Program Complot
(Version 2021-1)
by
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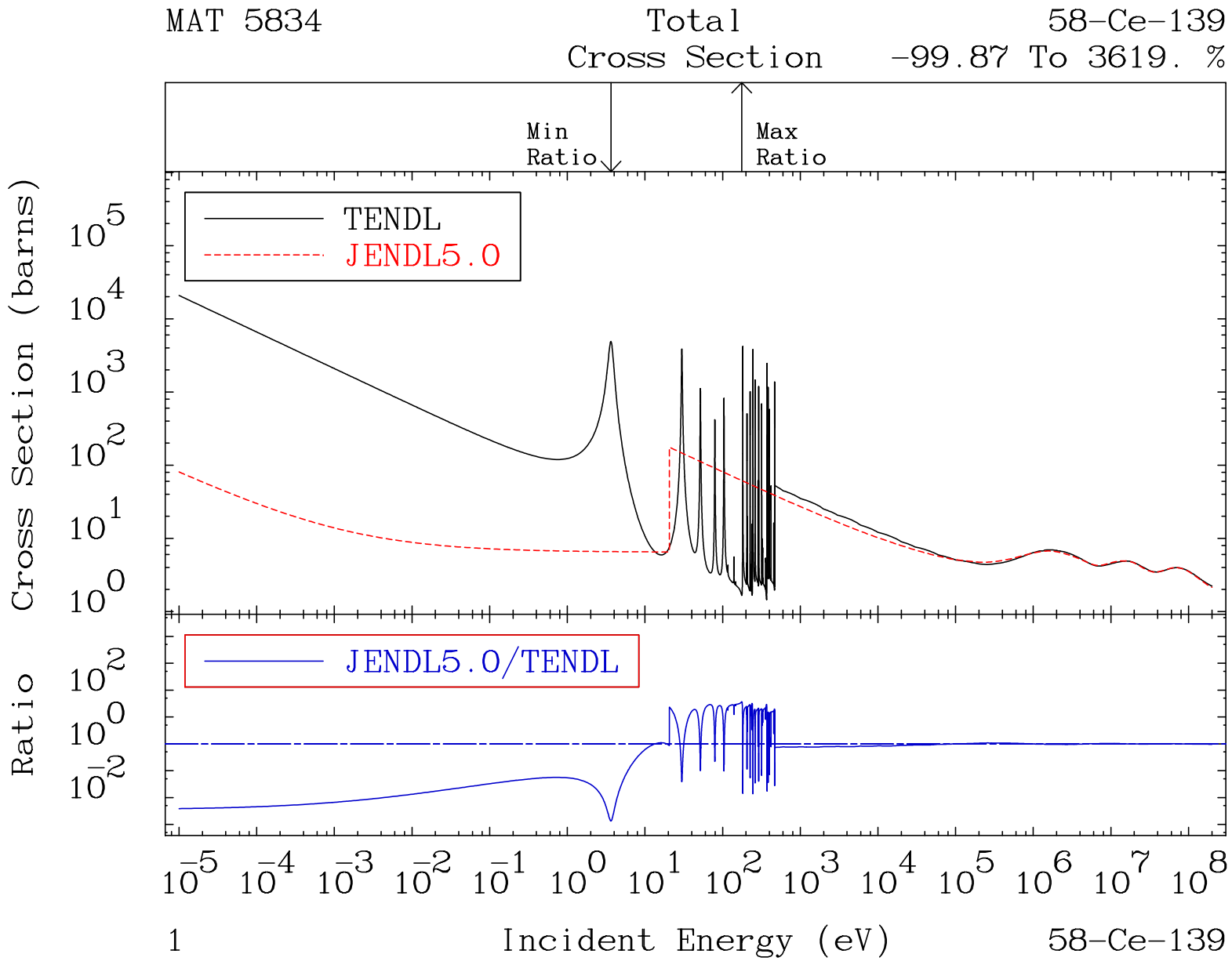
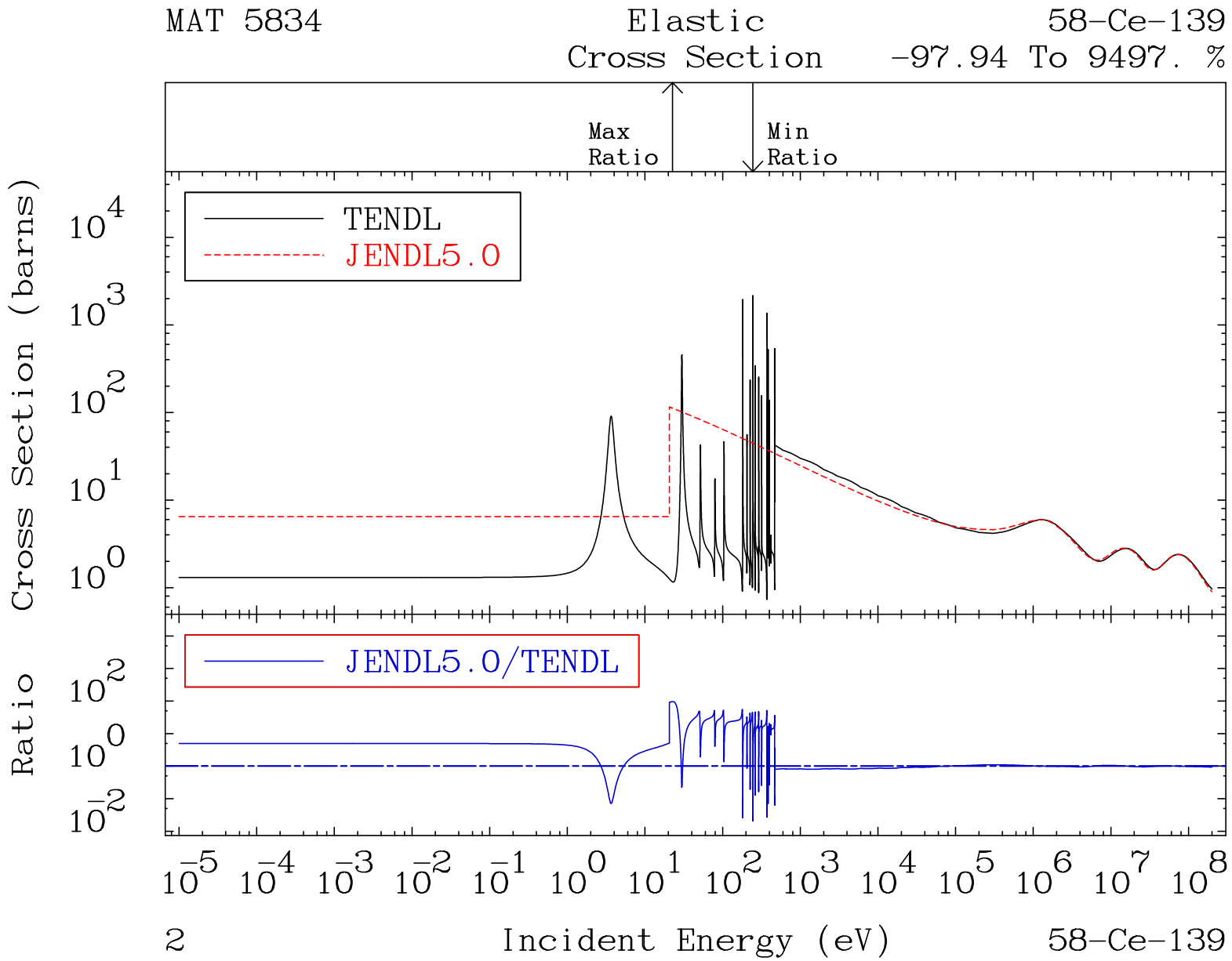
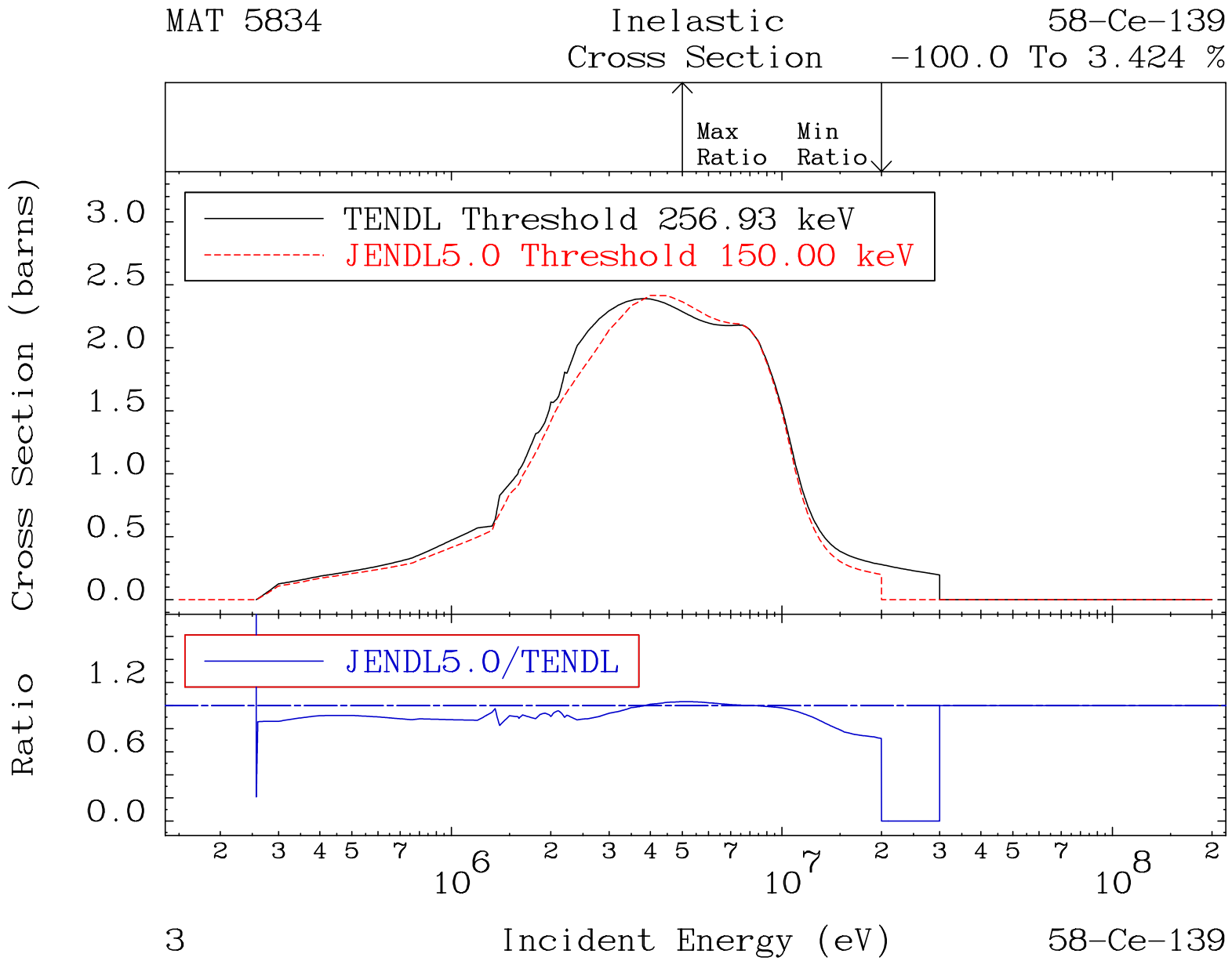
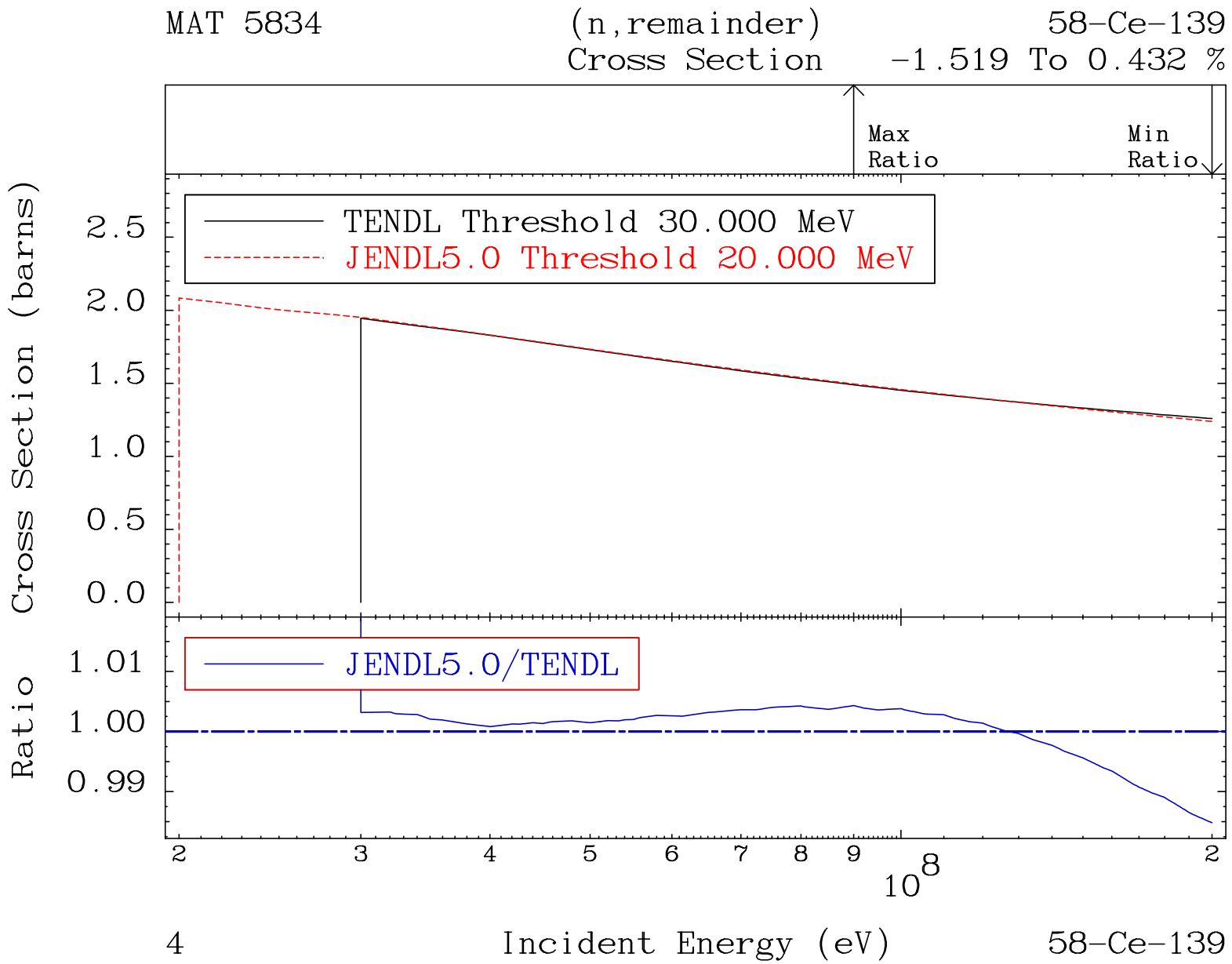
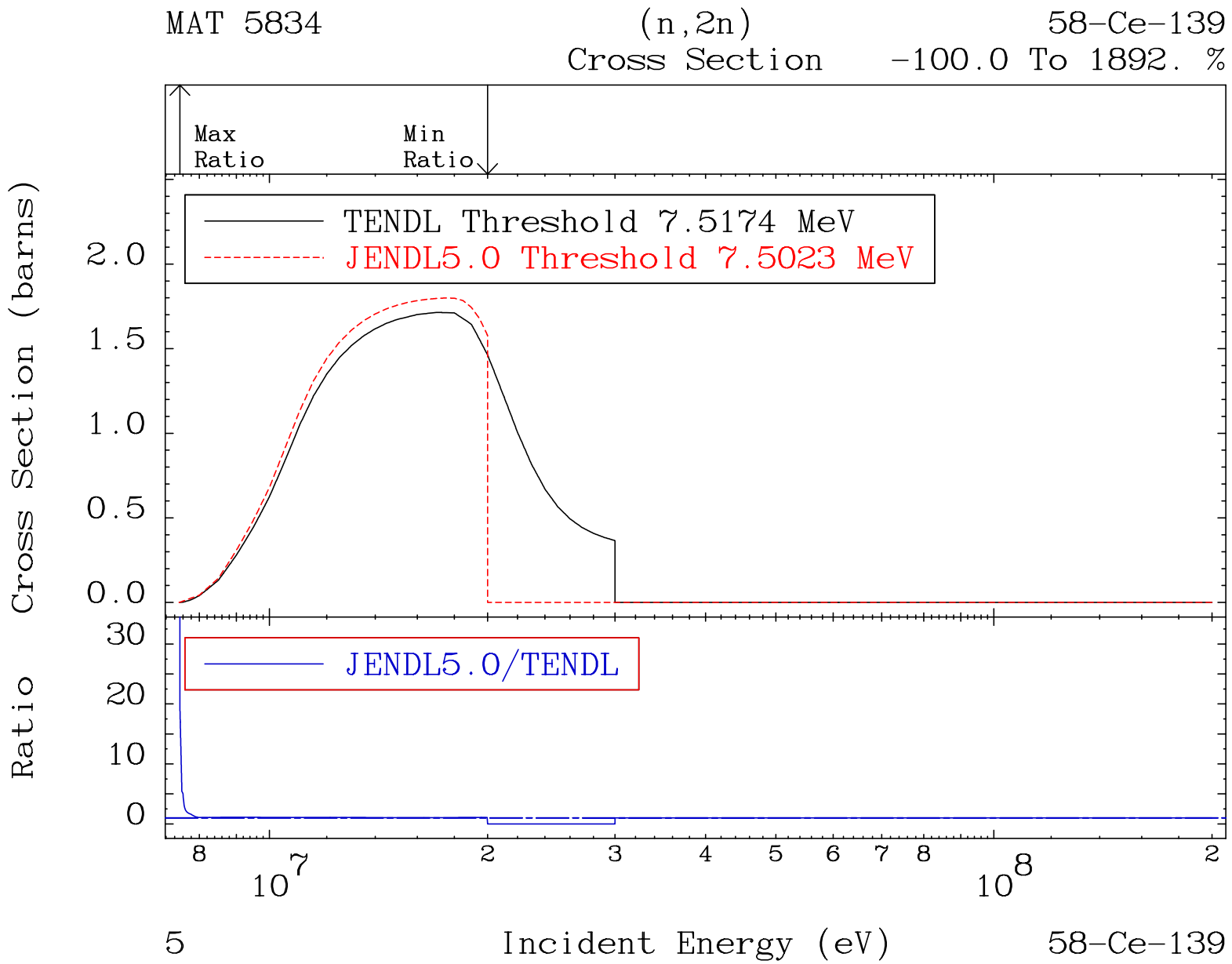
Press Mouse Button to Start

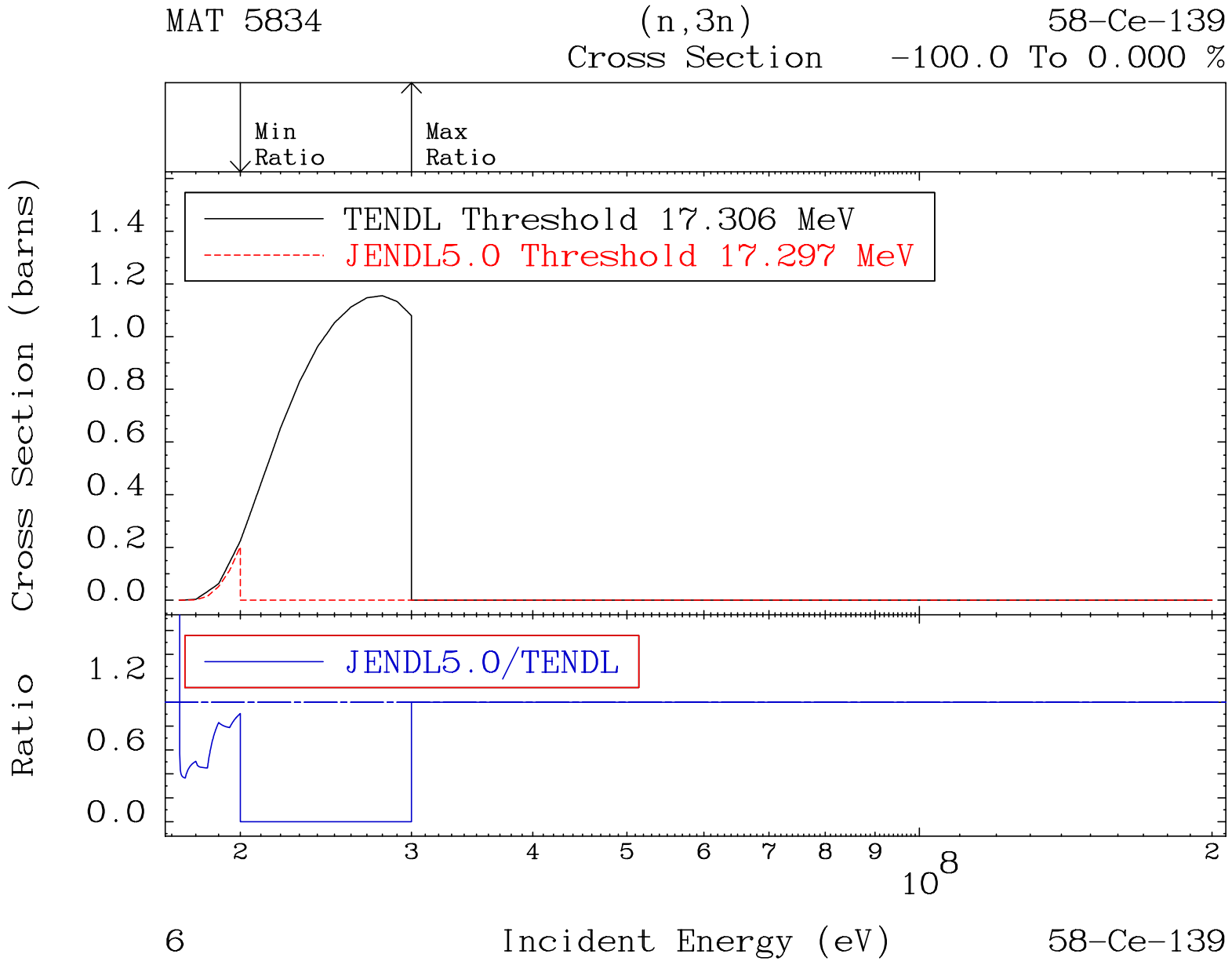

MAT 5834
Total
Cross Section
58-Ce-139
-99.87 To 3619. %
Min
Ratio
Max
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
58-Ce-139

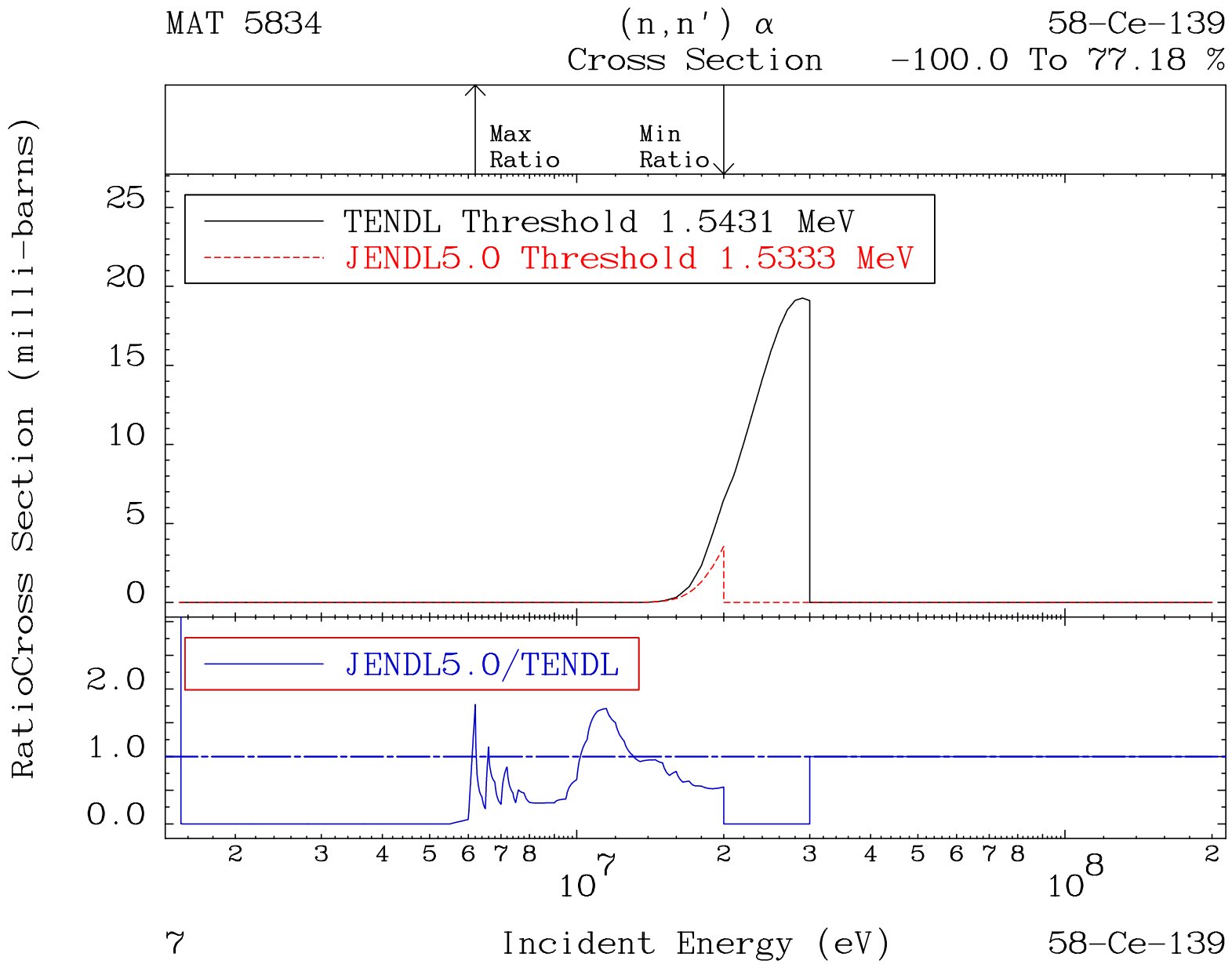

MAT 5834
Elastic
Cross Section
58-Ce-139
-97.94 To 9497. %
Max
Ratio
Min
Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
2
58-Ce-139

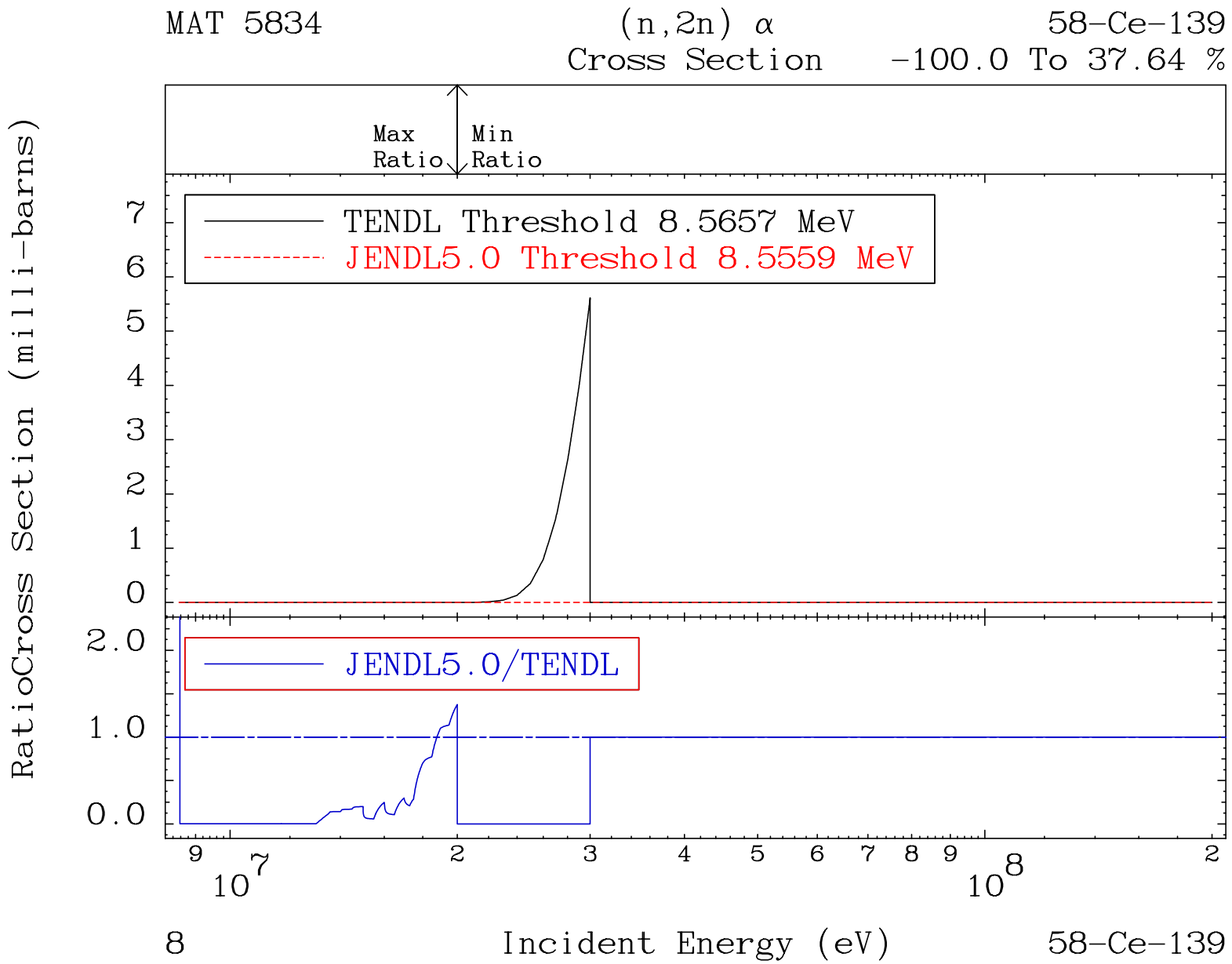

MAT 5834
Inelastic
Cross Section
58-Ce-139
-100.0 To 3.424 %
Max Ratio
Min Ratio
TENDL Threshold 256.93 keV
JENDL5.0 Threshold 150.00 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JENDL5.0/TENDL
Ratio
1.2
0.6
0.0
2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
3
Incident Energy (eV)
58-Ce-139

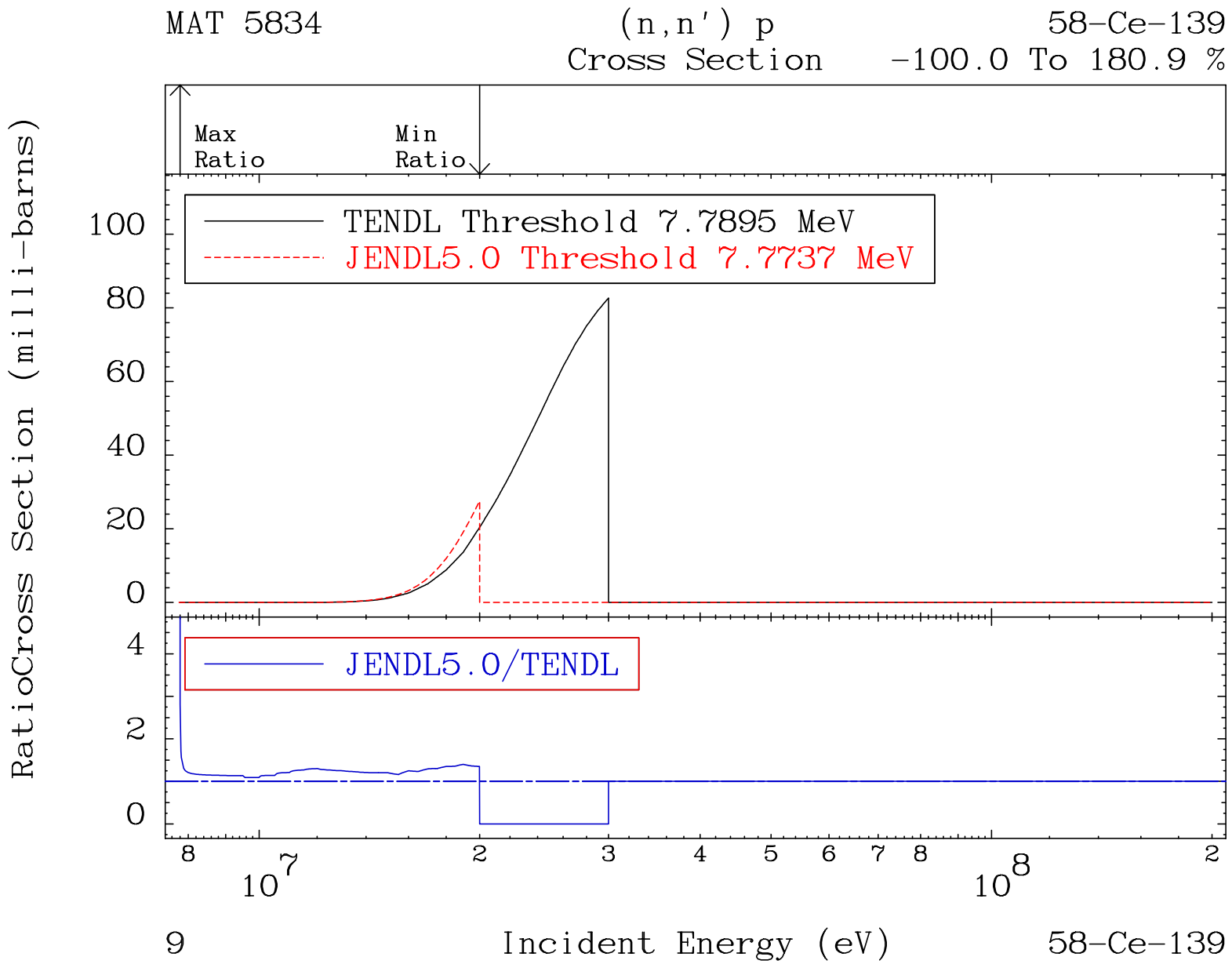

MAT 5834
(n,remainder)
Cross Section
58-Ce-139
-1.519 To 0.432 %
Max Ratio
Min Ratio
TENDL Threshold 30.000 MeV
JENDL5.0 Threshold 20.000 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JENDL5.0/TENDL
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
58-Ce-139

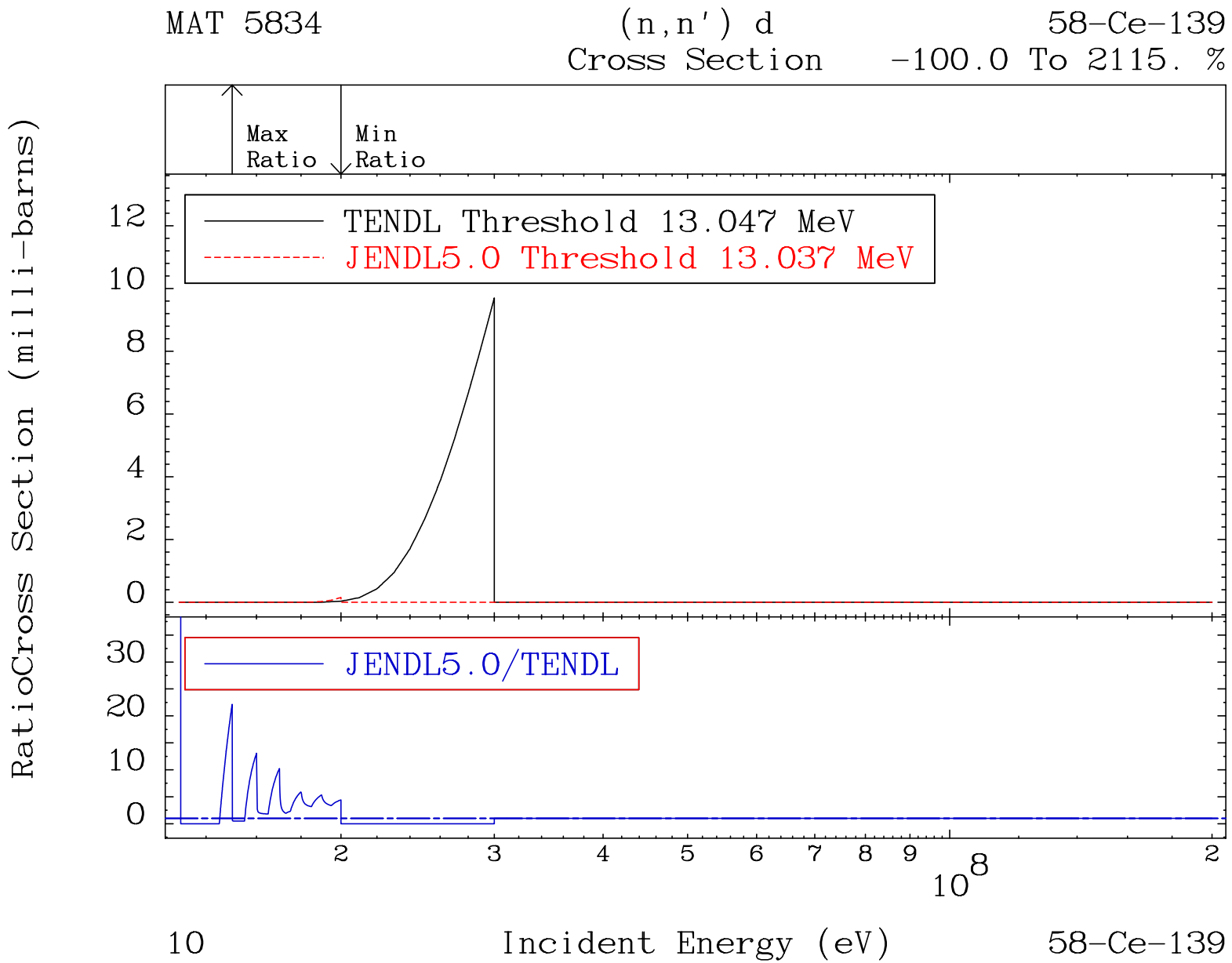

MAT 5834
(n,2n)
Cross Section
58-Ce-139
-100.0 To 1892. %
Max Ratio
Min Ratio
TENDL Threshold 7.5174 MeV
JENDL5.0 Threshold 7.5023 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
30
20
10
0
8
2
3
4
5
6
7
8
2
10^7
10^8
5
Incident Energy (eV)
58-Ce-139

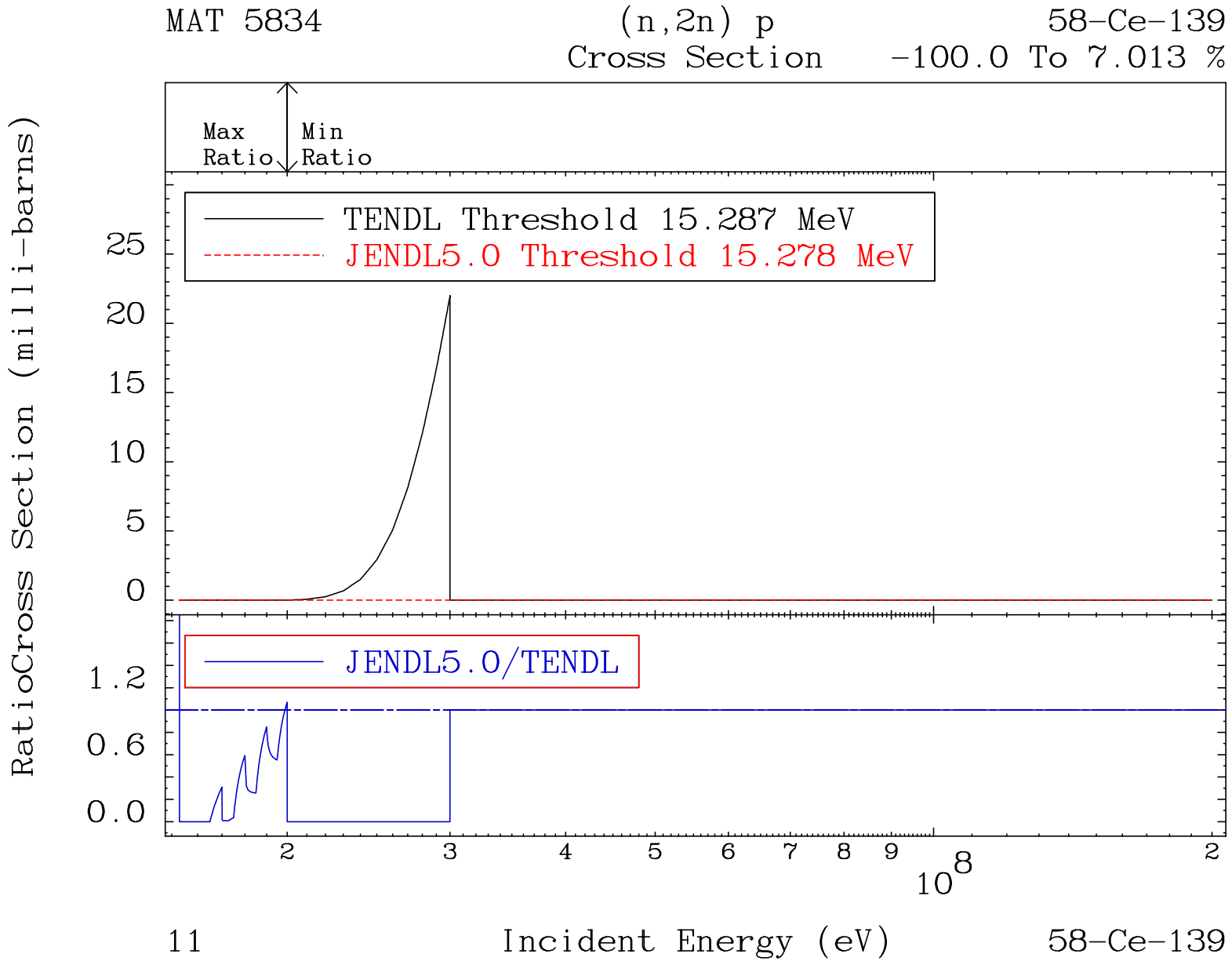

MAT 5834
(n,3n)
58-Ce-139
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 17.306 MeV
JENDL5.0 Threshold 17.297 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2
3
4
5
6
7
8
9
10^8
Incident Energy (eV)
6
58-Ce-139

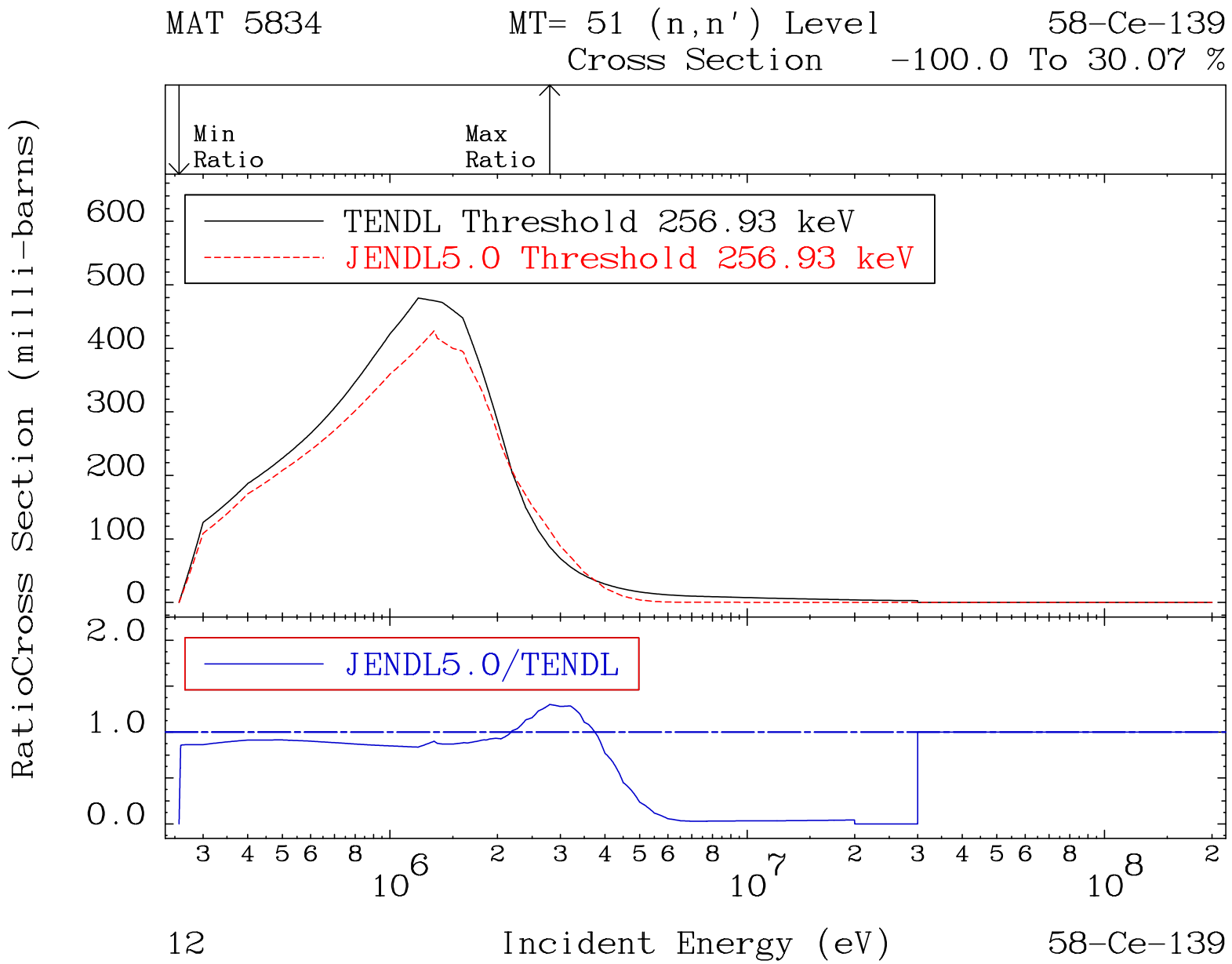

MAT 5834
(n,n') α
Cross Section
58-Ce-139
-100.0 To 77.18 %
Max Ratio
Min Ratio
TENDL Threshold 1.5431 MeV
JENDL5.0 Threshold 1.5333 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
58-Ce-139

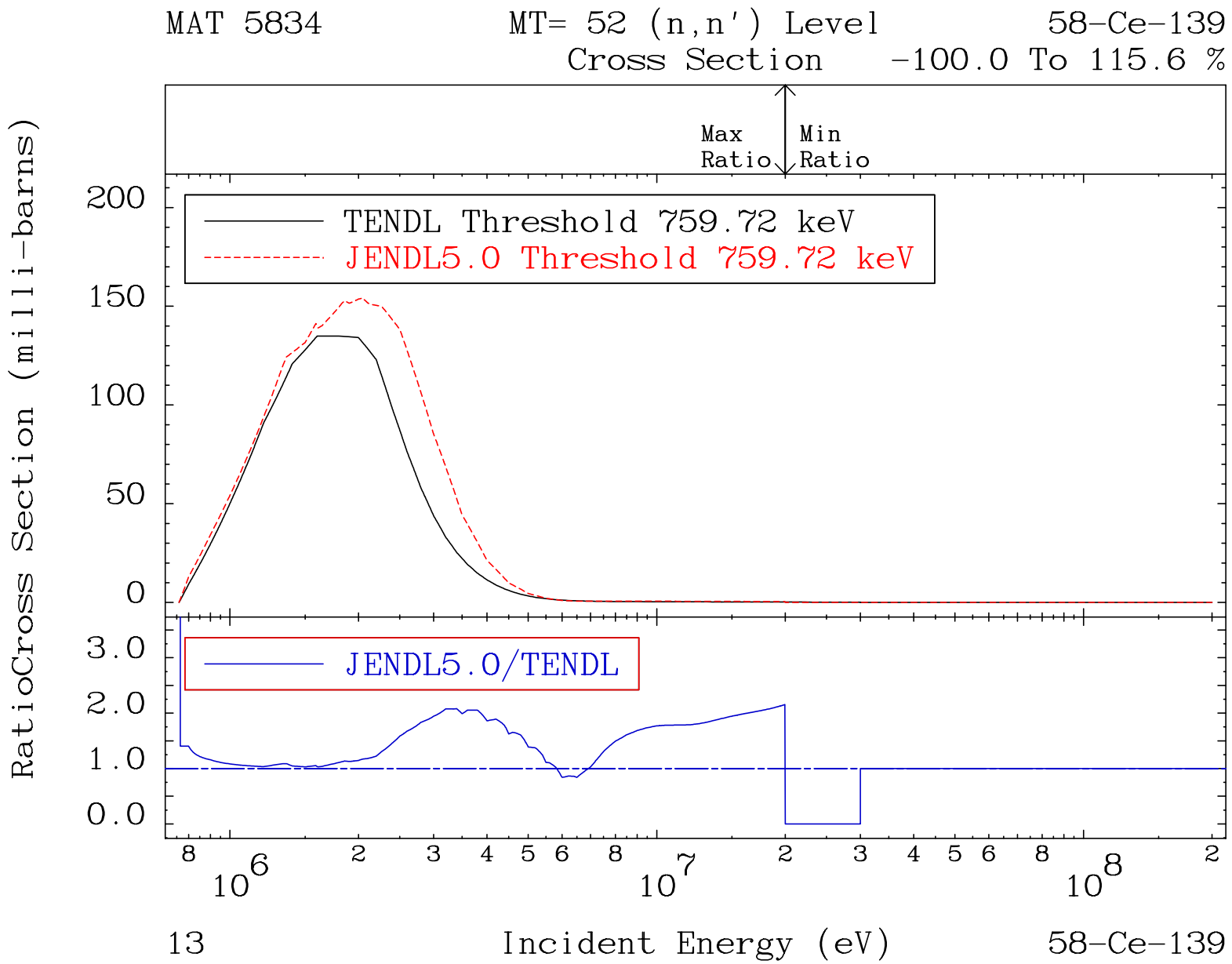

MAT 5834
(n,2n) α
58-Ce-139
Cross Section
-100.0 To 37.64 %
Max Ratio
Min Ratio
TENDL Threshold 8.5657 MeV
JENDL5.0 Threshold 8.5559 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
58-Ce-139
8

