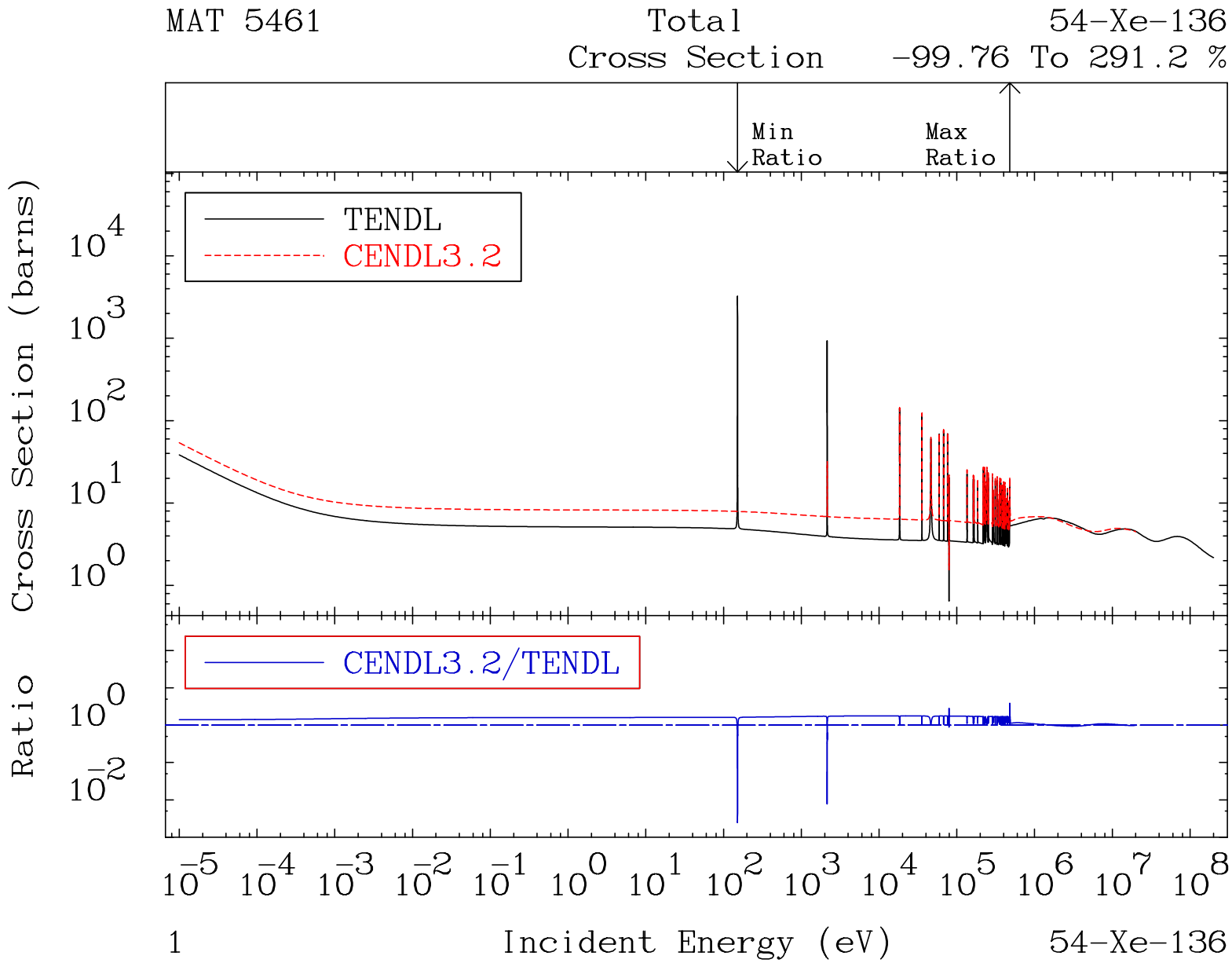
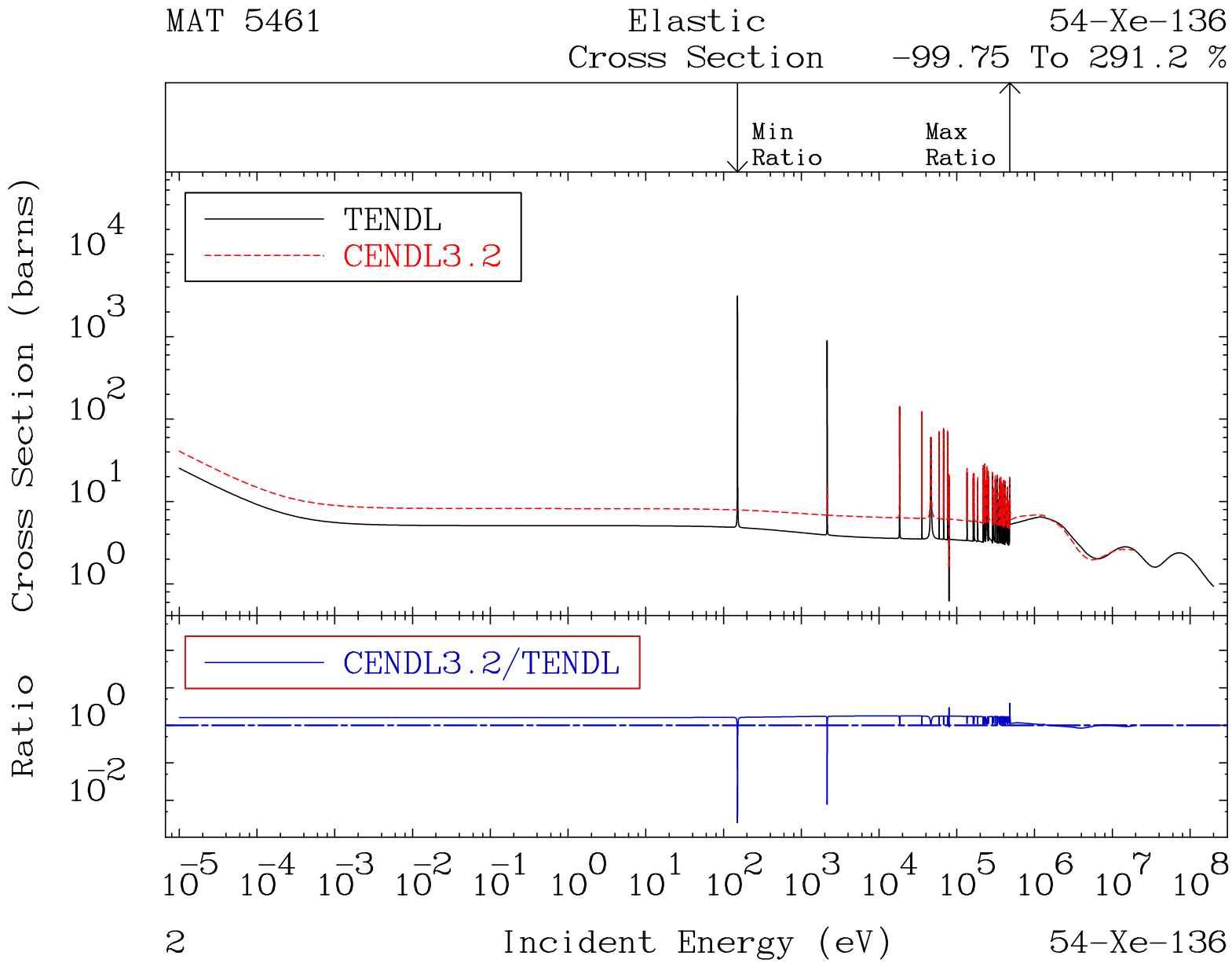
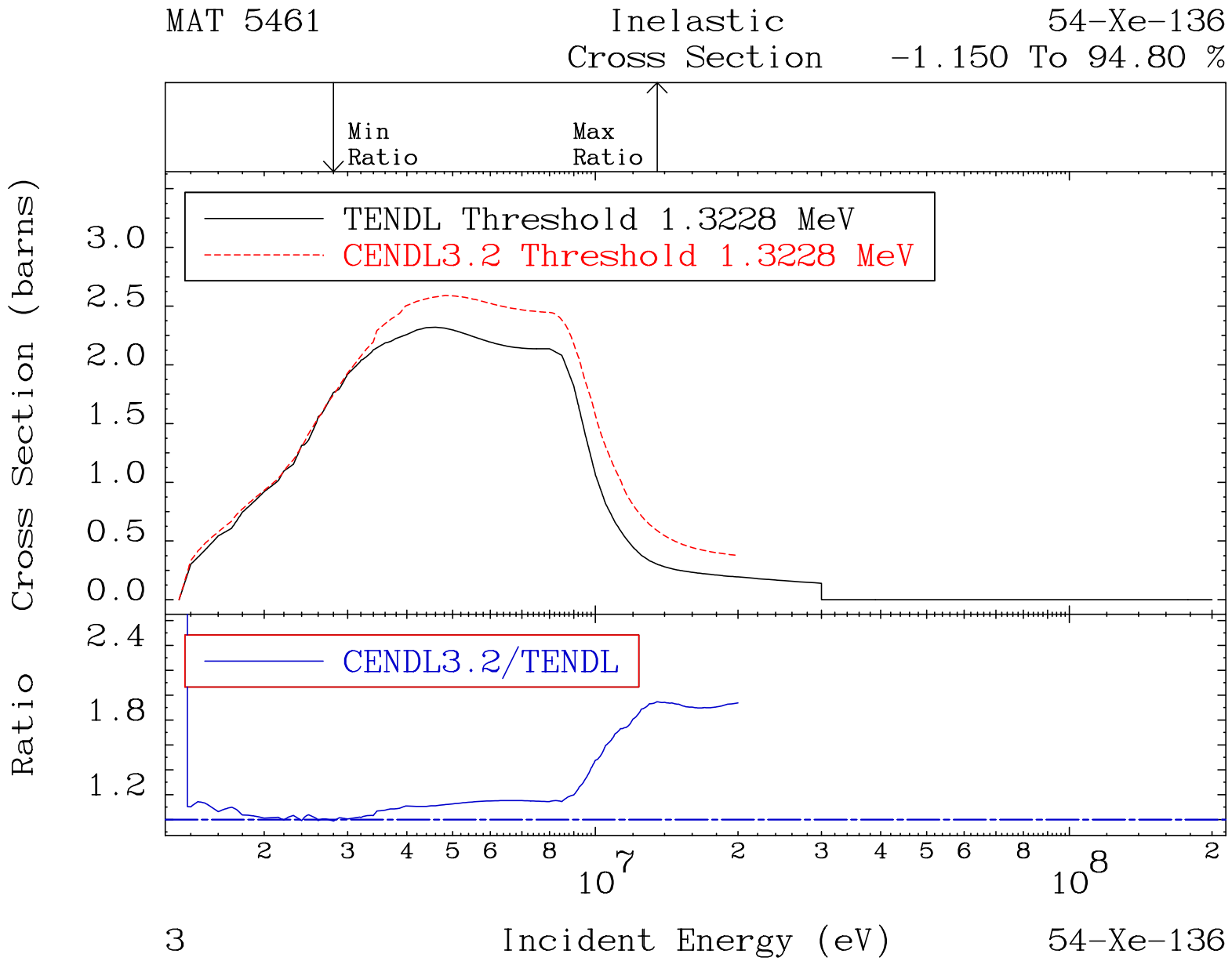
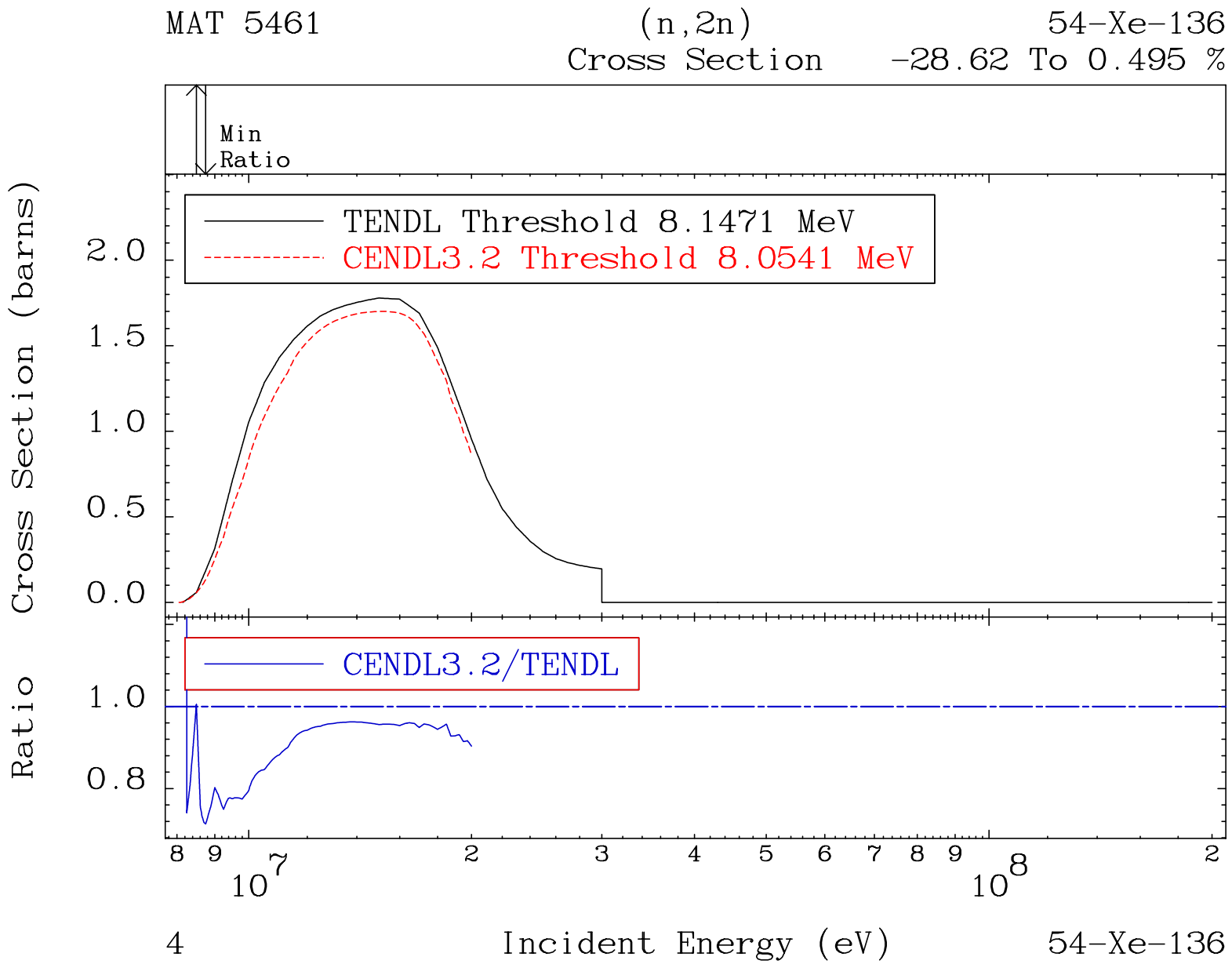
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

