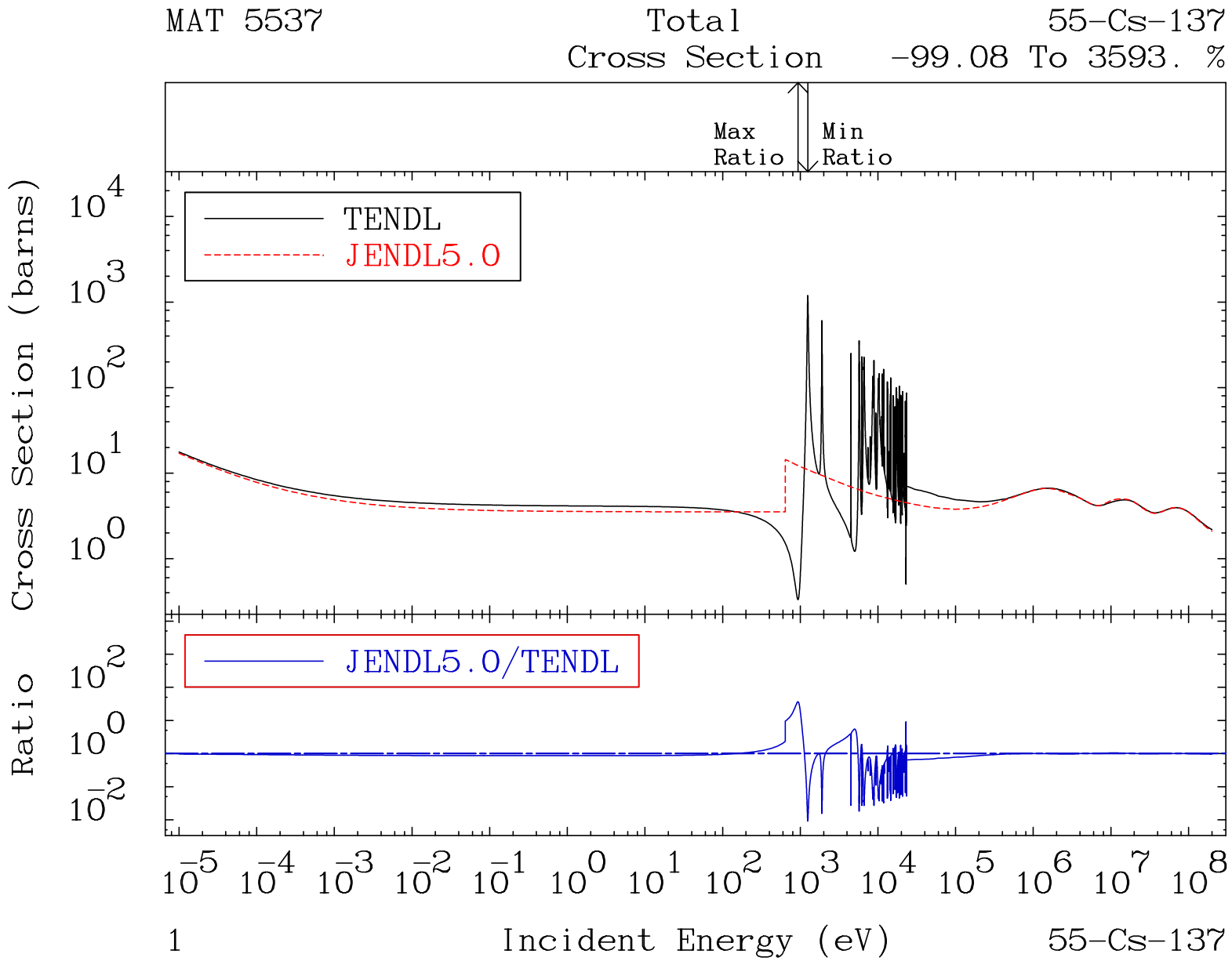
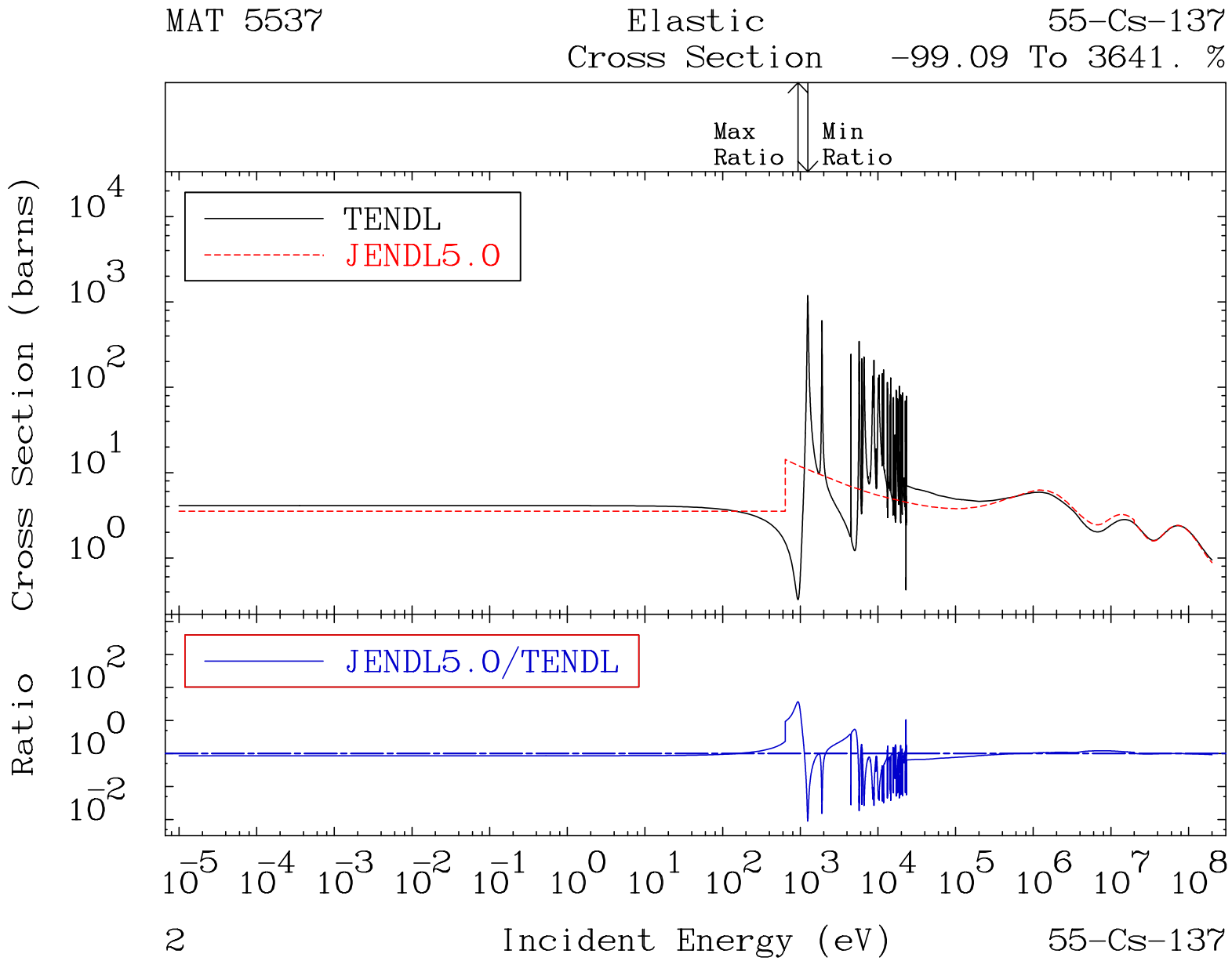
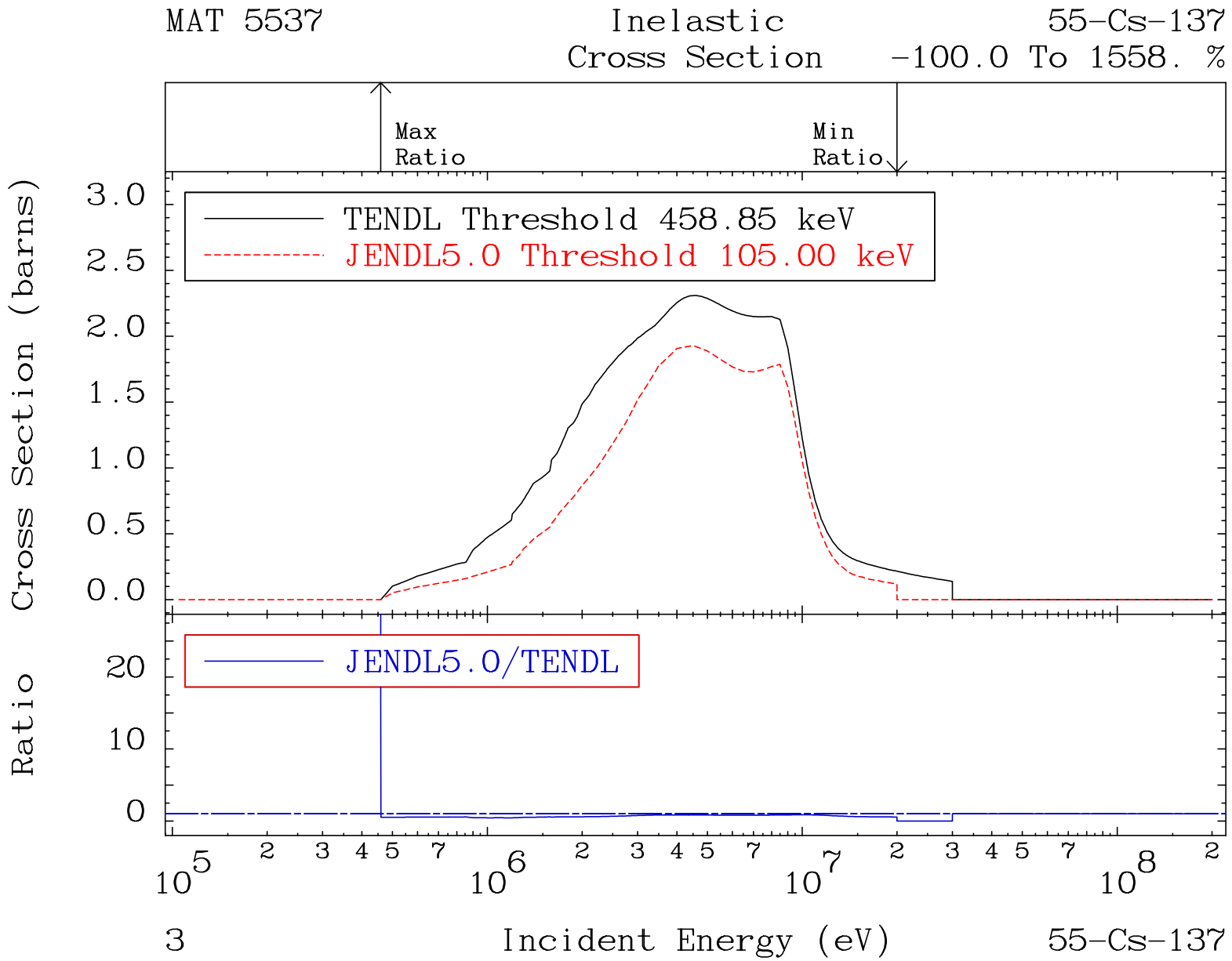
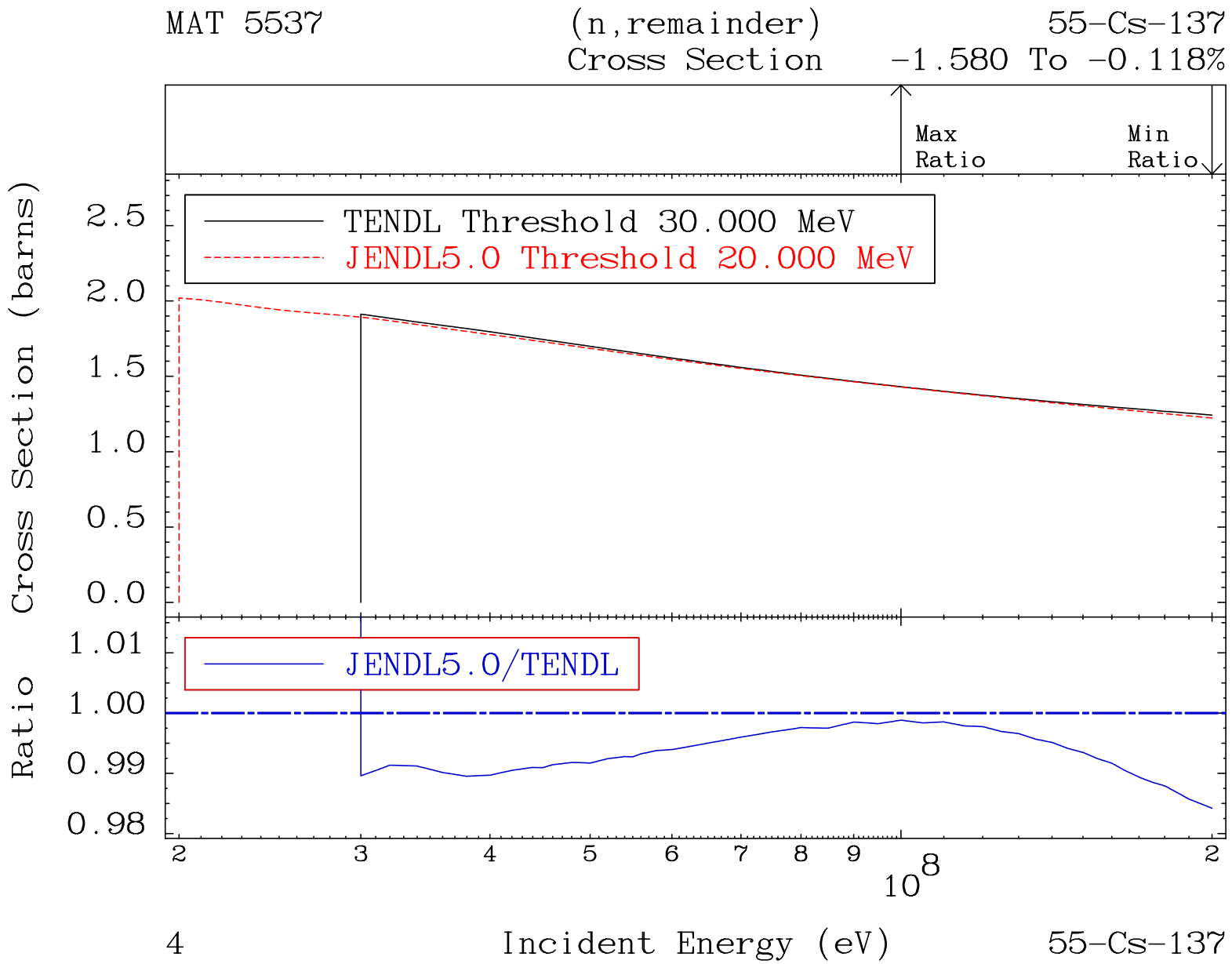
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

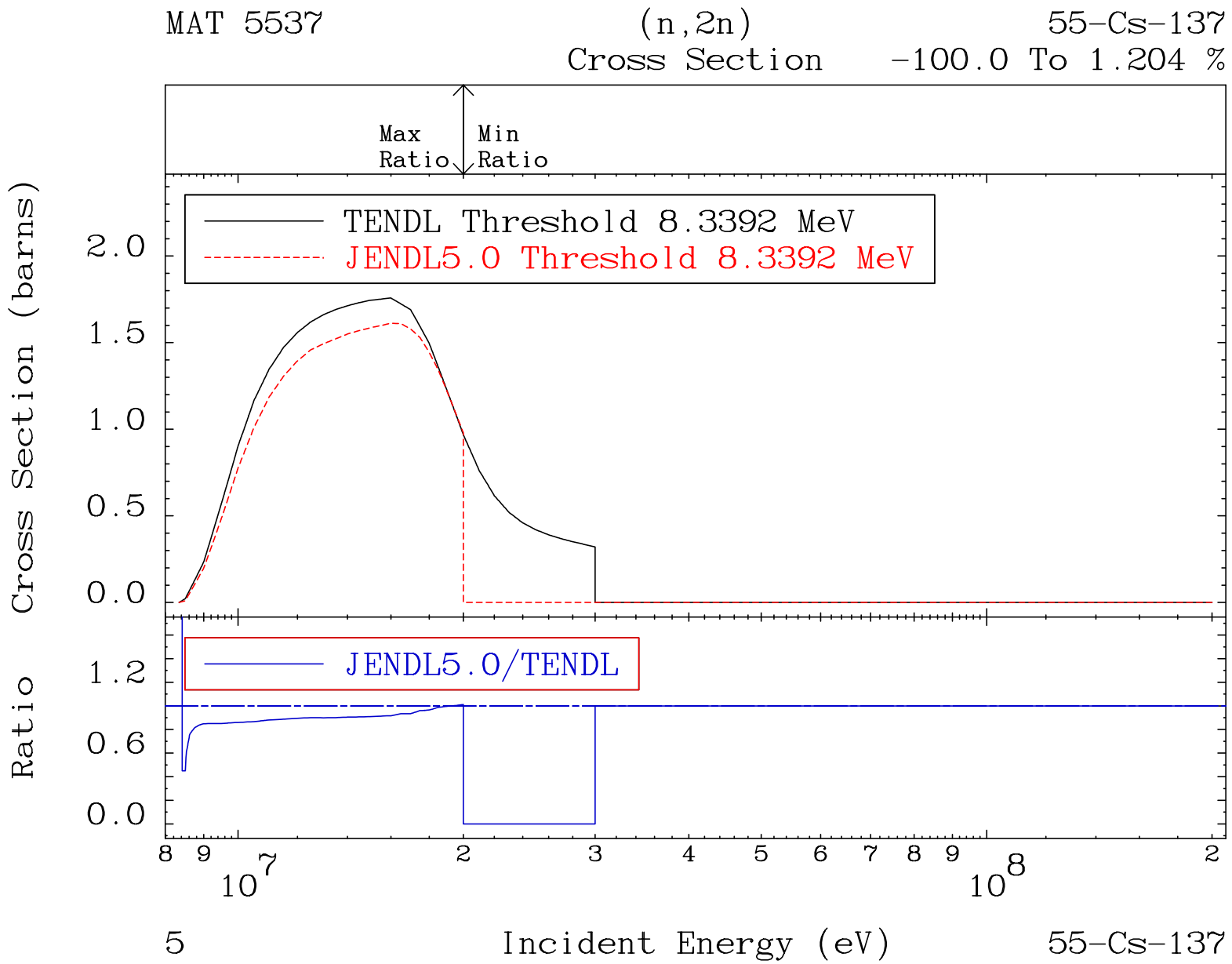
Press Mouse Button to Start

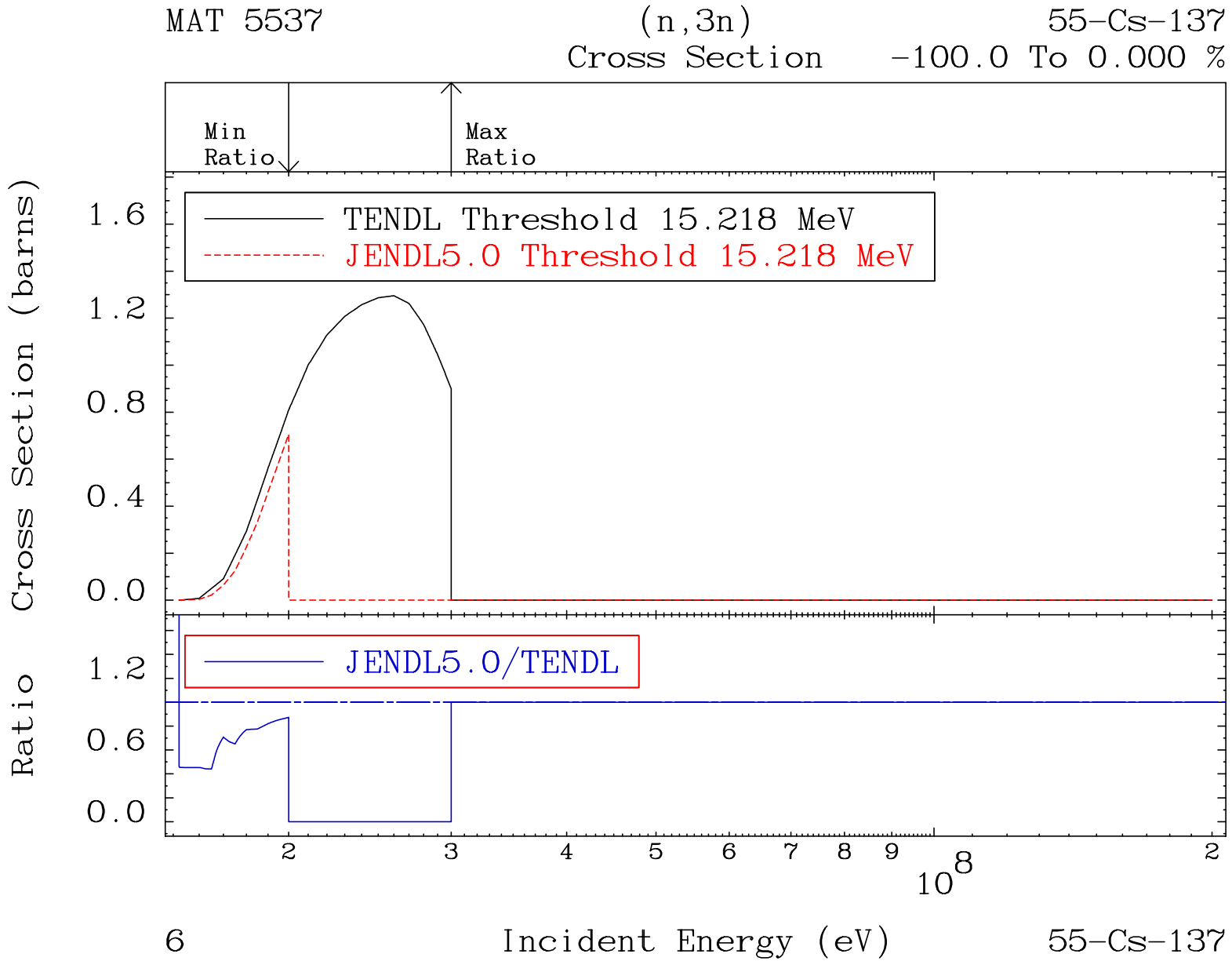

MAT 5537
Total
Cross Section
55-Cs-137
-99.08 To 3593. %
Max
Ratio
Min
Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
1
55-Cs-137

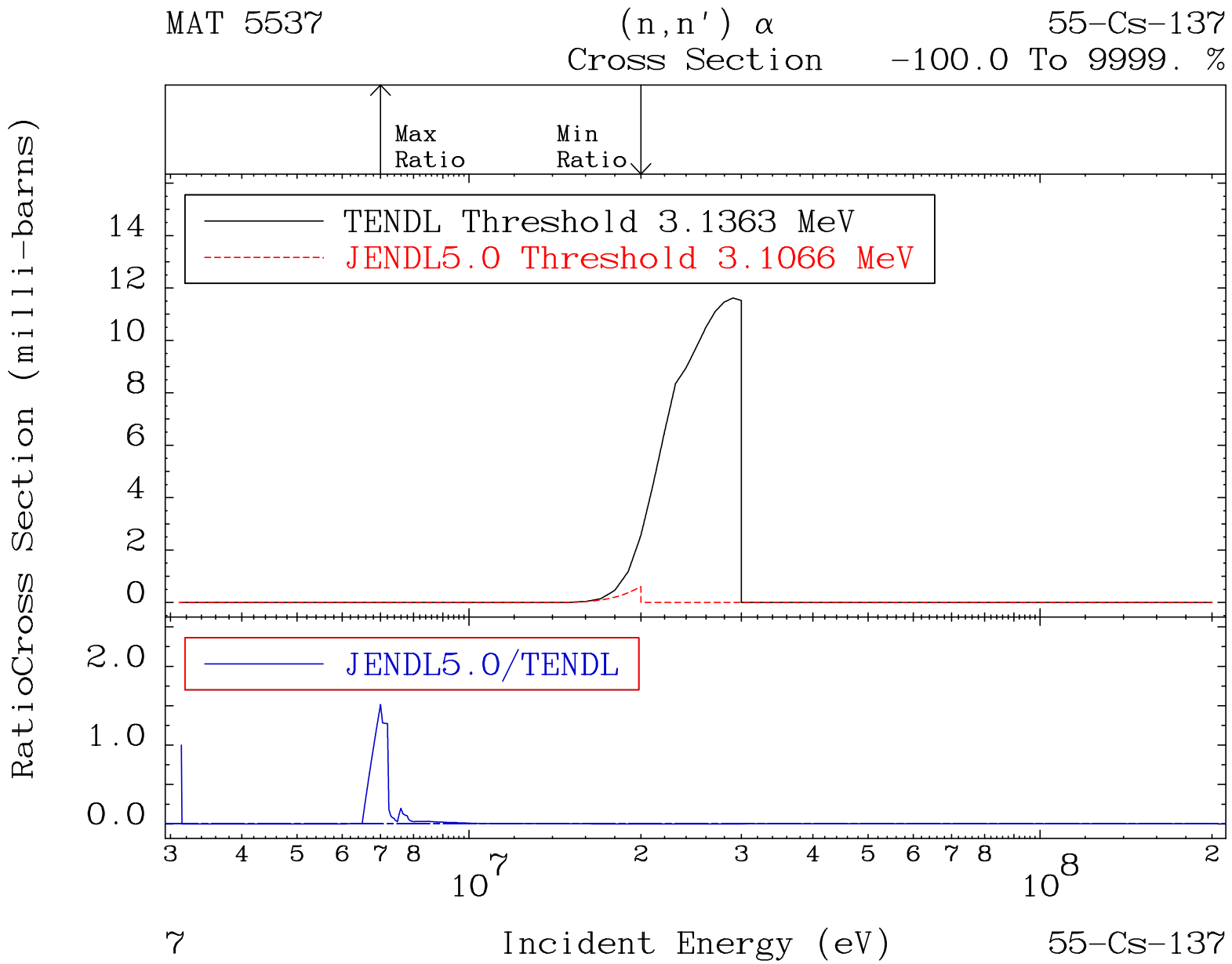

MAT 5537
Elastic
Cross Section
55-Cs-137
-99.09 To 3641. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
55-Cs-137
2

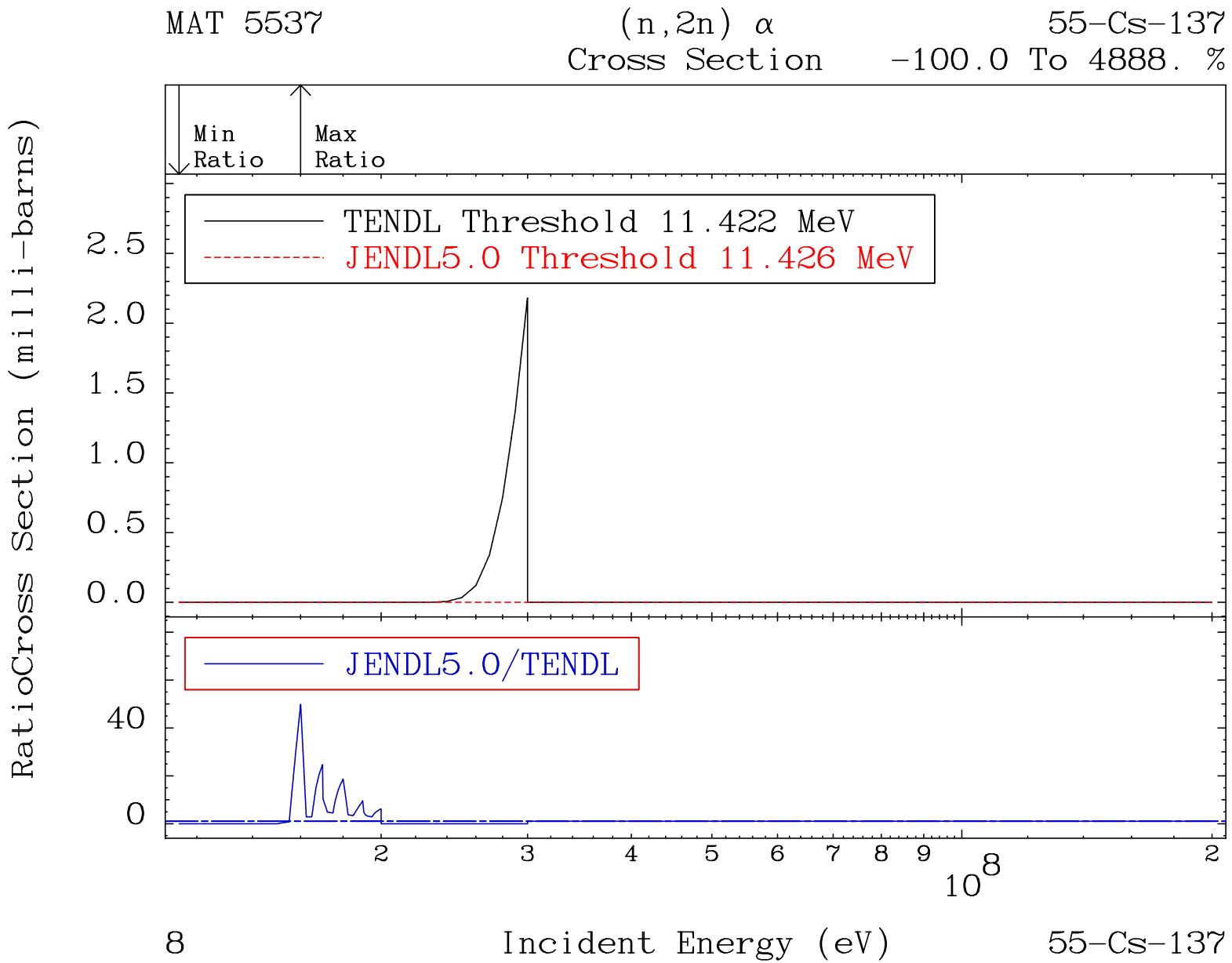

MAT 5537
Inelastic
Cross Section
55-Cs-137
-100.0 To 1558. %
Max
Ratio
Min
Ratio
TENDL Threshold 458.85 keV
JENDL5.0 Threshold 105.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
55-Cs-137

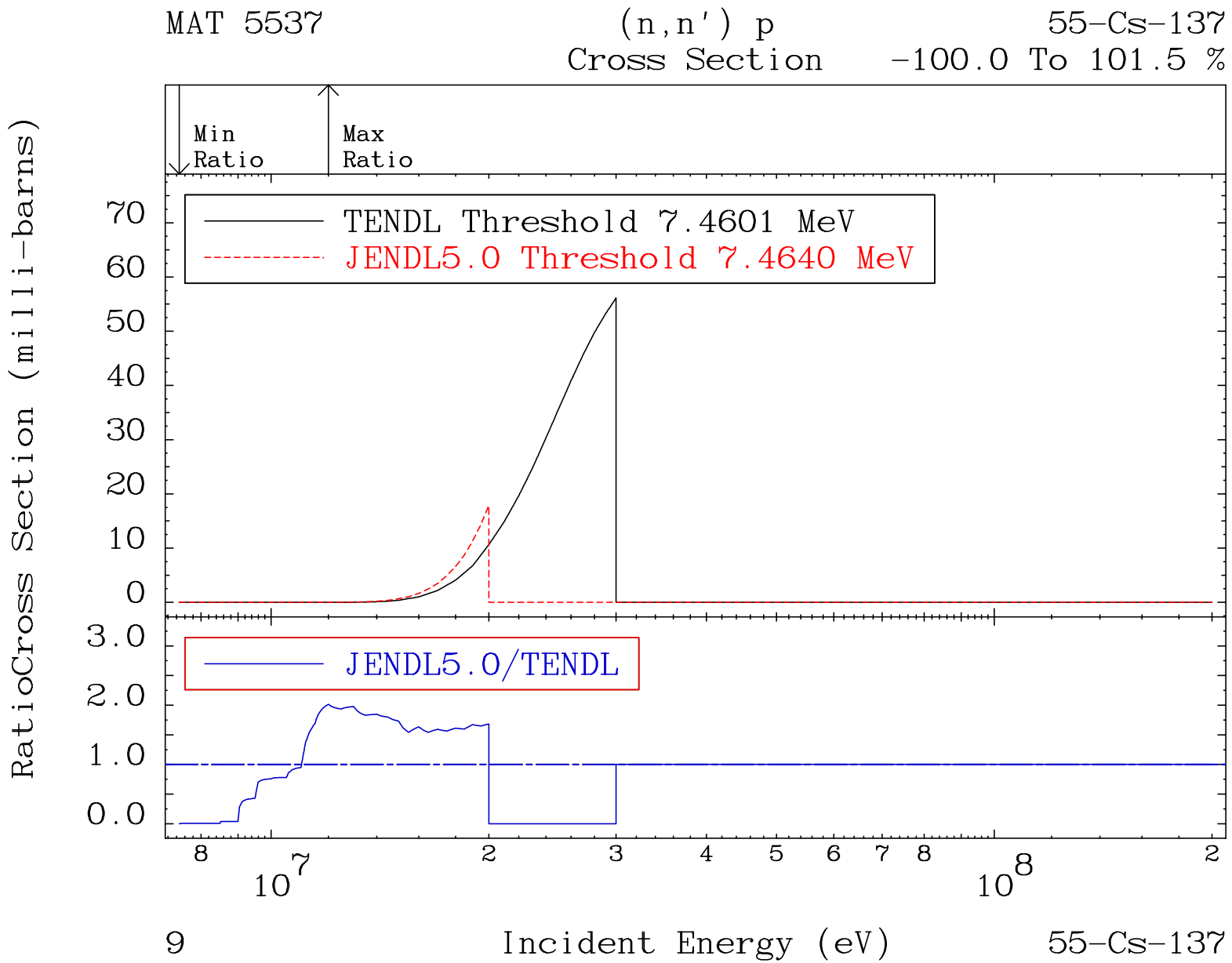

MAT 5537
(n,remainder)
Cross Section
55-Cs-137
-1.580 To -0.118%
Max Ratio
Min Ratio
TENDL Threshold 30.000 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.5
2.0
1.5
1.0
0.5
0.0
1.01
1.00
0.99
0.98
2
3
4
5
6
7
8
9
2
10^8
4
Incident Energy (eV)
55-Cs-137

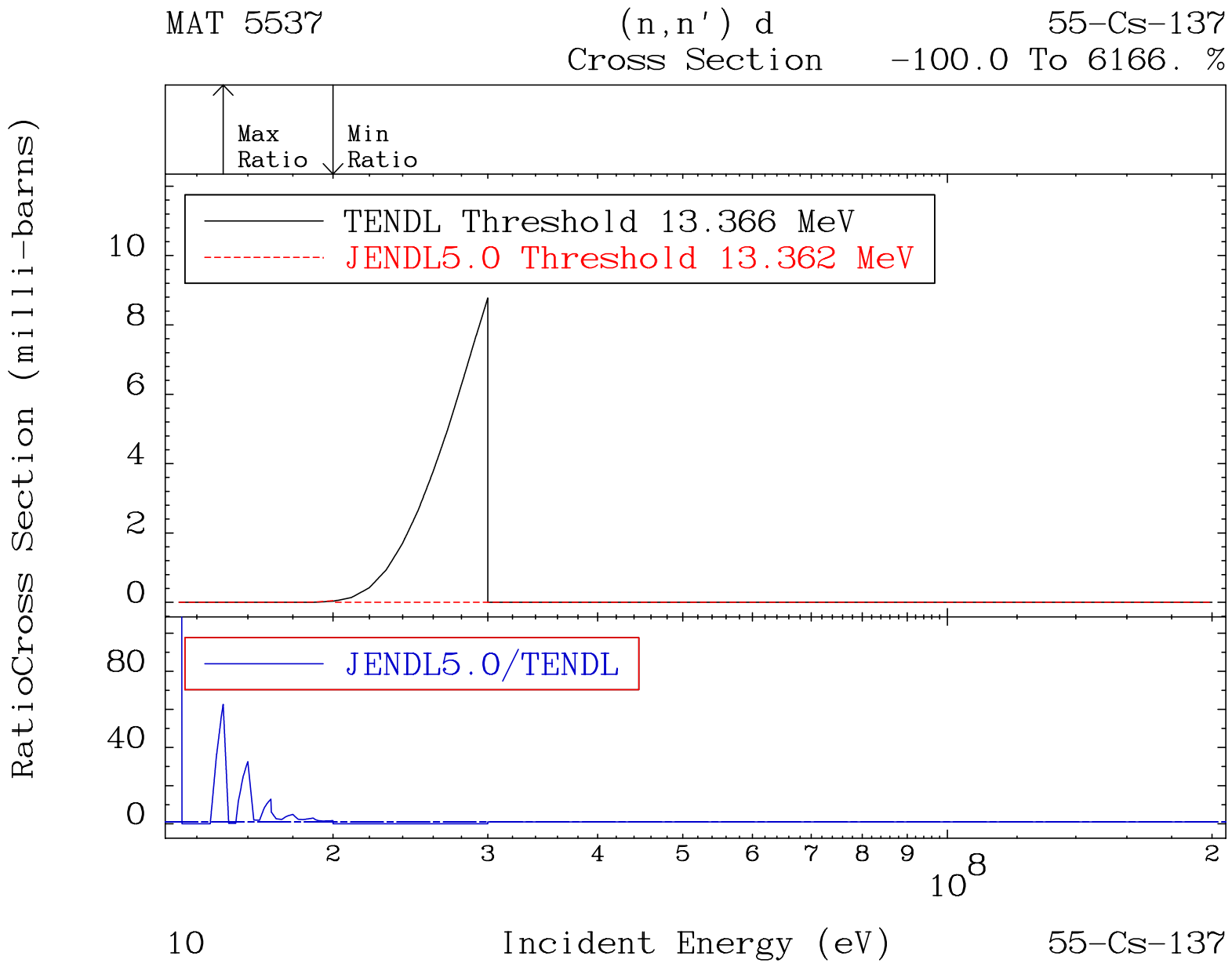

MAT 5537
(n,2n)
Cross Section
55-Cs-137
-100.0 To 1.204 %
Max Ratio
Min Ratio
TENDL Threshold 8.3392 MeV
JENDL5.0 Threshold 8.3392 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
55-Cs-137
5

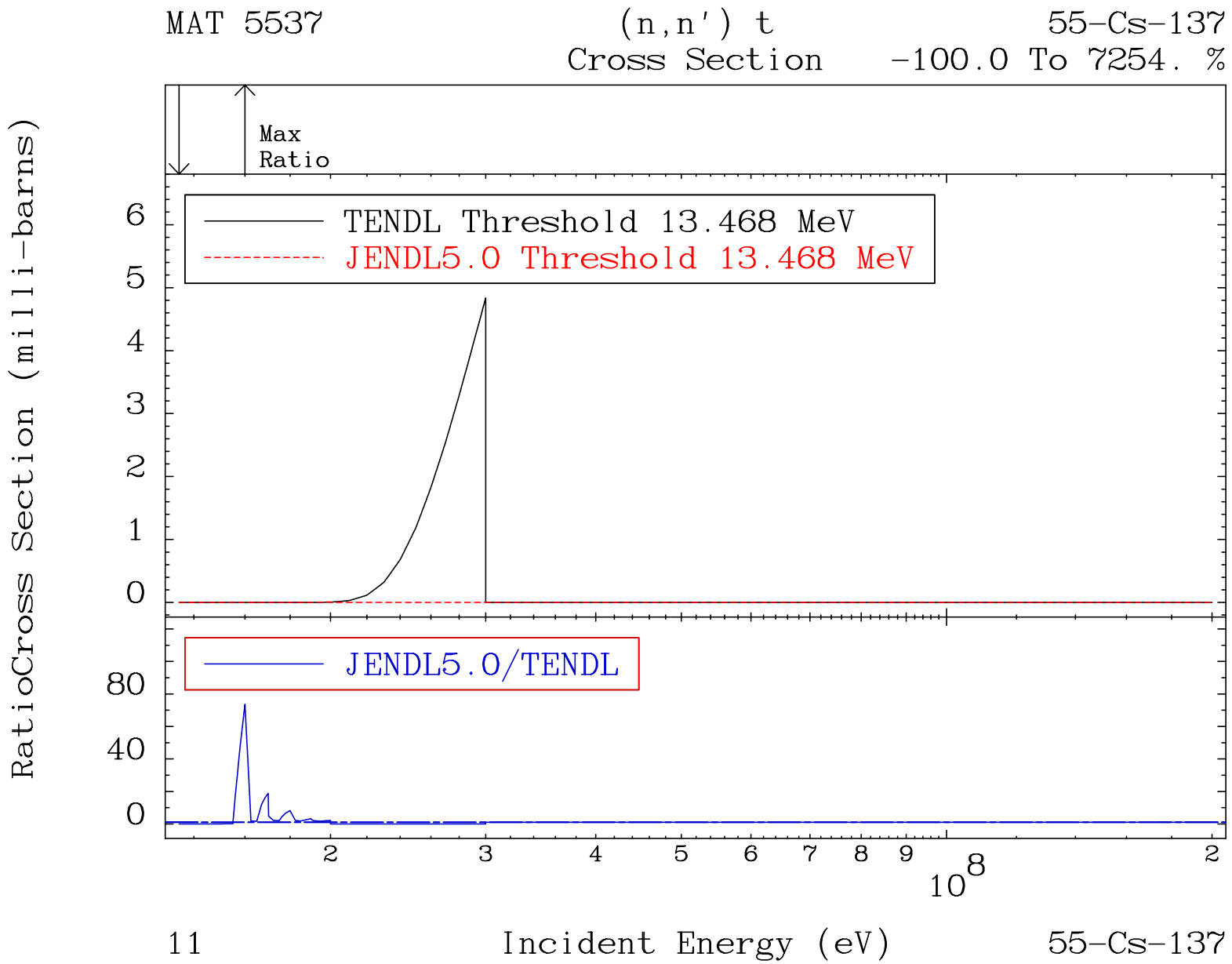

MAT 5537
(n,3n)
55-Cs-137
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 15.218 MeV
JENDL5.0 Threshold 15.218 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.6
1.2
0.8
0.4
0.0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
55-Cs-137

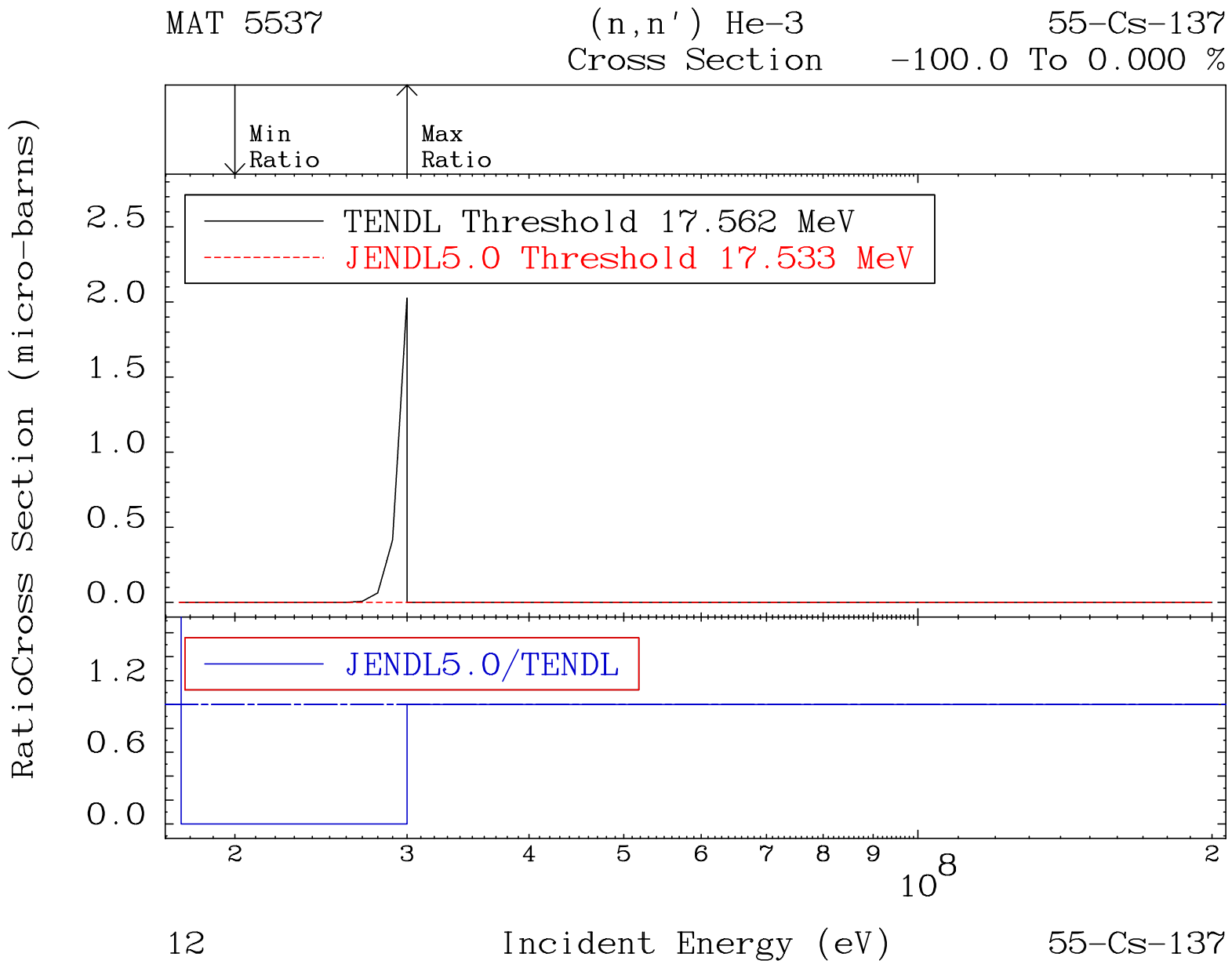

MAT 5537
(n,n') α
Cross Section
55-Cs-137
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.1363 MeV
JENDL5.0 Threshold 3.1066 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
55-Cs-137

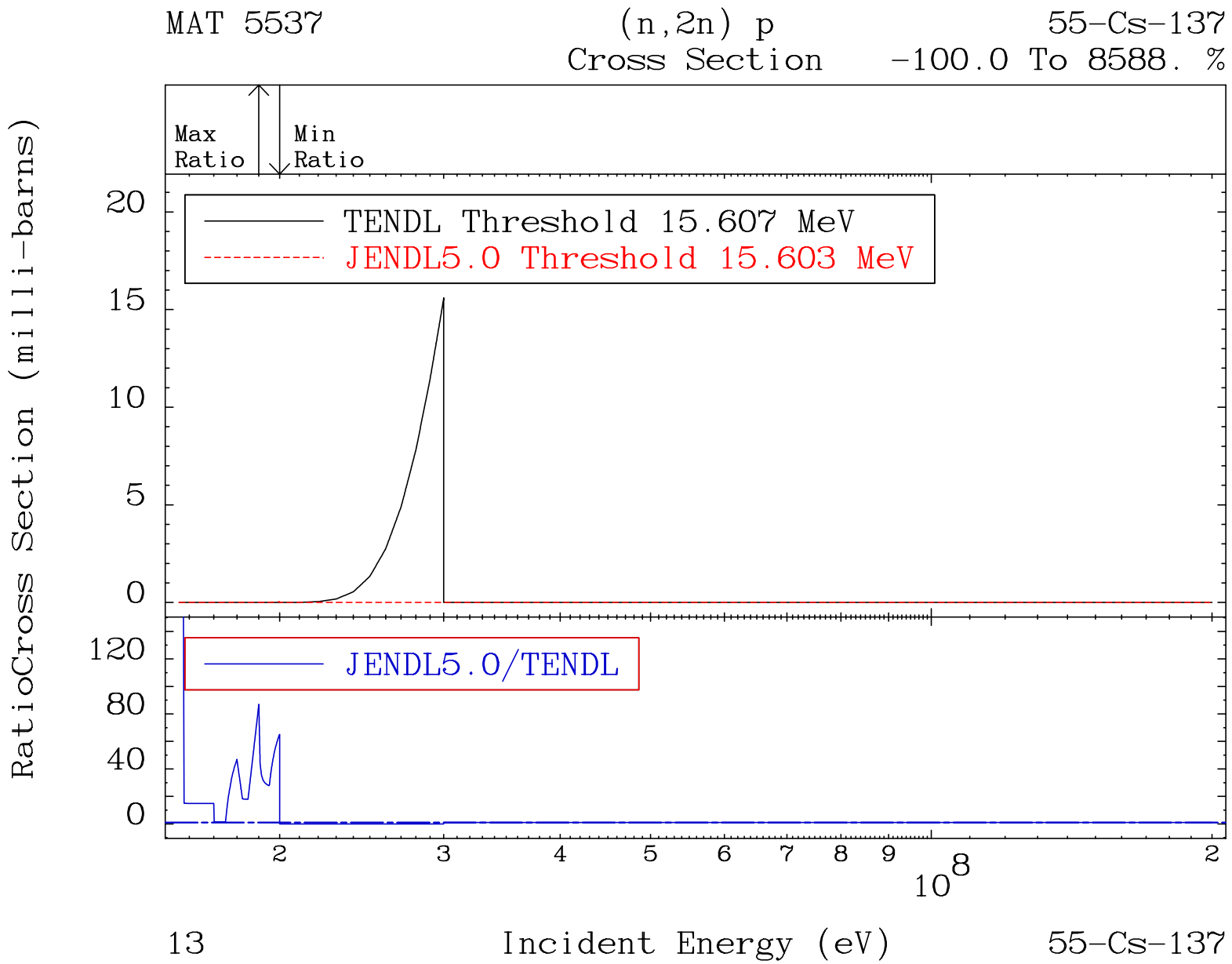

MAT 5537
(n,2n) α
55-Cs-137
Cross Section
-100.0 To 4888. %
Min Ratio
Max Ratio
TENDL Threshold 11.422 MeV
JENDL5.0 Threshold 11.426 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
40
0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
55-Cs-137

