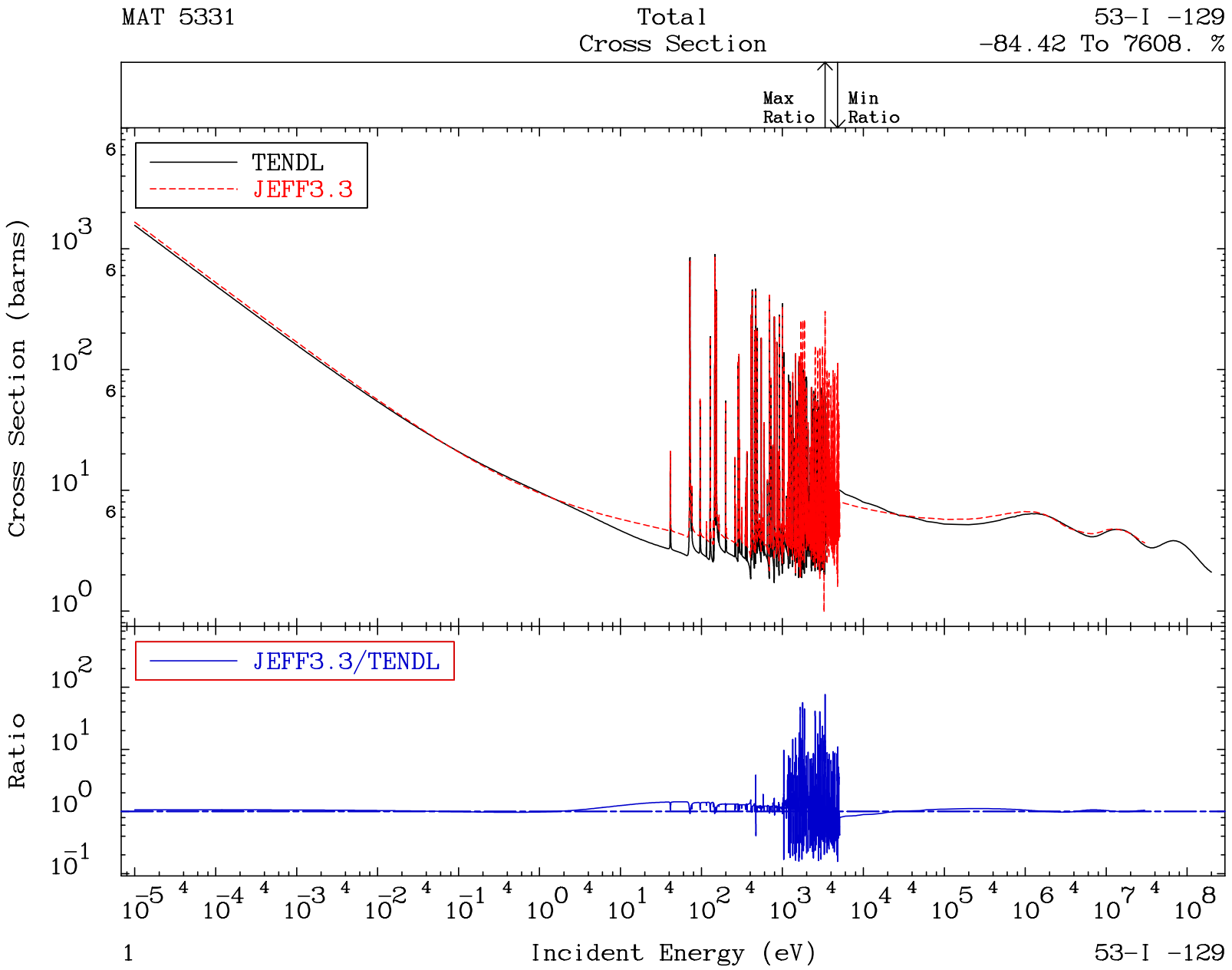
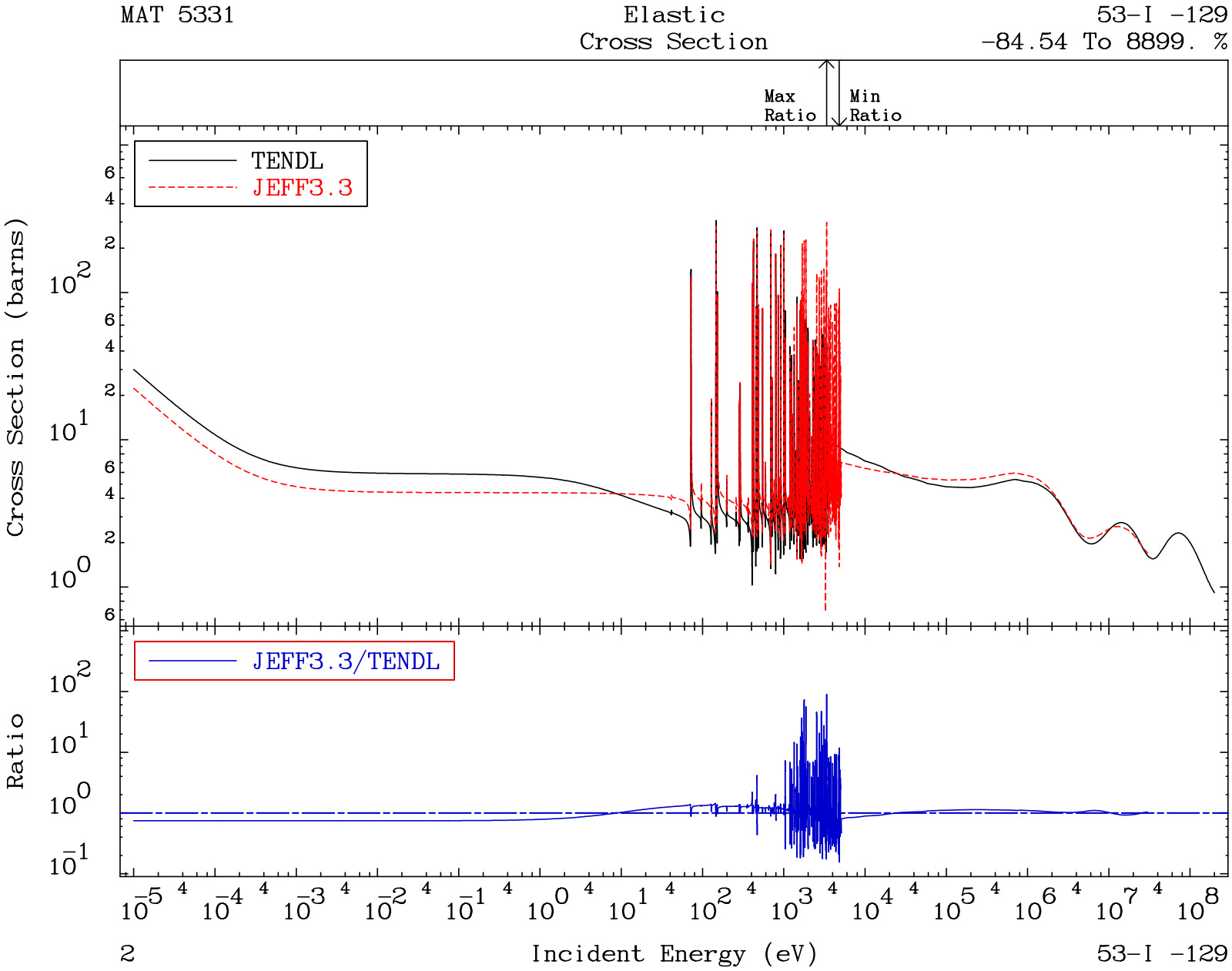
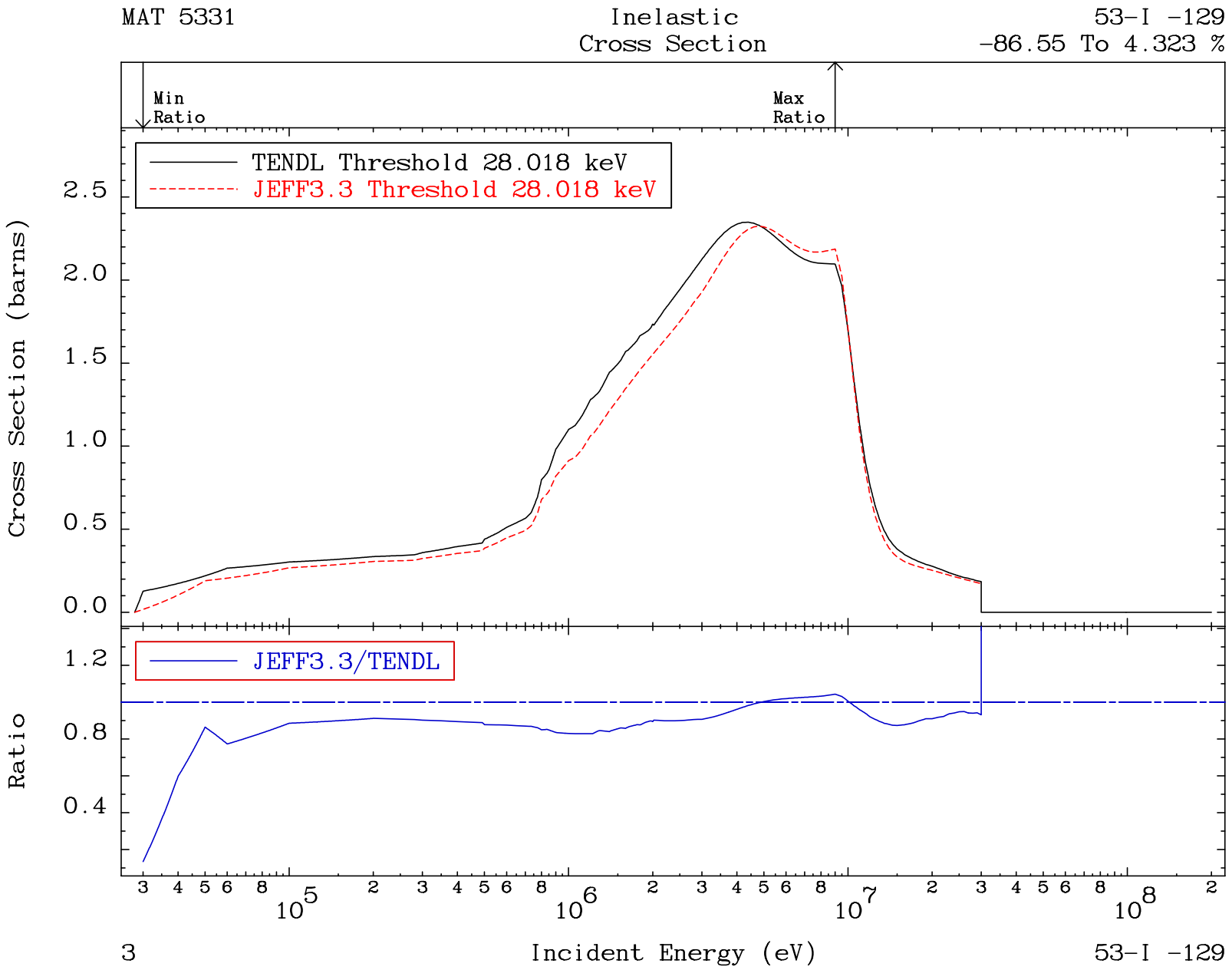
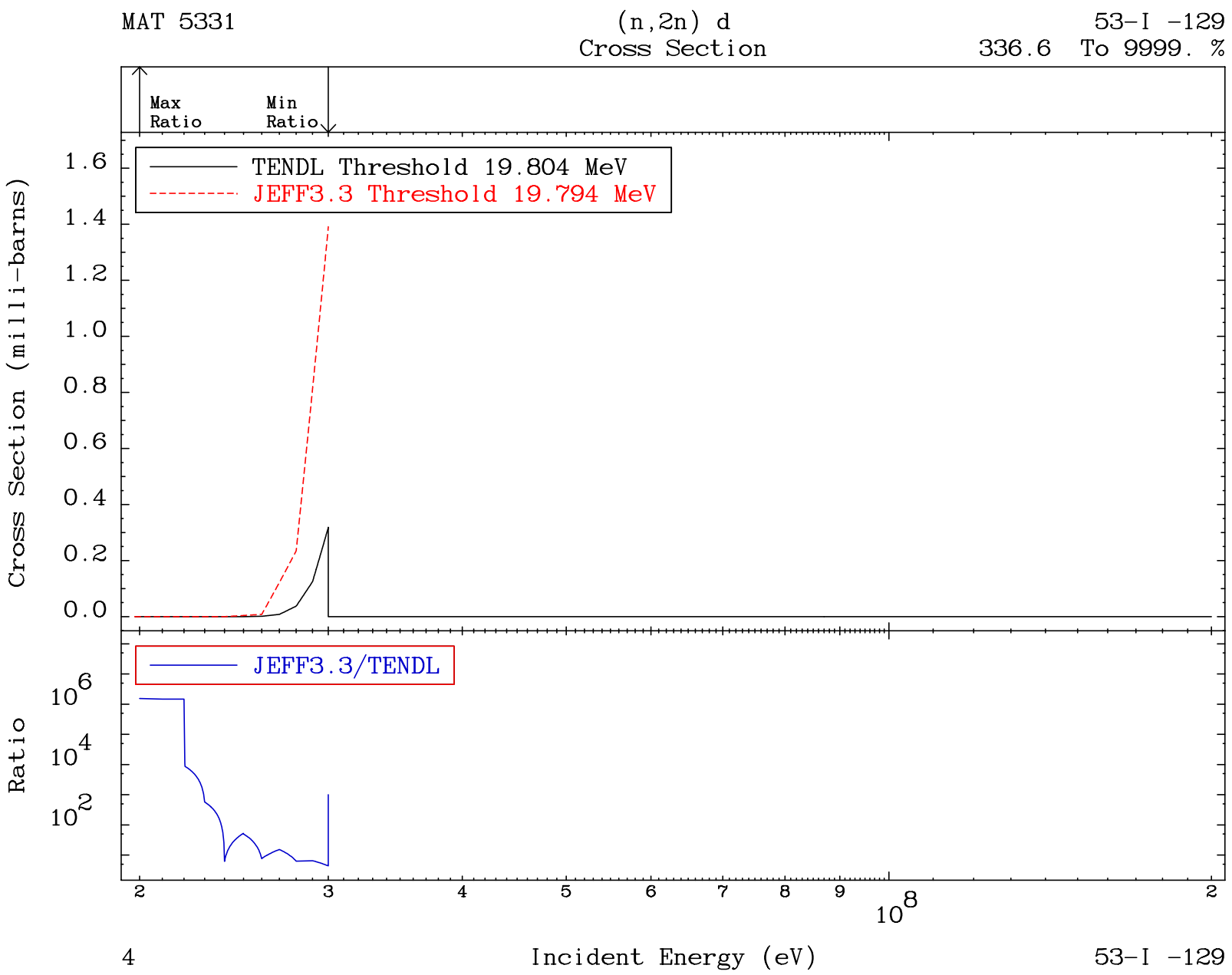
Program Complot
(Version 2018-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

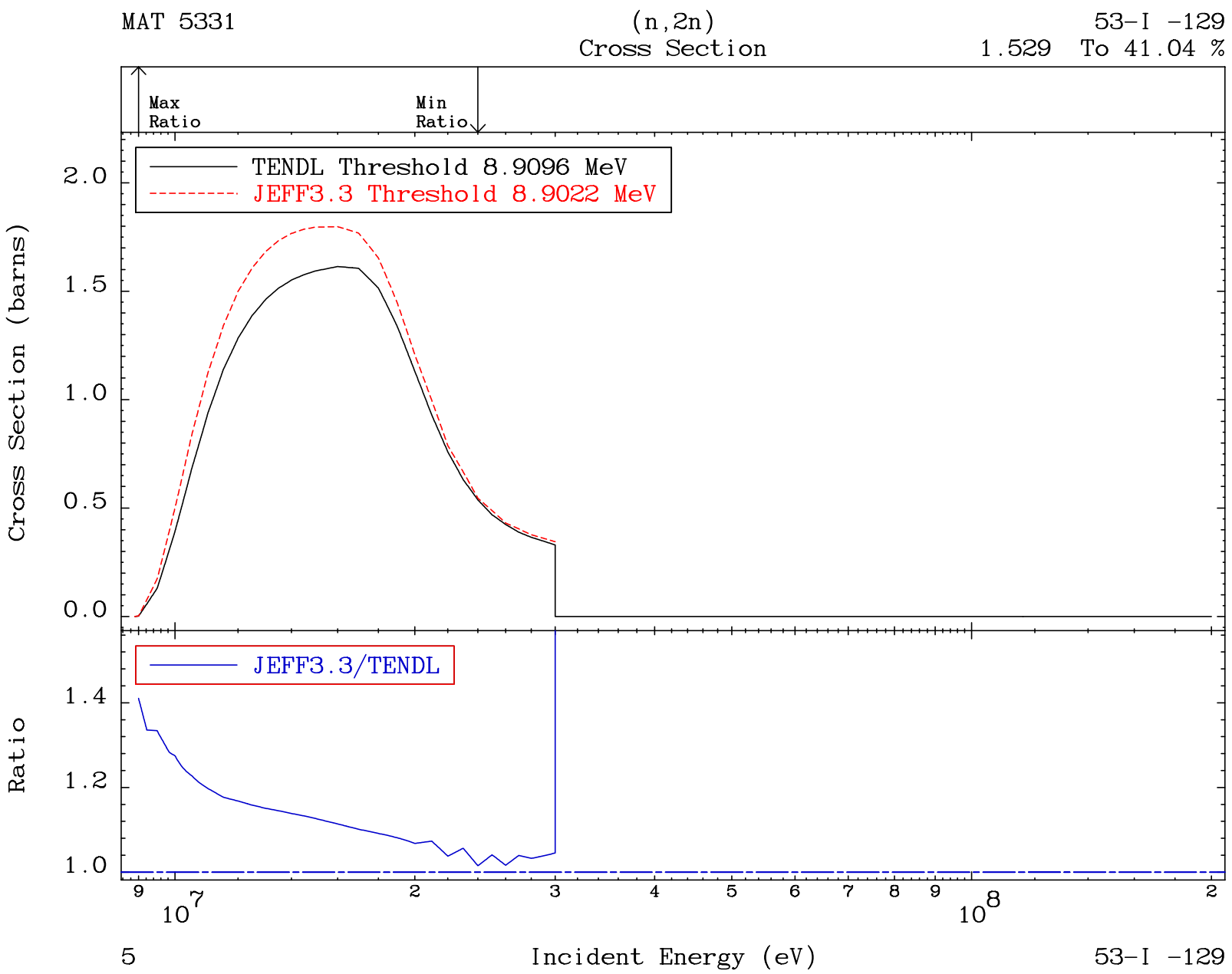
Press Mouse Button to Start

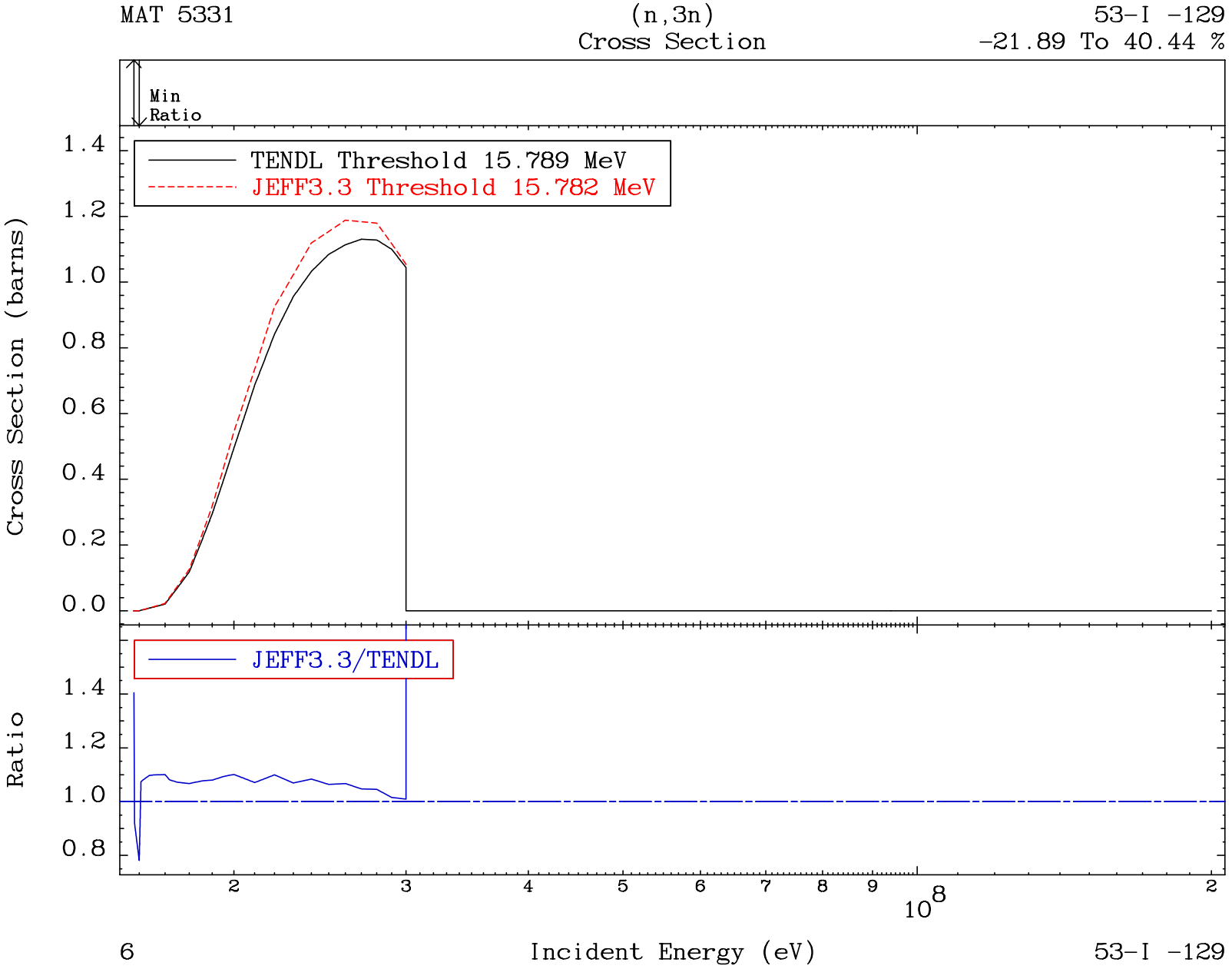

MAT 5331
Total
Cross Section
53-I -129
-84.42 To 7608. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
1
53-I -129

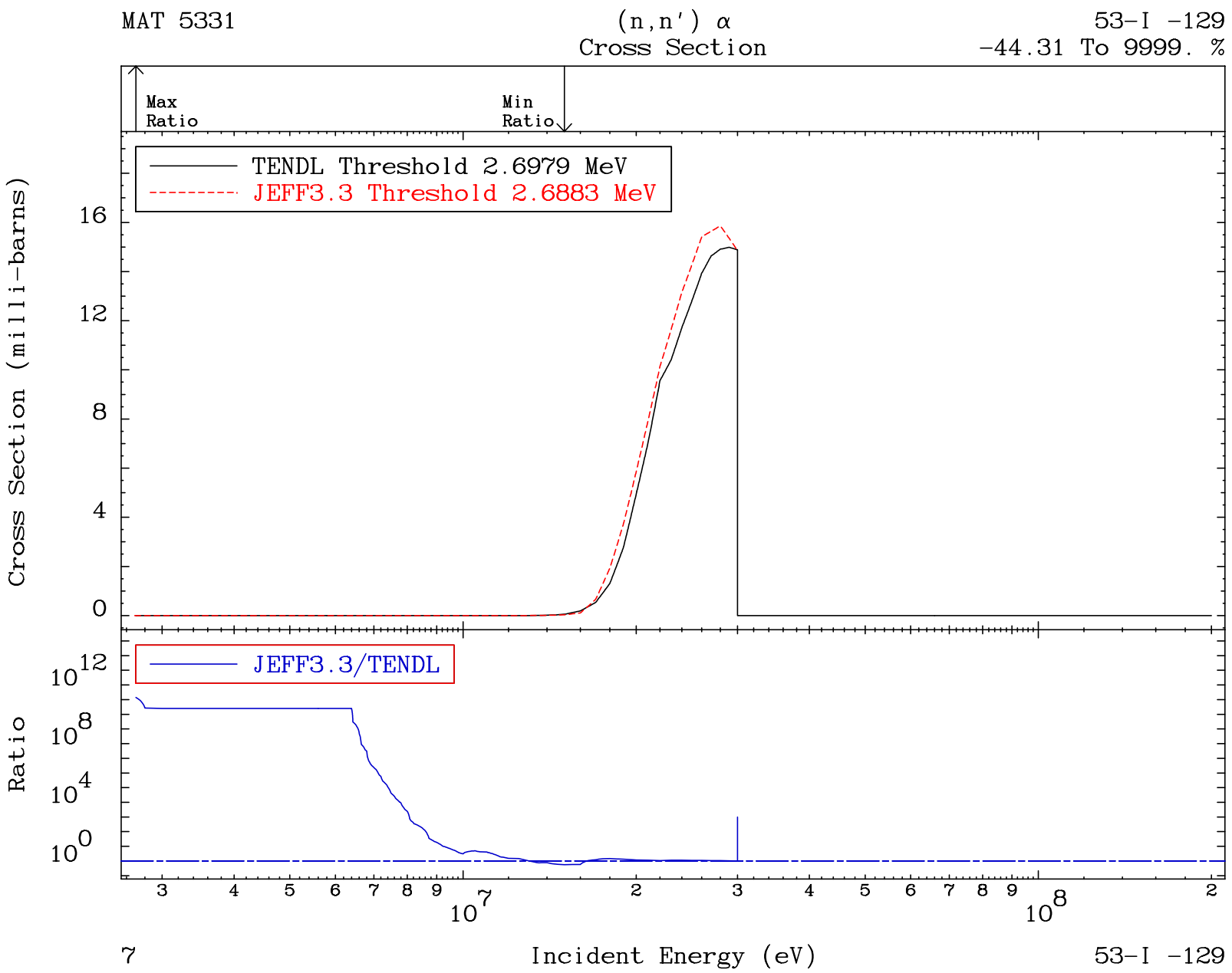

MAT 5331
Elastic
Cross Section
53-I -129
-84.54 To 8899. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
2
53-I -129

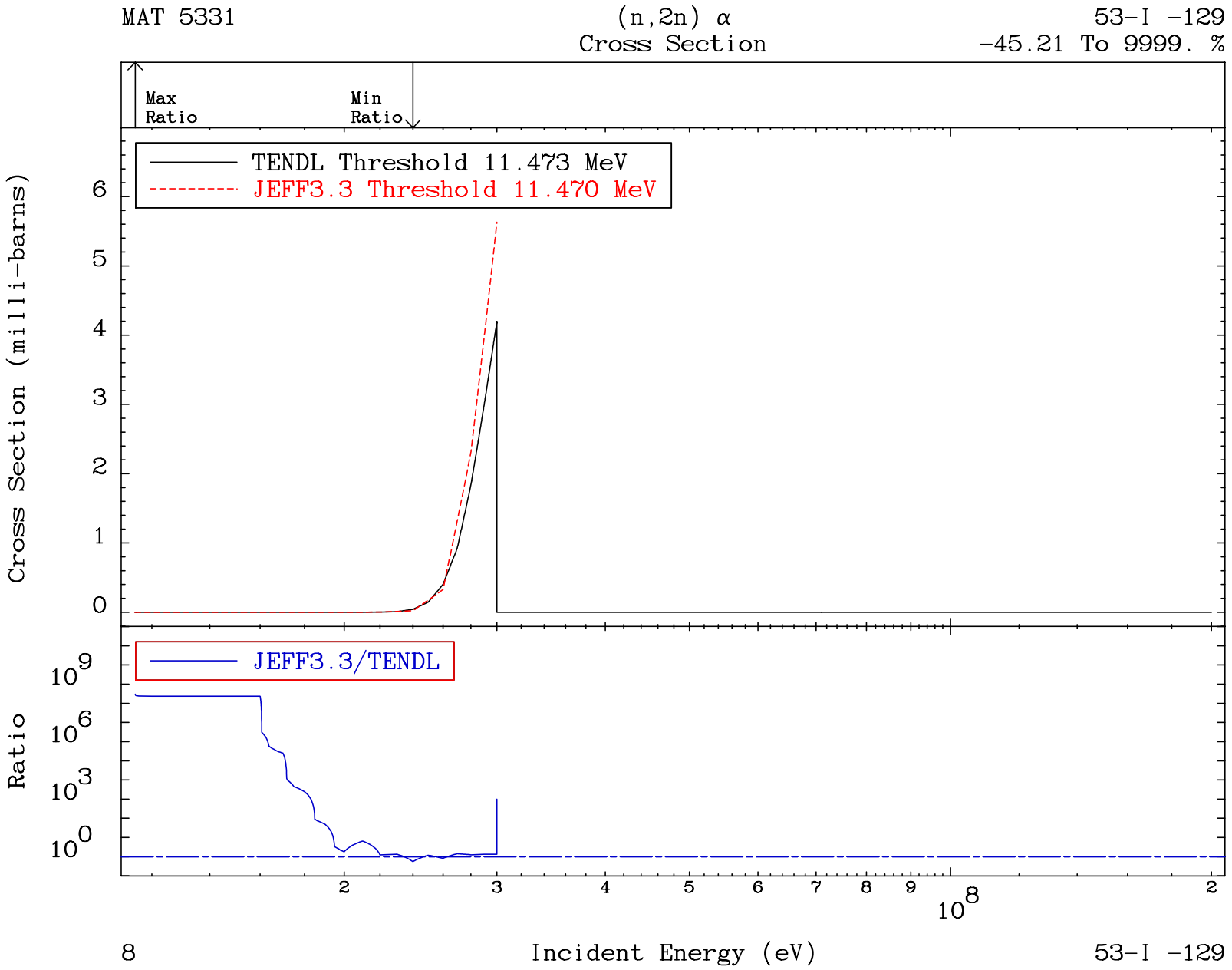

MAT 5331
Inelastic
Cross Section
53-I -129
-86.55 To 4.323 %
Min
Ratio
Max
Ratio
TENDL Threshold 28.018 keV
JEFF3.3 Threshold 28.018 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
3
Incident Energy (eV)
53-I -129

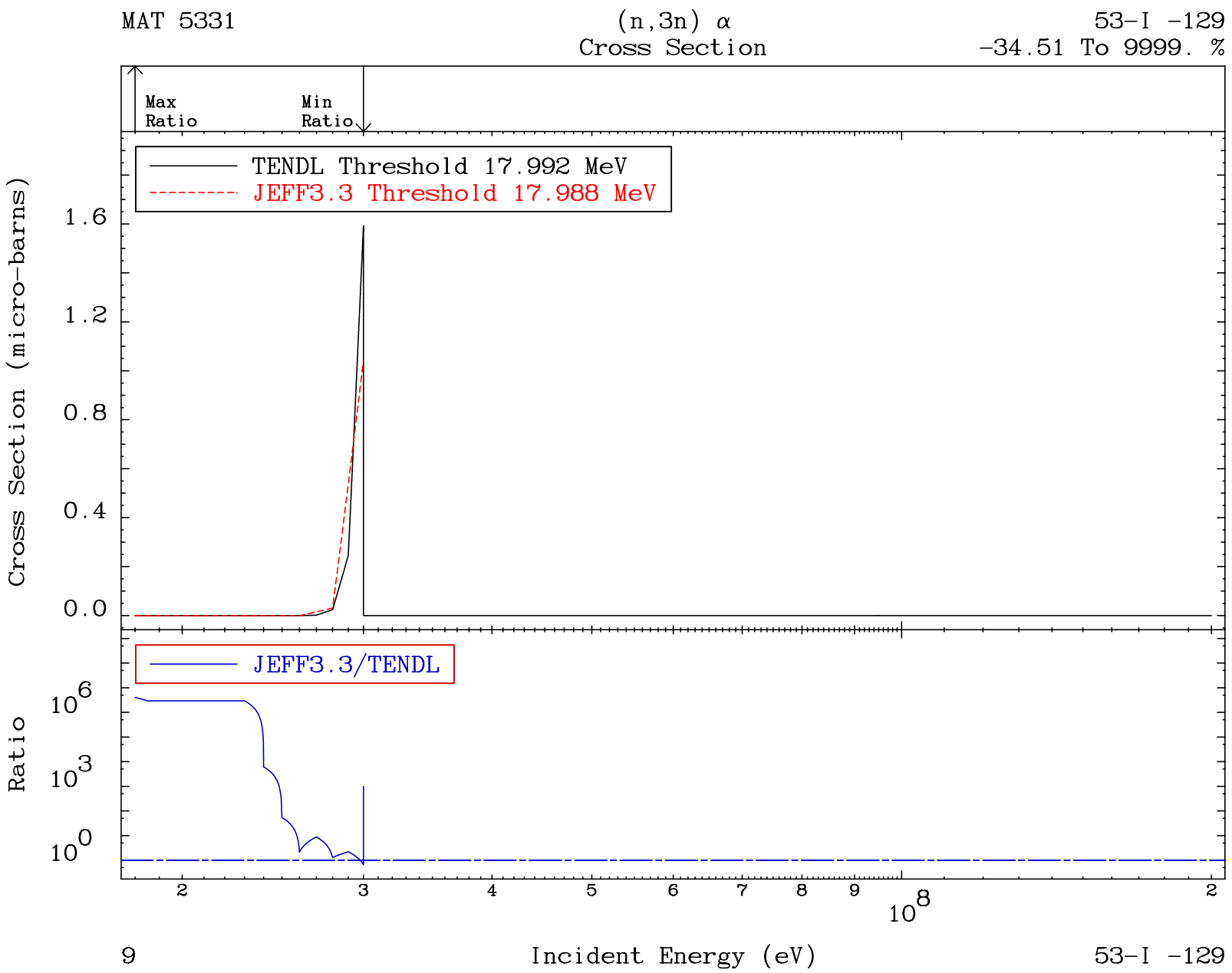

MAT 5331
(n,2n) d
Cross Section
53-I -129
336.6 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 19.804 MeV
JEFF3.3 Threshold 19.794 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
10^6
10^4
10^2
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
53-I -129

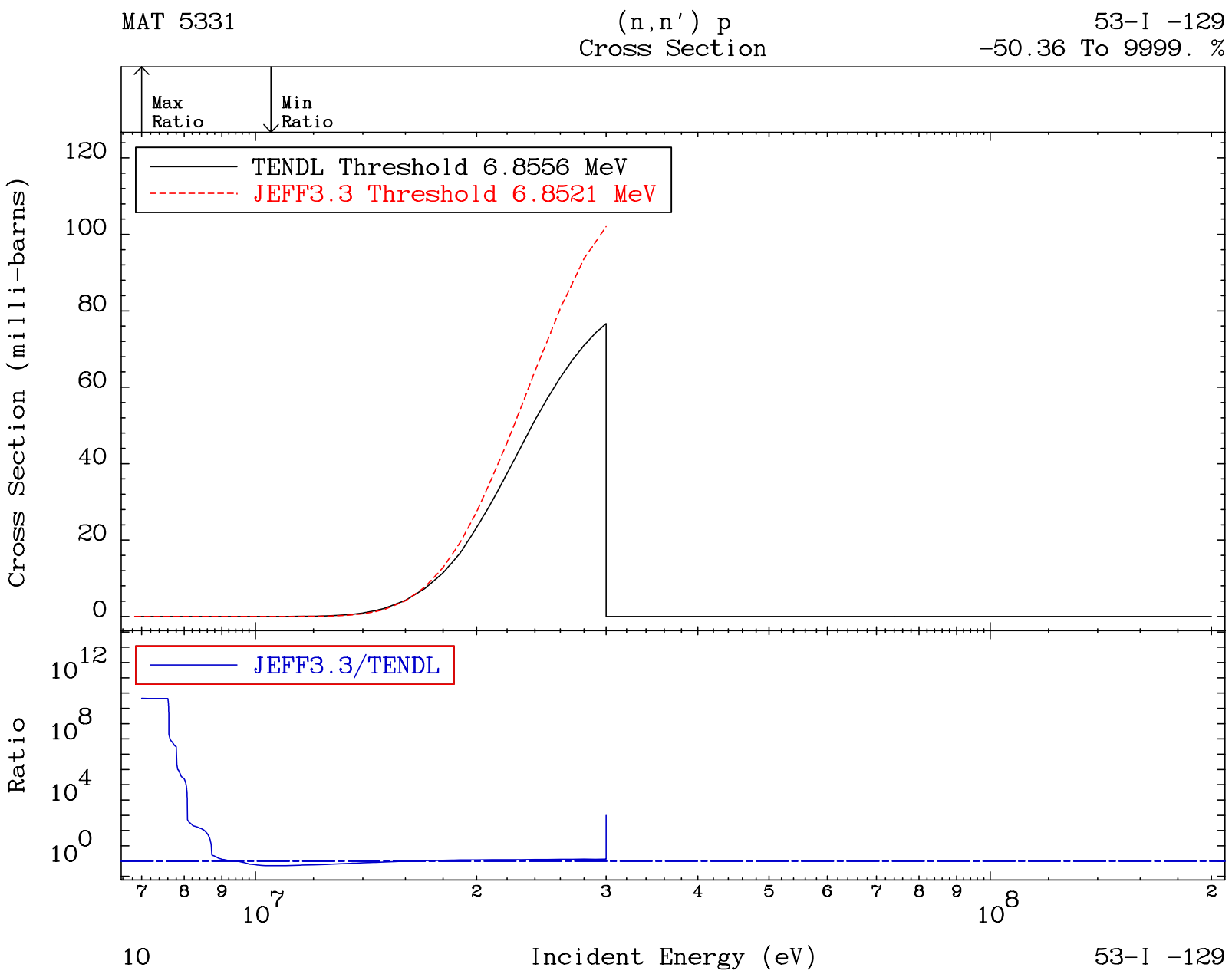

MAT 5331
(n,2n)
Cross Section
53-I -129
1.529 To 41.04 %
Max Ratio
Min Ratio
TENDL Threshold 8.9096 MeV
JEFF3.3 Threshold 8.9022 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.4
1.2
1.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
53-I -129

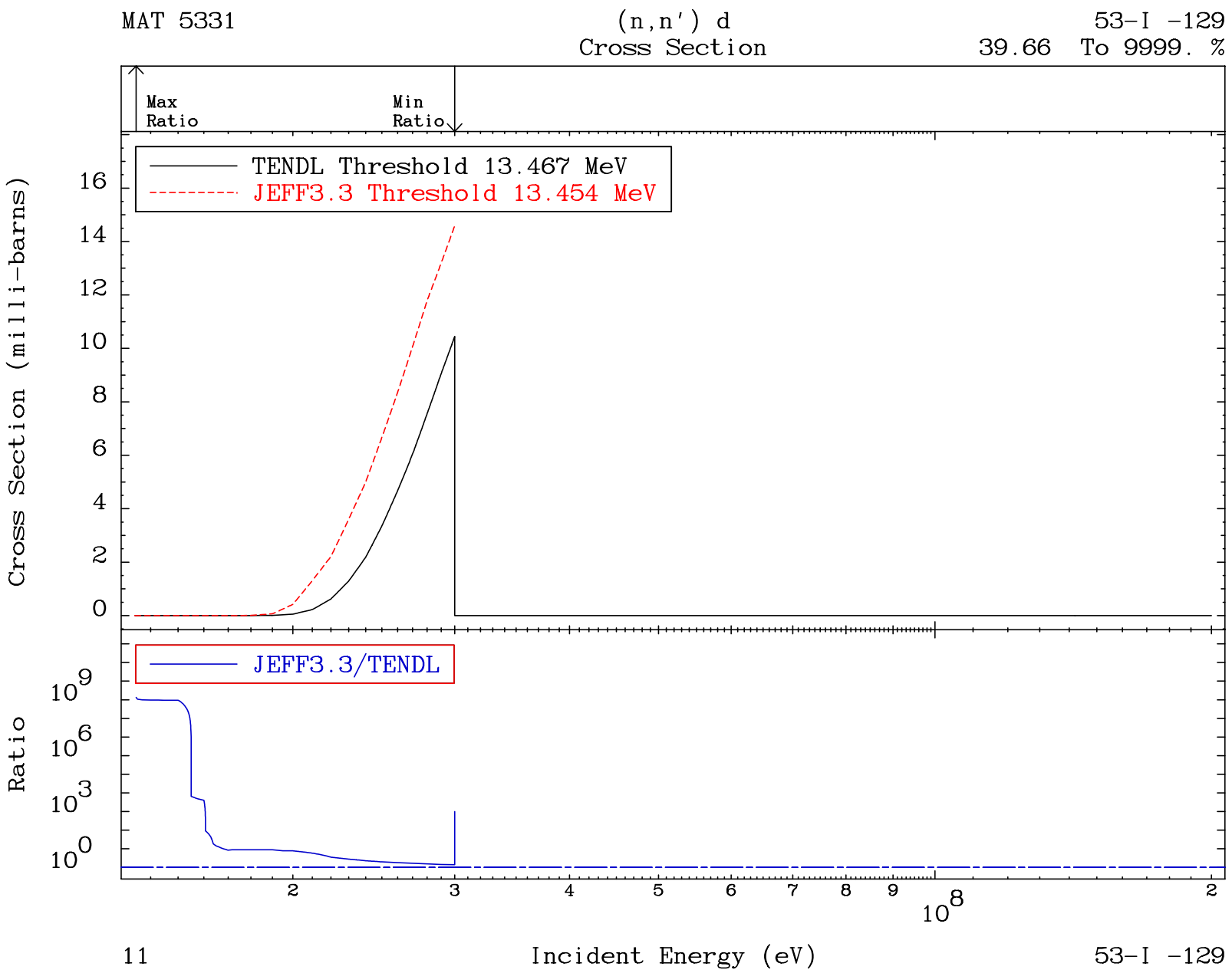

MAT 5331
(n,3n)
Cross Section
53-I -129
-21.89 To 40.44 %
Min
Ratio
TENDL Threshold 15.789 MeV
JEFF3.3 Threshold 15.782 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.4
1.2
1.0
0.8
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
53-I -129

