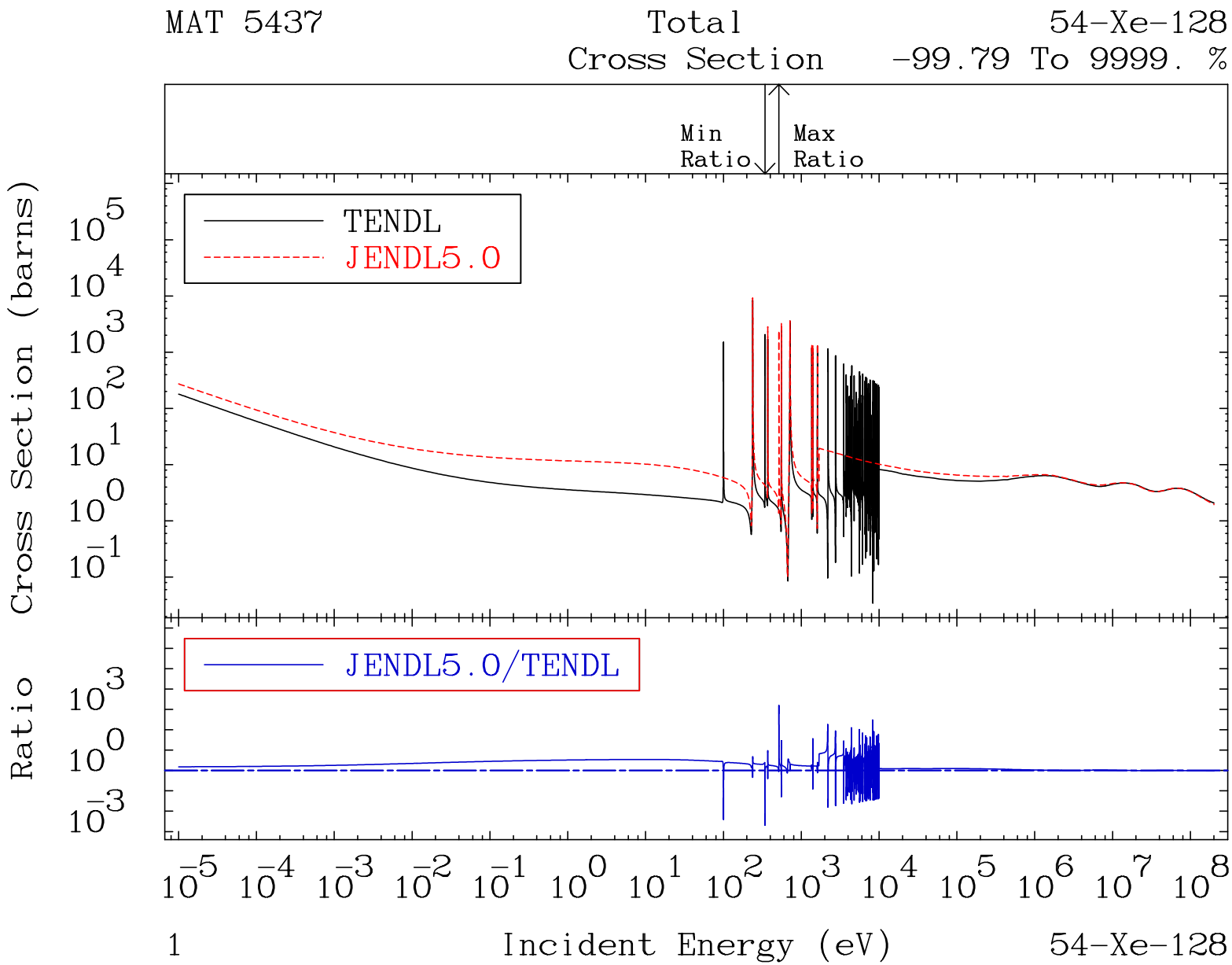
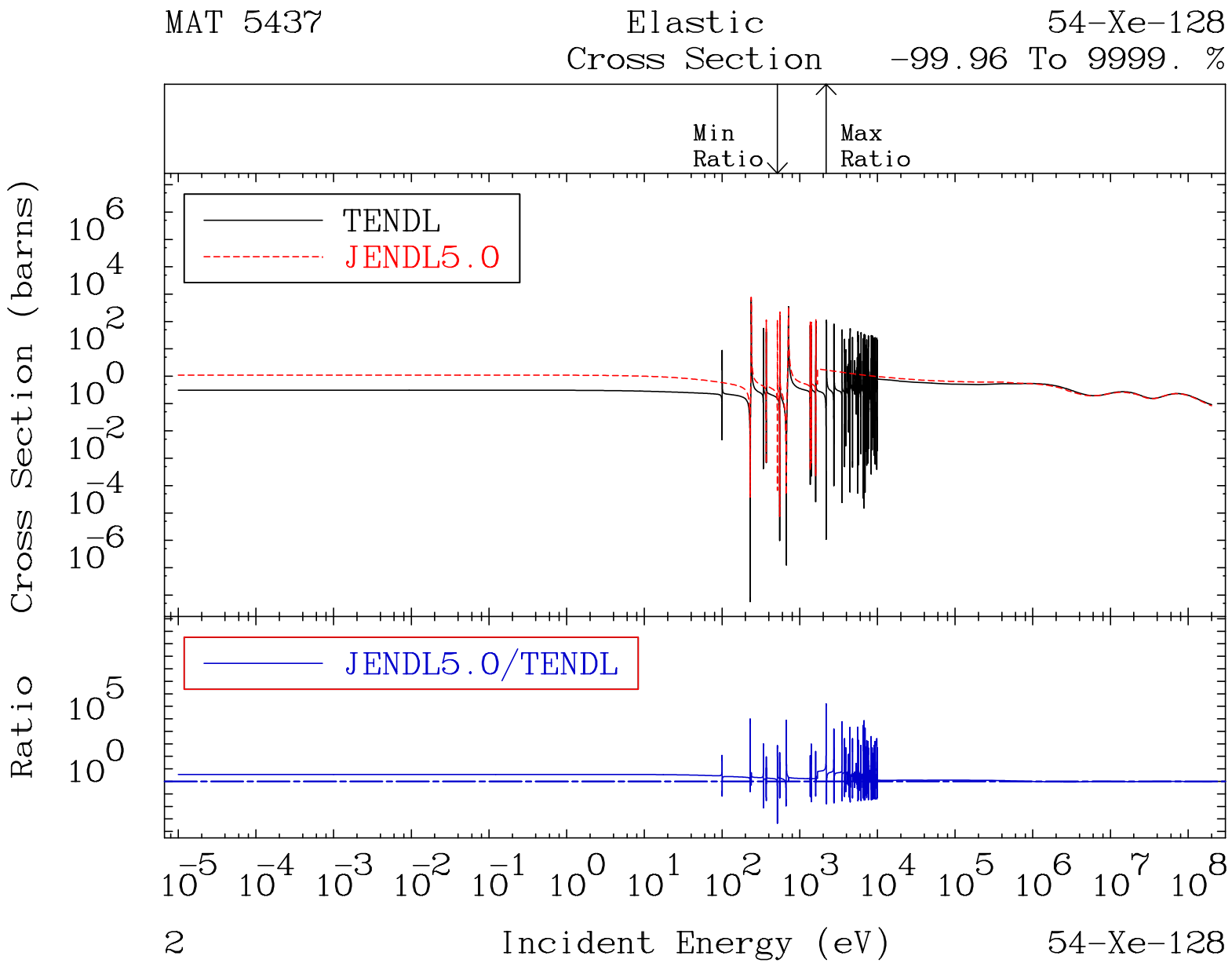
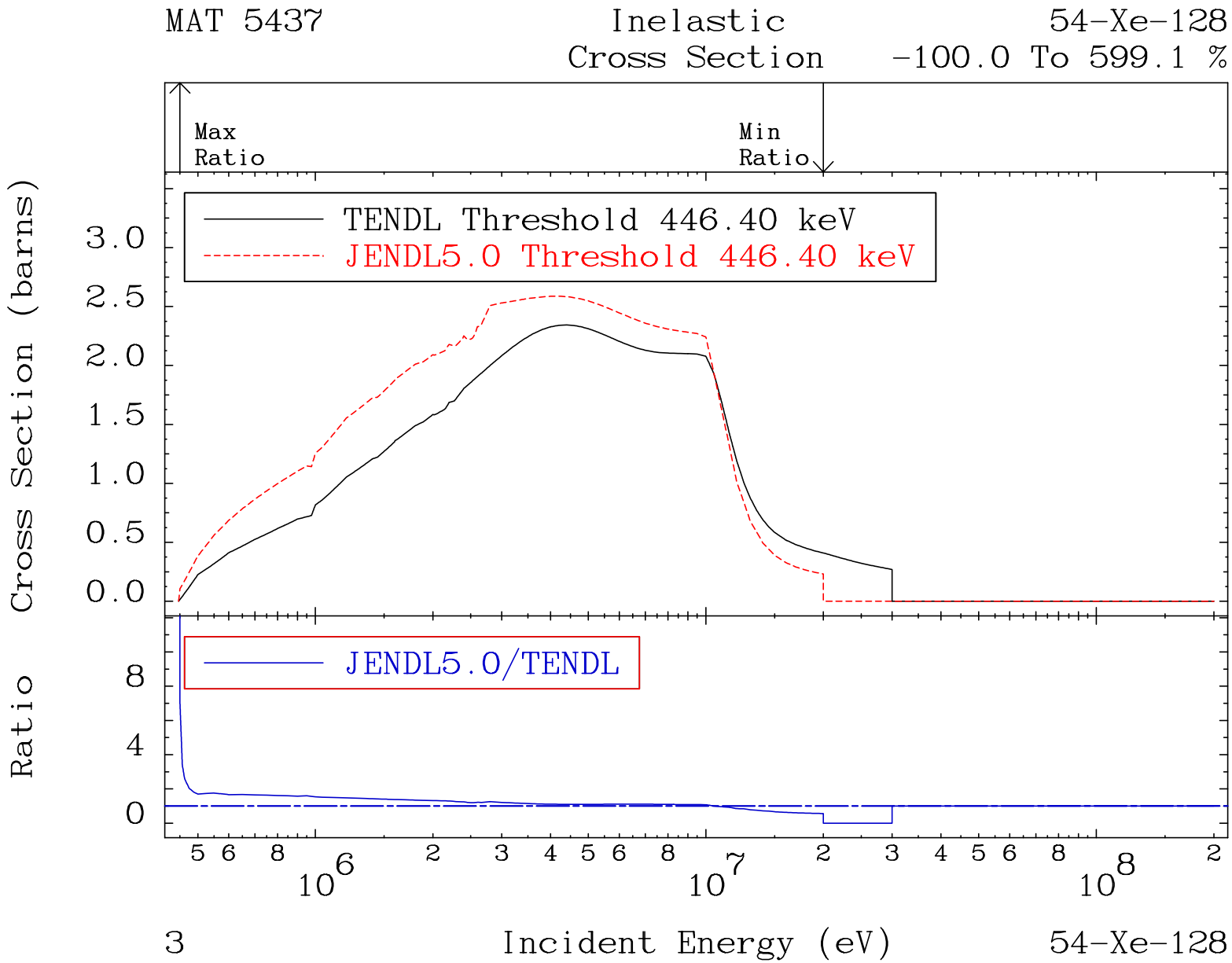
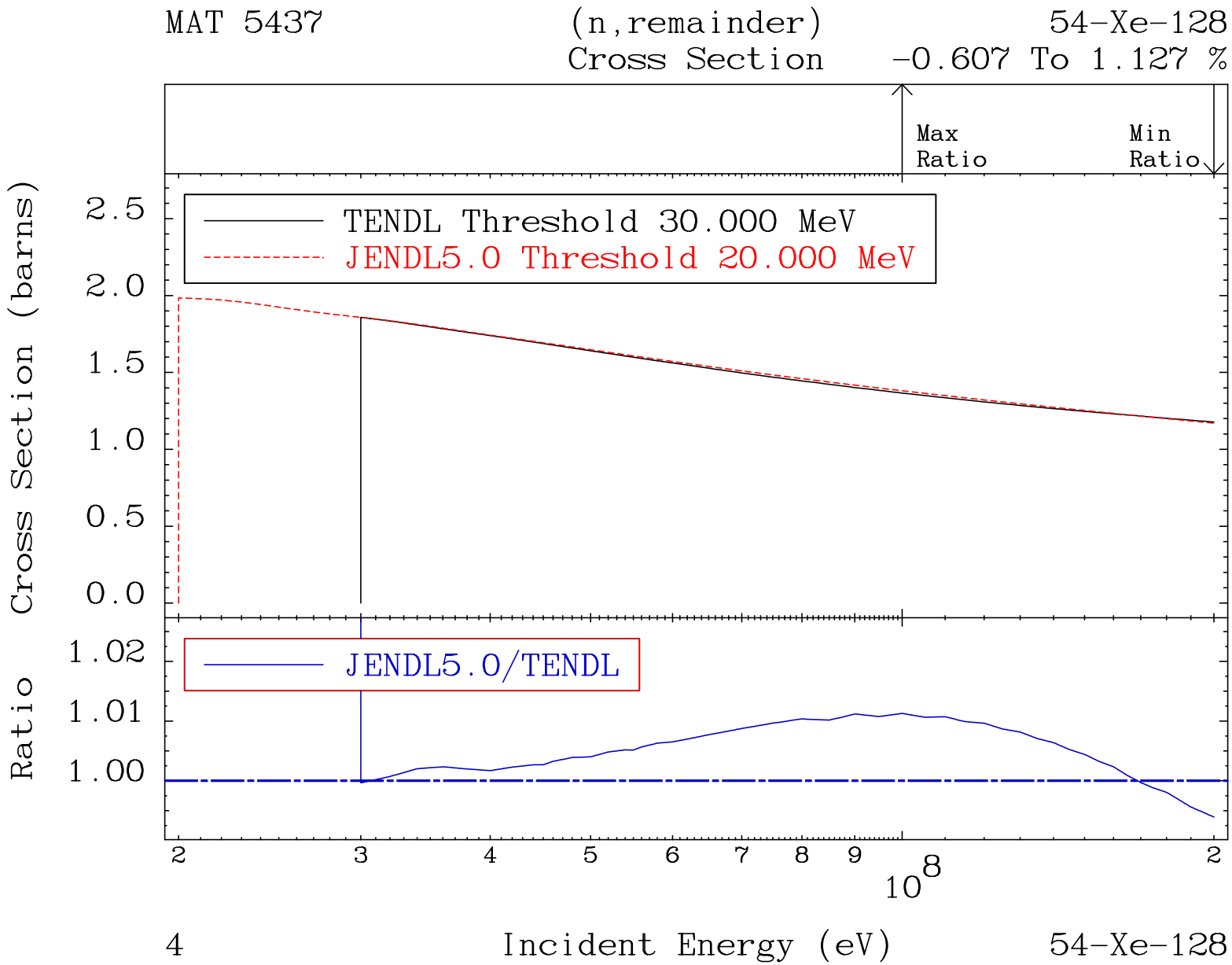
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

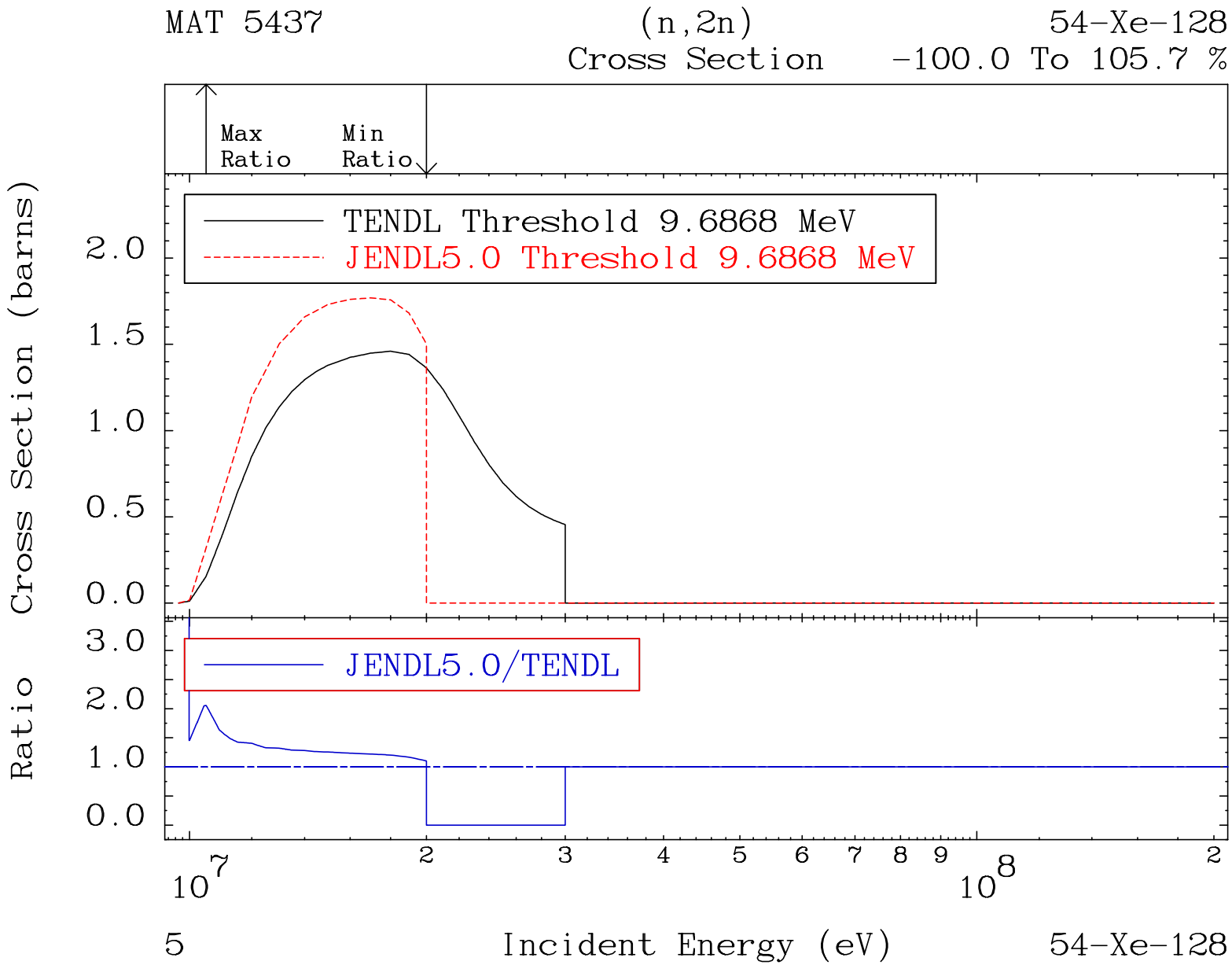
Press Mouse Button to Start

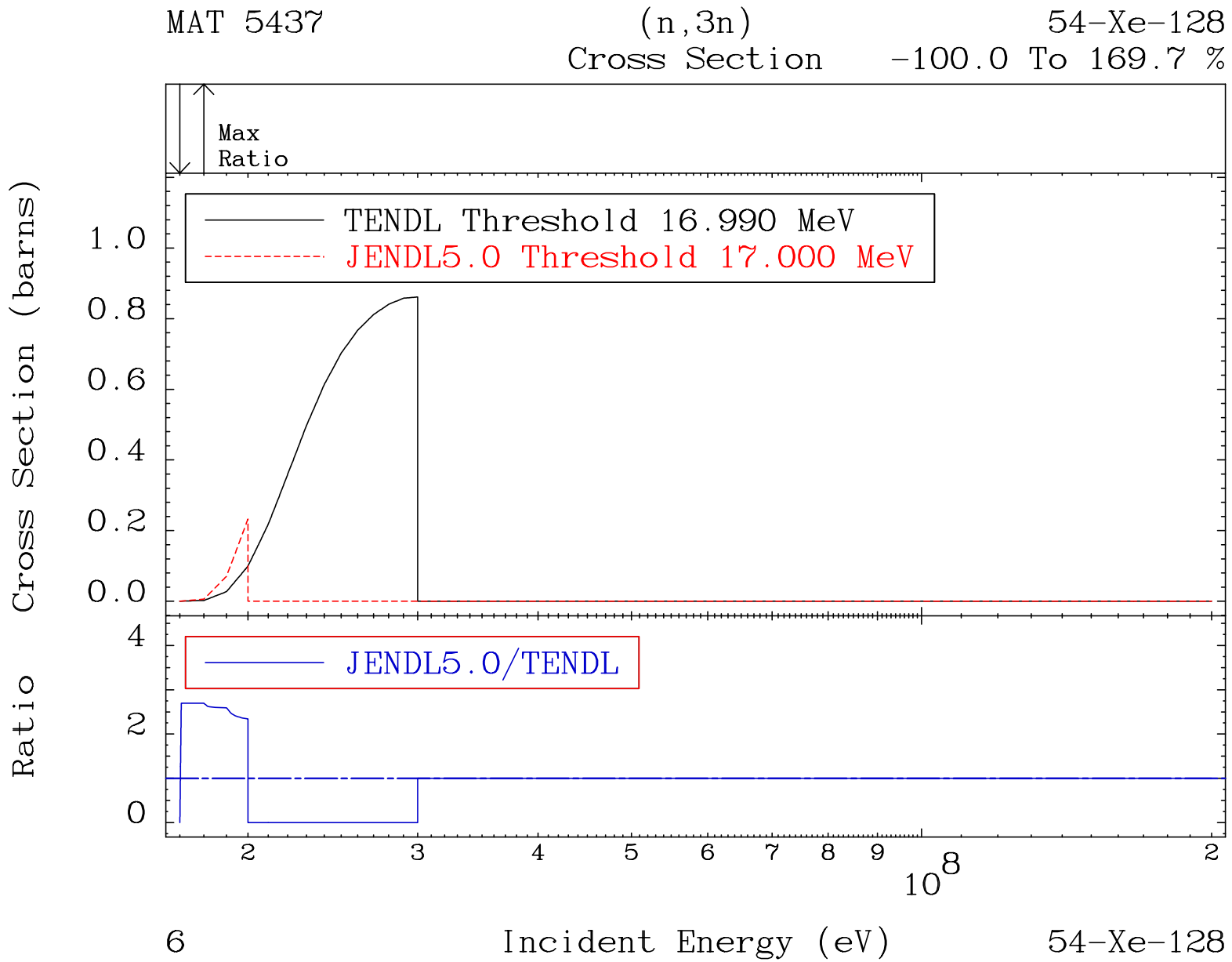

MAT 5437
Total
Cross Section
54-Xe-128
-99.79 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
54-Xe-128

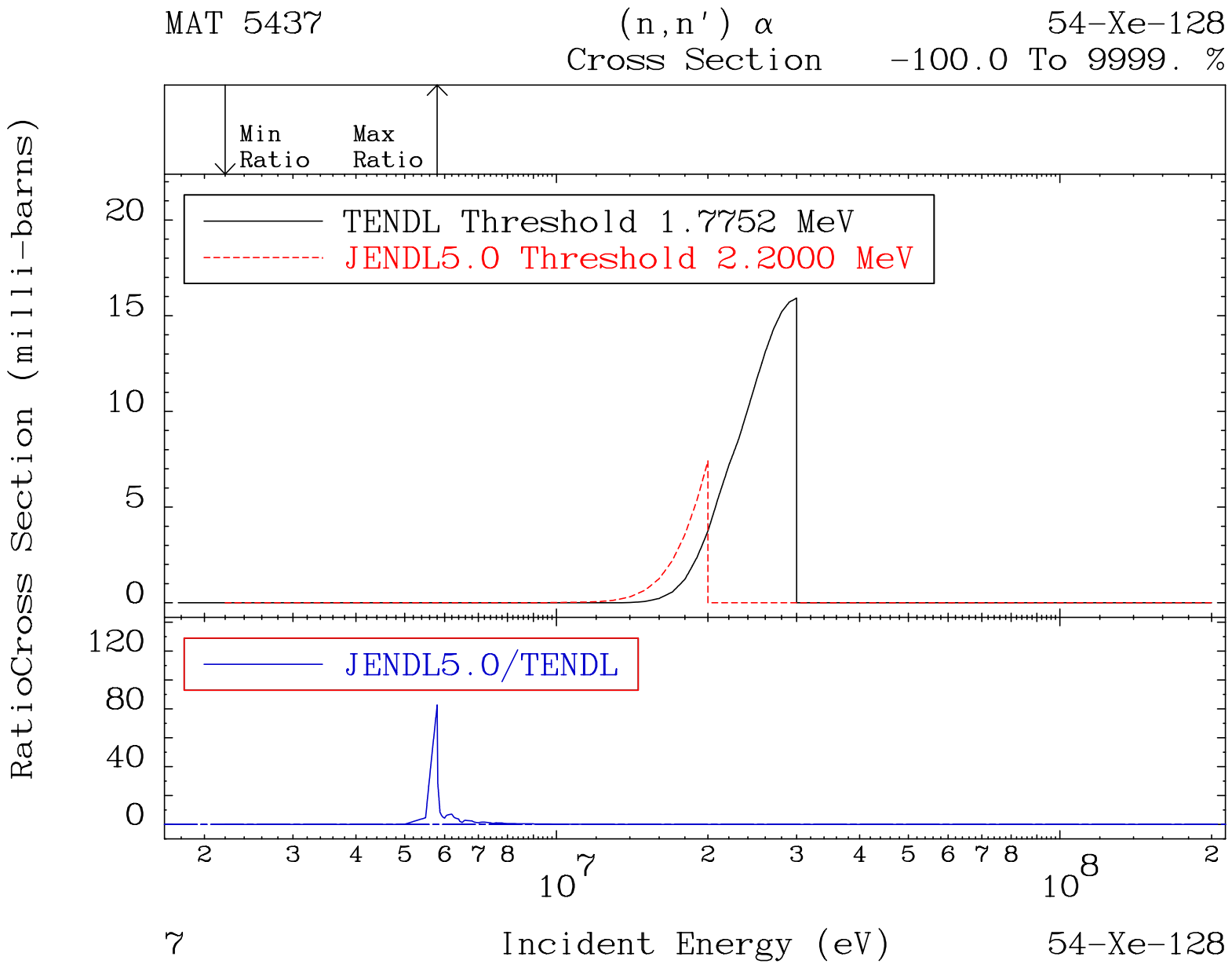

MAT 5437
Elastic
Cross Section
54-Xe-128
-99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
54-Xe-128

