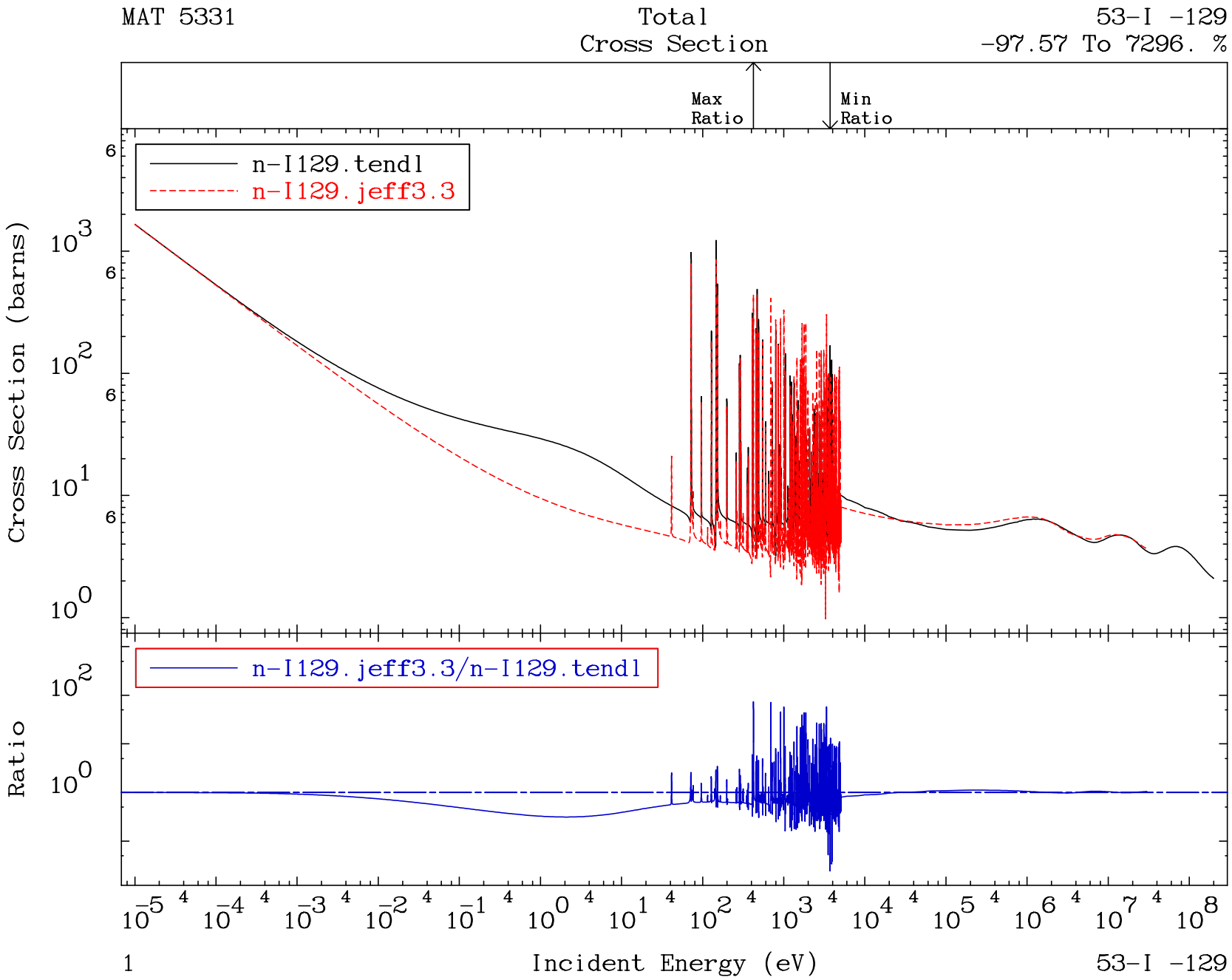
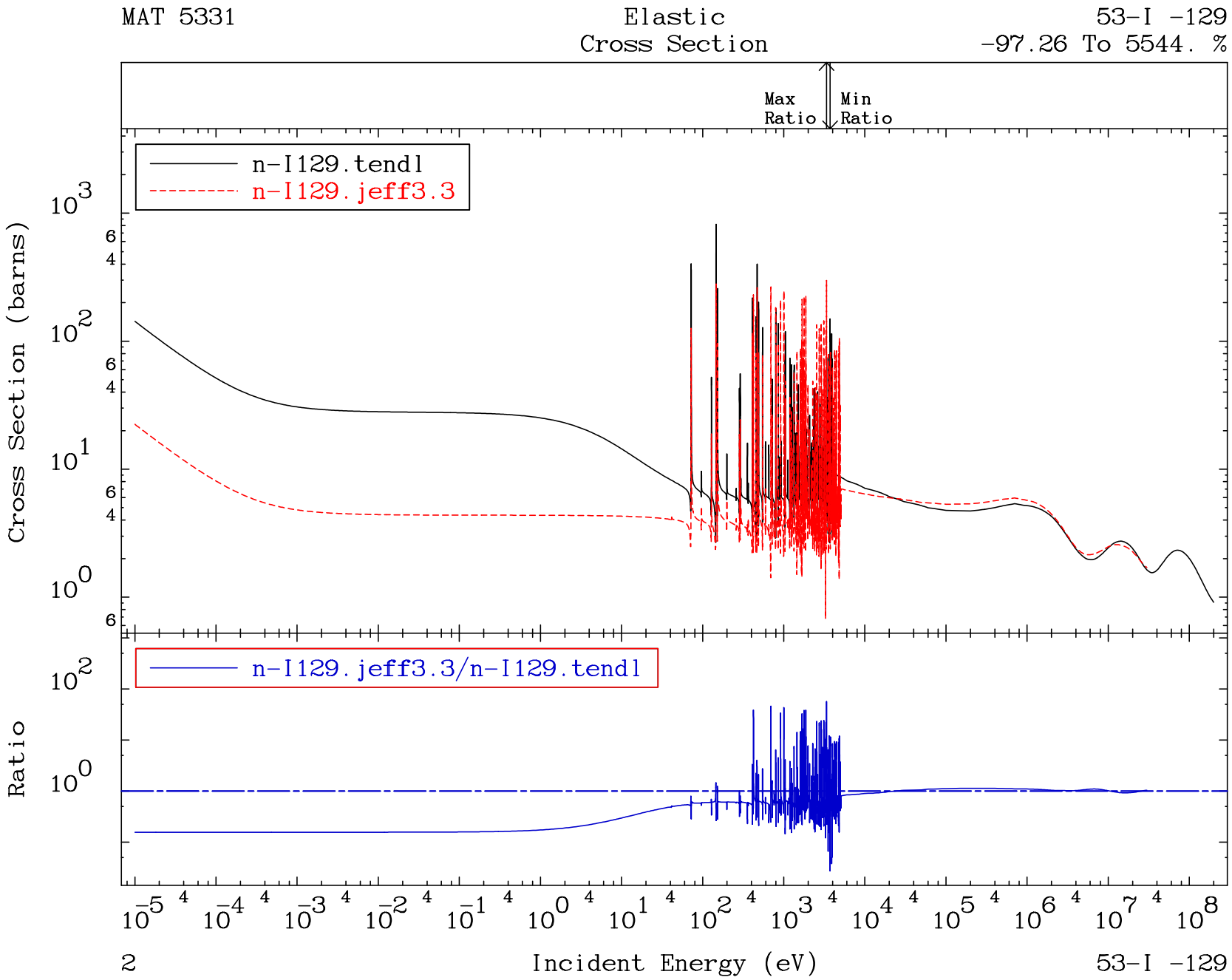
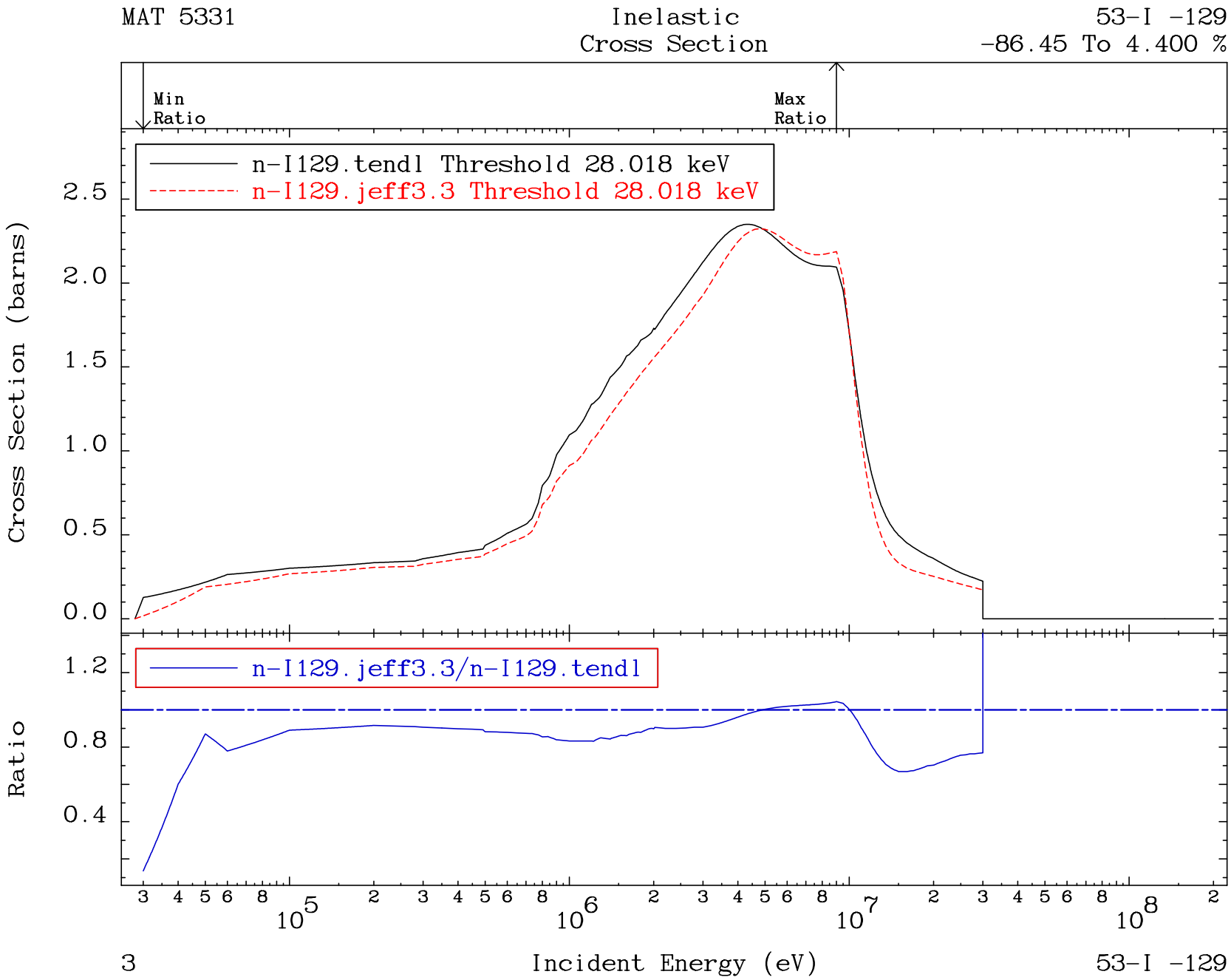
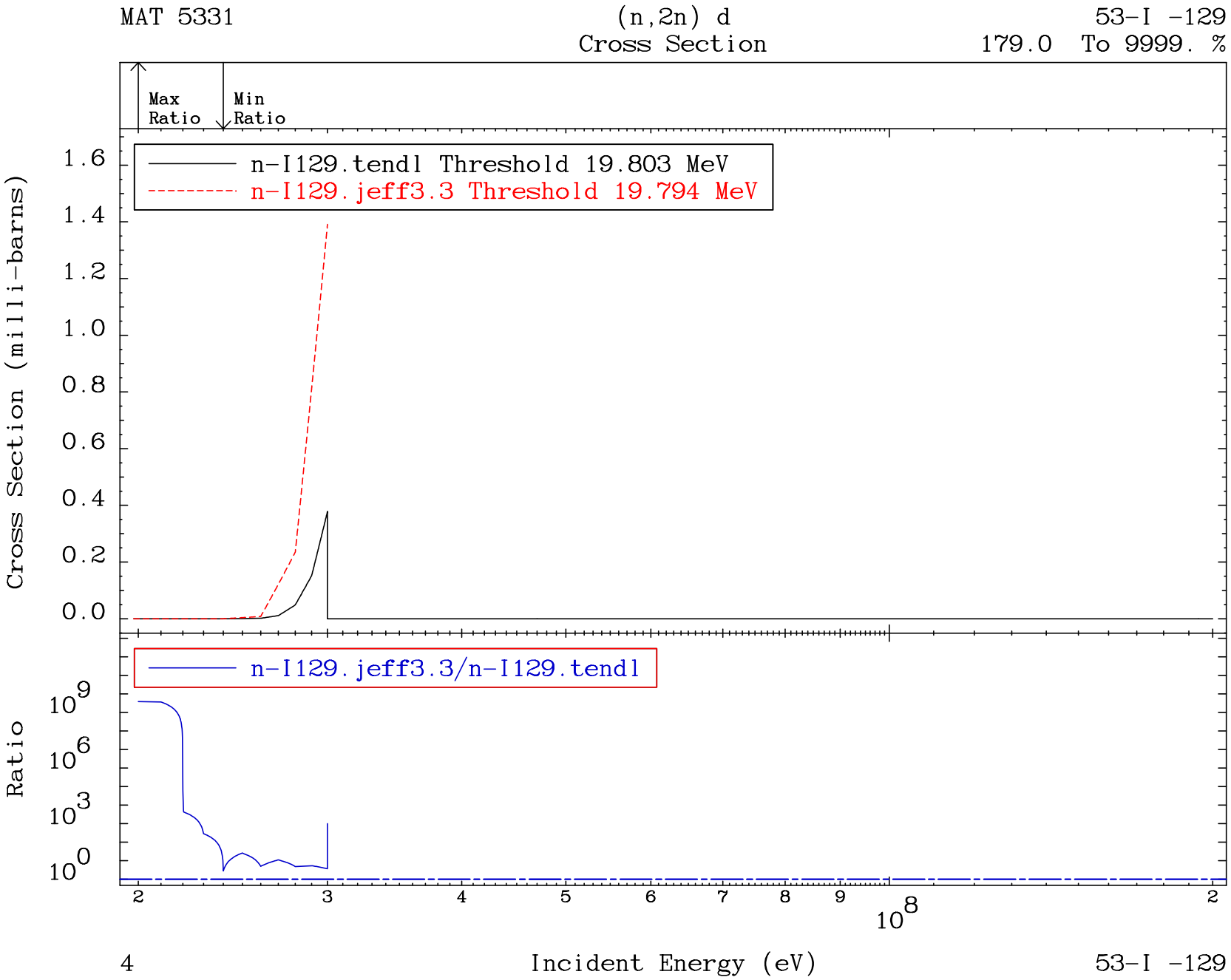
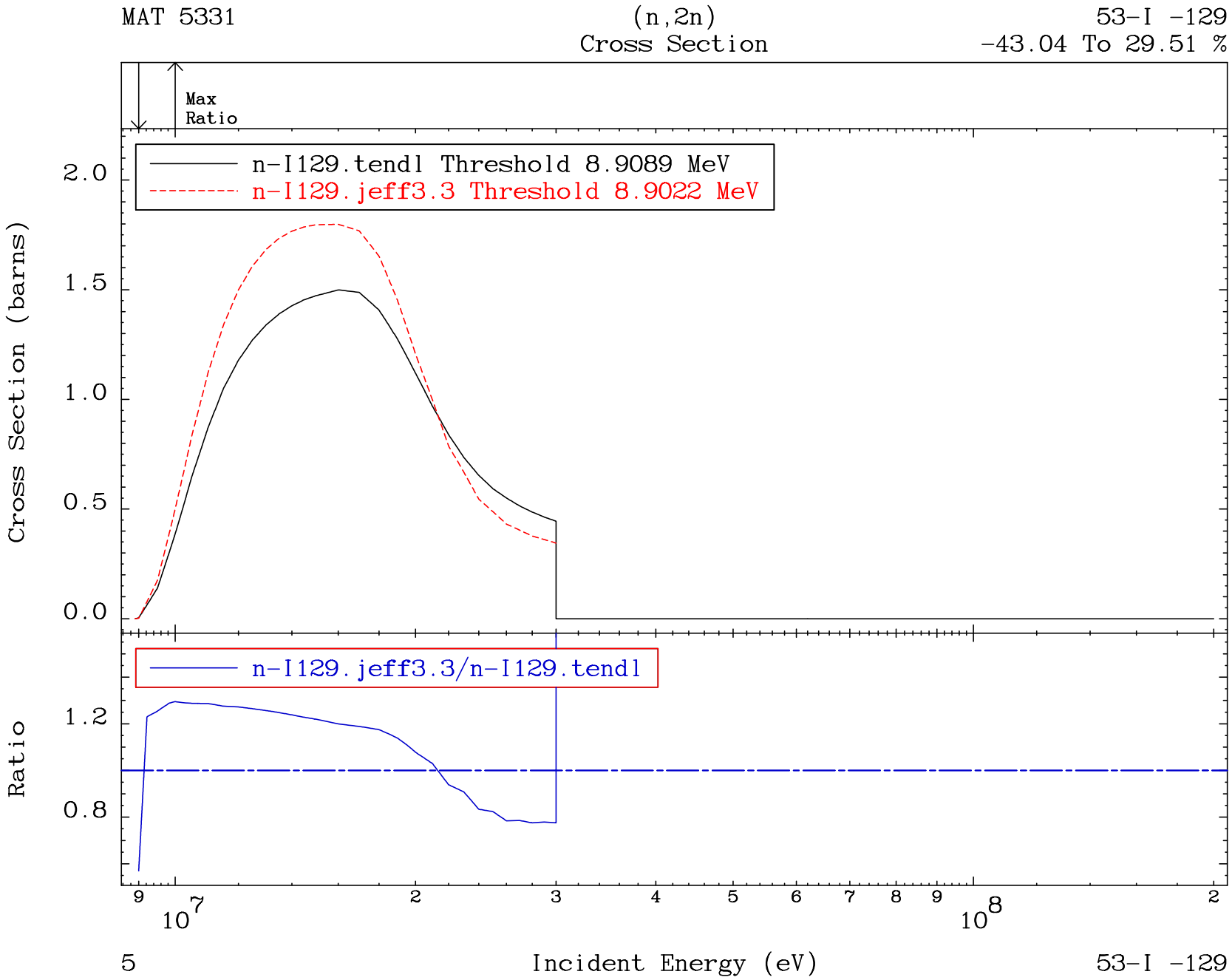
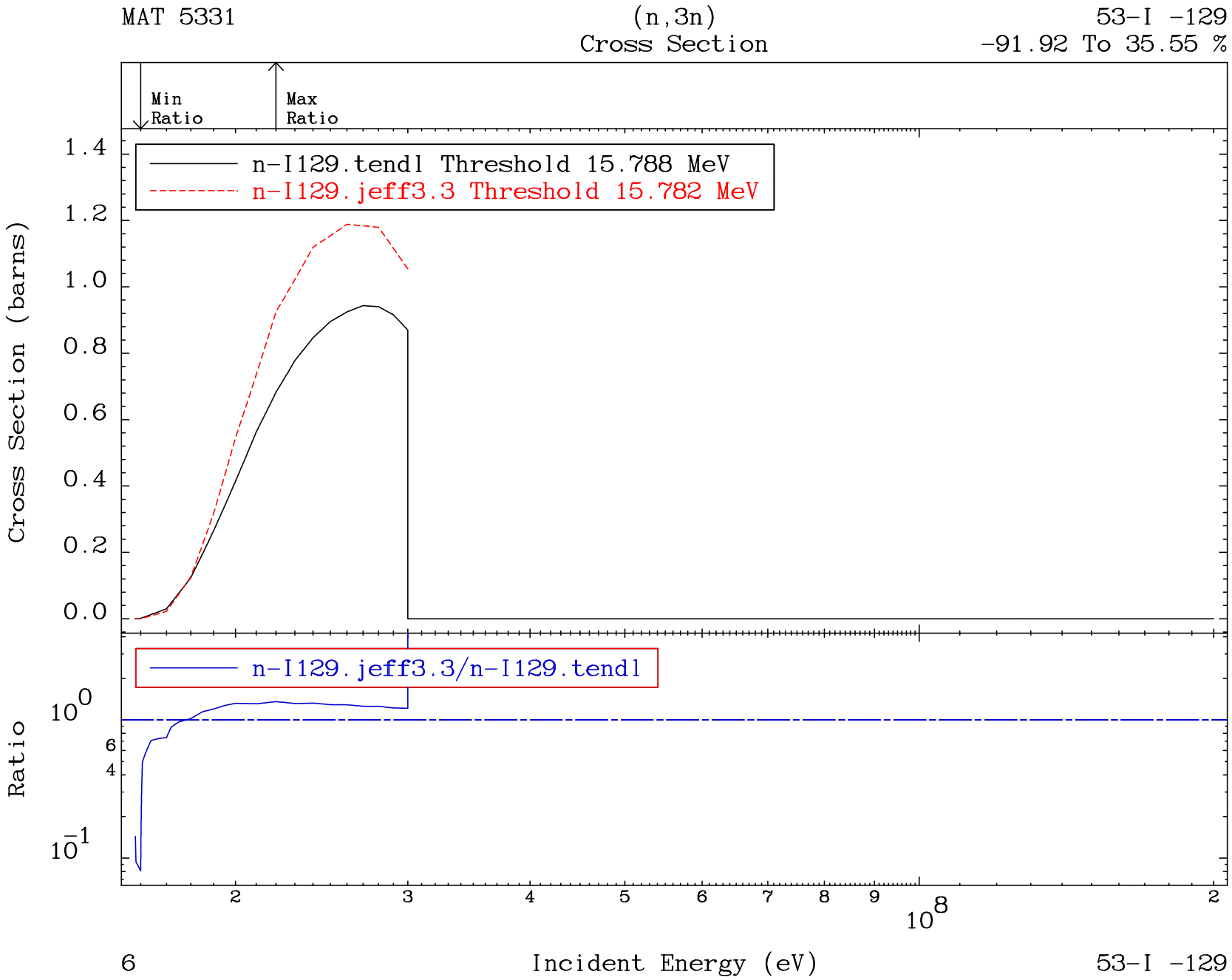

MAT 5331
Total
Cross Section
53-I -129
-97.57 To 7296. %
Max
Ratio
Min
Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
1
53-I -129

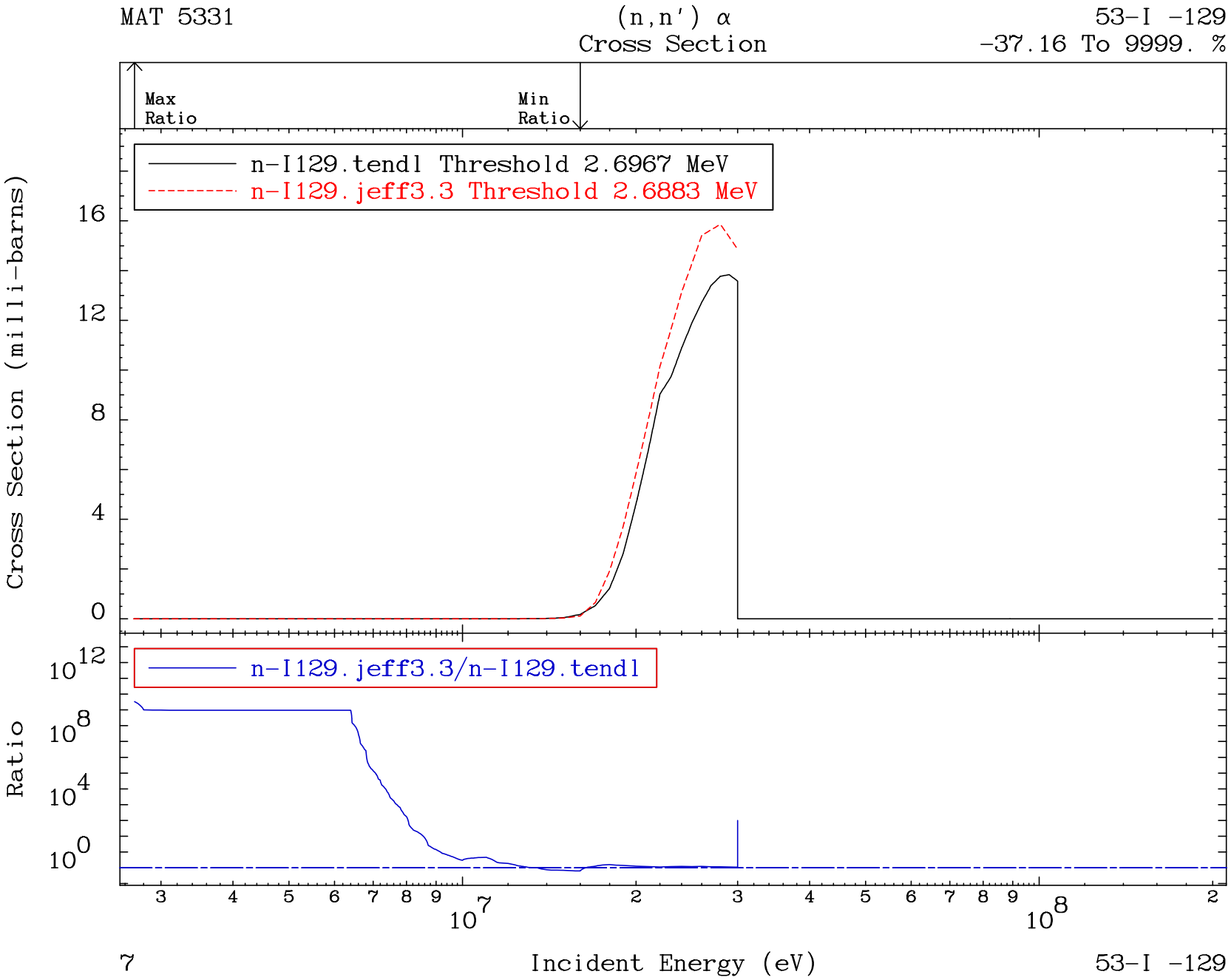

MAT 5331
Elastic
Cross Section
53-I -129
-97.26 To 5544. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
2
53-I -129

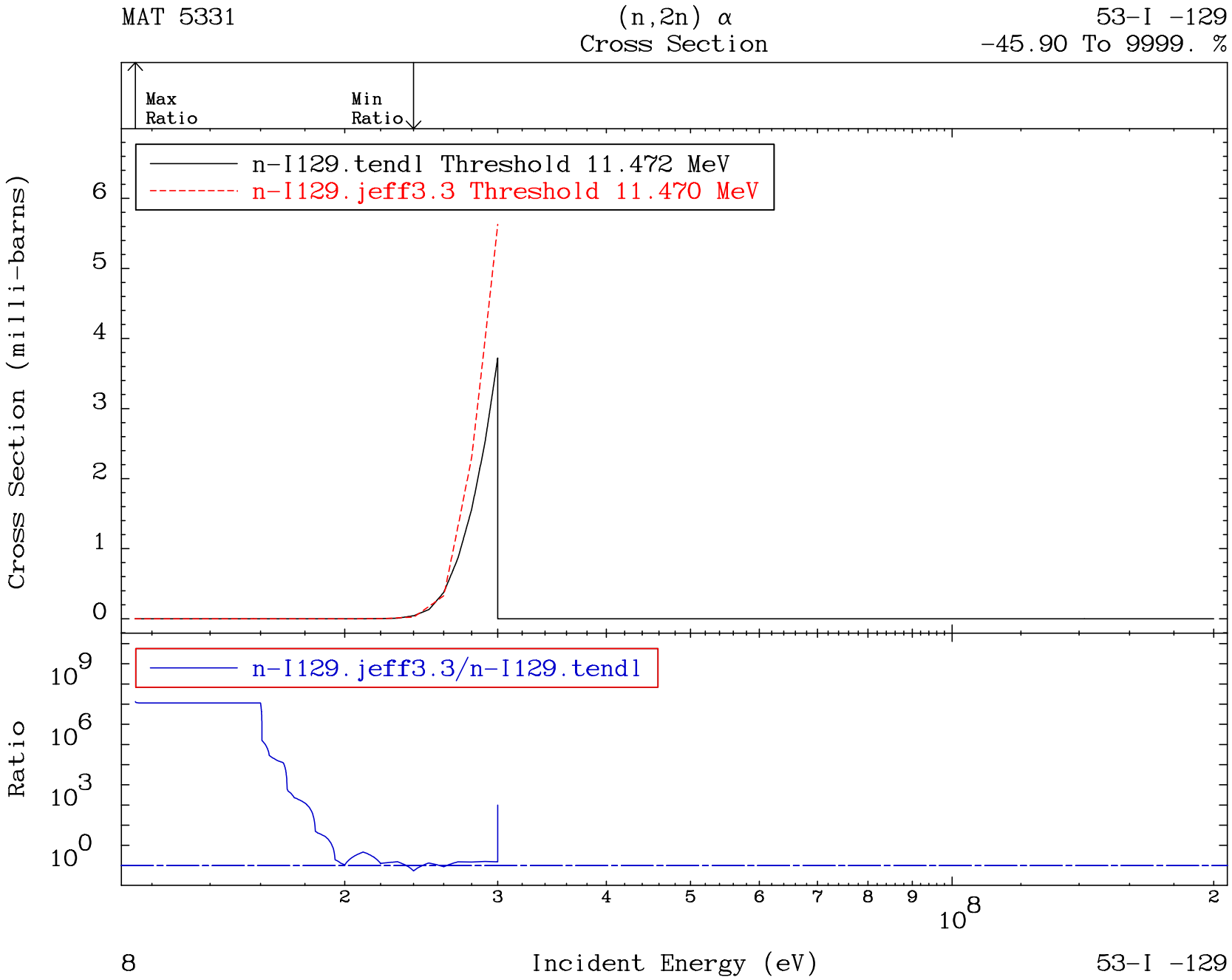

MAT 5331
Inelastic
Cross Section
53-I -129
-86.45 To 4.400 %
Min
Ratio
Max
Ratio
n-I129.tendl Threshold 28.018 keV
n-I129.jeff3.3 Threshold 28.018 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
1.2
0.8
0.4
3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
3
53-I -129

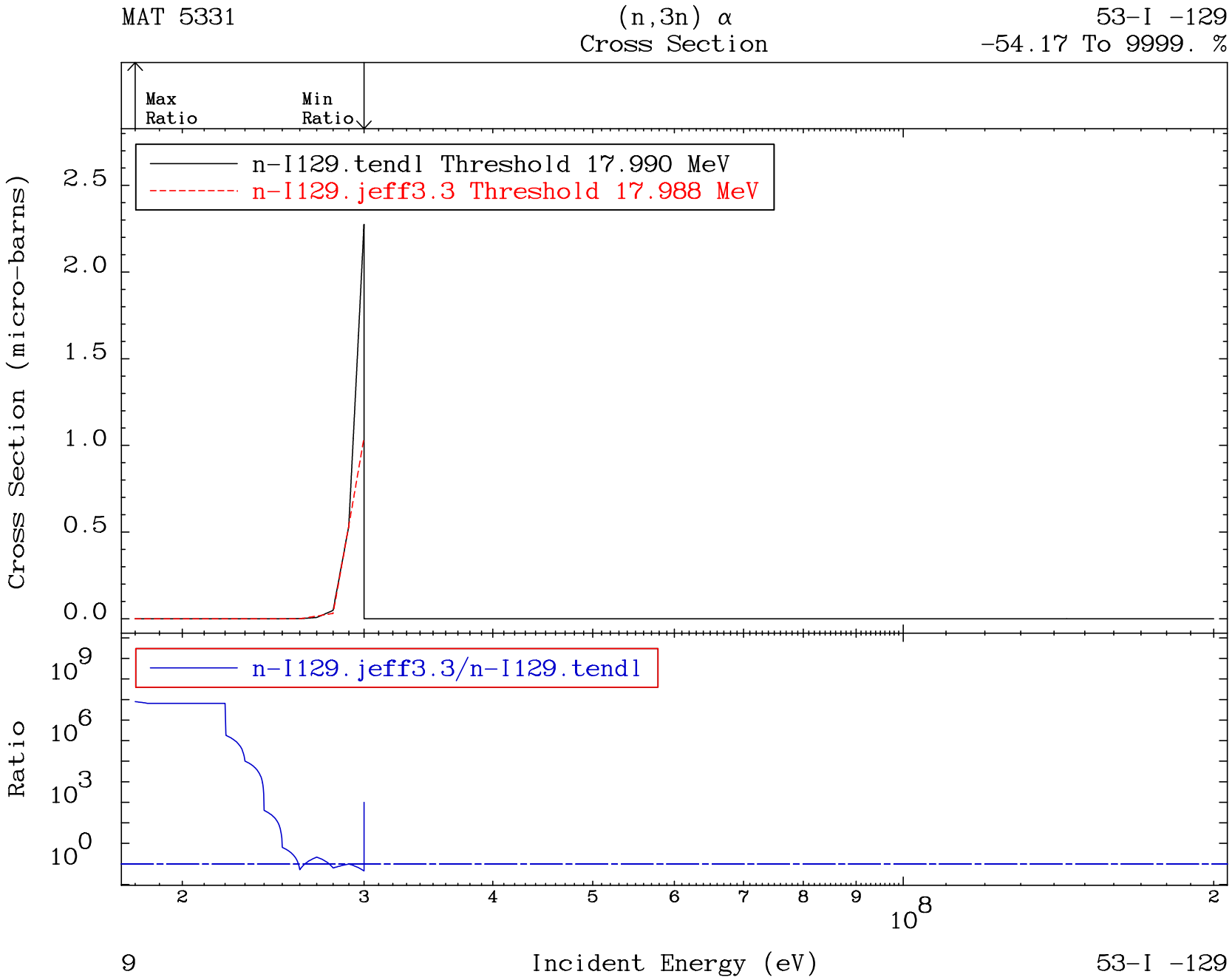

MAT 5331
(n,2n) d
Cross Section
53-I -129
179.0 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 19.803 MeV
n-I129.jeff3.3 Threshold 19.794 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
53-I -129

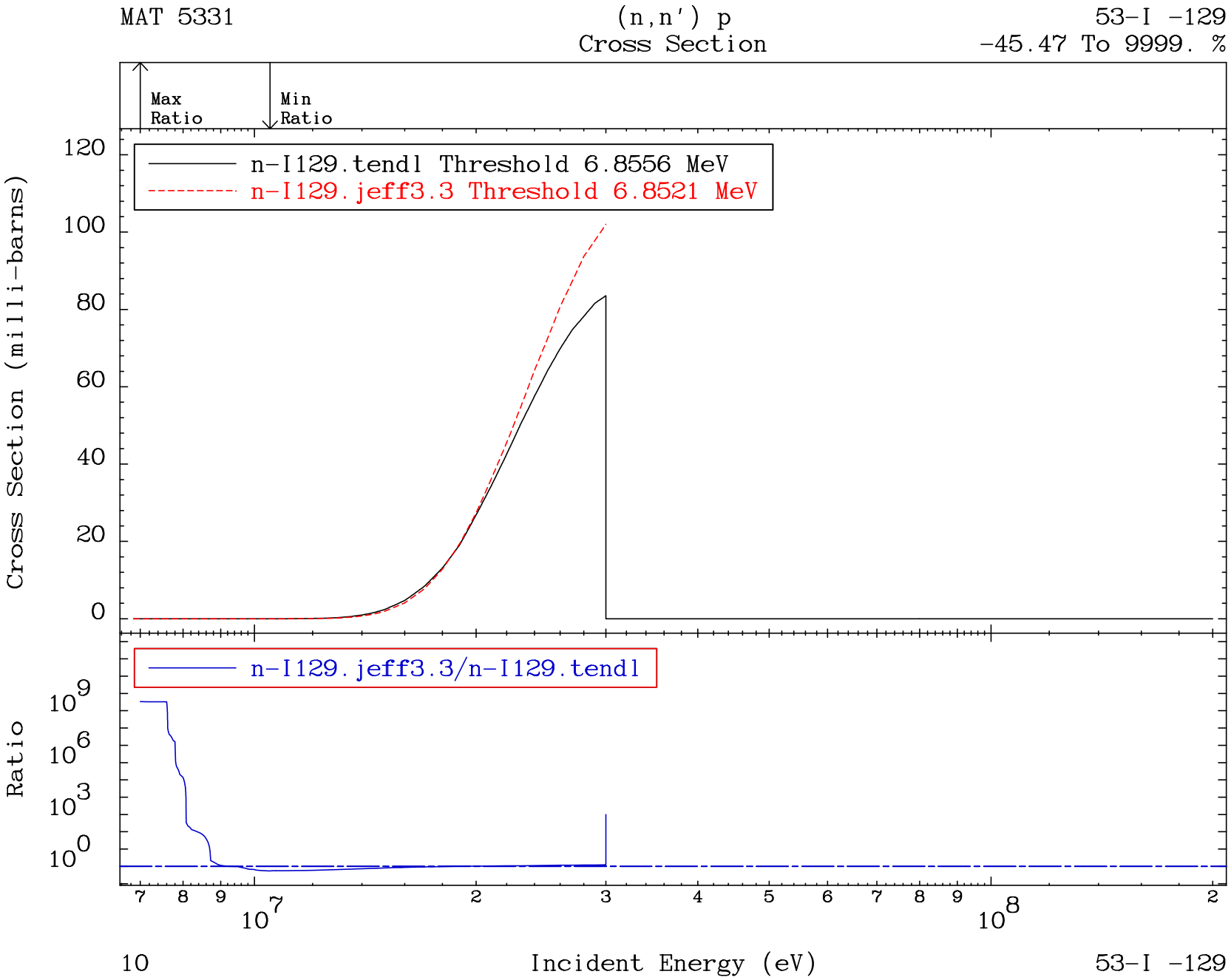

MAT 5331
(n,2n)
Cross Section
53-I -129
-43.04 To 29.51 %
Max
Ratio
n-I129.tendl Threshold 8.9089 MeV
n-I129.jeff3.3 Threshold 8.9022 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
1.2
0.8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
53-I -129

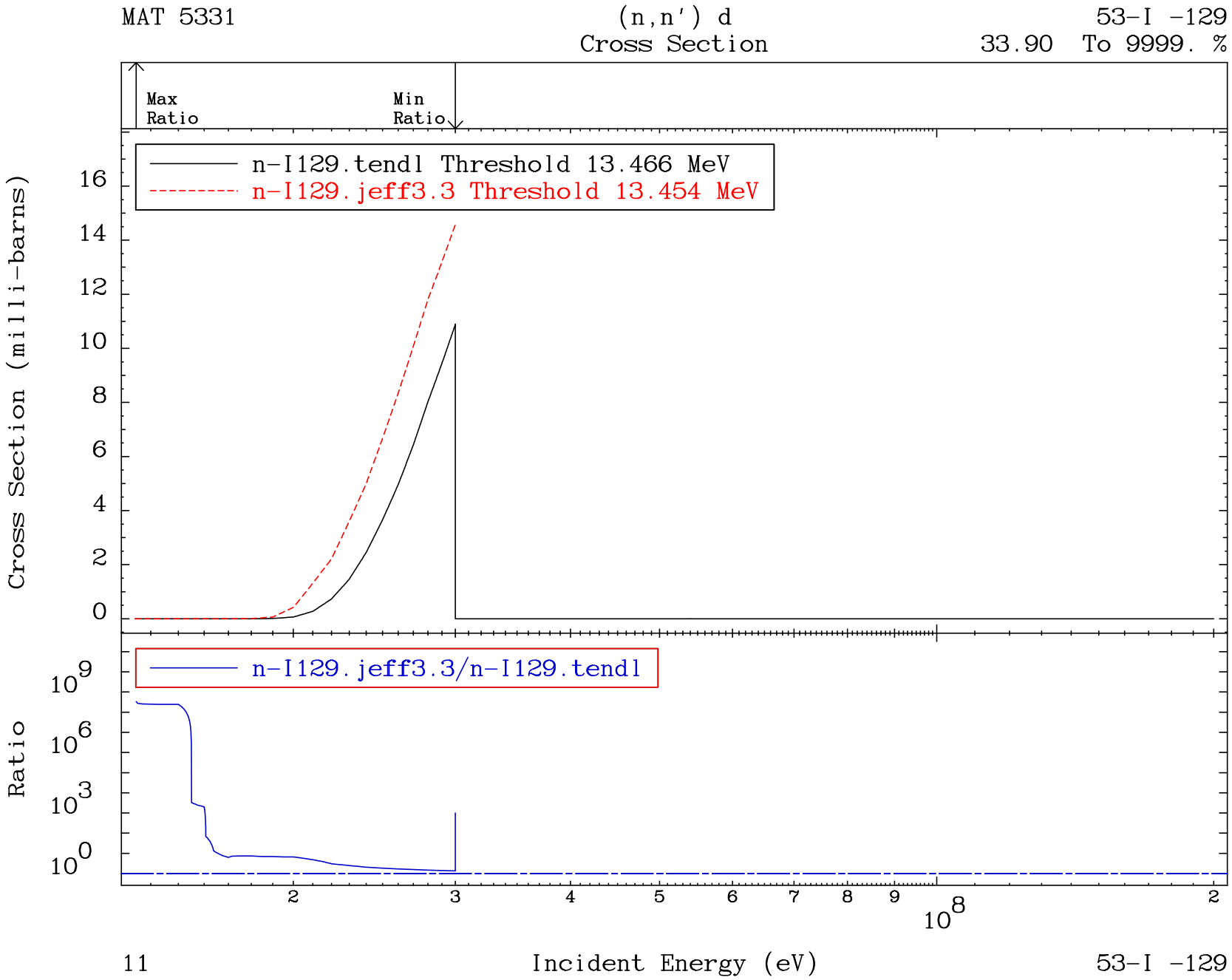

MAT 5331
(n,3n)
Cross Section
53-I -129
-91.92 To 35.55 %
Min Ratio
Max Ratio
n-I129.tendl Threshold 15.788 MeV
n-I129.jeff3.3 Threshold 15.782 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
6
4
10^-1
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
53-I -129