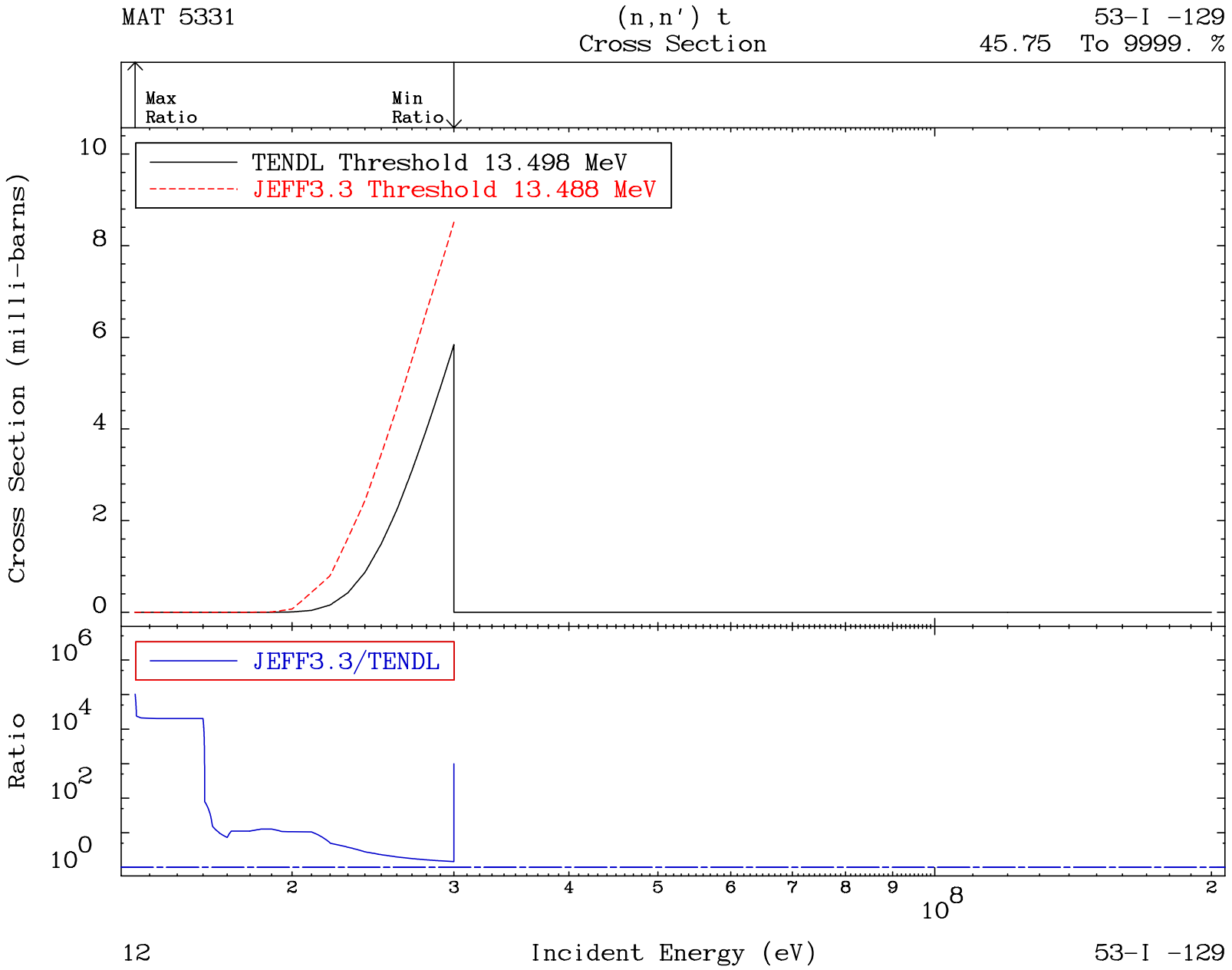

MAT 5331
(n,n') α
Cross Section
53-I -129
-44.31 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.6979 MeV
JEFF3.3 Threshold 2.6883 MeV
Cross Section (milli-barns)
16
12
8
4
0
JEFF3.3/TENDL
Ratio
10^12
10^8
10^4
10^0
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
7
Incident Energy (eV)
53-I -129

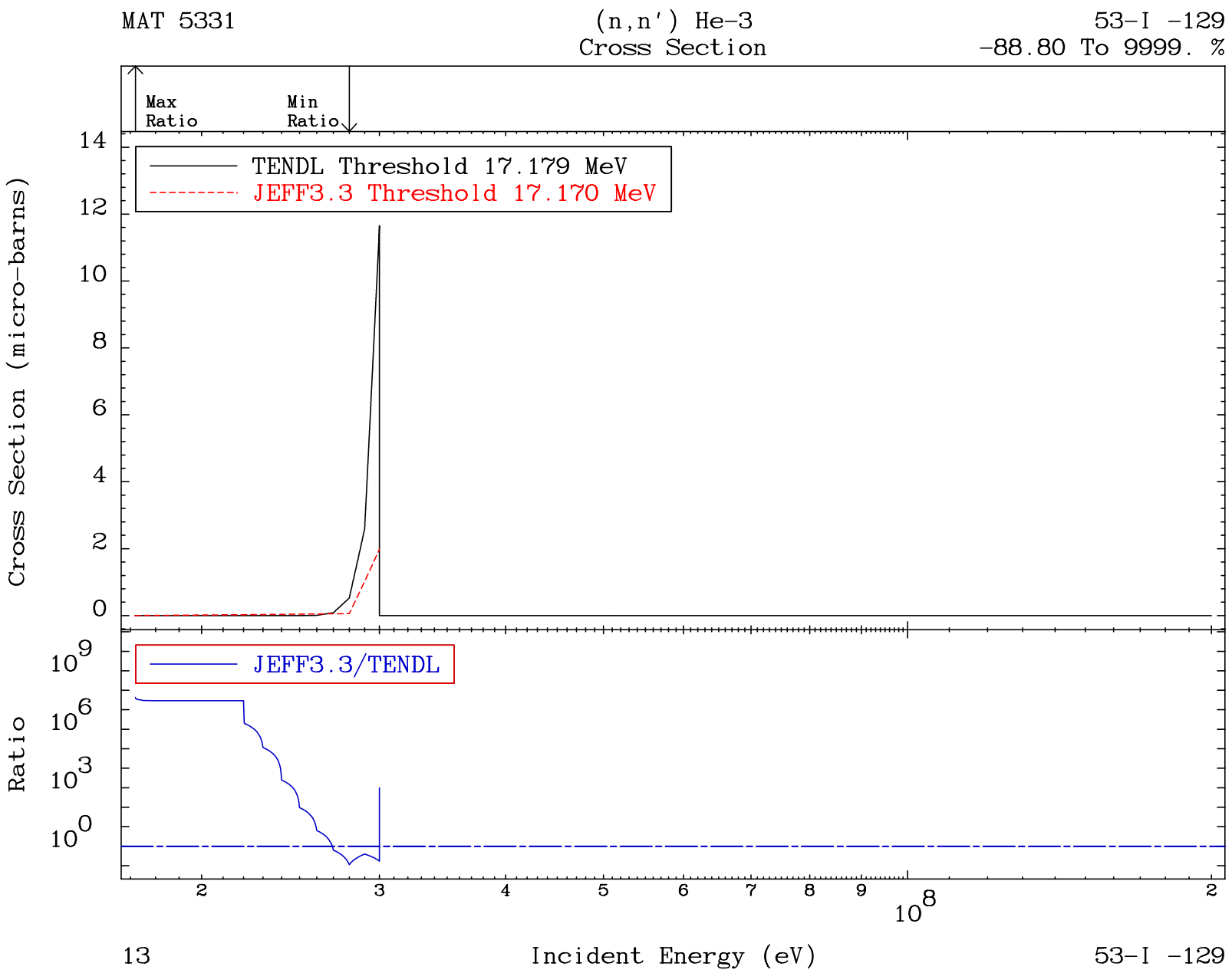

MAT 5331
(n,2n) α
Cross Section
53-I -129
-45.21 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.473 MeV
JEFF3.3 Threshold 11.470 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
53-I -129

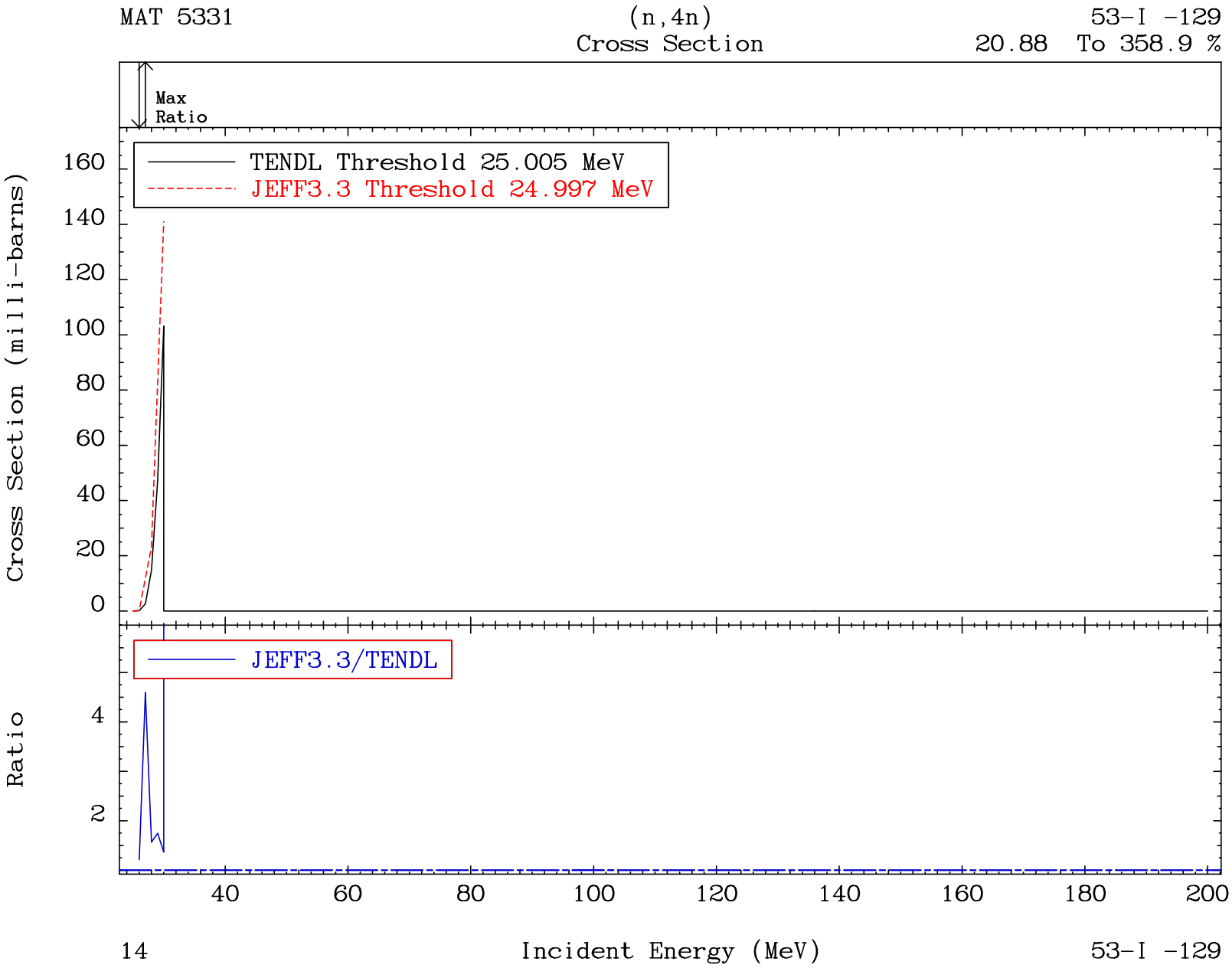

MAT 5331
(n,3n) α
Cross Section
53-I -129
-34.51 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 17.992 MeV
JEFF3.3 Threshold 17.988 MeV
Cross Section (micro-barns)
1.6
1.2
0.8
0.4
0.0
JEFF3.3/TENDL
Ratio
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
53-I -129

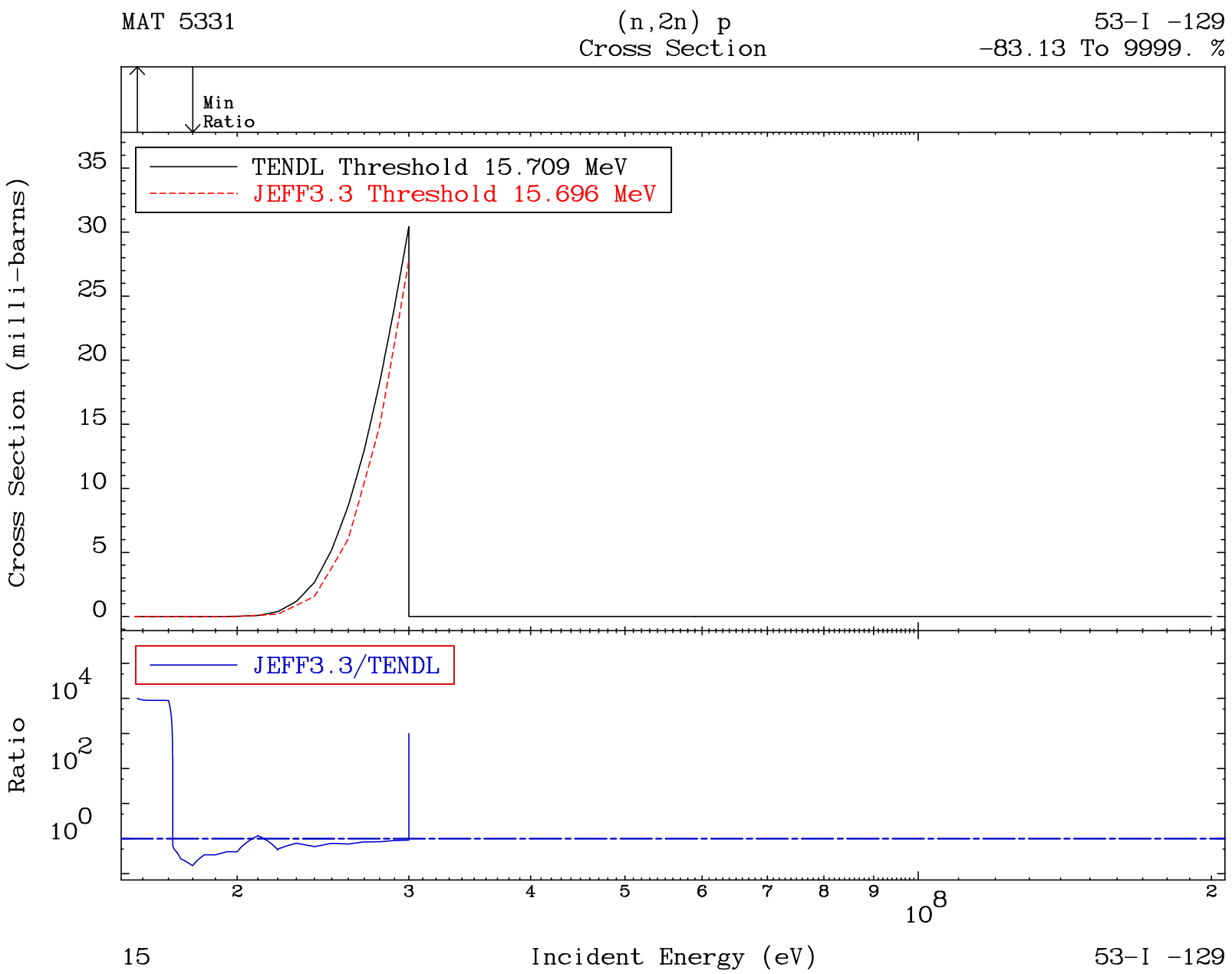

MAT 5331
(n,n') p
Cross Section
53-I -129
-50.36 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.8556 MeV
JEFF3.3 Threshold 6.8521 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^12
10^8
10^4
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
10
Incident Energy (eV)
53-I -129

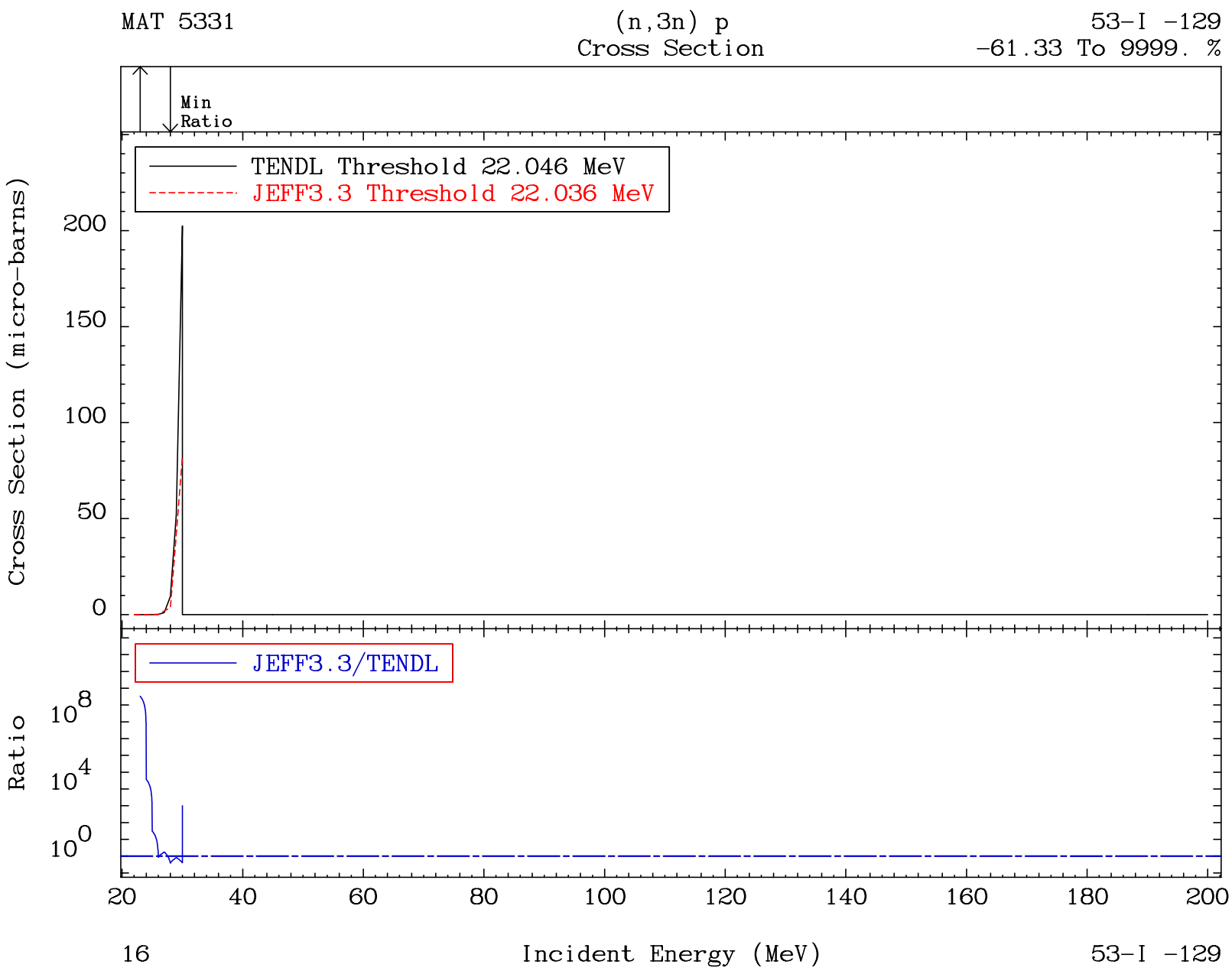

MAT 5331
(n,n') d
Cross Section
53-I -129
39.66 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 13.467 MeV
JEFF3.3 Threshold 13.454 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
53-I -129

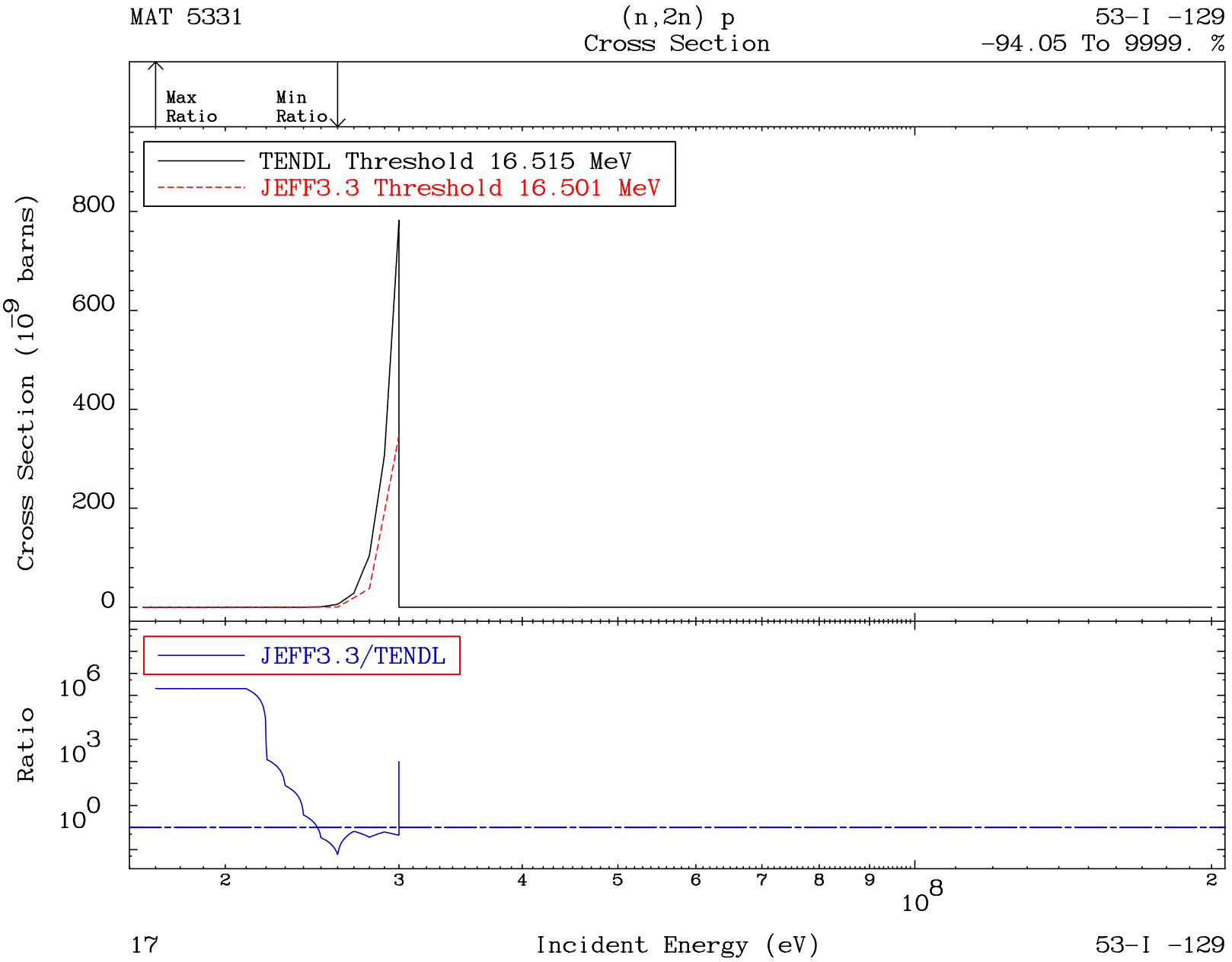

MAT 5331
(n,n') t
Cross Section
53-I -129
45.75 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 13.498 MeV
JEFF3.3 Threshold 13.488 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
12
53-I -129

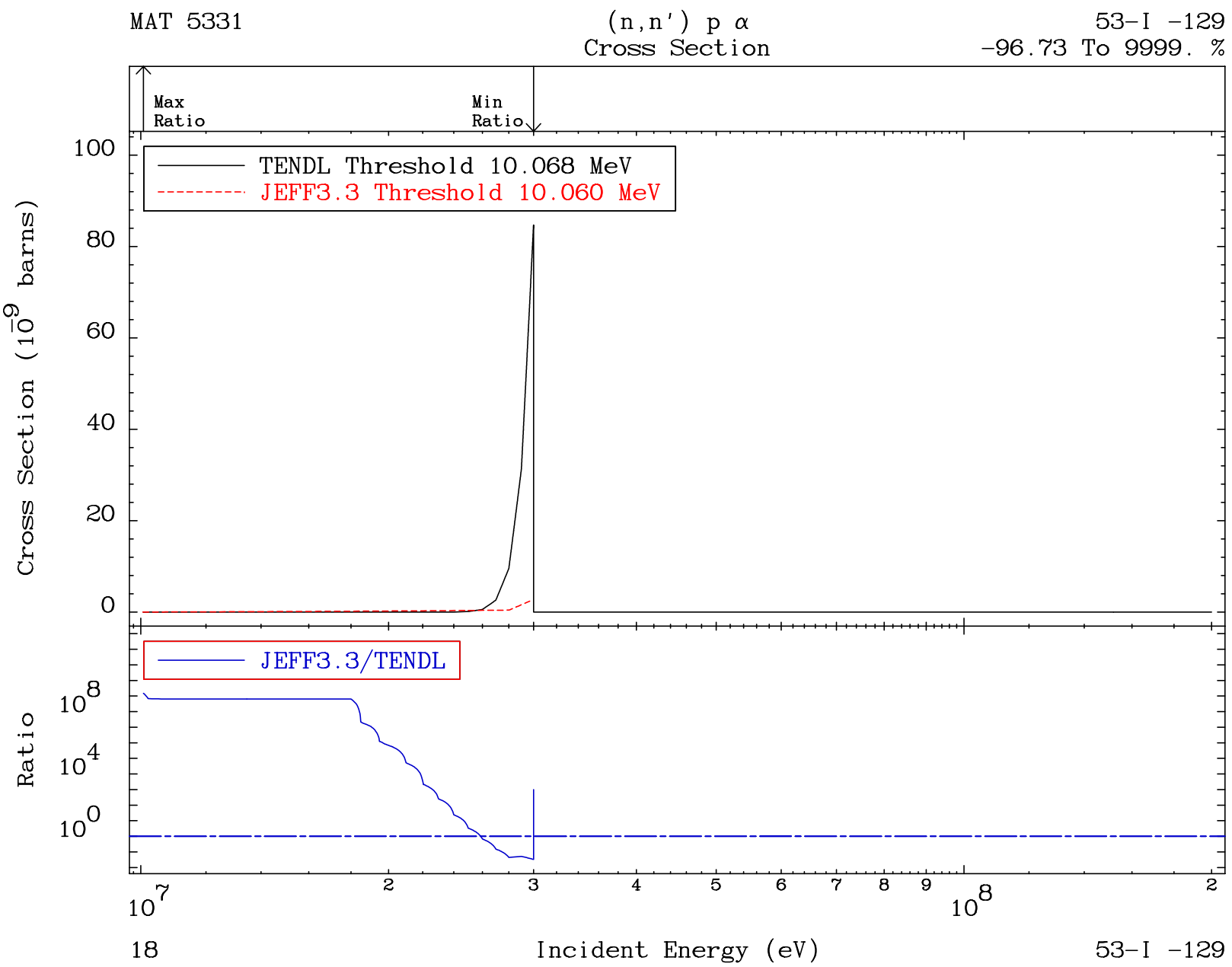

MAT 5331
(n,n') He-3
Cross Section
53-I -129
-88.80 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 17.179 MeV
JEFF3.3 Threshold 17.170 MeV
Cross Section (micro-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
13
53-I -129

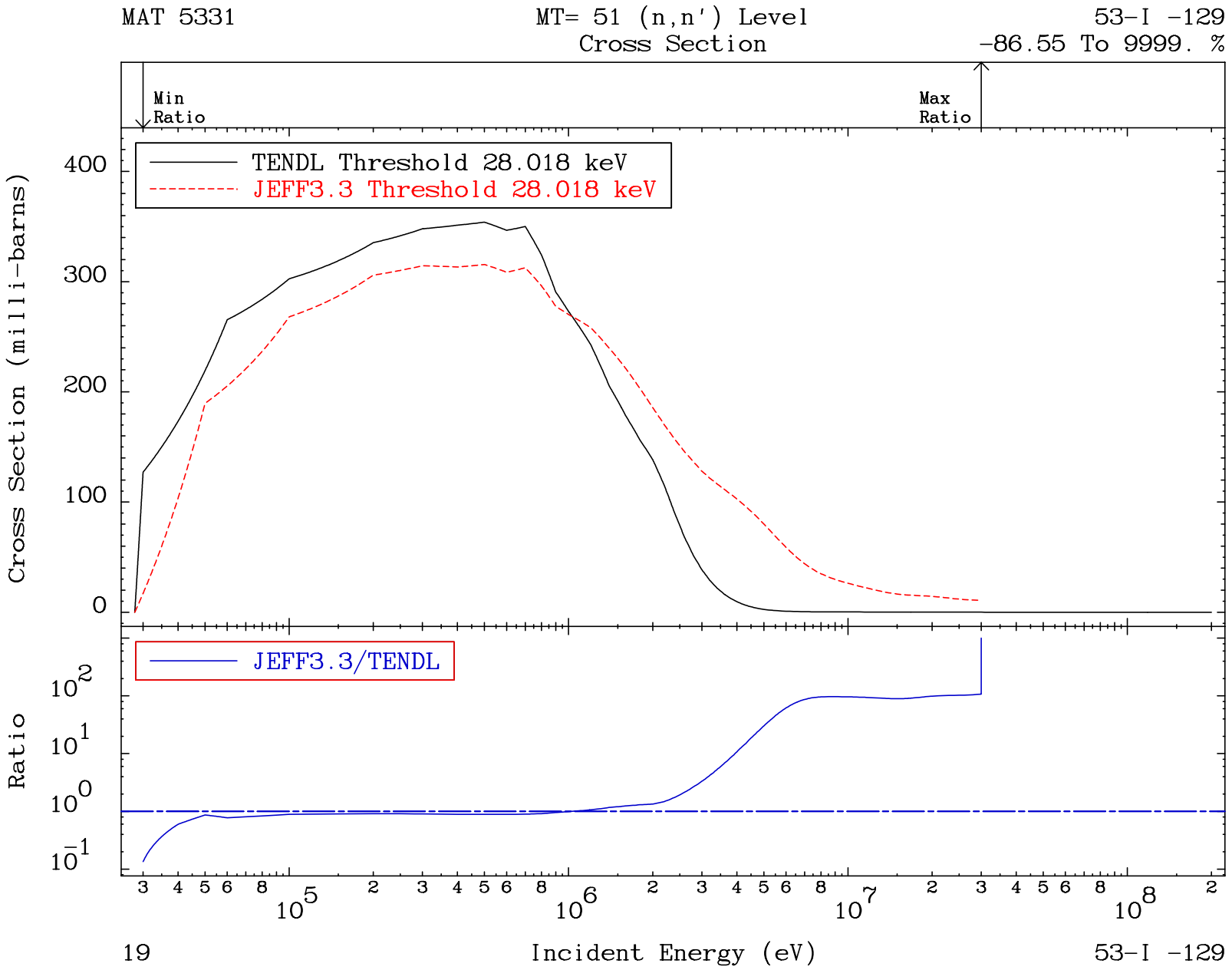

MAT 5331
(n,4n)
Cross Section
53-I -129
20.88 To 358.9 %
Max
Ratio
TENDL Threshold 25.005 MeV
JEFF3.3 Threshold 24.997 MeV
JEFF3.3/TENDL
Cross Section (milli-barns)
Ratio
Incident Energy (MeV)
14
53-I -129
0
20
40
60
80
100
120
140
160
2
4
40
60
80
100
120
140
160
180
200

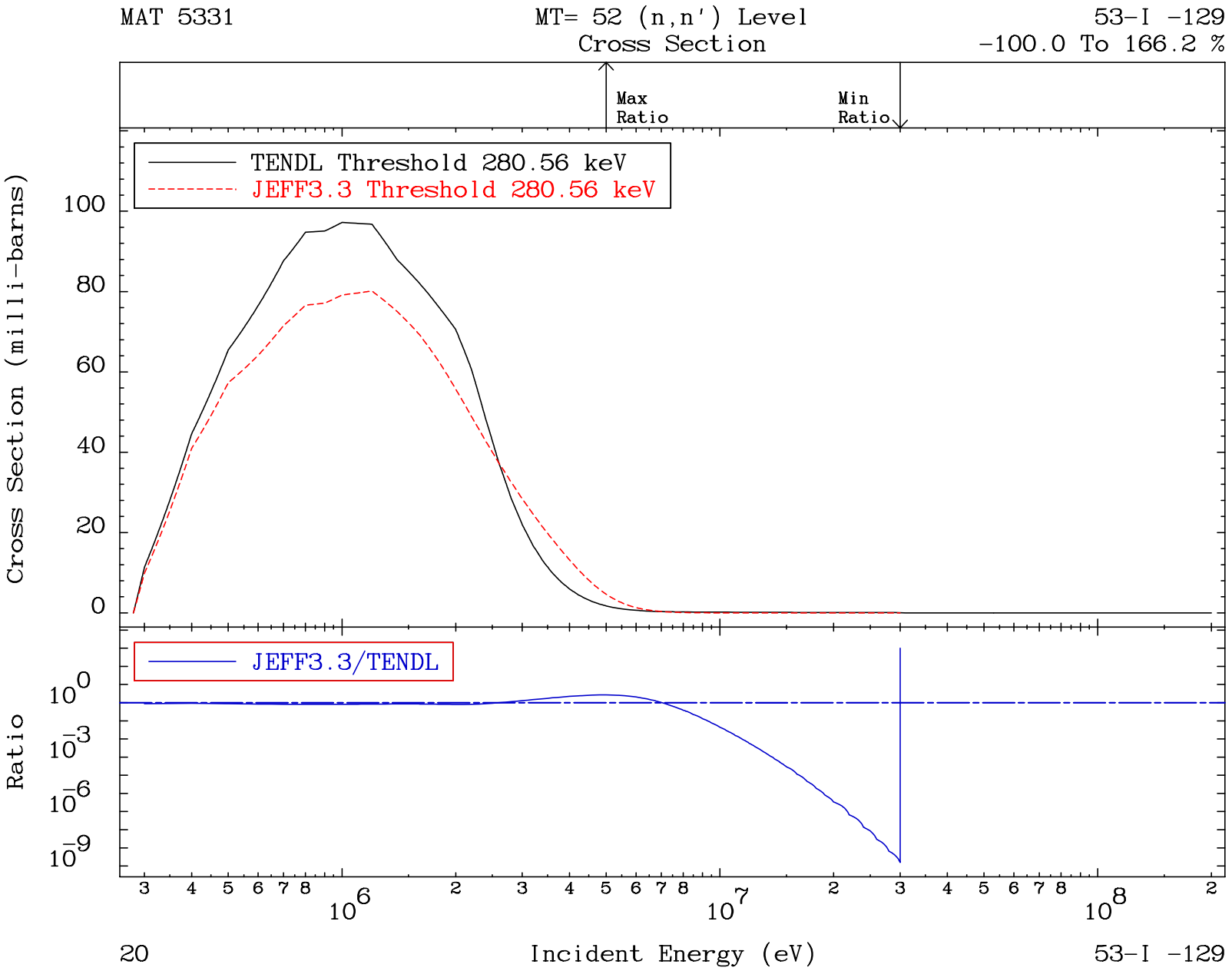

MAT 5331
(n,2n) p
Cross Section
53-I -129
-83.13 To 9999. %
Min
Ratio
TENDL Threshold 15.709 MeV
JEFF3.3 Threshold 15.696 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
15
Incident Energy (eV)
53-I -129

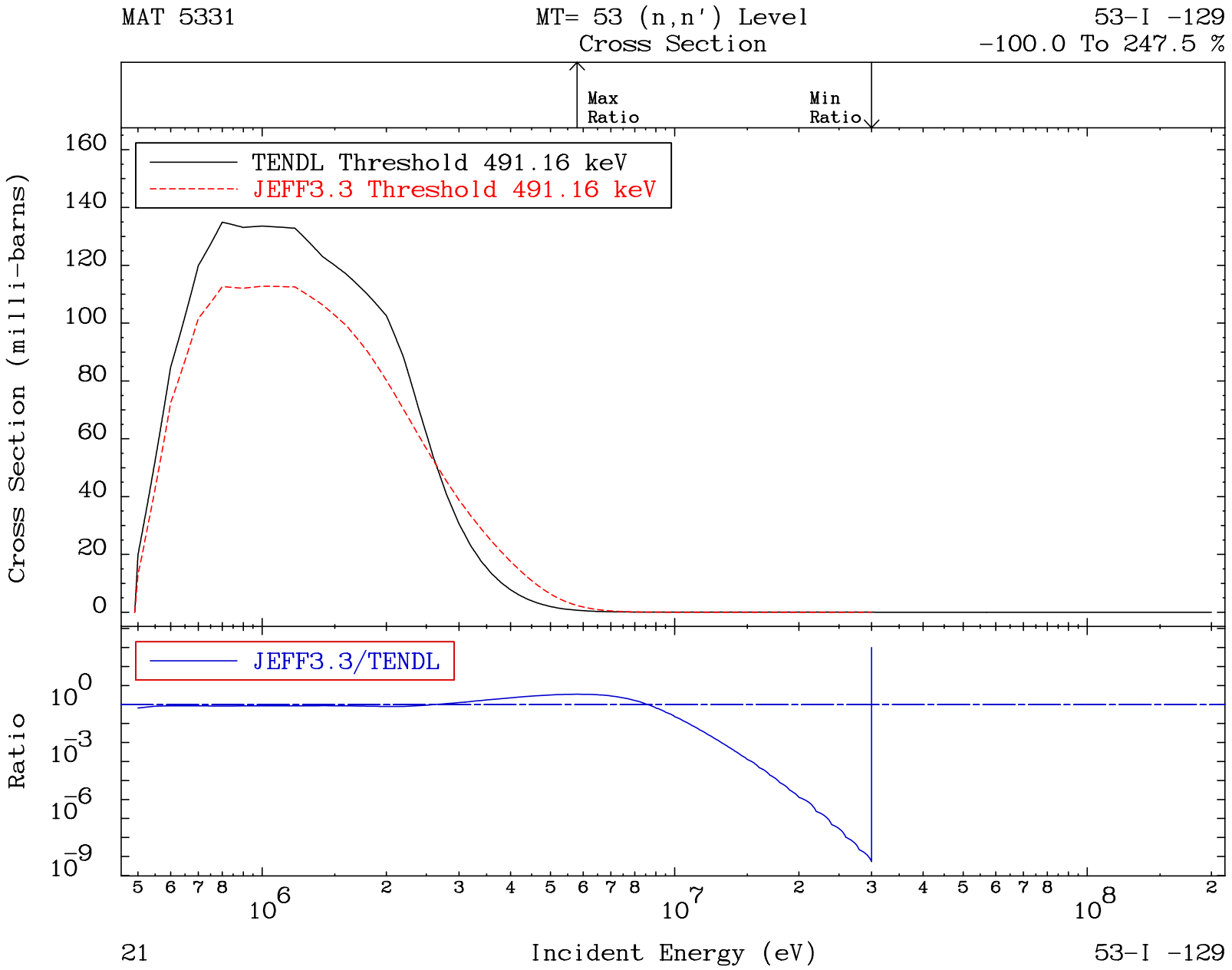

MAT 5331
(n,3n) p
Cross Section
53-I -129
-61.33 To 9999. %
Min
Ratio
TENDL Threshold 22.046 MeV
JEFF3.3 Threshold 22.036 MeV
Cross Section (micro-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^8
10^4
10^0
20
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
53-I -129

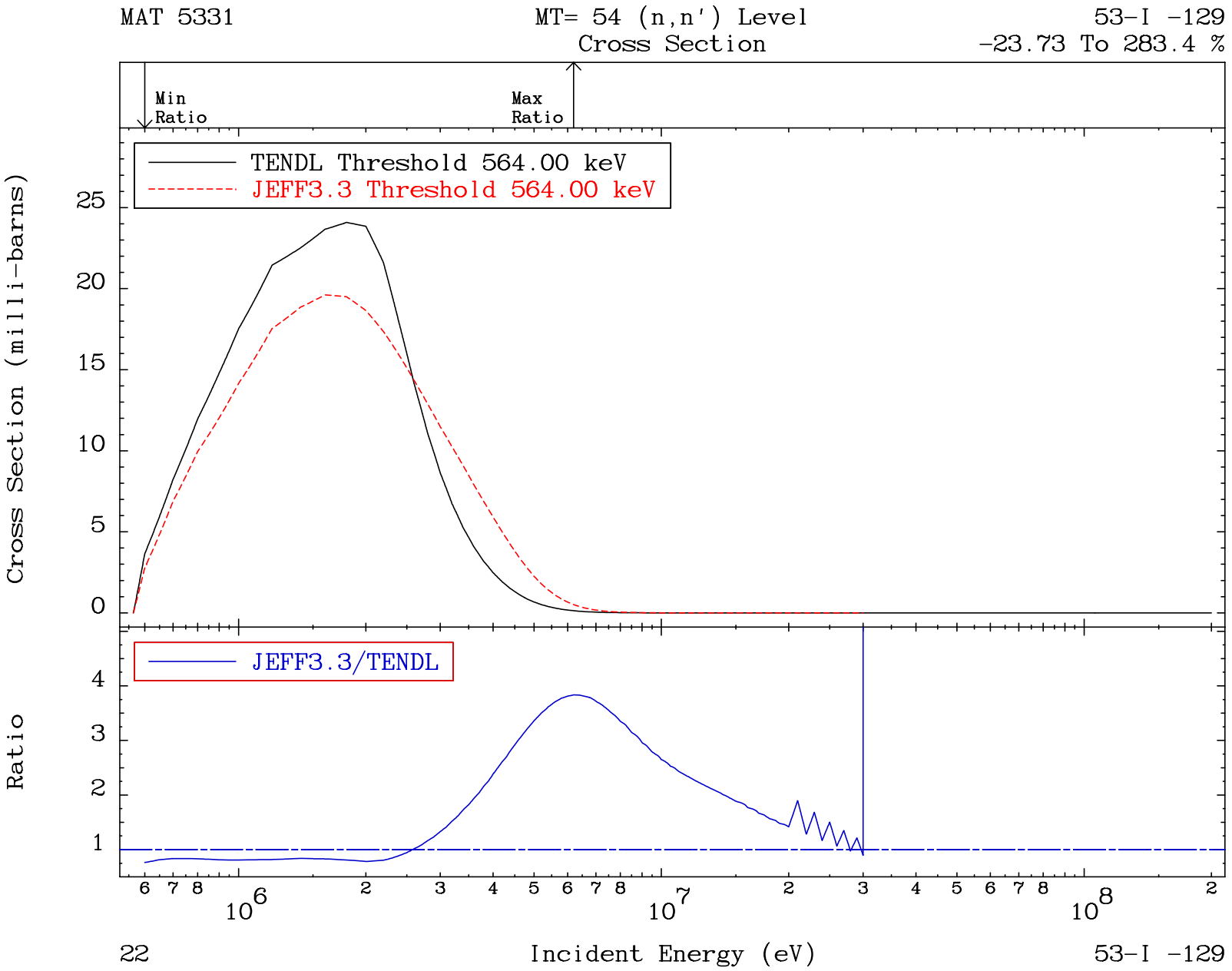

MAT 5331
(n,2n) p
Cross Section
53-I -129
-94.05 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.515 MeV
JEFF3.3 Threshold 16.501 MeV
Cross Section (10^{-9} barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
10^{6}
10^{3}
10^{0}
2
3
4
5
6
7
8
9
10^{8}
2
17
Incident Energy (eV)
53-I -129