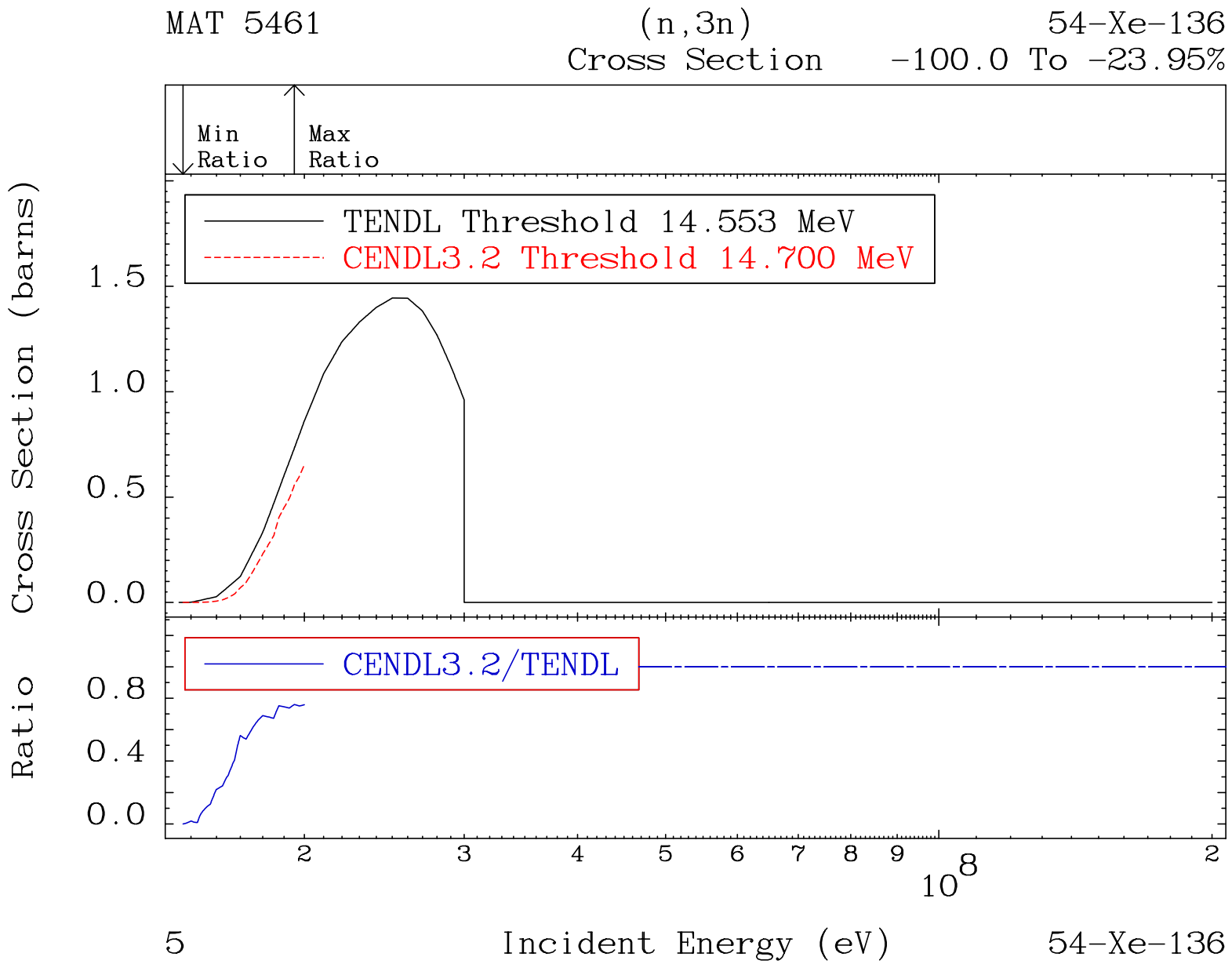
Press Mouse Button to Start

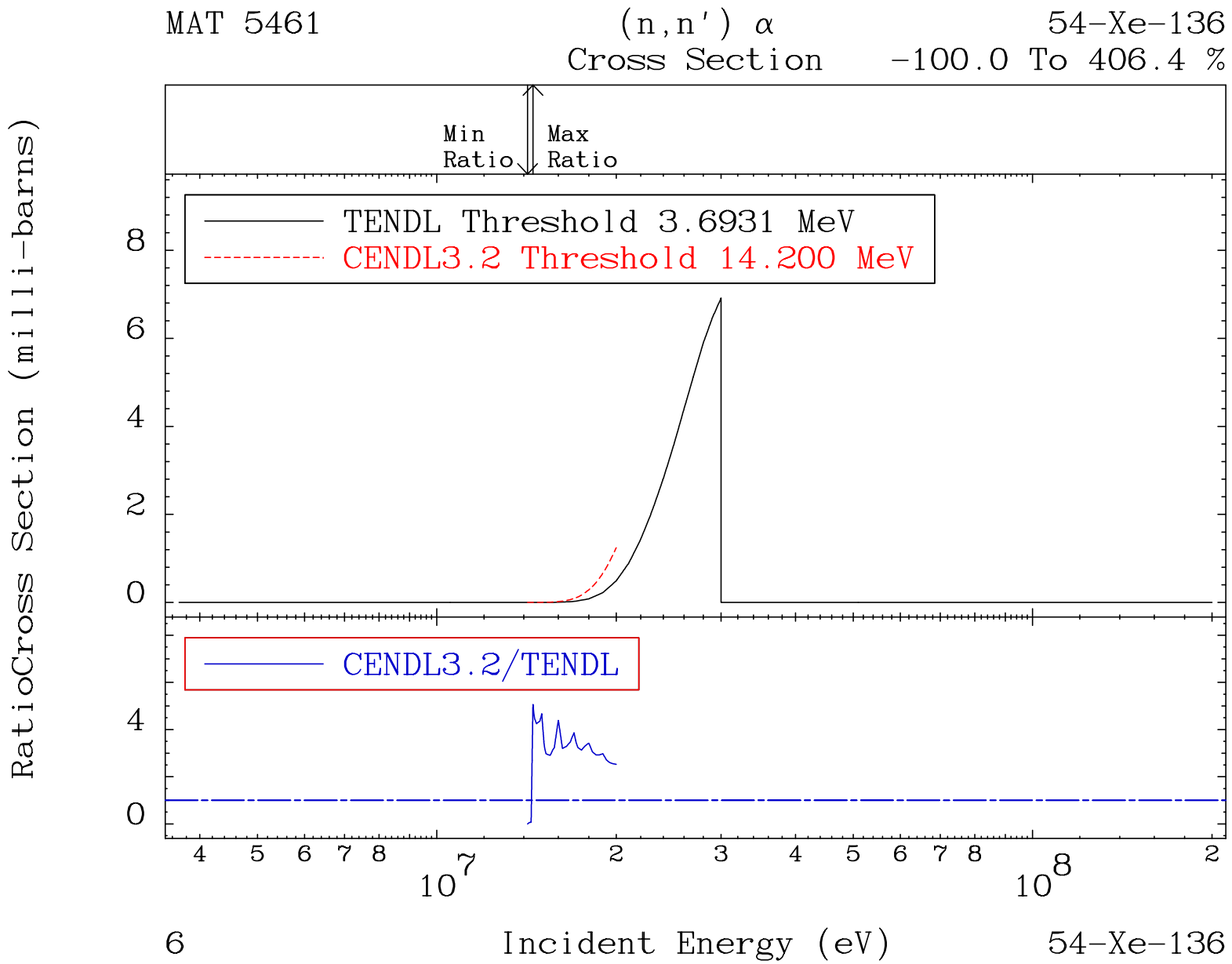

MAT 5461
Total
Cross Section
54-Xe-136
-99.76 To 291.2 %
Min
Ratio
Max
Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
54-Xe-136

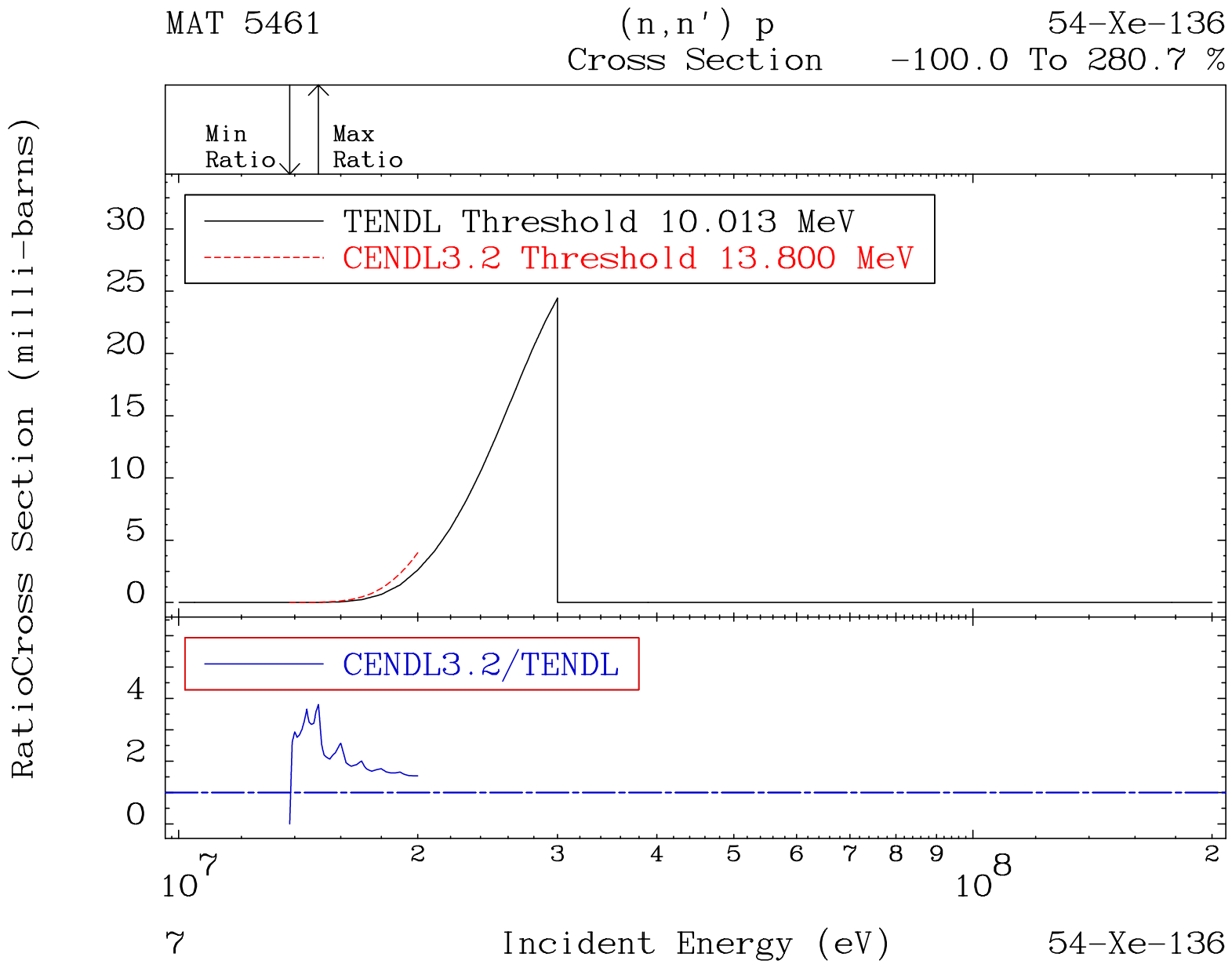

MAT 5461
Elastic
Cross Section
54-Xe-136
-99.75 To 291.2 %
Min
Ratio
Max
Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
54-Xe-136

