threshold 5.6792 MeV
Cross Section (milli-barns)
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
26
Incident Energy (eV)
8-0 -18

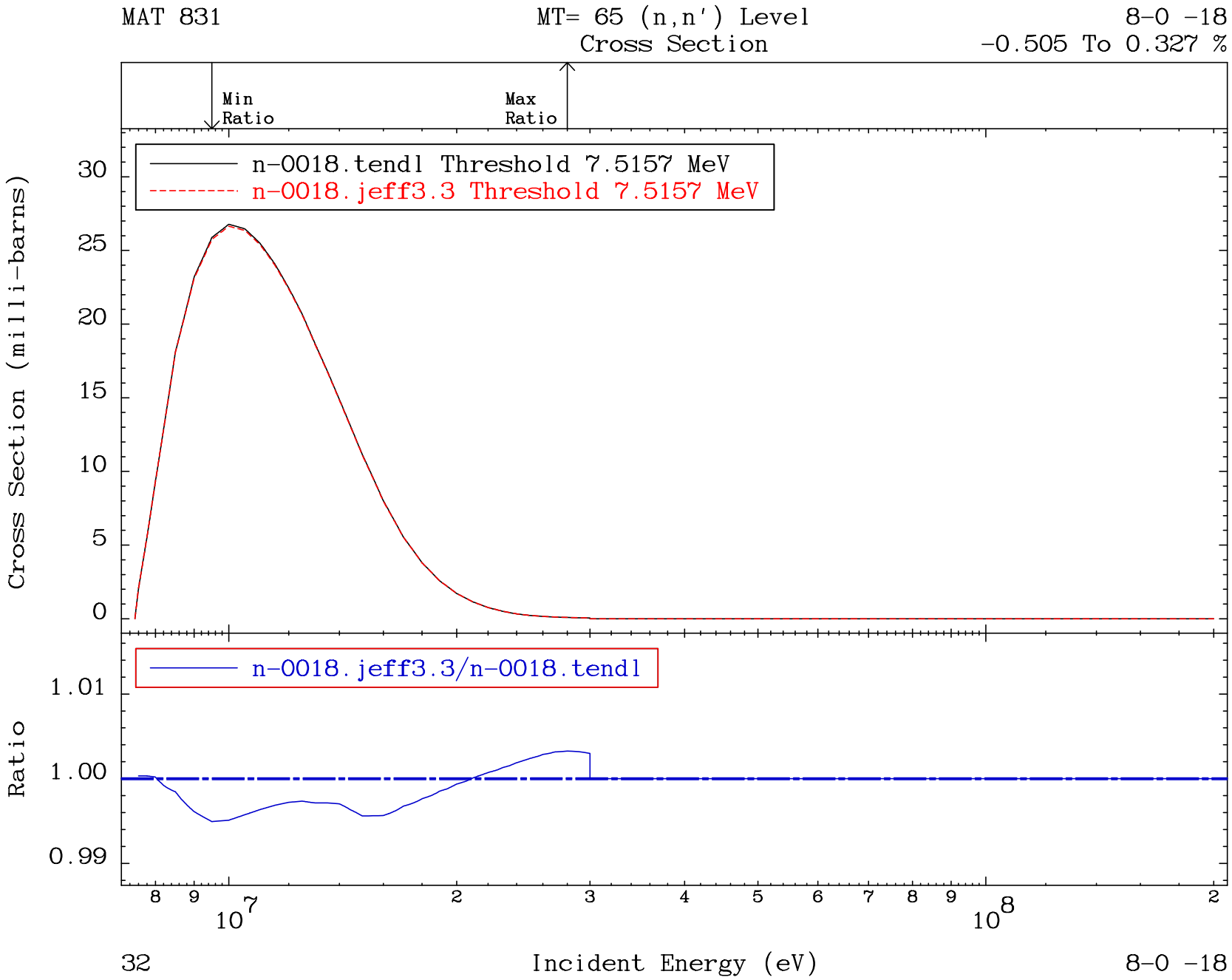

MAT 831
MT= 60 (n,n') Level
Cross Section
8-0 -18
-0.620 To 0.026 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 5.8402 MeV
n-0018.jeff3.3 Threshold 5.8402 MeV
Cross Section (milli-barns)
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
27
Incident Energy (eV)
8-0 -18

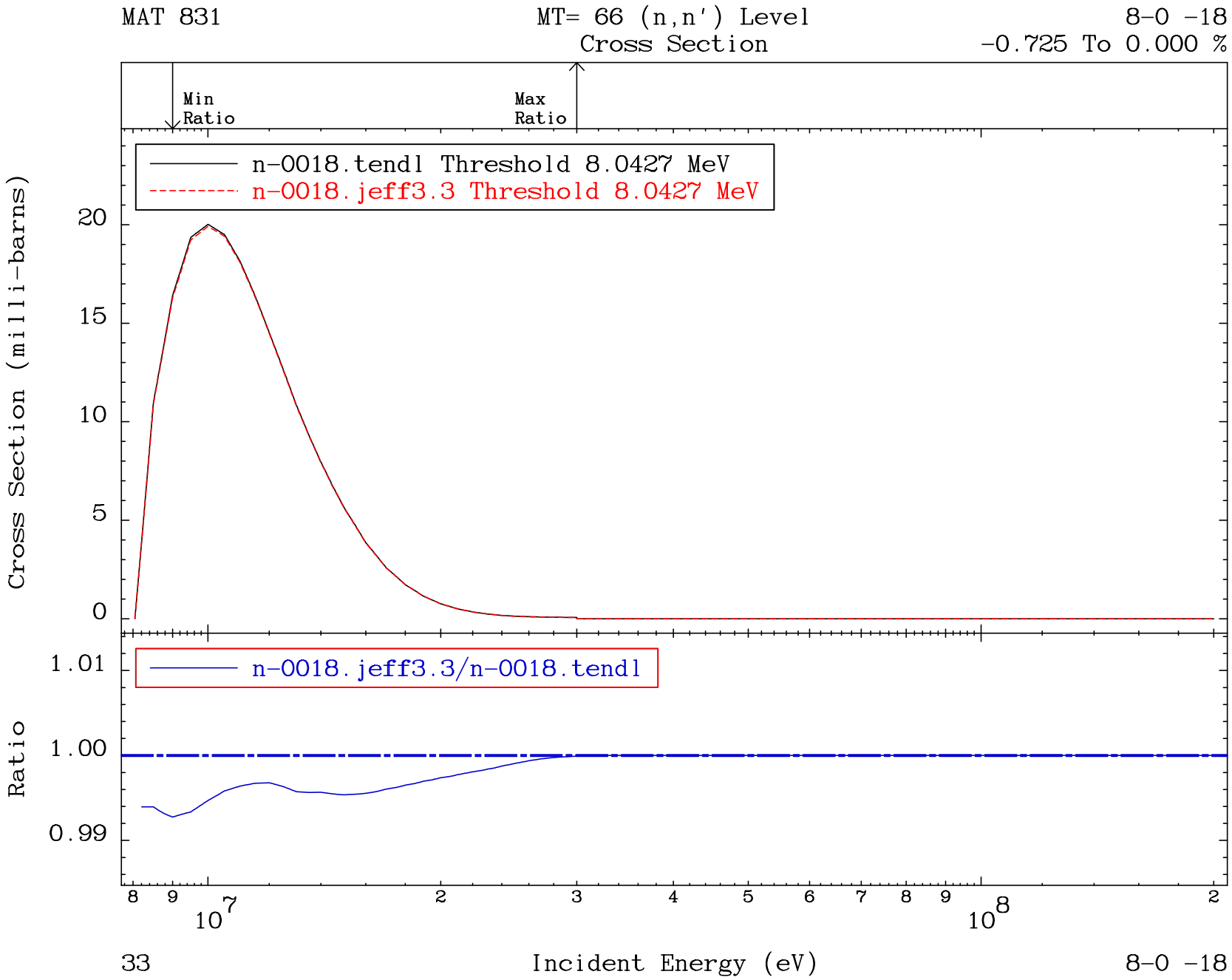

MAT 831
MT= 61 (n,n') Level
Cross Section
8-0 -18
-0.702 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 6.5456 MeV
n-0018.jeff3.3 Threshold 6.5456 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
8-0 -18

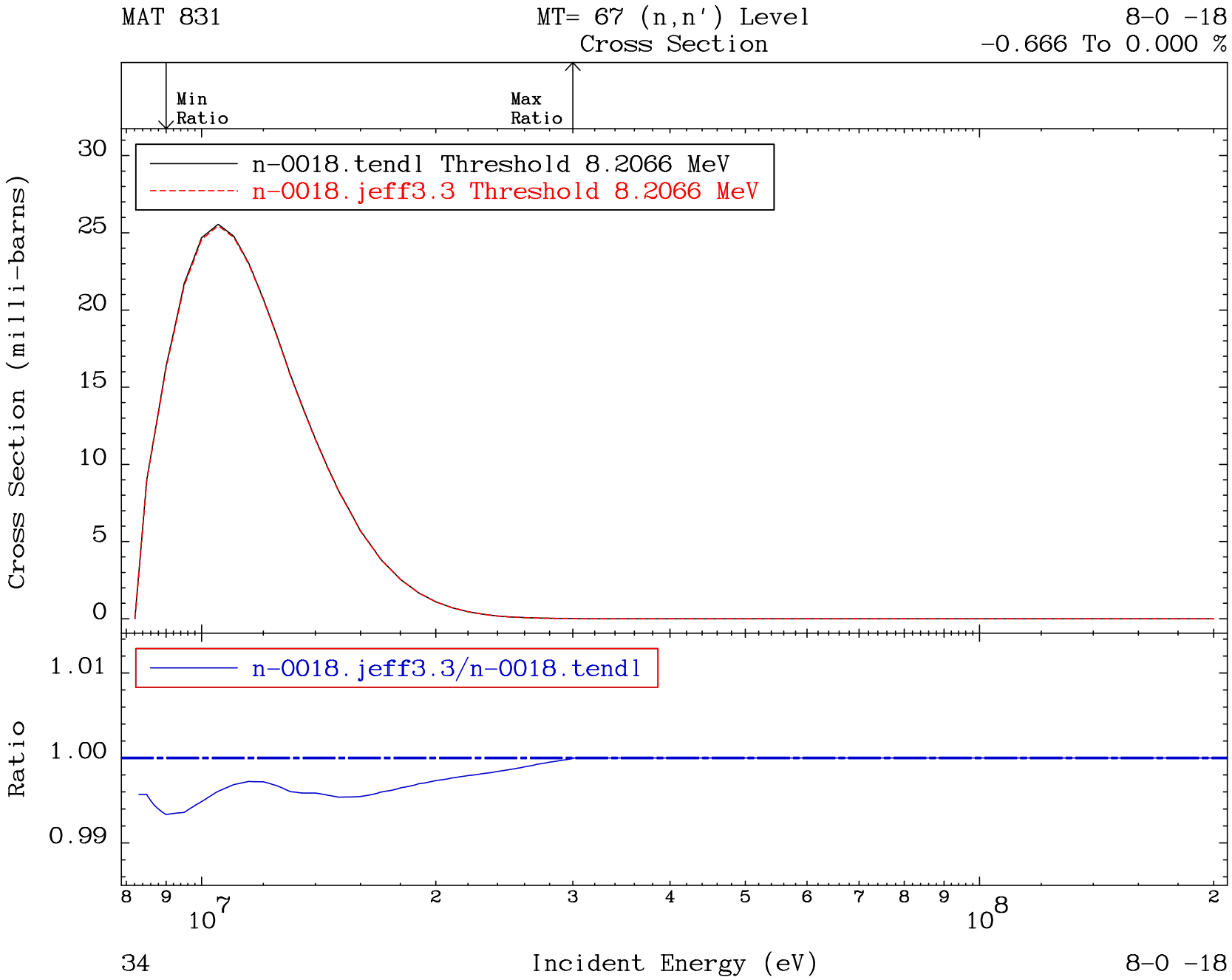

MAT 831
MT= 62 (n,n') Level
Cross Section
8-0 -18
-0.638 To 0.014 %
Min
Ratio
Max
Ratio
n-0018.tendl Threshold 6.7072 MeV
n-0018.jeff3.3 Threshold 6.7072 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
8-0 -18

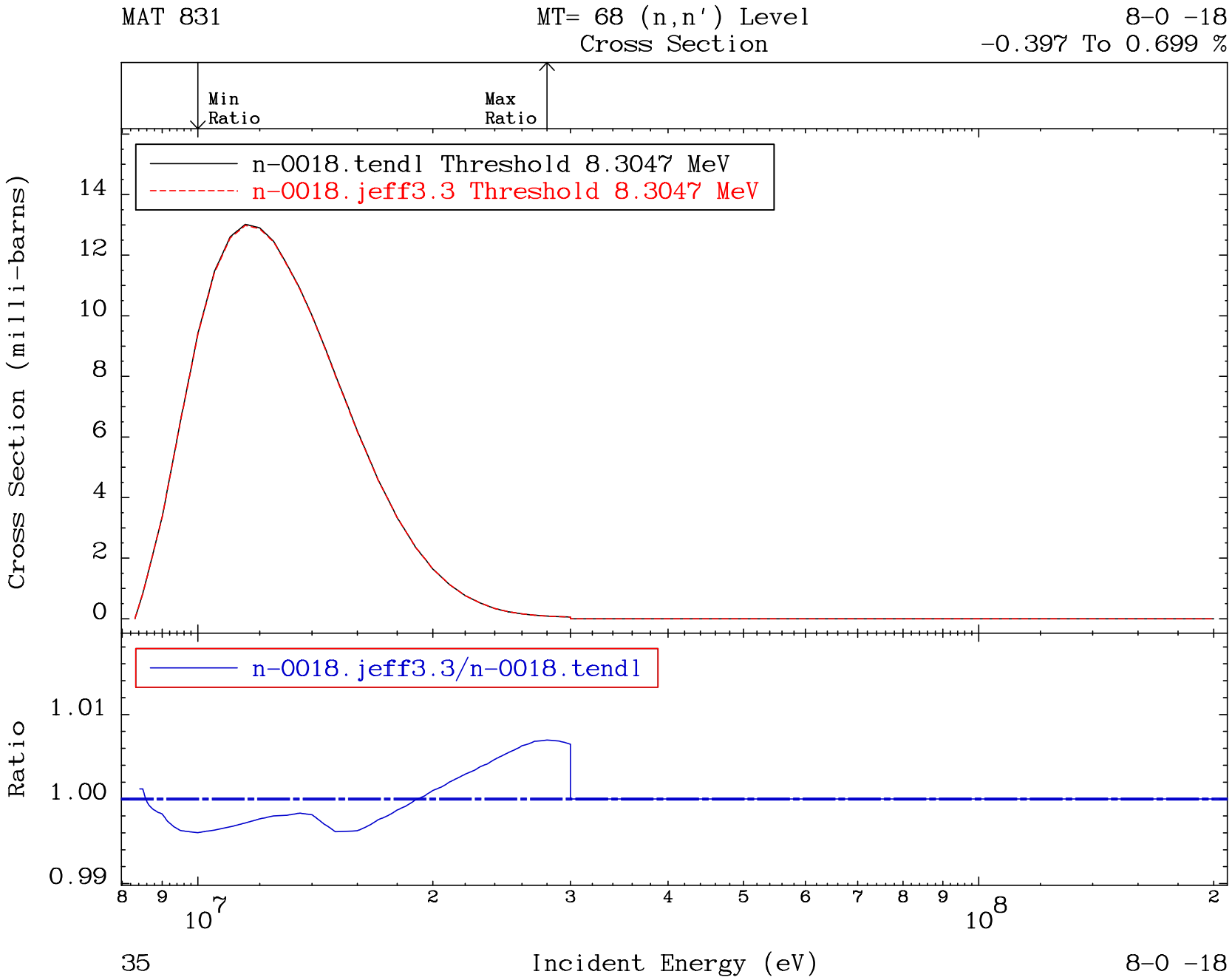

MAT 831
MT= 63 (n,n') Level
Cross Section
8-0 -18
-0.541 To 0.114 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 6.7633 MeV
n-0018.jeff3.3 Threshold 6.7633 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
30
Incident Energy (eV)
8-0 -18

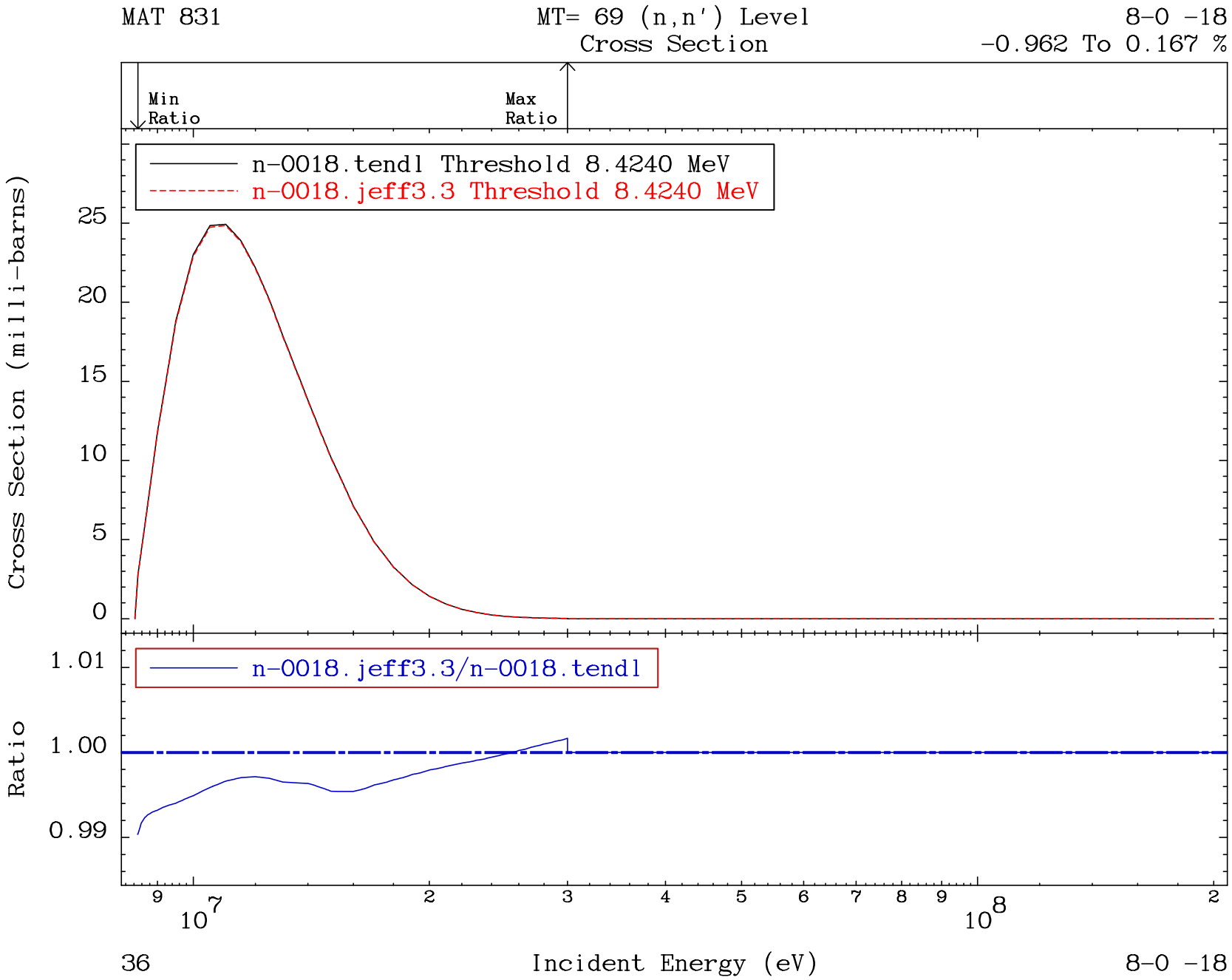

MAT 831
MT= 64 (n,n') Level
Cross Section
8-0 -18
-0.652 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 7.2660 MeV
n-0018.jeff3.3 Threshold 7.2660 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
31
Incident Energy (eV)
8-0 -18

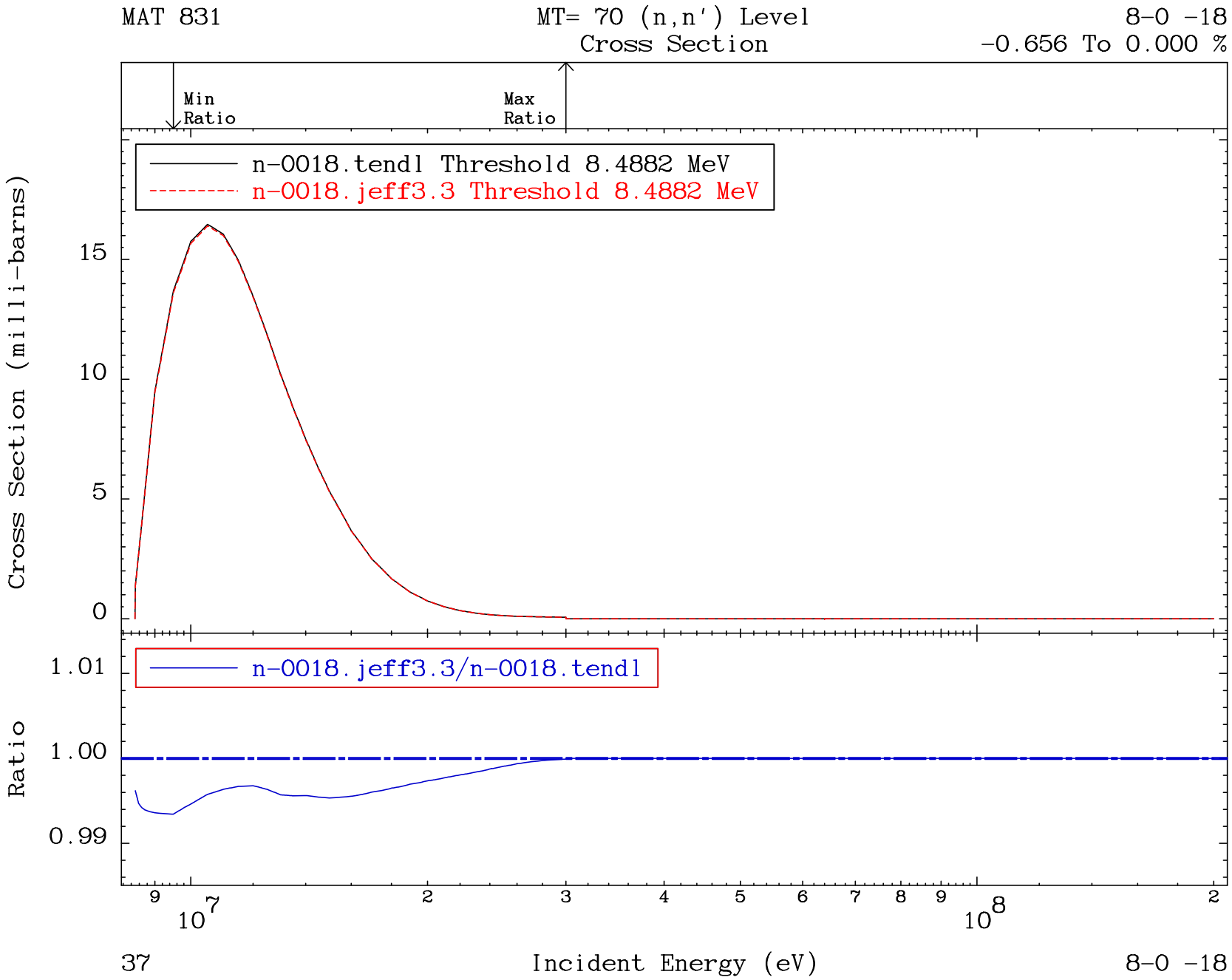

MAT 831
MT= 65 (n,n') Level
Cross Section
8-0 -18
-0.505 To 0.327 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 7.5157 MeV
n-0018.jeff3.3 Threshold 7.5157 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
32
Incident Energy (eV)
8-0 -18