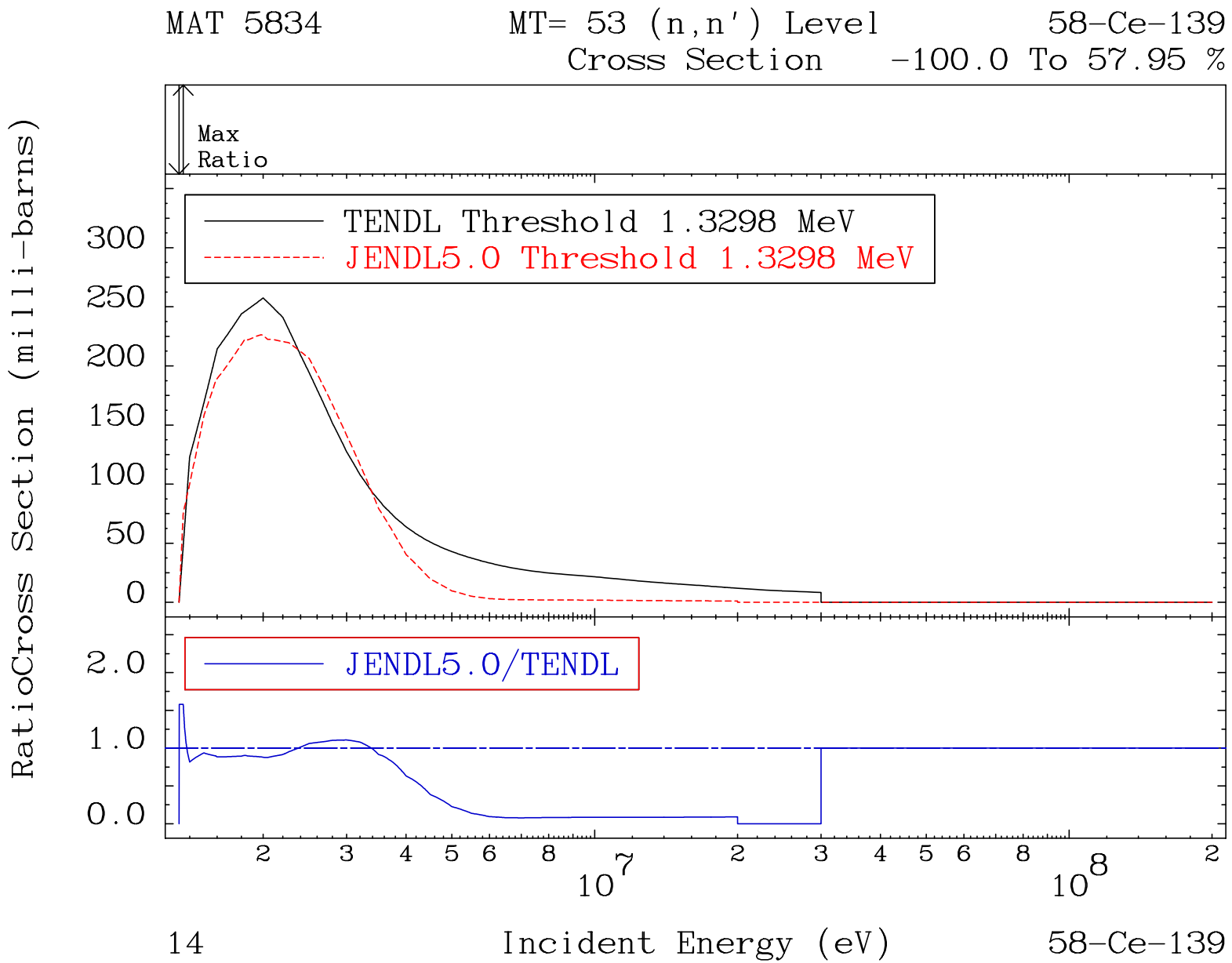

MAT 5834
(n,n') p
Cross Section
58-Ce-139
-100.0 To 180.9 %
Max Ratio
Min Ratio
TENDL Threshold 7.7895 MeV
JENDL5.0 Threshold 7.7737 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
4
2
0
8
2
3
4
5
6
7
8
2
10^7
10^8
9
Incident Energy (eV)
58-Ce-139

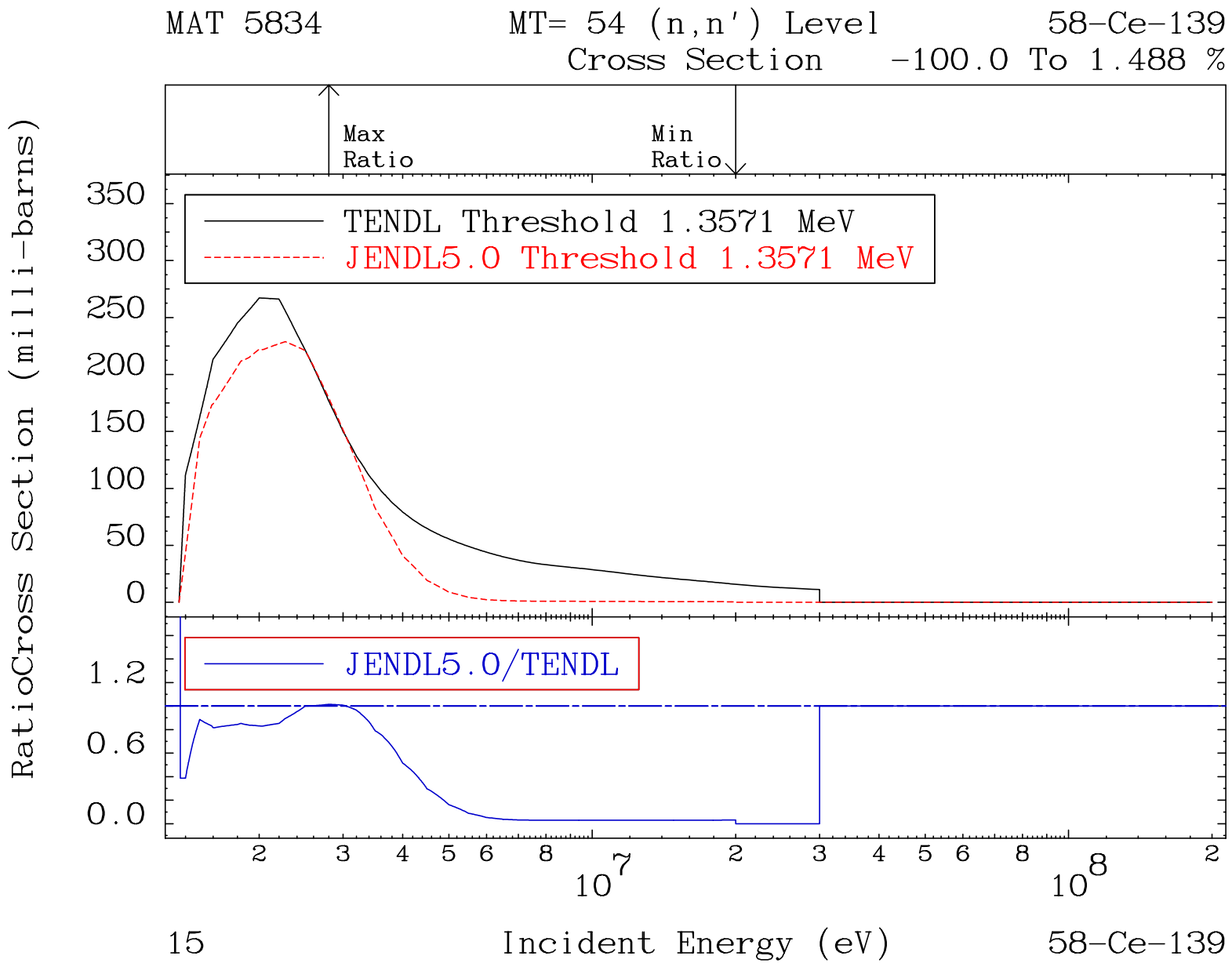

MAT 5834
(n,n') d
Cross Section
58-Ce-139
-100.0 To 2115. %
Max Ratio
Min Ratio
TENDL Threshold 13.047 MeV
JENDL5.0 Threshold 13.037 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
12
10
8
6
4
2
0
30
20
10
0
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
58-Ce-139

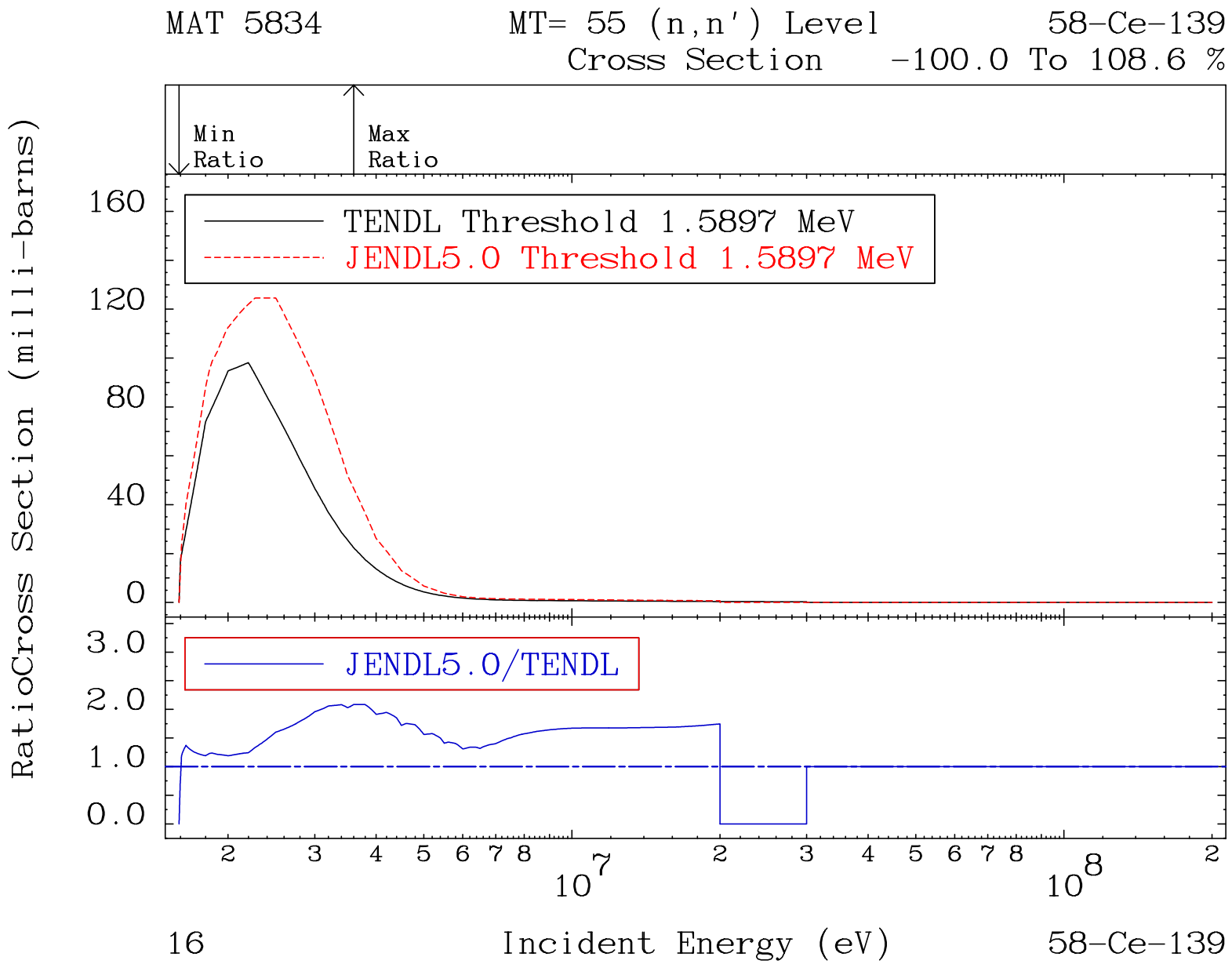

MAT 5834
(n,2n) p
Cross Section
58-Ce-139
-100.0 To 7.013 %
Max Ratio
Min Ratio
TENDL Threshold 15.287 MeV
JENDL5.0 Threshold 15.278 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
58-Ce-139

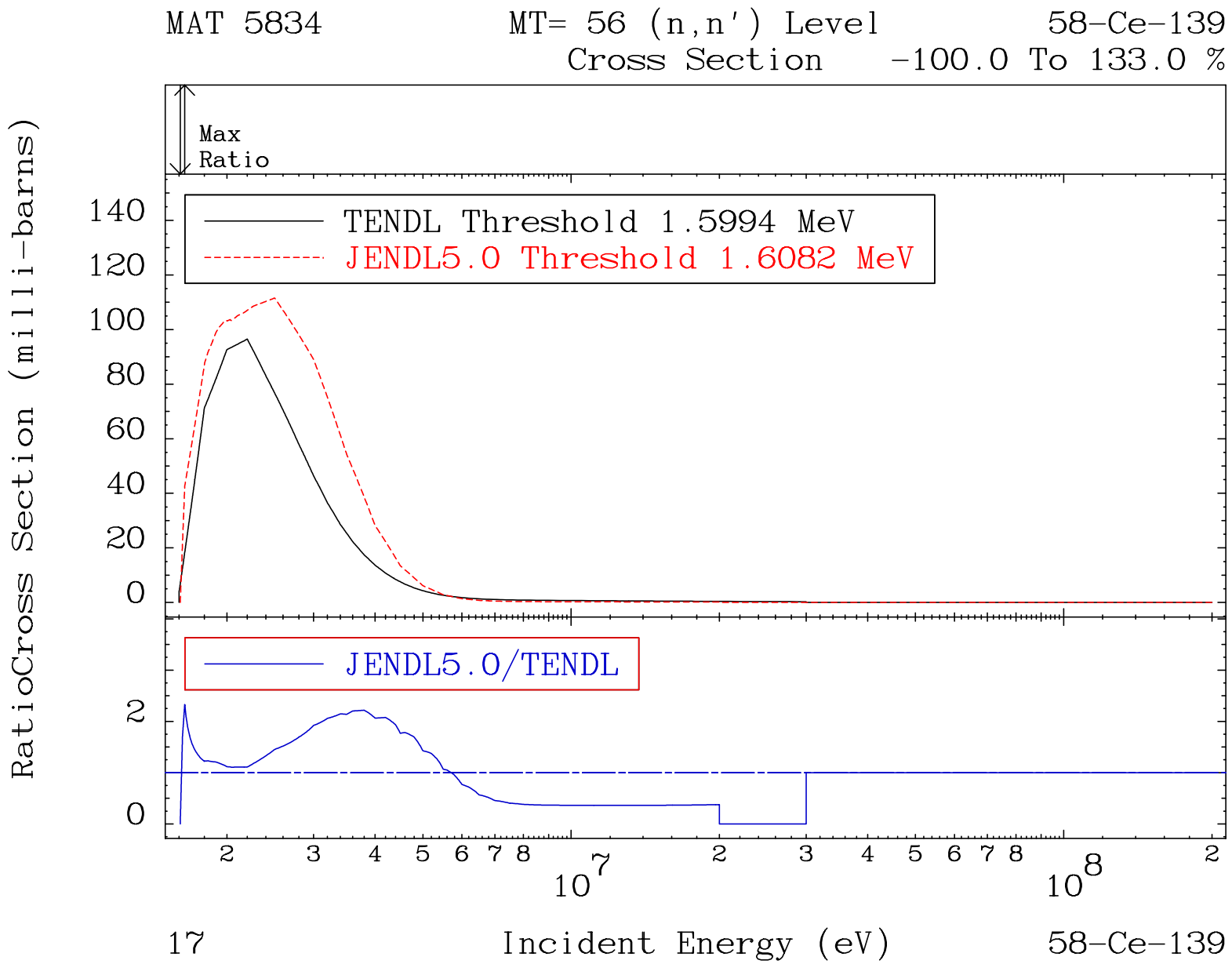

MAT 5834
MT= 51 (n,n') Level
58-Ce-139
Cross Section -100.0 To 30.07 %
Min Ratio
Max Ratio
TENDL Threshold 256.93 keV
JENDL5.0 Threshold 256.93 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
600
500
400
300
200
100
0
2.0
1.0
0.0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
58-Ce-139

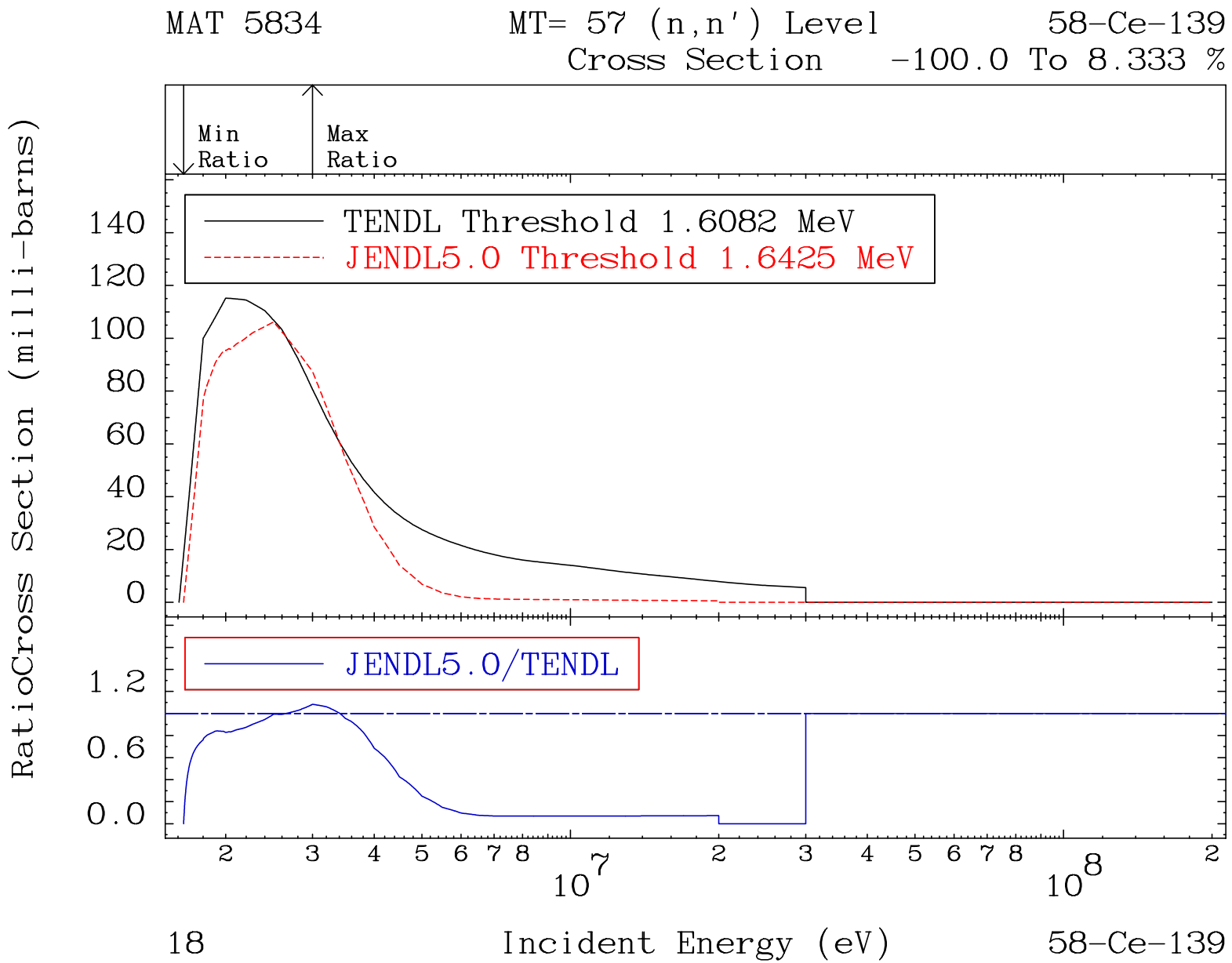

MAT 5834
MT= 52 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 115.6 %
Max Ratio
Min Ratio
TENDL Threshold 759.72 keV
JENDL5.0 Threshold 759.72 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
3.0
2.0
1.0
0.0
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
13
Incident Energy (eV)
58-Ce-139

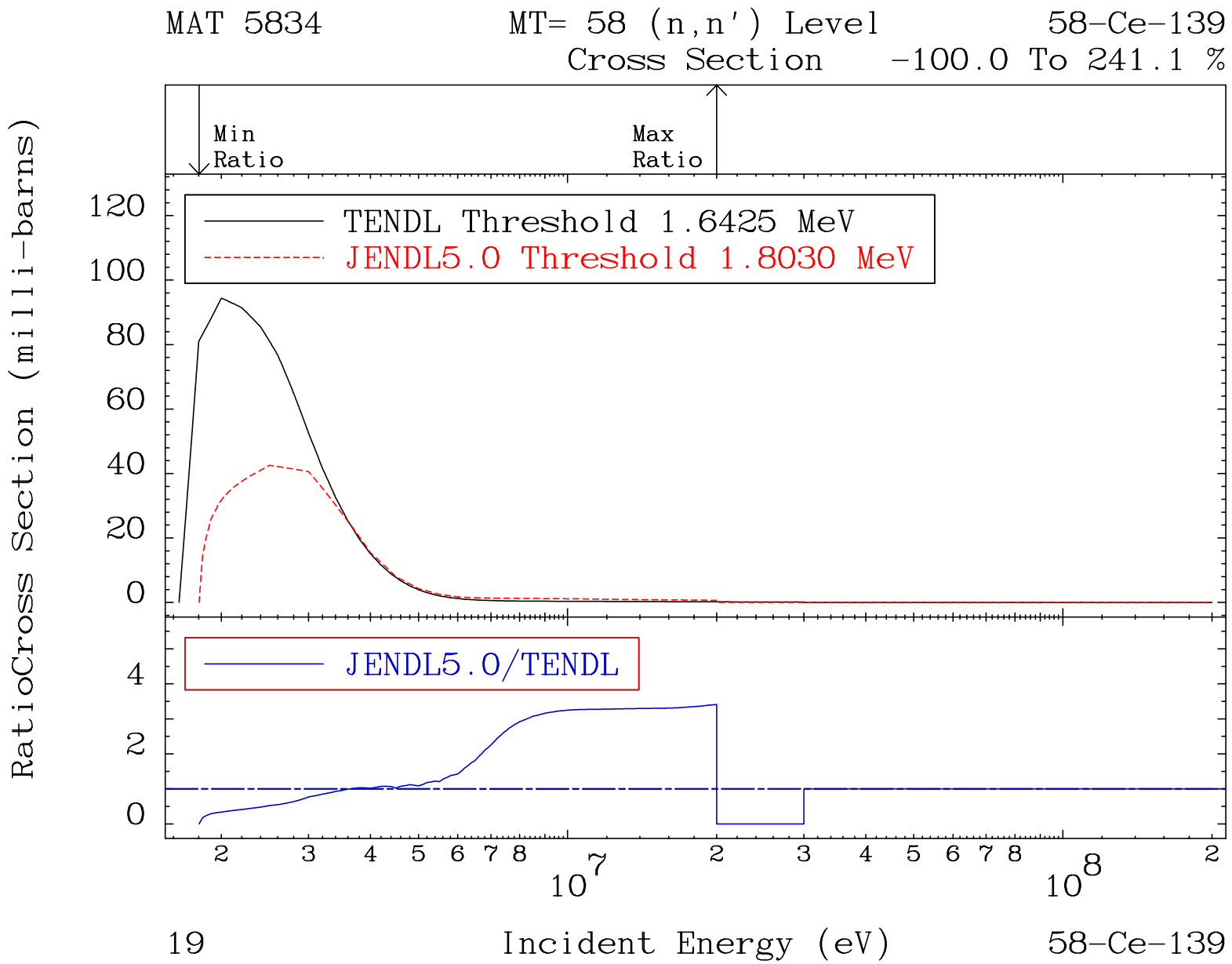

MAT 5834
MT= 53 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 57.95 %
Max
Ratio
TENDL Threshold 1.3298 MeV
JENDL5.0 Threshold 1.3298 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
2.0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
14
Incident Energy (eV)
58-Ce-139

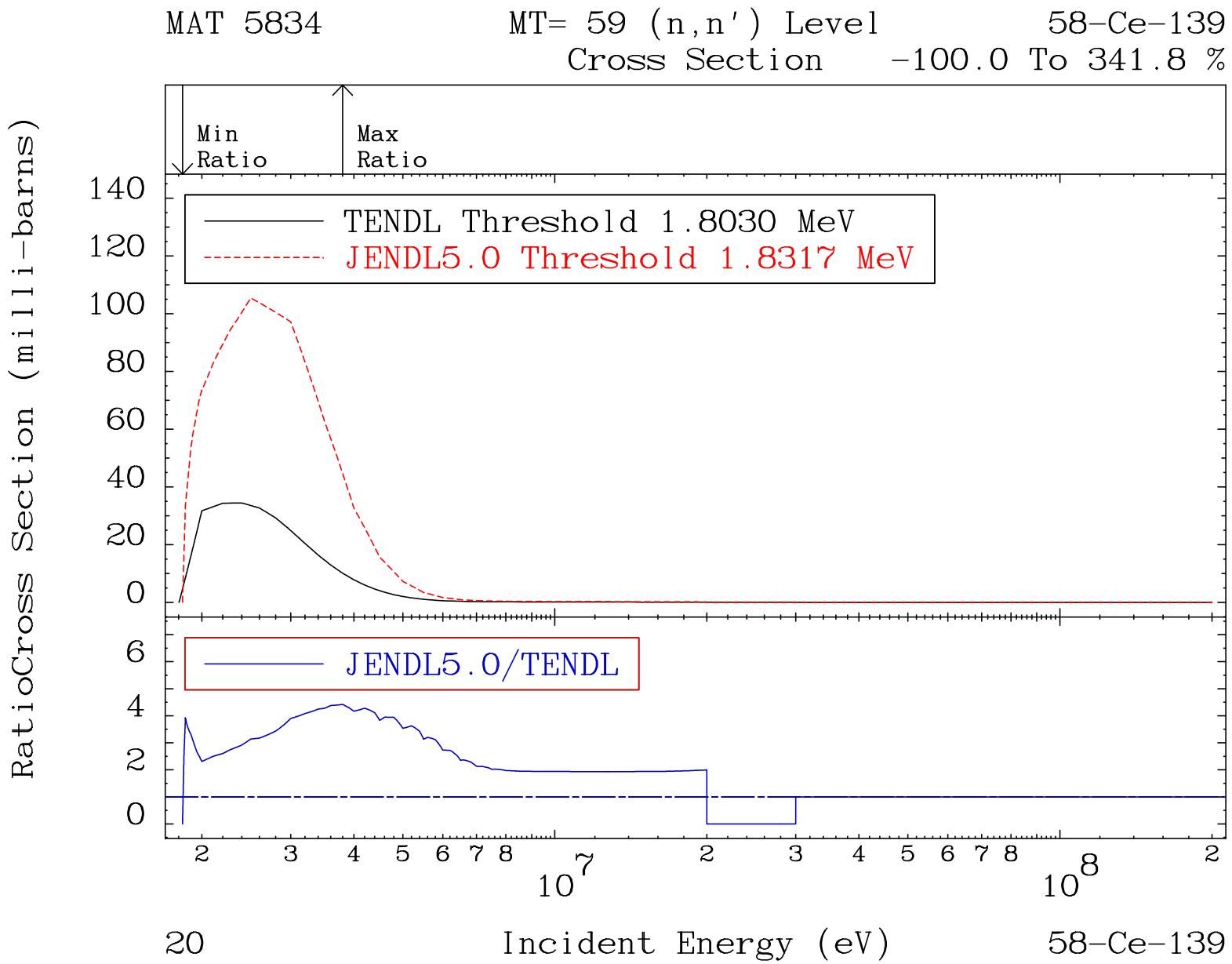

MAT 5834
MT= 54 (n,n') Level
58-Ce-139
Cross Section -100.0 To 1.488 %
Max Ratio
Min Ratio
TENDL Threshold 1.3571 MeV
JENDL5.0 Threshold 1.3571 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
1.2
0.6
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
15
Incident Energy (eV)
58-Ce-139

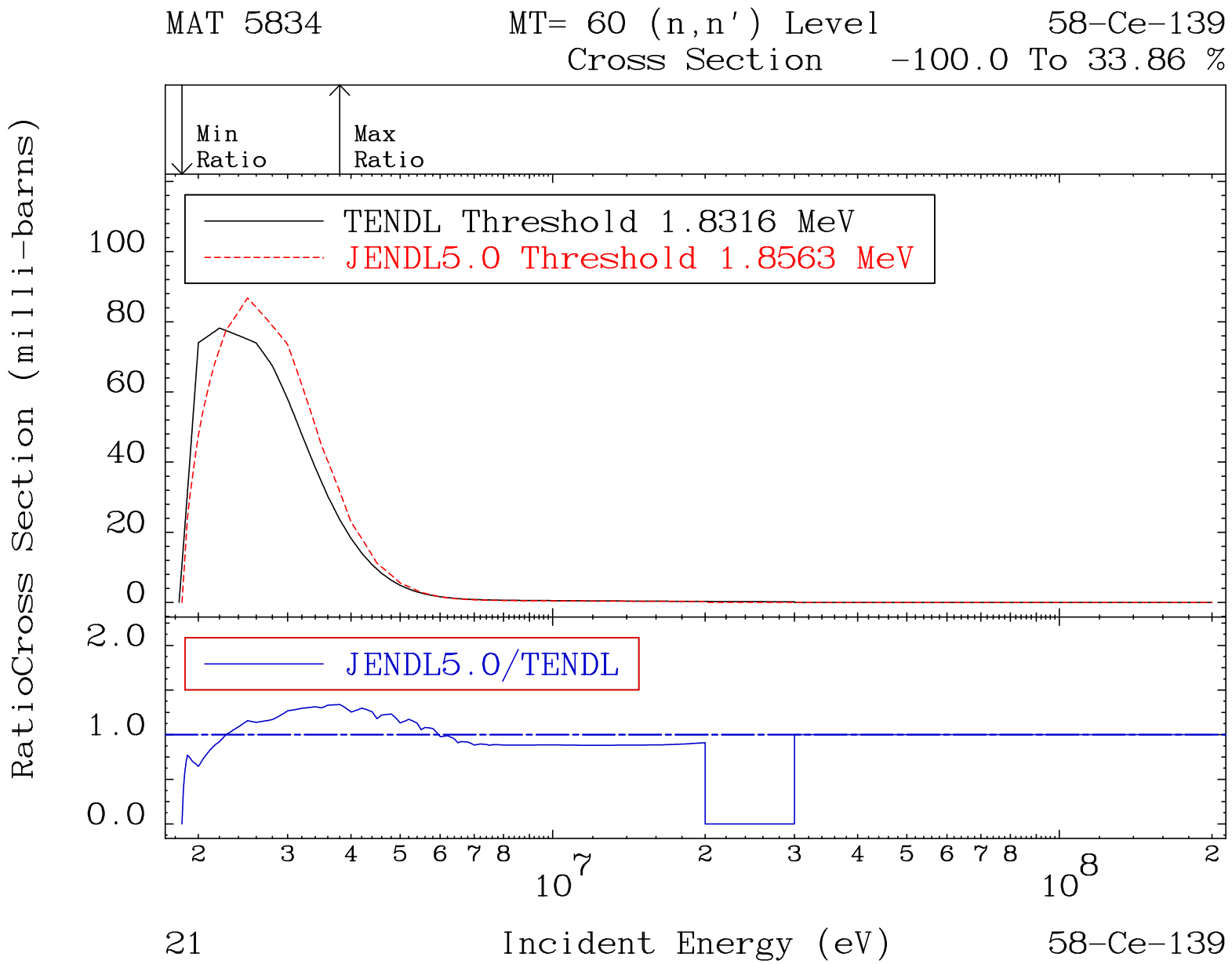

MAT 5834
MT= 55 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 108.6 %
Min Ratio
Max Ratio
TENDL Threshold 1.5897 MeV
JENDL5.0 Threshold 1.5897 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
58-Ce-139

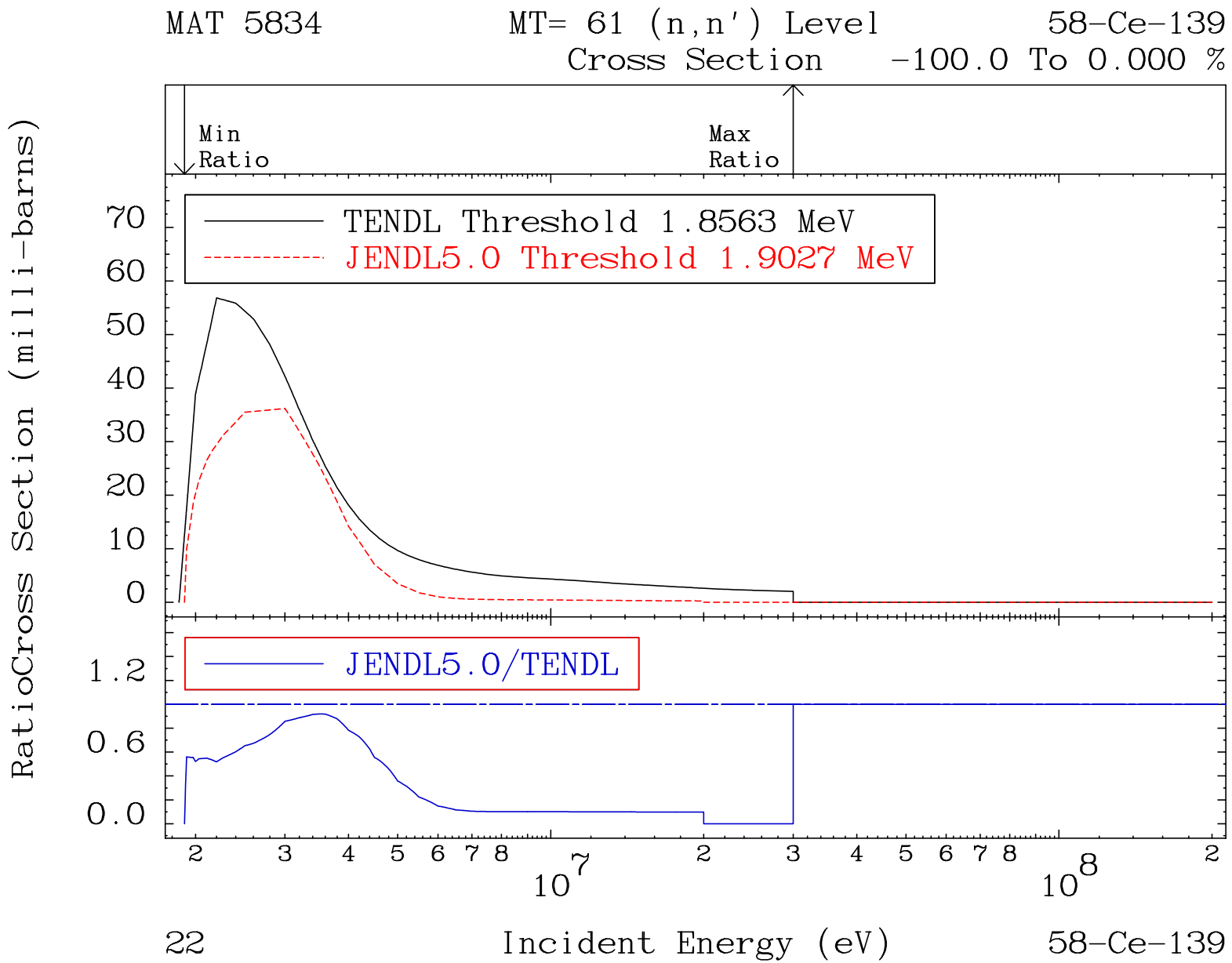

MAT 5834
MT= 56 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 133.0 %
Max
Ratio
TENDL Threshold 1.5994 MeV
JENDL5.0 Threshold 1.6082 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
58-Ce-139

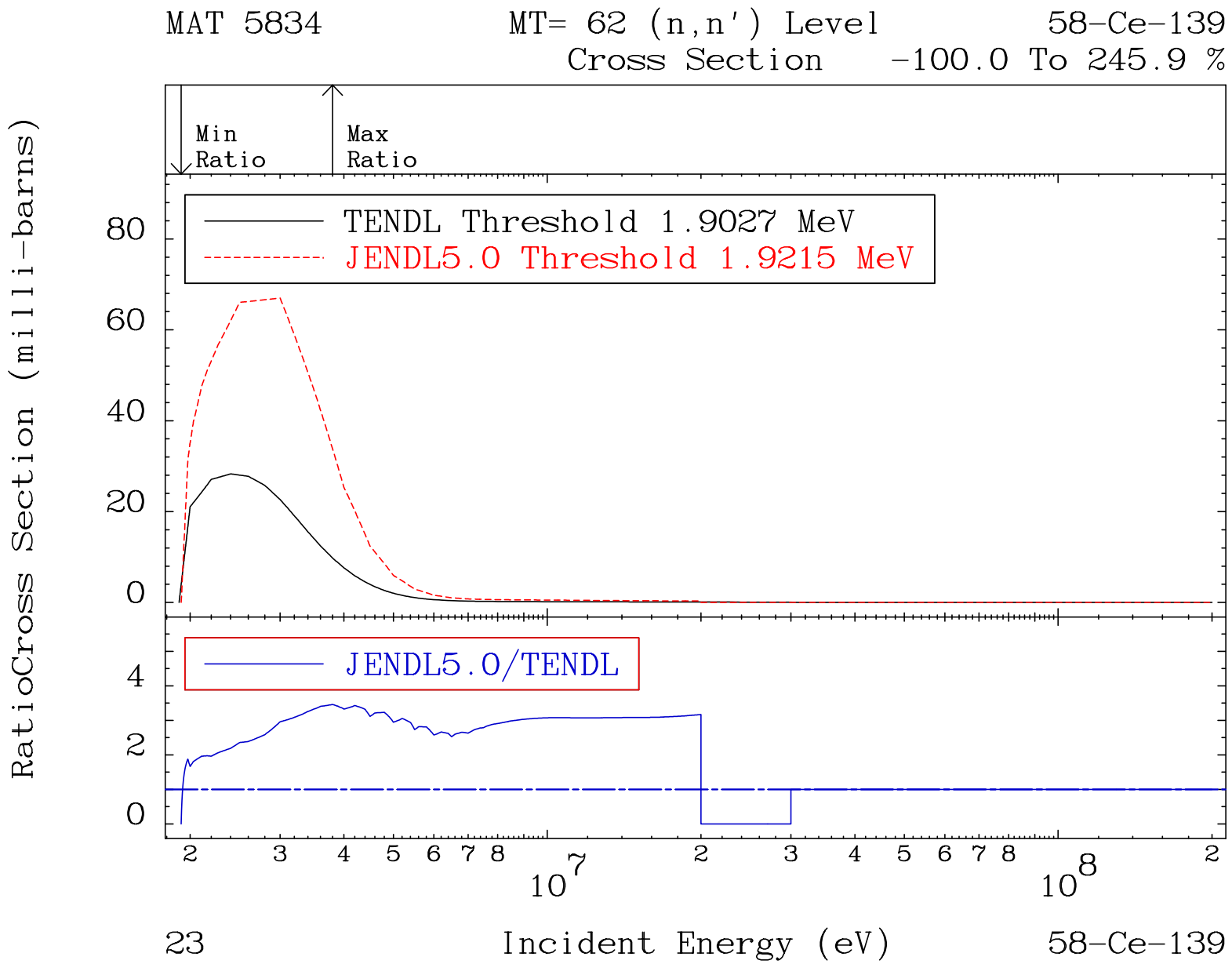

MAT 5834
MT= 57 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 8.333 %
Min Ratio
Max Ratio
TENDL Threshold 1.6082 MeV
JENDL5.0 Threshold 1.6425 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
58-Ce-139

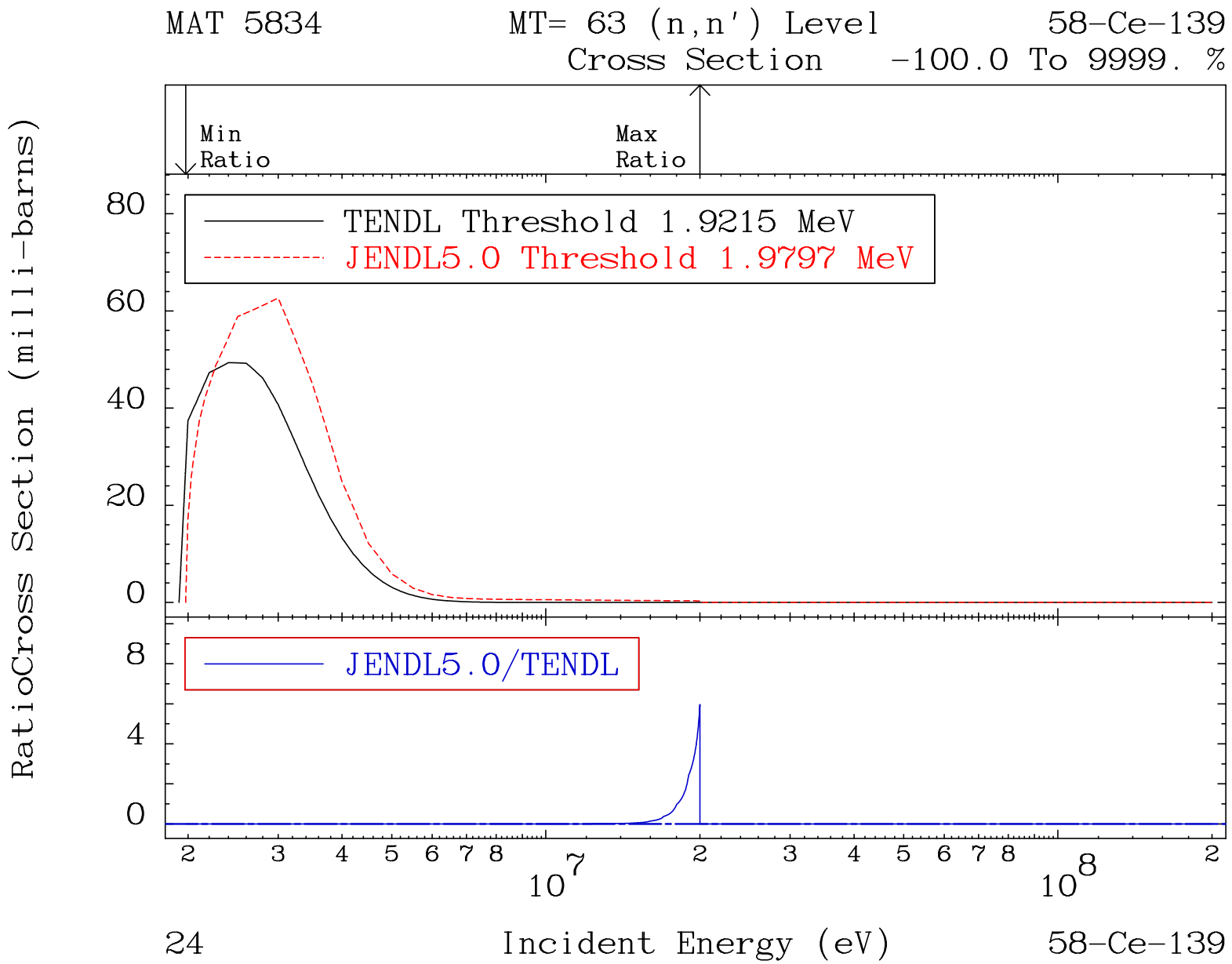

MAT 5834
MT= 58 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 241.1 %
Min Ratio
Max Ratio
TENDL Threshold 1.6425 MeV
JENDL5.0 Threshold 1.8030 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
58-Ce-139

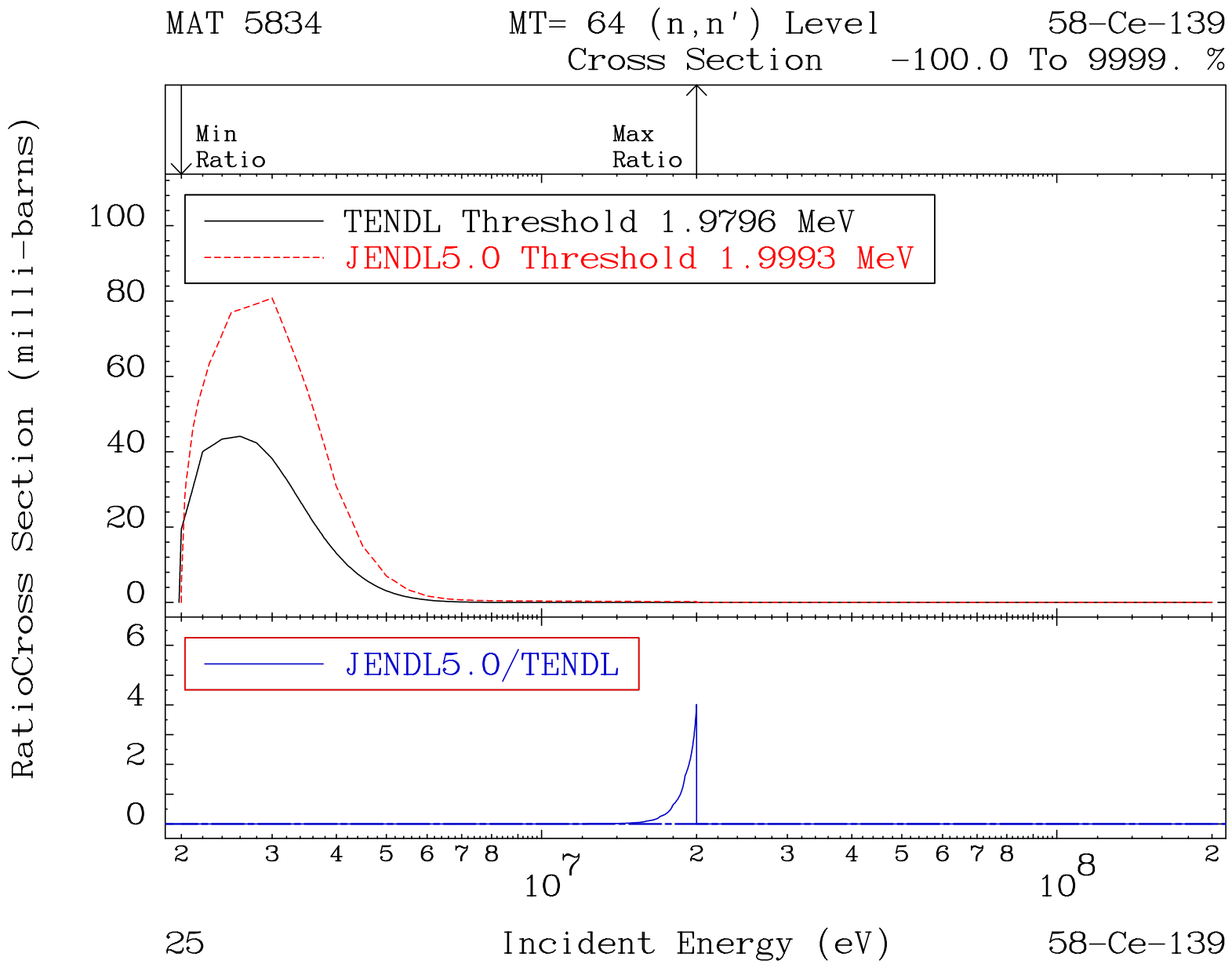

MAT 5834
MT= 59 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 341.8 %
Min Ratio
Max Ratio
TENDL Threshold 1.8030 MeV
JENDL5.0 Threshold 1.8317 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
6
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
58-Ce-139

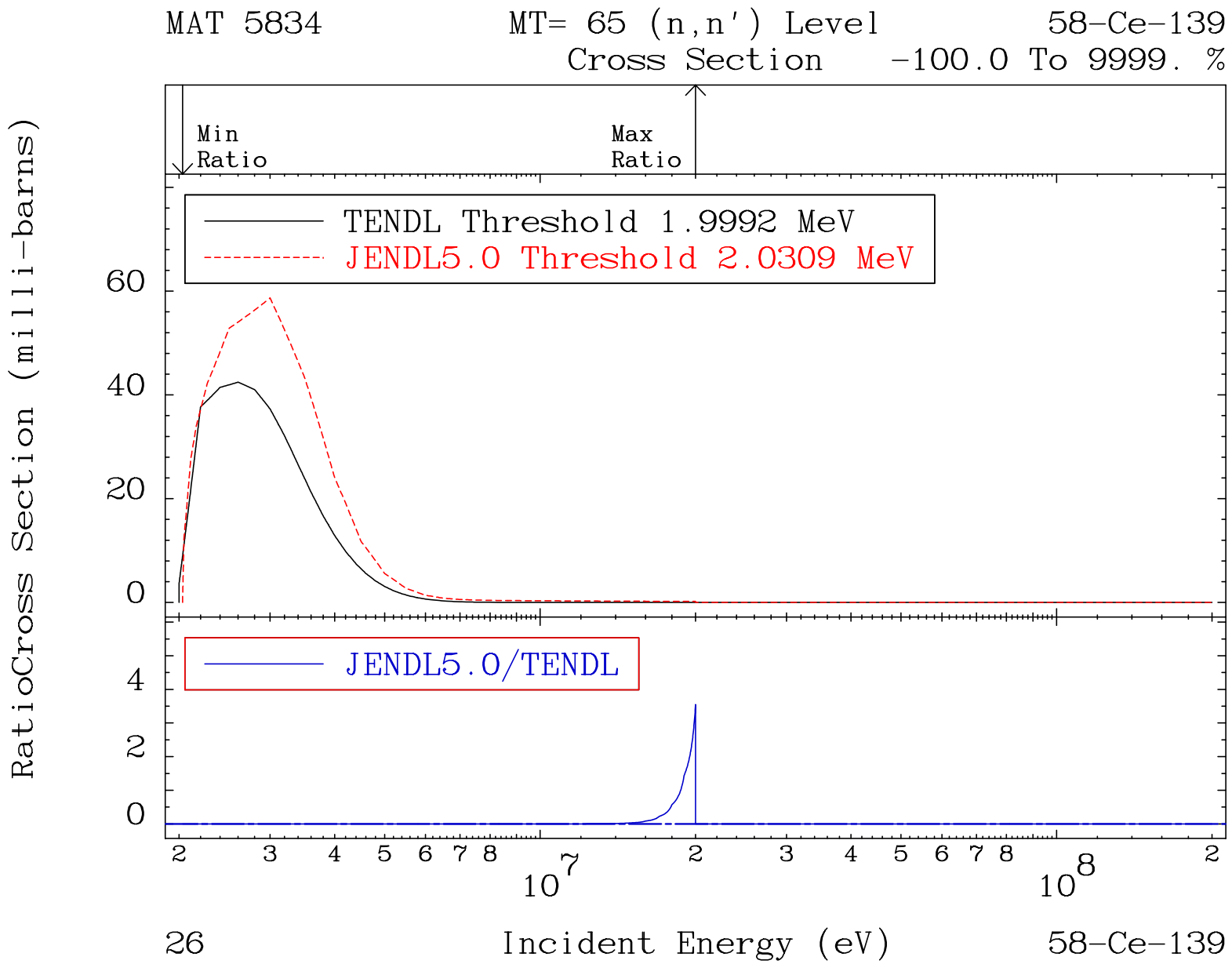

MAT 5834
MT= 60 (n,n') Level
58-Ce-139
Cross Section -100.0 To 33.86 %
Min Ratio
Max Ratio
TENDL Threshold 1.8316 MeV
JENDL5.0 Threshold 1.8563 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
58-Ce-139