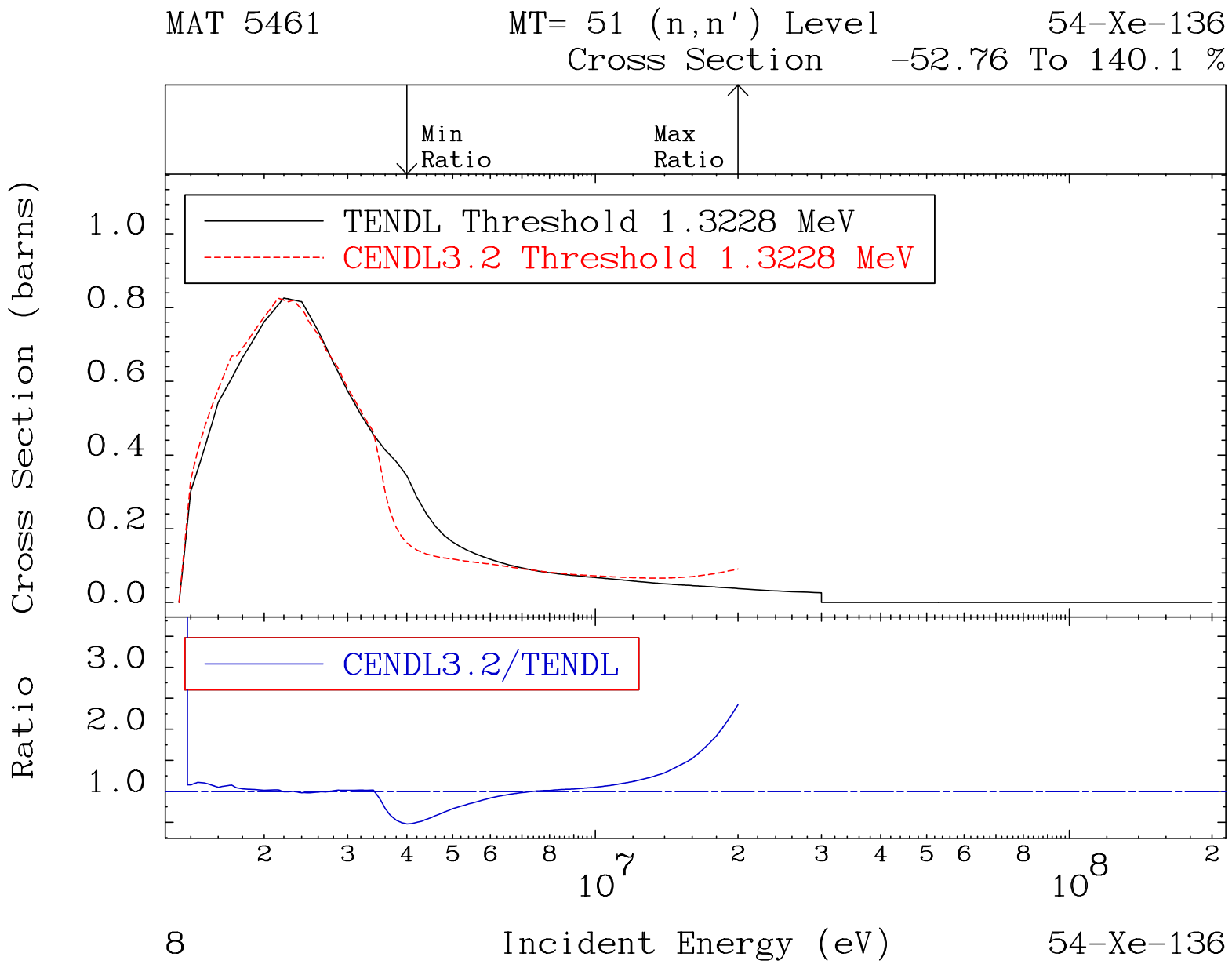

MAT 5461
Inelastic
Cross Section
54-Xe-136
-1.150 To 94.80 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.3228 MeV
CENDL3.2 Threshold 1.3228 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2.4
1.8
1.2
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
3
Incident Energy (eV)
54-Xe-136

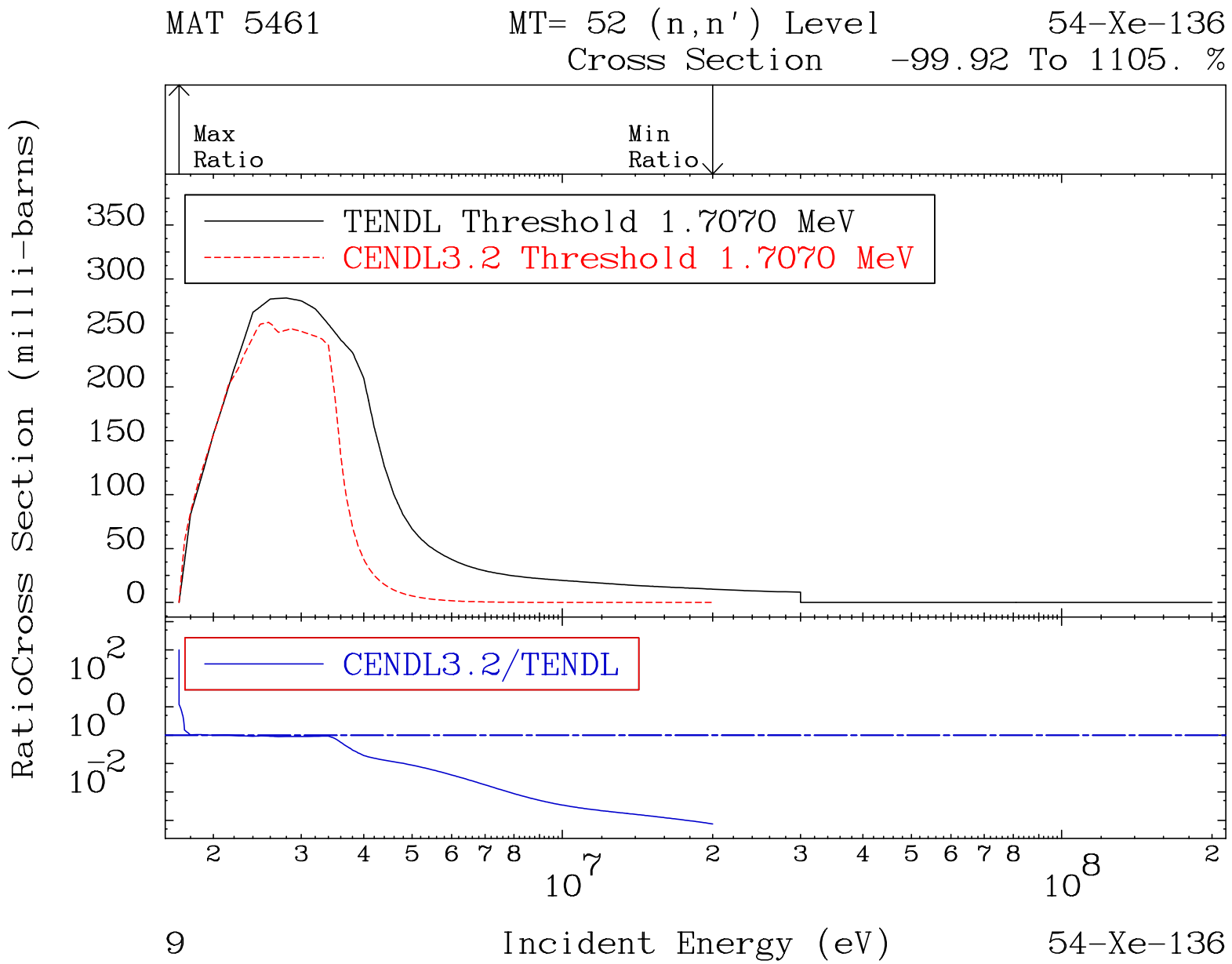

MAT 5461
(n,2n)
Cross Section
54-Xe-136
-28.62 To 0.495 %
Min
Ratio
TENDL Threshold 8.1471 MeV
CENDL3.2 Threshold 8.0541 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
1.0
0.8
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
4
Incident Energy (eV)
54-Xe-136

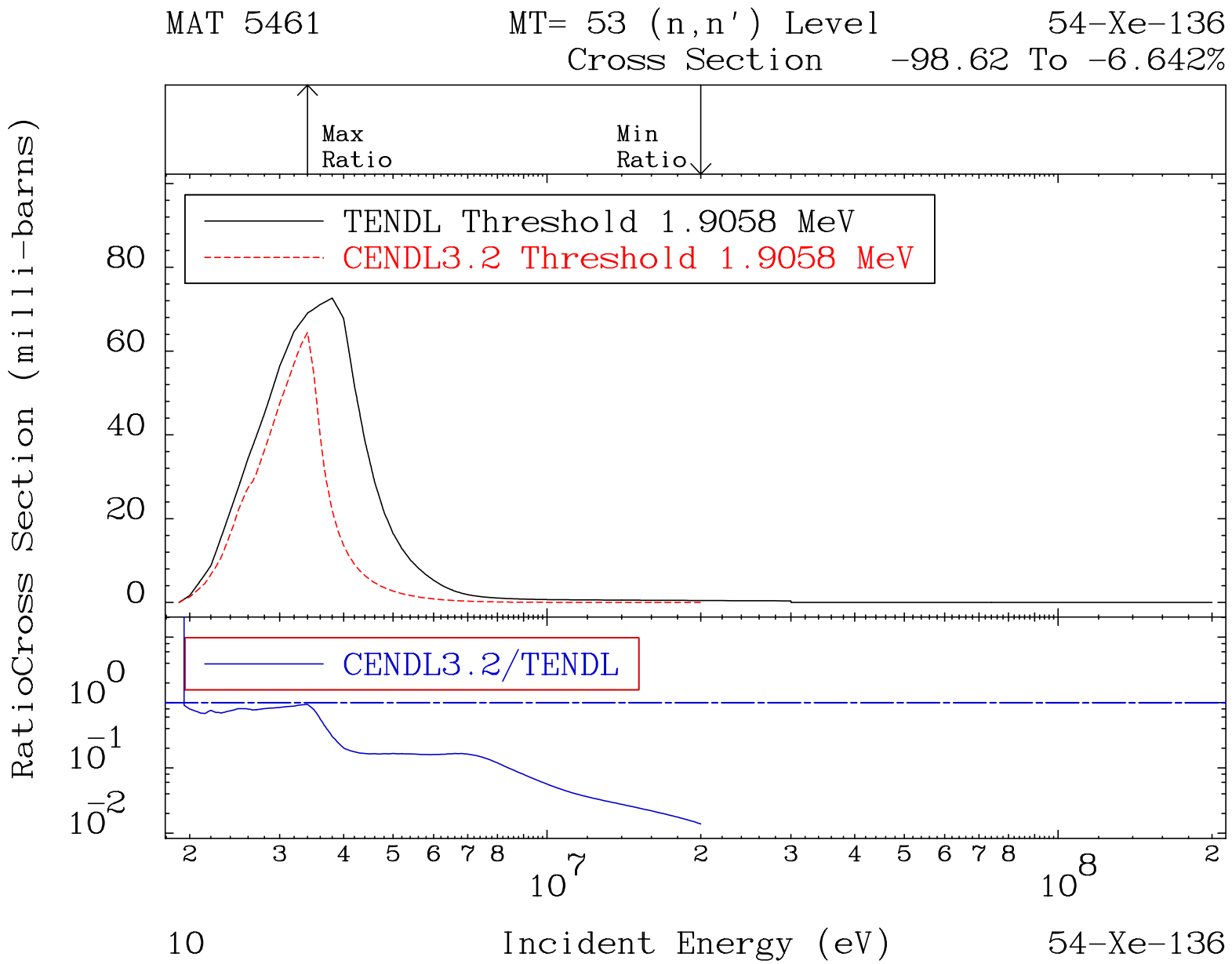

MAT 5461
(n,3n)
Cross Section
54-Xe-136
-100.0 To -23.95%
Min Ratio
Max Ratio
TENDL Threshold 14.553 MeV
CENDL3.2 Threshold 14.700 MeV
Cross Section (barns)
1.5
1.0
0.5
0.0
CENDL3.2/TENDL
Ratio
0.8
0.4
0.0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
54-Xe-136

