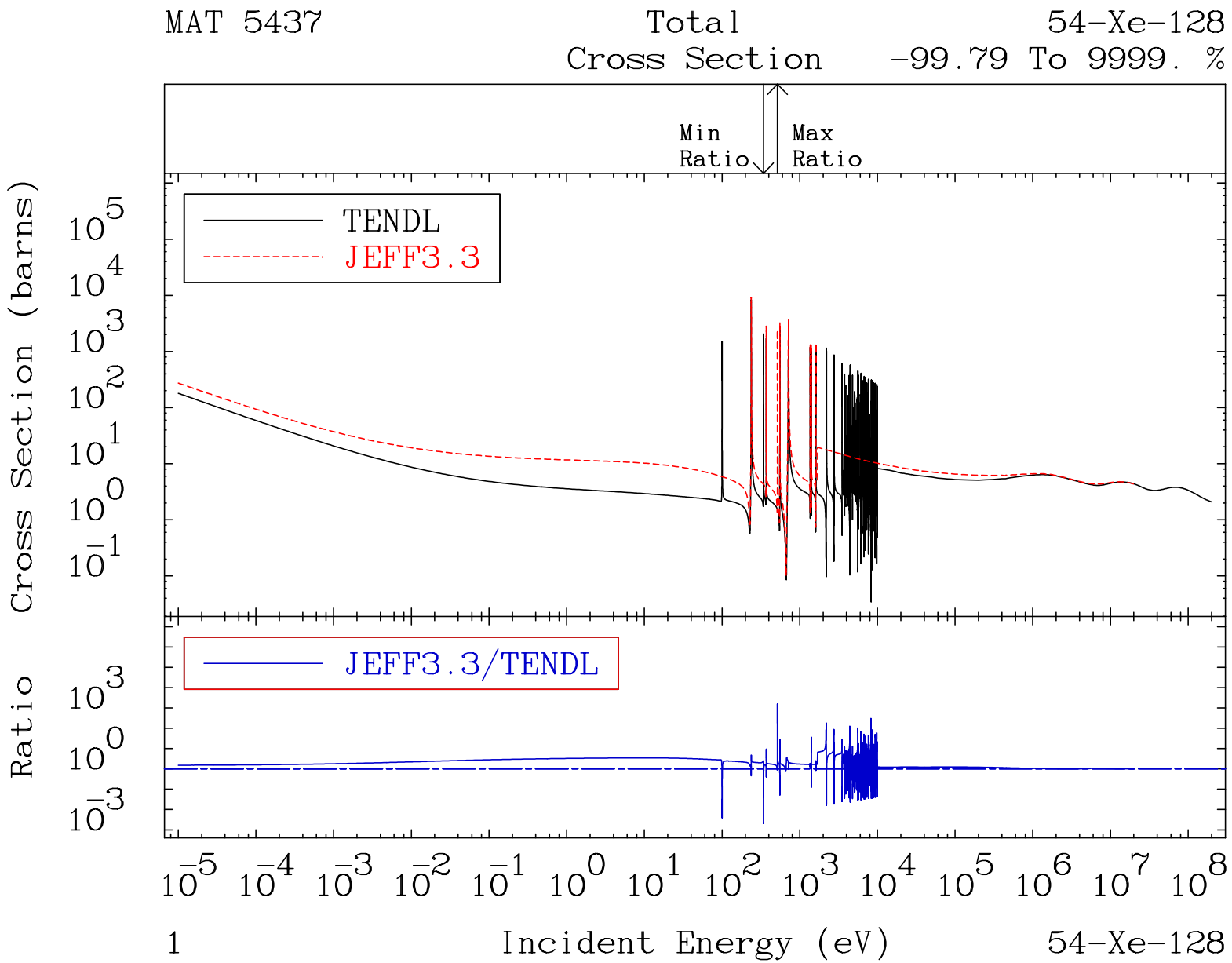
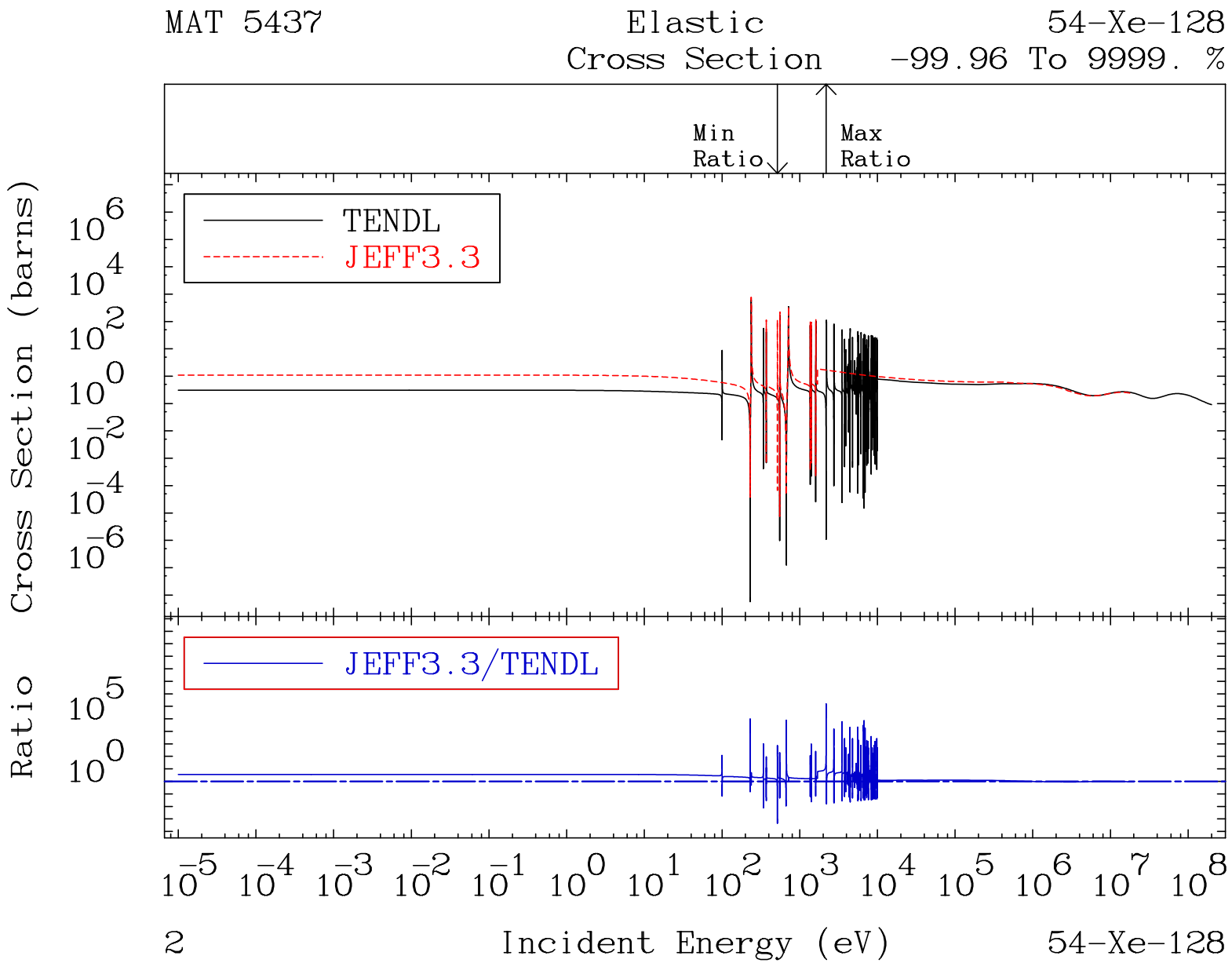
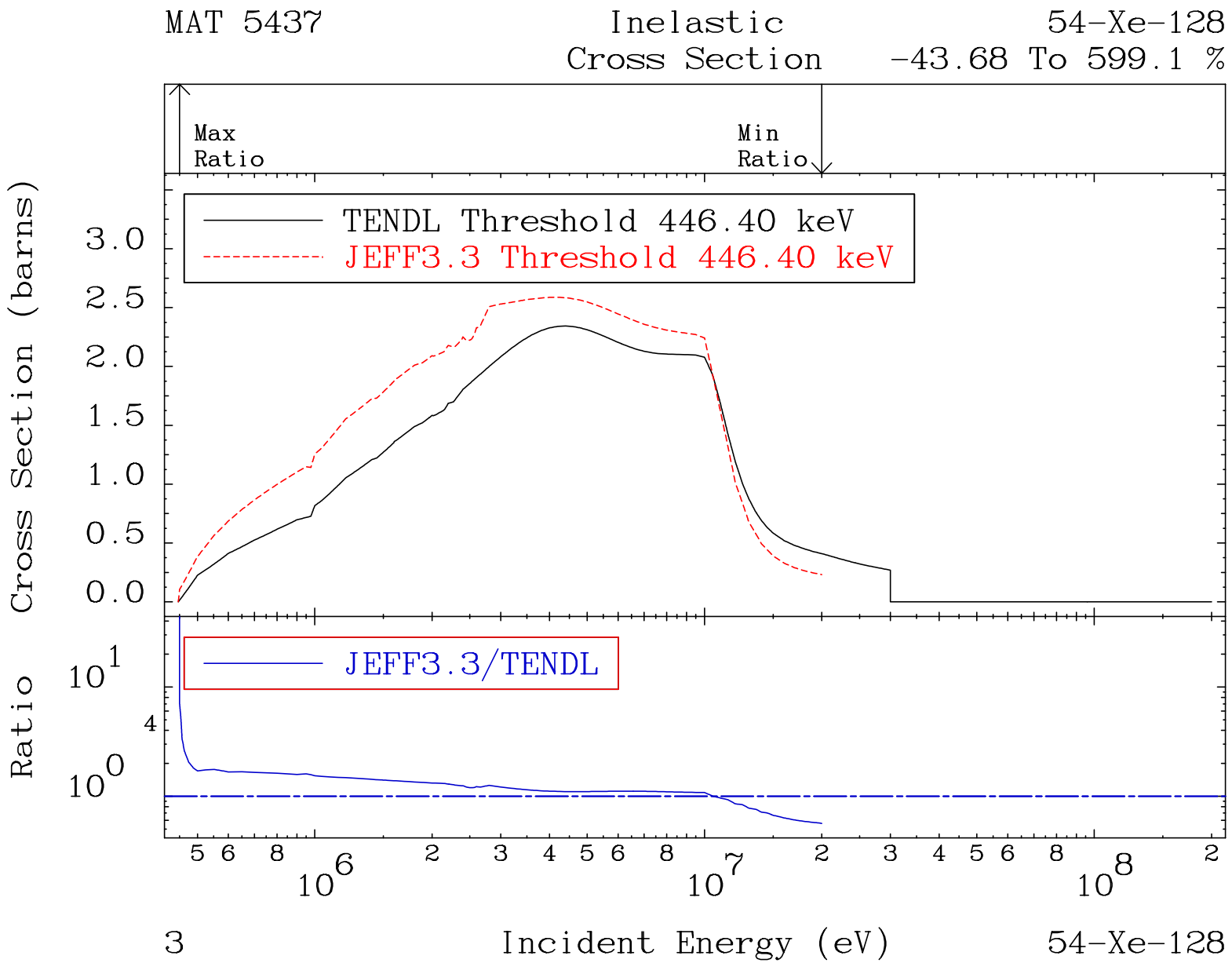
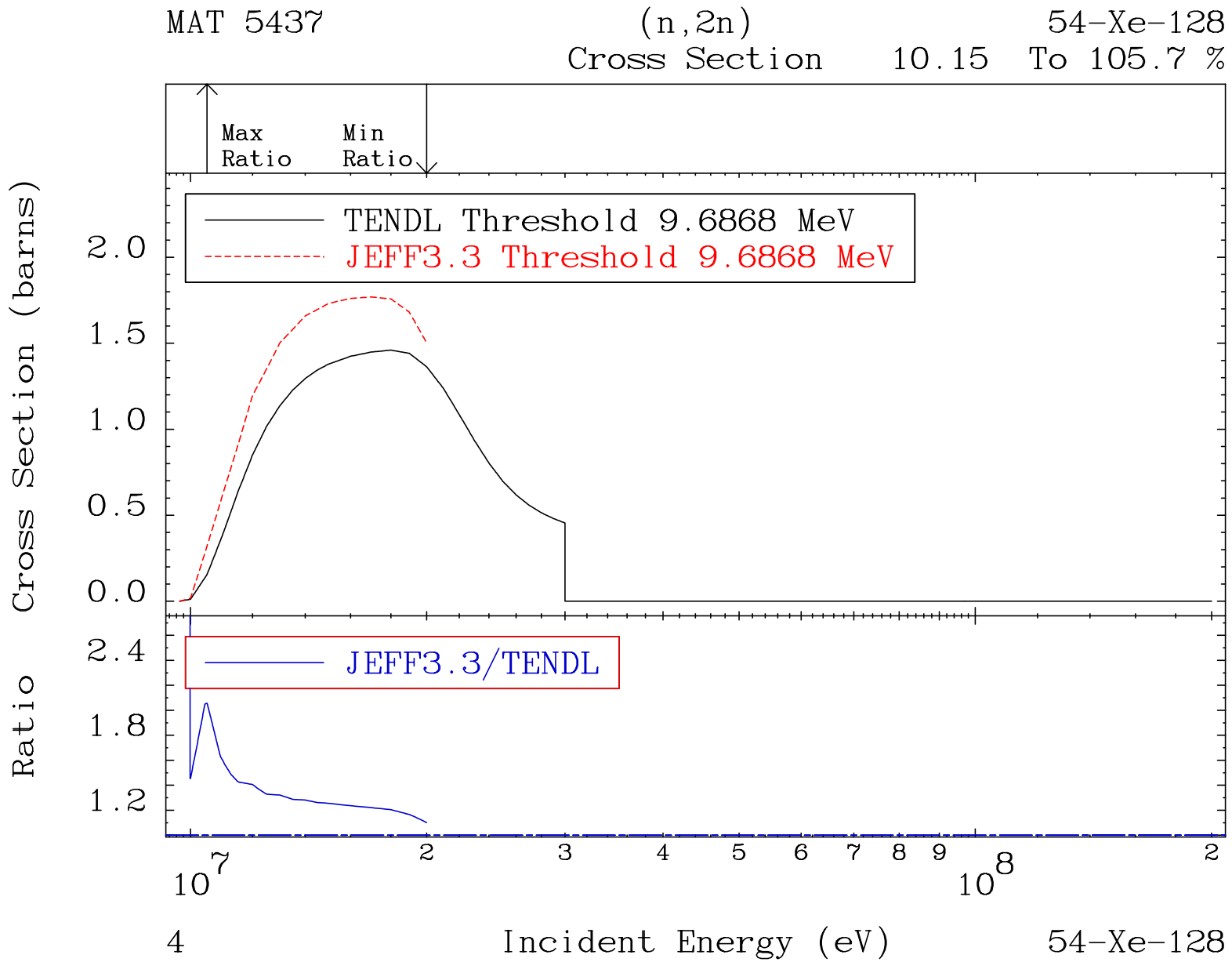
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

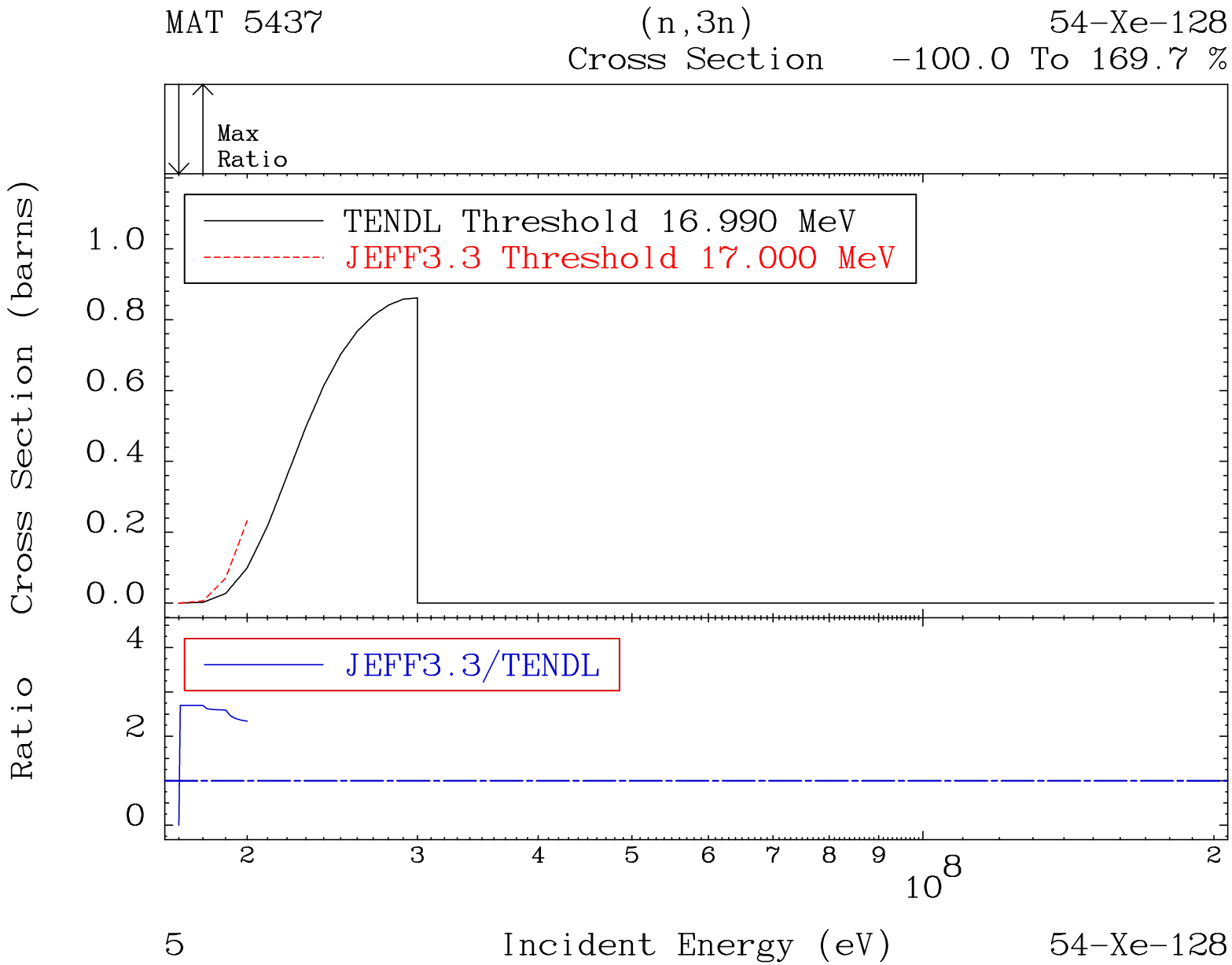
Press Mouse Button to Start

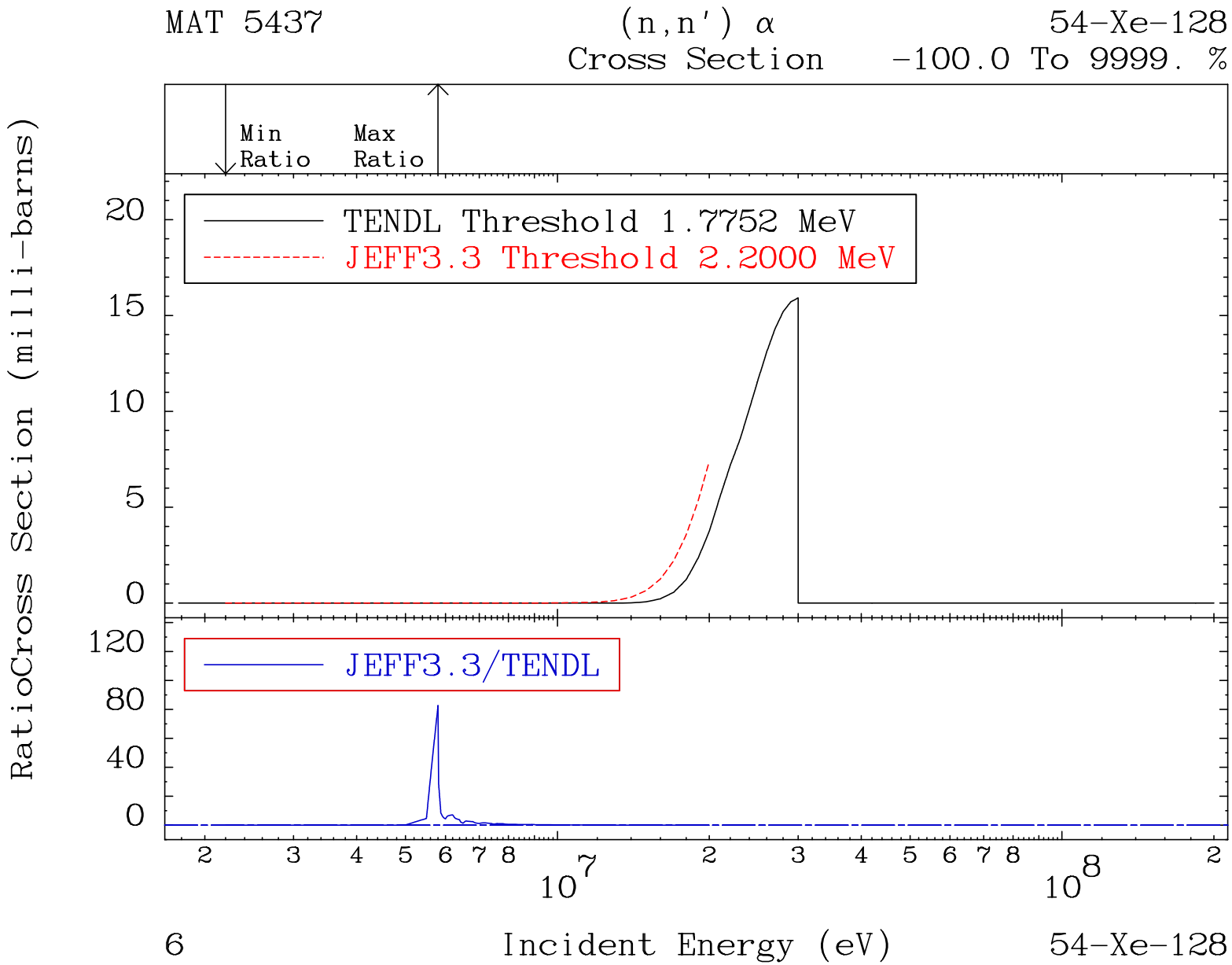

MAT 5437
Total
Cross Section
54-Xe-128
-99.79 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
54-Xe-128