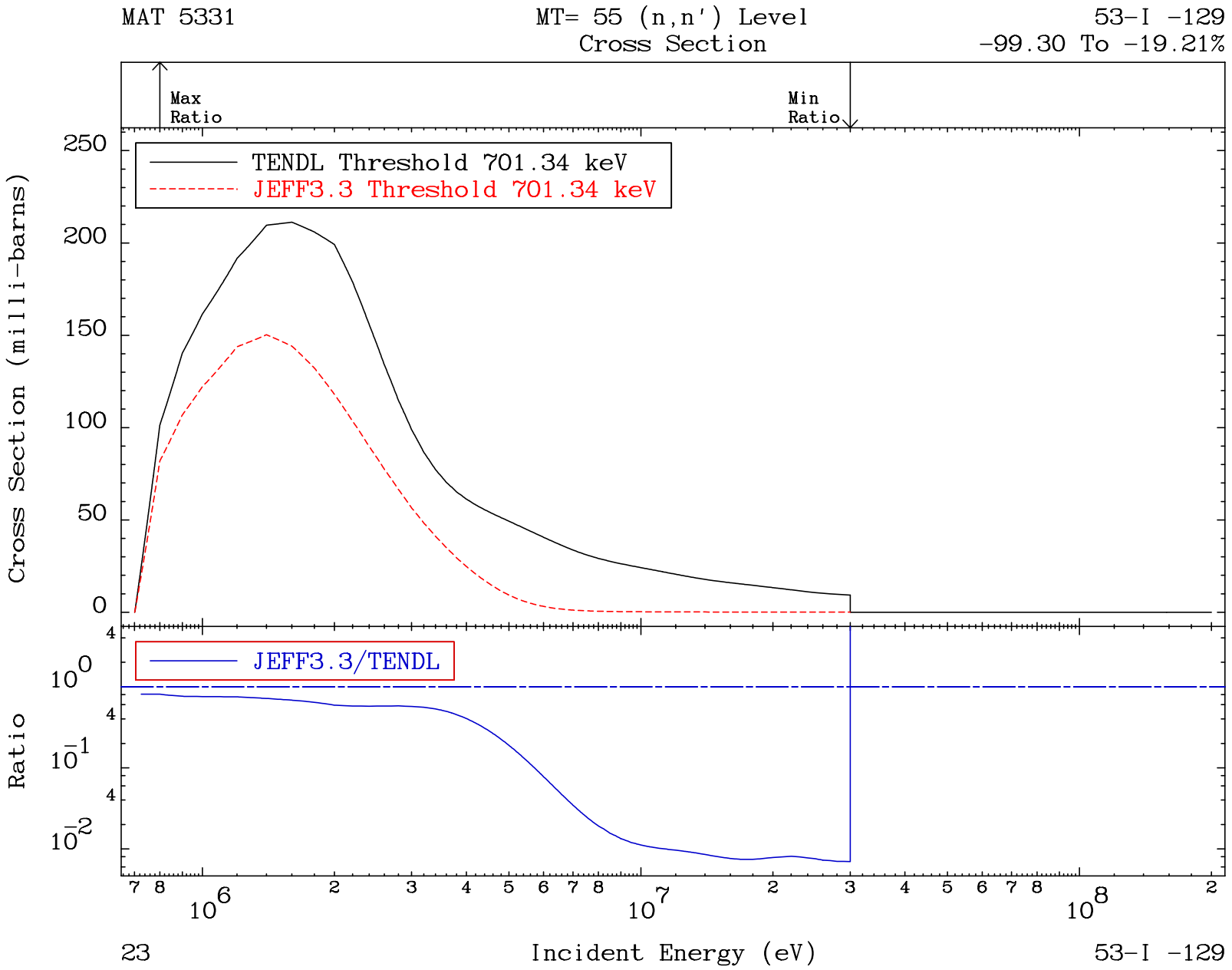

MAT 5331
(n,n') p α
Cross Section
53-I -129
-96.73 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 10.068 MeV
JEFF3.3 Threshold 10.060 MeV
Cross Section (10^-9 barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^8
10^4
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
18
Incident Energy (eV)
53-I -129

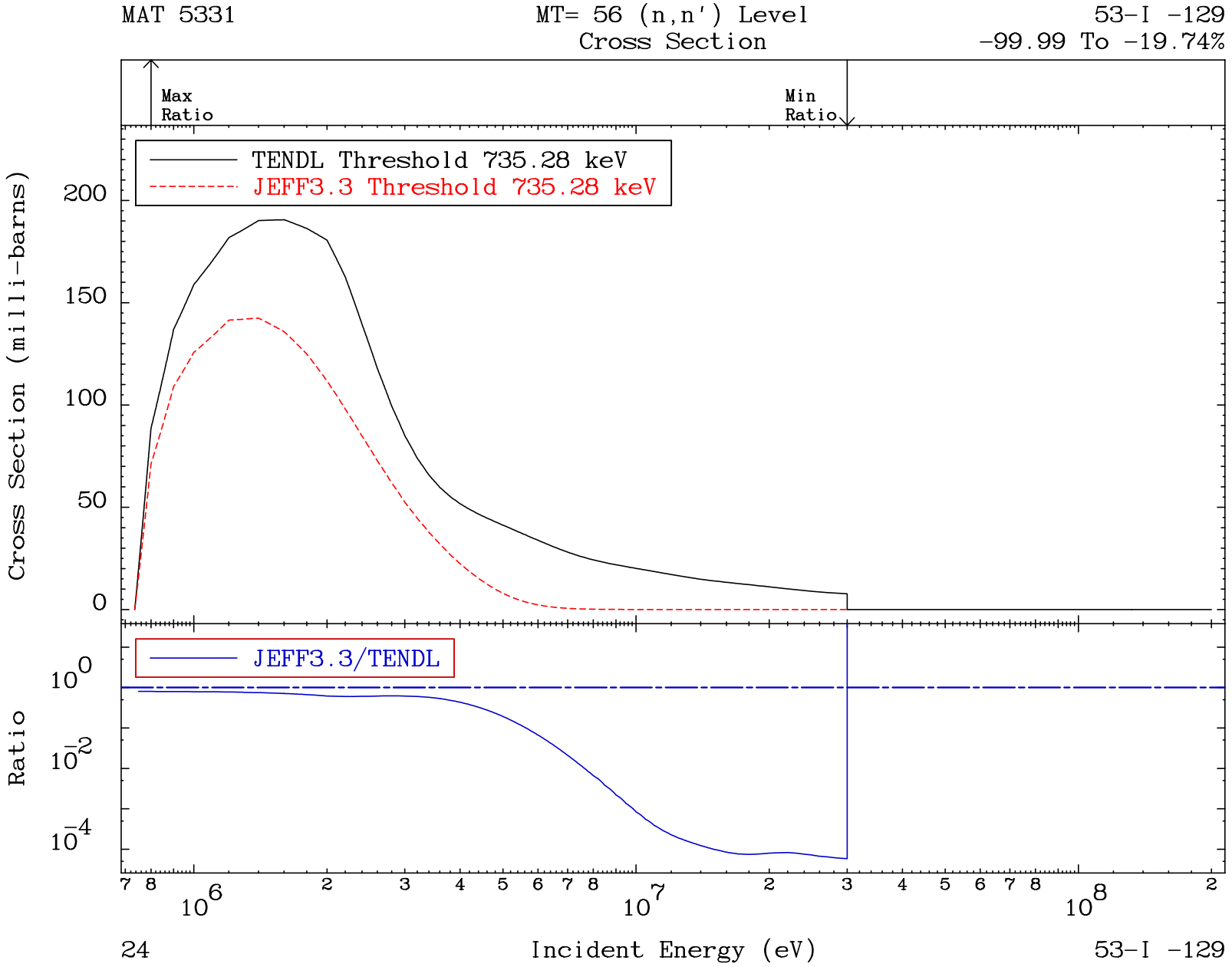

MAT 5331
MT= 51 (n,n') Level
Cross Section
53-I -129
-86.55 To 9999. %
Min
Ratio
Max
Ratio
TENDL Threshold 28.018 keV
JEFF3.3 Threshold 28.018 keV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
10^2
10^1
10^0
10^{-1}
3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
19
Incident Energy (eV)
53-I -129

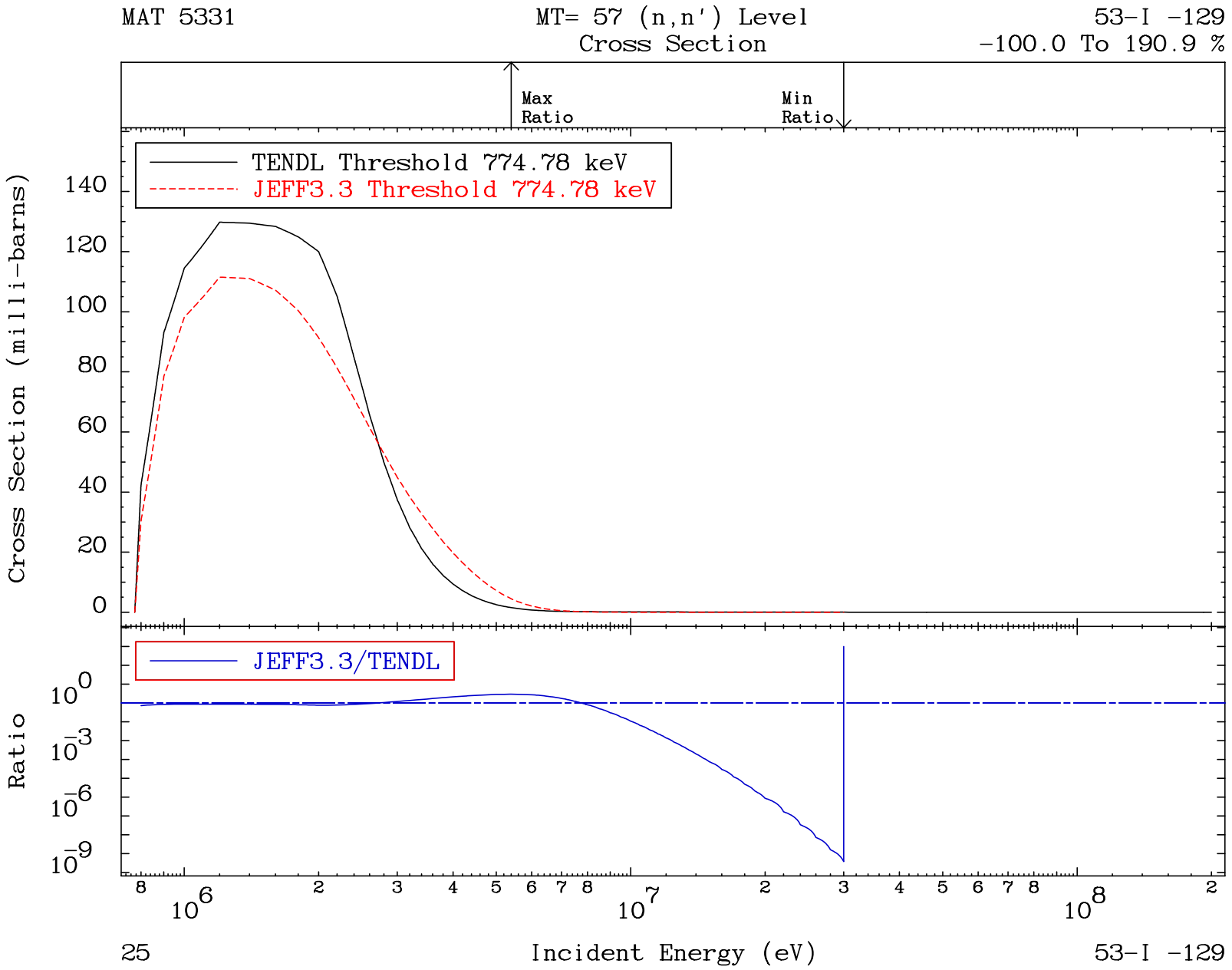

MAT 5331
MT= 52 (n,n') Level
Cross Section
53-I -129
-100.0 To 166.2 %
Max
Ratio
Min
Ratio
TENDL Threshold 280.56 keV
JEFF3.3 Threshold 280.56 keV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
53-I -129

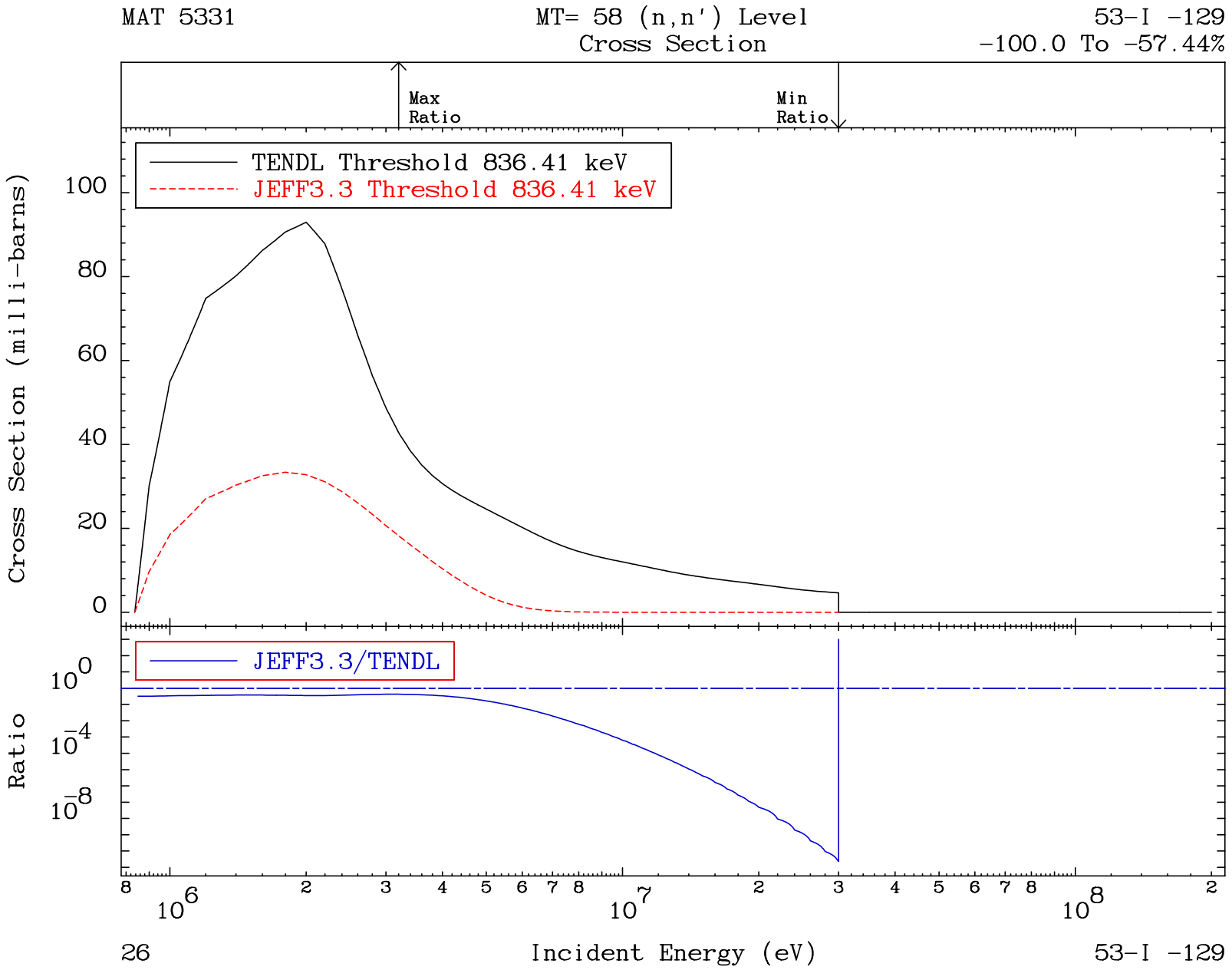

MAT 5331
MT= 53 (n,n') Level
Cross Section
53-I -129
-100.0 To 247.5 %
Max
Ratio
Min
Ratio
TENDL Threshold 491.16 keV
JEFF3.3 Threshold 491.16 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
53-I -129

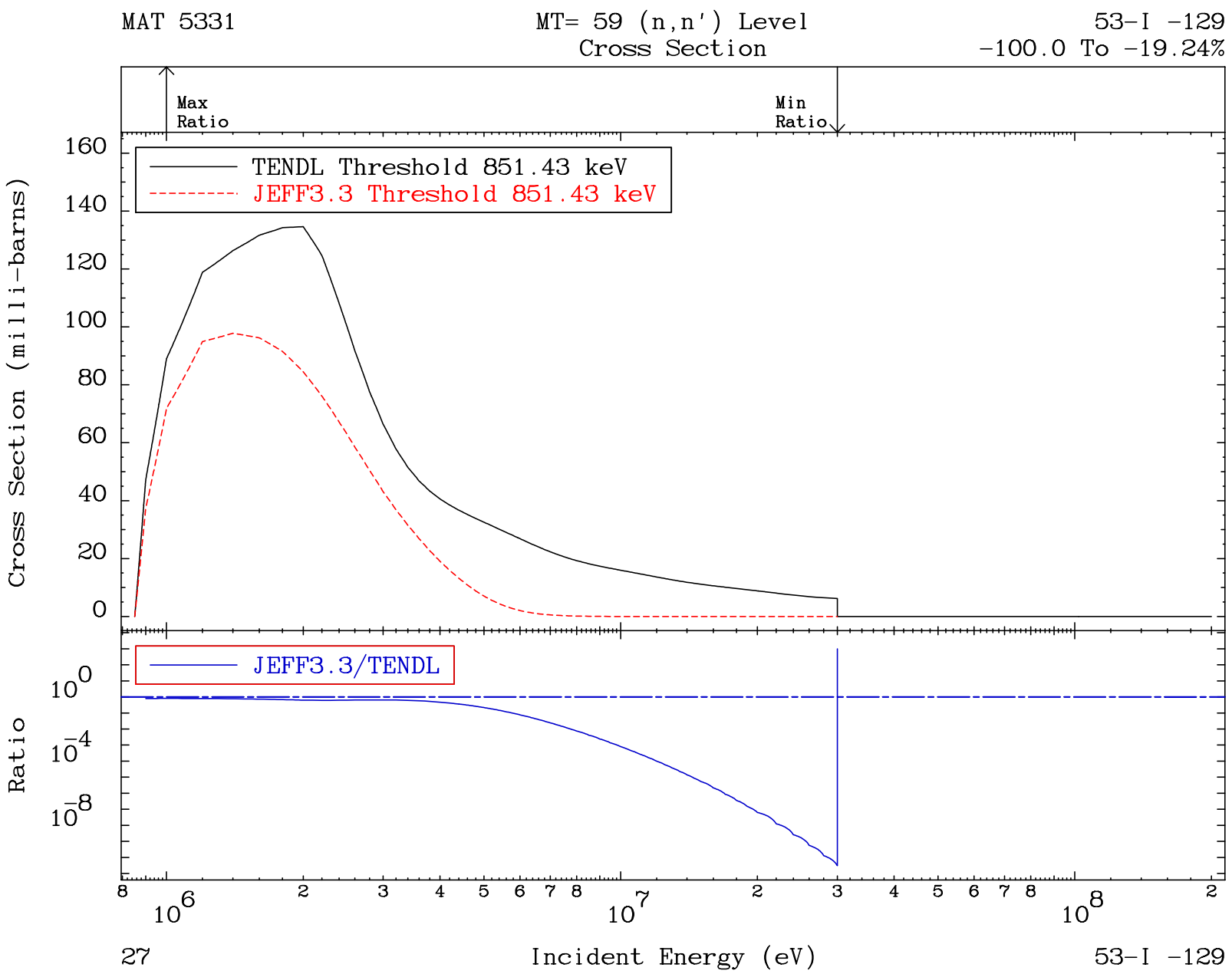

MAT 5331
MT= 54 (n,n') Level
Cross Section
53-I -129
-23.73 To 283.4 %
Min
Ratio
Max
Ratio
TENDL Threshold 564.00 keV
JEFF3.3 Threshold 564.00 keV
Cross Section (milli-barns)
0
5
10
15
20
25
JEFF3.3/TENDL
Ratio
1
2
3
4
6 7 8
10^6
2
3
4
5
6 7 8
10^7
2
3
4
5
6 7 8
10^8
2
22
Incident Energy (eV)
53-I -129

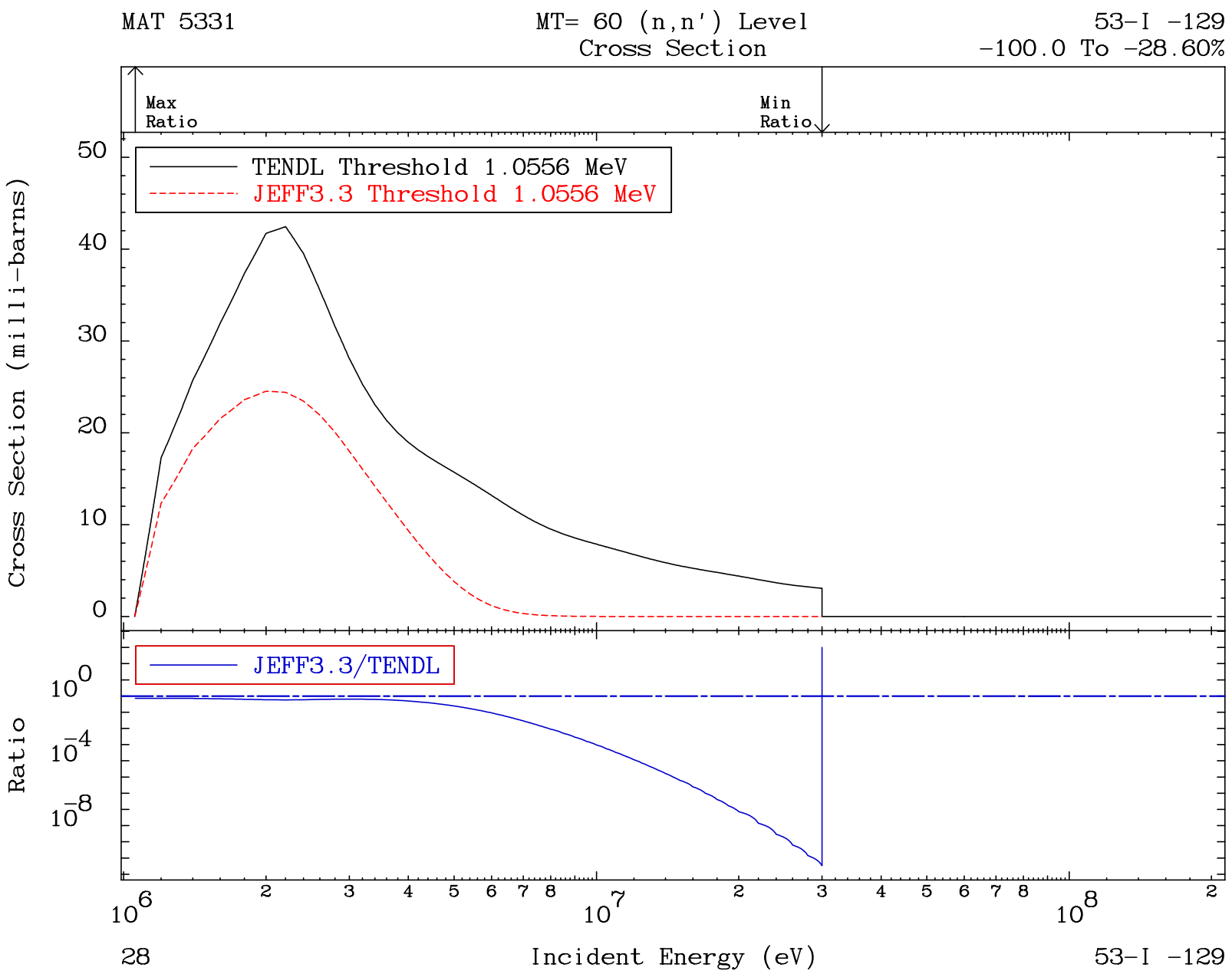

MAT 5331
MT= 55 (n,n') Level
Cross Section
53-I -129
-99.30 To -19.21%
Max
Ratio
Min
Ratio
TENDL Threshold 701.34 keV
JEFF3.3 Threshold 701.34 keV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^0
10^-1
10^-2
10^6
10^7
10^8
Incident Energy (eV)
23
53-I -129

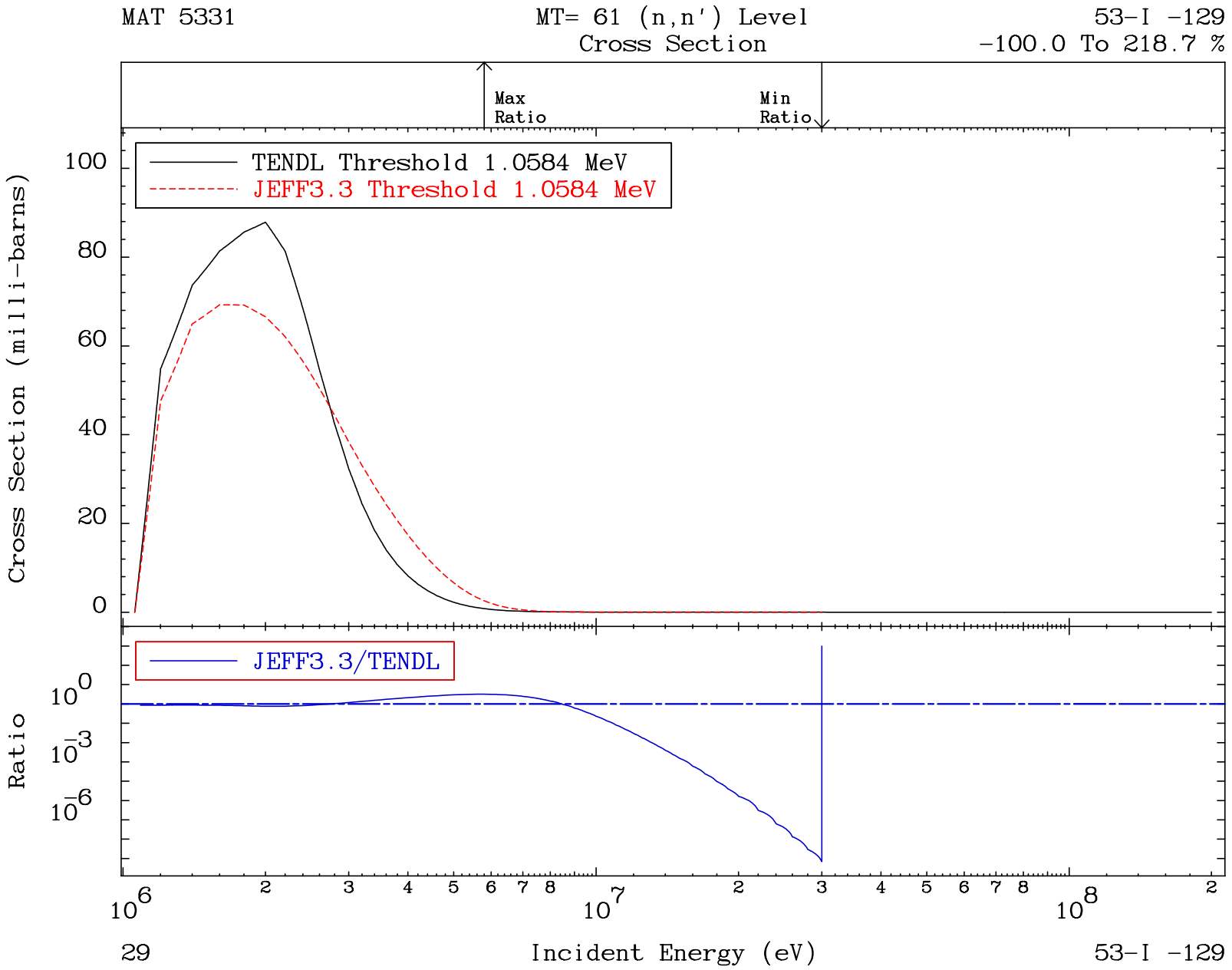

MAT 5331
MT= 56 (n,n') Level
Cross Section
53-I -129
-99.99 To -19.74%
Max
Ratio
Min
Ratio
TENDL Threshold 735.28 keV
JEFF3.3 Threshold 735.28 keV
Cross Section (milli-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^0
10^-2
10^-4
7 8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
24
Incident Energy (eV)
53-I -129

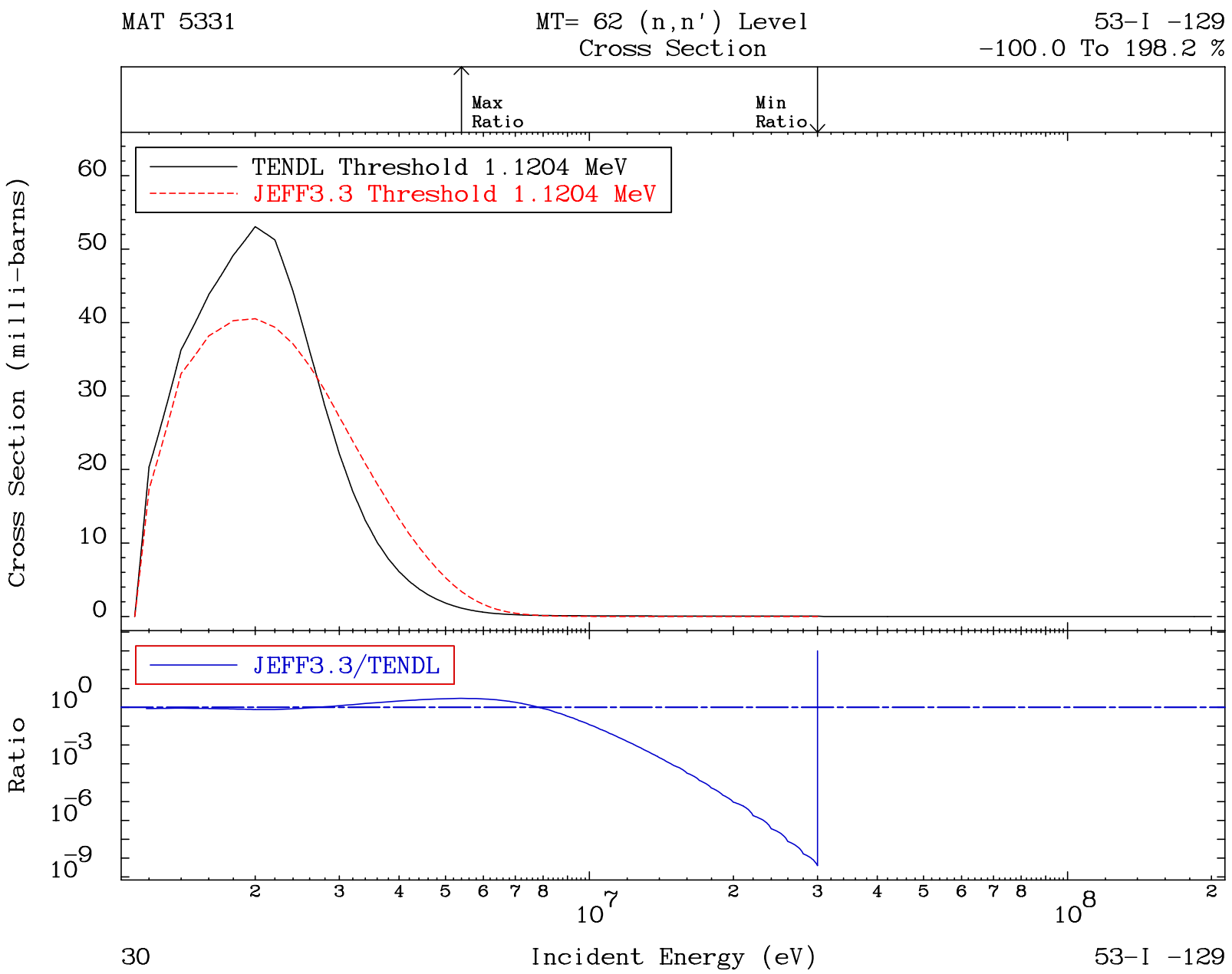

MAT 5331
MT= 57 (n,n') Level
Cross Section
53-I -129
-100.0 To 190.9 %
Max
Ratio
Min
Ratio
TENDL Threshold 774.78 keV
JEFF3.3 Threshold 774.78 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
25
Incident Energy (eV)
53-I -129

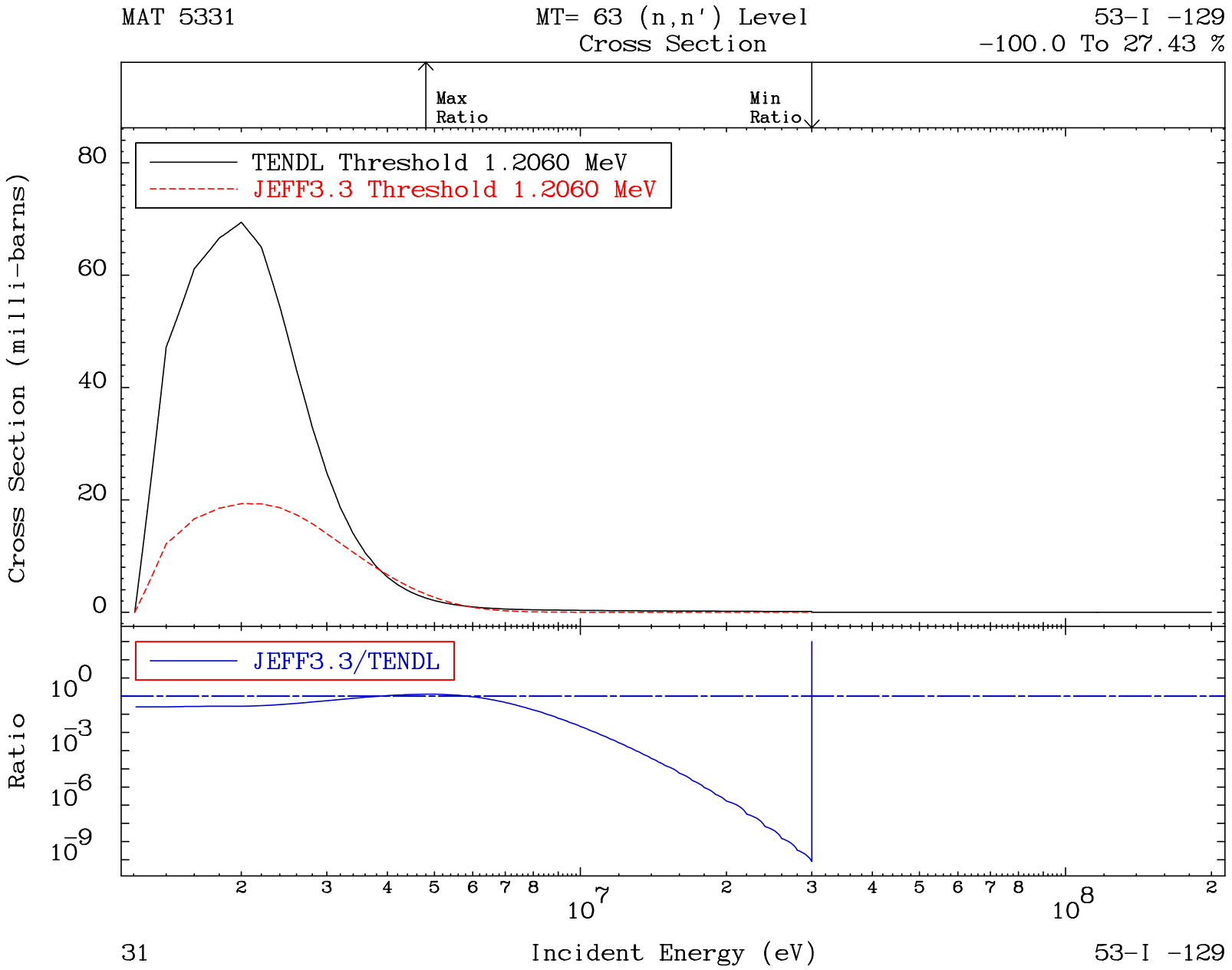

MAT 5331
MT= 58 (n,n') Level
Cross Section
53-I -129
-100.0 To -57.44%
Max
Ratio
Min
Ratio
TENDL Threshold 836.41 keV
JEFF3.3 Threshold 836.41 keV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-4
10^-8
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
26
Incident Energy (eV)
53-I -129

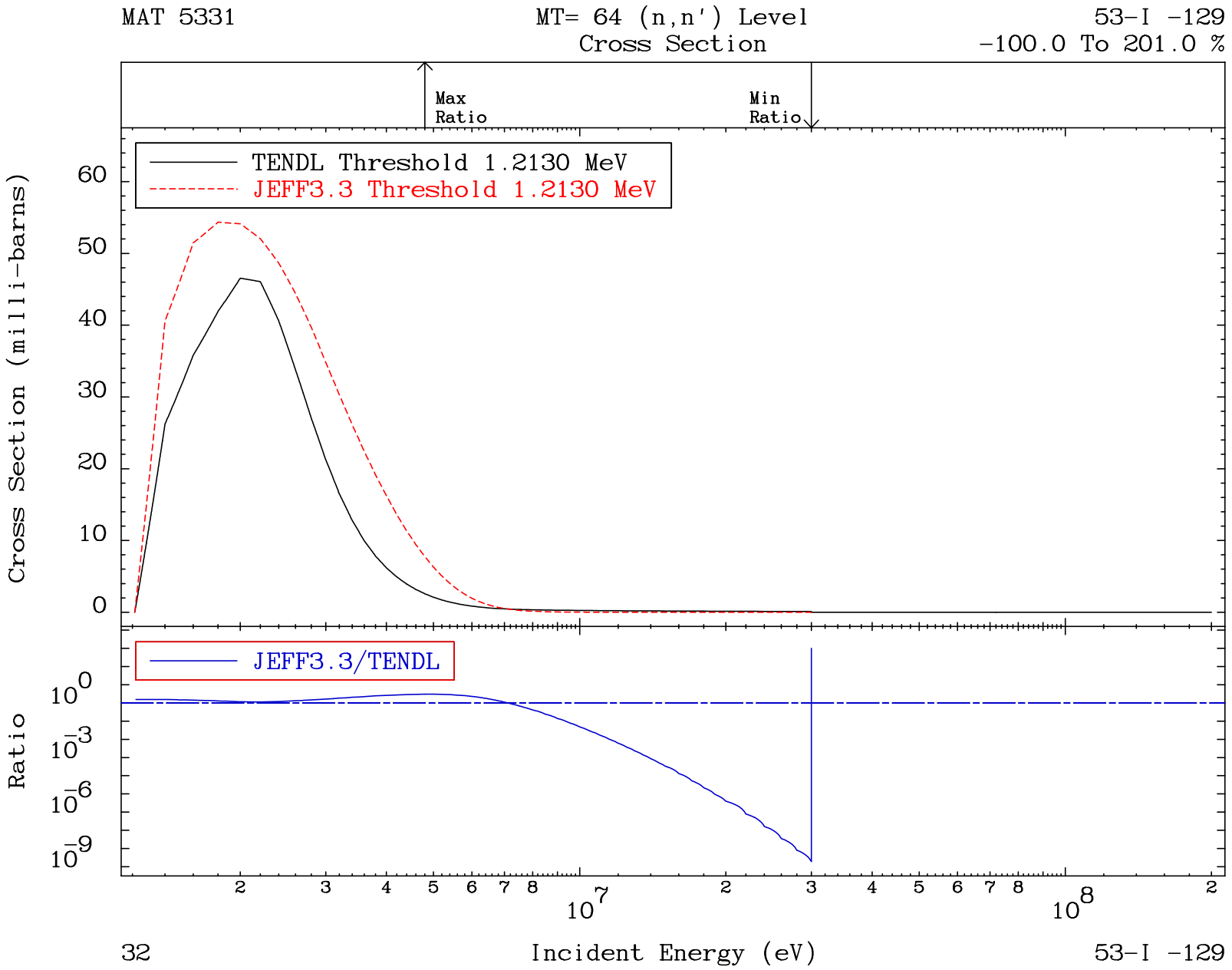

MAT 5331
MT= 59 (n,n') Level
Cross Section
53-I -129
-100.0 To -19.24%
Max
Ratio
Min
Ratio
TENDL Threshold 851.43 keV
JEFF3.3 Threshold 851.43 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-4
10^-8
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
27
Incident Energy (eV)
53-I -129

