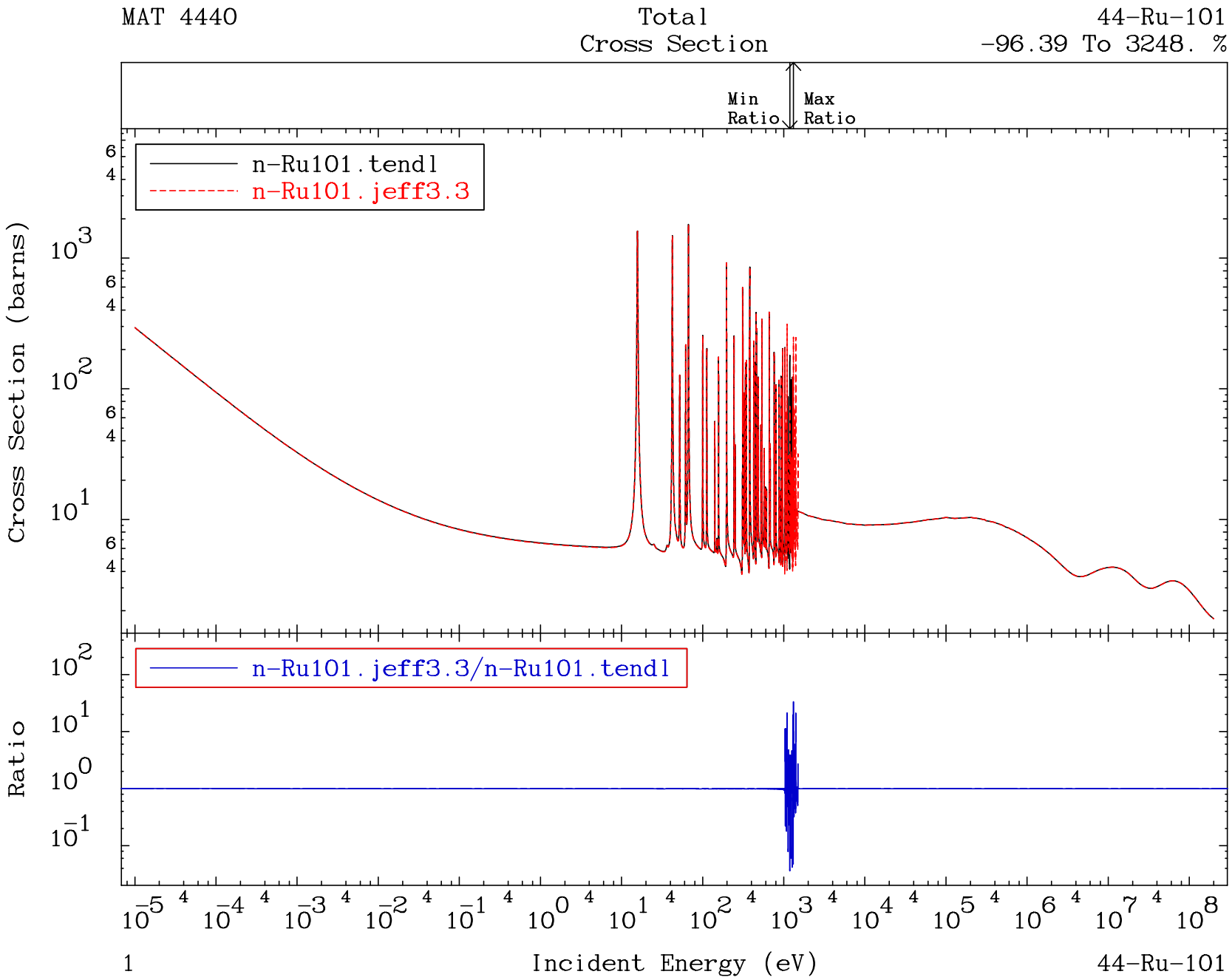
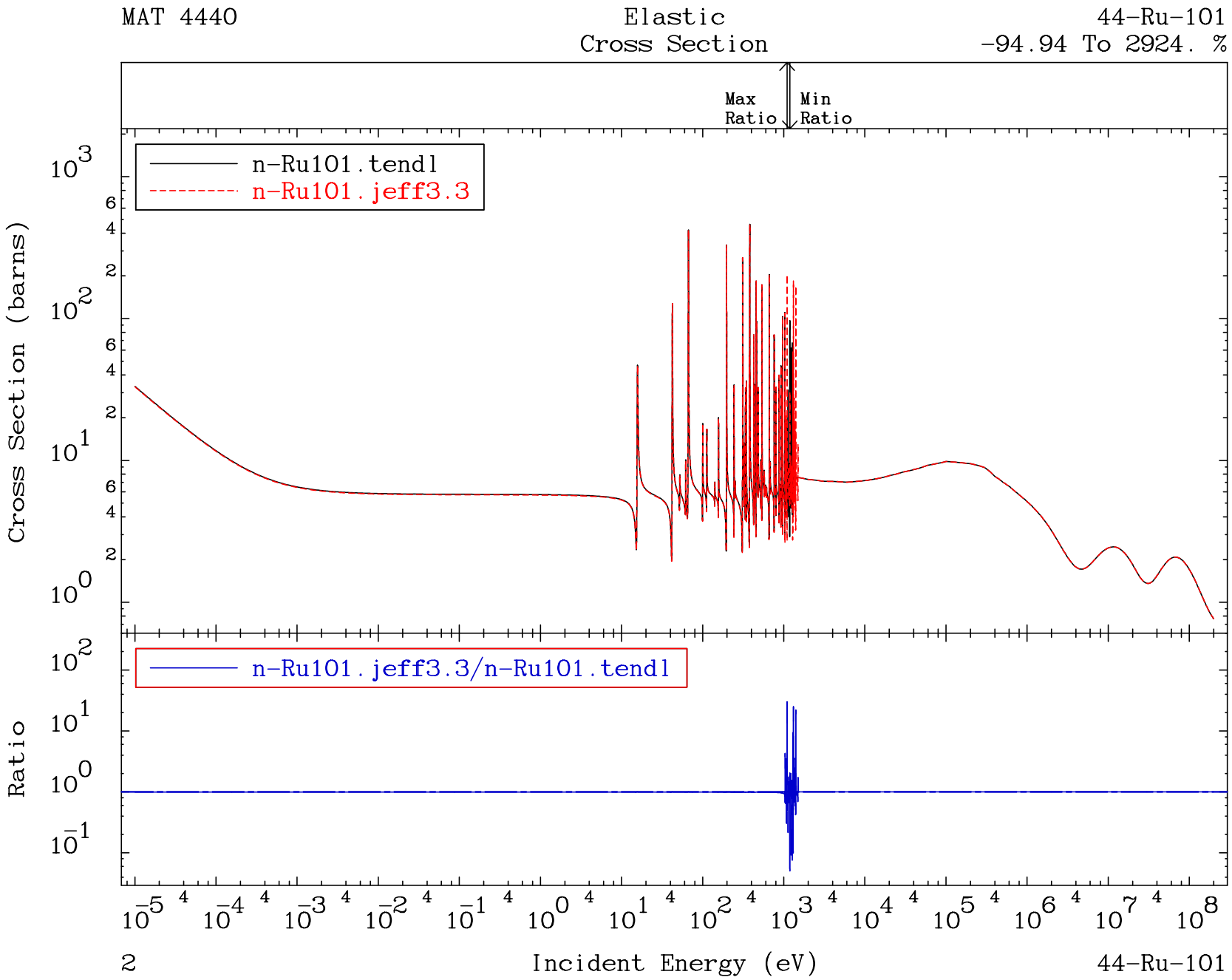
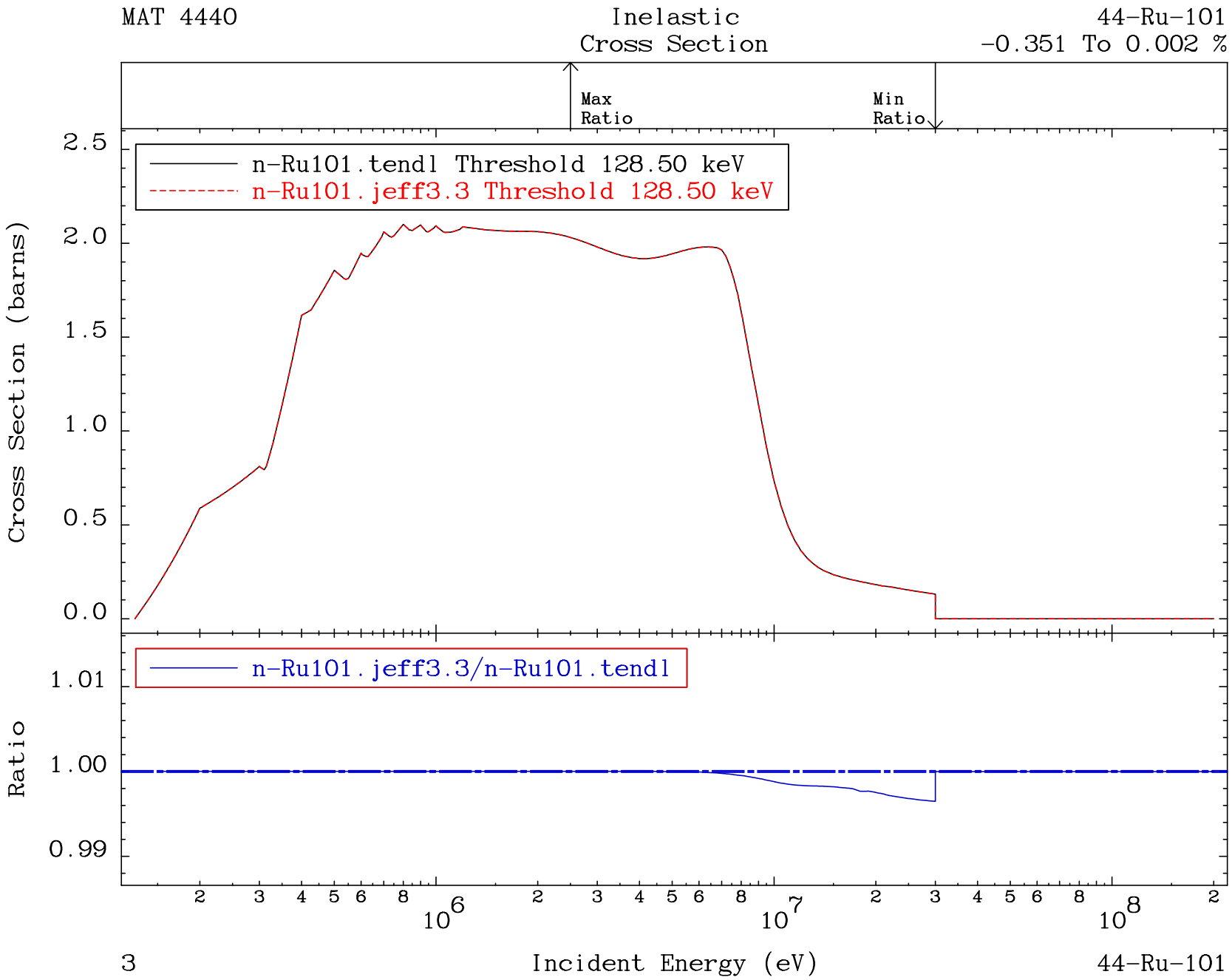
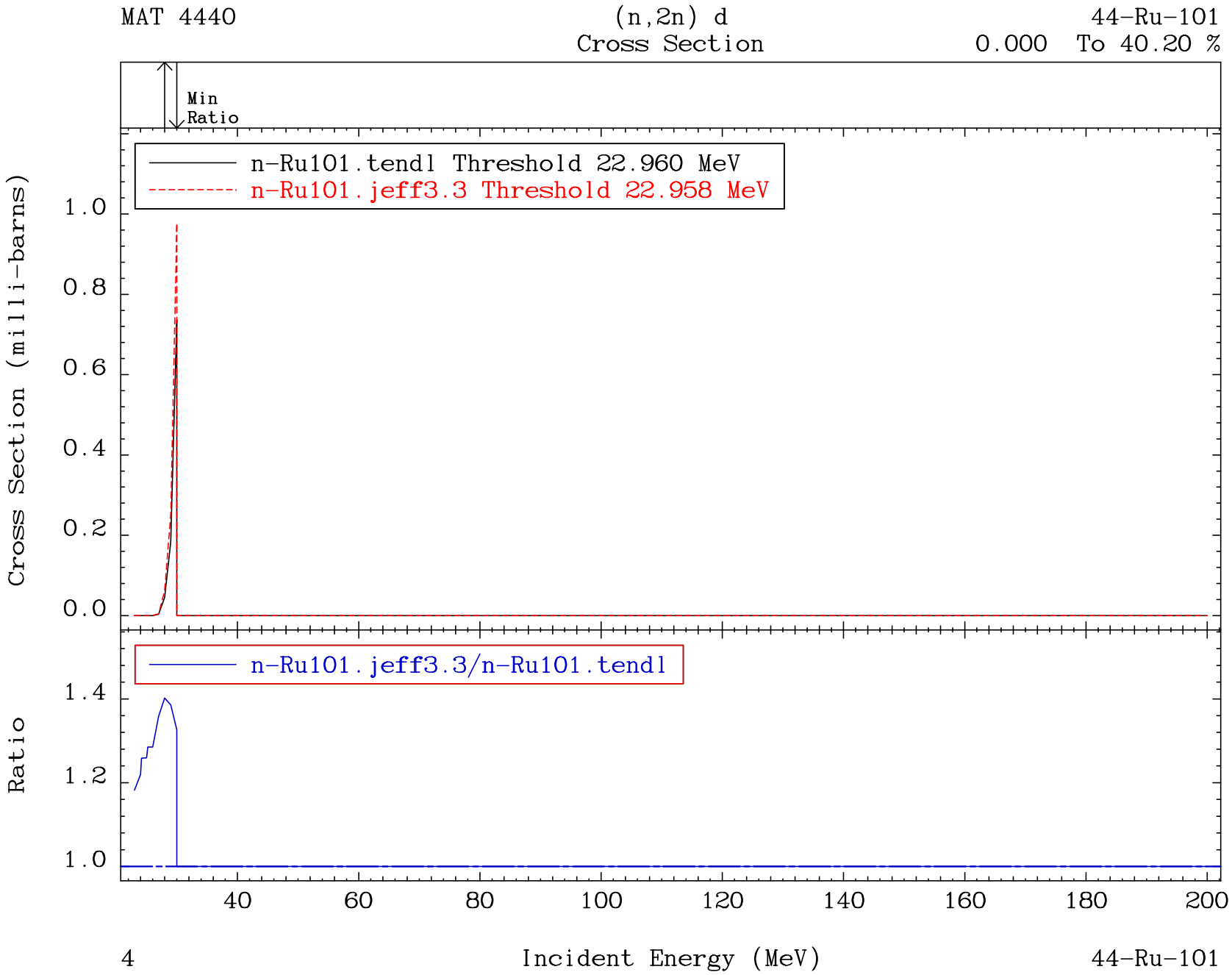
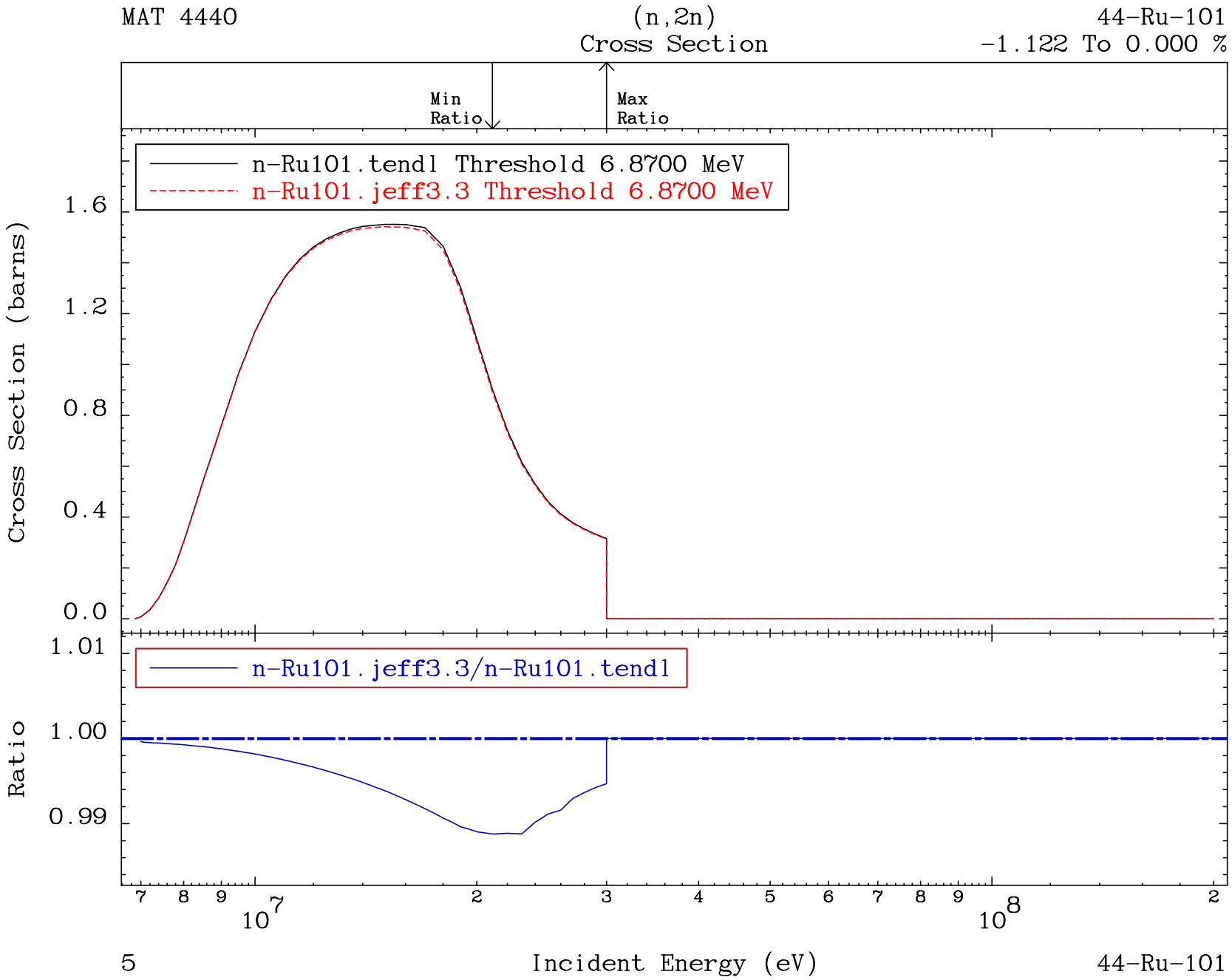
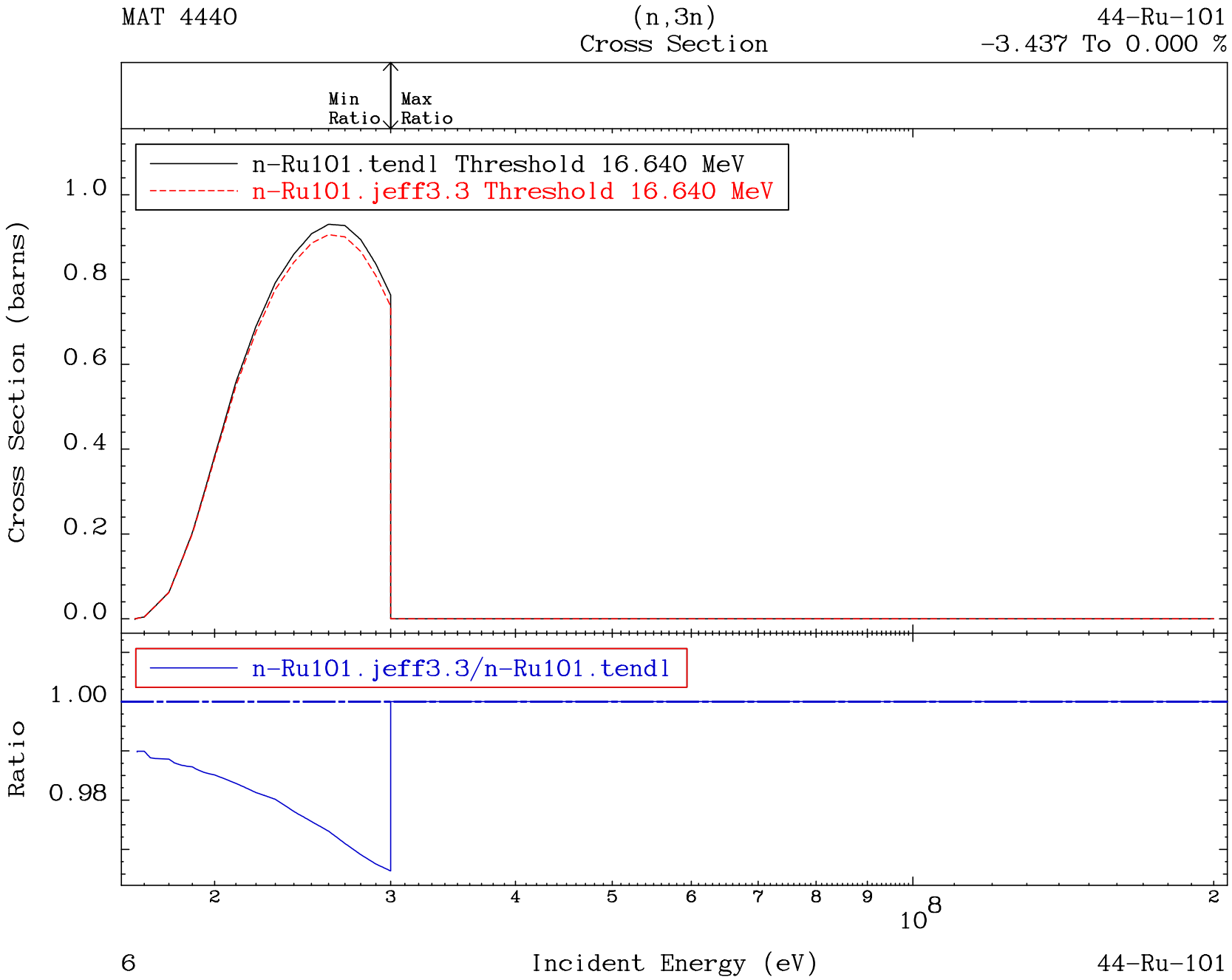

MAT 4440
Total
Cross Section
44-Ru-101
-96.39 To 3248. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
1
44-Ru-101

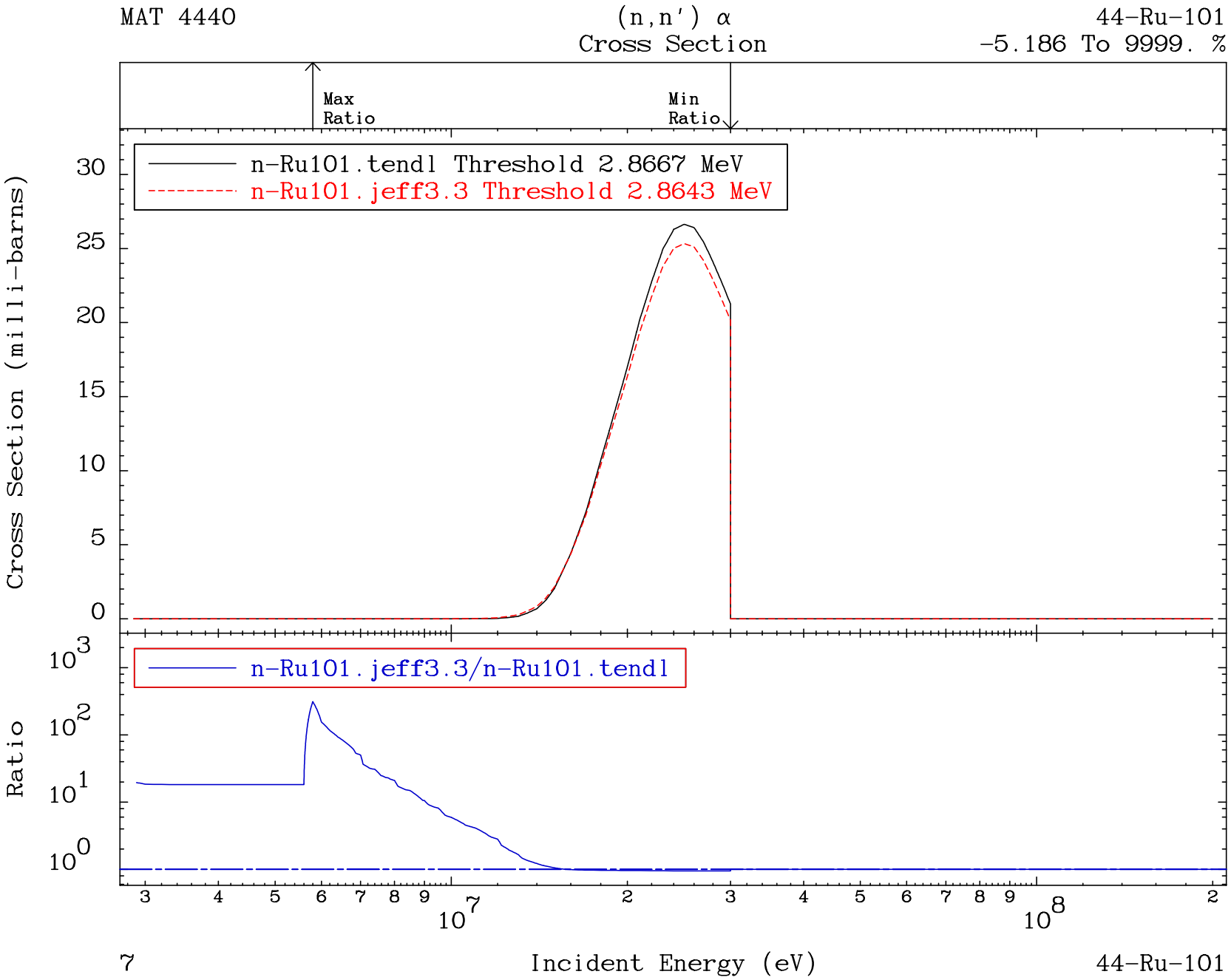

MAT 4440
Elastic
Cross Section
44-Ru-101
-94.94 To 2924. %
Max Ratio
Min Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
2
44-Ru-101

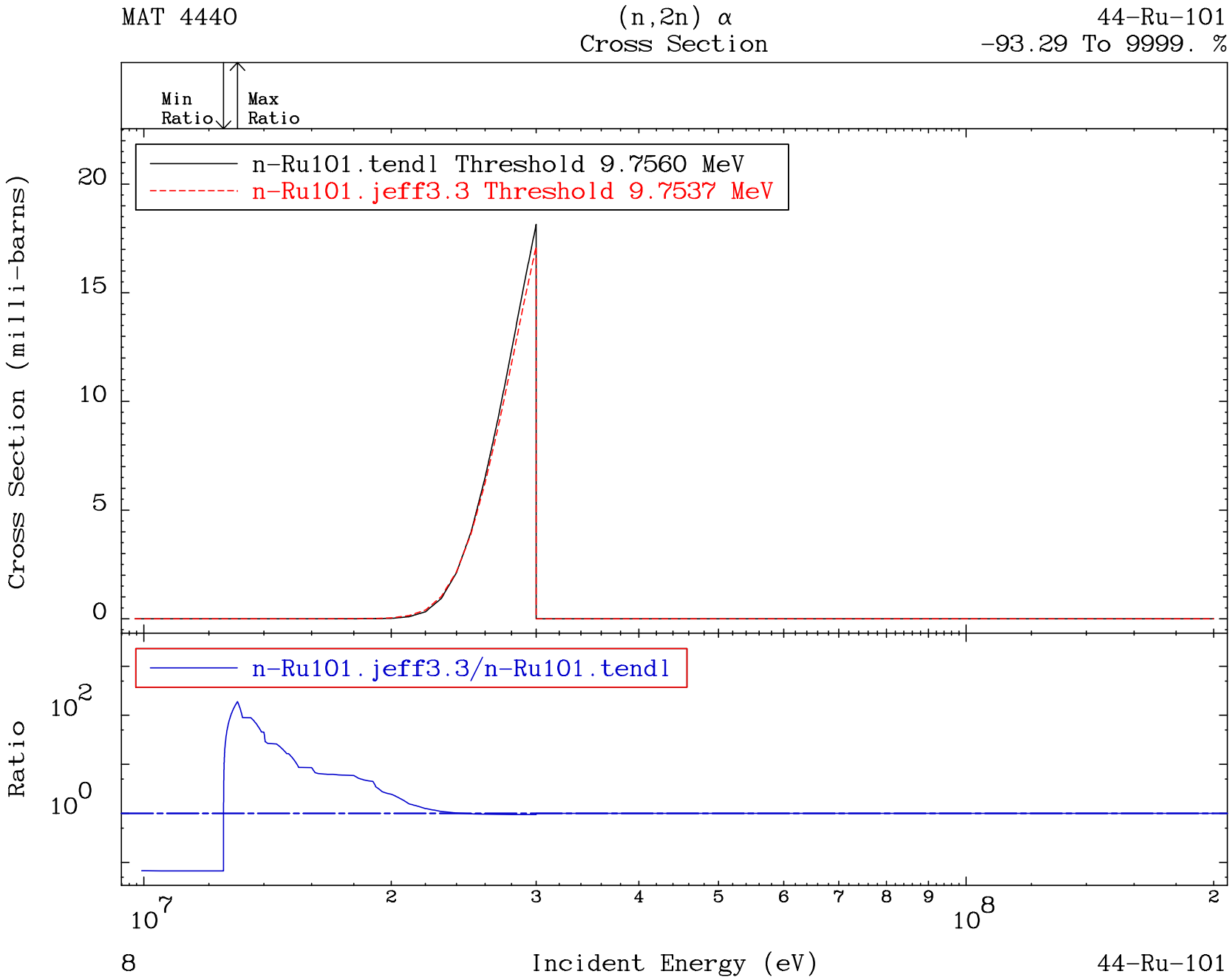

MAT 4440
Inelastic
Cross Section
44-Ru-101
-0.351 To 0.002 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 128.50 keV
n-Ru101.jeff3.3 Threshold 128.50 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 8
10^6
2 3 4 5 6 8
10^7
2 3 4 5 6 8
10^8
2
3
Incident Energy (eV)
44-Ru-101

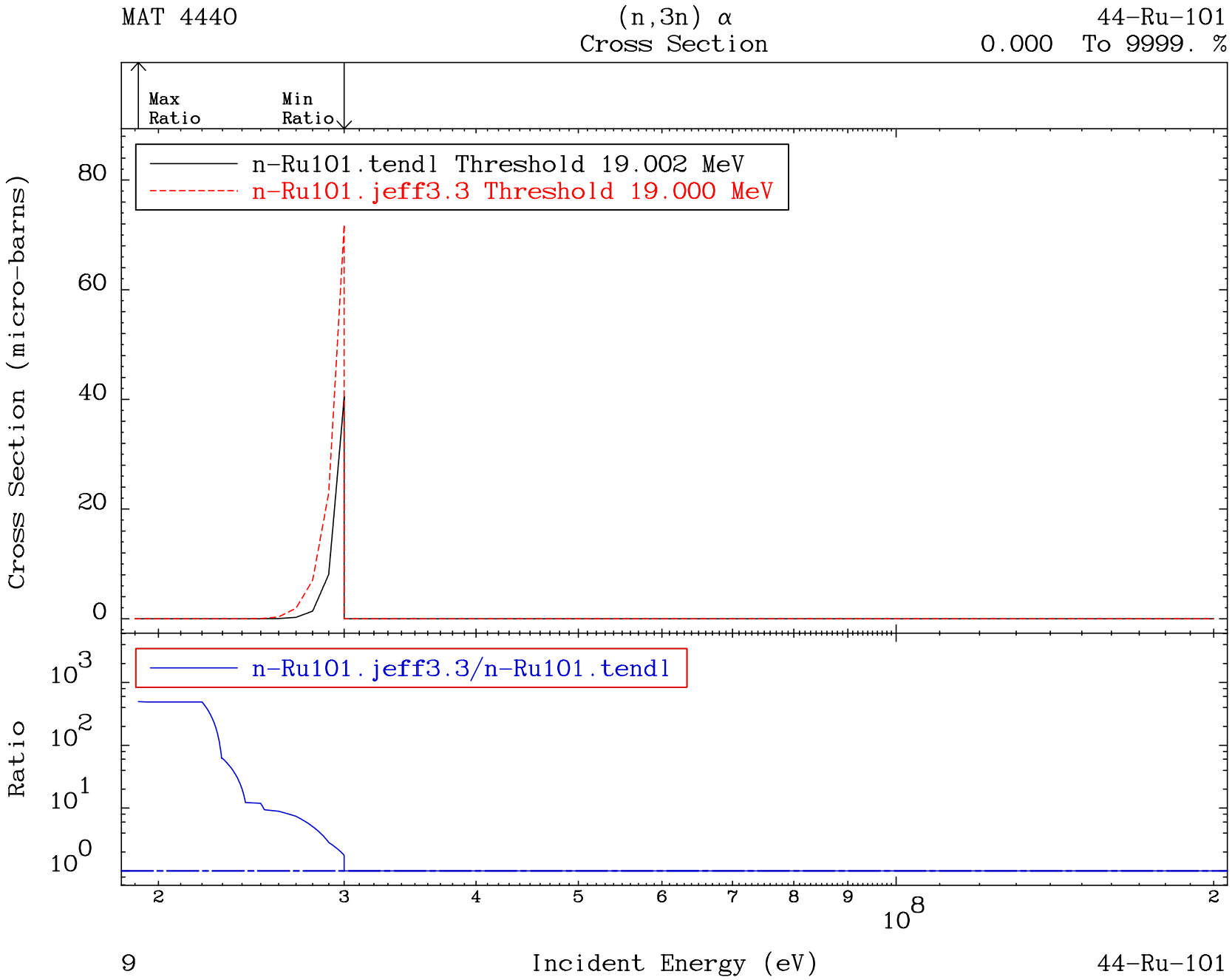

MAT 4440
(n,2n) d
Cross Section
44-Ru-101
0.000 To 40.20 %
Min
Ratio
n-Ru101.tendl Threshold 22.960 MeV
n-Ru101.jeff3.3 Threshold 22.958 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
44-Ru-101

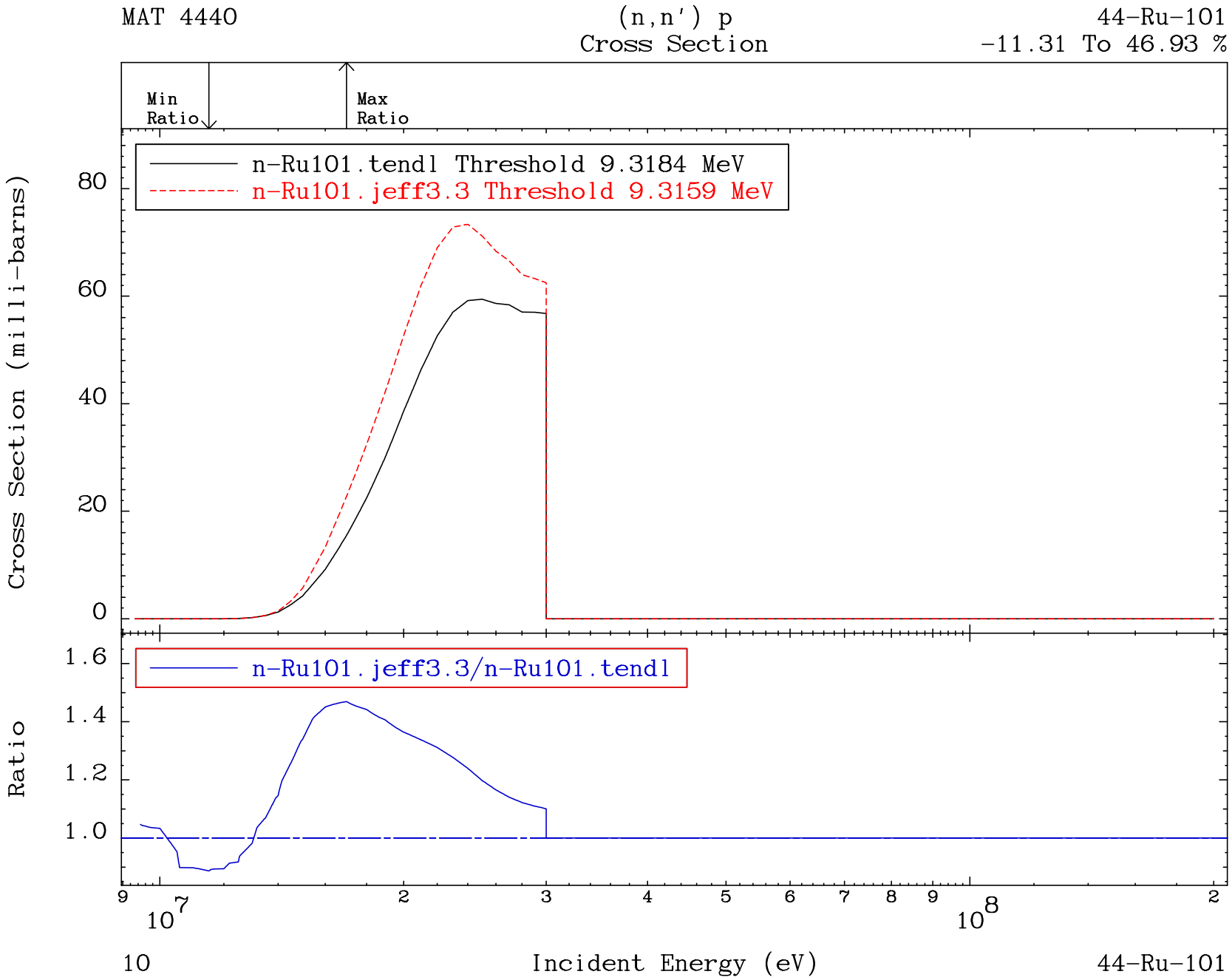

MAT 4440
(n,2n)
Cross Section
44-Ru-101
-1.122 To 0.000 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 6.8700 MeV
n-Ru101.jeff3.3 Threshold 6.8700 MeV
Cross Section (barns)
1.6
1.2
0.8
0.4
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
44-Ru-101

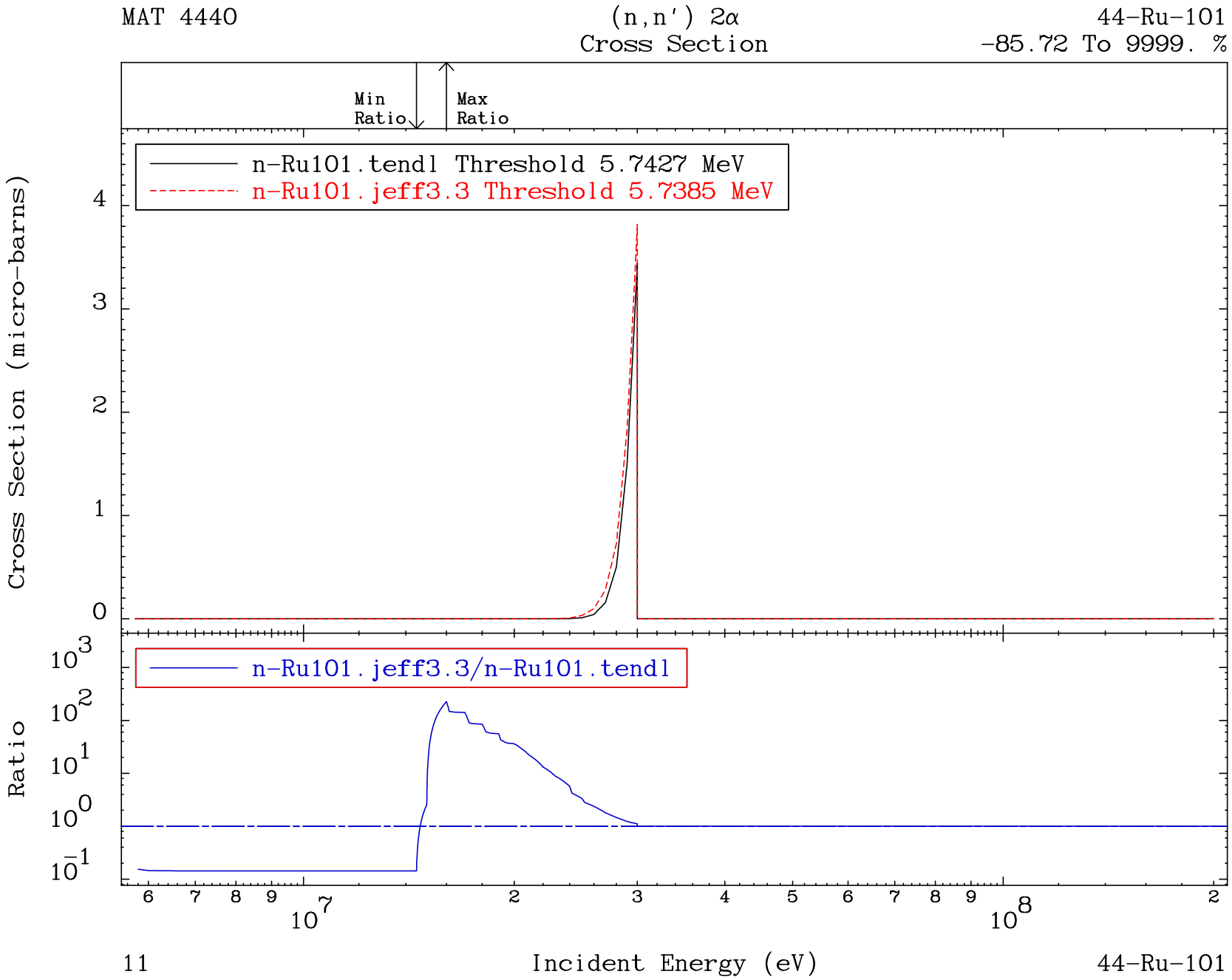

MAT 4440
(n,3n)
Cross Section
44-Ru-101
-3.437 To 0.000 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 16.640 MeV
n-Ru101.jeff3.3 Threshold 16.640 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.98
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
44-Ru-101

