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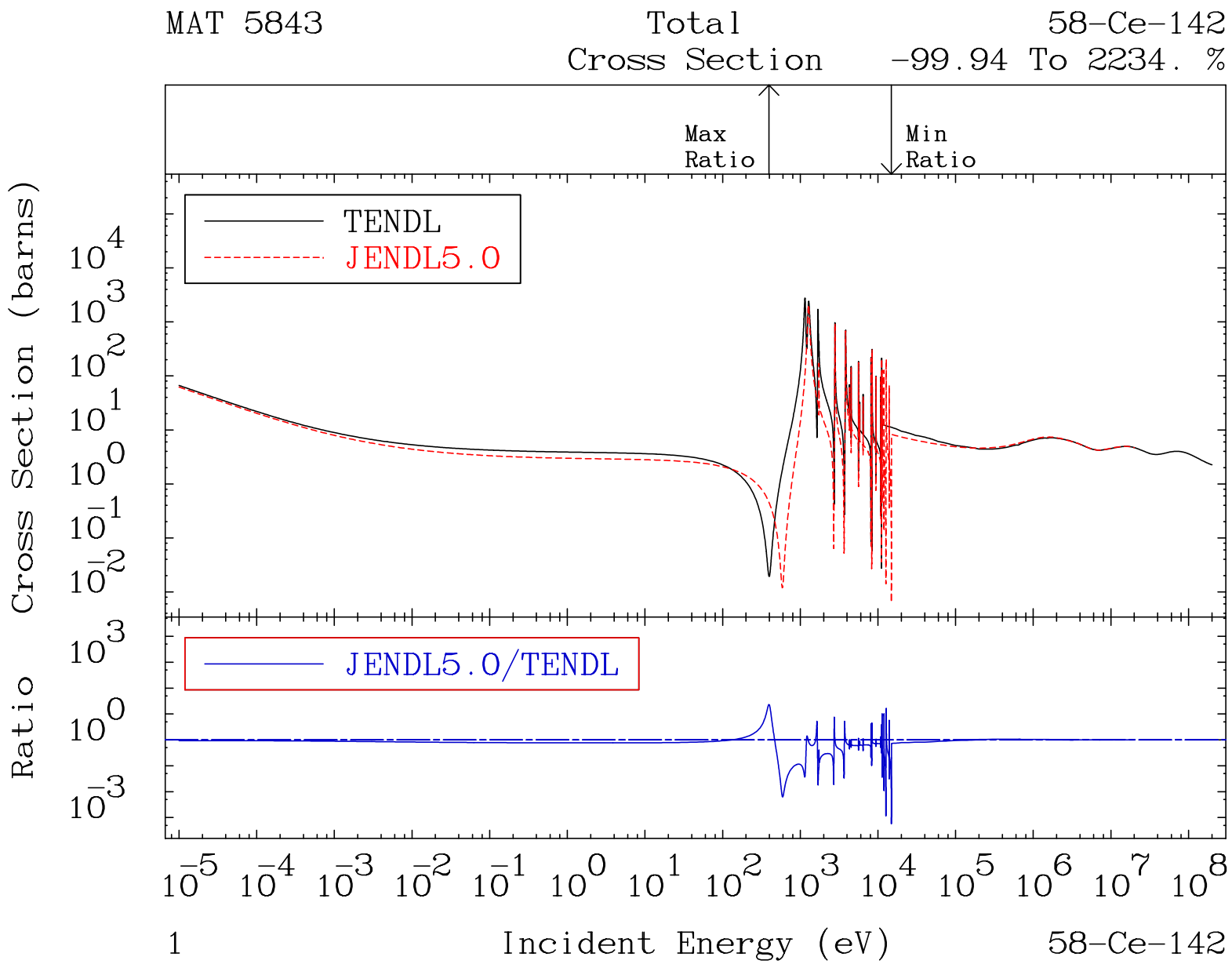
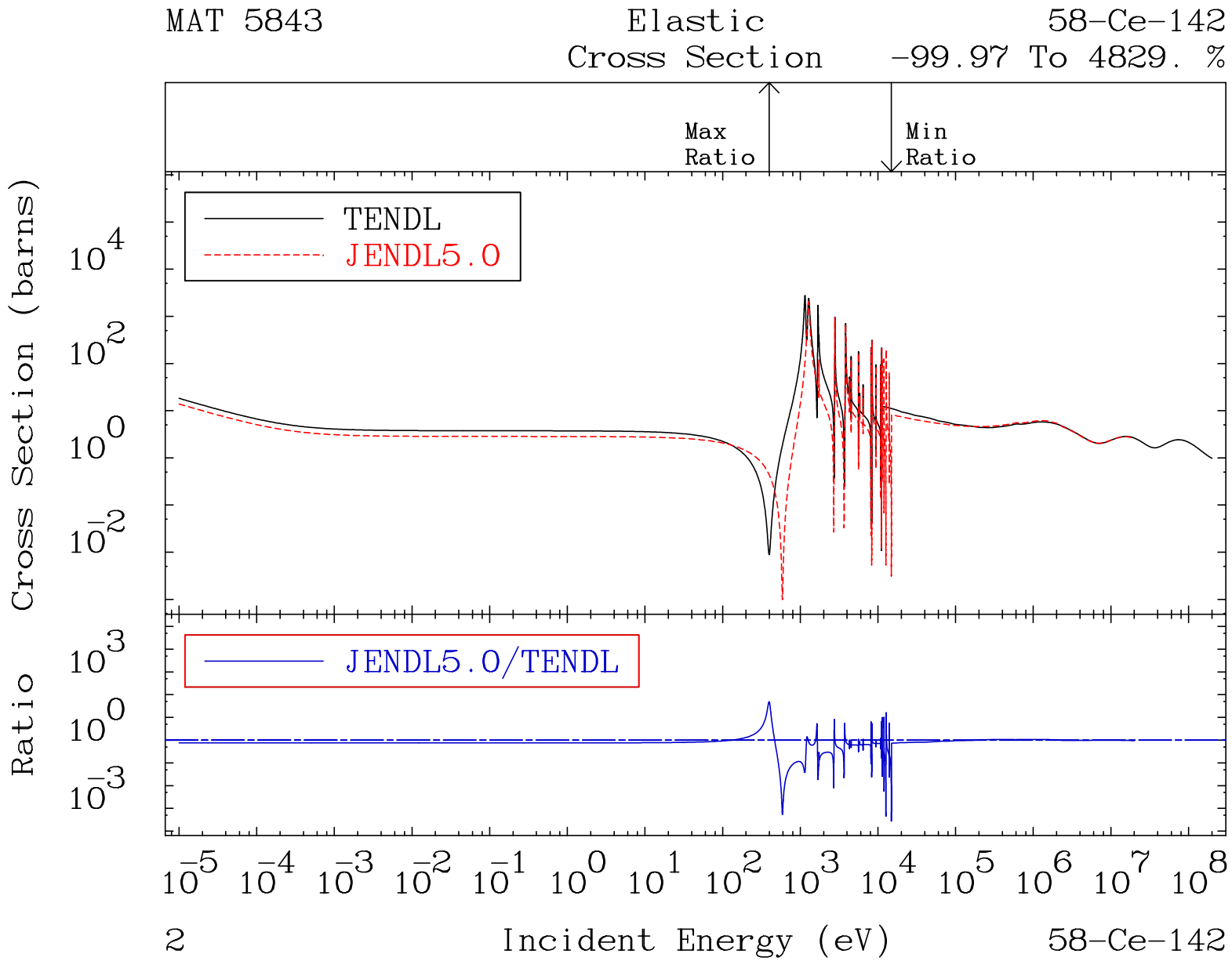
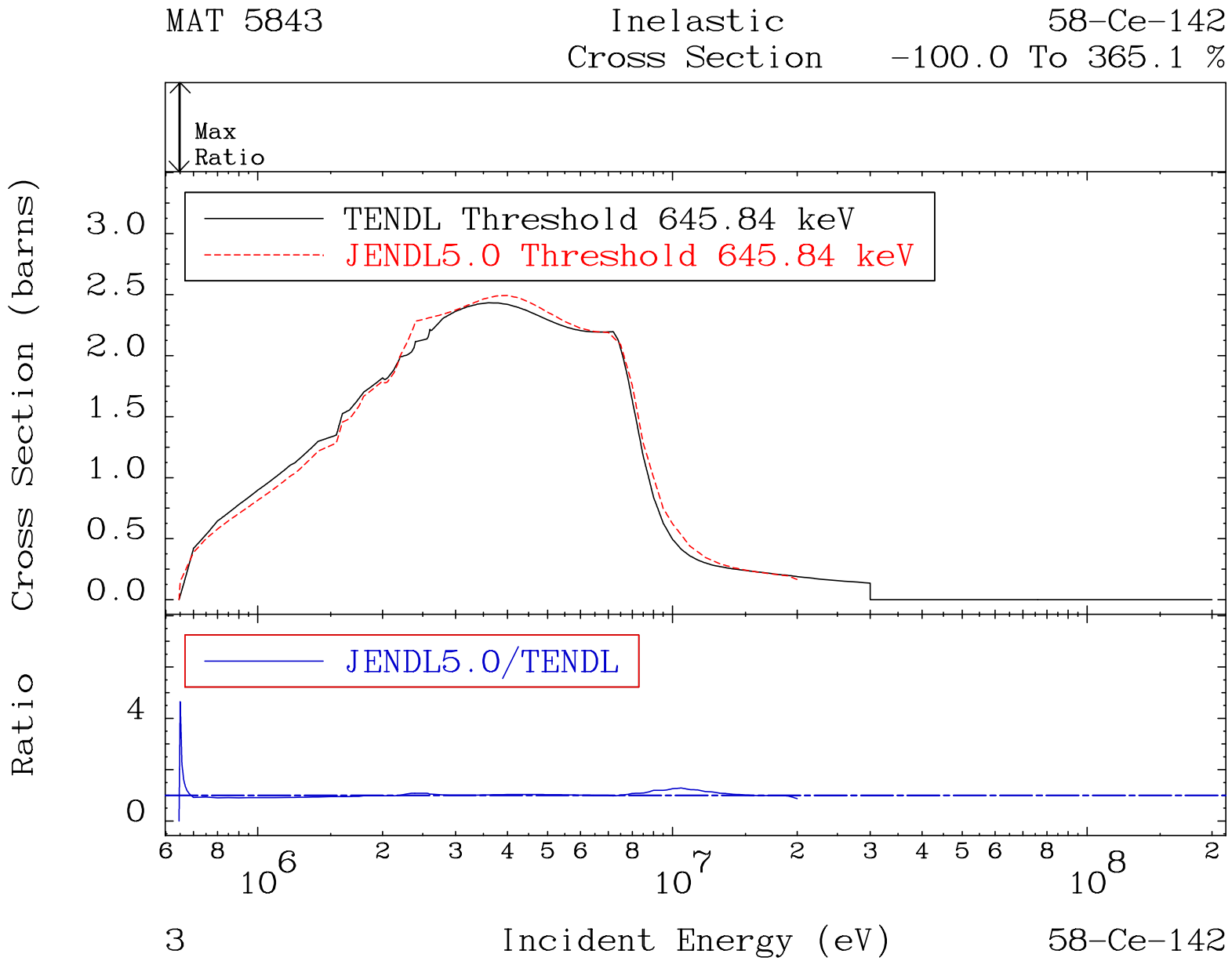
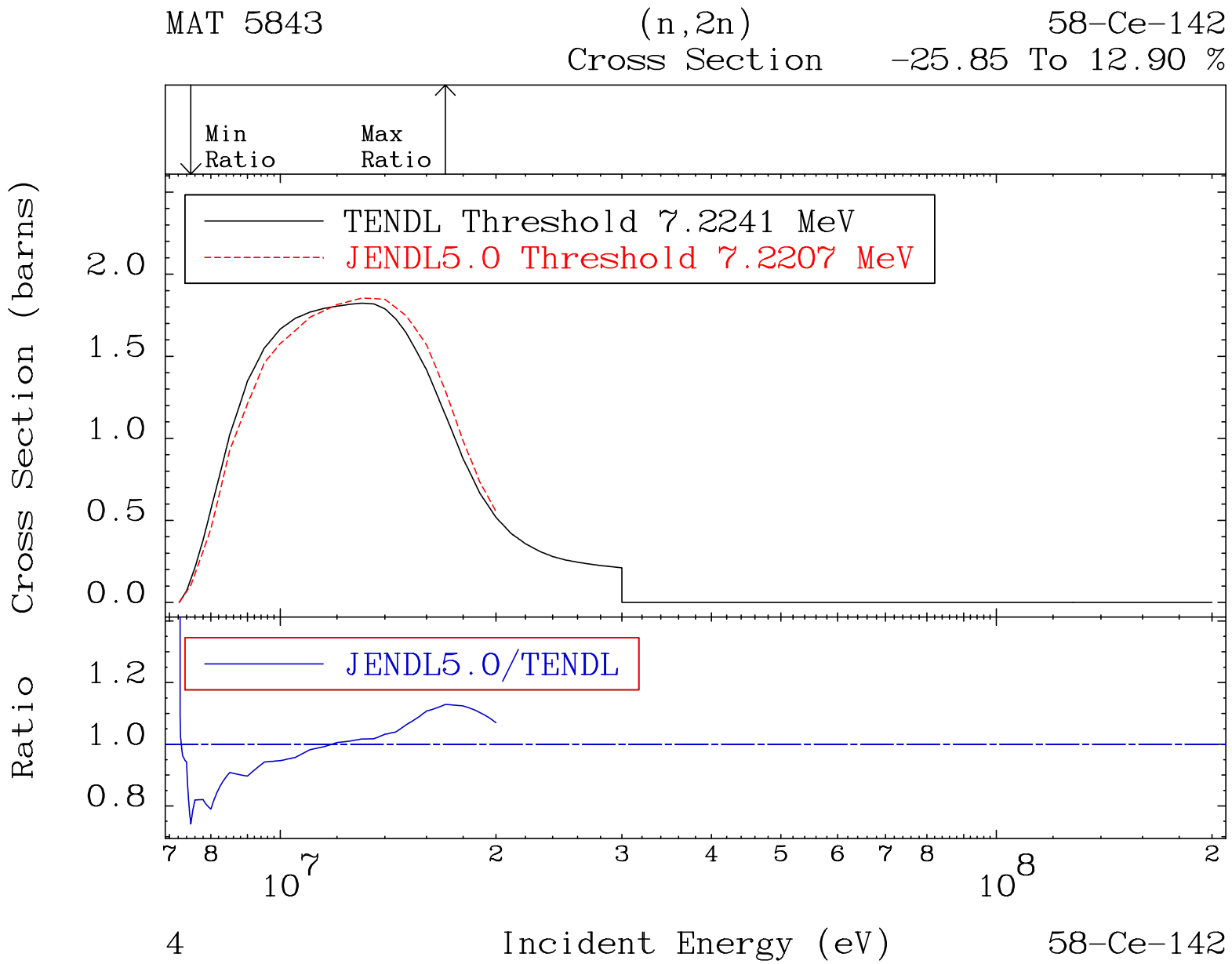
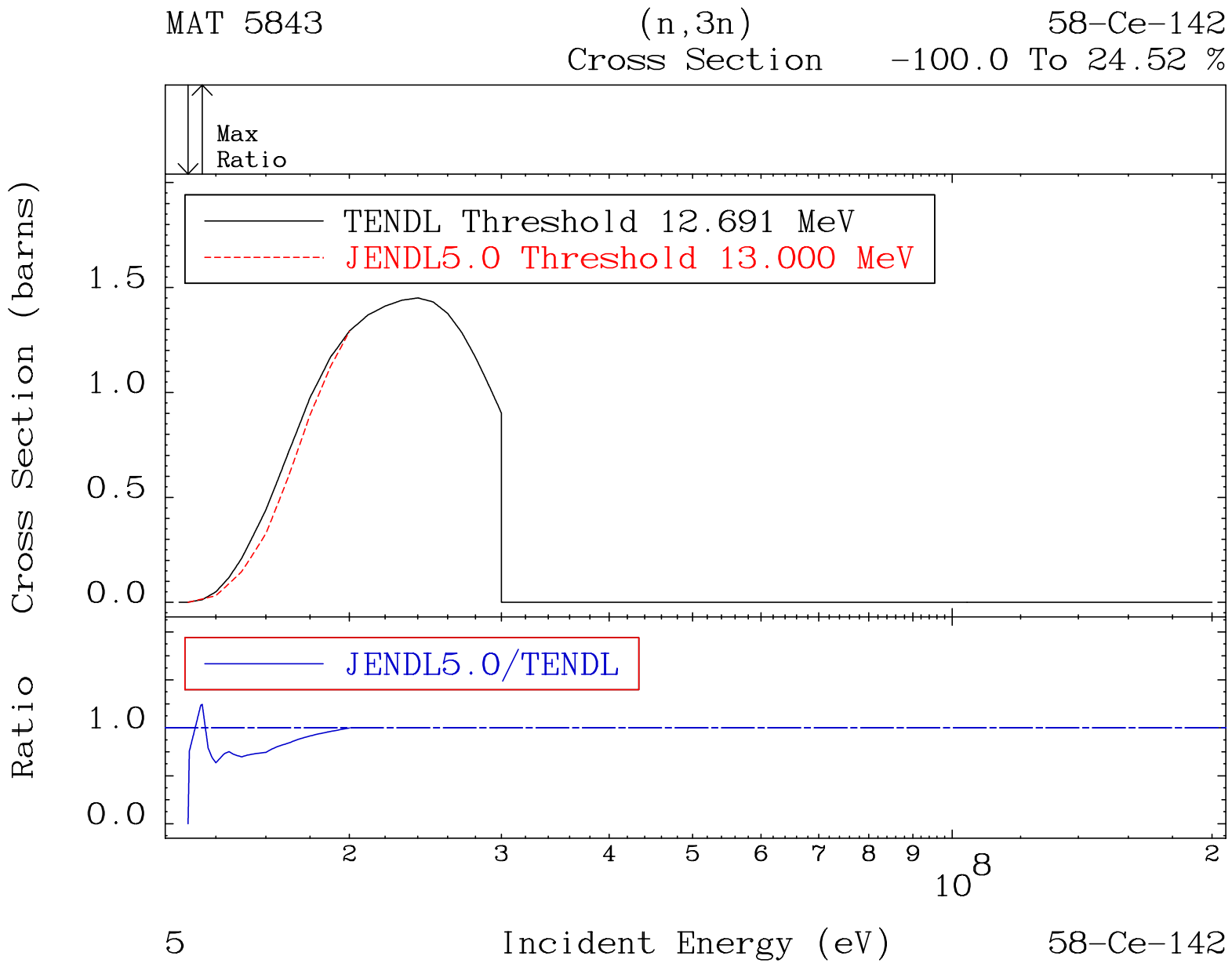
Press Mouse Button to Start

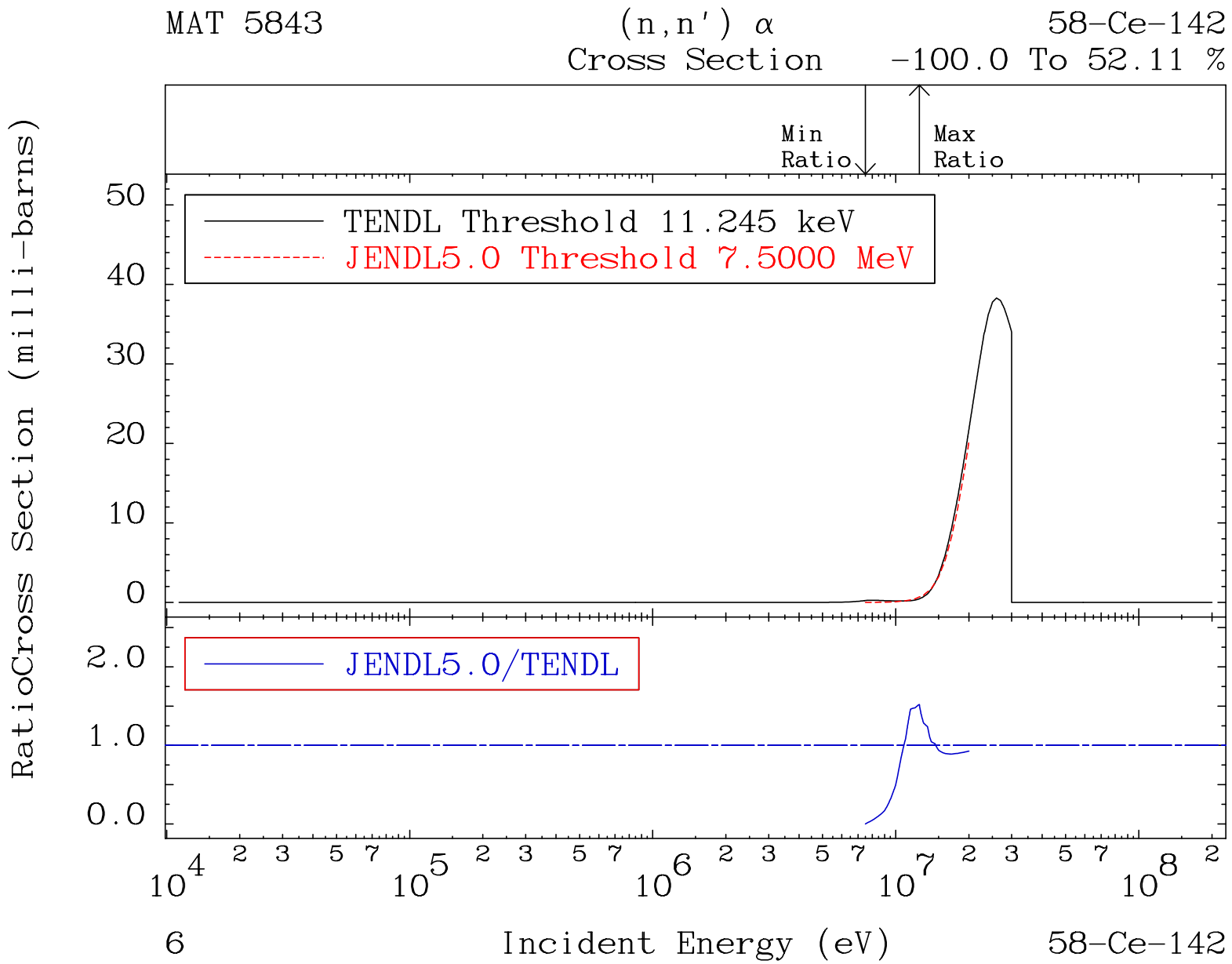

MAT 5843
Total
Cross Section
58-Ce-142
-99.94 To 2234. %
Max
Ratio
Min
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
58-Ce-142

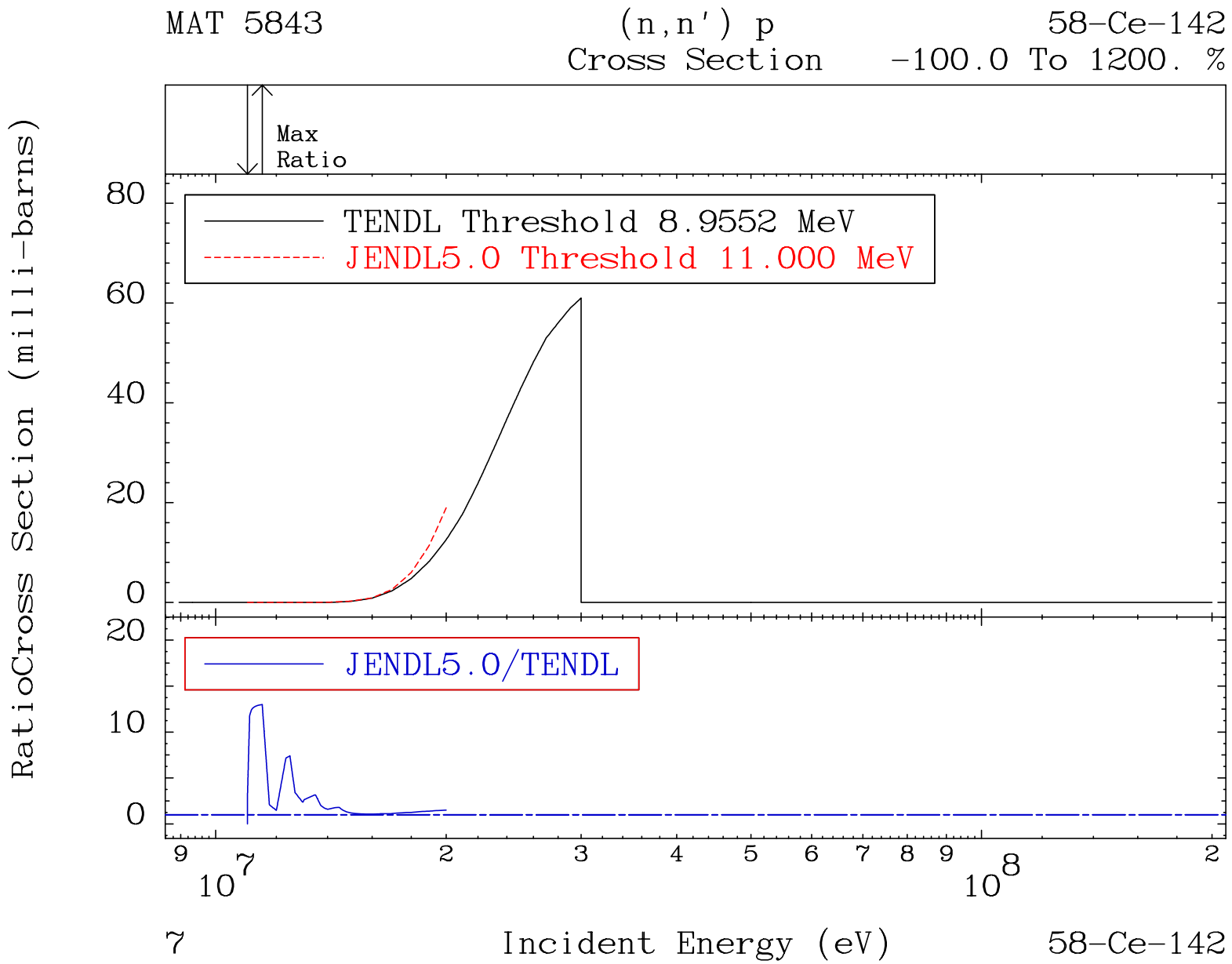

MAT 5843
Elastic
Cross Section
58-Ce-142
-99.97 To 4829. %
Max
Ratio
Min
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
58-Ce-142

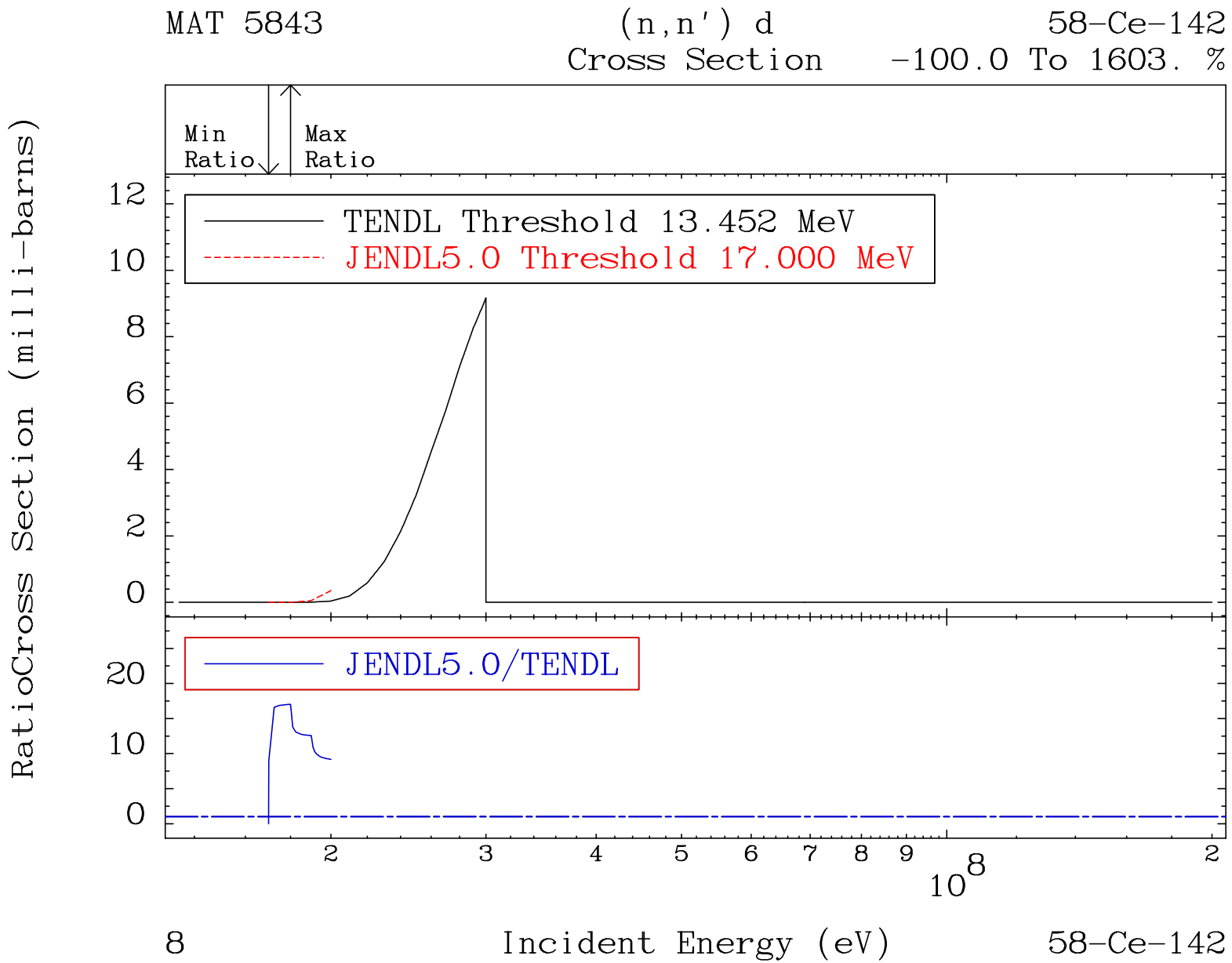

MAT 5843
Inelastic
Cross Section
58-Ce-142
-100.0 To 365.1 %
Max
Ratio
TENDL Threshold 645.84 keV
JENDL5.0 Threshold 645.84 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4
0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
3
58-Ce-142

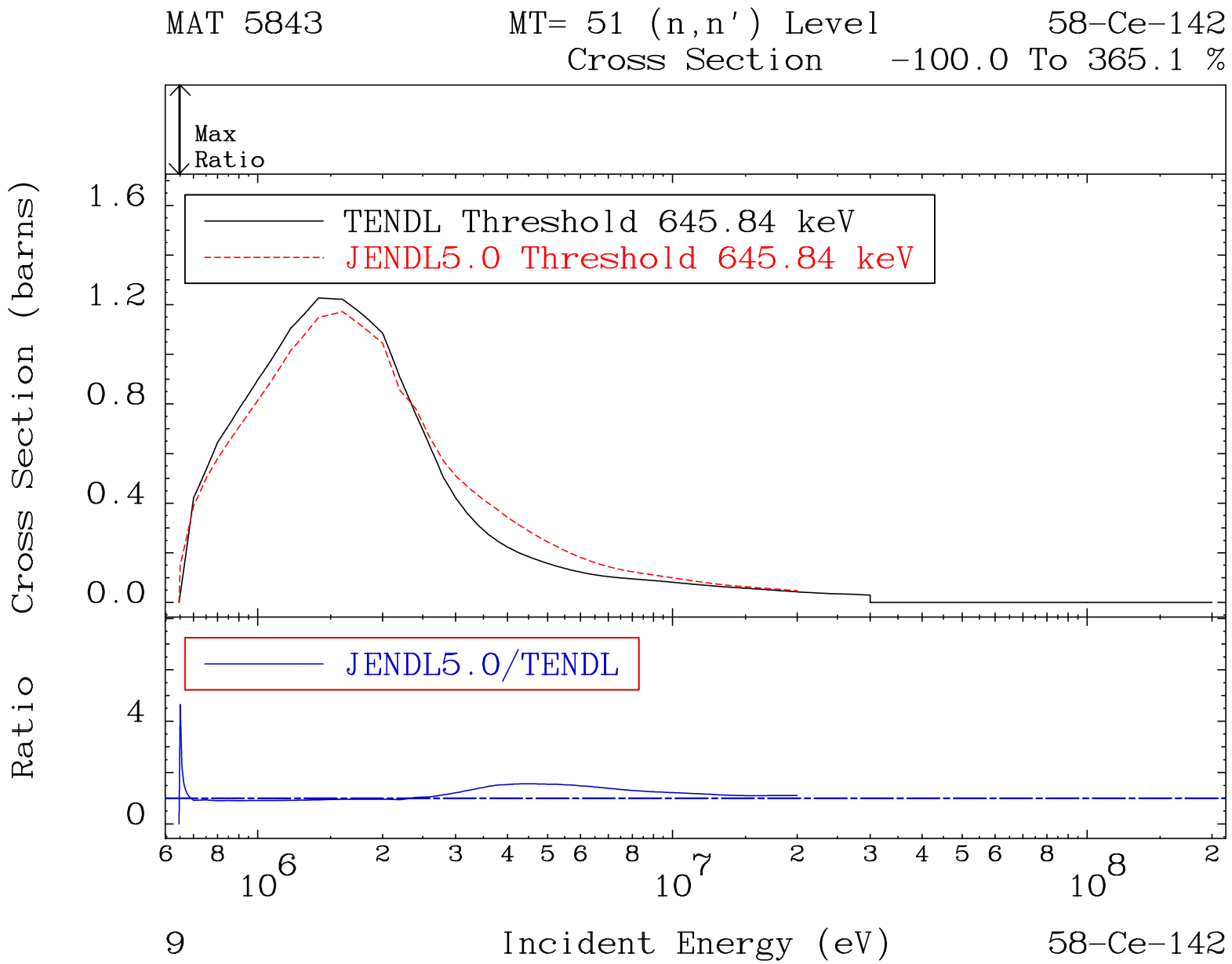

MAT 5843
(n,2n)
Cross Section
58-Ce-142
-25.85 To 12.90 %
Min Ratio
Max Ratio
TENDL Threshold 7.2241 MeV
JENDL5.0 Threshold 7.2207 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
1.2
1.0
0.8
7 8 10^7 2 3 4 5 6 7 8 10^8 2
4
Incident Energy (eV)
58-Ce-142

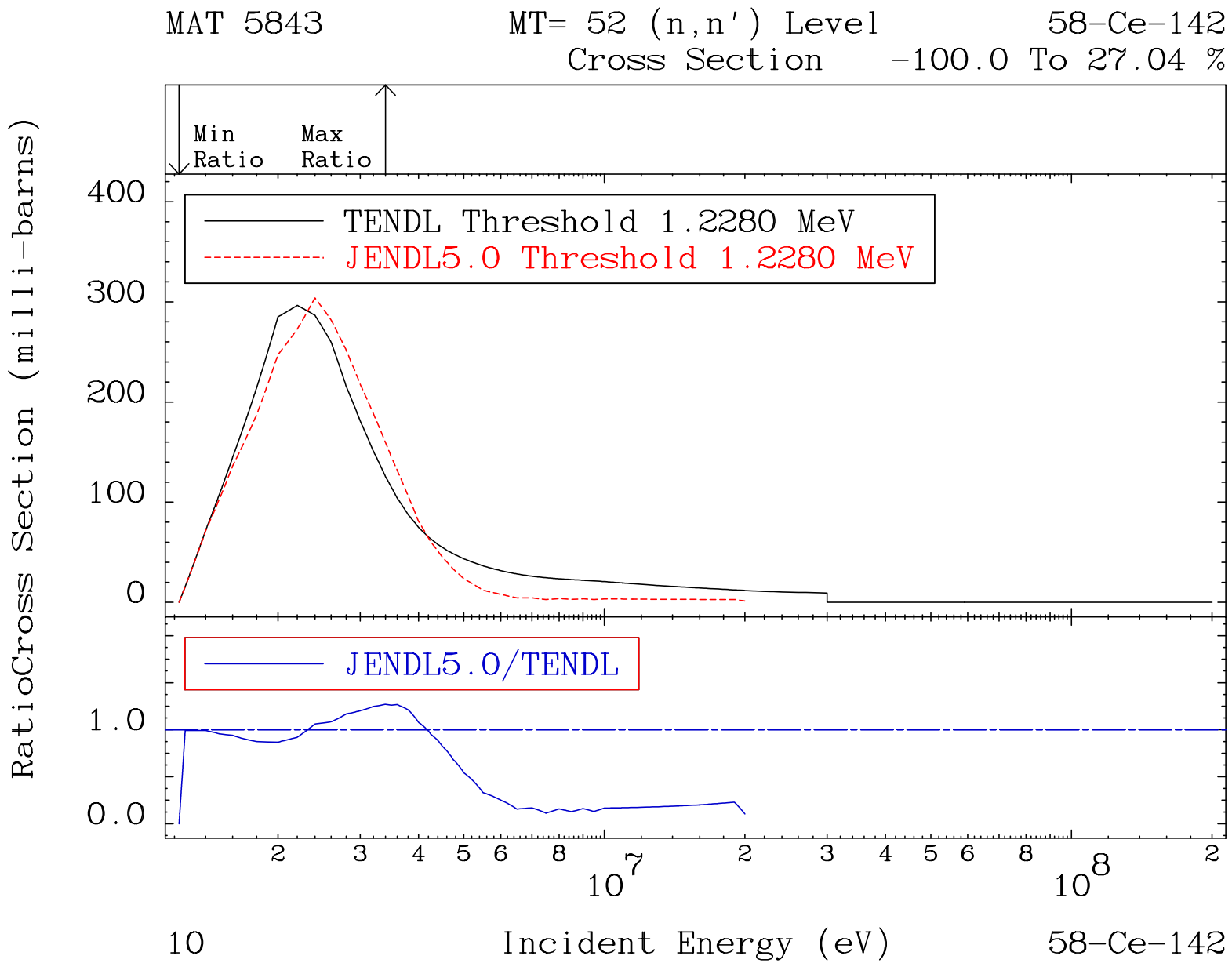

MAT 5843
(n,3n)
Cross Section
58-Ce-142
-100.0 To 24.52 %
Max
Ratio
TENDL Threshold 12.691 MeV
JENDL5.0 Threshold 13.000 MeV
Cross Section (barns)
1.5
1.0
0.5
0.0
JENDL5.0/TENDL
Ratio
1.0
0.0
2
3
4
5
6
7
8
9
2
10^8
5
Incident Energy (eV)
58-Ce-142

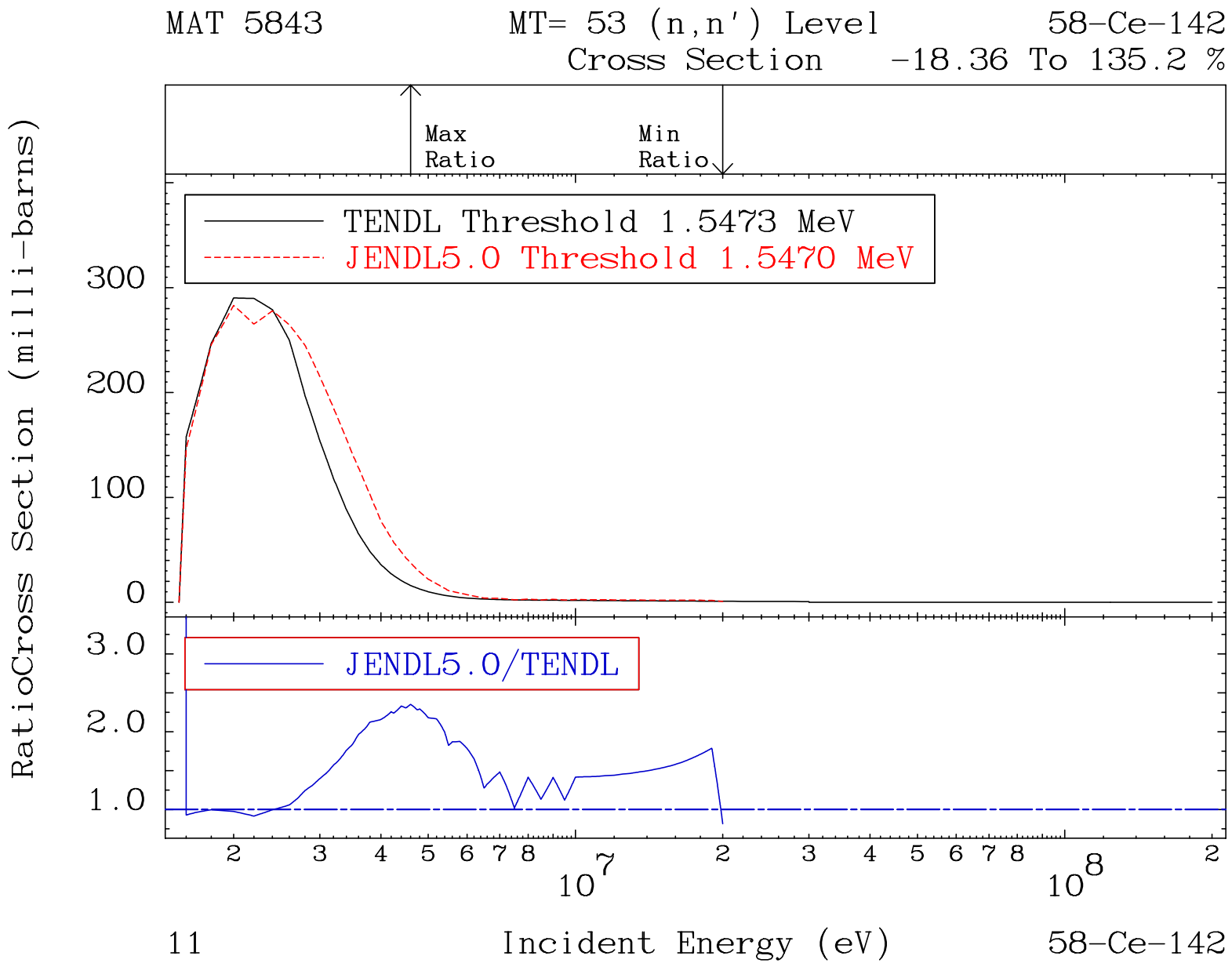

MAT 5843
(n,n') α
Cross Section
58-Ce-142
-100.0 To 52.11 %
Min Ratio
Max Ratio
TENDL Threshold 11.245 keV
JENDL5.0 Threshold 7.5000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
2.0
1.0
0.0
10^4 2 3 5 7 10^5 2 3 5 7 10^6 2 3 5 7 10^7 2 3 5 7 10^8 2
6
Incident Energy (eV)
58-Ce-142

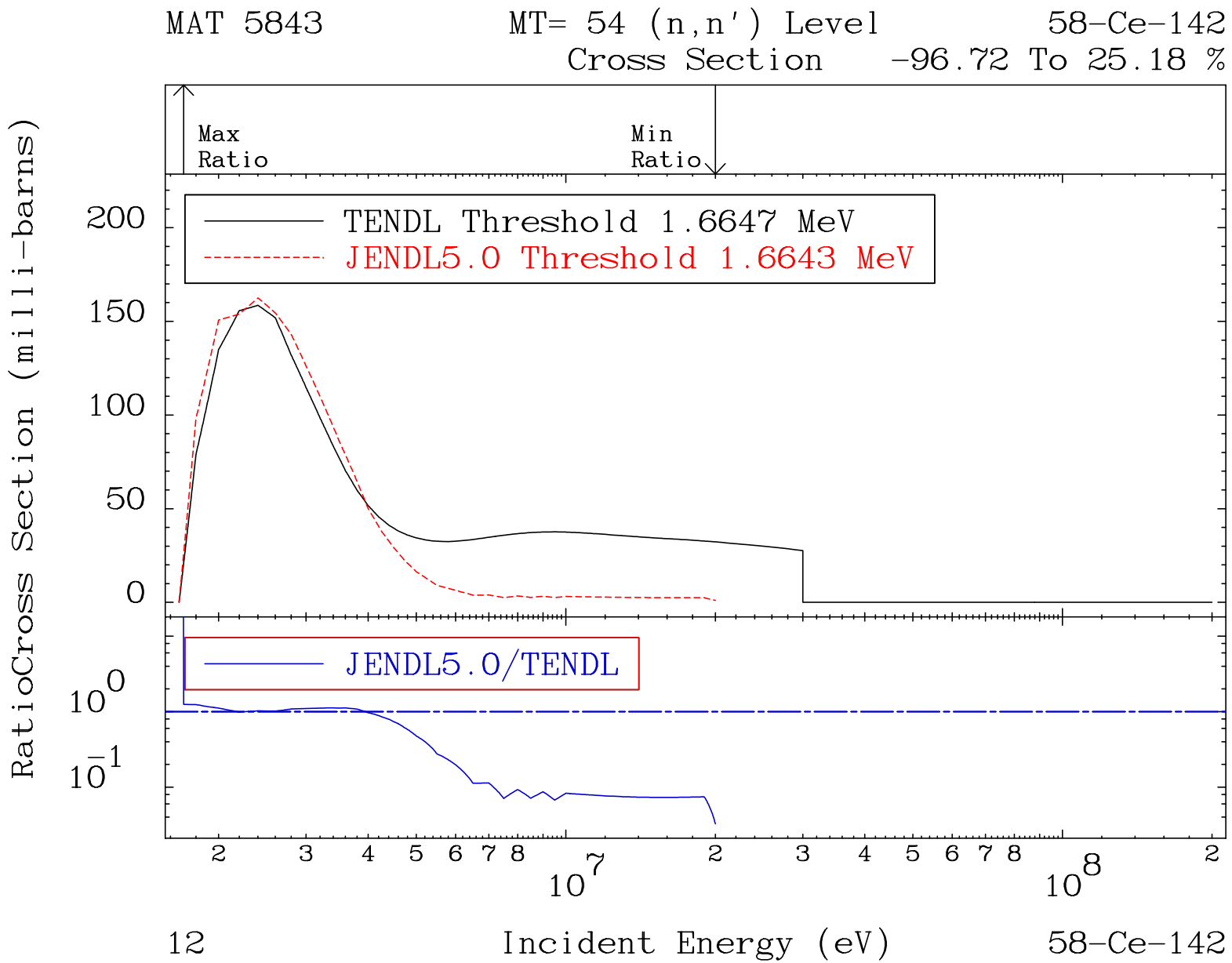

MAT 5843
(n,n') p
Cross Section
58-Ce-142
-100.0 To 1200. %
Max
Ratio
TENDL Threshold 8.9552 MeV
JENDL5.0 Threshold 11.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
20
10
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
58-Ce-142

