Program Complot
(Version 2018-1)
by
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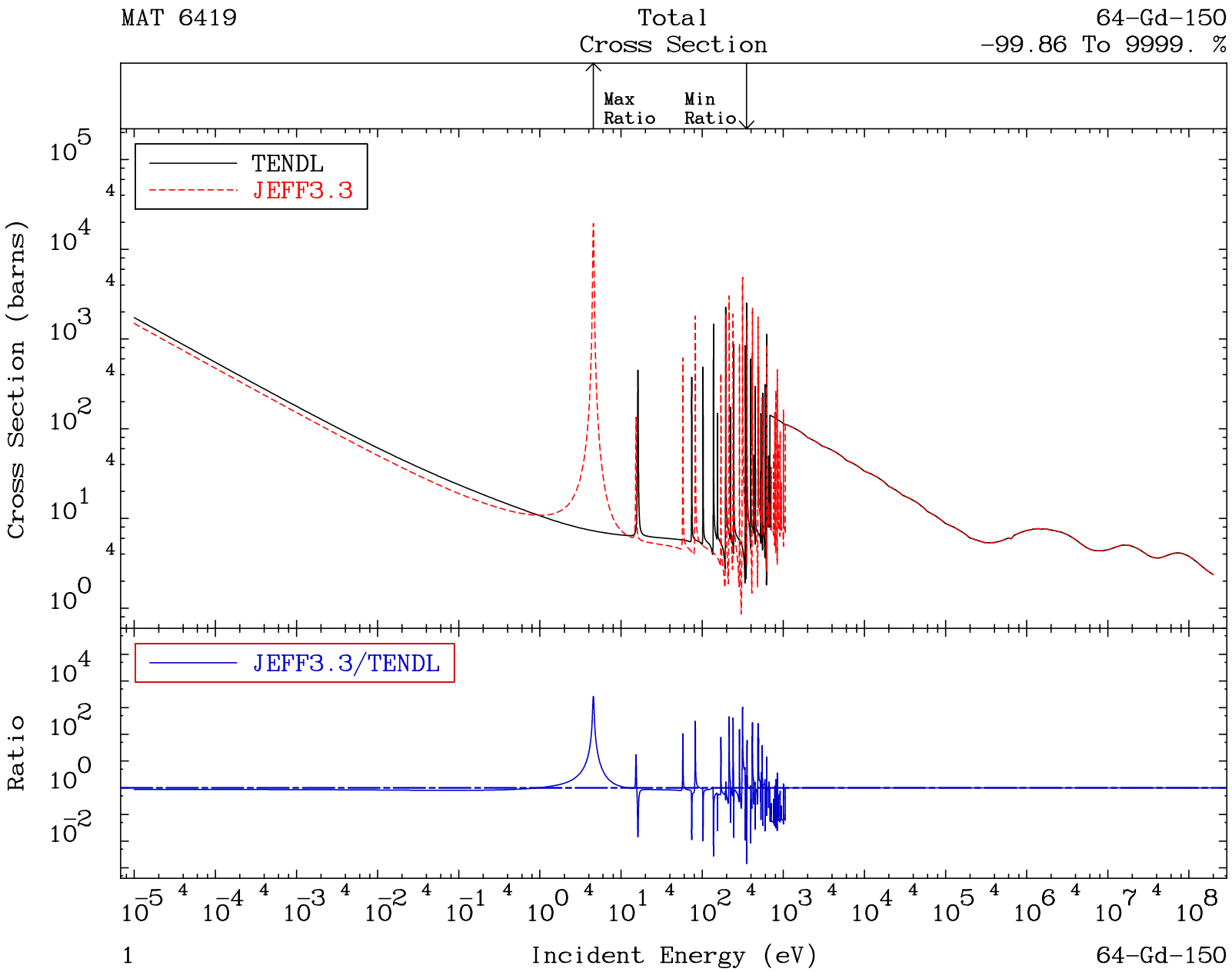
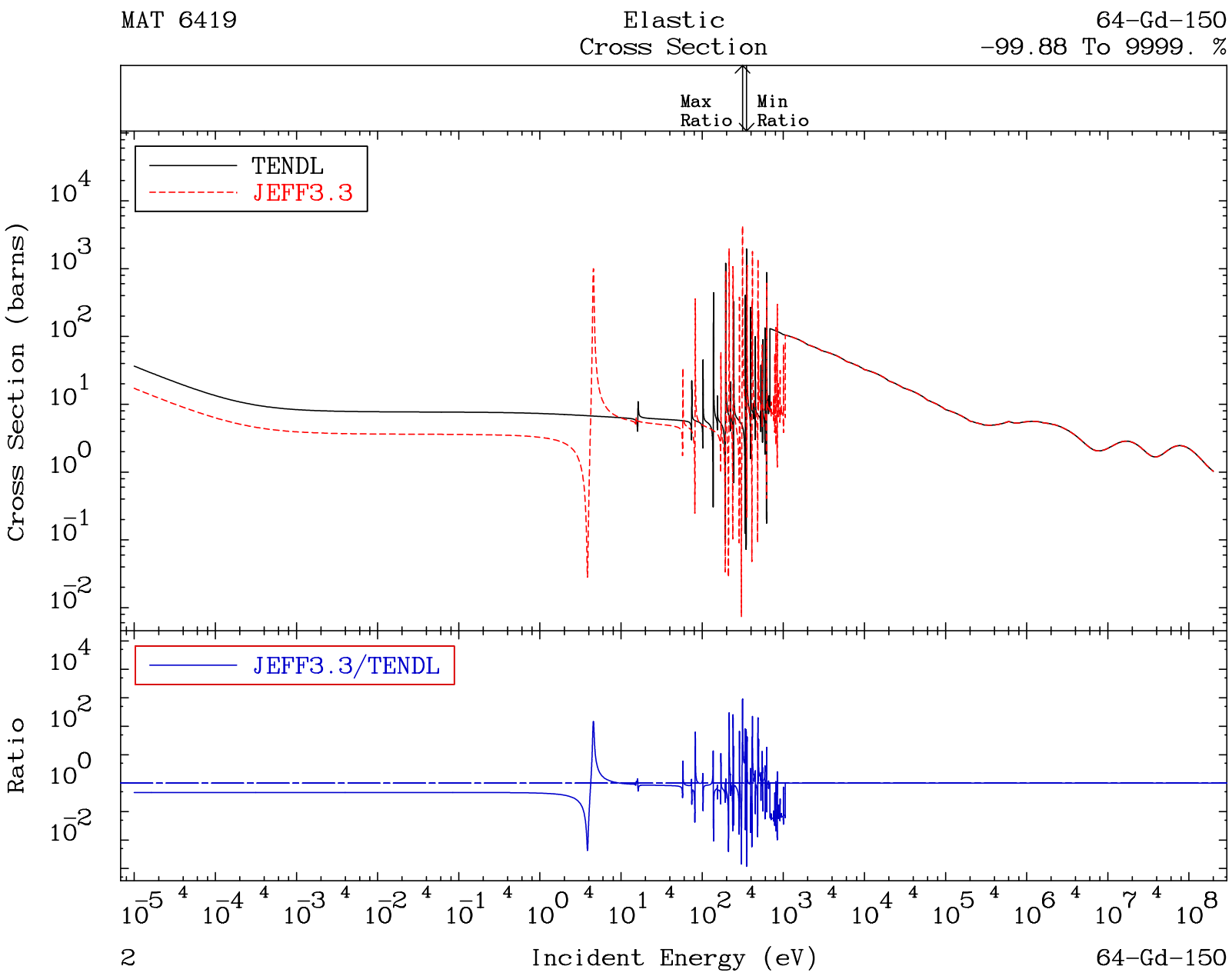
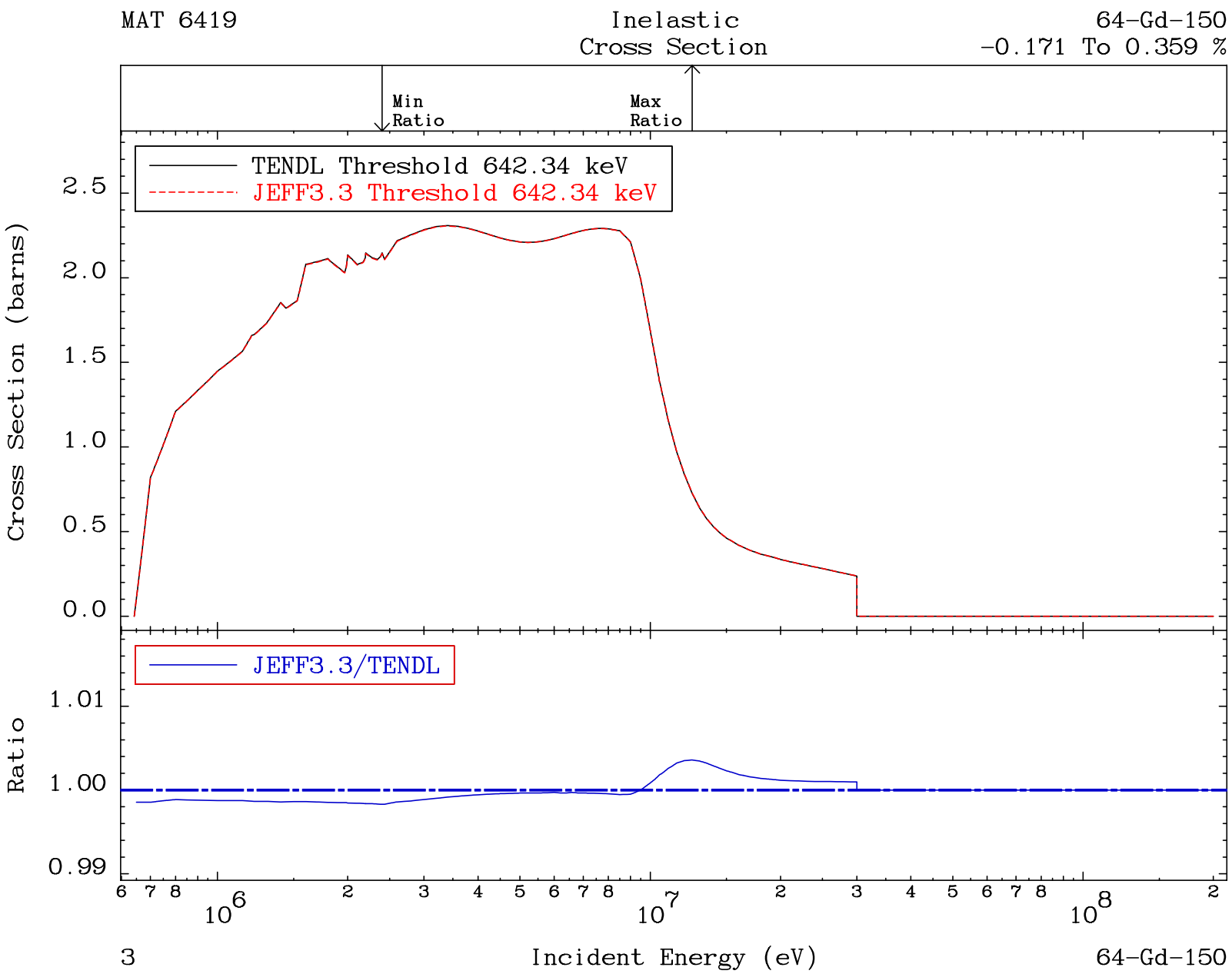
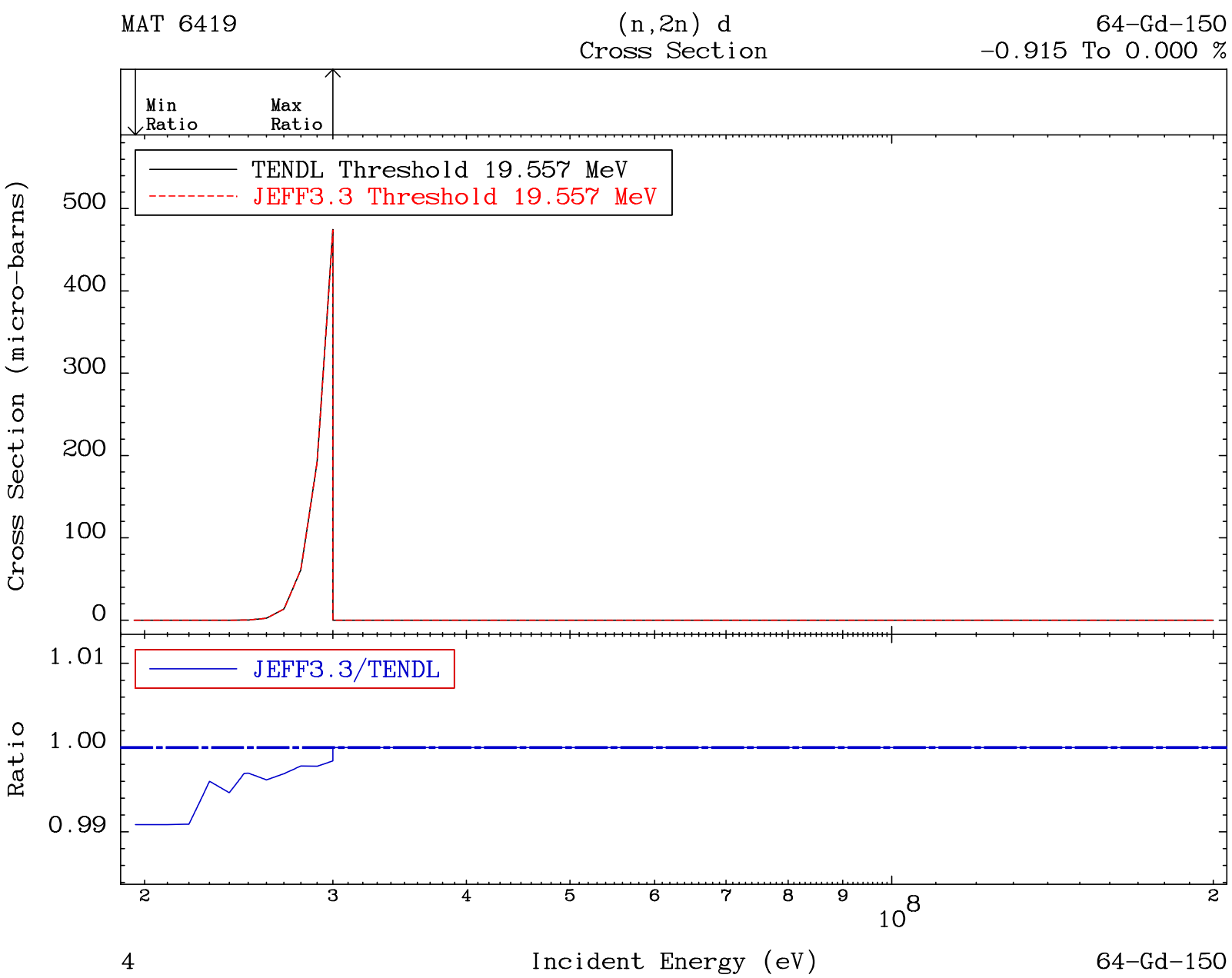
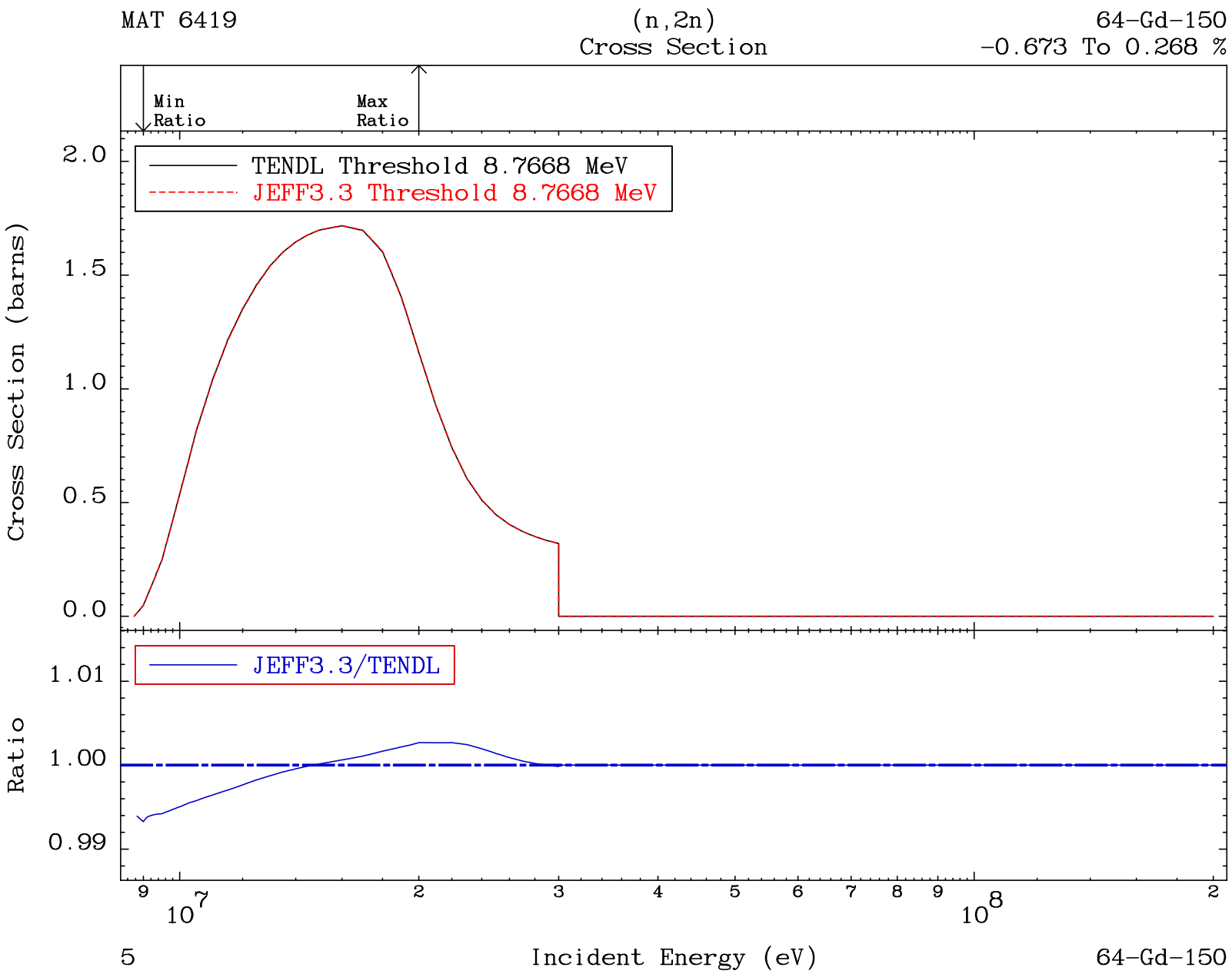
Press Mouse Button to Start

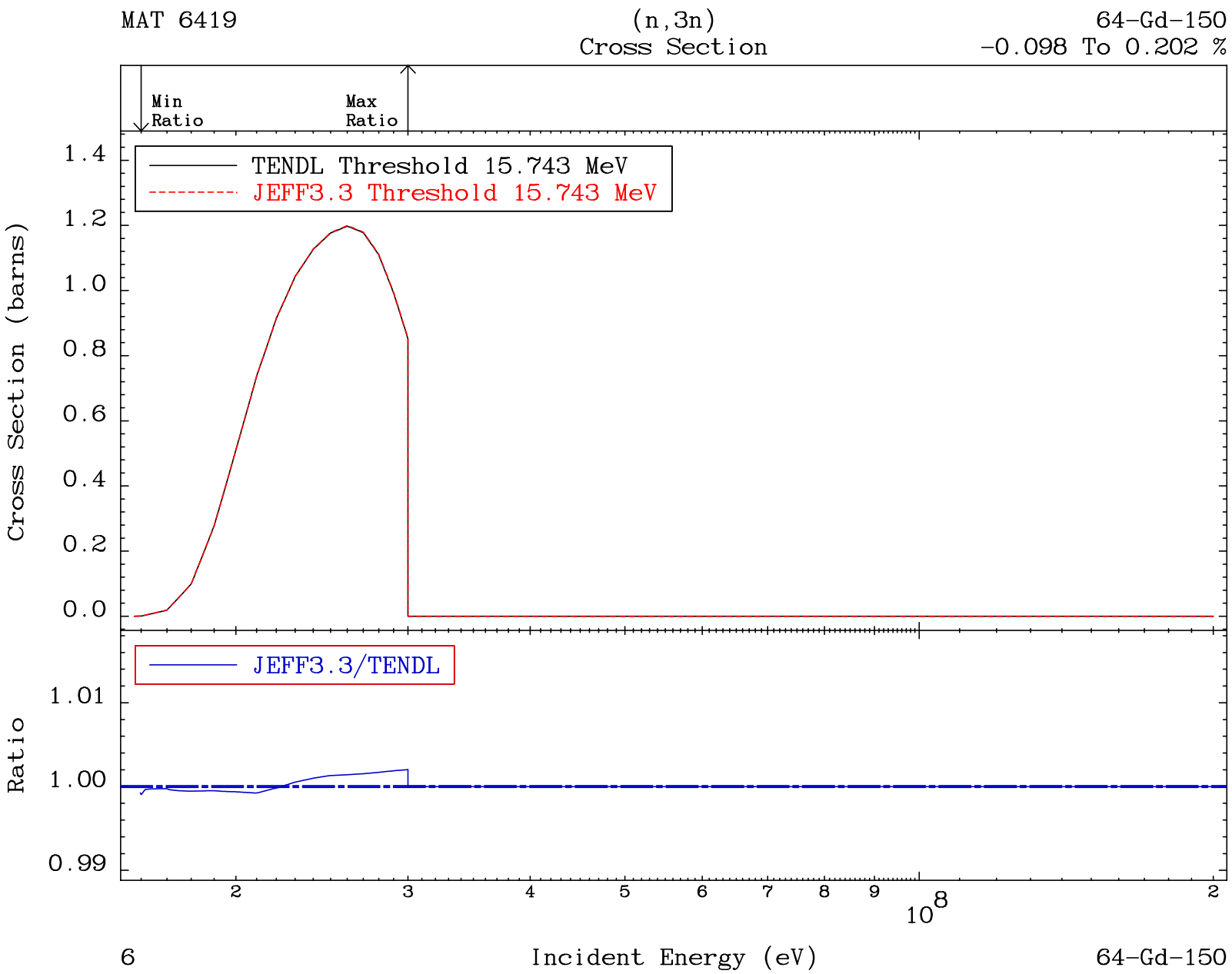

MAT 6419
Total
Cross Section
64-Gd-150
-99.86 To 9999. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
1
64-Gd-150

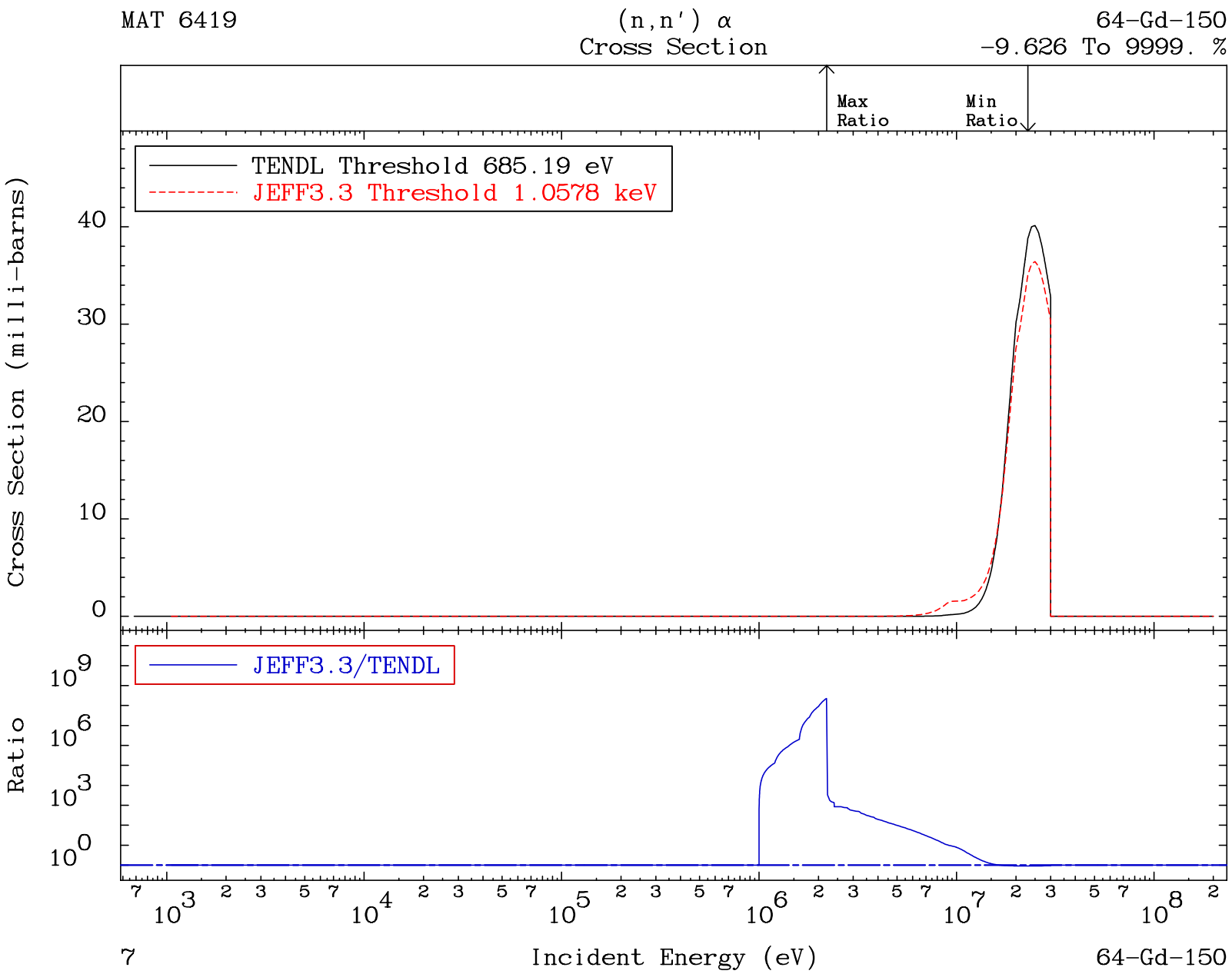

MAT 6419
Elastic
Cross Section
64-Gd-150
-99.88 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
2
64-Gd-150

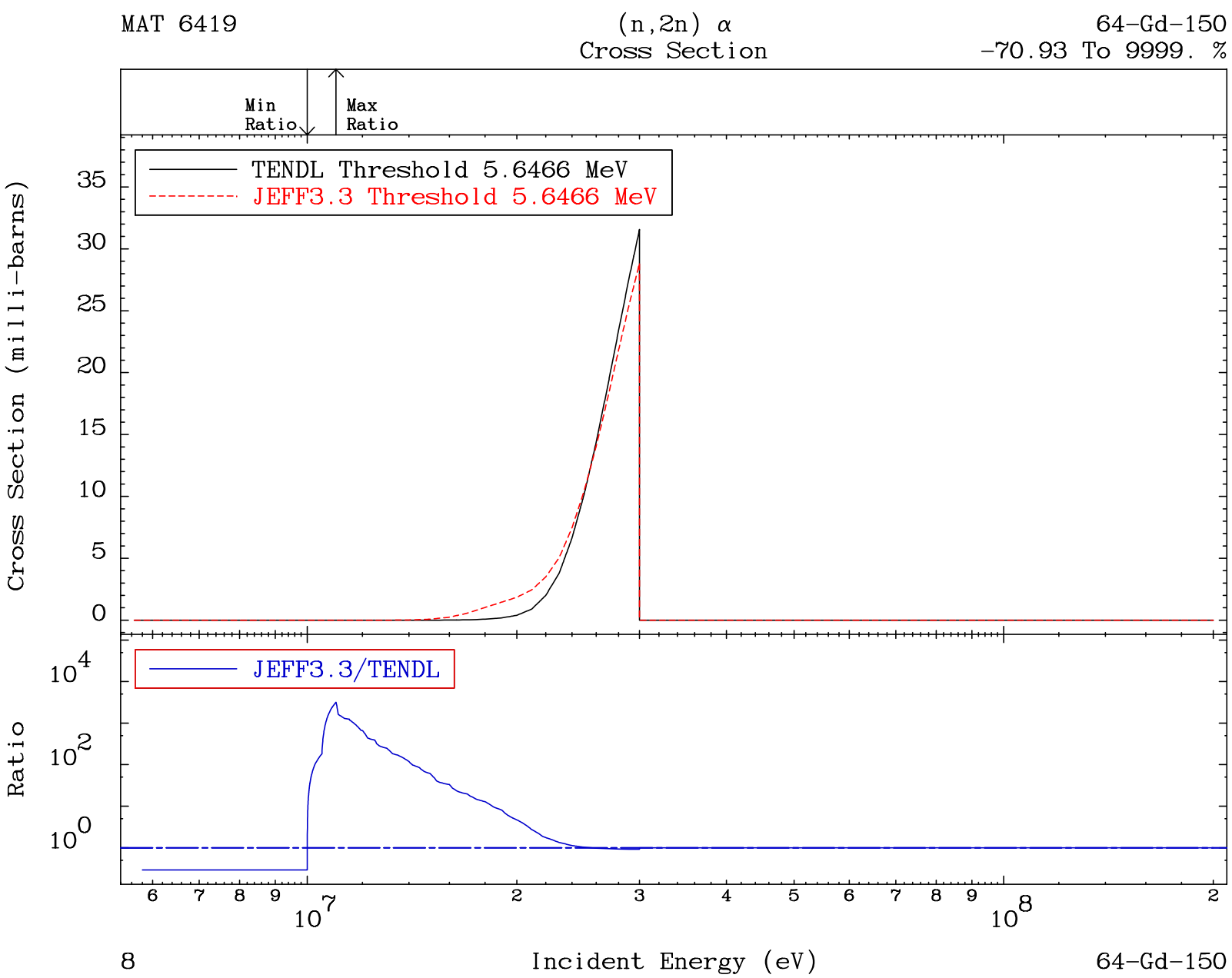

MAT 6419
Inelastic
Cross Section
64-Gd-150
-0.171 To 0.359 %
Min
Ratio
Max
Ratio
TENDL Threshold 642.34 keV
JEFF3.3 Threshold 642.34 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
3
Incident Energy (eV)
64-Gd-150

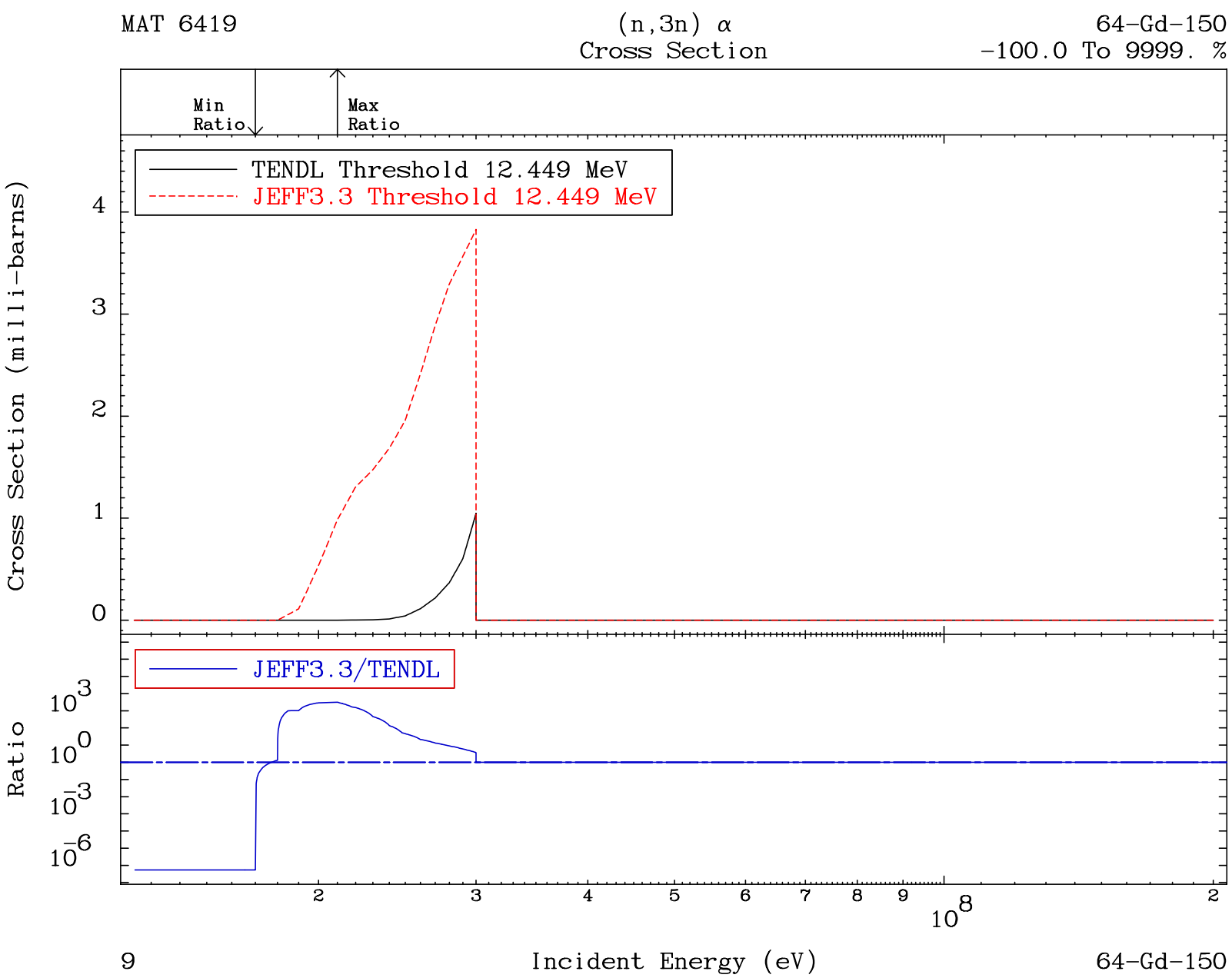

MAT 6419
(n,2n) d
Cross Section
64-Gd-150
-0.915 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 19.557 MeV
JEFF3.3 Threshold 19.557 MeV
Cross Section (micro-barns)
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
64-Gd-150

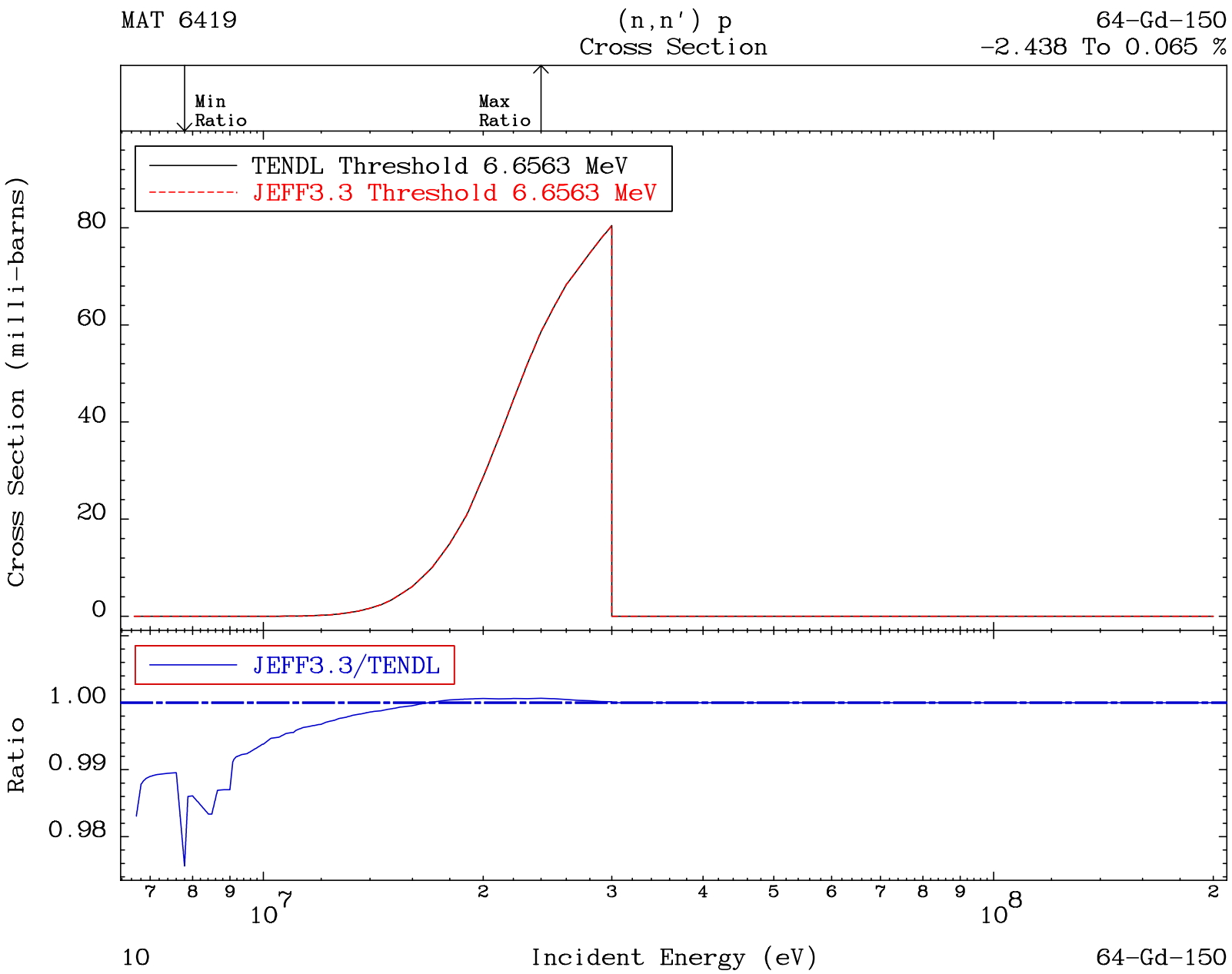

MAT 6419
(n,2n)
Cross Section
64-Gd-150
-0.673 To 0.268 %
Min Ratio
Max Ratio
TENDL Threshold 8.7668 MeV
JEFF3.3 Threshold 8.7668 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
64-Gd-150

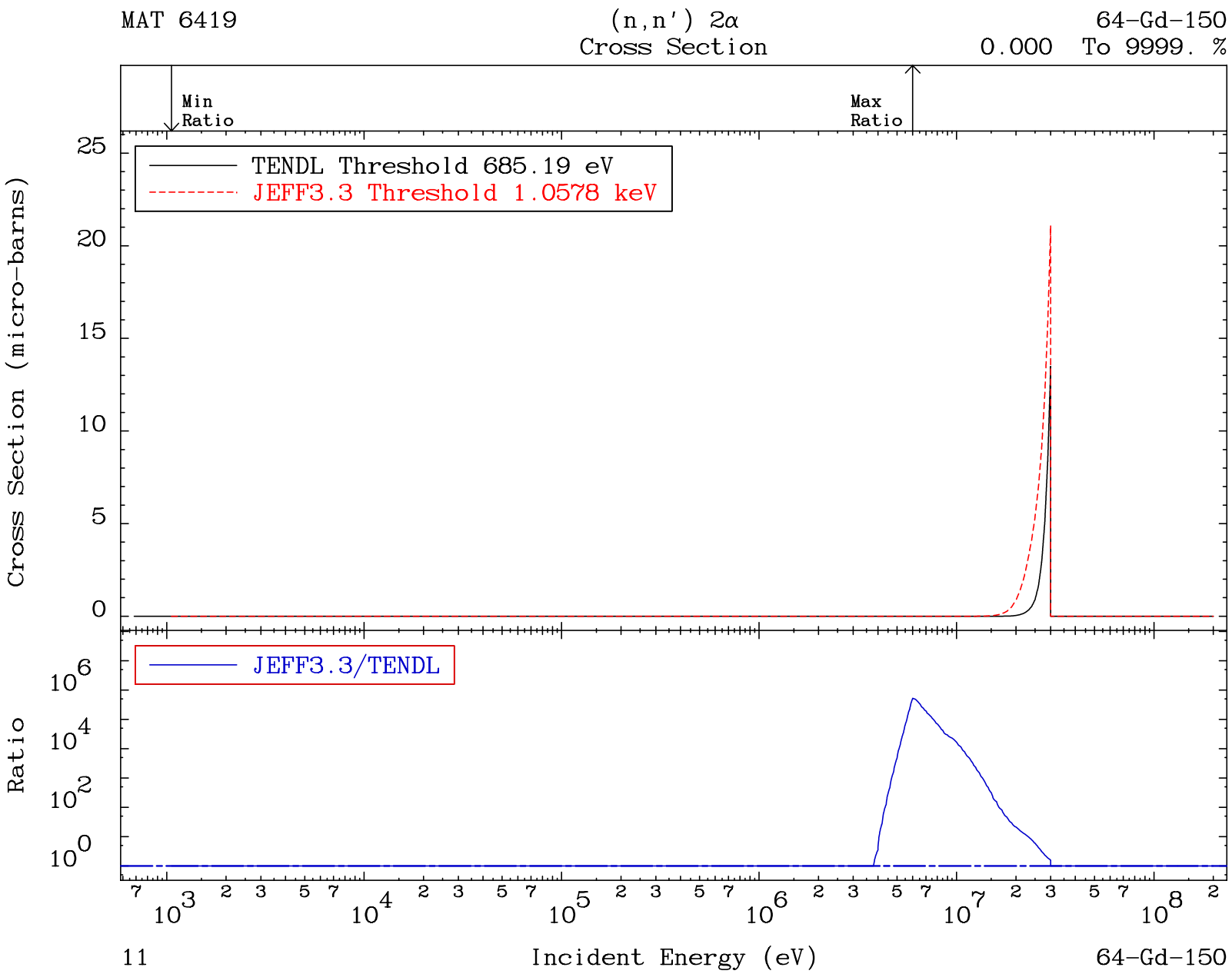

MAT 6419
(n,3n)
Cross Section
64-Gd-150
-0.098 To 0.202 %
Min Ratio
Max Ratio
TENDL Threshold 15.743 MeV
JEFF3.3 Threshold 15.743 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
64-Gd-150

