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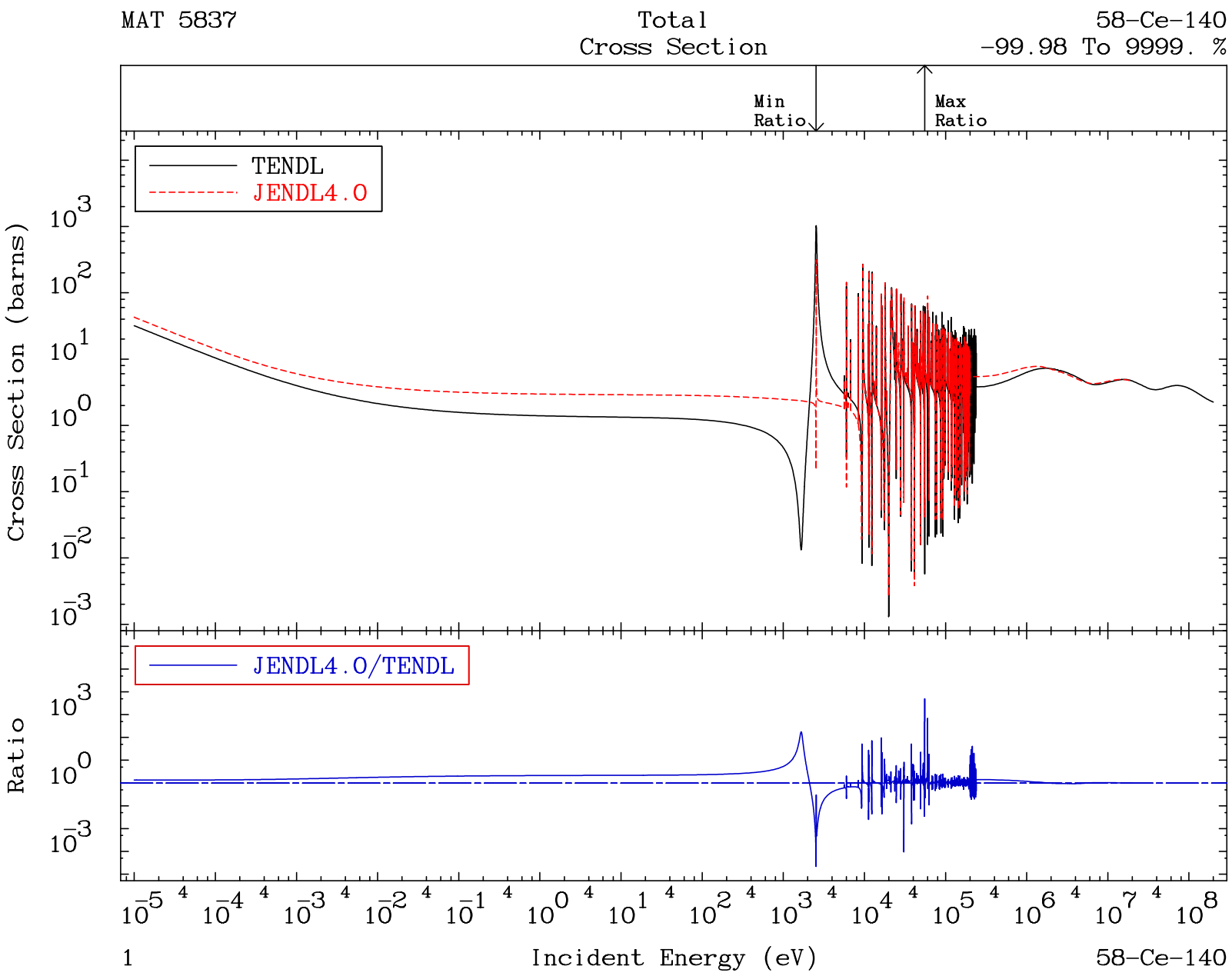
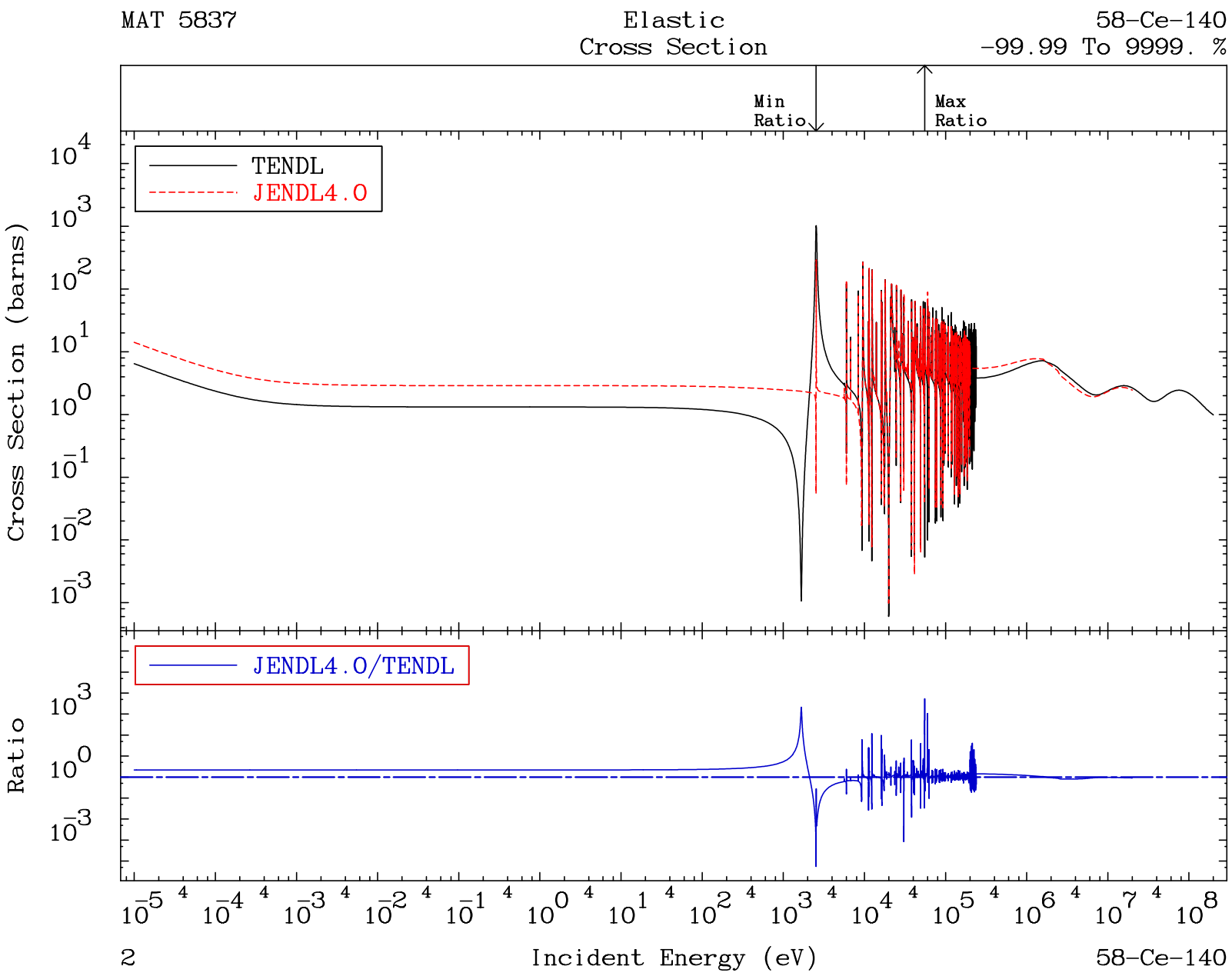
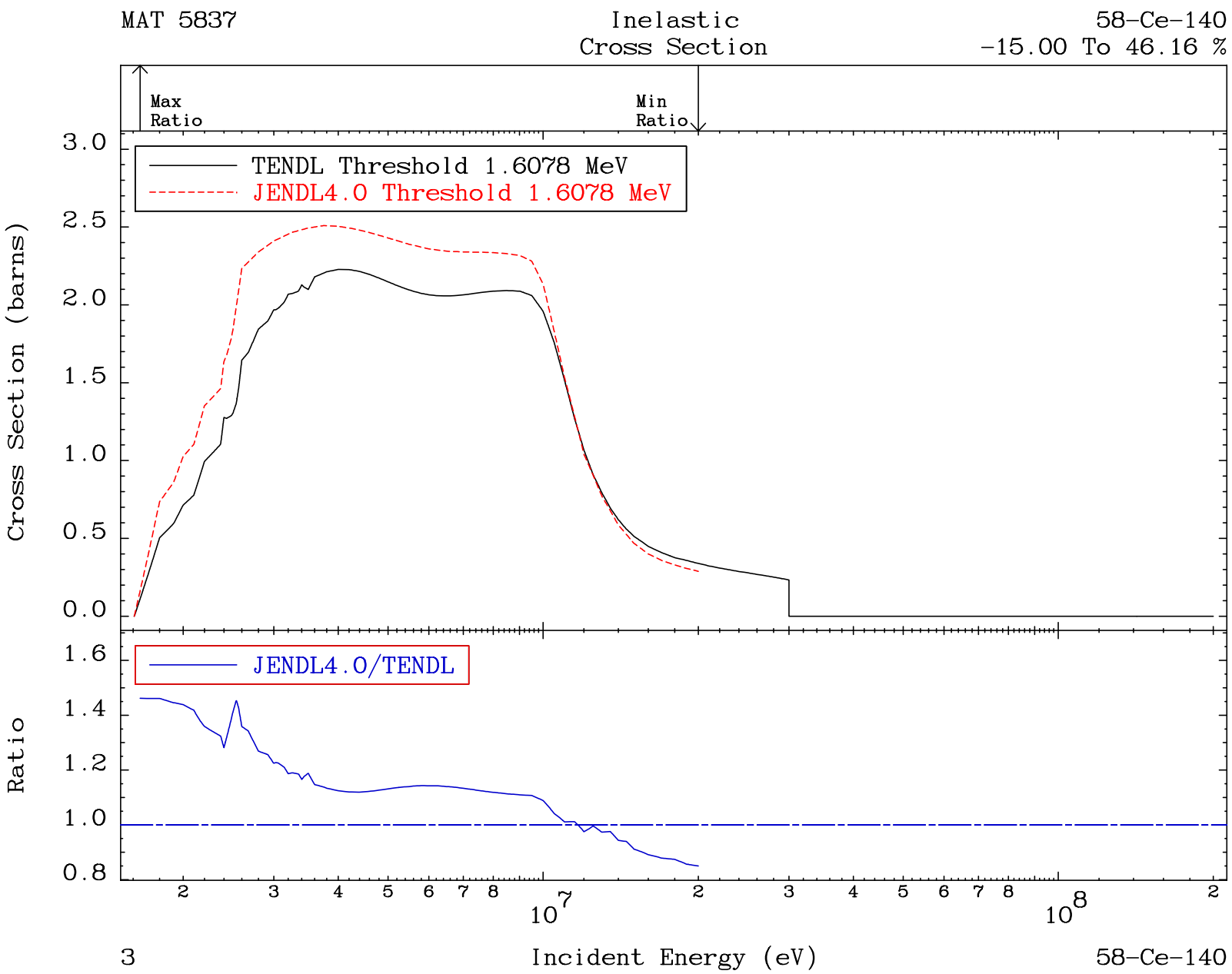
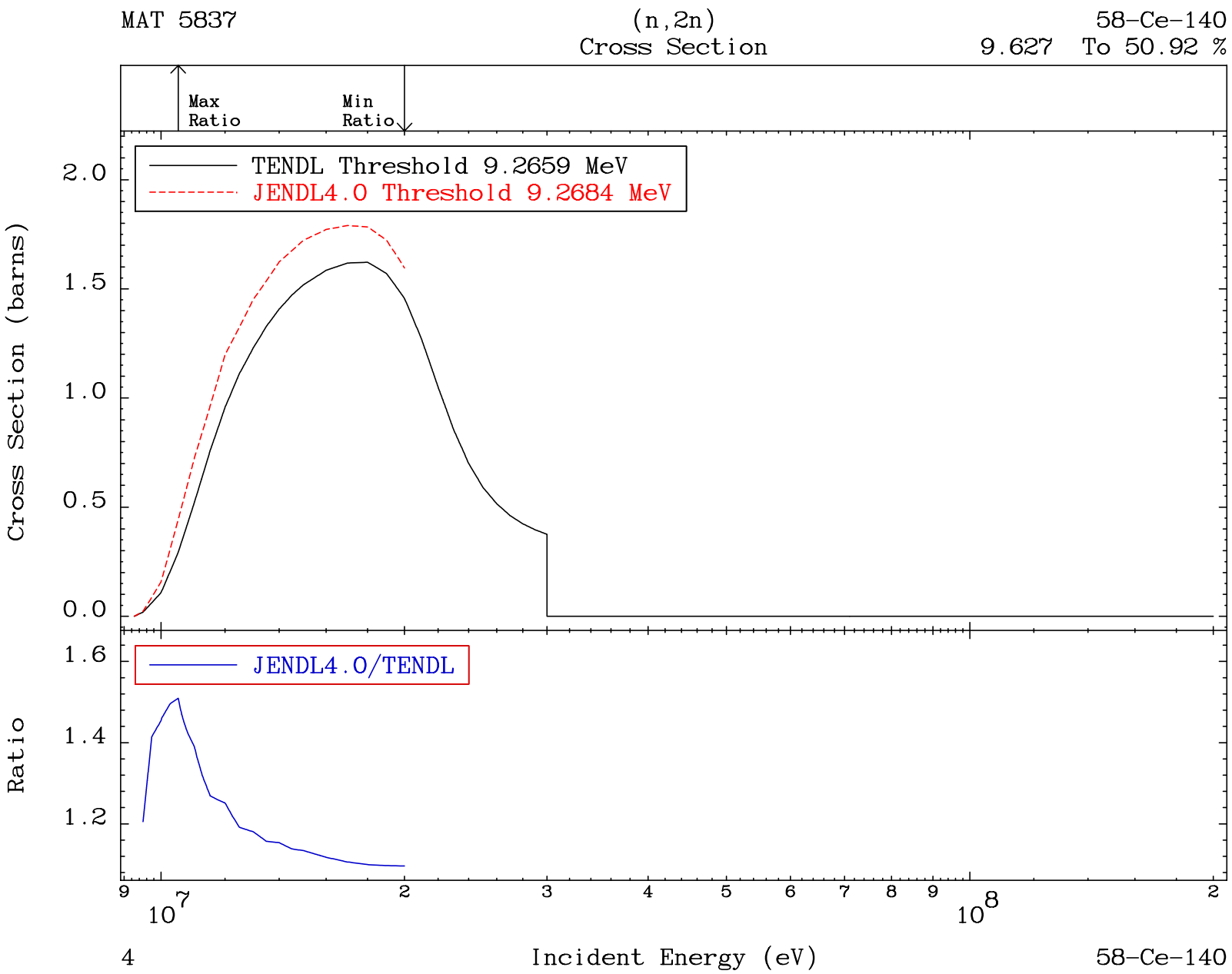
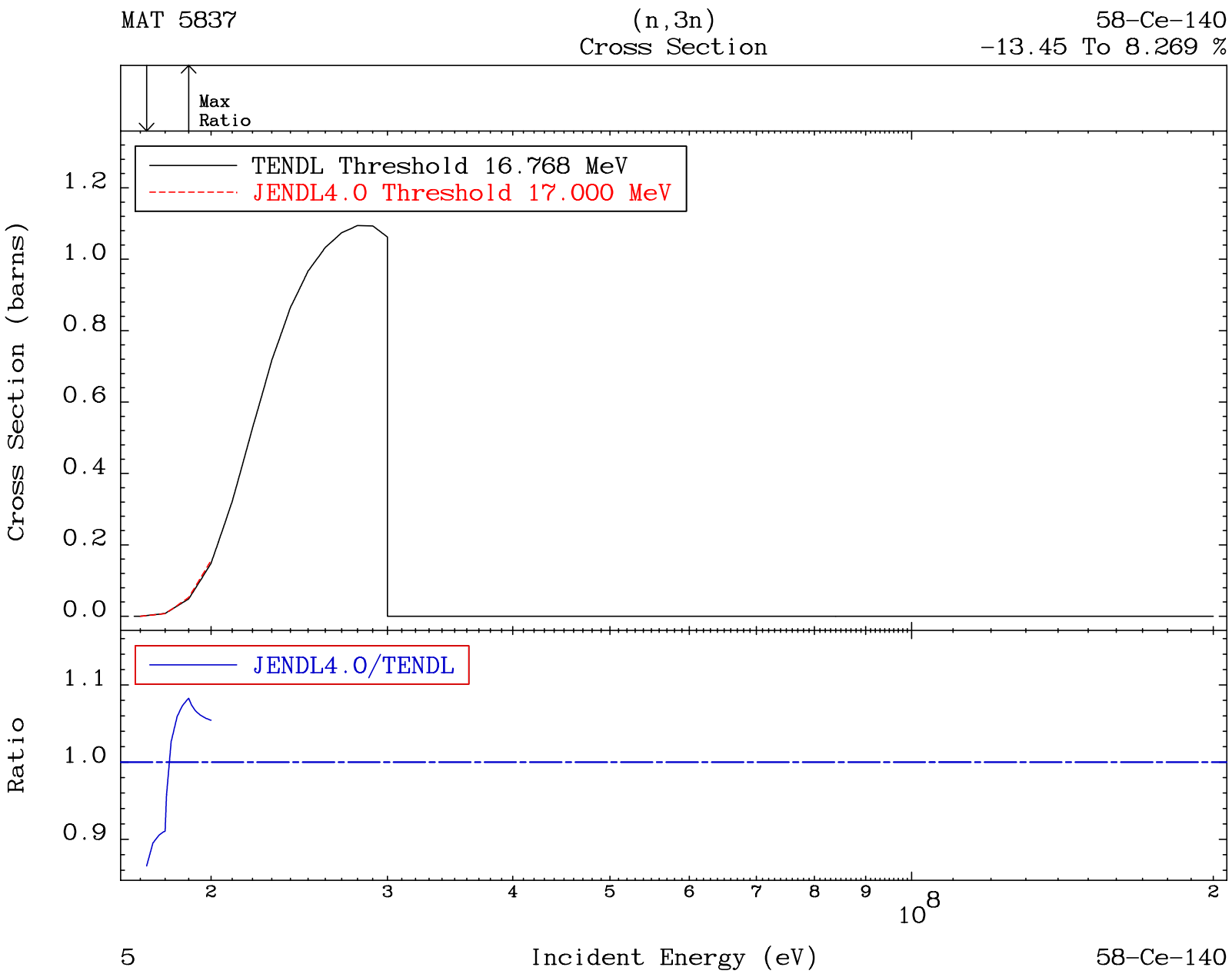
Press Mouse Button to Start

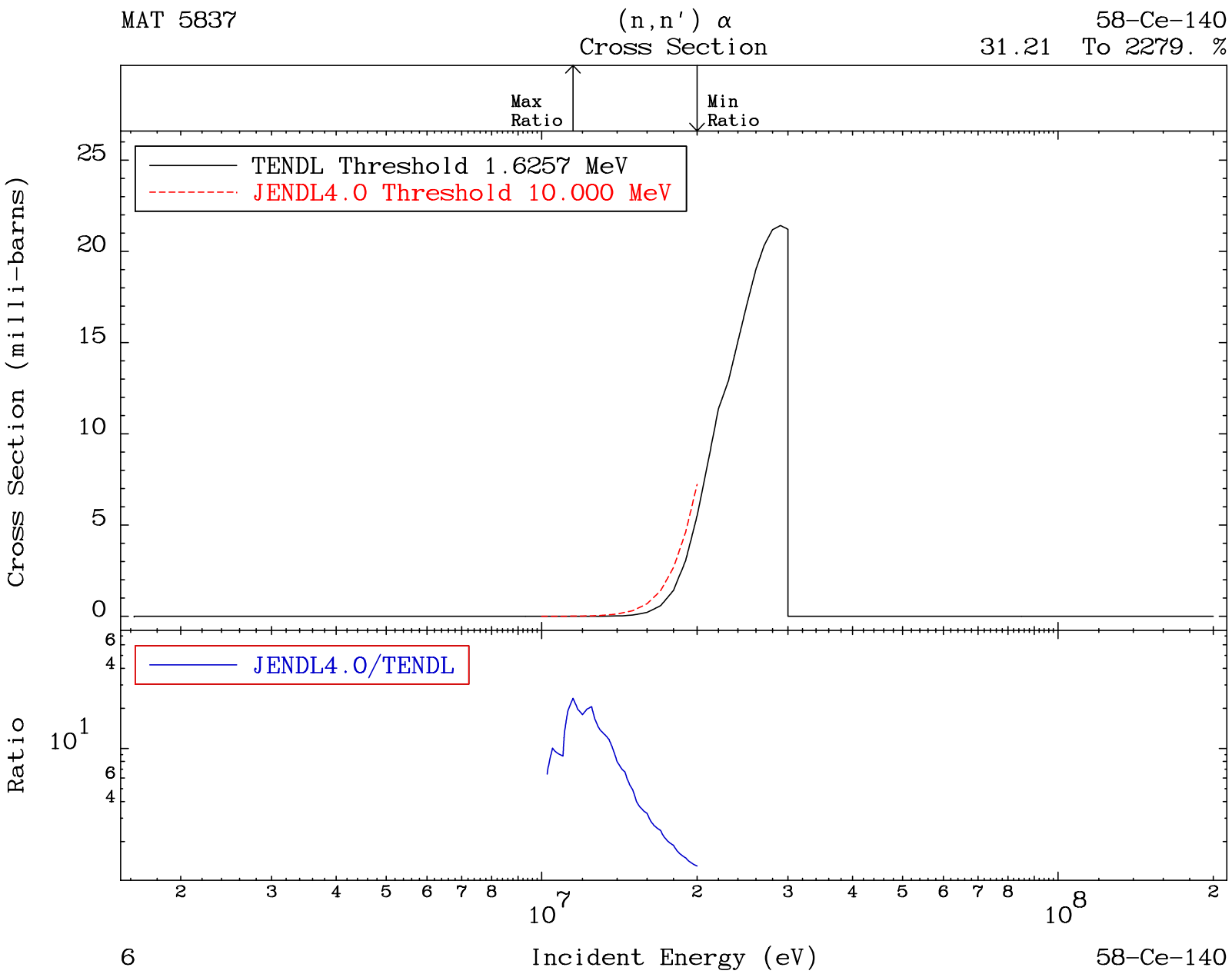

MAT 5837
Total
Cross Section
58-Ce-140
-99.98 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
1
58-Ce-140

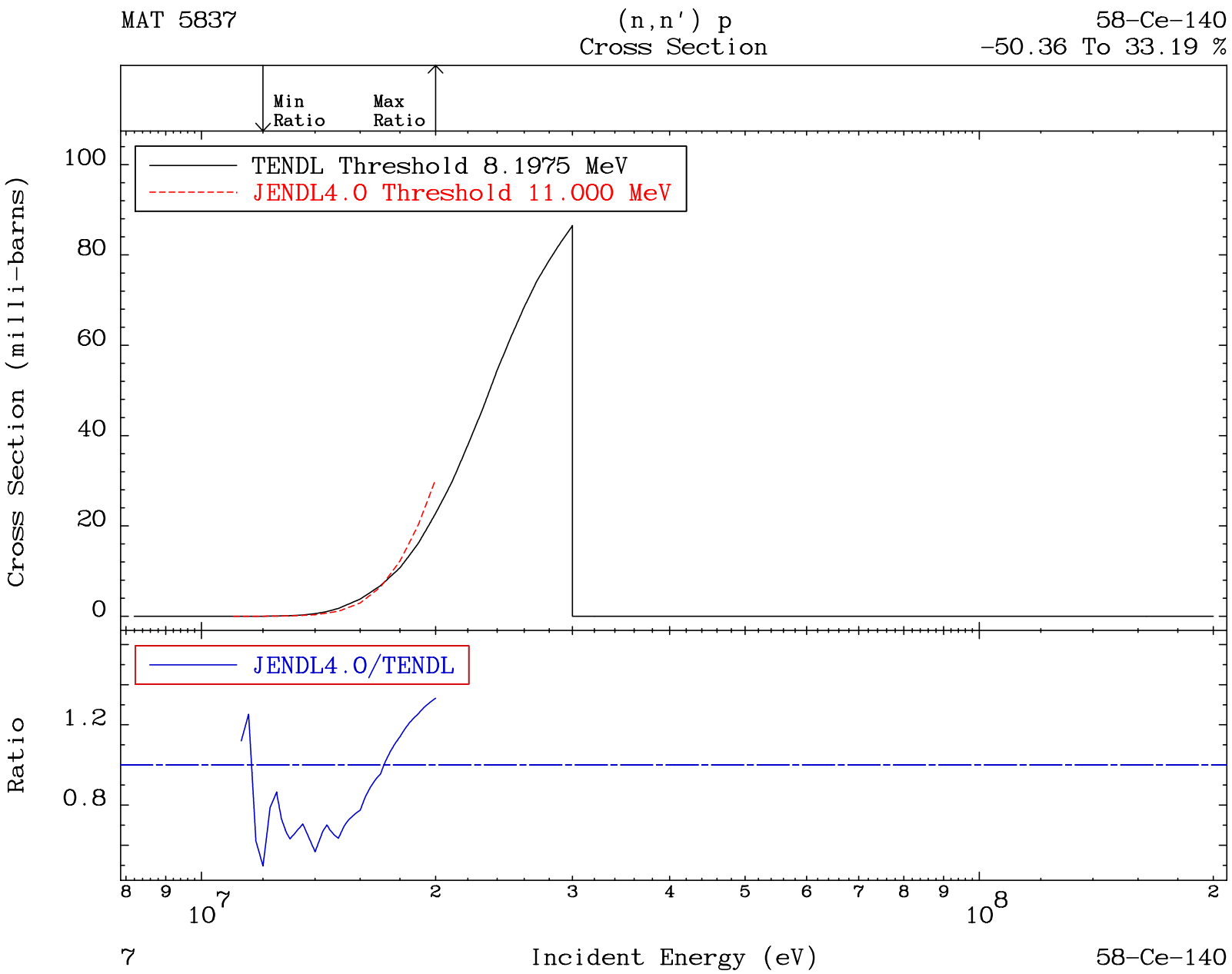

MAT 5837
Elastic
Cross Section
58-Ce-140
-99.99 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
2
58-Ce-140

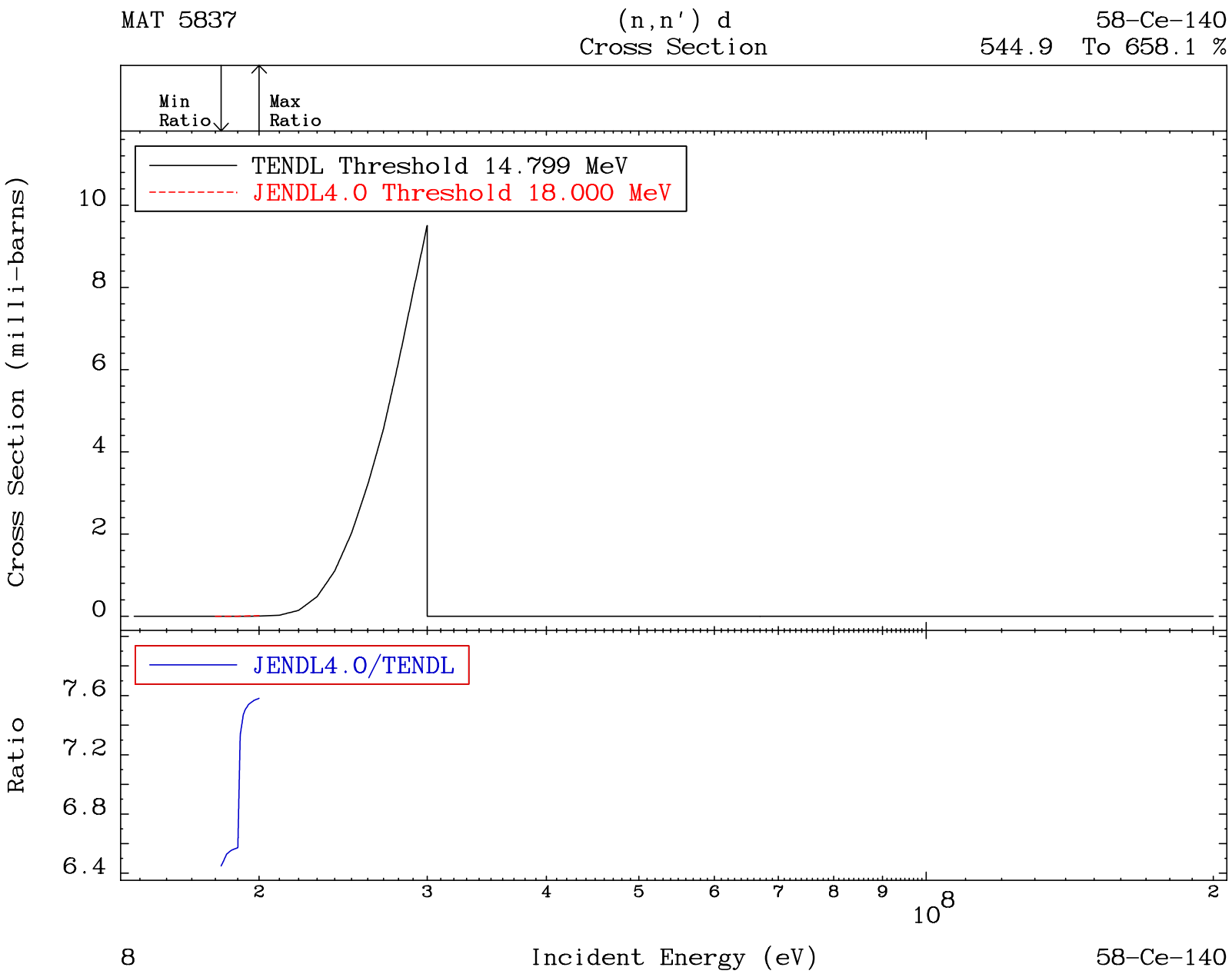

MAT 5837
Inelastic
Cross Section
58-Ce-140
-15.00 To 46.16 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.6078 MeV
JENDL4.0 Threshold 1.6078 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JENDL4.0/TENDL
Ratio
1.6
1.4
1.2
1.0
0.8
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
3
Incident Energy (eV)
58-Ce-140

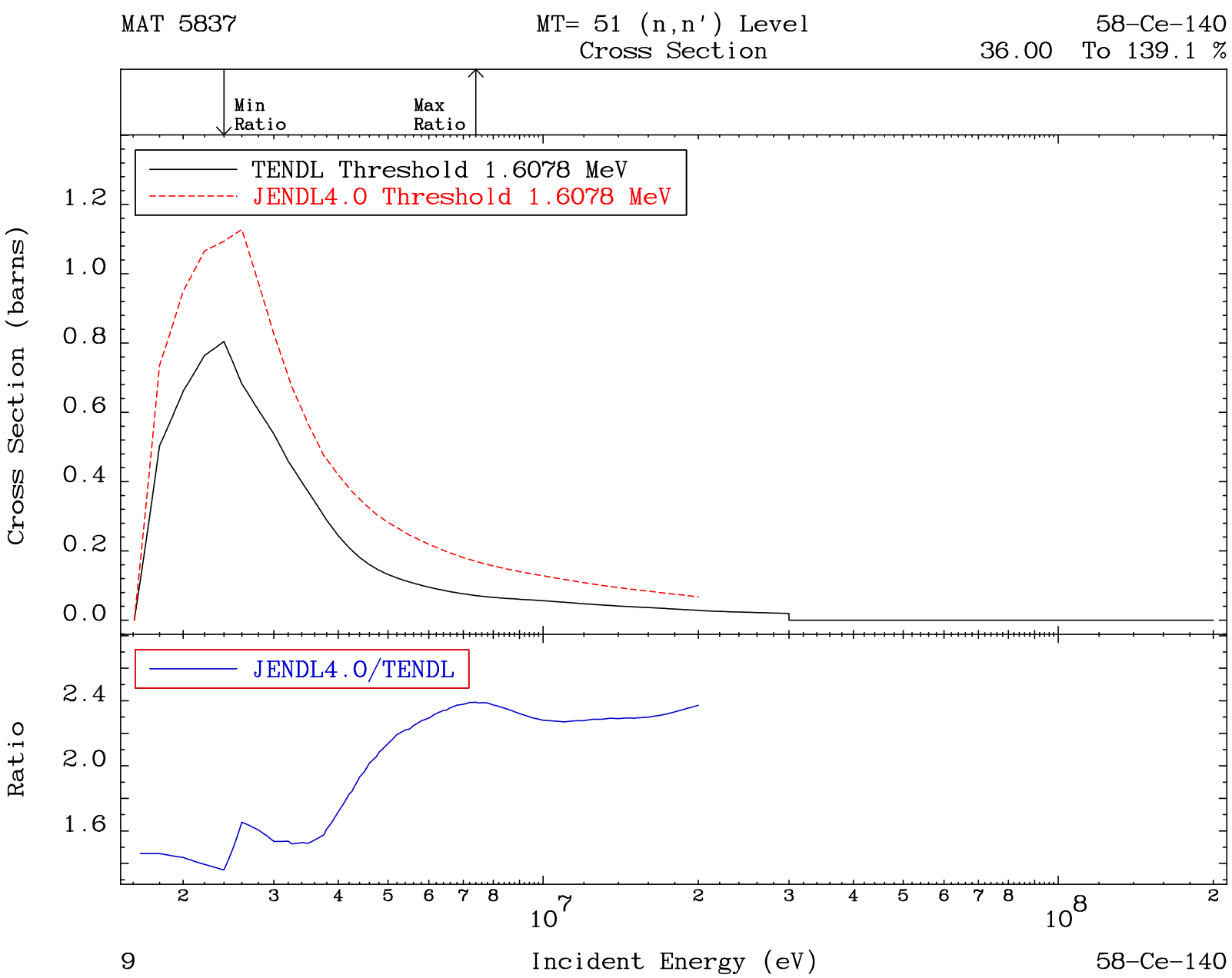

MAT 5837
(n,2n)
Cross Section
58-Ce-140
9.627 To 50.92 %
Max Ratio
Min Ratio
TENDL Threshold 9.2659 MeV
JENDL4.0 Threshold 9.2684 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JENDL4.0/TENDL
Ratio
1.6
1.4
1.2
9
2
3
4
5
6
7
8
9
2
10^7
10^8
4
Incident Energy (eV)
58-Ce-140

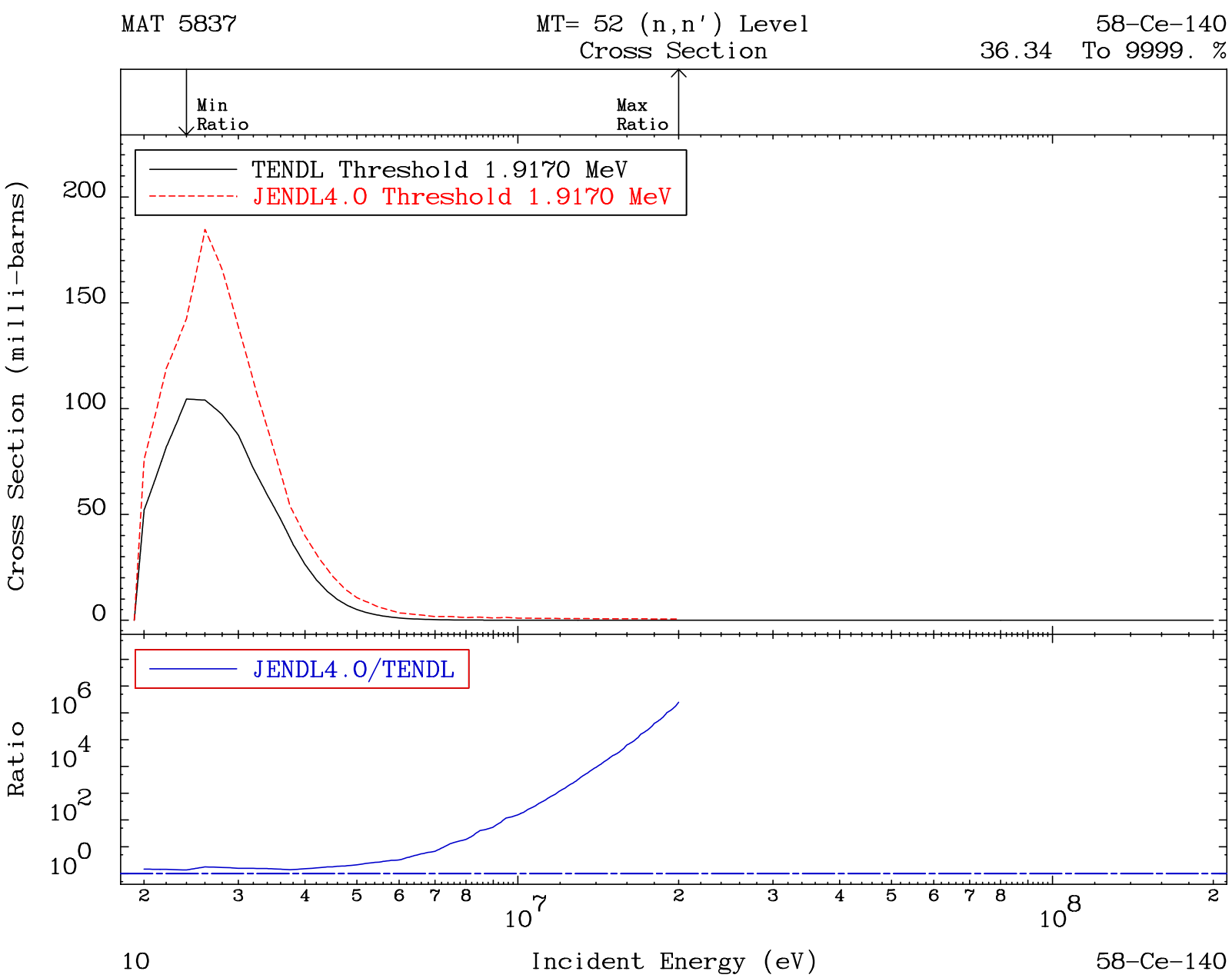

MAT 5837
(n,3n)
Cross Section
58-Ce-140
-13.45 To 8.269 %
Max
Ratio
TENDL Threshold 16.768 MeV
JENDL4.0 Threshold 17.000 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JENDL4.0/TENDL
Ratio
1.1
1.0
0.9
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
58-Ce-140

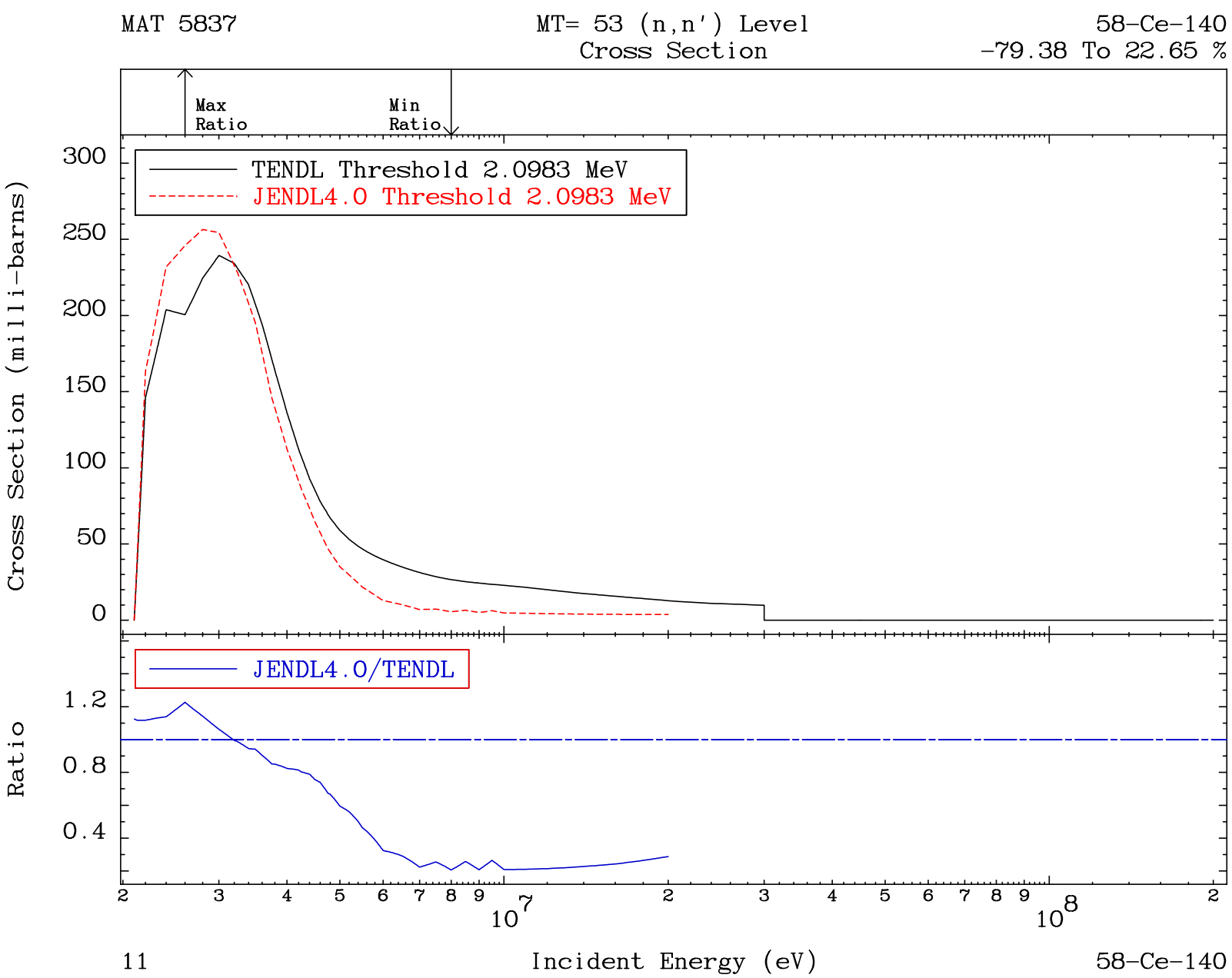

MAT 5837
(n,n') α
Cross Section
58-Ce-140
31.21 To 2279. %
Max Ratio
Min Ratio
TENDL Threshold 1.6257 MeV
JENDL4.0 Threshold 10.000 MeV
Cross Section (milli-barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
6
58-Ce-140

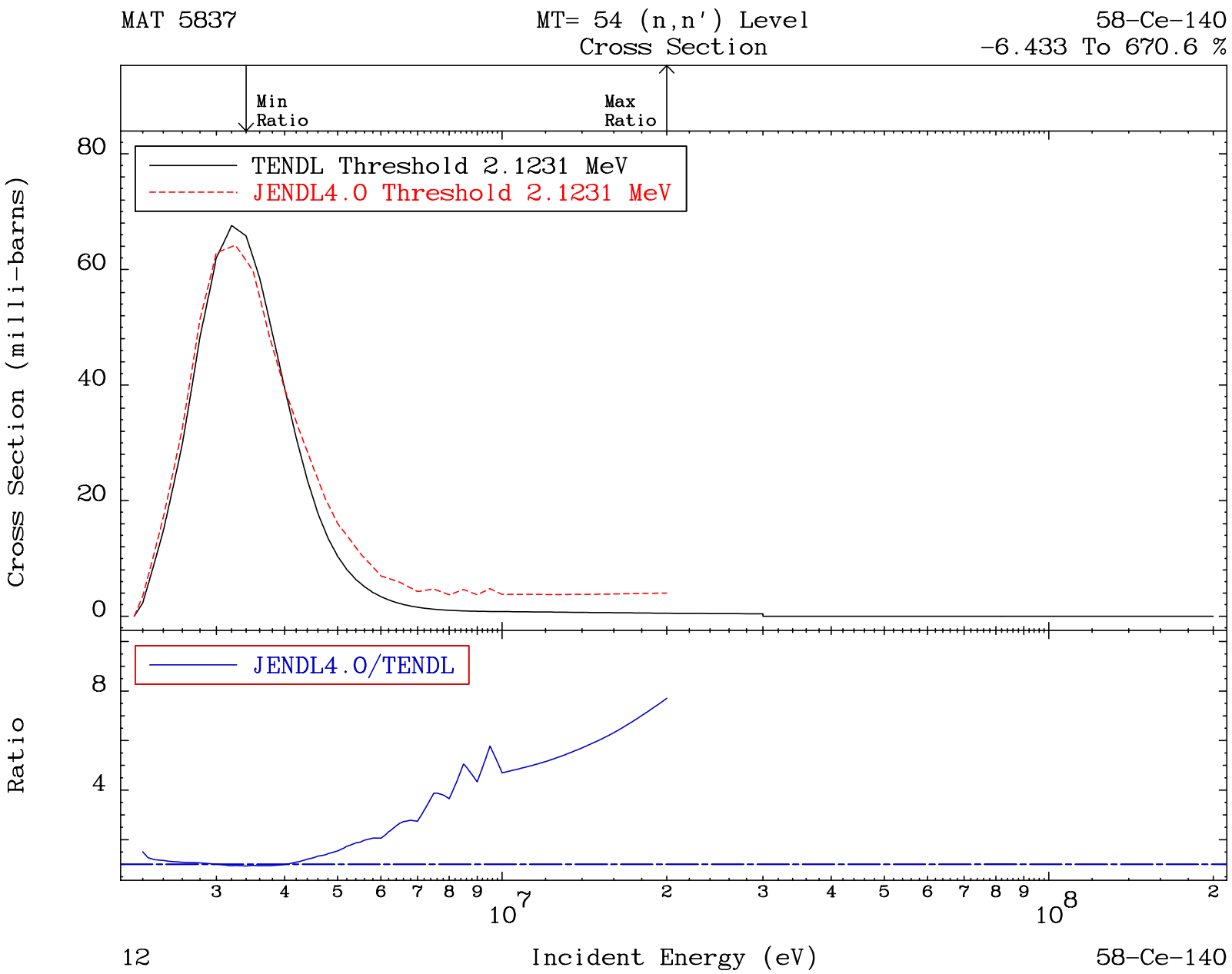

MAT 5837
(n,n') p
Cross Section
58-Ce-140
-50.36 To 33.19 %
Min Ratio
Max Ratio
TENDL Threshold 8.1975 MeV
JENDL4.0 Threshold 11.000 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JENDL4.0/TENDL
Ratio
1.2
0.8
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
58-Ce-140