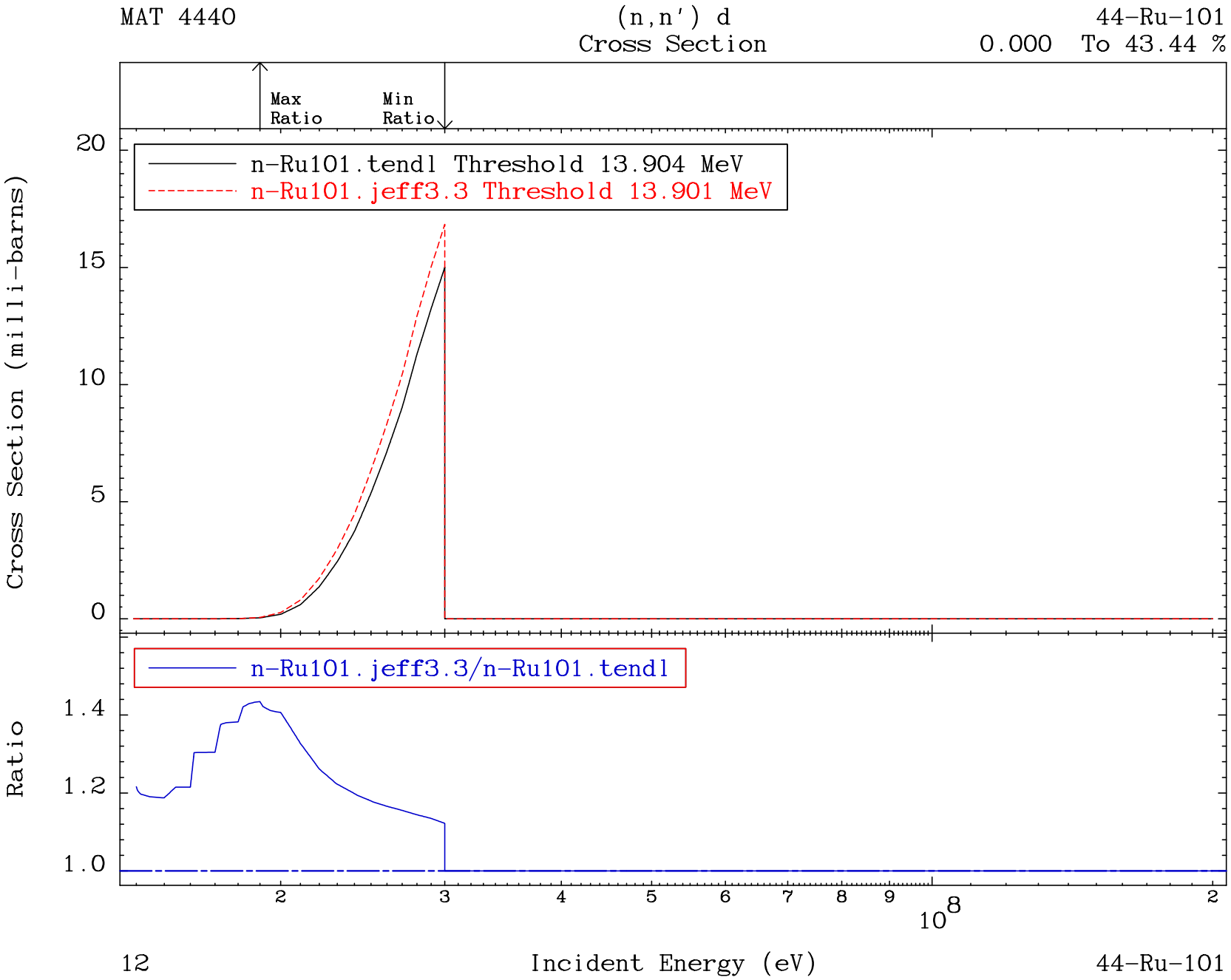

MAT 4440
(n,n') α
Cross Section
44-Ru-101
-5.186 To 9999. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 2.8667 MeV
n-Ru101.jeff3.3 Threshold 2.8643 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
10^3
10^2
10^1
10^0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
44-Ru-101

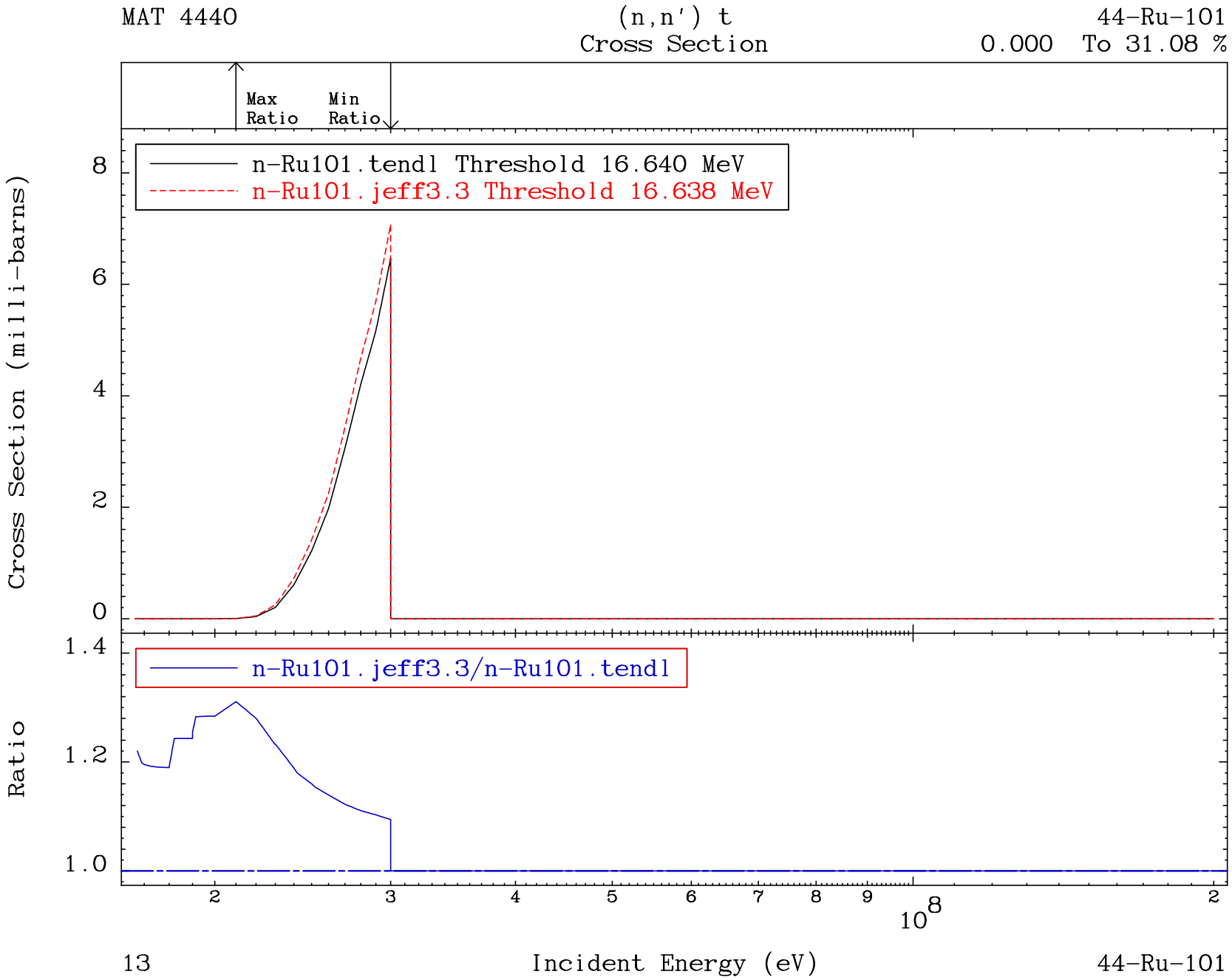

MAT 4440
(n,2n) α
Cross Section
44-Ru-101
-93.29 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 9.7560 MeV
n-Ru101.jeff3.3 Threshold 9.7537 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
10^2
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
44-Ru-101

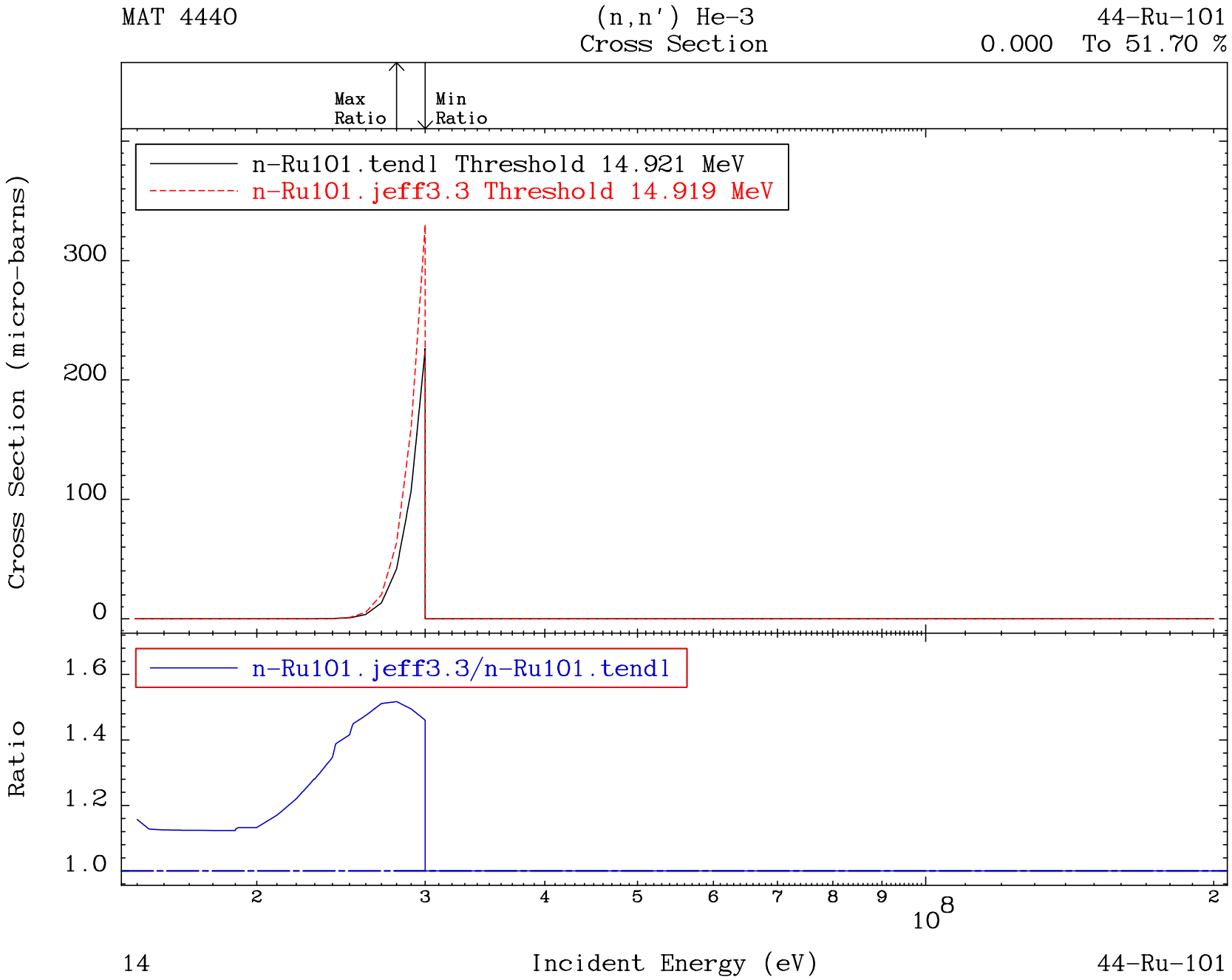

MAT 4440
(n,3n) α
Cross Section
44-Ru-101
0.000 To 9999. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 19.002 MeV
n-Ru101.jeff3.3 Threshold 19.000 MeV
Cross Section (micro-barns)
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
10^3
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
44-Ru-101

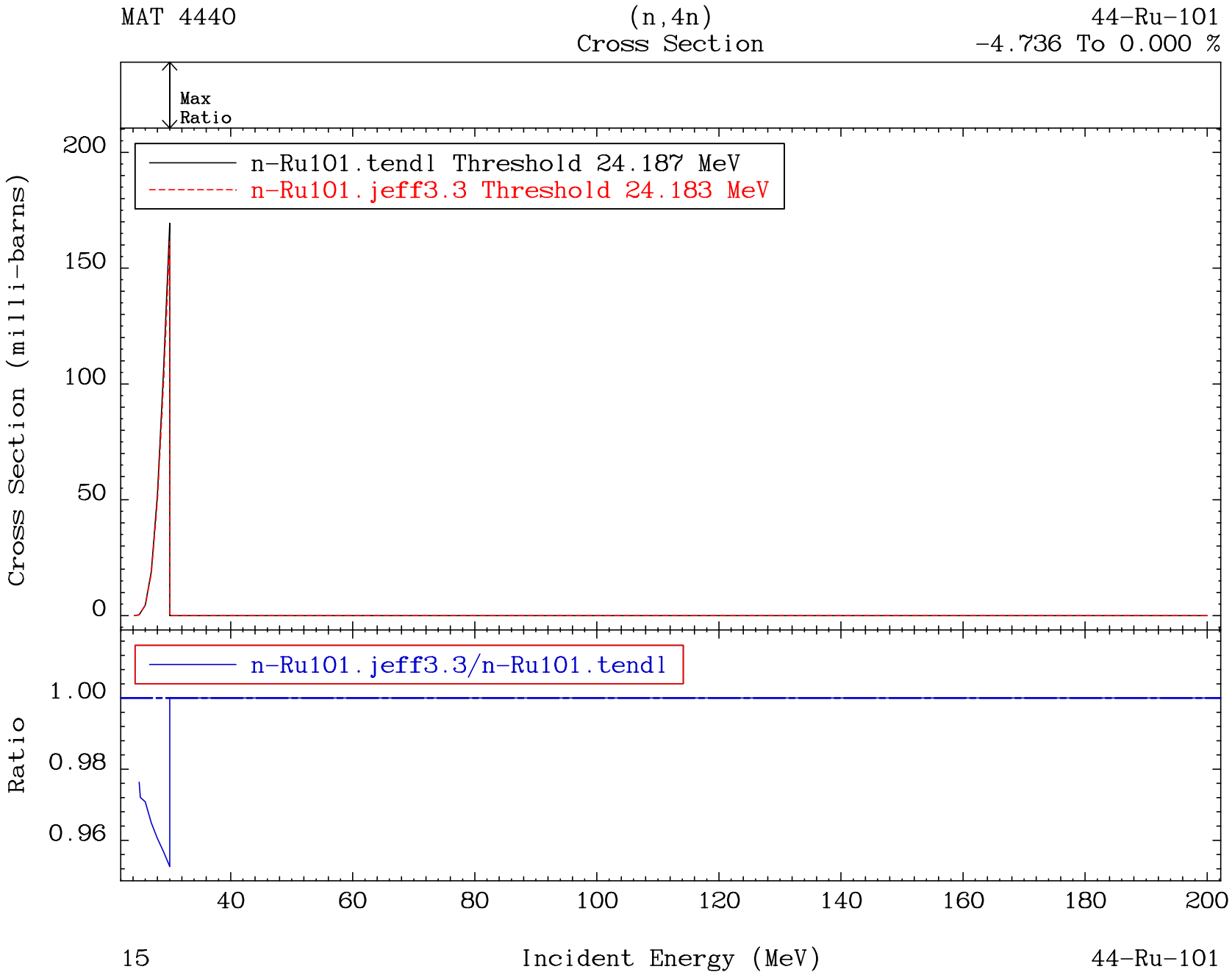

MAT 4440
(n,n') p
Cross Section
44-Ru-101
-11.31 To 46.93 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 9.3184 MeV
n-Ru101.jeff3.3 Threshold 9.3159 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.4
1.2
1.0
9
2
3
4
5
6
7
8
9
2
10^7
10^8
10
Incident Energy (eV)
44-Ru-101

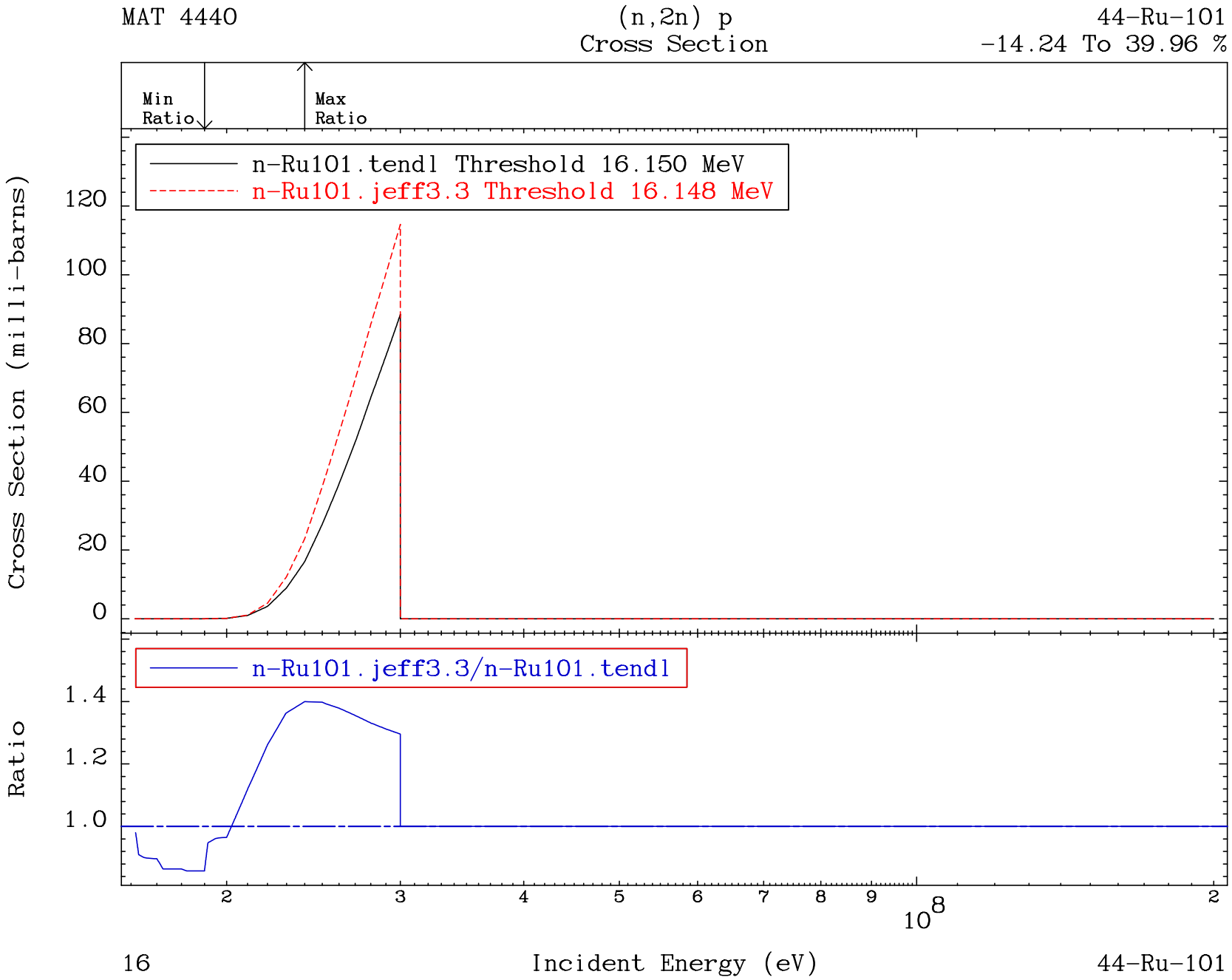

MAT 4440
(n,n') 2α
Cross Section
44-Ru-101
-85.72 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 5.7427 MeV
n-Ru101.jeff3.3 Threshold 5.7385 MeV
Cross Section (micro-barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
11
44-Ru-101

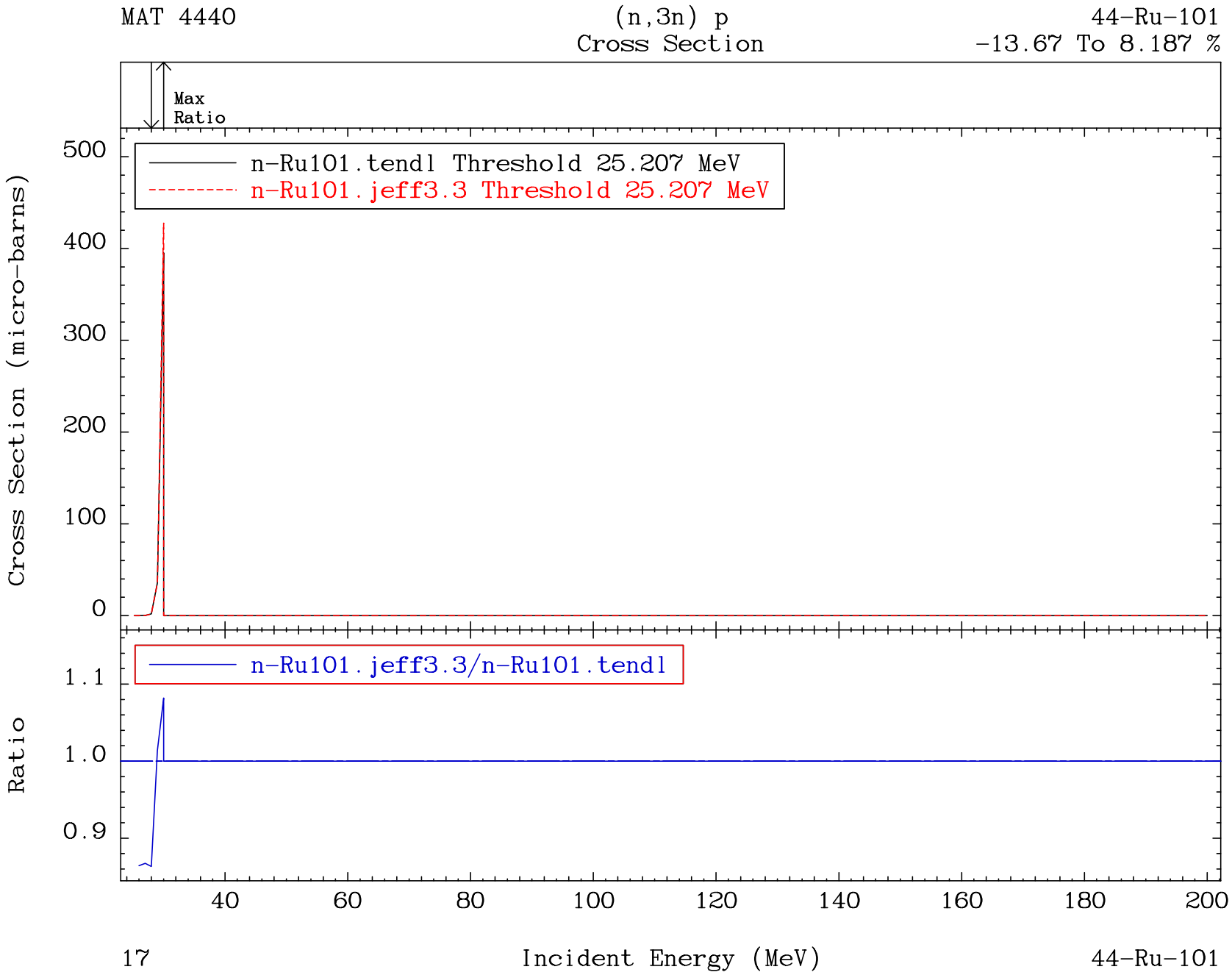

MAT 4440
(n,n') d
Cross Section
44-Ru-101
0.000 To 43.44 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 13.904 MeV
n-Ru101.jeff3.3 Threshold 13.901 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
44-Ru-101

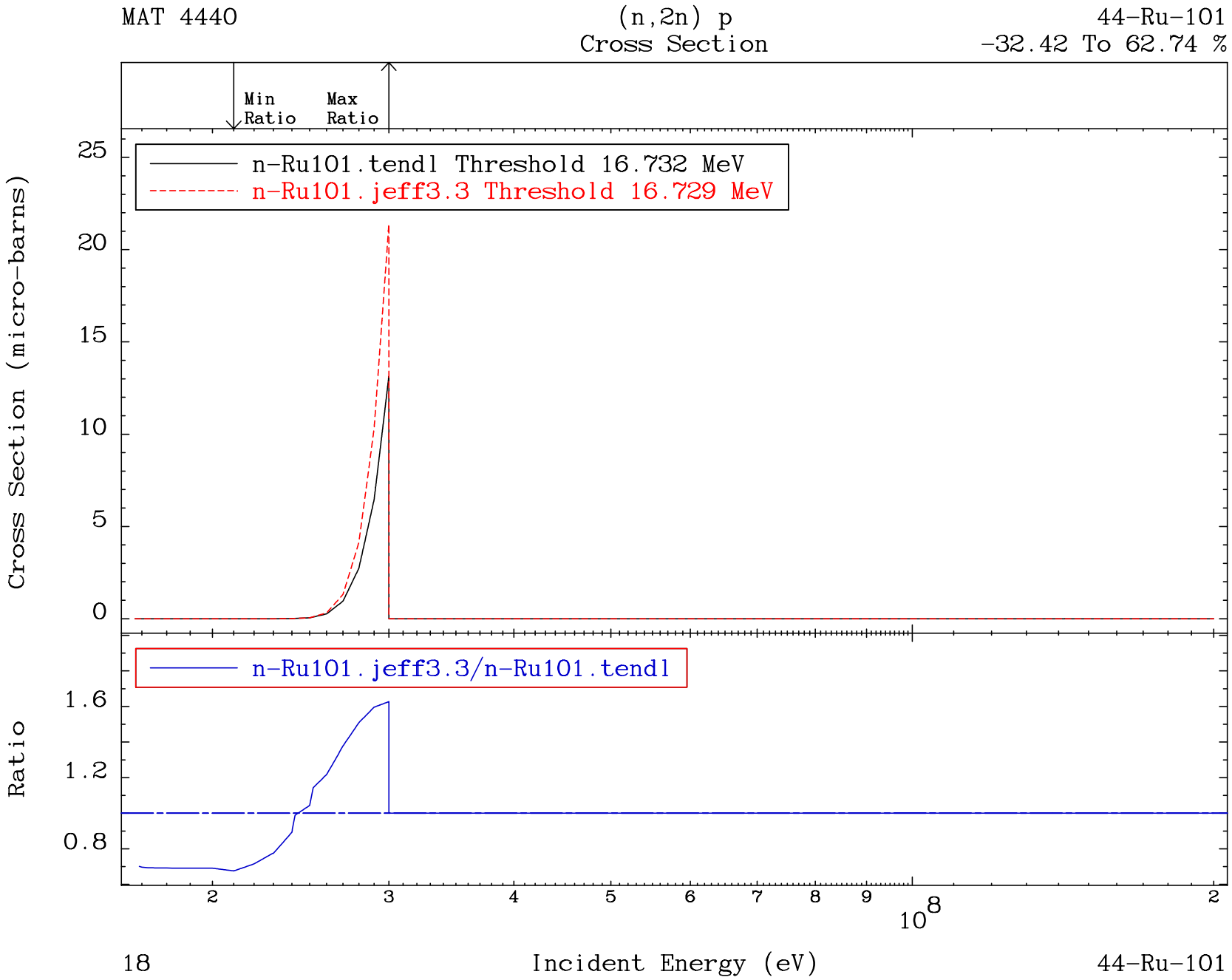

MAT 4440
(n,n') t
Cross Section
44-Ru-101
0.000 To 31.08 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 16.640 MeV
n-Ru101.jeff3.3 Threshold 16.638 MeV
Cross Section (milli-barns)
8
6
4
2
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
44-Ru-101

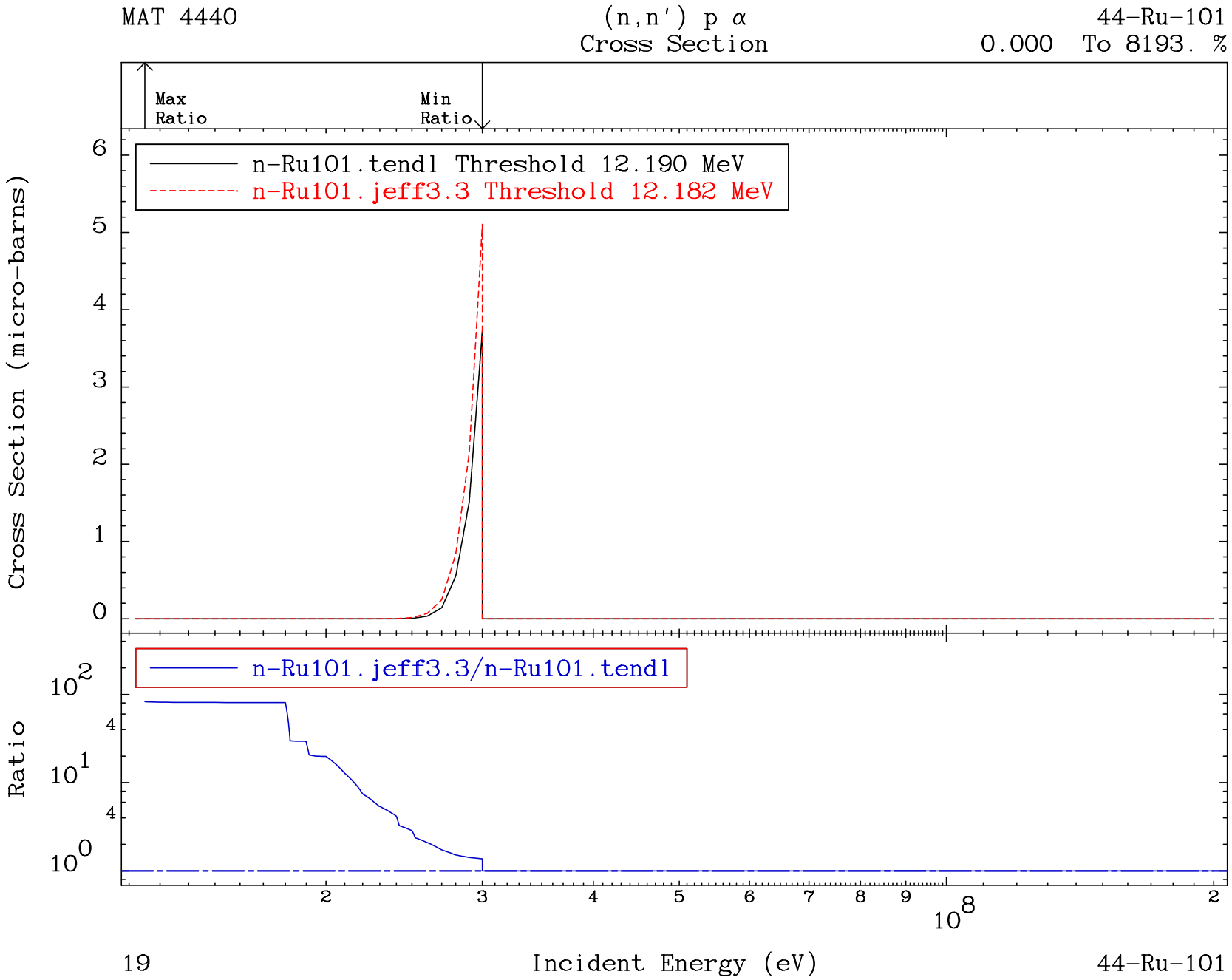

MAT 4440
(n,n') He-3
Cross Section
44-Ru-101
0.000 To 51.70 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 14.921 MeV
n-Ru101.jeff3.3 Threshold 14.919 MeV
Cross Section (micro-barns)
300
200
100
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
44-Ru-101

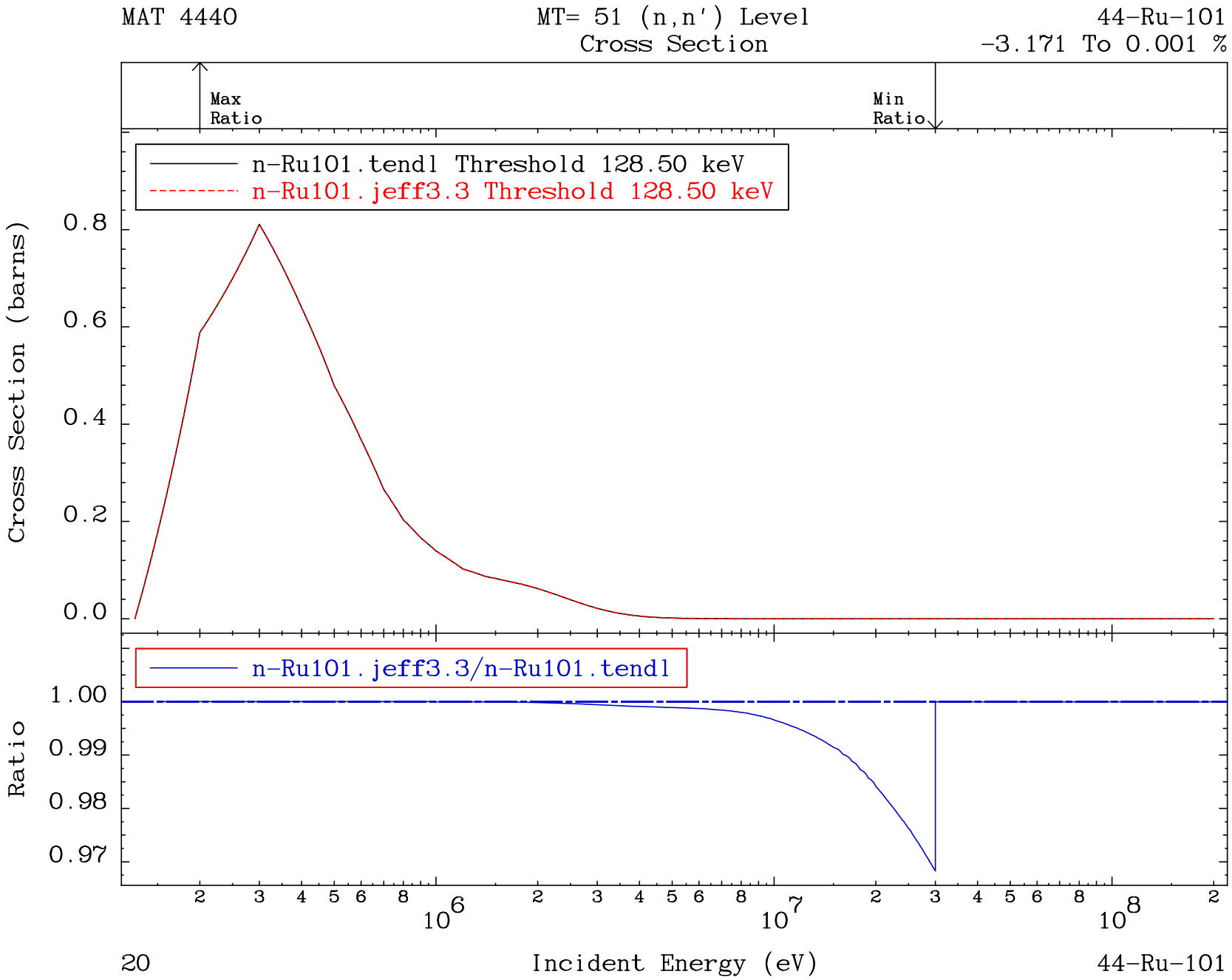

MAT 4440
(n,4n)
Cross Section
44-Ru-101
-4.736 To 0.000 %
Max
Ratio
n-Ru101.tendl Threshold 24.187 MeV
n-Ru101.jeff3.3 Threshold 24.183 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.98
0.96
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
44-Ru-101

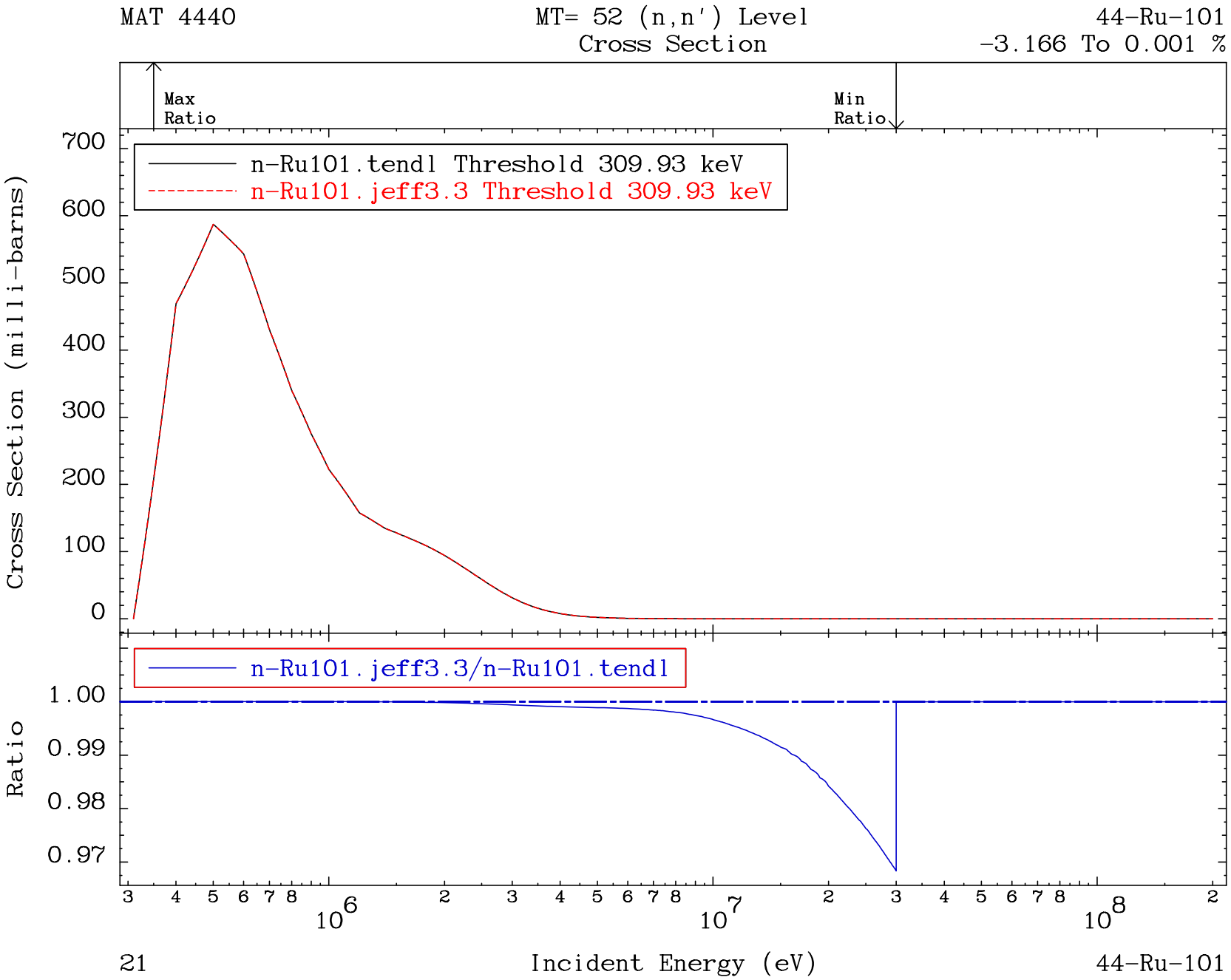

MAT 4440
(n,2n) p
Cross Section
44-Ru-101
-14.24 To 39.96 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 16.150 MeV
n-Ru101.jeff3.3 Threshold 16.148 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
16
Incident Energy (eV)
44-Ru-101

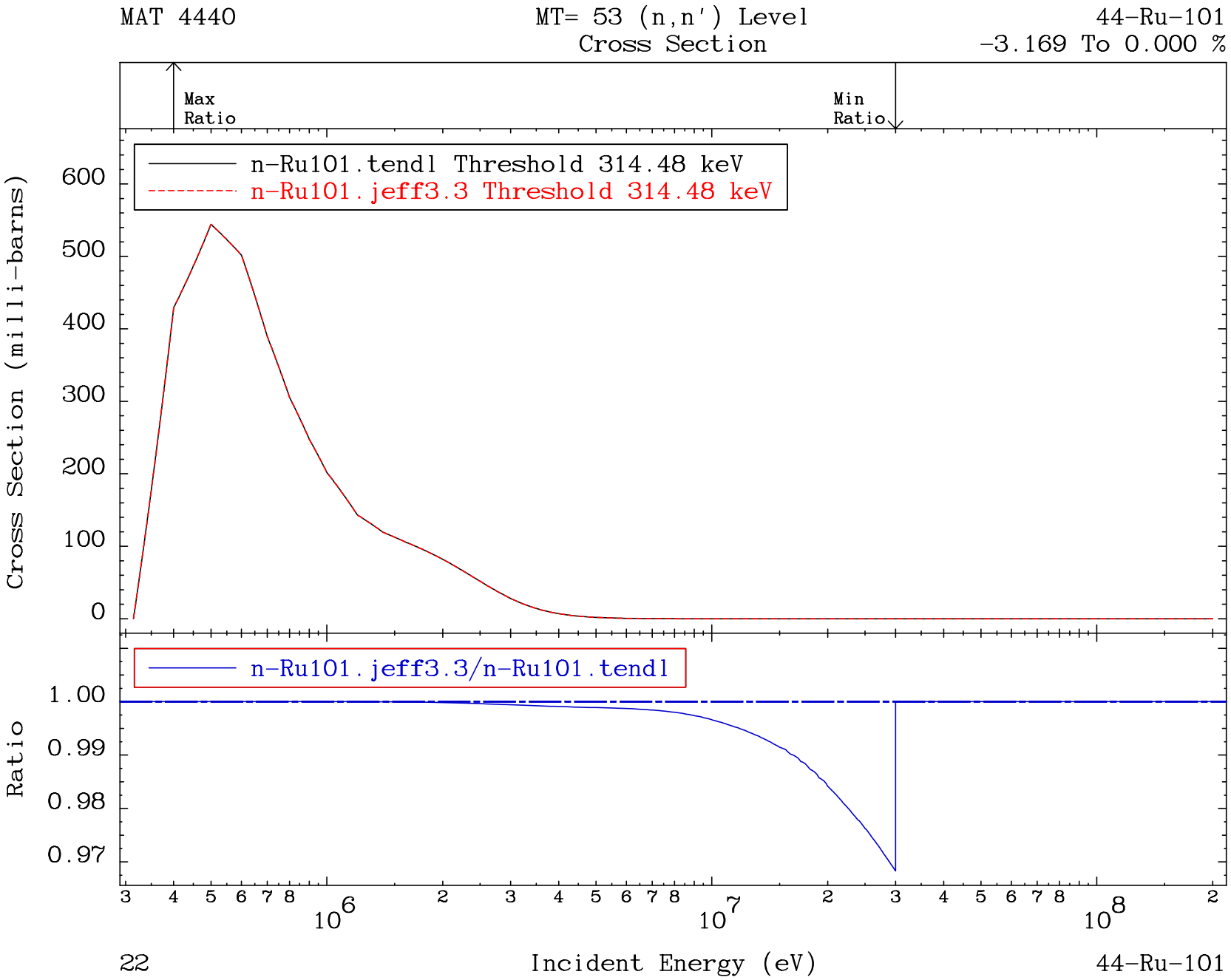

MAT 4440
(n,3n) p
Cross Section
44-Ru-101
-13.67 To 8.187 %
Max
Ratio
n-Ru101.tendl Threshold 25.207 MeV
n-Ru101.jeff3.3 Threshold 25.207 MeV
Cross Section (micro-barns)
500
400
300
200
100
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.1
1.0
0.9
40
60
80
100
120
140
160
180
200
17
Incident Energy (MeV)
44-Ru-101