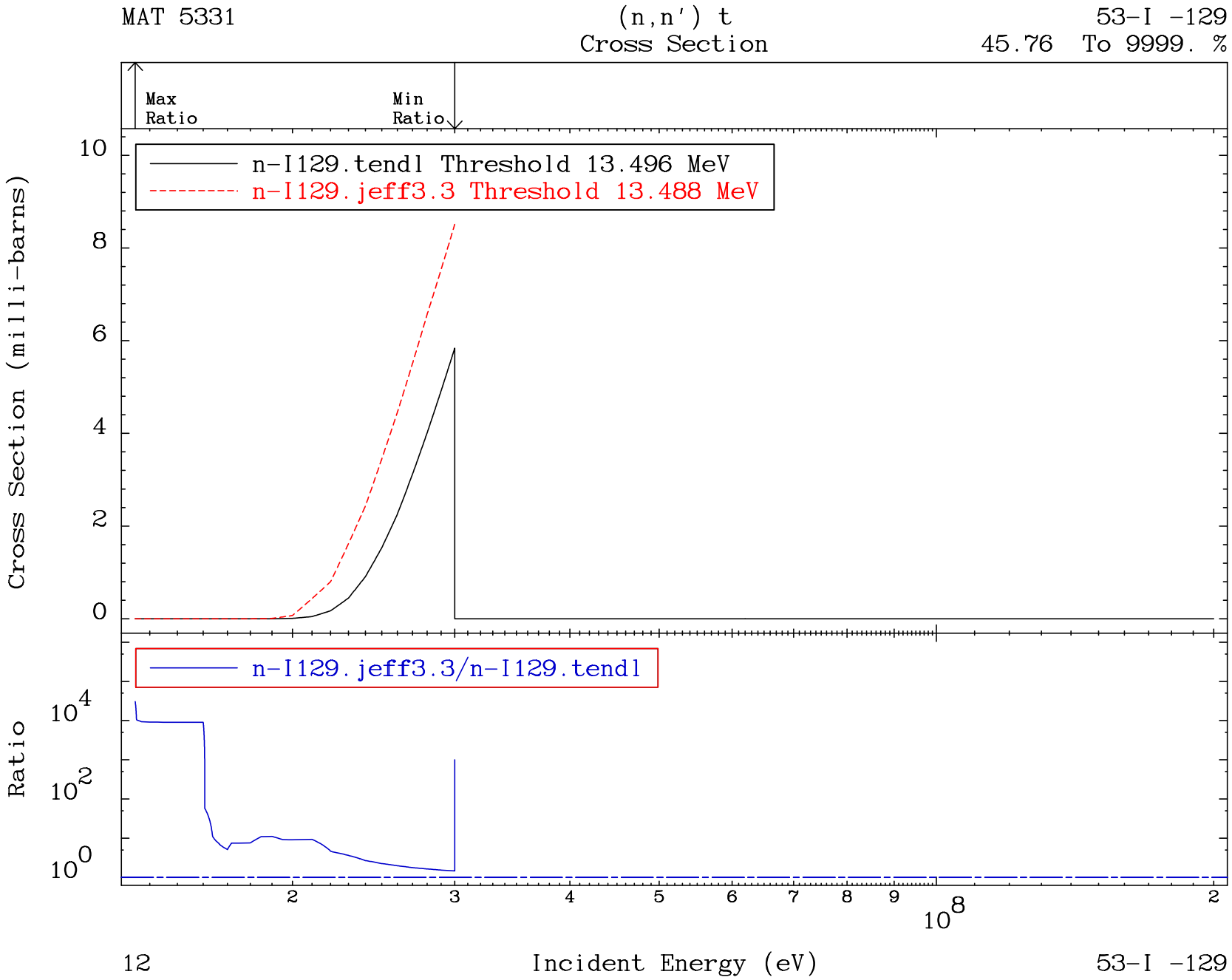

MAT 5331
(n,n') α
Cross Section
53-I -129
-37.16 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 2.6967 MeV
n-I129.jeff3.3 Threshold 2.6883 MeV
Cross Section (milli-barns)
16
12
8
4
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^12
10^8
10^4
10^0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
53-I -129

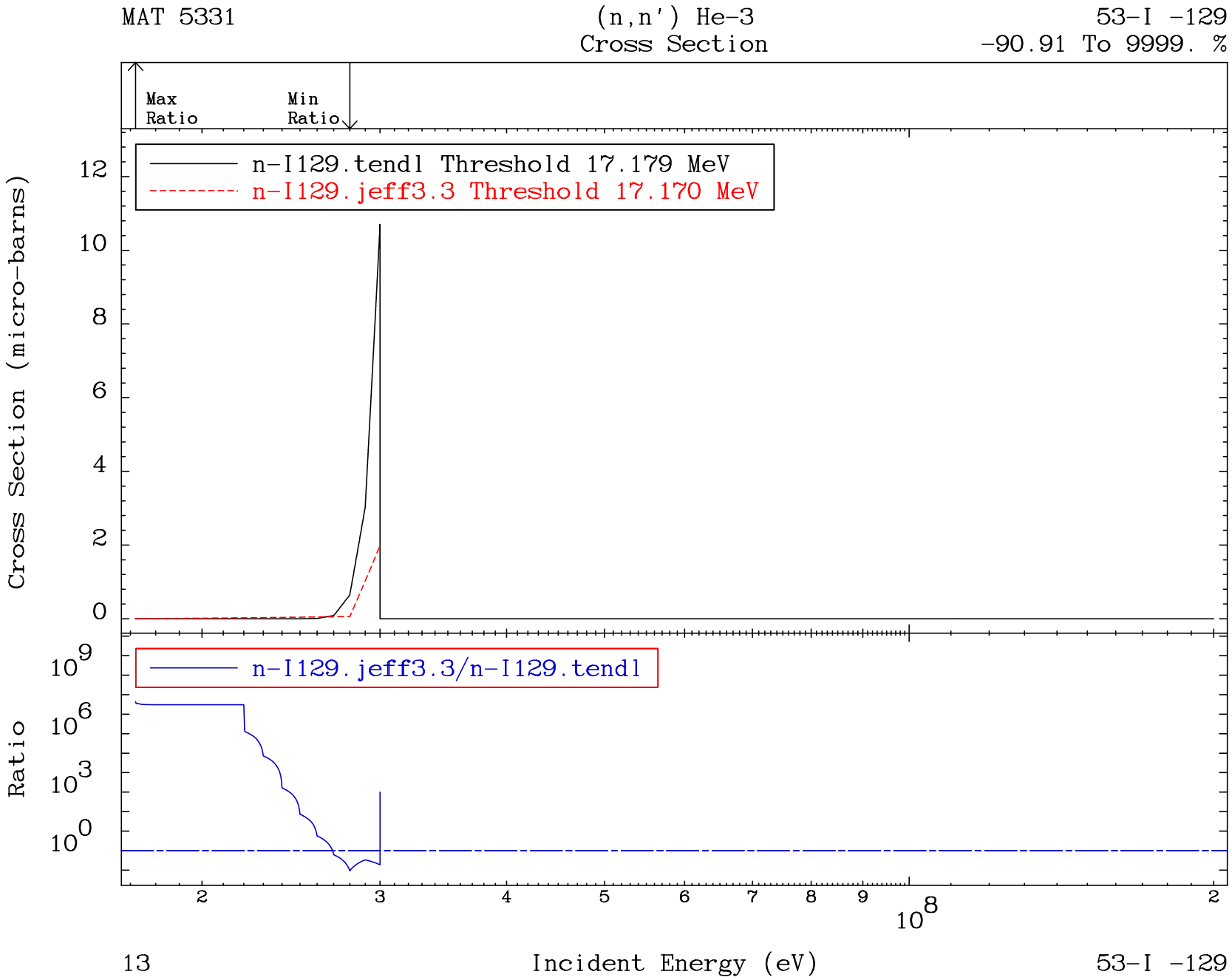

MAT 5331
(n,2n) α
Cross Section
53-I -129
-45.90 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 11.472 MeV
n-I129.jeff3.3 Threshold 11.470 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
53-I -129

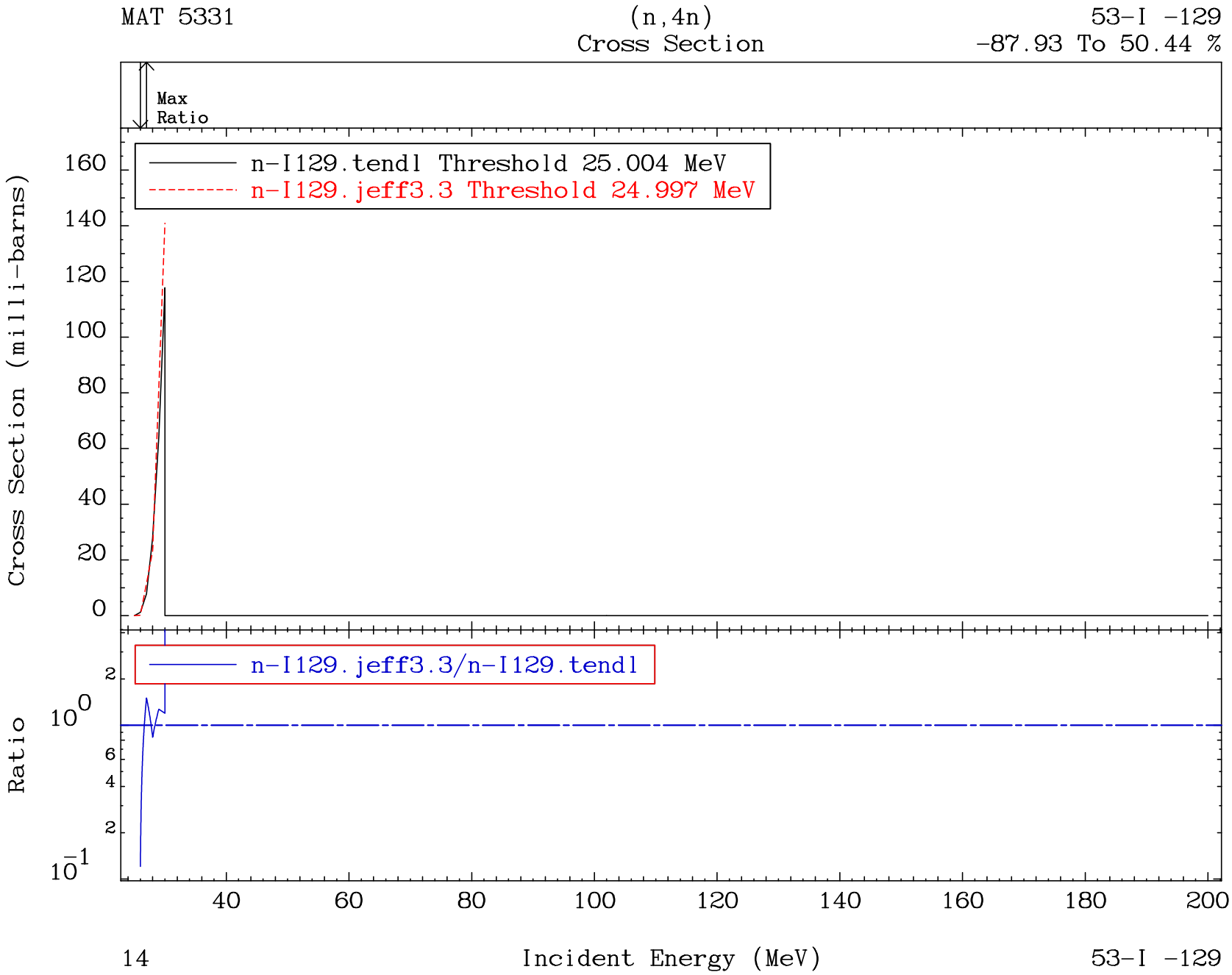

MAT 5331
(n,3n) α
Cross Section
53-I -129
-54.17 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 17.990 MeV
n-I129.jeff3.3 Threshold 17.988 MeV
Cross Section (micro-barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
53-I -129

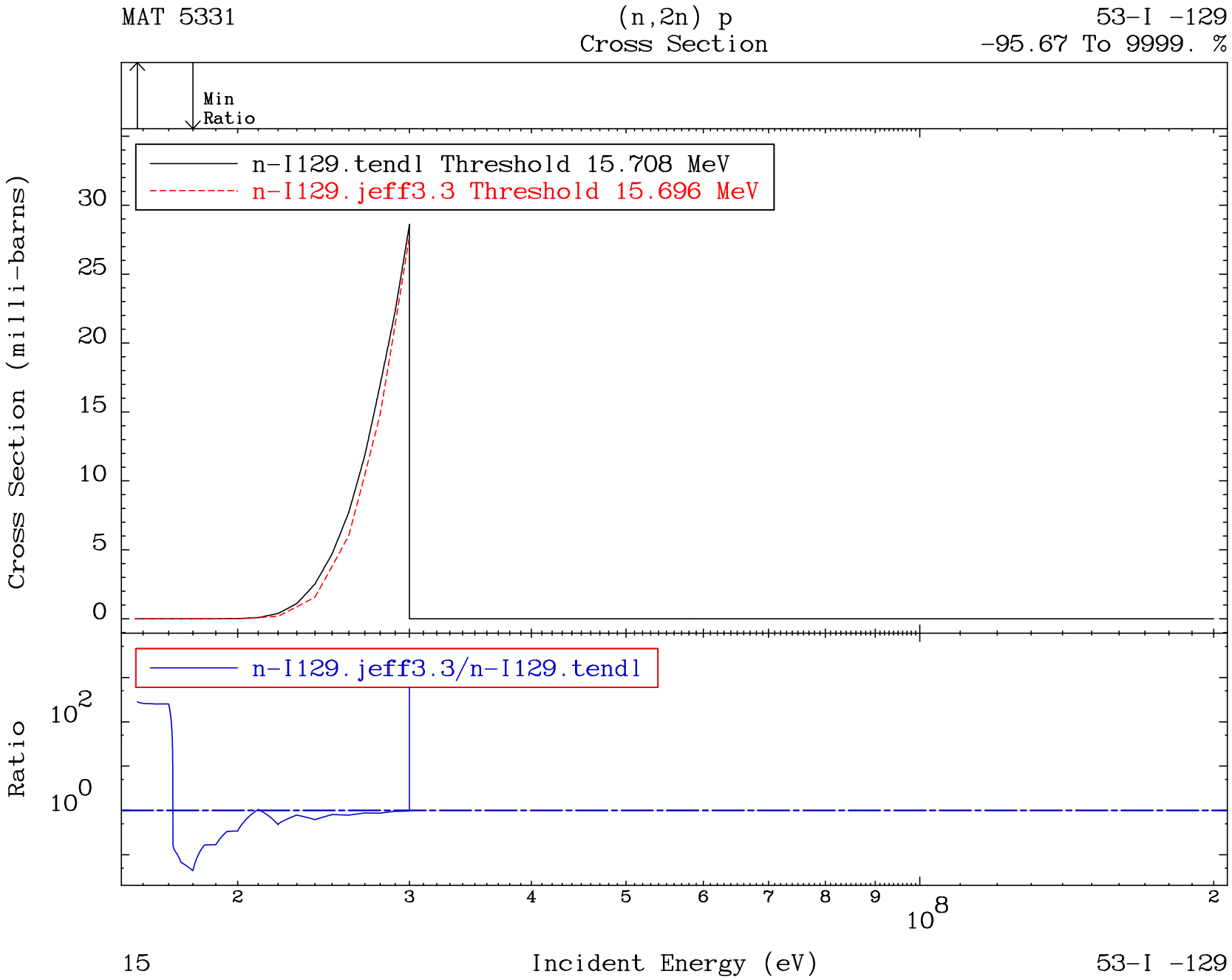

MAT 5331
(n,n') p
Cross Section
53-I -129
-45.47 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 6.8556 MeV
n-I129.jeff3.3 Threshold 6.8521 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
10
Incident Energy (eV)
53-I -129

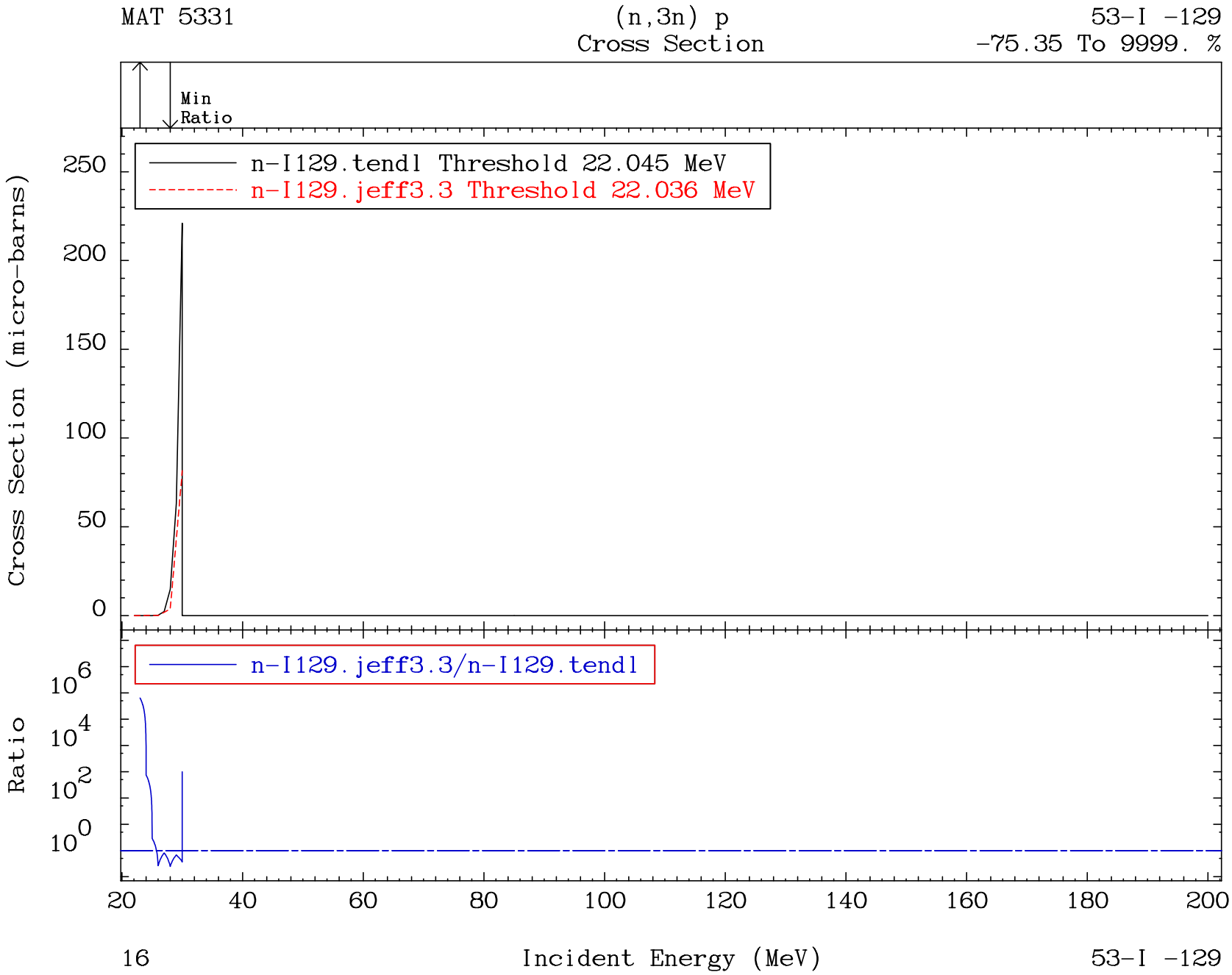

MAT 5331
(n,n') d
Cross Section
53-I -129
33.90 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 13.466 MeV
n-I129.jeff3.3 Threshold 13.454 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
53-I -129

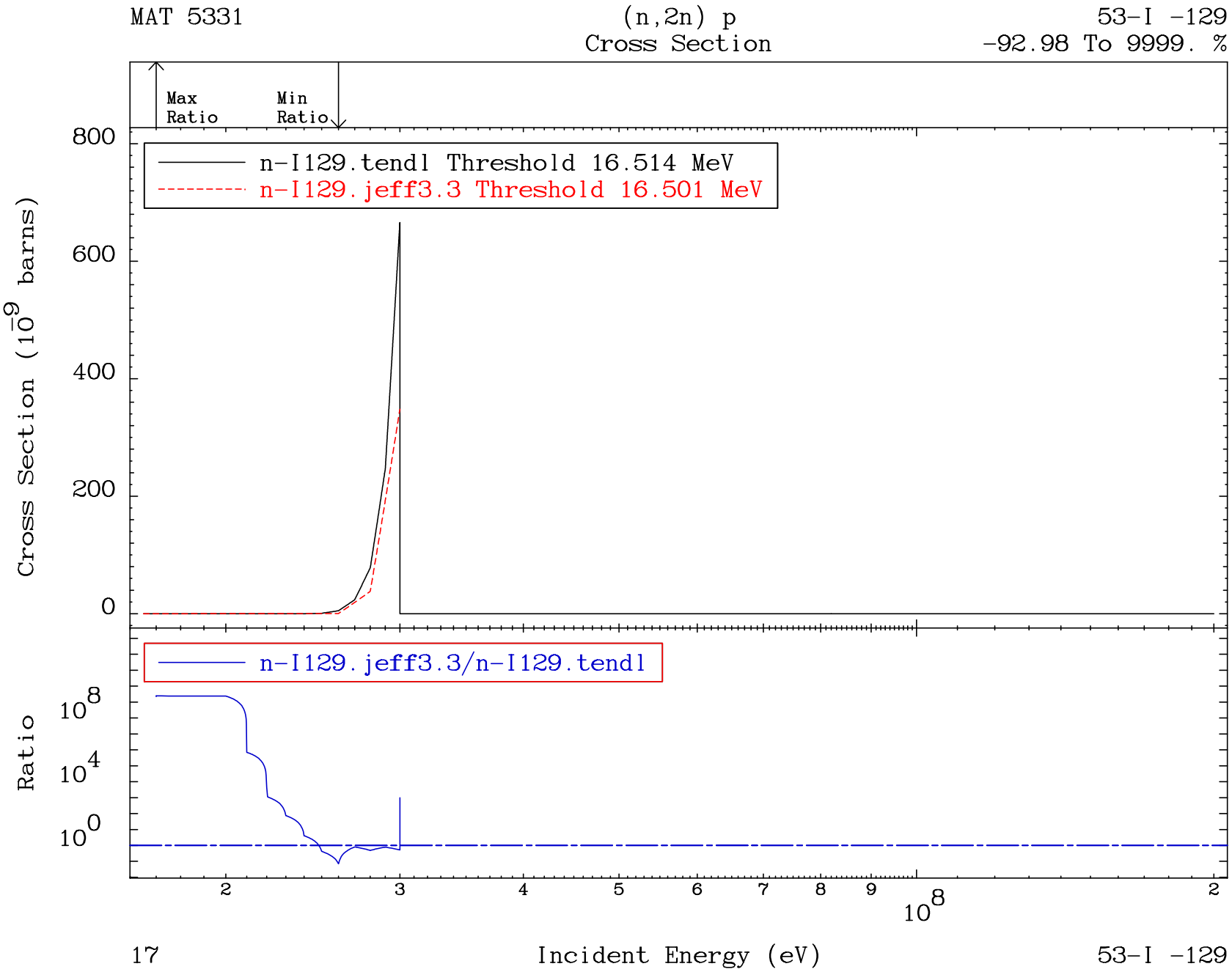

MAT 5331
(n,n') t
Cross Section
53-I -129
45.76 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 13.496 MeV
n-I129.jeff3.3 Threshold 13.488 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
53-I -129

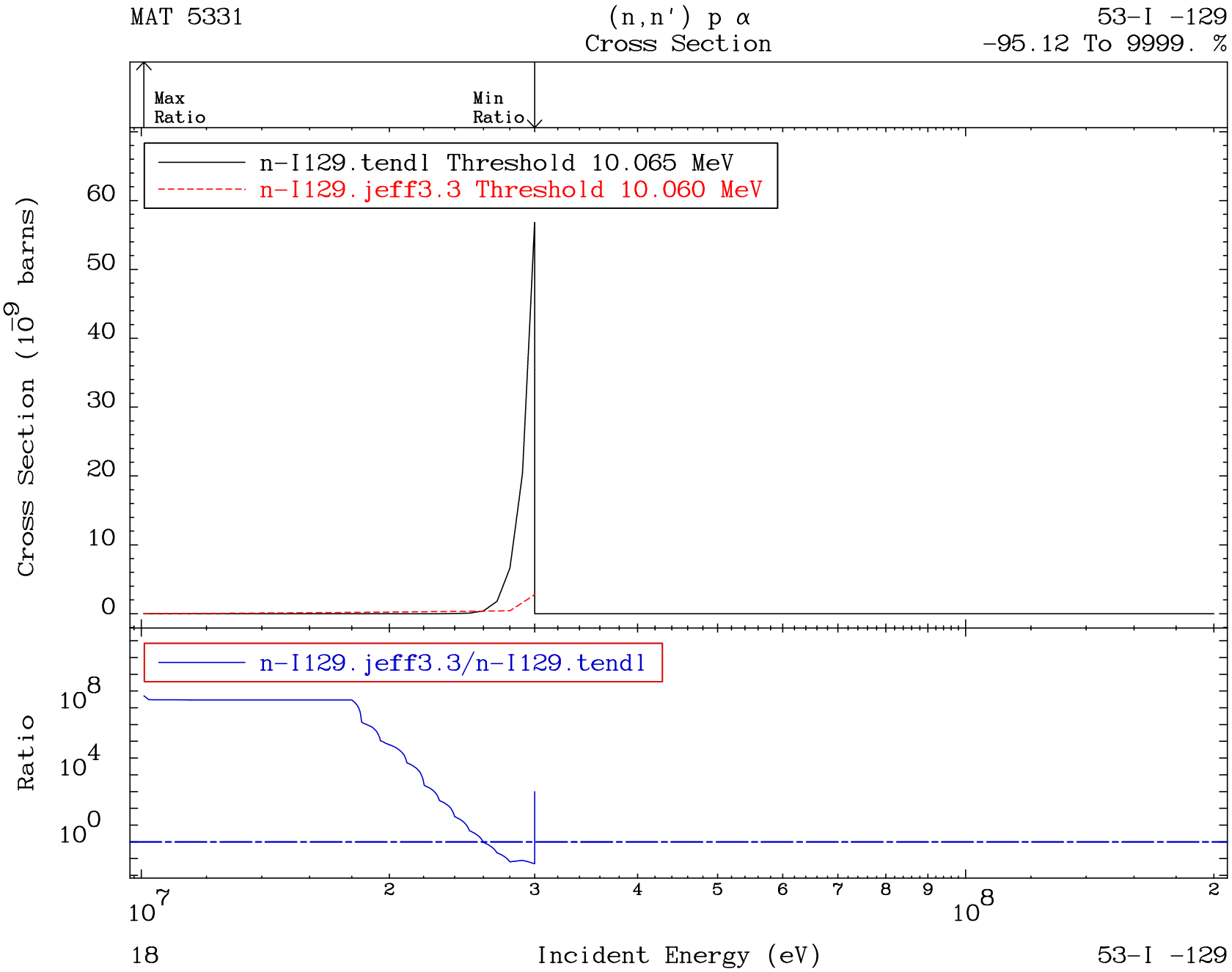

MAT 5331
(n,n') He-3
Cross Section
53-I -129
-90.91 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 17.179 MeV
n-I129.jeff3.3 Threshold 17.170 MeV
Cross Section (micro-barns)
0
2
4
6
8
10
12
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^3
10^6
10^9
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
53-I -129

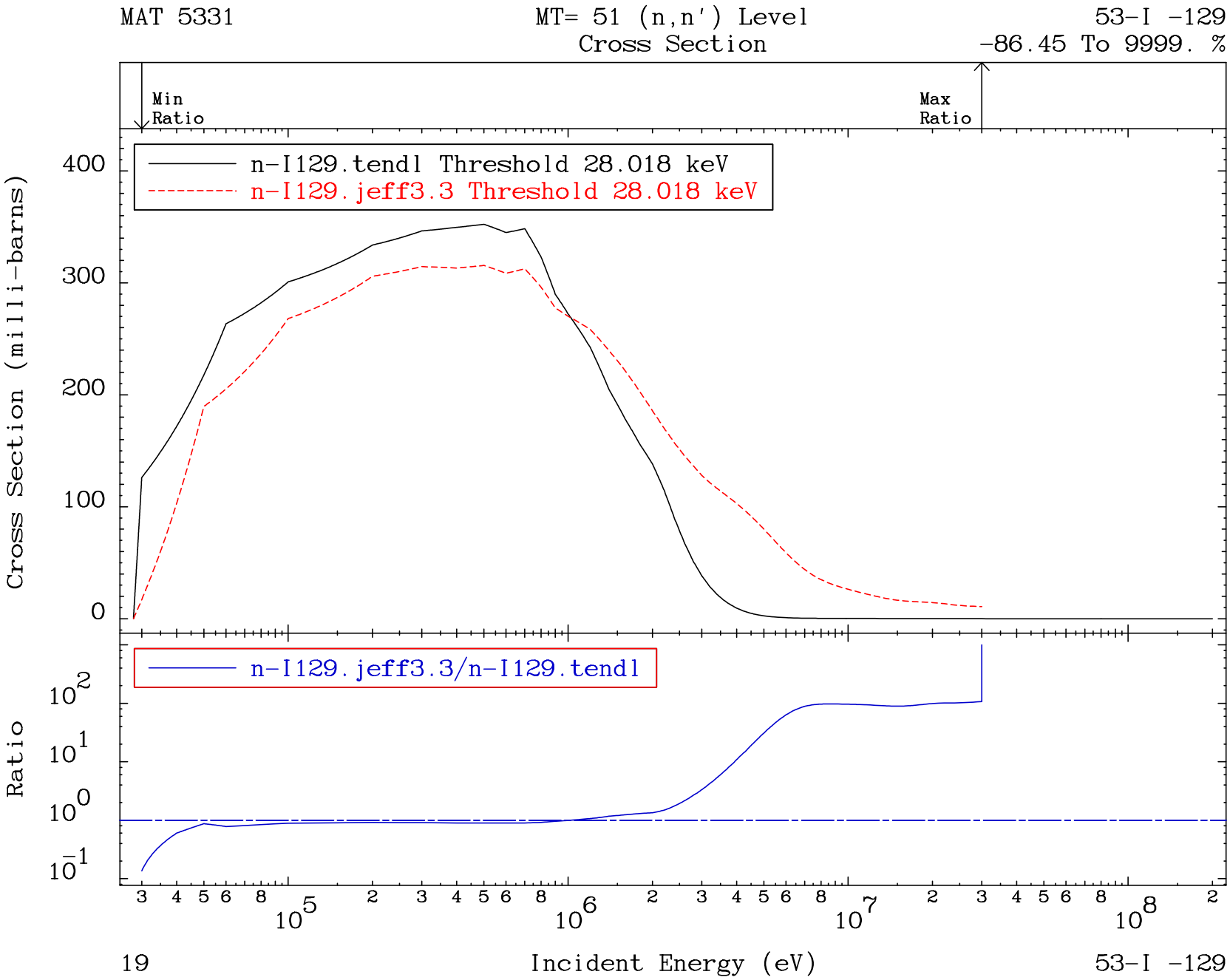

MAT 5331
(n,4n)
Cross Section
53-I -129
-87.93 To 50.44 %
Max
Ratio
n-I129.tendl Threshold 25.004 MeV
n-I129.jeff3.3 Threshold 24.997 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
2
10^0
6
4
2
10^-1
40
60
80
100
120
140
160
180
200
14
Incident Energy (MeV)
53-I -129

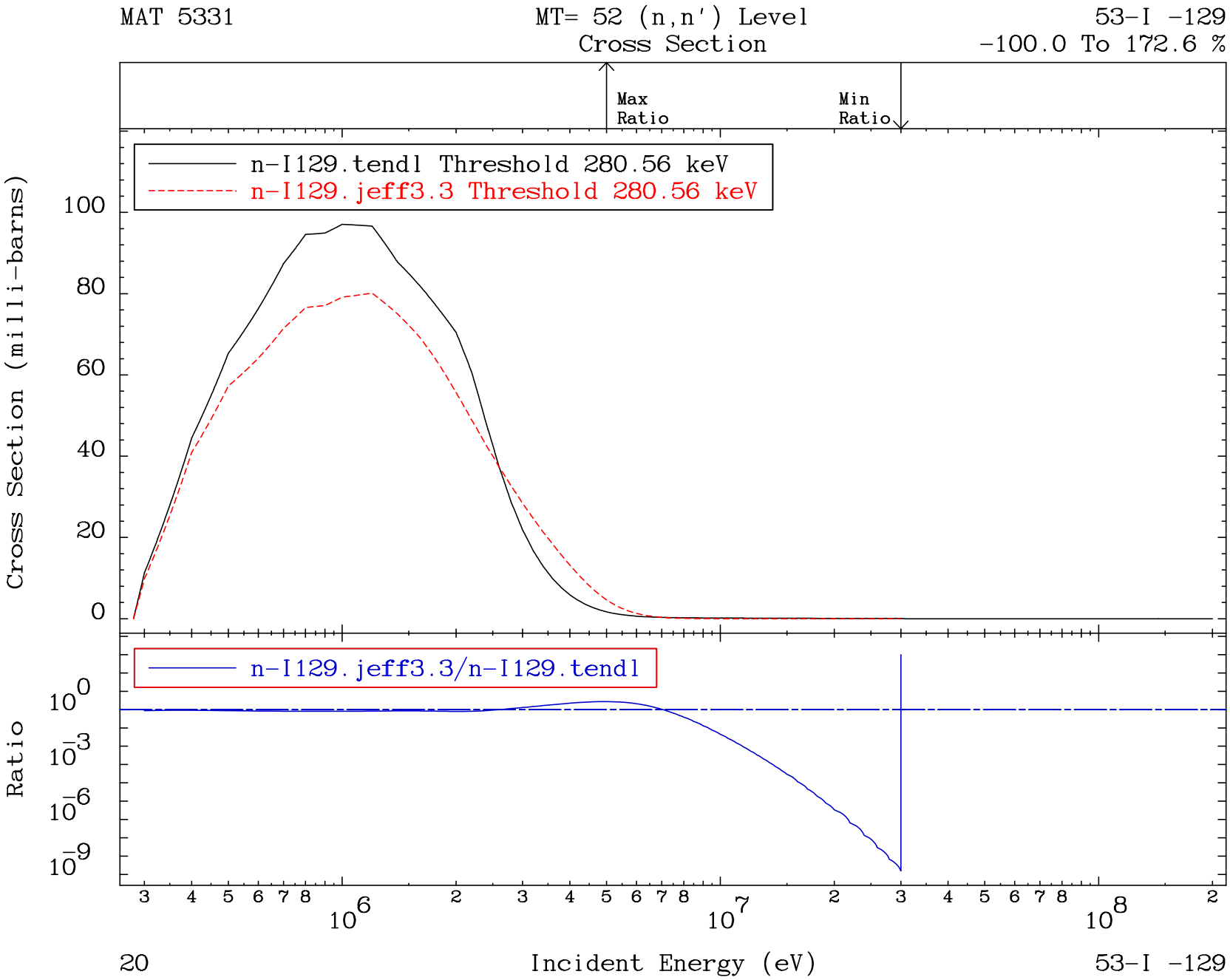

MAT 5331
(n,2n) p
Cross Section
53-I -129
-95.67 To 9999. %
Min
Ratio
n-I129.tendl Threshold 15.708 MeV
n-I129.jeff3.3 Threshold 15.696 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
15
Incident Energy (eV)
53-I -129

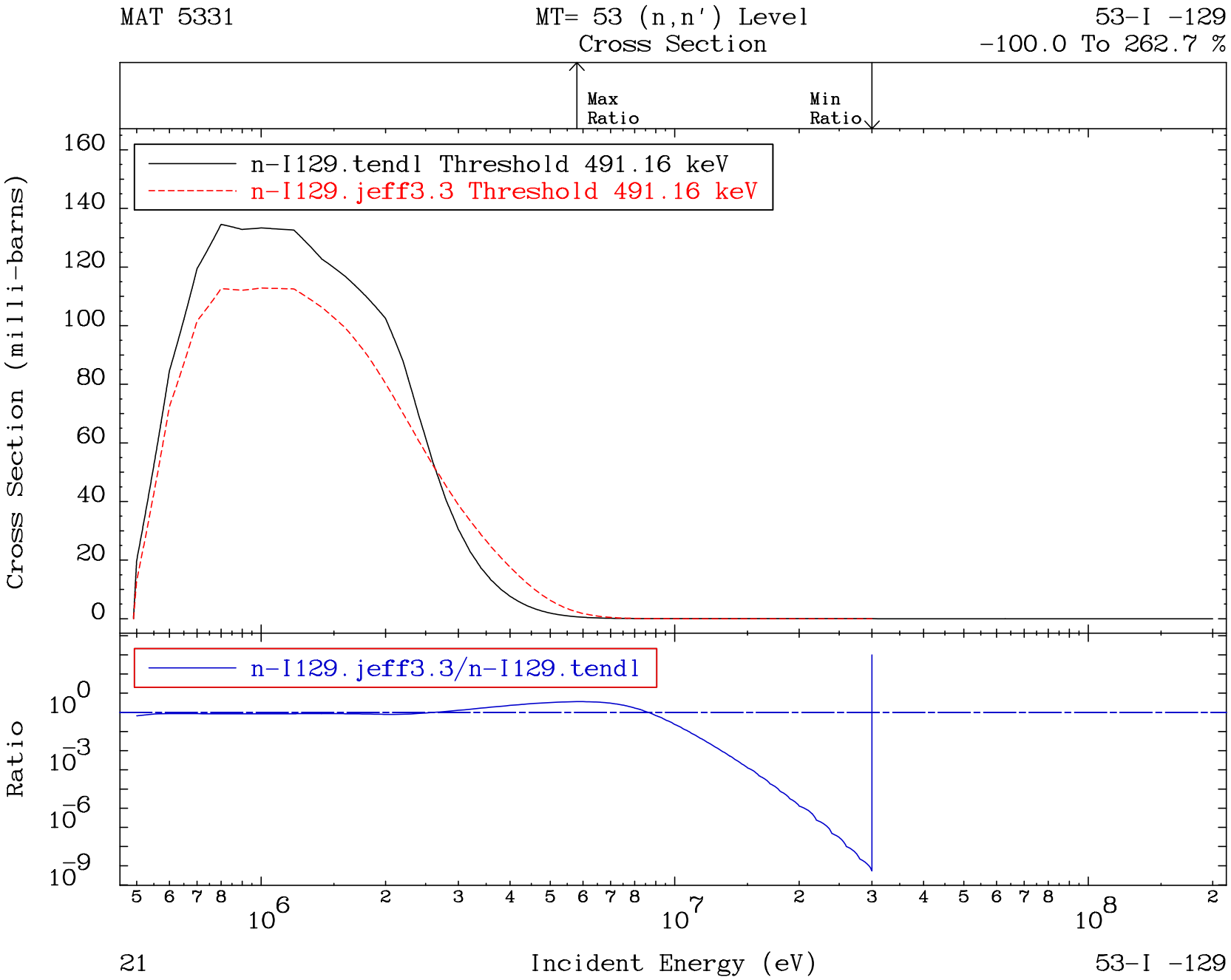

MAT 5331
(n,3n) p
Cross Section
53-I -129
-75.35 To 9999. %
Min
Ratio
n-I129.tendl Threshold 22.045 MeV
n-I129.jeff3.3 Threshold 22.036 MeV
Cross Section (micro-barns)
250
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^6
10^4
10^2
10^0
20
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
53-I -129