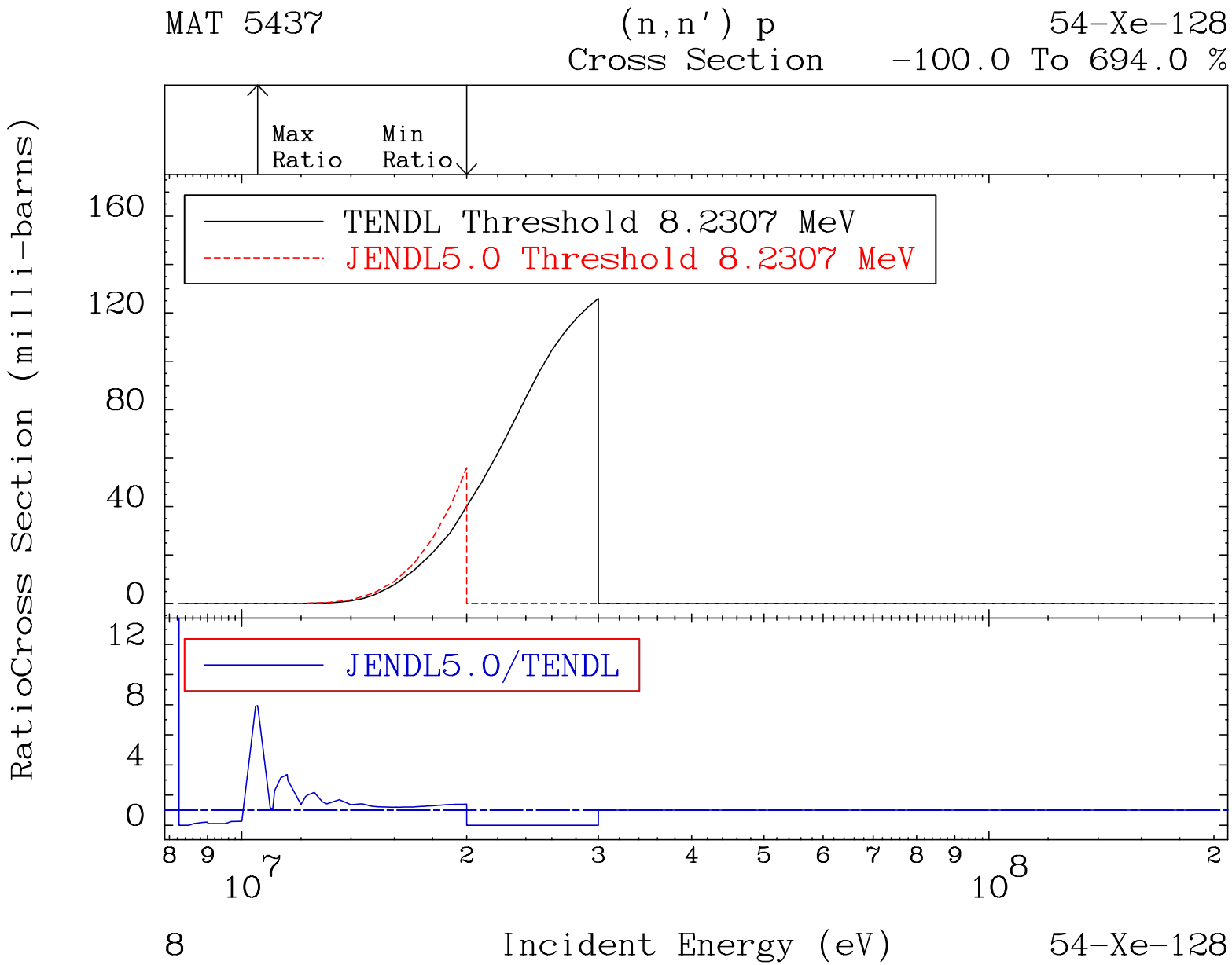

MAT 5437
Inelastic
Cross Section
54-Xe-128
-100.0 To 599.1 %
Max
Ratio
Min
Ratio
TENDL Threshold 446.40 keV
JENDL5.0 Threshold 446.40 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
54-Xe-128

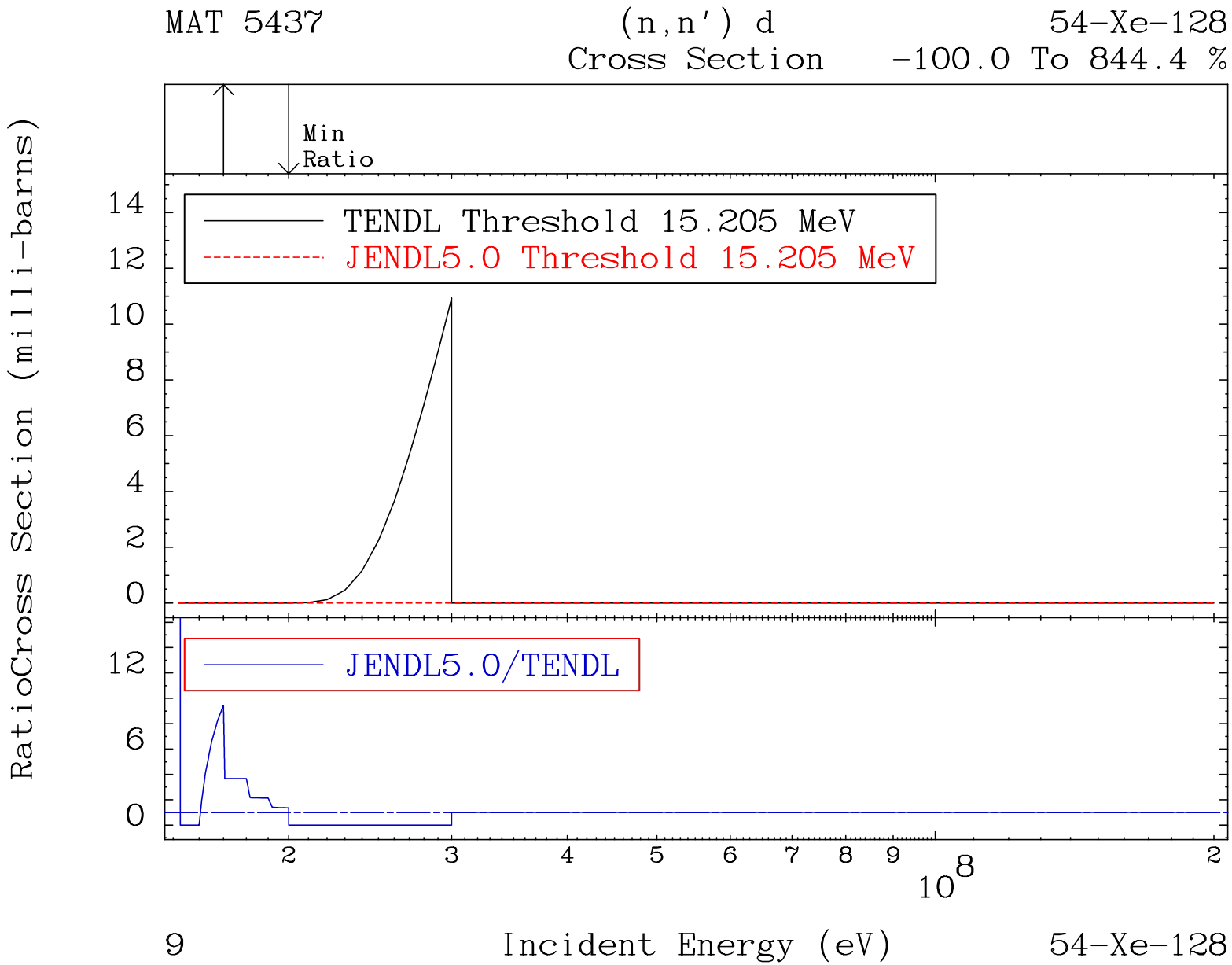

MAT 5437
(n,remainder)
Cross Section
54-Xe-128
-0.607 To 1.127 %
Max Ratio
Min Ratio
TENDL Threshold 30.000 MeV
JENDL5.0 Threshold 20.000 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JENDL5.0/TENDL
Ratio
1.02
1.01
1.00
2
3
4
5
6
7
8
9
2
10^8
4
Incident Energy (eV)
54-Xe-128

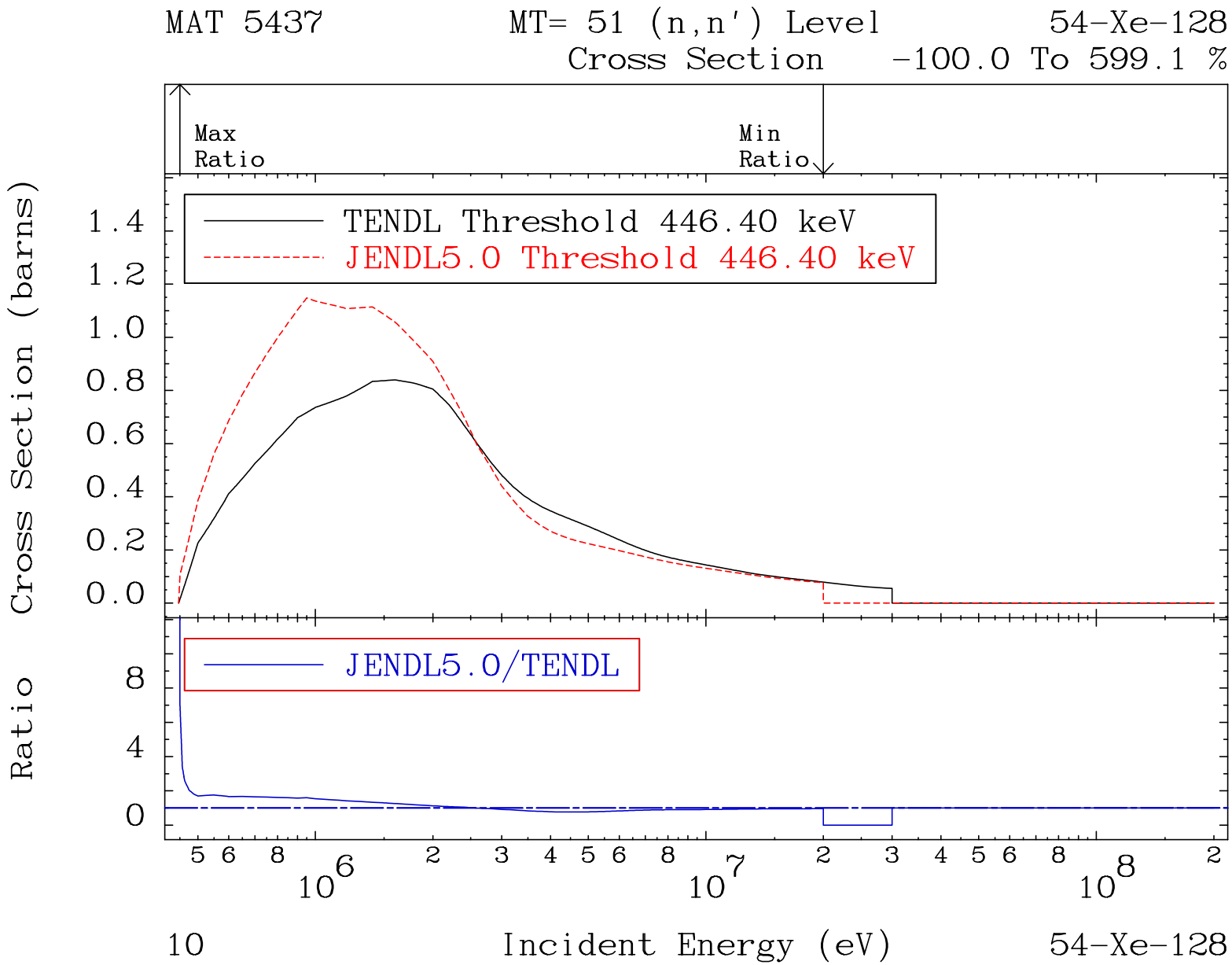

MAT 5437
(n,2n)
Cross Section
54-Xe-128
-100.0 To 105.7 %
Max Ratio
Min Ratio
TENDL Threshold 9.6868 MeV
JENDL5.0 Threshold 9.6868 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
3.0
2.0
1.0
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
54-Xe-128

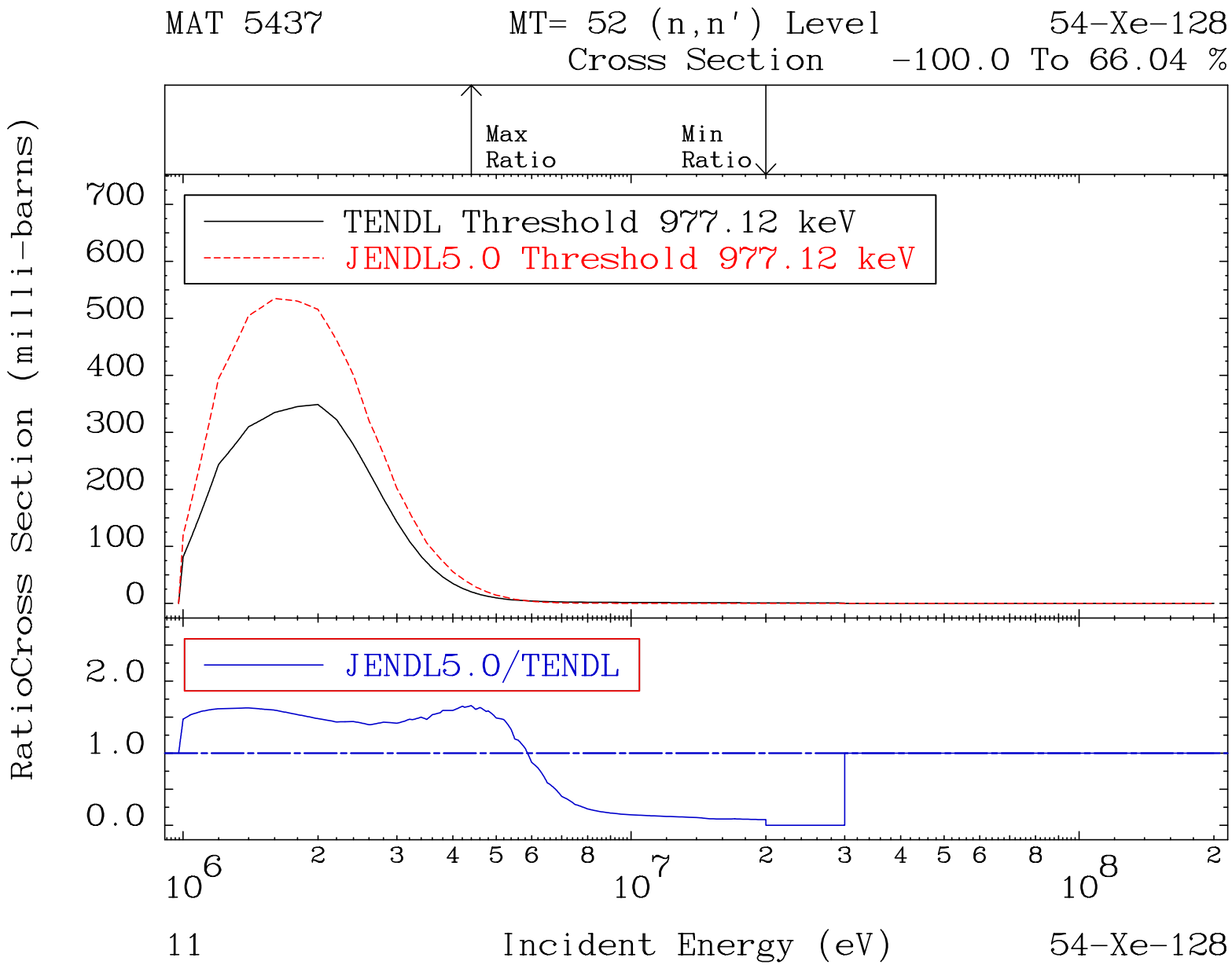

MAT 5437
(n,3n)
Cross Section
54-Xe-128
-100.0 To 169.7 %
Max
Ratio
TENDL Threshold 16.990 MeV
JENDL5.0 Threshold 17.000 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
JENDL5.0/TENDL
Ratio
4
2
0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
54-Xe-128

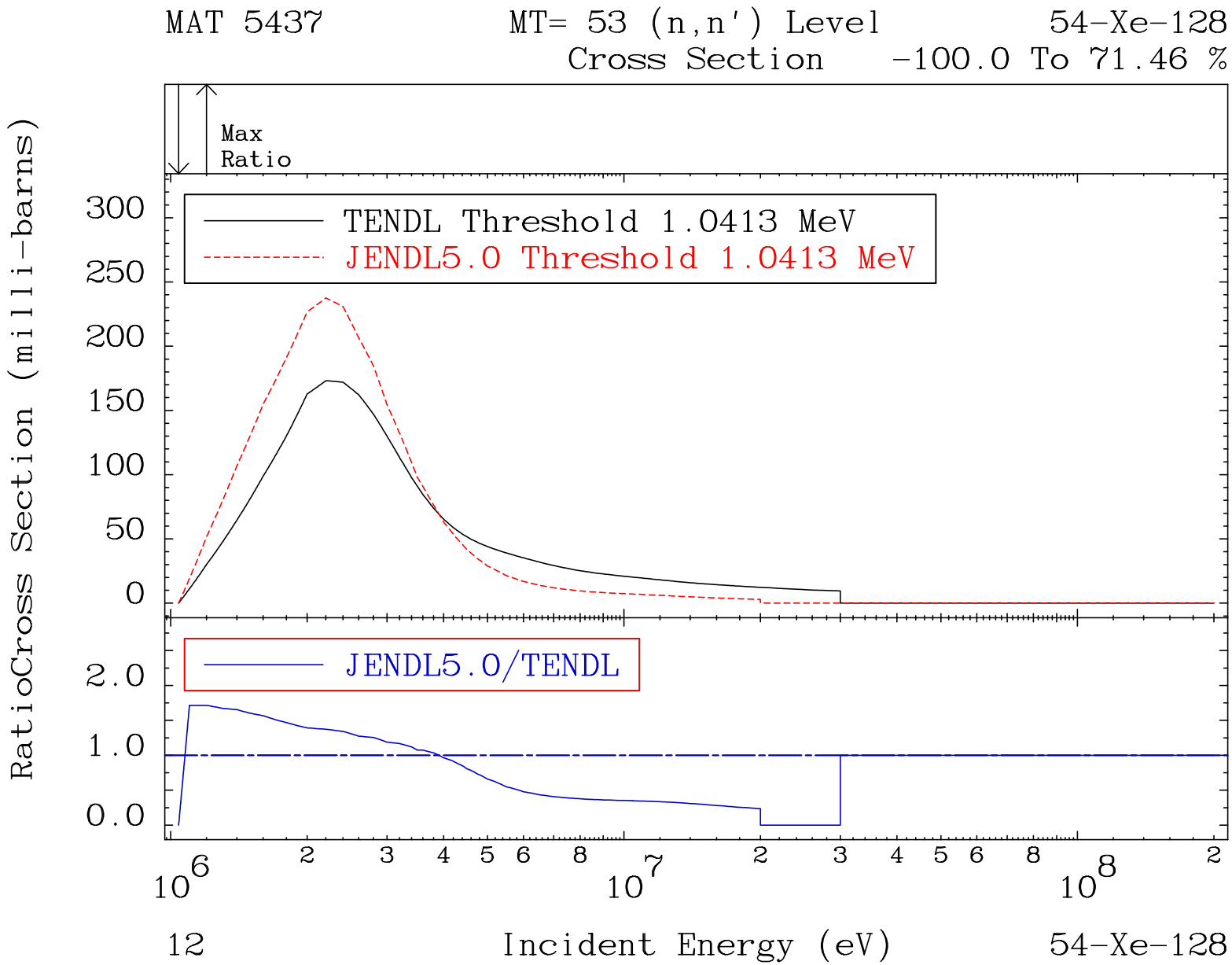

MAT 5437
(n,n') α
54-Xe-128
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.7752 MeV
JENDL5.0 Threshold 2.2000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
54-Xe-128

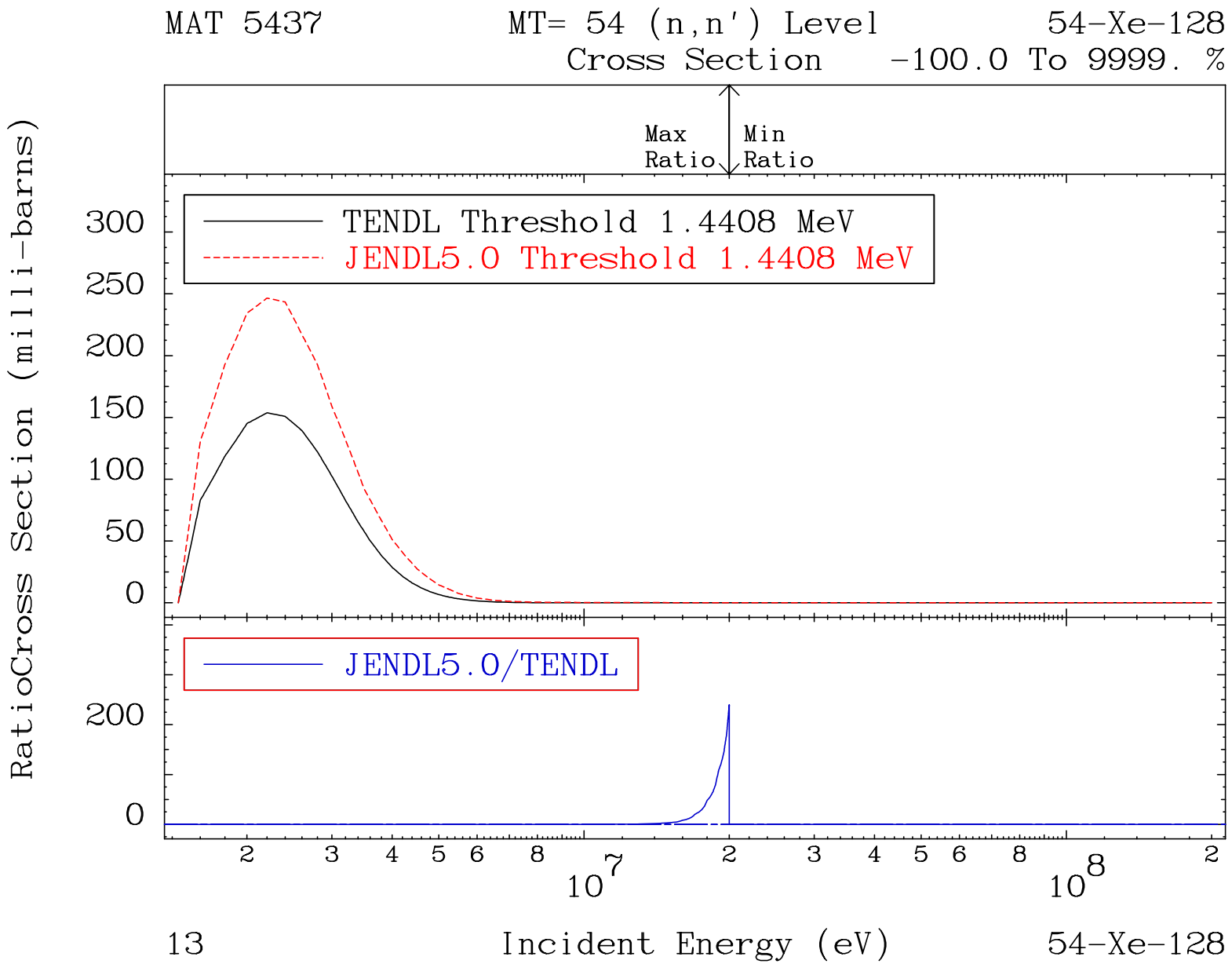

MAT 5437
(n,n') p
Cross Section
54-Xe-128
-100.0 To 694.0 %
Max Ratio
Min Ratio
TENDL Threshold 8.2307 MeV
JENDL5.0 Threshold 8.2307 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
12
8
4
0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
8
Incident Energy (eV)
54-Xe-128