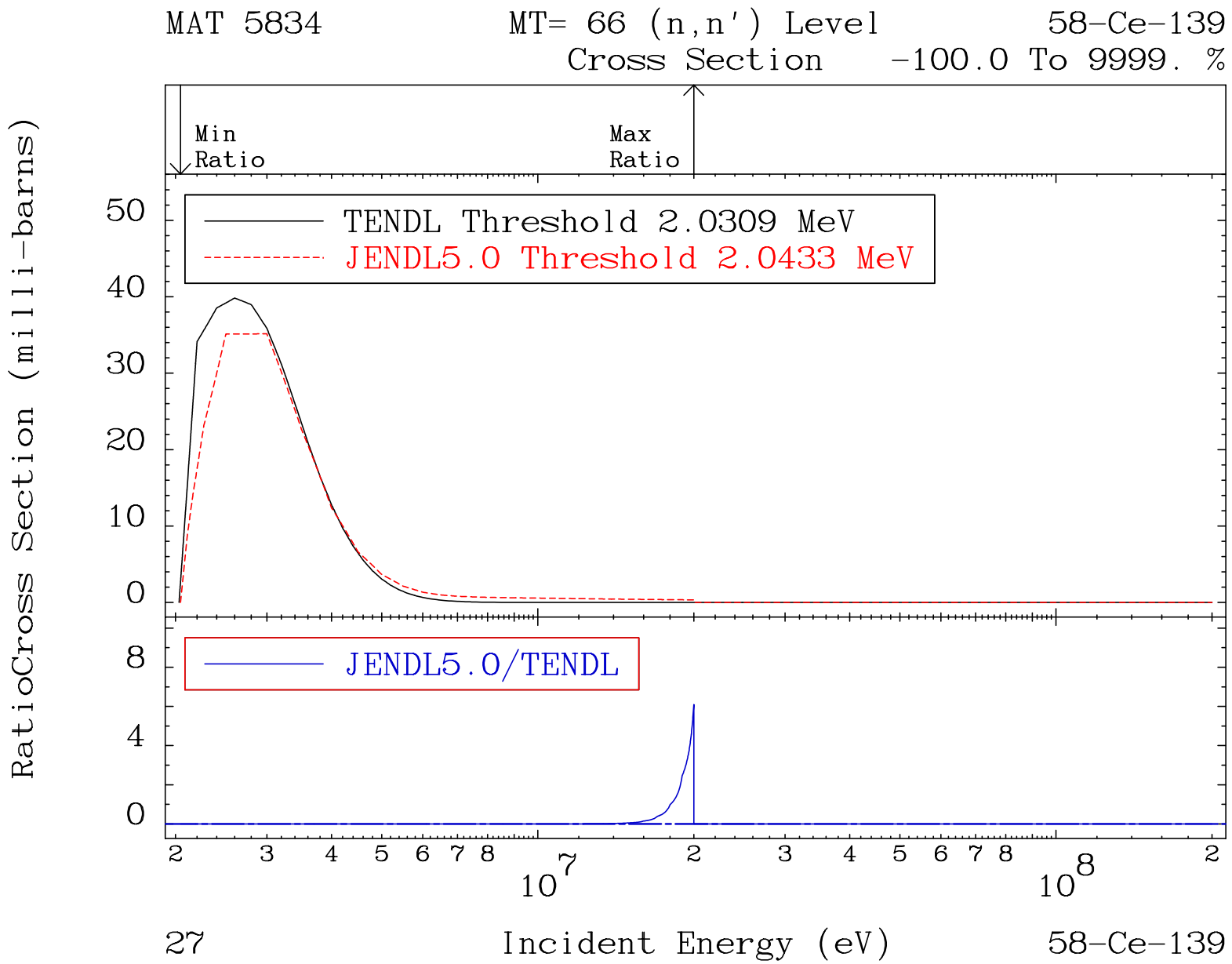

MAT 5834
MT= 61 (n,n') Level
58-Ce-139
Cross Section -100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 1.8563 MeV
JENDL5.0 Threshold 1.9027 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
58-Ce-139

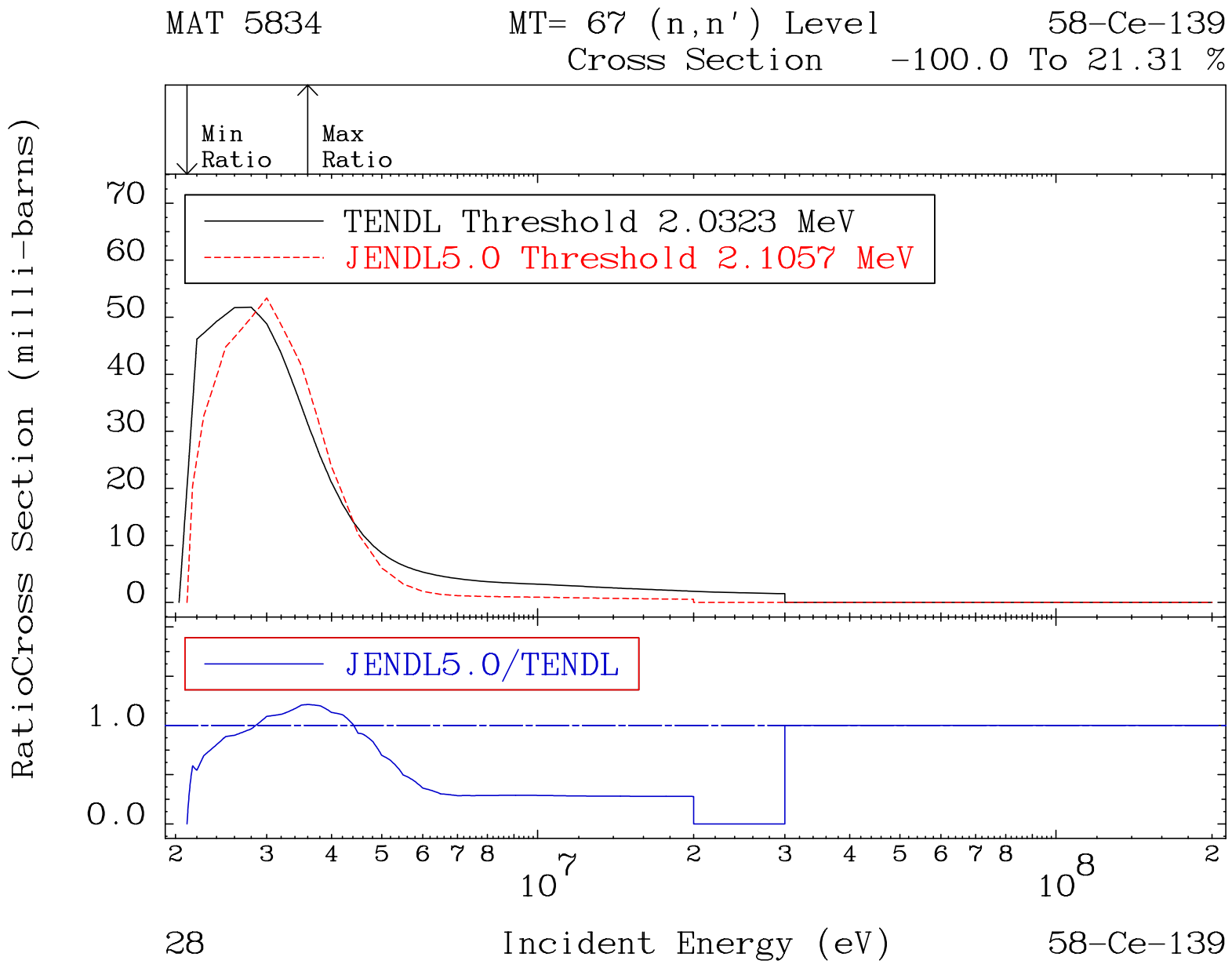

MAT 5834
MT= 62 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 245.9 %
Min Ratio
Max Ratio
TENDL Threshold 1.9027 MeV
JENDL5.0 Threshold 1.9215 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
58-Ce-139

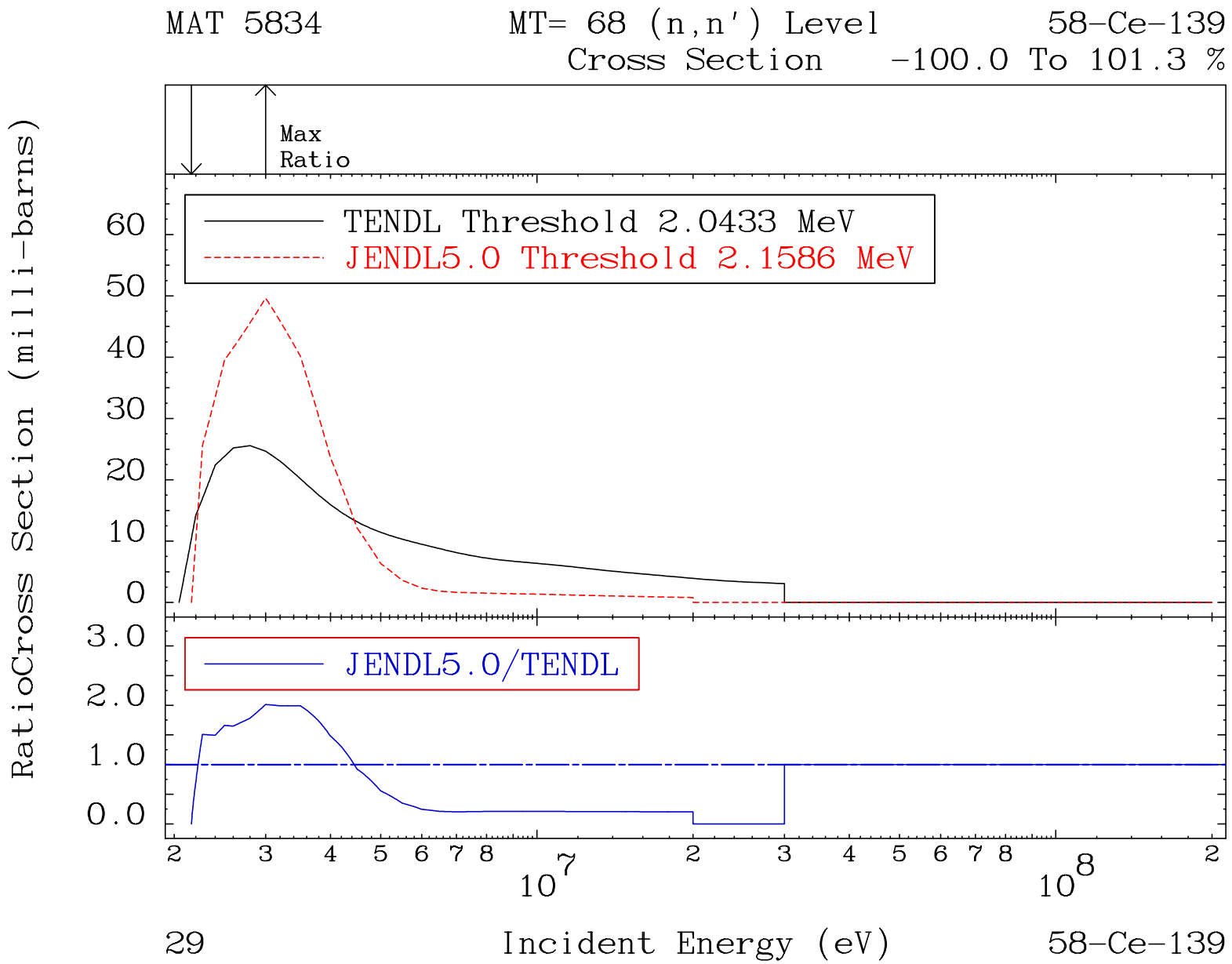

MAT 5834
MT= 63 (n,n') Level
58-Ce-139
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9215 MeV
JENDL5.0 Threshold 1.9797 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
8
4
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
58-Ce-139

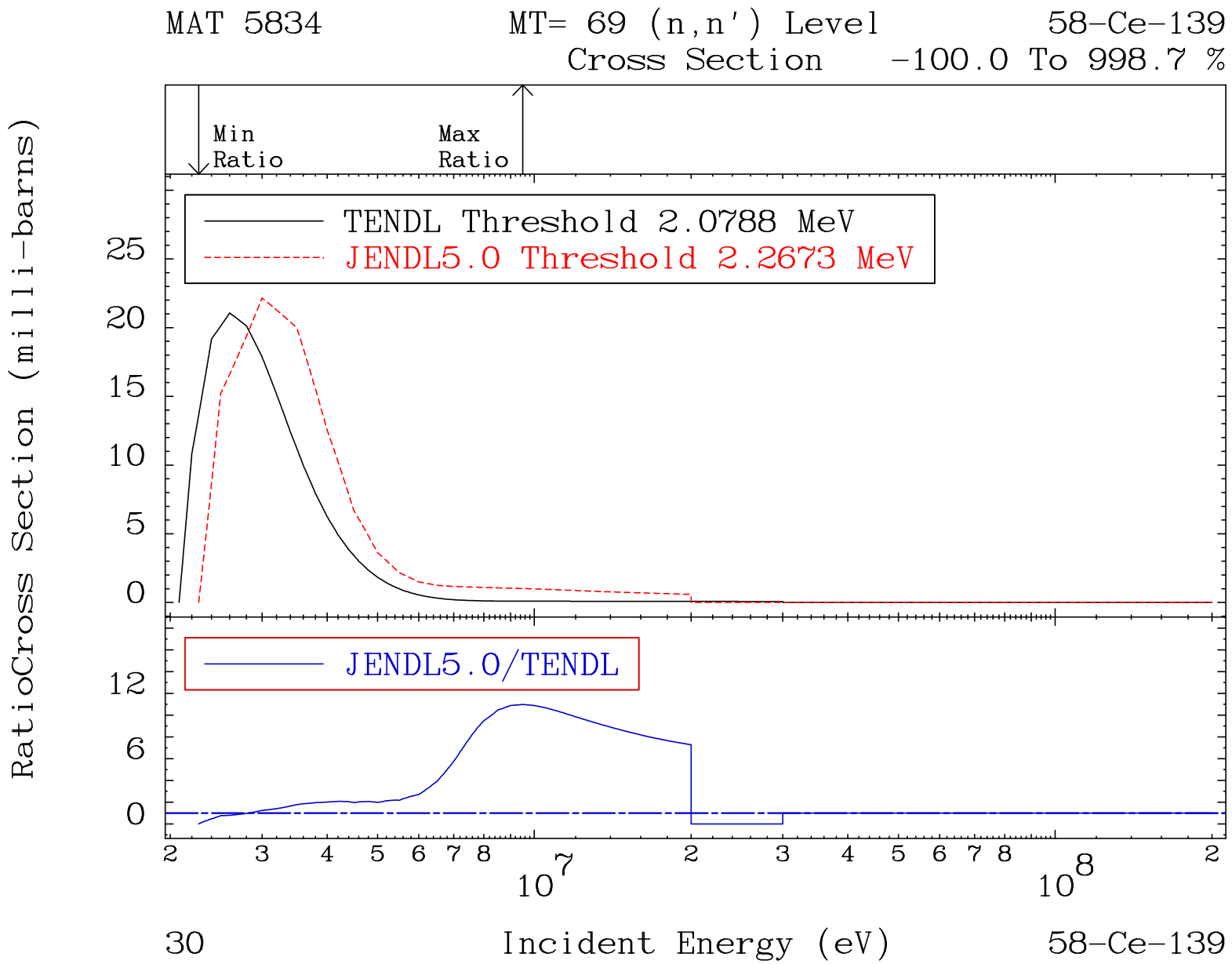

MAT 5834
MT= 64 (n,n') Level
58-Ce-139
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9796 MeV
JENDL5.0 Threshold 1.9993 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
6
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
58-Ce-139

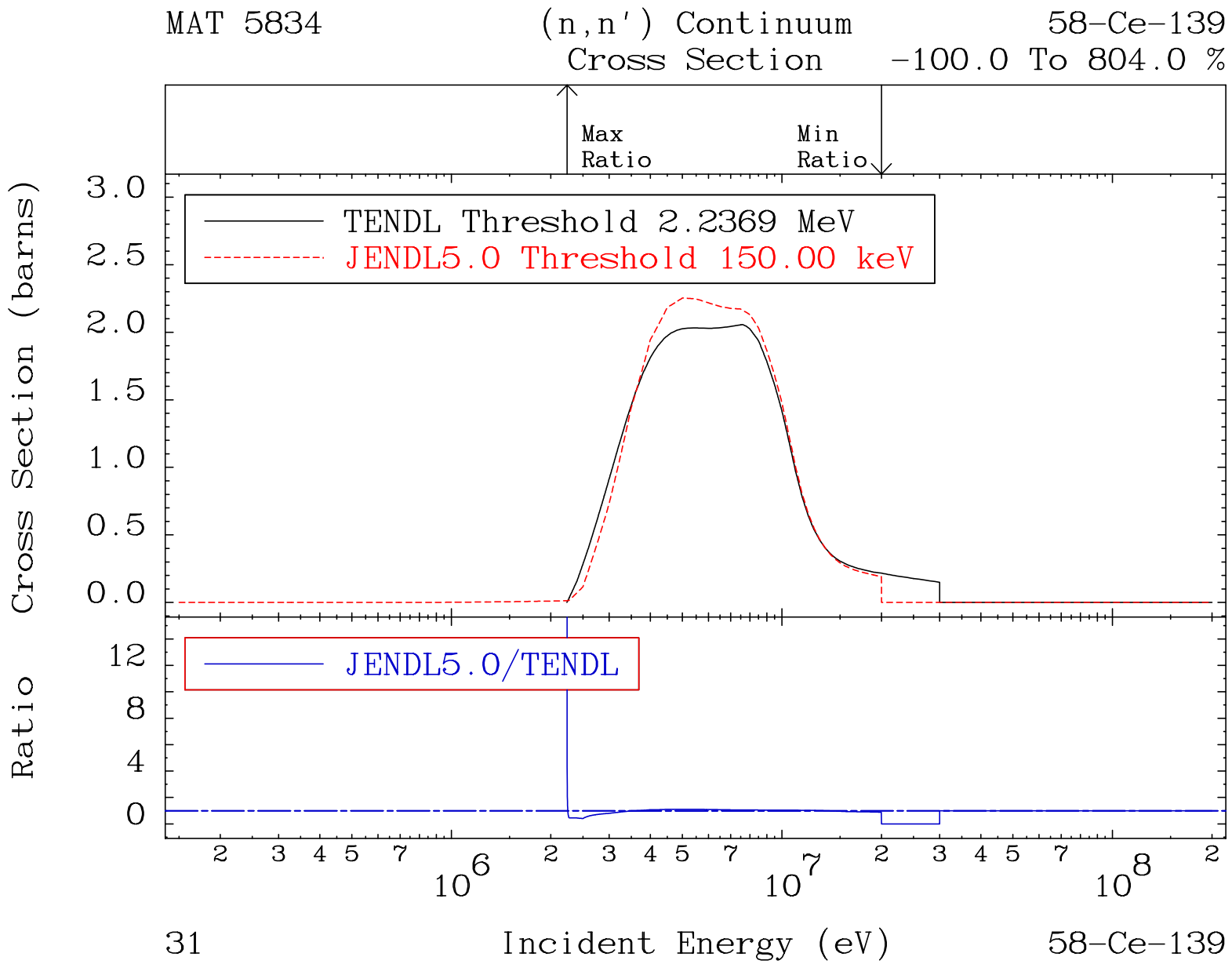

MAT 5834
MT= 65 (n,n') Level
58-Ce-139
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9992 MeV
JENDL5.0 Threshold 2.0309 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
40
20
0
4
2
0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
58-Ce-139

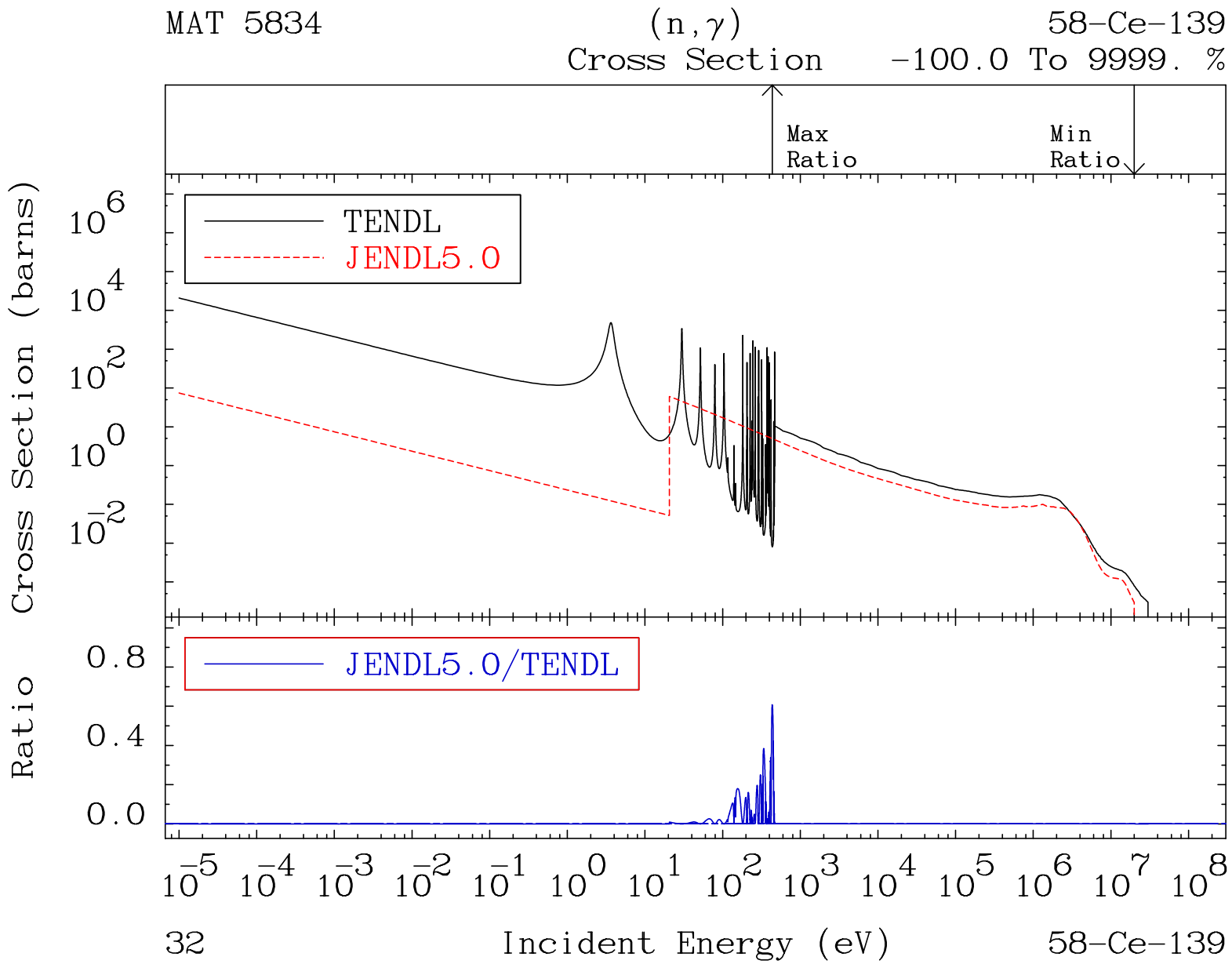

MAT 5834
MT= 66 (n,n') Level
58-Ce-139
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.0309 MeV
JENDL5.0 Threshold 2.0433 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
8
4
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
27
Incident Energy (eV)
58-Ce-139

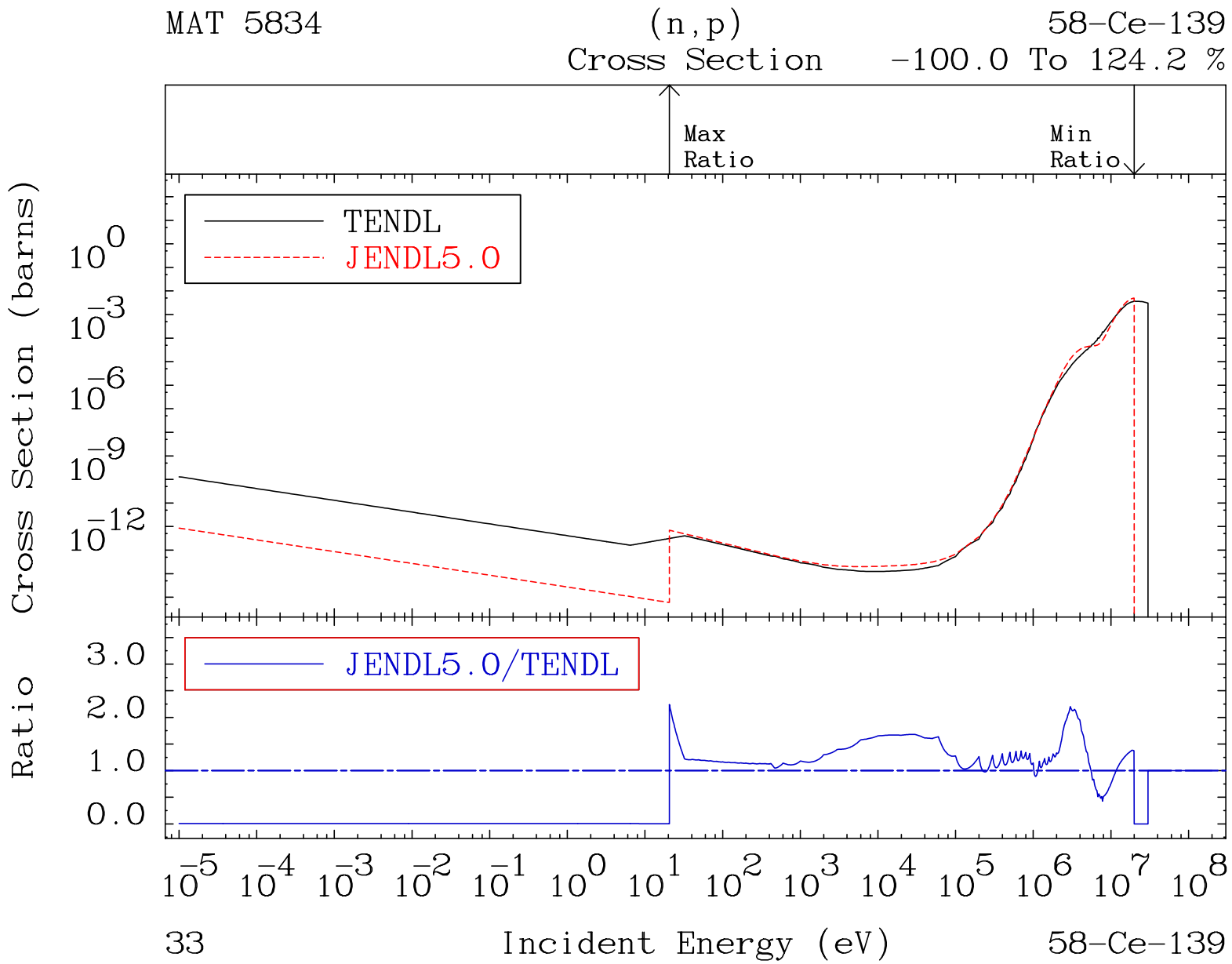

MAT 5834
MT= 67 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 21.31 %
Min Ratio
Max Ratio
TENDL Threshold 2.0323 MeV
JENDL5.0 Threshold 2.1057 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
58-Ce-139

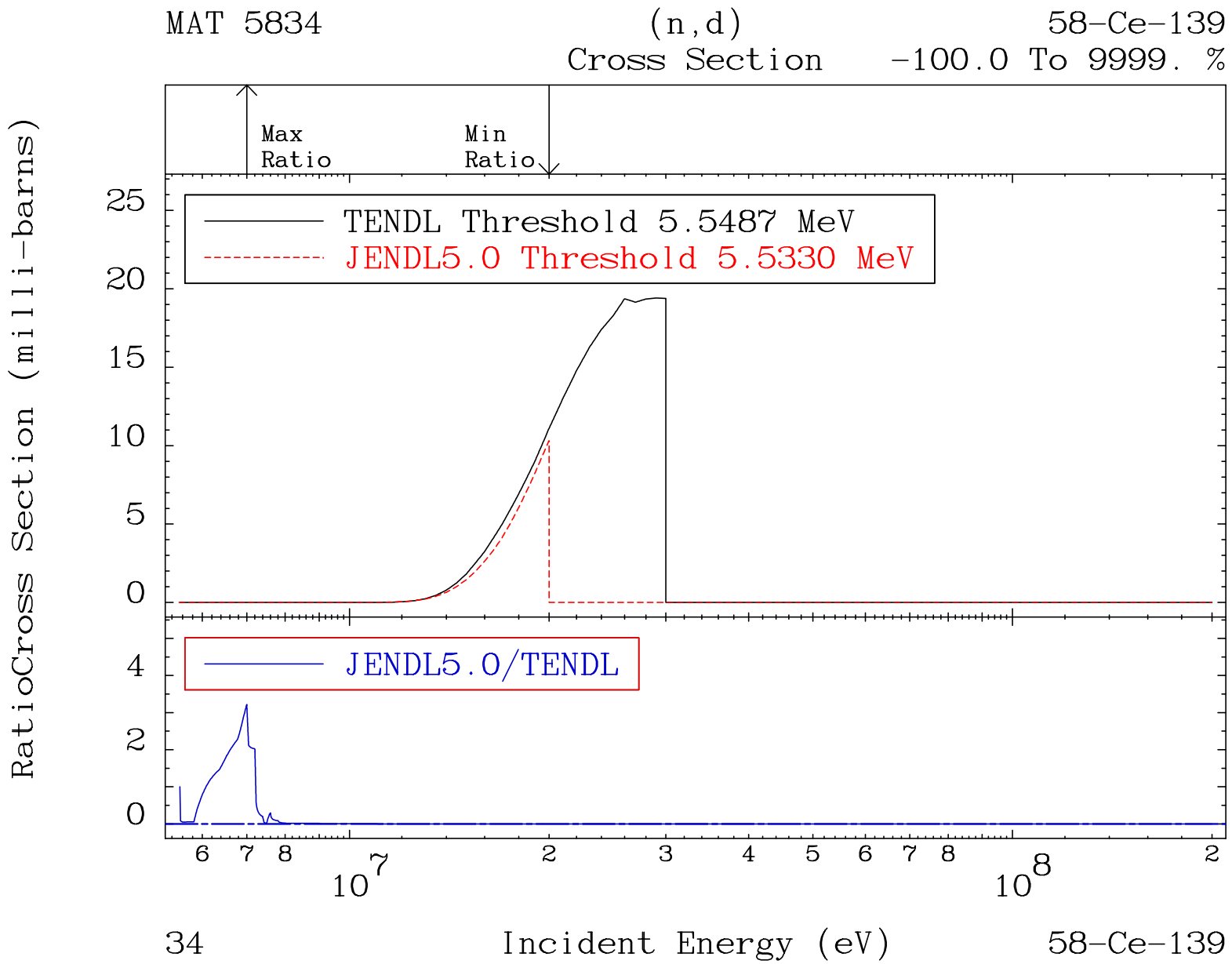

MAT 5834
MT= 68 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 101.3 %
Max
Ratio
TENDL Threshold 2.0433 MeV
JENDL5.0 Threshold 2.1586 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
29
Incident Energy (eV)
58-Ce-139

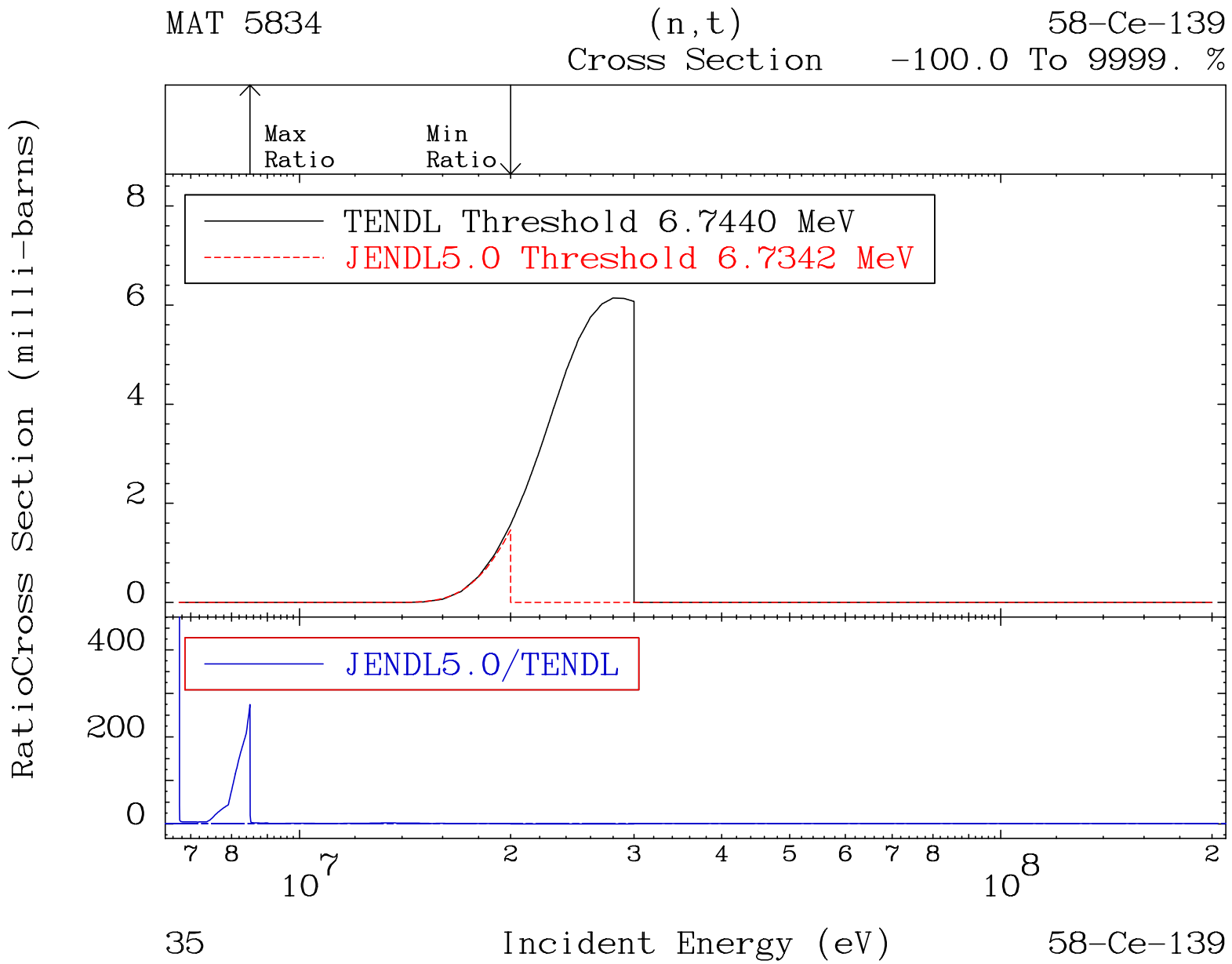

MAT 5834
MT= 69 (n,n') Level
58-Ce-139
Cross Section
-100.0 To 998.7 %
Min Ratio
Max Ratio
TENDL Threshold 2.0788 MeV
JENDL5.0 Threshold 2.2673 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
12
6
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
58-Ce-139

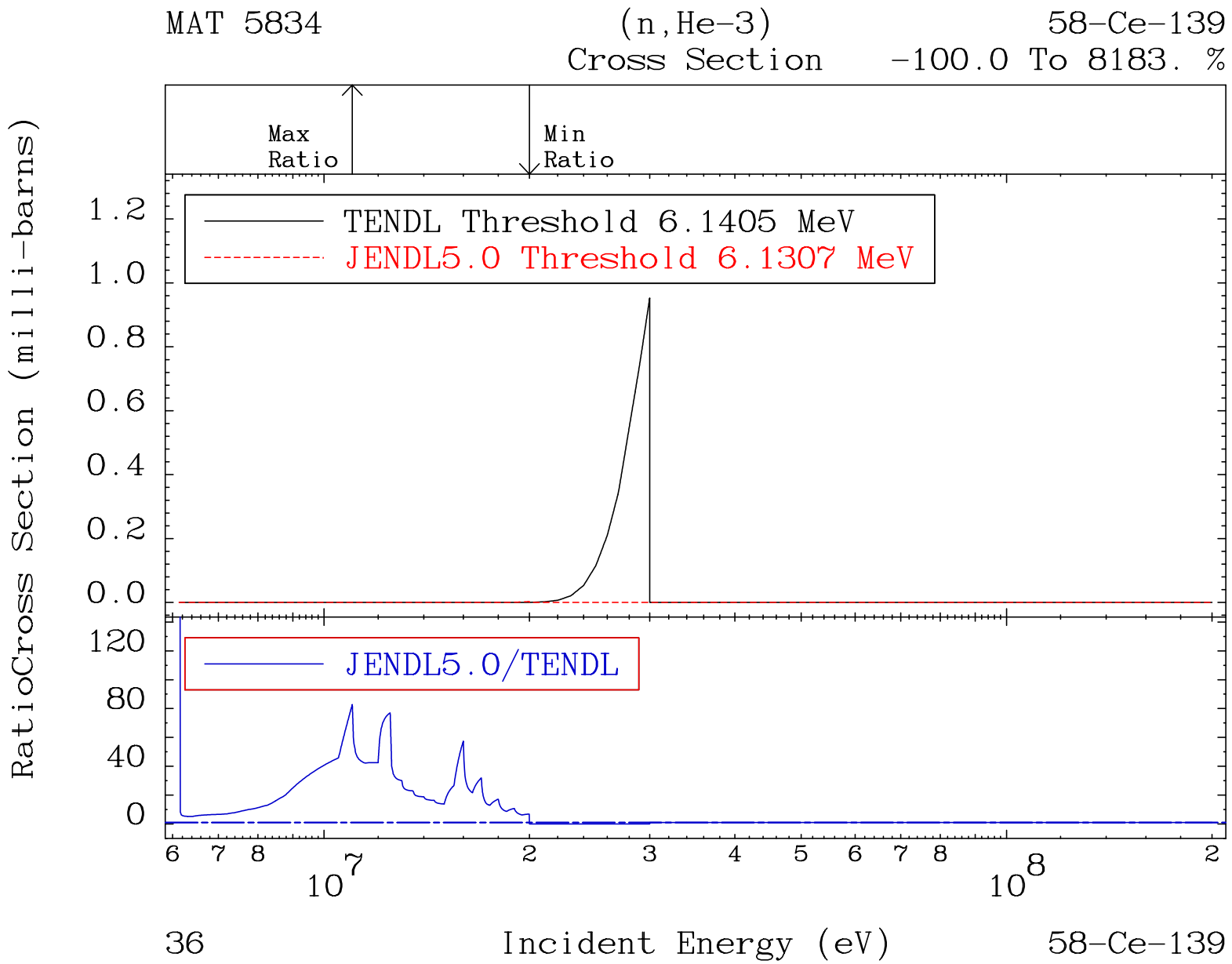

MAT 5834
(n,n') Continuum
Cross Section
58-Ce-139
-100.0 To 804.0 %
Max Ratio
Min Ratio
TENDL Threshold 2.2369 MeV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
31
58-Ce-139

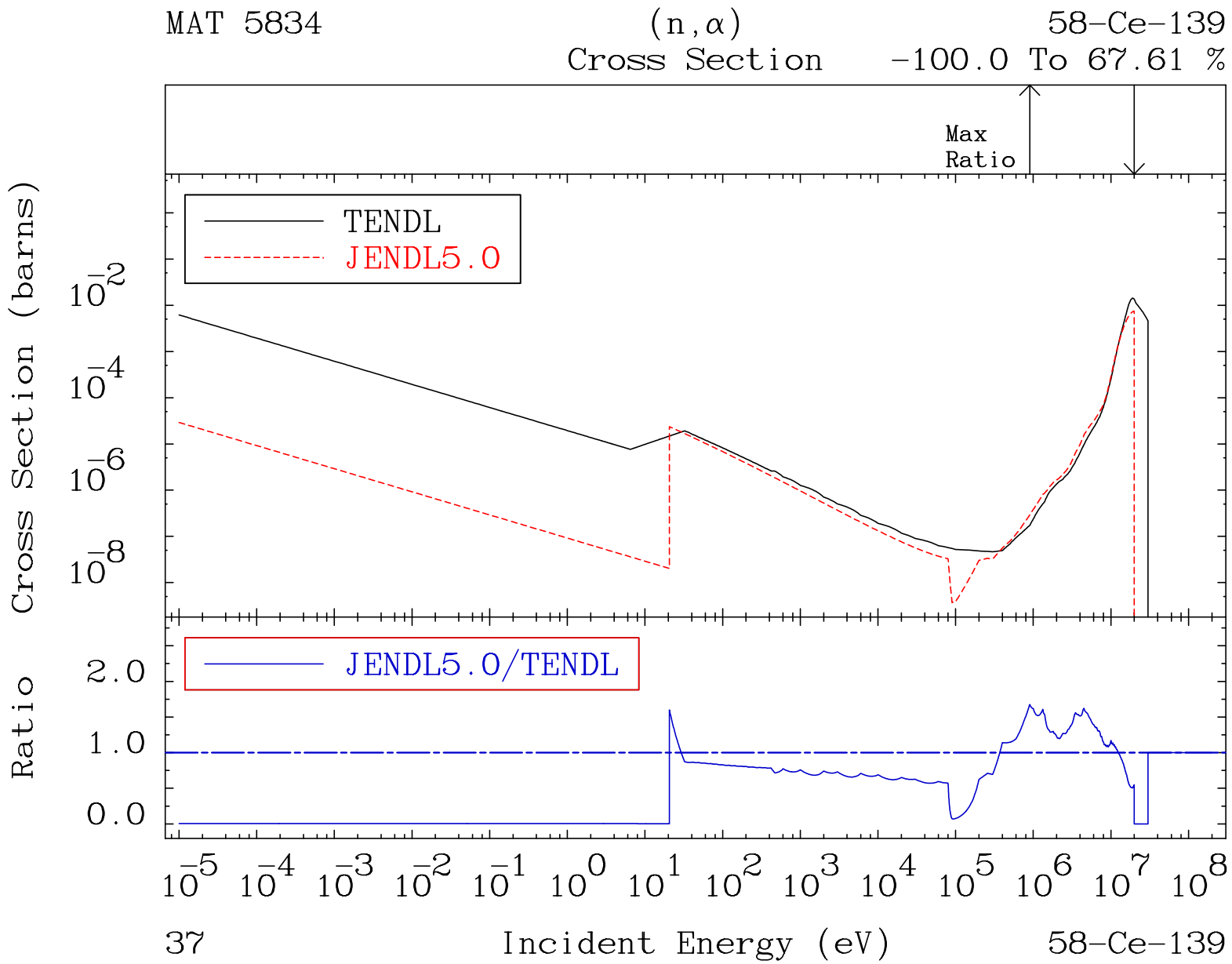

MAT 5834
(n,γ)
58-Ce-139
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
32
58-Ce-139

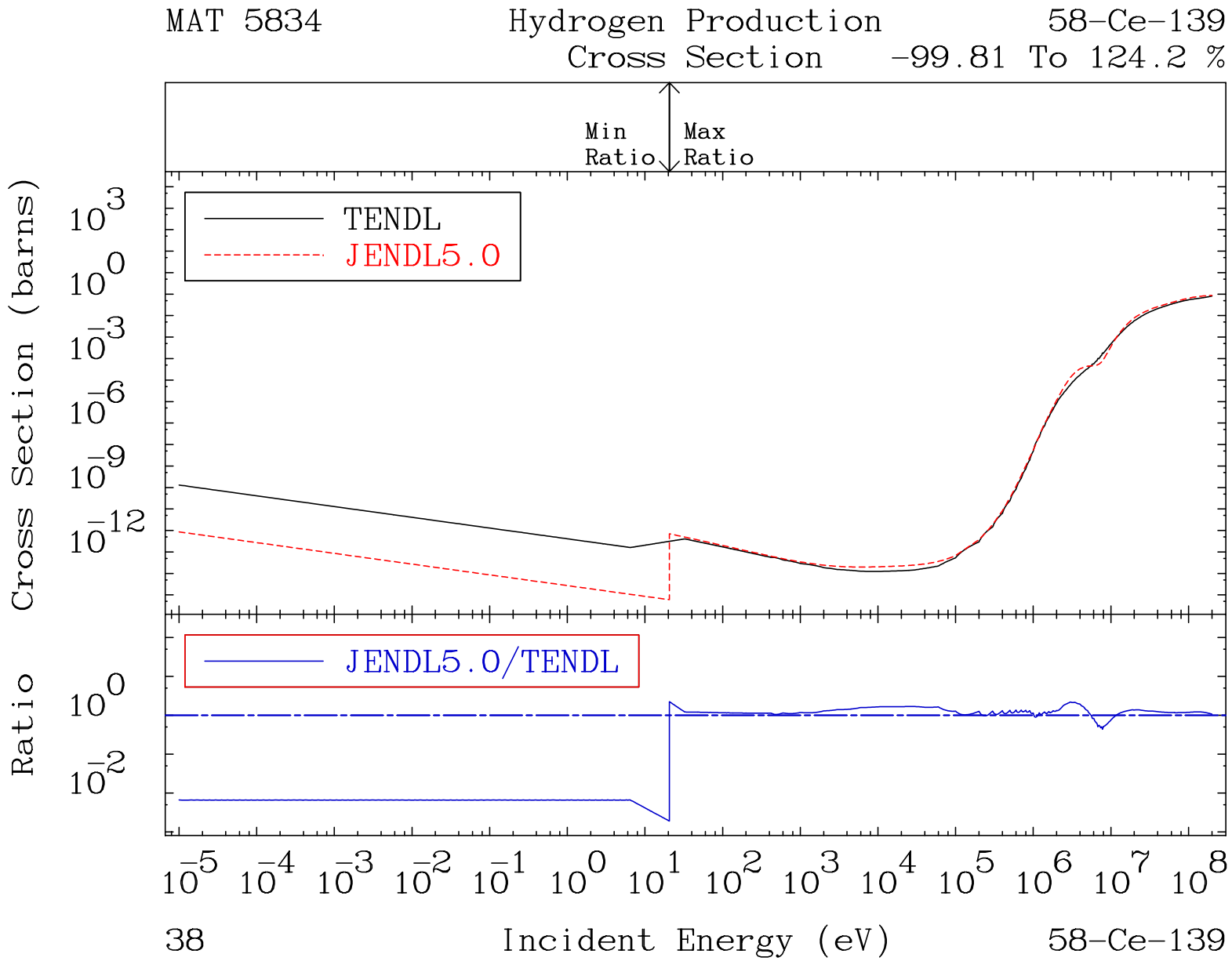

MAT 5834
(n,p)
58-Ce-139
Cross Section
-100.0 To 124.2 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^0
10^-3
10^-6
10^-9
10^-12
JENDL5.0/TENDL
Ratio
3.0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
33
Incident Energy (eV)
58-Ce-139

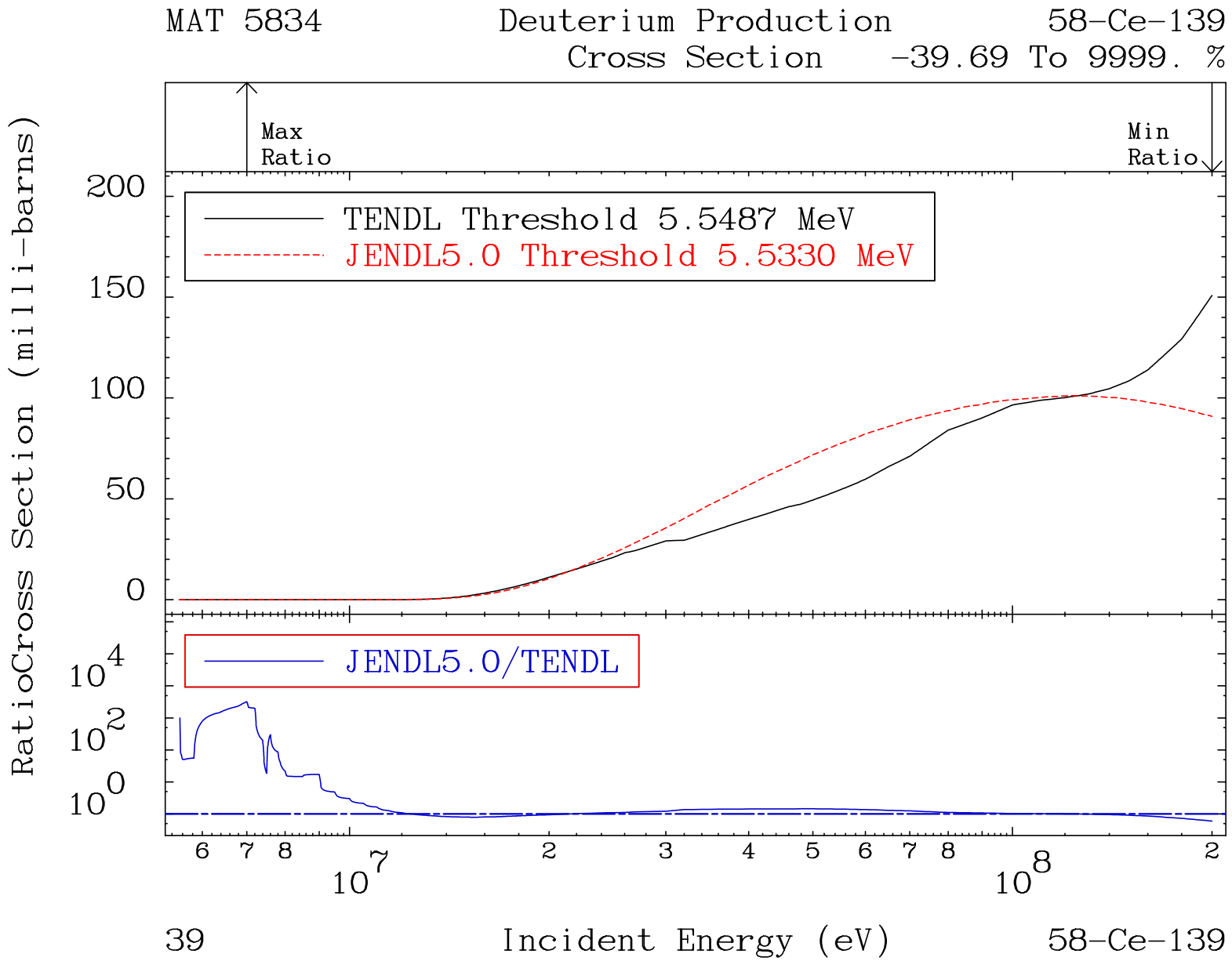

MAT 5834
(n,d)
58-Ce-139
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 5.5487 MeV
JENDL5.0 Threshold 5.5330 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
4
2
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
34
Incident Energy (eV)
58-Ce-139

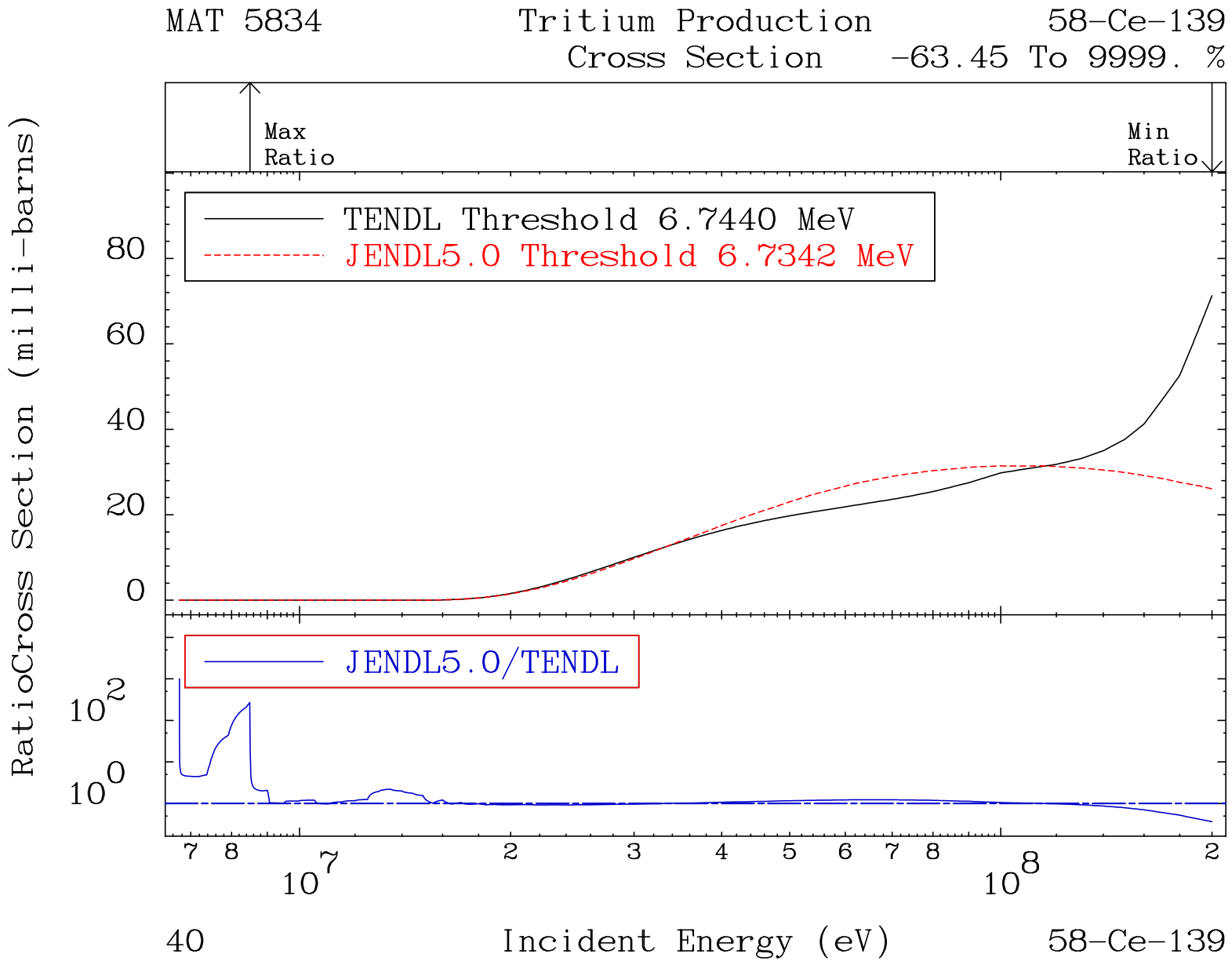

MAT 5834
(n,t)
Cross Section
58-Ce-139
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.7440 MeV
JENDL5.0 Threshold 6.7342 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
35
58-Ce-139