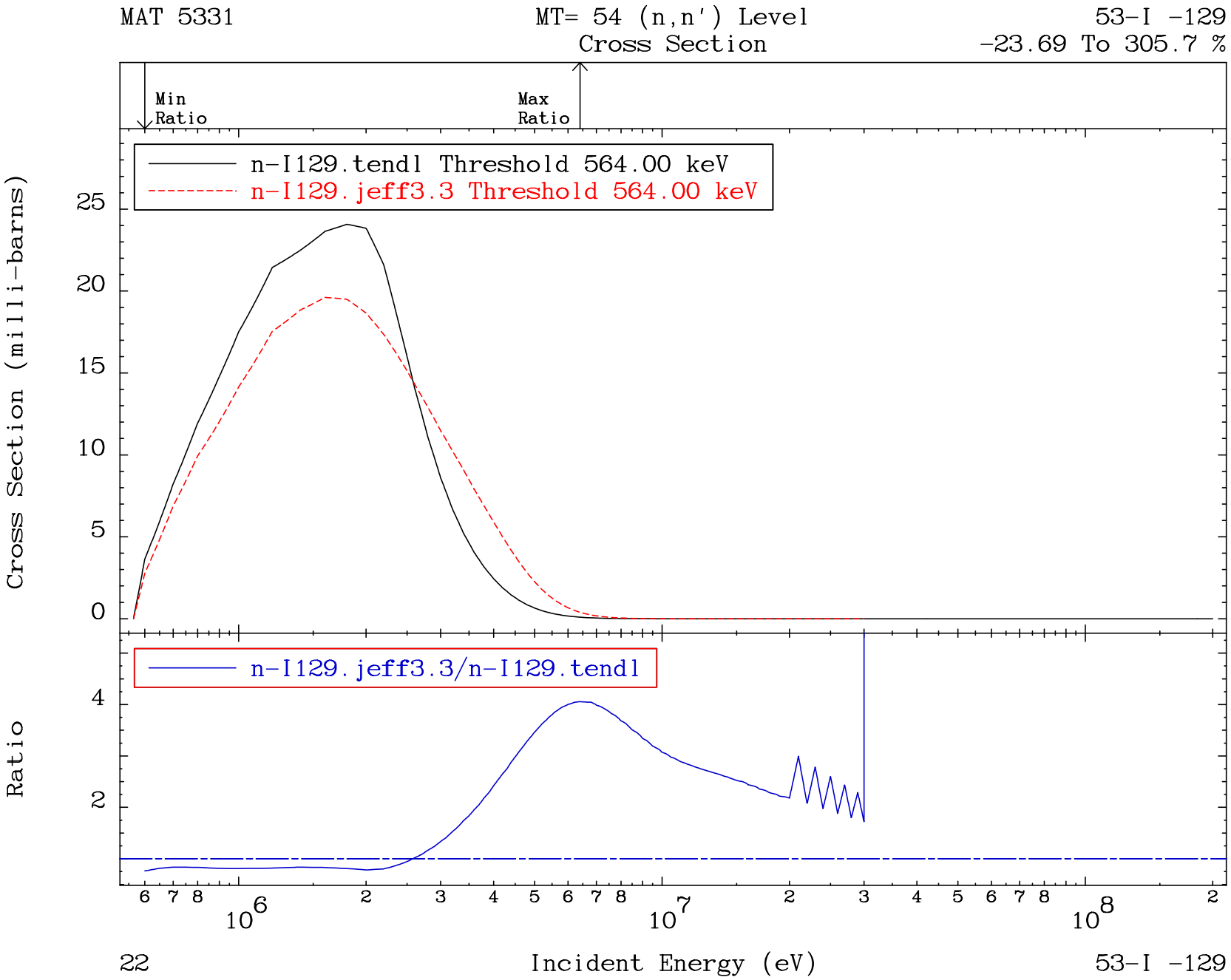

MAT 5331
(n,2n) p
Cross Section
53-I -129
-92.98 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 16.514 MeV
n-I129.jeff3.3 Threshold 16.501 MeV
Cross Section (10^{-9} barns)
800
600
400
200
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{8}
10^{4}
10^{0}
2
3
4
5
6
7
8
9
10^{8}
2
17
Incident Energy (eV)
53-I -129

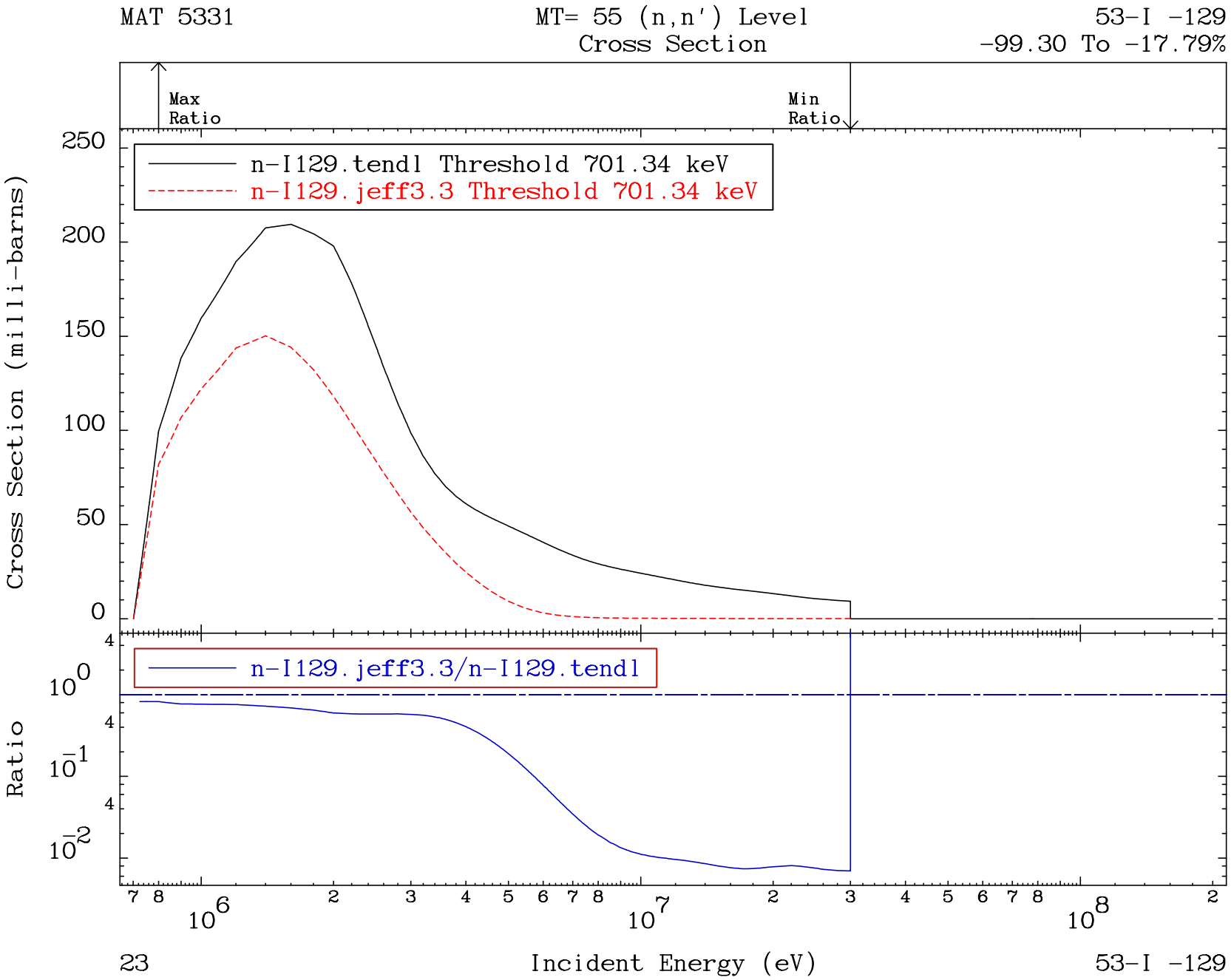

MAT 5331
(n,n') p α
Cross Section
53-I -129
-95.12 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 10.065 MeV
n-I129.jeff3.3 Threshold 10.060 MeV
Cross Section (10^-9 barns)
60
50
40
30
20
10
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^8
10^4
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
18
Incident Energy (eV)
53-I -129

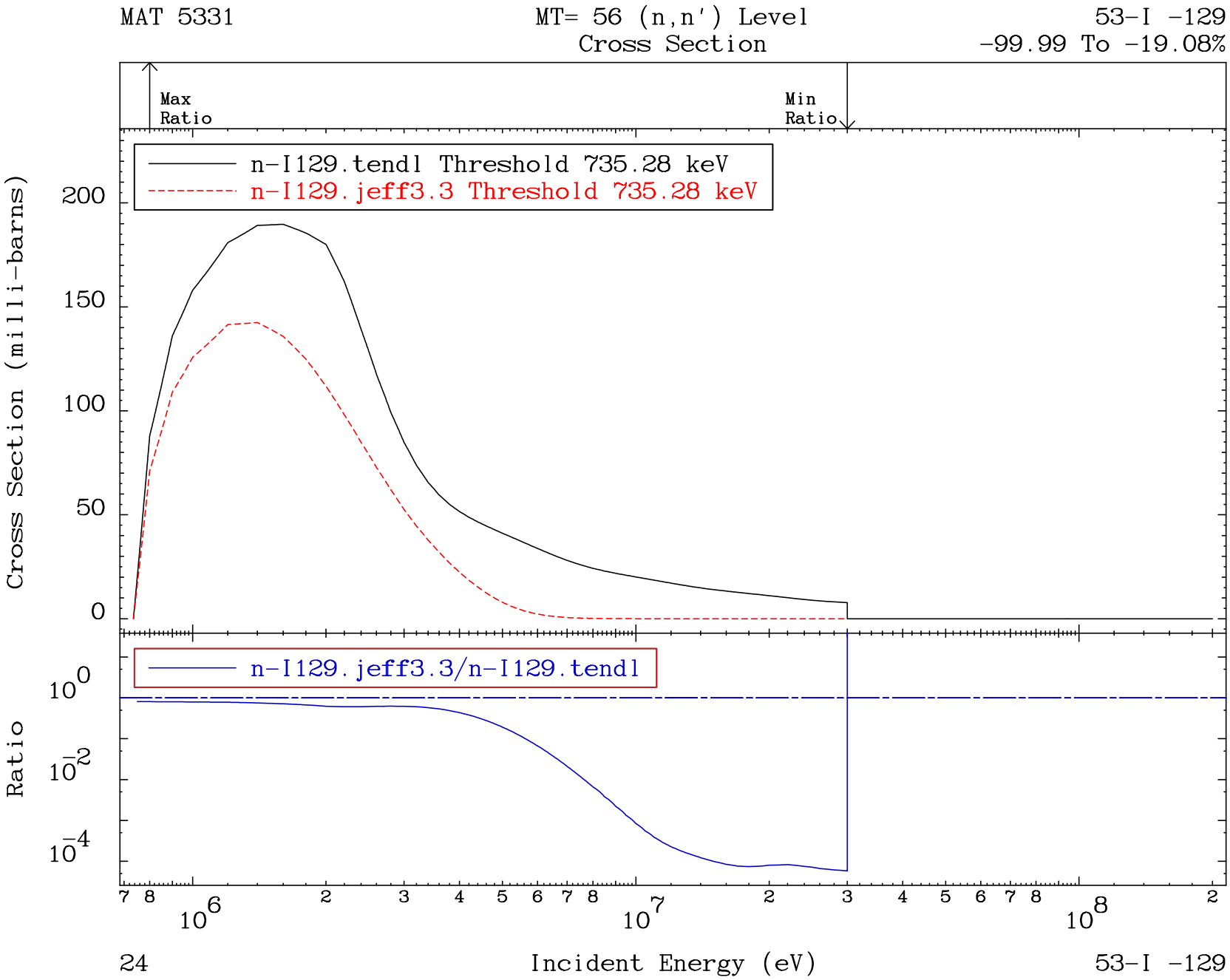

MAT 5331
MT= 51 (n,n') Level
Cross Section
53-I -129
-86.45 To 9999. %
Min Ratio
Max Ratio
n-I129.tendl Threshold 28.018 keV
n-I129.jeff3.3 Threshold 28.018 keV
Cross Section (milli-barns)
400
300
200
100
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^2
10^1
10^0
10^-1
3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
19
Incident Energy (eV)
53-I -129

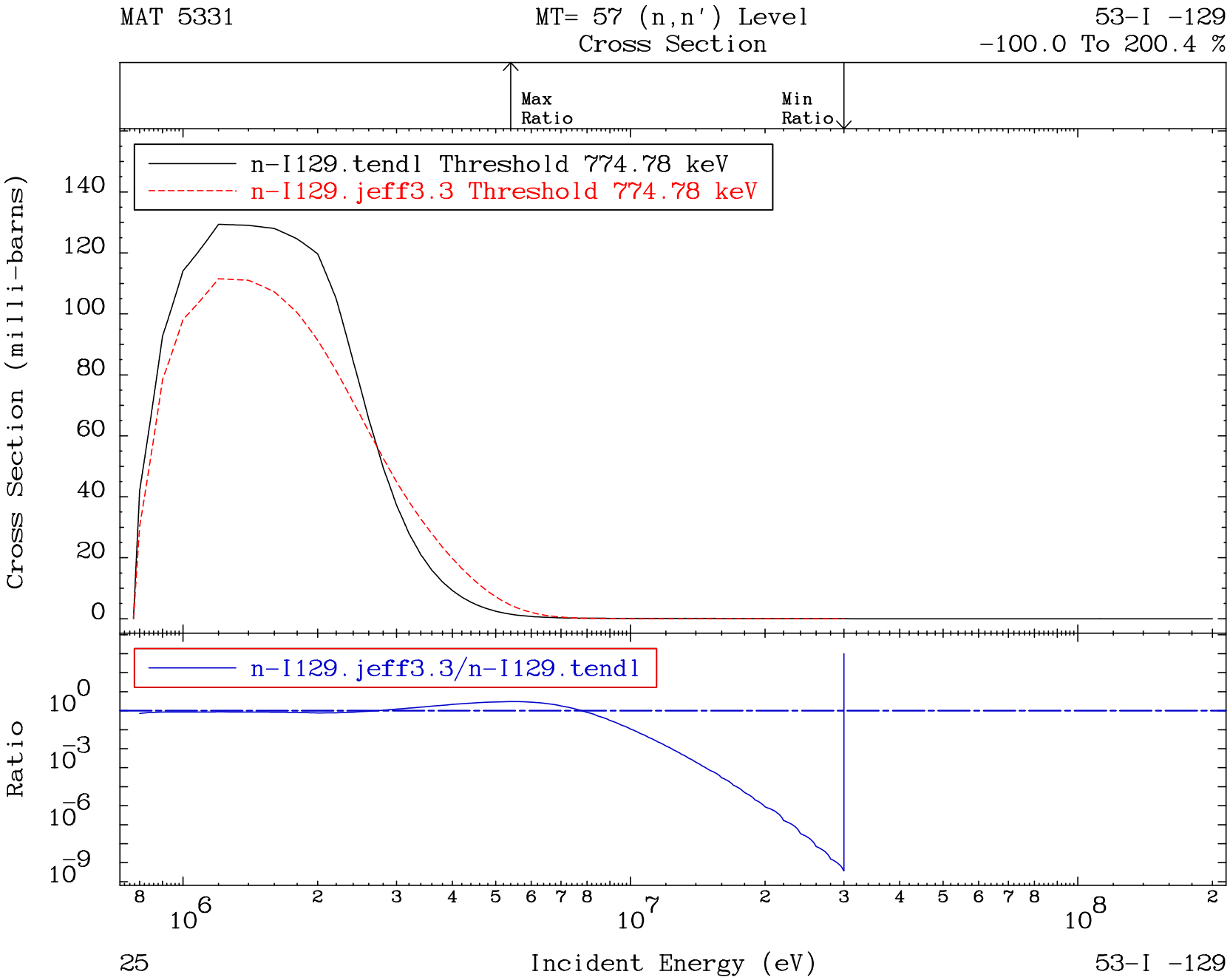

MAT 5331
MT= 52 (n,n') Level
Cross Section
53-I -129
-100.0 To 172.6 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 280.56 keV
n-I129.jeff3.3 Threshold 280.56 keV
Cross Section (milli-barns)
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^-9
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
53-I -129

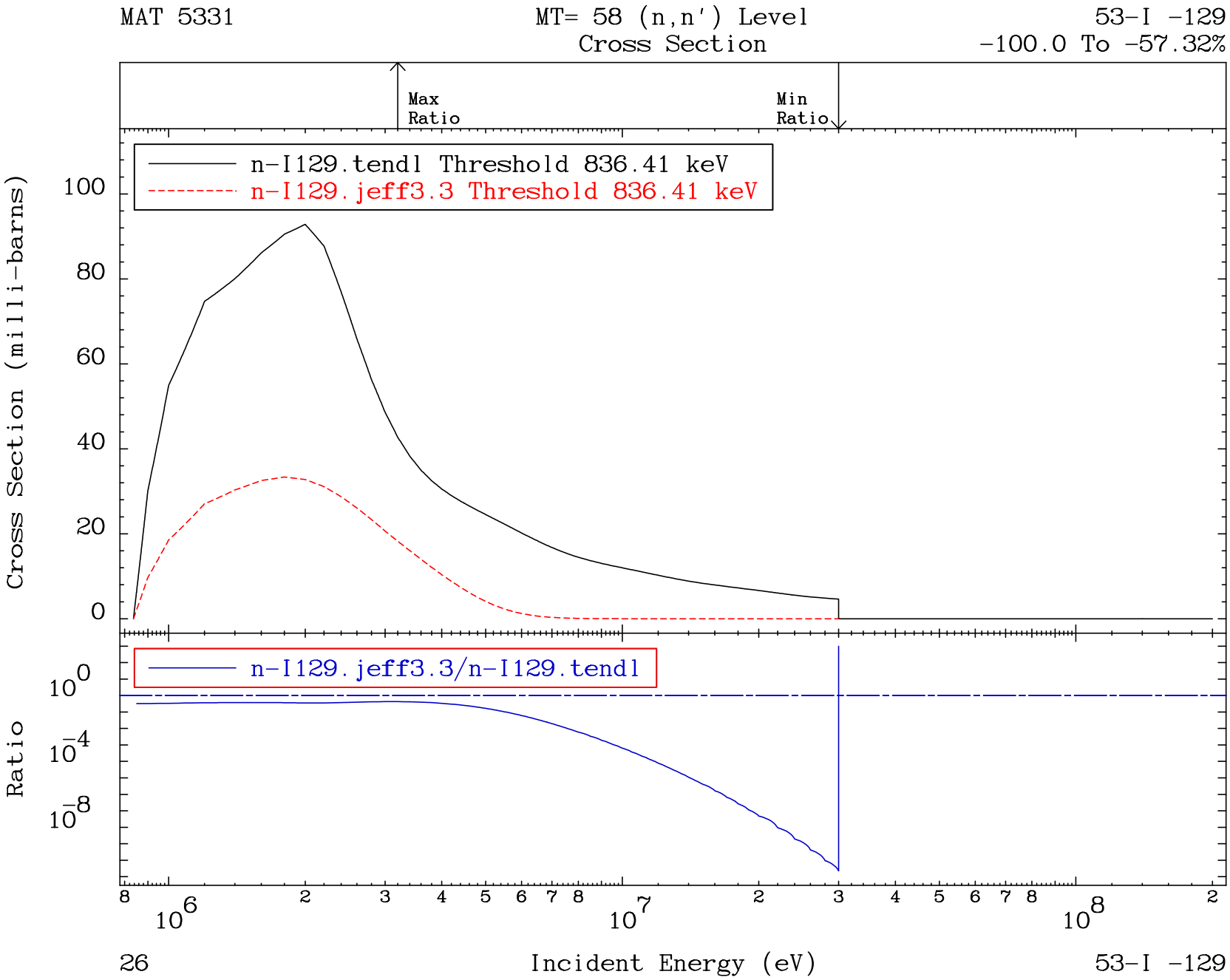

MAT 5331
MT= 53 (n,n') Level
Cross Section
53-I -129
-100.0 To 262.7 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 491.16 keV
n-I129.jeff3.3 Threshold 491.16 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^-9
5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
53-I -129

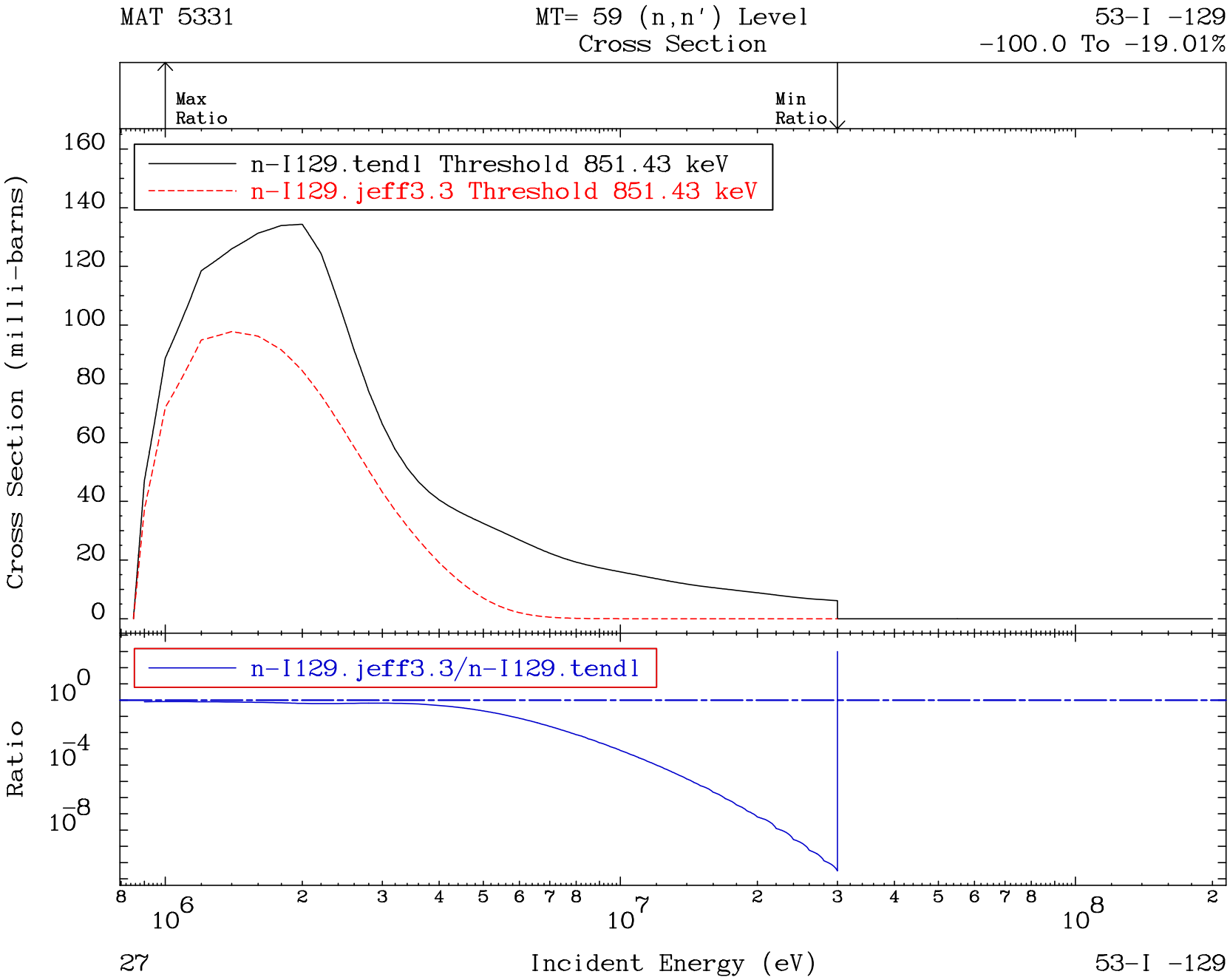

MAT 5331
MT= 54 (n,n') Level
Cross Section
53-I -129
-23.69 To 305.7 %
Min Ratio
Max Ratio
n-I129.tendl Threshold 564.00 keV
n-I129.jeff3.3 Threshold 564.00 keV
Cross Section (milli-barns)
25
20
15
10
5
0
n-I129.jeff3.3/n-I129.tendl
Ratio
4
2
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
53-I -129

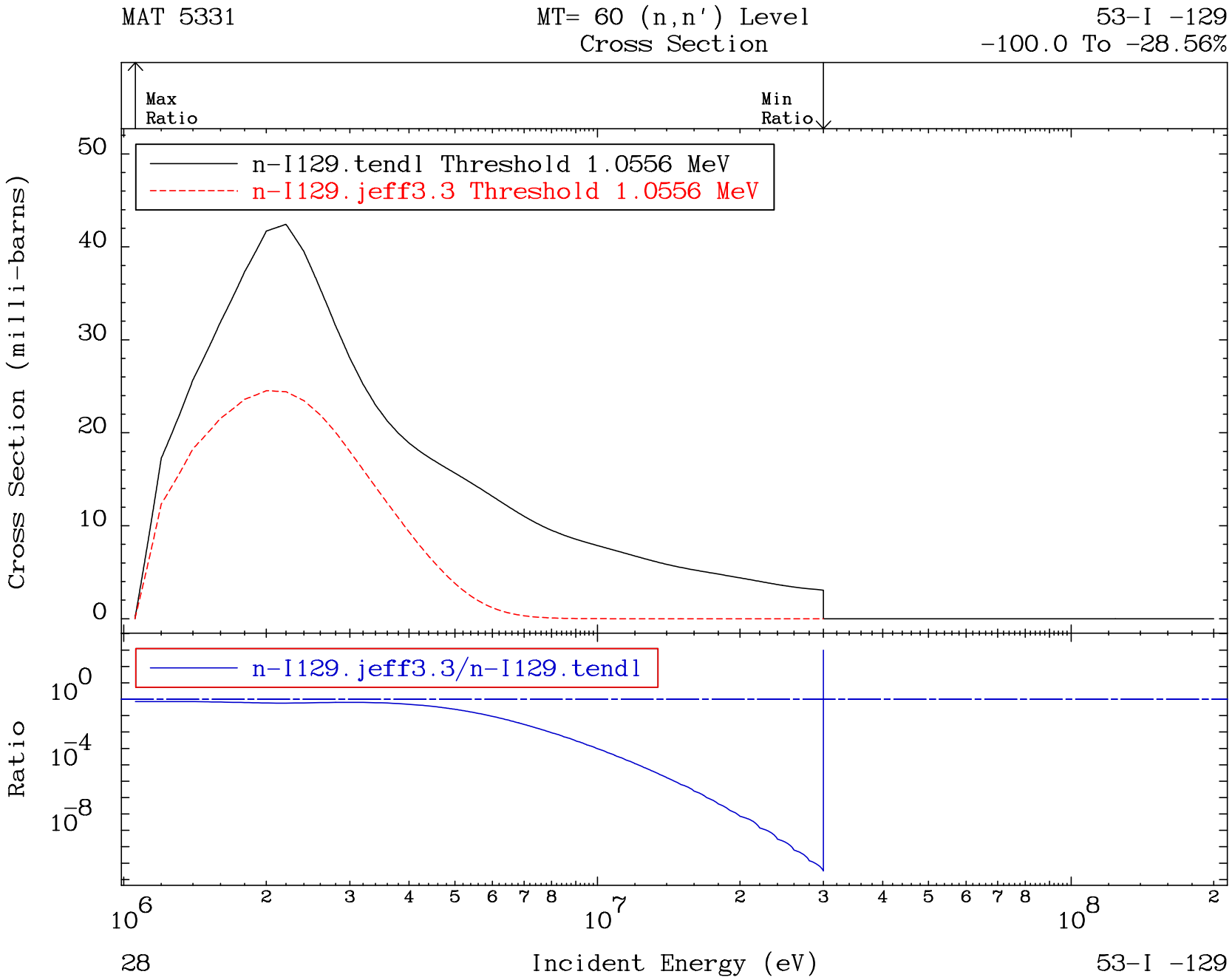

MAT 5331
MT= 55 (n,n') Level
Cross Section
53-I -129
-99.30 To -17.79%
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 701.34 keV
n-I129.jeff3.3 Threshold 701.34 keV
Cross Section (milli-barns)
250
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-1
10^-2
10^6
10^7
10^8
Incident Energy (eV)
23
53-I -129

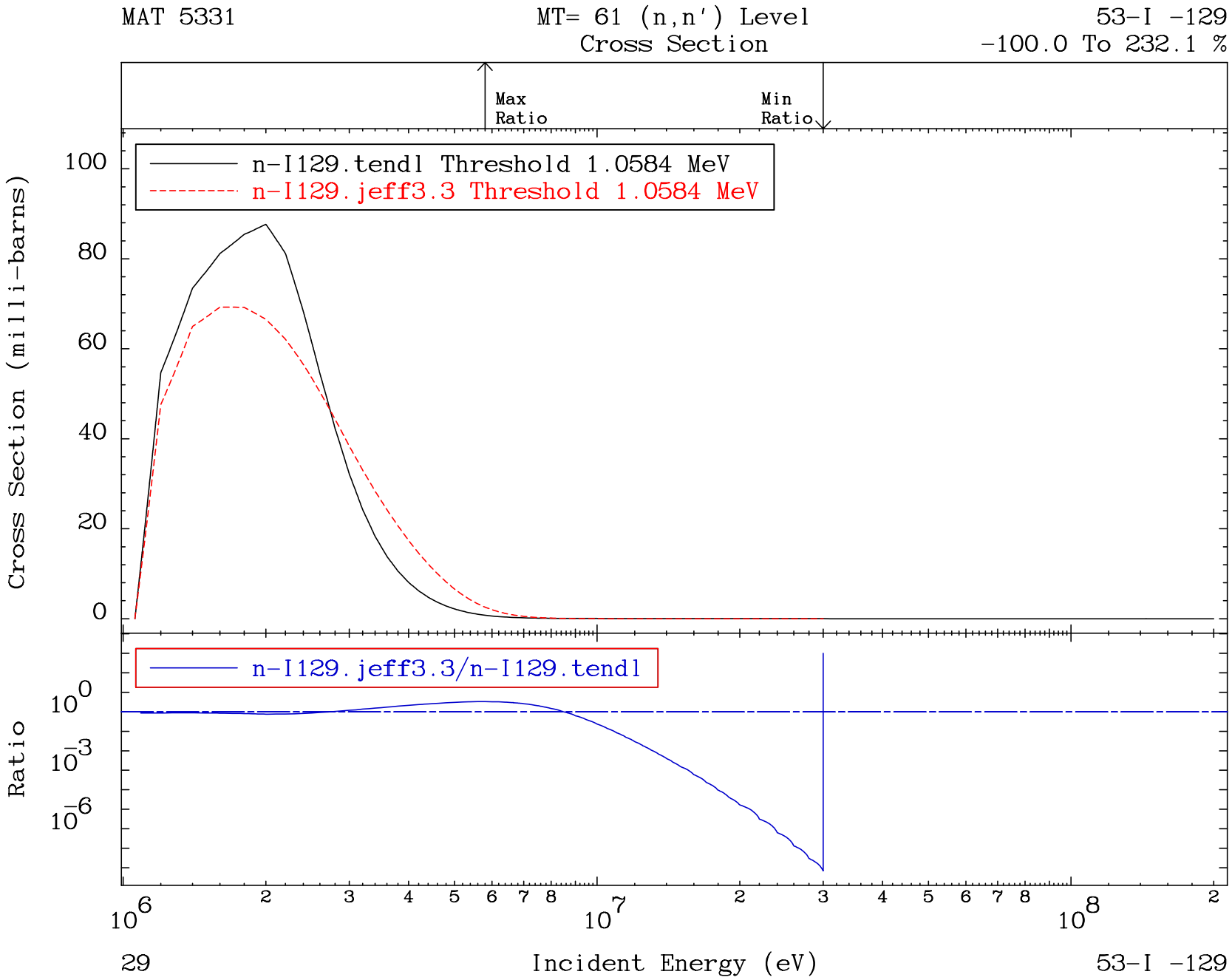

MAT 5331
MT= 56 (n,n') Level
Cross Section
53-I -129
-99.99 To -19.08%
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 735.28 keV
n-I129.jeff3.3 Threshold 735.28 keV
Cross Section (milli-barns)
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-2
10^-4
7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
53-I -129

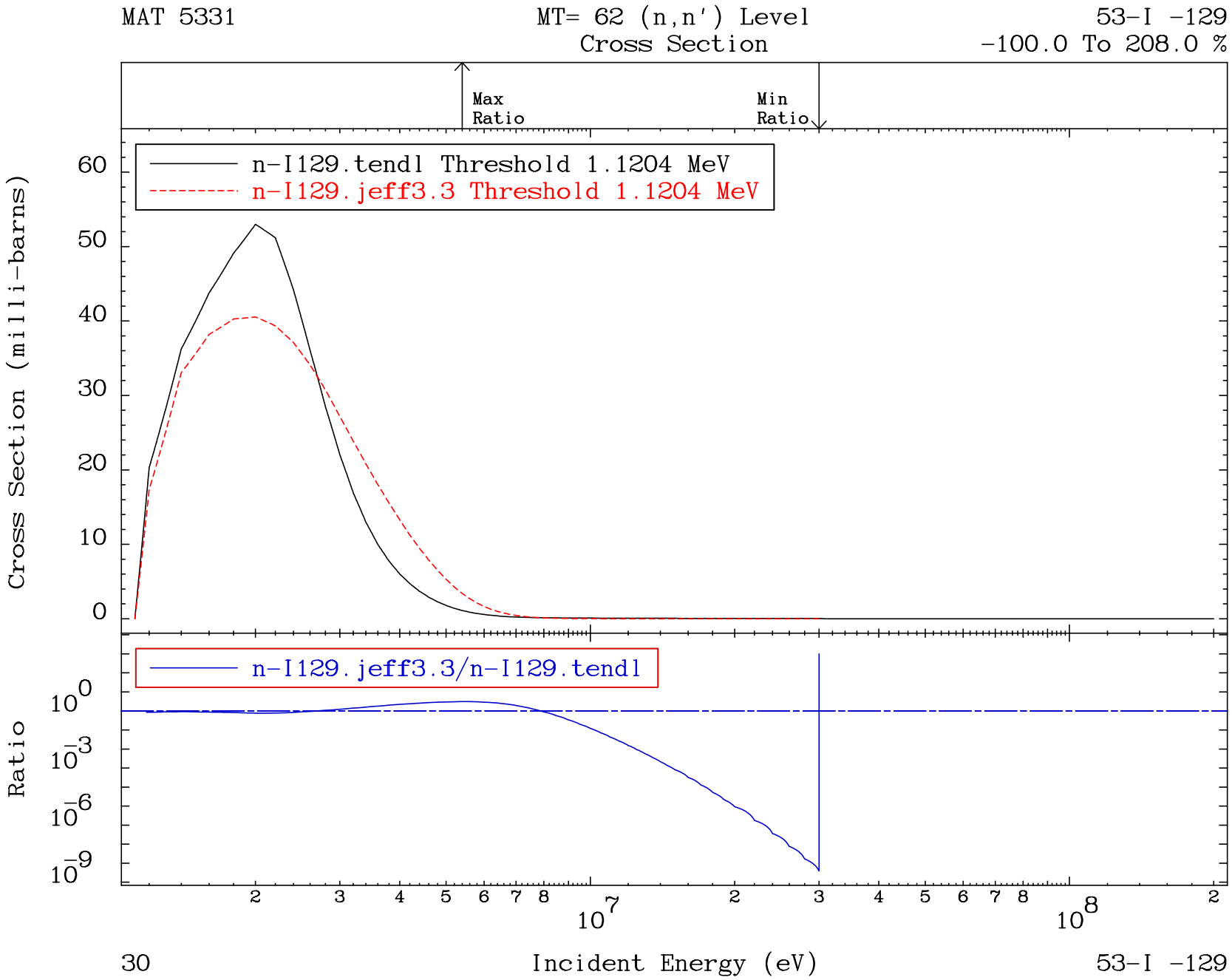

MAT 5331
MT= 57 (n,n') Level
Cross Section
53-I -129
-100.0 To 200.4 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 774.78 keV
n-I129.jeff3.3 Threshold 774.78 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^-9
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
25
Incident Energy (eV)
53-I -129

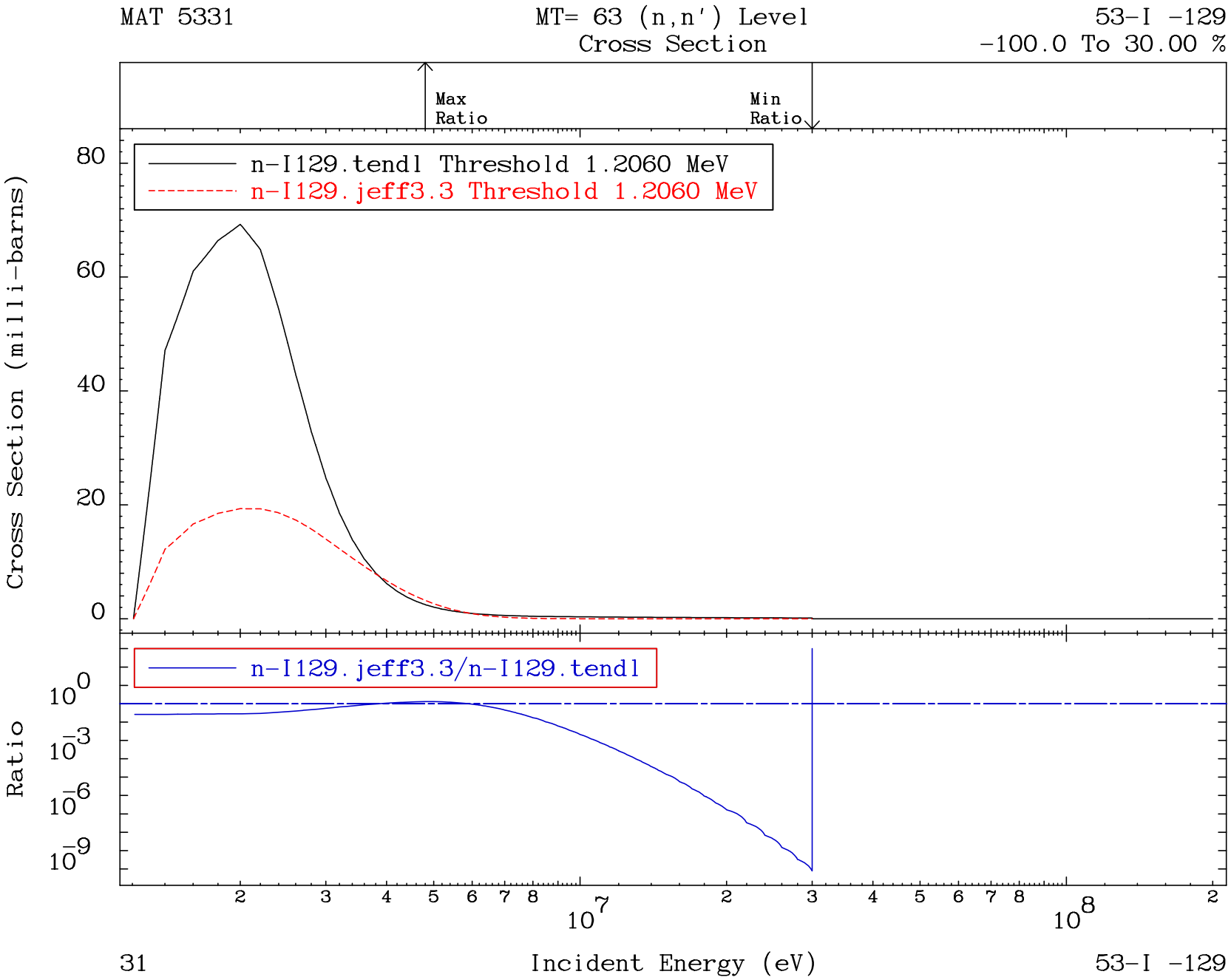

MAT 5331
MT= 58 (n,n') Level
Cross Section
53-I -129
-100.0 To -57.32%
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 836.41 keV
n-I129.jeff3.3 Threshold 836.41 keV
Cross Section (milli-barns)
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-4
10^-8
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
26
Incident Energy (eV)
53-I -129

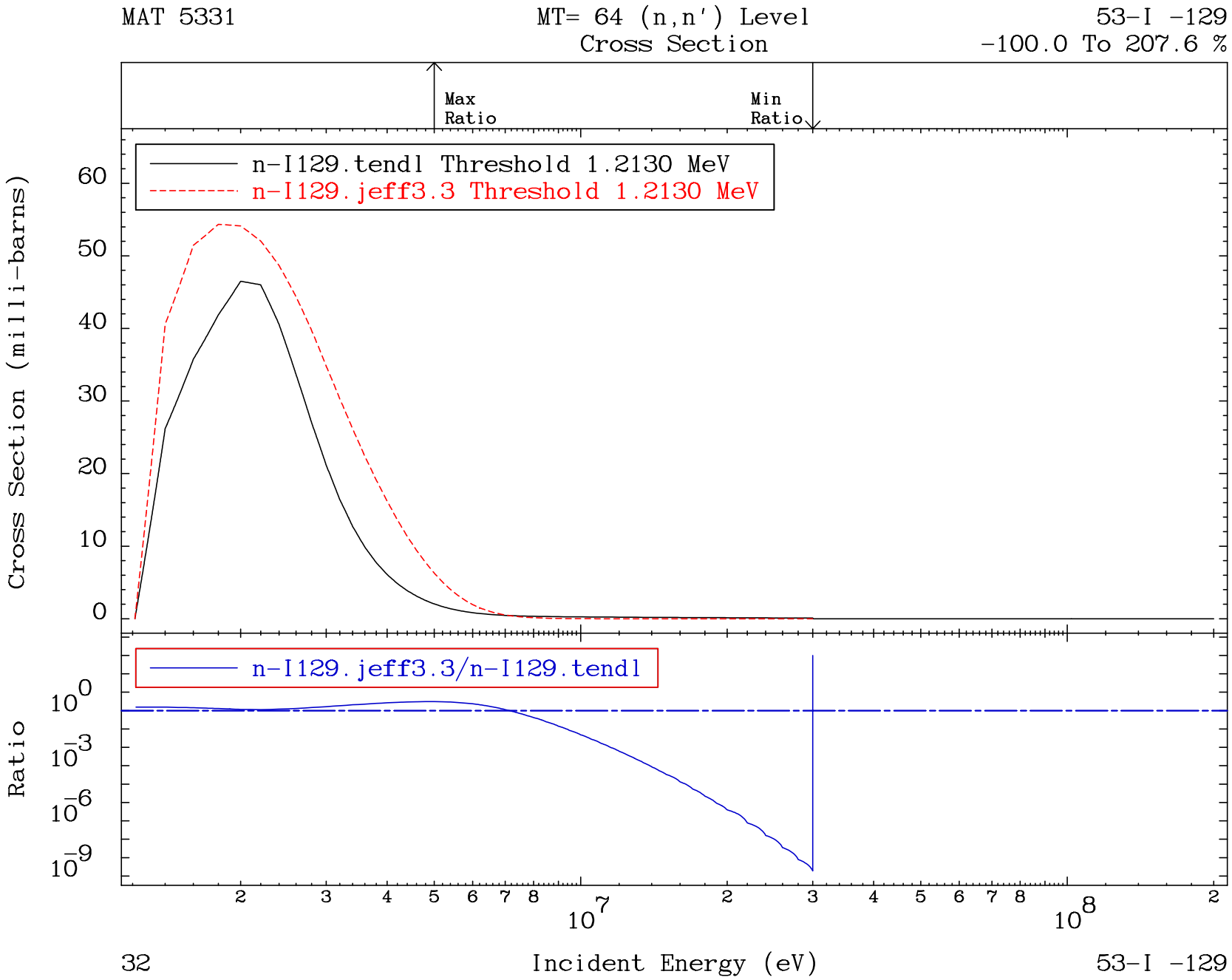

MAT 5331
MT= 59 (n,n') Level
Cross Section
53-I -129
-100.0 To -19.01%
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 851.43 keV
n-I129.jeff3.3 Threshold 851.43 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-4
10^-8
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
27
Incident Energy (eV)
53-I -129