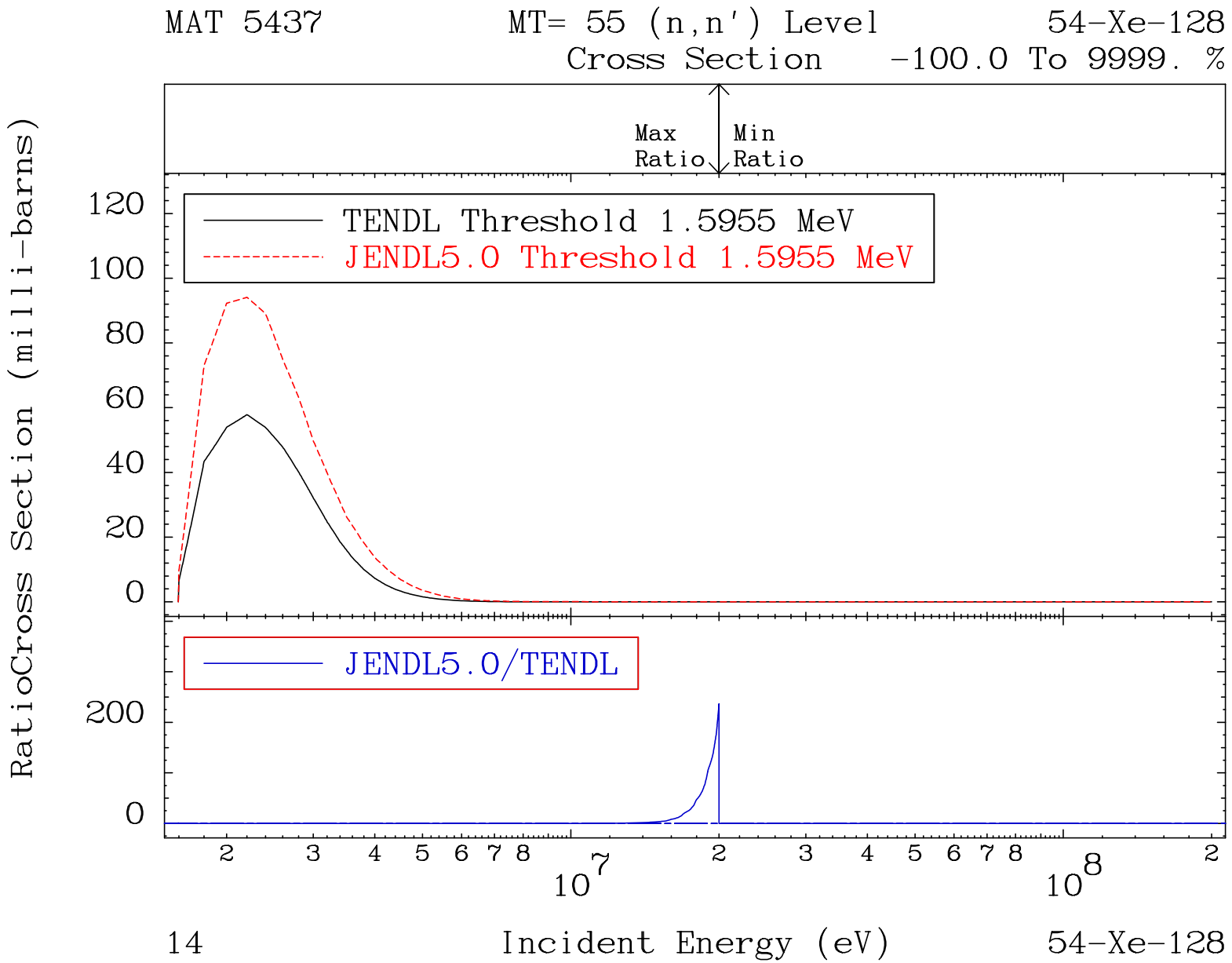

MAT 5437
(n,n') d
Cross Section
54-Xe-128
-100.0 To 844.4 %
Min
Ratio
TENDL Threshold 15.205 MeV
JENDL5.0 Threshold 15.205 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
12
6
0
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
54-Xe-128

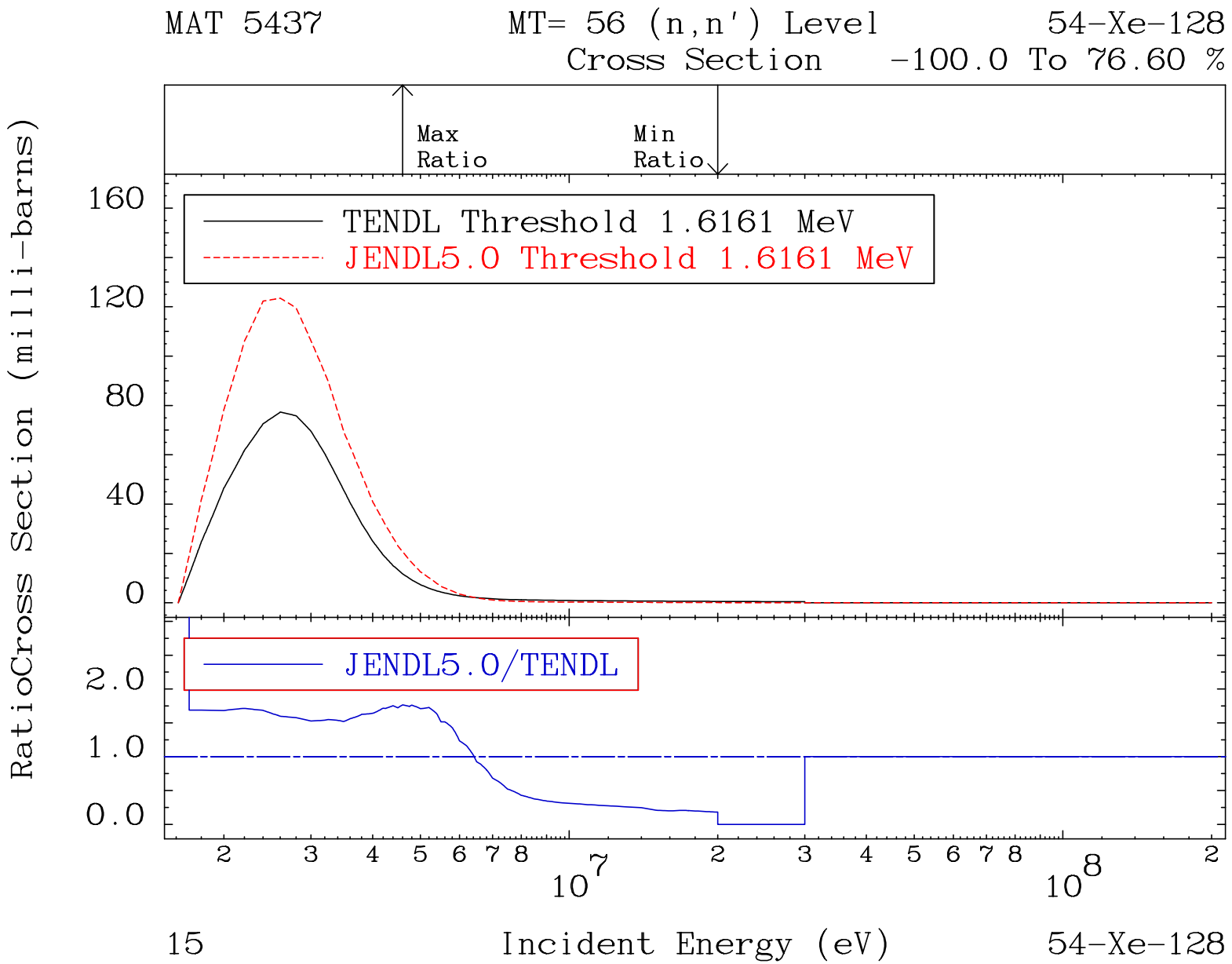

MAT 5437
MT= 51 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 599.1 %
Max Ratio
Min Ratio
TENDL Threshold 446.40 keV
JENDL5.0 Threshold 446.40 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
10
54-Xe-128

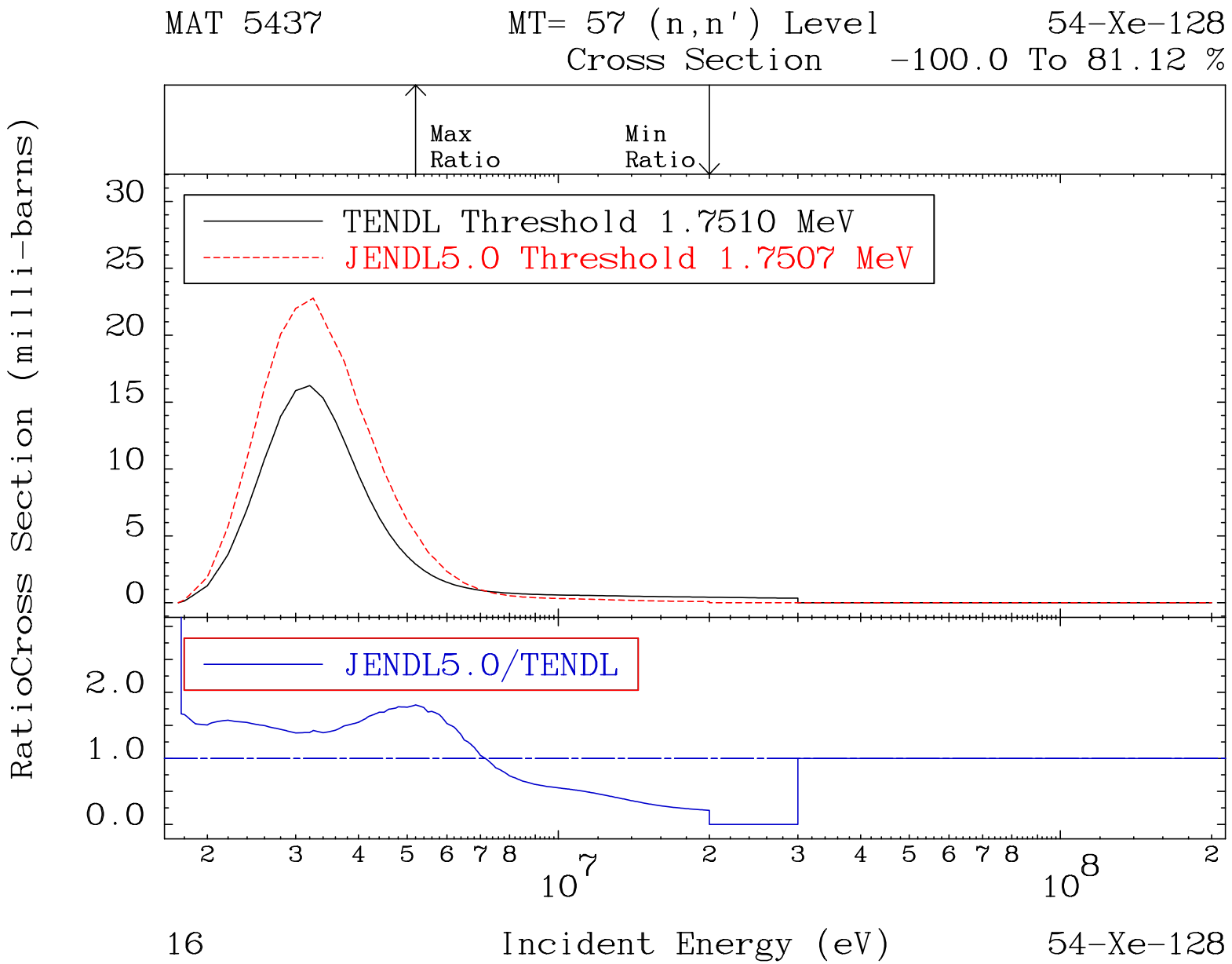

MAT 5437
MT= 52 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 66.04 %
Max Ratio
Min Ratio
TENDL Threshold 977.12 keV
JENDL5.0 Threshold 977.12 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
700
600
500
400
300
200
100
0
2.0
1.0
0.0
10^6
10^7
10^8
Incident Energy (eV)
11
54-Xe-128

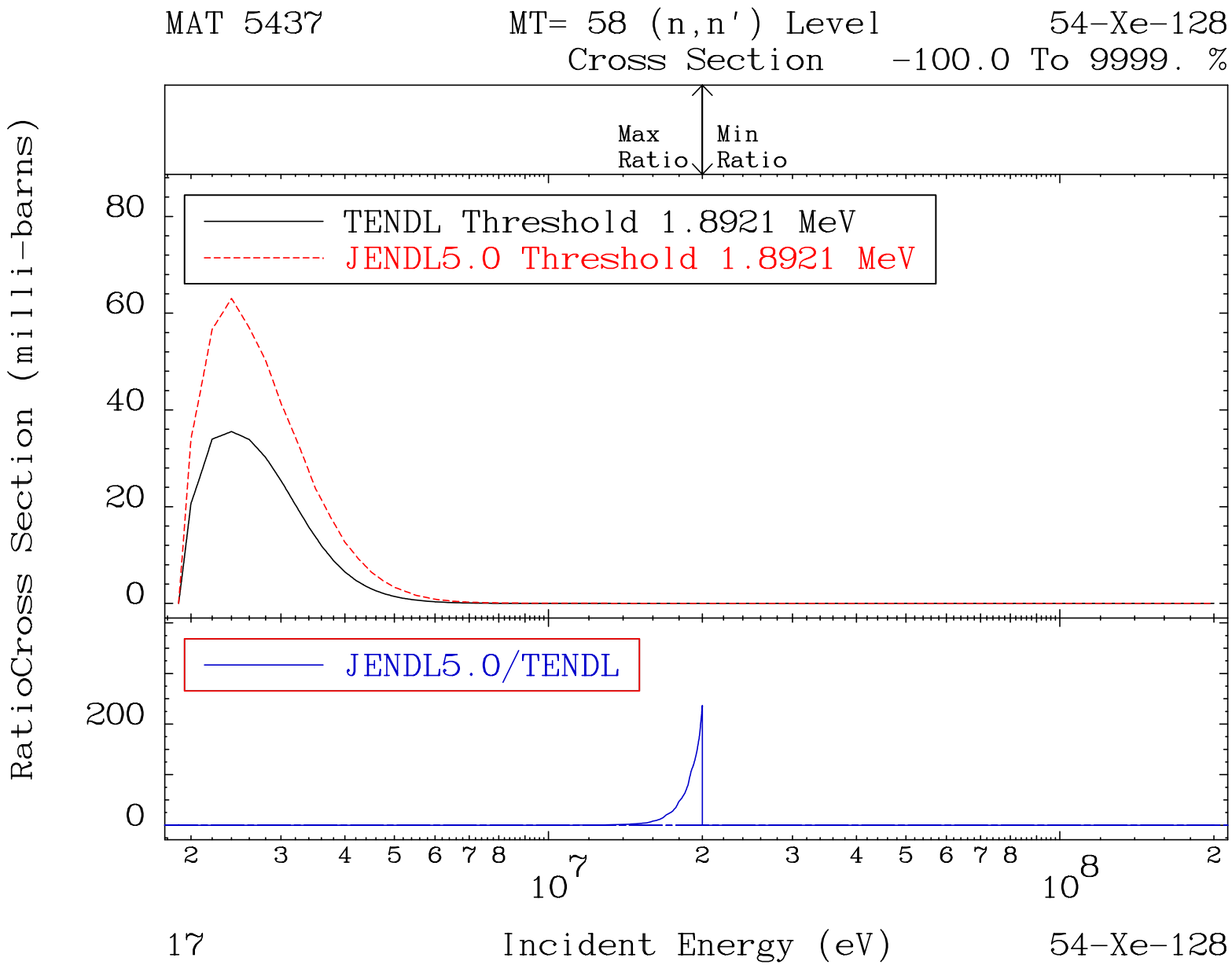

MAT 5437
MT= 53 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 71.46 %
Max
Ratio
TENDL Threshold 1.0413 MeV
JENDL5.0 Threshold 1.0413 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
2.0
1.0
0.0
10^6
10^7
10^8
Incident Energy (eV)
12
54-Xe-128

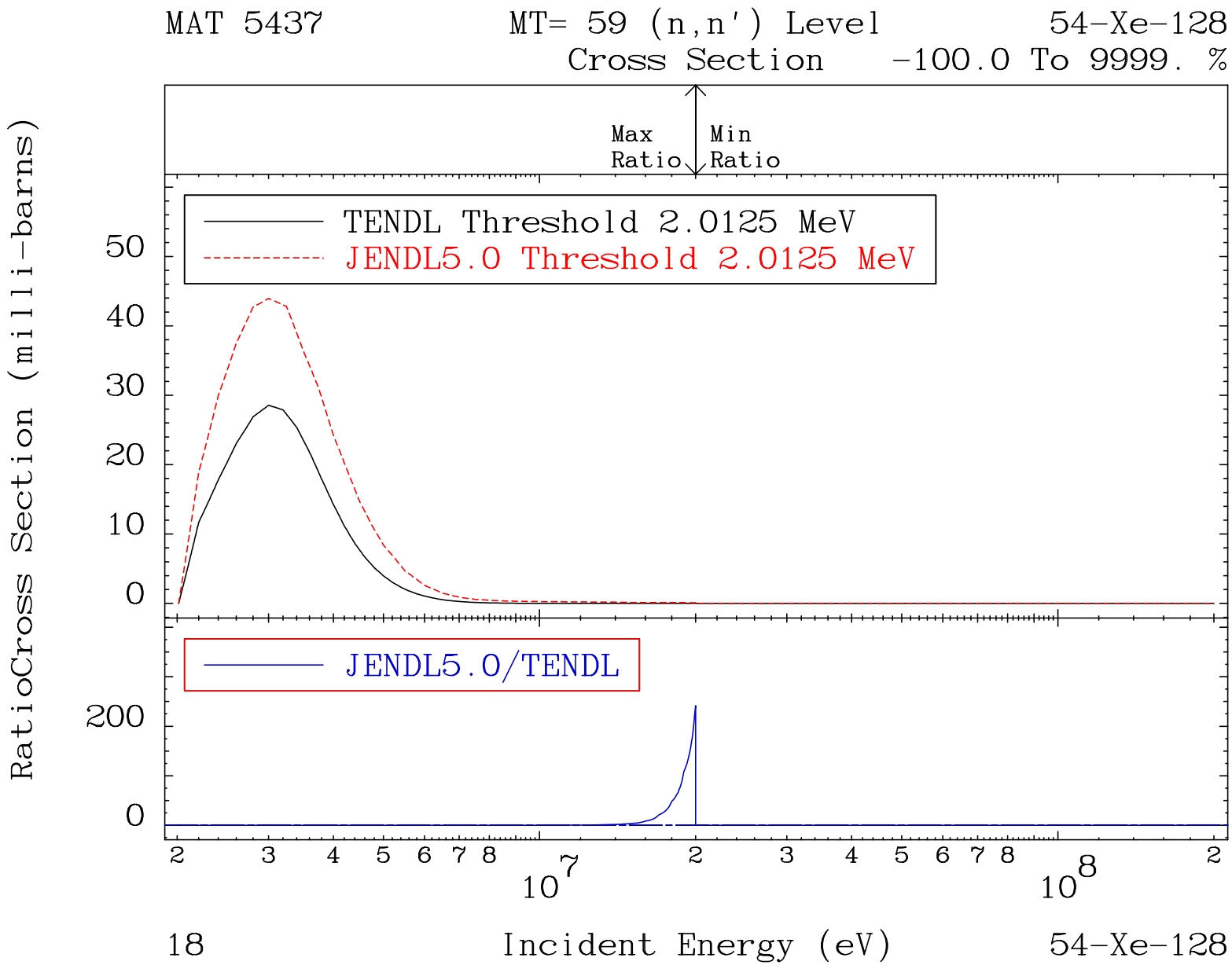

MAT 5437
MT= 54 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.4408 MeV
JENDL5.0 Threshold 1.4408 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
200
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
13
Incident Energy (eV)
54-Xe-128

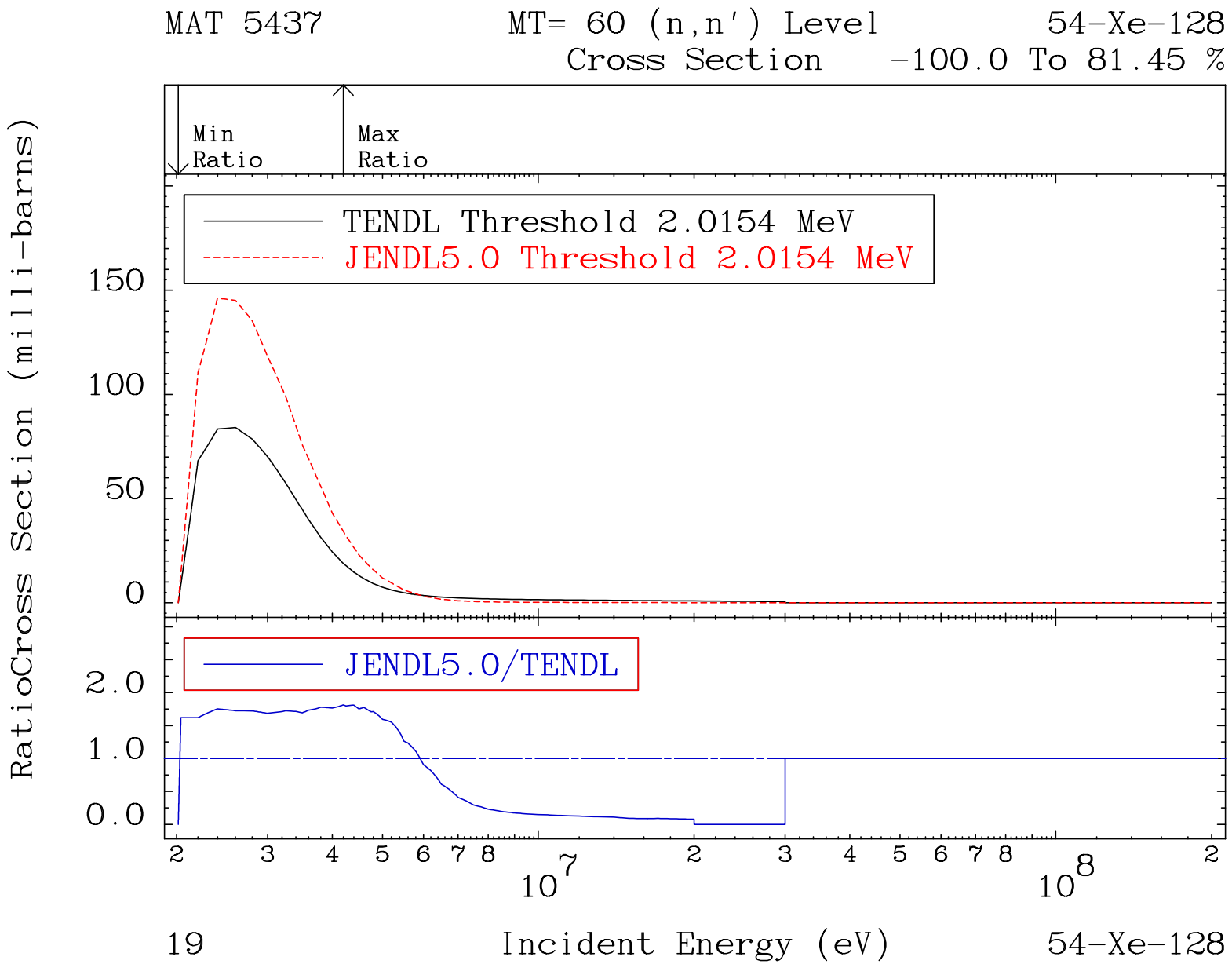

MAT 5437
MT= 55 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.5955 MeV
JENDL5.0 Threshold 1.5955 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
200
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
54-Xe-128

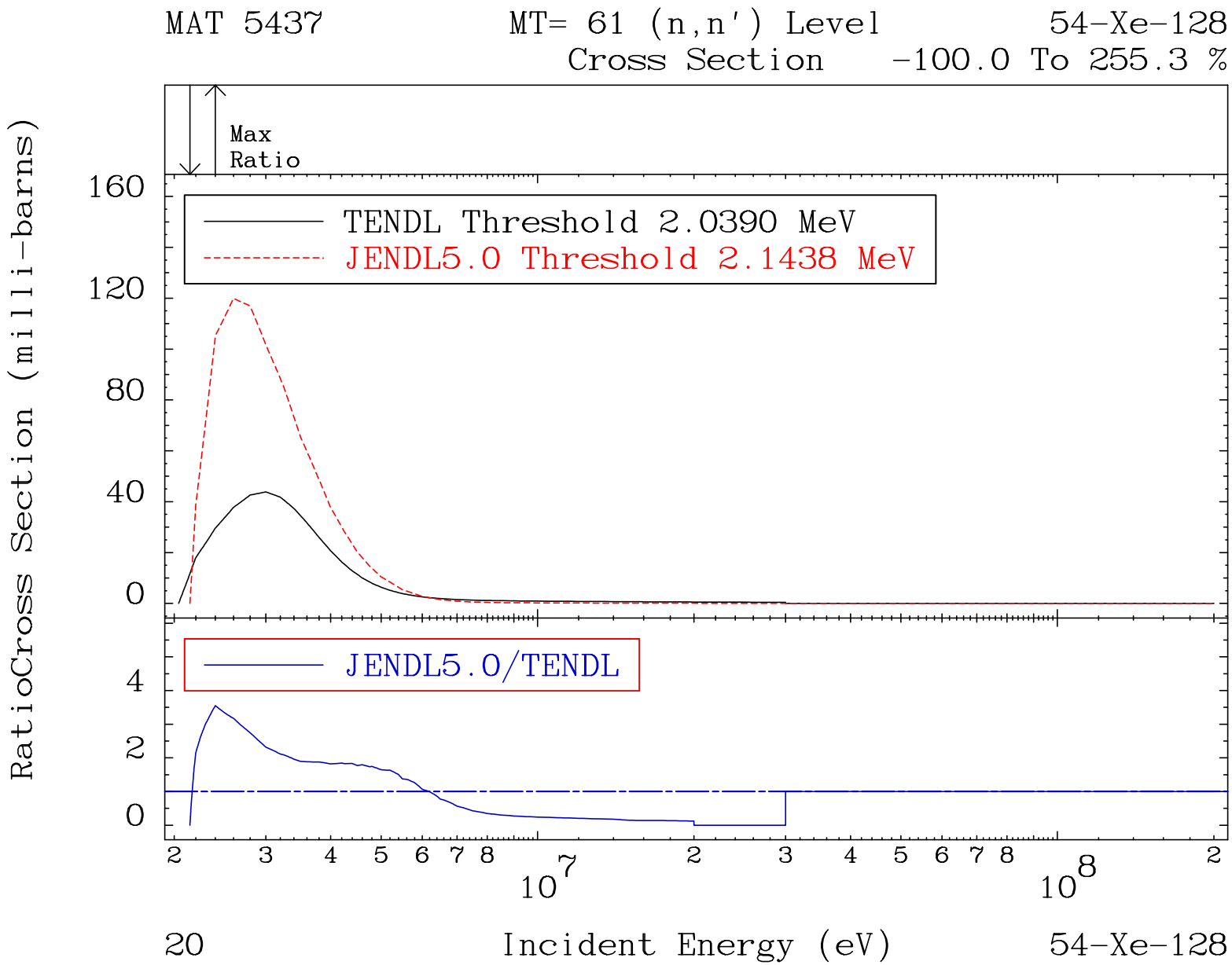

MAT 5437
MT= 56 (n,n') Level
54-Xe-128
Cross Section -100.0 To 76.60 %
Max Ratio
Min Ratio
TENDL Threshold 1.6161 MeV
JENDL5.0 Threshold 1.6161 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
54-Xe-128