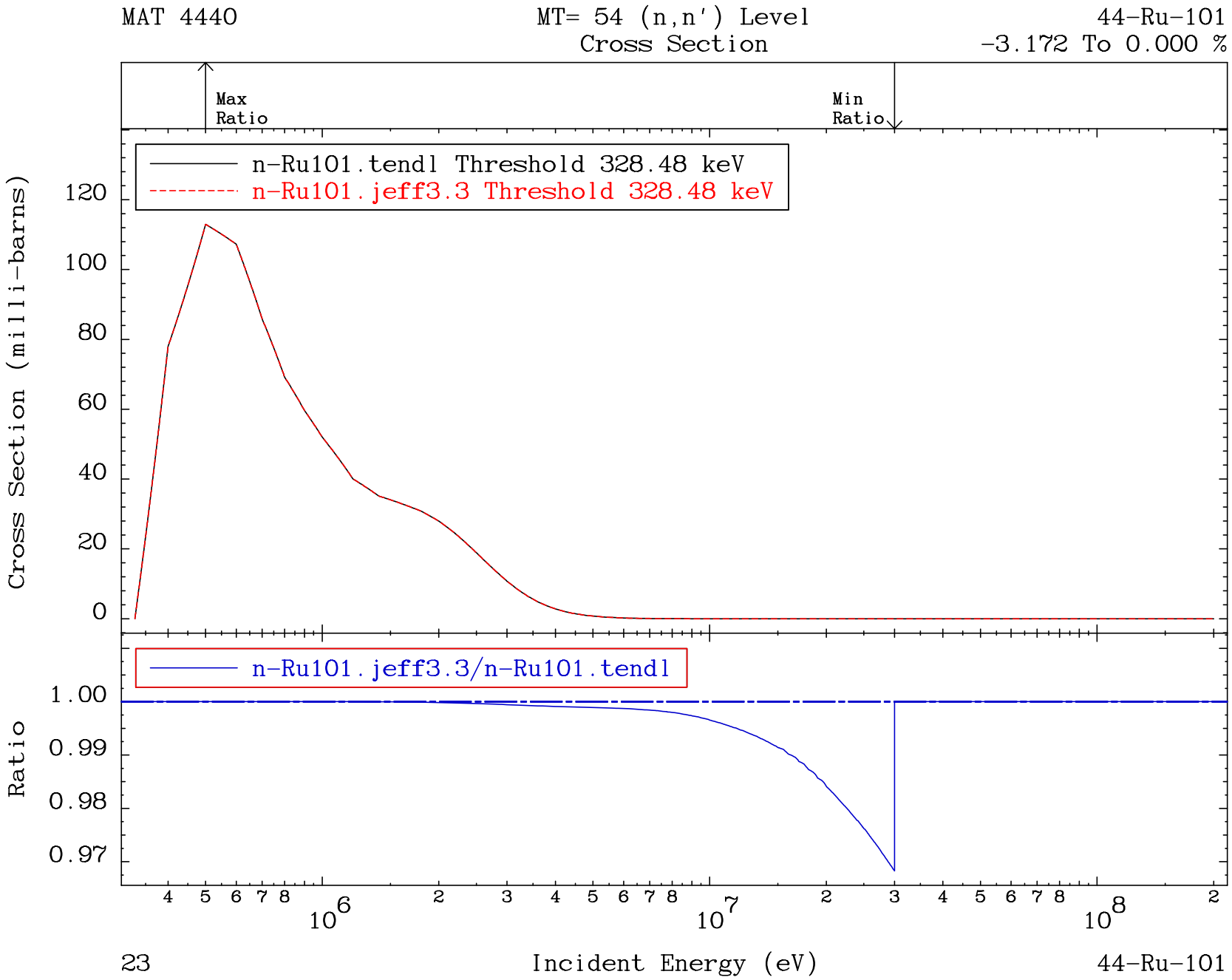

MAT 4440
(n,2n) p
Cross Section
44-Ru-101
-32.42 To 62.74 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 16.732 MeV
n-Ru101.jeff3.3 Threshold 16.729 MeV
Cross Section (micro-barns)
25
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.2
0.8
2
3
4
5
6
7
8
9
10^8
2
18
Incident Energy (eV)
44-Ru-101

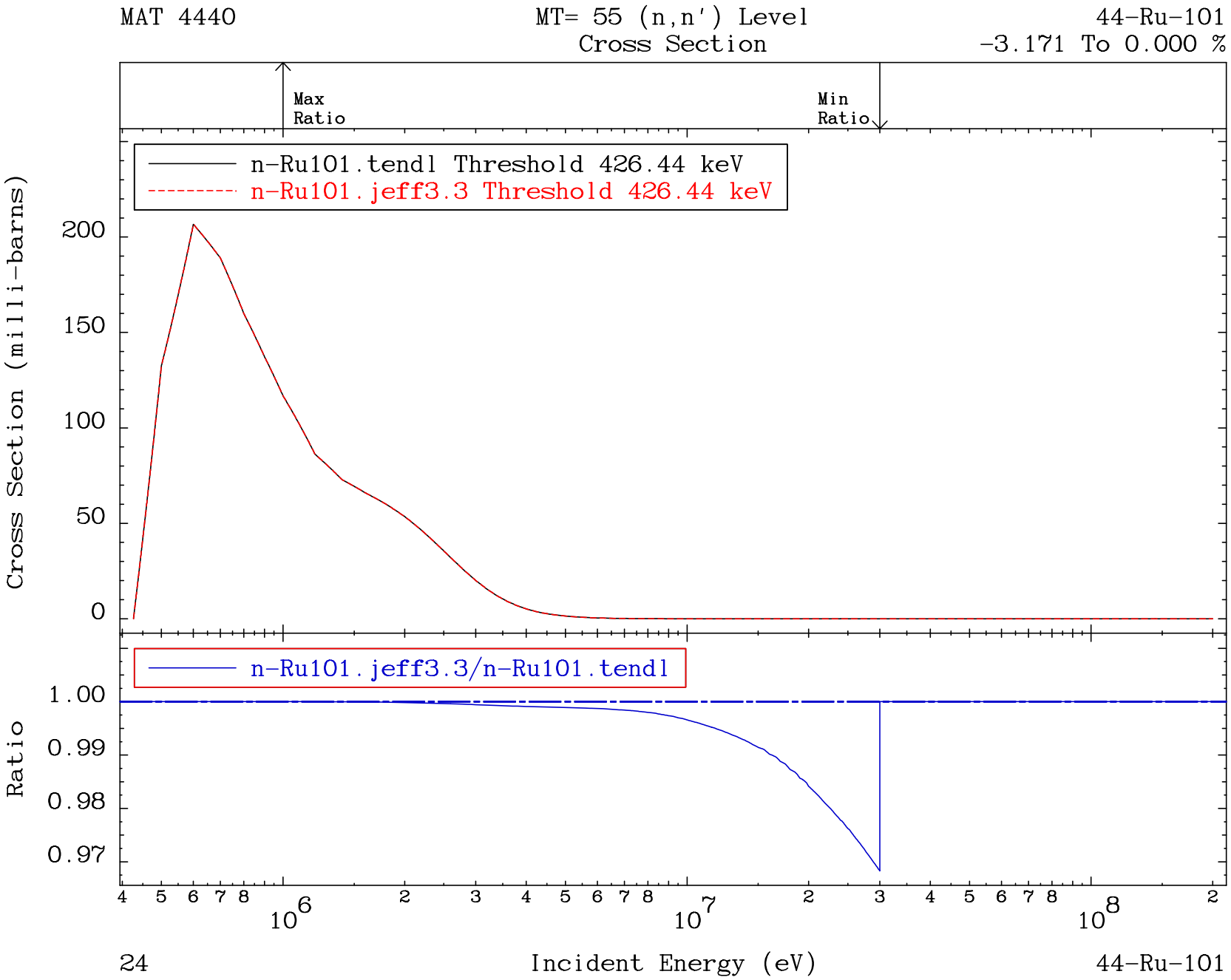

MAT 4440
(n,n') p α
Cross Section
44-Ru-101
0.000 To 8193. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 12.190 MeV
n-Ru101.jeff3.3 Threshold 12.182 MeV
Cross Section (micro-barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
19
44-Ru-101

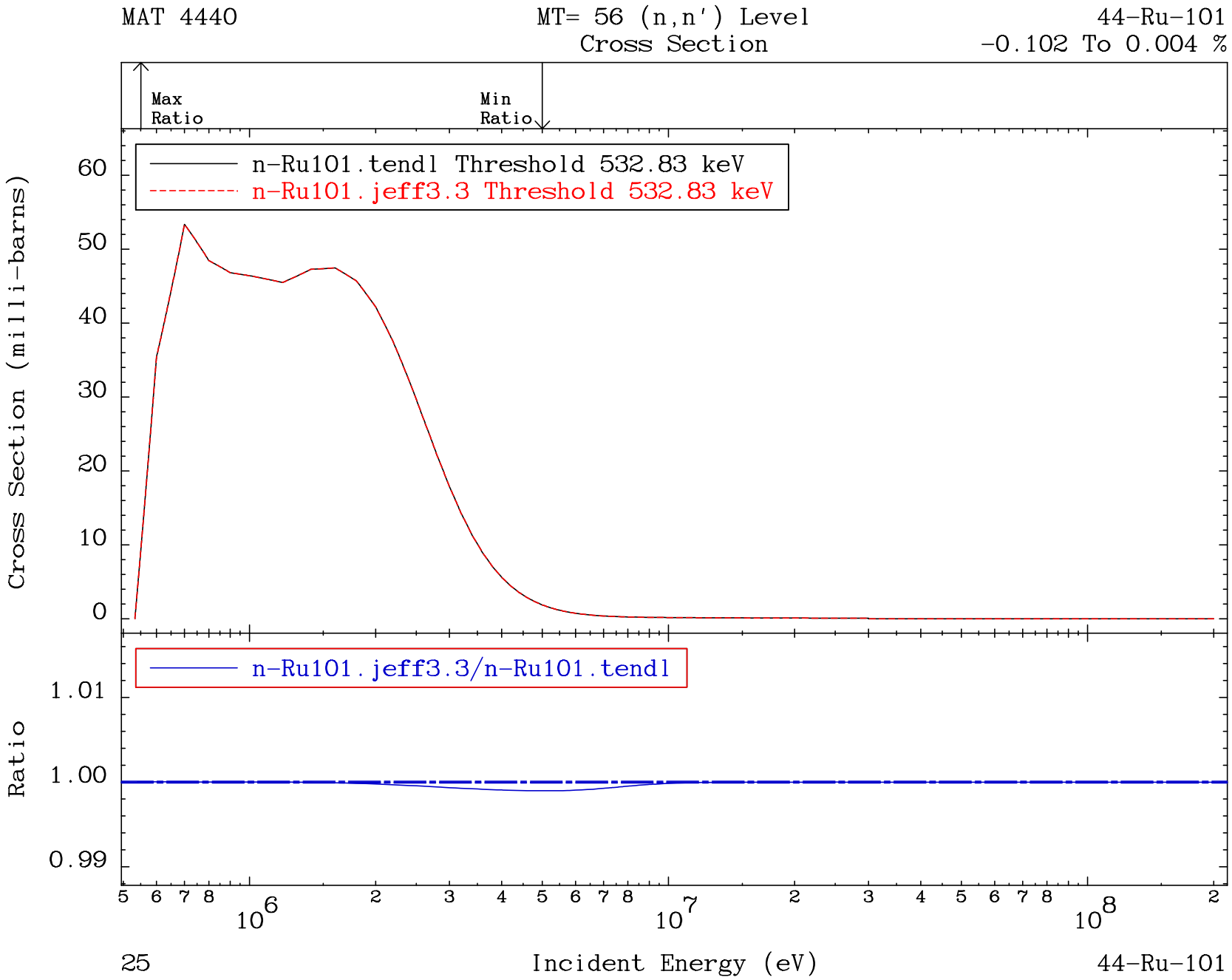

MAT 4440
MT= 51 (n,n') Level
Cross Section
44-Ru-101
-3.171 To 0.001 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 128.50 keV
n-Ru101.jeff3.3 Threshold 128.50 keV
Cross Section (barns)
0.8
0.6
0.4
0.2
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
2 3 4 5 6 8
10^6
2 3 4 5 6 8
10^7
2 3 4 5 6 8
10^8
2
20
Incident Energy (eV)
44-Ru-101

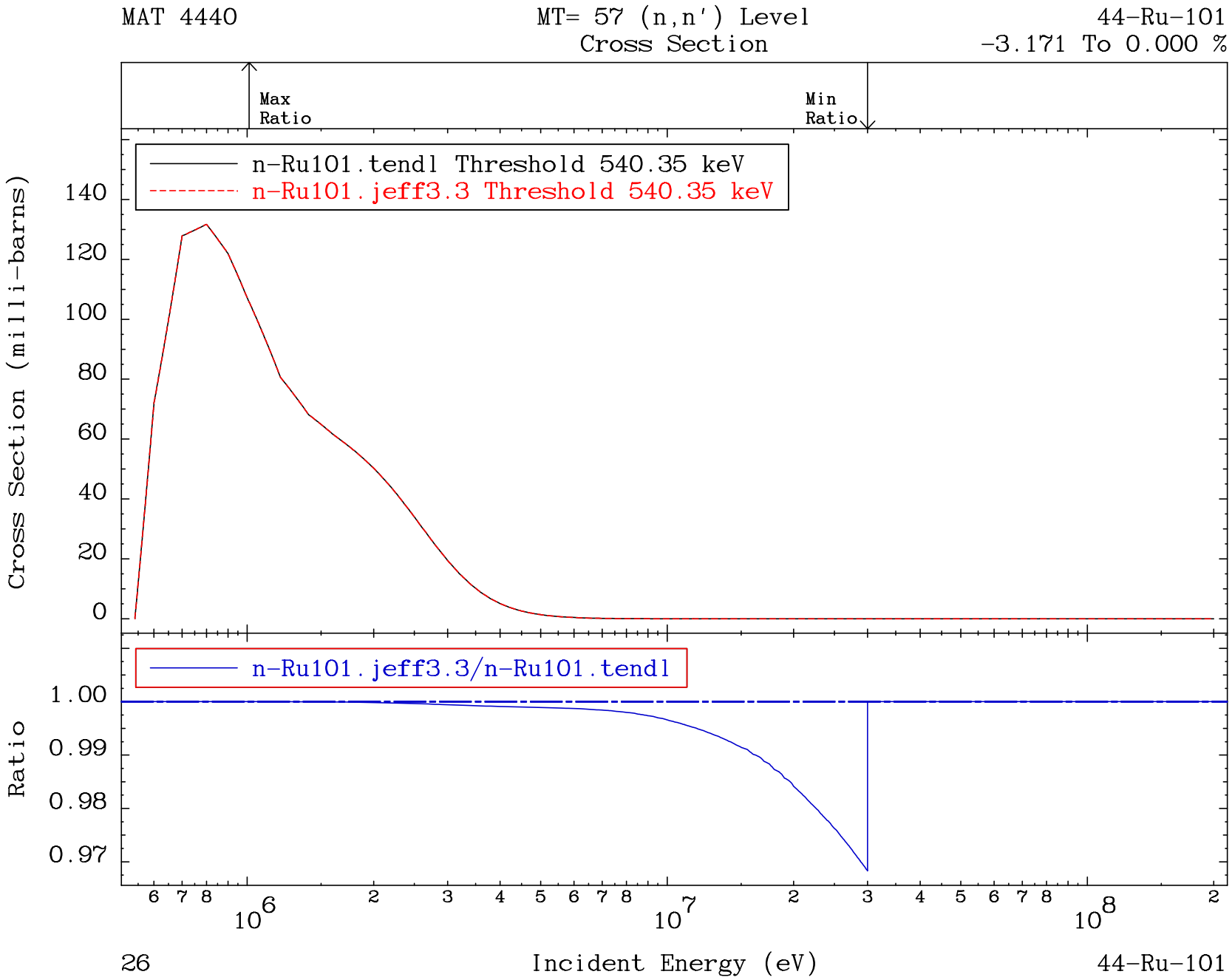

MAT 4440
MT= 52 (n,n') Level
Cross Section
44-Ru-101
-3.166 To 0.001 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 309.93 keV
n-Ru101.jeff3.3 Threshold 309.93 keV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
44-Ru-101

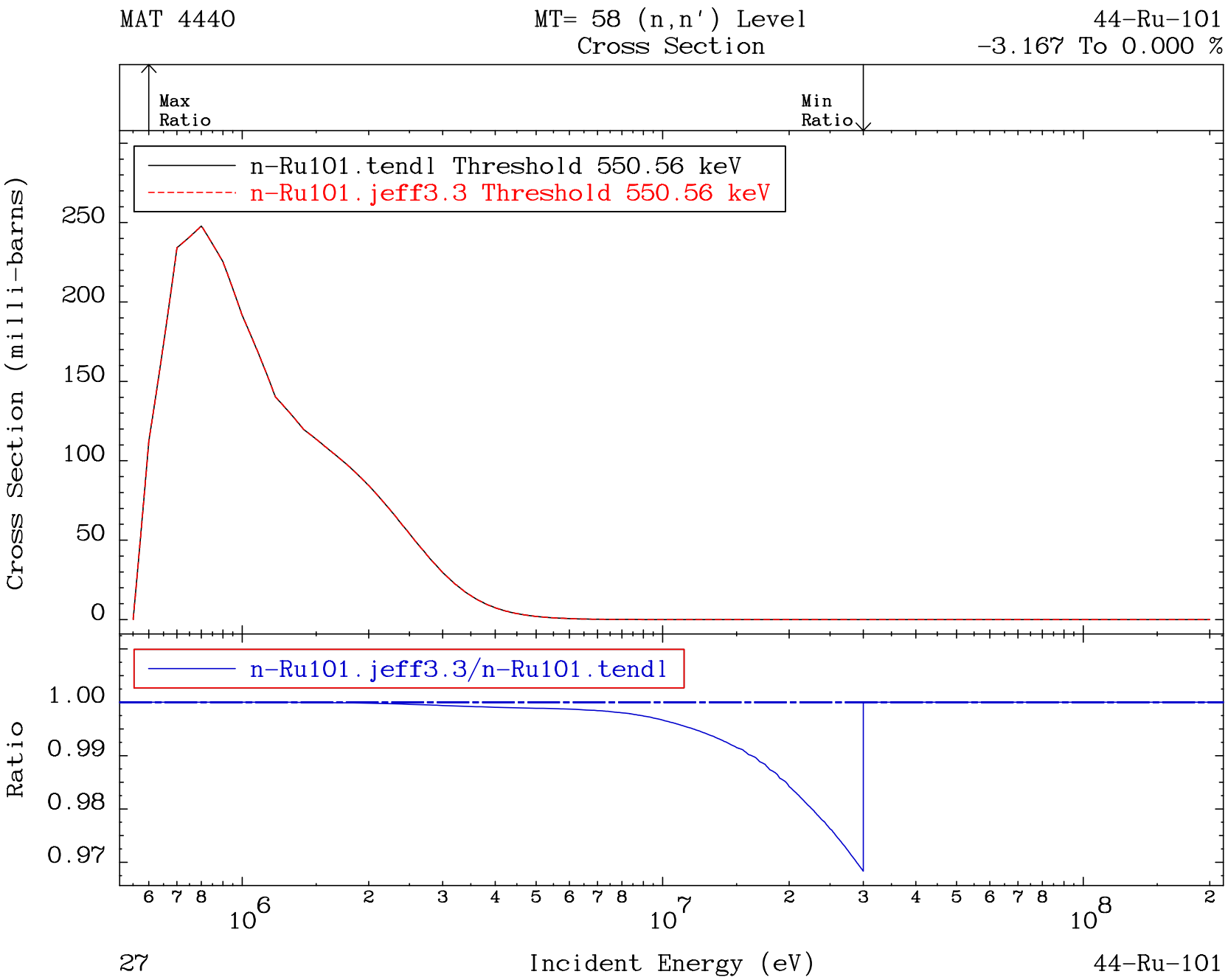

MAT 4440
MT= 53 (n,n') Level
Cross Section
44-Ru-101
-3.169 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 314.48 keV
n-Ru101.jeff3.3 Threshold 314.48 keV
Cross Section (milli-barns)
600
500
400
300
200
100
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
22
Incident Energy (eV)
44-Ru-101

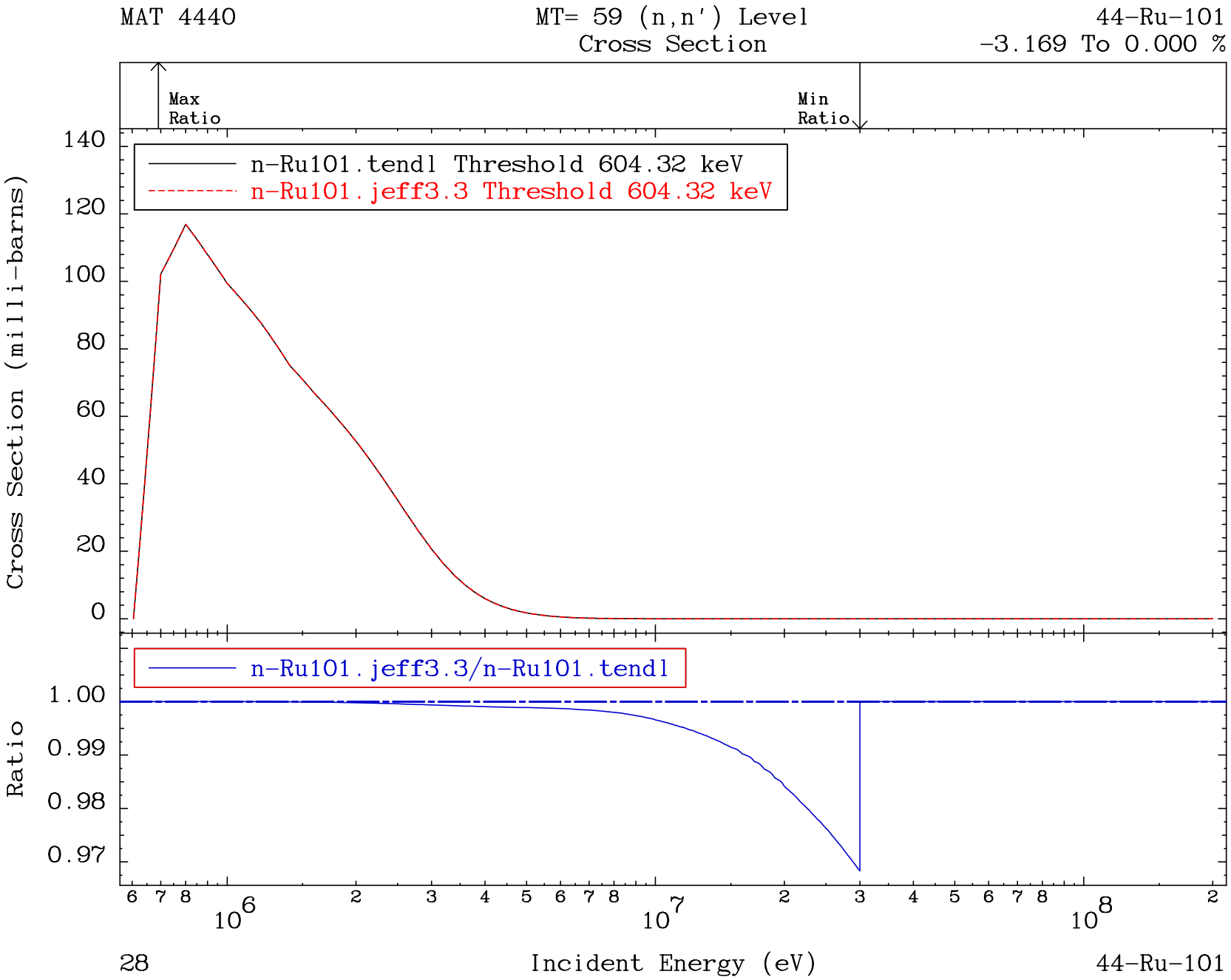

MAT 4440
MT= 54 (n,n') Level
Cross Section
44-Ru-101
-3.172 To 0.000 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 328.48 keV
n-Ru101.jeff3.3 Threshold 328.48 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
44-Ru-101

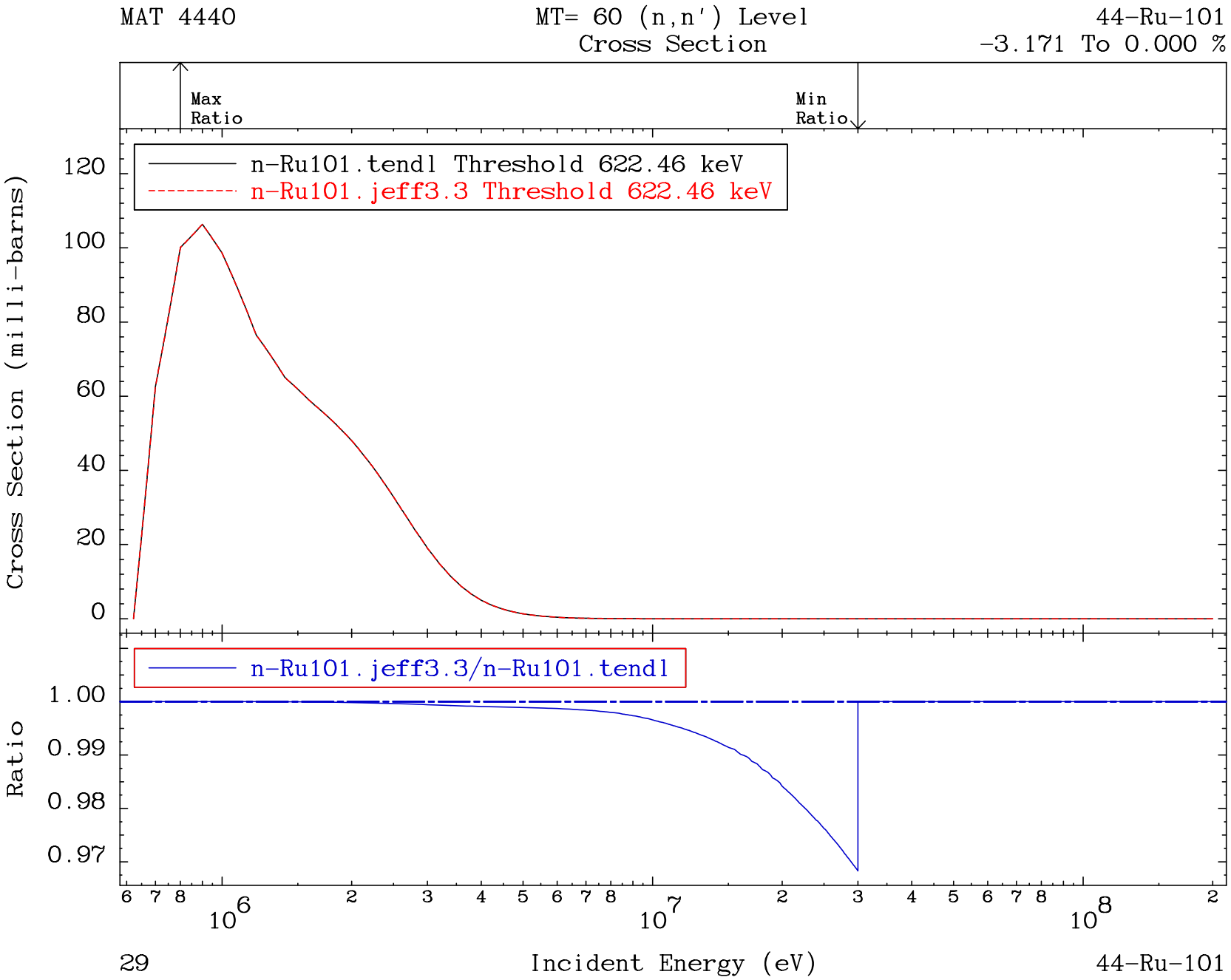

MAT 4440
MT= 55 (n,n') Level
Cross Section
44-Ru-101
-3.171 To 0.000 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 426.44 keV
n-Ru101.jeff3.3 Threshold 426.44 keV
Cross Section (milli-barns)
200
150
100
50
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
24
Incident Energy (eV)
44-Ru-101

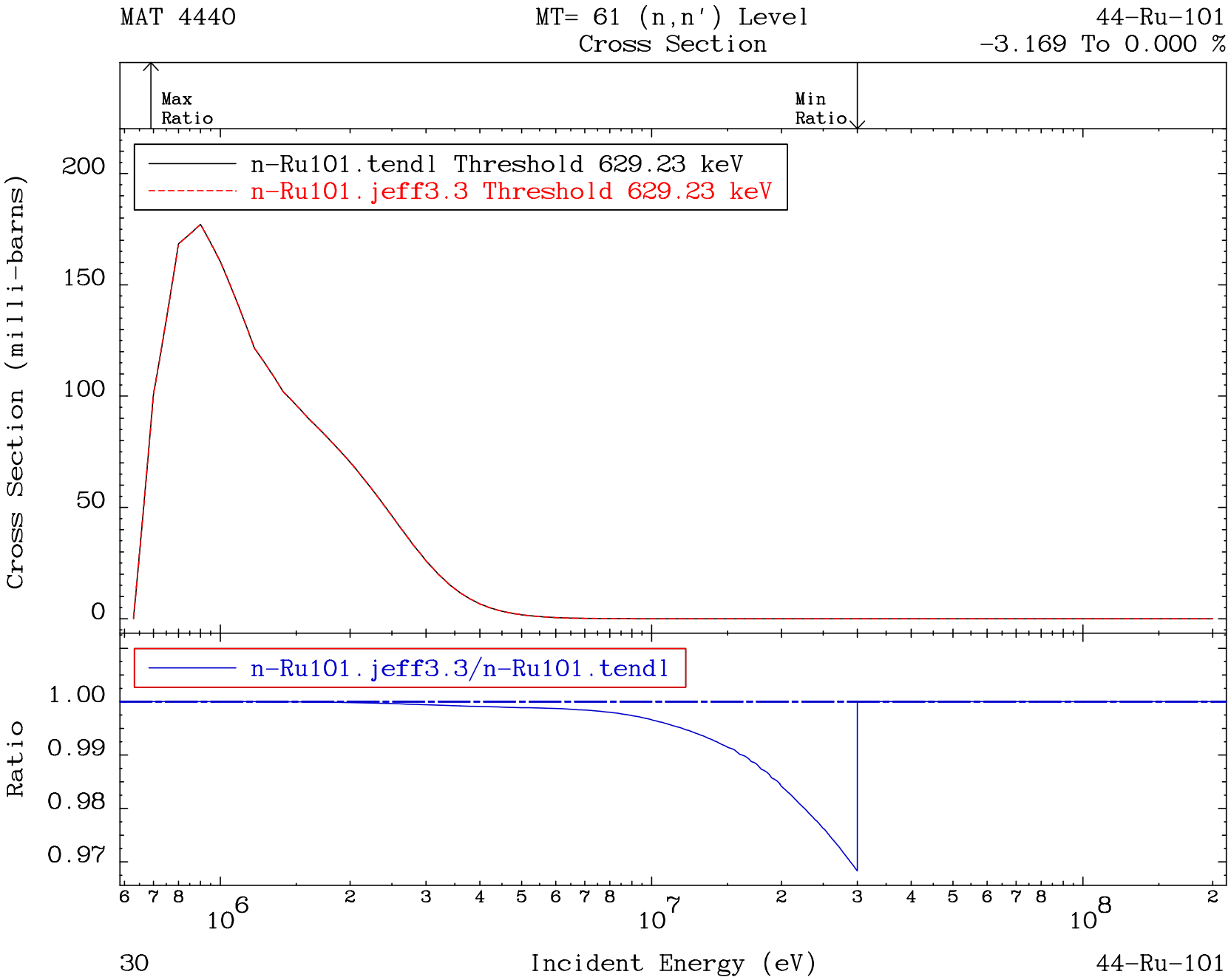

MAT 4440
MT= 56 (n,n') Level
Cross Section
44-Ru-101
-0.102 To 0.004 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 532.83 keV
n-Ru101.jeff3.3 Threshold 532.83 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
44-Ru-101

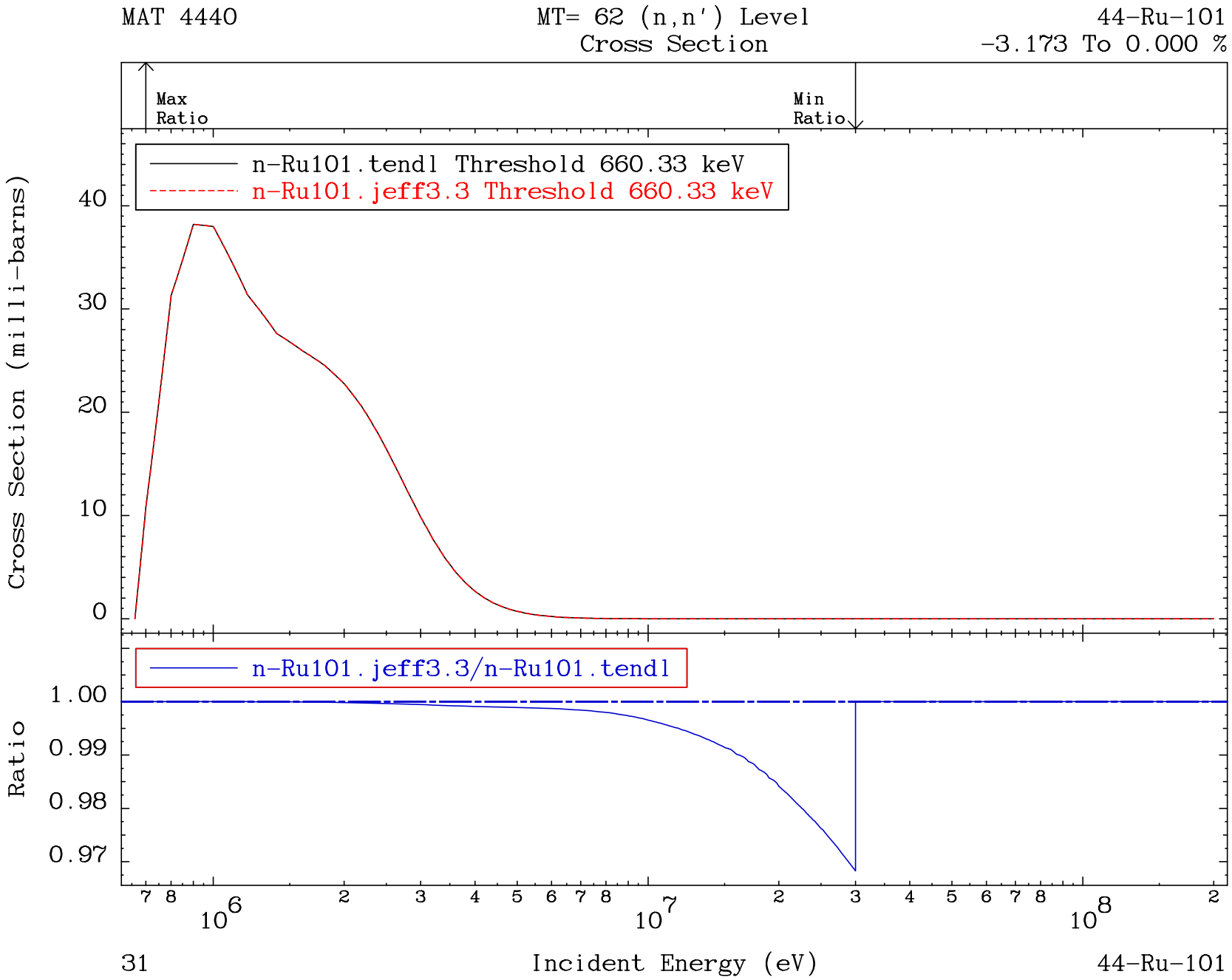

MAT 4440
MT= 57 (n,n') Level
Cross Section
44-Ru-101
-3.171 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 540.35 keV
n-Ru101.jeff3.3 Threshold 540.35 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
44-Ru-101

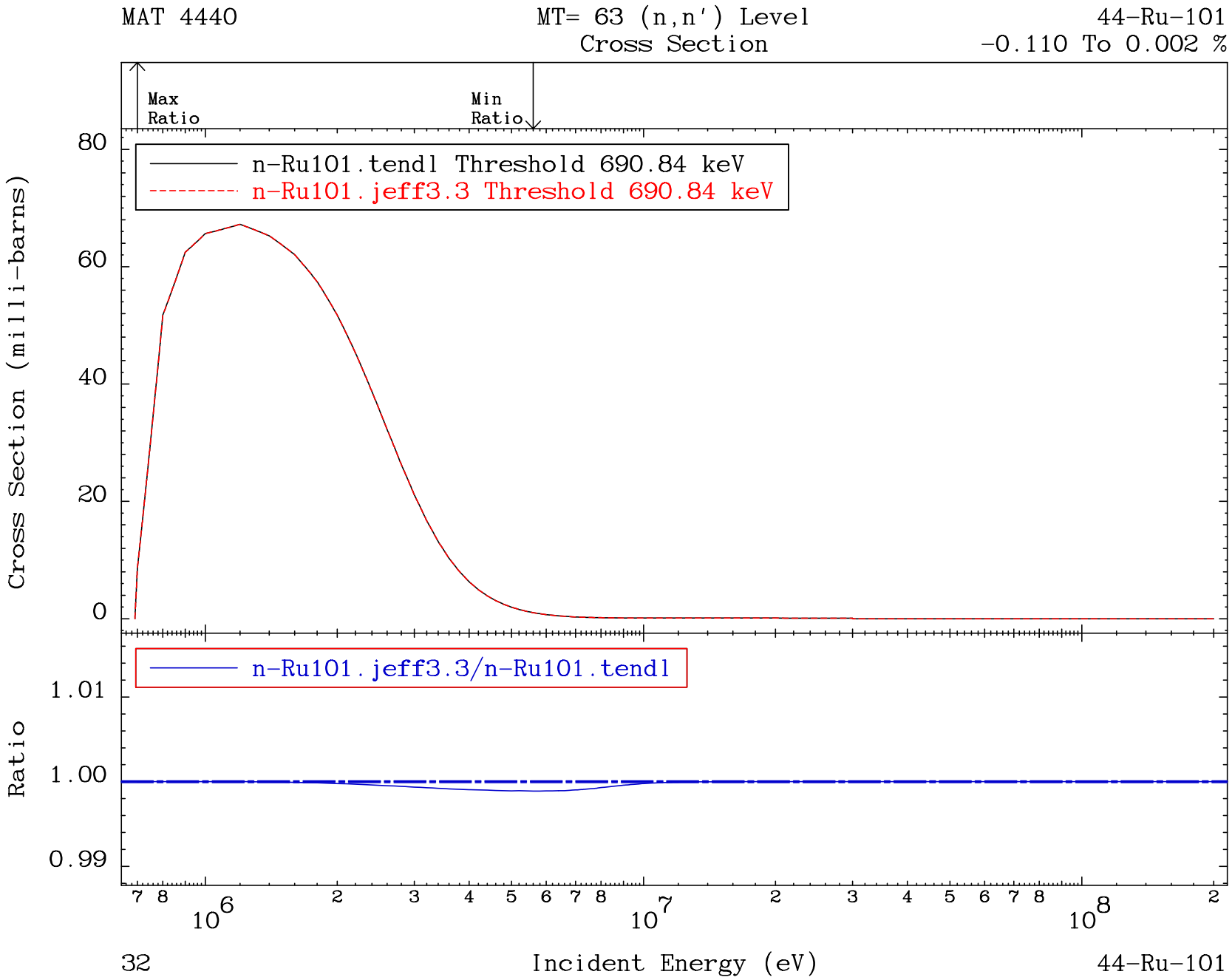

MAT 4440
MT= 58 (n,n') Level
Cross Section
44-Ru-101
-3.167 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 550.56 keV
n-Ru101.jeff3.3 Threshold 550.56 keV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
27
Incident Energy (eV)
44-Ru-101

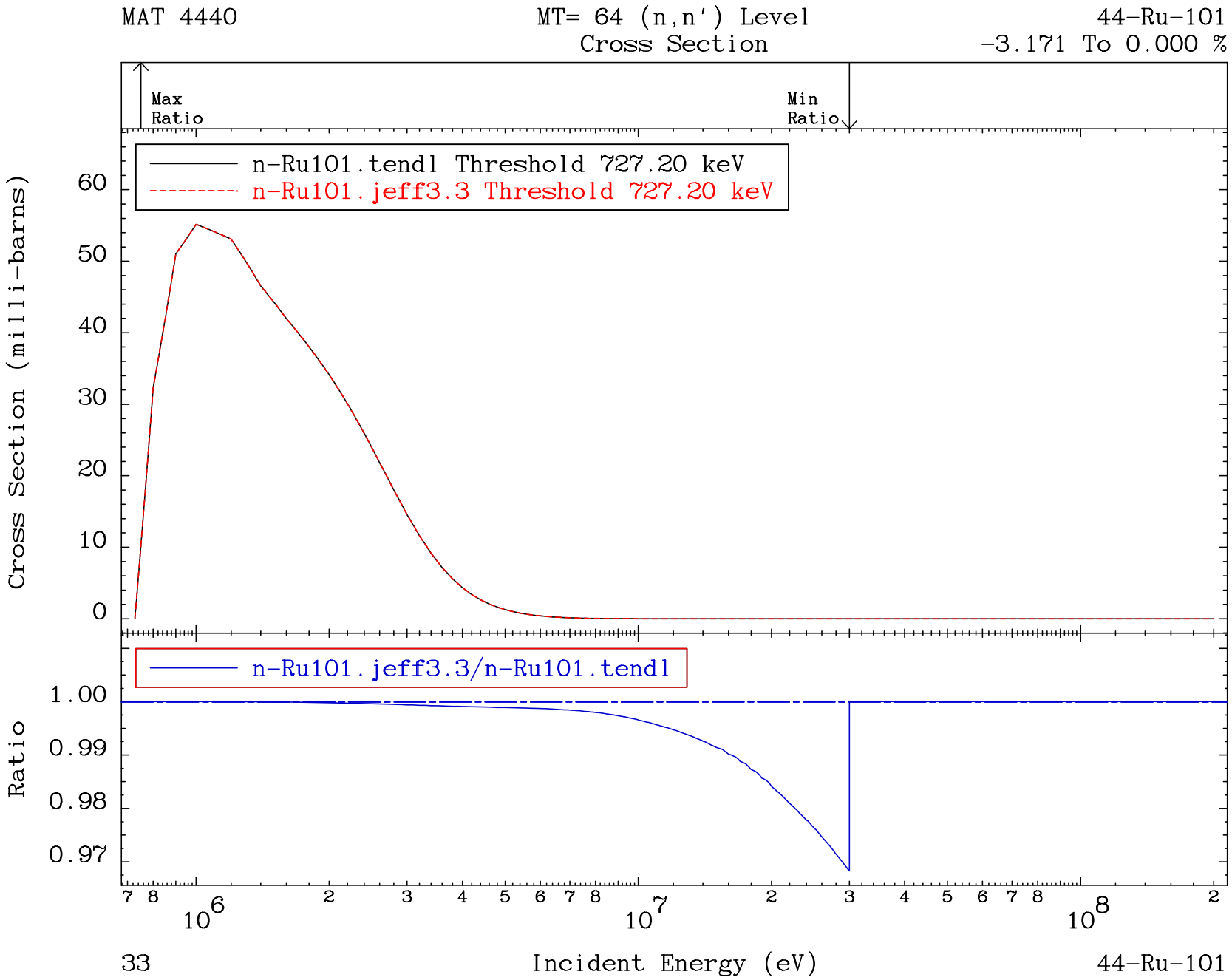

MAT 4440
MT= 59 (n,n') Level
Cross Section
44-Ru-101
-3.169 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 604.32 keV
n-Ru101.jeff3.3 Threshold 604.32 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
28
Incident Energy (eV)
44-Ru-101