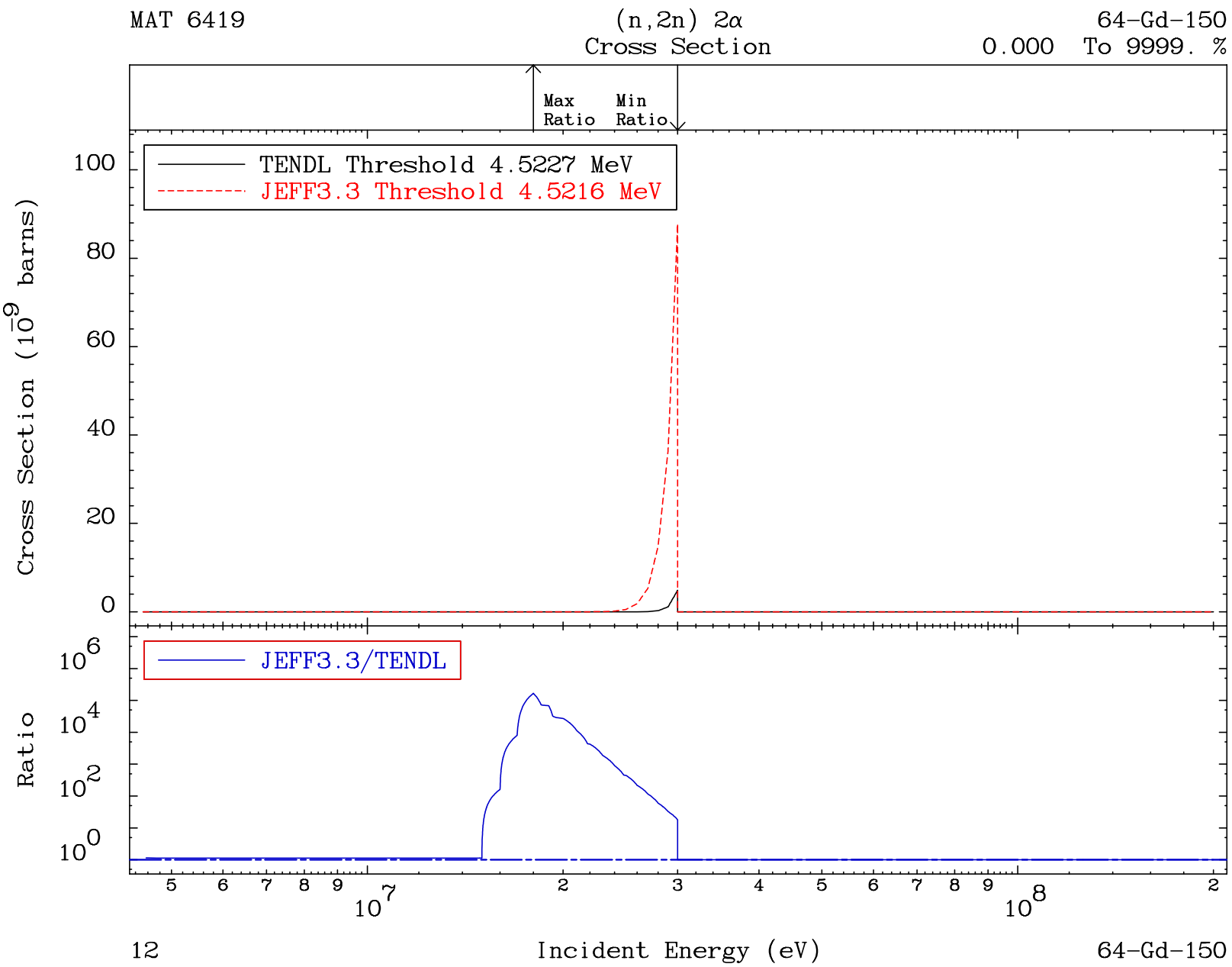

MAT 6419
(n,n') α
Cross Section
64-Gd-150
-9.626 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 685.19 eV
JEFF3.3 Threshold 1.0578 keV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^9
10^6
10^3
10^0
7
10^3
2
3
5
7
10^4
2
3
5
7
10^5
2
3
5
7
10^6
2
3
5
7
10^7
2
3
5
7
10^8
2
Incident Energy (eV)
7
64-Gd-150

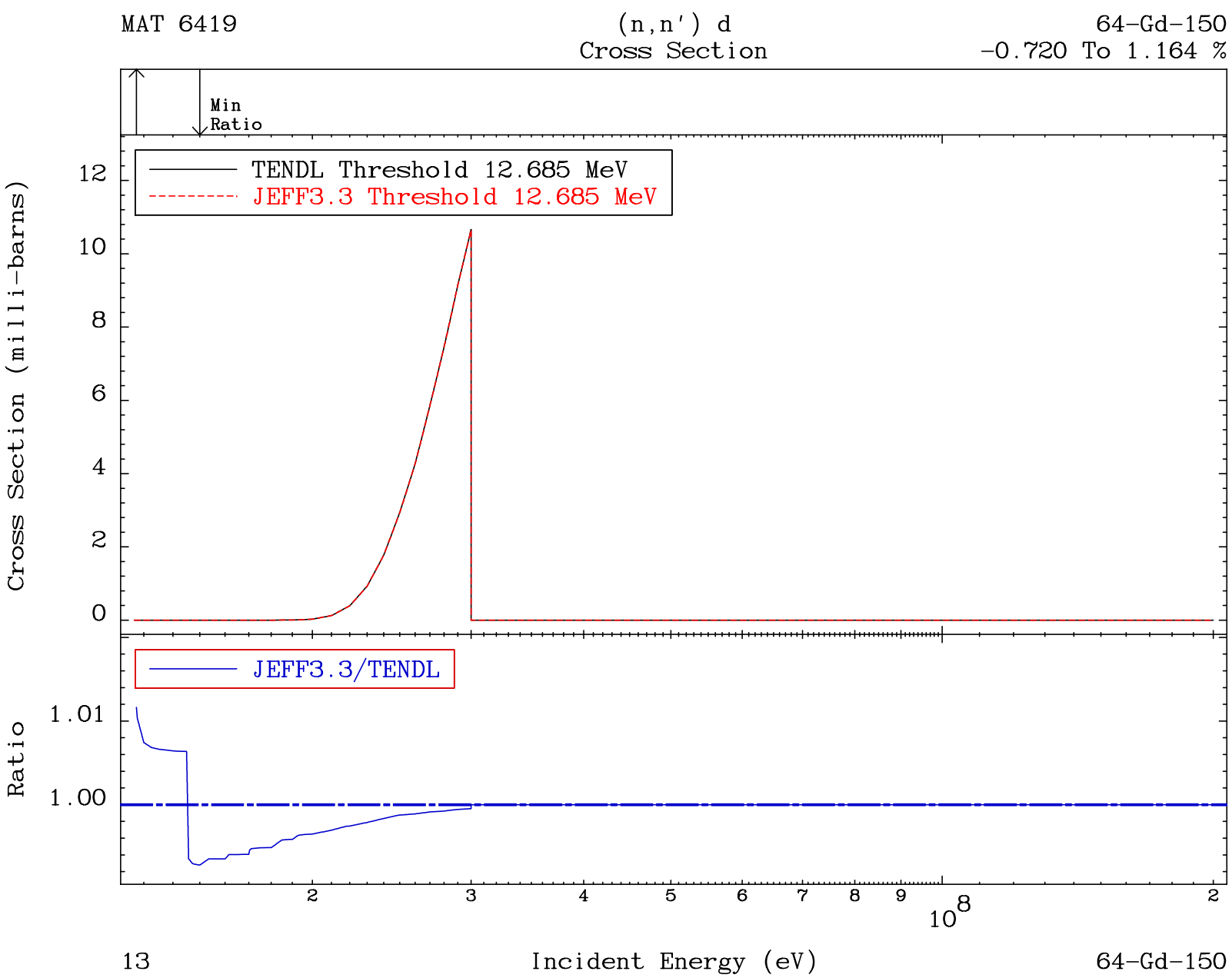

MAT 6419
(n,2n) α
Cross Section
64-Gd-150
-70.93 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.6466 MeV
JEFF3.3 Threshold 5.6466 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
8
64-Gd-150

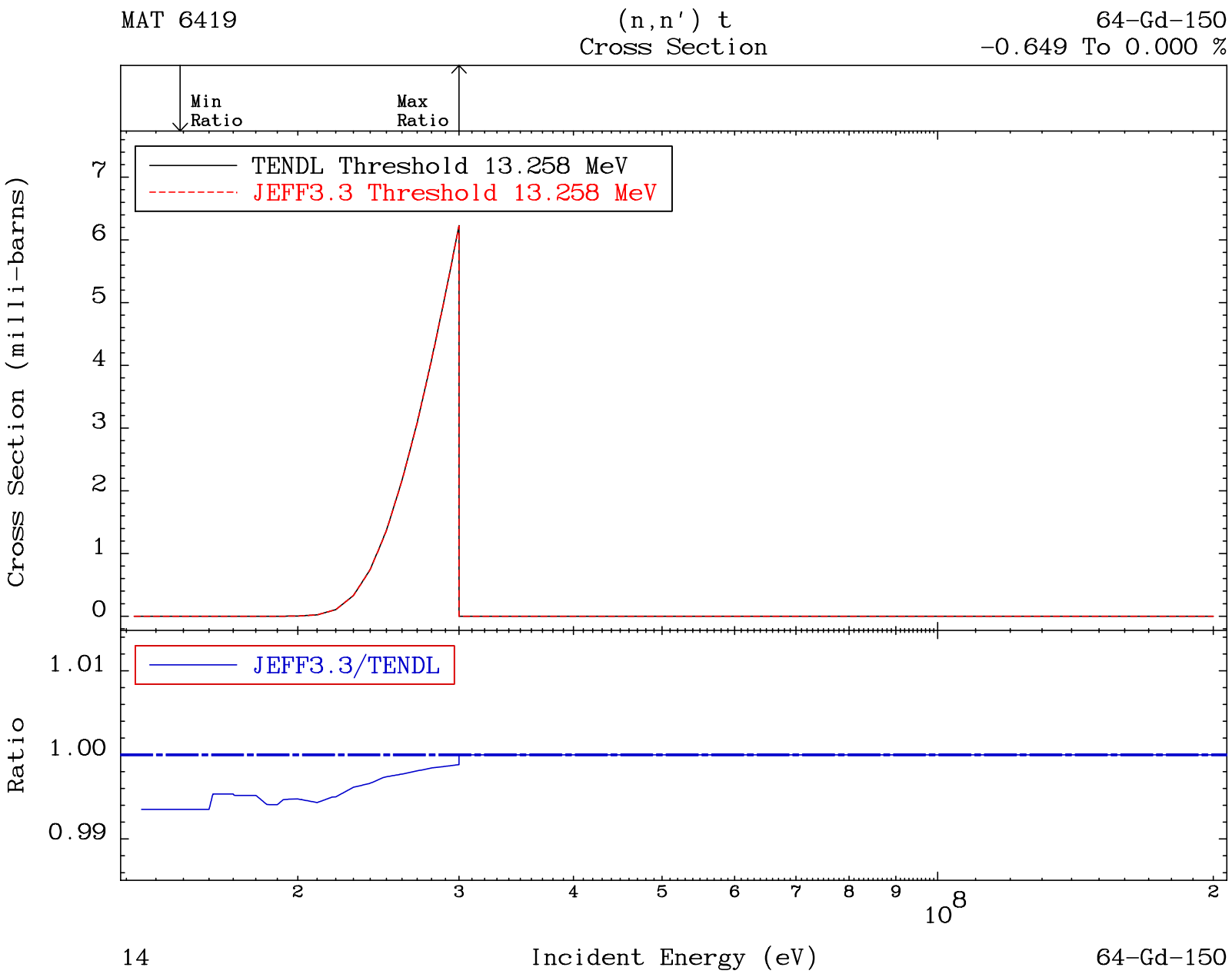

MAT 6419
(n,3n) α
Cross Section
64-Gd-150
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 12.449 MeV
JEFF3.3 Threshold 12.449 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
9
64-Gd-150

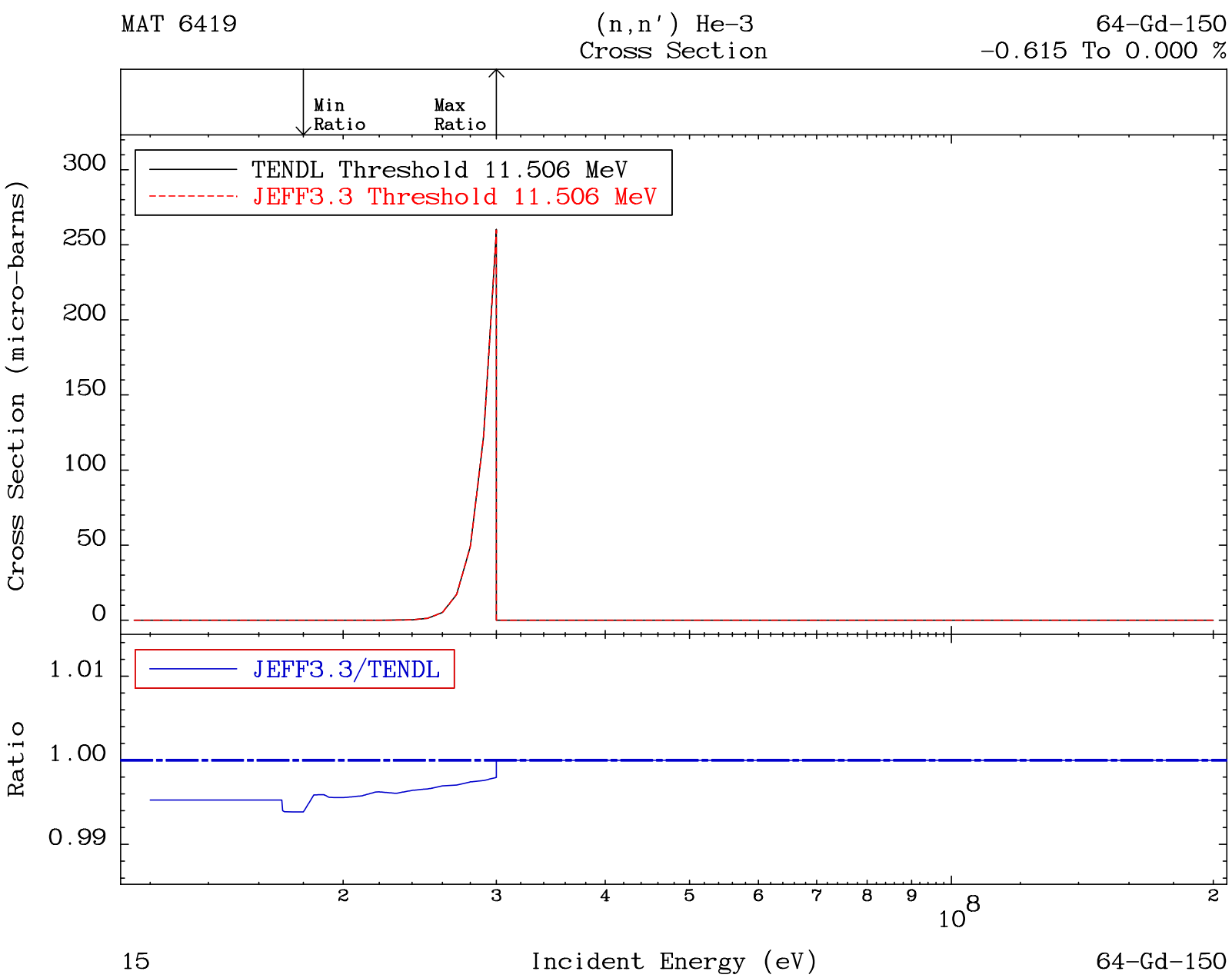

MAT 6419
(n,n') p
Cross Section
64-Gd-150
-2.438 To 0.065 %
Min Ratio
Max Ratio
TENDL Threshold 6.6563 MeV
JEFF3.3 Threshold 6.6563 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
10
Incident Energy (eV)
64-Gd-150

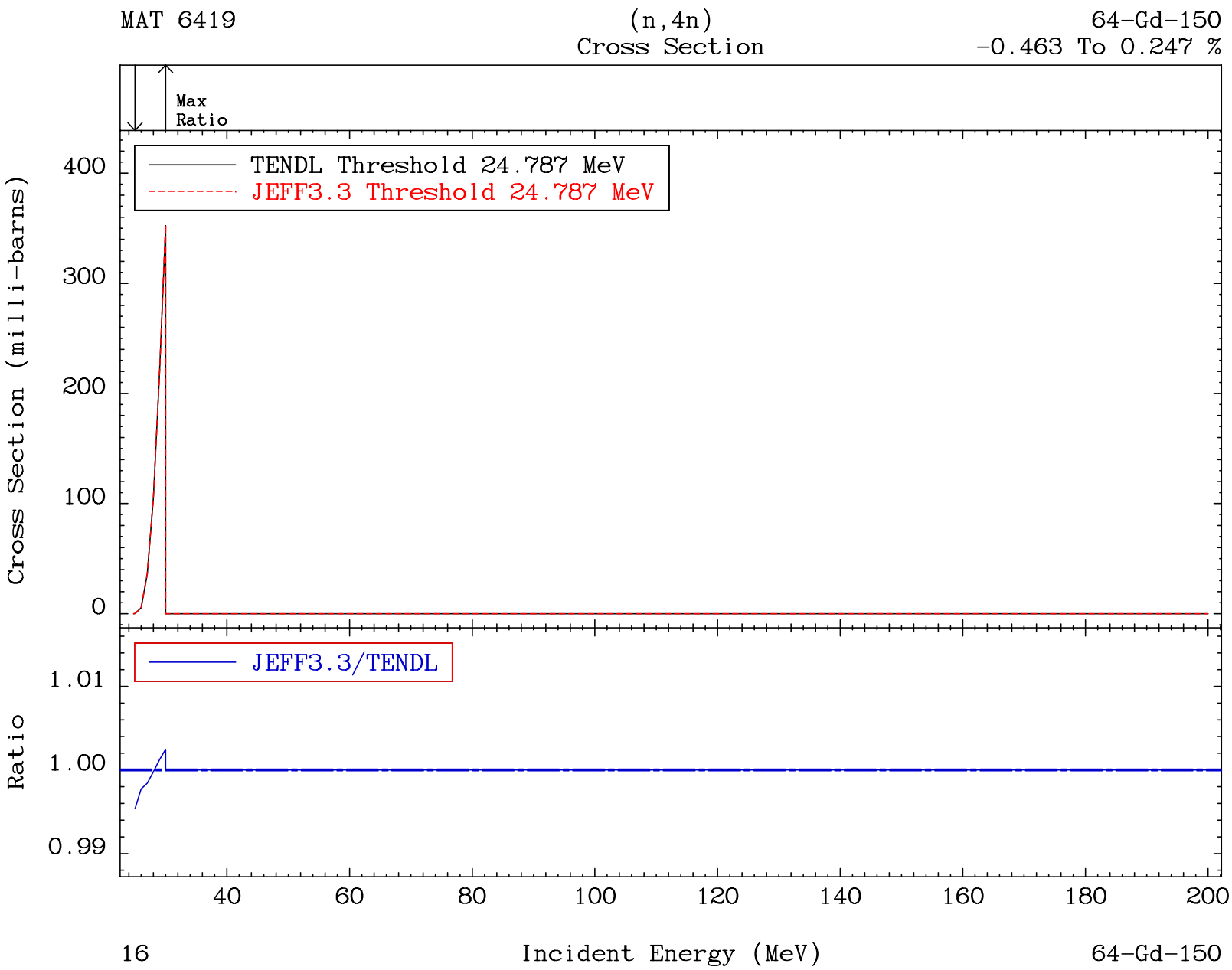

MAT 6419
(n,n') 2α
Cross Section
64-Gd-150
0.000 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 685.19 eV
JEFF3.3 Threshold 1.0578 keV
Cross Section (micro-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
11
64-Gd-150

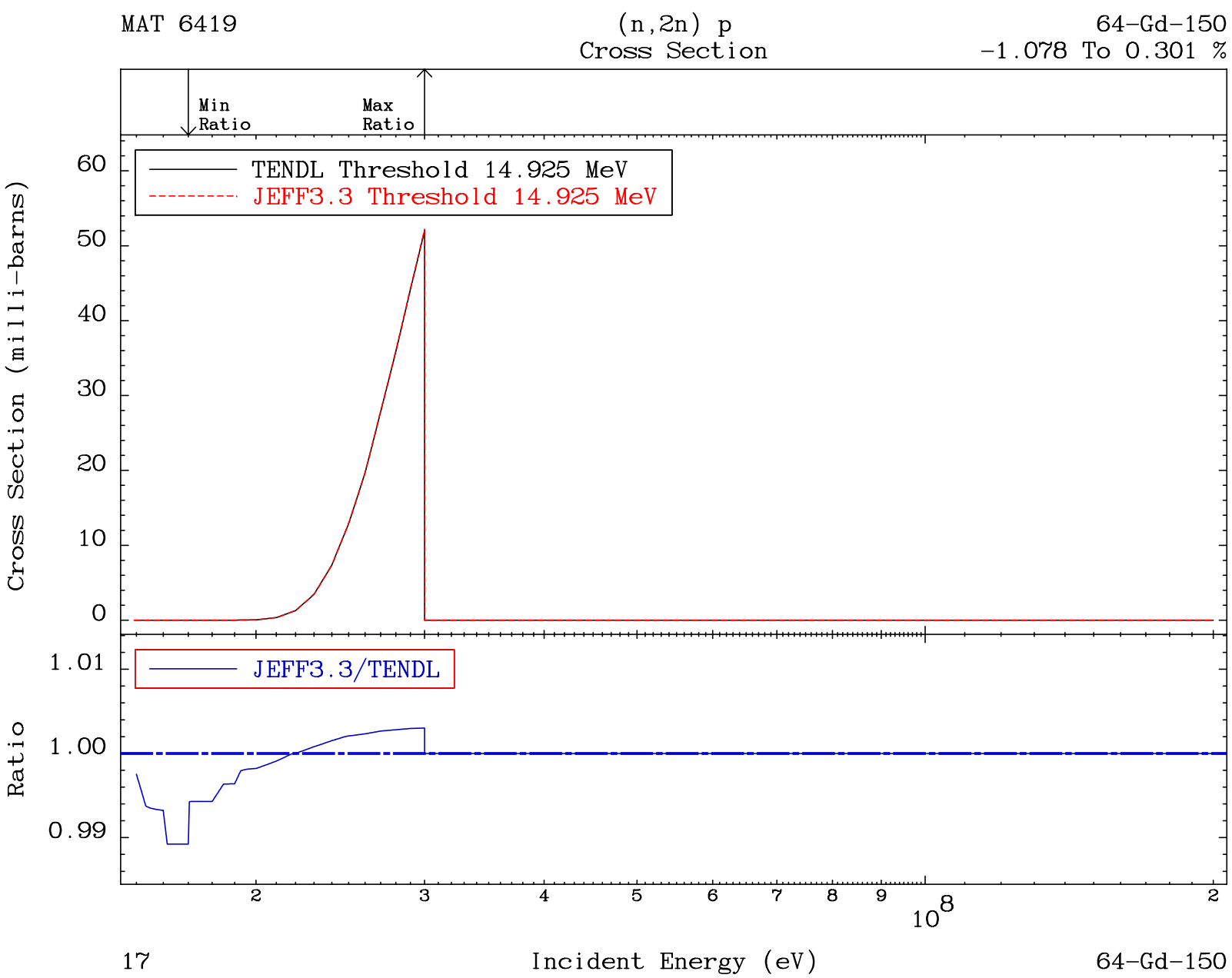

MAT 6419
(n,2n) 2α
Cross Section
64-Gd-150
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.5227 MeV
JEFF3.3 Threshold 4.5216 MeV
Cross Section (10^{-9} barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^{6}
10^{4}
10^{2}
10^{0}
5 6 7 8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
12
Incident Energy (eV)
64-Gd-150

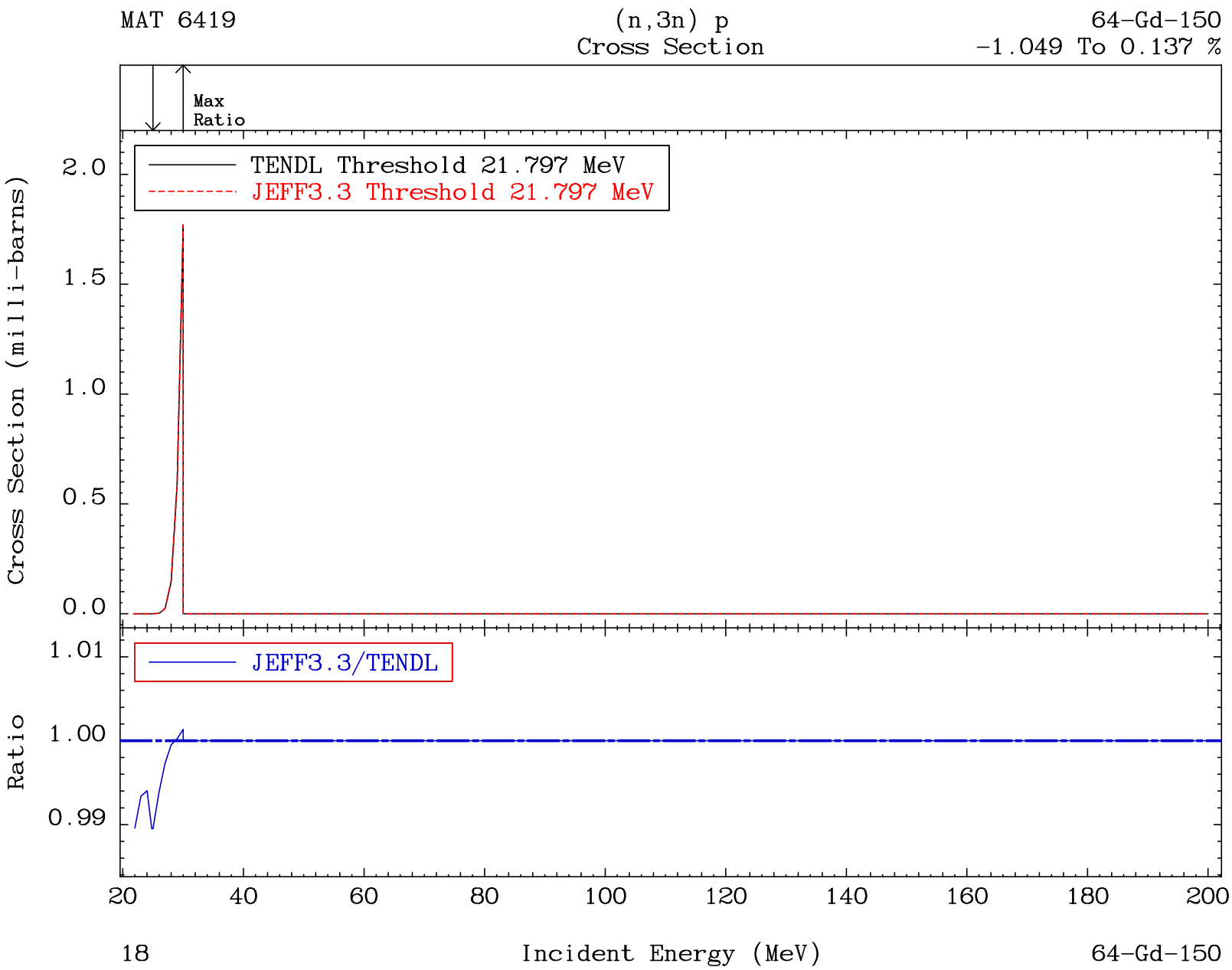

MAT 6419
(n,n') d
Cross Section
64-Gd-150
-0.720 To 1.164 %
Min
Ratio
TENDL Threshold 12.685 MeV
JEFF3.3 Threshold 12.685 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.01
1.00
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
64-Gd-150

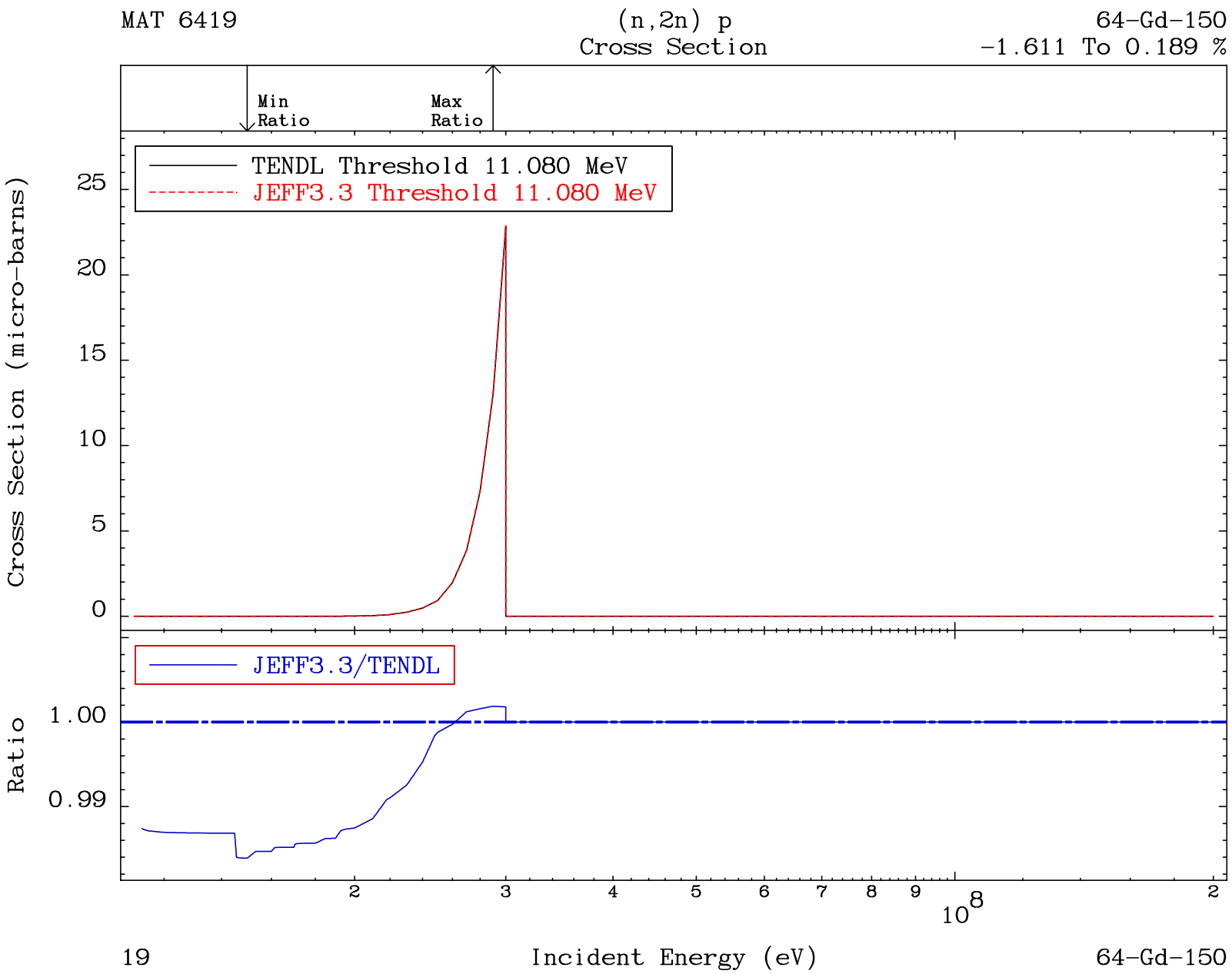

MAT 6419
(n,n') t
Cross Section
64-Gd-150
-0.649 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 13.258 MeV
JEFF3.3 Threshold 13.258 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
7
JEFF3.3/TENDL
Ratio
0.99
1.00
1.01
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
64-Gd-150

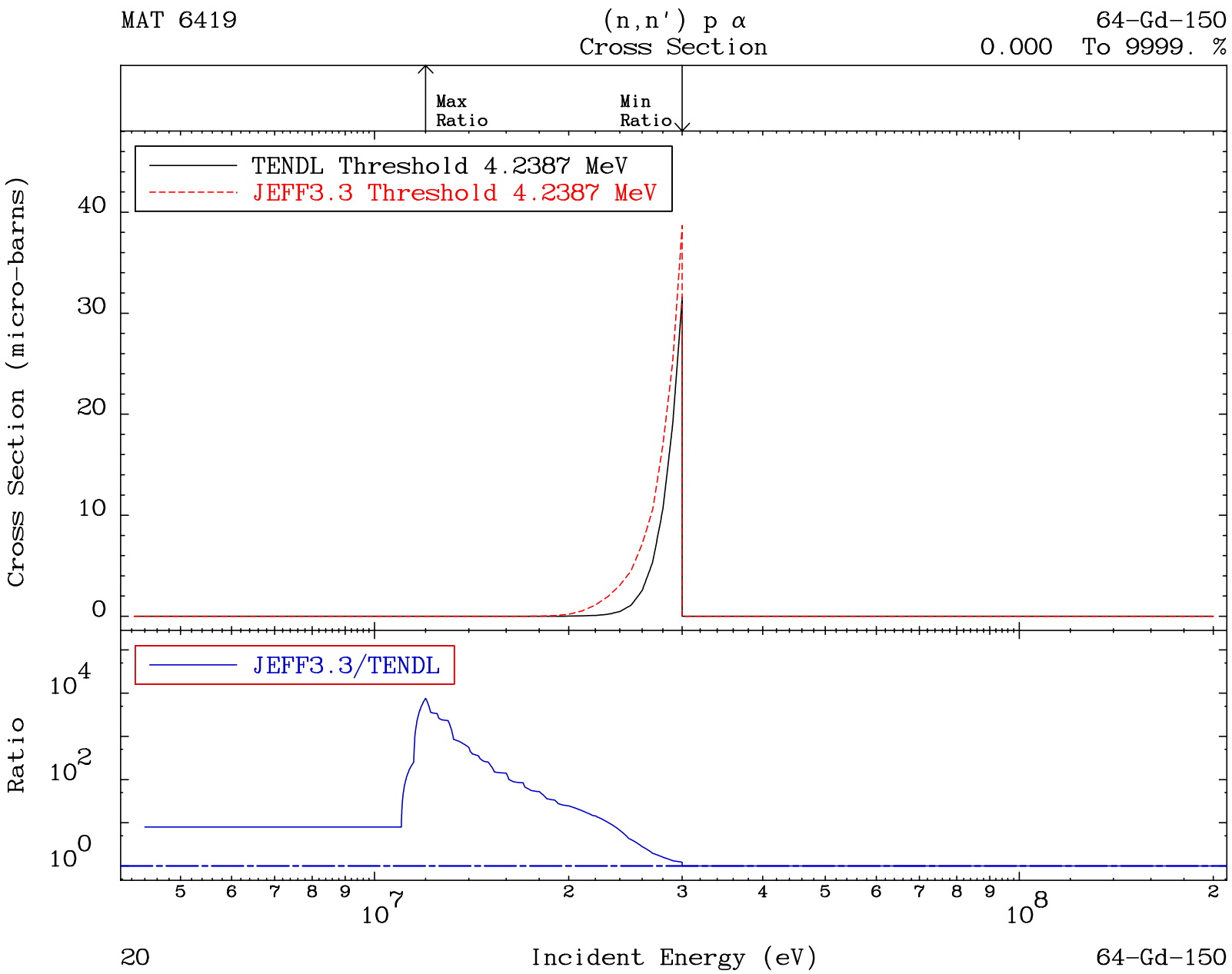

MAT 6419
(n,n') He-3
Cross Section
64-Gd-150
-0.615 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 11.506 MeV
JEFF3.3 Threshold 11.506 MeV
Cross Section (micro-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
15
Incident Energy (eV)
64-Gd-150

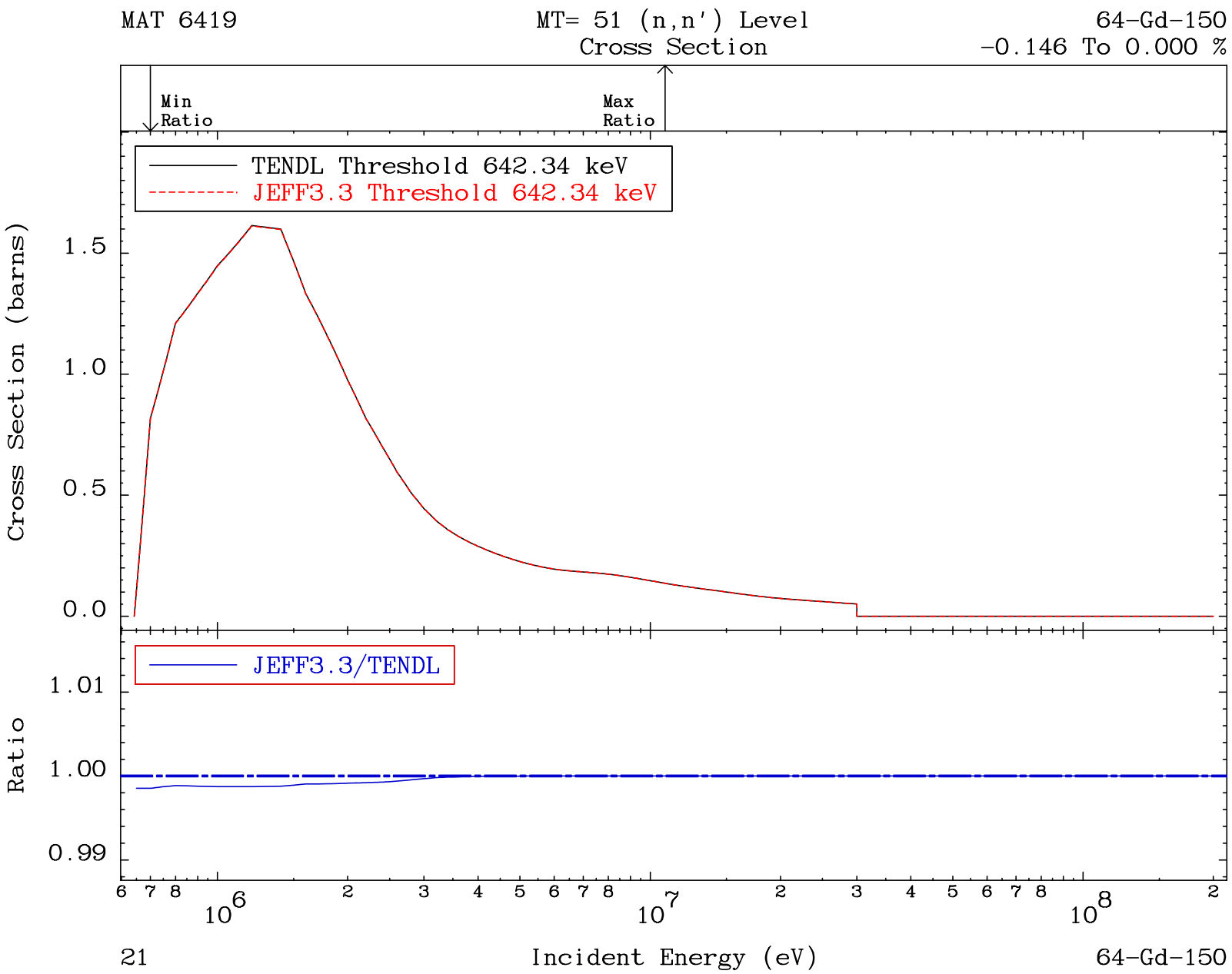

MAT 6419
(n,4n)
Cross Section
64-Gd-150
-0.463 To 0.247 %
Max
Ratio
TENDL Threshold 24.787 MeV
JEFF3.3 Threshold 24.787 MeV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
64-Gd-150