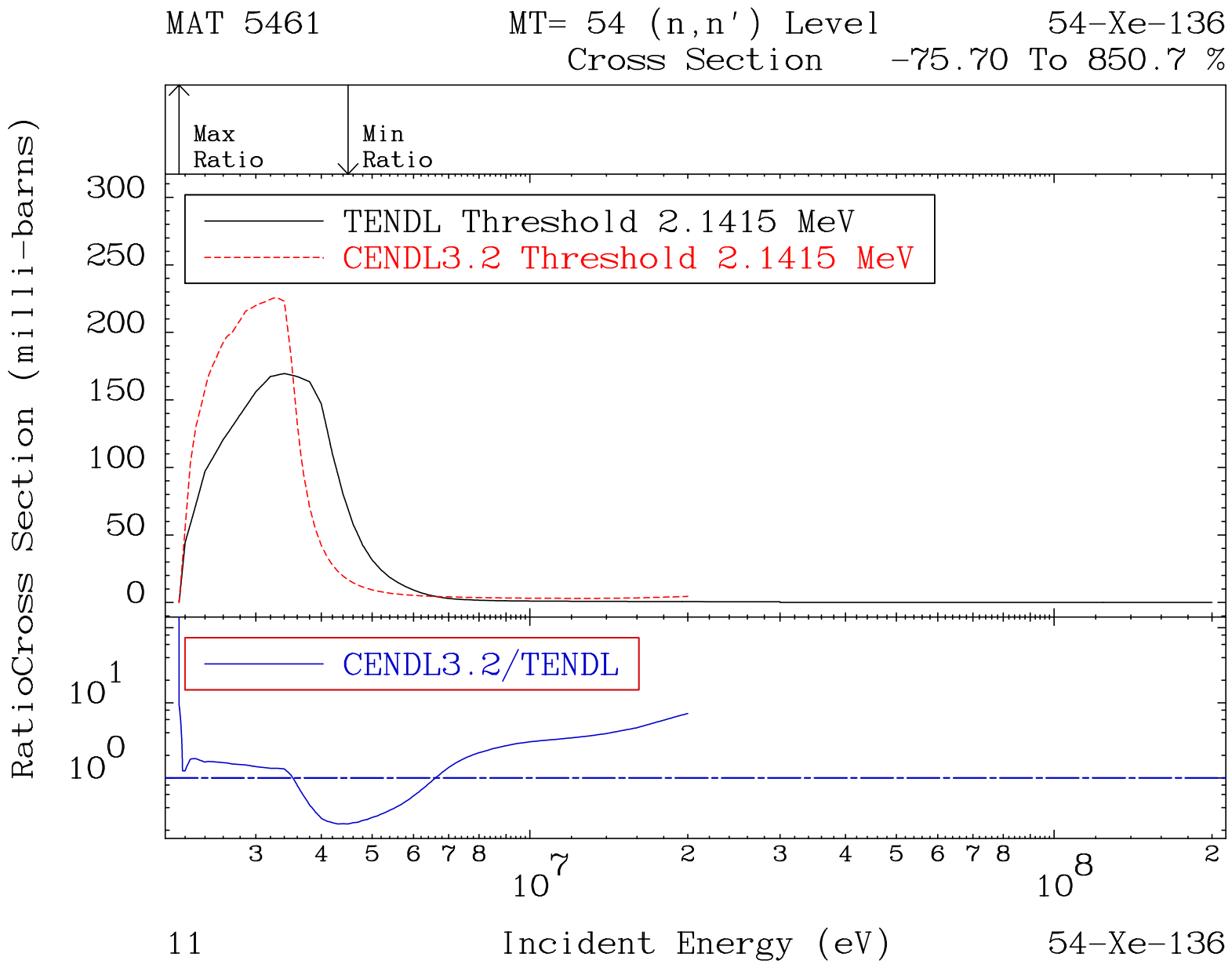

MAT 5461
(n,n') α
Cross Section
54-Xe-136
-100.0 To 406.4 %
Min Ratio
Max Ratio
TENDL Threshold 3.6931 MeV
CENDL3.2 Threshold 14.200 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
6
54-Xe-136

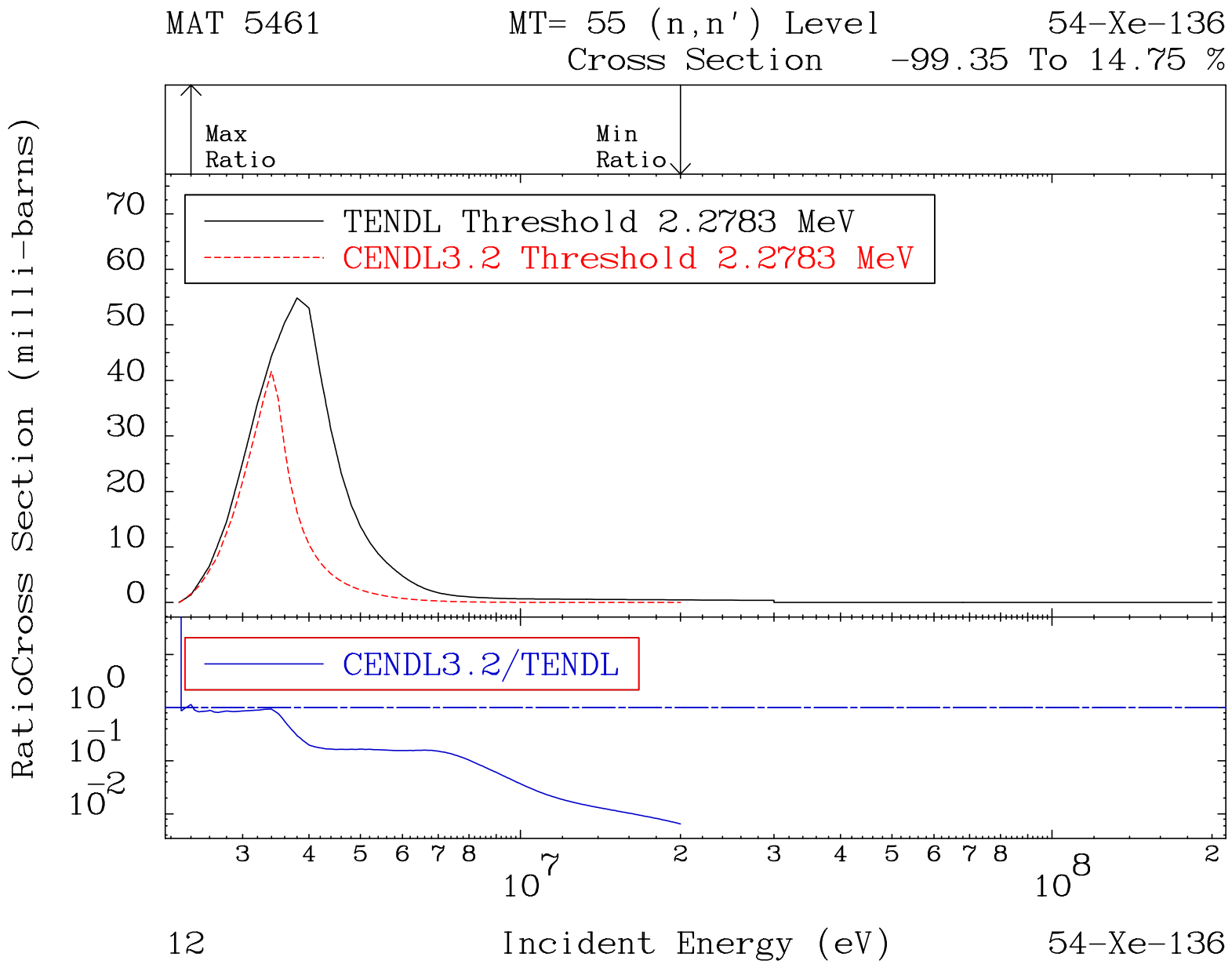

MAT 5461
(n,n') p
Cross Section
54-Xe-136
-100.0 To 280.7 %
Min Ratio
Max Ratio
TENDL Threshold 10.013 MeV
CENDL3.2 Threshold 13.800 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
4
2
0
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
54-Xe-136

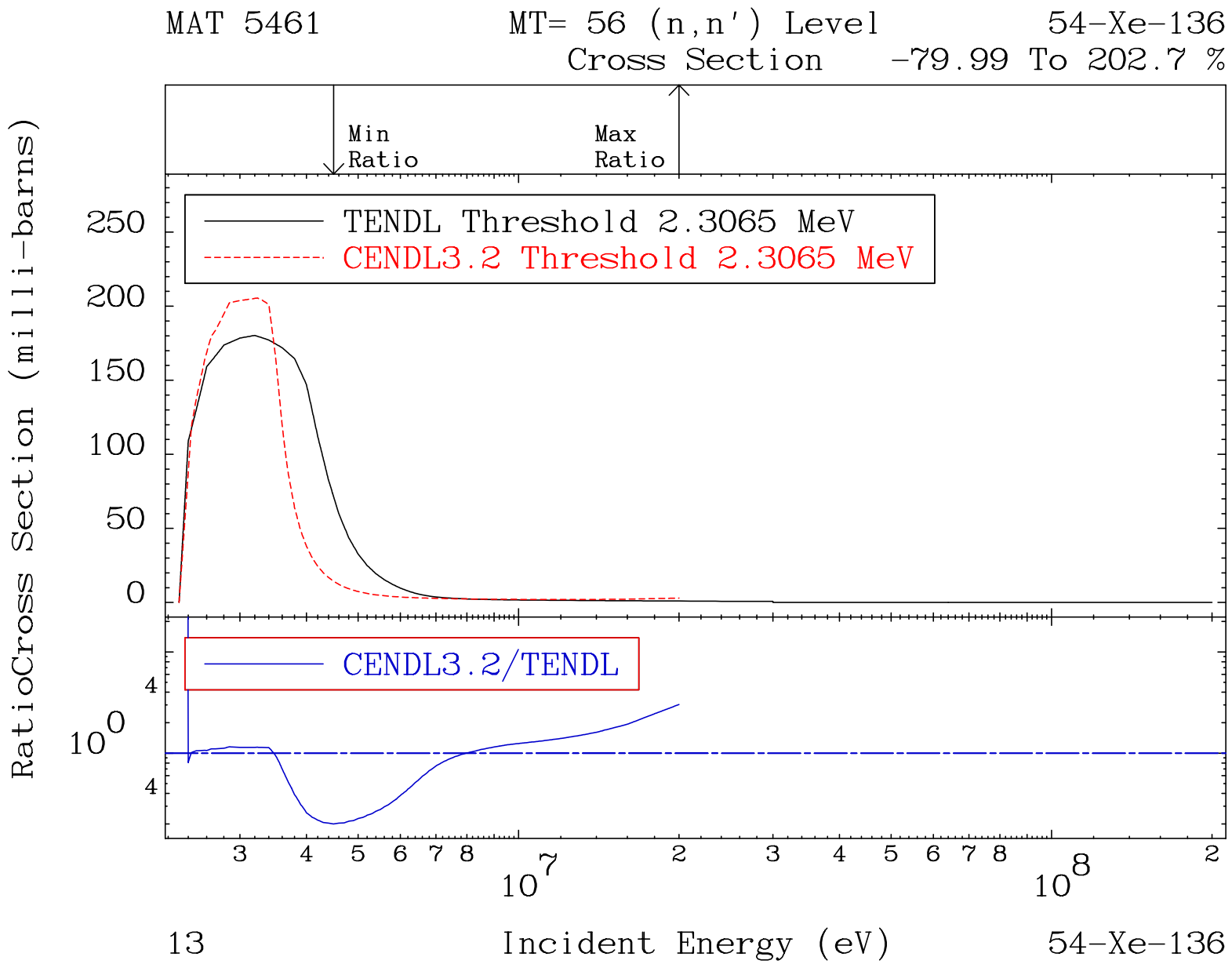

MAT 5461
MT= 51 (n,n') Level
54-Xe-136
Cross Section -52.76 To 140.1 %
Min Ratio
Max Ratio
TENDL Threshold 1.3228 MeV
CENDL3.2 Threshold 1.3228 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
3.0
2.0
1.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
8
Incident Energy (eV)
54-Xe-136