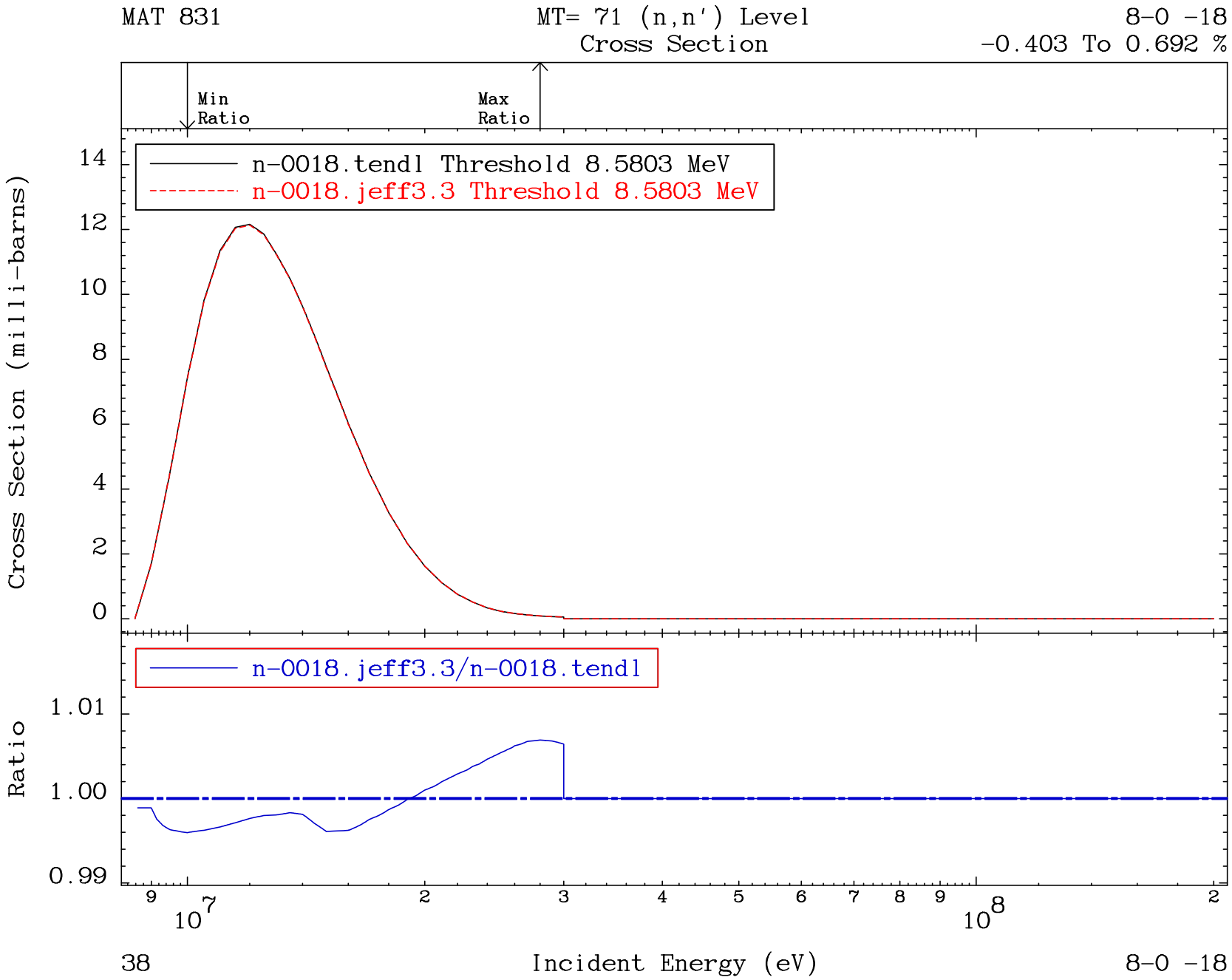

MAT 831
MT= 66 (n,n') Level
Cross Section
8-0 -18
-0.725 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.0427 MeV
n-0018.jeff3.3 Threshold 8.0427 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
33
Incident Energy (eV)
8-0 -18

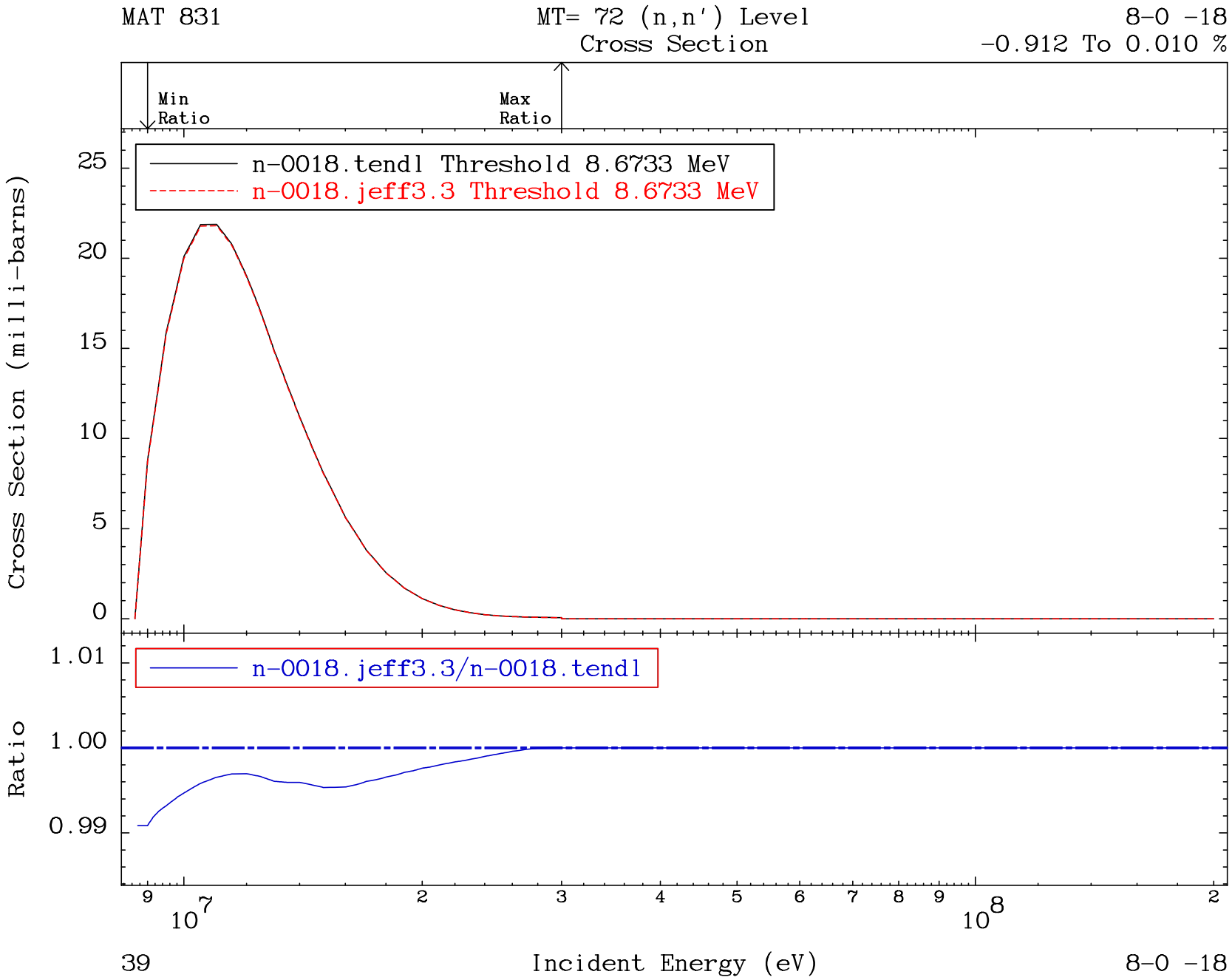

MAT 831
MT= 67 (n,n') Level
Cross Section
8-0 -18
-0.666 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.2066 MeV
n-0018.jeff3.3 Threshold 8.2066 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
34
Incident Energy (eV)
8-0 -18

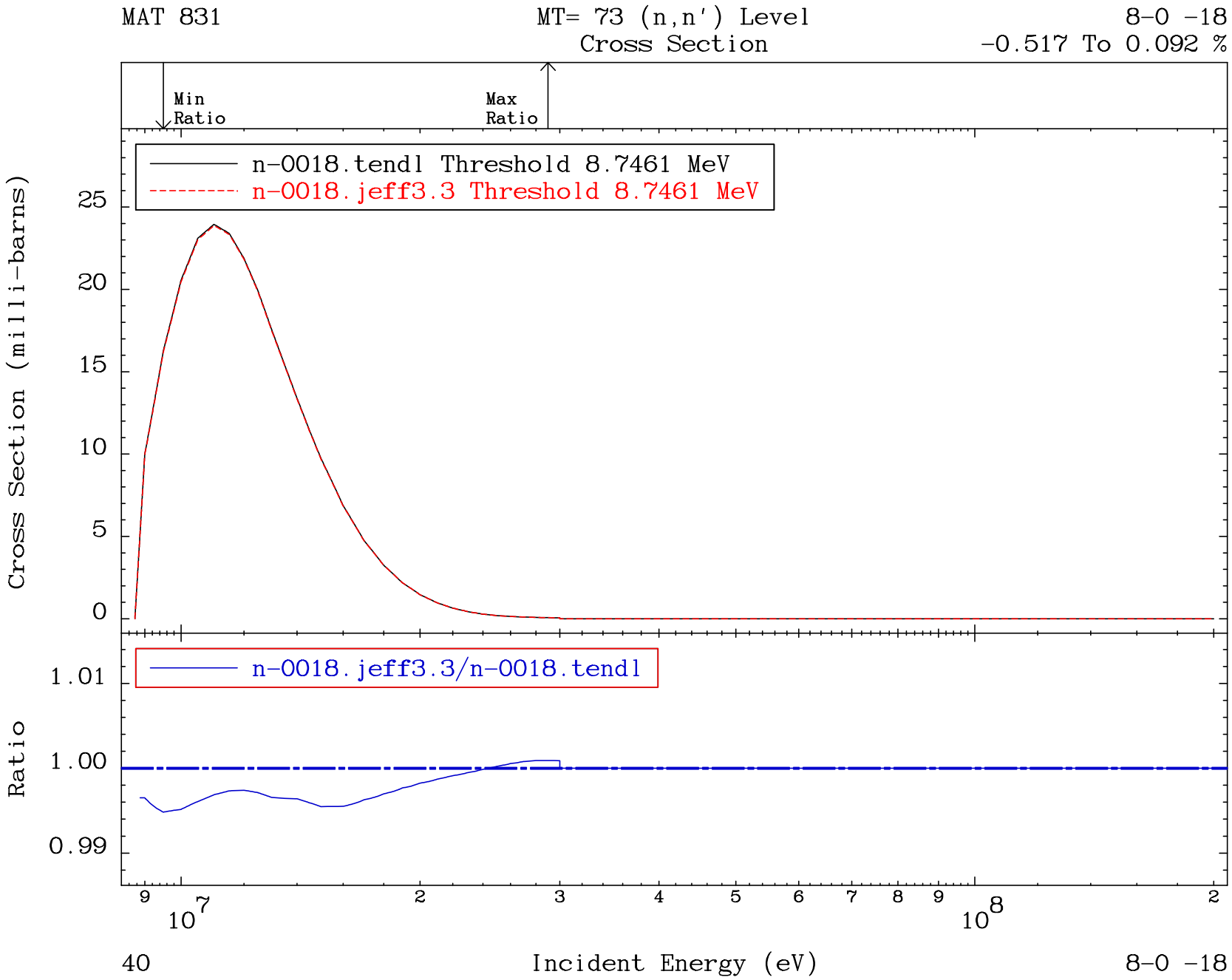

MAT 831
MT= 68 (n,n') Level
Cross Section
8-0 -18
-0.397 To 0.699 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.3047 MeV
n-0018.jeff3.3 Threshold 8.3047 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
35
Incident Energy (eV)
8-0 -18

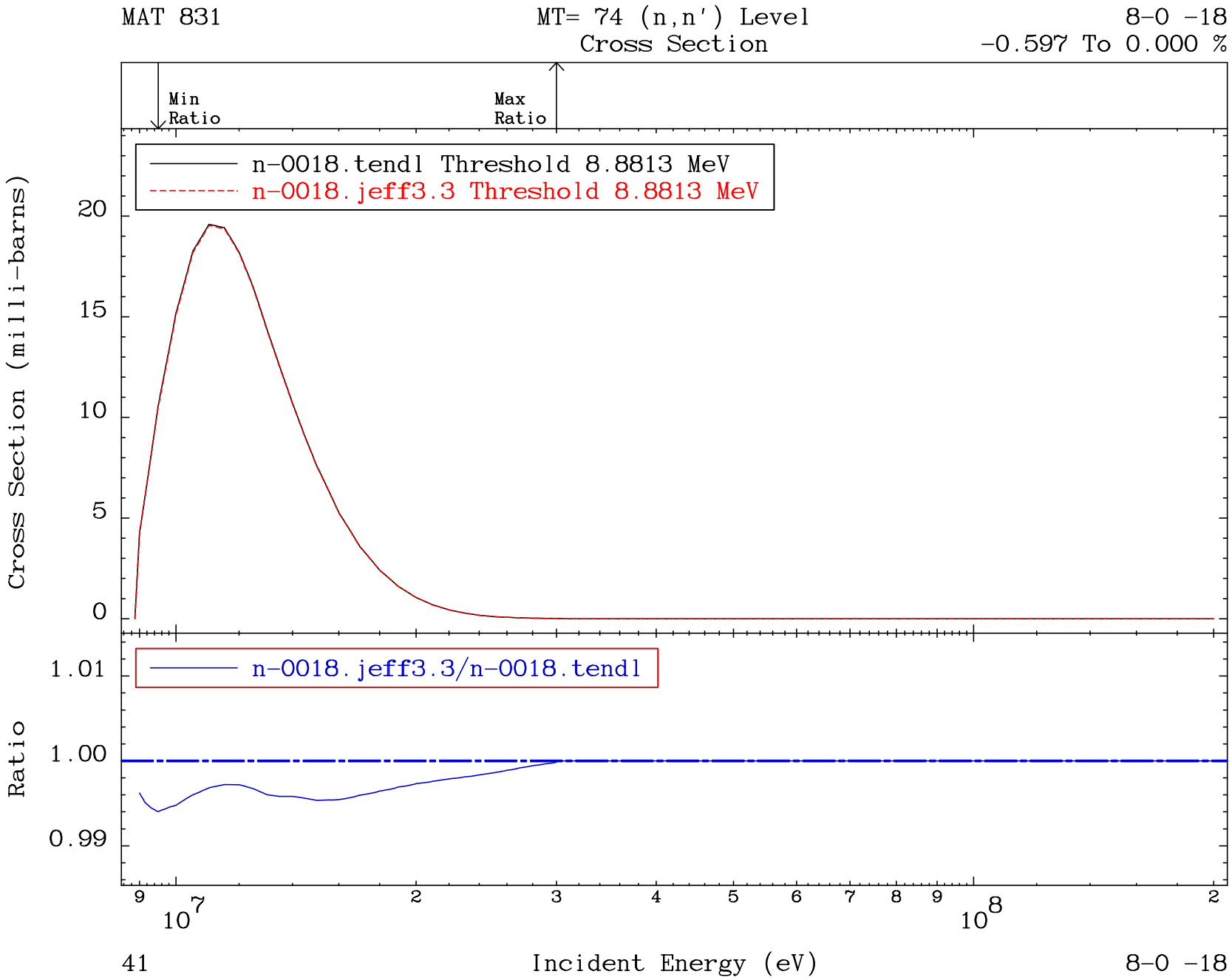

MAT 831
MT= 69 (n,n') Level
Cross Section
8-0 -18
-0.962 To 0.167 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.4240 MeV
n-0018.jeff3.3 Threshold 8.4240 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
36
Incident Energy (eV)
8-0 -18

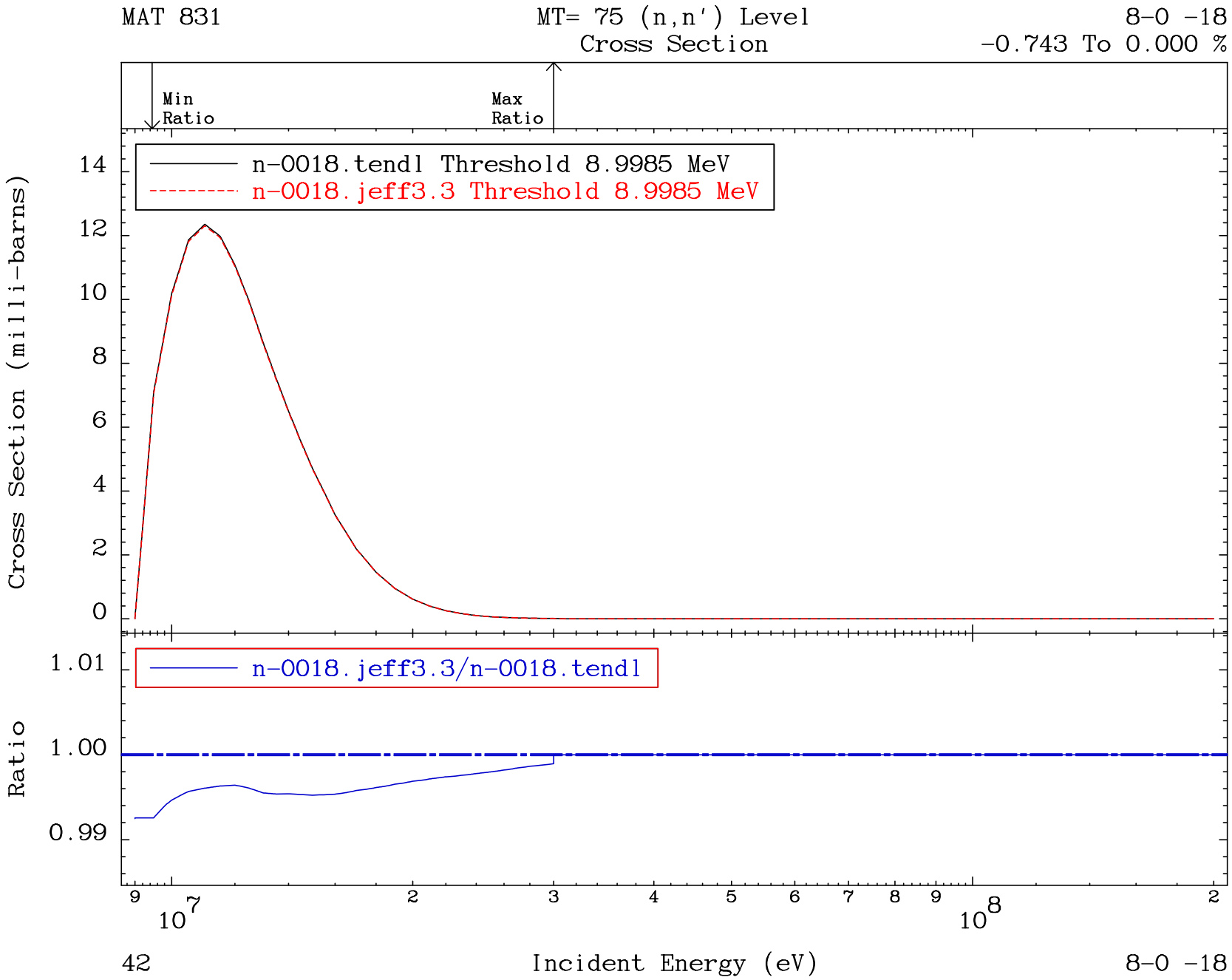

MAT 831
MT= 70 (n,n') Level
Cross Section
8-0 -18
-0.656 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.4882 MeV
n-0018.jeff3.3 Threshold 8.4882 MeV
Cross Section (milli-barns)
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
37
Incident Energy (eV)
8-0 -18