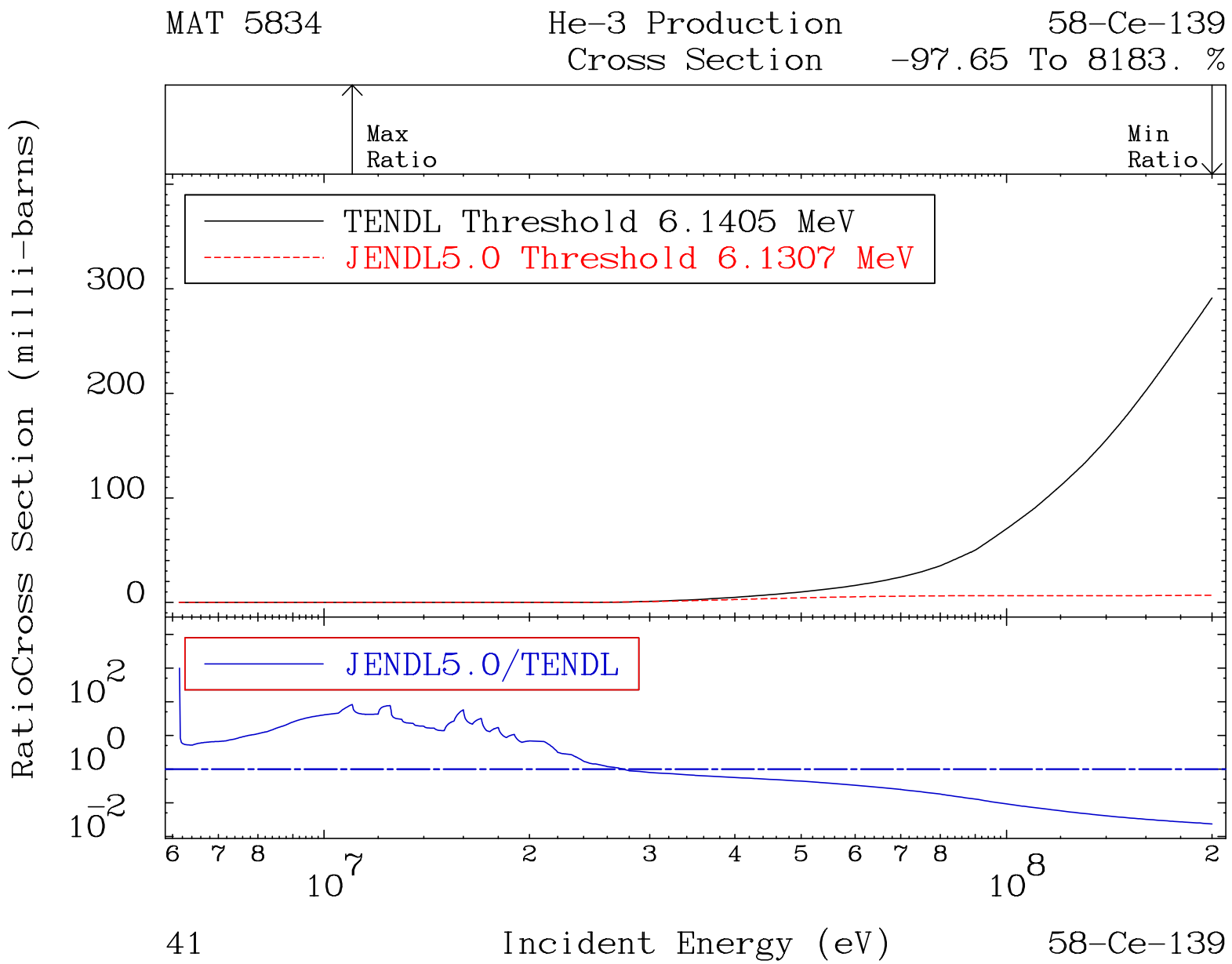

MAT 5834
(n,He-3)
58-Ce-139
Cross Section
-100.0 To 8183. %
Max Ratio
Min Ratio
TENDL Threshold 6.1405 MeV
JENDL5.0 Threshold 6.1307 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
120
80
40
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
36
58-Ce-139

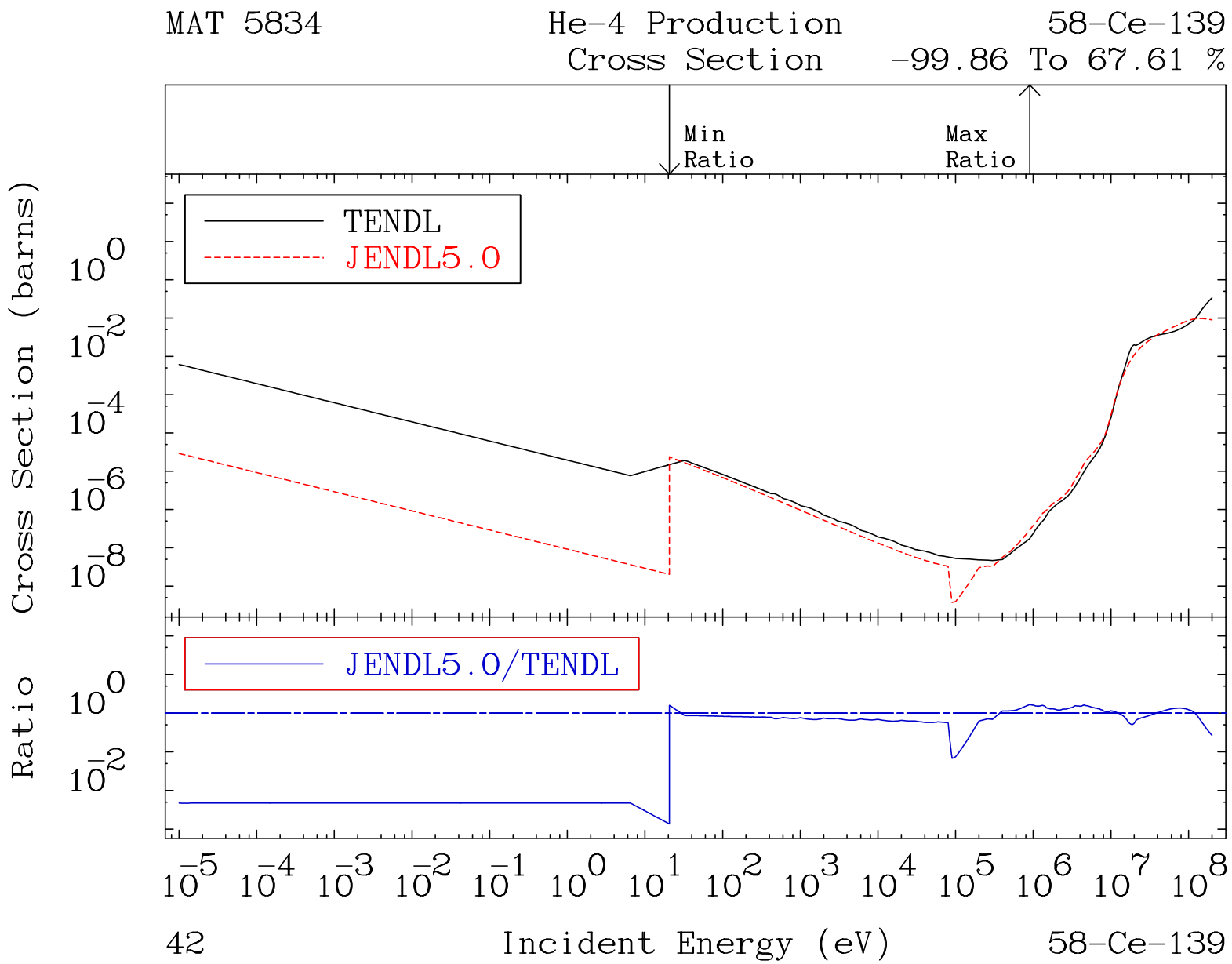

MAT 5834
(n,α)
Cross Section
58-Ce-139
-100.0 To 67.61 %
Max
Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^-2
10^-4
10^-6
10^-8
JENDL5.0/TENDL
Ratio
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
37
Incident Energy (eV)
58-Ce-139

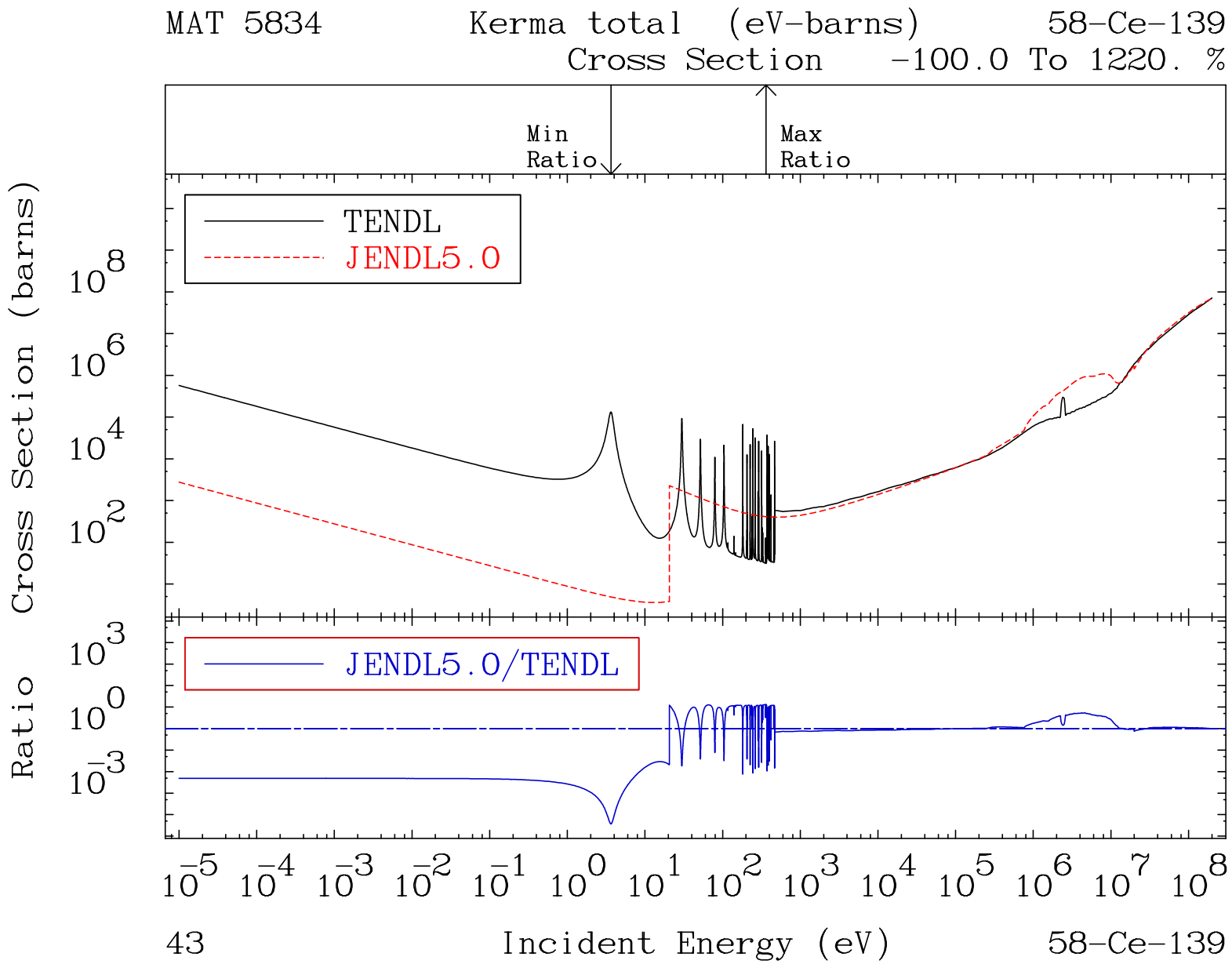

MAT 5834
Hydrogen Production
58-Ce-139
Cross Section
-99.81 To 124.2 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
38
58-Ce-139

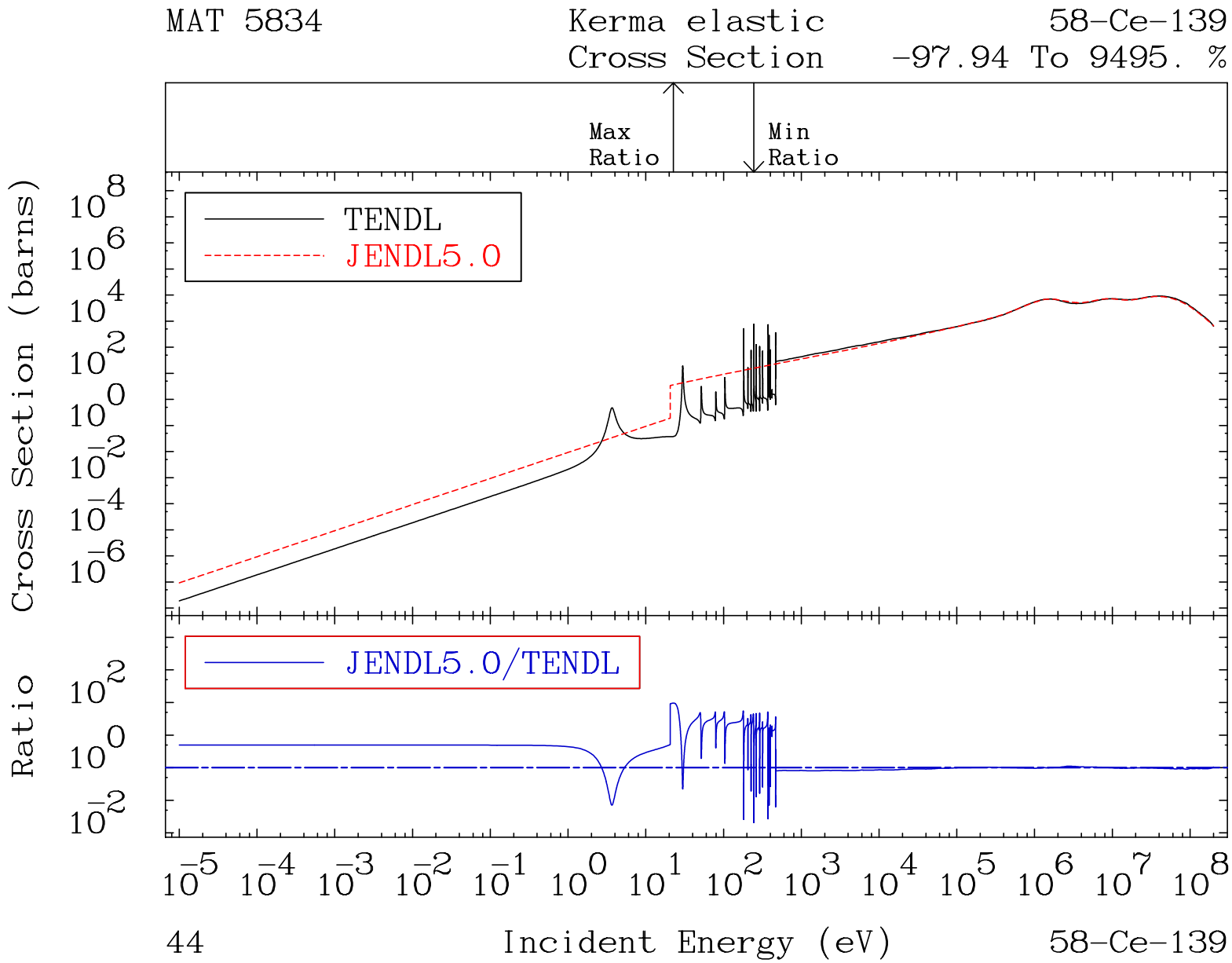

MAT 5834
Deuterium Production
58-Ce-139
Cross Section
-39.69 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 5.5487 MeV
JENDL5.0 Threshold 5.5330 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
10^4
10^2
10^0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
39
Incident Energy (eV)
58-Ce-139

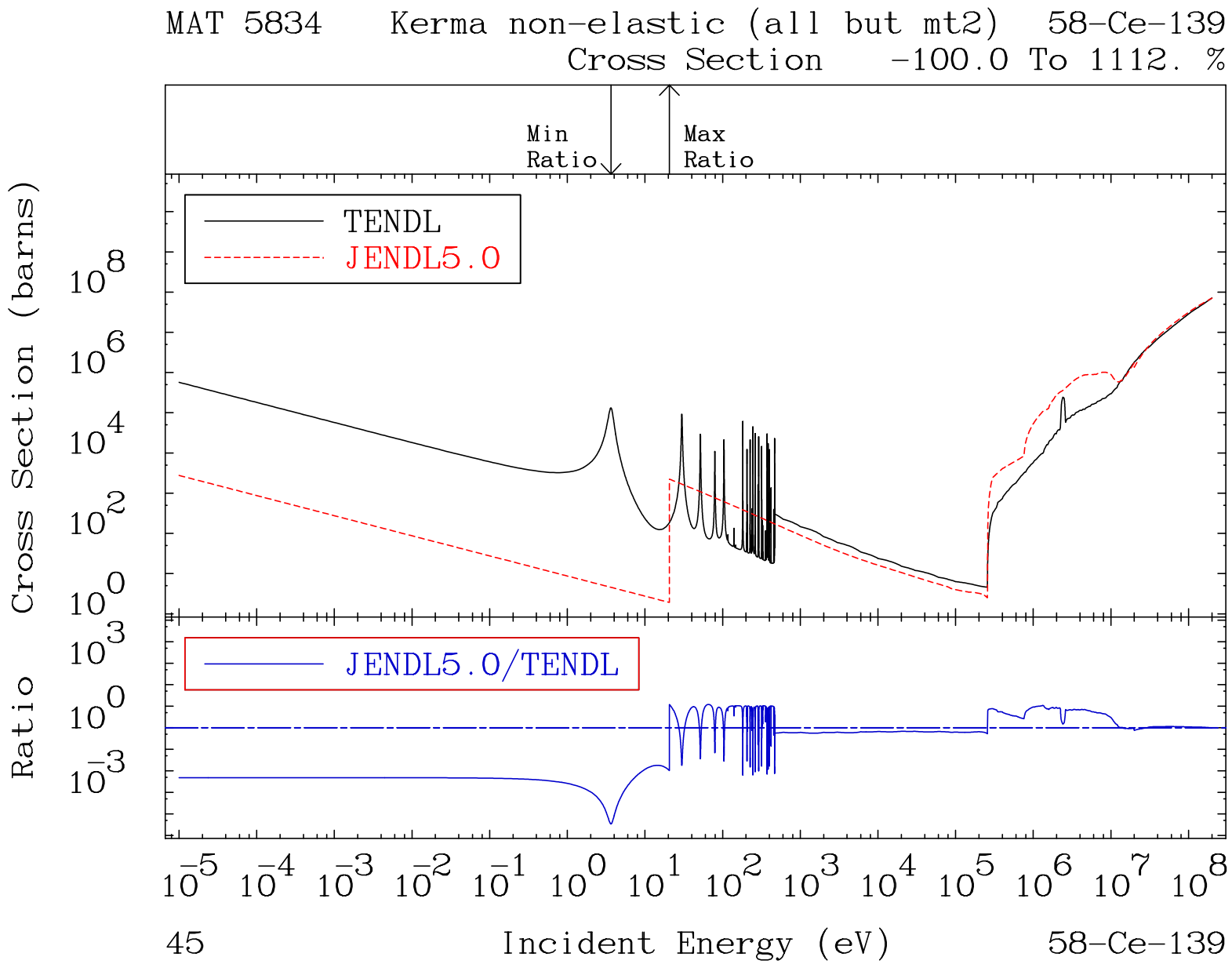

MAT 5834
Tritium Production
58-Ce-139
Cross Section
-63.45 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.7440 MeV
JENDL5.0 Threshold 6.7342 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
10^2
10^0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
40
Incident Energy (eV)
58-Ce-139

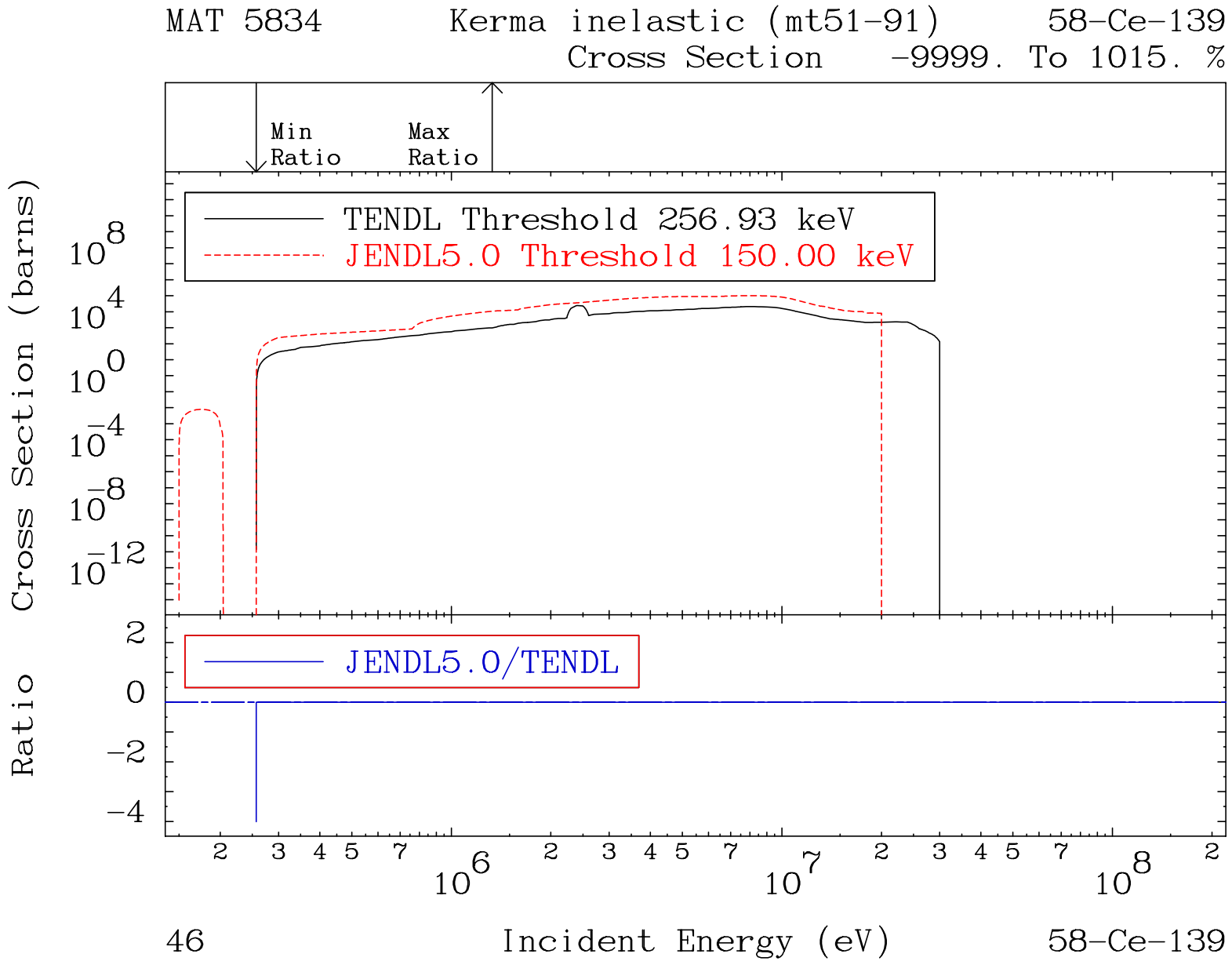

MAT 5834
He-3 Production
Cross Section
58-Ce-139
-97.65 To 8183. %
Max Ratio
Min Ratio
TENDL Threshold 6.1405 MeV
JENDL5.0 Threshold 6.1307 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
10^2
10^0
10^-2
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
41
Incident Energy (eV)
58-Ce-139

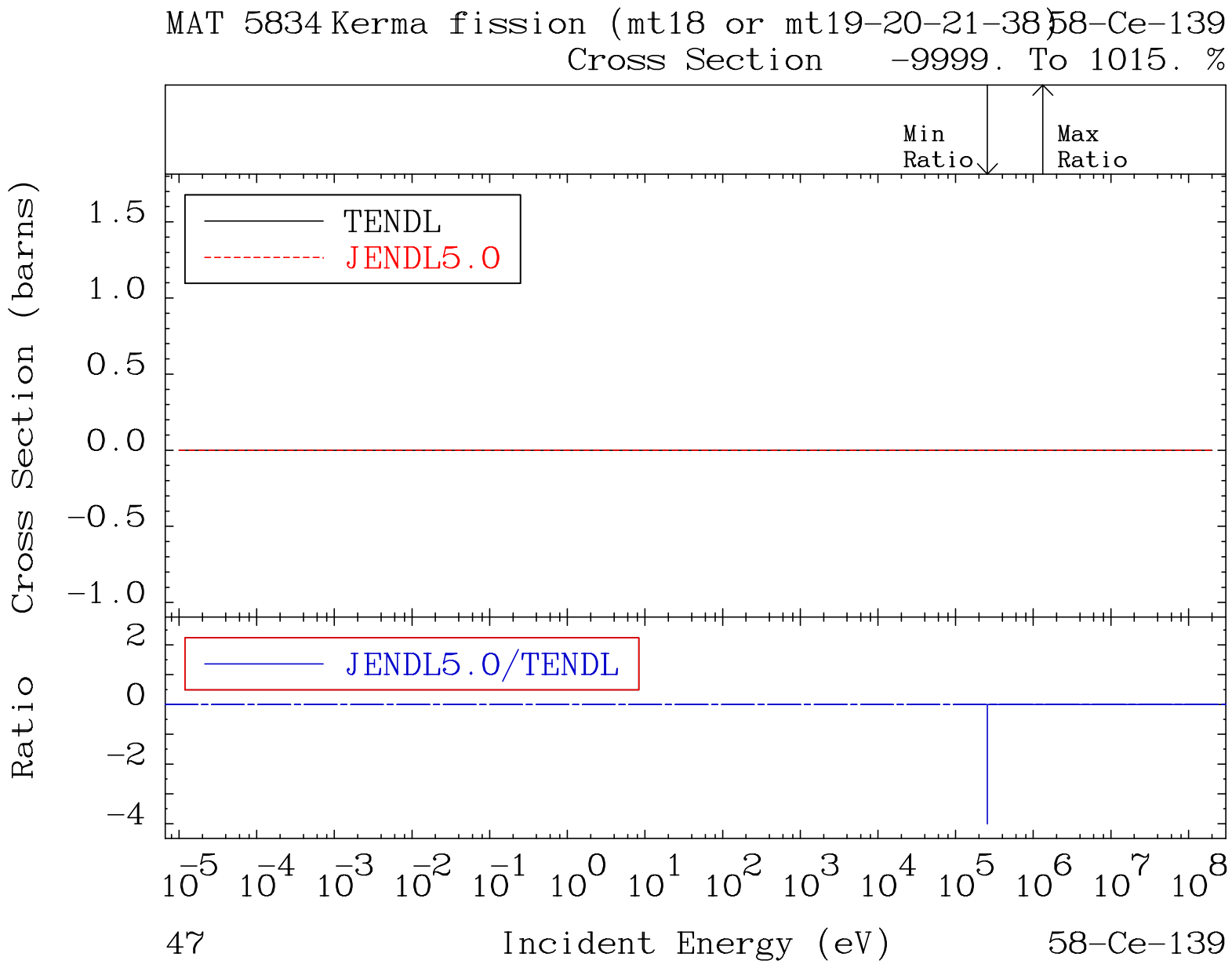

MAT 5834
He-4 Production
Cross Section
58-Ce-139
-99.86 To 67.61 %
Min
Ratio
Max
Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
42
58-Ce-139

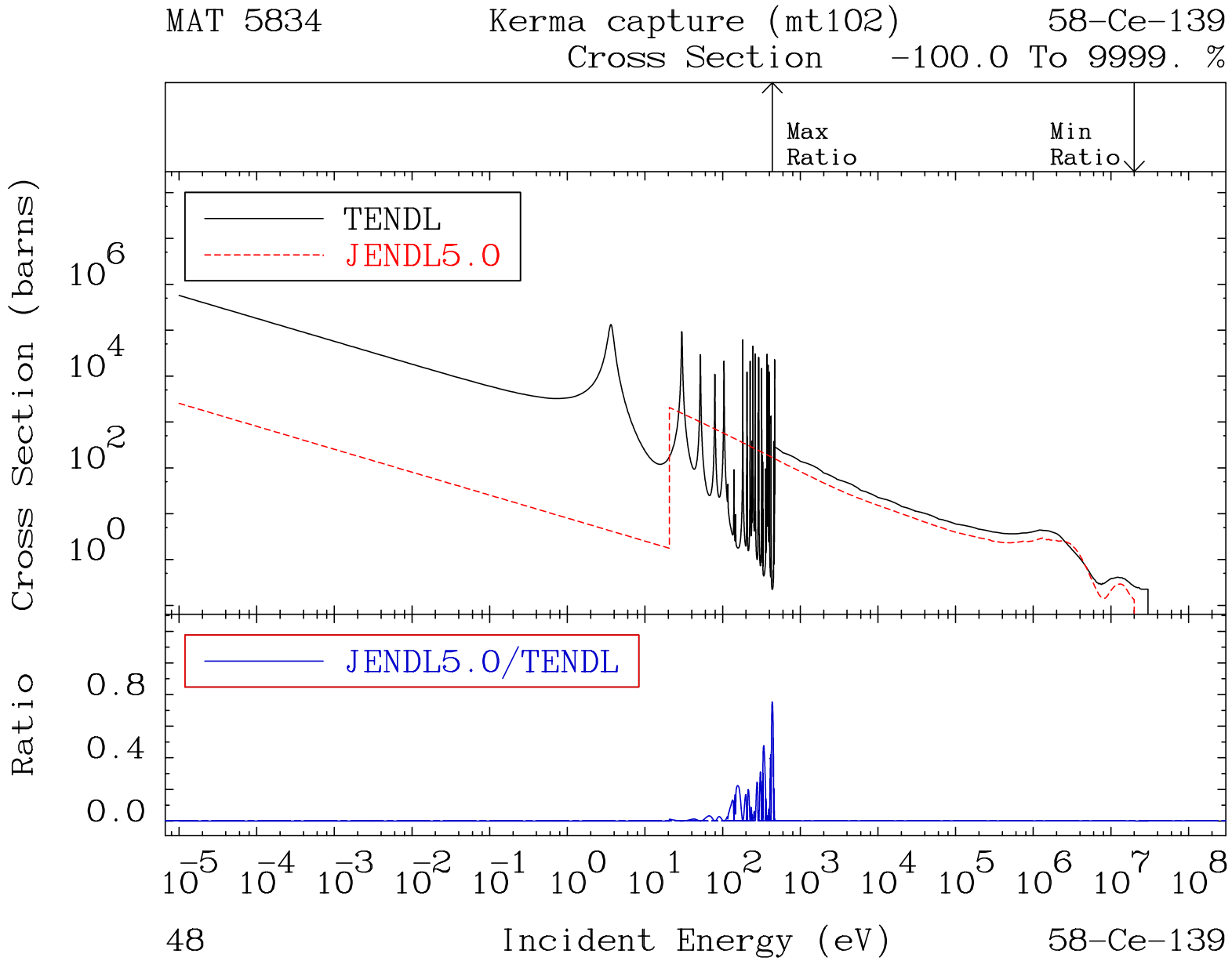

MAT 5834
Kerma total (eV-barns)
58-Ce-139
Cross Section -100.0 To 1220. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
58-Ce-139

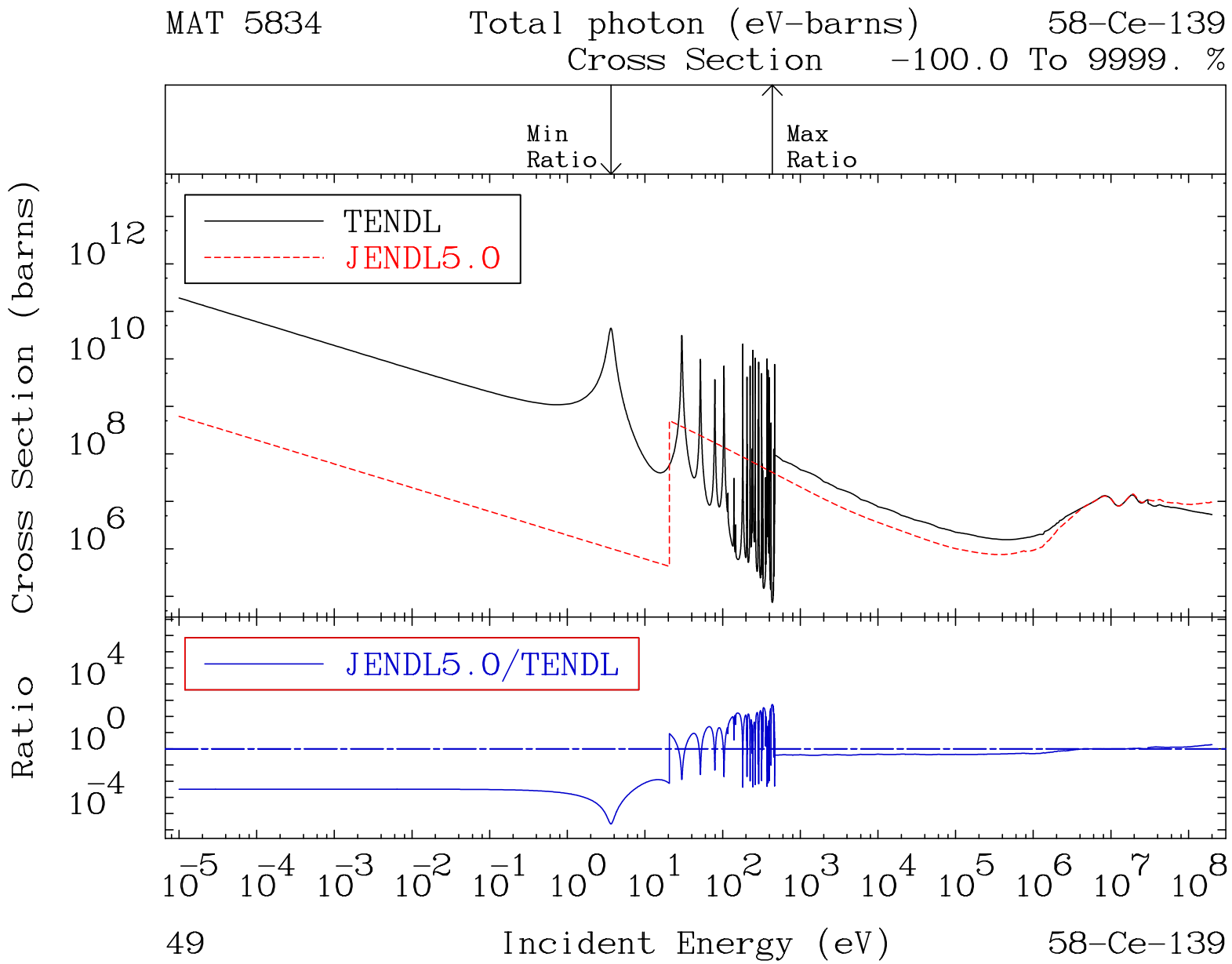

MAT 5834
Kerma elastic
Cross Section
58-Ce-139
-97.94 To 9495. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
44
58-Ce-139

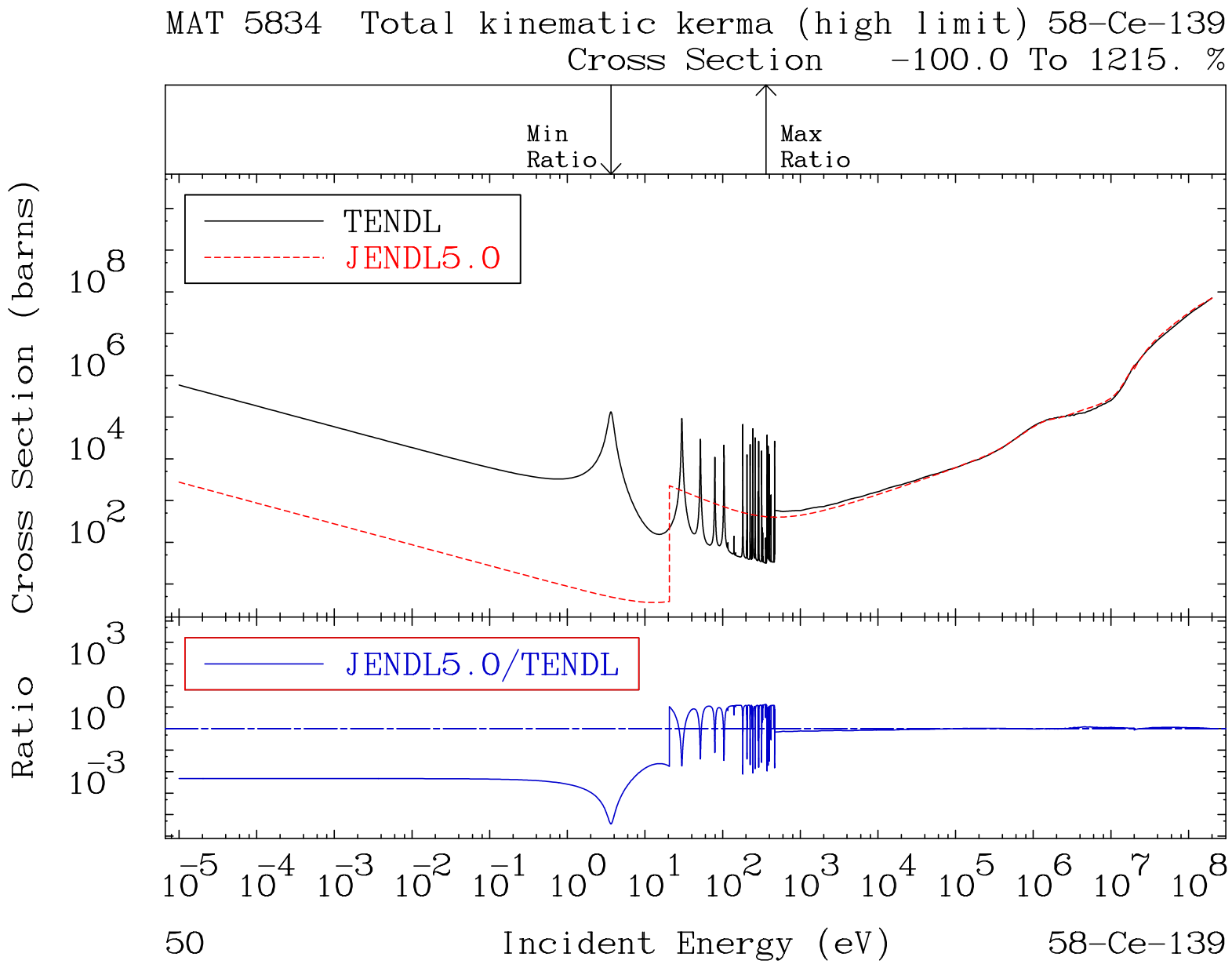

MAT 5834 Kerma non-elastic (all but mt2) 58-Ce-139
Cross Section -100.0 To 1112. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
58-Ce-139

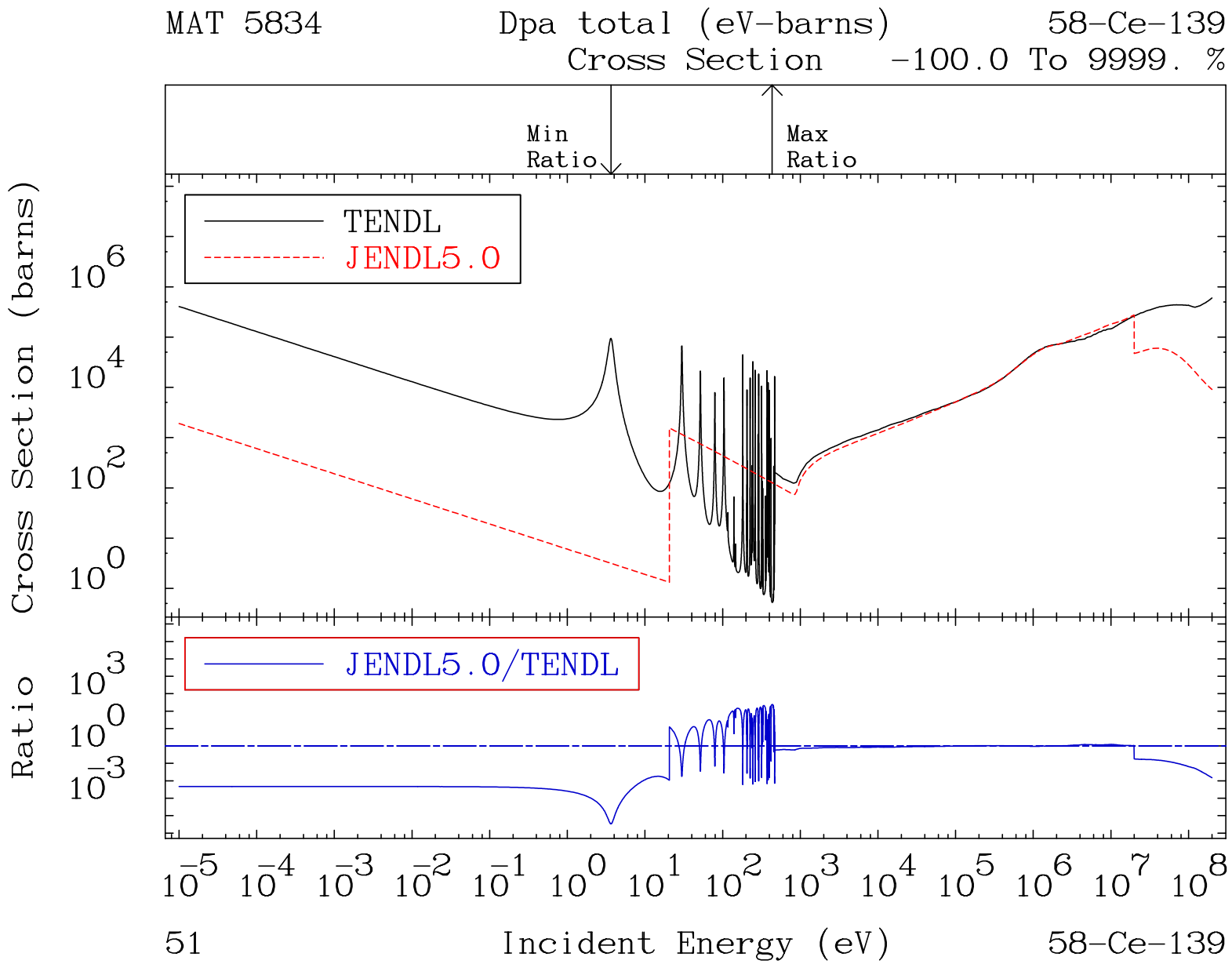

MAT 5834
Kerma inelastic (mt51-91)
58-Ce-139
Cross Section -9999. To 1015. %
Min Ratio
Max Ratio
TENDL Threshold 256.93 keV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
46
58-Ce-139

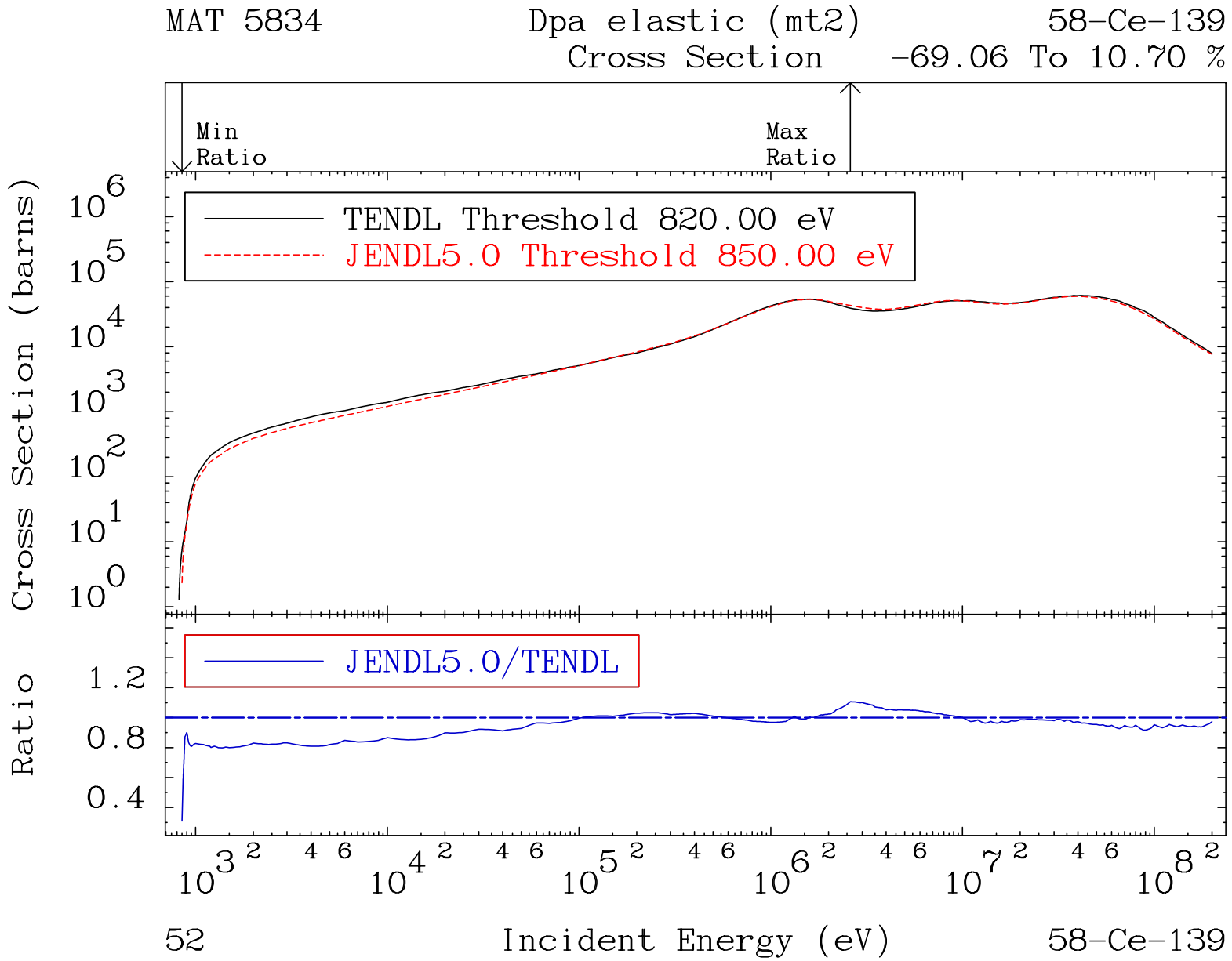

MAT 5834 Kerma fission (mt18 or mt19-20-21-38) 58-Ce-139
Cross Section -9999. To 1015. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
2
0
-2
-4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
47
Incident Energy (eV)
58-Ce-139

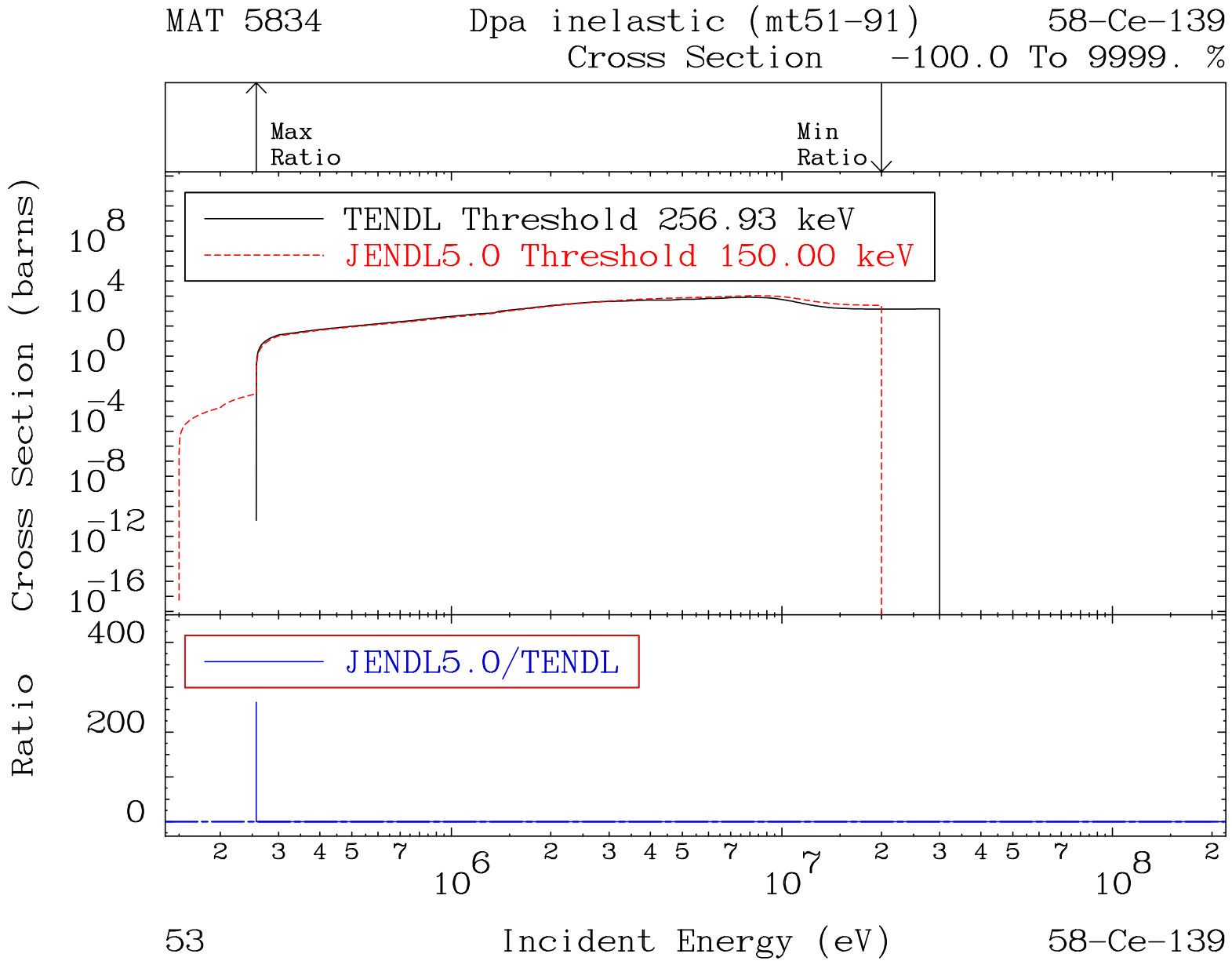

MAT 5834
Kerma capture (mt102)
58-Ce-139
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^6
10^4
10^2
10^0
JENDL5.0/TENDL
Ratio
0.8
0.4
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
48
Incident Energy (eV)
58-Ce-139