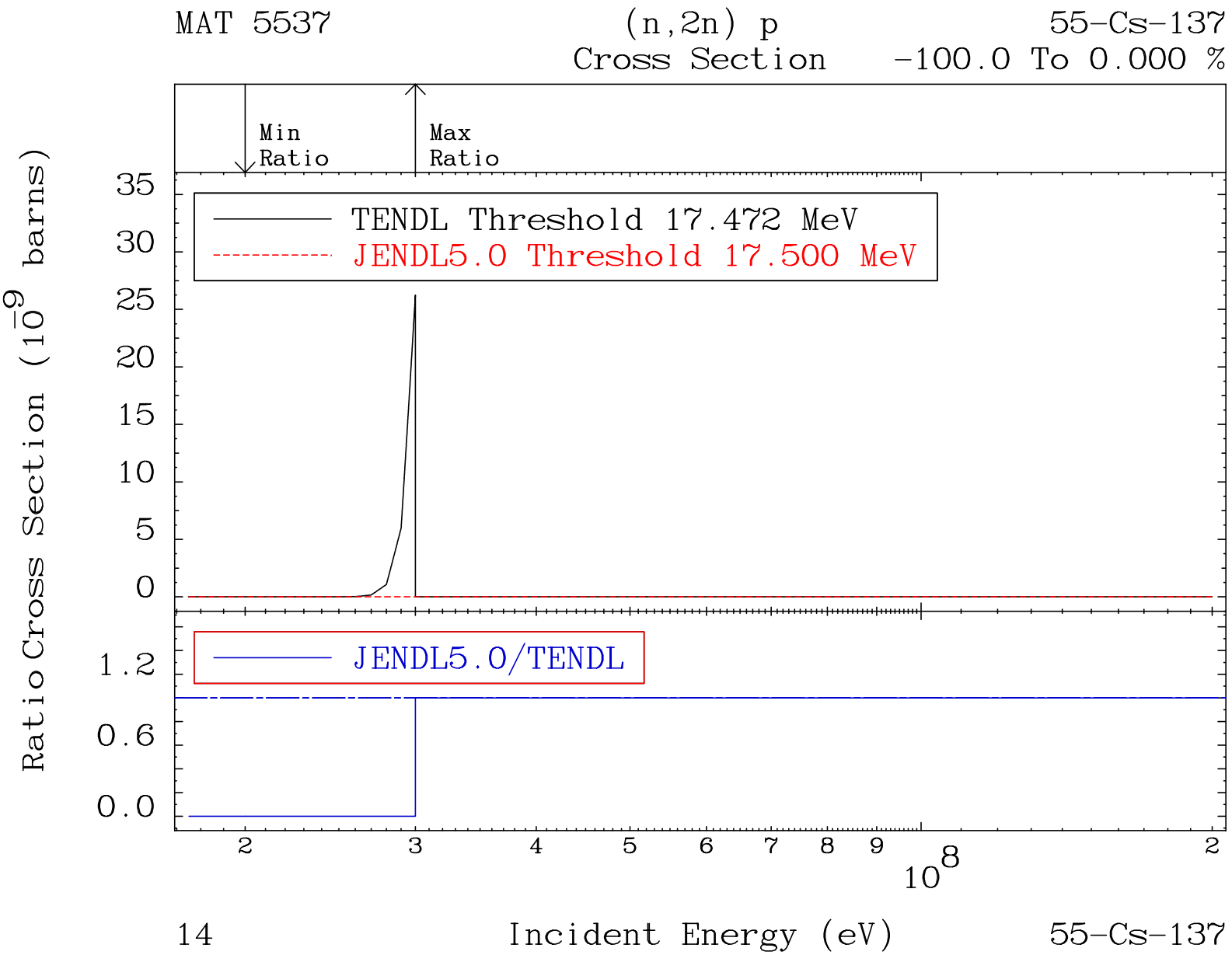

MAT 5537
(n,n') p
Cross Section
55-Cs-137
-100.0 To 101.5 %
Min Ratio
Max Ratio
TENDL Threshold 7.4601 MeV
JENDL5.0 Threshold 7.4640 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
3.0
2.0
1.0
0.0
8
10^7
2
3
4
5
6
7
8
10^8
2
9
Incident Energy (eV)
55-Cs-137

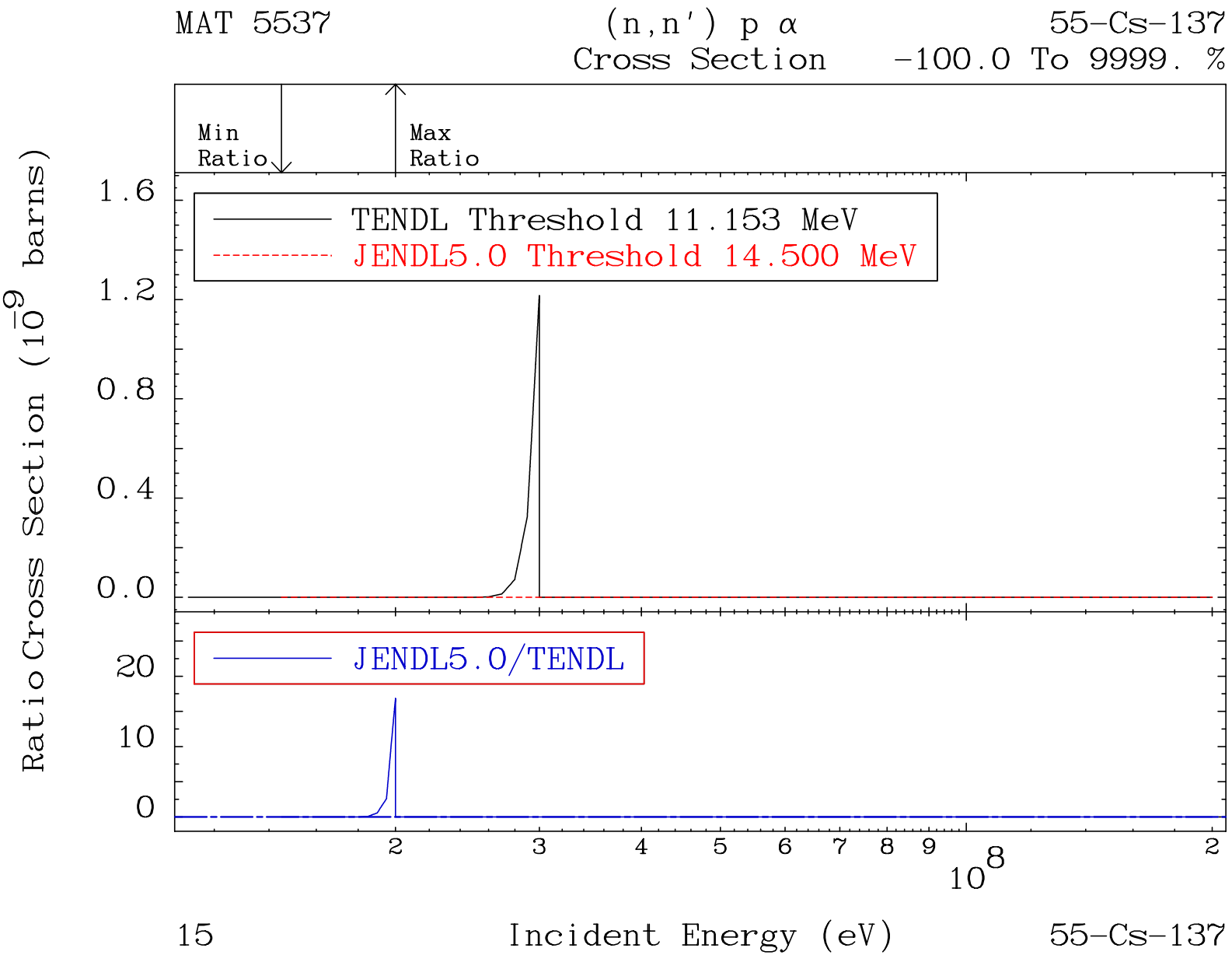

MAT 5537
(n,n') d
Cross Section
55-Cs-137
-100.0 To 6166. %
Max Ratio
Min Ratio
TENDL Threshold 13.366 MeV
JENDL5.0 Threshold 13.362 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
80
40
0
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
55-Cs-137

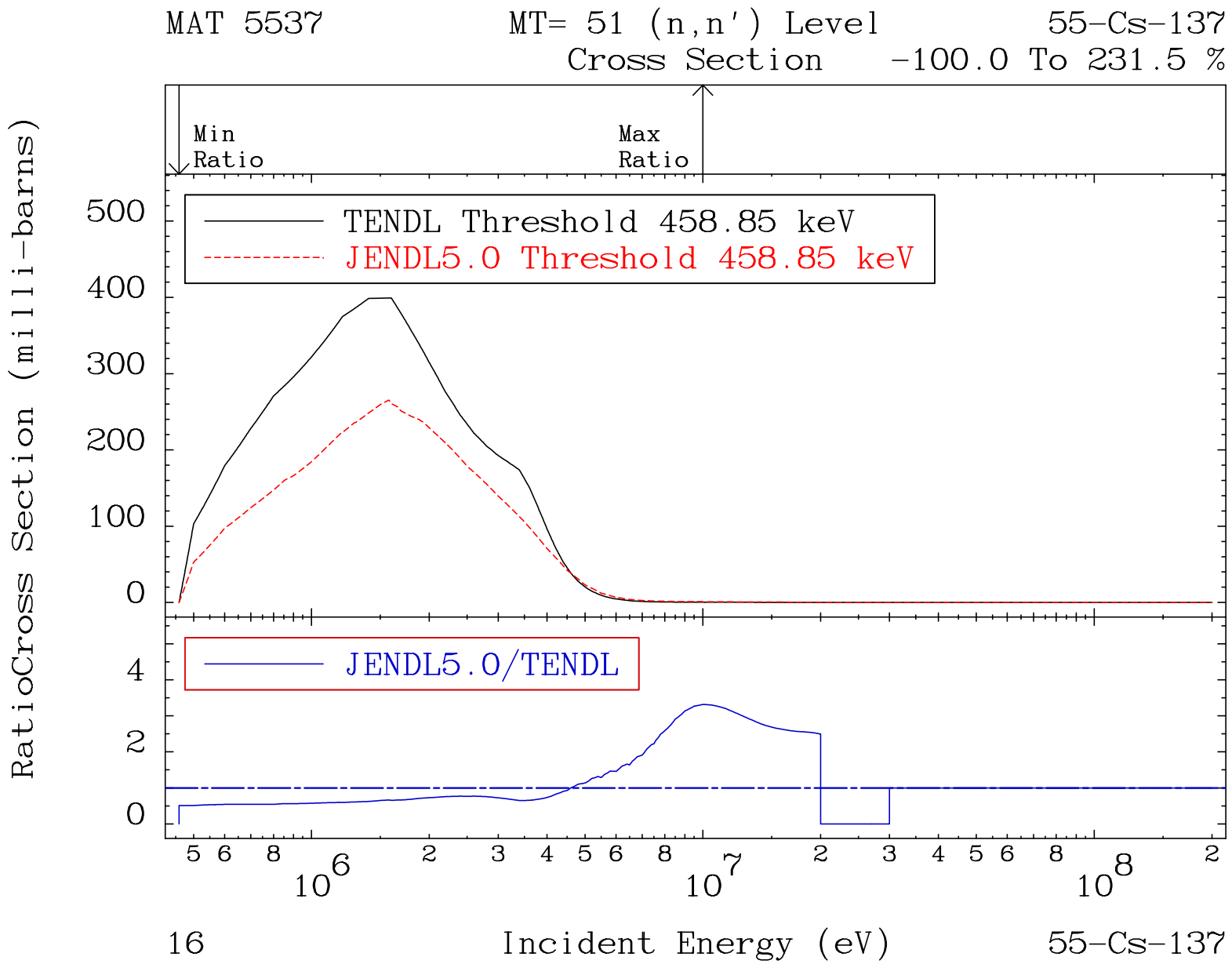

MAT 5537
(n,n') t
Cross Section
55-Cs-137
-100.0 To 7254. %
Max
Ratio
TENDL Threshold 13.468 MeV
JENDL5.0 Threshold 13.468 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
6
5
4
3
2
1
0
80
40
0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
55-Cs-137

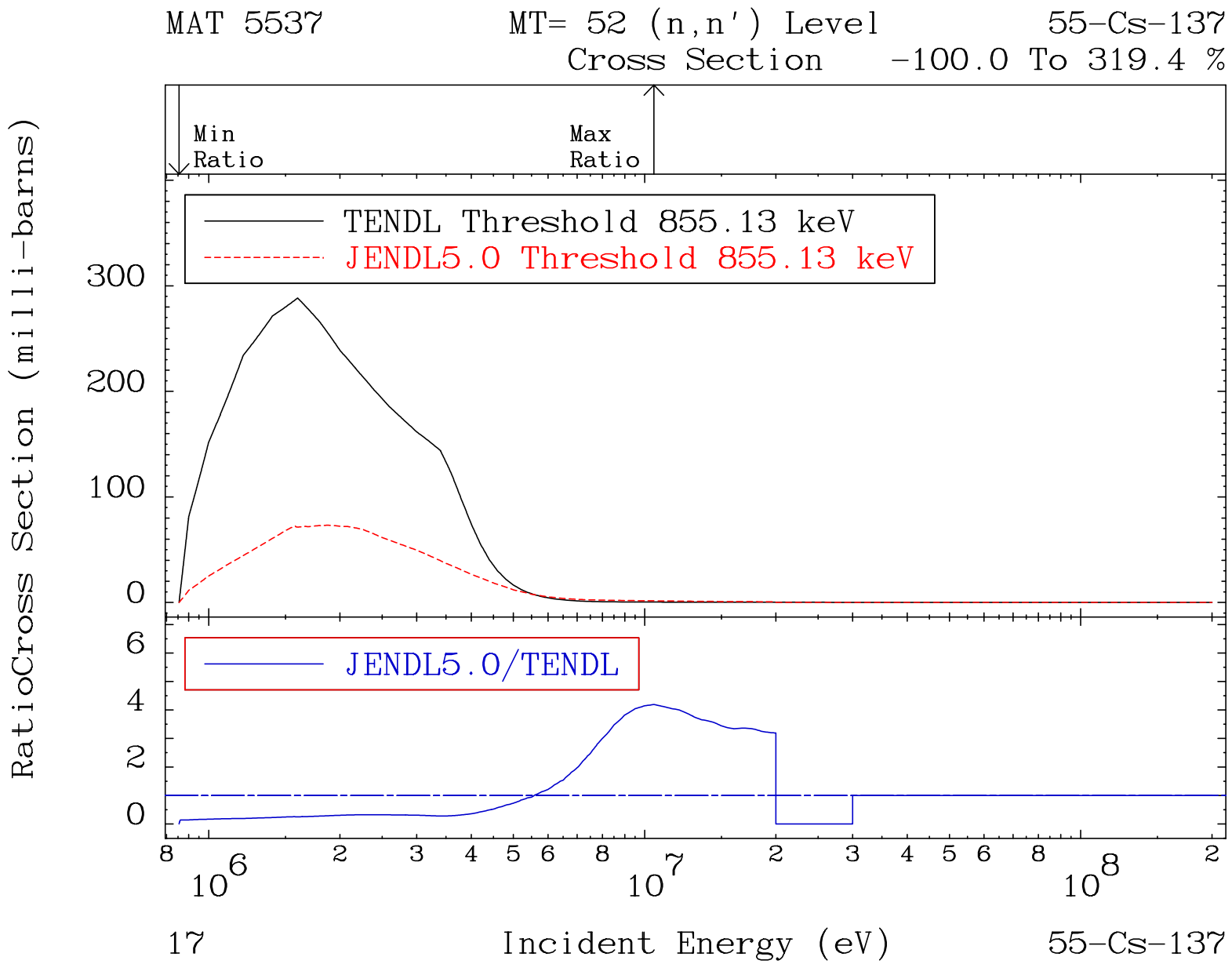

MAT 5537
(n,n') He-3
Cross Section
55-Cs-137
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 17.562 MeV
JENDL5.0 Threshold 17.533 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
2.5
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
55-Cs-137

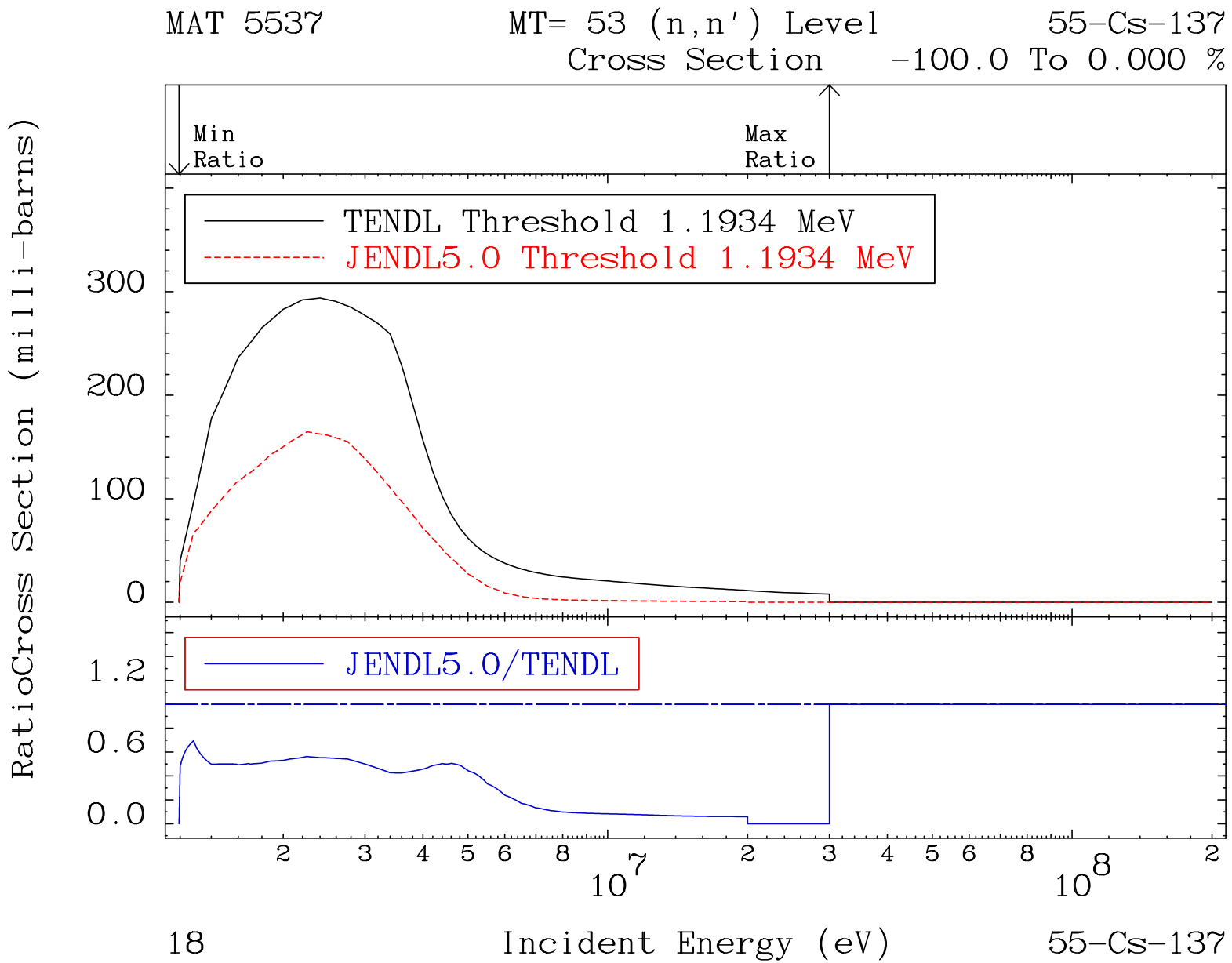

MAT 5537
(n,2n) p
Cross Section
55-Cs-137
-100.0 To 8588. %
Max Ratio
Min Ratio
TENDL Threshold 15.607 MeV
JENDL5.0 Threshold 15.603 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
120
80
40
0
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
55-Cs-137

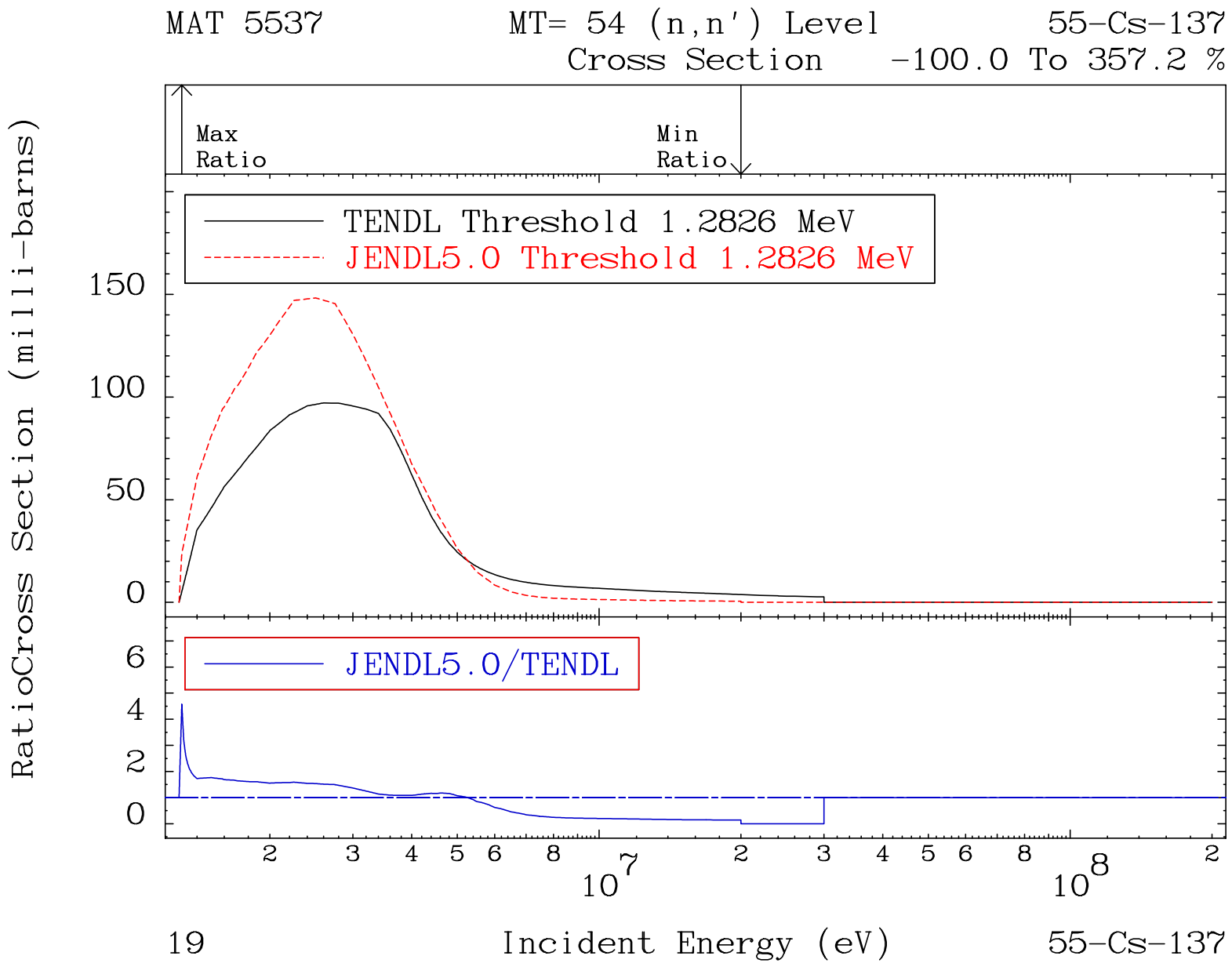

MAT 5537
(n,2n) p
Cross Section
55-Cs-137
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 17.472 MeV
JENDL5.0 Threshold 17.500 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^{-9} barns)
35
30
25
20
15
10
5
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
55-Cs-137

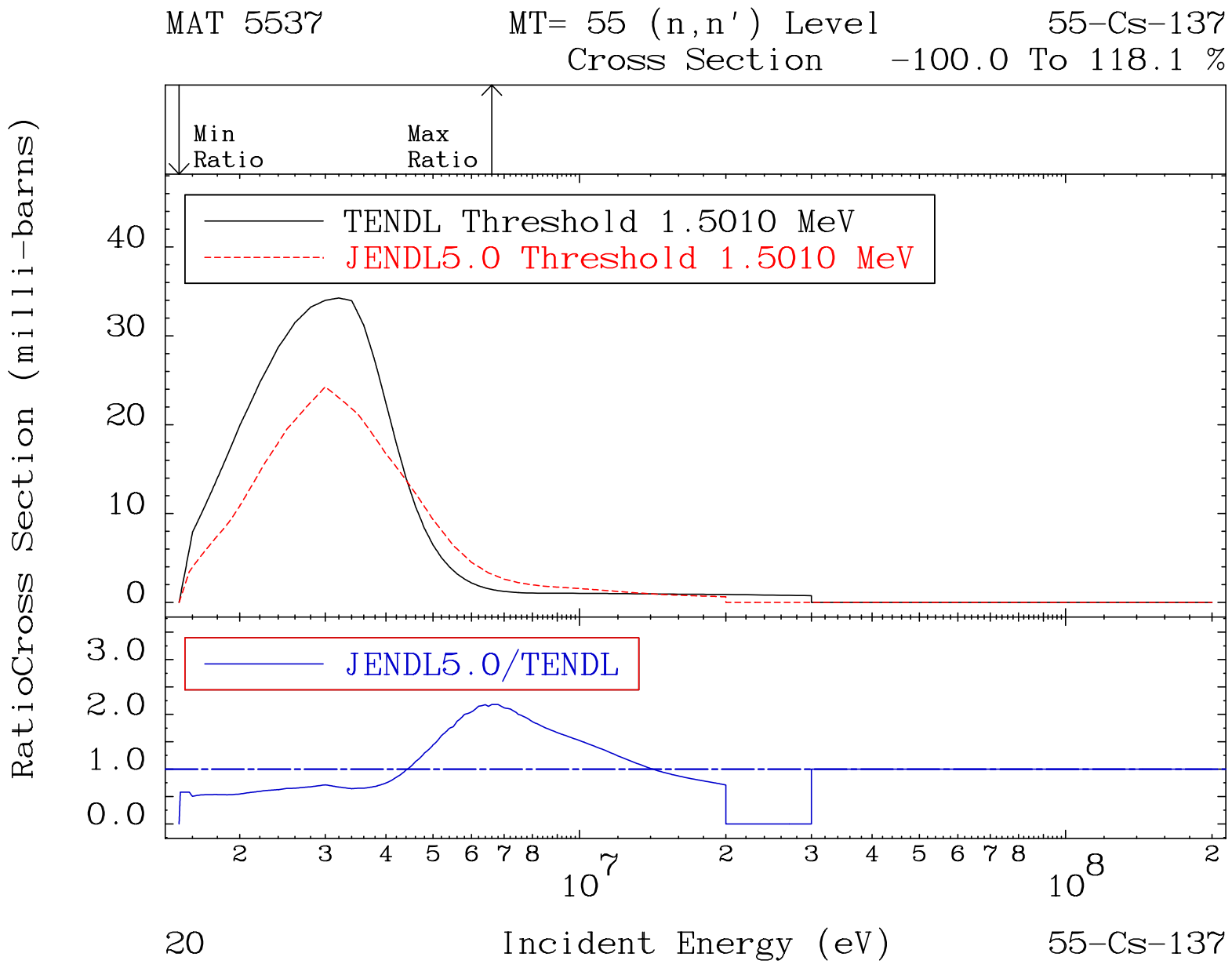

MAT 5537
(n,n') p α
55-Cs-137
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 11.153 MeV
JENDL5.0 Threshold 14.500 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^-9 barns)
1.6
1.2
0.8
0.4
0.0
20
10
0
2
3
4
5
6
7
8
9
10^8
2
15
Incident Energy (eV)
55-Cs-137

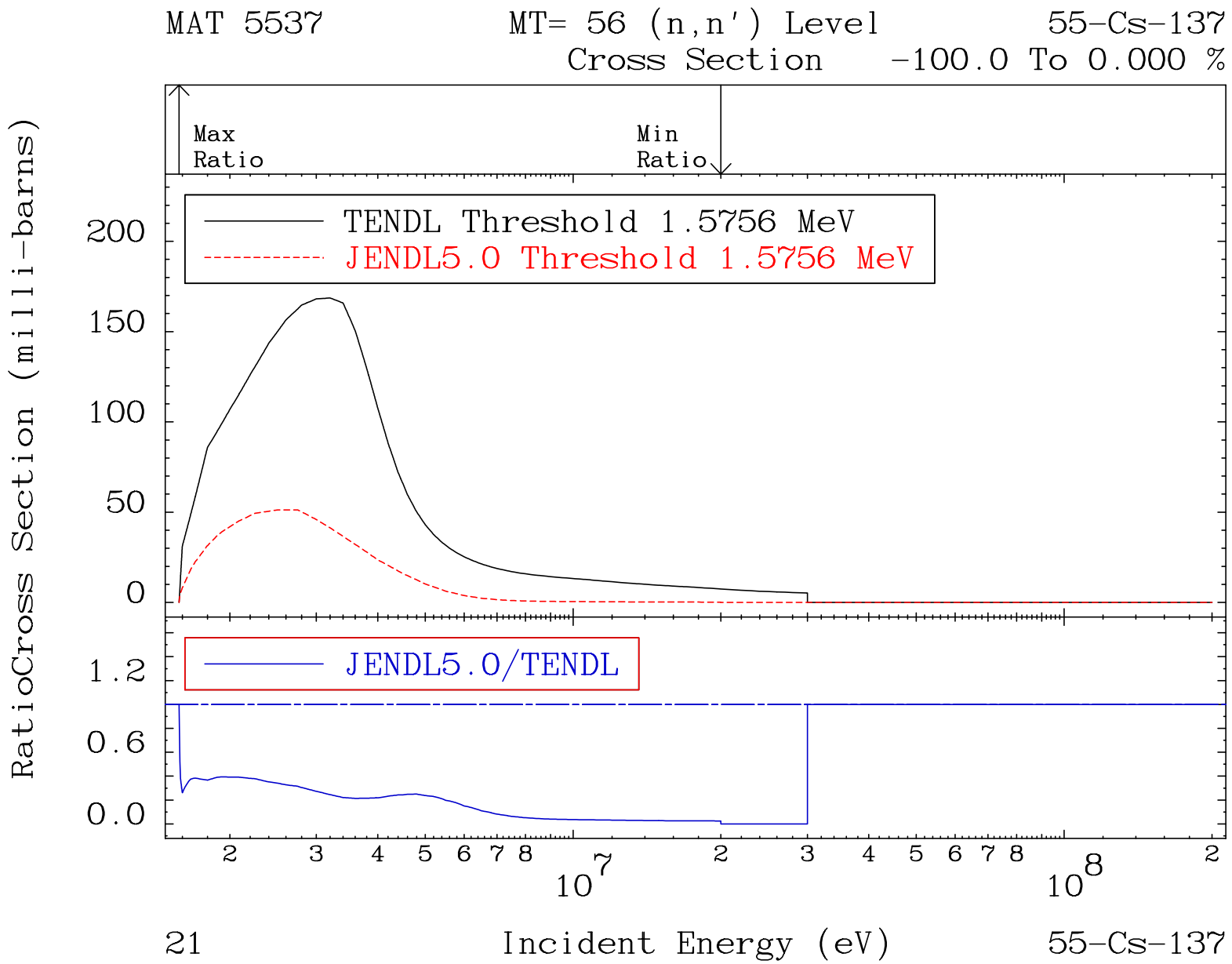

MAT 5537
MT= 51 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 231.5 %
Min Ratio
Max Ratio
TENDL Threshold 458.85 keV
JENDL5.0 Threshold 458.85 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
4
2
0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
16
Incident Energy (eV)
55-Cs-137

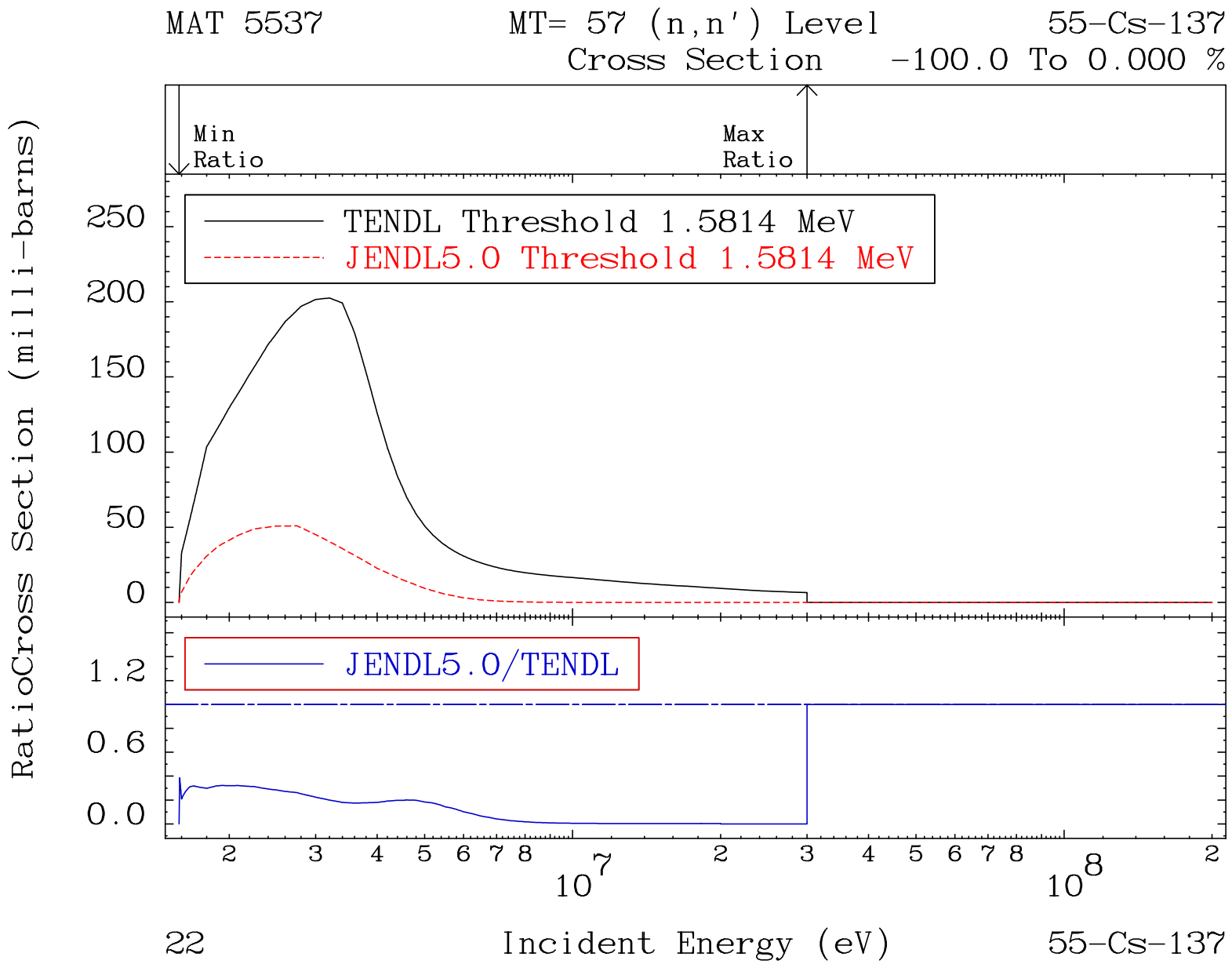

MAT 5537
MT= 52 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 319.4 %
Min Ratio
Max Ratio
TENDL Threshold 855.13 keV
JENDL5.0 Threshold 855.13 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
6
4
2
0
8
2
3
4
5
6
8
2
3
4
5
6
8
2
10^6
10^7
10^8
17
Incident Energy (eV)
55-Cs-137

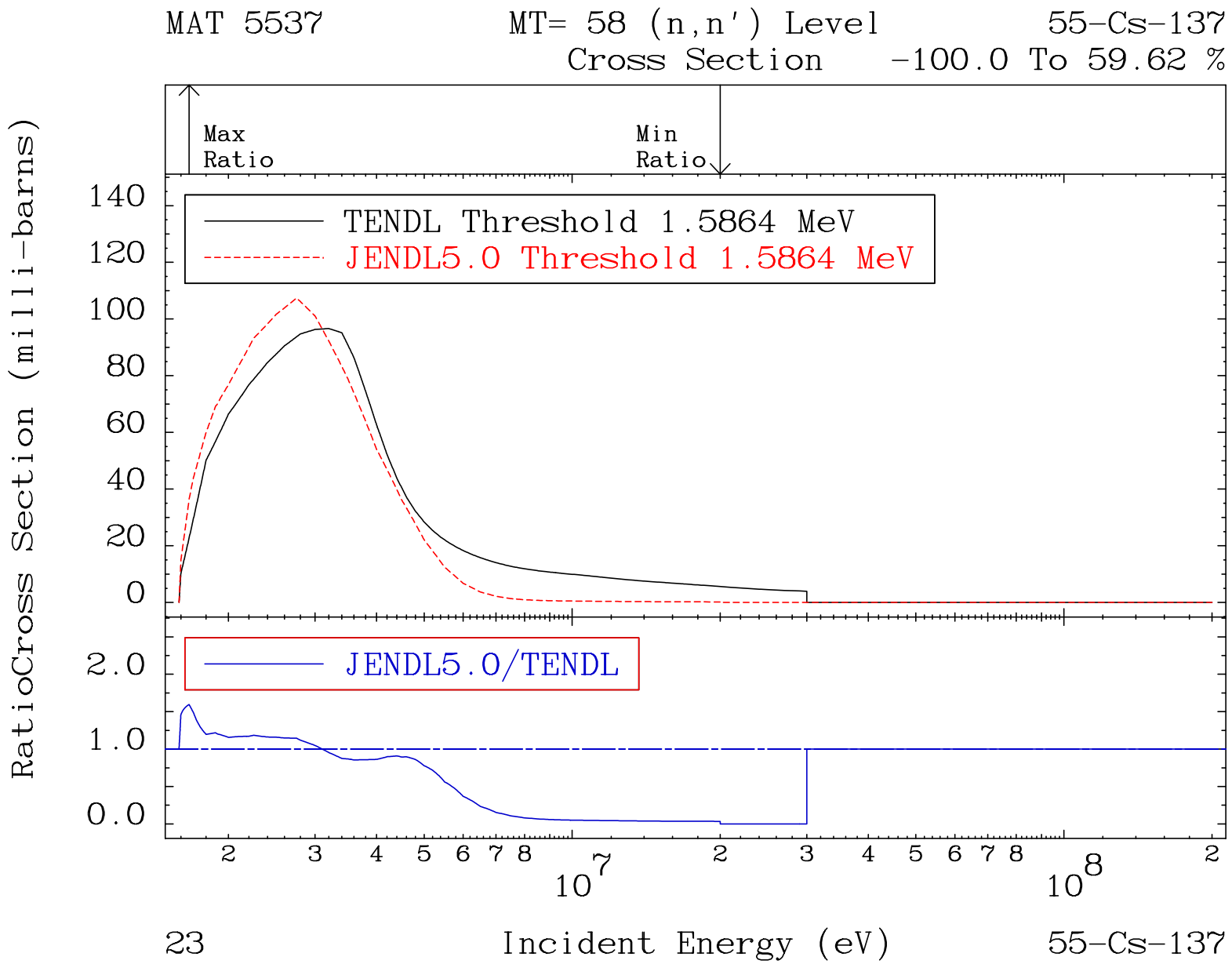

MAT 5537
MT= 53 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 1.1934 MeV
JENDL5.0 Threshold 1.1934 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
1.2
0.6
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
18
Incident Energy (eV)
55-Cs-137

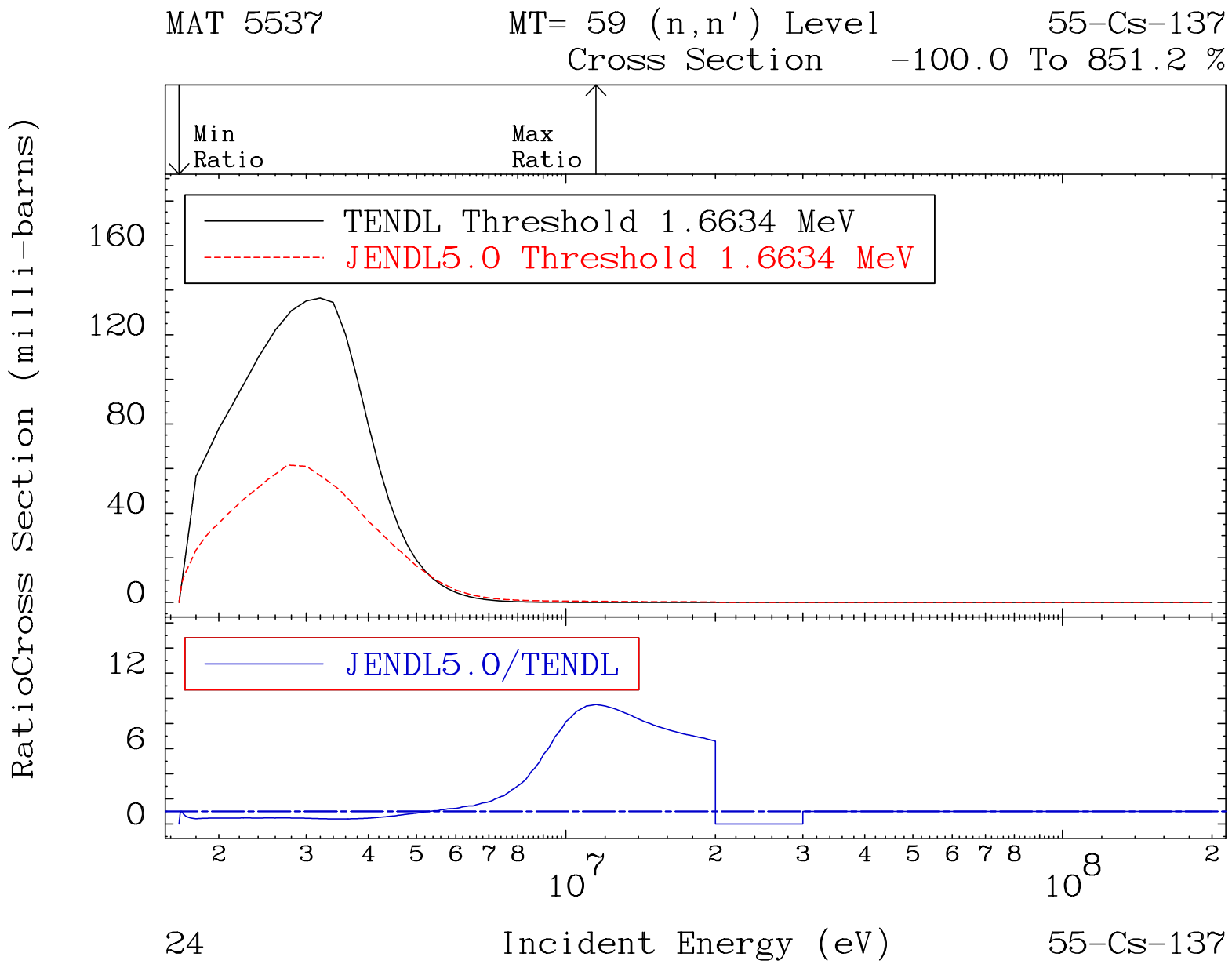

MAT 5537
MT= 54 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 357.2 %
Max Ratio
Min Ratio
TENDL Threshold 1.2826 MeV
JENDL5.0 Threshold 1.2826 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
150
100
50
0
6
4
2
0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
19
Incident Energy (eV)
55-Cs-137

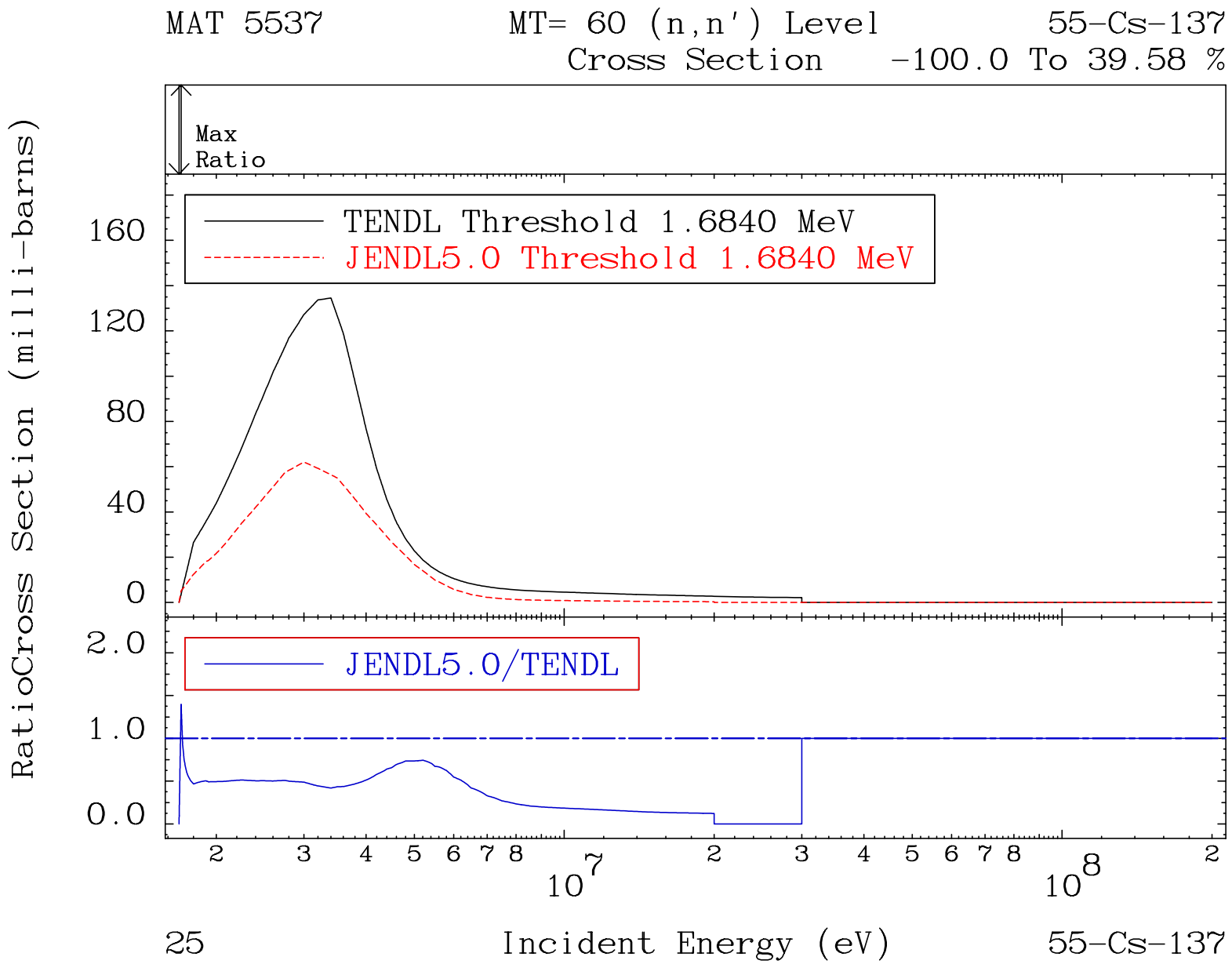

MAT 5537
MT= 55 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 118.1 %
Min Ratio
Max Ratio
TENDL Threshold 1.5010 MeV
JENDL5.0 Threshold 1.5010 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
55-Cs-137