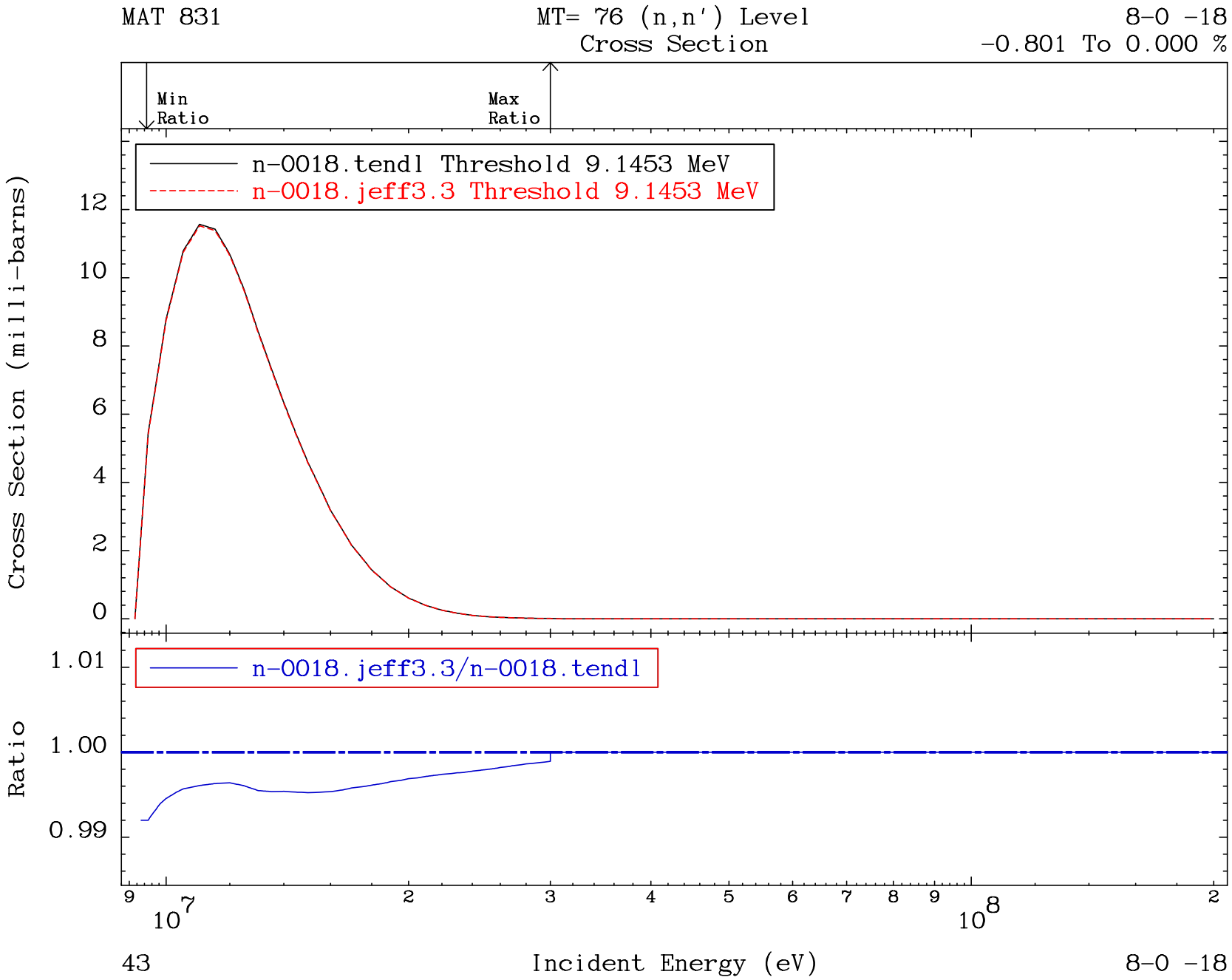

MAT 831
MT= 71 (n,n') Level
Cross Section
8-0 -18
-0.403 To 0.692 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.5803 MeV
n-0018.jeff3.3 Threshold 8.5803 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
38
Incident Energy (eV)
8-0 -18

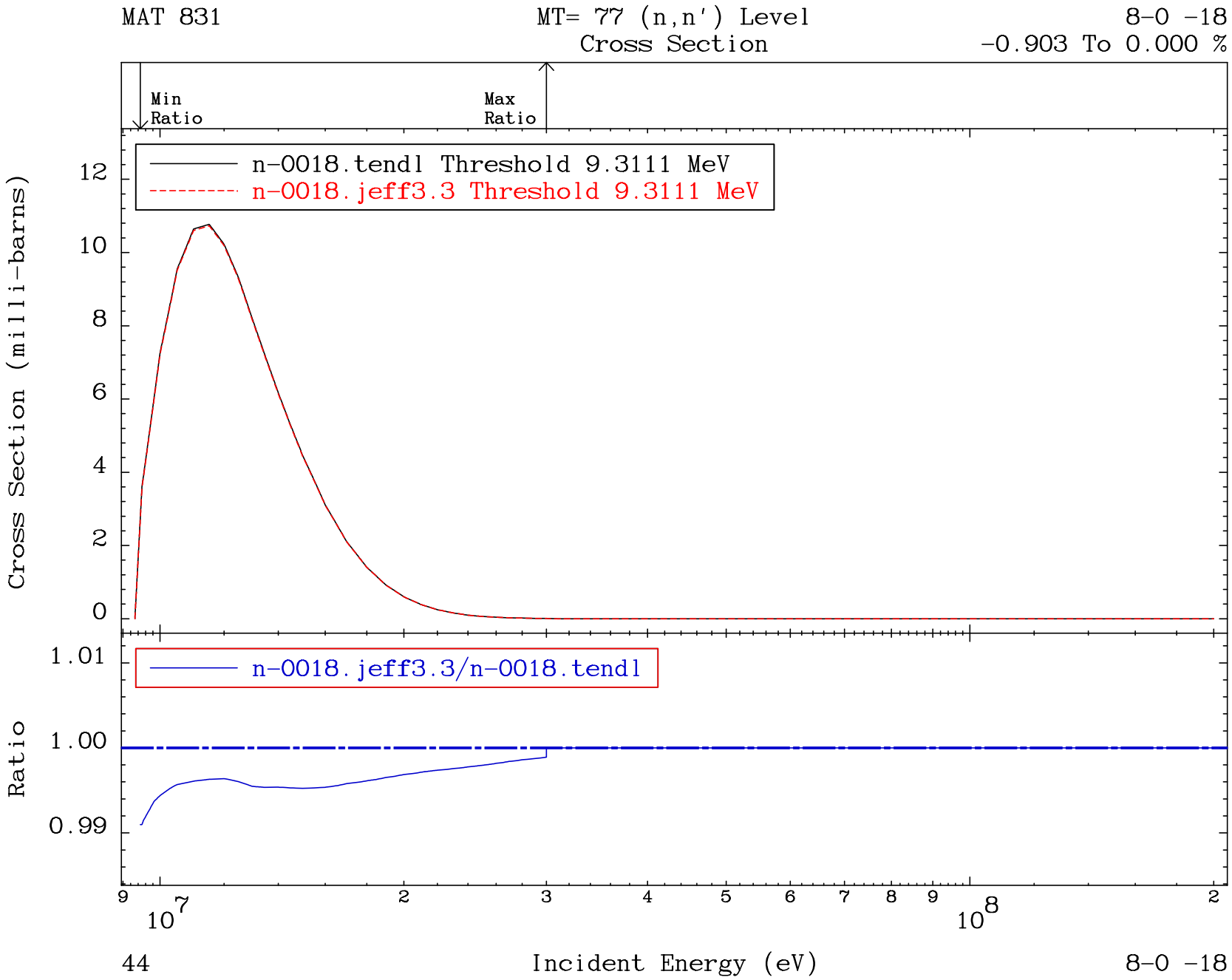

MAT 831
MT= 72 (n,n') Level
Cross Section
8-0 -18
-0.912 To 0.010 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.6733 MeV
n-0018.jeff3.3 Threshold 8.6733 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
39
Incident Energy (eV)
8-0 -18

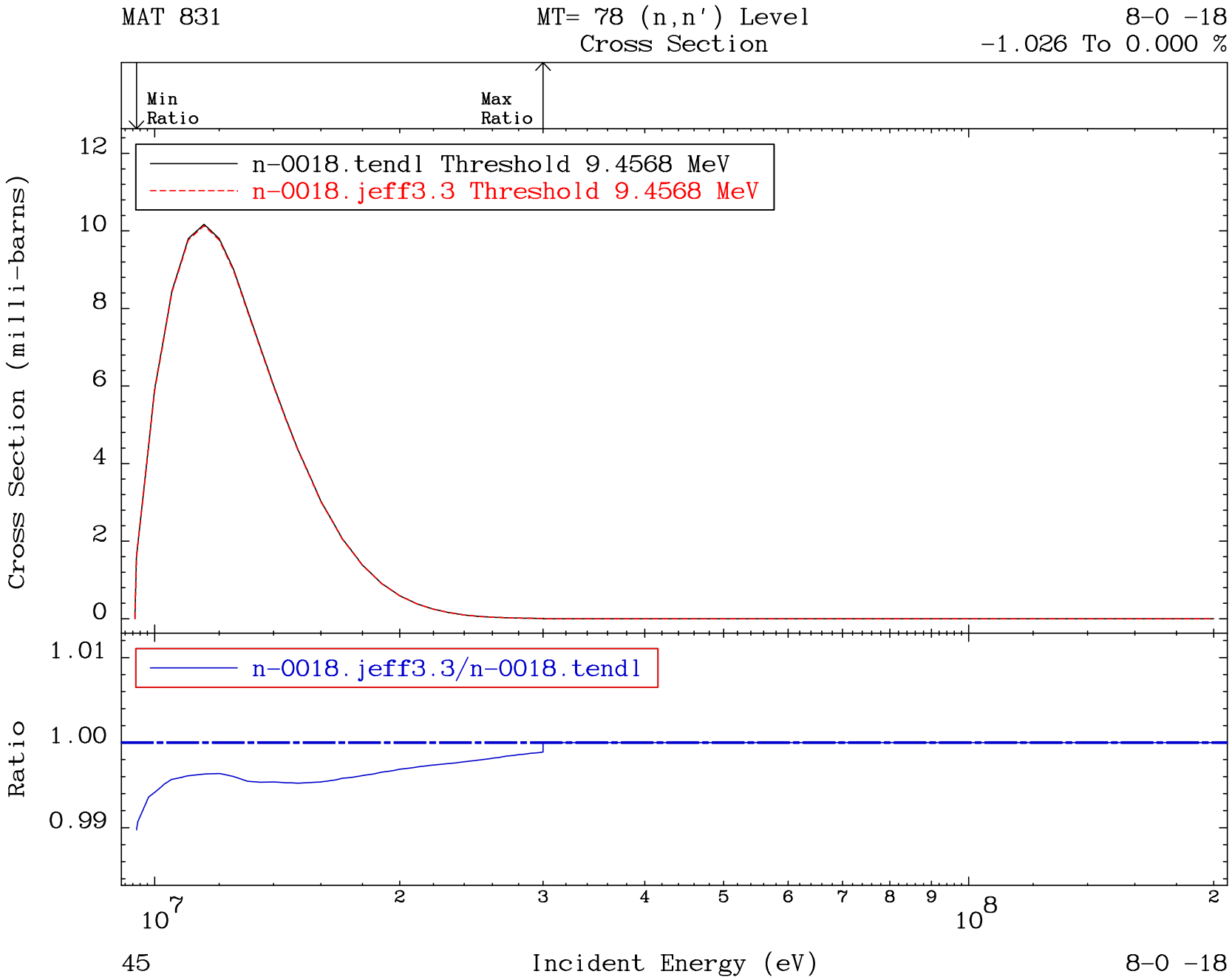

MAT 831
MT= 73 (n,n') Level
Cross Section
8-0 -18
-0.517 To 0.092 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.7461 MeV
n-0018.jeff3.3 Threshold 8.7461 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
40
Incident Energy (eV)
8-0 -18

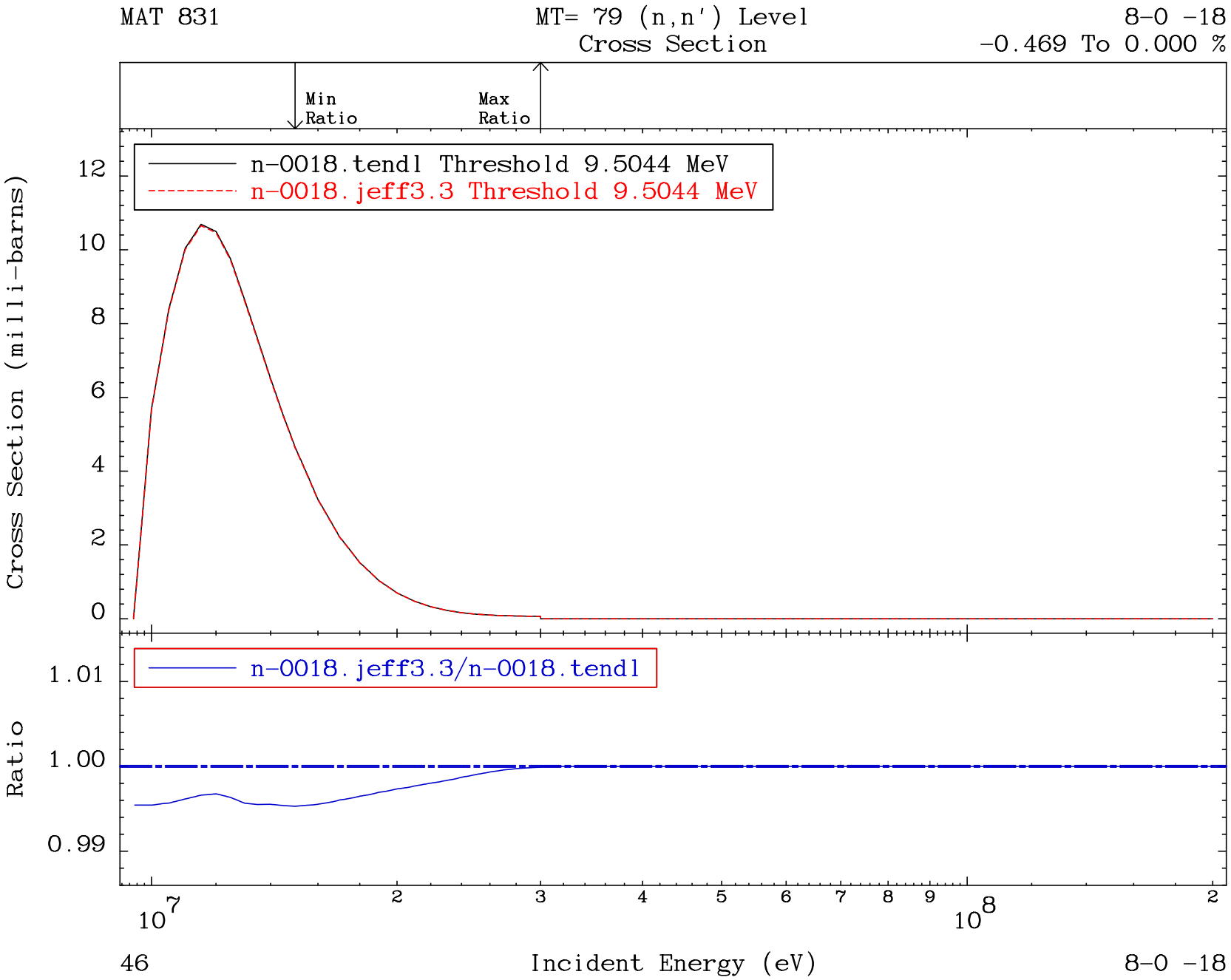

MAT 831
MT= 74 (n,n') Level
Cross Section
8-0 -18
-0.597 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.8813 MeV
n-0018.jeff3.3 Threshold 8.8813 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
41
Incident Energy (eV)
8-0 -18

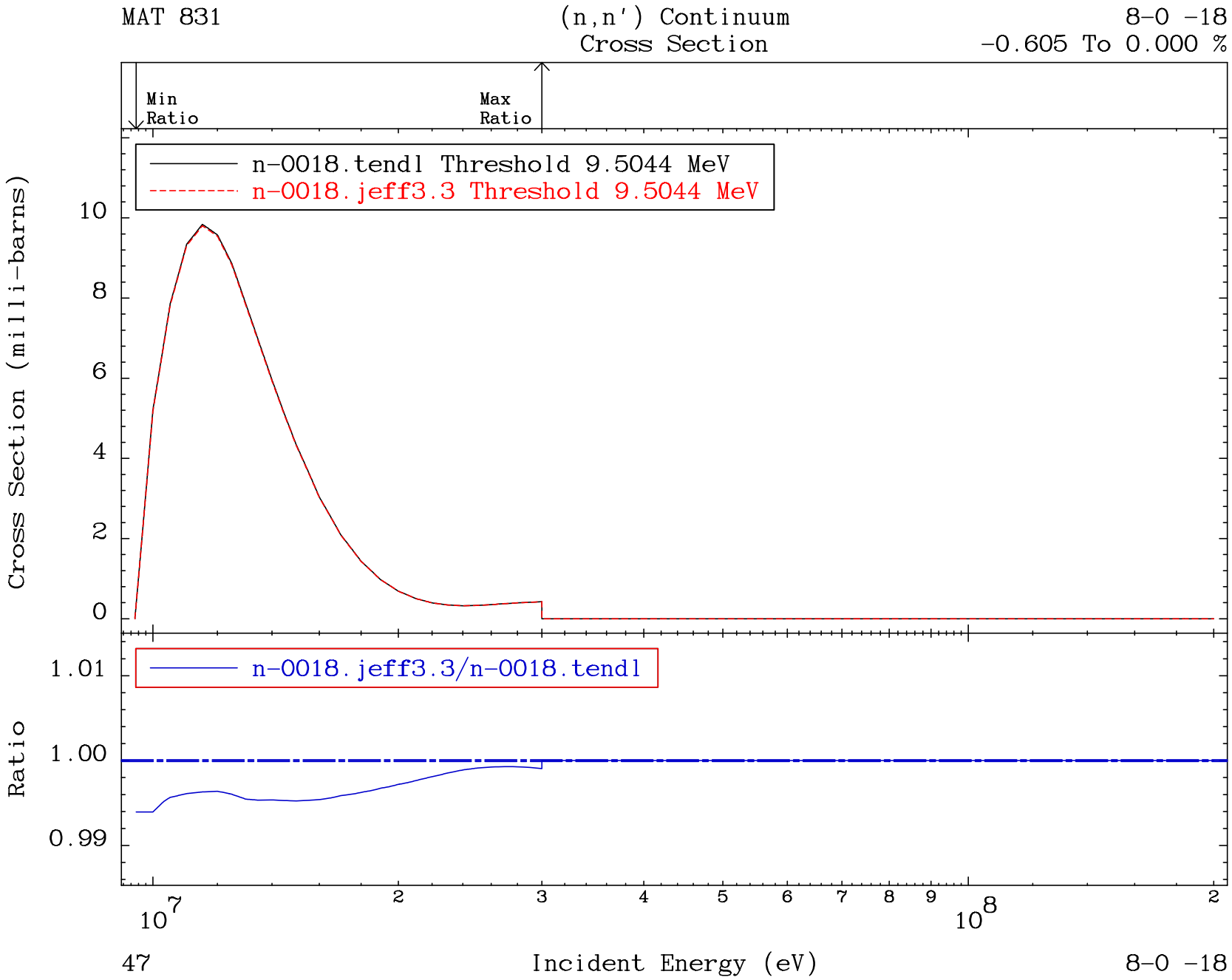

MAT 831
MT= 75 (n,n') Level
Cross Section
8-0 -18
-0.743 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 8.9985 MeV
n-0018.jeff3.3 Threshold 8.9985 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
42
Incident Energy (eV)
8-0 -18

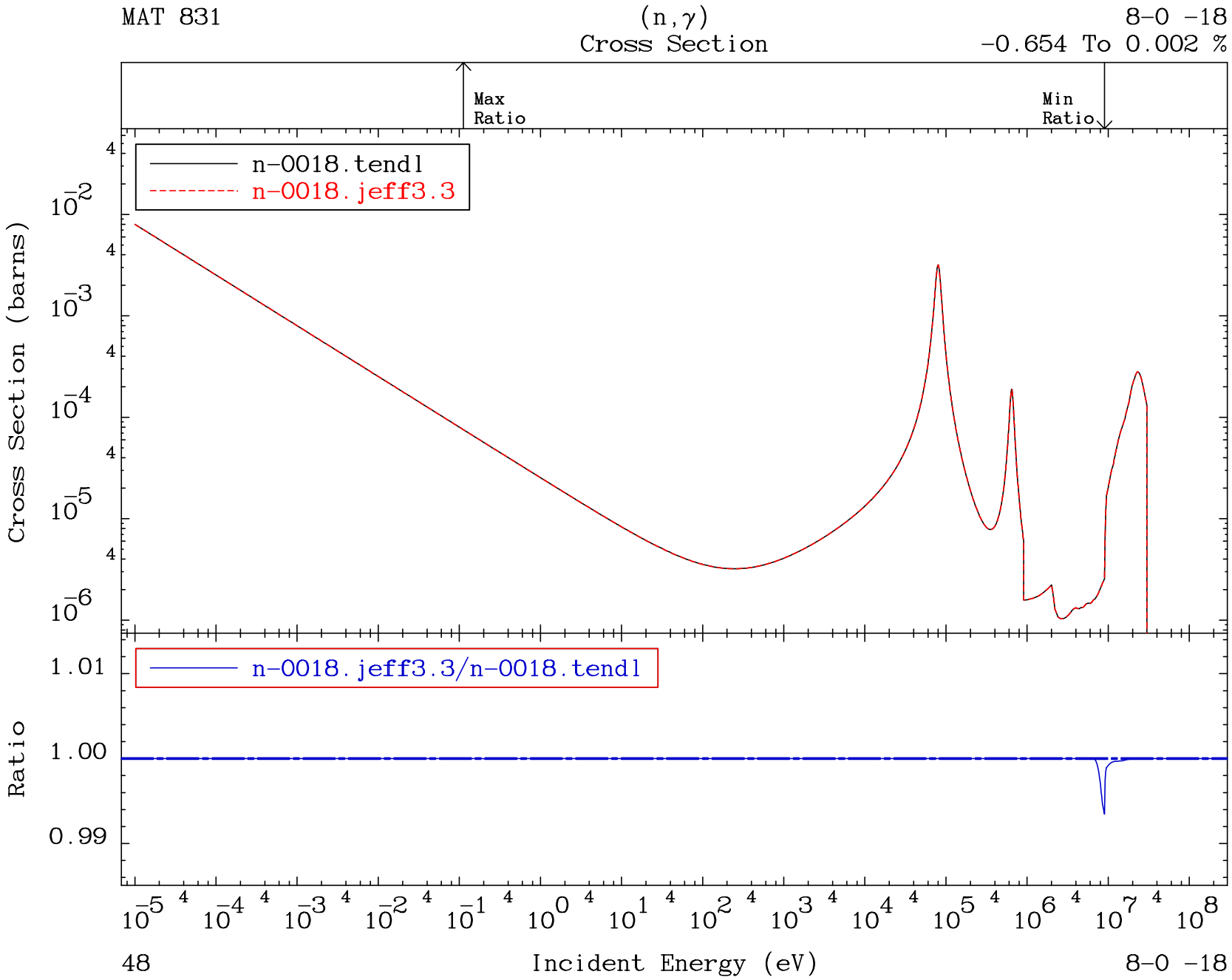

MAT 831
MT= 76 (n,n') Level
Cross Section
8-0 -18
-0.801 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 9.1453 MeV
n-0018.jeff3.3 Threshold 9.1453 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
n-0018.jeff3.3/n-0018.tendl
Ratio
0.99
1.00
1.01
9
10^7
2
3
4
5
6
7
8
9
10^8
2
43
Incident Energy (eV)
8-0 -18