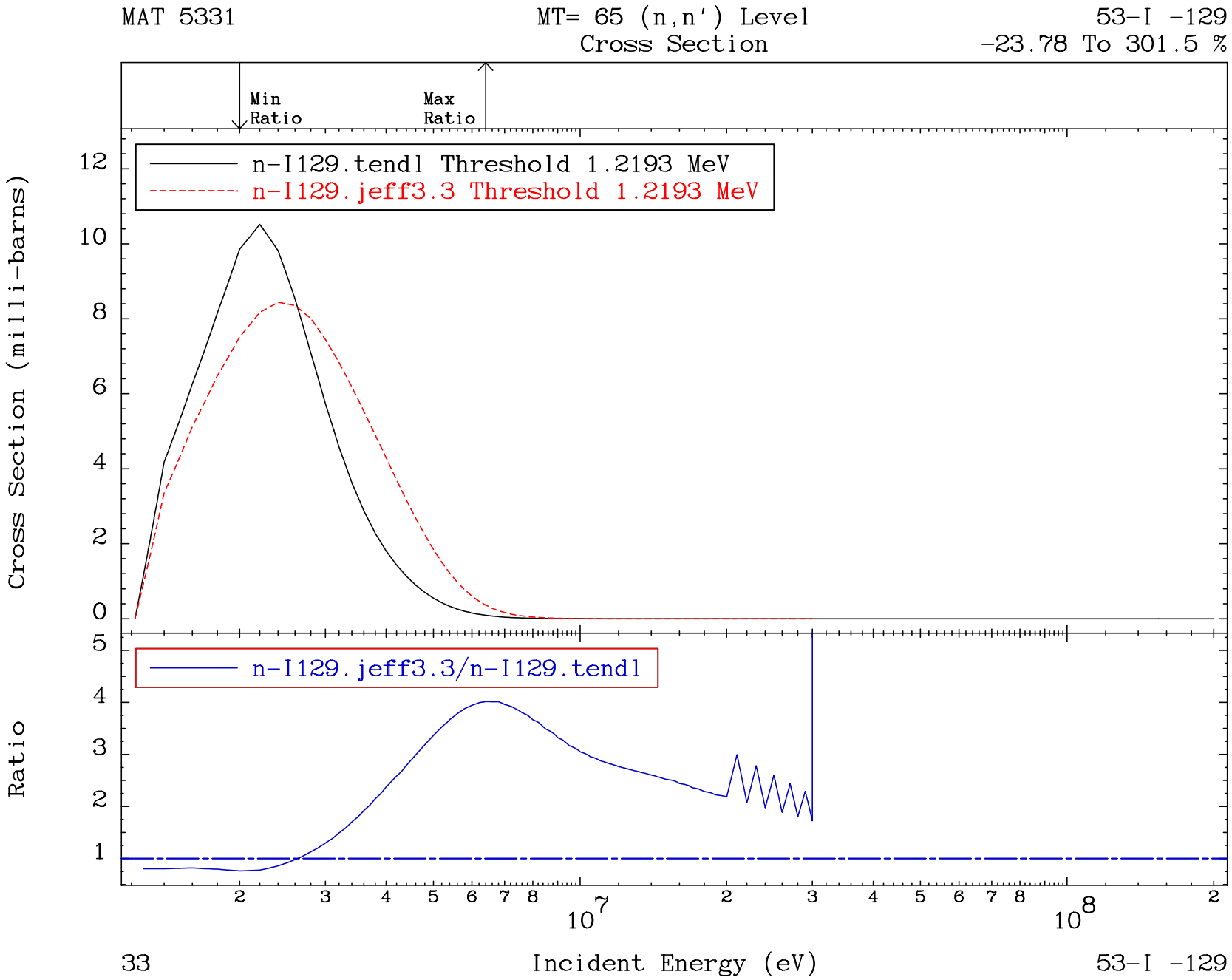

MAT 5331
MT= 60 (n,n') Level
Cross Section
53-I -129
-100.0 To -28.56%
Max Ratio
Min Ratio
n-I129.tendl Threshold 1.0556 MeV
n-I129.jeff3.3 Threshold 1.0556 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-4
10^-8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
53-I -129

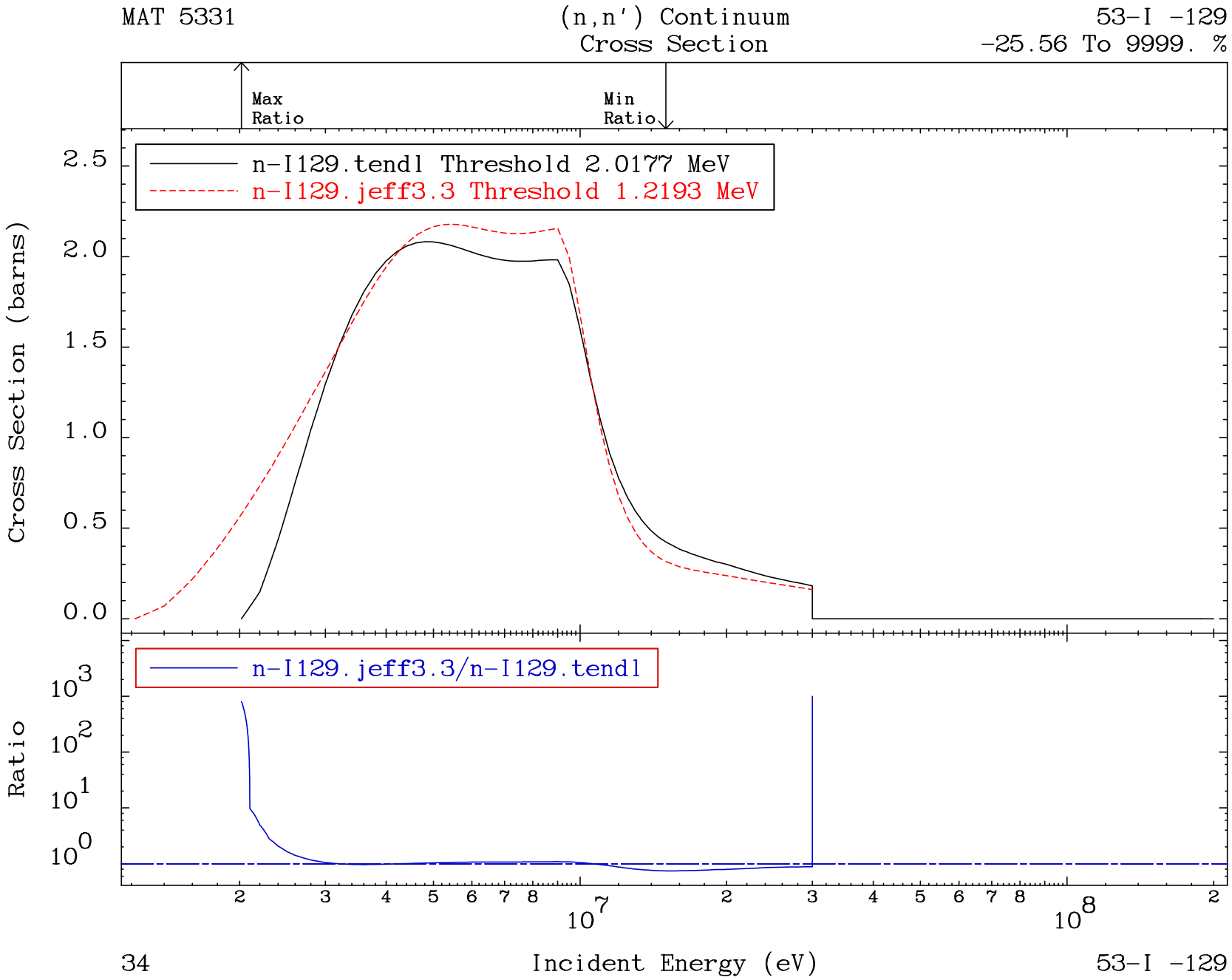

MAT 5331
MT= 61 (n,n') Level
Cross Section
53-I -129
-100.0 To 232.1 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 1.0584 MeV
n-I129.jeff3.3 Threshold 1.0584 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
29
Incident Energy (eV)
53-I -129

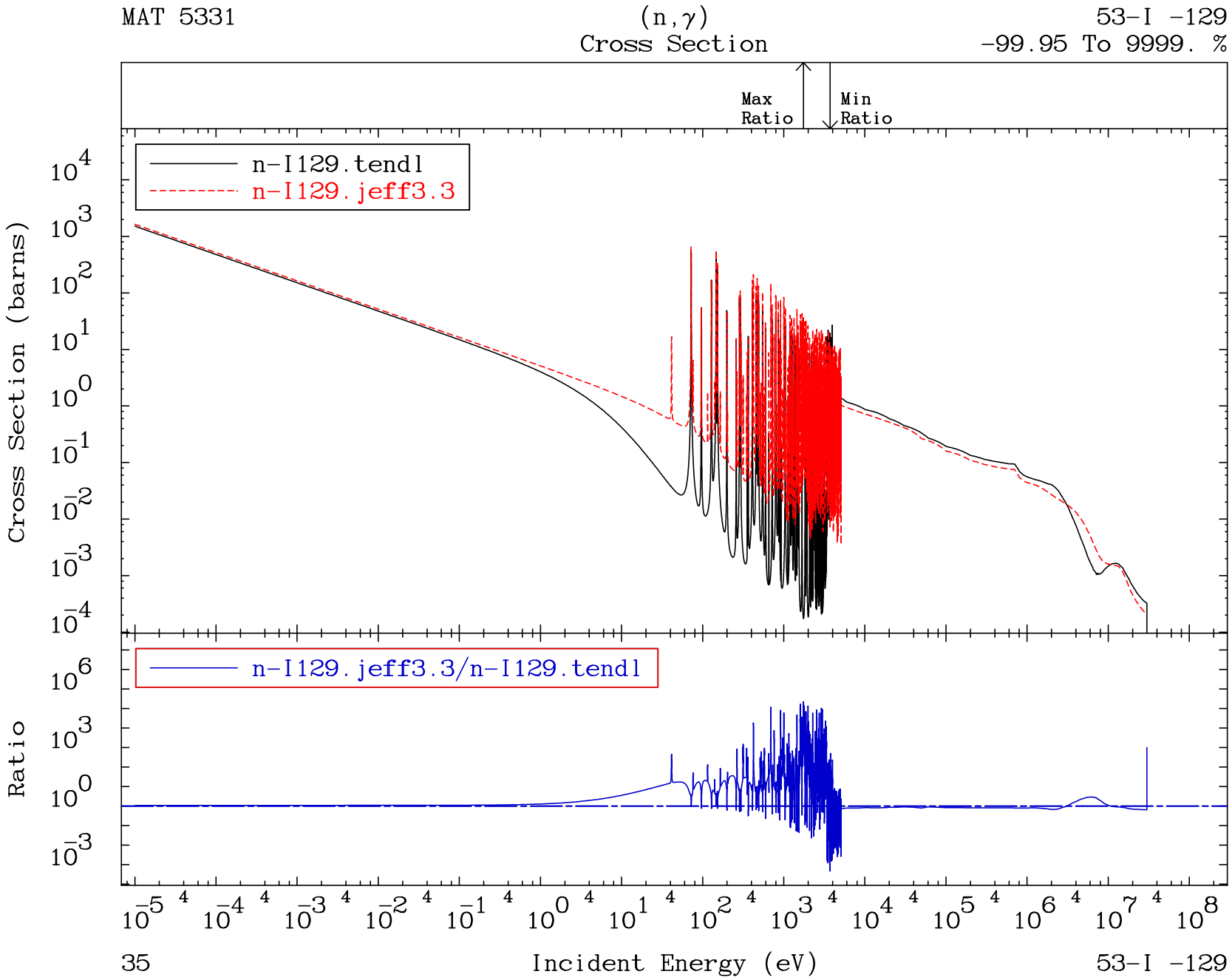

MAT 5331
MT= 62 (n,n') Level
Cross Section
53-I -129
-100.0 To 208.0 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 1.1204 MeV
n-I129.jeff3.3 Threshold 1.1204 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
30
Incident Energy (eV)
53-I -129

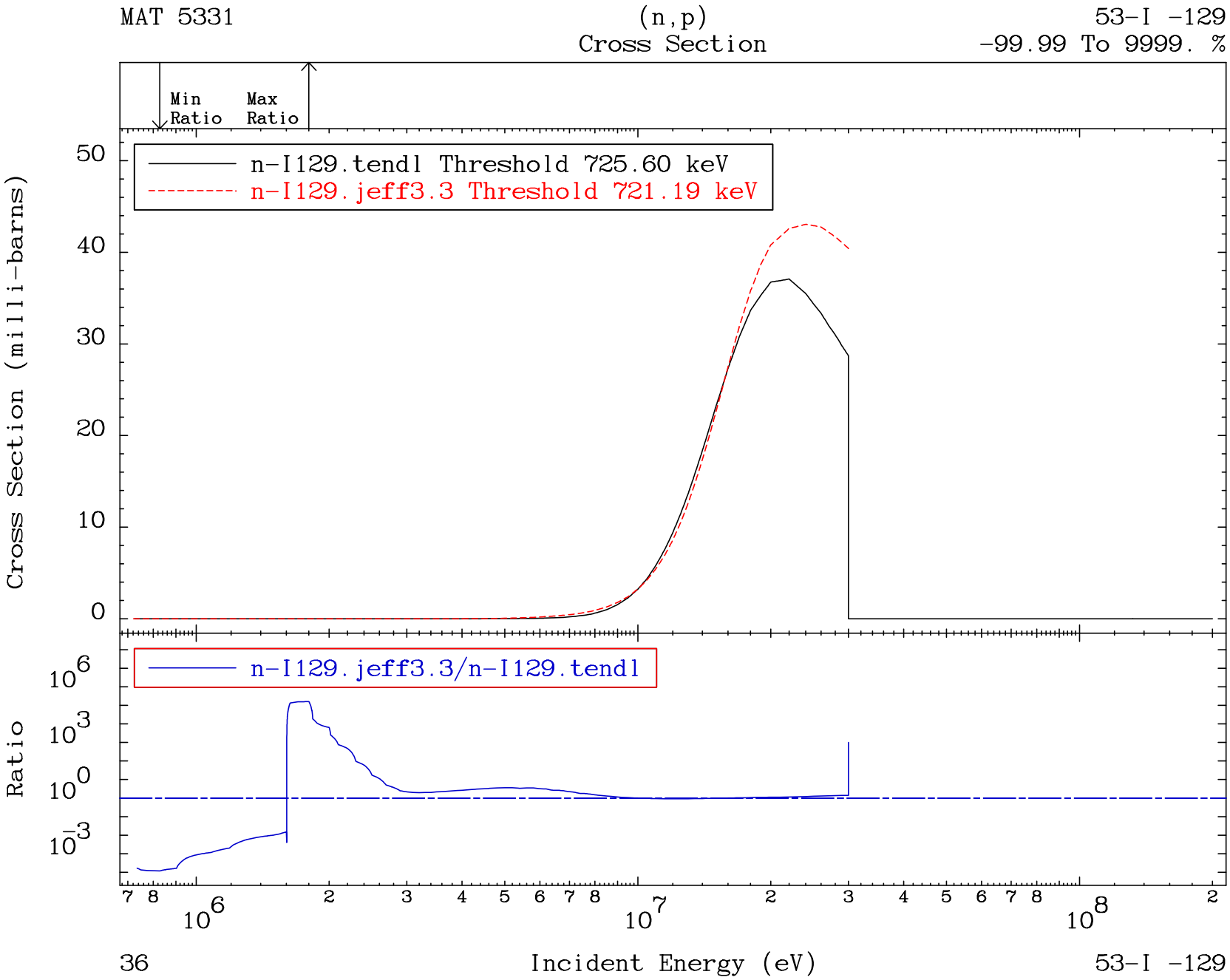

MAT 5331
MT= 63 (n,n') Level
Cross Section
53-I -129
-100.0 To 30.00 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 1.2060 MeV
n-I129.jeff3.3 Threshold 1.2060 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
31
Incident Energy (eV)
53-I -129

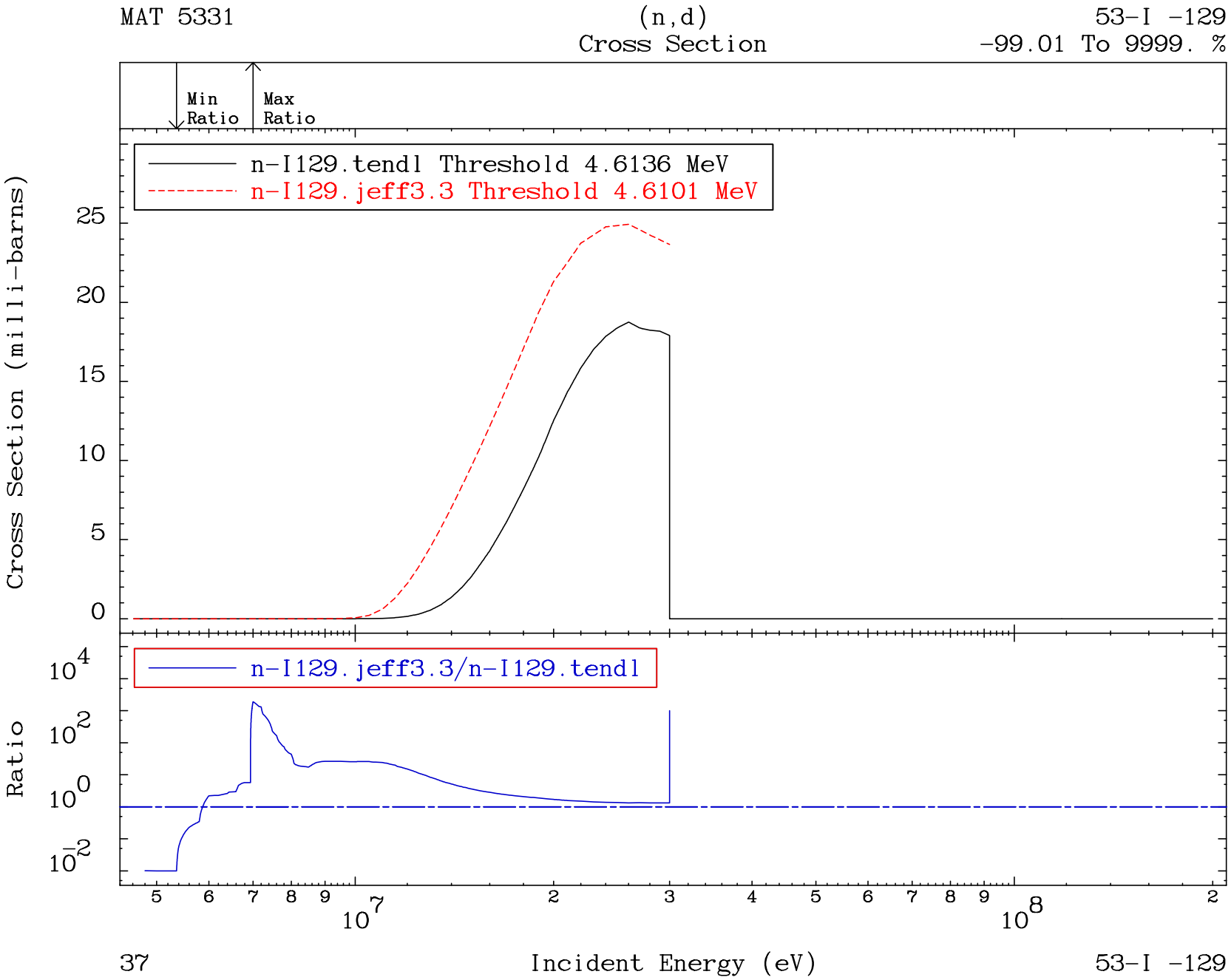

MAT 5331
MT= 64 (n,n') Level
Cross Section
53-I -129
-100.0 To 207.6 %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 1.2130 MeV
n-I129.jeff3.3 Threshold 1.2130 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
32
Incident Energy (eV)
53-I -129

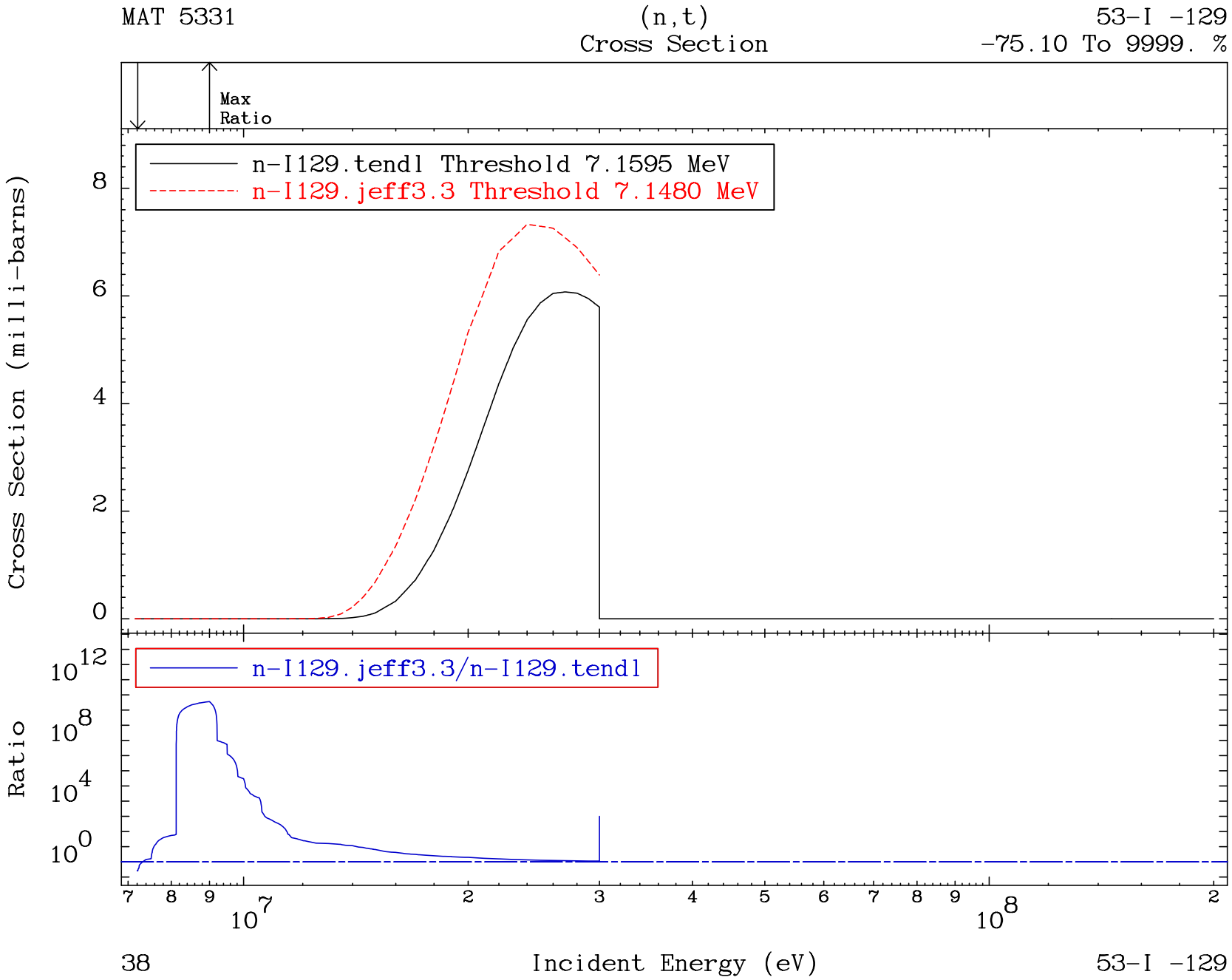

MAT 5331
MT= 65 (n,n') Level
Cross Section
53-I -129
-23.78 To 301.5 %
Min Ratio
Max Ratio
n-I129.tendl Threshold 1.2193 MeV
n-I129.jeff3.3 Threshold 1.2193 MeV
Cross Section (milli-barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
33
53-I -129

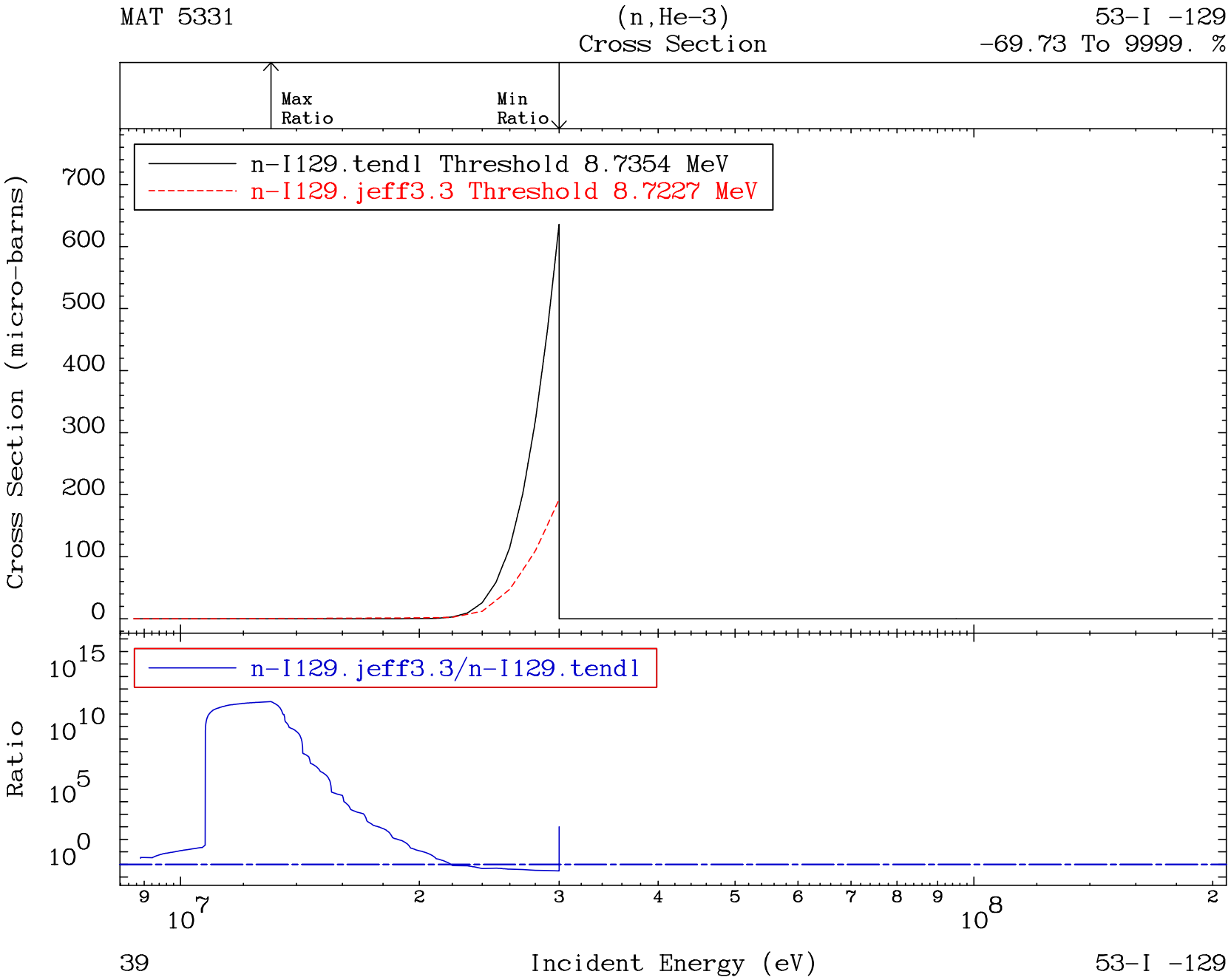

MAT 5331
(n,n') Continuum
Cross Section
53-I -129
-25.56 To 9999. %
Max
Ratio
Min
Ratio
n-I129.tendl Threshold 2.0177 MeV
n-I129.jeff3.3 Threshold 1.2193 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^3
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
34
Incident Energy (eV)
53-I -129

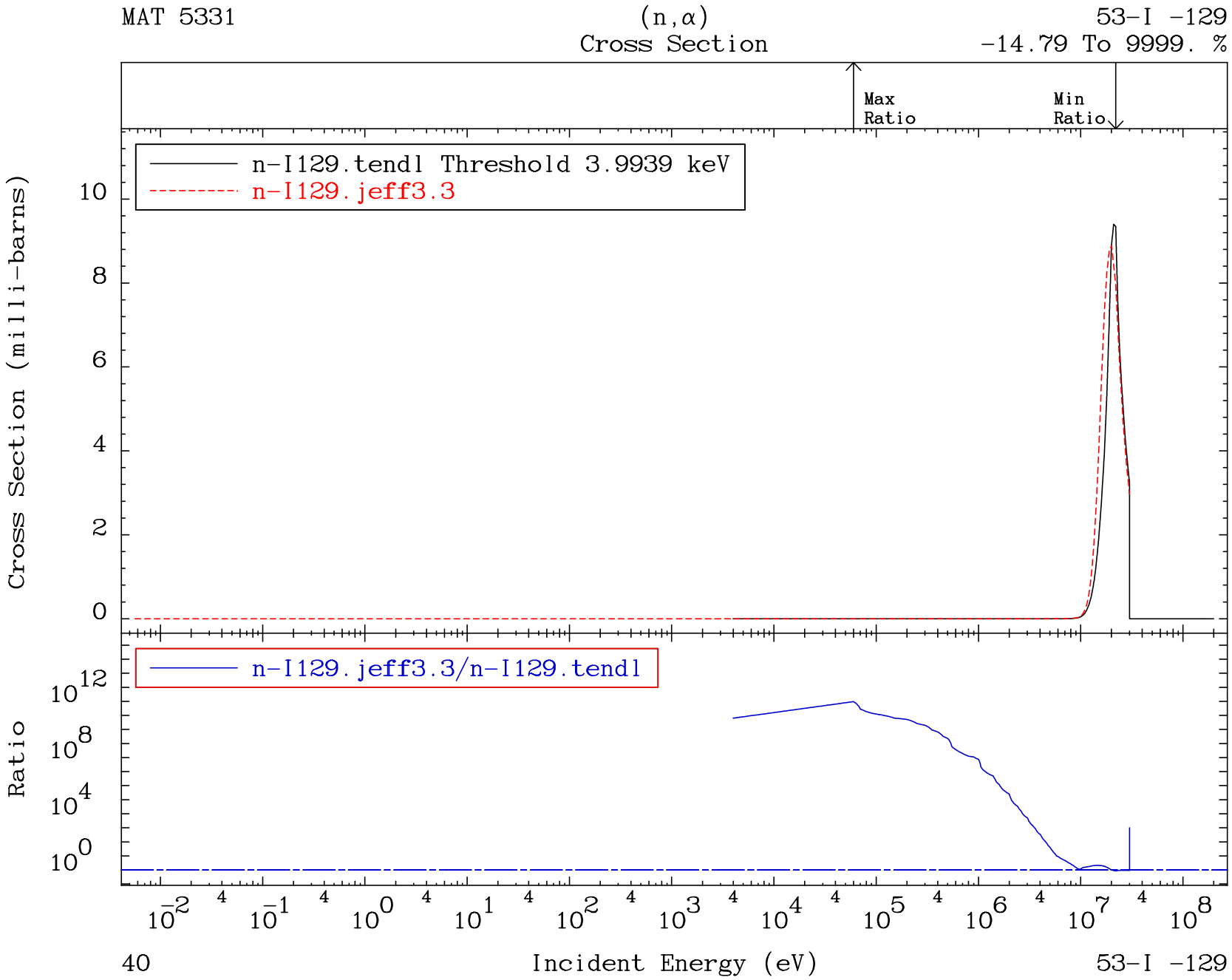

MAT 5331
(n,γ)
Cross Section
53-I -129
-99.95 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
35
Incident Energy (eV)
53-I -129

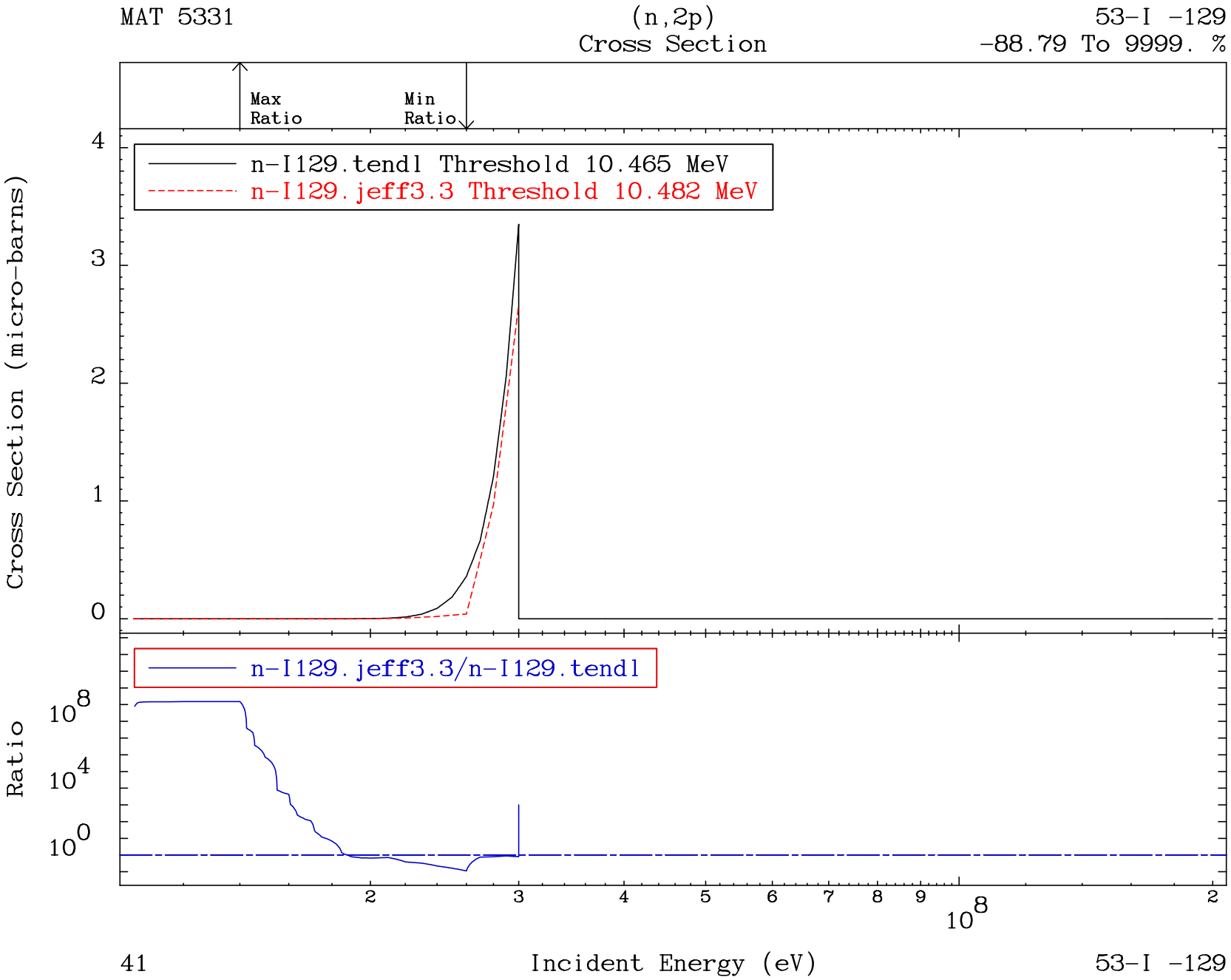

MAT 5331
(n,p)
Cross Section
53-I -129
-99.99 To 9999. %
Min Ratio
Max Ratio
n-I129.tendl Threshold 725.60 keV
n-I129.jeff3.3 Threshold 721.19 keV
Cross Section (milli-barns)
50
40
30
20
10
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^6
10^3
10^0
10^-3
7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
36
Incident Energy (eV)
53-I -129

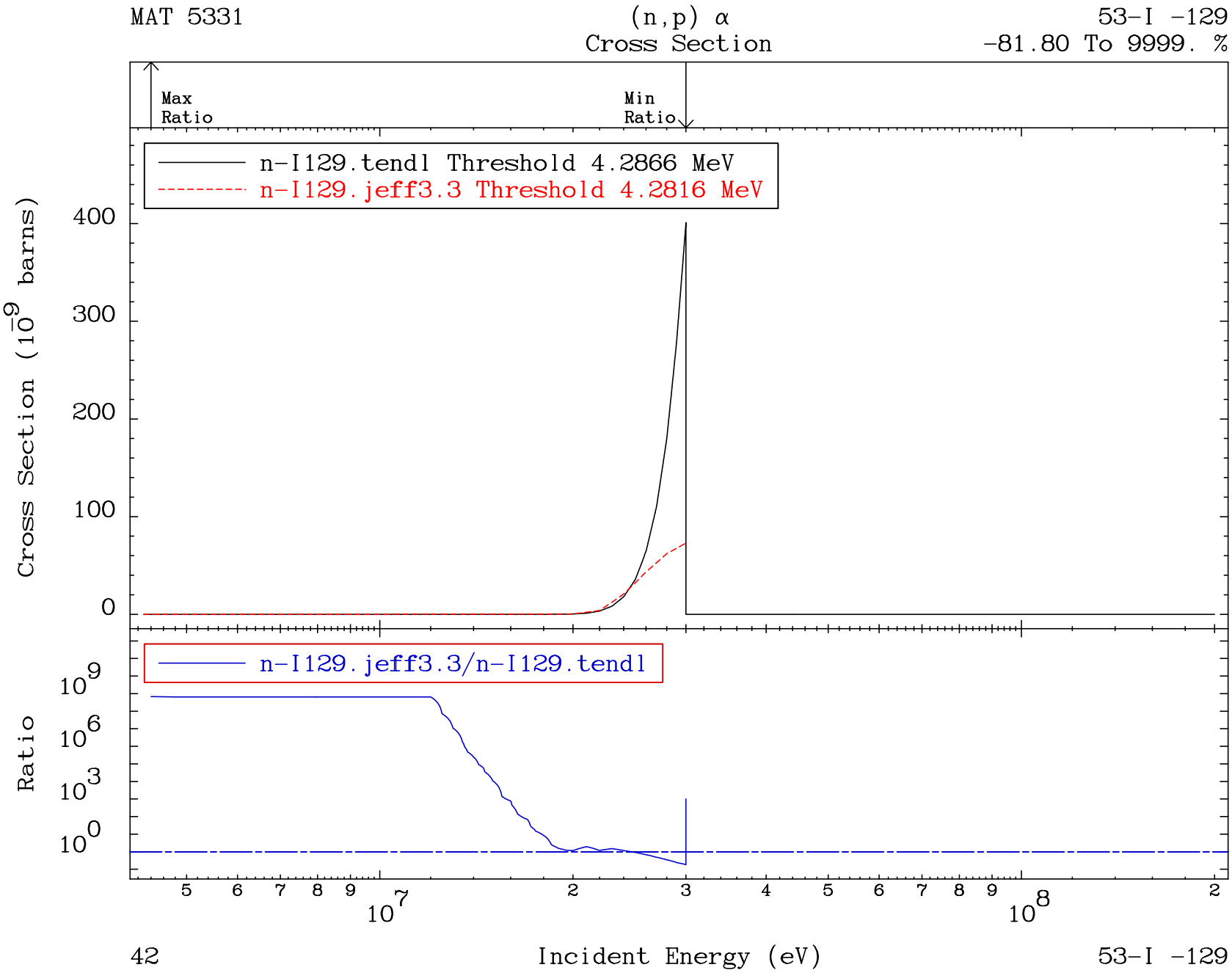

MAT 5331
(n,d)
Cross Section
53-I -129
-99.01 To 9999. %
Min Ratio
Max Ratio
n-I129.tendl Threshold 4.6136 MeV
n-I129.jeff3.3 Threshold 4.6101 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^4
10^2
10^0
10^-2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
37
Incident Energy (eV)
53-I -129