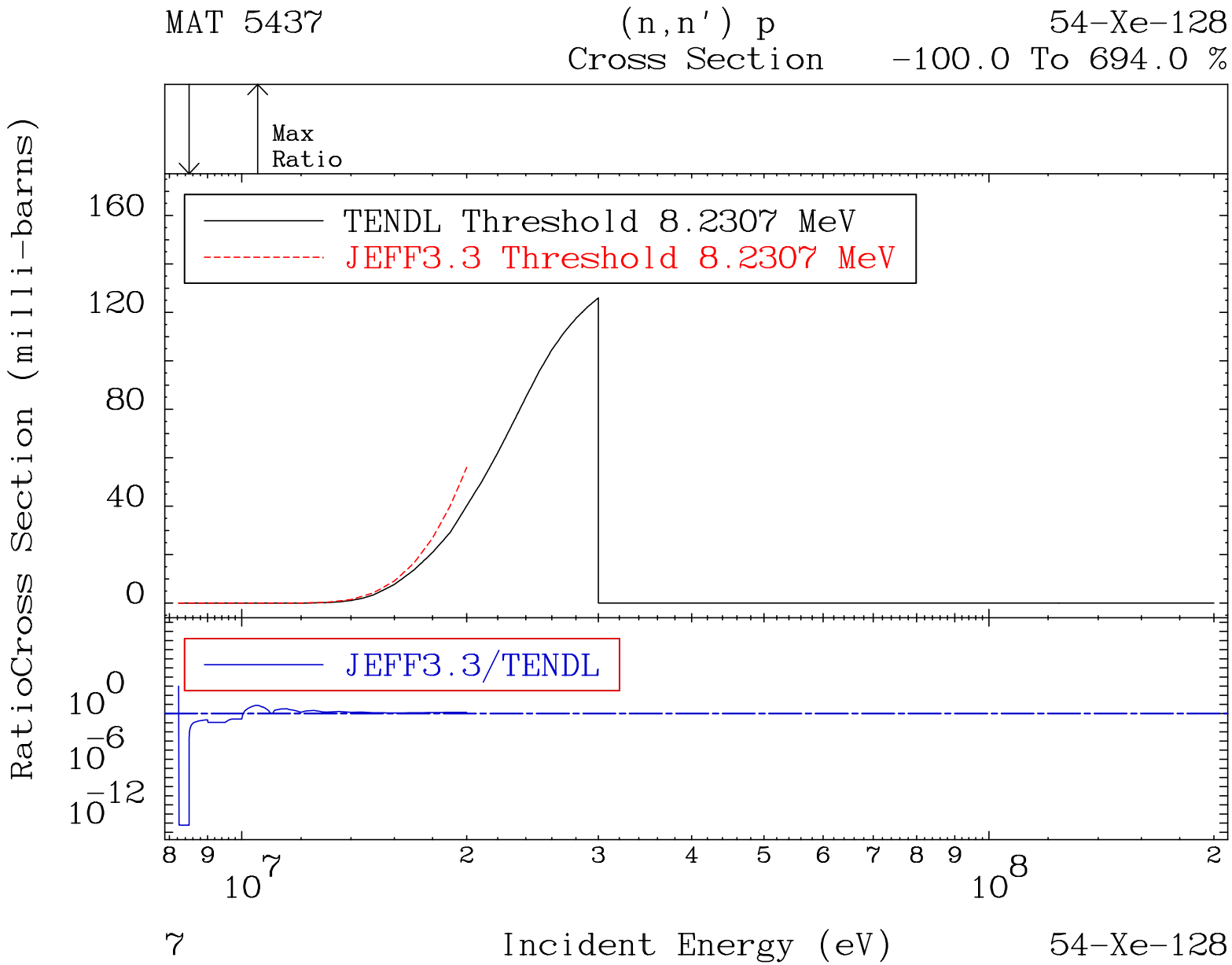

MAT 5437
Elastic
Cross Section
54-Xe-128
-99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
54-Xe-128

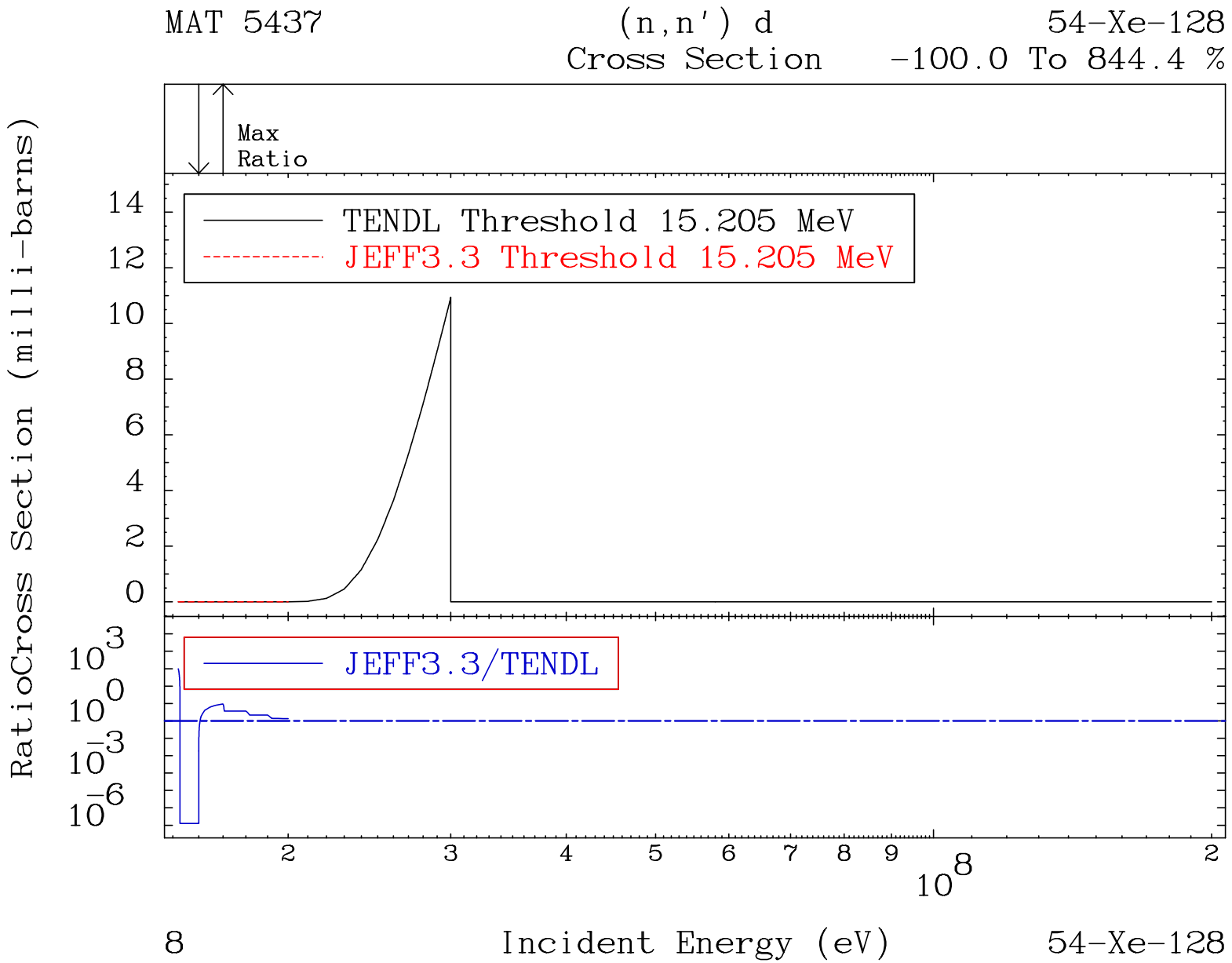

MAT 5437
Inelastic
Cross Section
54-Xe-128
-43.68 To 599.1 %
Max
Ratio
Min
Ratio
TENDL Threshold 446.40 keV
JEFF3.3 Threshold 446.40 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^1
10^0
4
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
3
Incident Energy (eV)
54-Xe-128

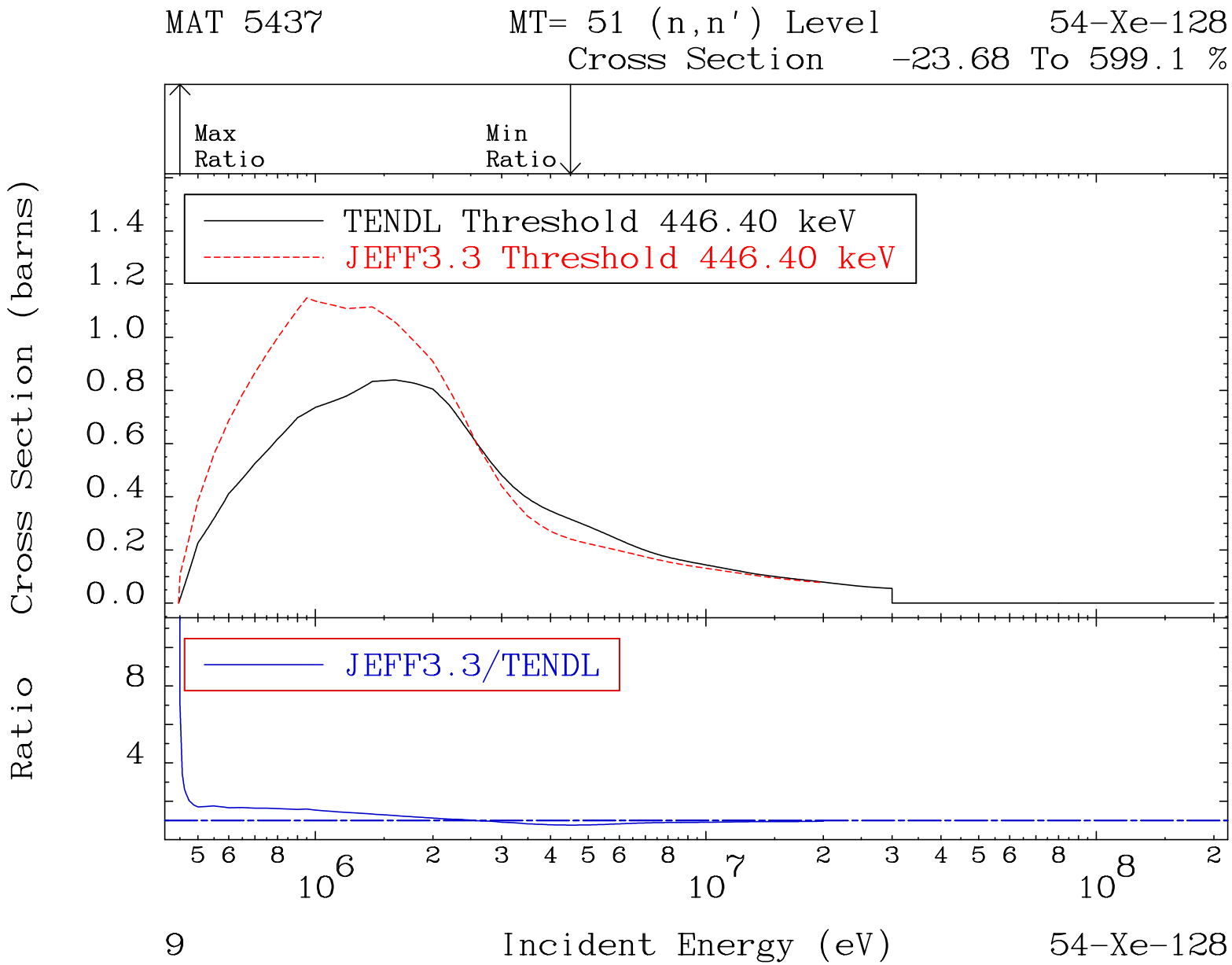

MAT 5437
(n,2n)
Cross Section
54-Xe-128
10.15 To 105.7 %
Max Ratio
Min Ratio
TENDL Threshold 9.6868 MeV
JEFF3.3 Threshold 9.6868 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
2.4
1.8
1.2
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
54-Xe-128

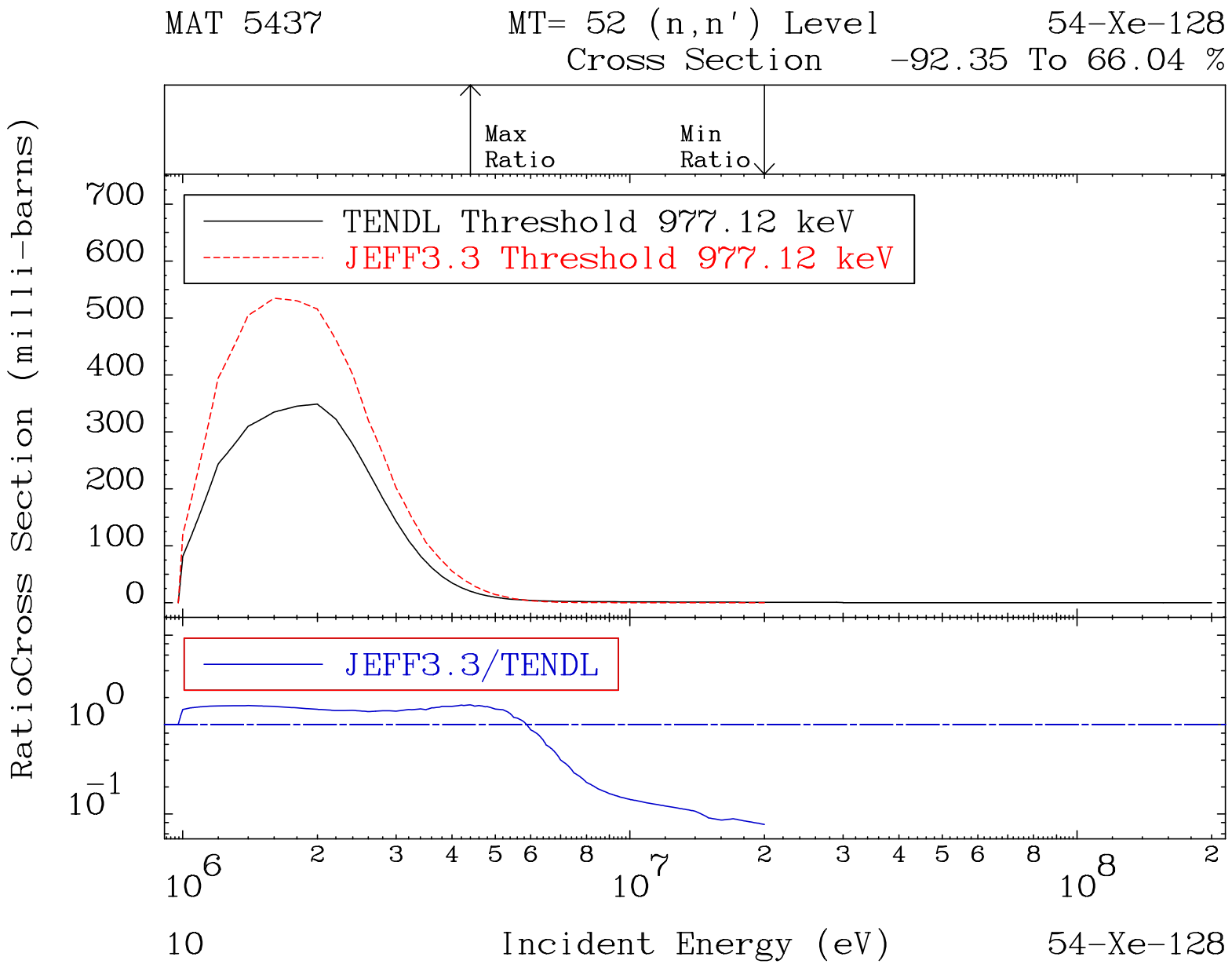

MAT 5437
(n,3n)
Cross Section
54-Xe-128
-100.0 To 169.7 %
Max
Ratio
TENDL Threshold 16.990 MeV
JEFF3.3 Threshold 17.000 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
4
2
0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
54-Xe-128

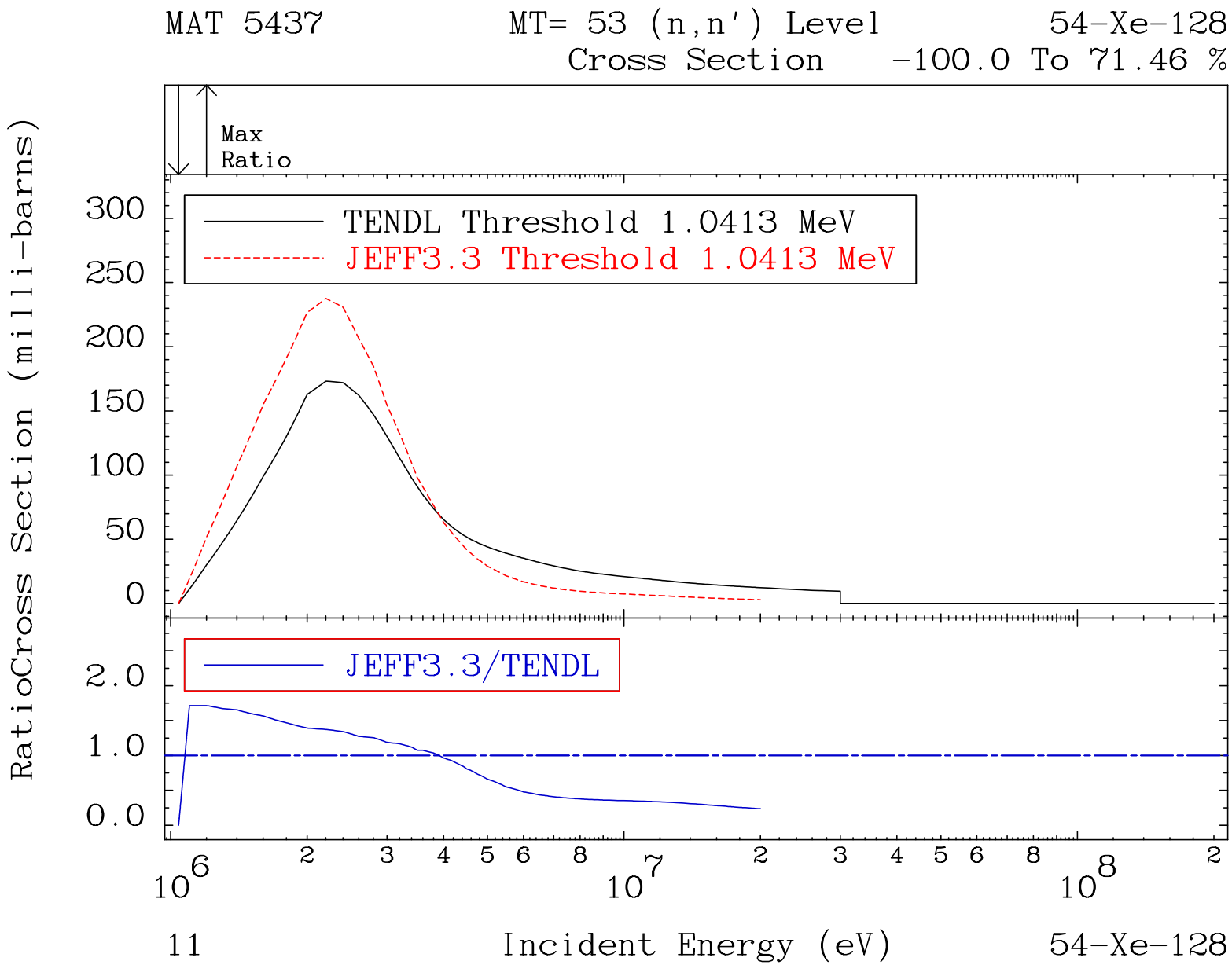

MAT 5437
(n,n') α
54-Xe-128
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.7752 MeV
JEFF3.3 Threshold 2.2000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
120
80
40
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
6
Incident Energy (eV)
54-Xe-128

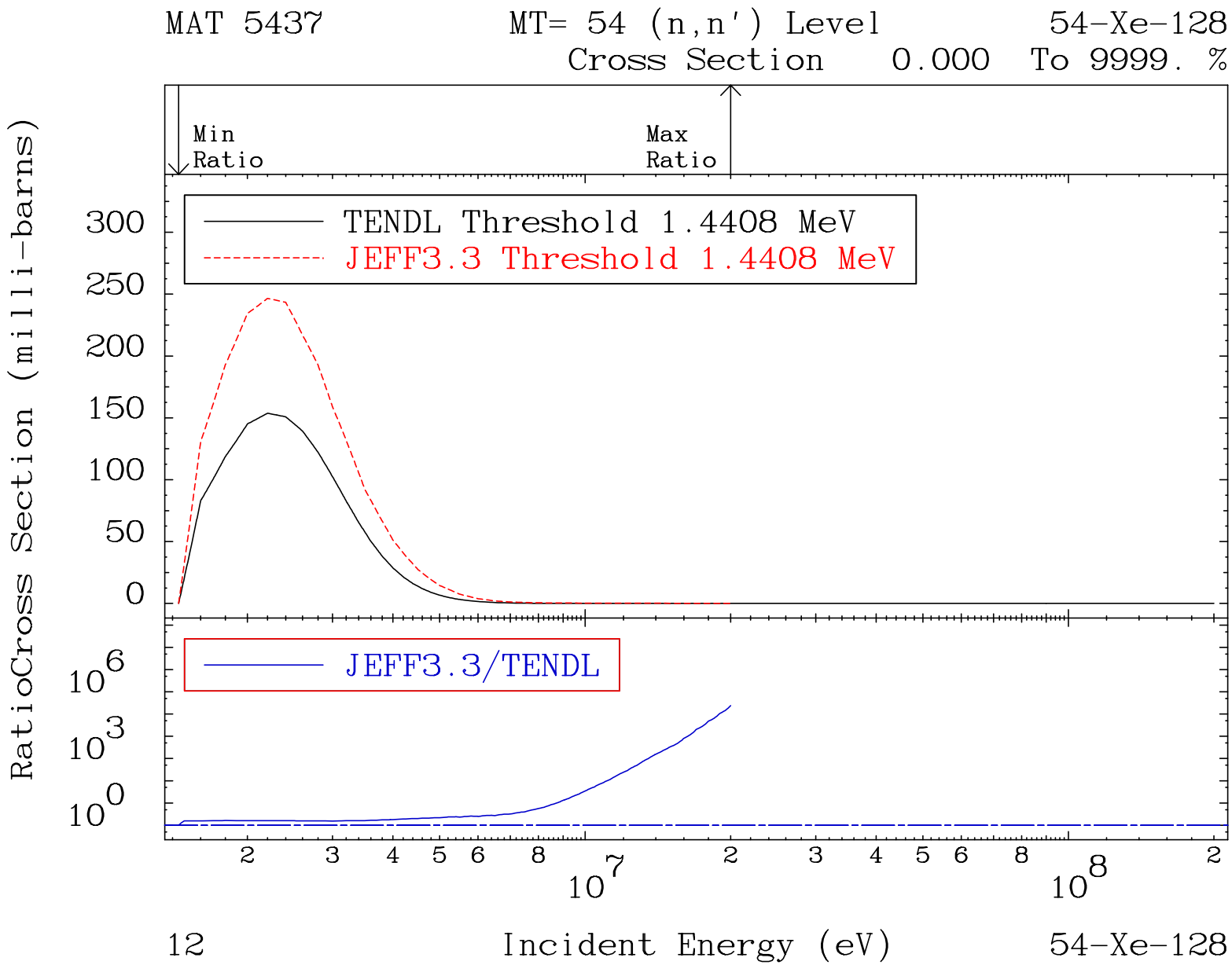

MAT 5437
(n,n') p
Cross Section
54-Xe-128
-100.0 To 694.0 %
Max
Ratio
TENDL Threshold 8.2307 MeV
JEFF3.3 Threshold 8.2307 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
10^0
10^-6
10^-12
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
54-Xe-128