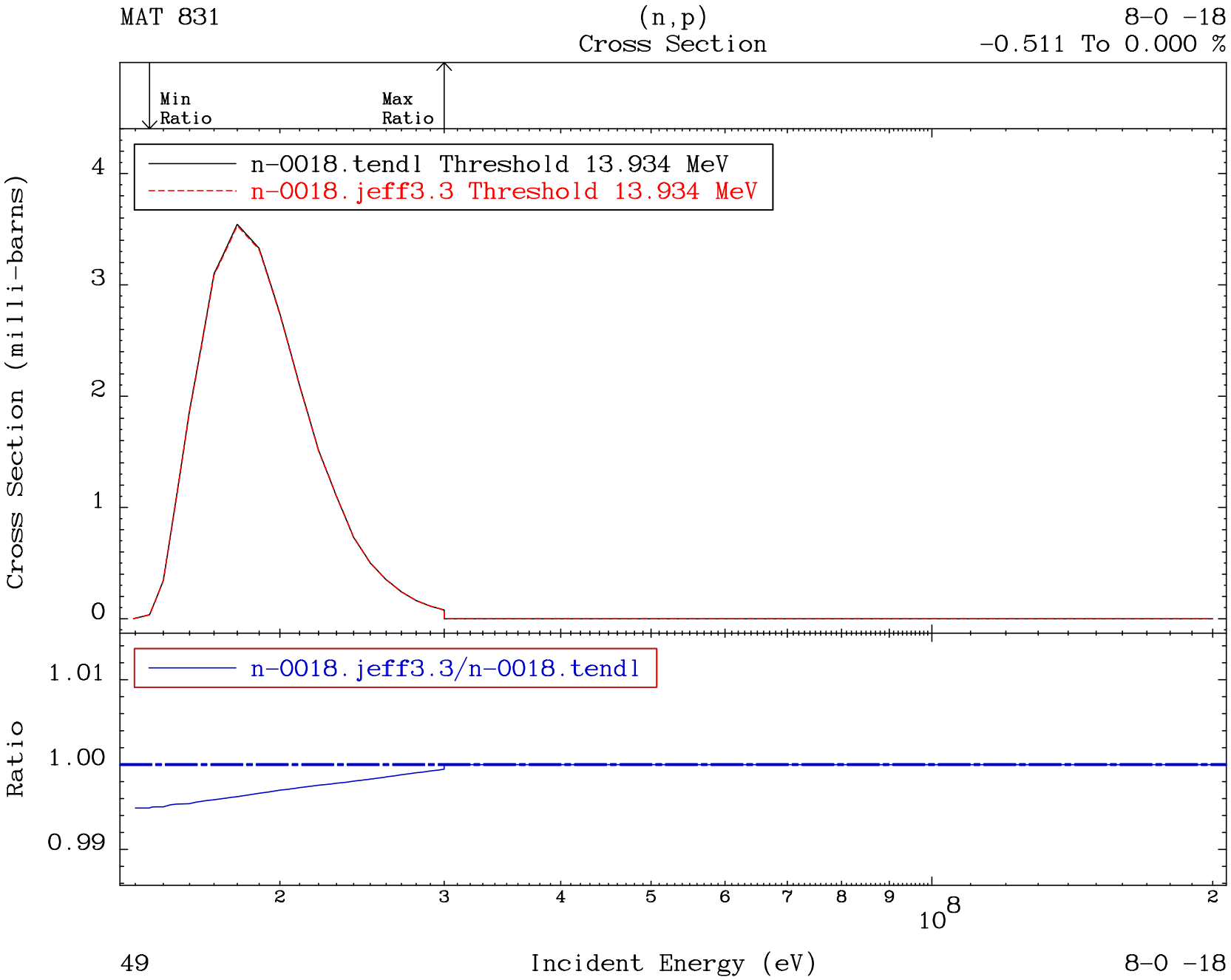

MAT 831
MT= 77 (n,n') Level
Cross Section
8-0 -18
-0.903 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 9.3111 MeV
n-0018.jeff3.3 Threshold 9.3111 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
9
2
3
4
5
6
7
8
9
2
10^7
10^8
44
Incident Energy (eV)
8-0 -18

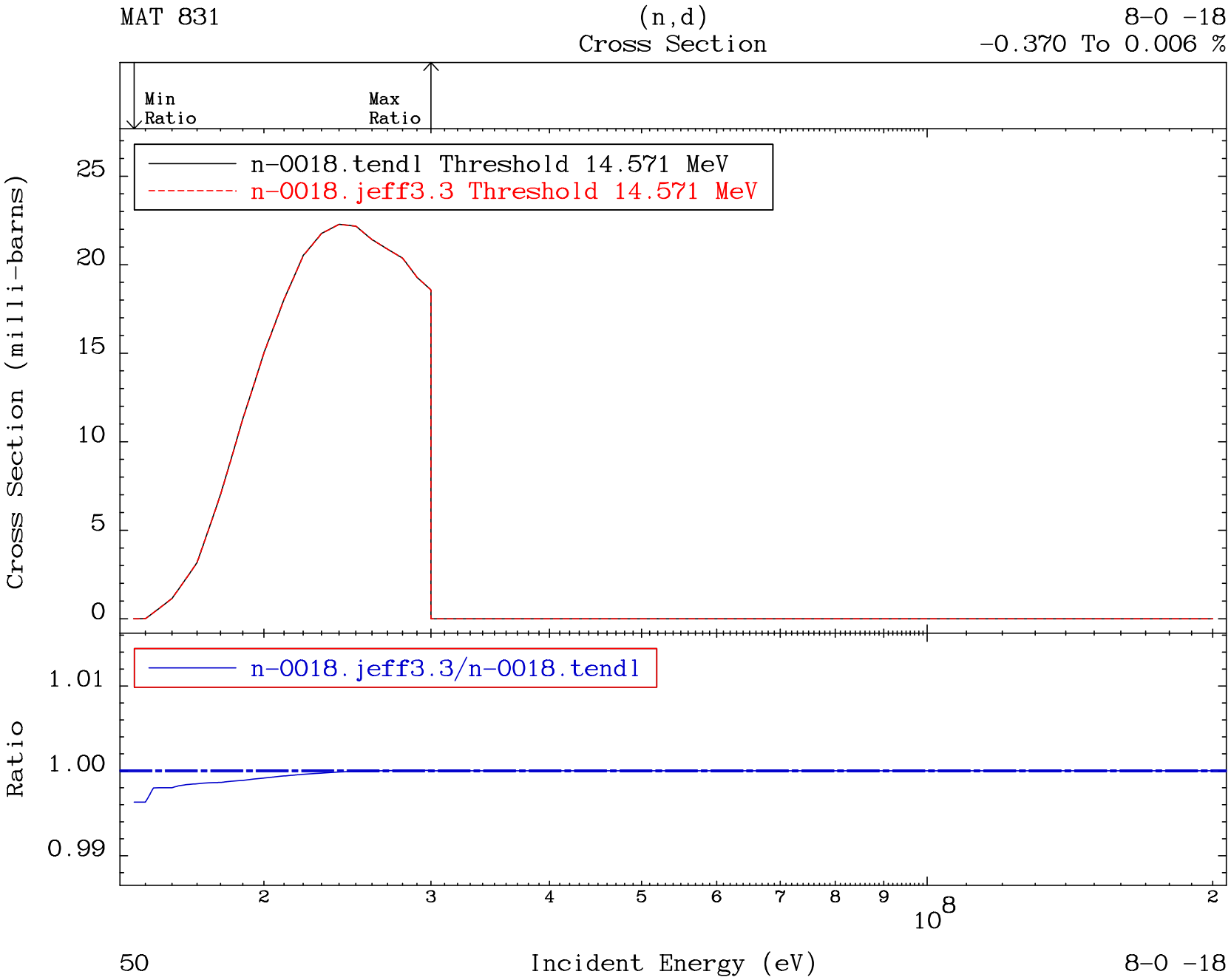

MAT 831
MT= 78 (n,n') Level
Cross Section
8-0 -18
-1.026 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 9.4568 MeV
n-0018.jeff3.3 Threshold 9.4568 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
10^7
2
3
4
5
6
7
8
9
10^8
2
45
Incident Energy (eV)
8-0 -18

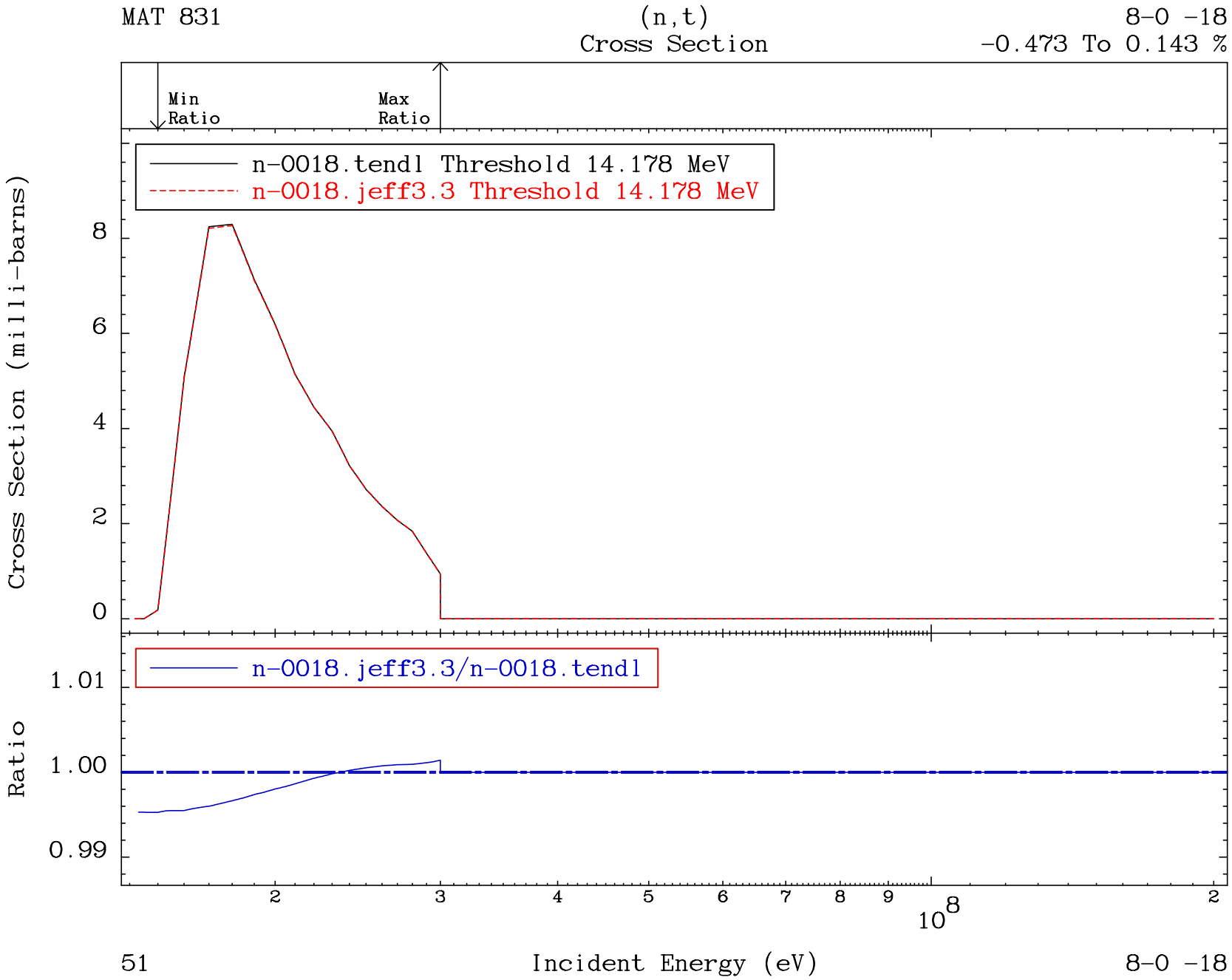

MAT 831
MT= 79 (n,n') Level
Cross Section
8-0 -18
-0.469 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 9.5044 MeV
n-0018.jeff3.3 Threshold 9.5044 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
10^7
2
3
4
5
6
7
8
9
10^8
2
46
Incident Energy (eV)
8-0 -18

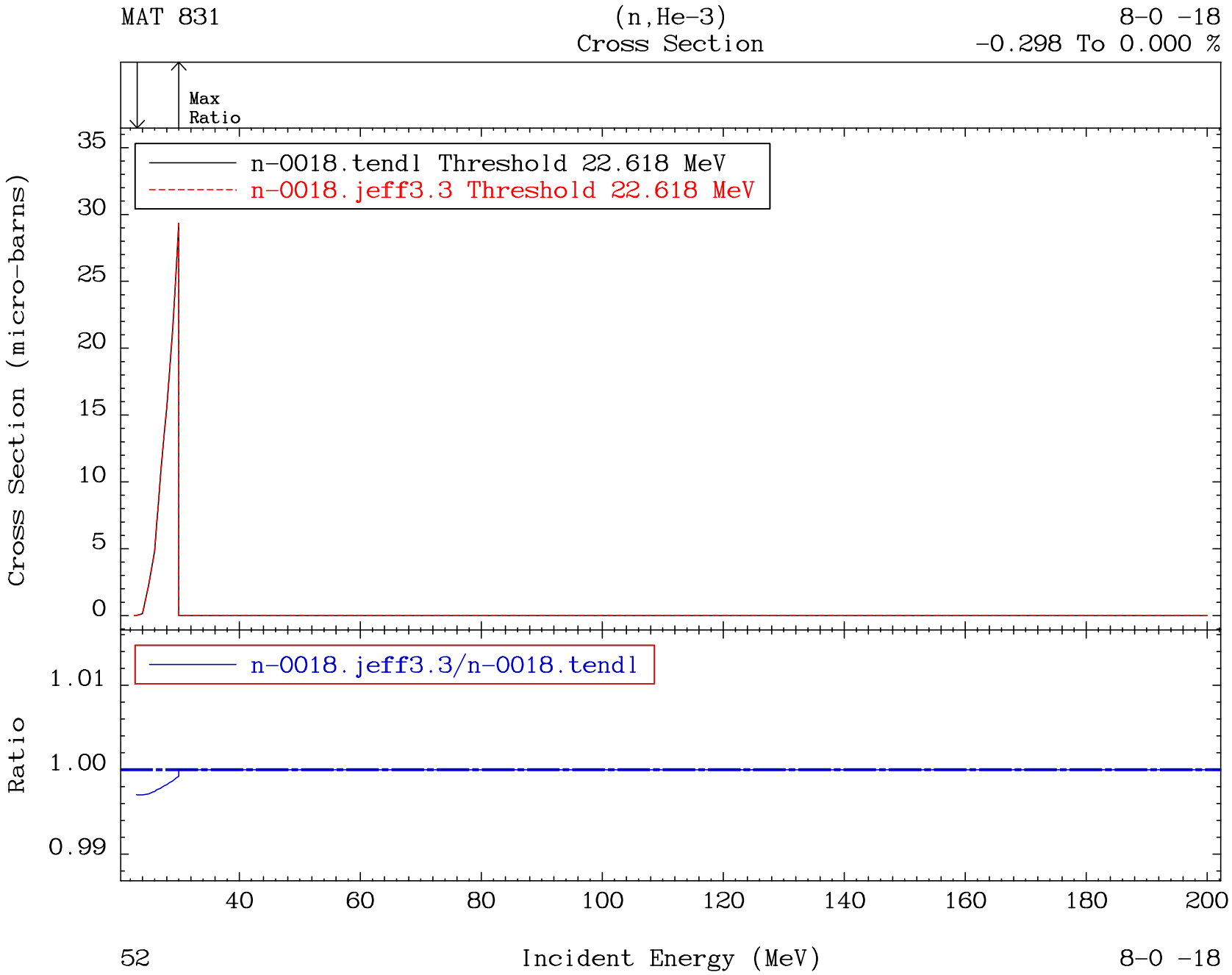

MAT 831
(n,n') Continuum
Cross Section
8-0 -18
-0.605 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 9.5044 MeV
n-0018.jeff3.3 Threshold 9.5044 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
10^7
2
3
4
5
6
7
8
9
10^8
2
47
Incident Energy (eV)
8-0 -18

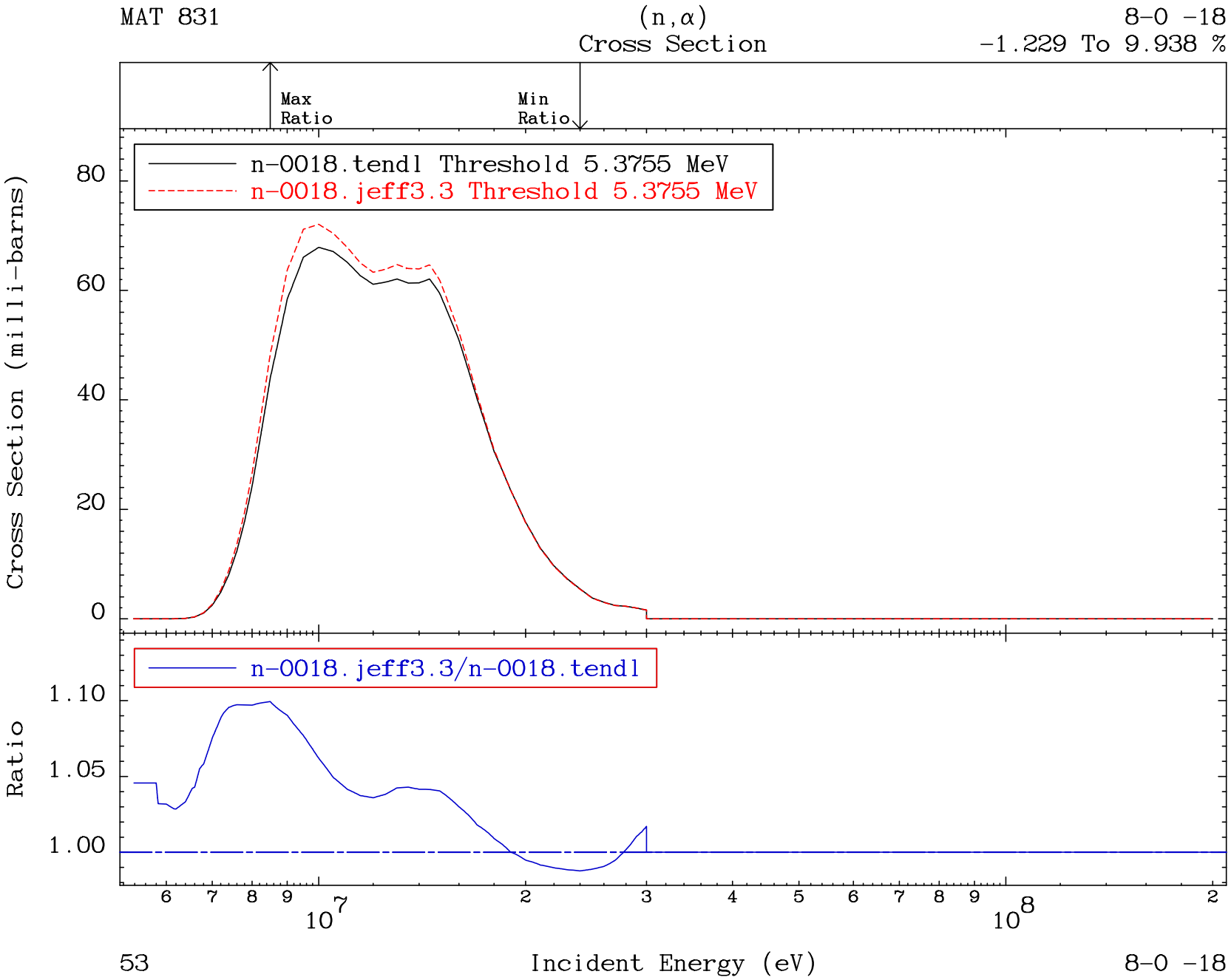

MAT 831
(n,γ)
Cross Section
8-0 -18
-0.654 To 0.002 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
Incident Energy (eV)
48
8-0 -18