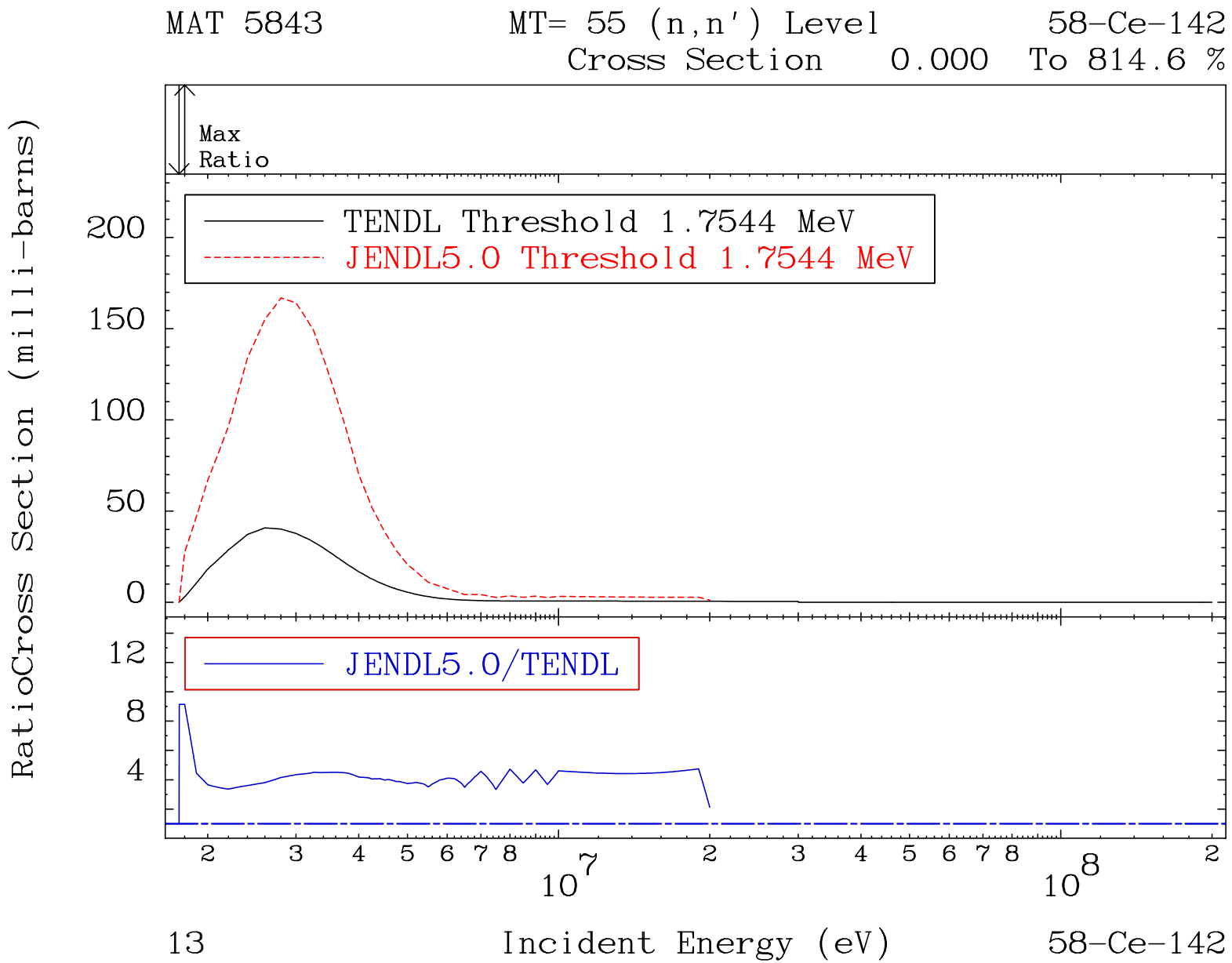

MAT 5843
(n,n') d
Cross Section
58-Ce-142
-100.0 To 1603. %
Min Ratio
Max Ratio
TENDL Threshold 13.452 MeV
JENDL5.0 Threshold 17.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
12
10
8
6
4
2
0
20
10
0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
58-Ce-142

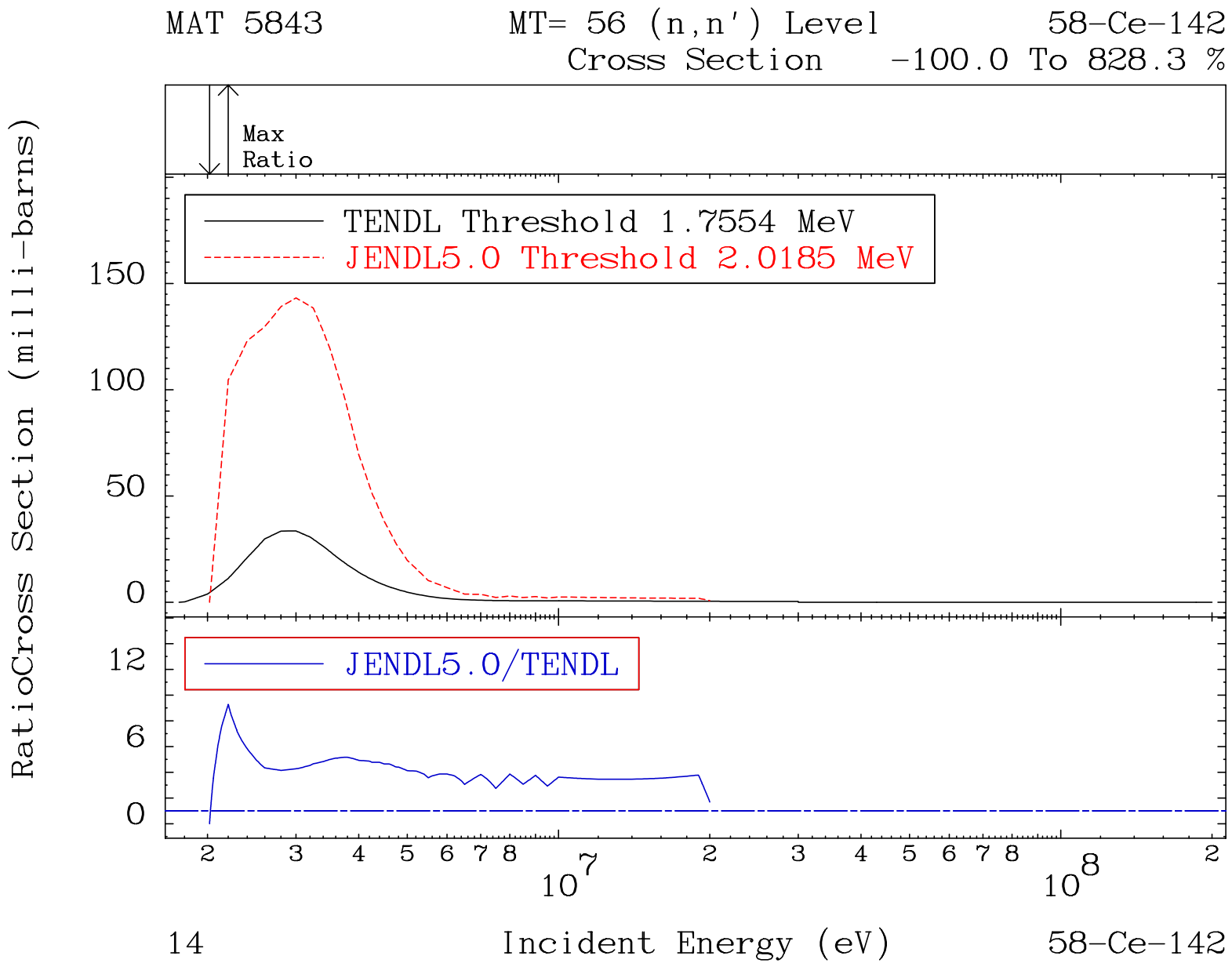

MAT 5843
MT= 51 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 365.1 %
Max
Ratio
TENDL Threshold 645.84 keV
JENDL5.0 Threshold 645.84 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.6
1.2
0.8
0.4
0.0
4
0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
9
58-Ce-142

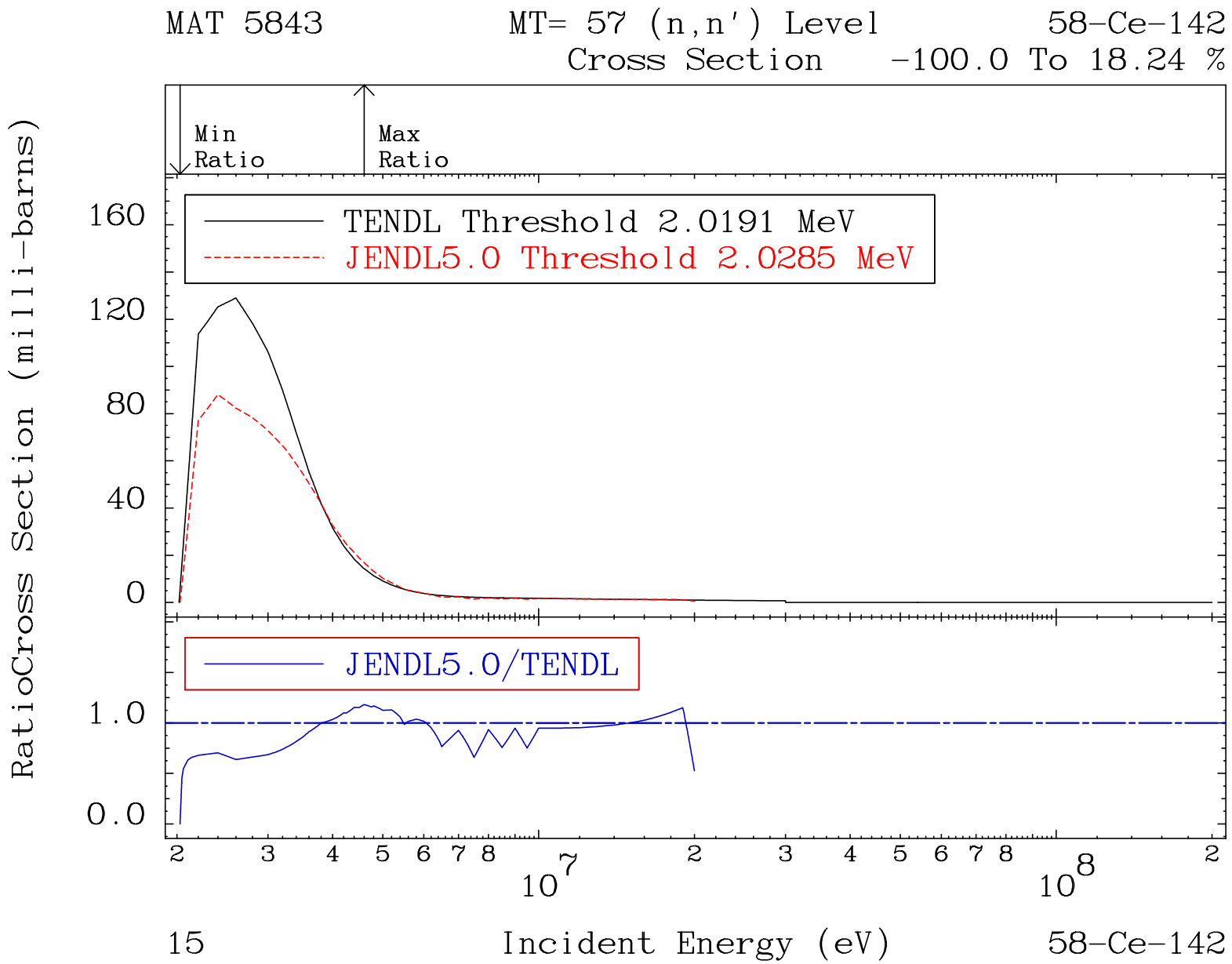

MAT 5843
MT= 52 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 27.04 %
Min Ratio
Max Ratio
TENDL Threshold 1.2280 MeV
JENDL5.0 Threshold 1.2280 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
1.0
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
10
Incident Energy (eV)
58-Ce-142

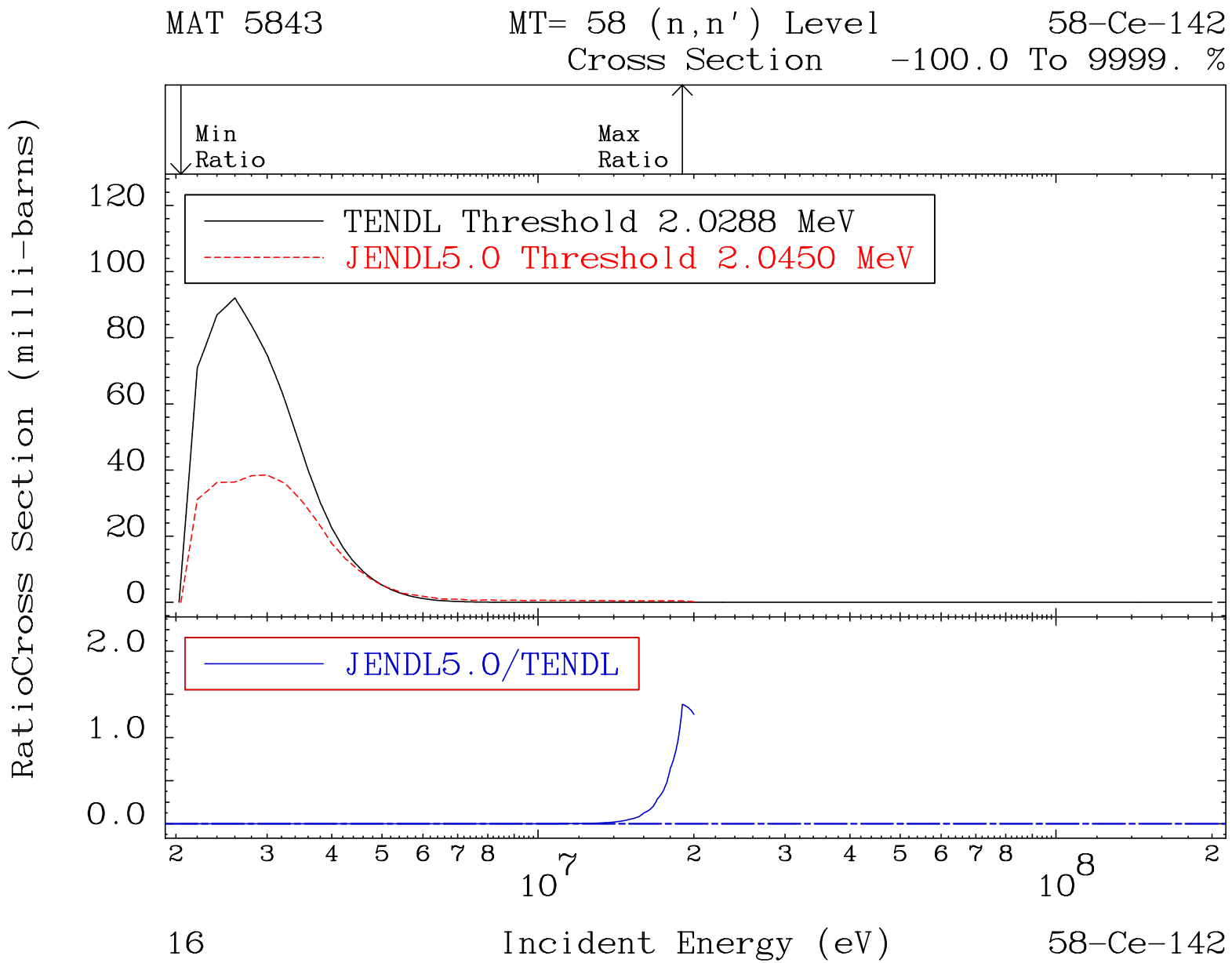

MAT 5843
MT= 53 (n,n') Level
58-Ce-142
Cross Section
-18.36 To 135.2 %
Max Ratio
Min Ratio
TENDL Threshold 1.5473 MeV
JENDL5.0 Threshold 1.5470 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
3.0
2.0
1.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
11
Incident Energy (eV)
58-Ce-142

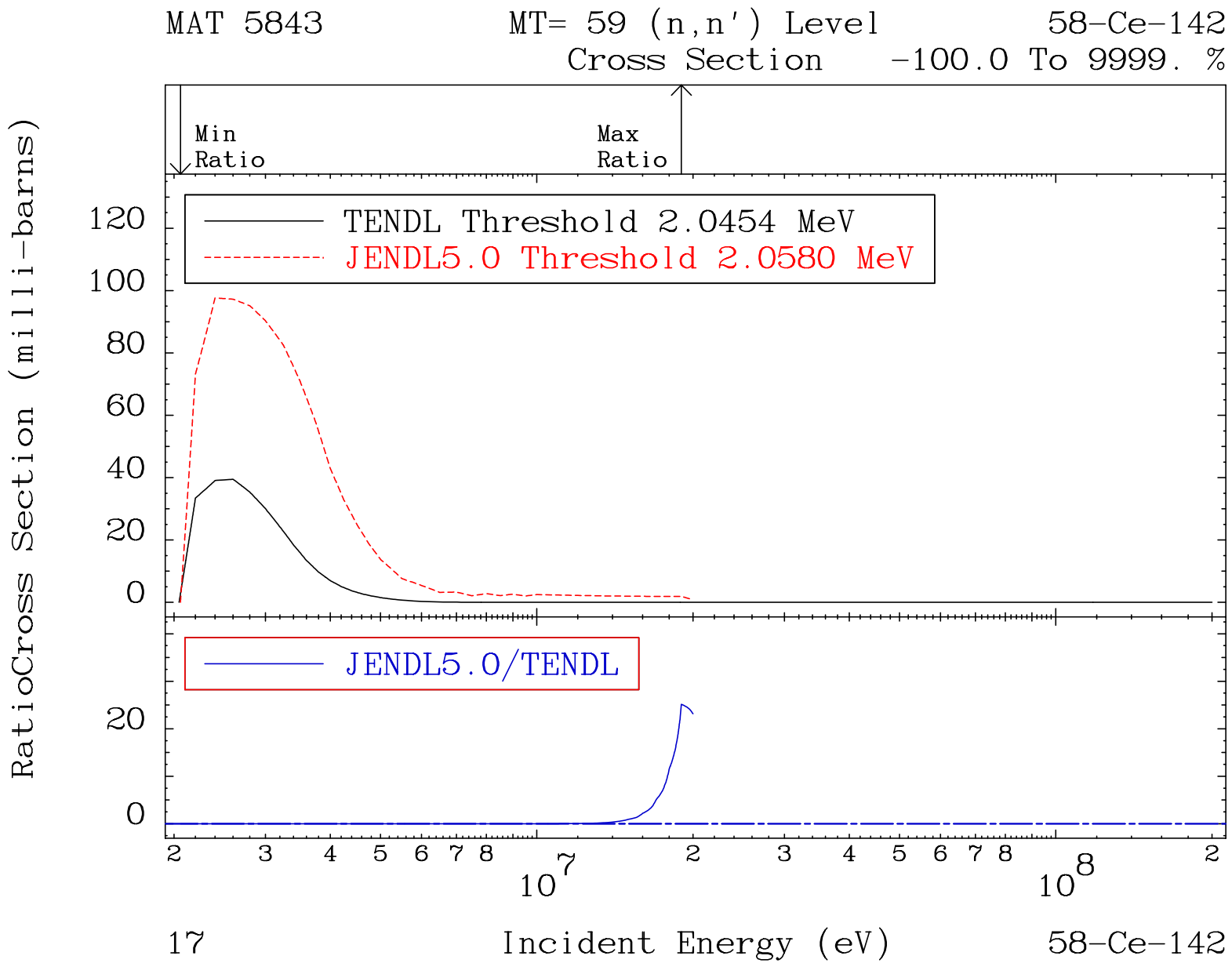

MAT 5843
MT= 54 (n,n') Level
58-Ce-142
Cross Section
-96.72 To 25.18 %
Max Ratio
Min Ratio
TENDL Threshold 1.6647 MeV
JENDL5.0 Threshold 1.6643 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
10^0
10^{-1}
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
12
Incident Energy (eV)
58-Ce-142

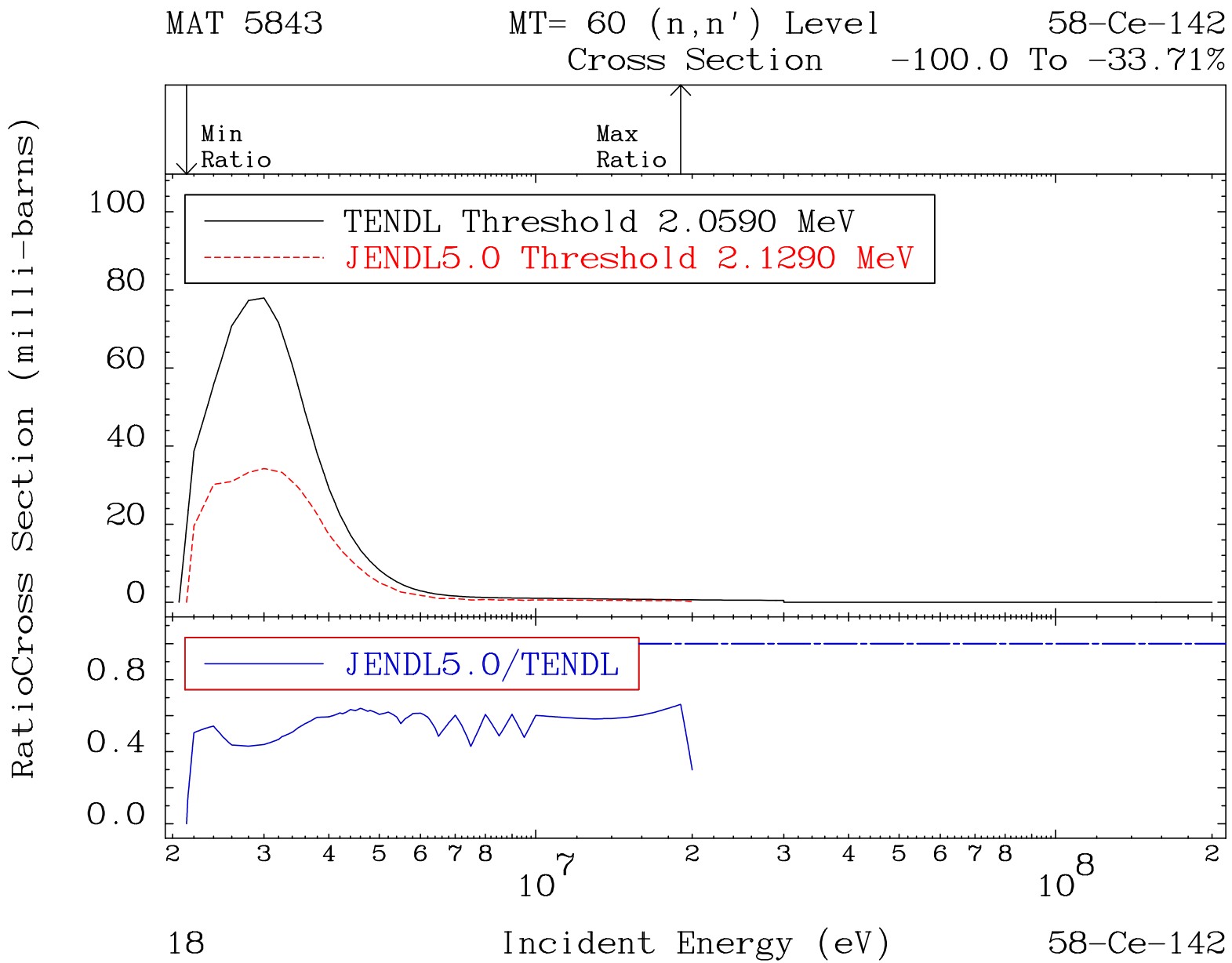

MAT 5843
MT= 55 (n,n') Level
58-Ce-142
Cross Section 0.000 To 814.6 %
Max
Ratio
TENDL Threshold 1.7544 MeV
JENDL5.0 Threshold 1.7544 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
12
8
4
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
58-Ce-142

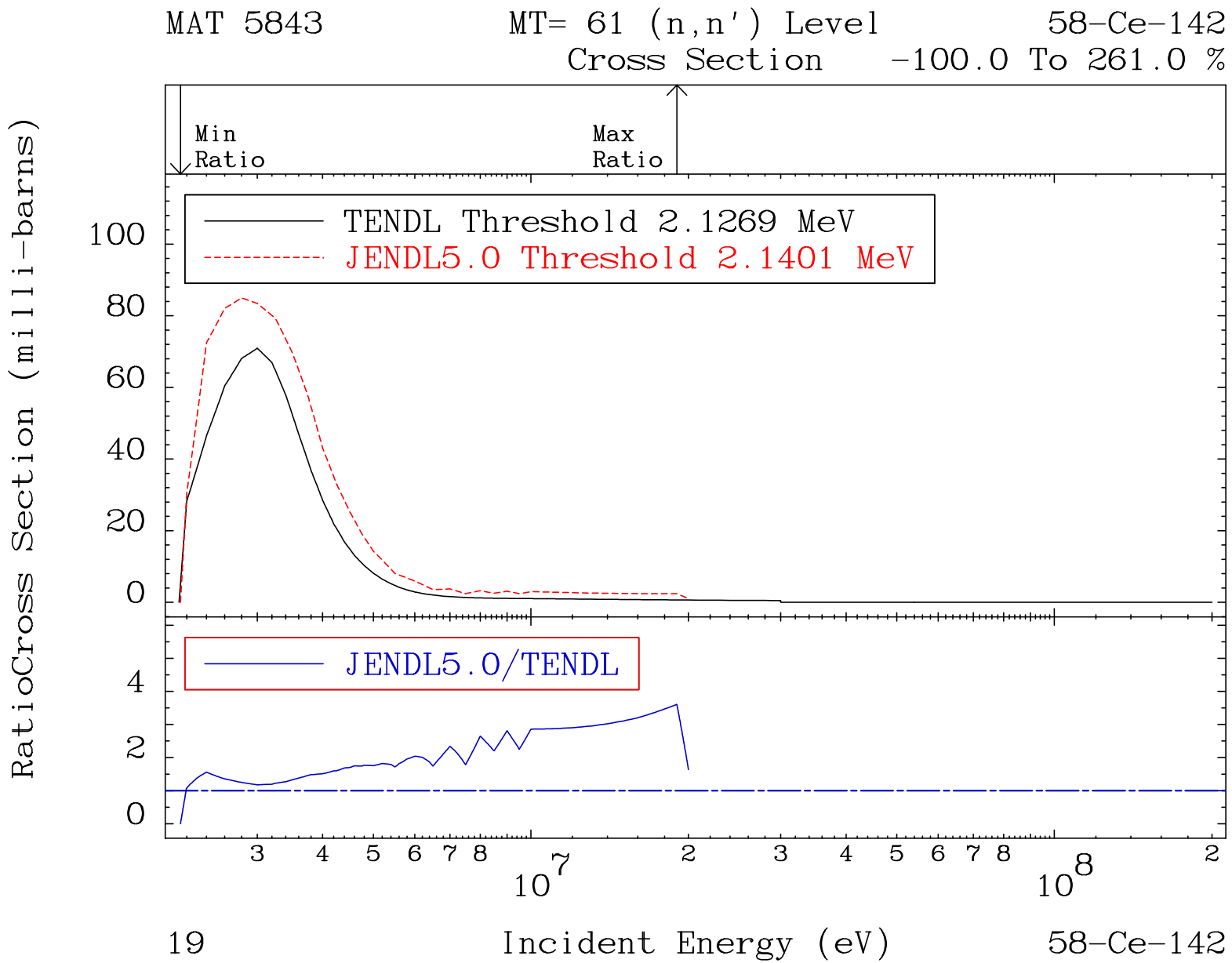

MAT 5843
MT= 56 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 828.3 %
Max
Ratio
TENDL Threshold 1.7554 MeV
JENDL5.0 Threshold 2.0185 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
150
100
50
0
12
6
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
58-Ce-142

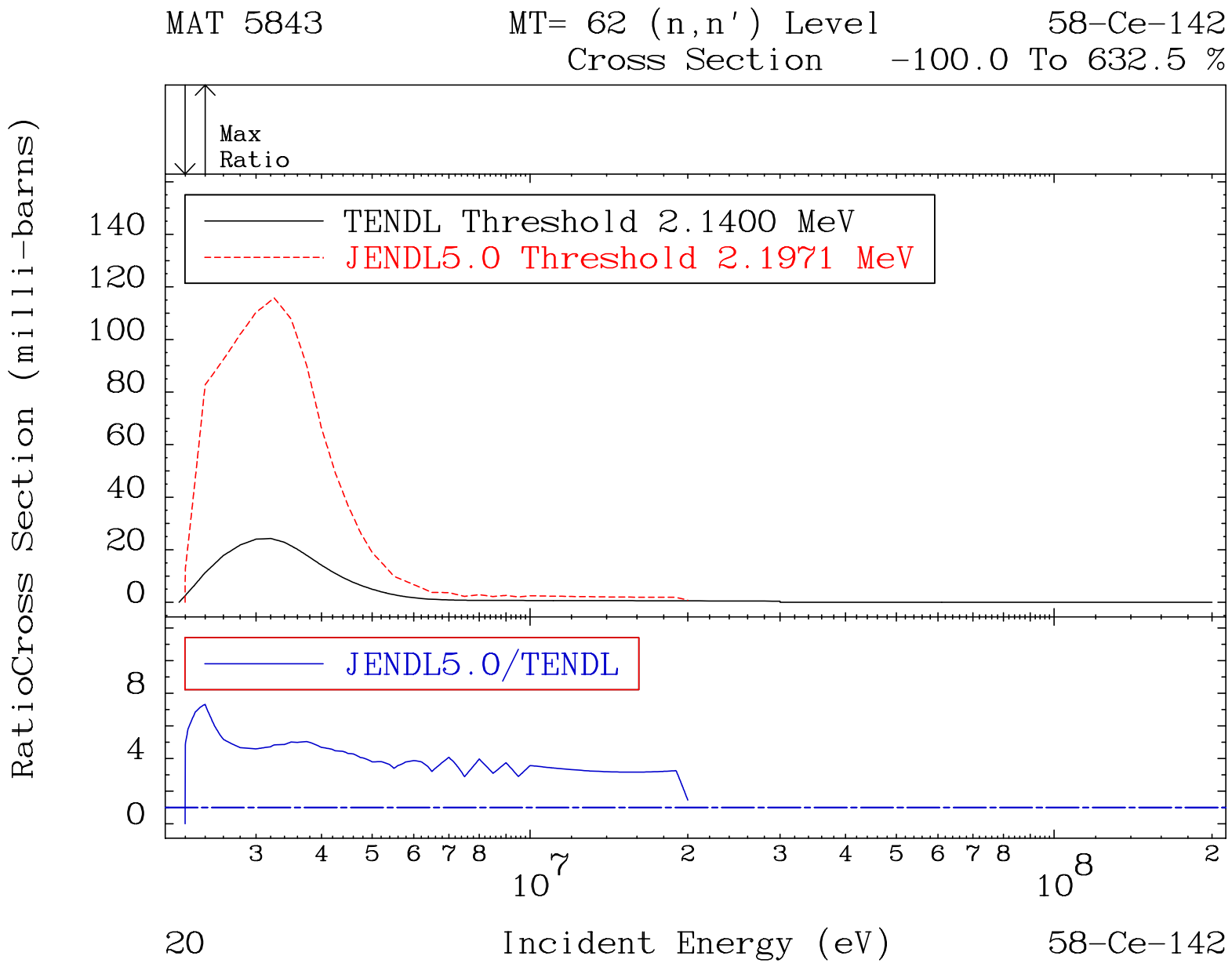

MAT 5843
MT= 57 (n,n') Level
58-Ce-142
Cross Section -100.0 To 18.24 %
Min Ratio
Max Ratio
TENDL Threshold 2.0191 MeV
JENDL5.0 Threshold 2.0285 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.0
0.0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
15
Incident Energy (eV)
58-Ce-142

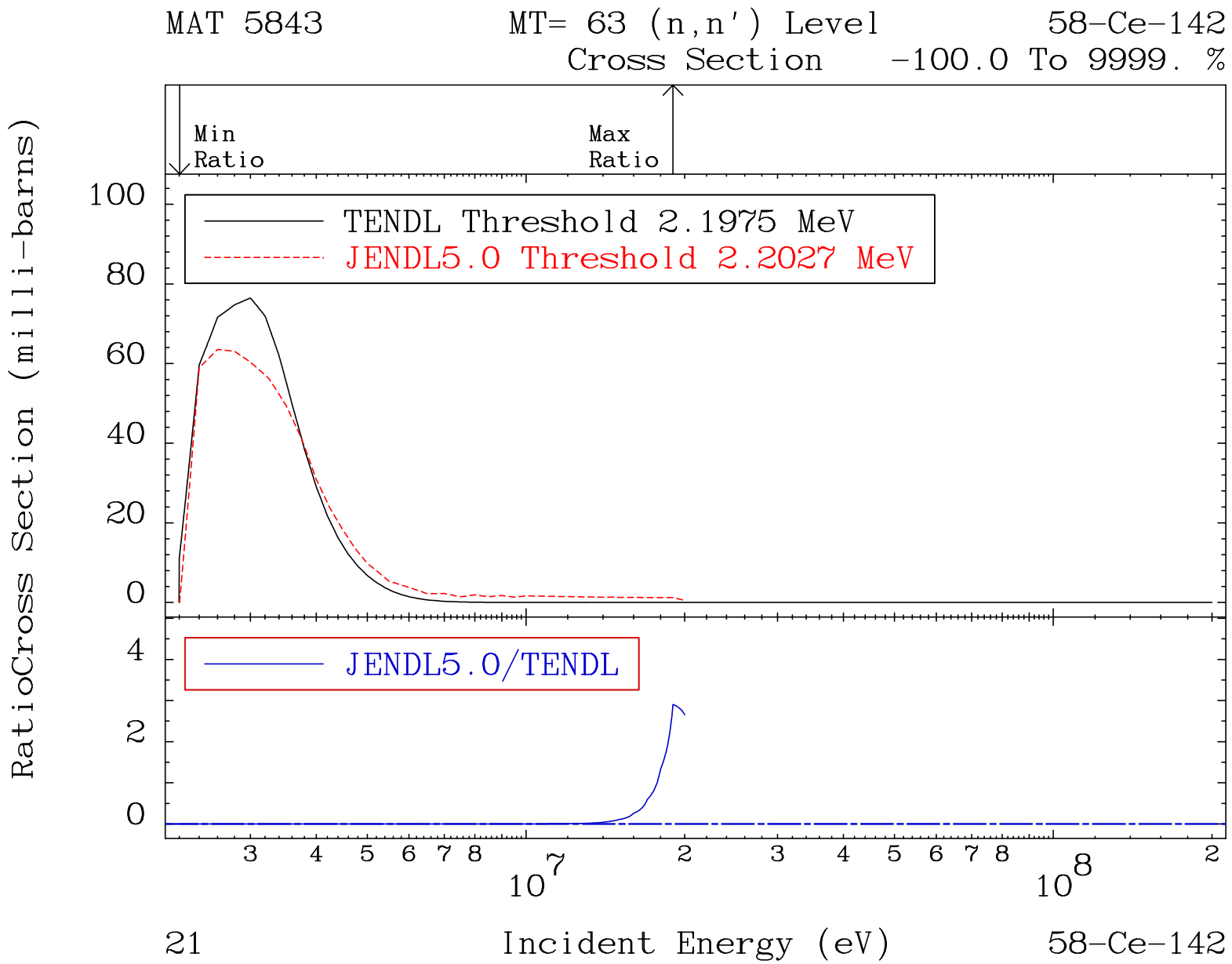

MAT 5843
MT= 58 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.0288 MeV
JENDL5.0 Threshold 2.0450 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
58-Ce-142

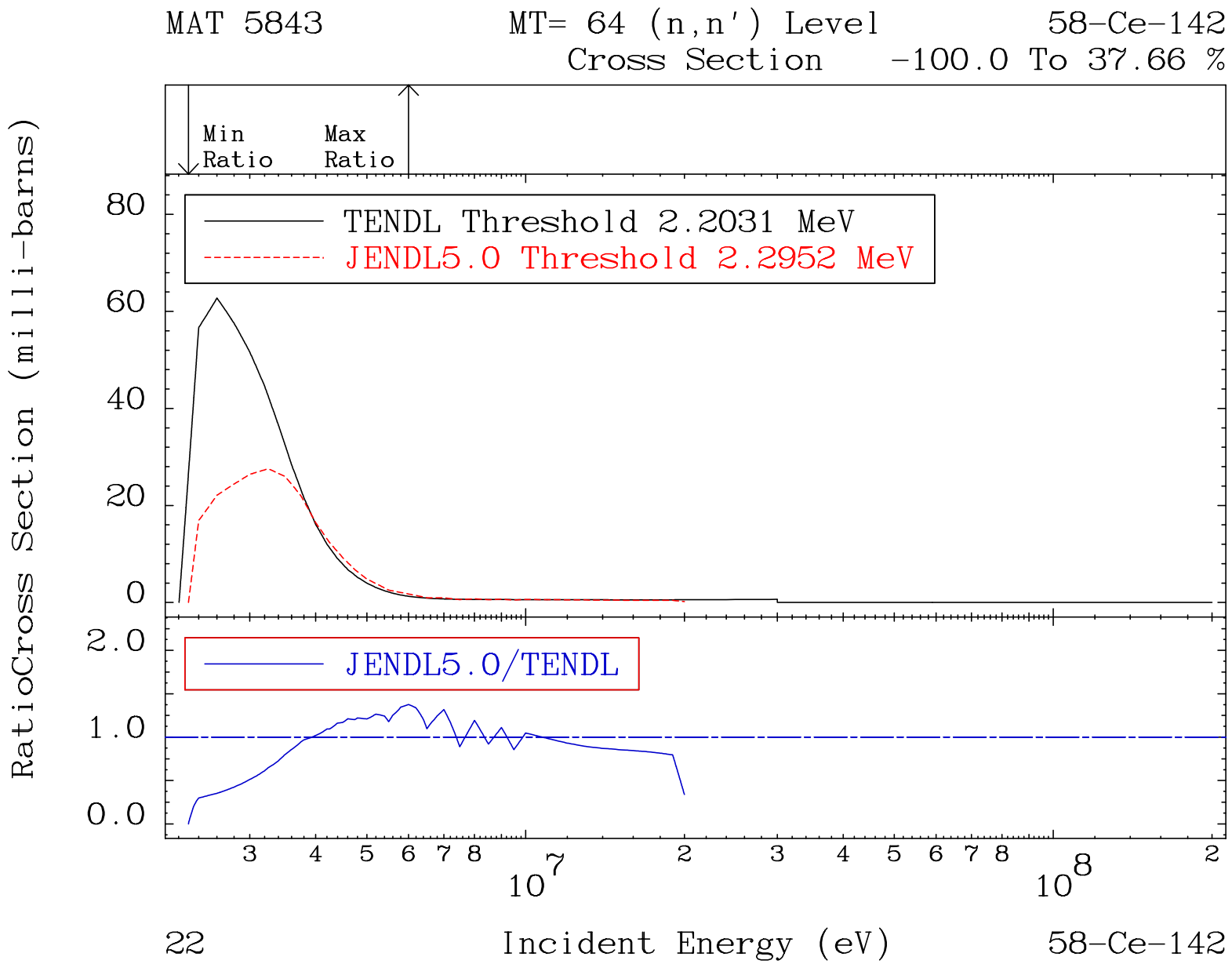

MAT 5843
MT= 59 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.0454 MeV
JENDL5.0 Threshold 2.0580 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
20
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
58-Ce-142

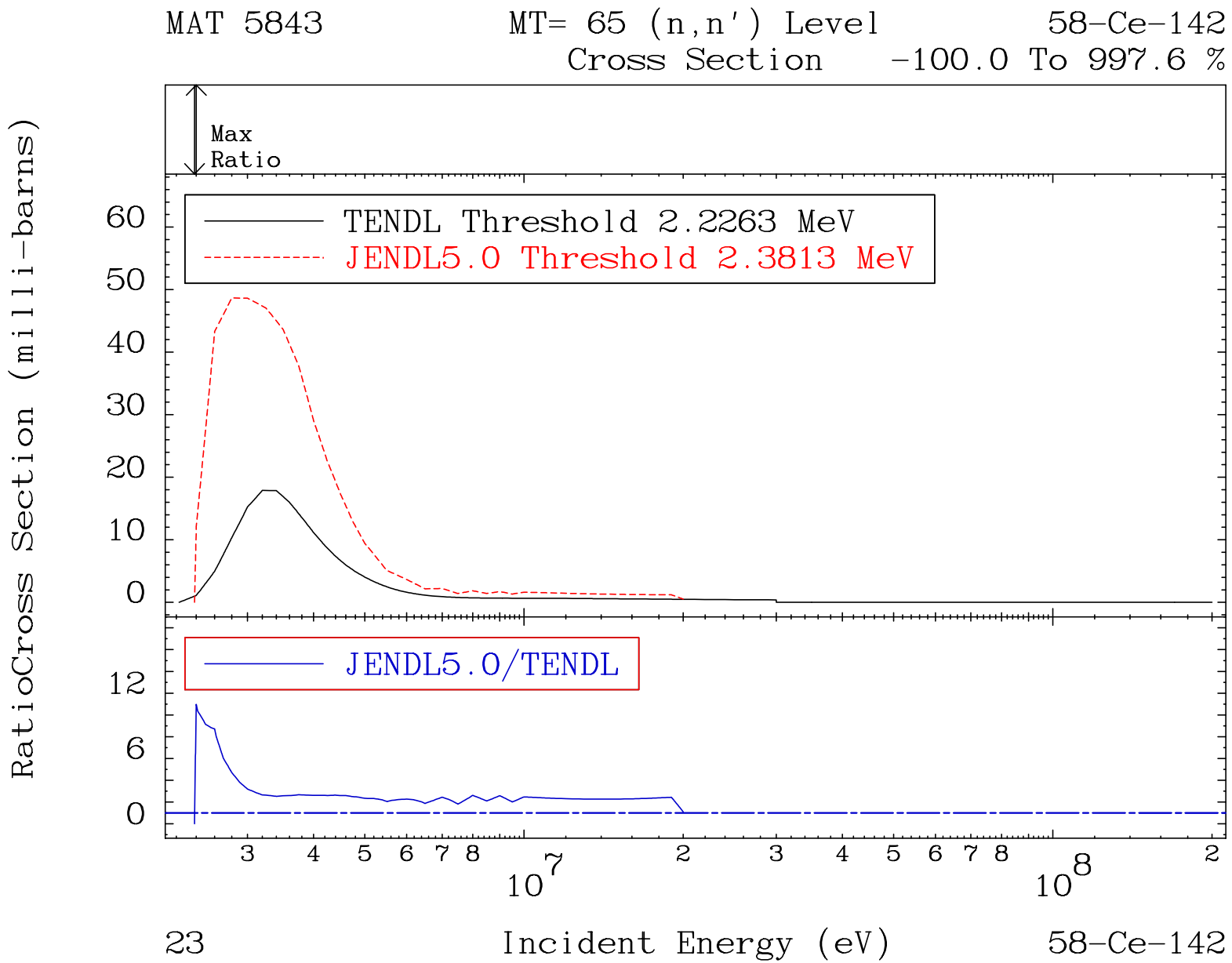

MAT 5843
MT= 60 (n,n') Level
58-Ce-142
Cross Section -100.0 To -33.71%
Min Ratio
Max Ratio
TENDL Threshold 2.0590 MeV
JENDL5.0 Threshold 2.1290 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
0.8
0.4
0.0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
18
Incident Energy (eV)
58-Ce-142