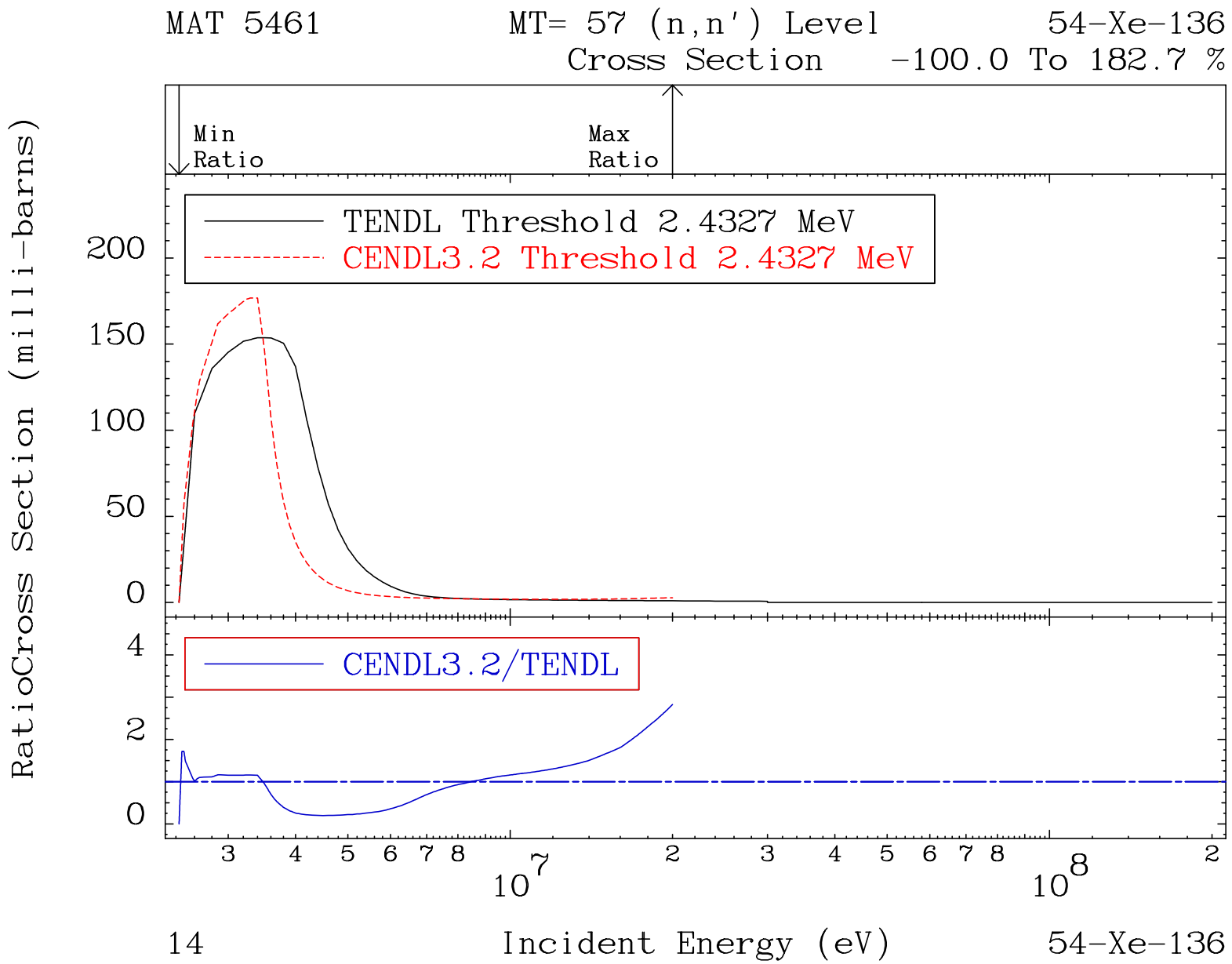

MAT 5461
MT= 52 (n,n') Level
54-Xe-136
Cross Section -99.92 To 1105. %
Max Ratio
Min Ratio
TENDL Threshold 1.7070 MeV
CENDL3.2 Threshold 1.7070 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
10^2
10^0
10^-2
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
9
54-Xe-136

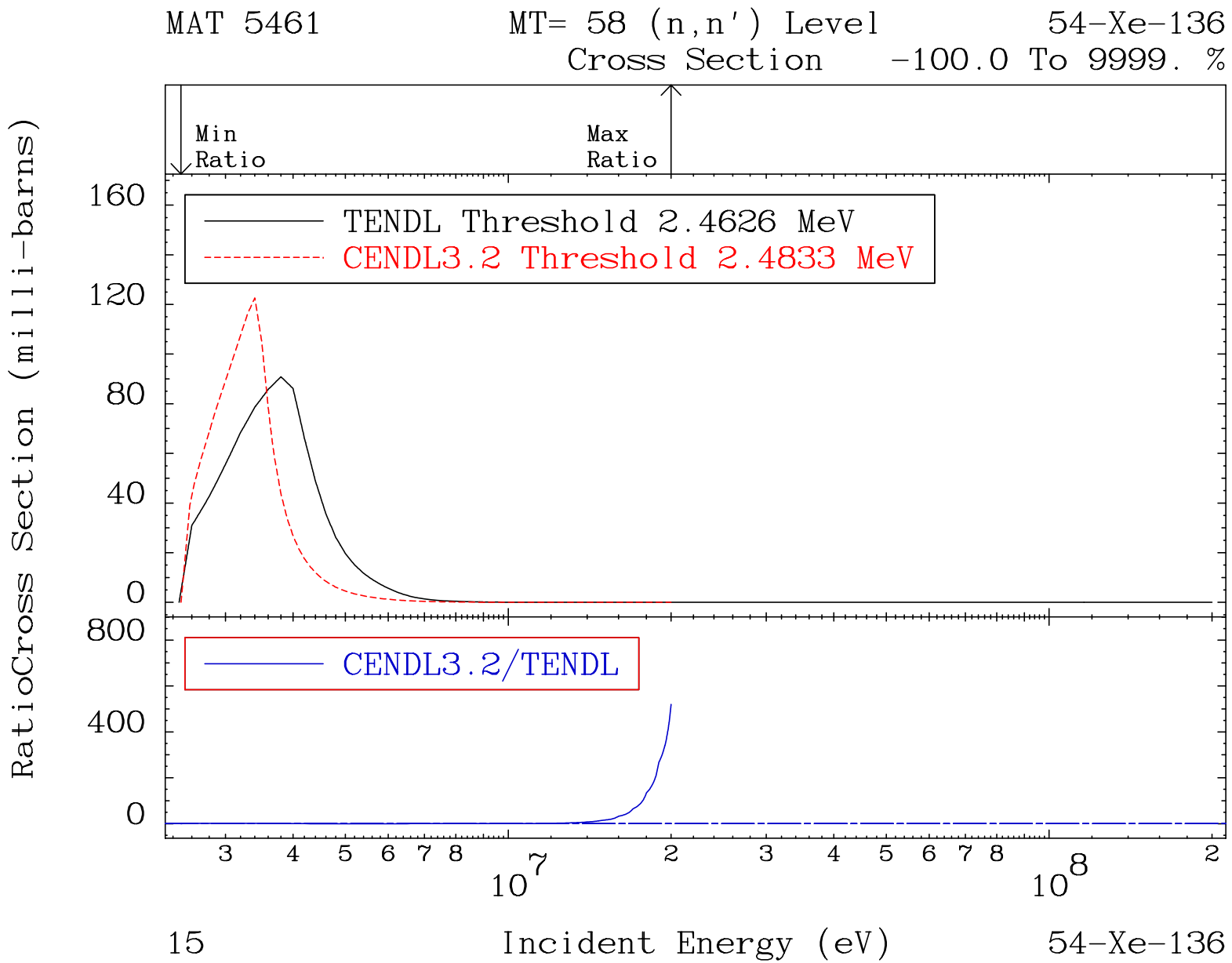

MAT 5461
MT= 53 (n,n') Level
54-Xe-136
Cross Section
-98.62 To -6.642%
Max Ratio
Min Ratio
TENDL Threshold 1.9058 MeV
CENDL3.2 Threshold 1.9058 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
10
54-Xe-136

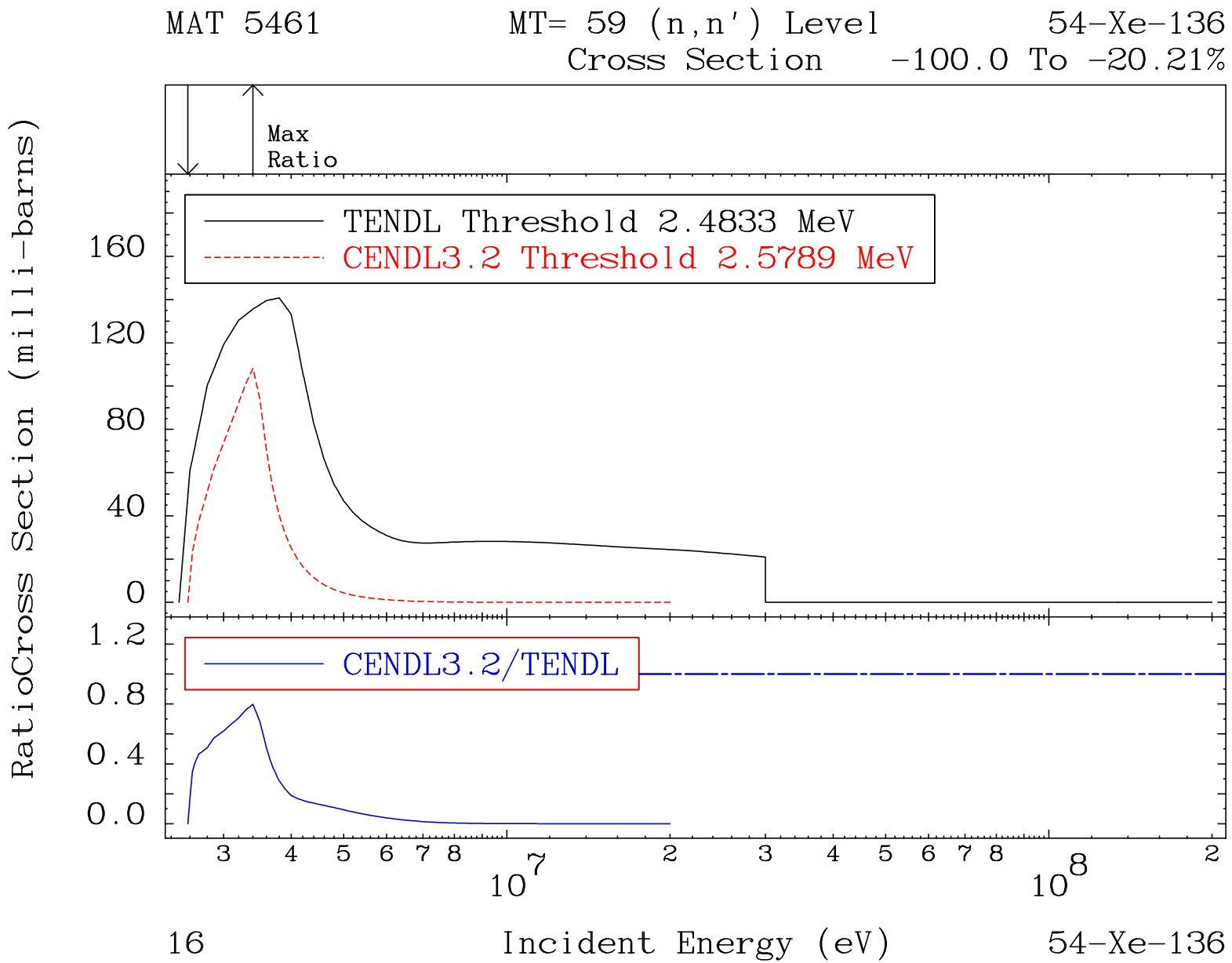

MAT 5461
MT= 54 (n,n') Level
54-Xe-136
Cross Section -75.70 To 850.7 %
Max Ratio
Min Ratio
TENDL Threshold 2.1415 MeV
CENDL3.2 Threshold 2.1415 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
10^1
10^0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
11
Incident Energy (eV)
54-Xe-136