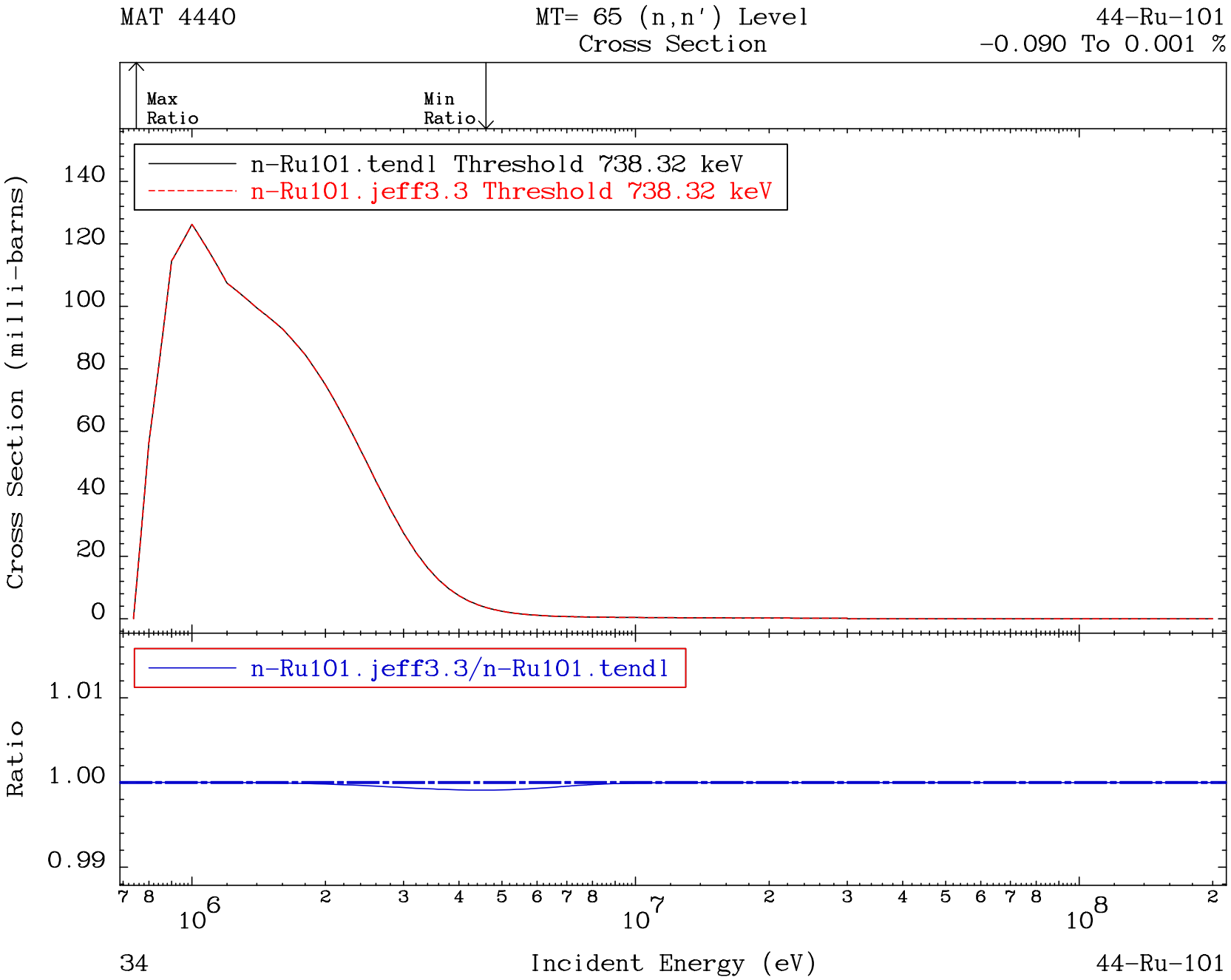

MAT 4440
MT= 60 (n,n') Level
Cross Section
44-Ru-101
-3.171 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 622.46 keV
n-Ru101.jeff3.3 Threshold 622.46 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
29
Incident Energy (eV)
44-Ru-101

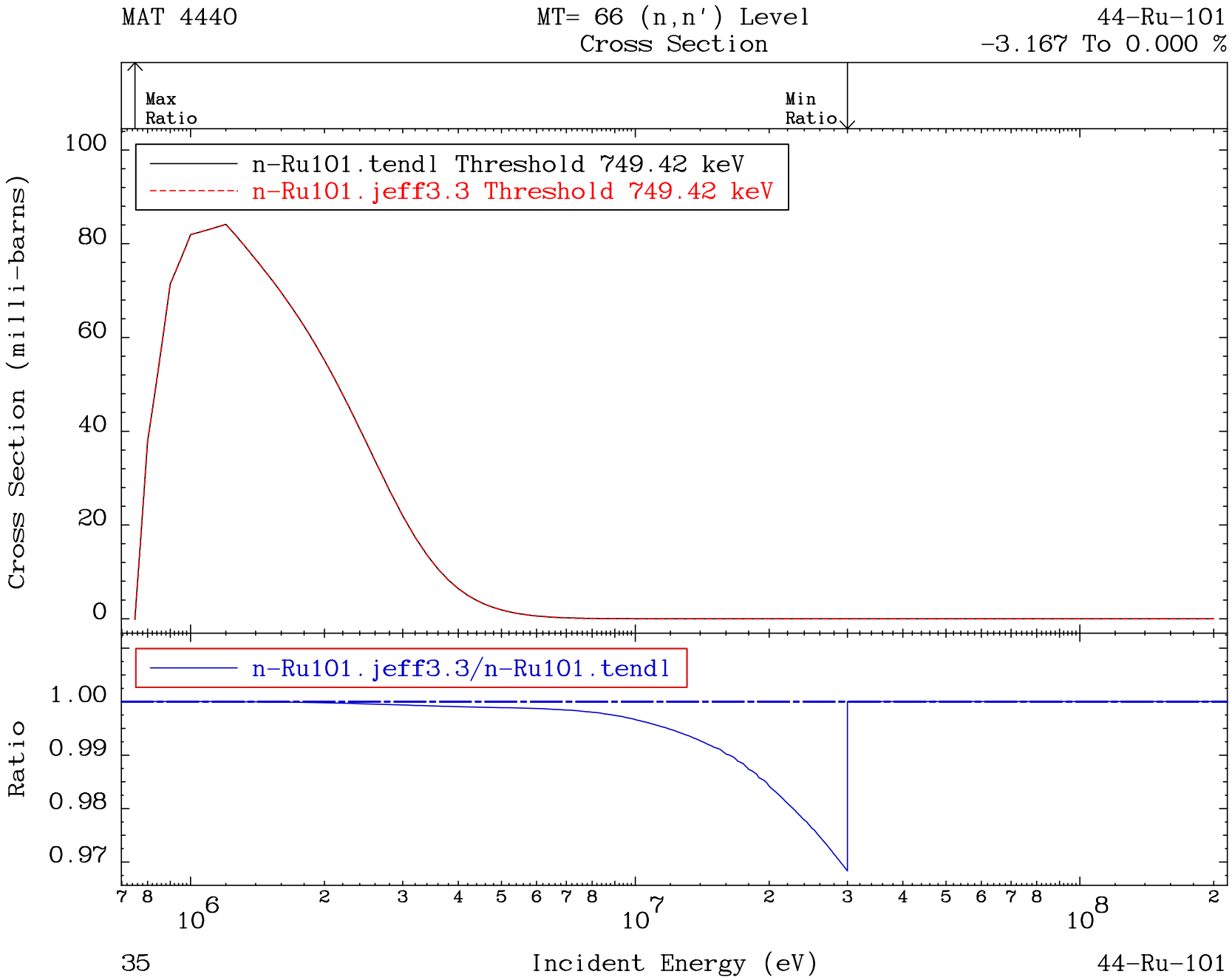

MAT 4440
MT= 61 (n,n') Level
Cross Section
44-Ru-101
-3.169 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 629.23 keV
n-Ru101.jeff3.3 Threshold 629.23 keV
Cross Section (milli-barns)
200
150
100
50
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
30
Incident Energy (eV)
44-Ru-101

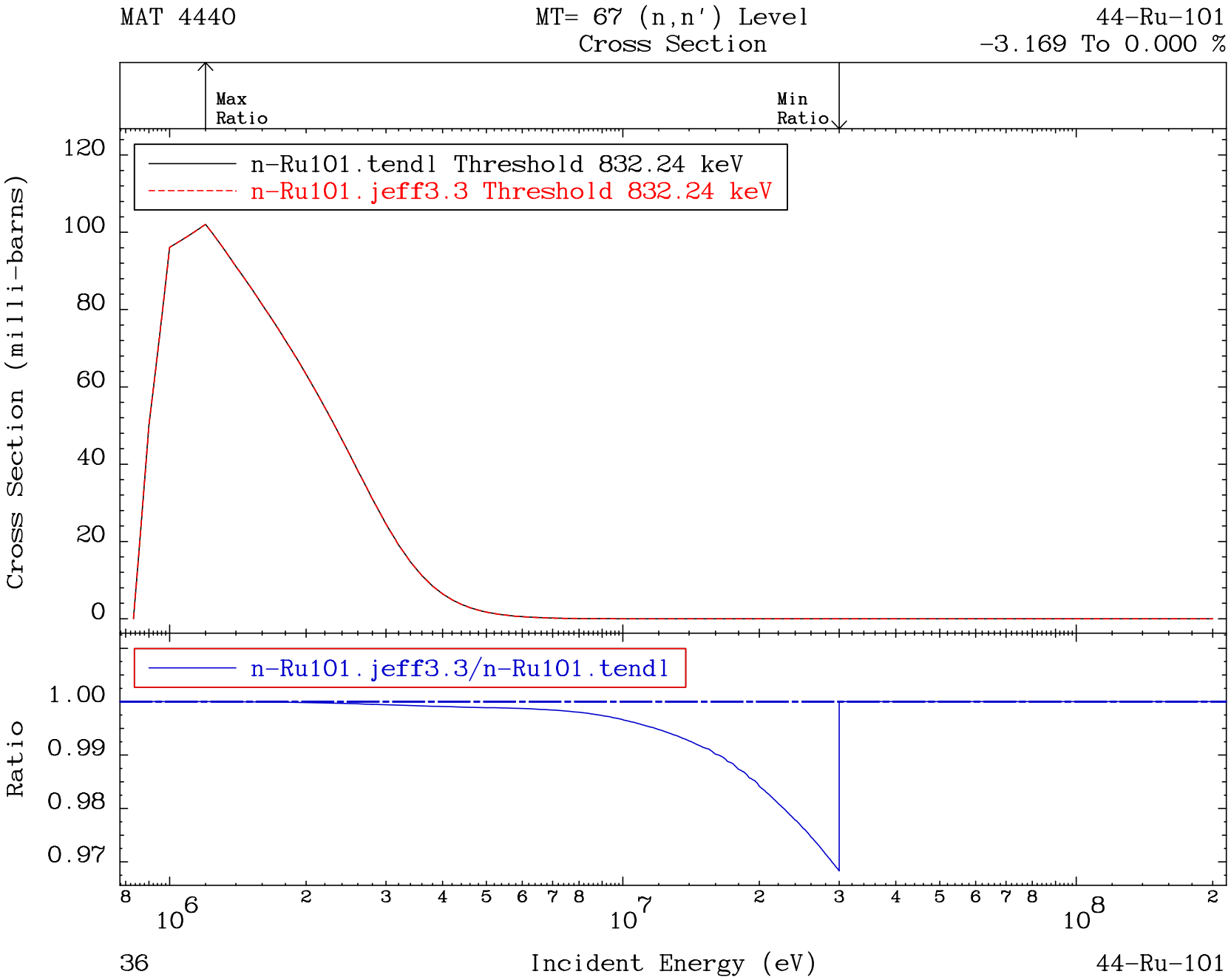

MAT 4440
MT= 62 (n,n') Level
Cross Section
44-Ru-101
-3.173 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 660.33 keV
n-Ru101.jeff3.3 Threshold 660.33 keV
Cross Section (milli-barns)
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
31
Incident Energy (eV)
44-Ru-101

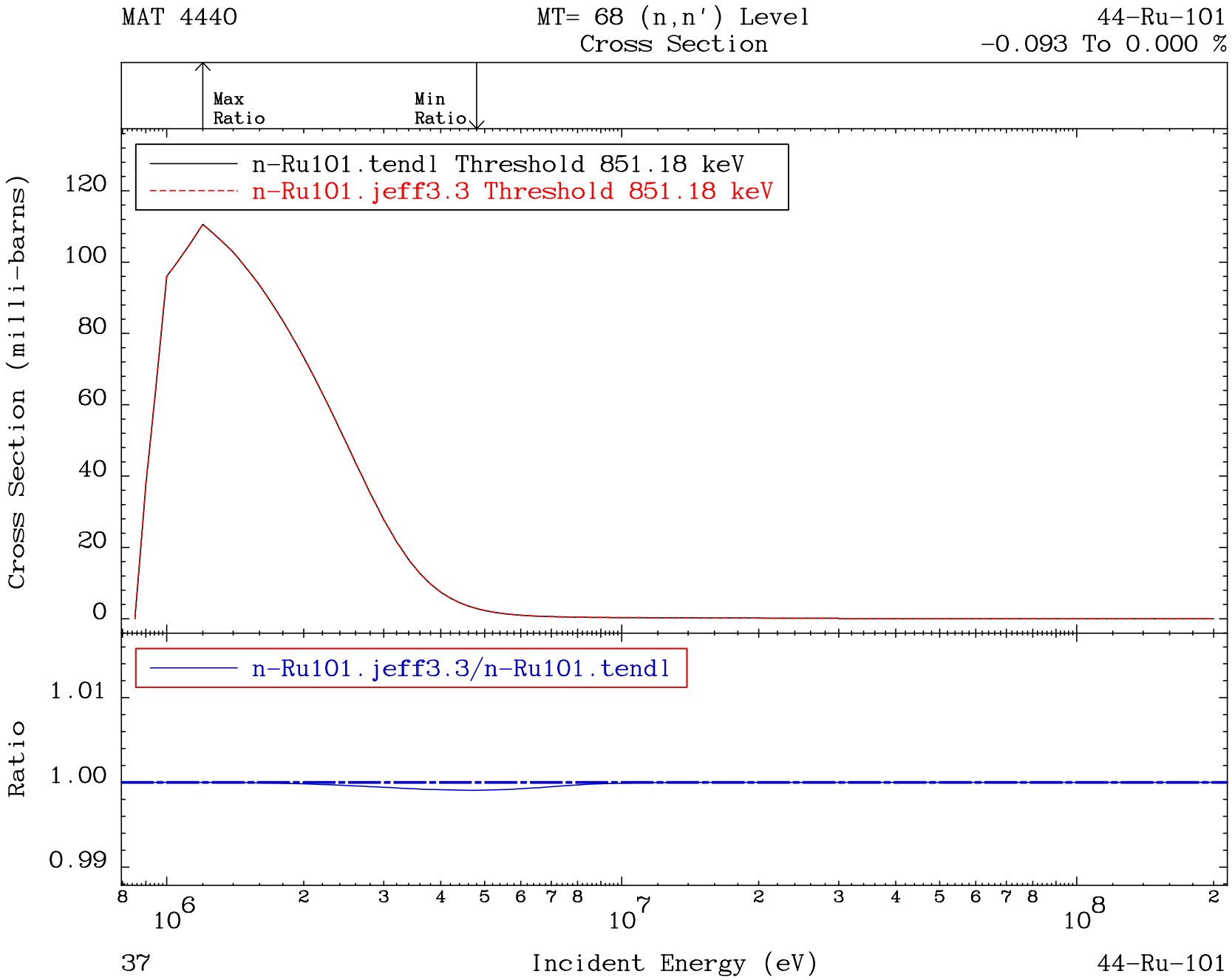

MAT 4440
MT= 63 (n,n') Level
Cross Section
44-Ru-101
-0.110 To 0.002 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 690.84 keV
n-Ru101.jeff3.3 Threshold 690.84 keV
Cross Section (milli-barns)
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
32
Incident Energy (eV)
44-Ru-101

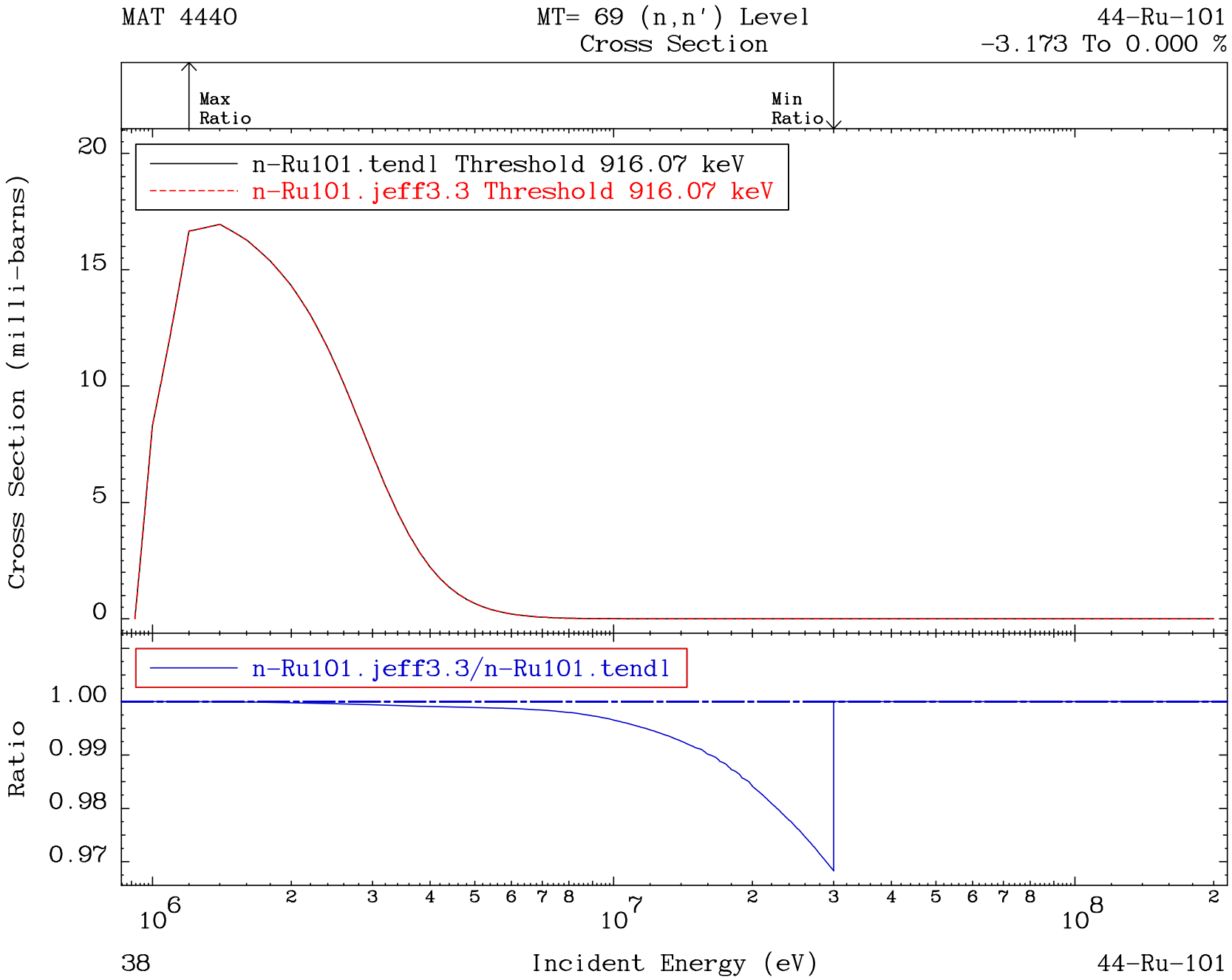

MAT 4440
MT= 64 (n,n') Level
Cross Section
44-Ru-101
-3.171 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 727.20 keV
n-Ru101.jeff3.3 Threshold 727.20 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
33
Incident Energy (eV)
44-Ru-101

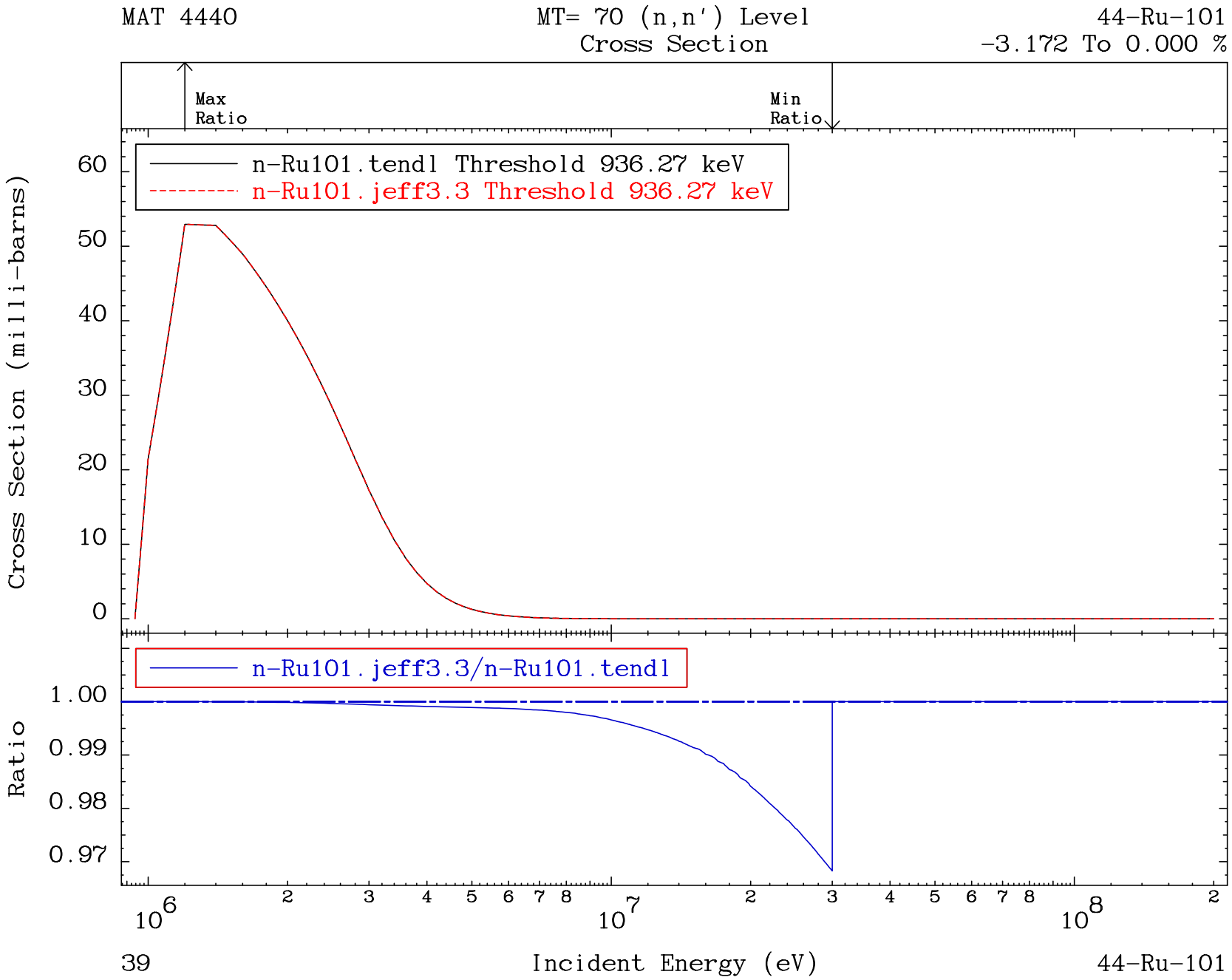

MAT 4440
MT= 65 (n,n') Level
Cross Section
44-Ru-101
-0.090 To 0.001 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 738.32 keV
n-Ru101.jeff3.3 Threshold 738.32 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
34
Incident Energy (eV)
44-Ru-101

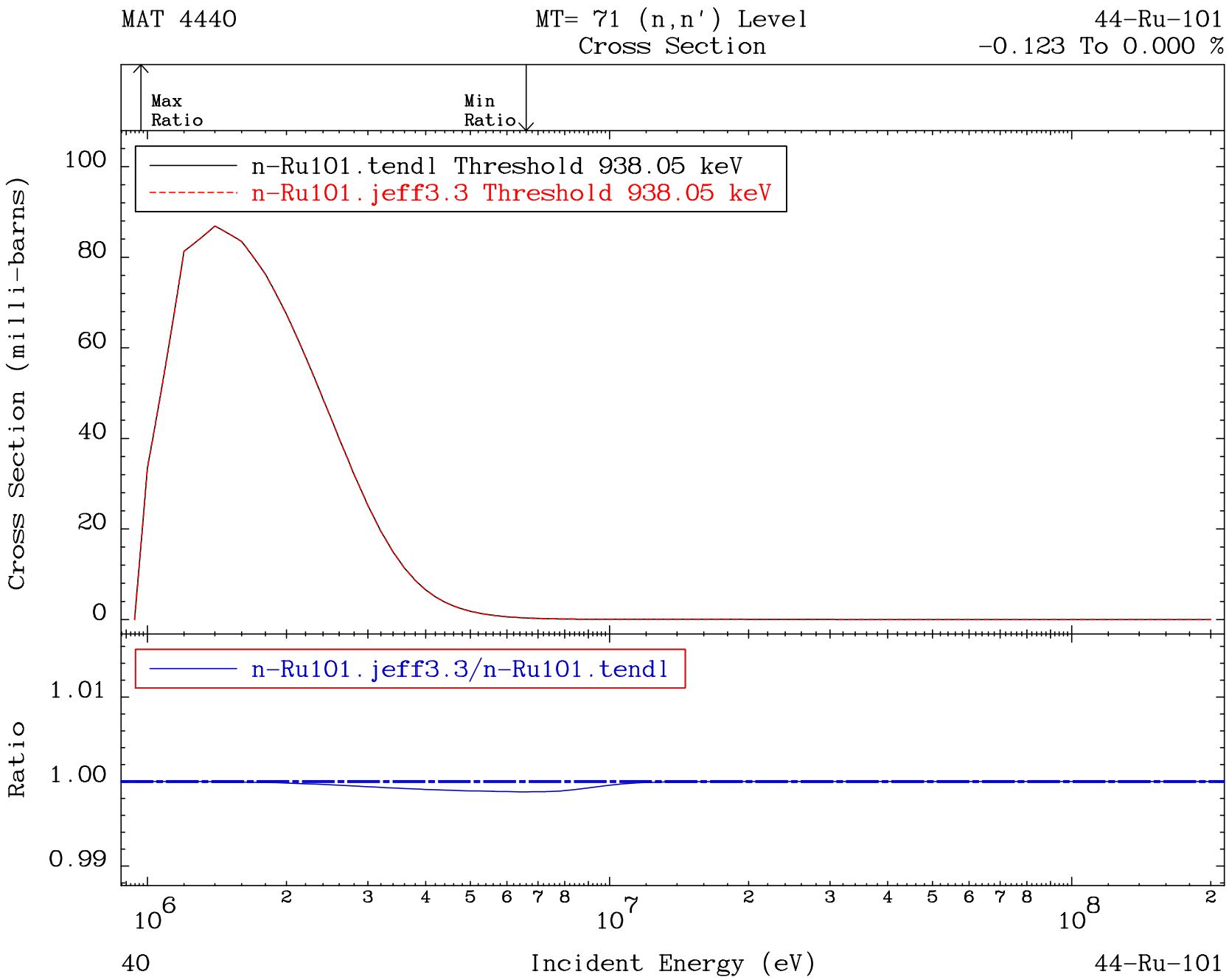

MAT 4440
MT= 66 (n,n') Level
Cross Section
44-Ru-101
-3.167 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 749.42 keV
n-Ru101.jeff3.3 Threshold 749.42 keV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
35
Incident Energy (eV)
44-Ru-101

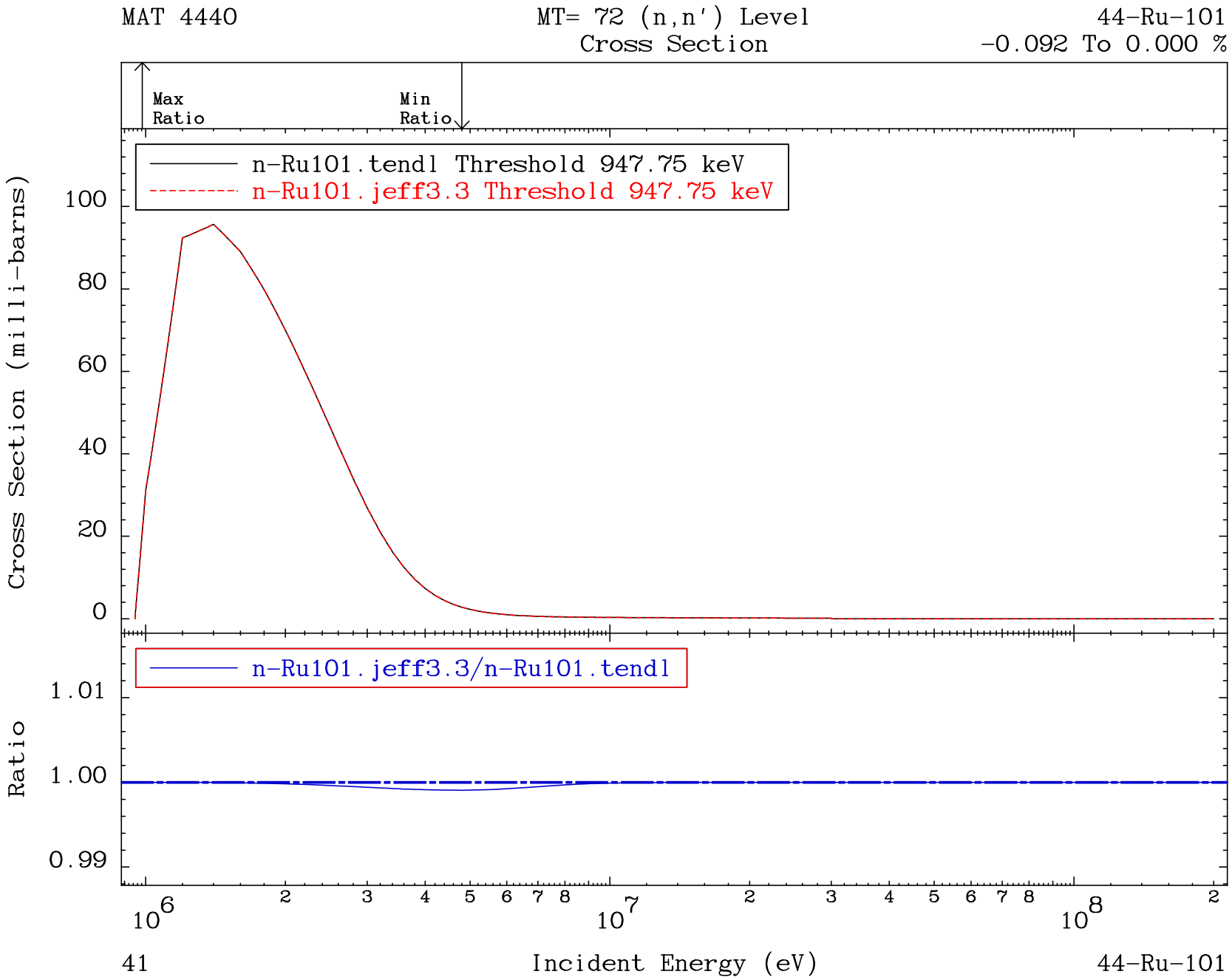

MAT 4440
MT= 67 (n,n') Level
Cross Section
44-Ru-101
-3.169 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 832.24 keV
n-Ru101.jeff3.3 Threshold 832.24 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
36
Incident Energy (eV)
44-Ru-101

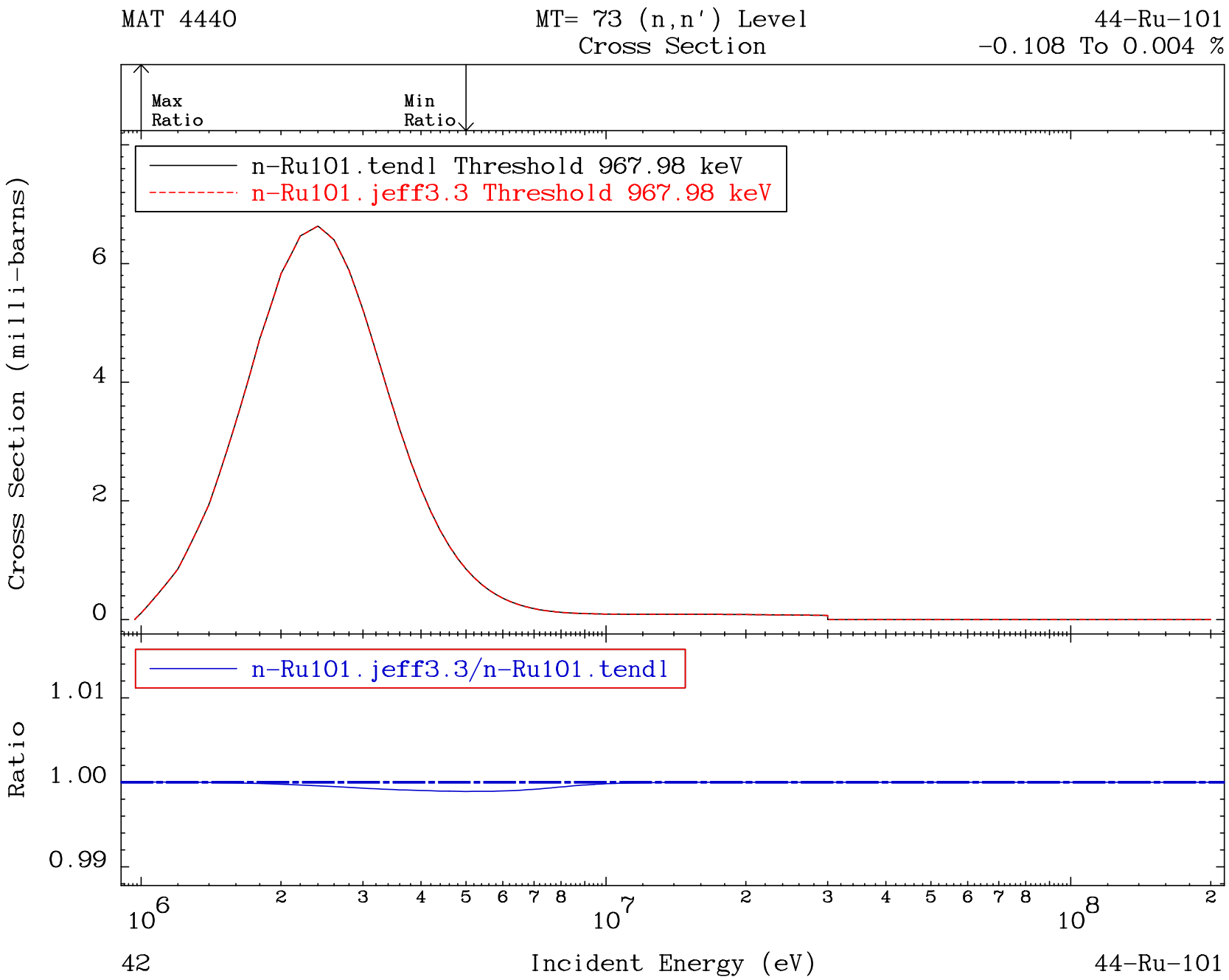

MAT 4440
MT= 68 (n,n') Level
Cross Section
44-Ru-101
-0.093 To 0.000 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 851.18 keV
n-Ru101.jeff3.3 Threshold 851.18 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
37
Incident Energy (eV)
44-Ru-101

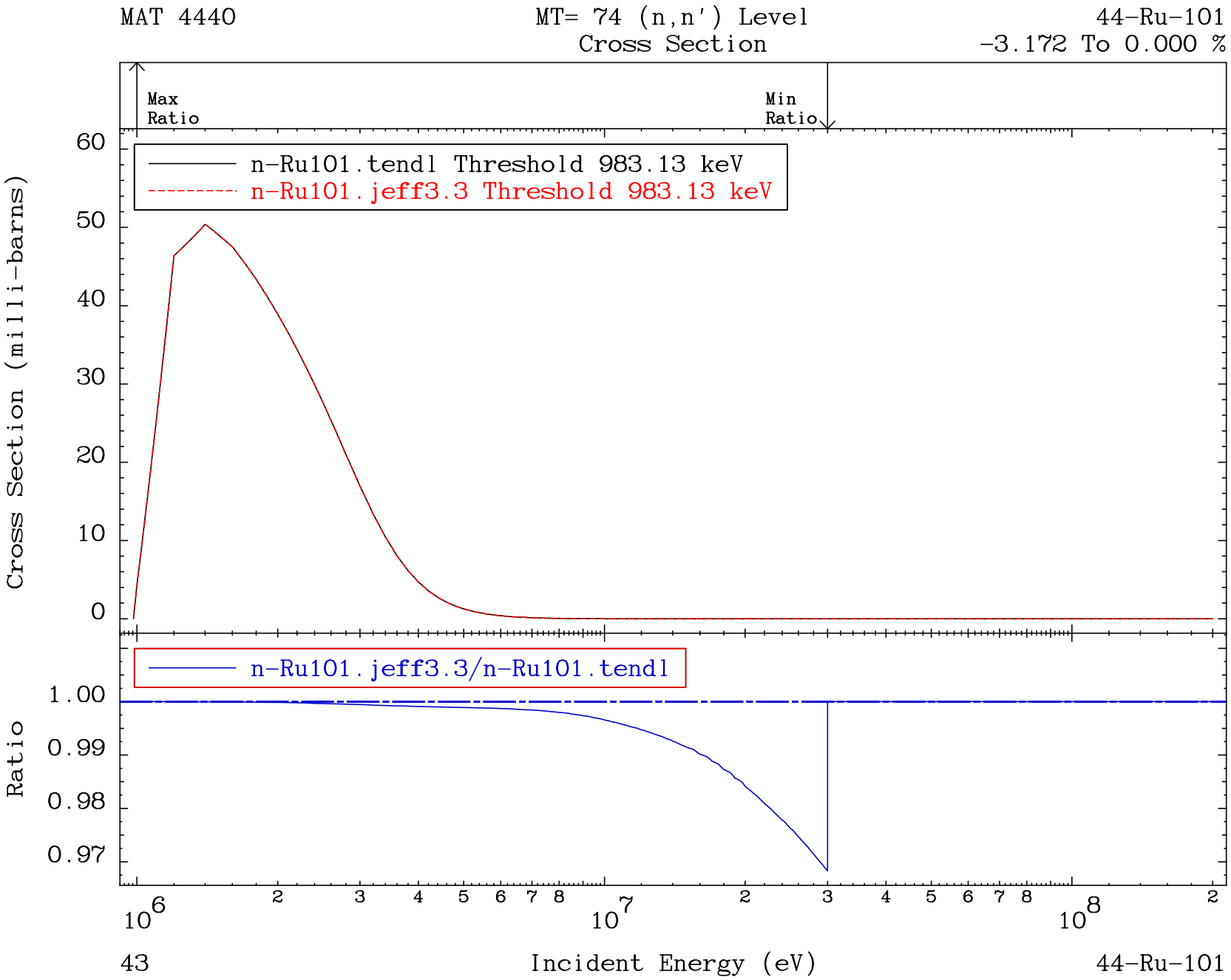

MAT 4440
MT= 69 (n,n') Level
Cross Section
44-Ru-101
-3.173 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 916.07 keV
n-Ru101.jeff3.3 Threshold 916.07 keV
Cross Section (milli-barns)
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
10^6
10^7
10^8
38
Incident Energy (eV)
44-Ru-101

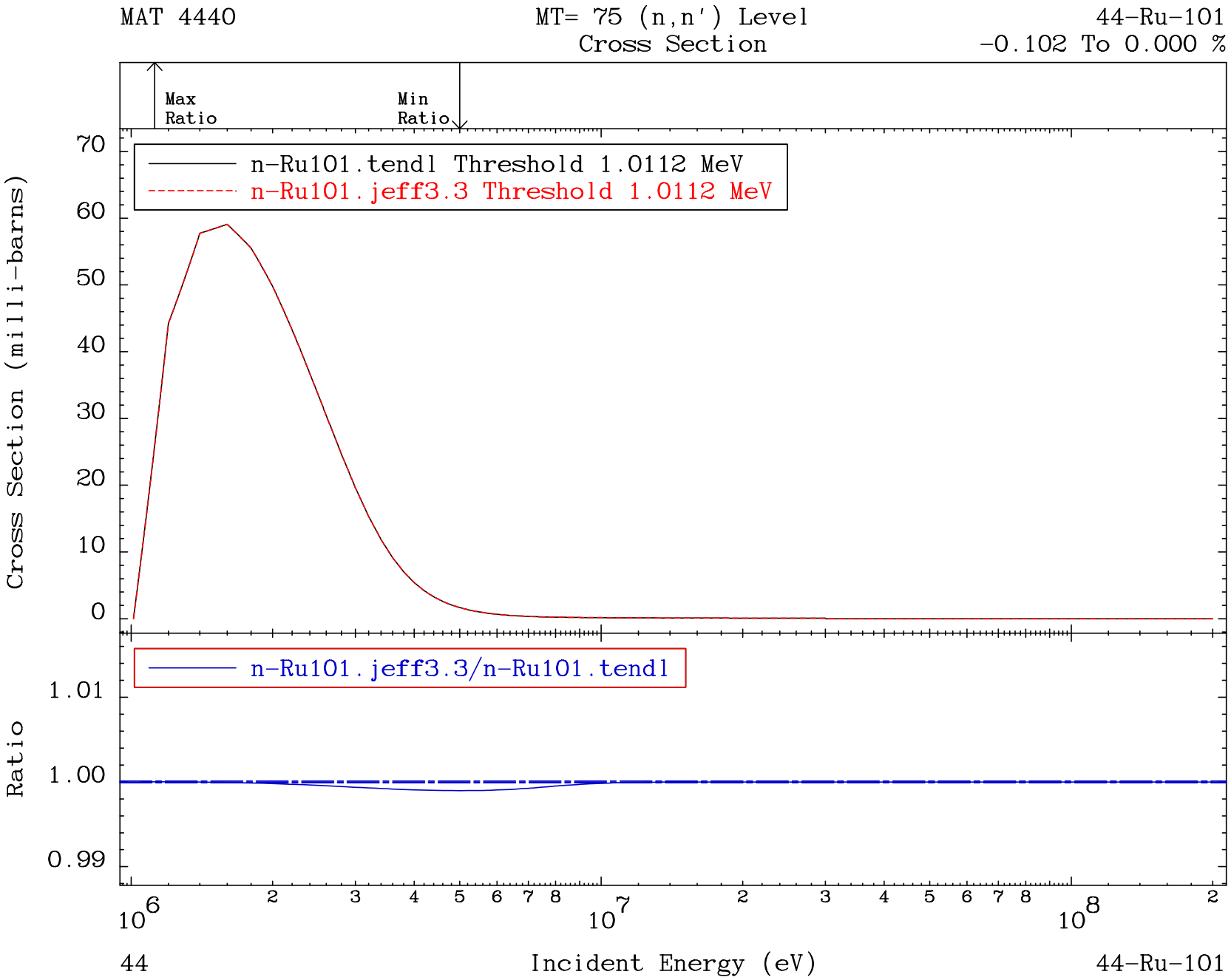

MAT 4440
MT= 70 (n,n') Level
Cross Section
44-Ru-101
-3.172 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 936.27 keV
n-Ru101.jeff3.3 Threshold 936.27 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
39
Incident Energy (eV)
44-Ru-101