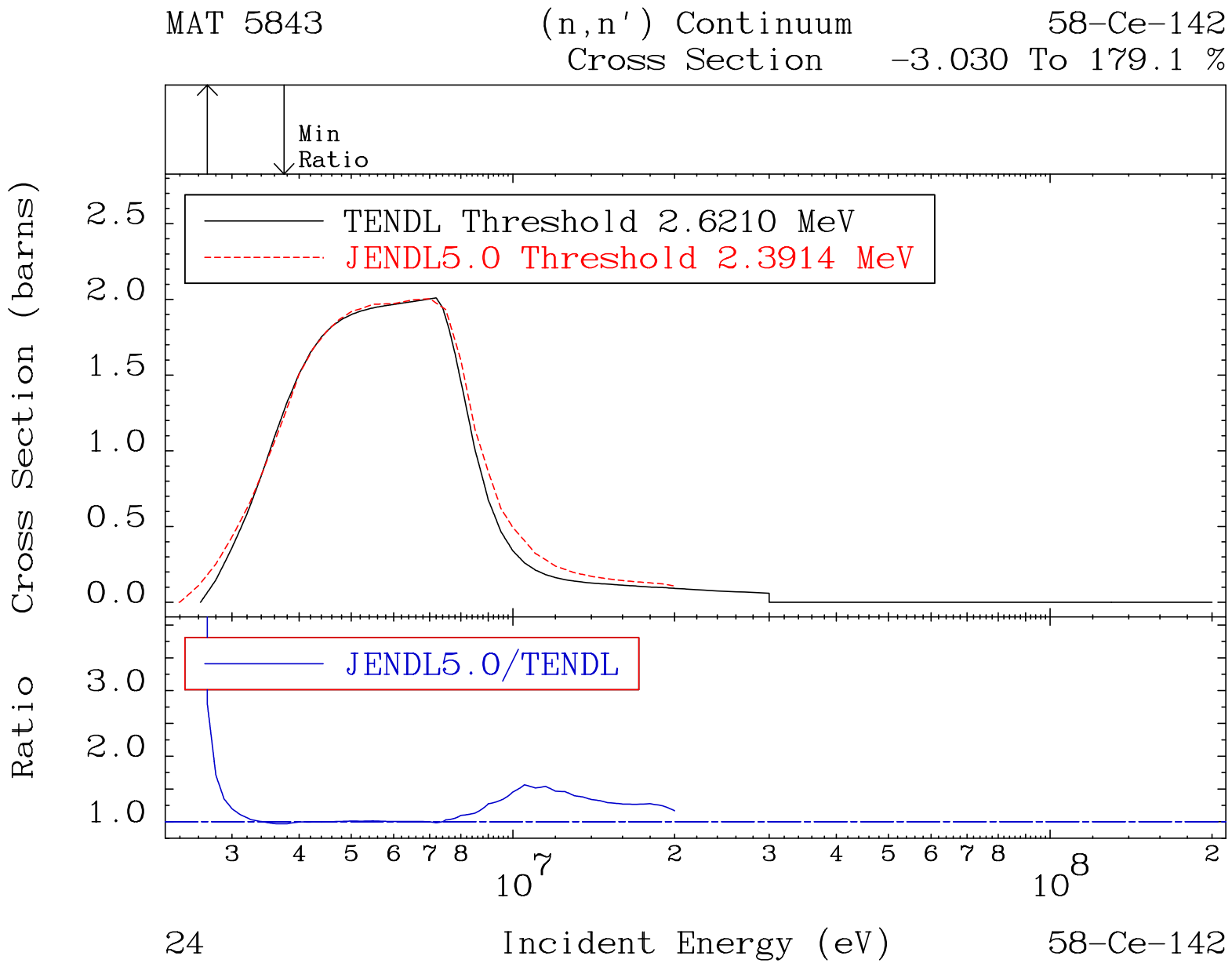

MAT 5843
MT= 61 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 261.0 %
Min Ratio
Max Ratio
TENDL Threshold 2.1269 MeV
JENDL5.0 Threshold 2.1401 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
4
2
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
58-Ce-142

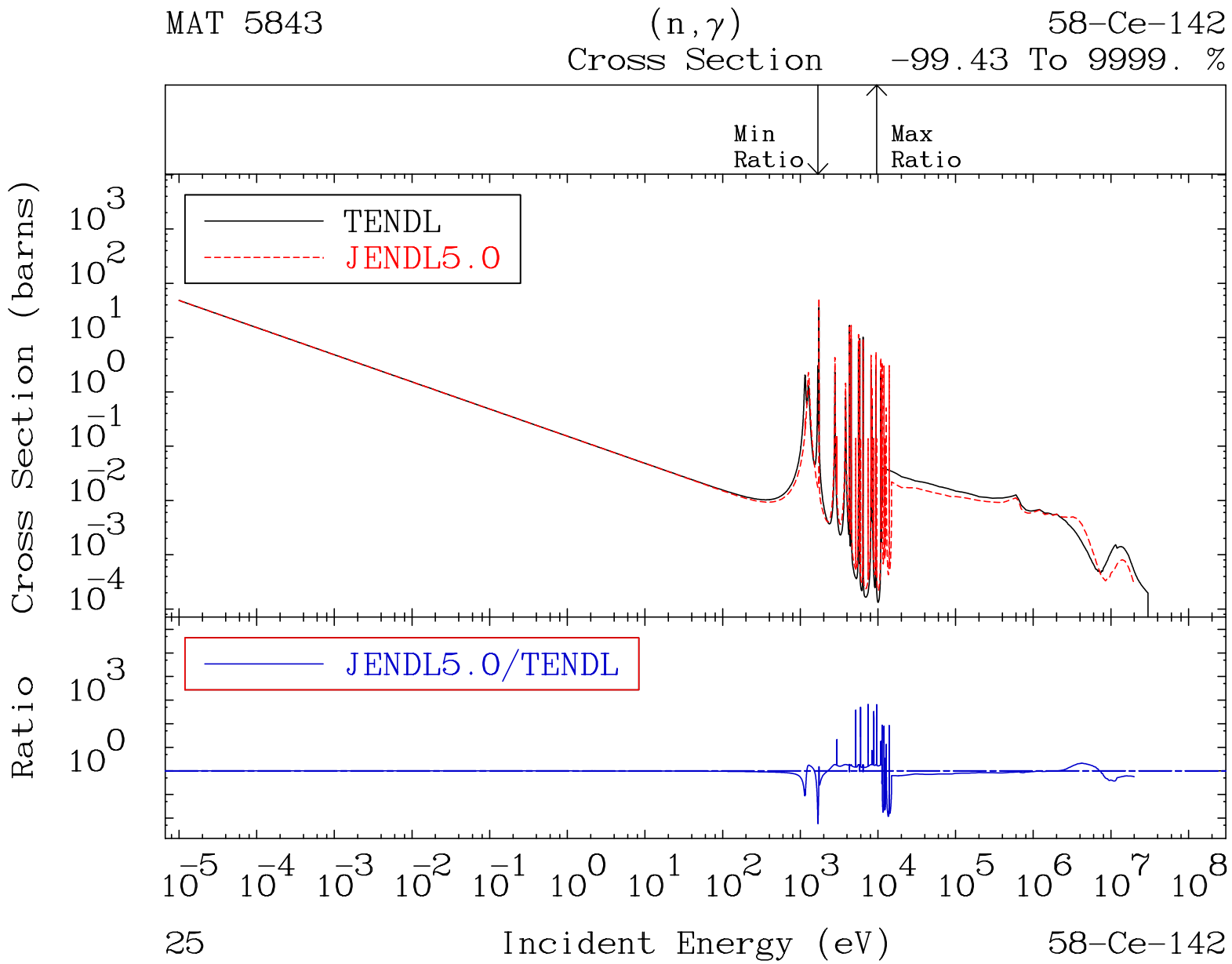

MAT 5843
MT= 62 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 632.5 %
Max
Ratio
TENDL Threshold 2.1400 MeV
JENDL5.0 Threshold 2.1971 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
8
4
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
58-Ce-142

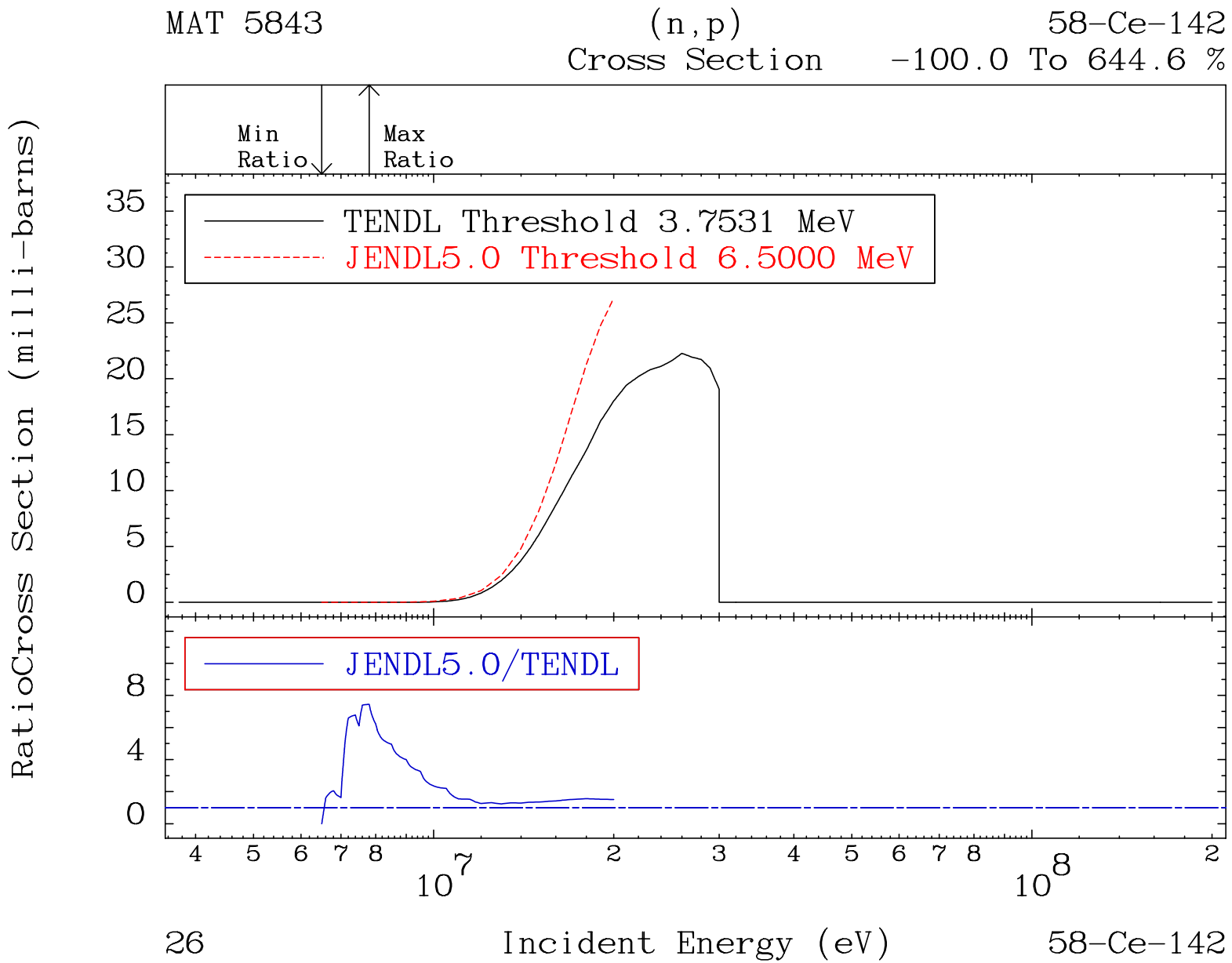

MAT 5843
MT= 63 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.1975 MeV
JENDL5.0 Threshold 2.2027 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
4
2
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
58-Ce-142

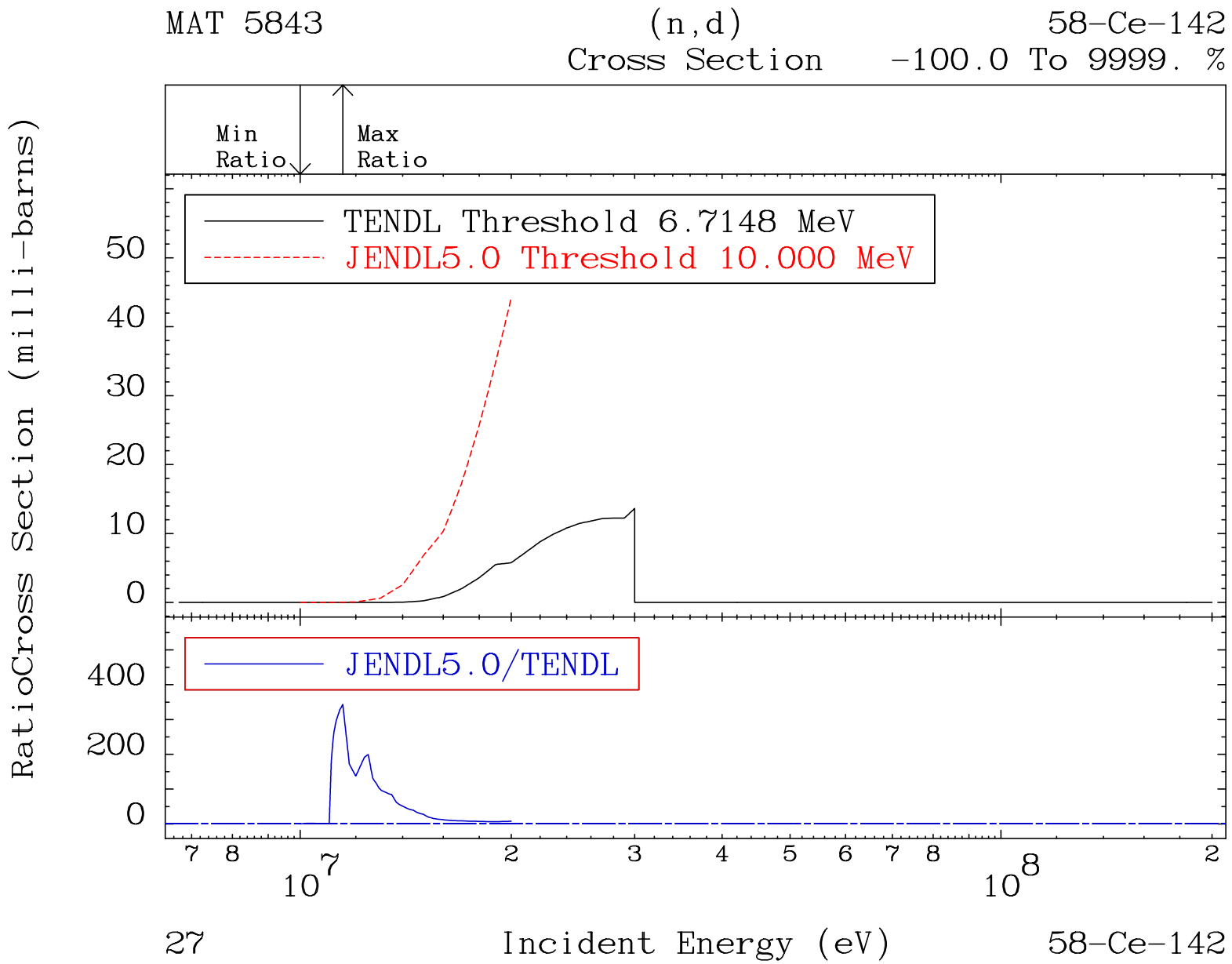

MAT 5843
MT= 64 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 37.66 %
Min Ratio
Max Ratio
TENDL Threshold 2.2031 MeV
JENDL5.0 Threshold 2.2952 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
58-Ce-142

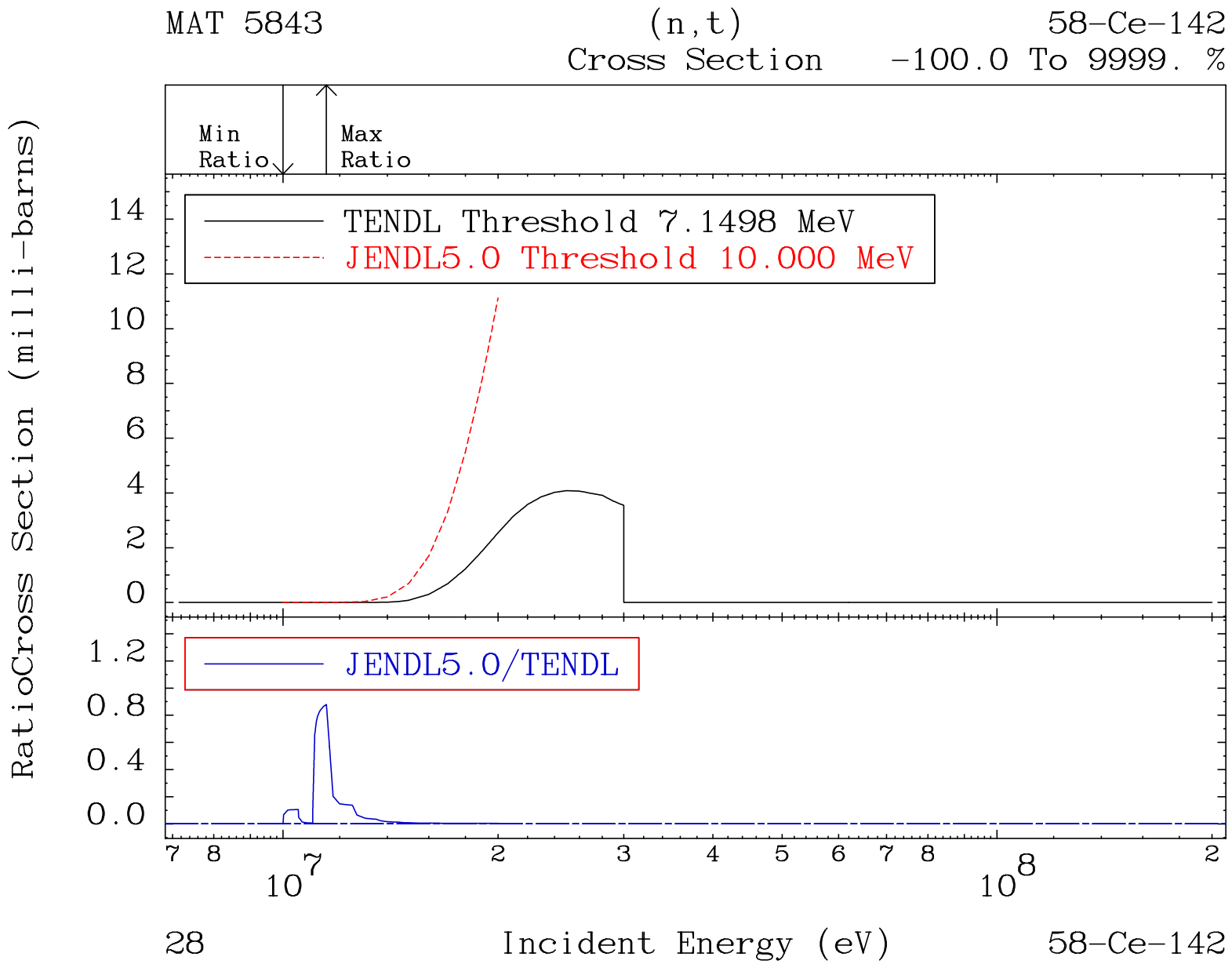

MAT 5843
MT= 65 (n,n') Level
58-Ce-142
Cross Section
-100.0 To 997.6 %
Max
Ratio
TENDL Threshold 2.2263 MeV
JENDL5.0 Threshold 2.3813 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
12
6
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
58-Ce-142

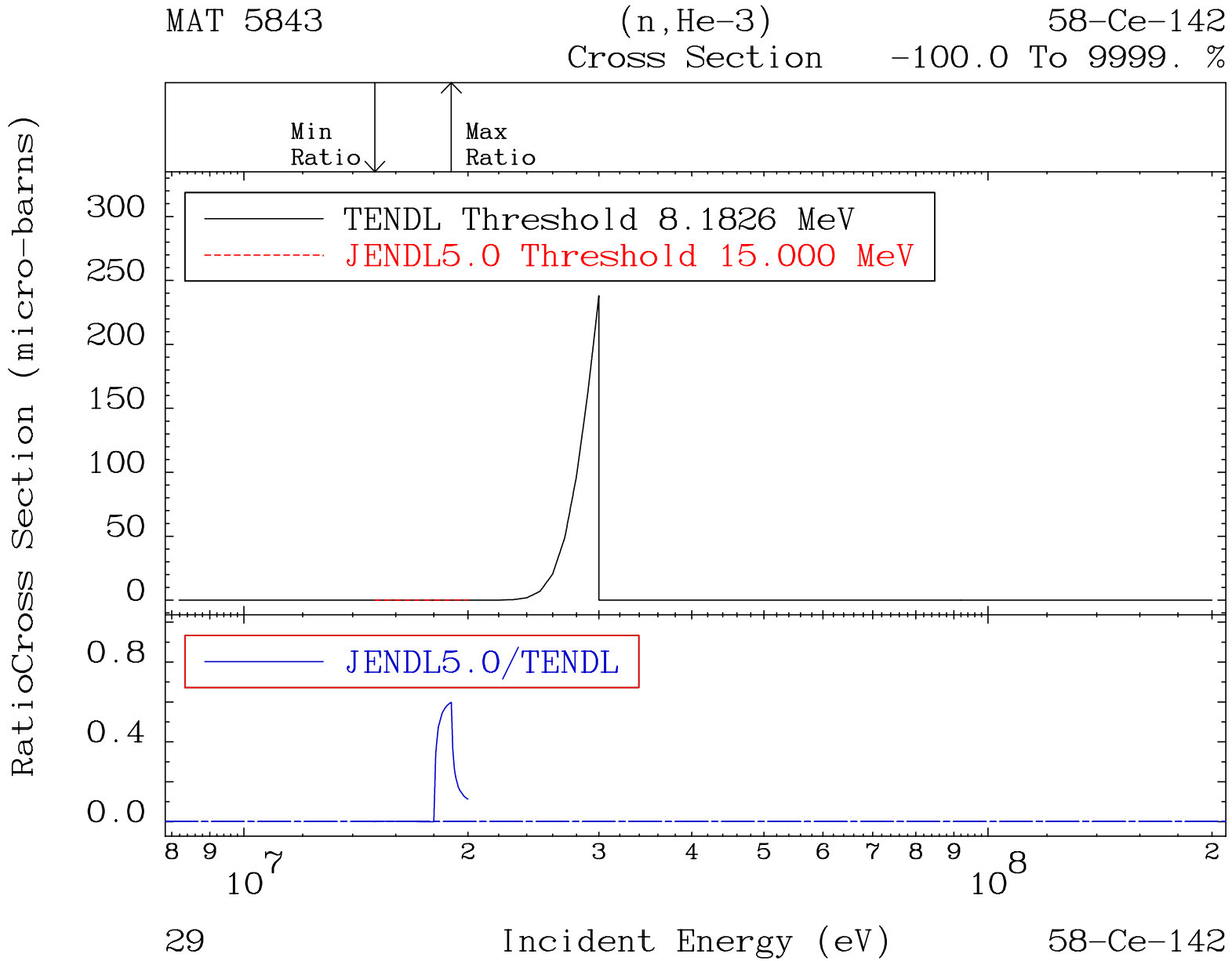

MAT 5843
(n,n') Continuum
Cross Section
58-Ce-142
-3.030 To 179.1 %
Min
Ratio
TENDL Threshold 2.6210 MeV
JENDL5.0 Threshold 2.3914 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
24
58-Ce-142

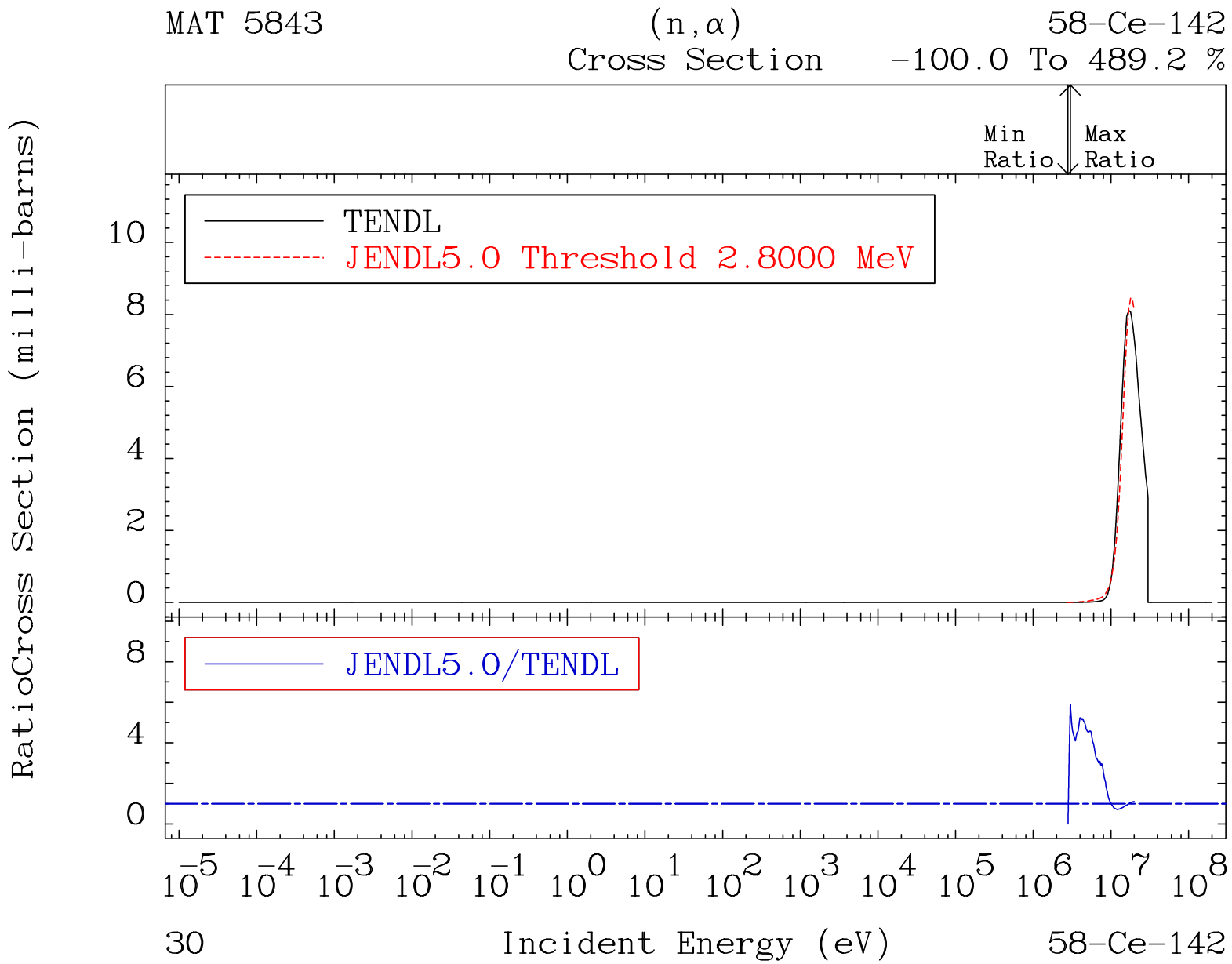

MAT 5843
(n,γ)
Cross Section
58-Ce-142
-99.43 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
25
58-Ce-142

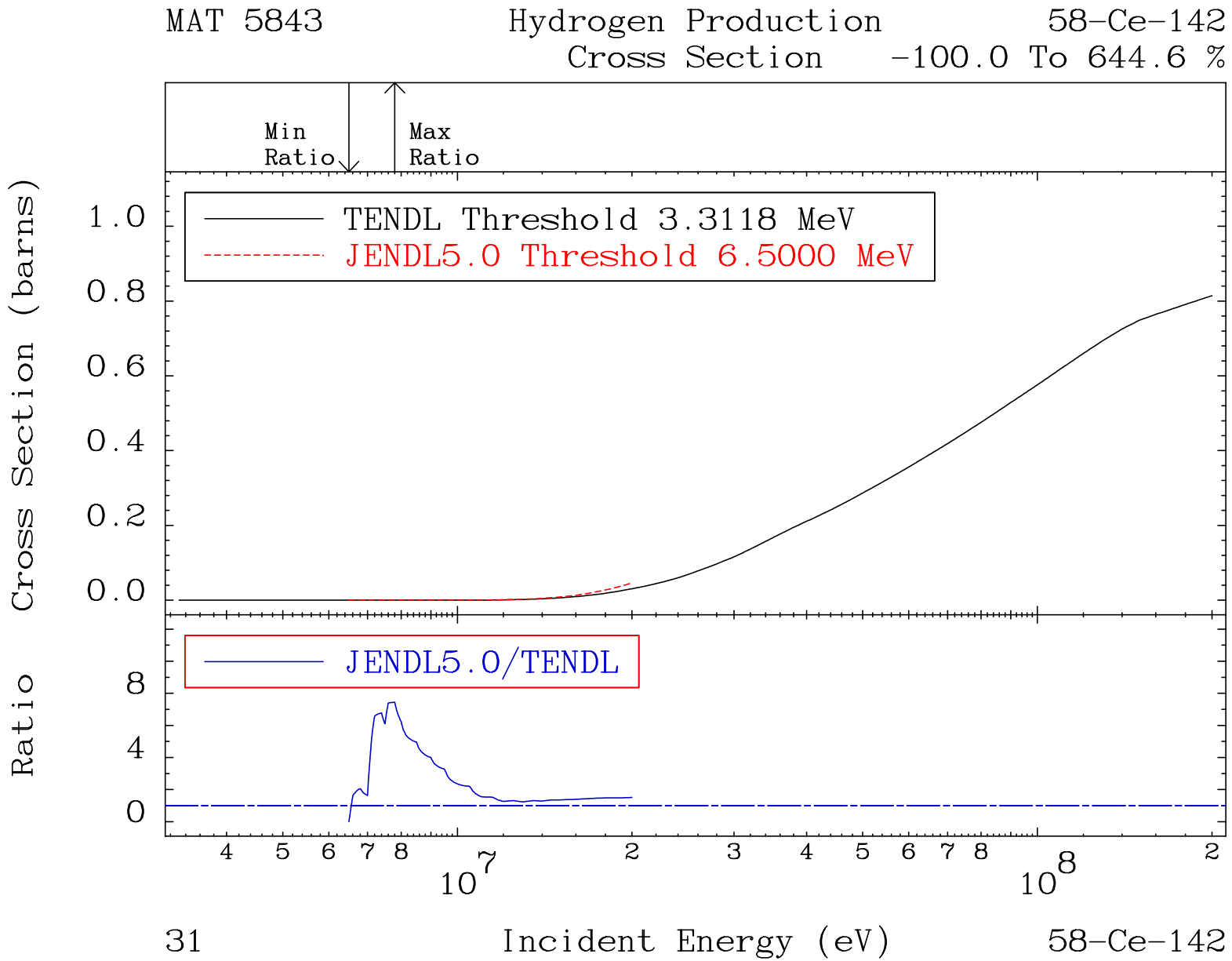

MAT 5843
(n,p)
Cross Section
58-Ce-142
-100.0 To 644.6 %
Min Ratio
Max Ratio
TENDL Threshold 3.7531 MeV
JENDL5.0 Threshold 6.5000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
35
30
25
20
15
10
5
0
8
4
0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
58-Ce-142

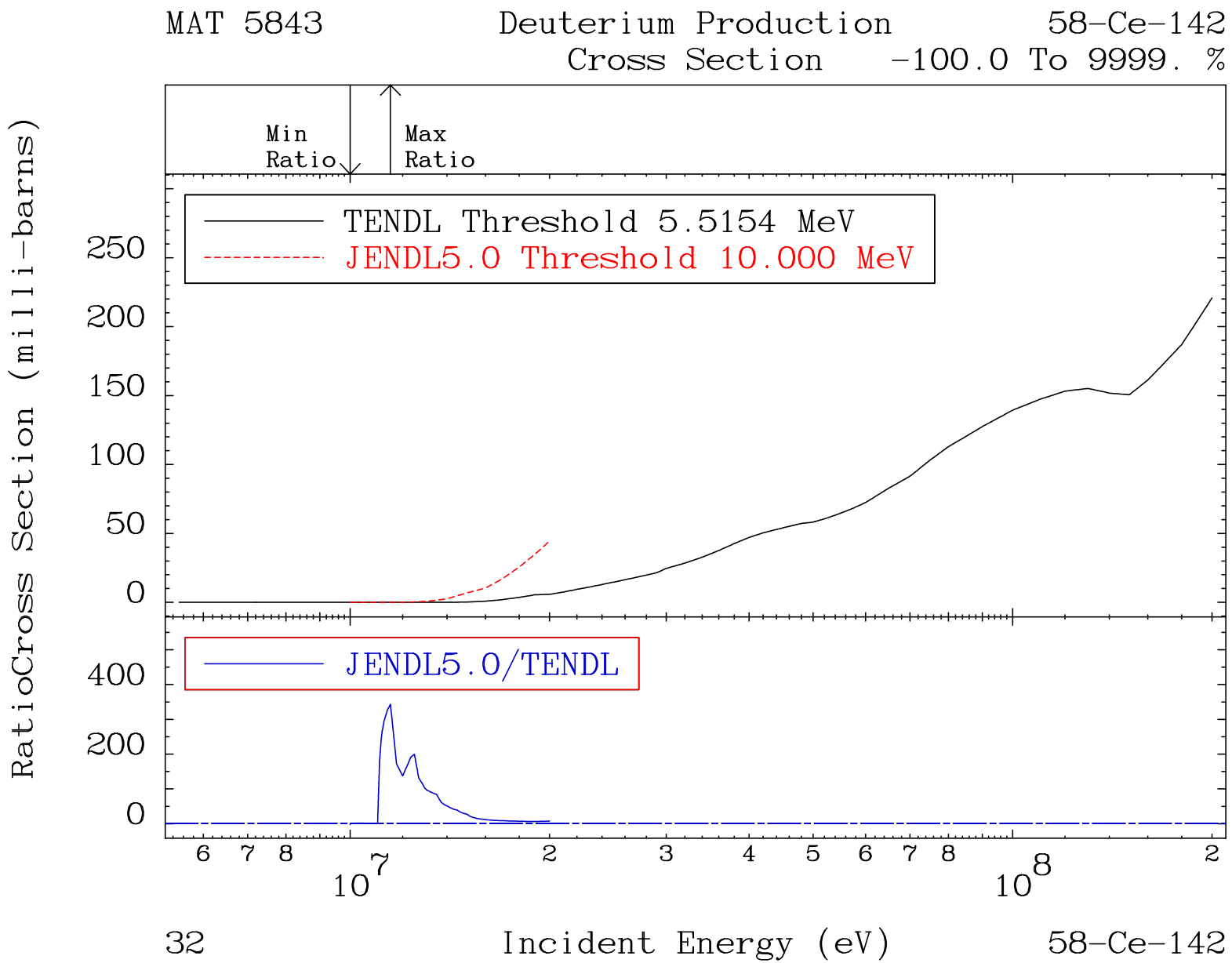

MAT 5843
(n,d)
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.7148 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
400
200
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
27
Incident Energy (eV)
58-Ce-142

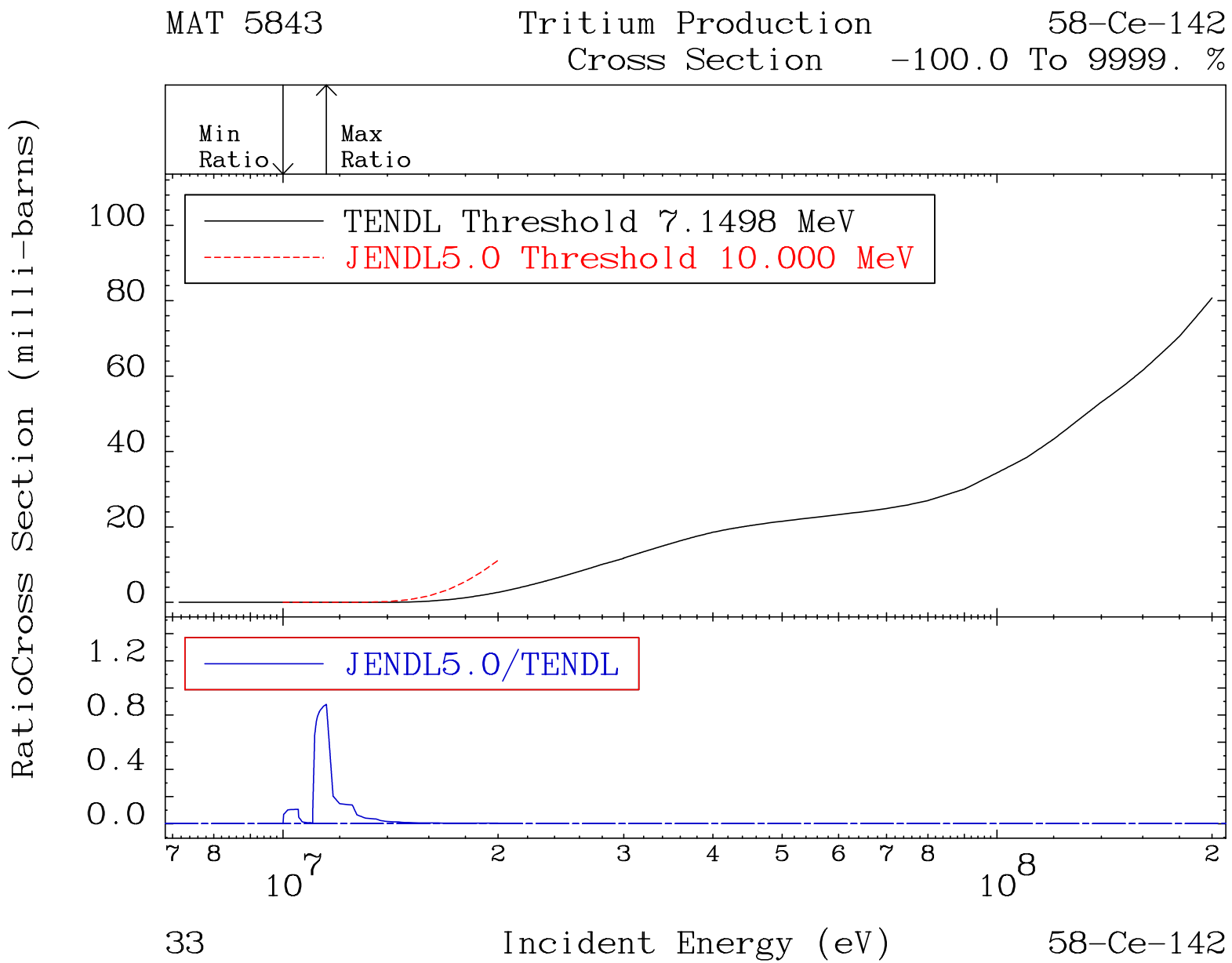

MAT 5843
(n,t)
Cross Section
58-Ce-142
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 7.1498 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
1.2
0.8
0.4
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
28
Incident Energy (eV)
58-Ce-142

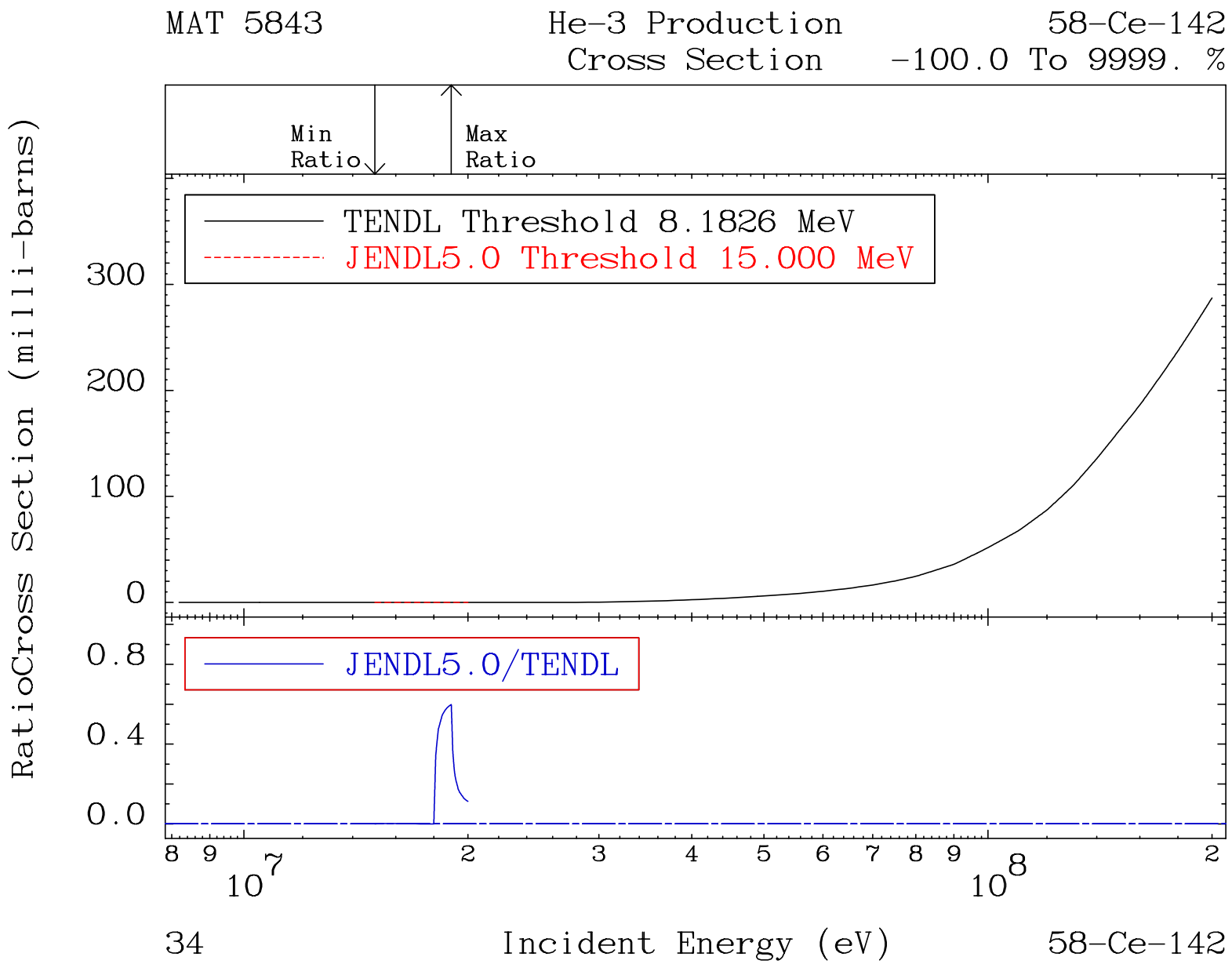

MAT 5843
(n,He-3)
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 8.1826 MeV
JENDL5.0 Threshold 15.000 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
300
250
200
150
100
50
0
0.8
0.4
0.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
58-Ce-142