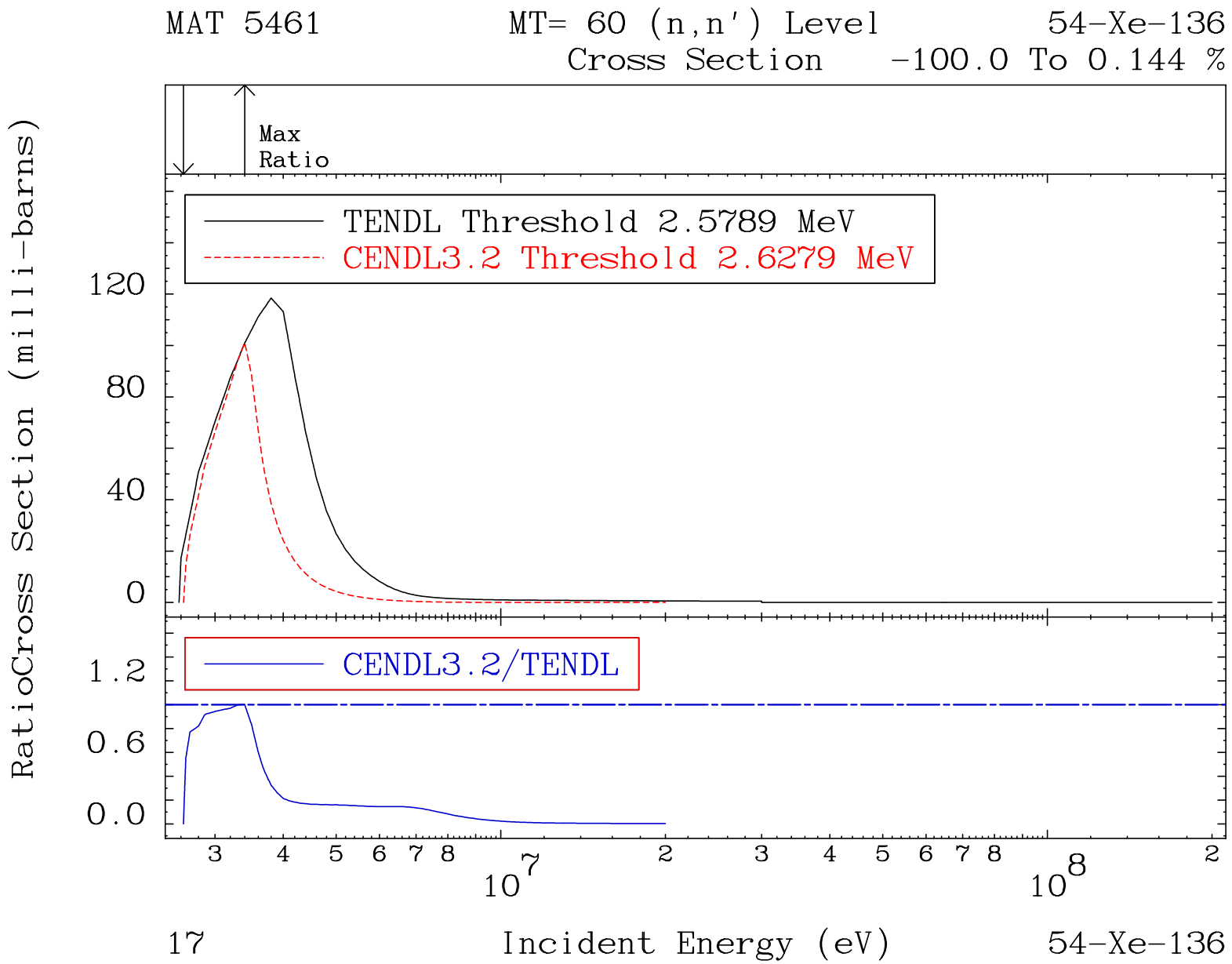

MAT 5461
MT= 55 (n,n') Level
54-Xe-136
Cross Section -99.35 To 14.75 %
Max Ratio
Min Ratio
TENDL Threshold 2.2783 MeV
CENDL3.2 Threshold 2.2783 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
12
54-Xe-136

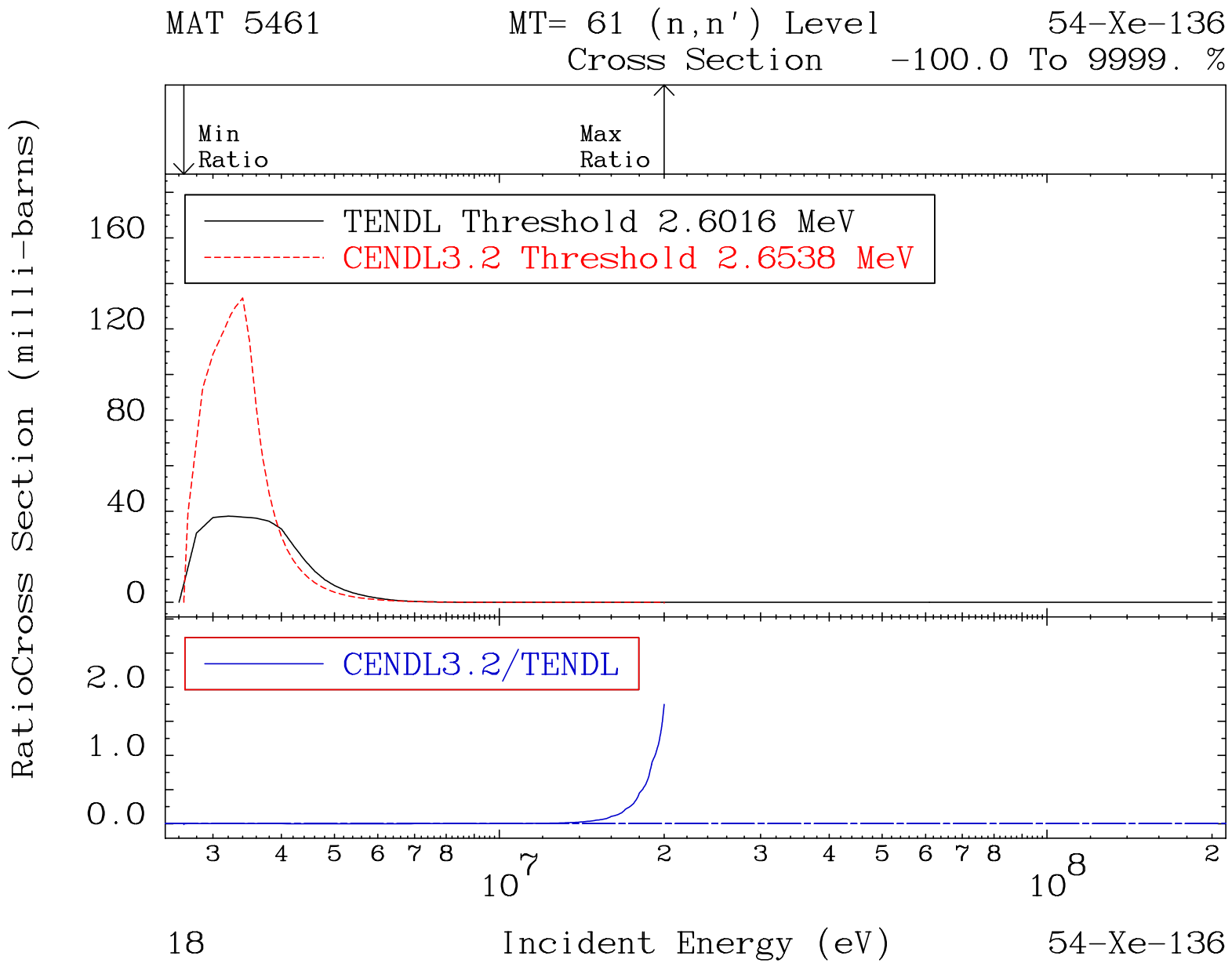

MAT 5461
MT= 56 (n,n') Level
54-Xe-136
Cross Section -79.99 To 202.7 %
Min Ratio
Max Ratio
TENDL Threshold 2.3065 MeV
CENDL3.2 Threshold 2.3065 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
13
54-Xe-136

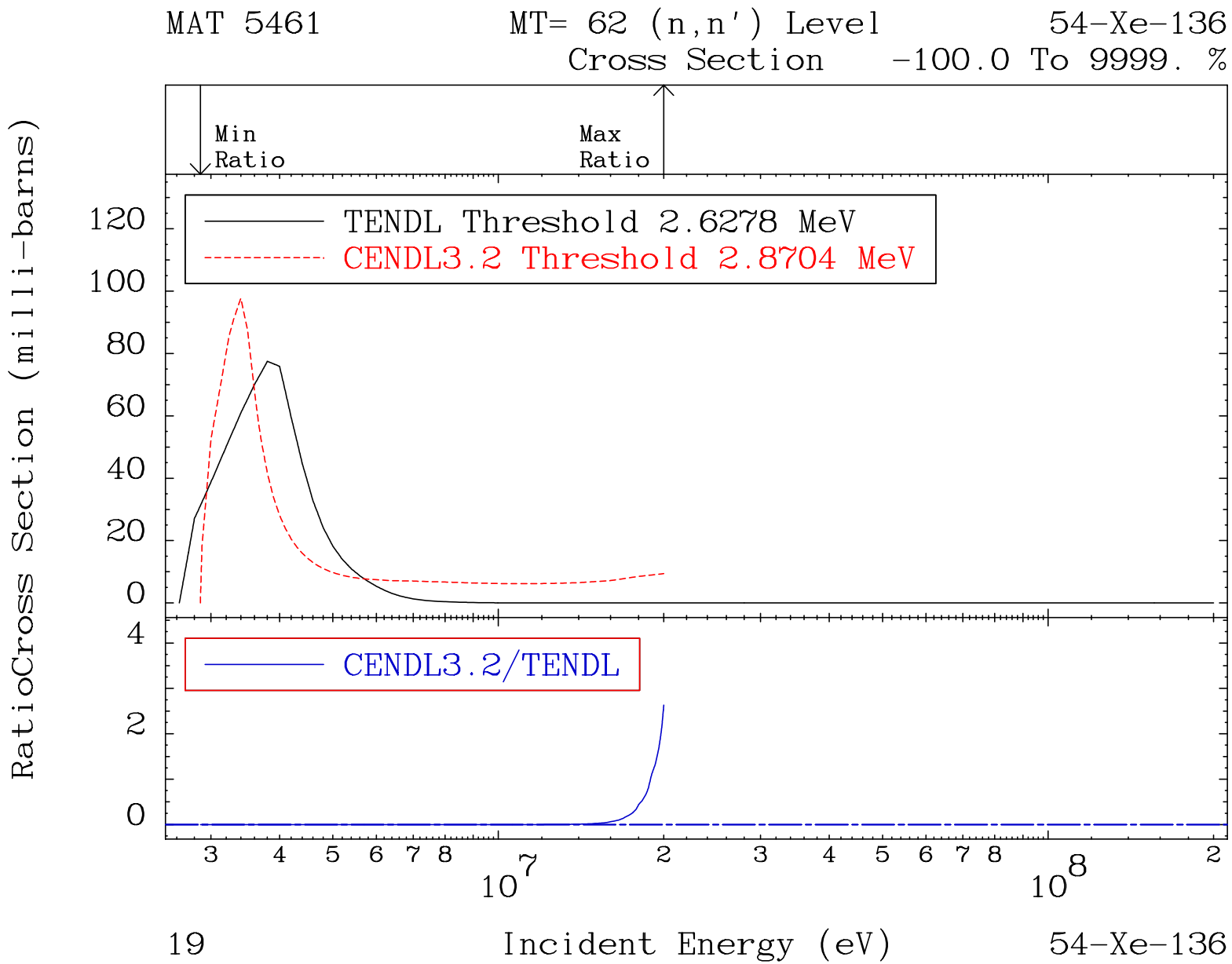

MAT 5461
MT= 57 (n,n') Level
54-Xe-136
Cross Section -100.0 To 182.7 %
Min Ratio
Max Ratio
TENDL Threshold 2.4327 MeV
CENDL3.2 Threshold 2.4327 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
4
2
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
54-Xe-136