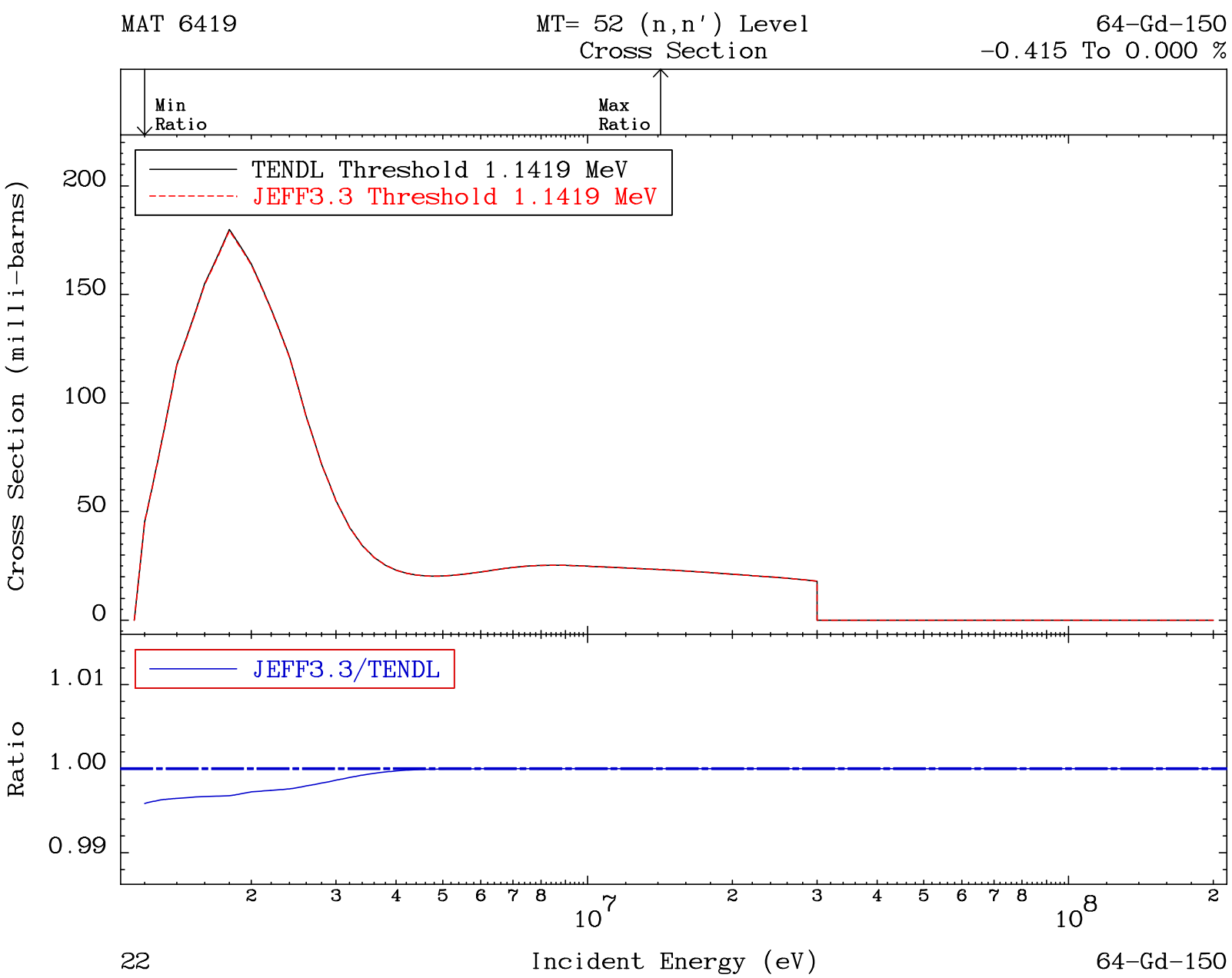

MAT 6419
(n,2n) p
Cross Section
64-Gd-150
-1.078 To 0.301 %
Min Ratio
Max Ratio
TENDL Threshold 14.925 MeV
JEFF3.3 Threshold 14.925 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
17
Incident Energy (eV)
64-Gd-150

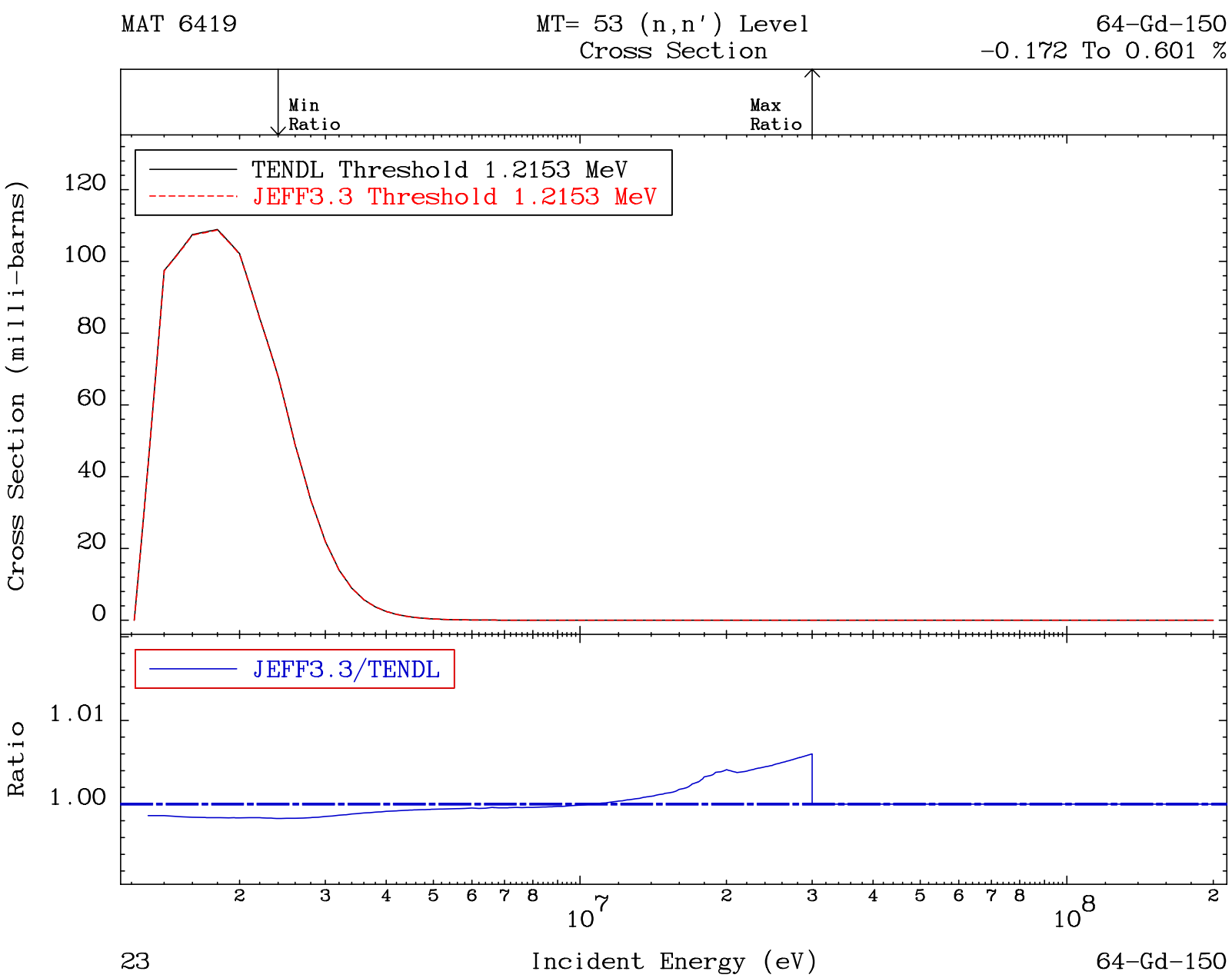

MAT 6419
(n,3n) p
Cross Section
64-Gd-150
-1.049 To 0.137 %
Max
Ratio
TENDL Threshold 21.797 MeV
JEFF3.3 Threshold 21.797 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
20
40
60
80
100
120
140
160
180
200
18
Incident Energy (MeV)
64-Gd-150

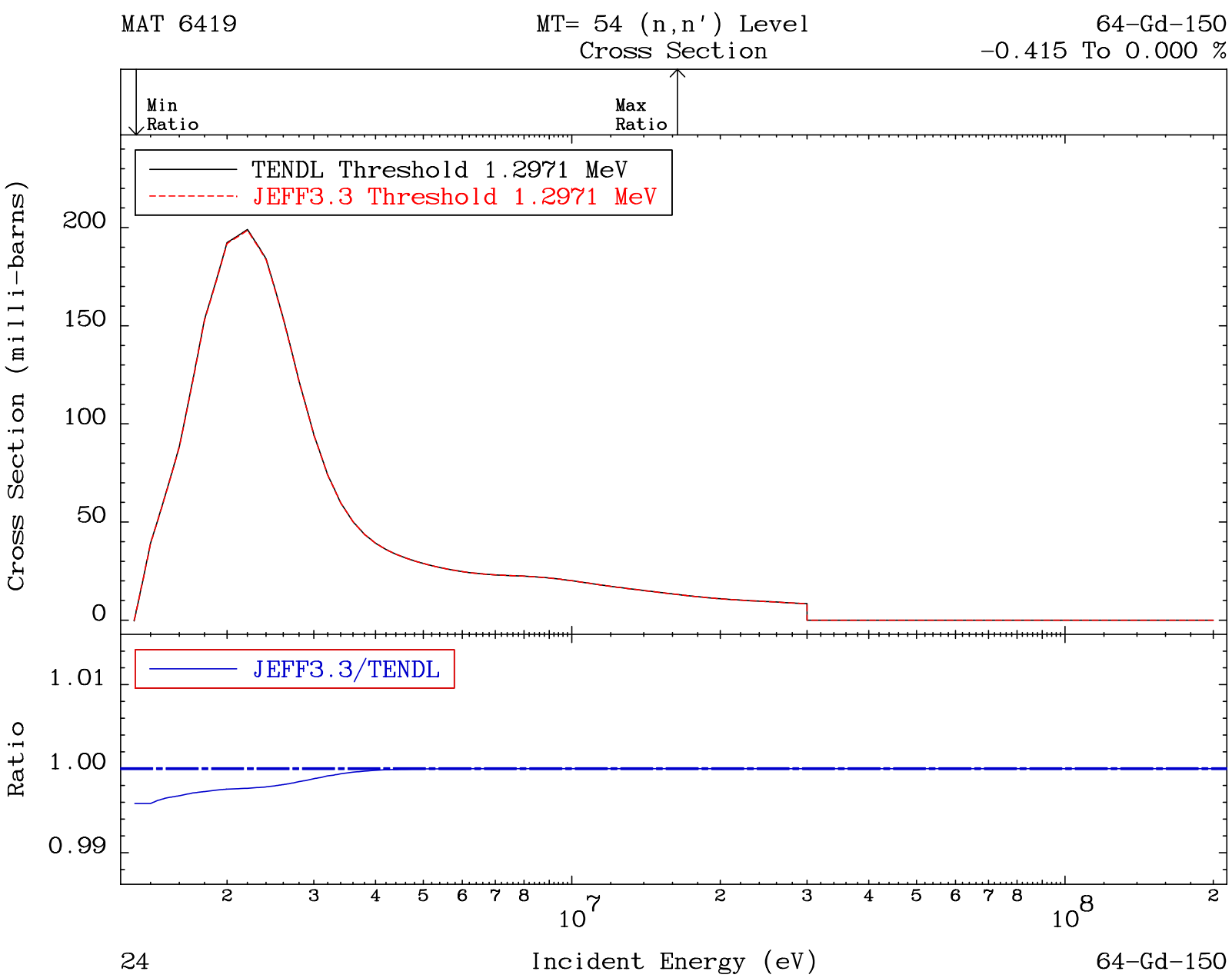

MAT 6419
(n,2n) p
Cross Section
64-Gd-150
-1.611 To 0.189 %
Min Ratio
Max Ratio
TENDL Threshold 11.080 MeV
JEFF3.3 Threshold 11.080 MeV
Cross Section (micro-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
19
Incident Energy (eV)
64-Gd-150

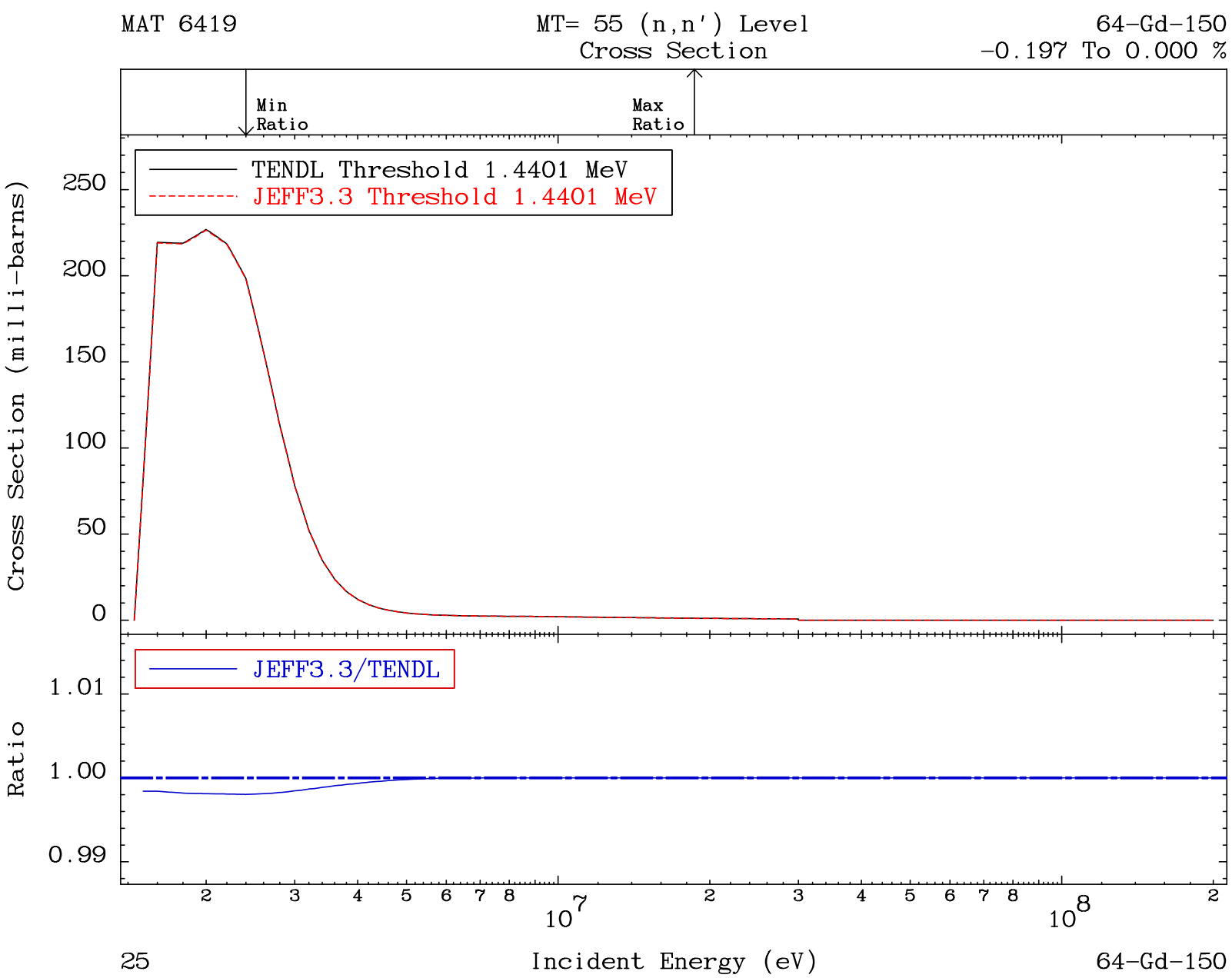

MAT 6419
(n,n') p α
Cross Section
64-Gd-150
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.2387 MeV
JEFF3.3 Threshold 4.2387 MeV
Cross Section (micro-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
20
Incident Energy (eV)
64-Gd-150

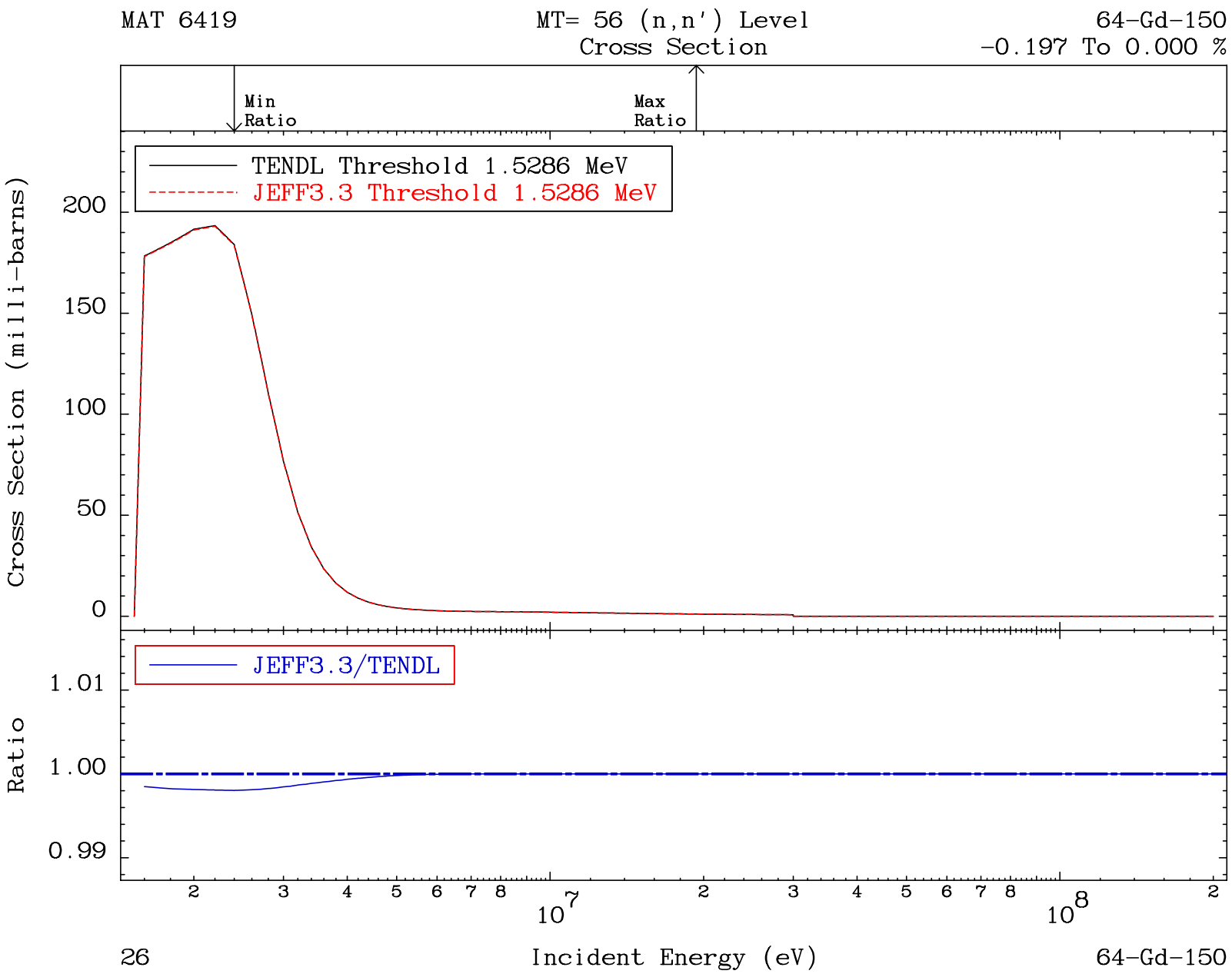

MAT 6419
MT= 51 (n,n') Level
Cross Section
64-Gd-150
-0.146 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 642.34 keV
JEFF3.3 Threshold 642.34 keV
Cross Section (barns)
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
64-Gd-150

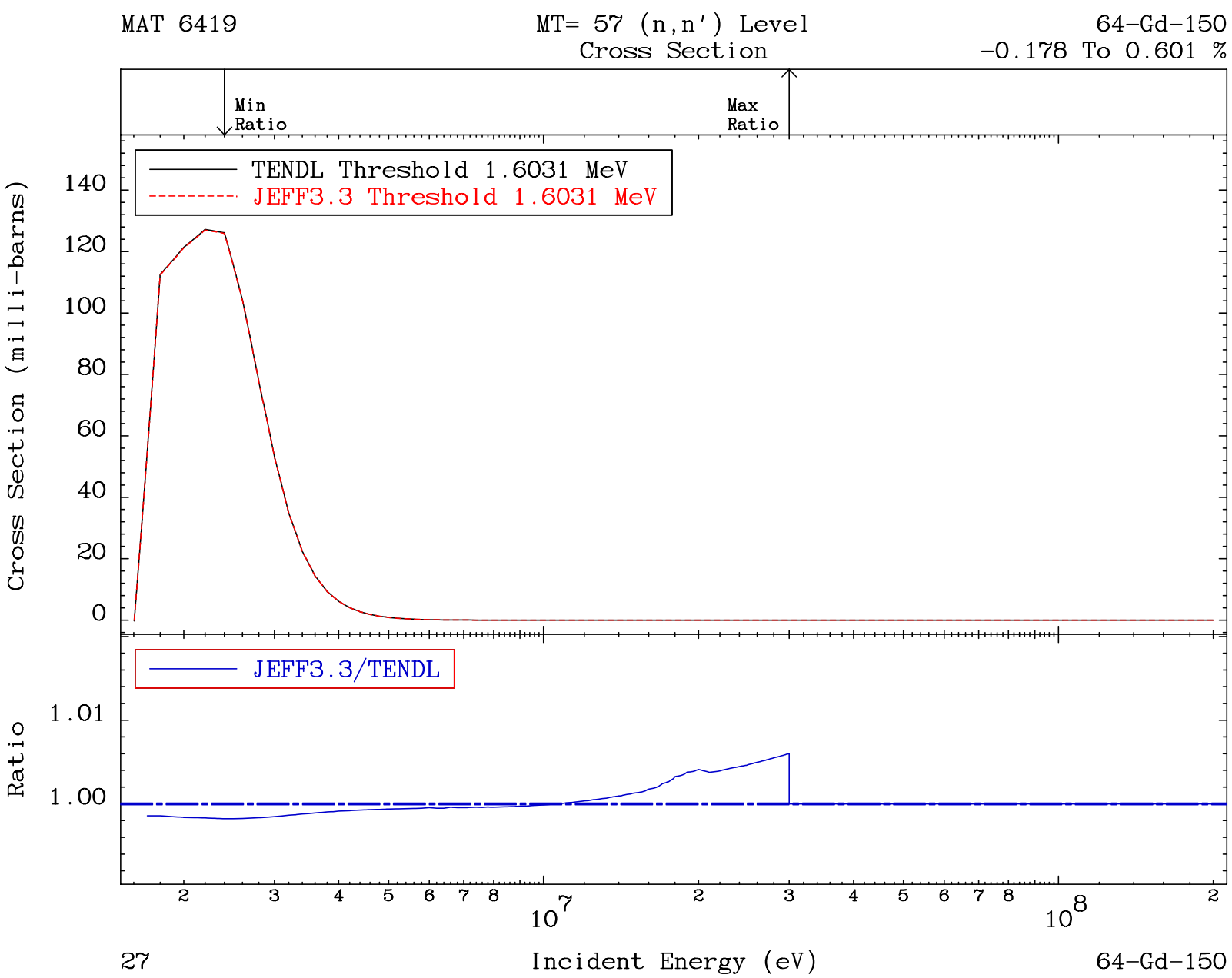

MAT 6419
MT= 52 (n,n') Level
Cross Section
64-Gd-150
-0.415 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.1419 MeV
JEFF3.3 Threshold 1.1419 MeV
Cross Section (milli-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
22
Incident Energy (eV)
64-Gd-150

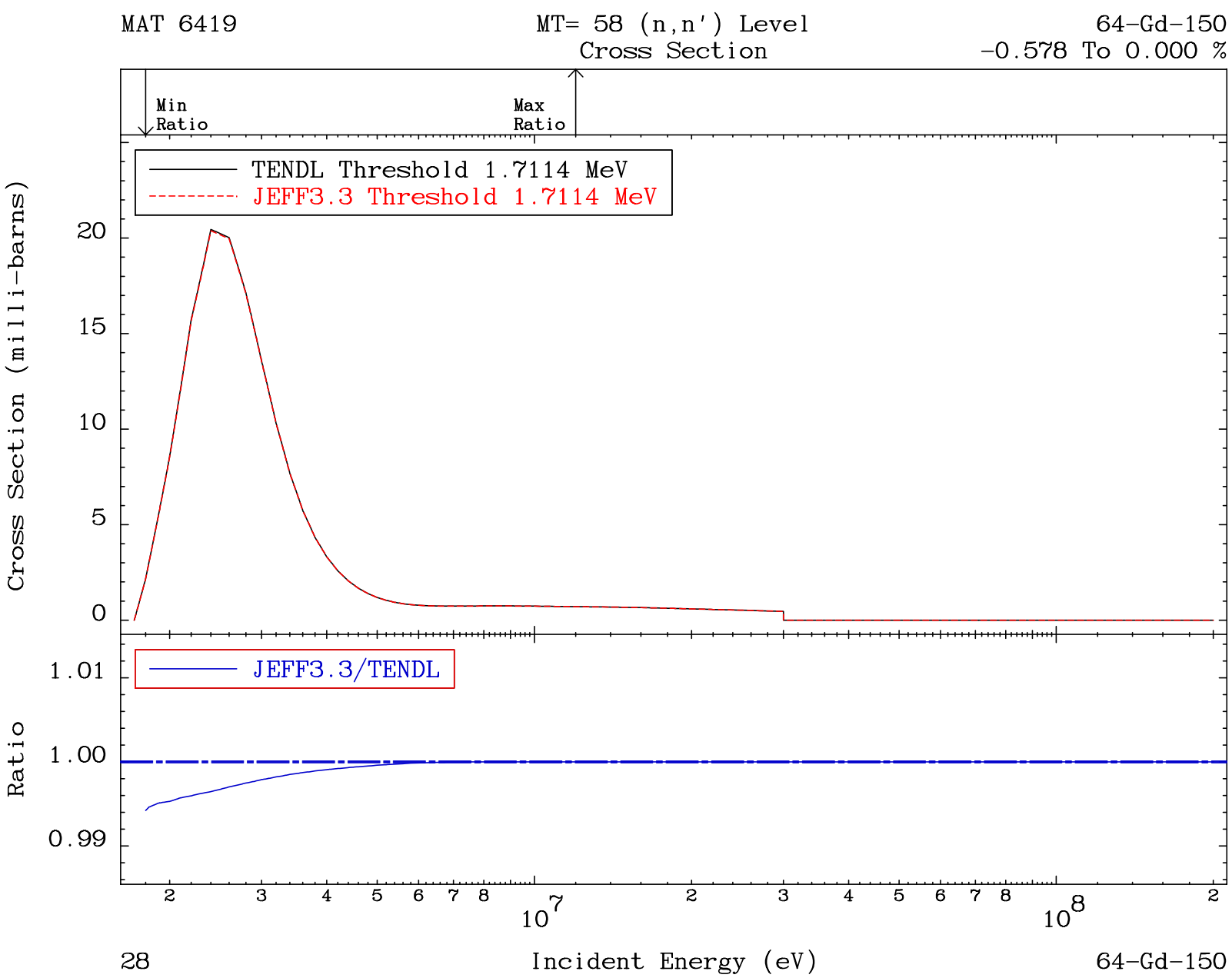

MAT 6419
MT= 53 (n,n') Level
Cross Section
64-Gd-150
-0.172 To 0.601 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.2153 MeV
JEFF3.3 Threshold 1.2153 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.01
1.00
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
23
Incident Energy (eV)
64-Gd-150

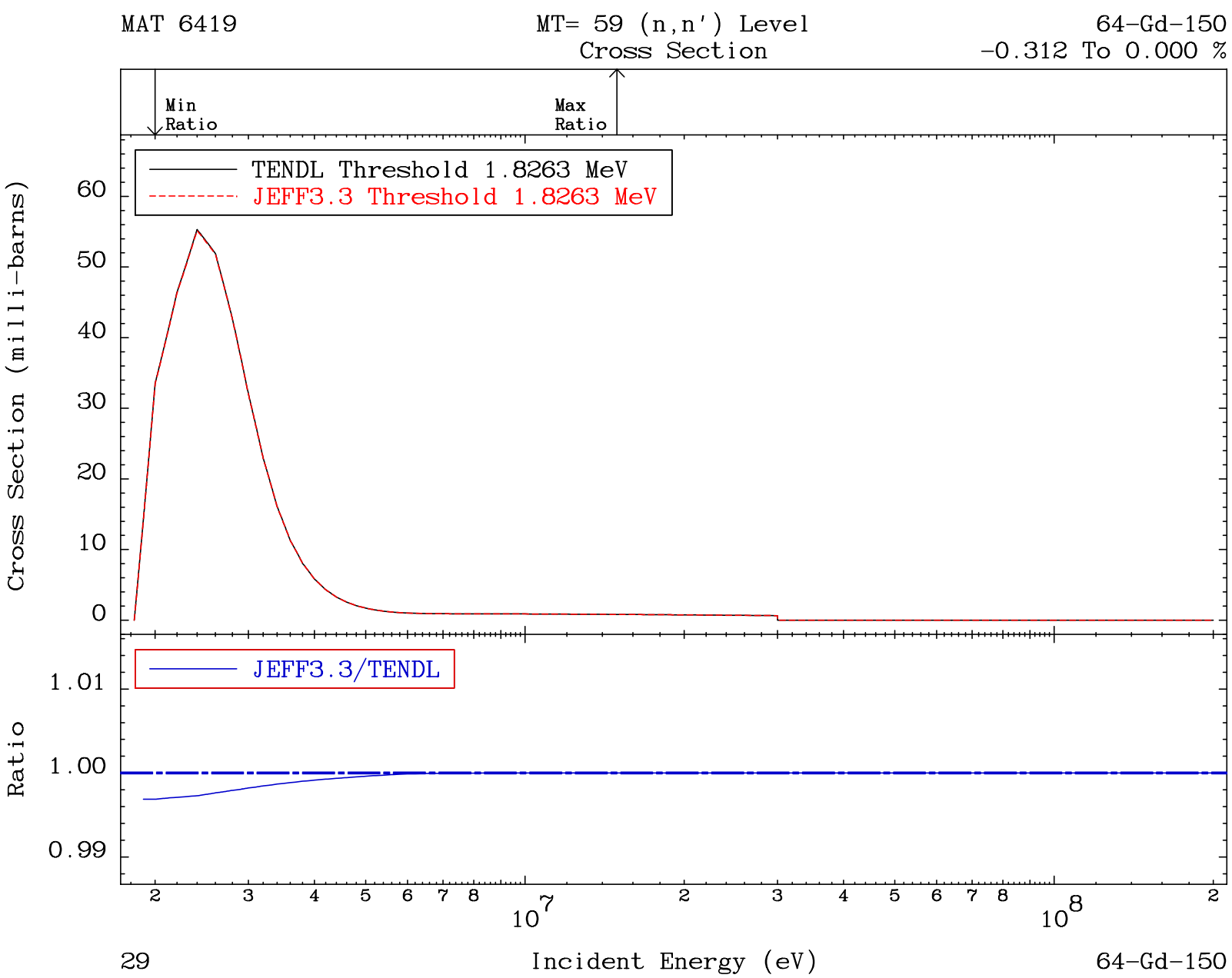

MAT 6419
MT= 54 (n,n') Level
Cross Section
64-Gd-150
-0.415 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.2971 MeV
JEFF3.3 Threshold 1.2971 MeV
Cross Section (milli-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
24
Incident Energy (eV)
64-Gd-150

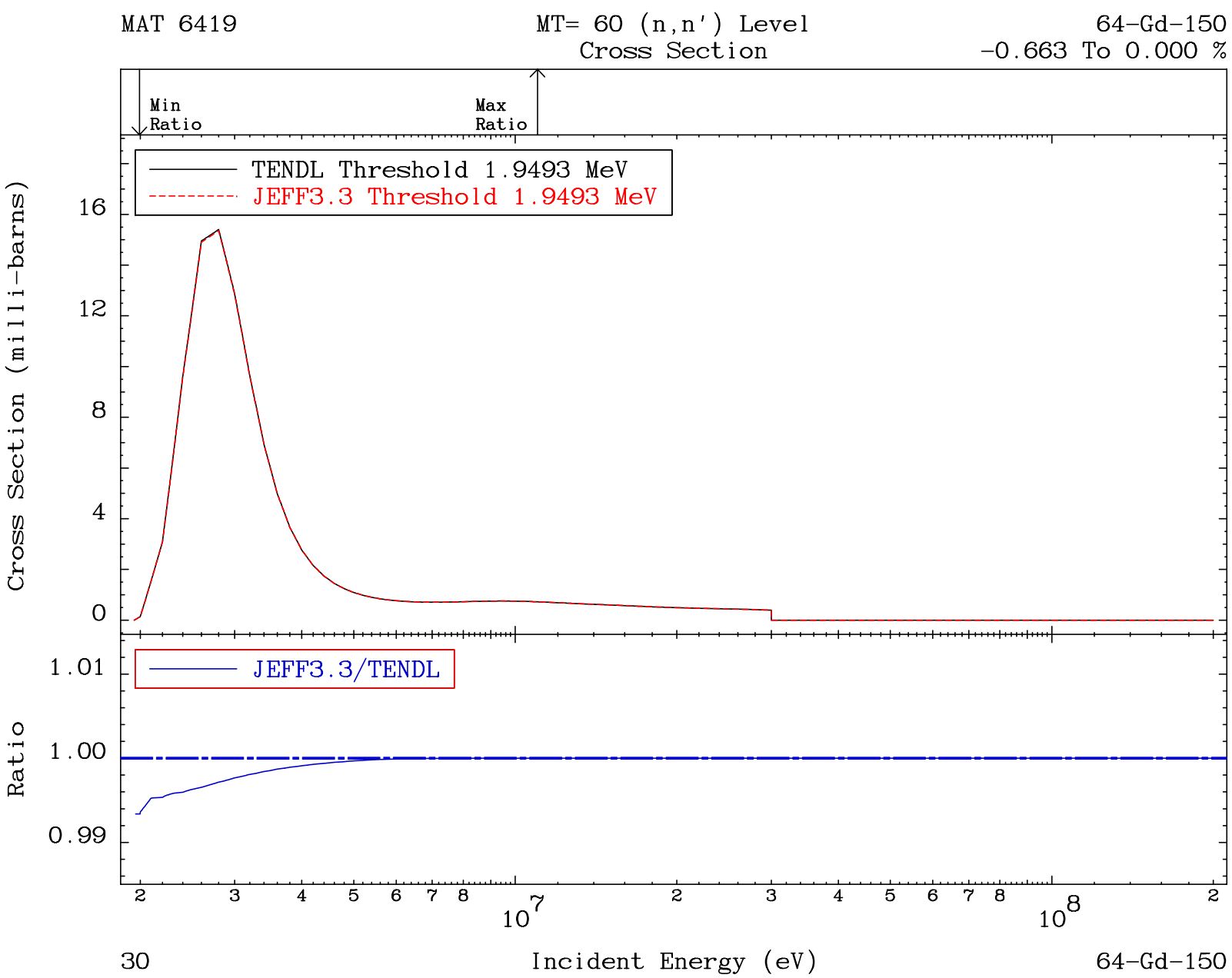

MAT 6419
MT= 55 (n,n') Level
Cross Section
64-Gd-150
-0.197 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.4401 MeV
JEFF3.3 Threshold 1.4401 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
25
Incident Energy (eV)
64-Gd-150

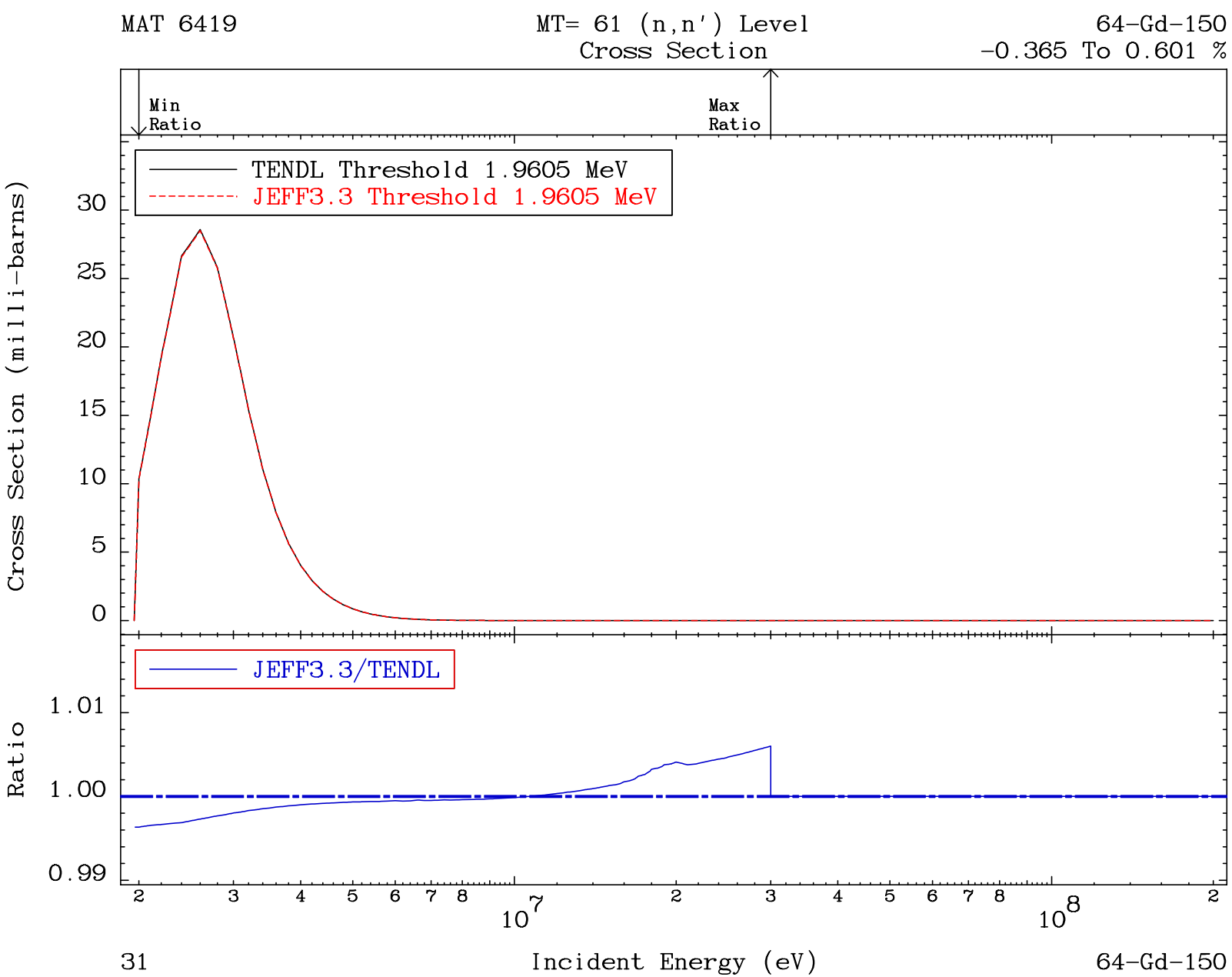

MAT 6419
MT= 56 (n,n') Level
Cross Section
64-Gd-150
-0.197 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.5286 MeV
JEFF3.3 Threshold 1.5286 MeV
Cross Section (milli-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
26
Incident Energy (eV)
64-Gd-150

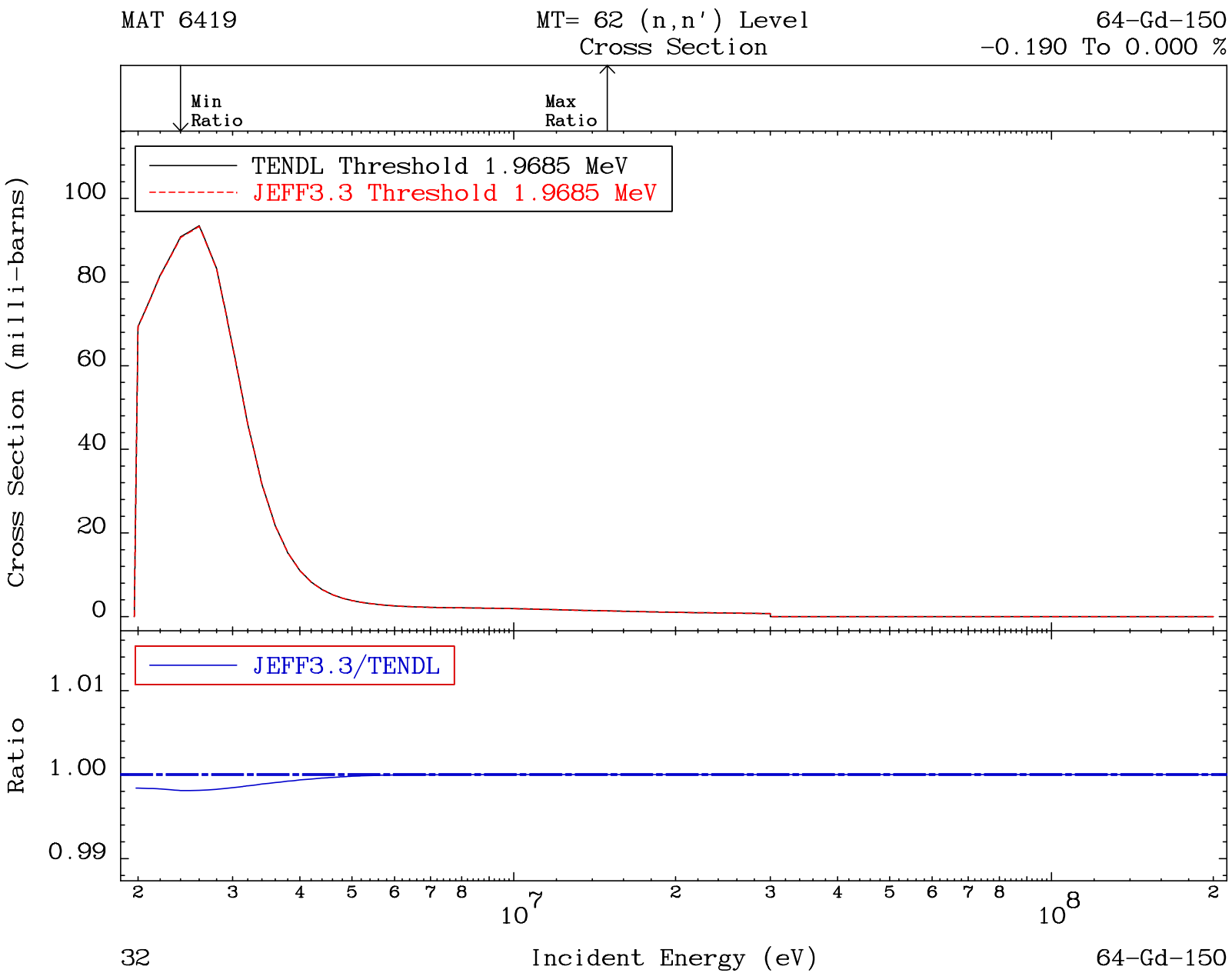

MAT 6419
MT= 57 (n,n') Level
Cross Section
64-Gd-150
-0.178 To 0.601 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.6031 MeV
JEFF3.3 Threshold 1.6031 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.01
1.00
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
27
Incident Energy (eV)
64-Gd-150