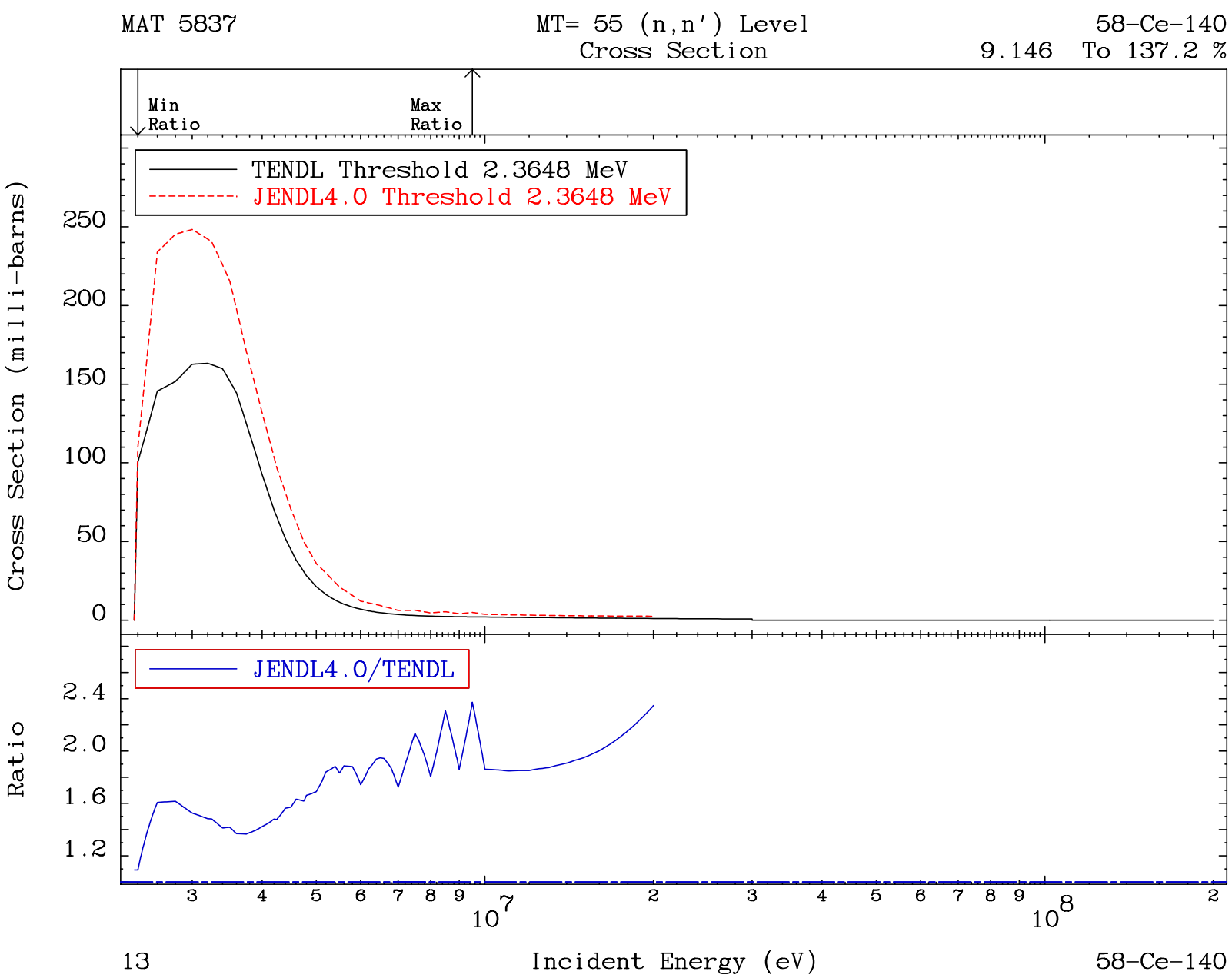

MAT 5837
(n,n') d
Cross Section
58-Ce-140
544.9 To 658.1 %
Min Ratio
Max Ratio
TENDL Threshold 14.799 MeV
JENDL4.0 Threshold 18.000 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
JENDL4.0/TENDL
Ratio
7.6
7.2
6.8
6.4
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
58-Ce-140

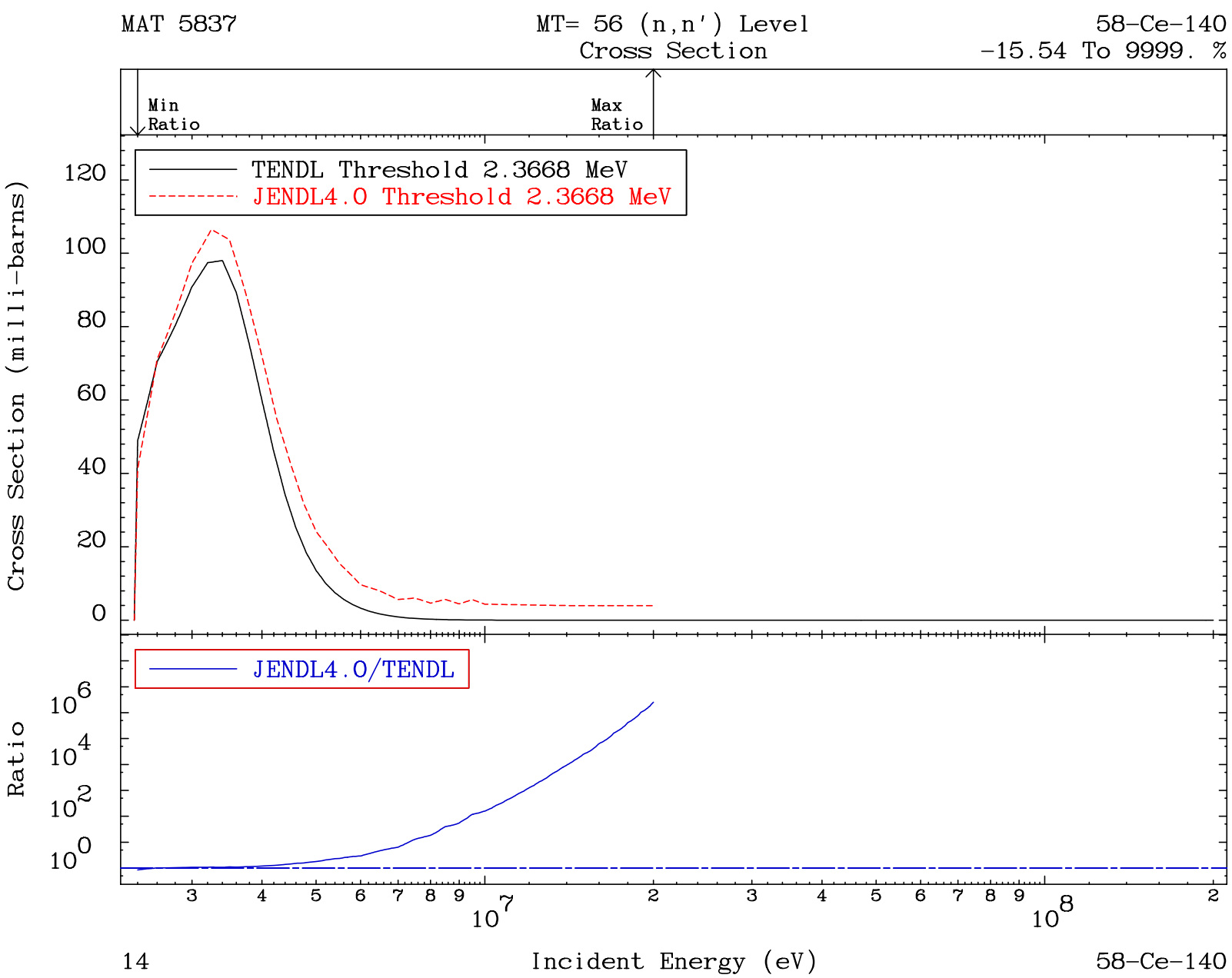

MAT 5837
MT= 51 (n,n') Level
Cross Section
58-Ce-140
36.00 To 139.1 %
Min Ratio
Max Ratio
TENDL Threshold 1.6078 MeV
JENDL4.0 Threshold 1.6078 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JENDL4.0/TENDL
Ratio
2.4
2.0
1.6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
9
Incident Energy (eV)
58-Ce-140

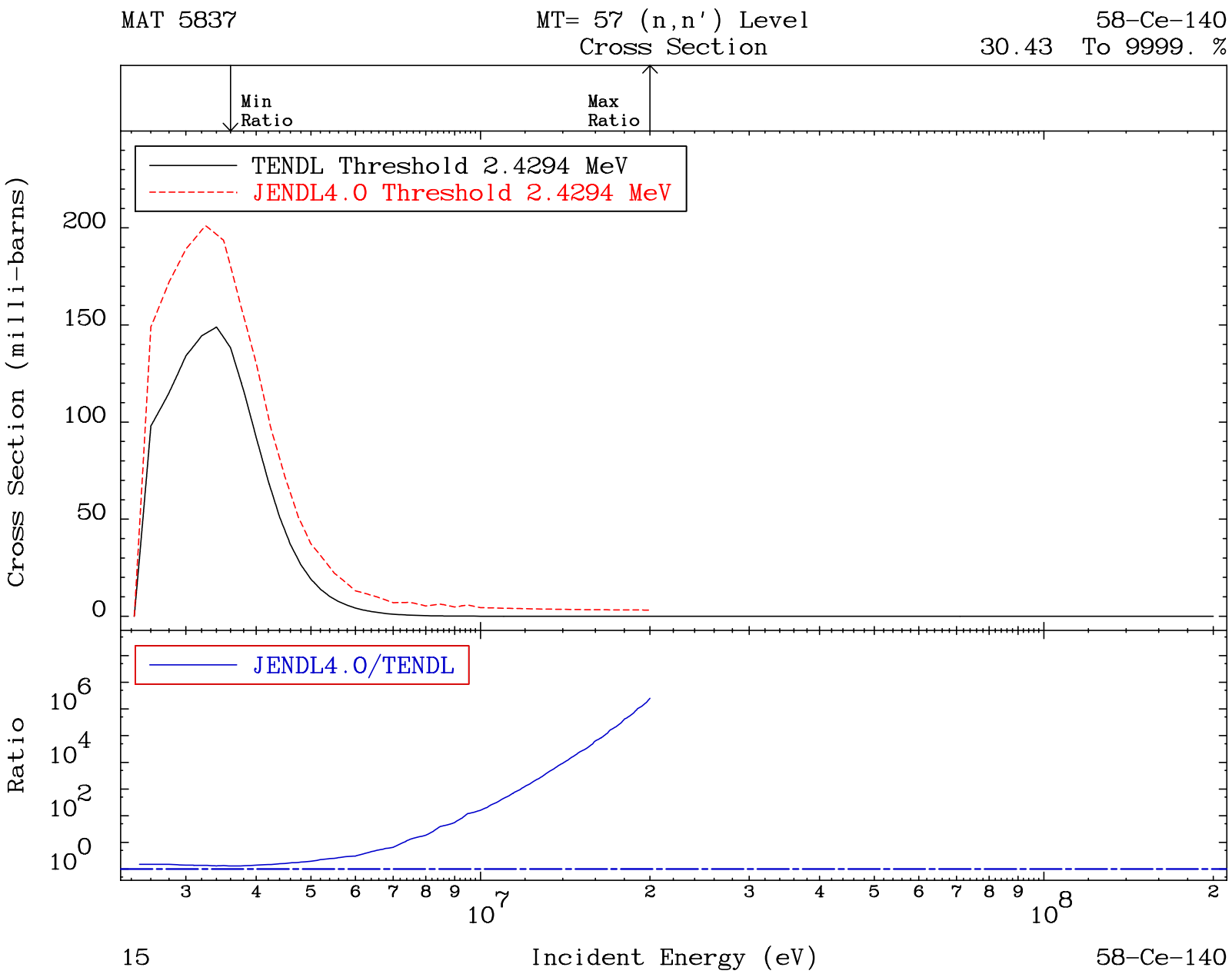

MAT 5837
MT= 52 (n,n') Level
Cross Section
58-Ce-140
36.34 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9170 MeV
JENDL4.0 Threshold 1.9170 MeV
Cross Section (milli-barns)
200
150
100
50
0
JENDL4.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
10
Incident Energy (eV)
58-Ce-140

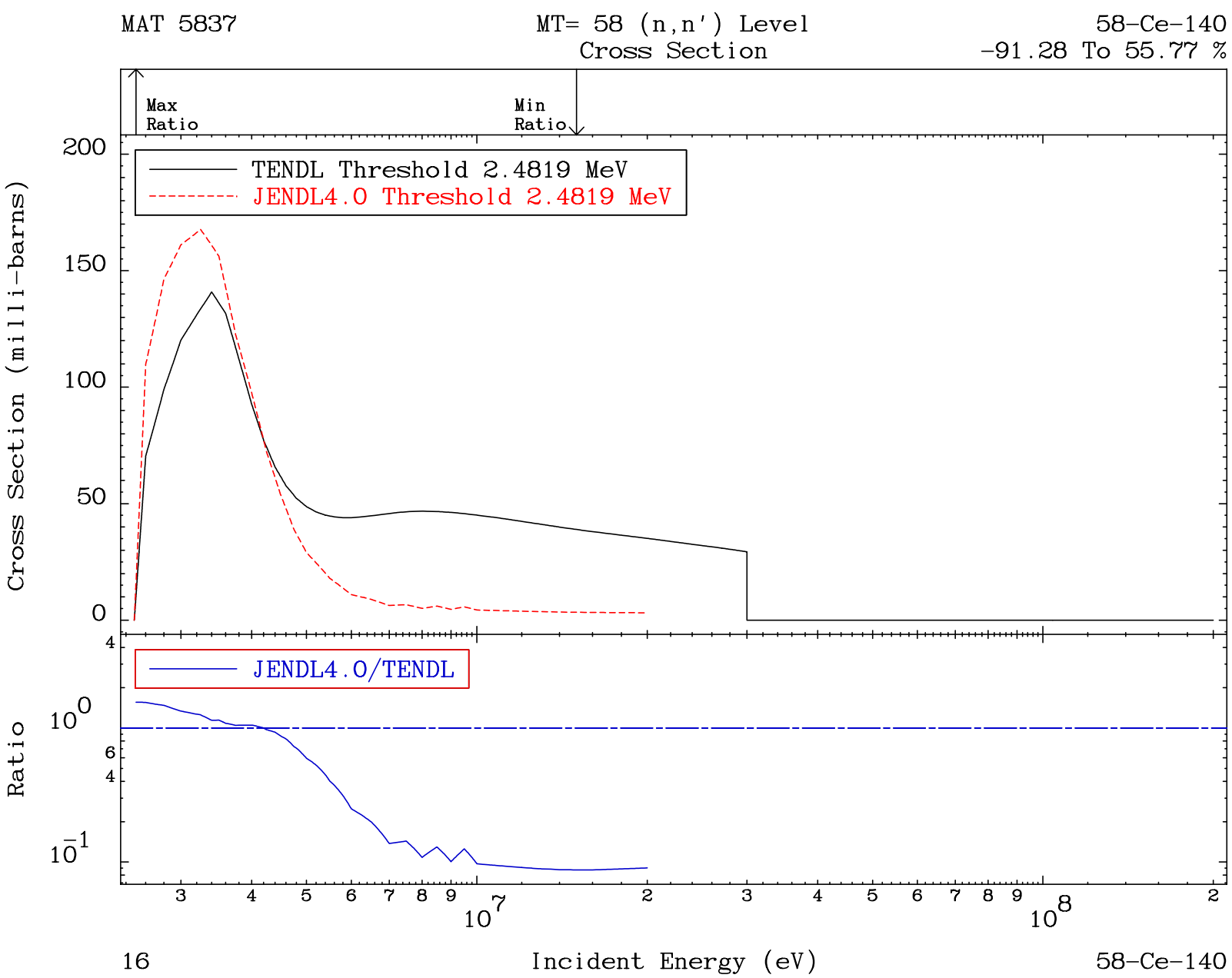

MAT 5837
MT= 53 (n,n') Level
Cross Section
58-Ce-140
-79.38 To 22.65 %
Max Ratio
Min Ratio
TENDL Threshold 2.0983 MeV
JENDL4.0 Threshold 2.0983 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JENDL4.0/TENDL
Ratio
1.2
0.8
0.4
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
11
Incident Energy (eV)
58-Ce-140

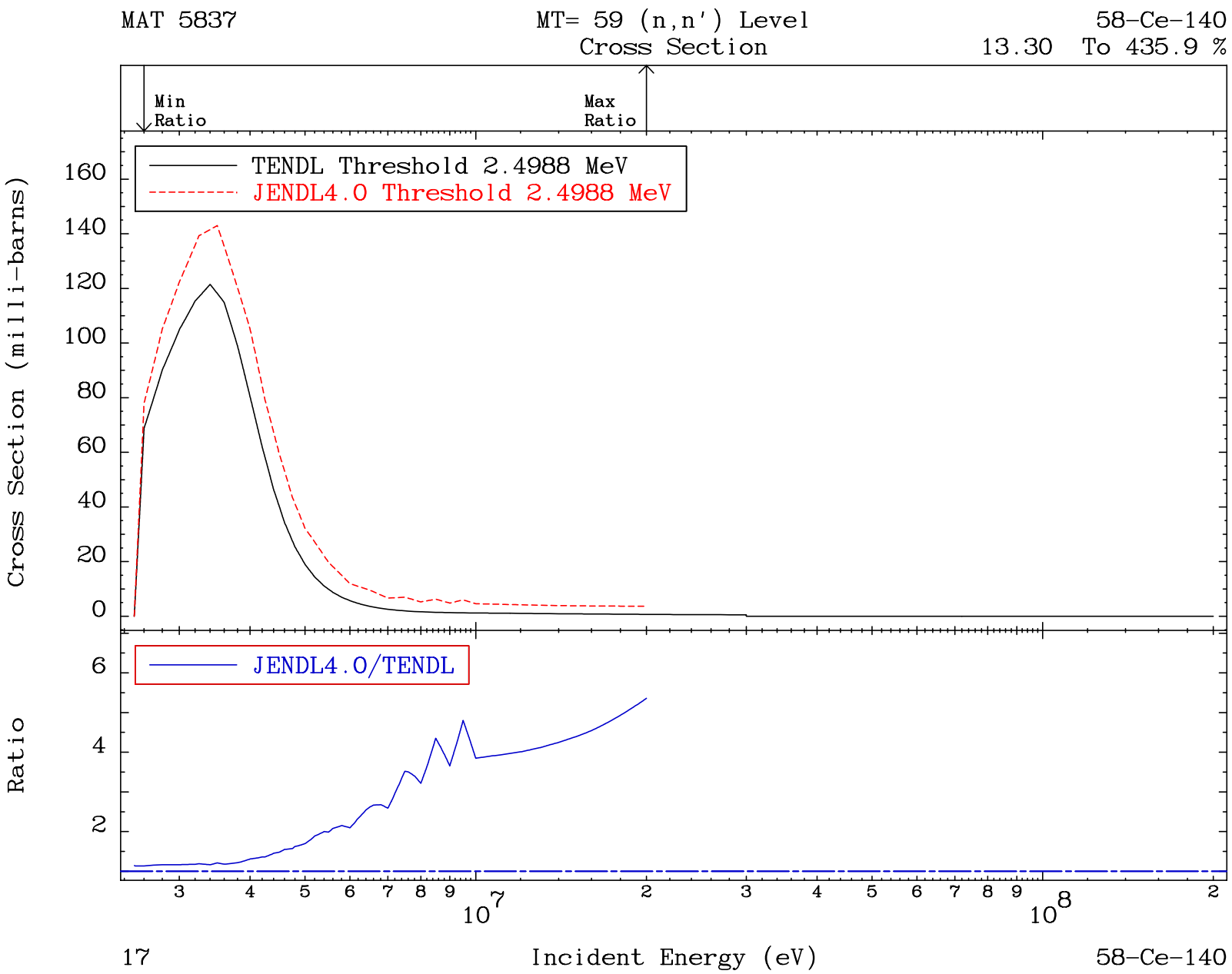

MAT 5837
MT= 54 (n,n') Level
Cross Section
58-Ce-140
-6.433 To 670.6 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.1231 MeV
JENDL4.0 Threshold 2.1231 MeV
Cross Section (milli-barns)
80
60
40
20
0
JENDL4.0/TENDL
Ratio
8
4
3
4
5
6
7
8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
58-Ce-140

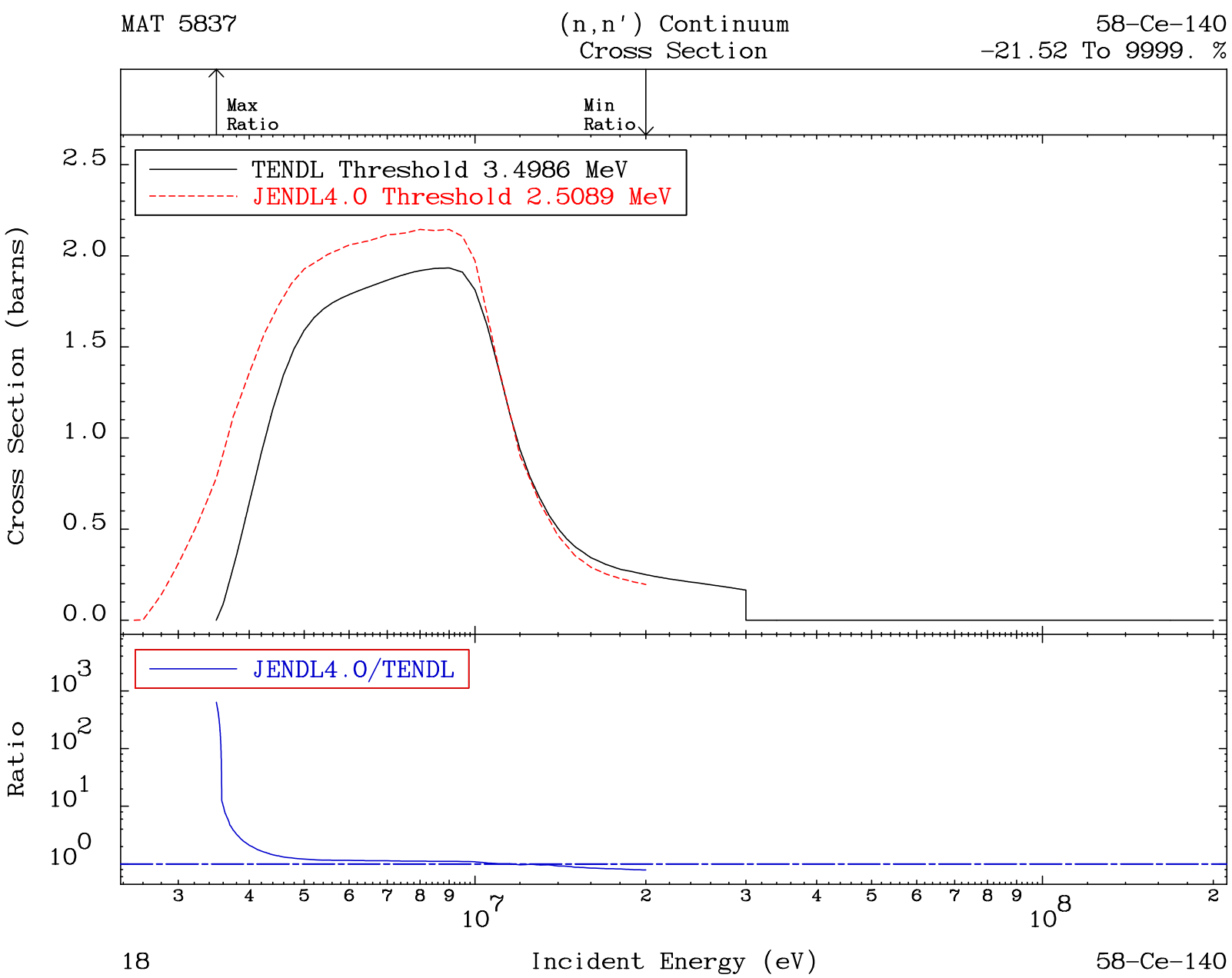

MAT 5837
MT= 55 (n,n') Level
Cross Section
58-Ce-140
9.146 To 137.2 %
Min Ratio
Max Ratio
TENDL Threshold 2.3648 MeV
JENDL4.0 Threshold 2.3648 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
JENDL4.0/TENDL
Ratio
2.4
2.0
1.6
1.2
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
13
Incident Energy (eV)
58-Ce-140

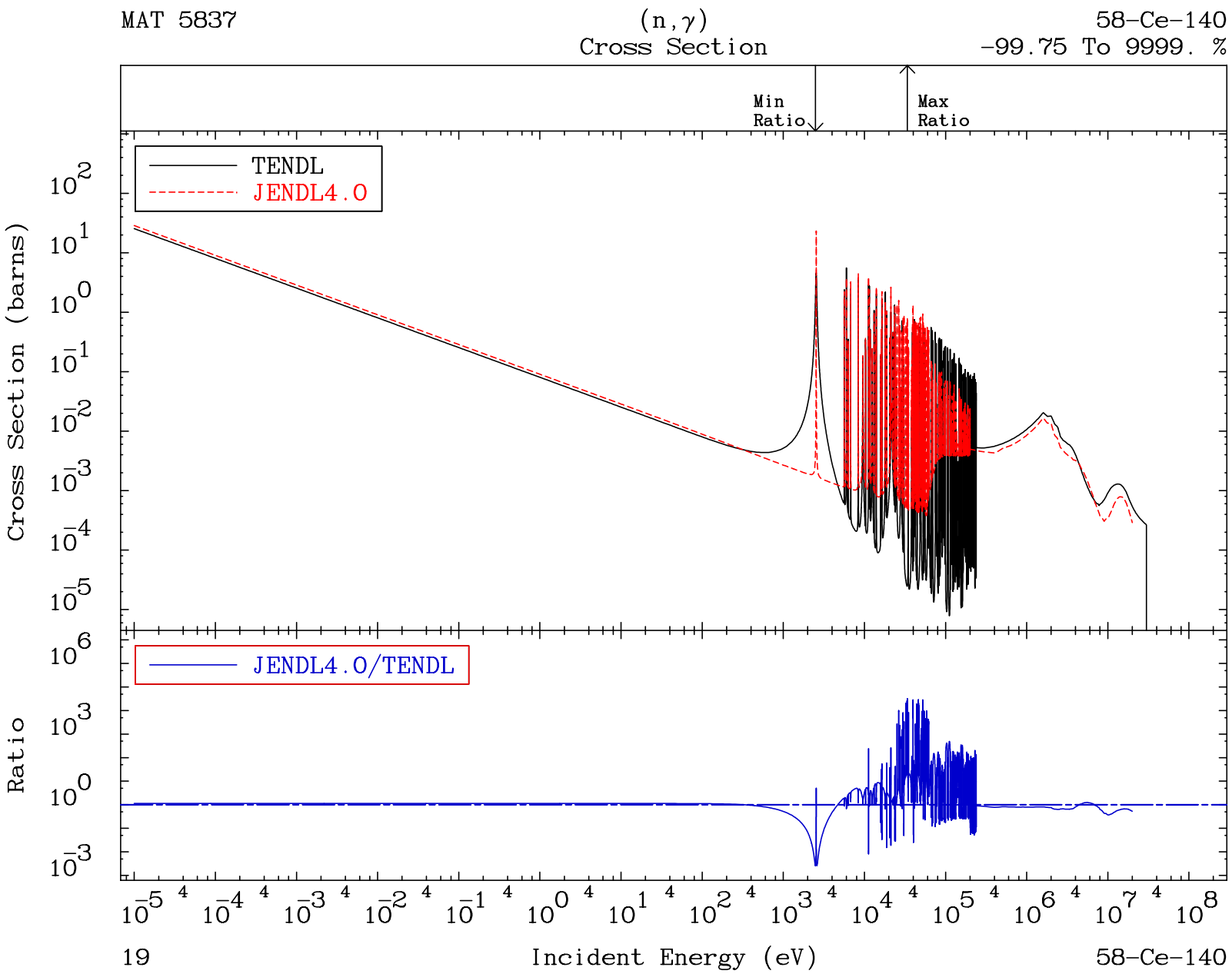

MAT 5837
MT= 56 (n,n') Level
Cross Section
58-Ce-140
-15.54 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.3668 MeV
JENDL4.0 Threshold 2.3668 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JENDL4.0/TENDL
Ratio
10^6
10^4
10^2
10^0
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
14
Incident Energy (eV)
58-Ce-140

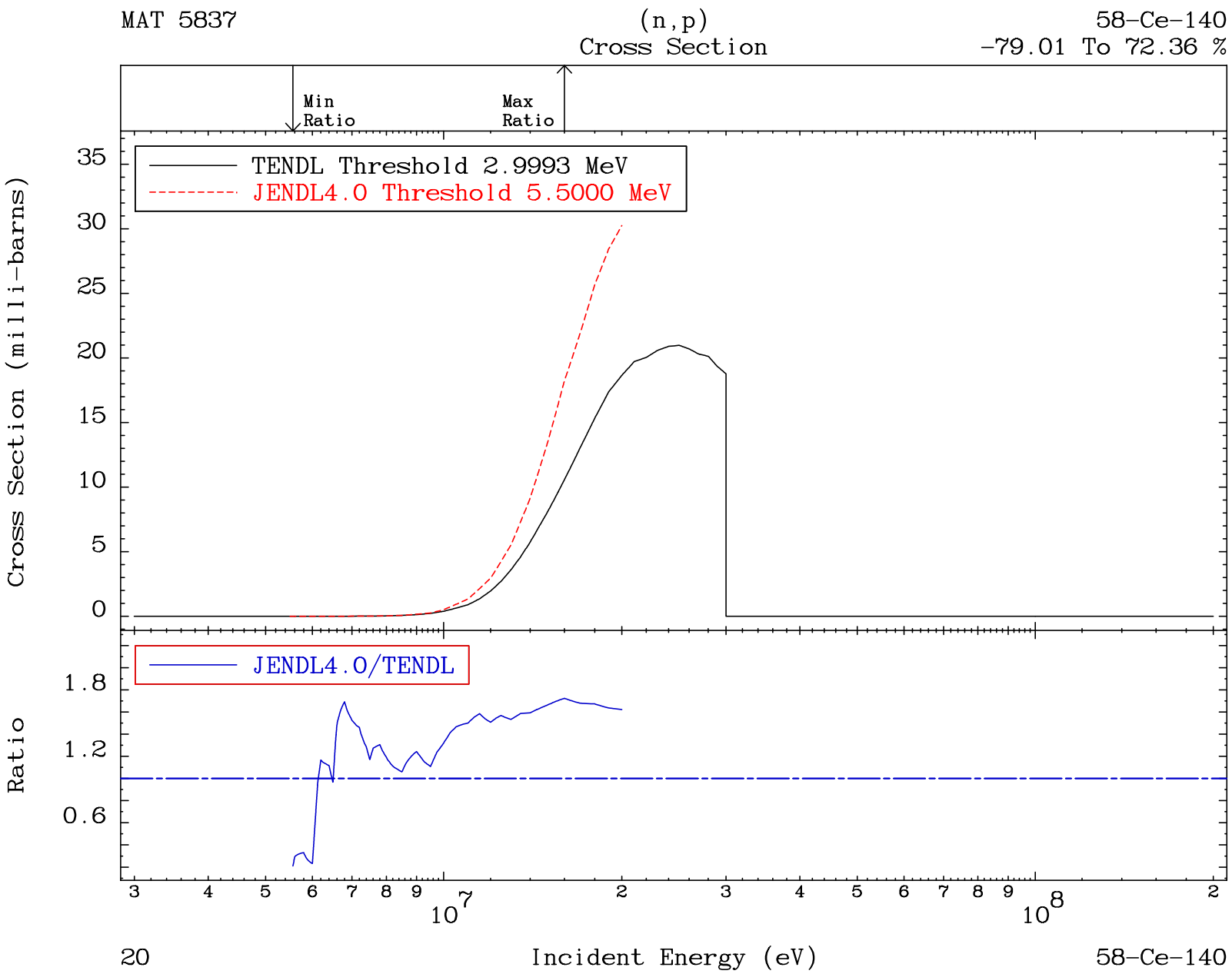

MAT 5837
MT= 57 (n,n') Level
Cross Section
58-Ce-140
30.43 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.4294 MeV
JENDL4.0 Threshold 2.4294 MeV
Cross Section (milli-barns)
200
150
100
50
0
JENDL4.0/TENDL
Ratio
10^6
10^4
10^2
10^0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
15
Incident Energy (eV)
58-Ce-140

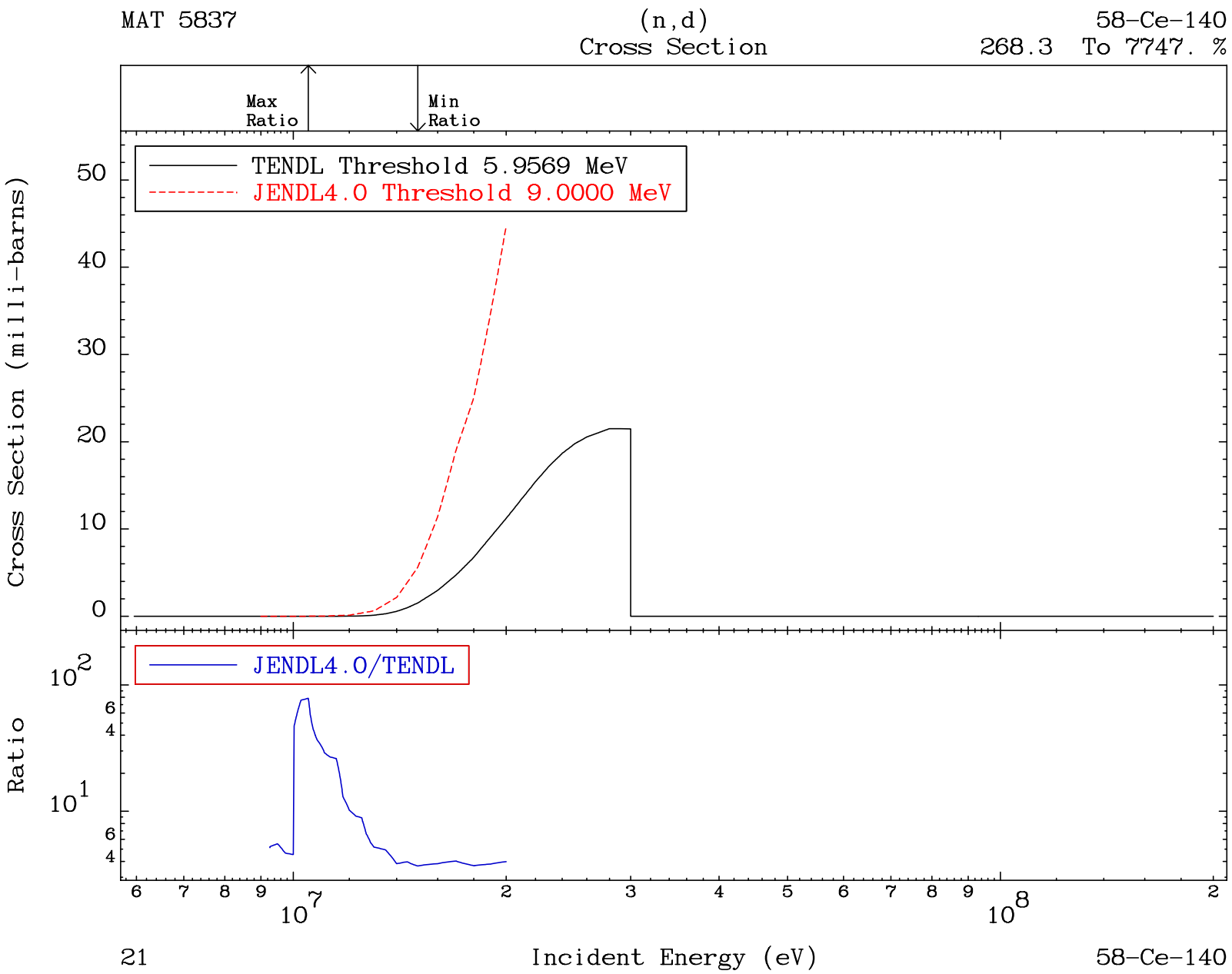

MAT 5837
MT= 58 (n,n') Level
Cross Section
58-Ce-140
-91.28 To 55.77 %
Max
Ratio
Min
Ratio
TENDL Threshold 2.4819 MeV
JENDL4.0 Threshold 2.4819 MeV
Cross Section (milli-barns)
200
150
100
50
0
JENDL4.0/TENDL
Ratio
4
10^0
6
4
10^-1
3
4
5
6
7
8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
16
Incident Energy (eV)
58-Ce-140

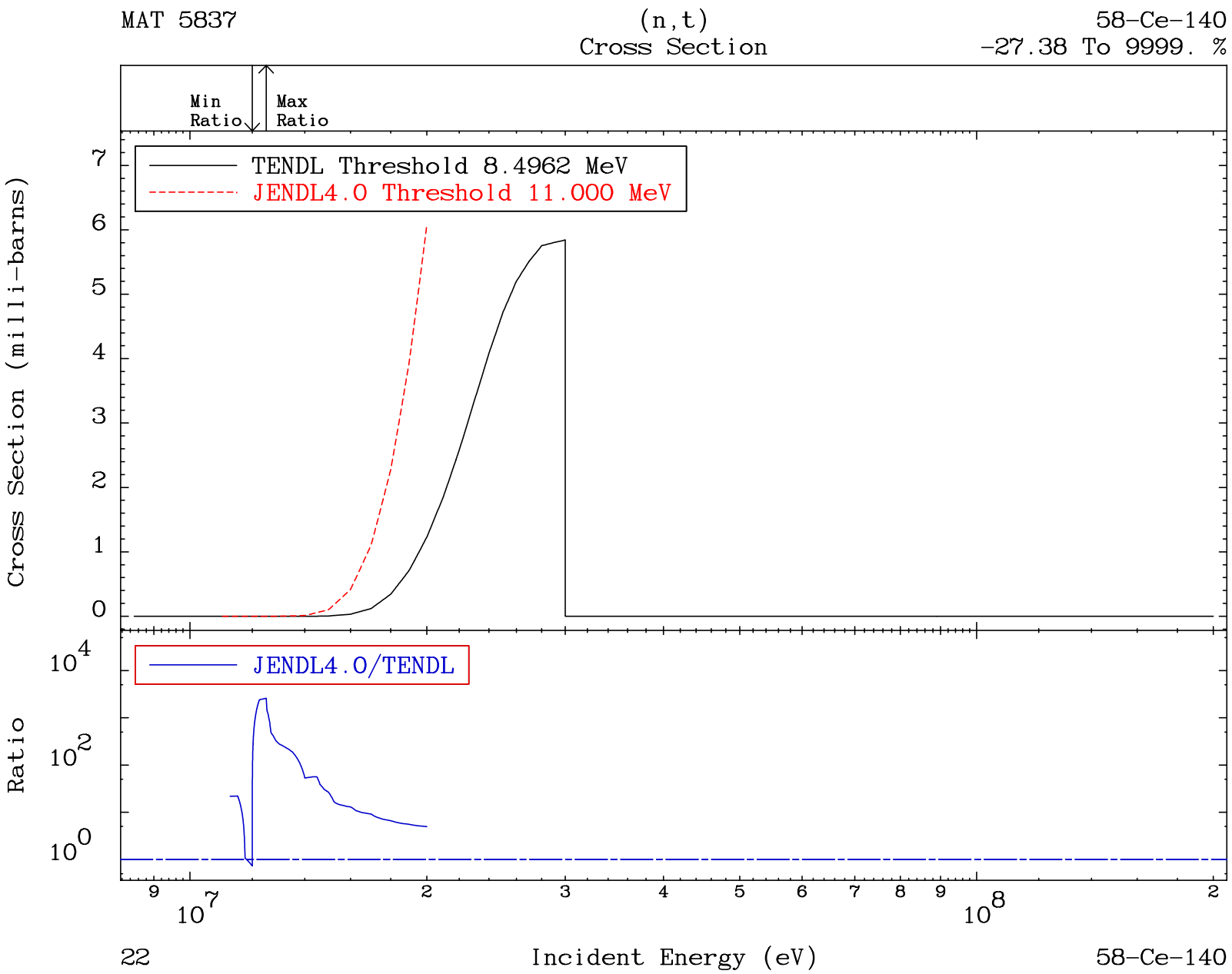

MAT 5837
MT= 59 (n,n') Level
Cross Section
58-Ce-140
13.30 To 435.9 %
Min Ratio
Max Ratio
TENDL Threshold 2.4988 MeV
JENDL4.0 Threshold 2.4988 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JENDL4.0/TENDL
Ratio
6
4
2
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
17
Incident Energy (eV)
58-Ce-140

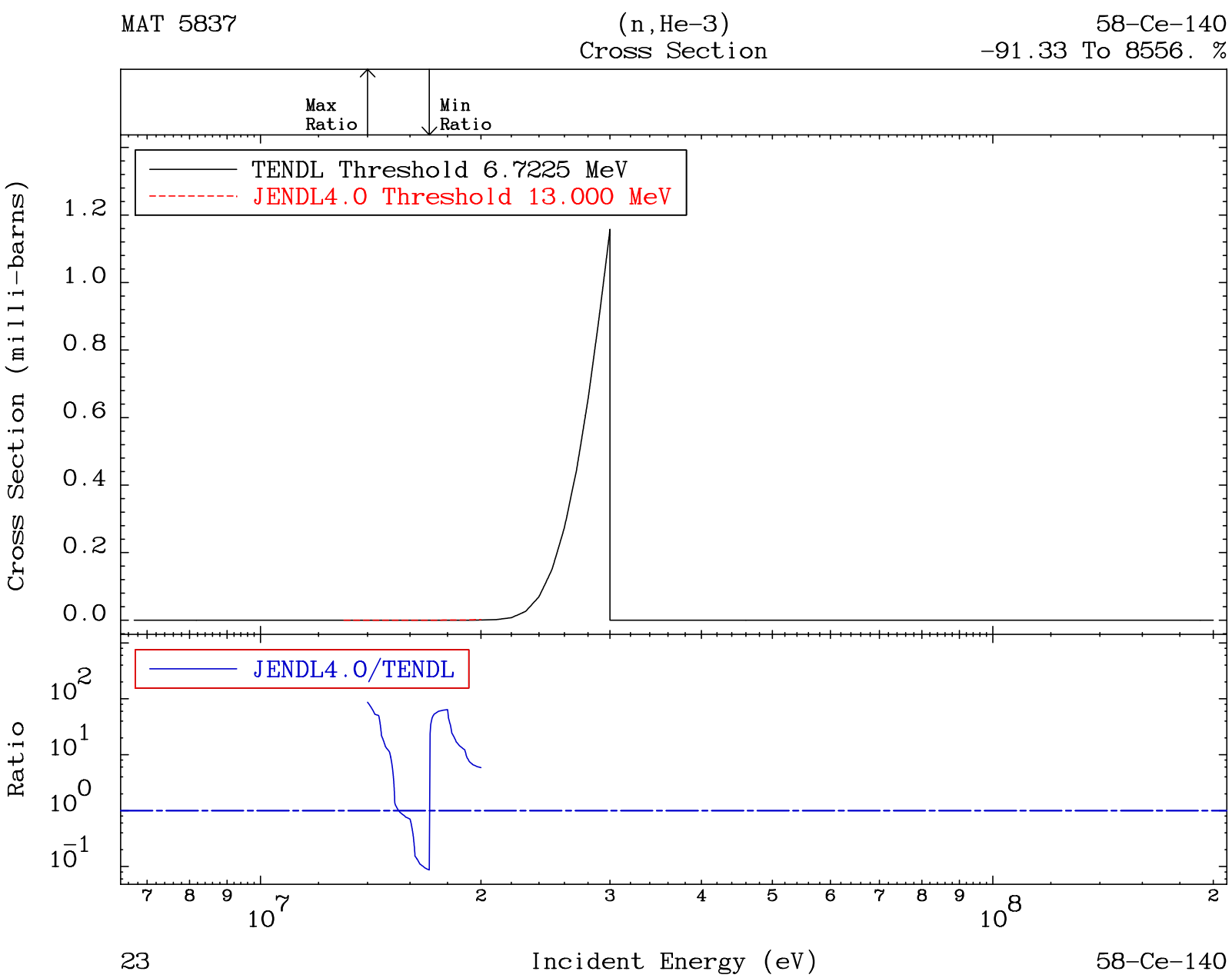

MAT 5837
(n,n') Continuum
Cross Section
58-Ce-140
-21.52 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4986 MeV
JENDL4.0 Threshold 2.5089 MeV
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
18
58-Ce-140

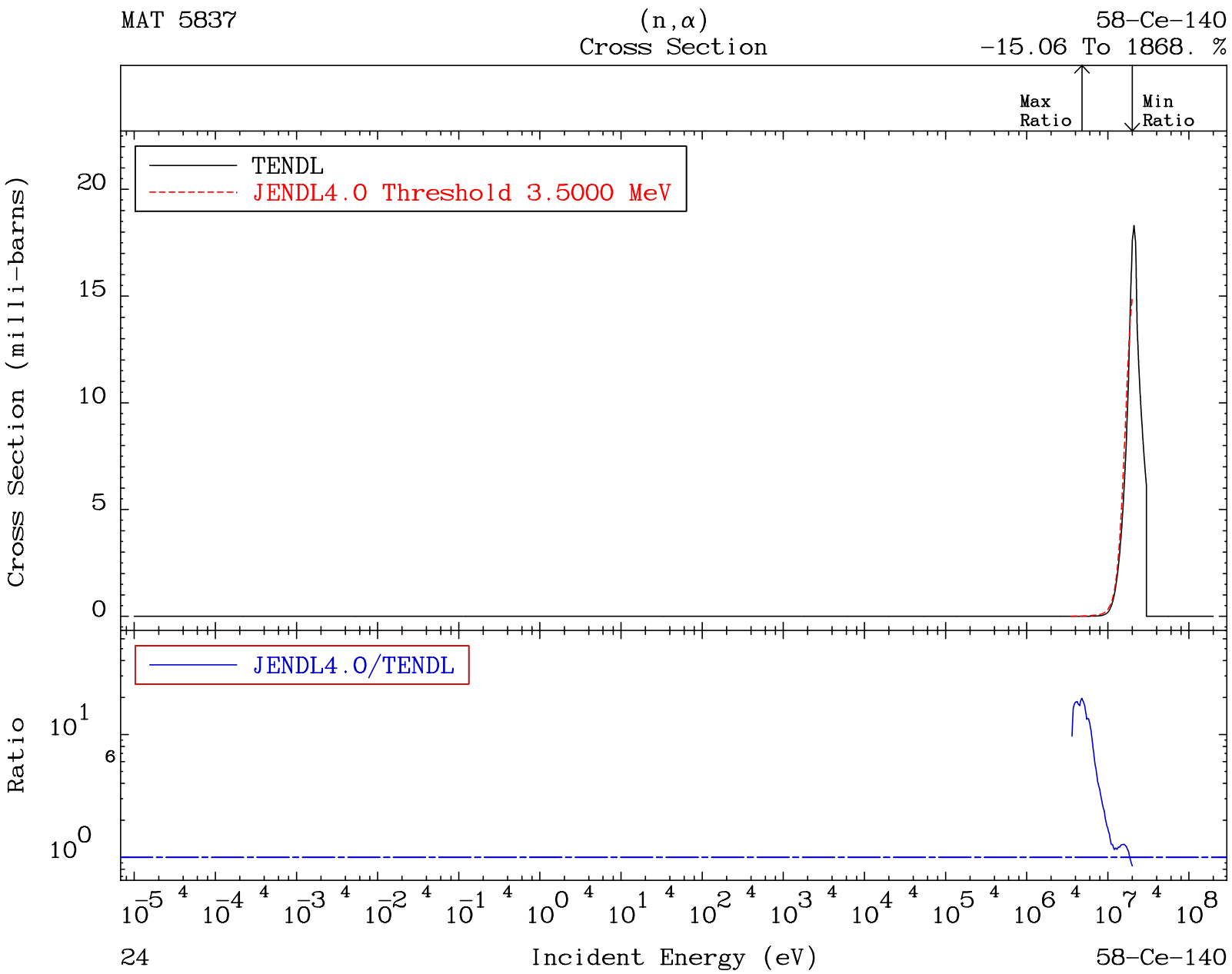

MAT 5837
(n,γ)
Cross Section
58-Ce-140
-99.75 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
19
58-Ce-140