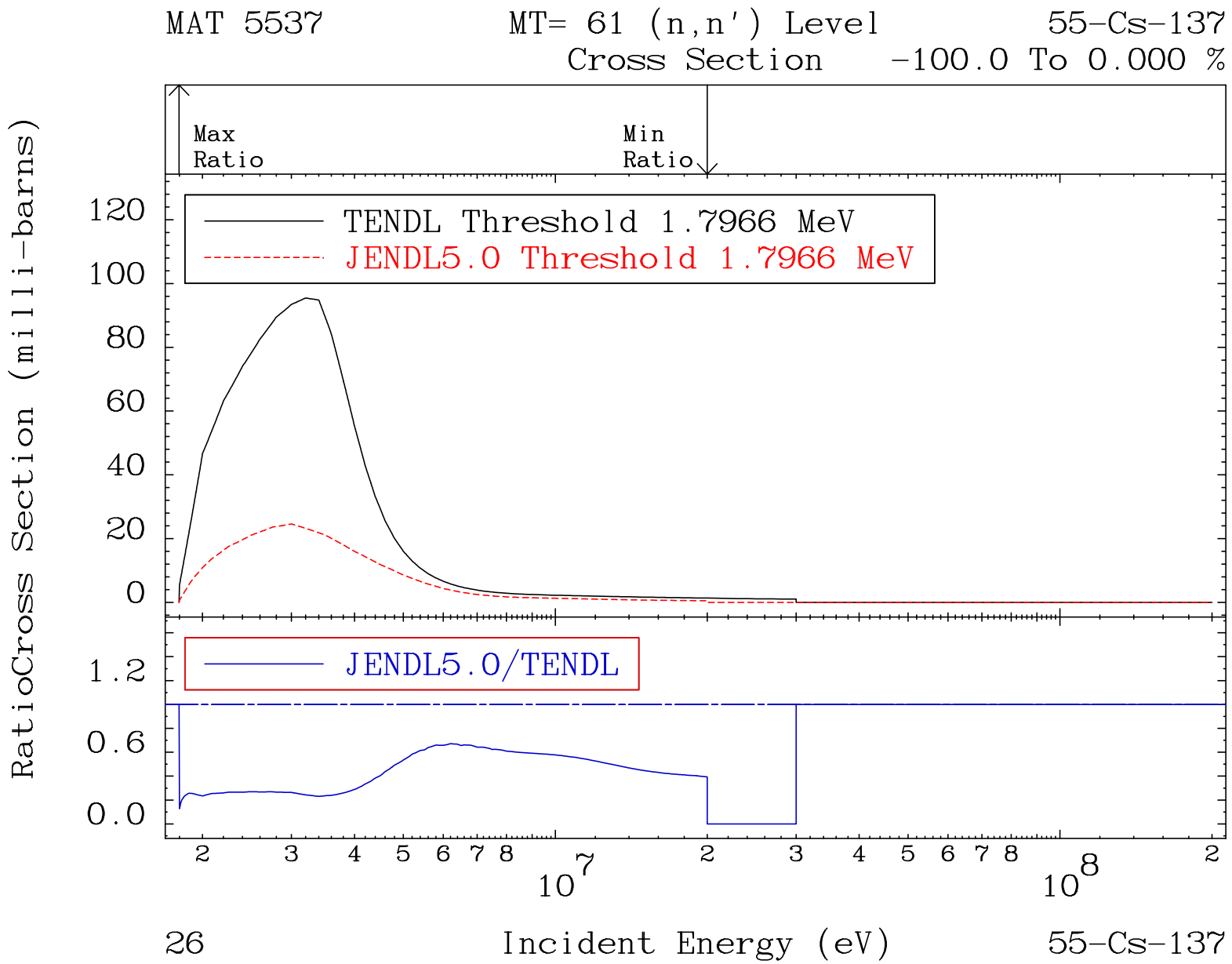

MAT 5537
MT= 56 (n,n') Level
55-Cs-137
Cross Section -100.0 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 1.5756 MeV
JENDL5.0 Threshold 1.5756 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
55-Cs-137

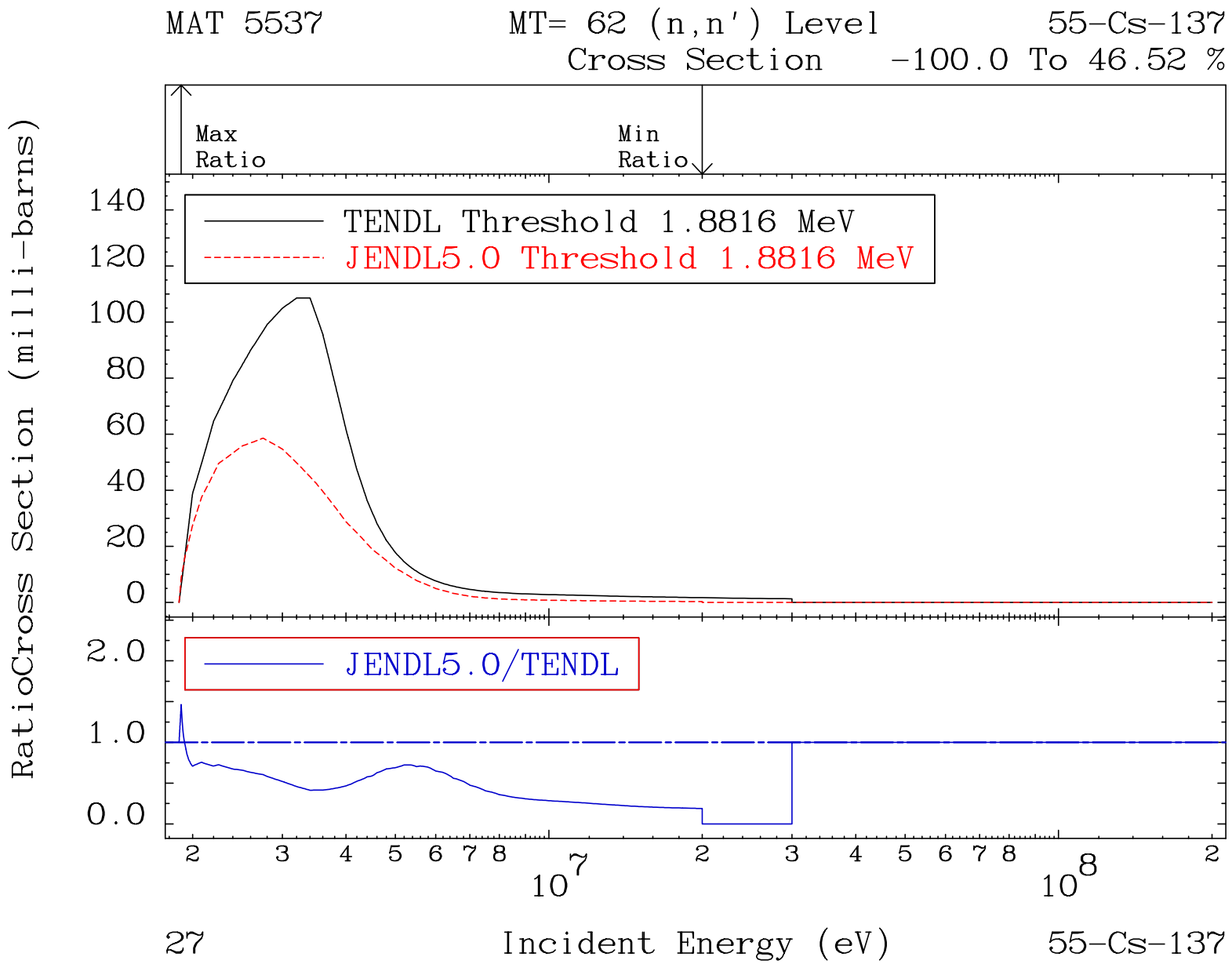

MAT 5537
MT= 57 (n,n') Level
55-Cs-137
Cross Section -100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 1.5814 MeV
JENDL5.0 Threshold 1.5814 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
55-Cs-137

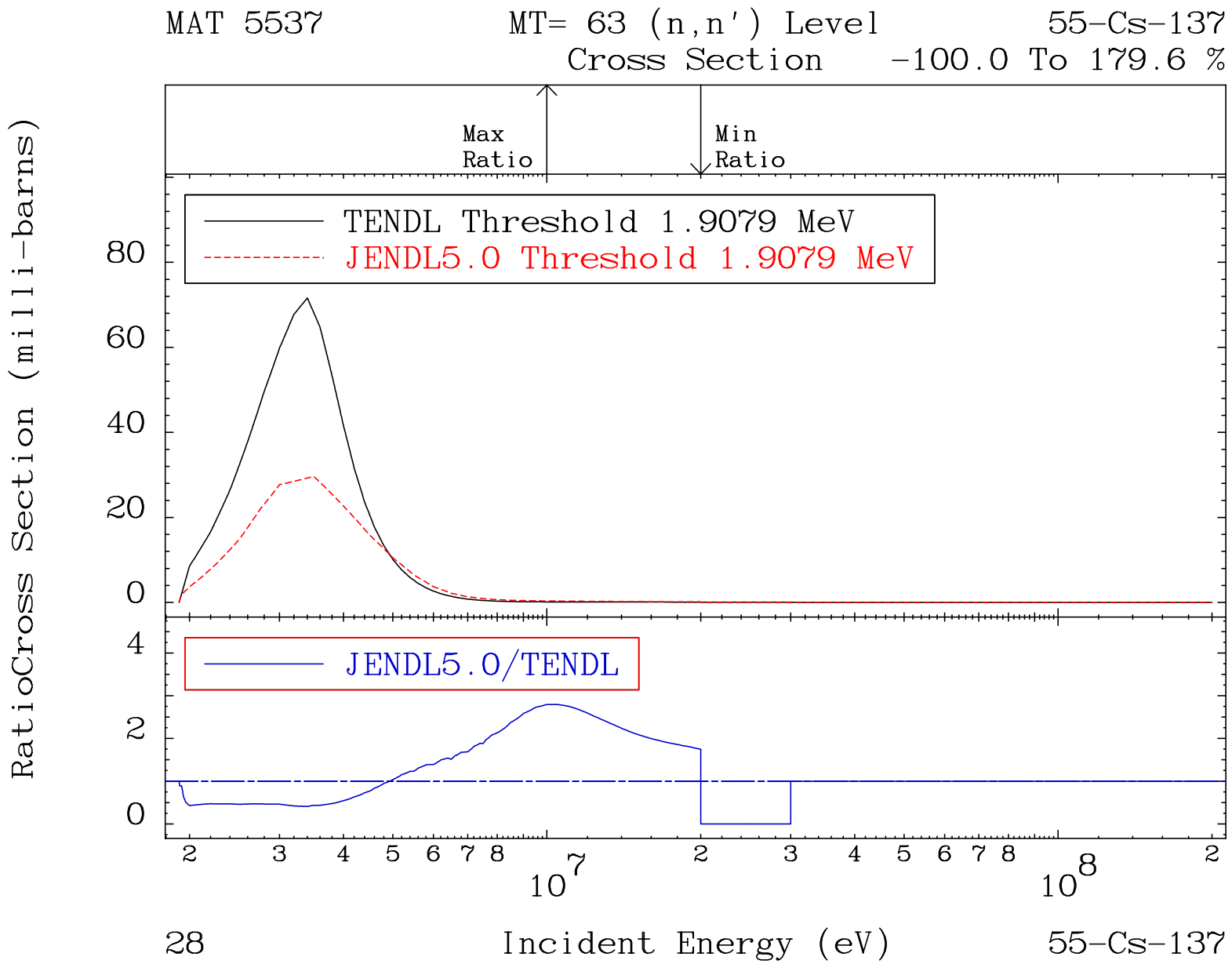

MAT 5537
MT= 58 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 59.62 %
Max Ratio
Min Ratio
TENDL Threshold 1.5864 MeV
JENDL5.0 Threshold 1.5864 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
55-Cs-137

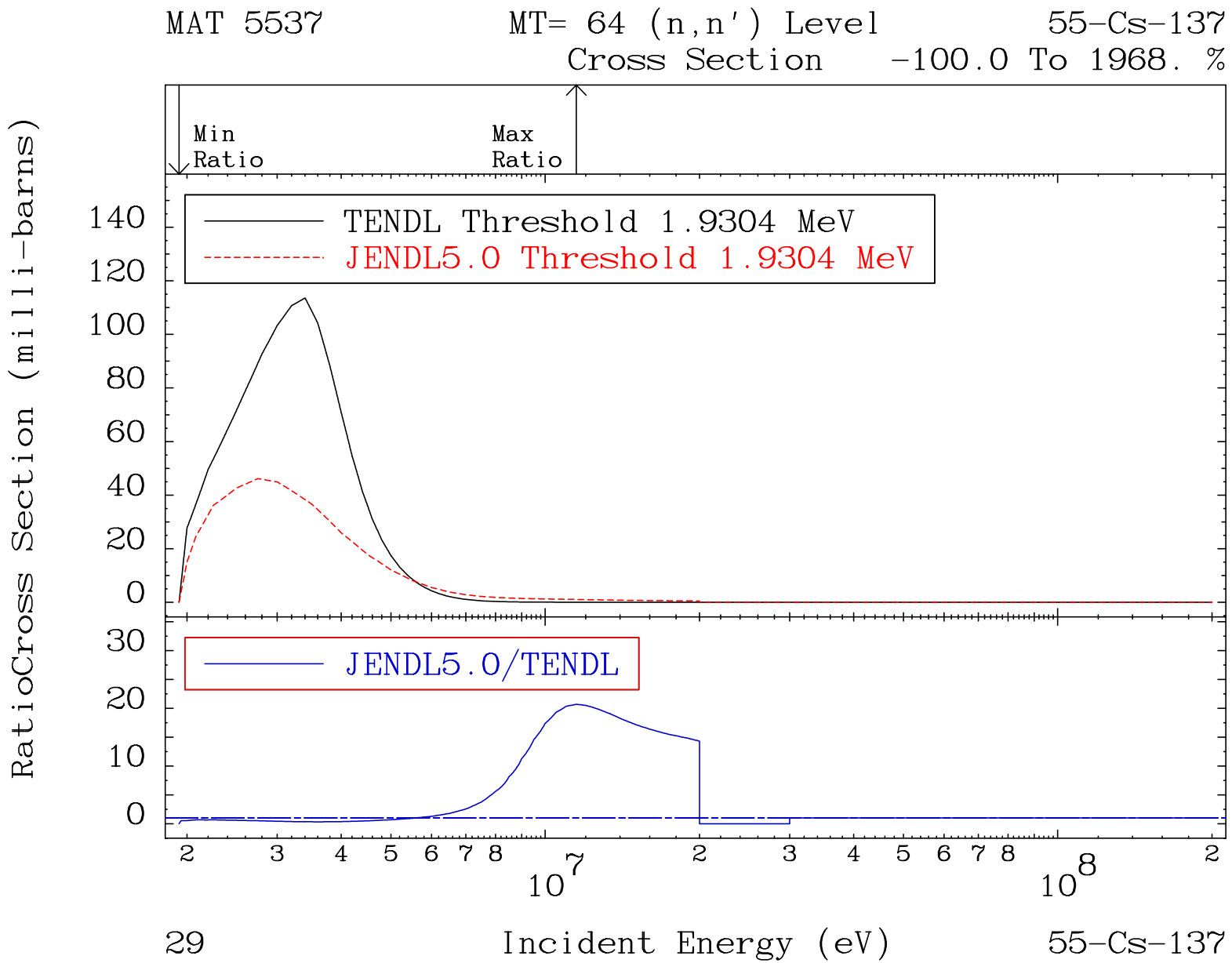

MAT 5537
MT= 59 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 851.2 %
Min Ratio
Max Ratio
TENDL Threshold 1.6634 MeV
JENDL5.0 Threshold 1.6634 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
12
6
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
55-Cs-137

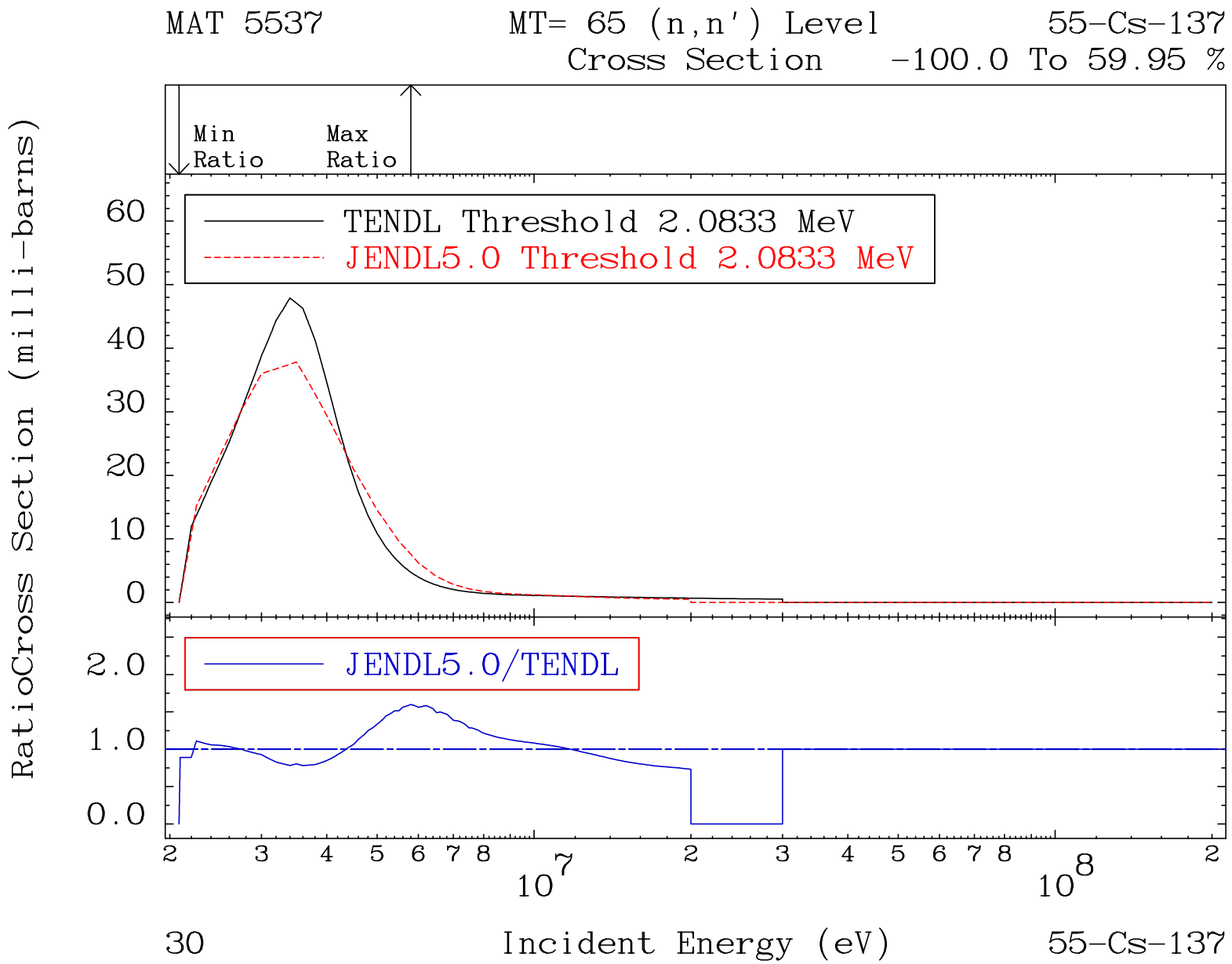

MAT 5537
MT= 60 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 39.58 %
Max
Ratio
TENDL Threshold 1.6840 MeV
JENDL5.0 Threshold 1.6840 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
55-Cs-137

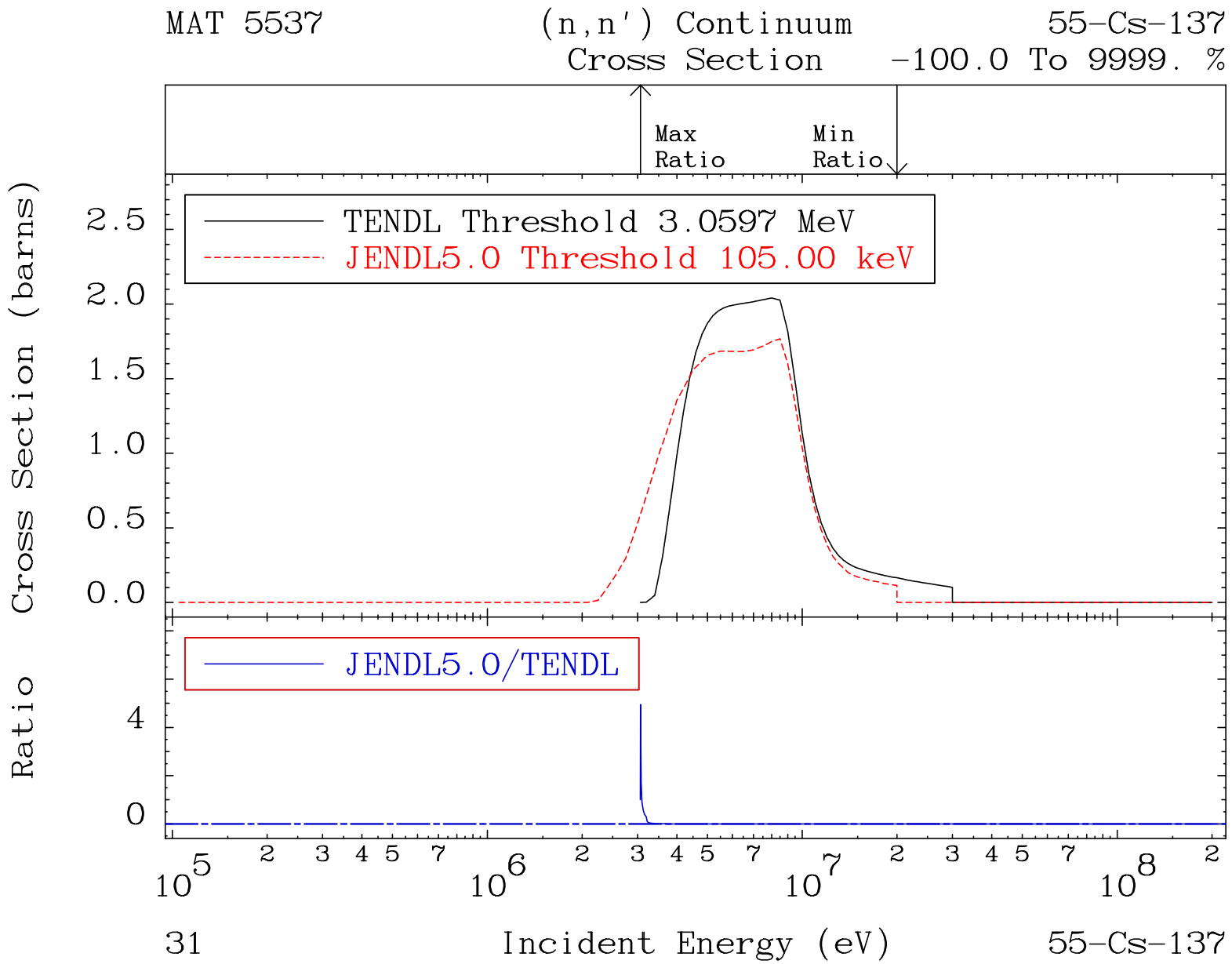

MAT 5537
MT= 61 (n,n') Level
55-Cs-137
Cross Section -100.0 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 1.7966 MeV
JENDL5.0 Threshold 1.7966 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
55-Cs-137

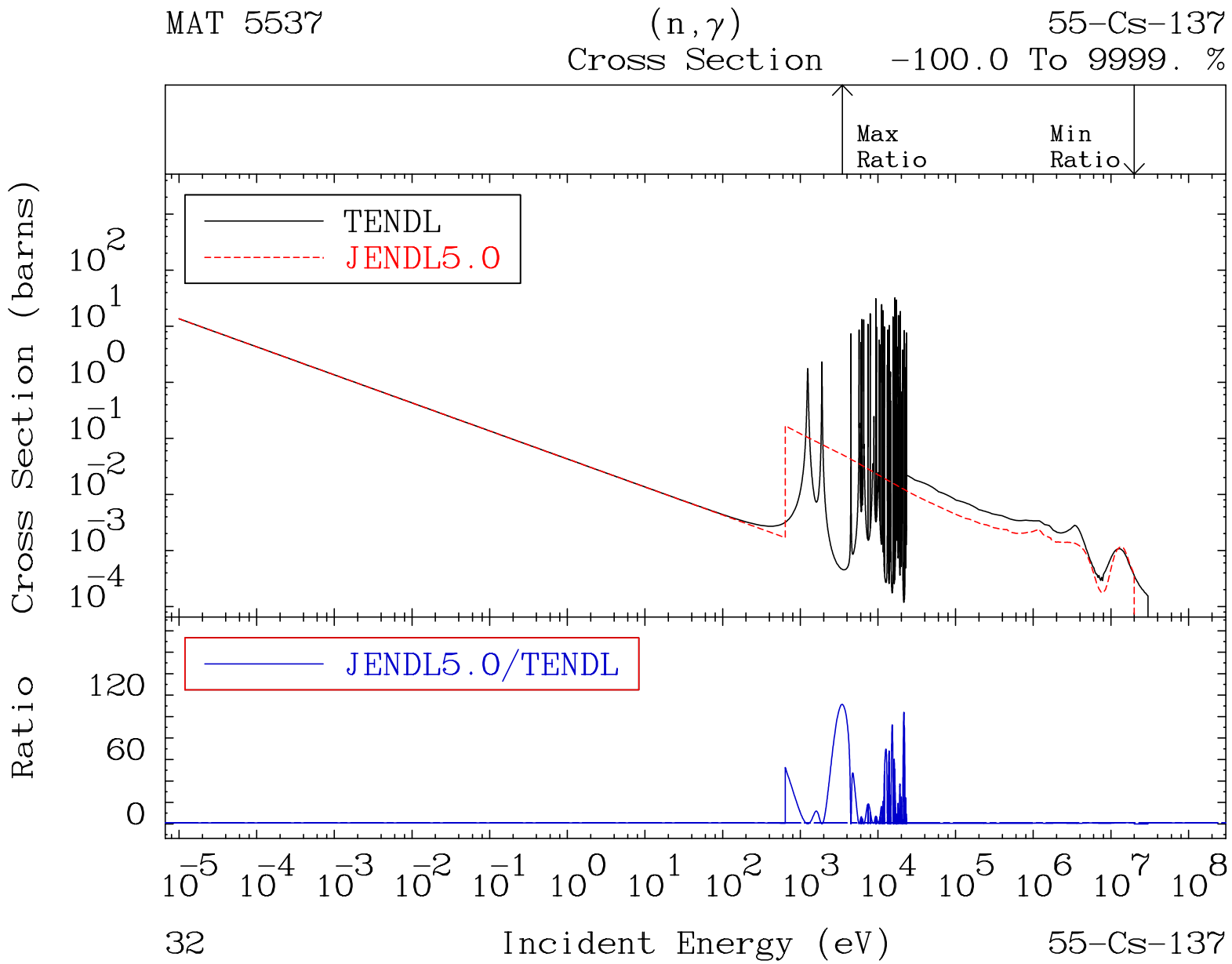

MAT 5537
MT= 62 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 46.52 %
Max Ratio
Min Ratio
TENDL Threshold 1.8816 MeV
JENDL5.0 Threshold 1.8816 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
27
Incident Energy (eV)
55-Cs-137

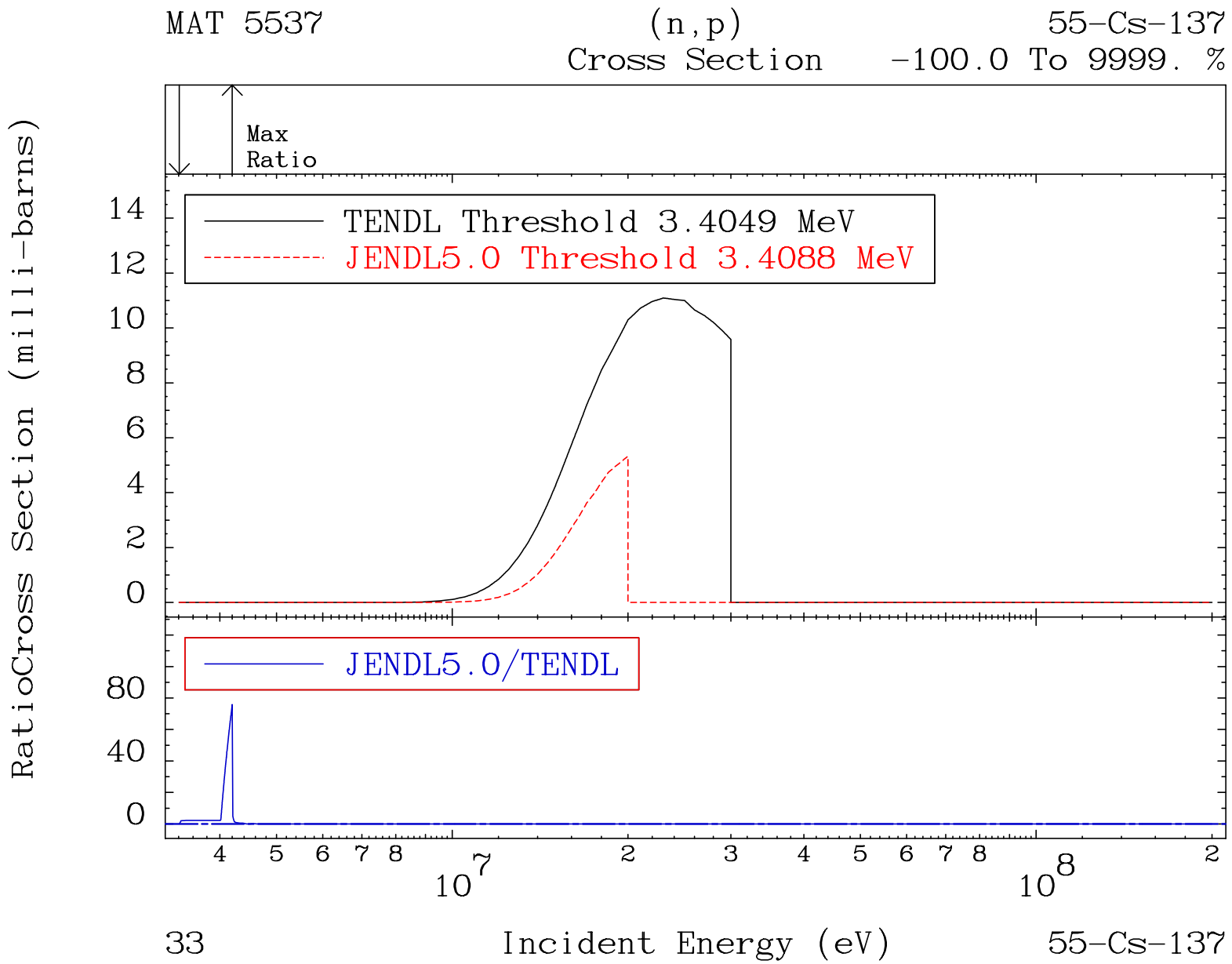

MAT 5537
MT= 63 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 179.6 %
Max Ratio
Min Ratio
TENDL Threshold 1.9079 MeV
JENDL5.0 Threshold 1.9079 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
55-Cs-137

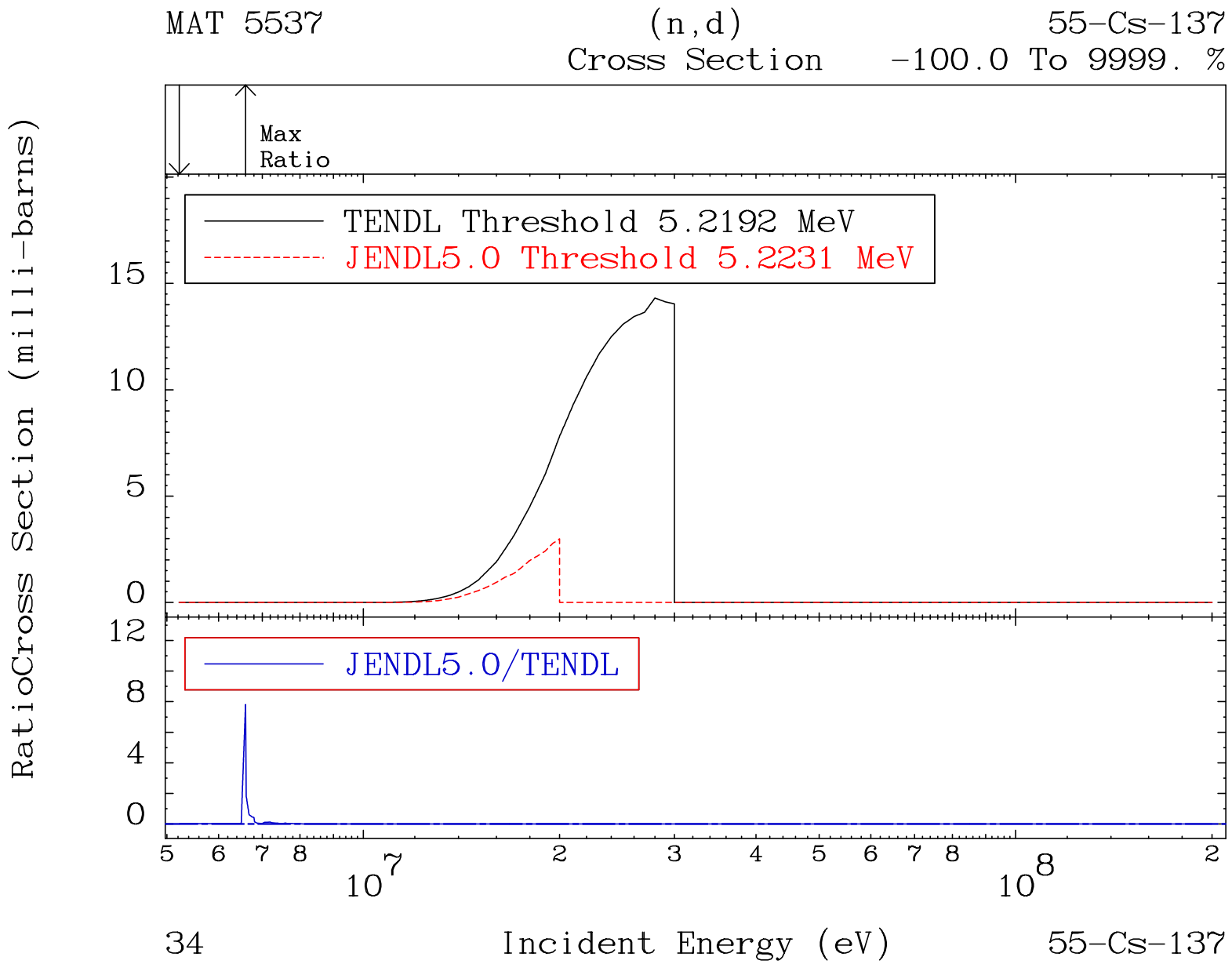

MAT 5537
MT= 64 (n,n') Level
55-Cs-137
Cross Section -100.0 To 1968. %
Min Ratio
Max Ratio
TENDL Threshold 1.9304 MeV
JENDL5.0 Threshold 1.9304 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
30
20
10
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
29
Incident Energy (eV)
55-Cs-137

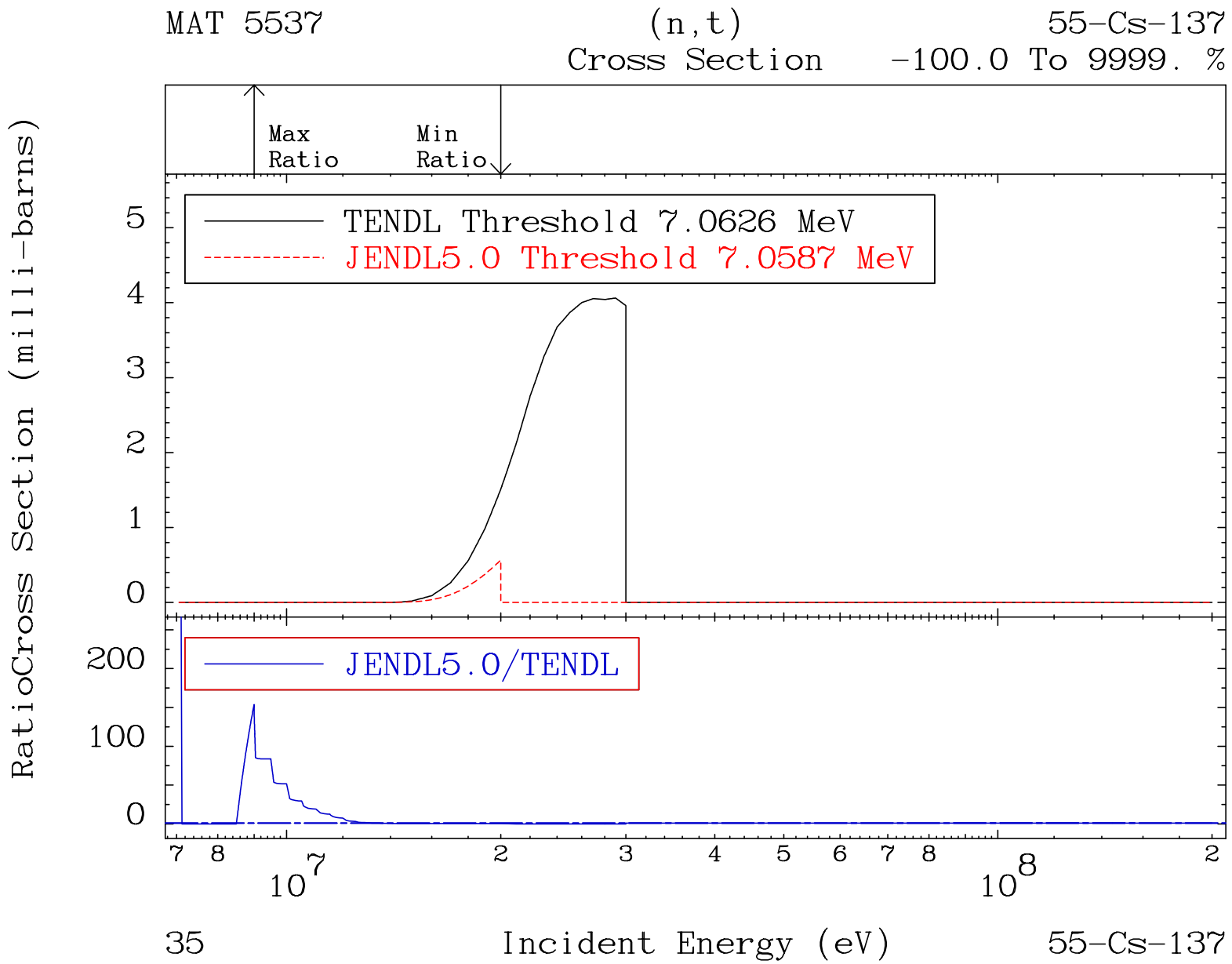

MAT 5537
MT= 65 (n,n') Level
55-Cs-137
Cross Section
-100.0 To 59.95 %
Min Ratio
Max Ratio
TENDL Threshold 2.0833 MeV
JENDL5.0 Threshold 2.0833 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
55-Cs-137

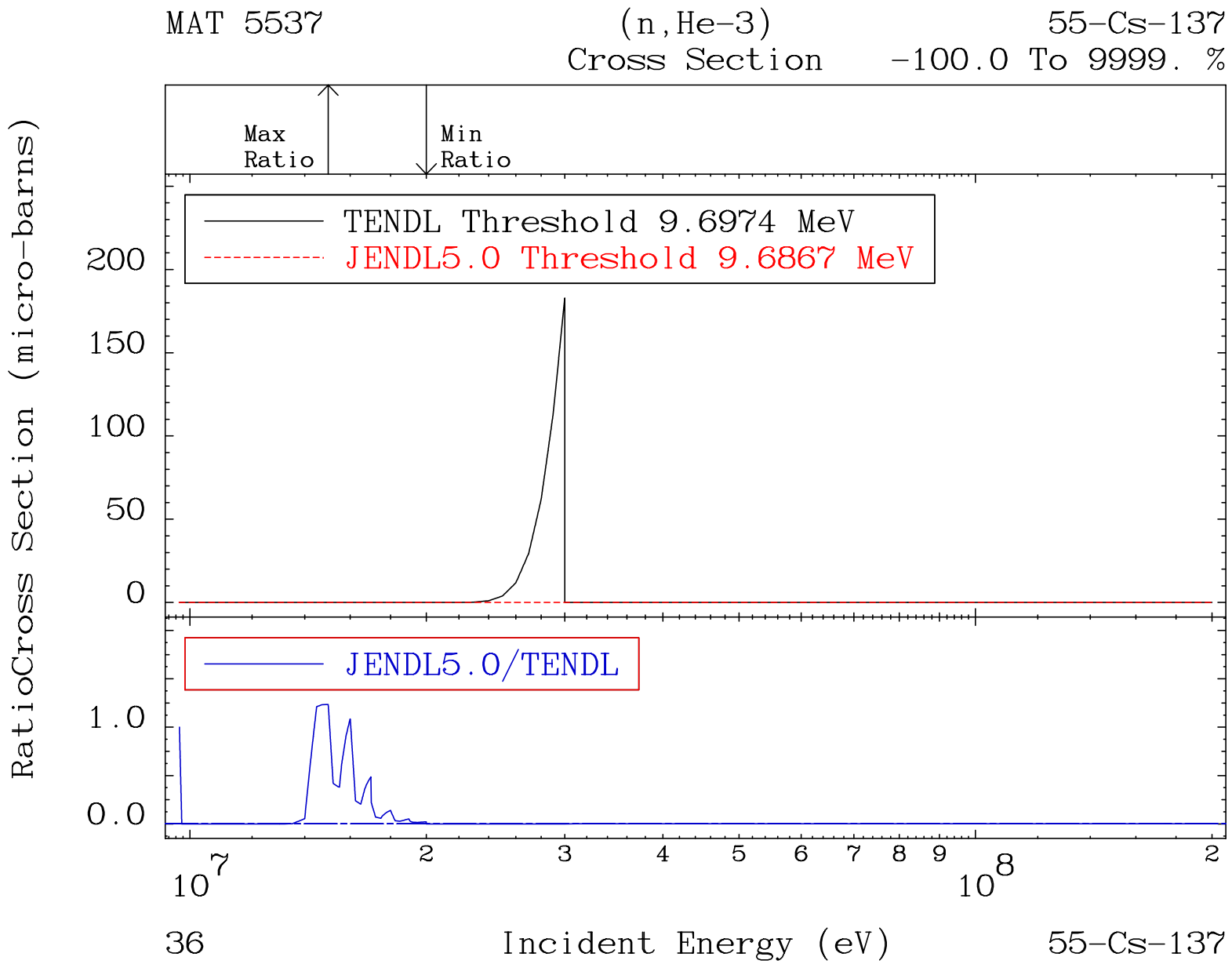

MAT 5537
(n,n') Continuum
Cross Section
55-Cs-137
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.0597 MeV
JENDL5.0 Threshold 105.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.5
2.0
1.5
1.0
0.5
0.0
4
0
10^5
10^6
10^7
10^8
2 3 4 5 7
31
Incident Energy (eV)
55-Cs-137

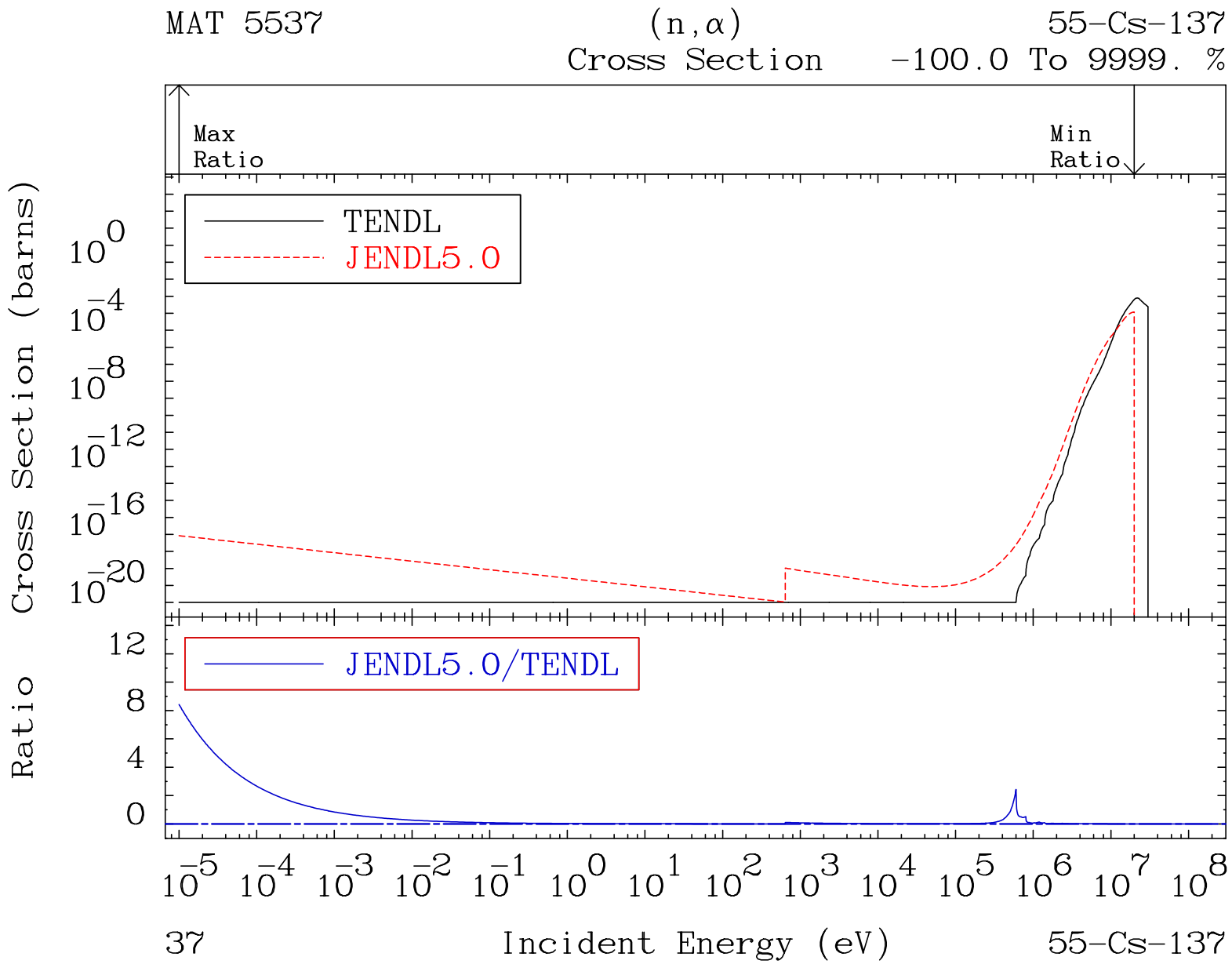

MAT 5537
(n,γ)
Cross Section
55-Cs-137
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
32
55-Cs-137

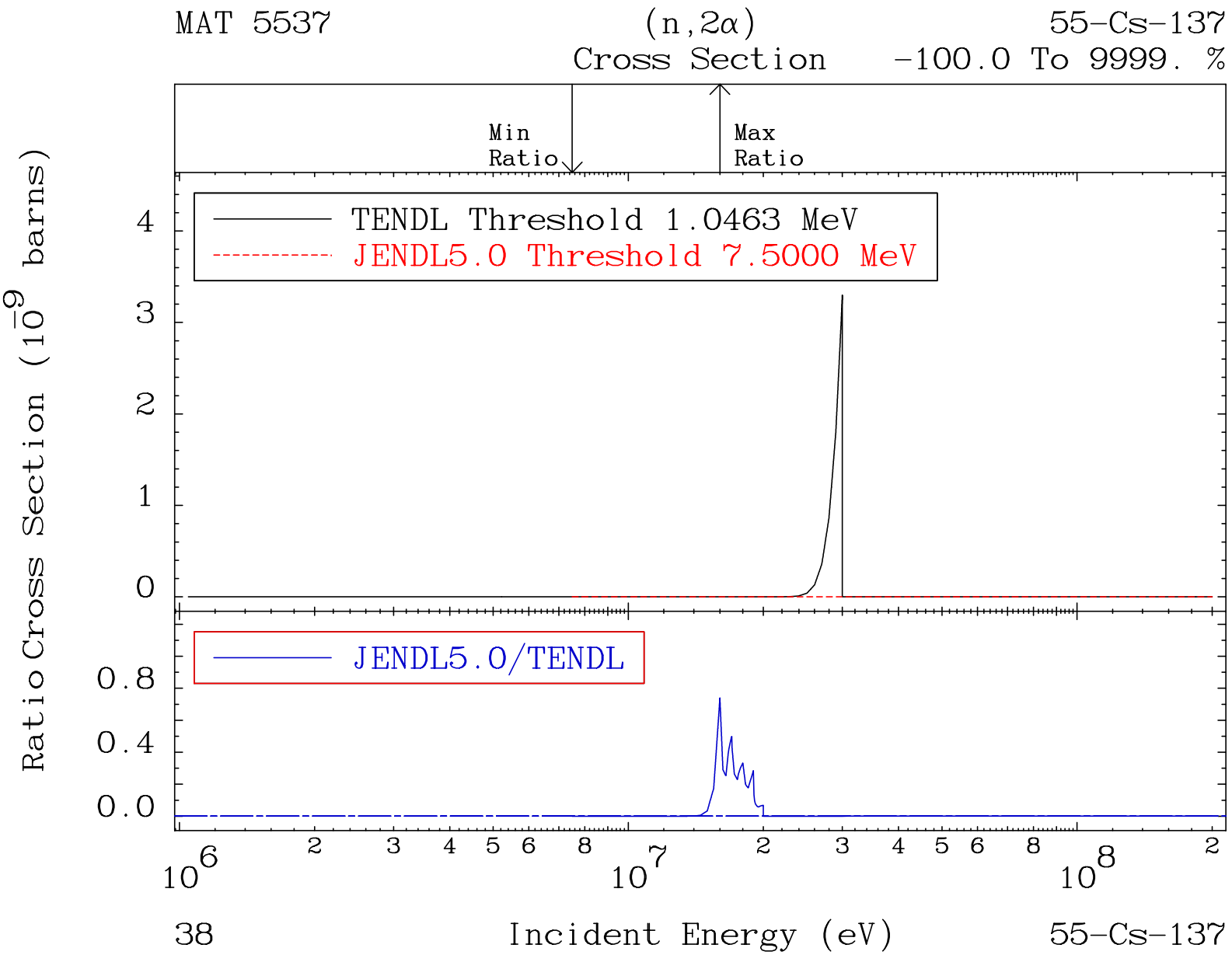

MAT 5537
(n,p)
55-Cs-137
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 3.4049 MeV
JENDL5.0 Threshold 3.4088 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
80
40
0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
33
Incident Energy (eV)
55-Cs-137