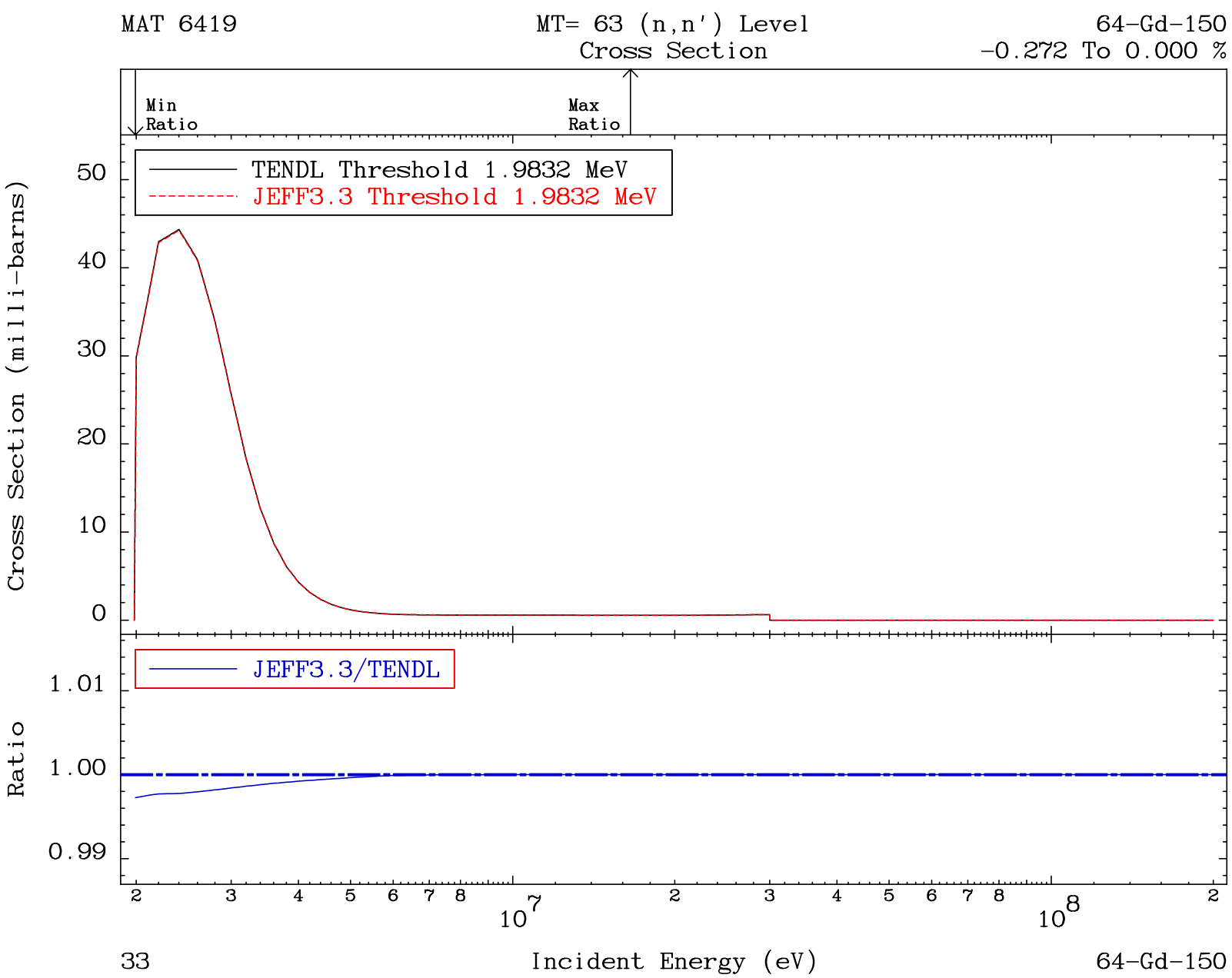

MAT 6419
MT= 58 (n,n') Level
Cross Section
64-Gd-150
-0.578 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.7114 MeV
JEFF3.3 Threshold 1.7114 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
28
Incident Energy (eV)
64-Gd-150

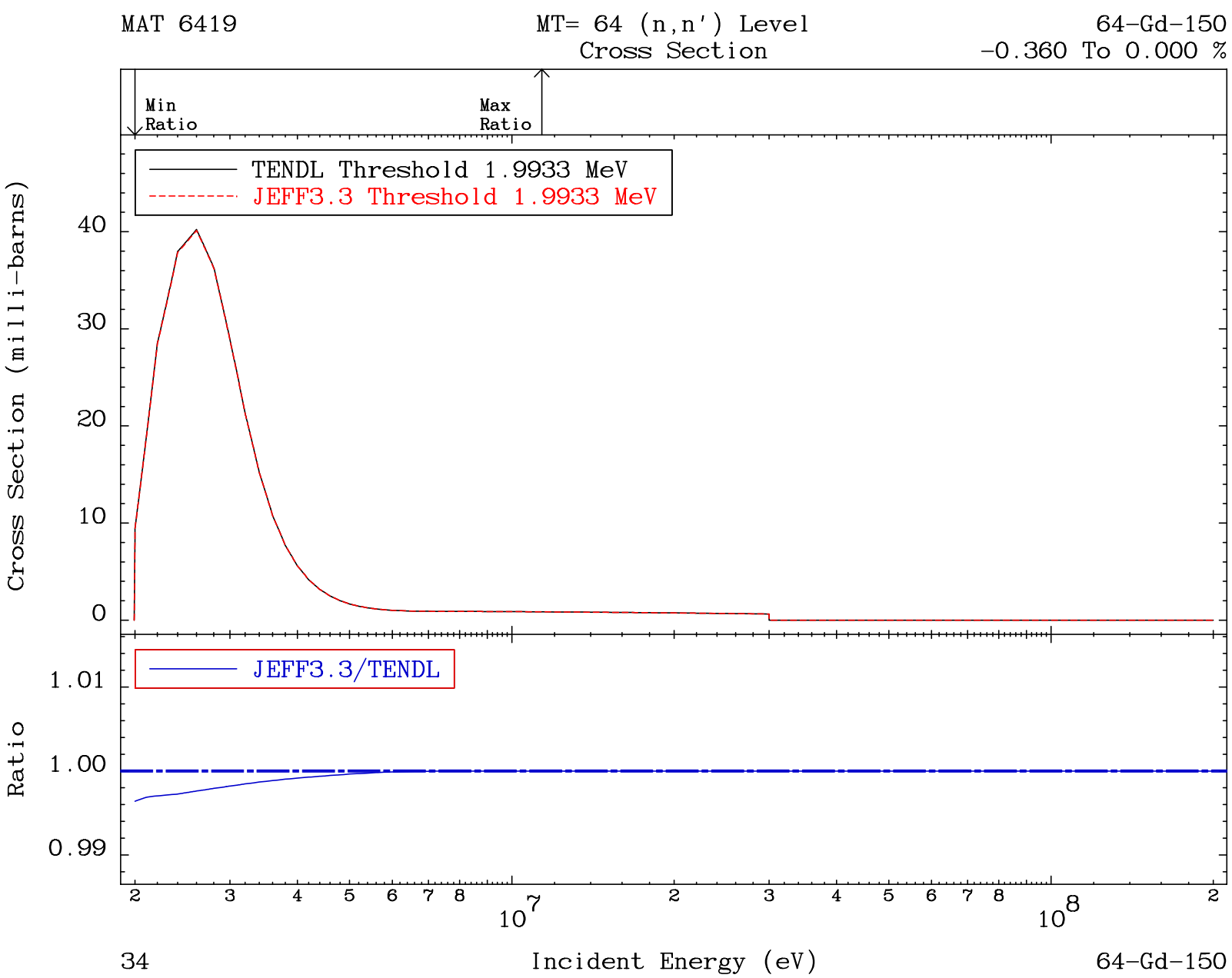

MAT 6419
MT= 59 (n,n') Level
Cross Section
64-Gd-150
-0.312 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.8263 MeV
JEFF3.3 Threshold 1.8263 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
29
Incident Energy (eV)
64-Gd-150

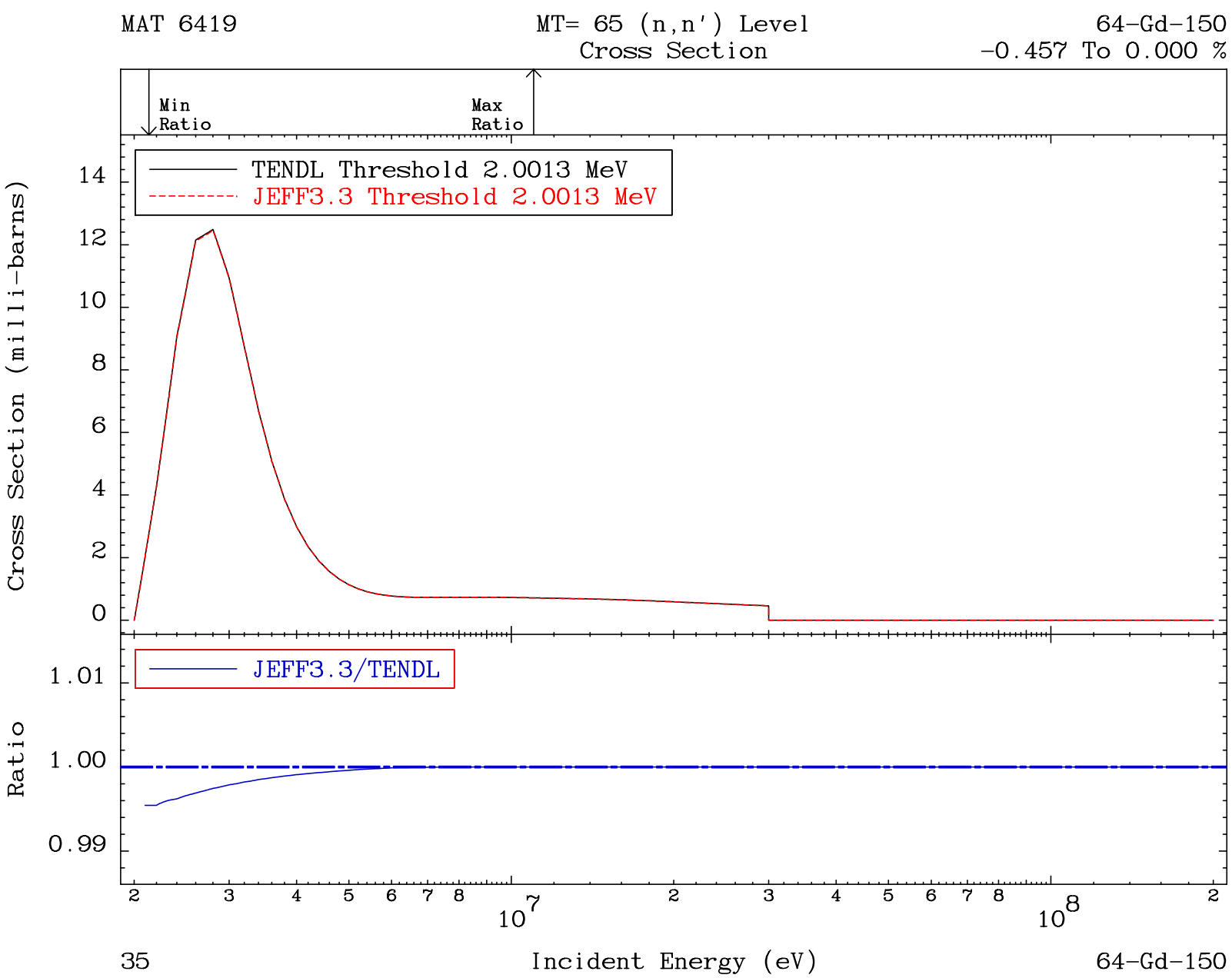

MAT 6419
MT= 60 (n,n') Level
Cross Section
64-Gd-150
-0.663 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 1.9493 MeV
JEFF3.3 Threshold 1.9493 MeV
Cross Section (milli-barns)
16
12
8
4
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
30
Incident Energy (eV)
64-Gd-150

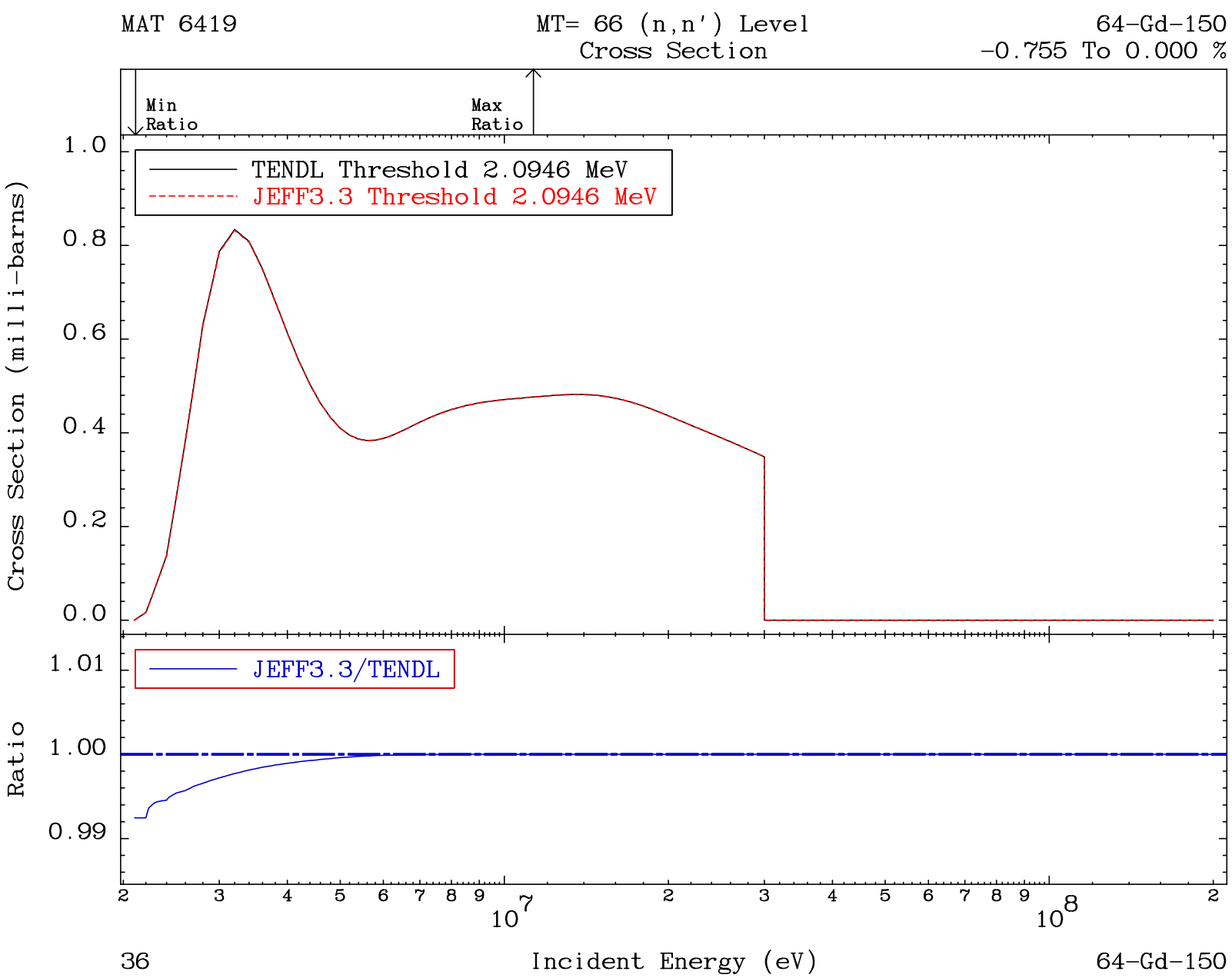

MAT 6419
MT= 61 (n,n') Level
Cross Section
64-Gd-150
-0.365 To 0.601 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.9605 MeV
JEFF3.3 Threshold 1.9605 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
31
Incident Energy (eV)
64-Gd-150

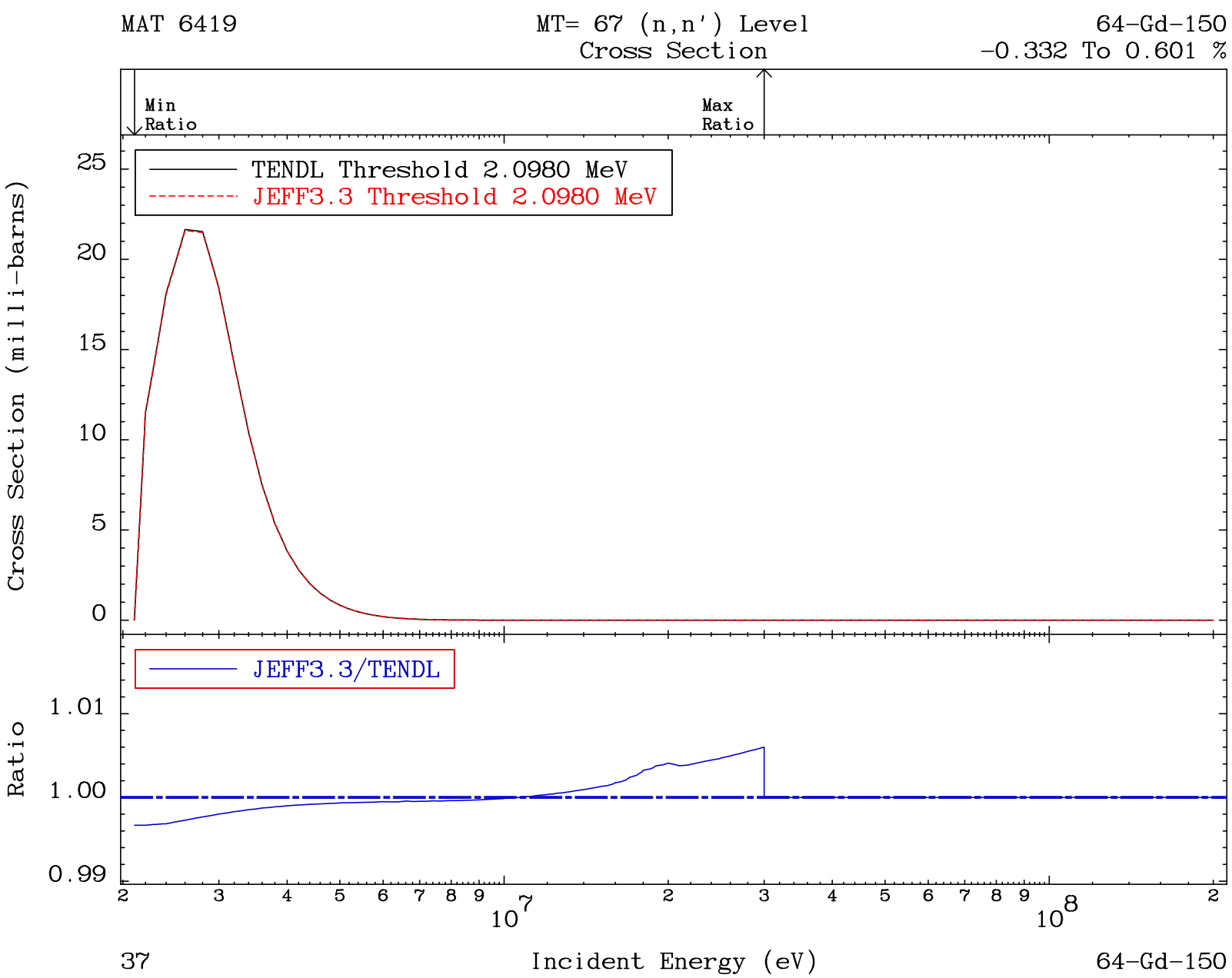

MAT 6419
MT= 62 (n,n') Level
Cross Section
64-Gd-150
-0.190 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.9685 MeV
JEFF3.3 Threshold 1.9685 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
32
Incident Energy (eV)
64-Gd-150

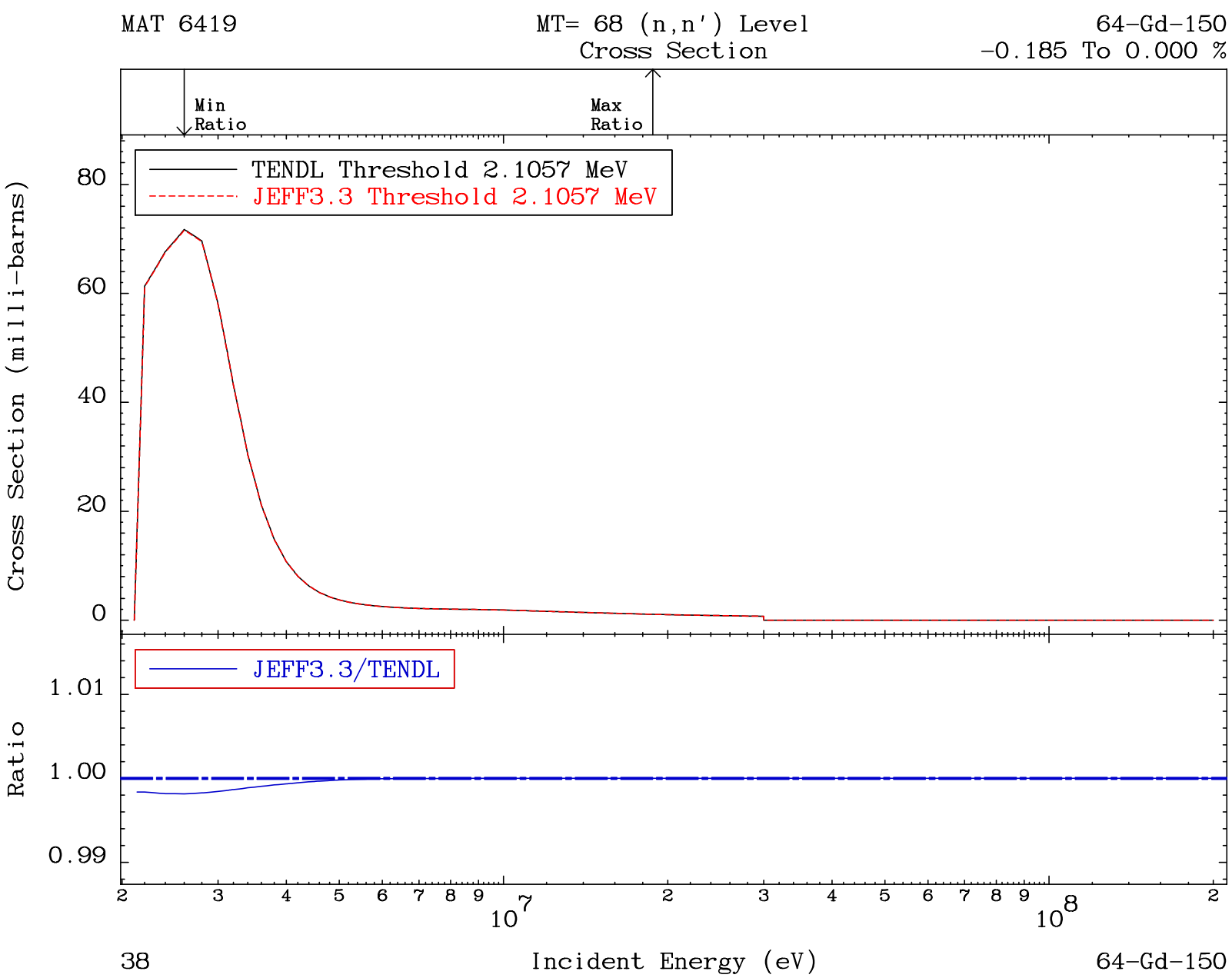

MAT 6419
MT= 63 (n,n') Level
Cross Section
64-Gd-150
-0.272 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.9832 MeV
JEFF3.3 Threshold 1.9832 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
33
Incident Energy (eV)
64-Gd-150

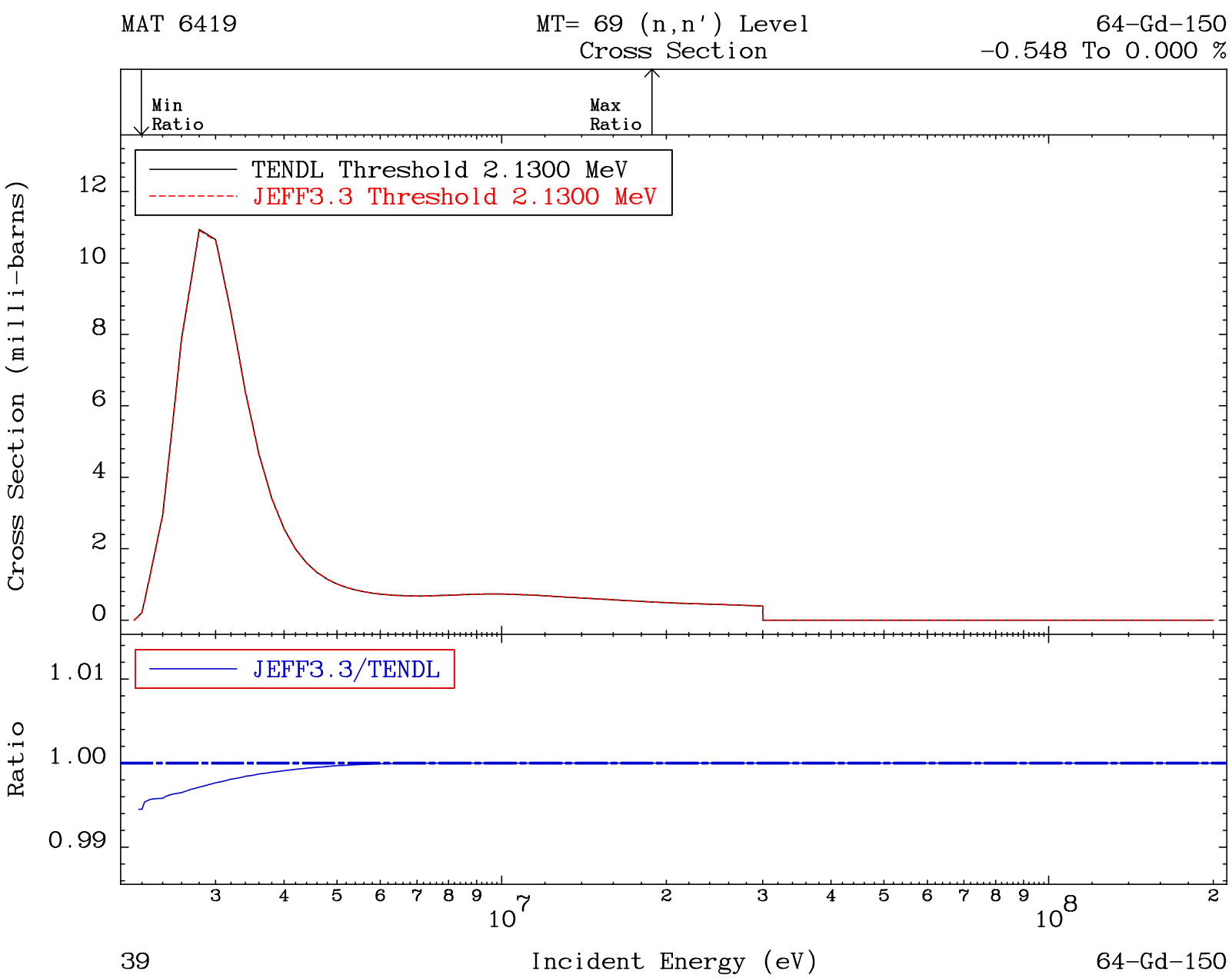

MAT 6419
MT= 64 (n,n') Level
Cross Section
64-Gd-150
-0.360 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 1.9933 MeV
JEFF3.3 Threshold 1.9933 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
34
Incident Energy (eV)
64-Gd-150

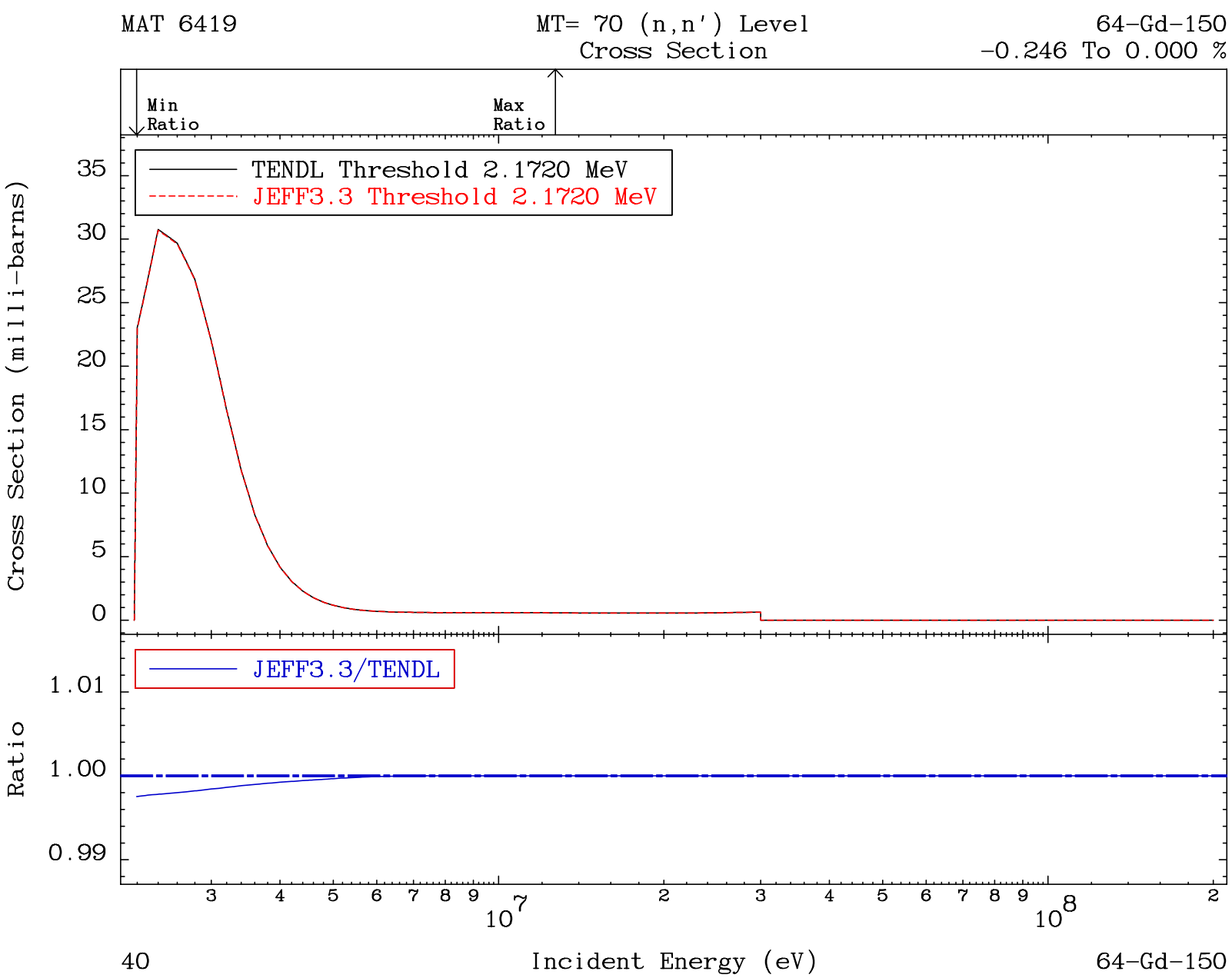

MAT 6419
MT= 65 (n,n') Level
Cross Section
64-Gd-150
-0.457 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 2.0013 MeV
JEFF3.3 Threshold 2.0013 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
35
Incident Energy (eV)
64-Gd-150

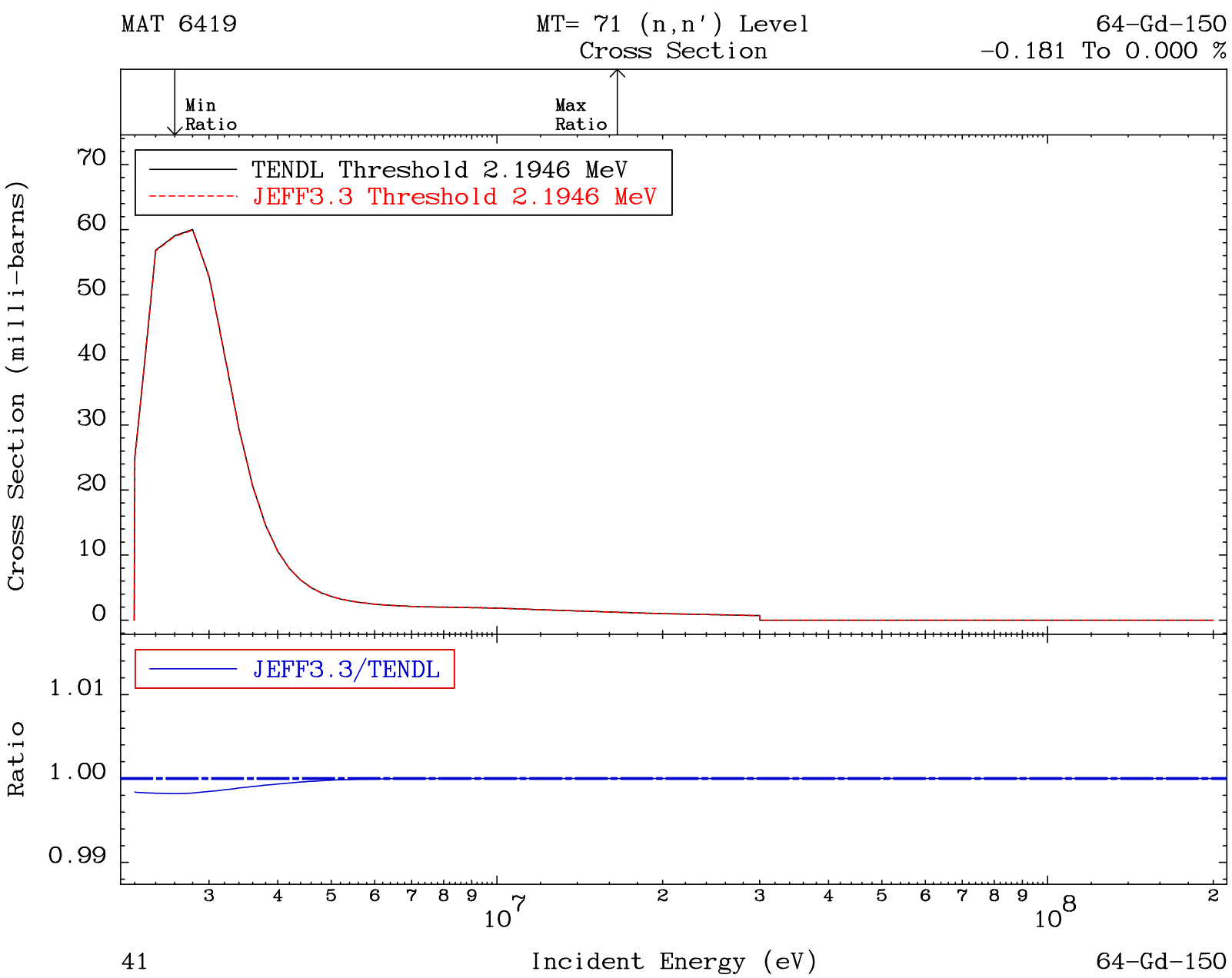

MAT 6419
MT= 66 (n,n') Level
Cross Section
64-Gd-150
-0.755 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 2.0946 MeV
JEFF3.3 Threshold 2.0946 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
36
Incident Energy (eV)
64-Gd-150

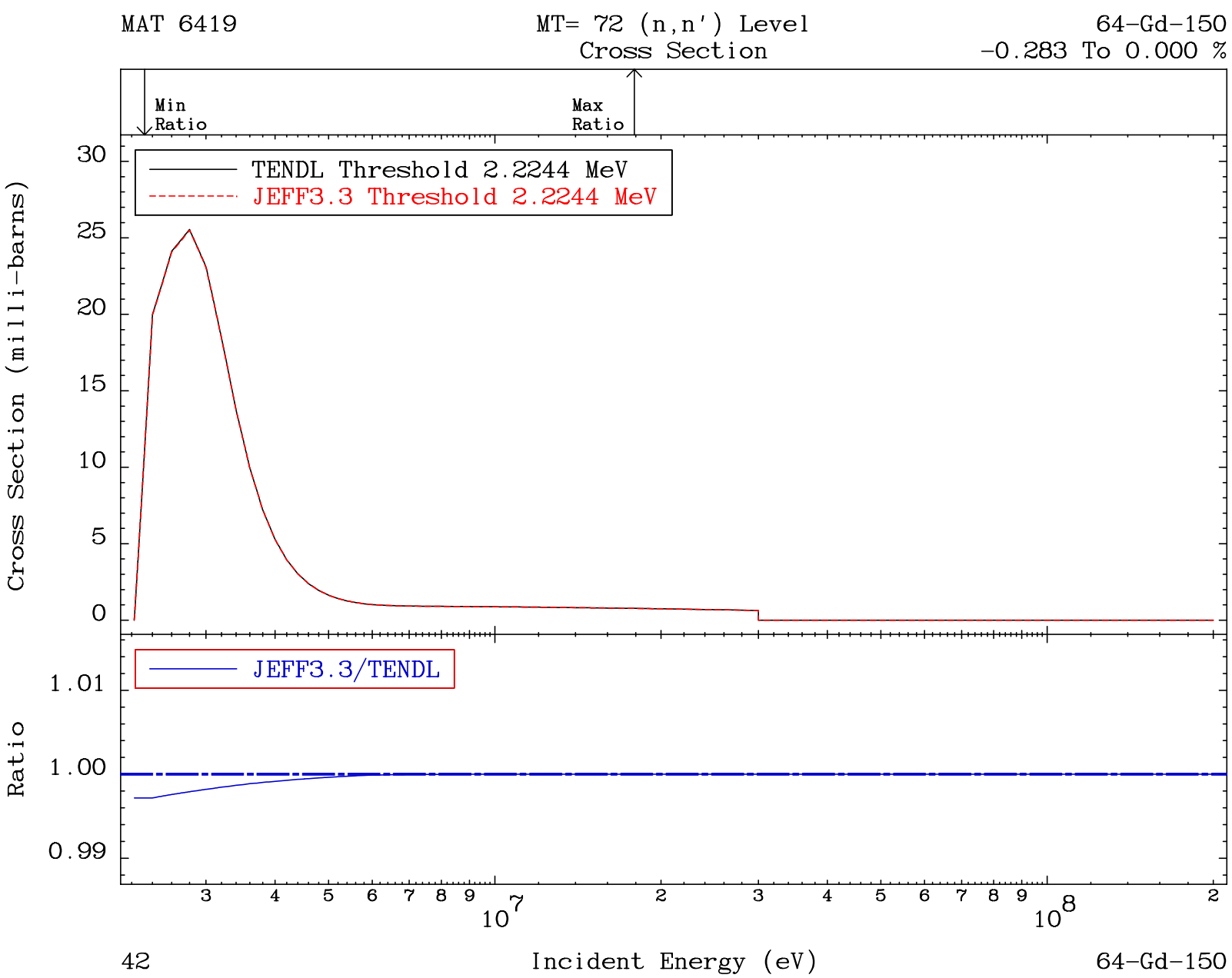

MAT 6419
MT= 67 (n,n') Level
Cross Section
64-Gd-150
-0.332 To 0.601 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.0980 MeV
JEFF3.3 Threshold 2.0980 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
37
Incident Energy (eV)
64-Gd-150