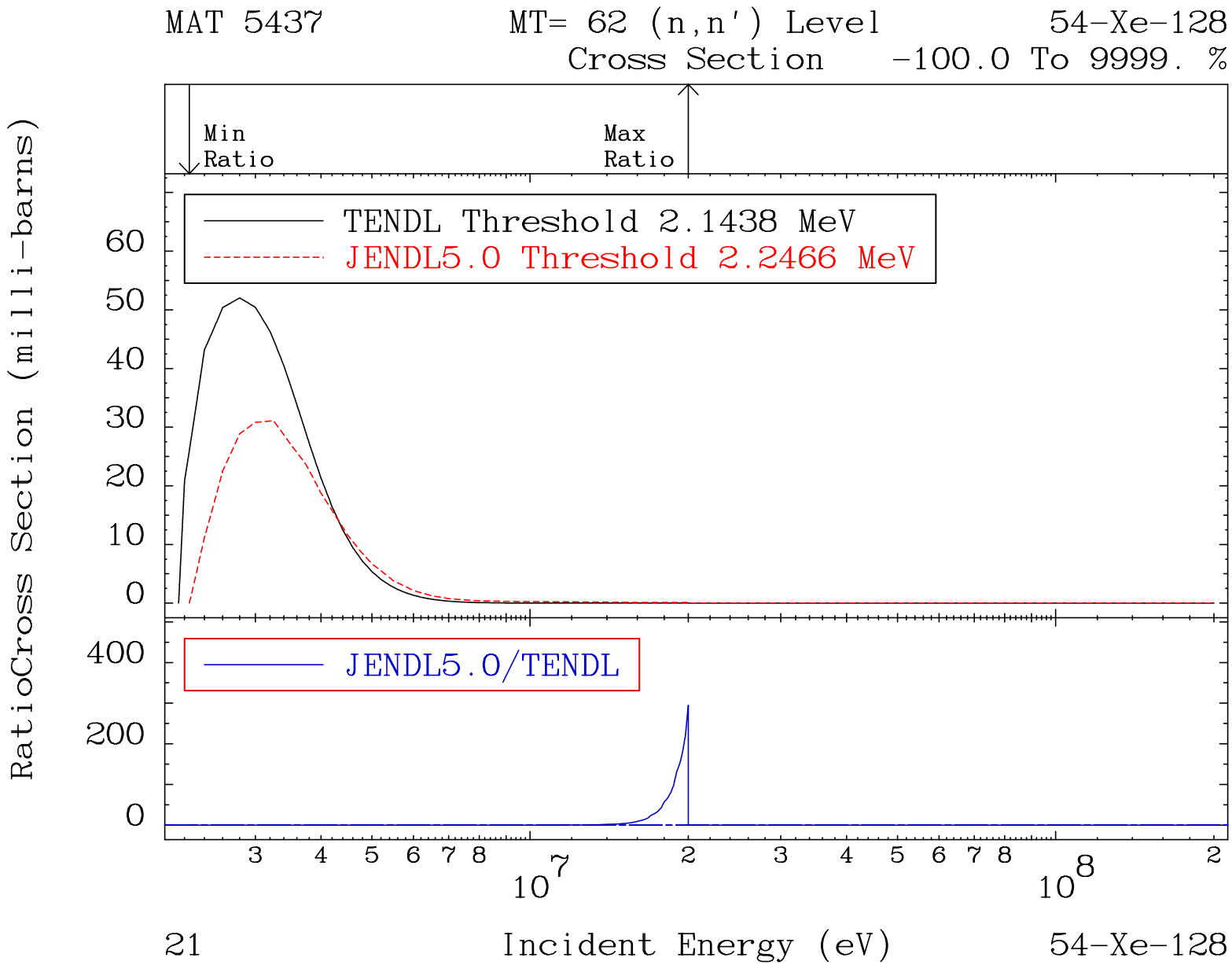

MAT 5437
MT= 57 (n,n') Level
54-Xe-128
Cross Section -100.0 To 81.12 %
Max Ratio
Min Ratio
TENDL Threshold 1.7510 MeV
JENDL5.0 Threshold 1.7507 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
54-Xe-128

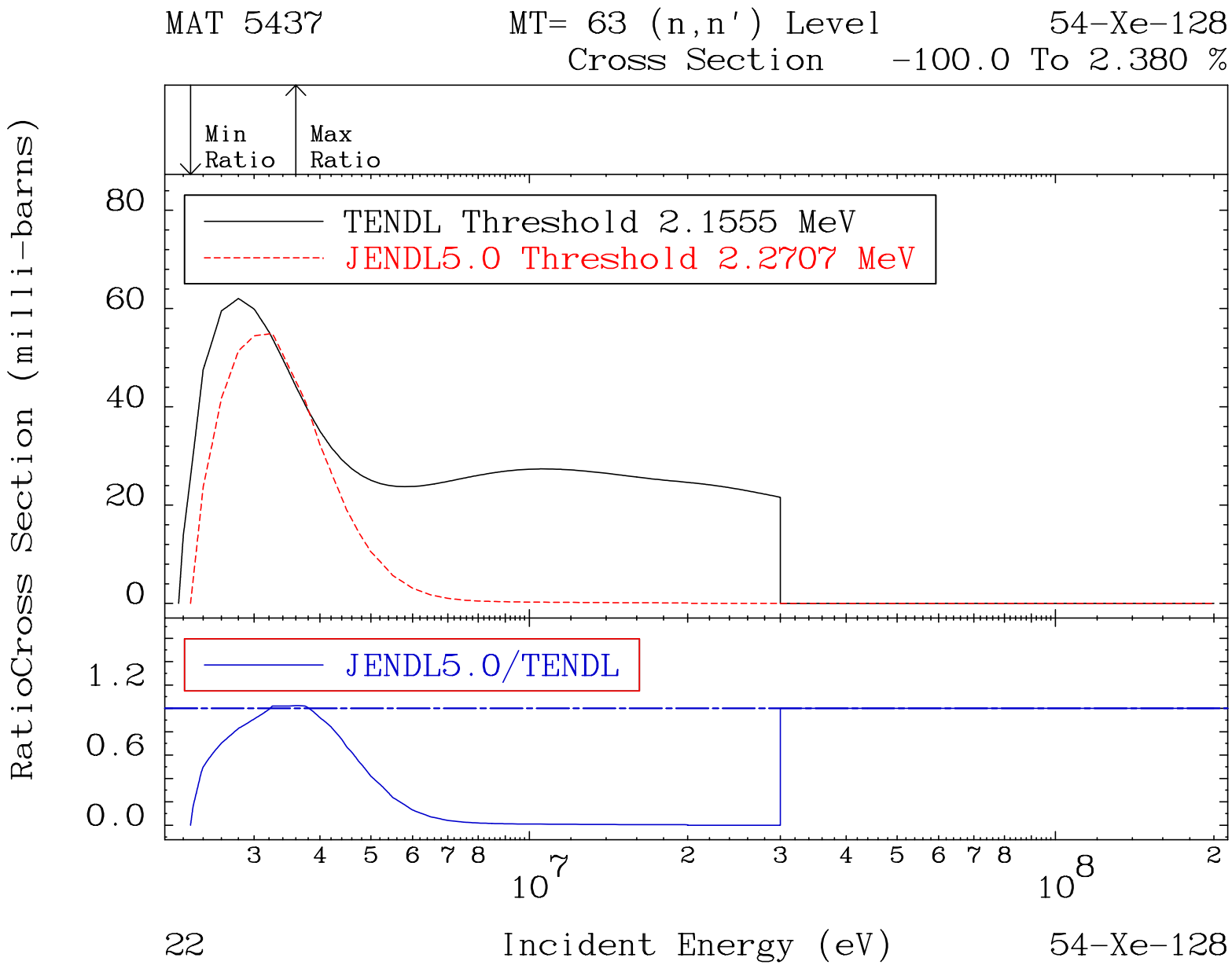

MAT 5437
MT= 58 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.8921 MeV
JENDL5.0 Threshold 1.8921 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
200
0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
17
Incident Energy (eV)
54-Xe-128

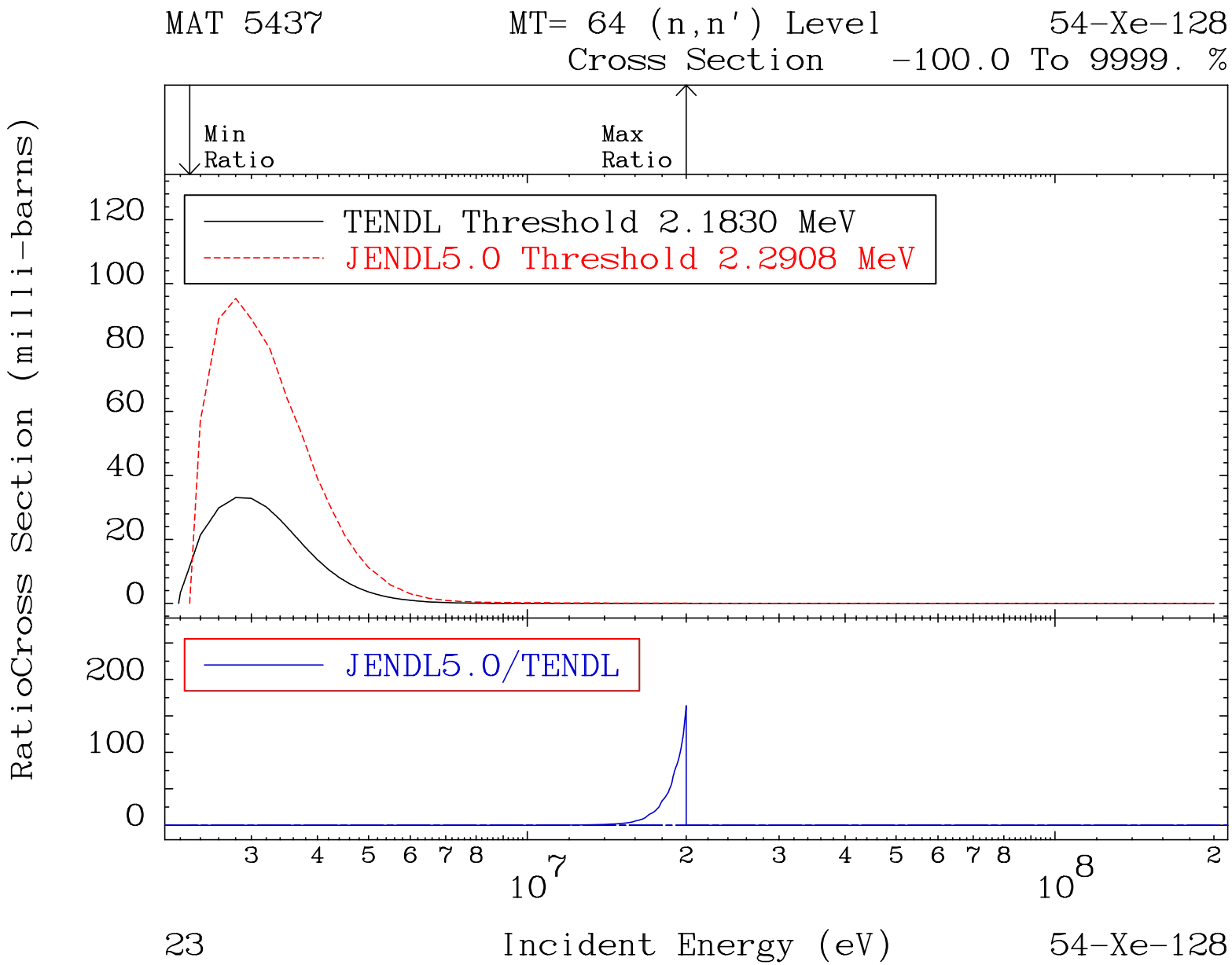

MAT 5437
MT= 59 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.0125 MeV
JENDL5.0 Threshold 2.0125 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
200
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
54-Xe-128

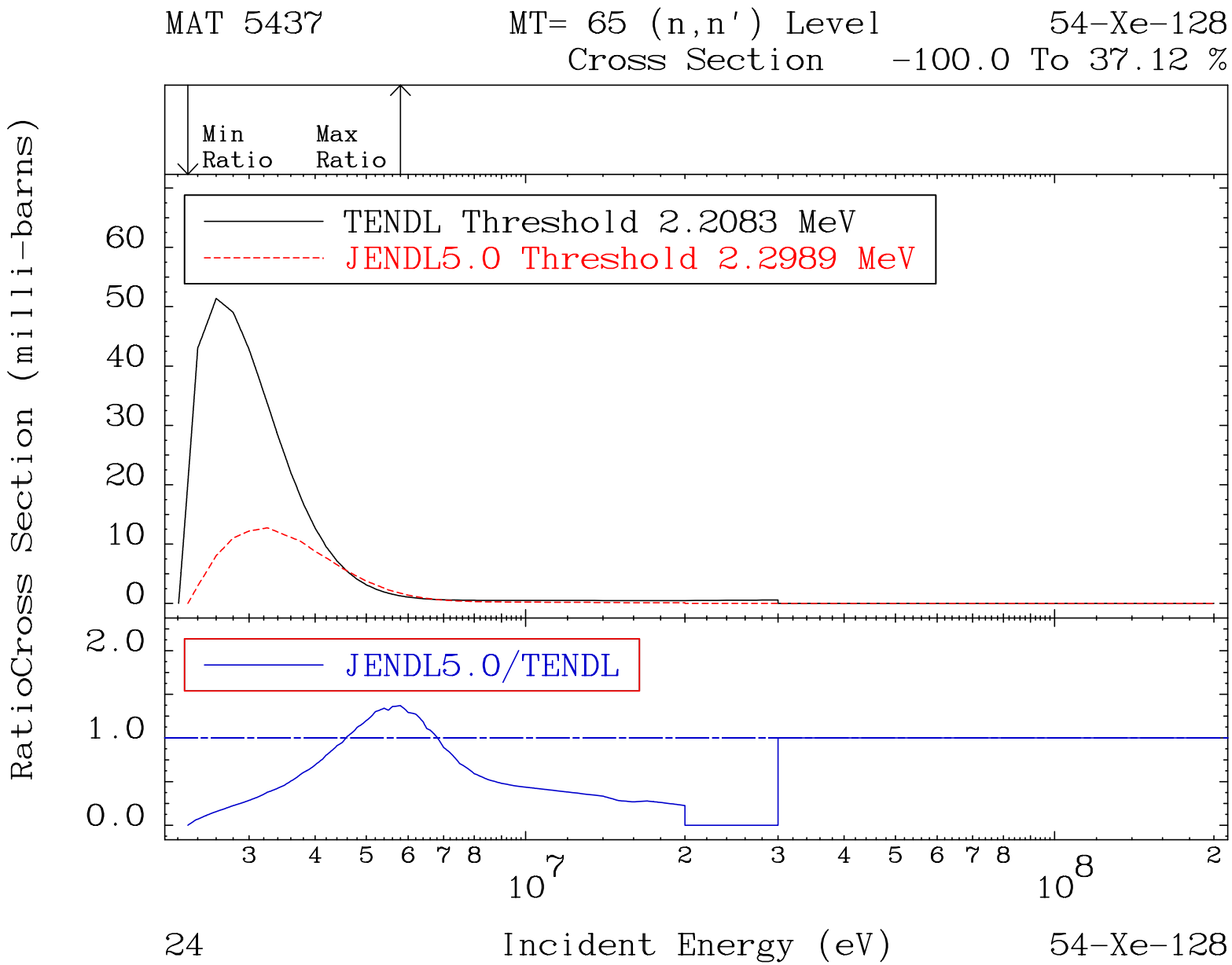

MAT 5437
MT= 60 (n,n') Level
54-Xe-128
Cross Section -100.0 To 81.45 %
Min Ratio
Max Ratio
TENDL Threshold 2.0154 MeV
JENDL5.0 Threshold 2.0154 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
150
100
50
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
54-Xe-128

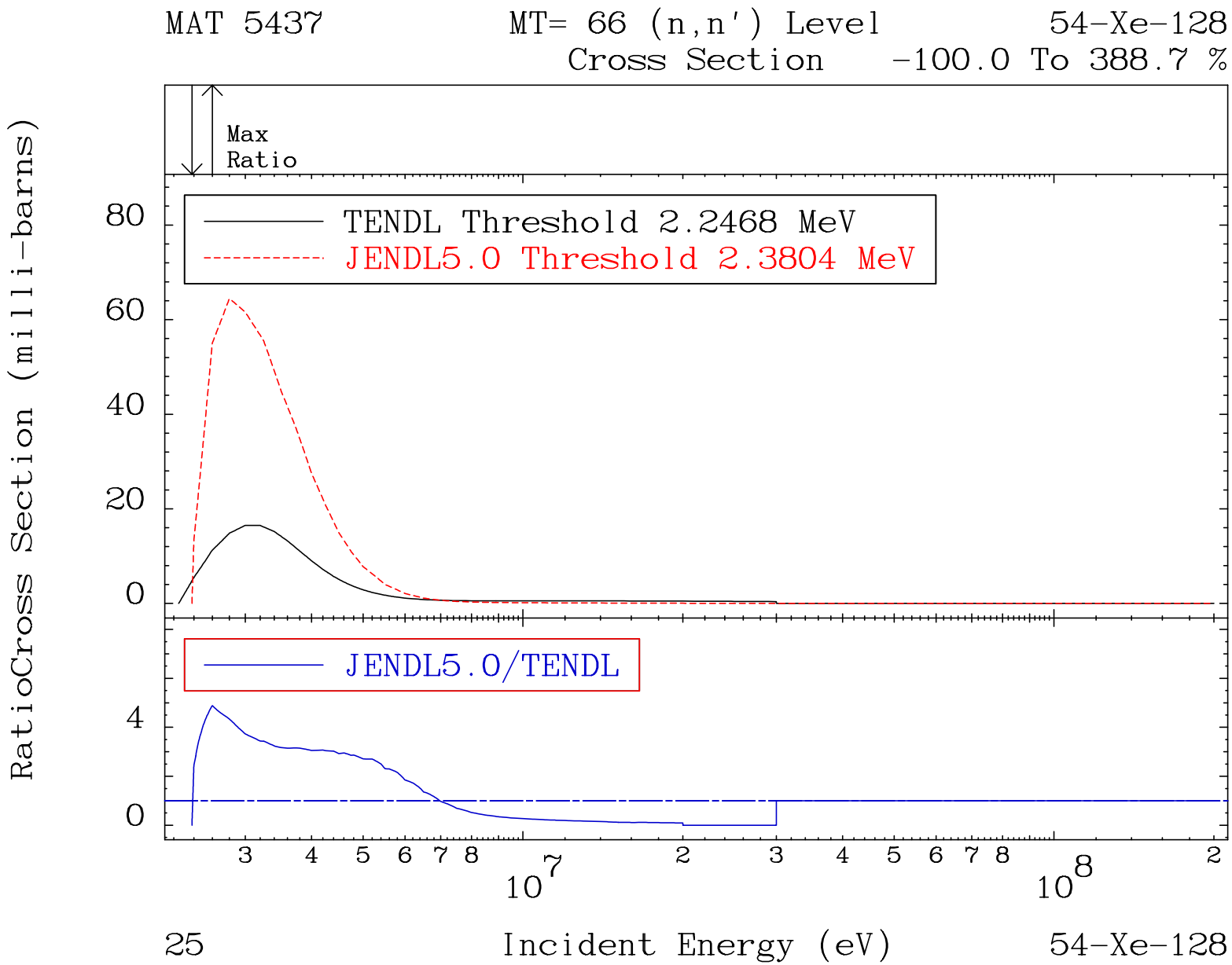

MAT 5437
MT= 61 (n,n') Level
54-Xe-128
Cross Section -100.0 To 255.3 %
Max
Ratio
TENDL Threshold 2.0390 MeV
JENDL5.0 Threshold 2.1438 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
54-Xe-128

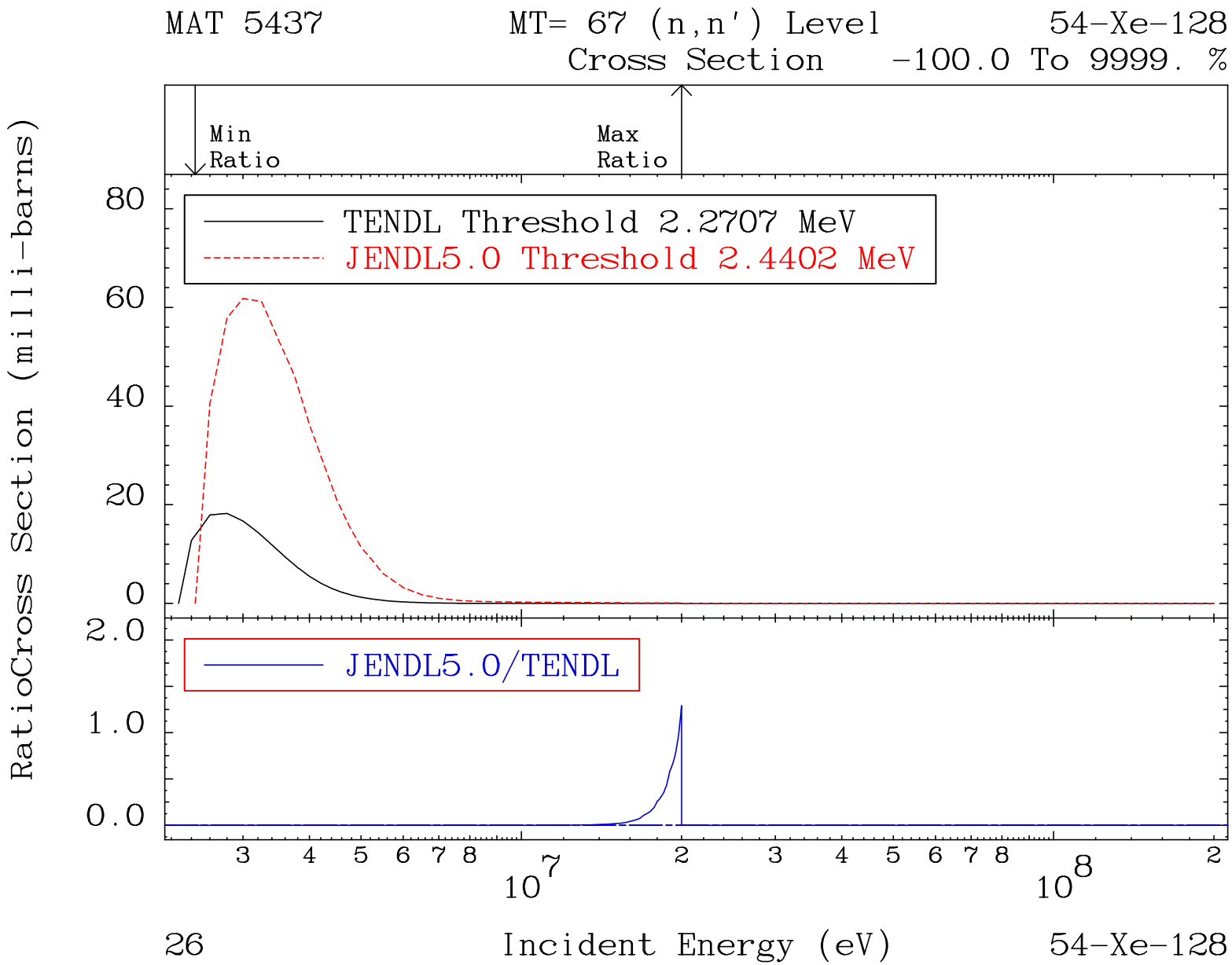

MAT 5437
MT= 62 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.1438 MeV
JENDL5.0 Threshold 2.2466 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
400
200
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
54-Xe-128