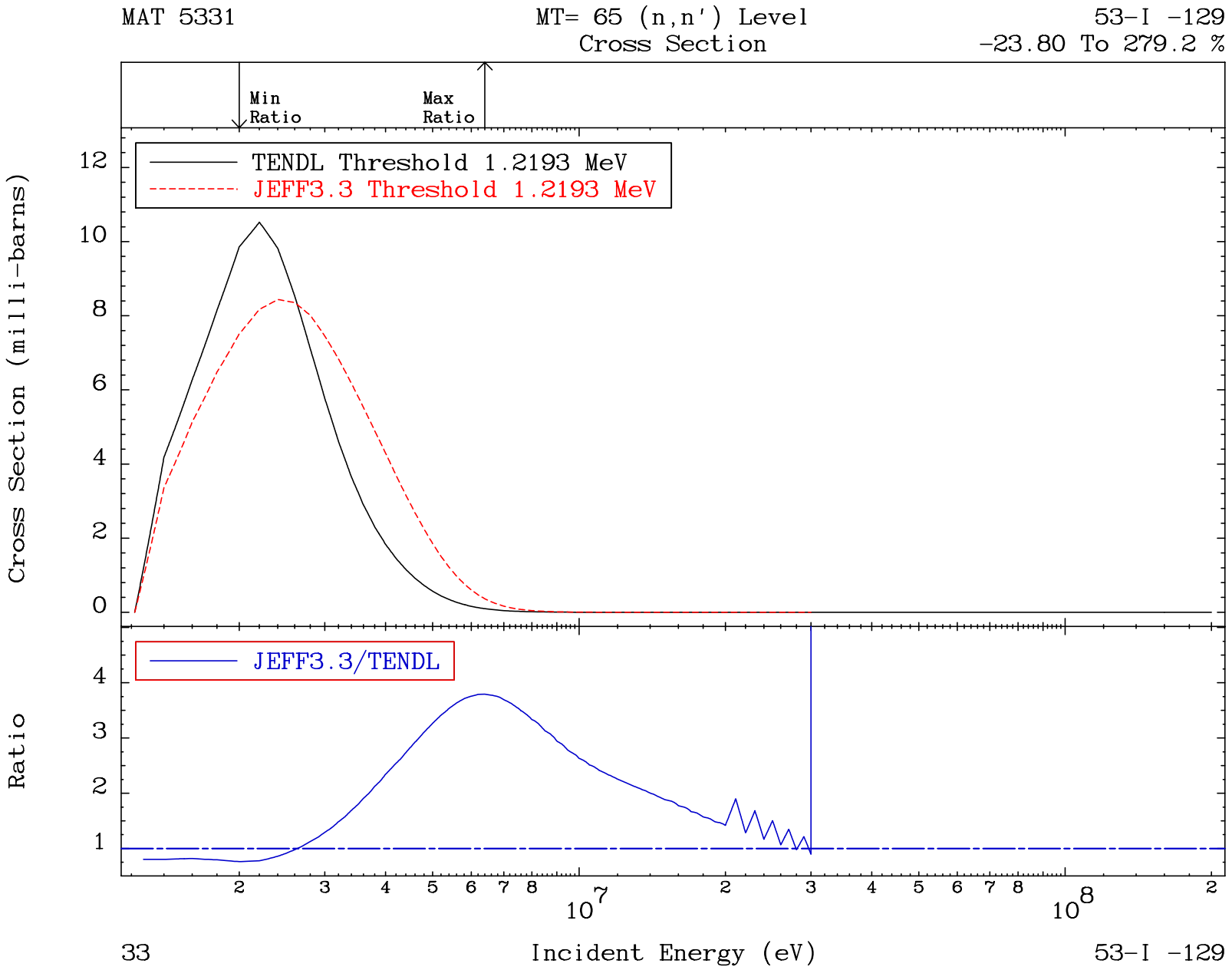

MAT 5331
MT= 60 (n,n') Level
Cross Section
53-I -129
-100.0 To -28.60%
Max
Ratio
Min
Ratio
TENDL Threshold 1.0556 MeV
JEFF3.3 Threshold 1.0556 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^0
10^-4
10^-8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
28
Incident Energy (eV)
53-I -129

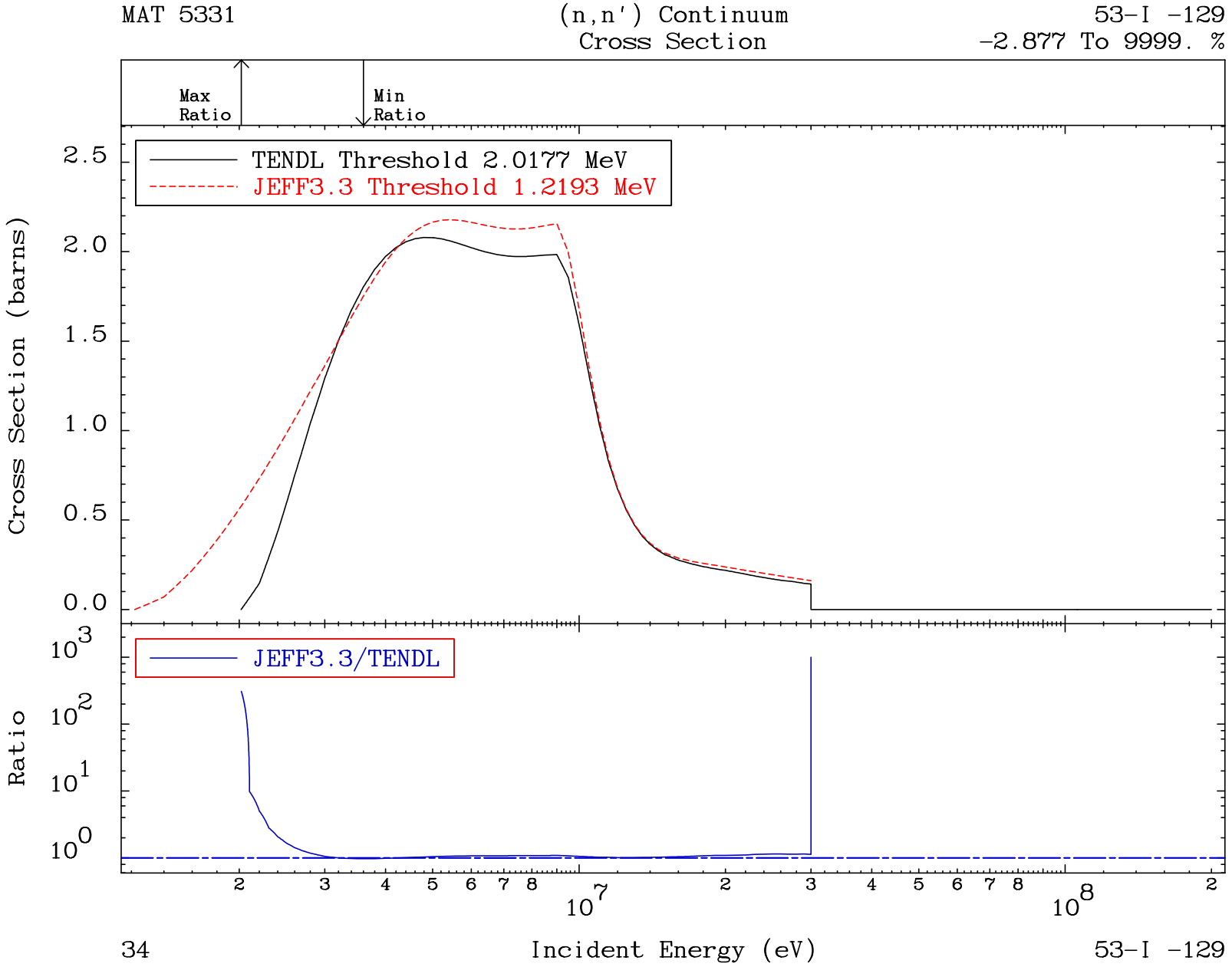

MAT 5331
MT= 61 (n,n') Level
Cross Section
53-I -129
-100.0 To 218.7 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.0584 MeV
JEFF3.3 Threshold 1.0584 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
29
Incident Energy (eV)
53-I -129

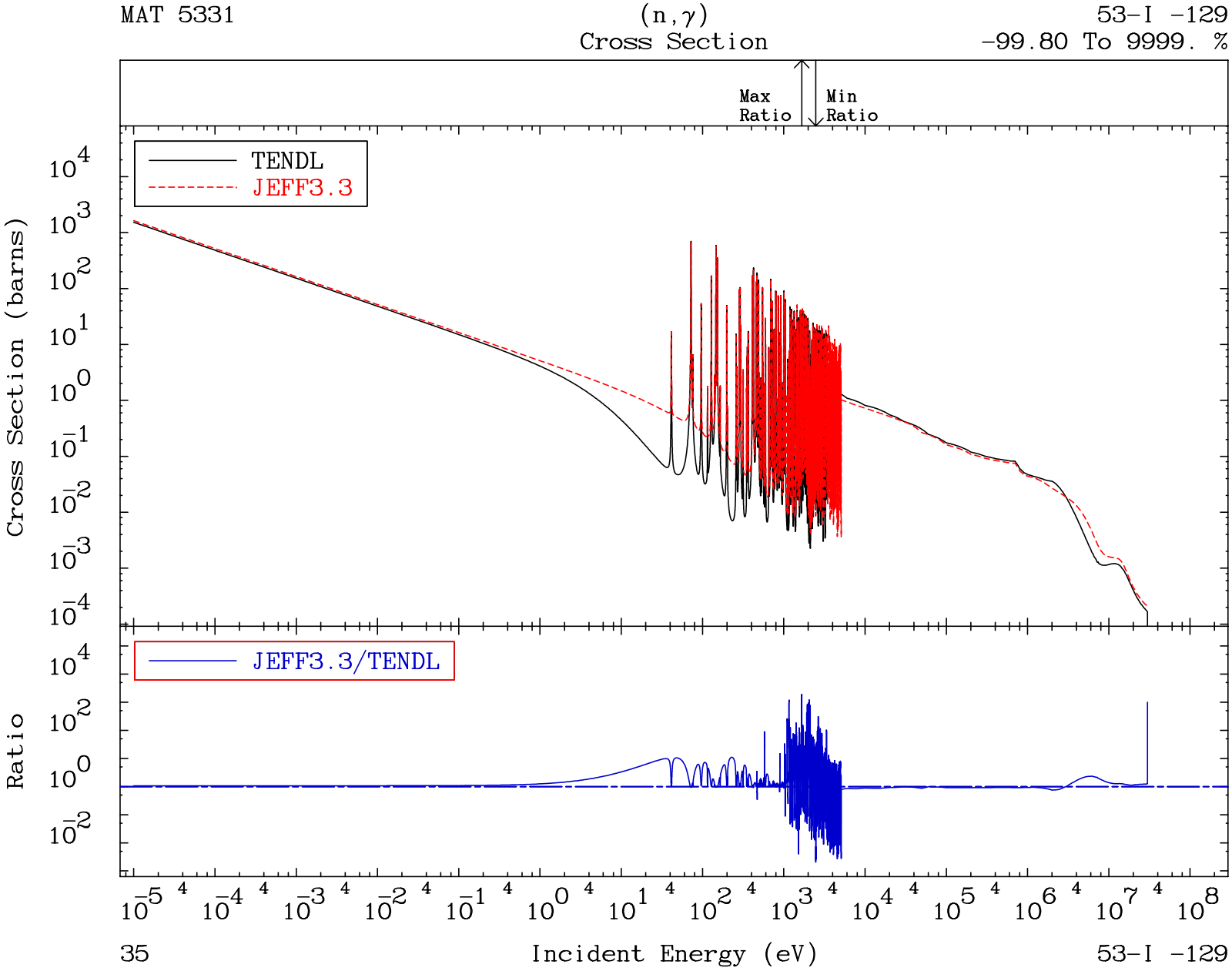

MAT 5331
MT= 62 (n,n') Level
Cross Section
53-I -129
-100.0 To 198.2 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.1204 MeV
JEFF3.3 Threshold 1.1204 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
53-I -129

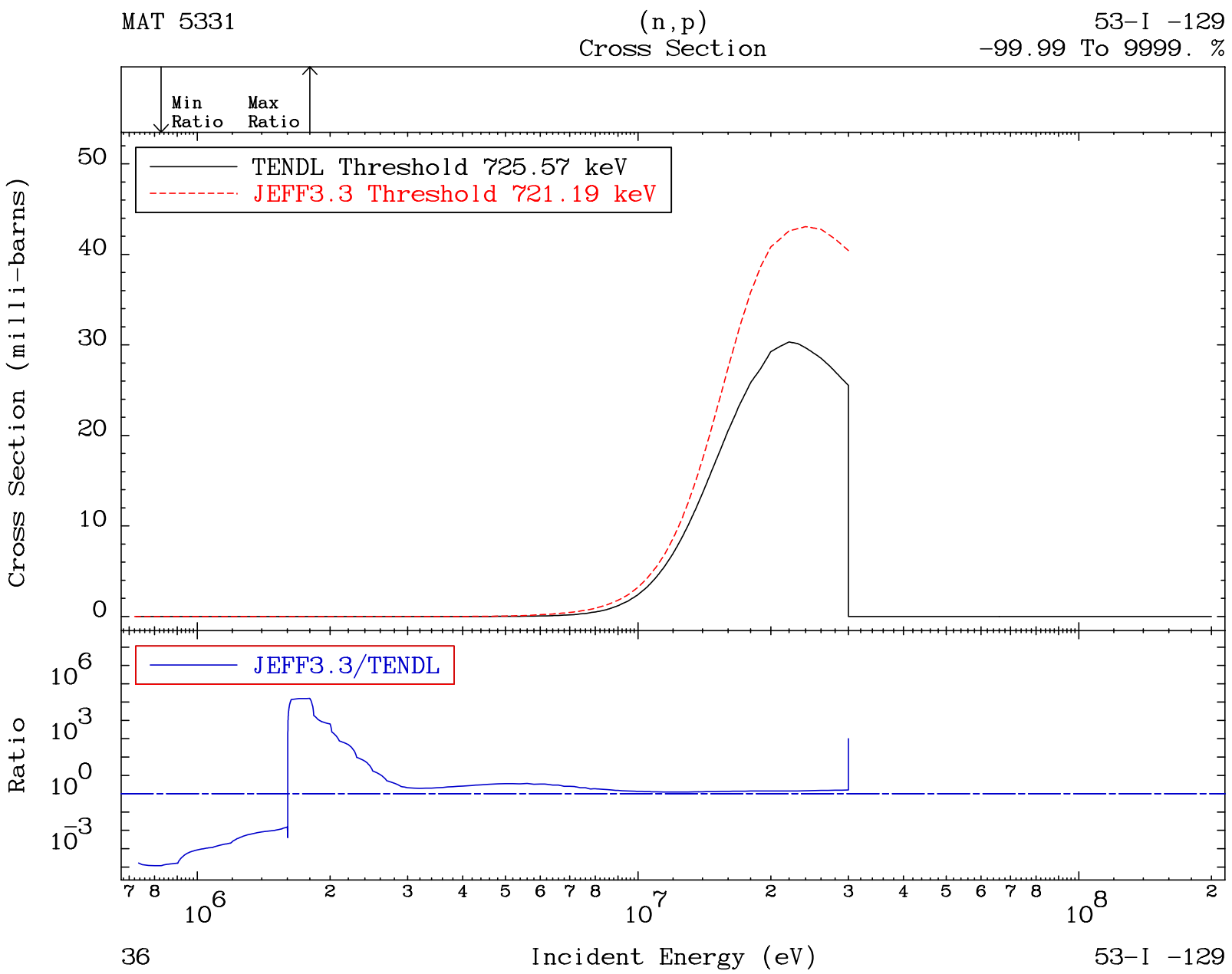

MAT 5331
MT= 63 (n,n') Level
Cross Section
53-I -129
-100.0 To 27.43 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.2060 MeV
JEFF3.3 Threshold 1.2060 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
31
Incident Energy (eV)
53-I -129

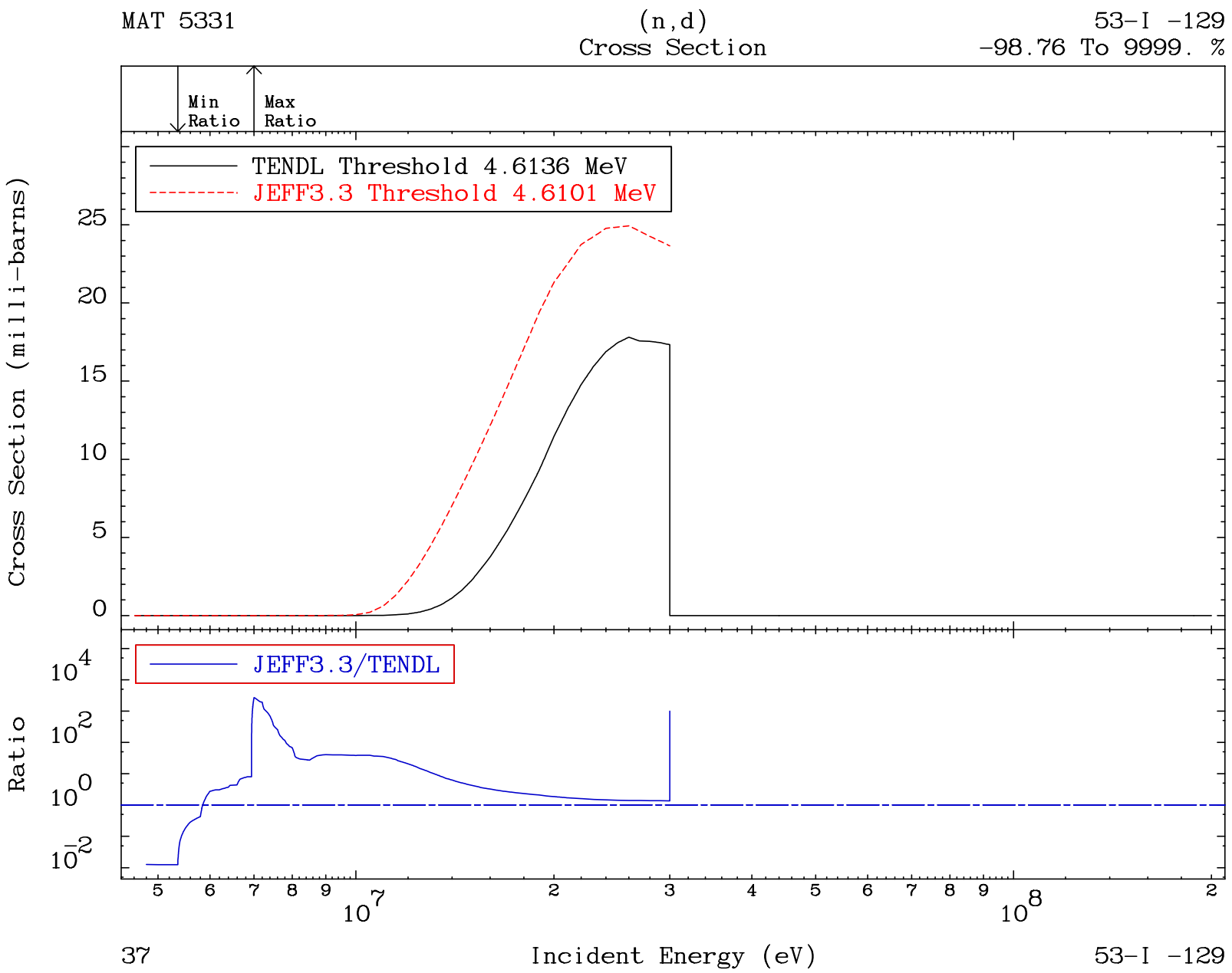

MAT 5331
MT= 64 (n,n') Level
Cross Section
53-I -129
-100.0 To 201.0 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.2130 MeV
JEFF3.3 Threshold 1.2130 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
32
Incident Energy (eV)
53-I -129

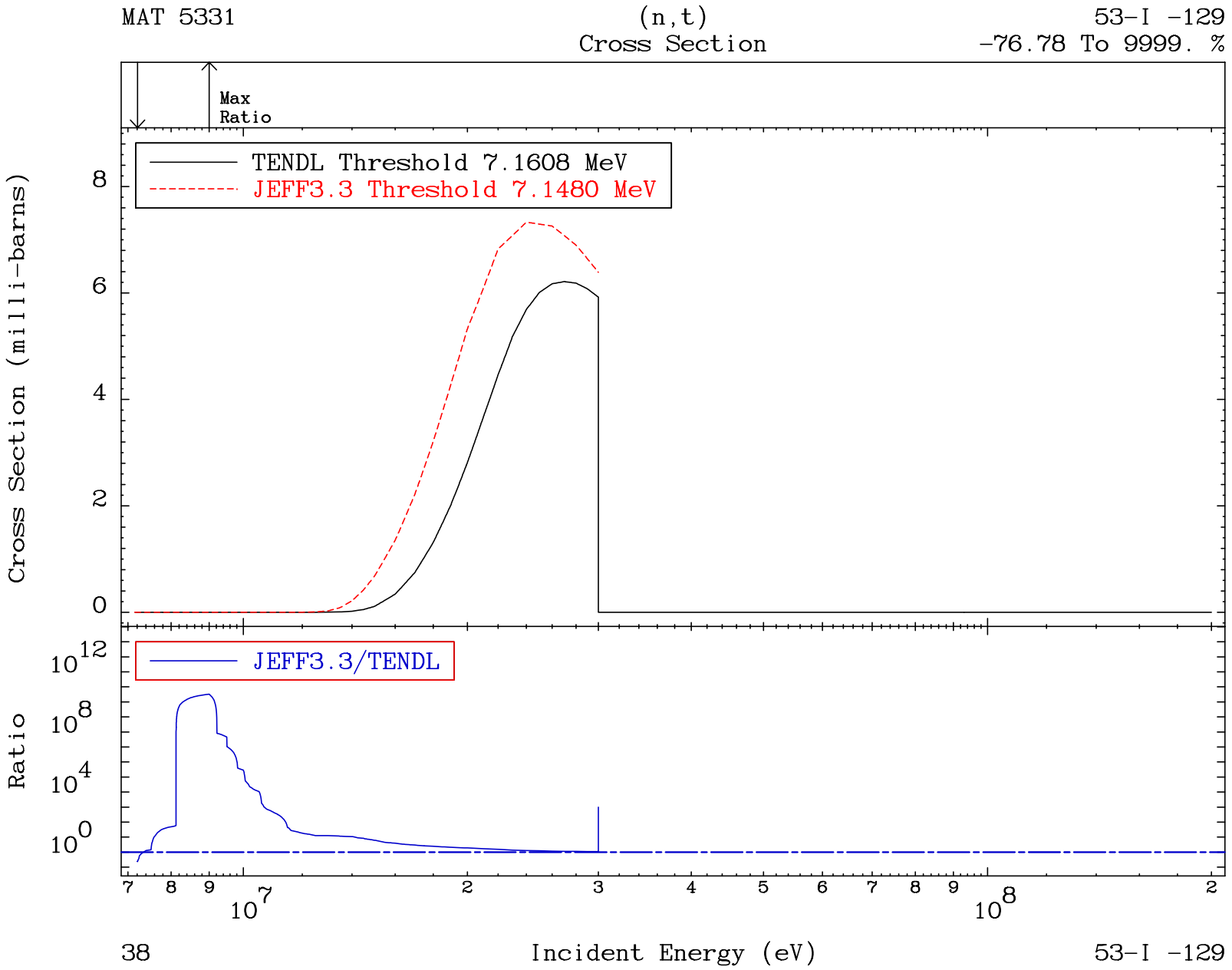

MAT 5331
MT= 65 (n,n') Level
Cross Section
53-I -129
-23.80 To 279.2 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.2193 MeV
JEFF3.3 Threshold 1.2193 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
33
53-I -129

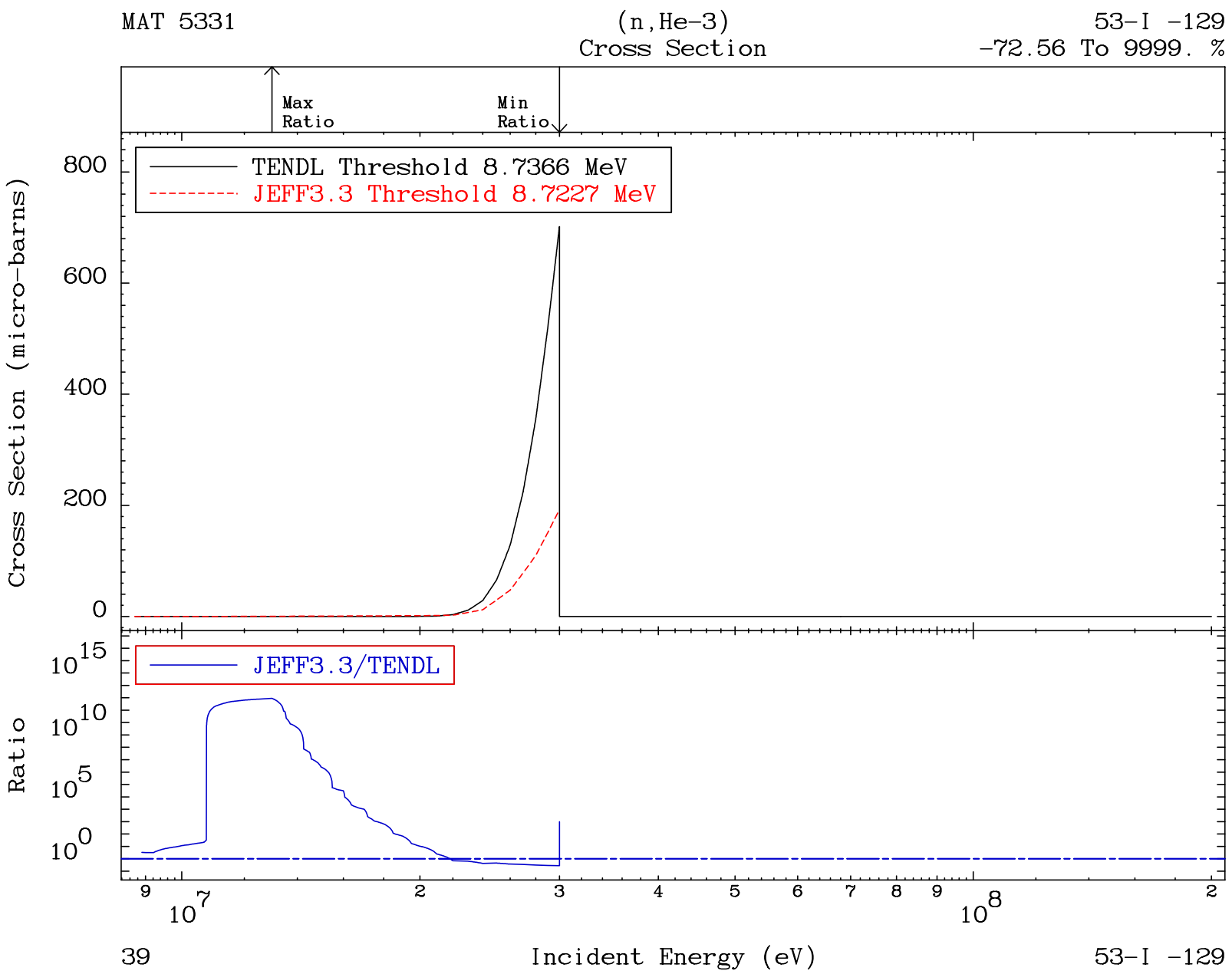

MAT 5331
(n,n') Continuum
Cross Section
53-I -129
-2.877 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.0177 MeV
JEFF3.3 Threshold 1.2193 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
34
53-I -129

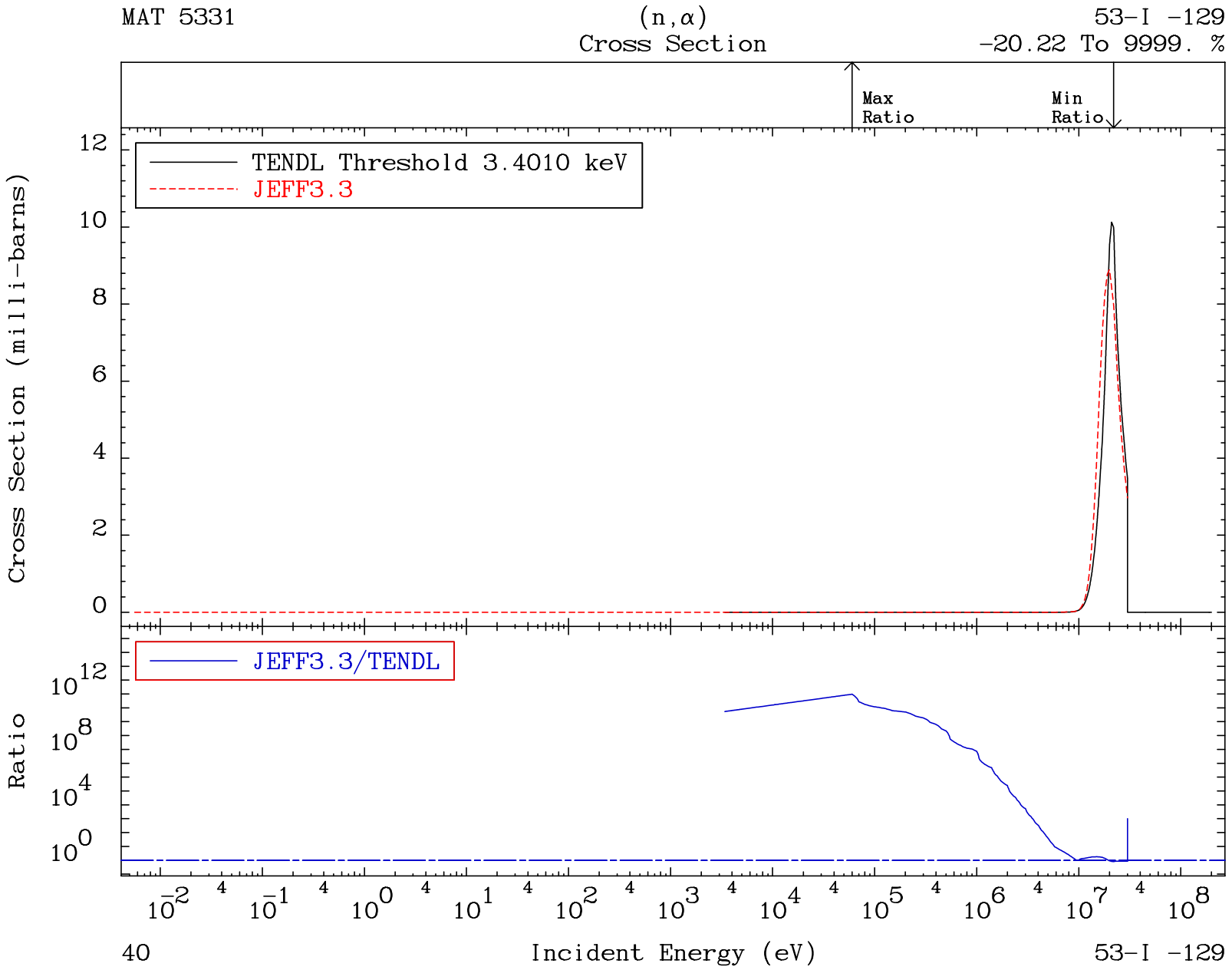

MAT 5331
(n,γ)
Cross Section
53-I -129
-99.80 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
35
53-I -129

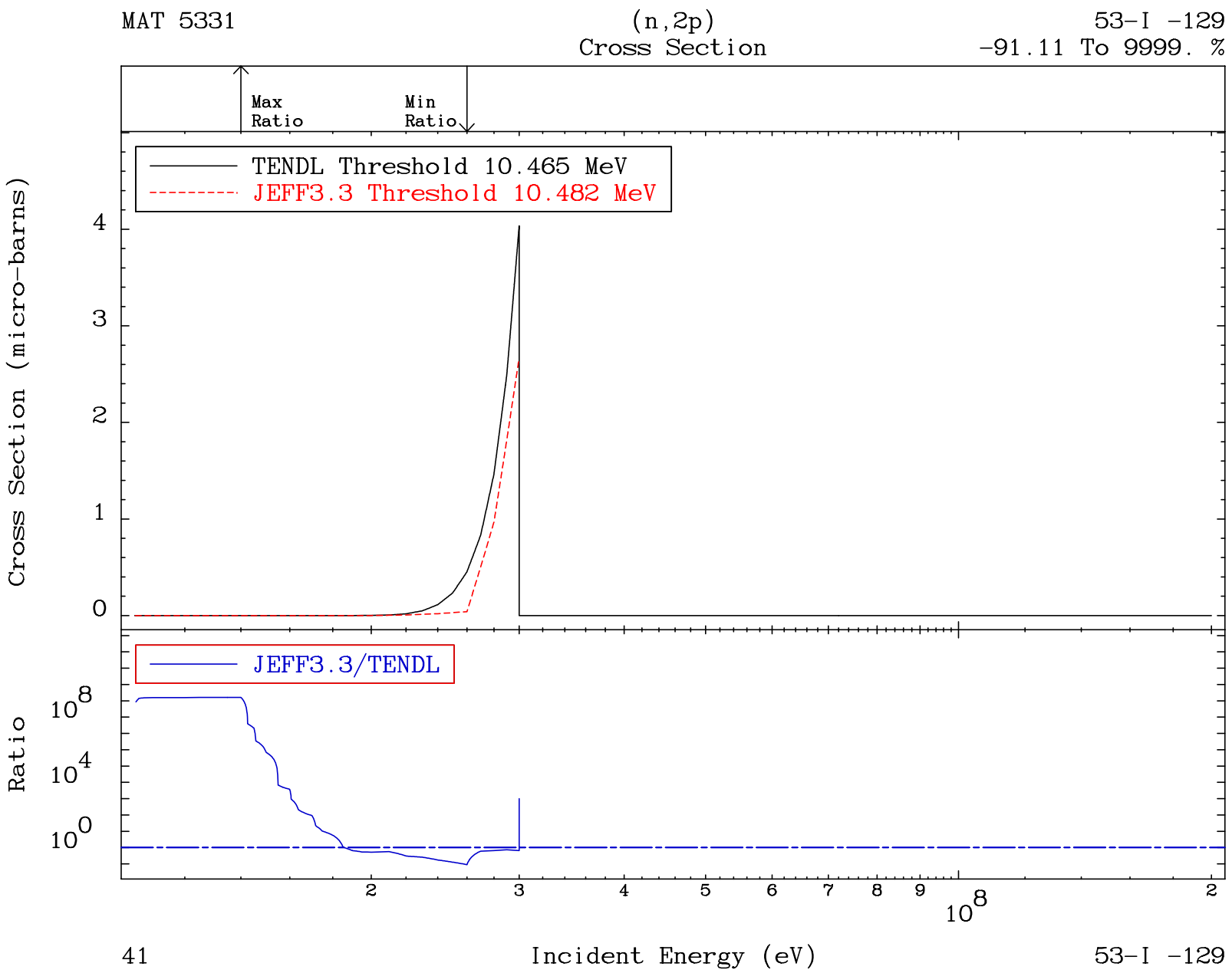

MAT 5331
(n,p)
Cross Section
53-I -129
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 725.57 keV
JEFF3.3 Threshold 721.19 keV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
36
53-I -129

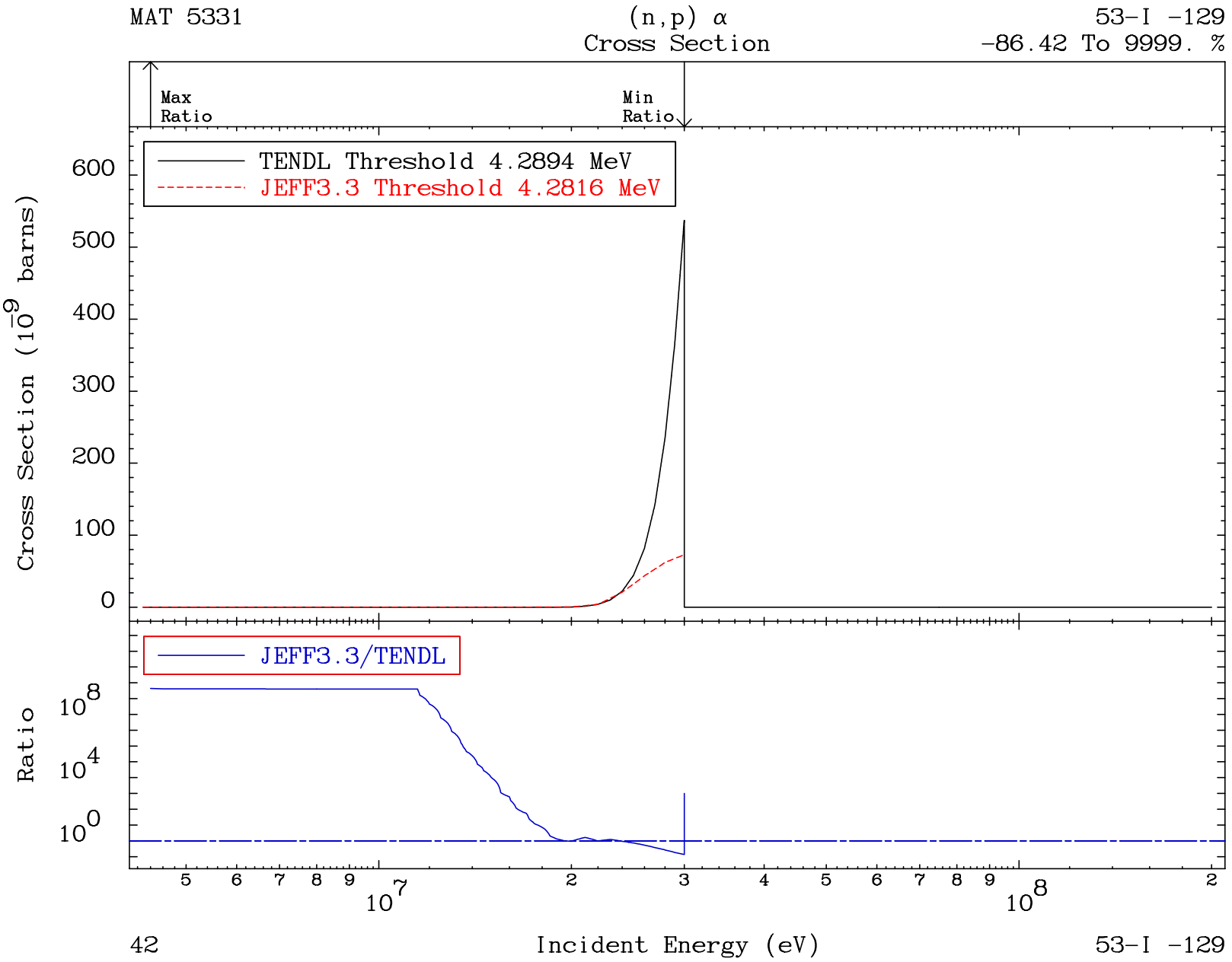

MAT 5331
(n,d)
Cross Section
53-I -129
-98.76 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 4.6136 MeV
JEFF3.3 Threshold 4.6101 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
10^-2
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
37
Incident Energy (eV)
53-I -129

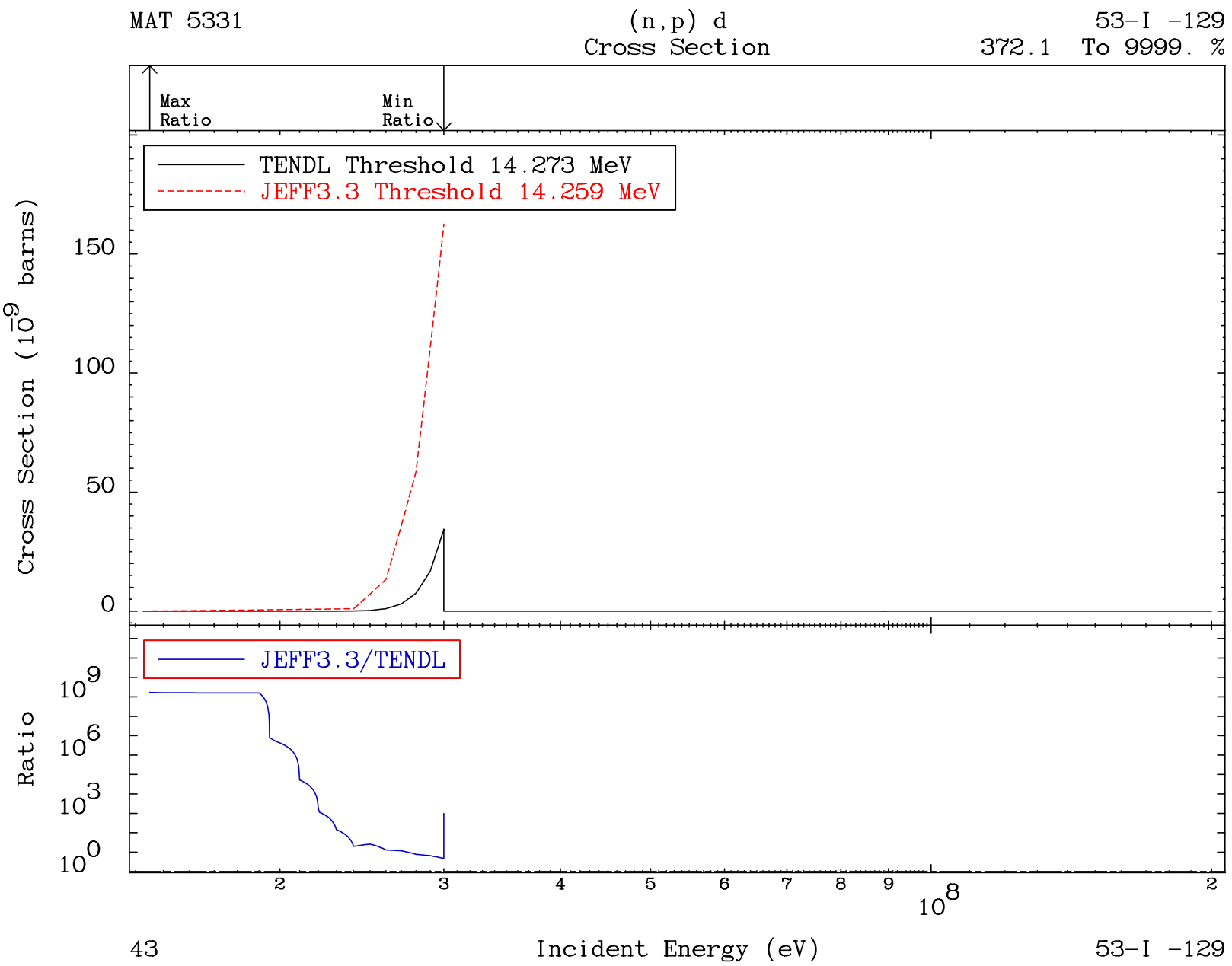

MAT 5331
(n,t)
Cross Section
53-I -129
-76.78 To 9999. %
Max
Ratio
TENDL Threshold 7.1608 MeV
JEFF3.3 Threshold 7.1480 MeV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
10^{12}
10^{8}
10^{4}
10^{0}
7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
38
Incident Energy (eV)
53-I -129