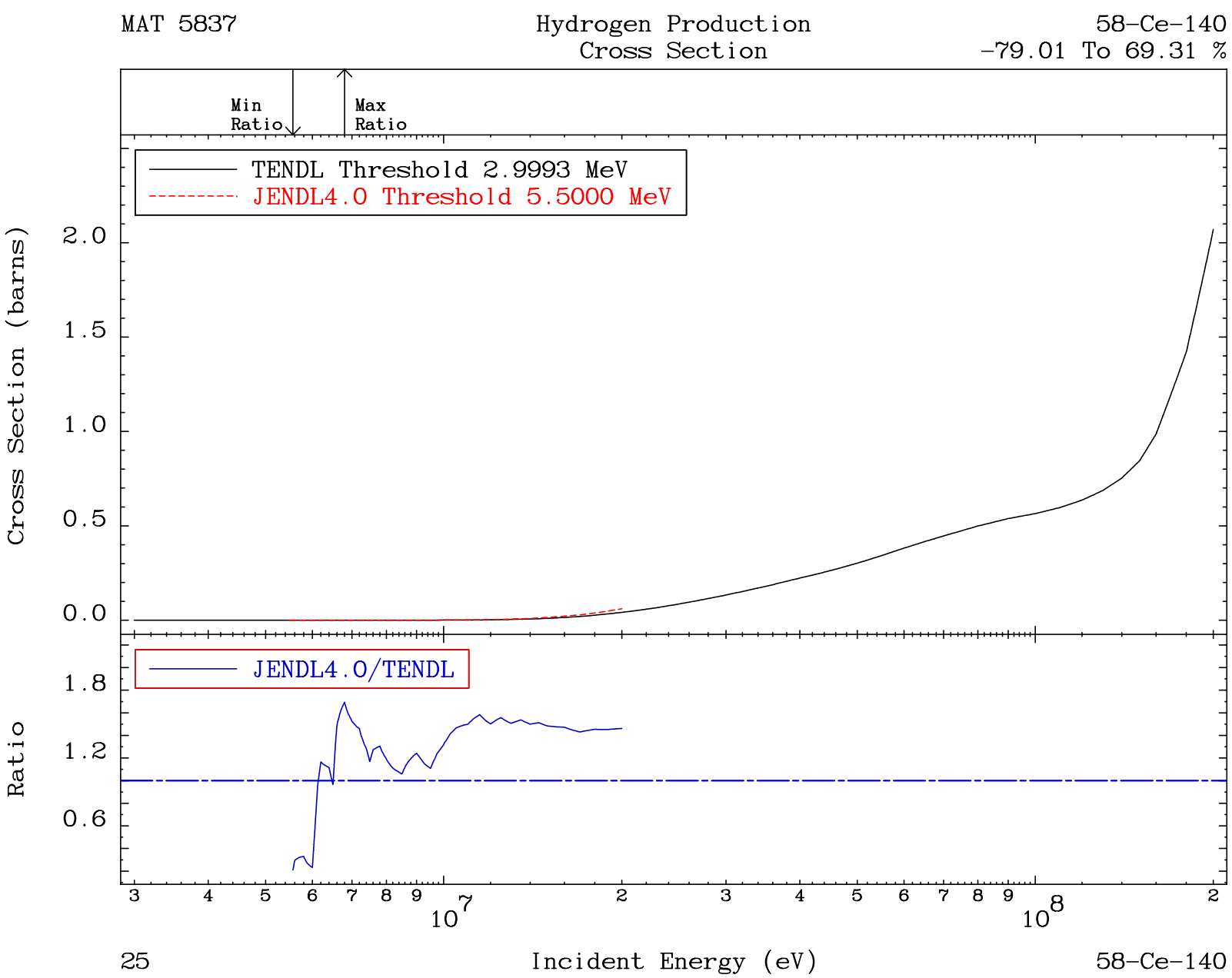

MAT 5837
(n,p)
Cross Section
58-Ce-140
-79.01 To 72.36 %
Min Ratio
Max Ratio
TENDL Threshold 2.9993 MeV
JENDL4.0 Threshold 5.5000 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JENDL4.0/TENDL
Ratio
1.8
1.2
0.6
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
58-Ce-140

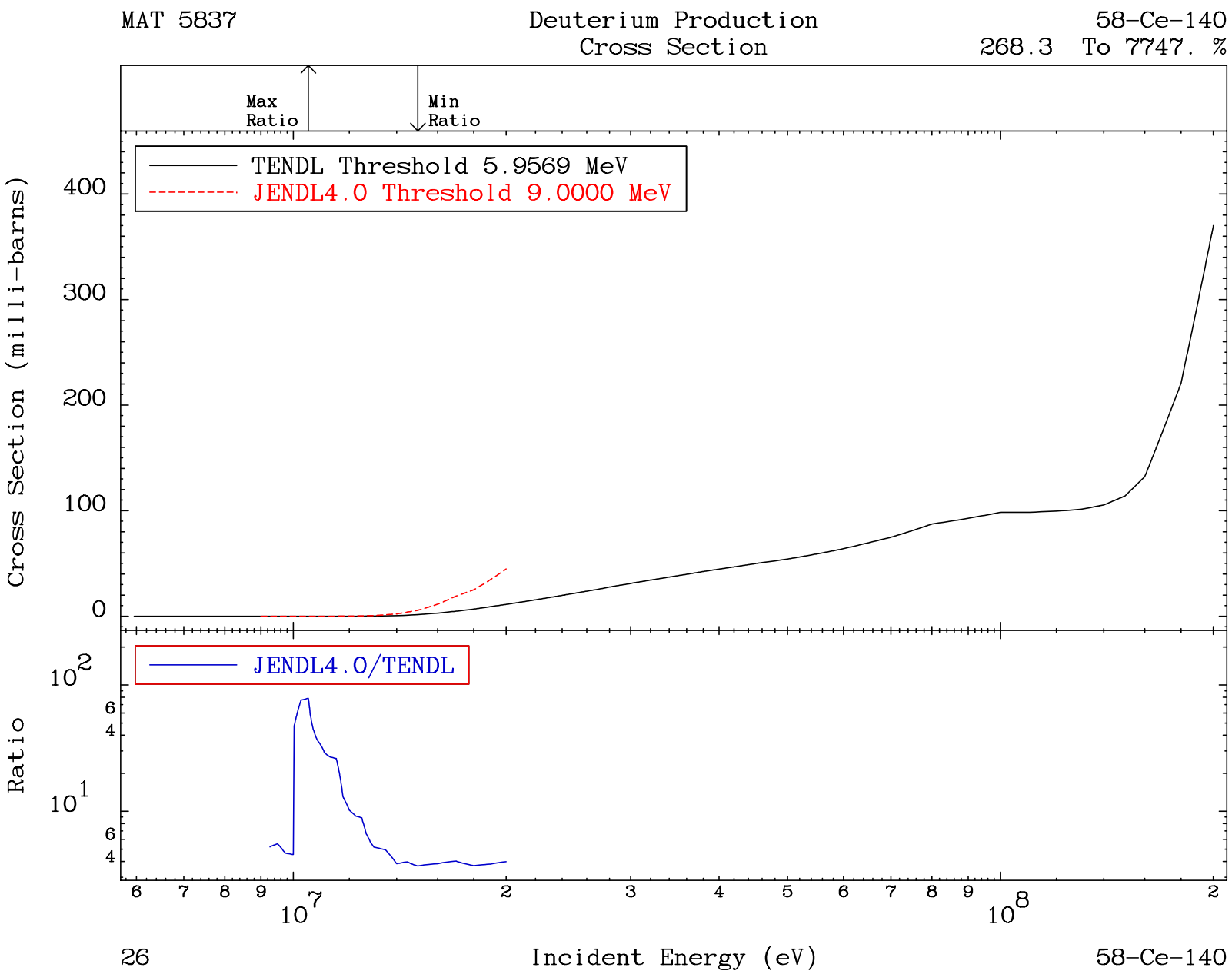

MAT 5837
(n,d)
Cross Section
58-Ce-140
268.3 To 7747. %
Max Ratio
Min Ratio
TENDL Threshold 5.9569 MeV
JENDL4.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JENDL4.0/TENDL
Ratio
10^2
10^1
6
4
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
21
Incident Energy (eV)
58-Ce-140

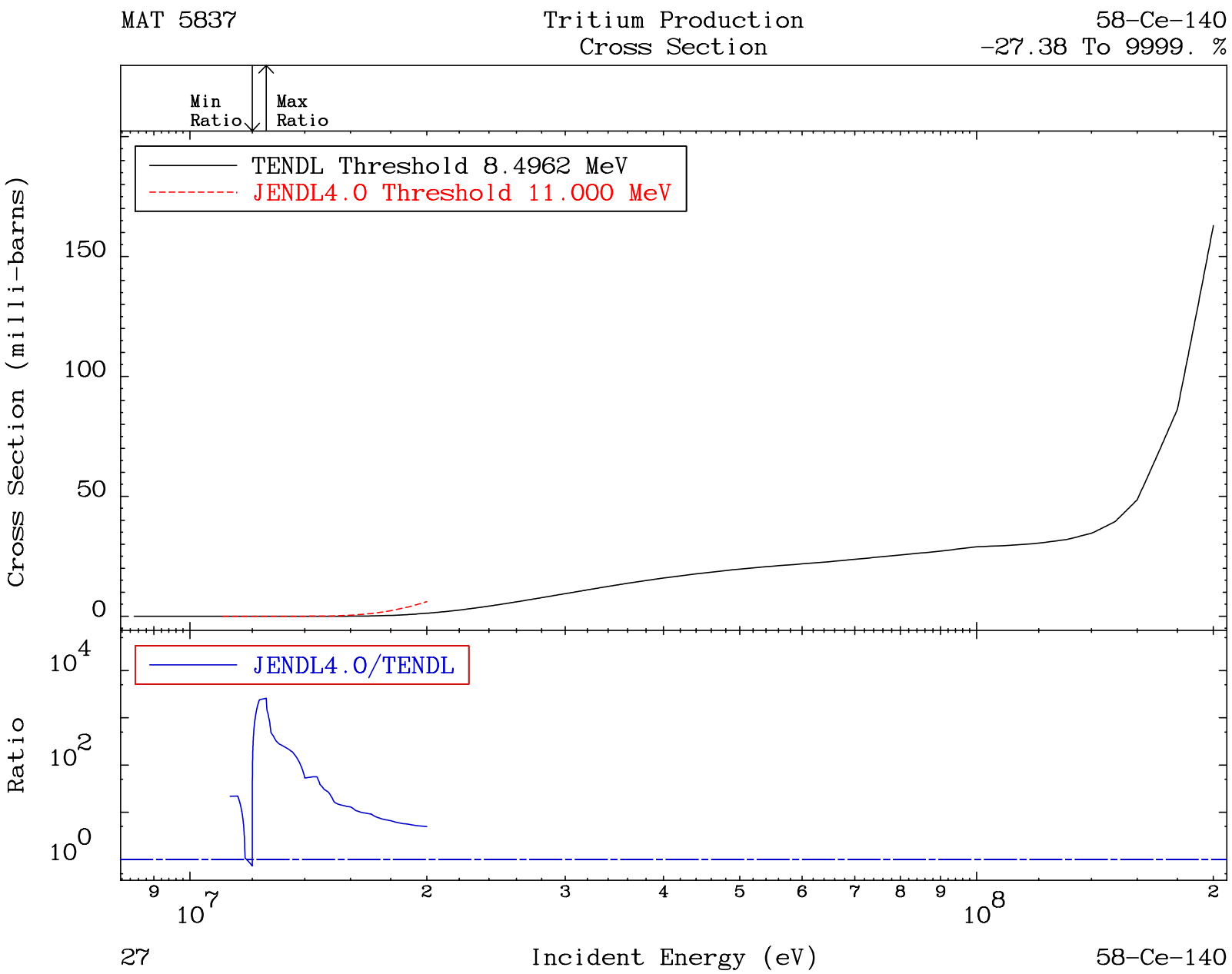

MAT 5837
(n,t)
Cross Section
58-Ce-140
-27.38 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 8.4962 MeV
JENDL4.0 Threshold 11.000 MeV
Cross Section (milli-barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
22
58-Ce-140

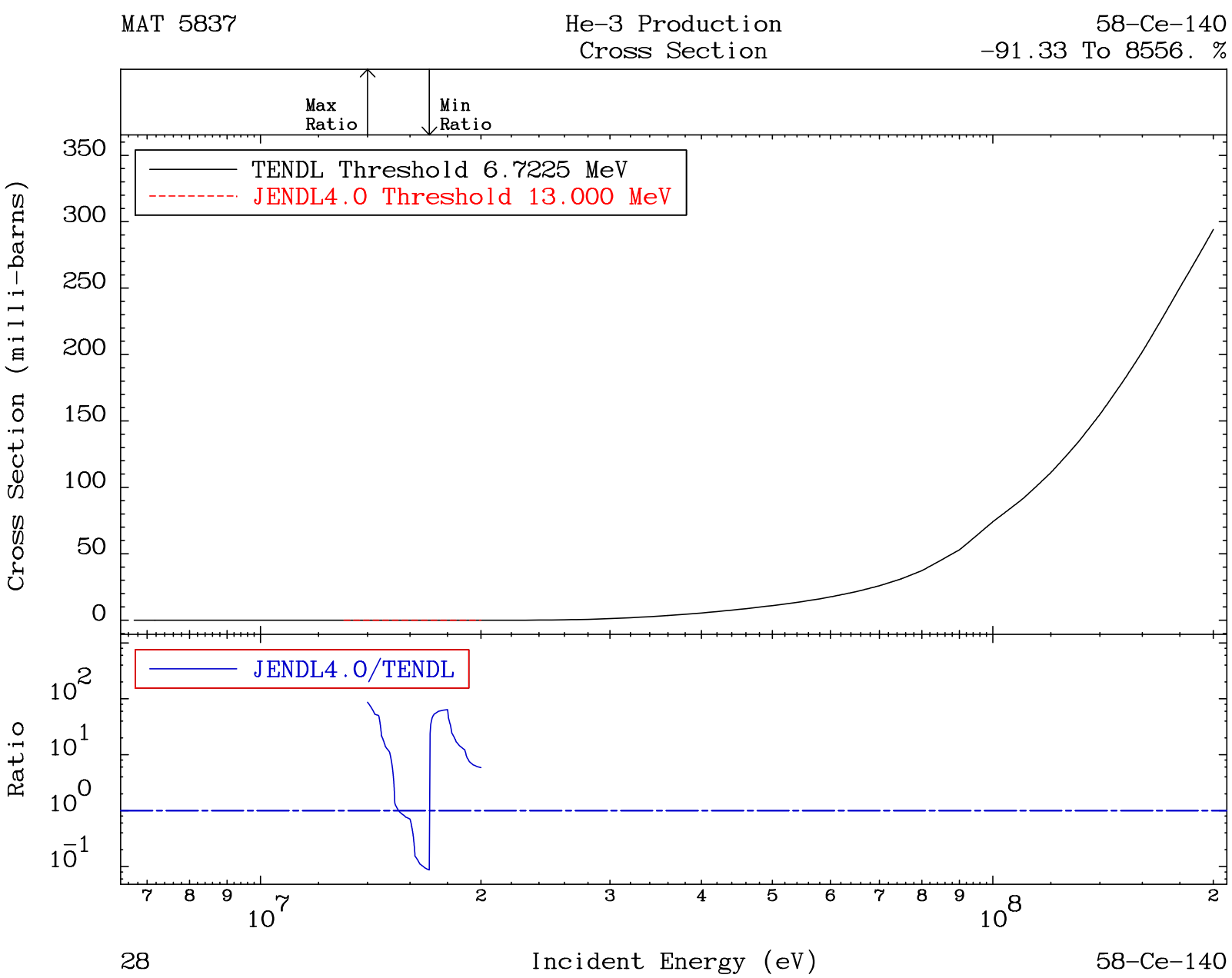

MAT 5837
(n,He-3)
Cross Section
58-Ce-140
-91.33 To 8556. %
Max Ratio
Min Ratio
TENDL Threshold 6.7225 MeV
JENDL4.0 Threshold 13.000 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JENDL4.0/TENDL
Ratio
10^2
10^1
10^0
10^-1
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
23
Incident Energy (eV)
58-Ce-140

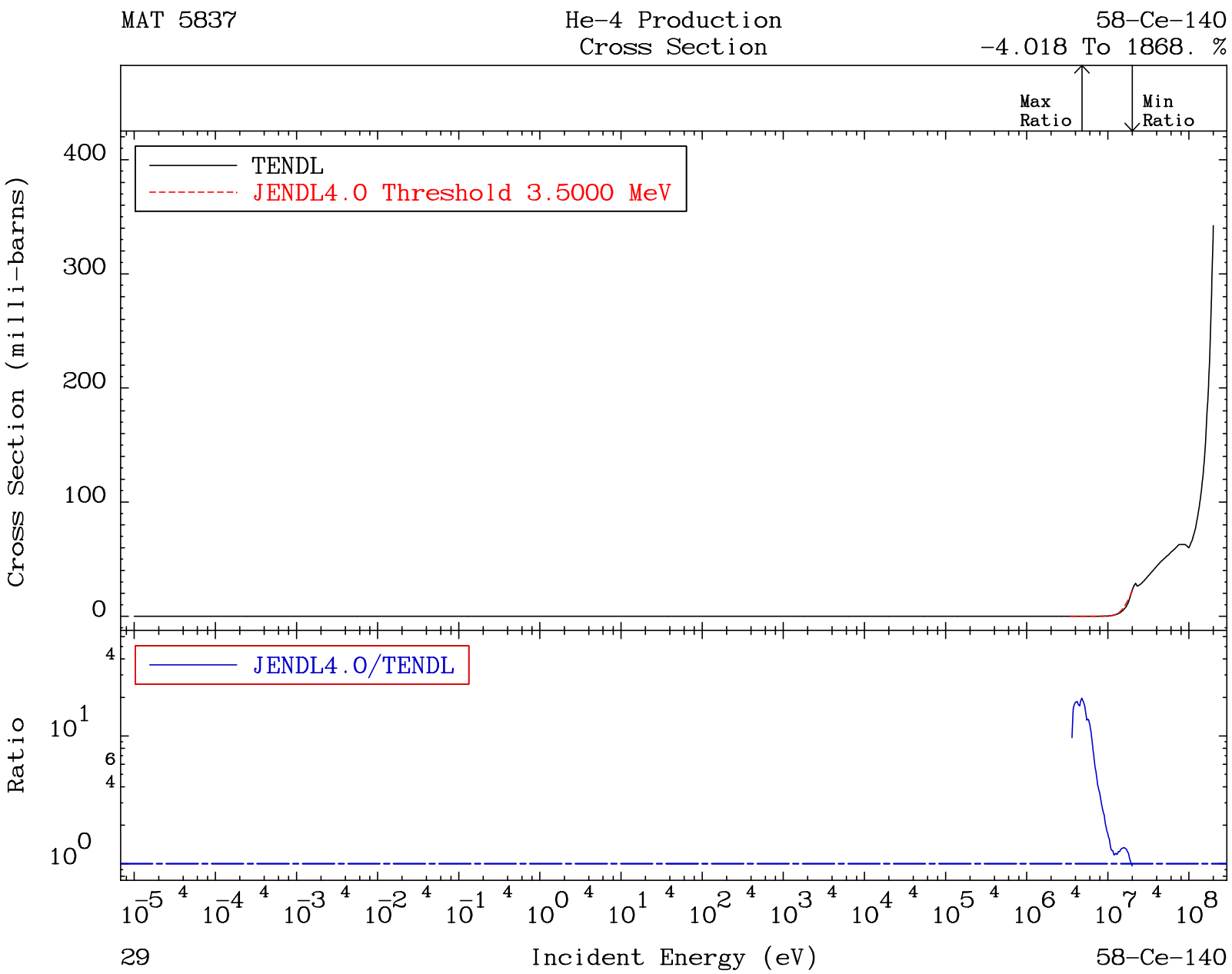

MAT 5837
(n,α)
Cross Section
58-Ce-140
-15.06 To 1868. %
Max Ratio
Min Ratio
TENDL
JENDL4.0 Threshold 3.5000 MeV
Cross Section (milli-barns)
20
15
10
5
0
JENDL4.0/TENDL
Ratio
10^1
6
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
24
Incident Energy (eV)
58-Ce-140

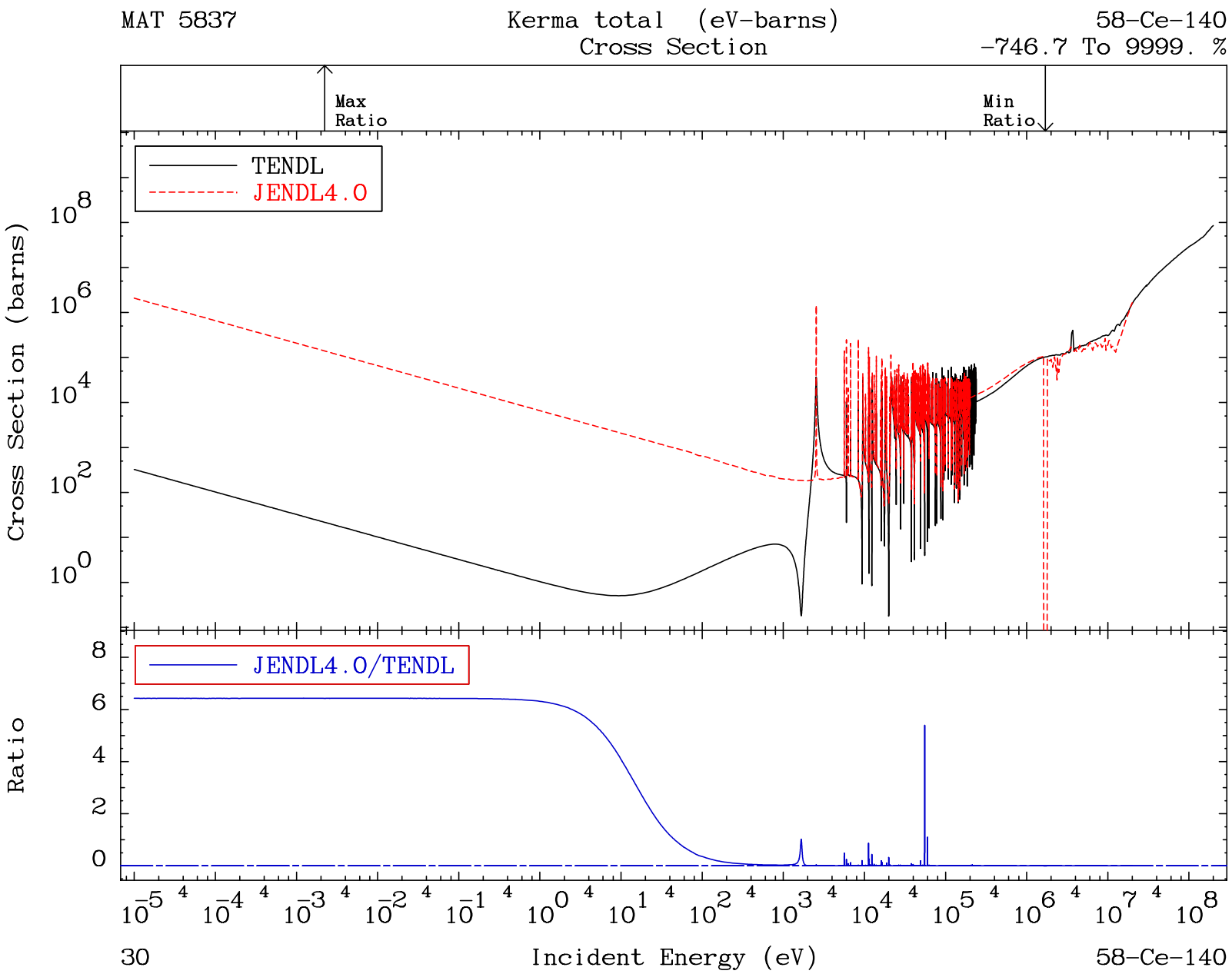

MAT 5837
Hydrogen Production
Cross Section
58-Ce-140
-79.01 To 69.31 %
Min Ratio
Max Ratio
TENDL Threshold 2.9993 MeV
JENDL4.0 Threshold 5.5000 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JENDL4.0/TENDL
Ratio
1.8
1.2
0.6
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
58-Ce-140

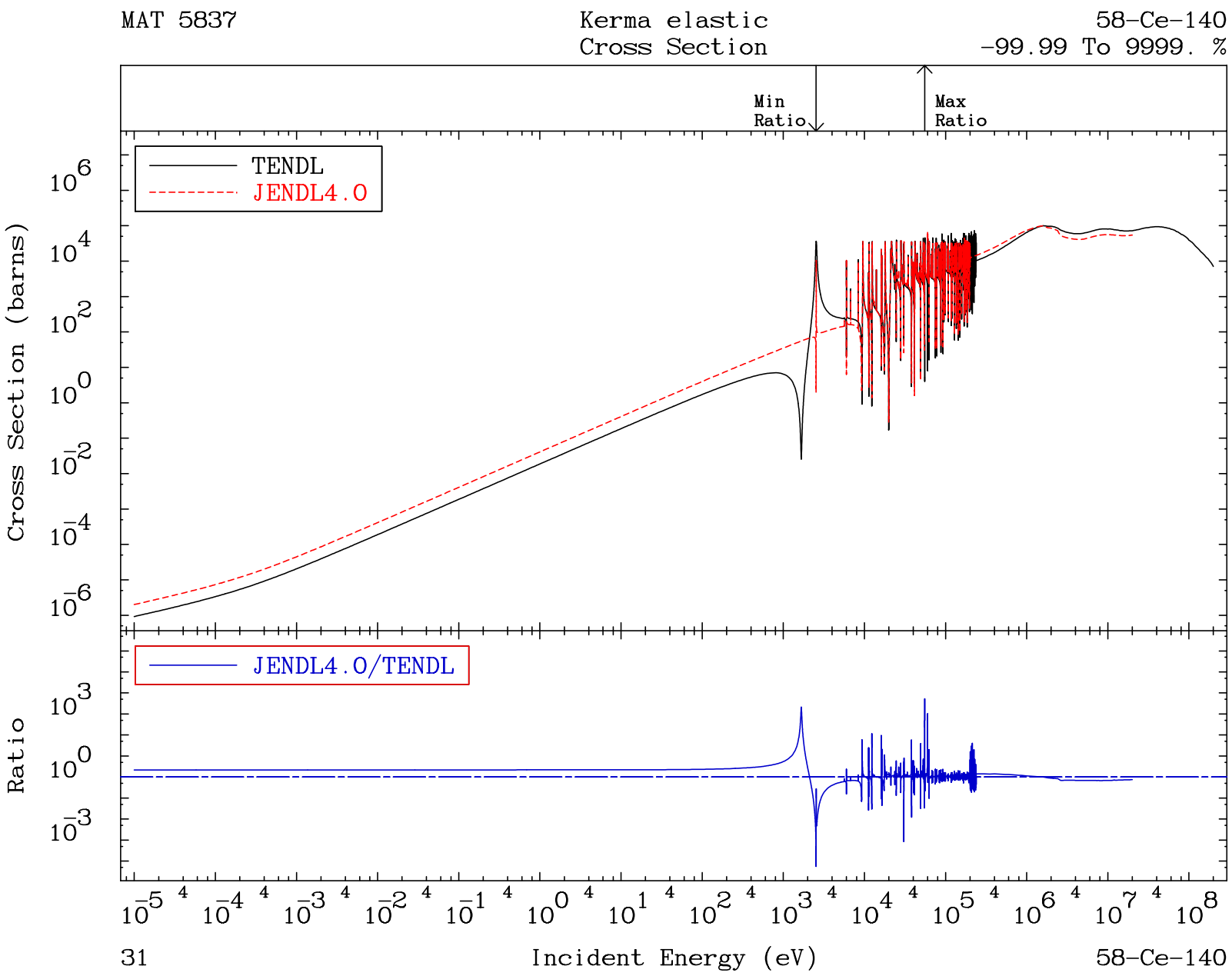

MAT 5837
Deuterium Production
Cross Section
58-Ce-140
268.3 To 7747. %
Max Ratio
Min Ratio
TENDL Threshold 5.9569 MeV
JENDL4.0 Threshold 9.0000 MeV
Cross Section (milli-barns)
400
300
200
100
0
JENDL4.0/TENDL
Ratio
10^2
10^1
6
4
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
58-Ce-140

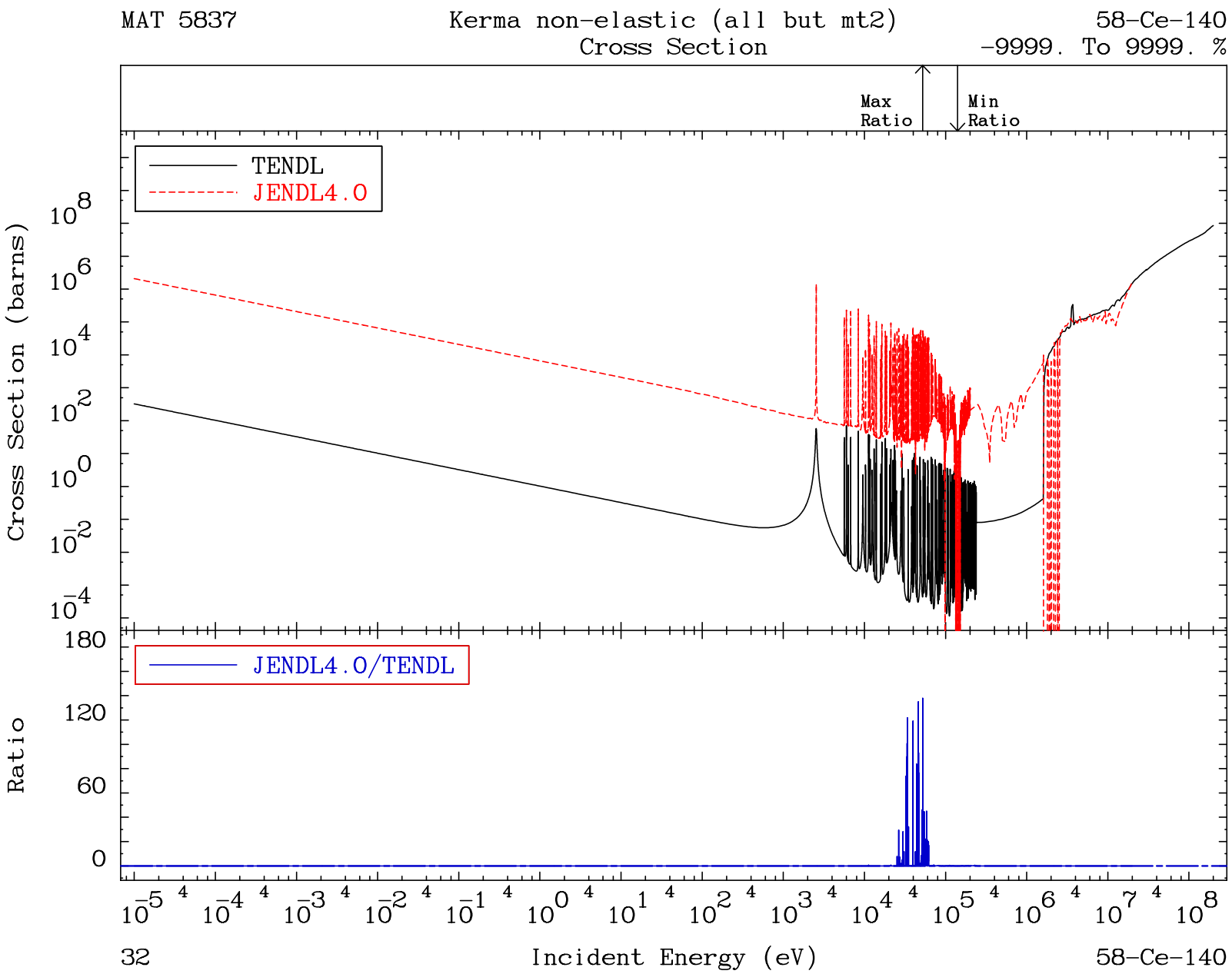

MAT 5837
Tritium Production
Cross Section
58-Ce-140
-27.38 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 8.4962 MeV
JENDL4.0 Threshold 11.000 MeV
Cross Section (milli-barns)
150
100
50
0
JENDL4.0/TENDL
Ratio
10^4
10^2
10^0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
27
Incident Energy (eV)
58-Ce-140

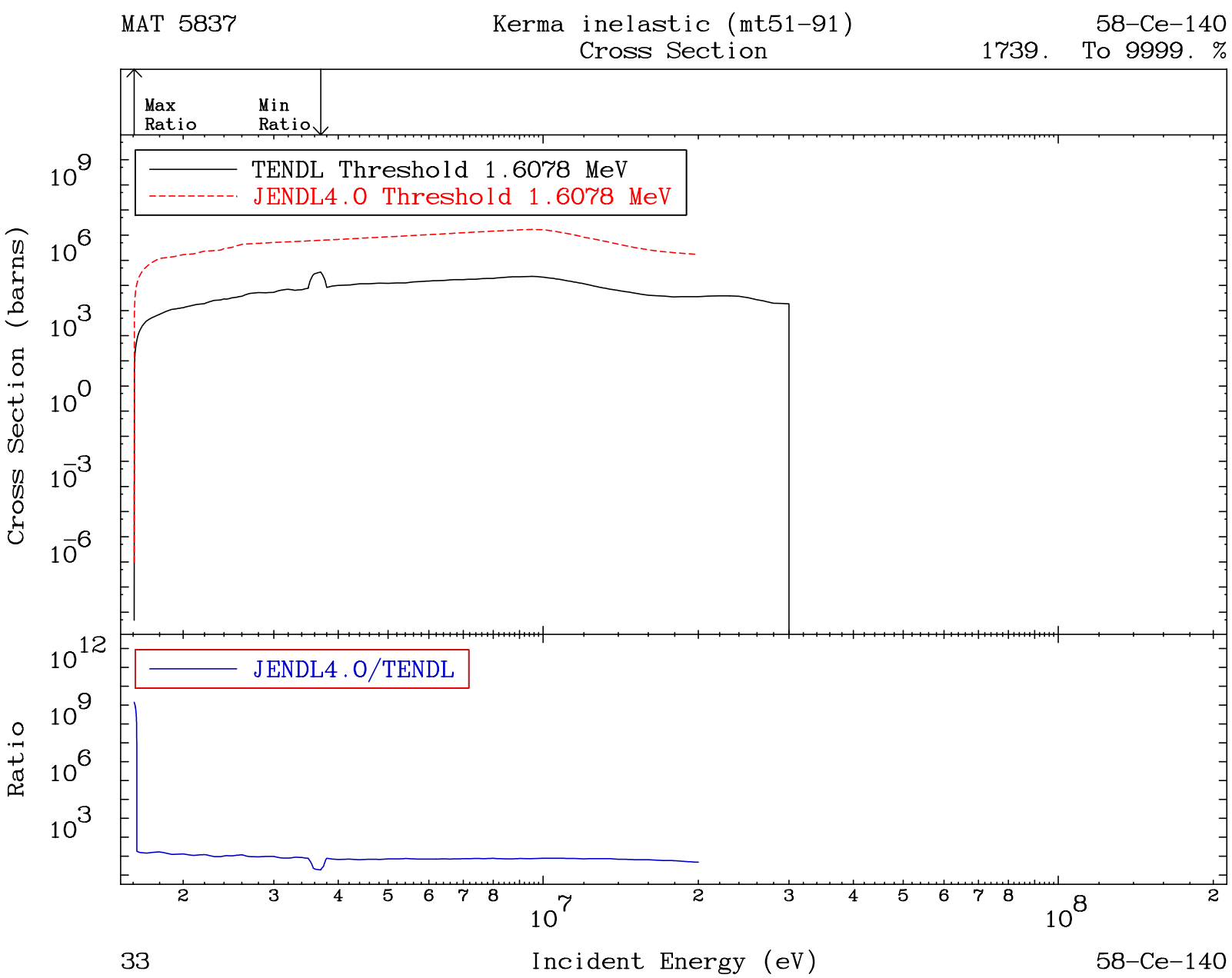

MAT 5837
He-3 Production
Cross Section
58-Ce-140
-91.33 To 8556. %
Max Ratio
Min Ratio
TENDL Threshold 6.7225 MeV
JENDL4.0 Threshold 13.000 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
JENDL4.0/TENDL
Ratio
10^2
10^1
10^0
10^-1
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
58-Ce-140

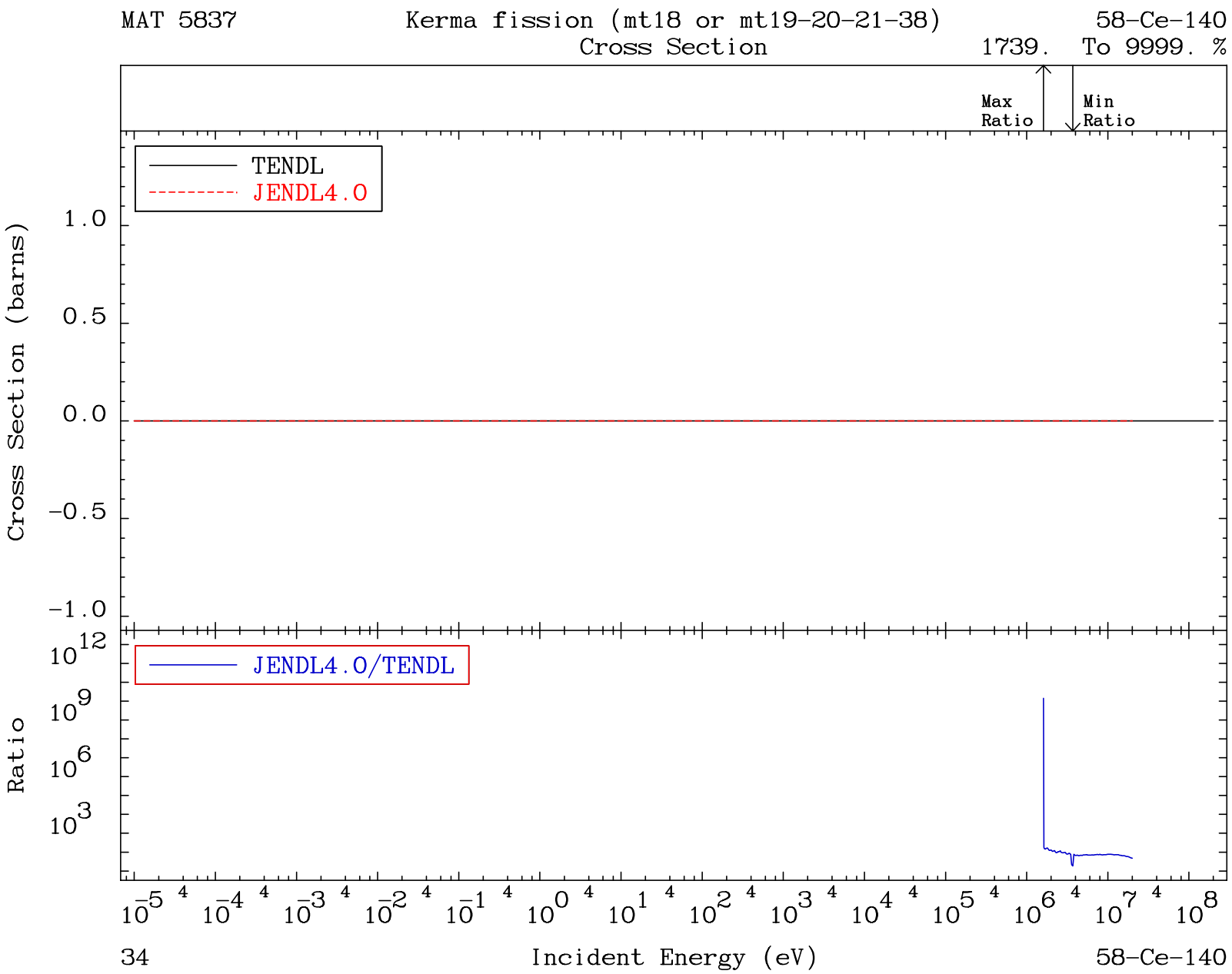

MAT 5837
He-4 Production
Cross Section
58-Ce-140
-4.018 To 1868. %
Max Ratio
Min Ratio
TENDL
JENDL4.0 Threshold 3.5000 MeV
Cross Section (milli-barns)
400
300
200
100
0
JENDL4.0/TENDL
Ratio
4
10^1
6
4
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
58-Ce-140

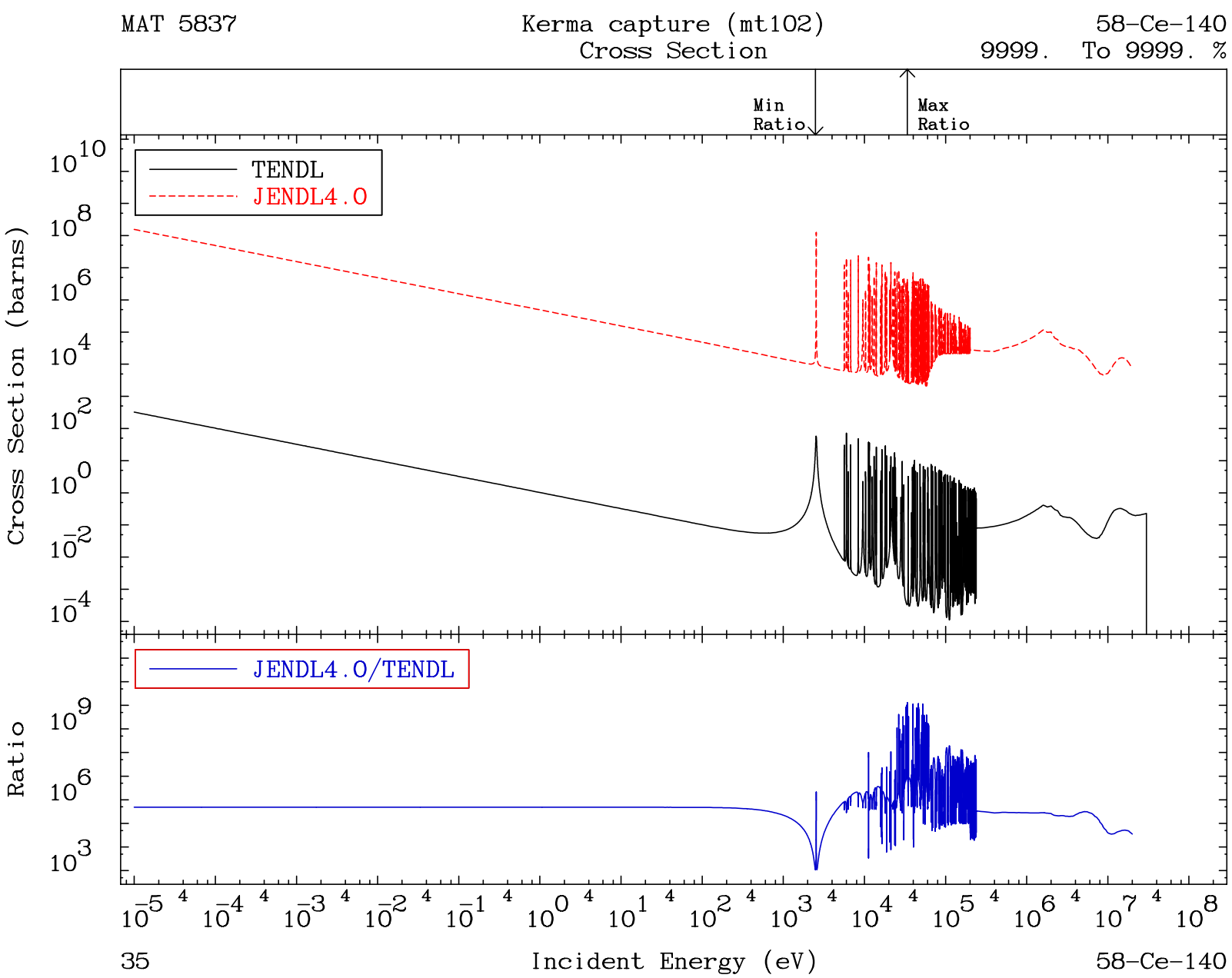

MAT 5837
Kerma total (eV-barns)
Cross Section
58-Ce-140
-746.7 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
30
58-Ce-140

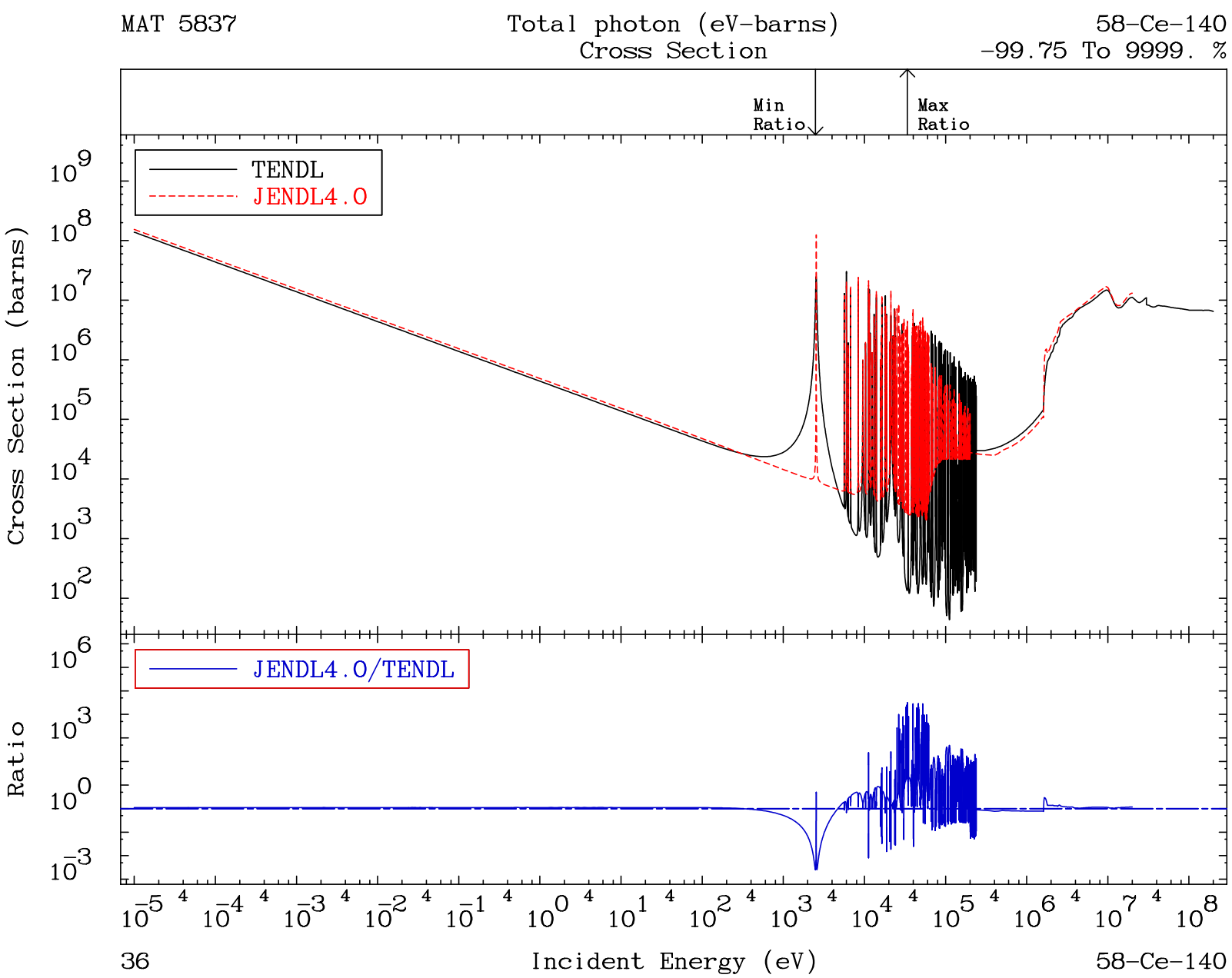

MAT 5837
Kerma elastic
Cross Section
58-Ce-140
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
31
58-Ce-140