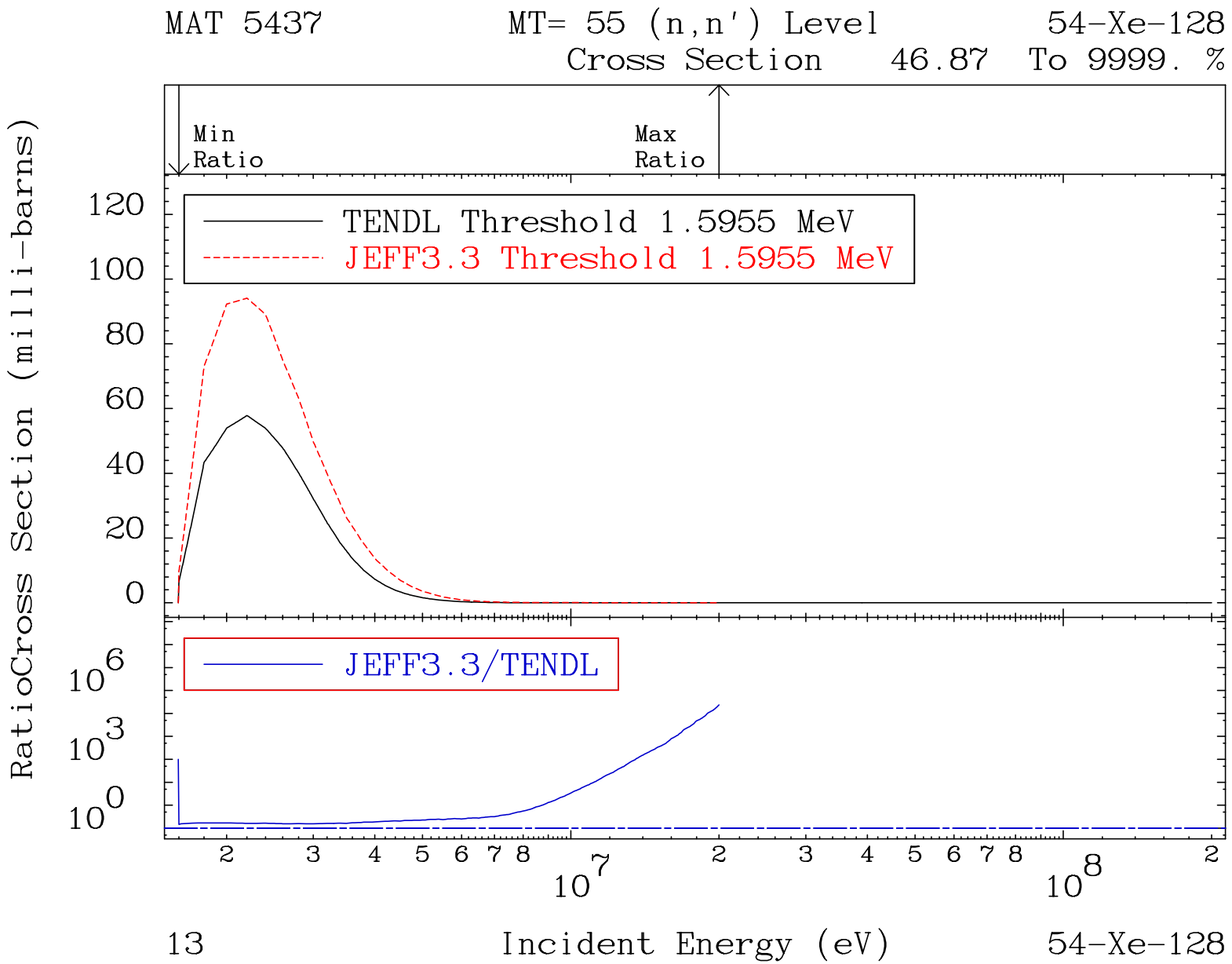

MAT 5437
(n,n') d
Cross Section
54-Xe-128
-100.0 To 844.4 %
Max
Ratio
TENDL Threshold 15.205 MeV
JEFF3.3 Threshold 15.205 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
8
54-Xe-128

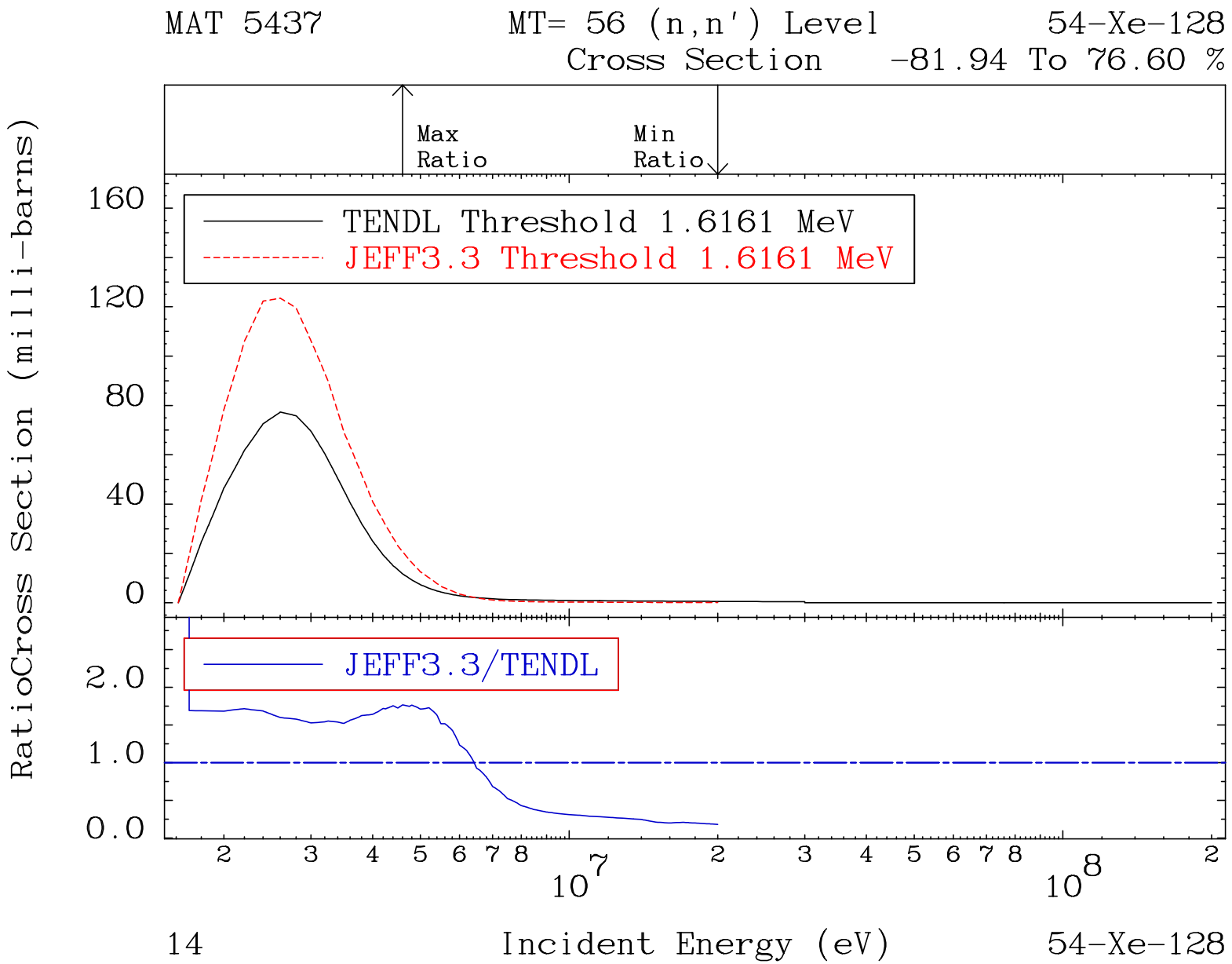

MAT 5437
MT= 51 (n,n') Level
54-Xe-128
Cross Section
-23.68 To 599.1 %
Max Ratio
Min Ratio
TENDL Threshold 446.40 keV
JEFF3.3 Threshold 446.40 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
8
4
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
9
54-Xe-128

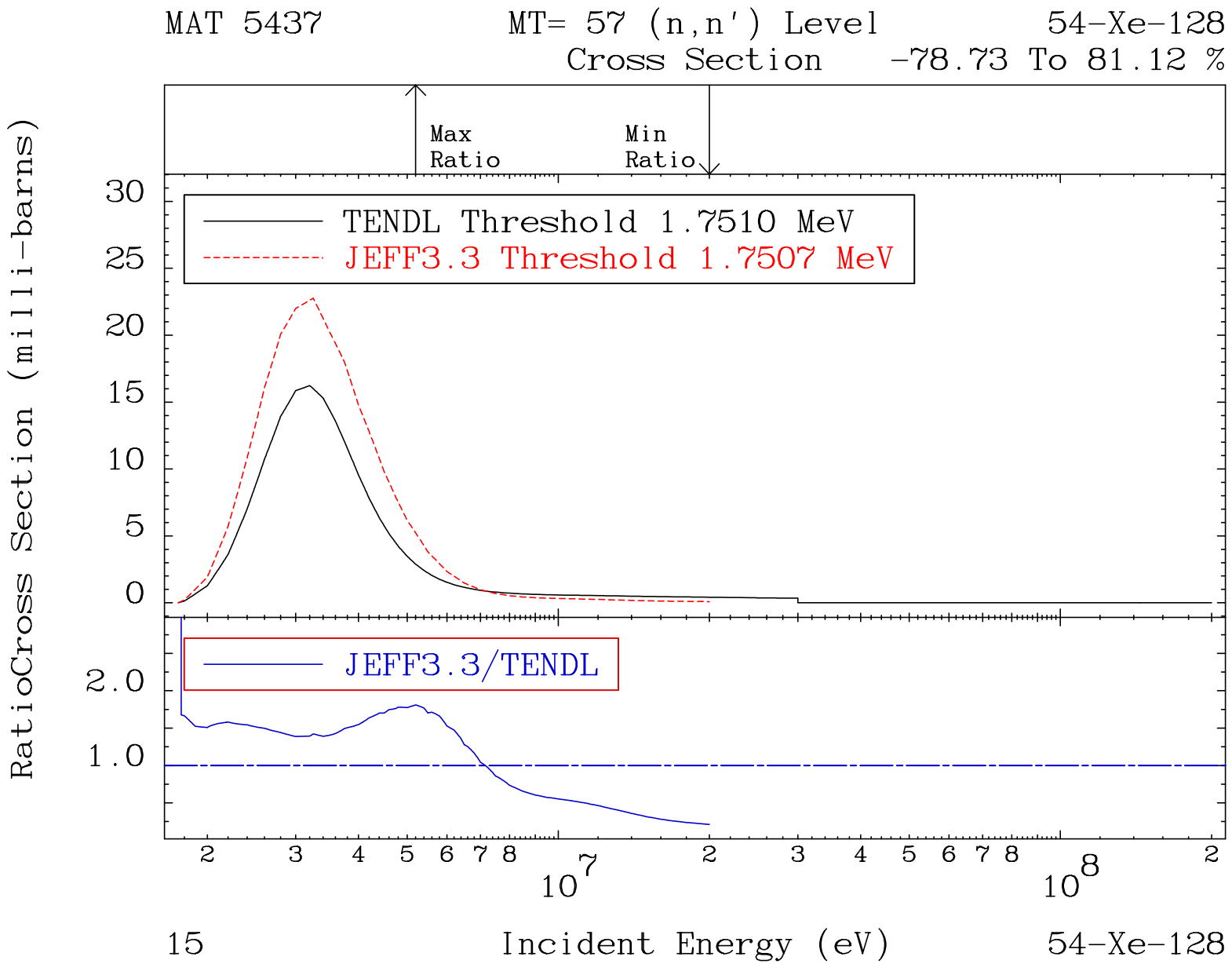

MAT 5437
MT= 52 (n,n') Level
54-Xe-128
Cross Section
-92.35 To 66.04 %
Max Ratio
Min Ratio
TENDL Threshold 977.12 keV
JEFF3.3 Threshold 977.12 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
700
600
500
400
300
200
100
0
10^0
10^-1
10^6
10^7
10^8
2
3
4
5
6
8
10
Incident Energy (eV)
54-Xe-128

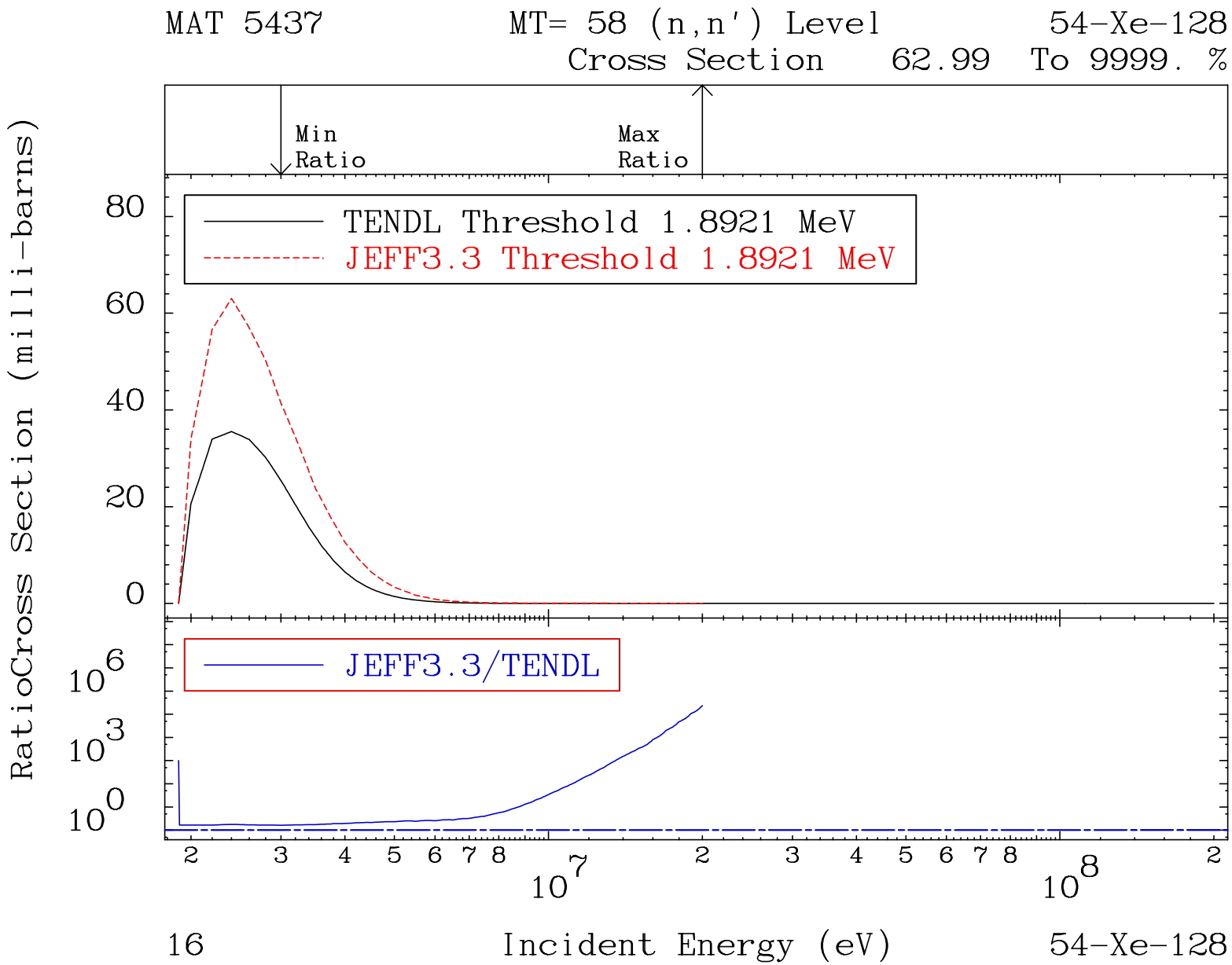

MAT 5437
MT= 53 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 71.46 %
Max
Ratio
TENDL Threshold 1.0413 MeV
JEFF3.3 Threshold 1.0413 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
2.0
1.0
0.0
10^6
10^7
10^8
Incident Energy (eV)
11
54-Xe-128

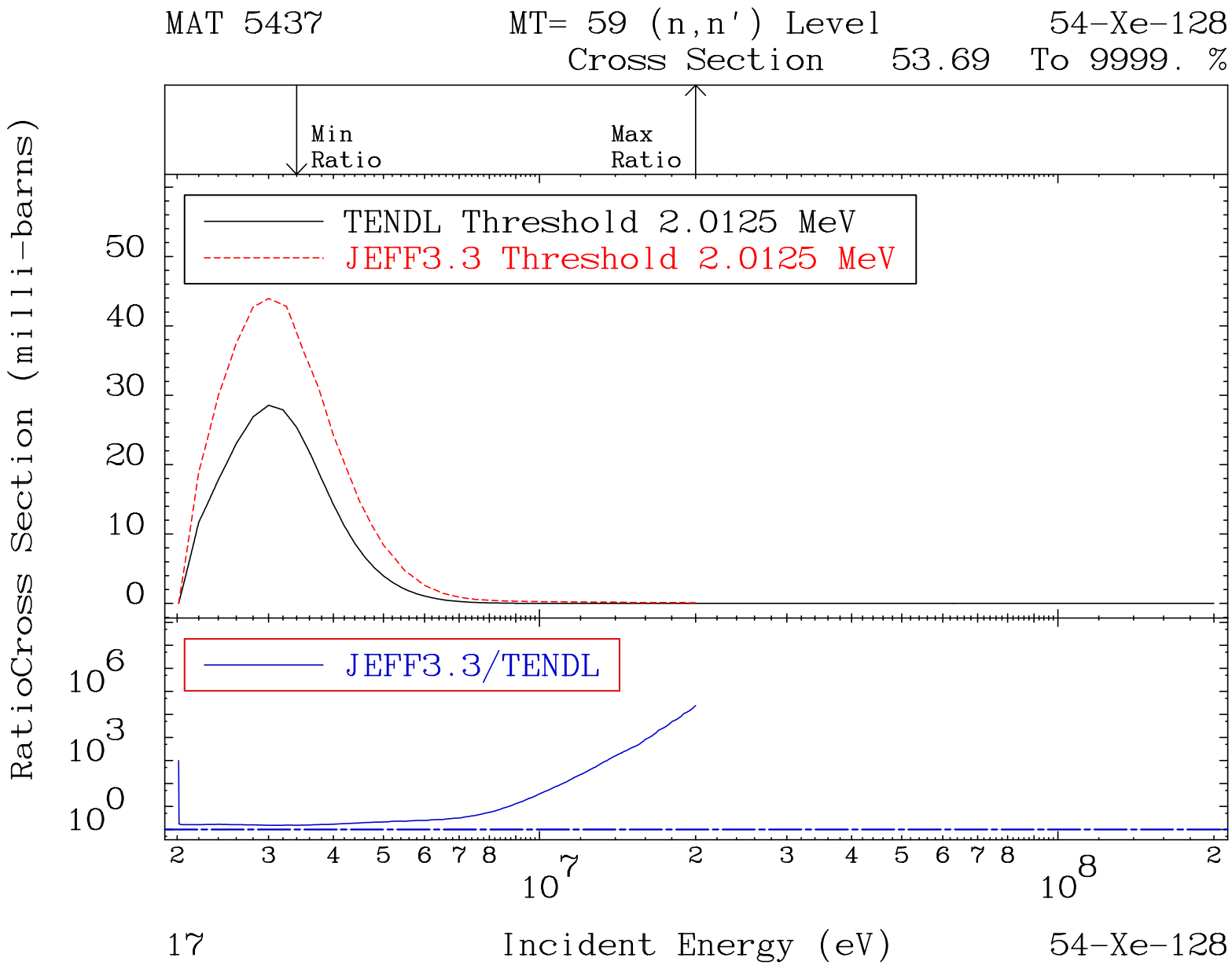

MAT 5437
MT= 54 (n,n') Level
54-Xe-128
Cross Section 0.000 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.4408 MeV
JEFF3.3 Threshold 1.4408 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
10^6
10^3
10^0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
54-Xe-128

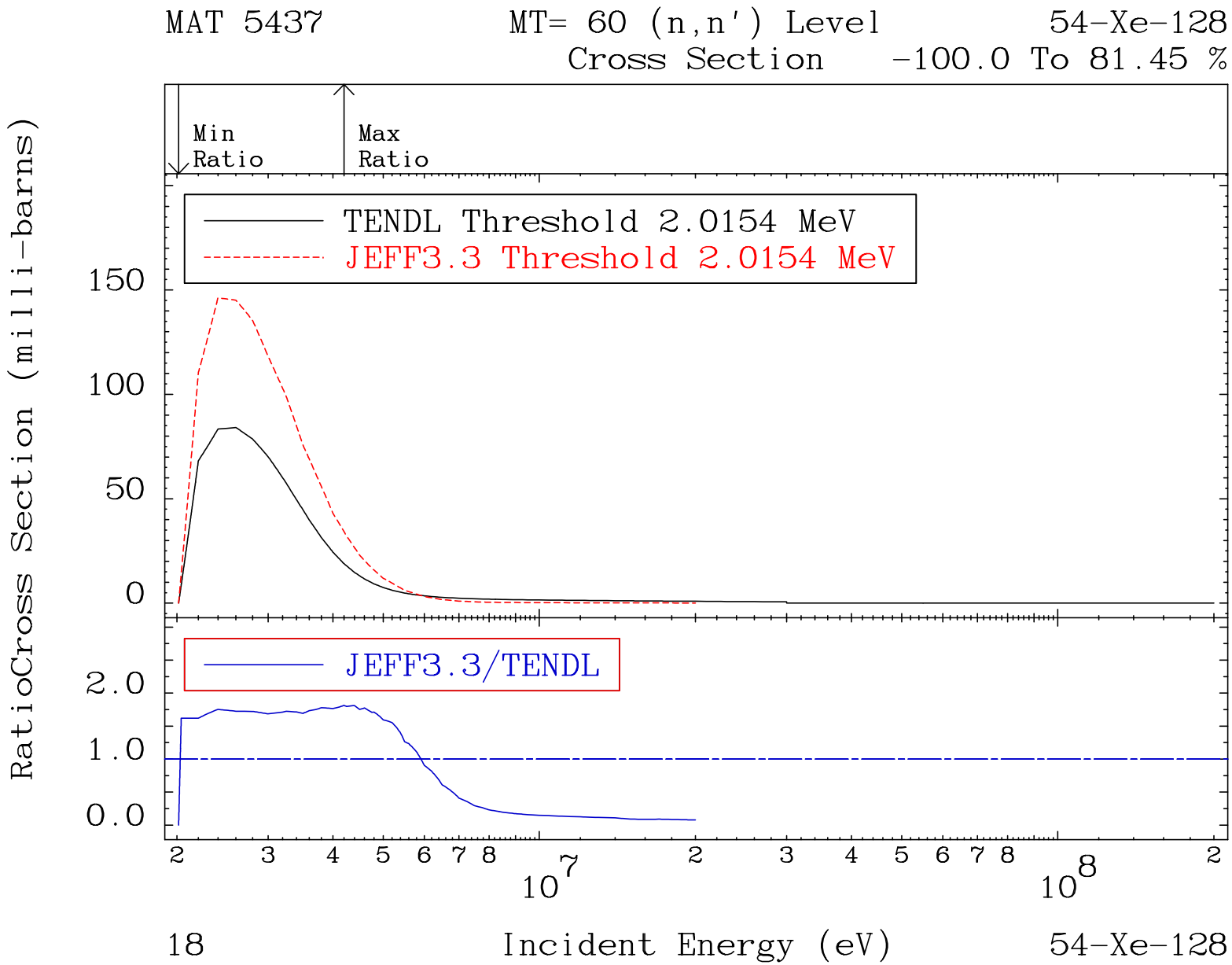

MAT 5437
MT= 55 (n,n') Level
54-Xe-128
Cross Section 46.87 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.5955 MeV
JEFF3.3 Threshold 1.5955 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
54-Xe-128