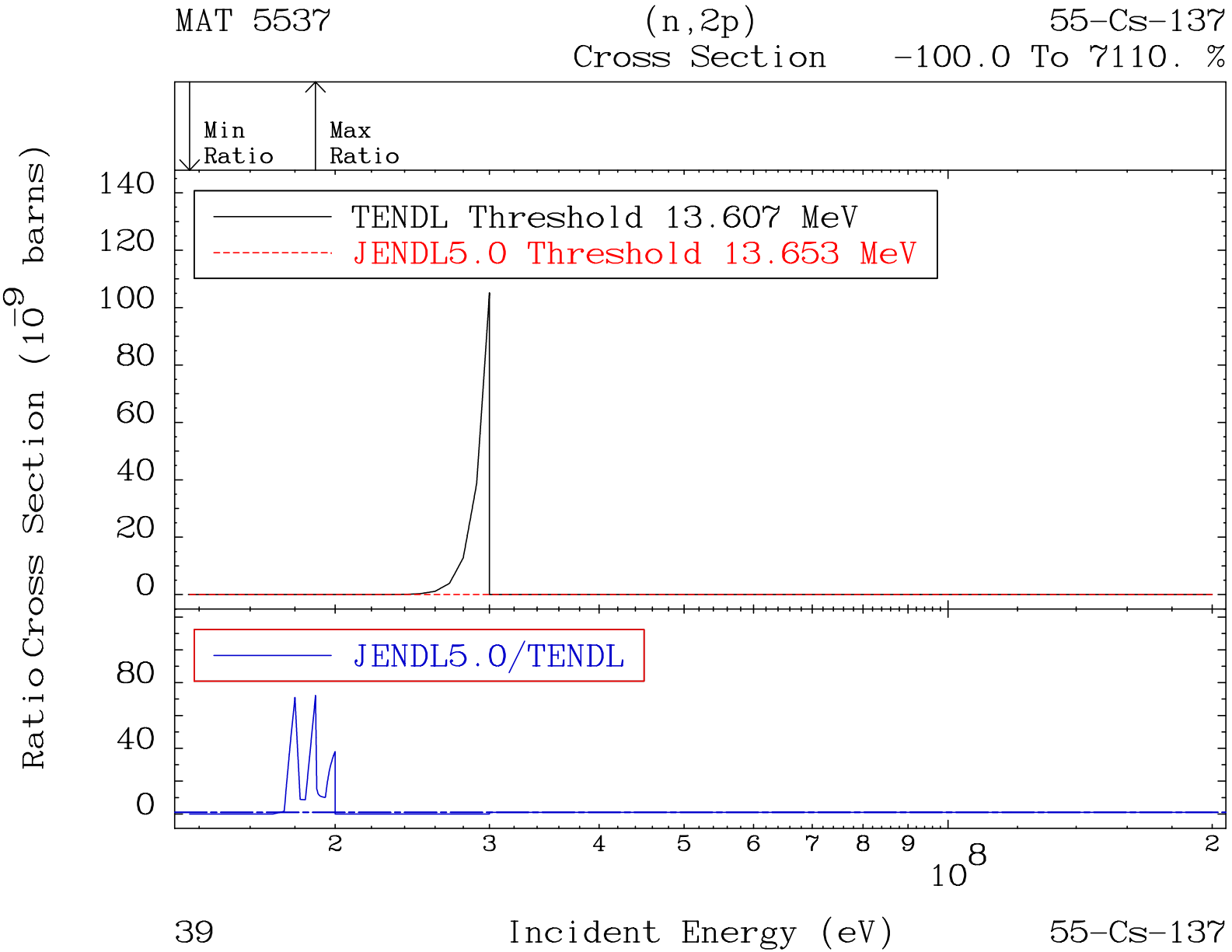

MAT 5537
(n,d)
55-Cs-137
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 5.2192 MeV
JENDL5.0 Threshold 5.2231 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
15
10
5
0
12
8
4
0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
34
Incident Energy (eV)
55-Cs-137

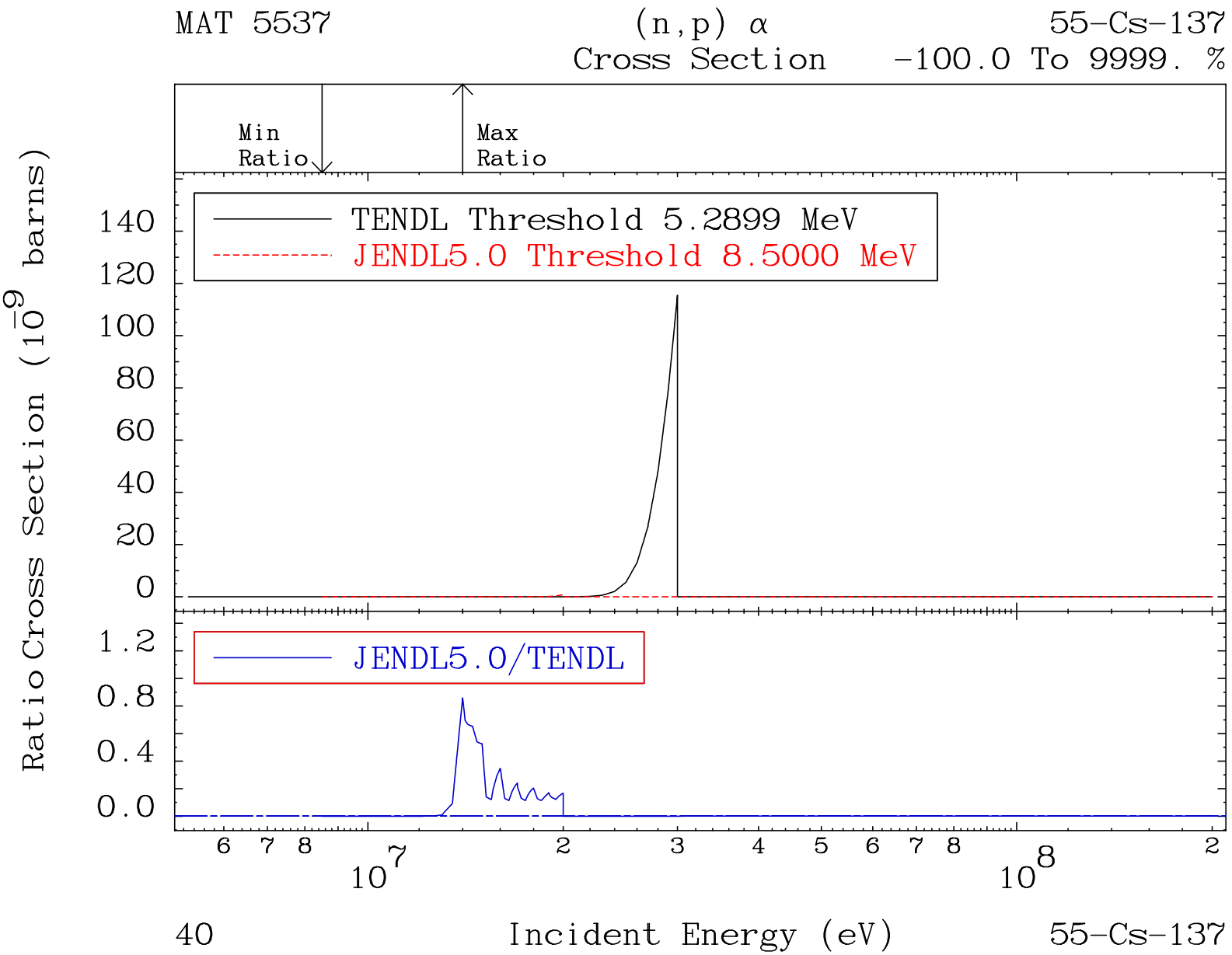

MAT 5537
(n,t)
Cross Section
55-Cs-137
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.0626 MeV
JENDL5.0 Threshold 7.0587 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
35
55-Cs-137

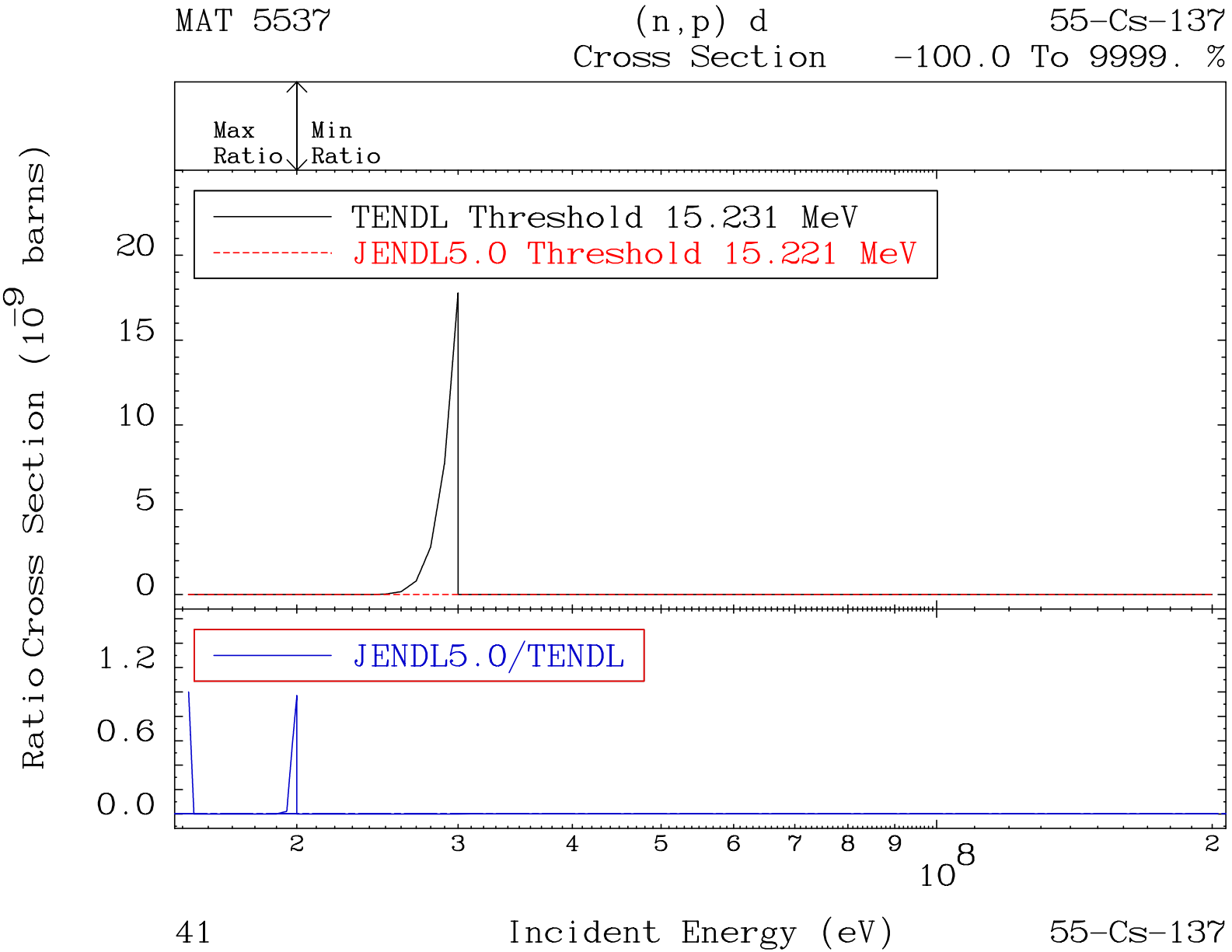

MAT 5537
(n,He-3)
55-Cs-137
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 9.6974 MeV
JENDL5.0 Threshold 9.6867 MeV
200
150
100
50
0
JENDL5.0/TENDL
1.0
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
RatioCross Section (micro-barns)
36
Incident Energy (eV)
55-Cs-137

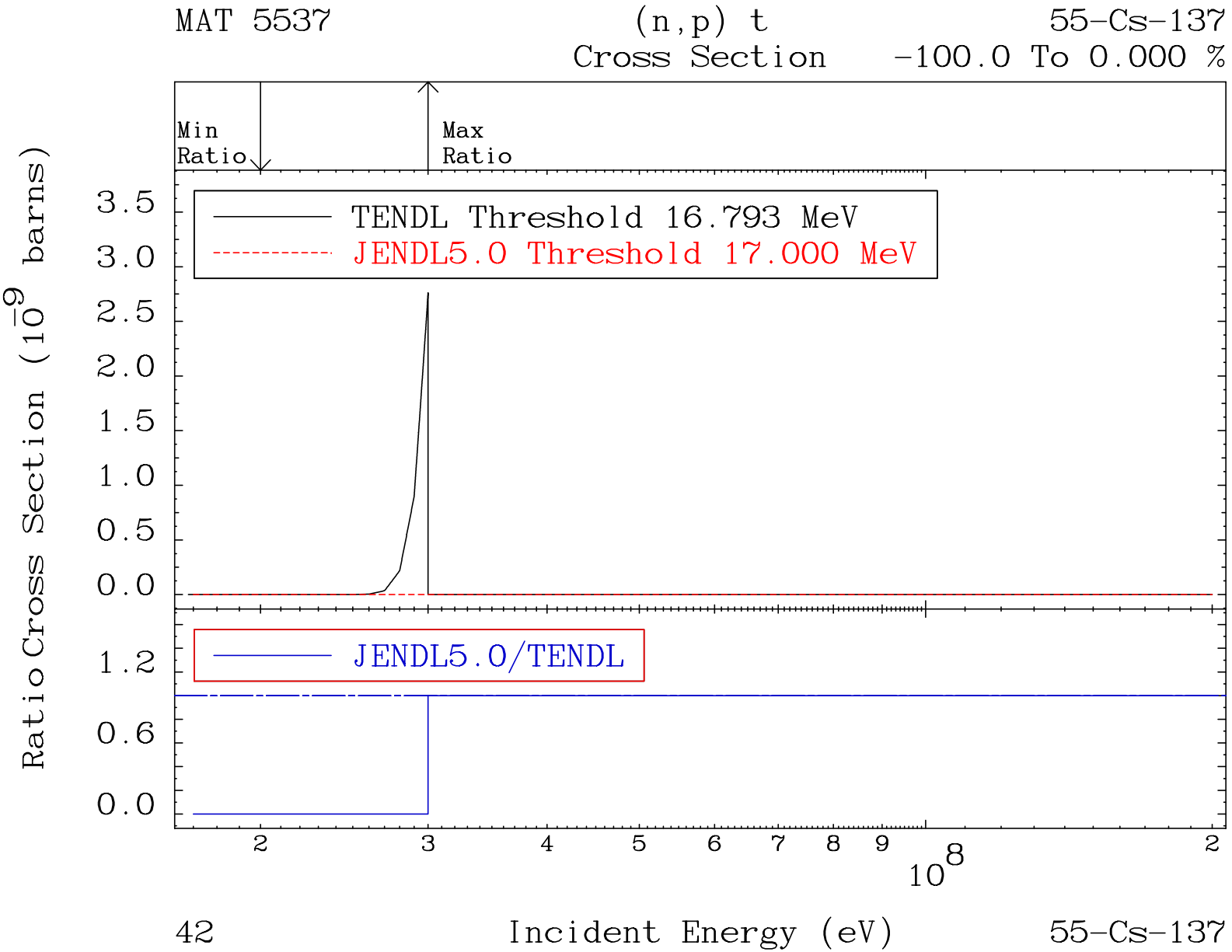

MAT 5537
(n,α)
Cross Section
55-Cs-137
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
37
55-Cs-137

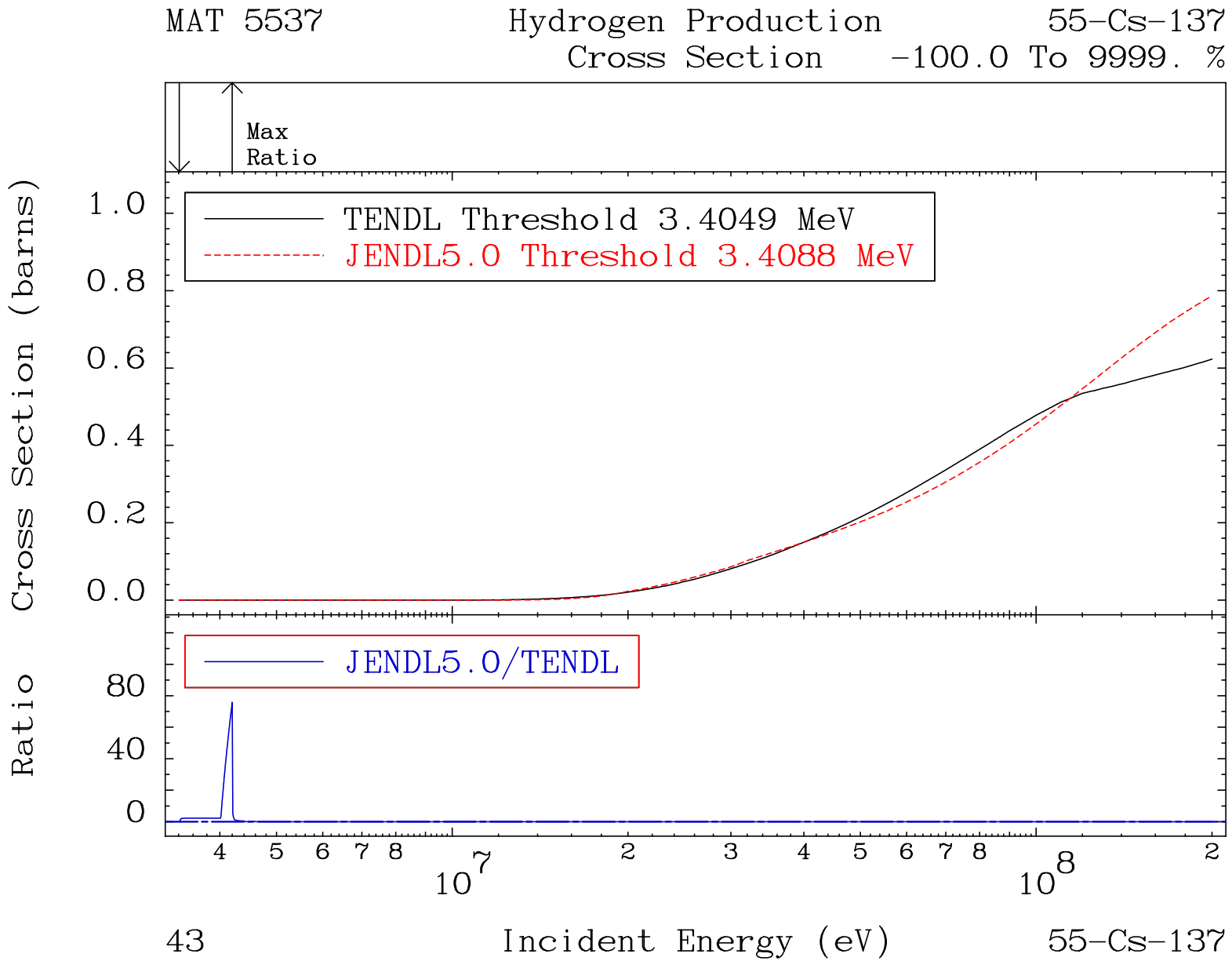

MAT 5537
(n,2α)
55-Cs-137
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.0463 MeV
JENDL5.0 Threshold 7.5000 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^-9 barns)
Incident Energy (eV)
38
55-Cs-137

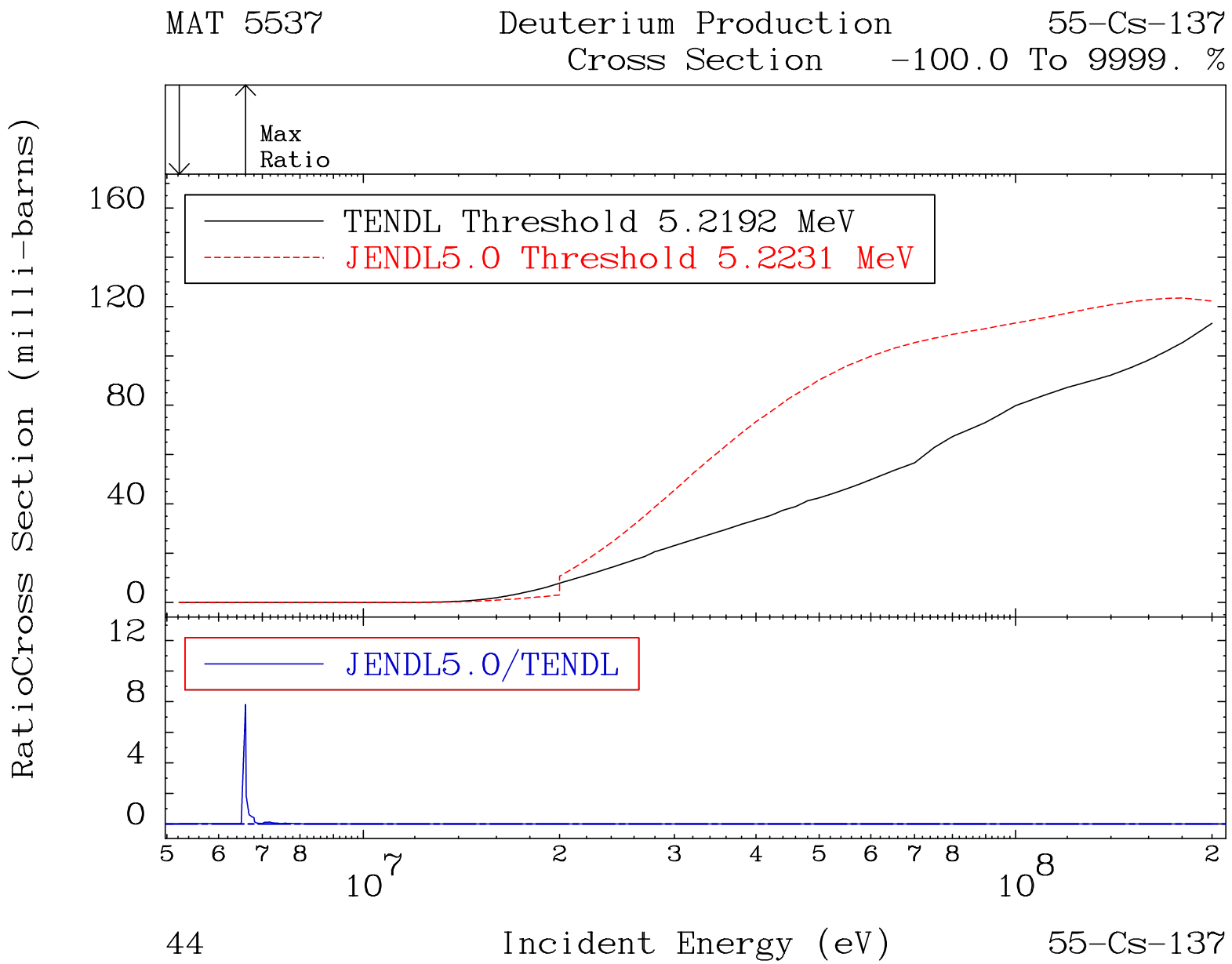

MAT 5537
(n,2p)
55-Cs-137
Cross Section
-100.0 To 7110. %
Min Ratio
Max Ratio
TENDL Threshold 13.607 MeV
JENDL5.0 Threshold 13.653 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^{-9} barns)
140
120
100
80
60
40
20
0
80
40
0
2
3
4
5
6
7
8
9
10^8
2
39
Incident Energy (eV)
55-Cs-137

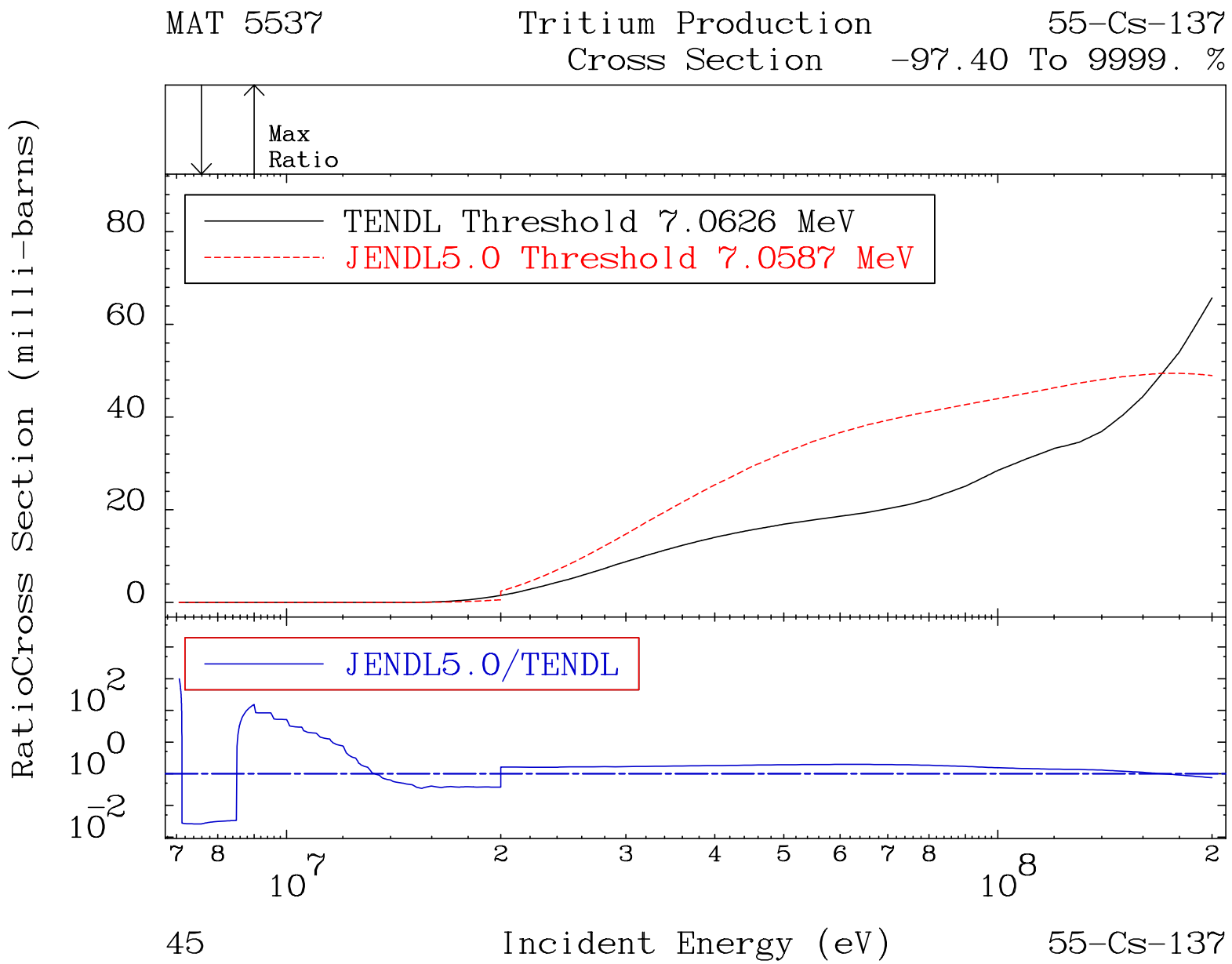

MAT 5537
(n,p) α
55-Cs-137
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.2899 MeV
JENDL5.0 Threshold 8.5000 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^-9 barns)
140
120
100
80
60
40
20
0
1.2
0.8
0.4
0.0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
40
Incident Energy (eV)
55-Cs-137

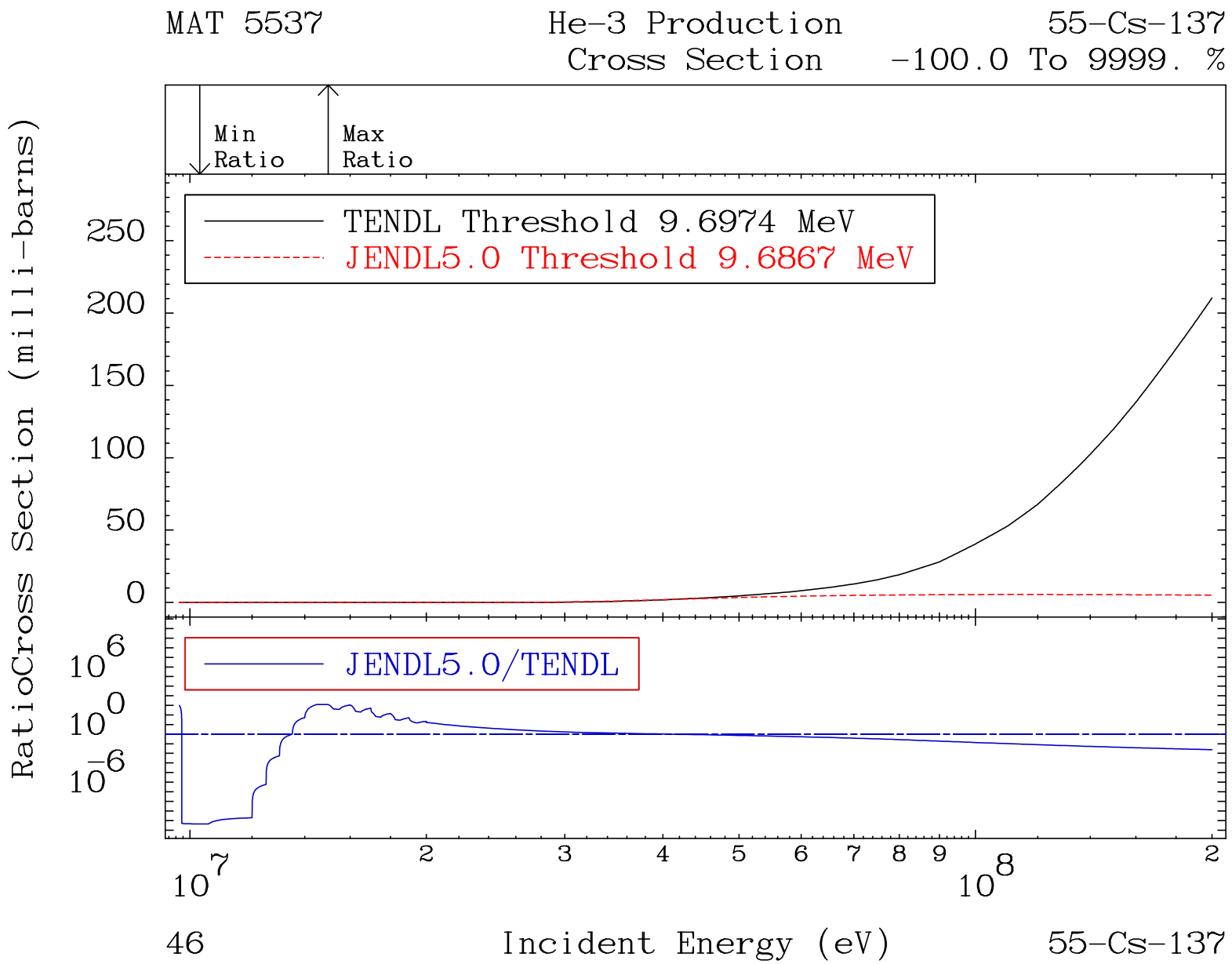

MAT 5537
(n,p) d
Cross Section
55-Cs-137
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 15.231 MeV
JENDL5.0 Threshold 15.221 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^{-9} barns)
20
15
10
5
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
41
Incident Energy (eV)
55-Cs-137

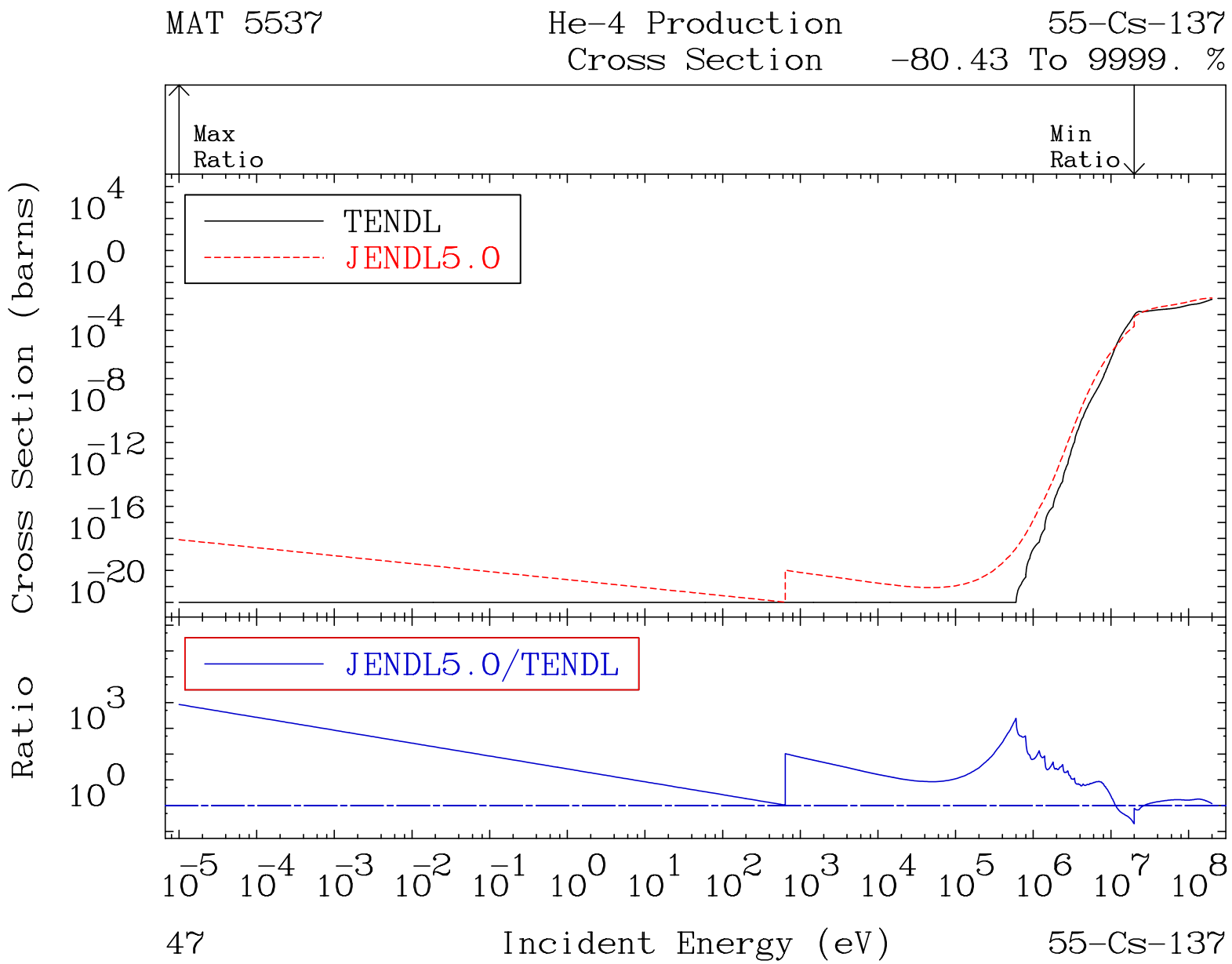

MAT 5537
(n,p) t
55-Cs-137
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 16.793 MeV
JENDL5.0 Threshold 17.000 MeV
JENDL5.0/TENDL
Ratio Cross Section (10^{-9} barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
42
Incident Energy (eV)
55-Cs-137

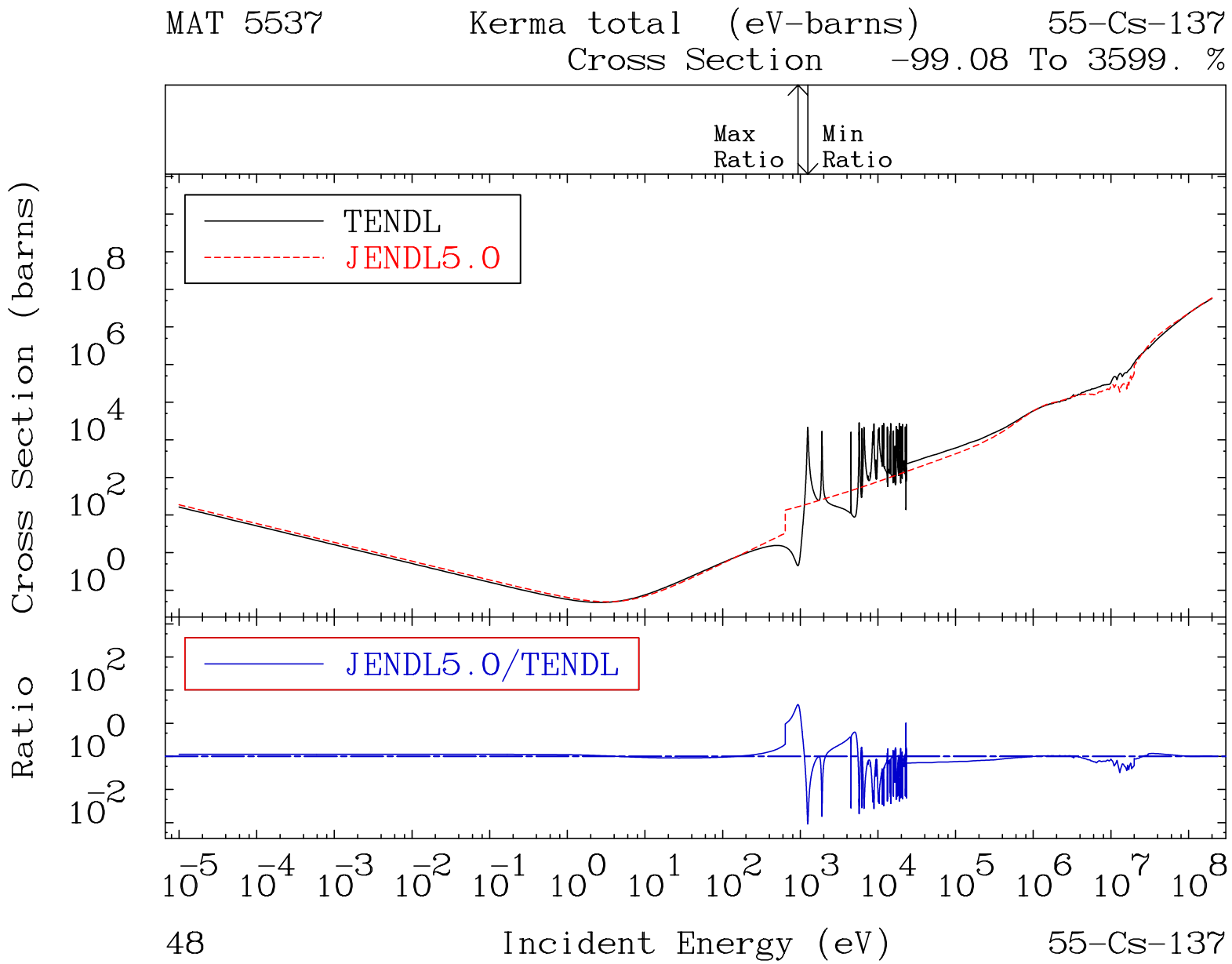

MAT 5537
Hydrogen Production
55-Cs-137
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 3.4049 MeV
JENDL5.0 Threshold 3.4088 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
80
40
0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
43
Incident Energy (eV)
55-Cs-137

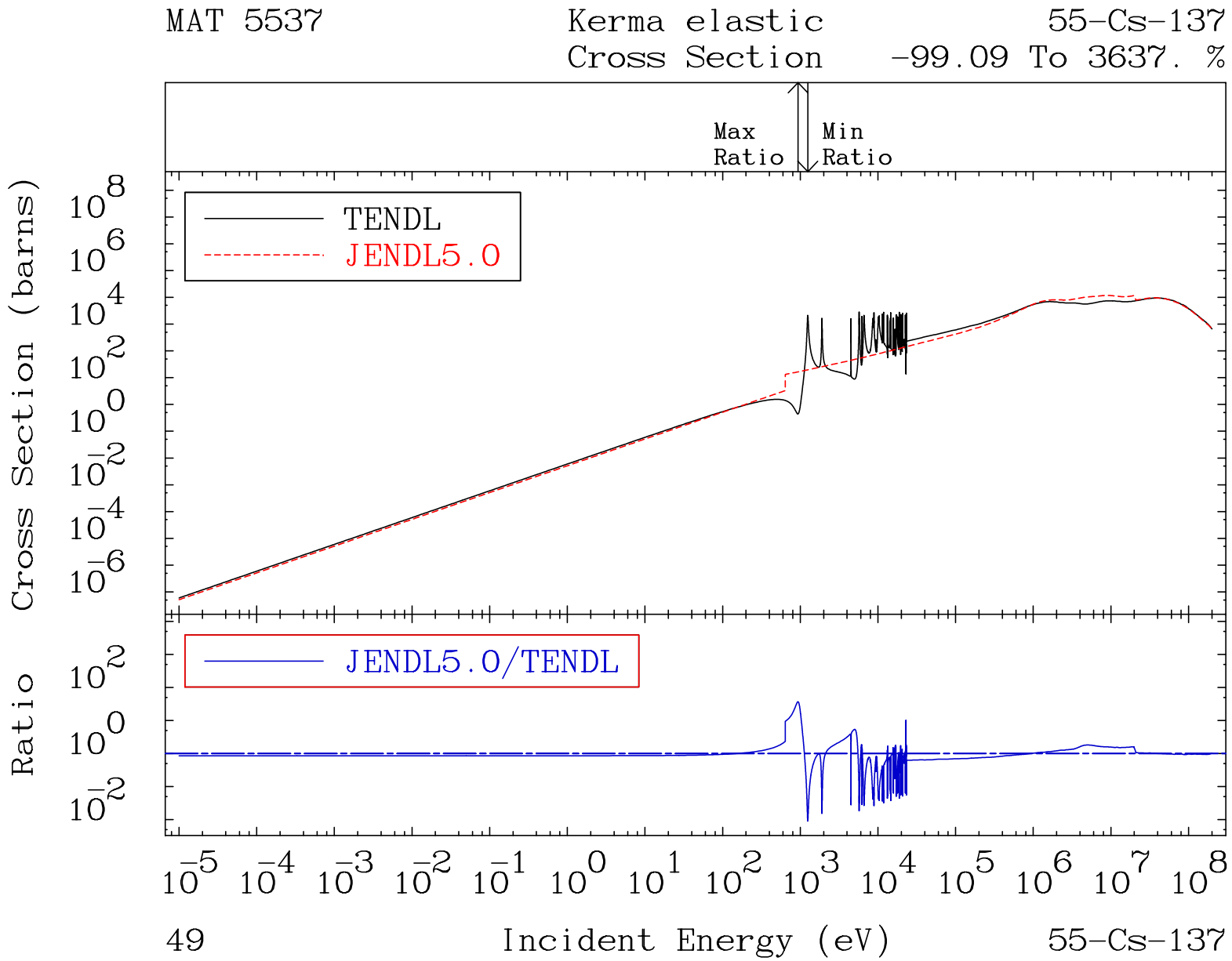

MAT 5537
Deuterium Production
55-Cs-137
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 5.2192 MeV
JENDL5.0 Threshold 5.2231 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
12
8
4
0
5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
44
Incident Energy (eV)
55-Cs-137

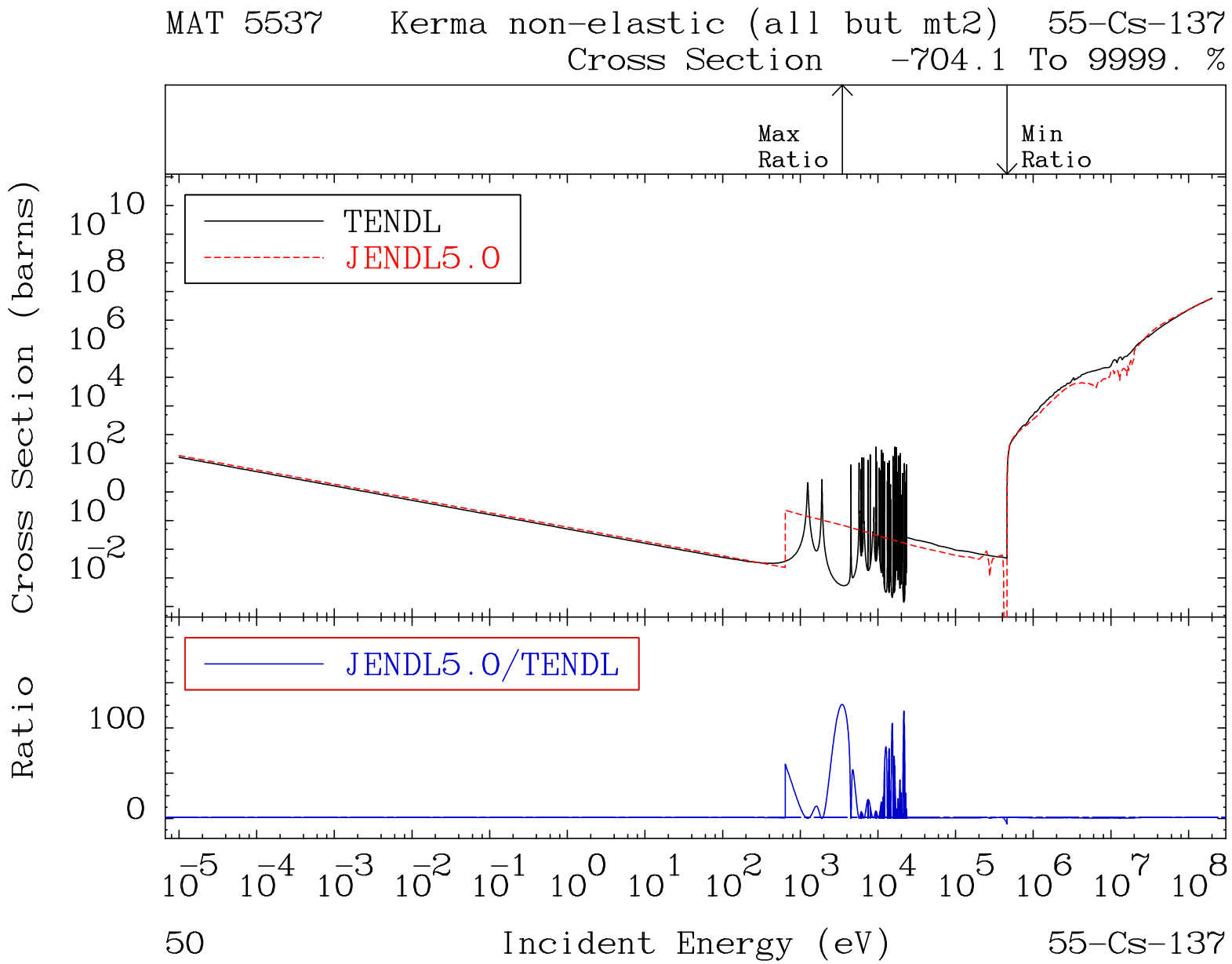

MAT 5537
Tritium Production
55-Cs-137
Cross Section
-97.40 To 9999. %
Max
Ratio
TENDL Threshold 7.0626 MeV
JENDL5.0 Threshold 7.0587 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
10^2
10^0
10^-2
7 8
10^7
2 3 4 5 6 7 8
10^8
2
45
Incident Energy (eV)
55-Cs-137

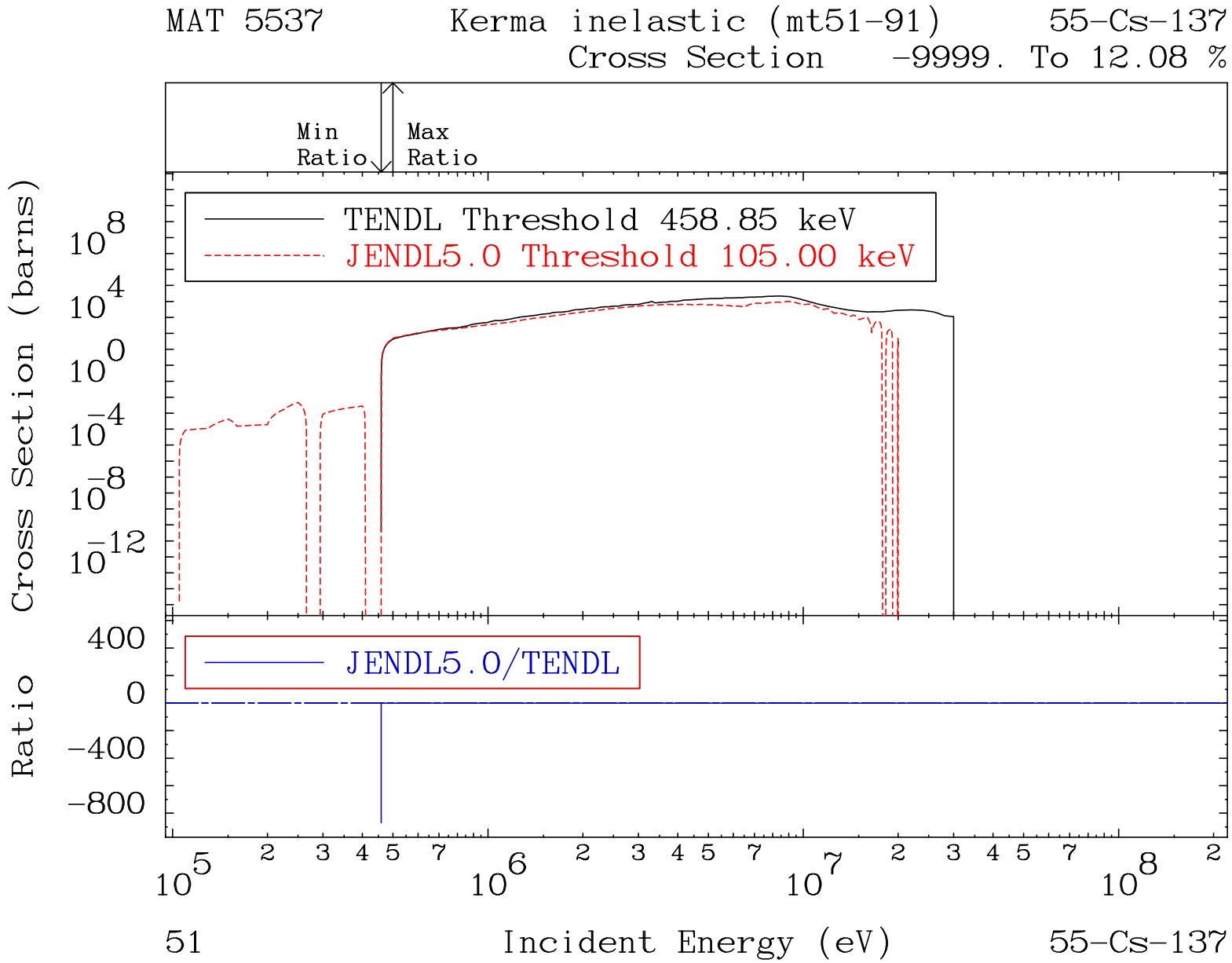

MAT 5537
He-3 Production
Cross Section
55-Cs-137
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 9.6974 MeV
JENDL5.0 Threshold 9.6867 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
10^6
10^0
10^-6
10^7
2
3
4
5
6
7
8
9
10^8
2
46
Incident Energy (eV)
55-Cs-137