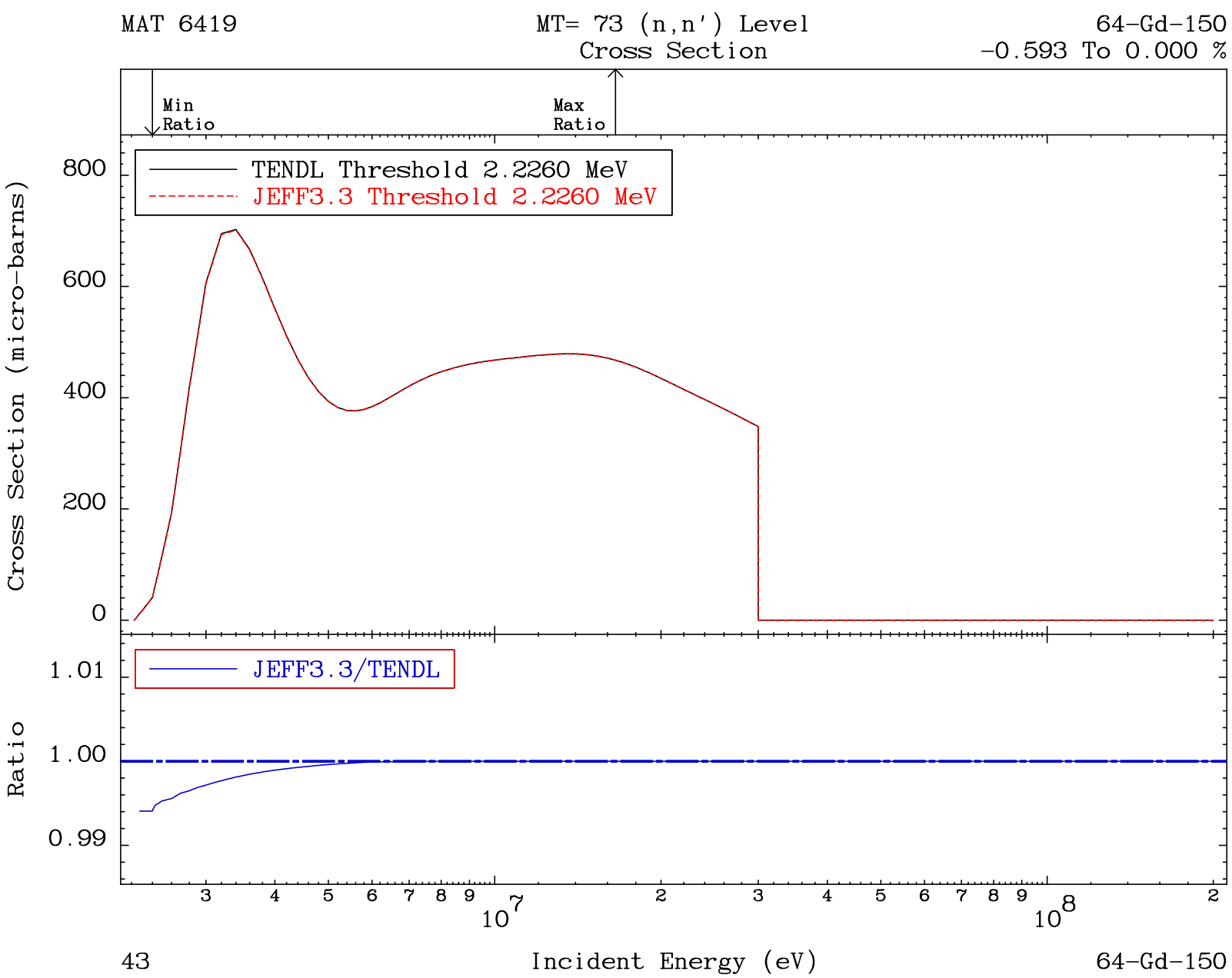

MAT 6419
MT= 68 (n,n') Level
Cross Section
64-Gd-150
-0.185 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.1057 MeV
JEFF3.3 Threshold 2.1057 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
38
Incident Energy (eV)
64-Gd-150

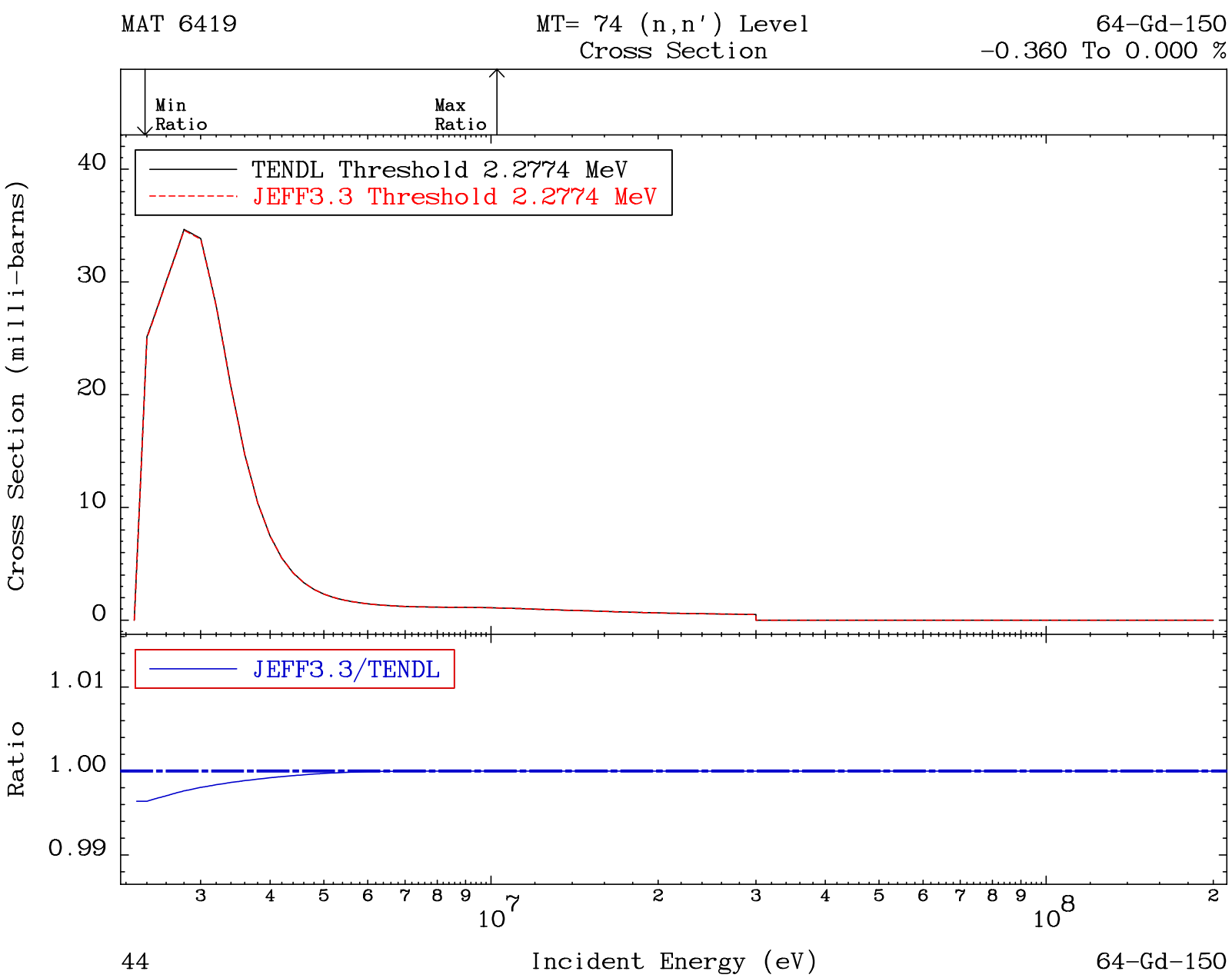

MAT 6419
MT= 69 (n,n') Level
Cross Section
64-Gd-150
-0.548 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.1300 MeV
JEFF3.3 Threshold 2.1300 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3
4
5
6
7
8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
39
Incident Energy (eV)
64-Gd-150

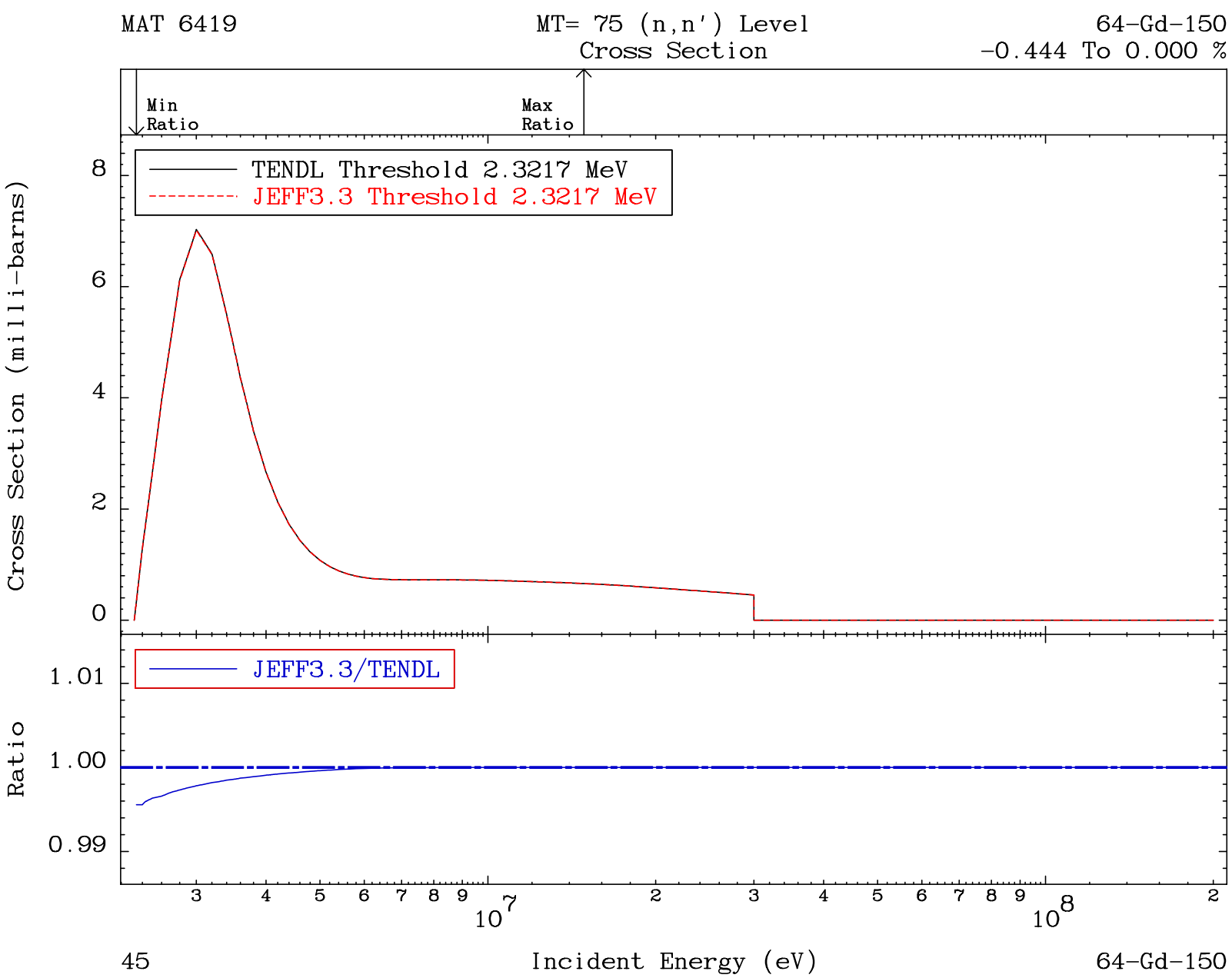

MAT 6419
MT= 70 (n,n') Level
Cross Section
64-Gd-150
-0.246 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 2.1720 MeV
JEFF3.3 Threshold 2.1720 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
40
Incident Energy (eV)
64-Gd-150

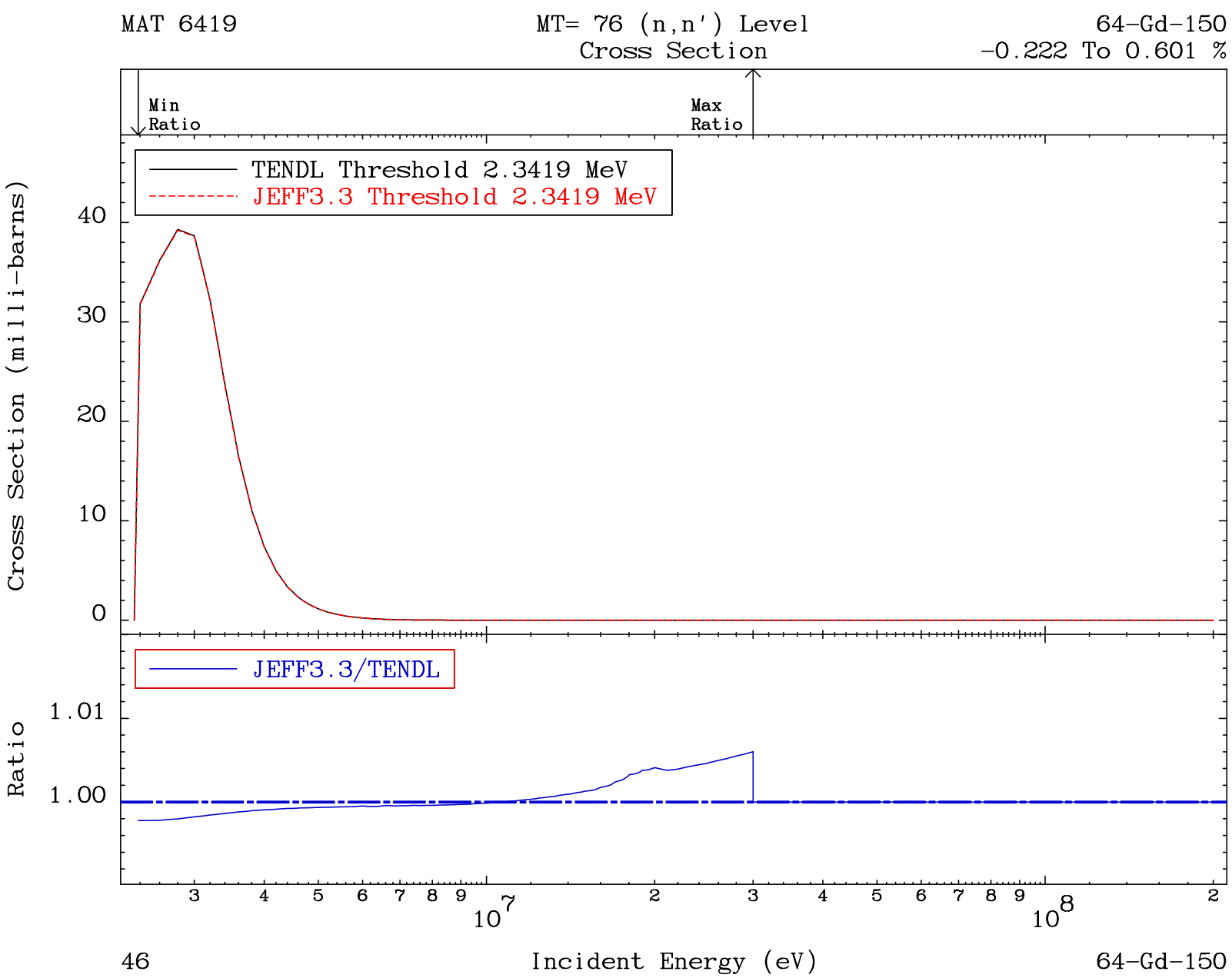

MAT 6419
MT= 71 (n,n') Level
Cross Section
64-Gd-150
-0.181 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.1946 MeV
JEFF3.3 Threshold 2.1946 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
41
Incident Energy (eV)
64-Gd-150

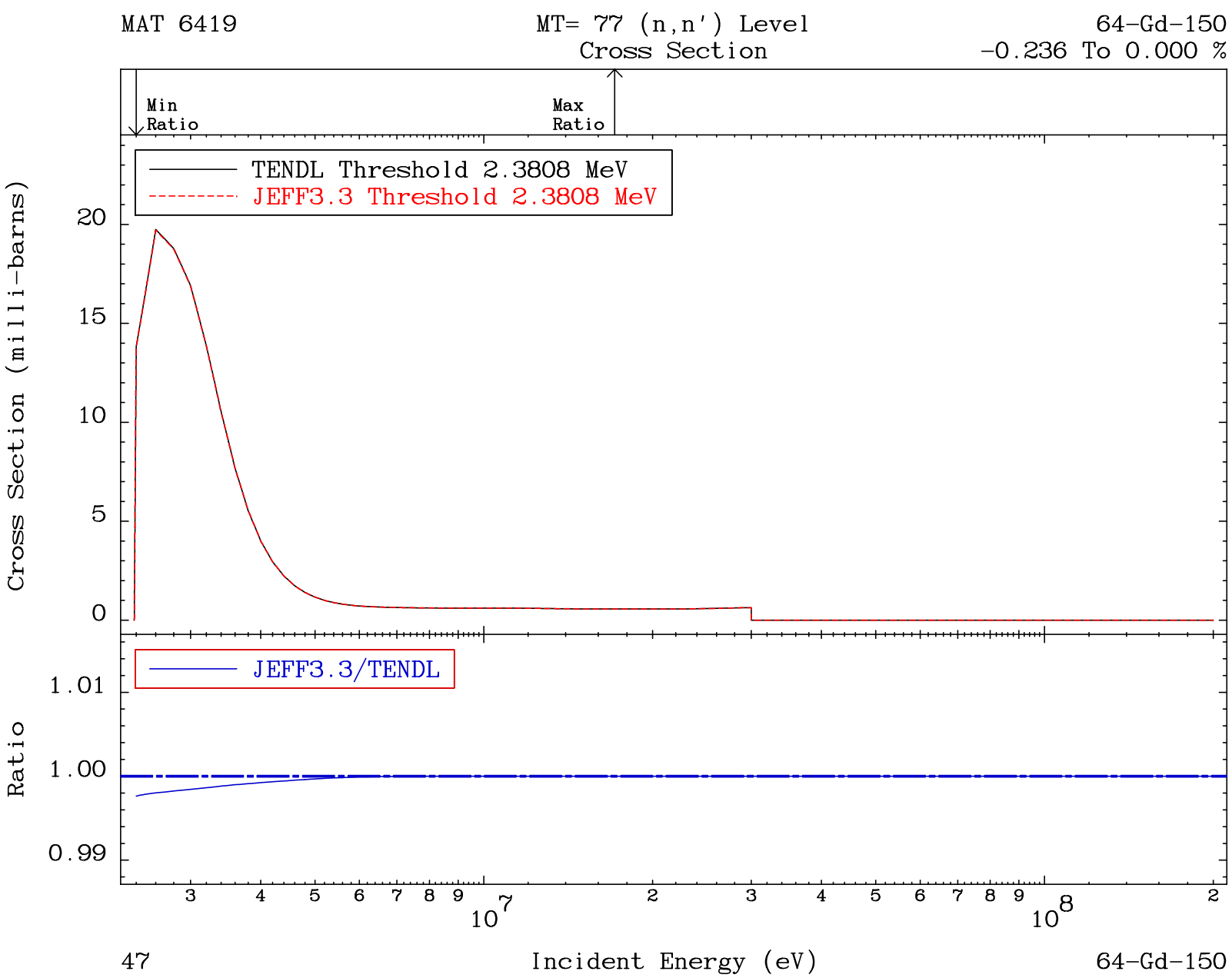

MAT 6419
MT= 72 (n,n') Level
Cross Section
64-Gd-150
-0.283 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.2244 MeV
JEFF3.3 Threshold 2.2244 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
42
Incident Energy (eV)
64-Gd-150

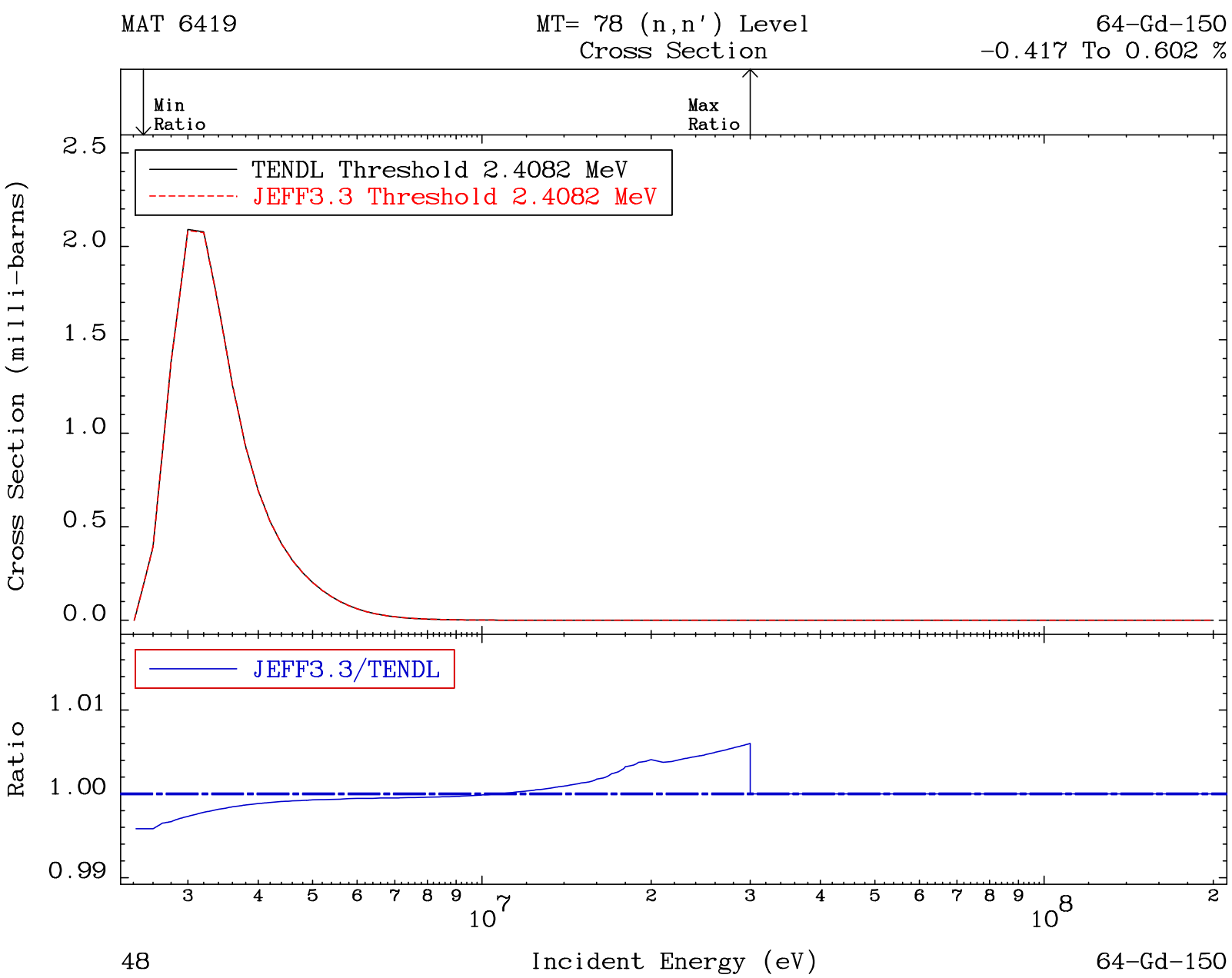

MAT 6419
MT= 73 (n,n') Level
Cross Section
64-Gd-150
-0.593 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.2260 MeV
JEFF3.3 Threshold 2.2260 MeV
Cross Section (micro-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
64-Gd-150

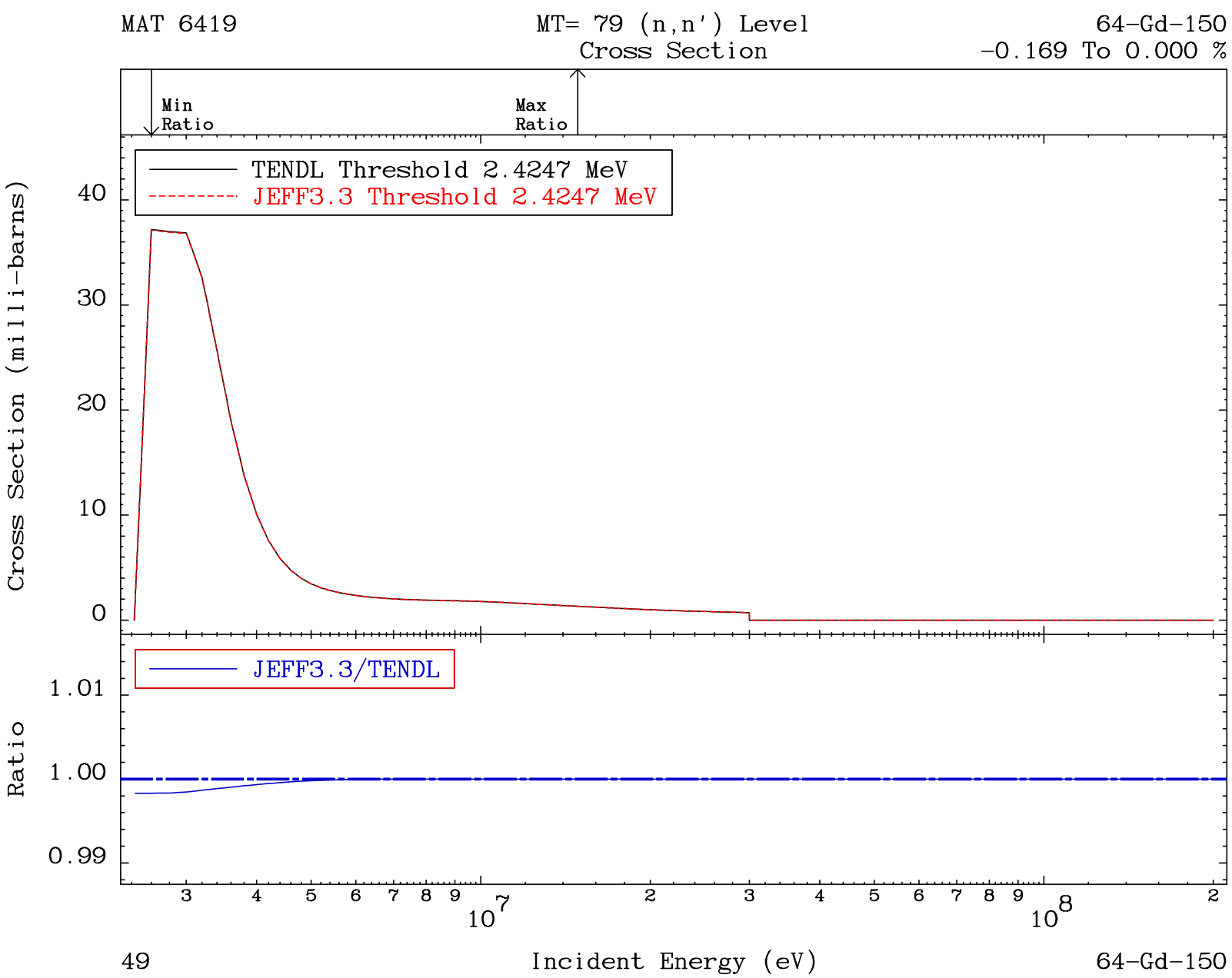

MAT 6419
MT= 74 (n,n') Level
Cross Section
64-Gd-150
-0.360 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.2774 MeV
JEFF3.3 Threshold 2.2774 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
44
Incident Energy (eV)
64-Gd-150

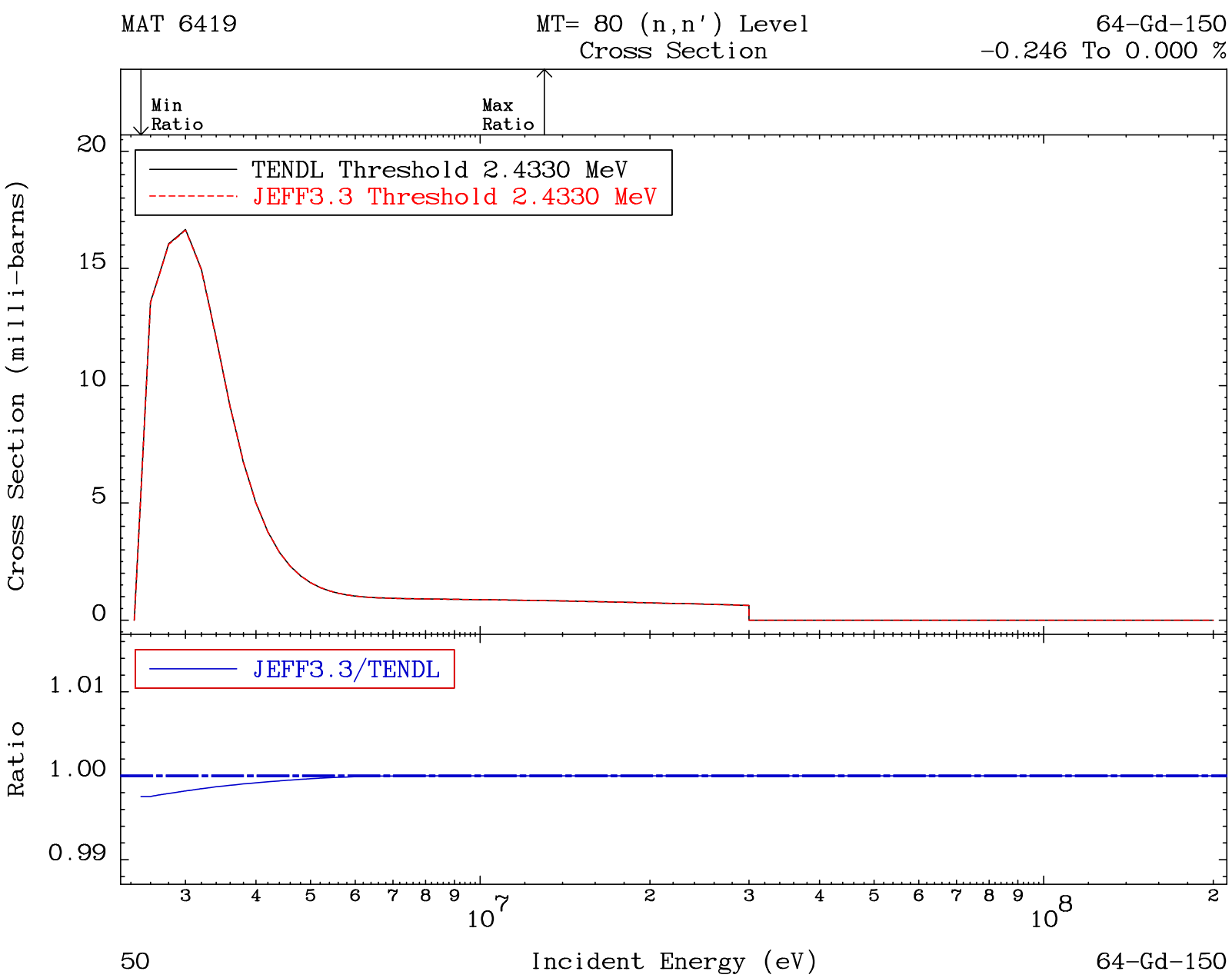

MAT 6419
MT= 75 (n,n') Level
Cross Section
64-Gd-150
-0.444 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.3217 MeV
JEFF3.3 Threshold 2.3217 MeV
Cross Section (milli-barns)
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
45
Incident Energy (eV)
64-Gd-150

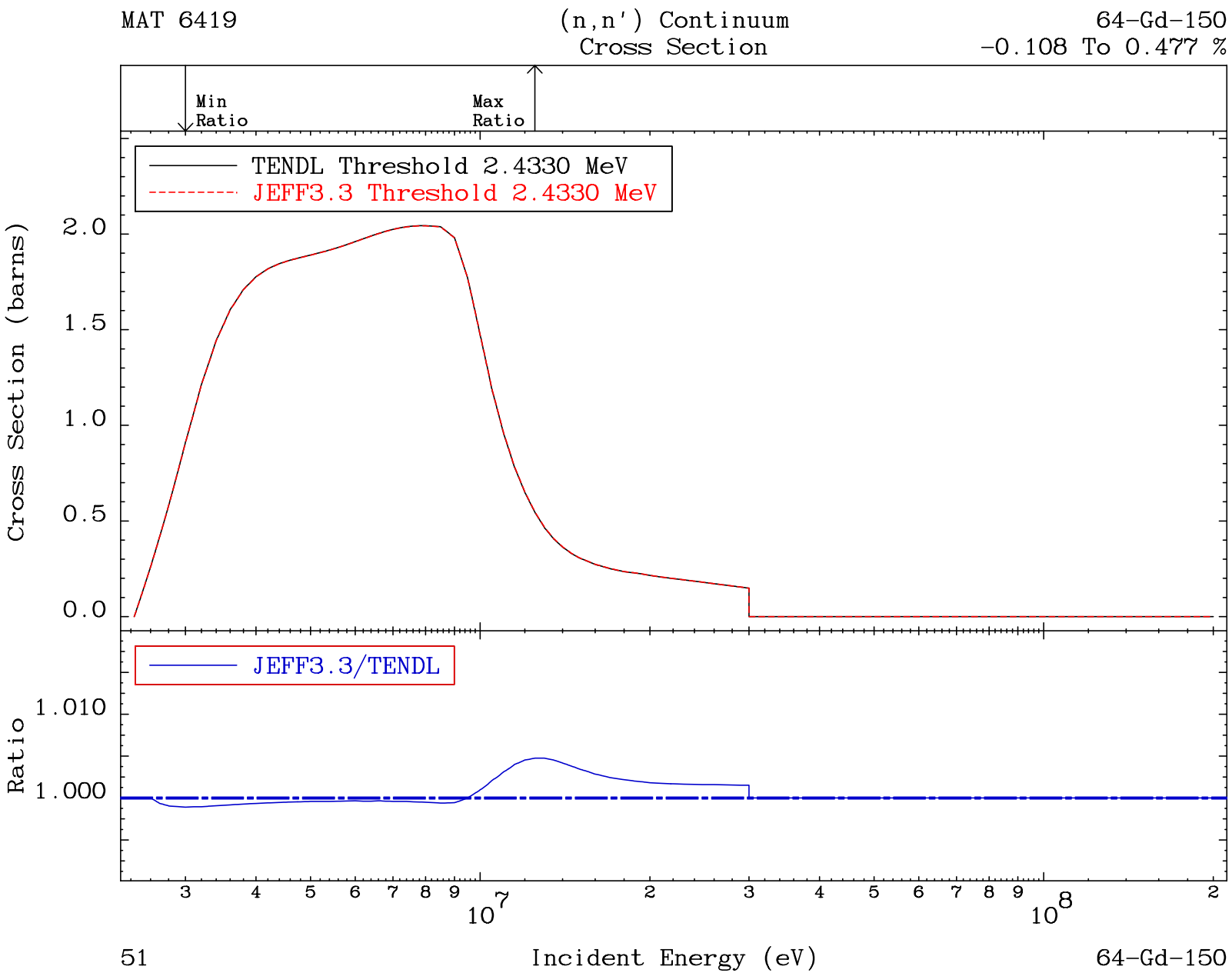

MAT 6419
MT= 76 (n,n') Level
Cross Section
64-Gd-150
-0.222 To 0.601 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.3419 MeV
JEFF3.3 Threshold 2.3419 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
46
Incident Energy (eV)
64-Gd-150

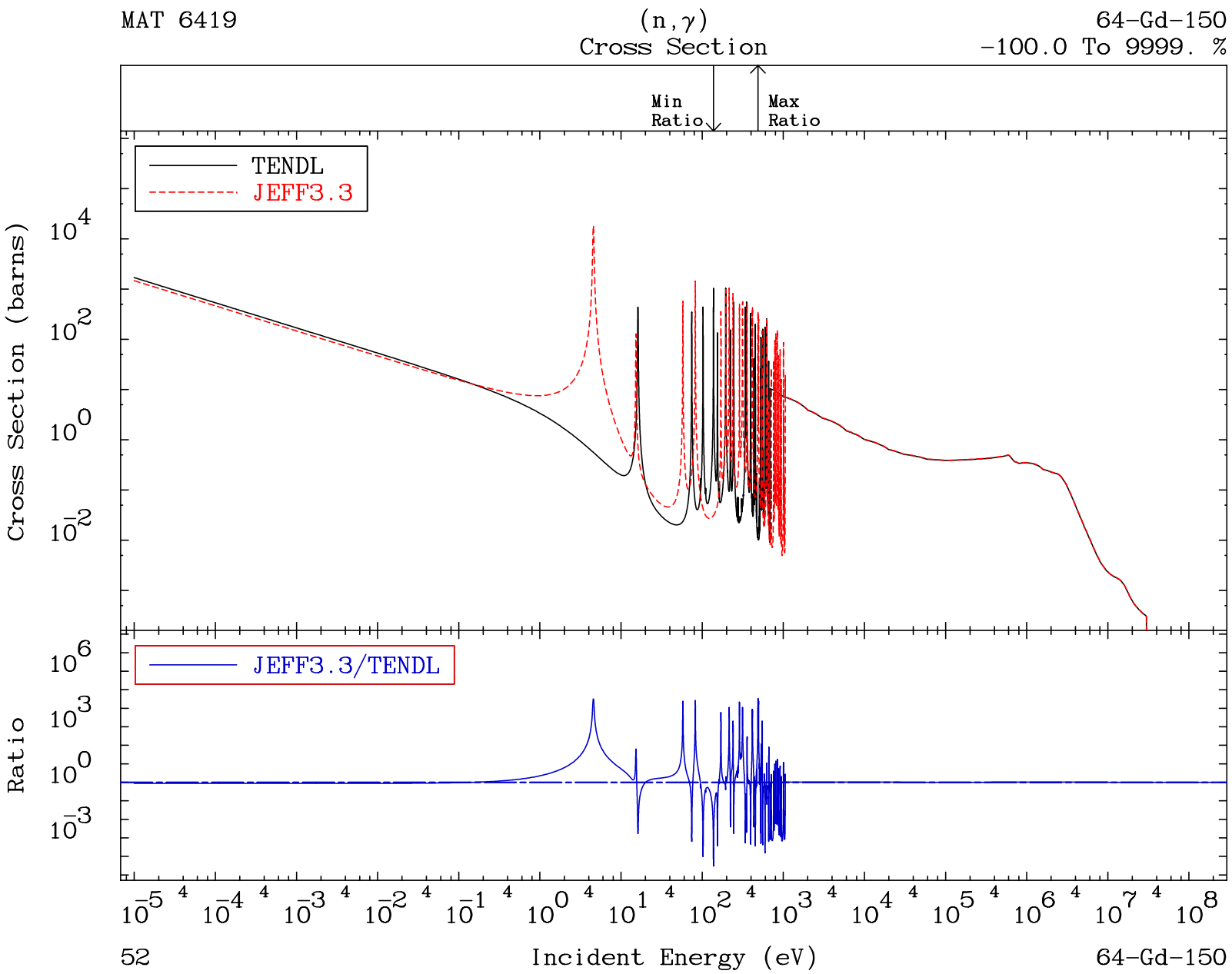

MAT 6419
MT= 77 (n,n') Level
Cross Section
64-Gd-150
-0.236 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.3808 MeV
JEFF3.3 Threshold 2.3808 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
47
Incident Energy (eV)
64-Gd-150

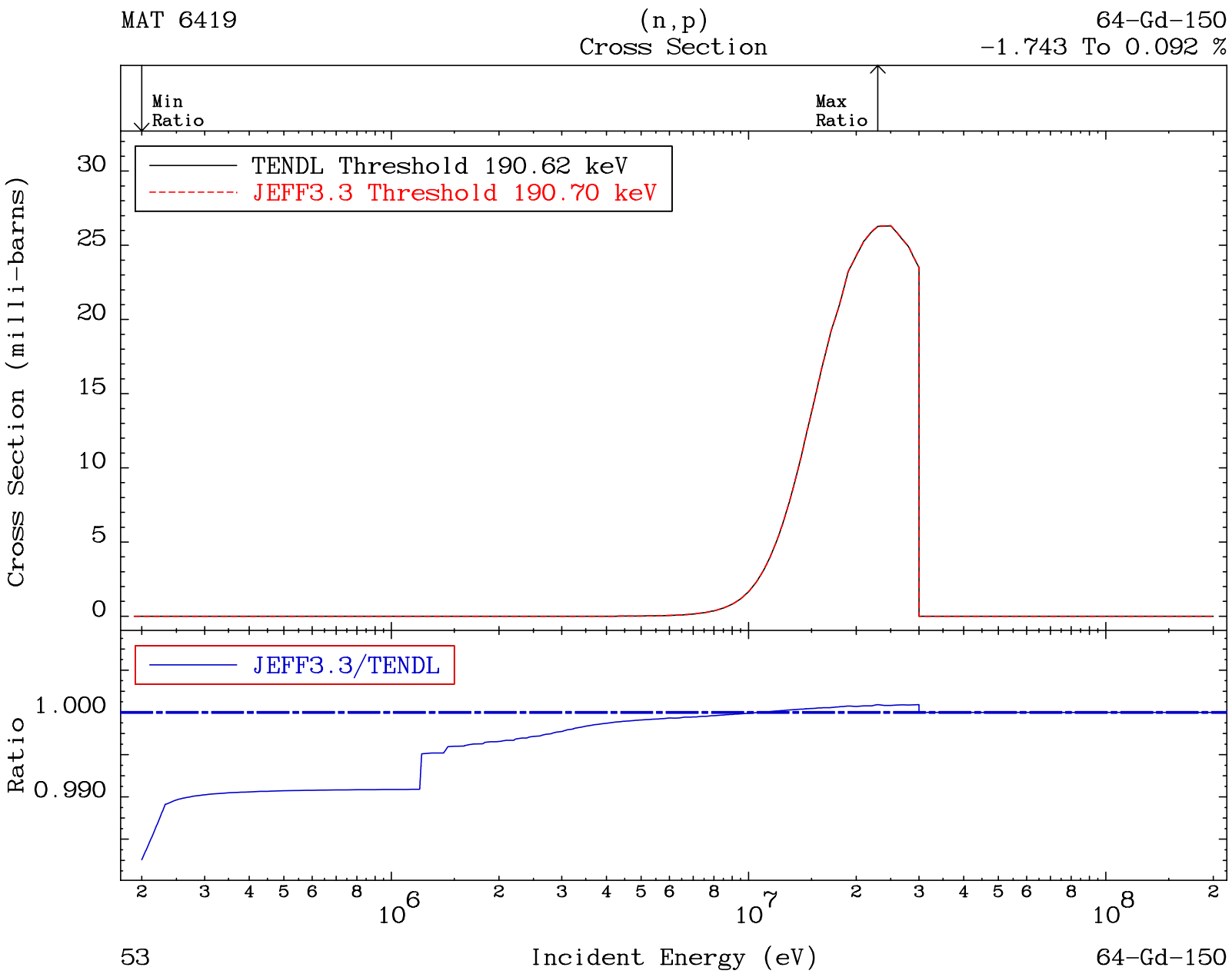

MAT 6419
MT= 78 (n,n') Level
Cross Section
64-Gd-150
-0.417 To 0.602 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.4082 MeV
JEFF3.3 Threshold 2.4082 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
48
Incident Energy (eV)
64-Gd-150