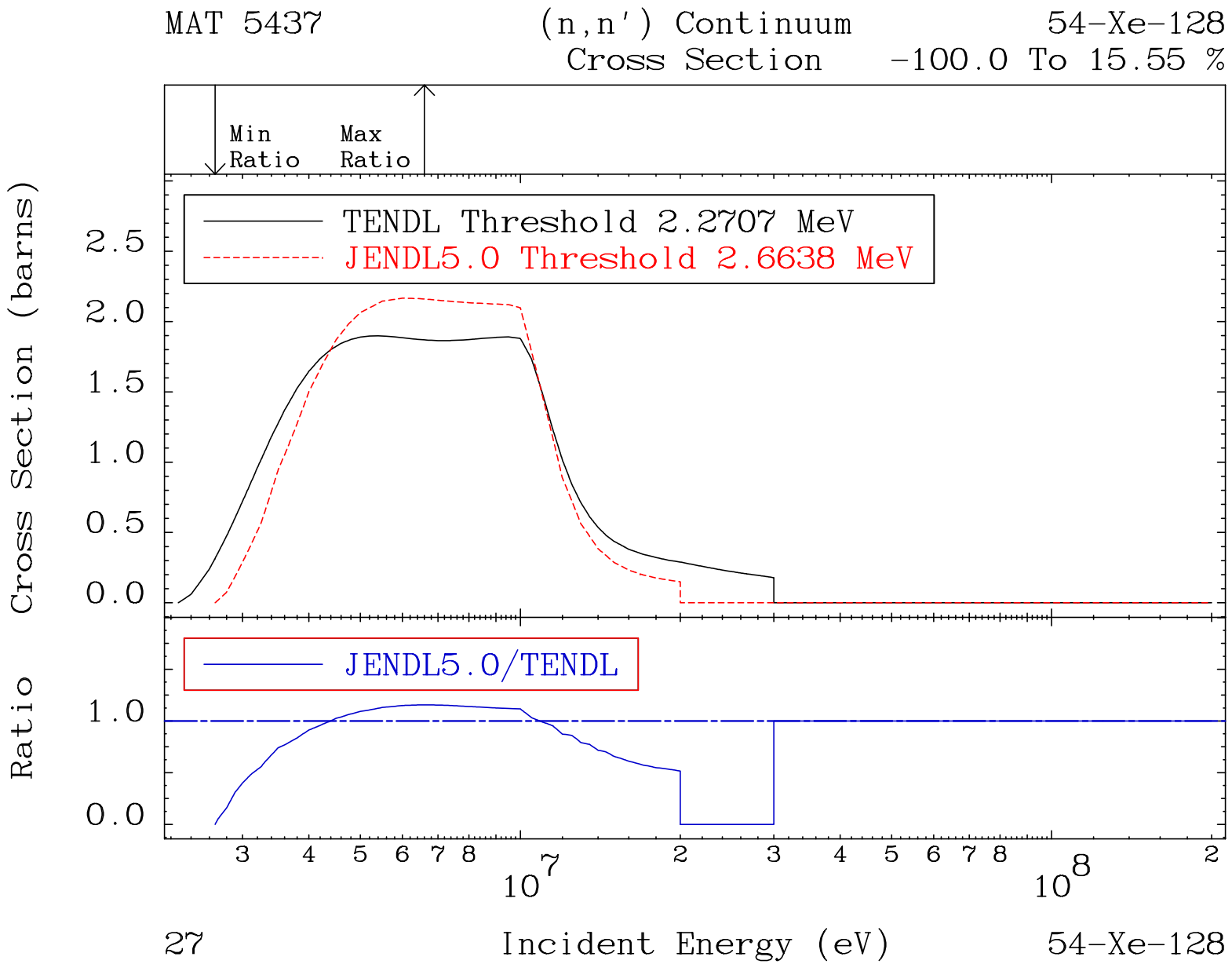

MAT 5437
MT= 63 (n,n') Level
54-Xe-128
Cross Section -100.0 To 2.380 %
Min Ratio
Max Ratio
TENDL Threshold 2.1555 MeV
JENDL5.0 Threshold 2.2707 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.2
0.6
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
22
Incident Energy (eV)
54-Xe-128

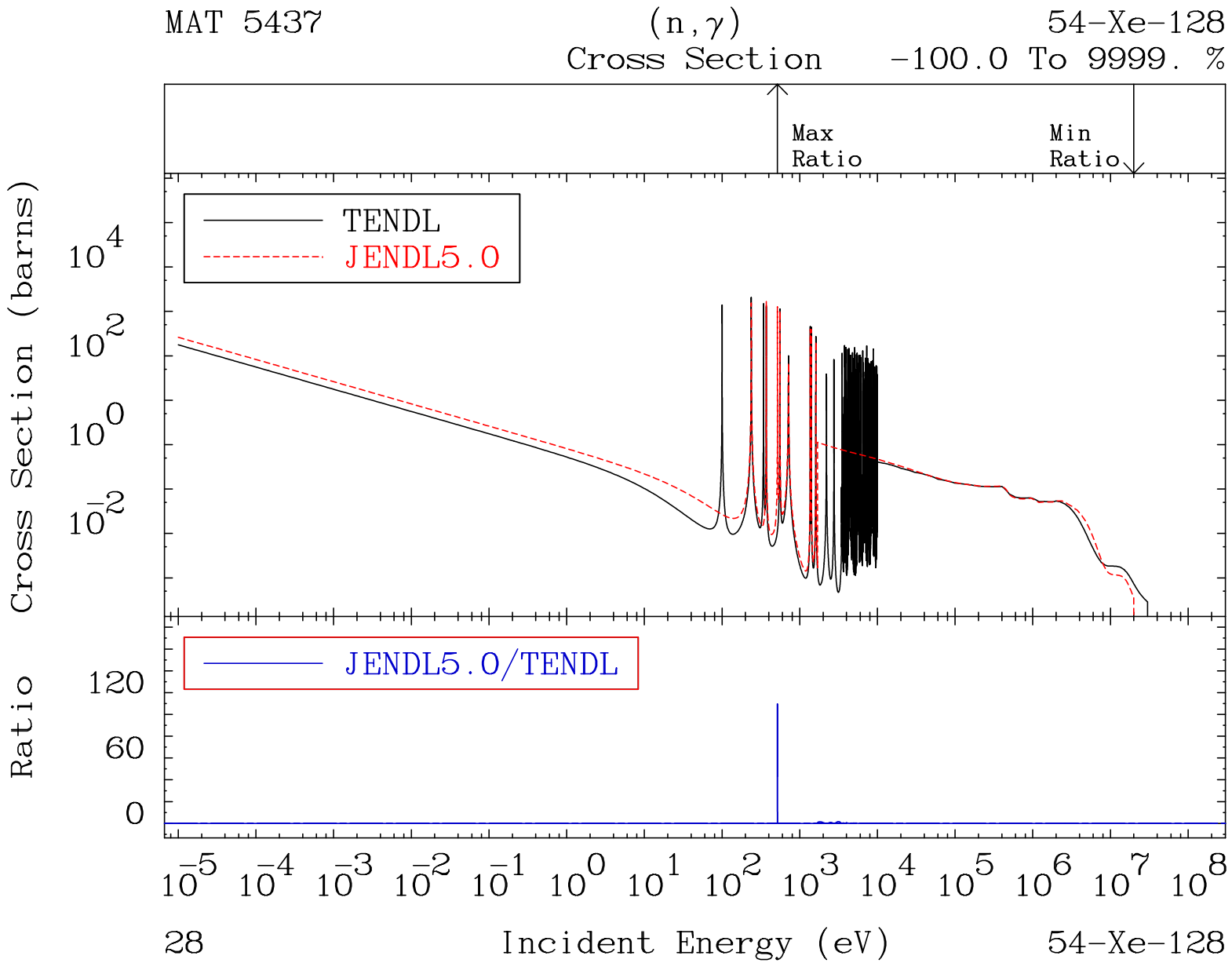

MAT 5437
MT= 64 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.1830 MeV
JENDL5.0 Threshold 2.2908 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
200
100
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
23
Incident Energy (eV)
54-Xe-128

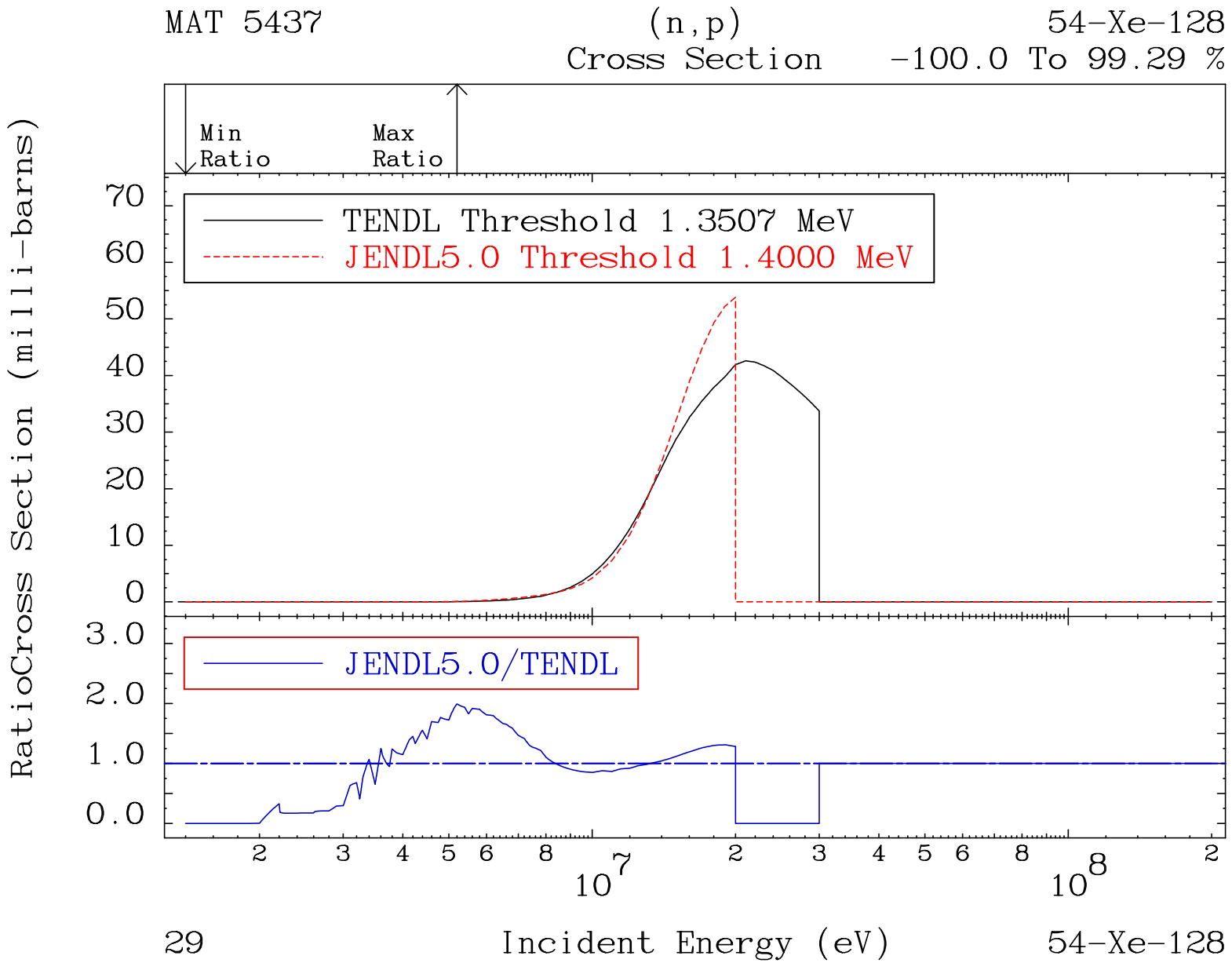

MAT 5437
MT= 65 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 37.12 %
Min Ratio
Max Ratio
TENDL Threshold 2.2083 MeV
JENDL5.0 Threshold 2.2989 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
54-Xe-128

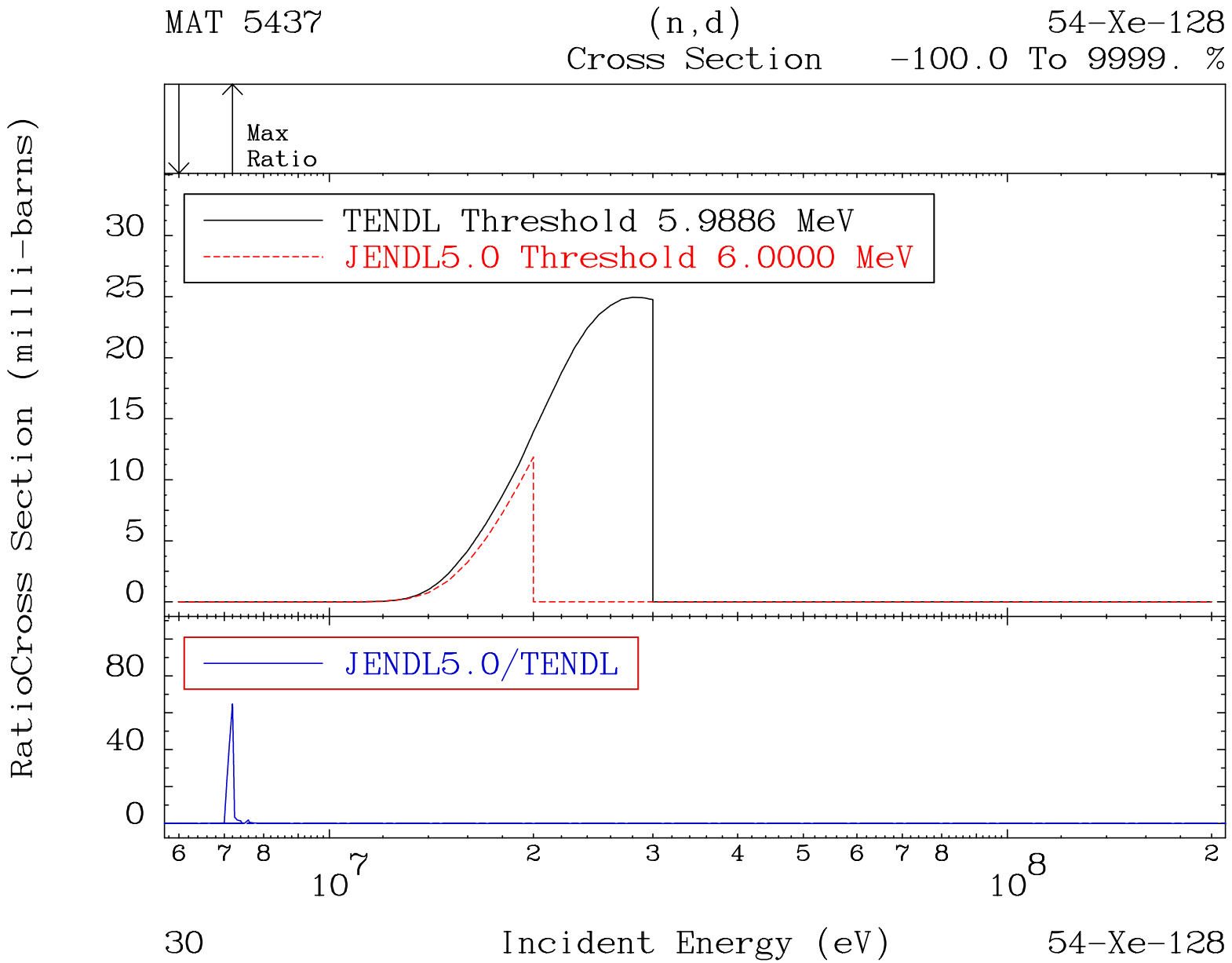

MAT 5437
MT= 66 (n,n') Level
54-Xe-128
Cross Section
-100.0 To 388.7 %
Max
Ratio
TENDL Threshold 2.2468 MeV
JENDL5.0 Threshold 2.3804 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
4
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
54-Xe-128

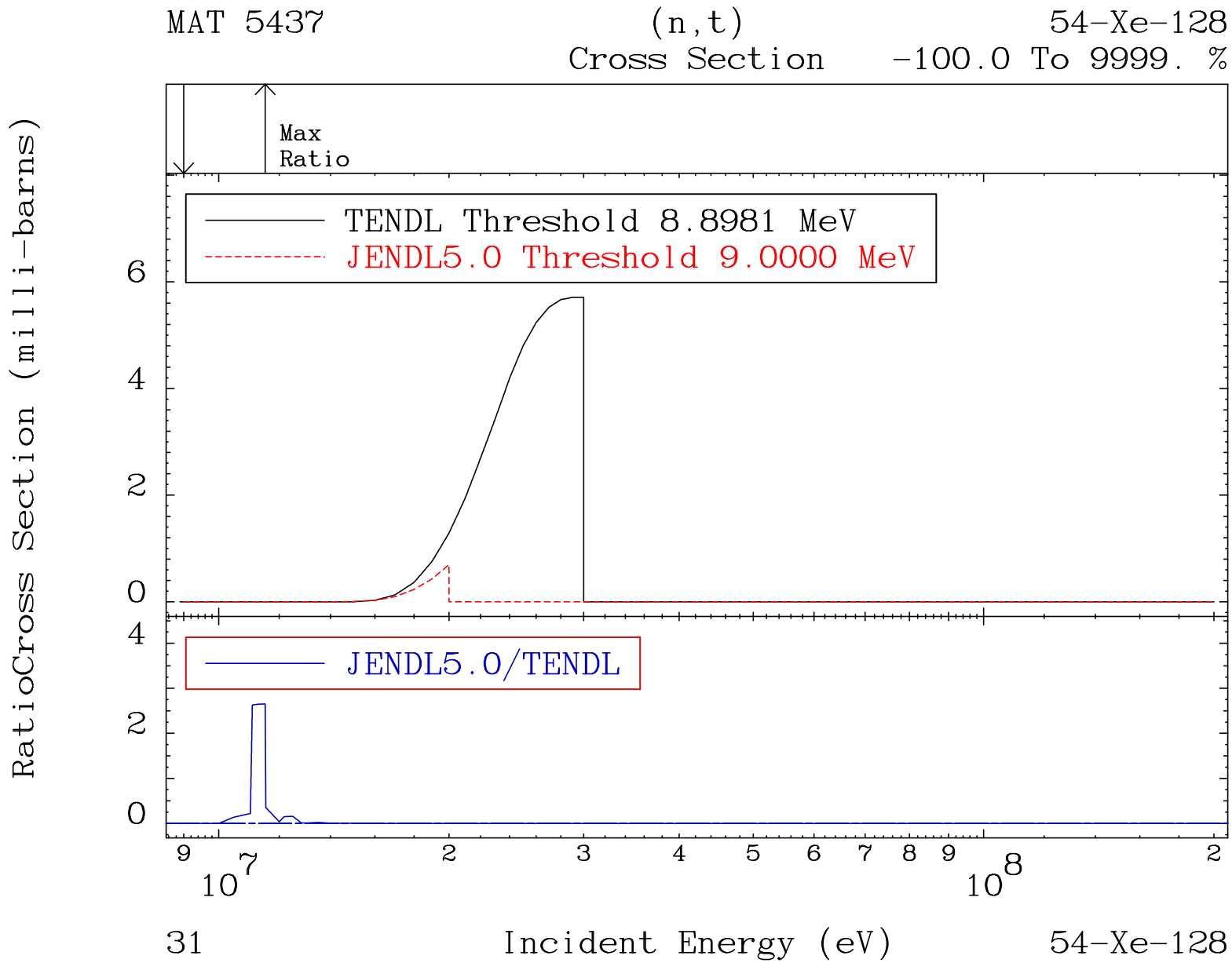

MAT 5437
MT= 67 (n,n') Level
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.2707 MeV
JENDL5.0 Threshold 2.4402 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
54-Xe-128

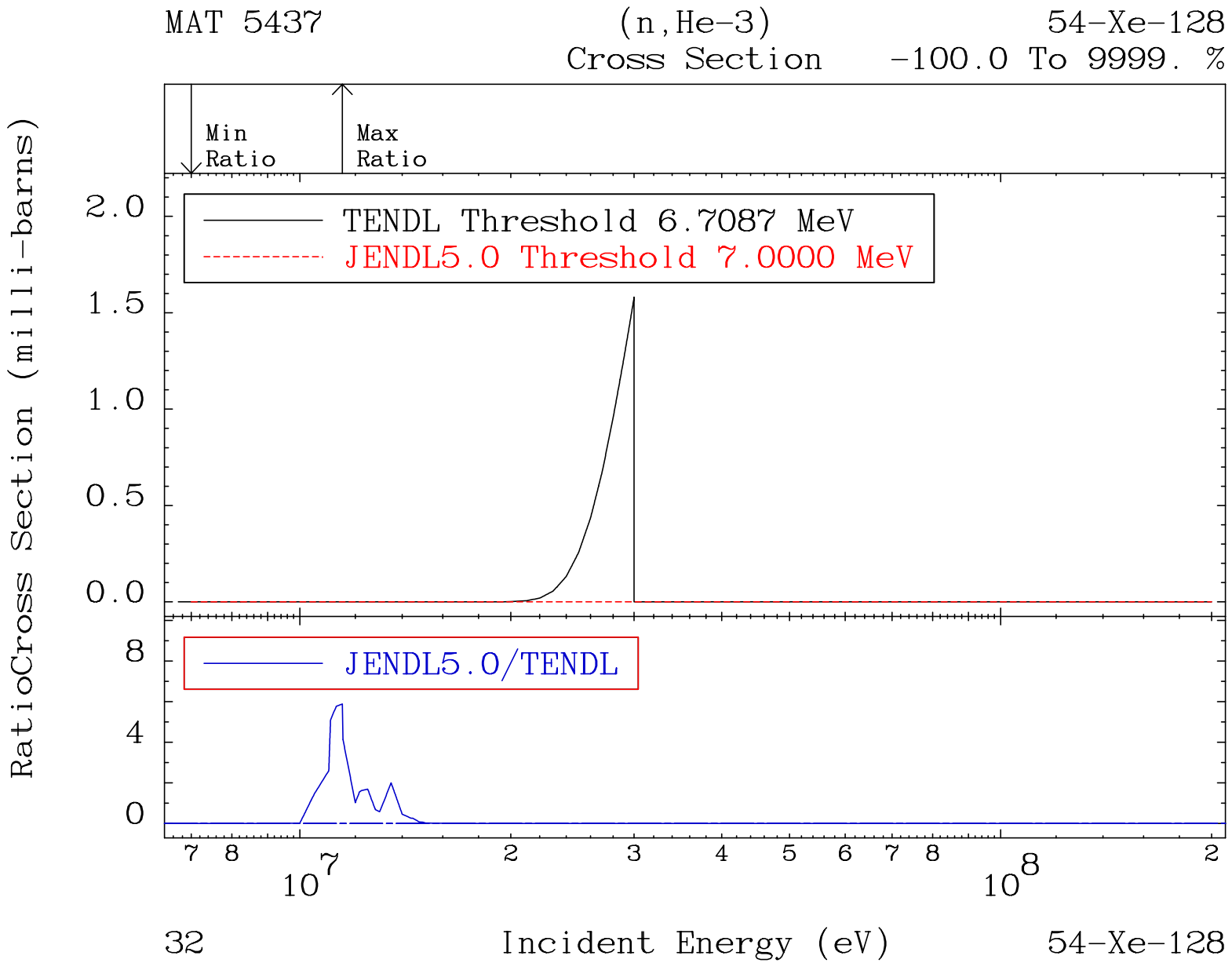

MAT 5437
(n,n') Continuum
Cross Section
54-Xe-128
-100.0 To 15.55 %
Min Ratio
Max Ratio
TENDL Threshold 2.2707 MeV
JENDL5.0 Threshold 2.6638 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JENDL5.0/TENDL
Ratio
1.0
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
27
Incident Energy (eV)
54-Xe-128

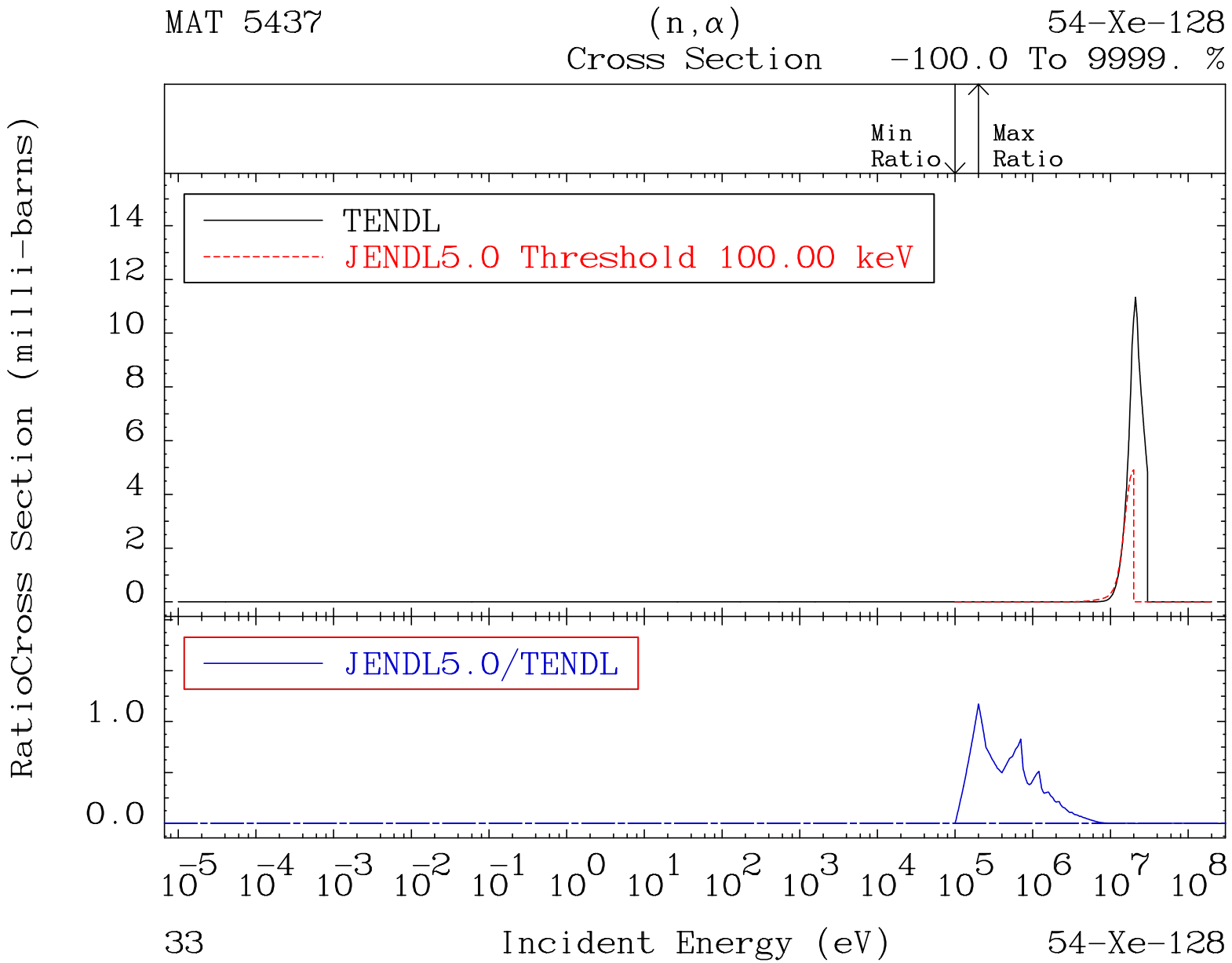

MAT 5437
(n,γ)
Cross Section
54-Xe-128
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^4
10^2
10^0
10^-2
JENDL5.0/TENDL
Ratio
120
60
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
28
Incident Energy (eV)
54-Xe-128