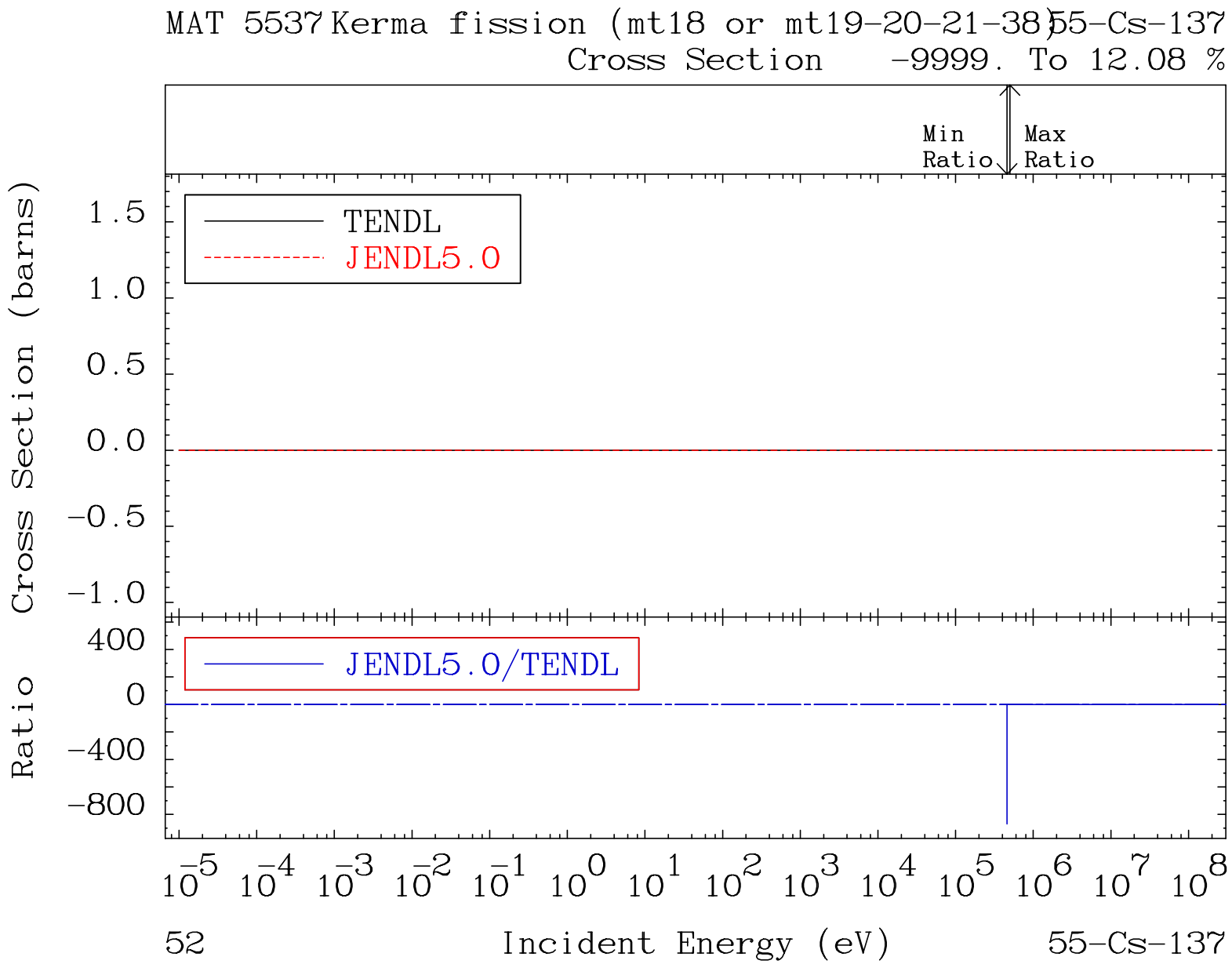

MAT 5537
He-4 Production
Cross Section
55-Cs-137
-80.43 To 9999. %
Max
Ratio
Min
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
55-Cs-137

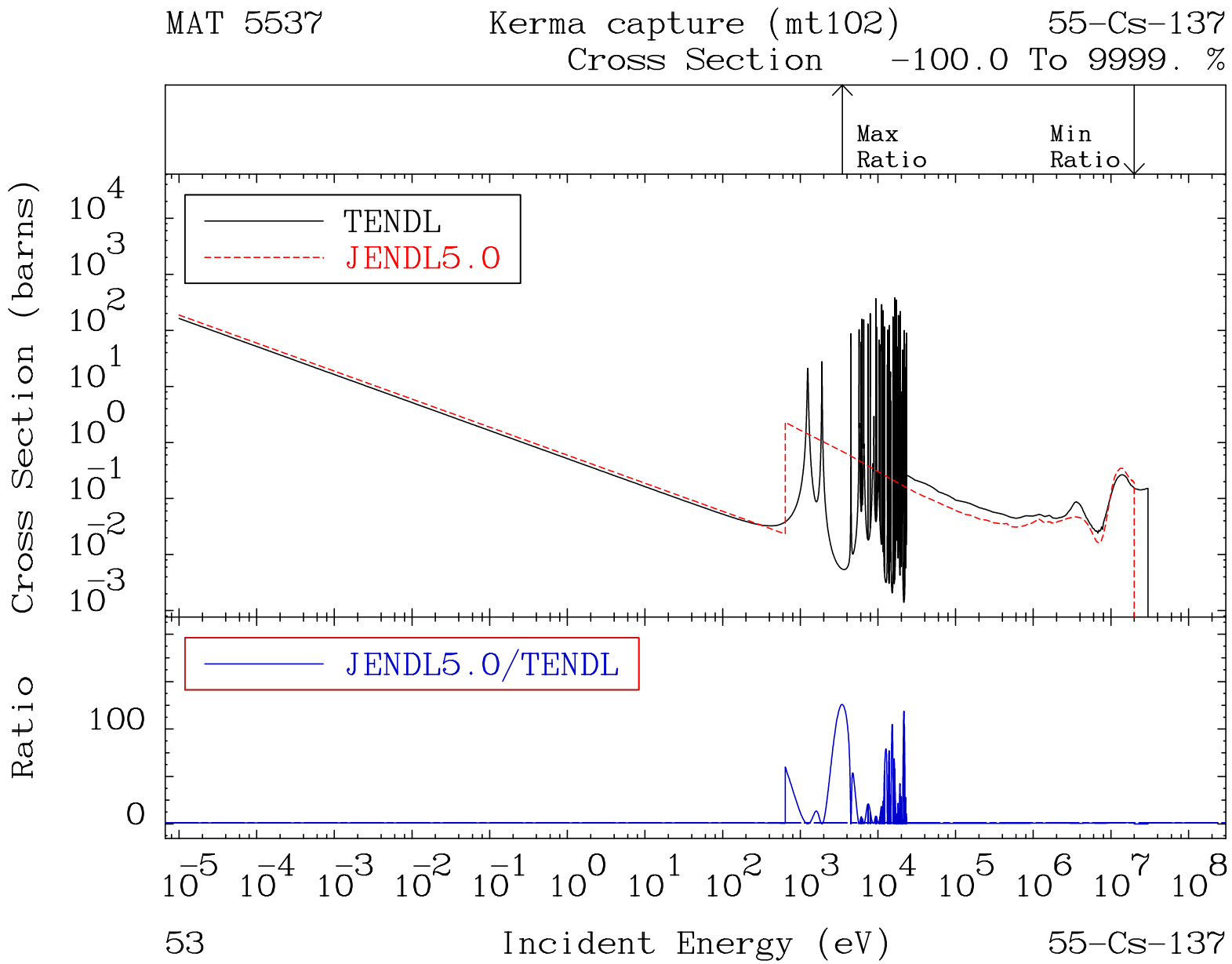

MAT 5537
Kerma total (eV-barns)
55-Cs-137
Cross Section -99.08 To 3599. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
48
55-Cs-137

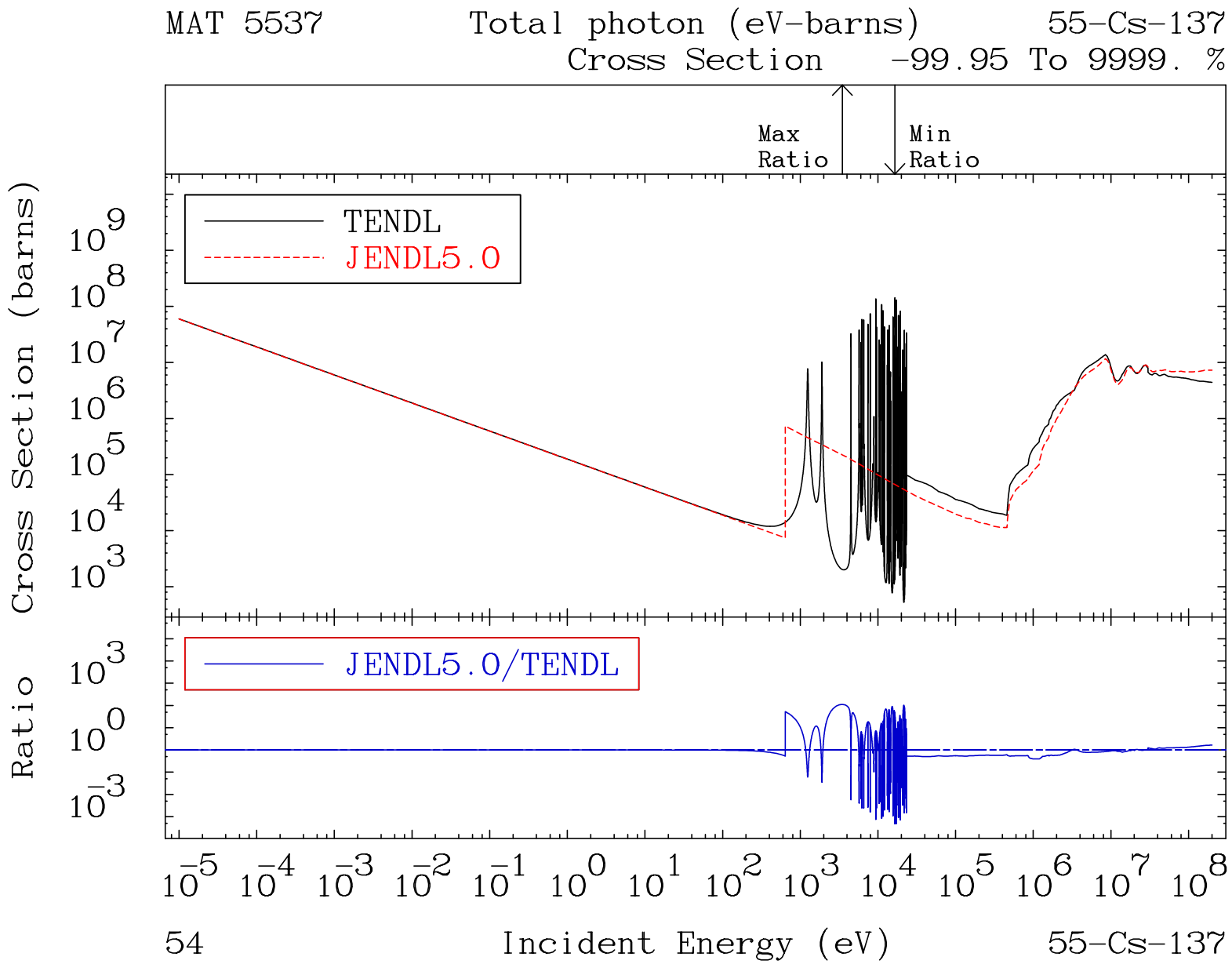

MAT 5537
Kerma elastic
55-Cs-137
Cross Section
-99.09 To 3637. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
49
55-Cs-137

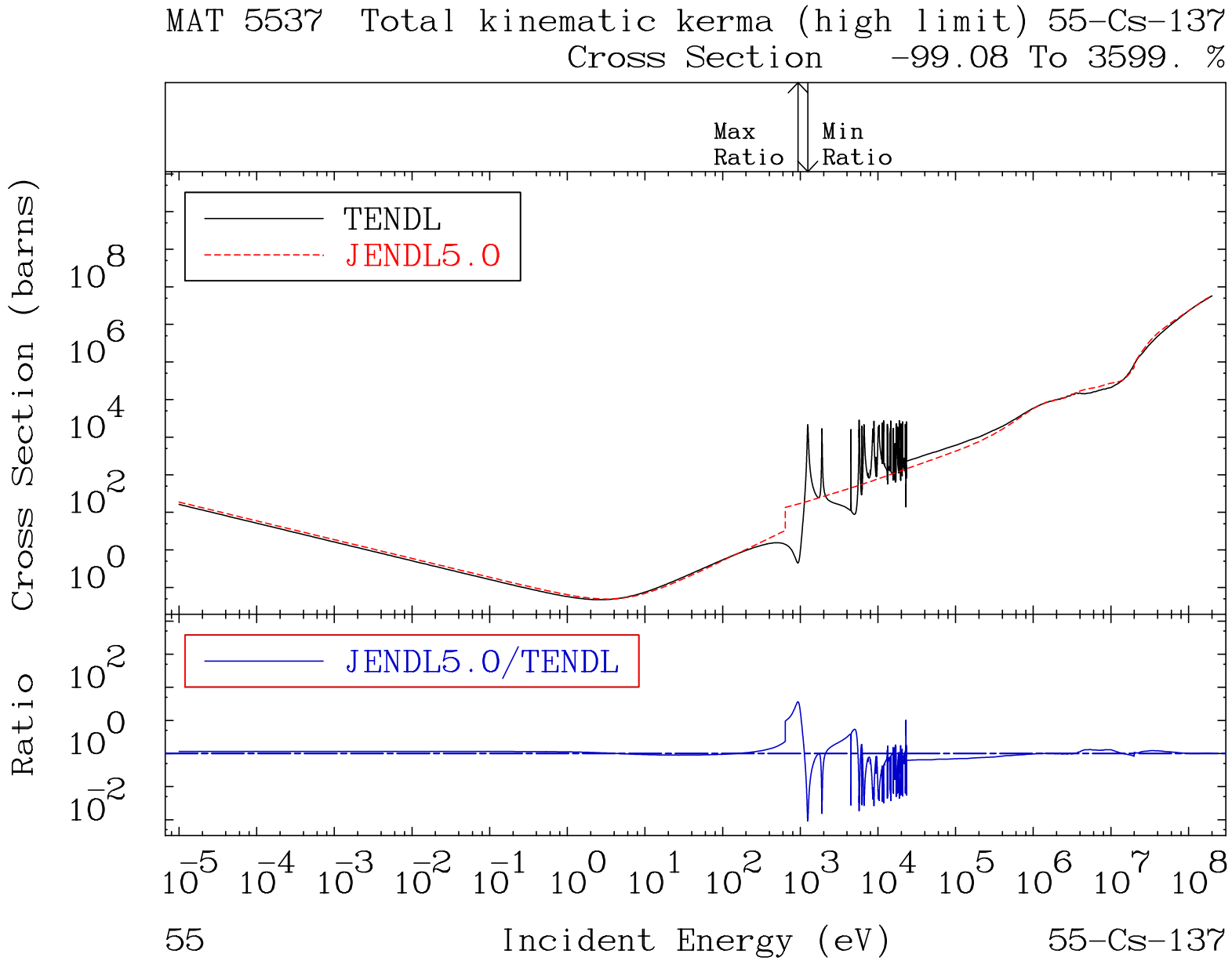

MAT 5537 Kerma non-elastic (all but mt2) 55-Cs-137
Cross Section -704.1 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
50
55-Cs-137

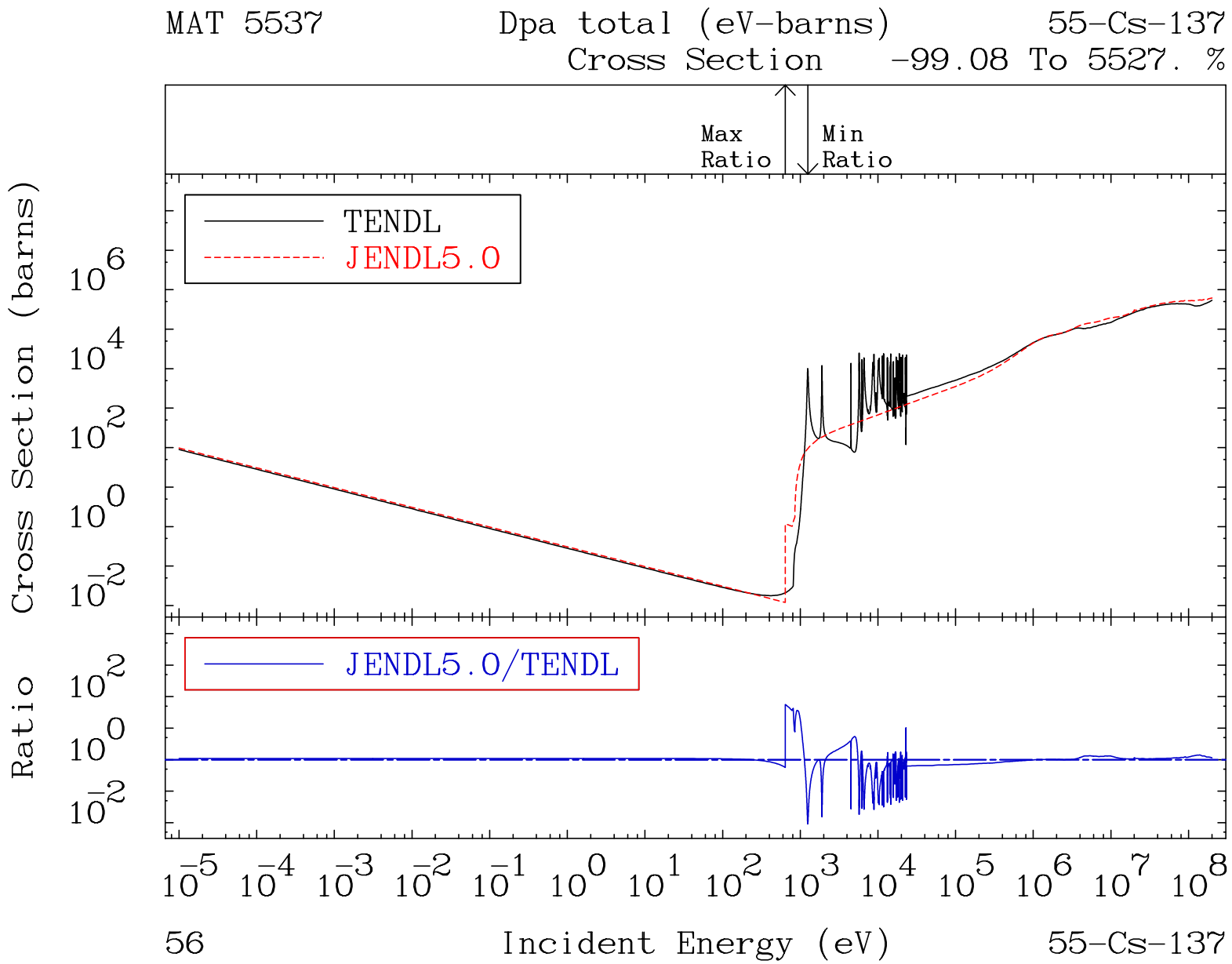

MAT 5537
Kerma inelastic (mt51-91)
55-Cs-137
Cross Section -9999. To 12.08 %
Min Ratio
Max Ratio
TENDL Threshold 458.85 keV
JENDL5.0 Threshold 105.00 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
51
55-Cs-137

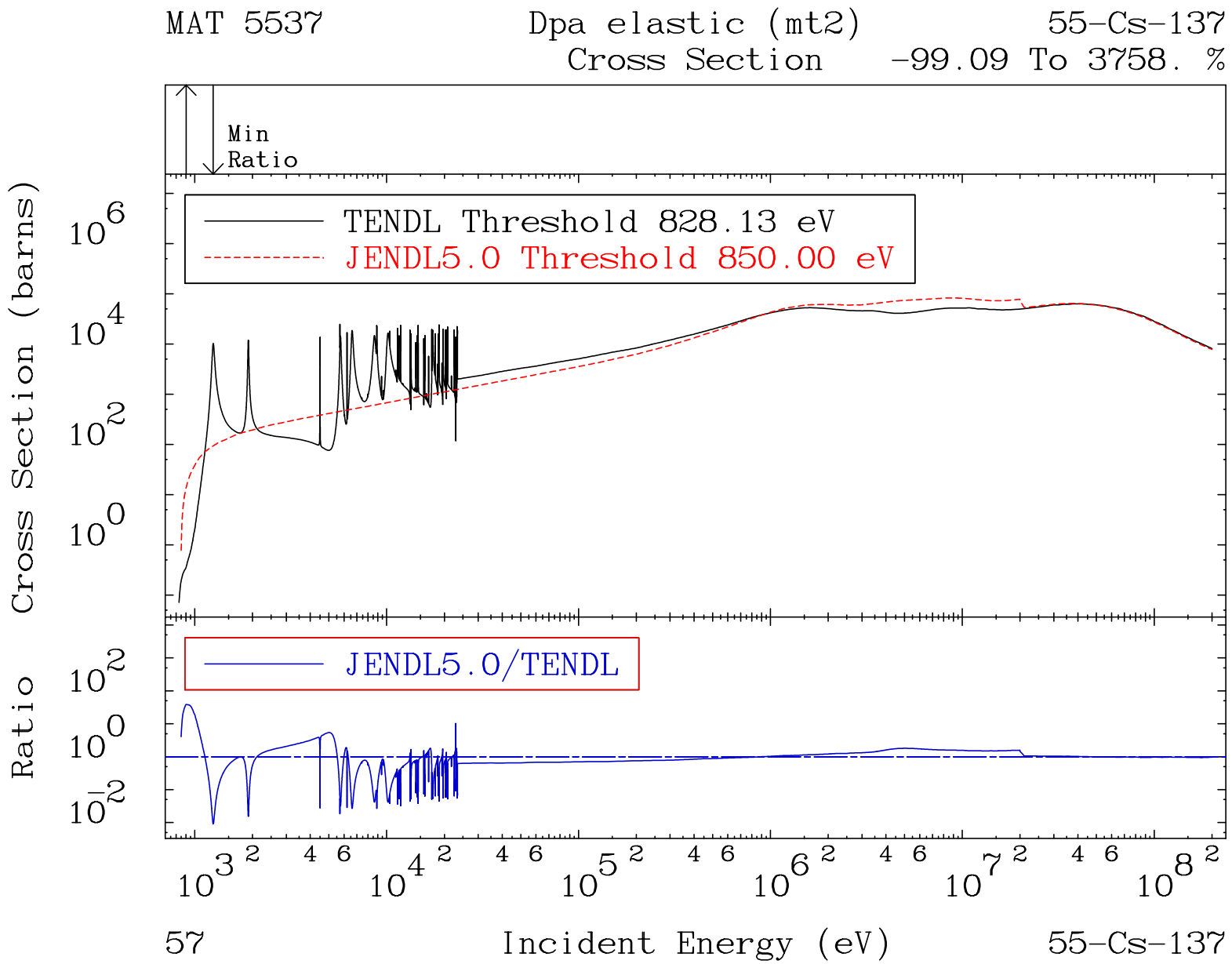

MAT 5537 Kerma fission (mt18 or mt19-20-21-38) 55-Cs-137
Cross Section -9999. To 12.08 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
400
0
-400
-800
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
Incident Energy (eV)
52
55-Cs-137

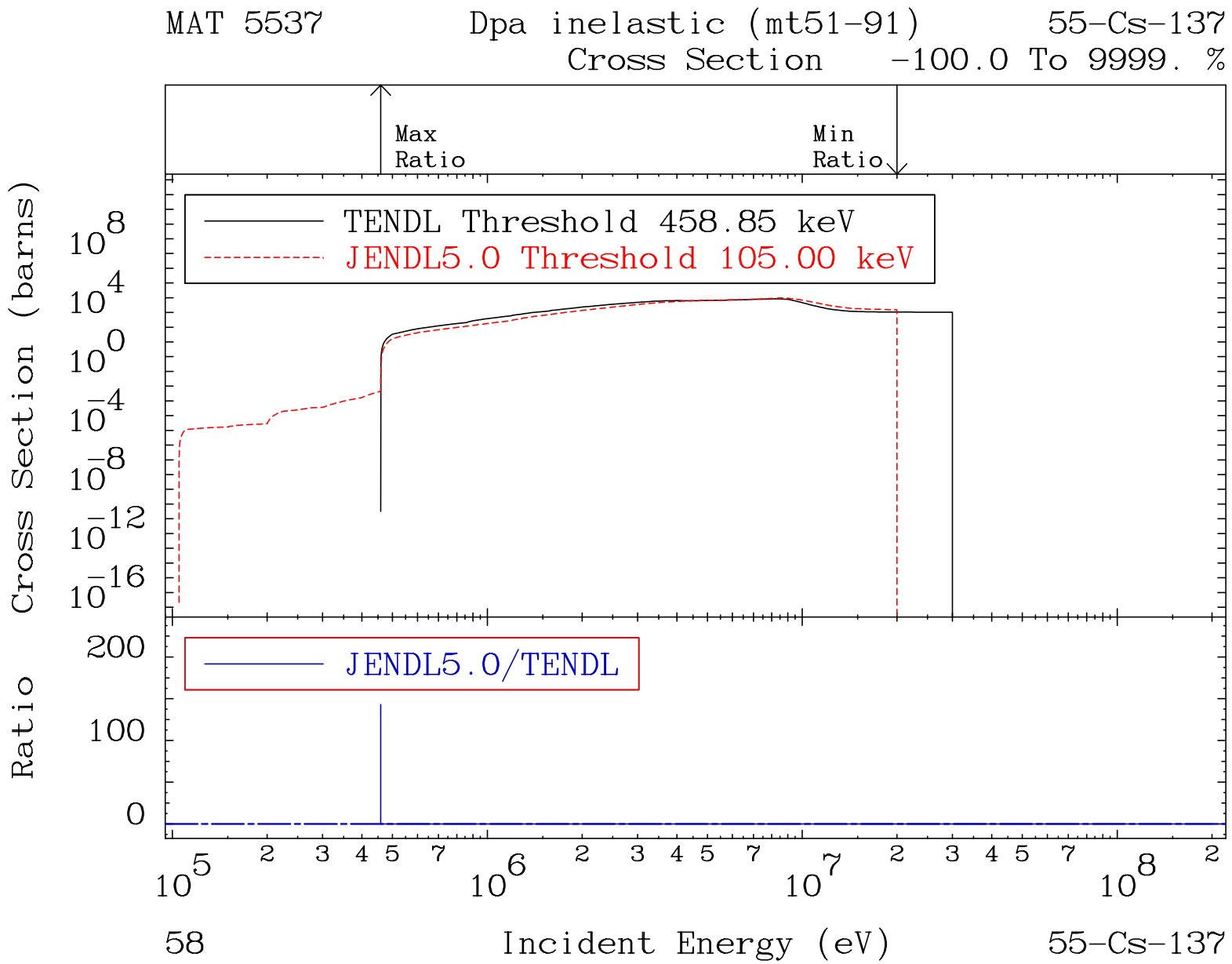

MAT 5537
Kerma capture (mt102)
55-Cs-137
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
100
0
Incident Energy (eV)
53
55-Cs-137

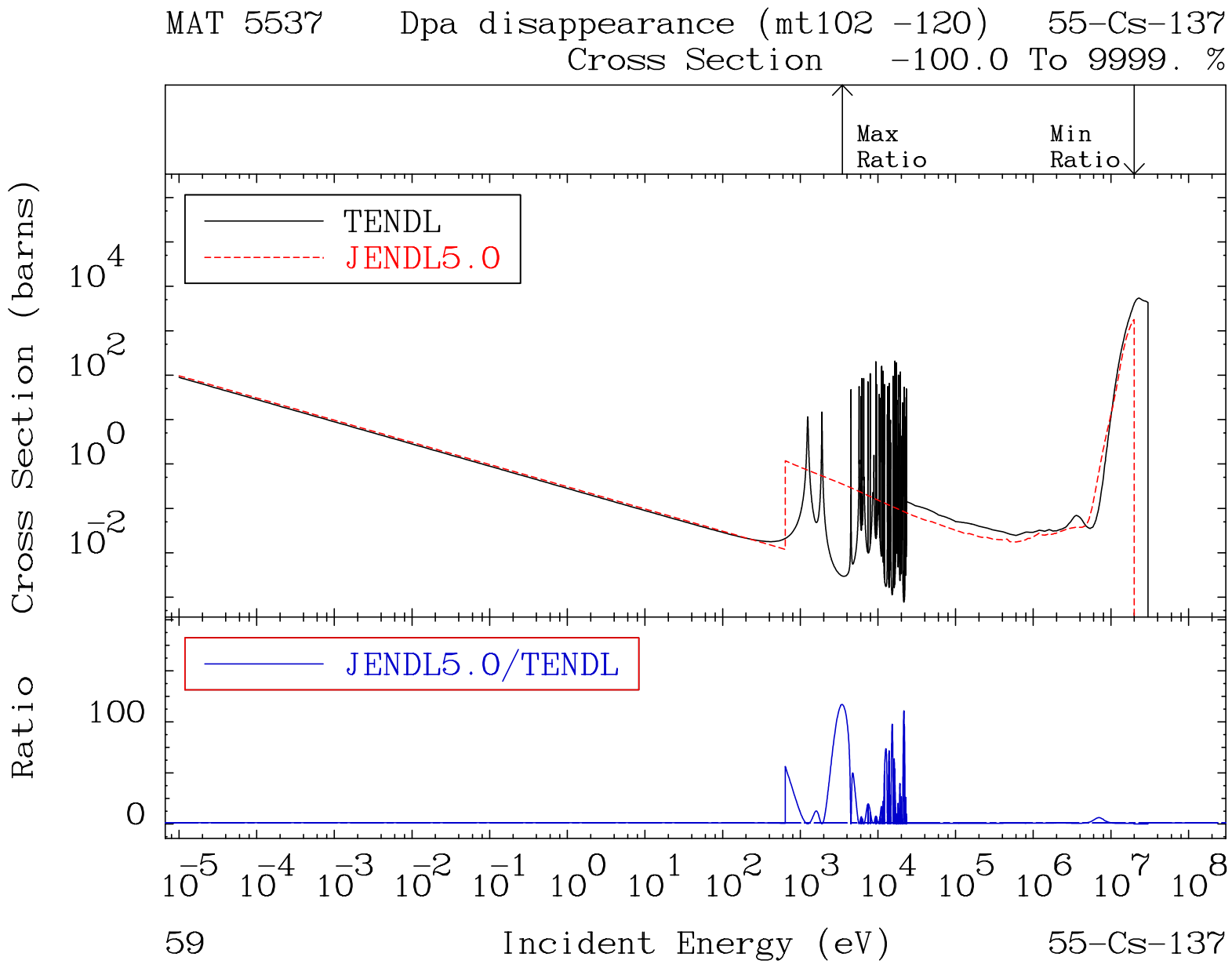

MAT 5537
Total photon (eV-barns)
55-Cs-137
Cross Section -99.95 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
54
55-Cs-137

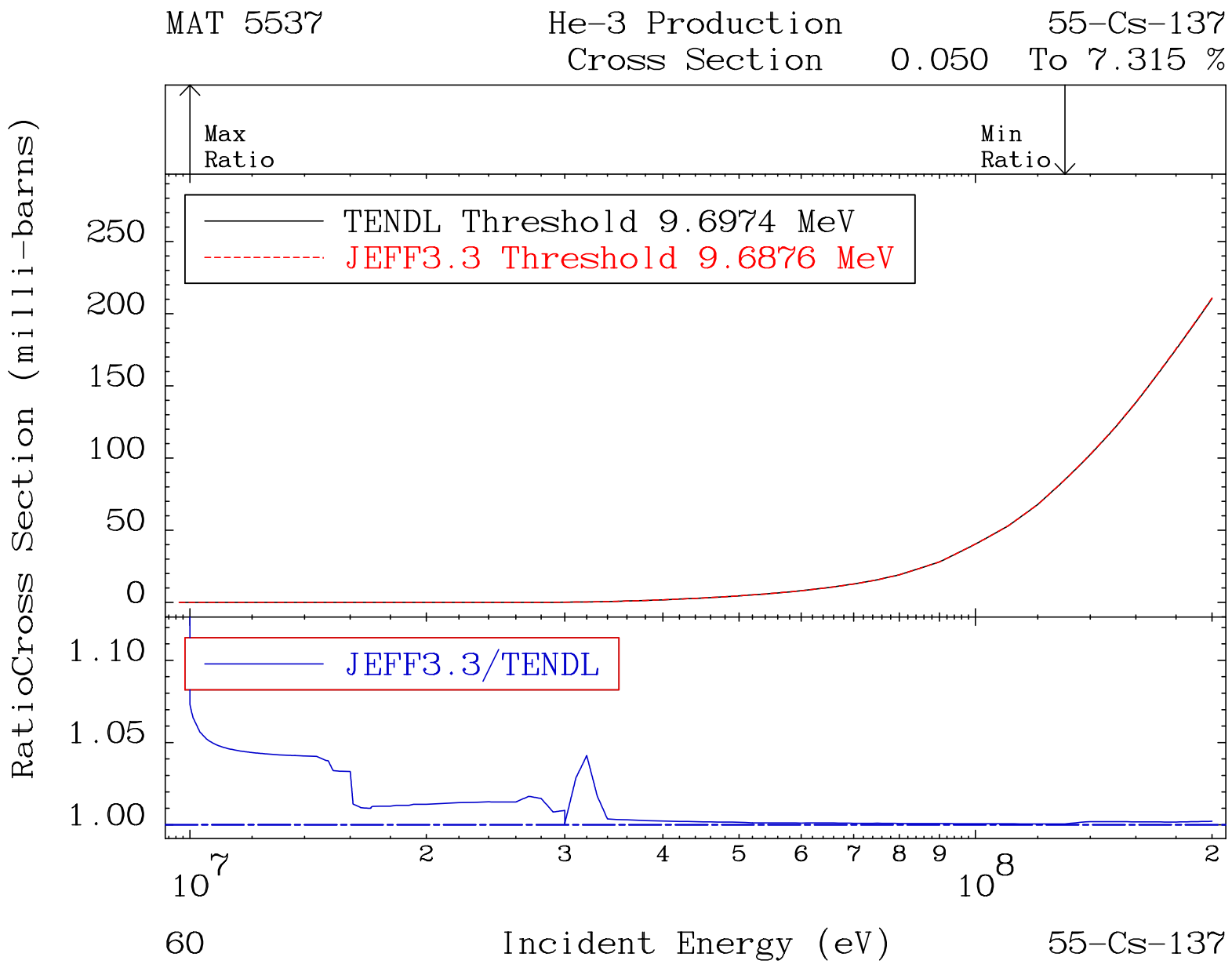

MAT 5537 Total kinematic kerma (high limit) 55-Cs-137
Cross Section -99.08 To 3599. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
Ratio
JENDL5.0/TENDL
Incident Energy (eV)
55
55-Cs-137

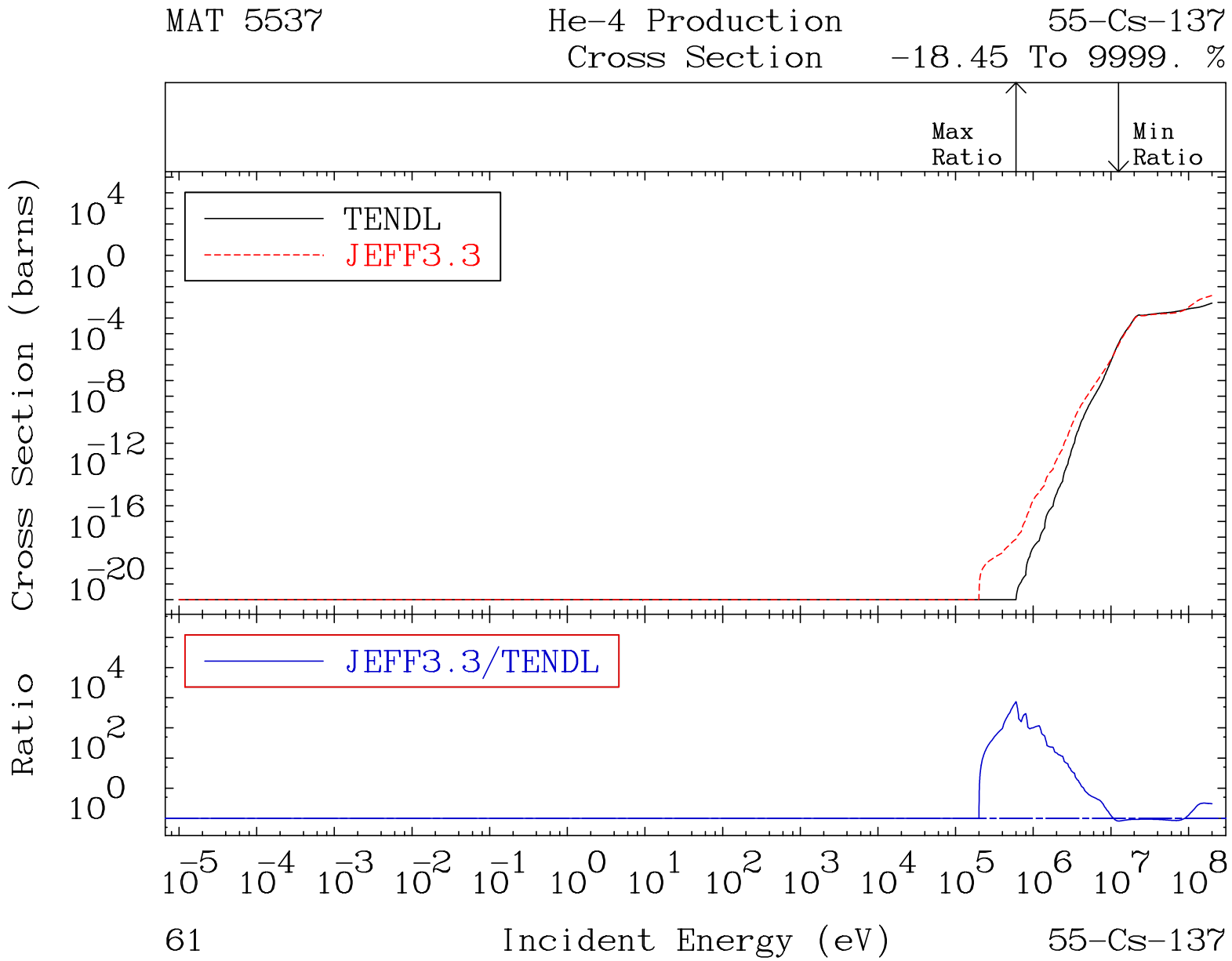

MAT 5537
Dpa total (eV-barns)
55-Cs-137
Cross Section
-99.08 To 5527. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
56
55-Cs-137

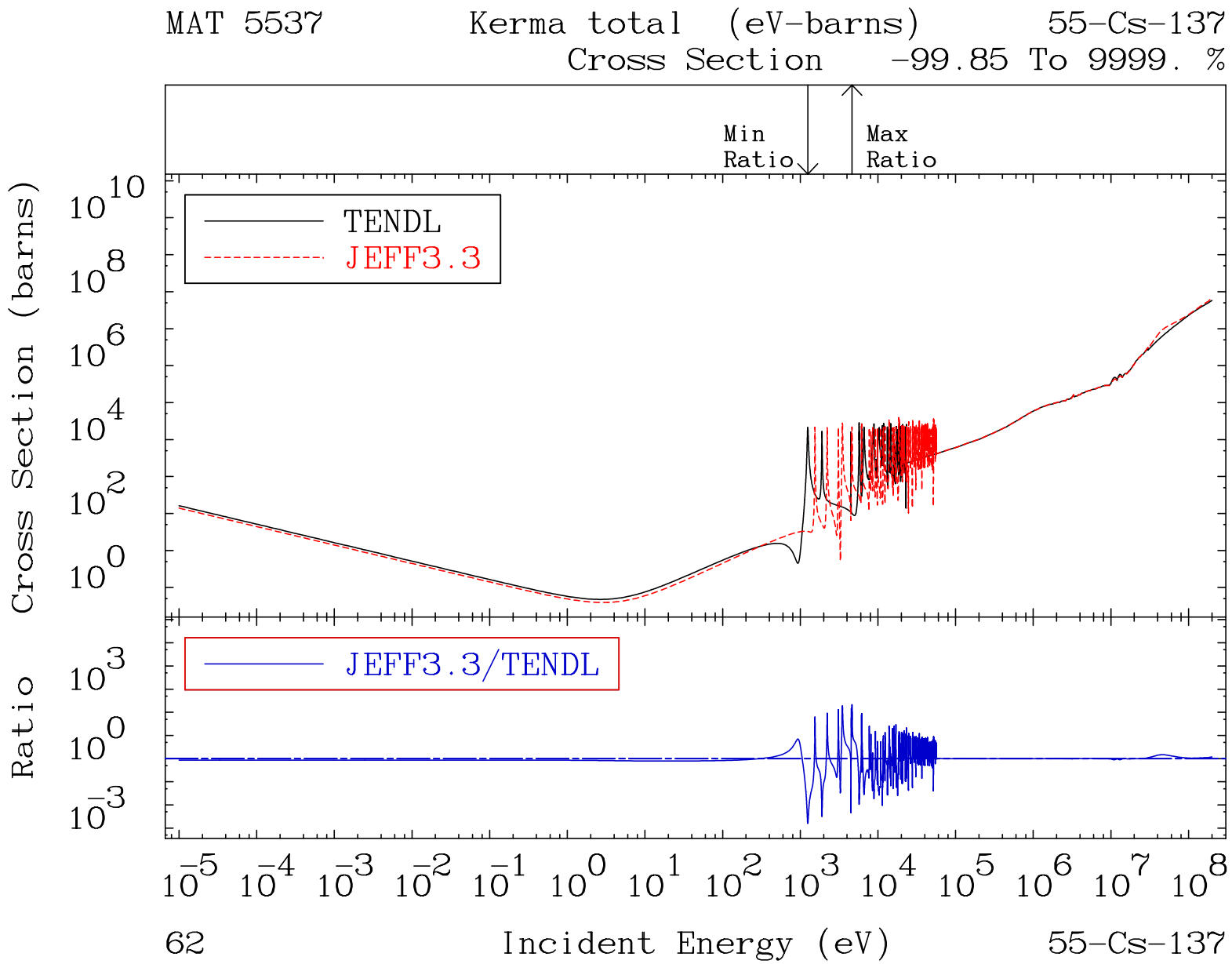

MAT 5537
Dpa elastic (mt2)
Cross Section
55-Cs-137
-99.09 To 3758. %
Min
Ratio
TENDL Threshold 828.13 eV
JENDL5.0 Threshold 850.00 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
57
55-Cs-137

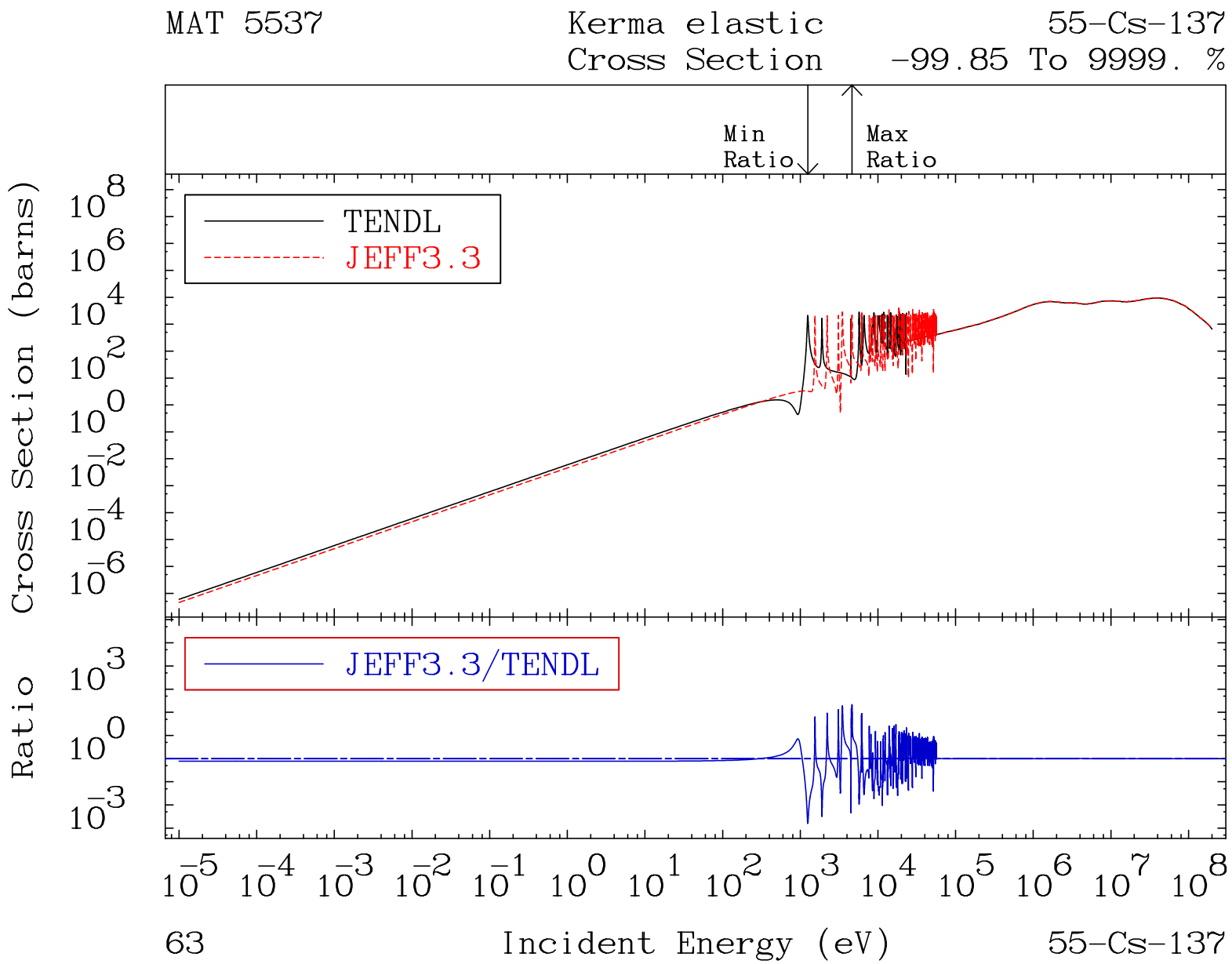

MAT 5537
Dpa inelastic (mt51-91)
55-Cs-137
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 458.85 keV
JENDL5.0 Threshold 105.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
58
55-Cs-137

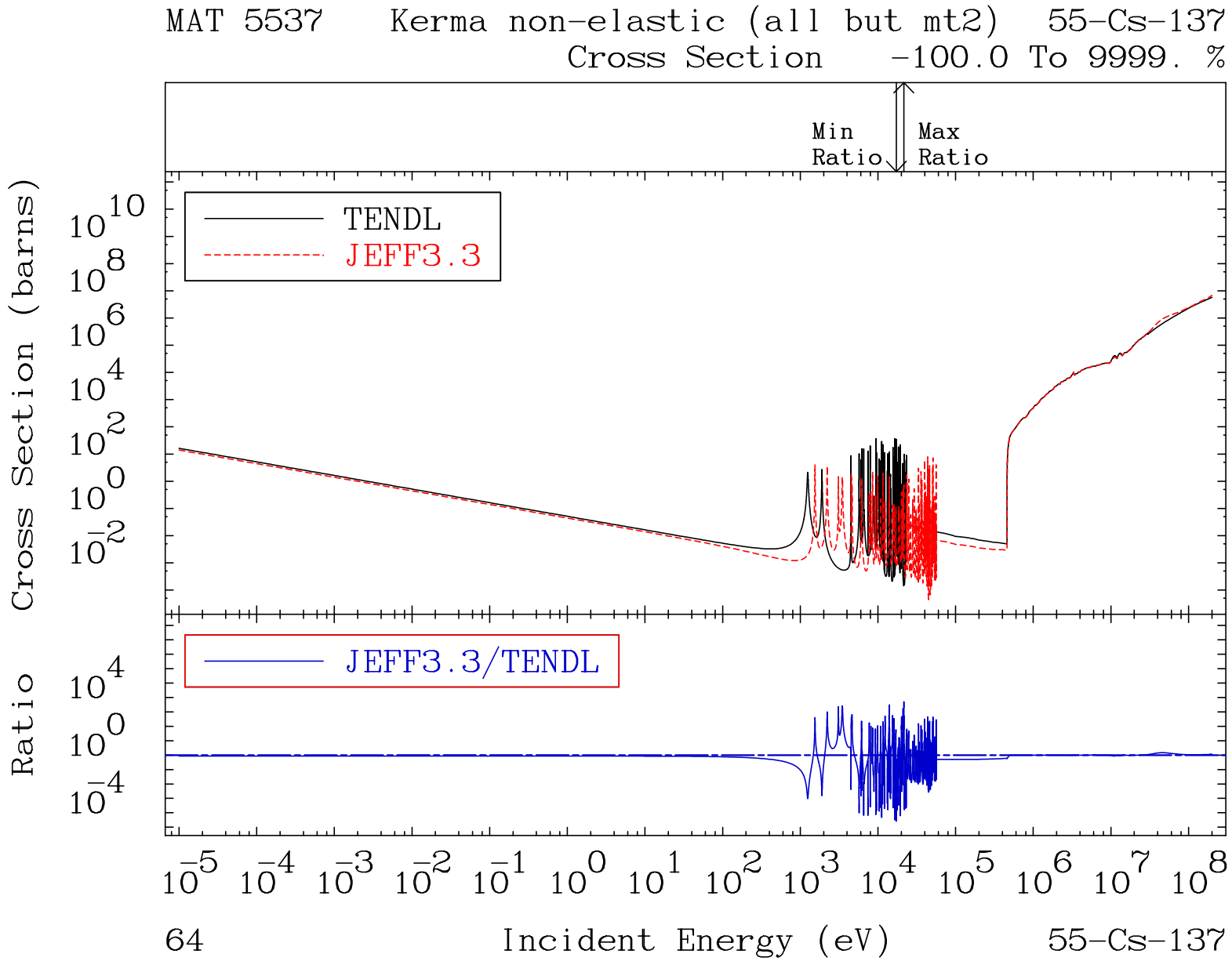

MAT 5537 Dpa disappearance (mt102 -120) 55-Cs-137
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
59
55-Cs-137