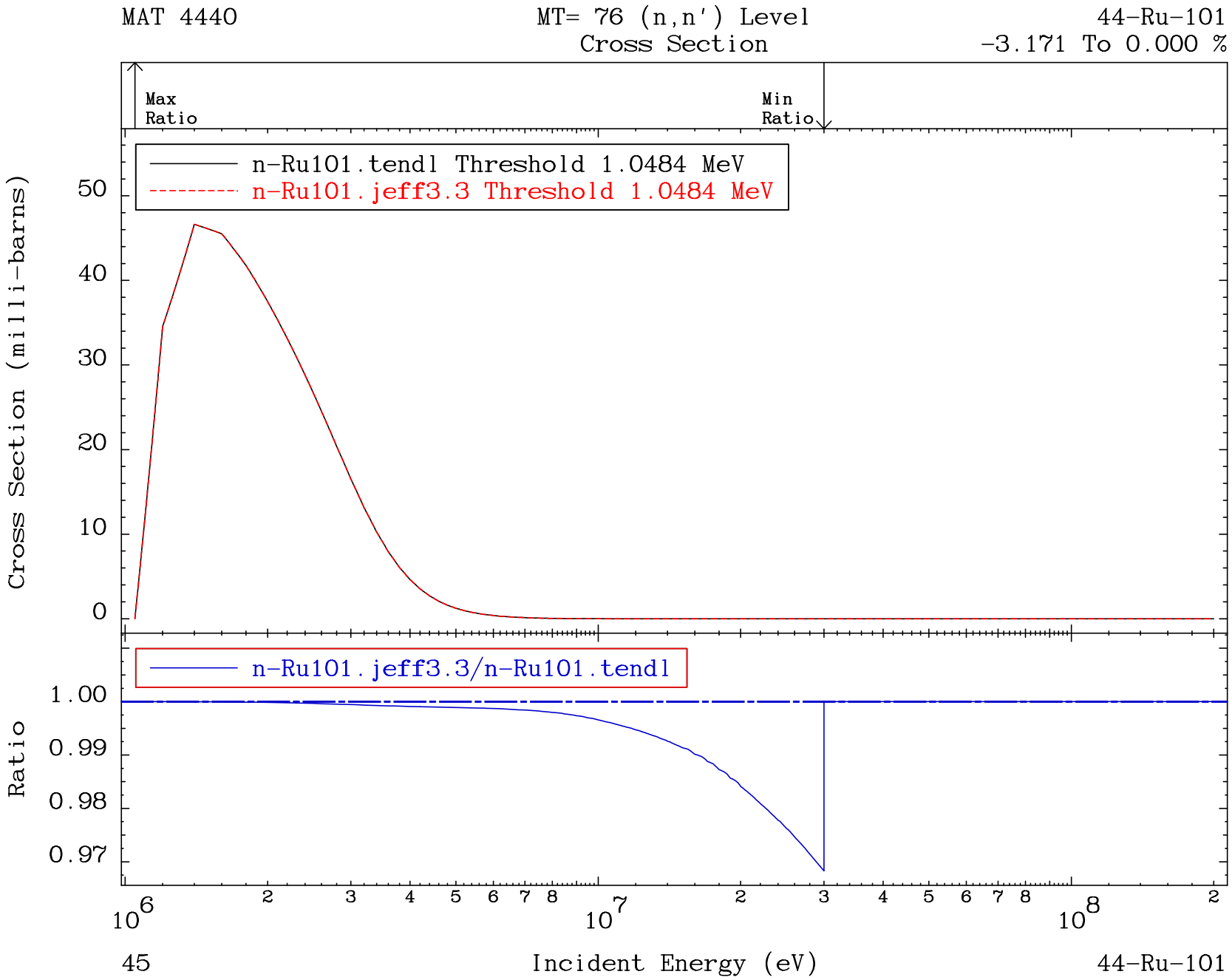

MAT 4440
MT= 71 (n,n') Level
Cross Section
44-Ru-101
-0.123 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 938.05 keV
n-Ru101.jeff3.3 Threshold 938.05 keV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
40
Incident Energy (eV)
44-Ru-101

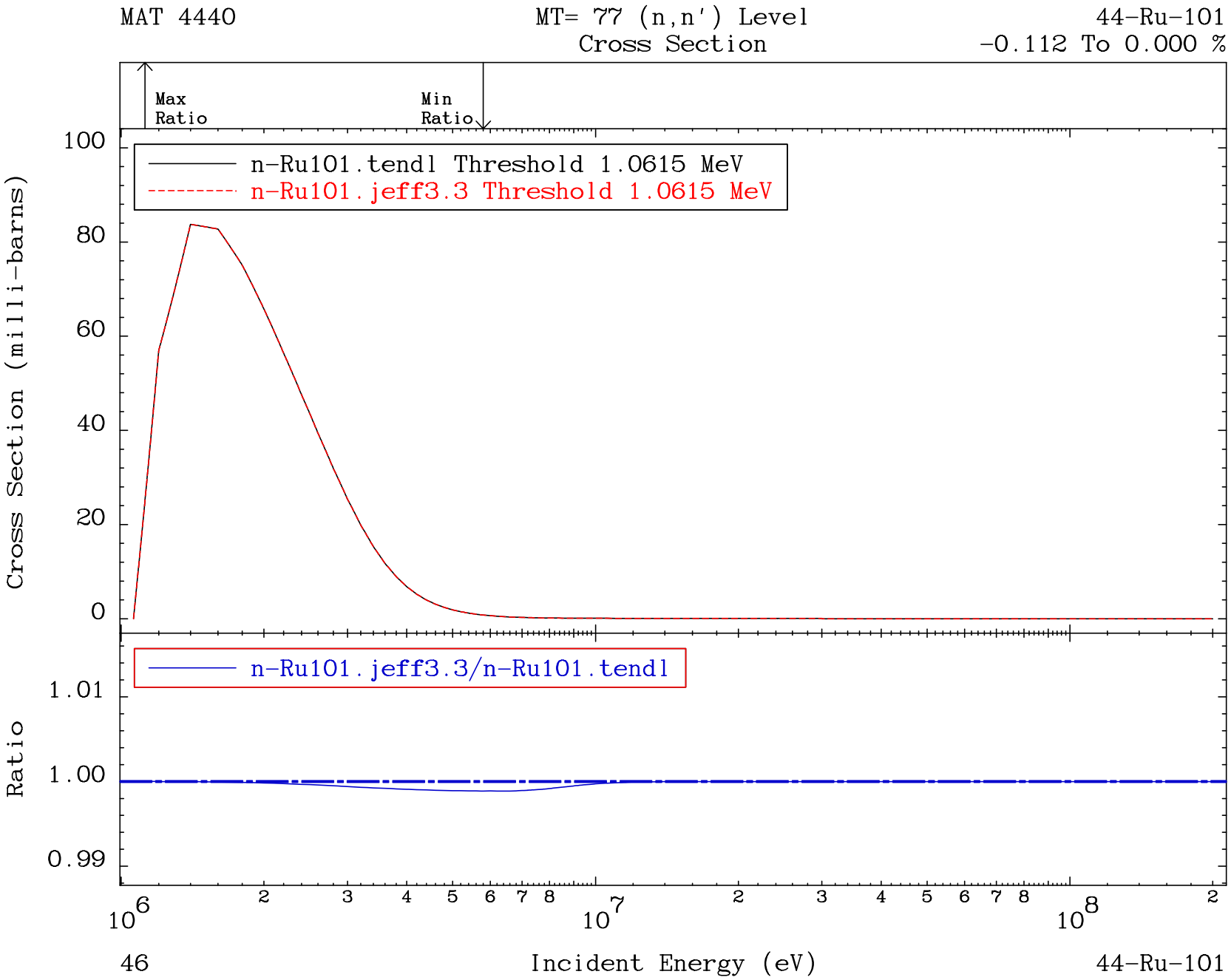

MAT 4440
MT= 72 (n,n') Level
Cross Section
44-Ru-101
-0.092 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 947.75 keV
n-Ru101.jeff3.3 Threshold 947.75 keV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
10^6
10^7
10^8
41
Incident Energy (eV)
44-Ru-101

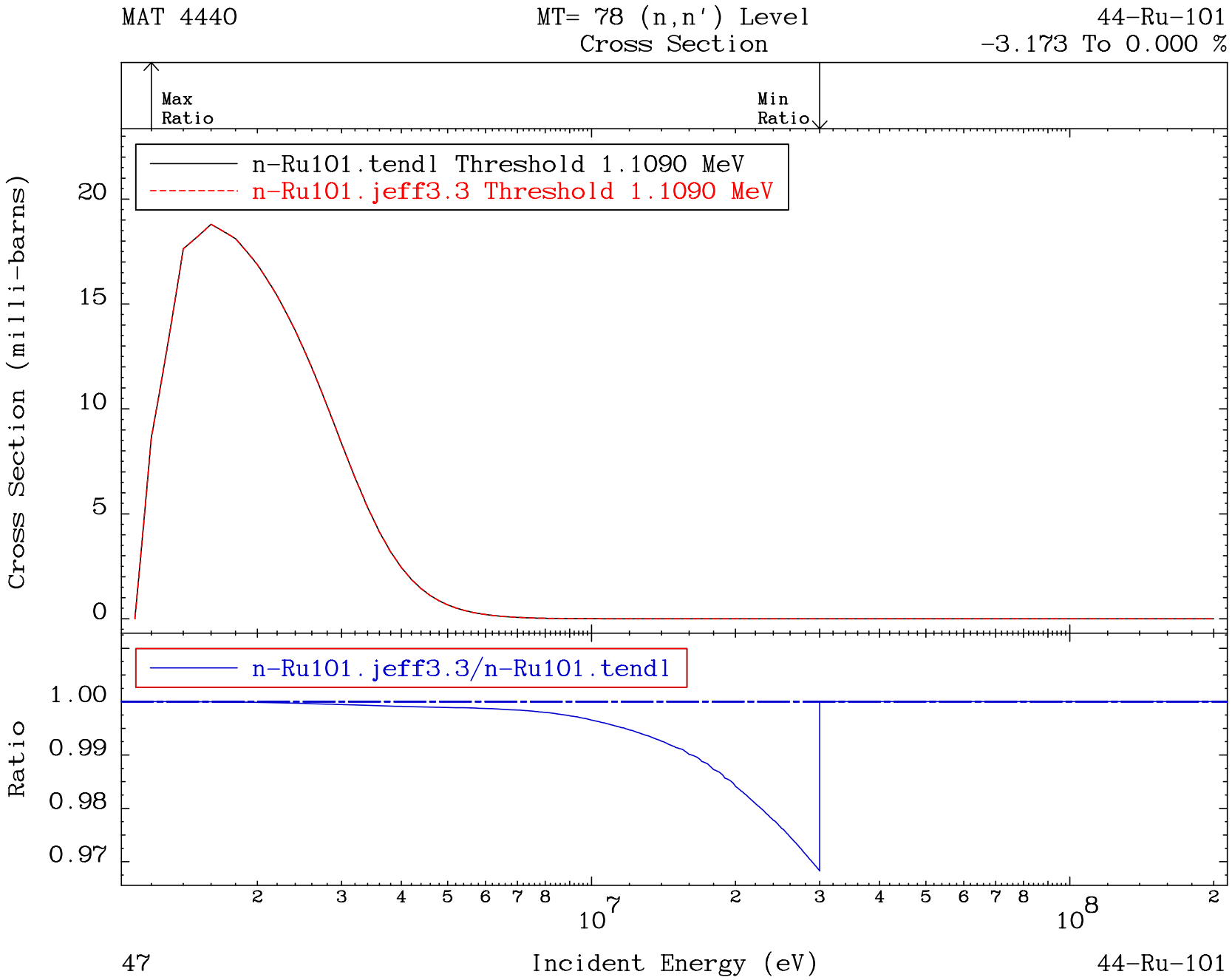

MAT 4440
MT= 73 (n,n') Level
Cross Section
44-Ru-101
-0.108 To 0.004 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 967.98 keV
n-Ru101.jeff3.3 Threshold 967.98 keV
Cross Section (milli-barns)
0
2
4
6
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
0.99
1.00
1.01
10^6
10^7
10^8
Incident Energy (eV)
42
44-Ru-101

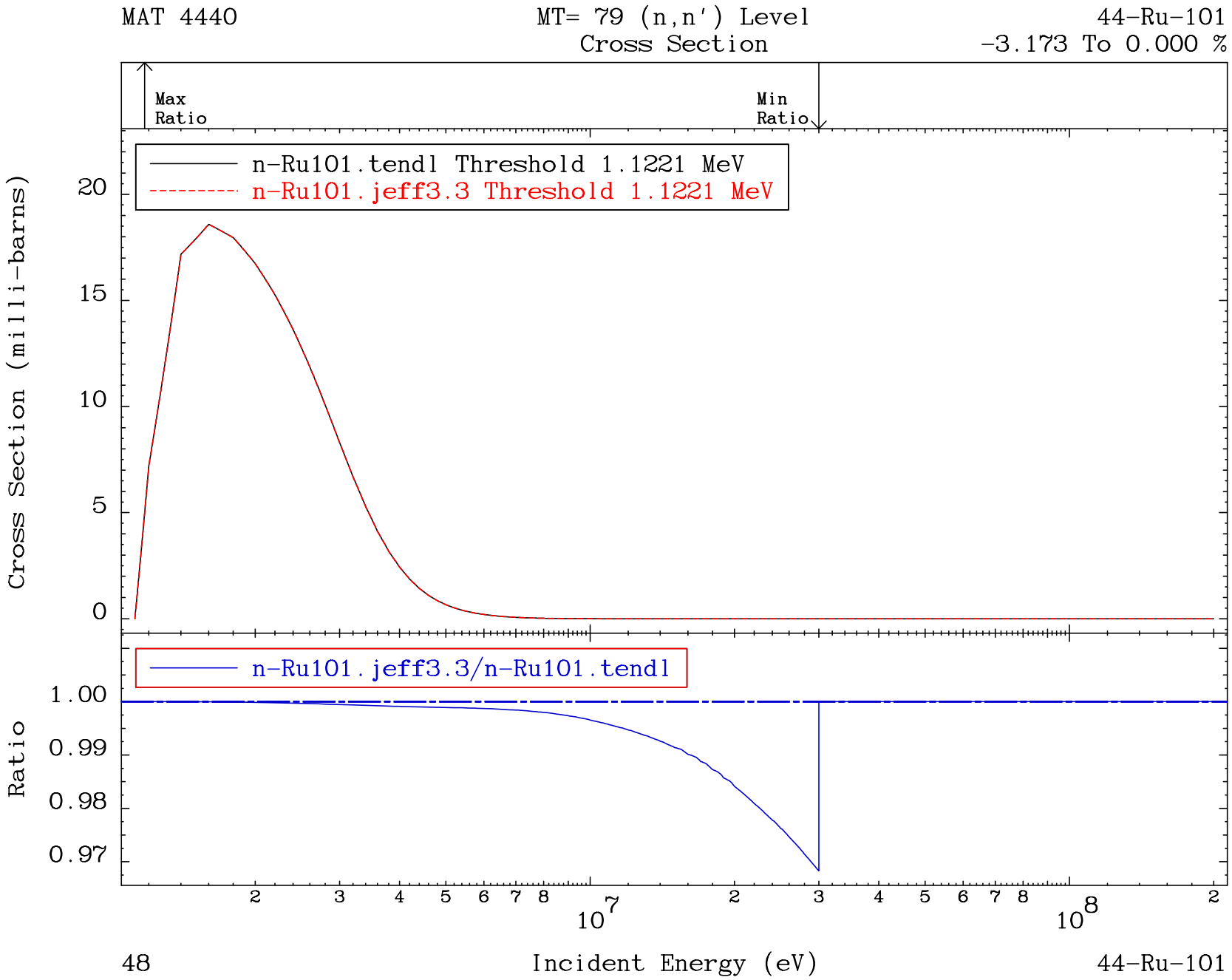

MAT 4440
MT= 74 (n,n') Level
Cross Section
44-Ru-101
-3.172 To 0.000 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 983.13 keV
n-Ru101.jeff3.3 Threshold 983.13 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
43
Incident Energy (eV)
44-Ru-101

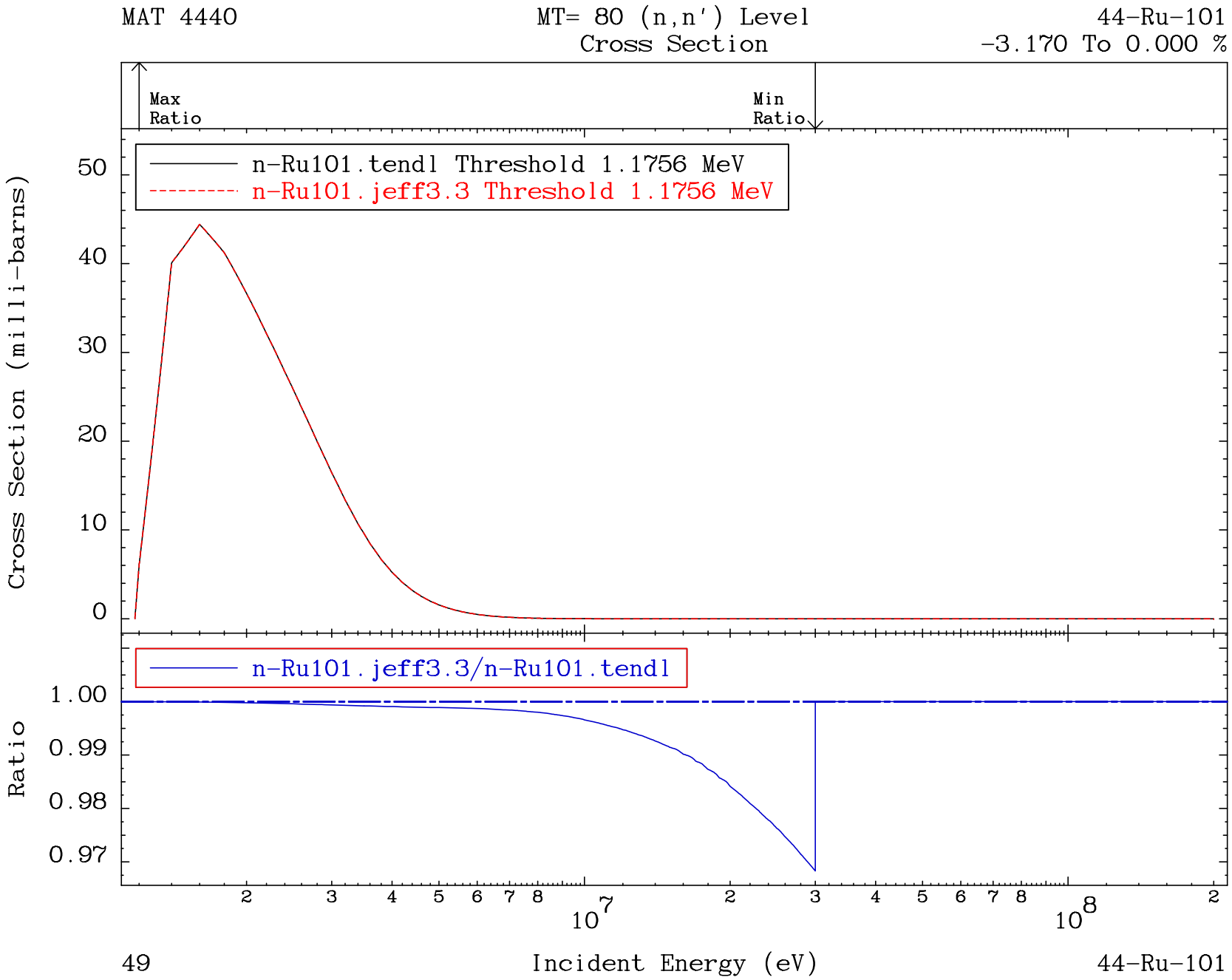

MAT 4440
MT= 75 (n,n') Level
Cross Section
44-Ru-101
-0.102 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 1.0112 MeV
n-Ru101.jeff3.3 Threshold 1.0112 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
10^6
10^7
10^8
2
3
4
5
6
7
8
44
Incident Energy (eV)
44-Ru-101

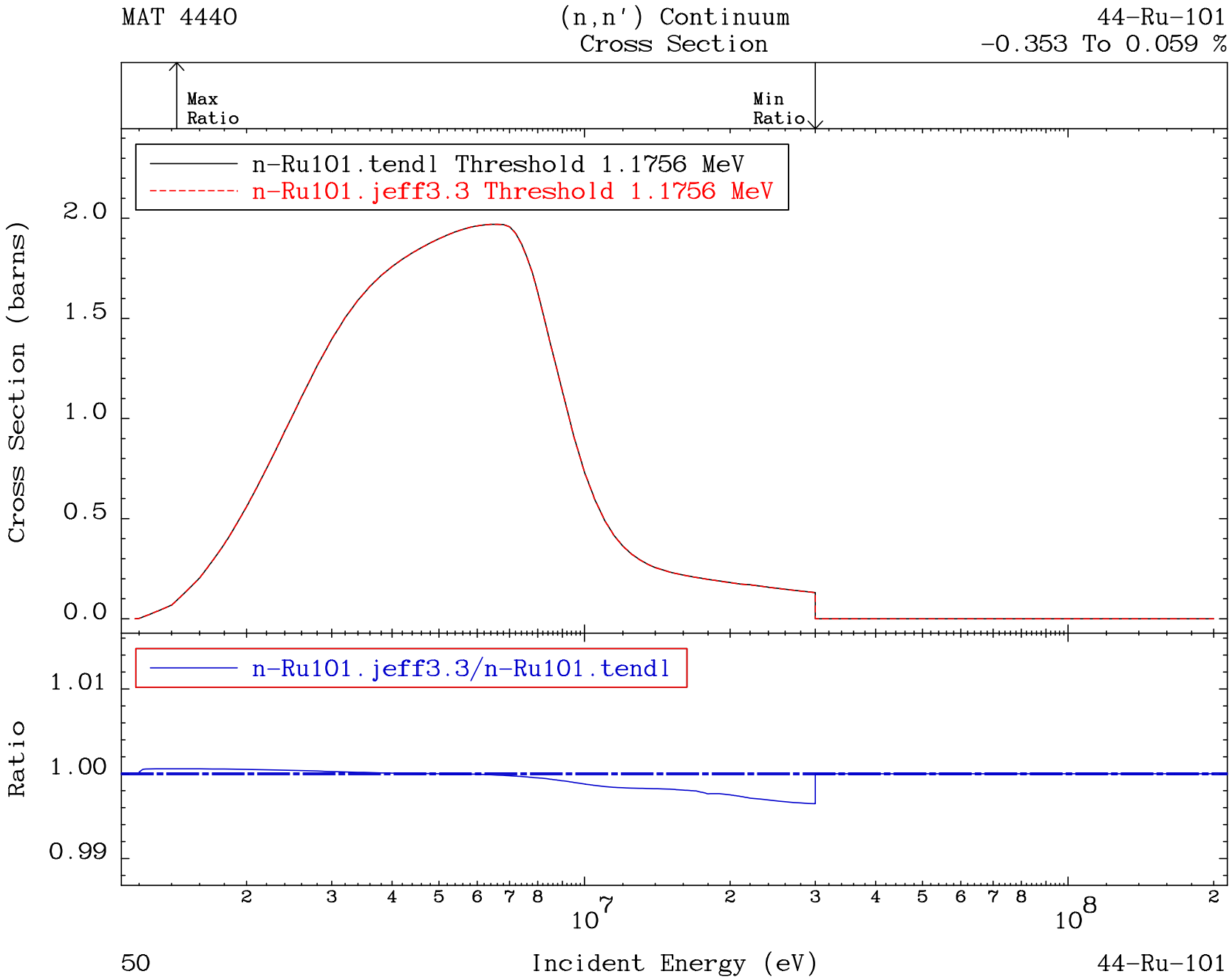

MAT 4440
MT= 76 (n,n') Level
Cross Section
44-Ru-101
-3.171 To 0.000 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 1.0484 MeV
n-Ru101.jeff3.3 Threshold 1.0484 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
45
Incident Energy (eV)
44-Ru-101

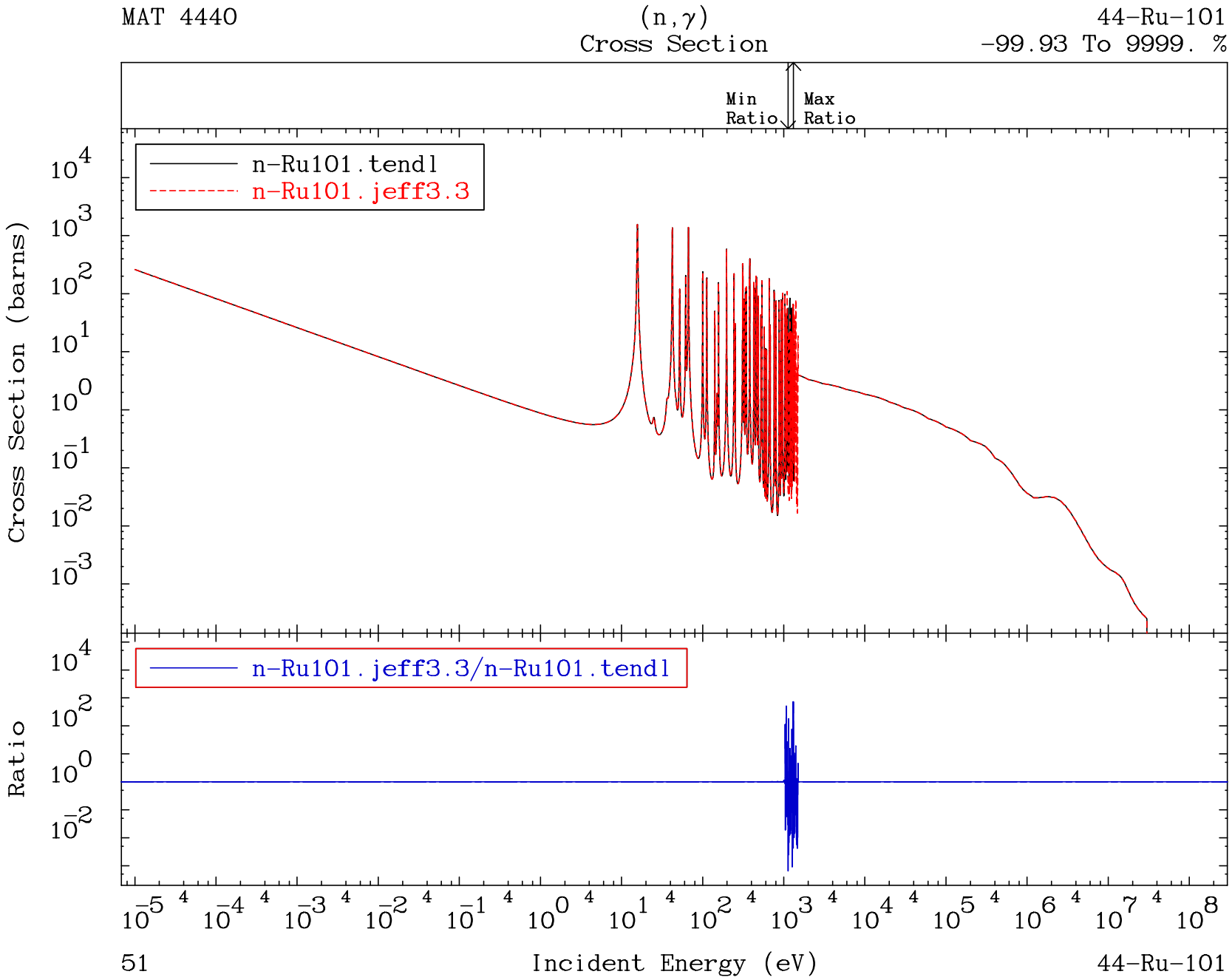

MAT 4440
MT= 77 (n,n') Level
Cross Section
44-Ru-101
-0.112 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 1.0615 MeV
n-Ru101.jeff3.3 Threshold 1.0615 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
10^6
10^7
10^8
Incident Energy (eV)
46
44-Ru-101

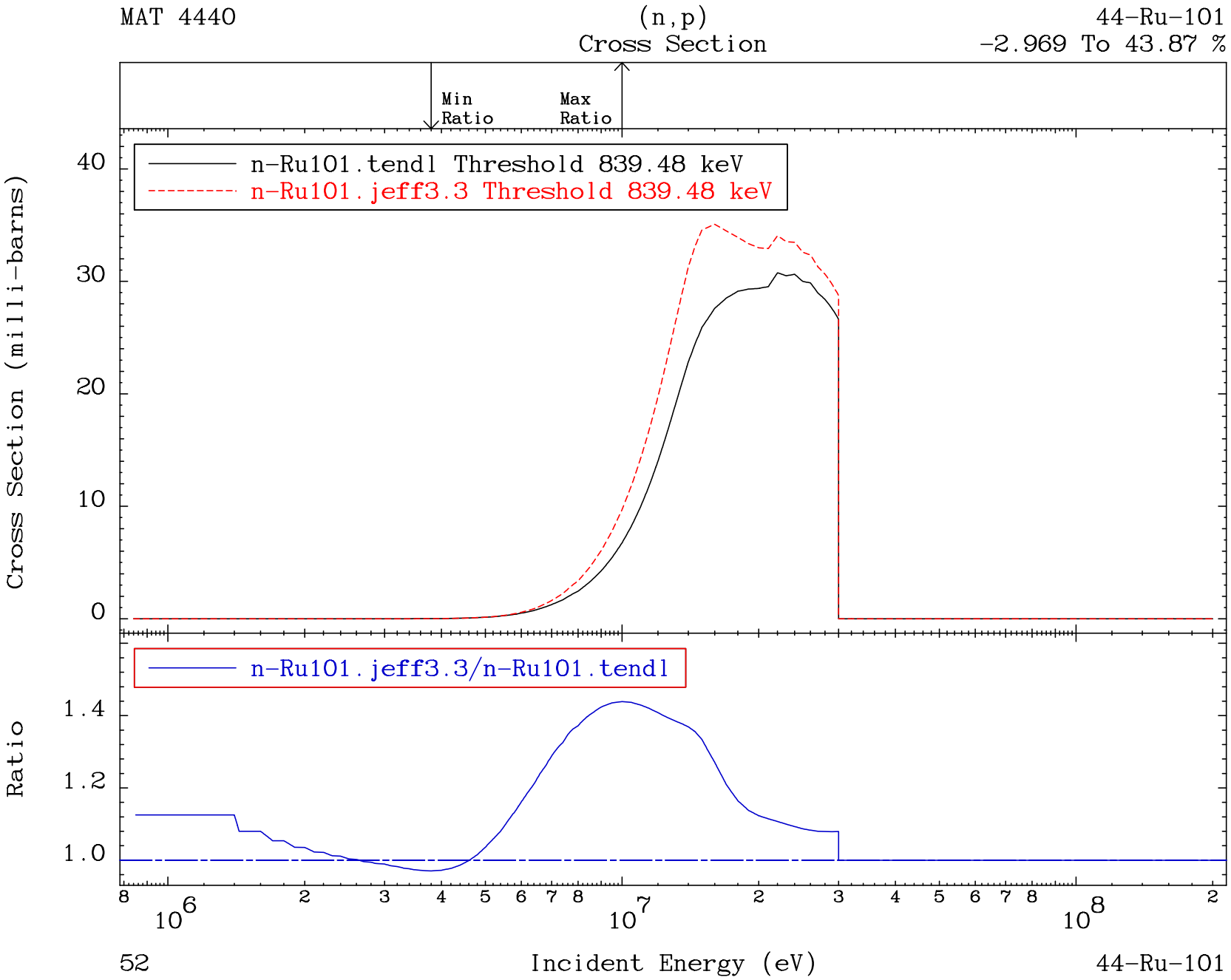

MAT 4440
MT= 78 (n,n') Level
Cross Section
44-Ru-101
-3.173 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 1.1090 MeV
n-Ru101.jeff3.3 Threshold 1.1090 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
47
Incident Energy (eV)
44-Ru-101

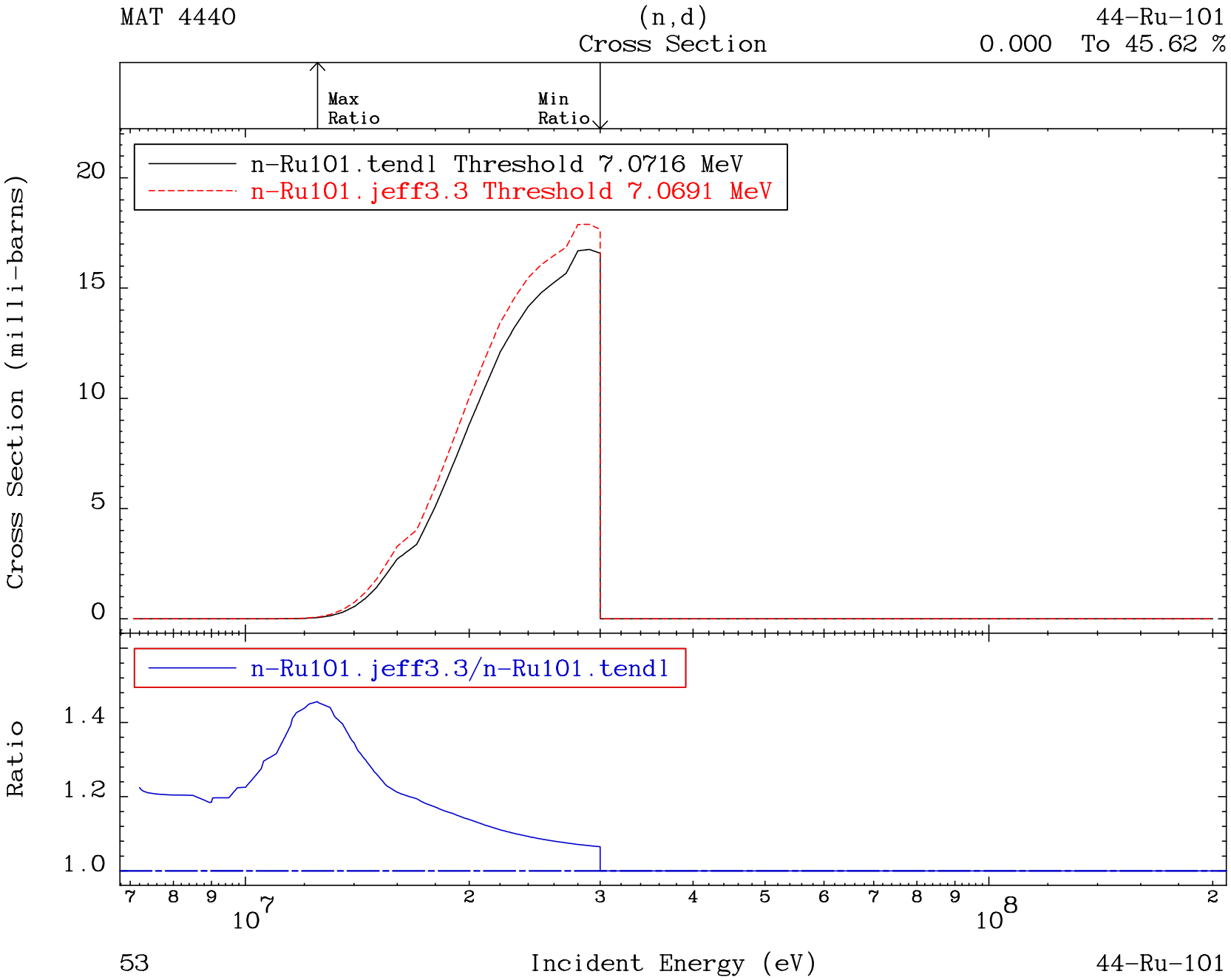

MAT 4440
MT= 79 (n,n') Level
Cross Section
44-Ru-101
-3.173 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 1.1221 MeV
n-Ru101.jeff3.3 Threshold 1.1221 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
48
Incident Energy (eV)
44-Ru-101

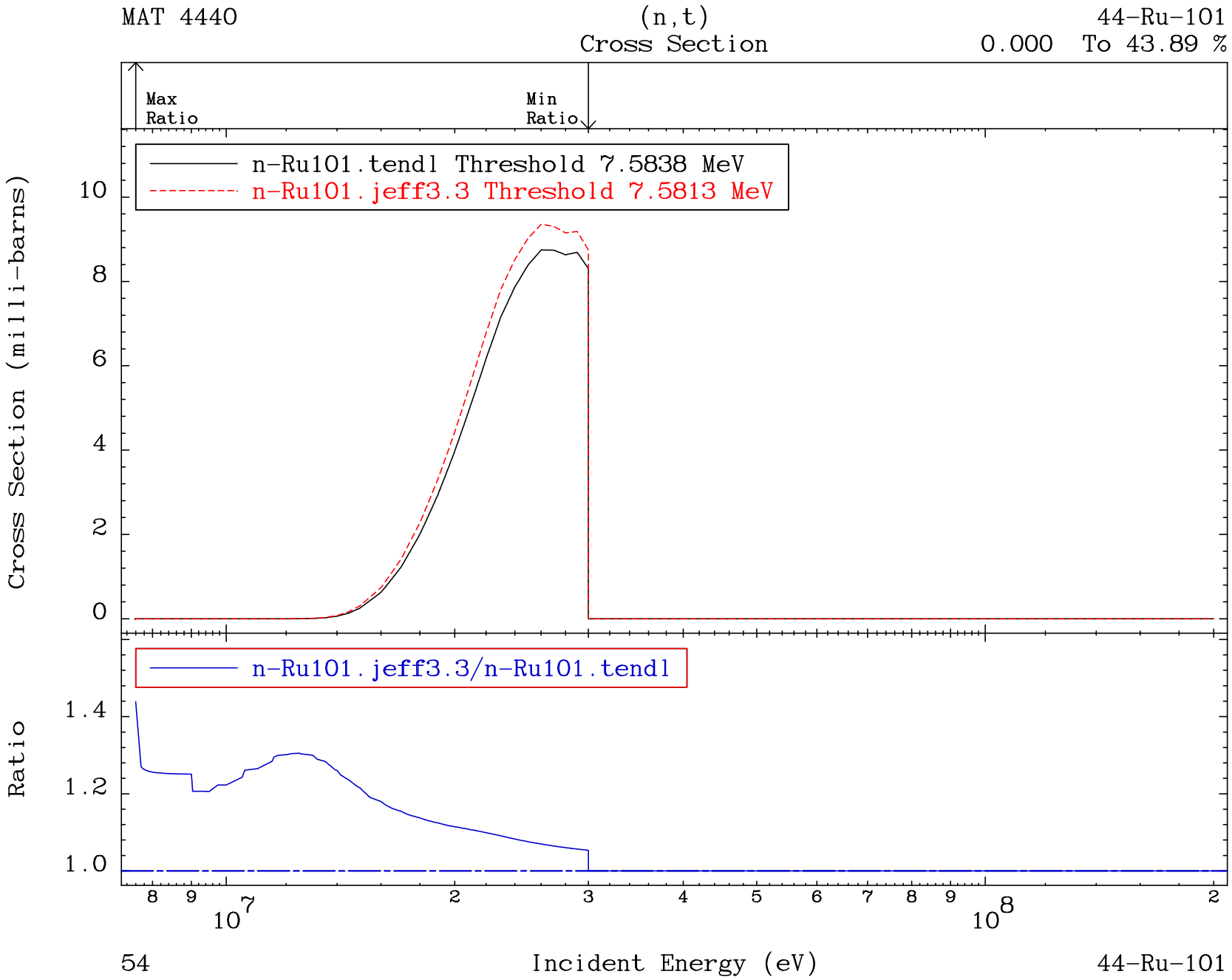

MAT 4440
MT= 80 (n,n') Level
Cross Section
44-Ru-101
-3.170 To 0.000 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 1.1756 MeV
n-Ru101.jeff3.3 Threshold 1.1756 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.00
0.99
0.98
0.97
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
49
Incident Energy (eV)
44-Ru-101

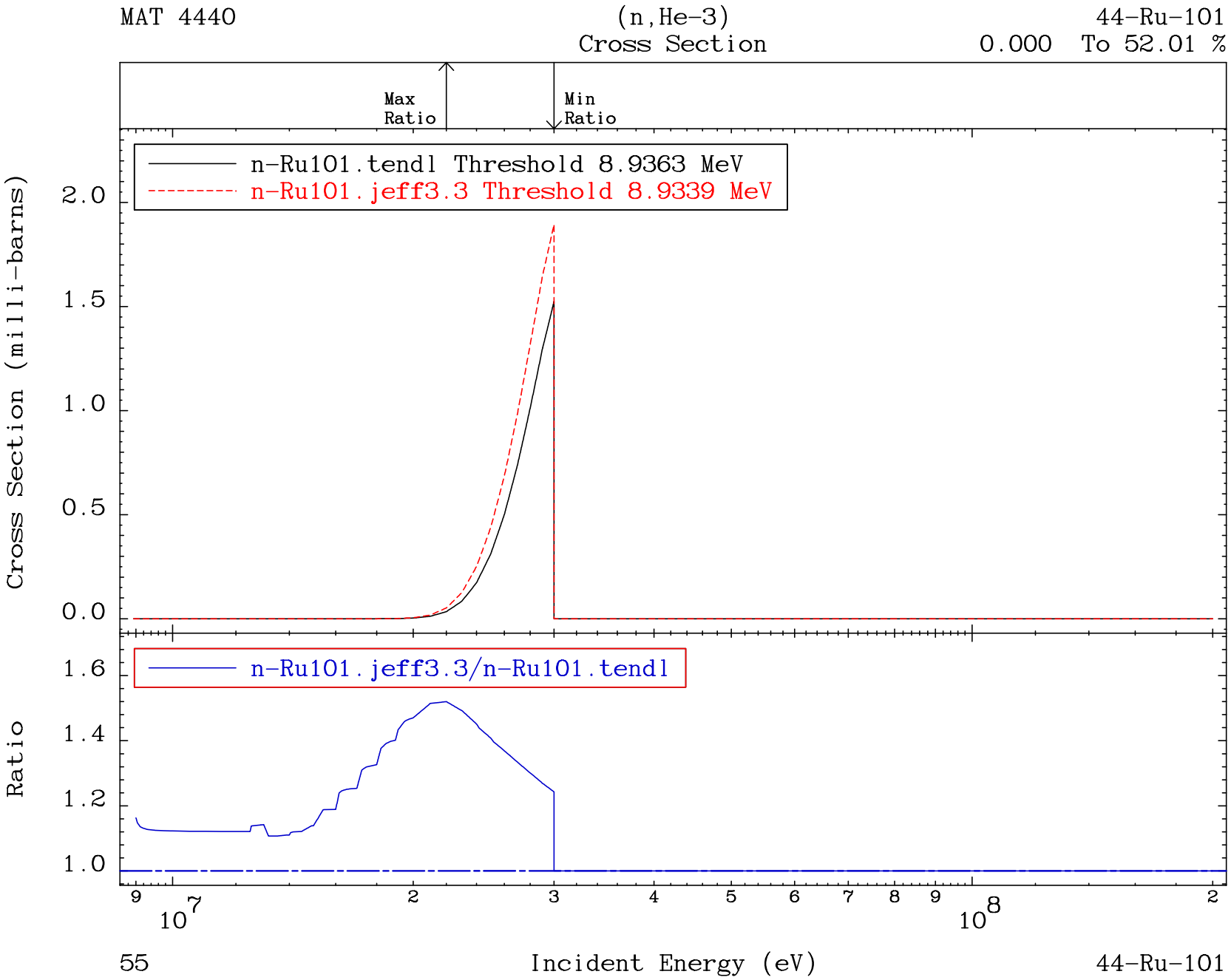

MAT 4440
(n,n') Continuum
Cross Section
44-Ru-101
-0.353 To 0.059 %
Max
Ratio
Min
Ratio
n-Ru101.tendl Threshold 1.1756 MeV
n-Ru101.jeff3.3 Threshold 1.1756 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
50
Incident Energy (eV)
44-Ru-101