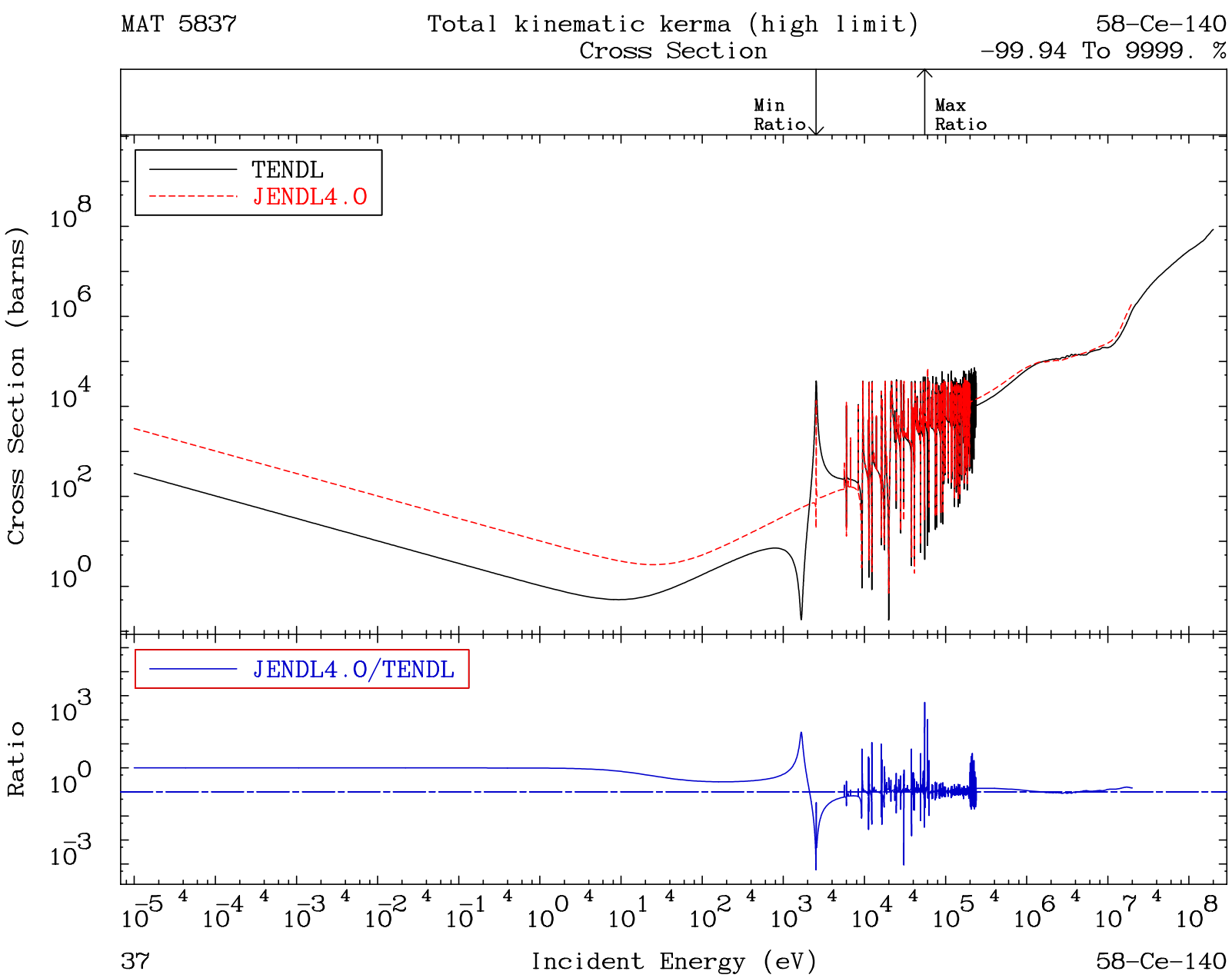

MAT 5837
Kerma non-elastic (all but mt2)
Cross Section
58-Ce-140
-9999. To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
32
58-Ce-140

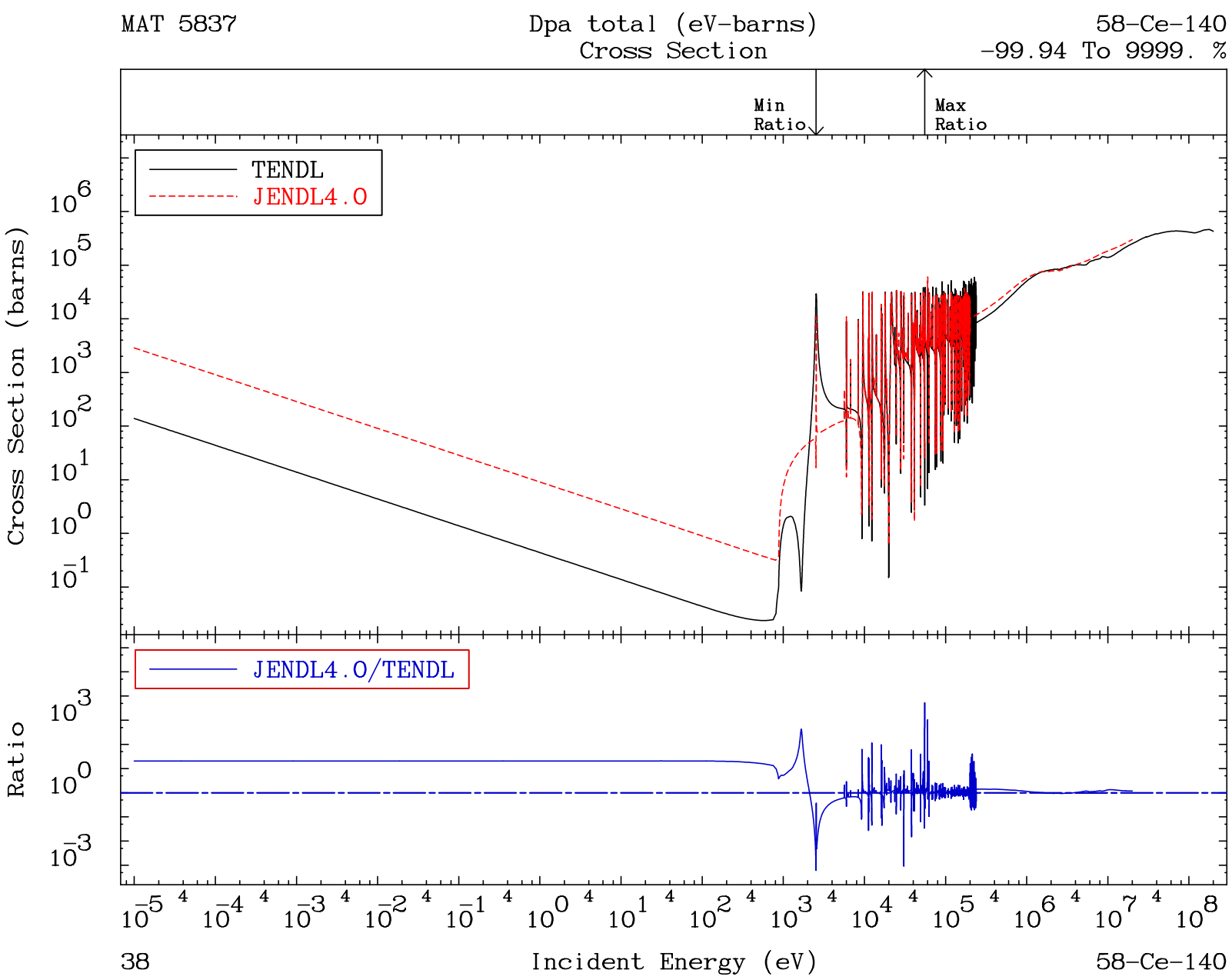

MAT 5837
Kerma inelastic (mt51-91)
Cross Section
58-Ce-140
1739. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.6078 MeV
JENDL4.0 Threshold 1.6078 MeV
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
33
58-Ce-140

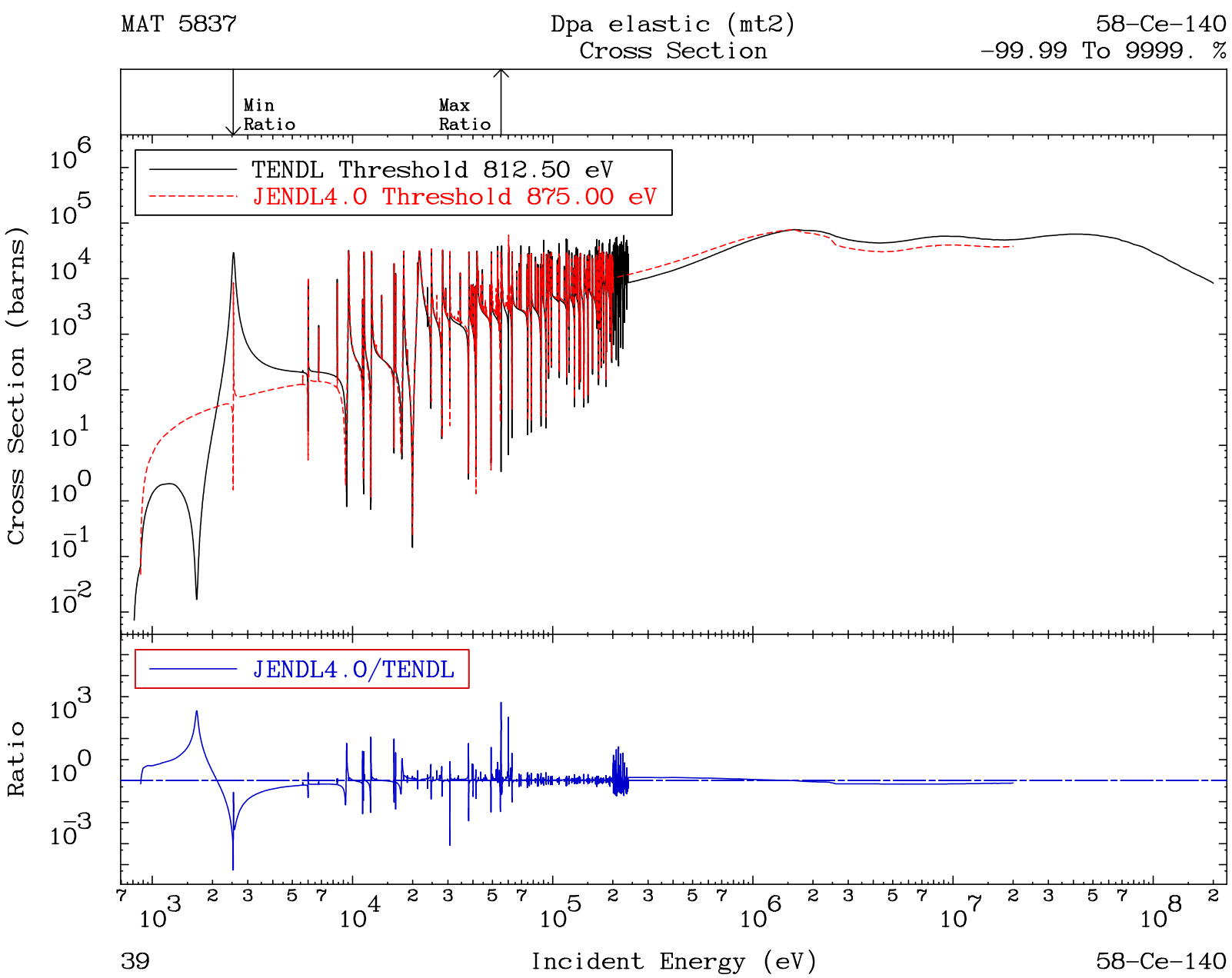

MAT 5837
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
58-Ce-140
1739. To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL4.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JENDL4.0/TENDL
Ratio
10^{12}
10^{9}
10^{6}
10^{3}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
34
Incident Energy (eV)
58-Ce-140

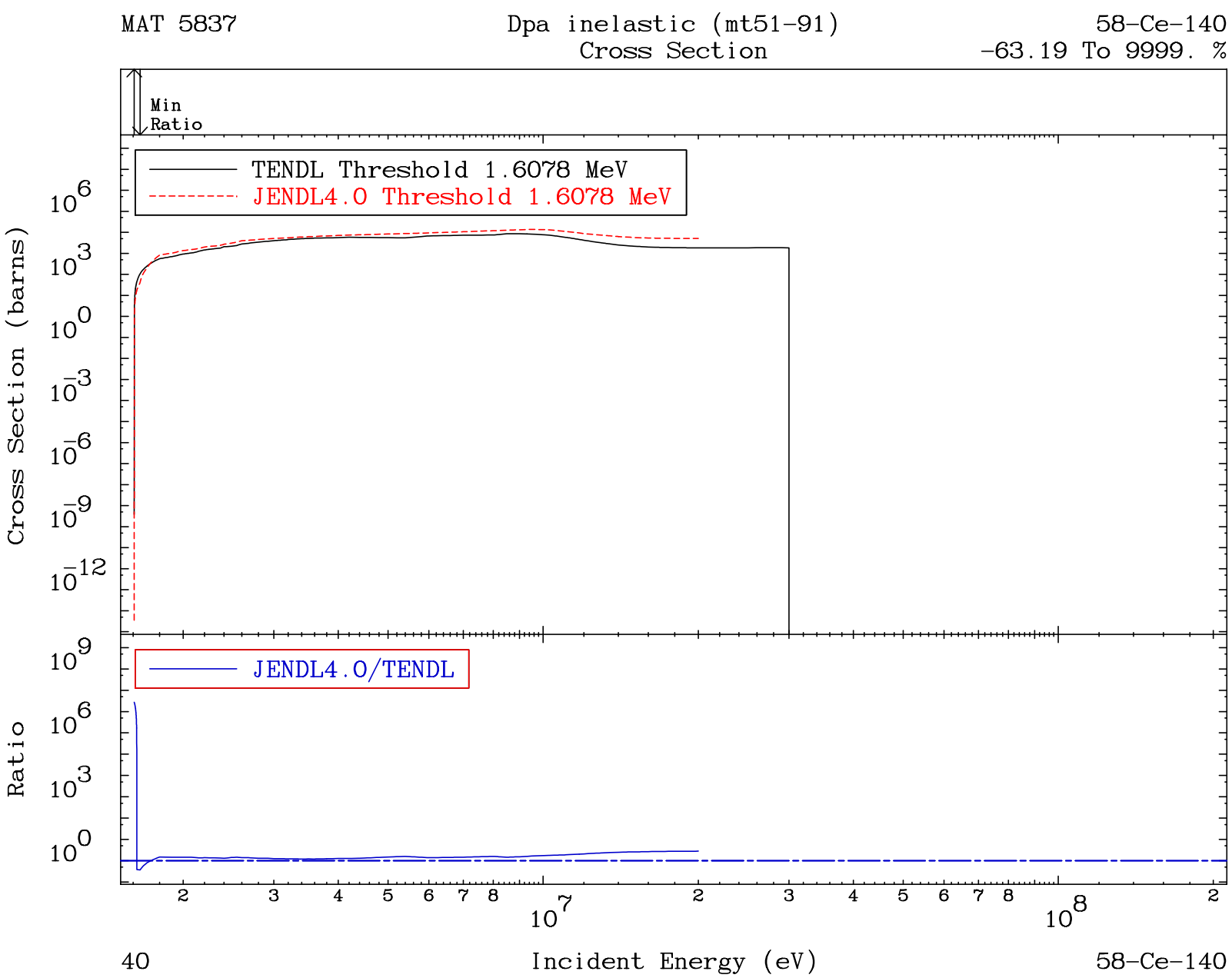

MAT 5837
Kerma capture (mt102)
Cross Section
58-Ce-140
9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
35
58-Ce-140

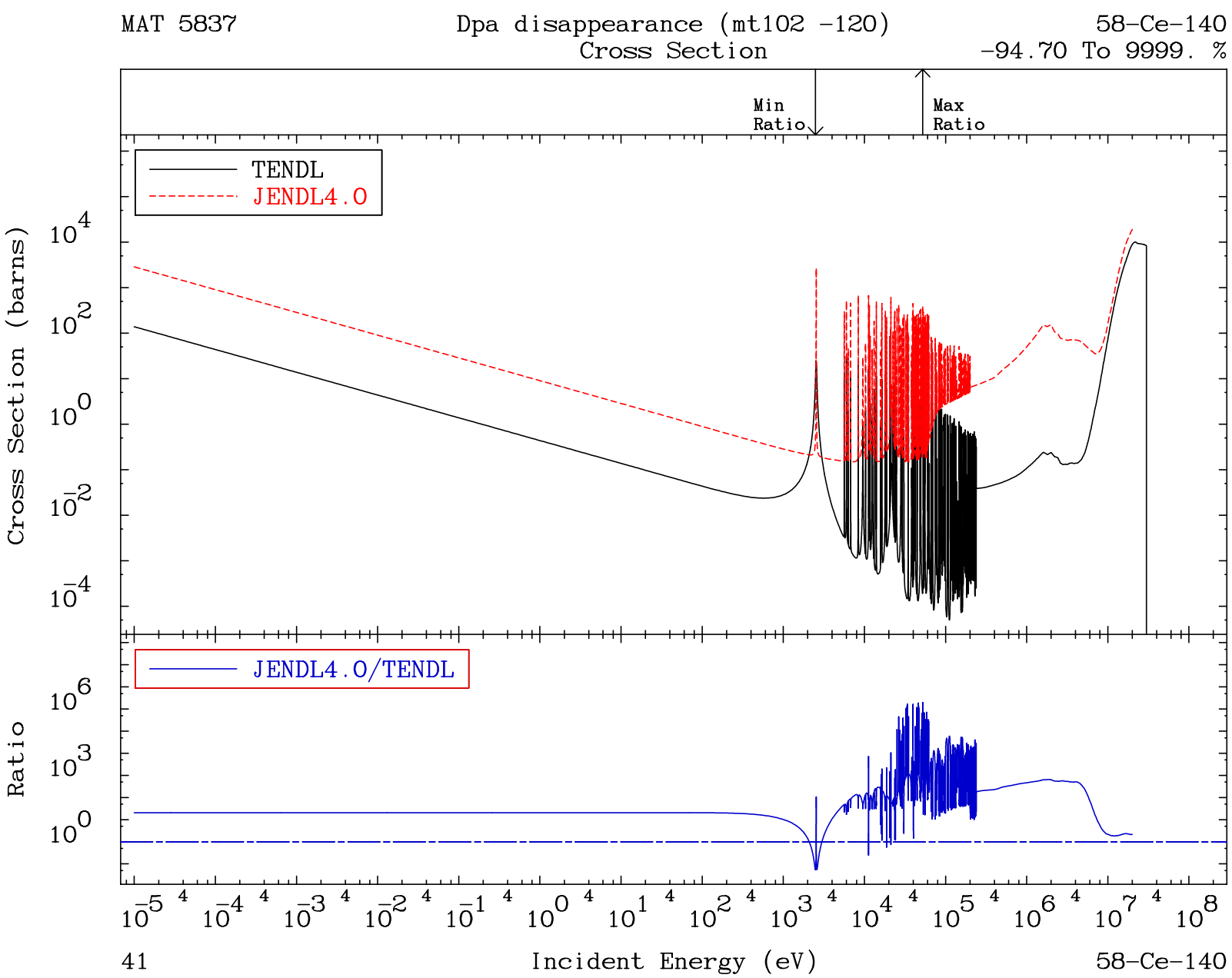

MAT 5837
Total photon (eV-barns)
Cross Section
58-Ce-140
-99.75 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
36
58-Ce-140

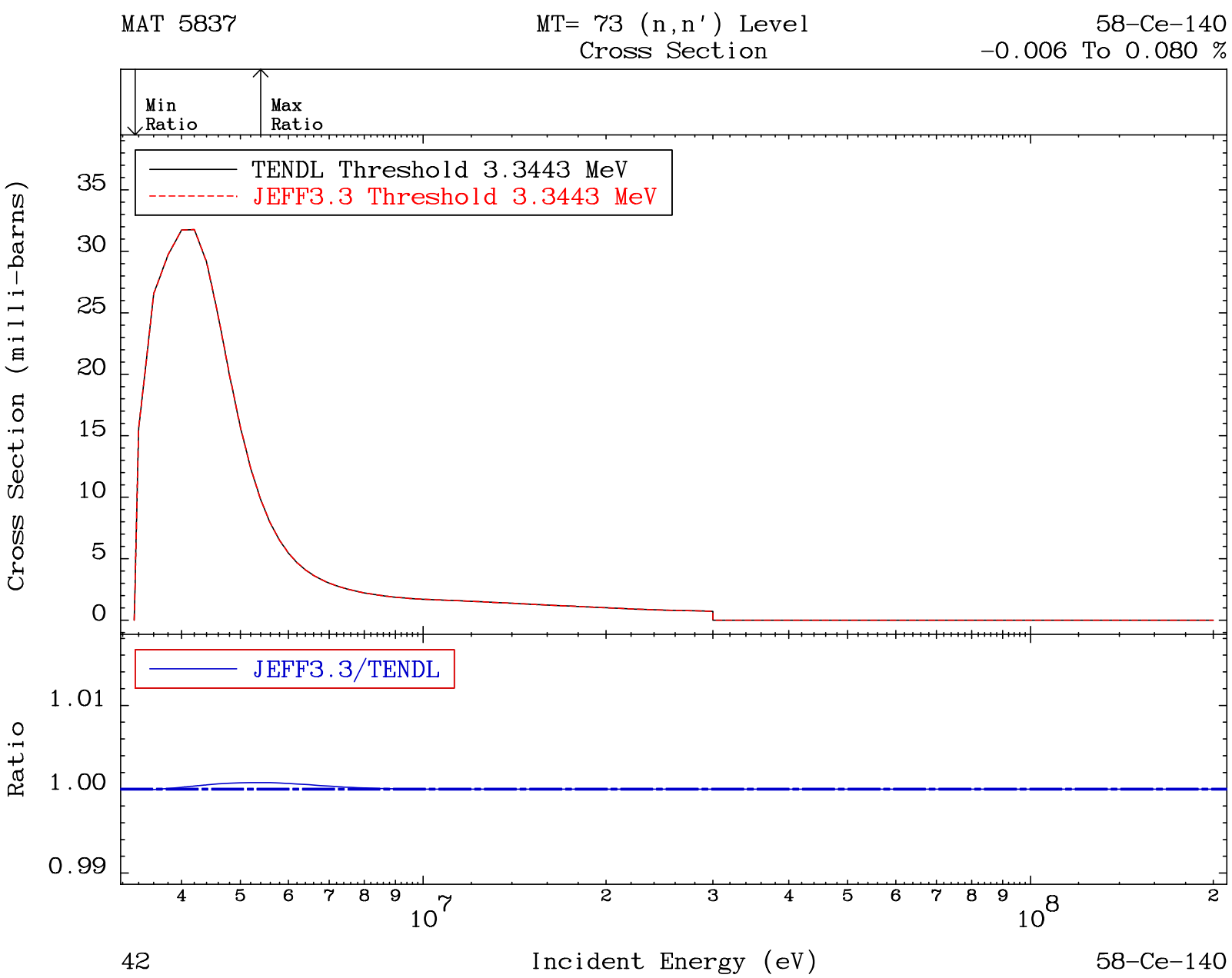

MAT 5837
Total kinematic kerma (high limit)
Cross Section
58-Ce-140
-99.94 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
37
58-Ce-140

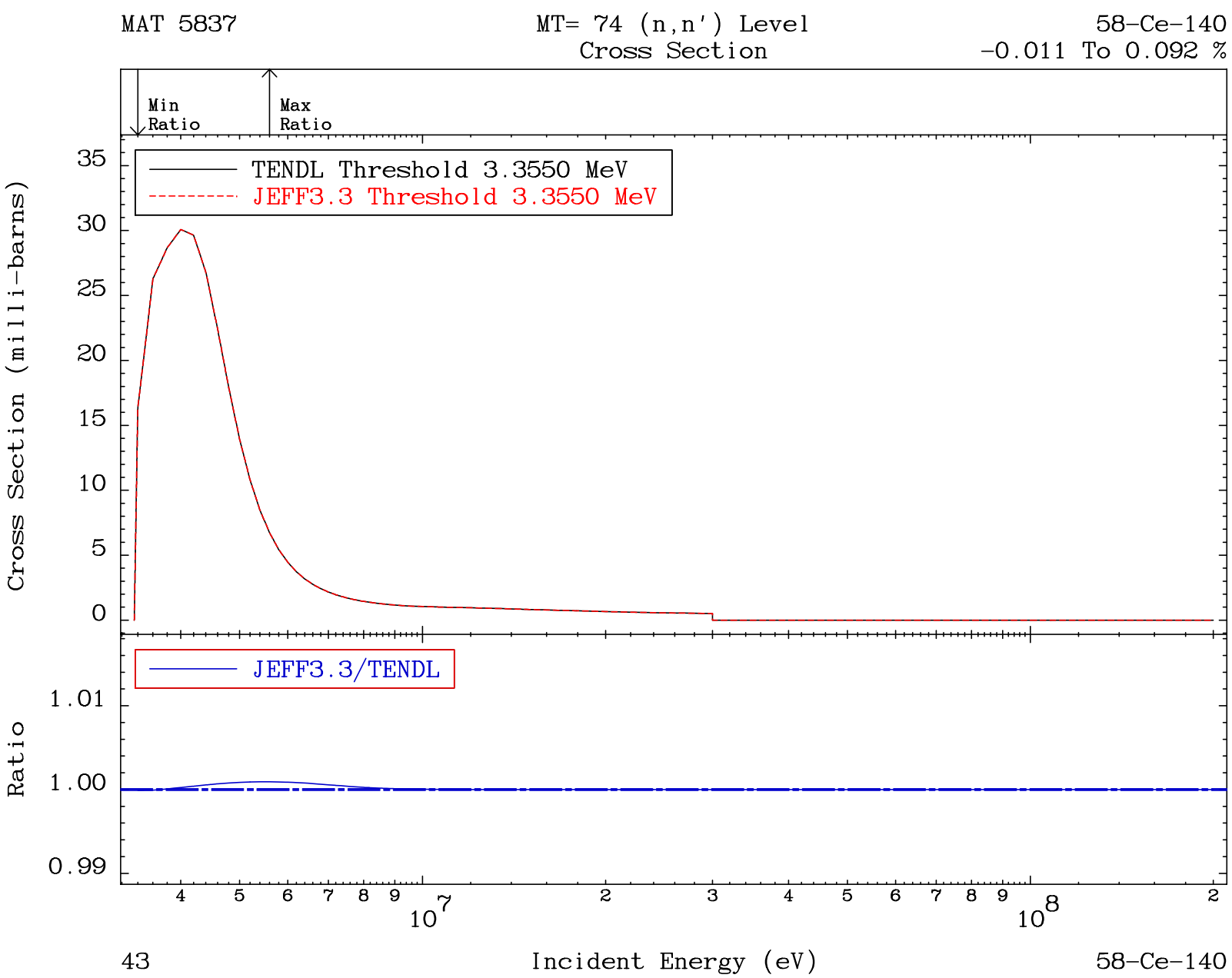

MAT 5837
Dpa total (eV-barns)
Cross Section
58-Ce-140
-99.94 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
38
58-Ce-140

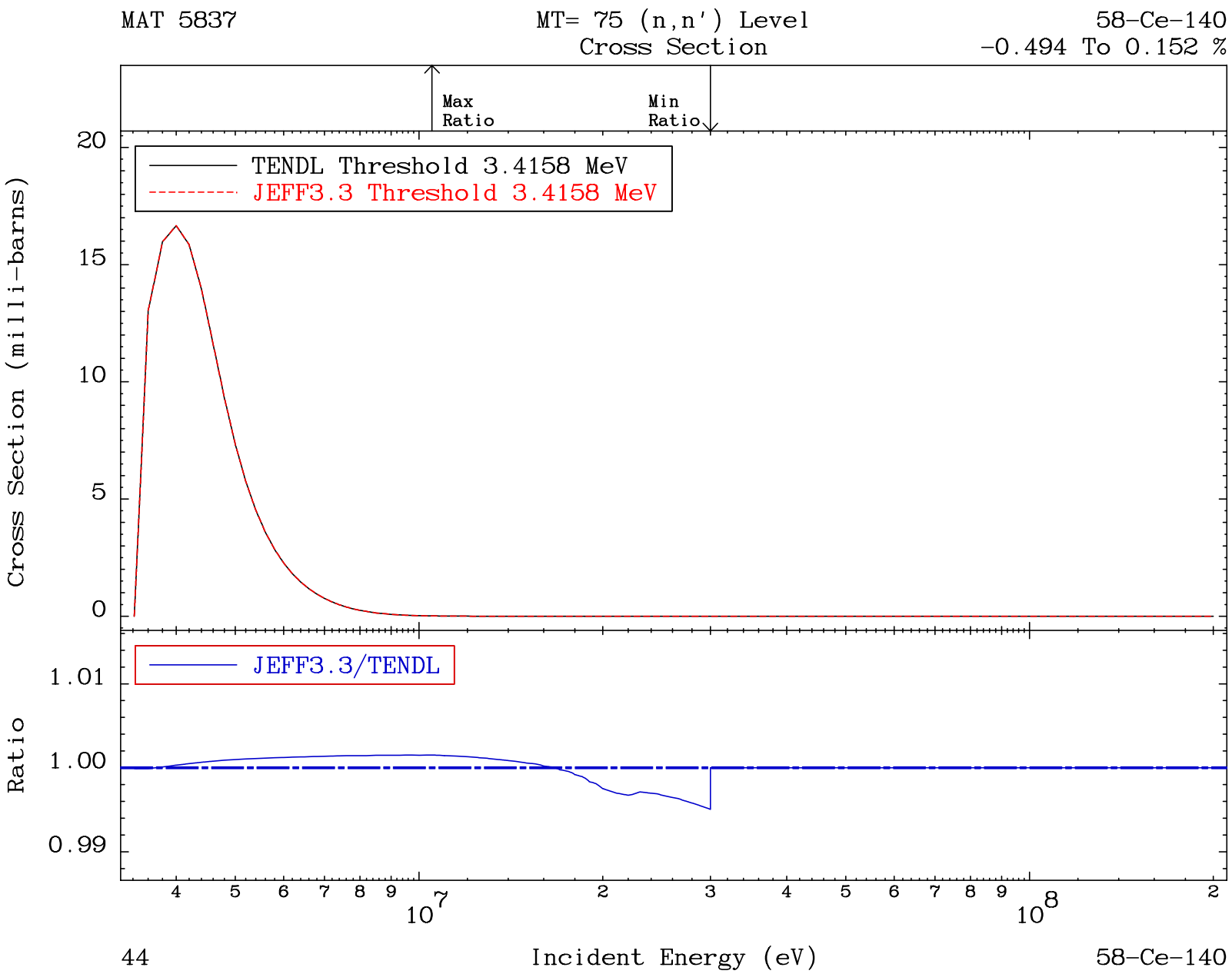

MAT 5837
Dpa elastic (mt2)
Cross Section
58-Ce-140
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 812.50 eV
JENDL4.0 Threshold 875.00 eV
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
39
58-Ce-140

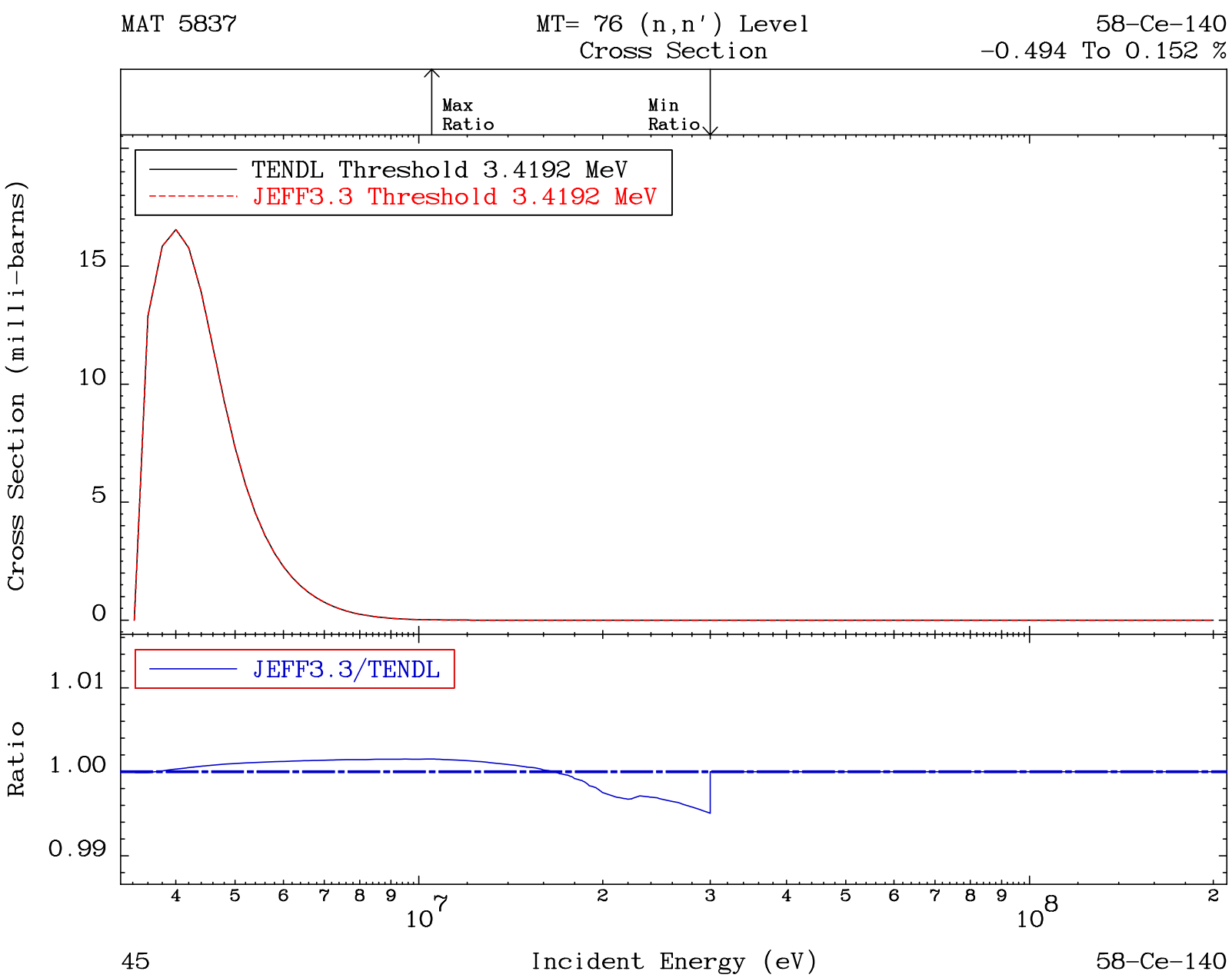

MAT 5837
Dpa inelastic (mt51-91)
Cross Section
58-Ce-140
-63.19 To 9999. %
Min
Ratio
TENDL Threshold 1.6078 MeV
JENDL4.0 Threshold 1.6078 MeV
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
40
58-Ce-140

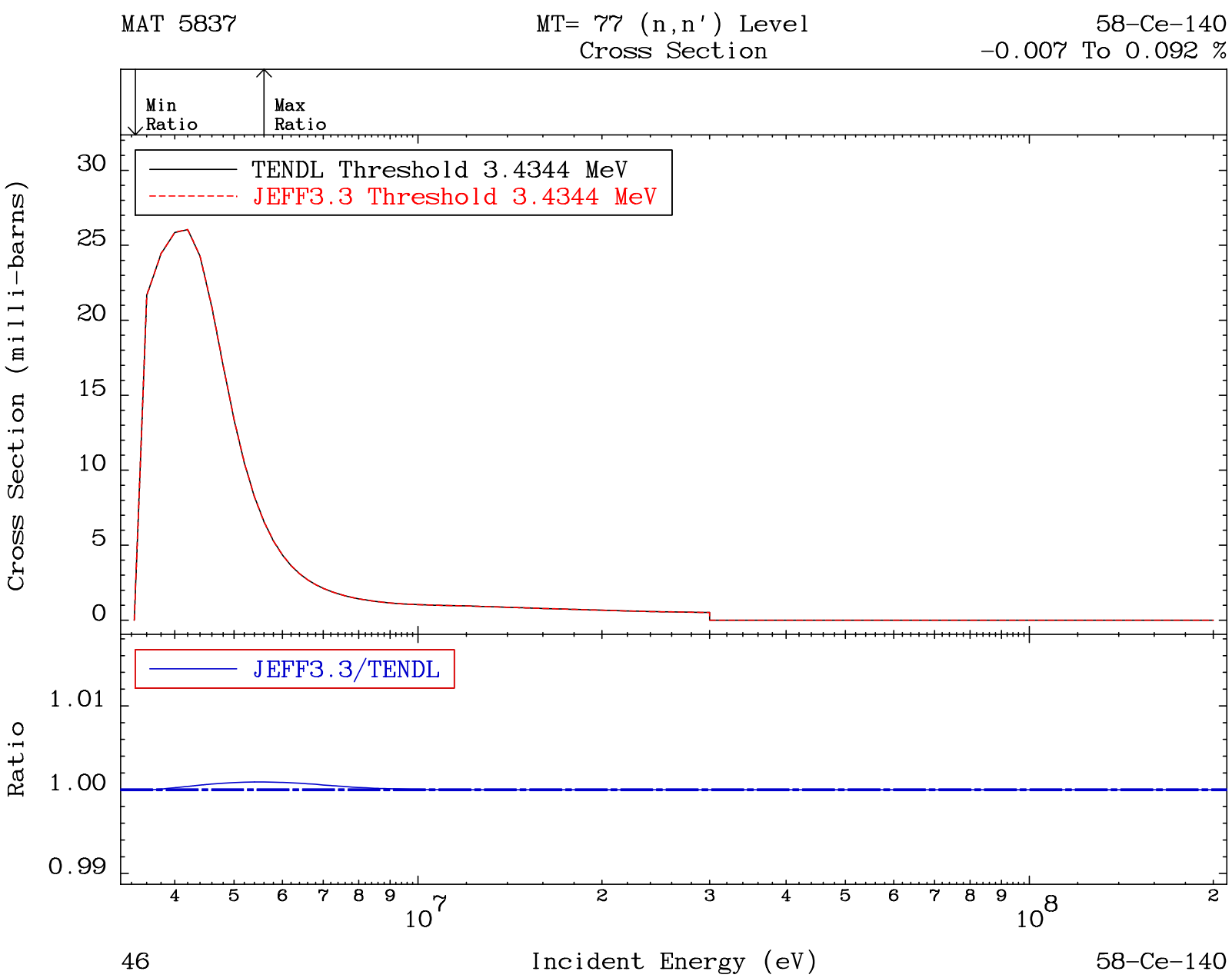

MAT 5837
Dpa disappearance (mt102 -120)
Cross Section
58-Ce-140
-94.70 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL4.0
Cross Section (barns)
JENDL4.0/TENDL
Ratio
Incident Energy (eV)
41
58-Ce-140

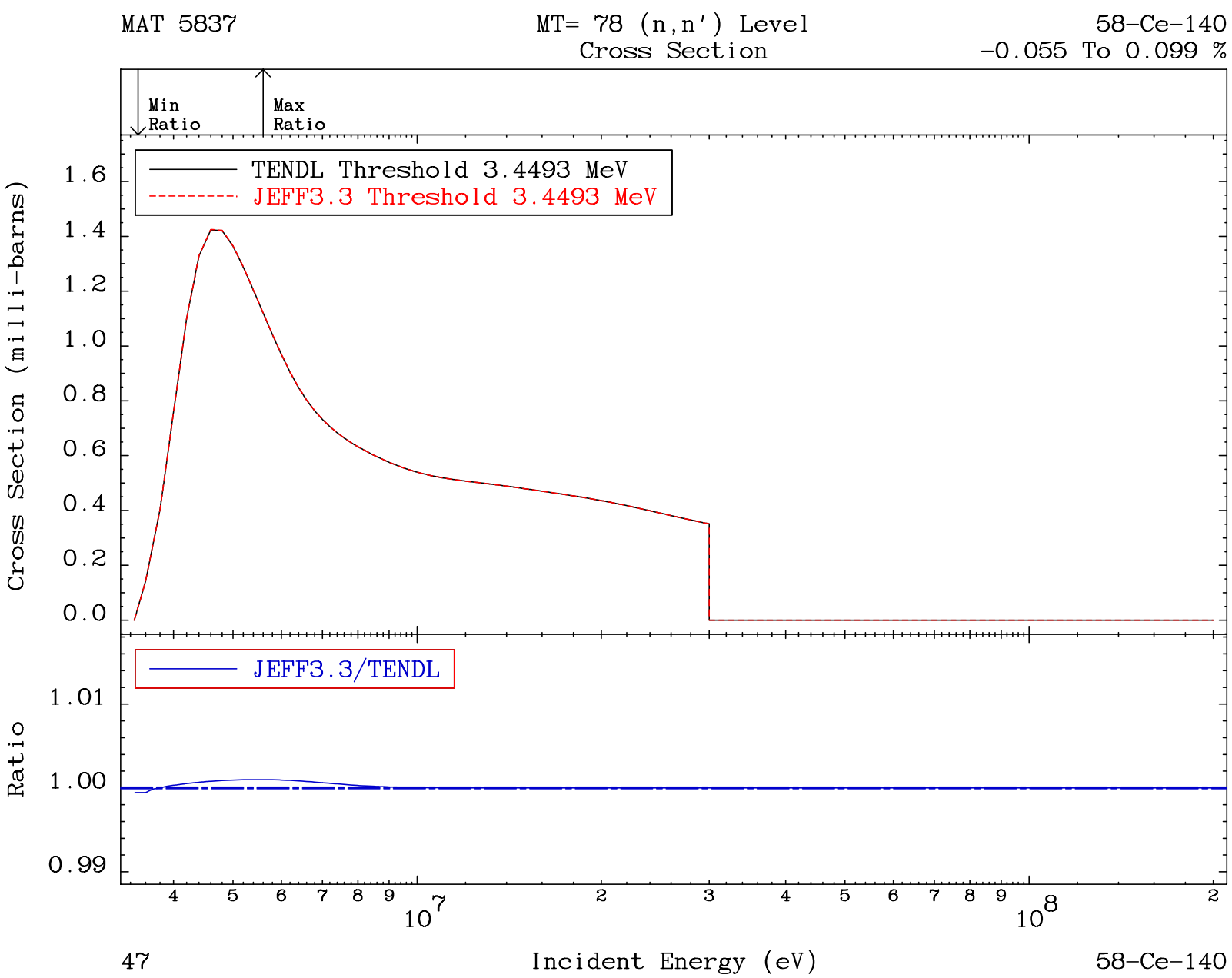

MAT 5837
MT= 73 (n,n') Level
Cross Section
58-Ce-140
-0.006 To 0.080 %
Min Ratio
Max Ratio
TENDL Threshold 3.3443 MeV
JEFF3.3 Threshold 3.3443 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
42
Incident Energy (eV)
58-Ce-140

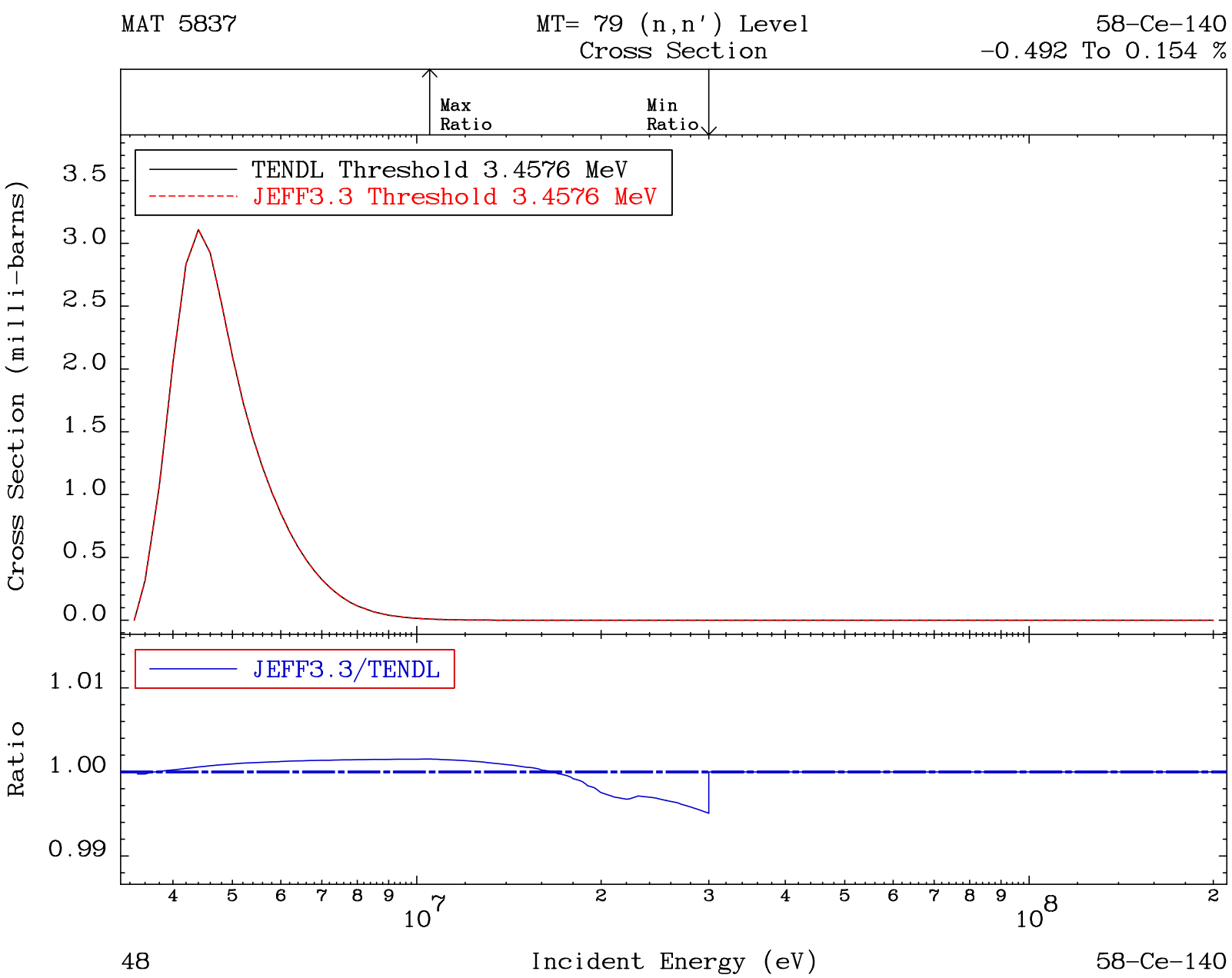

MAT 5837
MT= 74 (n,n') Level
Cross Section
58-Ce-140
-0.011 To 0.092 %
Min Ratio
Max Ratio
TENDL Threshold 3.3550 MeV
JEFF3.3 Threshold 3.3550 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
58-Ce-140

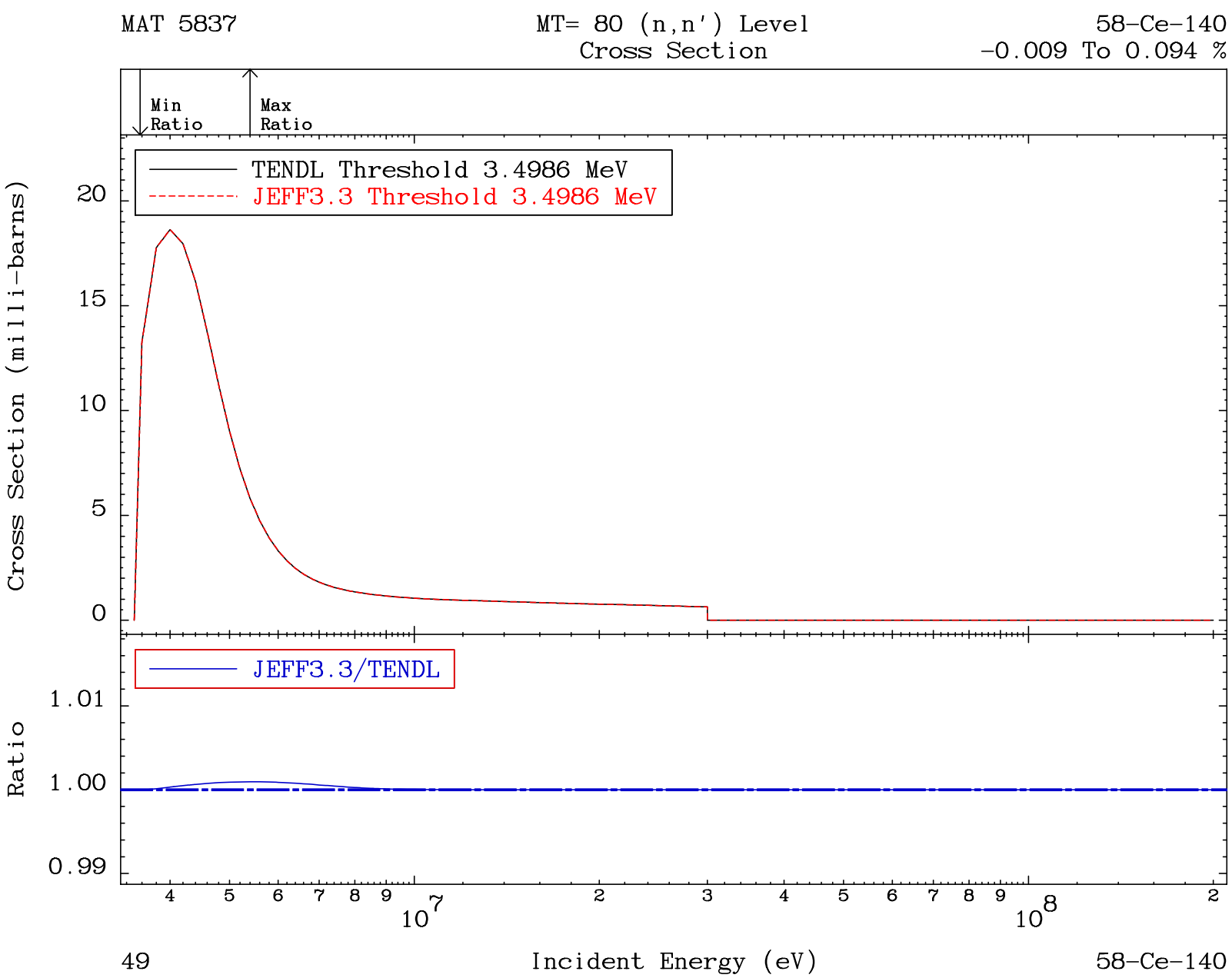

MAT 5837
MT= 75 (n,n') Level
Cross Section
58-Ce-140
-0.494 To 0.152 %
Max
Ratio
Min
Ratio
TENDL Threshold 3.4158 MeV
JEFF3.3 Threshold 3.4158 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
44
Incident Energy (eV)
58-Ce-140