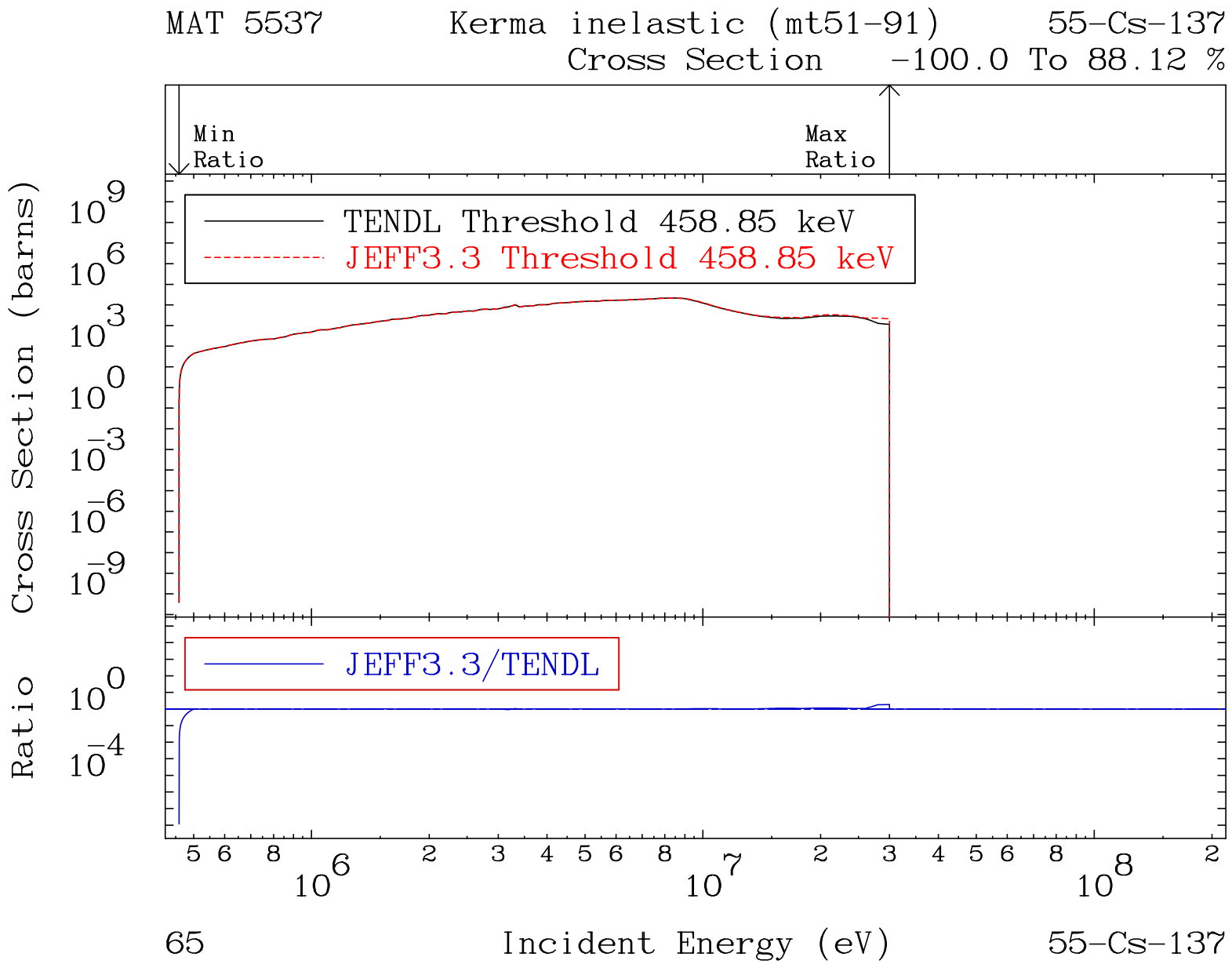

MAT 5537
He-3 Production
Cross Section
55-Cs-137
0.050 To 7.315 %
Max Ratio
Min Ratio
TENDL Threshold 9.6974 MeV
JEFF3.3 Threshold 9.6876 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
1.10
1.05
1.00
10^7
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
55-Cs-137

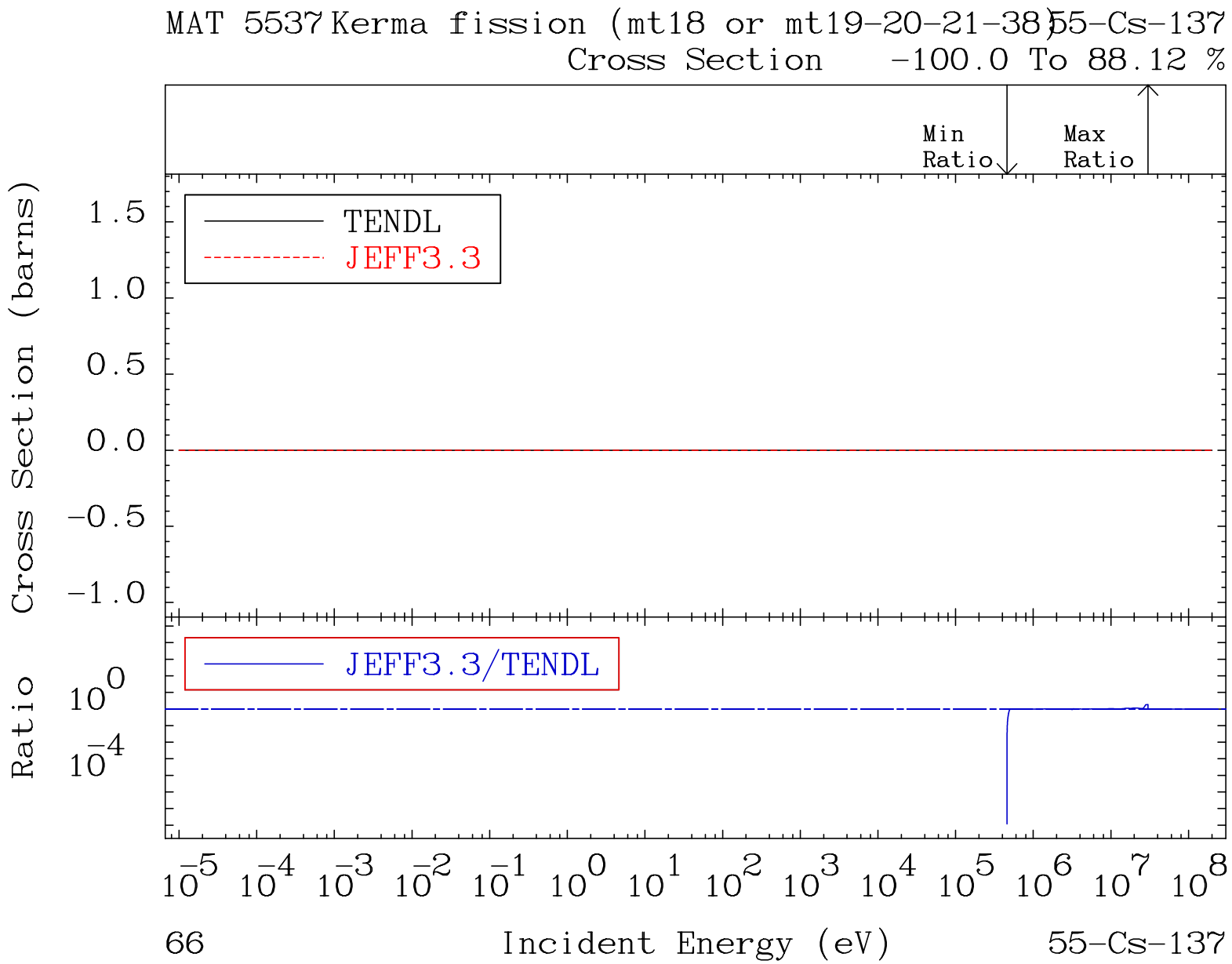

MAT 5537
He-4 Production
Cross Section
55-Cs-137
-18.45 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
61
55-Cs-137

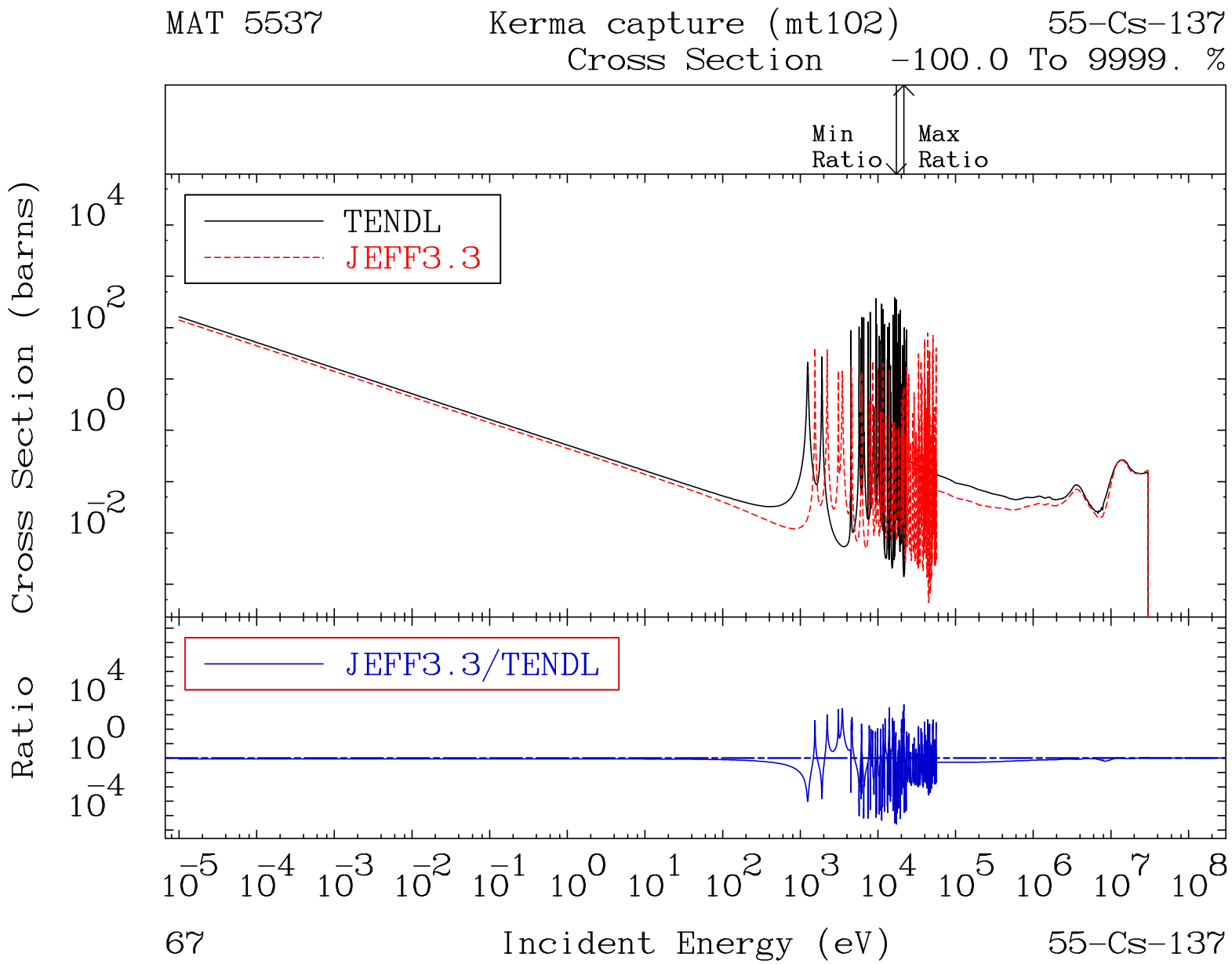

MAT 5537
Kerma total (eV-barns)
55-Cs-137
Cross Section -99.85 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
62
55-Cs-137

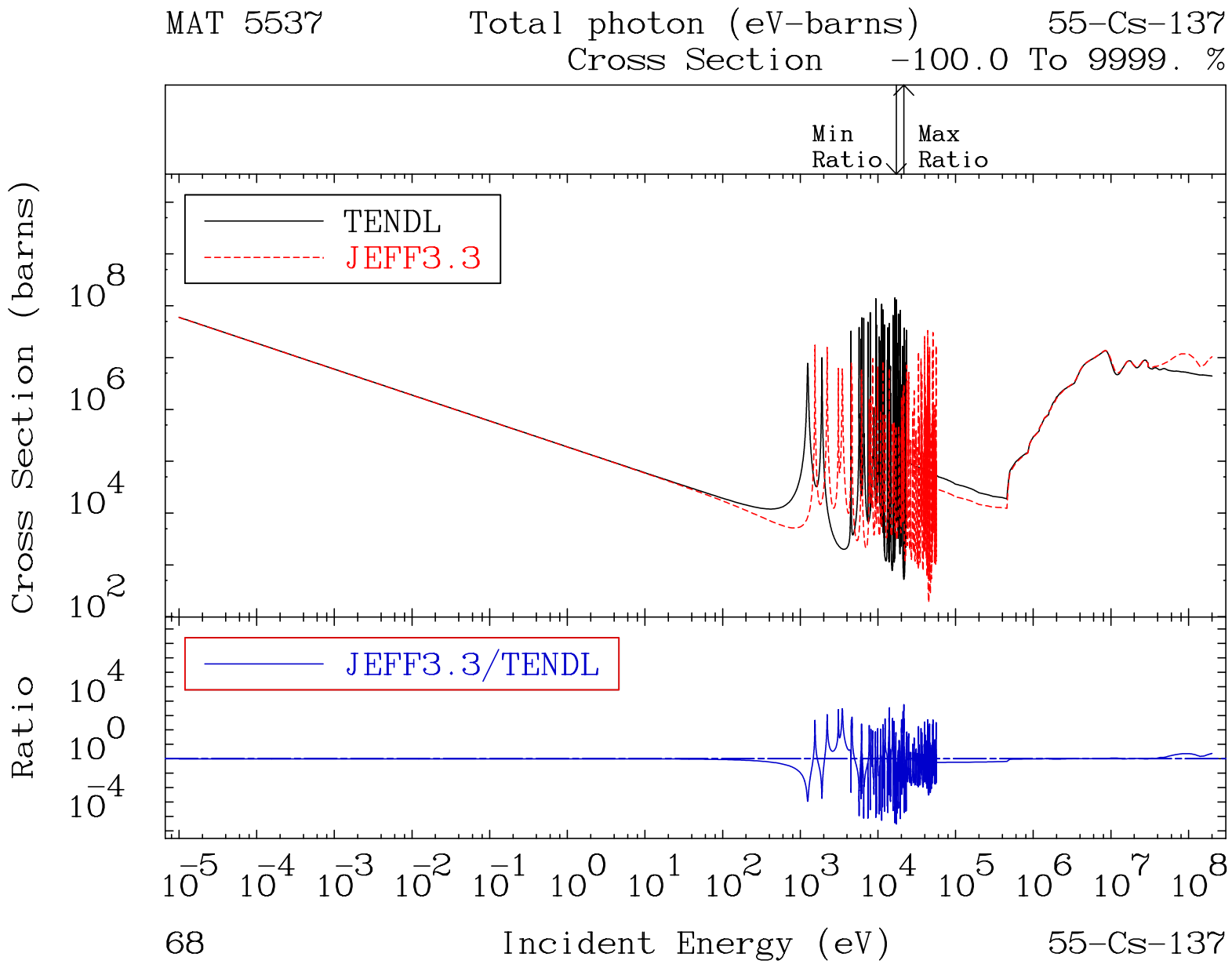

MAT 5537
Kerma elastic
Cross Section
55-Cs-137
-99.85 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
63
55-Cs-137

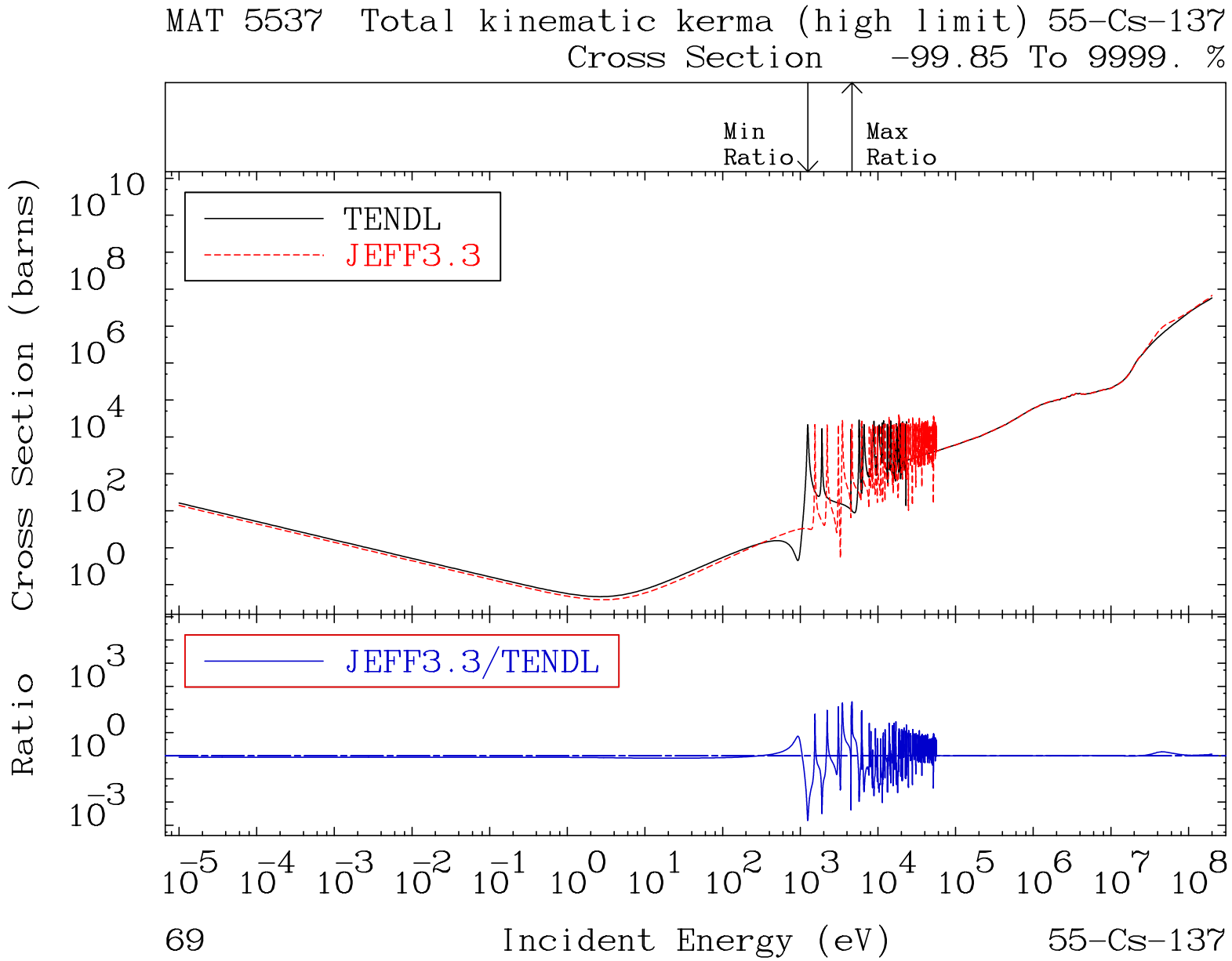

MAT 5537 Kerma non-elastic (all but mt2) 55-Cs-137
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64
55-Cs-137

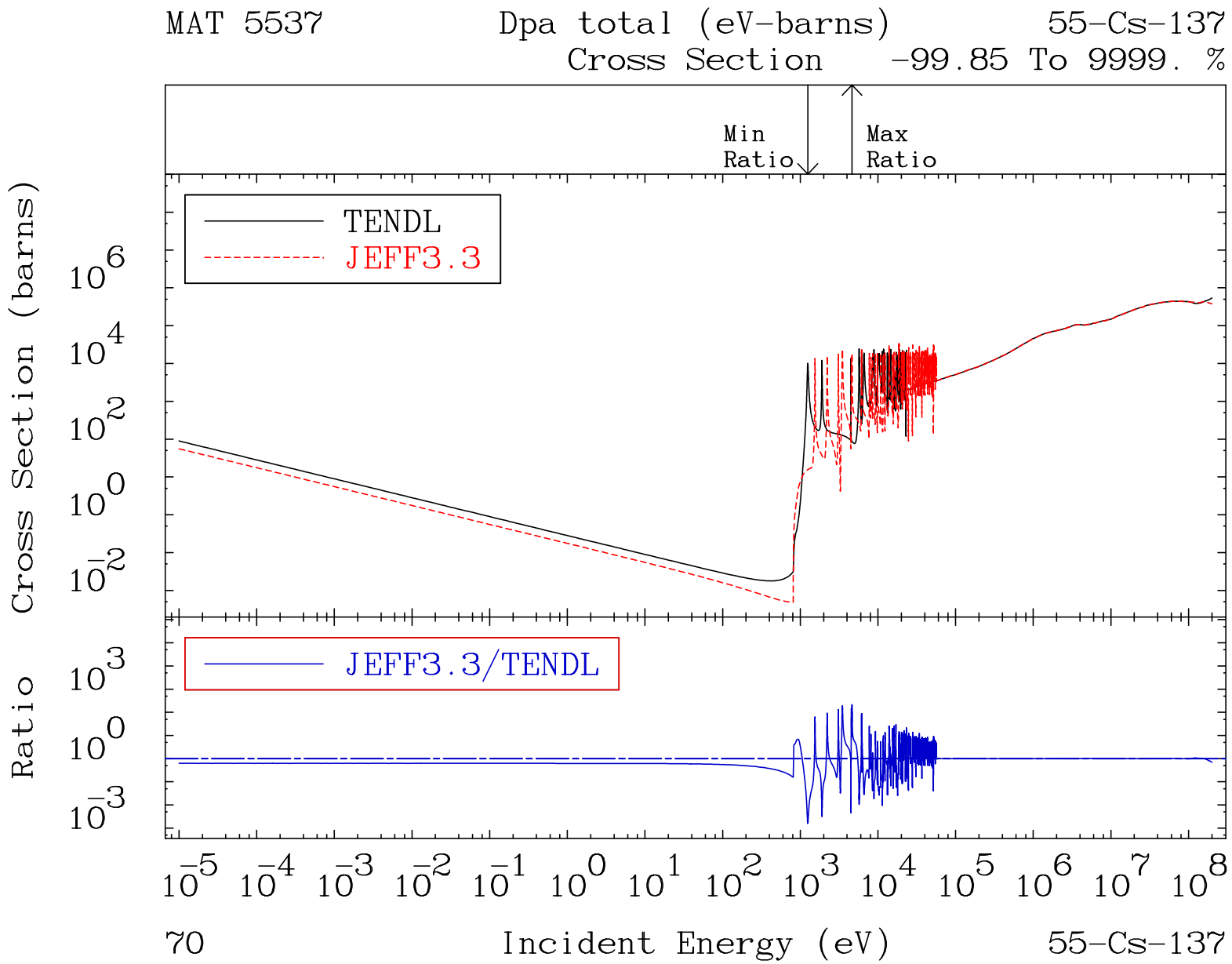

MAT 5537
Kerma inelastic (mt51-91)
55-Cs-137
Cross Section -100.0 To 88.12 %
Min Ratio
Max Ratio
TENDL Threshold 458.85 keV
JEFF3.3 Threshold 458.85 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
65
55-Cs-137

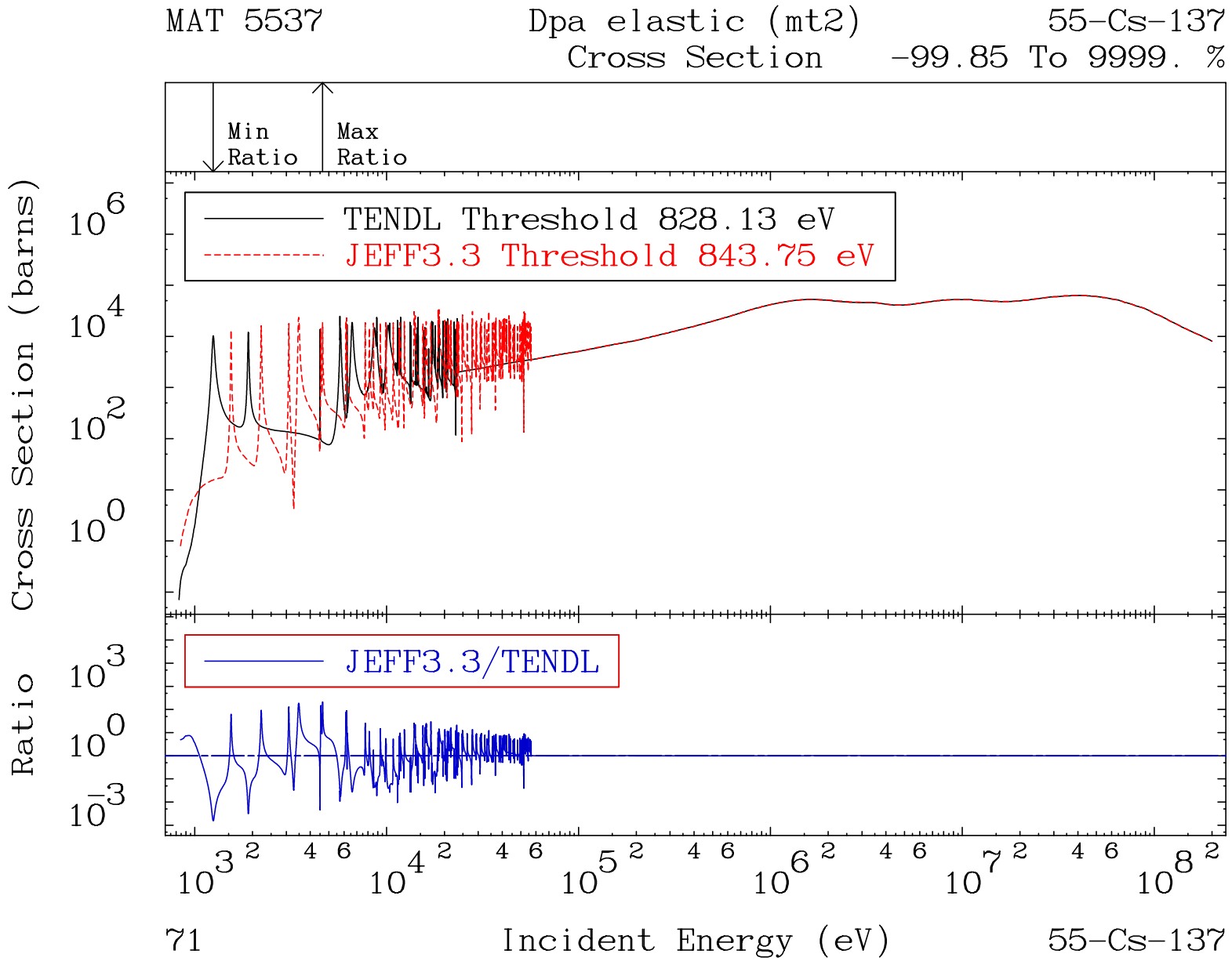

MAT 5537 Kerma fission (mt18 or mt19-20-21-38) 55-Cs-137
Cross Section -100.0 To 88.12 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{0}
10^{-4}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
66
Incident Energy (eV)
55-Cs-137

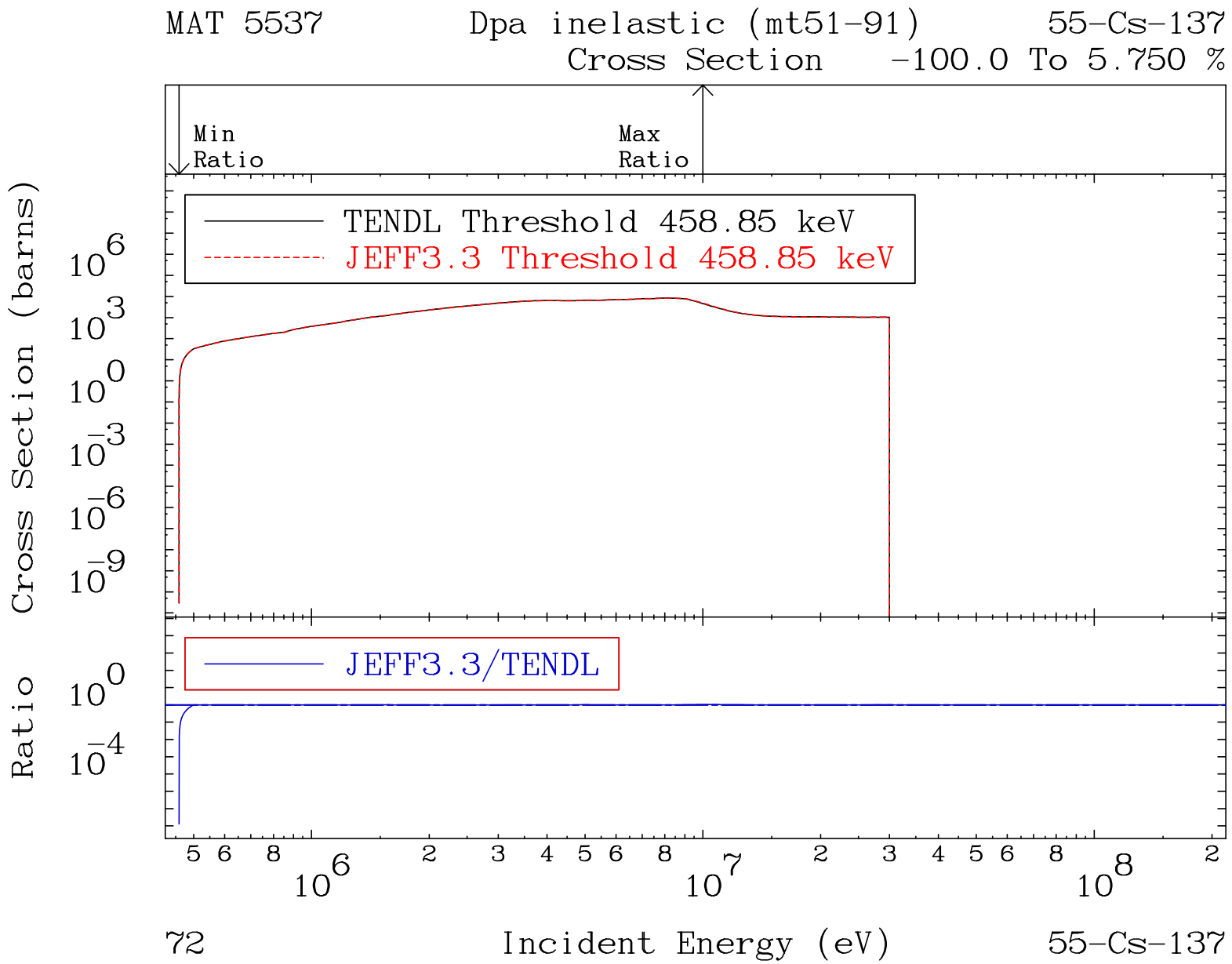

MAT 5537
Kerma capture (mt102)
55-Cs-137
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
55-Cs-137

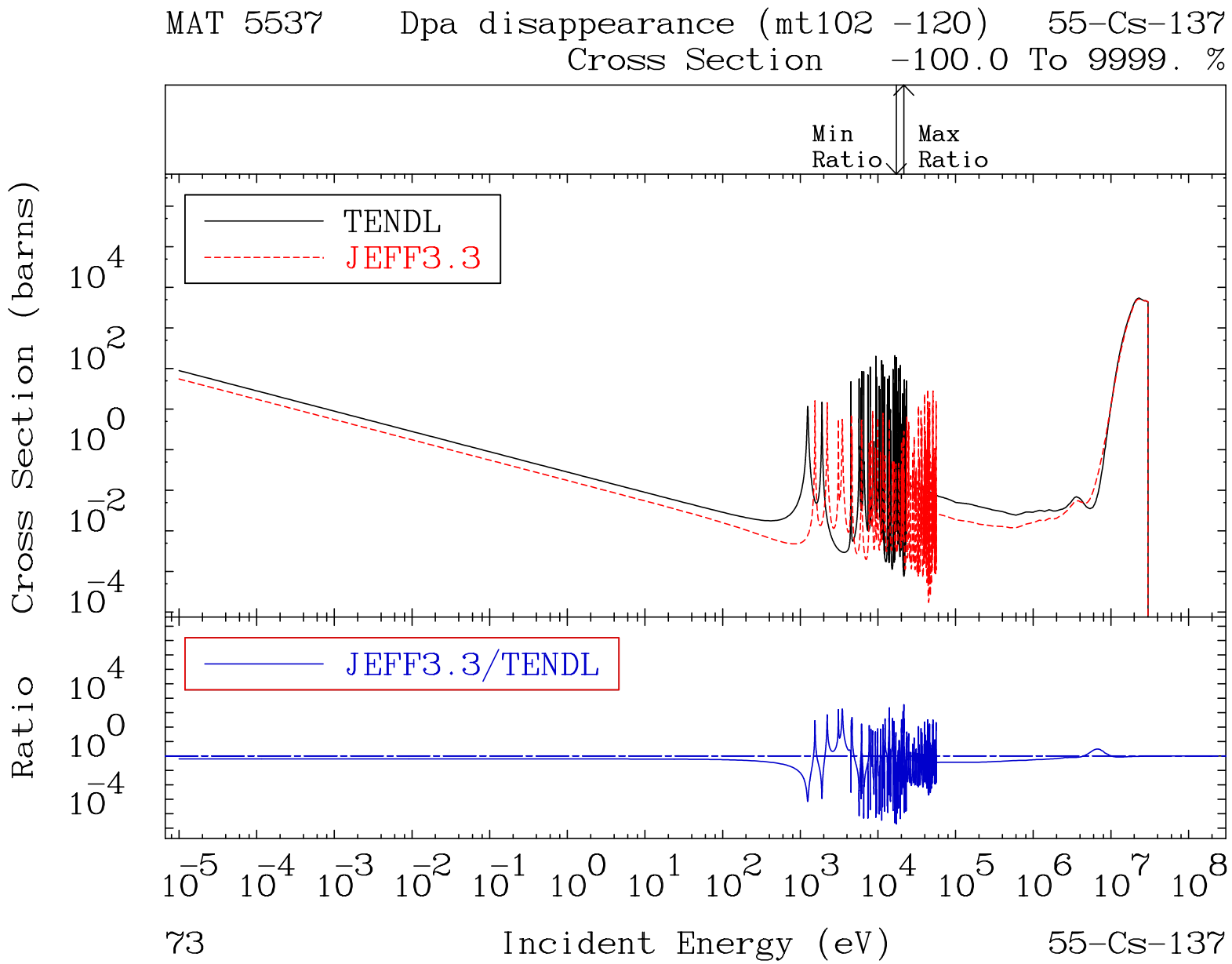

MAT 5537
Total photon (eV-barns)
55-Cs-137
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
68
55-Cs-137

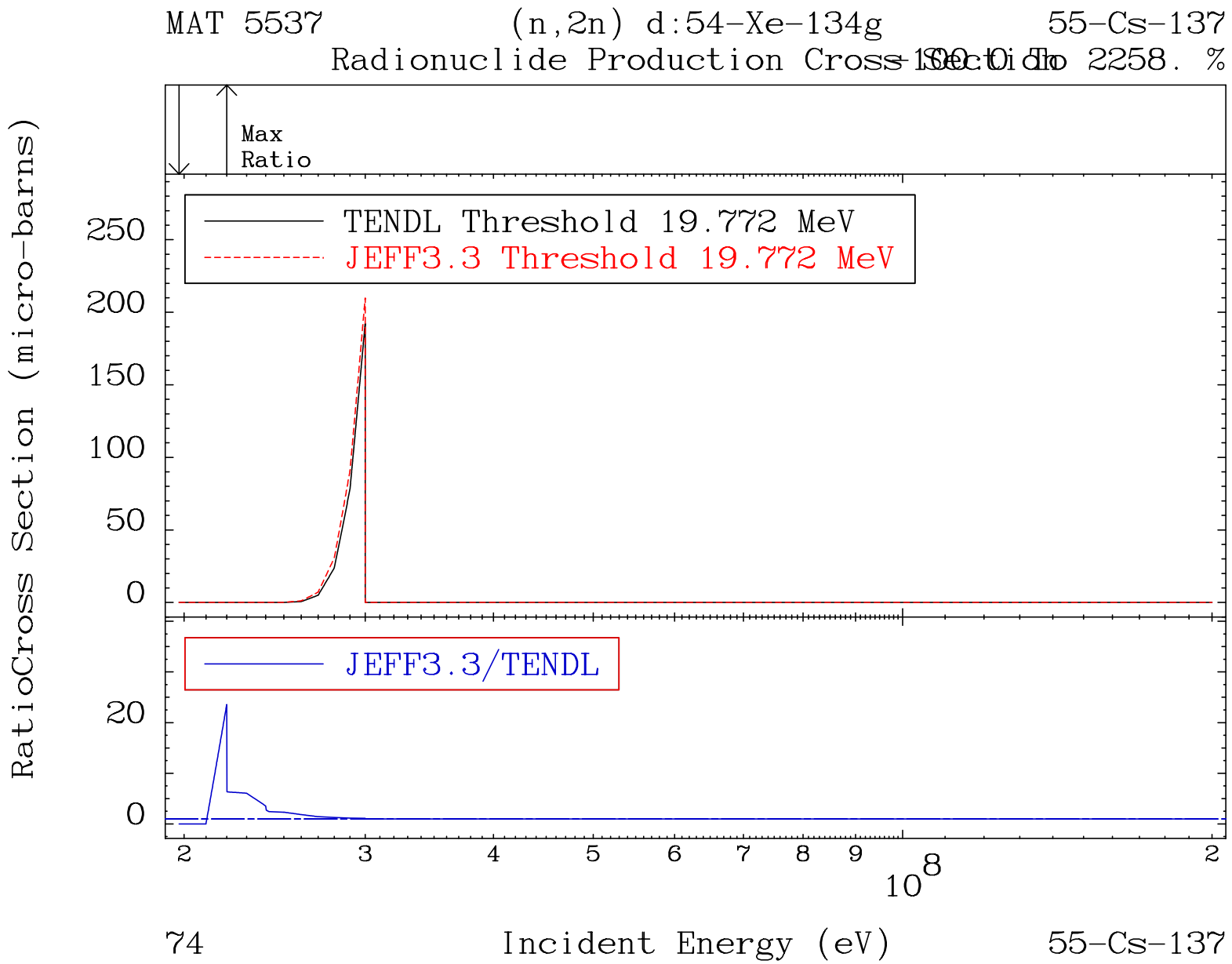

MAT 5537 Total kinematic kerma (high limit) 55-Cs-137
Cross Section -99.85 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
69
55-Cs-137

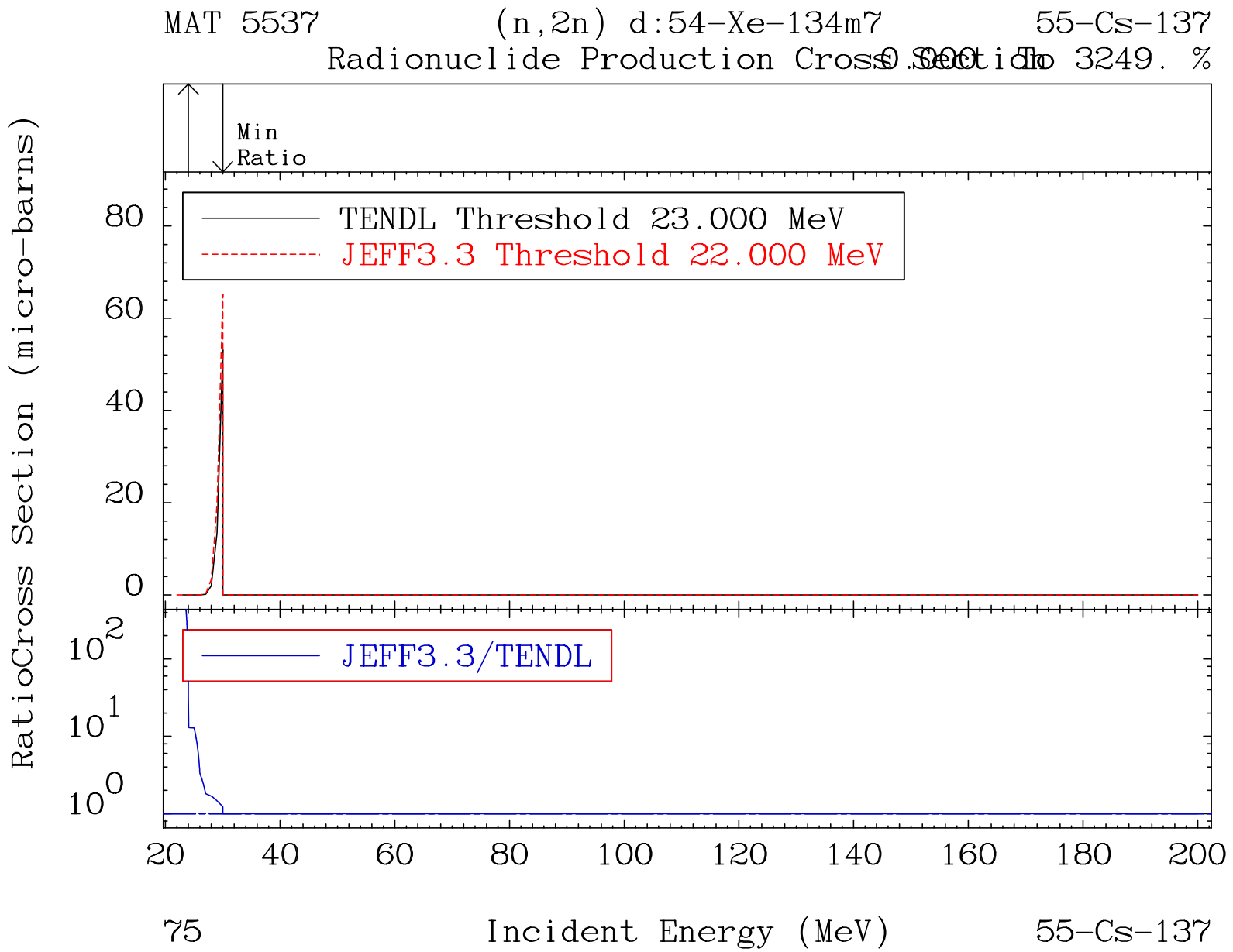

MAT 5537
Dpa total (eV-barns)
55-Cs-137
Cross Section
-99.85 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
70
55-Cs-137

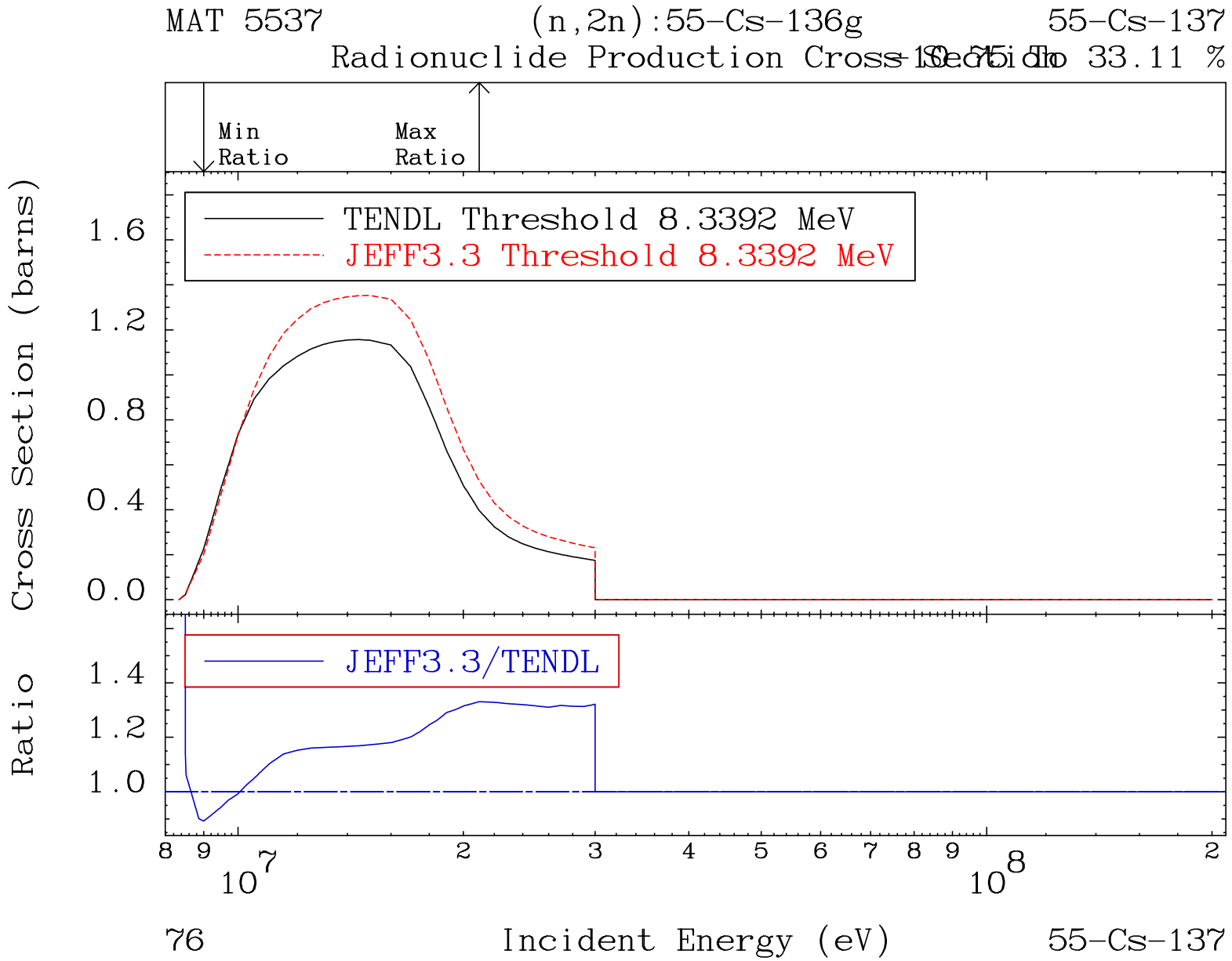

MAT 5537
Dpa elastic (mt2)
Cross Section
55-Cs-137
-99.85 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 828.13 eV
JEFF3.3 Threshold 843.75 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
71
55-Cs-137

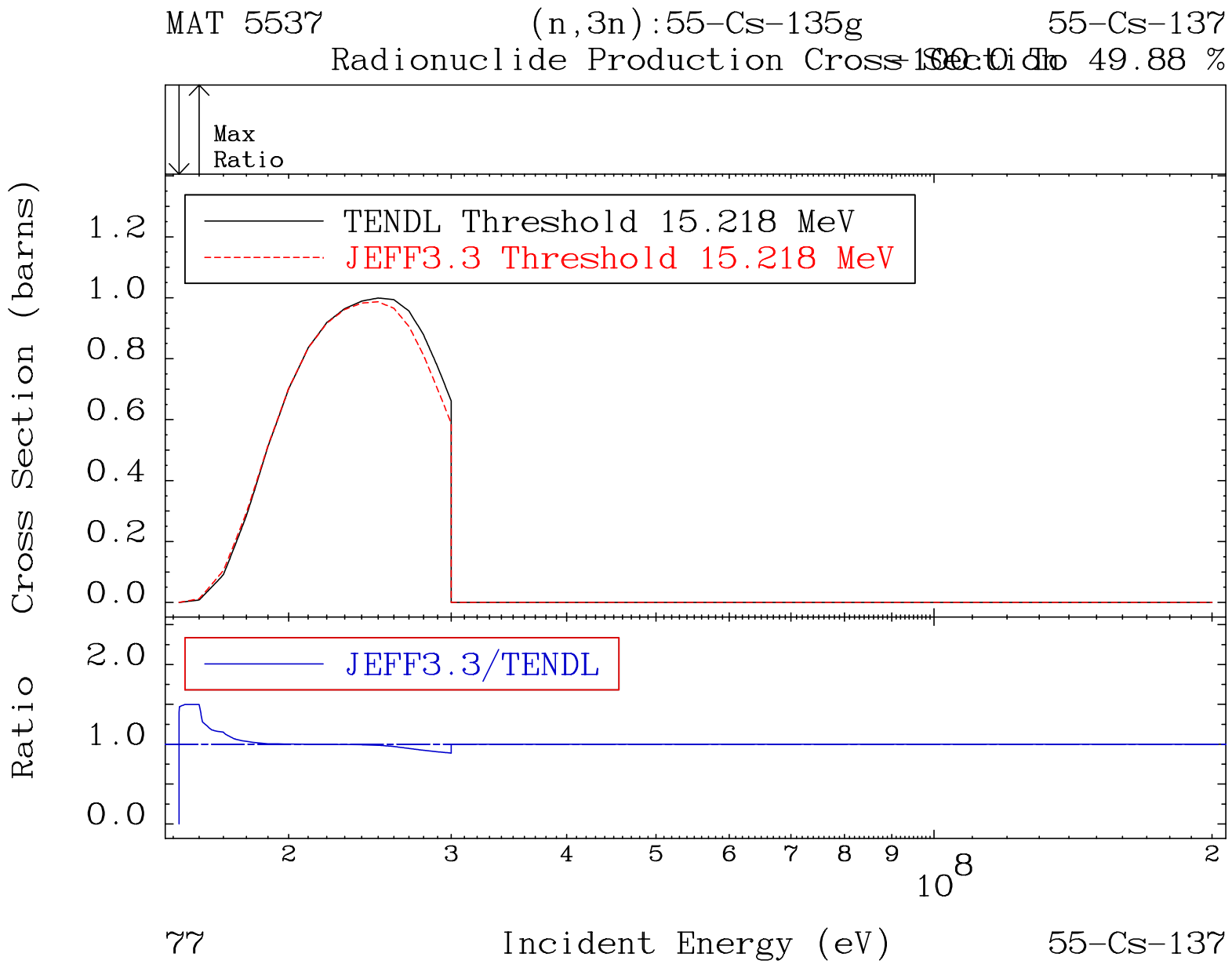

MAT 5537
Dpa inelastic (mt51-91)
55-Cs-137
Cross Section
-100.0 To 5.750 %
Min Ratio
Max Ratio
TENDL Threshold 458.85 keV
JEFF3.3 Threshold 458.85 keV
Cross Section (barns)
10^6
10^3
10^0
10^-3
10^-6
10^-9
JEFF3.3/TENDL
Ratio
10^0
10^-4
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
72
Incident Energy (eV)
55-Cs-137