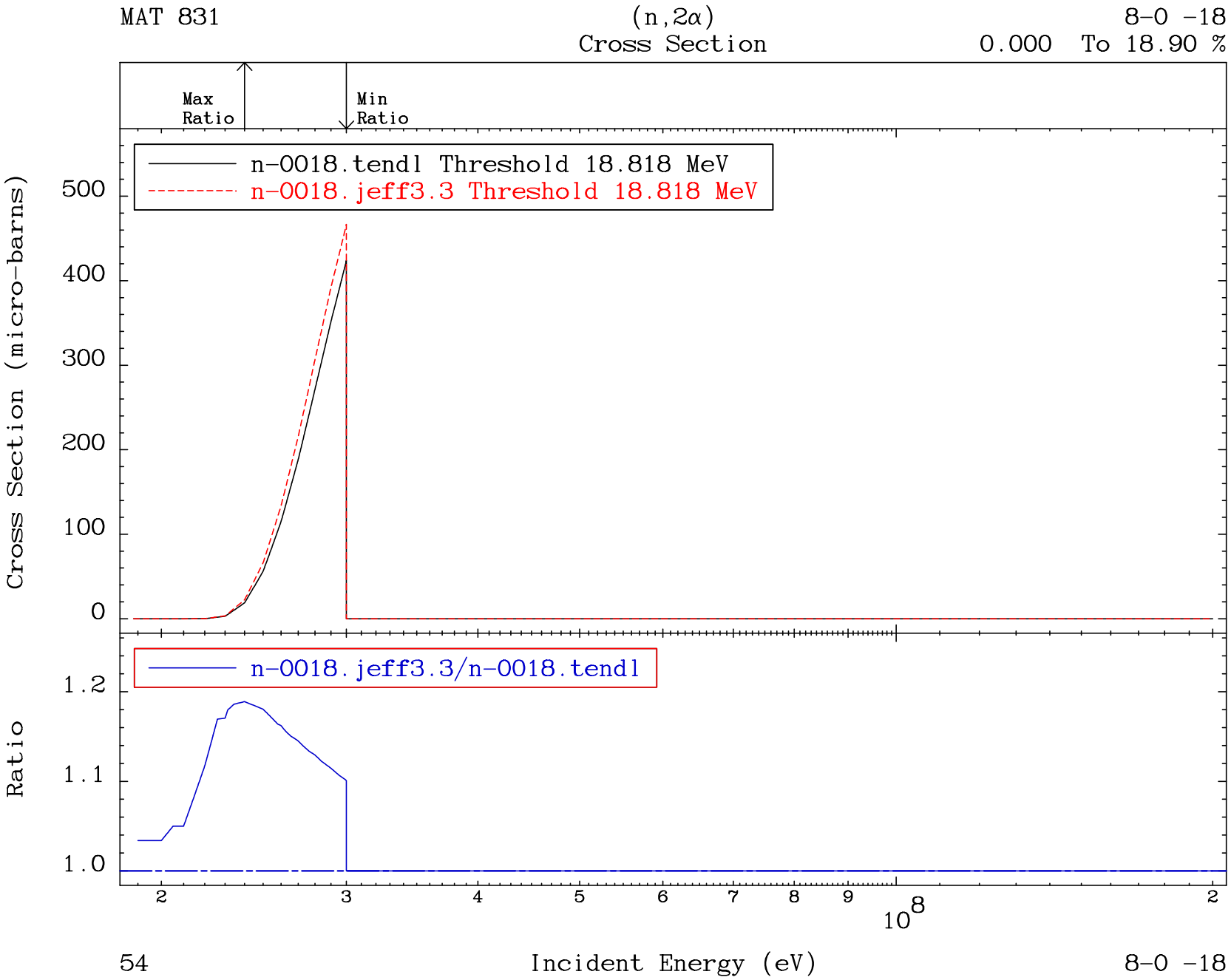

MAT 831
(n,p)
Cross Section
8-0 -18
-0.511 To 0.000 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 13.934 MeV
n-0018.jeff3.3 Threshold 13.934 MeV
Cross Section (milli-barns)
0
1
2
3
4
n-0018.jeff3.3/n-0018.tendl
Ratio
0.99
1.00
1.01
2
3
4
5
6
7
8
9
10^8
2
49
Incident Energy (eV)
8-0 -18

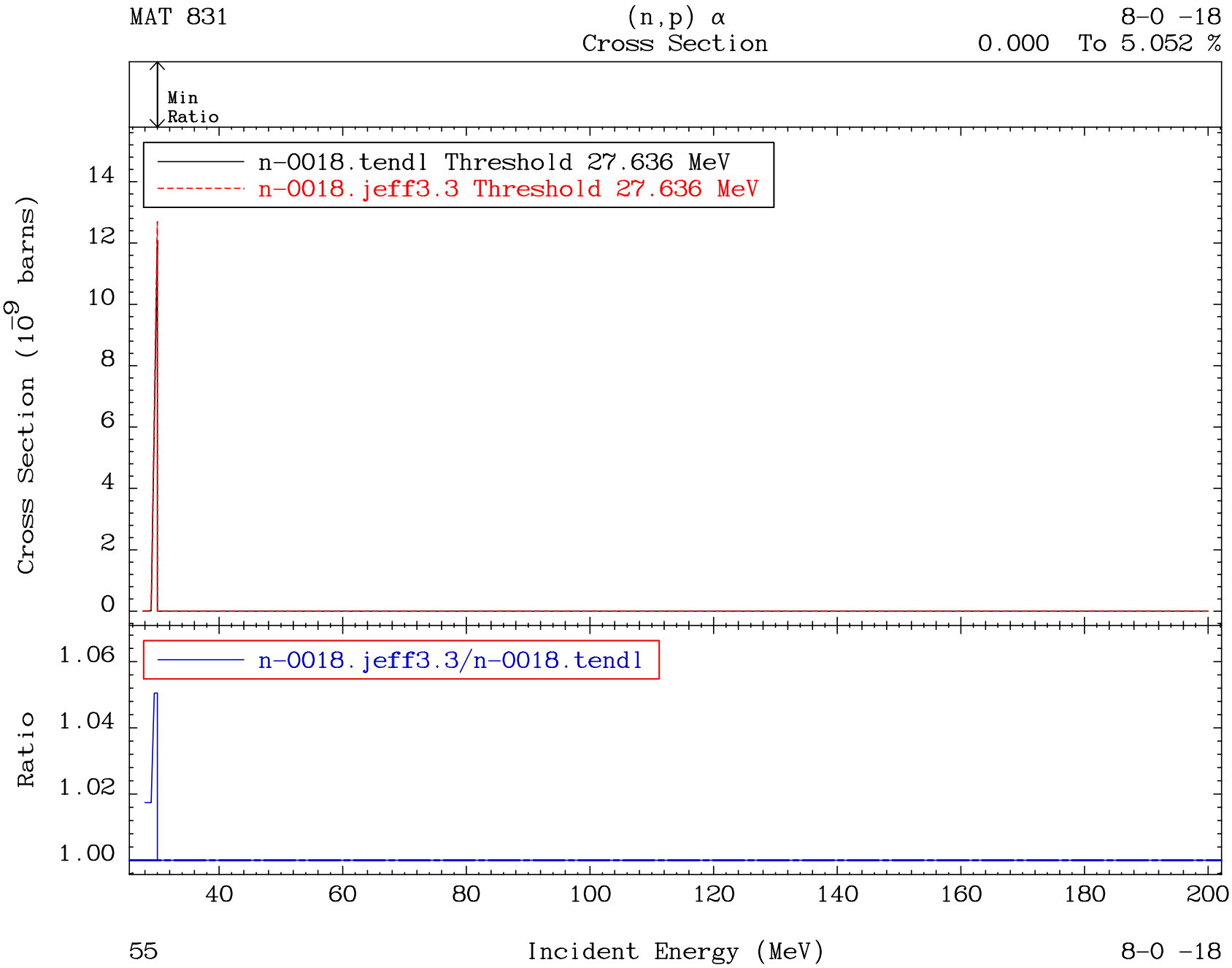

MAT 831
(n,d)
Cross Section
8-0 -18
-0.370 To 0.006 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 14.571 MeV
n-0018.jeff3.3 Threshold 14.571 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
50
Incident Energy (eV)
8-0 -18

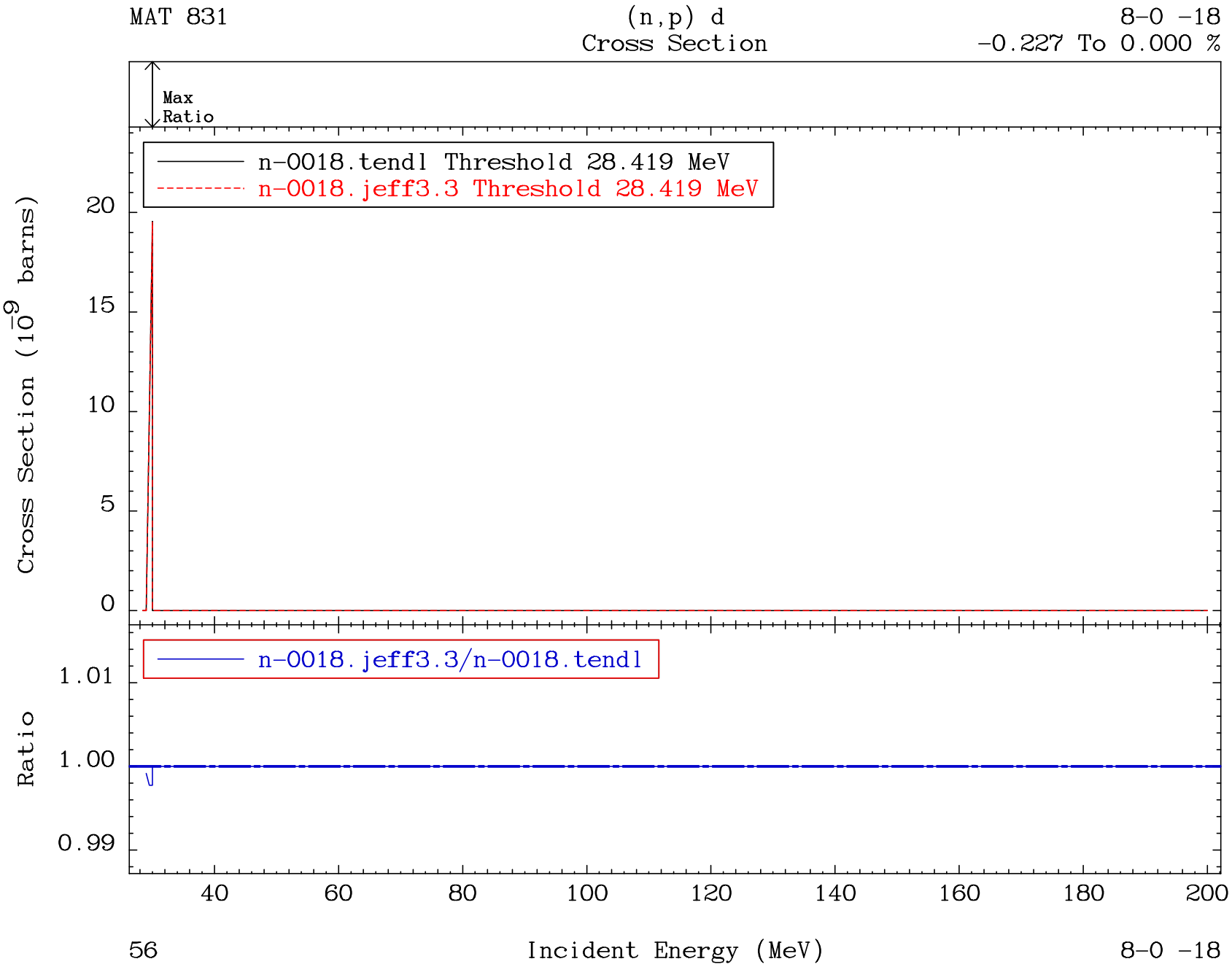

MAT 831
(n,t)
Cross Section
8-0 -18
-0.473 To 0.143 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 14.178 MeV
n-0018.jeff3.3 Threshold 14.178 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-0018.jeff3.3/n-0018.tendl
Ratio
0.99
1.00
1.01
2
3
4
5
6
7
8
9
10^8
2
51
Incident Energy (eV)
8-0 -18

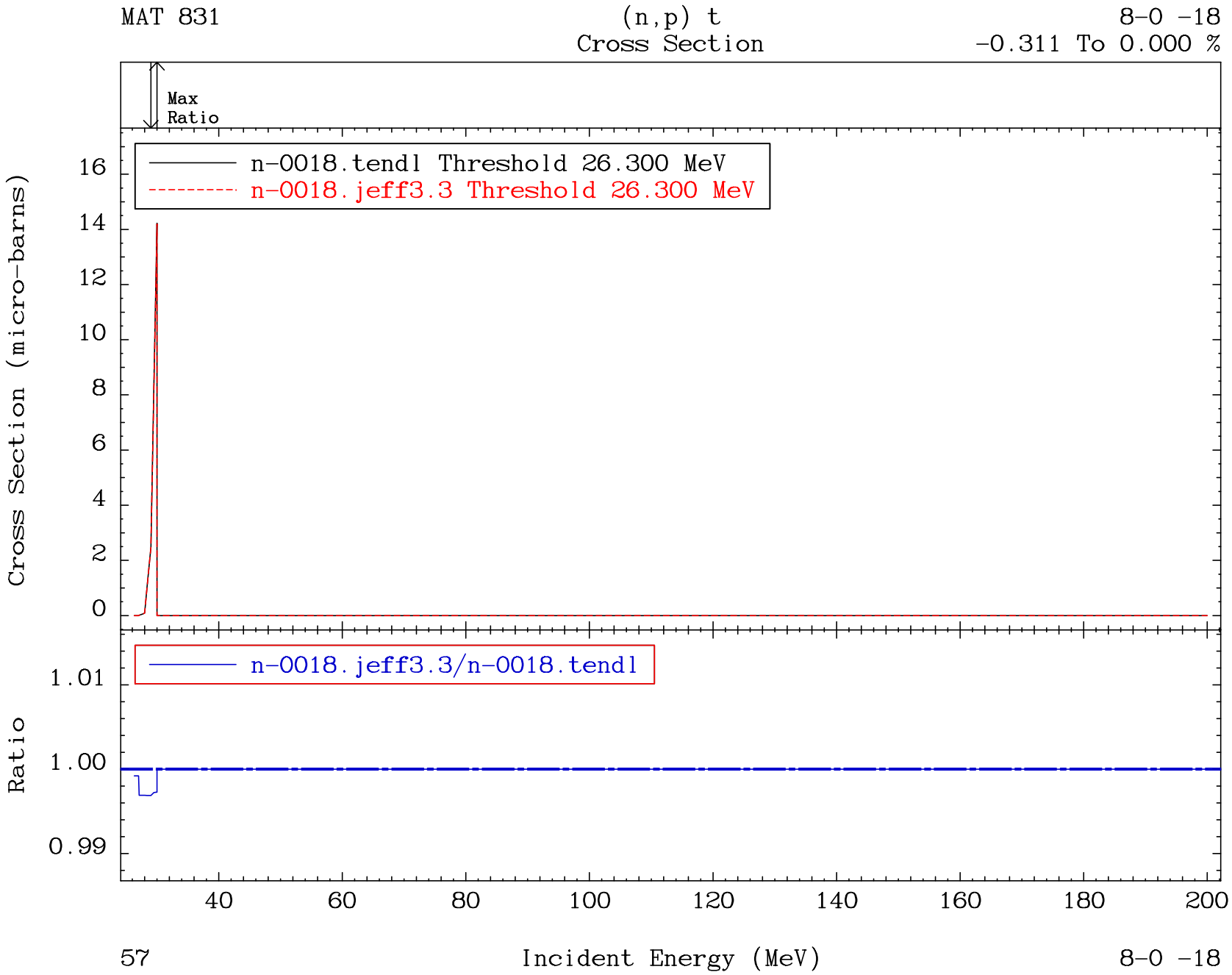

MAT 831
(n,He-3)
Cross Section
8-0 -18
-0.298 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 22.618 MeV
n-0018.jeff3.3 Threshold 22.618 MeV
Cross Section (micro-barns)
35
30
25
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
52
Incident Energy (MeV)
8-0 -18

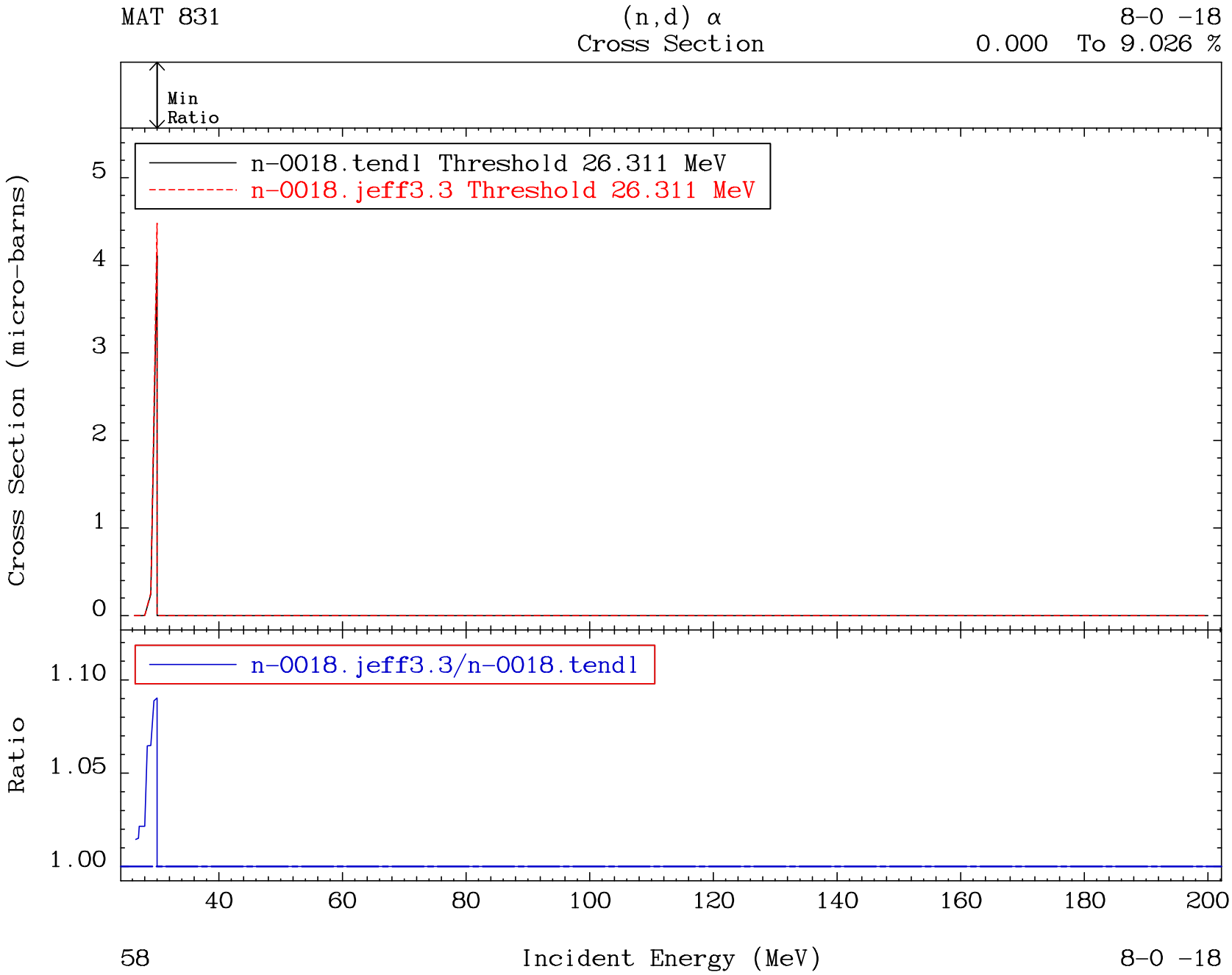

MAT 831
(n,α)
Cross Section
8-0 -18
-1.229 To 9.938 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 5.3755 MeV
n-0018.jeff3.3 Threshold 5.3755 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.10
1.05
1.00
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
53
Incident Energy (eV)
8-0 -18

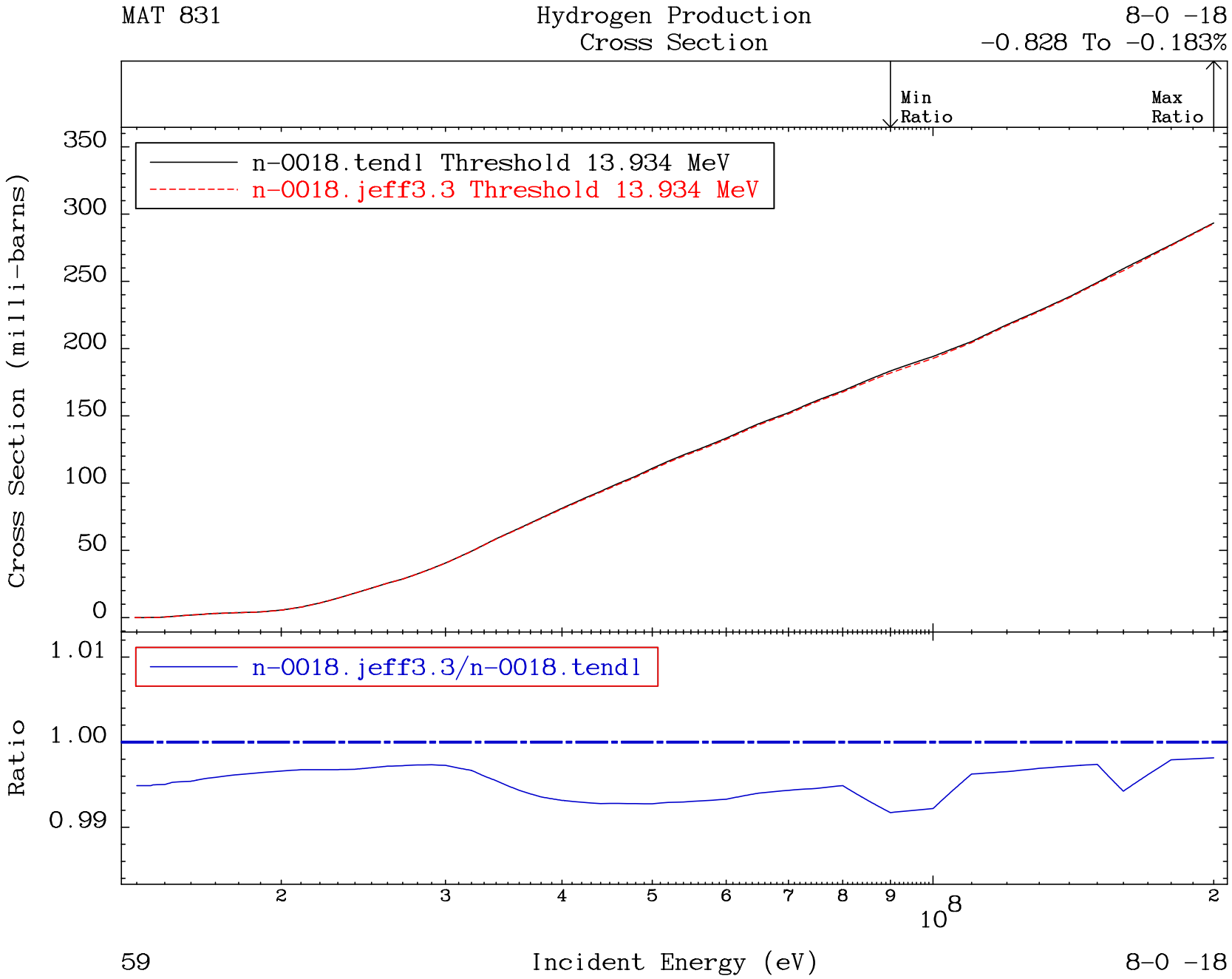

MAT 831
(n,2α)
Cross Section
8-0 -18
0.000 To 18.90 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 18.818 MeV
n-0018.jeff3.3 Threshold 18.818 MeV
Cross Section (micro-barns)
500
400
300
200
100
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.2
1.1
1.0
2
3
4
5
6
7
8
9
10^8
2
54
Incident Energy (eV)
8-0 -18