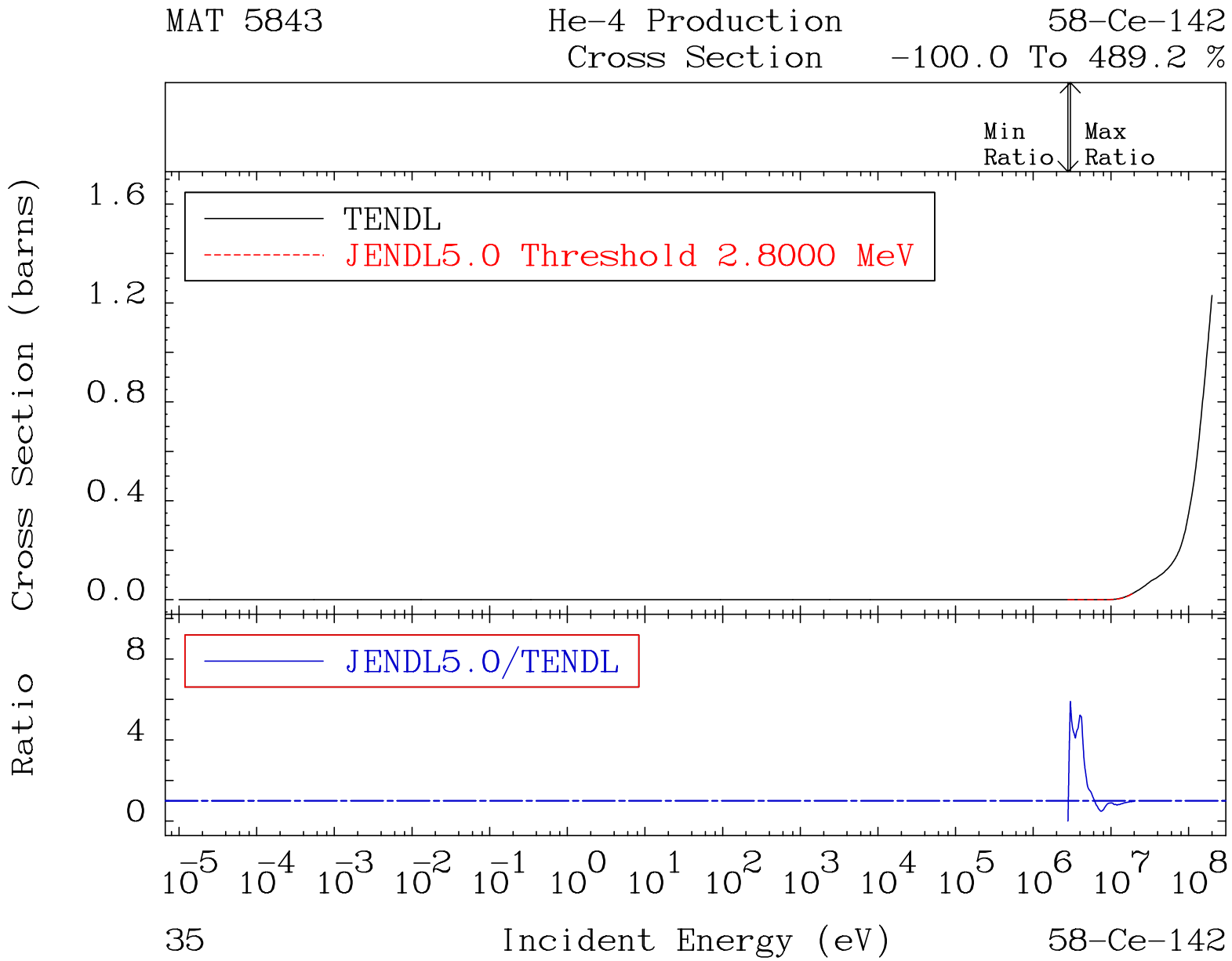

MAT 5843
(n,α)
58-Ce-142
Cross Section
-100.0 To 489.2 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 2.8000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
30
58-Ce-142

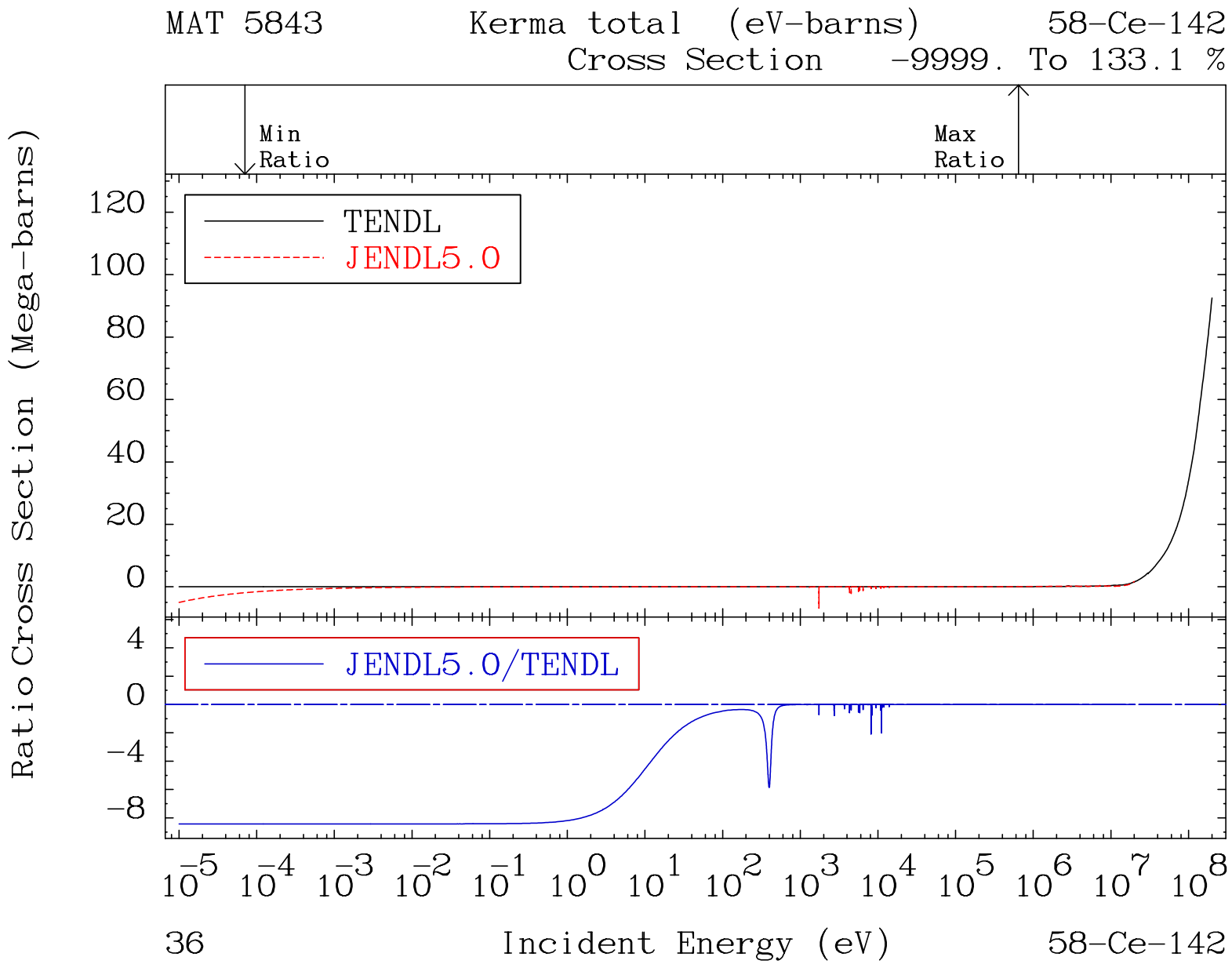

MAT 5843
Hydrogen Production
58-Ce-142
Cross Section
-100.0 To 644.6 %
Min Ratio
Max Ratio
TENDL Threshold 3.3118 MeV
JENDL5.0 Threshold 6.5000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
8
4
0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
31
Incident Energy (eV)
58-Ce-142

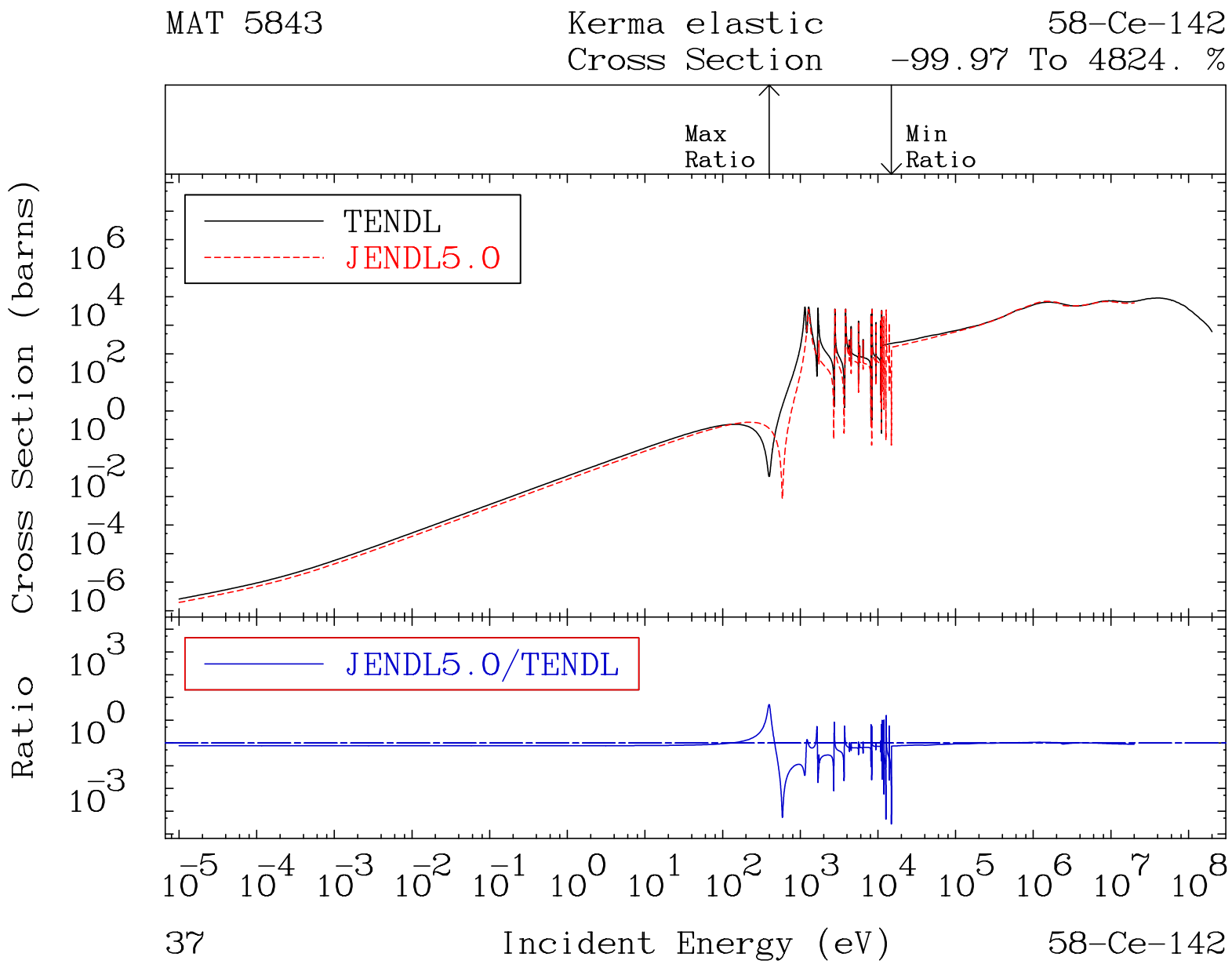

MAT 5843
Deuterium Production
58-Ce-142
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.5154 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
400
200
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
32
Incident Energy (eV)
58-Ce-142

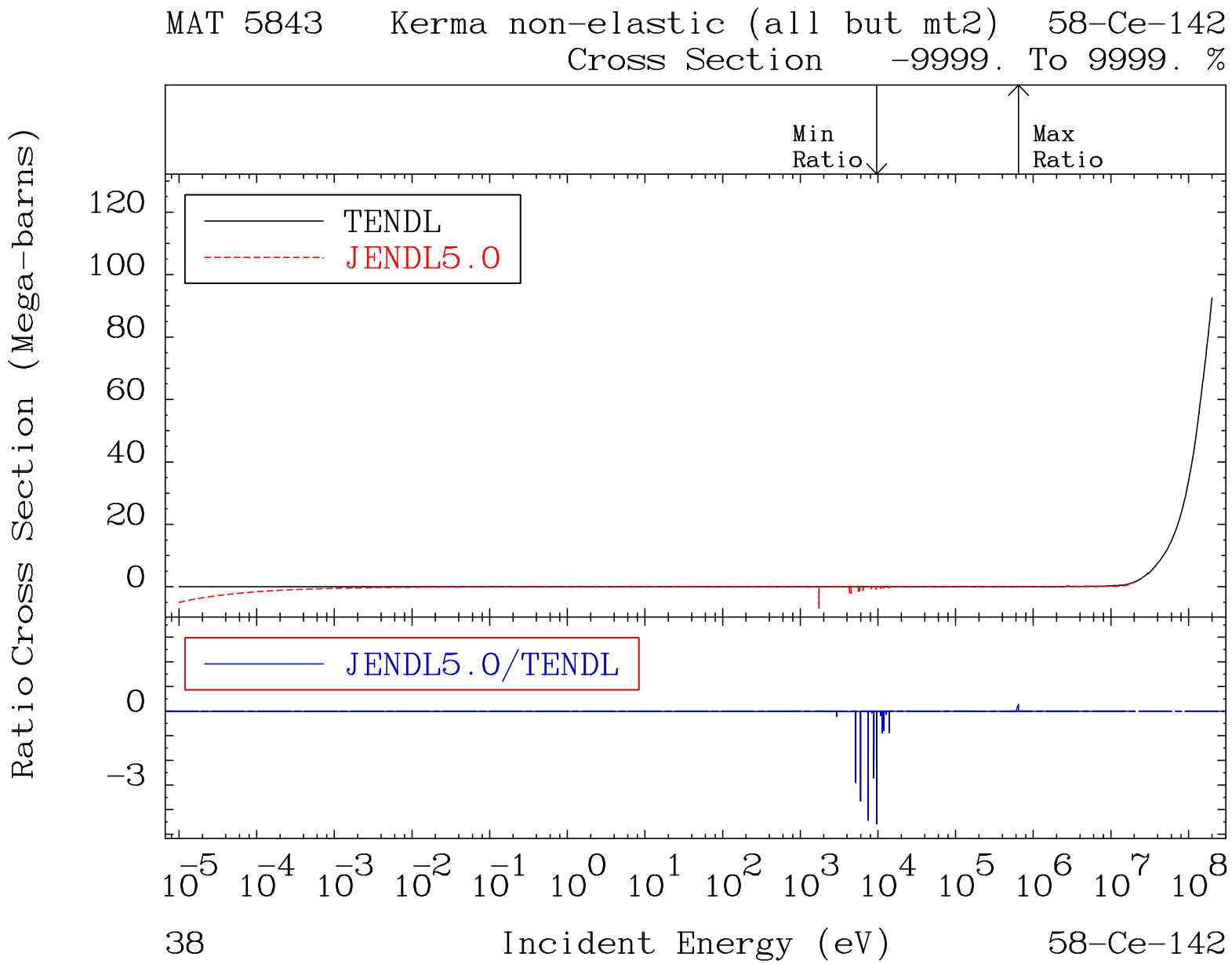

MAT 5843
Tritium Production
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 7.1498 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
1.2
0.8
0.4
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
33
Incident Energy (eV)
58-Ce-142

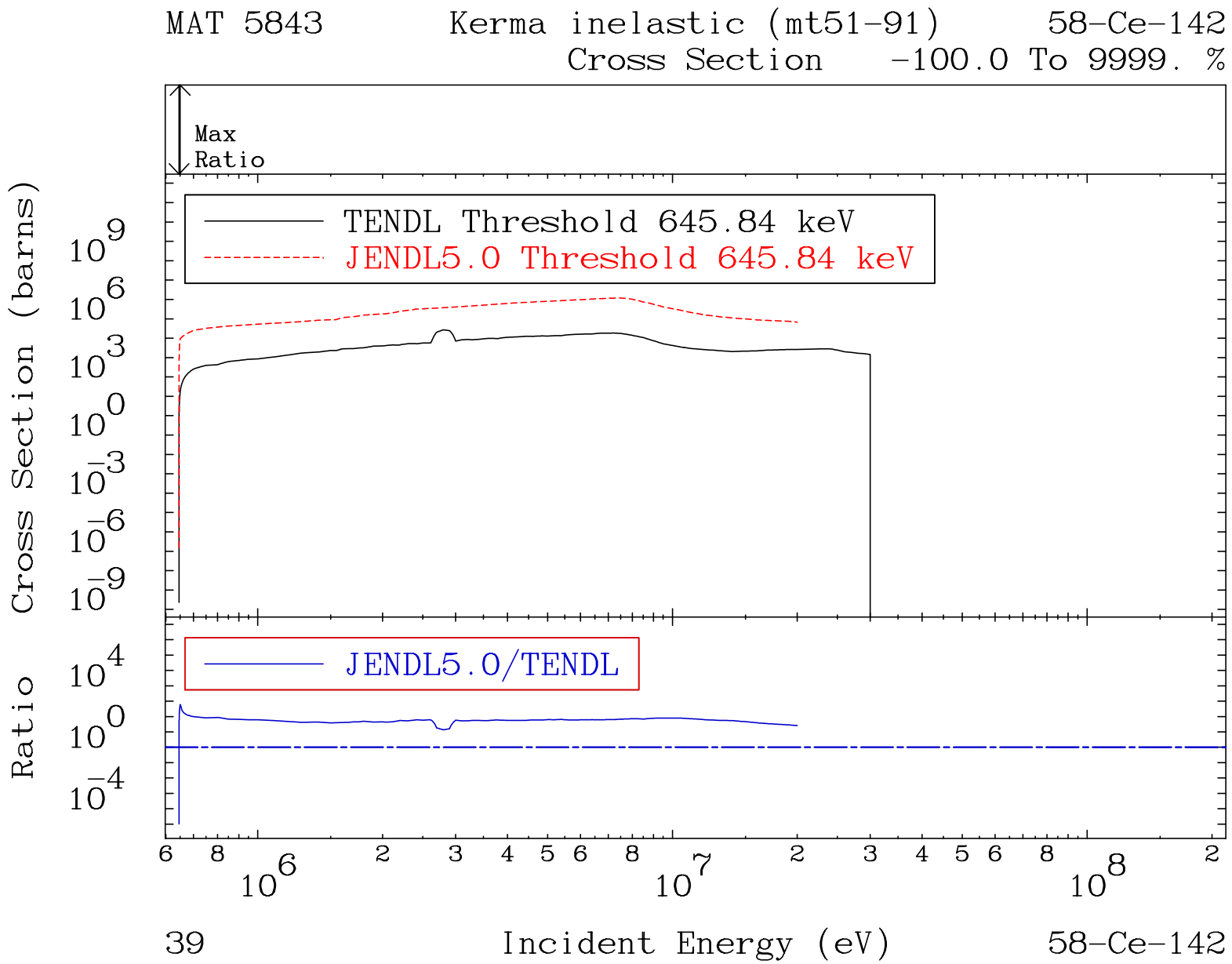

MAT 5843
He-3 Production
58-Ce-142
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 8.1826 MeV
JENDL5.0 Threshold 15.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
0.8
0.4
0.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
34
Incident Energy (eV)
58-Ce-142

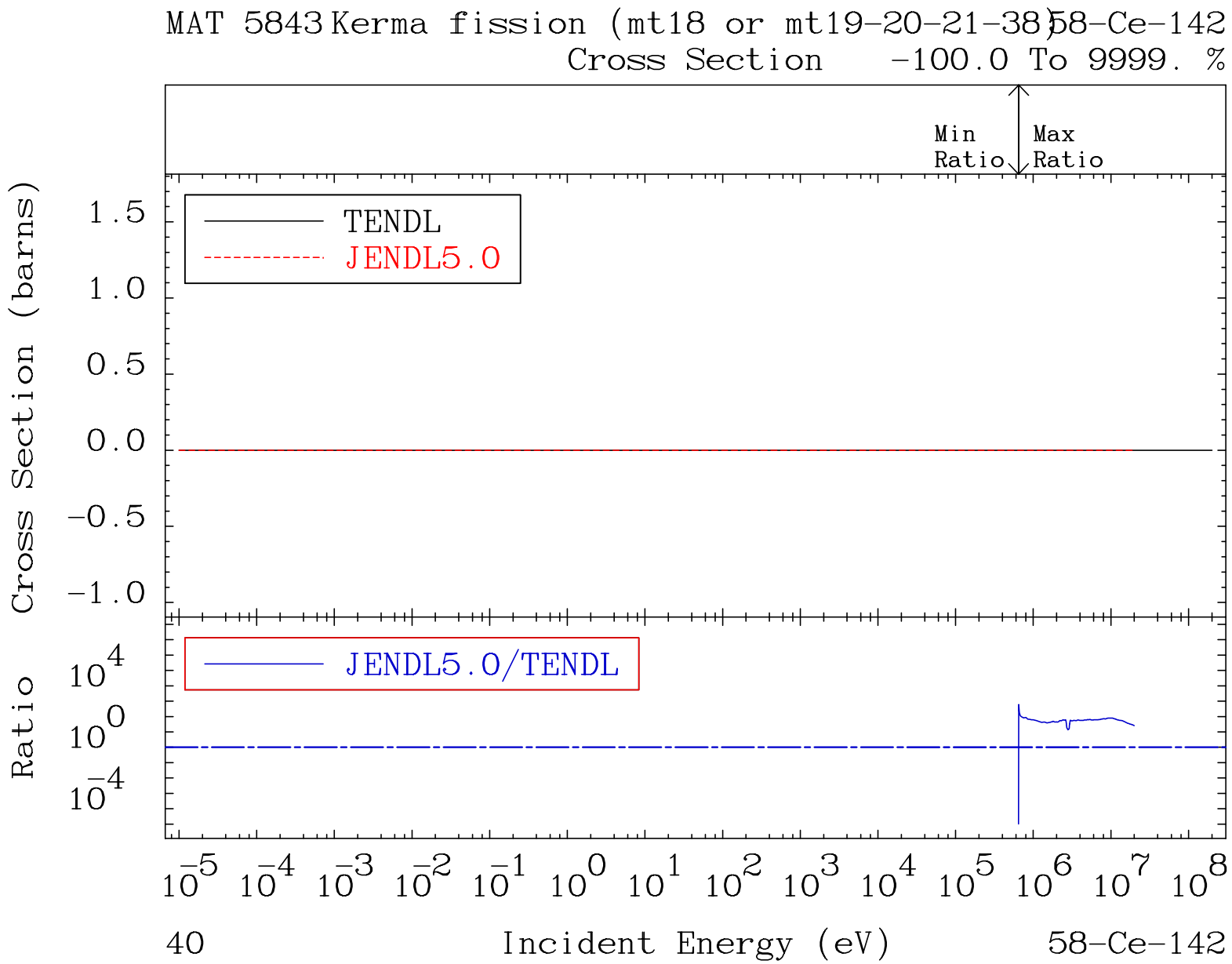

MAT 5843
He-4 Production
Cross Section
58-Ce-142
-100.0 To 489.2 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 2.8000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.6
1.2
0.8
0.4
0.0
8
4
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
35
Incident Energy (eV)
58-Ce-142

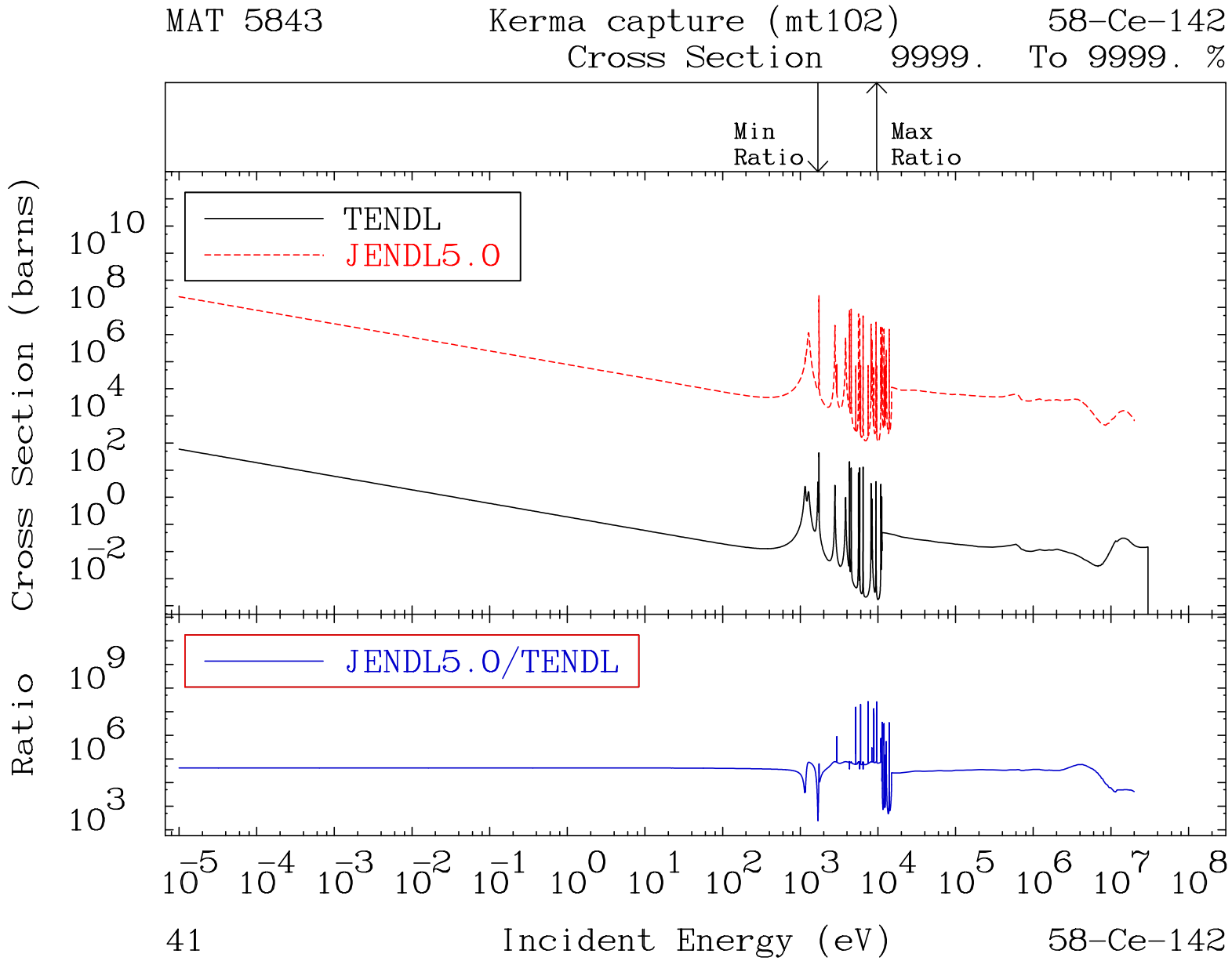

MAT 5843
Kerma total (eV-barns)
58-Ce-142
Cross Section -9999. To 133.1 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Ratio Cross Section (Mega-barns)
120
100
80
60
40
20
0
4
0
-4
-8
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
36
Incident Energy (eV)
58-Ce-142

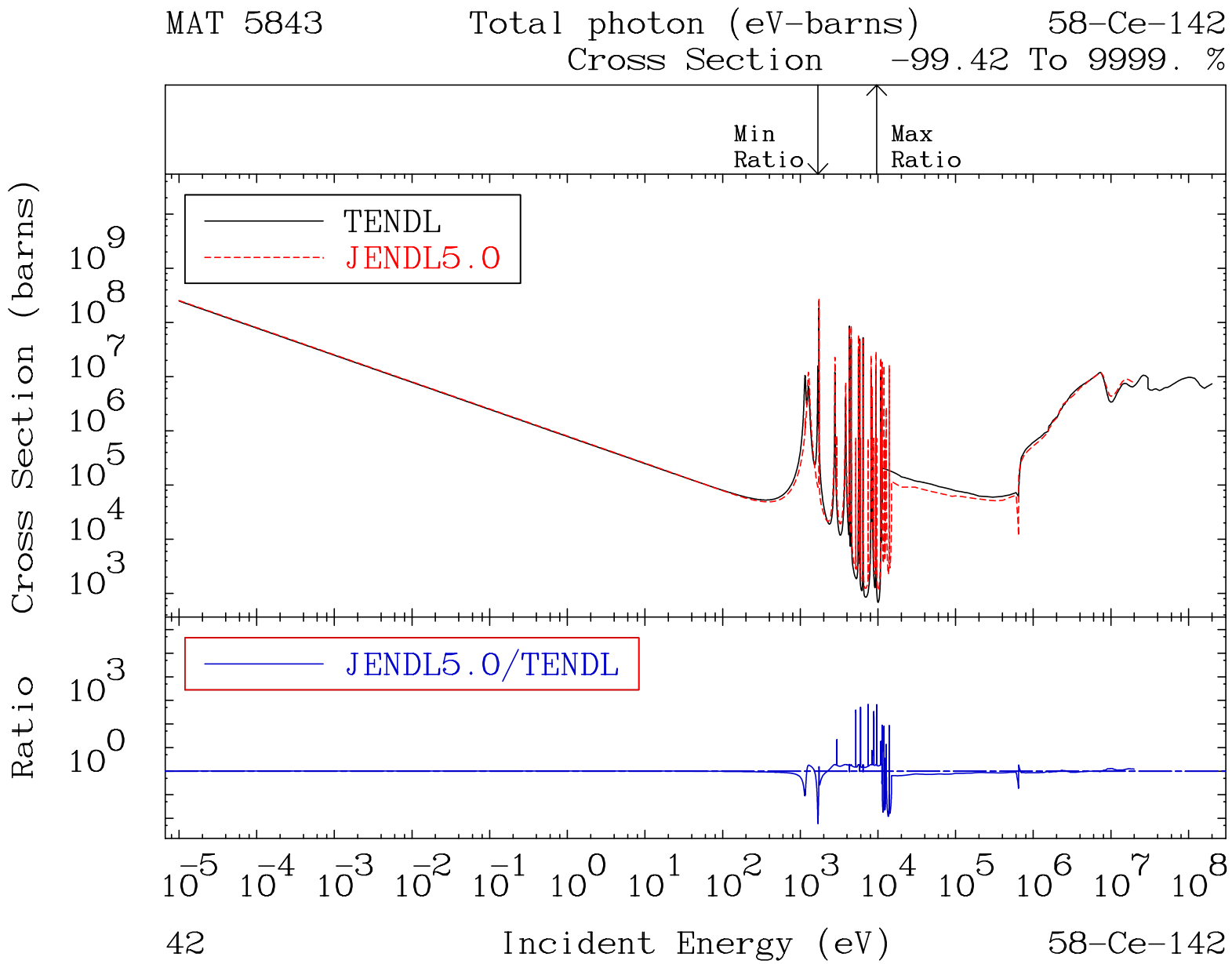

MAT 5843
Kerma elastic
Cross Section
58-Ce-142
-99.97 To 4824. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
37
58-Ce-142

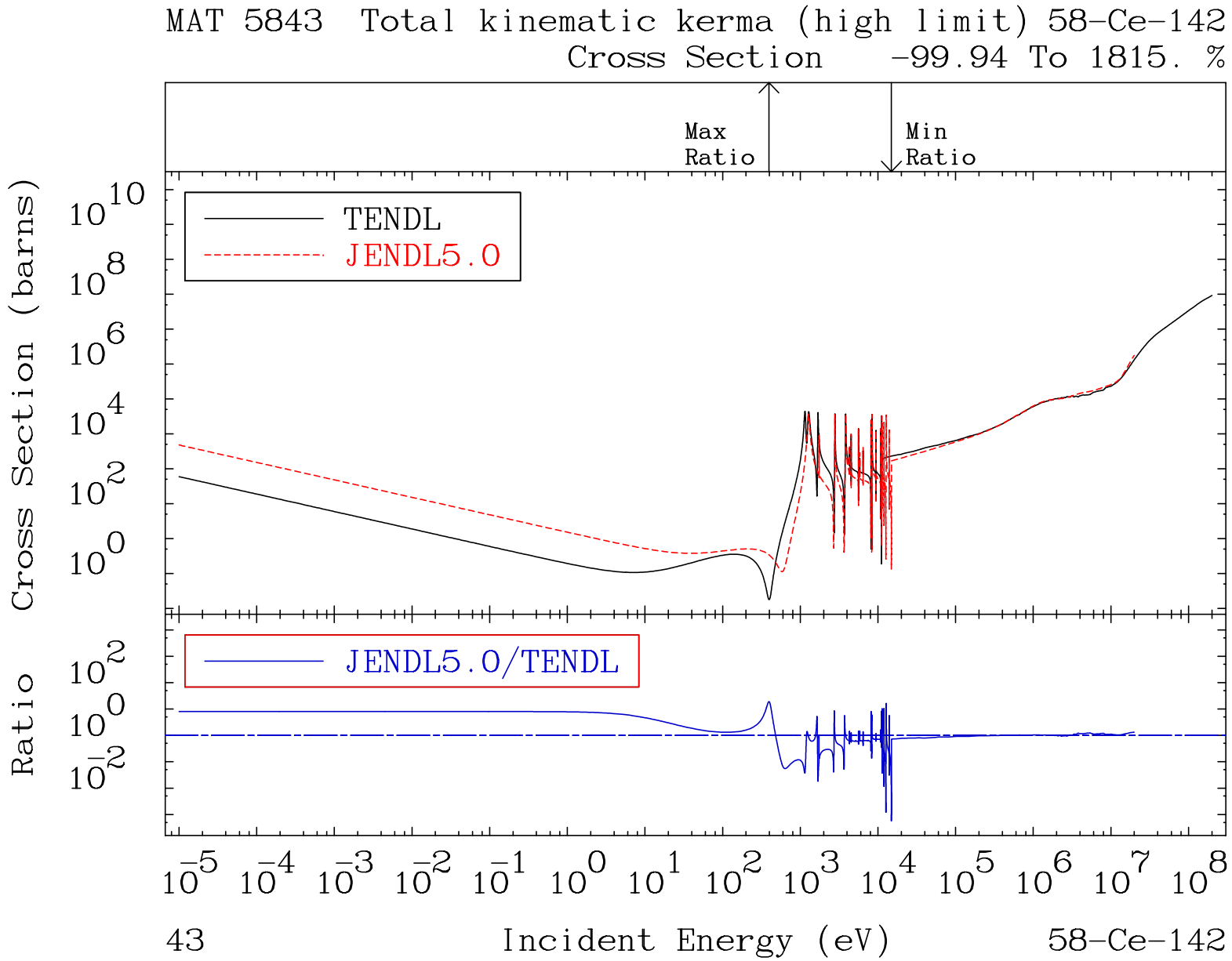

MAT 5843 Kerma non-elastic (all but mt2) 58-Ce-142
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Ratio Cross Section (Mega-barns)
120
100
80
60
40
20
0
0
-3
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
38
Incident Energy (eV)
58-Ce-142

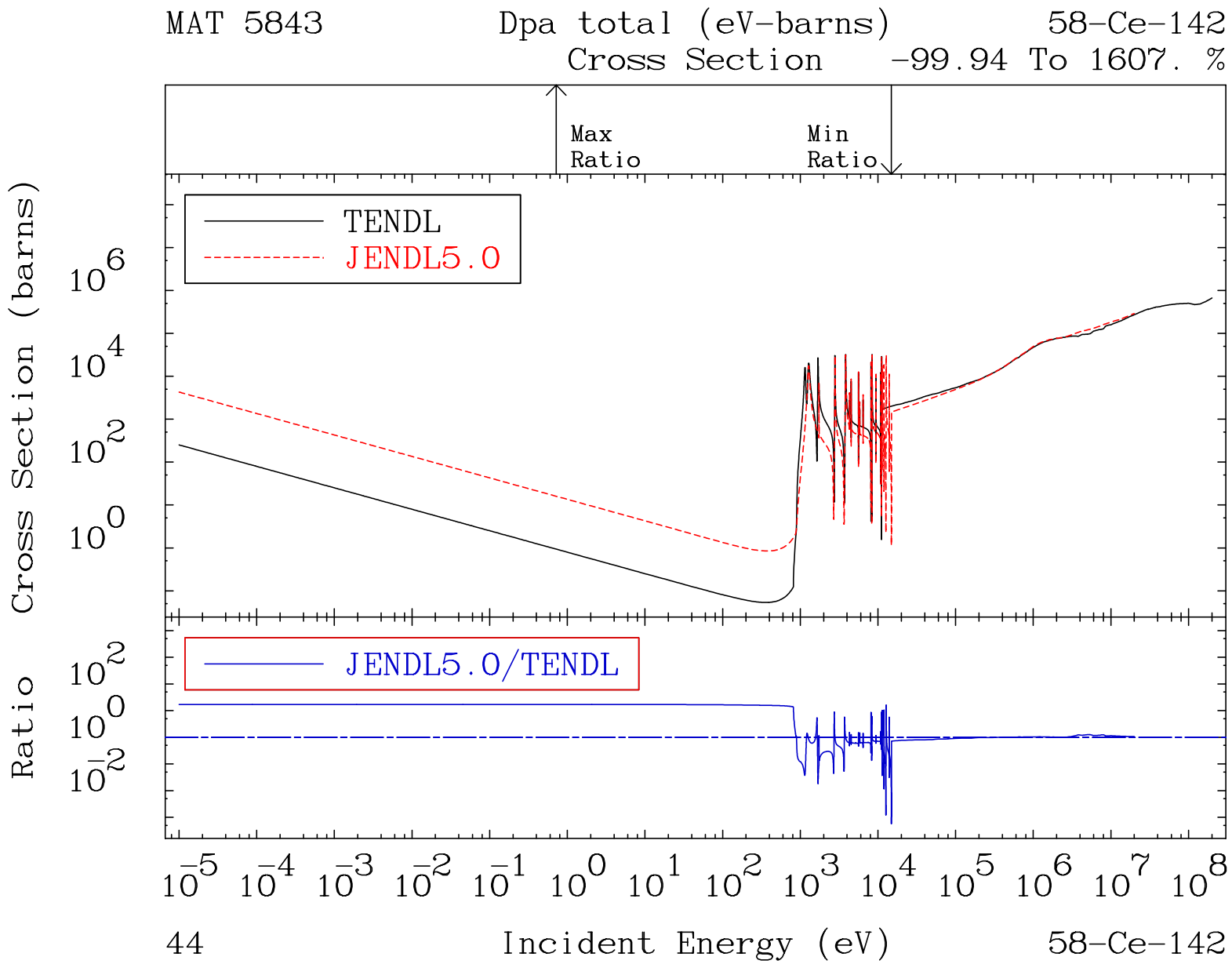

MAT 5843
Kerma inelastic (mt51-91)
58-Ce-142
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 645.84 keV
JENDL5.0 Threshold 645.84 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
58-Ce-142

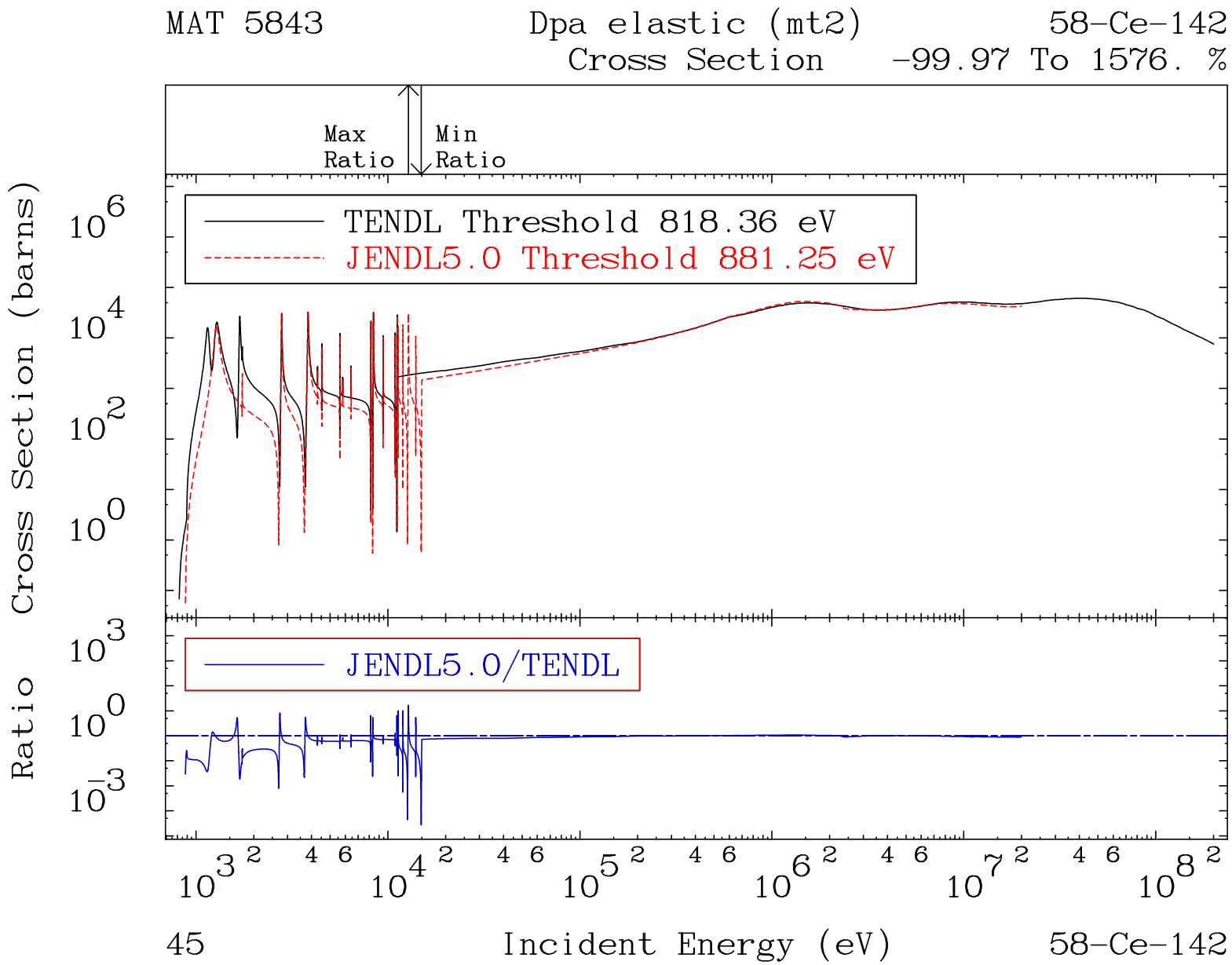

MAT 5843 Kerma fission (mt18 or mt19-20-21-38) 58-Ce-142
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{4}
10^{0}
10^{-4}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
40
Incident Energy (eV)
58-Ce-142

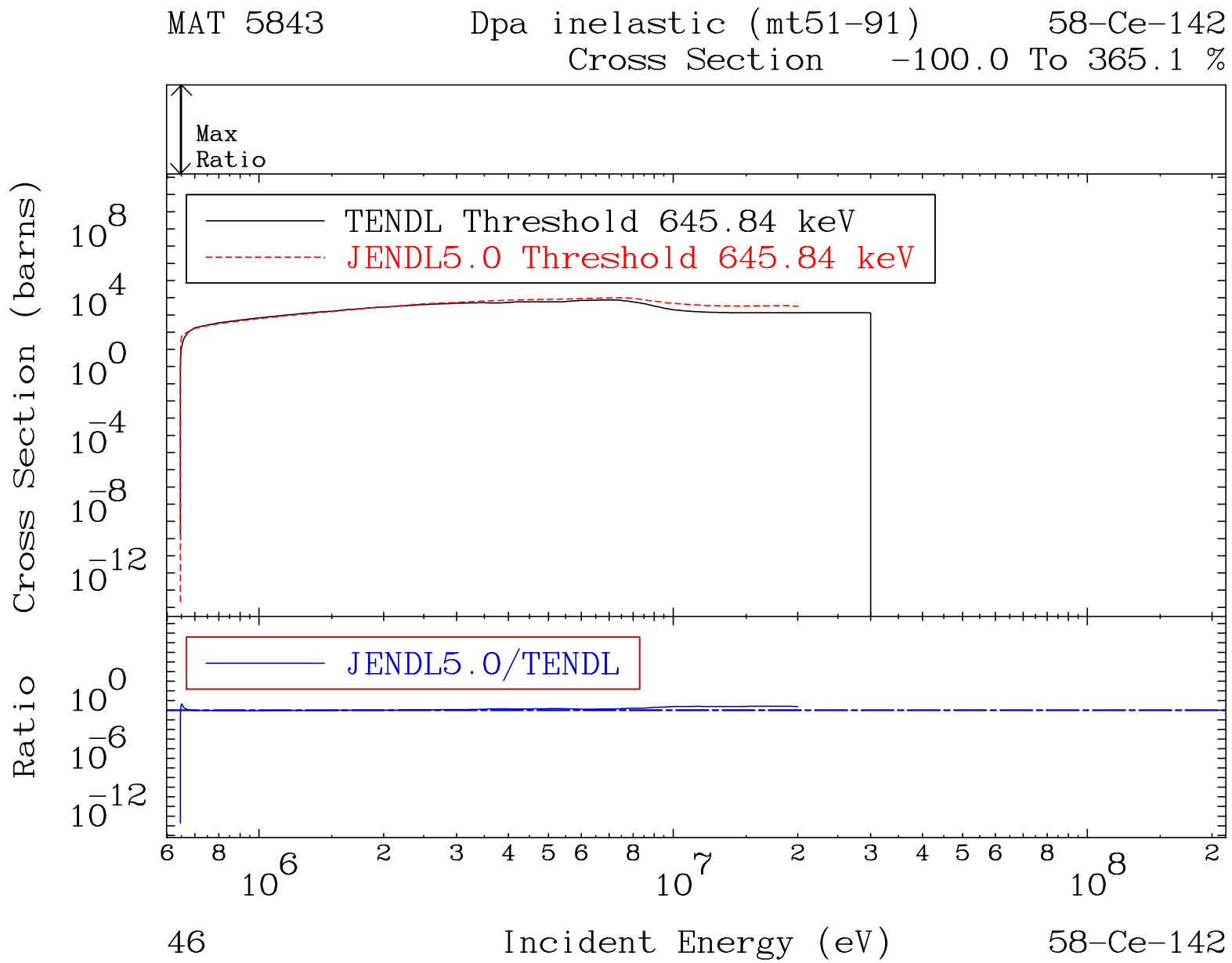

MAT 5843
Kerma capture (mt102)
58-Ce-142
Cross Section 9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
58-Ce-142