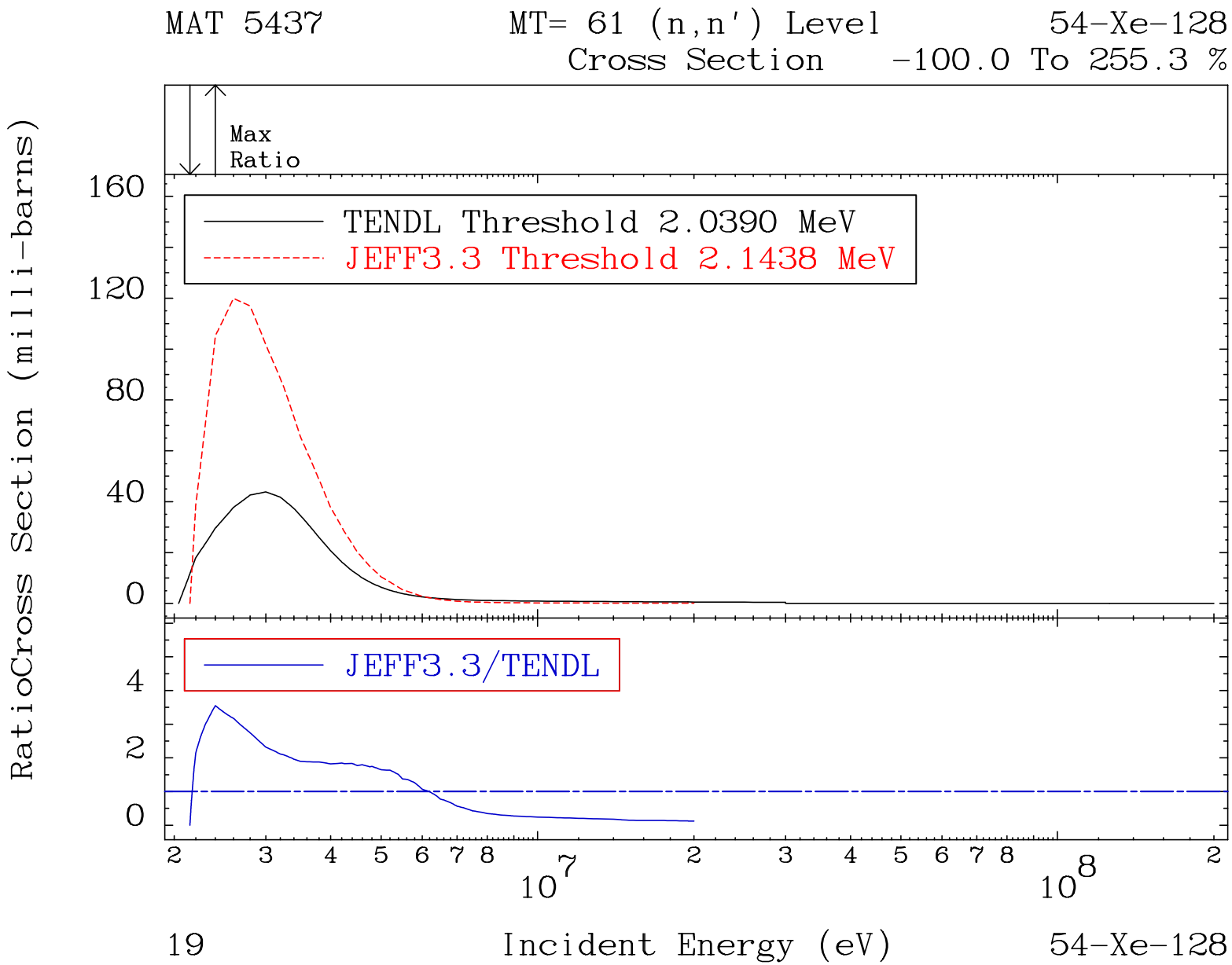

MAT 5437
MT= 56 (n,n') Level
54-Xe-128
Cross Section -81.94 To 76.60 %
Max Ratio
Min Ratio
TENDL Threshold 1.6161 MeV
JEFF3.3 Threshold 1.6161 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
54-Xe-128

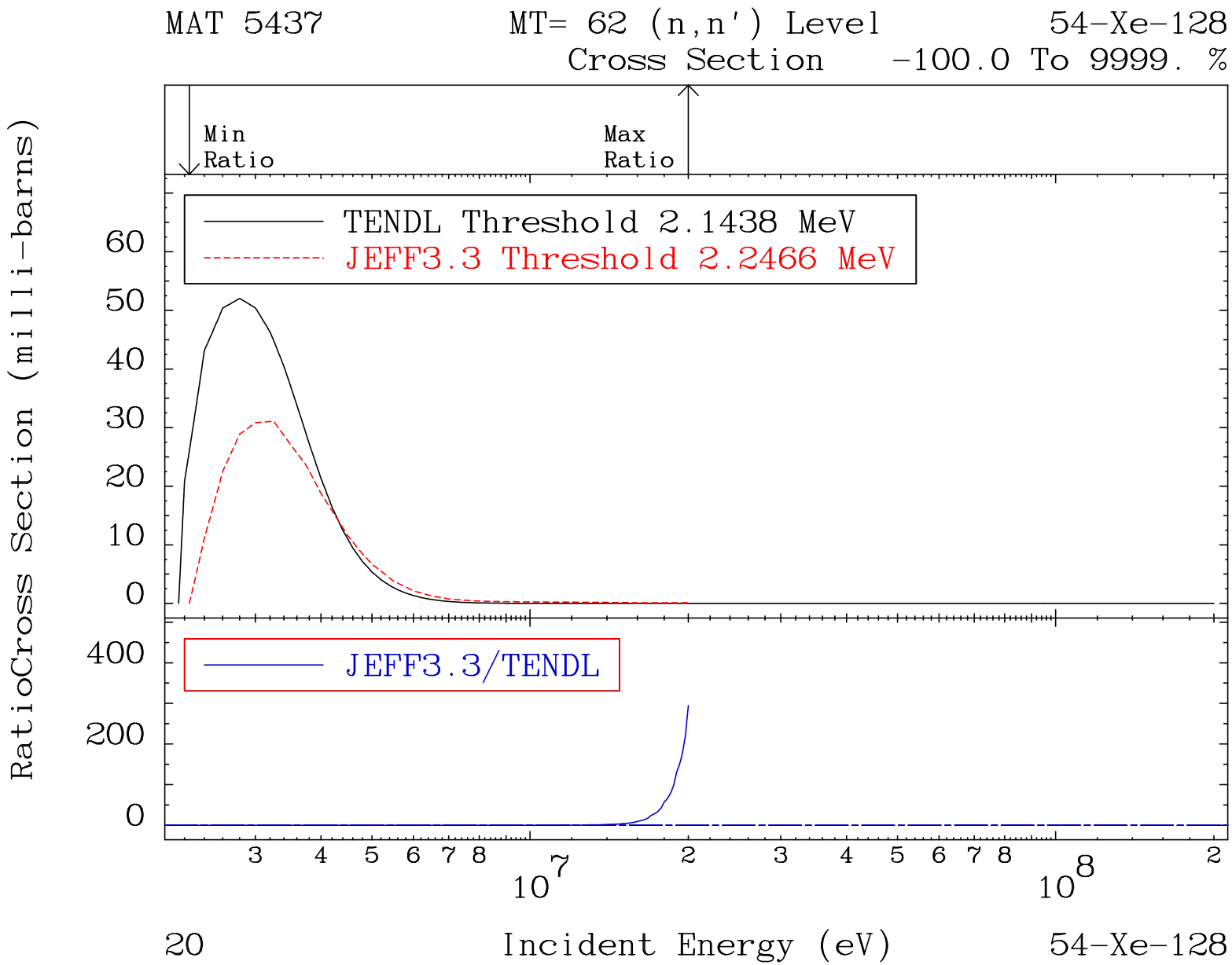

MAT 5437
MT= 57 (n,n') Level
54-Xe-128
Cross Section -78.73 To 81.12 %
Max Ratio
Min Ratio
TENDL Threshold 1.7510 MeV
JEFF3.3 Threshold 1.7507 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
2.0
1.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
54-Xe-128

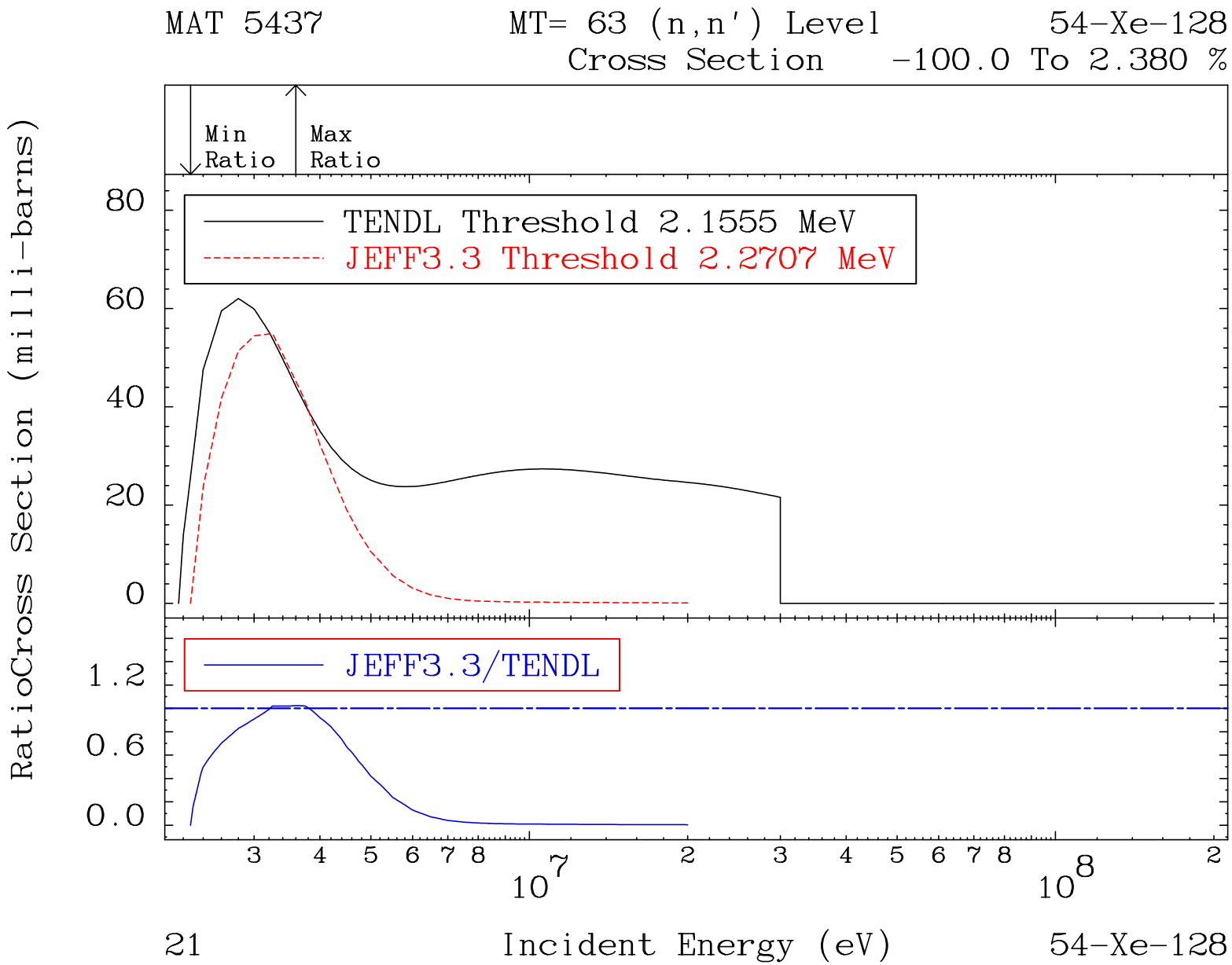

MAT 5437
MT= 58 (n,n') Level
54-Xe-128
Cross Section 62.99 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.8921 MeV
JEFF3.3 Threshold 1.8921 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
54-Xe-128

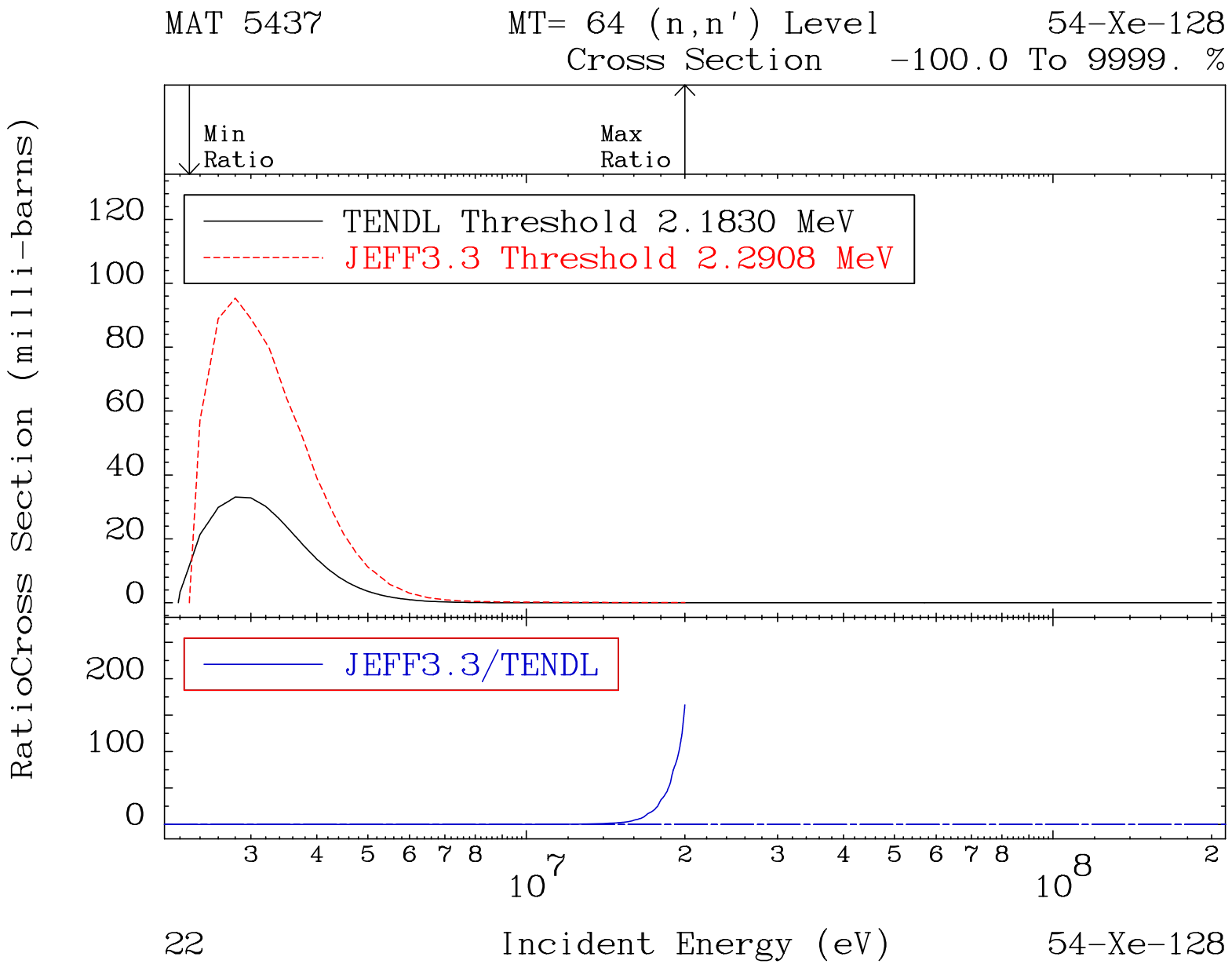

MAT 5437
MT= 59 (n,n') Level
54-Xe-128
Cross Section 53.69 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.0125 MeV
JEFF3.3 Threshold 2.0125 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
10^6
10^3
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
54-Xe-128

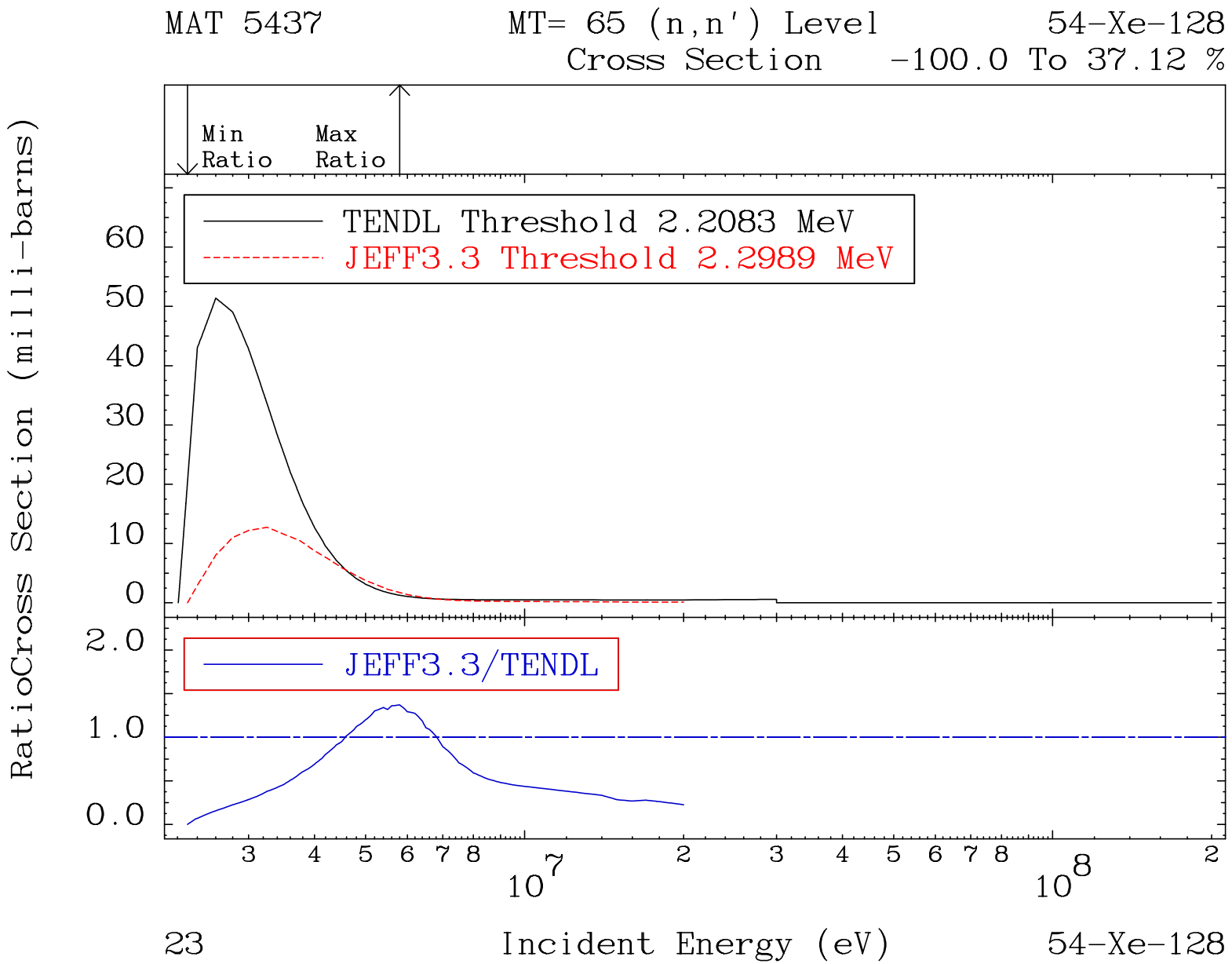

MAT 5437
MT= 60 (n,n') Level
54-Xe-128
Cross Section -100.0 To 81.45 %
Min Ratio
Max Ratio
TENDL Threshold 2.0154 MeV
JEFF3.3 Threshold 2.0154 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
150
100
50
0
2.0
1.0
0.0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
18
Incident Energy (eV)
54-Xe-128

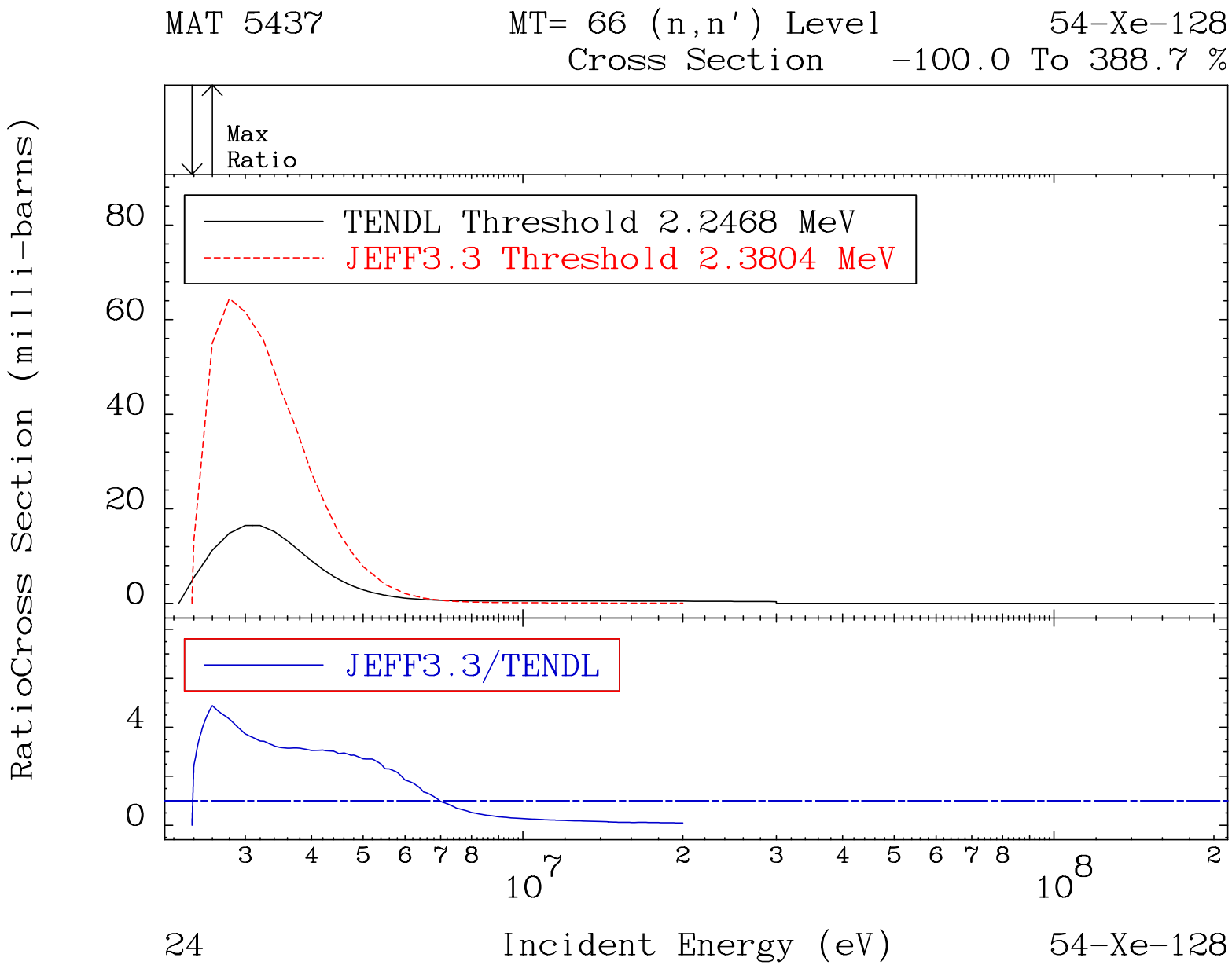

MAT 5437
MT= 61 (n,n') Level
54-Xe-128
Cross Section -100.0 To 255.3 %
Max
Ratio
TENDL Threshold 2.0390 MeV
JEFF3.3 Threshold 2.1438 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
54-Xe-128

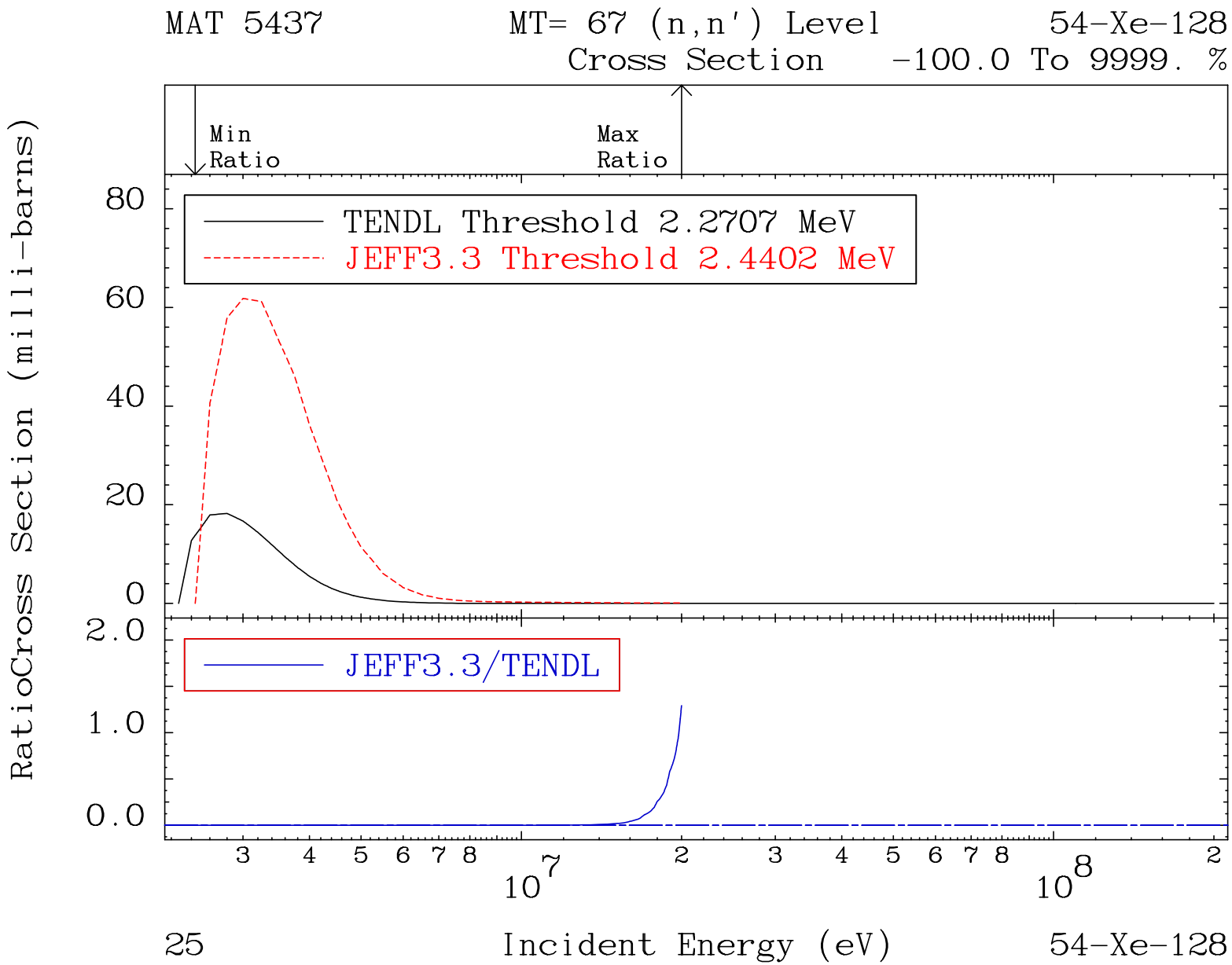

MAT 5437
MT= 62 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.1438 MeV
JEFF3.3 Threshold 2.2466 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
400
200
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
54-Xe-128