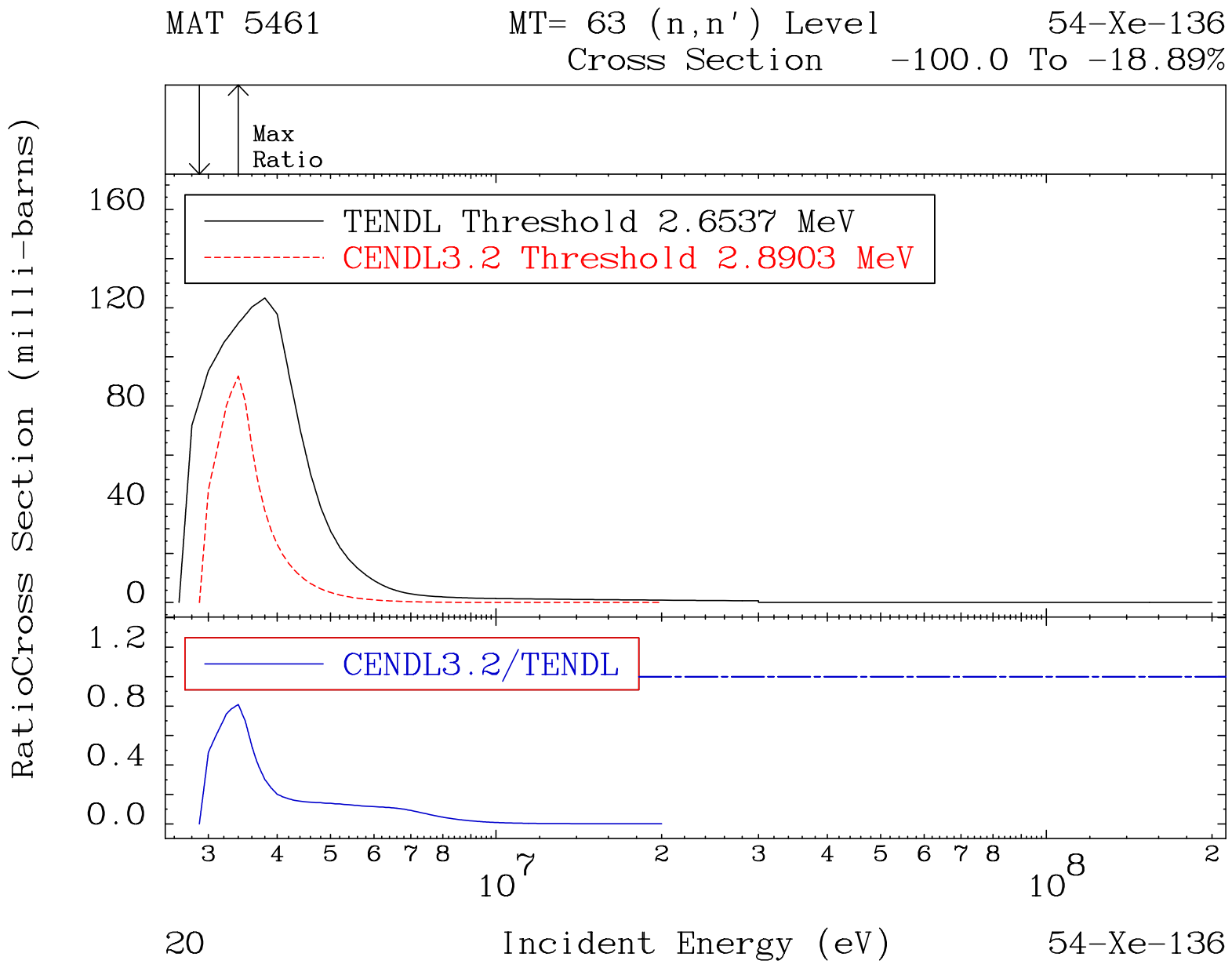

MAT 5461
MT= 58 (n,n') Level
54-Xe-136
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.4626 MeV
CENDL3.2 Threshold 2.4833 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
800
400
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
15
Incident Energy (eV)
54-Xe-136

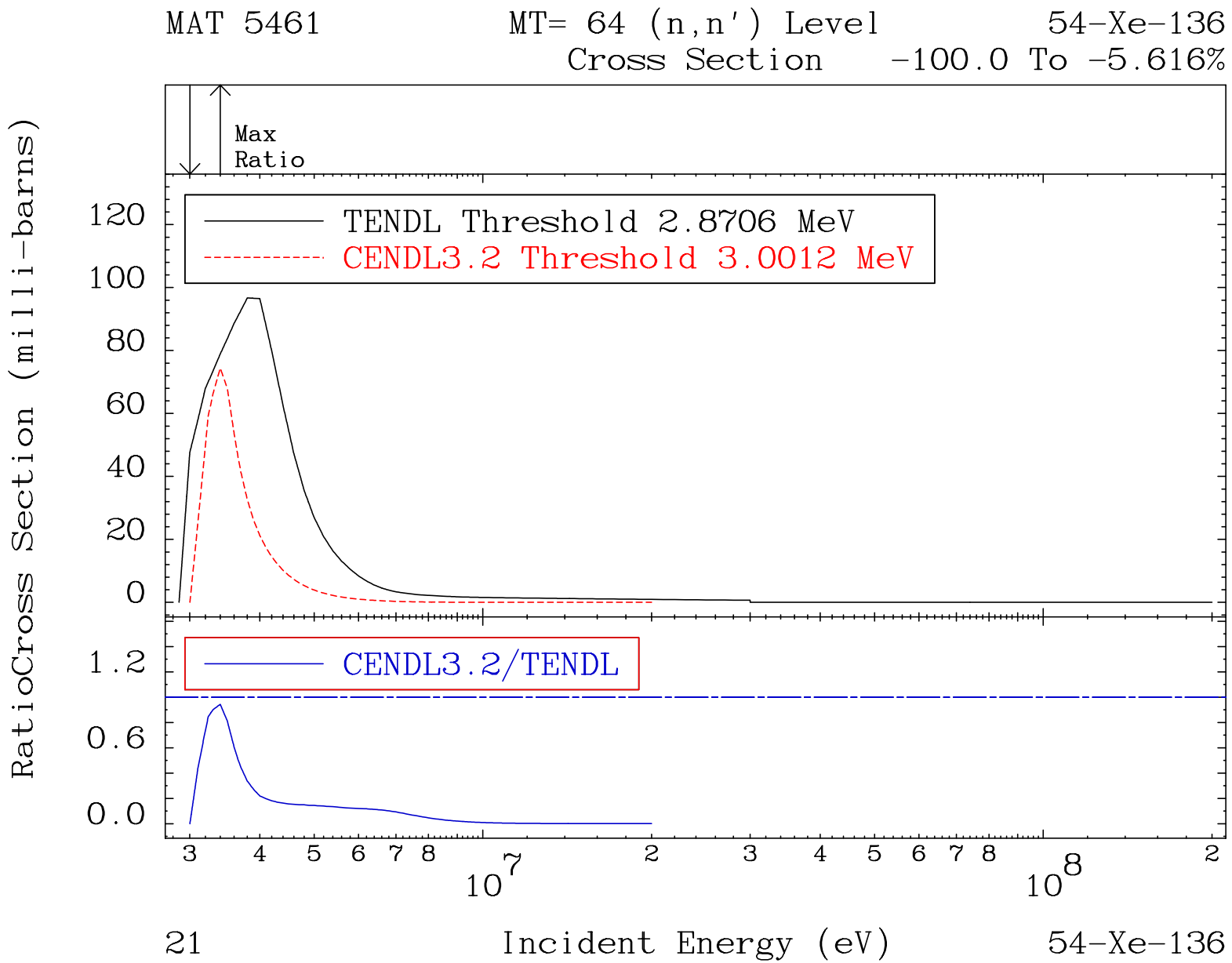

MAT 5461
MT= 59 (n,n') Level
54-Xe-136
Cross Section -100.0 To -20.21%
Max
Ratio
TENDL Threshold 2.4833 MeV
CENDL3.2 Threshold 2.5789 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.2
0.8
0.4
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
16
Incident Energy (eV)
54-Xe-136

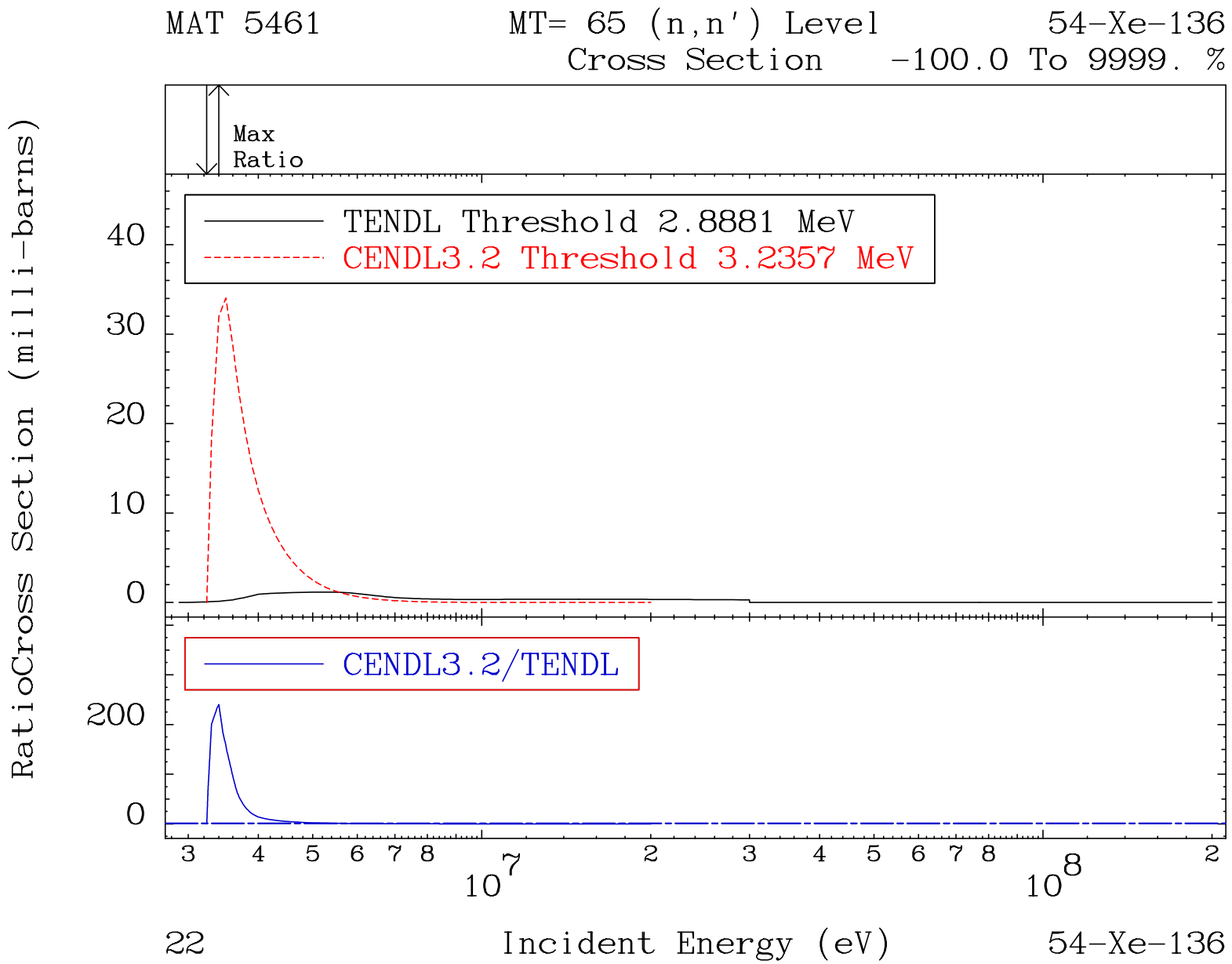

MAT 5461
MT= 60 (n,n') Level
54-Xe-136
Cross Section
-100.0 To 0.144 %
Max
Ratio
TENDL Threshold 2.5789 MeV
CENDL3.2 Threshold 2.6279 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
80
40
0
1.2
0.6
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
17
Incident Energy (eV)
54-Xe-136