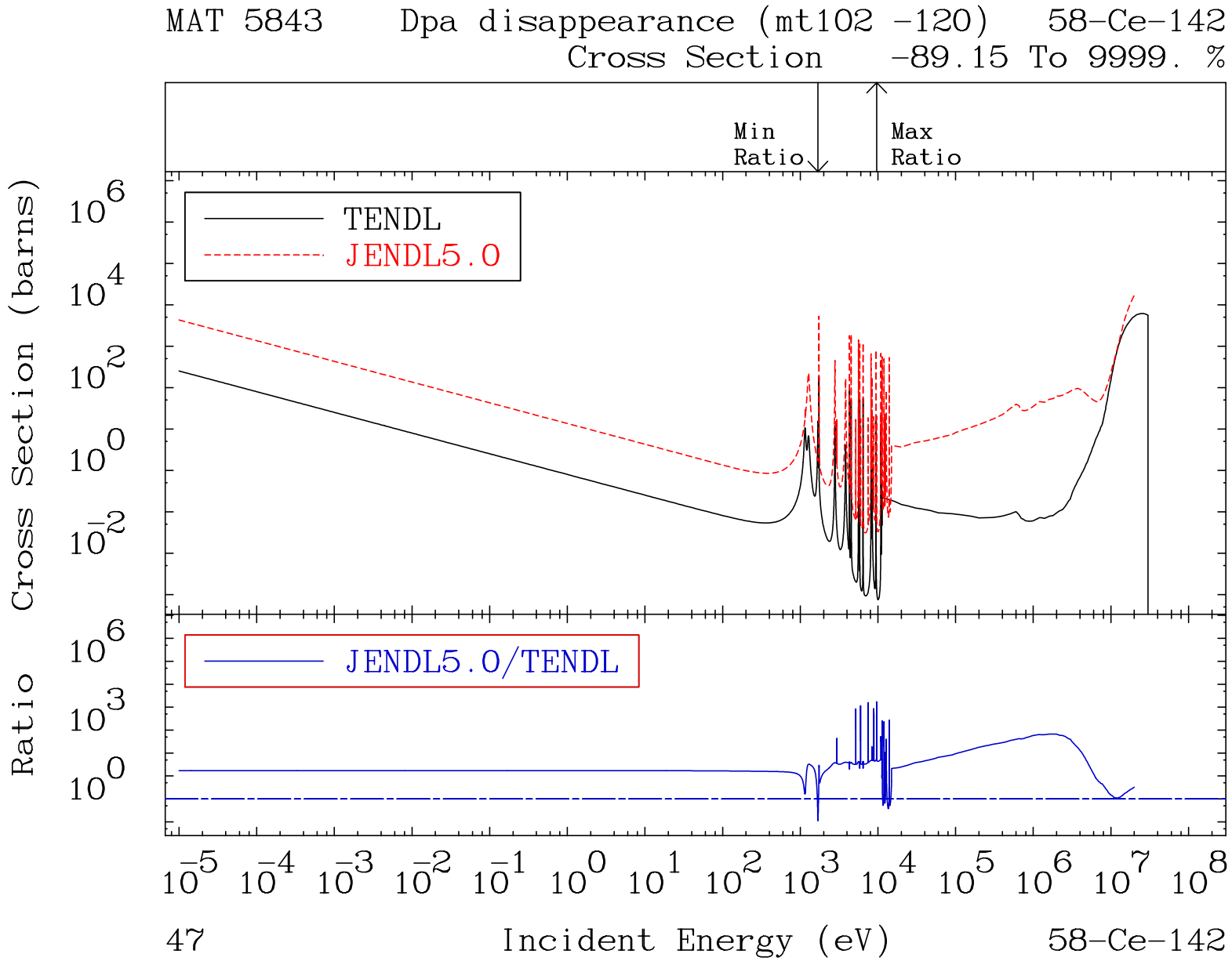

MAT 5843
Total photon (eV-barns)
58-Ce-142
Cross Section -99.42 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
42
58-Ce-142

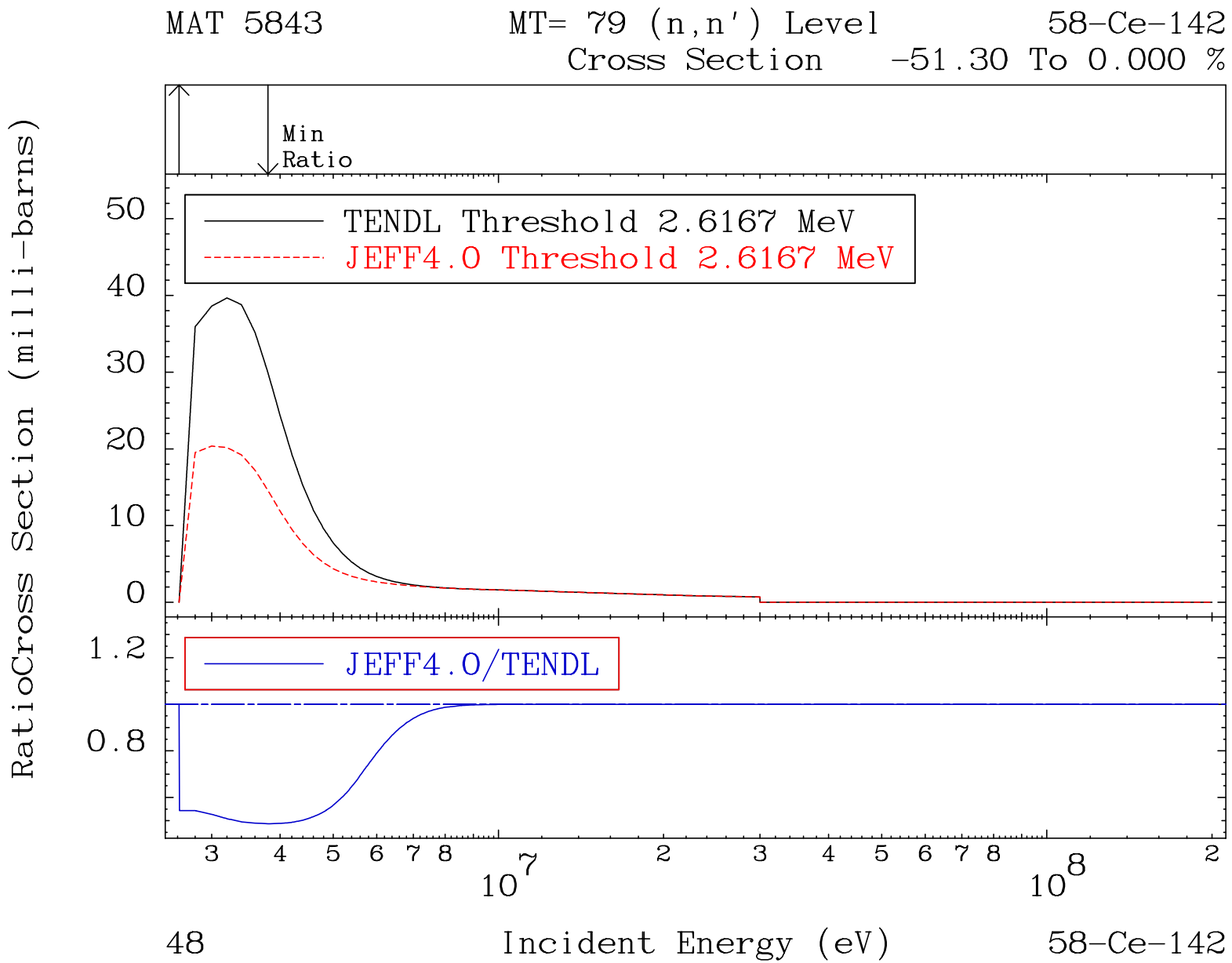

MAT 5843 Total kinematic kerma (high limit) 58-Ce-142
Cross Section -99.94 To 1815. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
58-Ce-142

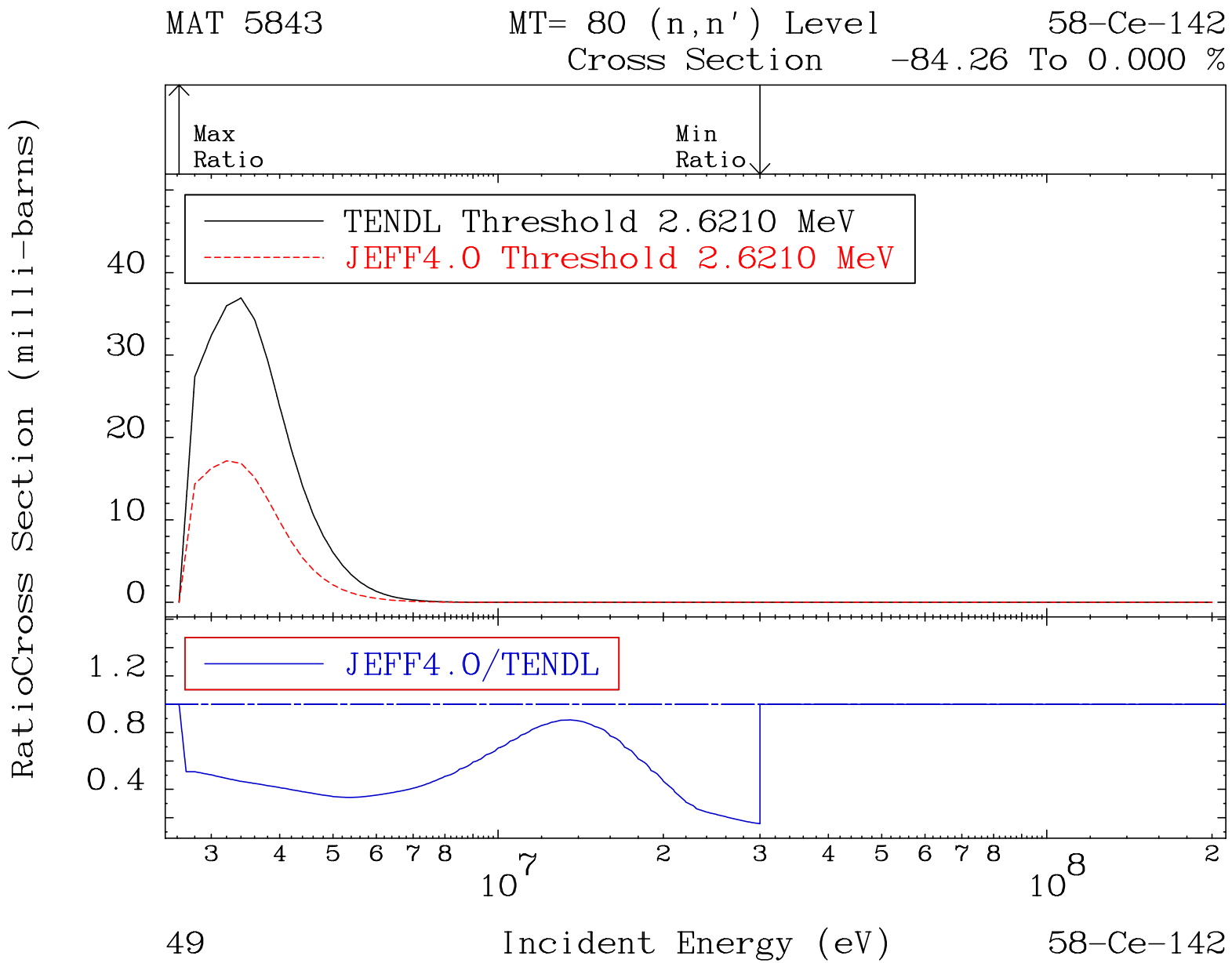

MAT 5843
Dpa total (eV-barns)
58-Ce-142
Cross Section
-99.94 To 1607. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
44
58-Ce-142

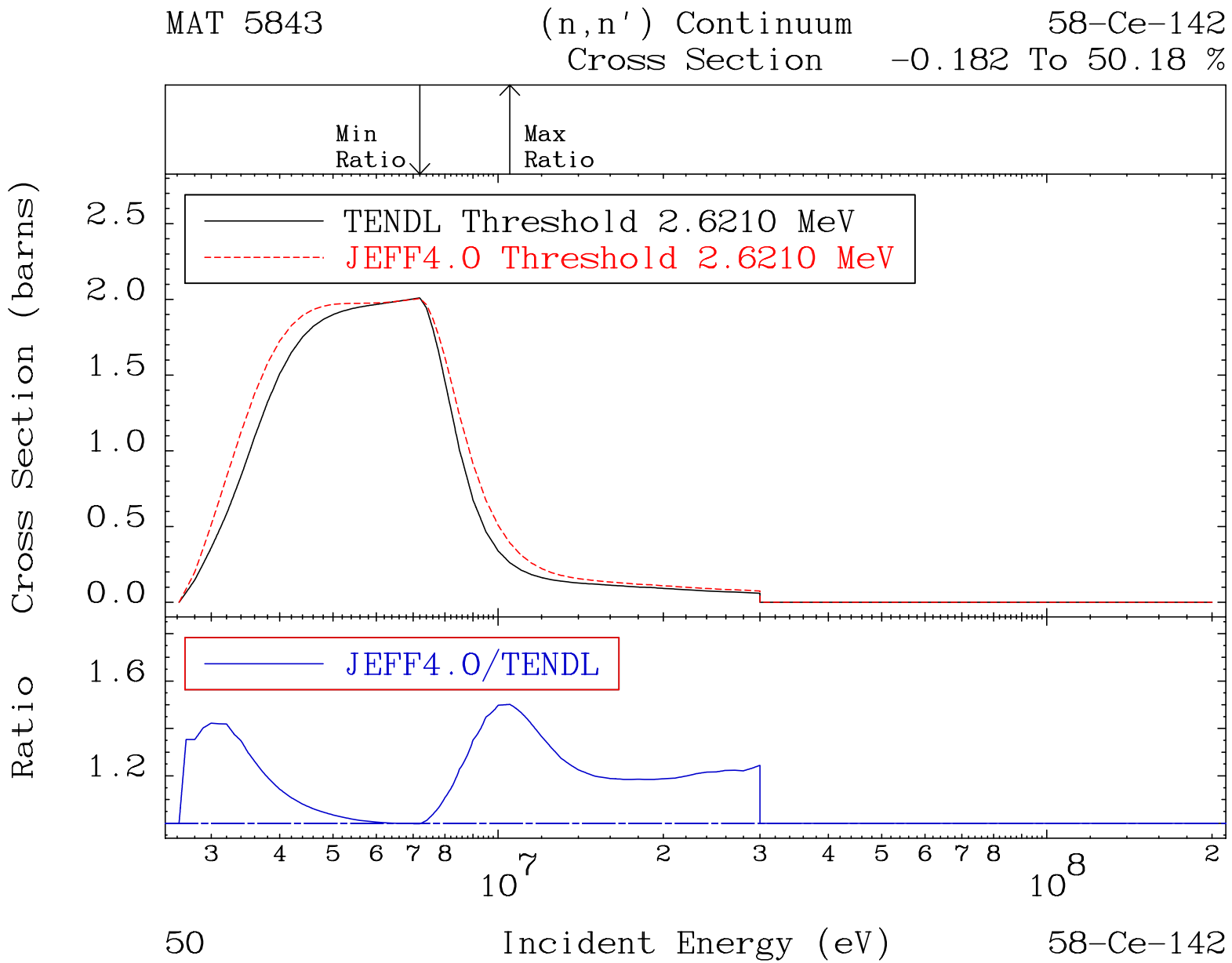

MAT 5843
Dpa elastic (mt2)
Cross Section
58-Ce-142
-99.97 To 1576. %
Max Ratio
Min Ratio
TENDL Threshold 818.36 eV
JENDL5.0 Threshold 881.25 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
58-Ce-142

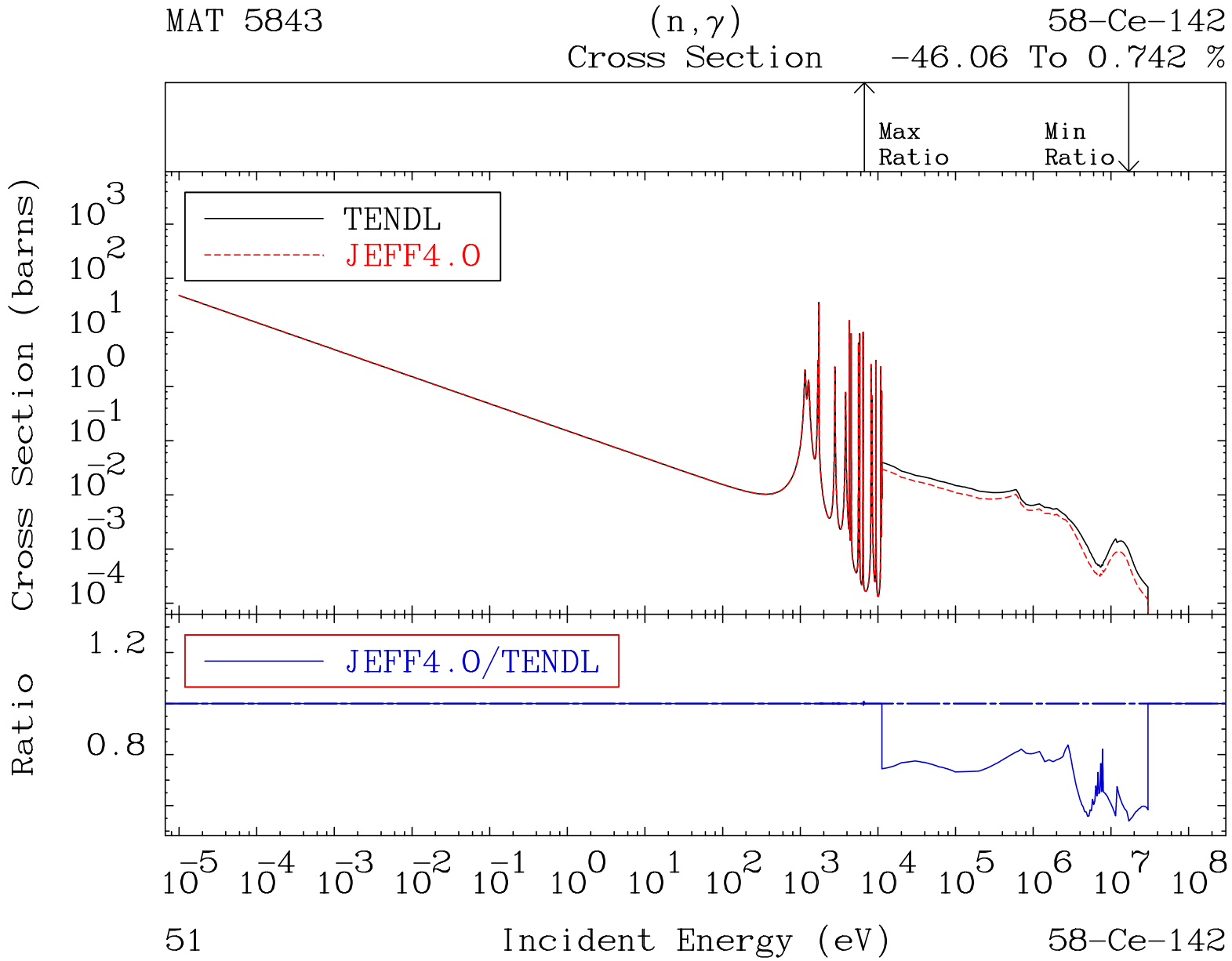

MAT 5843
Dpa inelastic (mt51-91)
58-Ce-142
Cross Section
-100.0 To 365.1 %
Max
Ratio
TENDL Threshold 645.84 keV
JENDL5.0 Threshold 645.84 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
46
58-Ce-142

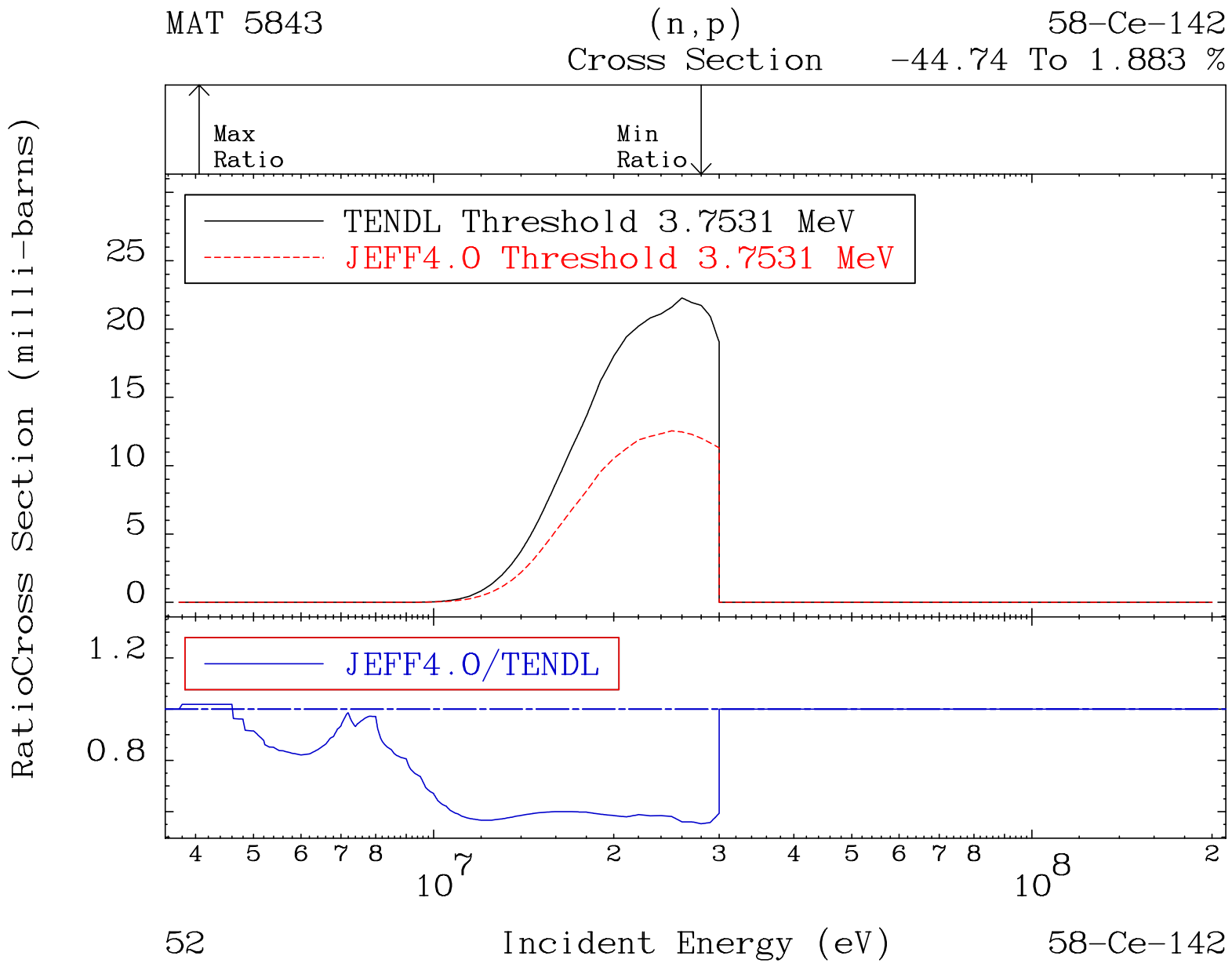

MAT 5843 Dpa disappearance (mt102 -120) 58-Ce-142
Cross Section -89.15 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
58-Ce-142

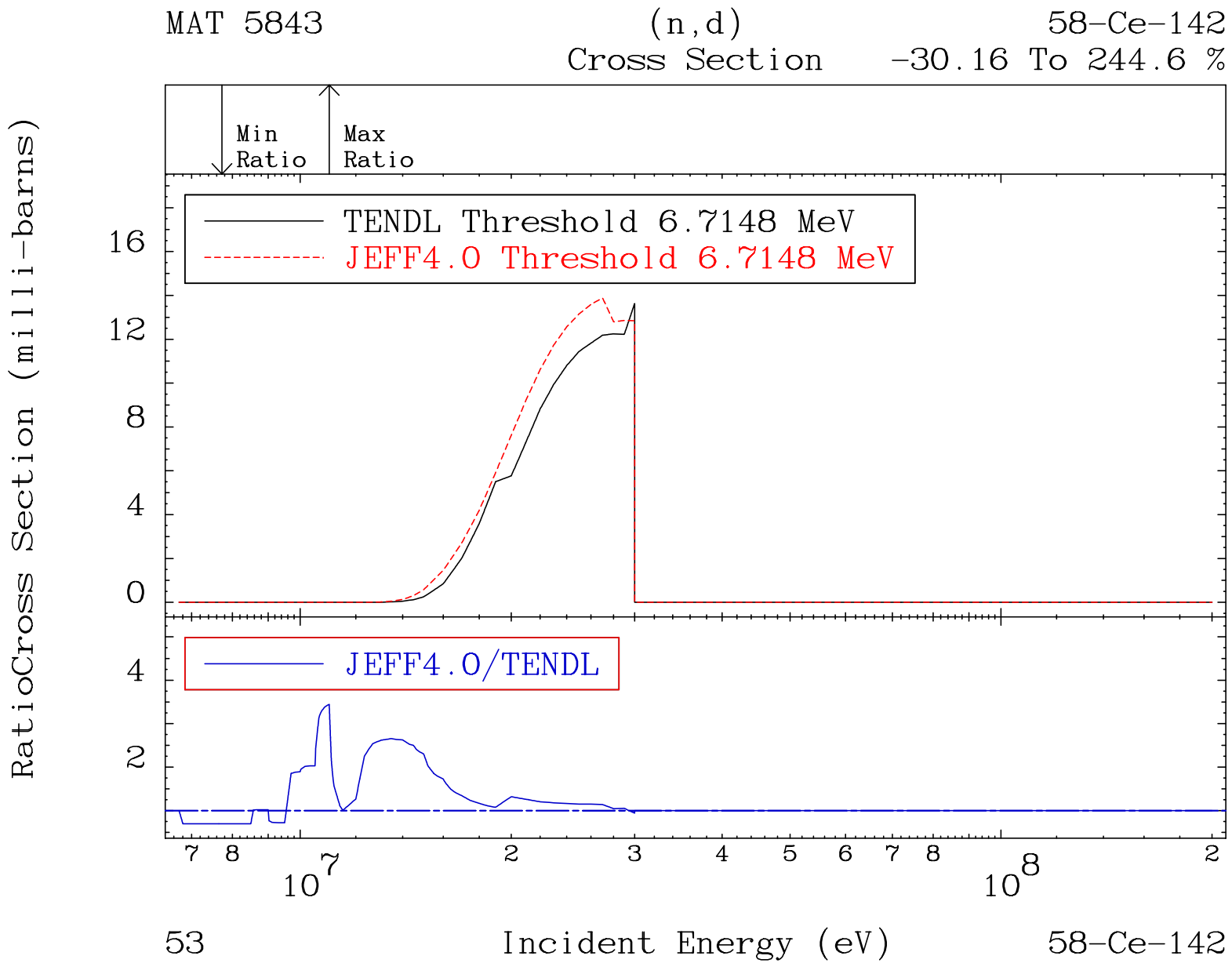

MAT 5843
MT= 79 (n,n') Level
58-Ce-142
Cross Section -51.30 To 0.000 %
Min
Ratio
TENDL Threshold 2.6167 MeV
JEFF4.0 Threshold 2.6167 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
1.2
0.8
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
48
Incident Energy (eV)
58-Ce-142

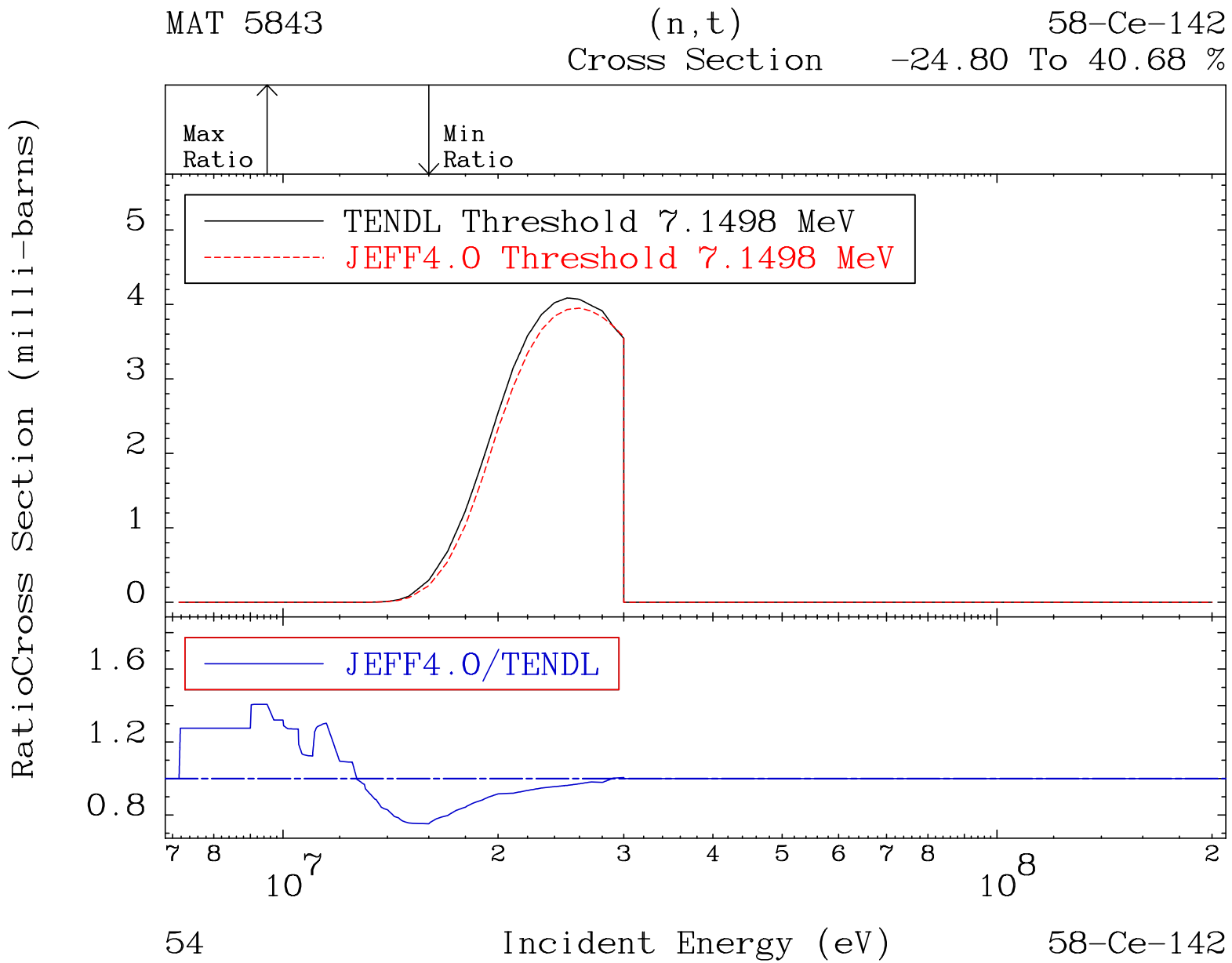

MAT 5843
MT= 80 (n,n') Level
58-Ce-142
Cross Section -84.26 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 2.6210 MeV
JEFF4.0 Threshold 2.6210 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
1.2
0.8
0.4
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
49
Incident Energy (eV)
58-Ce-142

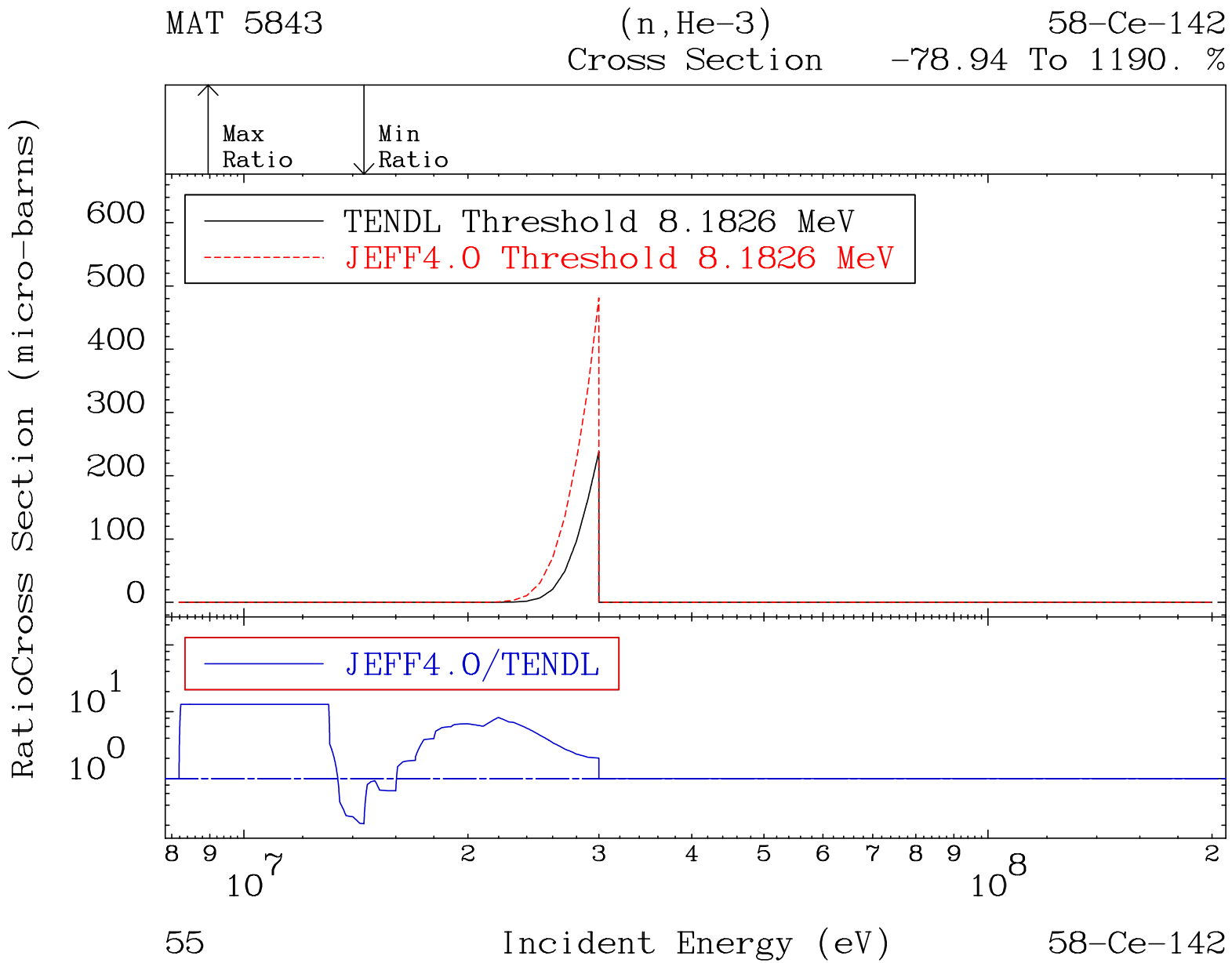

MAT 5843
(n,n') Continuum
Cross Section
58-Ce-142
-0.182 To 50.18 %
Min Ratio
Max Ratio
TENDL Threshold 2.6210 MeV
JEFF4.0 Threshold 2.6210 MeV
JEFF4.0/TENDL
Cross Section (barns)
Ratio
2.5
2.0
1.5
1.0
0.5
0.0
1.6
1.2
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
50
Incident Energy (eV)
58-Ce-142

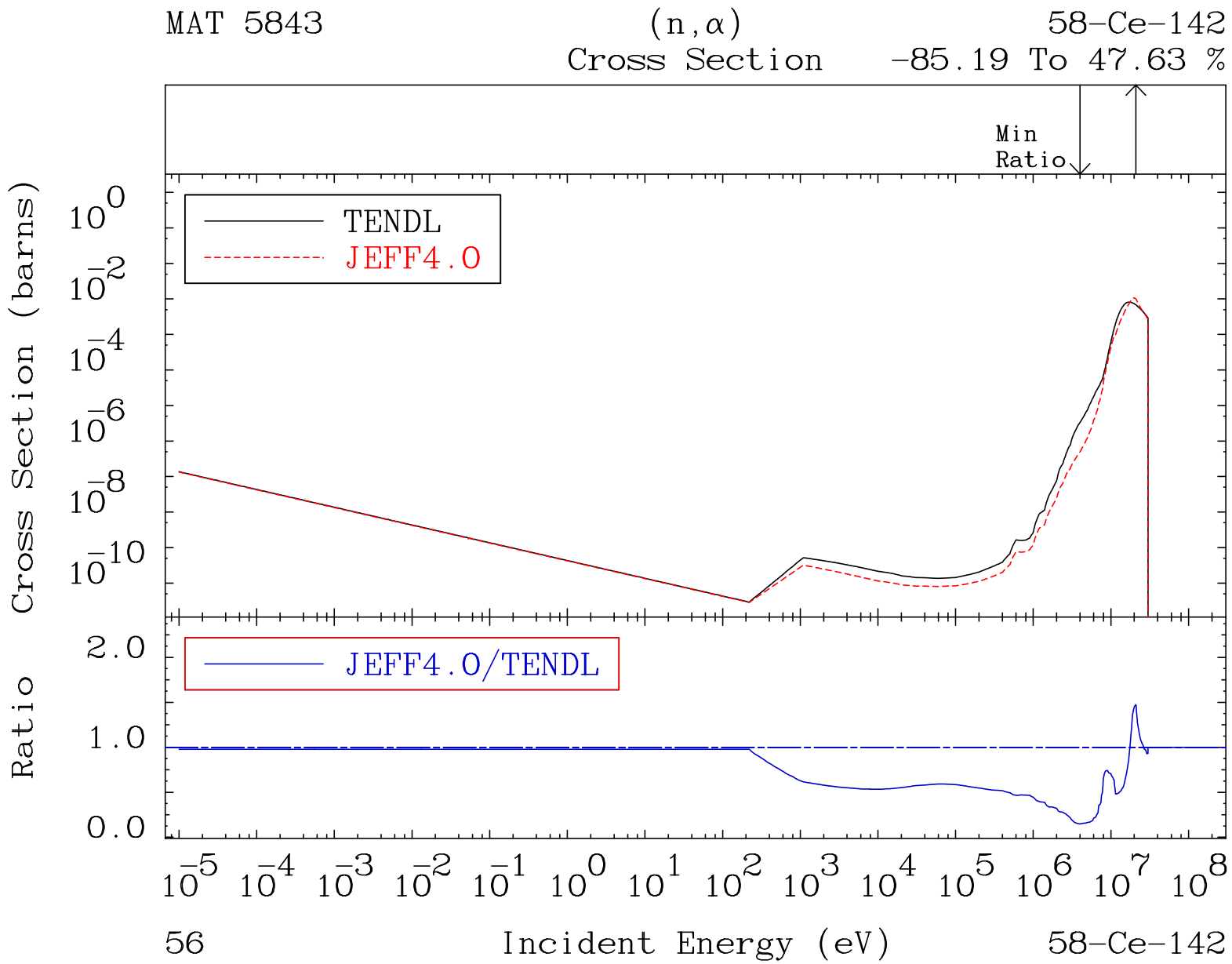

MAT 5843
(n,γ)
Cross Section
58-Ce-142
-46.06 To 0.742 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
51
58-Ce-142

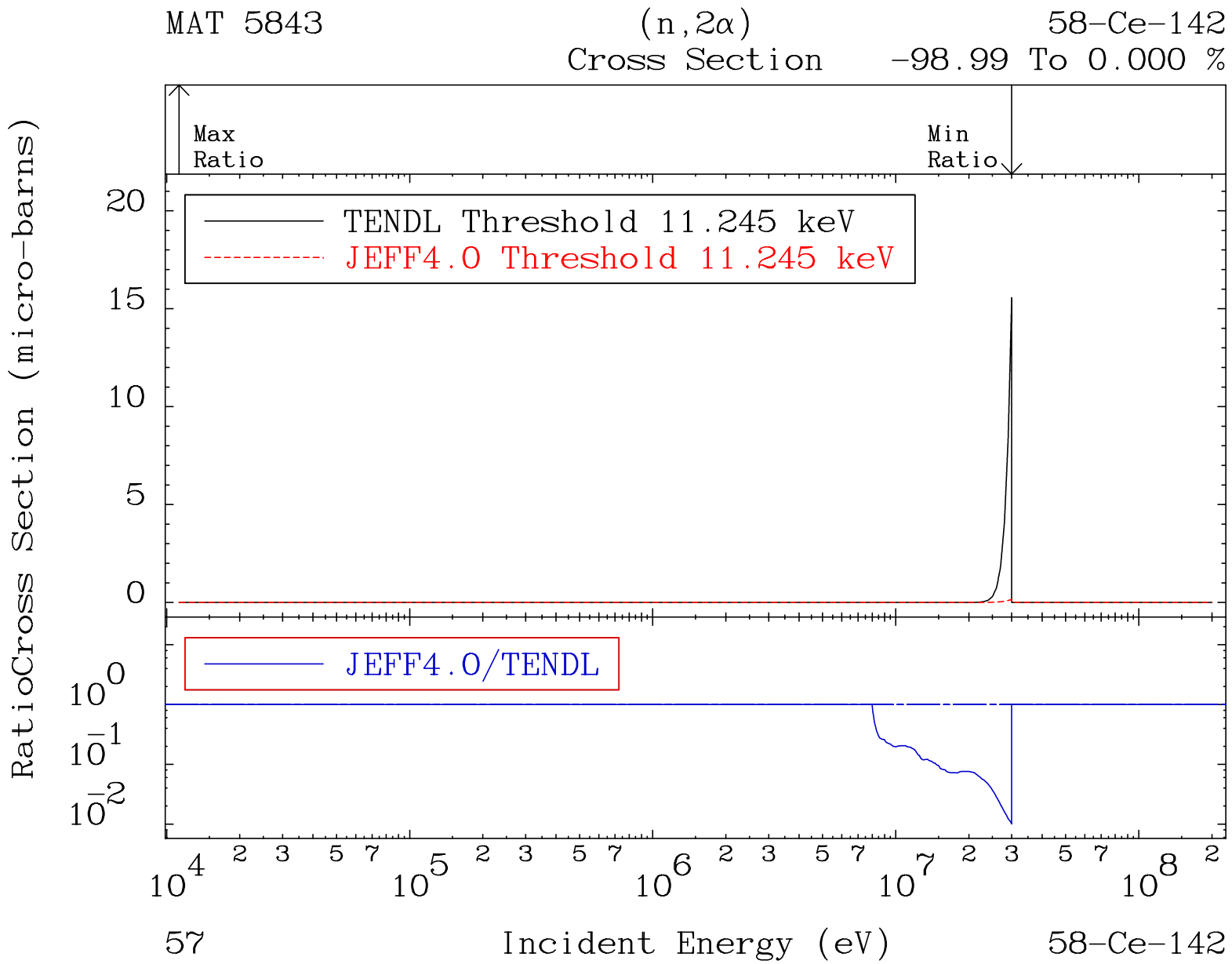

MAT 5843
(n,p)
Cross Section
58-Ce-142
-44.74 To 1.883 %
Max Ratio
Min Ratio
TENDL Threshold 3.7531 MeV
JEFF4.0 Threshold 3.7531 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
1.2
0.8
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
52
Incident Energy (eV)
58-Ce-142