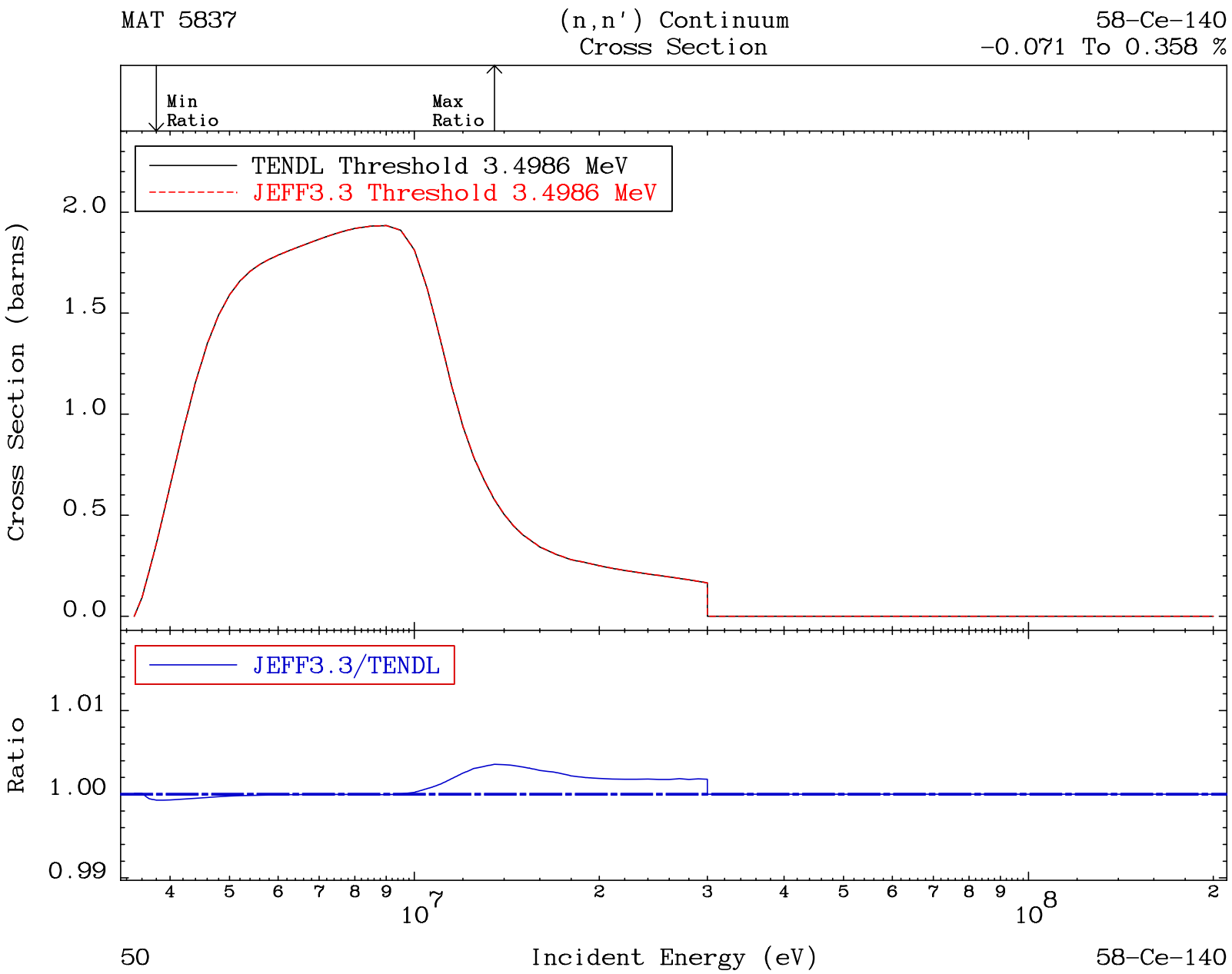

MAT 5837
MT= 76 (n,n') Level
Cross Section
58-Ce-140
-0.494 To 0.152 %
Max
Ratio
Min
Ratio
TENDL Threshold 3.4192 MeV
JEFF3.3 Threshold 3.4192 MeV
Cross Section (milli-barns)
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
45
Incident Energy (eV)
58-Ce-140

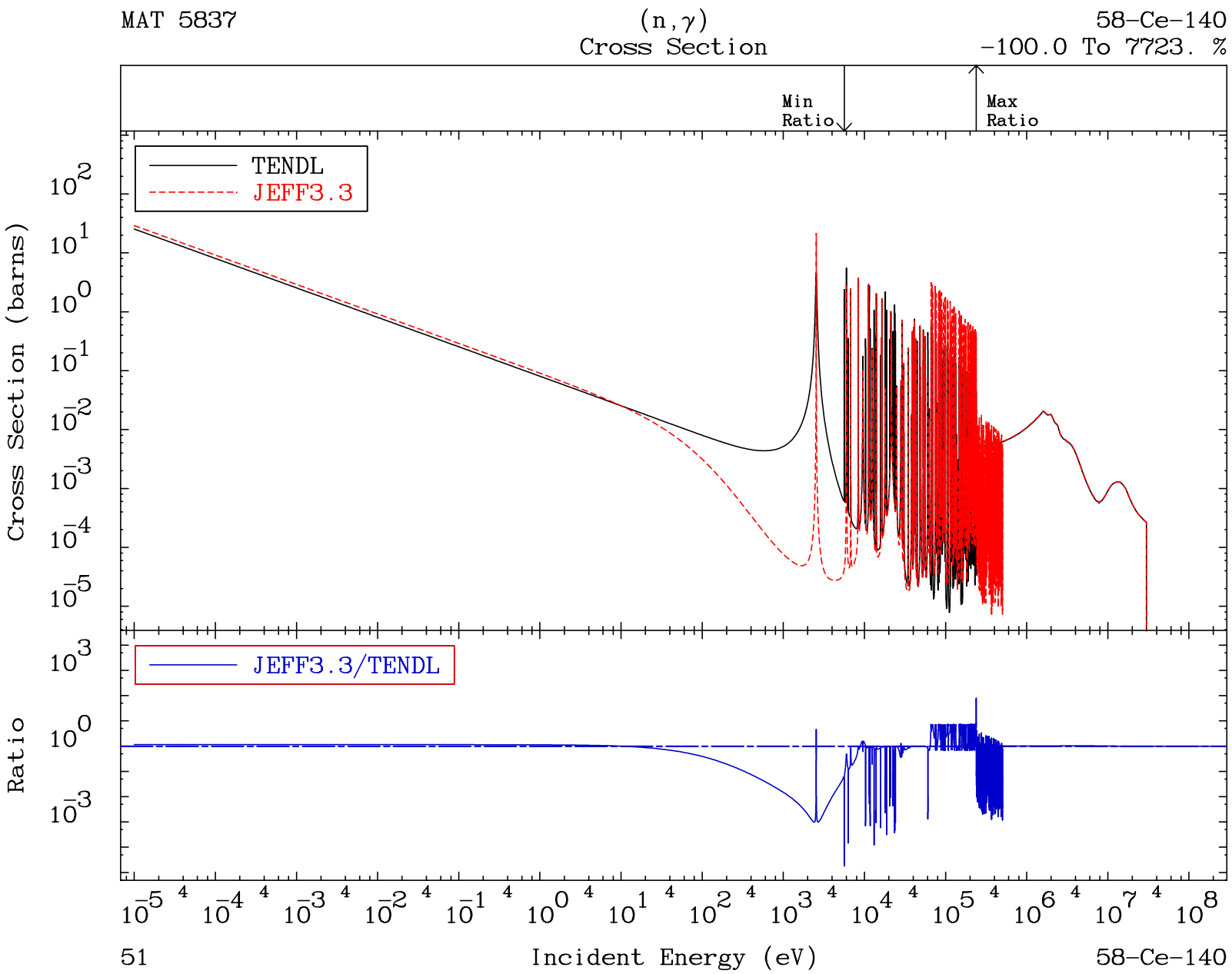

MAT 5837
MT= 77 (n,n') Level
Cross Section
58-Ce-140
-0.007 To 0.092 %
Min Ratio
Max Ratio
TENDL Threshold 3.4344 MeV
JEFF3.3 Threshold 3.4344 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
46
Incident Energy (eV)
58-Ce-140

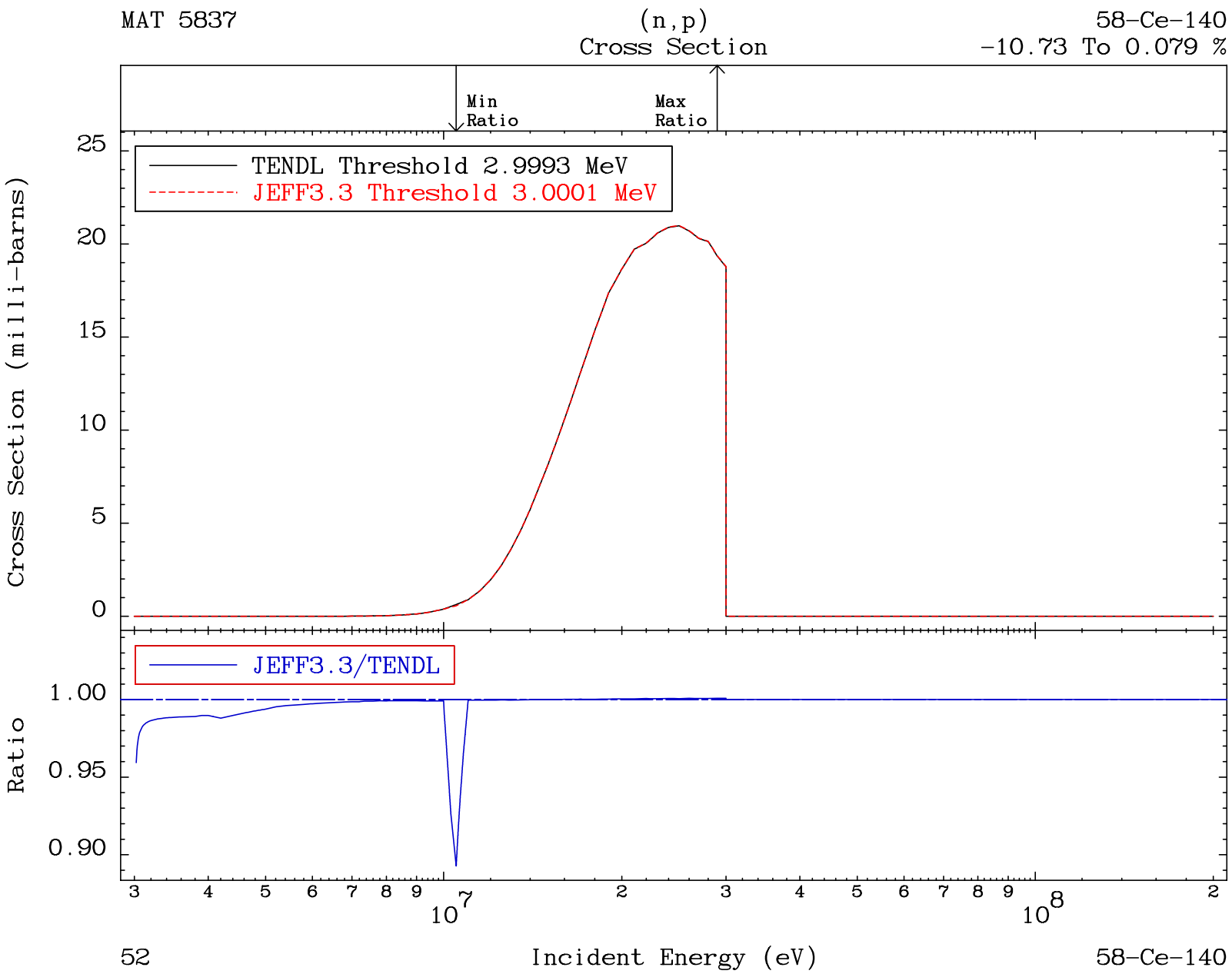

MAT 5837
MT= 78 (n,n') Level
Cross Section
58-Ce-140
-0.055 To 0.099 %
Min Ratio
Max Ratio
TENDL Threshold 3.4493 MeV
JEFF3.3 Threshold 3.4493 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
47
Incident Energy (eV)
58-Ce-140

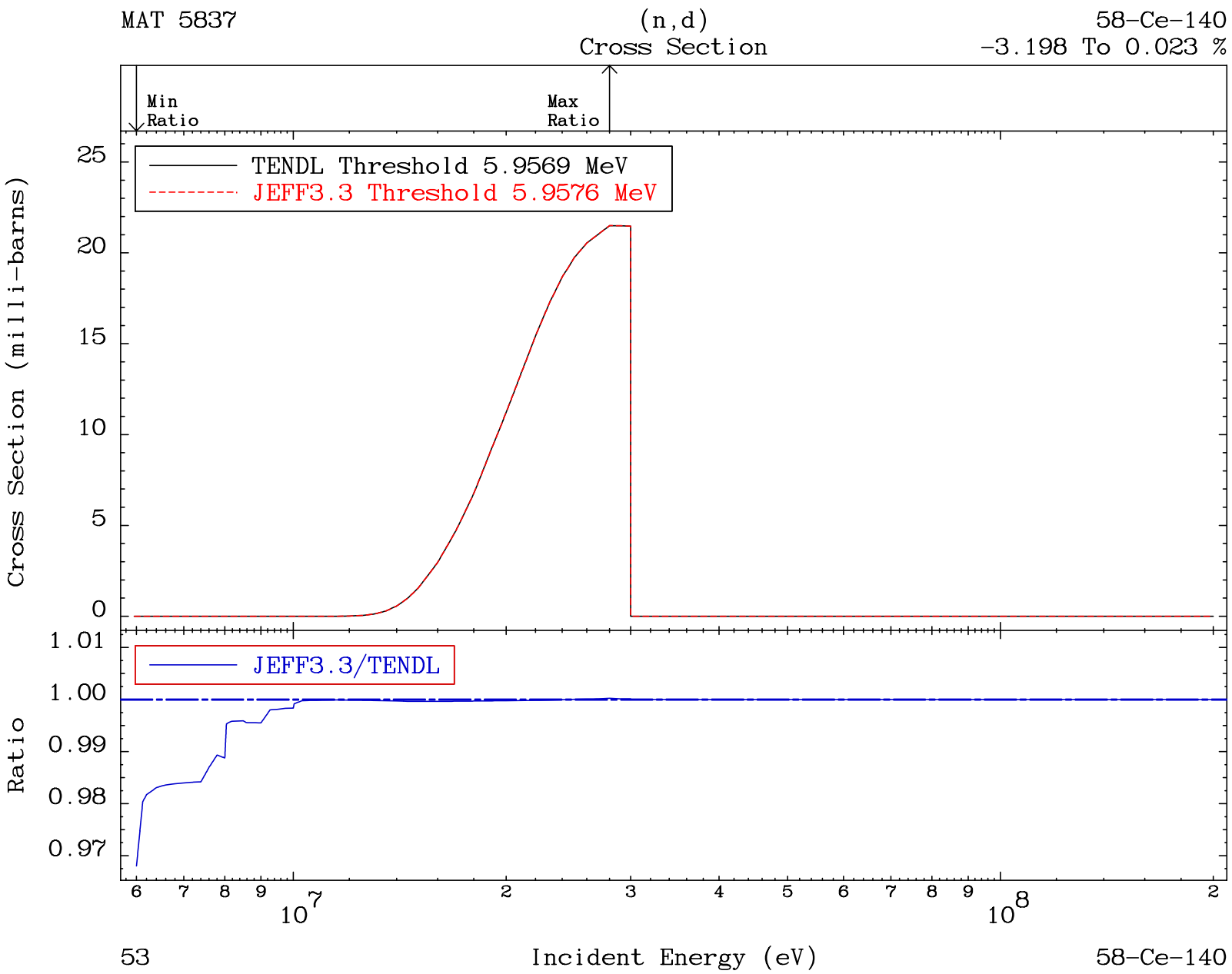

MAT 5837
MT= 79 (n,n') Level
Cross Section
58-Ce-140
-0.492 To 0.154 %
Max
Ratio
Min
Ratio
TENDL Threshold 3.4576 MeV
JEFF3.3 Threshold 3.4576 MeV
Cross Section (milli-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
48
Incident Energy (eV)
58-Ce-140

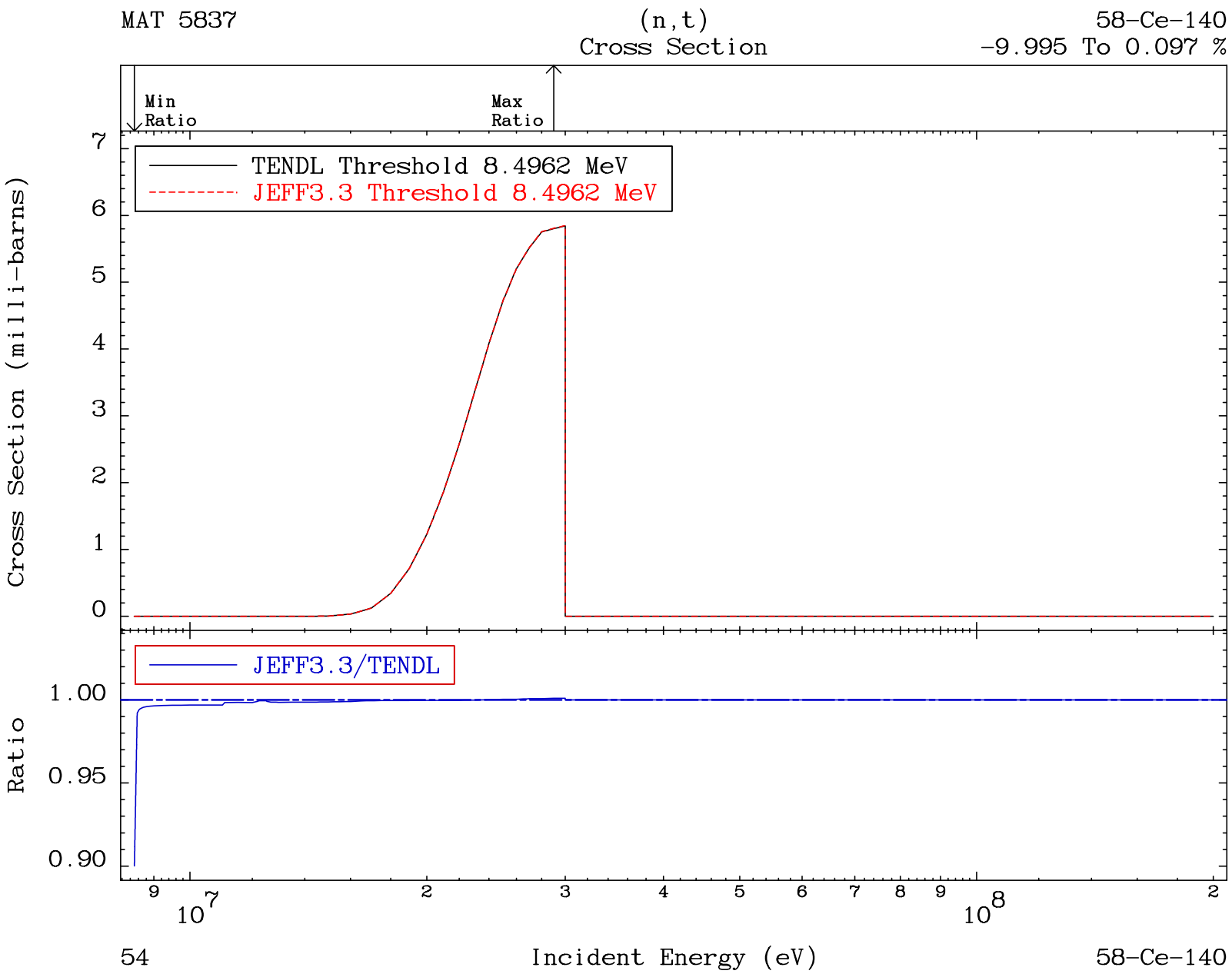

MAT 5837
MT= 80 (n,n') Level
Cross Section
58-Ce-140
-0.009 To 0.094 %
Min Ratio
Max Ratio
TENDL Threshold 3.4986 MeV
JEFF3.3 Threshold 3.4986 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
49
Incident Energy (eV)
58-Ce-140

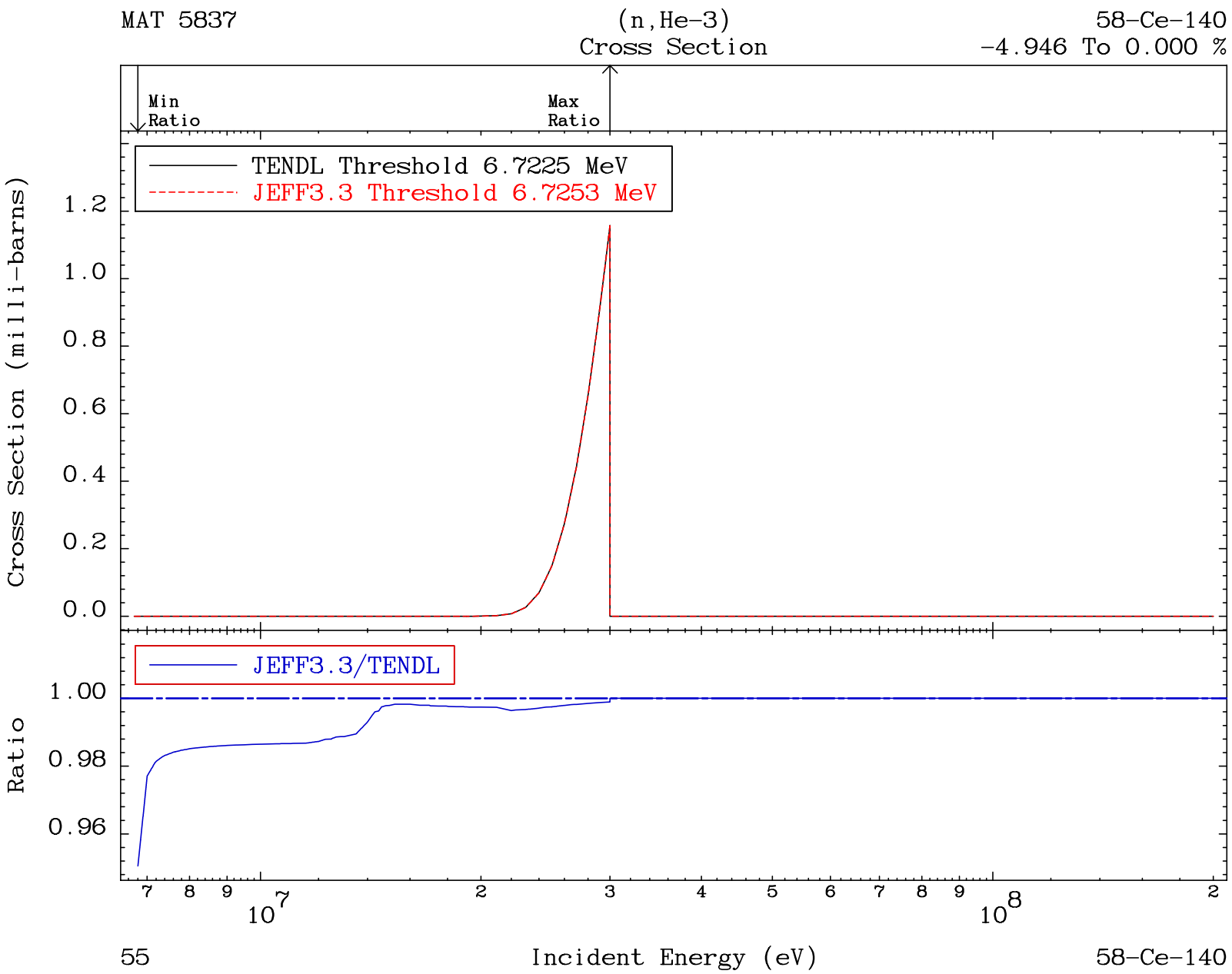

MAT 5837
(n,n') Continuum
Cross Section
58-Ce-140
-0.071 To 0.358 %
Min Ratio
Max Ratio
TENDL Threshold 3.4986 MeV
JEFF3.3 Threshold 3.4986 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
50
Incident Energy (eV)
58-Ce-140

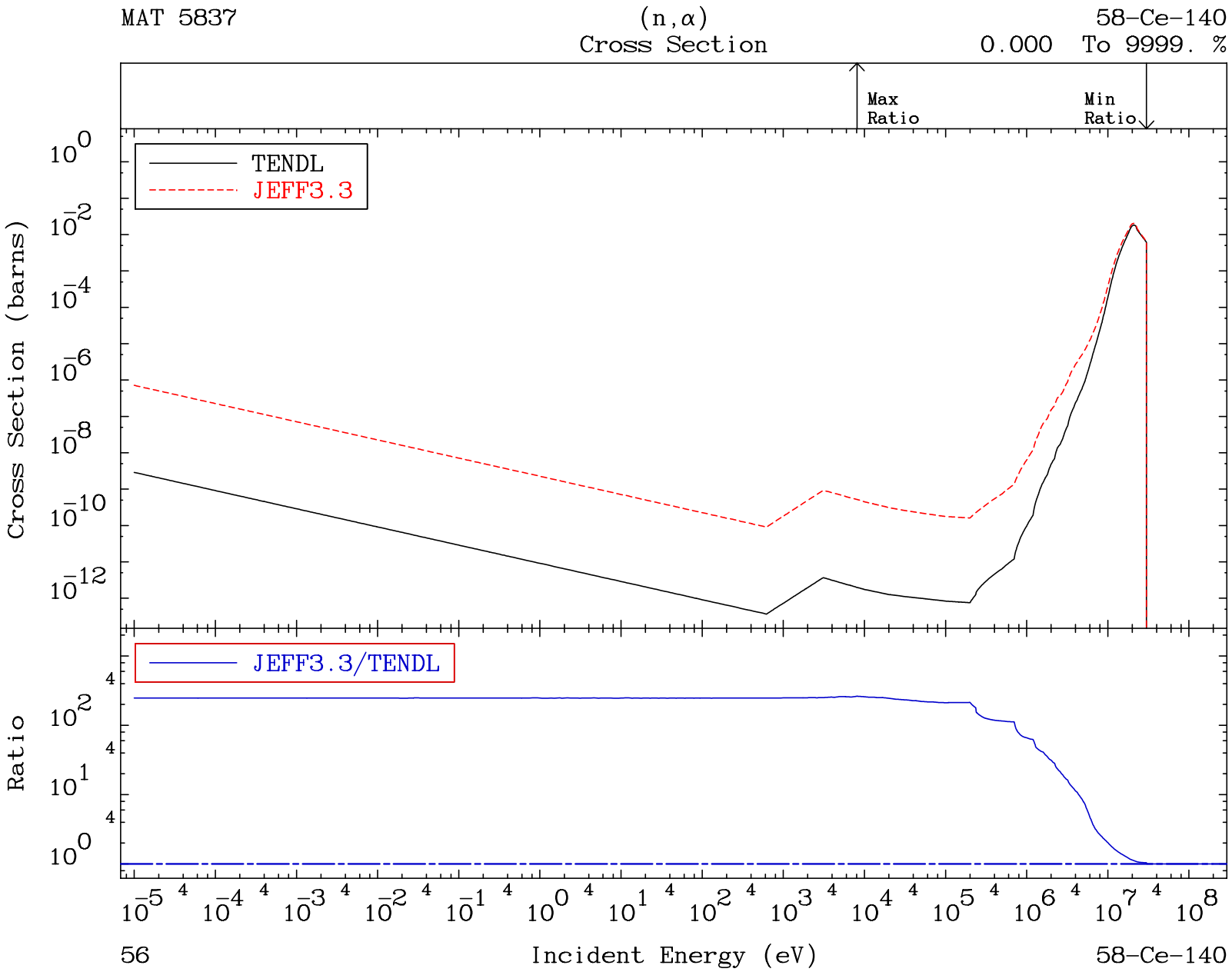

MAT 5837
(n,γ)
Cross Section
58-Ce-140
-100.0 To 7723. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
51
58-Ce-140

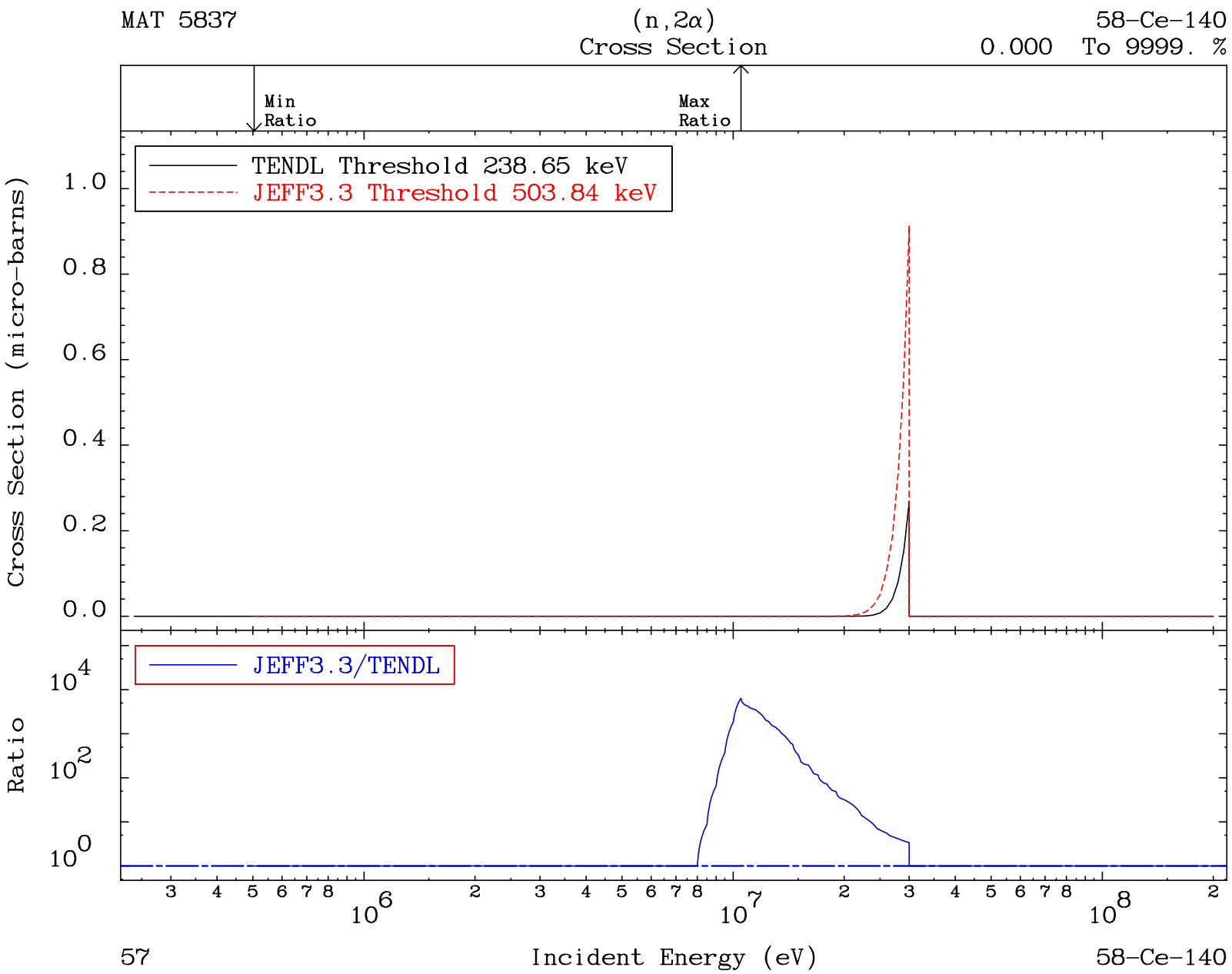

MAT 5837
(n,p)
Cross Section
58-Ce-140
-10.73 To 0.079 %
Min Ratio
Max Ratio
TENDL Threshold 2.9993 MeV
JEFF3.3 Threshold 3.0001 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.00
0.95
0.90
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
52
Incident Energy (eV)
58-Ce-140

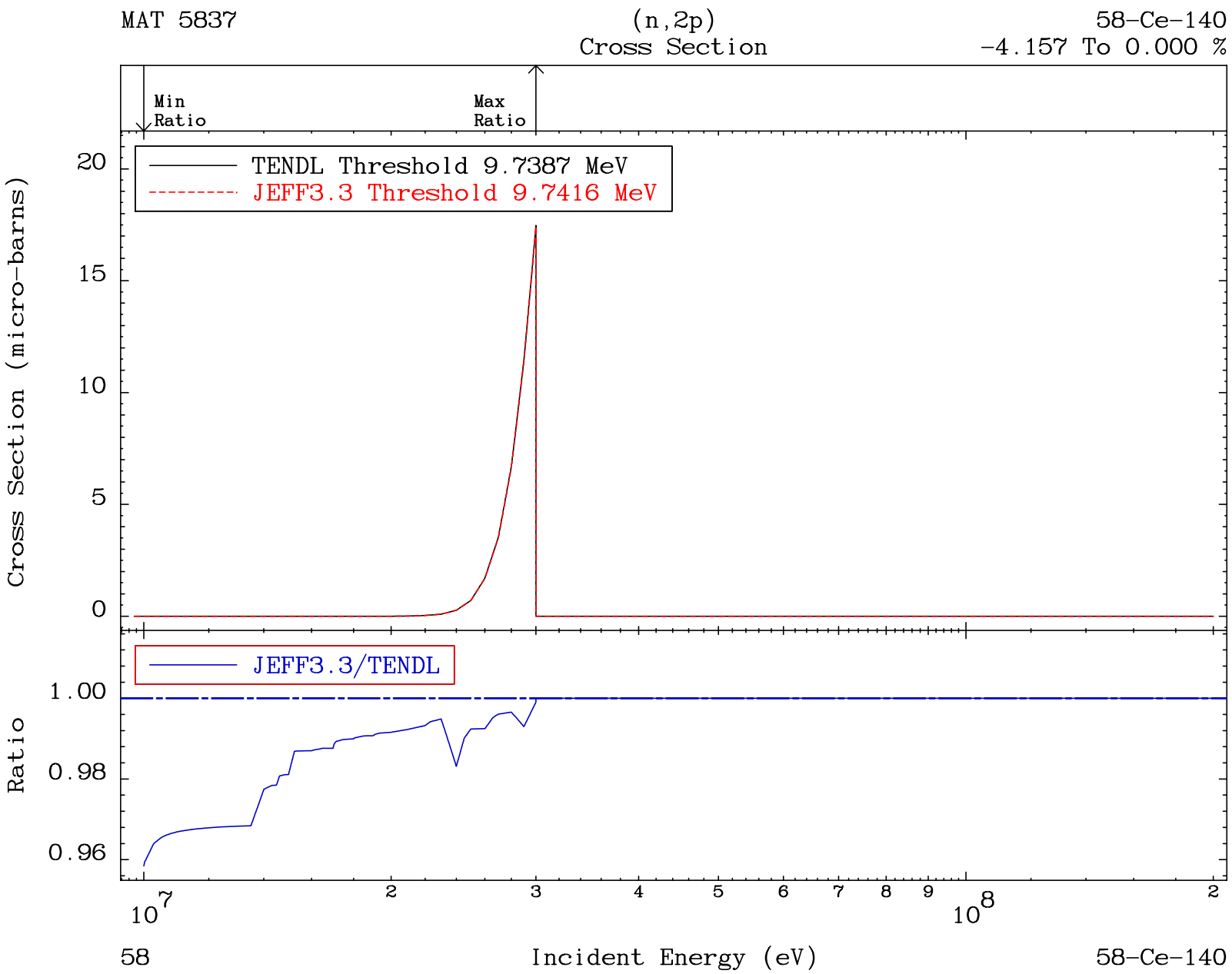

MAT 5837
(n,d)
Cross Section
58-Ce-140
-3.198 To 0.023 %
Min Ratio
Max Ratio
TENDL Threshold 5.9569 MeV
JEFF3.3 Threshold 5.9576 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
0.98
0.97
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
53
Incident Energy (eV)
58-Ce-140

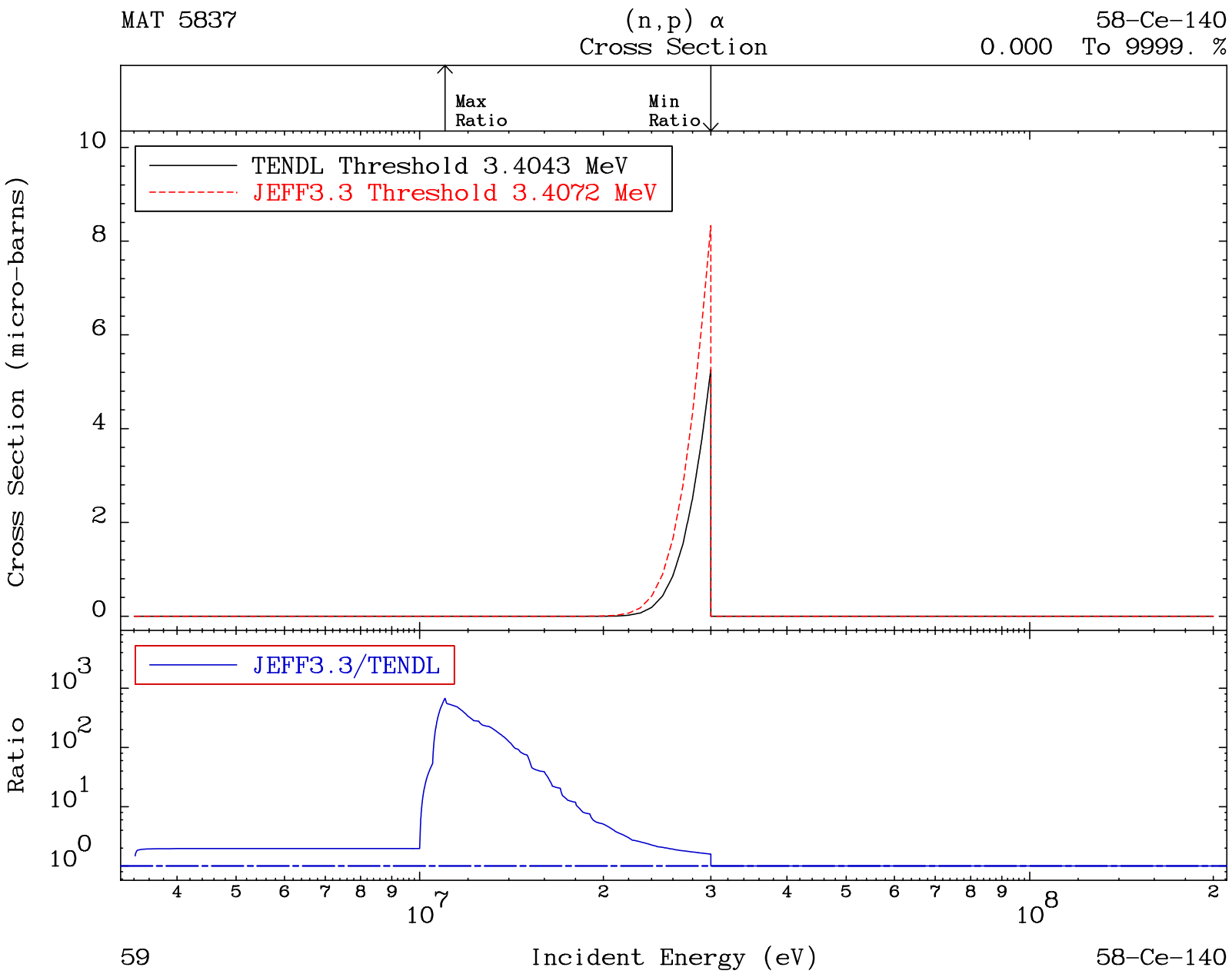

MAT 5837
(n,t)
Cross Section
58-Ce-140
-9.995 To 0.097 %
Min Ratio
Max Ratio
TENDL Threshold 8.4962 MeV
JEFF3.3 Threshold 8.4962 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
7
JEFF3.3/TENDL
Ratio
1.00
0.95
0.90
9
10^7
2
3
4
5
6
7
8
9
10^8
2
54
Incident Energy (eV)
58-Ce-140

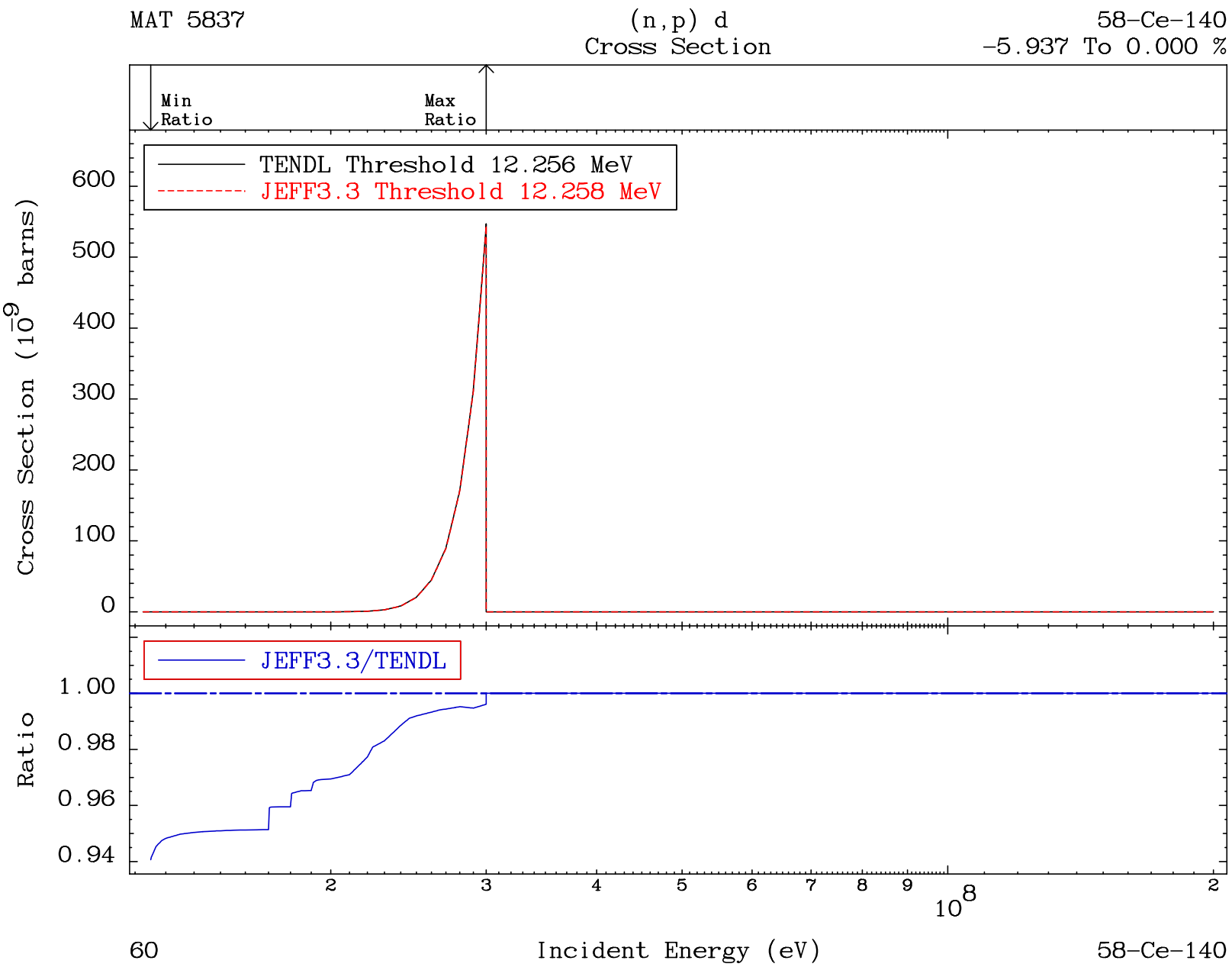

MAT 5837
(n,He-3)
Cross Section
58-Ce-140
-4.946 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 6.7225 MeV
JEFF3.3 Threshold 6.7253 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
55
Incident Energy (eV)
58-Ce-140

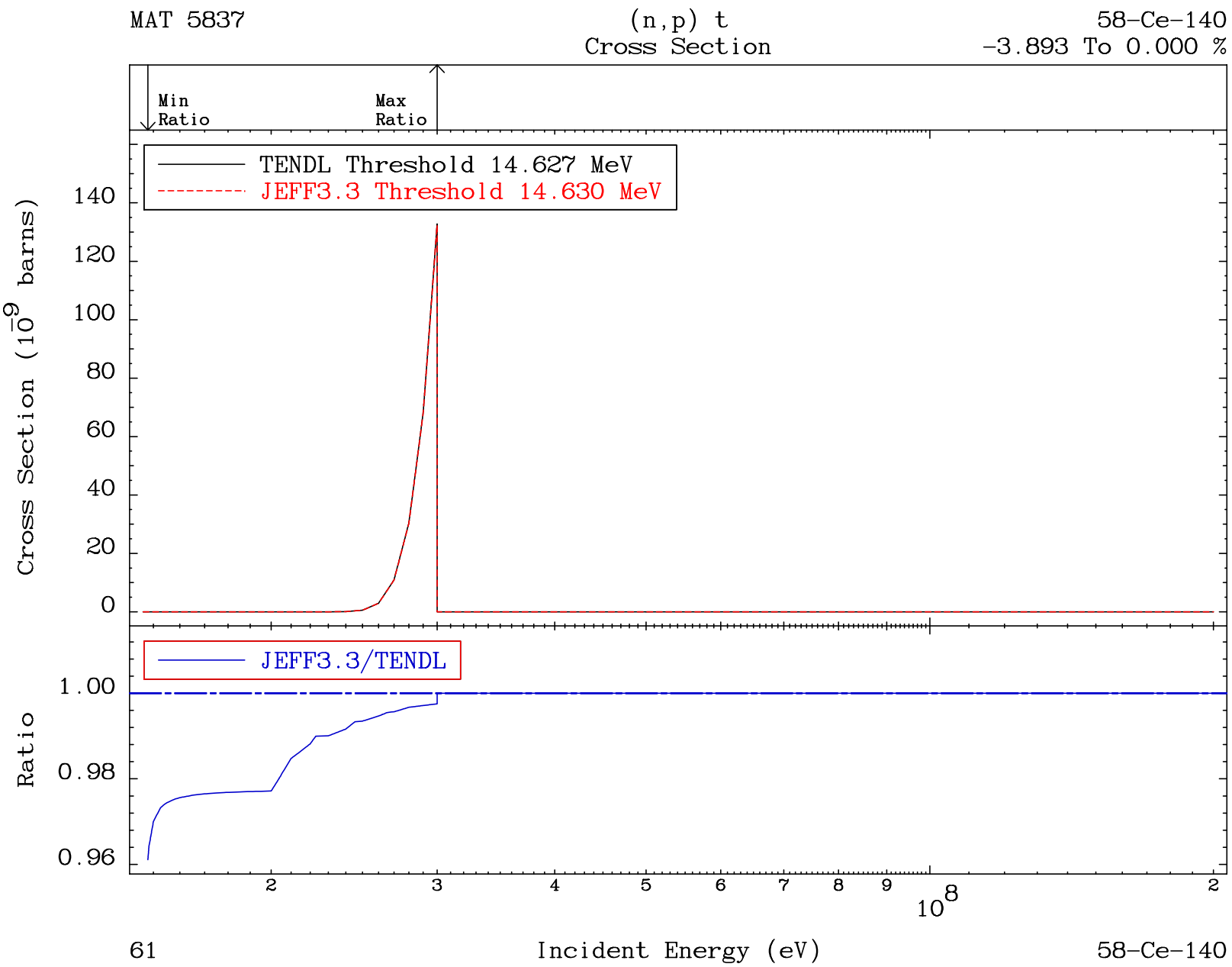

MAT 5837
(n,α)
Cross Section
58-Ce-140
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
56
58-Ce-140