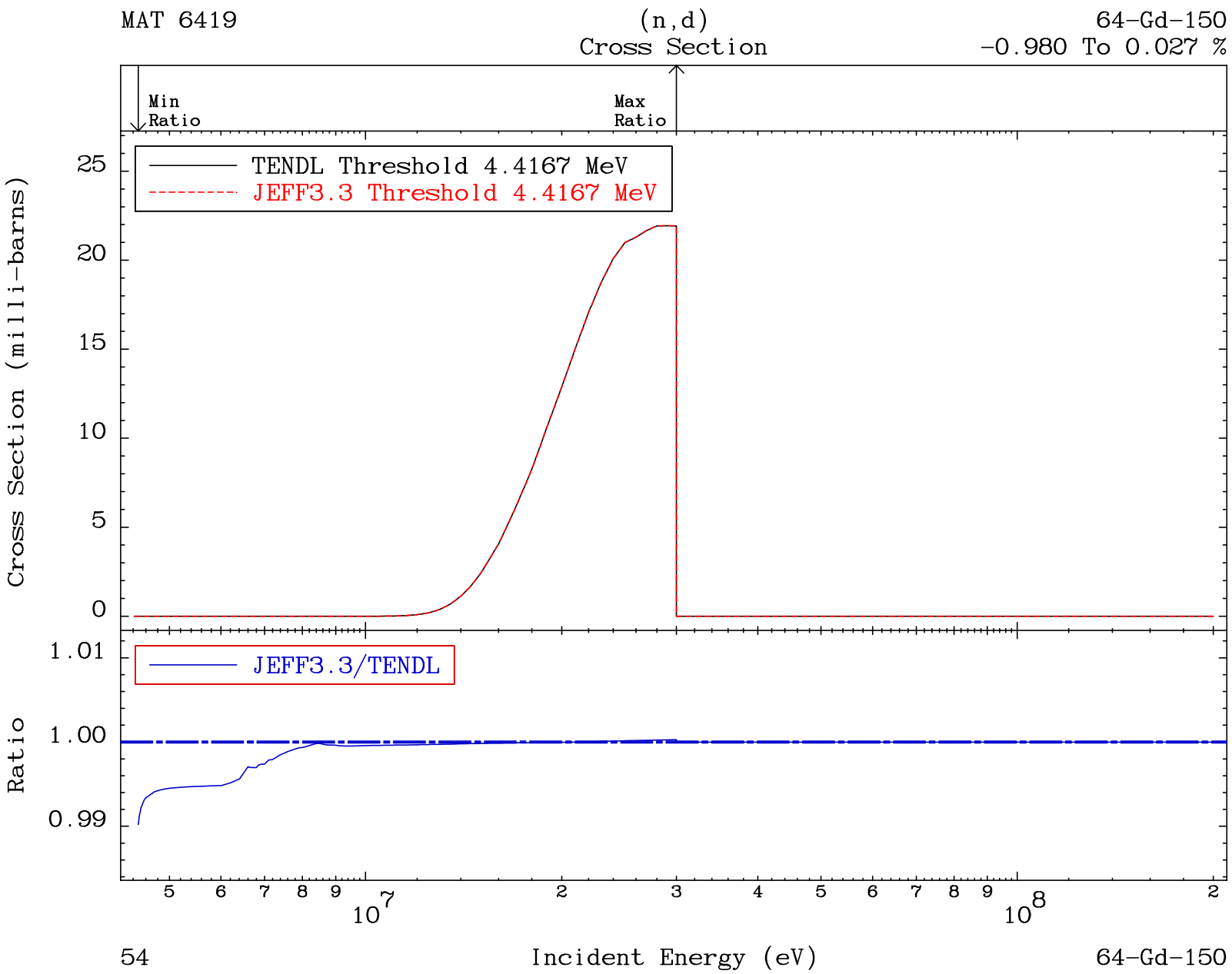

MAT 6419
MT= 79 (n,n') Level
Cross Section
64-Gd-150
-0.169 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.4247 MeV
JEFF3.3 Threshold 2.4247 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
49
Incident Energy (eV)
64-Gd-150

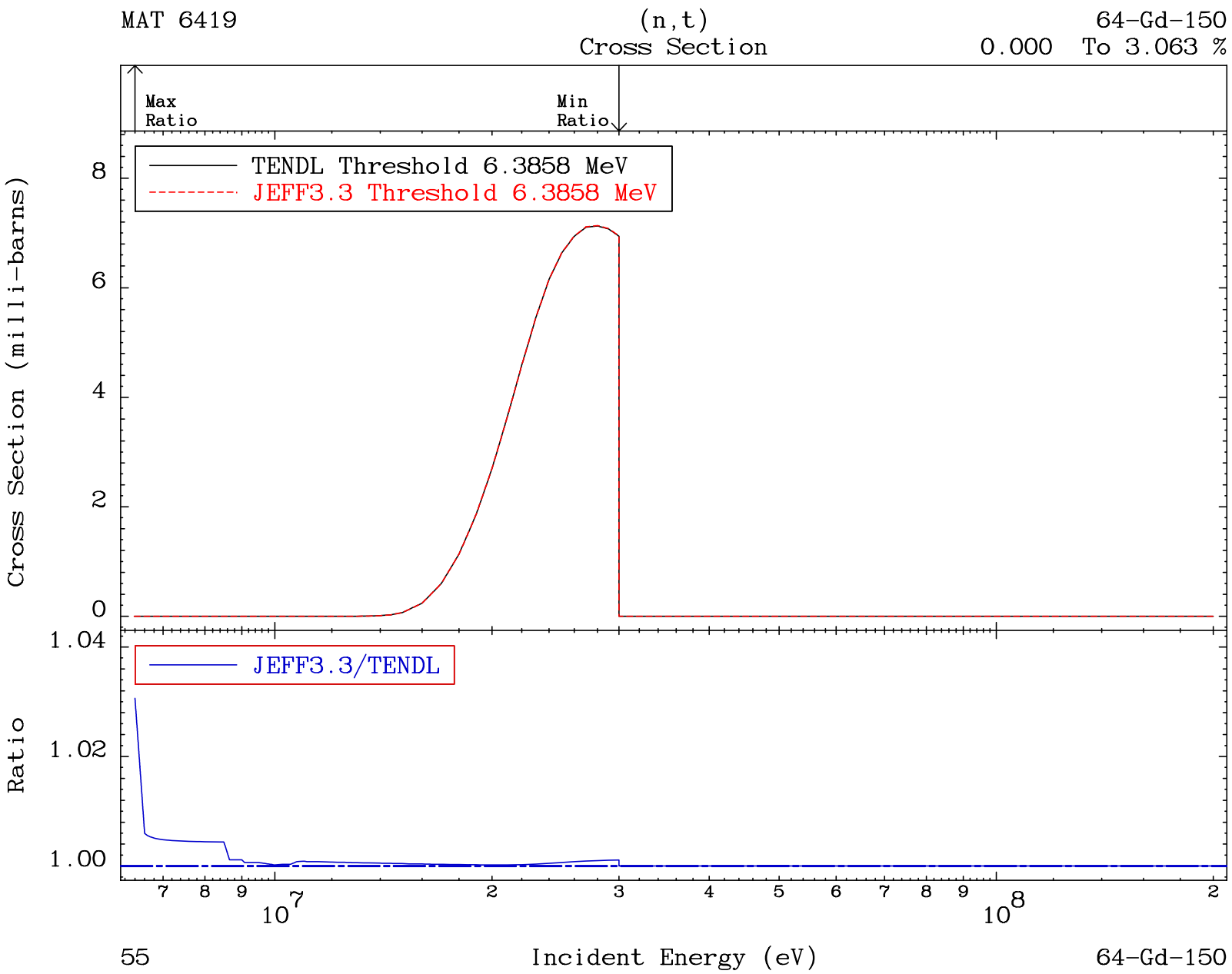

MAT 6419
MT= 80 (n,n') Level
Cross Section
64-Gd-150
-0.246 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.4330 MeV
JEFF3.3 Threshold 2.4330 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
50
Incident Energy (eV)
64-Gd-150

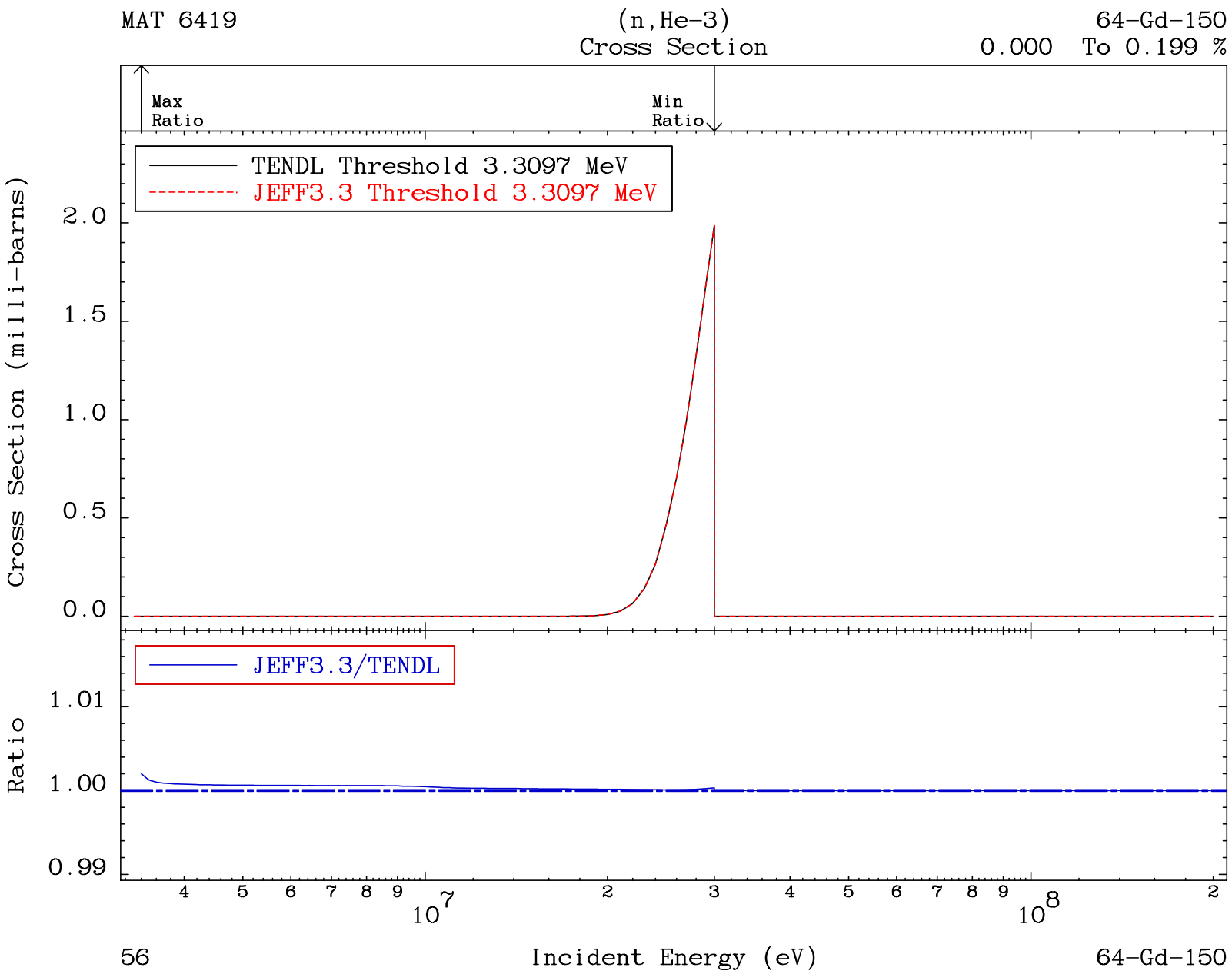

MAT 6419
(n,n') Continuum
Cross Section
64-Gd-150
-0.108 To 0.477 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.4330 MeV
JEFF3.3 Threshold 2.4330 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.010
1.000
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
51
Incident Energy (eV)
64-Gd-150

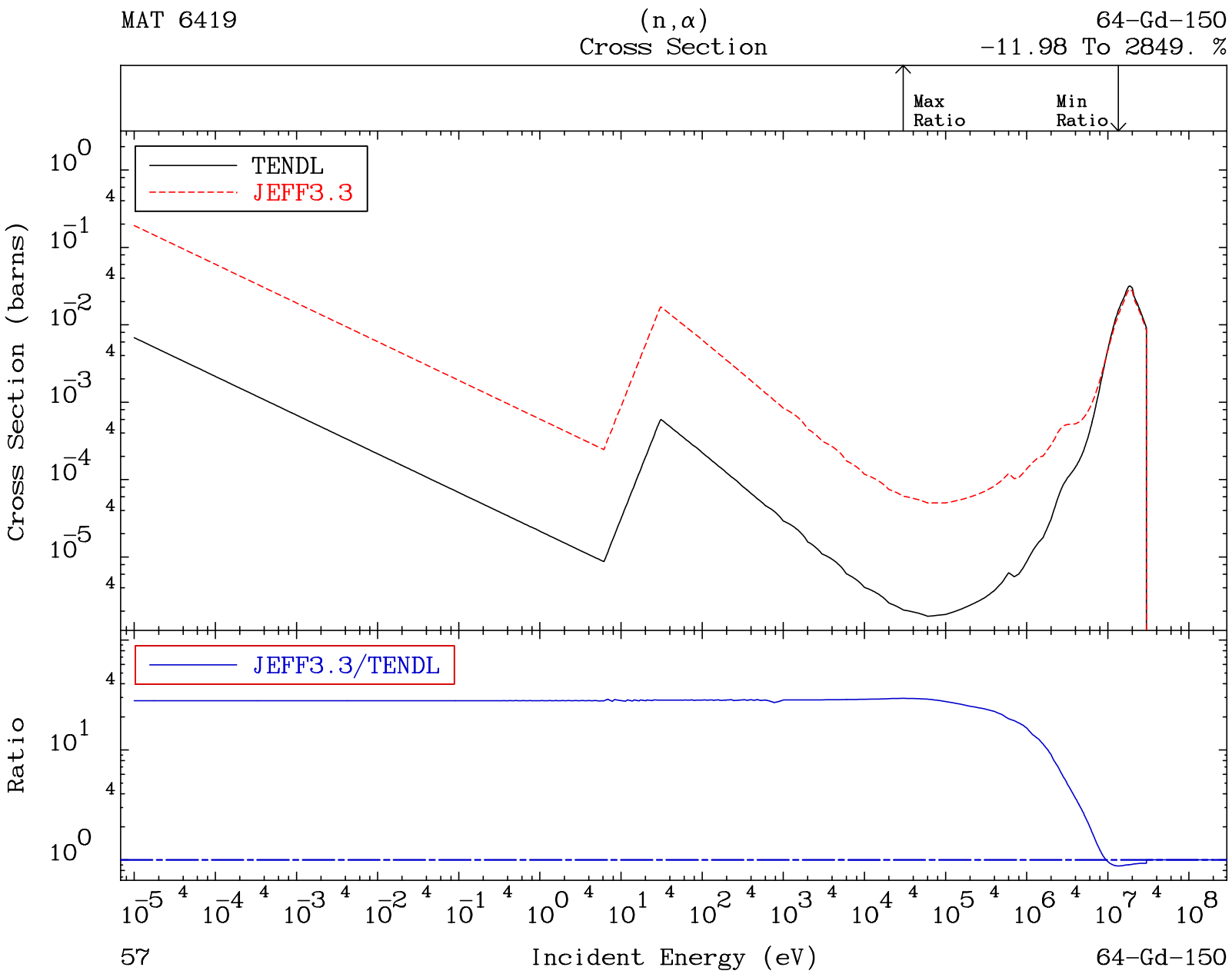

MAT 6419
(n,γ)
Cross Section
64-Gd-150
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
52
64-Gd-150

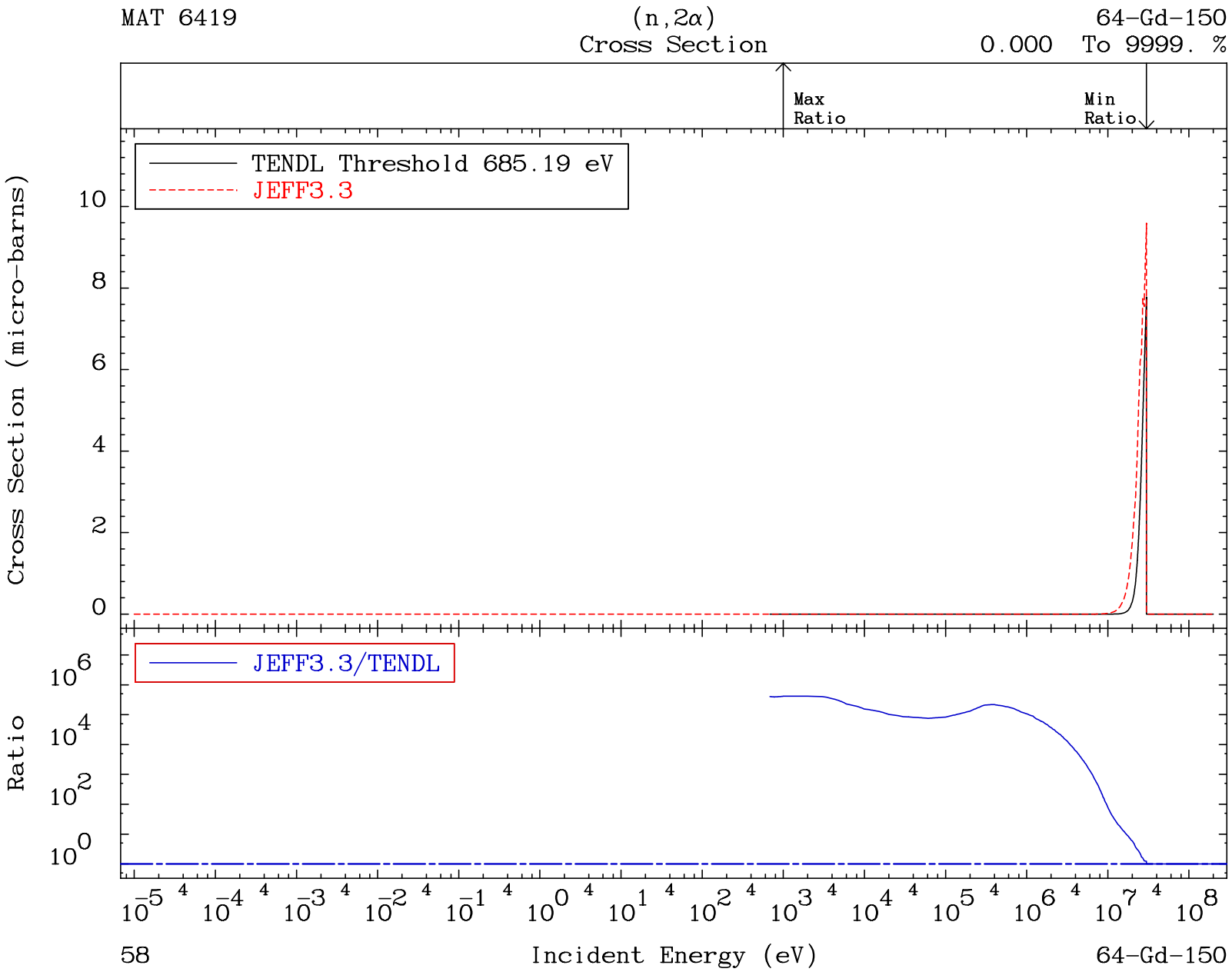

MAT 6419
(n,p)
Cross Section
64-Gd-150
-1.743 To 0.092 %
Min Ratio
Max Ratio
TENDL Threshold 190.62 keV
JEFF3.3 Threshold 190.70 keV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.000
0.990
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
53
Incident Energy (eV)
64-Gd-150

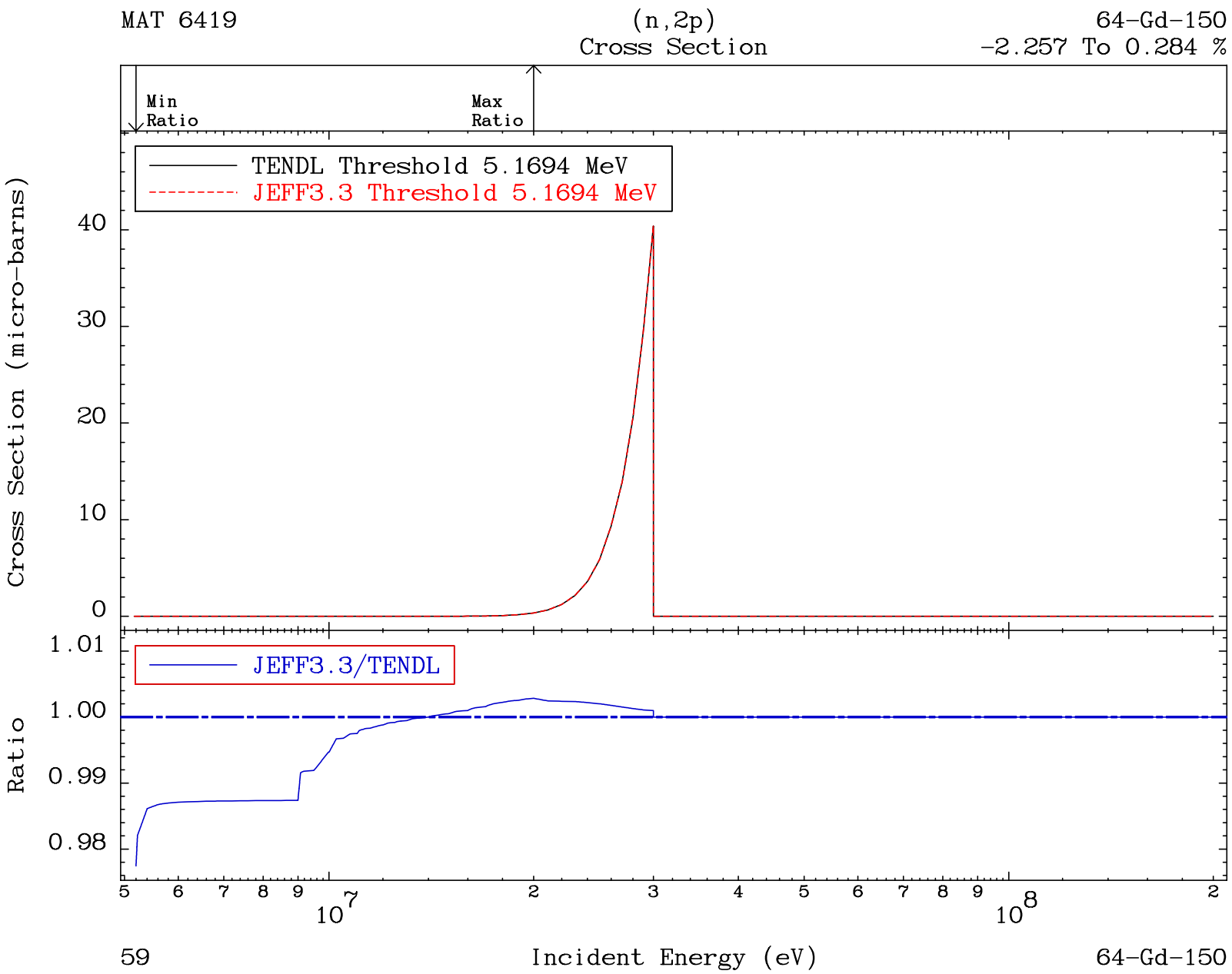

MAT 6419
(n,d)
Cross Section
64-Gd-150
-0.980 To 0.027 %
Min Ratio
Max Ratio
TENDL Threshold 4.4167 MeV
JEFF3.3 Threshold 4.4167 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
54
Incident Energy (eV)
64-Gd-150

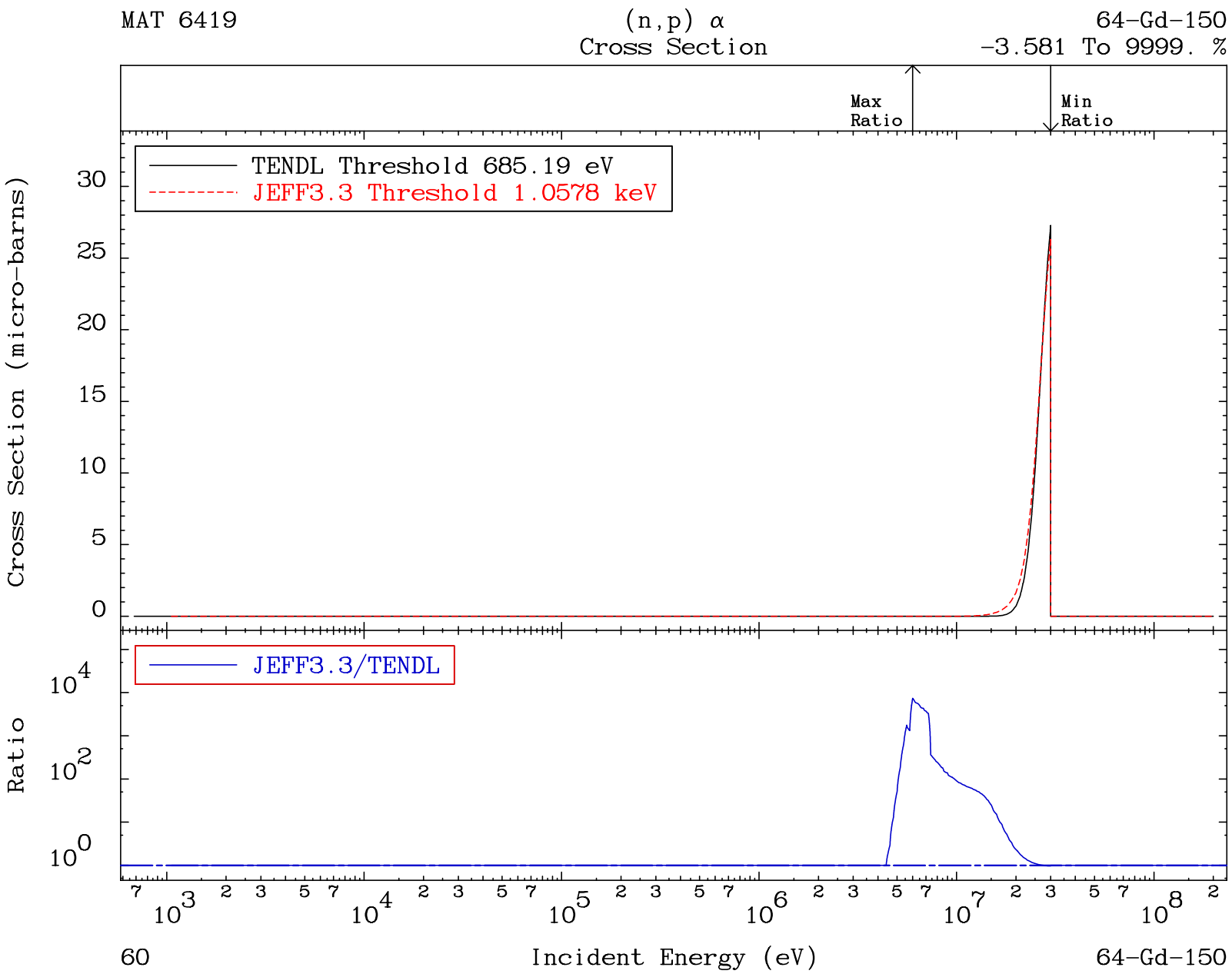

MAT 6419
(n,t)
Cross Section
64-Gd-150
0.000 To 3.063 %
Max Ratio
Min Ratio
TENDL Threshold 6.3858 MeV
JEFF3.3 Threshold 6.3858 MeV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
1.00
1.02
1.04
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
55
Incident Energy (eV)
64-Gd-150

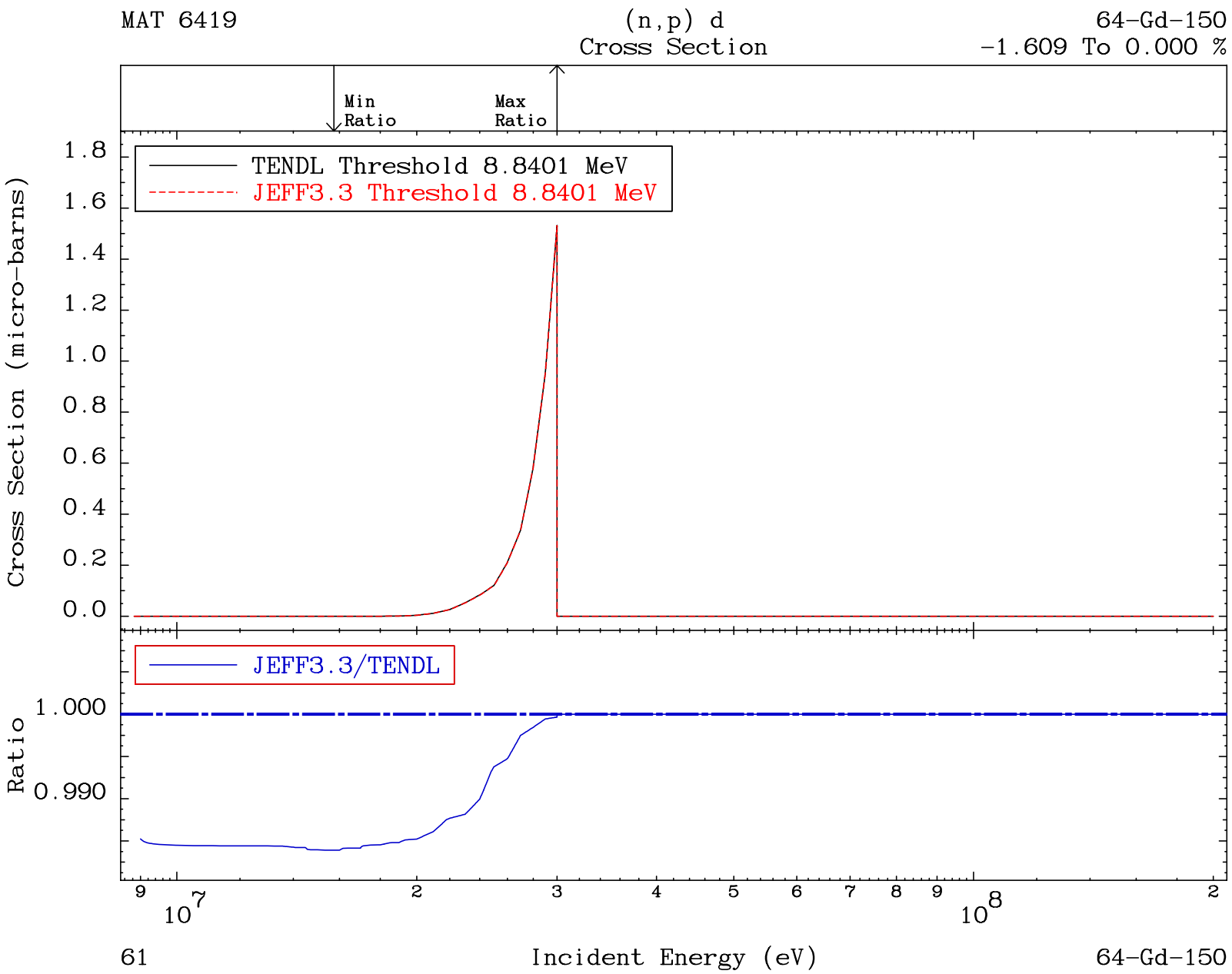

MAT 6419
(n,He-3)
Cross Section
64-Gd-150
0.000 To 0.199 %
Max Ratio
Min Ratio
TENDL Threshold 3.3097 MeV
JEFF3.3 Threshold 3.3097 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
56
Incident Energy (eV)
64-Gd-150

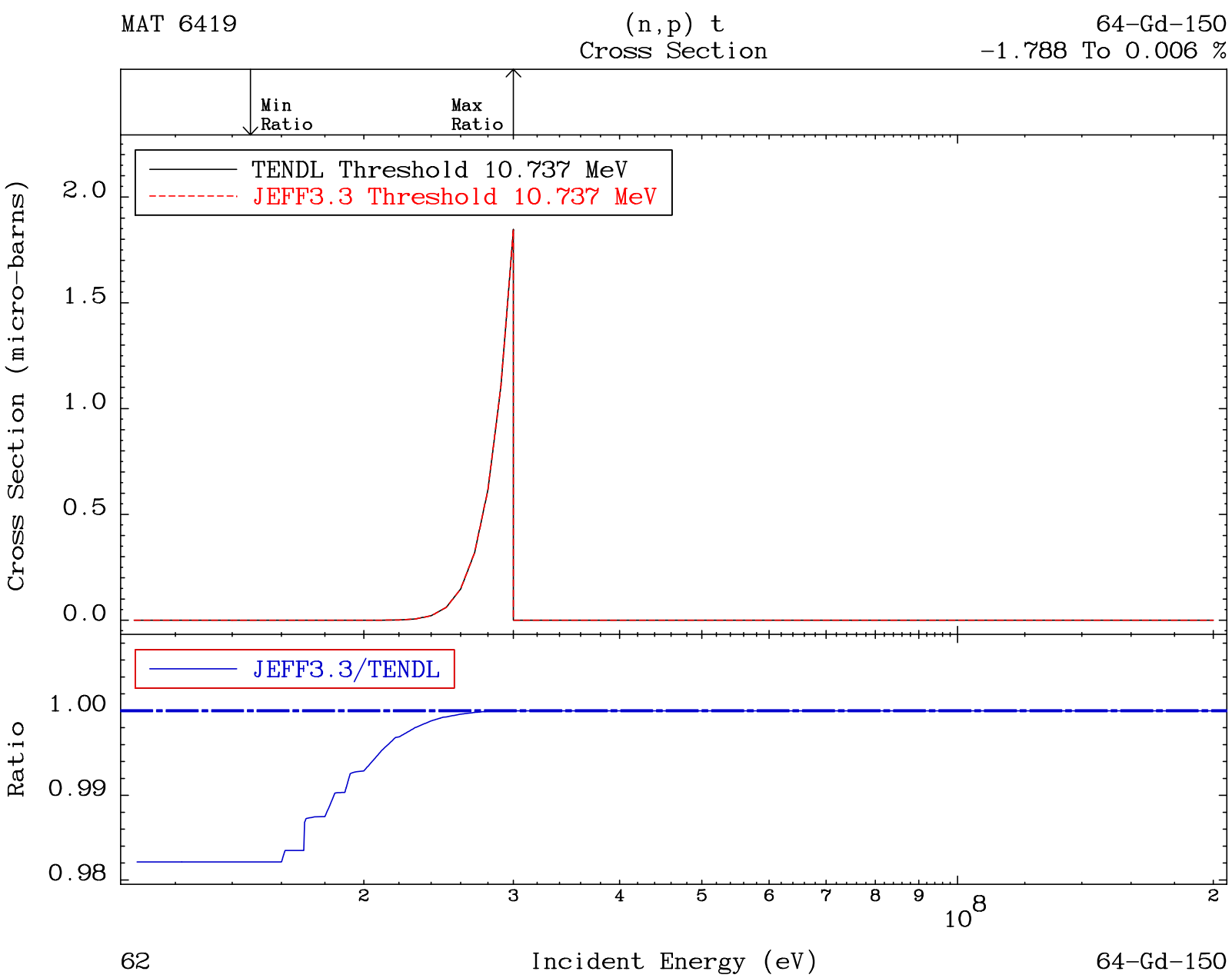

MAT 6419
(n,α)
Cross Section
64-Gd-150
-11.98 To 2849. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
57
64-Gd-150

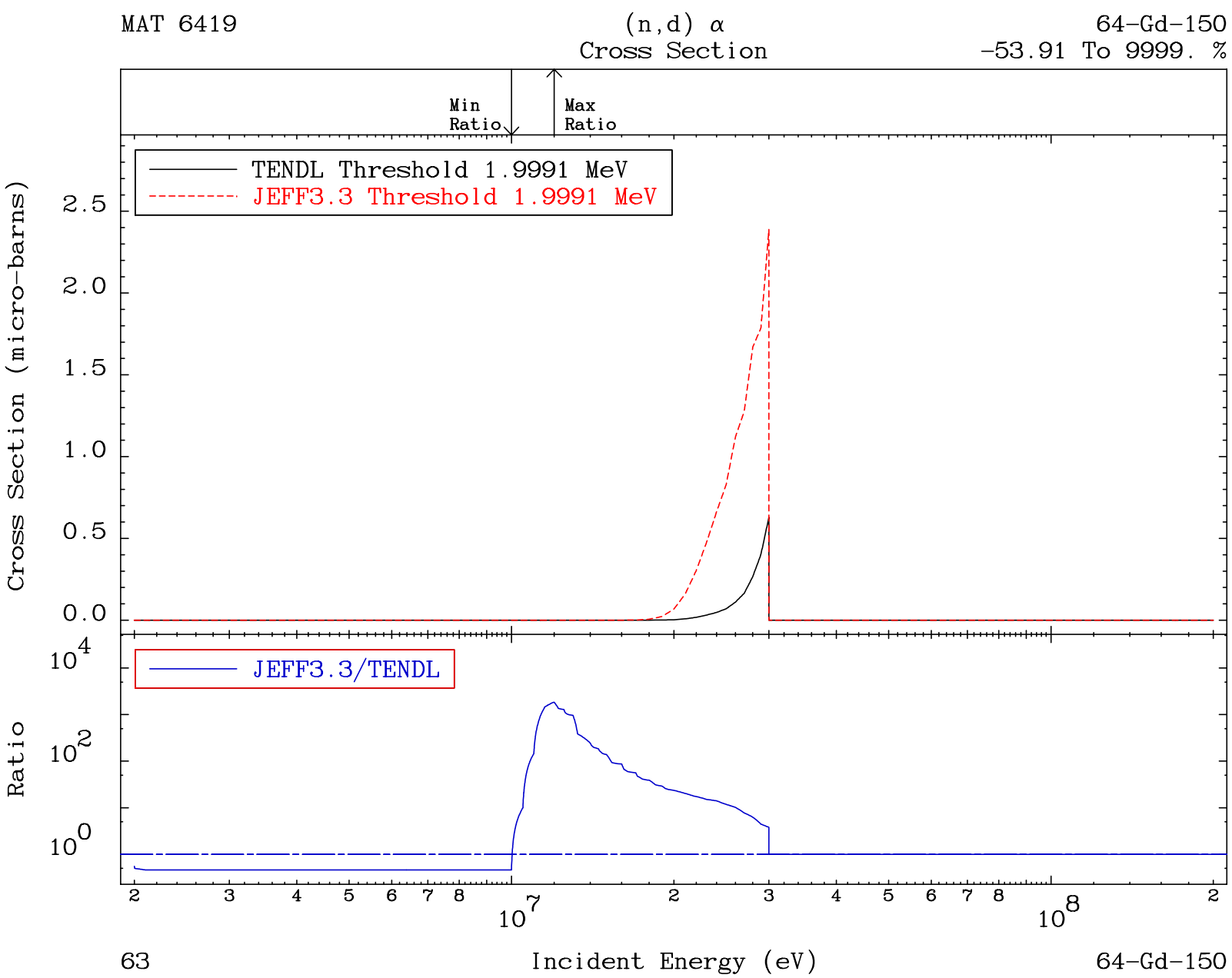

MAT 6419
(n,2α)
Cross Section
64-Gd-150
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 685.19 eV
JEFF3.3
Cross Section (micro-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
58
64-Gd-150