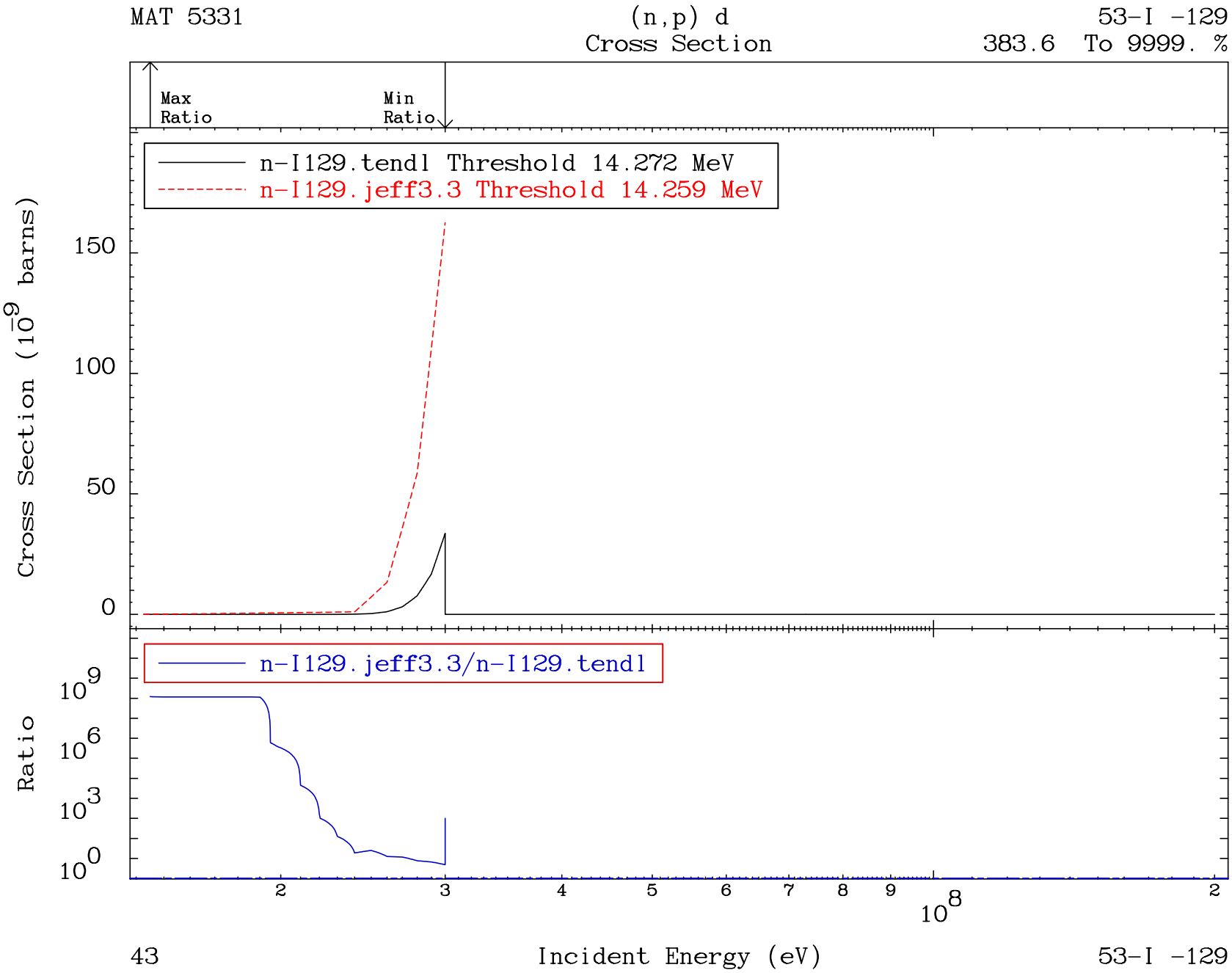

MAT 5331
(n,t)
Cross Section
53-I -129
-75.10 To 9999. %
Max
Ratio
n-I129.tendl Threshold 7.1595 MeV
n-I129.jeff3.3 Threshold 7.1480 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{0}
10^{4}
10^{8}
10^{12}
7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
38
Incident Energy (eV)
53-I -129

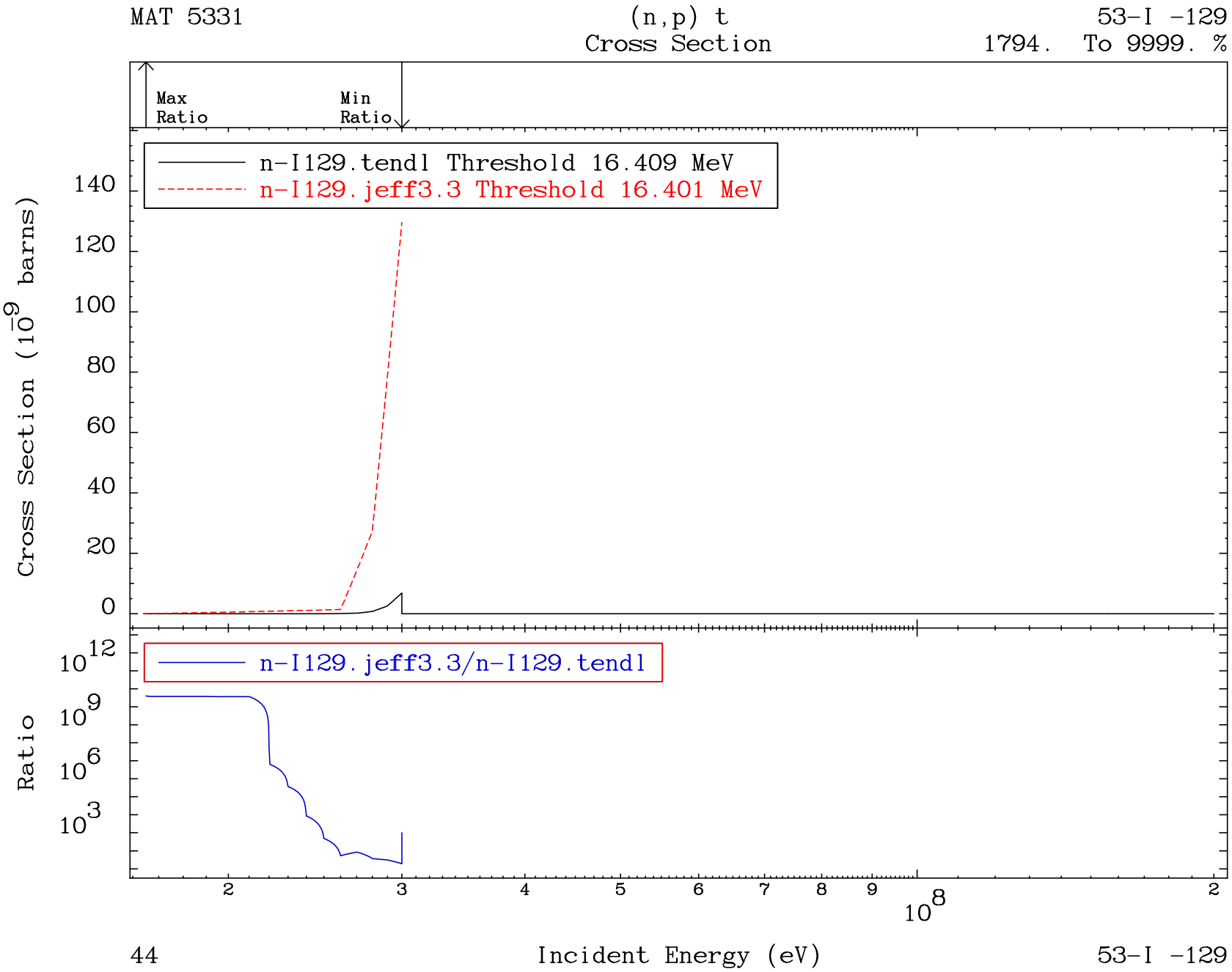

MAT 5331
(n,He-3)
Cross Section
53-I -129
-69.73 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 8.7354 MeV
n-I129.jeff3.3 Threshold 8.7227 MeV
Cross Section (micro-barns)
700
600
500
400
300
200
100
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^15
10^10
10^5
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
39
Incident Energy (eV)
53-I -129

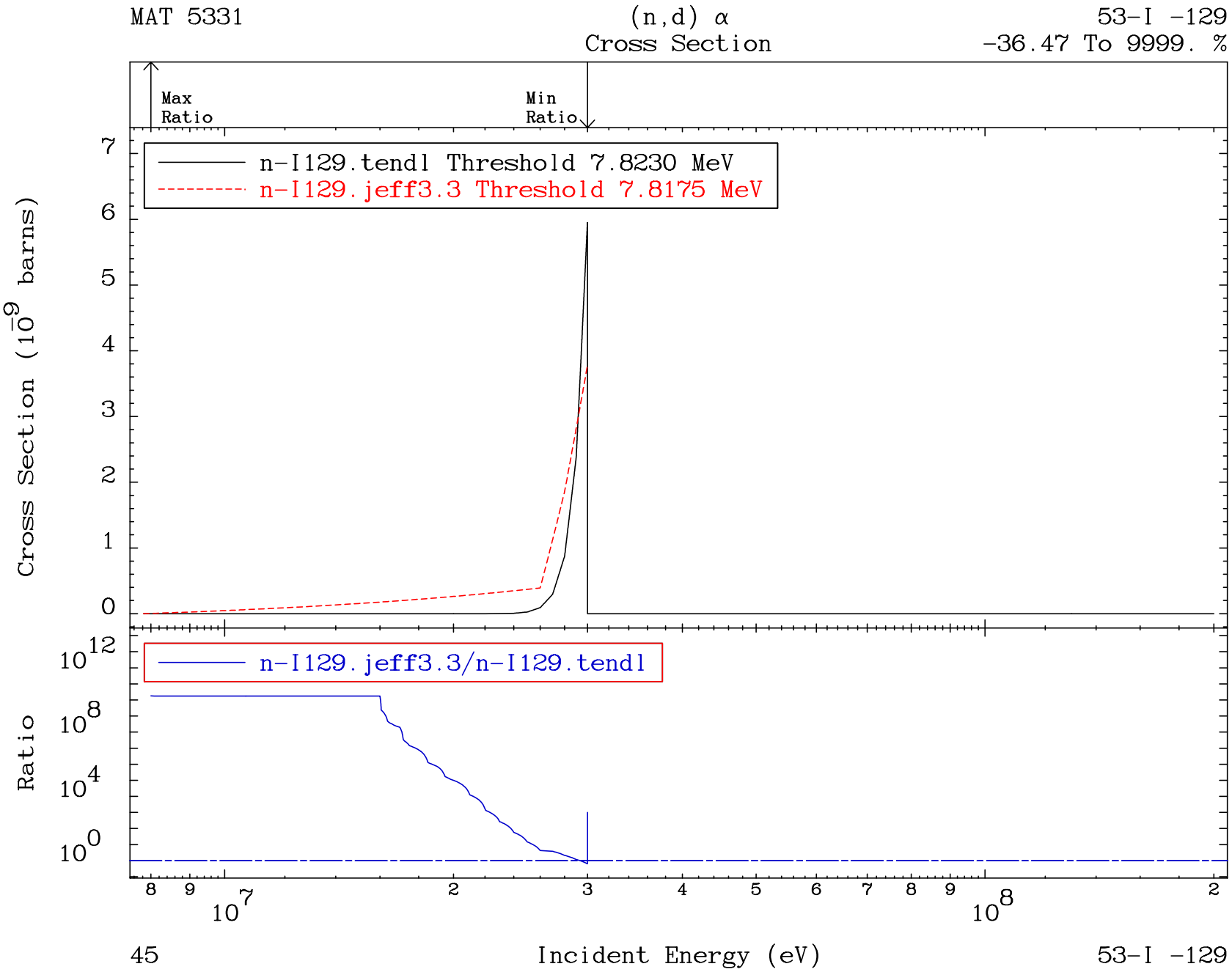

MAT 5331
(n,α)
Cross Section
53-I -129
-14.79 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 3.9939 keV
n-I129.jeff3.3
Cross Section (milli-barns)
0
2
4
6
8
10
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{0}
10^{4}
10^{8}
10^{12}
10^{-2}
10^{-1}
10^{0}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
10^{6}
10^{7}
10^{8}
Incident Energy (eV)
40
53-I -129

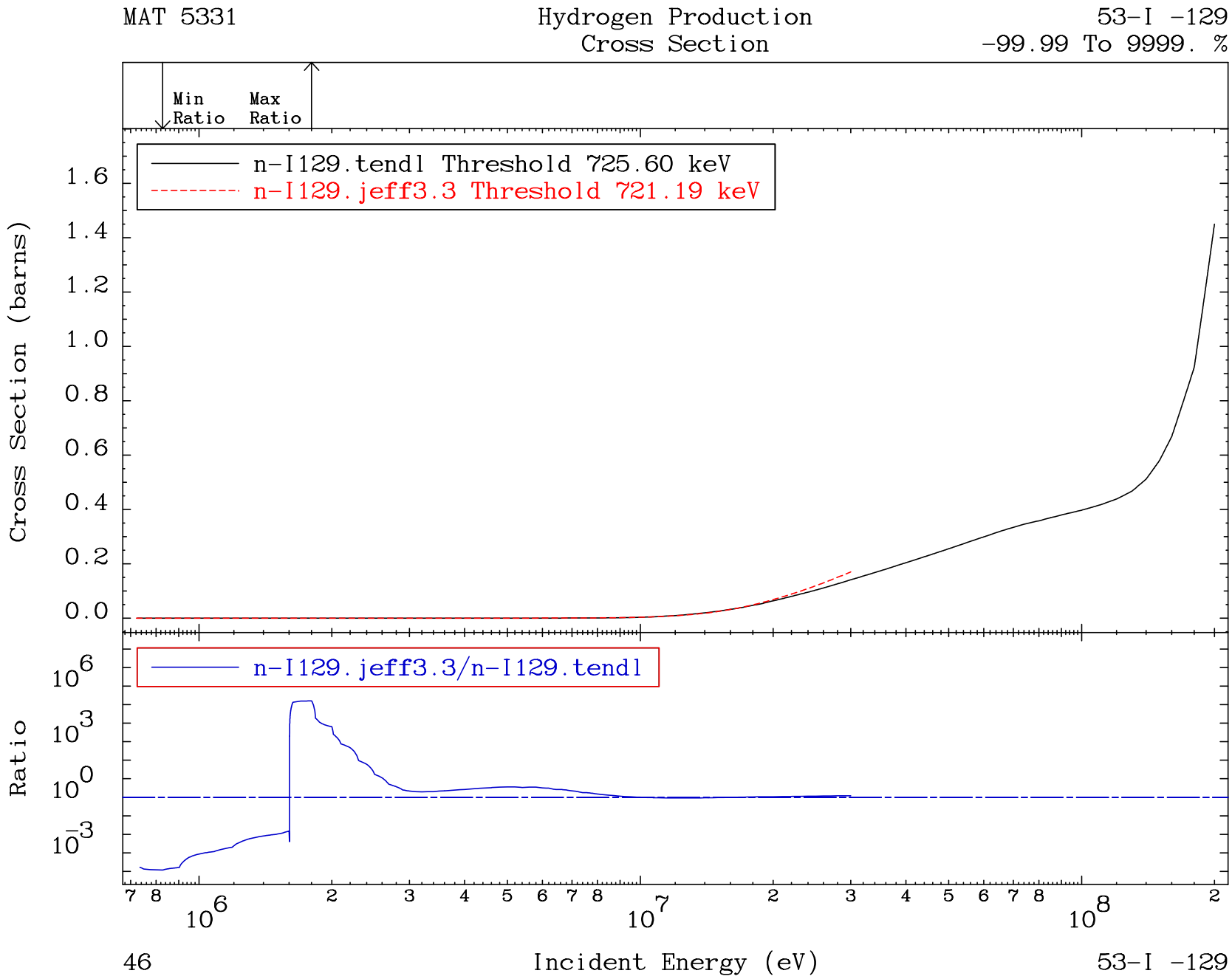

MAT 5331
(n,2p)
Cross Section
53-I -129
-88.79 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 10.465 MeV
n-I129.jeff3.3 Threshold 10.482 MeV
Cross Section (micro-barns)
0
1
2
3
4
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^4
10^8
2
3
4
5
6
7
8
9
10^8
2
41
Incident Energy (eV)
53-I -129

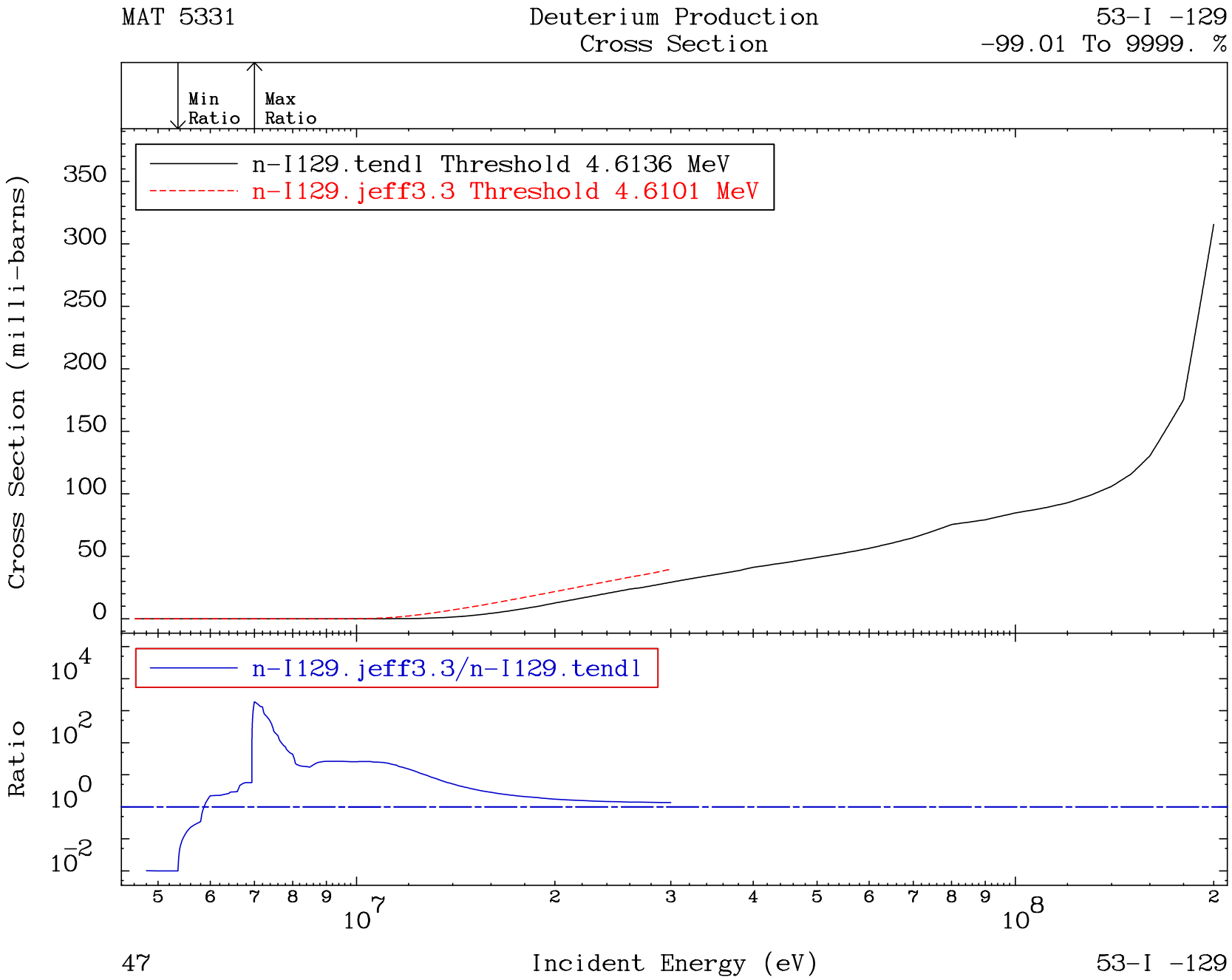

MAT 5331
(n,p) α
Cross Section
53-I -129
-81.80 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 4.2866 MeV
n-I129.jeff3.3 Threshold 4.2816 MeV
Cross Section (10^{-9} barns)
400
300
200
100
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{9}
10^{6}
10^{3}
10^{0}
5 6 7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
42
Incident Energy (eV)
53-I -129

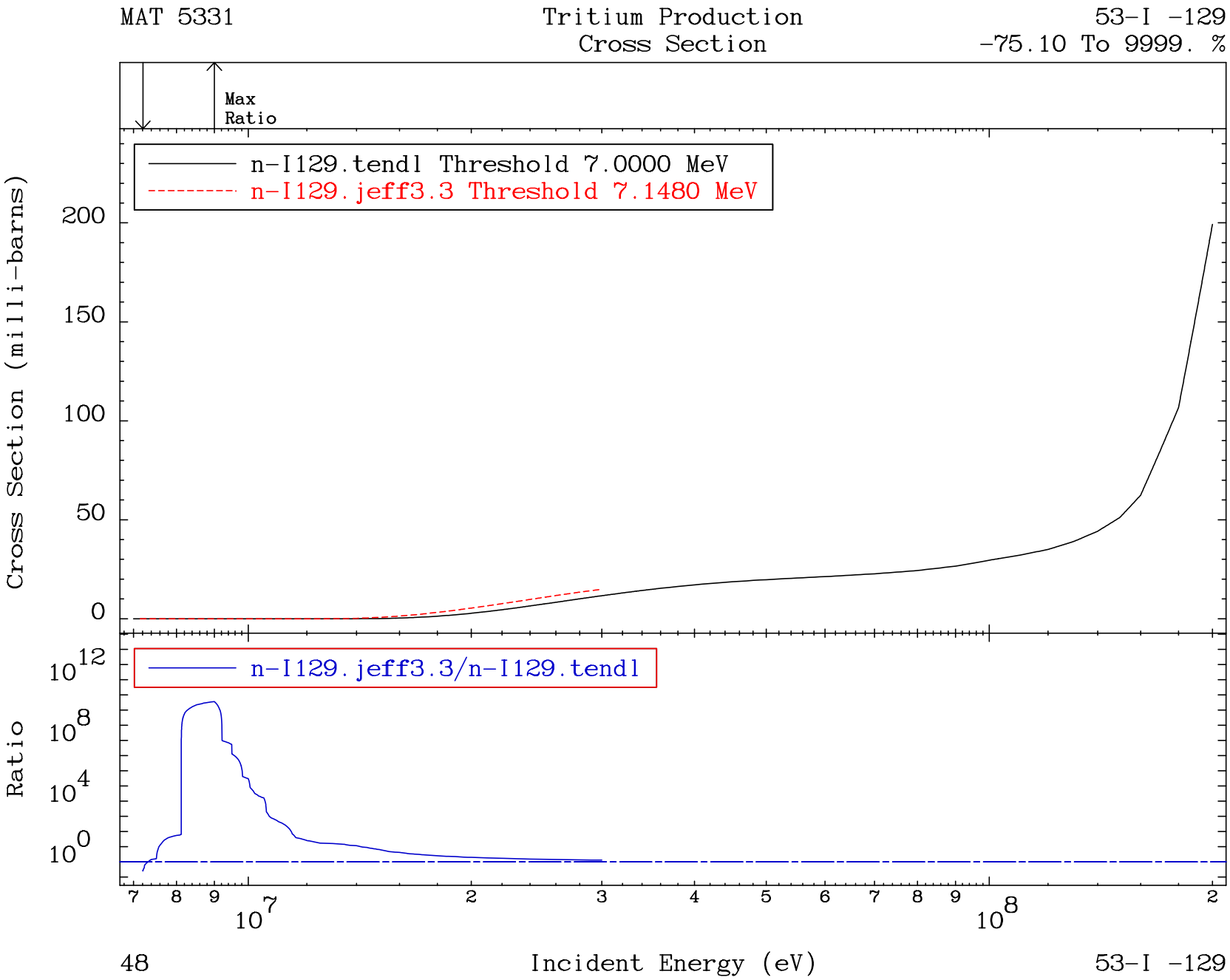

MAT 5331
(n,p) d
Cross Section
53-I -129
383.6 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 14.272 MeV
n-I129.jeff3.3 Threshold 14.259 MeV
Cross Section (10^{-9} barns)
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{9}
10^{6}
10^{3}
10^{0}
2
3
4
5
6
7
8
9
10^{8}
2
43
Incident Energy (eV)
53-I -129

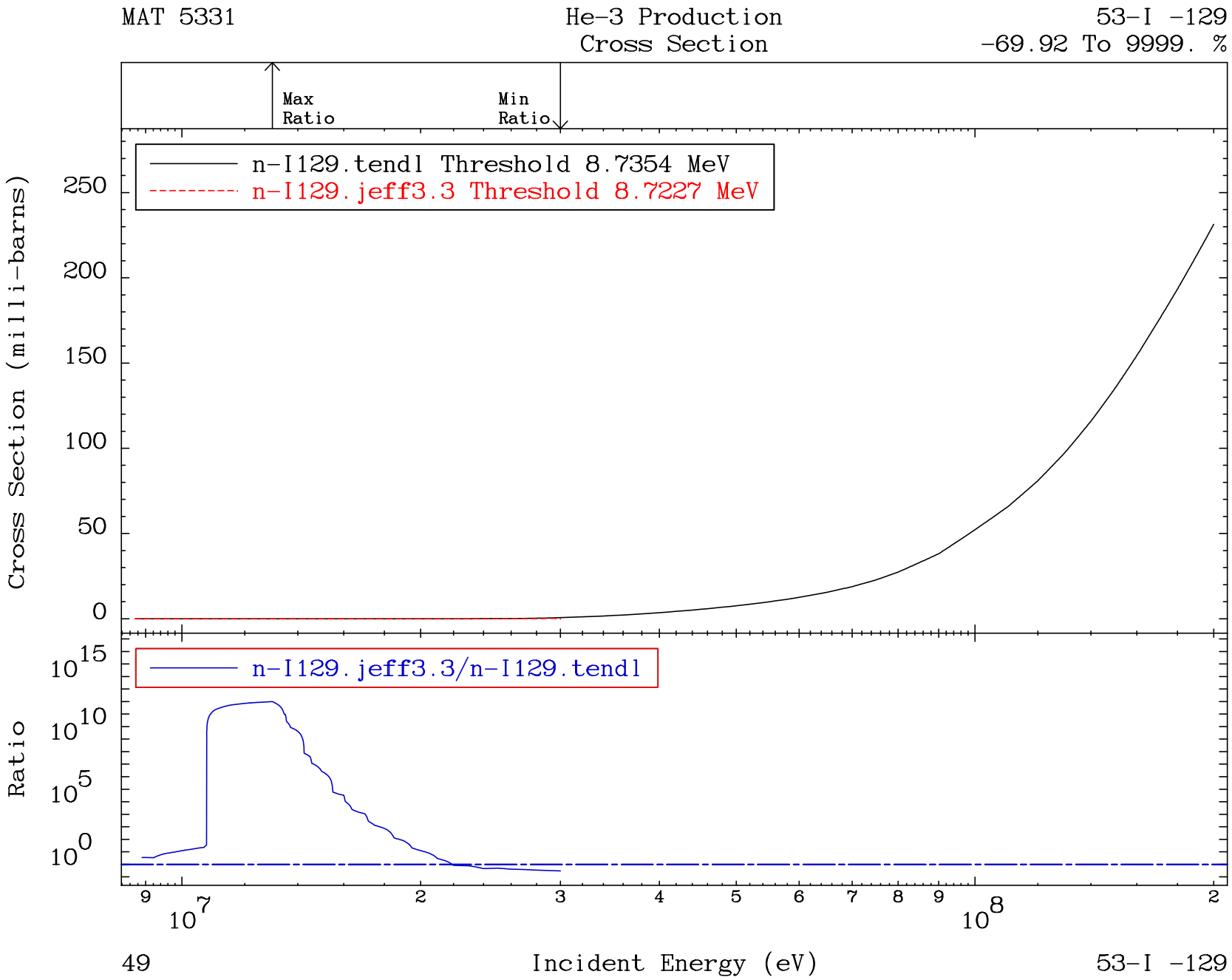

MAT 5331
(n,p) t
Cross Section
53-I -129
1794. To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 16.409 MeV
n-I129.jeff3.3 Threshold 16.401 MeV
Cross Section (10^{-9} barns)
140
120
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{12}
10^{9}
10^{6}
10^{3}
2
3
4
5
6
7
8
9
10^{8}
2
44
Incident Energy (eV)
53-I -129

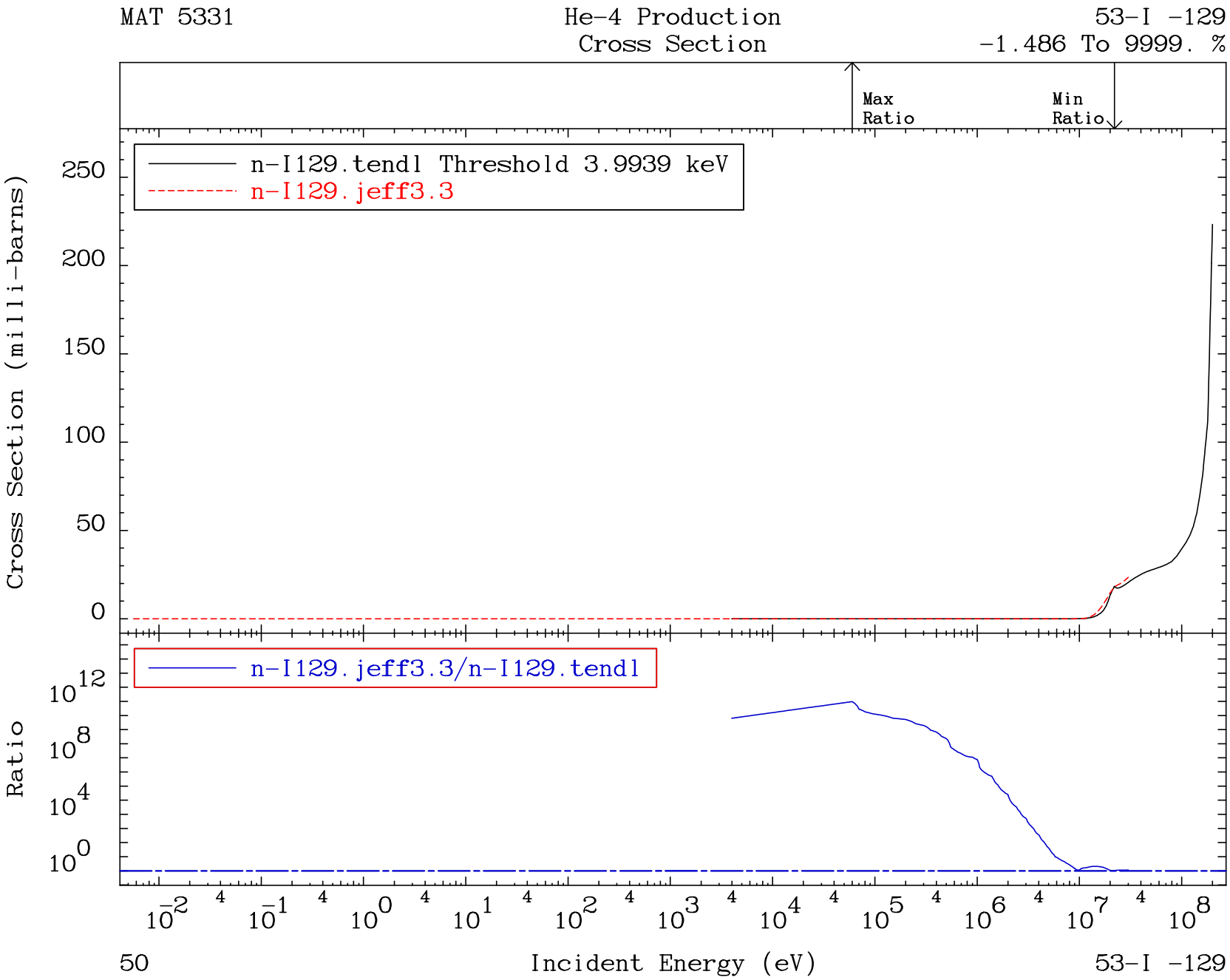

MAT 5331
(n,d) α
Cross Section
53-I -129
-36.47 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 7.8230 MeV
n-I129.jeff3.3 Threshold 7.8175 MeV
Cross Section (10^{-9} barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
45
53-I -129

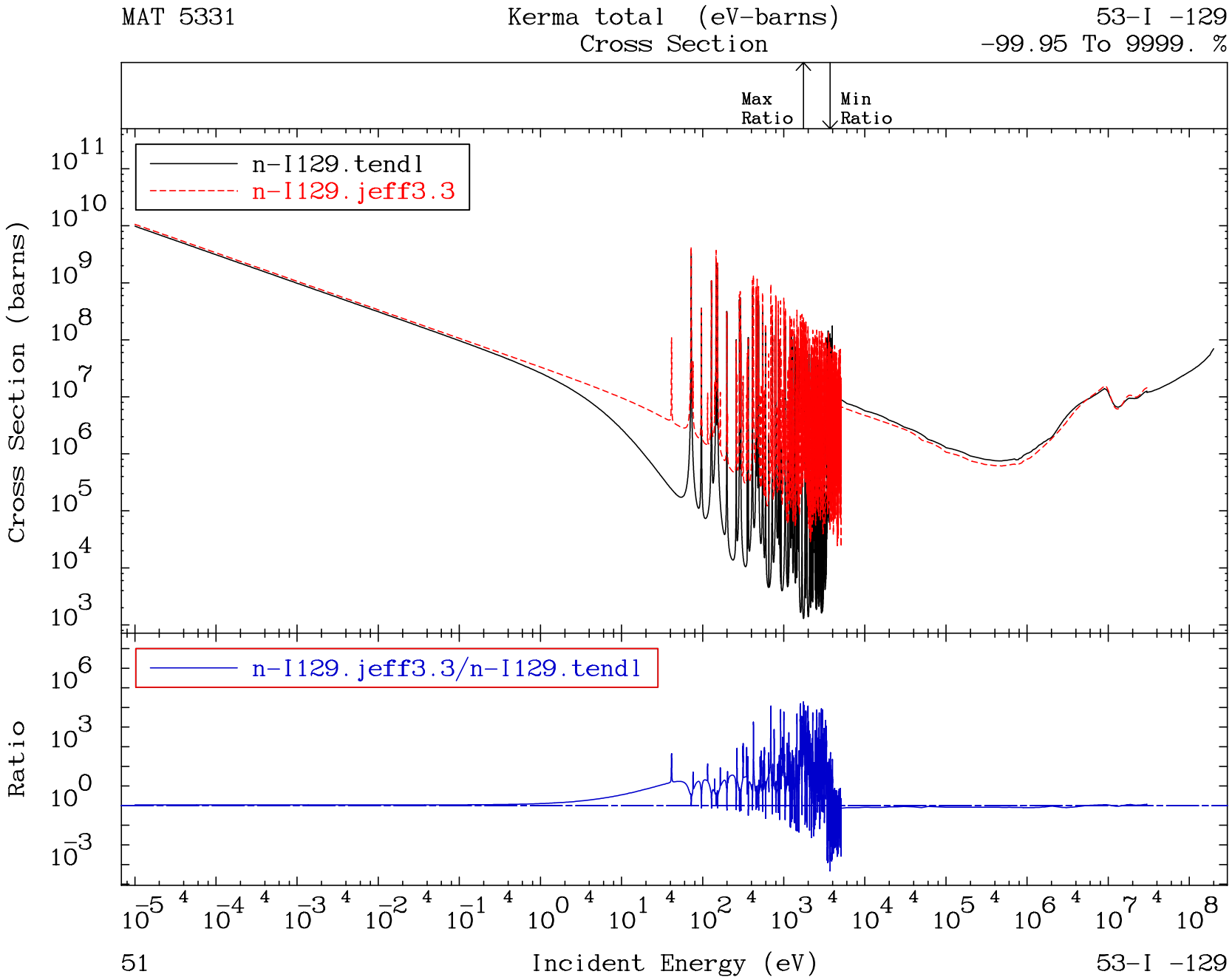

MAT 5331
Hydrogen Production
Cross Section
53-I -129
-99.99 To 9999. %
Min Ratio
Max Ratio
n-I129.tendl Threshold 725.60 keV
n-I129.jeff3.3 Threshold 721.19 keV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^6
10^3
10^0
10^-3
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
46
Incident Energy (eV)
53-I -129

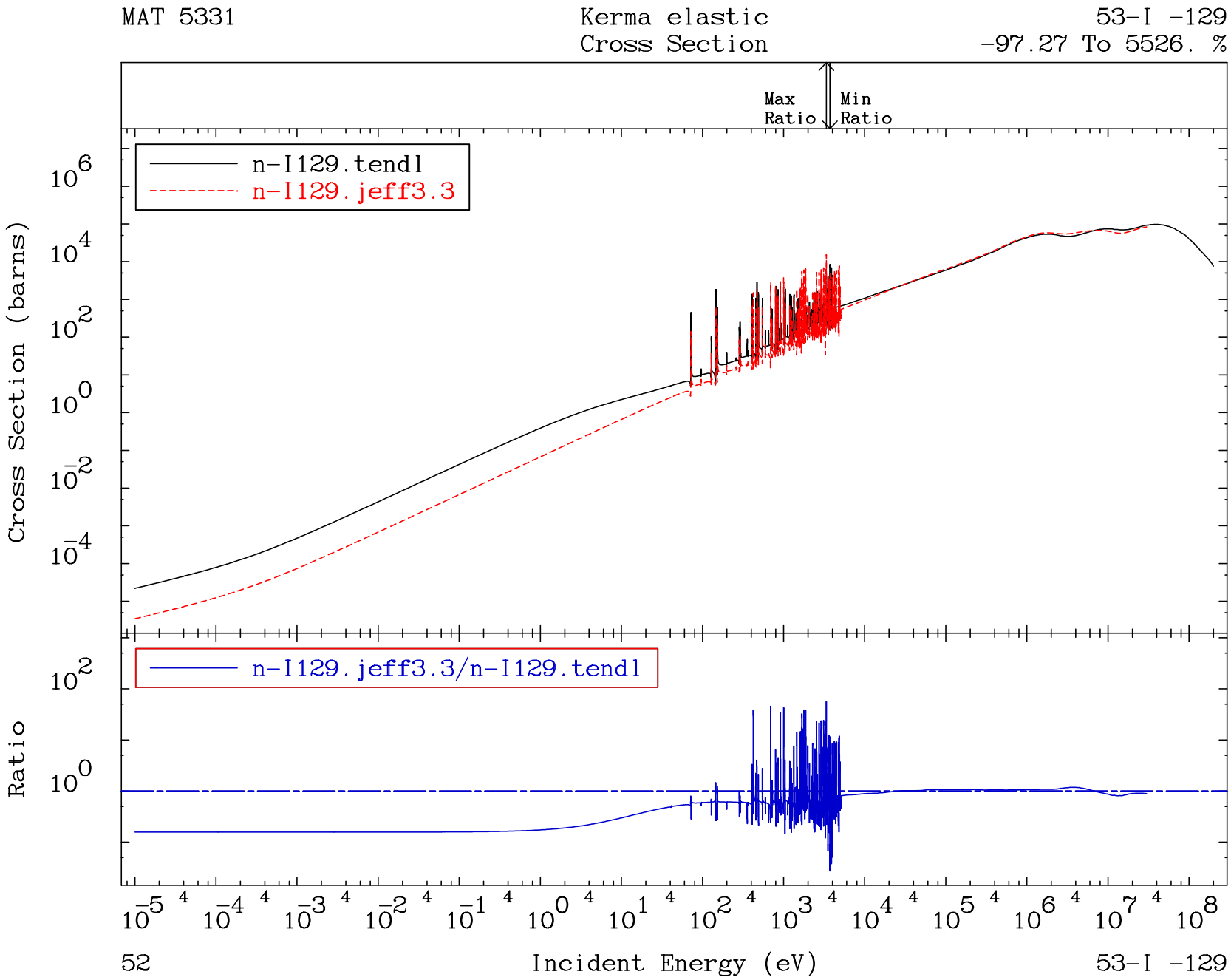

MAT 5331
Deuterium Production
Cross Section
53-I -129
-99.01 To 9999. %
Min Ratio
Max Ratio
n-I129.tendl Threshold 4.6136 MeV
n-I129.jeff3.3 Threshold 4.6101 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^4
10^2
10^0
10^-2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
53-I -129