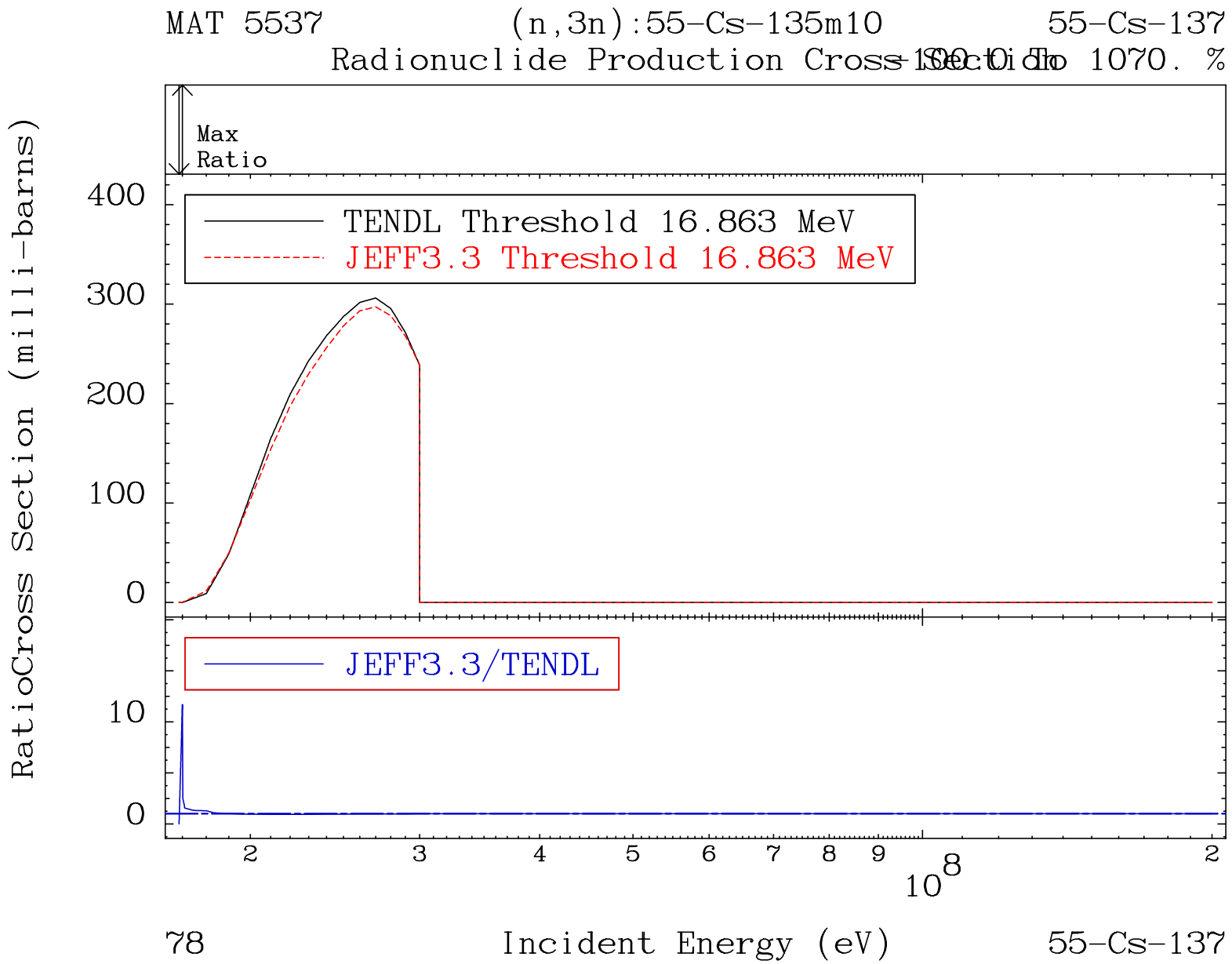

MAT 5537 Dpa disappearance (mt102 -120) 55-Cs-137
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
73
55-Cs-137

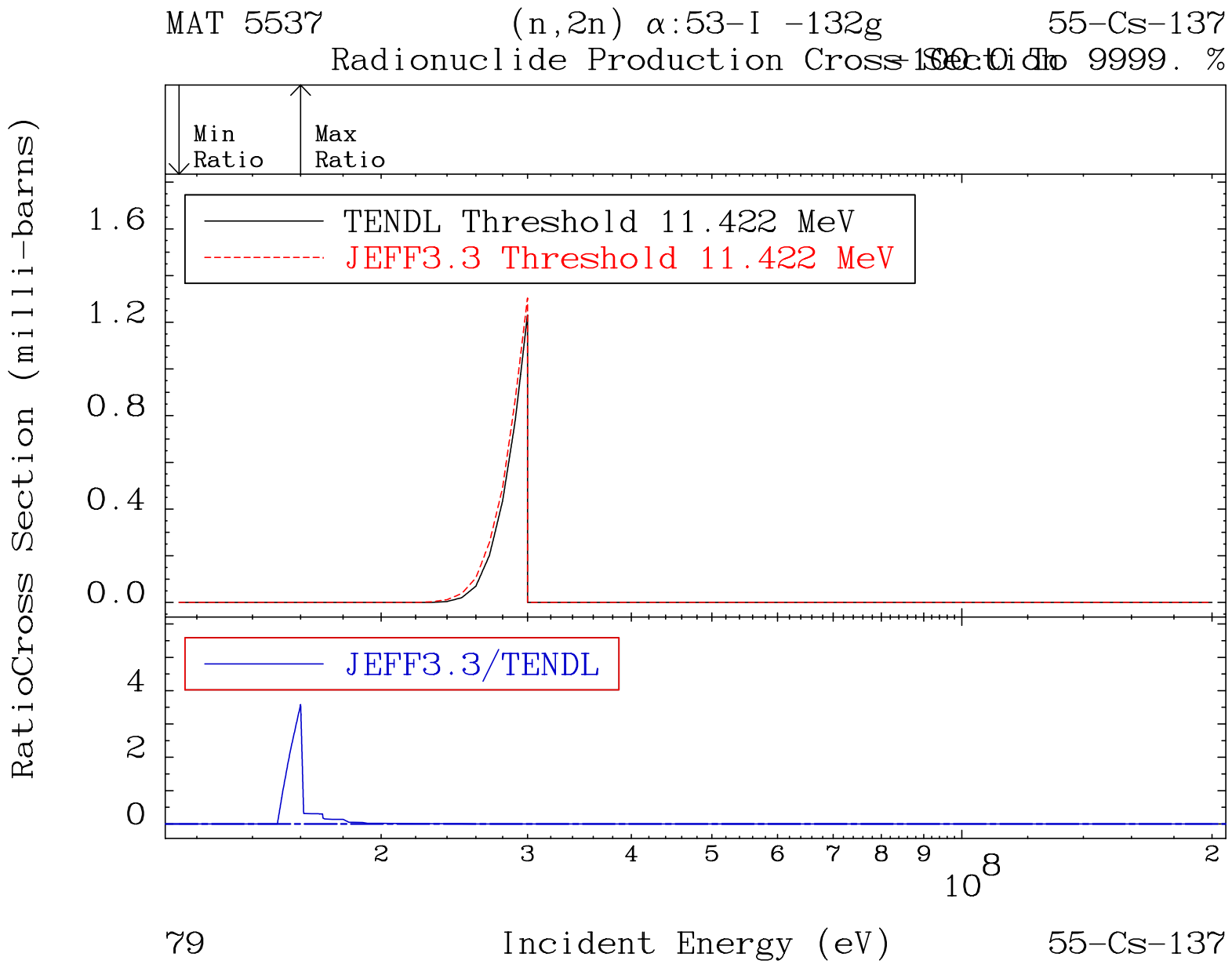

MAT 5537
(n,2n) d:54-Xe-134g
55-Cs-137
Radionuclide Production Cross Section To 2258. %
Max
Ratio
TENDL Threshold 19.772 MeV
JEFF3.3 Threshold 19.772 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
250
200
150
100
50
0
20
0
2
3
4
5
6
7
8
9
2
10^8
74
Incident Energy (eV)
55-Cs-137

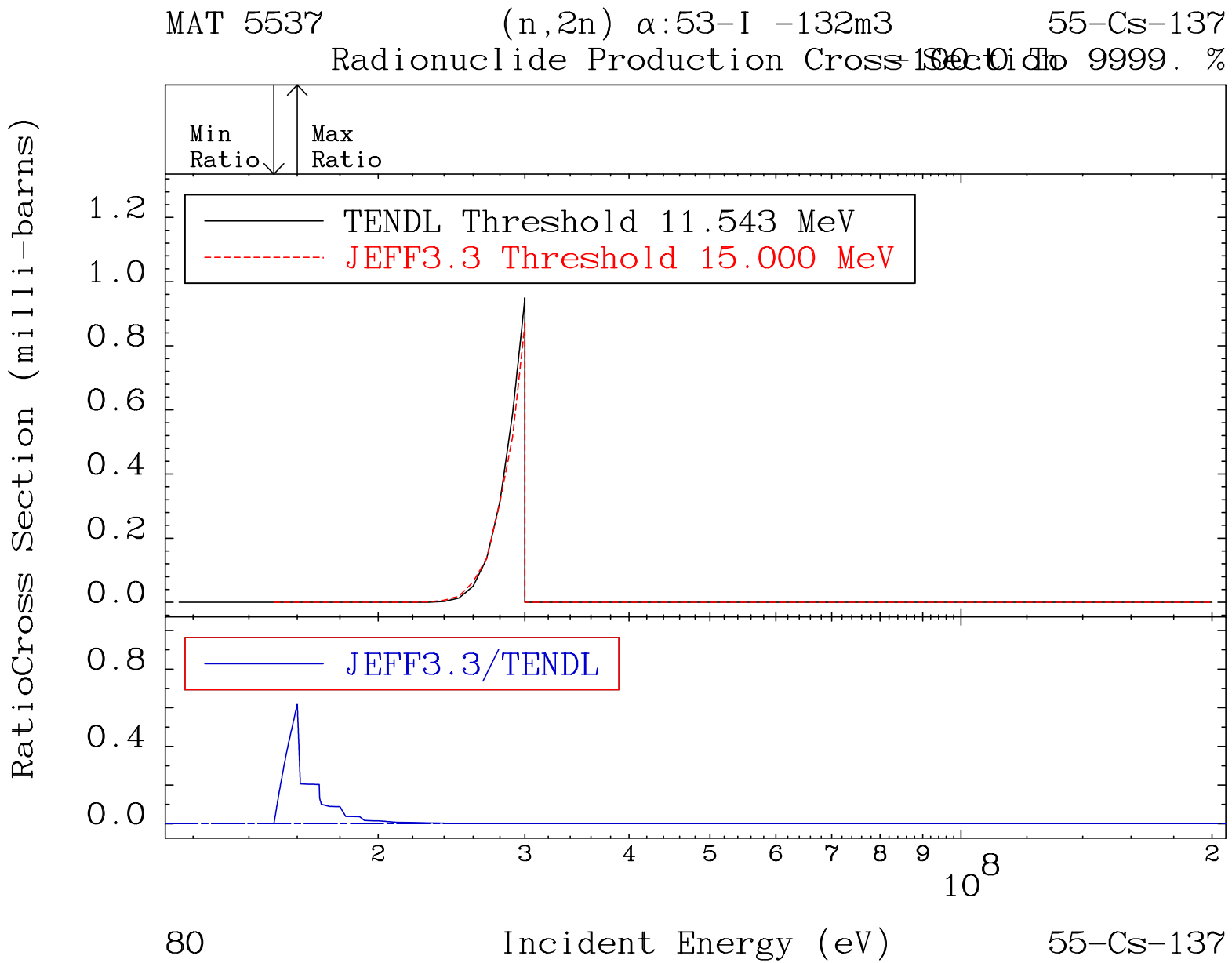

MAT 5537
(n,2n) d:54-Xe-134m7
55-Cs-137
Radionuclide Production Cross Section
0.000 To 3249. %
Min
Ratio
TENDL Threshold 23.000 MeV
JEFF3.3 Threshold 22.000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
80
60
40
20
0
10^2
10^1
10^0
20
40
60
80
100
120
140
160
180
200
75
Incident Energy (MeV)
55-Cs-137

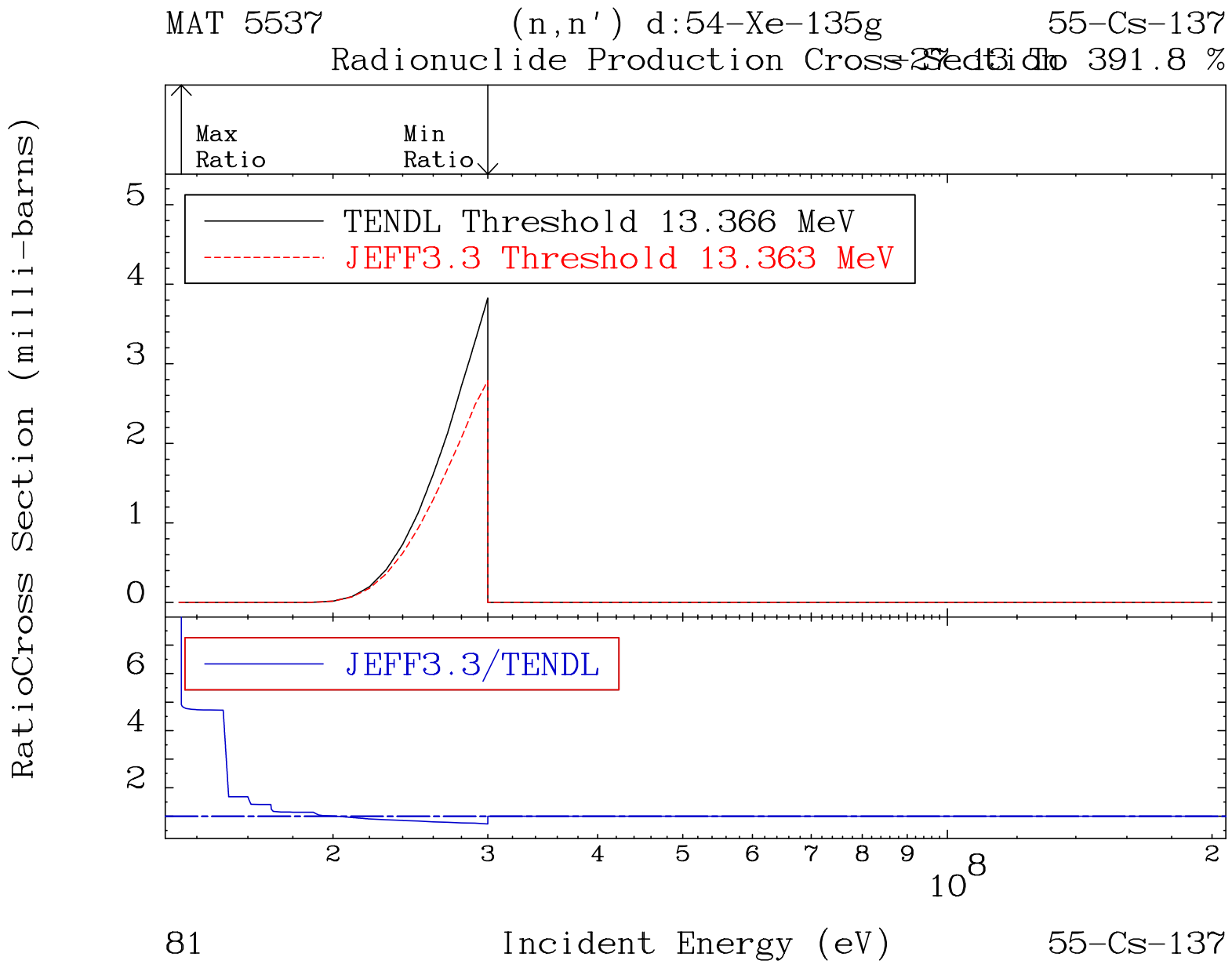

MAT 5537
(n,2n):55-Cs-136g
55-Cs-137
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL Threshold 8.3392 MeV
JEFF3.3 Threshold 8.3392 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
76
55-Cs-137

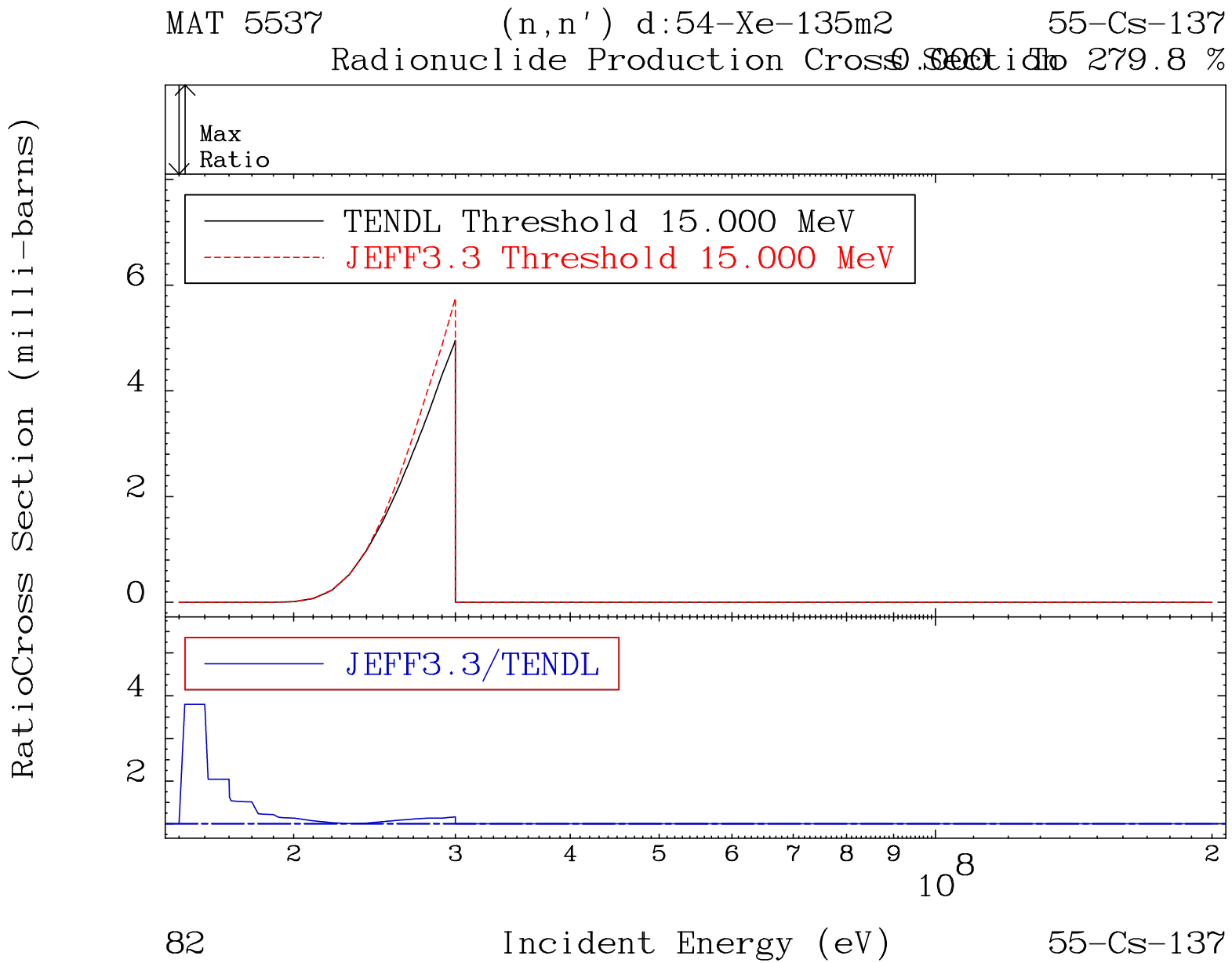

MAT 5537
(n,3n):55-Cs-135g
55-Cs-137
Radionuclide Production Cross Section To 49.88 %
Max
Ratio
TENDL Threshold 15.218 MeV
JEFF3.3 Threshold 15.218 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
2
10^8
77
Incident Energy (eV)
55-Cs-137

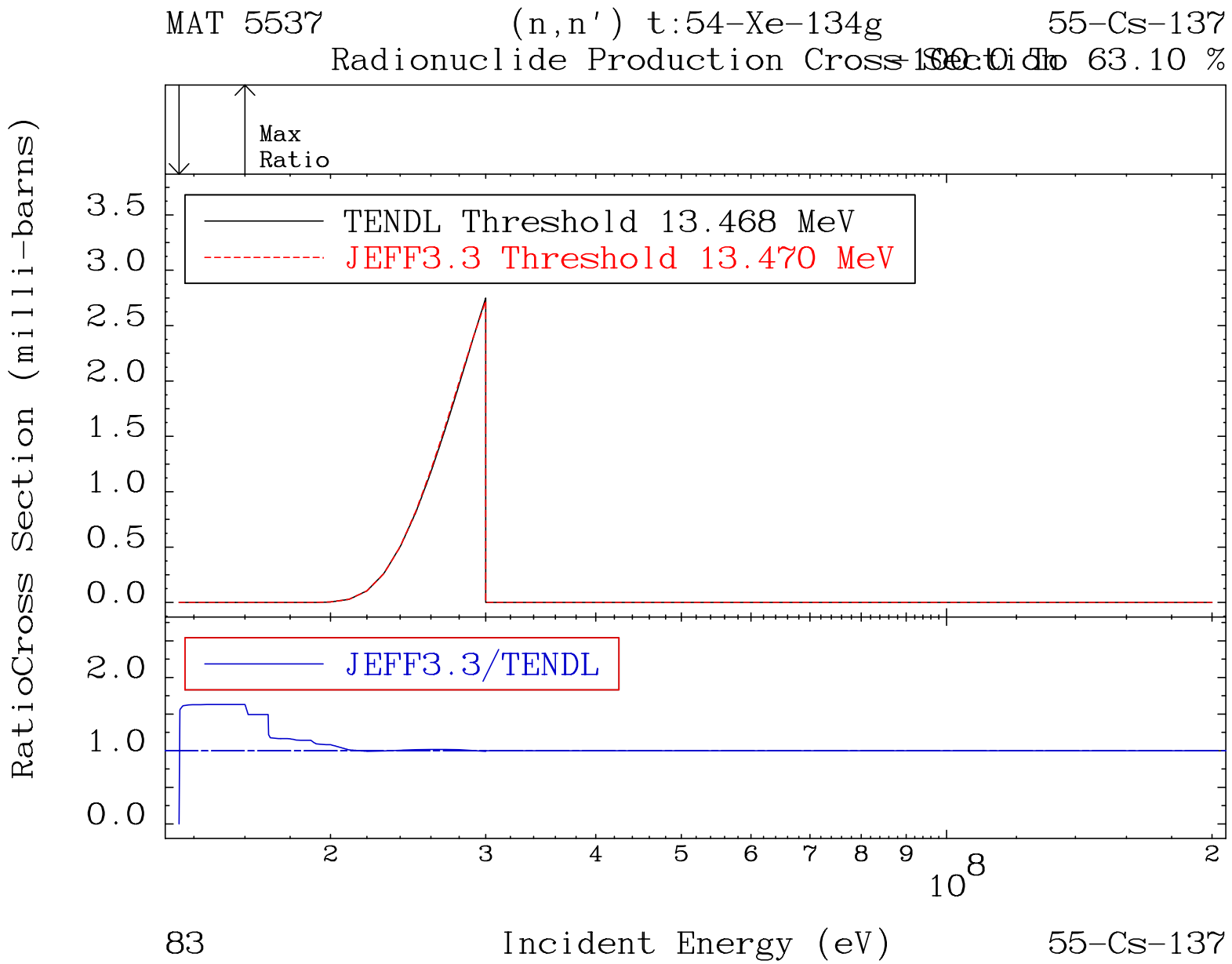

MAT 5537
(n,3n):55-Cs-135m10
55-Cs-137
Radionuclide Production Cross Section To 1070. %
Max
Ratio
400
300
200
100
0
TENDL Threshold 16.863 MeV
JEFF3.3 Threshold 16.863 MeV
JEFF3.3/TENDL
10
0
2
3
4
5
6
7
8
9
10^8
2
RatioCross Section (milli-barns)
78
Incident Energy (eV)
55-Cs-137

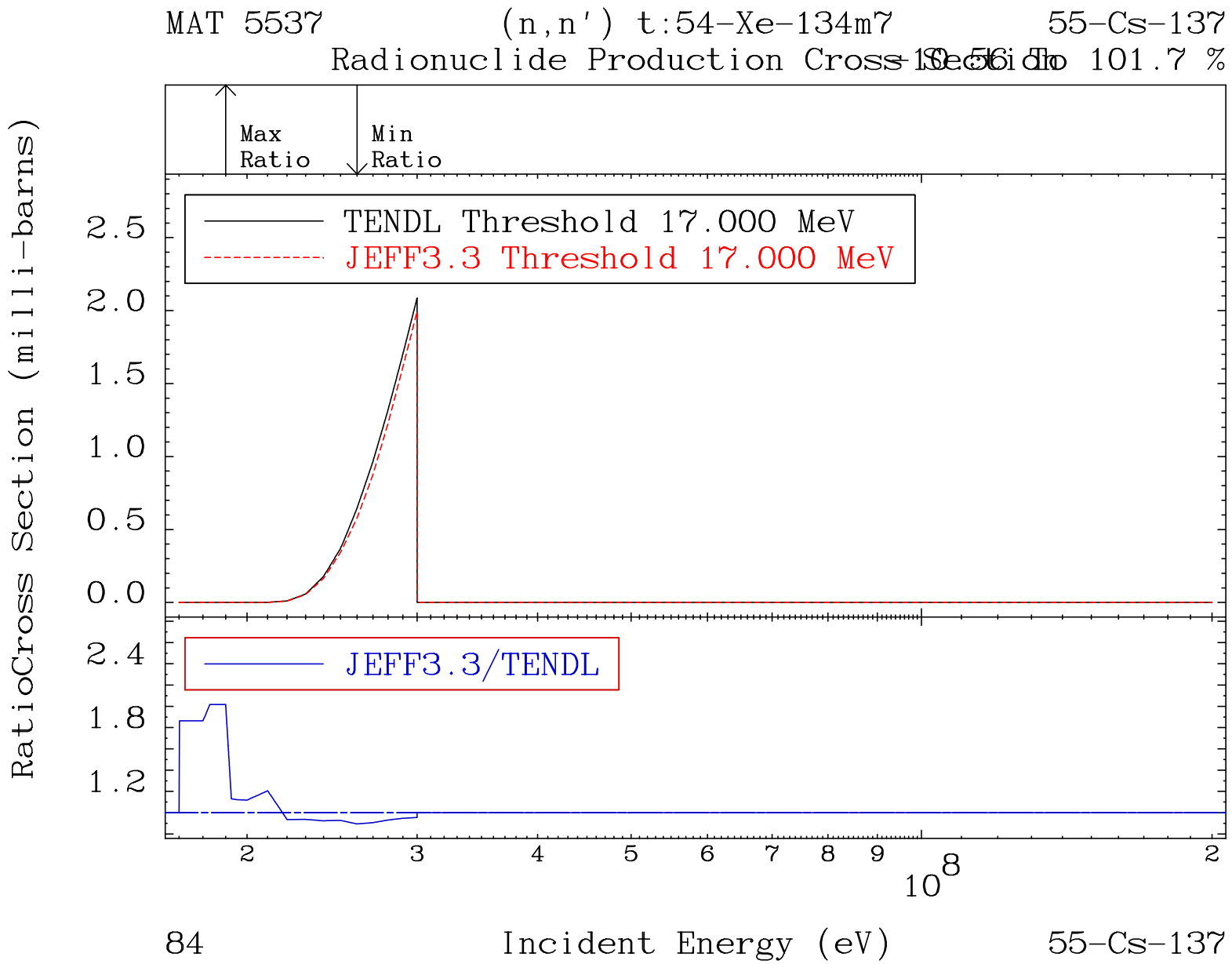

MAT 5537
(n,2n) α:53-I -132g
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 11.422 MeV
JEFF3.3 Threshold 11.422 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
4
2
0
2
3
4
5
6
7
8
9
10^8
2
79
Incident Energy (eV)
55-Cs-137

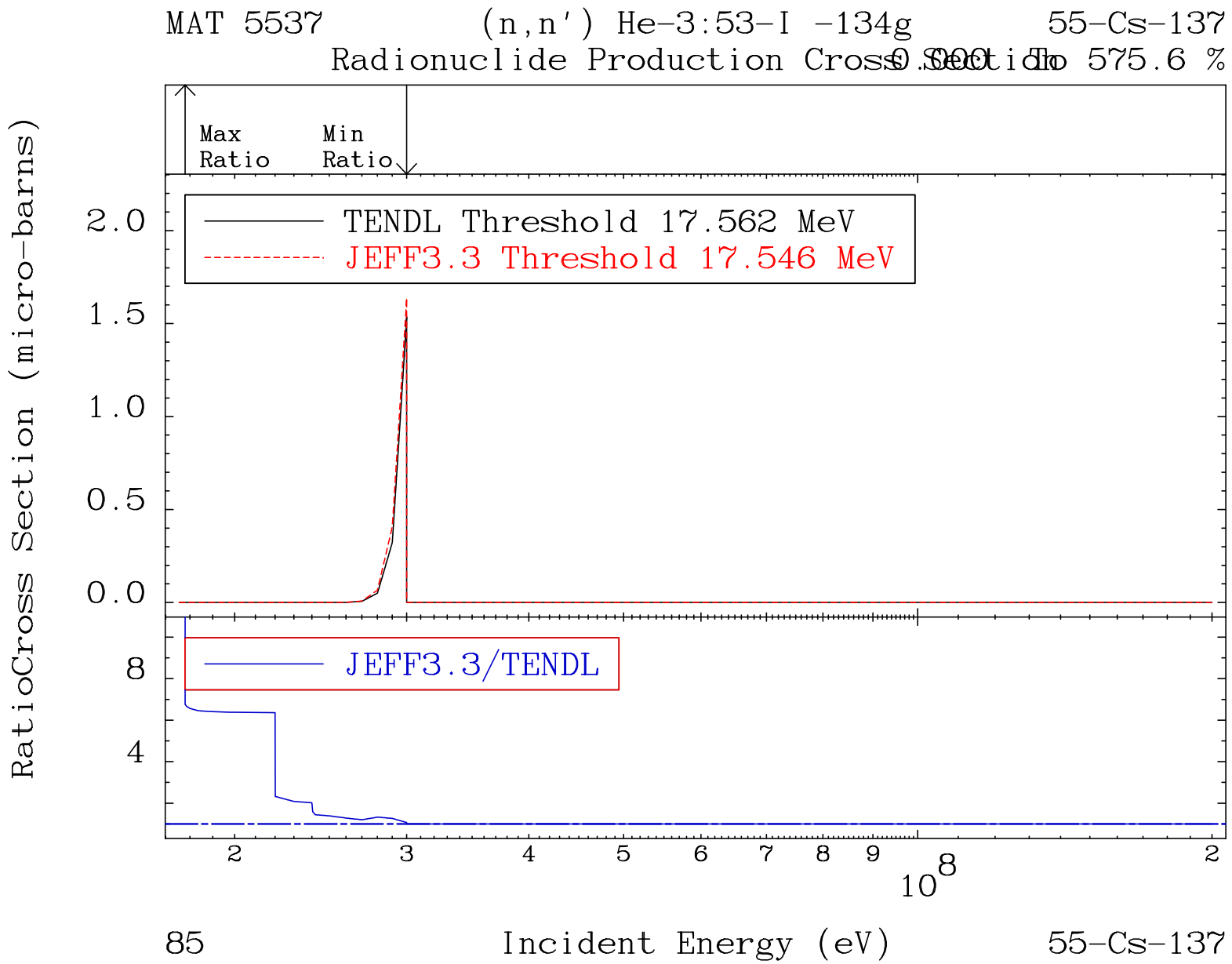

MAT 5537
(n,2n) α:53-I -132m3
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 11.543 MeV
JEFF3.3 Threshold 15.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.8
0.4
0.0
2
3
4
5
6
7
8
9
2
10^8
80
Incident Energy (eV)
55-Cs-137

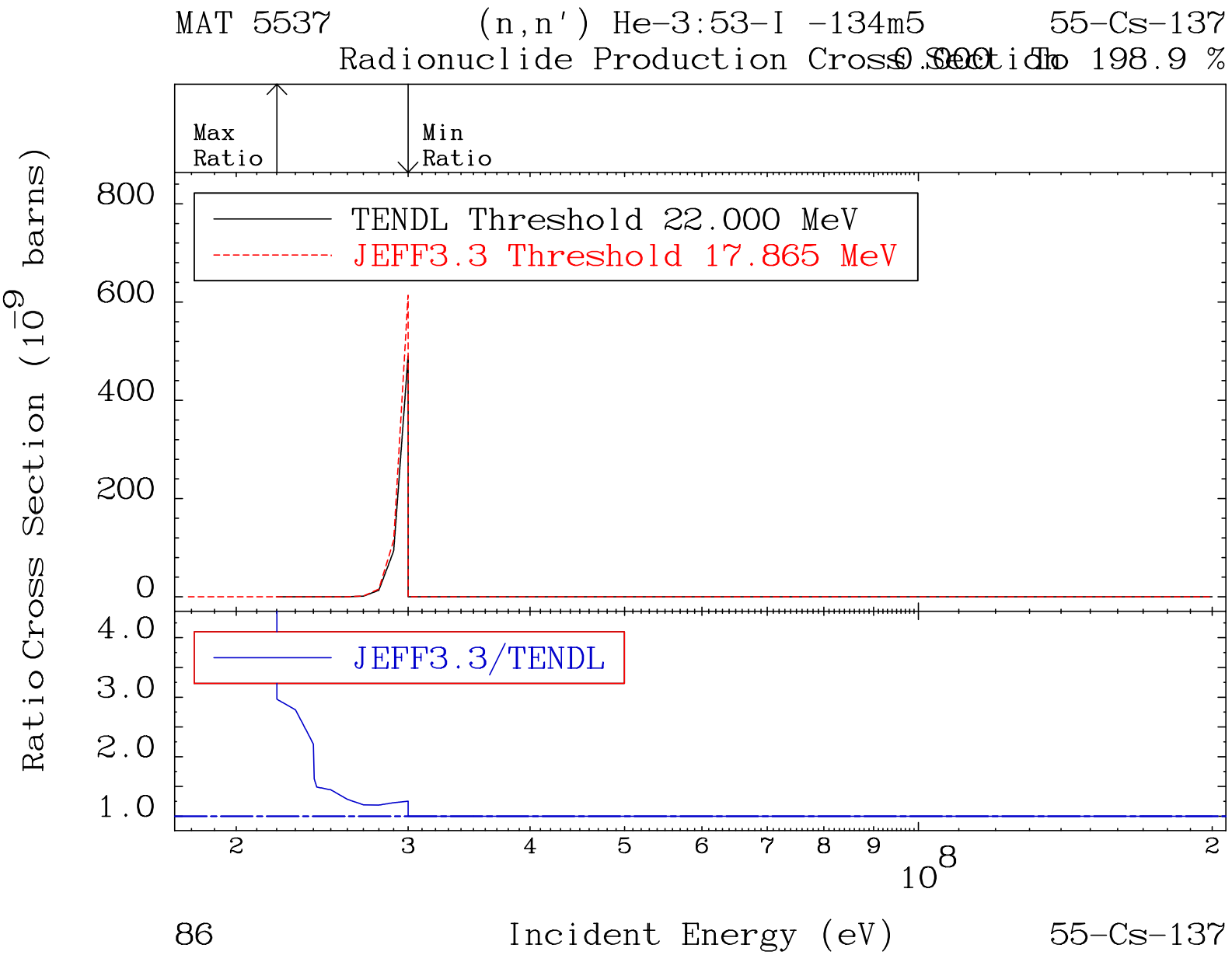

MAT 5537
(n,n') d:54-Xe-135g
55-Cs-137
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 13.366 MeV
JEFF3.3 Threshold 13.363 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
81
55-Cs-137

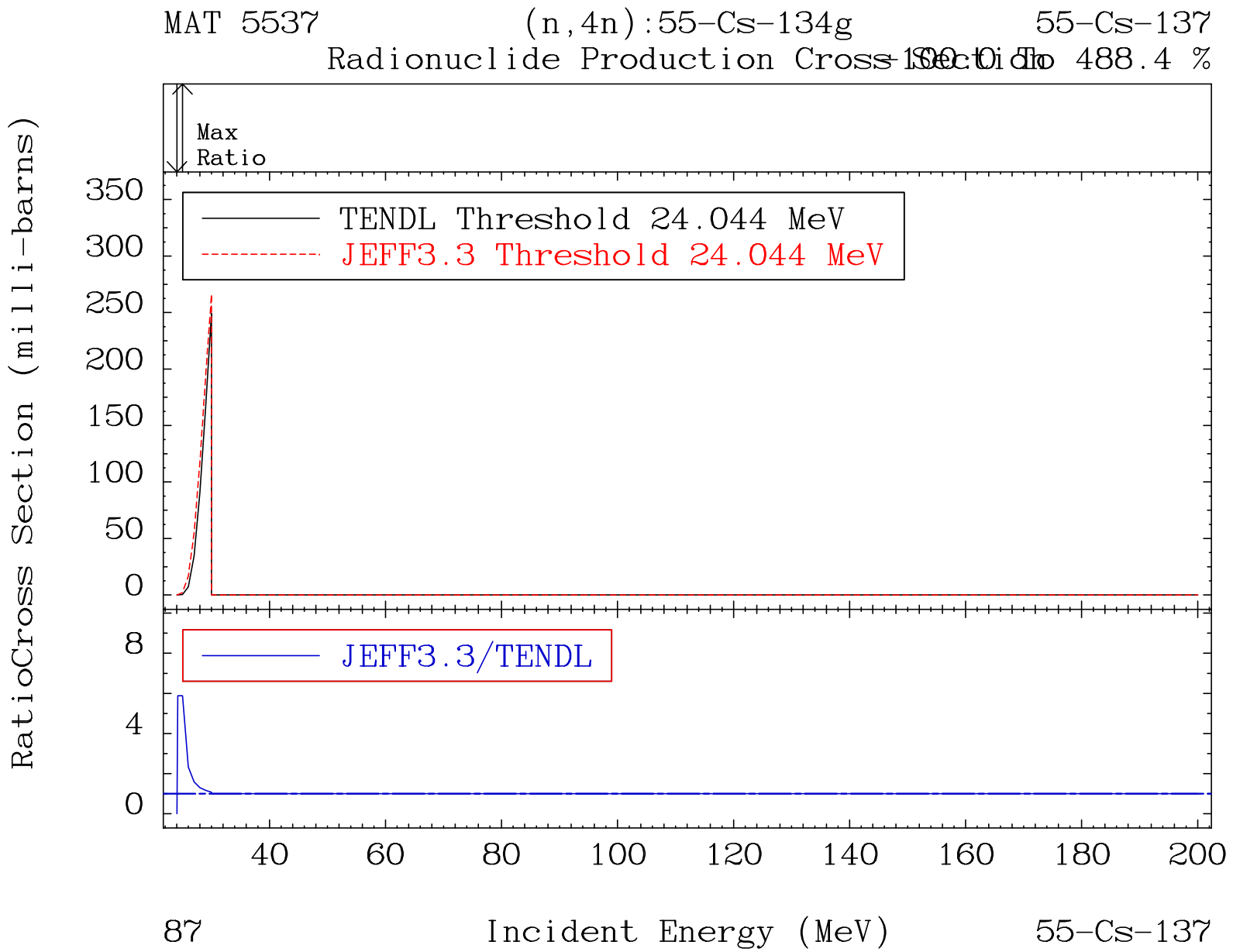

MAT 5537
(n,n') d:54-Xe-135m2
55-Cs-137
Radionuclide Production Cross Section To 279.8 %
Max
Ratio
TENDL Threshold 15.000 MeV
JEFF3.3 Threshold 15.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
82
55-Cs-137

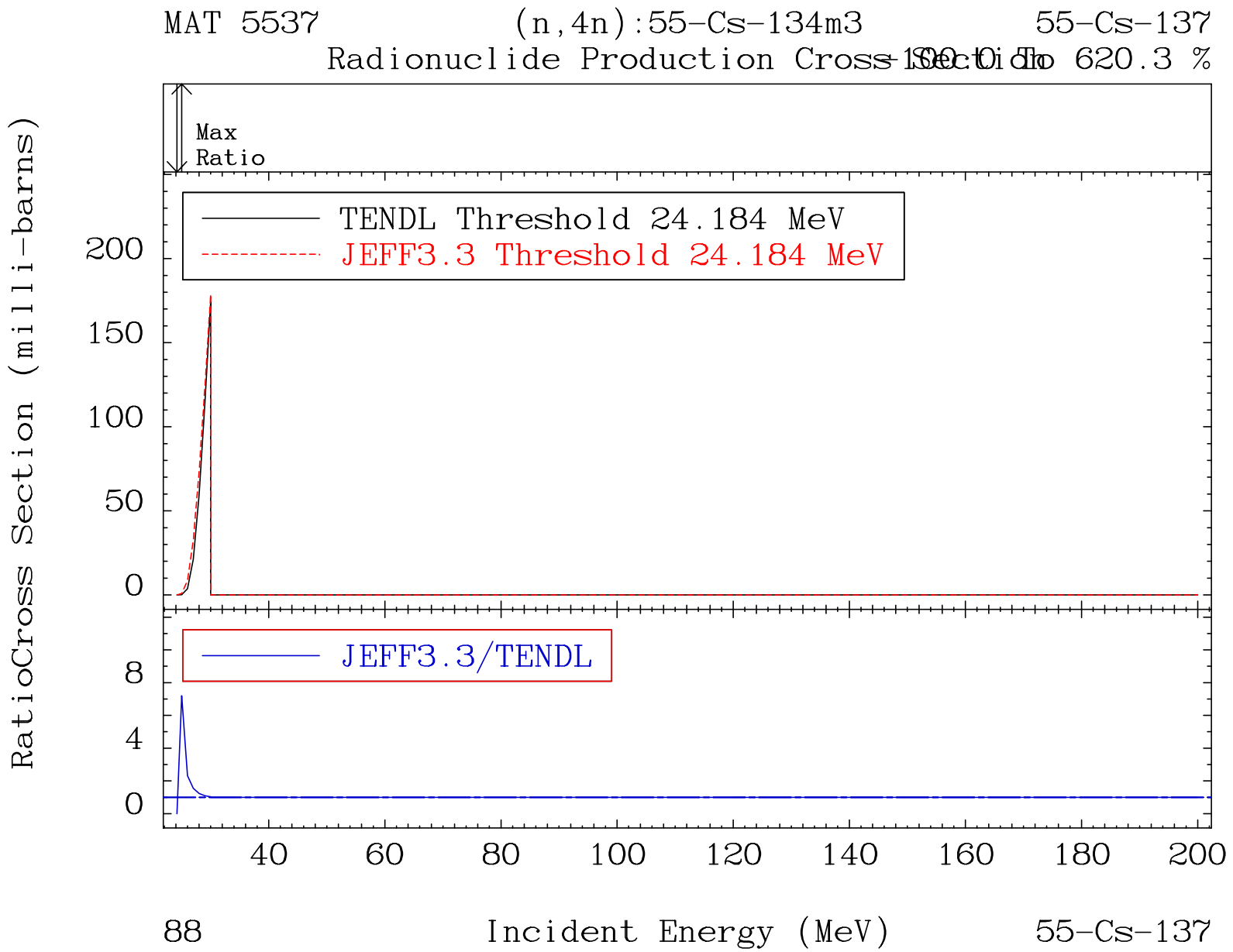

MAT 5537
(n,n') t:54-Xe-134g
55-Cs-137
Radionuclide Production Cross Section To 63.10 %
Max
Ratio
TENDL Threshold 13.468 MeV
JEFF3.3 Threshold 13.470 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
10^8
2
83
Incident Energy (eV)
55-Cs-137

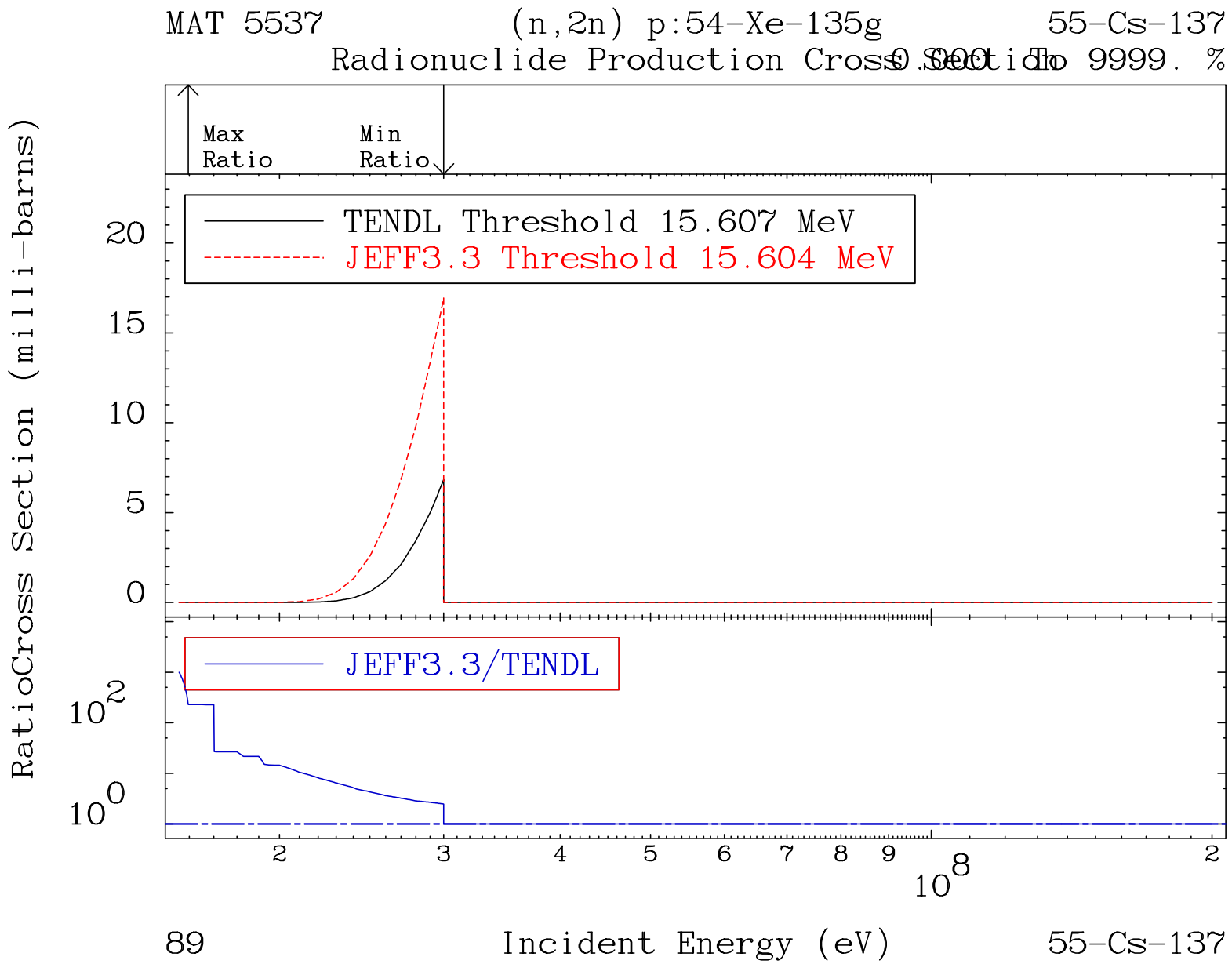

MAT 5537
(n,n') t:54-Xe-134m7
55-Cs-137
Radionuclide Production Cross Section To 101.7 %
Max Ratio
Min Ratio
TENDL Threshold 17.000 MeV
JEFF3.3 Threshold 17.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
2.4
1.8
1.2
2
3
4
5
6
7
8
9
10^8
2
84
Incident Energy (eV)
55-Cs-137