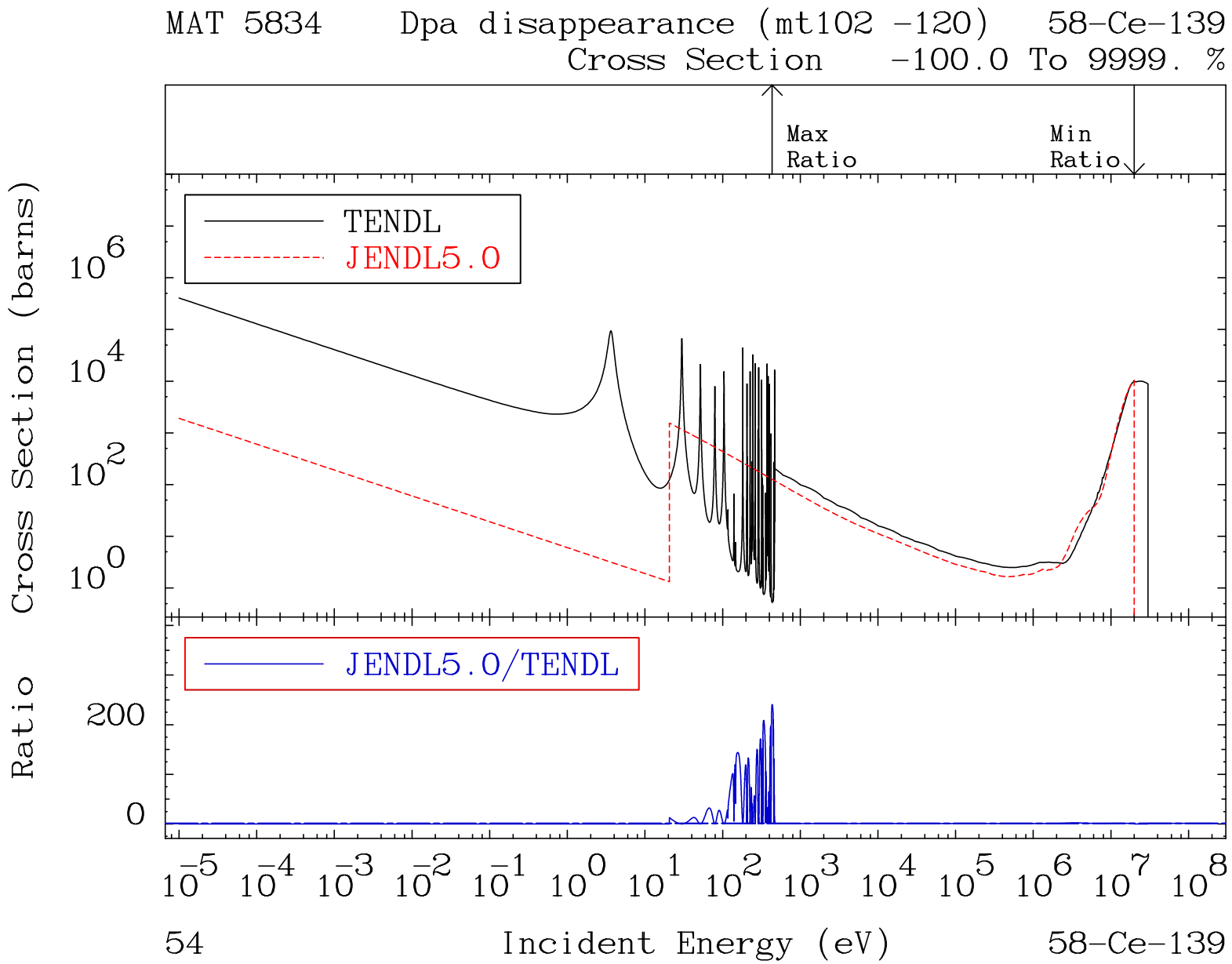

MAT 5834
Total photon (eV-barns)
58-Ce-139
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
49
58-Ce-139

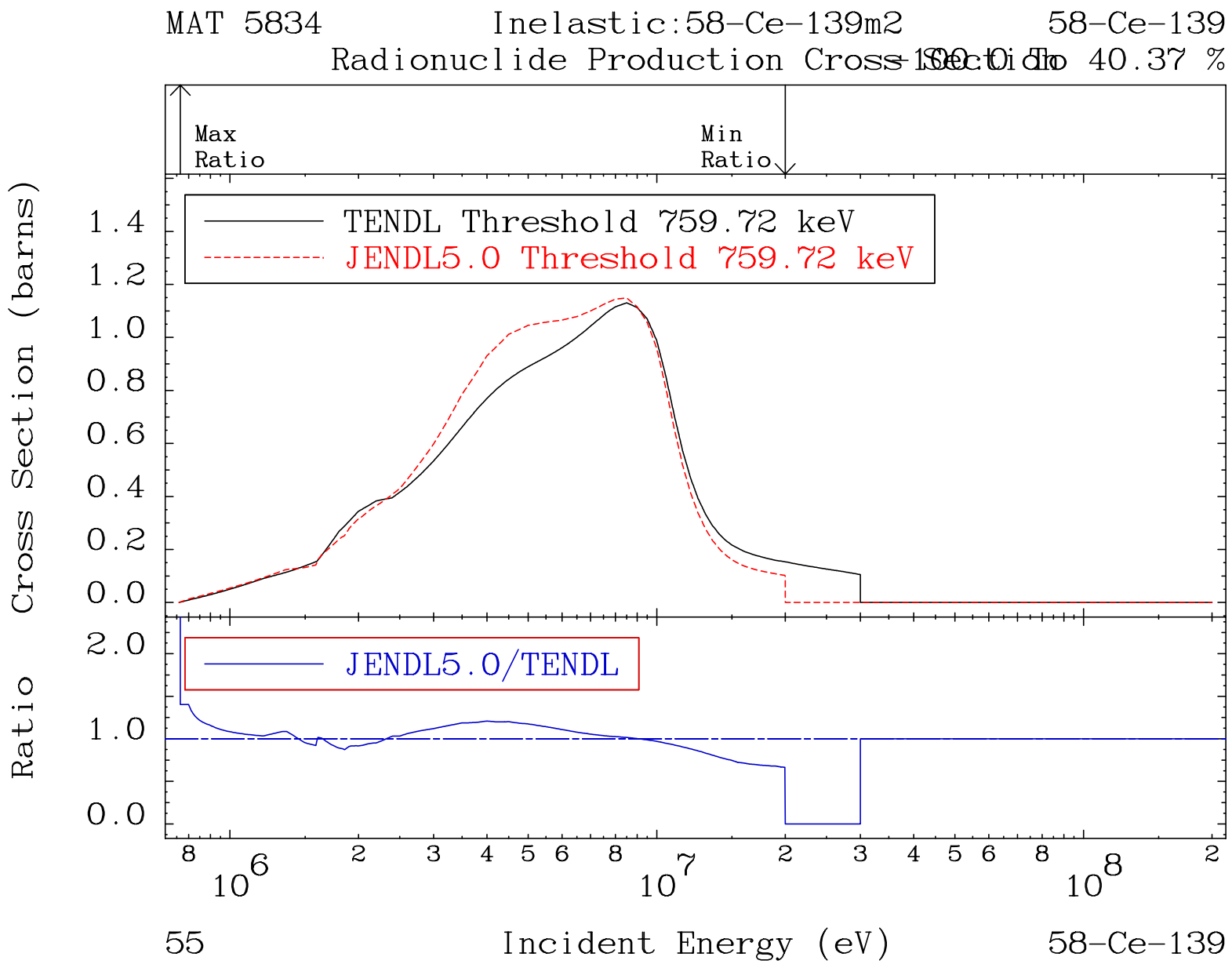

MAT 5834 Total kinematic kerma (high limit) 58-Ce-139
Cross Section -100.0 To 1215. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
50
58-Ce-139

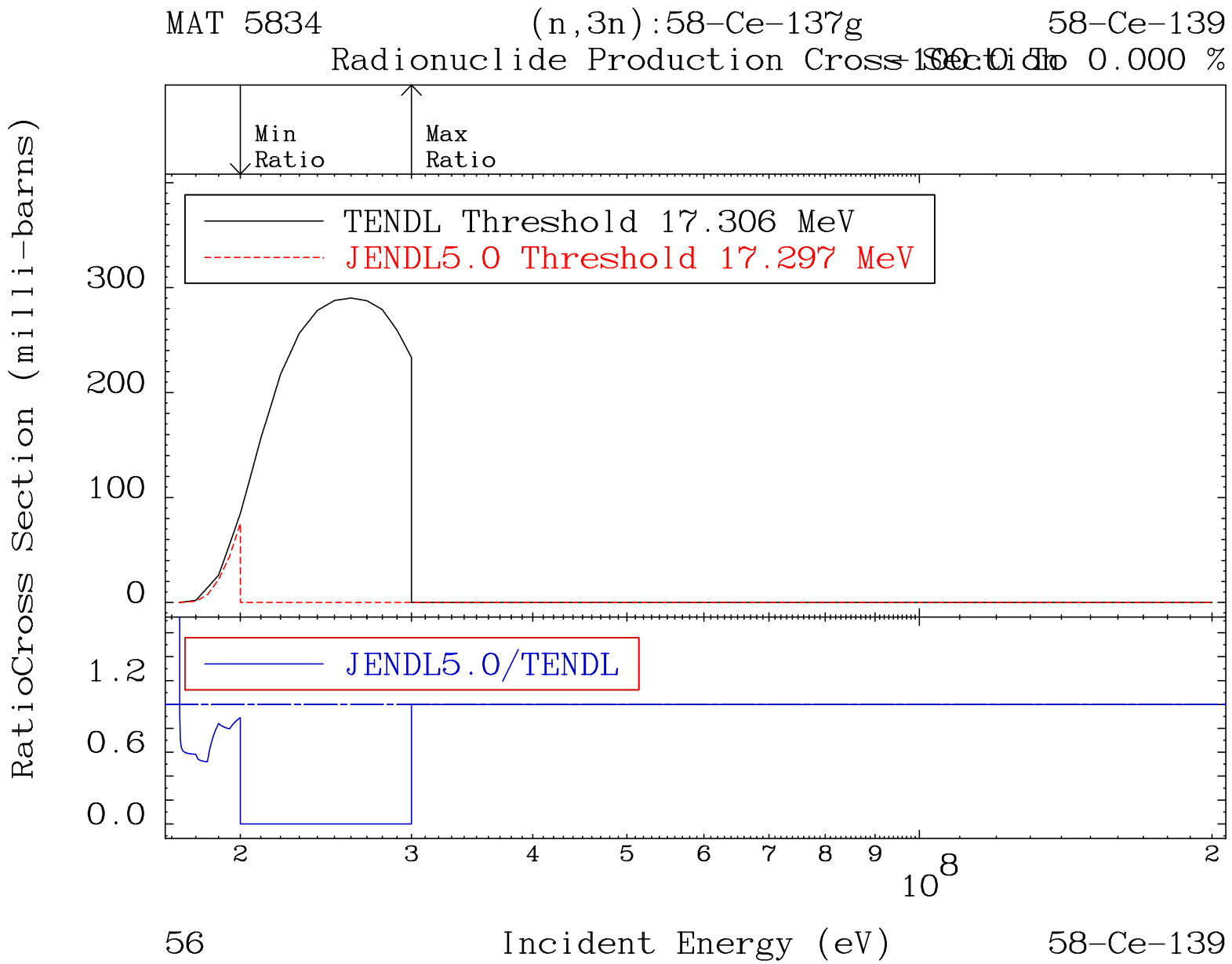

MAT 5834
Dpa total (eV-barns)
58-Ce-139
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
51
58-Ce-139

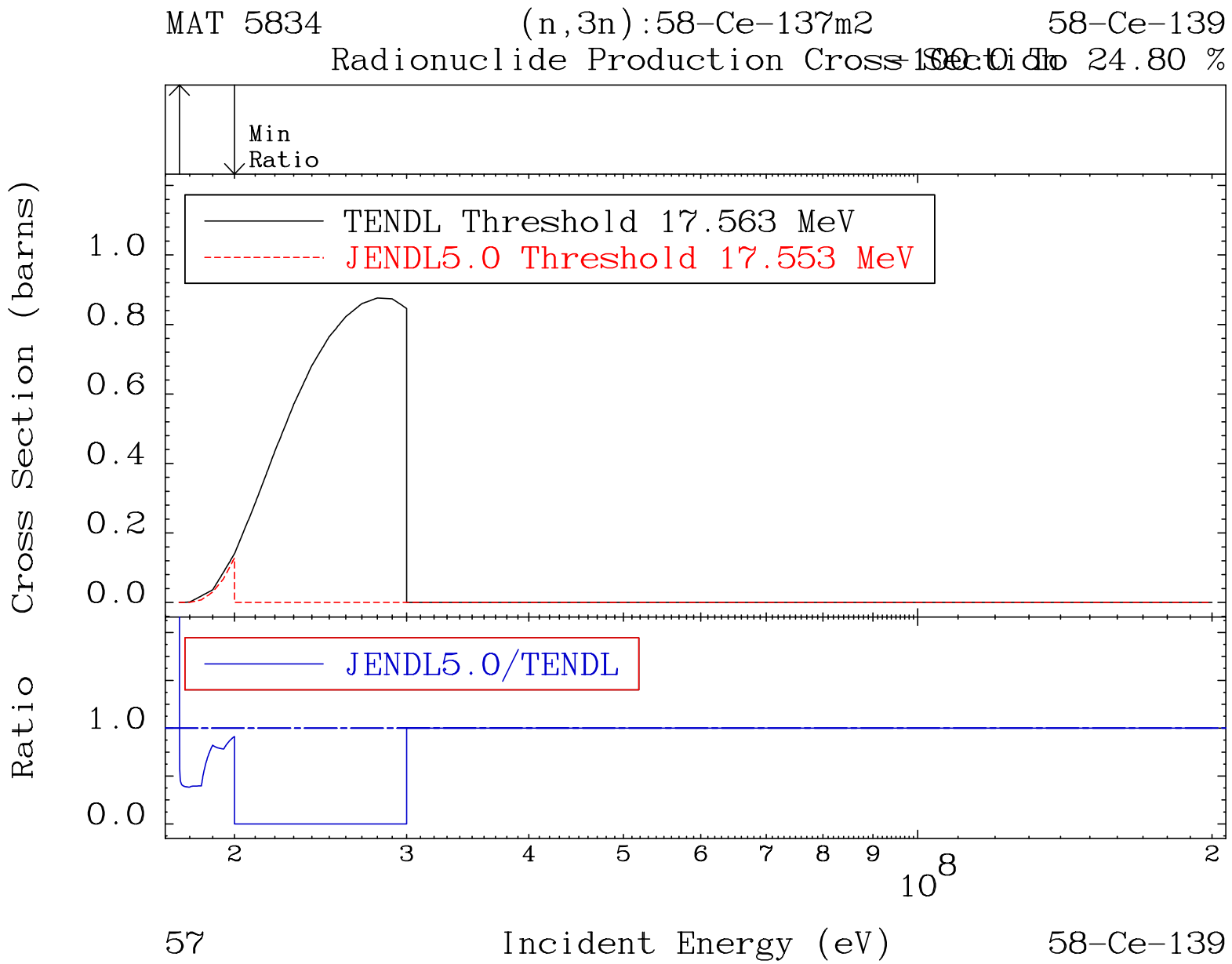

MAT 5834
Dpa elastic (mt2)
Cross Section
58-Ce-139
-69.06 To 10.70 %
Min Ratio
Max Ratio
TENDL Threshold 820.00 eV
JENDL5.0 Threshold 850.00 eV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
52
58-Ce-139

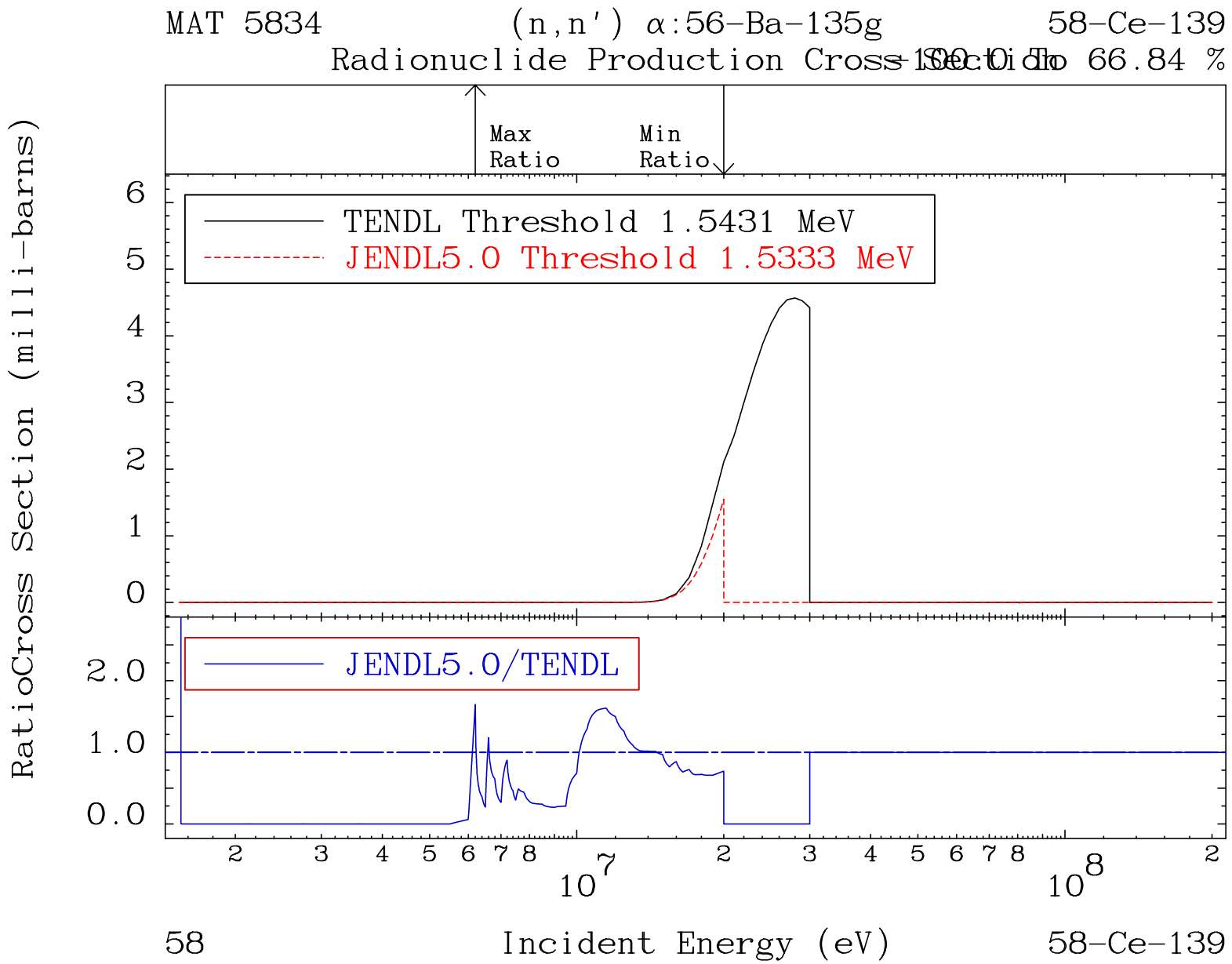

MAT 5834
Dpa inelastic (mt51-91)
58-Ce-139
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 256.93 keV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
53
58-Ce-139

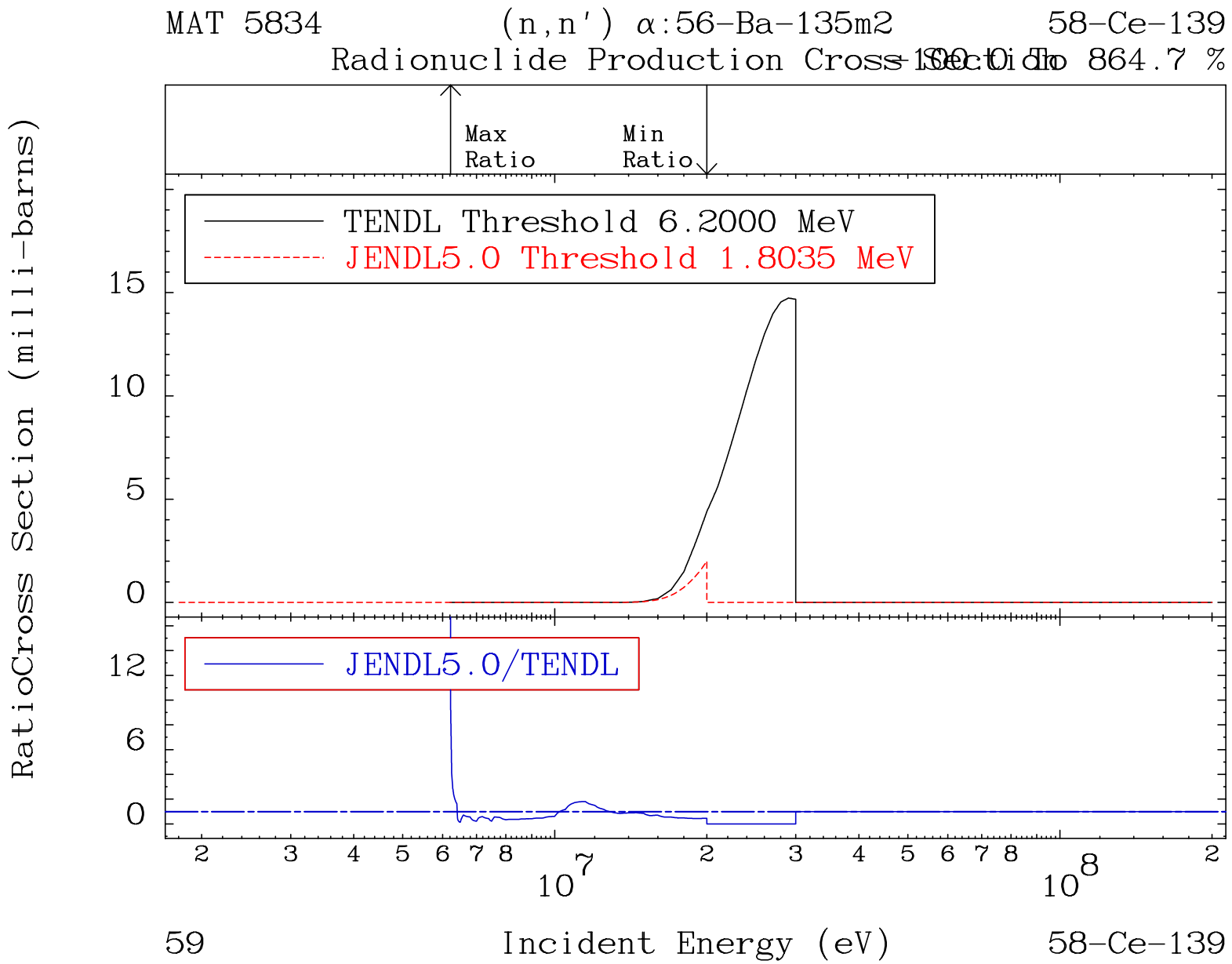

MAT 5834 Dpa disappearance (mt102 -120) 58-Ce-139
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^6
10^4
10^2
10^0
JENDL5.0/TENDL
Ratio
200
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
54
Incident Energy (eV)
58-Ce-139

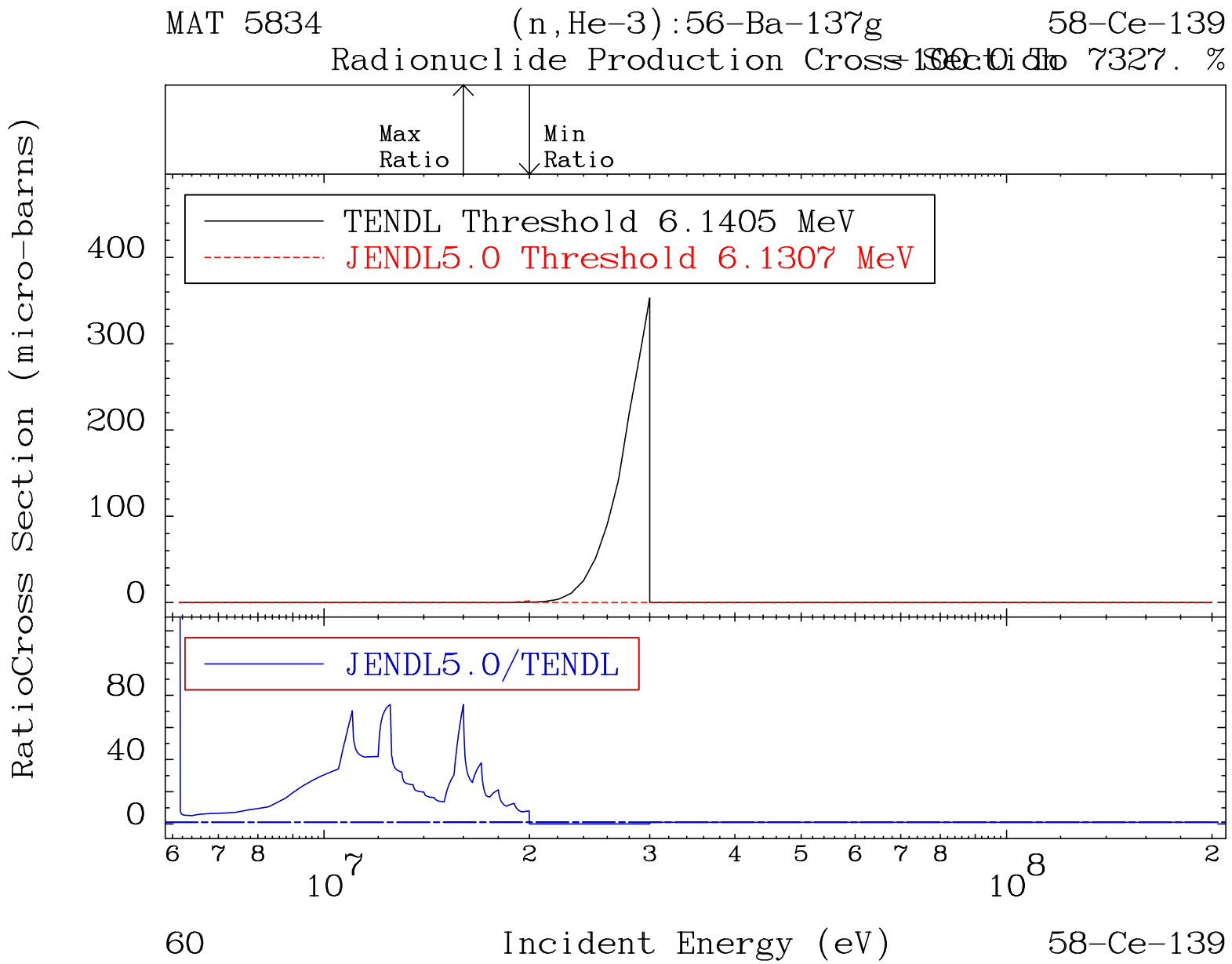

MAT 5834
Inelastic:58-Ce-139m2
58-Ce-139
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 759.72 keV
JENDL5.0 Threshold 759.72 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
55
58-Ce-139

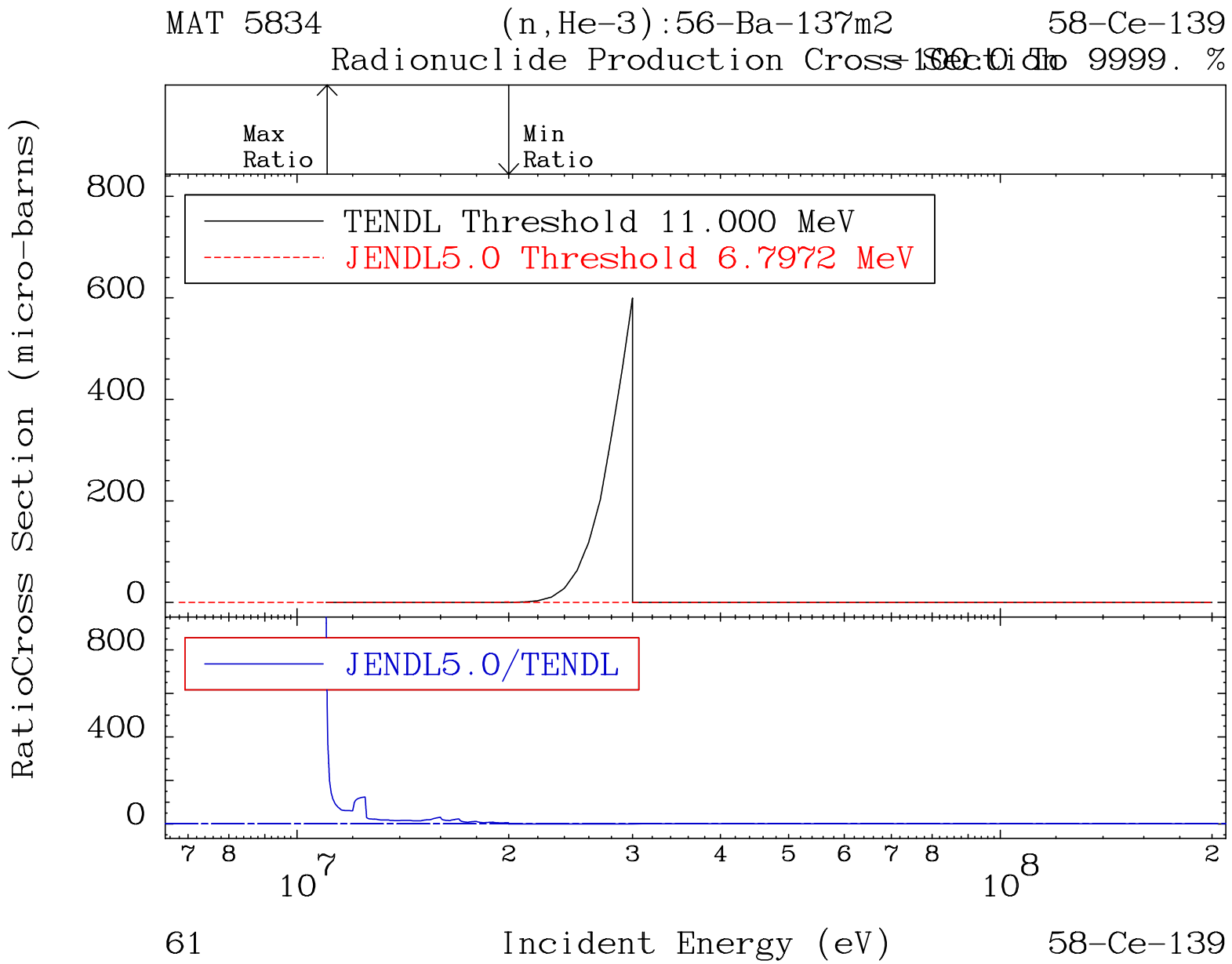

MAT 5834
(n,3n):58-Ce-137g
58-Ce-139
Radionuclide Production Cross Section
Uncertainty 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 17.306 MeV
JENDL5.0 Threshold 17.297 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
2
10^8
56
Incident Energy (eV)
58-Ce-139

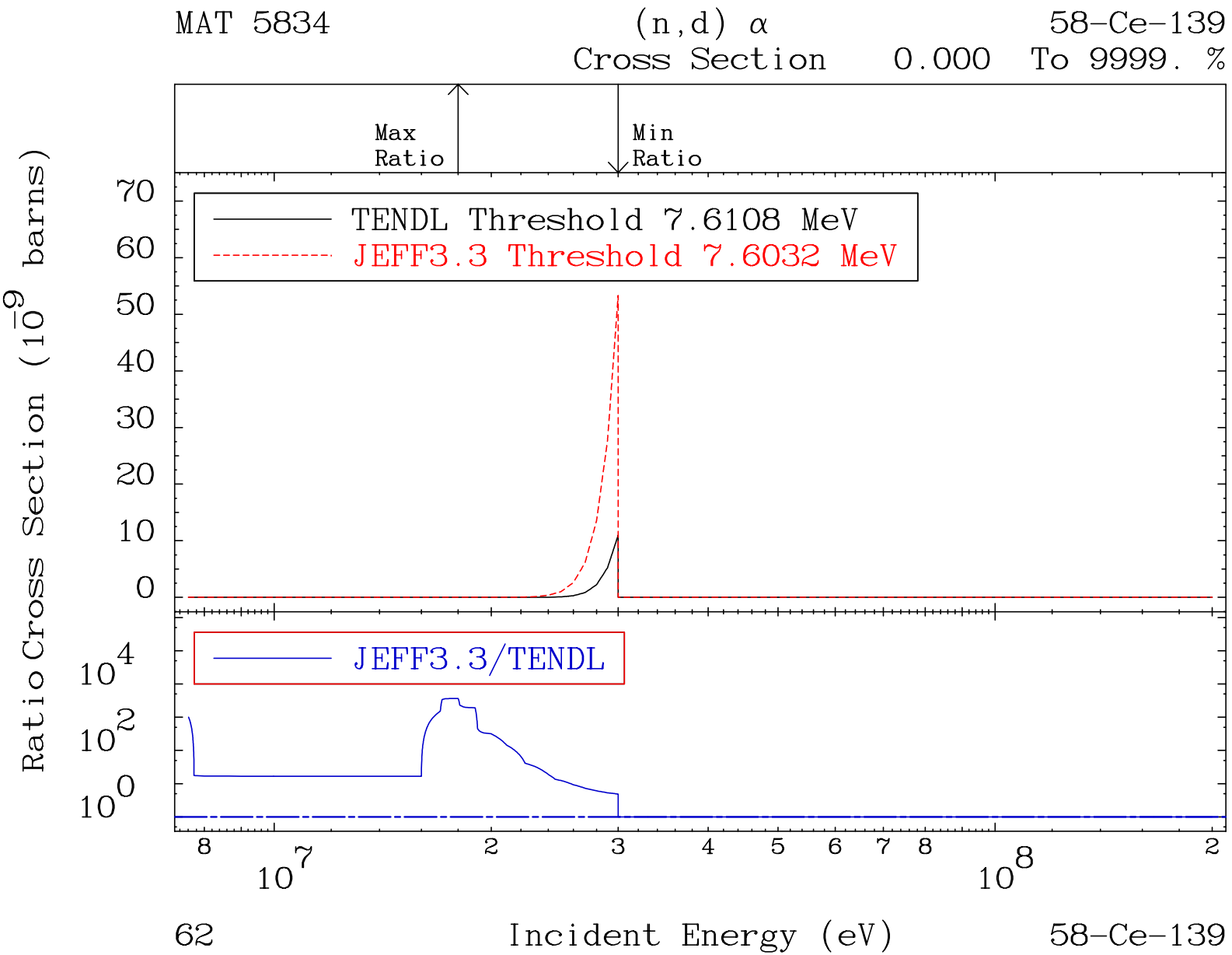

MAT 5834
(n,3n):58-Ce-137m2
58-Ce-139
Radionuclide Production Cross Section
Min
Ratio
TENDL Threshold 17.563 MeV
JENDL5.0 Threshold 17.553 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
JENDL5.0/TENDL
Ratio
1.0
0.0
2
3
4
5
6
7
8
9
2
10^8
57
Incident Energy (eV)
58-Ce-139

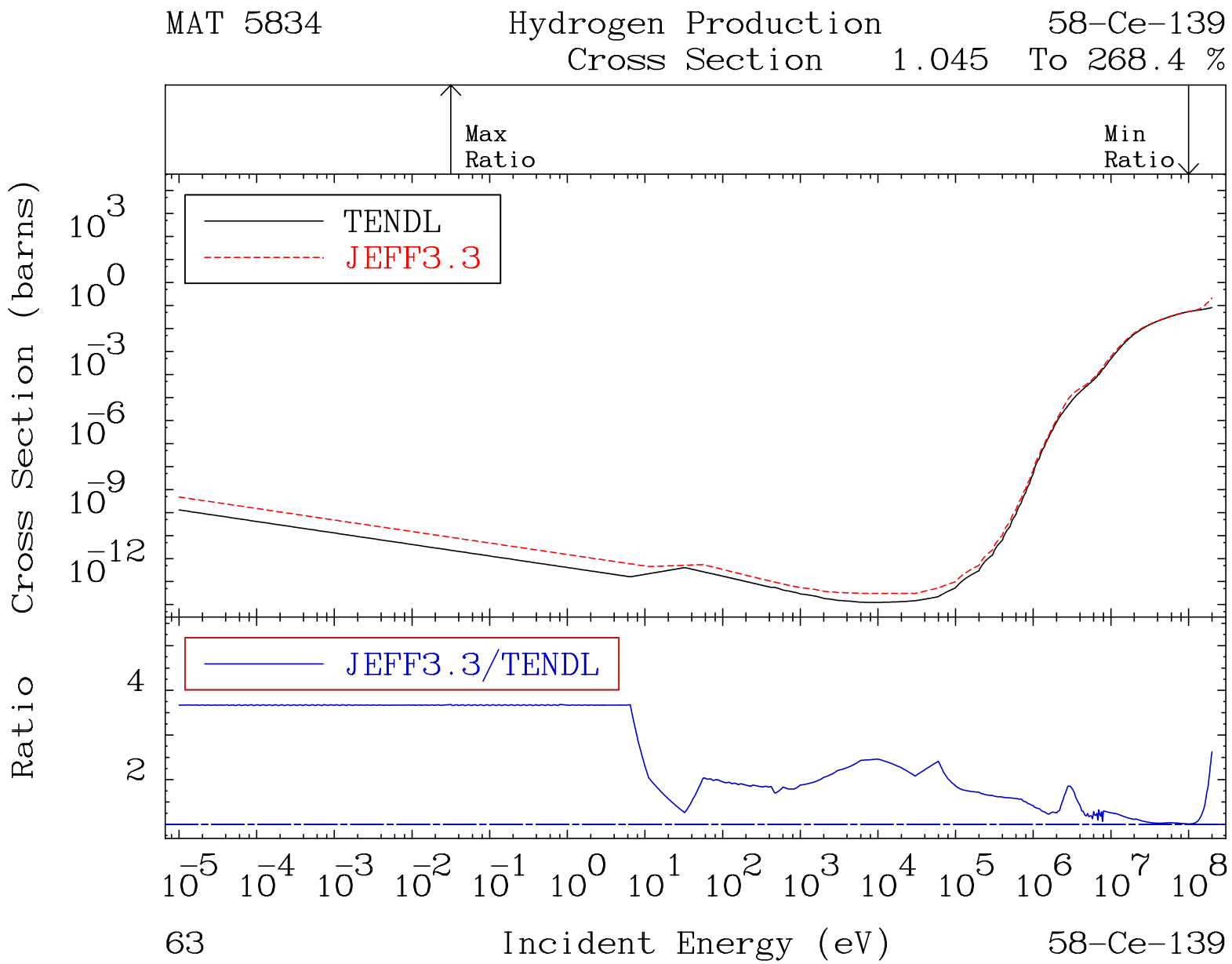

MAT 5834
(n,n') α:56-Ba-135g
58-Ce-139
Radionuclide Production Cross Section To 66.84 %
Max Ratio
Min Ratio
TENDL Threshold 1.5431 MeV
JENDL5.0 Threshold 1.5333 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
58
58-Ce-139

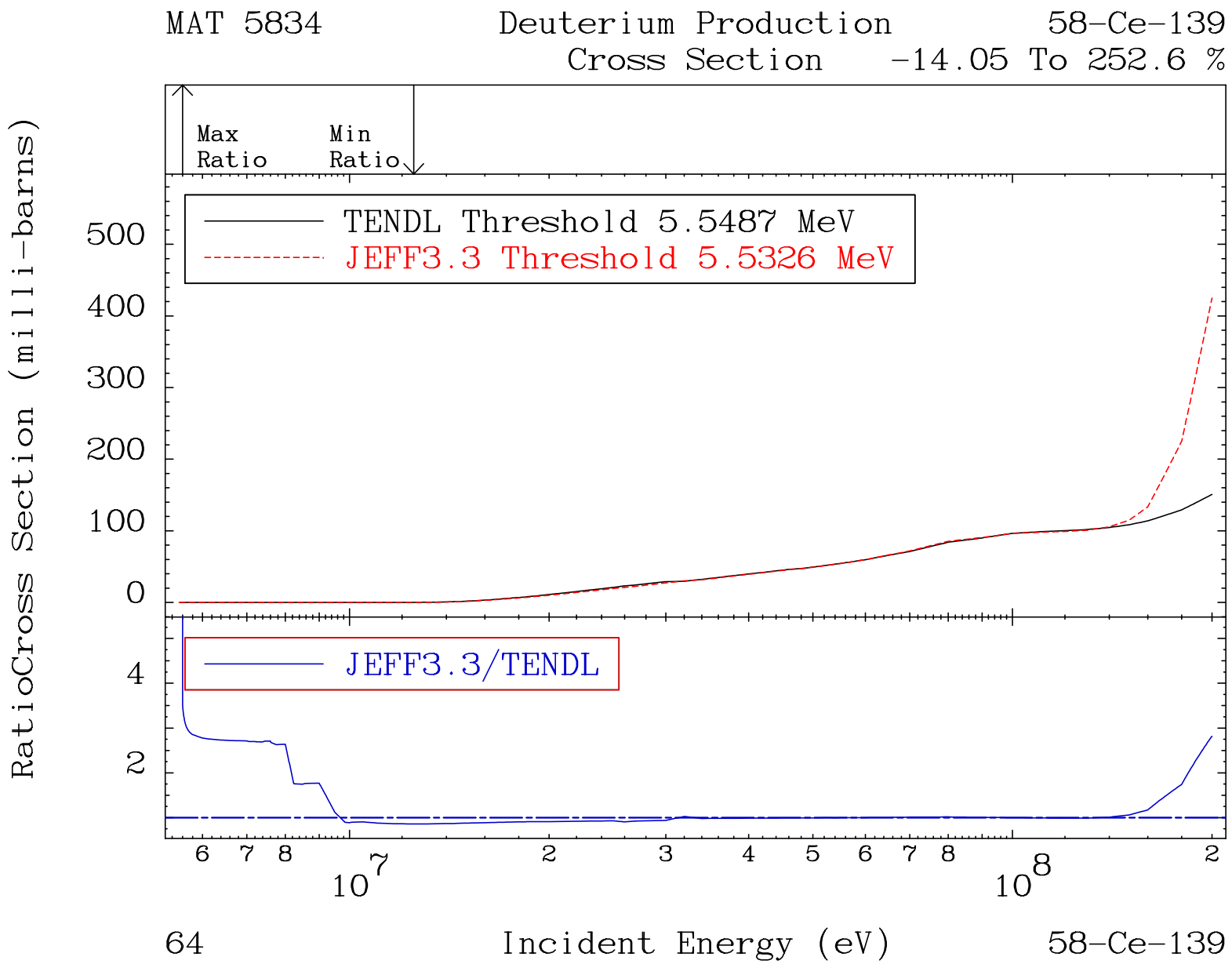

MAT 5834
(n,n') α:56-Ba-135m2
58-Ce-139
Radionuclide Production Cross Section To 864.7 %
Max Ratio
Min Ratio
TENDL Threshold 6.2000 MeV
JENDL5.0 Threshold 1.8035 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
15
10
5
0
12
6
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
59
Incident Energy (eV)
58-Ce-139

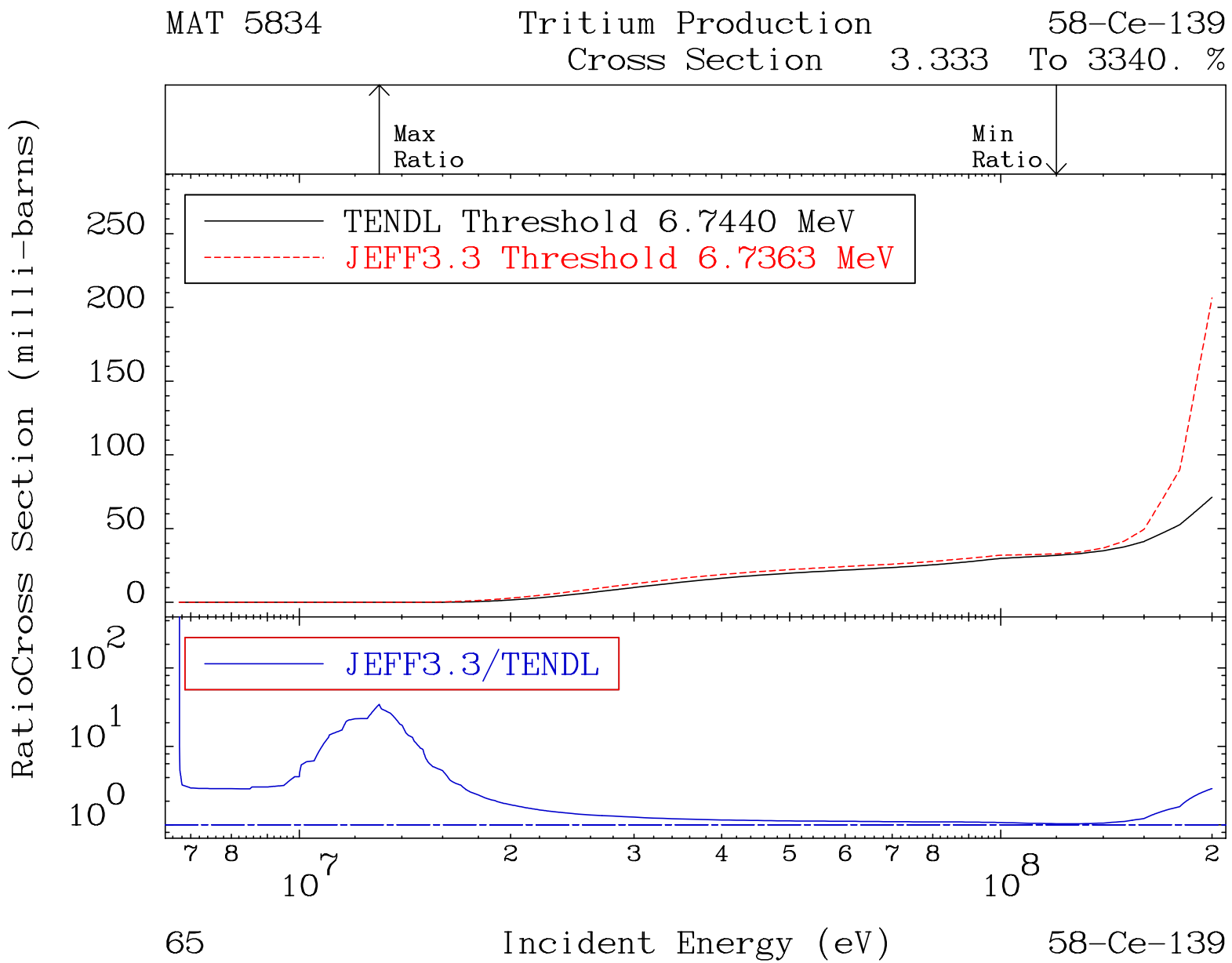

MAT 5834
(n,He-3):56-Ba-137g
58-Ce-139
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 6.1405 MeV
JENDL5.0 Threshold 6.1307 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
60
58-Ce-139

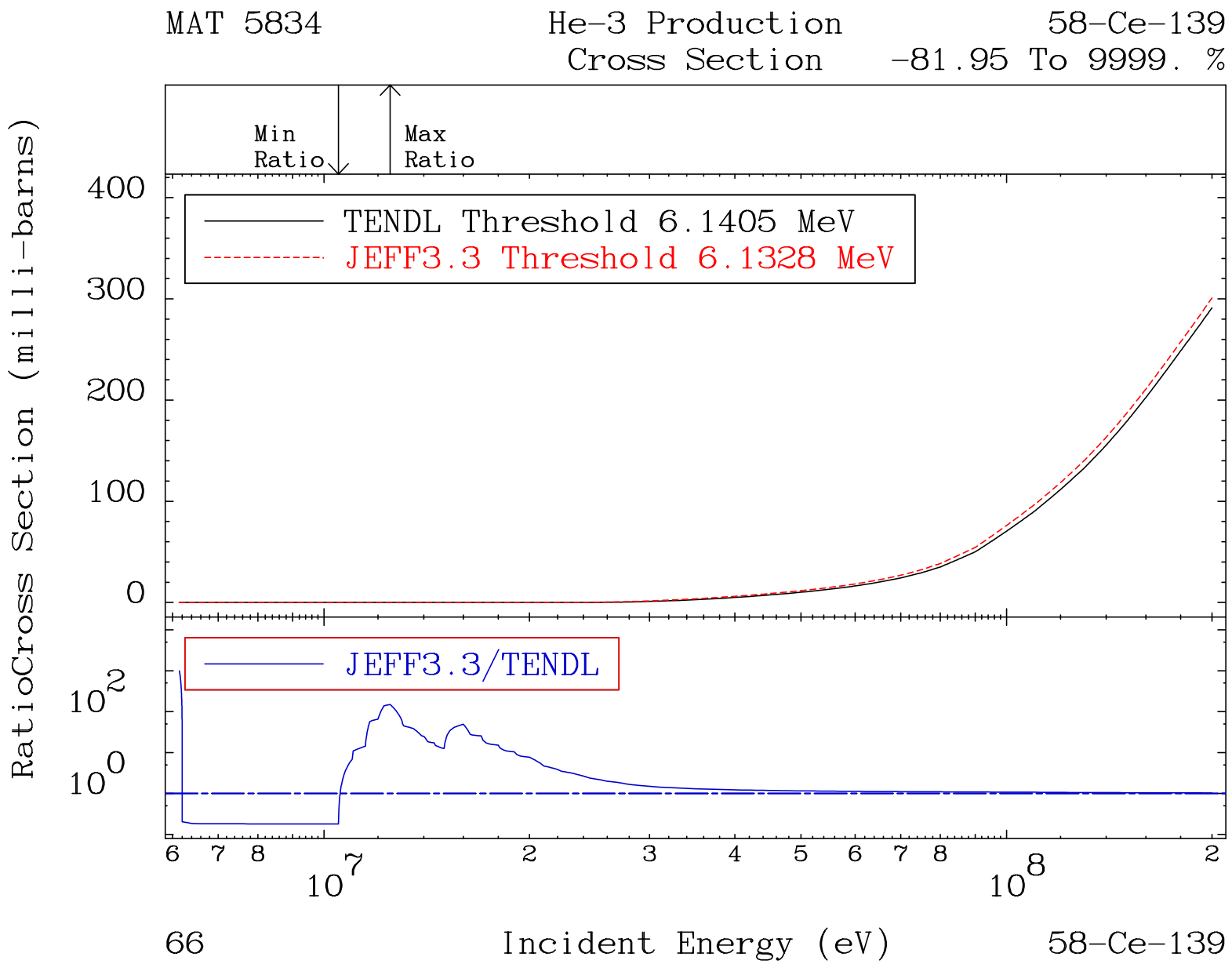

MAT 5834
(n,He-3):56-Ba-137m2
58-Ce-139
Radionuclide Production Cross Section To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.000 MeV
JENDL5.0 Threshold 6.7972 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
800
600
400
200
0
800
400
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
61
Incident Energy (eV)
58-Ce-139