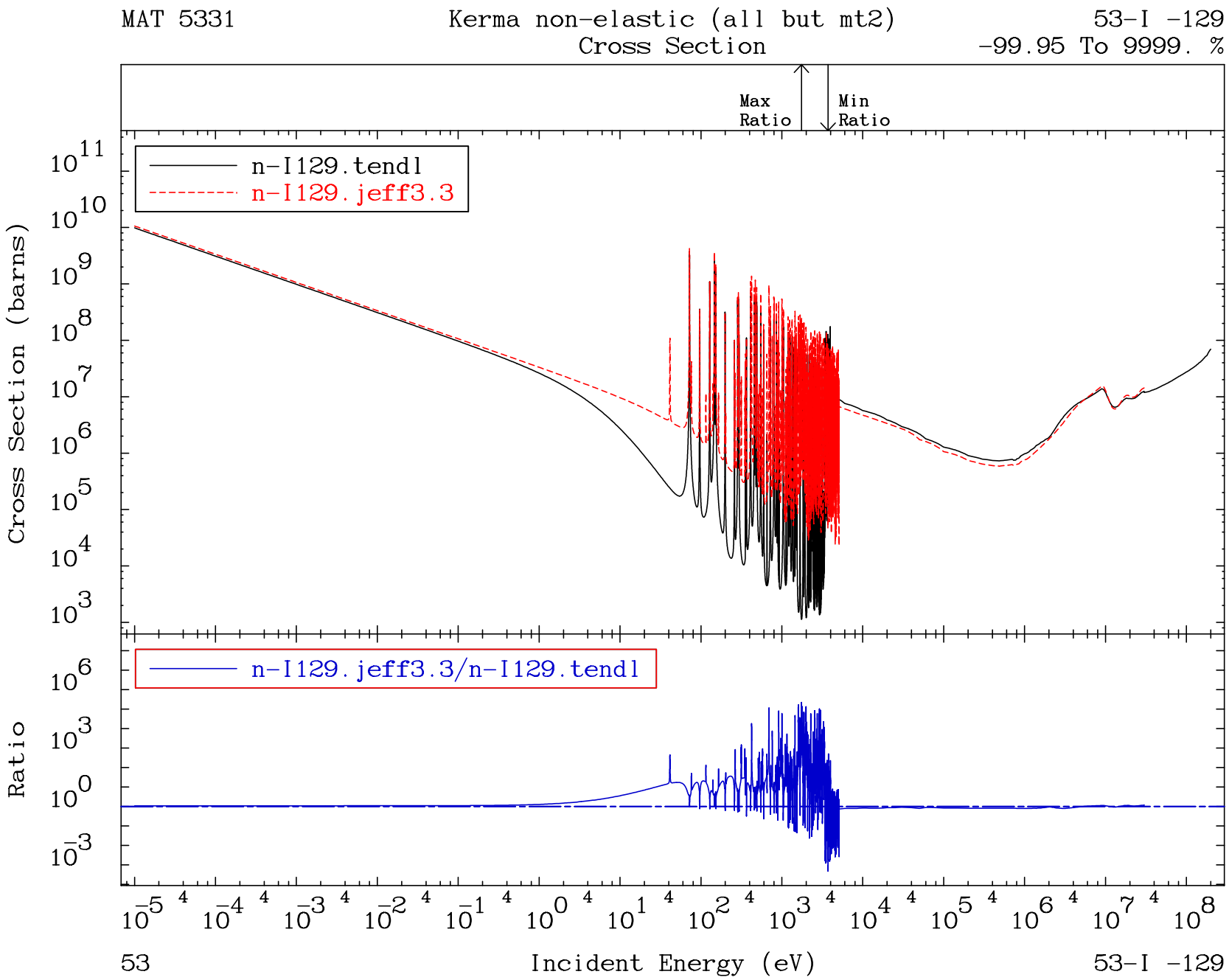

MAT 5331
Tritium Production
Cross Section
53-I -129
-75.10 To 9999. %
Max
Ratio
n-I129.tendl Threshold 7.0000 MeV
n-I129.jeff3.3 Threshold 7.1480 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^12
10^8
10^4
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
53-I -129

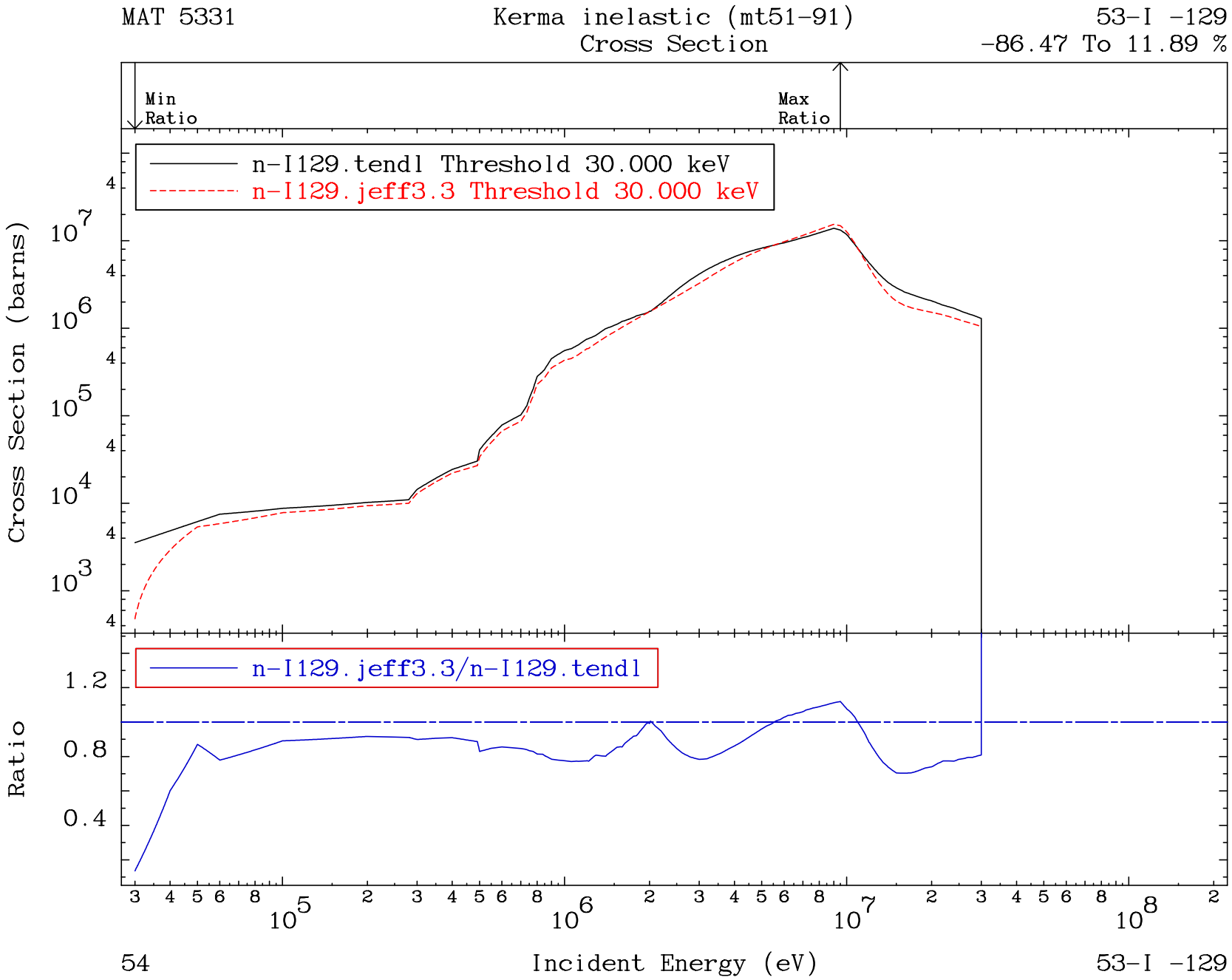

MAT 5331
He-3 Production
Cross Section
53-I -129
-69.92 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 8.7354 MeV
n-I129.jeff3.3 Threshold 8.7227 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^15
10^10
10^5
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
49
Incident Energy (eV)
53-I -129

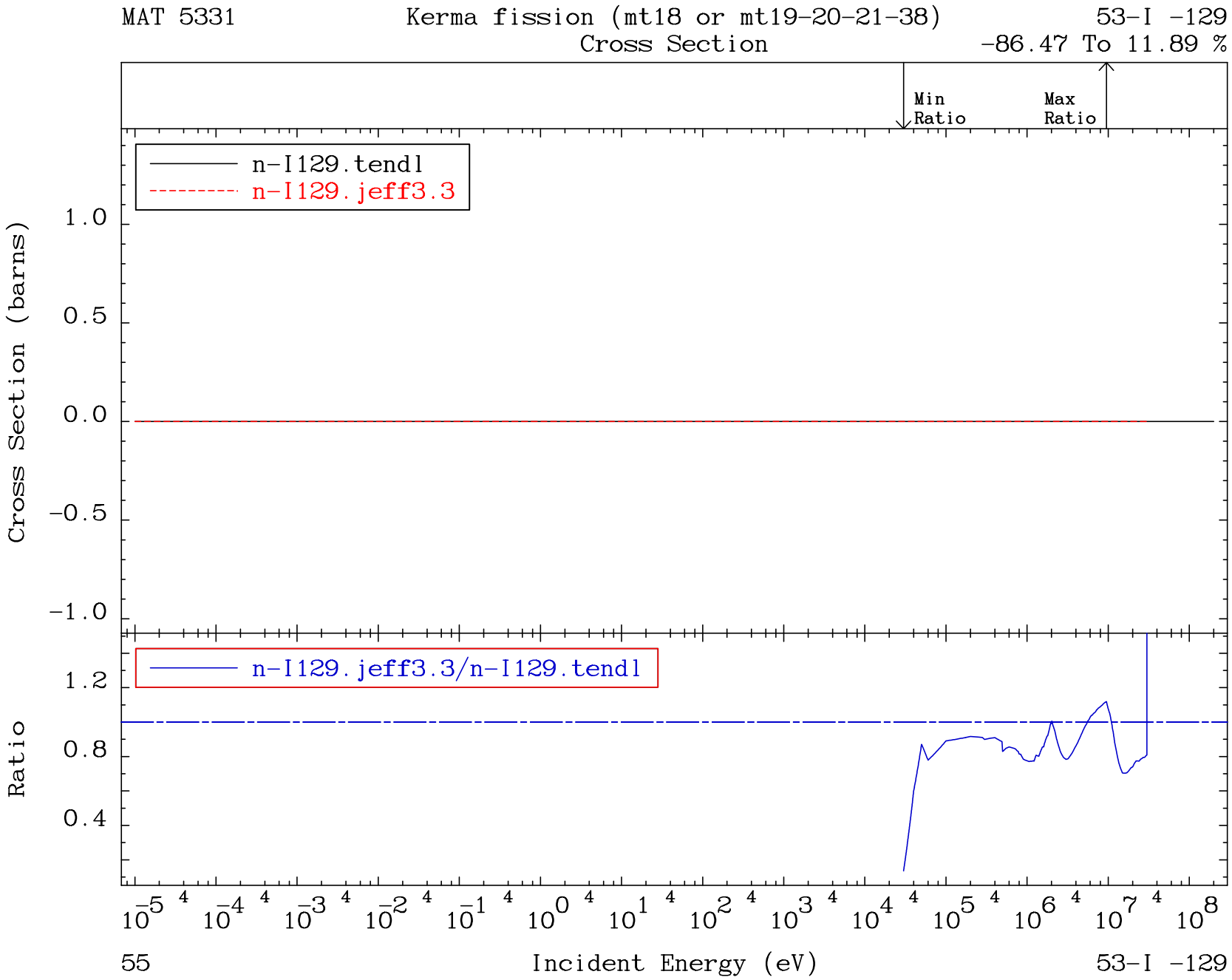

MAT 5331
He-4 Production
Cross Section
53-I -129
-1.486 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 3.9939 keV
n-I129.jeff3.3
Cross Section (milli-barns)
250
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^12
10^8
10^4
10^0
10^-2
10^-1
10^0
10^1
10^2
10^3
10^4
10^5
10^6
10^7
10^8
50
Incident Energy (eV)
53-I -129

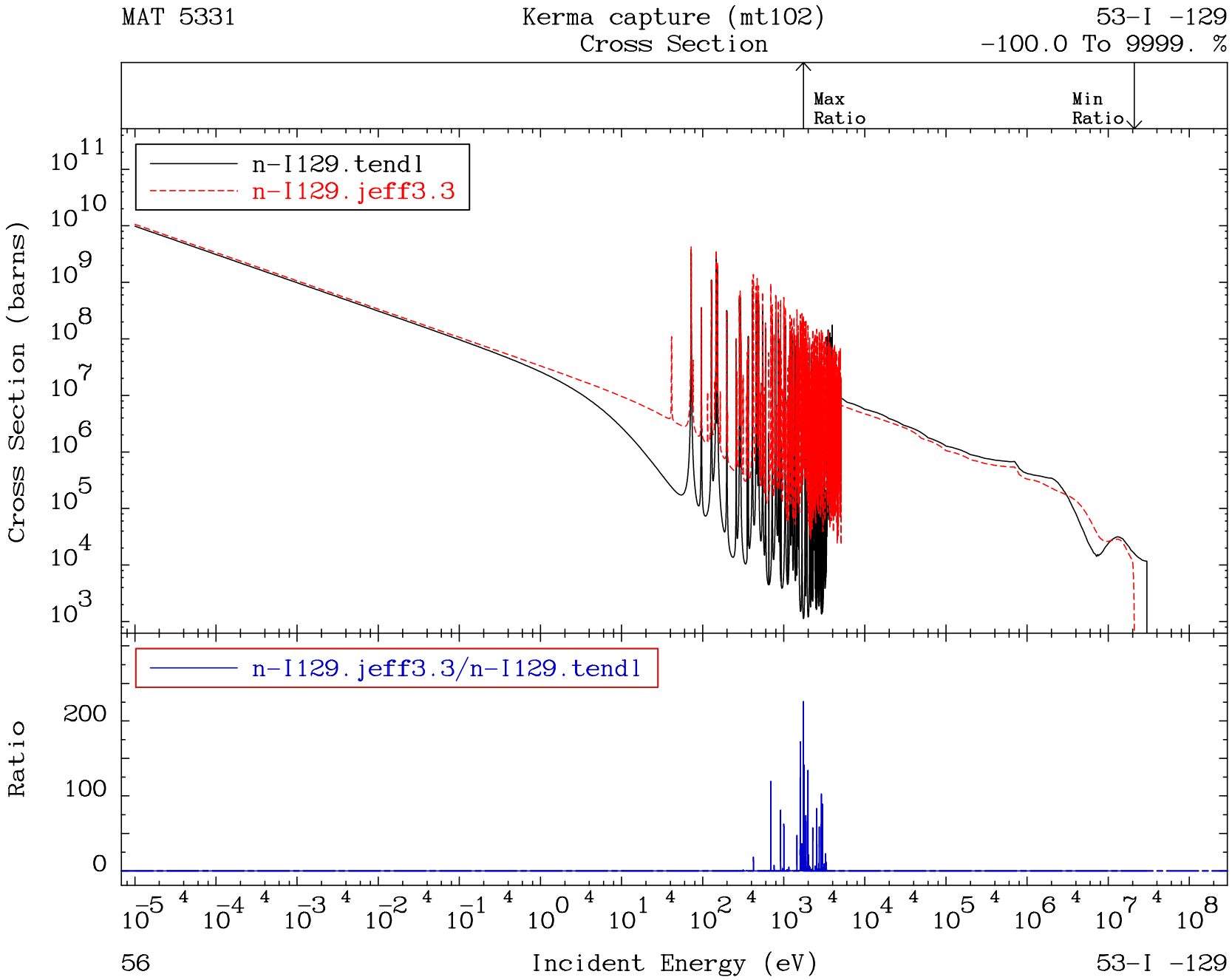

MAT 5331
Kerma total (eV-barns)
Cross Section
53-I -129
-99.95 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
51
53-I -129

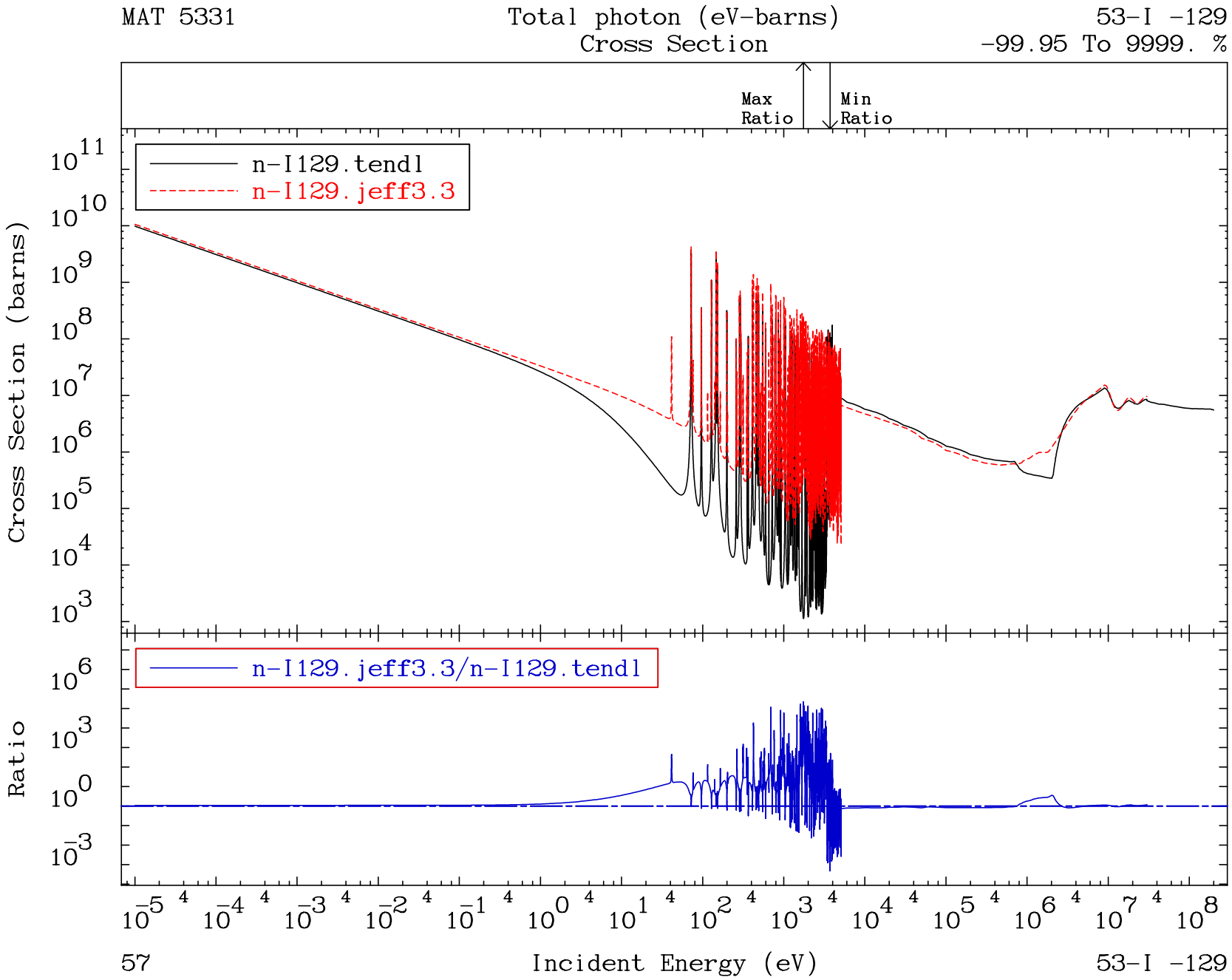

MAT 5331
Kerma elastic
Cross Section
53-I -129
-97.27 To 5526. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
52
53-I -129

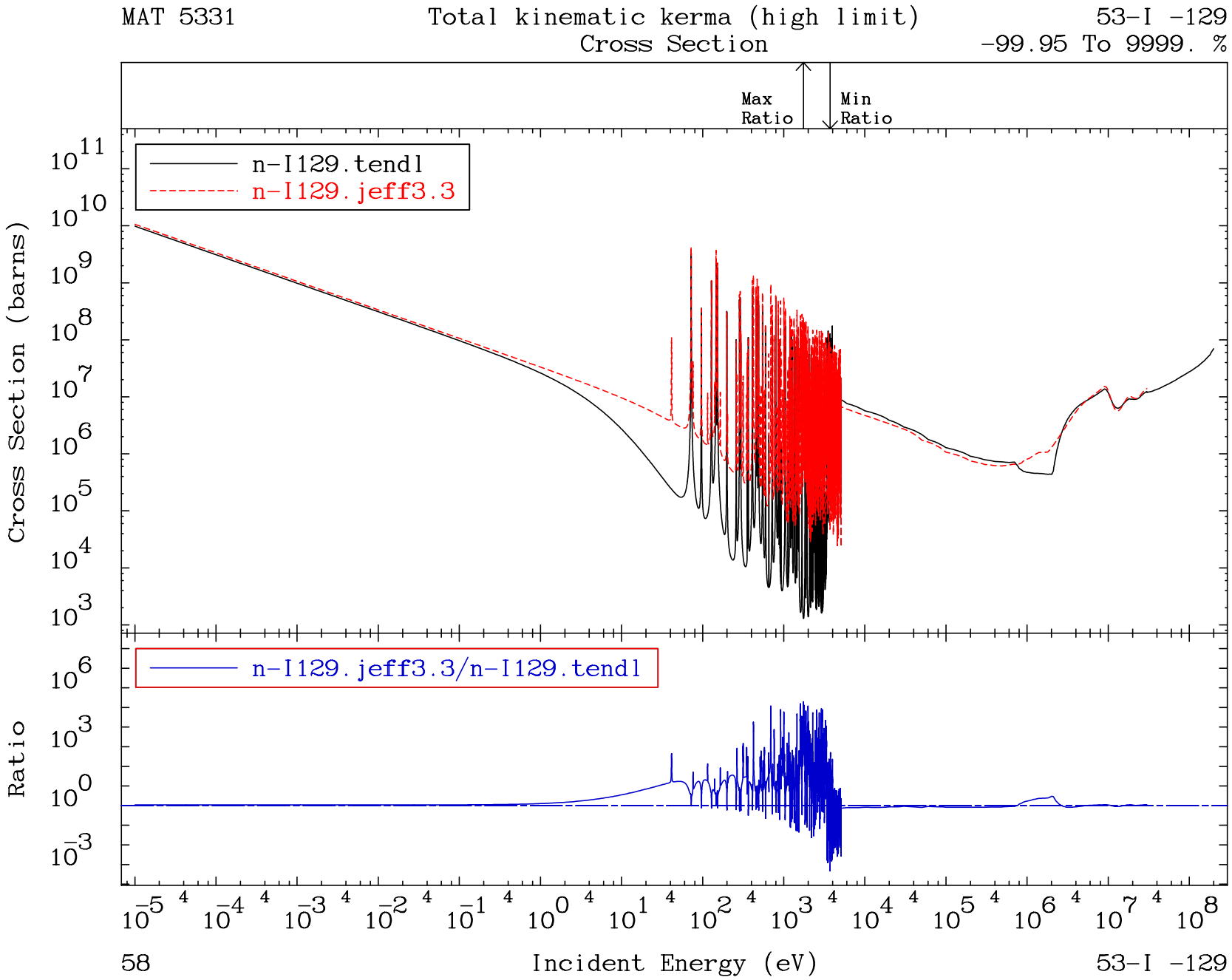

MAT 5331
Kerma non-elastic (all but mt2)
Cross Section
53-I -129
-99.95 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
53
53-I -129

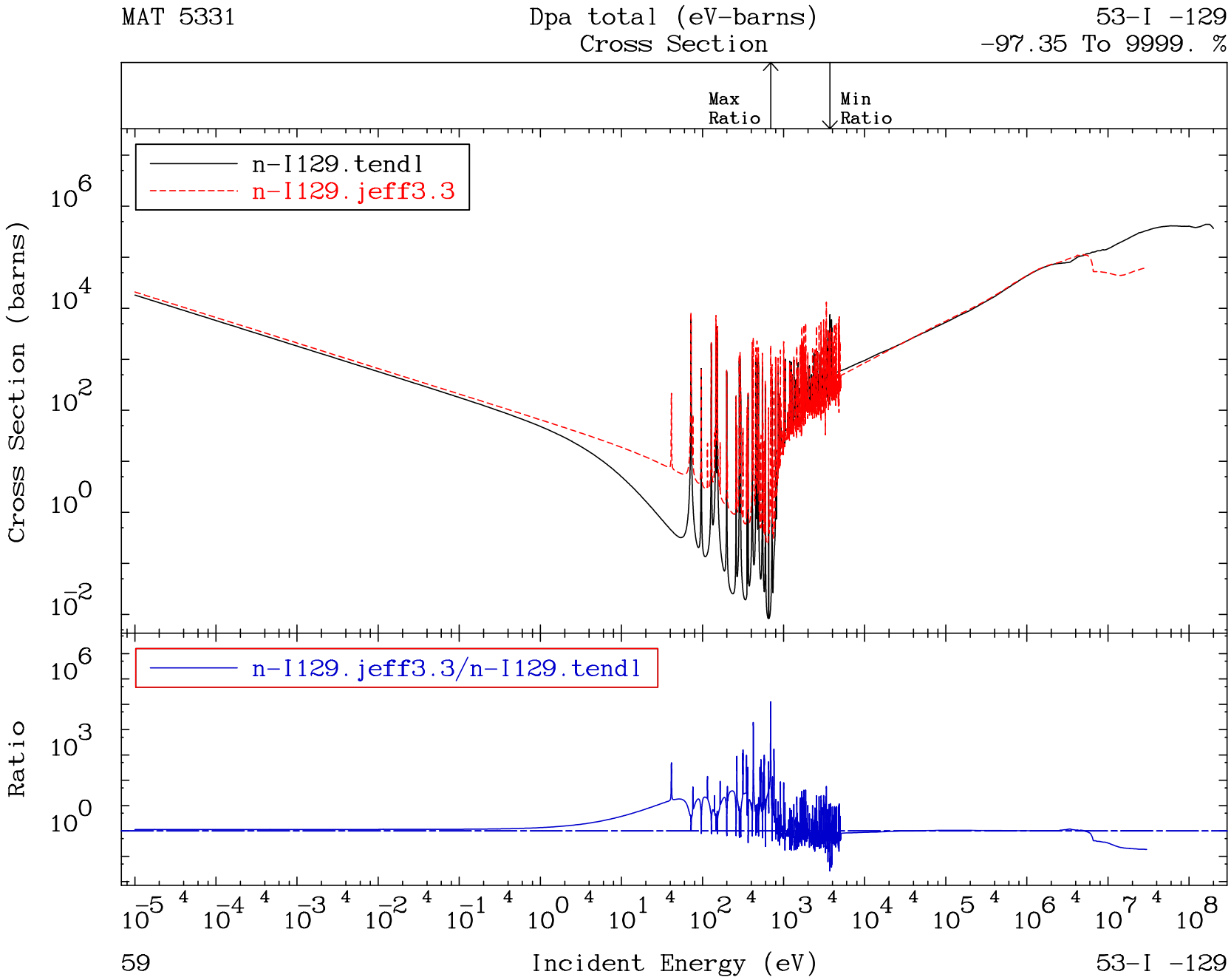

MAT 5331
Kerma inelastic (mt51-91)
Cross Section
53-I -129
-86.47 To 11.89 %
Min Ratio
Max Ratio
n-I129.tendl Threshold 30.000 keV
n-I129.jeff3.3 Threshold 30.000 keV
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
54
53-I -129

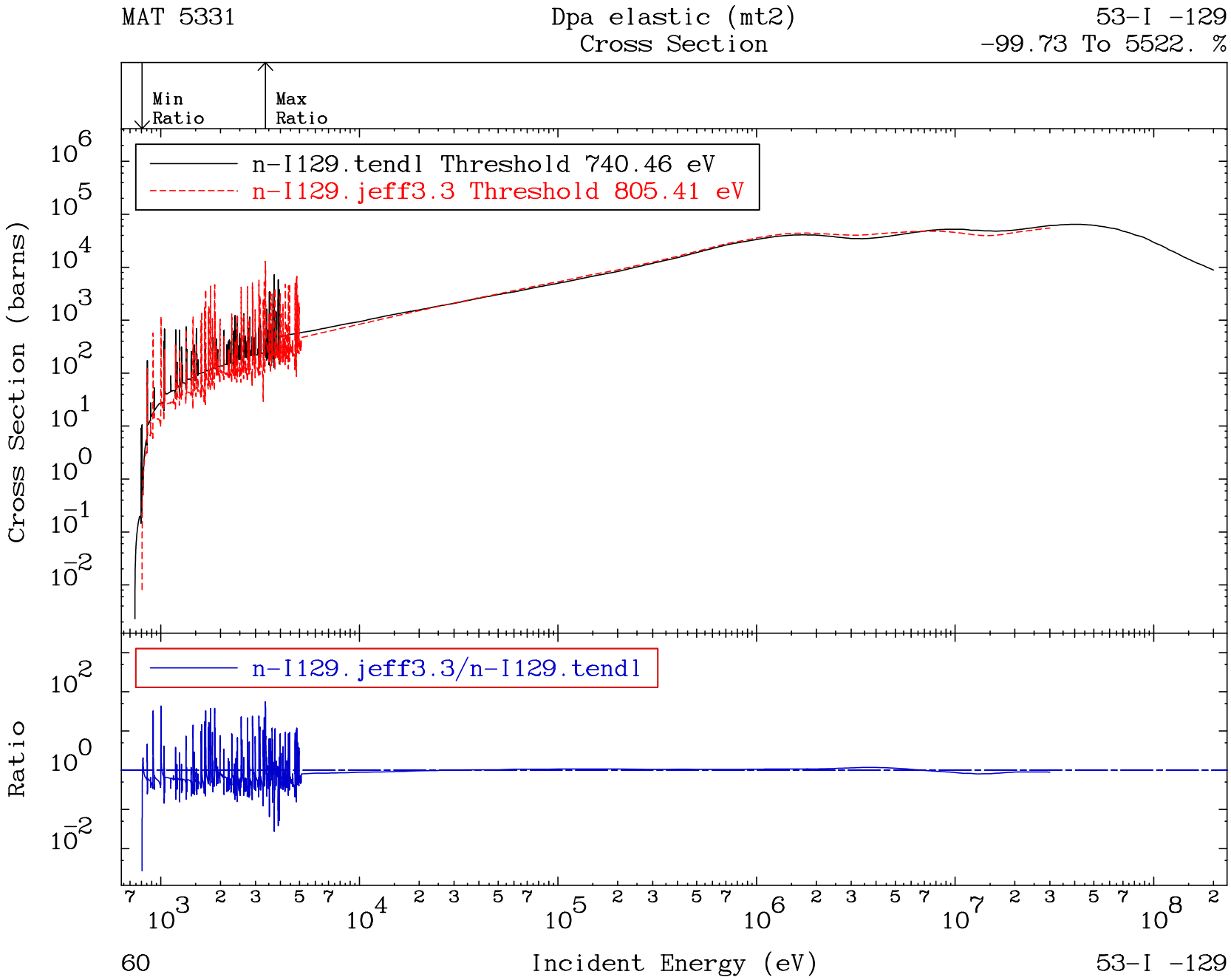

MAT 5331
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
53-I -129
-86.47 To 11.89 %
Min Ratio
Max Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-I129.jeff3.3/n-I129.tendl
Ratio
1.2
0.8
0.4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
55
Incident Energy (eV)
53-I -129

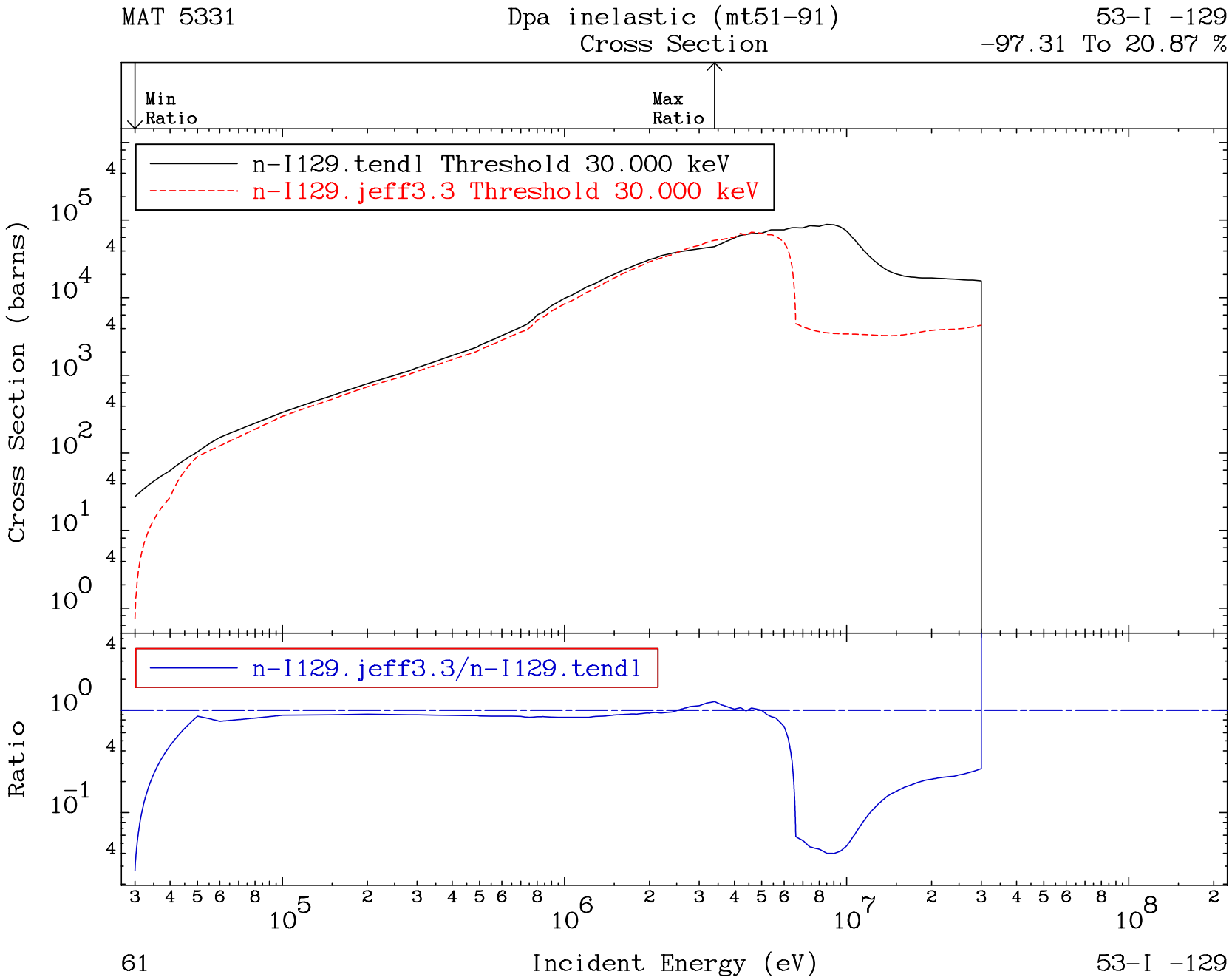

MAT 5331
Kerma capture (mt102)
Cross Section
53-I -129
-100.0 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
56
53-I -129

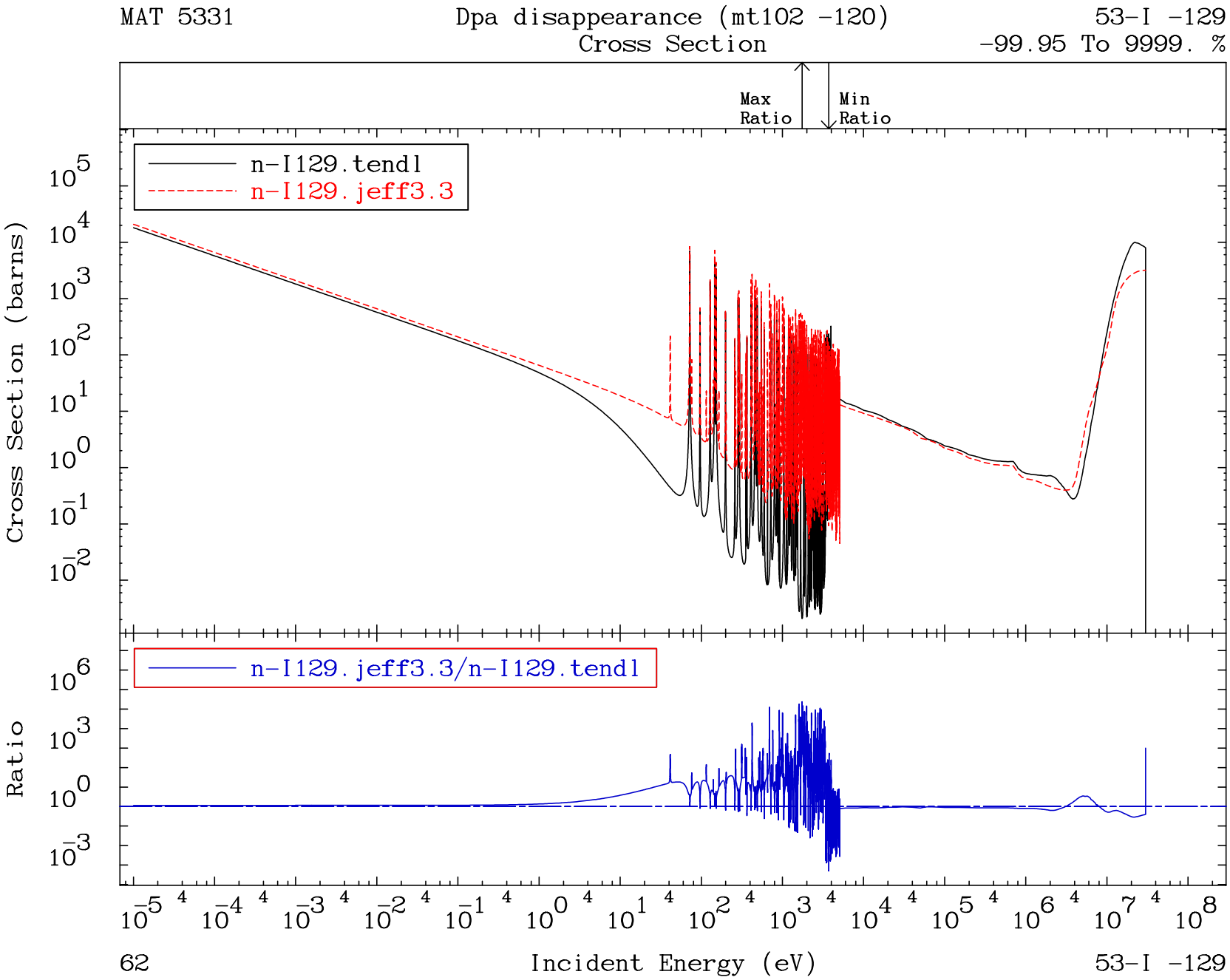

MAT 5331
Total photon (eV-barns)
Cross Section
53-I -129
-99.95 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
57
53-I -129

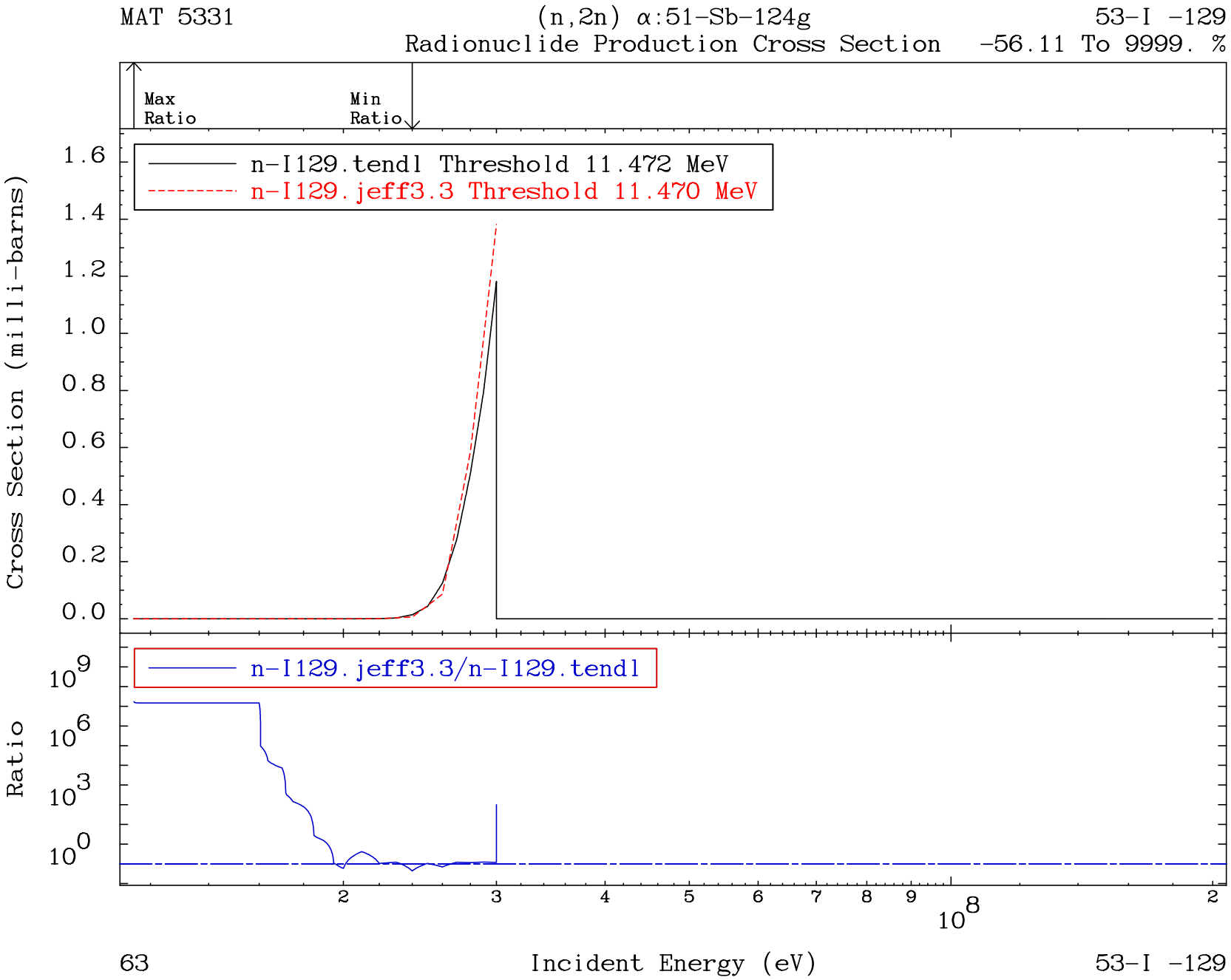

MAT 5331
Total kinematic kerma (high limit)
Cross Section
53-I -129
-99.95 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
58
53-I -129