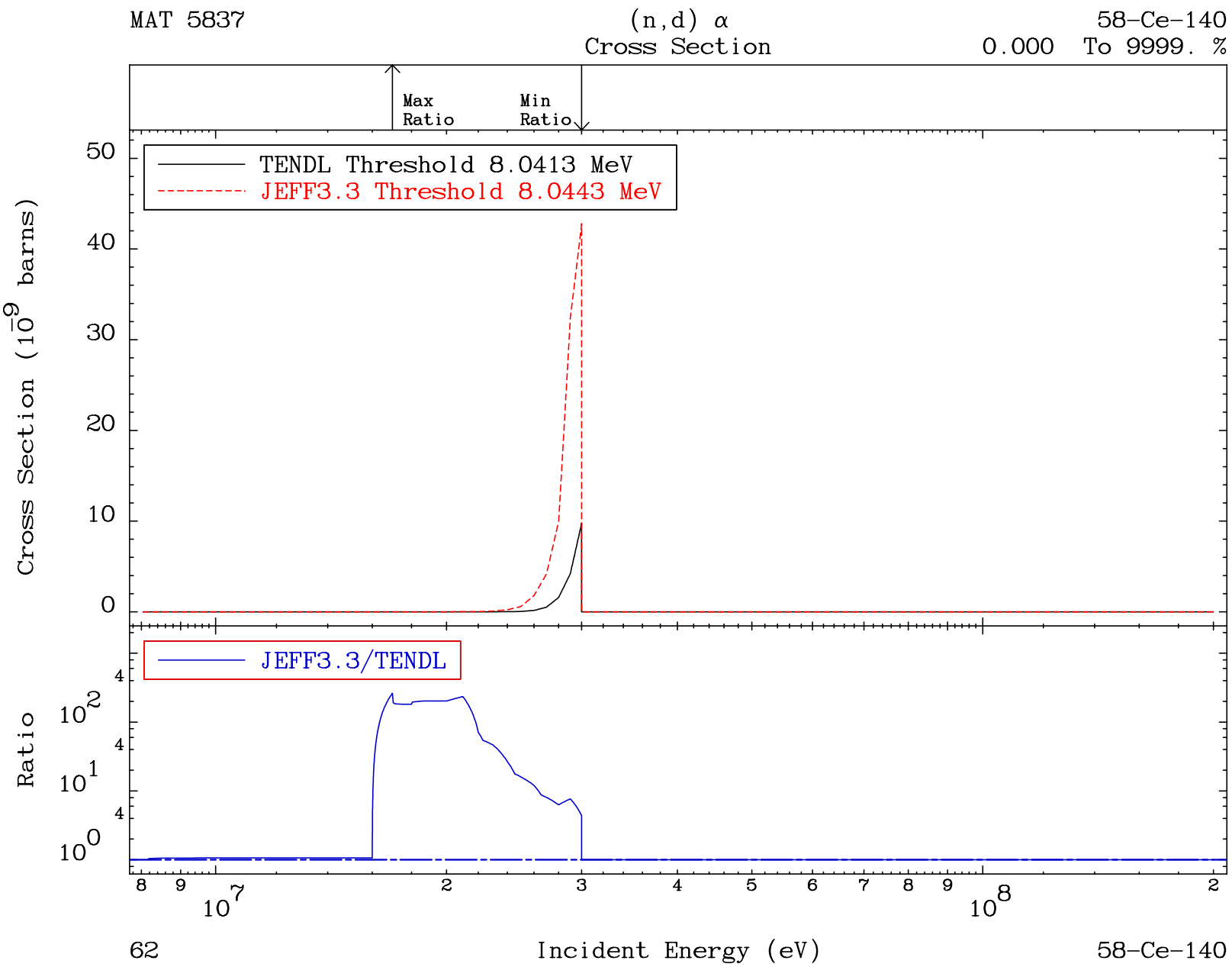

MAT 5837
(n,2α)
Cross Section
58-Ce-140
0.000 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 238.65 keV
JEFF3.3 Threshold 503.84 keV
Cross Section (micro-barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
57
Incident Energy (eV)
58-Ce-140

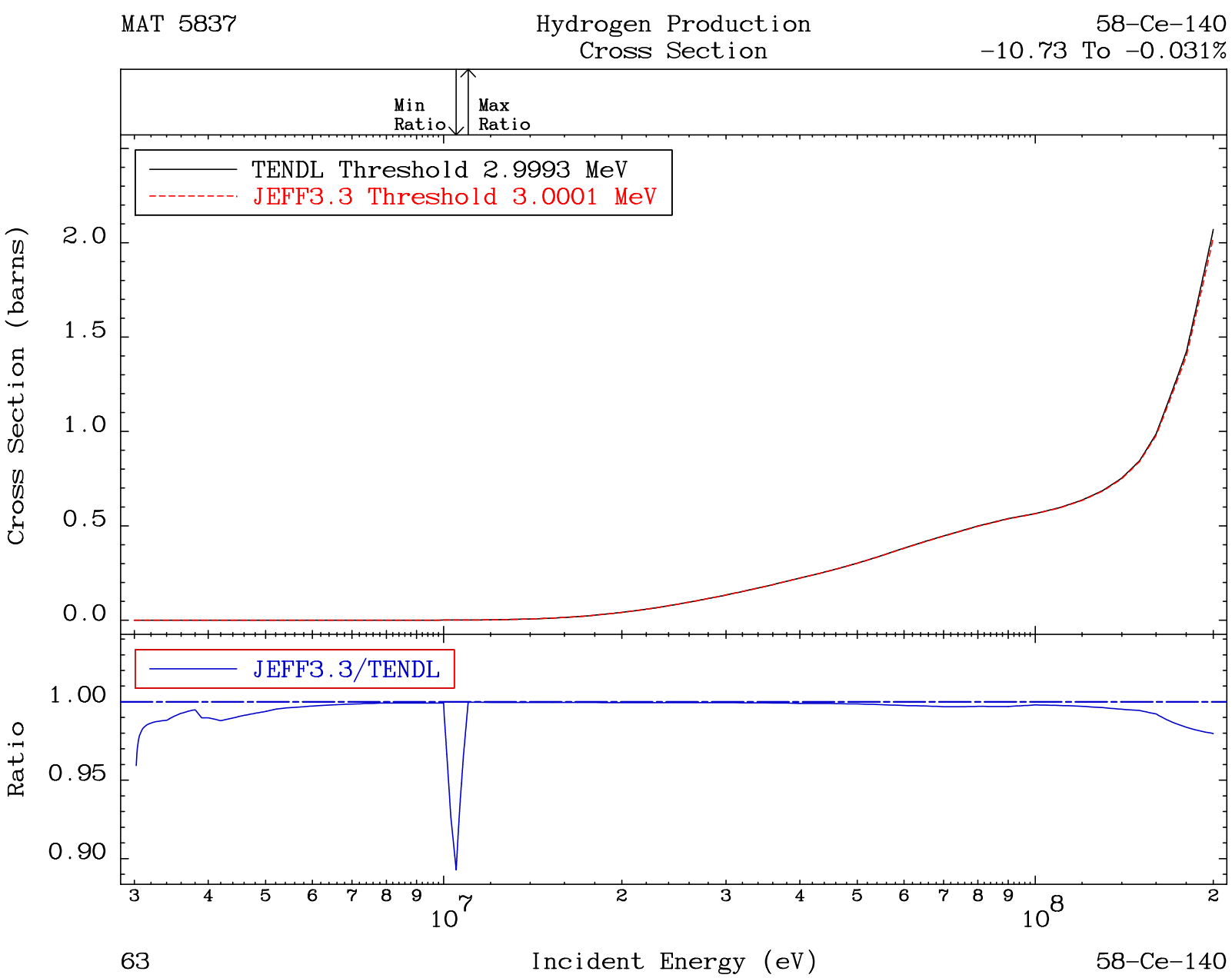

MAT 5837
(n,2p)
Cross Section
58-Ce-140
-4.157 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 9.7387 MeV
JEFF3.3 Threshold 9.7416 MeV
Cross Section (micro-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
10^7
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
58-Ce-140

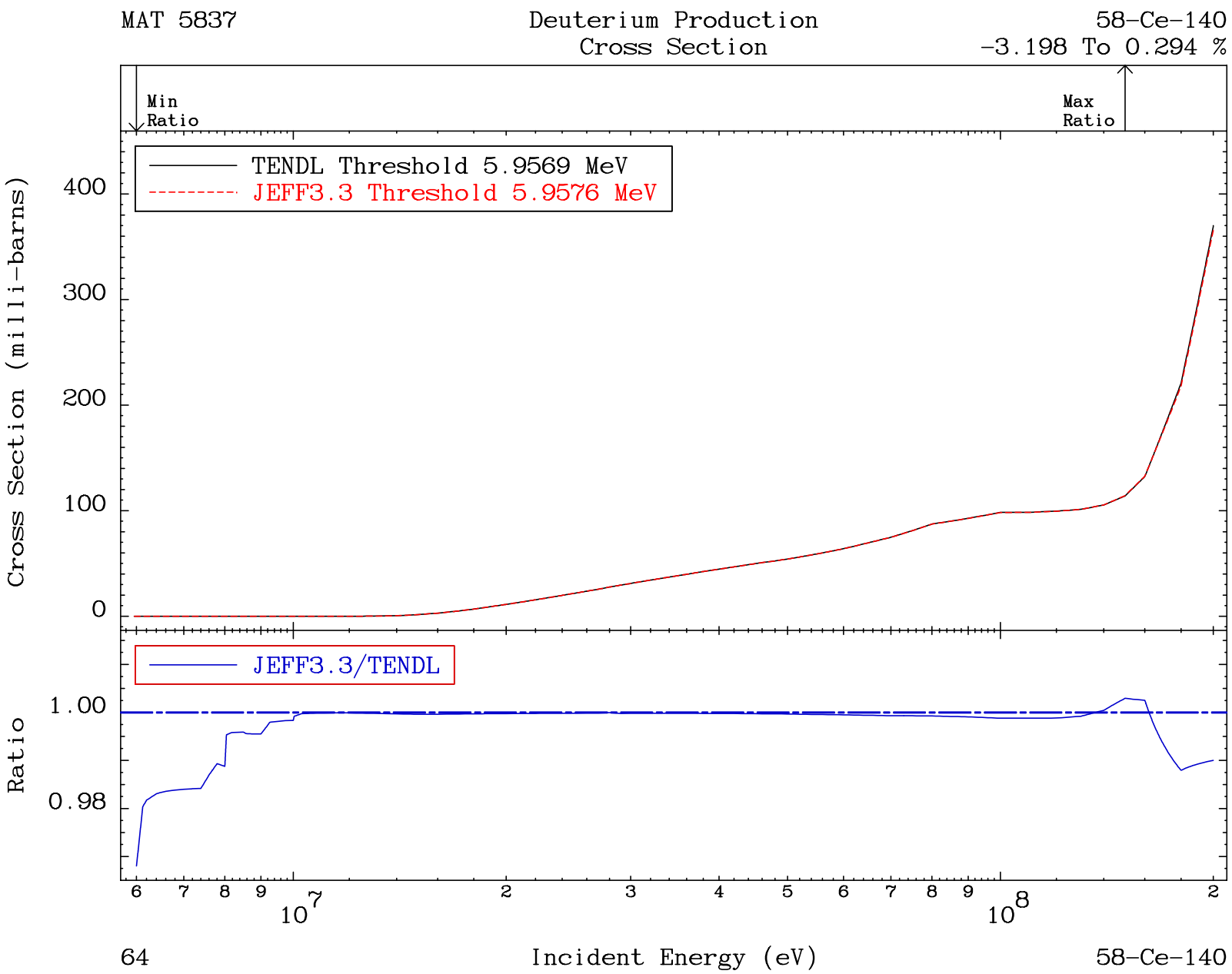

MAT 5837
(n,p) α
Cross Section
58-Ce-140
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4043 MeV
JEFF3.3 Threshold 3.4072 MeV
Cross Section (micro-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
59
58-Ce-140

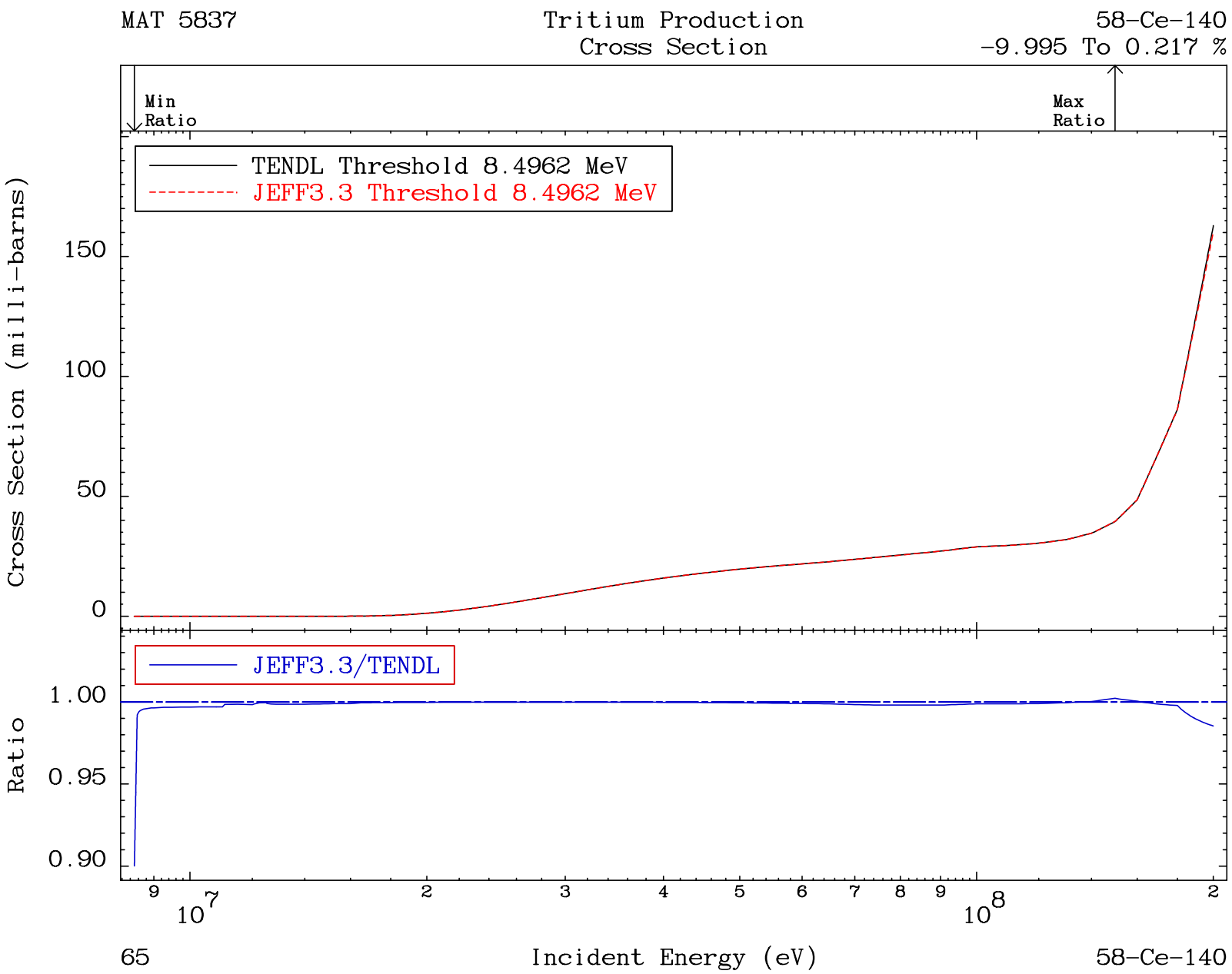

MAT 5837
(n,p) d
Cross Section
58-Ce-140
-5.937 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 12.256 MeV
JEFF3.3 Threshold 12.258 MeV
Cross Section (10^{-9} barns)
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
0.94
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
58-Ce-140

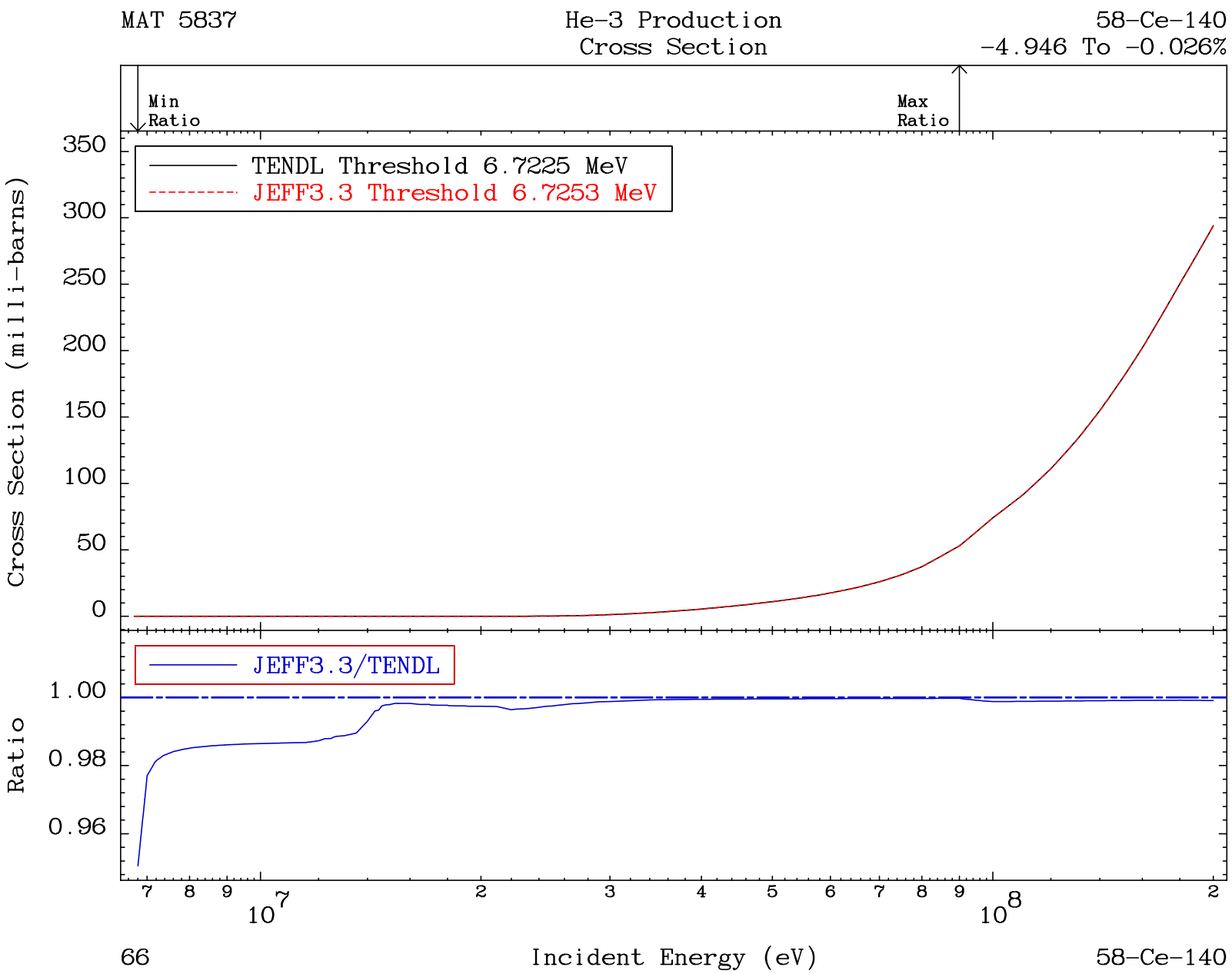

MAT 5837
(n,p) t
Cross Section
58-Ce-140
-3.893 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 14.627 MeV
JEFF3.3 Threshold 14.630 MeV
Cross Section (10^-9 barns)
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
58-Ce-140

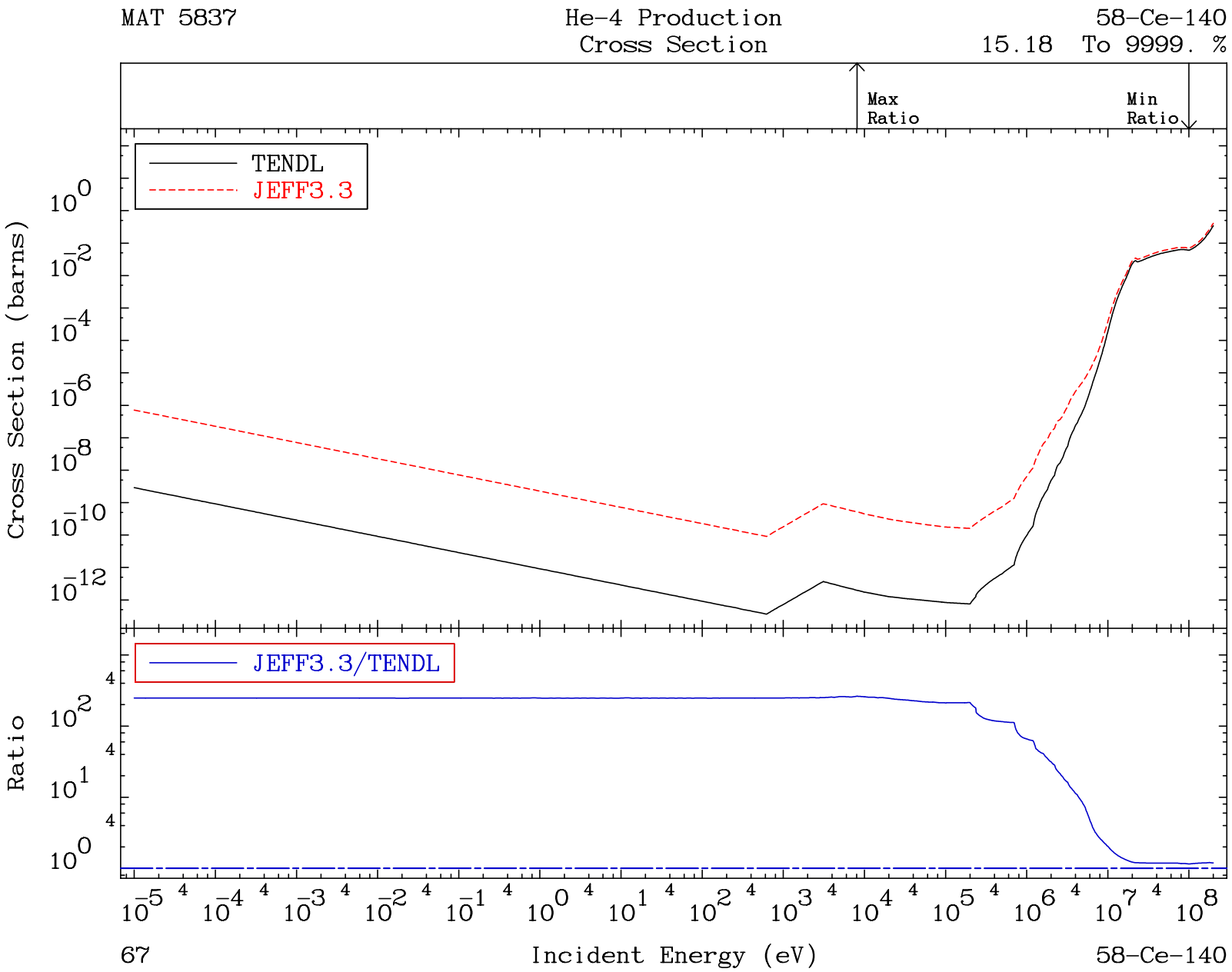

MAT 5837
(n,d) α
Cross Section
58-Ce-140
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.0413 MeV
JEFF3.3 Threshold 8.0443 MeV
Cross Section (10^{-9} barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^{2}
10^{1}
10^{0}
8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
62
Incident Energy (eV)
58-Ce-140

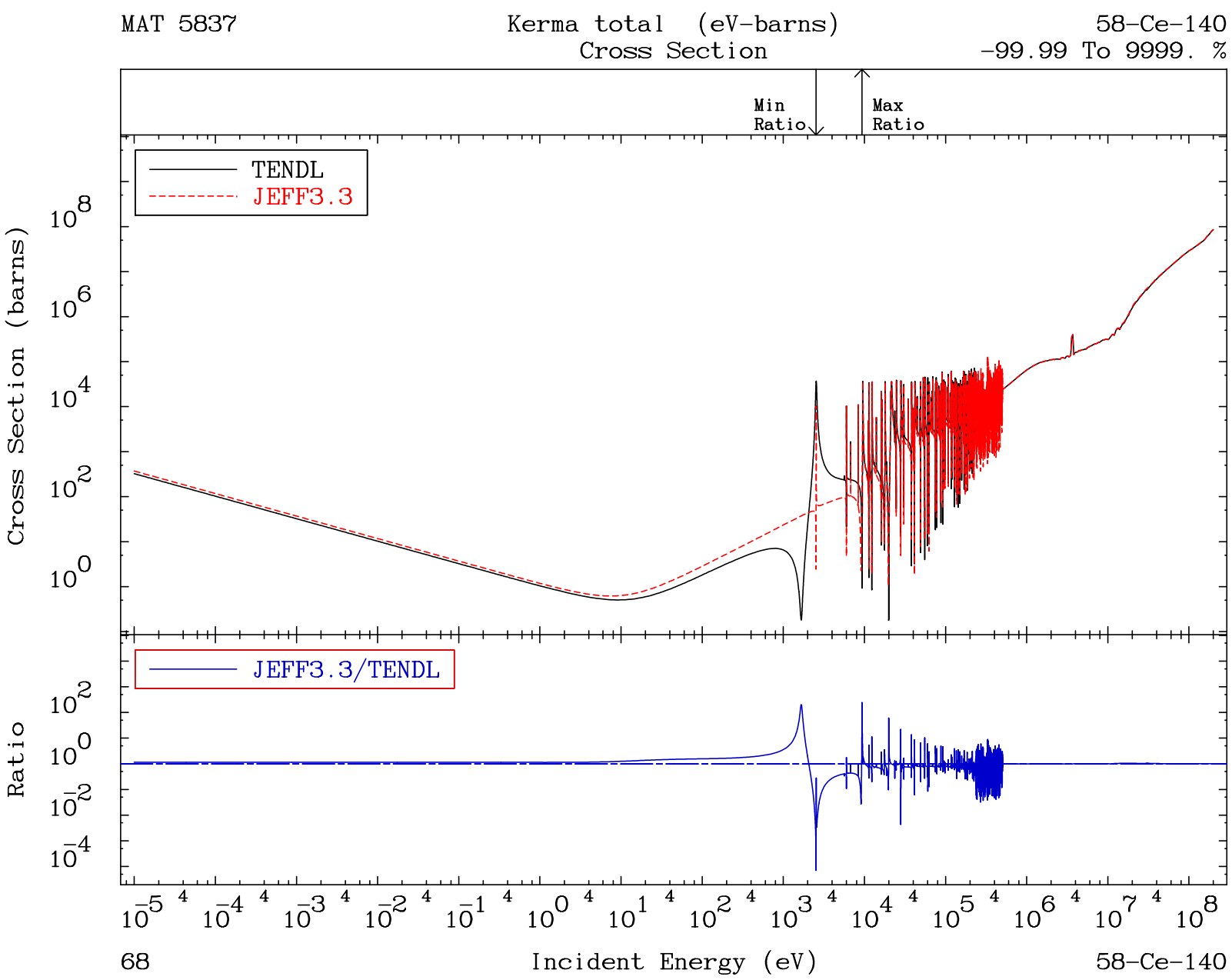

MAT 5837
Hydrogen Production
Cross Section
58-Ce-140
-10.73 To -0.031%
Min Ratio
Max Ratio
TENDL Threshold 2.9993 MeV
JEFF3.3 Threshold 3.0001 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.00
0.95
0.90
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
63
Incident Energy (eV)
58-Ce-140

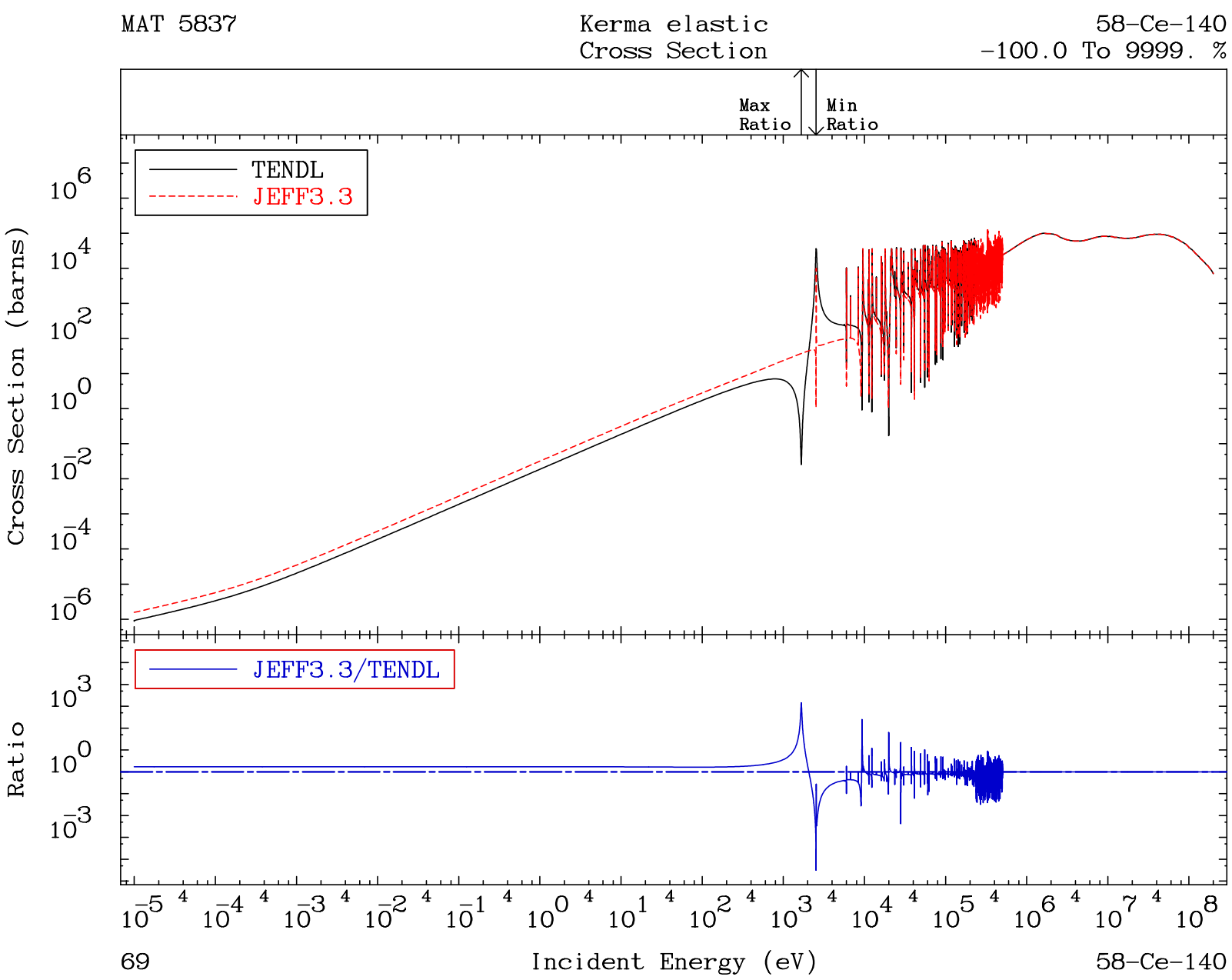

MAT 5837
Deuterium Production
Cross Section
58-Ce-140
-3.198 To 0.294 %
Min
Ratio
Max
Ratio
TENDL Threshold 5.9569 MeV
JEFF3.3 Threshold 5.9576 MeV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.00
0.98
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
64
Incident Energy (eV)
58-Ce-140

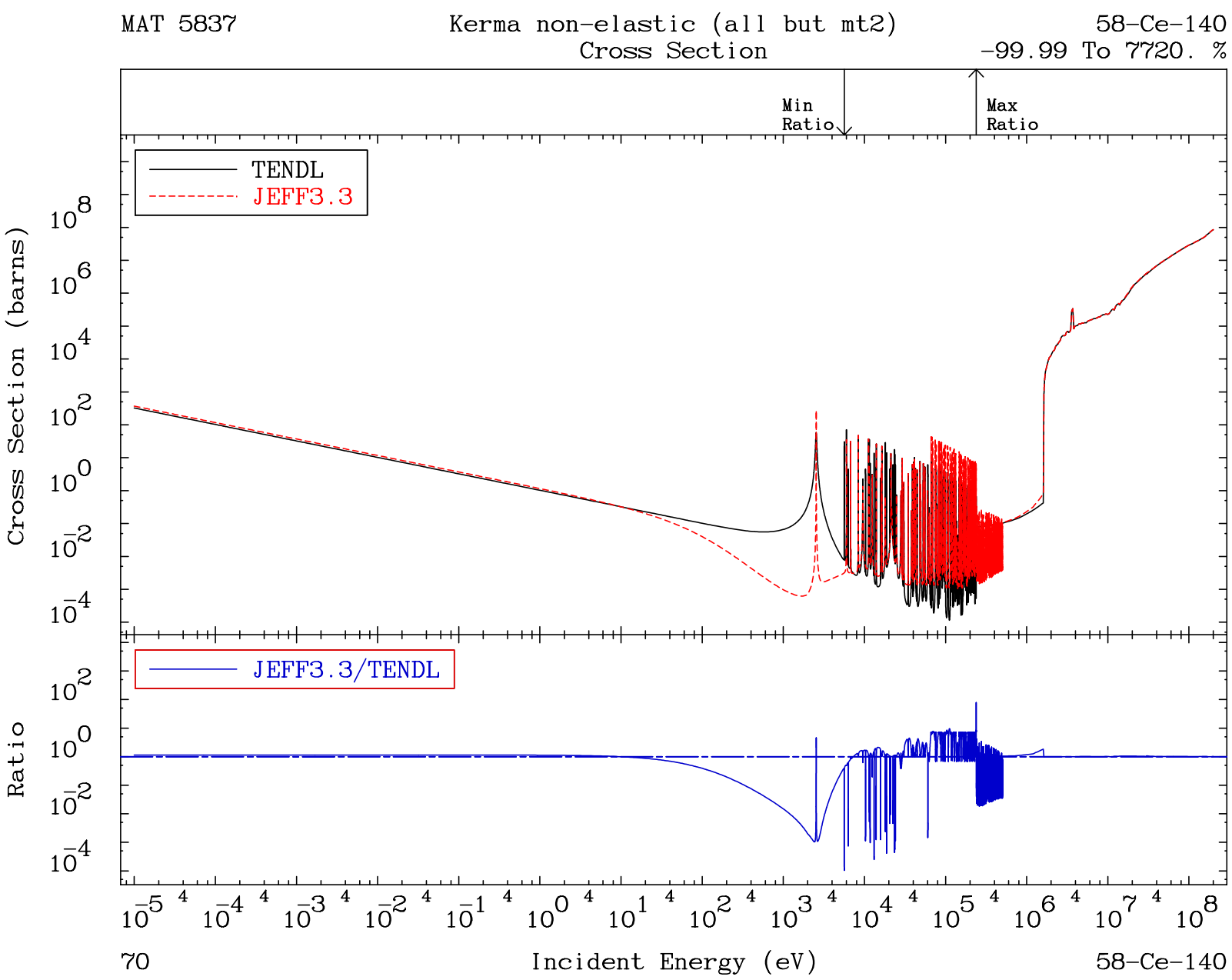

MAT 5837
Tritium Production
Cross Section
58-Ce-140
-9.995 To 0.217 %
Min
Ratio
Max
Ratio
TENDL Threshold 8.4962 MeV
JEFF3.3 Threshold 8.4962 MeV
Cross Section (milli-barns)
150
100
50
0
JEFF3.3/TENDL
Ratio
1.00
0.95
0.90
9
10^7
2
3
4
5
6
7
8
9
10^8
2
65
Incident Energy (eV)
58-Ce-140

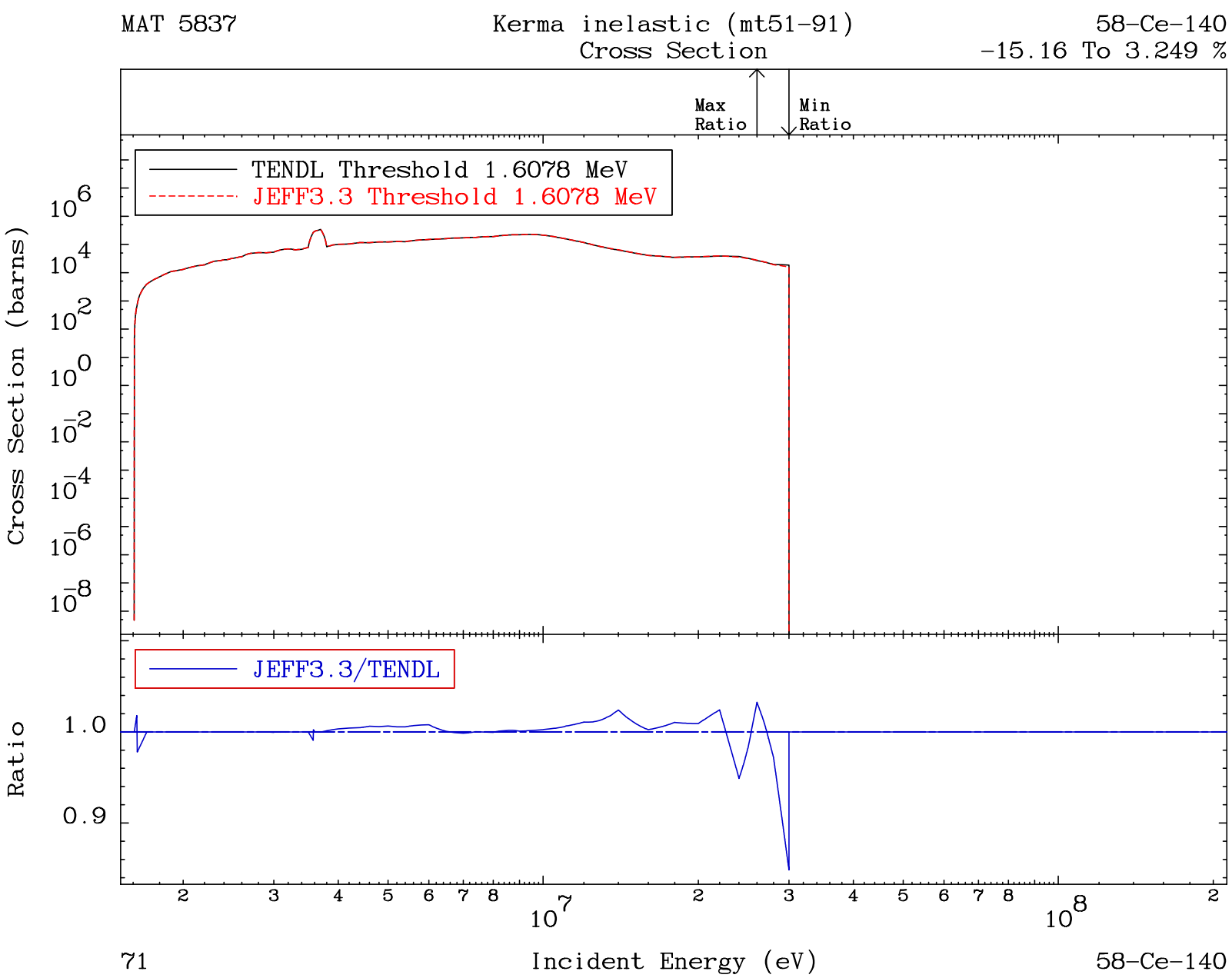

MAT 5837
He-3 Production
Cross Section
58-Ce-140
-4.946 To -0.026%
Min Ratio
Max Ratio
TENDL Threshold 6.7225 MeV
JEFF3.3 Threshold 6.7253 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
66
Incident Energy (eV)
58-Ce-140

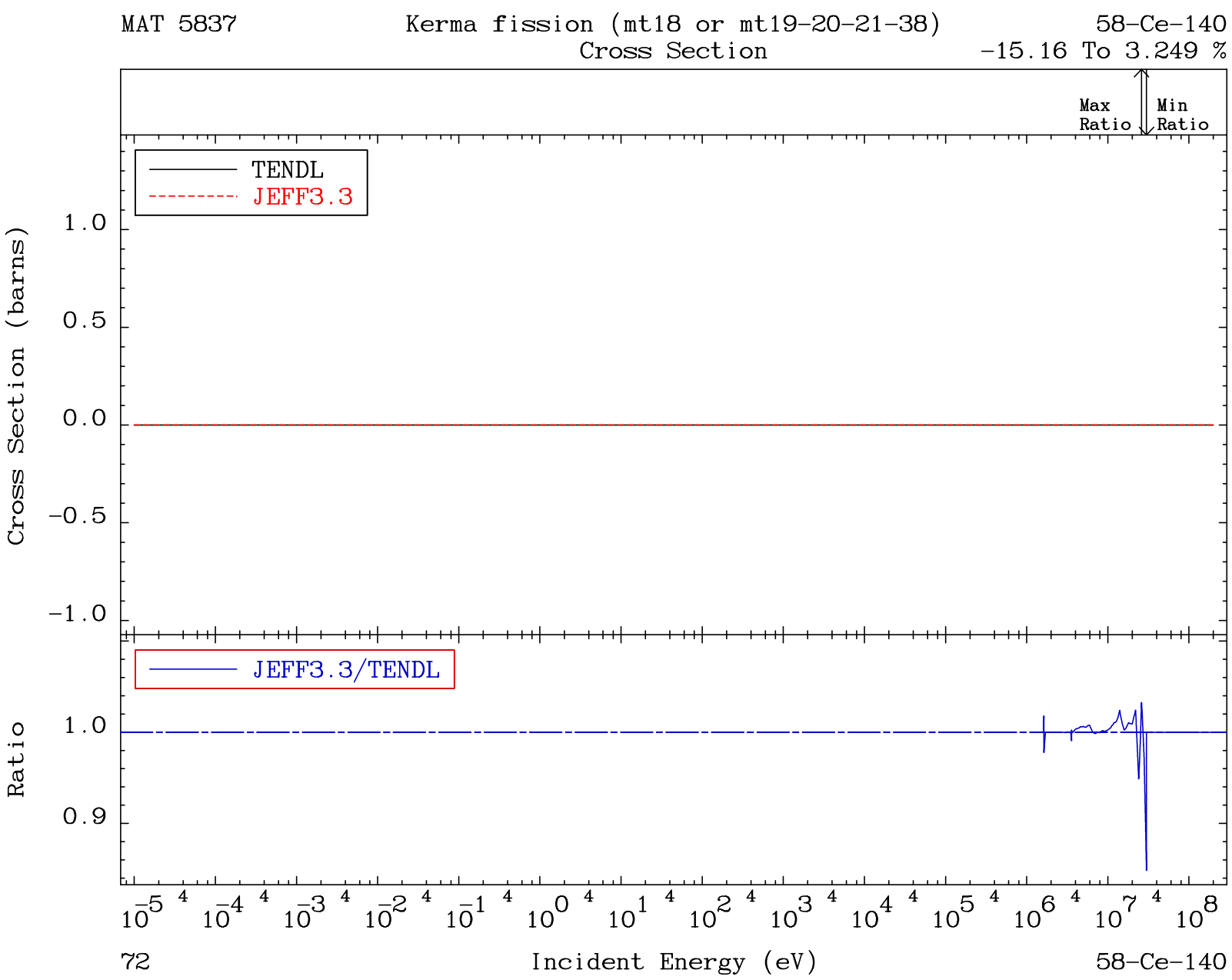

MAT 5837
He-4 Production
Cross Section
58-Ce-140
15.18 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
67
58-Ce-140

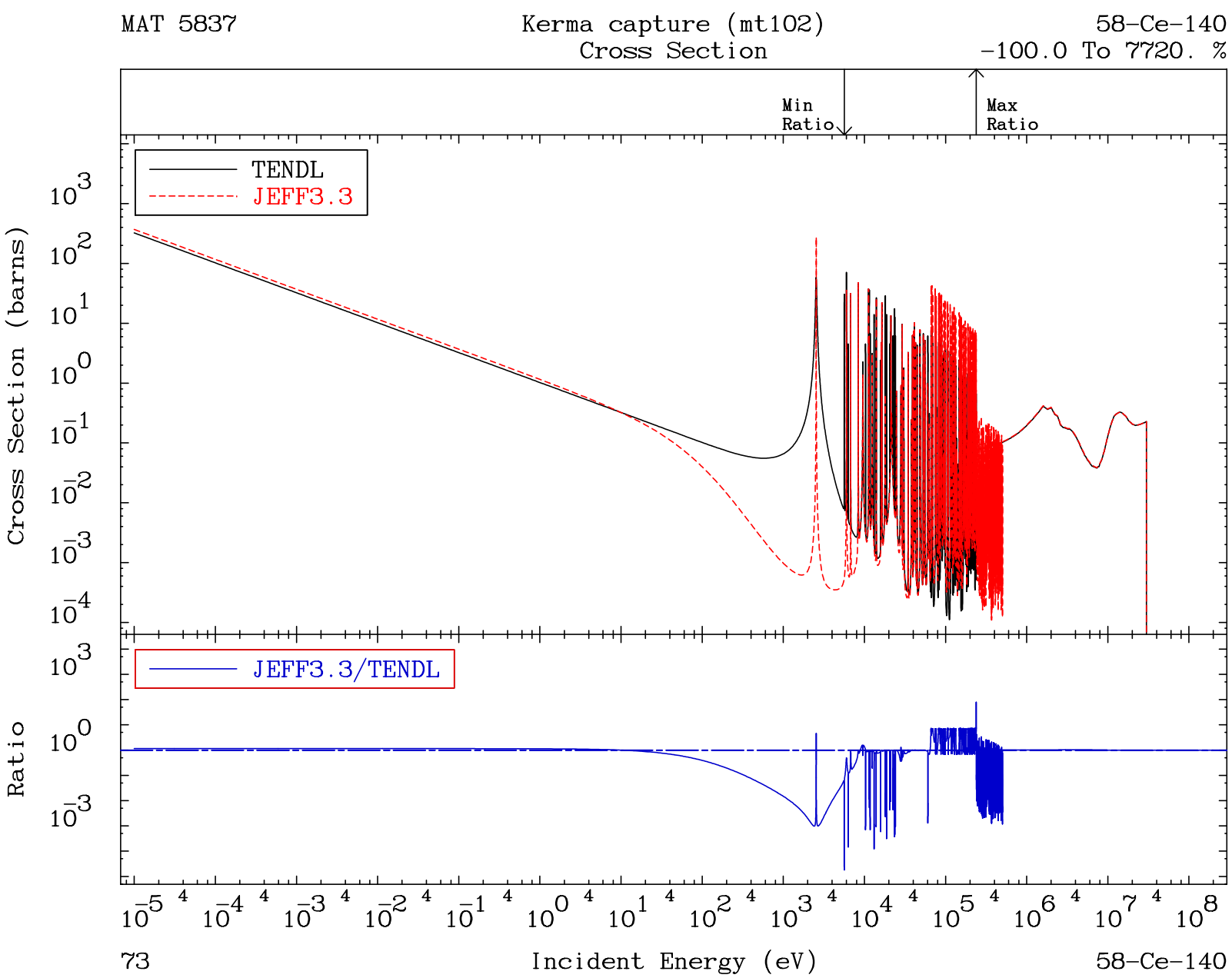

MAT 5837
Kerma total (eV-barns)
Cross Section
58-Ce-140
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
58-Ce-140