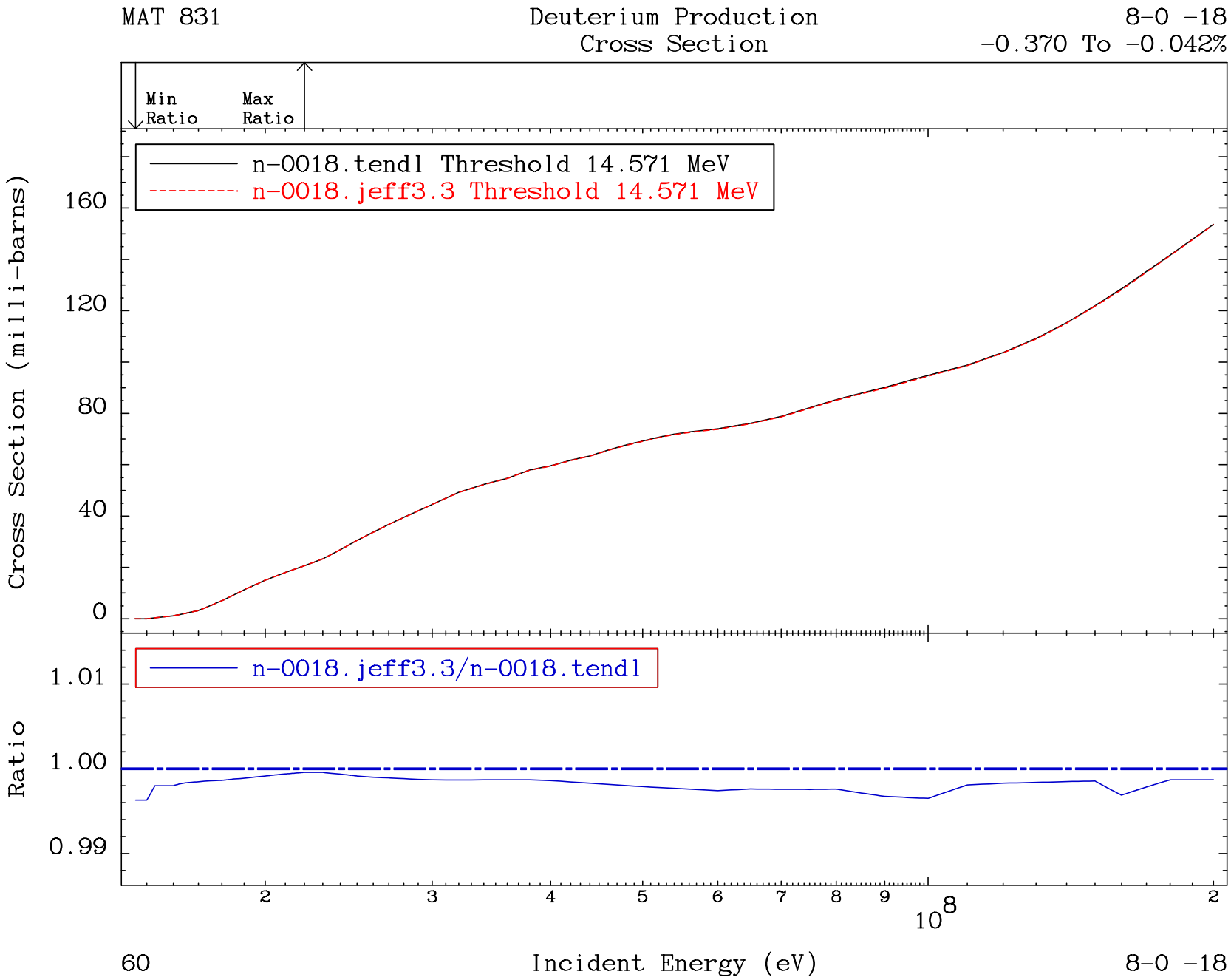

MAT 831
(n,p) α
Cross Section
8-0 -18
0.000 To 5.052 %
Min
Ratio
n-0018.tendl Threshold 27.636 MeV
n-0018.jeff3.3 Threshold 27.636 MeV
Cross Section (10^-9 barns)
0
2
4
6
8
10
12
14
n-0018.jeff3.3/n-0018.tendl
Ratio
1.00
1.02
1.04
1.06
40
60
80
100
120
140
160
180
200
55
Incident Energy (MeV)
8-0 -18

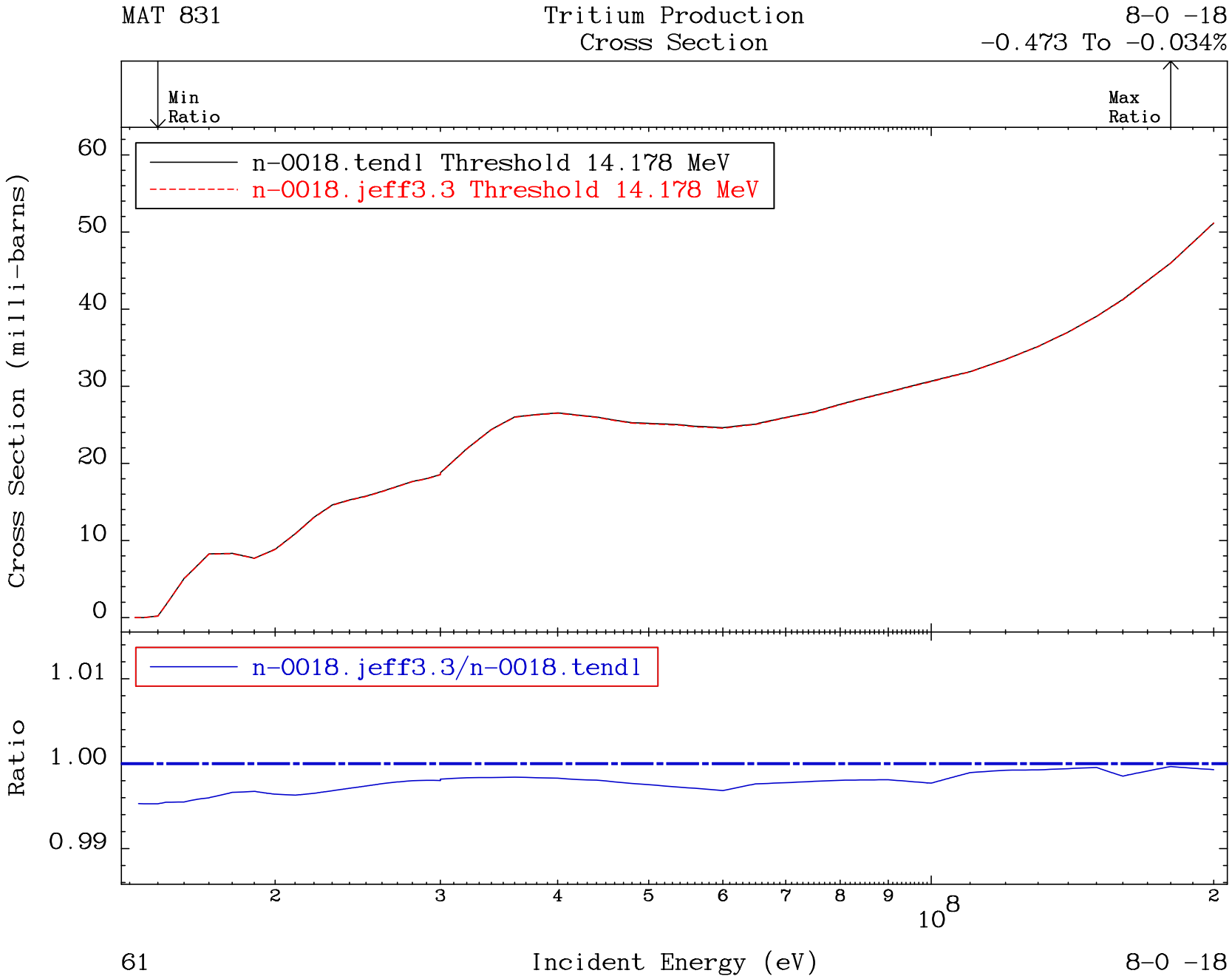

MAT 831
(n,p) d
Cross Section
8-0 -18
-0.227 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 28.419 MeV
n-0018.jeff3.3 Threshold 28.419 MeV
Cross Section (10^-9 barns)
20
15
10
5
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
56
Incident Energy (MeV)
8-0 -18

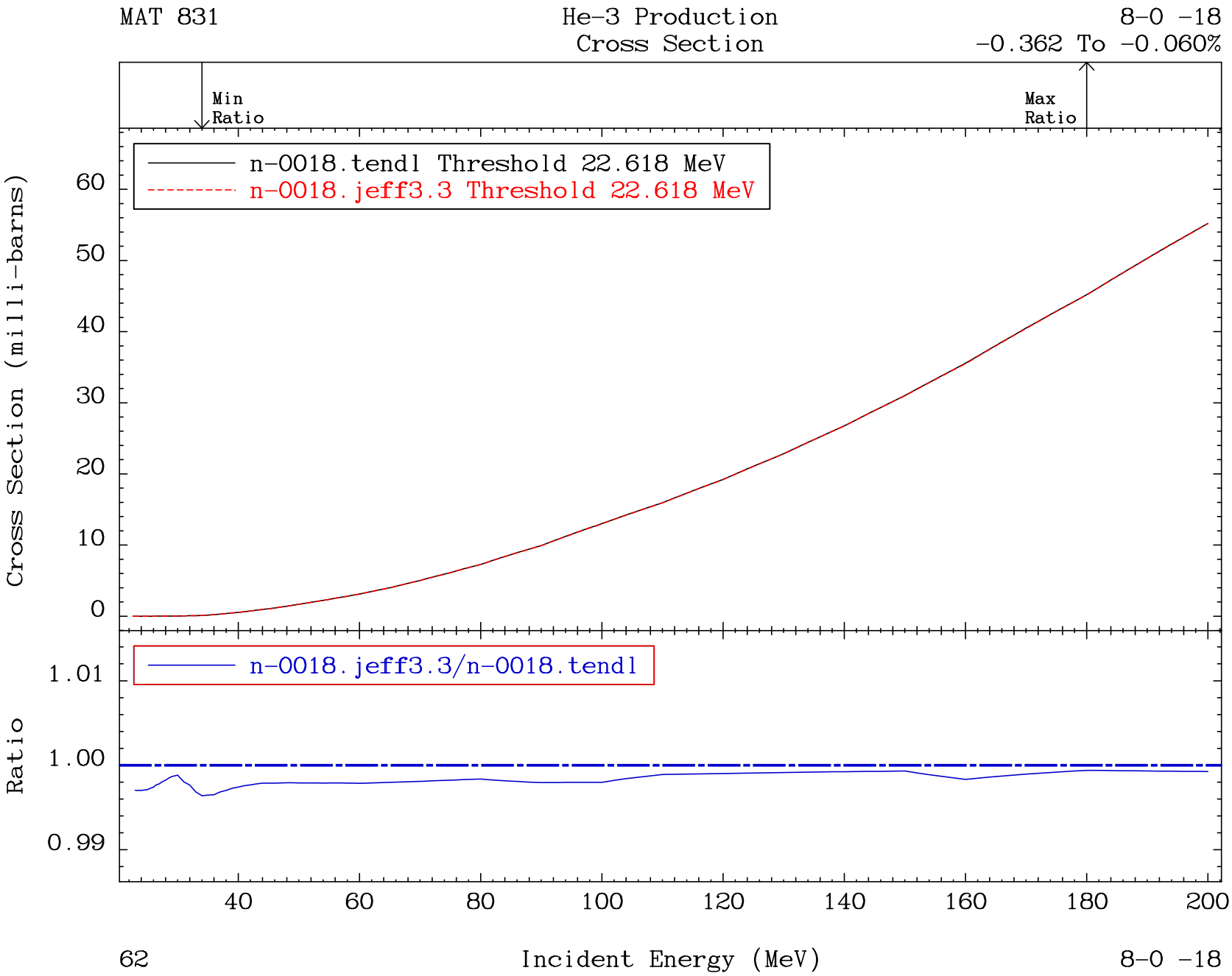

MAT 831
(n,p) t
Cross Section
8-0 -18
-0.311 To 0.000 %
Max
Ratio
n-0018.tendl Threshold 26.300 MeV
n-0018.jeff3.3 Threshold 26.300 MeV
Cross Section (micro-barns)
16
14
12
10
8
6
4
2
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
57
Incident Energy (MeV)
8-0 -18

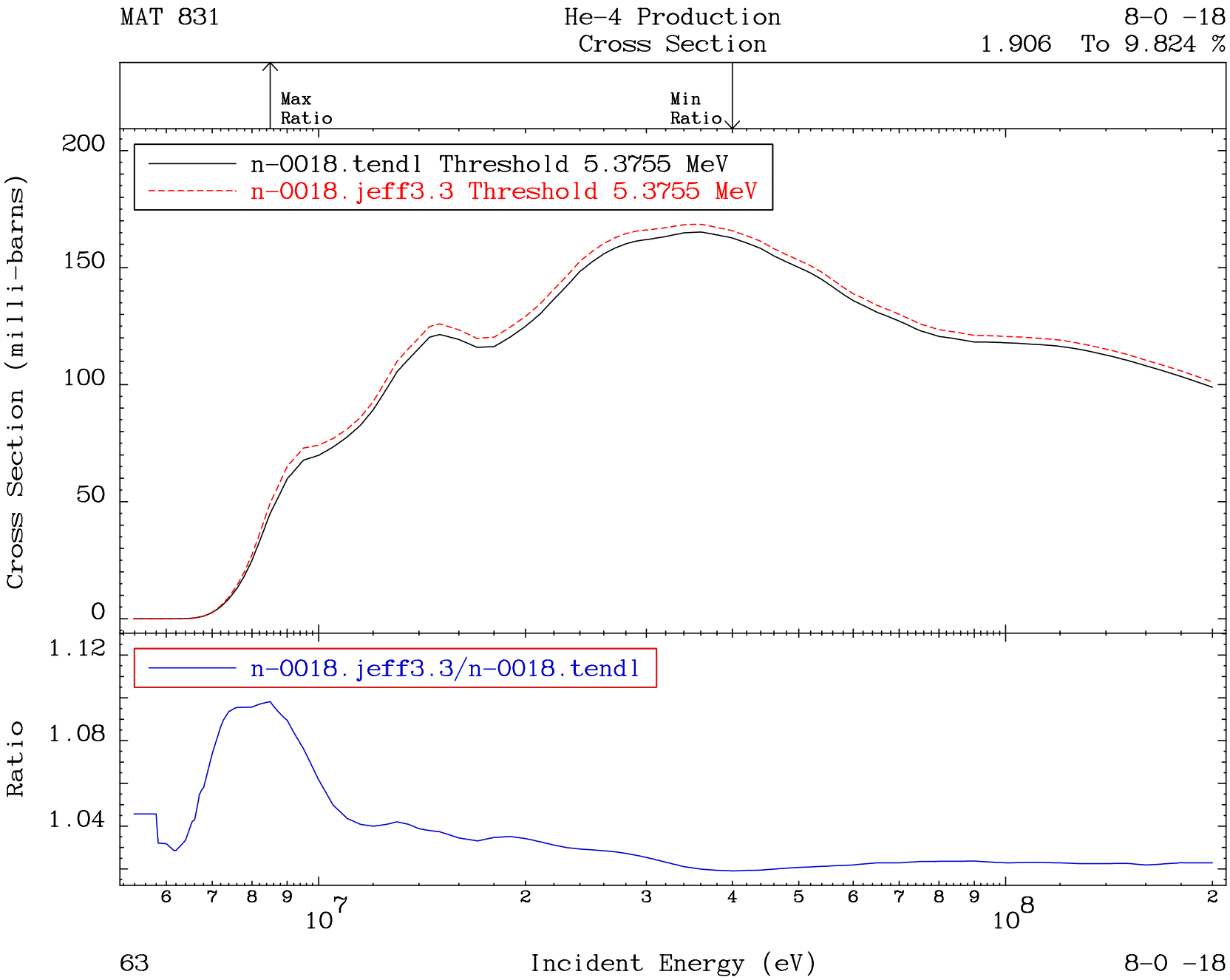

MAT 831
(n,d) α
Cross Section
8-0 -18
0.000 To 9.026 %
Min
Ratio
n-0018.tendl Threshold 26.311 MeV
n-0018.jeff3.3 Threshold 26.311 MeV
Cross Section (micro-barns)
0
1
2
3
4
5
n-0018.jeff3.3/n-0018.tendl
Ratio
1.00
1.05
1.10
40
60
80
100
120
140
160
180
200
58
Incident Energy (MeV)
8-0 -18

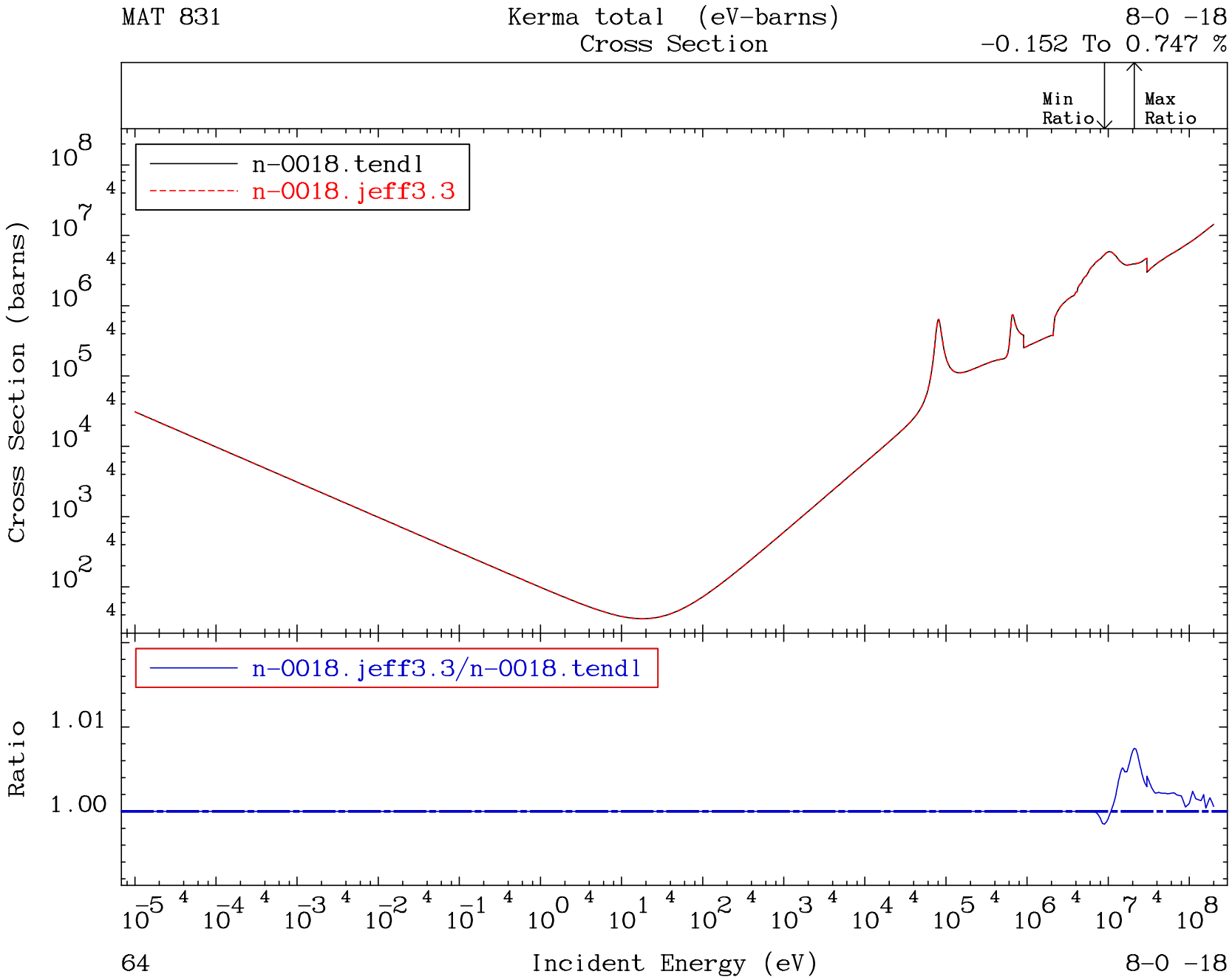

MAT 831
Hydrogen Production
Cross Section
8-0 -18
-0.828 To -0.183%
Min Ratio
Max Ratio
n-0018.tendl Threshold 13.934 MeV
n-0018.jeff3.3 Threshold 13.934 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
59
Incident Energy (eV)
8-0 -18