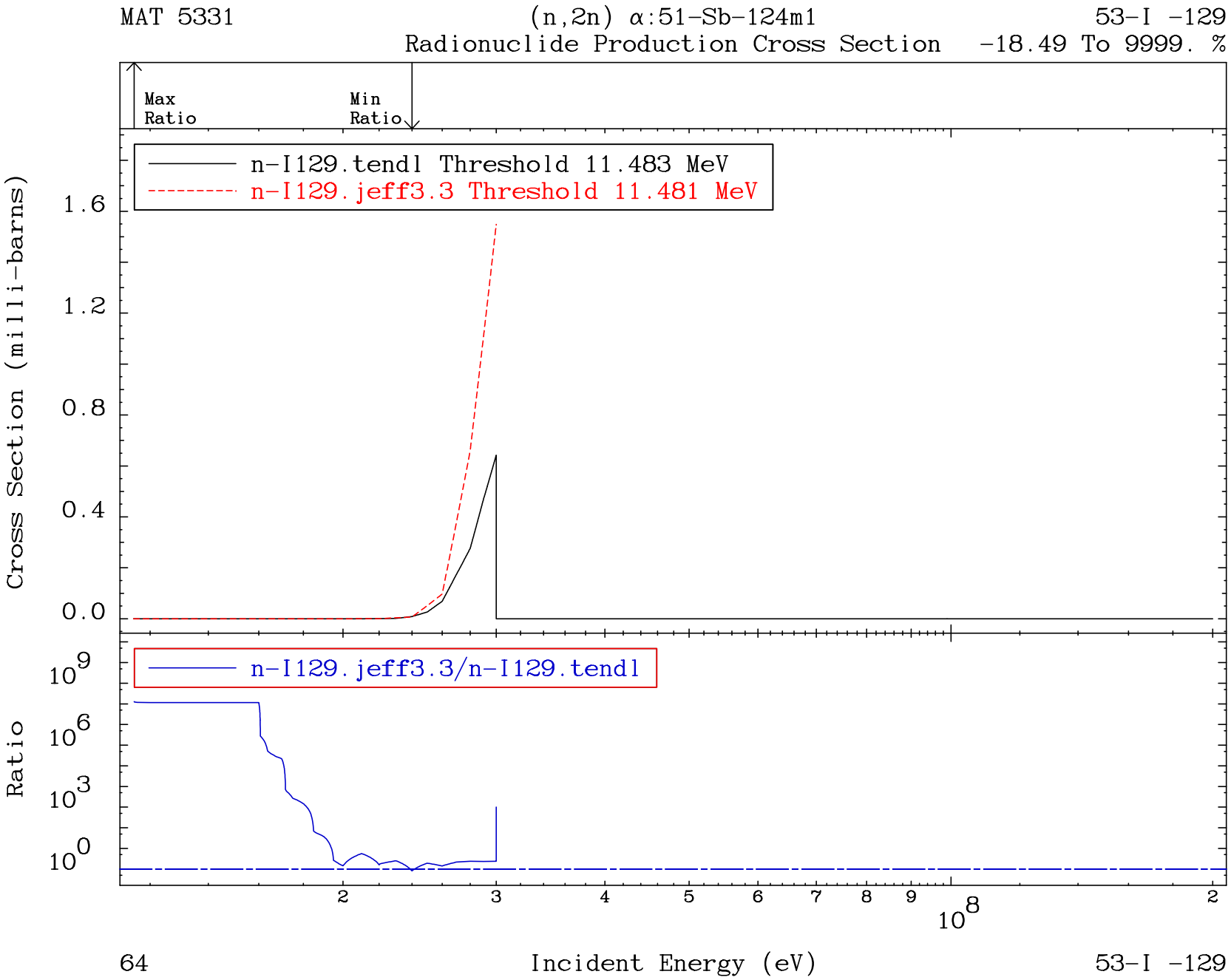

MAT 5331
Dpa total (eV-barns)
Cross Section
53-I -129
-97.35 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
59
53-I -129

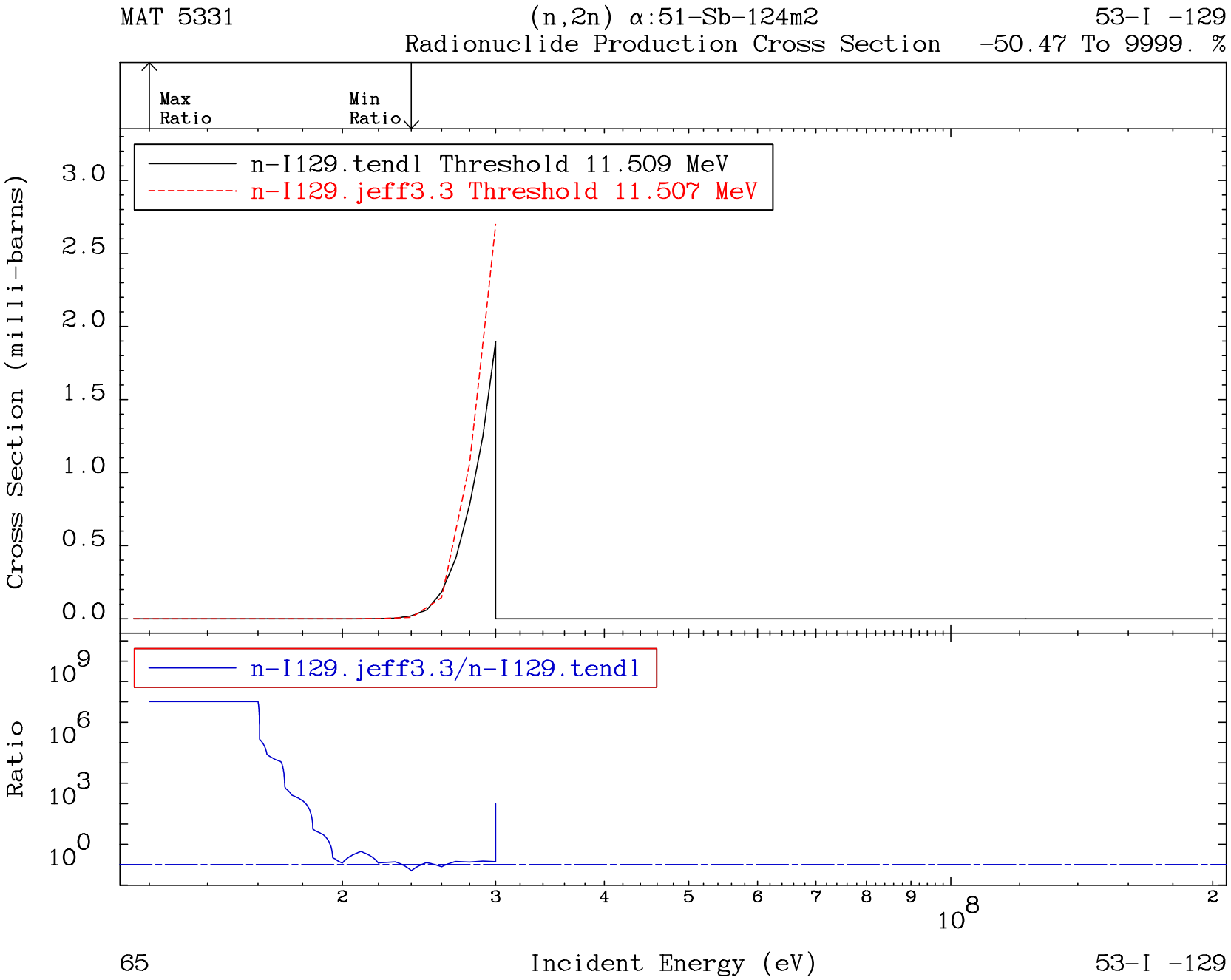

MAT 5331
Dpa elastic (mt2)
Cross Section
53-I -129
-99.73 To 5522. %
Min Ratio
Max Ratio
n-I129.tendl Threshold 740.46 eV
n-I129.jeff3.3 Threshold 805.41 eV
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
60
53-I -129

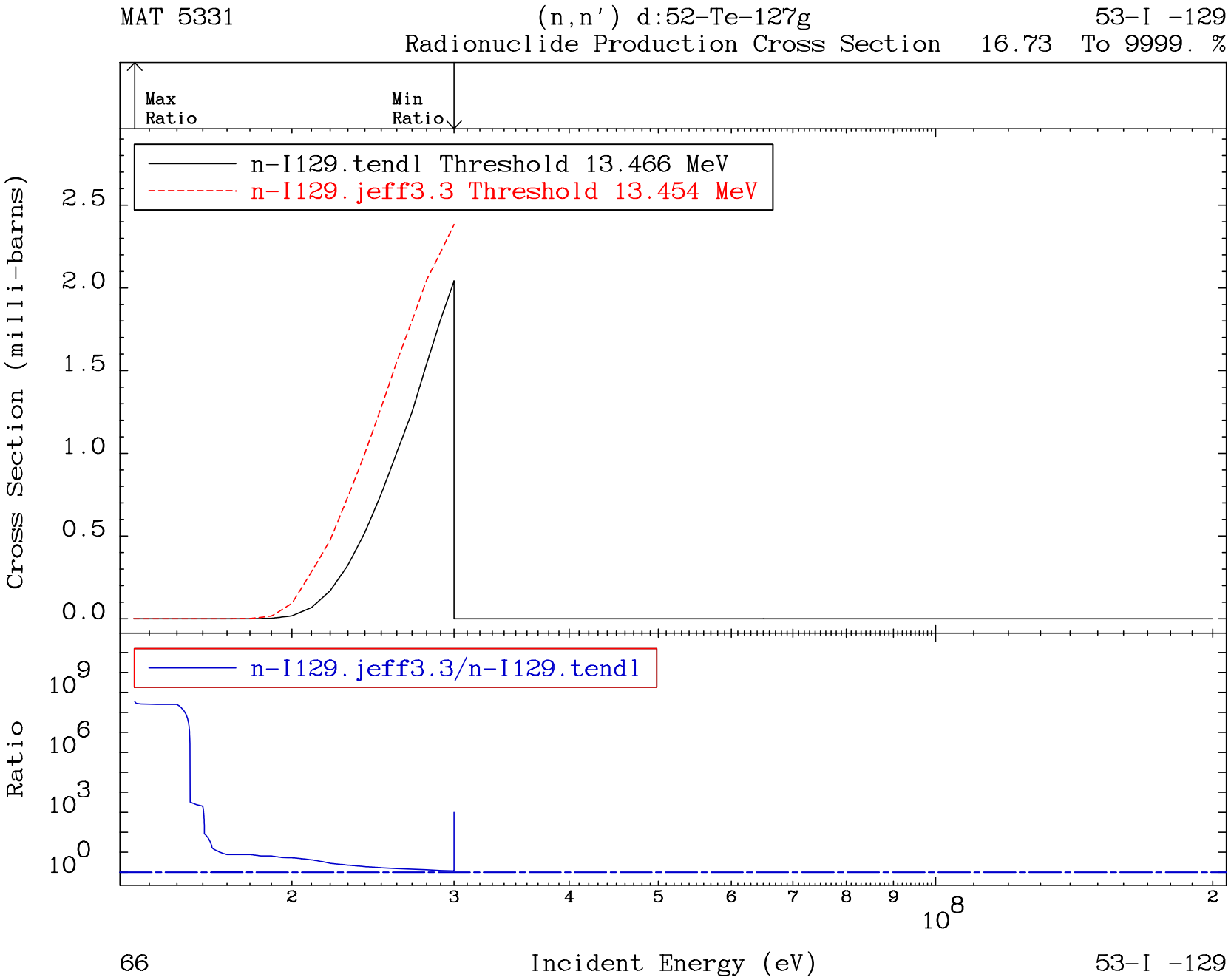

MAT 5331
Dpa inelastic (mt51-91)
Cross Section
53-I -129
-97.31 To 20.87 %
Min Ratio
Max Ratio
n-I129.tendl Threshold 30.000 keV
n-I129.jeff3.3 Threshold 30.000 keV
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
61
53-I -129

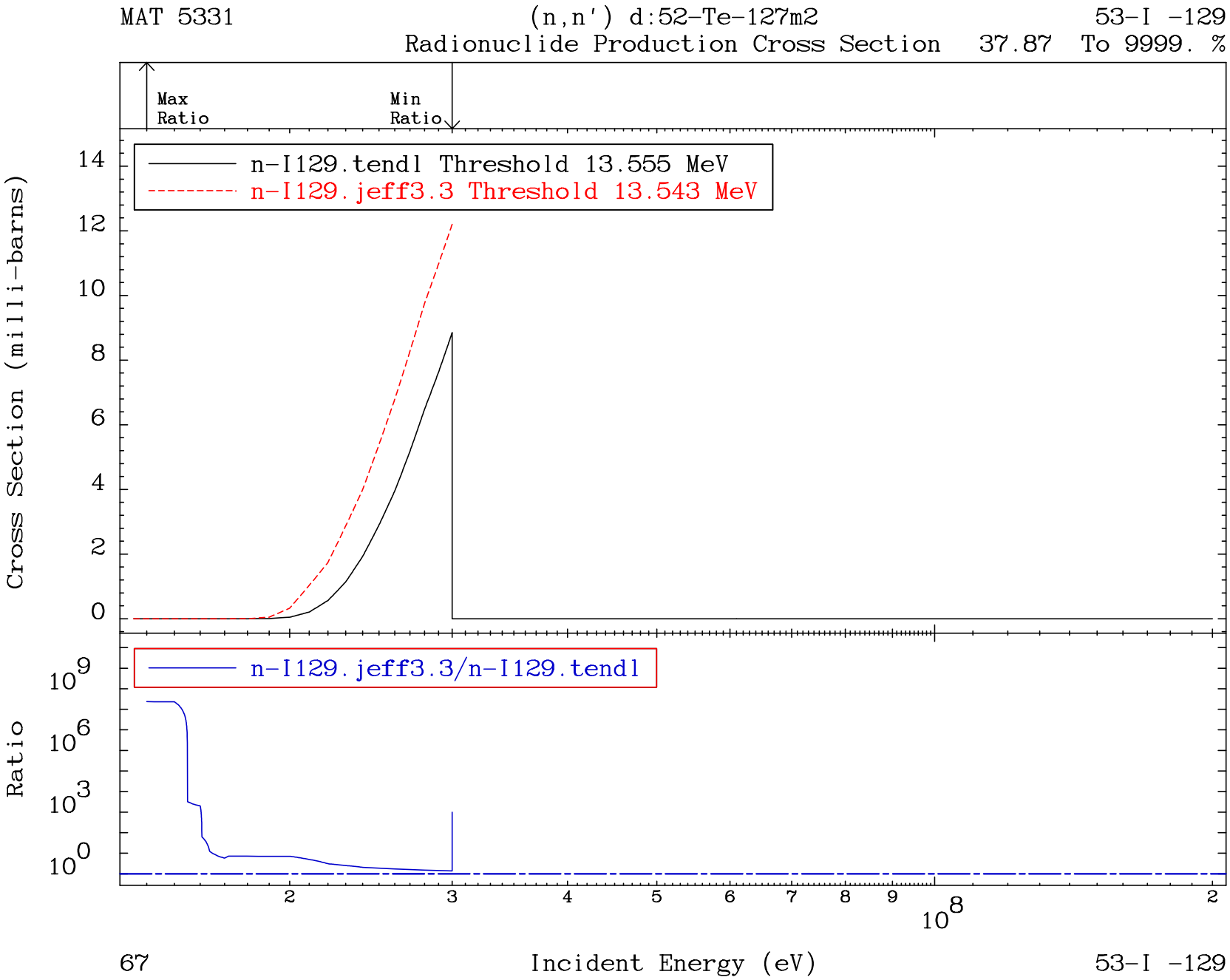

MAT 5331
Dpa disappearance (mt102 -120)
Cross Section
53-I -129
-99.95 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl
n-I129.jeff3.3
Cross Section (barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
62
Incident Energy (eV)
53-I -129

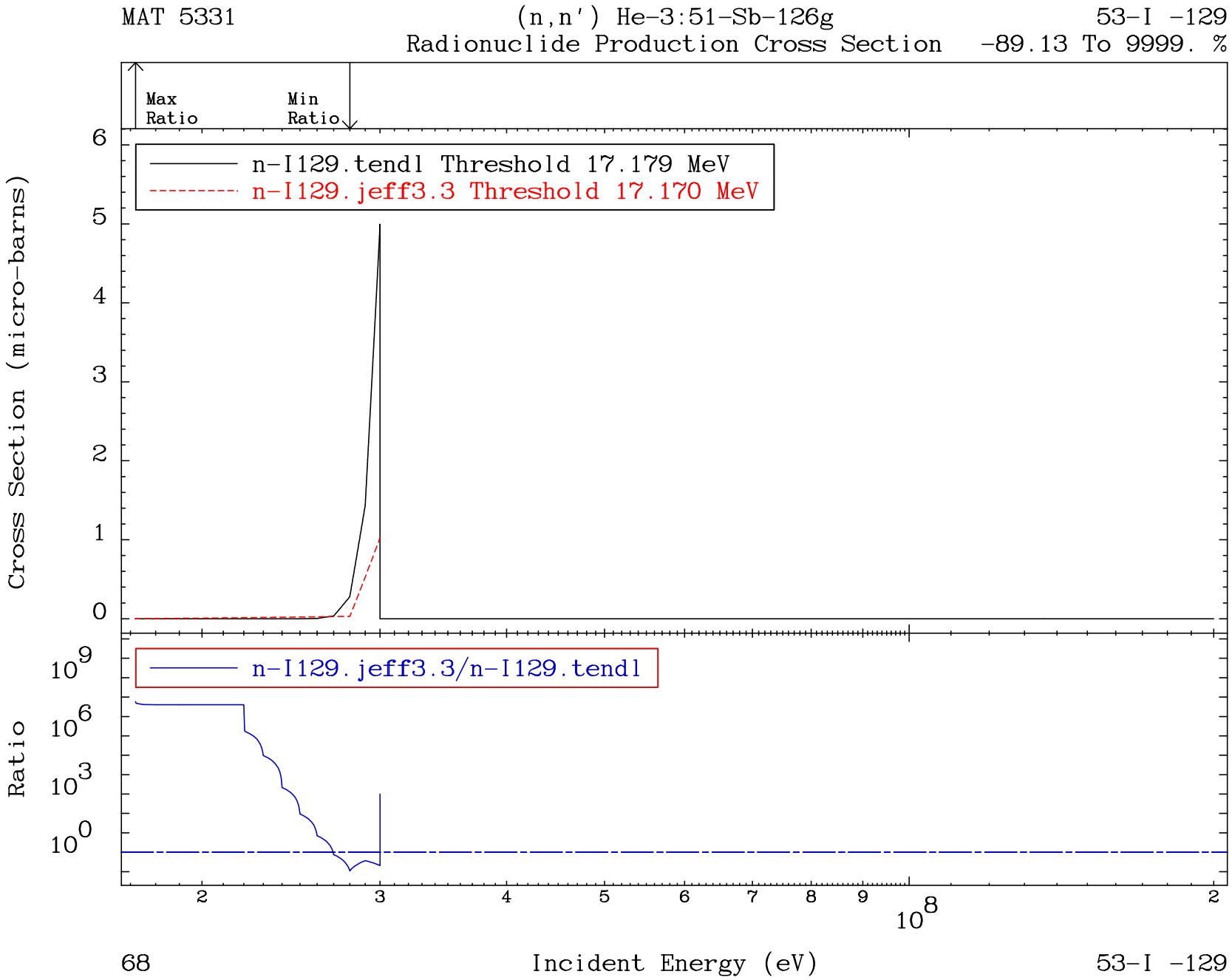

MAT 5331
(n,2n) α:51-Sb-124g
53-I -129
Radionuclide Production Cross Section -56.11 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 11.472 MeV
n-I129.jeff3.3 Threshold 11.470 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
63
Incident Energy (eV)
53-I -129

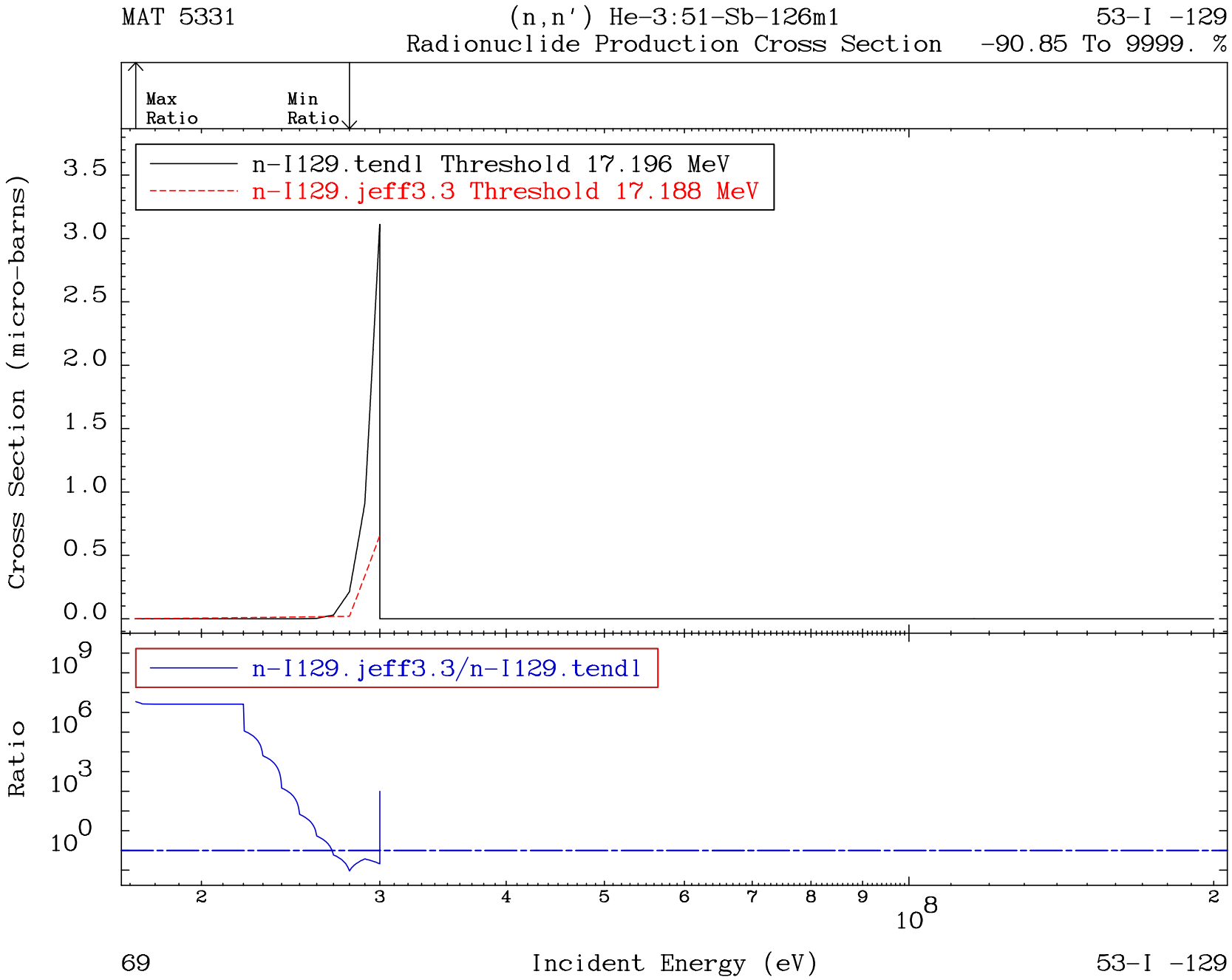

MAT 5331
(n,2n) α:51-Sb-124m1
53-I -129
Radionuclide Production Cross Section -18.49 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 11.483 MeV
n-I129.jeff3.3 Threshold 11.481 MeV
Cross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
53-I -129

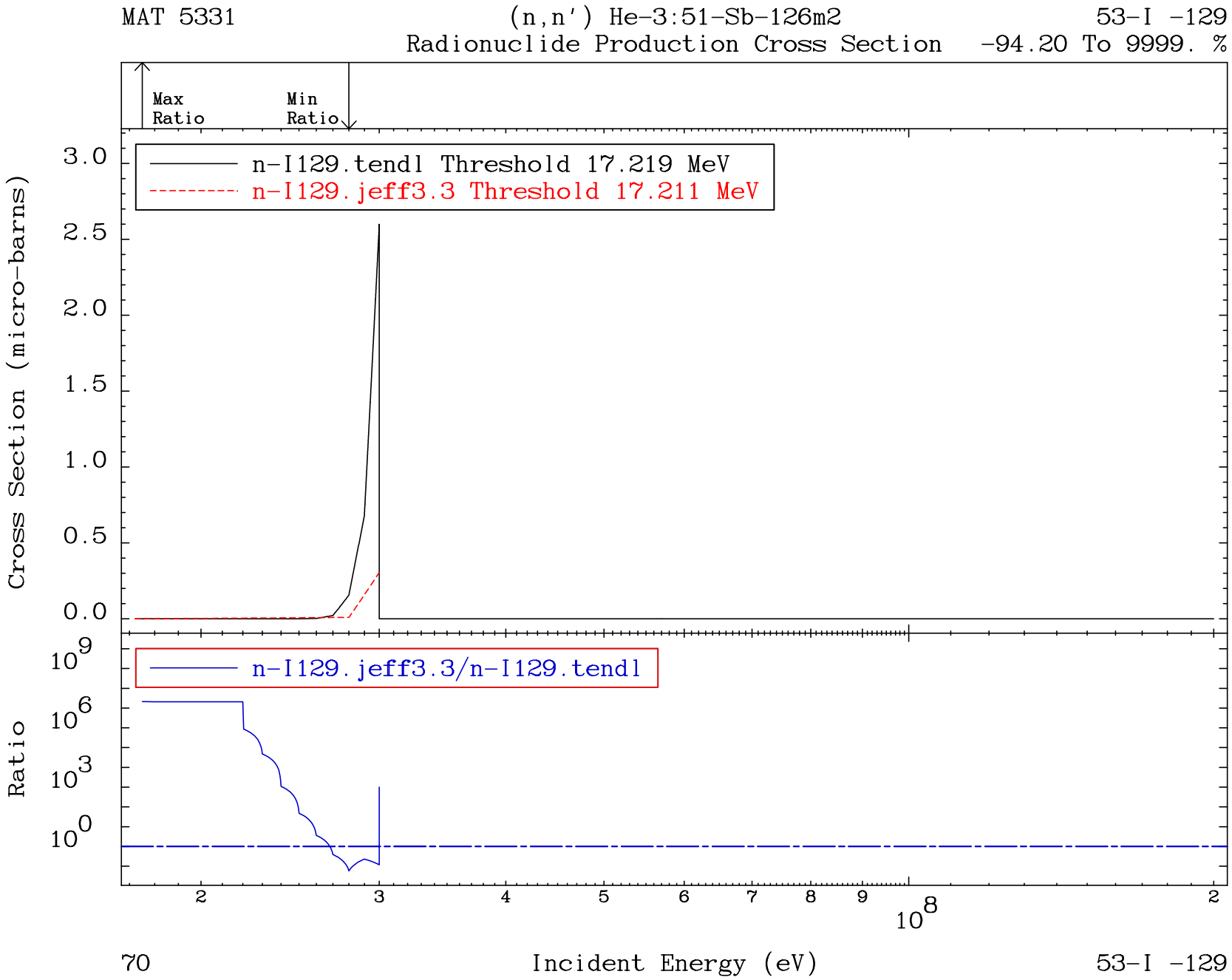

MAT 5331
(n,2n) α:51-Sb-124m2
53-I -129
Radionuclide Production Cross Section -50.47 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 11.509 MeV
n-I129.jeff3.3 Threshold 11.507 MeV
Cross Section (milli-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
65
Incident Energy (eV)
53-I -129

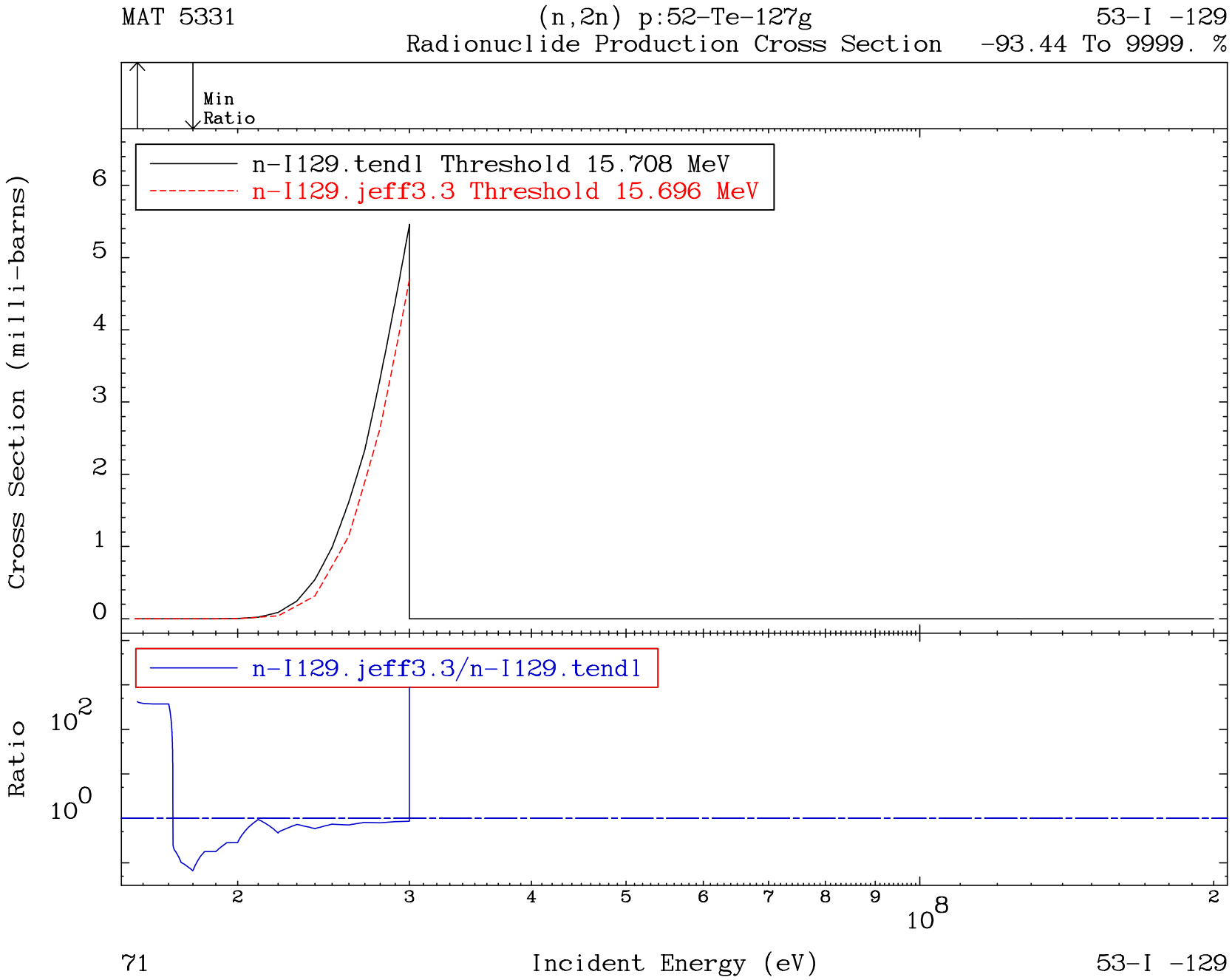

MAT 5331
(n,n') d:52-Te-127g
53-I -129
Radionuclide Production Cross Section 16.73 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 13.466 MeV
n-I129.jeff3.3 Threshold 13.454 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
66
Incident Energy (eV)
53-I -129

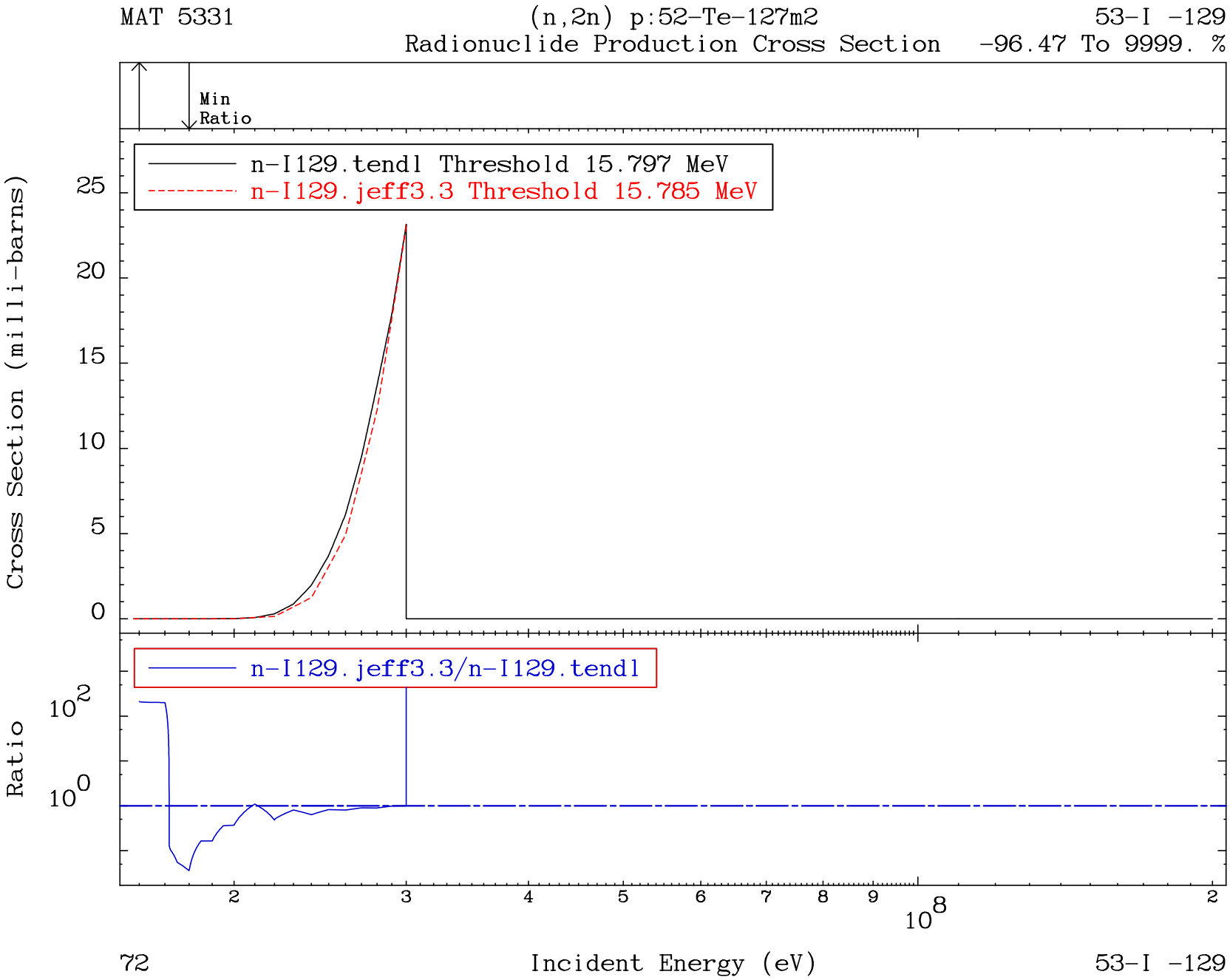

MAT 5331
(n,n') d:52-Te-127m2
53-I -129
Radionuclide Production Cross Section 37.87 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 13.555 MeV
n-I129.jeff3.3 Threshold 13.543 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
67
Incident Energy (eV)
53-I -129

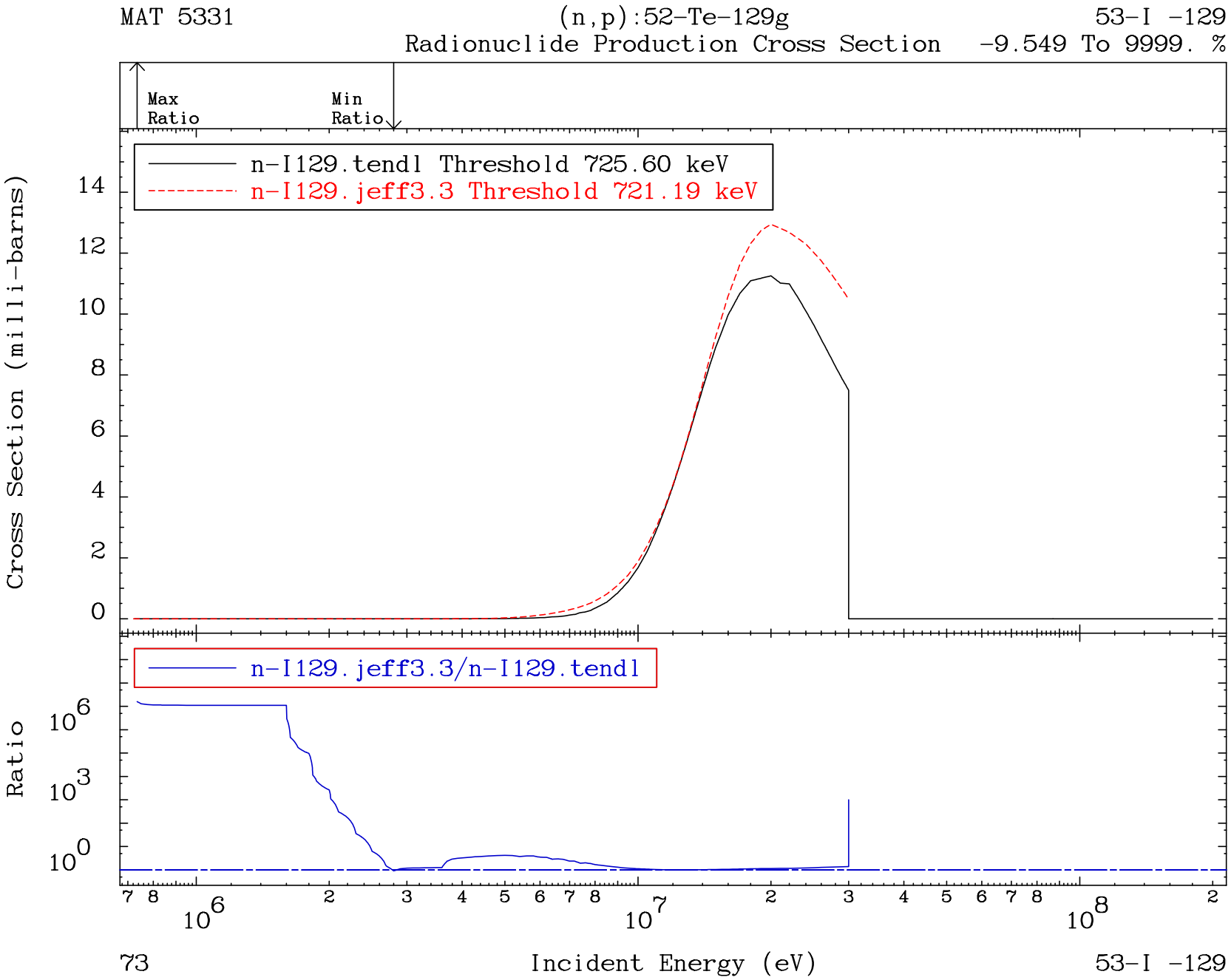

MAT 5331
(n,n') He-3:51-Sb-126g
53-I -129
Radionuclide Production Cross Section -89.13 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 17.179 MeV
n-I129.jeff3.3 Threshold 17.170 MeV
Cross Section (micro-barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
68
53-I -129