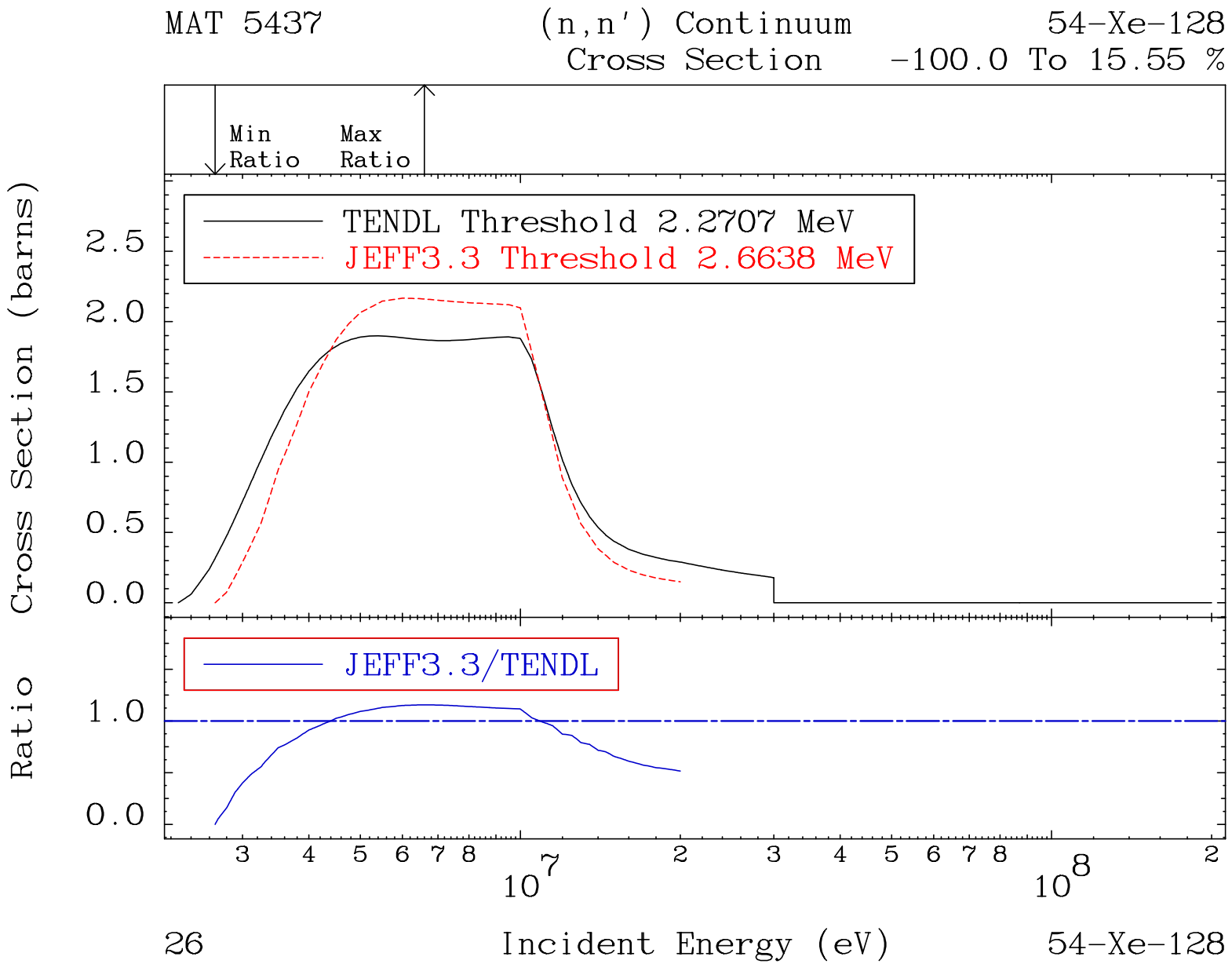

MAT 5437
MT= 63 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 2.380 %
Min Ratio
Max Ratio
TENDL Threshold 2.1555 MeV
JEFF3.3 Threshold 2.2707 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.2
0.6
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
54-Xe-128

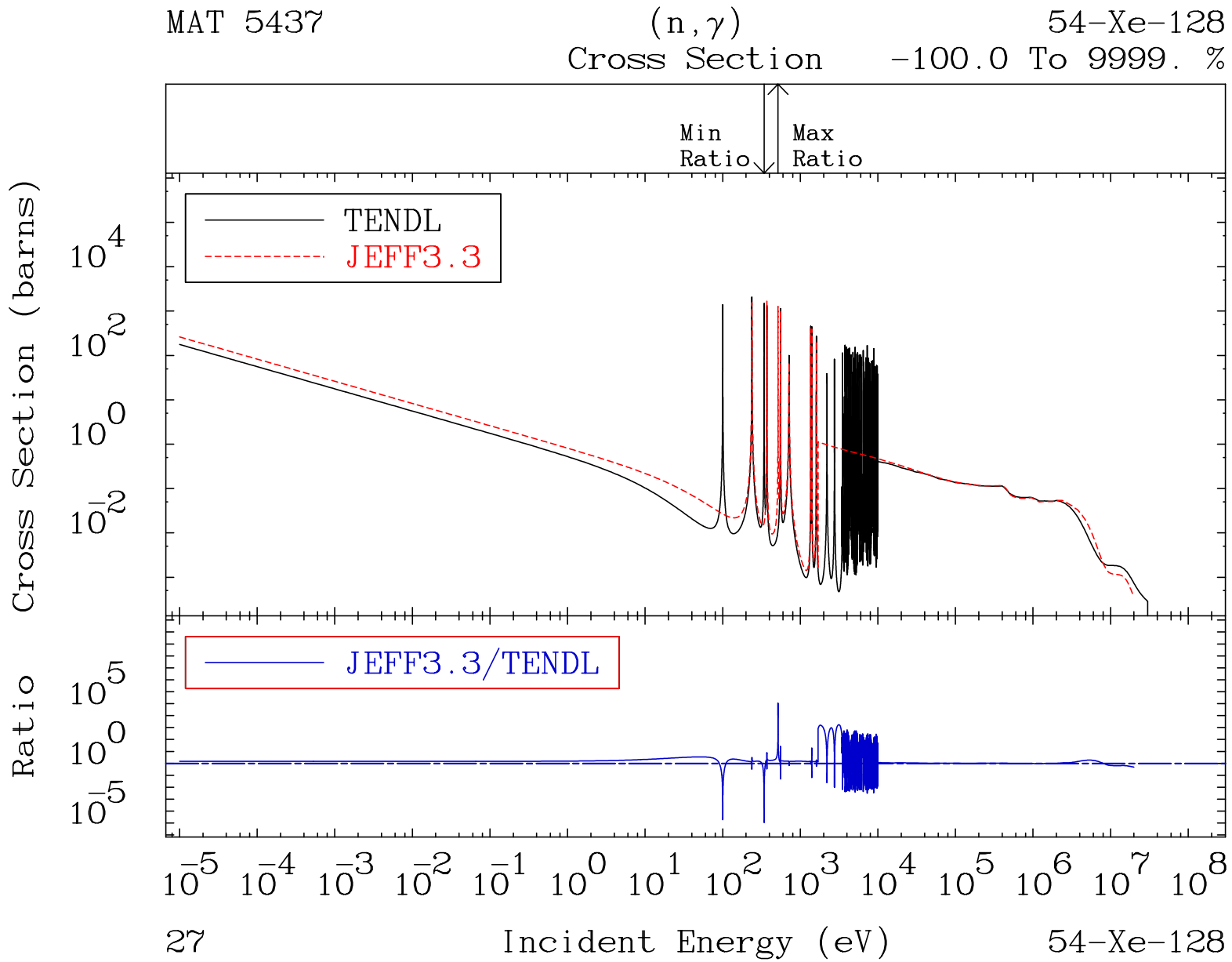

MAT 5437
MT= 64 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.1830 MeV
JEFF3.3 Threshold 2.2908 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
200
100
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
22
Incident Energy (eV)
54-Xe-128

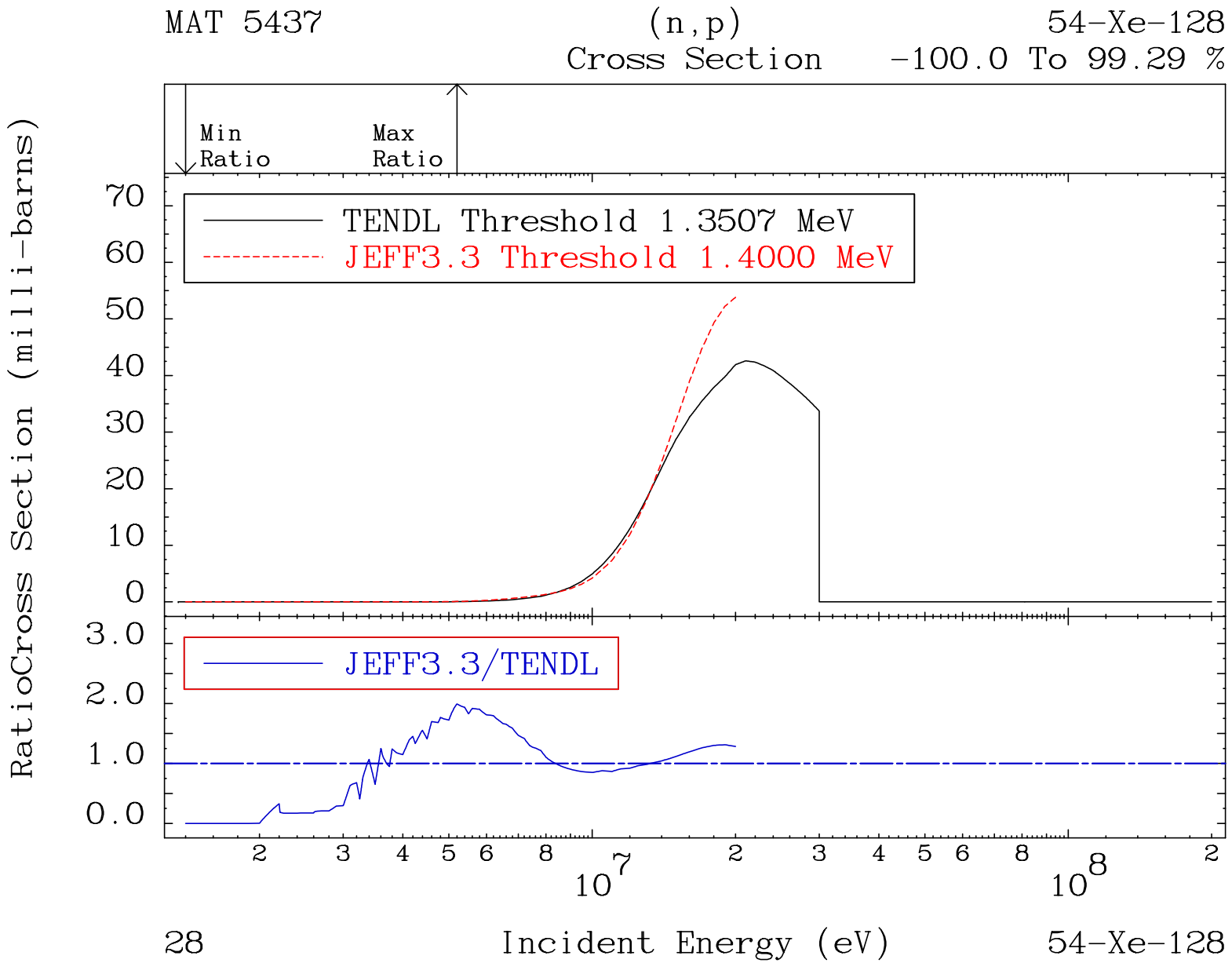

MAT 5437
MT= 65 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 37.12 %
Min Ratio
Max Ratio
TENDL Threshold 2.2083 MeV
JEFF3.3 Threshold 2.2989 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
54-Xe-128

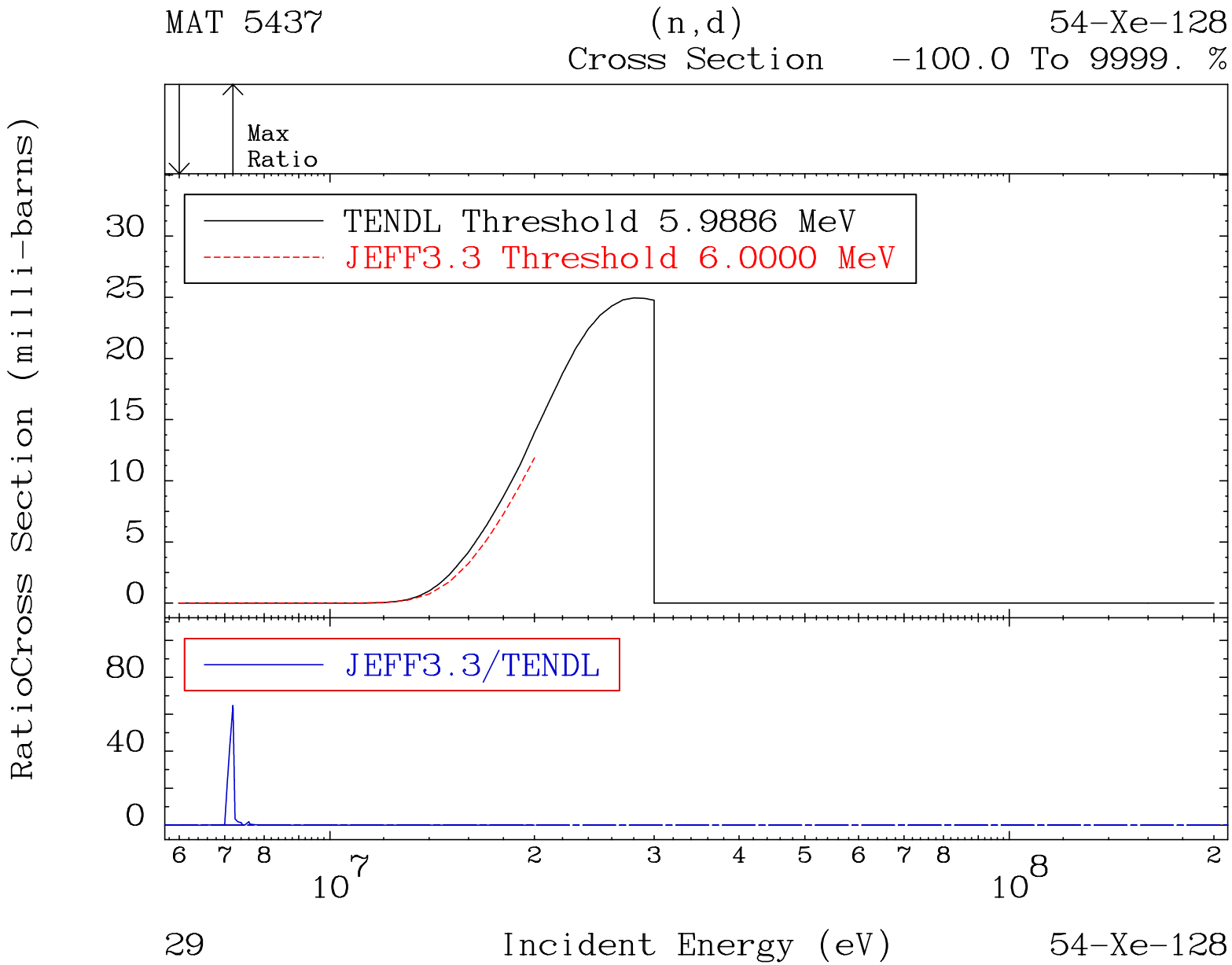

MAT 5437
MT= 66 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 388.7 %
Max
Ratio
TENDL Threshold 2.2468 MeV
JEFF3.3 Threshold 2.3804 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
4
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
54-Xe-128

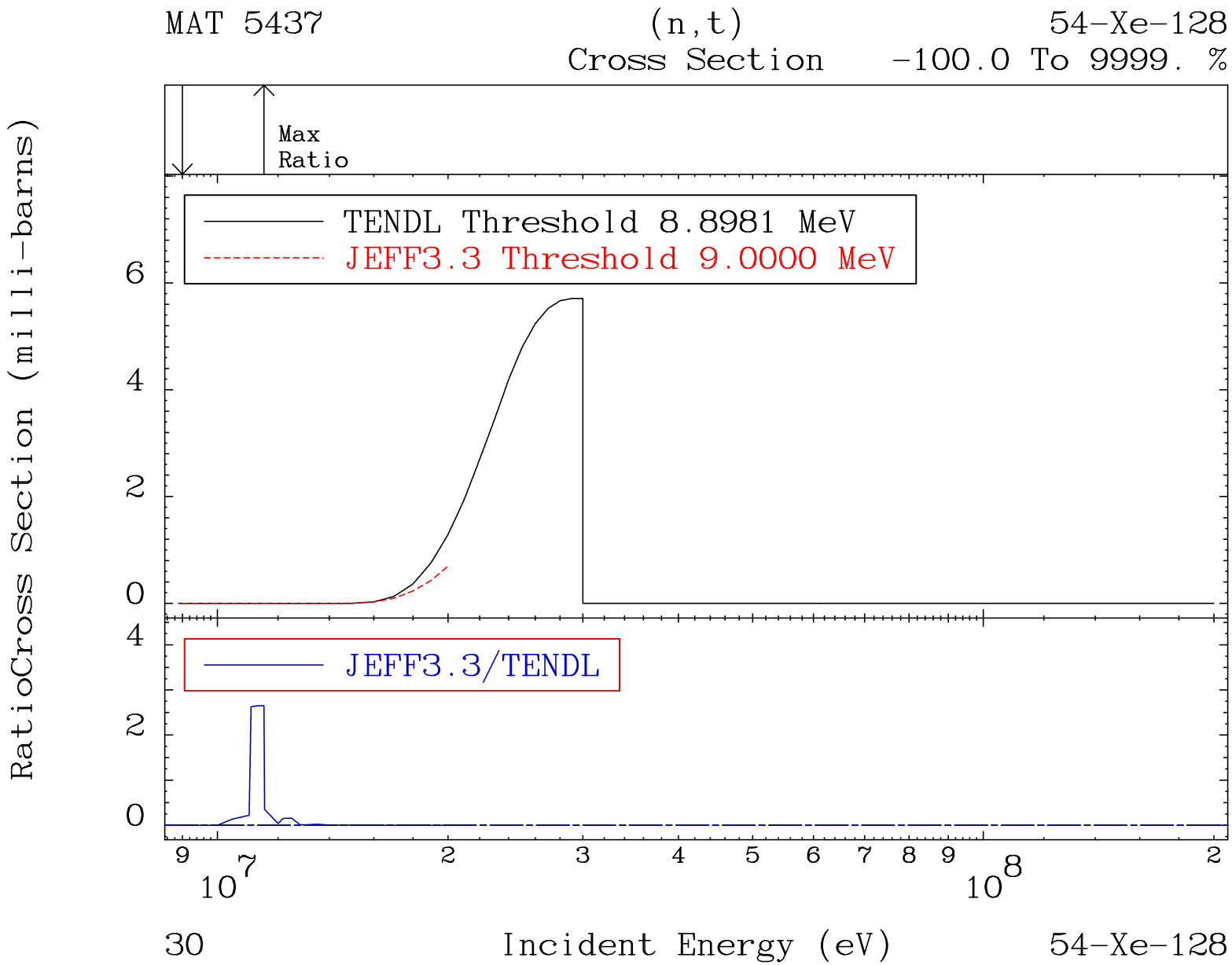

MAT 5437
MT= 67 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.2707 MeV
JEFF3.3 Threshold 2.4402 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
54-Xe-128

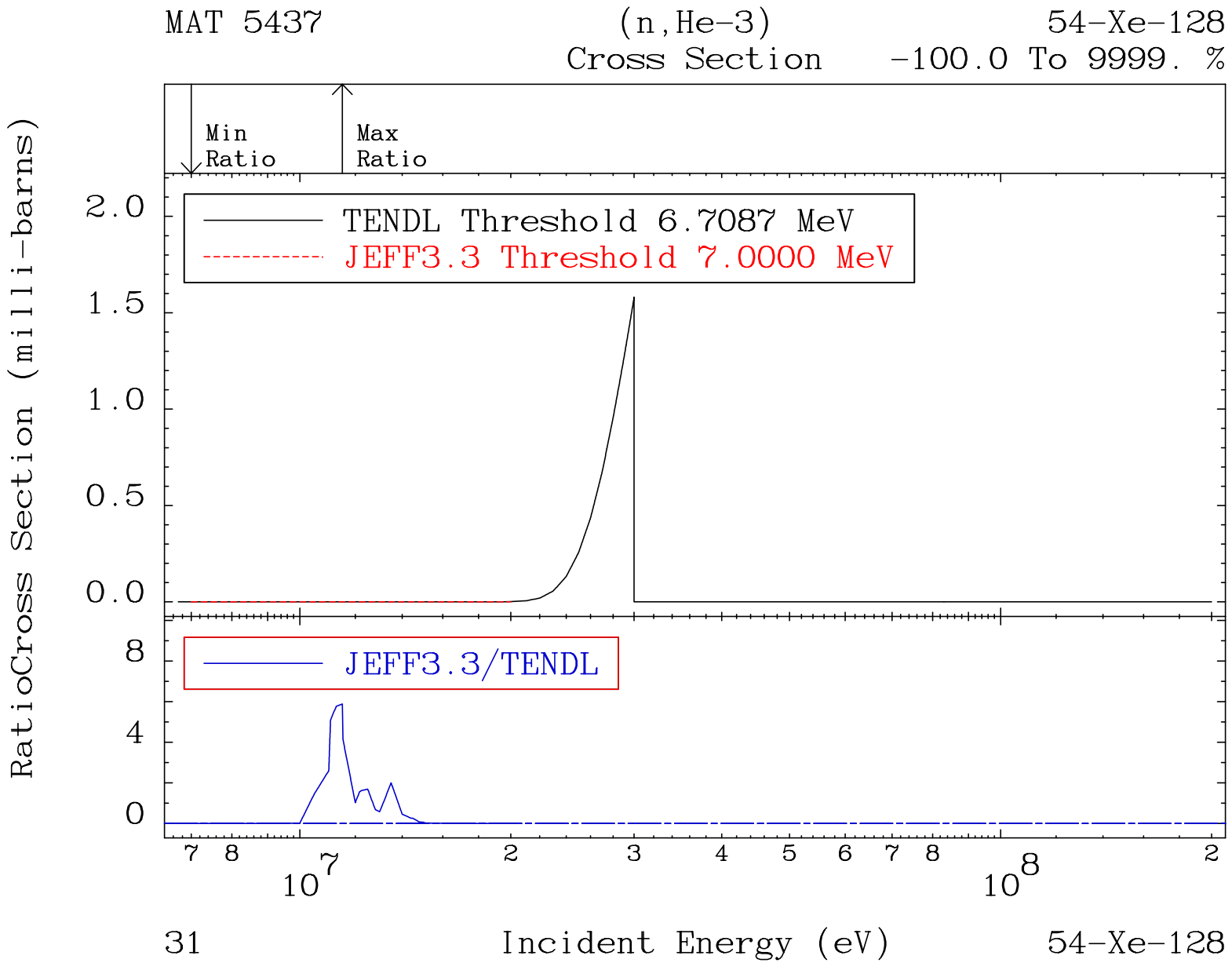

MAT 5437
(n,n') Continuum
Cross Section
54-Xe-128
-100.0 To 15.55 %
Min Ratio
Max Ratio
TENDL Threshold 2.2707 MeV
JEFF3.3 Threshold 2.6638 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
54-Xe-128