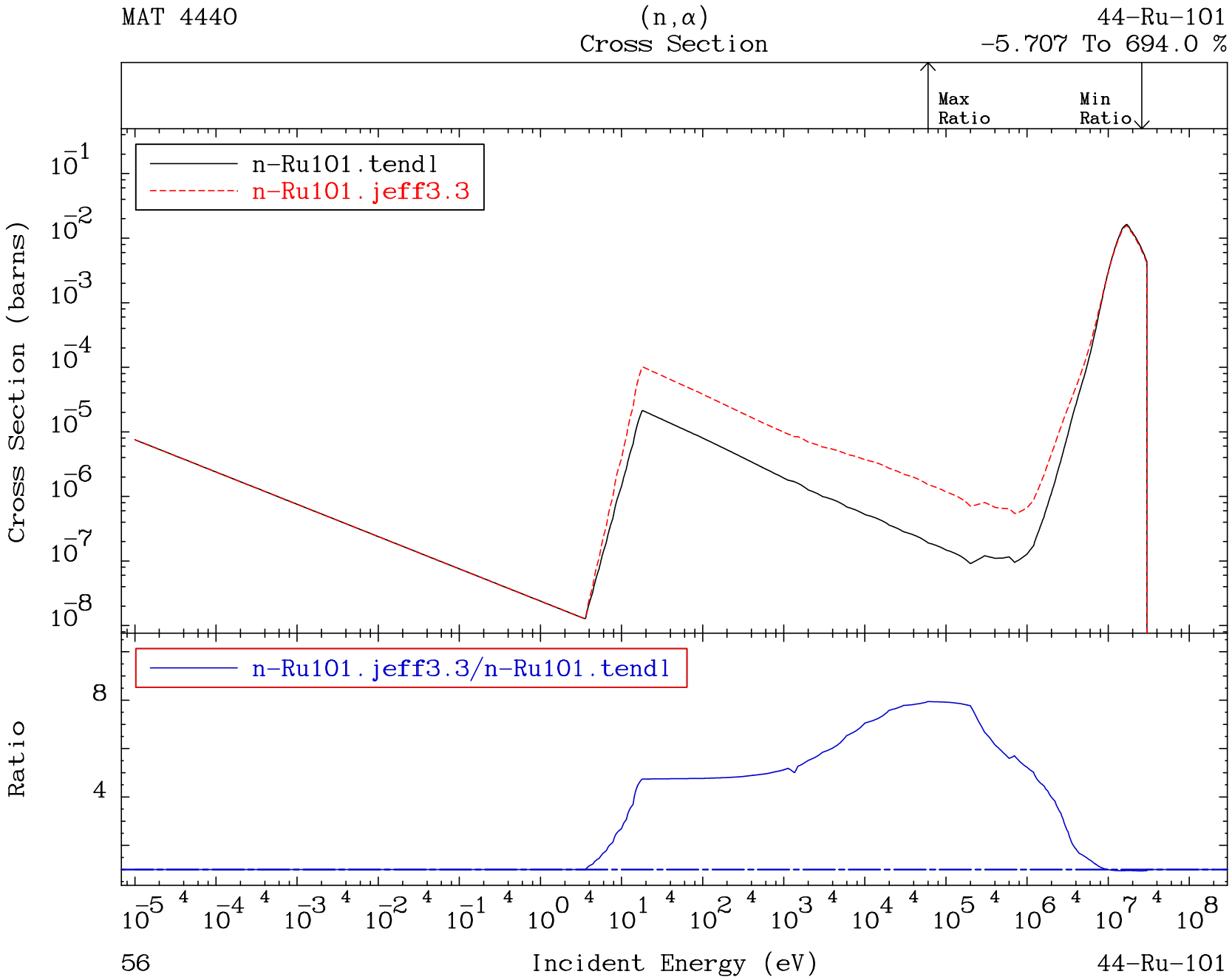

MAT 4440
(n,γ)
Cross Section
44-Ru-101
-99.93 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
51
44-Ru-101

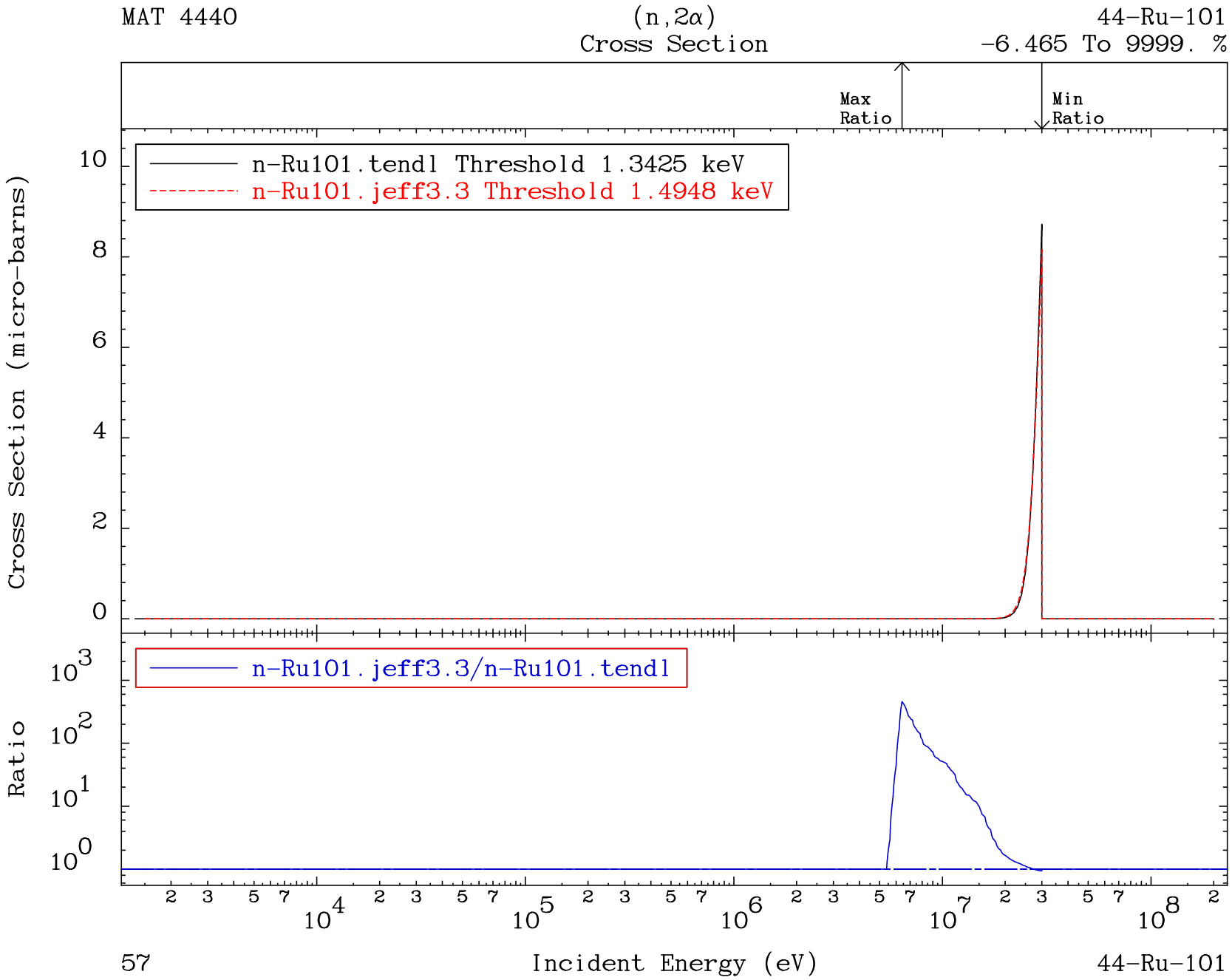

MAT 4440
(n,p)
Cross Section
44-Ru-101
-2.969 To 43.87 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 839.48 keV
n-Ru101.jeff3.3 Threshold 839.48 keV
Cross Section (milli-barns)
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
52
Incident Energy (eV)
44-Ru-101

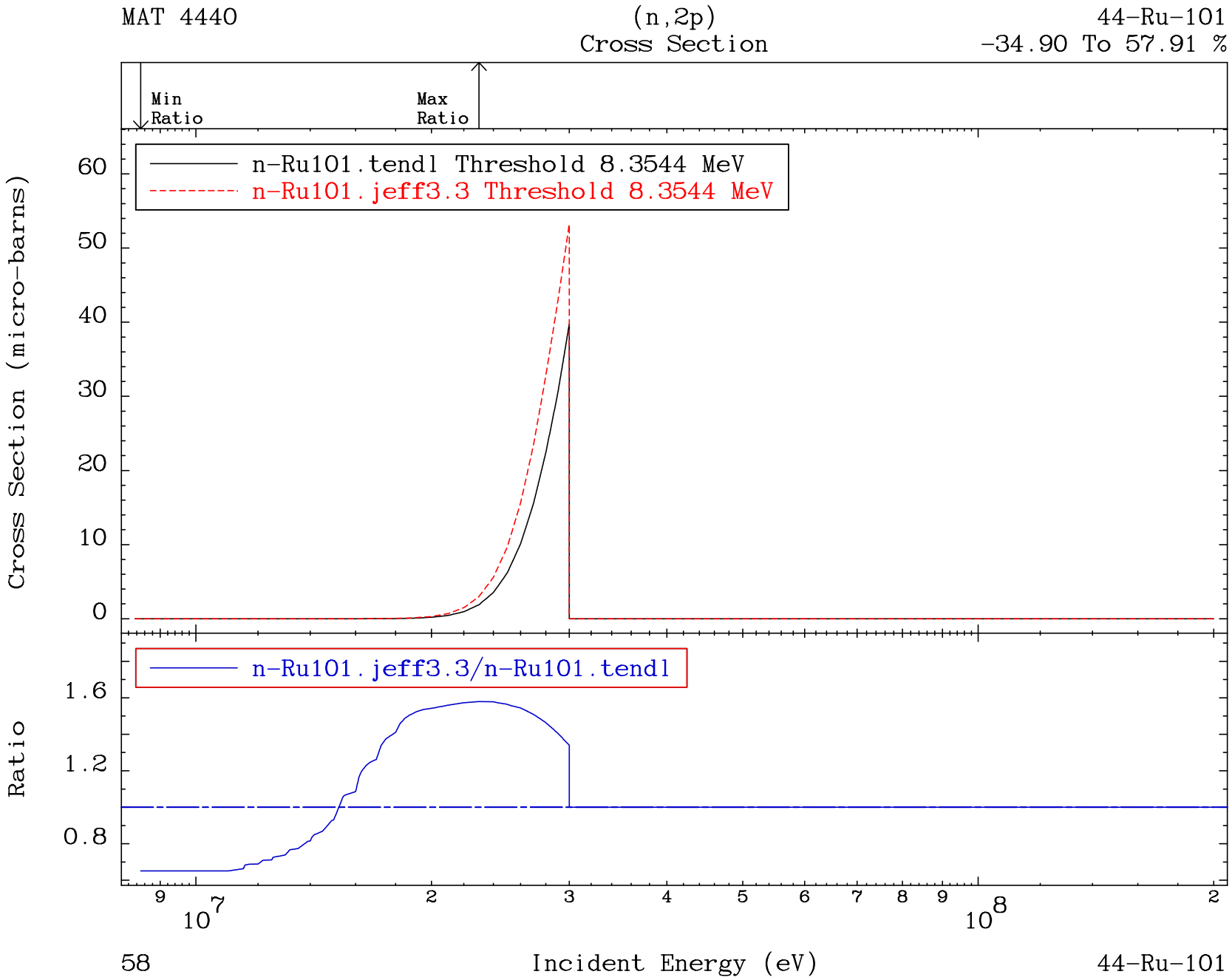

MAT 4440
(n,d)
Cross Section
44-Ru-101
0.000 To 45.62 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 7.0716 MeV
n-Ru101.jeff3.3 Threshold 7.0691 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
53
Incident Energy (eV)
44-Ru-101

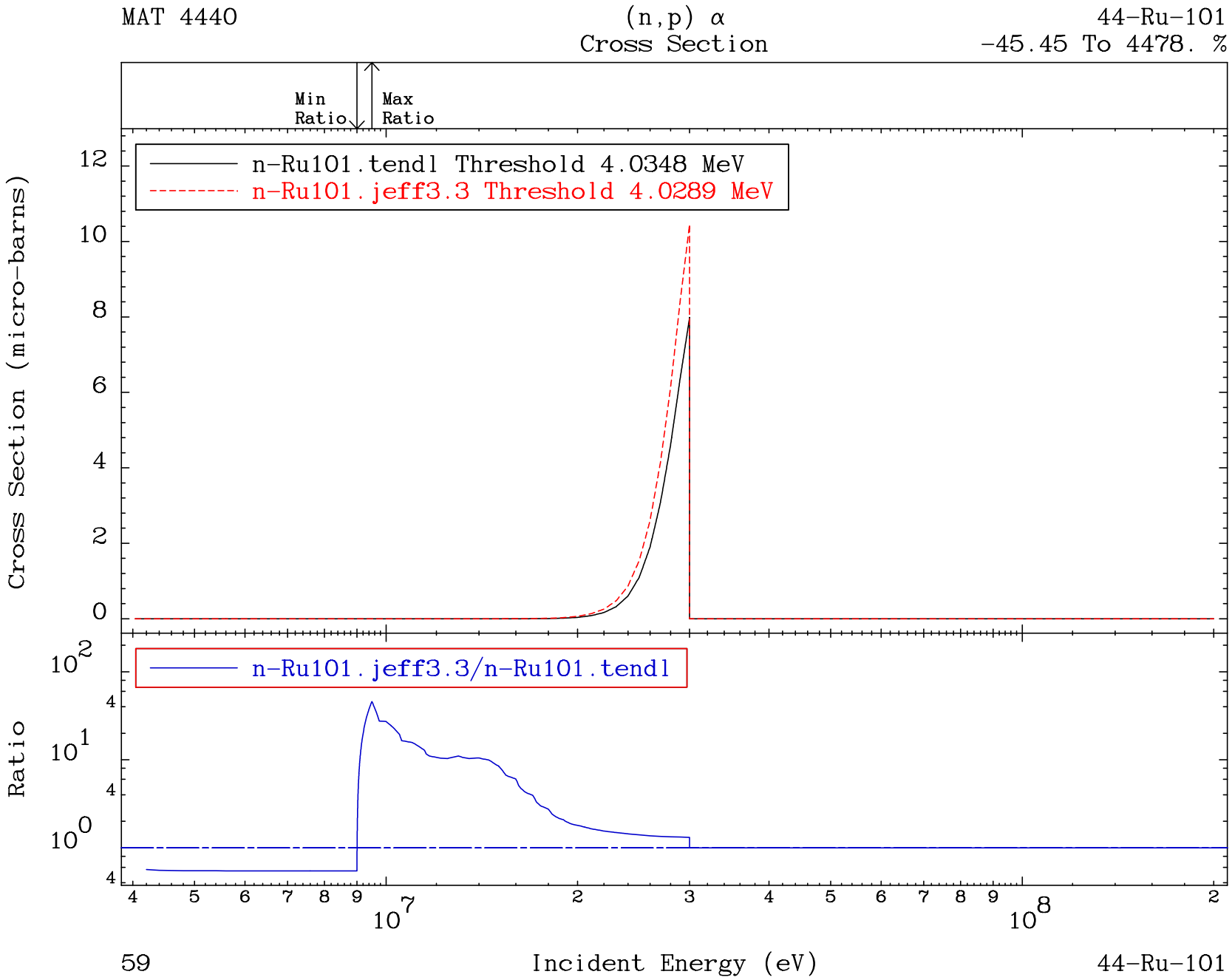

MAT 4440
(n,t)
Cross Section
44-Ru-101
0.000 To 43.89 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 7.5838 MeV
n-Ru101.jeff3.3 Threshold 7.5813 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.0
1.2
1.4
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
54
Incident Energy (eV)
44-Ru-101

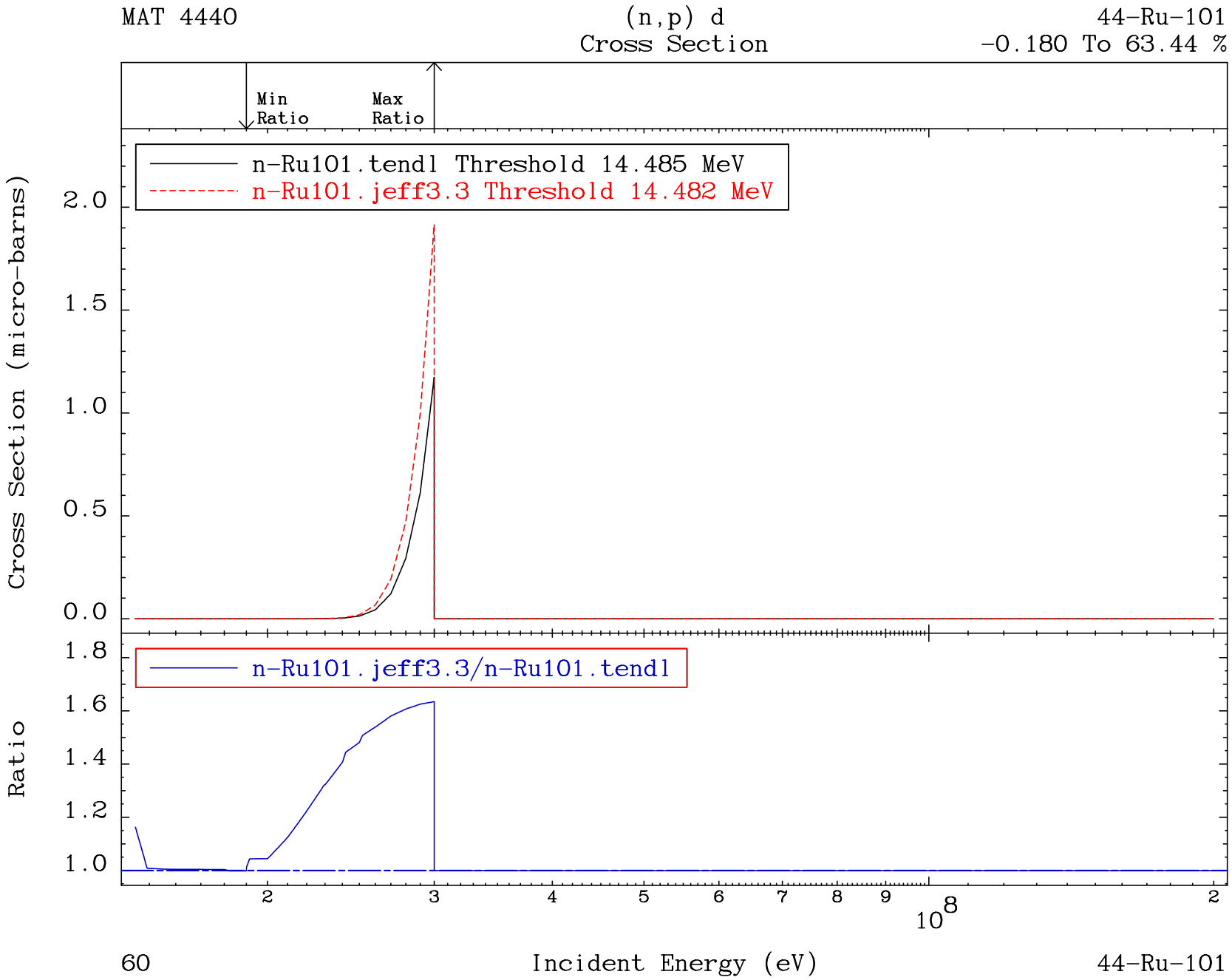

MAT 4440
(n,He-3)
Cross Section
44-Ru-101
0.000 To 52.01 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 8.9363 MeV
n-Ru101.jeff3.3 Threshold 8.9339 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.4
1.2
1.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
55
Incident Energy (eV)
44-Ru-101

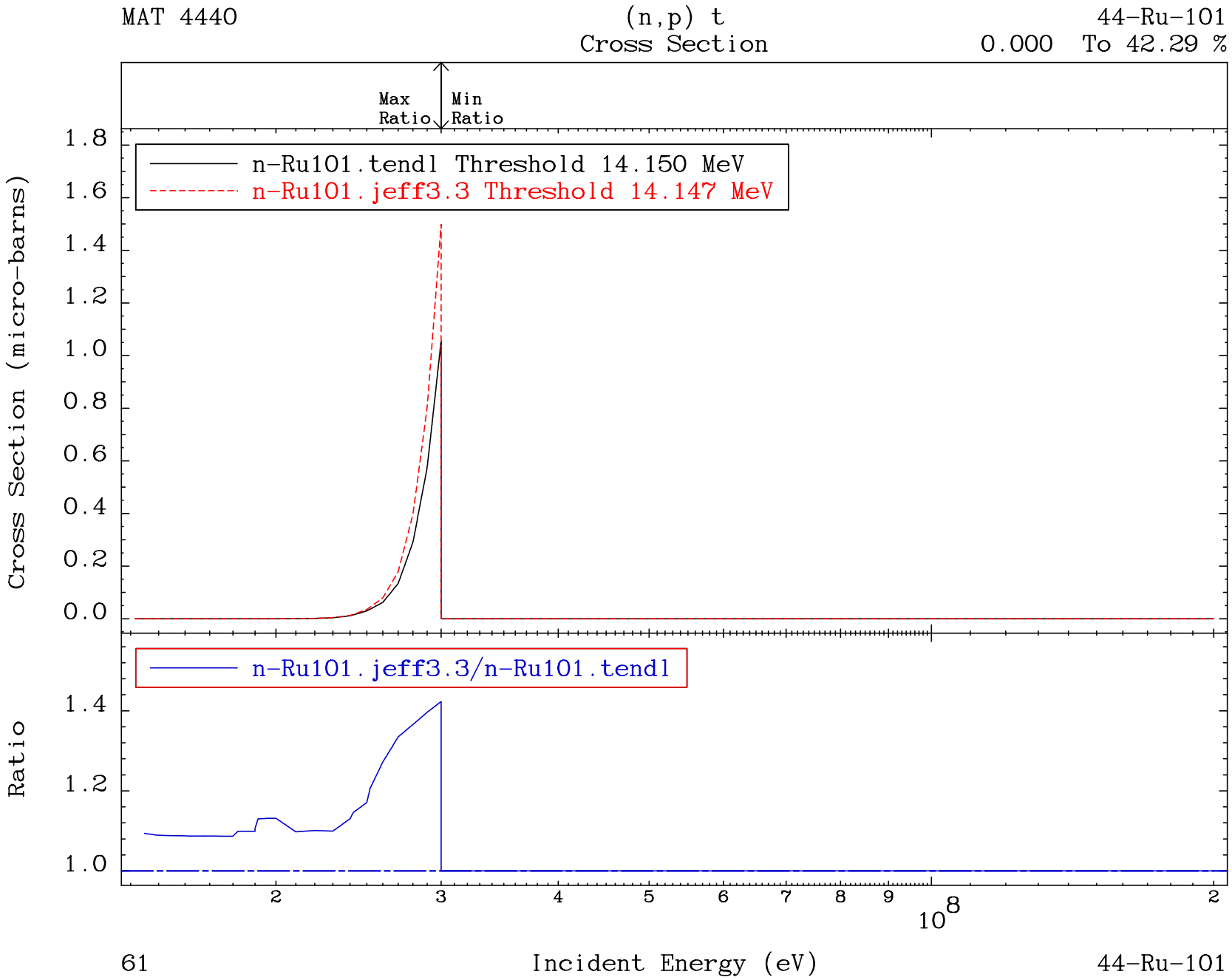

MAT 4440
(n,α)
Cross Section
44-Ru-101
-5.707 To 694.0 %
Max Ratio
Min Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
56
44-Ru-101

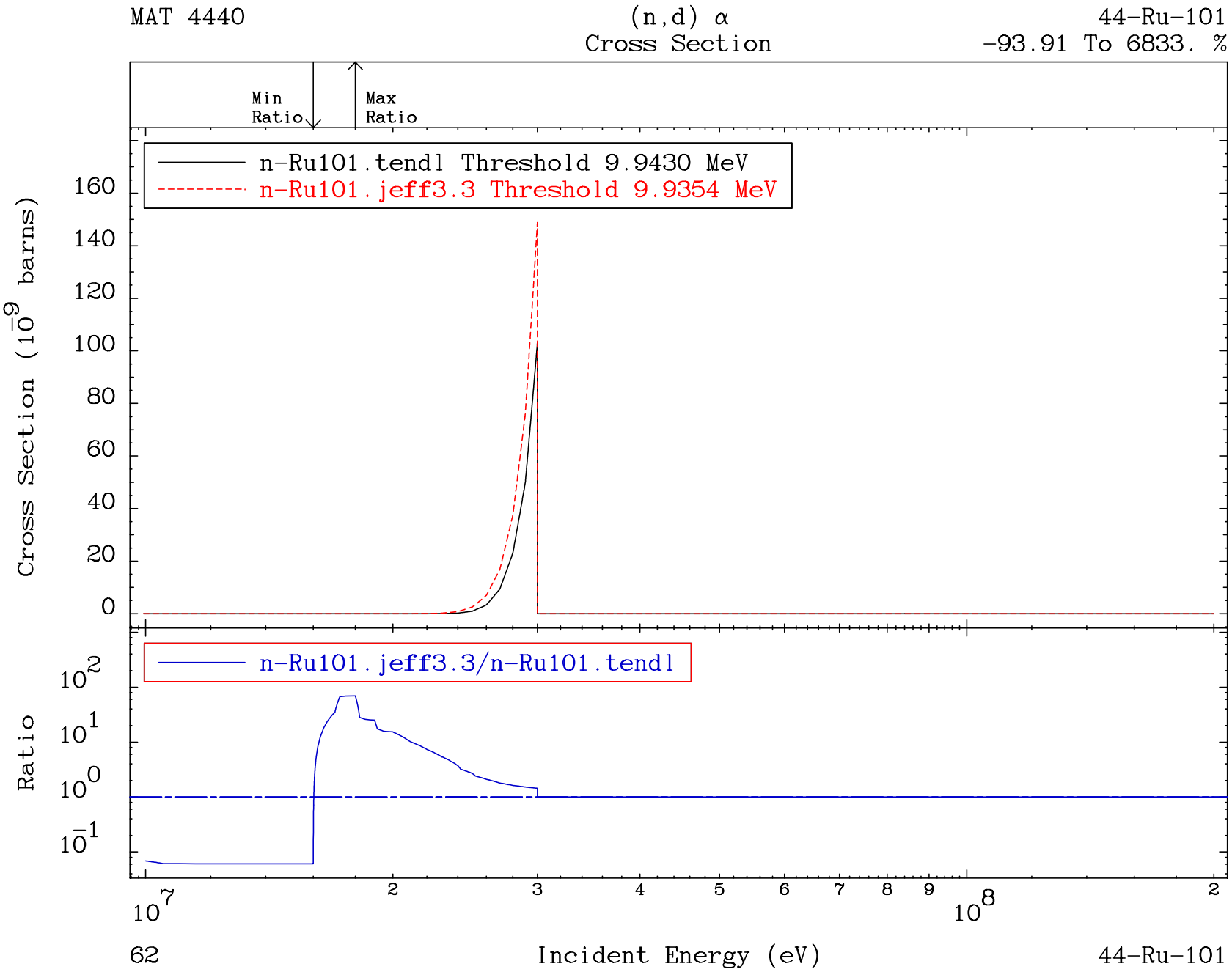

MAT 4440
(n,2α)
Cross Section
44-Ru-101
-6.465 To 9999. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 1.3425 keV
n-Ru101.jeff3.3 Threshold 1.4948 keV
Cross Section (micro-barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
57
44-Ru-101

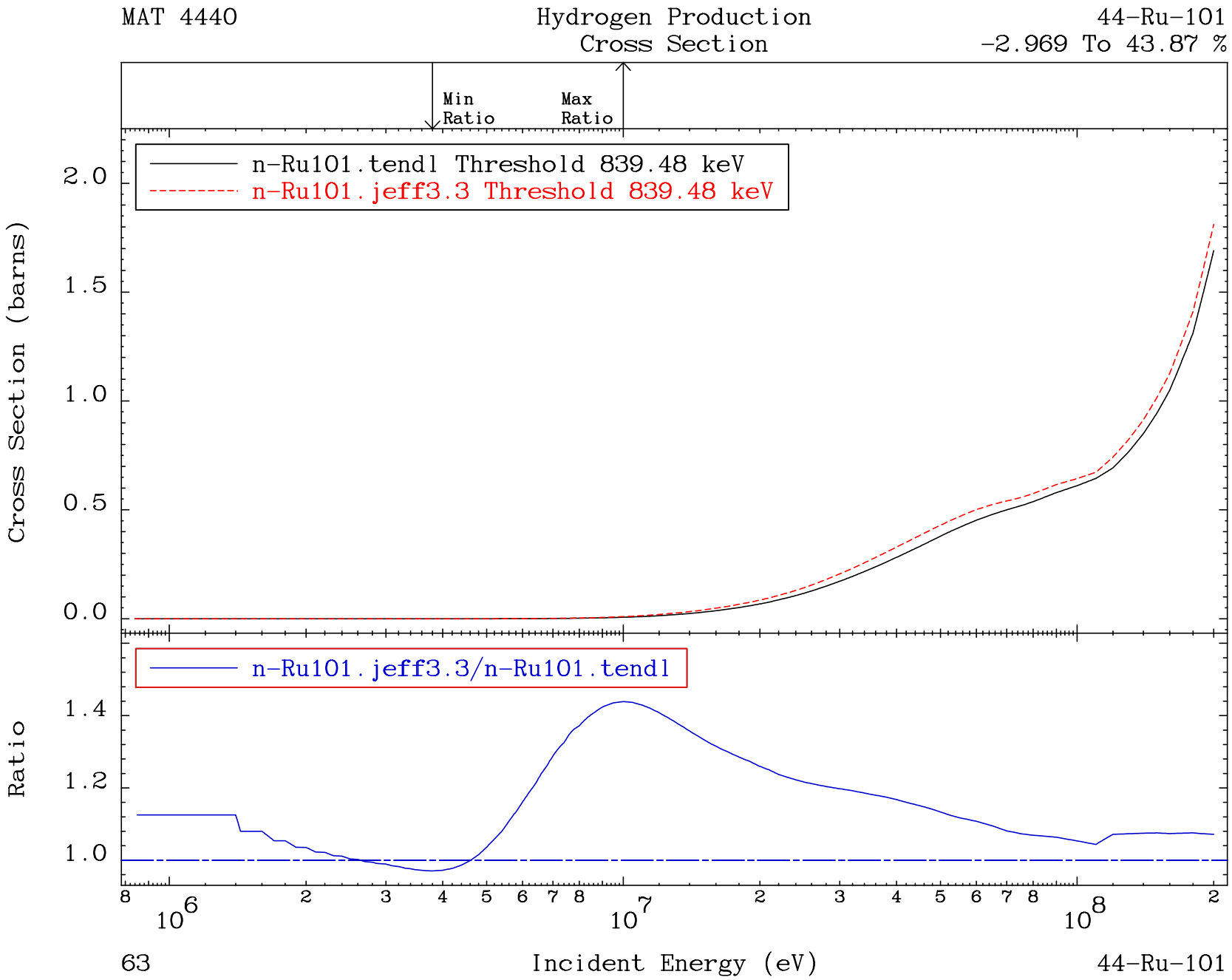

MAT 4440
(n,2p)
Cross Section
44-Ru-101
-34.90 To 57.91 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 8.3544 MeV
n-Ru101.jeff3.3 Threshold 8.3544 MeV
Cross Section (micro-barns)
60
50
40
30
20
10
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.2
0.8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
44-Ru-101

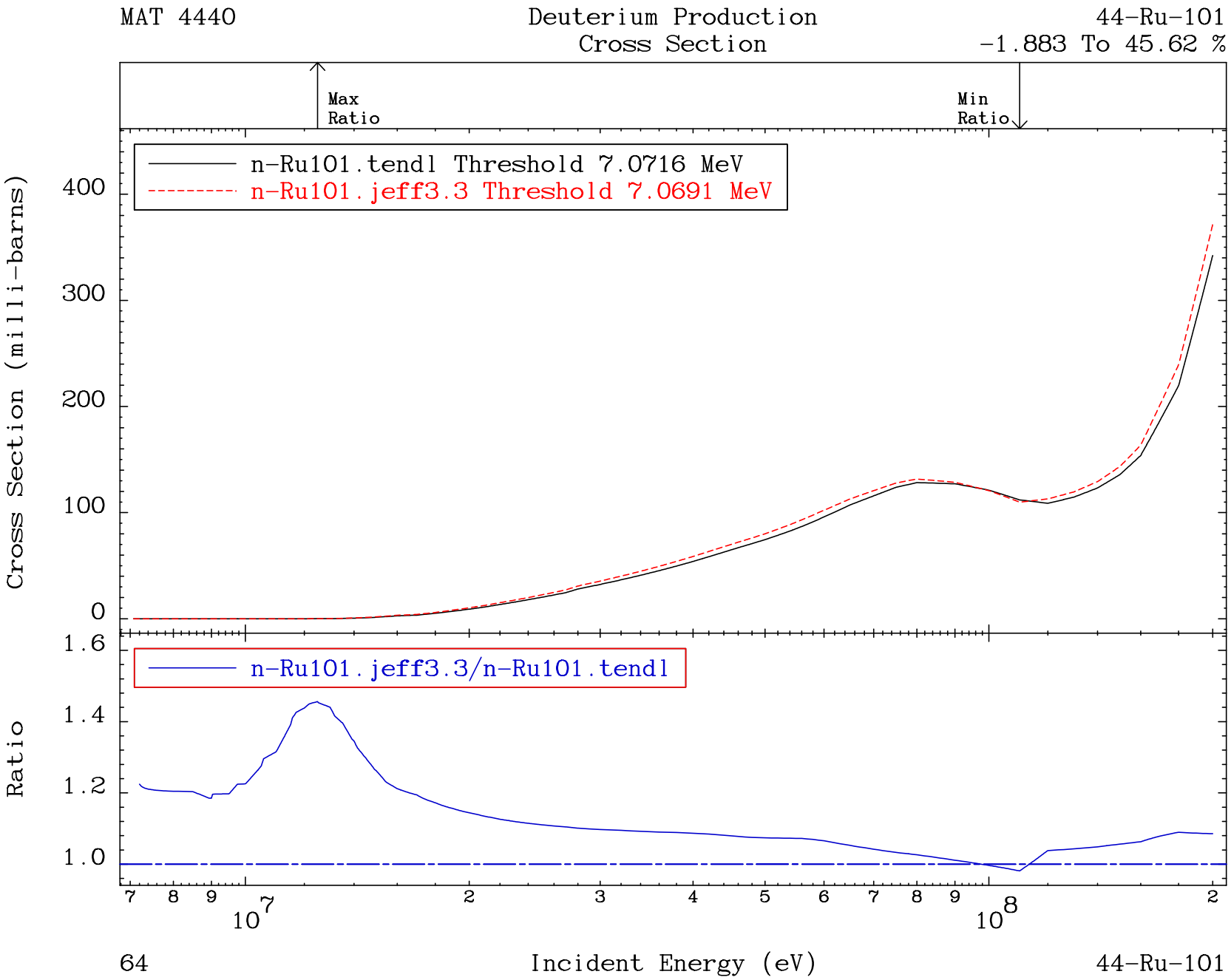

MAT 4440
(n,p) α
Cross Section
44-Ru-101
-45.45 To 4478. %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 4.0348 MeV
n-Ru101.jeff3.3 Threshold 4.0289 MeV
Cross Section (micro-barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
59
44-Ru-101

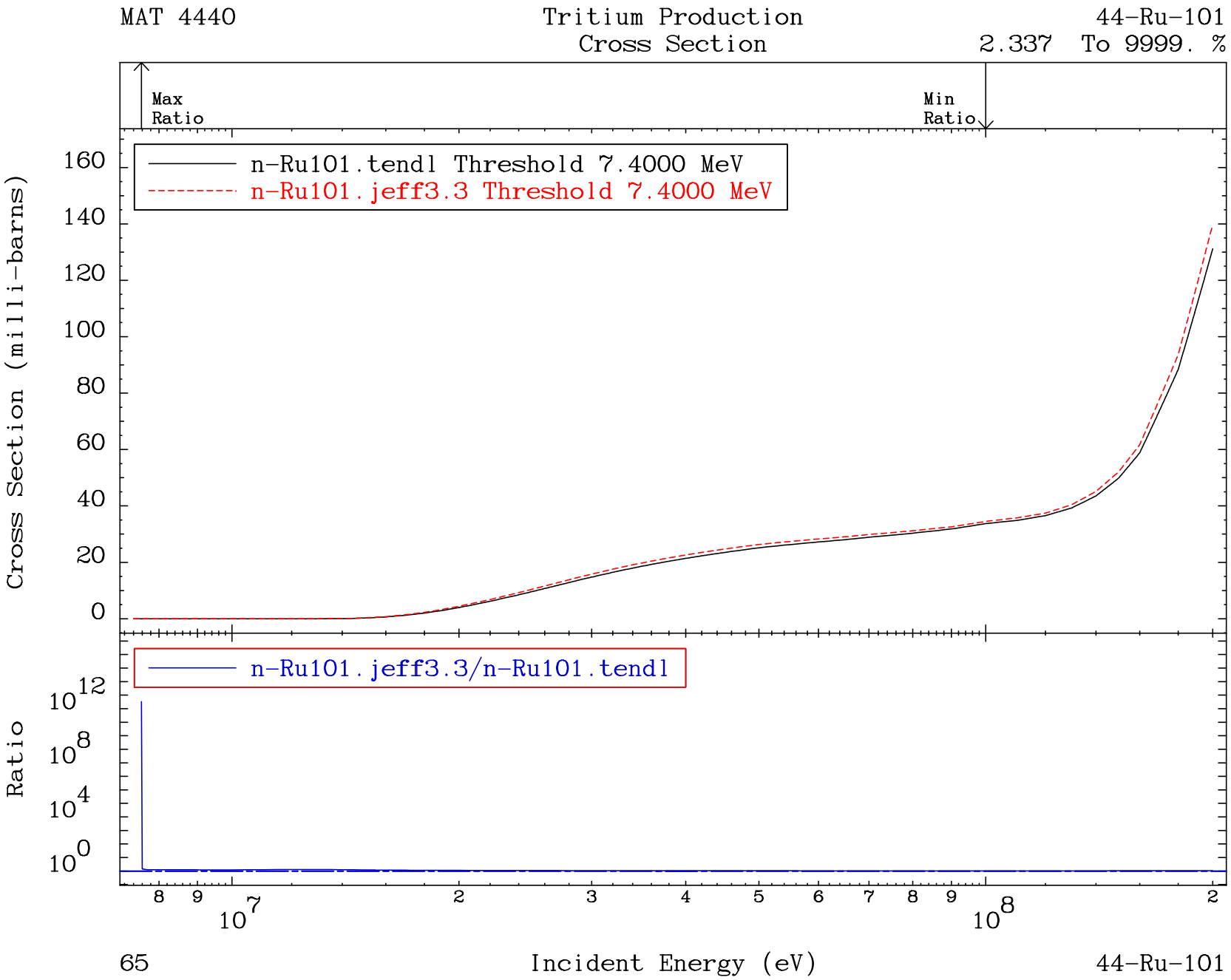

MAT 4440
(n,p) d
Cross Section
44-Ru-101
-0.180 To 63.44 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 14.485 MeV
n-Ru101.jeff3.3 Threshold 14.482 MeV
Cross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.8
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
44-Ru-101

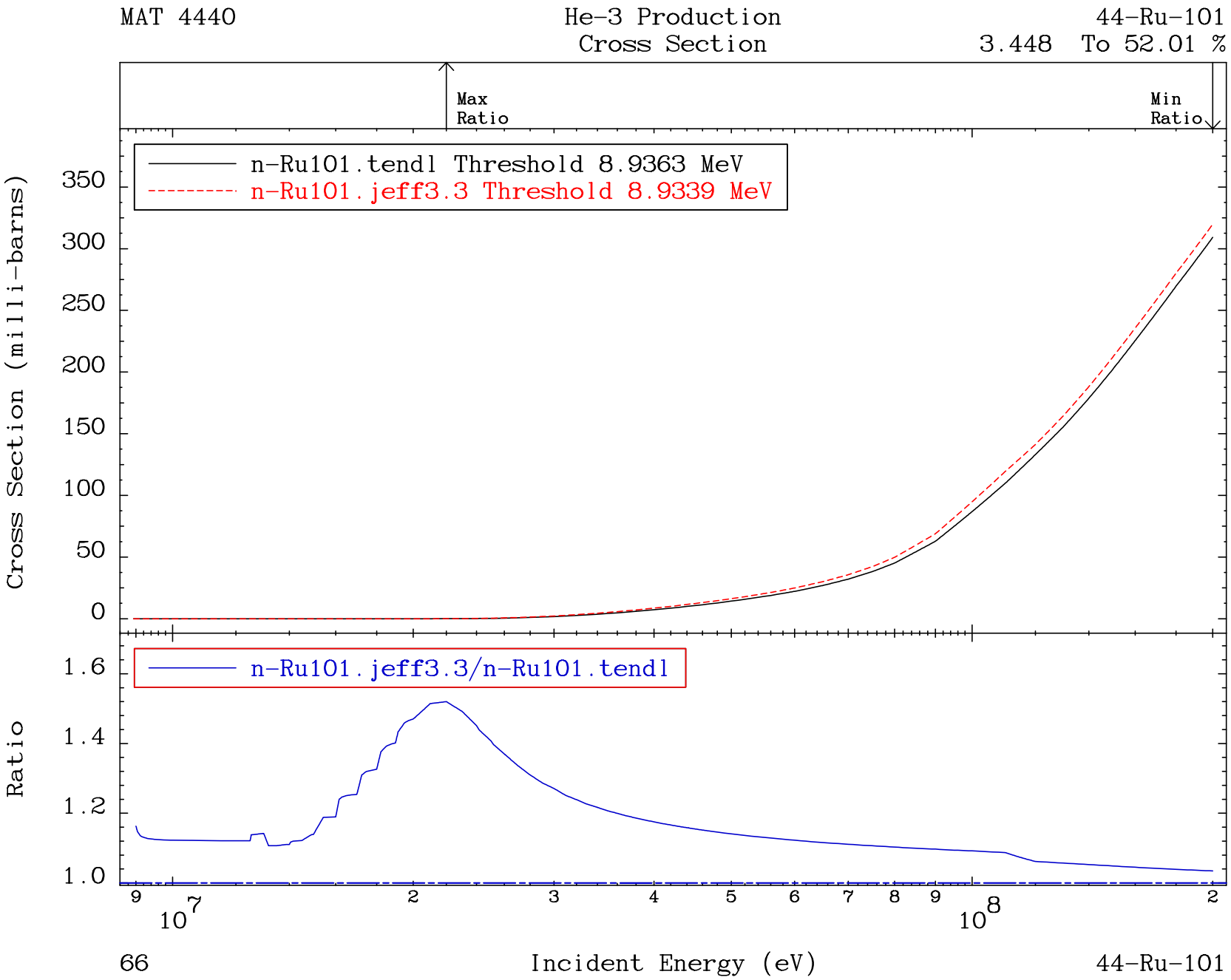

MAT 4440
(n,p) t
Cross Section
44-Ru-101
0.000 To 42.29 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 14.150 MeV
n-Ru101.jeff3.3 Threshold 14.147 MeV
Cross Section (micro-barns)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
44-Ru-101