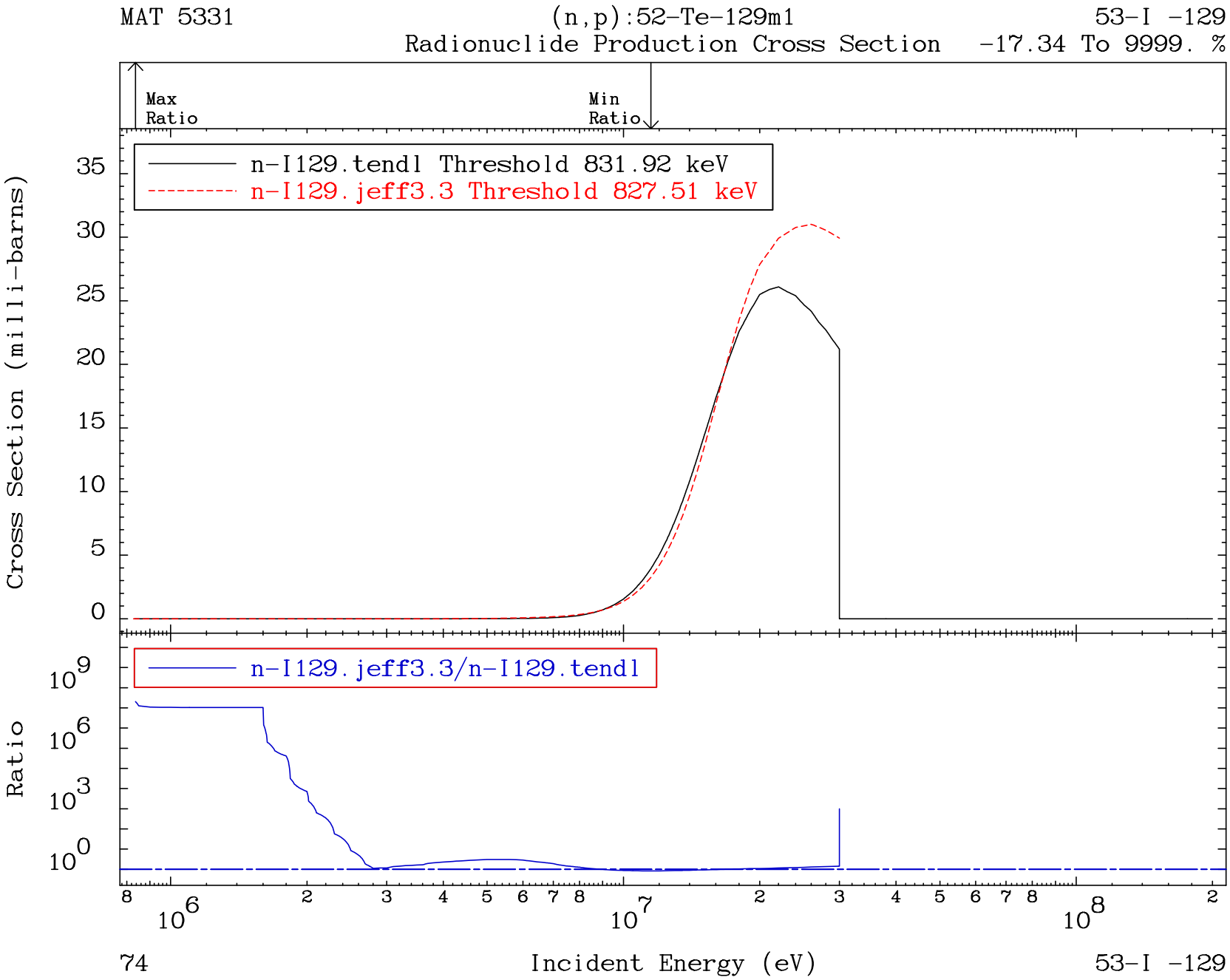

MAT 5331
(n,n') He-3:51-Sb-126m1
53-I -129
Radionuclide Production Cross Section
-90.85 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 17.196 MeV
n-I129.jeff3.3 Threshold 17.188 MeV
Cross Section (micro-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
69
Incident Energy (eV)
53-I -129

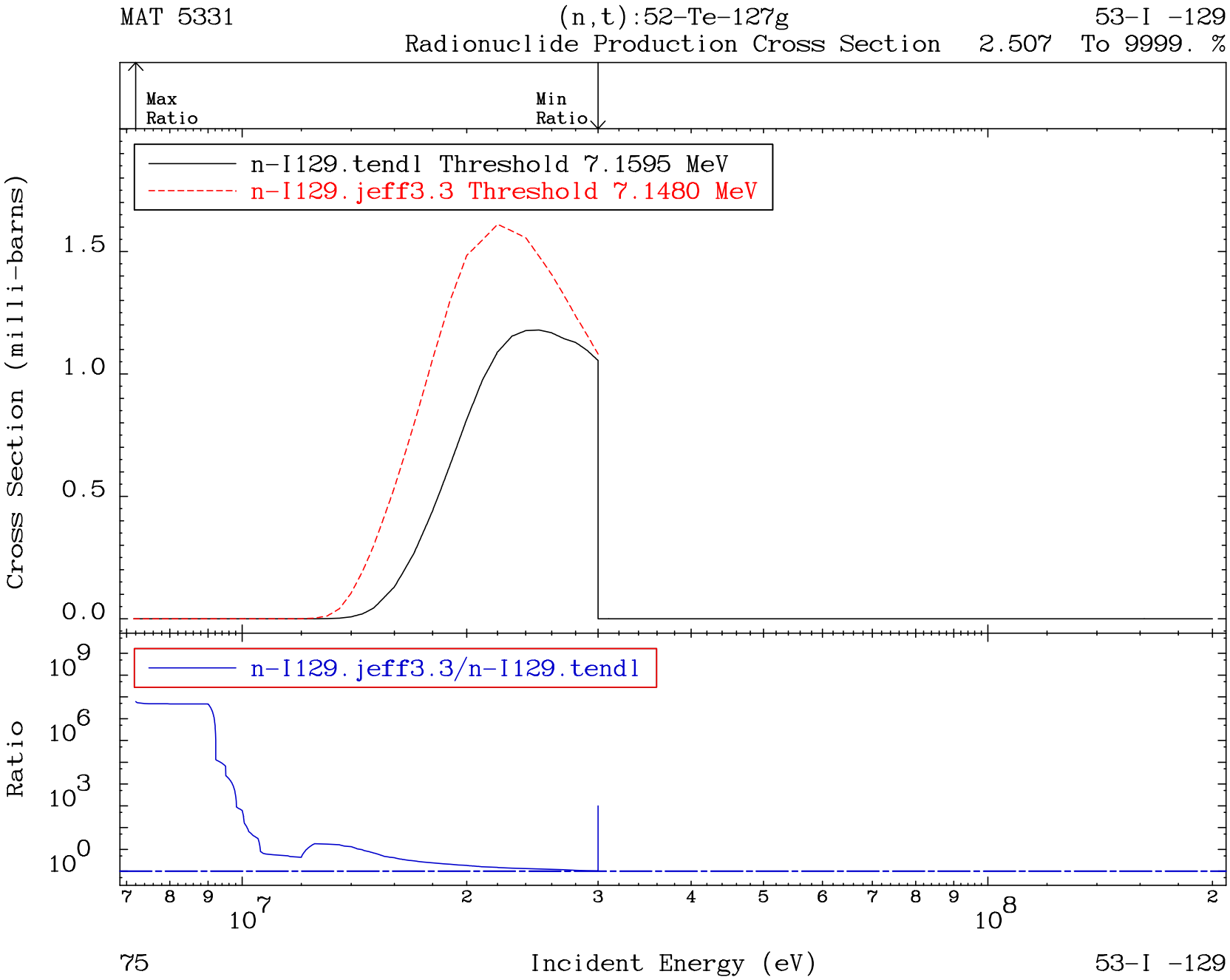

MAT 5331
(n,n') He-3:51-Sb-126m2
53-I -129
Radionuclide Production Cross Section -94.20 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 17.219 MeV
n-I129.jeff3.3 Threshold 17.211 MeV
Cross Section (micro-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
70
Incident Energy (eV)
53-I -129

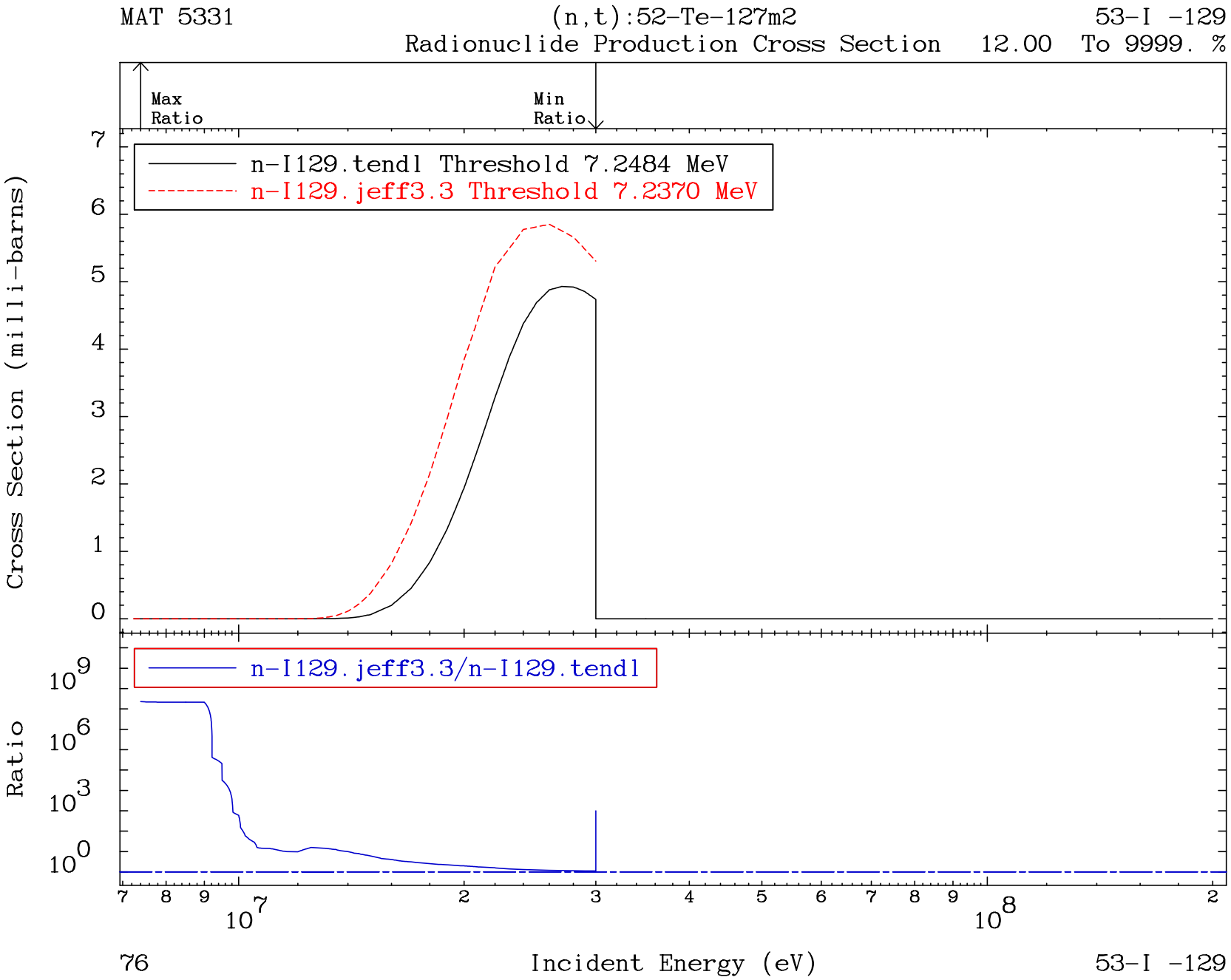

MAT 5331
(n,2n) p:52-Te-127g
53-I -129
Radionuclide Production Cross Section -93.44 To 9999. %
Min Ratio
n-I129.tendl Threshold 15.708 MeV
n-I129.jeff3.3 Threshold 15.696 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
n-I129.jeff3.3/n-I129.tendl
Ratio
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
71
Incident Energy (eV)
53-I -129

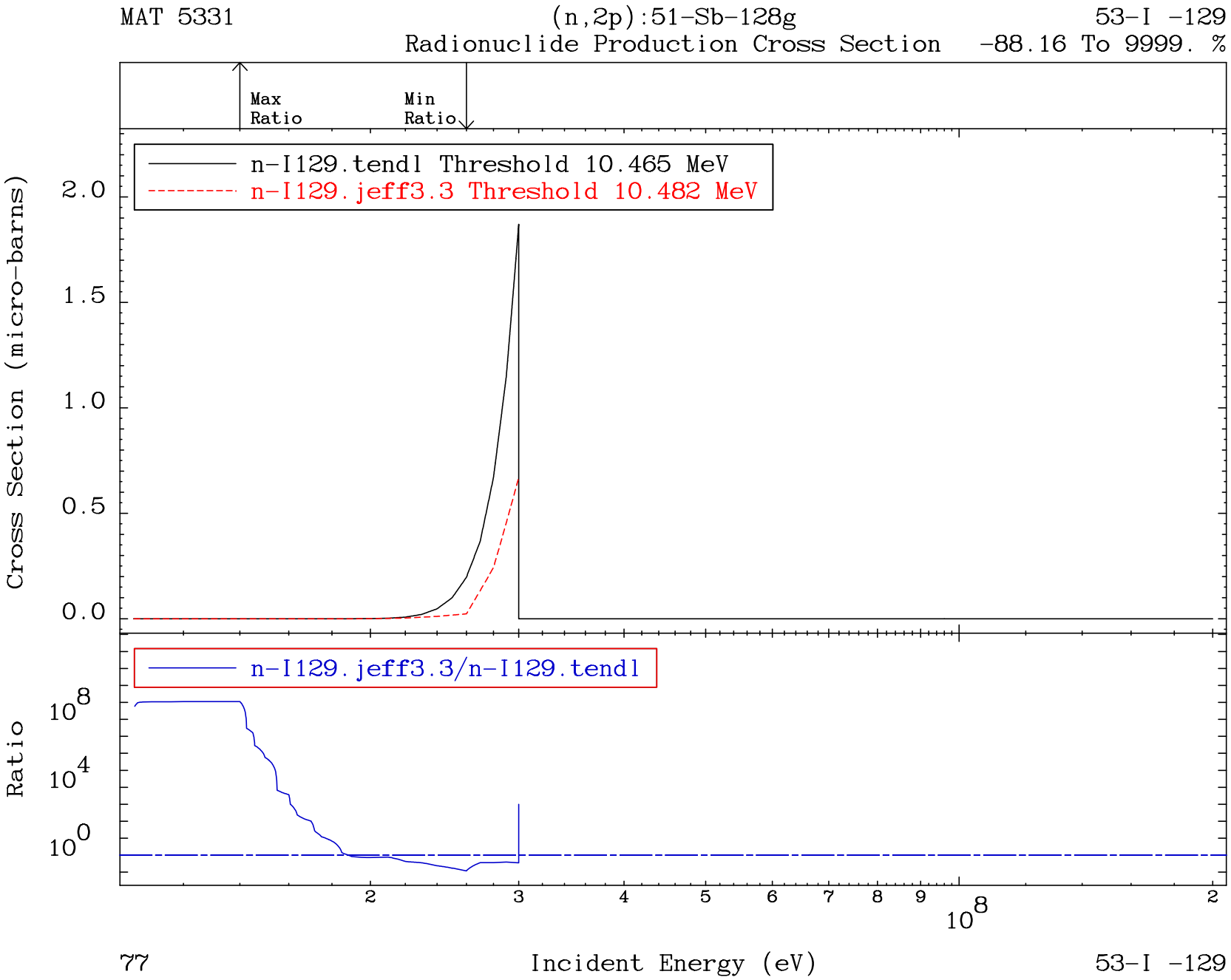

MAT 5331
(n,2n) p:52-Te-127m2
53-I -129
Radionuclide Production Cross Section -96.47 To 9999. %
Min
Ratio
n-I129.tendl Threshold 15.797 MeV
n-I129.jeff3.3 Threshold 15.785 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
72
Incident Energy (eV)
53-I -129

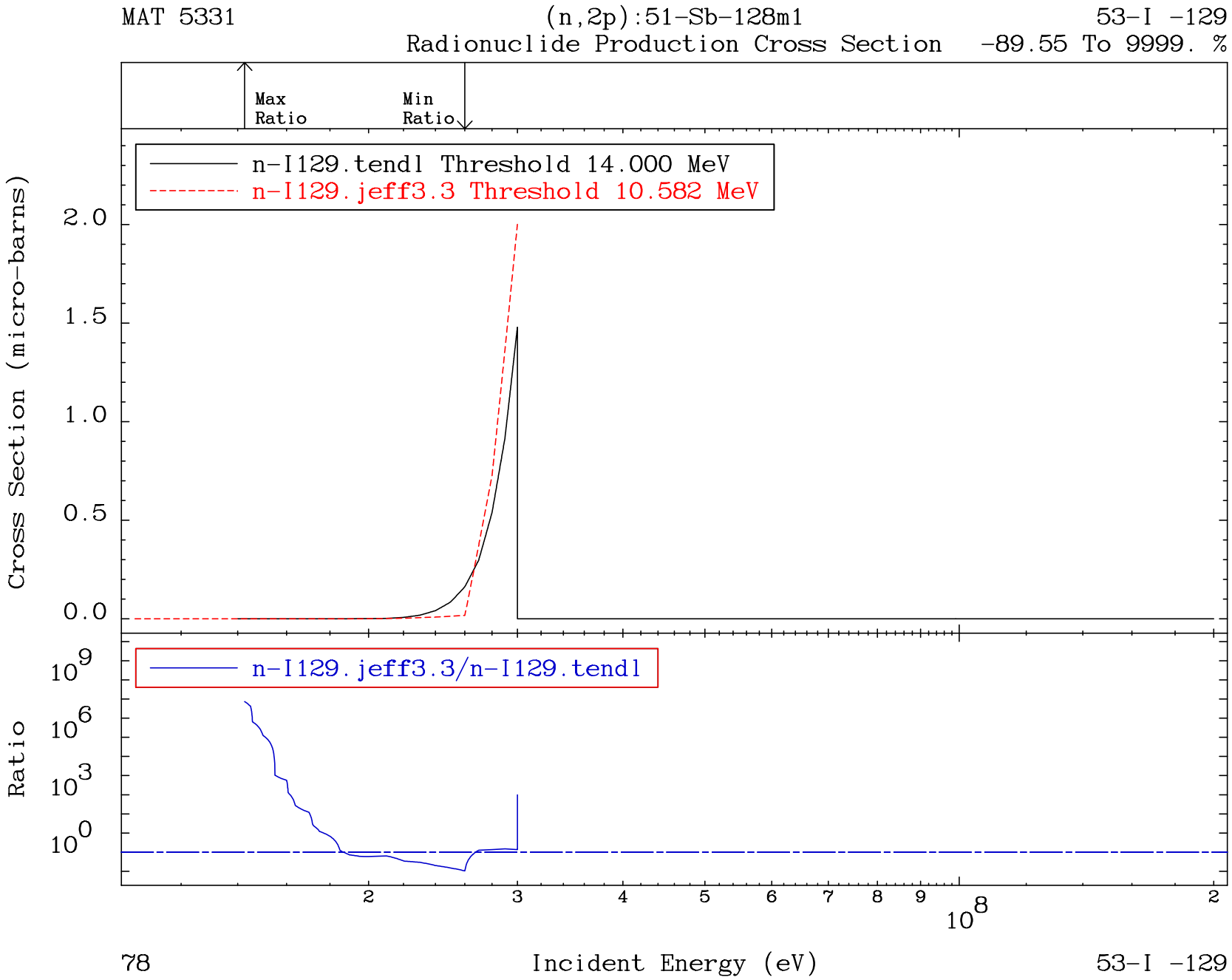

MAT 5331
(n,p):52-Te-129g
53-I -129
Radionuclide Production Cross Section -9.549 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 725.60 keV
n-I129.jeff3.3 Threshold 721.19 keV
Cross Section (milli-barns)
0
2
4
6
8
10
12
14
n-I129.jeff3.3/n-I129.tendl
Ratio
10^0
10^3
10^6
7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
73
Incident Energy (eV)
53-I -129

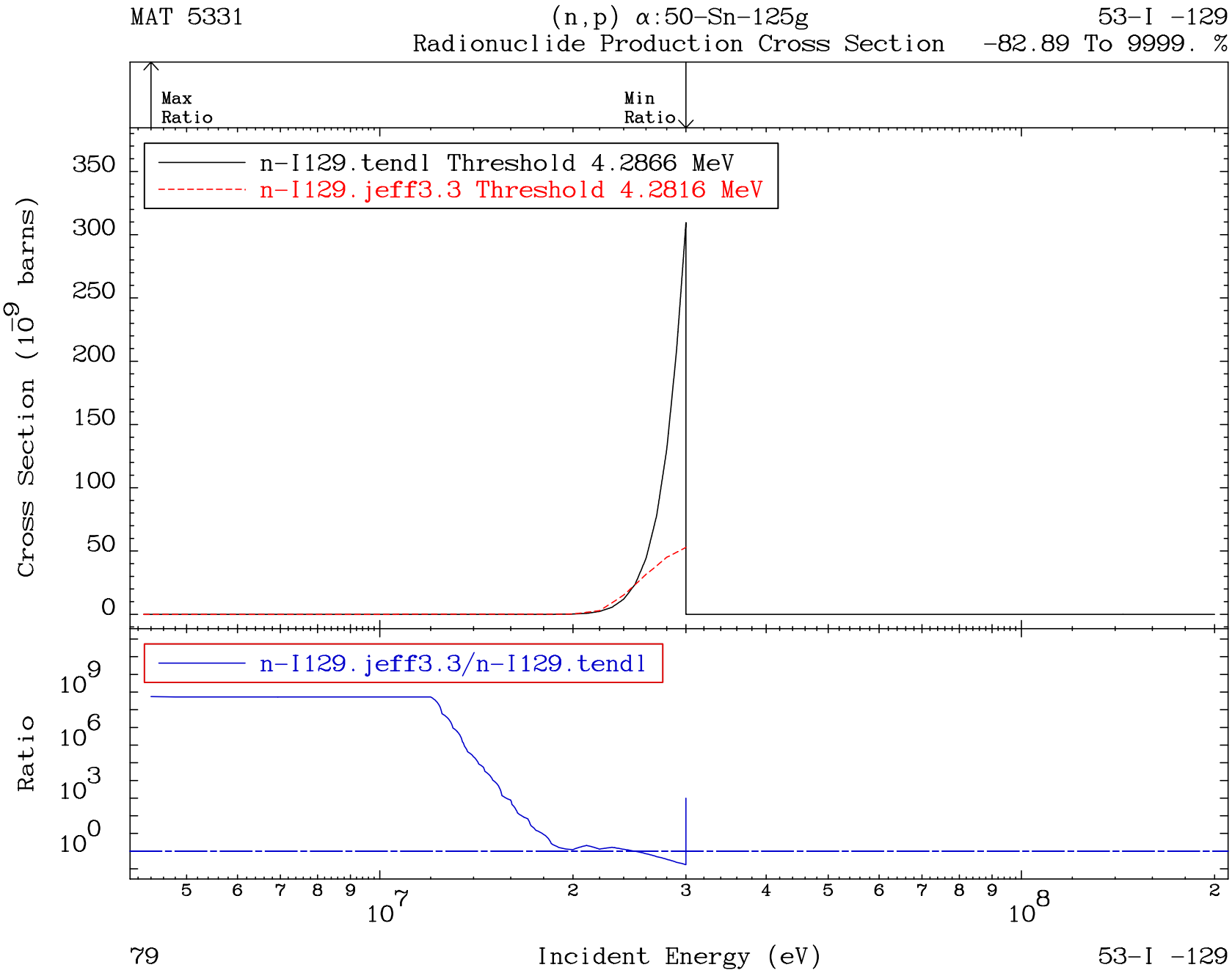

MAT 5331
(n,p):52-Te-129m1
53-I -129
Radionuclide Production Cross Section -17.34 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 831.92 keV
n-I129.jeff3.3 Threshold 827.51 keV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
74
Incident Energy (eV)
53-I -129

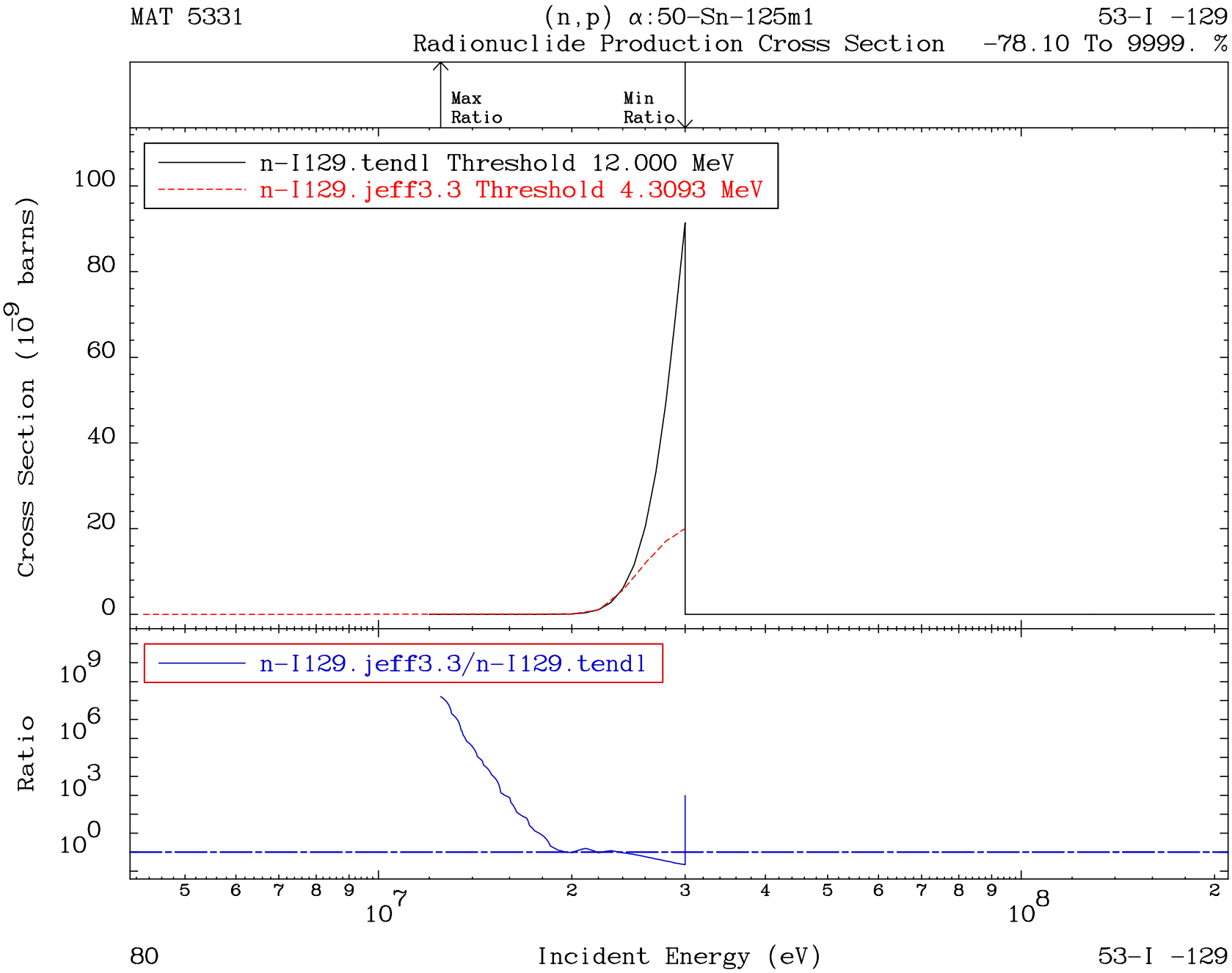

MAT 5331
(n,t):52-Te-127g
53-I -129
Radionuclide Production Cross Section 2.507 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 7.1595 MeV
n-I129.jeff3.3 Threshold 7.1480 MeV
Cross Section (milli-barns)
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
75
Incident Energy (eV)
53-I -129

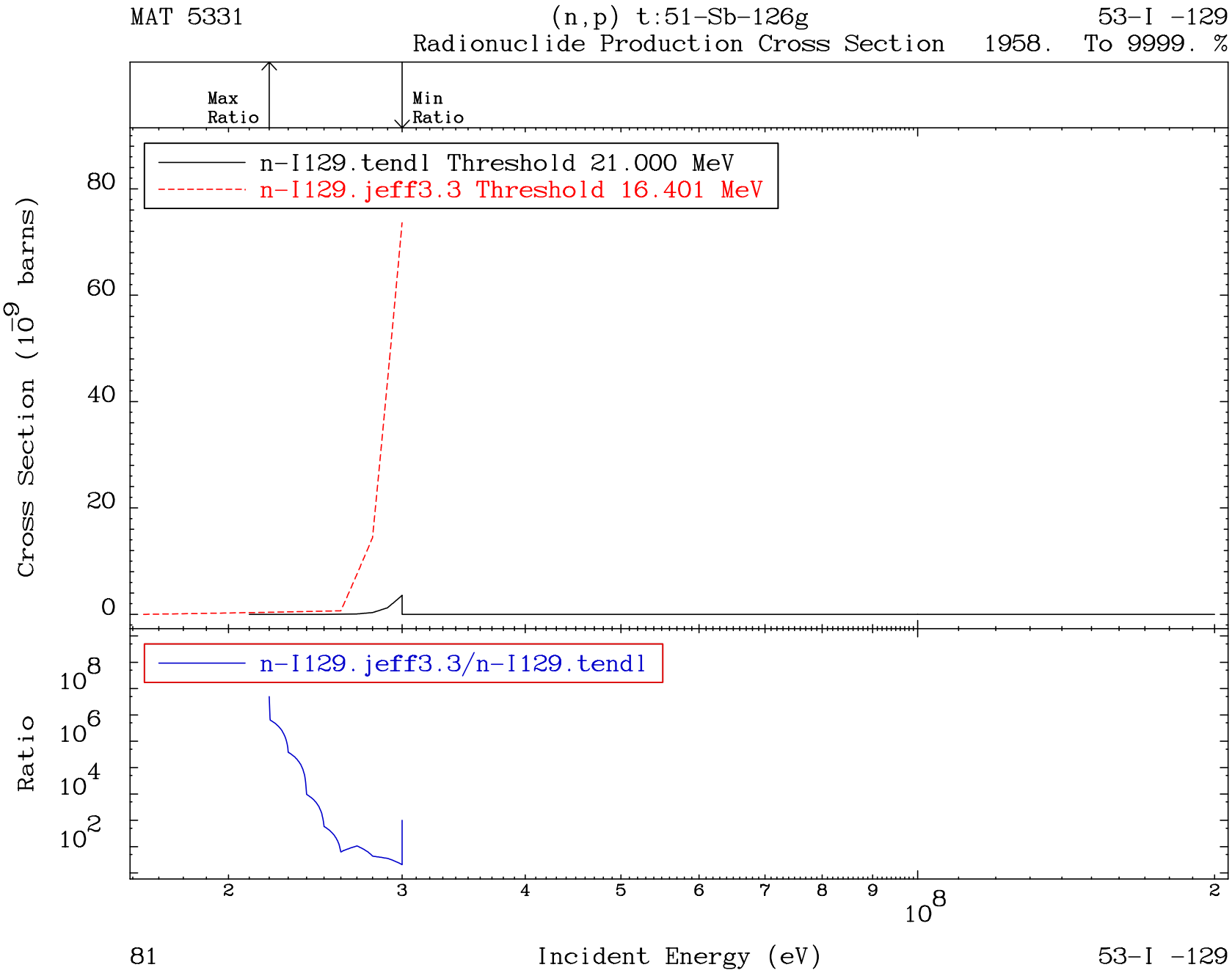

MAT 5331
(n,t):52-Te-127m2
53-I -129
Radionuclide Production Cross Section 12.00 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 7.2484 MeV
n-I129.jeff3.3 Threshold 7.2370 MeV
Cross Section (milli-barns)
n-I129.jeff3.3/n-I129.tendl
Ratio
Incident Energy (eV)
76
53-I -129

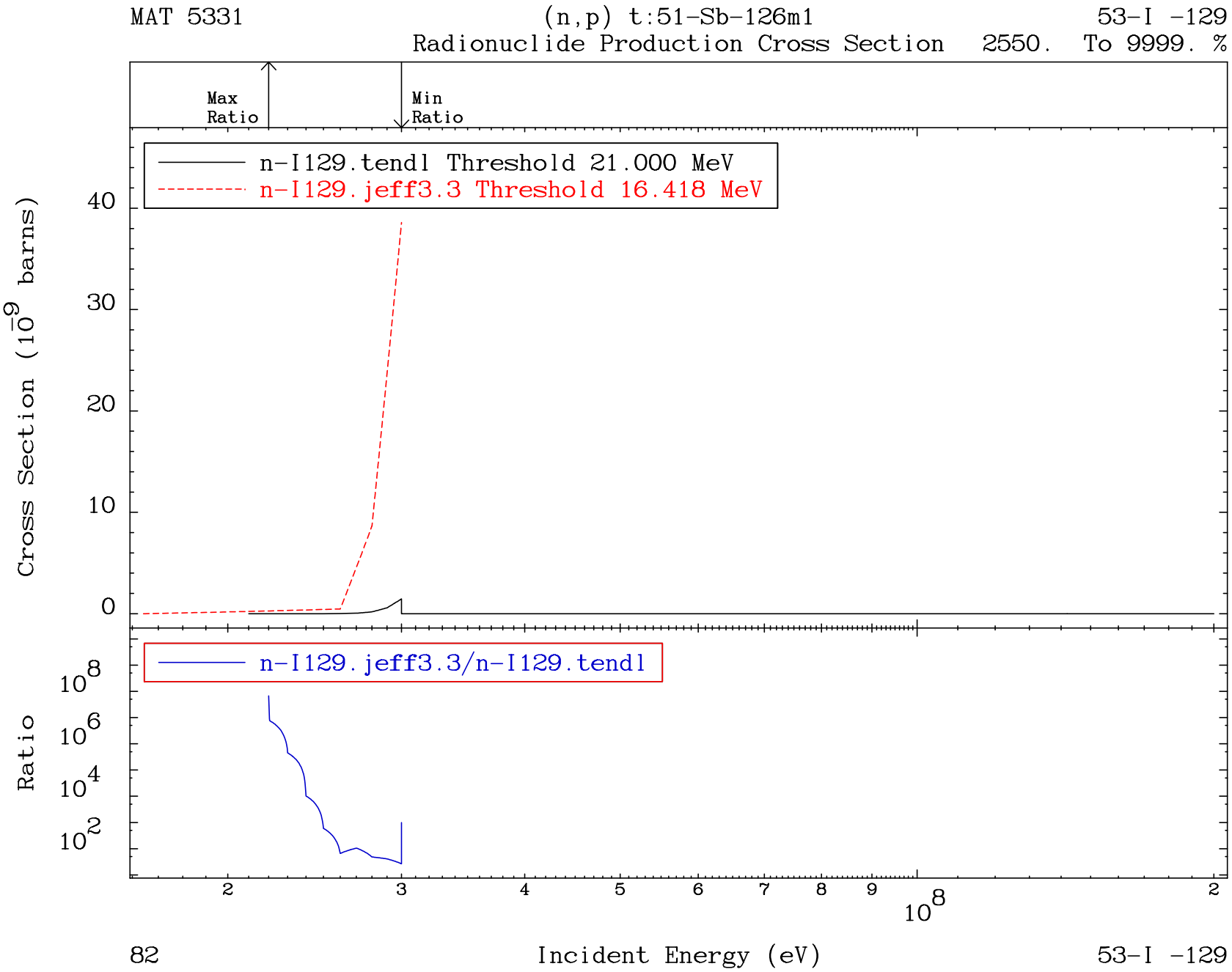

MAT 5331
(n,2p):51-Sb-128g
53-I -129
Radionuclide Production Cross Section -88.16 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 10.465 MeV
n-I129.jeff3.3 Threshold 10.482 MeV
Cross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^8
10^4
10^0
2
3
4
5
6
7
8
9
10^8
2
77
Incident Energy (eV)
53-I -129

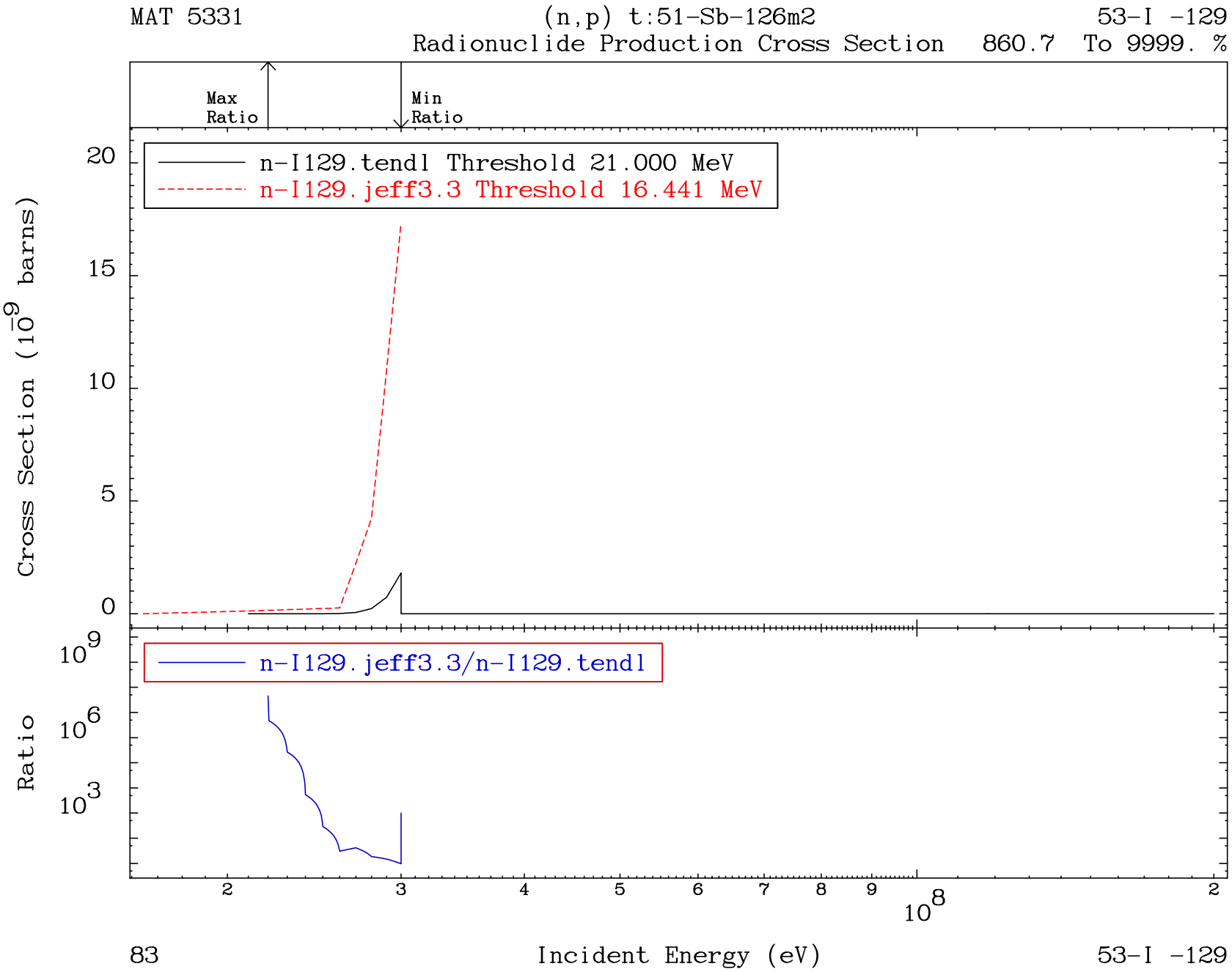

MAT 5331
(n,2p):51-Sb-128m1
53-I -129
Radionuclide Production Cross Section -89.55 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 14.000 MeV
n-I129.jeff3.3 Threshold 10.582 MeV
Cross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
78
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) α:50-Sn-125g
53-I -129
Radionuclide Production Cross Section -82.89 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 4.2866 MeV
n-I129.jeff3.3 Threshold 4.2816 MeV
Cross Section (10^{-9} barns)
350
300
250
200
150
100
50
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{9}
10^{6}
10^{3}
10^{0}
5 6 7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
79
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) α:50-Sn-125m1
53-I -129
Radionuclide Production Cross Section -78.10 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 12.000 MeV
n-I129.jeff3.3 Threshold 4.3093 MeV
Cross Section (10^{-9} barns)
100
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{9}
10^{6}
10^{3}
10^{0}
5 6 7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
80
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) t:51-Sb-126g
53-I -129
Radionuclide Production Cross Section 1958. To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 21.000 MeV
n-I129.jeff3.3 Threshold 16.401 MeV
Cross Section (10^{-9} barns)
80
60
40
20
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{8}
10^{6}
10^{4}
10^{2}
2
3
4
5
6
7
8
9
10^{8}
2
81
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) t:51-Sb-126m1
53-I -129
Radionuclide Production Cross Section 2550. To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 21.000 MeV
n-I129.jeff3.3 Threshold 16.418 MeV
Cross Section (10^{-9} barns)
40
30
20
10
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{8}
10^{6}
10^{4}
10^{2}
2
3
4
5
6
7
8
9
10^{8}
2
82
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) t:51-Sb-126m2
53-I -129
Radionuclide Production Cross Section 860.7 To 9999. %
Max Ratio
Min Ratio
n-I129.tendl Threshold 21.000 MeV
n-I129.jeff3.3 Threshold 16.441 MeV
Cross Section (10^{-9} barns)
20
15
10
5
0
n-I129.jeff3.3/n-I129.tendl
Ratio
10^{9}
10^{6}
10^{3}
2
3
4
5
6
7
8
9
10^{8}
2
83
Incident Energy (eV)
53-I -129