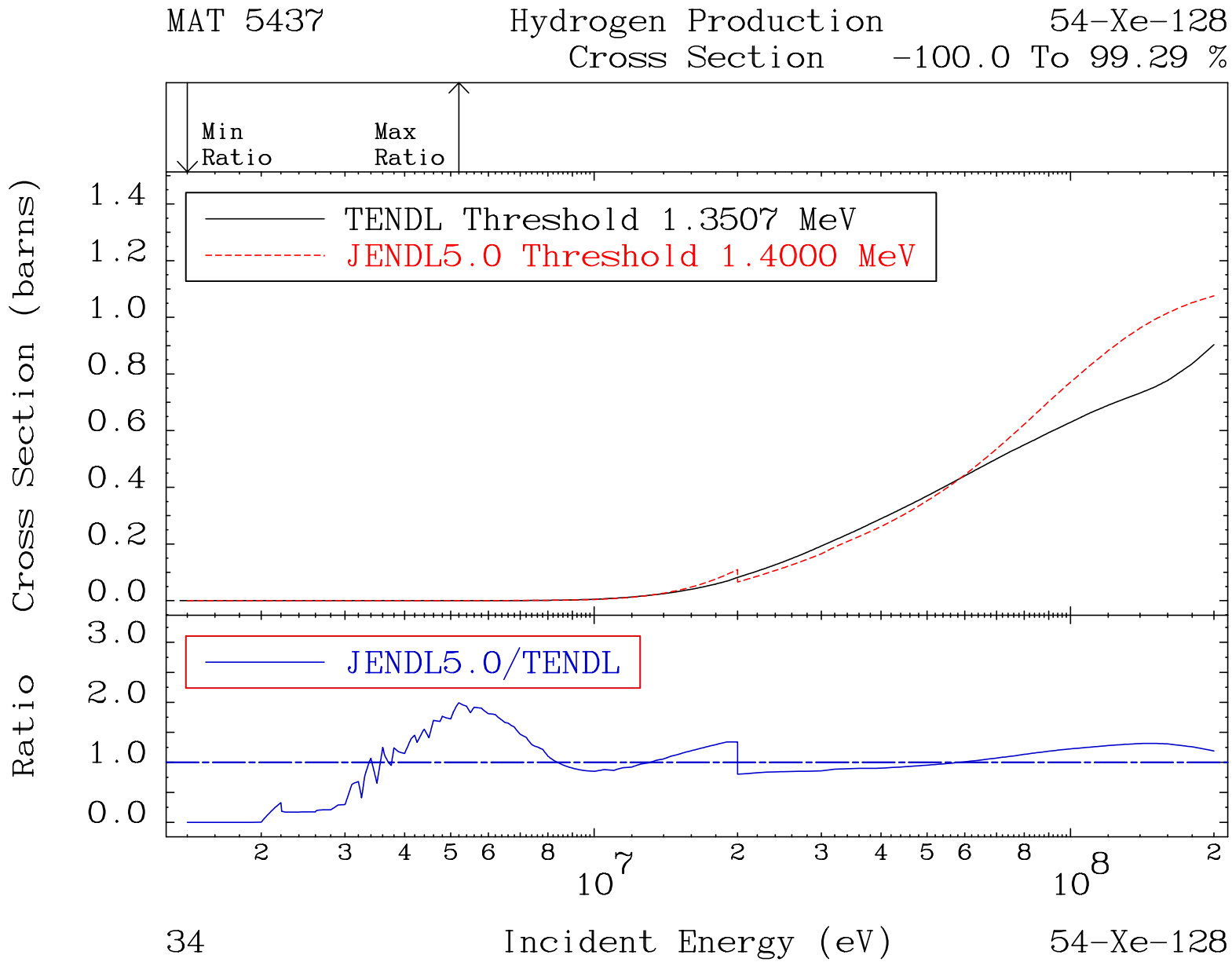

MAT 5437
(n,p)
54-Xe-128
Cross Section
-100.0 To 99.29 %
Min Ratio
Max Ratio
TENDL Threshold 1.3507 MeV
JENDL5.0 Threshold 1.4000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
3.0
2.0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
29
Incident Energy (eV)
54-Xe-128

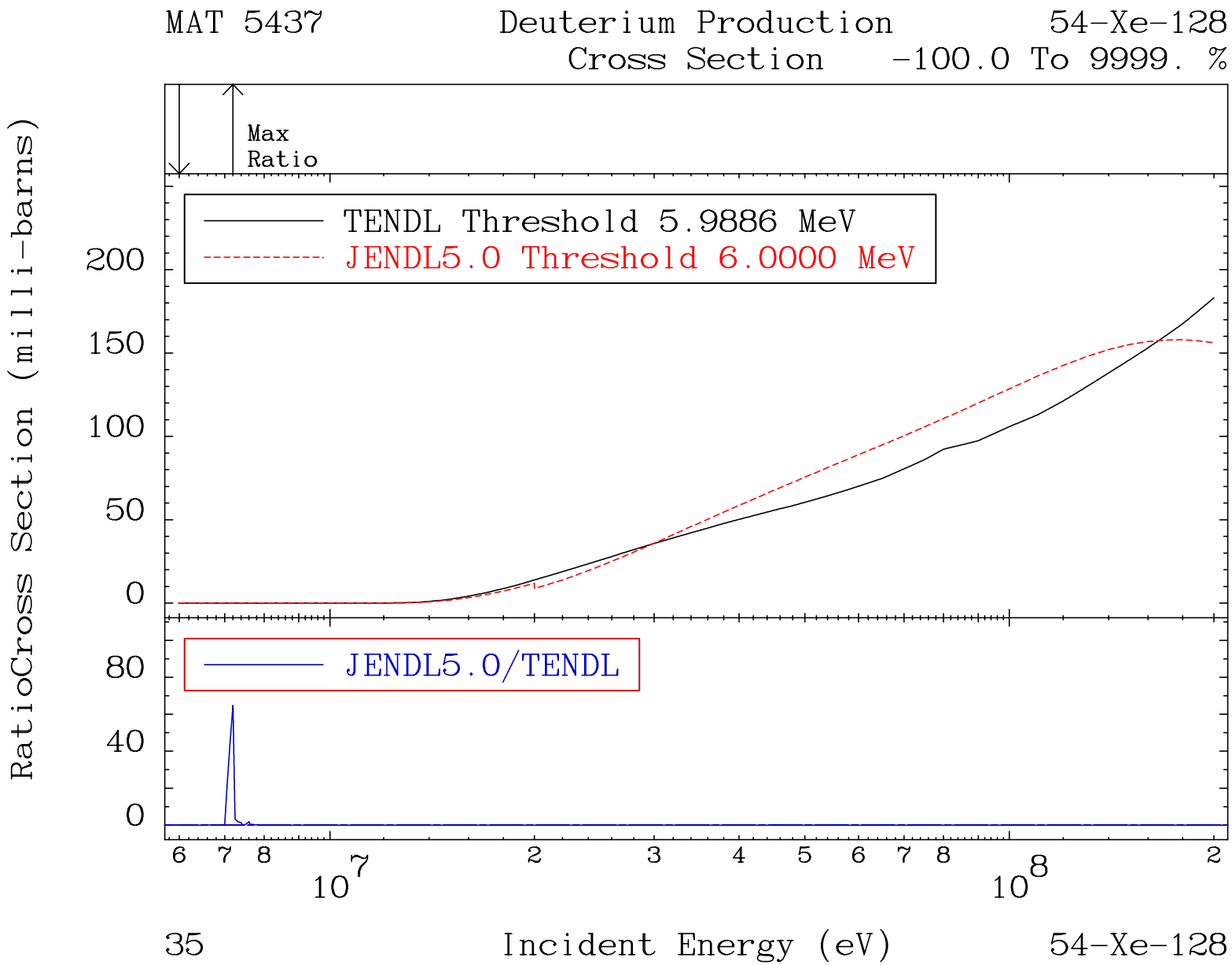

MAT 5437
(n,d)
54-Xe-128
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 5.9886 MeV
JENDL5.0 Threshold 6.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
80
40
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
30
Incident Energy (eV)
54-Xe-128

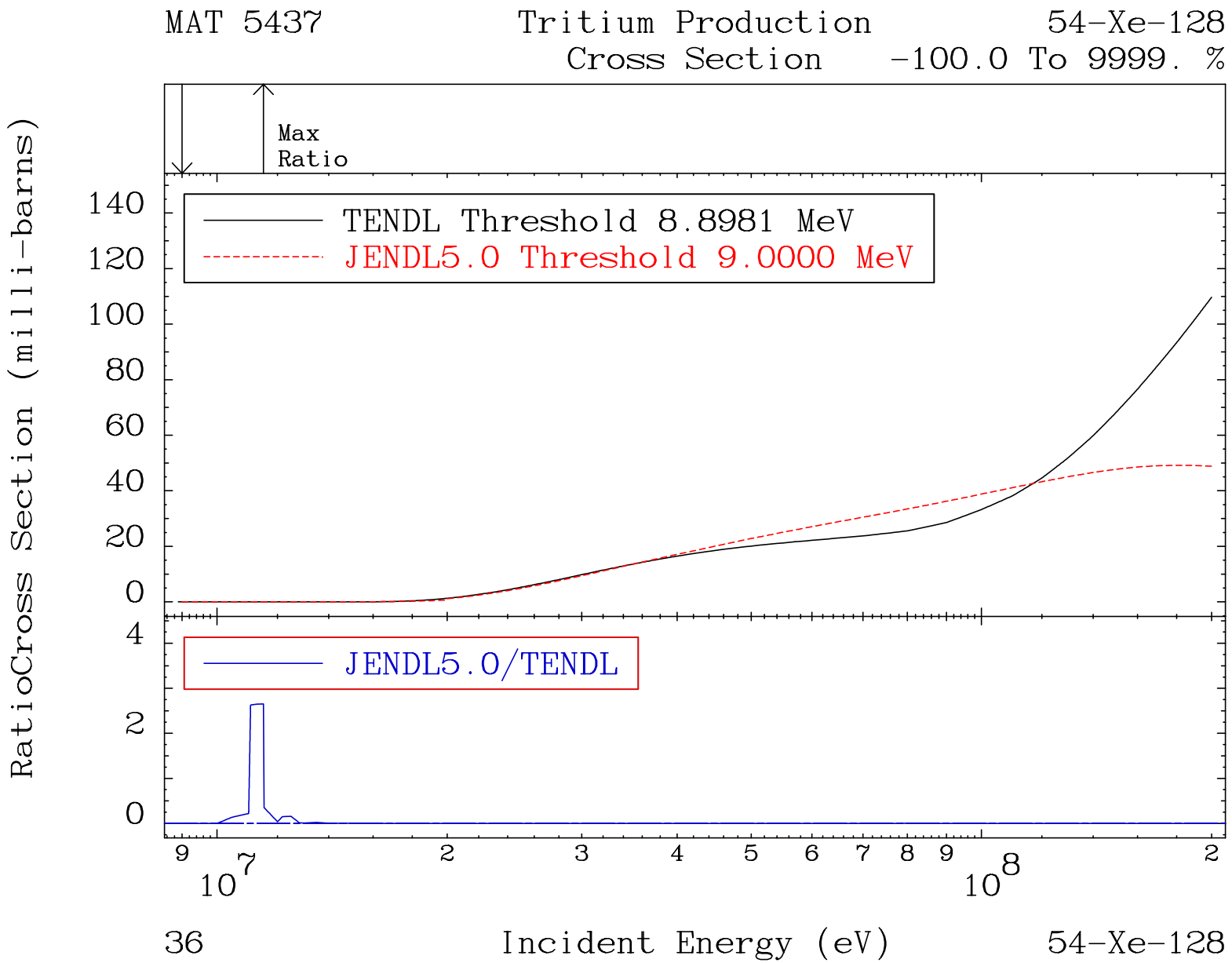

MAT 5437
(n,t)
54-Xe-128
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 8.8981 MeV
JENDL5.0 Threshold 9.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
6
4
2
0
4
2
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
31
Incident Energy (eV)
54-Xe-128

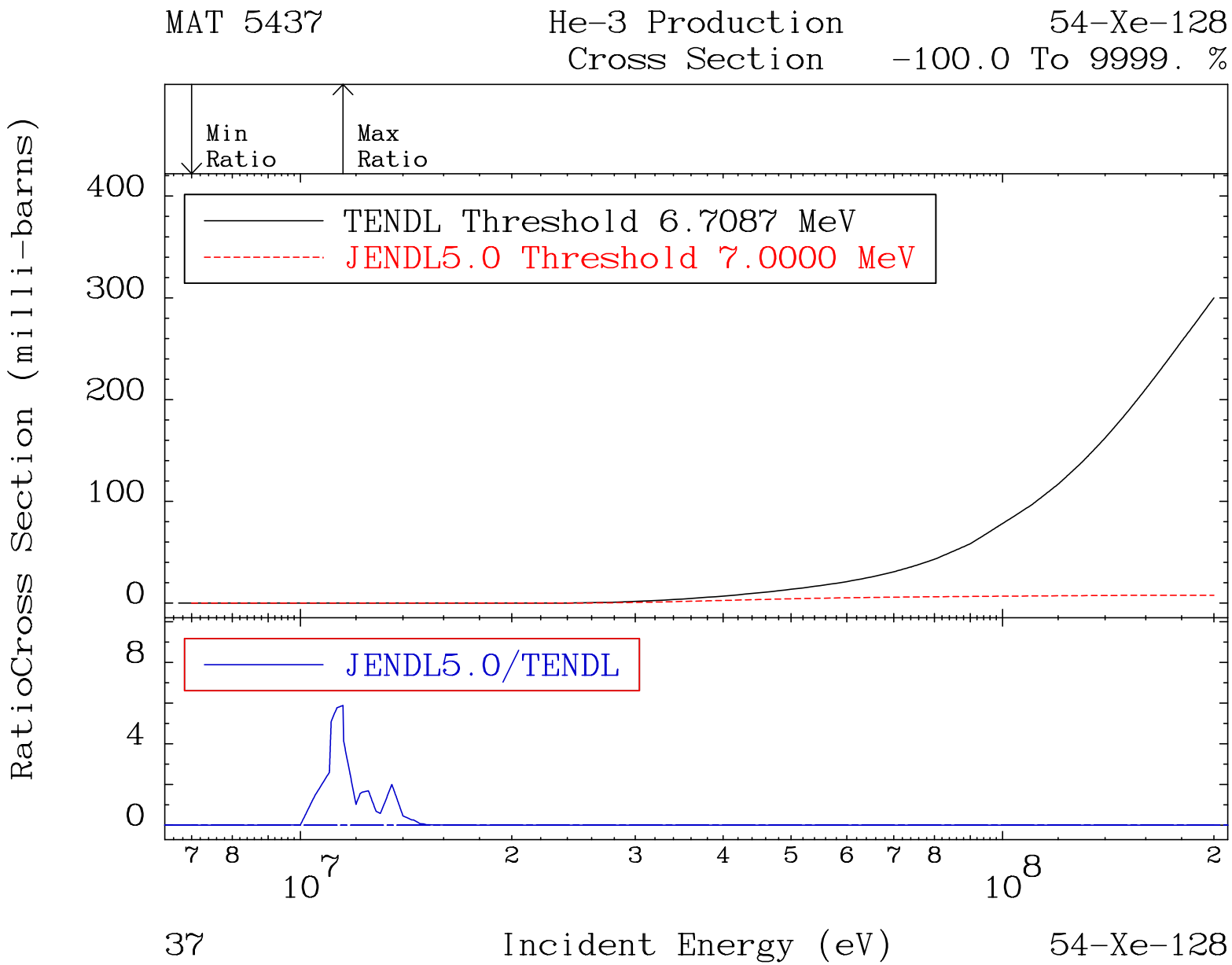

MAT 5437
(n,He-3)
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.7087 MeV
JENDL5.0 Threshold 7.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
8
4
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
32
Incident Energy (eV)
54-Xe-128

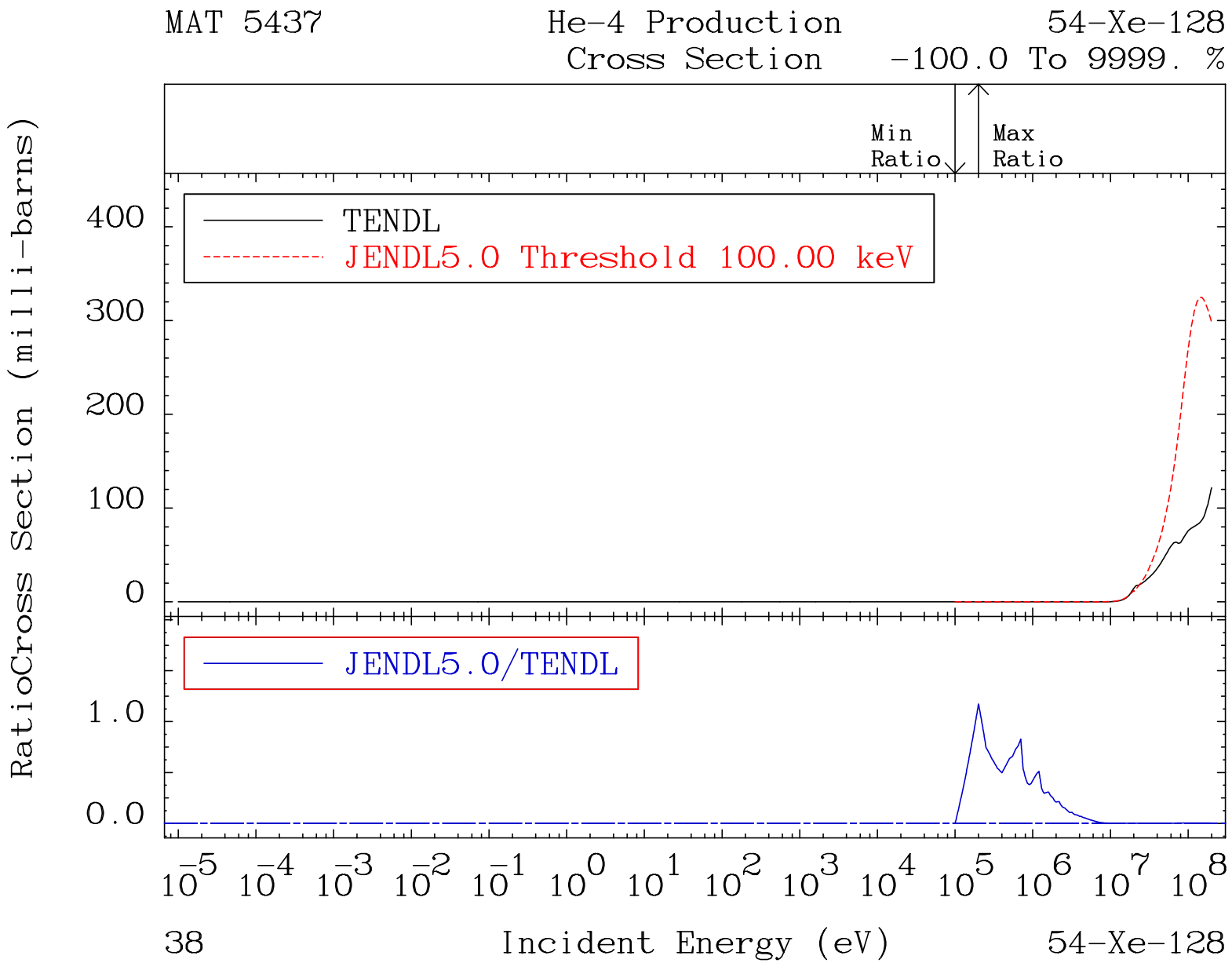

MAT 5437
(n,α)
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 100.00 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
33
Incident Energy (eV)
54-Xe-128

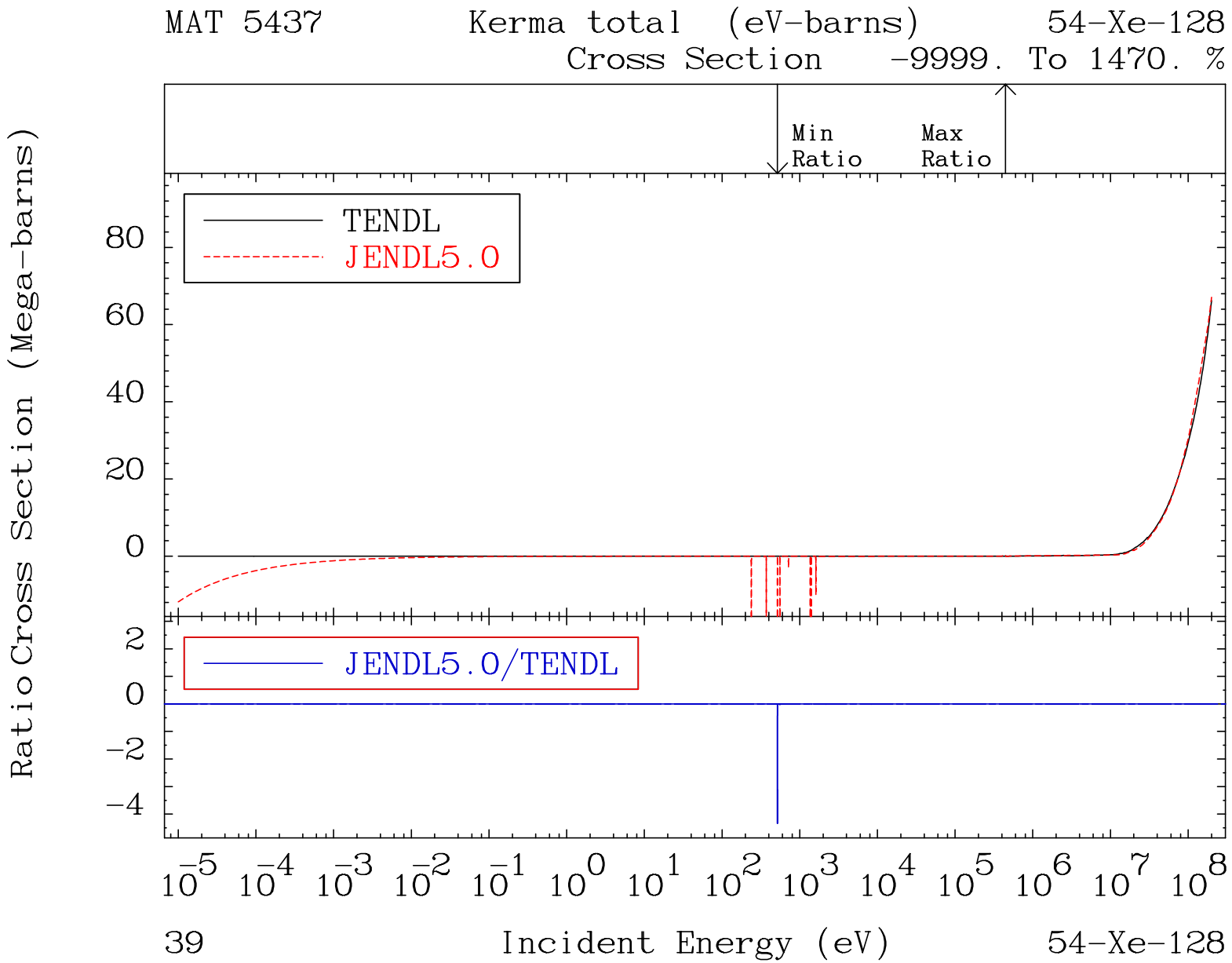

MAT 5437
Hydrogen Production
54-Xe-128
Cross Section -100.0 To 99.29 %
Min Ratio
Max Ratio
TENDL Threshold 1.3507 MeV
JENDL5.0 Threshold 1.4000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
3.0
2.0
1.0
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
34
Incident Energy (eV)
54-Xe-128