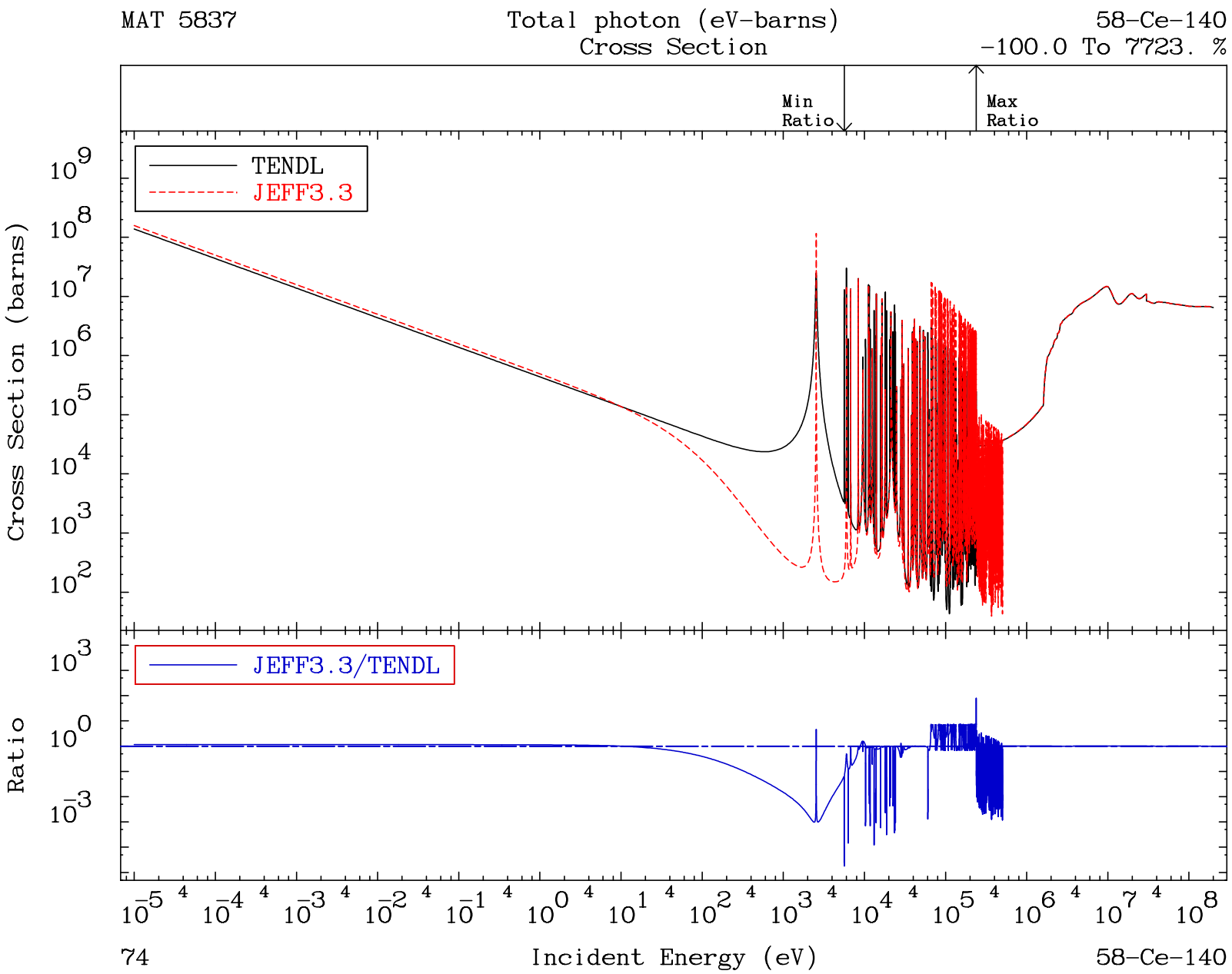

MAT 5837
Kerma elastic
Cross Section
58-Ce-140
-100.0 To 9999. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
69
58-Ce-140

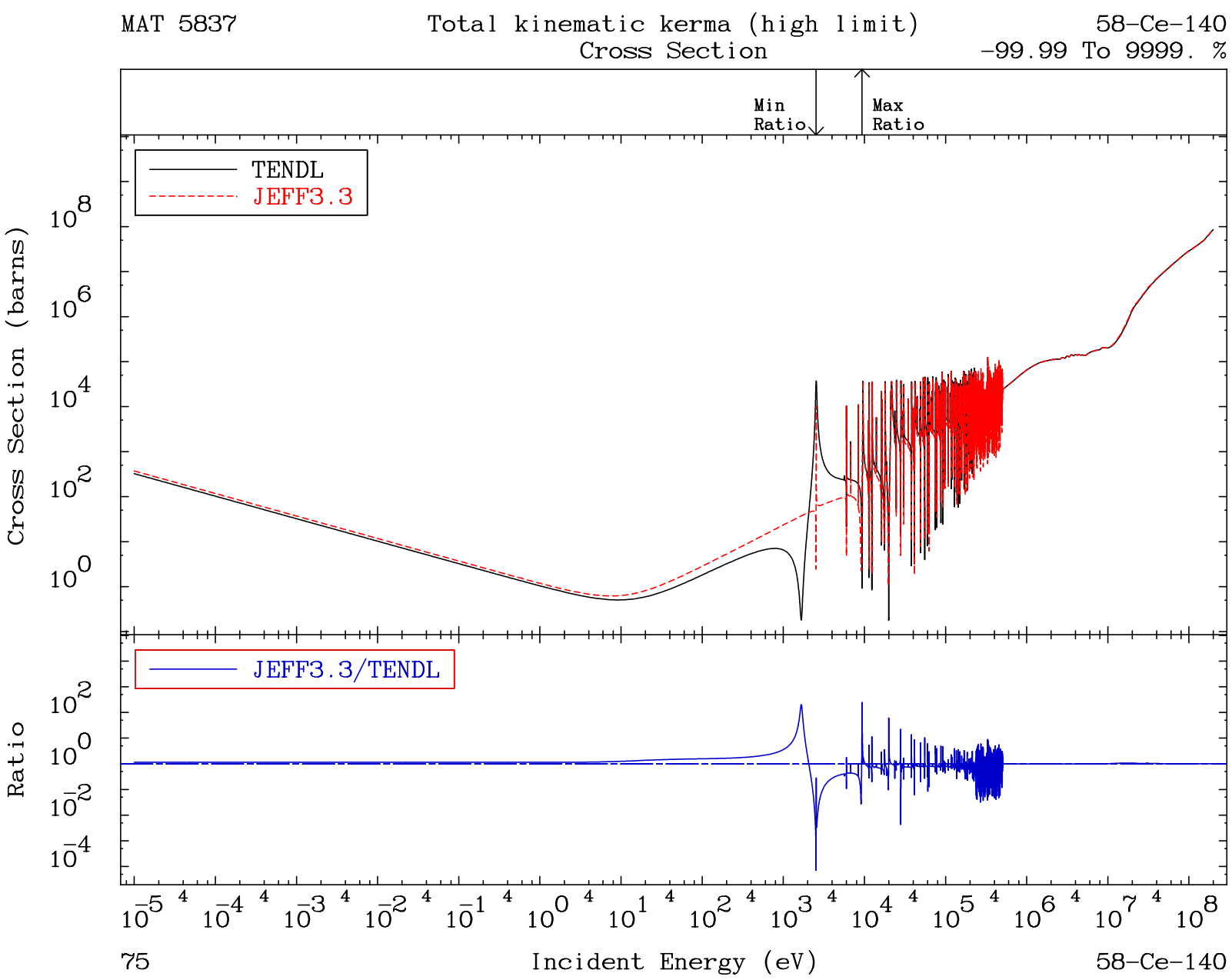

MAT 5837
Kerma non-elastic (all but mt2)
Cross Section
58-Ce-140
-99.99 To 7720. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
70
58-Ce-140

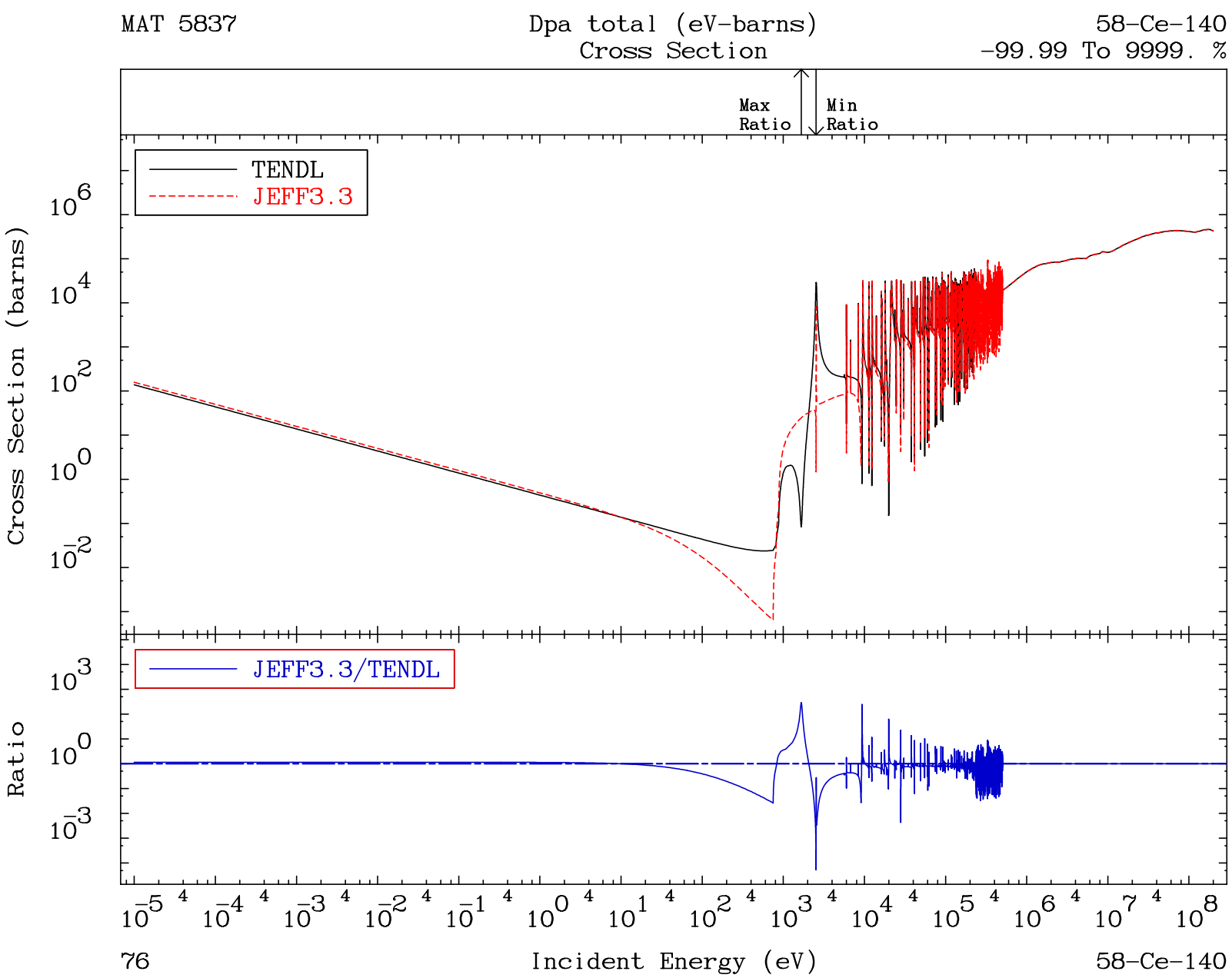

MAT 5837
Kerma inelastic (mt51-91)
Cross Section
58-Ce-140
-15.16 To 3.249 %
Max Ratio
Min Ratio
TENDL Threshold 1.6078 MeV
JEFF3.3 Threshold 1.6078 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
71
58-Ce-140

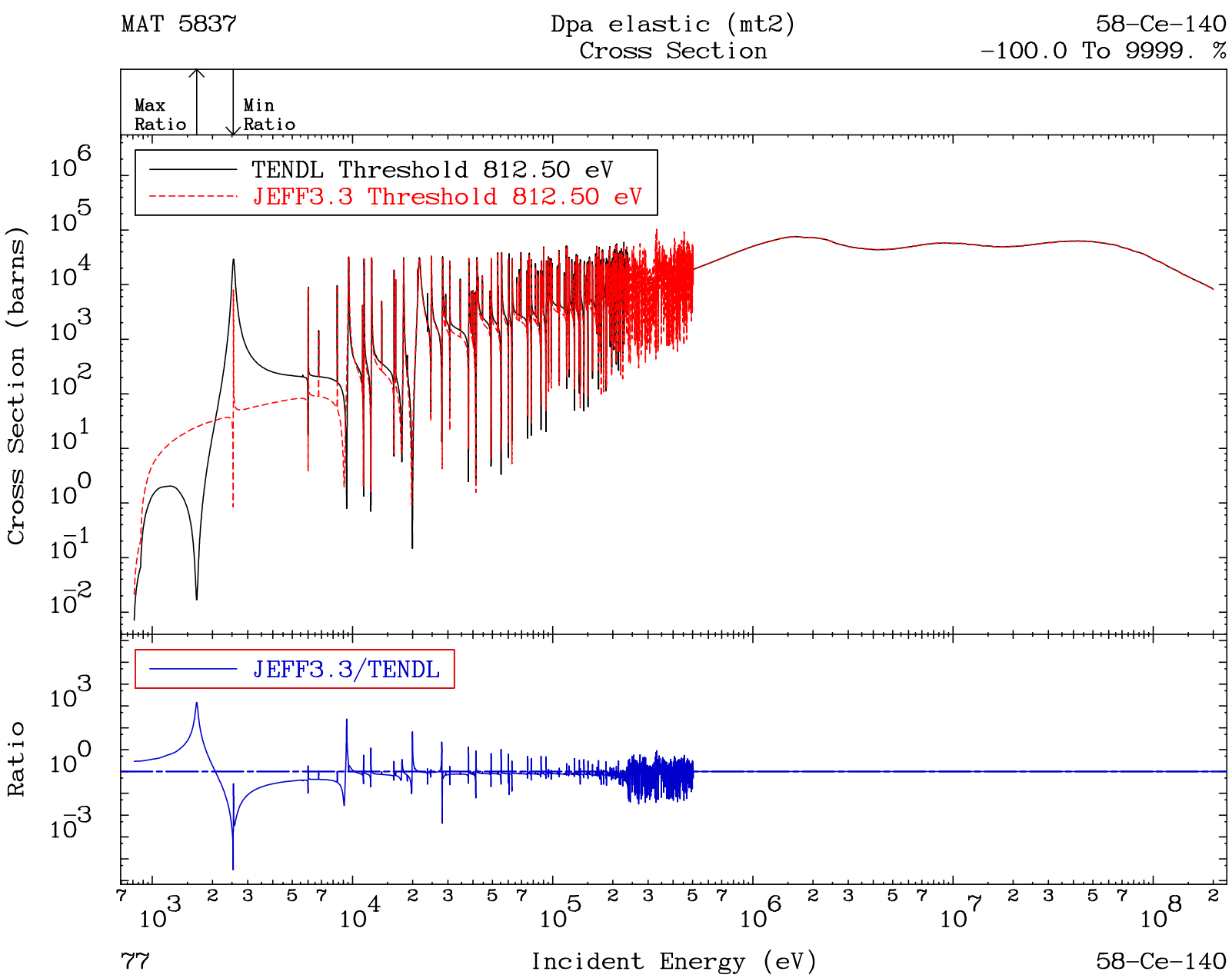

MAT 5837
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
58-Ce-140
-15.16 To 3.249 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JEFF3.3/TENDL
Ratio
1.0
0.9
10-5 4 10-4 4 10-3 4 10-2 4 10-1 4 100 4 101 4 102 4 103 4 104 4 105 4 106 4 107 4 108
72
Incident Energy (eV)
58-Ce-140

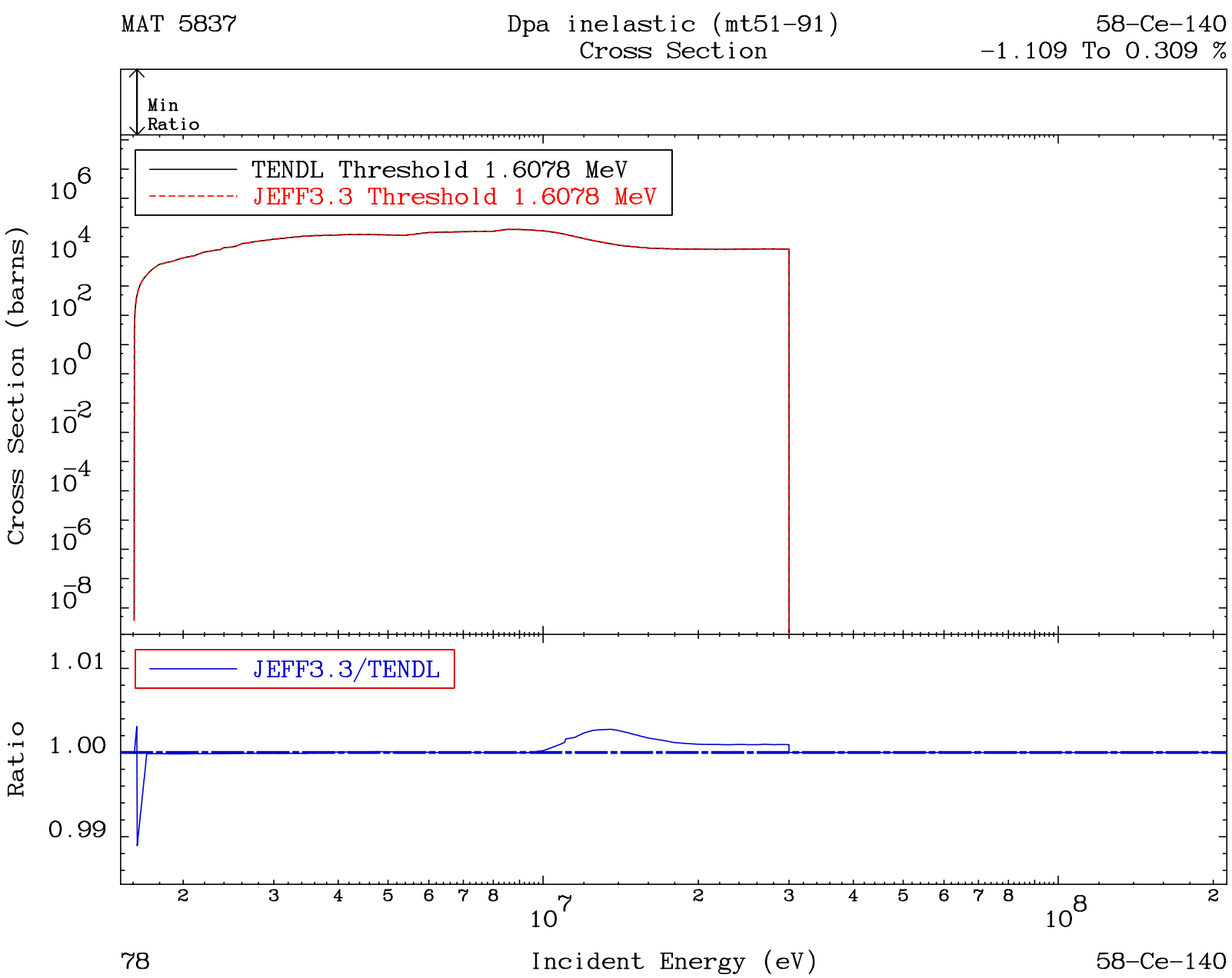

MAT 5837
Kerma capture (mt102)
Cross Section
58-Ce-140
-100.0 To 7720. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
73
58-Ce-140

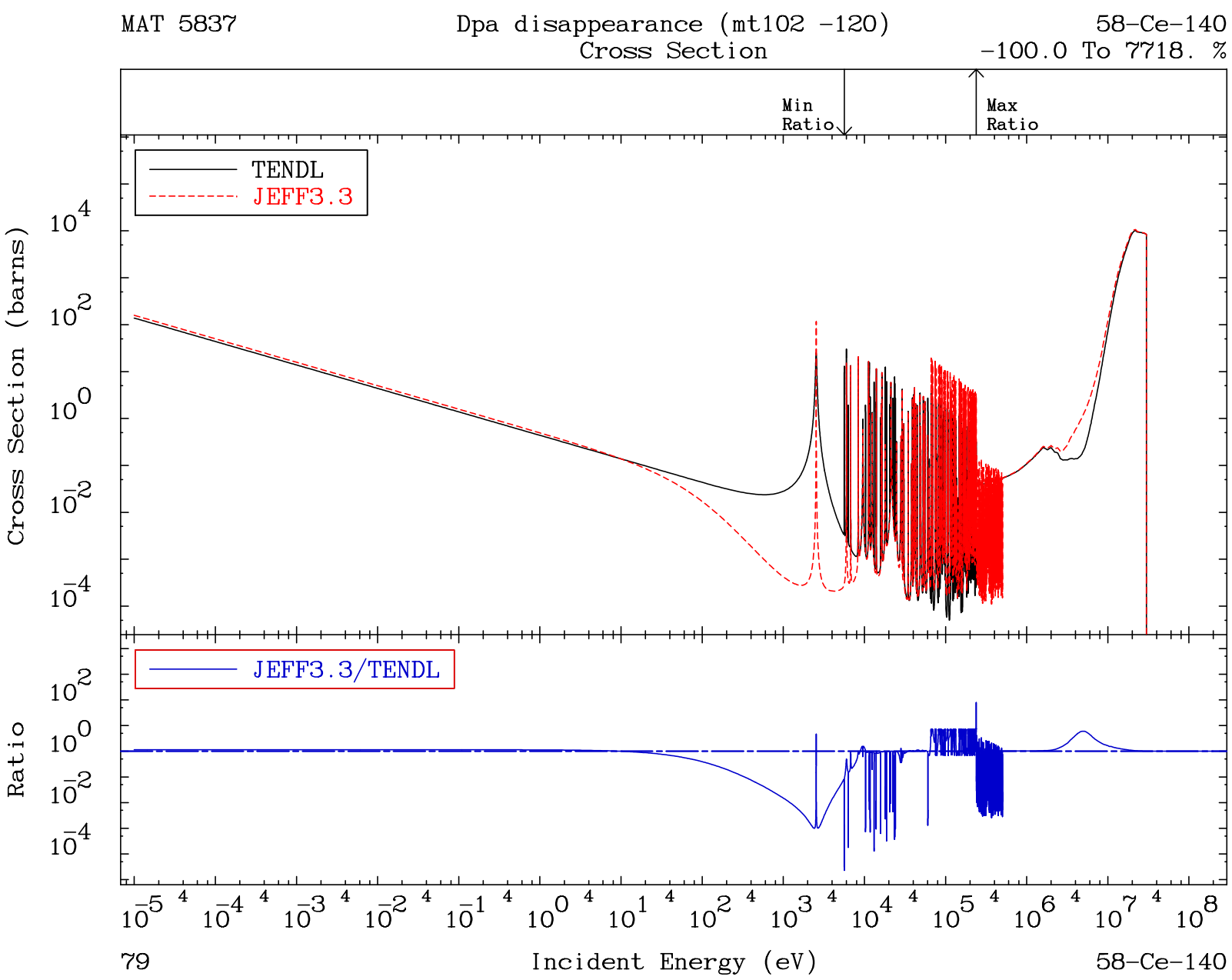

MAT 5837
Total photon (eV-barns)
Cross Section
58-Ce-140
-100.0 To 7723. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
74
58-Ce-140

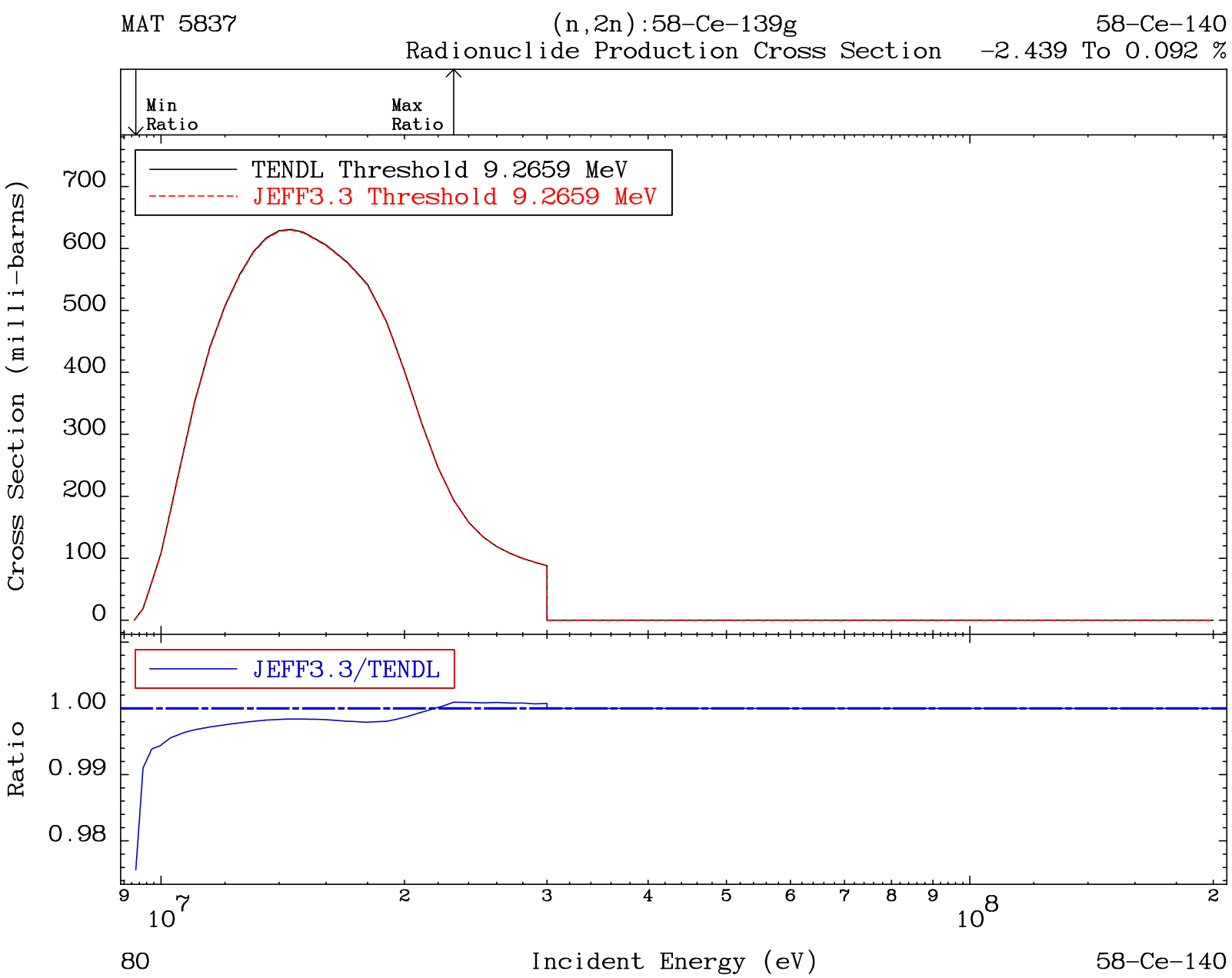

MAT 5837
Total kinematic kerma (high limit)
Cross Section
58-Ce-140
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
75
58-Ce-140

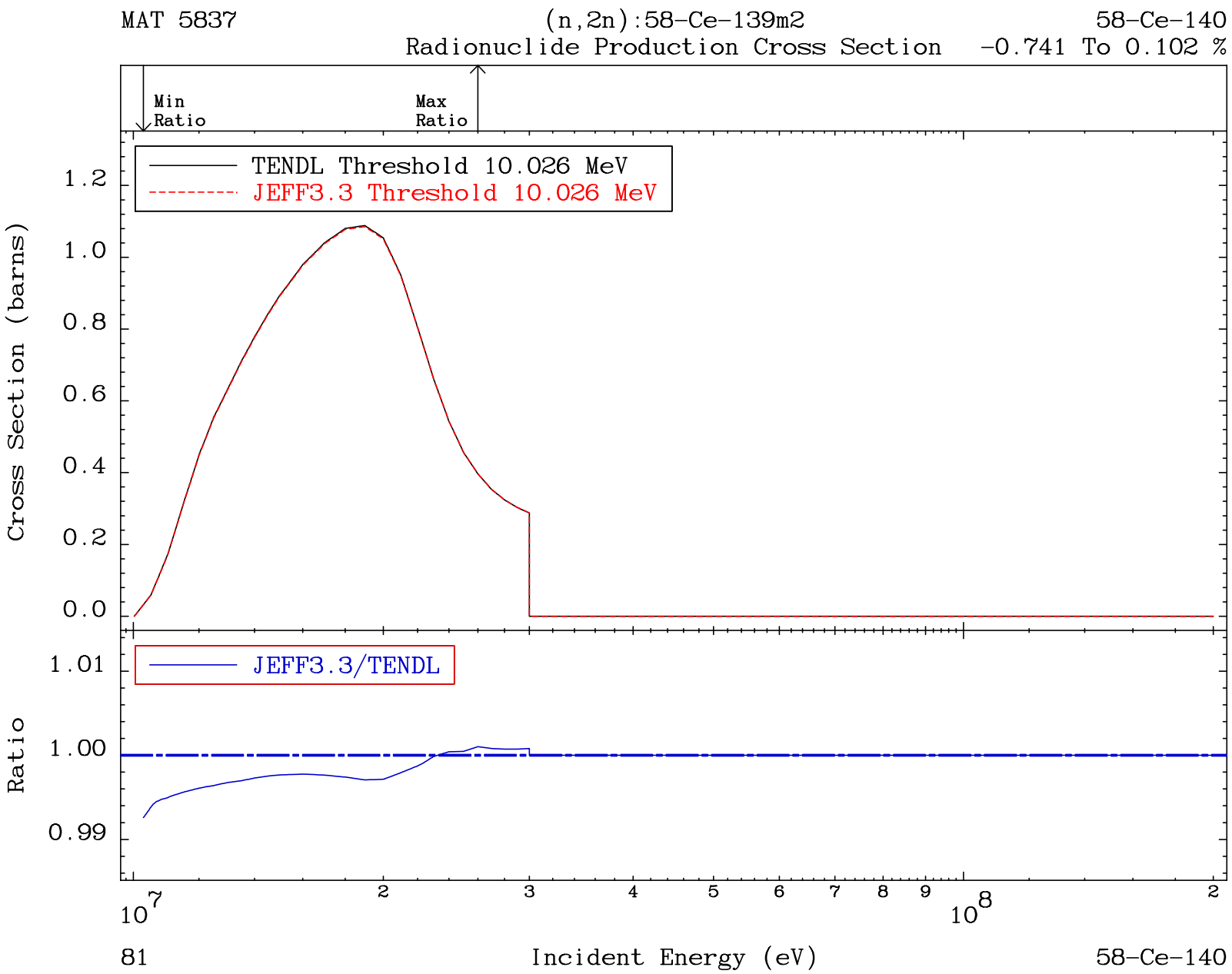

MAT 5837
Dpa total (eV-barns)
Cross Section
58-Ce-140
-99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
58-Ce-140

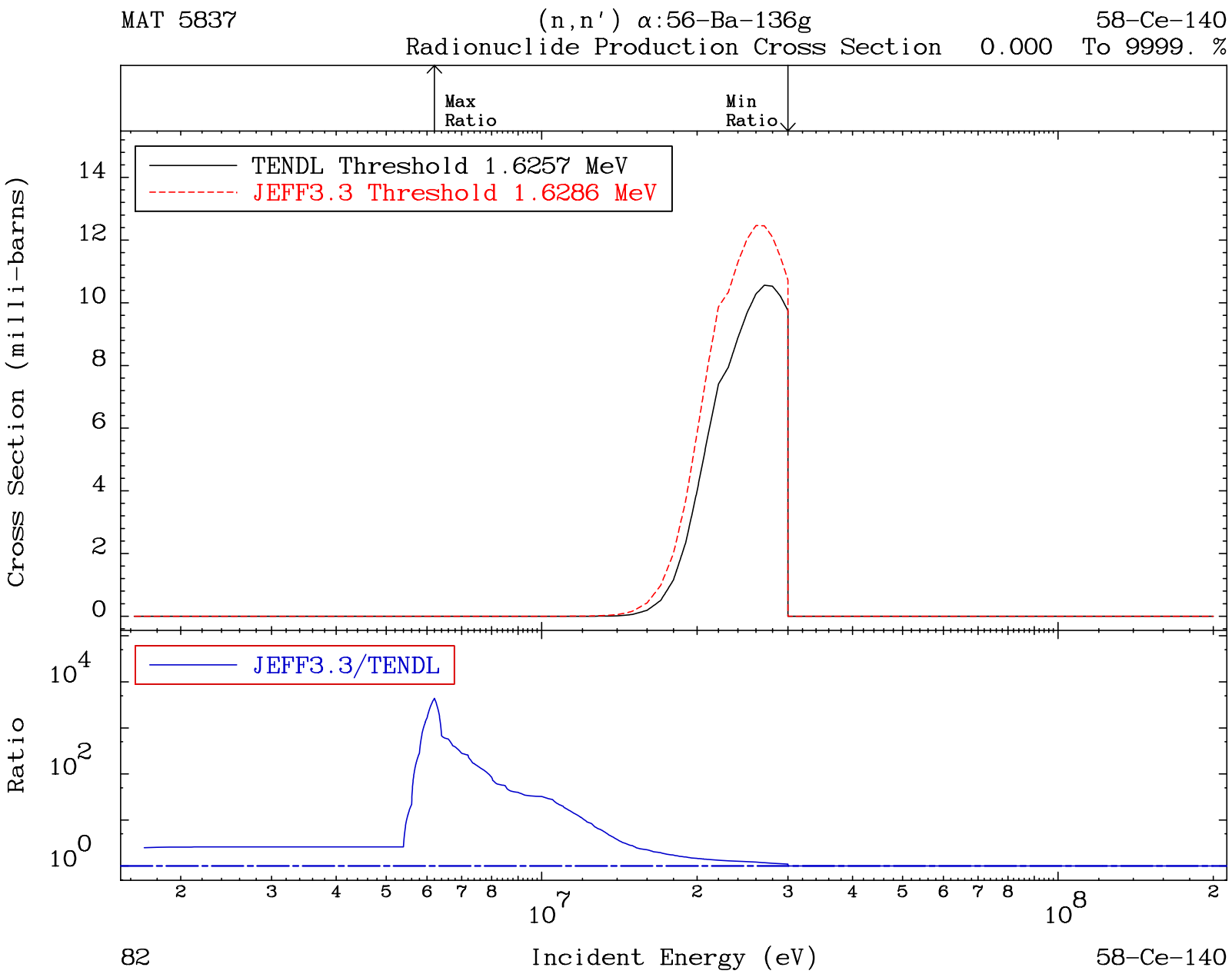

MAT 5837
Dpa elastic (mt2)
Cross Section
58-Ce-140
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 812.50 eV
JEFF3.3 Threshold 812.50 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
77
58-Ce-140

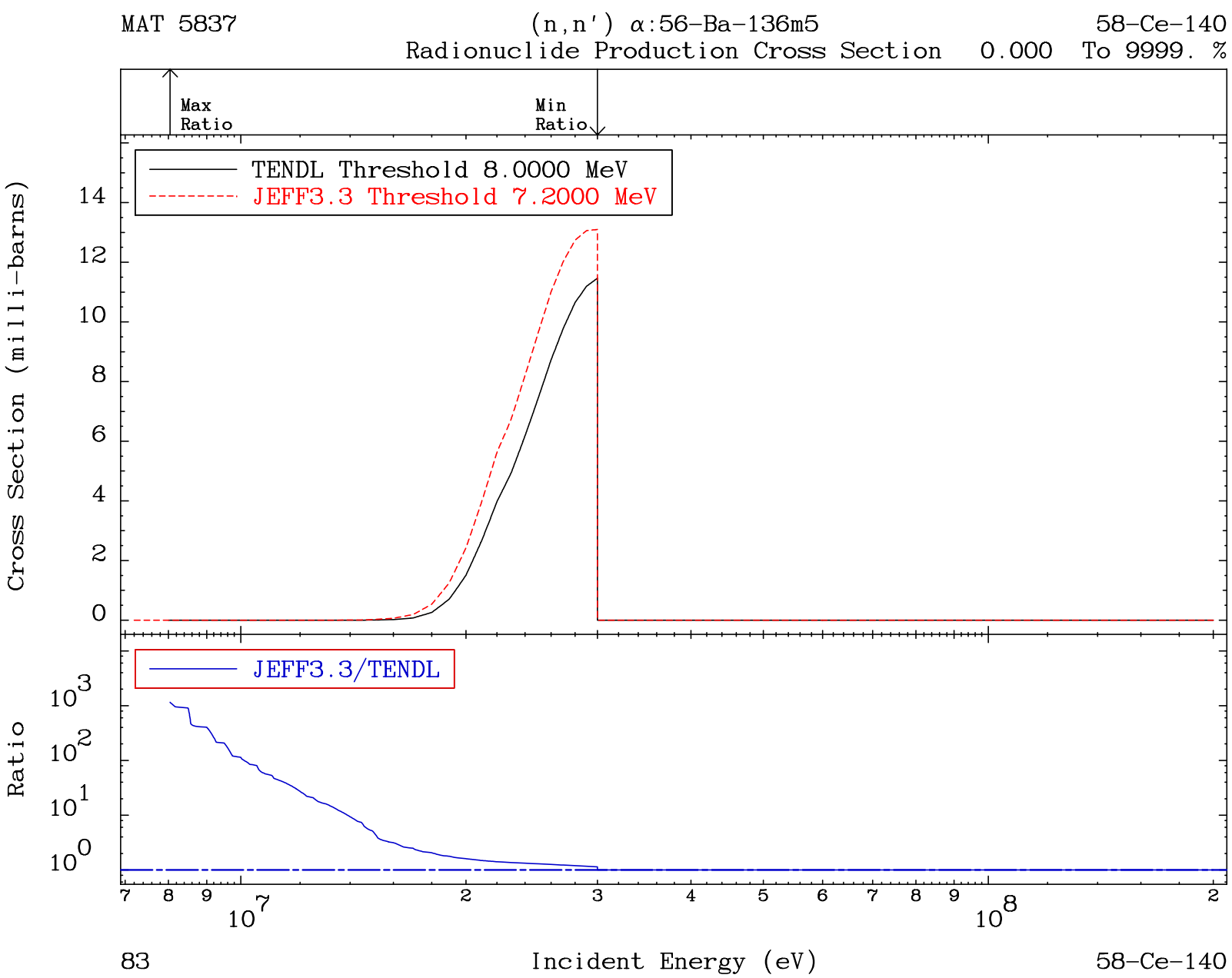

MAT 5837
Dpa inelastic (mt51-91)
Cross Section
58-Ce-140
-1.109 To 0.309 %
Min
Ratio
TENDL Threshold 1.6078 MeV
JEFF3.3 Threshold 1.6078 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
78
58-Ce-140

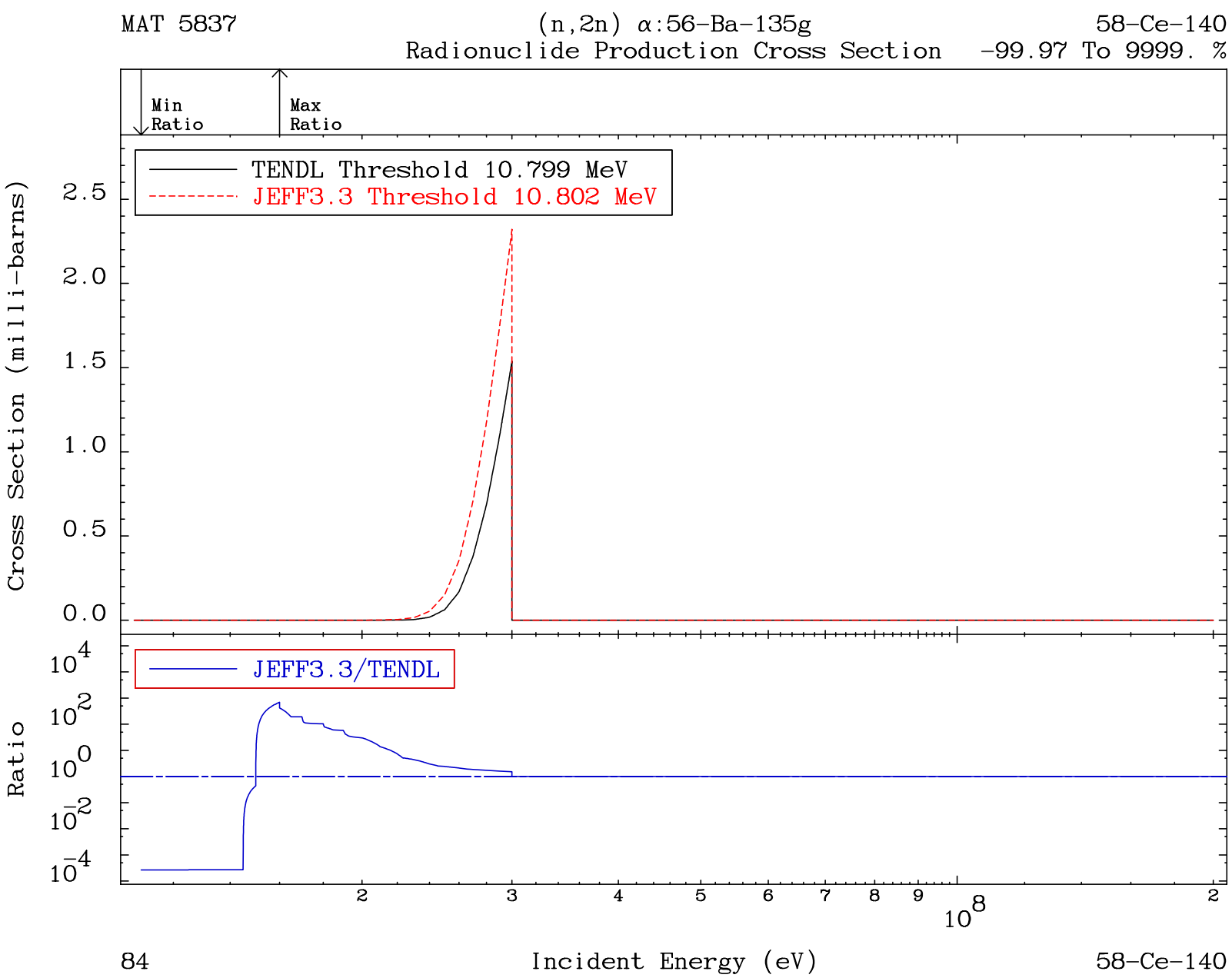

MAT 5837
Dpa disappearance (mt102 -120)
Cross Section
58-Ce-140
-100.0 To 7718. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
79
58-Ce-140

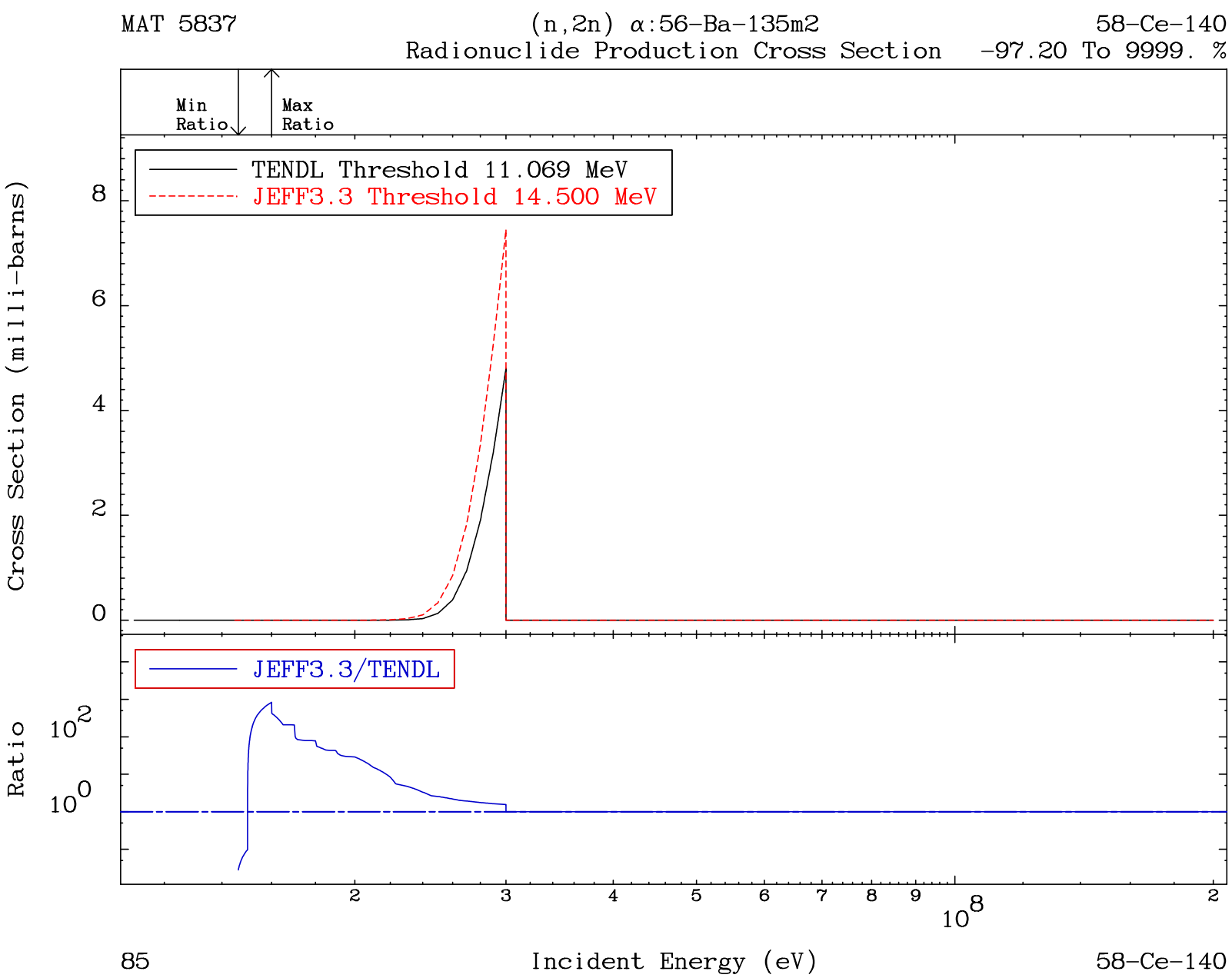

MAT 5837
(n,2n):58-Ce-139g
58-Ce-140
Radionuclide Production Cross Section
-2.439 To 0.092 %
Min Ratio
Max Ratio
TENDL Threshold 9.2659 MeV
JEFF3.3 Threshold 9.2659 MeV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
9
10^7
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
58-Ce-140