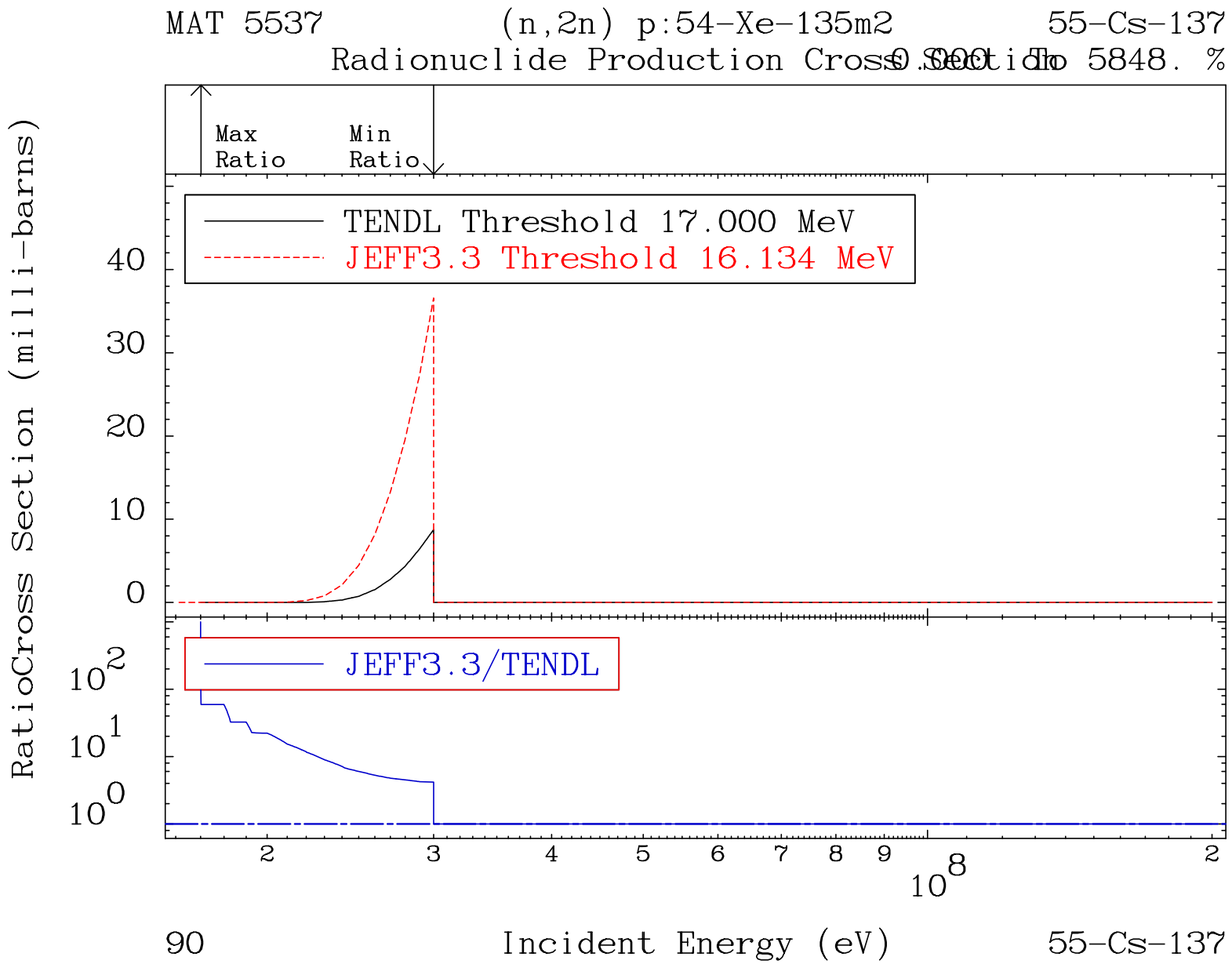

MAT 5537 (n,n') He-3:53-I -134g 55-Cs-137
Radionuclide Production Cross Section
0.000 To 575.6 %
Max Ratio
Min Ratio
TENDL Threshold 17.562 MeV
JEFF3.3 Threshold 17.546 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
8
4
2 3 4 5 6 7 8 9 10^8 2
85
Incident Energy (eV)
55-Cs-137

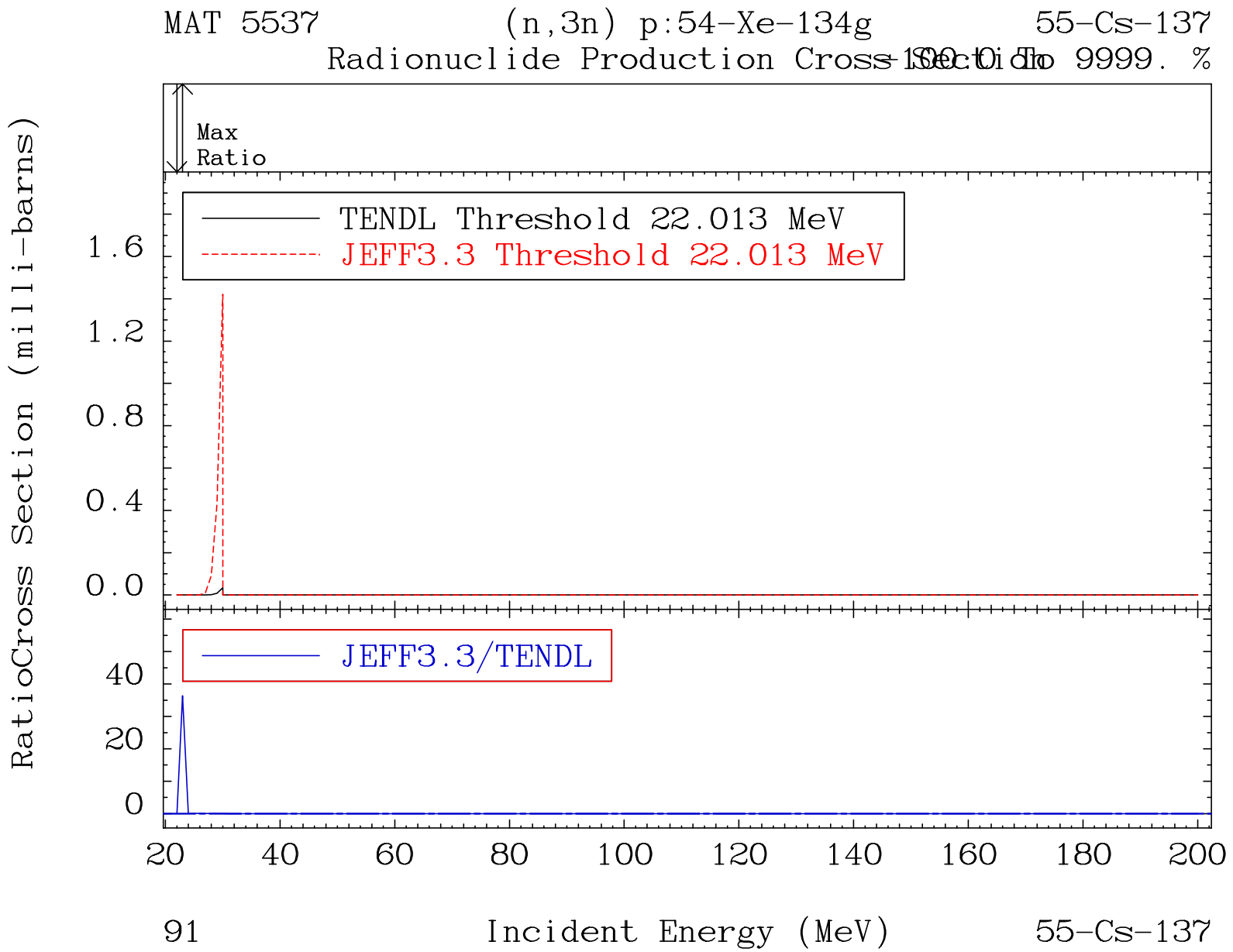

MAT 5537 (n,n') He-3:53-I -134m5 55-Cs-137
Radionuclide Production Cross Section To 198.9 %
Max Ratio
Min Ratio
TENDL Threshold 22.000 MeV
JEFF3.3 Threshold 17.865 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
800
600
400
200
0
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
86
Incident Energy (eV)
55-Cs-137

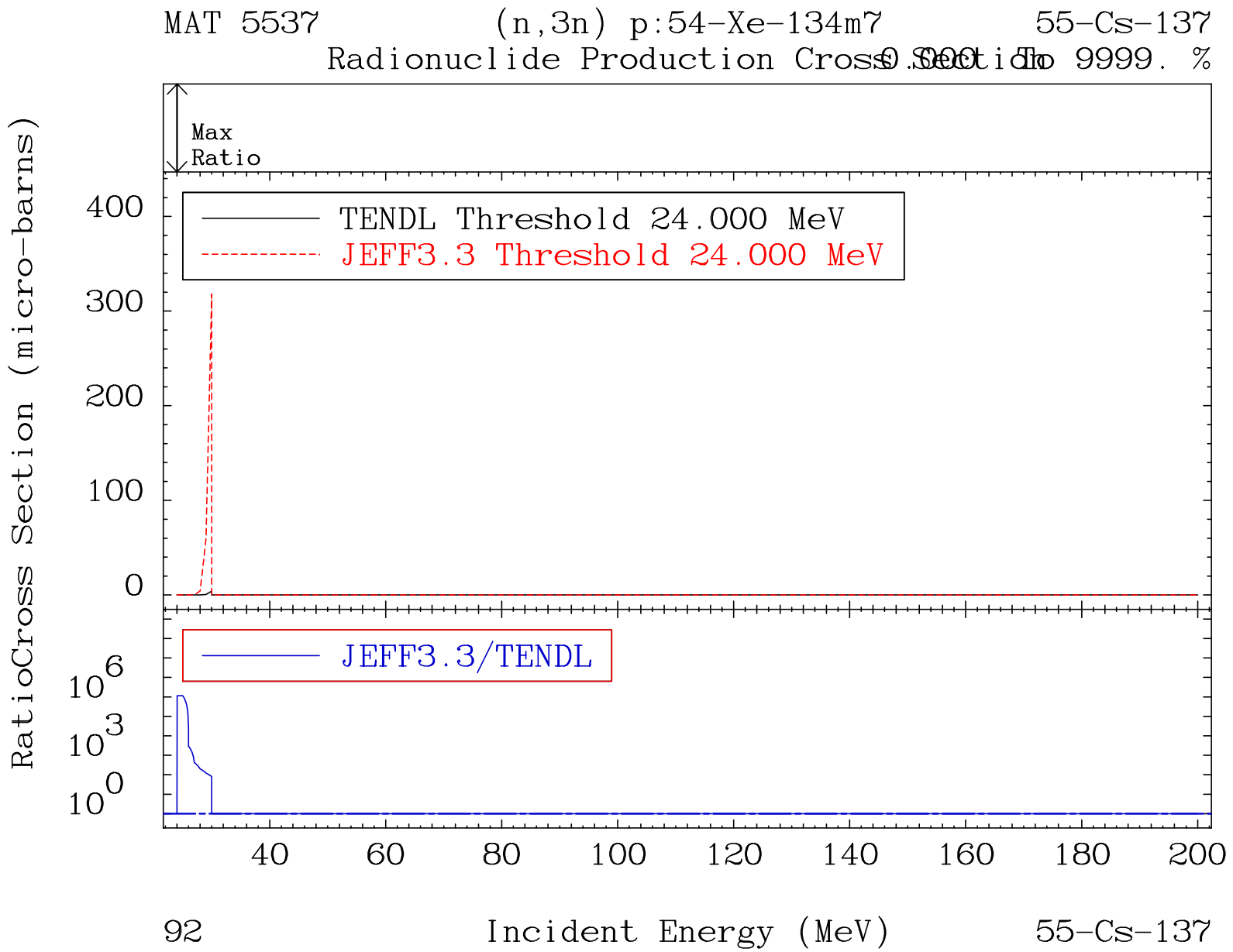

MAT 5537
(n,4n):55-Cs-134g
55-Cs-137
Radionuclide Production Cross Section To 488.4 %
Max
Ratio
TENDL Threshold 24.044 MeV
JEFF3.3 Threshold 24.044 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
8
4
0
40
60
80
100
120
140
160
180
200
87
Incident Energy (MeV)
55-Cs-137

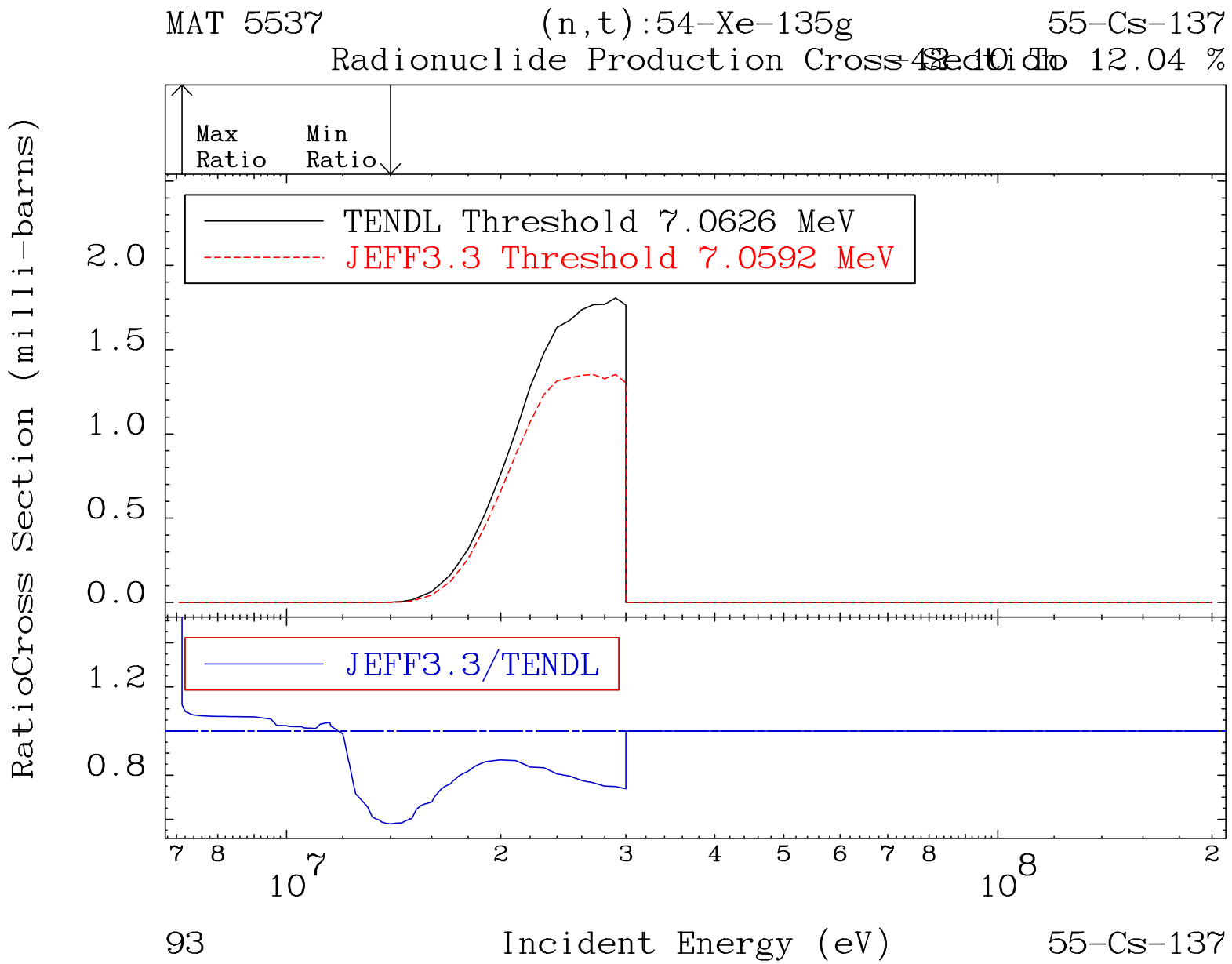

MAT 5537
(n,4n):55-Cs-134m3
55-Cs-137
Radionuclide Production Cross Section To 620.3 %
Max
Ratio
TENDL Threshold 24.184 MeV
JEFF3.3 Threshold 24.184 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
8
4
0
40
60
80
100
120
140
160
180
200
88
Incident Energy (MeV)
55-Cs-137

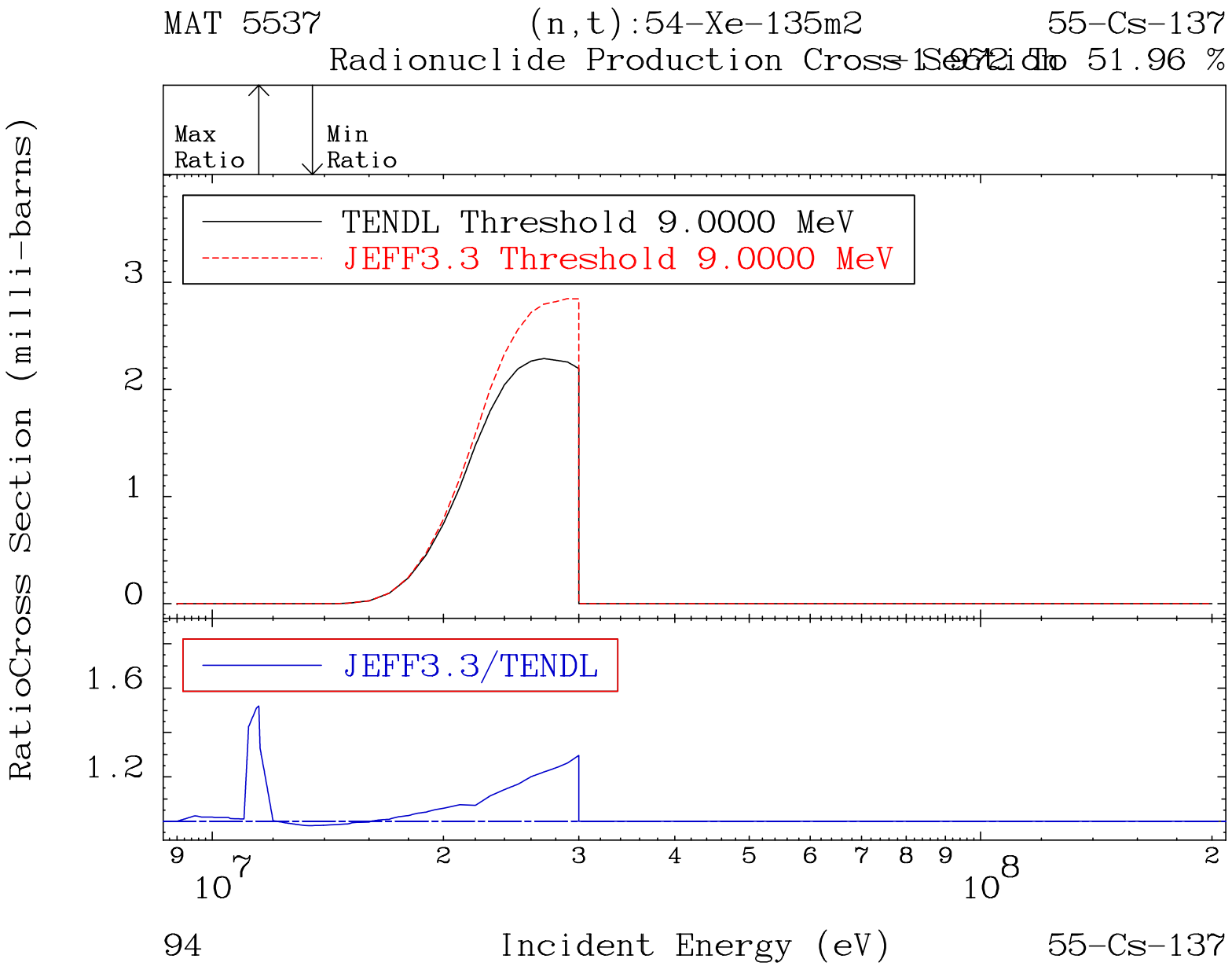

MAT 5537
(n,2n) p:54-Xe-135g
55-Cs-137
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 15.607 MeV
JEFF3.3 Threshold 15.604 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
89
Incident Energy (eV)
55-Cs-137

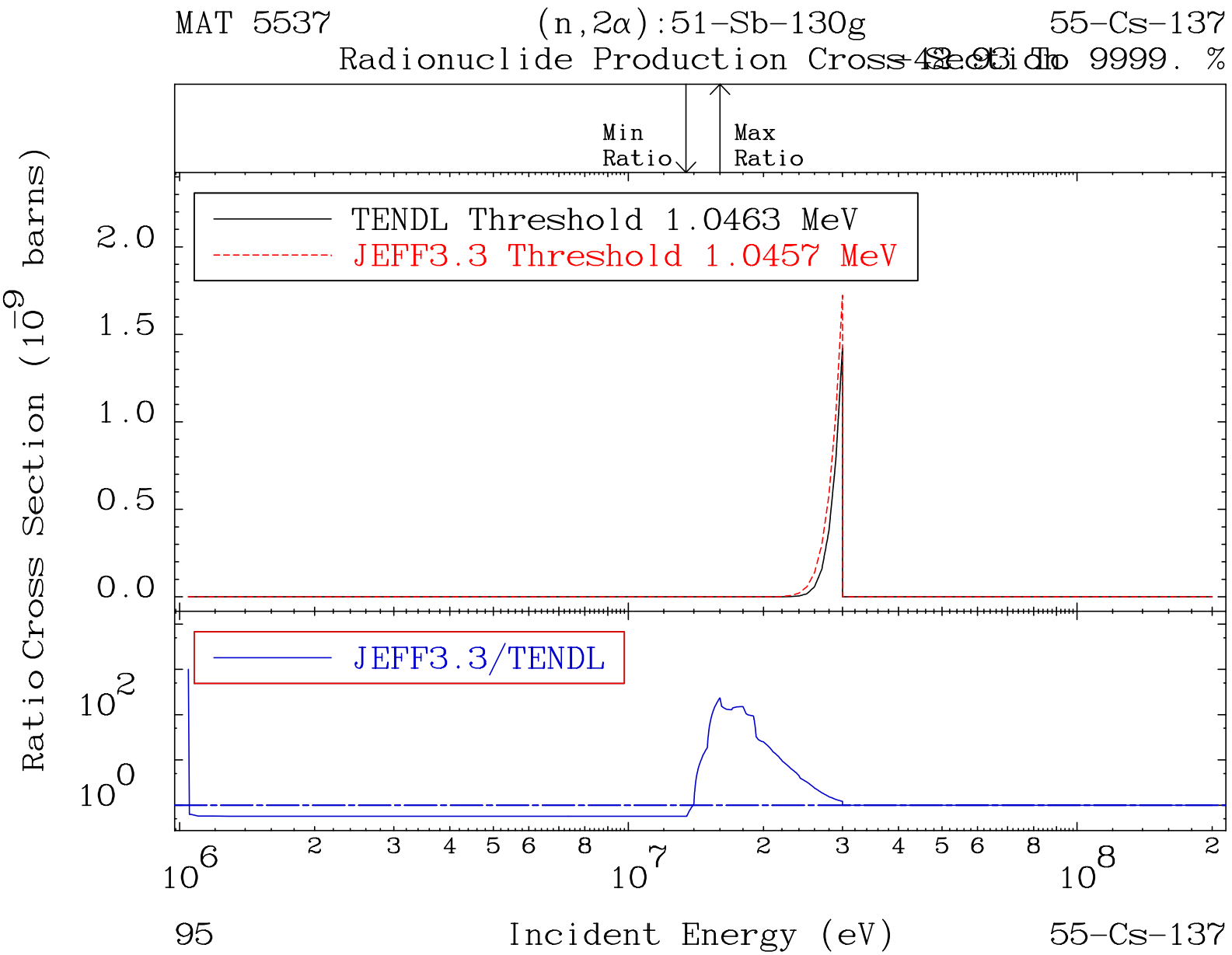

MAT 5537
(n,2n) p:54-Xe-135m2
55-Cs-137
Radionuclide Production Cross Section
0.000 To 5848. %
Max Ratio
Min Ratio
TENDL Threshold 17.000 MeV
JEFF3.3 Threshold 16.134 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
90
Incident Energy (eV)
55-Cs-137

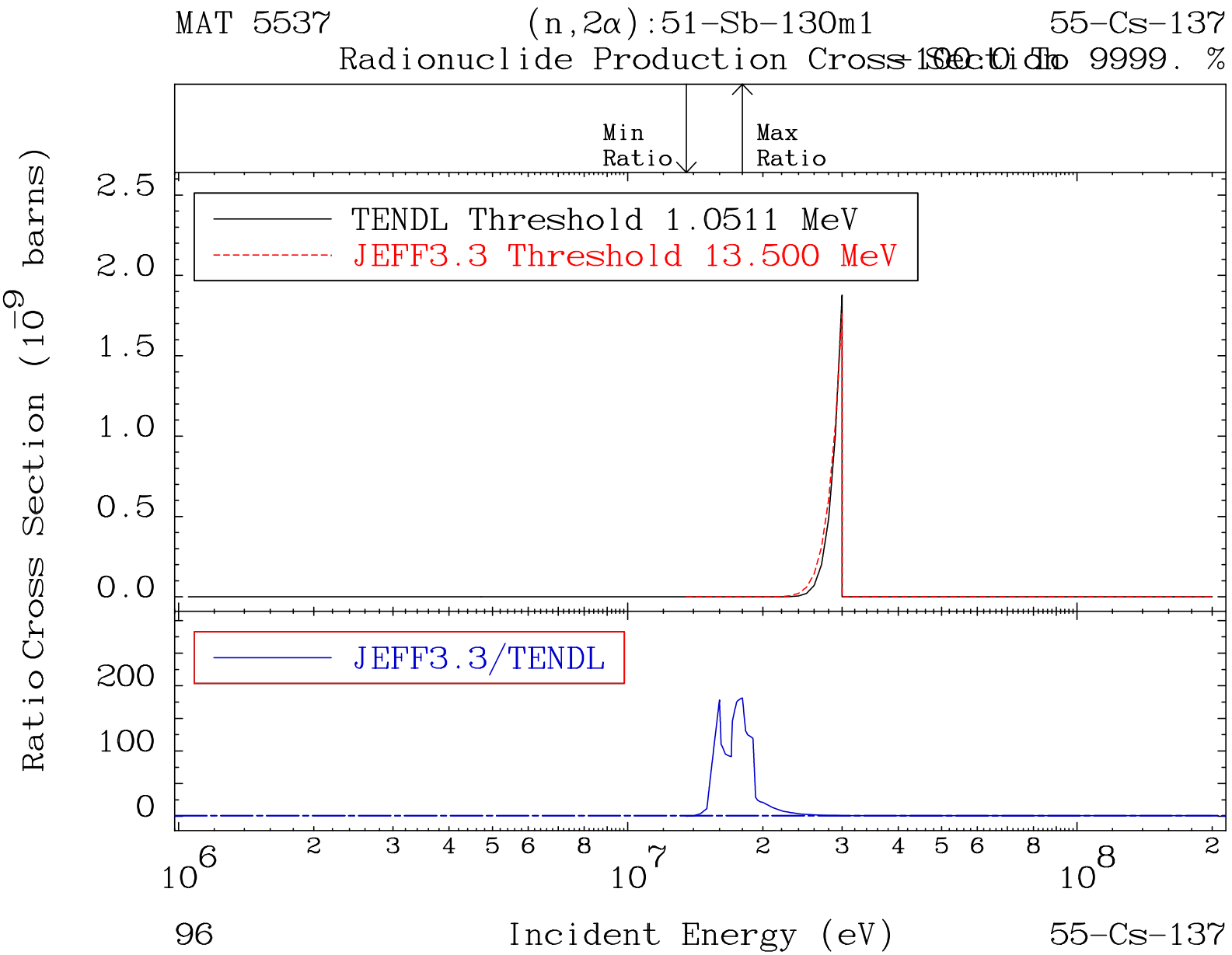

MAT 5537
(n,3n) p:54-Xe-134g
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Max
Ratio
TENDL Threshold 22.013 MeV
JEFF3.3 Threshold 22.013 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
40
20
0
20
40
60
80
100
120
140
160
180
200
91
Incident Energy (MeV)
55-Cs-137

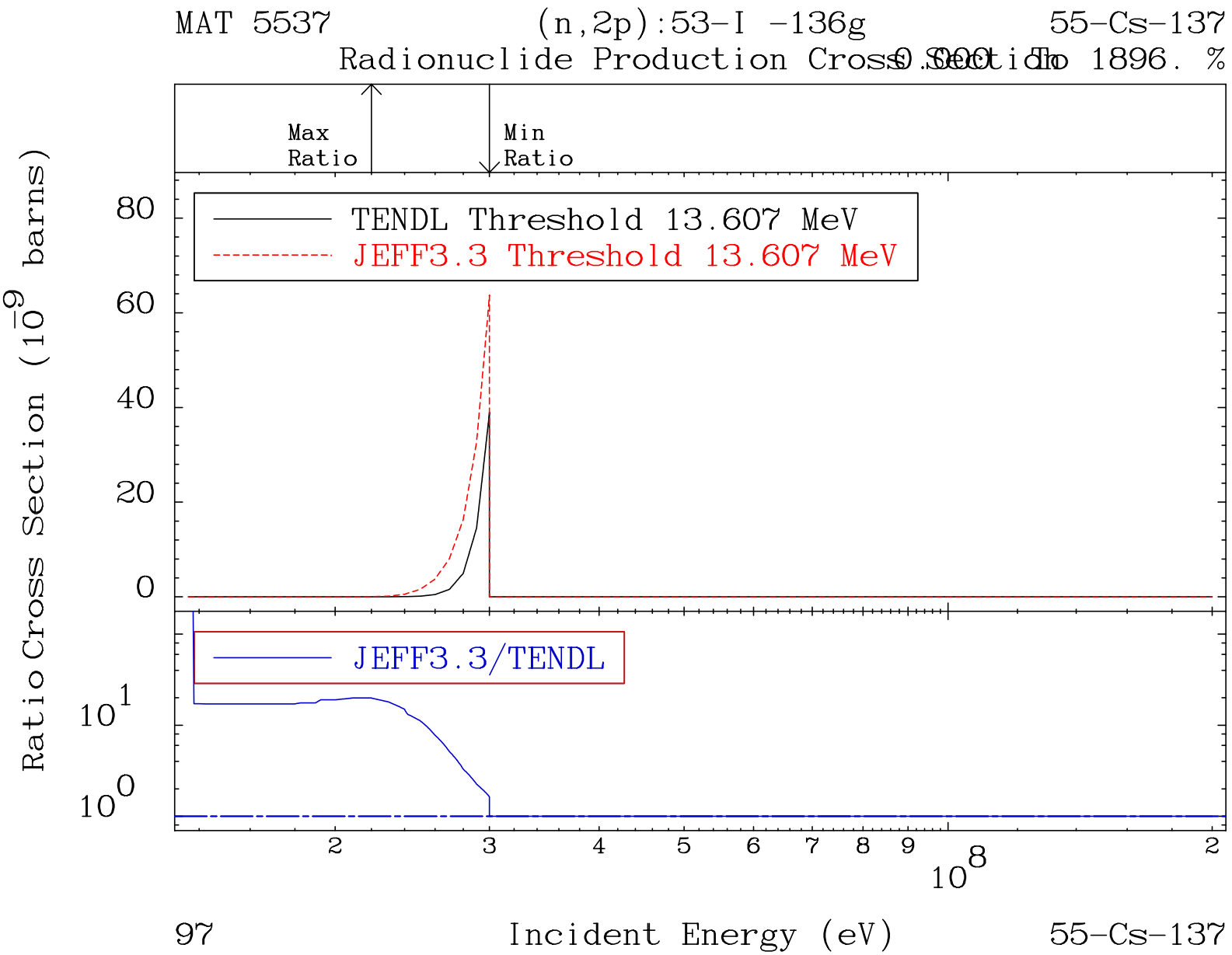

MAT 5537
(n,3n) p:54-Xe-134m7
55-Cs-137
Radionuclide Production Cross Section
0.000 To 9999. %
Max
Ratio
TENDL Threshold 24.000 MeV
JEFF3.3 Threshold 24.000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
400
300
200
100
0
10^6
10^3
10^0
40
60
80
100
120
140
160
180
200
92
Incident Energy (MeV)
55-Cs-137

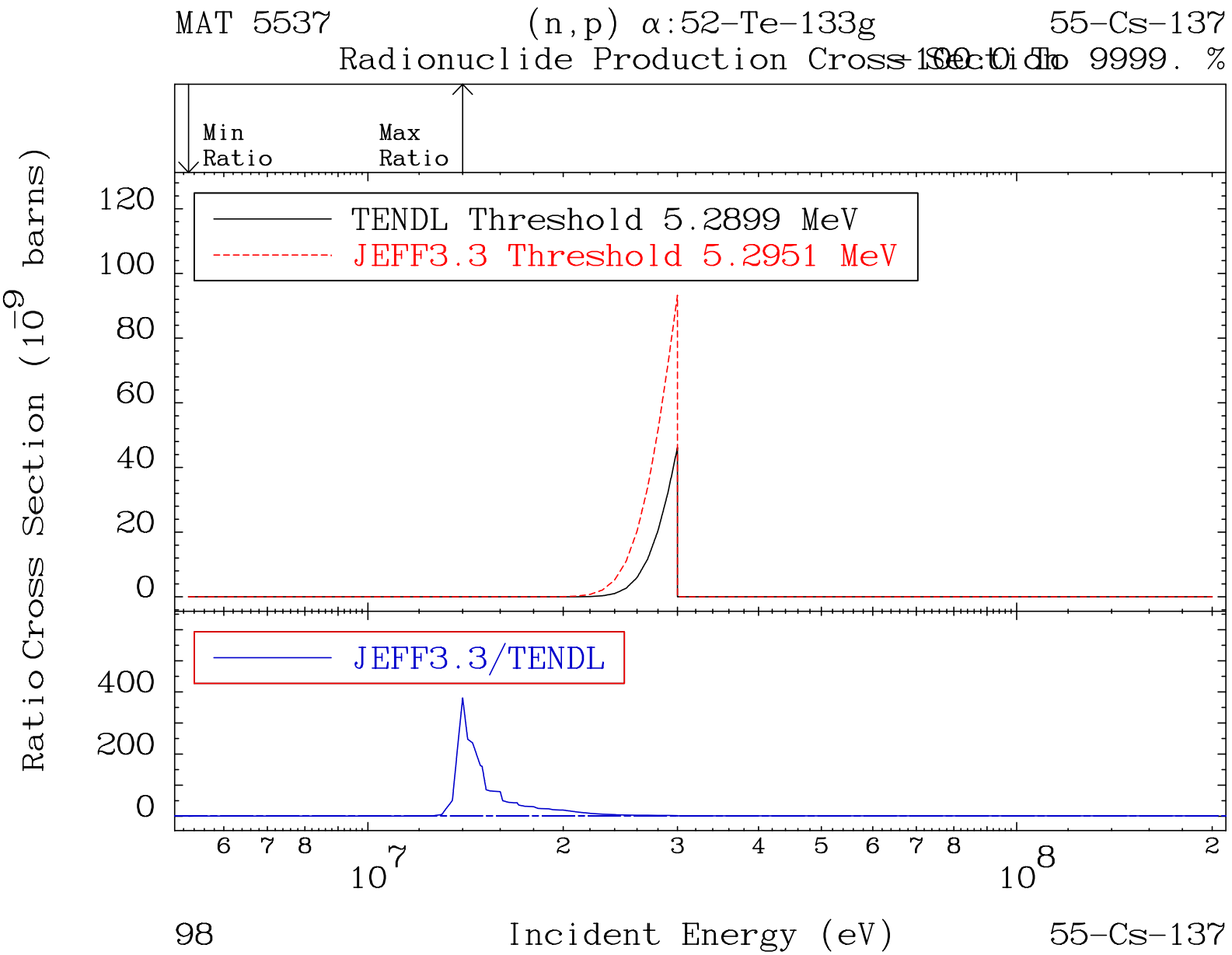

MAT 5537
(n,t):54-Xe-135g
55-Cs-137
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 7.0626 MeV
JEFF3.3 Threshold 7.0592 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
1.2
0.8
7 8 10^7 2 3 4 5 6 7 8 10^8 2
93
Incident Energy (eV)
55-Cs-137

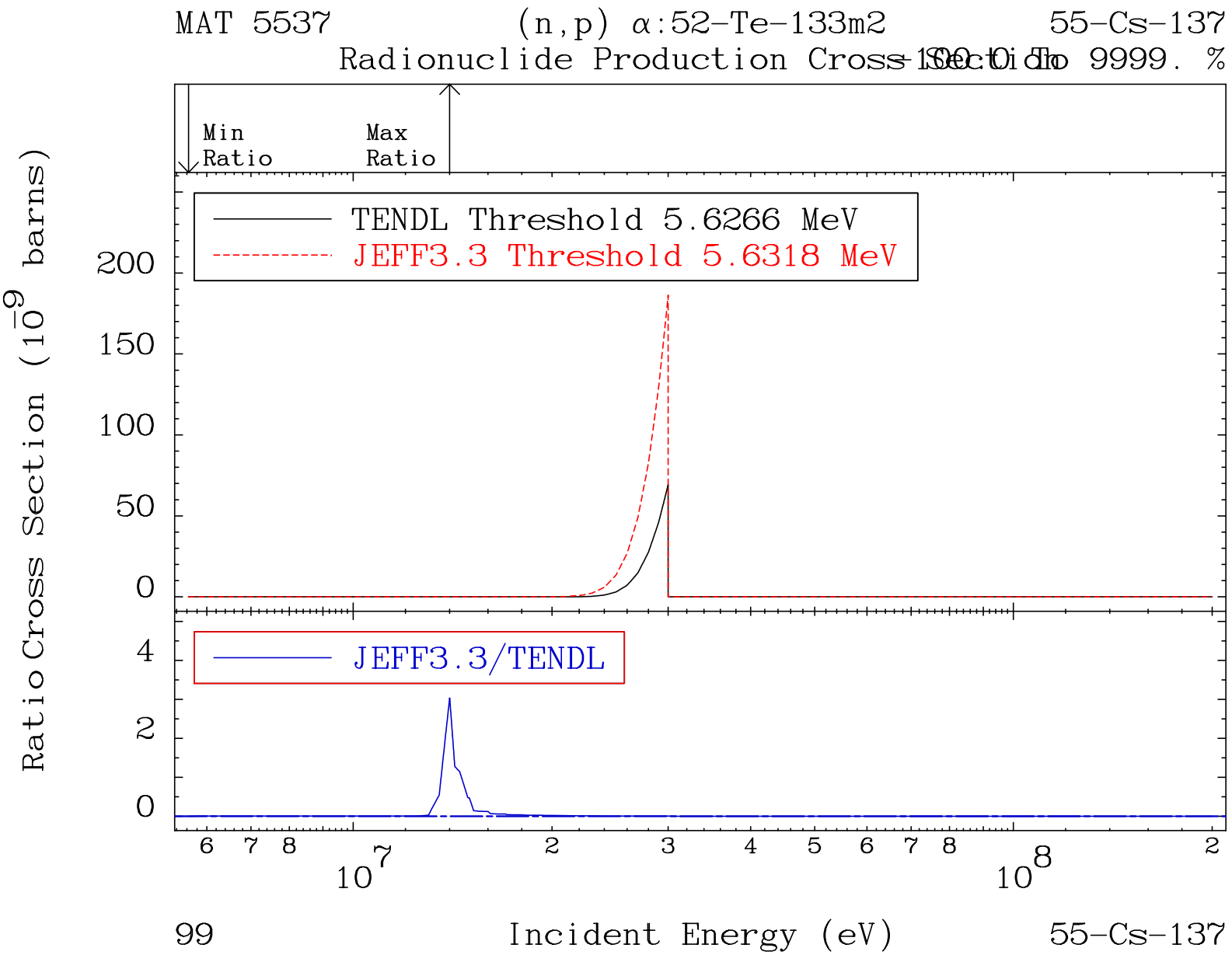

MAT 5537
(n,t):54-Xe-135m2
55-Cs-137
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 9.0000 MeV
JEFF3.3 Threshold 9.0000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
94
55-Cs-137

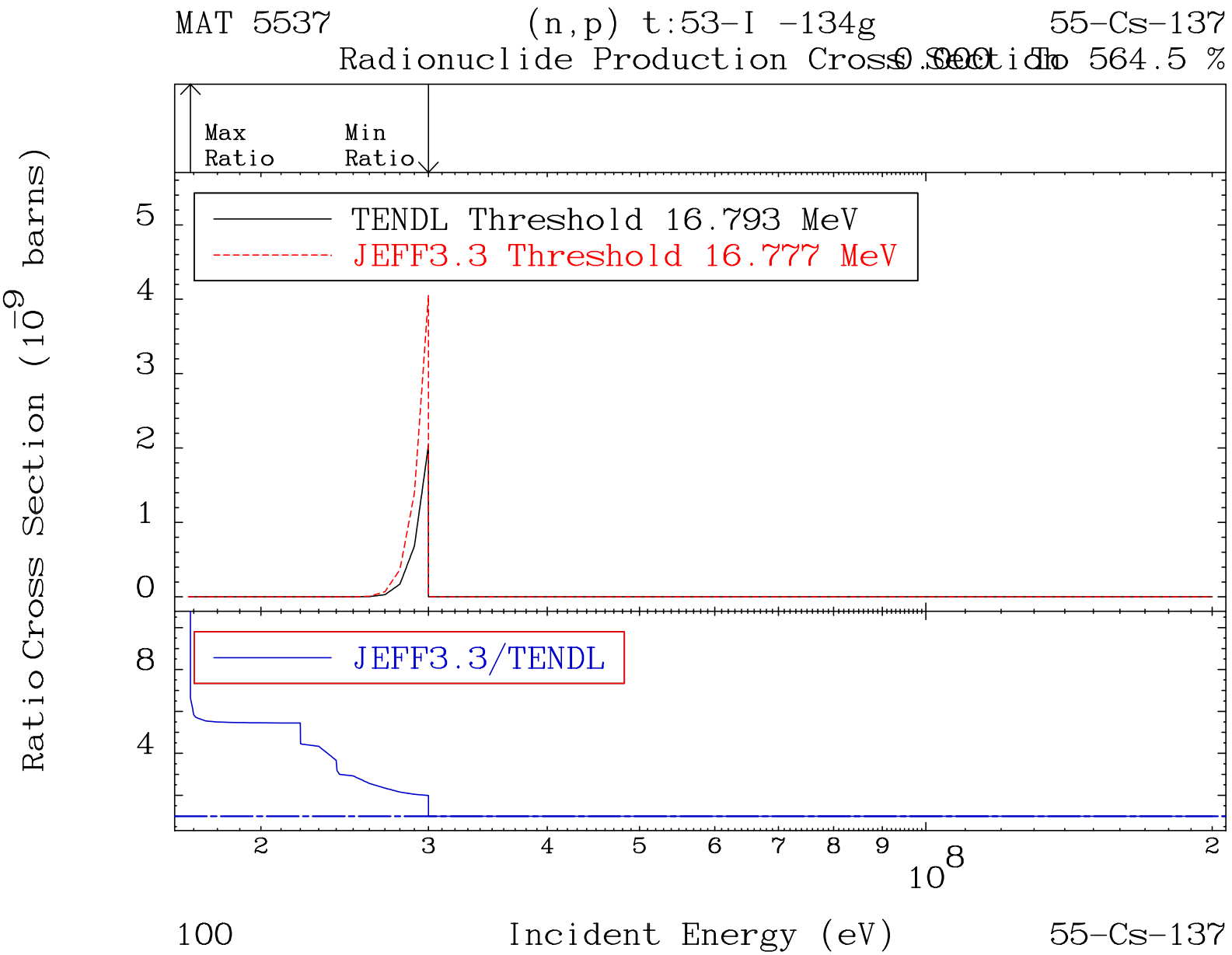

MAT 5537
(n,2α):51-Sb-130g
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.0463 MeV
JEFF3.3 Threshold 1.0457 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
2.0
1.5
1.0
0.5
0.0
10^2
10^0
10^6
10^7
10^8
Incident Energy (eV)
95
55-Cs-137

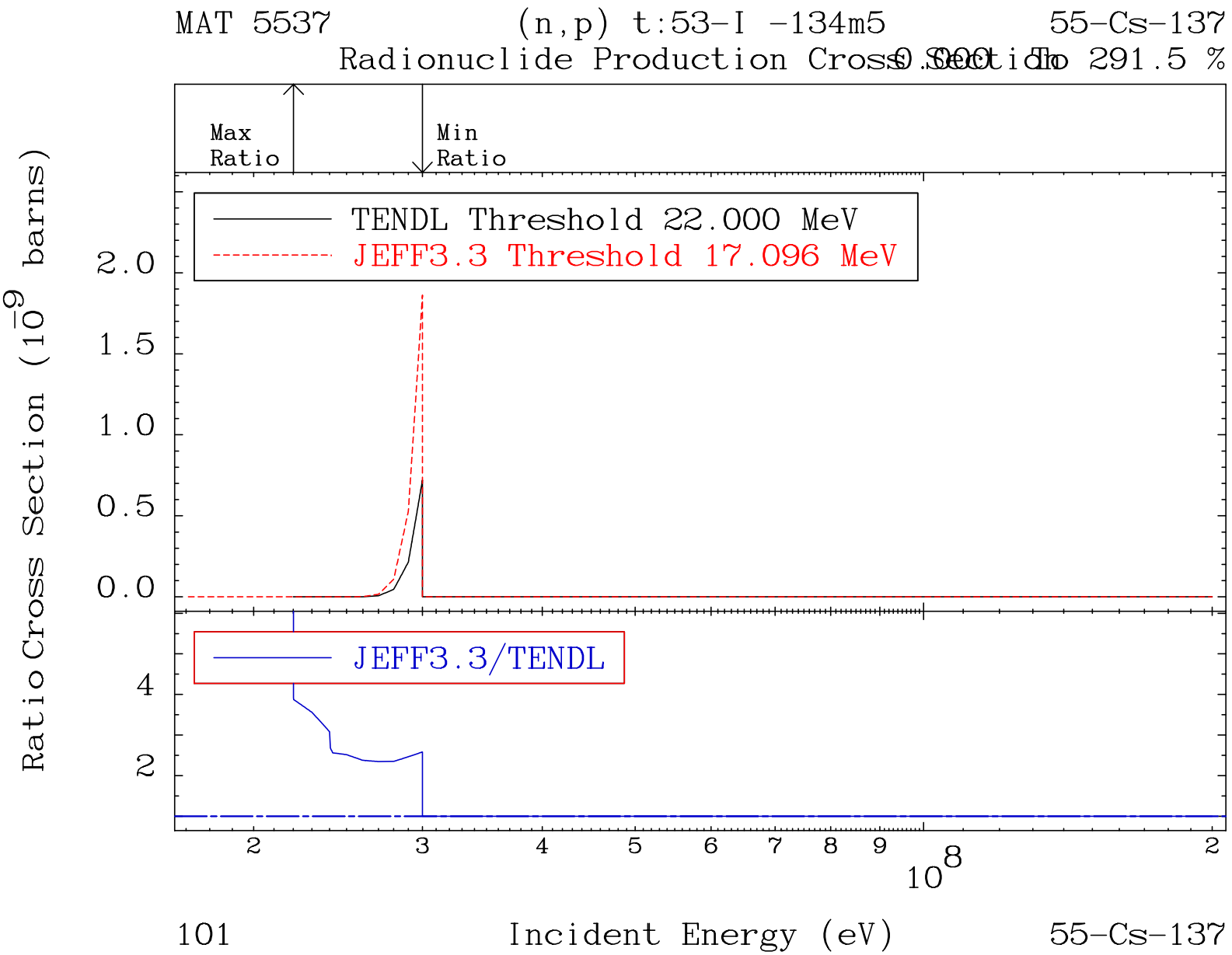

MAT 5537
(n,2α):51-Sb-130m1
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.0511 MeV
JEFF3.3 Threshold 13.500 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
2.5
2.0
1.5
1.0
0.5
0.0
200
100
0
10^6
10^7
10^8
Incident Energy (eV)
96
55-Cs-137


MAT 5537
(n,2p):53-I -136g
55-Cs-137
Radionuclide Production Cross Section
0.000 To 1896. %
Max Ratio
Min Ratio
TENDL Threshold 13.607 MeV
JEFF3.3 Threshold 13.607 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
80
60
40
20
0
10^{1}
10^{0}
2
3
4
5
6
7
8
9
10^{8}
2
97
Incident Energy (eV)
55-Cs-137


MAT 5537
(n,p) α:52-Te-133g
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.2899 MeV
JEFF3.3 Threshold 5.2951 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
120
100
80
60
40
20
0
400
200
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
98
Incident Energy (eV)
55-Cs-137


MAT 5537
(n,p) α:52-Te-133m2
55-Cs-137
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.6266 MeV
JEFF3.3 Threshold 5.6318 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
200
150
100
50
0
4
2
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
99
Incident Energy (eV)
55-Cs-137


MAT 5537
(n,p) t:53-I -134g
55-Cs-137
Radionuclide Production Cross Section To 564.5 %
Max Ratio
Min Ratio
TENDL Threshold 16.793 MeV
JEFF3.3 Threshold 16.777 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
Incident Energy (eV)
100
10^8
55-Cs-137


MAT 5537
(n,p) t:53-I -134m5
55-Cs-137
Radionuclide Production Cross Section
0.000 To 291.5 %
Max Ratio
Min Ratio
TENDL Threshold 22.000 MeV
JEFF3.3 Threshold 17.096 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
2.0
1.5
1.0
0.5
0.0
4
2
2
3
4
5
6
7
8
9
10^8
2
101
Incident Energy (eV)
55-Cs-137