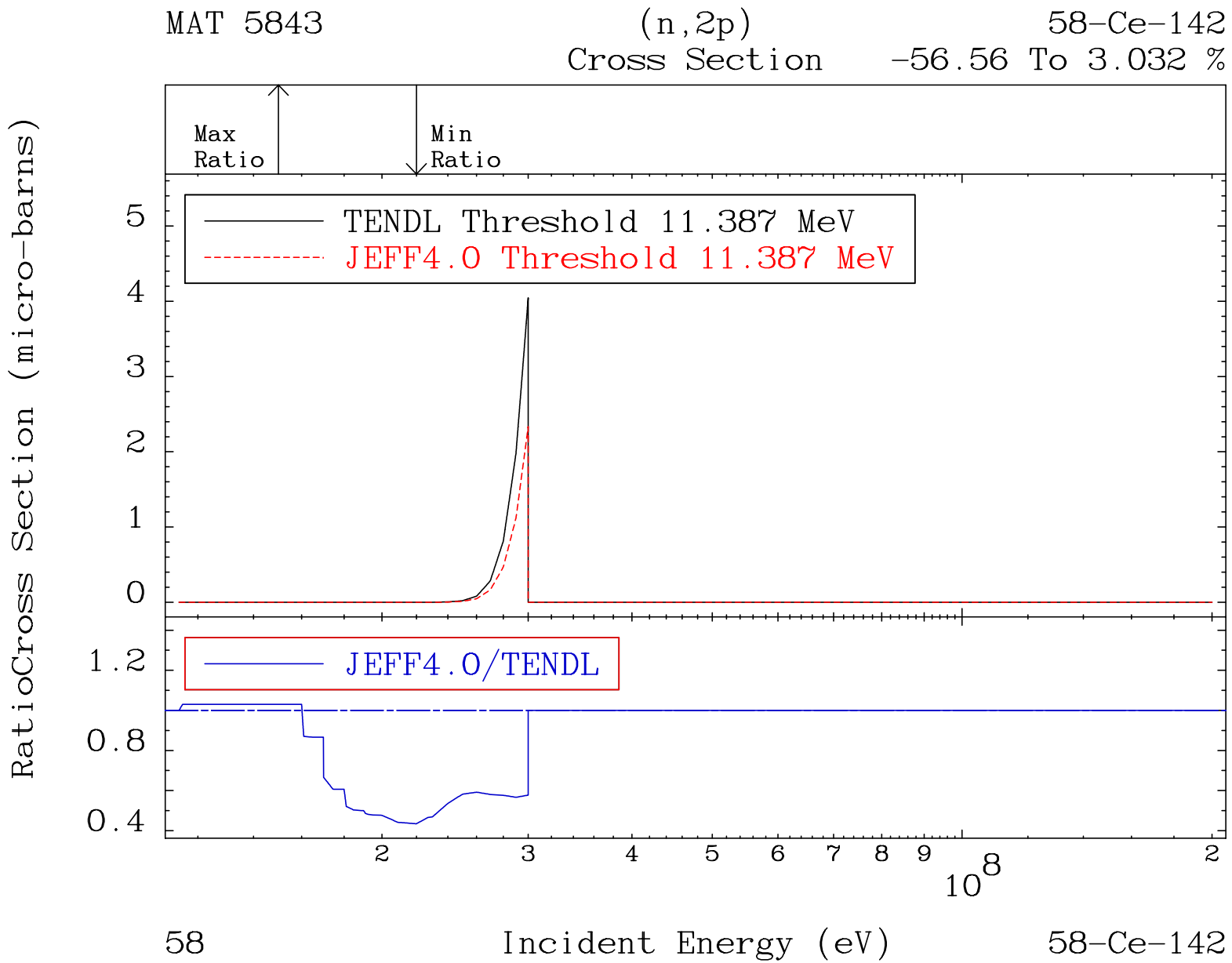

MAT 5843
(n,d)
58-Ce-142
Cross Section
-30.16 To 244.6 %
Min Ratio
Max Ratio
TENDL Threshold 6.7148 MeV
JEFF4.0 Threshold 6.7148 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
4
2
7 8 10^7 2 3 4 5 6 7 8 10^8 2
53
Incident Energy (eV)
58-Ce-142

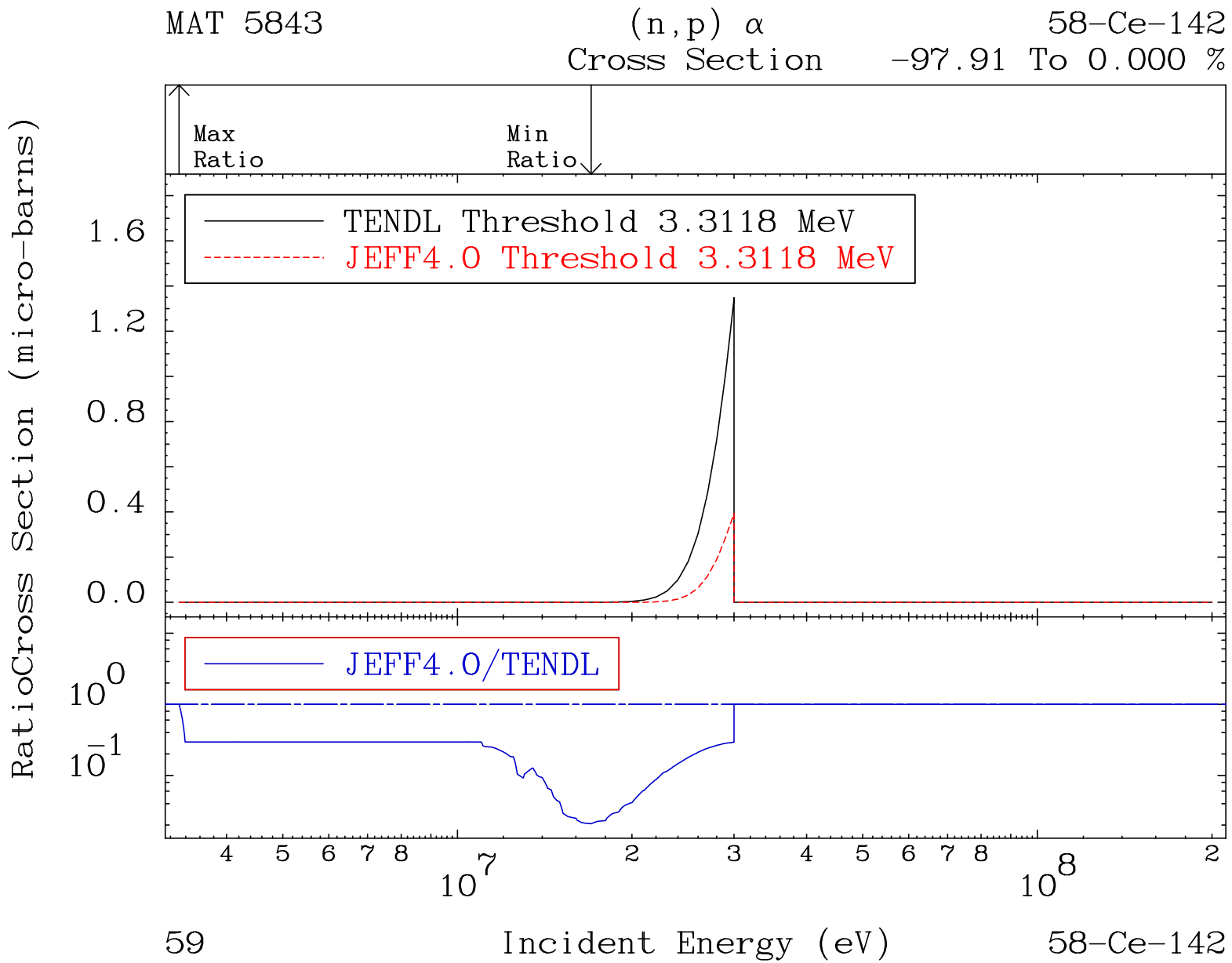

MAT 5843
(n,t)
Cross Section
58-Ce-142
-24.80 To 40.68 %
Max Ratio
Min Ratio
TENDL Threshold 7.1498 MeV
JEFF4.0 Threshold 7.1498 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
54
58-Ce-142

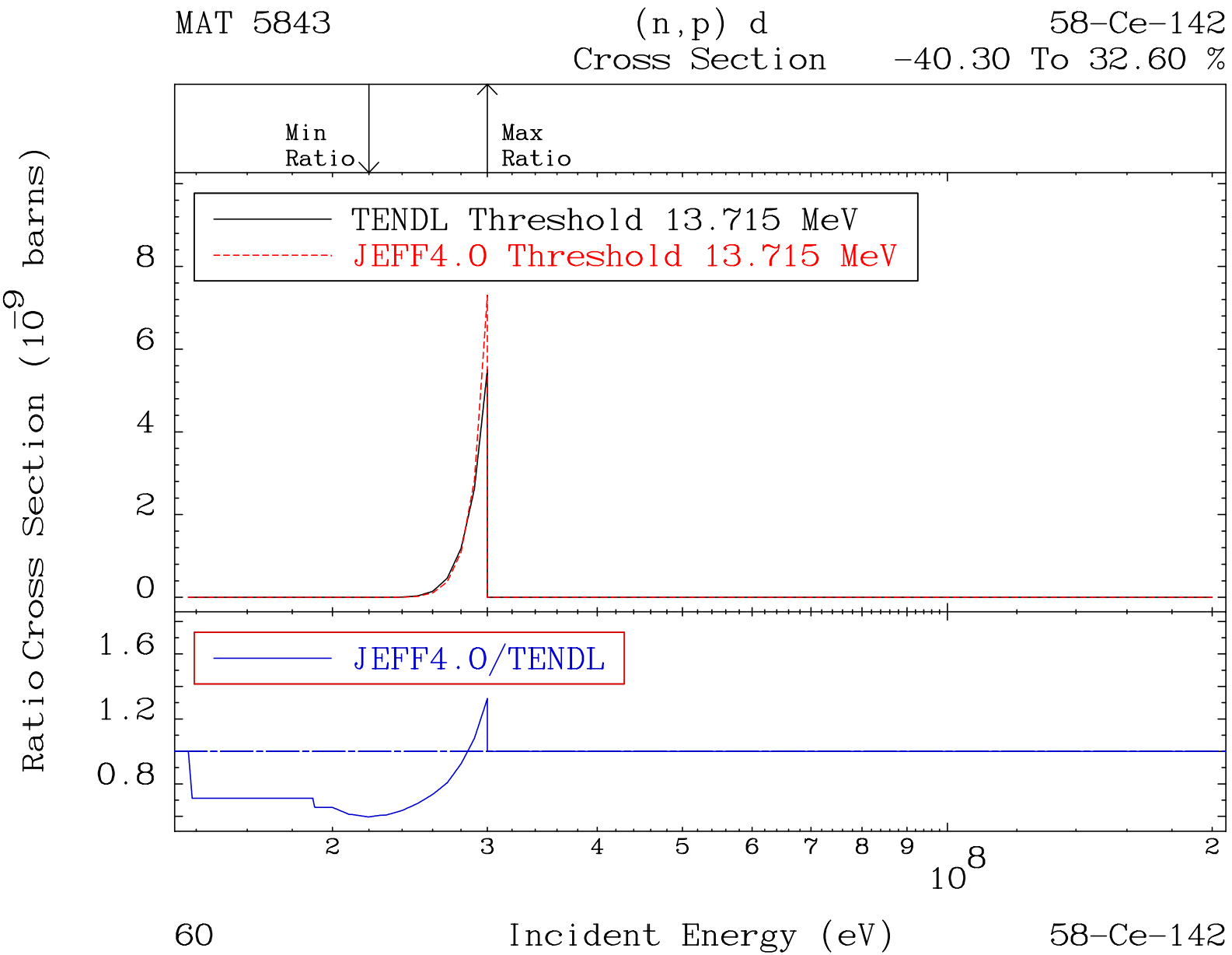

MAT 5843
(n,He-3)
Cross Section
58-Ce-142
-78.94 To 1190. %
Max Ratio
Min Ratio
TENDL Threshold 8.1826 MeV
JEFF4.0 Threshold 8.1826 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
600
500
400
300
200
100
0
10^1
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
55
Incident Energy (eV)
58-Ce-142

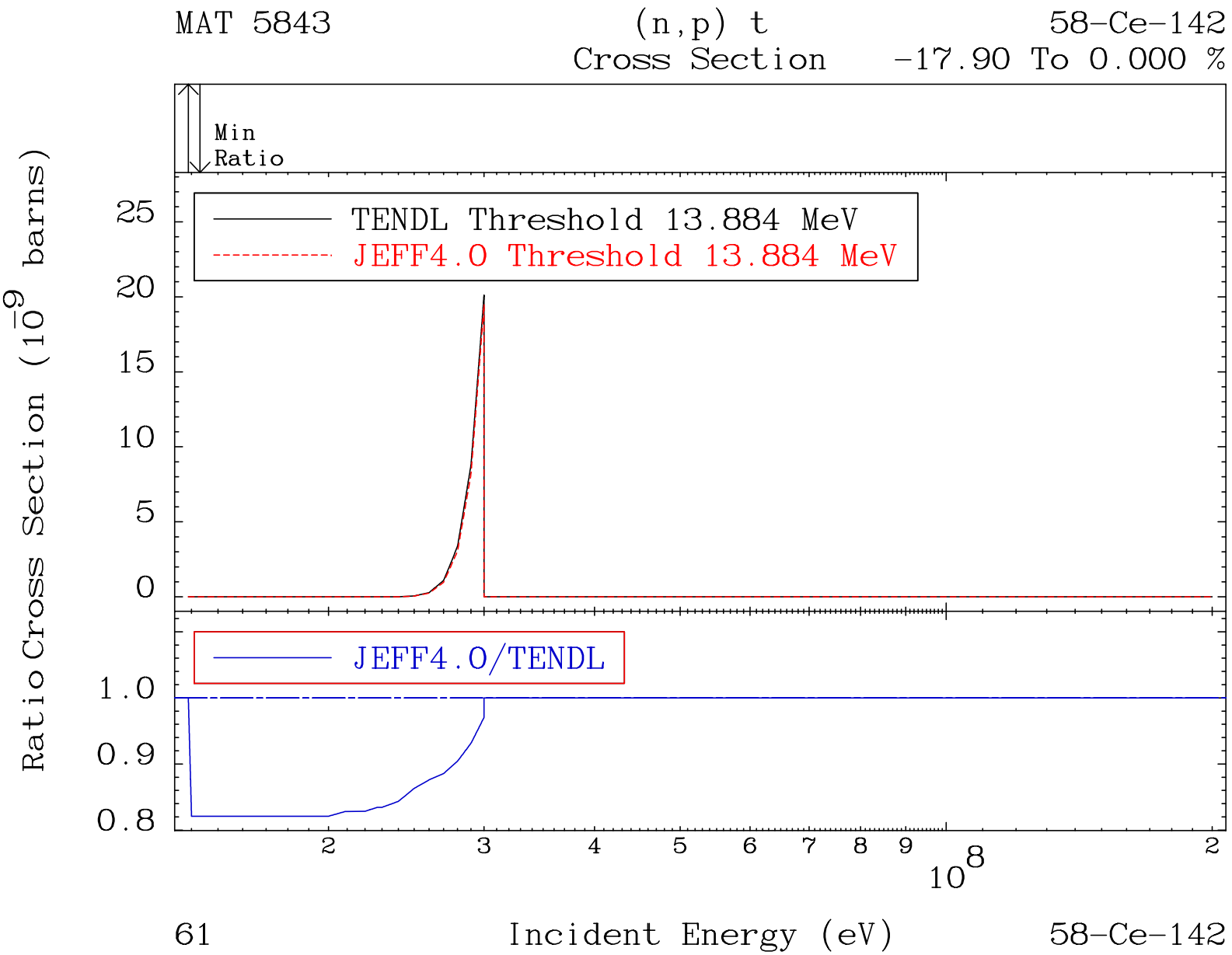

MAT 5843
(n,α)
Cross Section
58-Ce-142
-85.19 To 47.63 %
Min
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
56
58-Ce-142

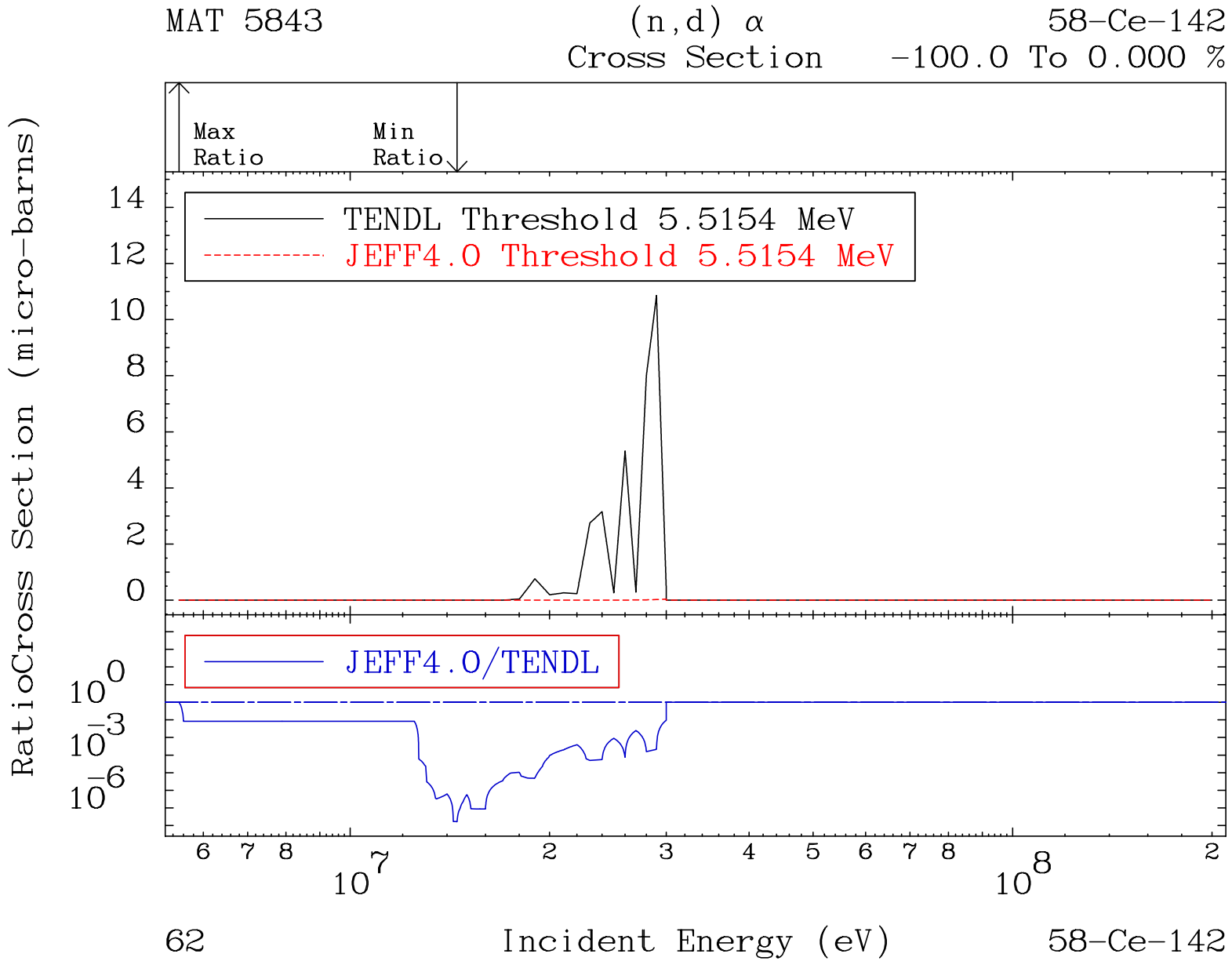

MAT 5843
(n,2α)
Cross Section
58-Ce-142
-98.99 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 11.245 keV
JEFF4.0 Threshold 11.245 keV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
57
58-Ce-142

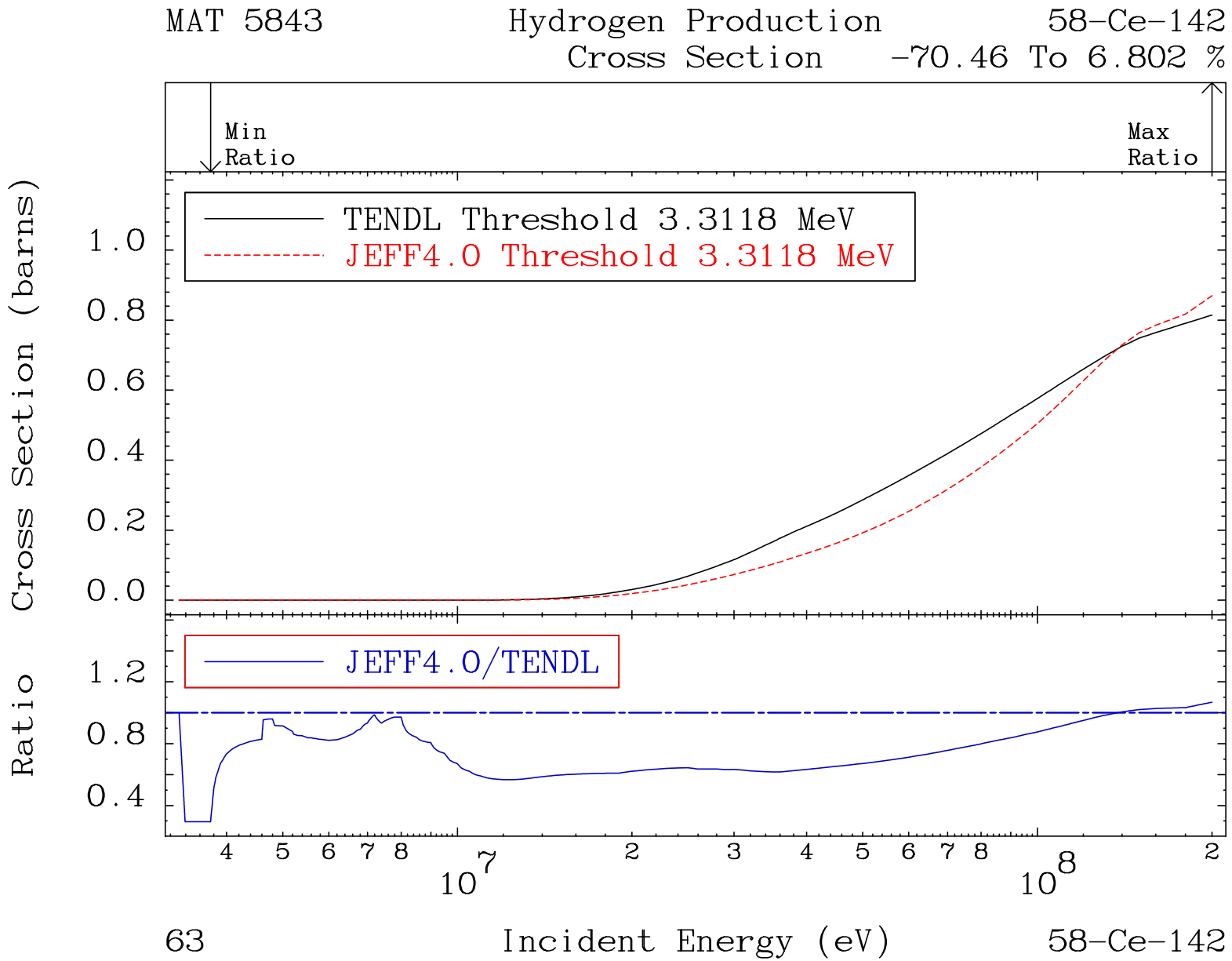

MAT 5843
(n,2p)
Cross Section
58-Ce-142
-56.56 To 3.032 %
Max Ratio
Min Ratio
TENDL Threshold 11.387 MeV
JEFF4.0 Threshold 11.387 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
5
4
3
2
1
0
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
58-Ce-142

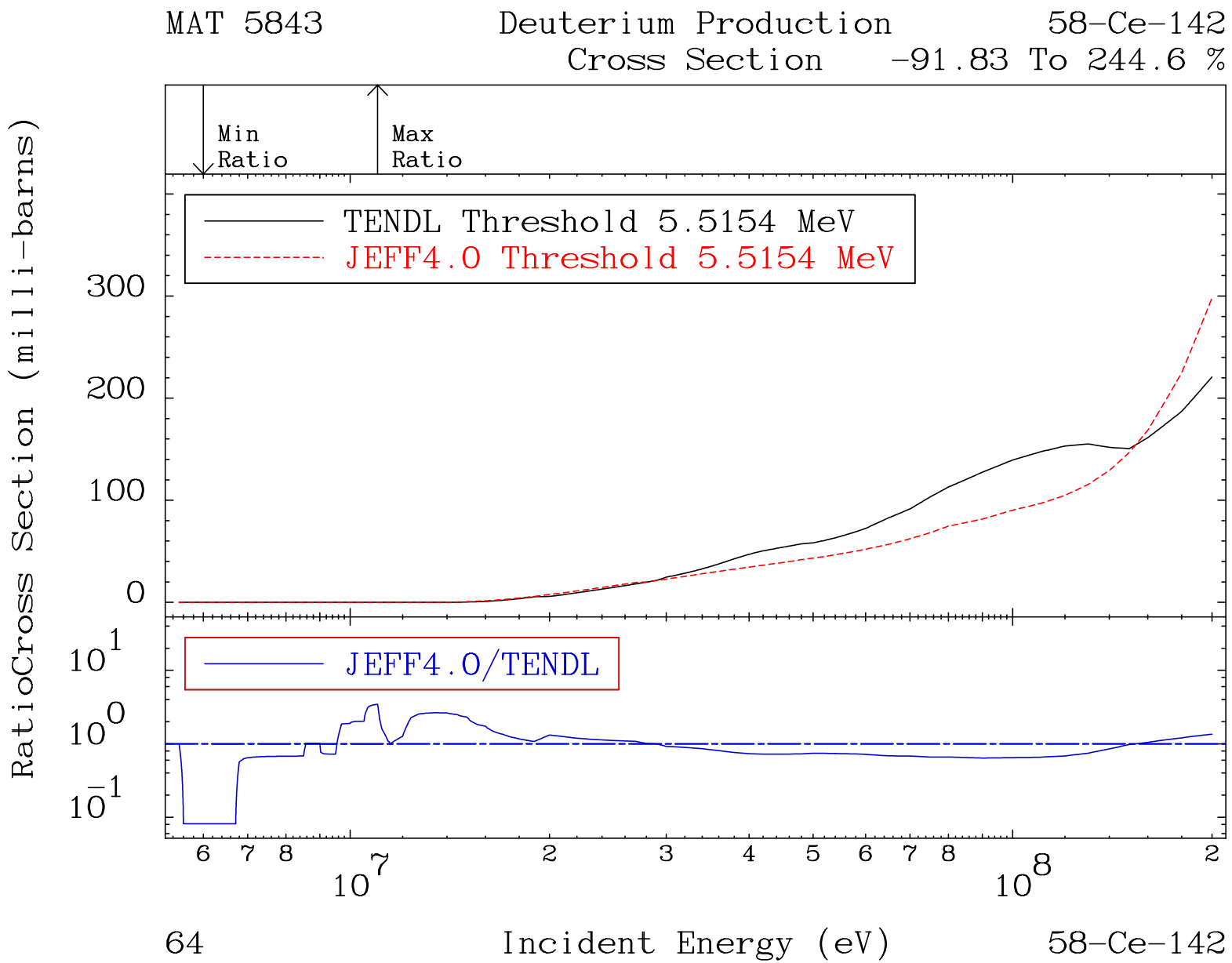

MAT 5843
(n,p) α
Cross Section
58-Ce-142
-97.91 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 3.3118 MeV
JEFF4.0 Threshold 3.3118 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
1.6
1.2
0.8
0.4
0.0
10^0
10^-1
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
59
Incident Energy (eV)
58-Ce-142

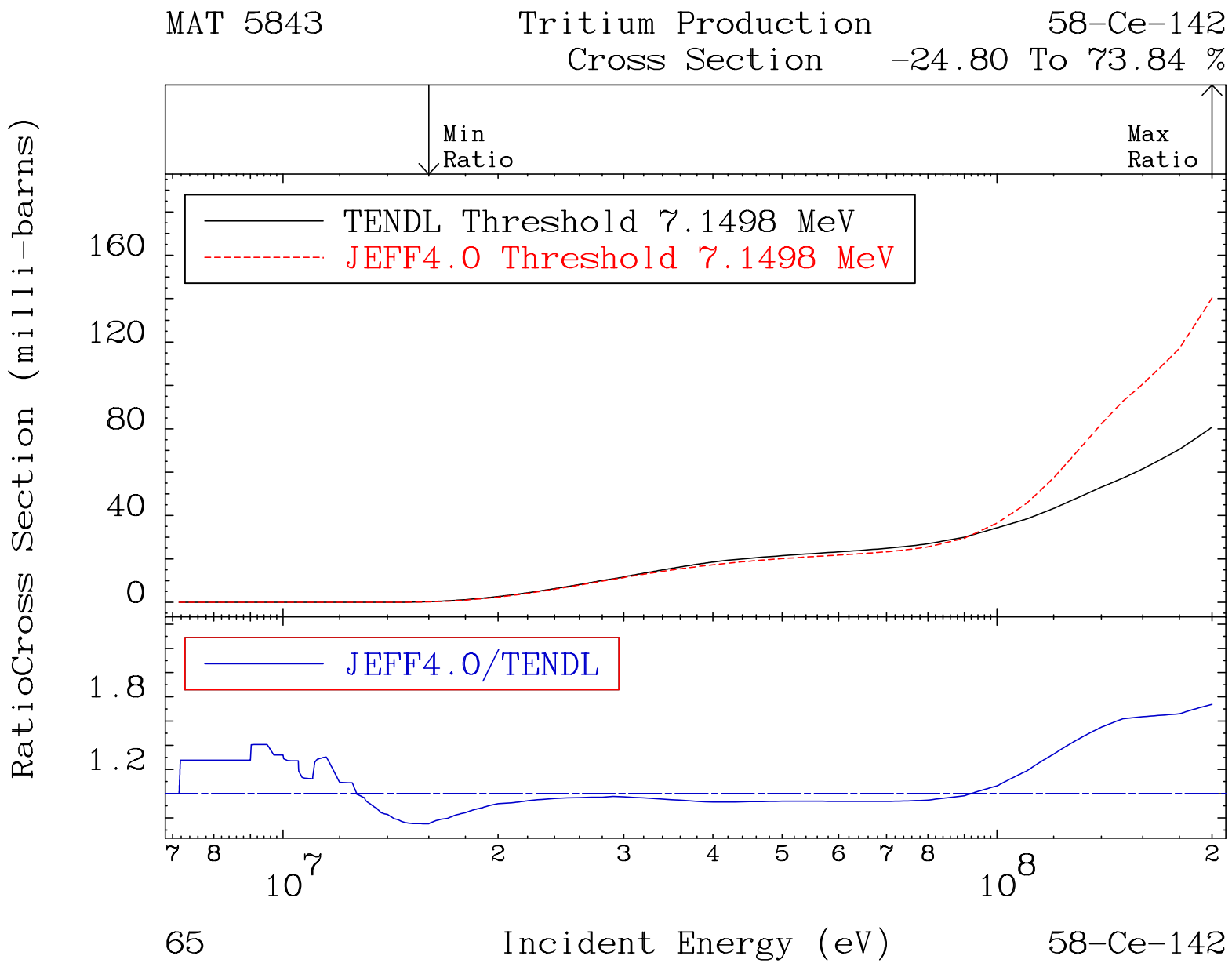

MAT 5843
(n,p) d
Cross Section
58-Ce-142
-40.30 To 32.60 %
Min Ratio
Max Ratio
TENDL Threshold 13.715 MeV
JEFF4.0 Threshold 13.715 MeV
JEFF4.0/TENDL
Ratio Cross Section (10^{-9} barns)
8
6
4
2
0
1.6
1.2
0.8
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
58-Ce-142

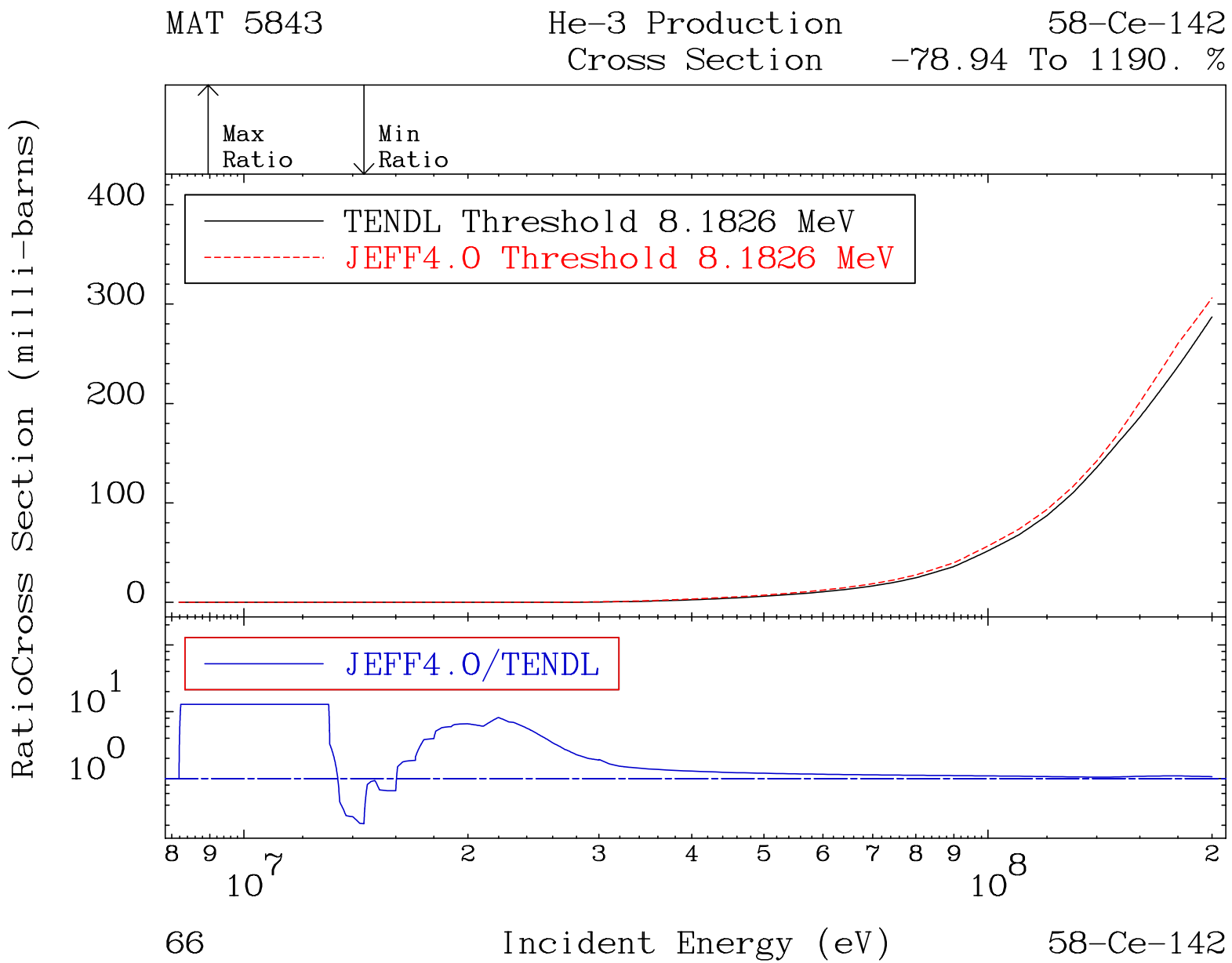

MAT 5843
(n,p) t
Cross Section
58-Ce-142
-17.90 To 0.000 %
Min
Ratio
TENDL Threshold 13.884 MeV
JEFF4.0 Threshold 13.884 MeV
JEFF4.0/TENDL
Ratio Cross Section (10^-9 barns)
25
20
15
10
5
0
1.0
0.9
0.8
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
58-Ce-142

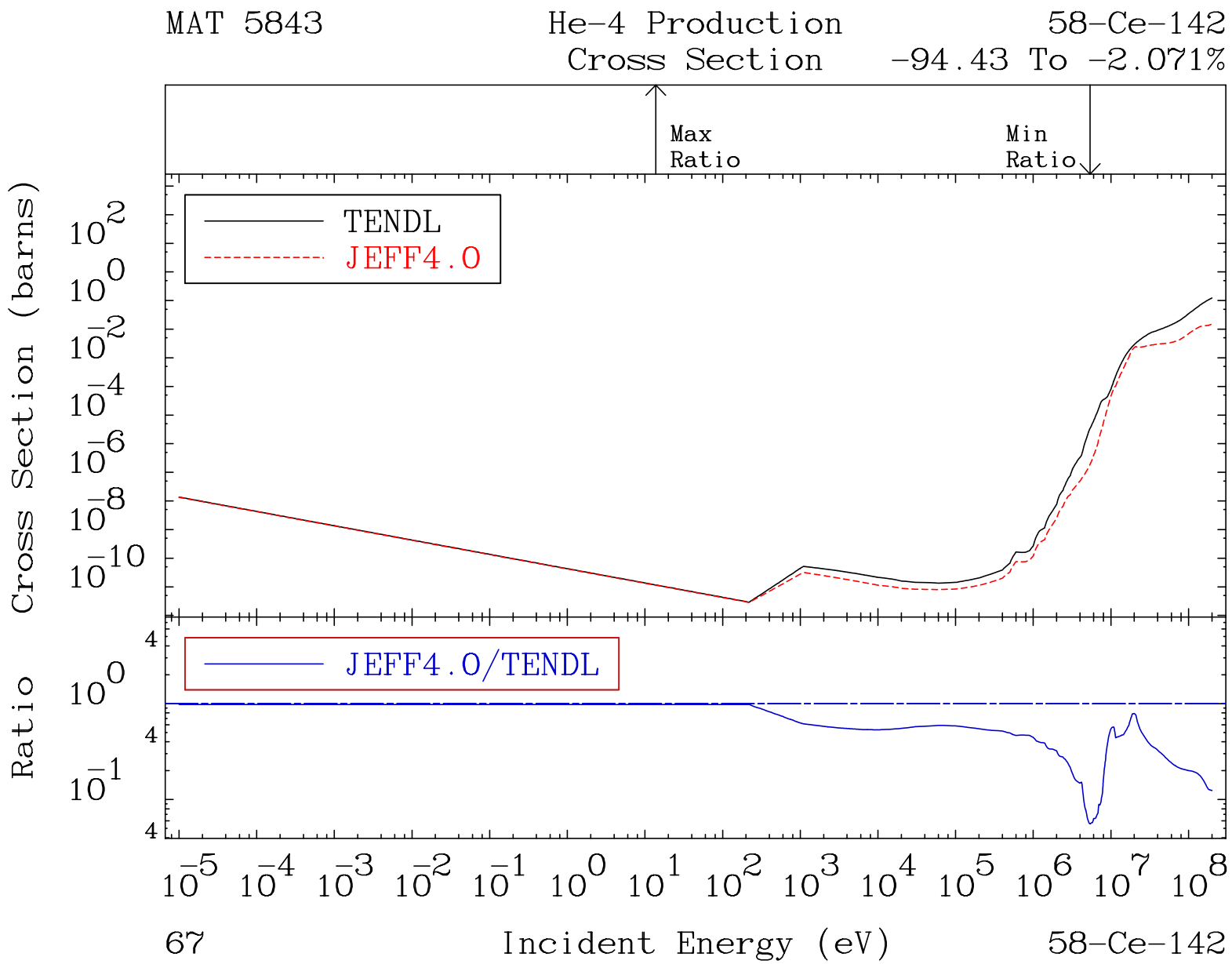

MAT 5843
(n,d) α
Cross Section
58-Ce-142
-100.0 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 5.5154 MeV
JEFF4.0 Threshold 5.5154 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
62
58-Ce-142

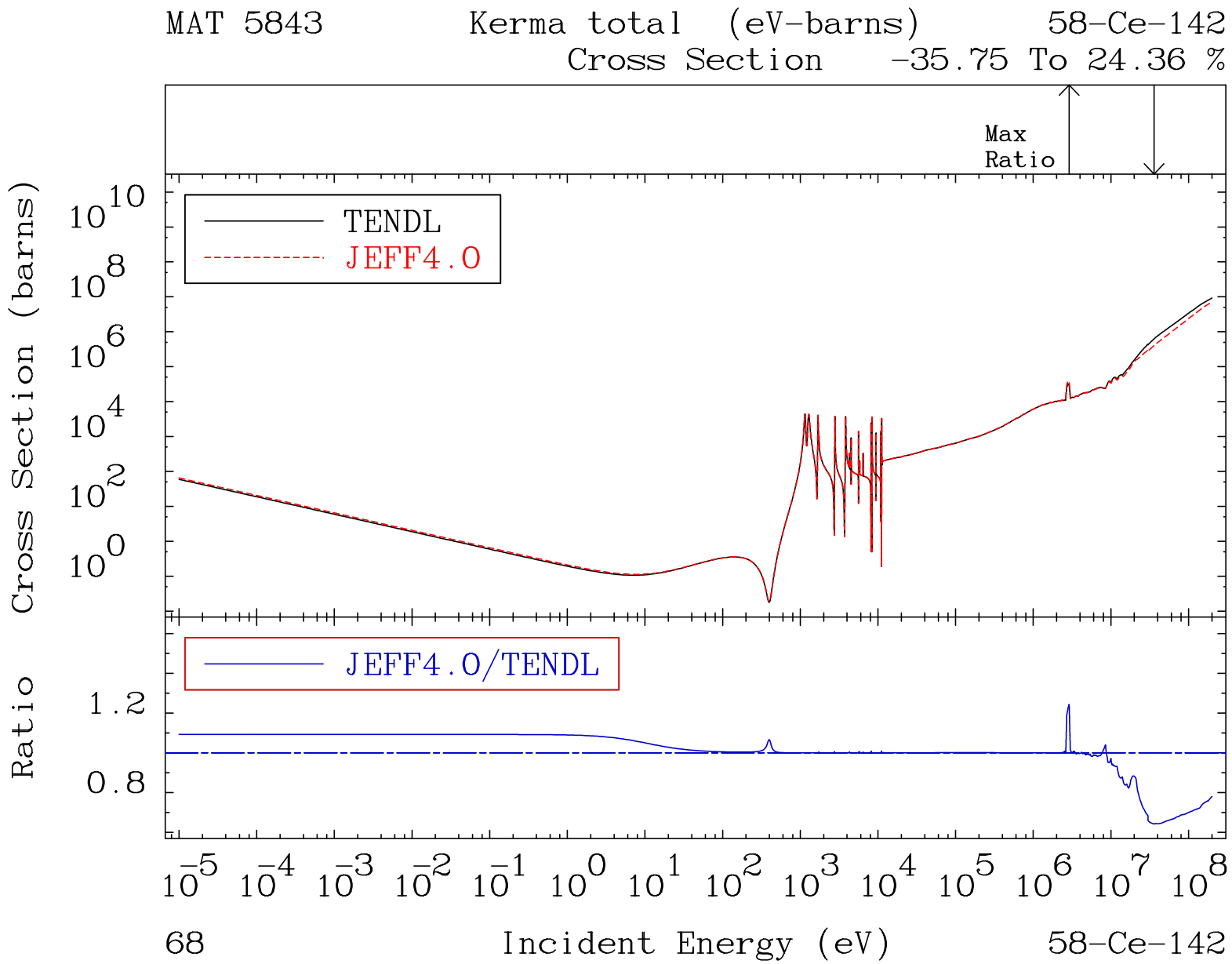

MAT 5843
Hydrogen Production
58-Ce-142
Cross Section
-70.46 To 6.802 %
Min Ratio
Max Ratio
TENDL Threshold 3.3118 MeV
JEFF4.0 Threshold 3.3118 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF4.0/TENDL
Ratio
1.2
0.8
0.4
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
63
Incident Energy (eV)
58-Ce-142

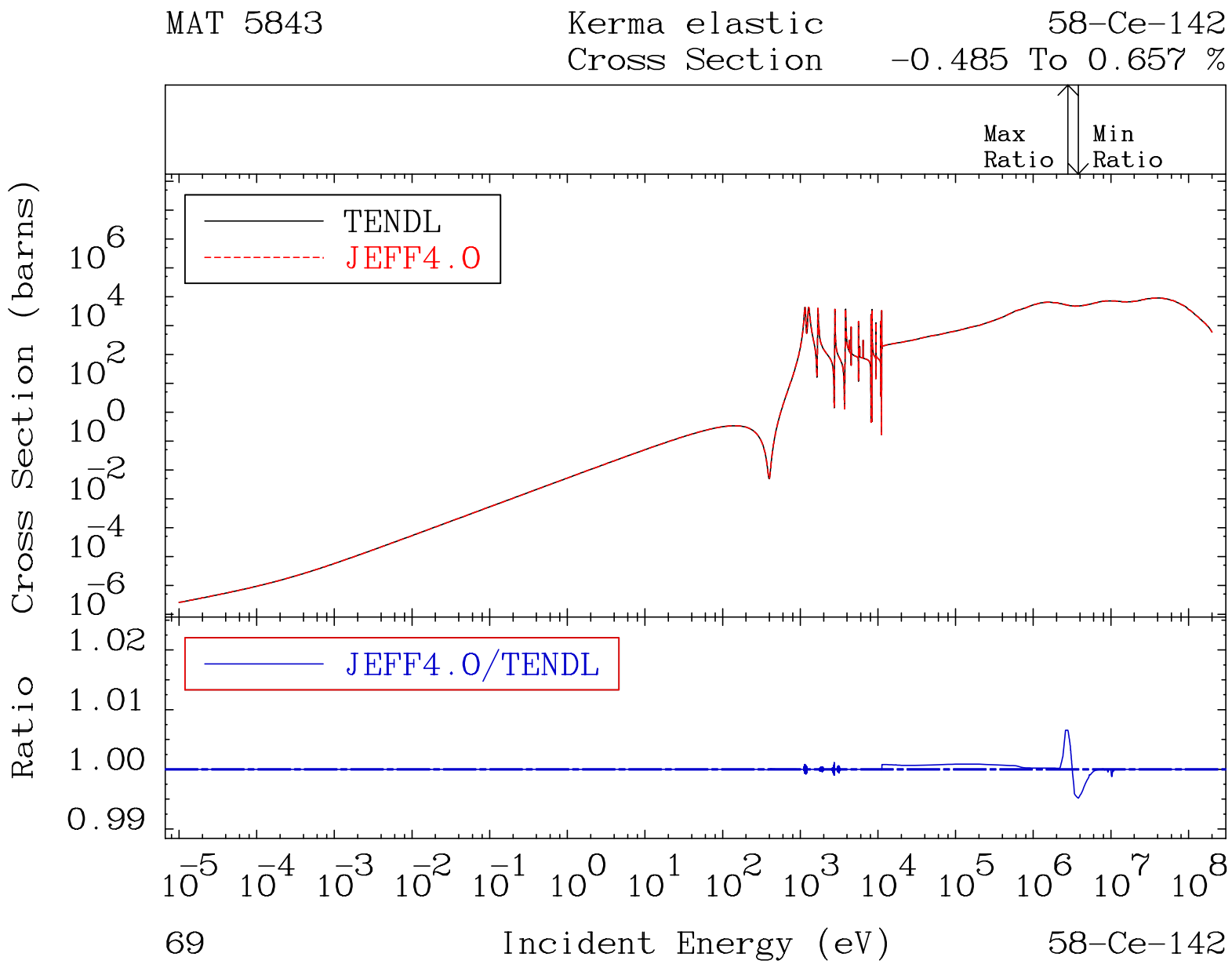

MAT 5843
Deuterium Production
58-Ce-142
Cross Section
-91.83 To 244.6 %
Min Ratio
Max Ratio
TENDL Threshold 5.5154 MeV
JEFF4.0 Threshold 5.5154 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
10^1
10^0
10^-1
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
64
Incident Energy (eV)
58-Ce-142