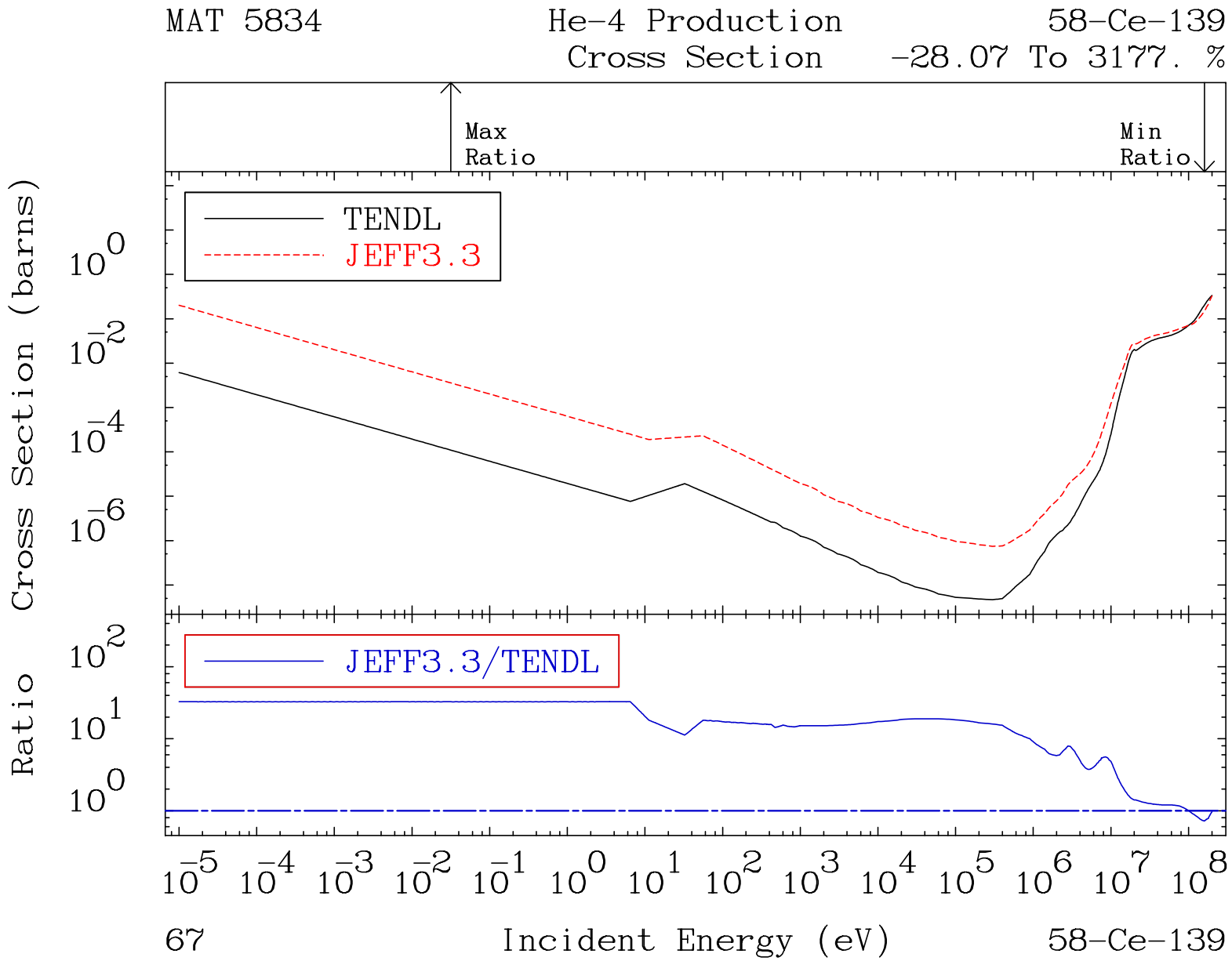

MAT 5834
(n,d) α
58-Ce-139
Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.6108 MeV
JEFF3.3 Threshold 7.6032 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
70
60
50
40
30
20
10
0
10^4
10^2
10^0
8
10^7
2
3
4
5
6
7
8
10^8
2
62
Incident Energy (eV)
58-Ce-139

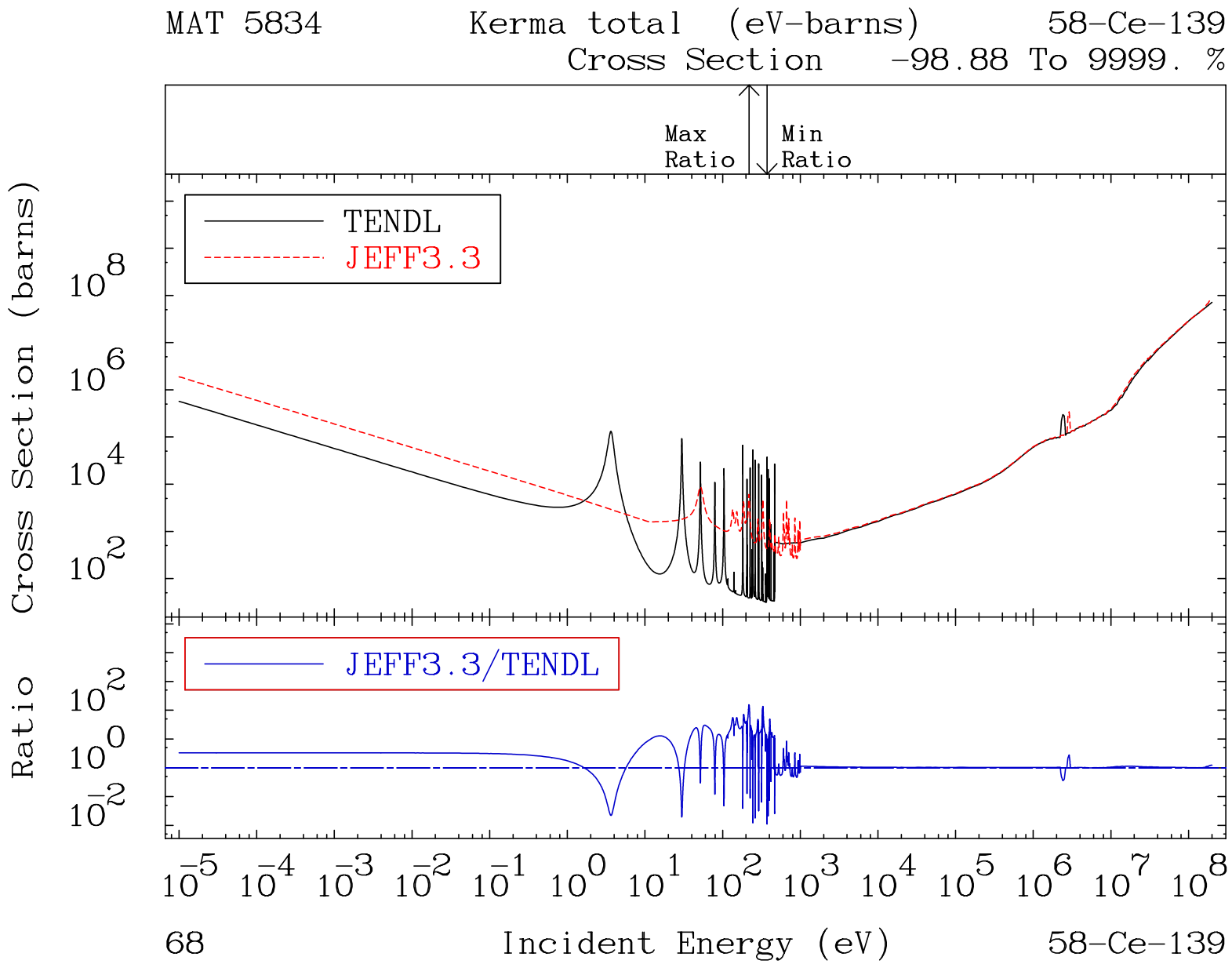

MAT 5834
Hydrogen Production
58-Ce-139
Cross Section 1.045 To 268.4 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
63
58-Ce-139

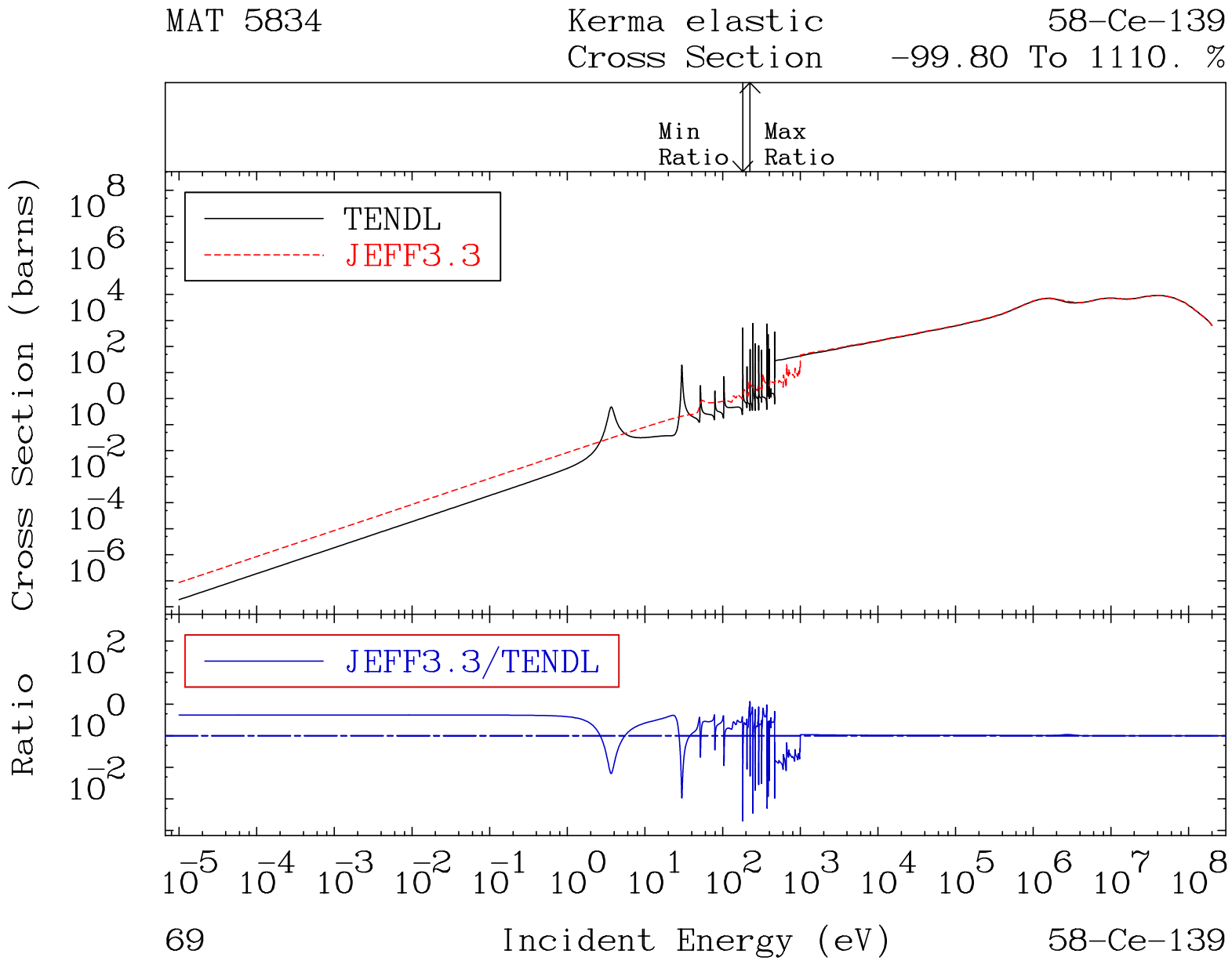

MAT 5834
Deuterium Production
58-Ce-139
Cross Section
-14.05 To 252.6 %
Max Ratio
Min Ratio
TENDL Threshold 5.5487 MeV
JEFF3.3 Threshold 5.5326 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
4
2
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
64
Incident Energy (eV)
58-Ce-139

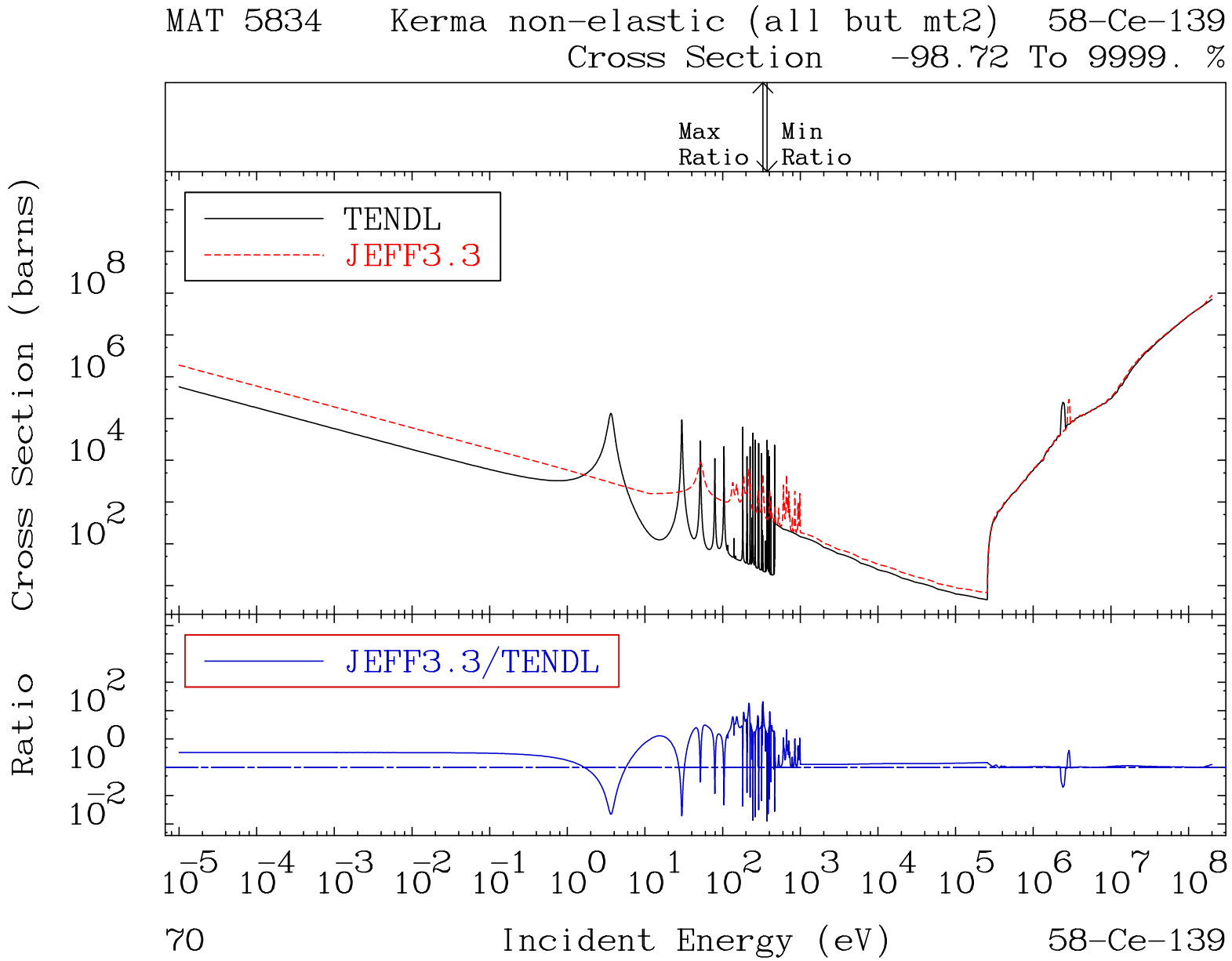

MAT 5834
Tritium Production
58-Ce-139
Cross Section 3.333 To 3340. %
Max Ratio
Min Ratio
TENDL Threshold 6.7440 MeV
JEFF3.3 Threshold 6.7363 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
10^2
10^1
10^0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
65
Incident Energy (eV)
58-Ce-139

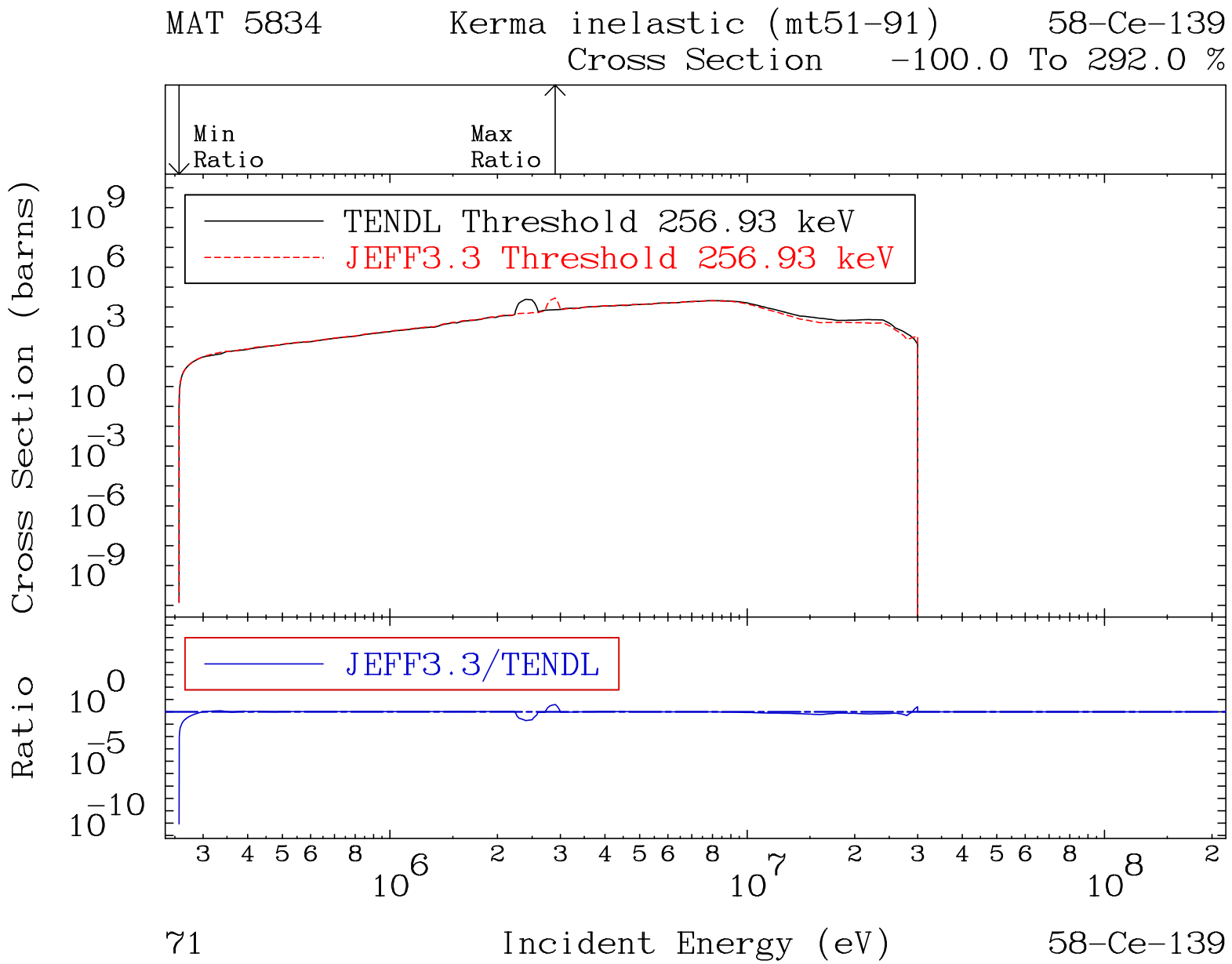

MAT 5834
He-3 Production
Cross Section
58-Ce-139
-81.95 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.1405 MeV
JEFF3.3 Threshold 6.1328 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
10^2
10^0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
66
Incident Energy (eV)
58-Ce-139

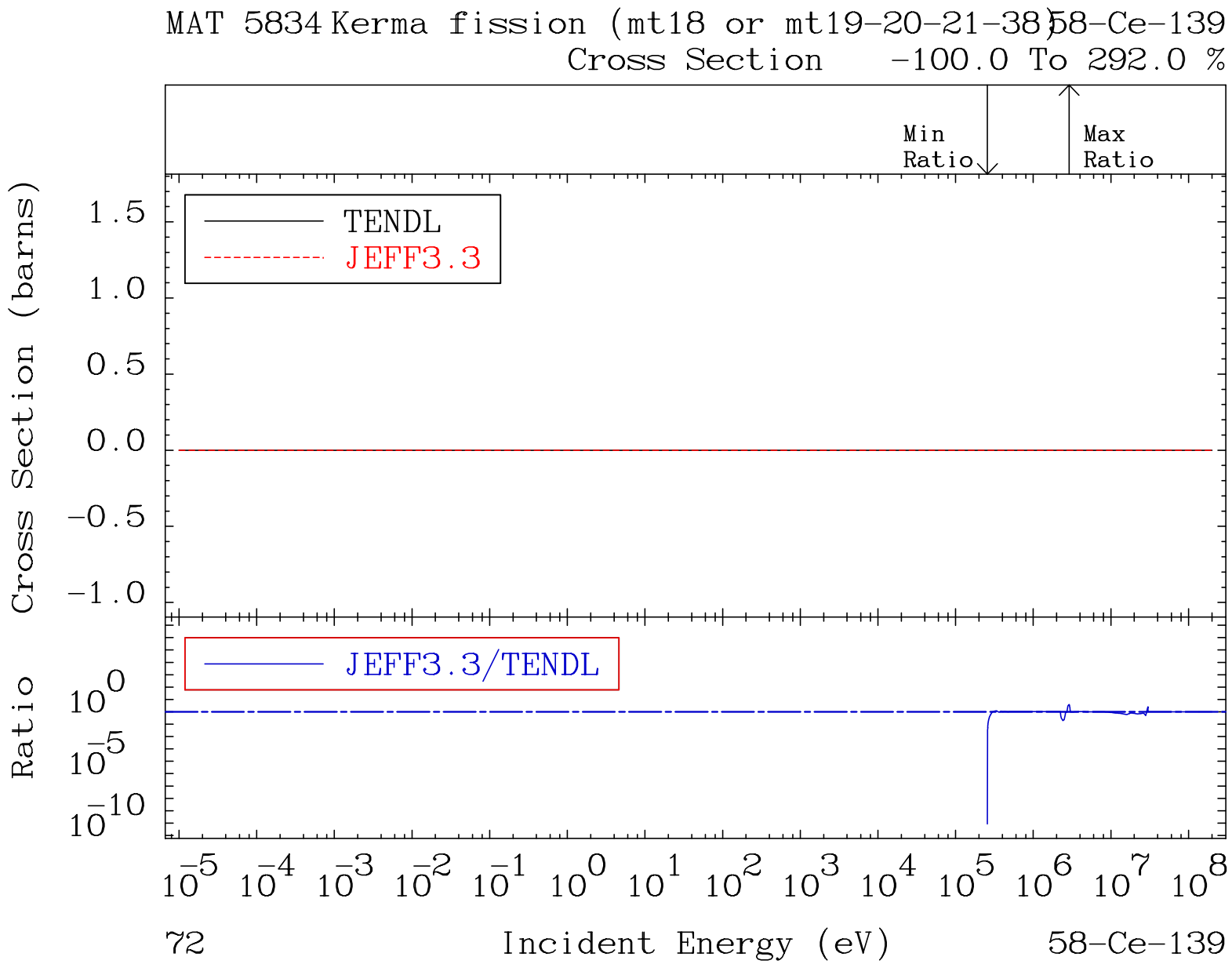

MAT 5834
He-4 Production
Cross Section
58-Ce-139
-28.07 To 3177. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
58-Ce-139

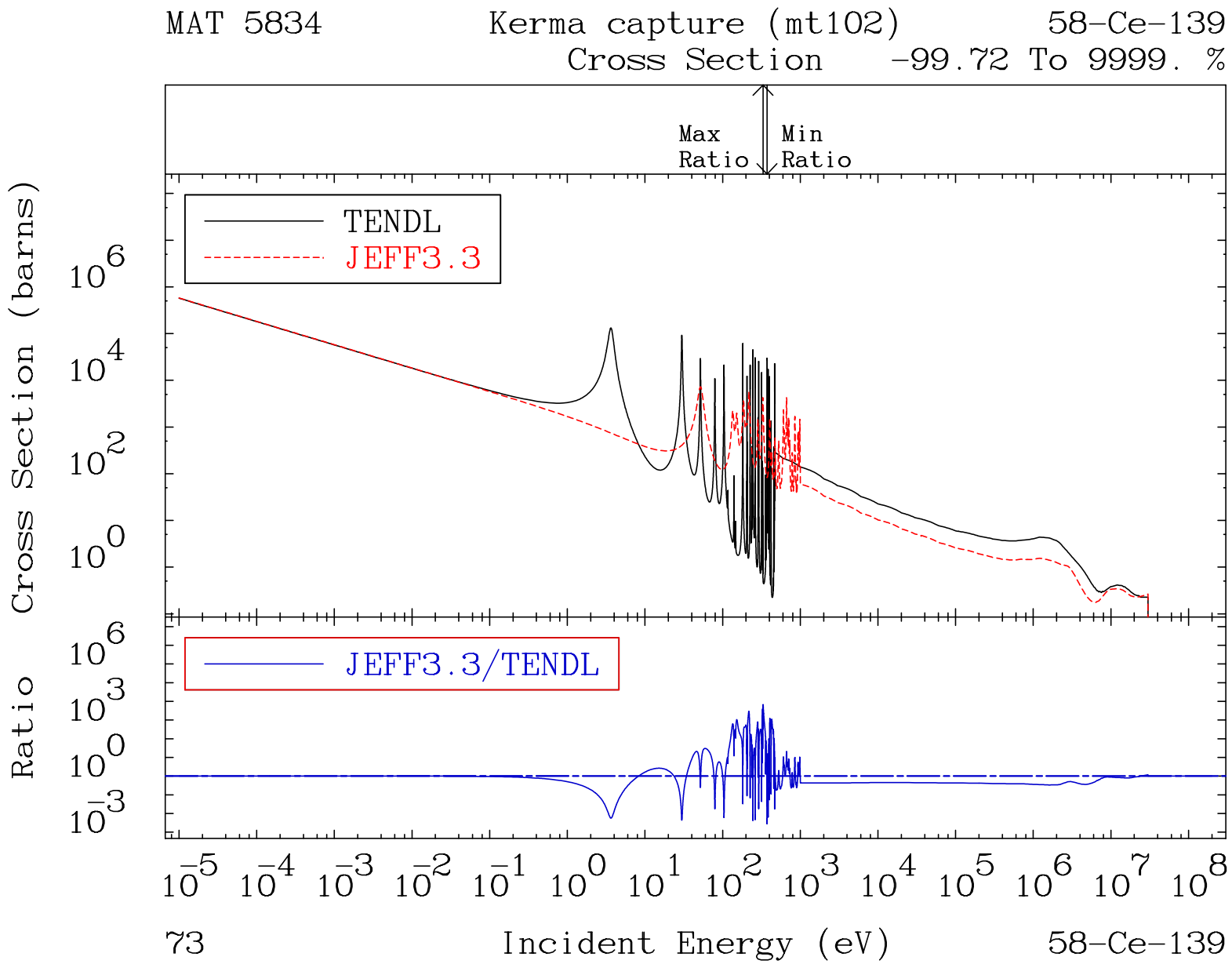

MAT 5834
Kerma total (eV-barns)
58-Ce-139
Cross Section -98.88 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
58-Ce-139

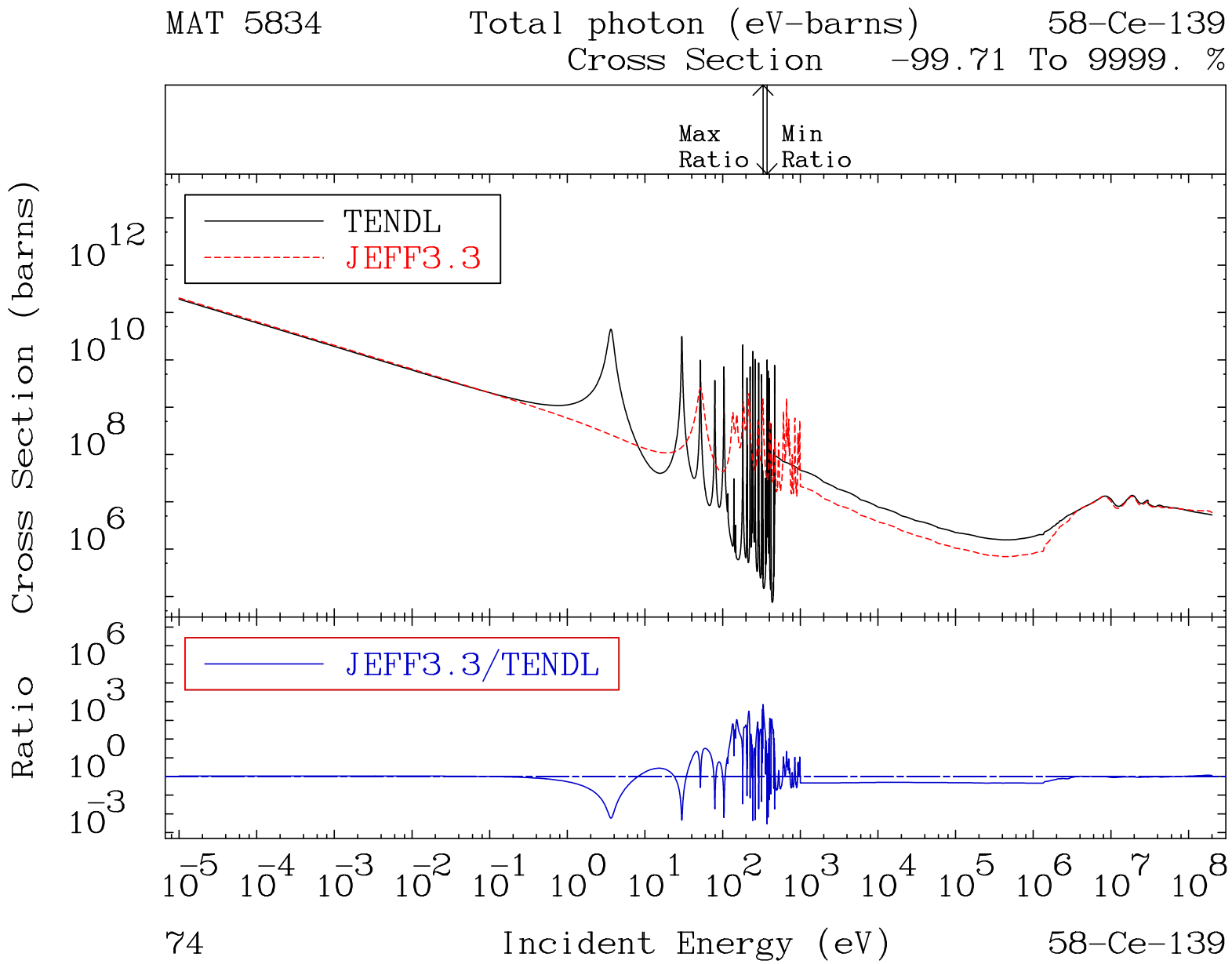

MAT 5834
Kerma elastic
Cross Section
58-Ce-139
-99.80 To 1110. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
69
58-Ce-139

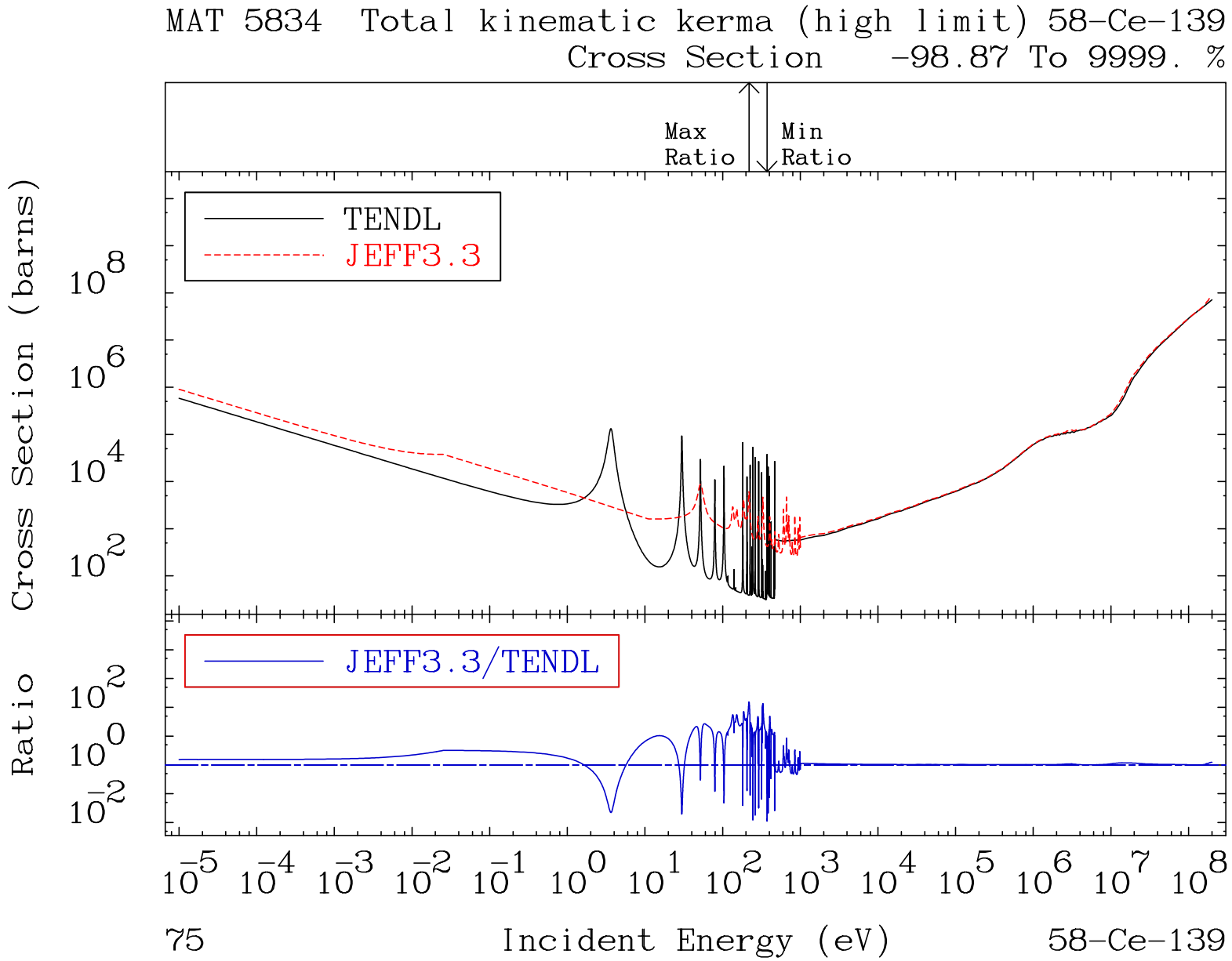

MAT 5834 Kerma non-elastic (all but mt2) 58-Ce-139
Cross Section -98.72 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
70
58-Ce-139

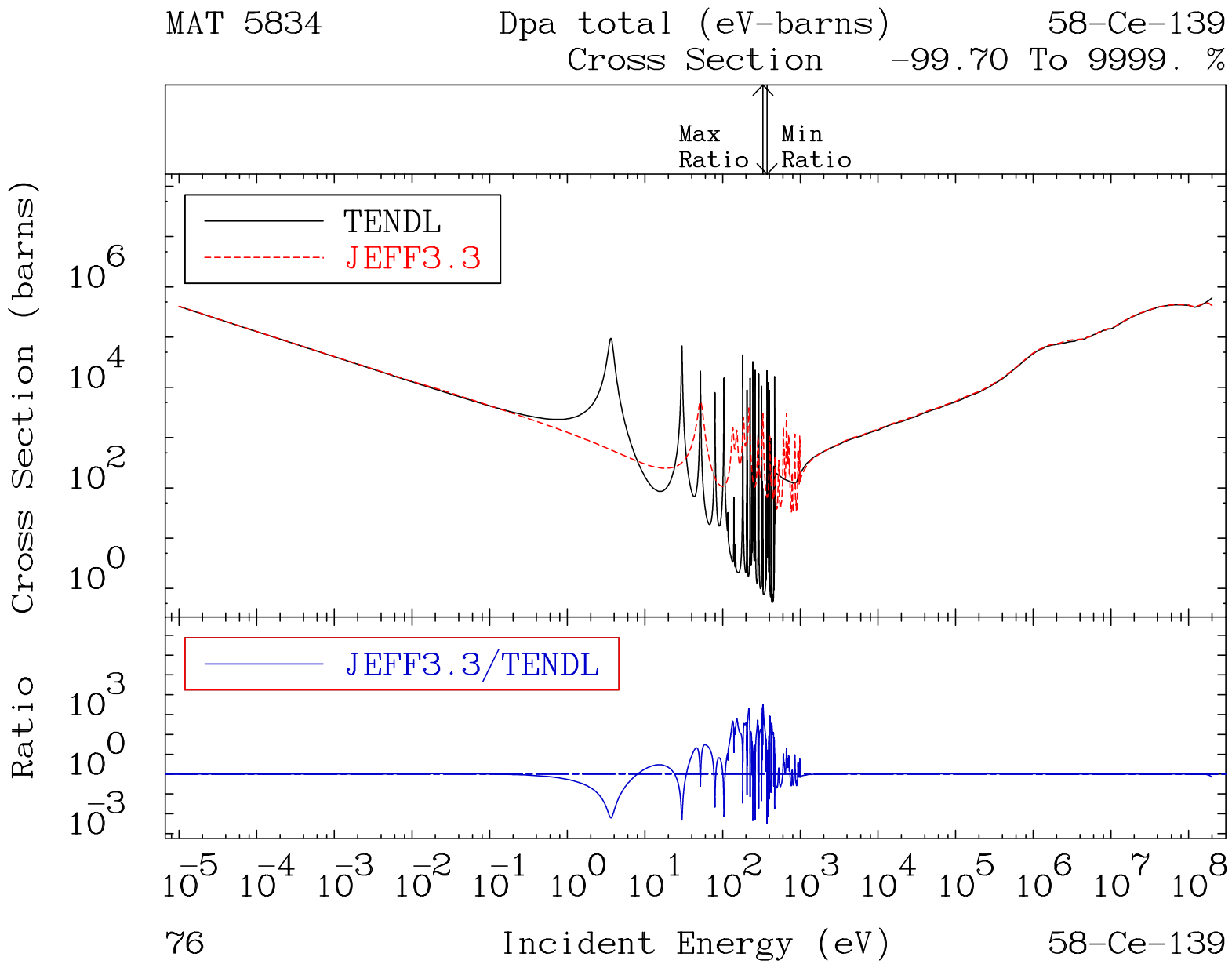

MAT 5834
Kerma inelastic (mt51-91)
58-Ce-139
Cross Section -100.0 To 292.0 %
Min Ratio
Max Ratio
TENDL Threshold 256.93 keV
JEFF3.3 Threshold 256.93 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
71
58-Ce-139

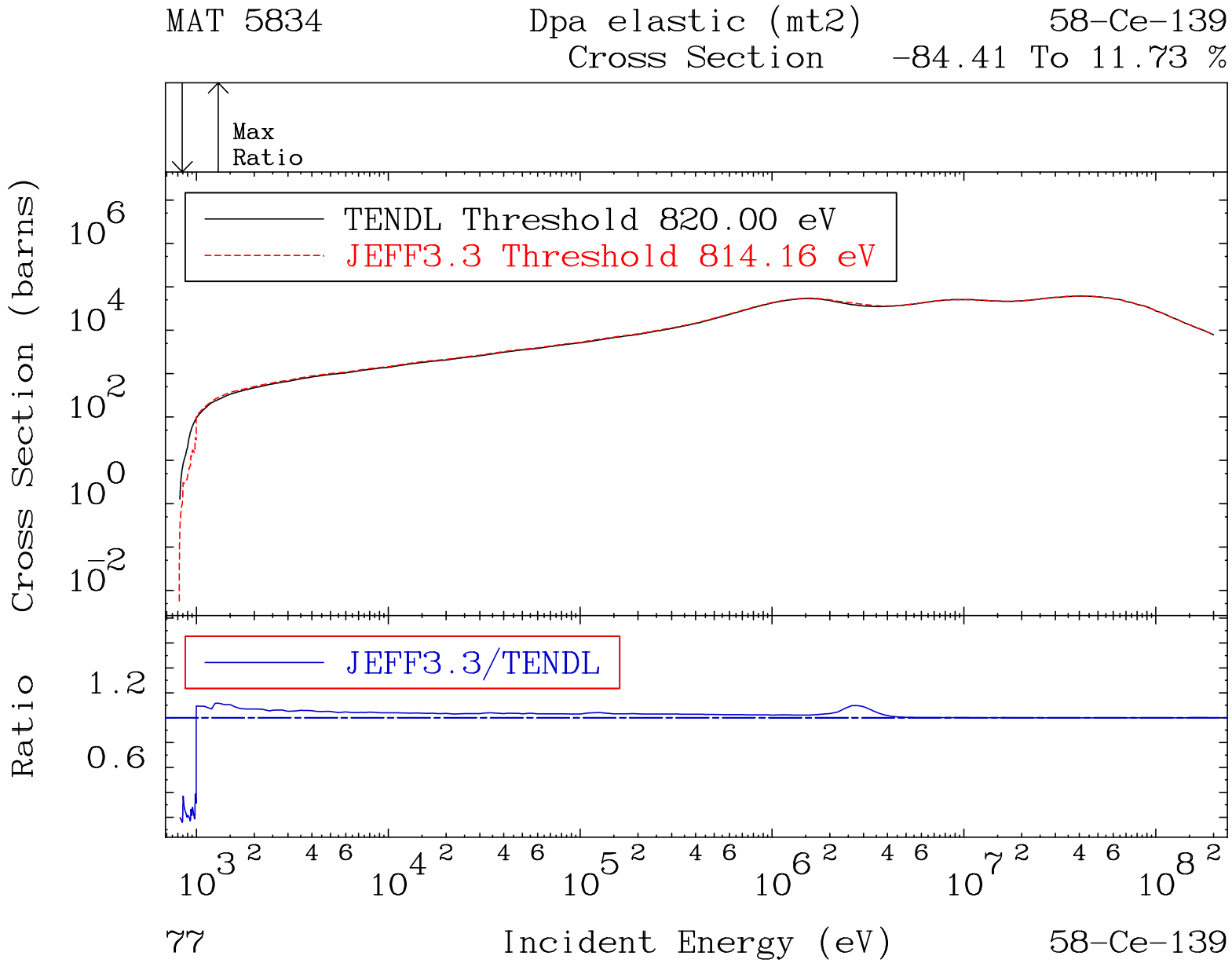

MAT 5834 Kerma fission (mt18 or mt19-20-21-38) 58-Ce-139
Cross Section -100.0 To 292.0 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{0}
10^{-5}
10^{-10}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
72
Incident Energy (eV)
58-Ce-139

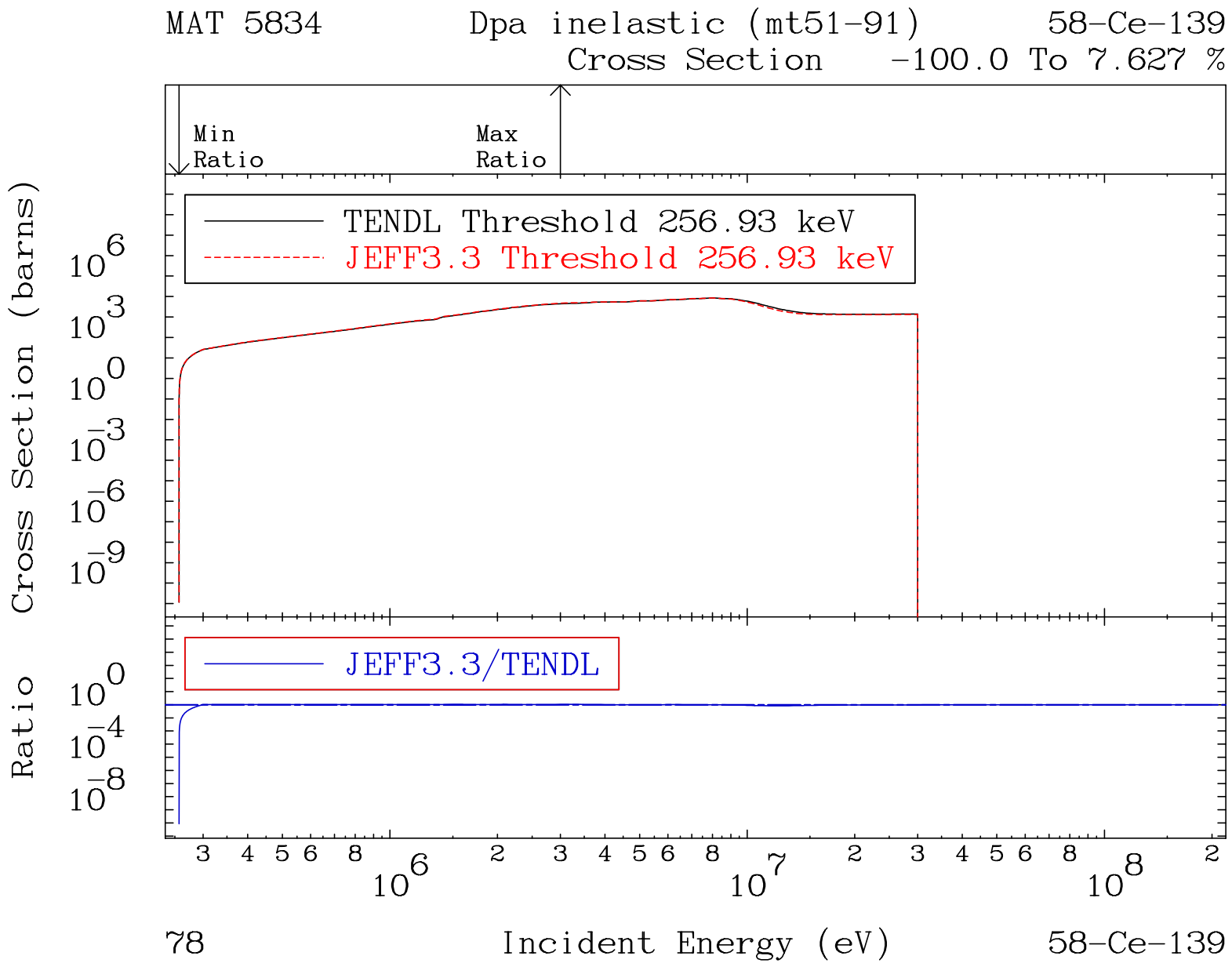

MAT 5834
Kerma capture (mt102)
58-Ce-139
Cross Section
-99.72 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
73
58-Ce-139

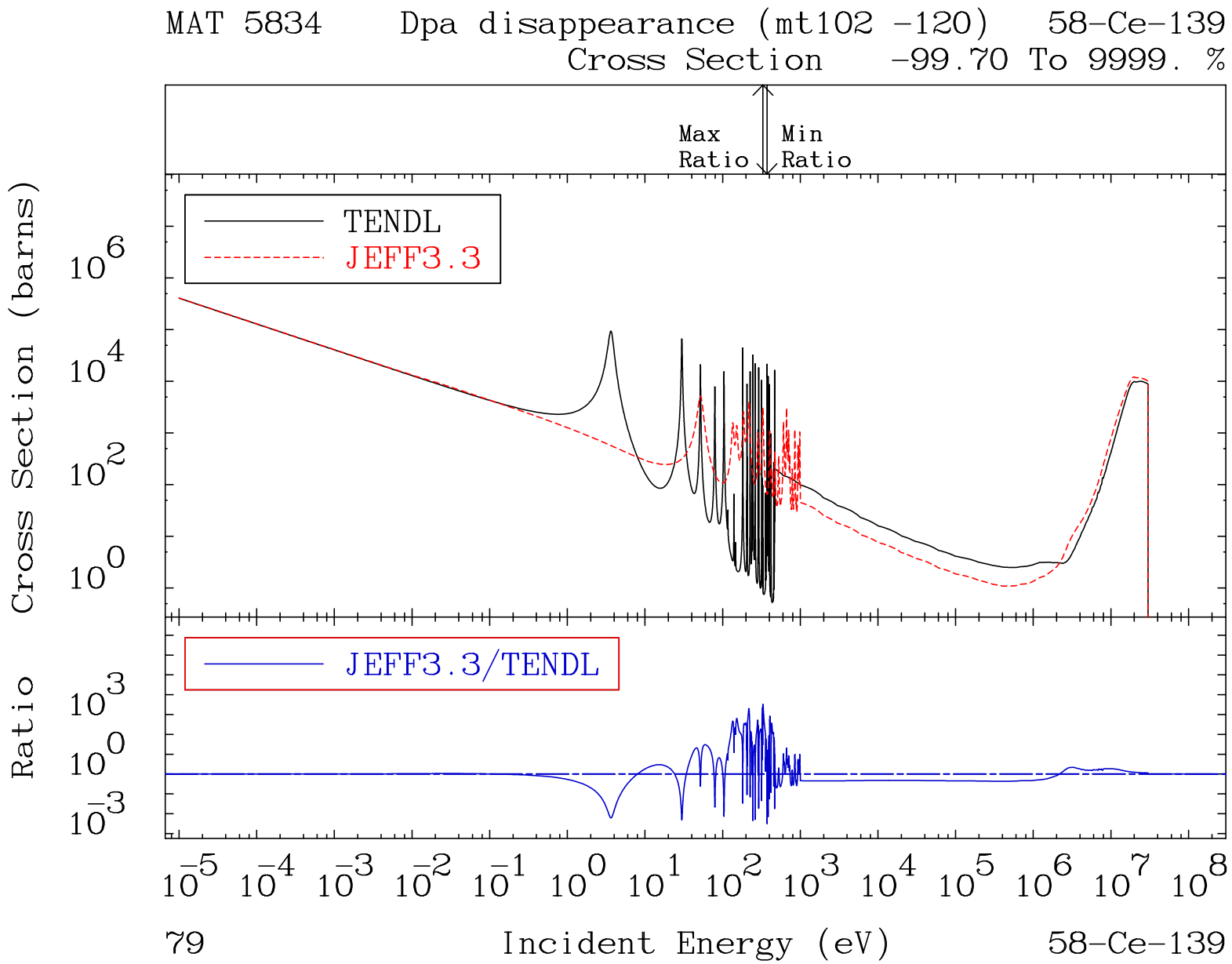

MAT 5834
Total photon (eV-barns)
58-Ce-139
Cross Section -99.71 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
74
58-Ce-139