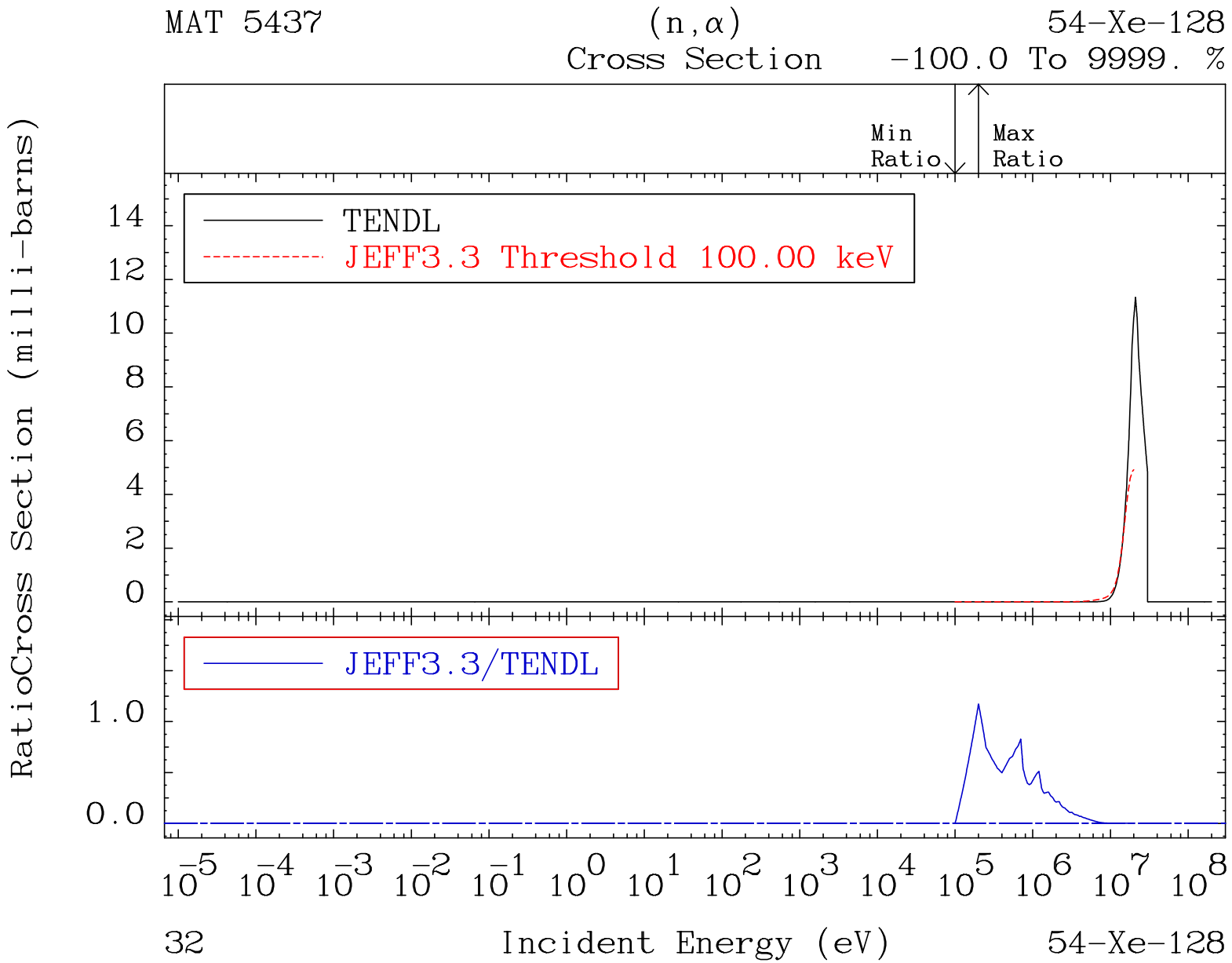

MAT 5437
(n,γ)
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
27
54-Xe-128

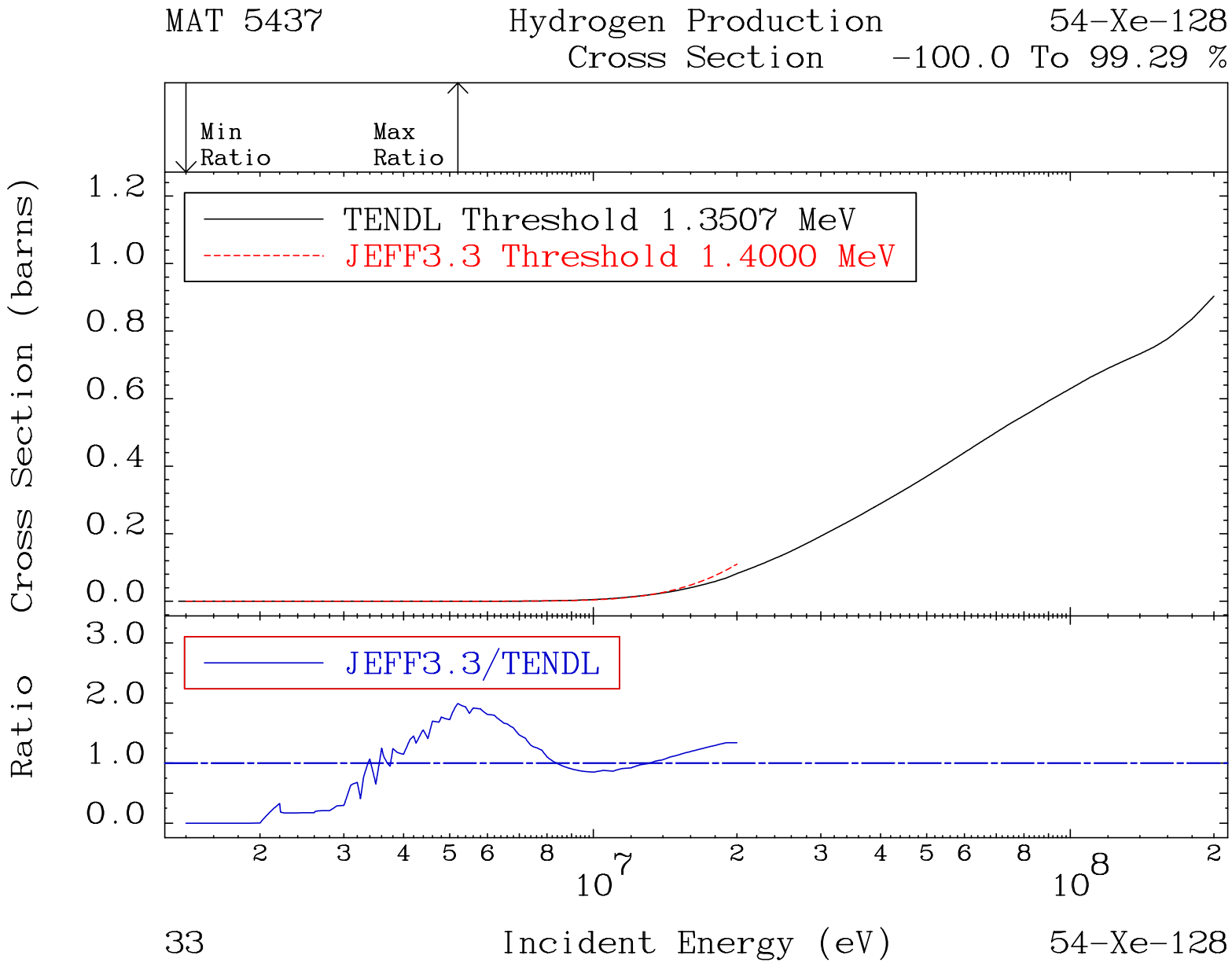

MAT 5437
(n,p)
54-Xe-128
Cross Section
-100.0 To 99.29 %
Min Ratio
Max Ratio
TENDL Threshold 1.3507 MeV
JEFF3.3 Threshold 1.4000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
3.0
2.0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
28
Incident Energy (eV)
54-Xe-128

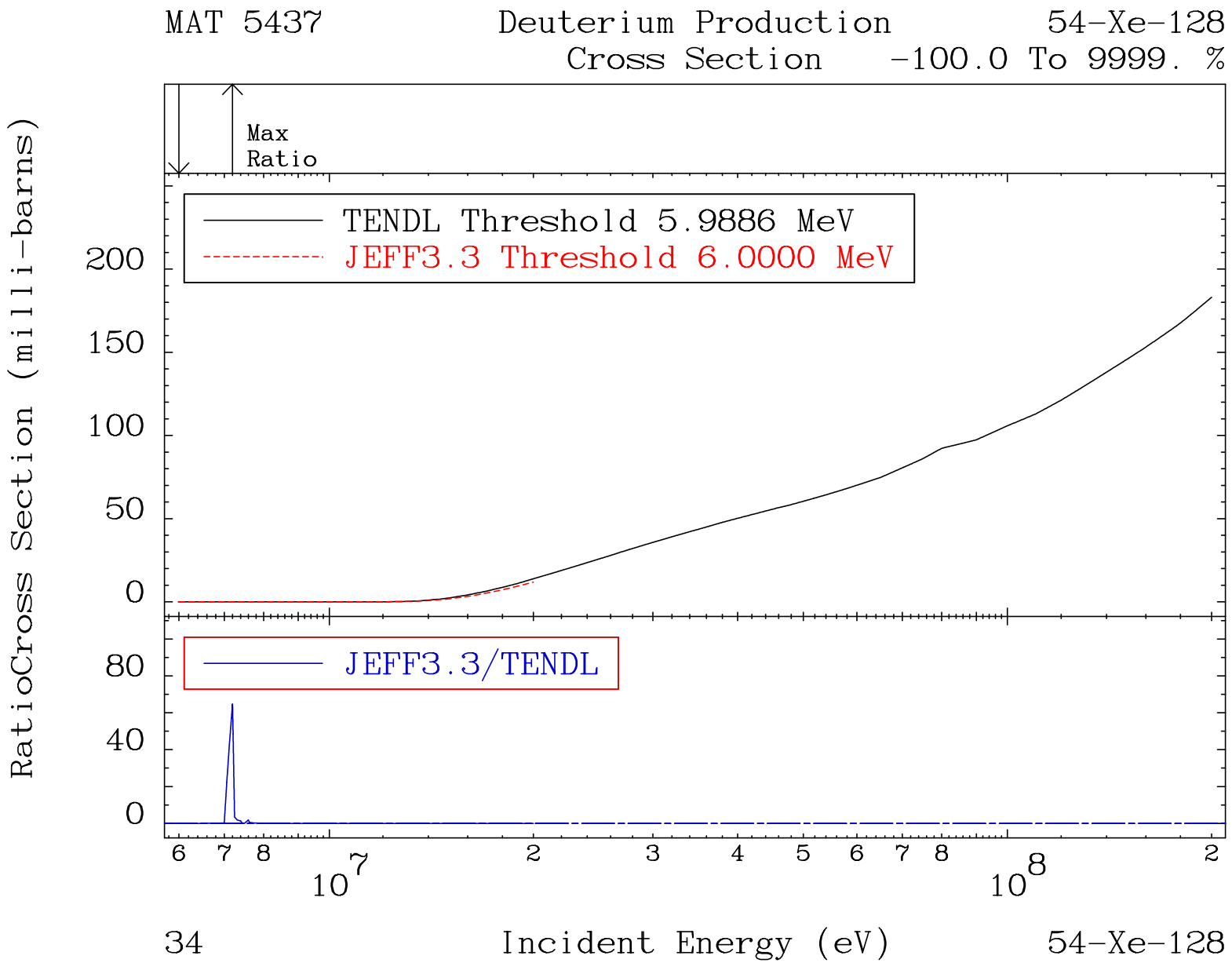

MAT 5437
(n,d)
54-Xe-128
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 5.9886 MeV
JEFF3.3 Threshold 6.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
80
40
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
29
Incident Energy (eV)
54-Xe-128

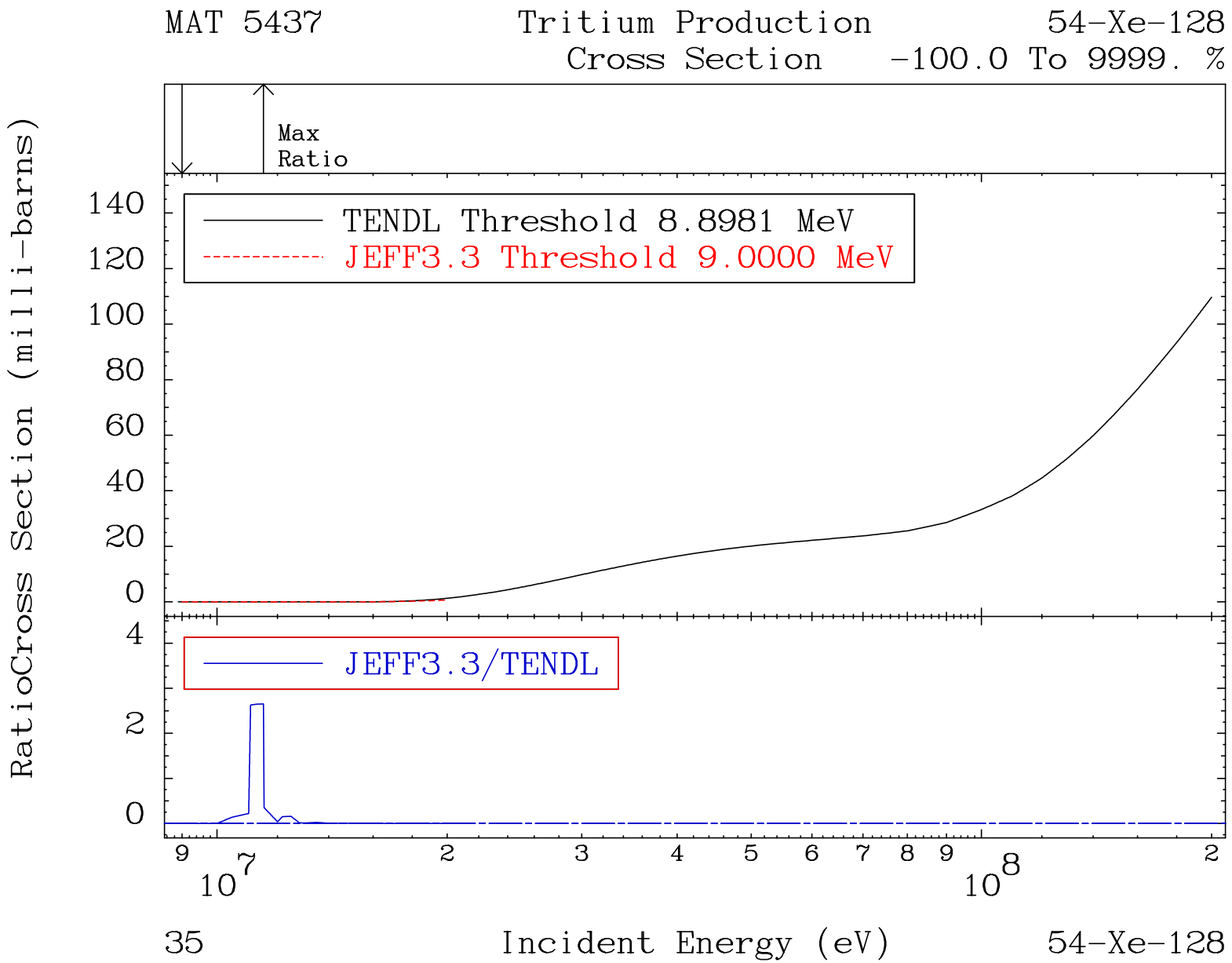

MAT 5437
(n,t)
Cross Section
54-Xe-128
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 8.8981 MeV
JEFF3.3 Threshold 9.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
30
54-Xe-128

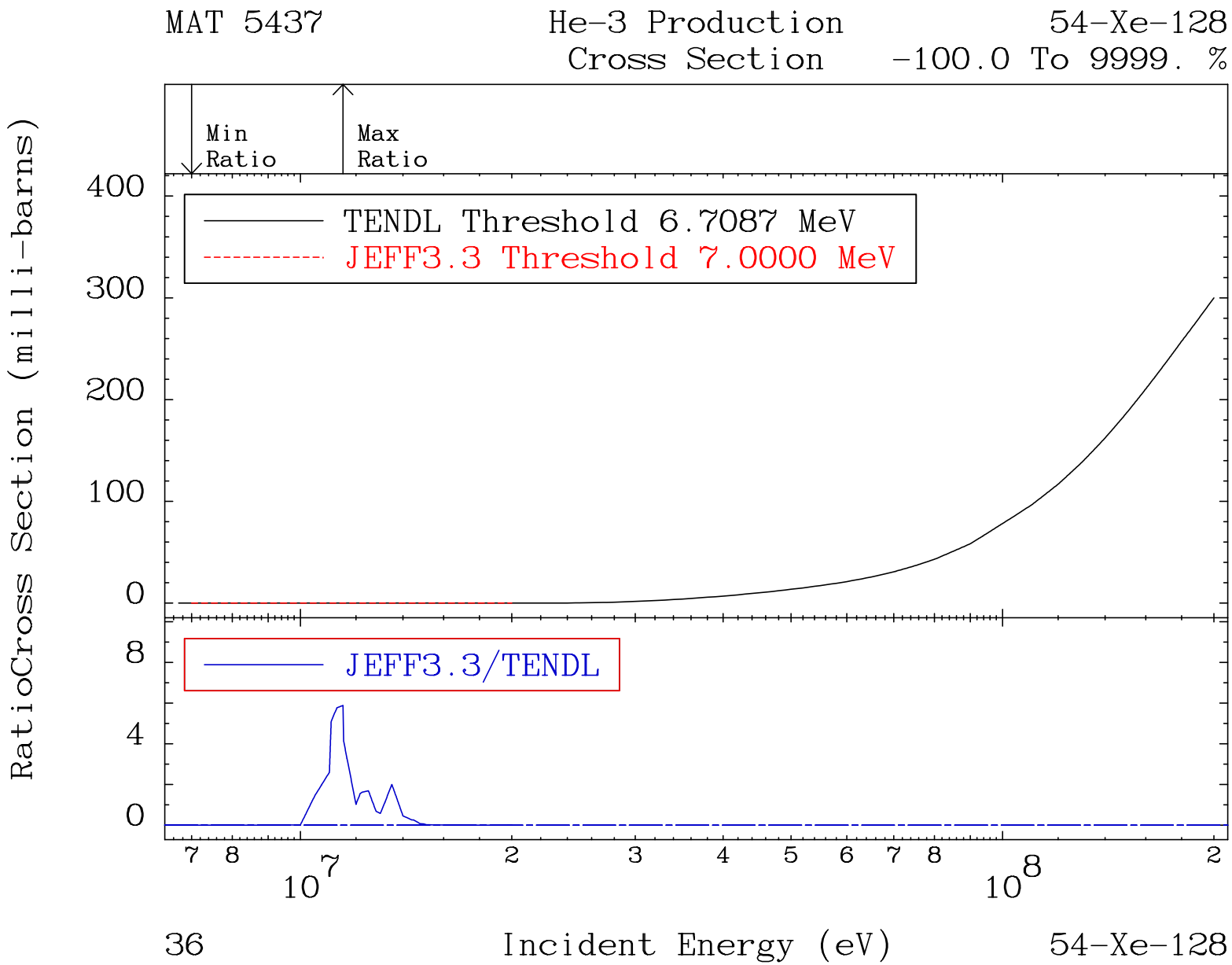

MAT 5437
(n,He-3)
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.7087 MeV
JEFF3.3 Threshold 7.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
8
4
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
31
Incident Energy (eV)
54-Xe-128

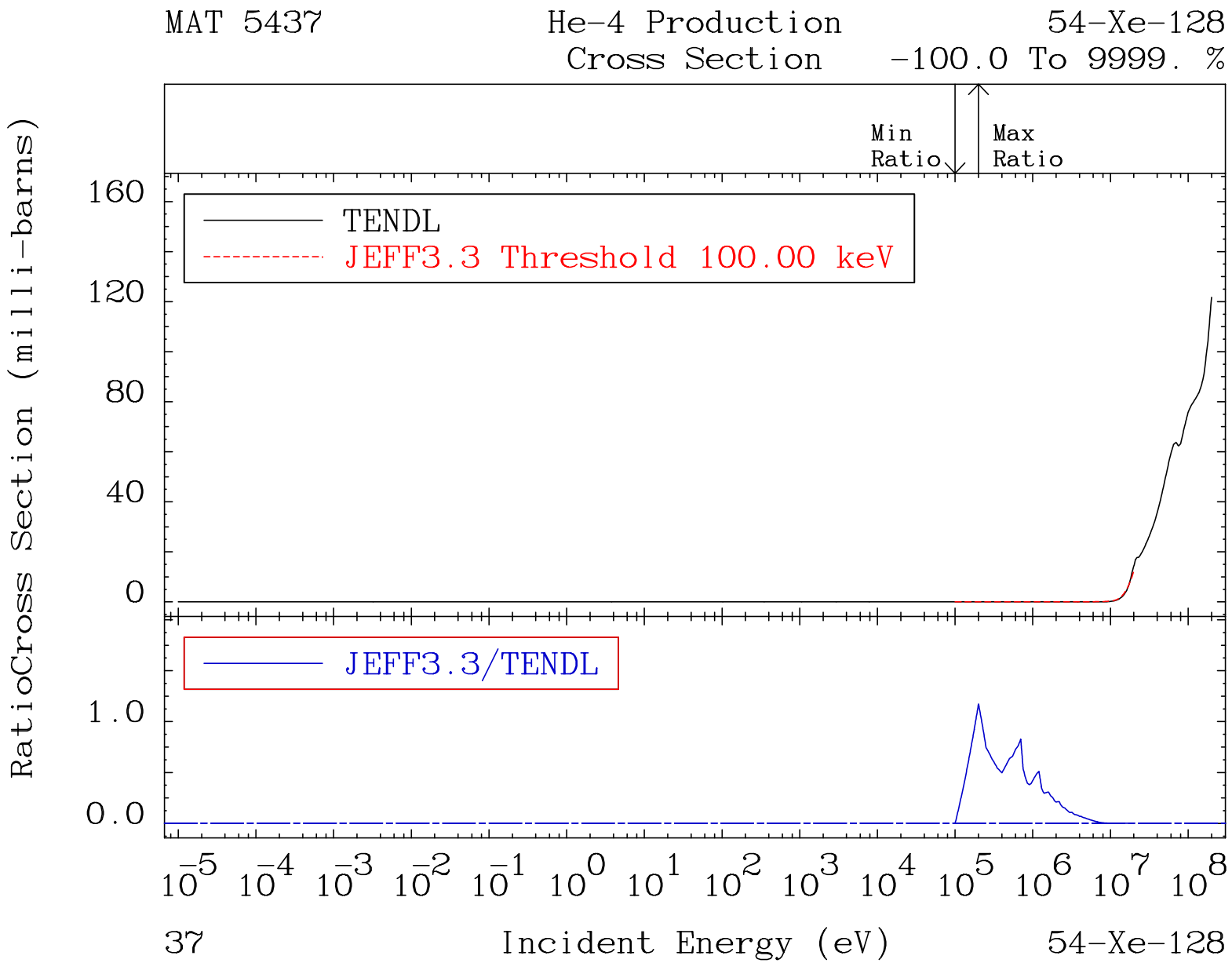

MAT 5437
(n,α)
54-Xe-128
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3 Threshold 100.00 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
32
Incident Energy (eV)
54-Xe-128