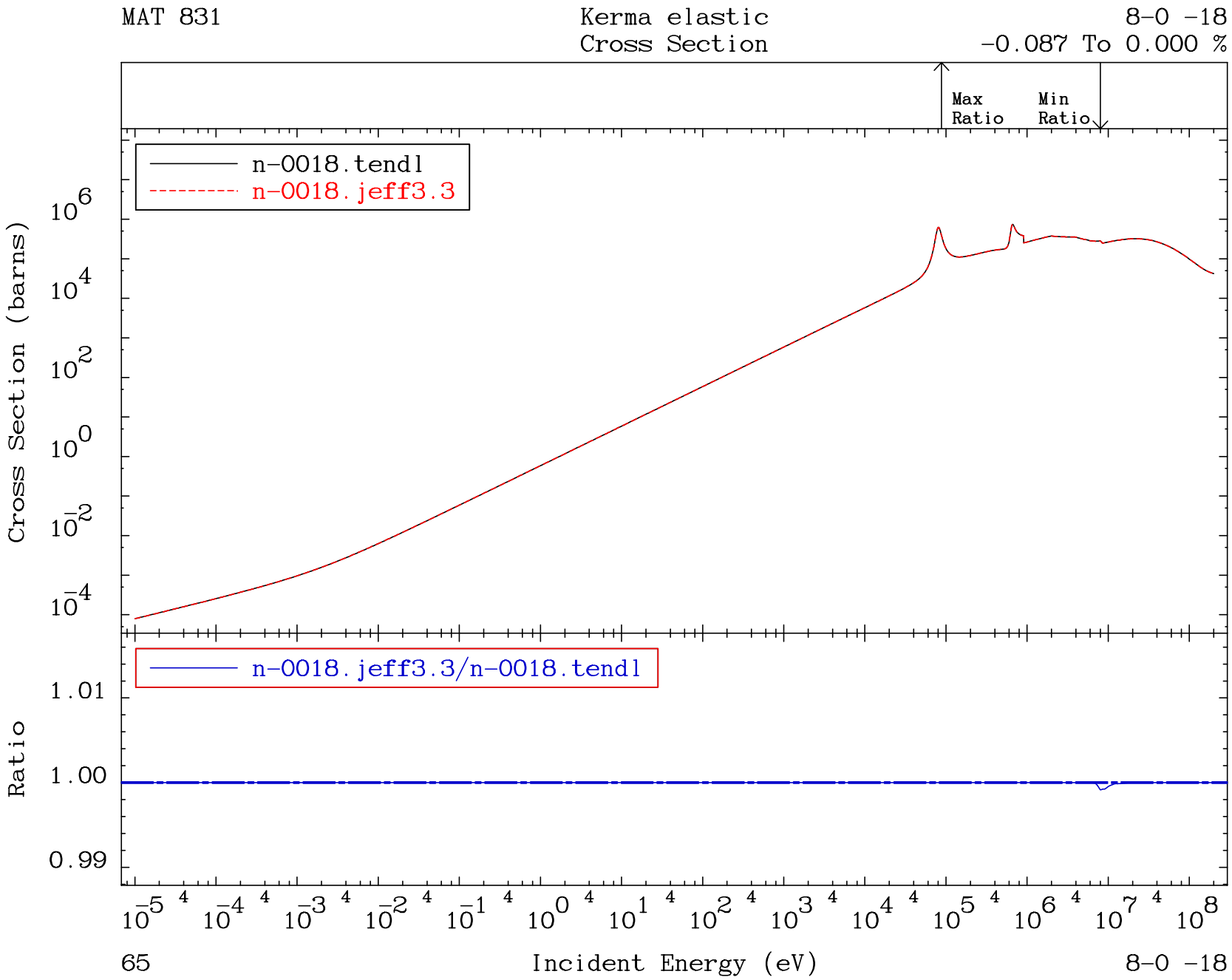

MAT 831
Deuterium Production
Cross Section
8-0 -18
-0.370 To -0.042%
Min Ratio
Max Ratio
n-0018.tendl Threshold 14.571 MeV
n-0018.jeff3.3 Threshold 14.571 MeV
Cross Section (milli-barns)
160
120
80
40
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
8-0 -18

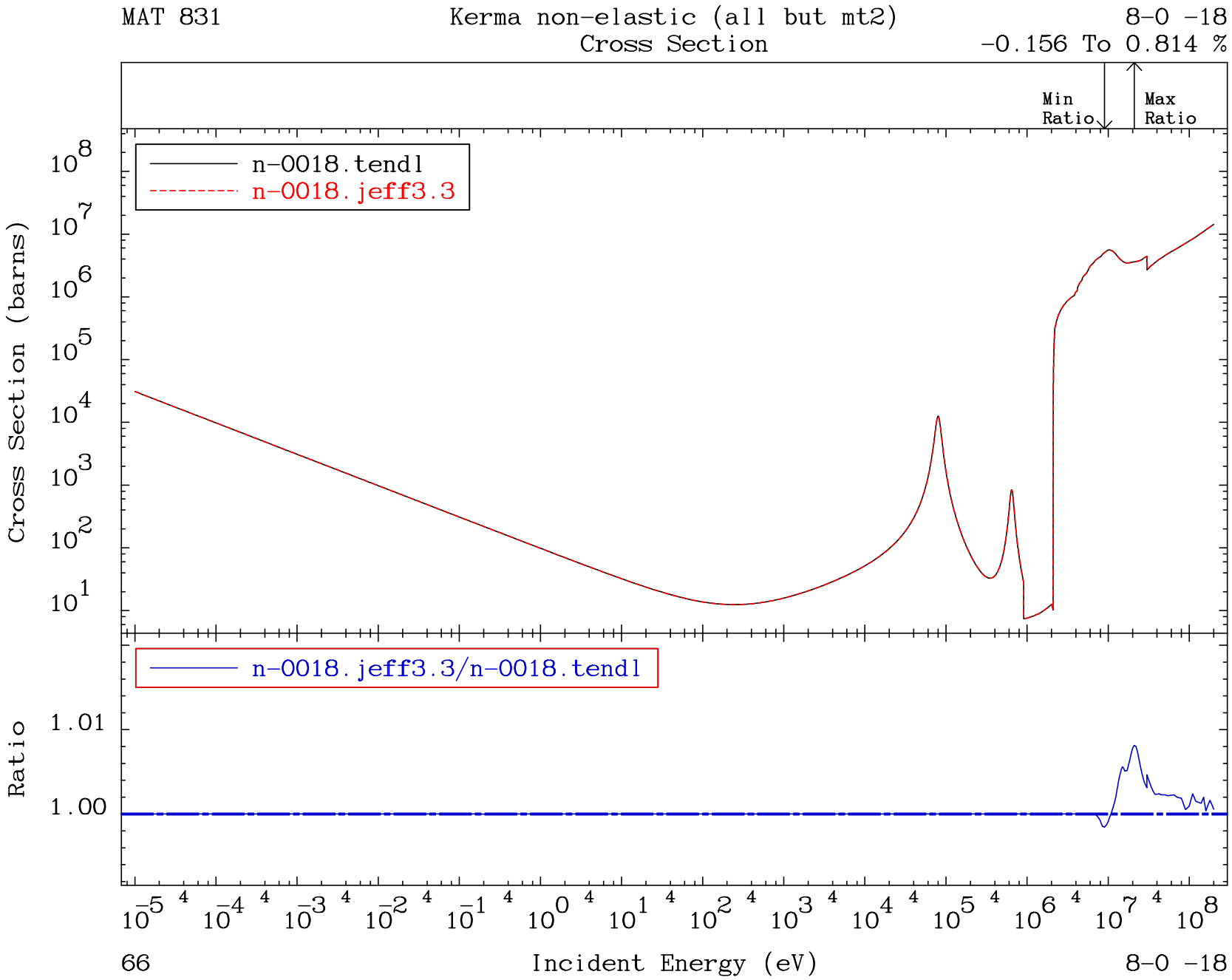

MAT 831
Tritium Production
Cross Section
8-0 -18
-0.473 To -0.034%
Min
Ratio
Max
Ratio
n-0018.tendl Threshold 14.178 MeV
n-0018.jeff3.3 Threshold 14.178 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
8-0 -18

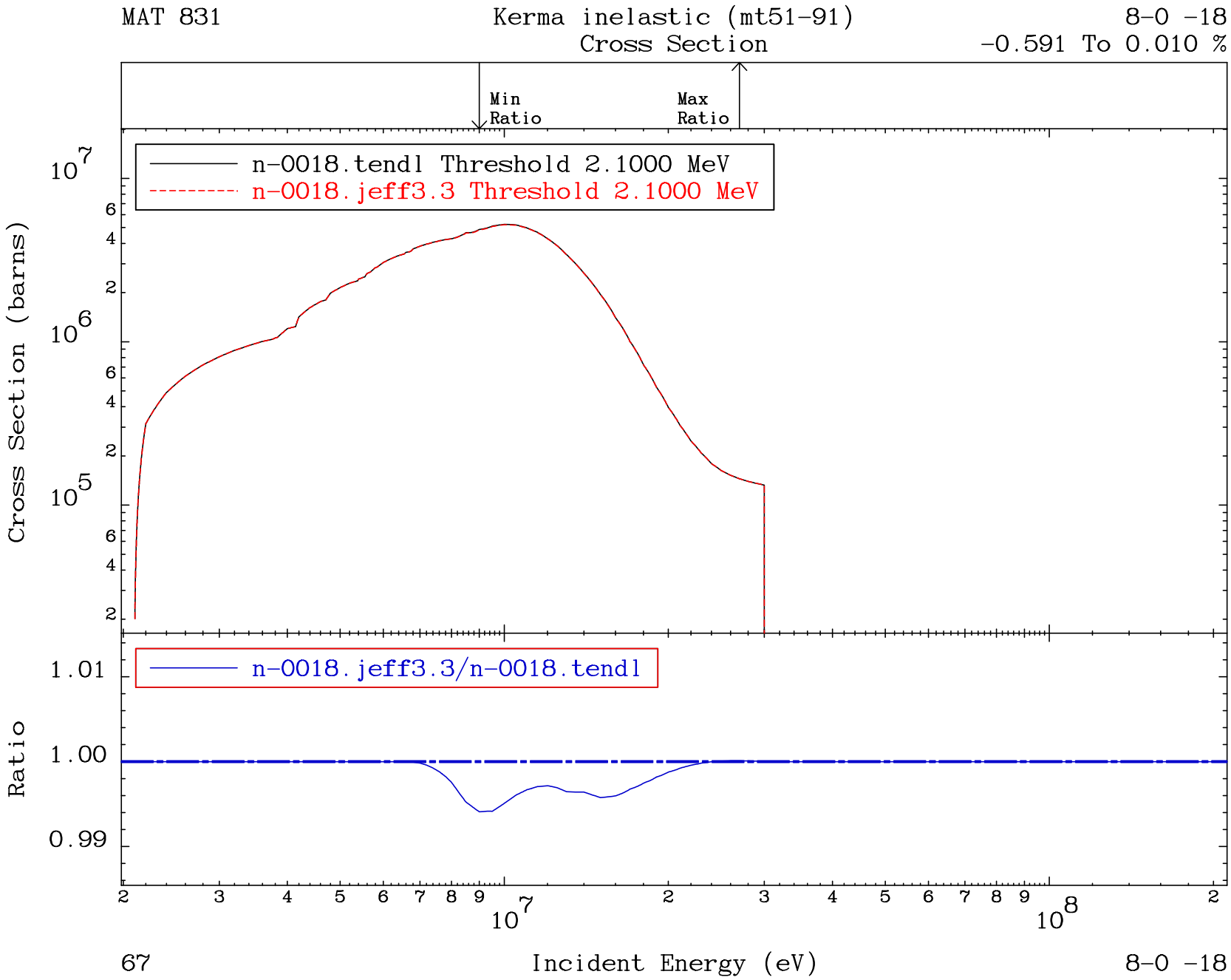

MAT 831
He-3 Production
Cross Section
8-0 -18
-0.362 To -0.060%
Min Ratio
Max Ratio
n-0018.tendl Threshold 22.618 MeV
n-0018.jeff3.3 Threshold 22.618 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
62
Incident Energy (MeV)
8-0 -18

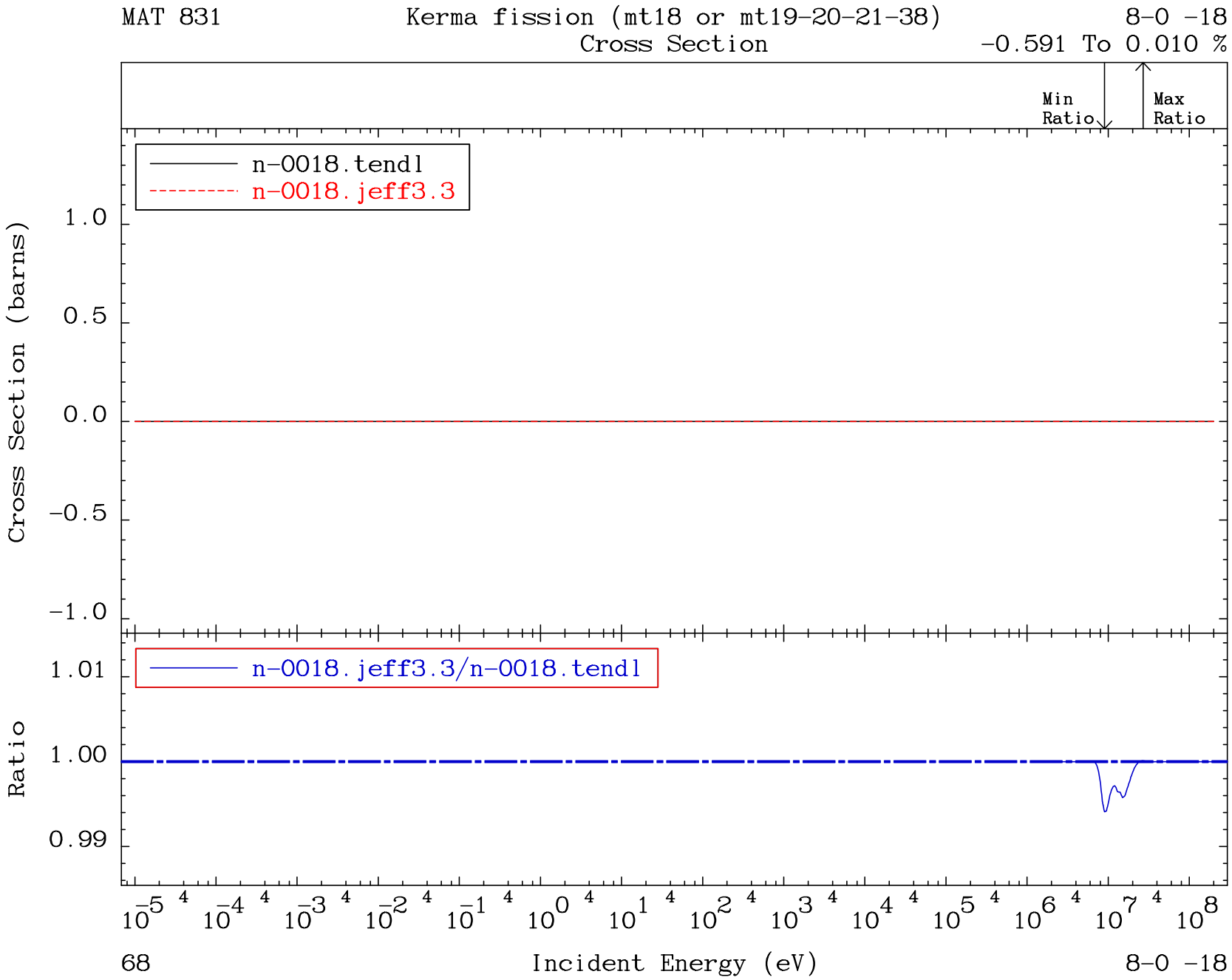

MAT 831
He-4 Production
Cross Section
8-0 -18
1.906 To 9.824 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 5.3755 MeV
n-0018.jeff3.3 Threshold 5.3755 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.12
1.08
1.04
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
63
Incident Energy (eV)
8-0 -18

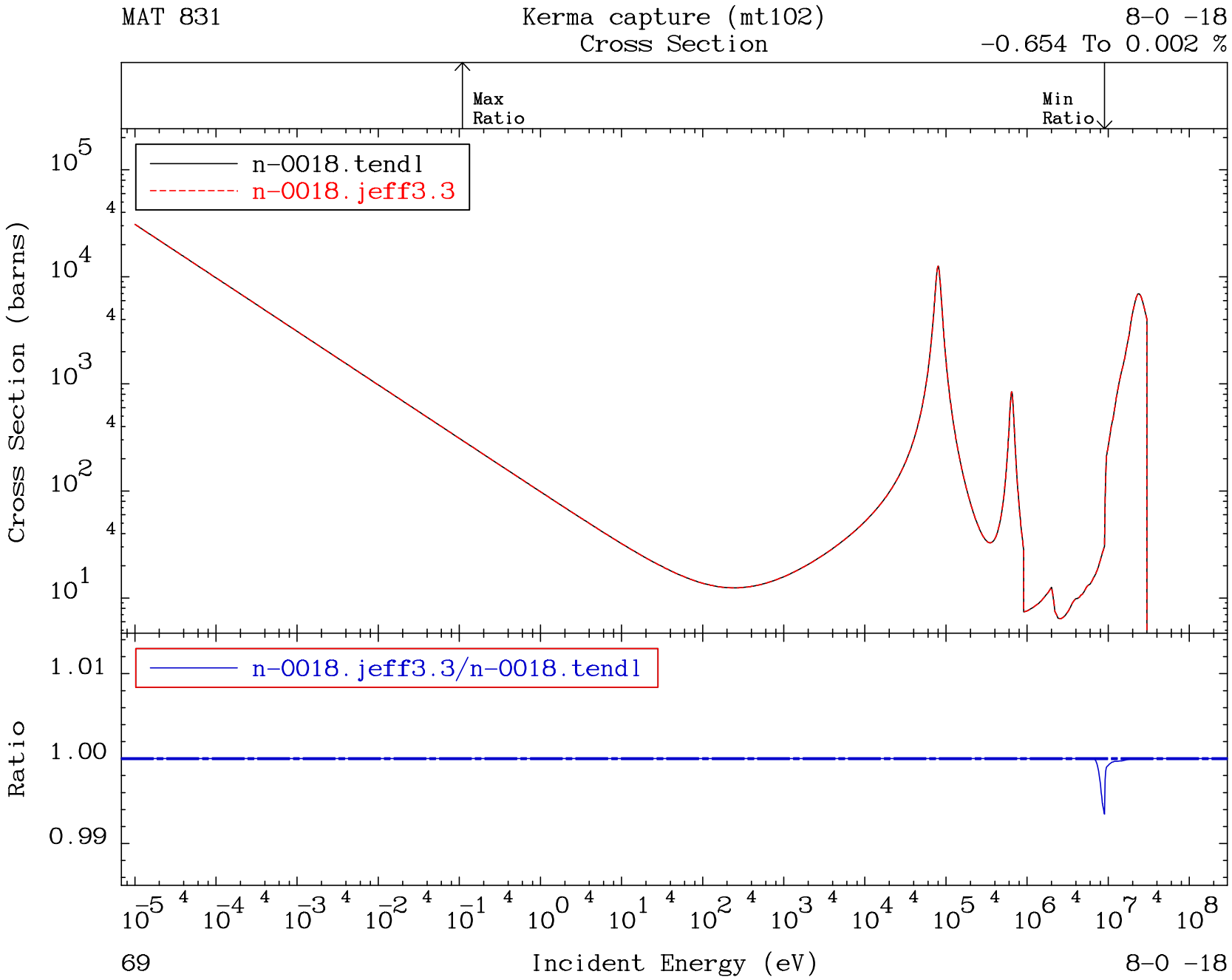

MAT 831
Kerma total (eV-barns)
Cross Section
8-0 -18
-0.152 To 0.747 %
Min Ratio
Max Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
Incident Energy (eV)
64
8-0 -18

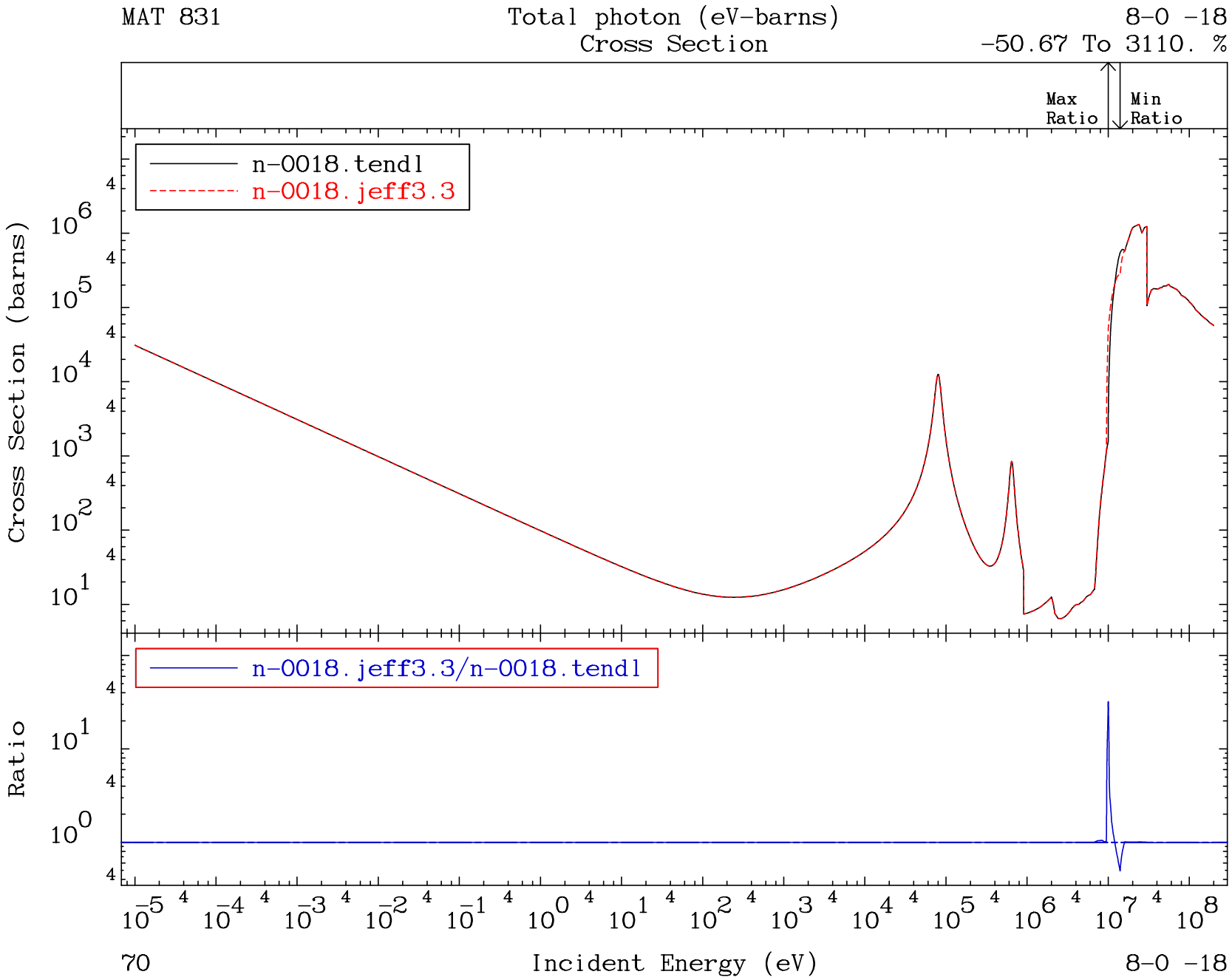

MAT 831
Kerma elastic
Cross Section
8-0 -18
-0.087 To 0.000 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
10^6
10^4
10^2
10^0
10^-2
10^-4
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
65
Incident Energy (eV)
8-0 -18