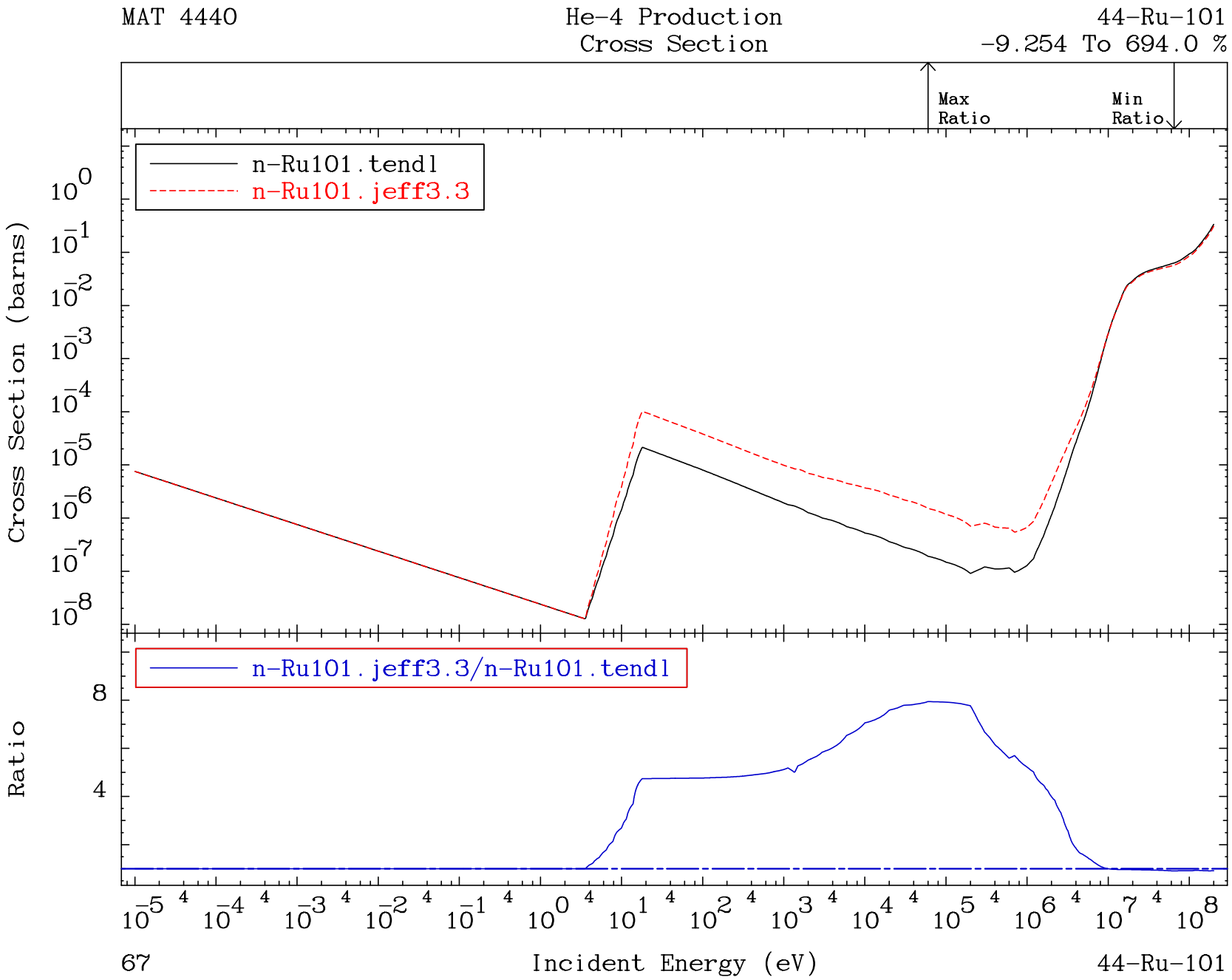

MAT 4440
(n,d) α
Cross Section
44-Ru-101
-93.91 To 6833. %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 9.9430 MeV
n-Ru101.jeff3.3 Threshold 9.9354 MeV
Cross Section (10^{-9} barns)
160
140
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
10^{2}
10^{1}
10^{0}
10^{-1}
10^{7}
2
3
4
5
6
7
8
9
10^{8}
2
62
Incident Energy (eV)
44-Ru-101

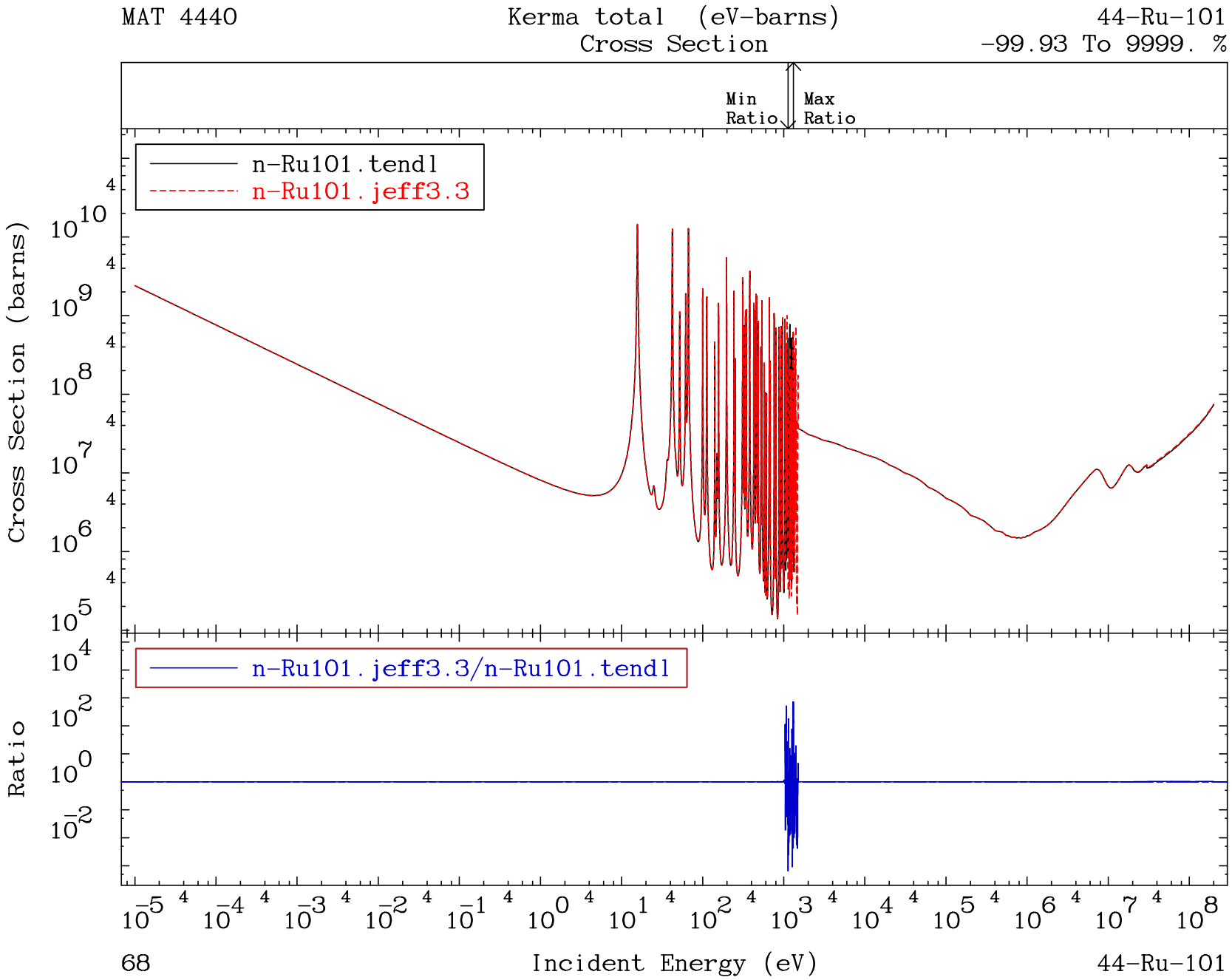

MAT 4440
Hydrogen Production
Cross Section
44-Ru-101
-2.969 To 43.87 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 839.48 keV
n-Ru101.jeff3.3 Threshold 839.48 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
63
Incident Energy (eV)
44-Ru-101

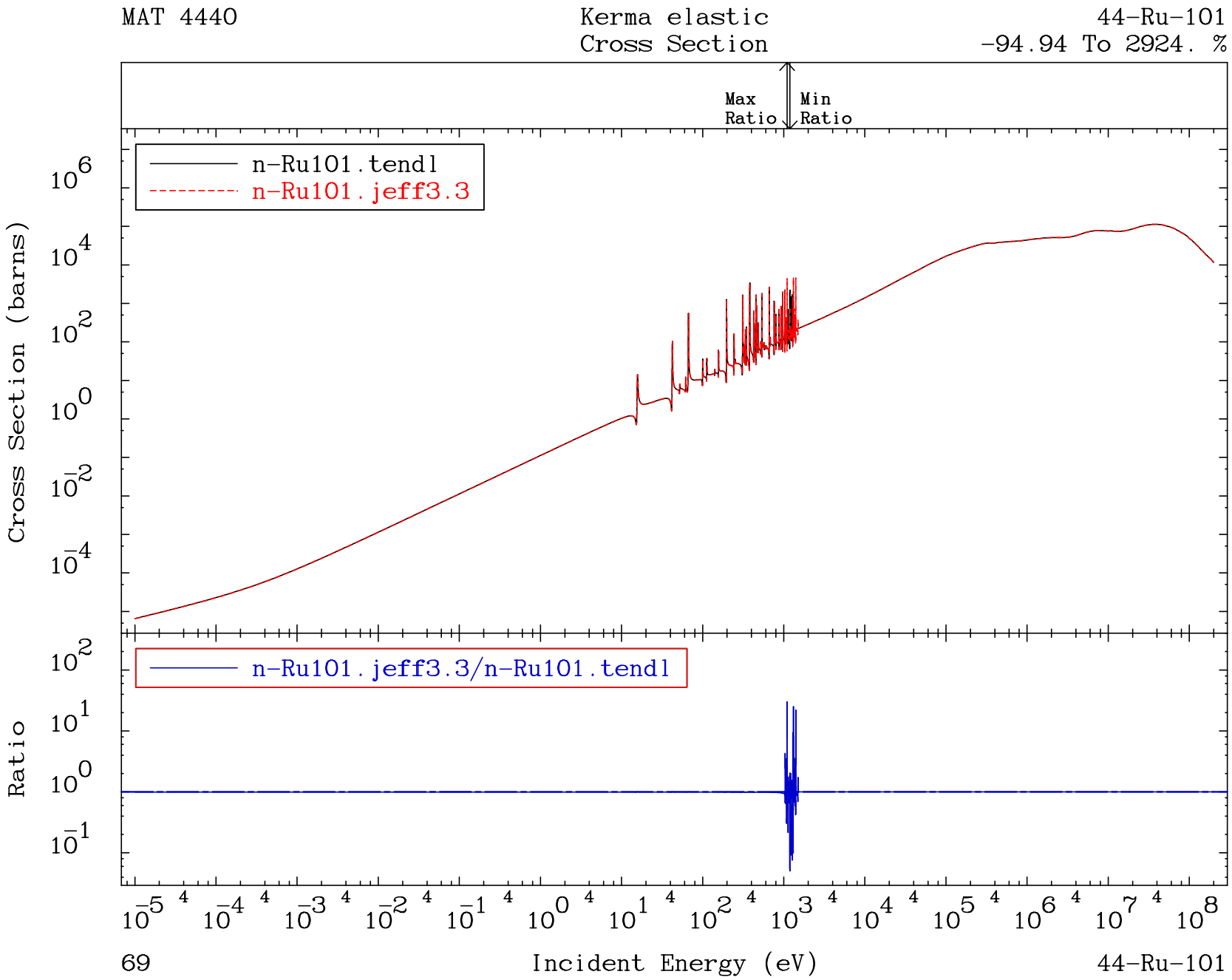

MAT 4440
Deuterium Production
Cross Section
44-Ru-101
-1.883 To 45.62 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 7.0716 MeV
n-Ru101.jeff3.3 Threshold 7.0691 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.4
1.2
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
64
Incident Energy (eV)
44-Ru-101

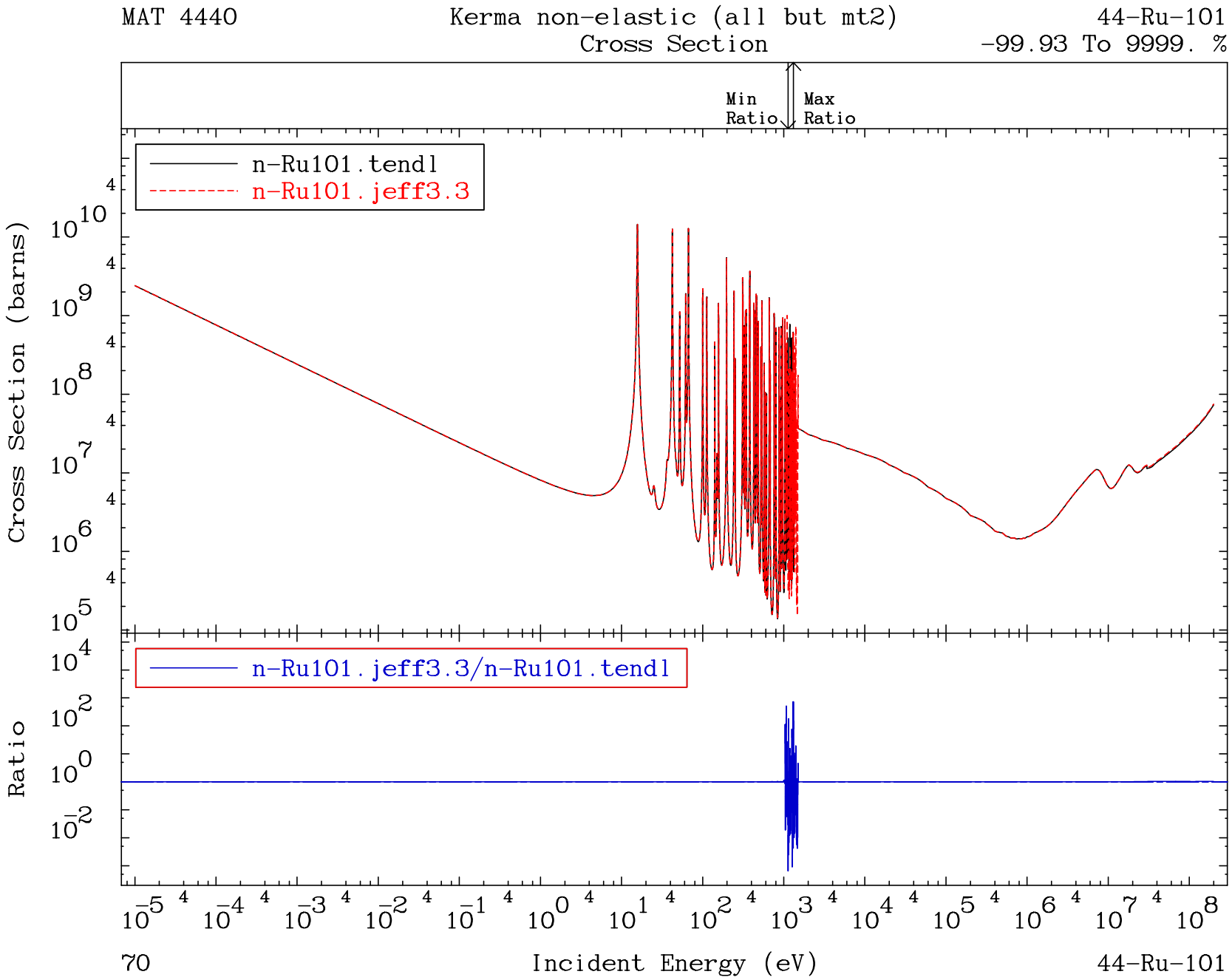

MAT 4440
Tritium Production
Cross Section
44-Ru-101
2.337 To 9999. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 7.4000 MeV
n-Ru101.jeff3.3 Threshold 7.4000 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
10^12
10^8
10^4
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
65
Incident Energy (eV)
44-Ru-101

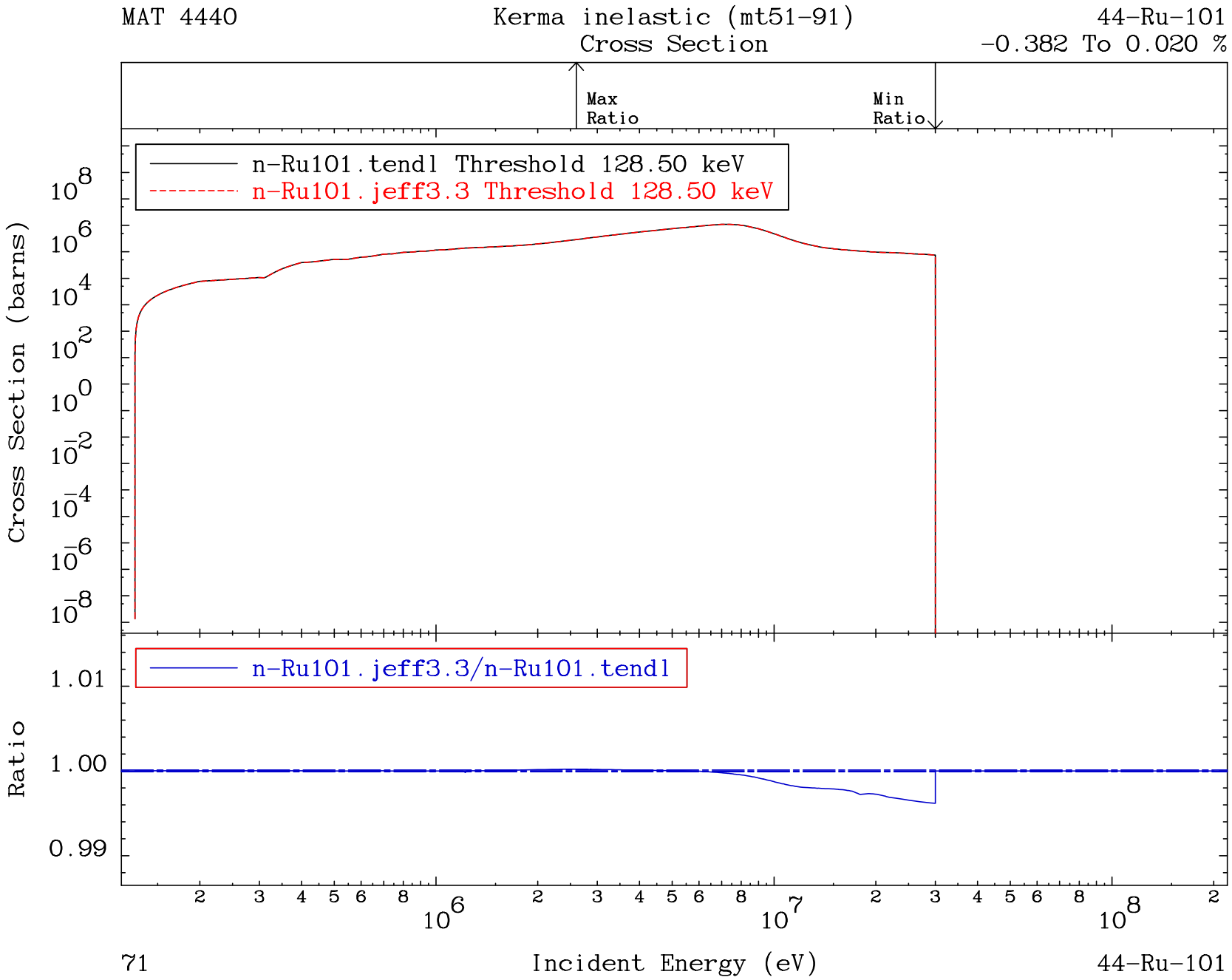

MAT 4440
He-3 Production
Cross Section
44-Ru-101
3.448 To 52.01 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 8.9363 MeV
n-Ru101.jeff3.3 Threshold 8.9339 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.6
1.4
1.2
1.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
66
Incident Energy (eV)
44-Ru-101

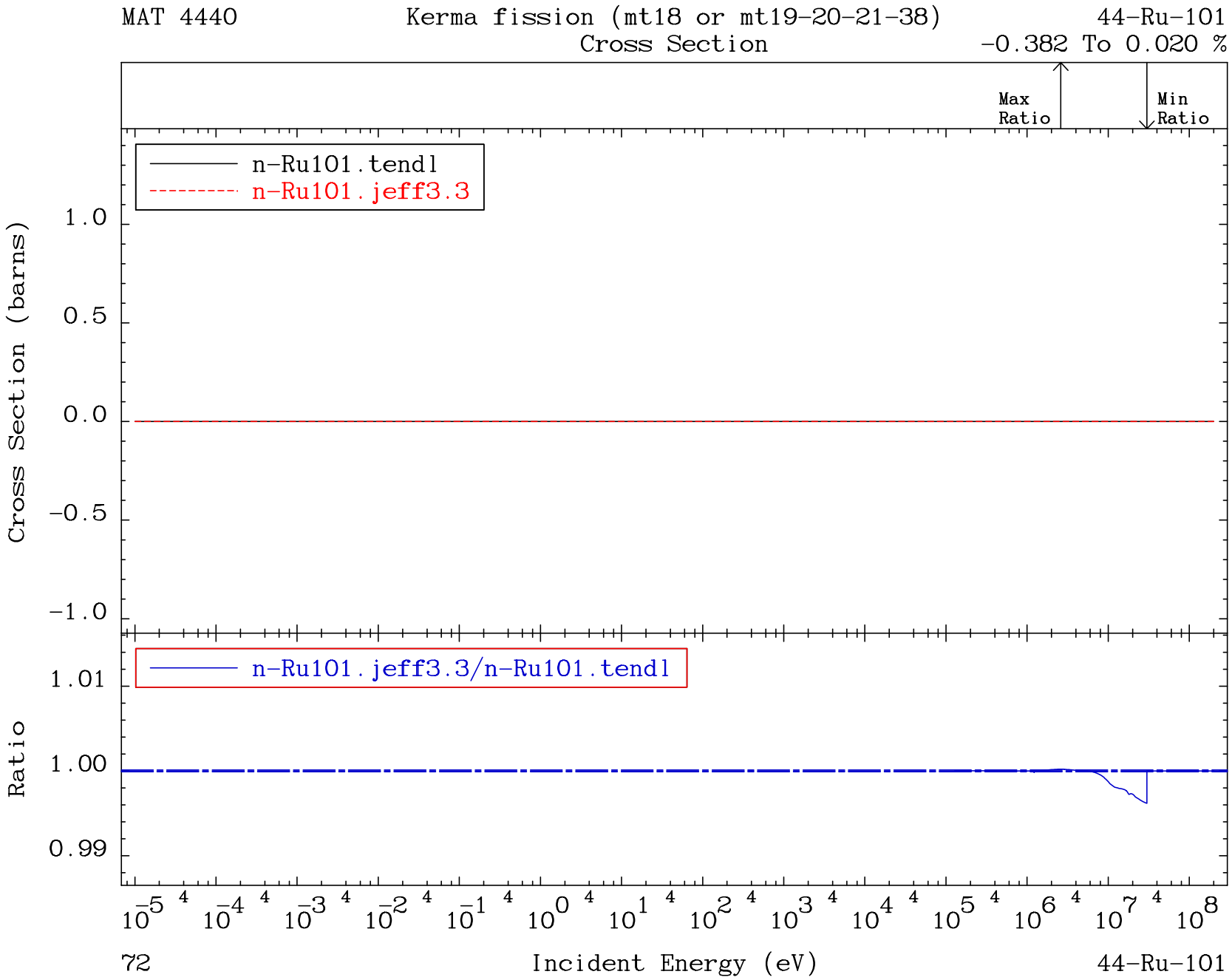

MAT 4440
He-4 Production
Cross Section
44-Ru-101
-9.254 To 694.0 %
Max Ratio
Min Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
67
44-Ru-101

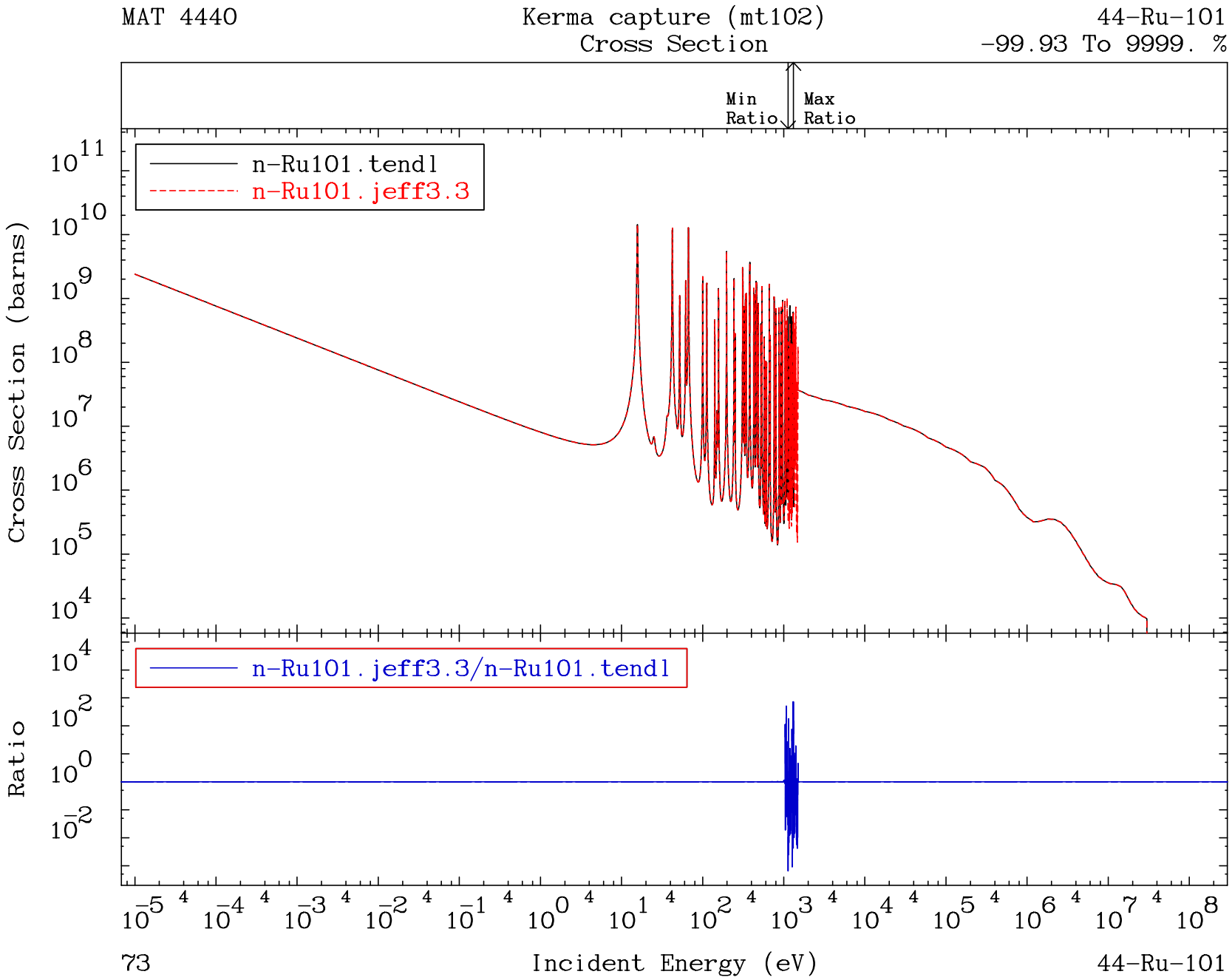

MAT 4440
Kerma total (eV-barns)
Cross Section
44-Ru-101
-99.93 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
68
44-Ru-101

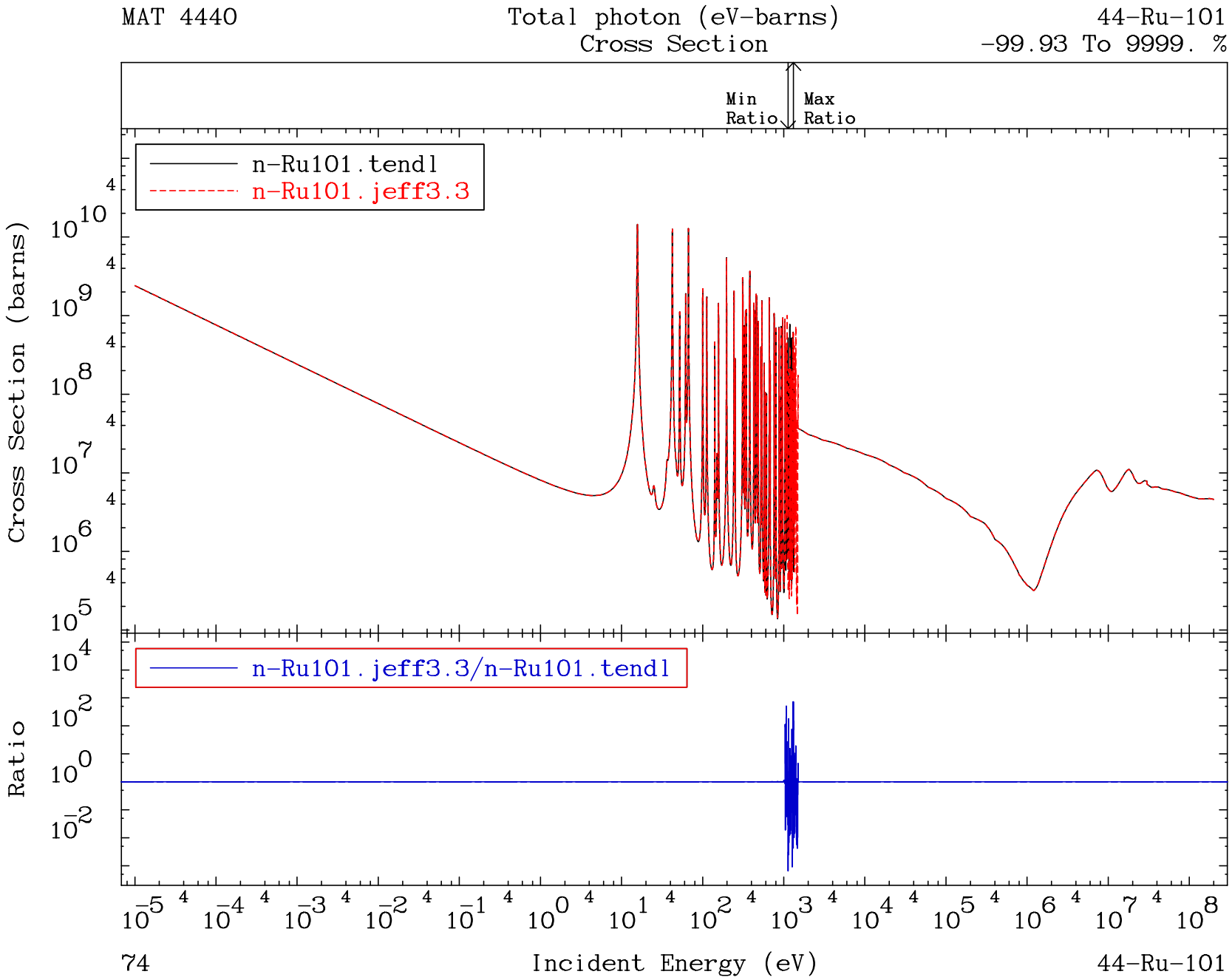

MAT 4440
Kerma elastic
Cross Section
44-Ru-101
-94.94 To 2924. %
Max Ratio
Min Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
69
44-Ru-101

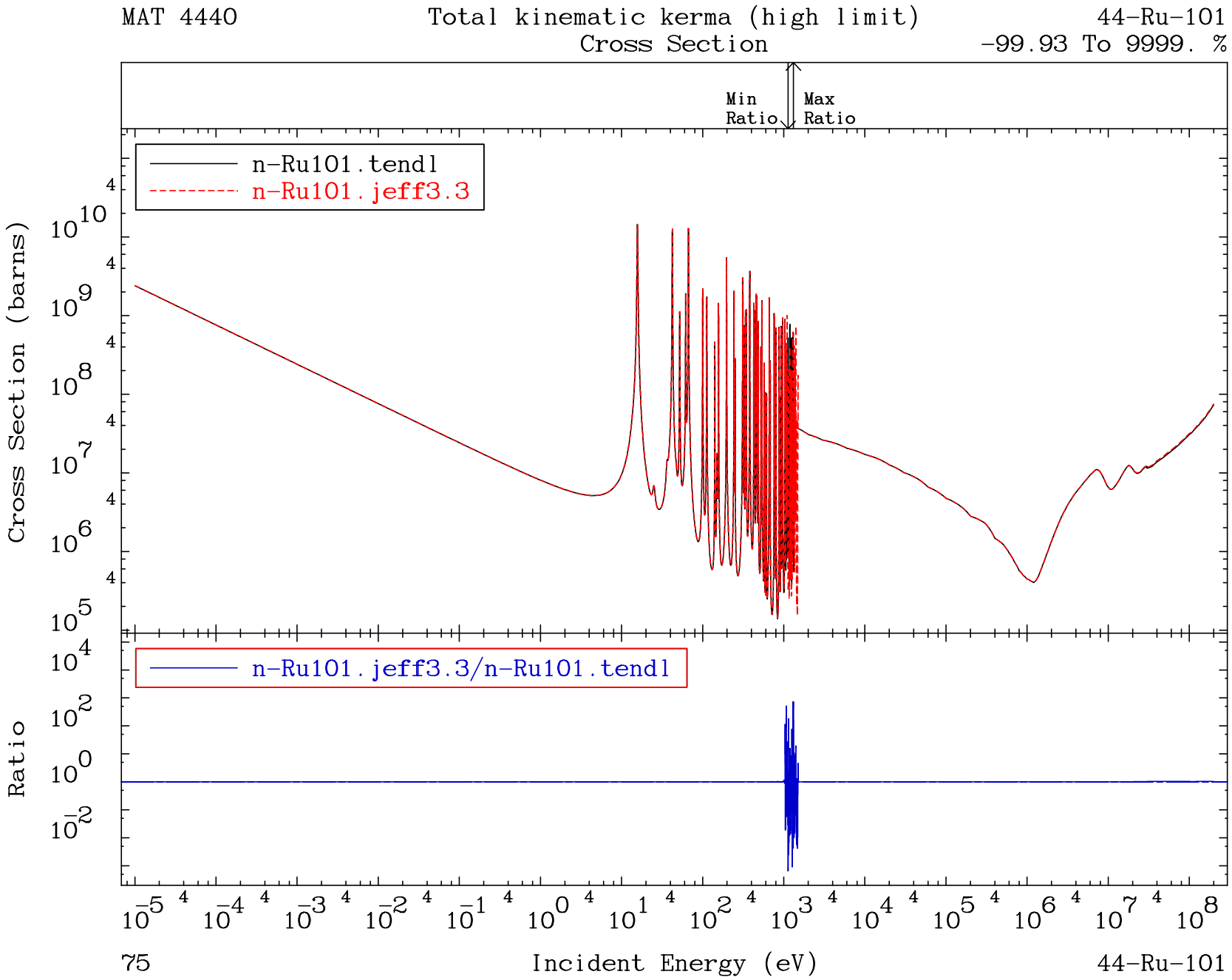

MAT 4440
Kerma non-elastic (all but mt2)
Cross Section
44-Ru-101
-99.93 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
70
44-Ru-101

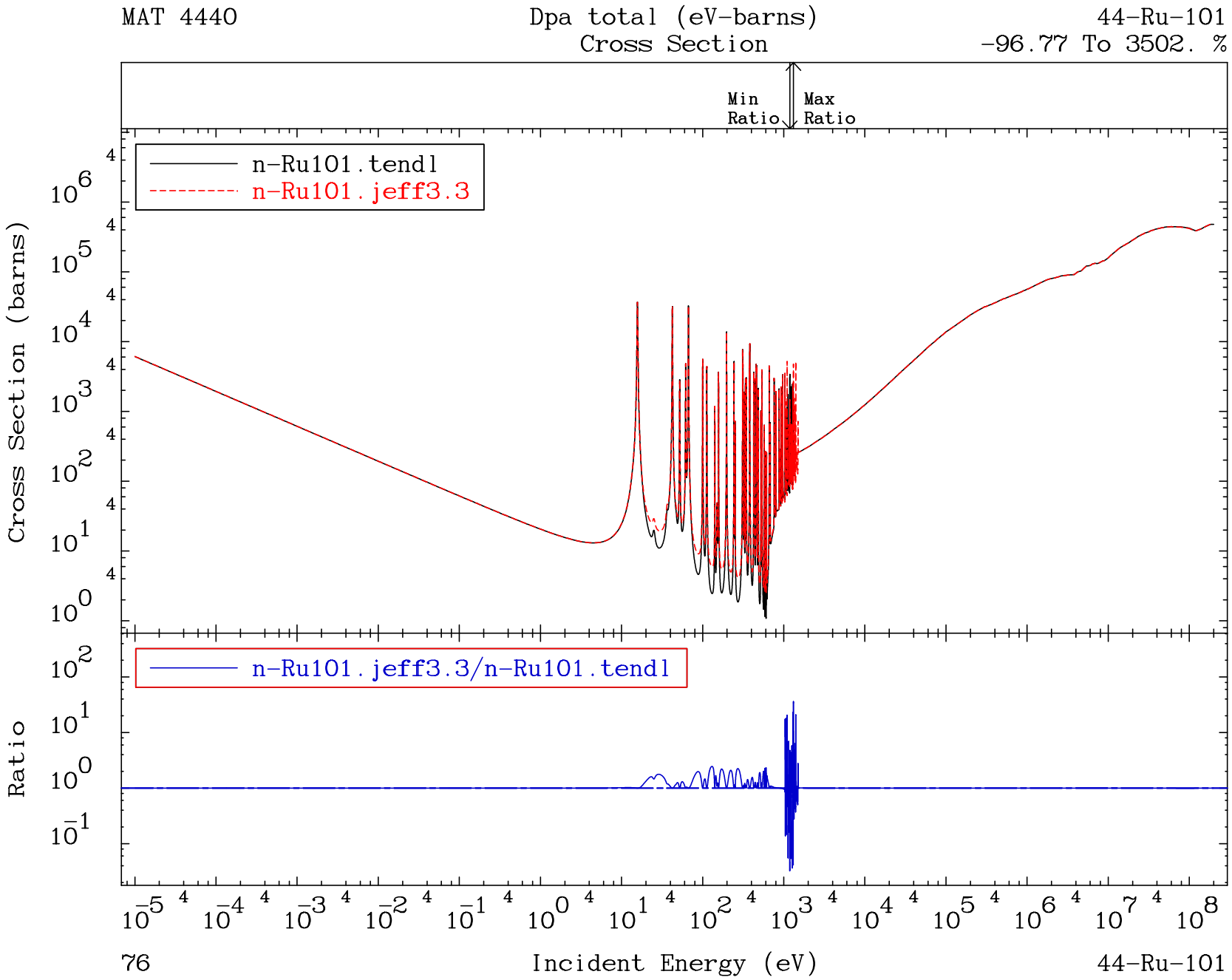

MAT 4440
Kerma inelastic (mt51-91)
Cross Section
44-Ru-101
-0.382 To 0.020 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 128.50 keV
n-Ru101.jeff3.3 Threshold 128.50 keV
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
71
44-Ru-101