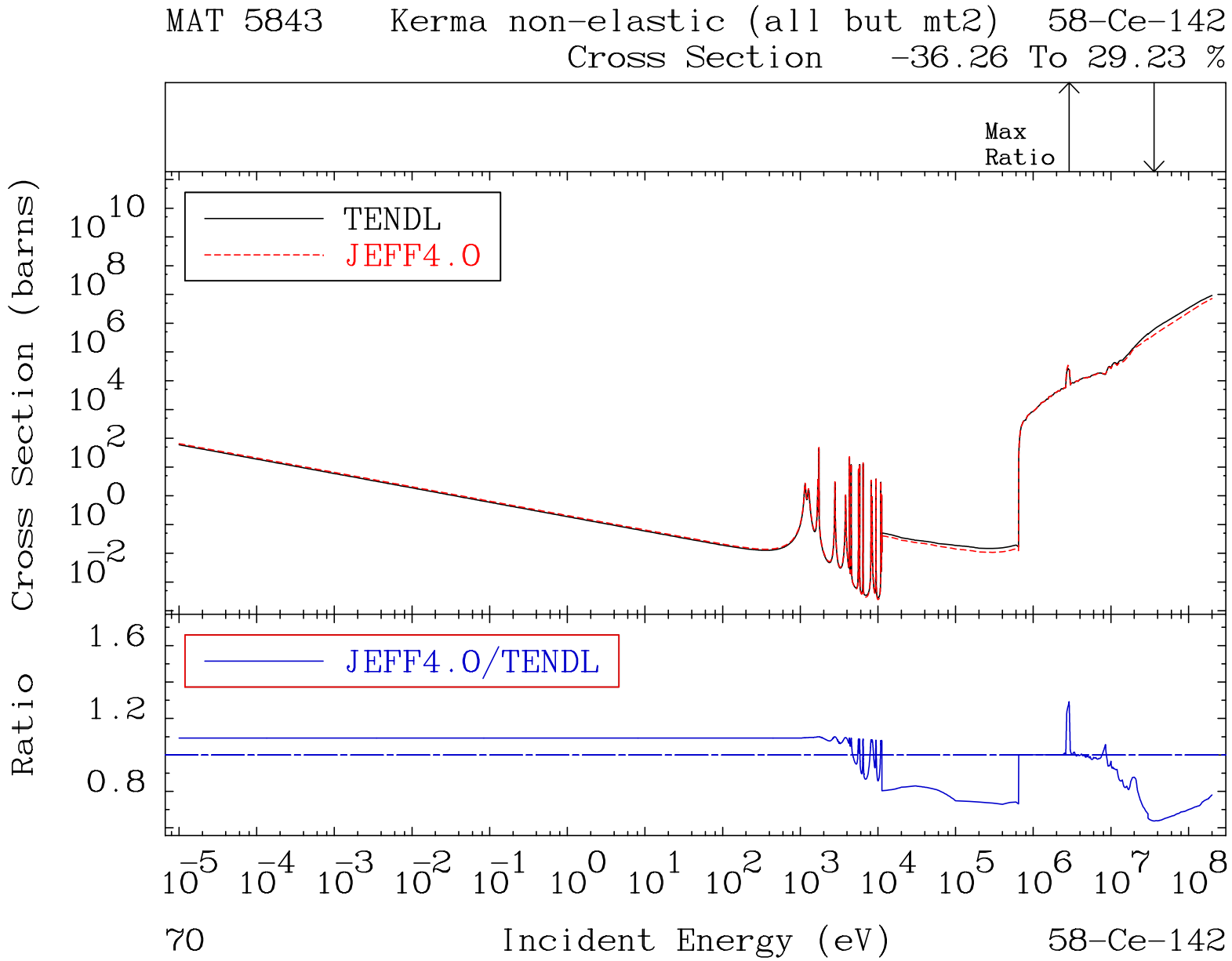

MAT 5843
Tritium Production
Cross Section
58-Ce-142
-24.80 To 73.84 %
Min
Ratio
Max
Ratio
TENDL Threshold 7.1498 MeV
JEFF4.0 Threshold 7.1498 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.8
1.2
7 8
10^7
2 3 4 5 6 7 8
10^8
2
65
Incident Energy (eV)
58-Ce-142

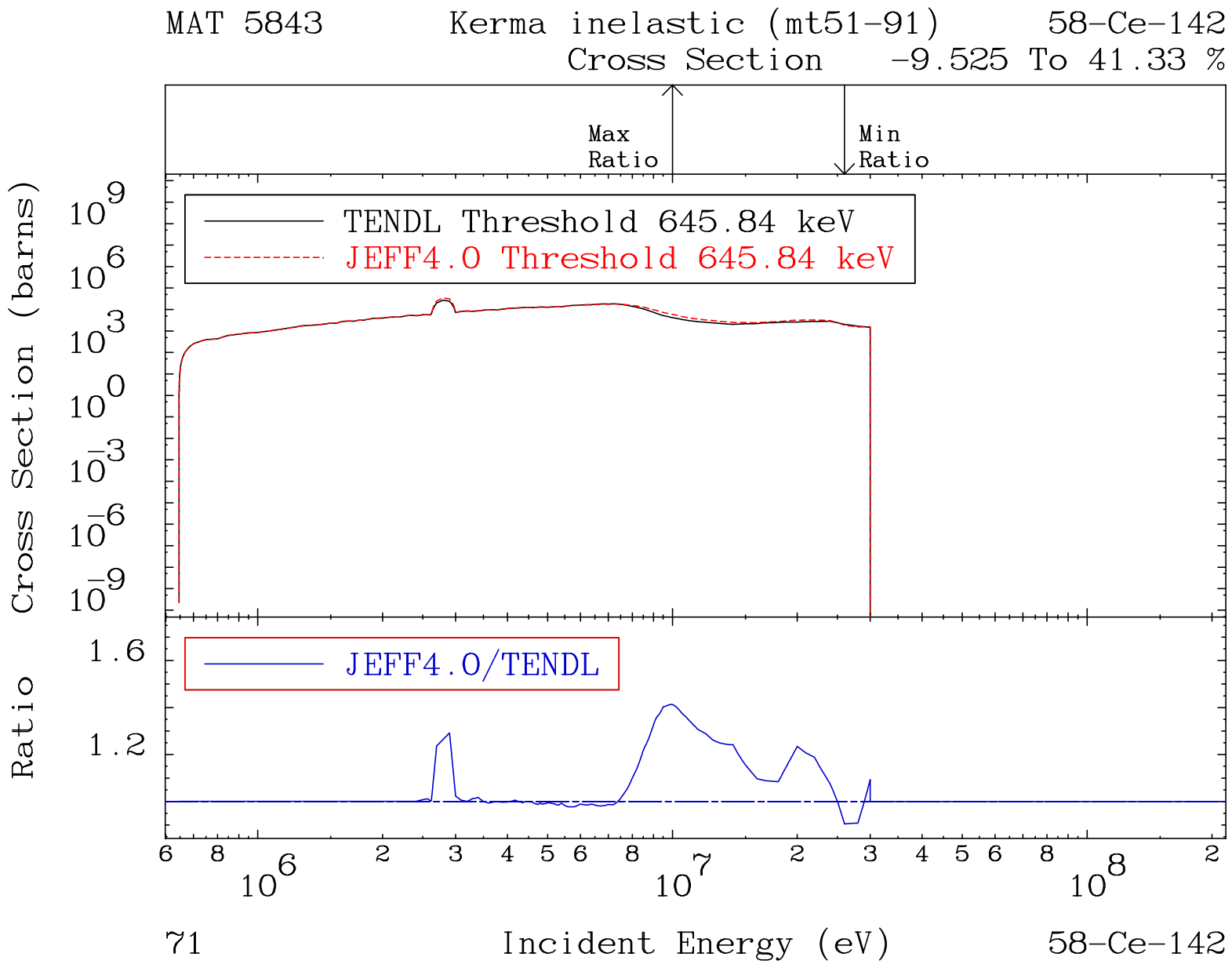

MAT 5843
He-3 Production
Cross Section
58-Ce-142
-78.94 To 1190. %
Max Ratio
Min Ratio
TENDL Threshold 8.1826 MeV
JEFF4.0 Threshold 8.1826 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
10^1
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
66
Incident Energy (eV)
58-Ce-142

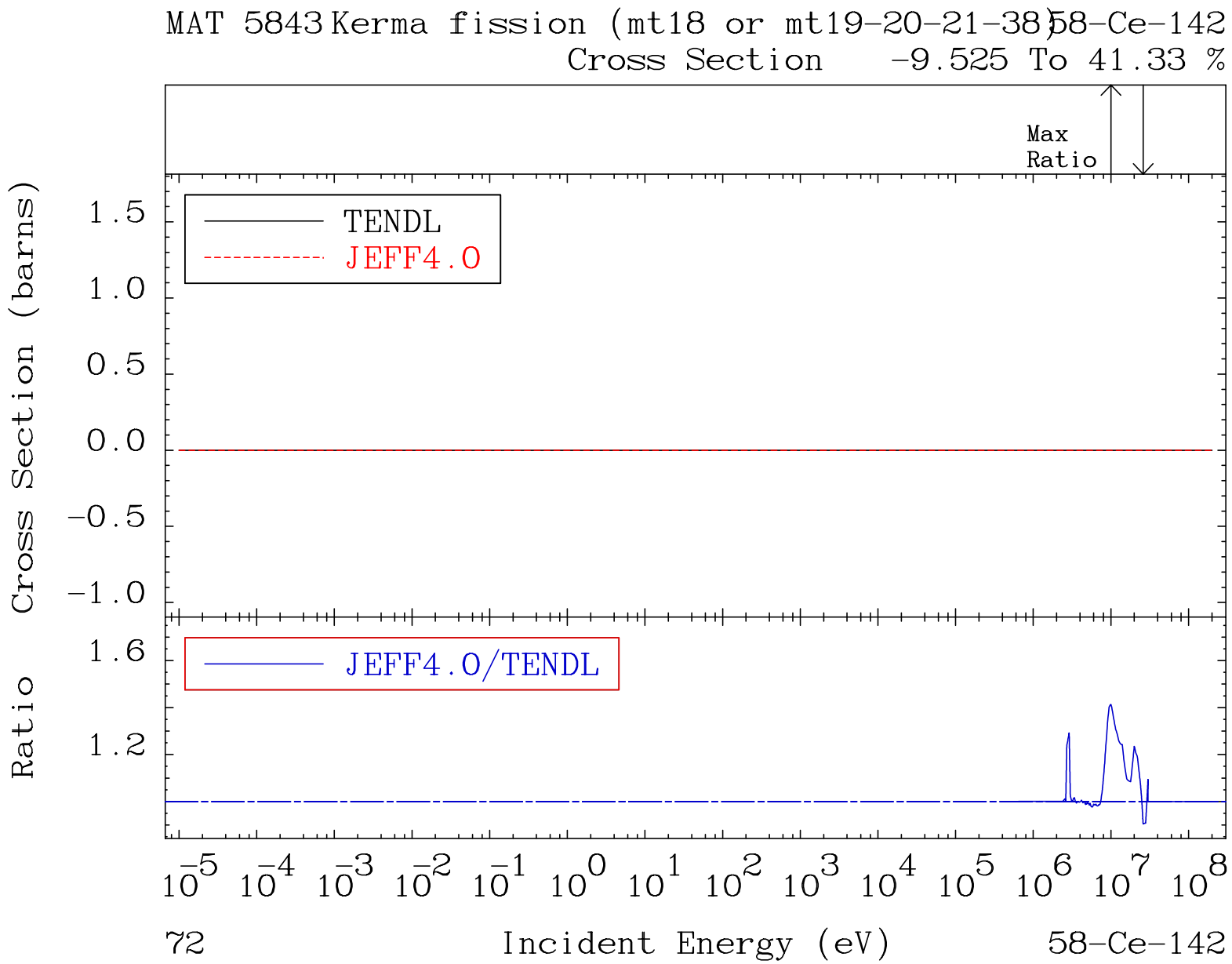

MAT 5843
He-4 Production
Cross Section
58-Ce-142
-94.43 To -2.071%
Max
Ratio
Min
Ratio
TENDL
JEFF4.0
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
67
58-Ce-142

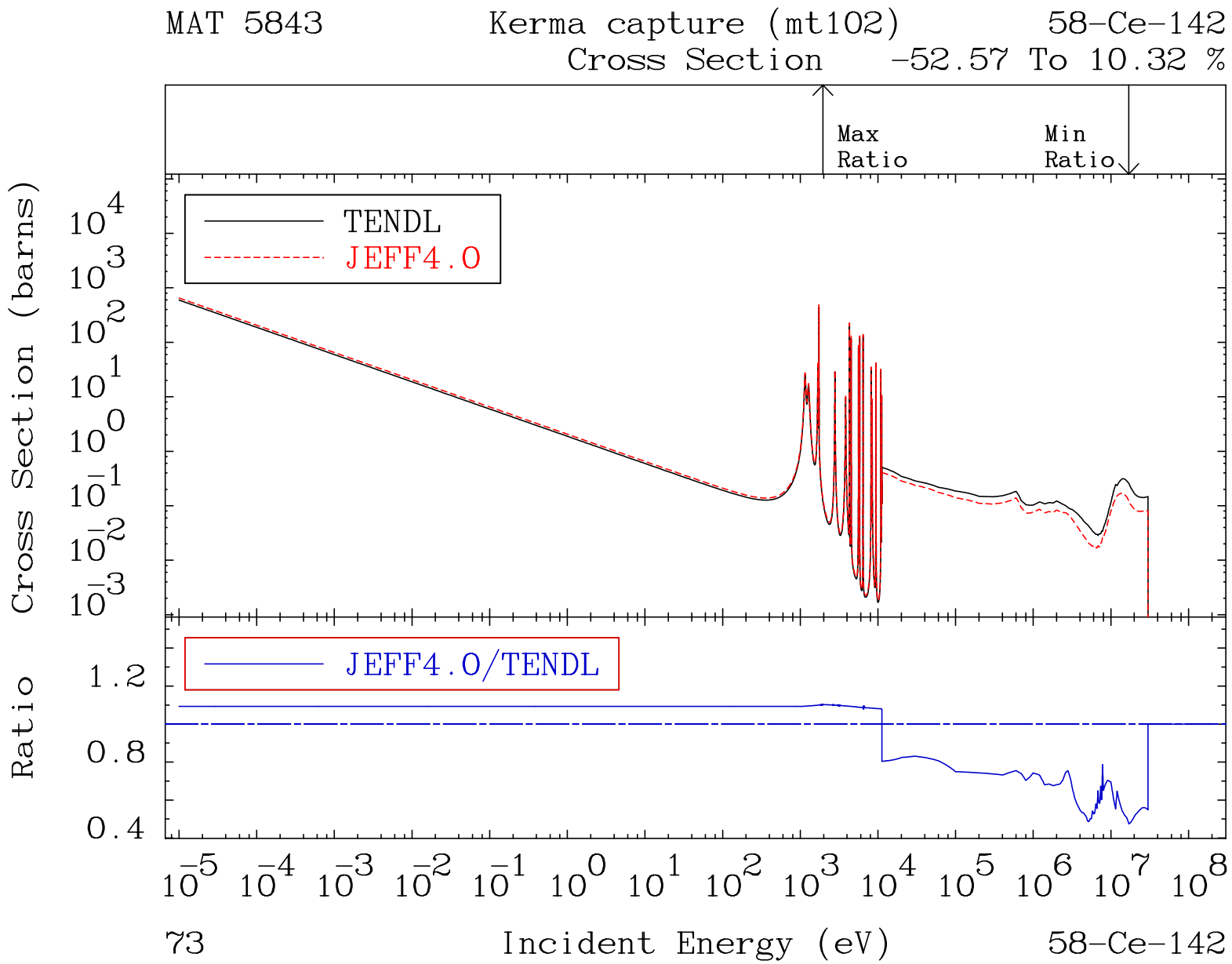

MAT 5843
Kerma total (eV-barns)
58-Ce-142
Cross Section -35.75 To 24.36 %
Max
Ratio
TENDL
JEFF4.0
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
68
58-Ce-142

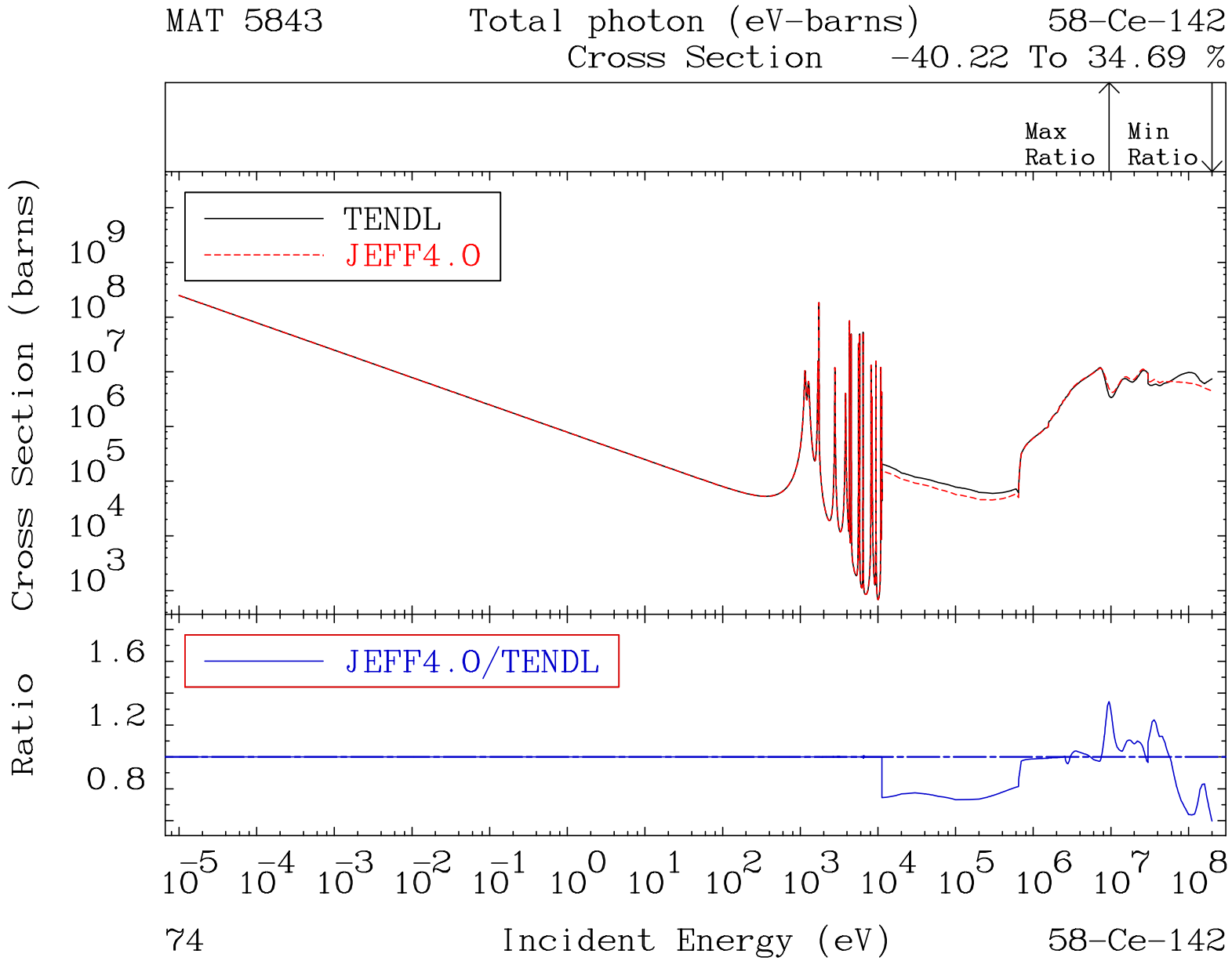

MAT 5843
Kerma elastic
Cross Section
58-Ce-142
-0.485 To 0.657 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
69
58-Ce-142

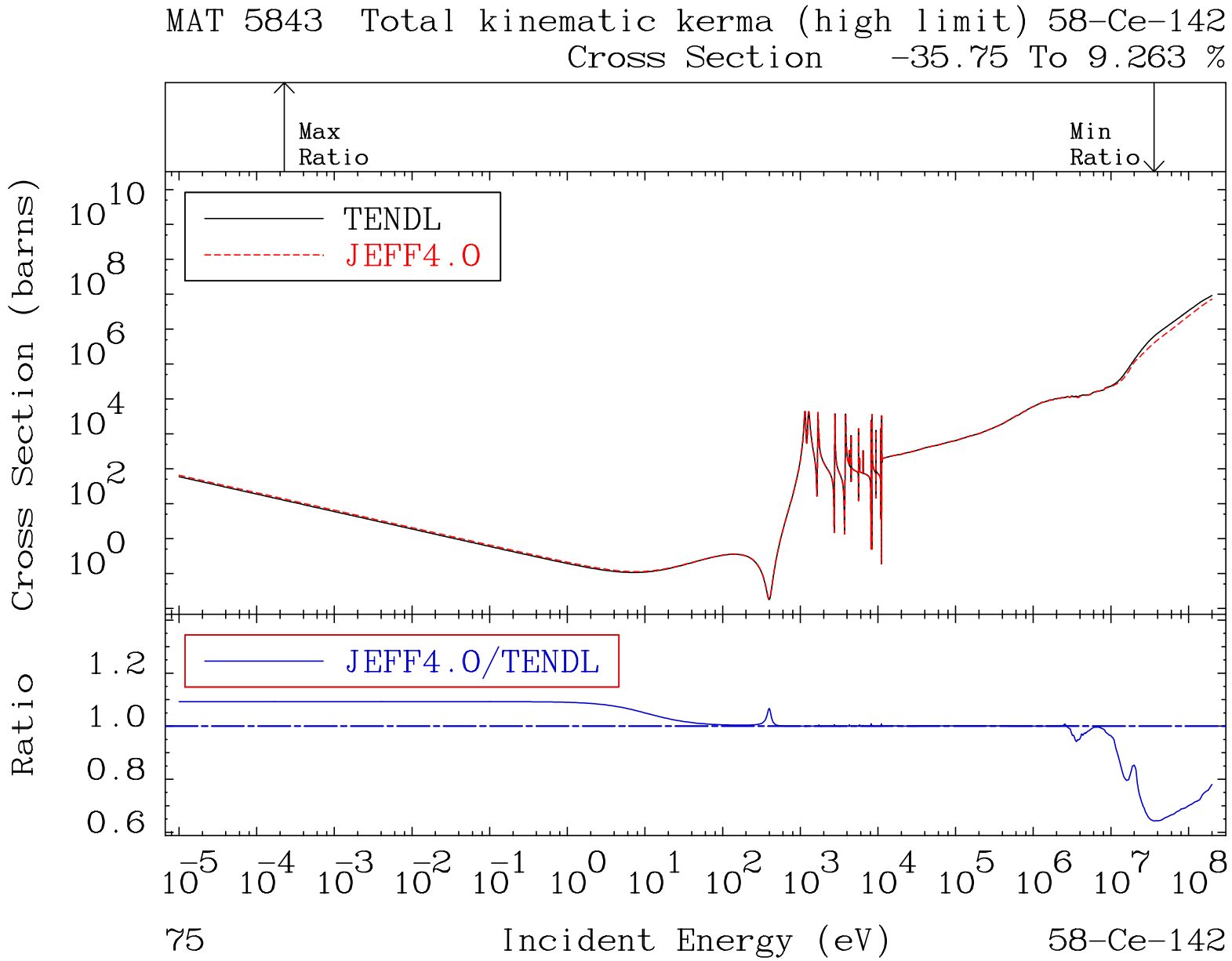

MAT 5843 Kerma non-elastic (all but mt2) 58-Ce-142
Cross Section -36.26 To 29.23 %
Max
Ratio
TENDL
JEFF4.0
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
70
58-Ce-142

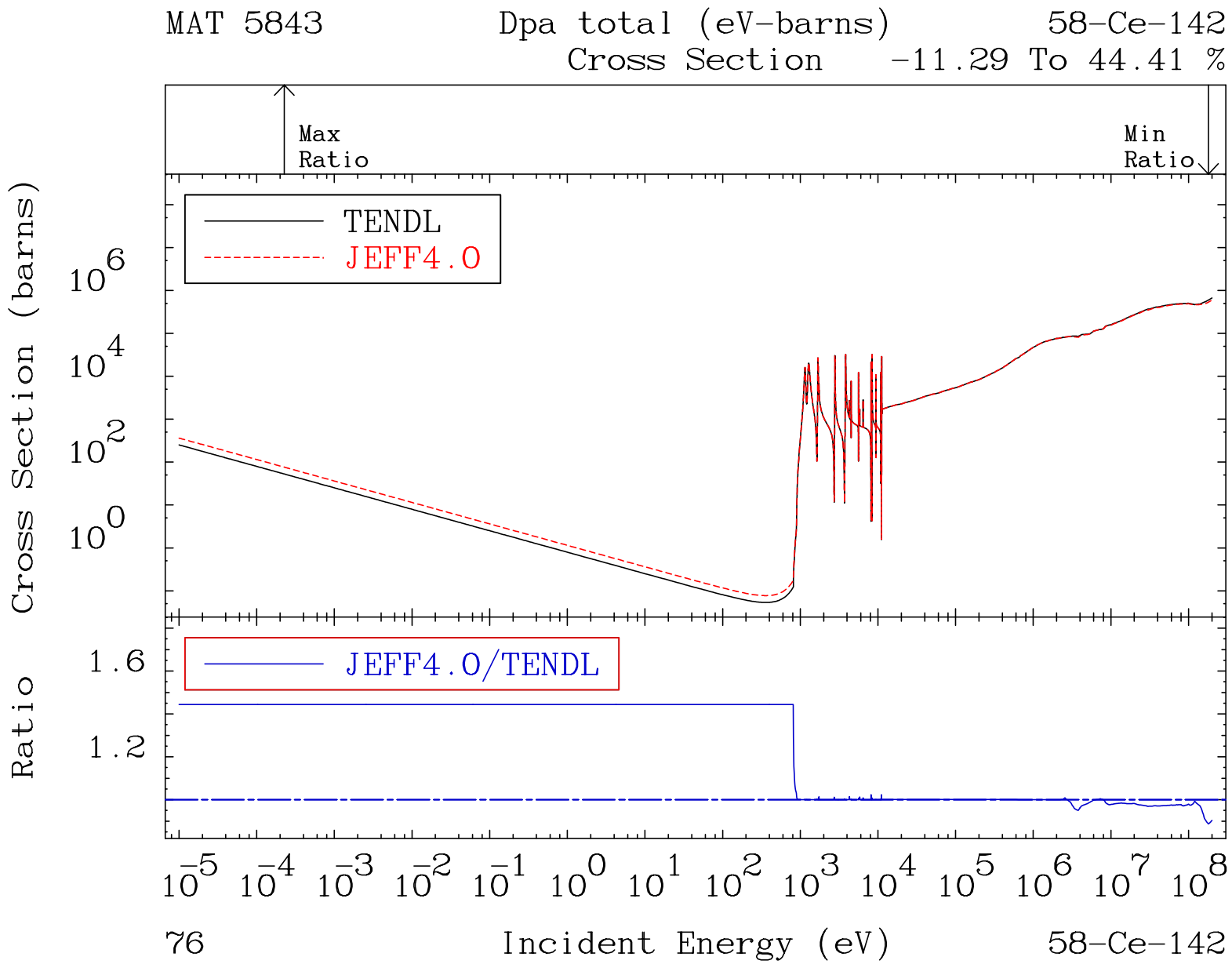

MAT 5843
Kerma inelastic (mt51-91)
58-Ce-142
Cross Section
-9.525 To 41.33 %
Max Ratio
Min Ratio
TENDL Threshold 645.84 keV
JEFF4.0 Threshold 645.84 keV
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
71
58-Ce-142

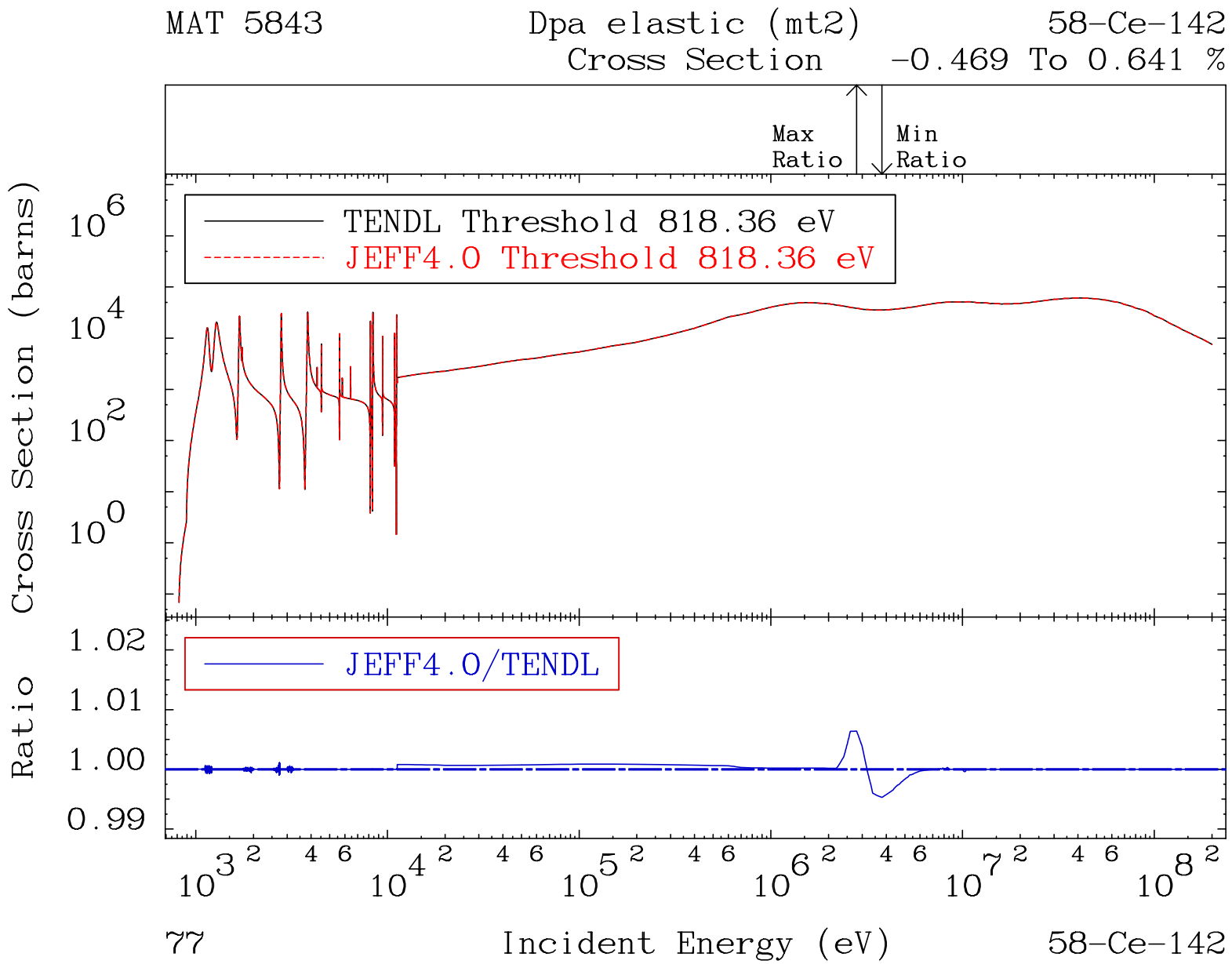

MAT 5843 Kerma fission (mt18 or mt19-20-21-38) 58-Ce-142
Cross Section -9.525 To 41.33 %
Max
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
1.6
1.2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
72
Incident Energy (eV)
58-Ce-142

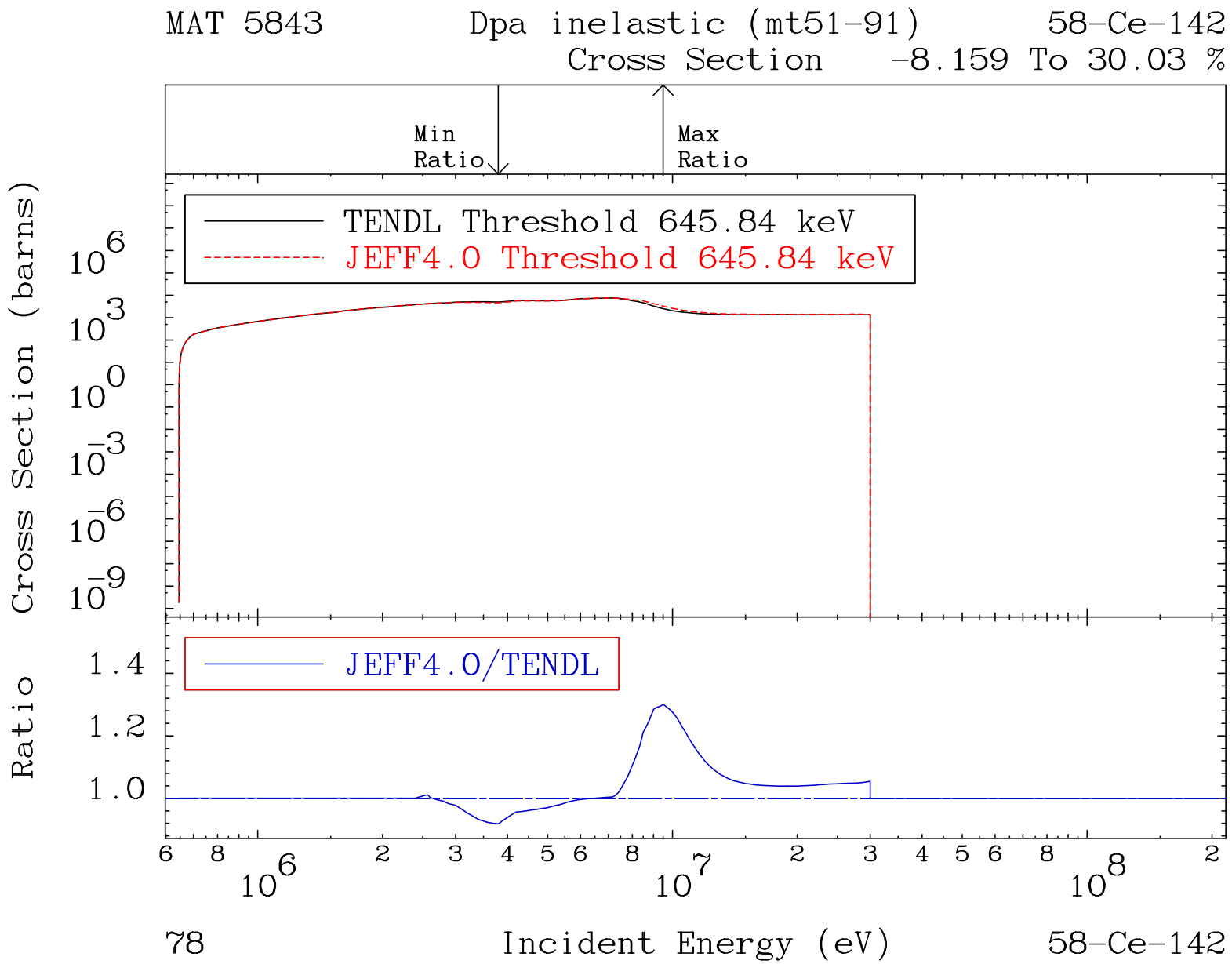

MAT 5843
Kerma capture (mt102)
58-Ce-142
Cross Section
-52.57 To 10.32 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
73
58-Ce-142

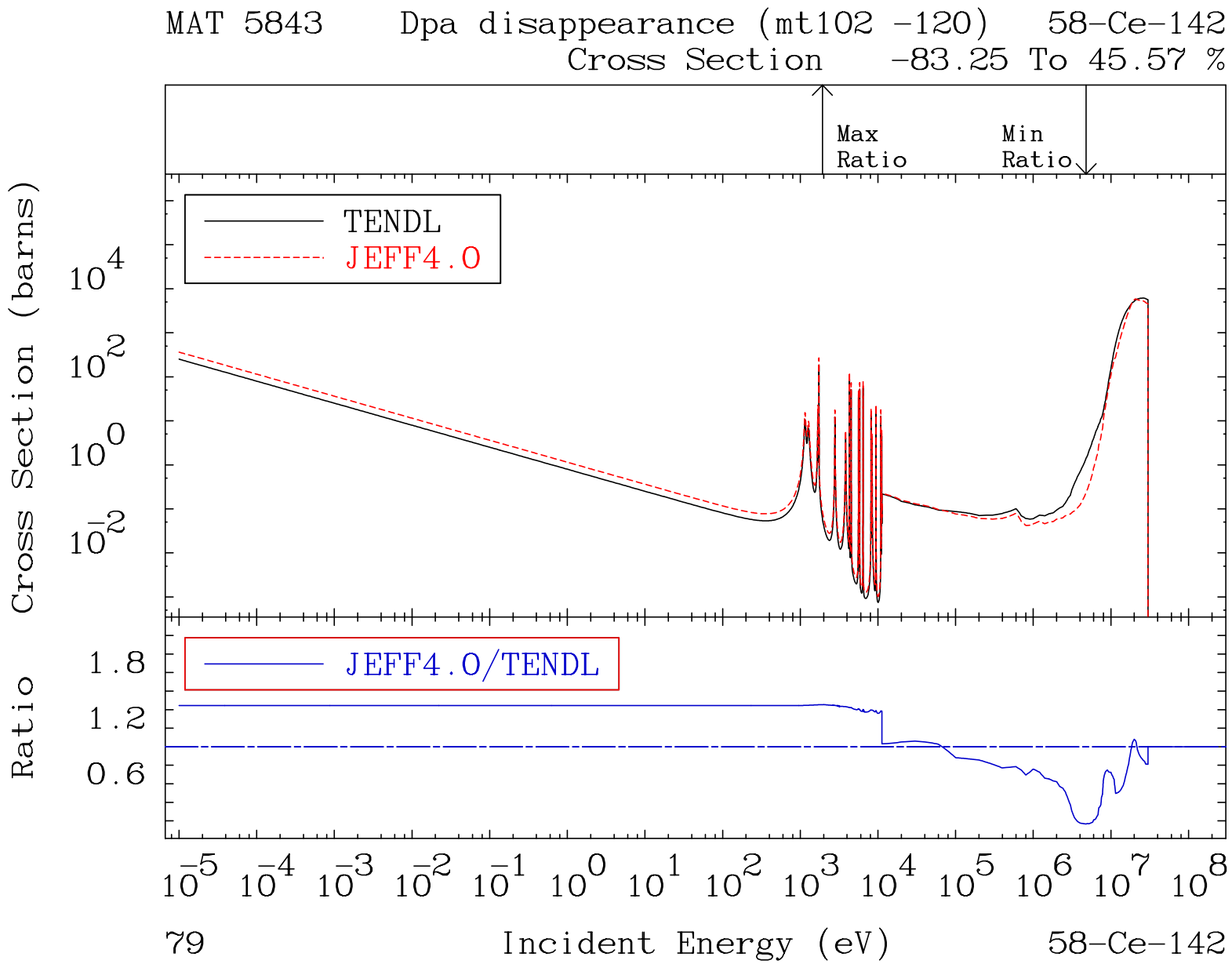

MAT 5843
Total photon (eV-barns)
58-Ce-142
Cross Section
-40.22 To 34.69 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
74
58-Ce-142

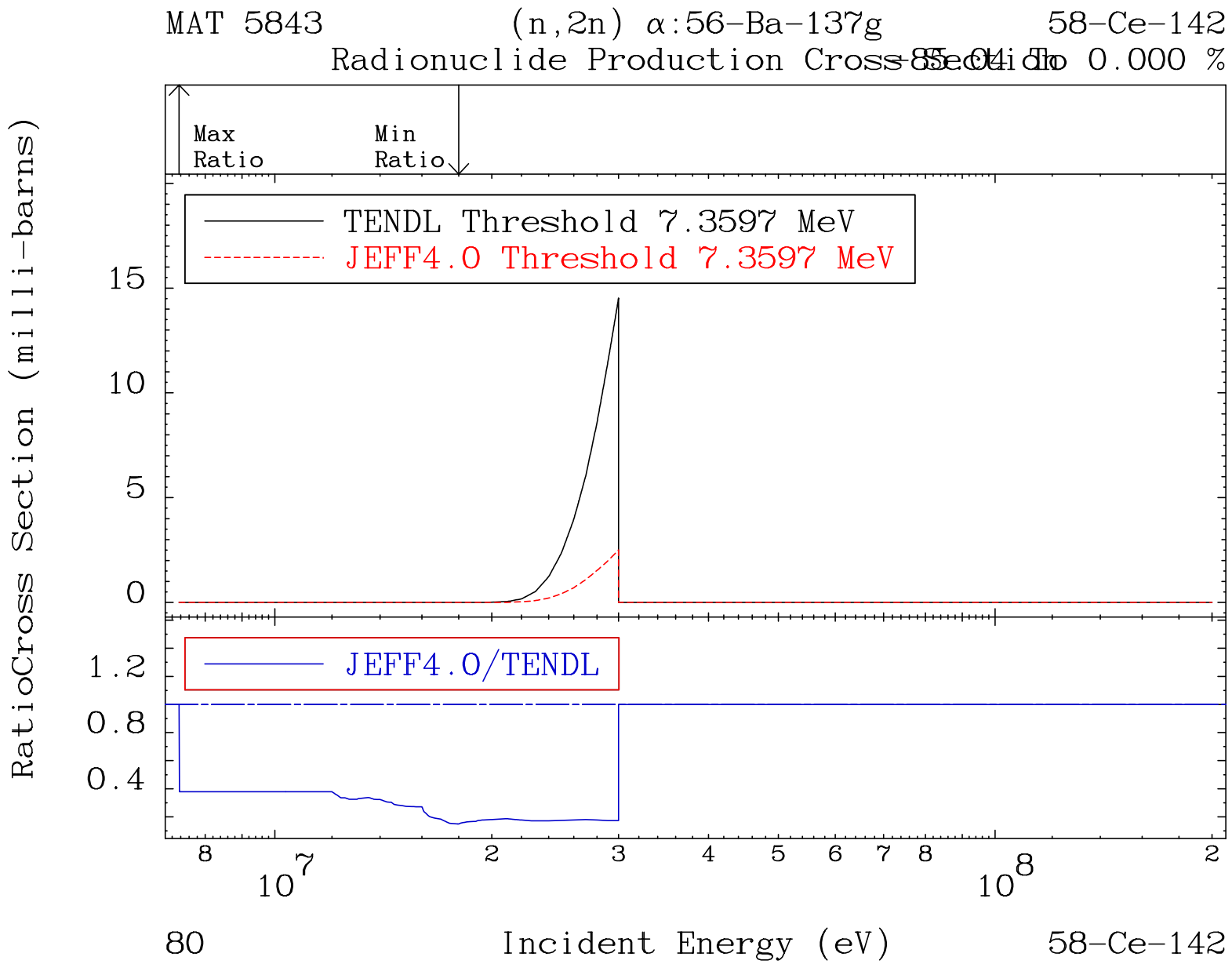

MAT 5843 Total kinematic kerma (high limit) 58-Ce-142
Cross Section -35.75 To 9.263 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
75
58-Ce-142