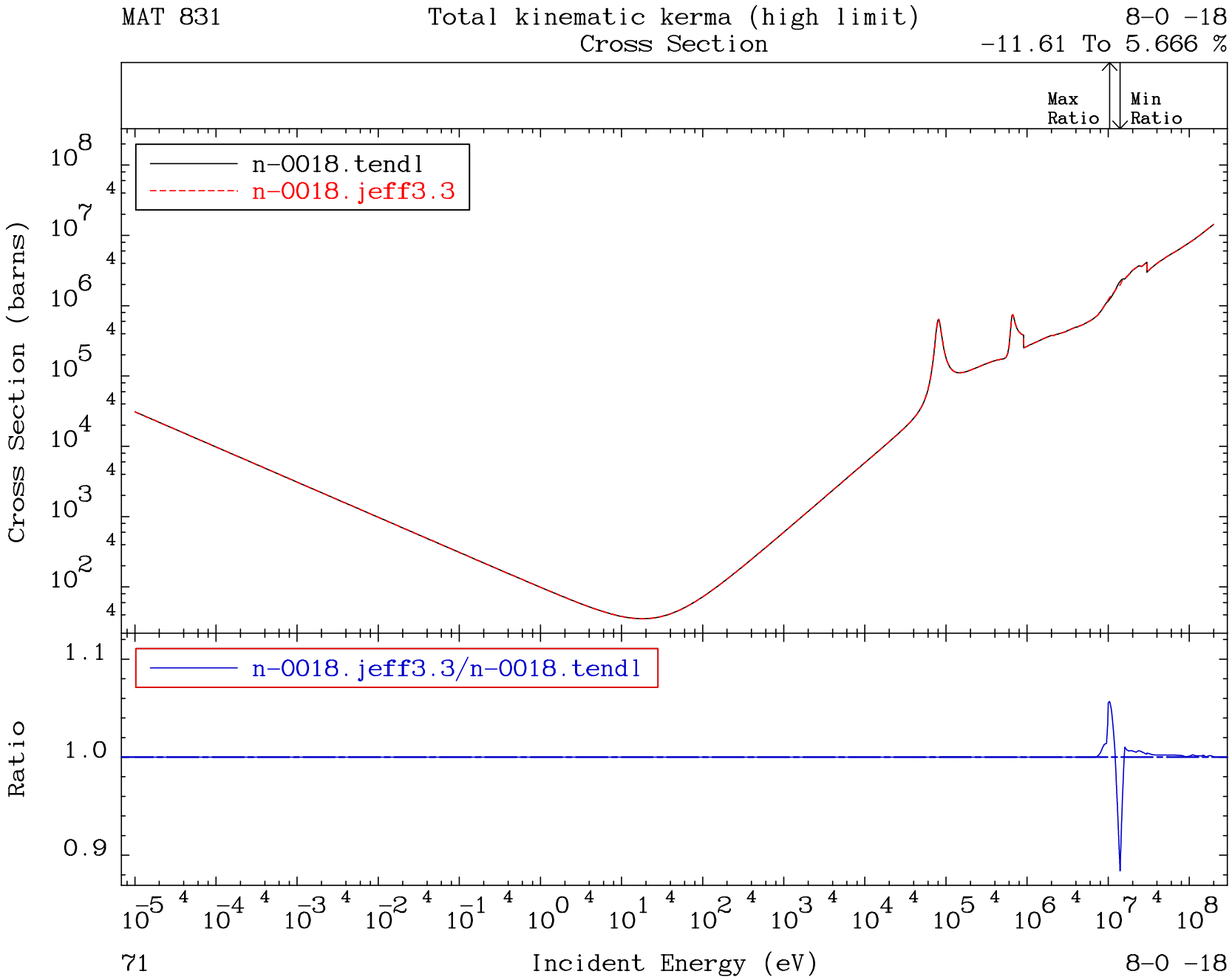

MAT 831
Kerma non-elastic (all but mt2)
Cross Section
8-0 -18
-0.156 To 0.814 %
Min Ratio
Max Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
Incident Energy (eV)
66
8-0 -18

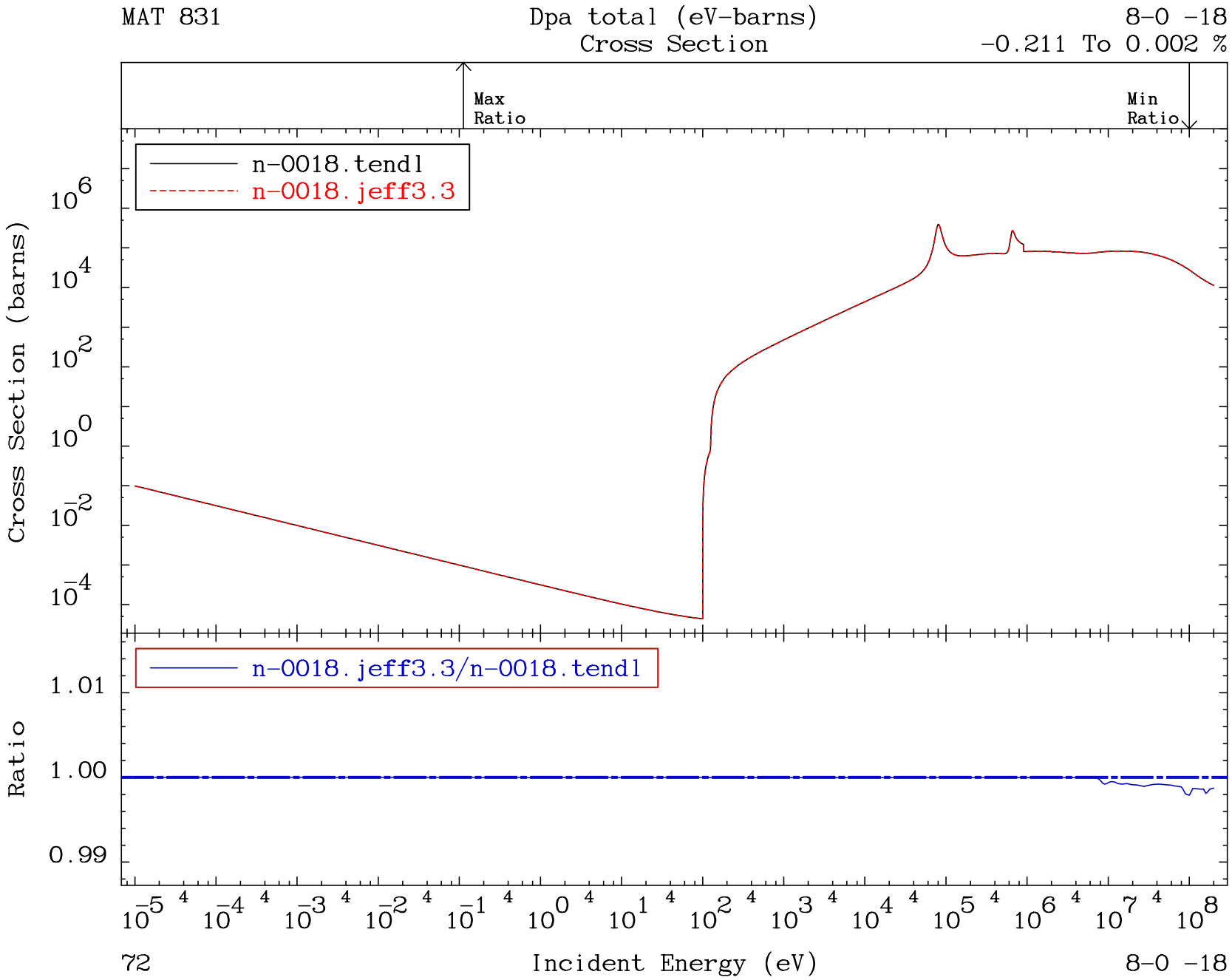

MAT 831
Kerma inelastic (mt51-91)
Cross Section
8-0 -18
-0.591 To 0.010 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 2.1000 MeV
n-0018.jeff3.3 Threshold 2.1000 MeV
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
Incident Energy (eV)
67
8-0 -18

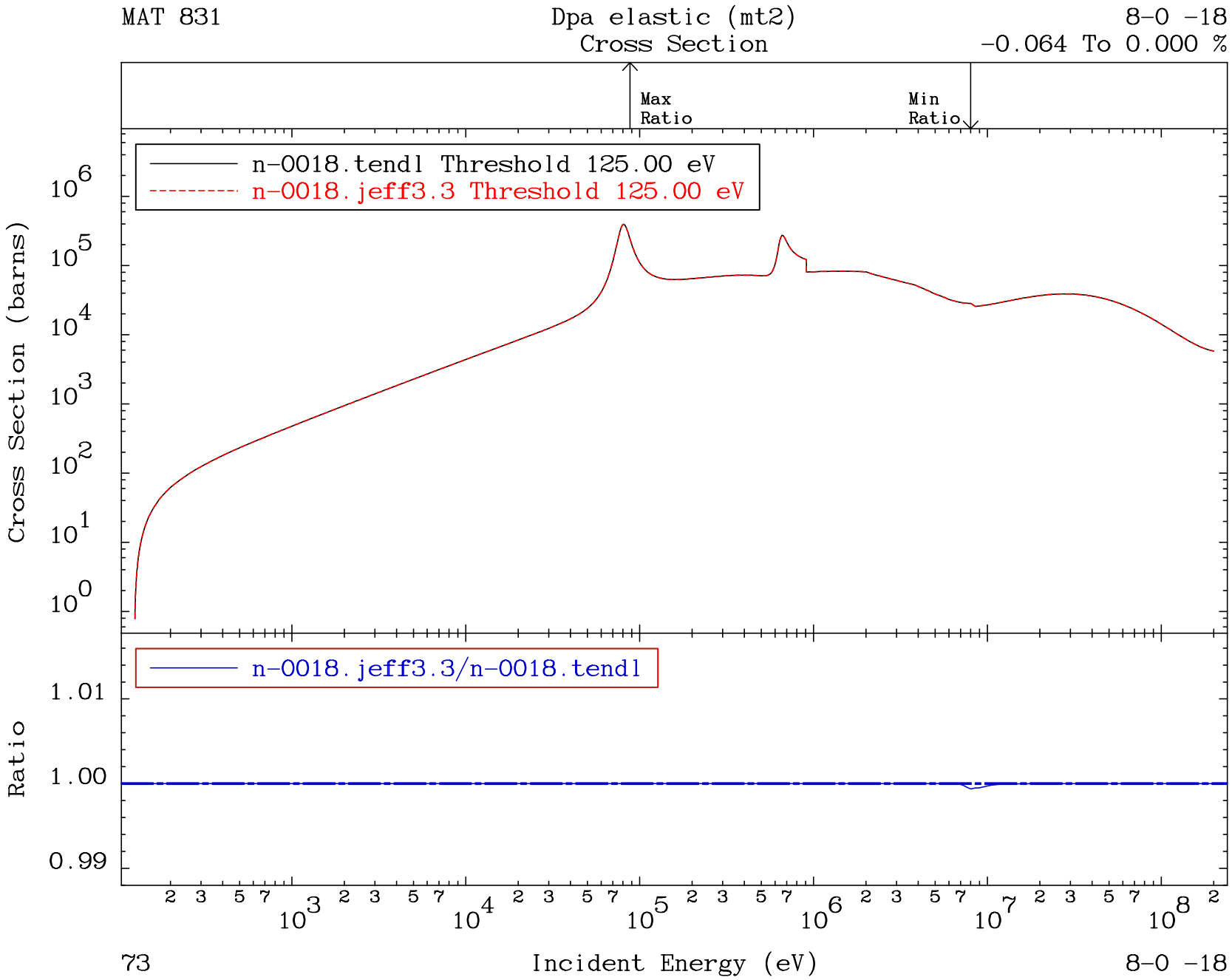

MAT 831
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
8-0 -18
-0.591 To 0.010 %
Min Ratio
Max Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
68
Incident Energy (eV)
8-0 -18

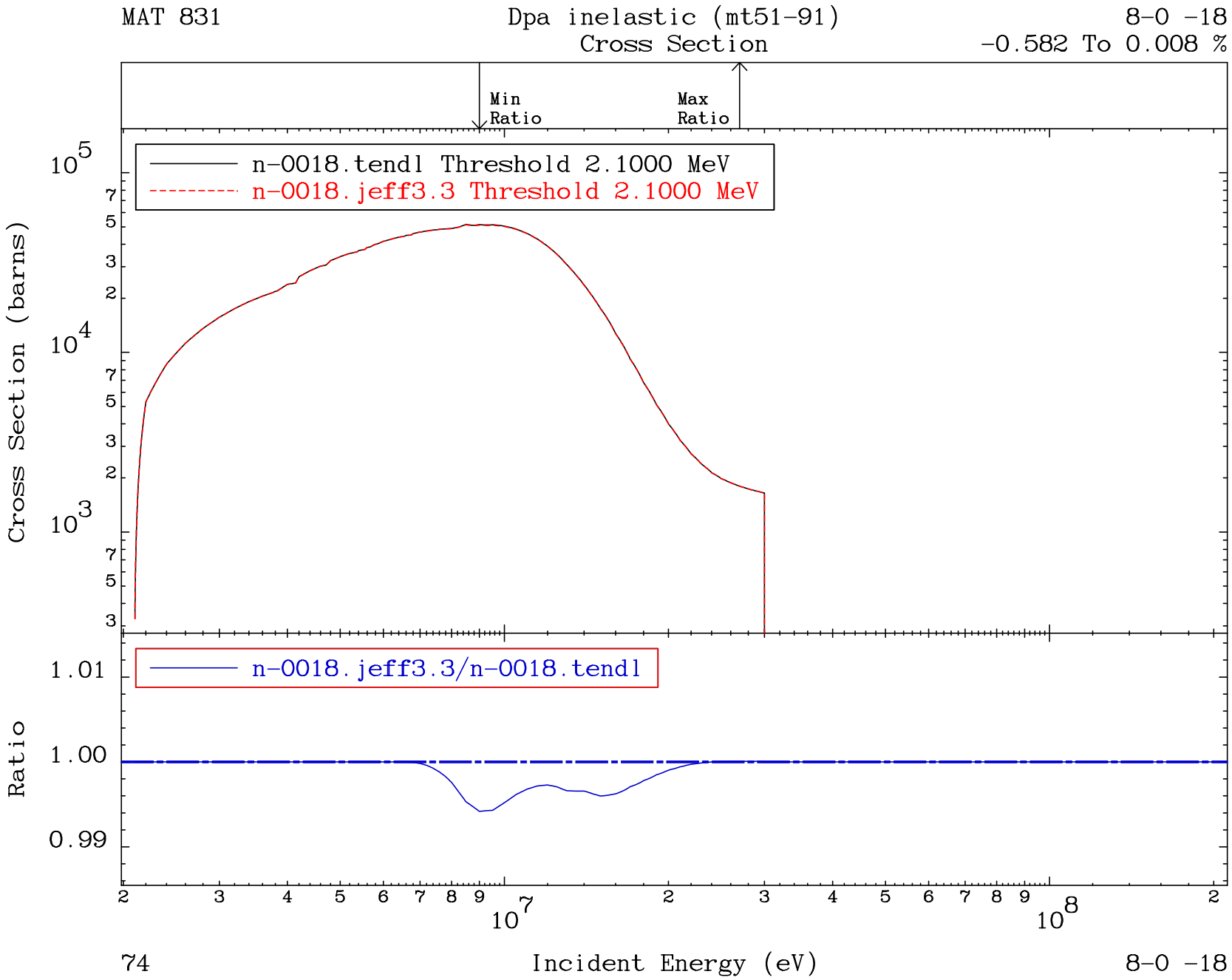

MAT 831
Kerma capture (mt102)
Cross Section
8-0 -18
-0.654 To 0.002 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
Incident Energy (eV)
69
8-0 -18

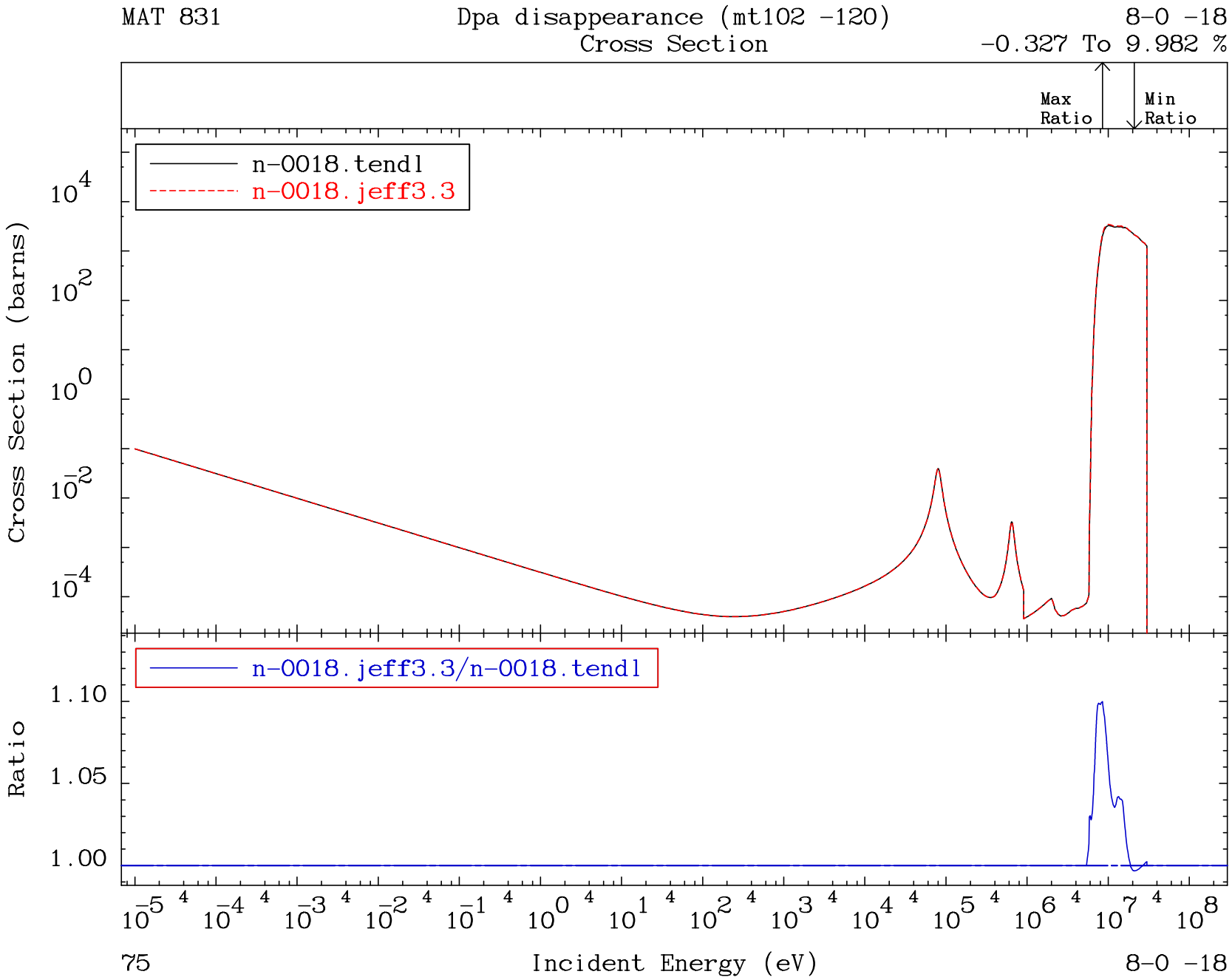

MAT 831
Total photon (eV-barns)
Cross Section
8-0 -18
-50.67 To 3110. %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
Incident Energy (eV)
70
8-0 -18


MAT 831
Total kinematic kerma (high limit)
Cross Section
8-0 -18
-11.61 To 5.666 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
Incident Energy (eV)
71
8-0 -18


MAT 831
Dpa total (eV-barns)
Cross Section
8-0 -18
-0.211 To 0.002 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
10^6
10^4
10^2
10^0
10^-2
10^-4
n-0018.jeff3.3/n-0018.tendl
Ratio
1.01
1.00
0.99
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
72
Incident Energy (eV)
8-0 -18


MAT 831
Dpa elastic (mt2)
Cross Section
8-0 -18
-0.064 To 0.000 %
Max Ratio
Min Ratio
n-0018.tendl Threshold 125.00 eV
n-0018.jeff3.3 Threshold 125.00 eV
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
Incident Energy (eV)
73
8-0 -18


MAT 831
Dpa inelastic (mt51-91)
Cross Section
8-0 -18
-0.582 To 0.008 %
Min Ratio
Max Ratio
n-0018.tendl Threshold 2.1000 MeV
n-0018.jeff3.3 Threshold 2.1000 MeV
Cross Section (barns)
n-0018.jeff3.3/n-0018.tendl
Ratio
Incident Energy (eV)
74
8-0 -18


MAT 831
Dpa disappearance (mt102 -120)
Cross Section
8-0 -18
-0.327 To 9.982 %
Max Ratio
Min Ratio
n-0018.tendl
n-0018.jeff3.3
Cross Section (barns)
10^4
10^2
10^0
10^-2
10^-4
n-0018.jeff3.3/n-0018.tendl
Ratio
1.10
1.05
1.00
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
75
Incident Energy (eV)
8-0 -18