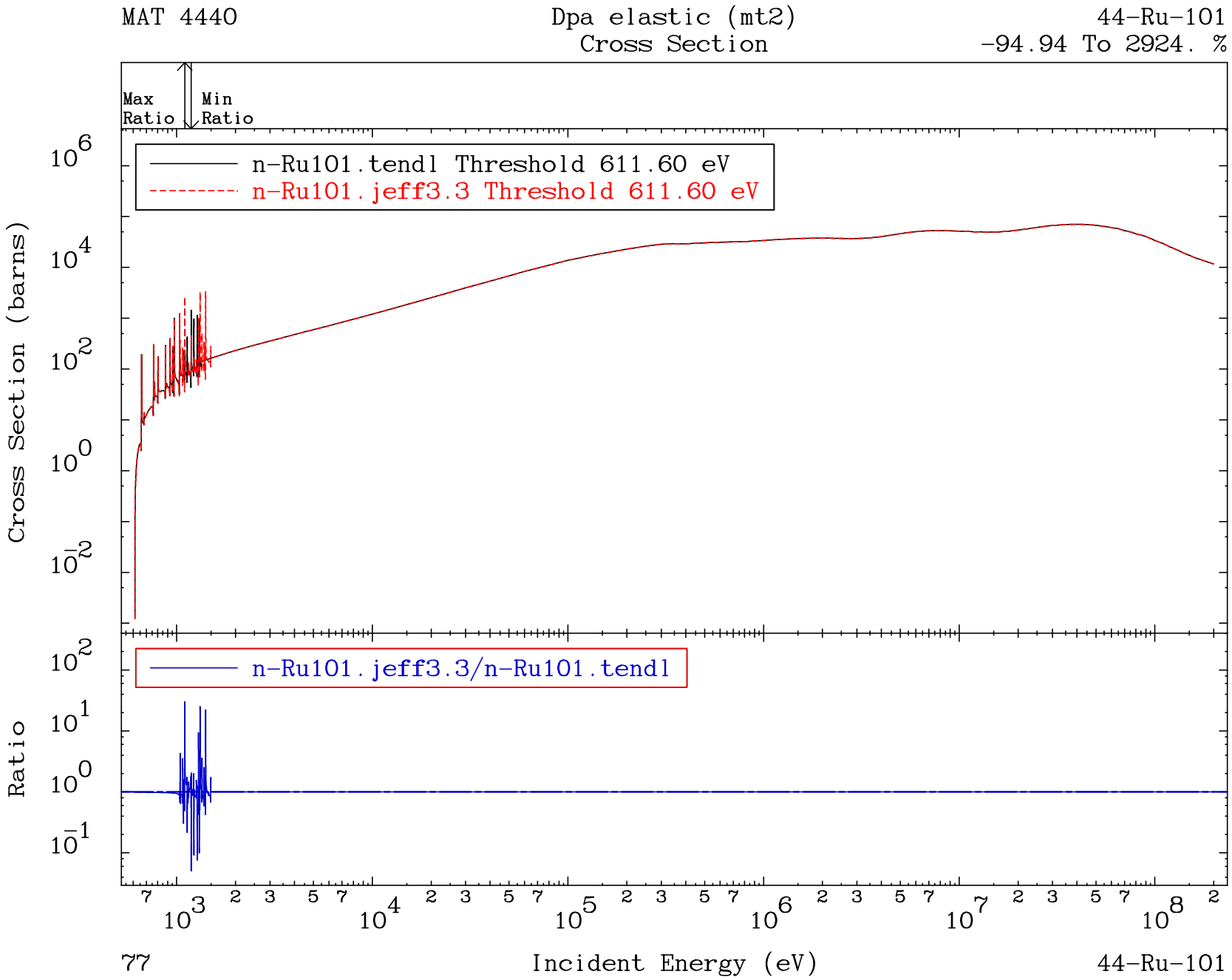

MAT 4440
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
44-Ru-101
-0.382 To 0.020 %
Max Ratio
Min Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.01
1.00
0.99
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
72
Incident Energy (eV)
44-Ru-101

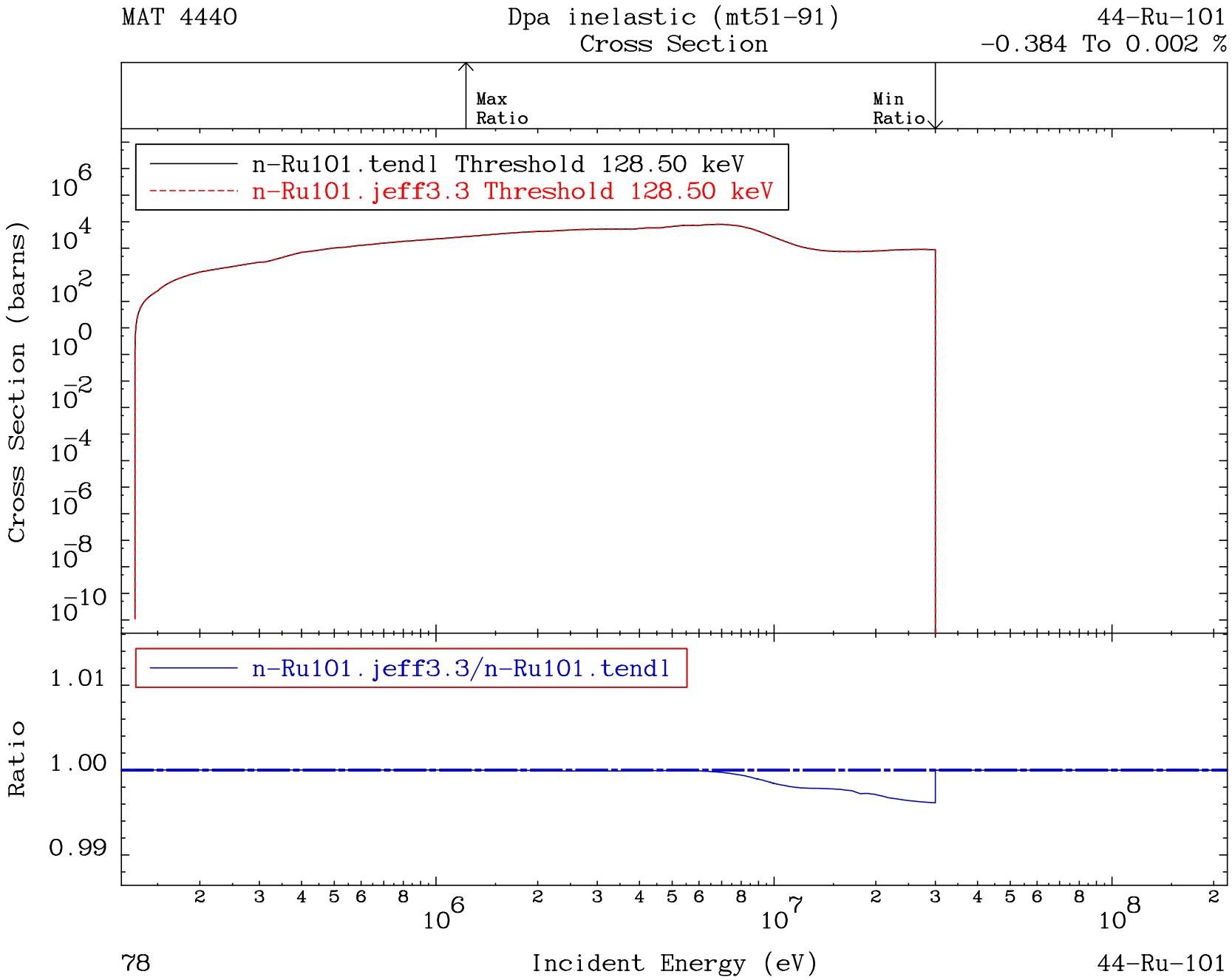

MAT 4440
Kerma capture (mt102)
Cross Section
44-Ru-101
-99.93 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
73
44-Ru-101

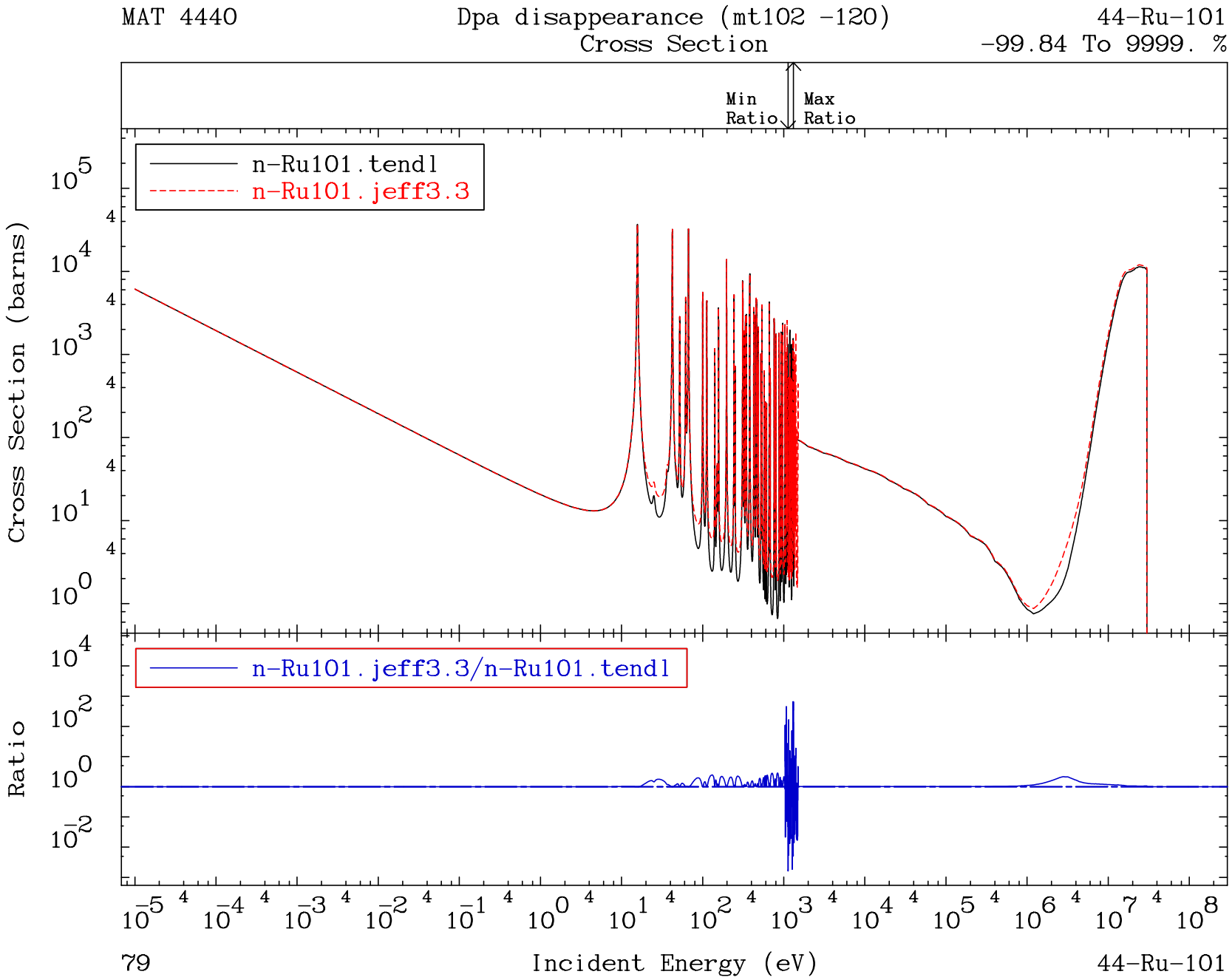

MAT 4440
Total photon (eV-barns)
Cross Section
44-Ru-101
-99.93 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
74
44-Ru-101

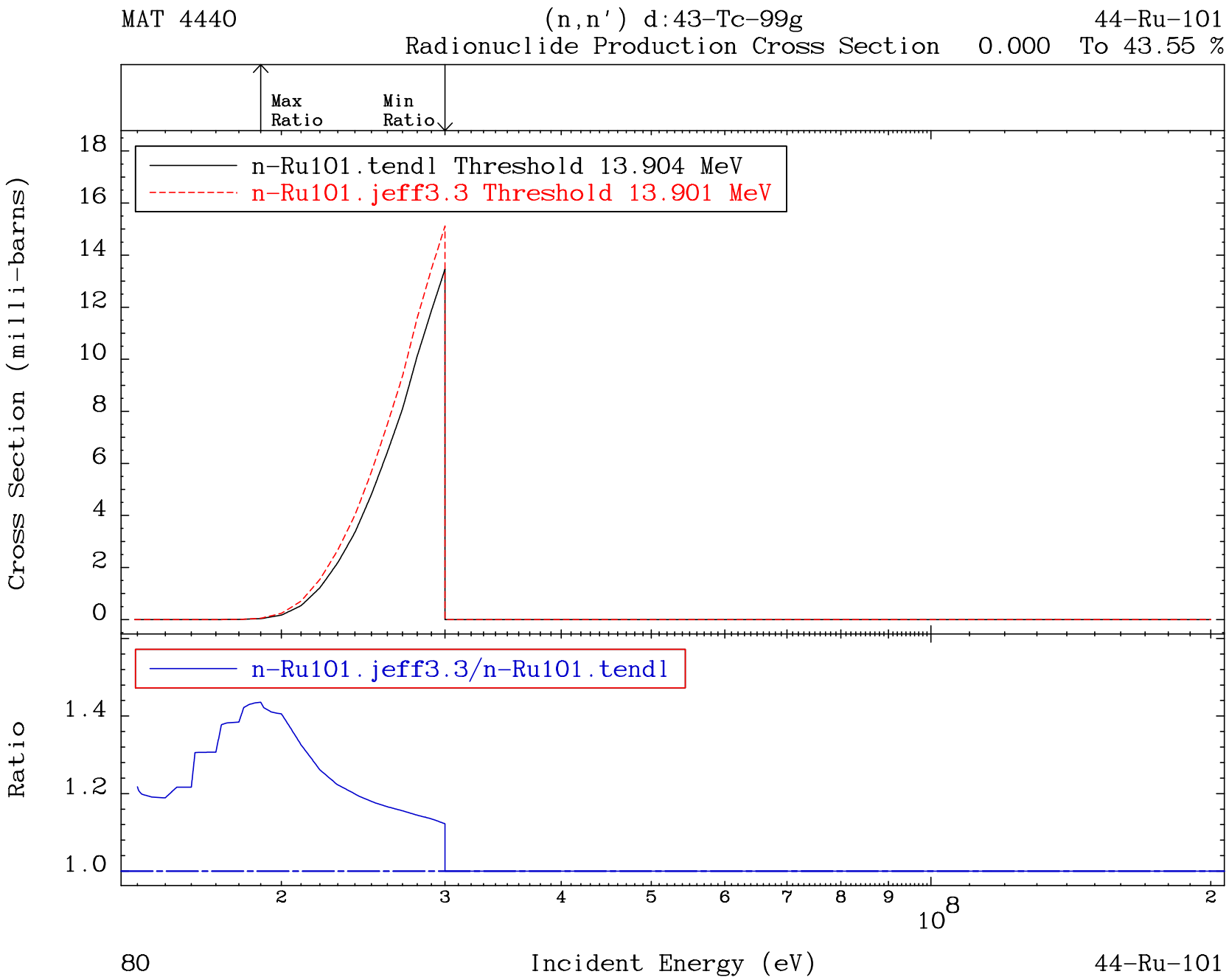

MAT 4440
Total kinematic kerma (high limit)
Cross Section
44-Ru-101
-99.93 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
75
44-Ru-101

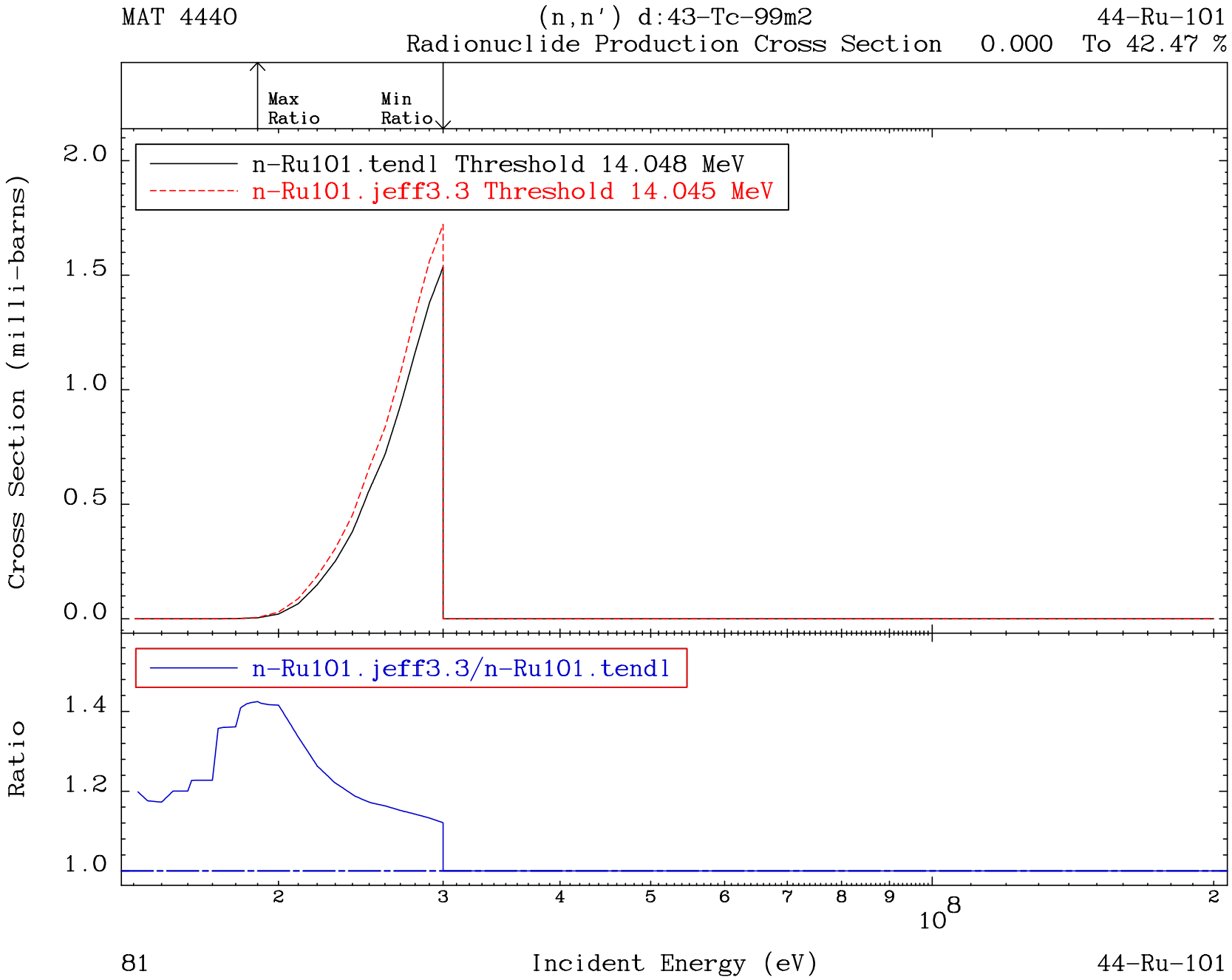

MAT 4440
Dpa total (eV-barns)
Cross Section
44-Ru-101
-96.77 To 3502. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
76
44-Ru-101

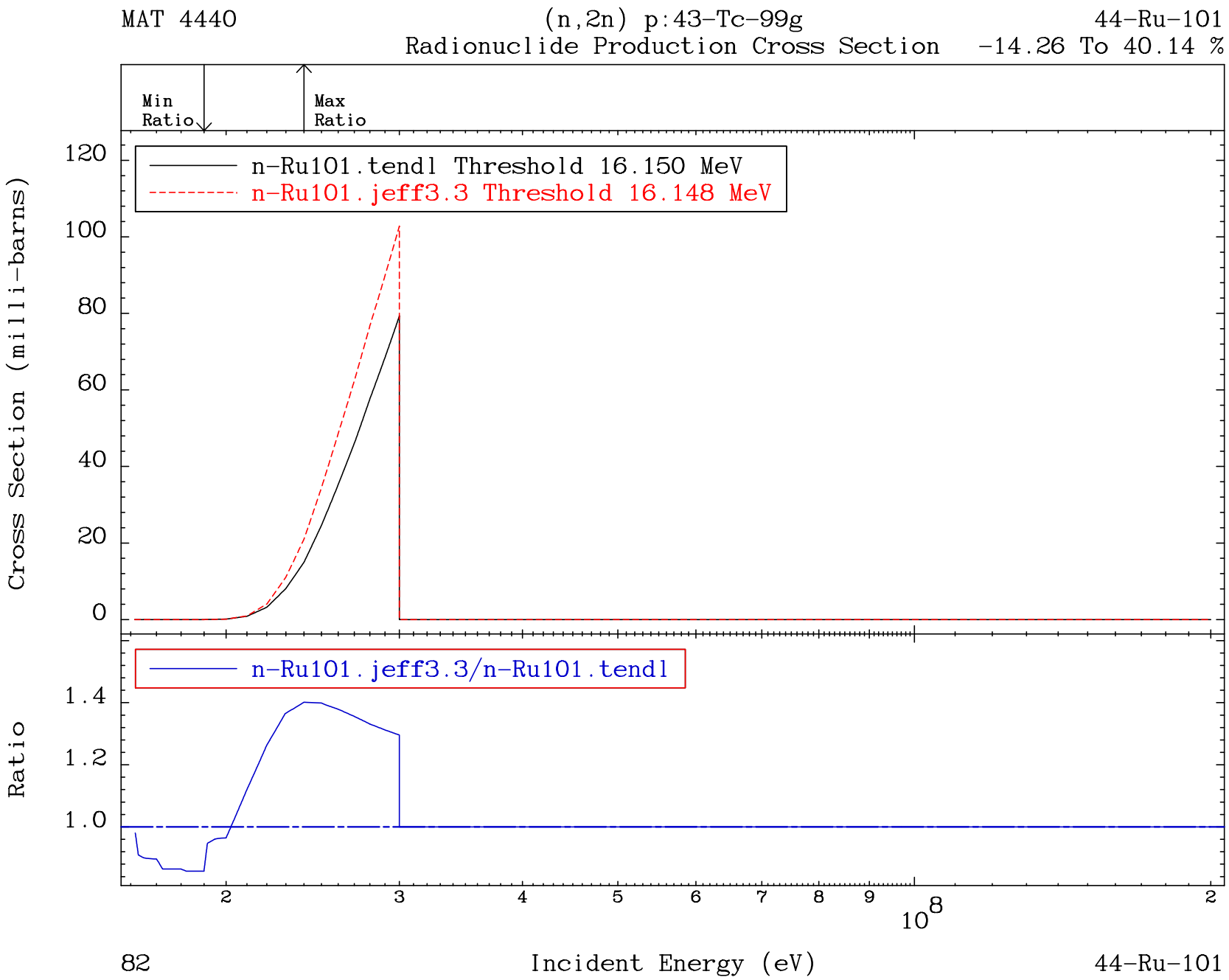

MAT 4440
Dpa elastic (mt2)
Cross Section
44-Ru-101
-94.94 To 2924. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 611.60 eV
n-Ru101.jeff3.3 Threshold 611.60 eV
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
77
44-Ru-101

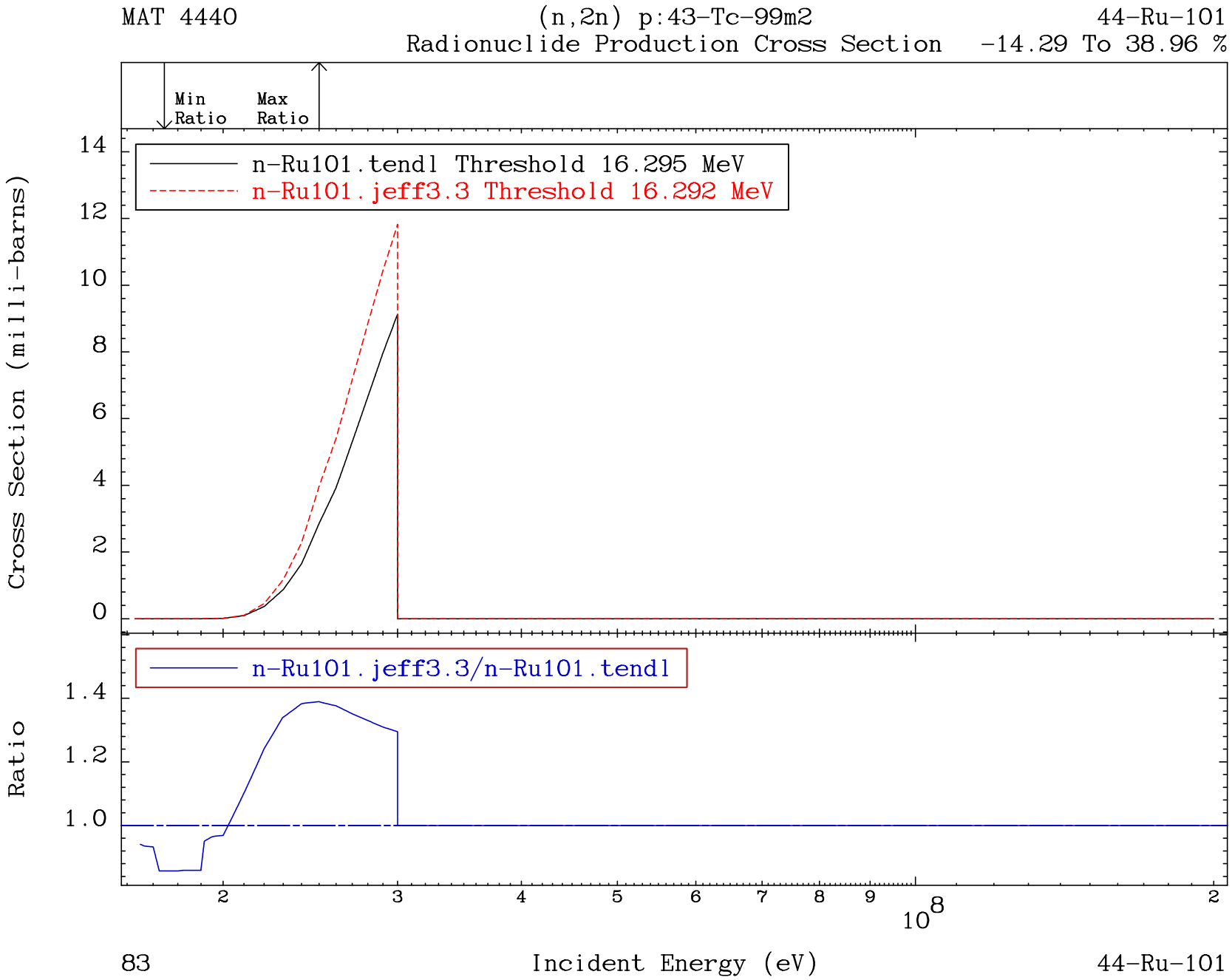

MAT 4440
Dpa inelastic (mt51-91)
Cross Section
44-Ru-101
-0.384 To 0.002 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 128.50 keV
n-Ru101.jeff3.3 Threshold 128.50 keV
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
78
44-Ru-101

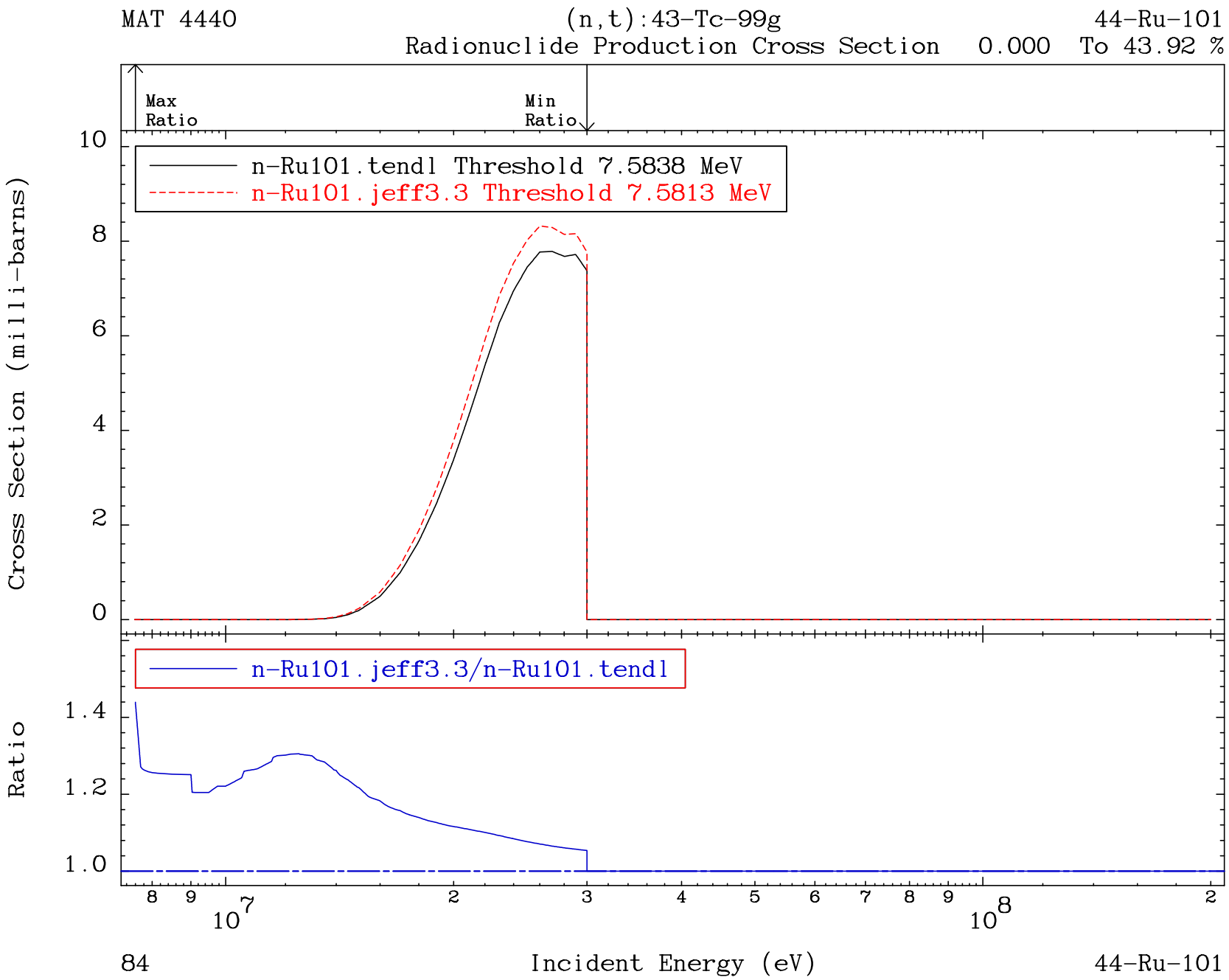

MAT 4440
Dpa disappearance (mt102 -120)
Cross Section
44-Ru-101
-99.84 To 9999. %
Min Ratio
Max Ratio
n-Ru101.tendl
n-Ru101.jeff3.3
Cross Section (barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
79
44-Ru-101

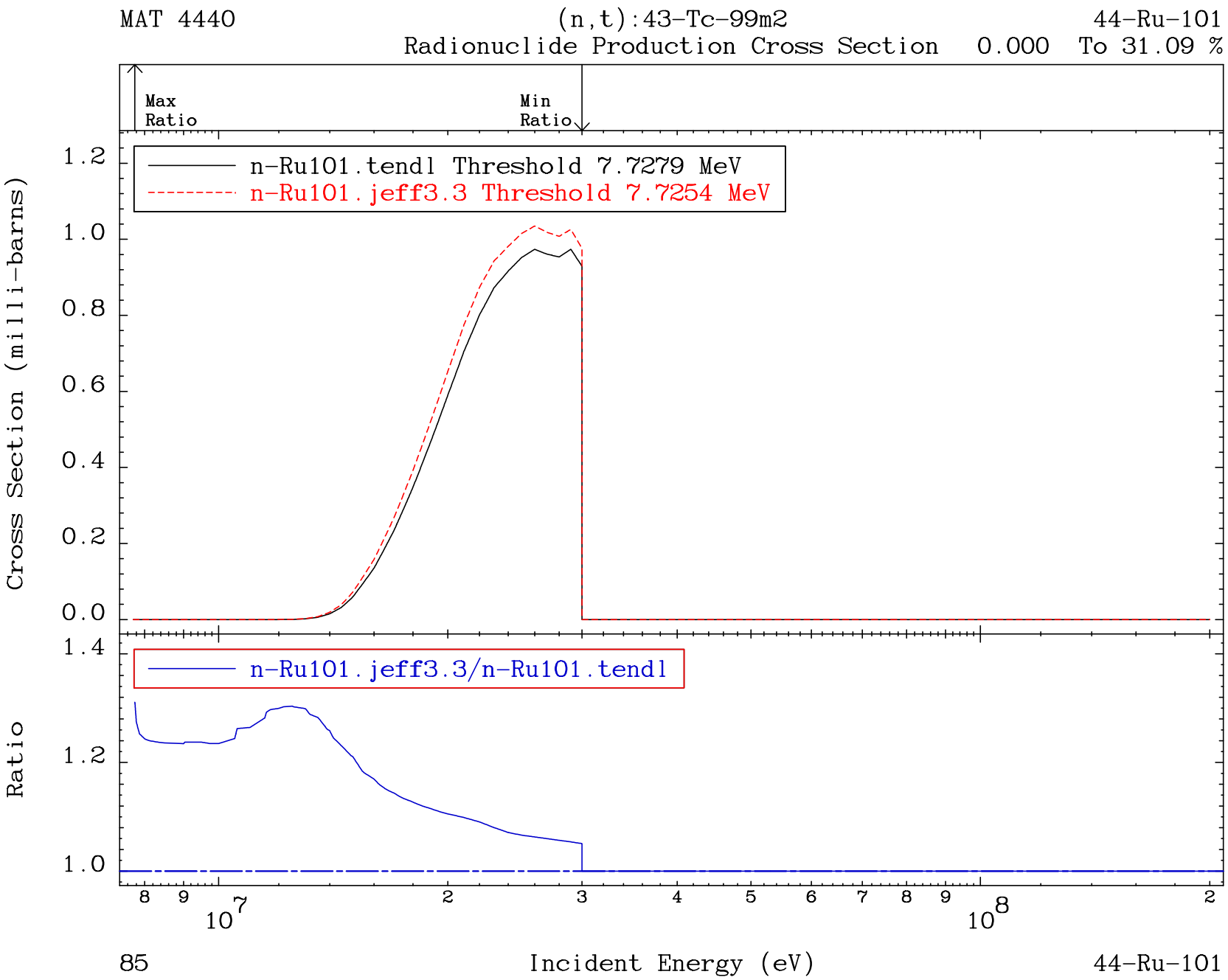

MAT 4440
(n,n') d:43-Tc-99g
44-Ru-101
Radionuclide Production Cross Section 0.000 To 43.55 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 13.904 MeV
n-Ru101.jeff3.3 Threshold 13.901 MeV
Cross Section (milli-barns)
18
16
14
12
10
8
6
4
2
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
44-Ru-101

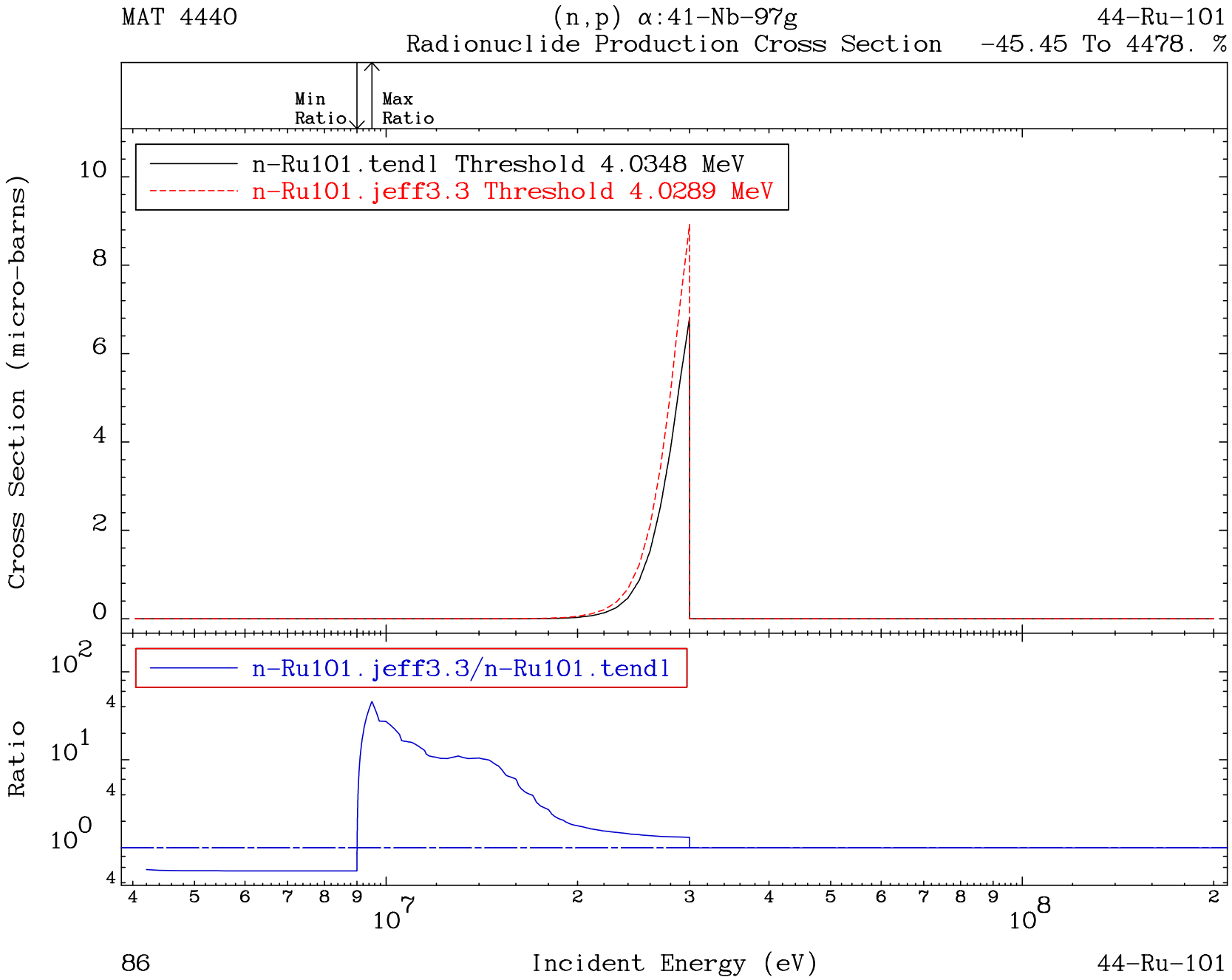

MAT 4440
(n,n') d:43-Tc-99m2
44-Ru-101
Radionuclide Production Cross Section 0.000 To 42.47 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 14.048 MeV
n-Ru101.jeff3.3 Threshold 14.045 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
44-Ru-101

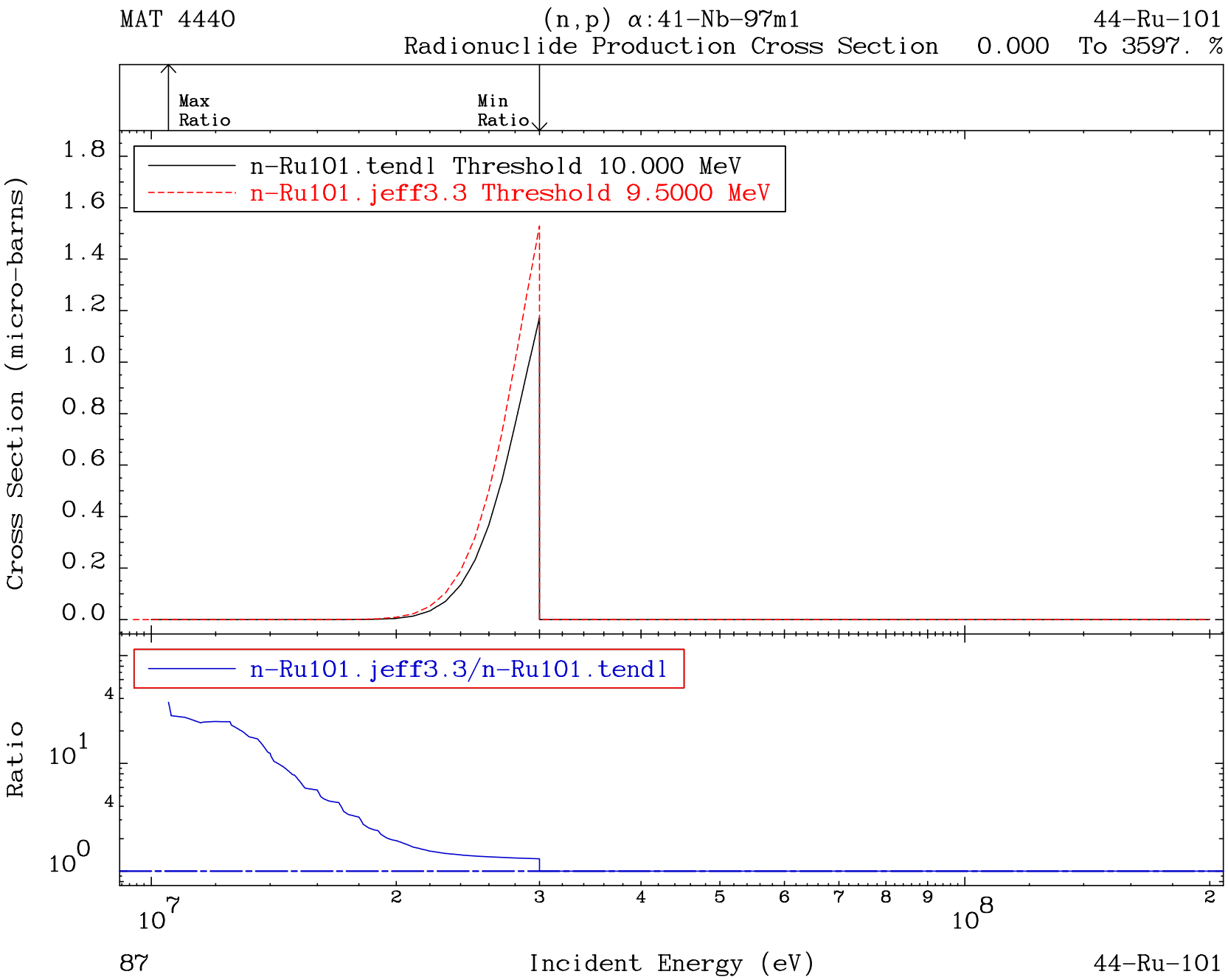

MAT 4440
(n,2n) p:43-Tc-99g
44-Ru-101
Radionuclide Production Cross Section -14.26 To 40.14 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 16.150 MeV
n-Ru101.jeff3.3 Threshold 16.148 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
82
Incident Energy (eV)
44-Ru-101


MAT 4440
(n,2n) p:43-Tc-99m2
44-Ru-101
Radionuclide Production Cross Section -14.29 To 38.96 %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 16.295 MeV
n-Ru101.jeff3.3 Threshold 16.292 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
14
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.0
1.2
1.4
2
3
4
5
6
7
8
9
10^8
2
83
Incident Energy (eV)
44-Ru-101


MAT 4440
(n,t):43-Tc-99g
44-Ru-101
Radionuclide Production Cross Section 0.000 To 43.92 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 7.5838 MeV
n-Ru101.jeff3.3 Threshold 7.5813 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
84
Incident Energy (eV)
44-Ru-101


MAT 4440
(n,t):43-Tc-99m2
44-Ru-101
Radionuclide Production Cross Section 0.000 To 31.09 %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 7.7279 MeV
n-Ru101.jeff3.3 Threshold 7.7254 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
1.4
1.2
1.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
85
Incident Energy (eV)
44-Ru-101


MAT 4440
(n,p) α:41-Nb-97g
44-Ru-101
Radionuclide Production Cross Section -45.45 To 4478. %
Min Ratio
Max Ratio
n-Ru101.tendl Threshold 4.0348 MeV
n-Ru101.jeff3.3 Threshold 4.0289 MeV
Cross Section (micro-barns)
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
Incident Energy (eV)
86
44-Ru-101


MAT 4440
(n,p) α:41-Nb-97m1
44-Ru-101
Radionuclide Production Cross Section 0.000 To 3597. %
Max Ratio
Min Ratio
n-Ru101.tendl Threshold 10.000 MeV
n-Ru101.jeff3.3 Threshold 9.5000 MeV
Cross Section (micro-barns)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Ru101.jeff3.3/n-Ru101.tendl
Ratio
10^1
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
87
Incident Energy (eV)
44-Ru-101