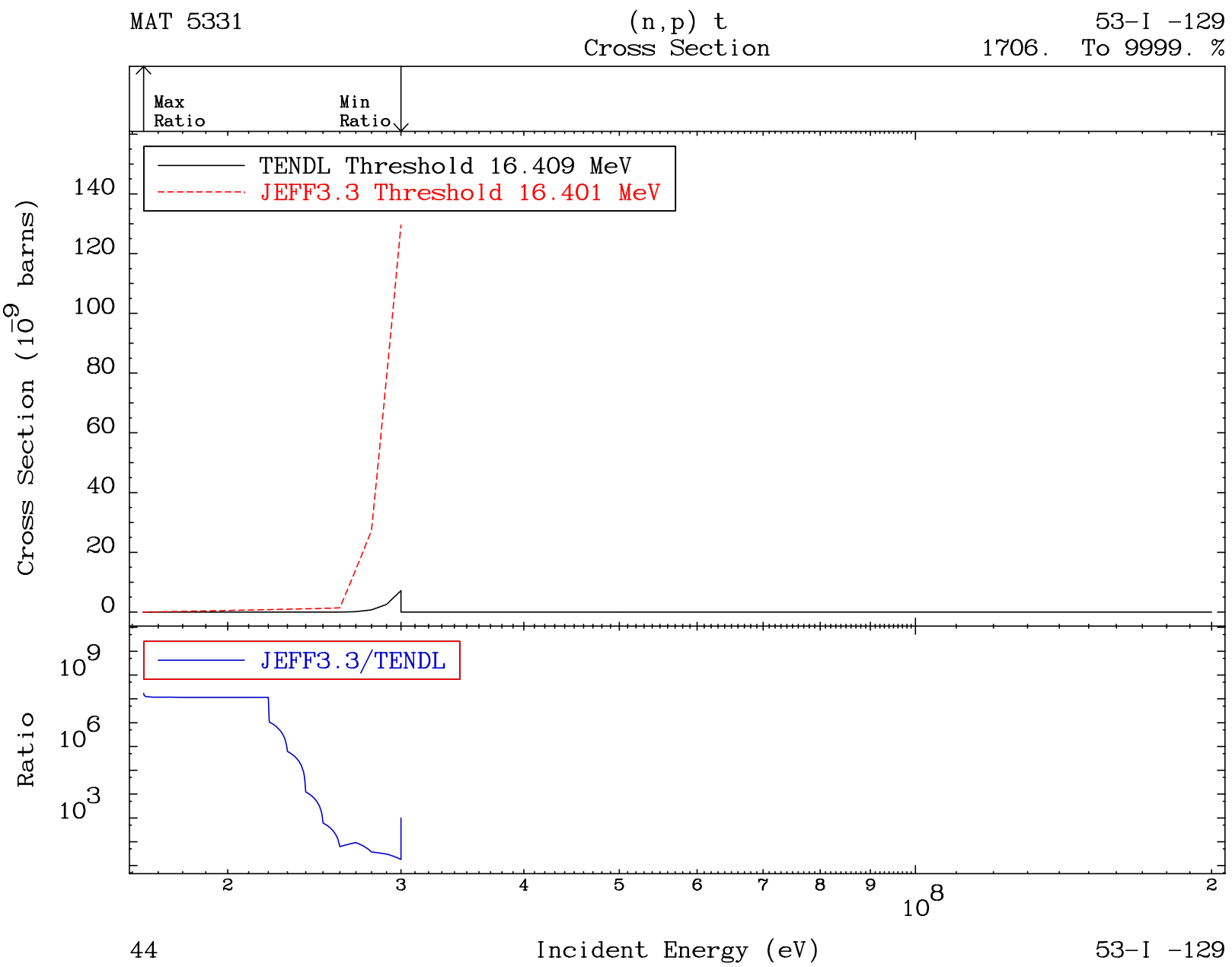

MAT 5331
(n,He-3)
Cross Section
53-I -129
-72.56 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.7366 MeV
JEFF3.3 Threshold 8.7227 MeV
Cross Section (micro-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
10^15
10^10
10^5
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
39
Incident Energy (eV)
53-I -129

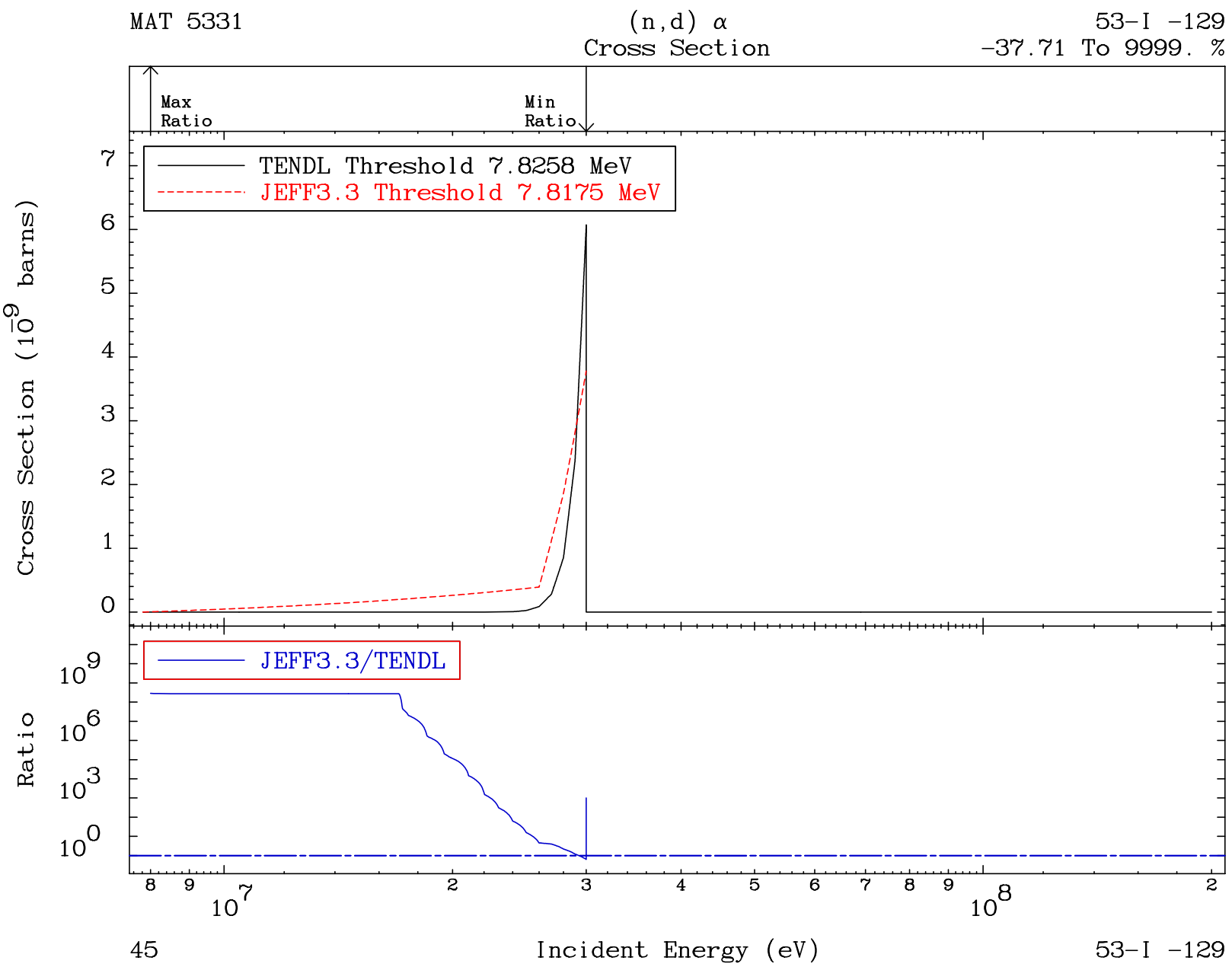

MAT 5331
(n,α)
Cross Section
53-I -129
-20.22 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4010 keV
JEFF3.3
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
40
53-I -129

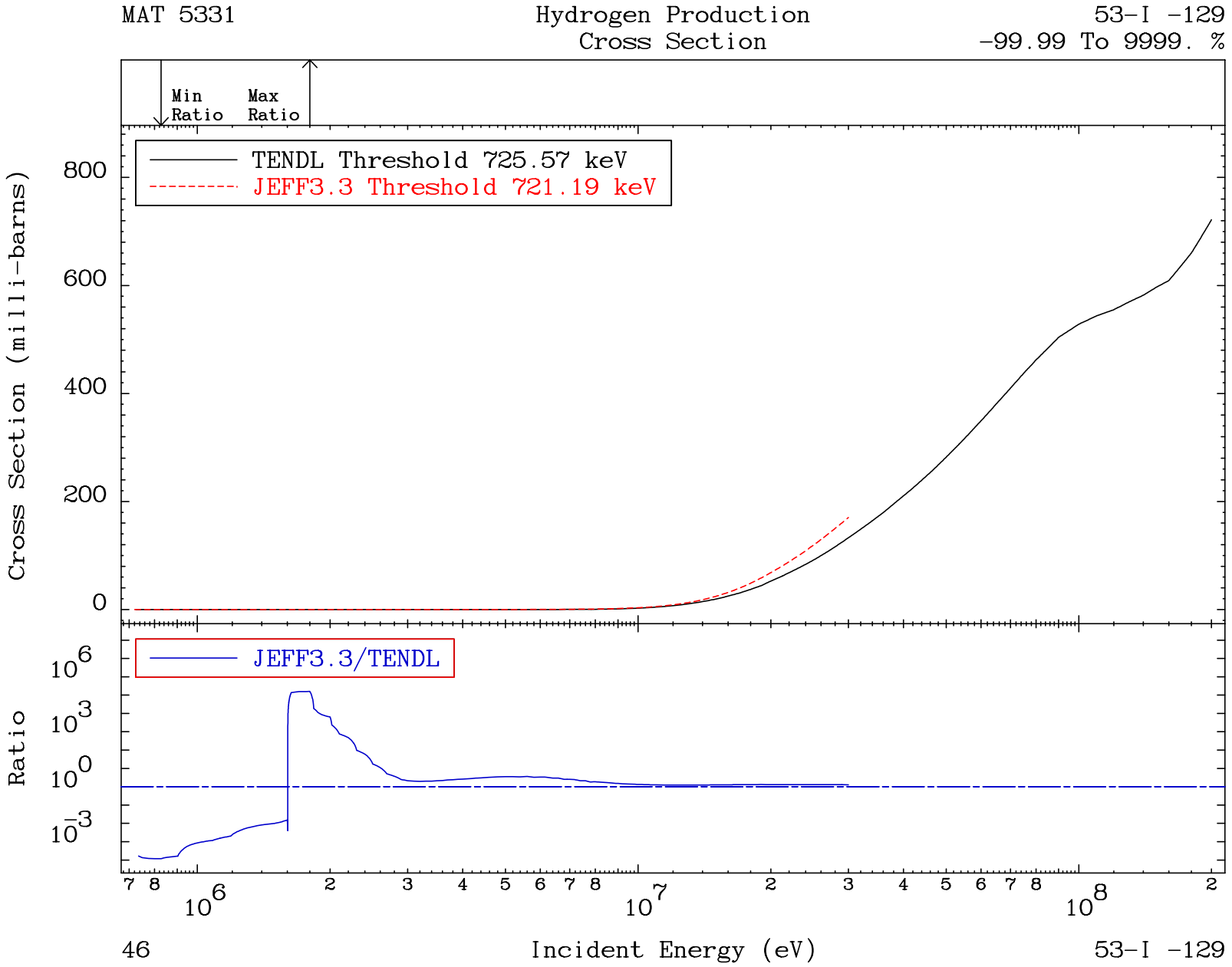

MAT 5331
(n,2p)
Cross Section
53-I -129
-91.11 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 10.465 MeV
JEFF3.3 Threshold 10.482 MeV
Cross Section (micro-barns)
0
1
2
3
4
JEFF3.3/TENDL
Ratio
10^0
10^4
10^8
2
3
4
5
6
7
8
9
10^8
2
41
Incident Energy (eV)
53-I -129

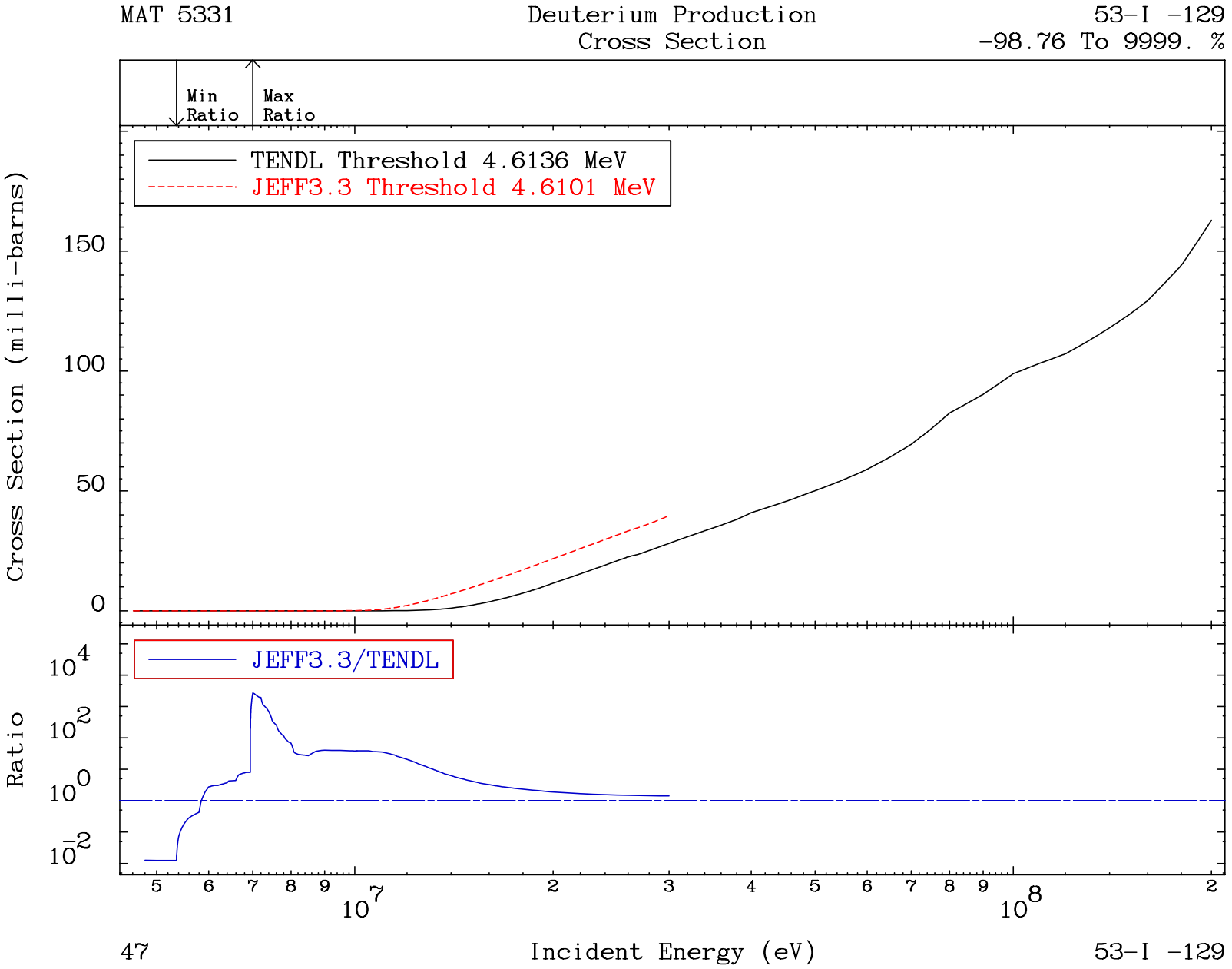

MAT 5331
(n,p) α
Cross Section
53-I -129
-86.42 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.2894 MeV
JEFF3.3 Threshold 4.2816 MeV
Cross Section (10^{-9} barns)
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
10^{8}
10^{4}
10^{0}
5 6 7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
42
Incident Energy (eV)
53-I -129

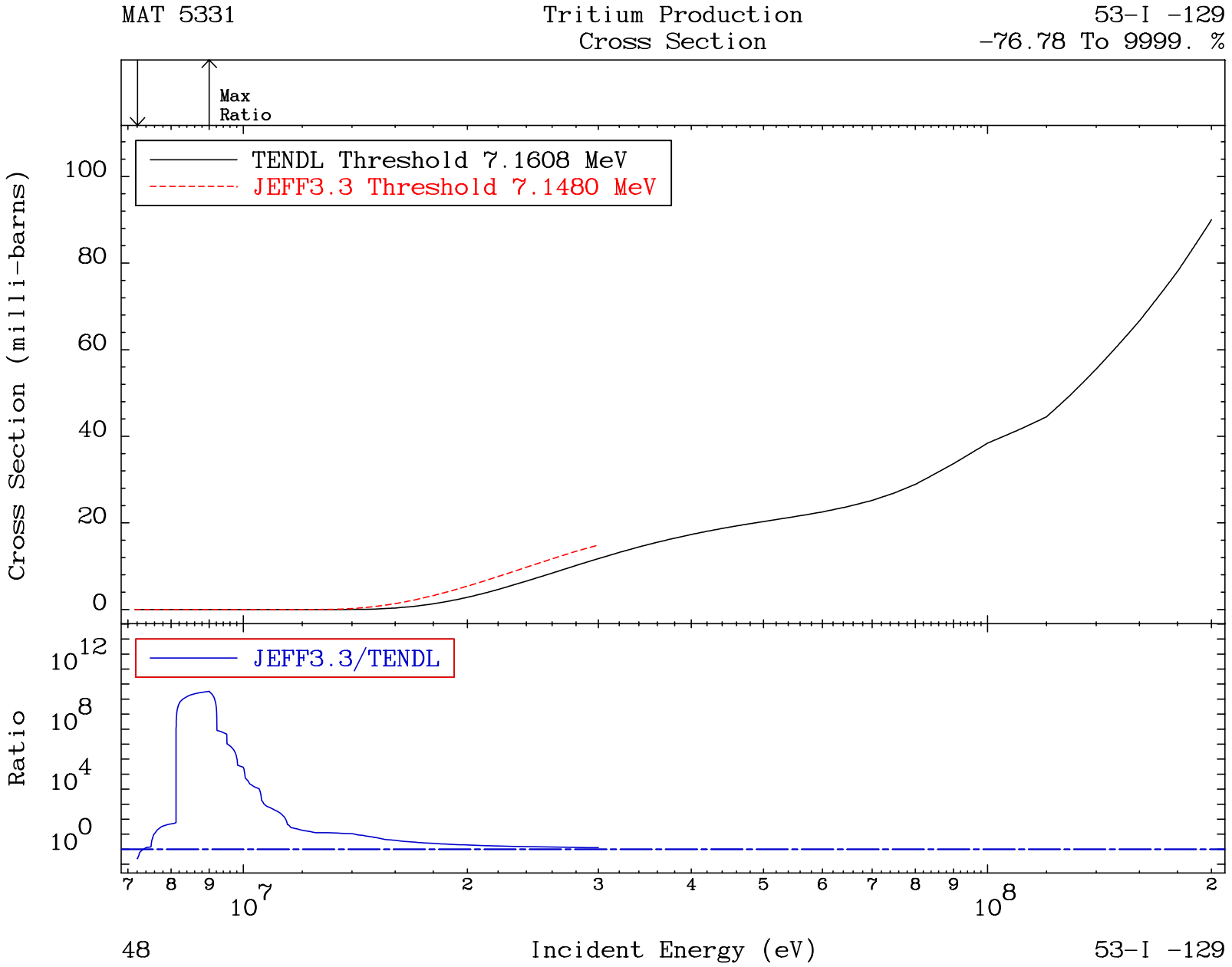

MAT 5331
(n,p) d
Cross Section
53-I -129
372.1 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 14.273 MeV
JEFF3.3 Threshold 14.259 MeV
Cross Section (10^{-9} barns)
150
100
50
0
JEFF3.3/TENDL
Ratio
10^{9}
10^{6}
10^{3}
10^{0}
2
3
4
5
6
7
8
9
10^{8}
2
43
Incident Energy (eV)
53-I -129

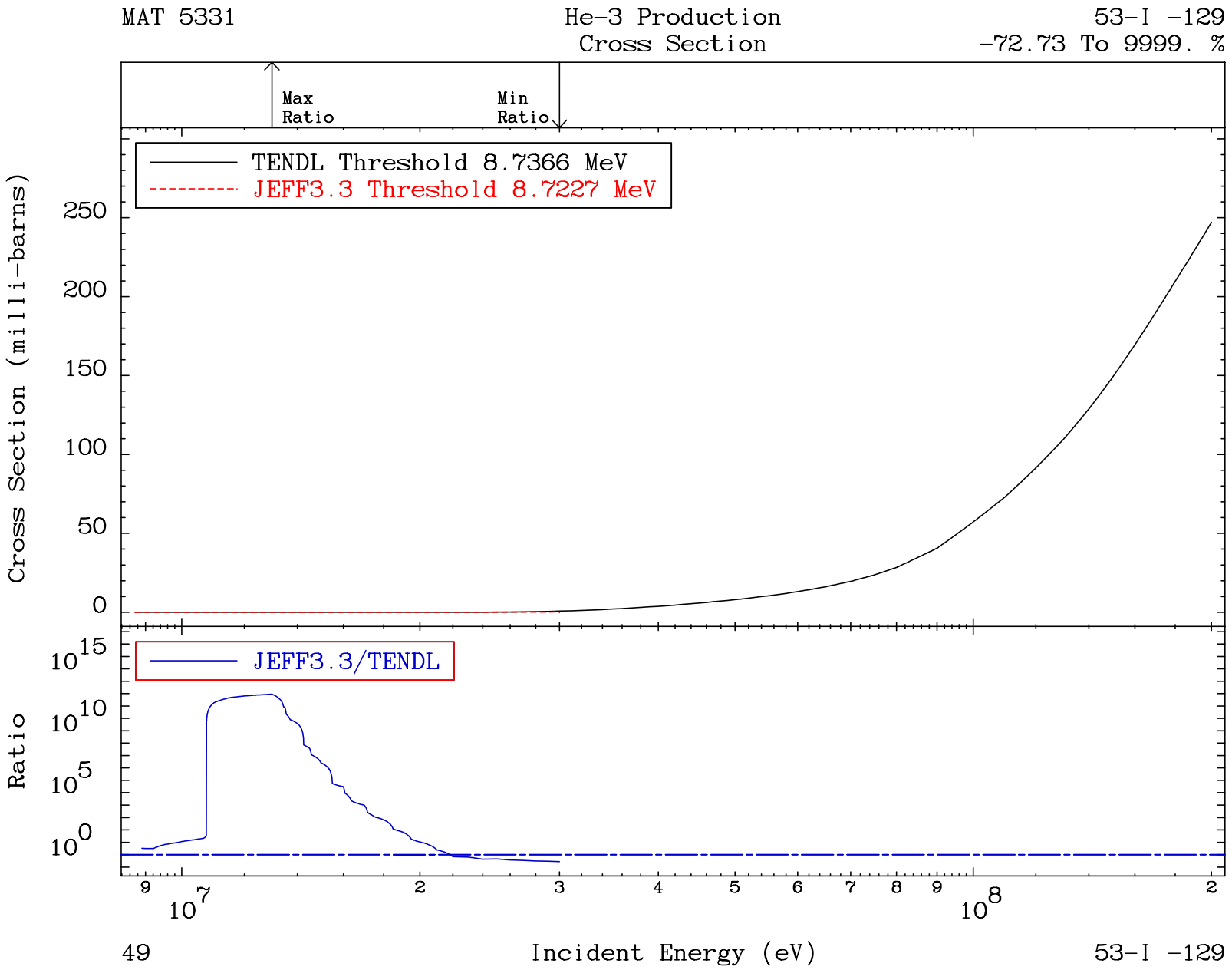

MAT 5331
(n,p) t
Cross Section
53-I -129
1706. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.409 MeV
JEFF3.3 Threshold 16.401 MeV
Cross Section (10^{-9} barns)
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^{9}
10^{6}
10^{3}
2
3
4
5
6
7
8
9
10^{8}
2
44
Incident Energy (eV)
53-I -129

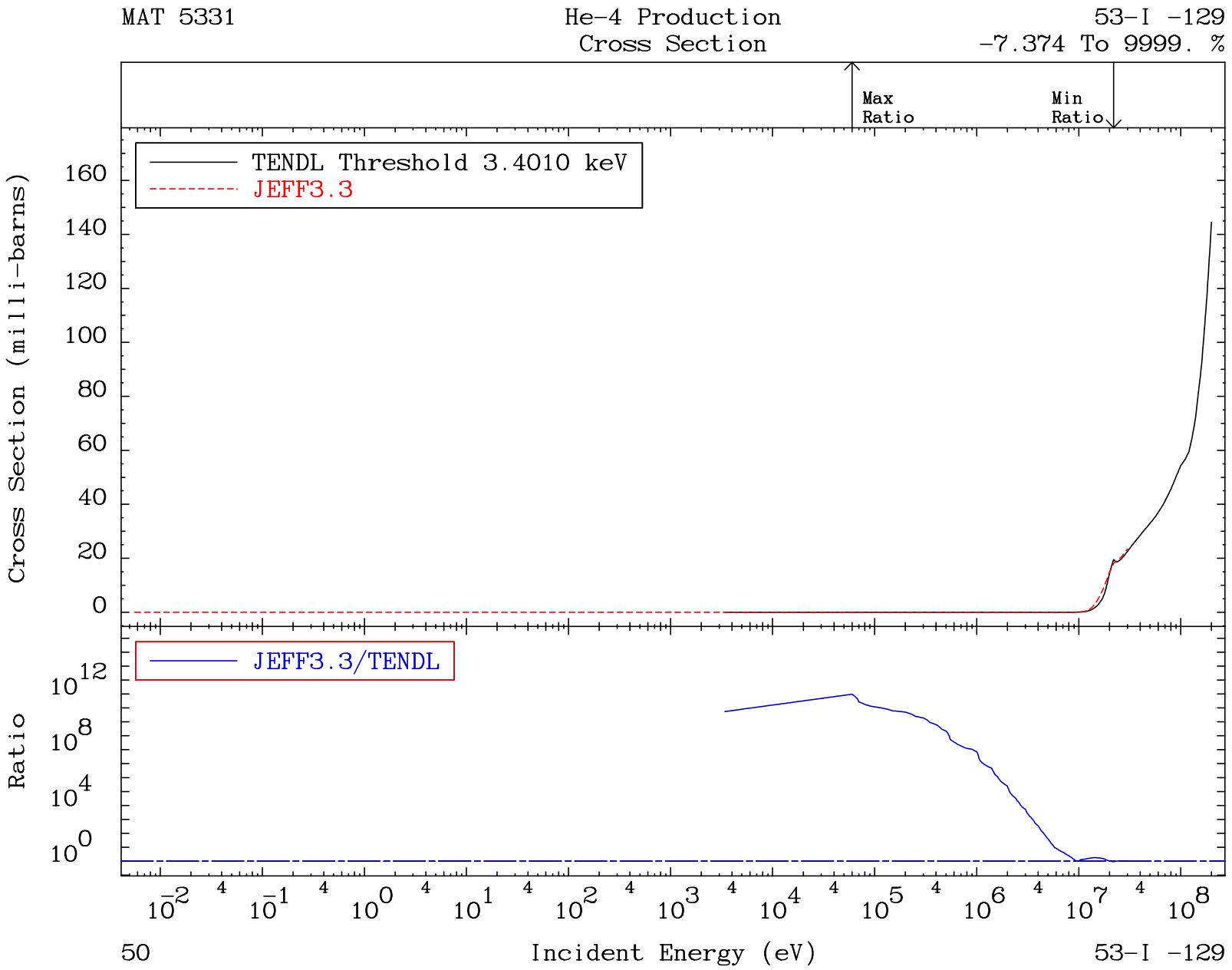

MAT 5331
(n,d) α
Cross Section
53-I -129
-37.71 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.8258 MeV
JEFF3.3 Threshold 7.8175 MeV
Cross Section (10^{-9} barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
45
53-I -129

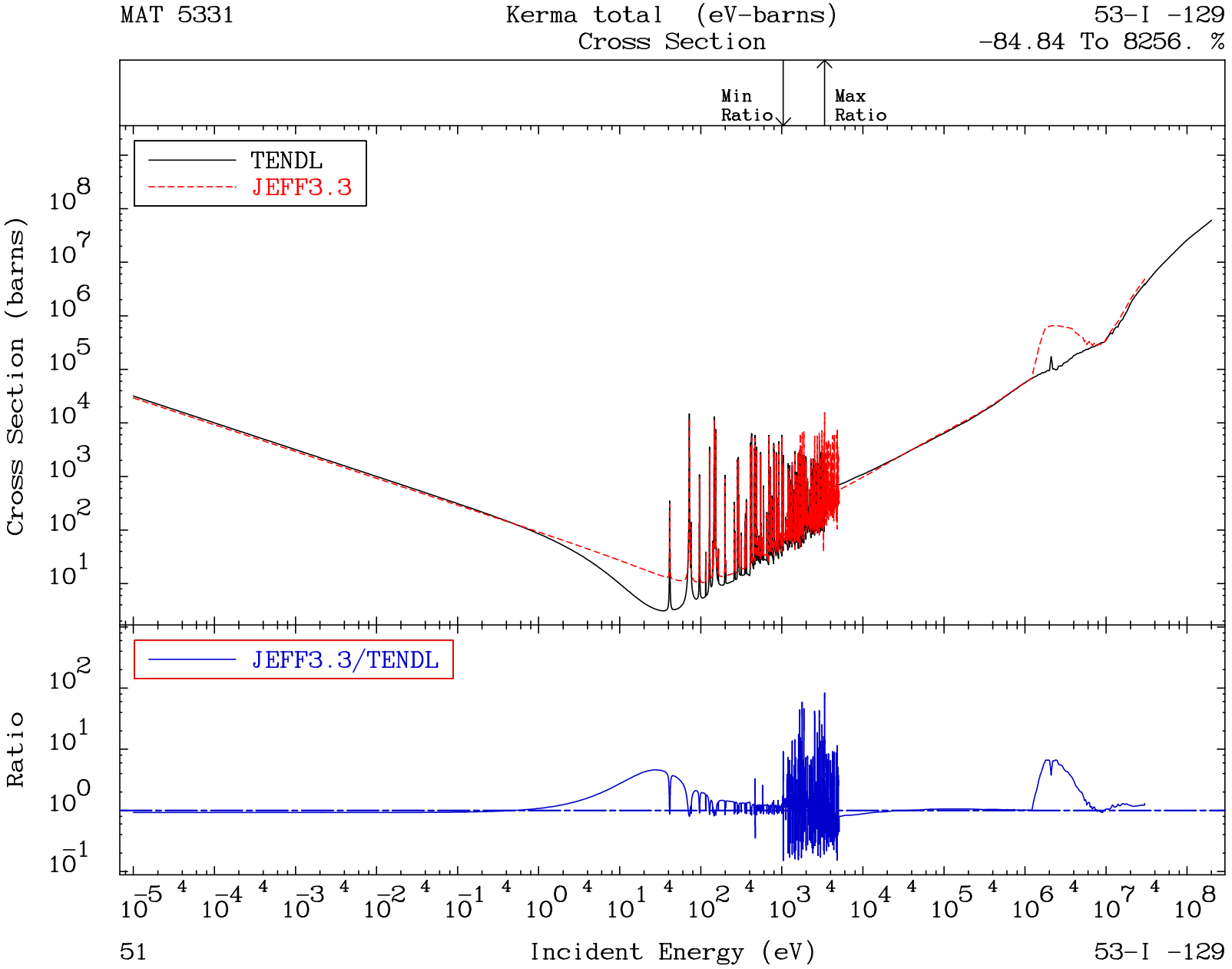

MAT 5331
Hydrogen Production
Cross Section
53-I -129
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 725.57 keV
JEFF3.3 Threshold 721.19 keV
Cross Section (milli-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
10^6
10^3
10^0
10^-3
7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
46
Incident Energy (eV)
53-I -129

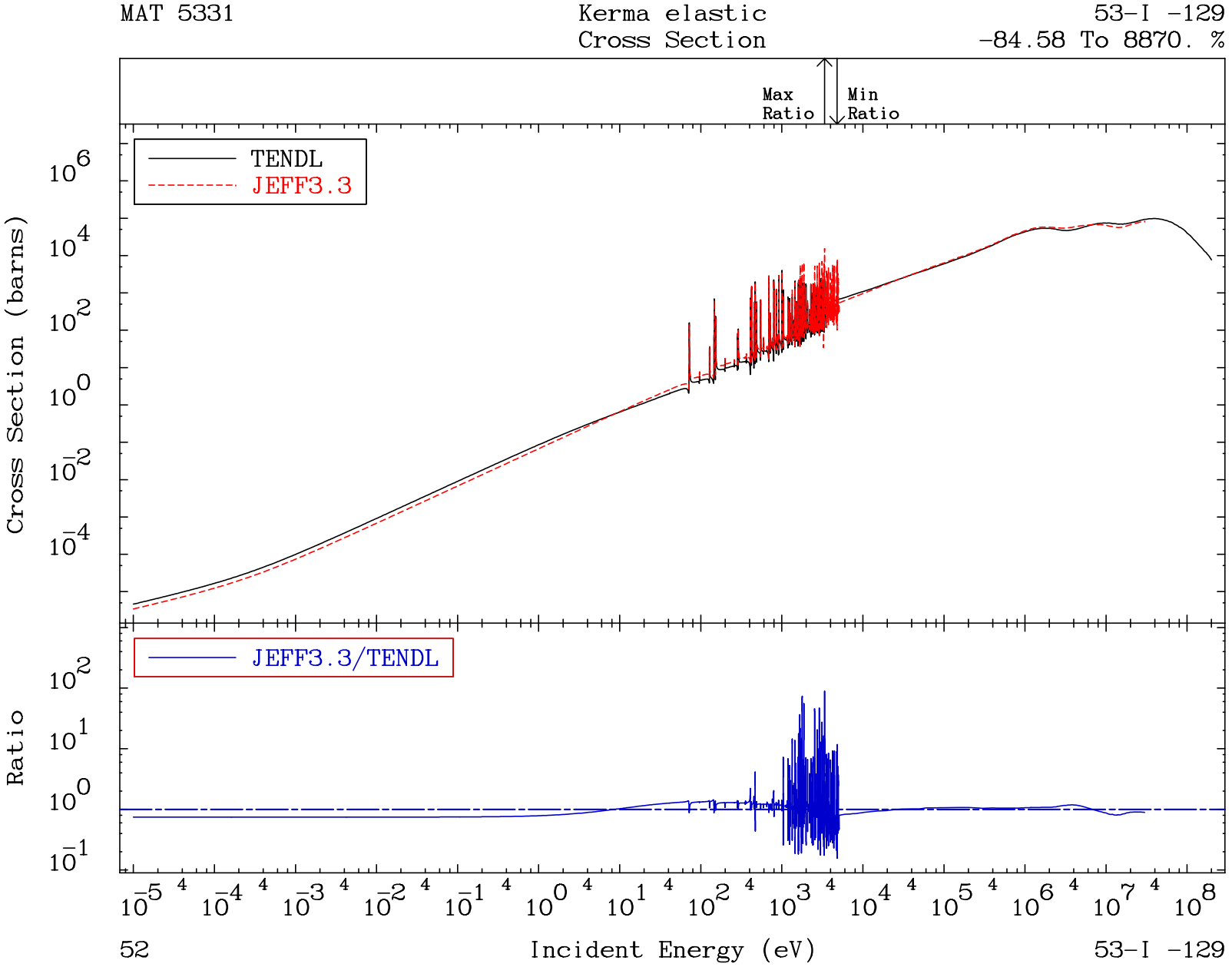

MAT 5331
Deuterium Production
Cross Section
53-I -129
-98.76 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 4.6136 MeV
JEFF3.3 Threshold 4.6101 MeV
Cross Section (milli-barns)
150
100
50
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
10^-2
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
47
Incident Energy (eV)
53-I -129

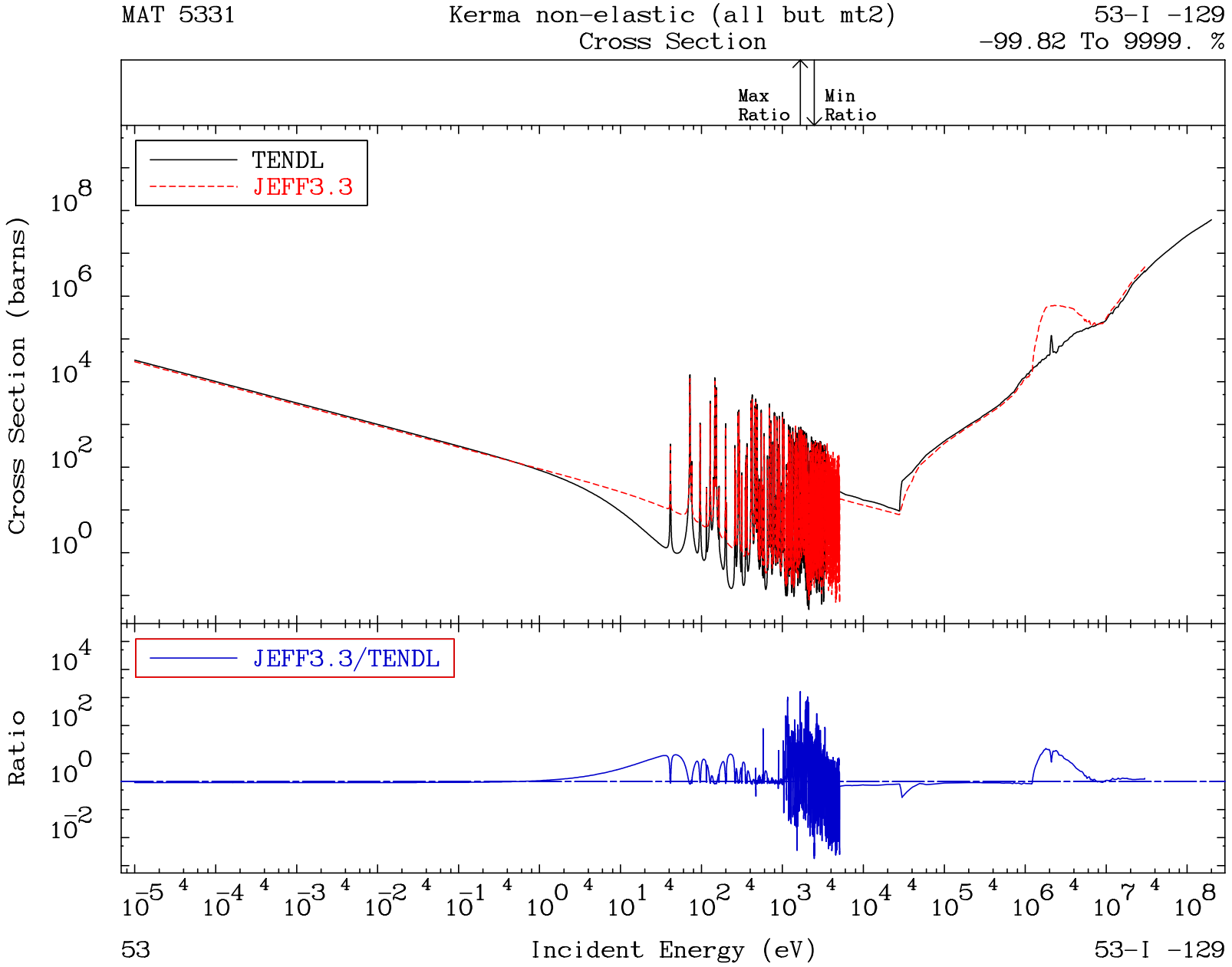

MAT 5331
Tritium Production
Cross Section
53-I -129
-76.78 To 9999. %
Max
Ratio
TENDL Threshold 7.1608 MeV
JEFF3.3 Threshold 7.1480 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^12
10^8
10^4
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
53-I -129

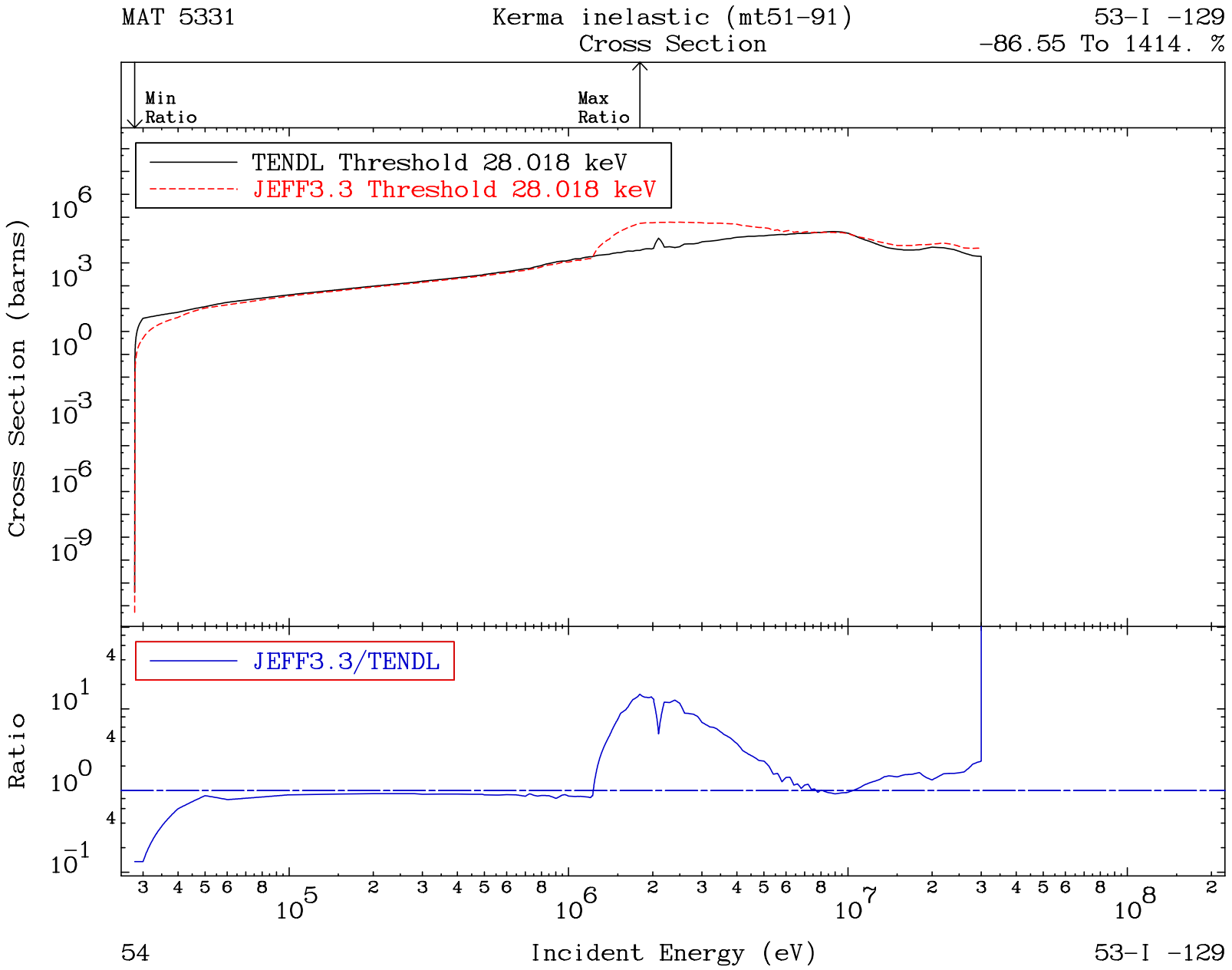

MAT 5331
He-3 Production
Cross Section
53-I -129
-72.73 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.7366 MeV
JEFF3.3 Threshold 8.7227 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^15
10^10
10^5
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
49
Incident Energy (eV)
53-I -129