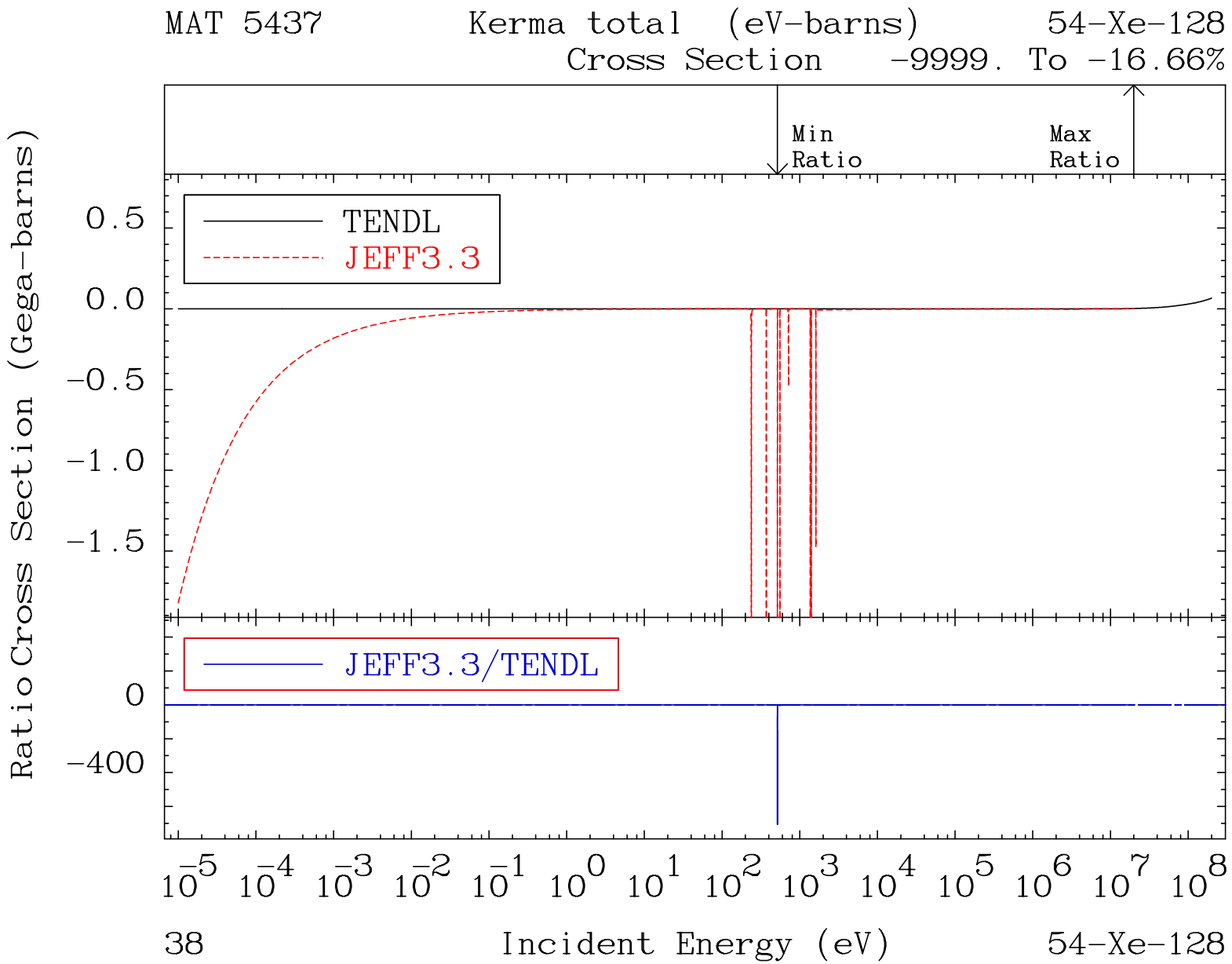

MAT 5437
Hydrogen Production
54-Xe-128
Cross Section -100.0 To 99.29 %
Min Ratio
Max Ratio
TENDL Threshold 1.3507 MeV
JEFF3.3 Threshold 1.4000 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
3.0
2.0
1.0
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
33
Incident Energy (eV)
54-Xe-128

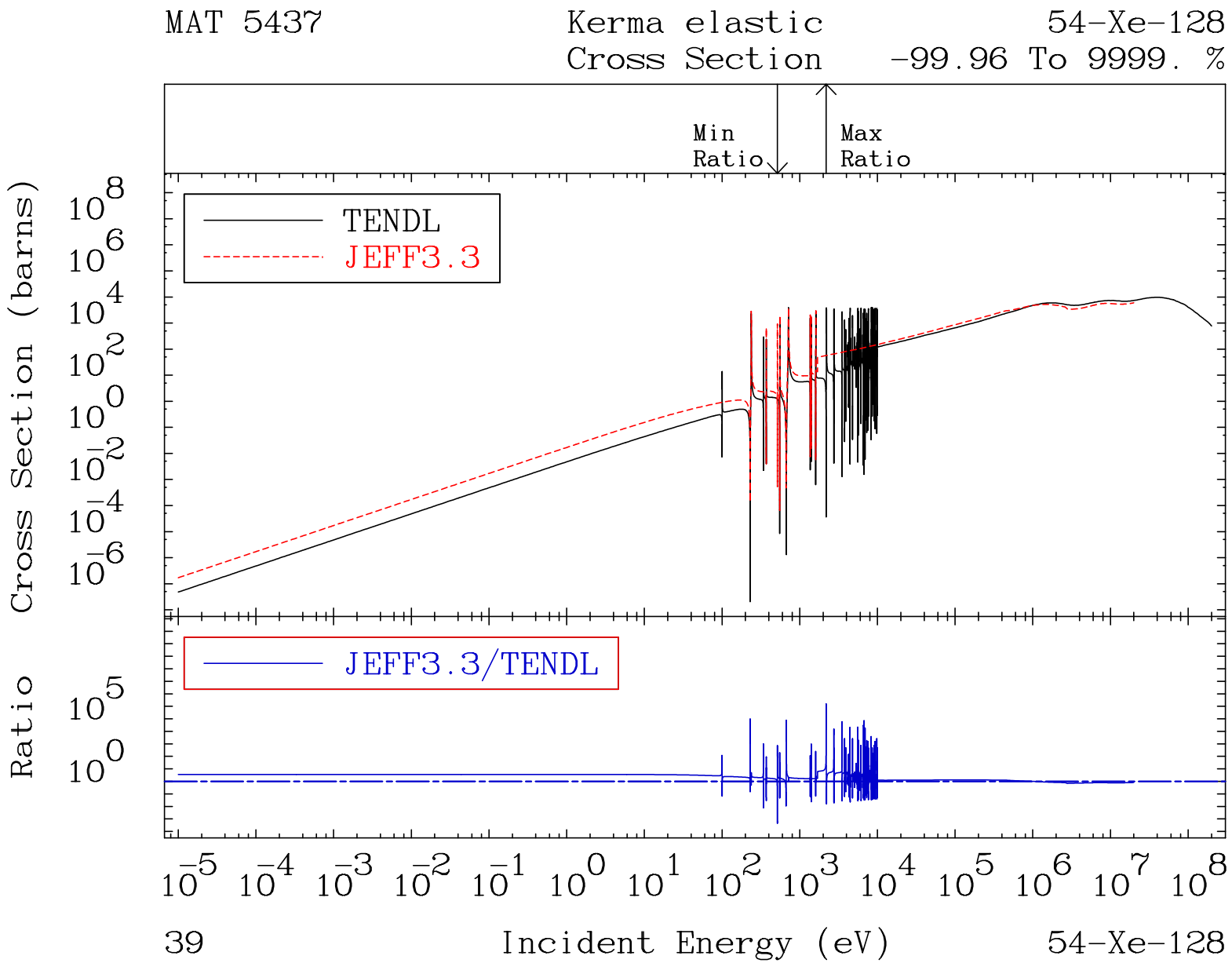

MAT 5437
Deuterium Production
54-Xe-128
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 5.9886 MeV
JEFF3.3 Threshold 6.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
80
40
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
34
Incident Energy (eV)
54-Xe-128

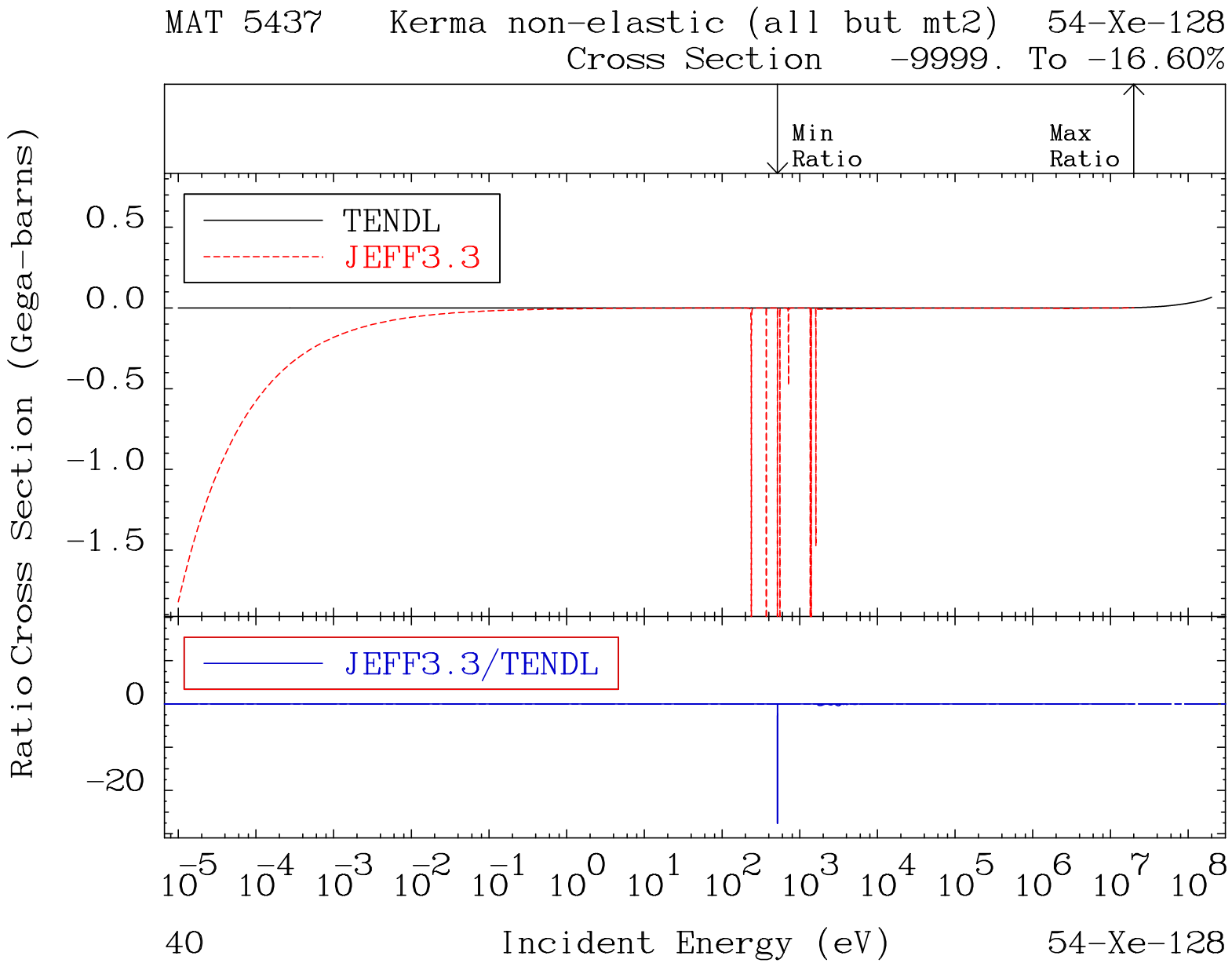

MAT 5437
Tritium Production
54-Xe-128
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 8.8981 MeV
JEFF3.3 Threshold 9.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
4
2
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
35
Incident Energy (eV)
54-Xe-128

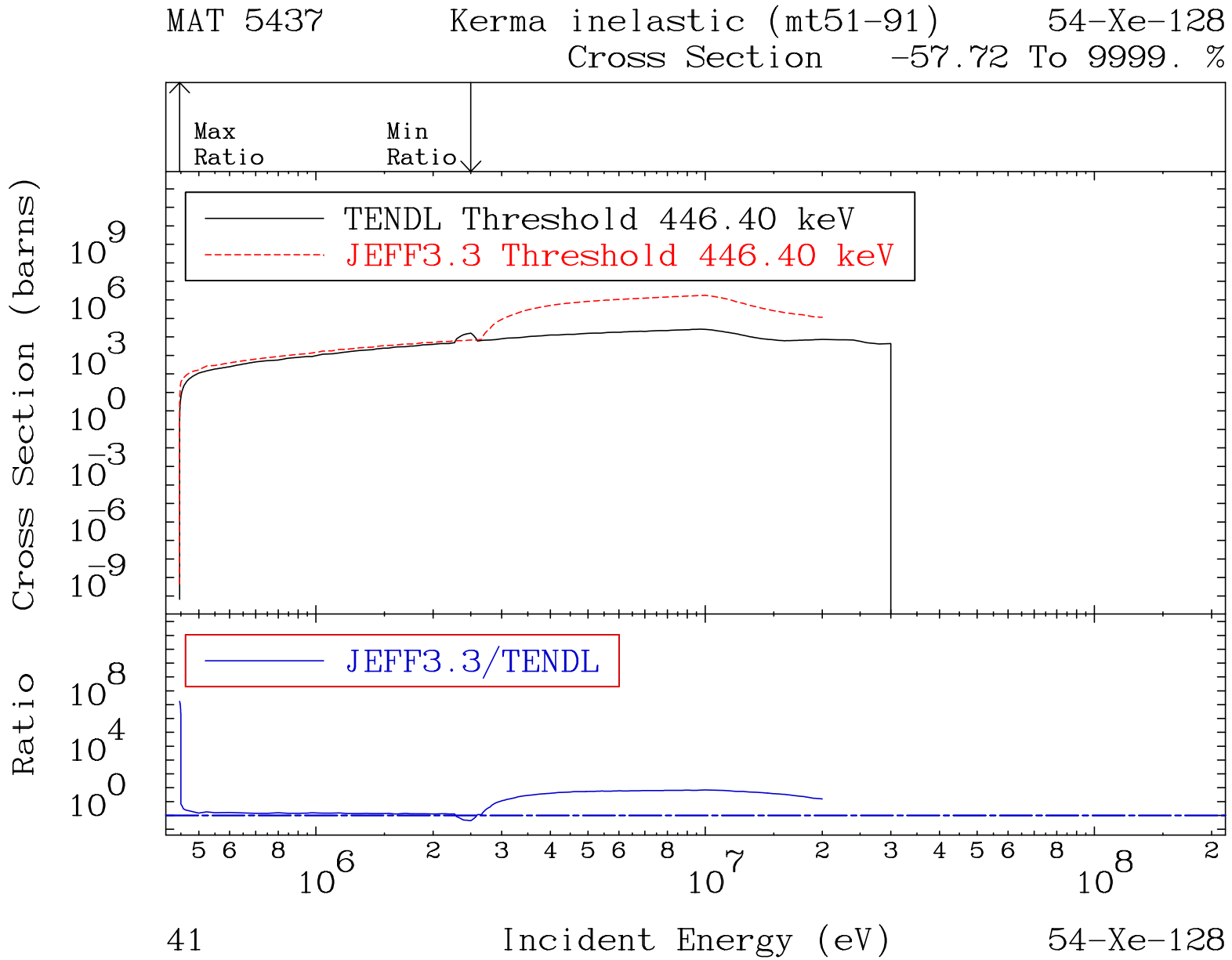

MAT 5437
He-3 Production
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.7087 MeV
JEFF3.3 Threshold 7.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
8
4
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
36
Incident Energy (eV)
54-Xe-128

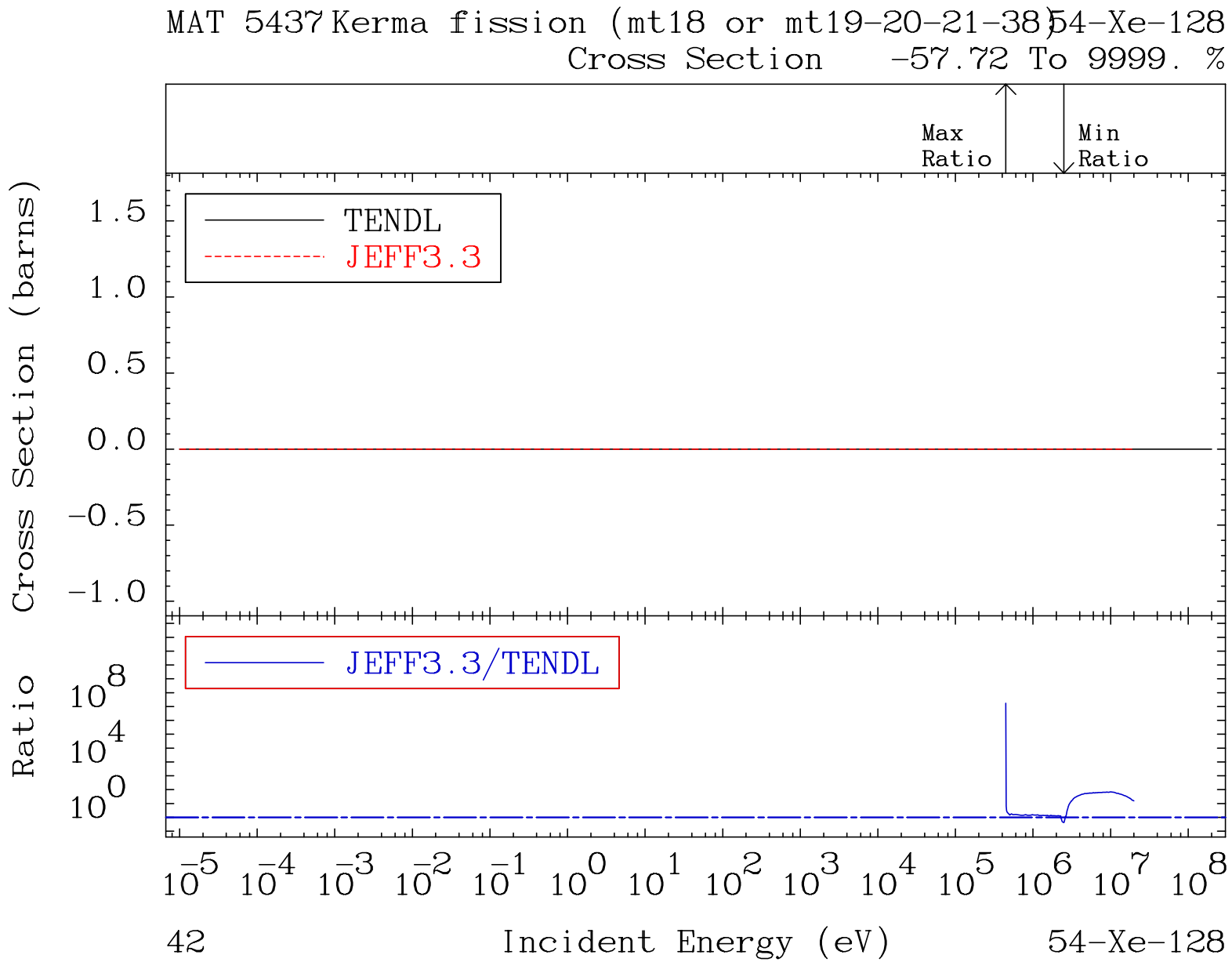

MAT 5437
He-4 Production
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3 Threshold 100.00 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
37
Incident Energy (eV)
54-Xe-128

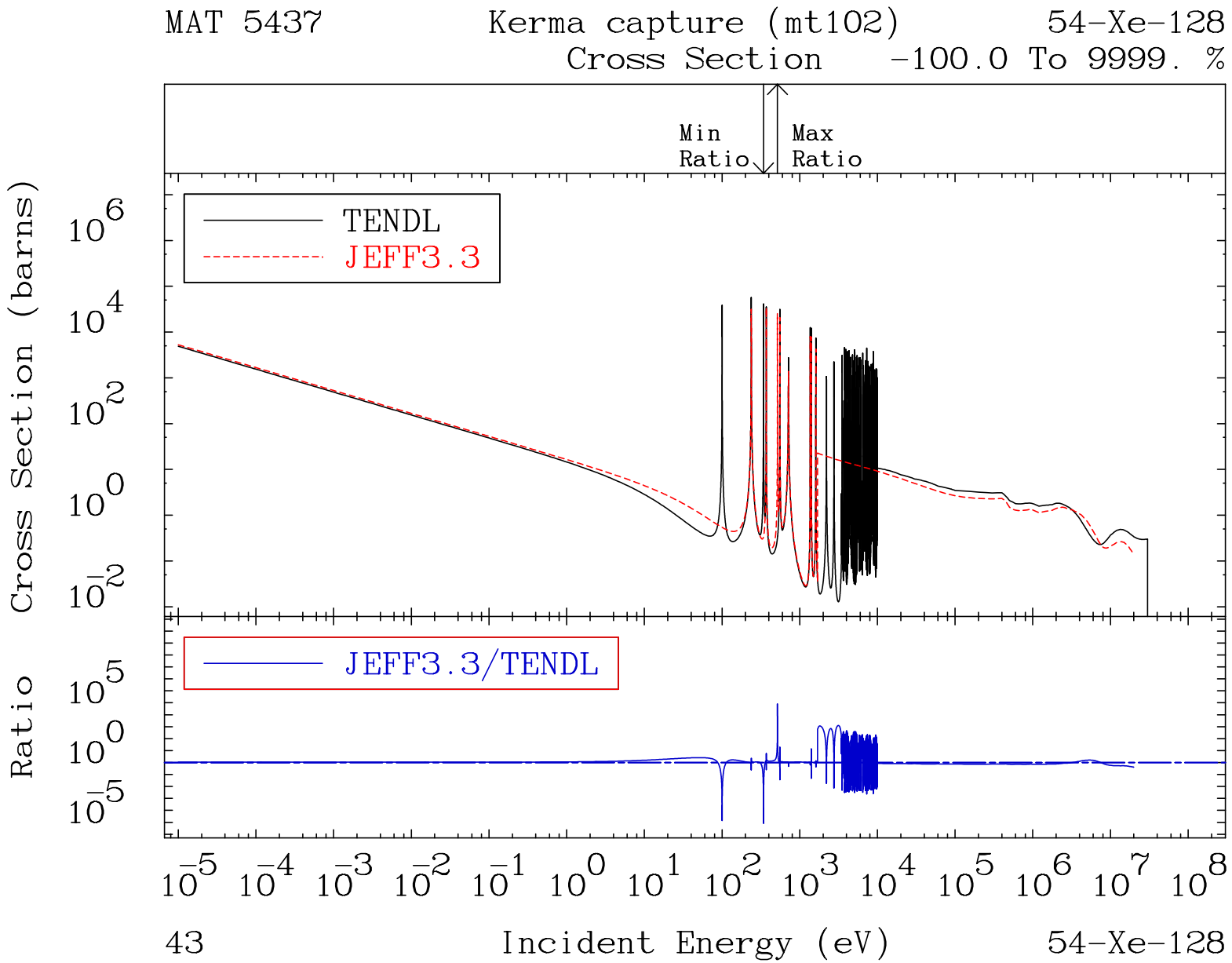

MAT 5437
Kerma total (eV-barns)
54-Xe-128
Cross Section -9999. To -16.66%
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Ratio Cross Section (Giga-barns)
0.5
0.0
-0.5
-1.0
-1.5
0
-400
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
38
Incident Energy (eV)
54-Xe-128