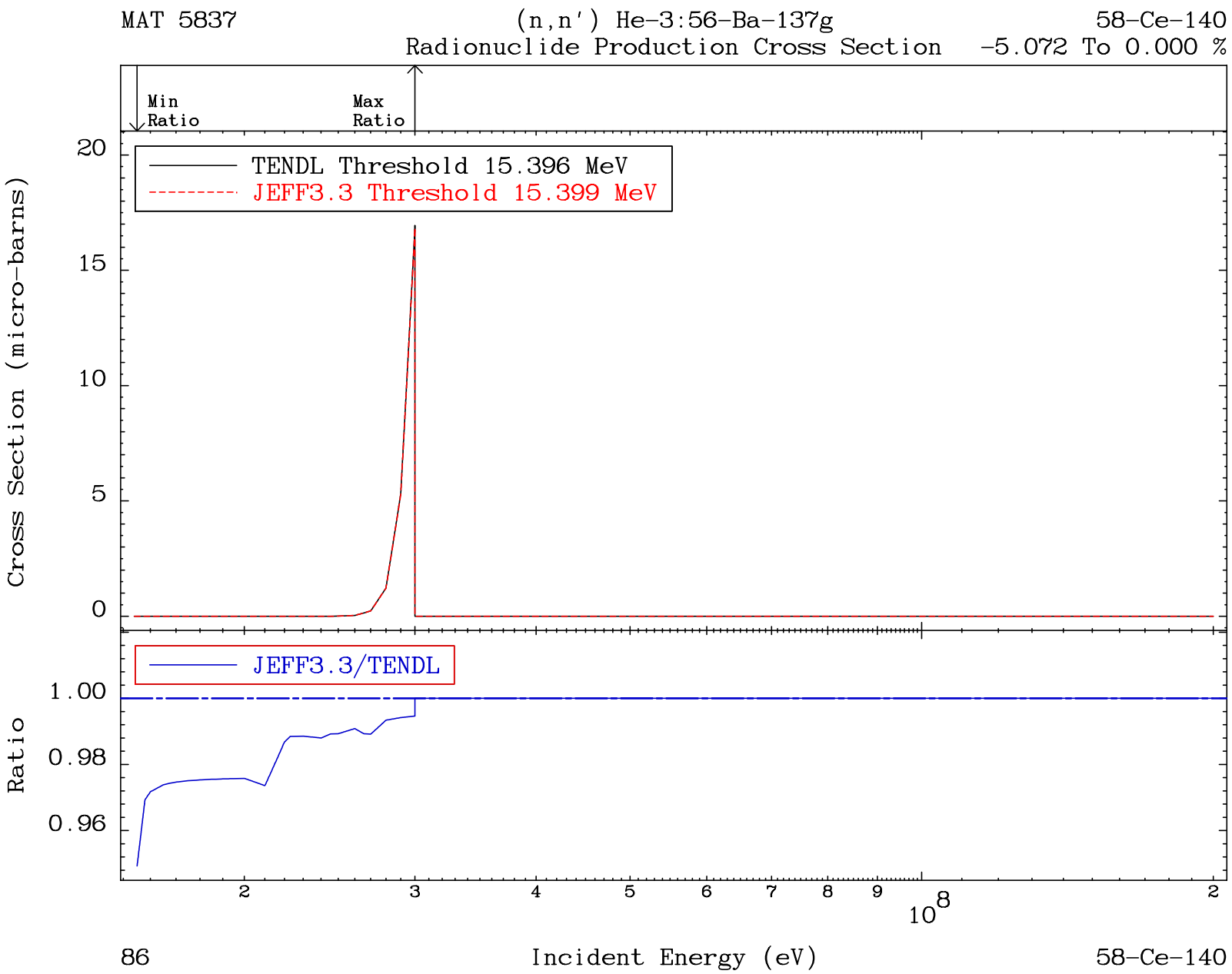

MAT 5837
(n,2n):58-Ce-139m2
58-Ce-140
Radionuclide Production Cross Section
-0.741 To 0.102 %
Min Ratio
Max Ratio
TENDL Threshold 10.026 MeV
JEFF3.3 Threshold 10.026 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
10^7
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
58-Ce-140

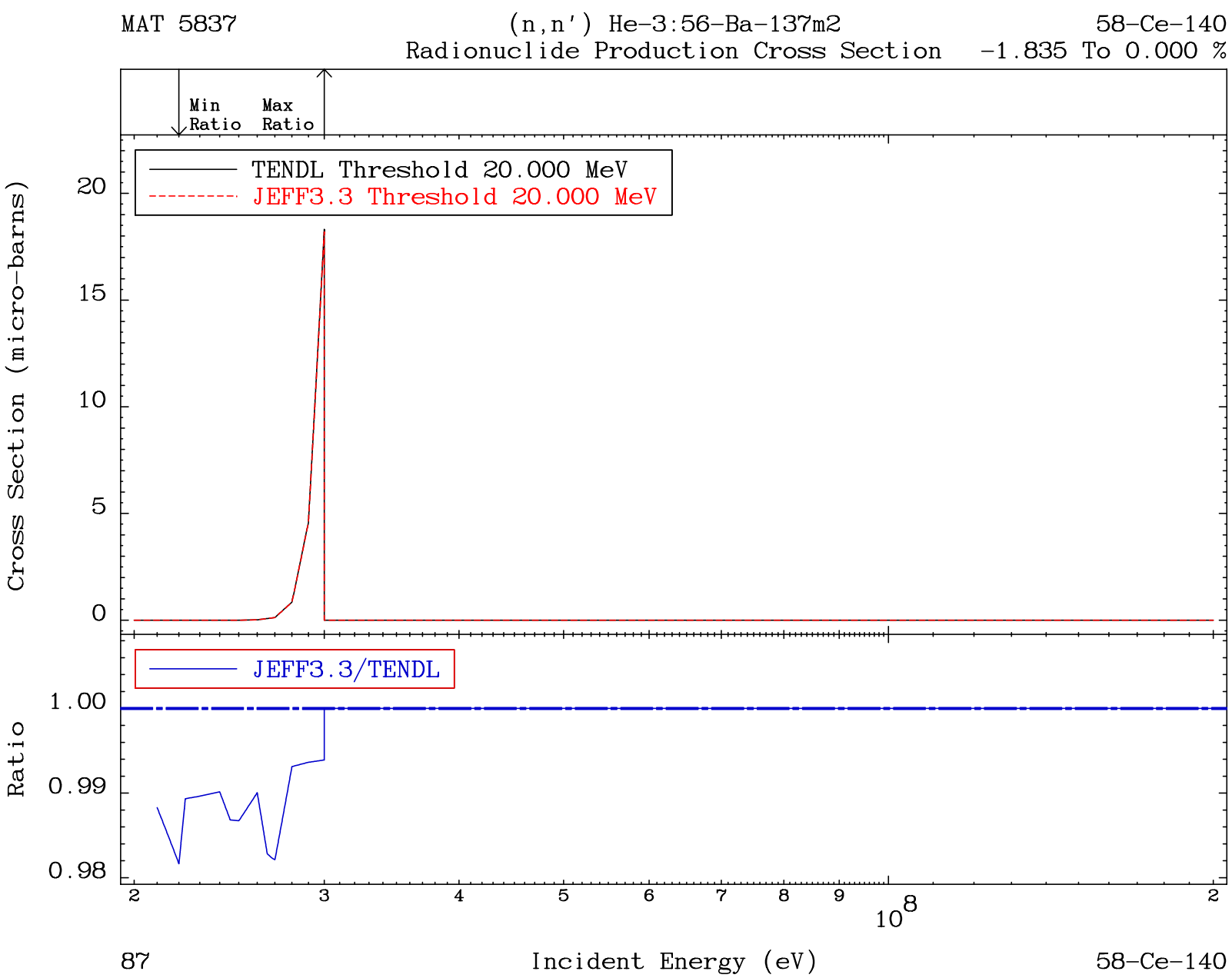

MAT 5837
(n,n') α:56-Ba-136g
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.6257 MeV
JEFF3.3 Threshold 1.6286 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
82
Incident Energy (eV)
58-Ce-140

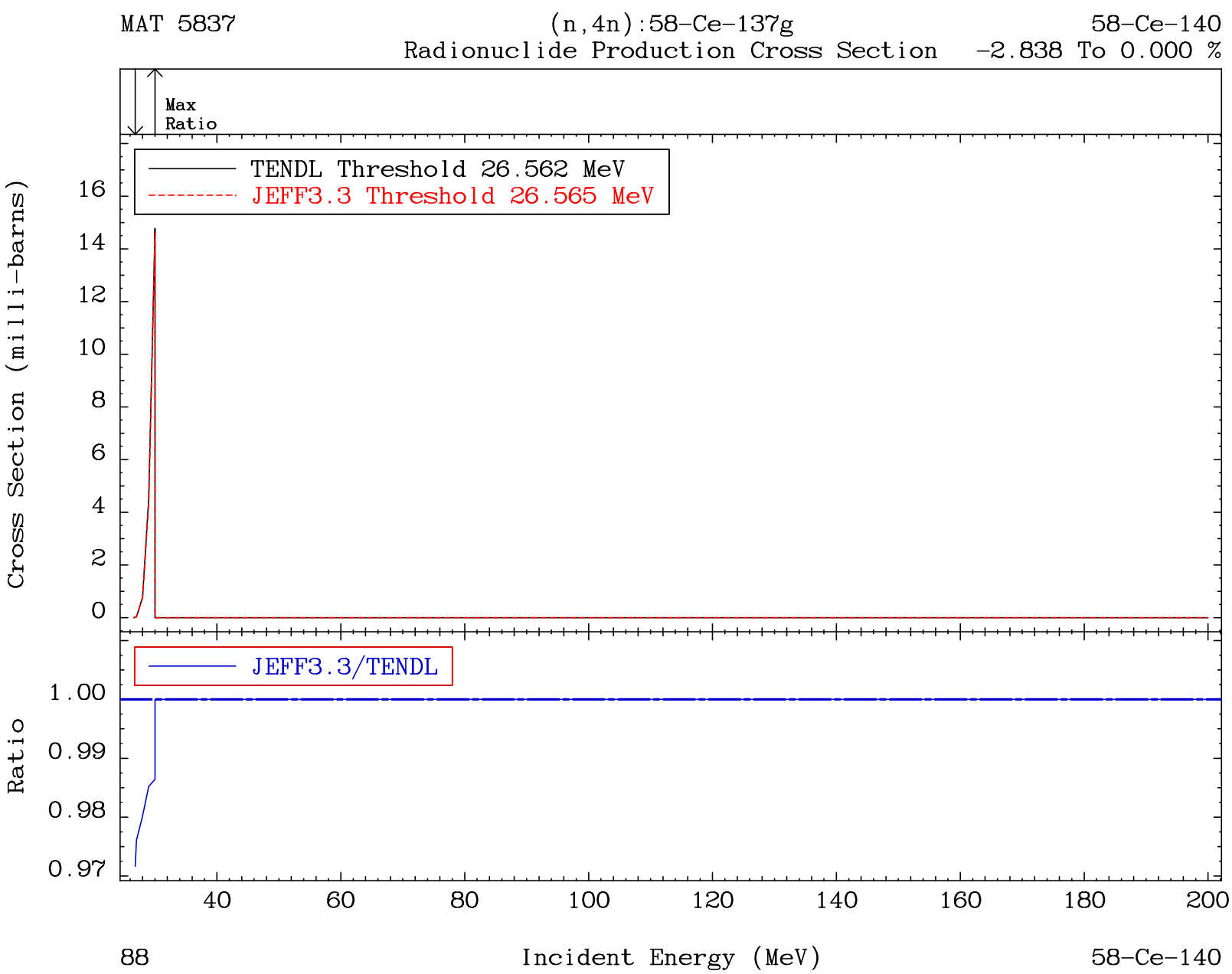

MAT 5837
(n,n') α:56-Ba-136m5
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.0000 MeV
JEFF3.3 Threshold 7.2000 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
14
JEFF3.3/TENDL
Ratio
10^0
10^1
10^2
10^3
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
83
Incident Energy (eV)
58-Ce-140

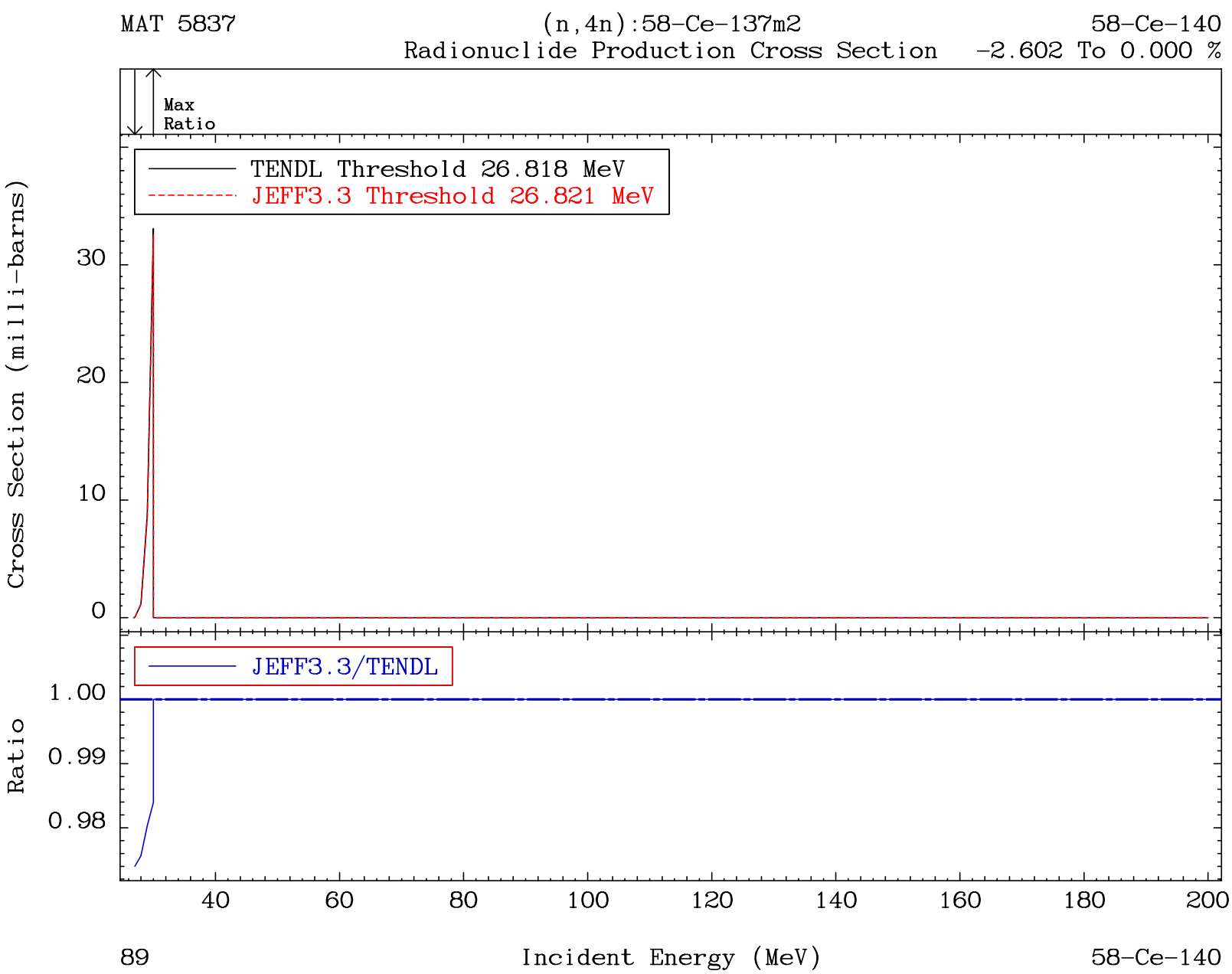

MAT 5837
(n,2n) α:56-Ba-135g
58-Ce-140
Radionuclide Production Cross Section -99.97 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 10.799 MeV
JEFF3.3 Threshold 10.802 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
10^-2
10^-4
2
3
4
5
6
7
8
9
10^8
2
84
Incident Energy (eV)
58-Ce-140

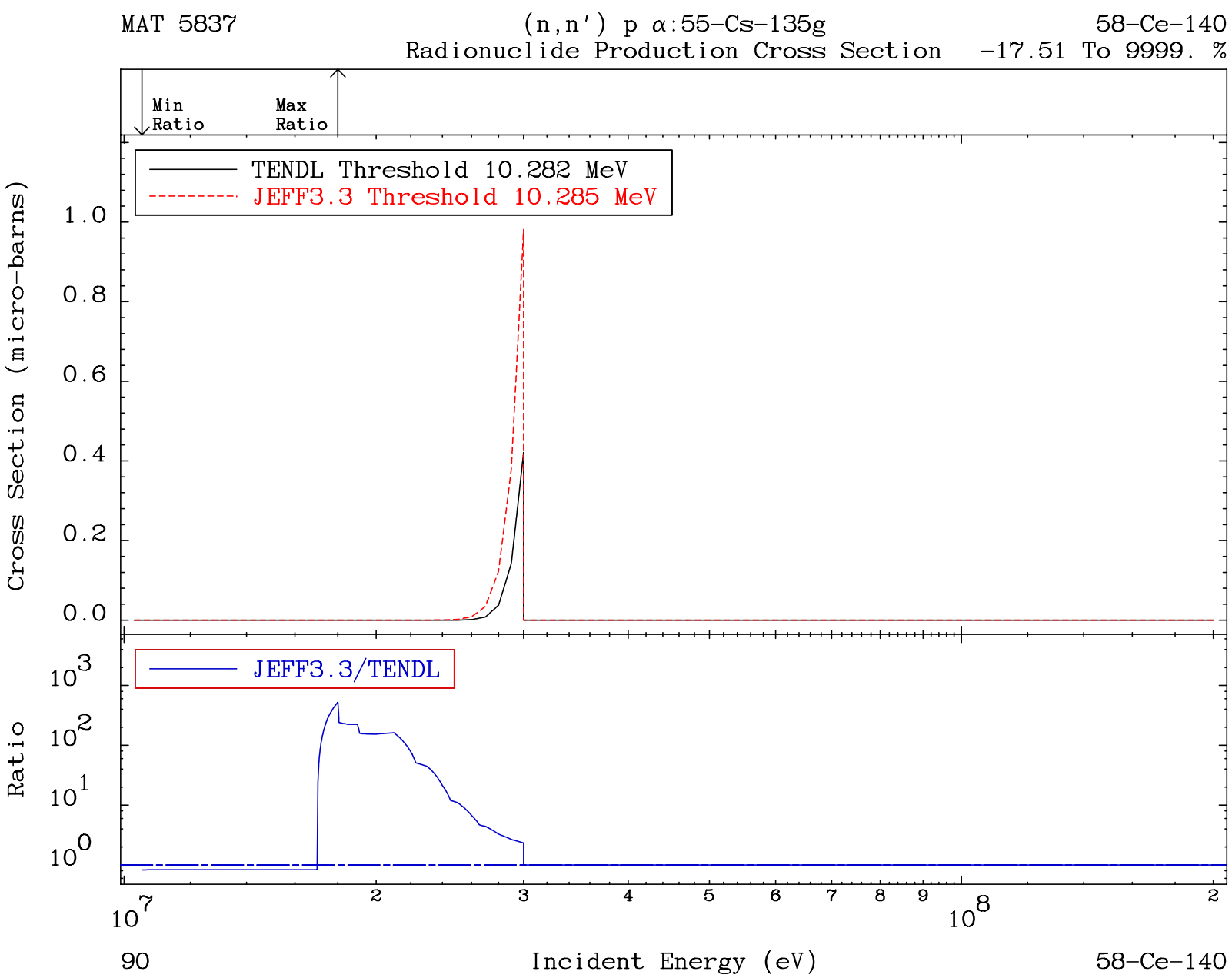

MAT 5837
(n,2n) α:56-Ba-135m2
58-Ce-140
Radionuclide Production Cross Section -97.20 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 11.069 MeV
JEFF3.3 Threshold 14.500 MeV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
85
Incident Energy (eV)
58-Ce-140

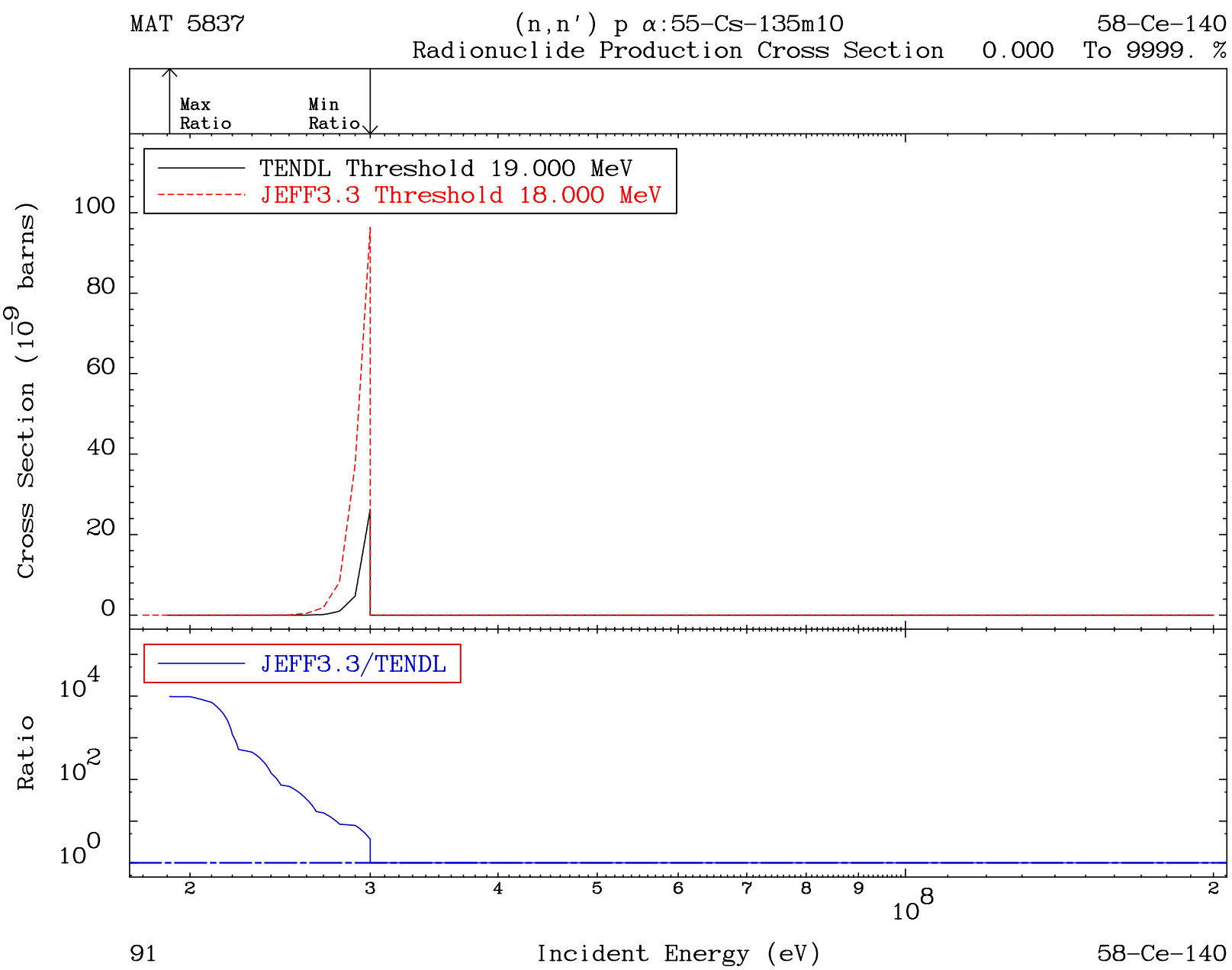

MAT 5837
(n,n') He-3:56-Ba-137g
58-Ce-140
Radionuclide Production Cross Section
-5.072 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 15.396 MeV
JEFF3.3 Threshold 15.399 MeV
Cross Section (micro-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
2
3
4
5
6
7
8
9
2
10^8
86
Incident Energy (eV)
58-Ce-140

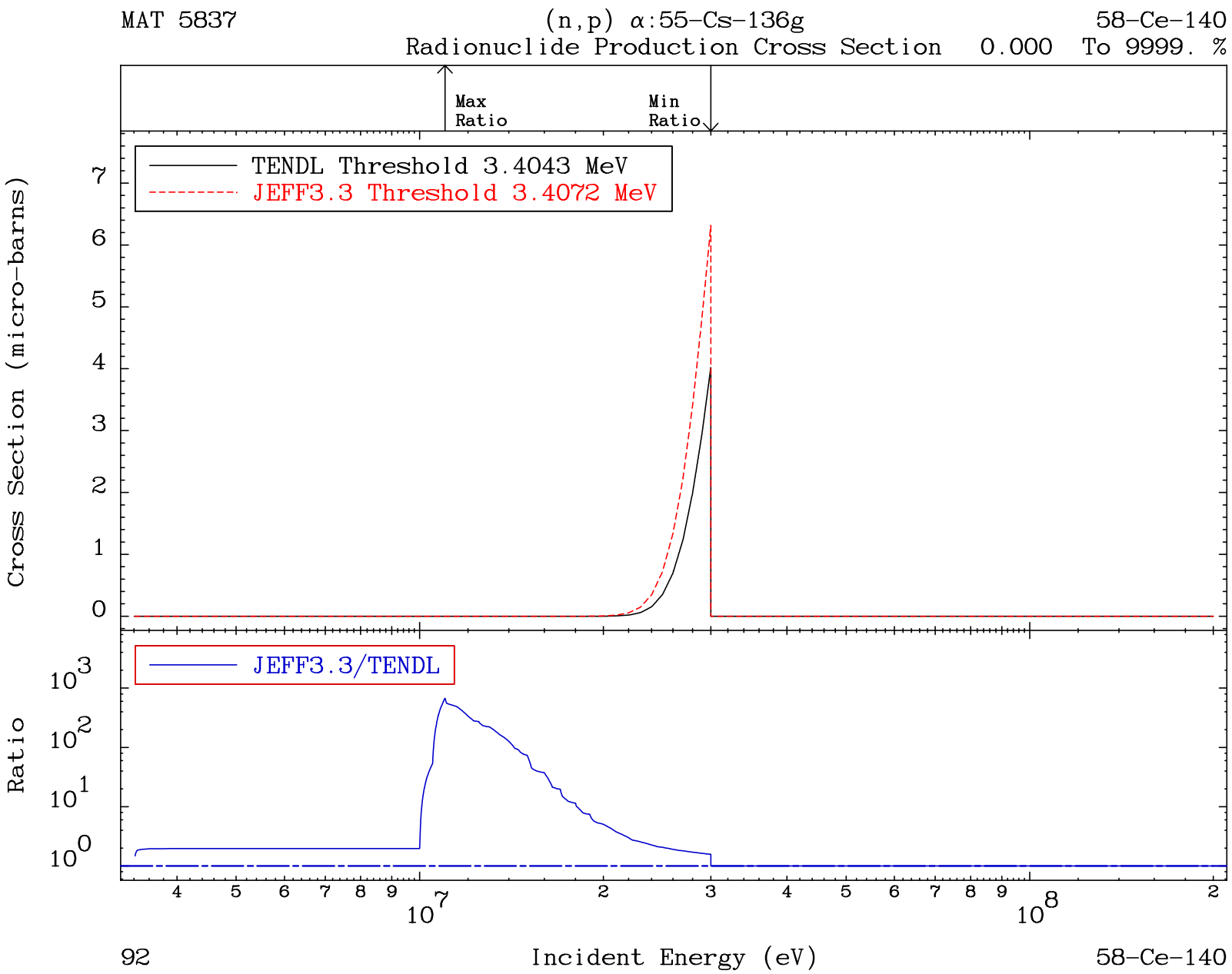

MAT 5837
(n,n') He-3:56-Ba-137m2
58-Ce-140
Radionuclide Production Cross Section
-1.835 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 20.000 MeV
JEFF3.3 Threshold 20.000 MeV
Cross Section (micro-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
2
3
4
5
6
7
8
9
10^8
2
87
Incident Energy (eV)
58-Ce-140

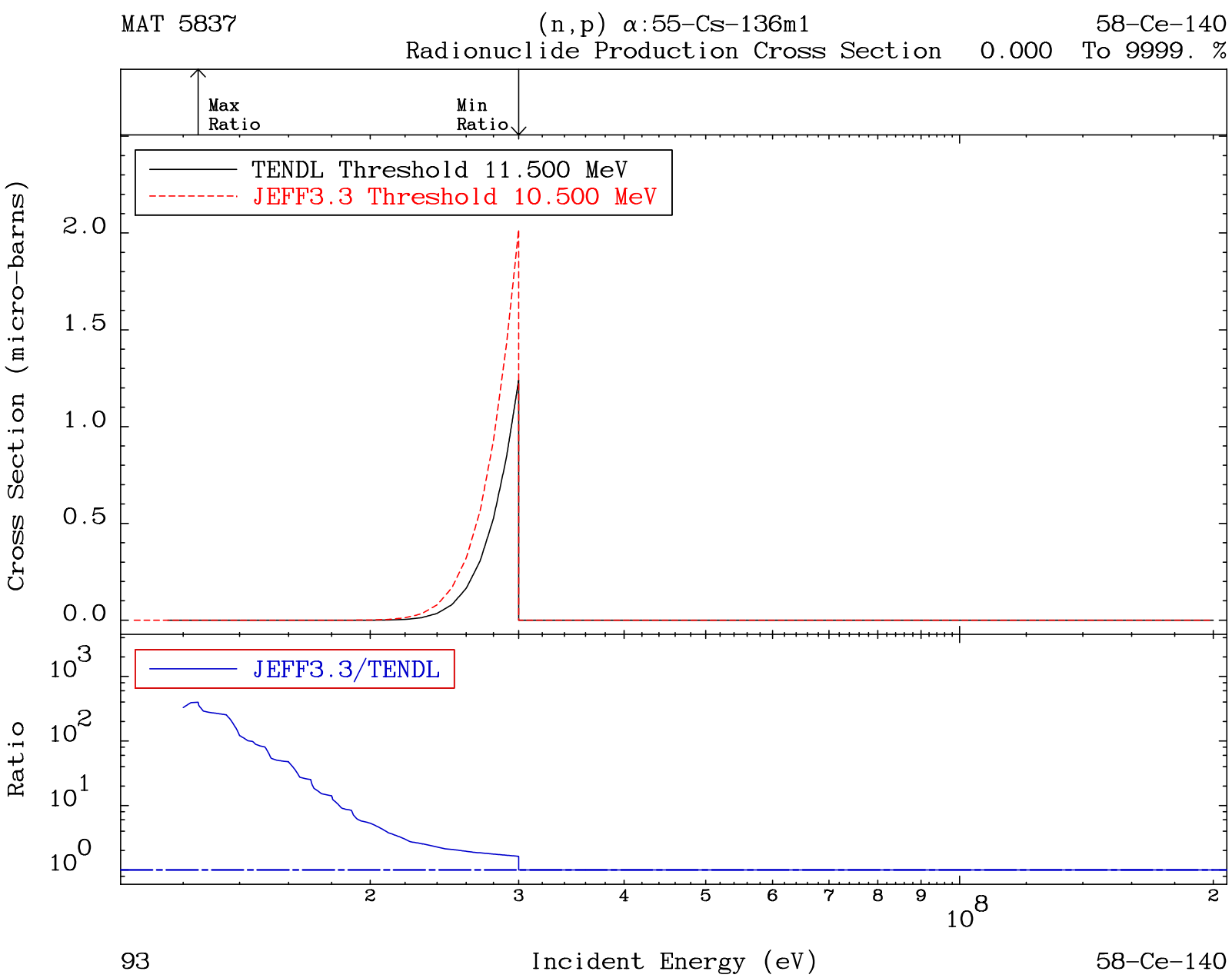

MAT 5837
(n,4n):58-Ce-137g
58-Ce-140
Radionuclide Production Cross Section
-2.838 To 0.000 %
Max
Ratio
TENDL Threshold 26.562 MeV
JEFF3.3 Threshold 26.565 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
0.97
40
60
80
100
120
140
160
180
200
88
Incident Energy (MeV)
58-Ce-140

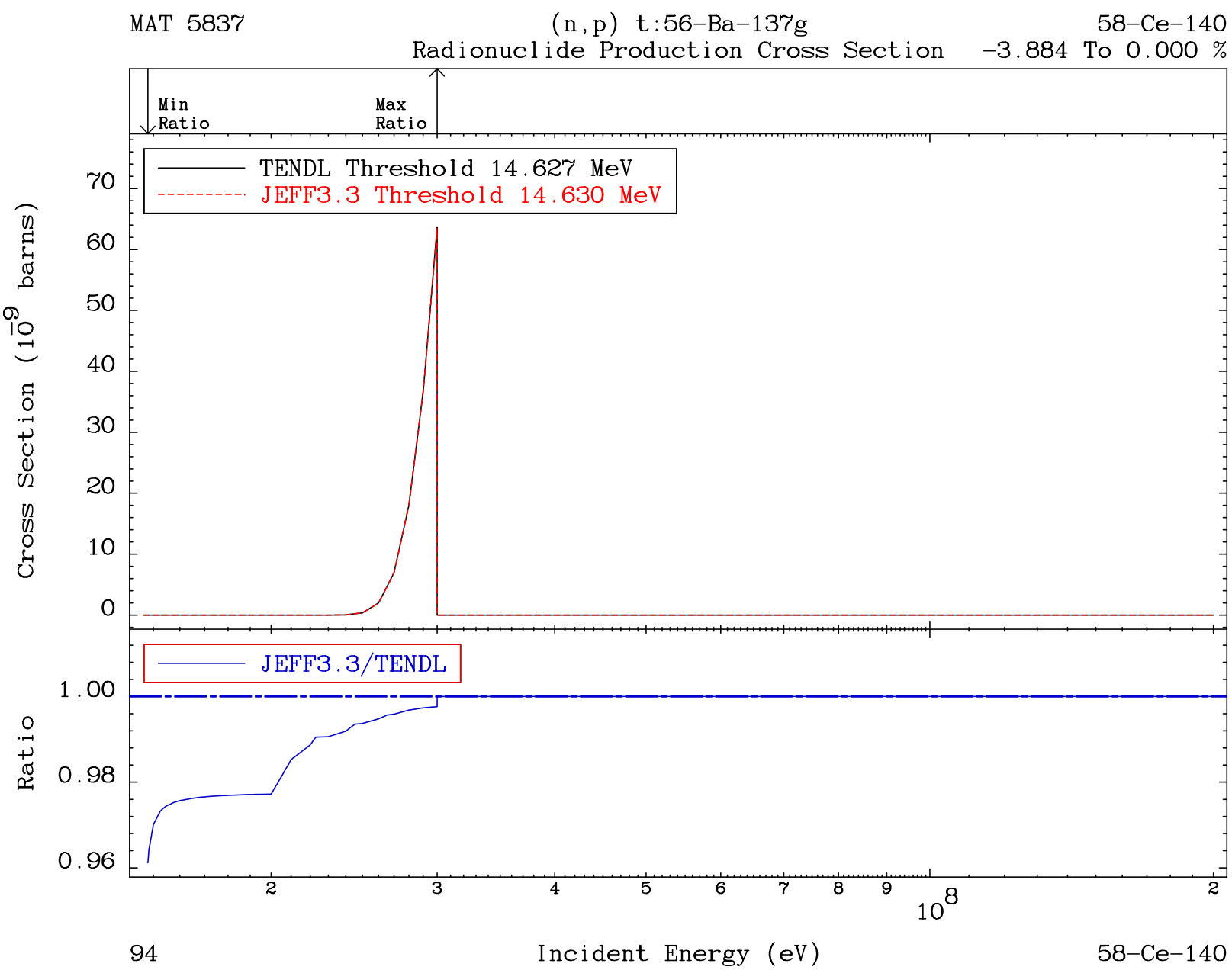

MAT 5837
(n,4n):58-Ce-137m2
58-Ce-140
Radionuclide Production Cross Section
-2.602 To 0.000 %
Max
Ratio
TENDL Threshold 26.818 MeV
JEFF3.3 Threshold 26.821 MeV
Cross Section (milli-barns)
30
20
10
0
JEFF3.3/TENDL
Ratio
1.00
0.99
0.98
40
60
80
100
120
140
160
180
200
89
Incident Energy (MeV)
58-Ce-140

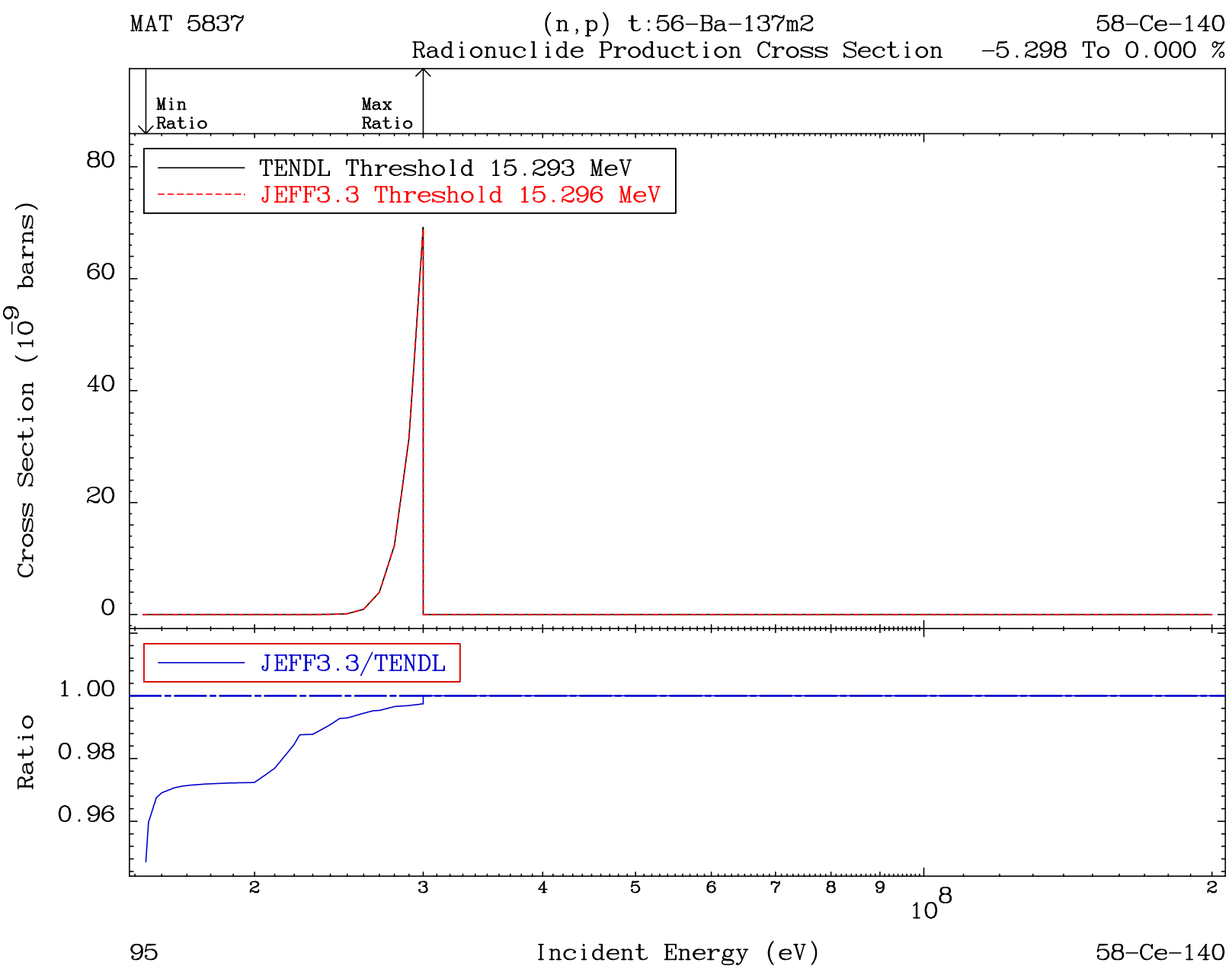

MAT 5837
(n,n') p α:55-Cs-135g
58-Ce-140
Radionuclide Production Cross Section -17.51 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 10.282 MeV
JEFF3.3 Threshold 10.285 MeV
Cross Section (micro-barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
10^3
10^2
10^1
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
90
Incident Energy (eV)
58-Ce-140

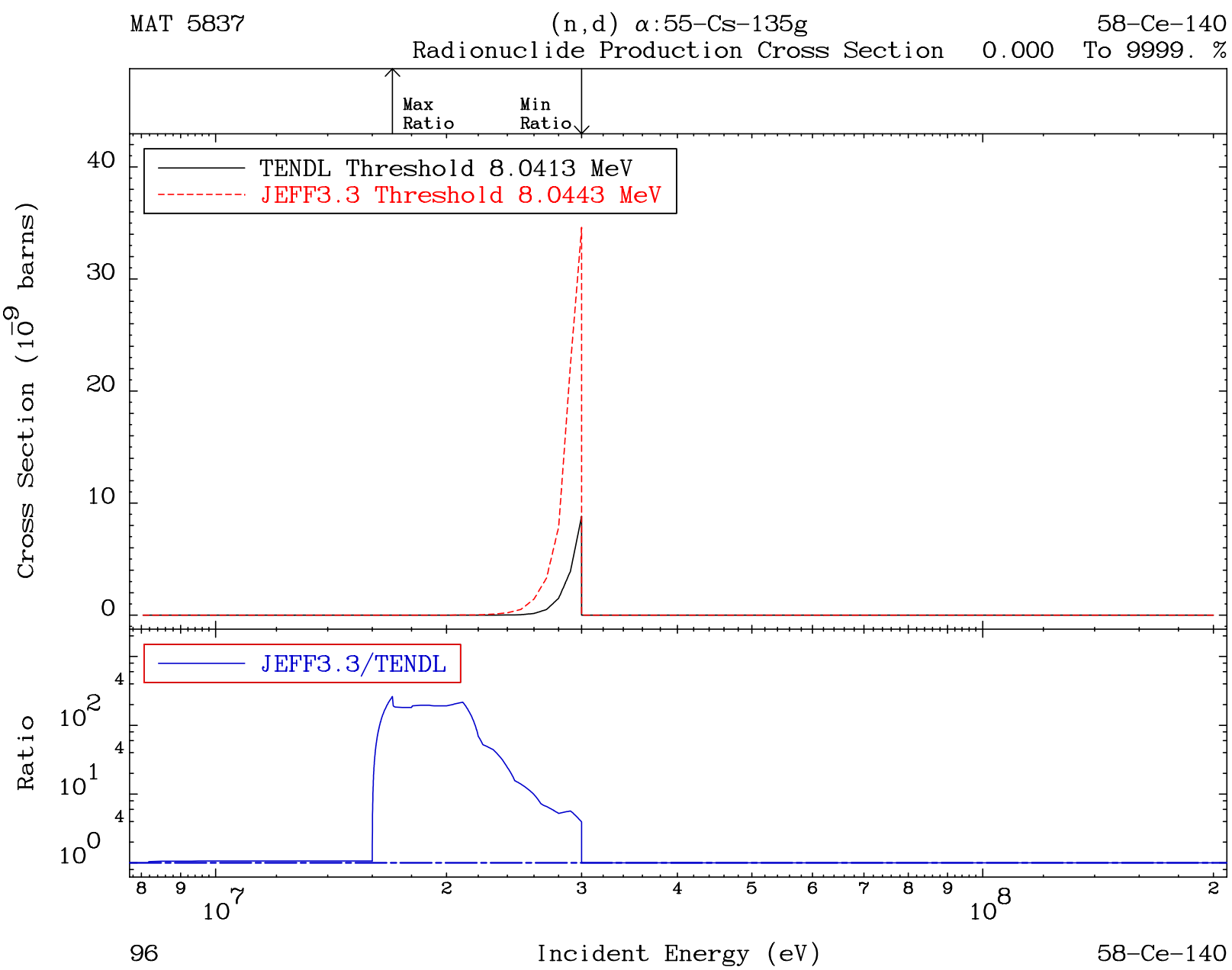

MAT 5837
(n,n') p α:55-Cs-135m10
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 19.000 MeV
JEFF3.3 Threshold 18.000 MeV
Cross Section (10^{-9} barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
91
Incident Energy (eV)
58-Ce-140

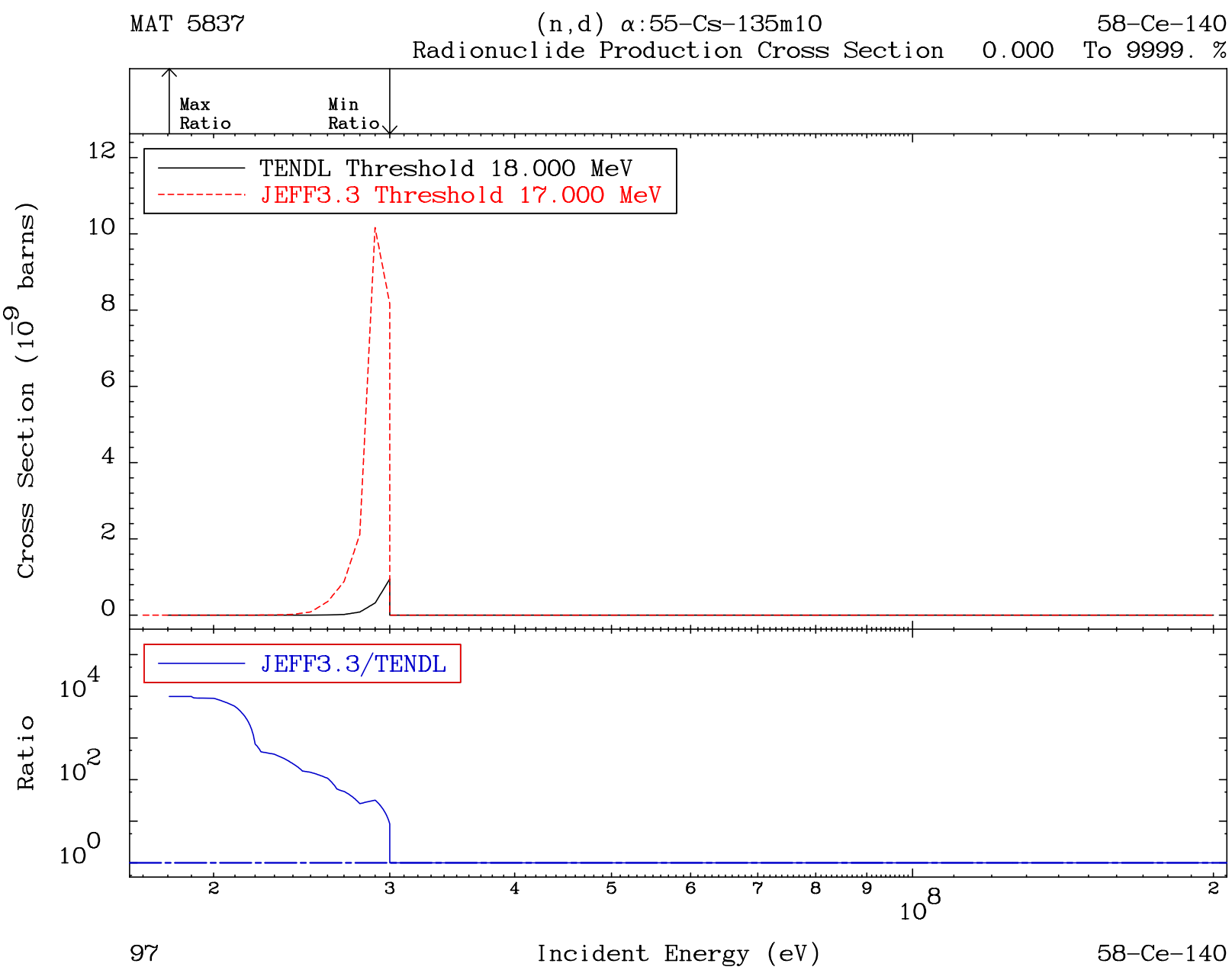

MAT 5837
(n,p) α:55-Cs-136g
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4043 MeV
JEFF3.3 Threshold 3.4072 MeV
Cross Section (micro-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
92
58-Ce-140


MAT 5837
(n,p) α:55-Cs-136m1
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 11.500 MeV
JEFF3.3 Threshold 10.500 MeV
Cross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^3
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
93
Incident Energy (eV)
58-Ce-140


MAT 5837
(n,p) t:56-Ba-137g
58-Ce-140
Radionuclide Production Cross Section
-3.884 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 14.627 MeV
JEFF3.3 Threshold 14.630 MeV
Cross Section (10^{-9} barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
2
3
4
5
6
7
8
9
10^8
2
94
Incident Energy (eV)
58-Ce-140


MAT 5837
(n,p) t:56-Ba-137m2
58-Ce-140
Radionuclide Production Cross Section
-5.298 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 15.293 MeV
JEFF3.3 Threshold 15.296 MeV
Cross Section (10^{-9} barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.00
0.98
0.96
2
3
4
5
6
7
8
9
10^8
2
95
Incident Energy (eV)
58-Ce-140


MAT 5837
(n,d) α:55-Cs-135g
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.0413 MeV
JEFF3.3 Threshold 8.0443 MeV
Cross Section (10^{-9} barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^{2}
10^{1}
10^{0}
8 9 10^{7} 2 3 4 5 6 7 8 9 10^{8} 2
96
Incident Energy (eV)
58-Ce-140


MAT 5837
(n,d) α:55-Cs-135m10
58-Ce-140
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 18.000 MeV
JEFF3.3 Threshold 17.000 MeV
Cross Section (10^{-9} barns)
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
97
Incident Energy (eV)
58-Ce-140