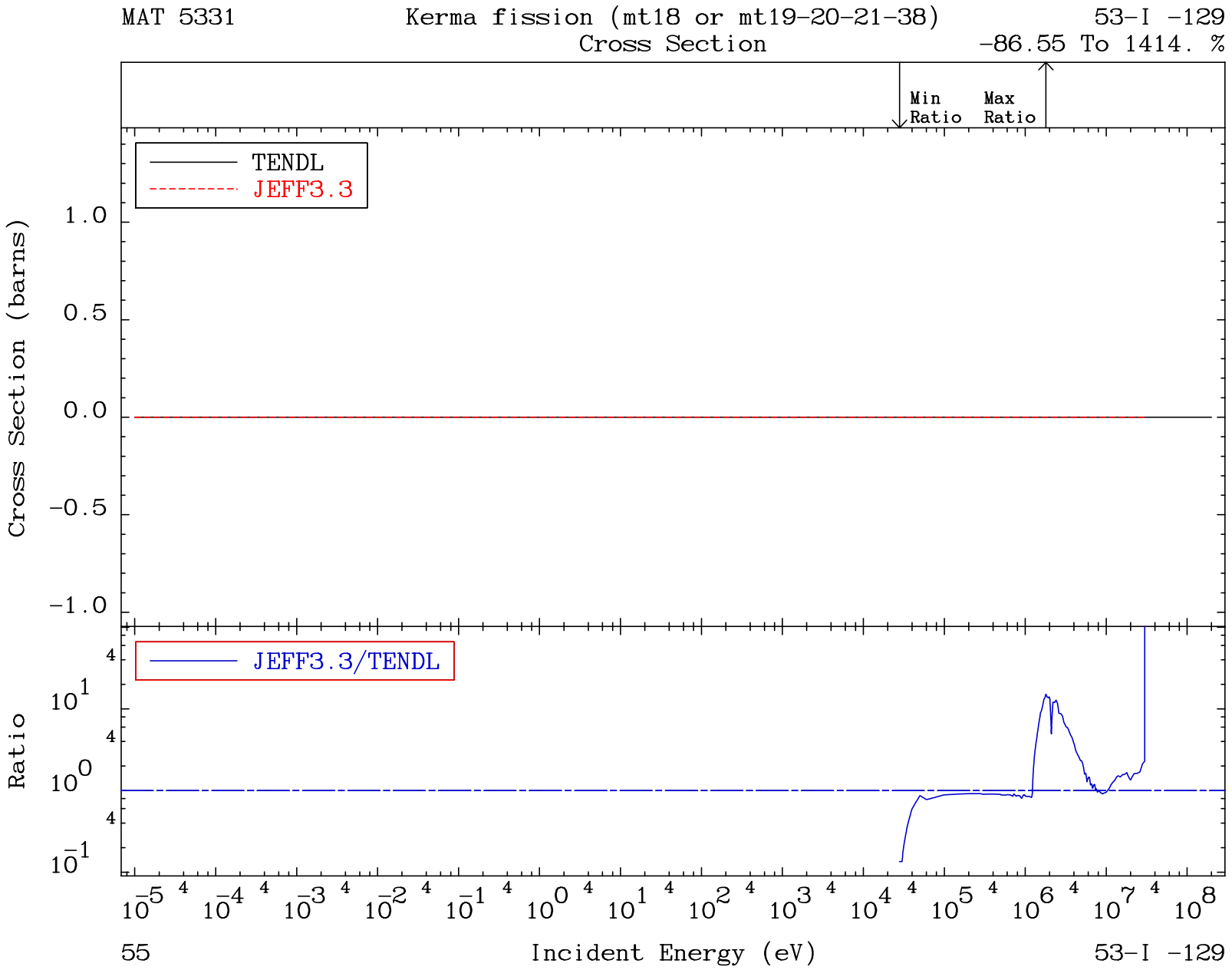

MAT 5331
He-4 Production
Cross Section
53-I -129
-7.374 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4010 keV
JEFF3.3
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^12
10^8
10^4
10^0
10^-2
10^-1
10^0
10^1
10^2
10^3
10^4
10^5
10^6
10^7
10^8
50
Incident Energy (eV)
53-I -129

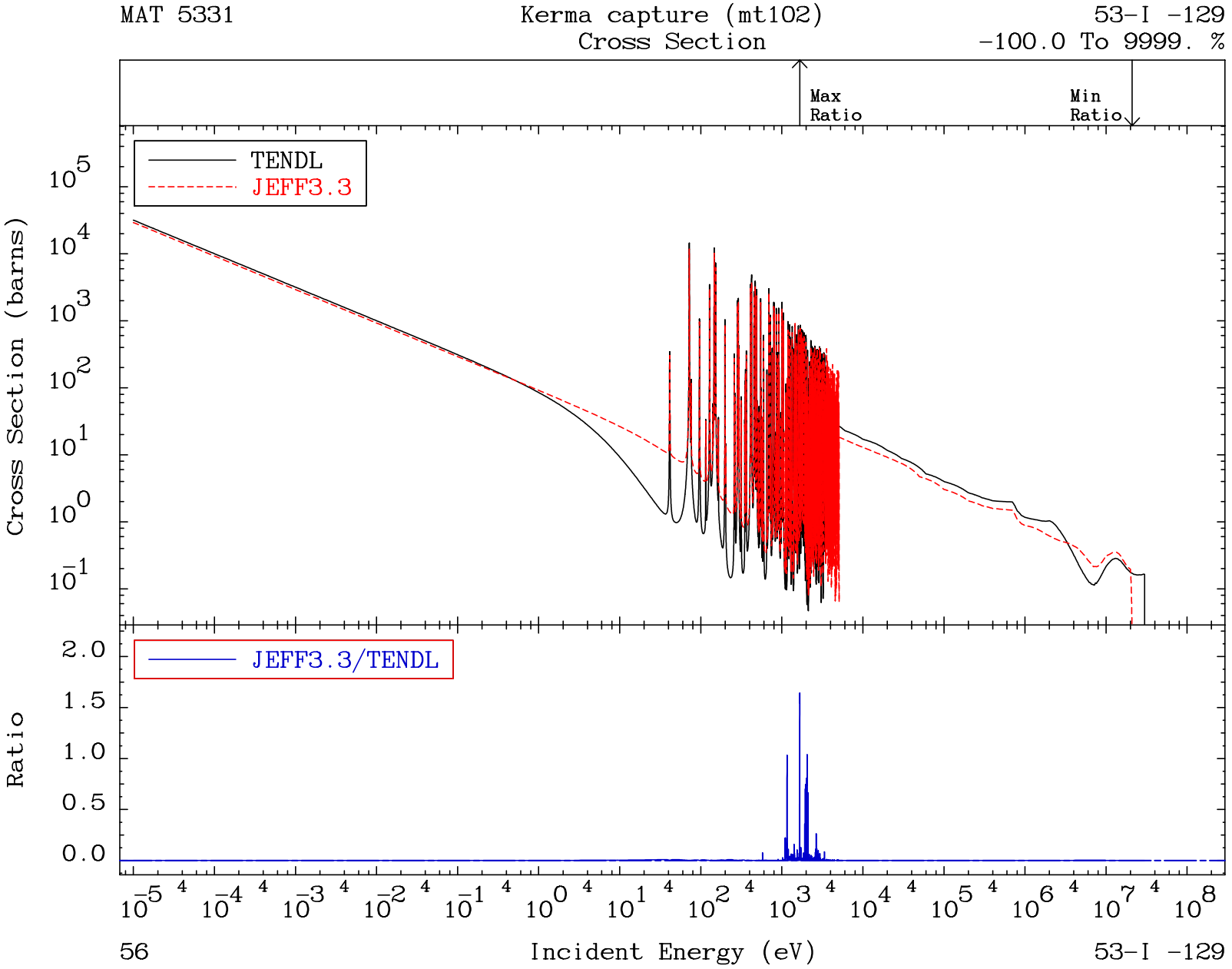

MAT 5331
Kerma total (eV-barns)
Cross Section
53-I -129
-84.84 To 8256. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
51
53-I -129

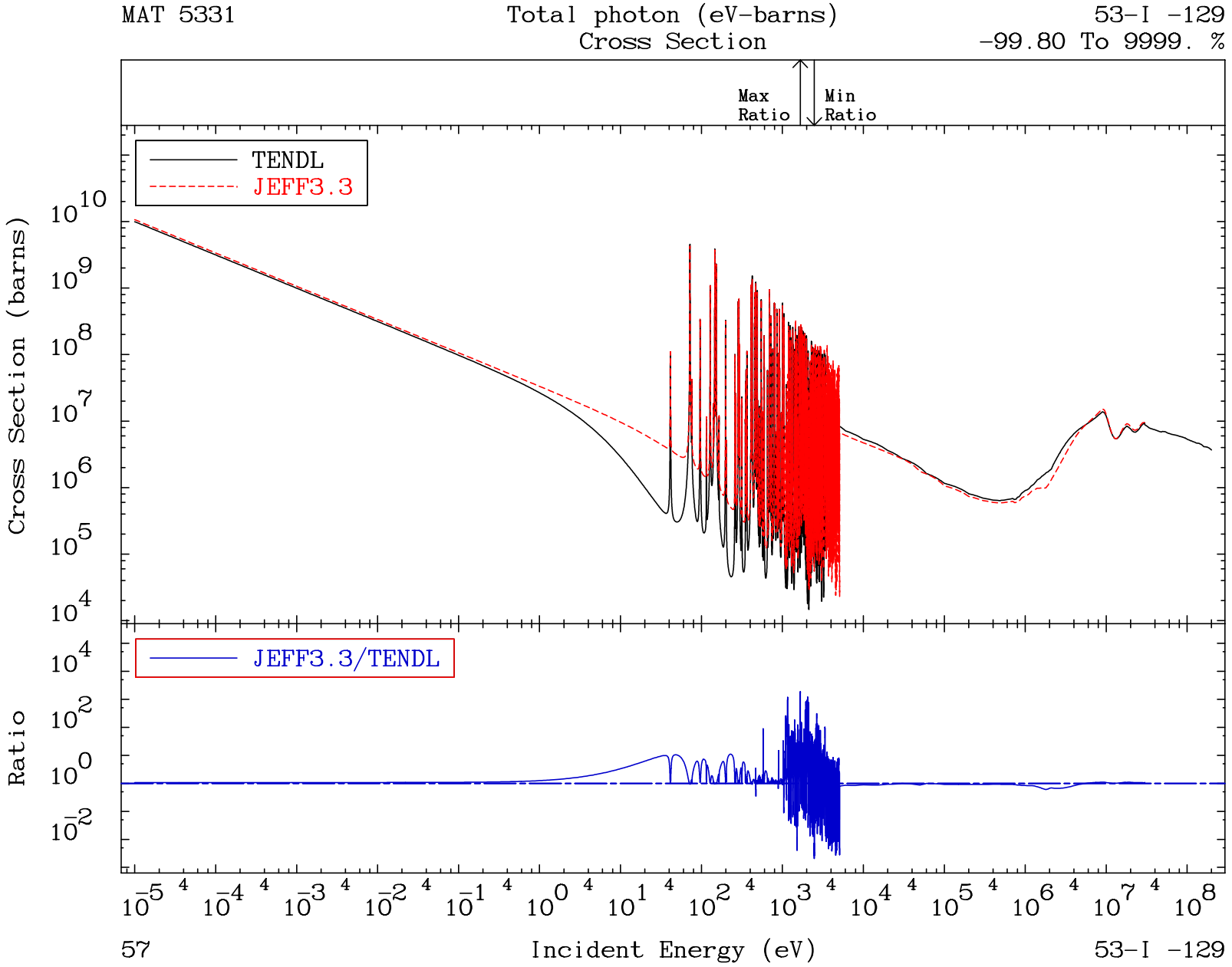

MAT 5331
Kerma elastic
Cross Section
53-I -129
-84.58 To 8870. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
52
53-I -129

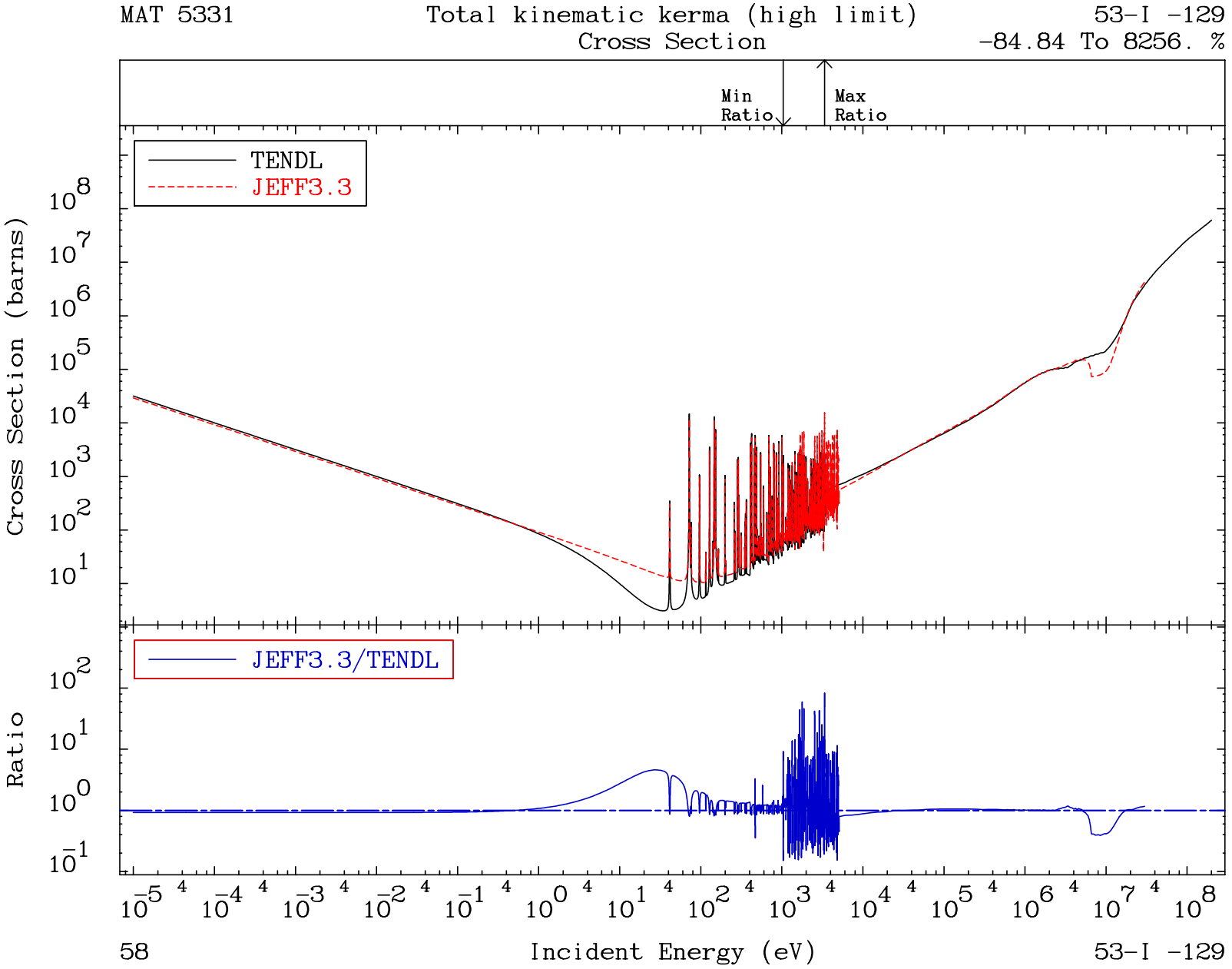

MAT 5331
Kerma non-elastic (all but mt2)
Cross Section
53-I -129
-99.82 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
53
53-I -129

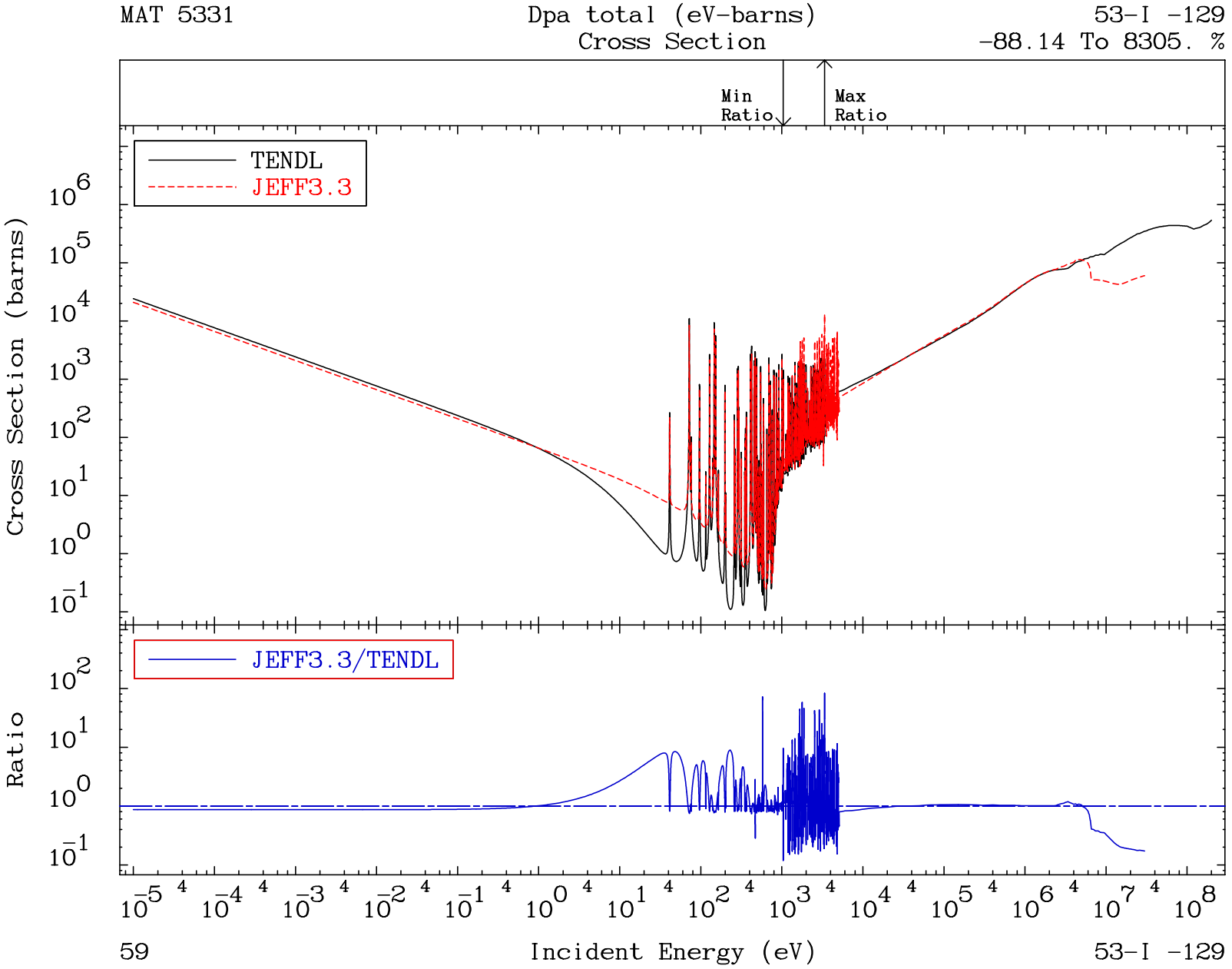

MAT 5331
Kerma inelastic (mt51-91)
Cross Section
53-I -129
-86.55 To 1414. %
Min Ratio
Max Ratio
TENDL Threshold 28.018 keV
JEFF3.3 Threshold 28.018 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
54
53-I -129

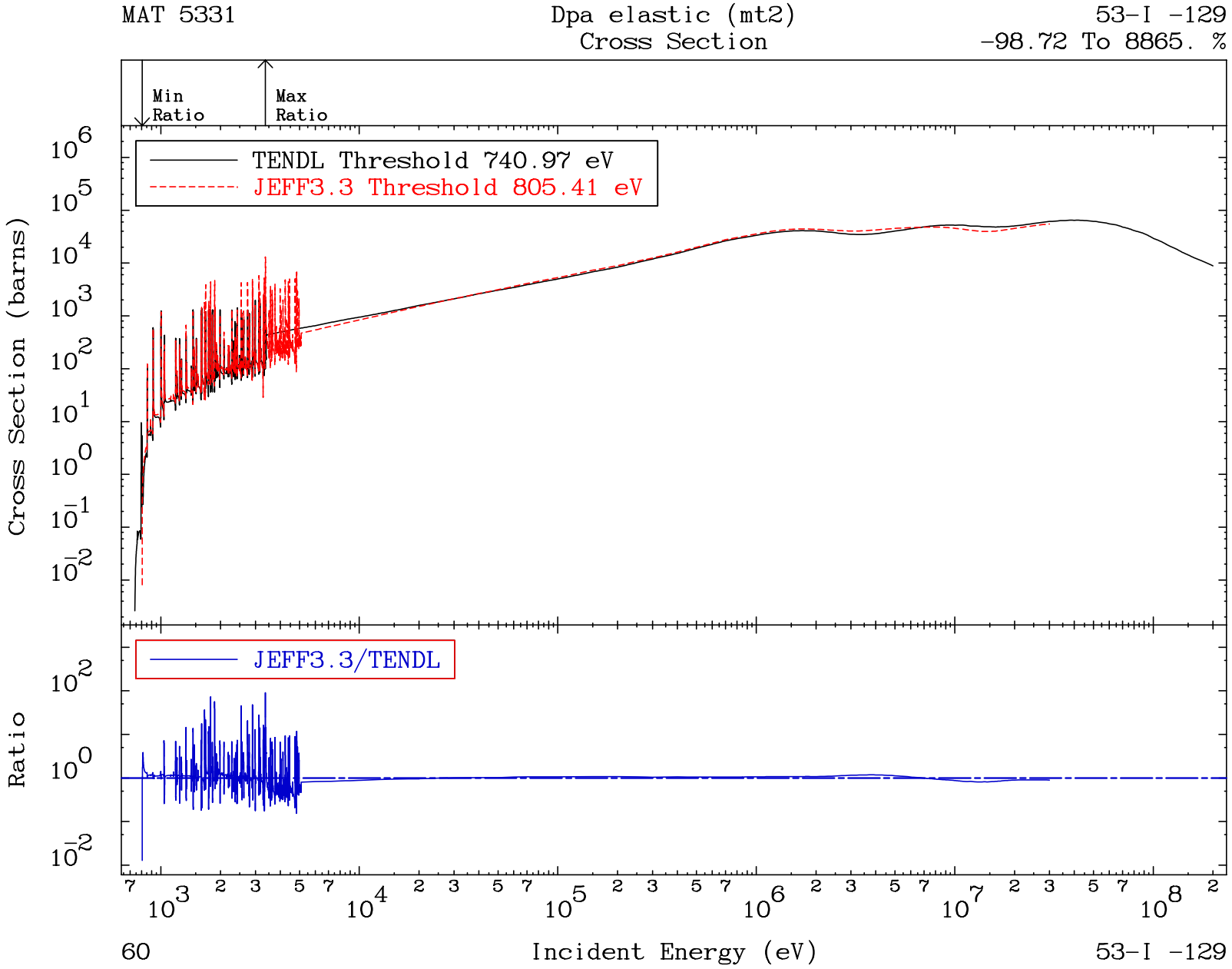

MAT 5331
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
53-I -129
-86.55 To 1414. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JEFF3.3/TENDL
Ratio
10^{1}
10^{0}
10^{-1}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
55
Incident Energy (eV)
53-I -129

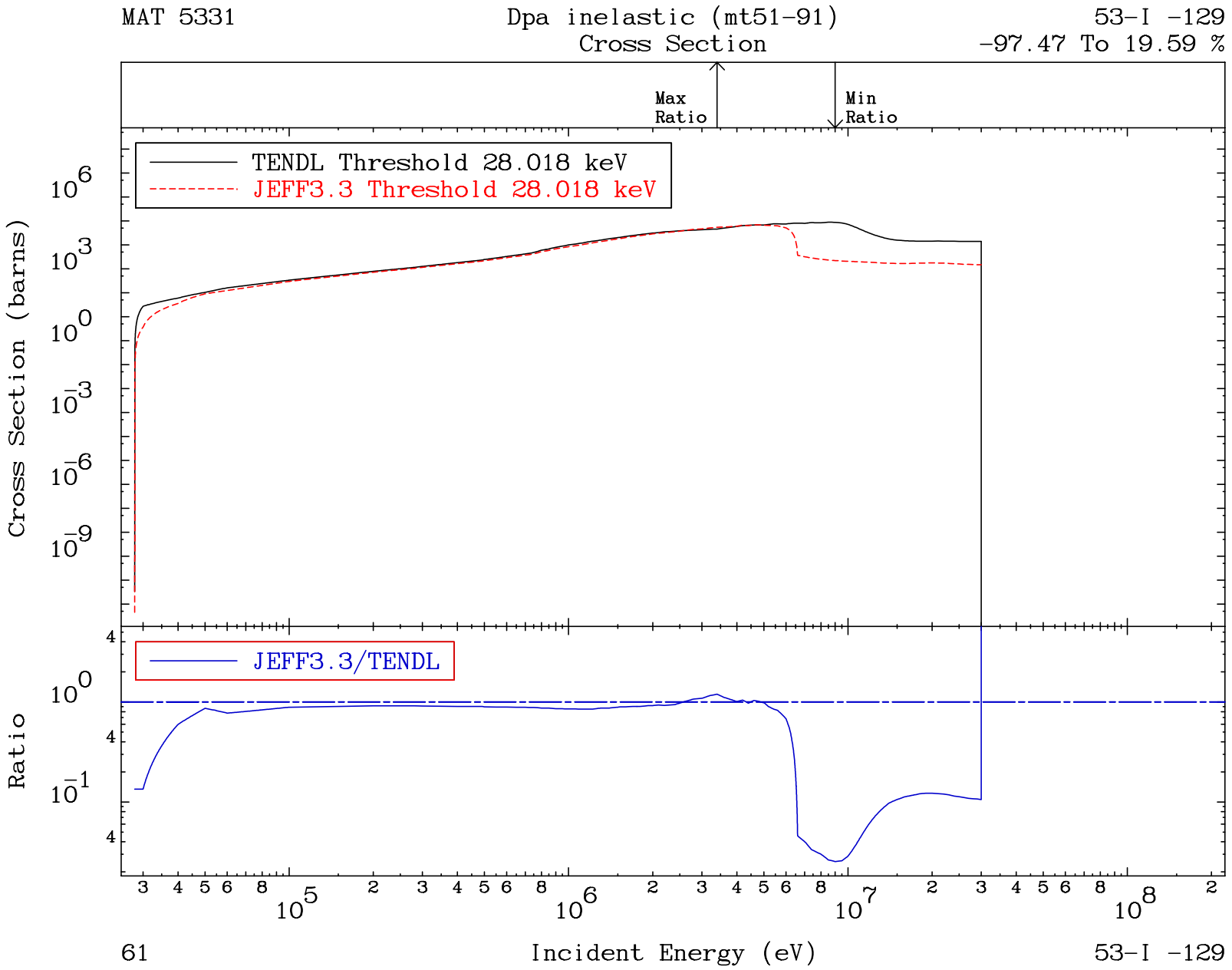

MAT 5331
Kerma capture (mt102)
Cross Section
53-I -129
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
56
53-I -129

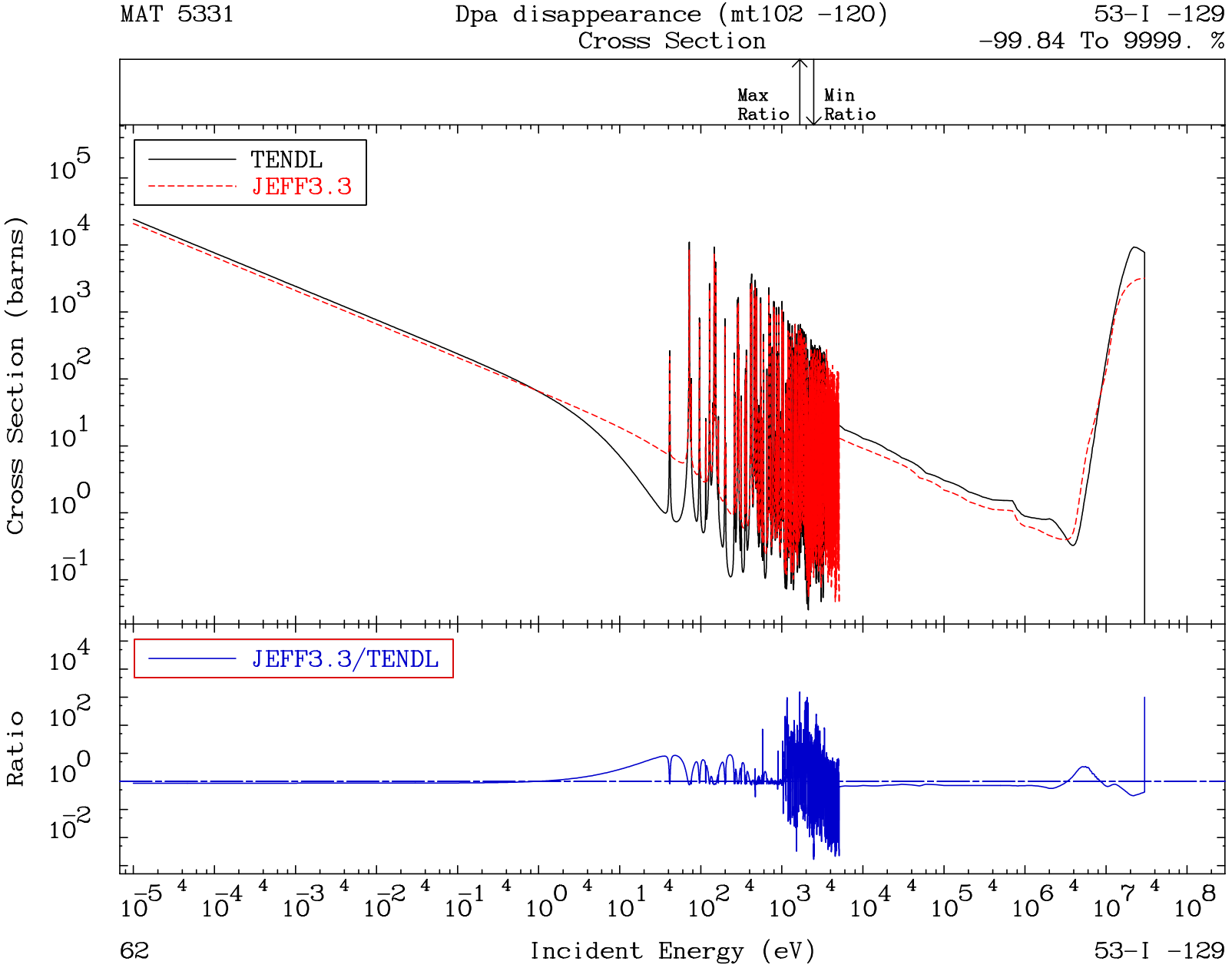

MAT 5331
Total photon (eV-barns)
Cross Section
53-I -129
-99.80 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
57
53-I -129

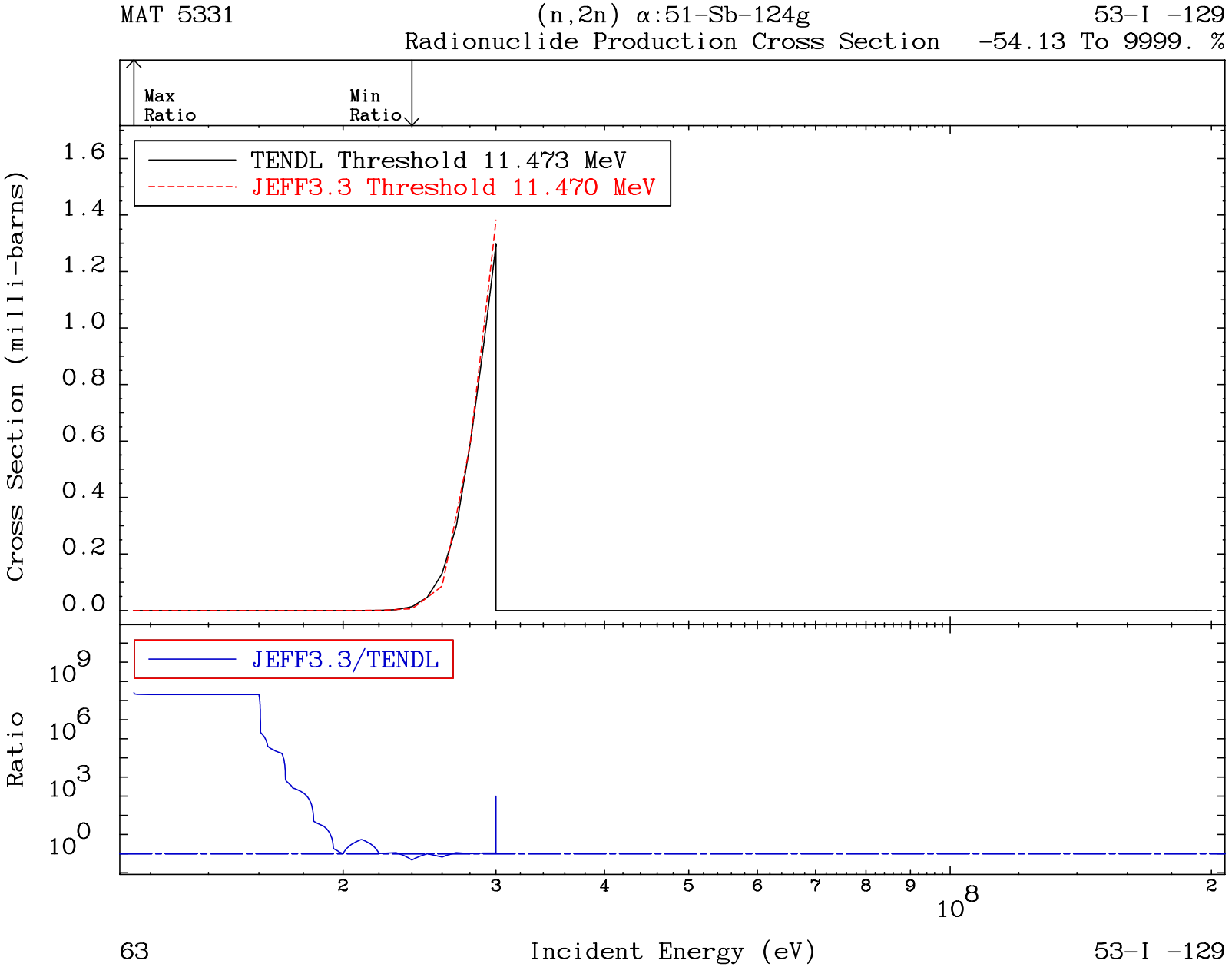

MAT 5331
Total kinematic kerma (high limit)
Cross Section
53-I -129
-84.84 To 8256. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
58
53-I -129

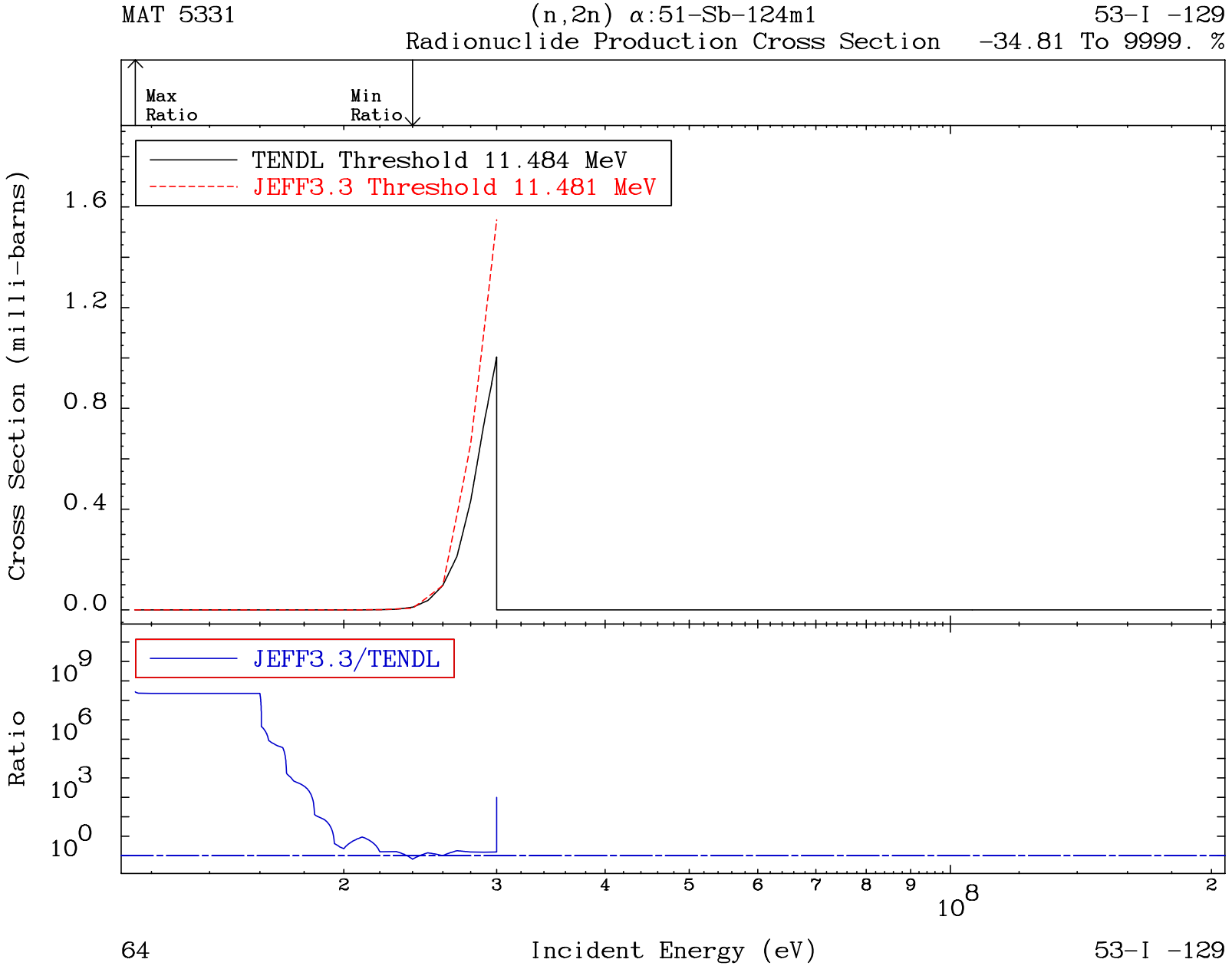

MAT 5331
Dpa total (eV-barns)
Cross Section
53-I -129
-88.14 To 8305. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
59
53-I -129

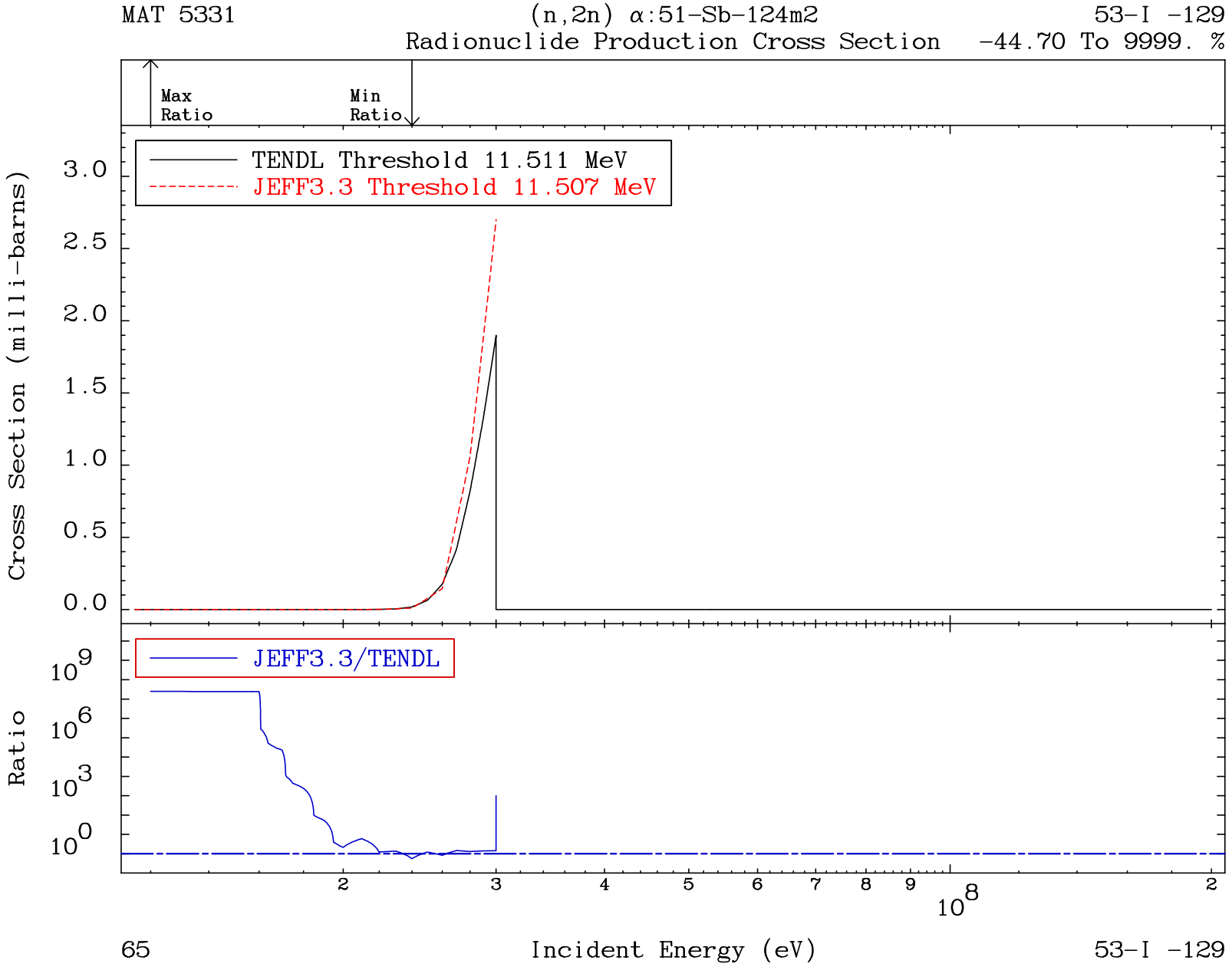

MAT 5331
Dpa elastic (mt2)
Cross Section
53-I -129
-98.72 To 8865. %
Min Ratio
Max Ratio
TENDL Threshold 740.97 eV
JEFF3.3 Threshold 805.41 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
60
53-I -129