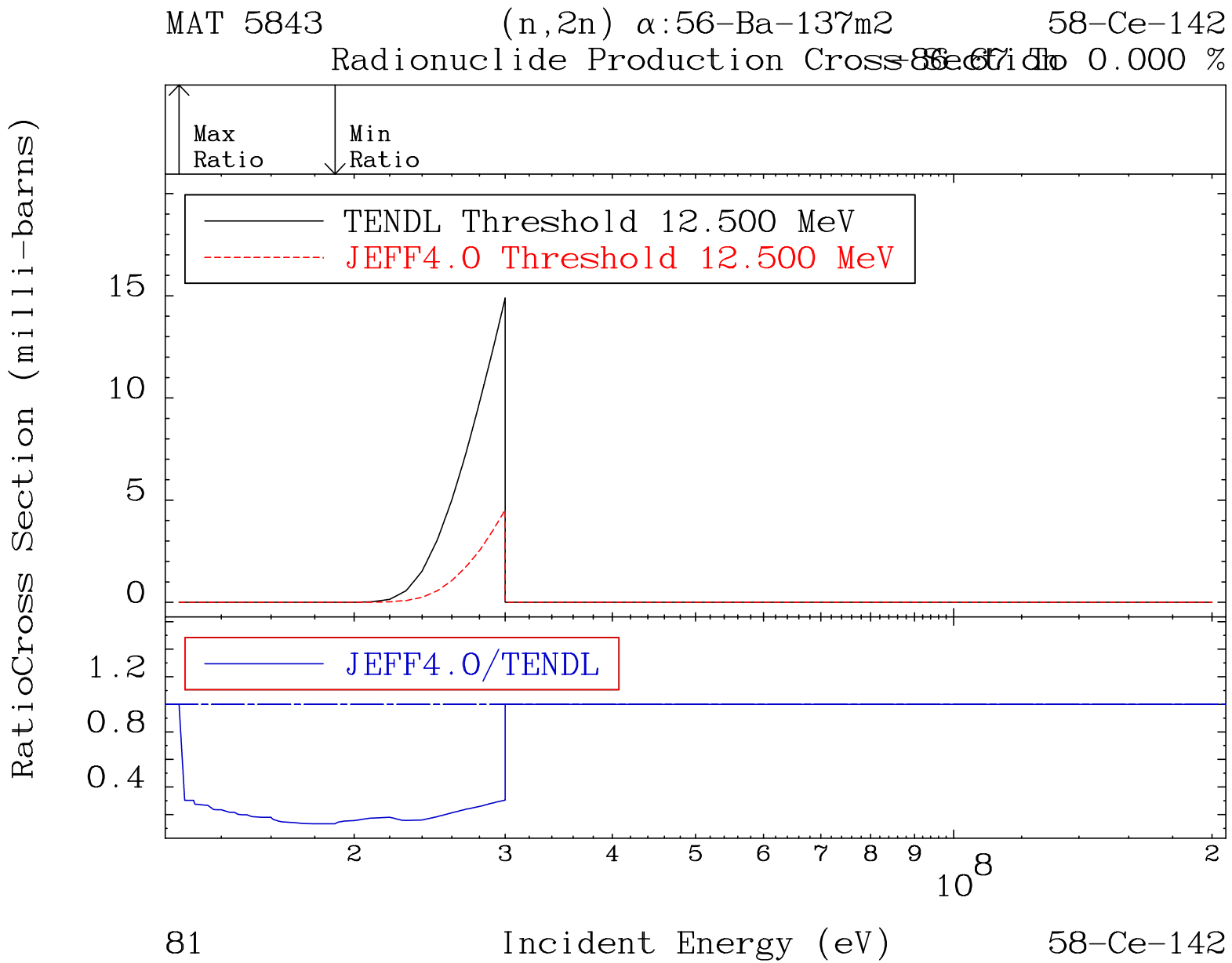

MAT 5843
Dpa total (eV-barns)
58-Ce-142
Cross Section
-11.29 To 44.41 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
Cross Section (barns)
10^6
10^4
10^2
10^0
JEFF4.0/TENDL
Ratio
1.6
1.2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
76
Incident Energy (eV)
58-Ce-142

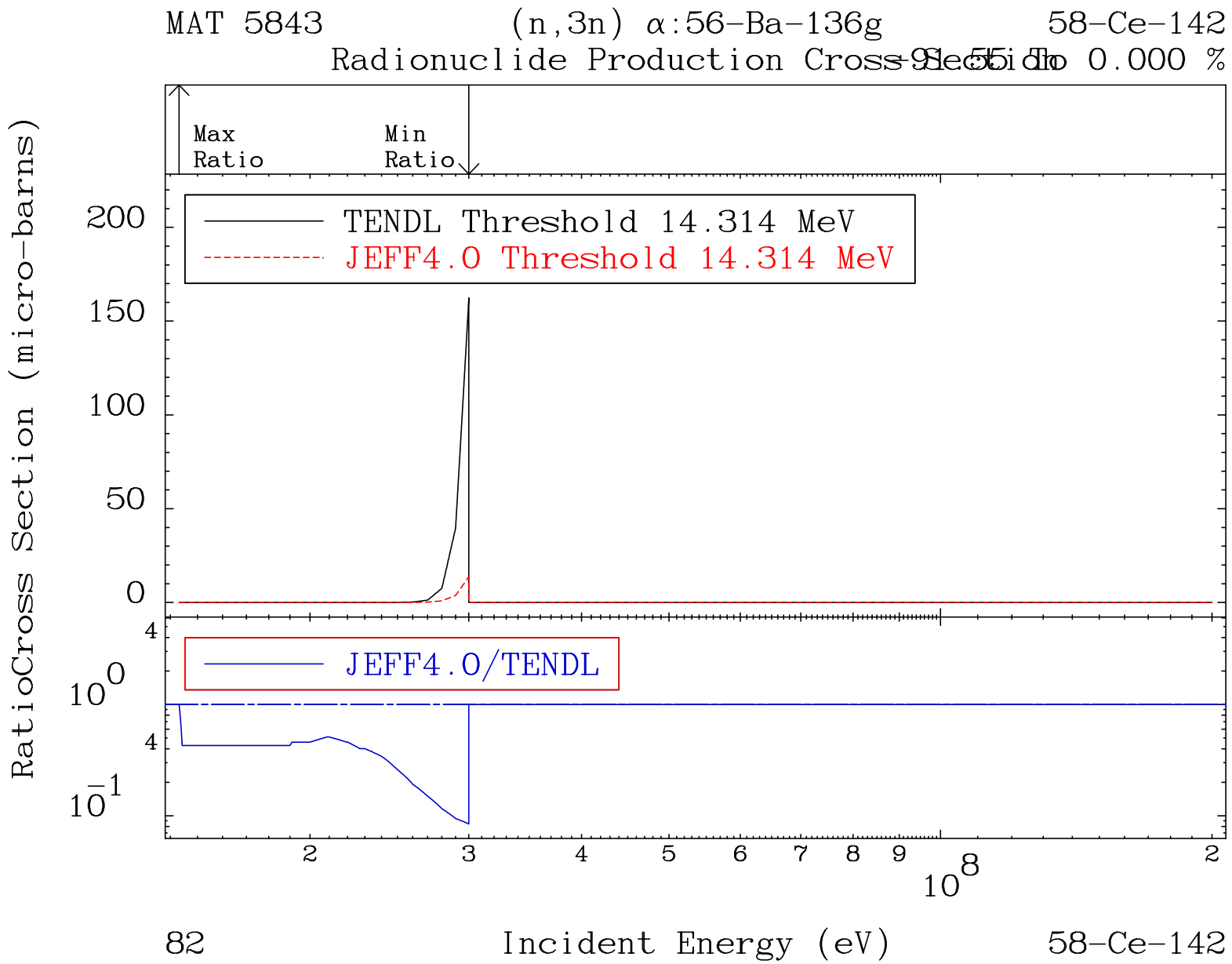

MAT 5843
Dpa elastic (mt2)
Cross Section
58-Ce-142
-0.469 To 0.641 %
Max Ratio
Min Ratio
TENDL Threshold 818.36 eV
JEFF4.0 Threshold 818.36 eV
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
77
58-Ce-142

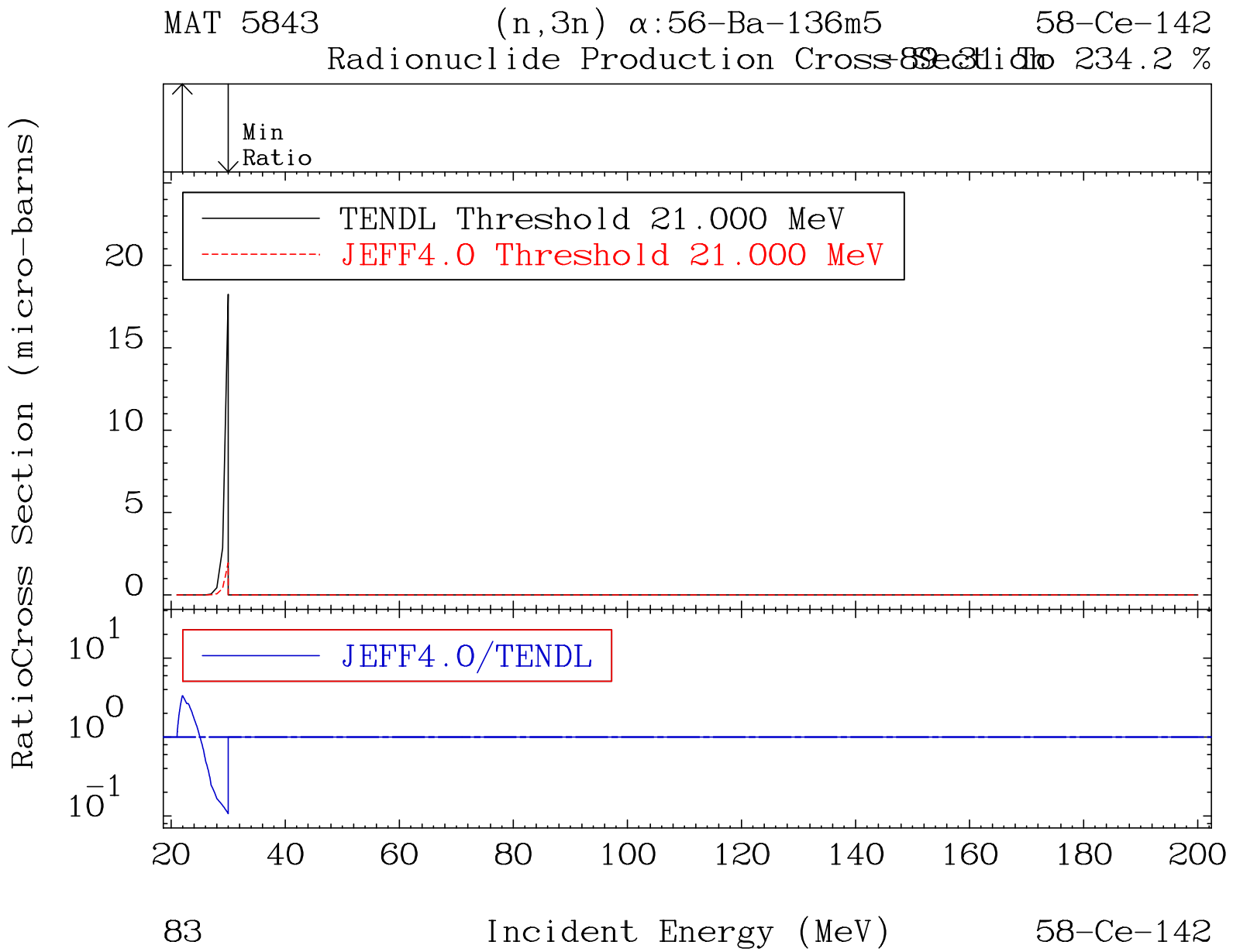

MAT 5843
Dpa inelastic (mt51-91)
58-Ce-142
Cross Section
-8.159 To 30.03 %
Min Ratio
Max Ratio
TENDL Threshold 645.84 keV
JEFF4.0 Threshold 645.84 keV
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
78
58-Ce-142

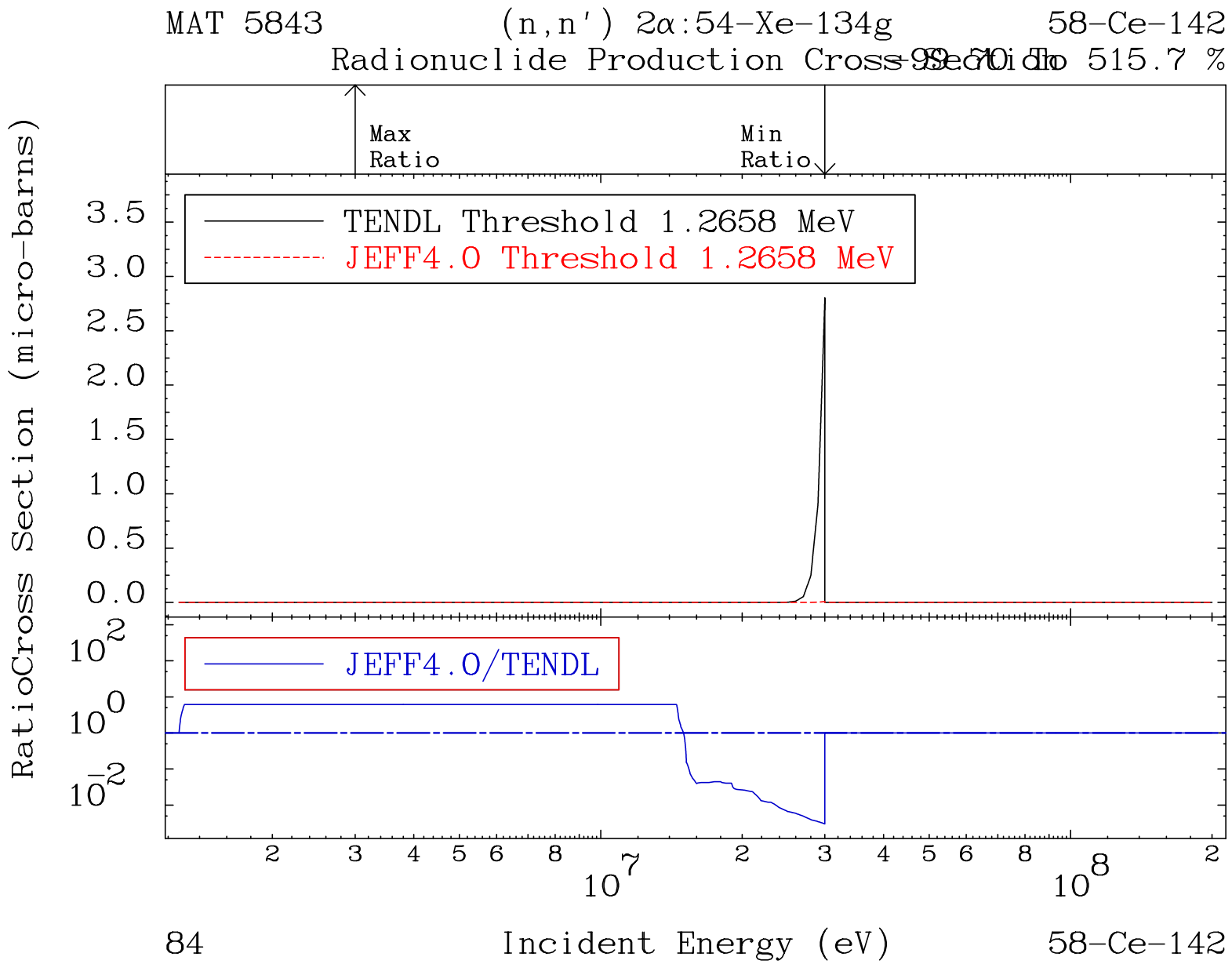

MAT 5843 Dpa disappearance (mt102 -120) 58-Ce-142
Cross Section -83.25 To 45.57 %
Max Ratio
Min Ratio
TENDL
JEFF4.0
Cross Section (barns)
10^4
10^2
10^0
10^-2
JEFF4.0/TENDL
Ratio
1.8
1.2
0.6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
79
Incident Energy (eV)
58-Ce-142

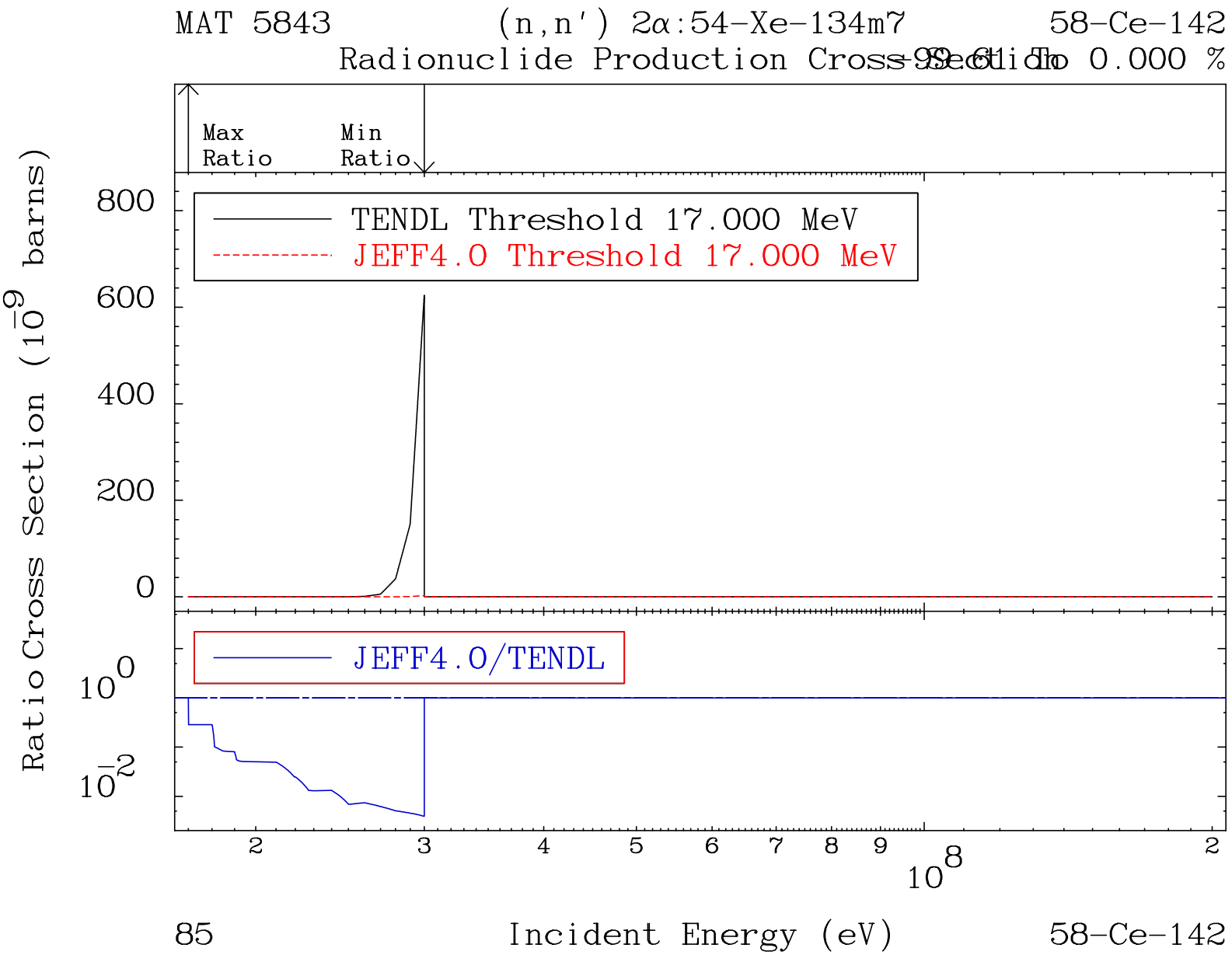

MAT 5843
(n,2n) α:56-Ba-137g
58-Ce-142
Radionuclide Production Cross Section
Uncertainty 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 7.3597 MeV
JEFF4.0 Threshold 7.3597 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
15
10
5
0
1.2
0.8
0.4
8
10^7
2
3
4
5
6
7
8
10^8
2
80
Incident Energy (eV)
58-Ce-142

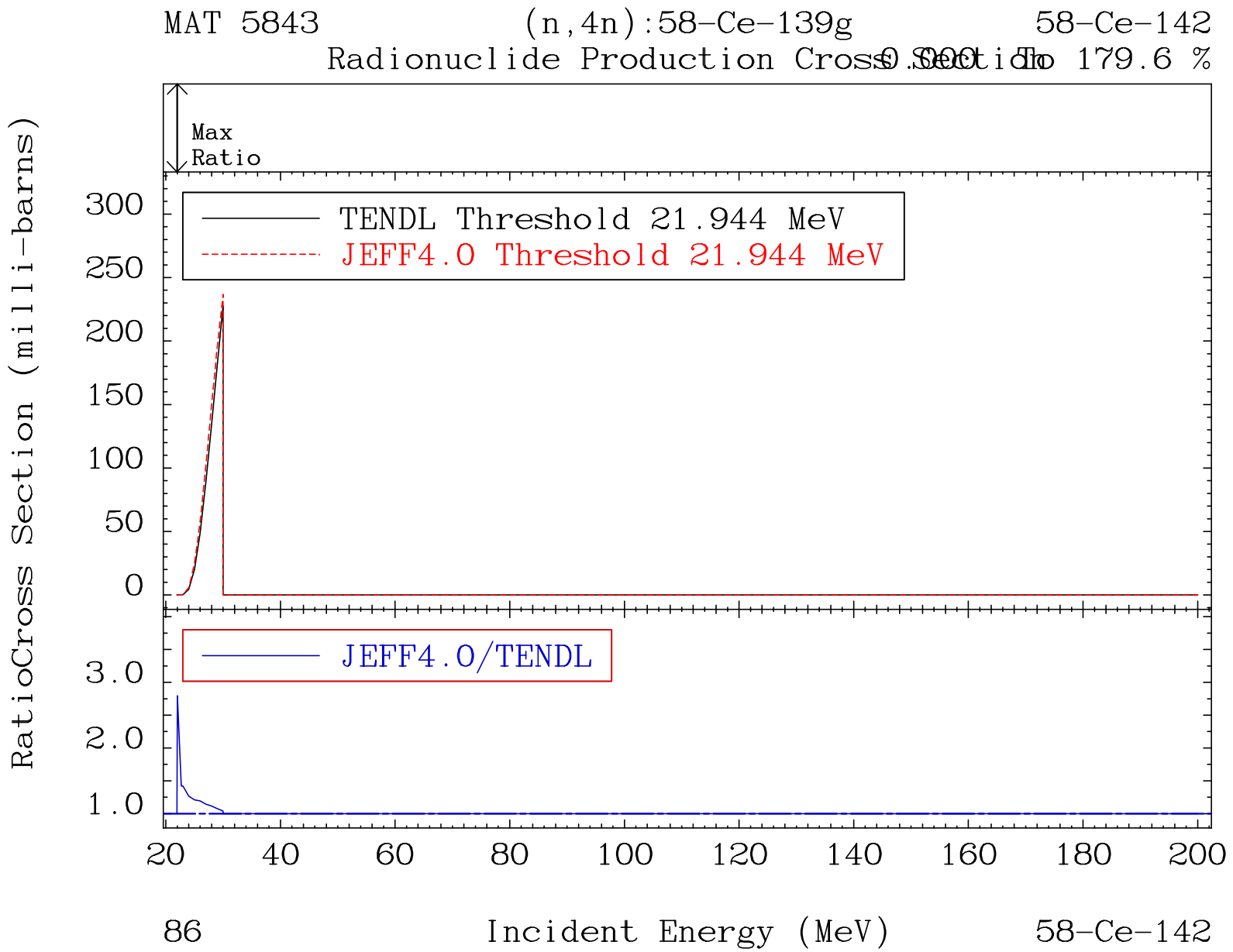

MAT 5843
(n,2n) α:56-Ba-137m2
58-Ce-142
Radionuclide Production Cross Section To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 12.500 MeV
JEFF4.0 Threshold 12.500 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
15
10
5
0
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
58-Ce-142

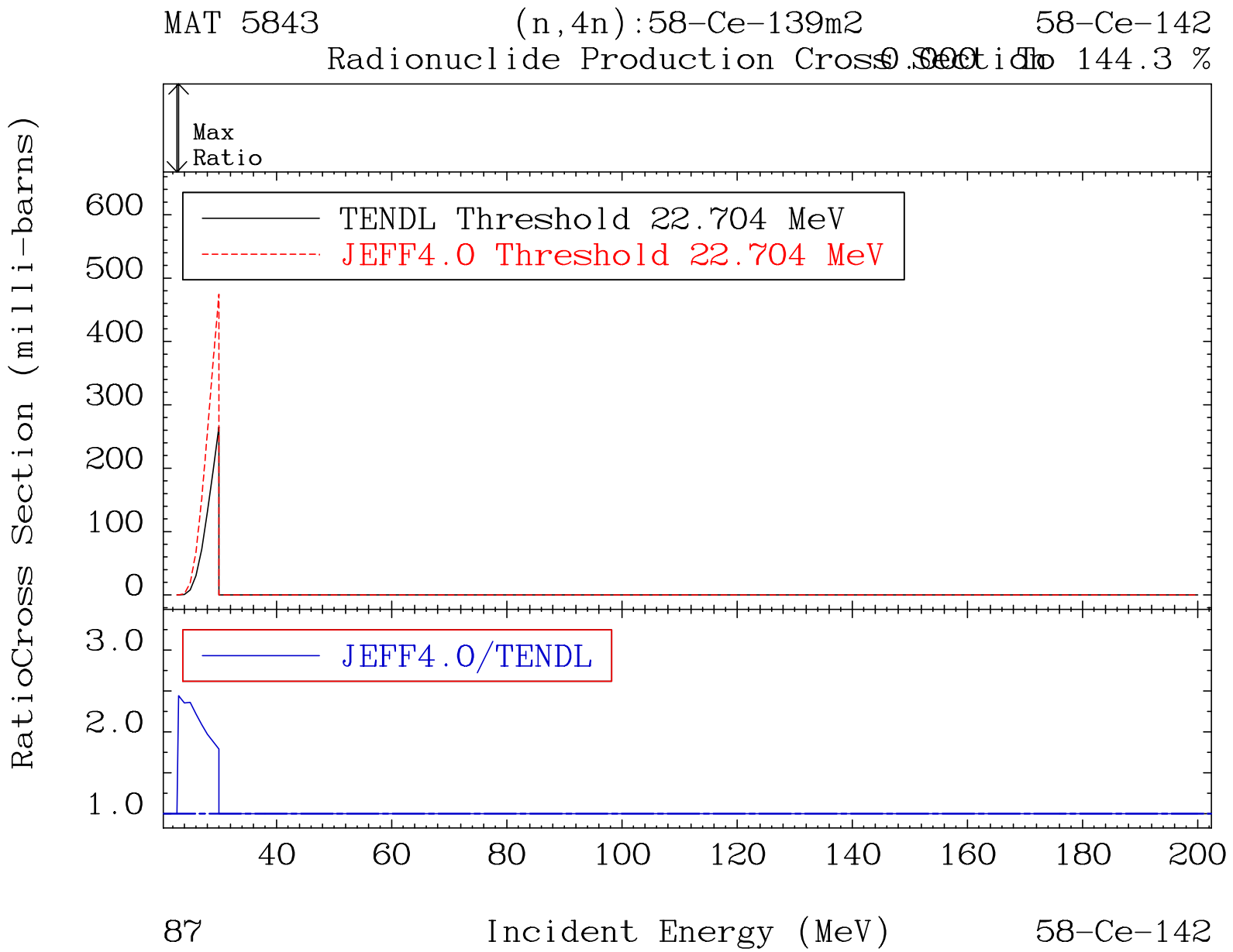

MAT 5843
(n,3n) α:56-Ba-136g
58-Ce-142
Radionuclide Production Cross Section
Uncertainty 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 14.314 MeV
JEFF4.0 Threshold 14.314 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
4
10^{0}
4
10^{-1}
2
3
4
5
6
7
8
9
10^{8}
2
82
Incident Energy (eV)
58-Ce-142

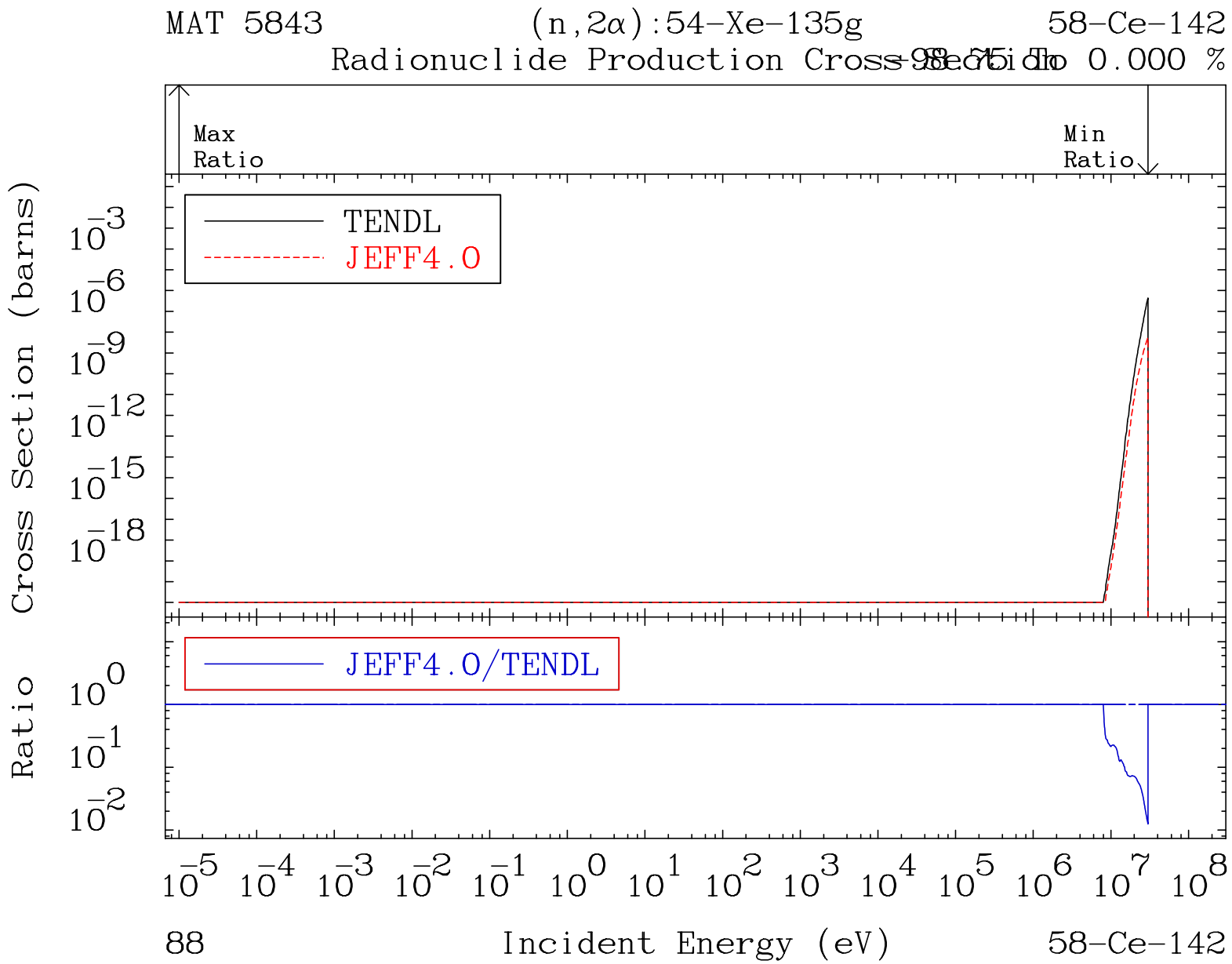

MAT 5843
(n,3n) α:56-Ba-136m5
58-Ce-142
Radionuclide Production Cross Section
Min
Ratio
TENDL Threshold 21.000 MeV
JEFF4.0 Threshold 21.000 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (MeV)
83
58-Ce-142

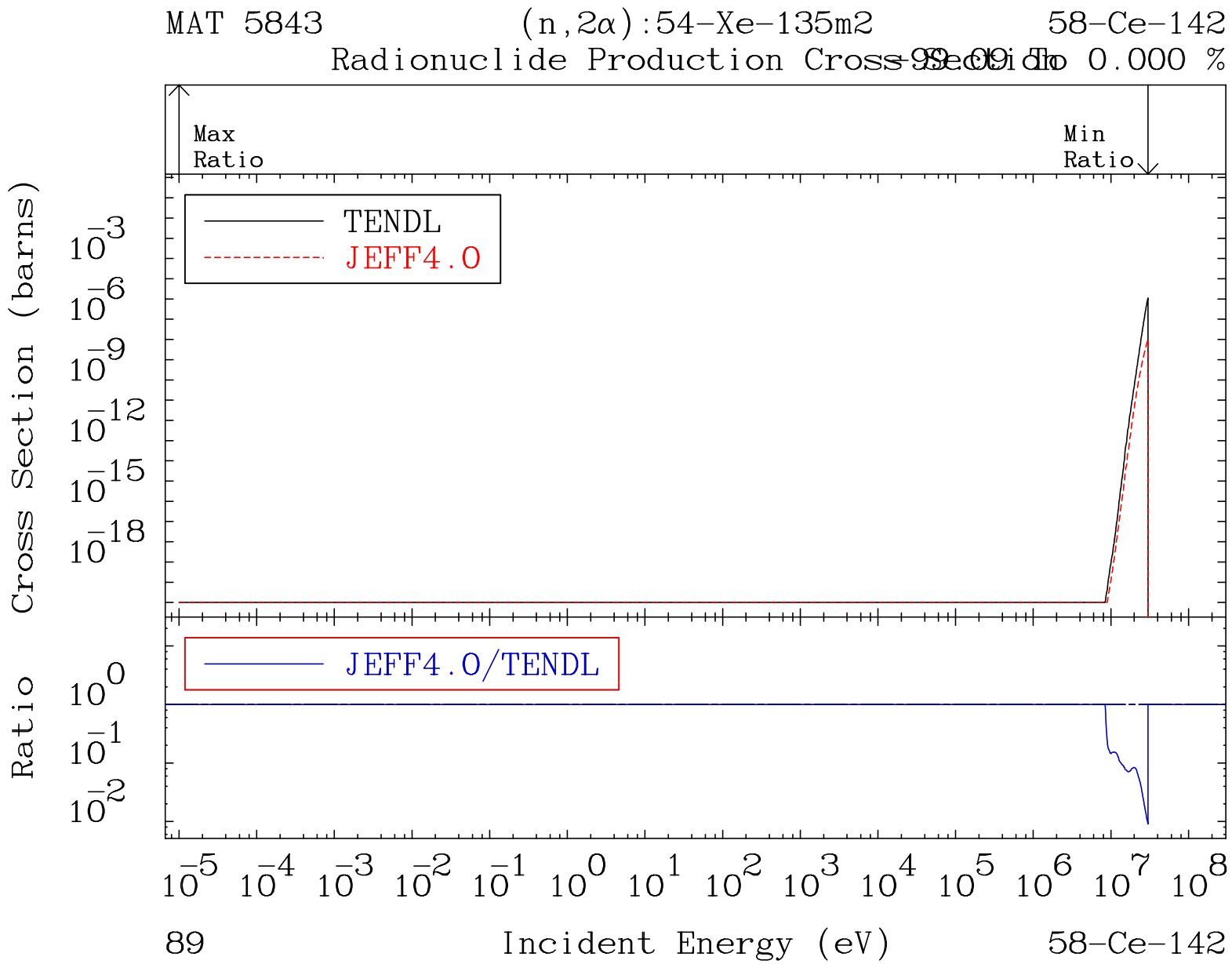

MAT 5843
(n,n') 2α:54-Xe-134g
58-Ce-142
Radionuclide Production Cross Section To 515.7 %
Max Ratio
Min Ratio
TENDL Threshold 1.2658 MeV
JEFF4.0 Threshold 1.2658 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
84
58-Ce-142

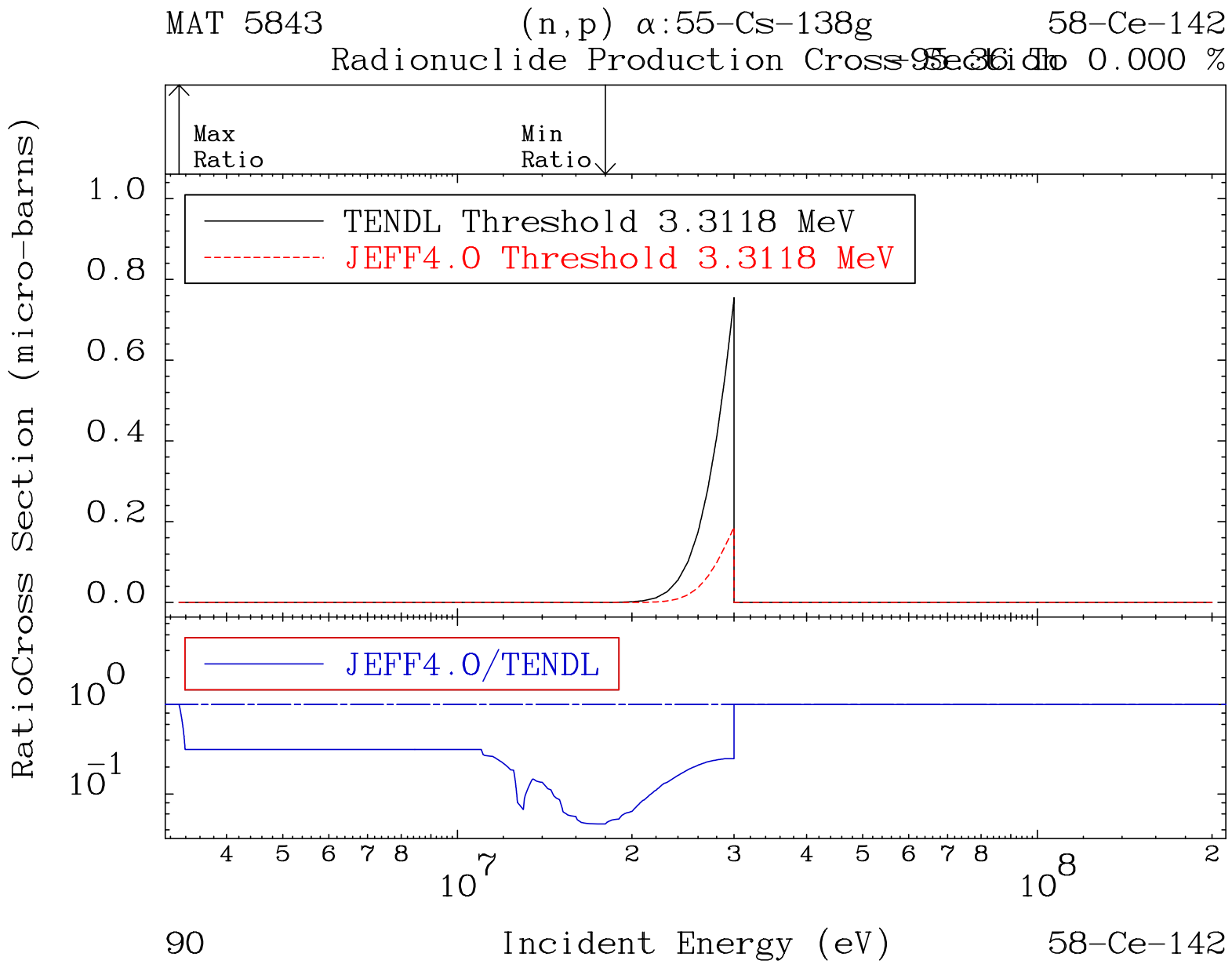

MAT 5843 (n,n') 2α:54-Xe-134m7 58-Ce-142
Radionuclide Production Cross Section To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 17.000 MeV
JEFF4.0 Threshold 17.000 MeV
JEFF4.0/TENDL
Ratio Cross Section (10^{-9} barns)
800
600
400
200
0
10^{0}
10^{-2}
2
3
4
5
6
7
8
9
10^{8}
2
85
Incident Energy (eV)
58-Ce-142

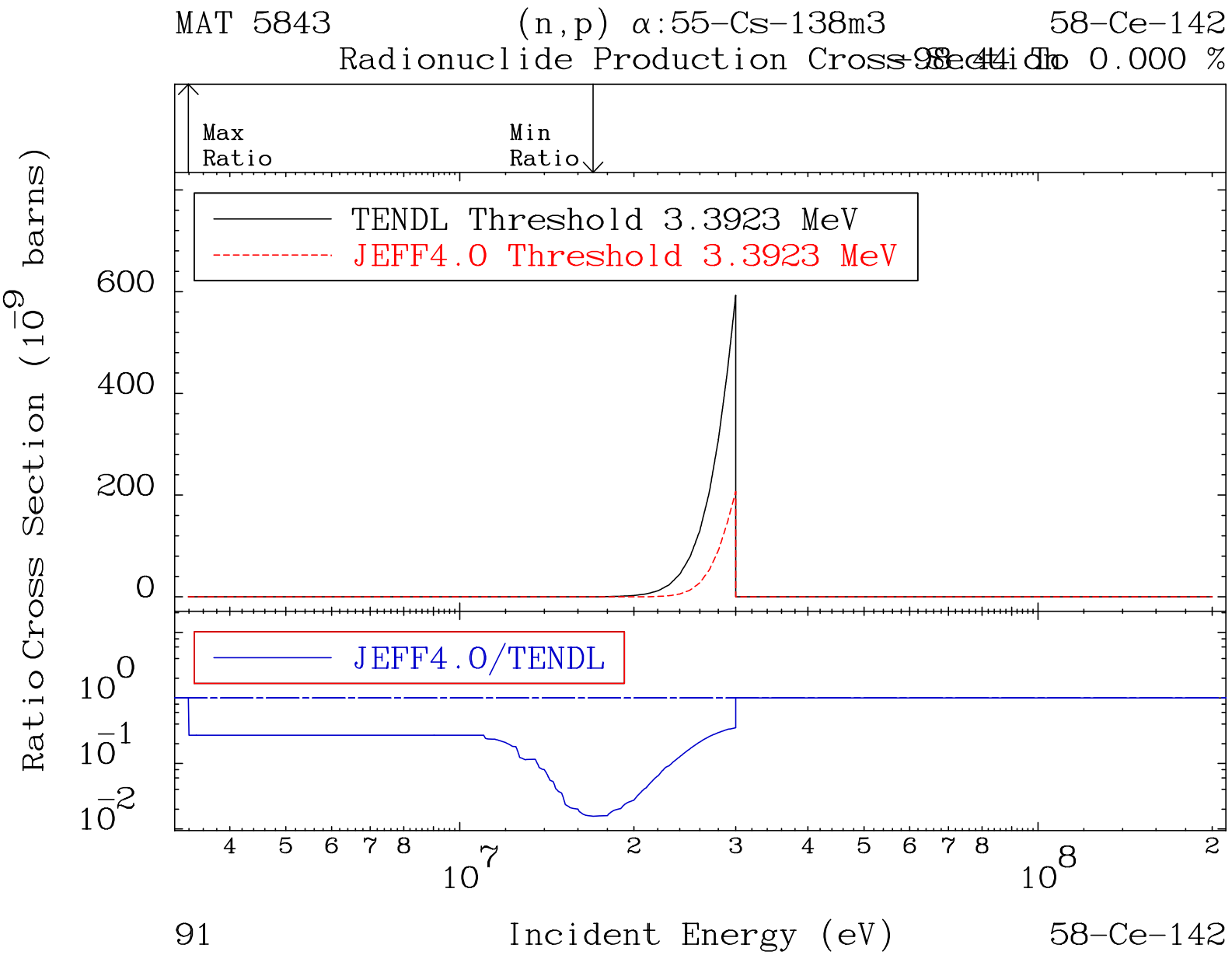

MAT 5843
(n,4n):58-Ce-139g
58-Ce-142
Radionuclide Production Cross Section
0.000 To 179.6 %
Max
Ratio
TENDL Threshold 21.944 MeV
JEFF4.0 Threshold 21.944 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
3.0
2.0
1.0
20
40
60
80
100
120
140
160
180
200
86
Incident Energy (MeV)
58-Ce-142


MAT 5843
(n,4n):58-Ce-139m2
58-Ce-142
Radionuclide Production Cross Section
0.000 To 144.3 %
Max
Ratio
TENDL Threshold 22.704 MeV
JEFF4.0 Threshold 22.704 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
600
500
400
300
200
100
0
3.0
2.0
1.0
40
60
80
100
120
140
160
180
200
87
Incident Energy (MeV)
58-Ce-142


MAT 5843
(n,2α):54-Xe-135g
58-Ce-142
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
88
58-Ce-142


MAT 5843
(n,2α):54-Xe-135m2
58-Ce-142
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
89
58-Ce-142


MAT 5843
(n,p) α:55-Cs-138g
58-Ce-142
Radionuclide Production Cross Section To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 3.3118 MeV
JEFF4.0 Threshold 3.3118 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
1.0
0.8
0.6
0.4
0.2
0.0
10^0
10^-1
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
90
Incident Energy (eV)
58-Ce-142


MAT 5843
(n,p) α:55-Cs-138m3
58-Ce-142
Radionuclide Production Cross Section To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 3.3923 MeV
JEFF4.0 Threshold 3.3923 MeV
600
400
200
0
Ratio Cross Section (10^{-9} barns)
JEFF4.0/TENDL
10^{0}
10^{-1}
10^{-2}
4 5 6 7 8
10^{7}
2 3 4 5 6 7 8
10^{8}
2
91
Incident Energy (eV)
58-Ce-142