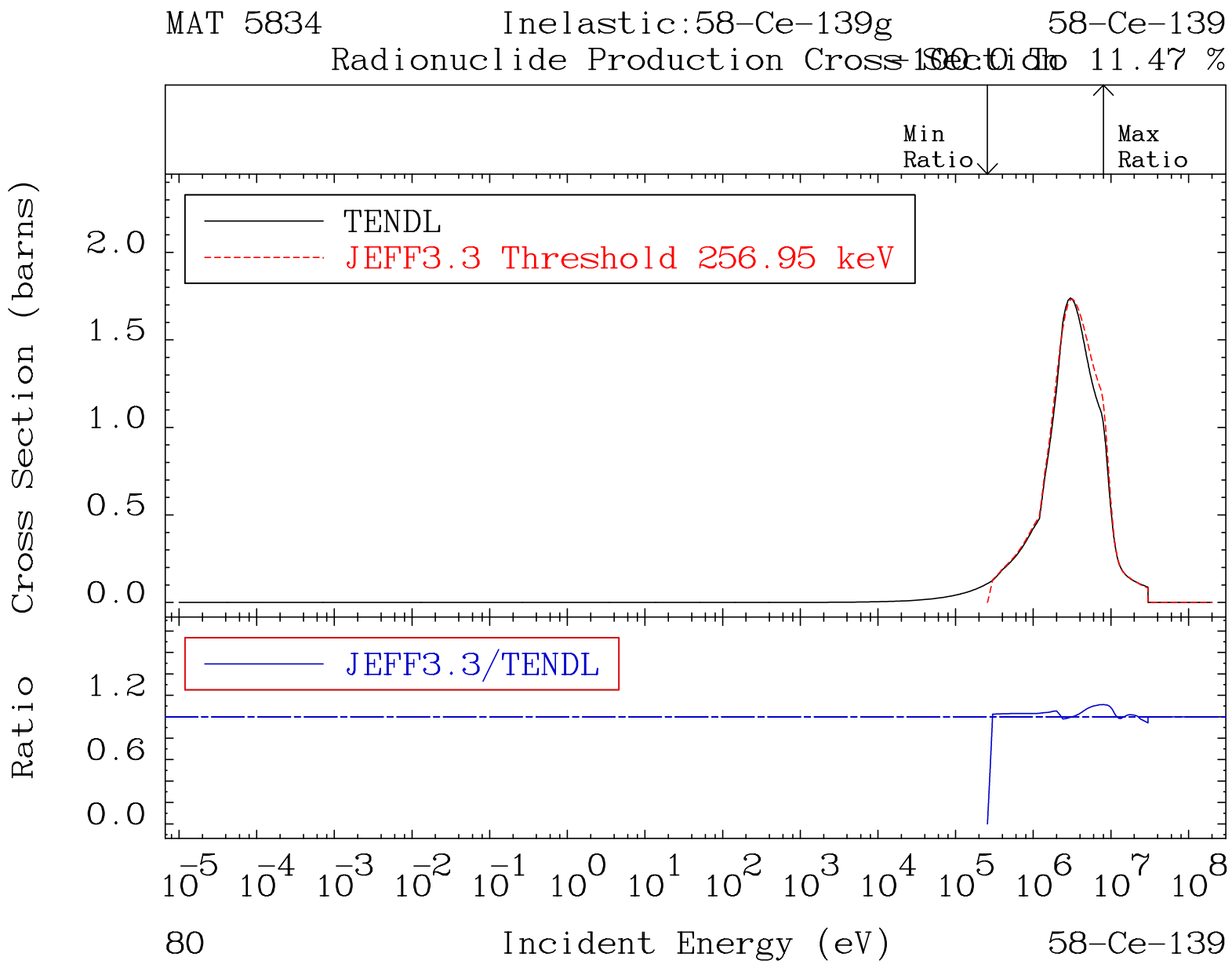

MAT 5834 Total kinematic kerma (high limit) 58-Ce-139
Cross Section -98.87 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
75
58-Ce-139

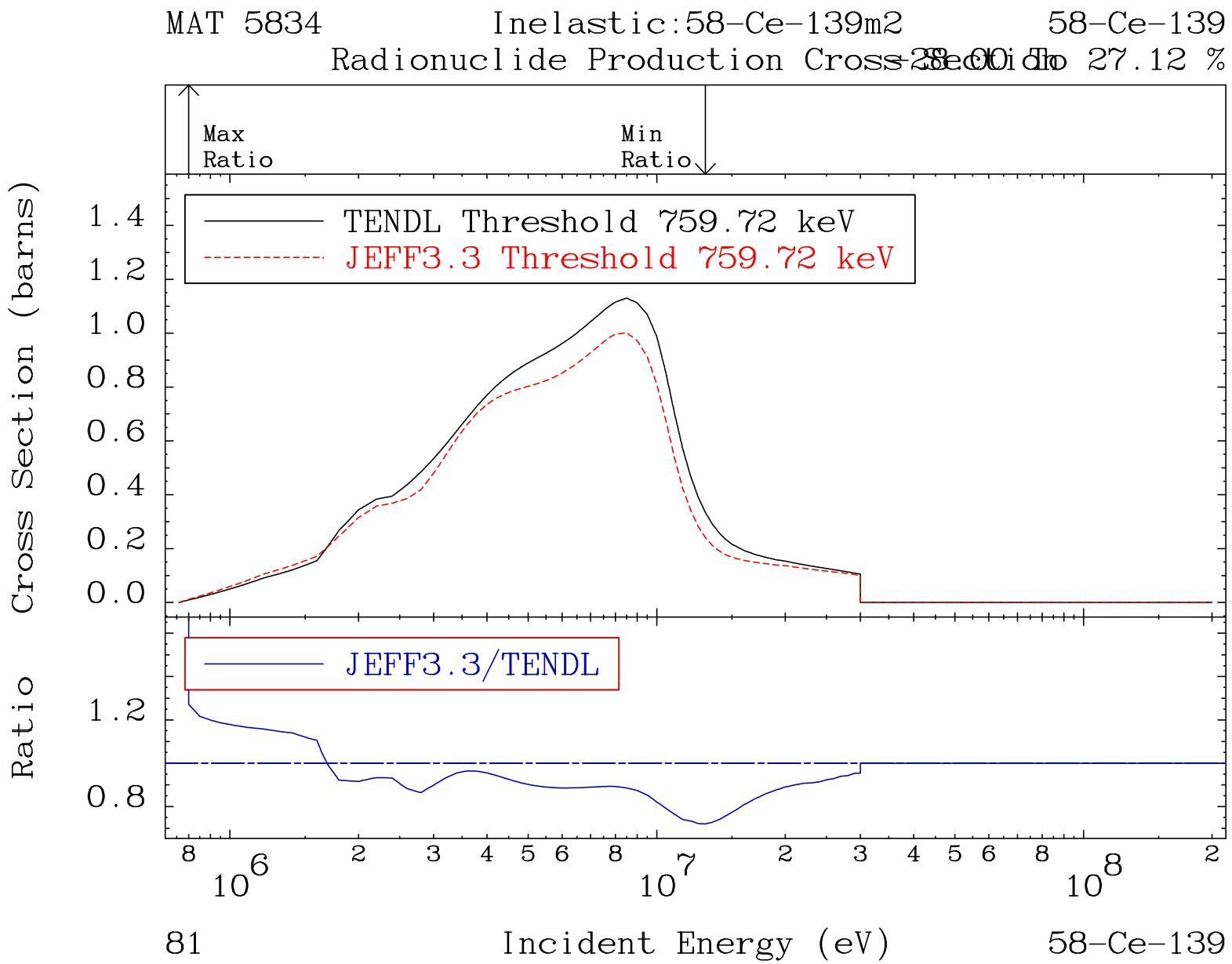

MAT 5834
Dpa total (eV-barns)
58-Ce-139
Cross Section -99.70 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
58-Ce-139

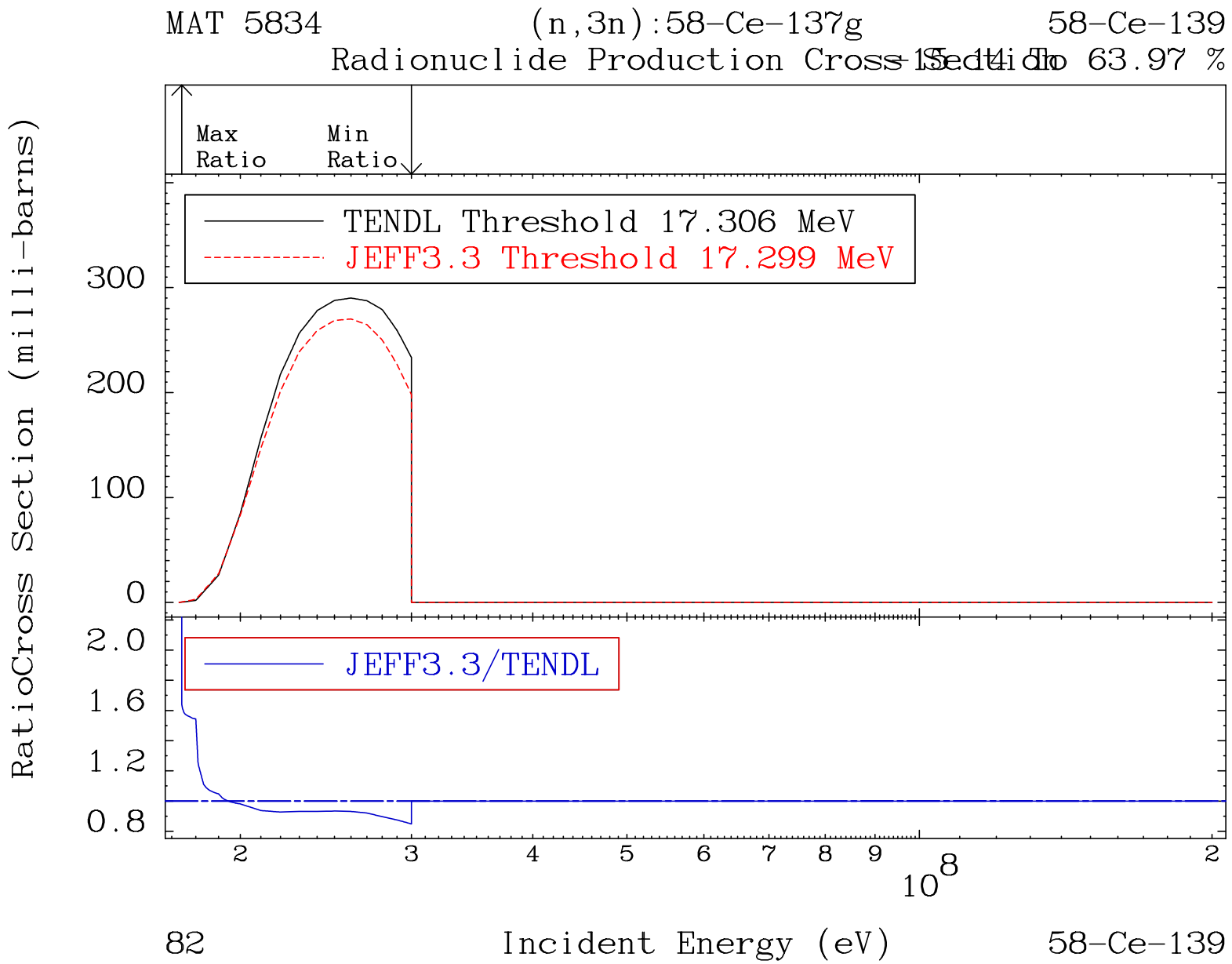

MAT 5834
Dpa elastic (mt2)
Cross Section
58-Ce-139
-84.41 To 11.73 %
Max
Ratio
TENDL Threshold 820.00 eV
JEFF3.3 Threshold 814.16 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
77
58-Ce-139

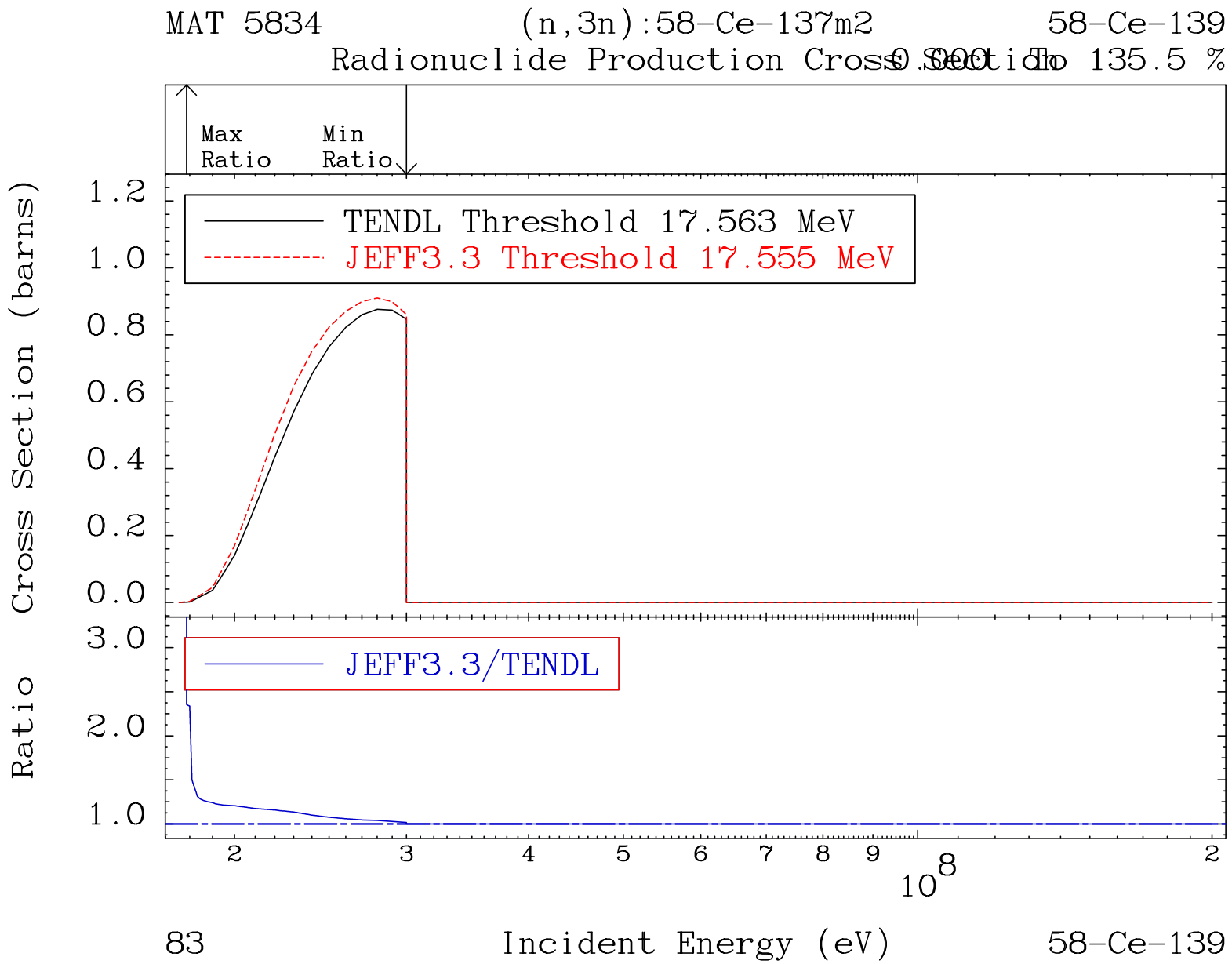

MAT 5834
Dpa inelastic (mt51-91)
58-Ce-139
Cross Section
-100.0 To 7.627 %
Min Ratio
Max Ratio
TENDL Threshold 256.93 keV
JEFF3.3 Threshold 256.93 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
78
58-Ce-139

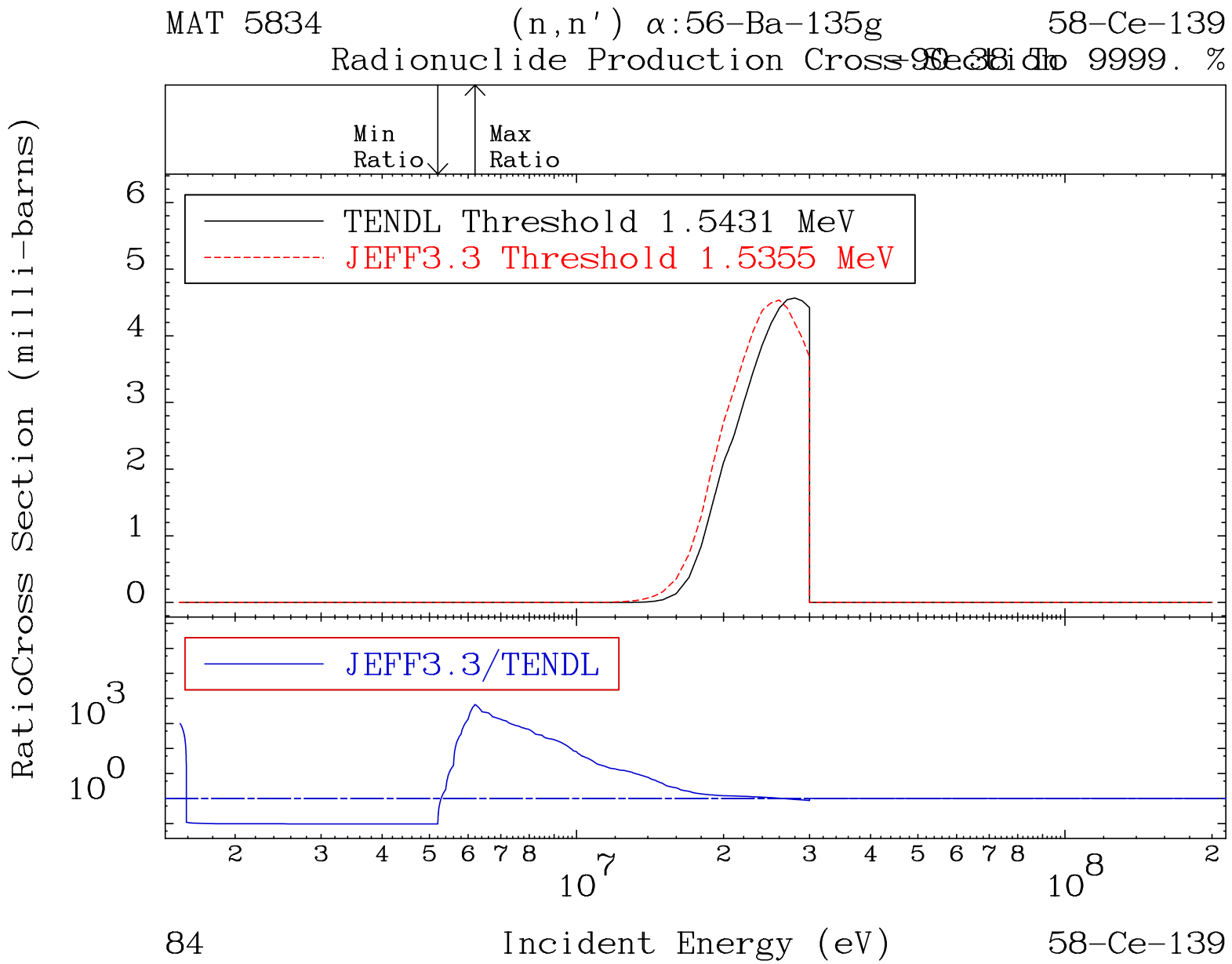

MAT 5834 Dpa disappearance (mt102 -120) 58-Ce-139
Cross Section -99.70 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
79
58-Ce-139

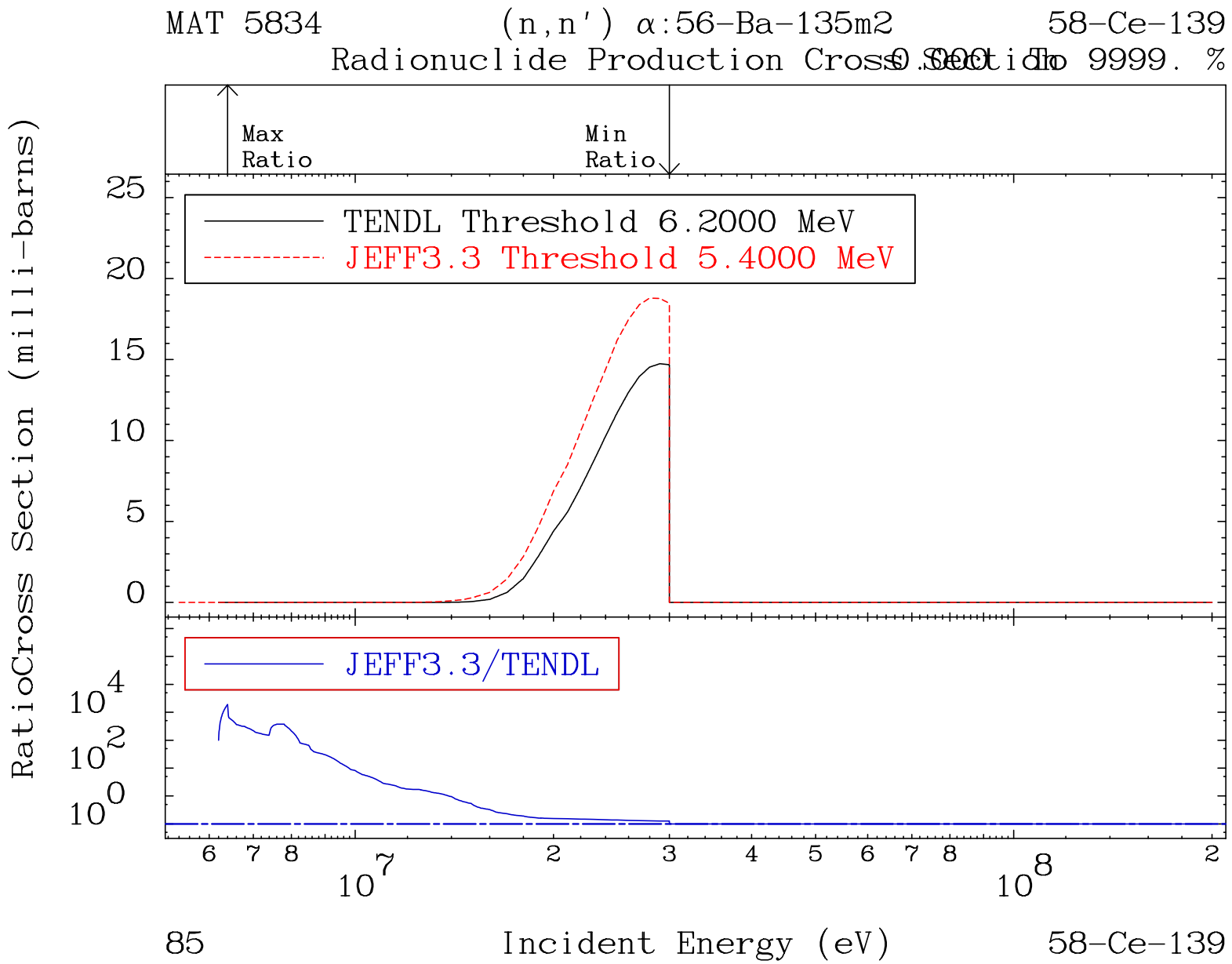

MAT 5834
Inelastic:58-Ce-139g
58-Ce-139
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL
JEFF3.3 Threshold 256.95 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
80
Incident Energy (eV)
58-Ce-139

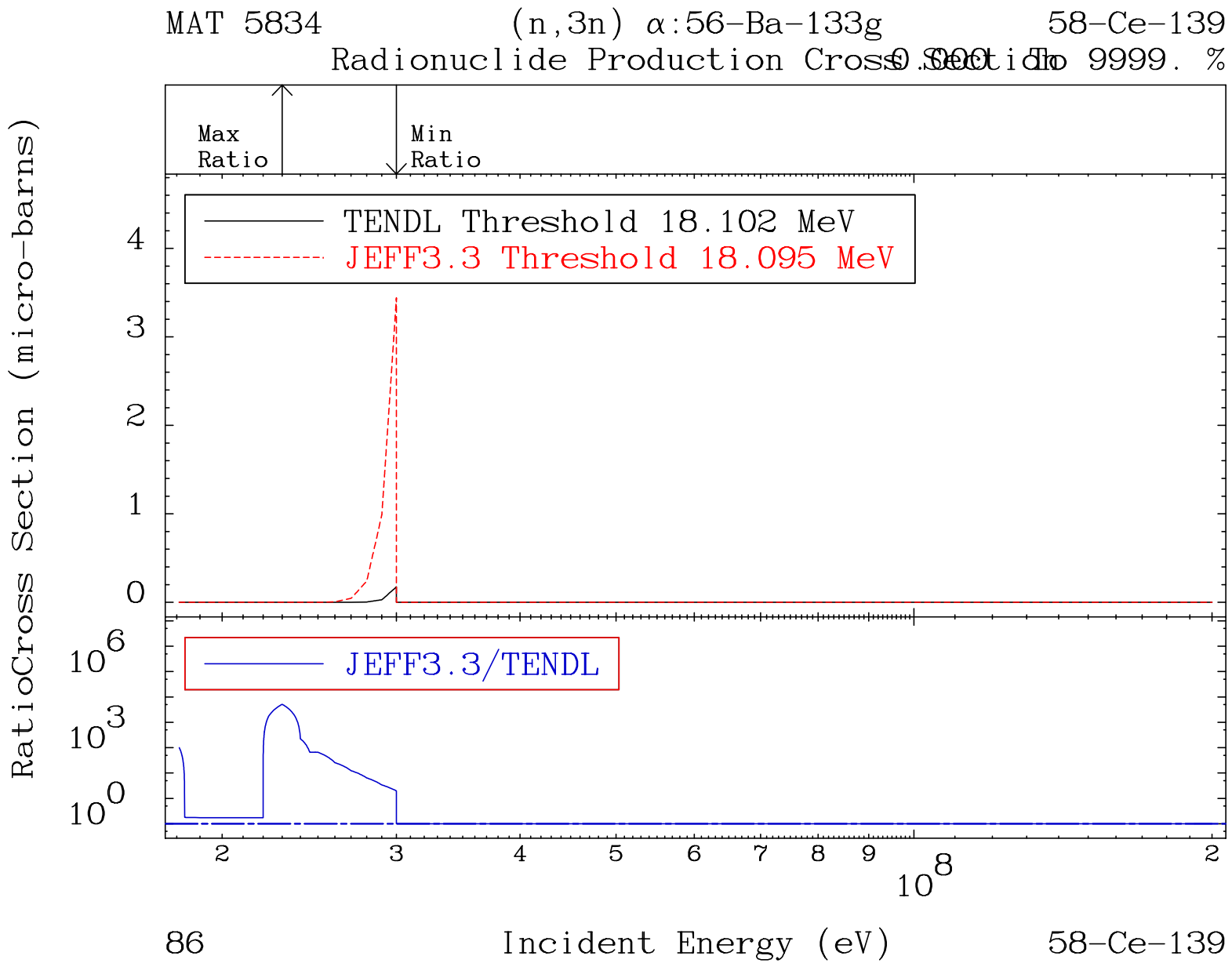

MAT 5834
Inelastic:58-Ce-139m2
58-Ce-139
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 759.72 keV
JEFF3.3 Threshold 759.72 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
81
58-Ce-139

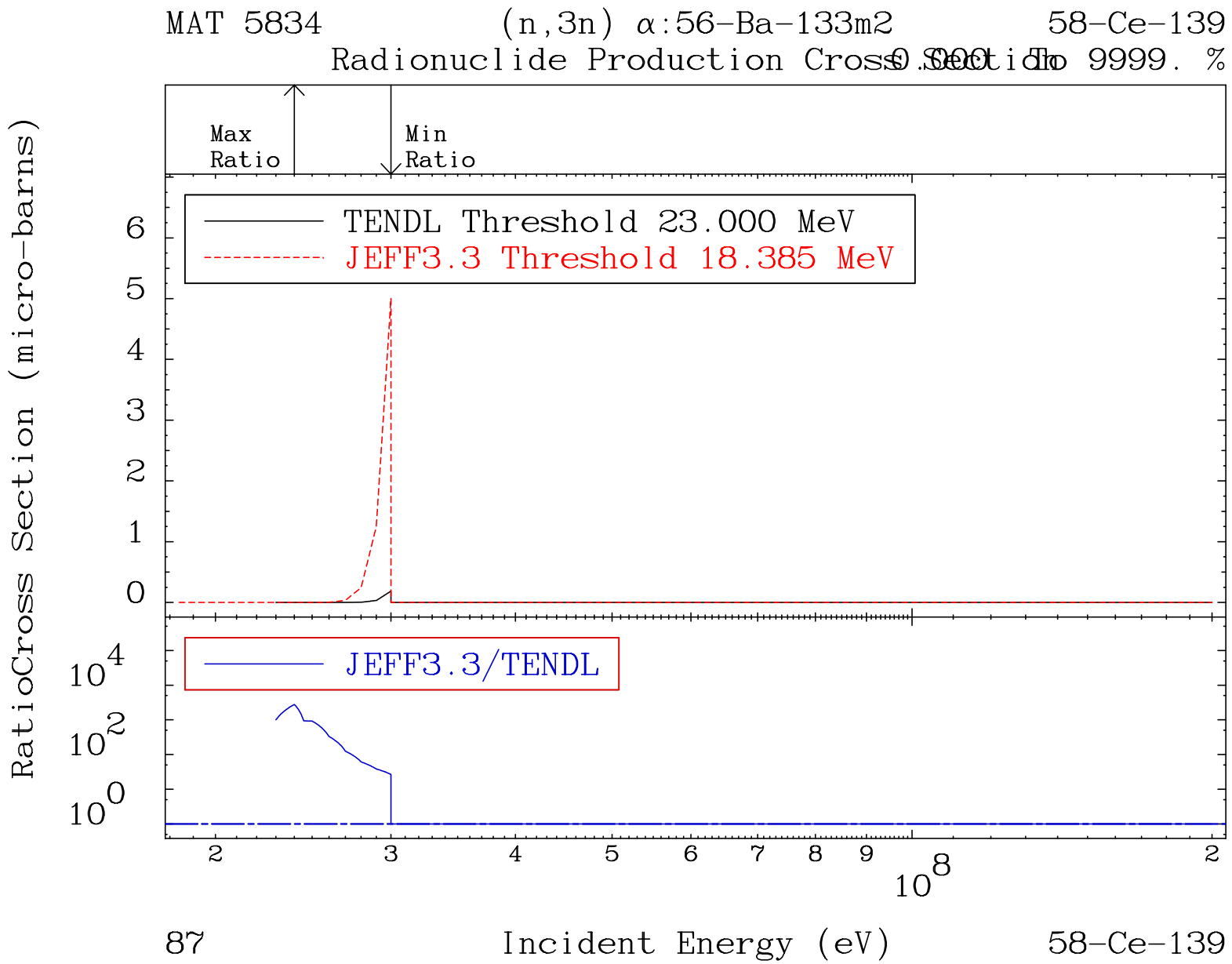

MAT 5834
(n,3n):58-Ce-137g
58-Ce-139
Radionuclide Production Cross Section To 63.97 %
Max Ratio
Min Ratio
TENDL Threshold 17.306 MeV
JEFF3.3 Threshold 17.299 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
200
100
0
2.0
1.6
1.2
0.8
2
3
4
5
6
7
8
9
2
10^8
82
Incident Energy (eV)
58-Ce-139

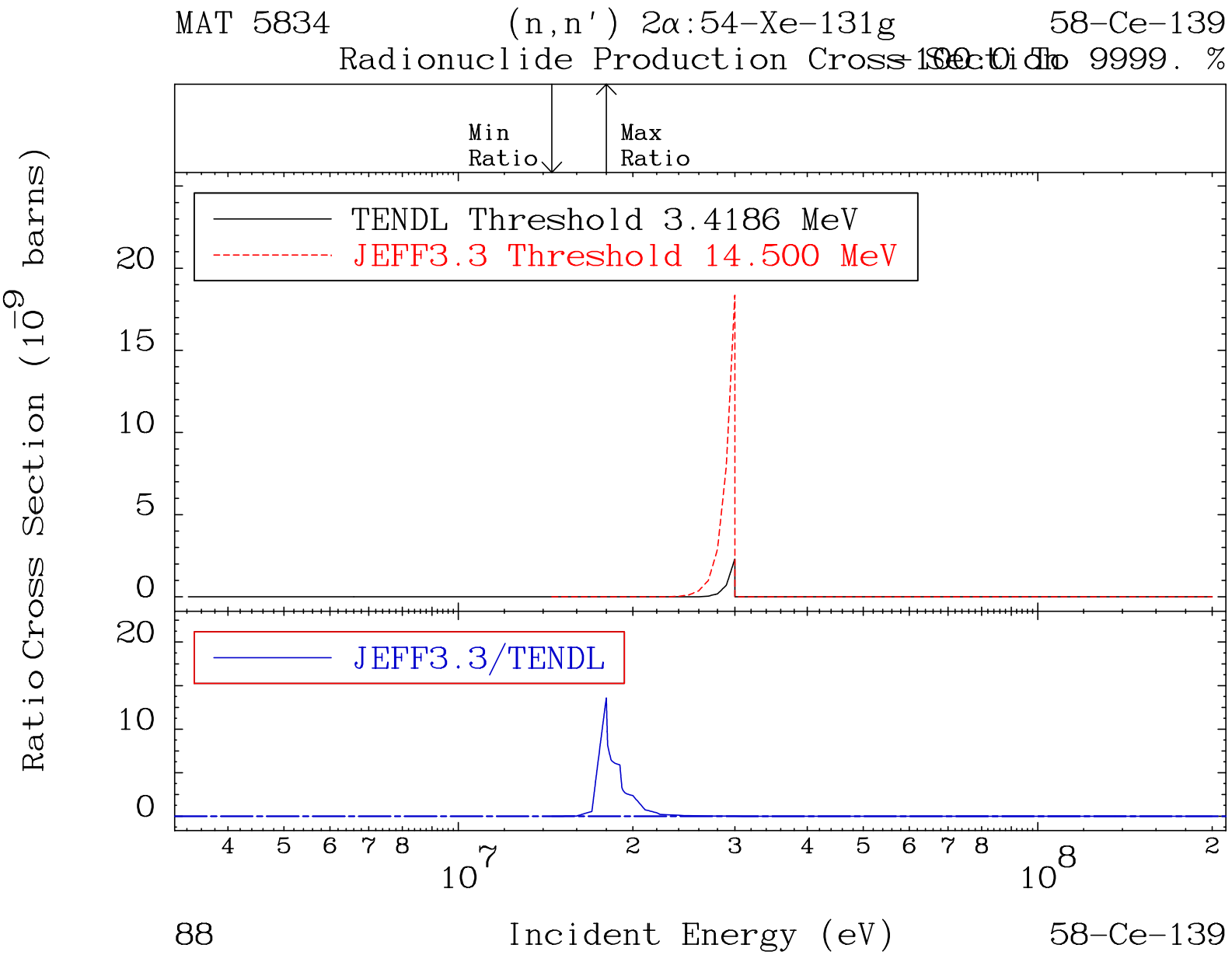

MAT 5834
(n,3n):58-Ce-137m2
58-Ce-139
Radionuclide Production Cross Section
0.000 To 135.5 %
Max Ratio
Min Ratio
TENDL Threshold 17.563 MeV
JEFF3.3 Threshold 17.555 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
2
10^8
83
Incident Energy (eV)
58-Ce-139

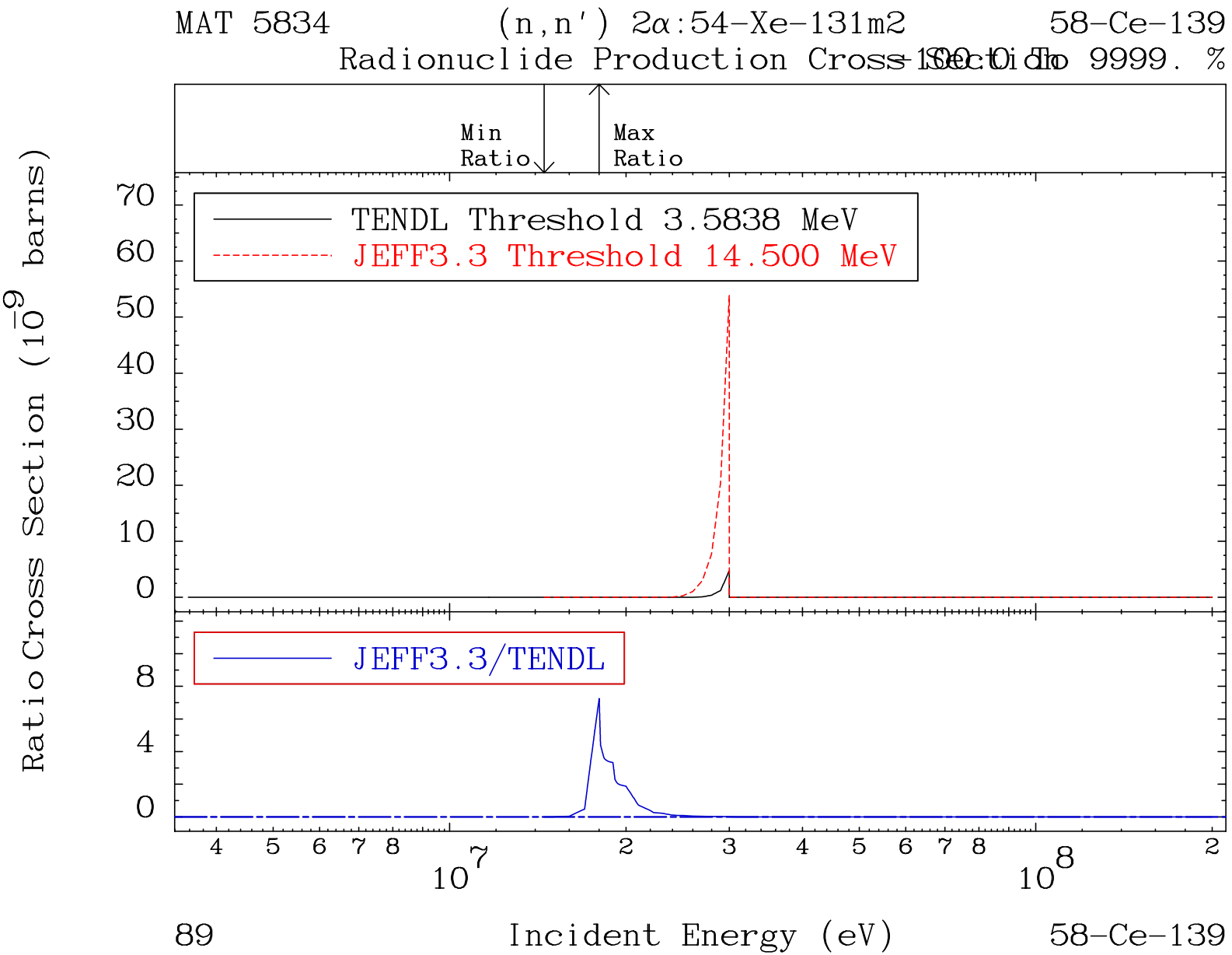

MAT 5834
(n,n') α:56-Ba-135g
58-Ce-139
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.5431 MeV
JEFF3.3 Threshold 1.5355 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
84
58-Ce-139

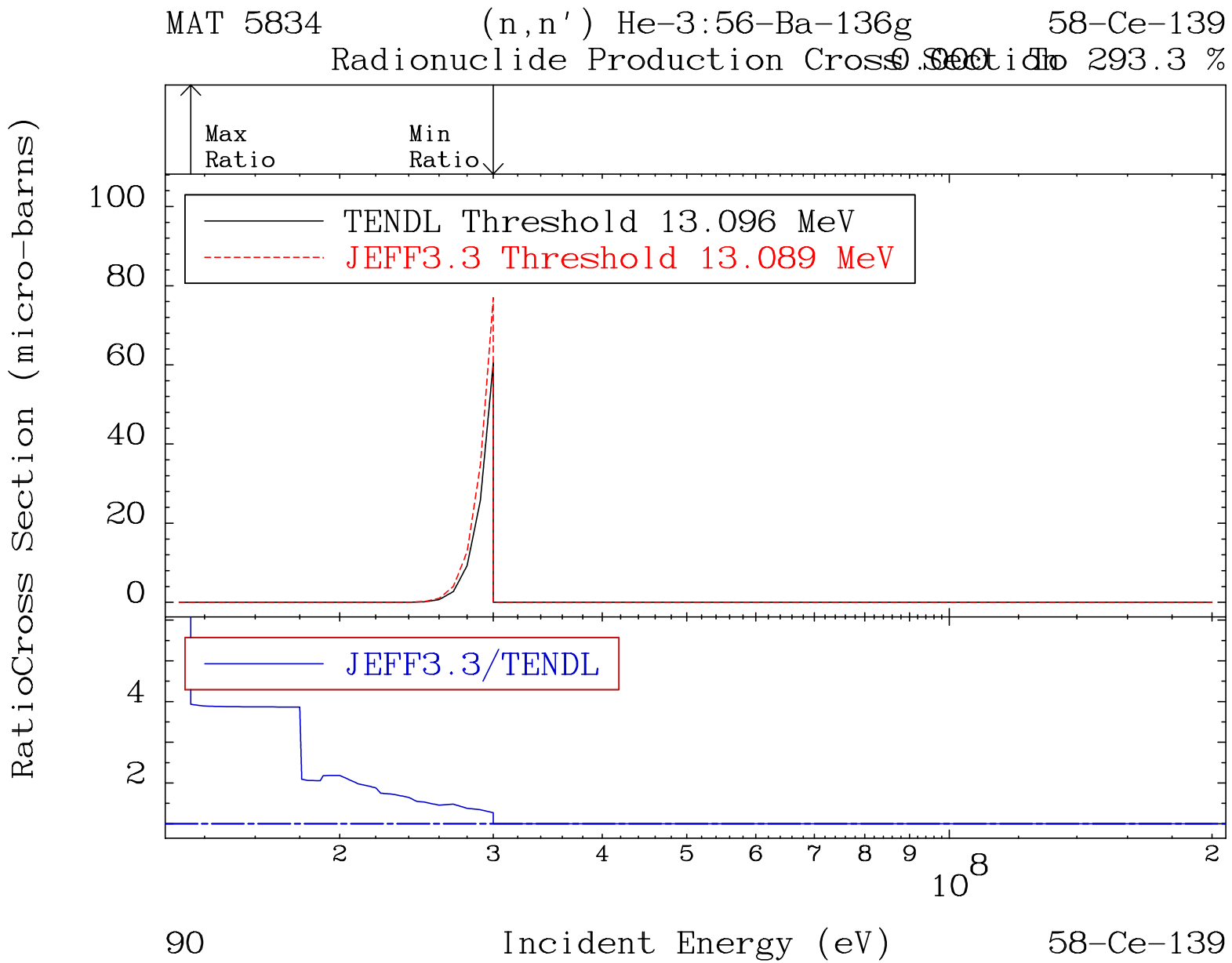

MAT 5834
(n,n') α:56-Ba-135m2
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.2000 MeV
JEFF3.3 Threshold 5.4000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
10^4
10^2
10^0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
85
Incident Energy (eV)
58-Ce-139

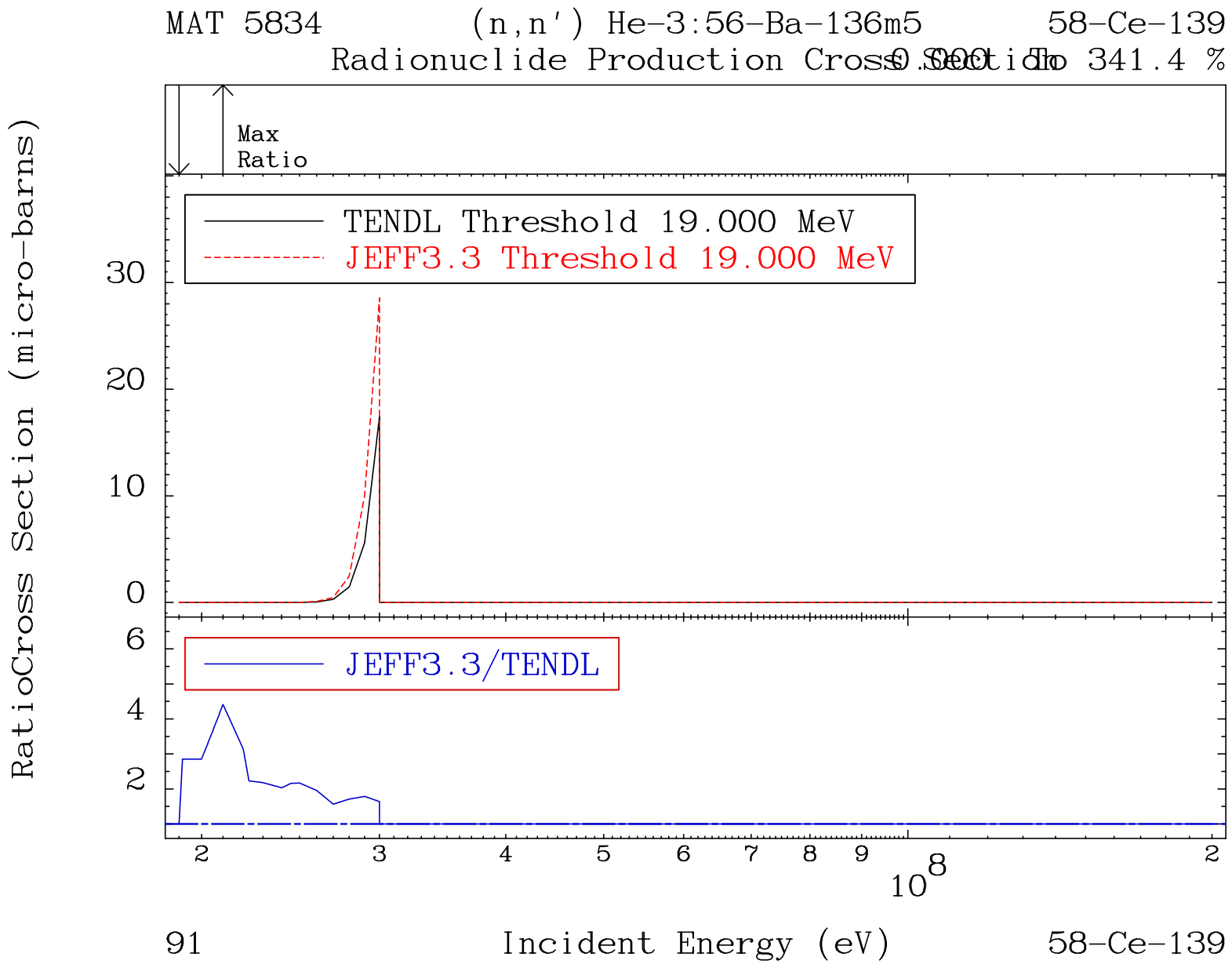

MAT 5834
(n,3n) α:56-Ba-133g
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 18.102 MeV
JEFF3.3 Threshold 18.095 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
86
58-Ce-139

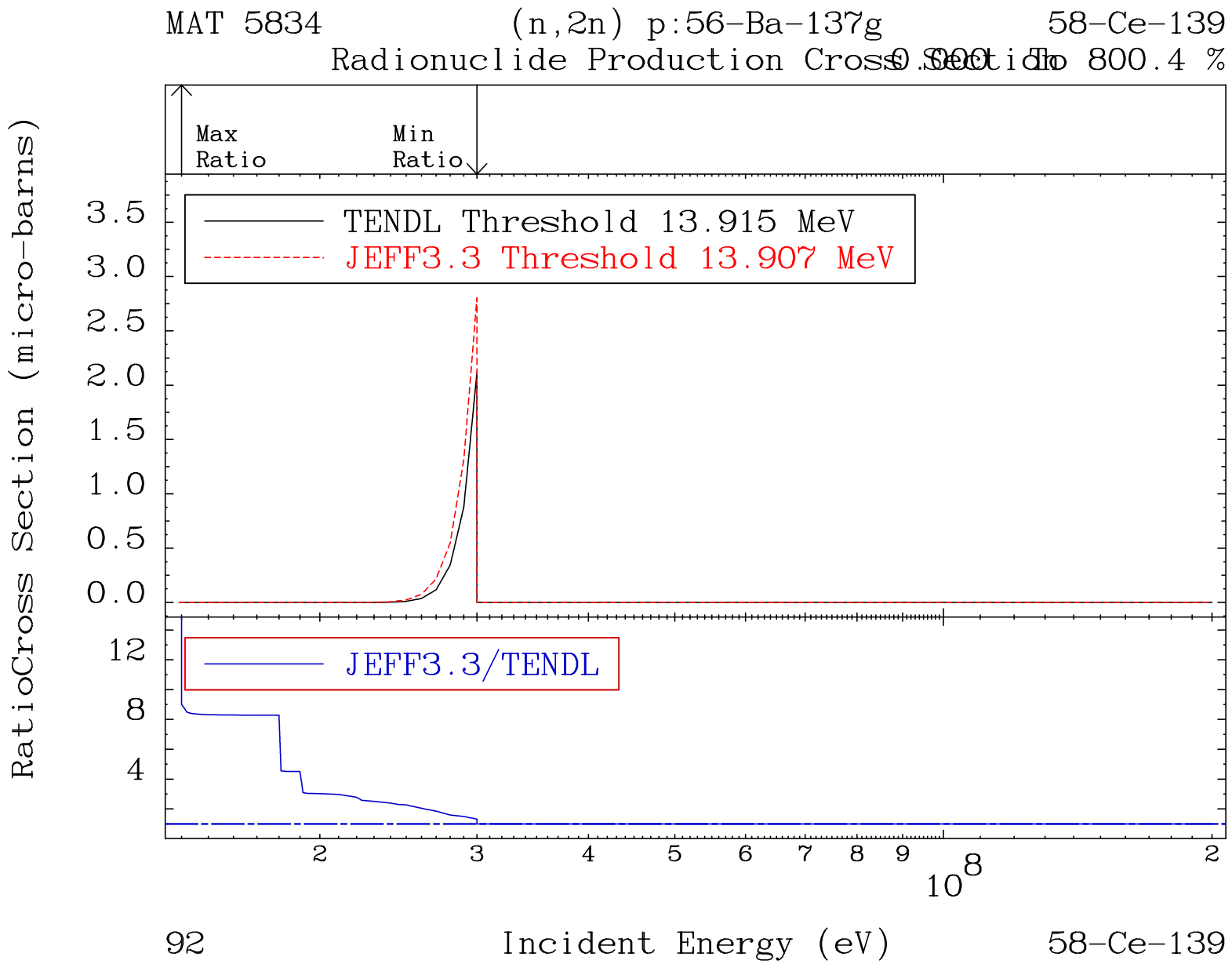

MAT 5834
(n,3n) α:56-Ba-133m2
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 23.000 MeV
JEFF3.3 Threshold 18.385 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
0
1
2
3
4
5
6
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
87
Incident Energy (eV)
58-Ce-139