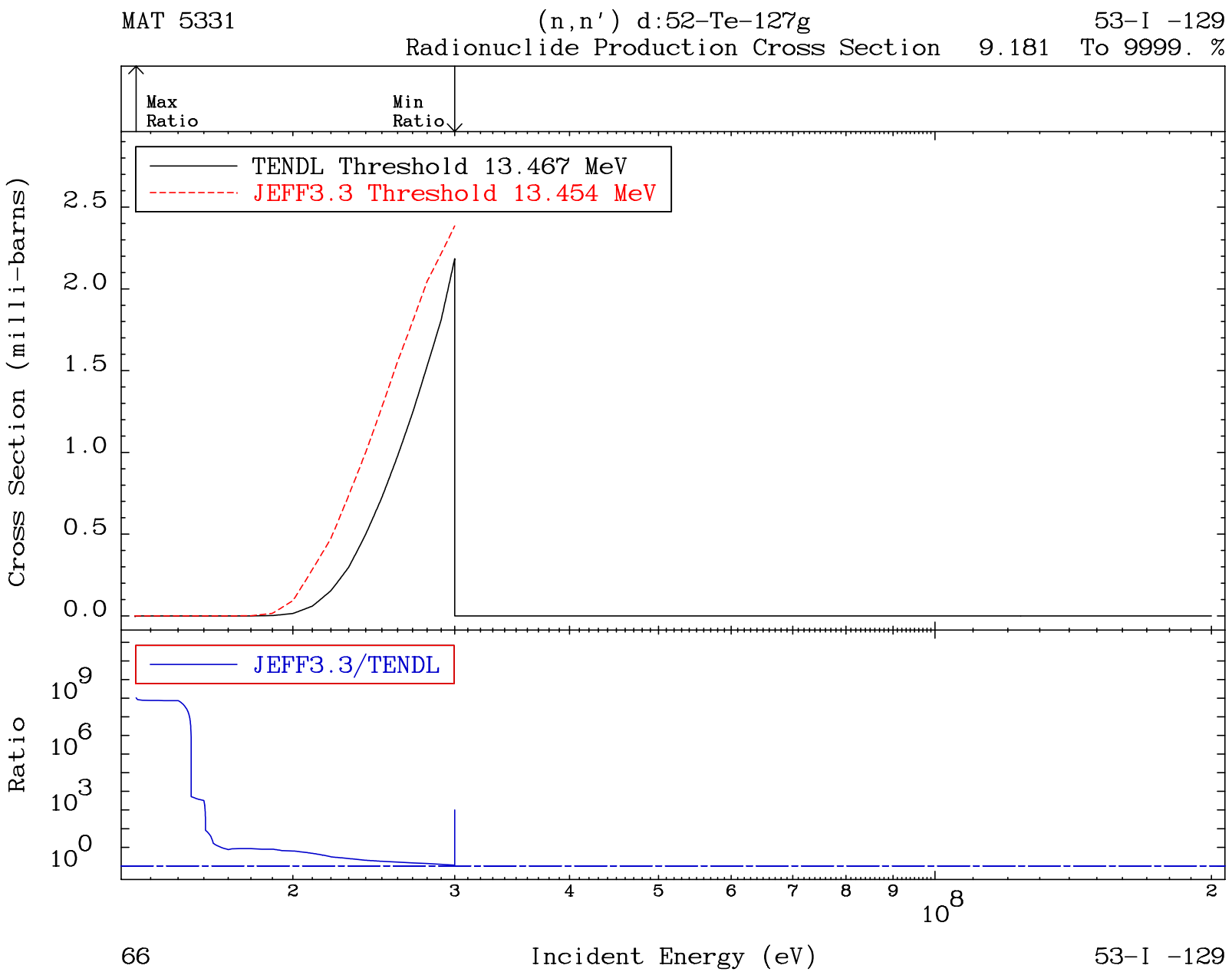

MAT 5331
Dpa inelastic (mt51-91)
Cross Section
53-I -129
-97.47 To 19.59 %
Max Ratio
Min Ratio
TENDL Threshold 28.018 keV
JEFF3.3 Threshold 28.018 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
61
53-I -129

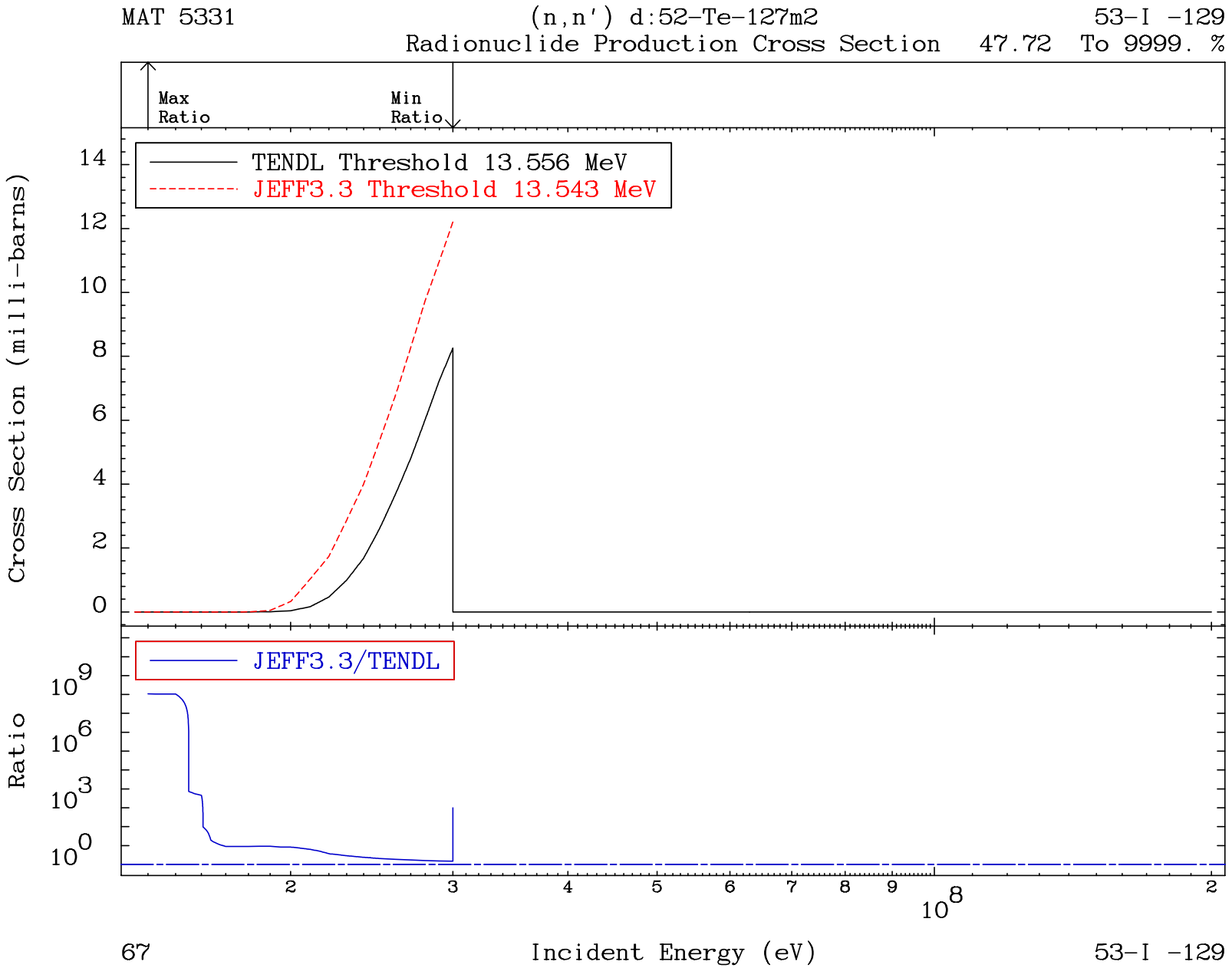

MAT 5331
Dpa disappearance (mt102 -120)
Cross Section
53-I -129
-99.84 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
62
53-I -129

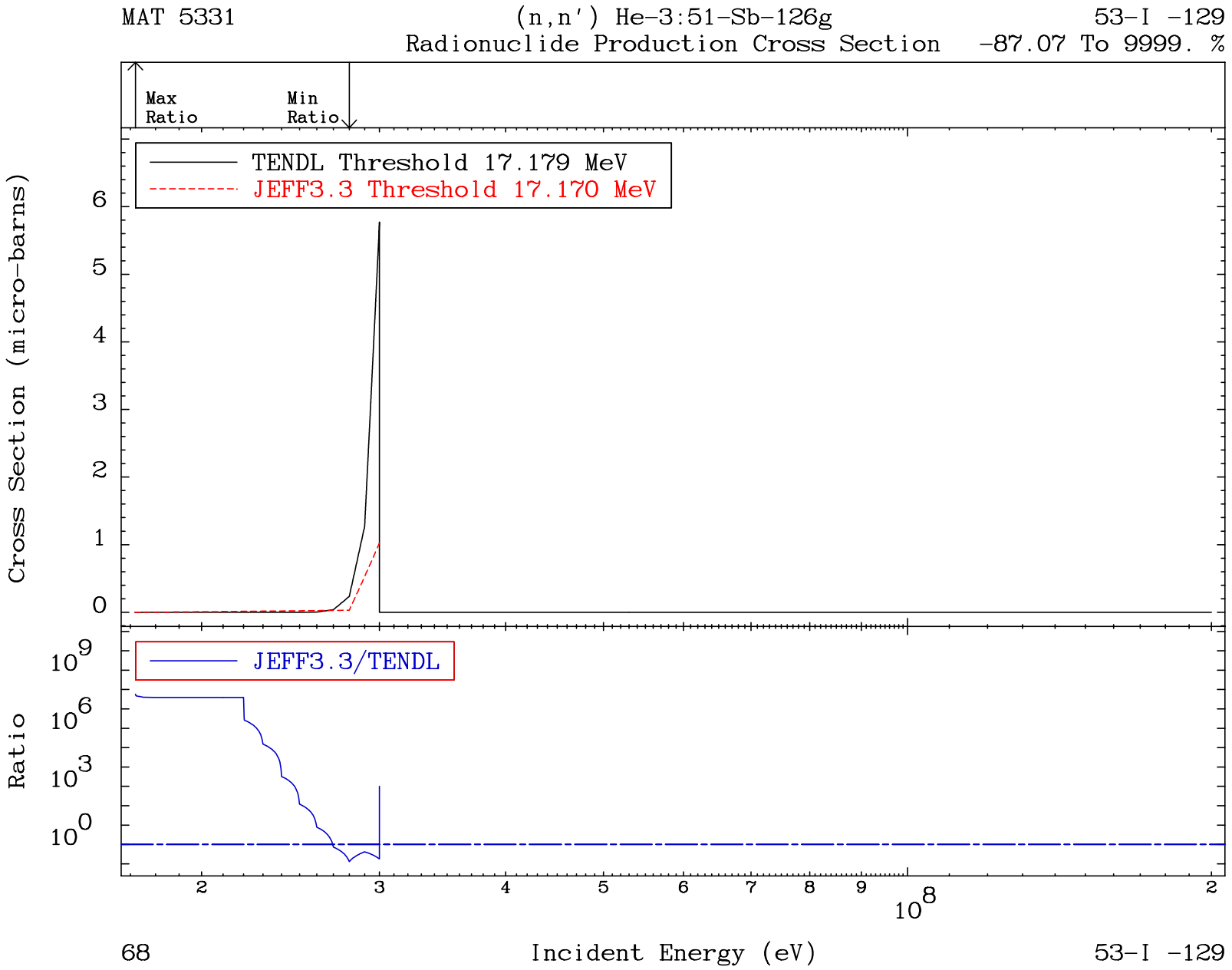

MAT 5331
(n,2n) α:51-Sb-124g
53-I -129
Radionuclide Production Cross Section -54.13 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.473 MeV
JEFF3.3 Threshold 11.470 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
63
Incident Energy (eV)
53-I -129

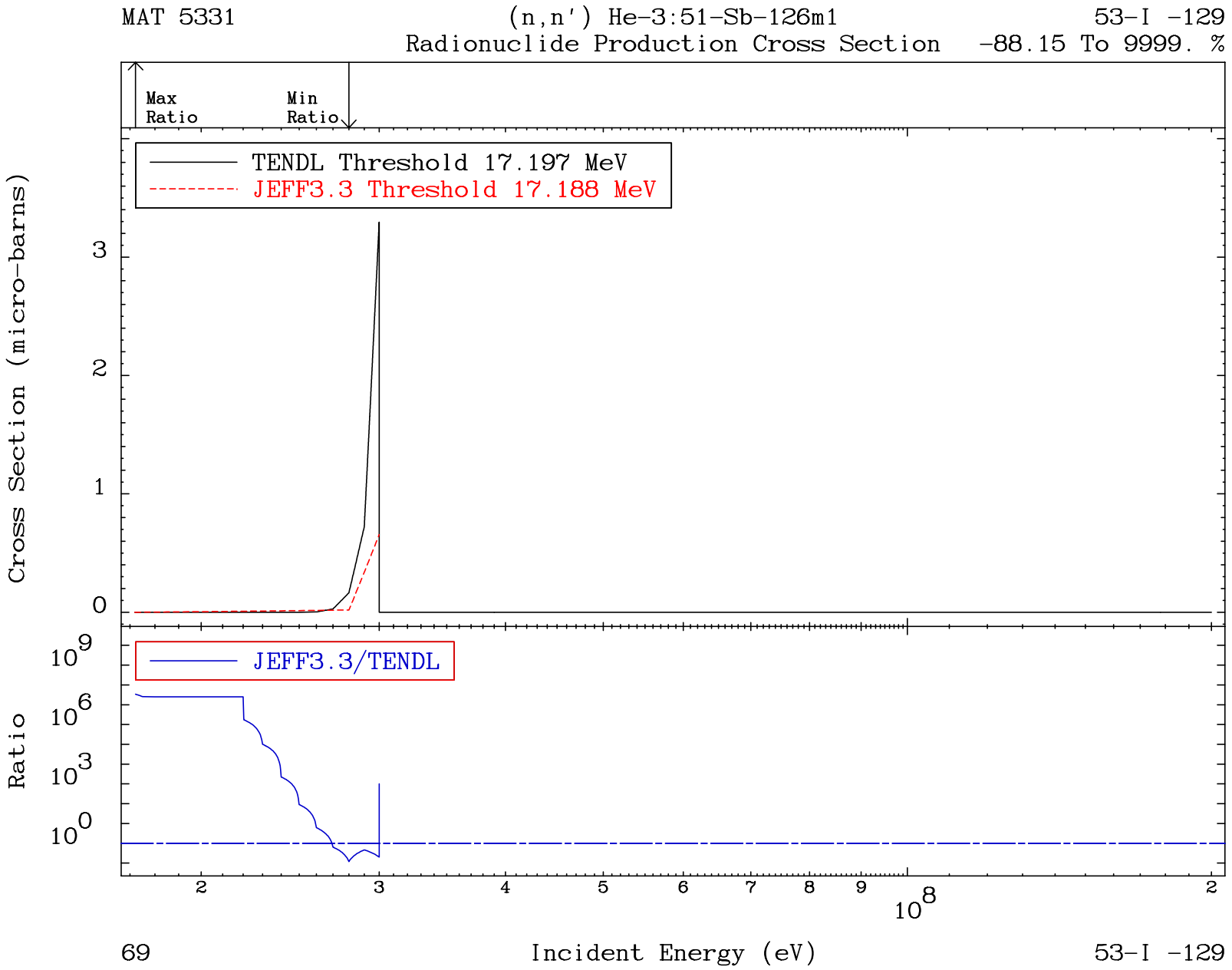

MAT 5331
(n,2n) α:51-Sb-124m1
53-I -129
Radionuclide Production Cross Section -34.81 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.484 MeV
JEFF3.3 Threshold 11.481 MeV
Cross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
53-I -129

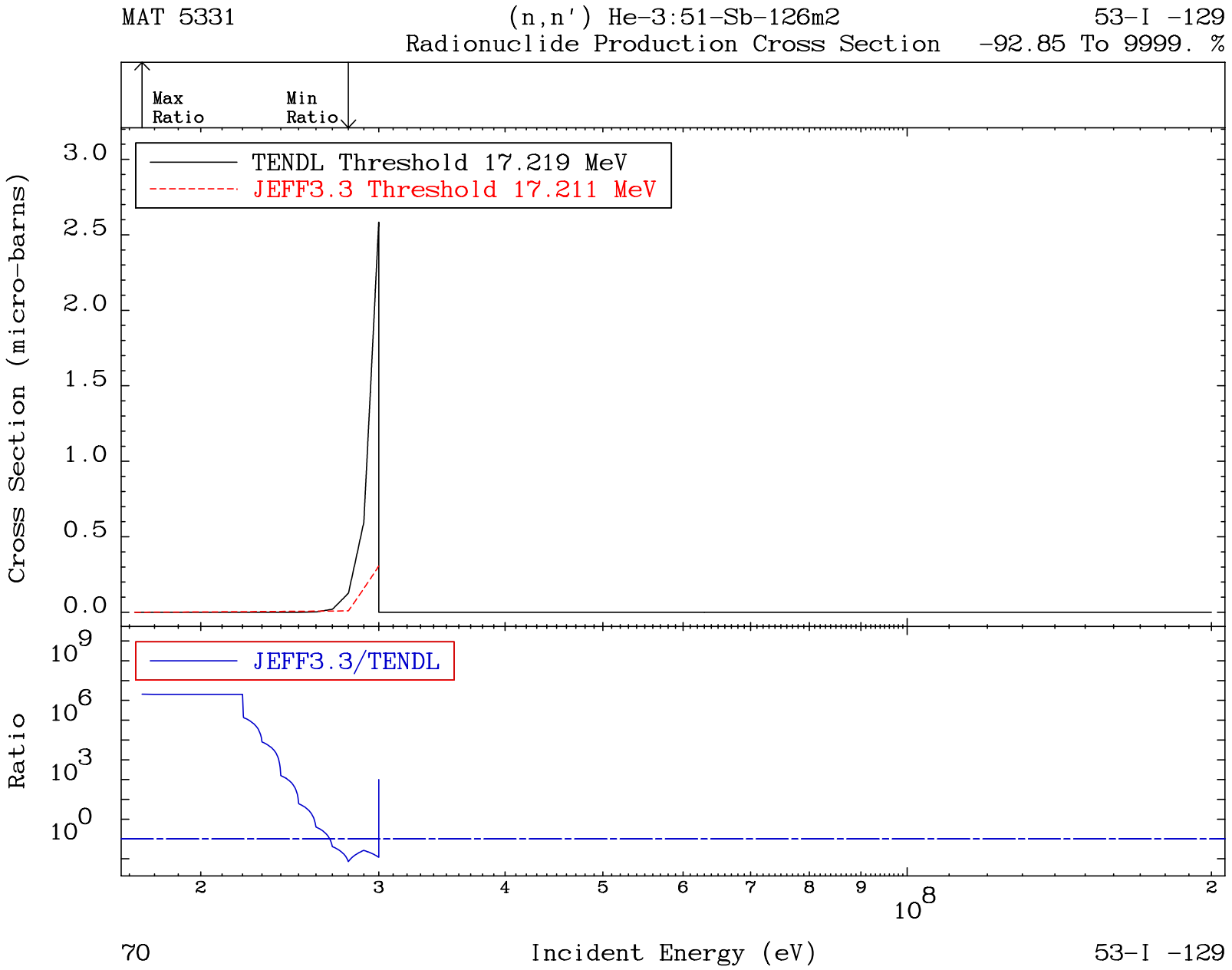

MAT 5331
(n,2n) α:51-Sb-124m2
53-I -129
Radionuclide Production Cross Section -44.70 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.511 MeV
JEFF3.3 Threshold 11.507 MeV
Cross Section (milli-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
65
Incident Energy (eV)
53-I -129

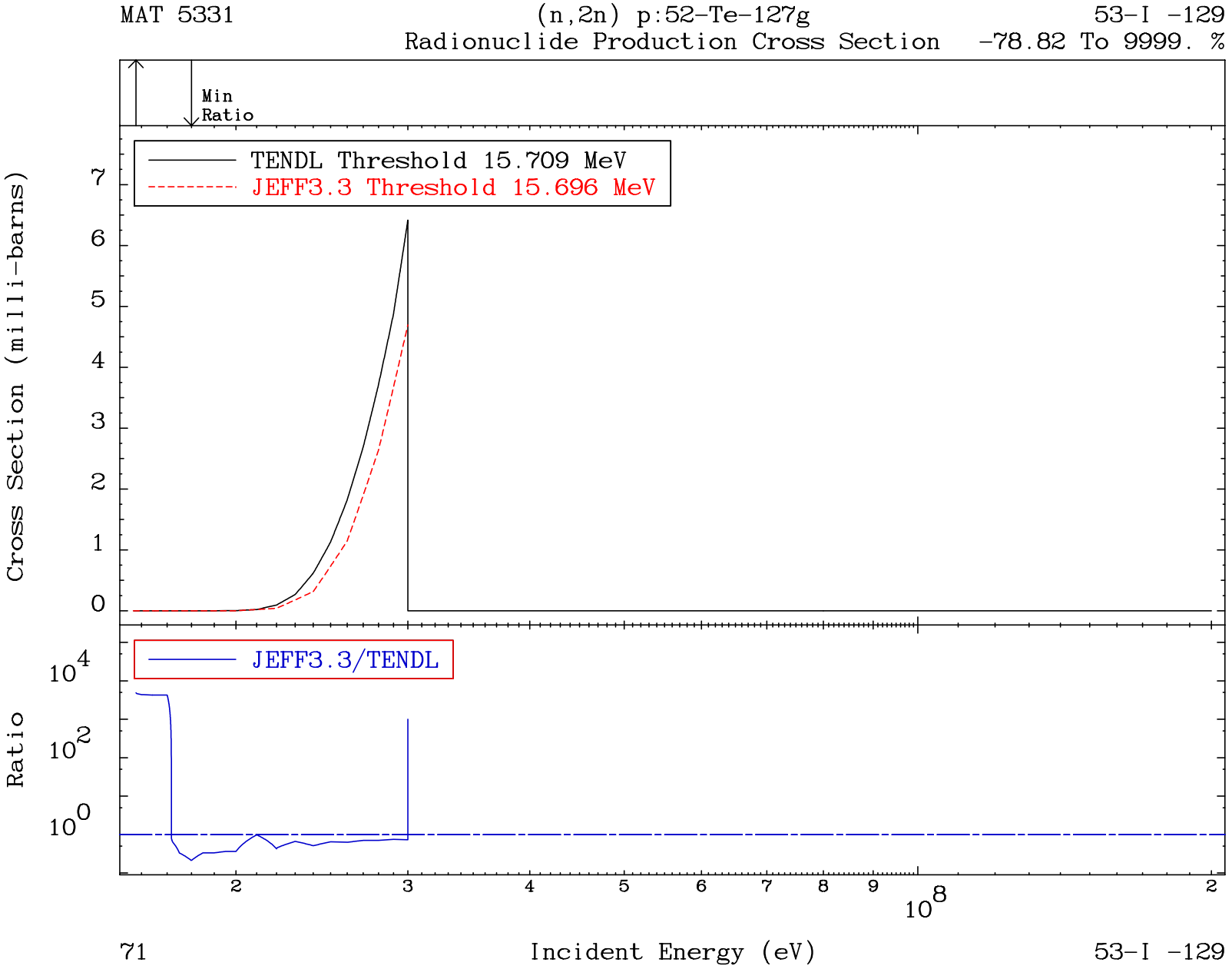

MAT 5331
(n,n') d:52-Te-127g
53-I -129
Radionuclide Production Cross Section 9.181 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 13.467 MeV
JEFF3.3 Threshold 13.454 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
66
Incident Energy (eV)
53-I -129

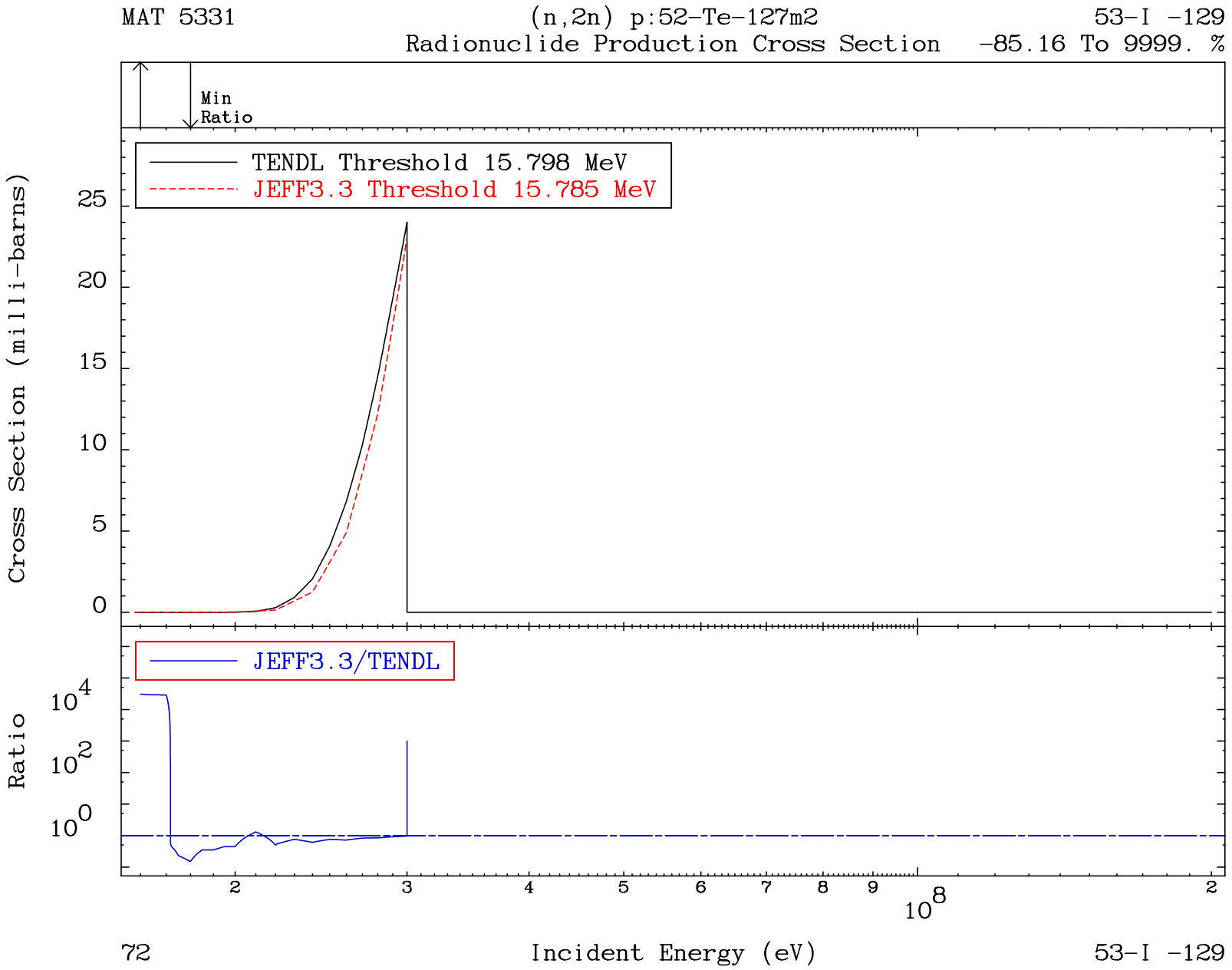

MAT 5331
(n,n') d:52-Te-127m2
53-I -129
Radionuclide Production Cross Section 47.72 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 13.556 MeV
JEFF3.3 Threshold 13.543 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
67
Incident Energy (eV)
53-I -129

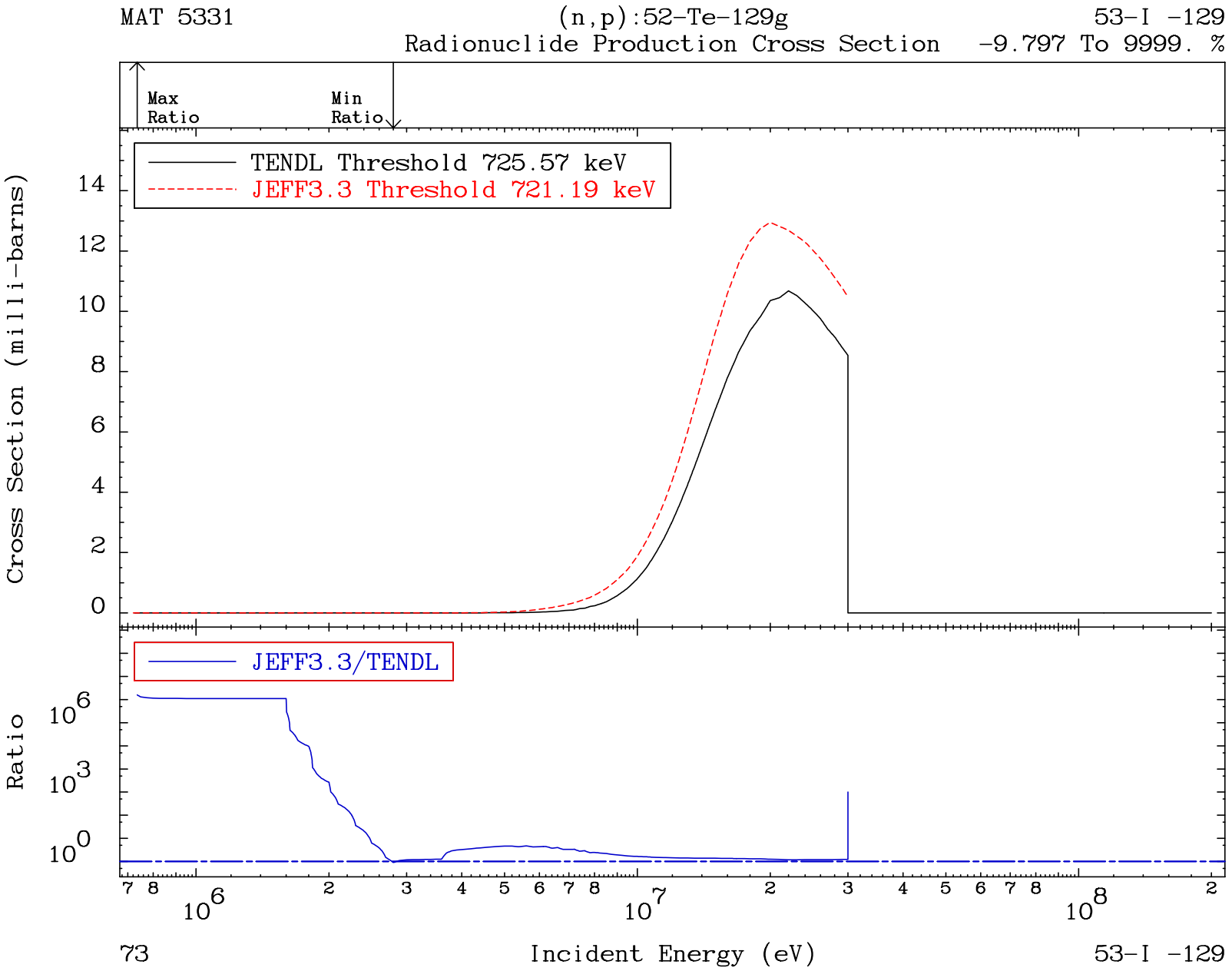

MAT 5331
(n,n') He-3:51-Sb-126g
53-I -129
Radionuclide Production Cross Section
-87.07 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 17.179 MeV
JEFF3.3 Threshold 17.170 MeV
Cross Section (micro-barns)
0
1
2
3
4
5
6
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
68
Incident Energy (eV)
53-I -129

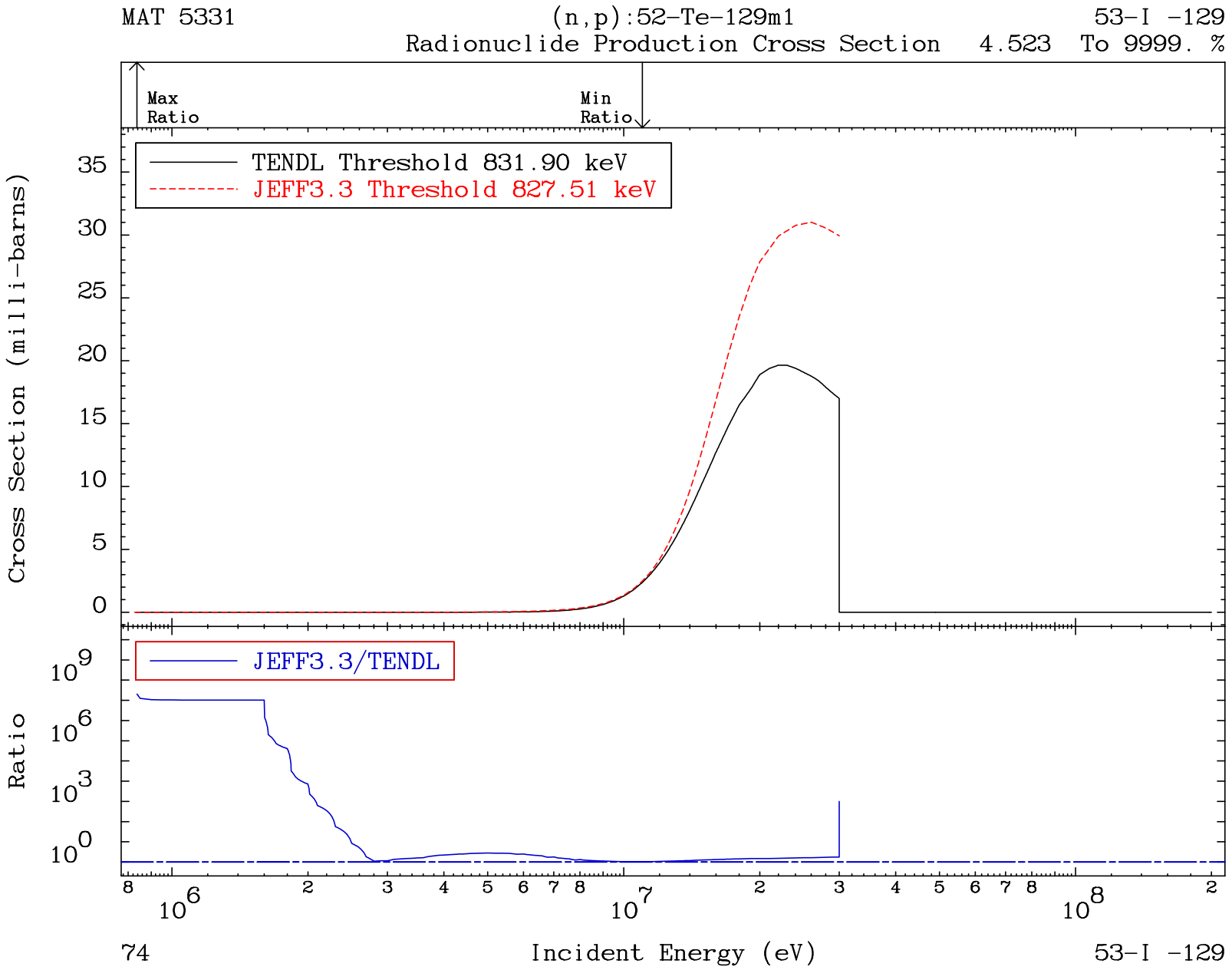

MAT 5331
(n,n') He-3:51-Sb-126m1
53-I -129
Radionuclide Production Cross Section
-88.15 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 17.197 MeV
JEFF3.3 Threshold 17.188 MeV
Cross Section (micro-barns)
0
1
2
3
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
69
Incident Energy (eV)
53-I -129

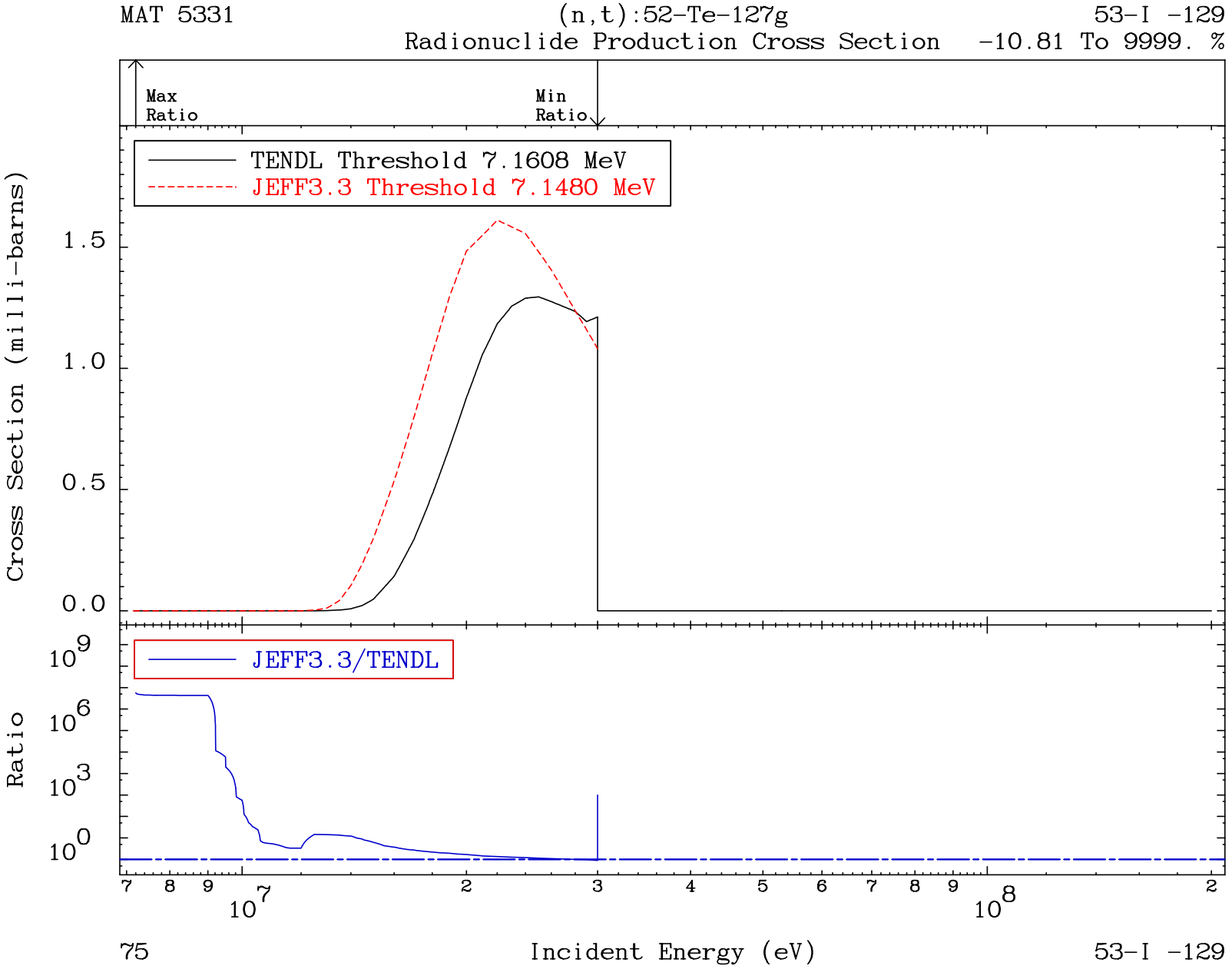

MAT 5331
(n,n') He-3:51-Sb-126m2
53-I -129
Radionuclide Production Cross Section
-92.85 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 17.219 MeV
JEFF3.3 Threshold 17.211 MeV
Cross Section (micro-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
70
Incident Energy (eV)
53-I -129

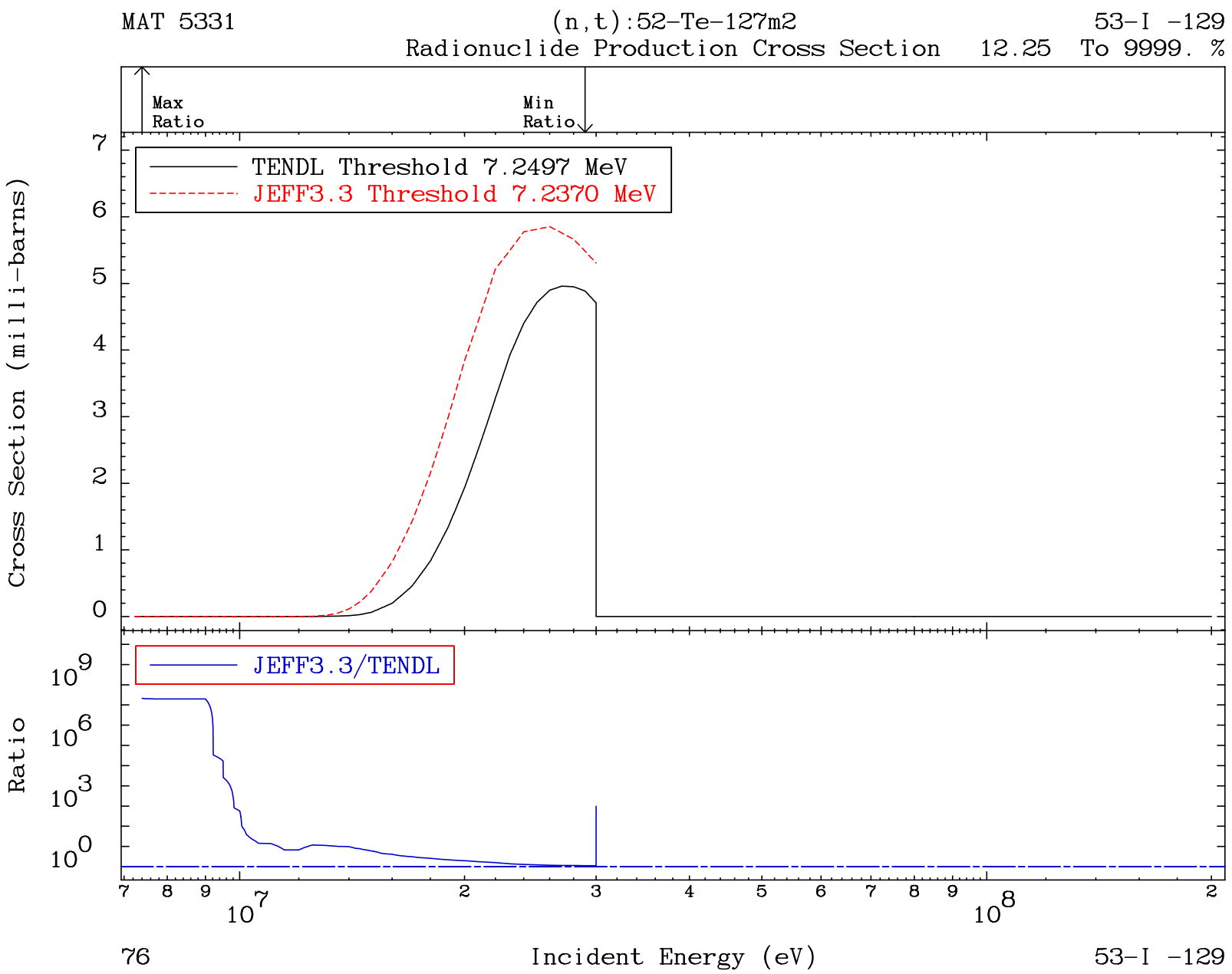

MAT 5331
(n,2n) p:52-Te-127g
53-I -129
Radionuclide Production Cross Section
-78.82 To 9999. %
Min
Ratio
TENDL Threshold 15.709 MeV
JEFF3.3 Threshold 15.696 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
7
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
71
Incident Energy (eV)
53-I -129