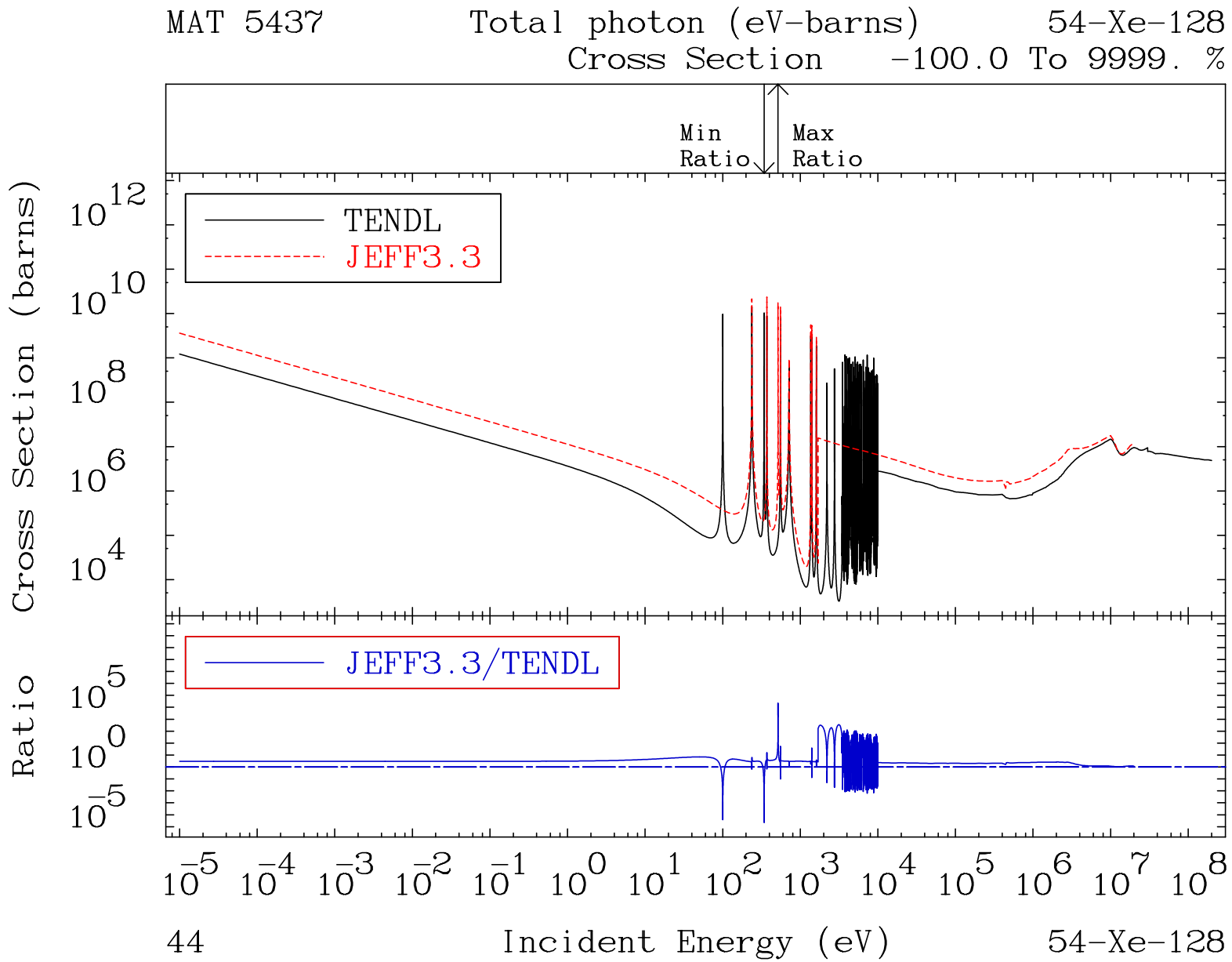

MAT 5437
Kerma elastic
Cross Section
54-Xe-128
-99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
54-Xe-128

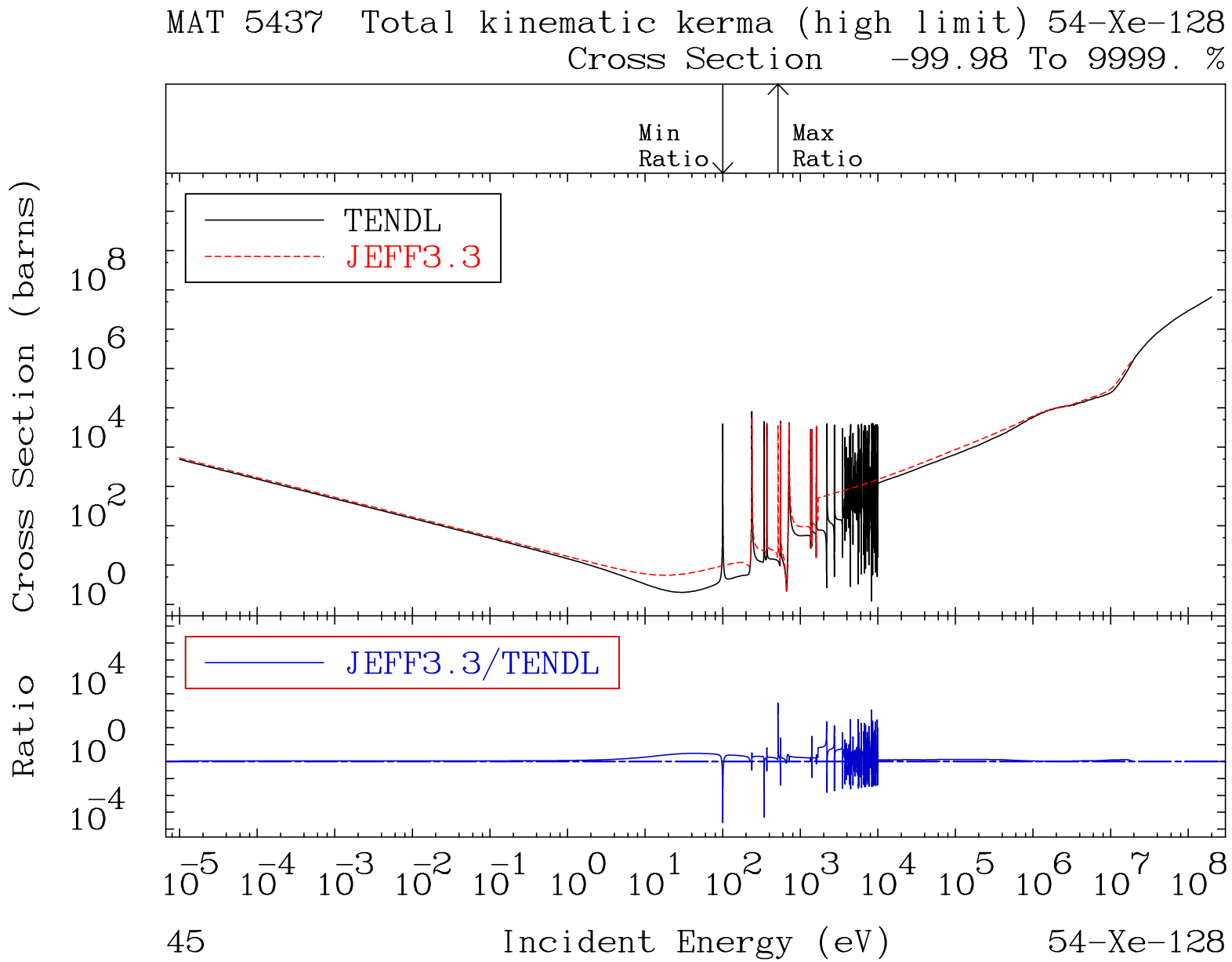

MAT 5437 Kerma non-elastic (all but mt2) 54-Xe-128
Cross Section -9999. To -16.60%
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Ratio Cross Section (Giga-barns)
0.5
0.0
-0.5
-1.0
-1.5
0
-20
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
40
Incident Energy (eV)
54-Xe-128

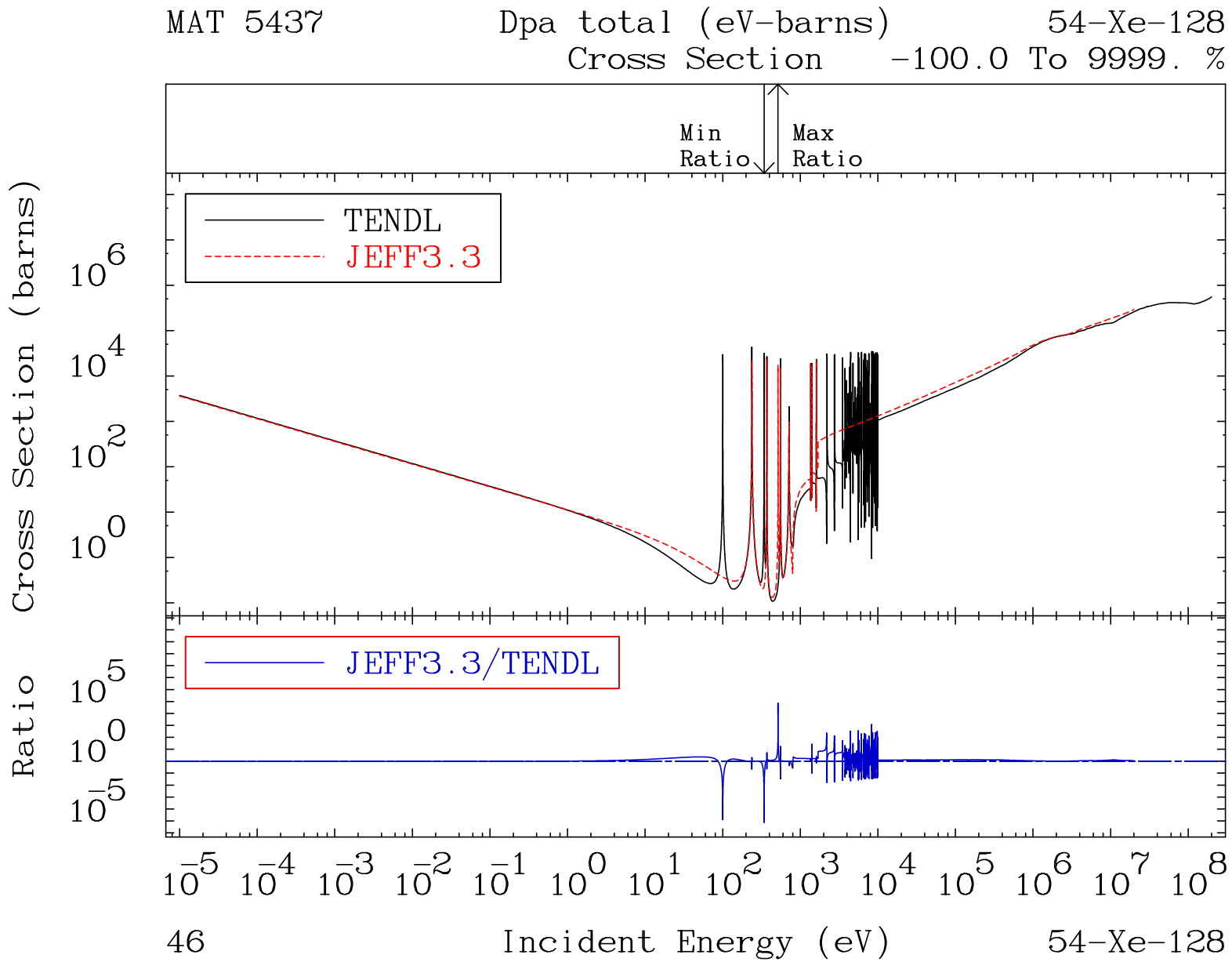

MAT 5437
Kerma inelastic (mt51-91)
54-Xe-128
Cross Section -57.72 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 446.40 keV
JEFF3.3 Threshold 446.40 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
41
54-Xe-128

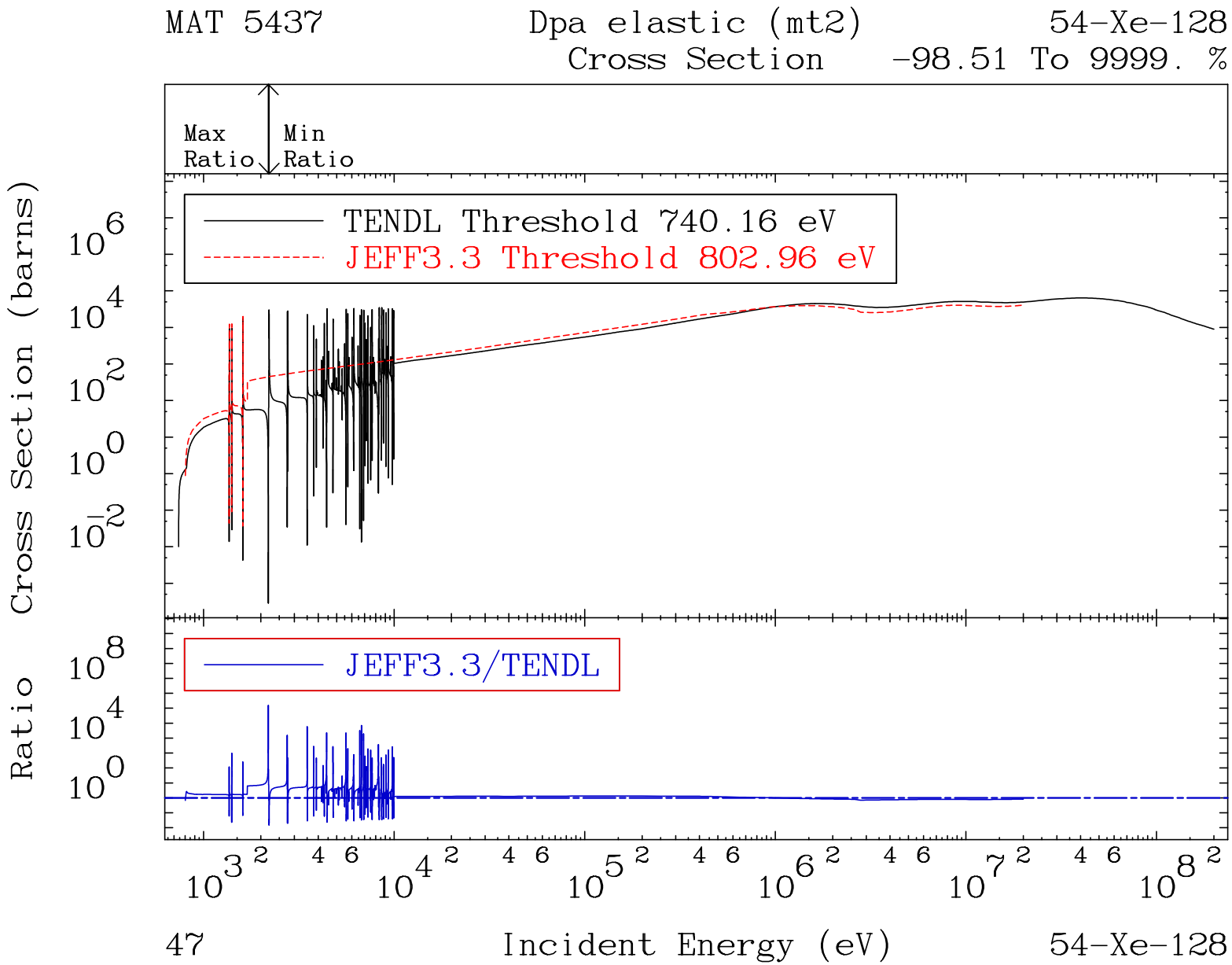

MAT 5437 Kerma fission (mt18 or mt19-20-21-38) 54-Xe-128
Cross Section -57.72 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{8}
10^{4}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
42
Incident Energy (eV)
54-Xe-128

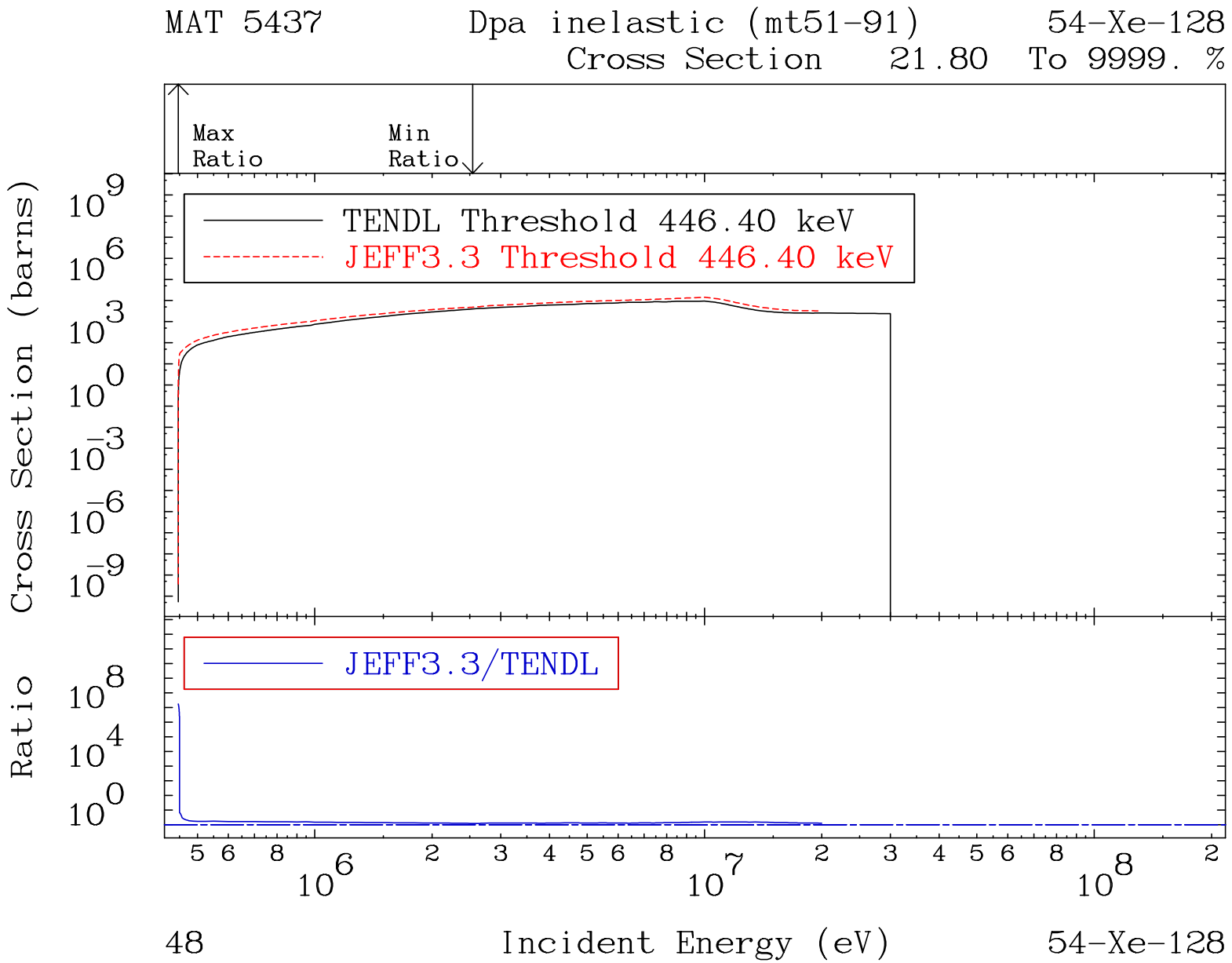

MAT 5437
Kerma capture (mt102)
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
54-Xe-128

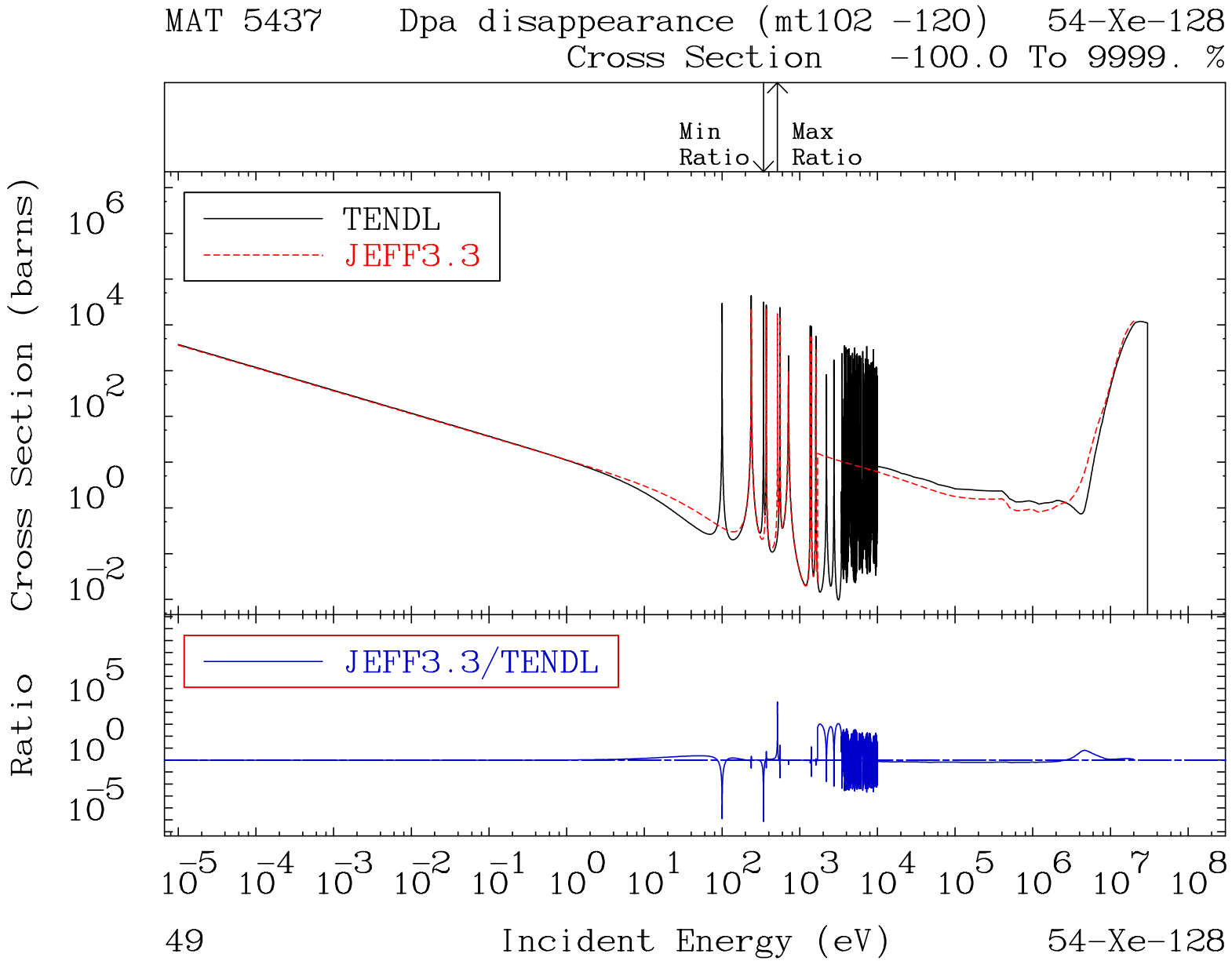

MAT 5437
Total photon (eV-barns)
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
54-Xe-128


MAT 5437 Total kinematic kerma (high limit) 54-Xe-128
Cross Section -99.98 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
54-Xe-128


MAT 5437
Dpa total (eV-barns)
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
46
54-Xe-128


MAT 5437
Dpa elastic (mt2)
Cross Section
54-Xe-128
-98.51 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 740.16 eV
JEFF3.3 Threshold 802.96 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
54-Xe-128


MAT 5437
Dpa inelastic (mt51-91)
54-Xe-128
Cross Section 21.80 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 446.40 keV
JEFF3.3 Threshold 446.40 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
48
54-Xe-128


MAT 5437 Dpa disappearance (mt102 -120) 54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
49
54-Xe-128