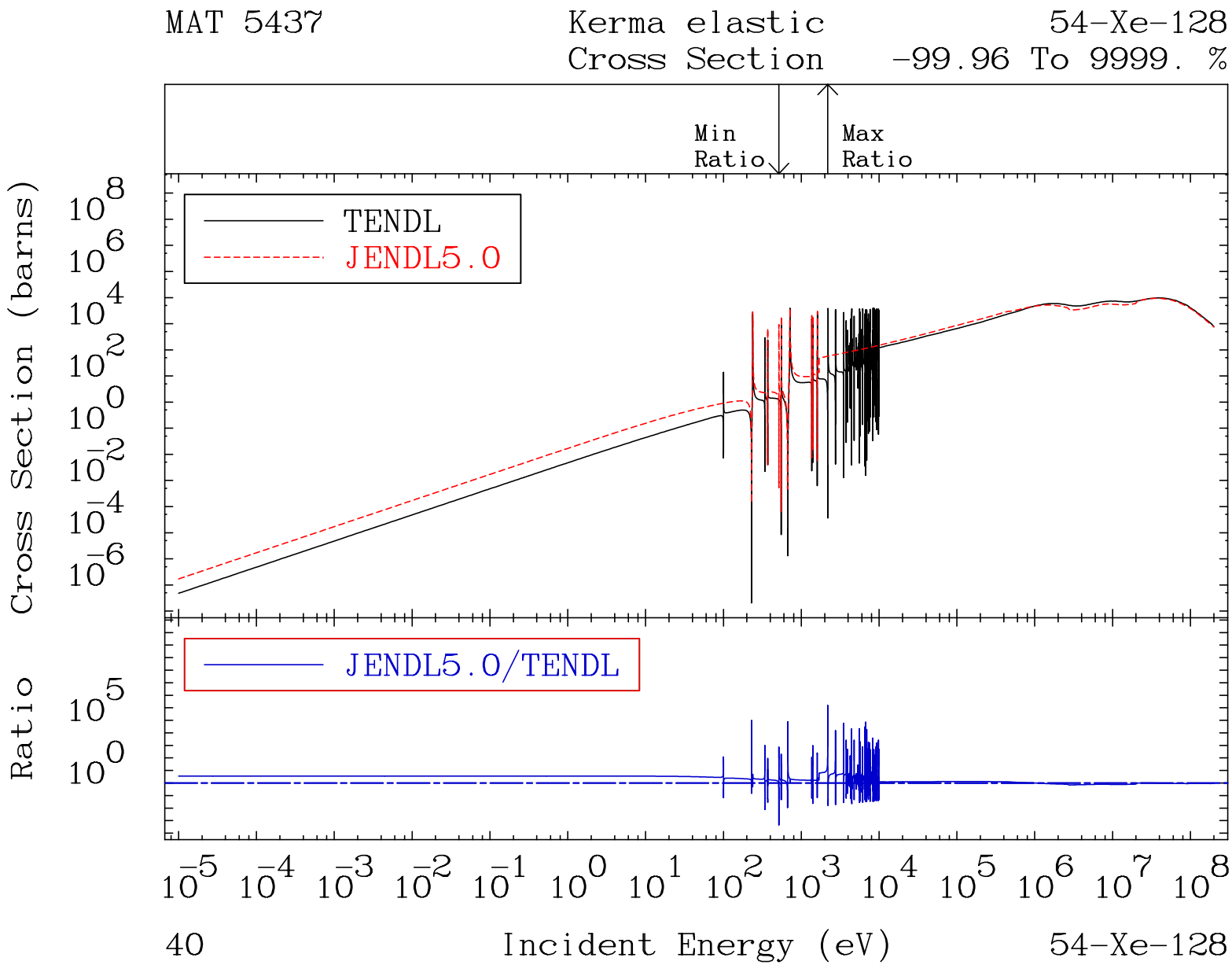

MAT 5437
Deuterium Production
54-Xe-128
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 5.9886 MeV
JENDL5.0 Threshold 6.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
80
40
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
35
Incident Energy (eV)
54-Xe-128

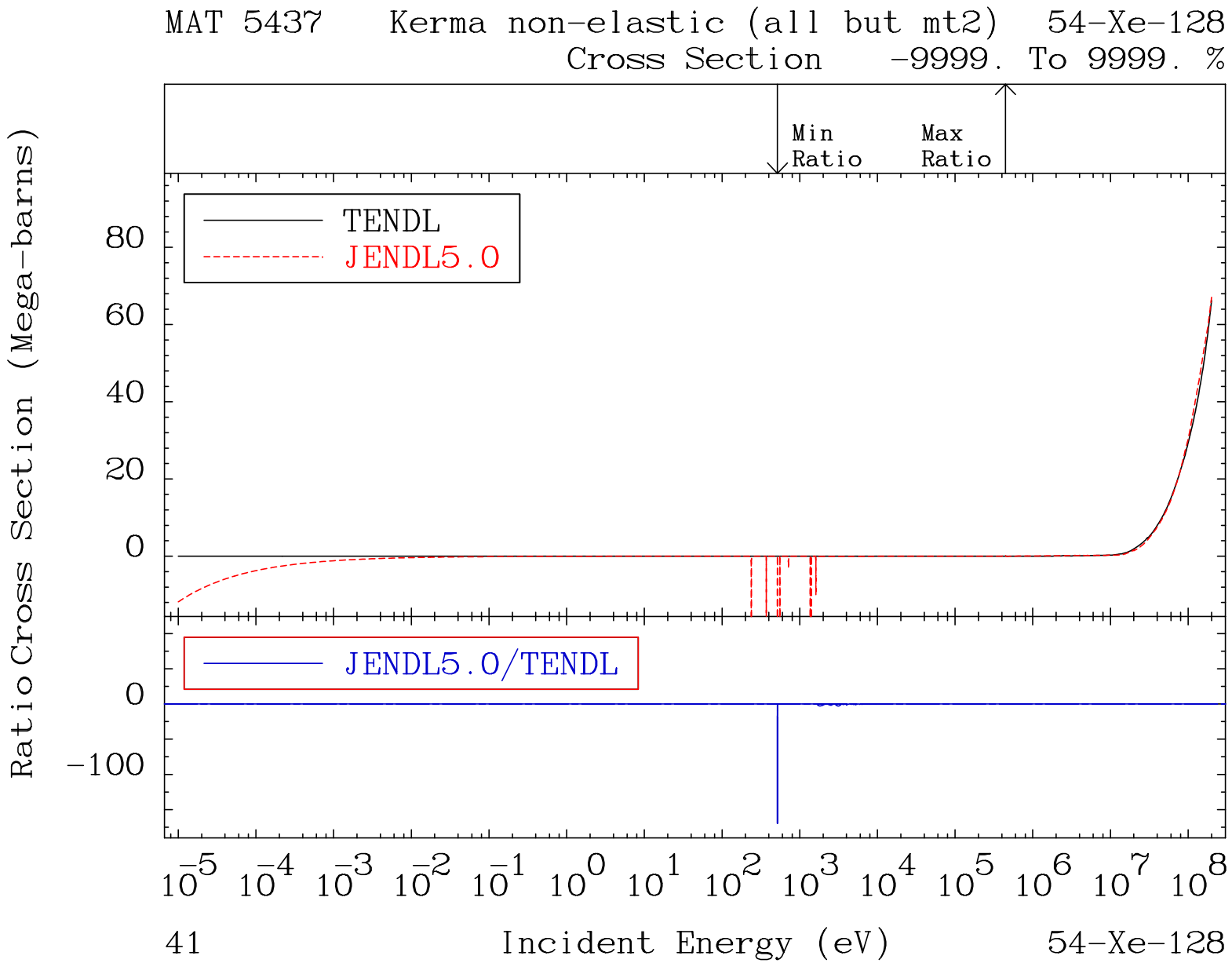

MAT 5437
Tritium Production
54-Xe-128
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 8.8981 MeV
JENDL5.0 Threshold 9.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
4
2
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
36
Incident Energy (eV)
54-Xe-128

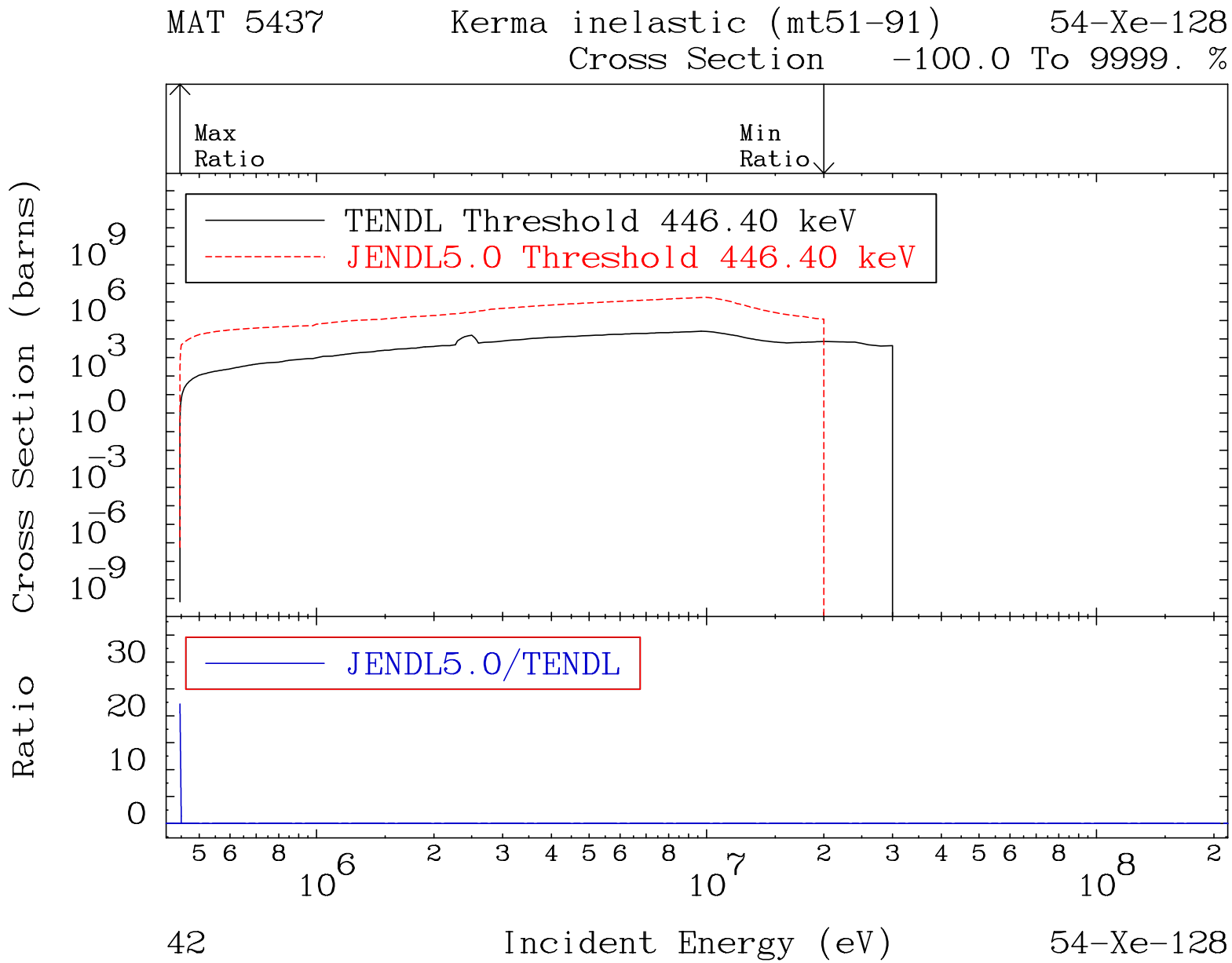

MAT 5437
He-3 Production
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.7087 MeV
JENDL5.0 Threshold 7.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
8
4
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
37
Incident Energy (eV)
54-Xe-128

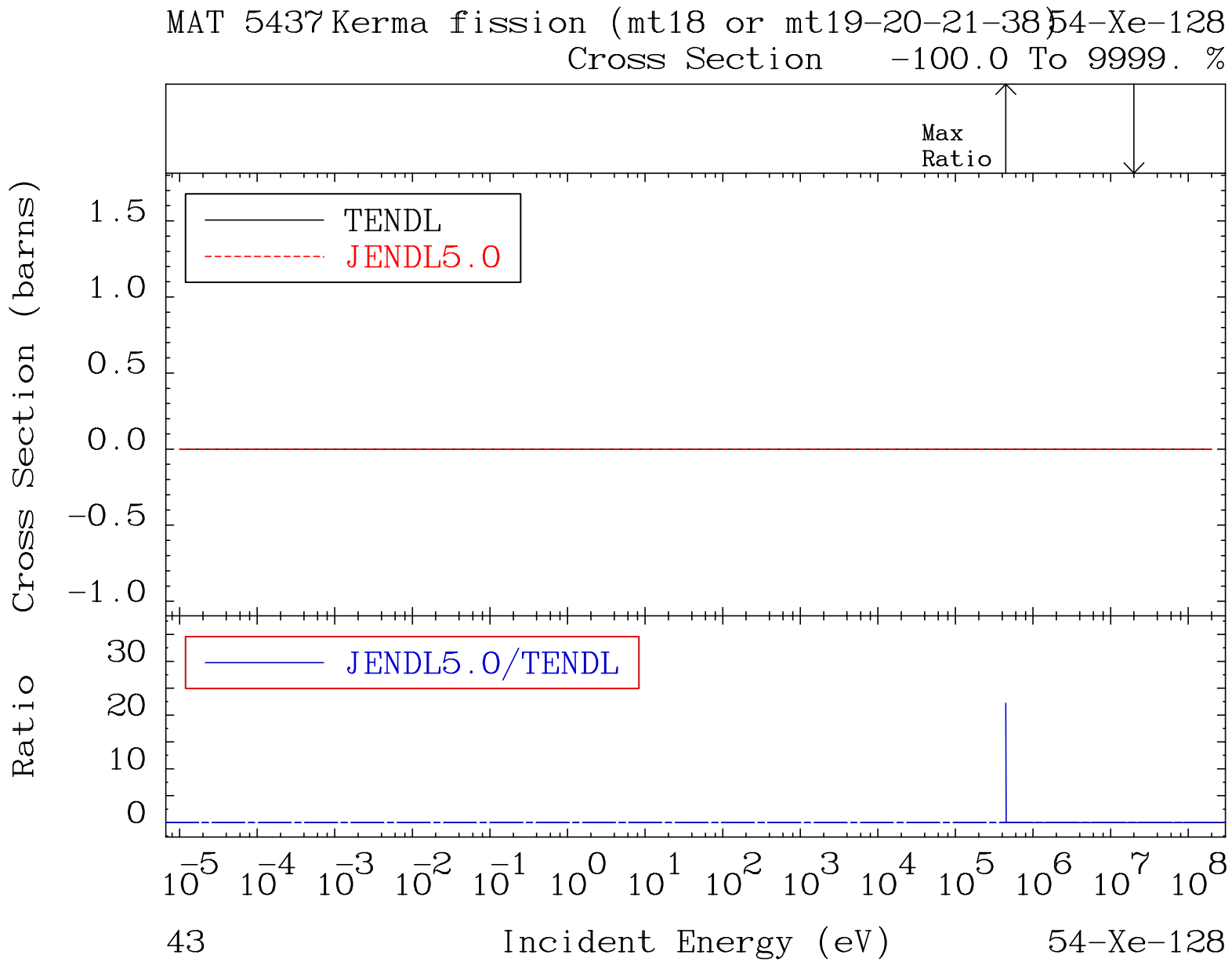

MAT 5437
He-4 Production
Cross Section
54-Xe-128
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 100.00 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
38
Incident Energy (eV)
54-Xe-128

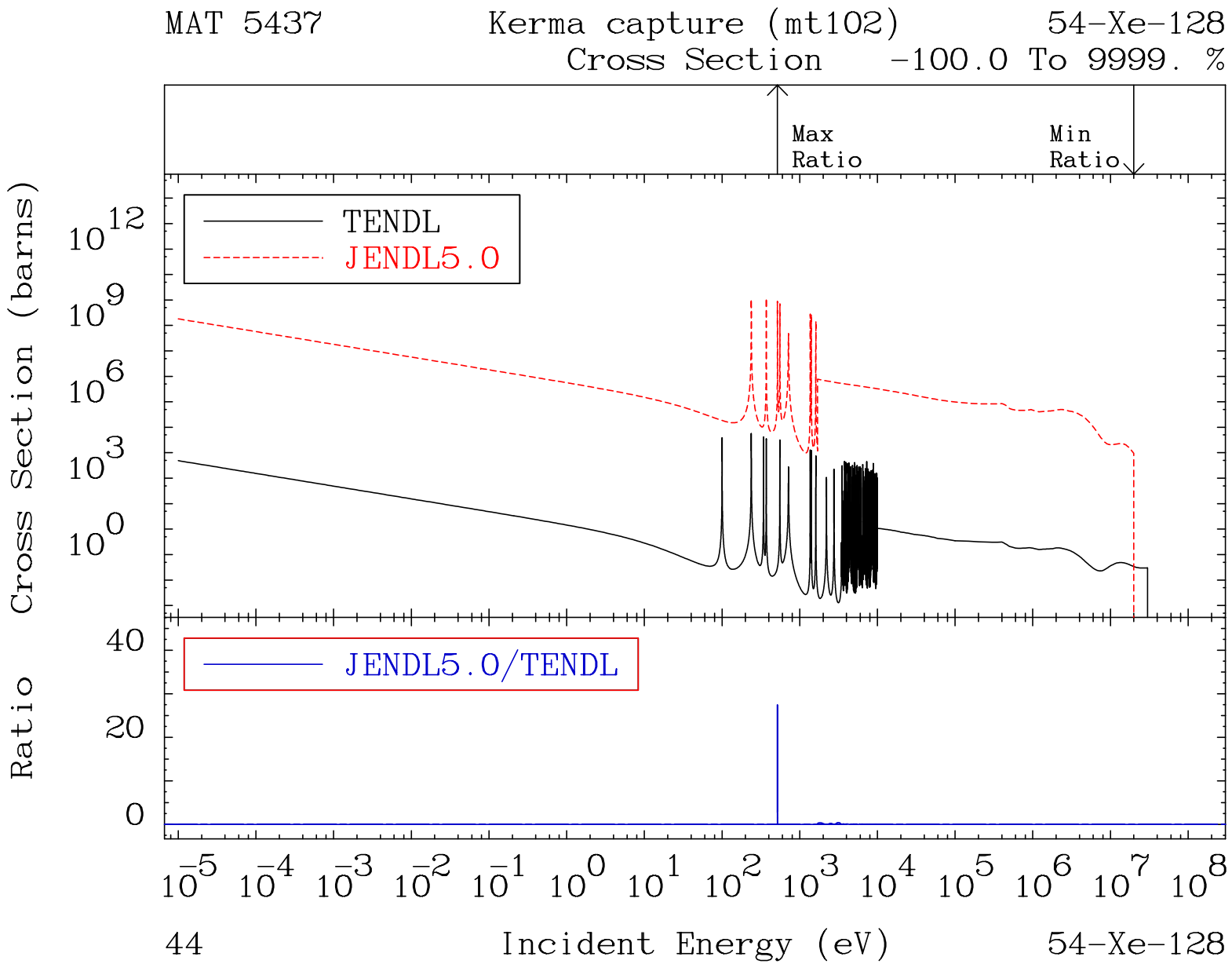

MAT 5437
Kerma total (eV-barns)
54-Xe-128
Cross Section -9999. To 1470. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Ratio Cross Section (Mega-barns)
80
60
40
20
0
2
0
-2
-4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
39
Incident Energy (eV)
54-Xe-128

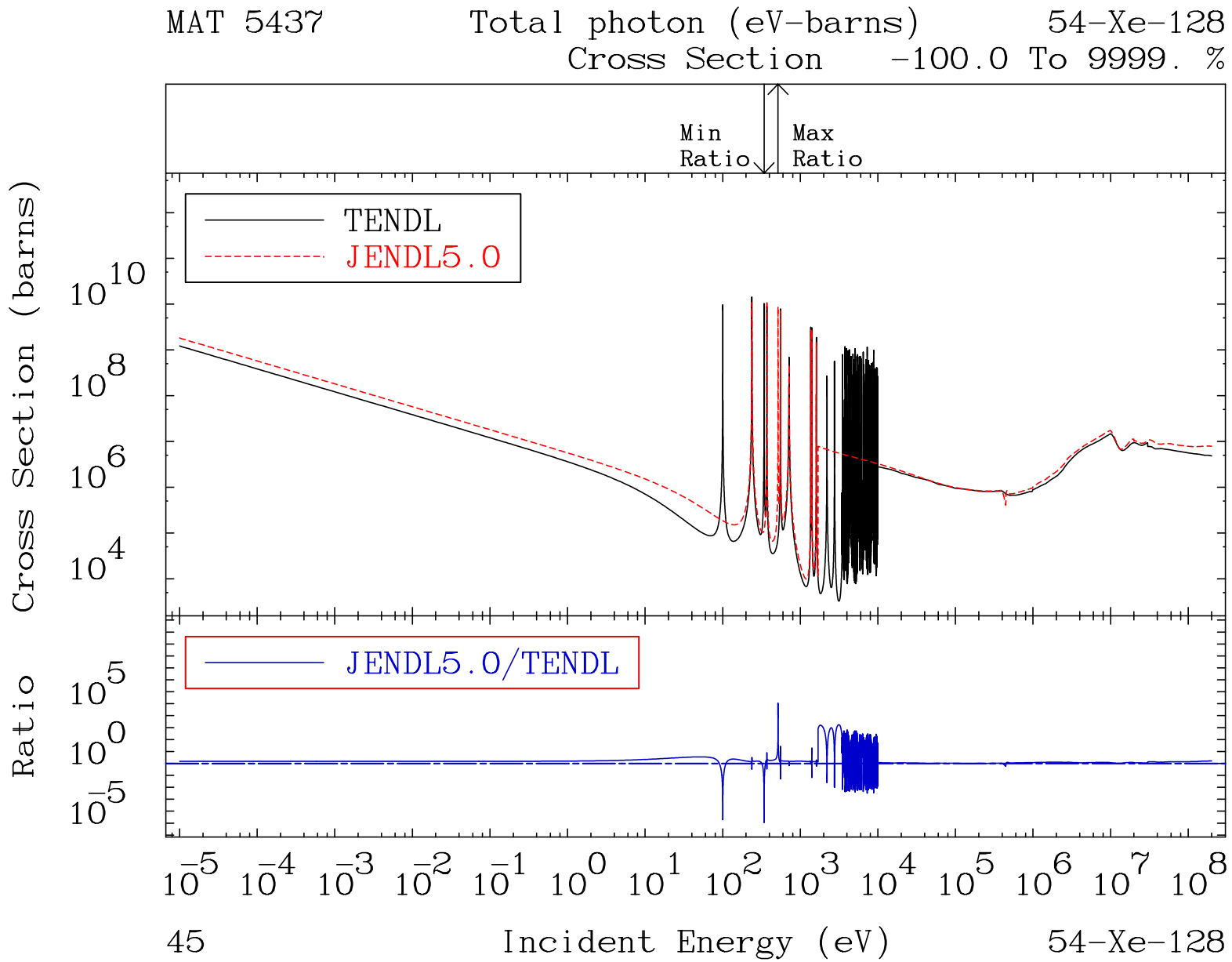

MAT 5437
Kerma elastic
Cross Section
54-Xe-128
-99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
54-Xe-128

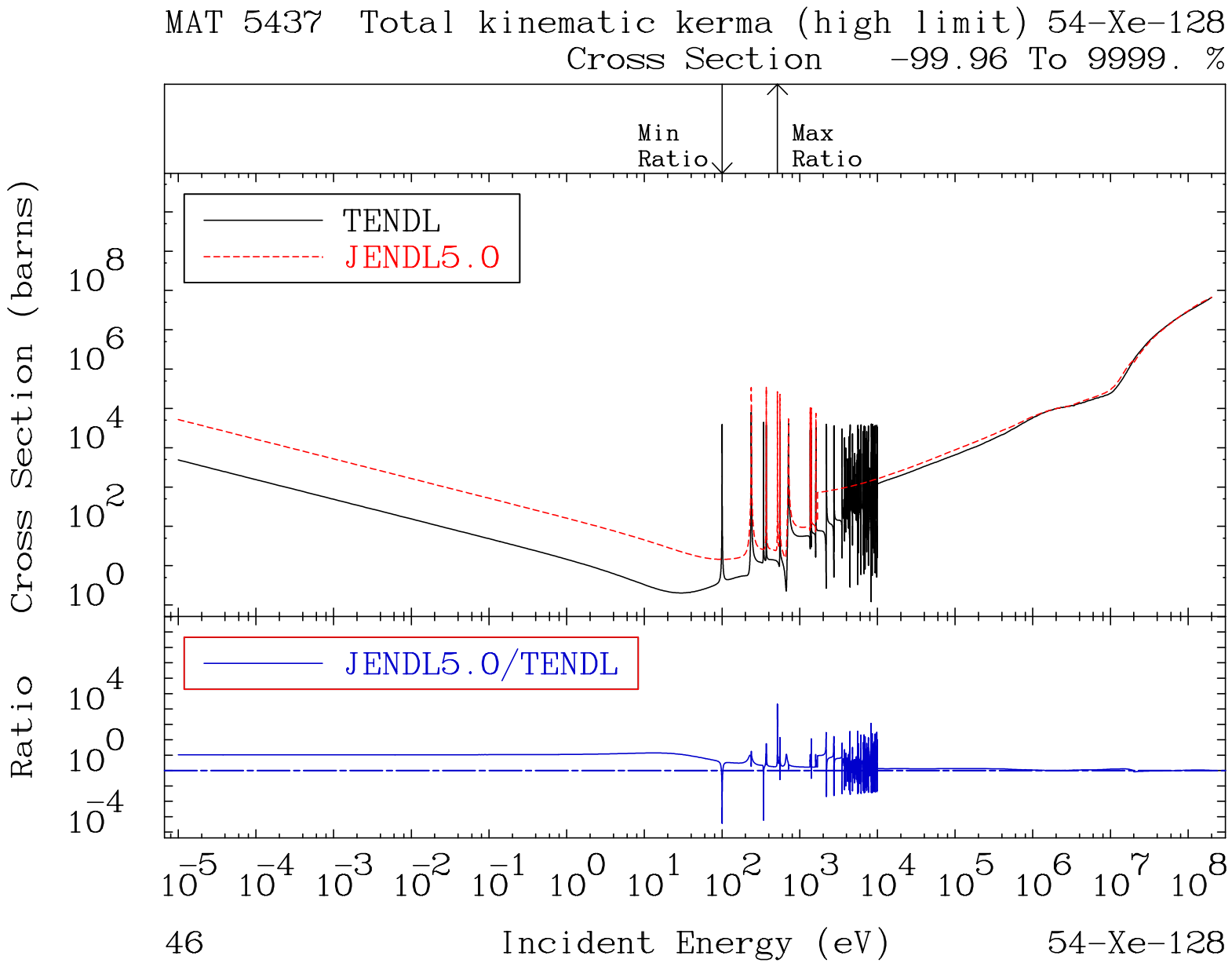

MAT 5437 Kerma non-elastic (all but mt2) 54-Xe-128
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Ratio Cross Section (Mega-barns)
80
60
40
20
0
0
-100
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
41
Incident Energy (eV)
54-Xe-128