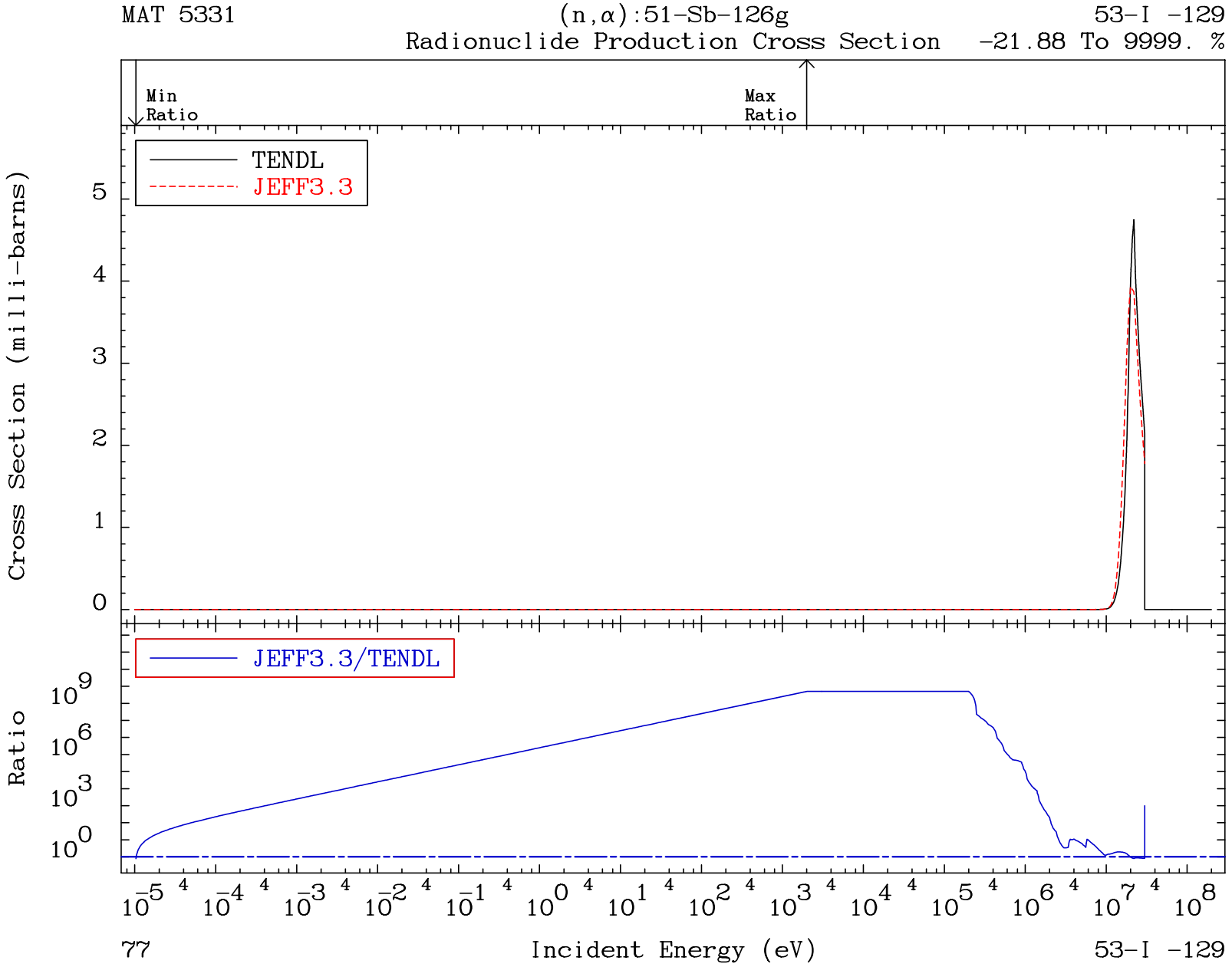

MAT 5331
(n,2n) p:52-Te-127m2
53-I -129
Radionuclide Production Cross Section -85.16 To 9999. %
Min
Ratio
TENDL Threshold 15.798 MeV
JEFF3.3 Threshold 15.785 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
72
Incident Energy (eV)
53-I -129

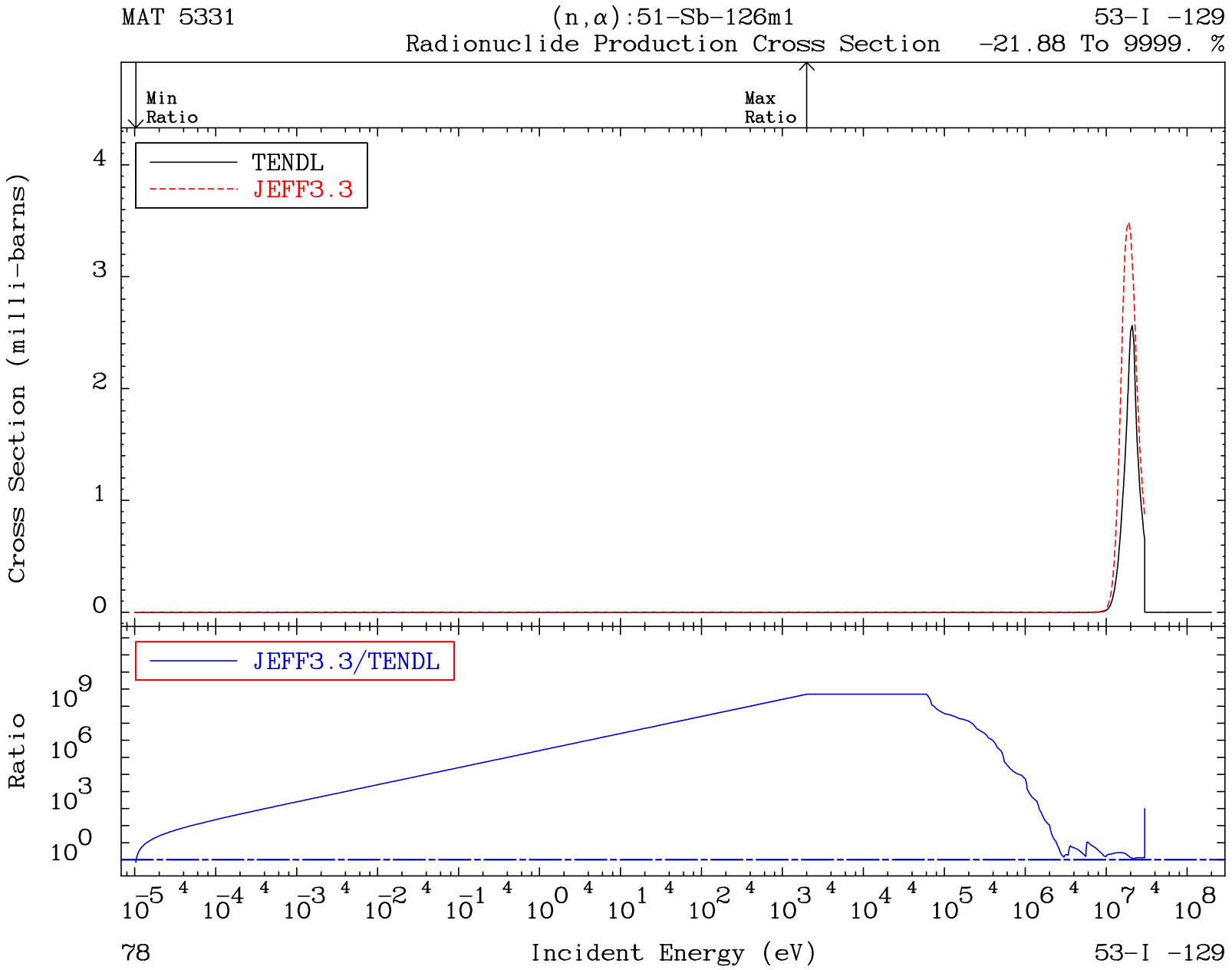

MAT 5331
(n,p):52-Te-129g
53-I -129
Radionuclide Production Cross Section
-9.797 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 725.57 keV
JEFF3.3 Threshold 721.19 keV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
73
53-I -129

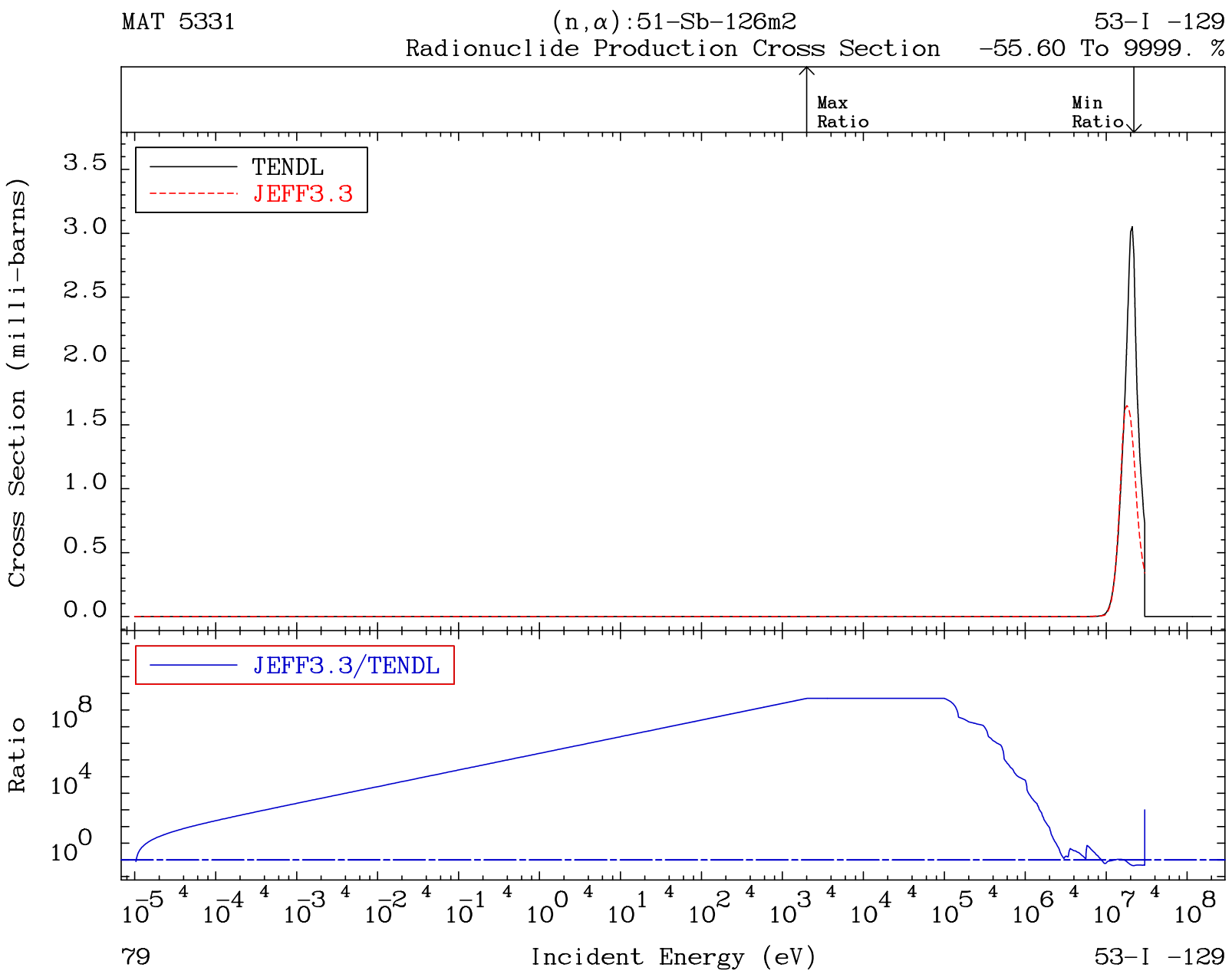

MAT 5331
(n,p):52-Te-129m1
53-I -129
Radionuclide Production Cross Section 4.523 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 831.90 keV
JEFF3.3 Threshold 827.51 keV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
74
Incident Energy (eV)
53-I -129

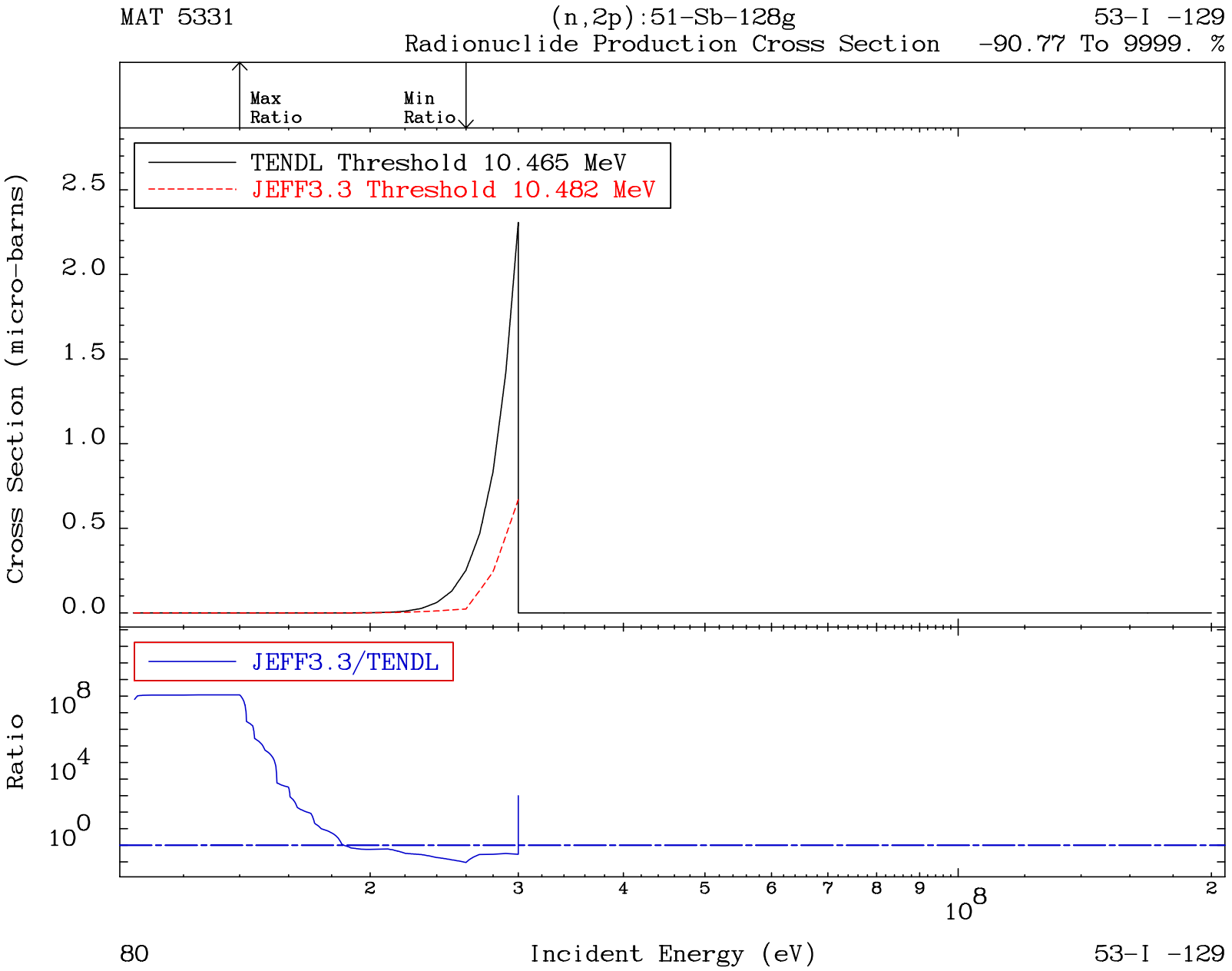

MAT 5331
(n,t):52-Te-127g
53-I -129
Radionuclide Production Cross Section -10.81 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.1608 MeV
JEFF3.3 Threshold 7.1480 MeV
Cross Section (milli-barns)
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
75
Incident Energy (eV)
53-I -129

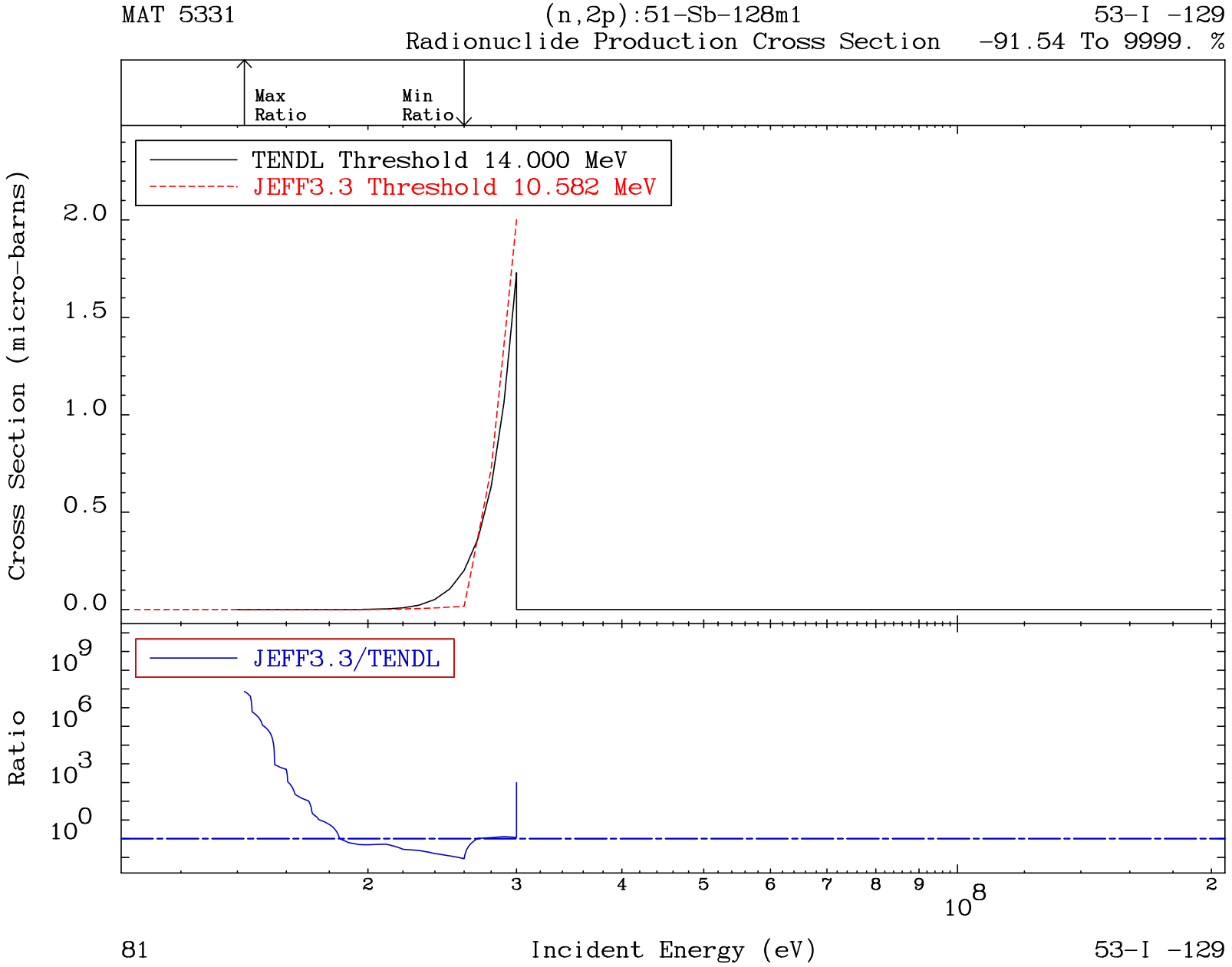

MAT 5331
(n,t):52-Te-127m2
53-I -129
Radionuclide Production Cross Section 12.25 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.2497 MeV
JEFF3.3 Threshold 7.2370 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
53-I -129

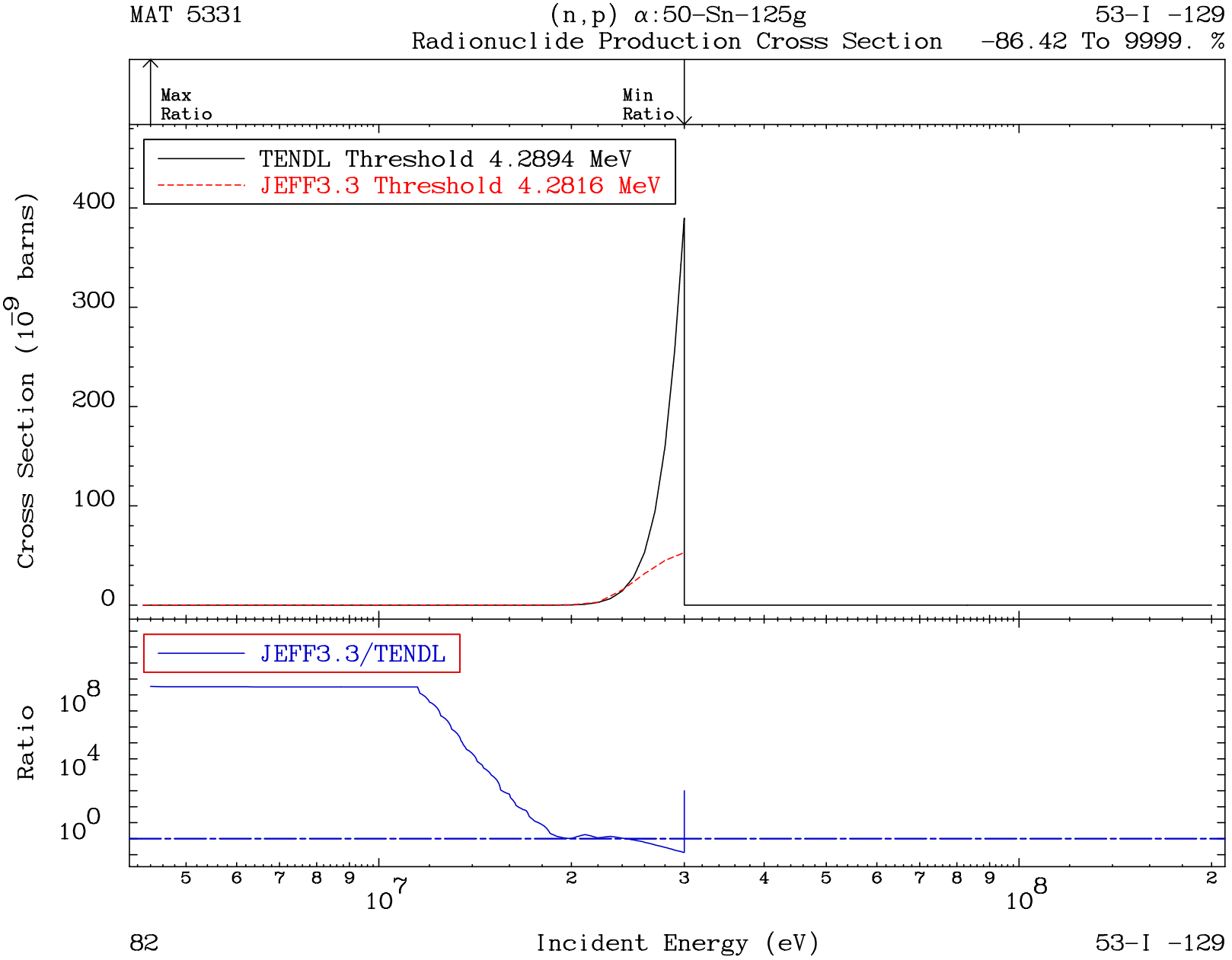

MAT 5331
(n,α):51-Sb-126g
53-I -129
Radionuclide Production Cross Section
-21.88 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (milli-barns)
0
1
2
3
4
5
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
77
Incident Energy (eV)
53-I -129

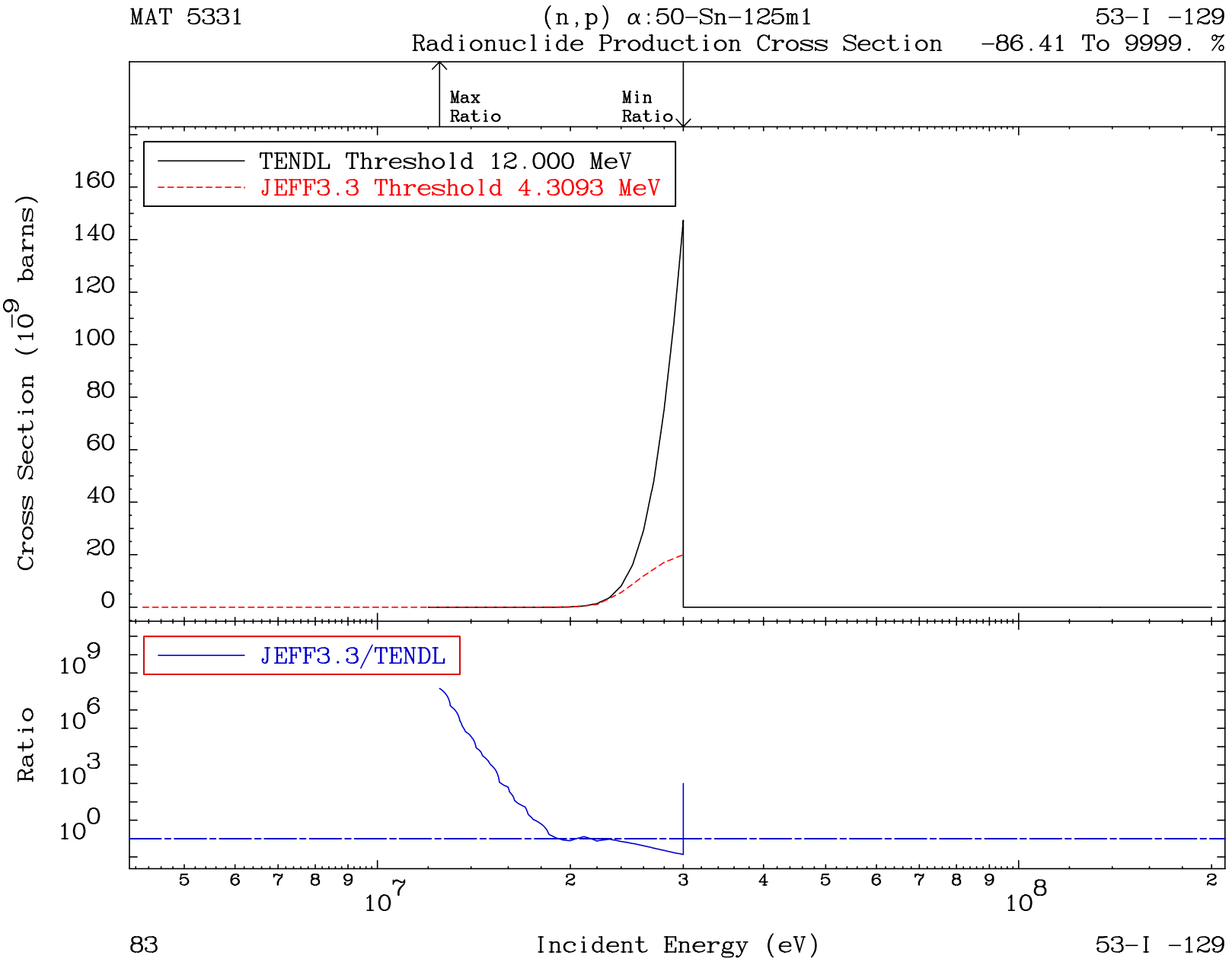

MAT 5331
(n,α):51-Sb-126m1
53-I -129
Radionuclide Production Cross Section
-21.88 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
78
53-I -129

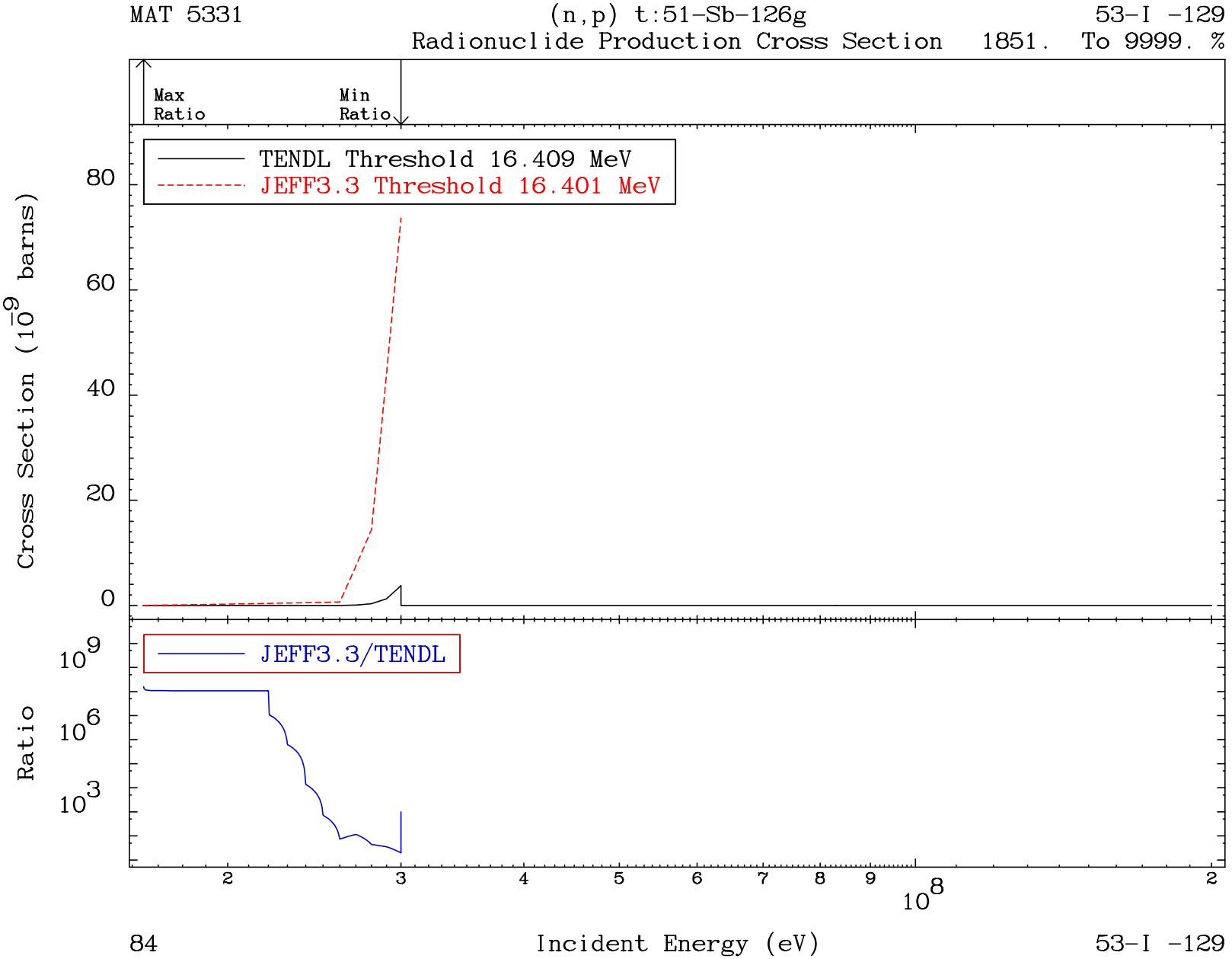

MAT 5331
(n,α):51-Sb-126m2
53-I -129
Radionuclide Production Cross Section
-55.60 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (milli-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^8
10^4
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
79
Incident Energy (eV)
53-I -129

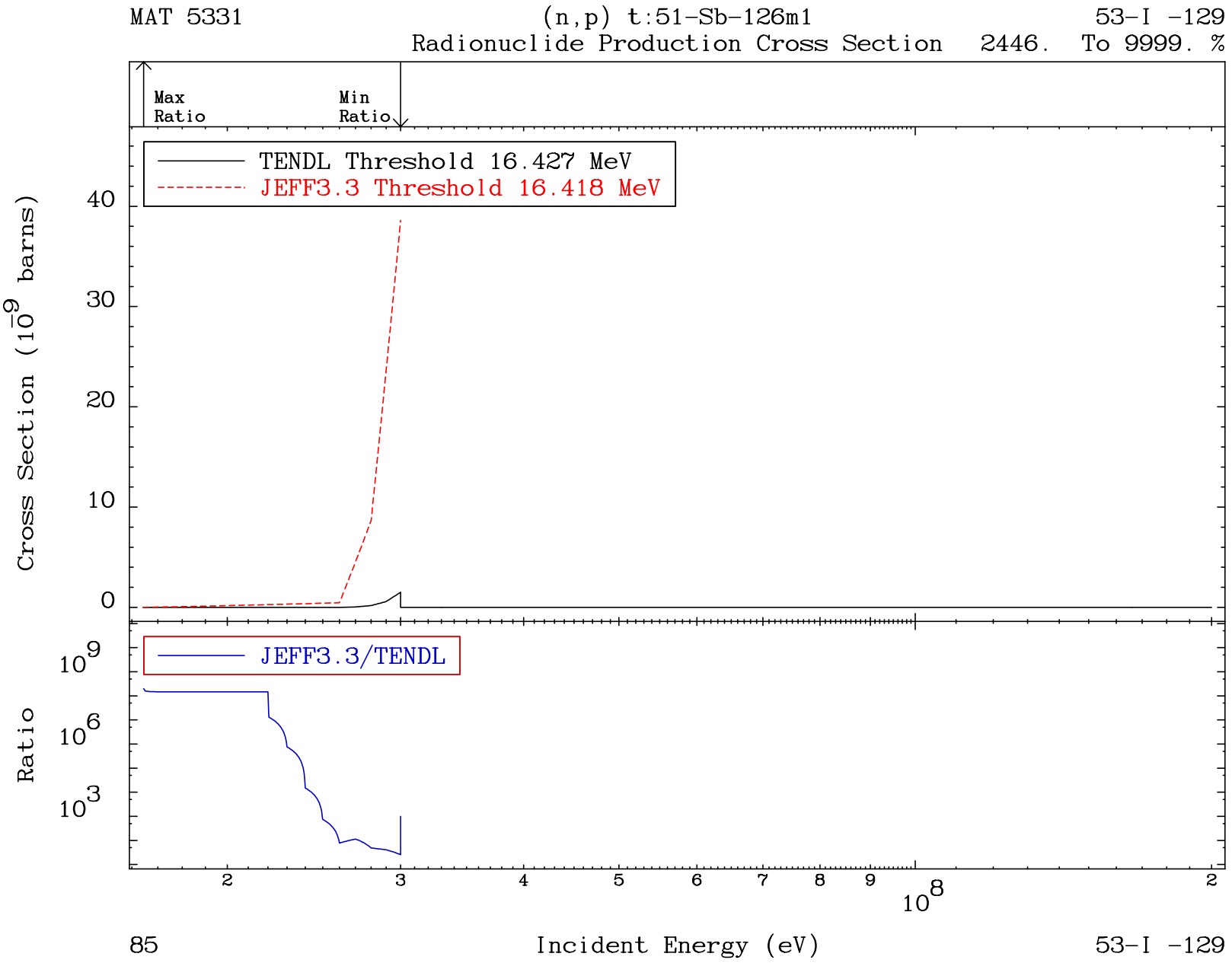

MAT 5331
(n,2p):51-Sb-128g
53-I -129
Radionuclide Production Cross Section -90.77 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 10.465 MeV
JEFF3.3 Threshold 10.482 MeV
Cross Section (micro-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^8
10^4
10^0
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
53-I -129

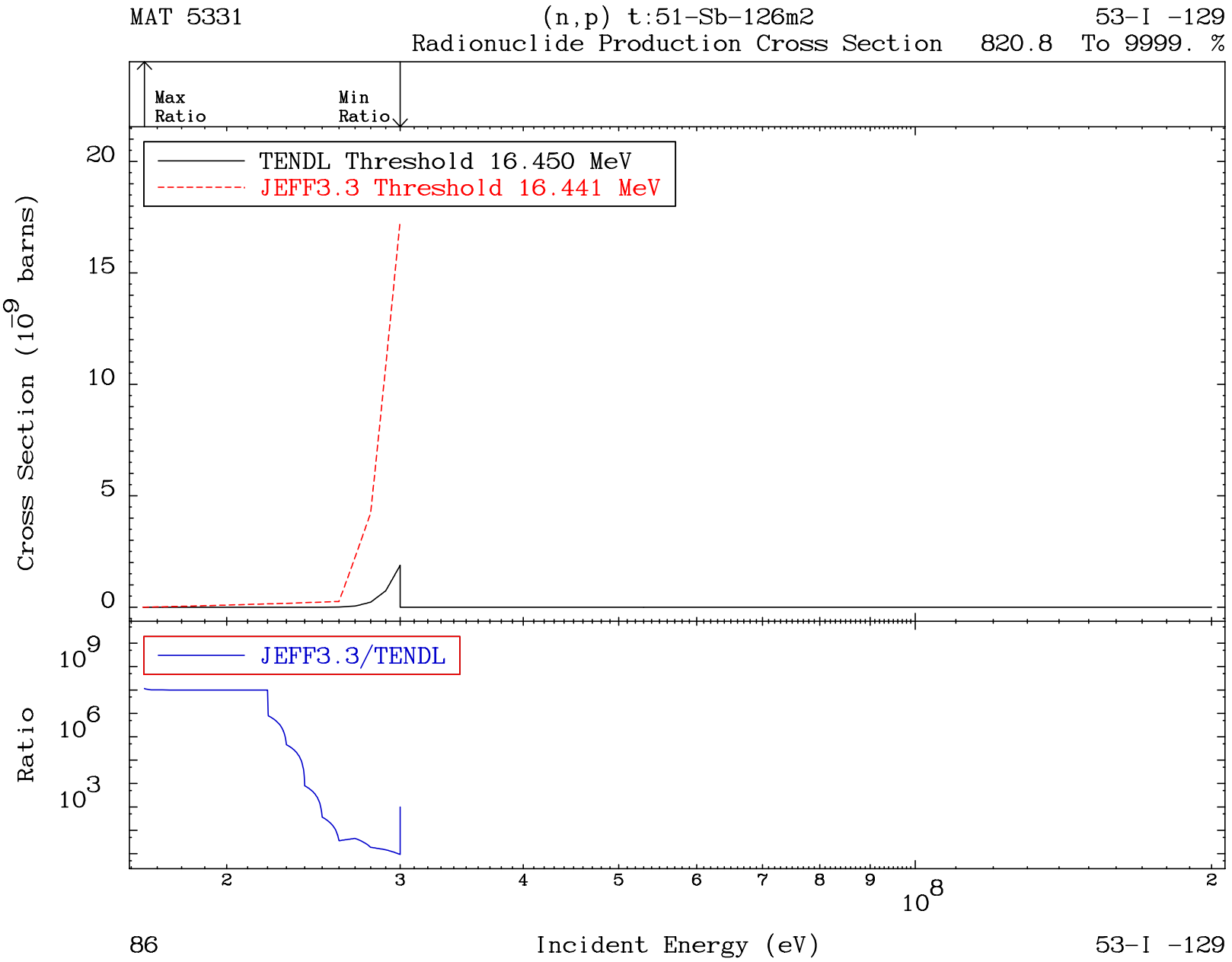

MAT 5331
(n,2p):51-Sb-128m1
53-I -129
Radionuclide Production Cross Section -91.54 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 14.000 MeV
JEFF3.3 Threshold 10.582 MeV
Cross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) α:50-Sn-125g
53-I -129
Radionuclide Production Cross Section -86.42 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.2894 MeV
JEFF3.3 Threshold 4.2816 MeV
Cross Section (10^{-9} barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
10^{8}
10^{4}
10^{0}
5 6 7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
82
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) α:50-Sn-125m1
53-I -129
Radionuclide Production Cross Section -86.41 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 12.000 MeV
JEFF3.3 Threshold 4.3093 MeV
Cross Section (10^{-9} barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/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
83
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) t:51-Sb-126g
53-I -129
Radionuclide Production Cross Section 1851. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.409 MeV
JEFF3.3 Threshold 16.401 MeV
Cross Section (10^{-9} barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^{9}
10^{6}
10^{3}
2
3
4
5
6
7
8
9
10^{8}
2
84
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) t:51-Sb-126m1
53-I -129
Radionuclide Production Cross Section 2446. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.427 MeV
JEFF3.3 Threshold 16.418 MeV
Cross Section (10^{-9} barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^{9}
10^{6}
10^{3}
2
3
4
5
6
7
8
9
10^{8}
2
85
Incident Energy (eV)
53-I -129


MAT 5331
(n,p) t:51-Sb-126m2
53-I -129
Radionuclide Production Cross Section 820.8 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.450 MeV
JEFF3.3 Threshold 16.441 MeV
Cross Section (10^{-9} barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^{9}
10^{6}
10^{3}
2
3
4
5
6
7
8
9
10^{8}
2
86
Incident Energy (eV)
53-I -129