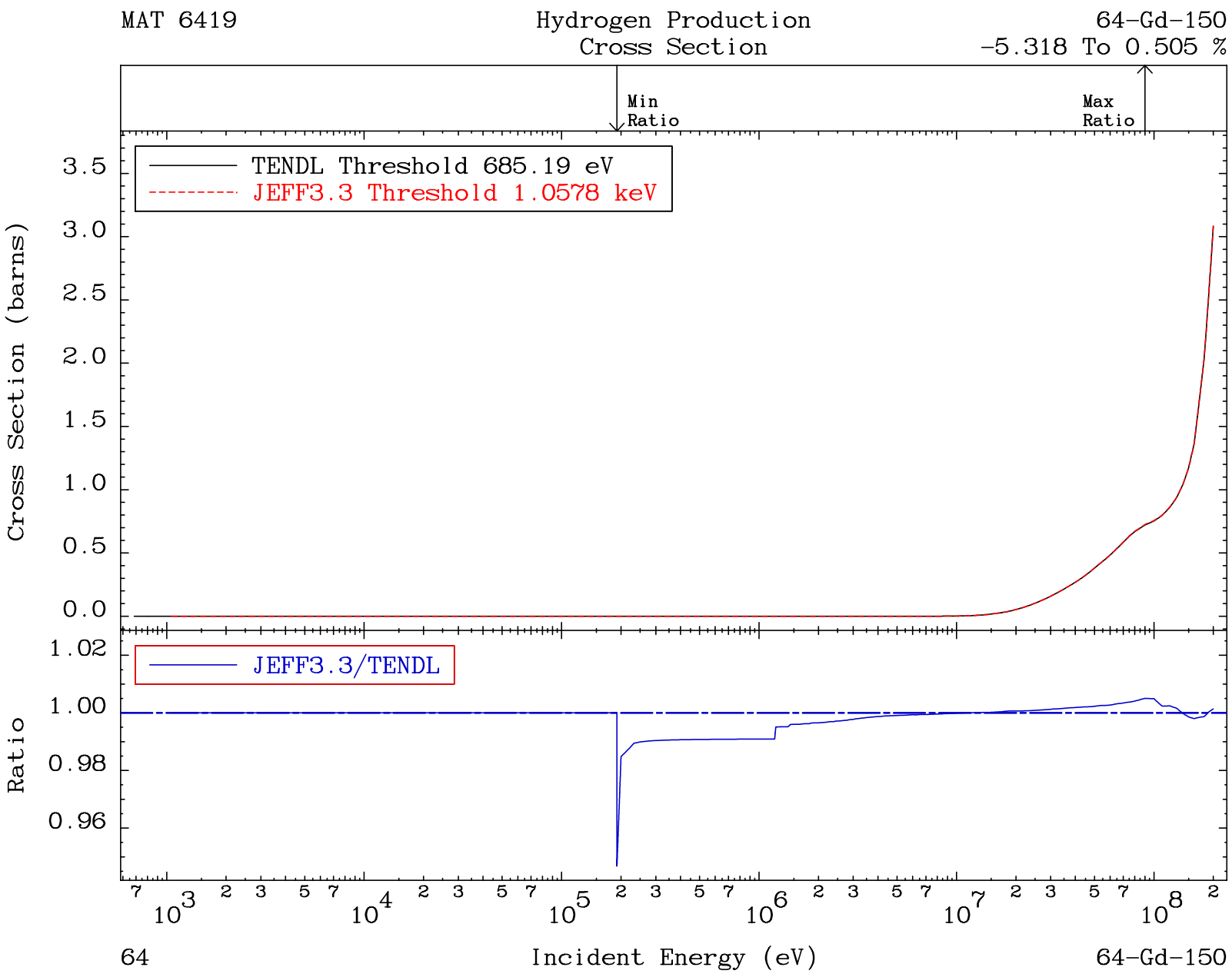

MAT 6419
(n,2p)
Cross Section
64-Gd-150
-2.257 To 0.284 %
Min Ratio
Max Ratio
TENDL Threshold 5.1694 MeV
JEFF3.3 Threshold 5.1694 MeV
Cross Section (micro-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
0.98
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
59
Incident Energy (eV)
64-Gd-150

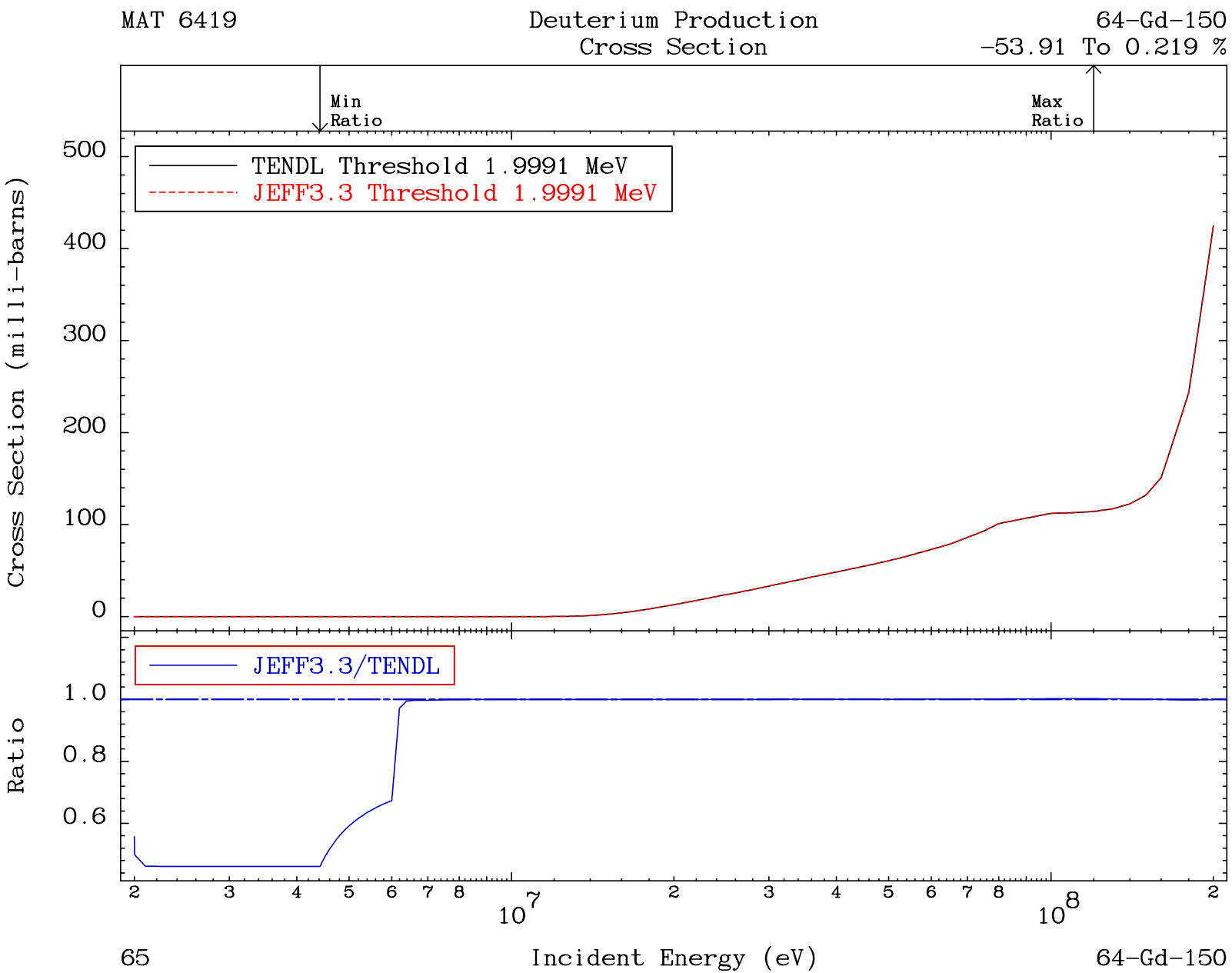

MAT 6419
(n,p) α
Cross Section
64-Gd-150
-3.581 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 685.19 eV
JEFF3.3 Threshold 1.0578 keV
Cross Section (micro-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
10^3
10^4
10^5
10^6
10^7
10^8
60
Incident Energy (eV)
64-Gd-150

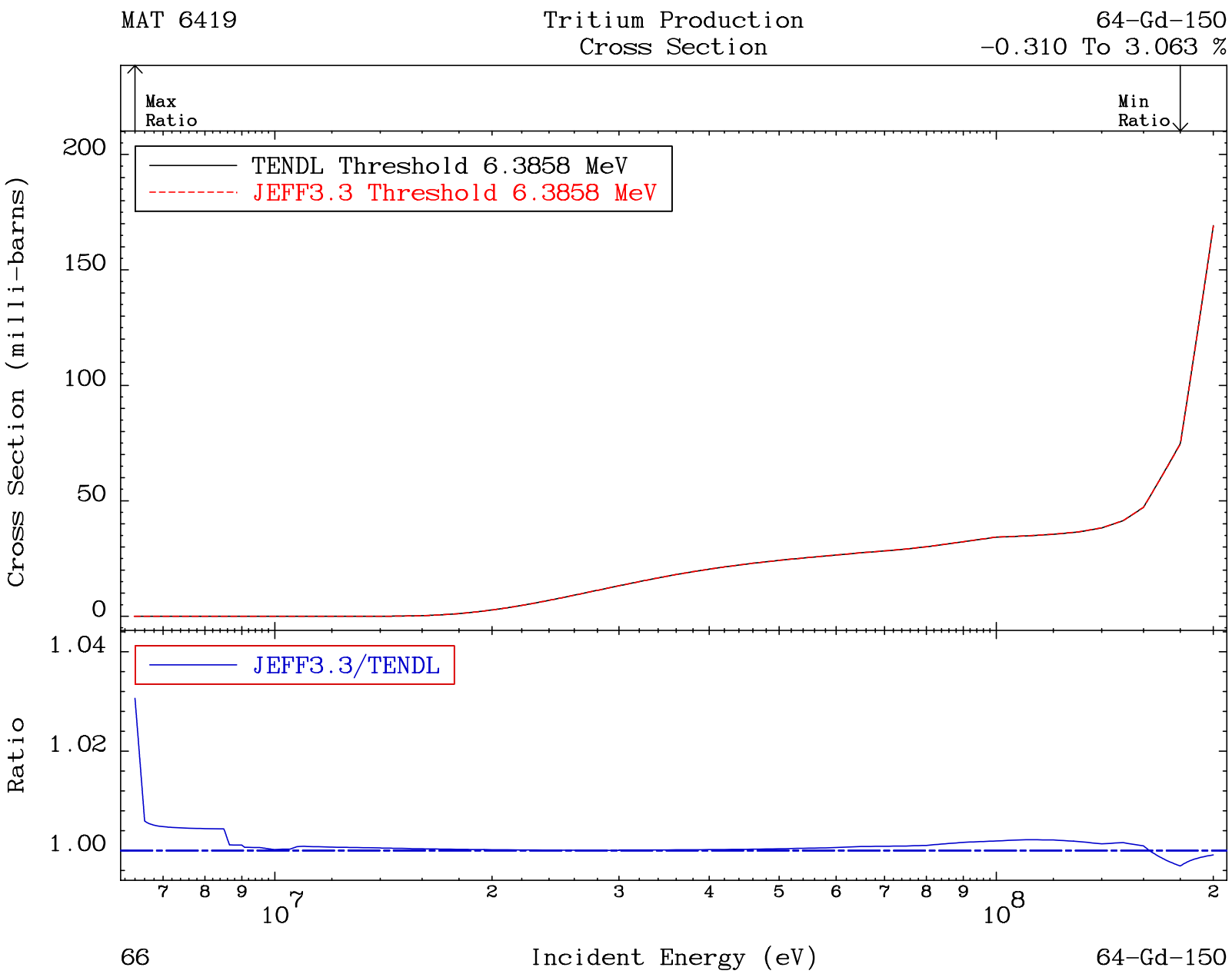

MAT 6419
(n,p) d
Cross Section
64-Gd-150
-1.609 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 8.8401 MeV
JEFF3.3 Threshold 8.8401 MeV
Cross Section (micro-barns)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.000
0.990
9
10^7
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
64-Gd-150

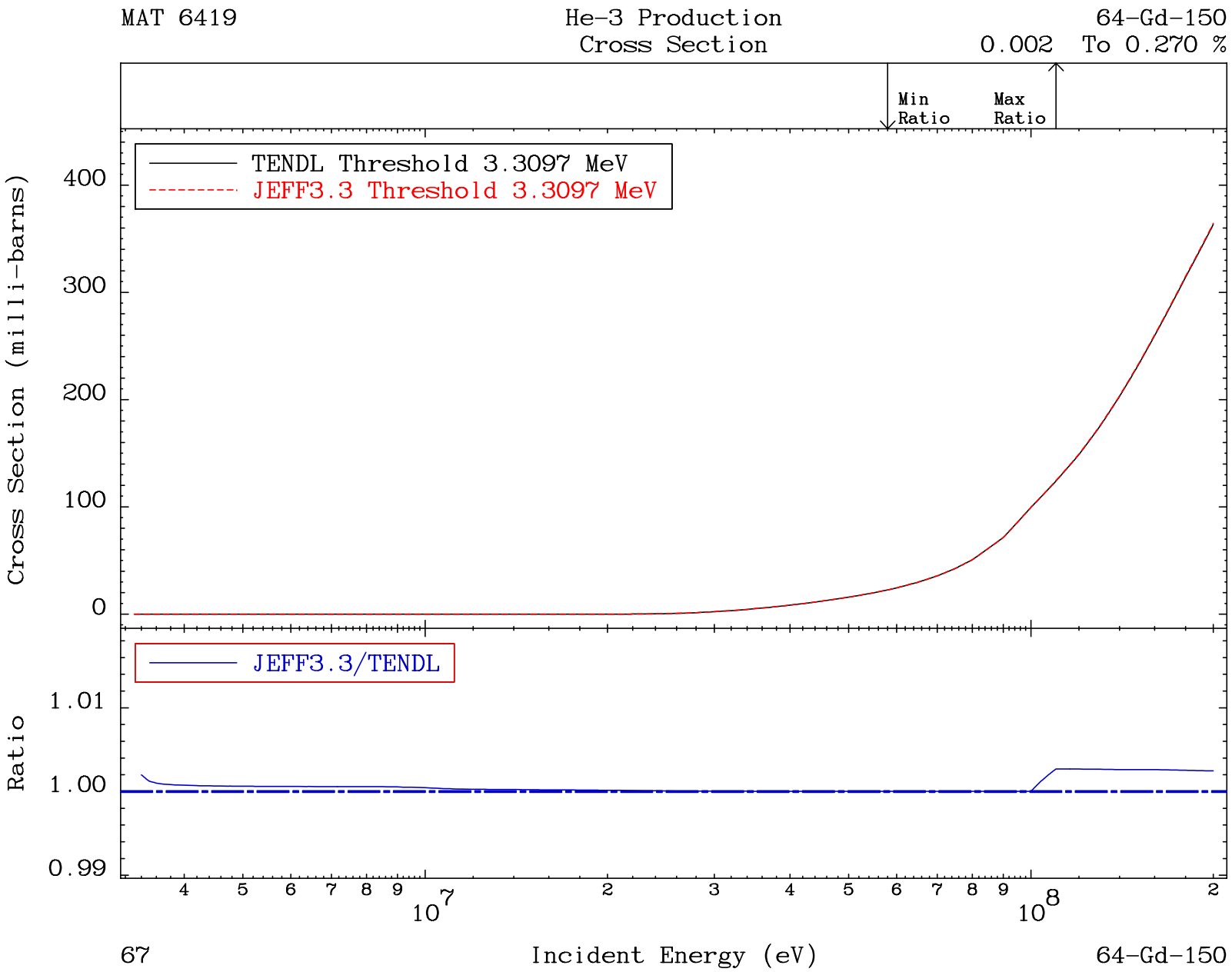

MAT 6419
(n,p) t
Cross Section
64-Gd-150
-1.788 To 0.006 %
Min Ratio
Max Ratio
TENDL Threshold 10.737 MeV
JEFF3.3 Threshold 10.737 MeV
Cross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
2
3
4
5
6
7
8
9
10^8
2
62
Incident Energy (eV)
64-Gd-150

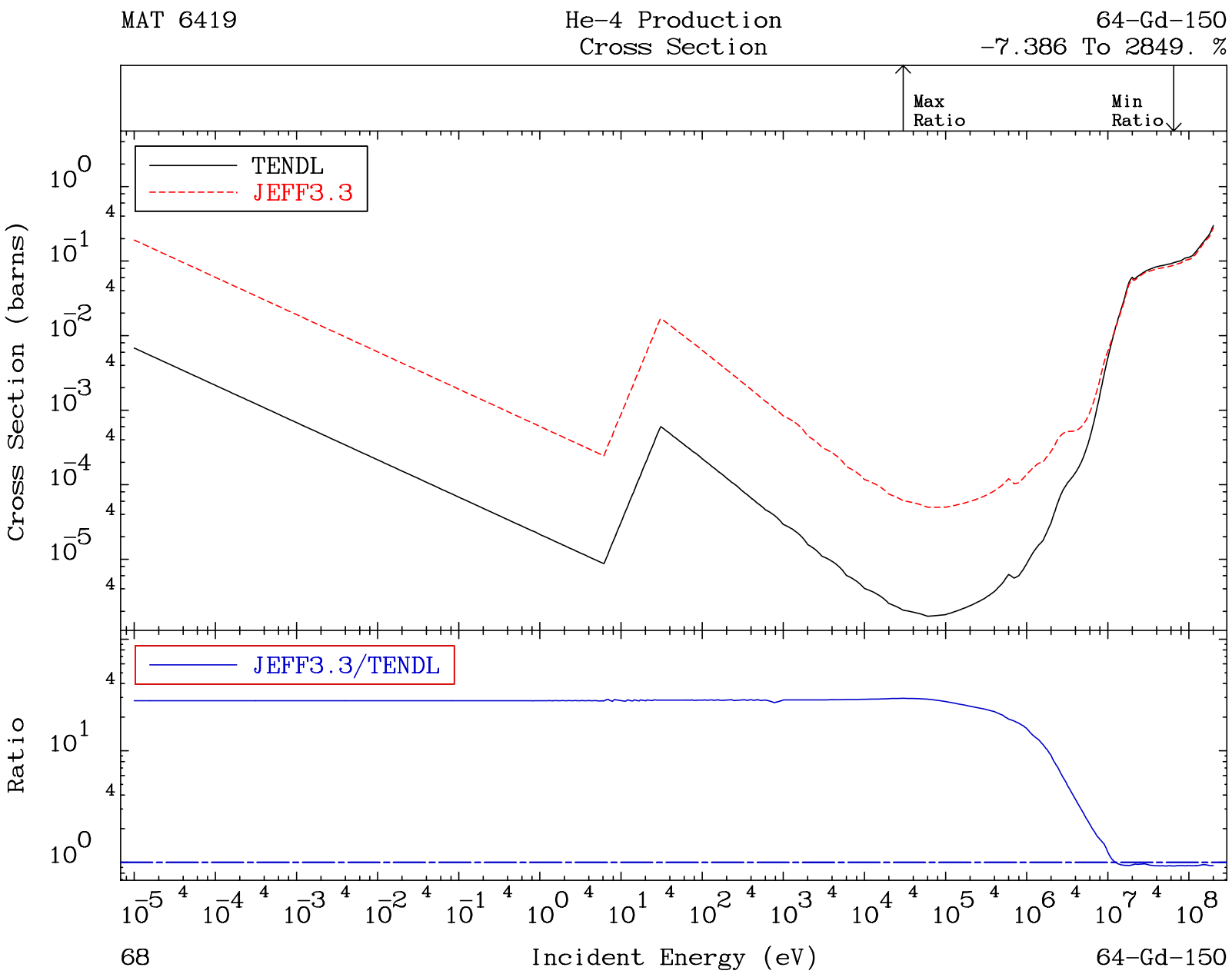

MAT 6419
(n,d) α
Cross Section
64-Gd-150
-53.91 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9991 MeV
JEFF3.3 Threshold 1.9991 MeV
Cross Section (micro-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
63
Incident Energy (eV)
64-Gd-150

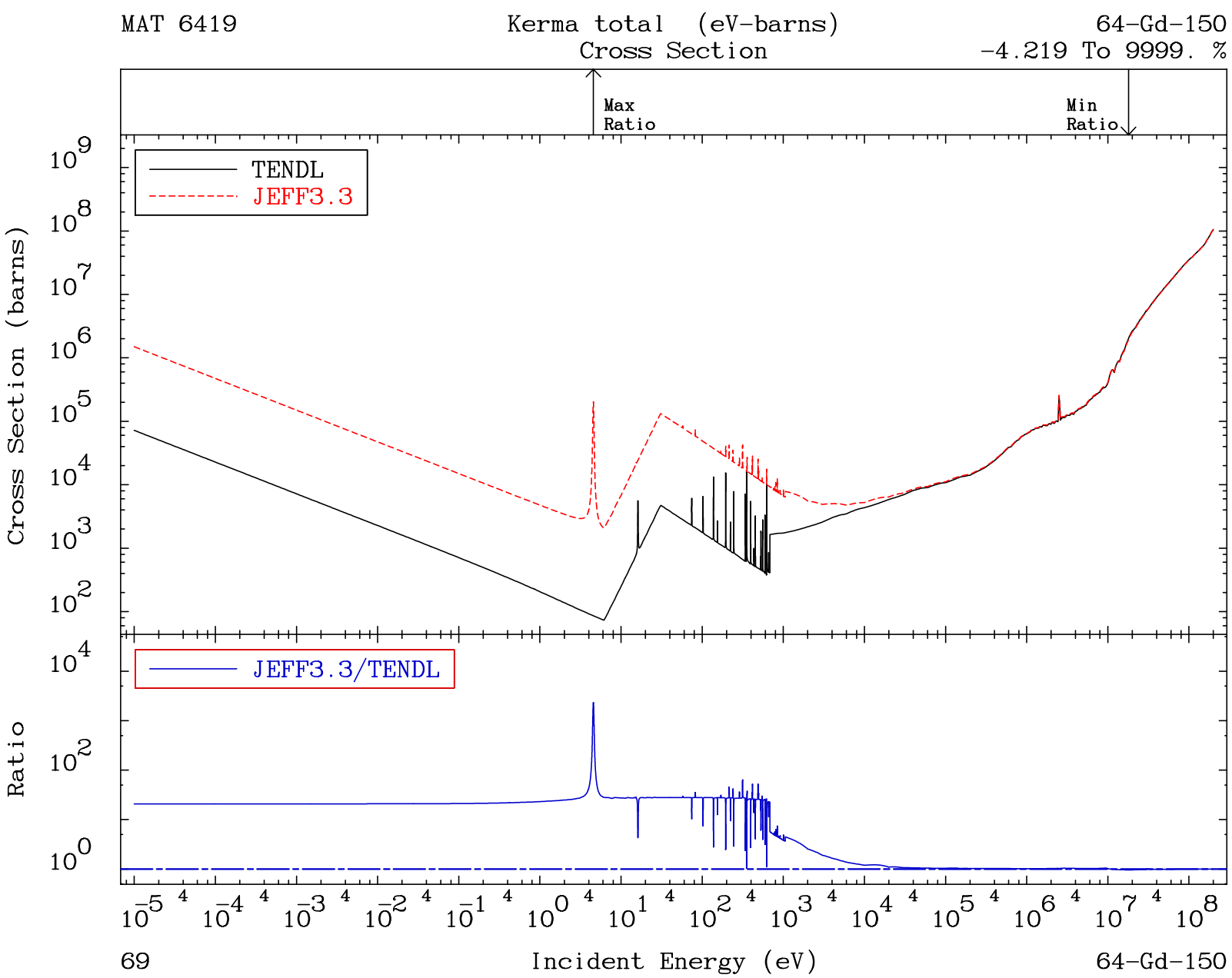

MAT 6419
Hydrogen Production
Cross Section
64-Gd-150
-5.318 To 0.505 %
Min Ratio
Max Ratio
TENDL Threshold 685.19 eV
JEFF3.3 Threshold 1.0578 keV
Cross Section (barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.02
1.00
0.98
0.96
7 2 3 5 7 2 3 5 7 2 3 5 7 2 3 5 7 2 3 5 7 2
10^3 10^4 10^5 10^6 10^7 10^8
64
Incident Energy (eV)
64-Gd-150

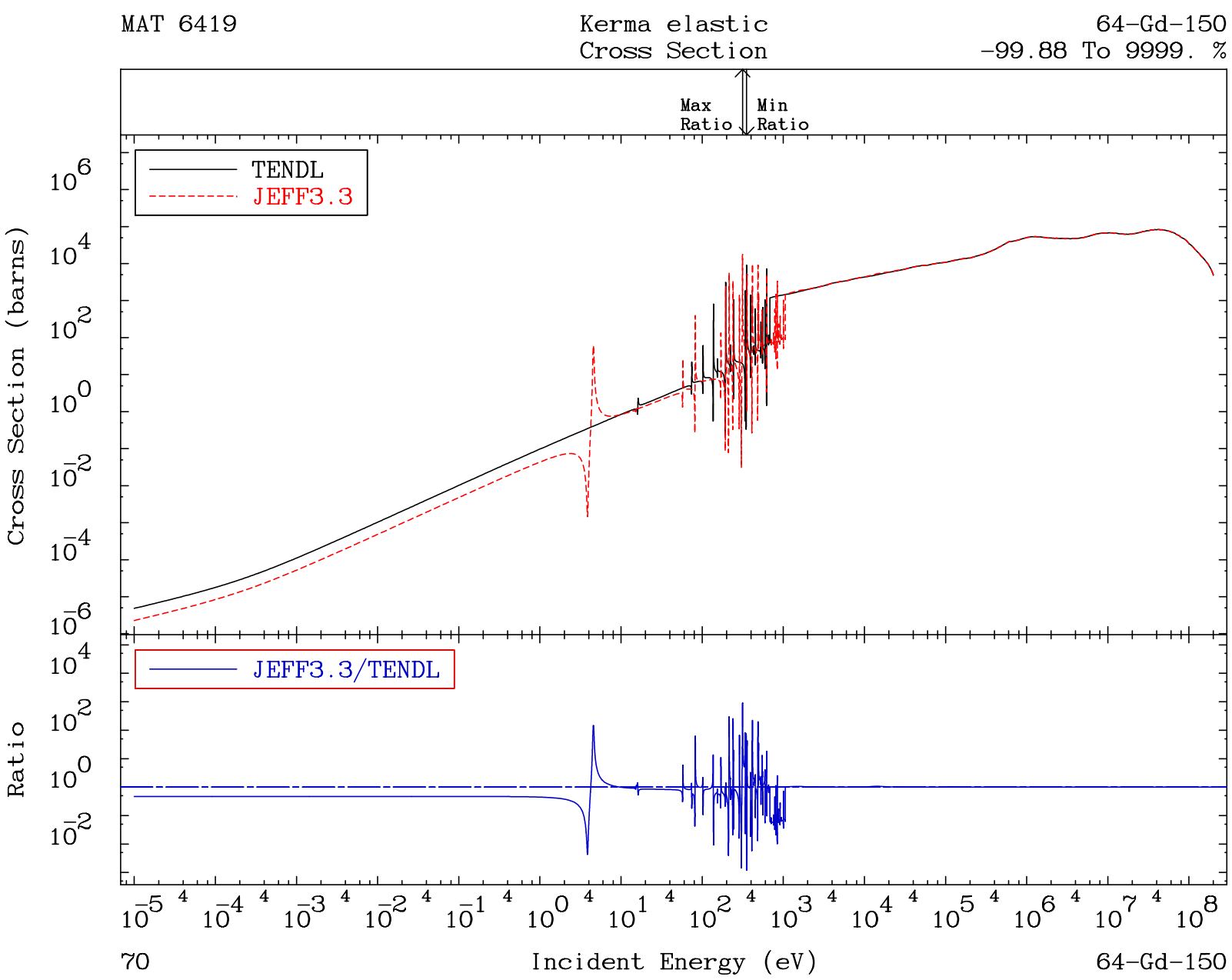

MAT 6419
Deuterium Production
Cross Section
64-Gd-150
-53.91 To 0.219 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.9991 MeV
JEFF3.3 Threshold 1.9991 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.0
0.8
0.6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
65
Incident Energy (eV)
64-Gd-150

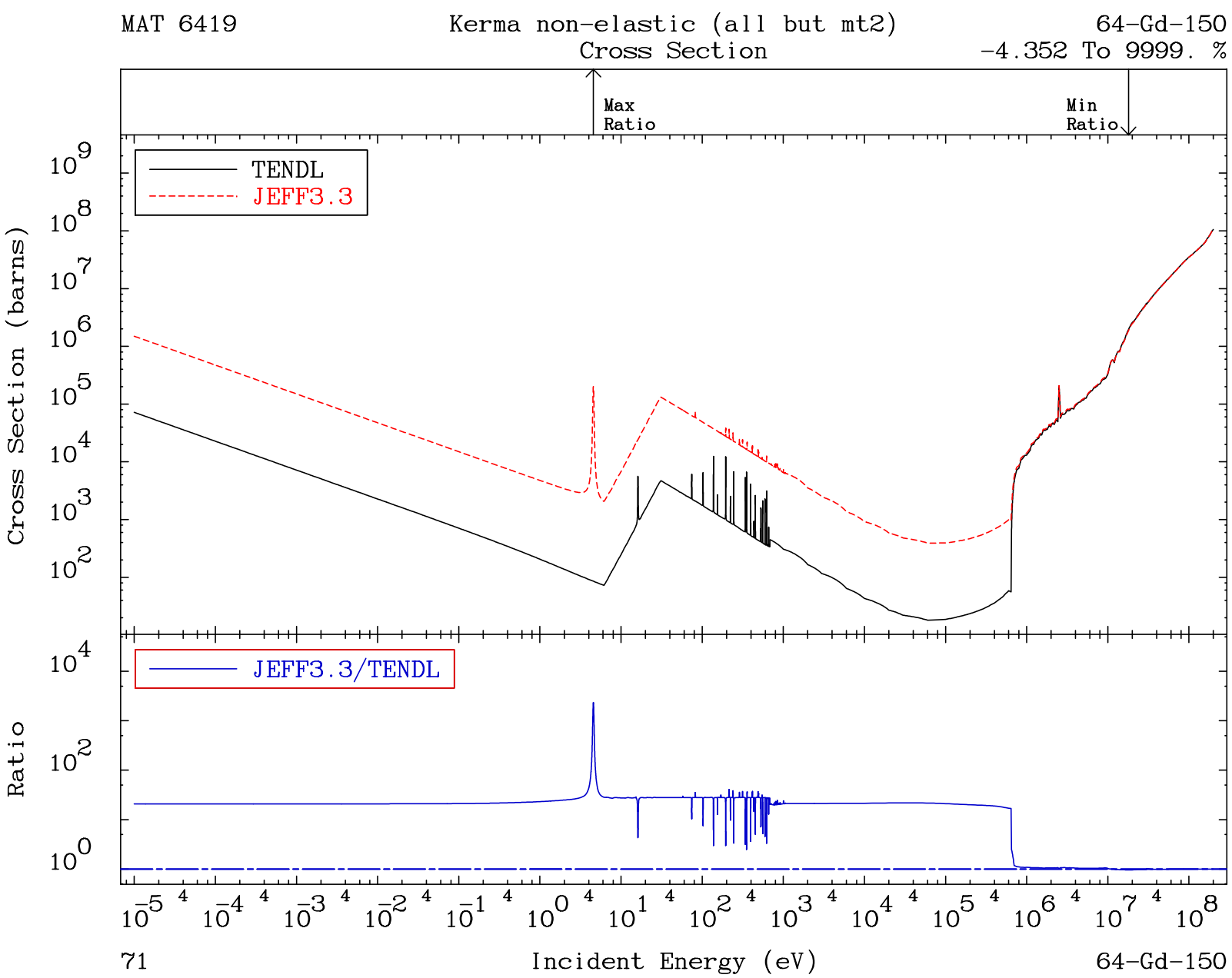

MAT 6419
Tritium Production
Cross Section
64-Gd-150
-0.310 To 3.063 %
Max
Ratio
Min
Ratio
TENDL Threshold 6.3858 MeV
JEFF3.3 Threshold 6.3858 MeV
Cross Section (milli-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.04
1.02
1.00
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
66
Incident Energy (eV)
64-Gd-150

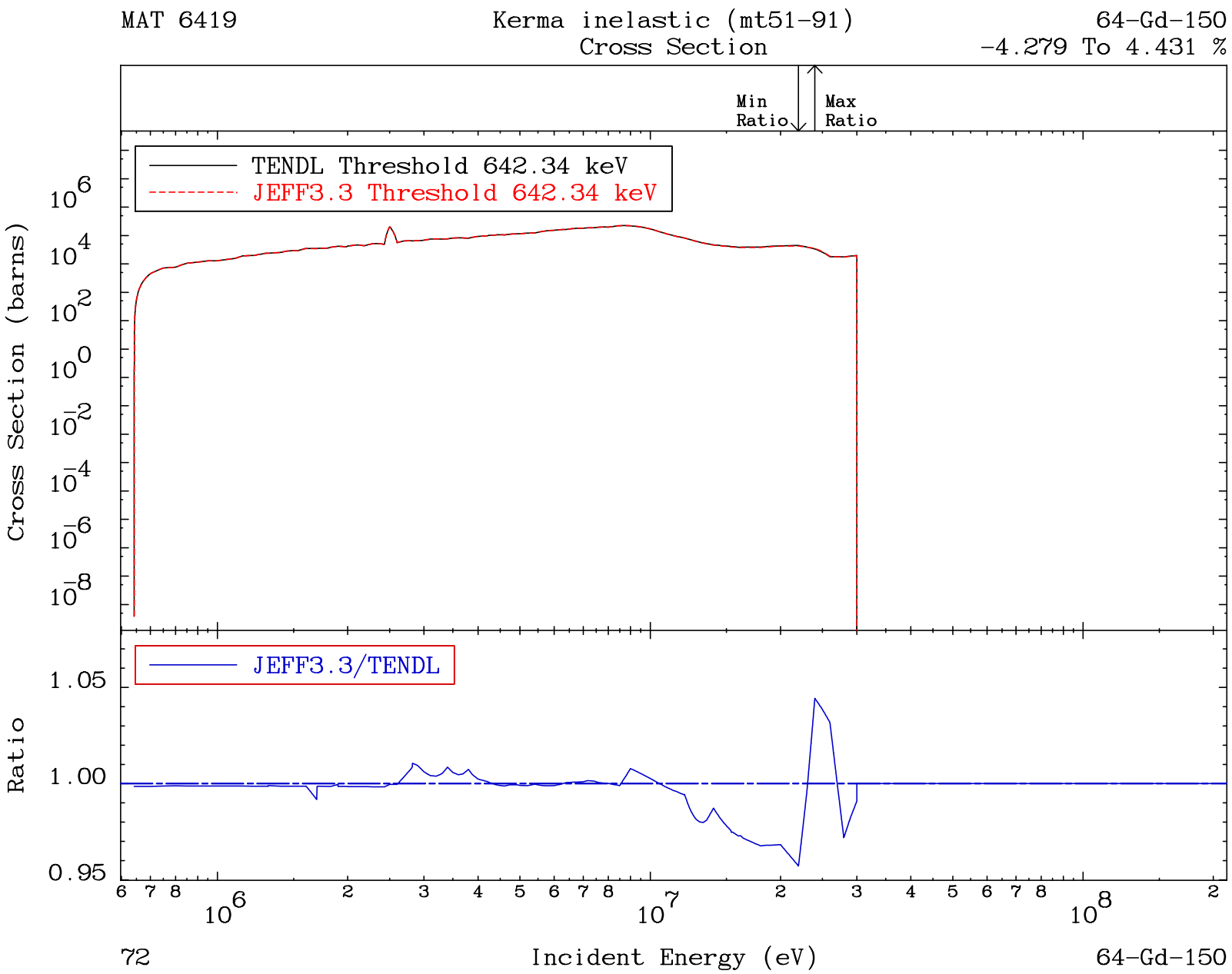

MAT 6419
He-3 Production
Cross Section
64-Gd-150
0.002 To 0.270 %
Min Ratio
Max Ratio
TENDL Threshold 3.3097 MeV
JEFF3.3 Threshold 3.3097 MeV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
67
Incident Energy (eV)
64-Gd-150

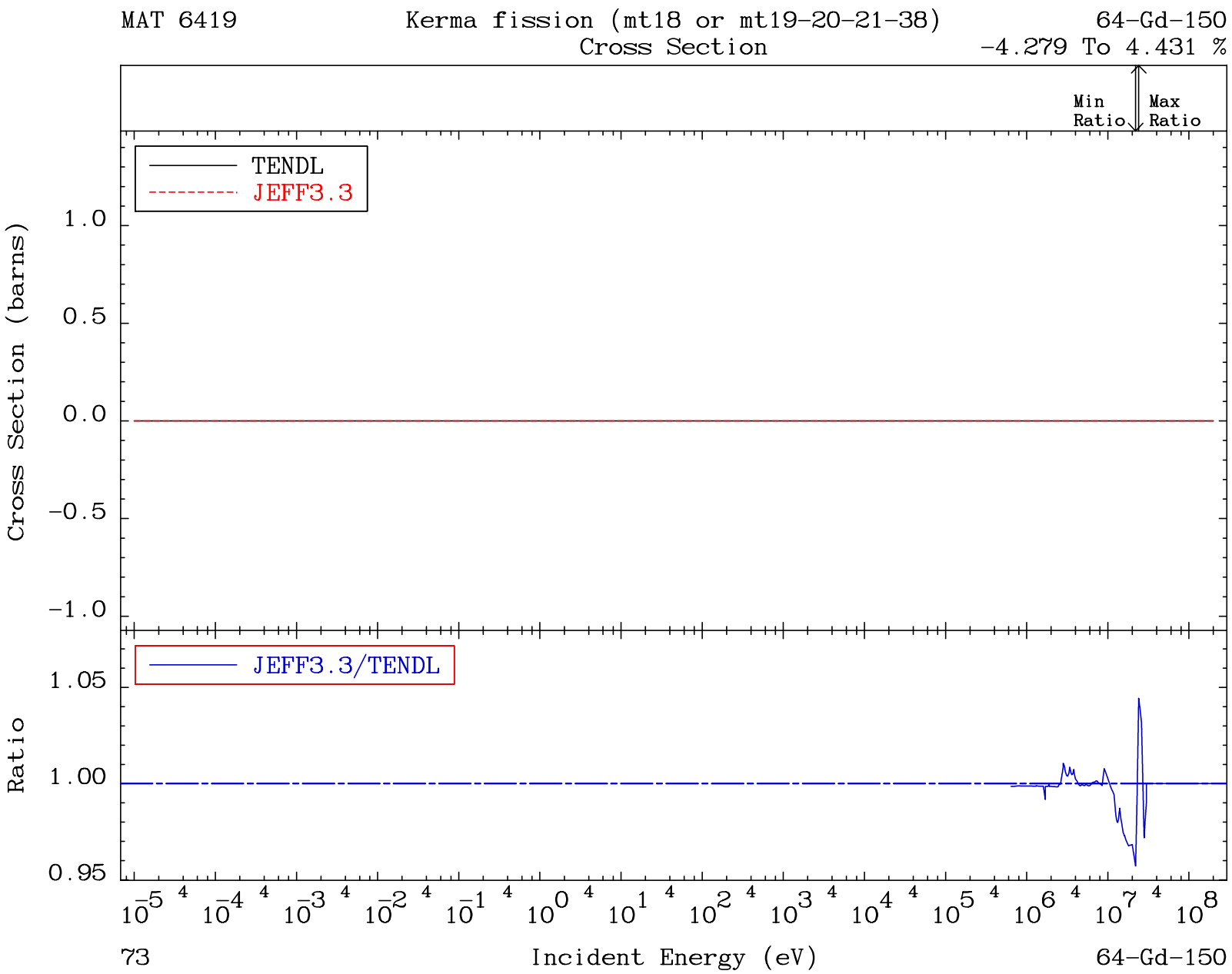

MAT 6419
He-4 Production
Cross Section
64-Gd-150
-7.386 To 2849. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
64-Gd-150

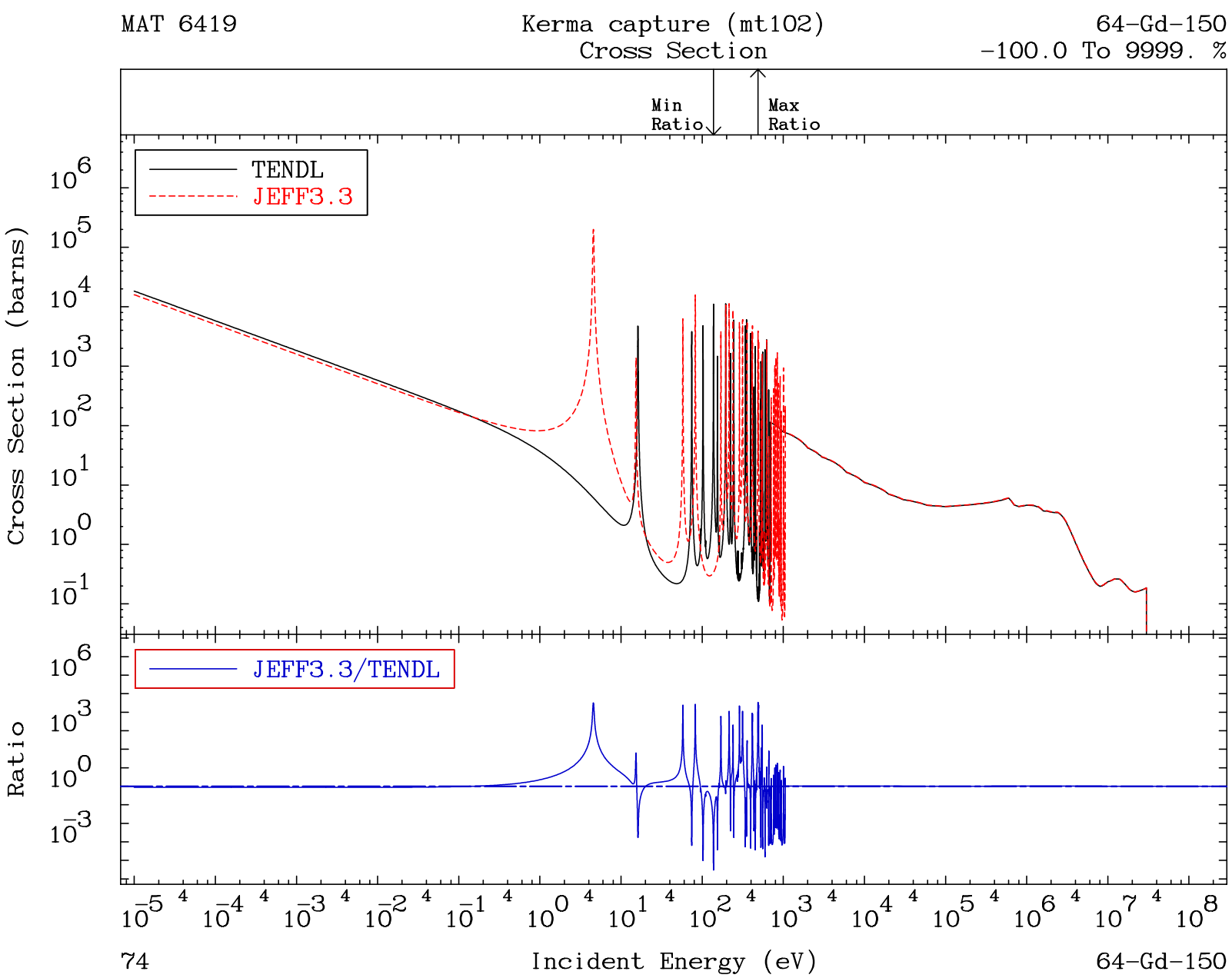

MAT 6419
Kerma total (eV-barns)
Cross Section
64-Gd-150
-4.219 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
69
64-Gd-150