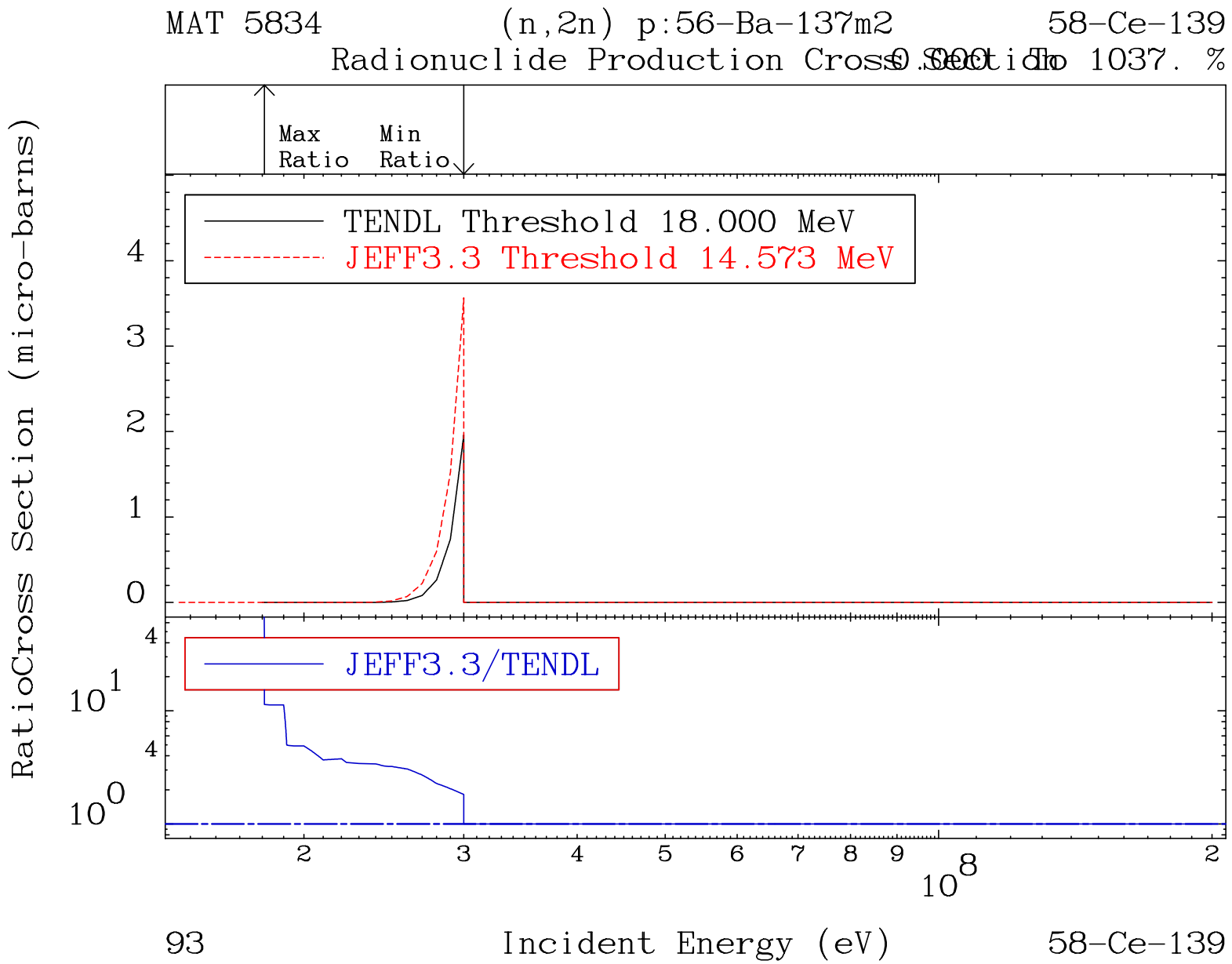

MAT 5834
(n,n') 2α:54-Xe-131g
58-Ce-139
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 3.4186 MeV
JEFF3.3 Threshold 14.500 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
Incident Energy (eV)
88
58-Ce-139

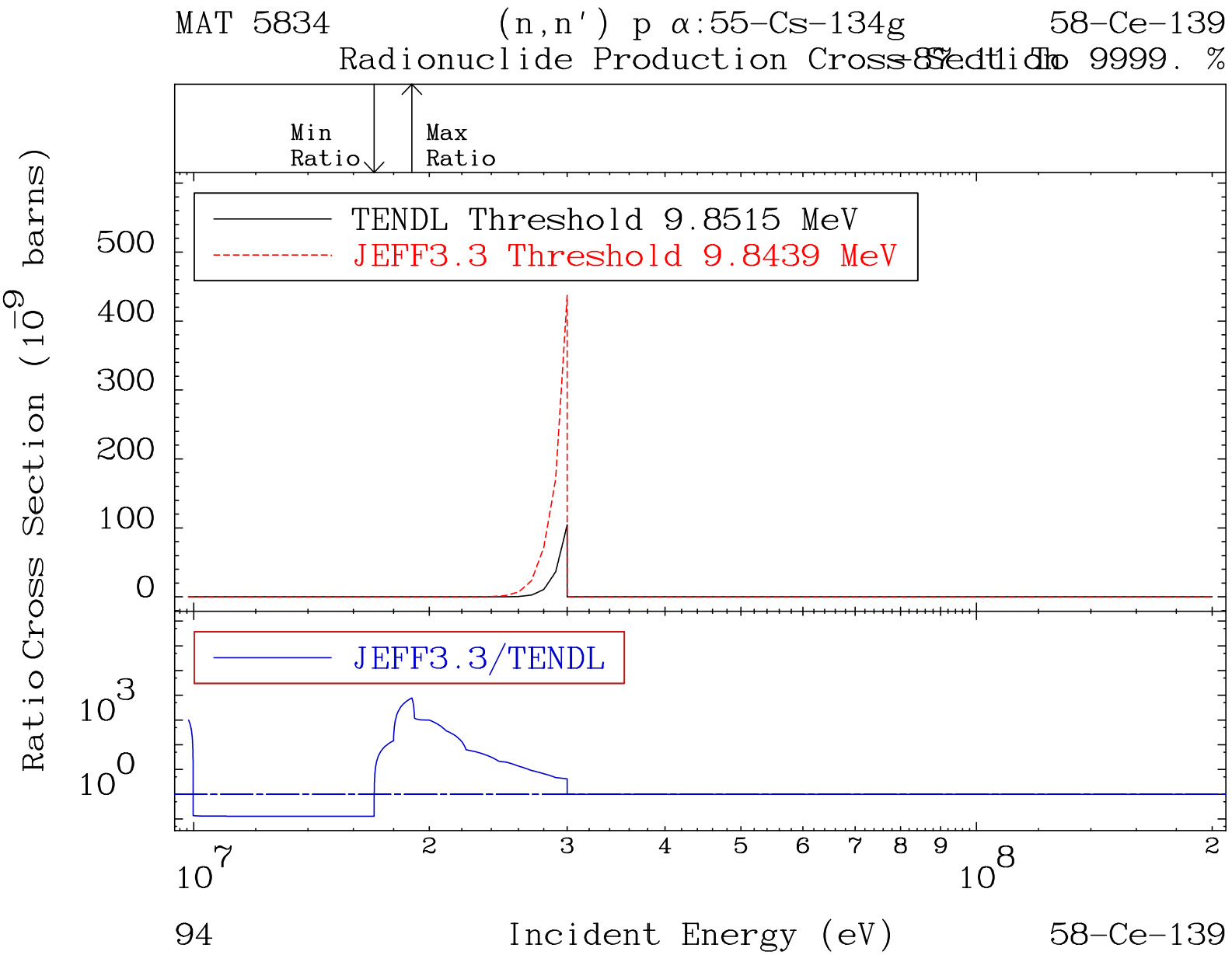

MAT 5834
(n,n') 2α:54-Xe-131m2
58-Ce-139
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 3.5838 MeV
JEFF3.3 Threshold 14.500 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
Incident Energy (eV)
89
58-Ce-139

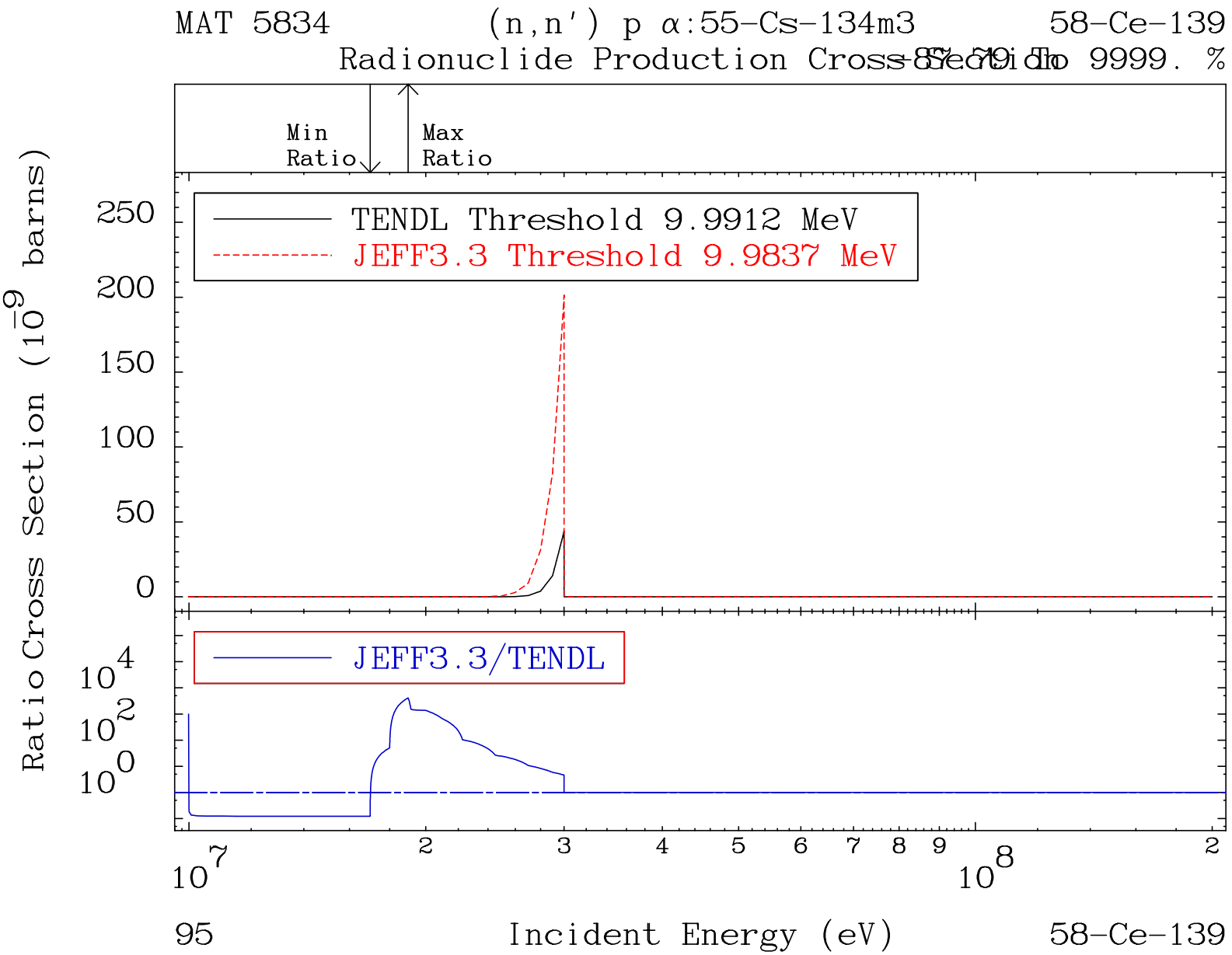

MAT 5834
(n,n') He-3:56-Ba-136g
58-Ce-139
Radionuclide Production Cross Section
0.000 To 293.3 %
Max Ratio
Min Ratio
TENDL Threshold 13.096 MeV
JEFF3.3 Threshold 13.089 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
100
80
60
40
20
0
4
2
2
3
4
5
6
7
8
9
10^8
2
90
Incident Energy (eV)
58-Ce-139

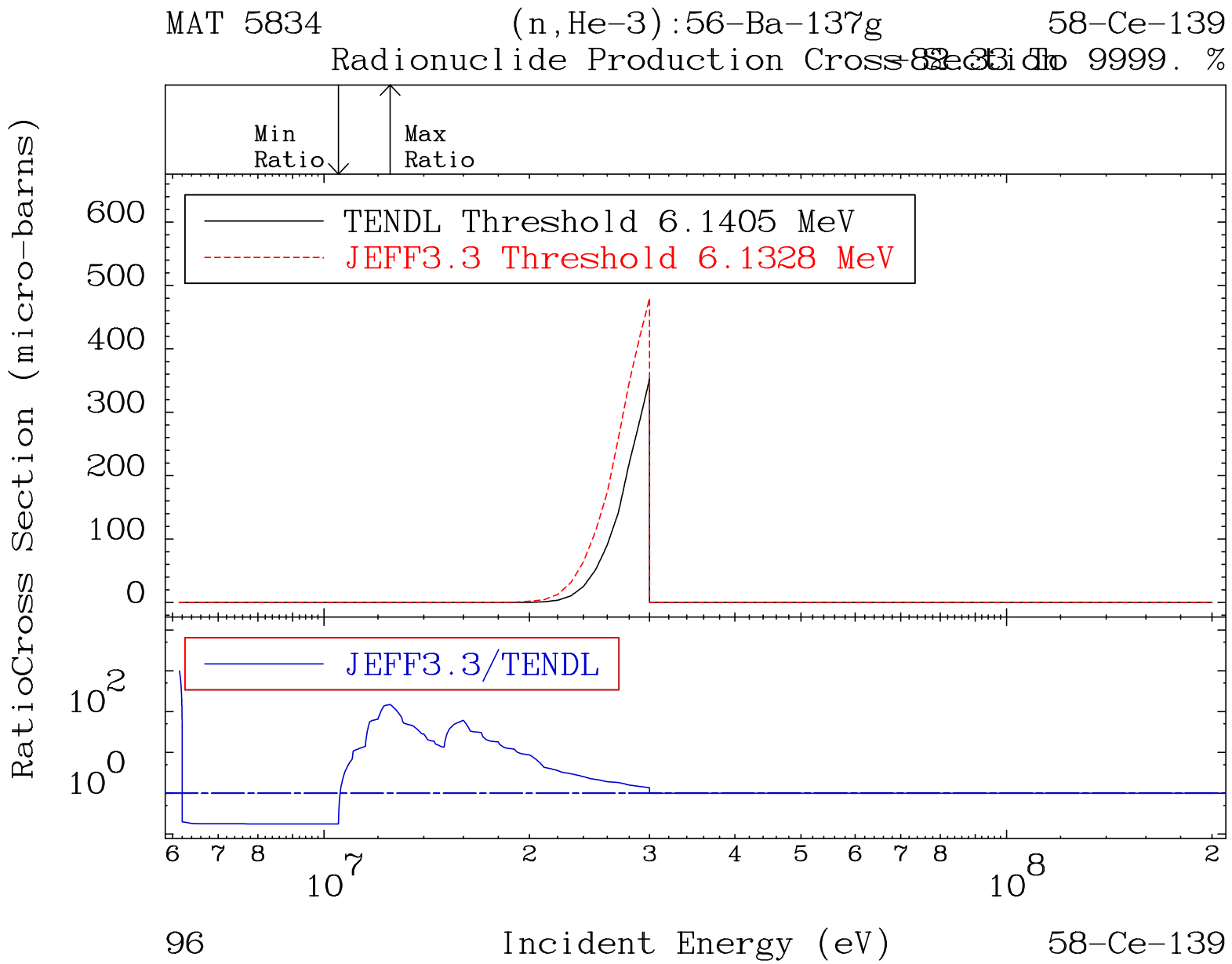

MAT 5834 (n,n') He-3:56-Ba-136m5 58-Ce-139
Radionuclide Production Cross Section To 341.4 %
Max
Ratio
TENDL Threshold 19.000 MeV
JEFF3.3 Threshold 19.000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
30
20
10
0
6
4
2
2
3
4
5
6
7
8
9
10^8
2
91
Incident Energy (eV)
58-Ce-139

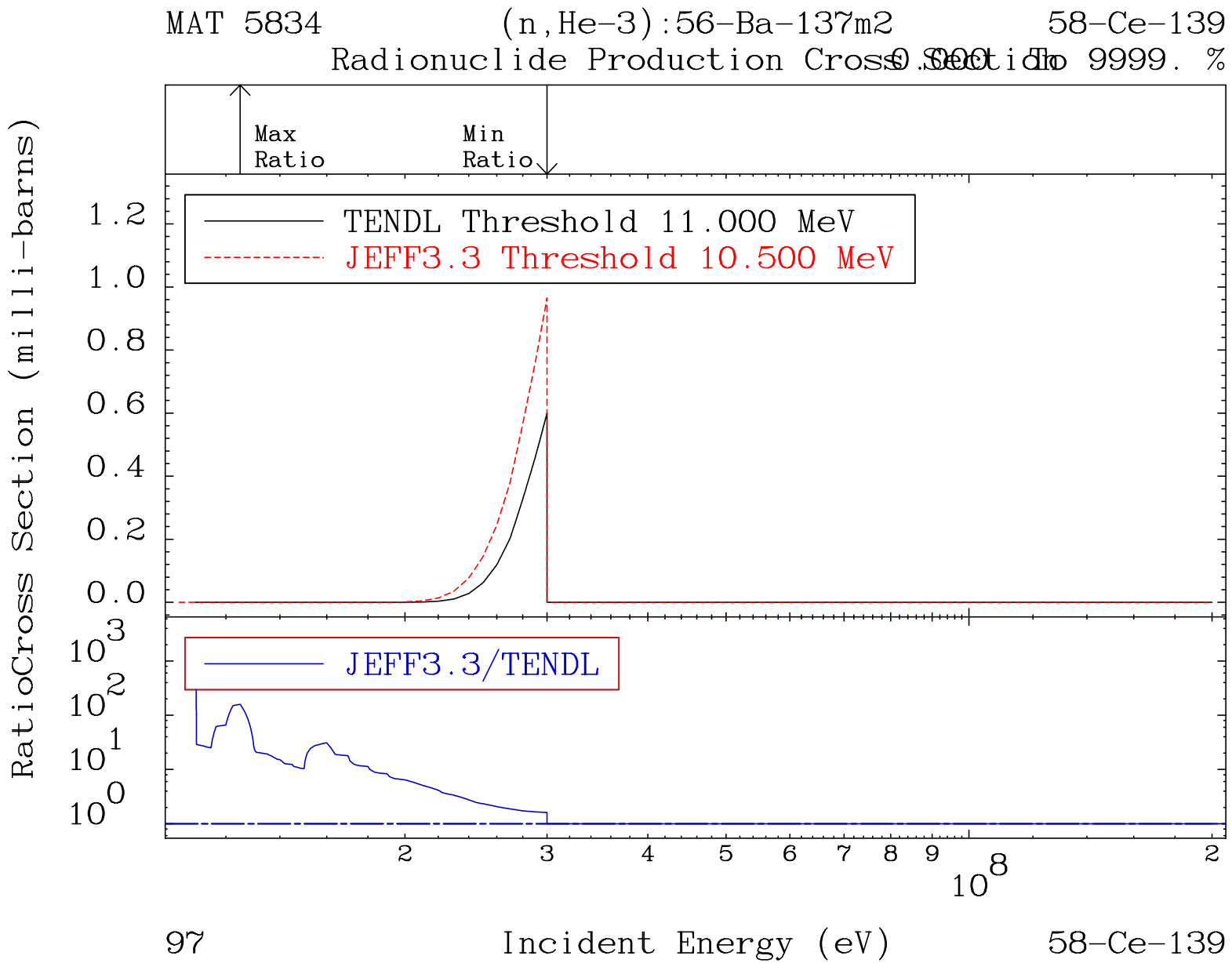

MAT 5834
(n,2n) p:56-Ba-137g
58-Ce-139
Radionuclide Production Cross Section
0.000 To 800.4 %
Max Ratio
Min Ratio
TENDL Threshold 13.915 MeV
JEFF3.3 Threshold 13.907 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
12
8
4
2
3
4
5
6
7
8
9
10^8
2
92
Incident Energy (eV)
58-Ce-139

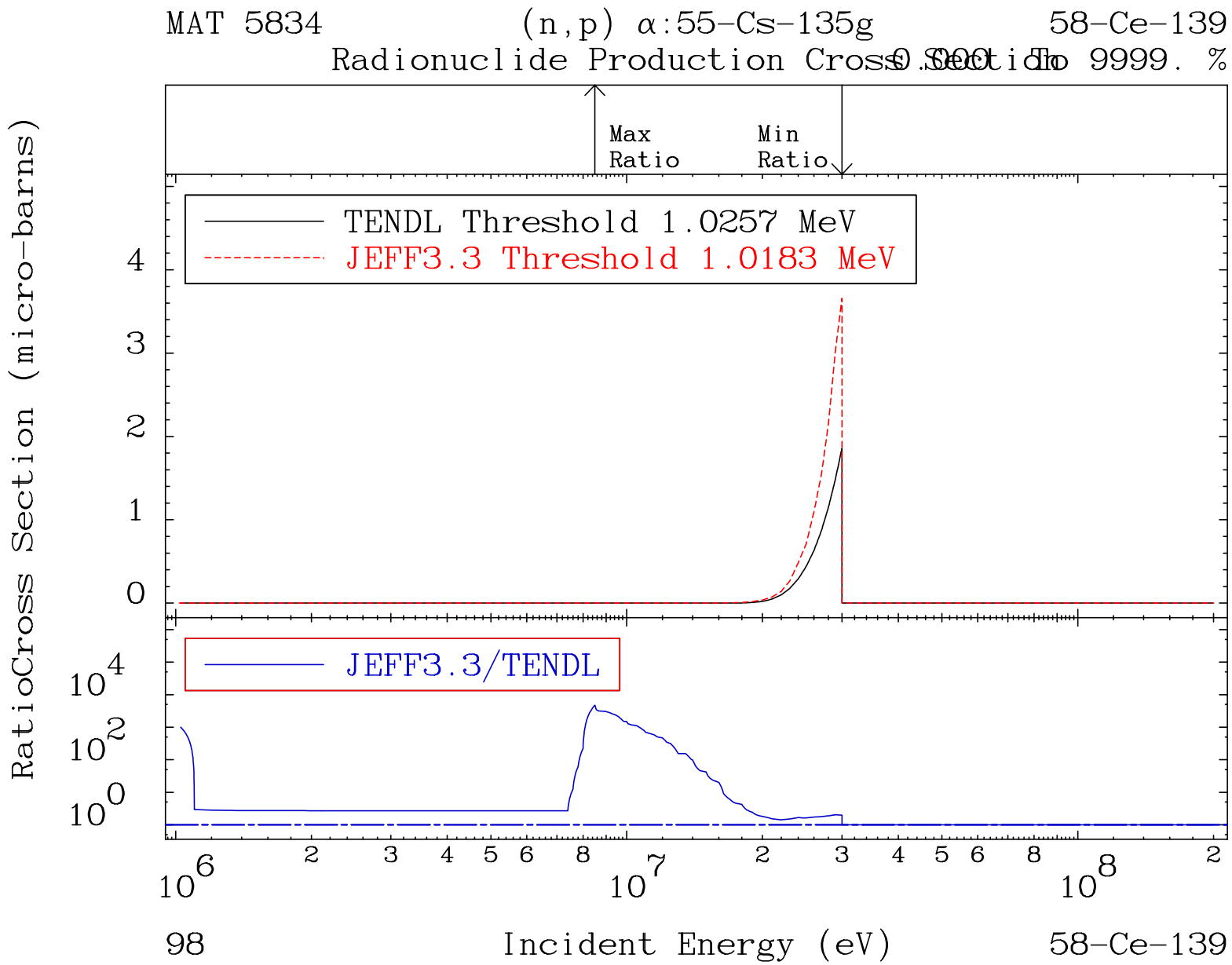

MAT 5834
(n,2n) p:56-Ba-137m2
58-Ce-139
Radionuclide Production Cross Section
0.000 To 1037. %
Max Ratio
Min Ratio
TENDL Threshold 18.000 MeV
JEFF3.3 Threshold 14.573 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
93
58-Ce-139

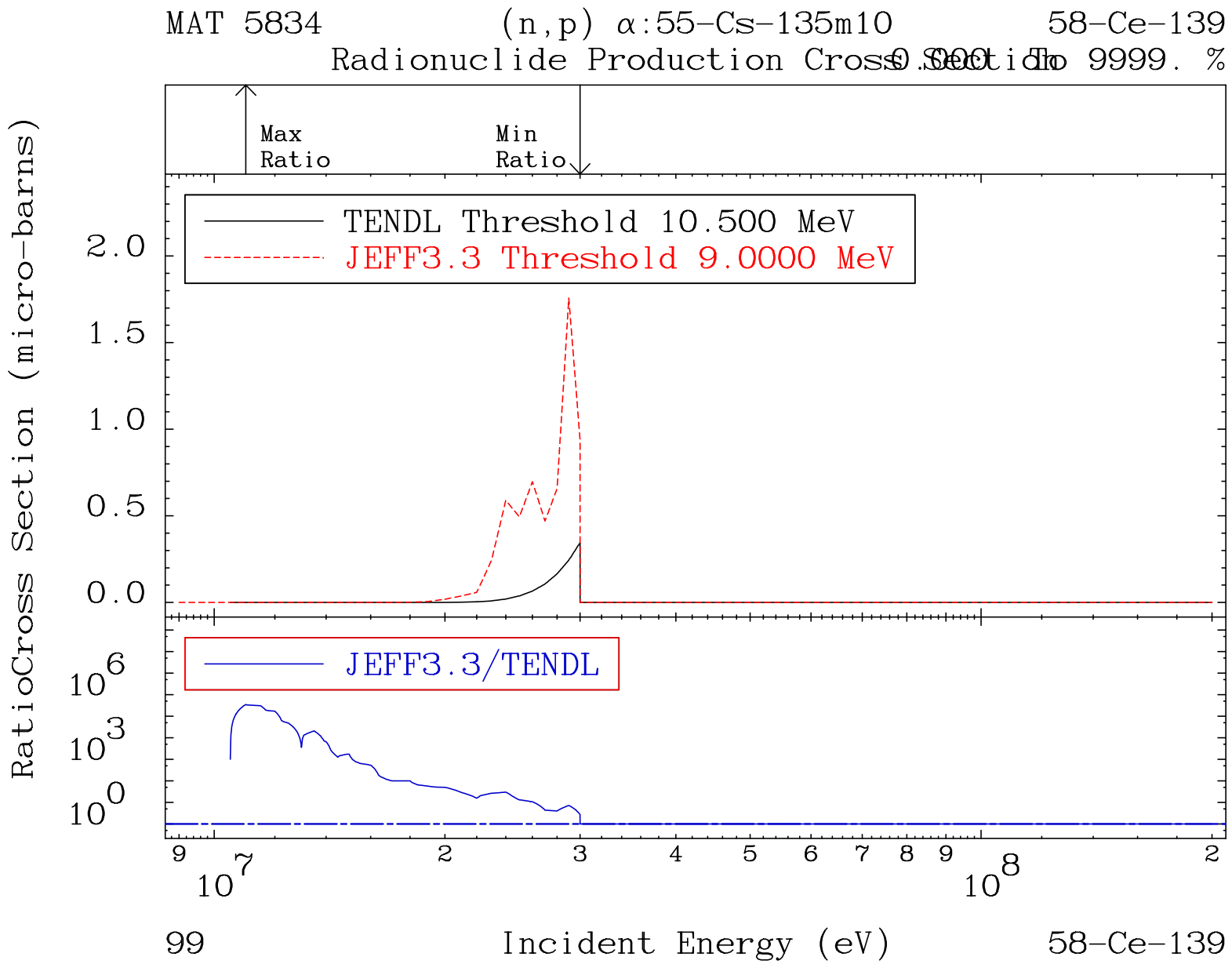

MAT 5834
(n,n') p α:55-Cs-134g
58-Ce-139
Radionuclide Production Cross Section
To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 9.8515 MeV
JEFF3.3 Threshold 9.8439 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
500
400
300
200
100
0
10^3
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
94
Incident Energy (eV)
58-Ce-139

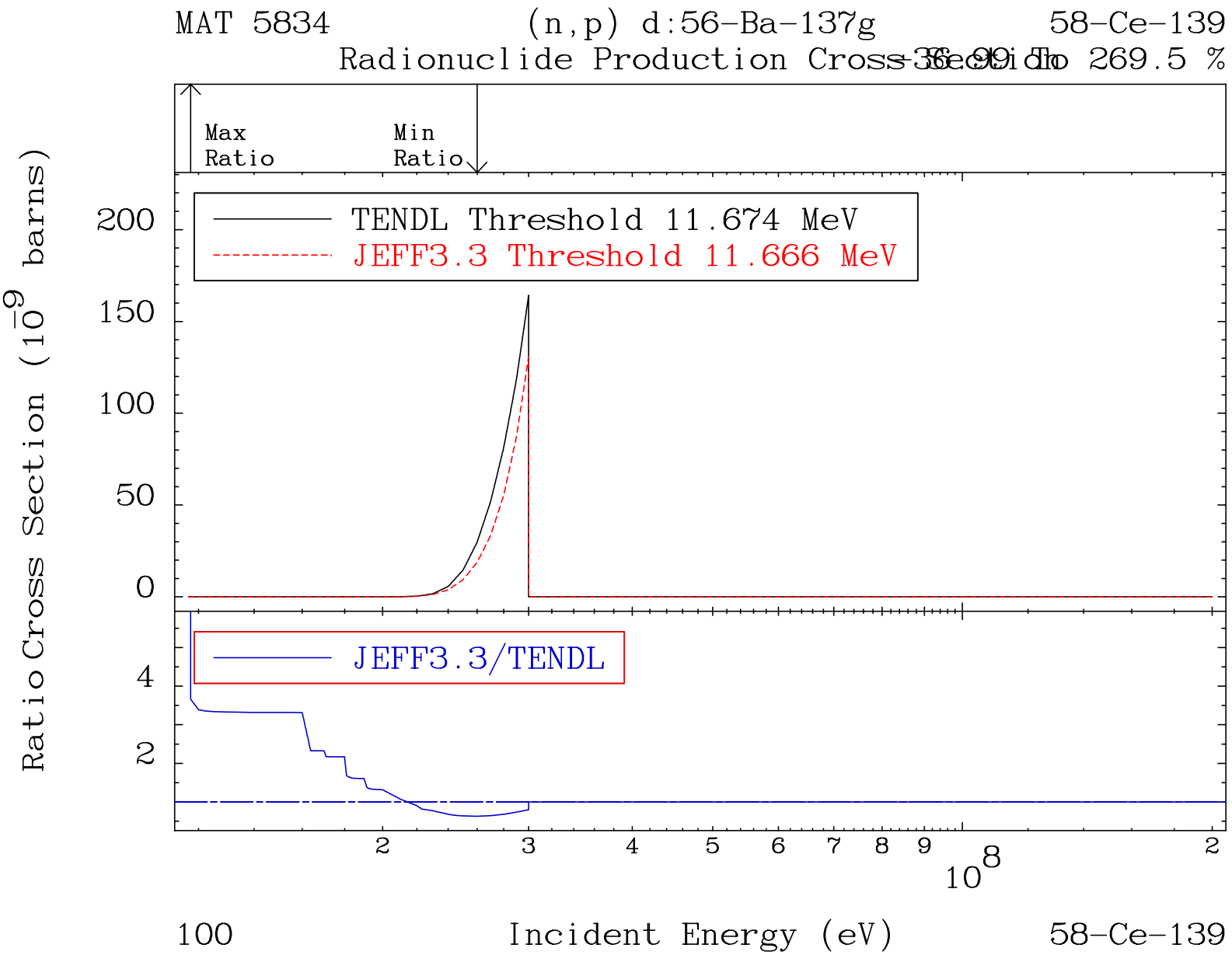

MAT 5834 (n,n') p α:55-Cs-134m3 58-Ce-139
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 9.9912 MeV
JEFF3.3 Threshold 9.9837 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
250
200
150
100
50
0
10^4
10^2
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
95
Incident Energy (eV)
58-Ce-139

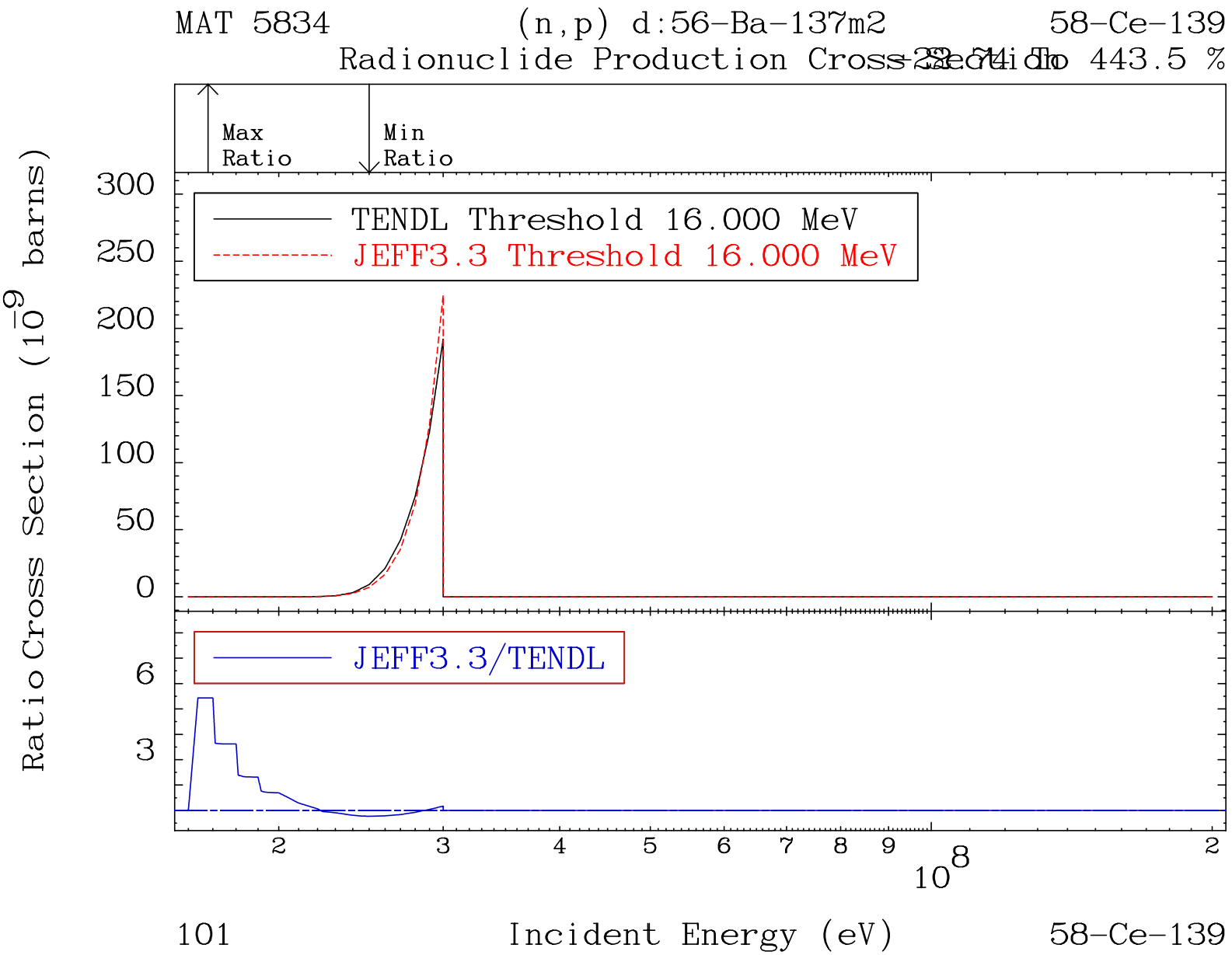

MAT 5834
(n,He-3):56-Ba-137g
58-Ce-139
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.1405 MeV
JEFF3.3 Threshold 6.1328 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
600
500
400
300
200
100
0
10^2
10^0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
96
Incident Energy (eV)
58-Ce-139

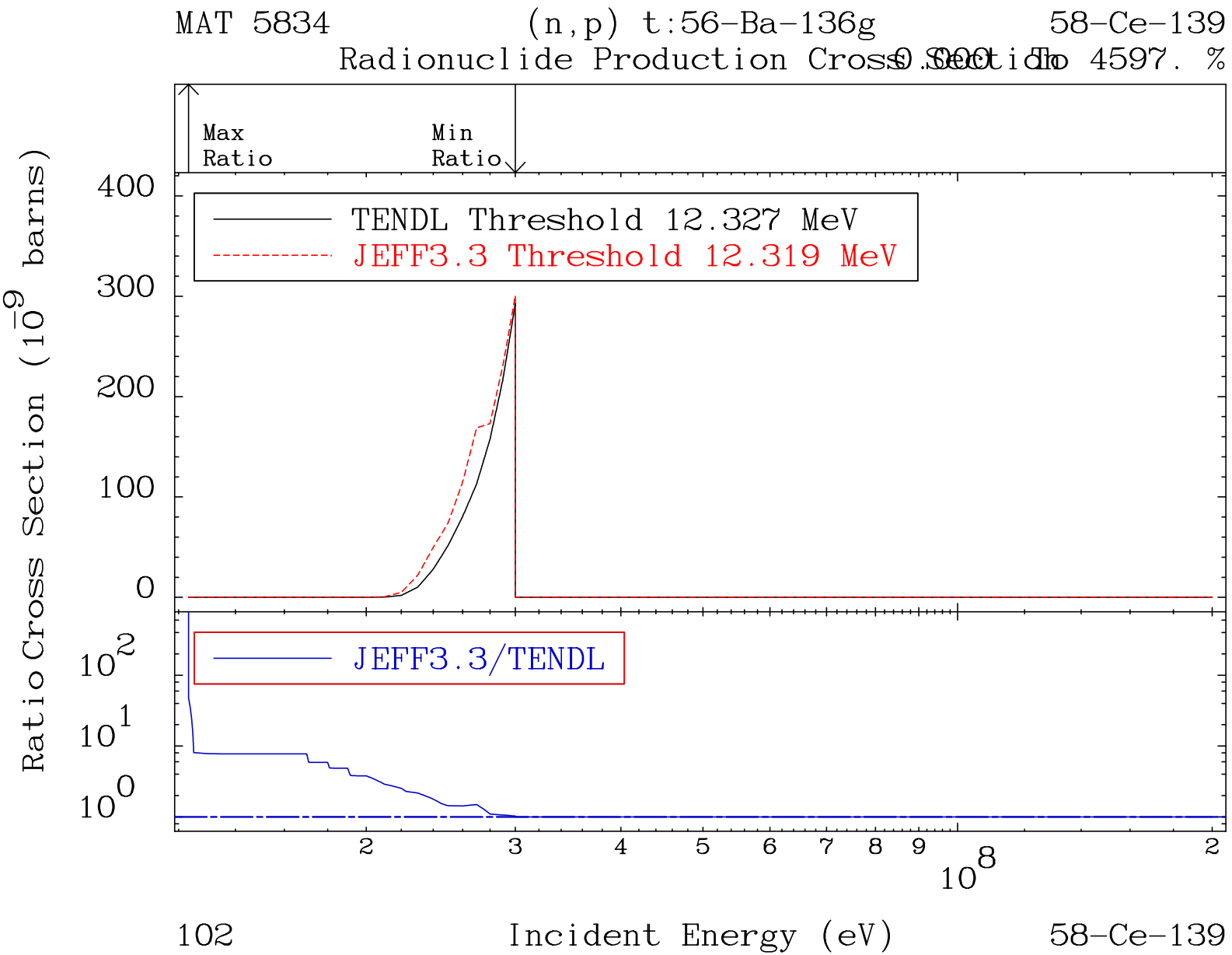

MAT 5834
(n,He-3):56-Ba-137m2
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.000 MeV
JEFF3.3 Threshold 10.500 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
10^3
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
97
Incident Energy (eV)
58-Ce-139

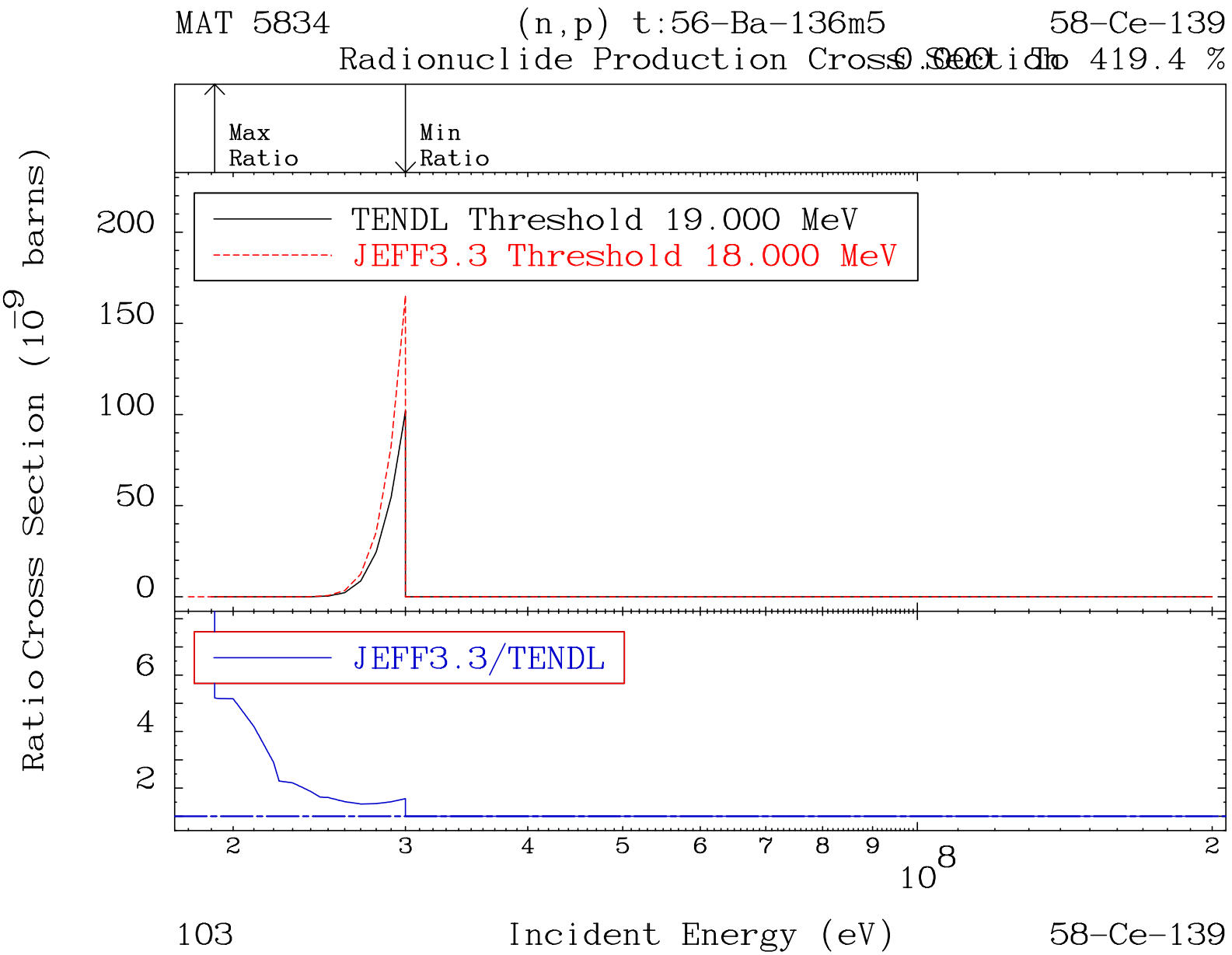

MAT 5834
(n,p) α:55-Cs-135g
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.0257 MeV
JEFF3.3 Threshold 1.0183 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
98
58-Ce-139

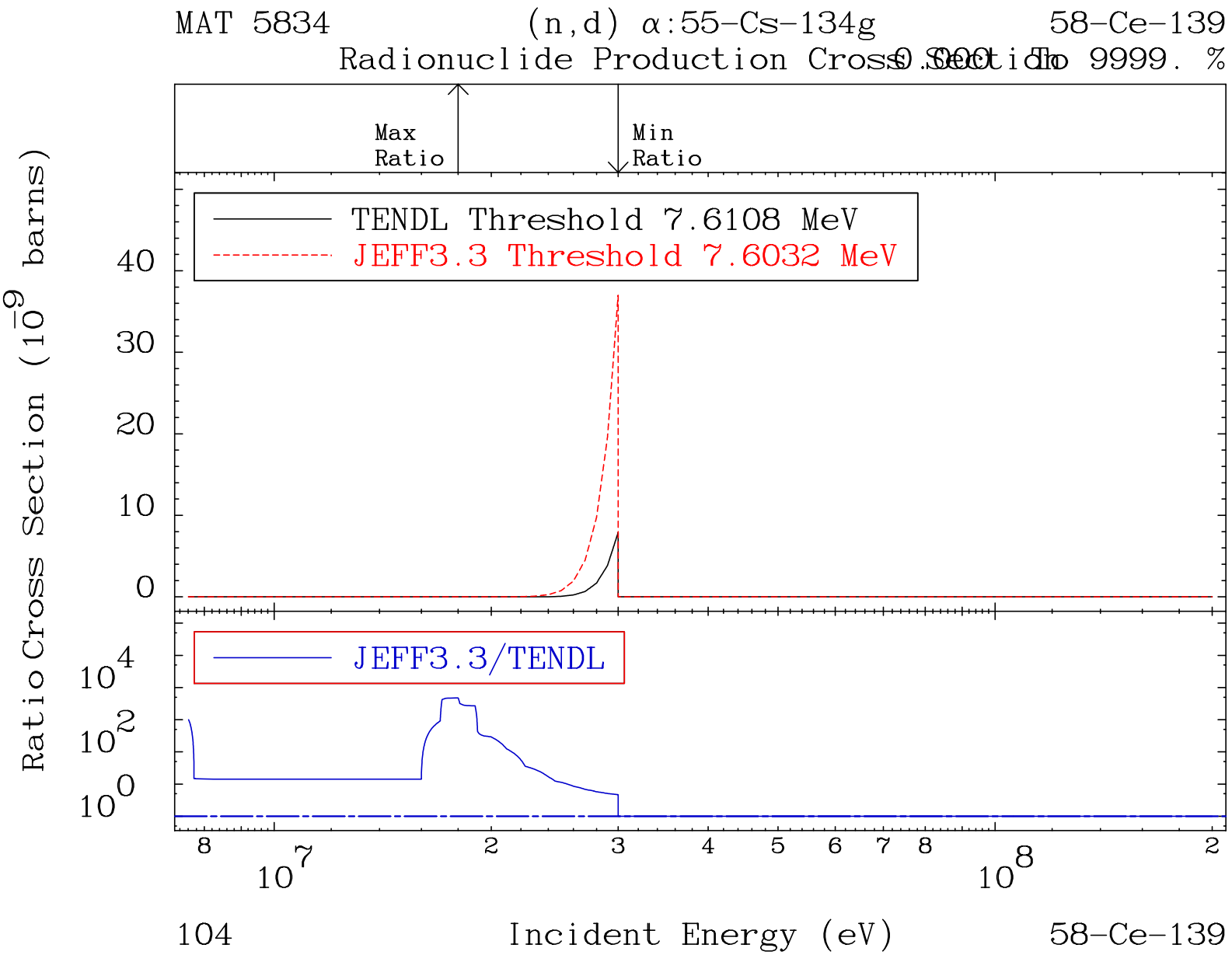

MAT 5834
(n,p) α:55-Cs-135m10
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 10.500 MeV
JEFF3.3 Threshold 9.0000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
10^6
10^3
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
99
Incident Energy (eV)
58-Ce-139

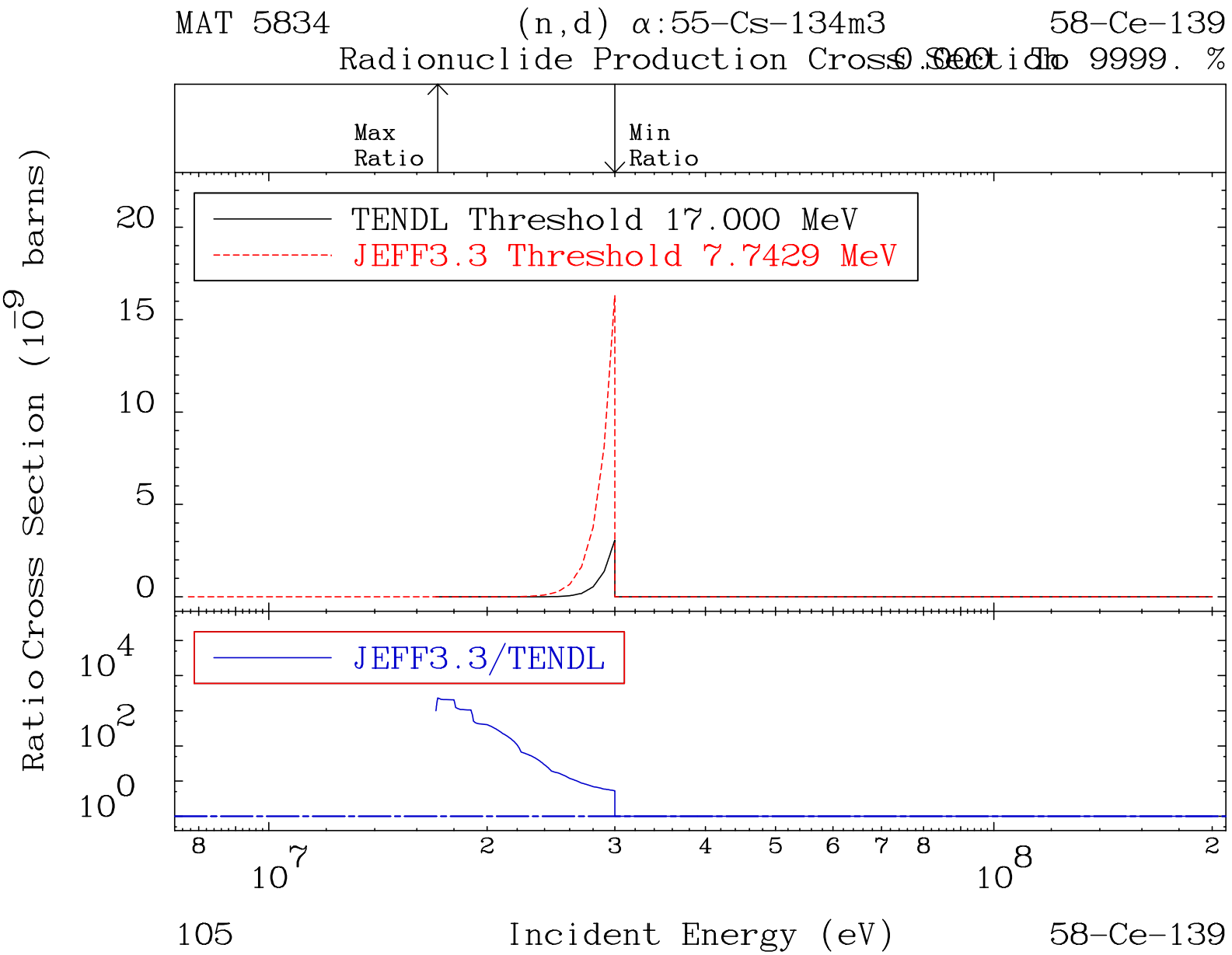

MAT 5834
(n,p) d:56-Ba-137g
58-Ce-139
Radionuclide Production Cross-Section To 269.5 %
Max Ratio
Min Ratio
TENDL Threshold 11.674 MeV
JEFF3.3 Threshold 11.666 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
200
150
100
50
0
4
2
2
3
4
5
6
7
8
9
10^8
2
100
Incident Energy (eV)
58-Ce-139


MAT 5834
(n,p) d:56-Ba-137m2
58-Ce-139
Radionuclide Production Cross Section To 443.5 %
Max Ratio
Min Ratio
TENDL Threshold 16.000 MeV
JEFF3.3 Threshold 16.000 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
300
250
200
150
100
50
0
6
3
2
3
4
5
6
7
8
9
10^8
2
101
Incident Energy (eV)
58-Ce-139


MAT 5834
(n,p) t:56-Ba-136g
58-Ce-139
Radionuclide Production Cross Section
0.000 To 4597. %
Max Ratio
Min Ratio
TENDL Threshold 12.327 MeV
JEFF3.3 Threshold 12.319 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
400
300
200
100
0
10^{2}
10^{1}
10^{0}
2
3
4
5
6
7
8
9
10^{8}
2
102
Incident Energy (eV)
58-Ce-139


MAT 5834
(n,p) t:56-Ba-136m5
58-Ce-139
Radionuclide Production Cross Section
0.000 To 419.4 %
Max Ratio
Min Ratio
TENDL Threshold 19.000 MeV
JEFF3.3 Threshold 18.000 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
200
150
100
50
0
6
4
2
2
3
4
5
6
7
8
9
10^8
2
103
Incident Energy (eV)
58-Ce-139


MAT 5834
(n,d) α:55-Cs-134g
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.6108 MeV
JEFF3.3 Threshold 7.6032 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
40
30
20
10
0
10^4
10^2
10^0
8
10^7
2
3
4
5
6
7
8
10^8
2
104
Incident Energy (eV)
58-Ce-139


MAT 5834
(n,d) α:55-Cs-134m3
58-Ce-139
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 17.000 MeV
JEFF3.3 Threshold 7.7429 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
20
15
10
5
0
10^4
10^2
10^0
8
2
3
4
5
6
7
8
2
10^7
10^8
105
Incident Energy (eV)
58-Ce-139