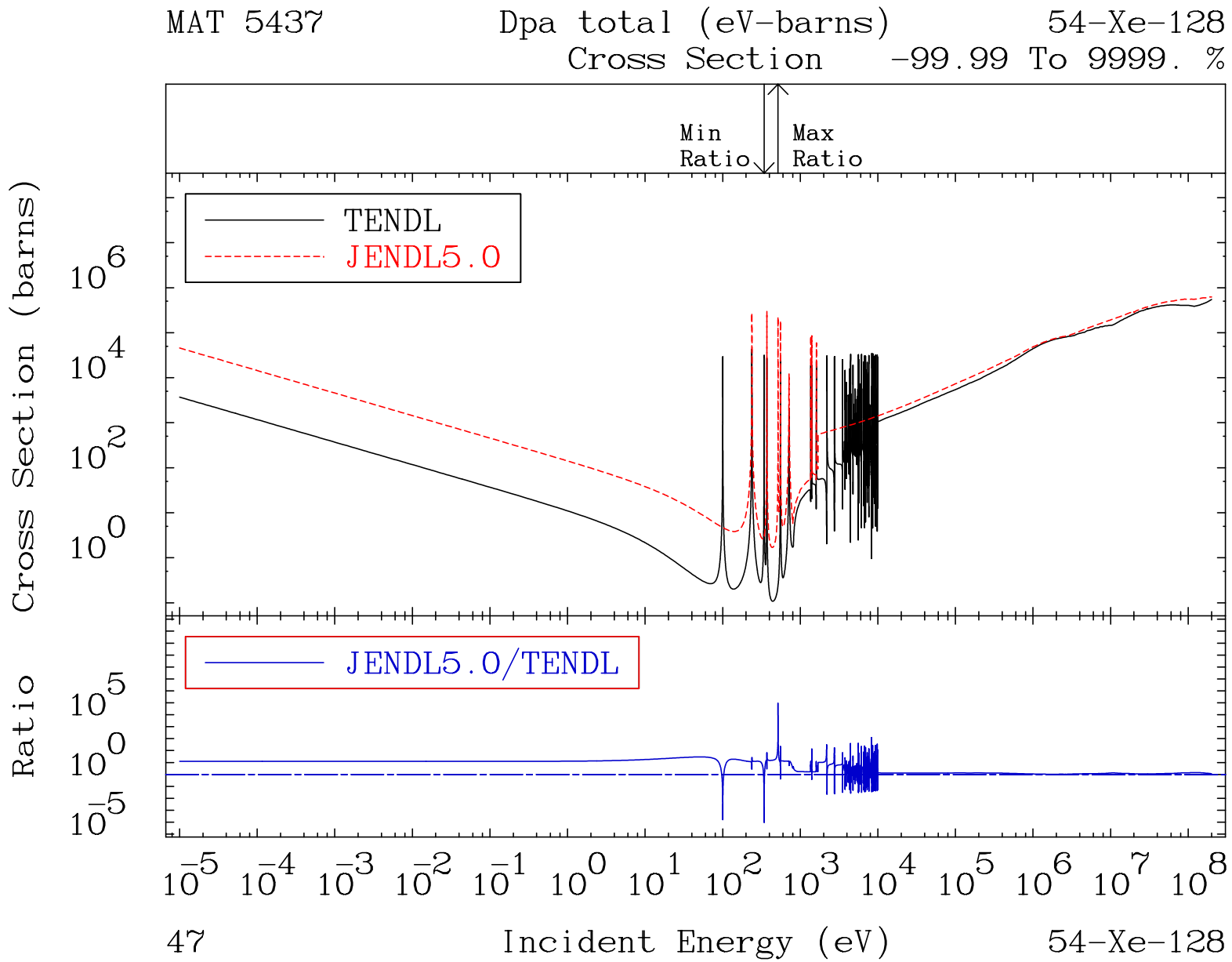

MAT 5437
Kerma inelastic (mt51-91)
54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 446.40 keV
JENDL5.0 Threshold 446.40 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
42
54-Xe-128

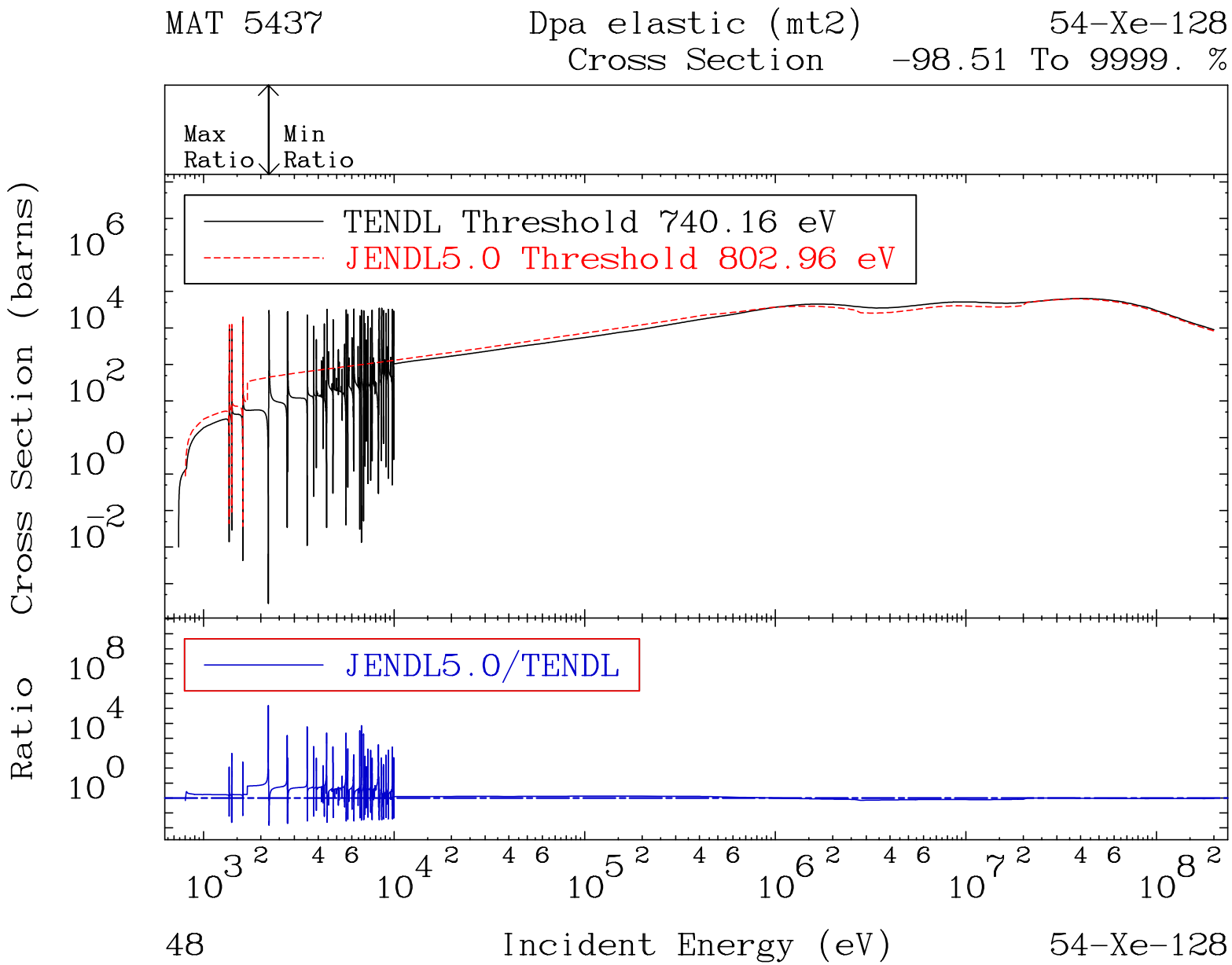

MAT 5437 Kerma fission (mt18 or mt19-20-21-38) 54-Xe-128
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
30
20
10
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
43
Incident Energy (eV)
54-Xe-128

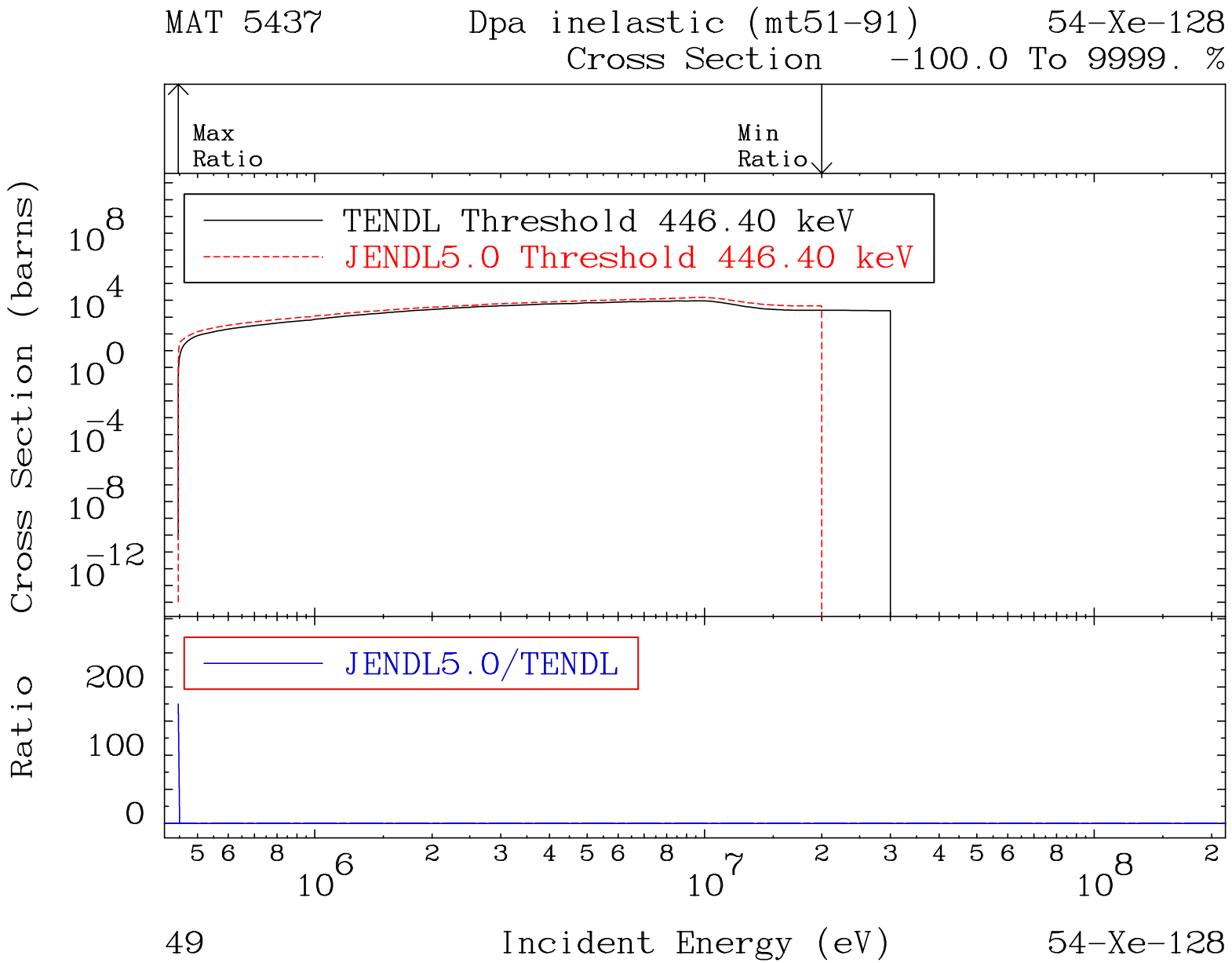

MAT 5437
Kerma capture (mt102)
54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
44
54-Xe-128

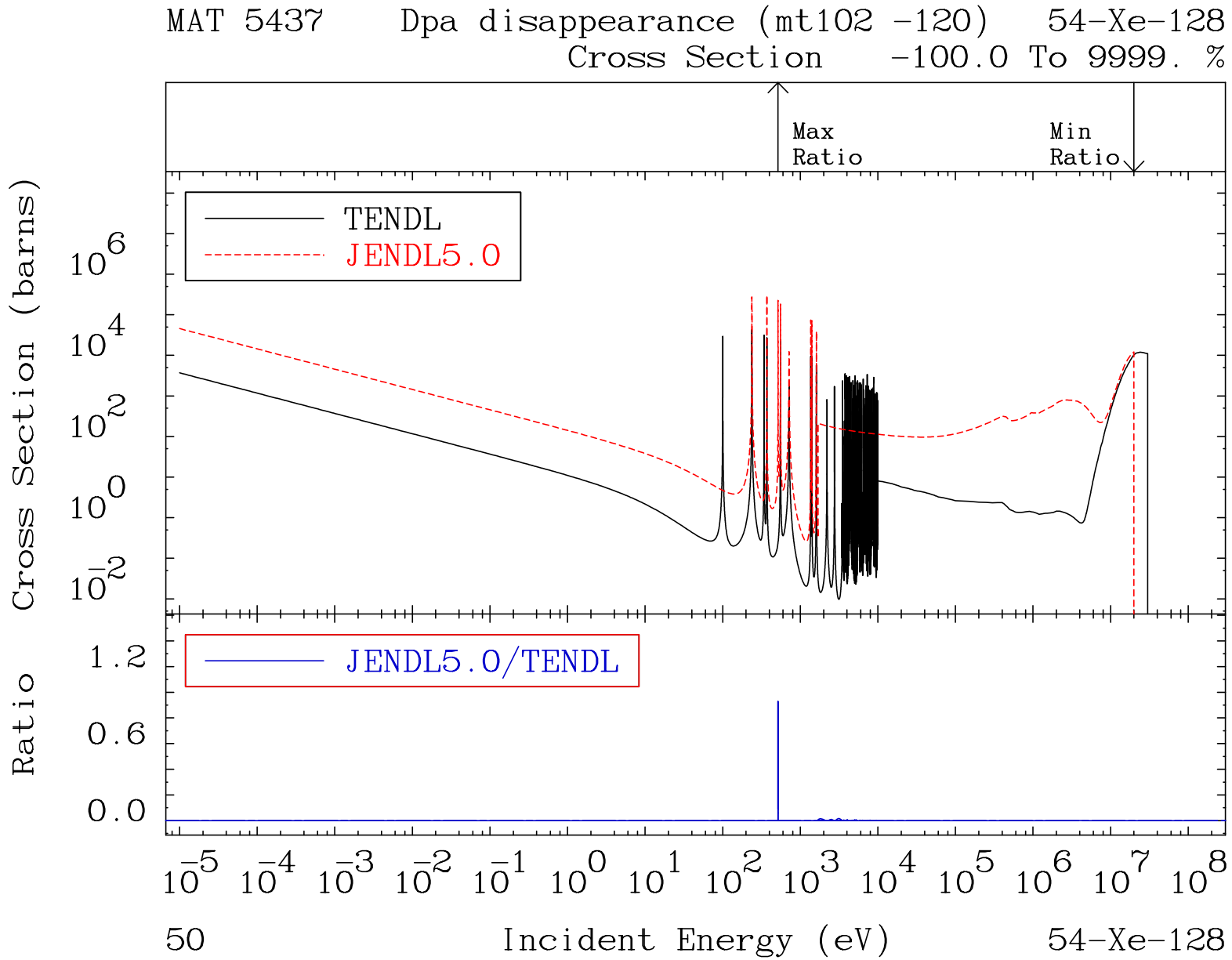

MAT 5437
Total photon (eV-barns)
54-Xe-128
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
45
54-Xe-128

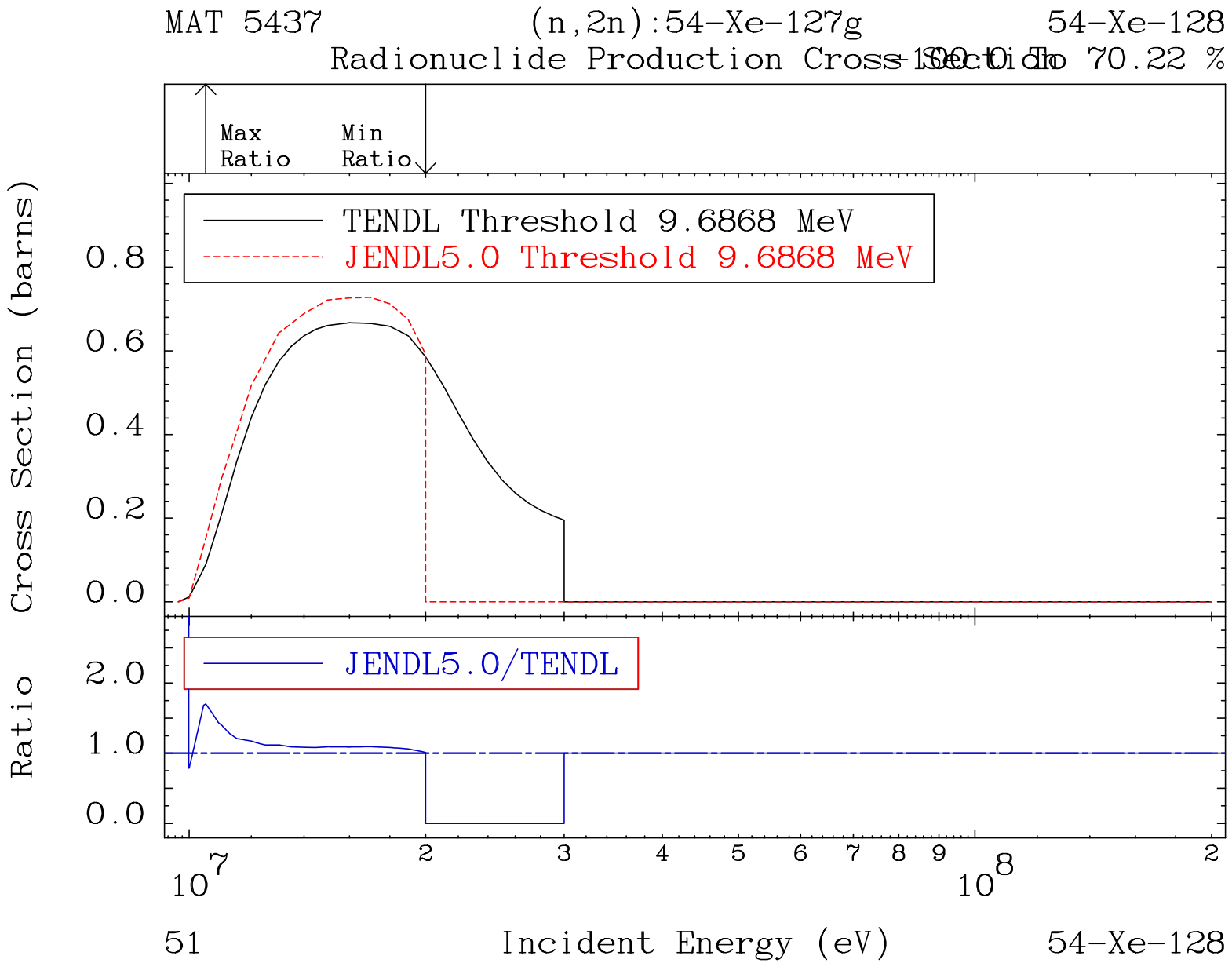

MAT 5437 Total kinematic kerma (high limit) 54-Xe-128
Cross Section -99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
46
54-Xe-128

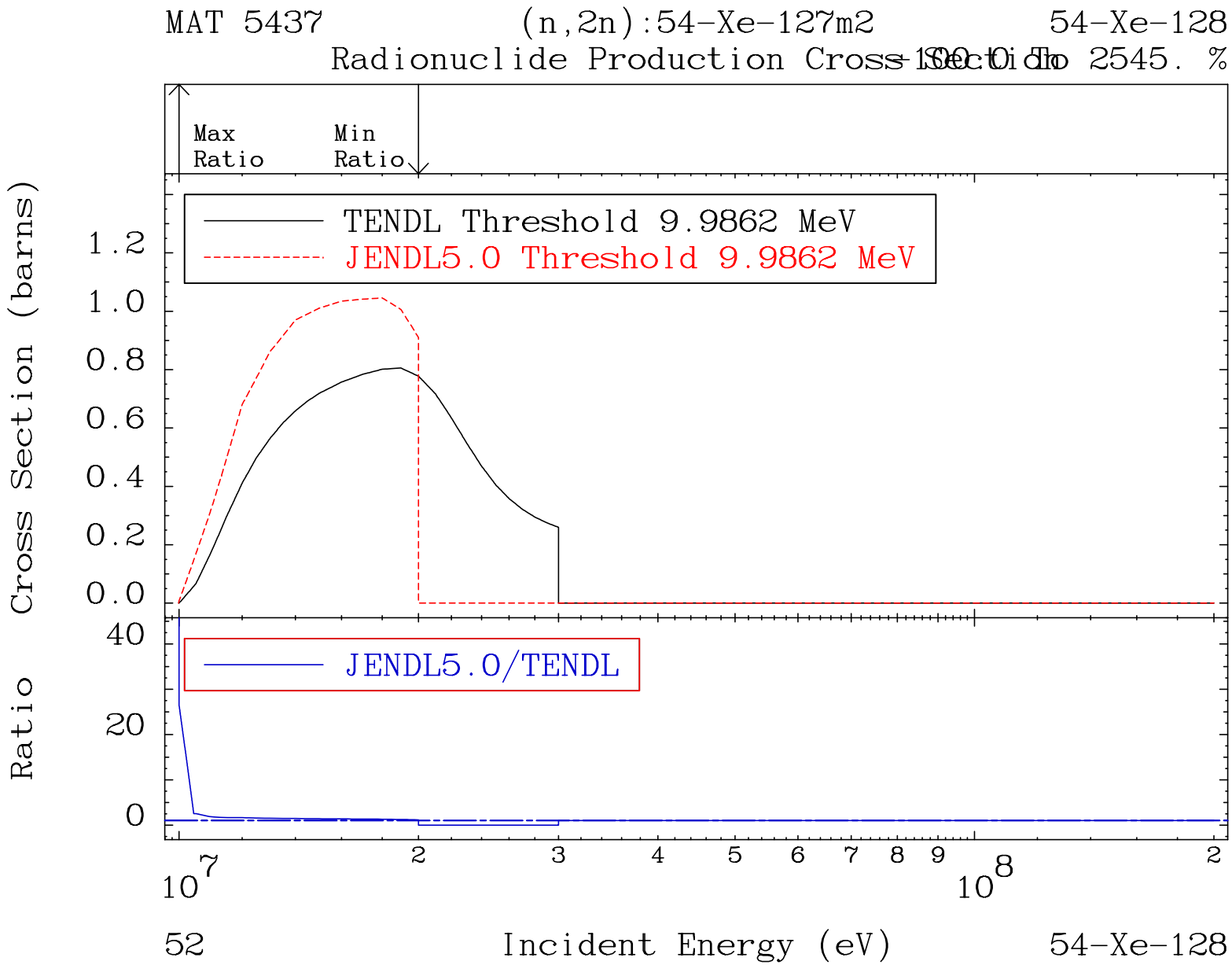

MAT 5437
Dpa total (eV-barns)
54-Xe-128
Cross Section -99.99 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
54-Xe-128


MAT 5437
Dpa elastic (mt2)
Cross Section
54-Xe-128
-98.51 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 740.16 eV
JENDL5.0 Threshold 802.96 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
48
54-Xe-128


MAT 5437
Dpa inelastic (mt51-91)
54-Xe-128
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 446.40 keV
JENDL5.0 Threshold 446.40 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
49
54-Xe-128


MAT 5437 Dpa disappearance (mt102 -120) 54-Xe-128
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
50
54-Xe-128


MAT 5437
(n,2n):54-Xe-127g
54-Xe-128
Radionuclide Production Cross Section To 70.22 %
Max Ratio
Min Ratio
TENDL Threshold 9.6868 MeV
JENDL5.0 Threshold 9.6868 MeV
Cross Section (barns)
0.8
0.6
0.4
0.2
0.0
JENDL5.0/TENDL
Ratio
2.0
1.0
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
51
Incident Energy (eV)
54-Xe-128


MAT 5437
(n,2n):54-Xe-127m2
54-Xe-128
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 9.9862 MeV
JENDL5.0 Threshold 9.9862 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
52
54-Xe-128