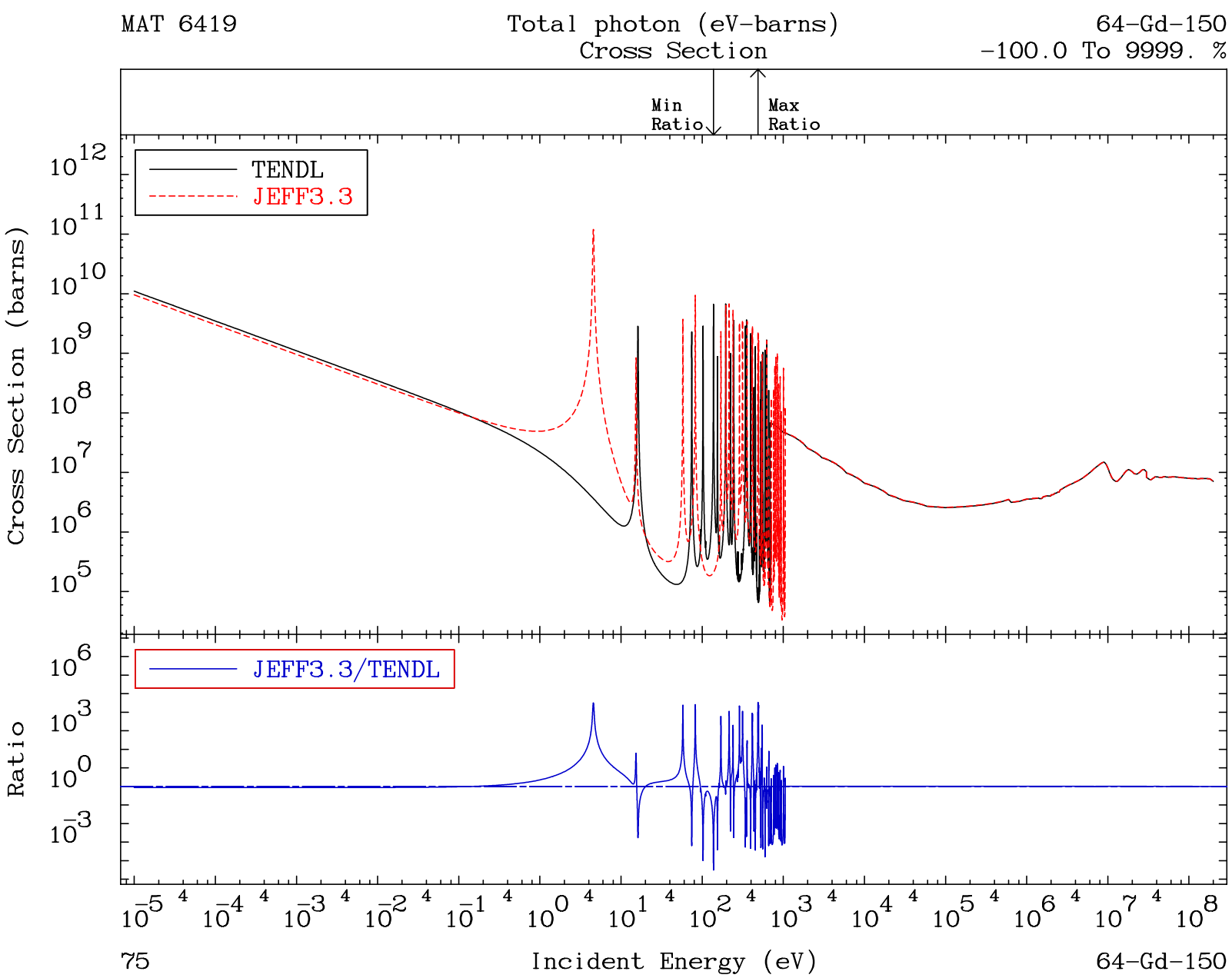

MAT 6419
Kerma elastic
Cross Section
64-Gd-150
-99.88 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
70
64-Gd-150

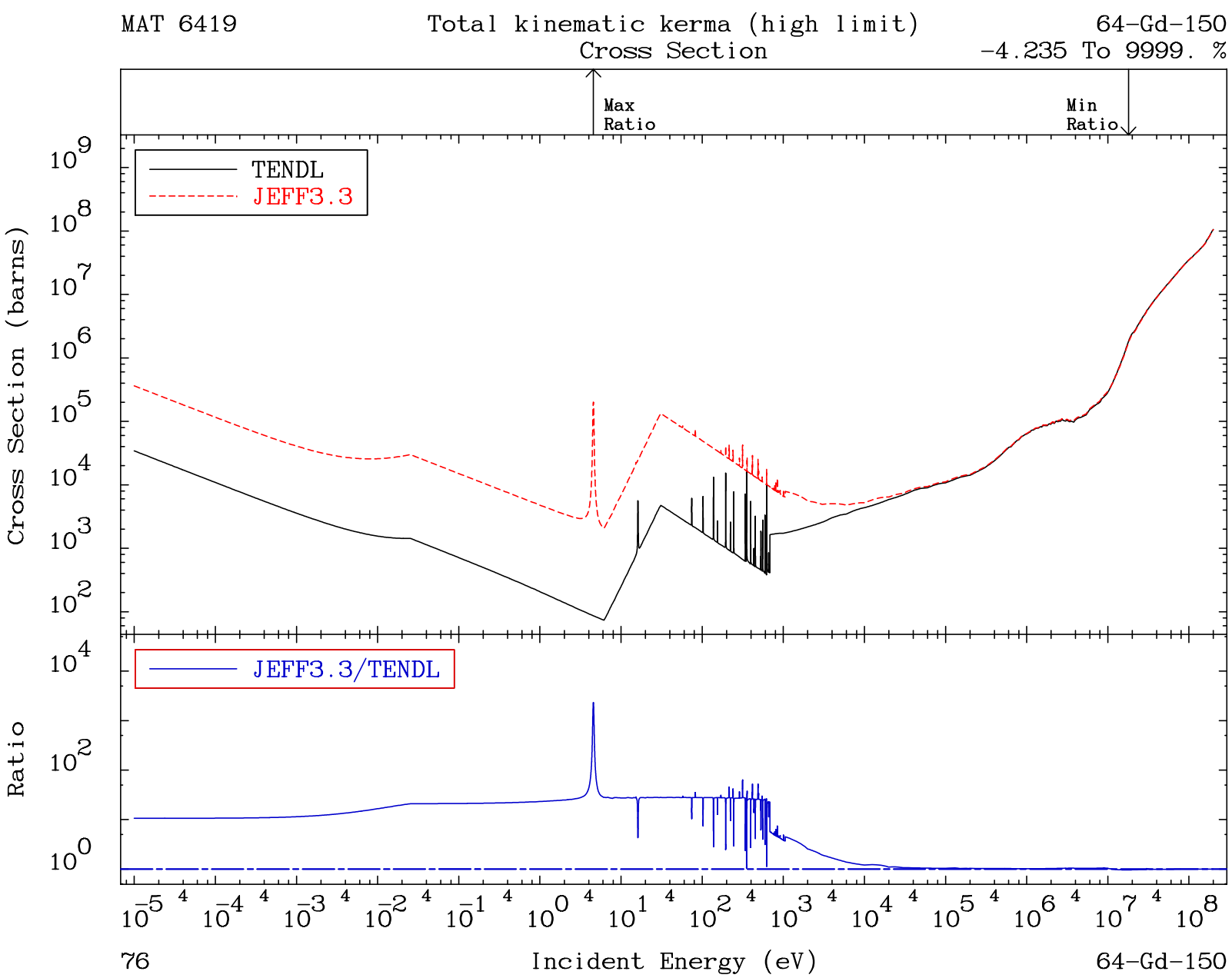

MAT 6419
Kerma non-elastic (all but mt2)
Cross Section
64-Gd-150
-4.352 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
71
64-Gd-150

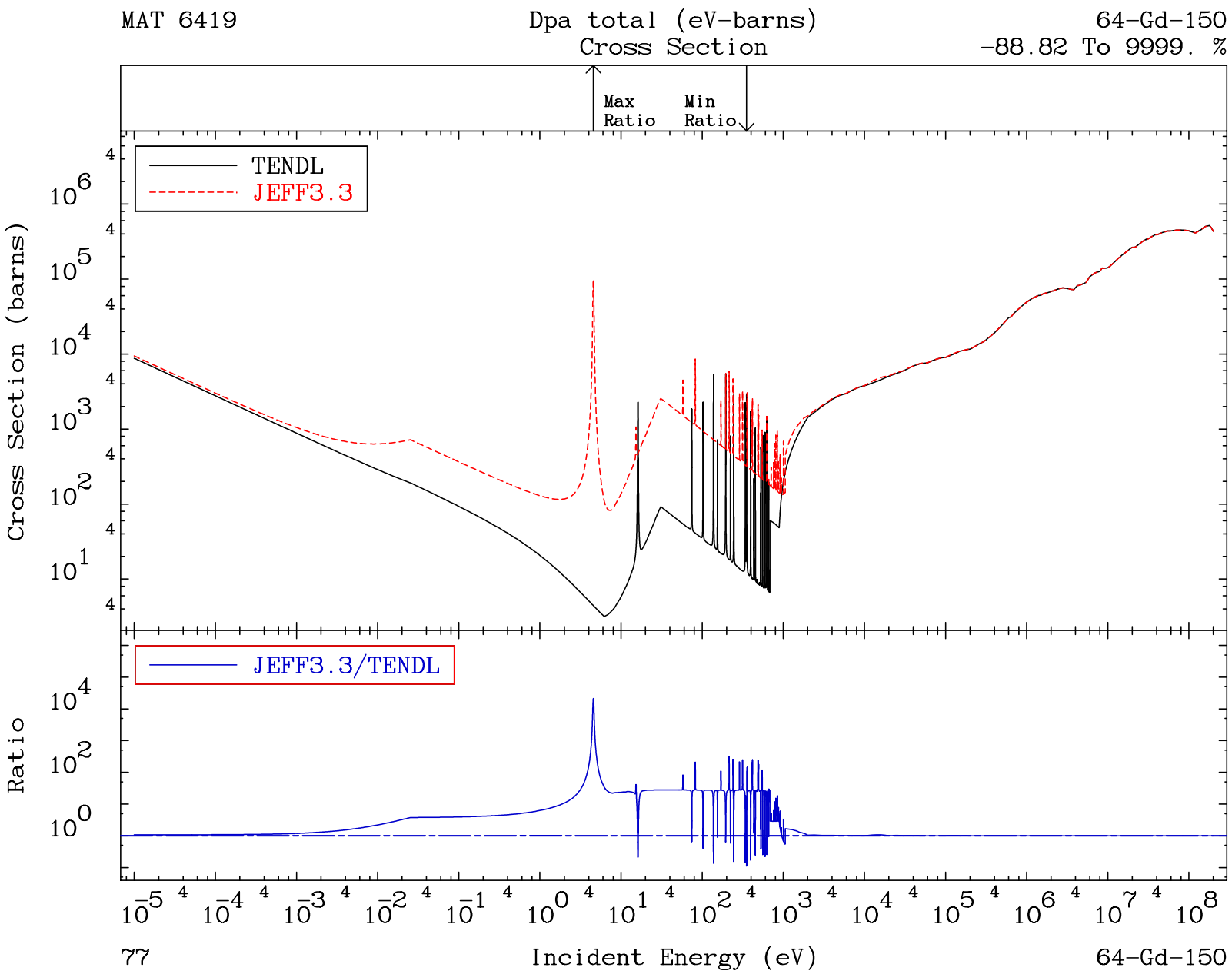

MAT 6419
Kerma inelastic (mt51-91)
Cross Section
64-Gd-150
-4.279 To 4.431 %
Min Ratio
Max Ratio
TENDL Threshold 642.34 keV
JEFF3.3 Threshold 642.34 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
72
64-Gd-150

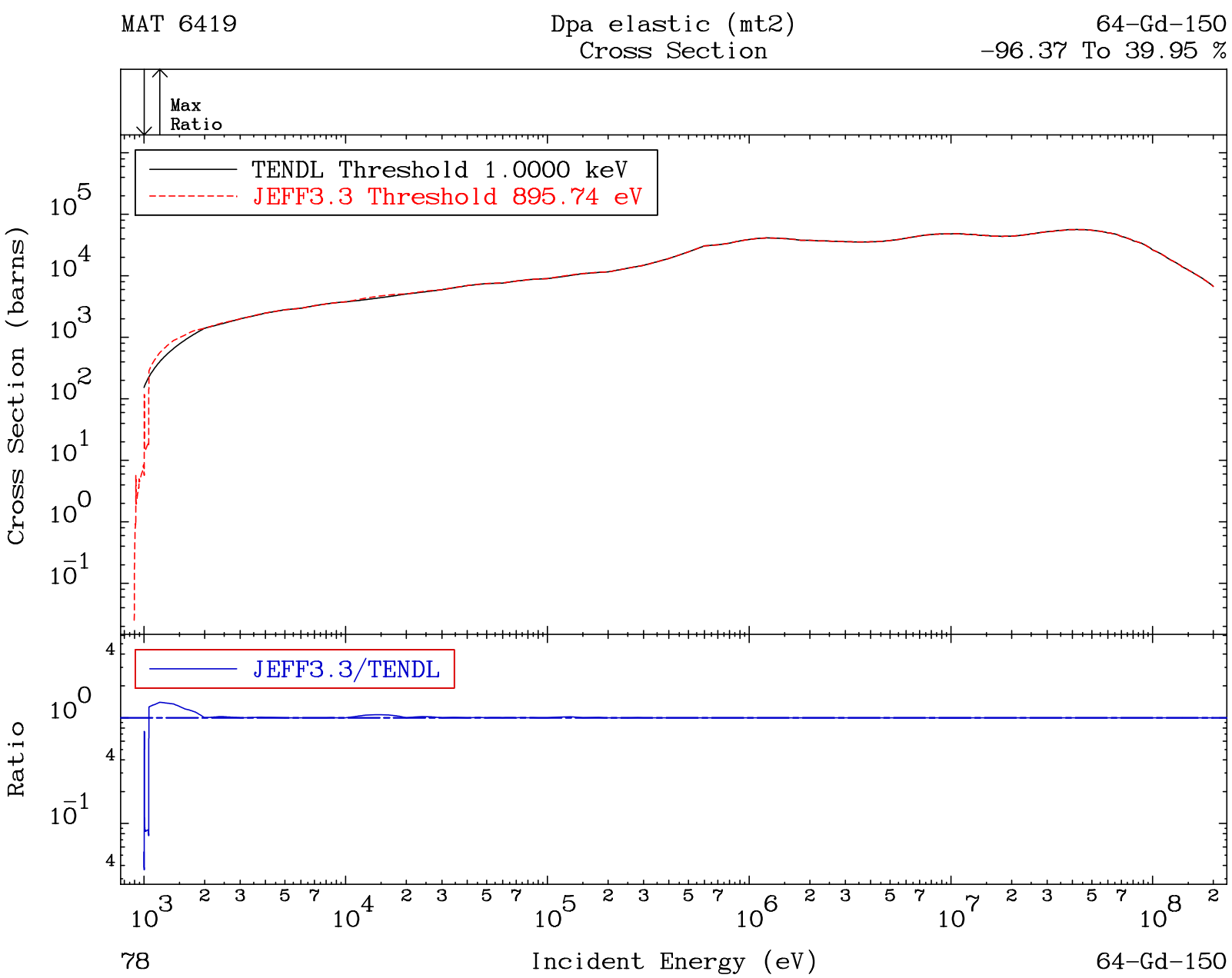

MAT 6419
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
64-Gd-150
-4.279 To 4.431 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JEFF3.3/TENDL
Ratio
1.05
1.00
0.95
10-5 4 10-4 4 10-3 4 10-2 4 10-1 4 100 4 101 4 102 4 103 4 104 4 105 4 106 4 107 4 108
73
Incident Energy (eV)
64-Gd-150

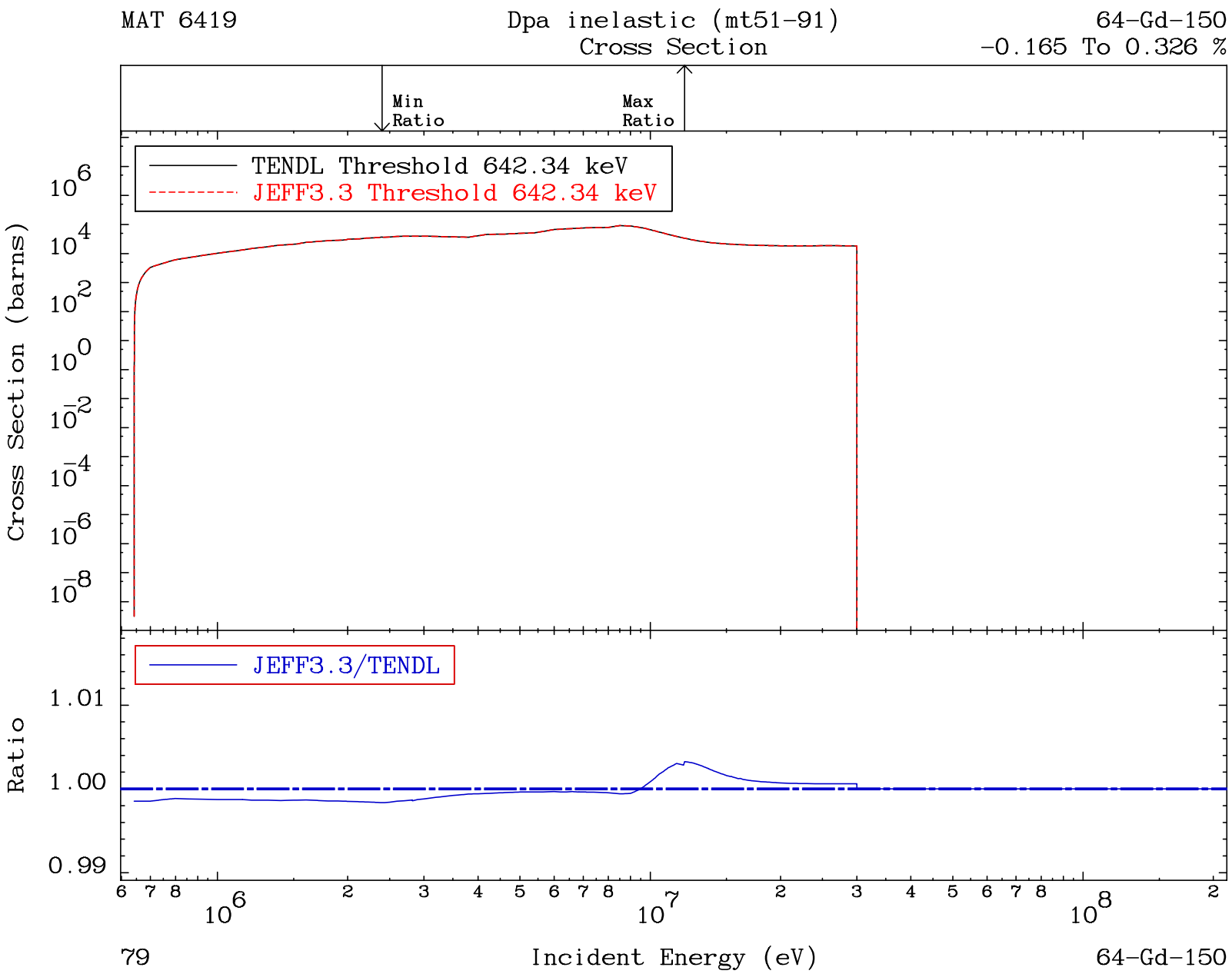

MAT 6419
Kerma capture (mt102)
Cross Section
64-Gd-150
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
74
Incident Energy (eV)
64-Gd-150

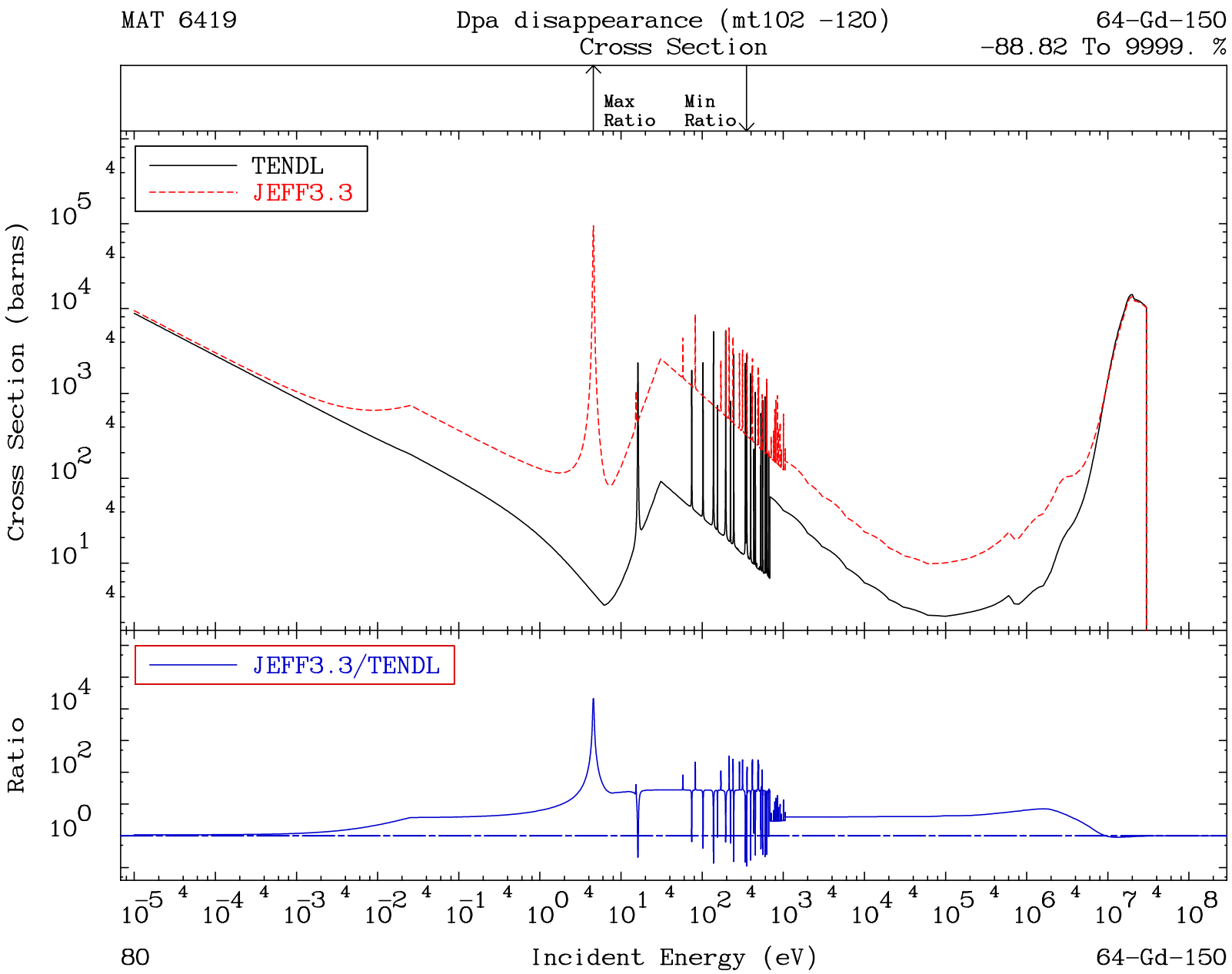

MAT 6419
Total photon (eV-barns)
Cross Section
64-Gd-150
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
75
64-Gd-150

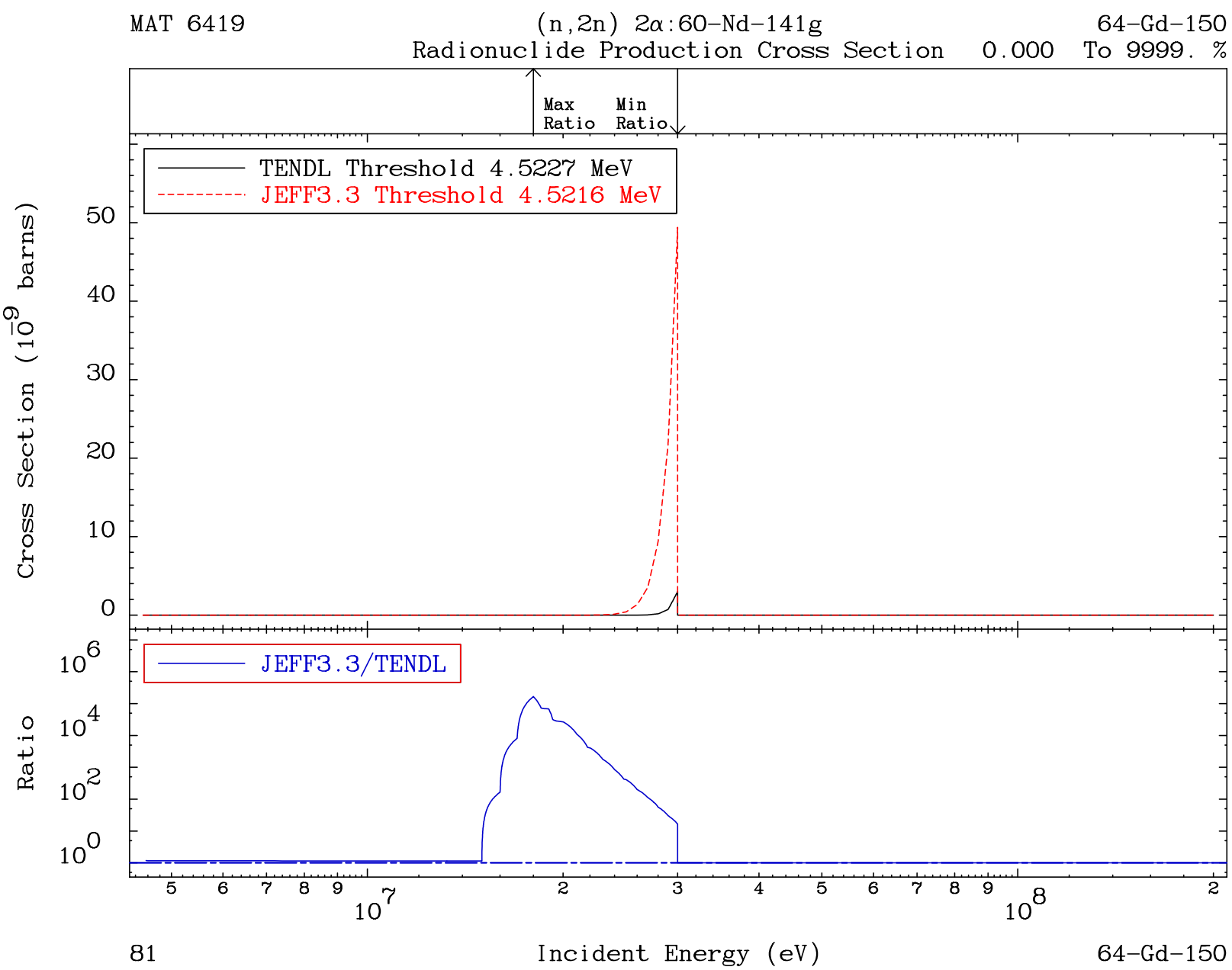

MAT 6419
Total kinematic kerma (high limit)
Cross Section
64-Gd-150
-4.235 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
64-Gd-150

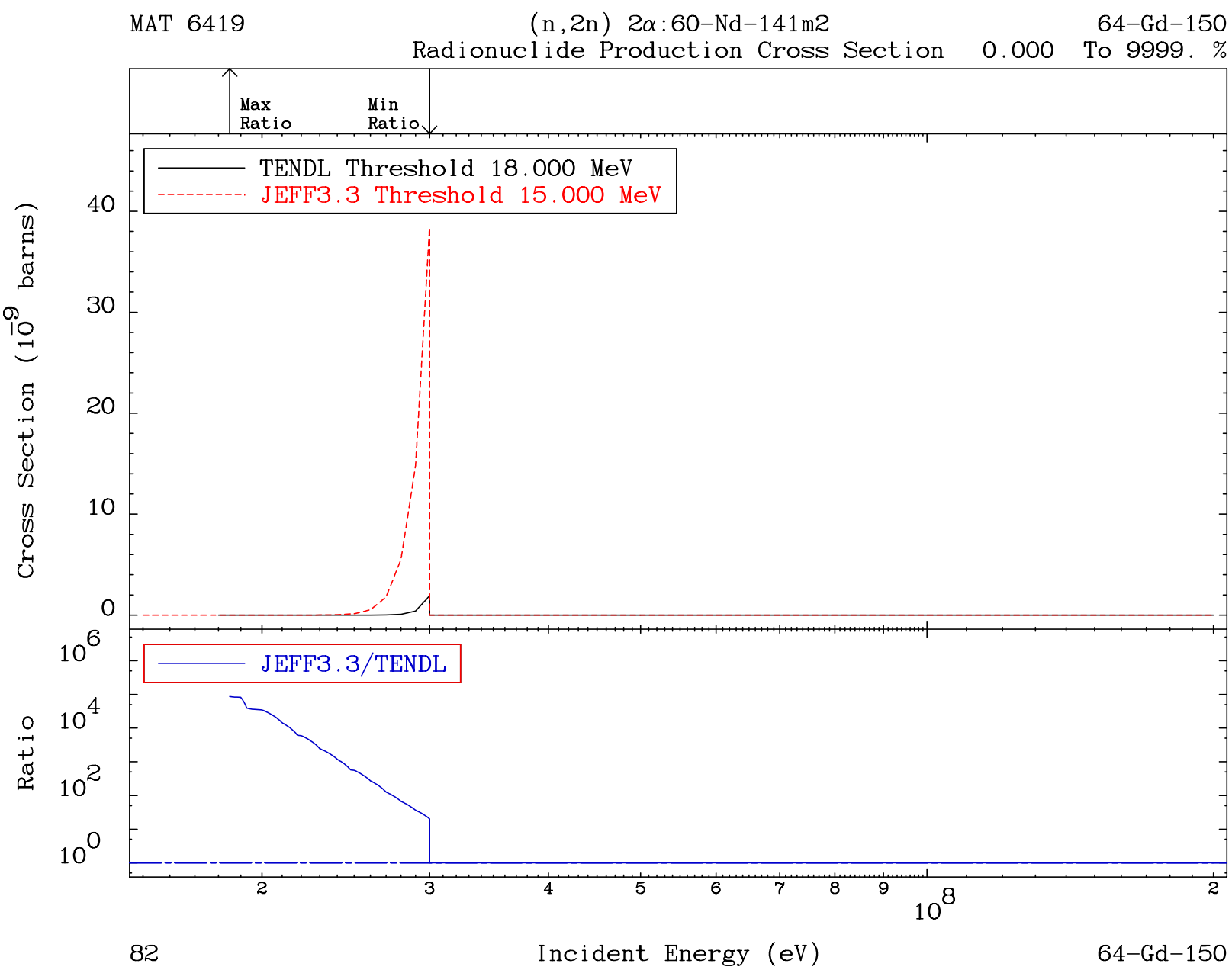

MAT 6419
Dpa total (eV-barns)
Cross Section
64-Gd-150
-88.82 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
77
Incident Energy (eV)
64-Gd-150

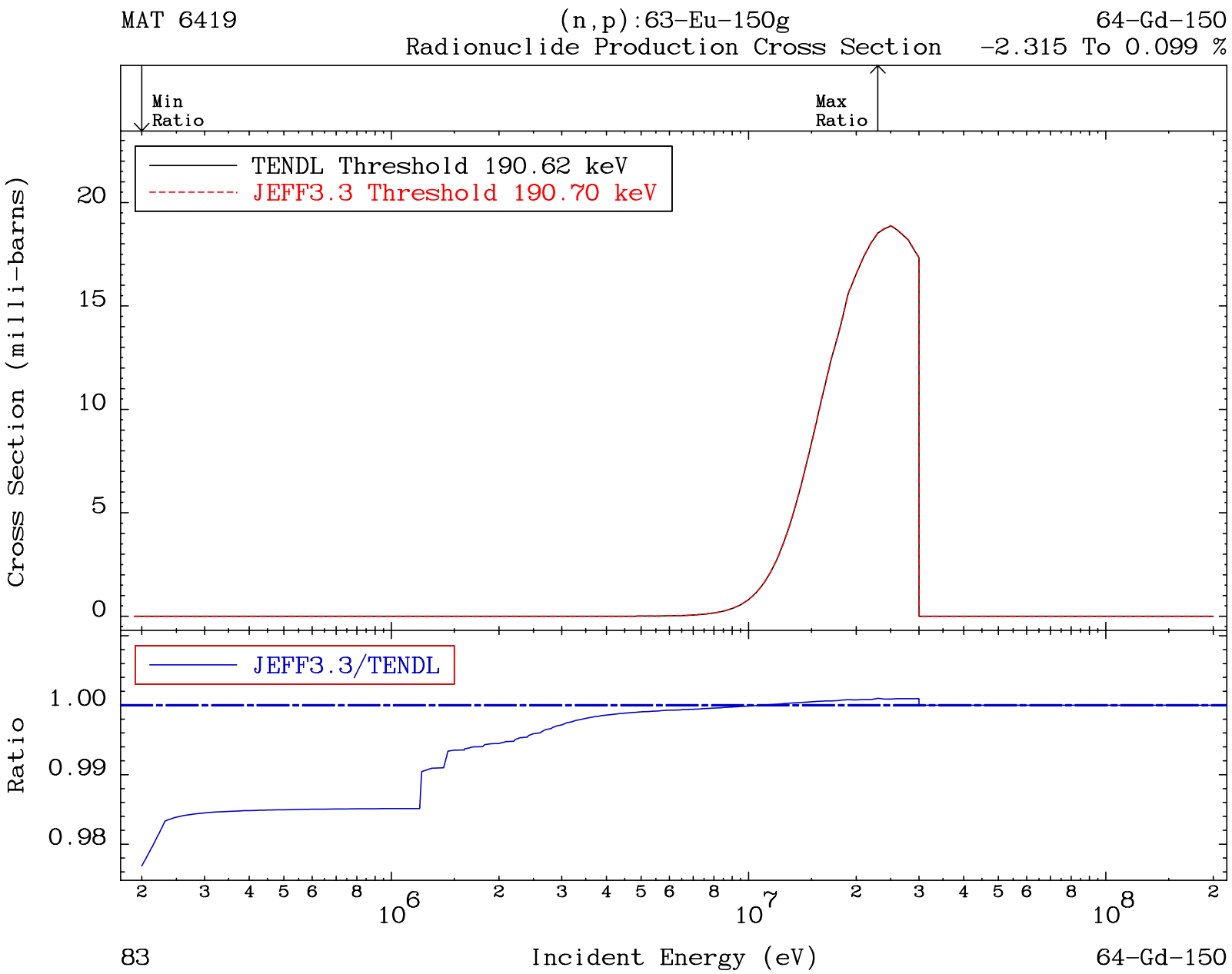

MAT 6419
Dpa elastic (mt2)
Cross Section
64-Gd-150
-96.37 To 39.95 %
Max
Ratio
TENDL Threshold 1.0000 keV
JEFF3.3 Threshold 895.74 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
78
64-Gd-150

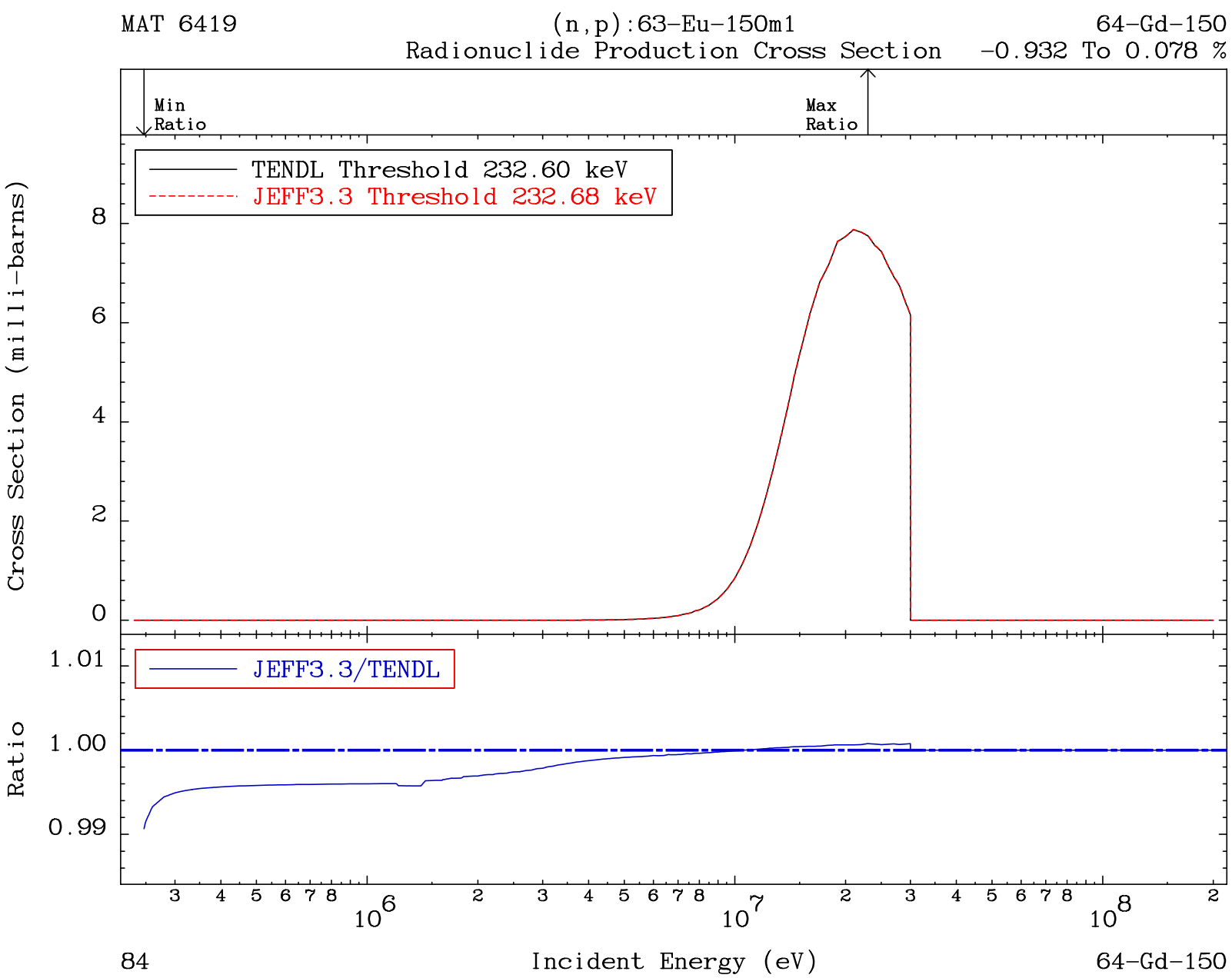

MAT 6419
Dpa inelastic (mt51-91)
Cross Section
64-Gd-150
-0.165 To 0.326 %
Min Ratio
Max Ratio
TENDL Threshold 642.34 keV
JEFF3.3 Threshold 642.34 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
79
64-Gd-150


MAT 6419
Dpa disappearance (mt102 -120)
Cross Section
64-Gd-150
-88.82 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
80
64-Gd-150


MAT 6419
(n,2n) 2α:60-Nd-141g
64-Gd-150
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.5227 MeV
JEFF3.3 Threshold 4.5216 MeV
Cross Section (10^{-9} barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^6
10^4
10^2
10^0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
81
Incident Energy (eV)
64-Gd-150


MAT 6419
(n,2n) 2α:60-Nd-141m2
64-Gd-150
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 18.000 MeV
JEFF3.3 Threshold 15.000 MeV
Cross Section (10^{-9} barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^6
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
82
Incident Energy (eV)
64-Gd-150


MAT 6419
(n,p):63-Eu-150g
64-Gd-150
Radionuclide Production Cross Section
-2.315 To 0.099 %
Min Ratio
Max Ratio
TENDL Threshold 190.62 keV
JEFF3.3 Threshold 190.70 keV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
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
83
Incident Energy (eV)
64-Gd-150


MAT 6419
(n,p):63-Eu-150m1
64-Gd-150
Radionuclide Production Cross Section
-0.932 To 0.078 %
Min Ratio
Max Ratio
TENDL Threshold 232.60 keV
JEFF3.3 Threshold 232.68 keV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
0.99
1.00
1.01
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
84
Incident Energy (eV)
64-Gd-150