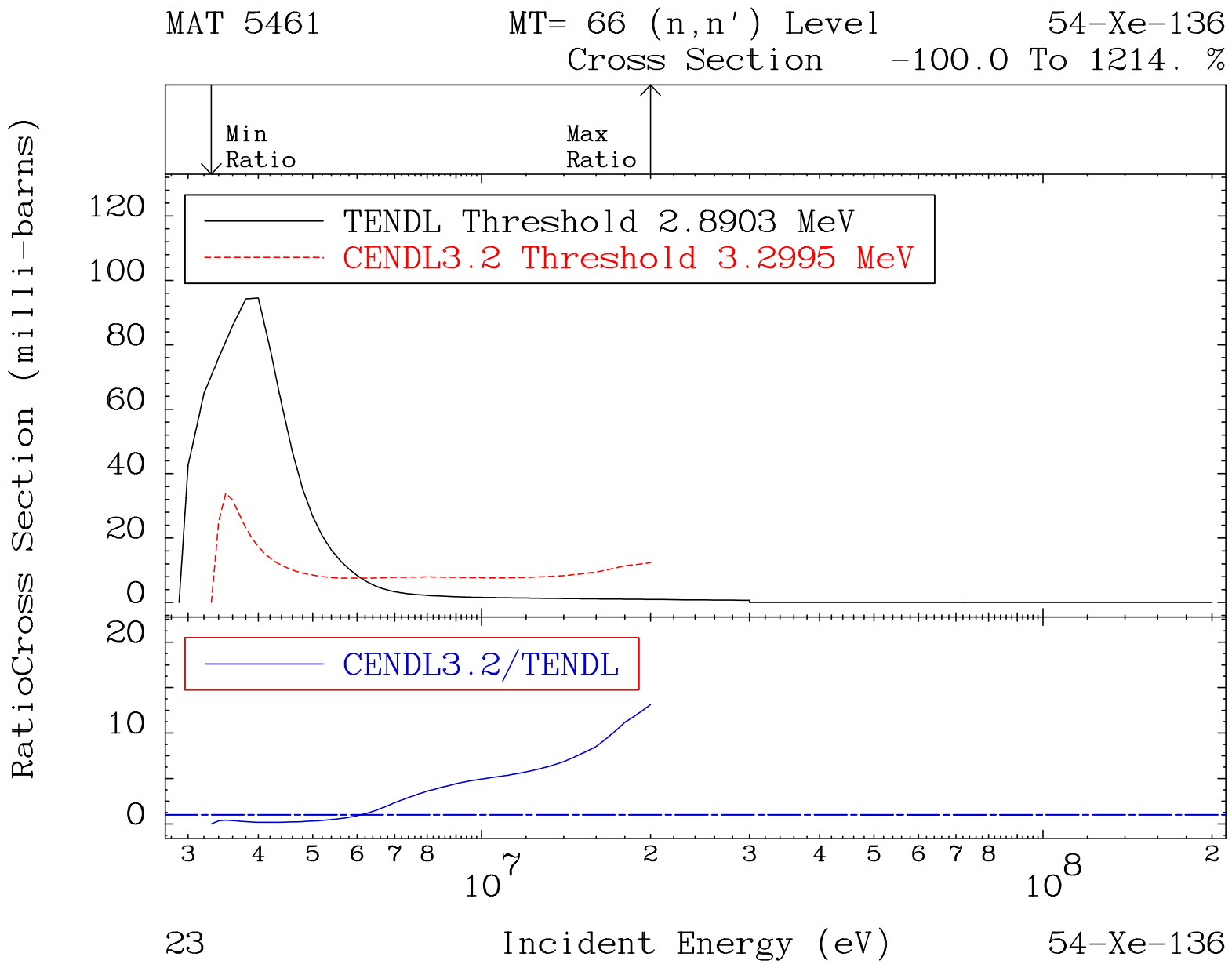

MAT 5461
MT= 61 (n,n') Level
54-Xe-136
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.6016 MeV
CENDL3.2 Threshold 2.6538 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
2.0
1.0
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
18
Incident Energy (eV)
54-Xe-136

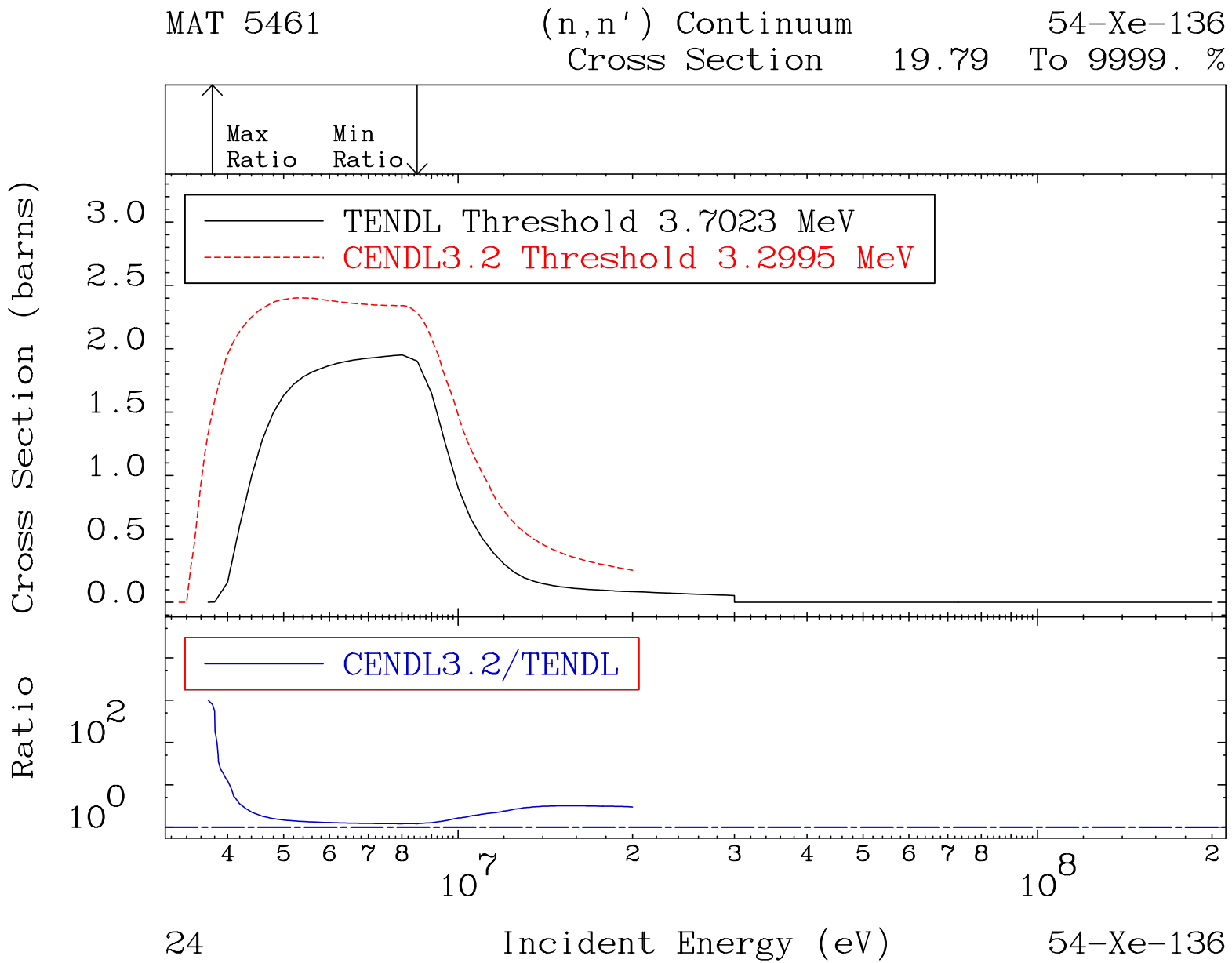

MAT 5461
MT= 62 (n,n') Level
54-Xe-136
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.6278 MeV
CENDL3.2 Threshold 2.8704 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
4
2
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
54-Xe-136

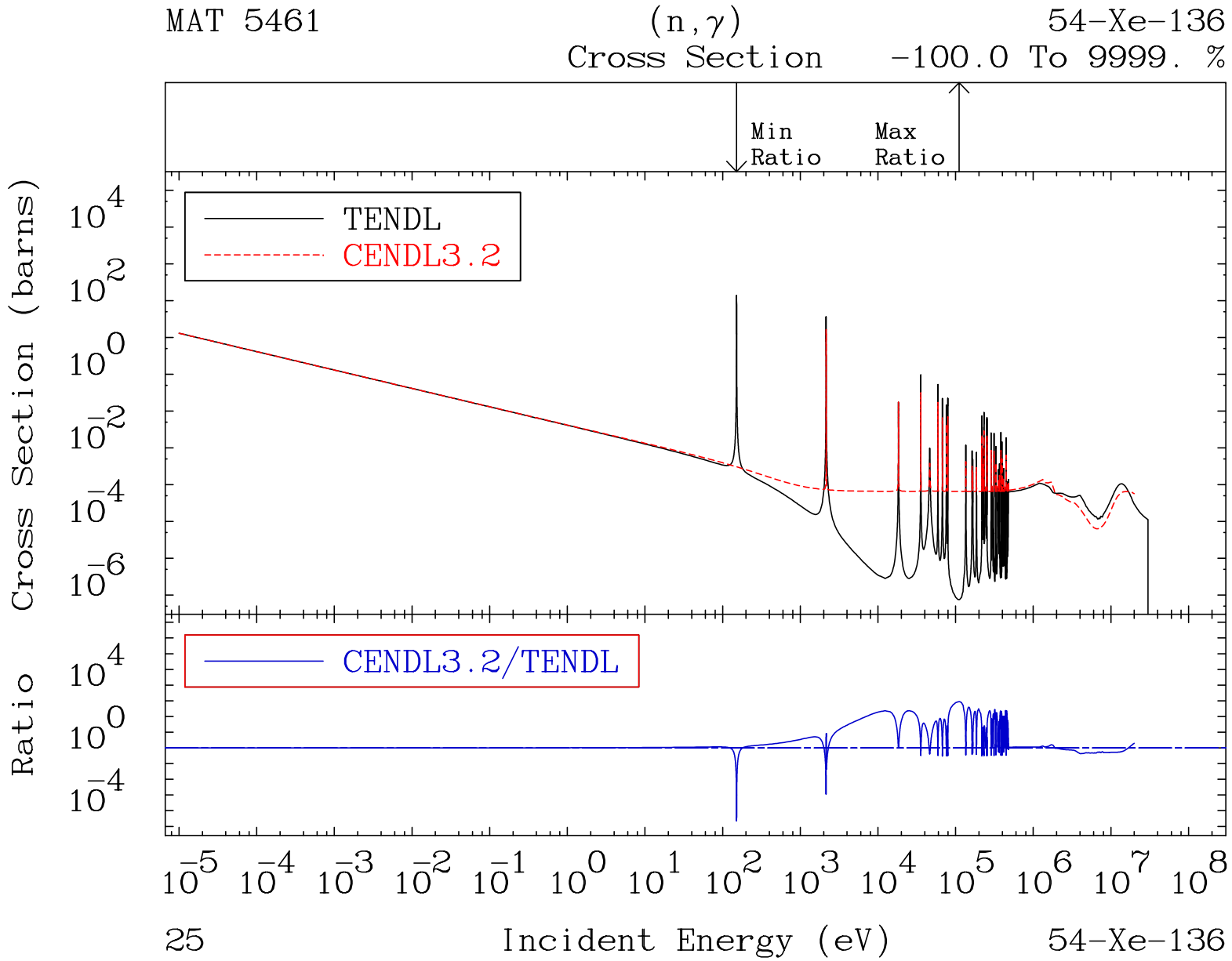

MAT 5461
MT= 63 (n,n') Level
54-Xe-136
Cross Section -100.0 To -18.89%
Max
Ratio
TENDL Threshold 2.6537 MeV
CENDL3.2 Threshold 2.8903 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.2
0.8
0.4
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
54-Xe-136

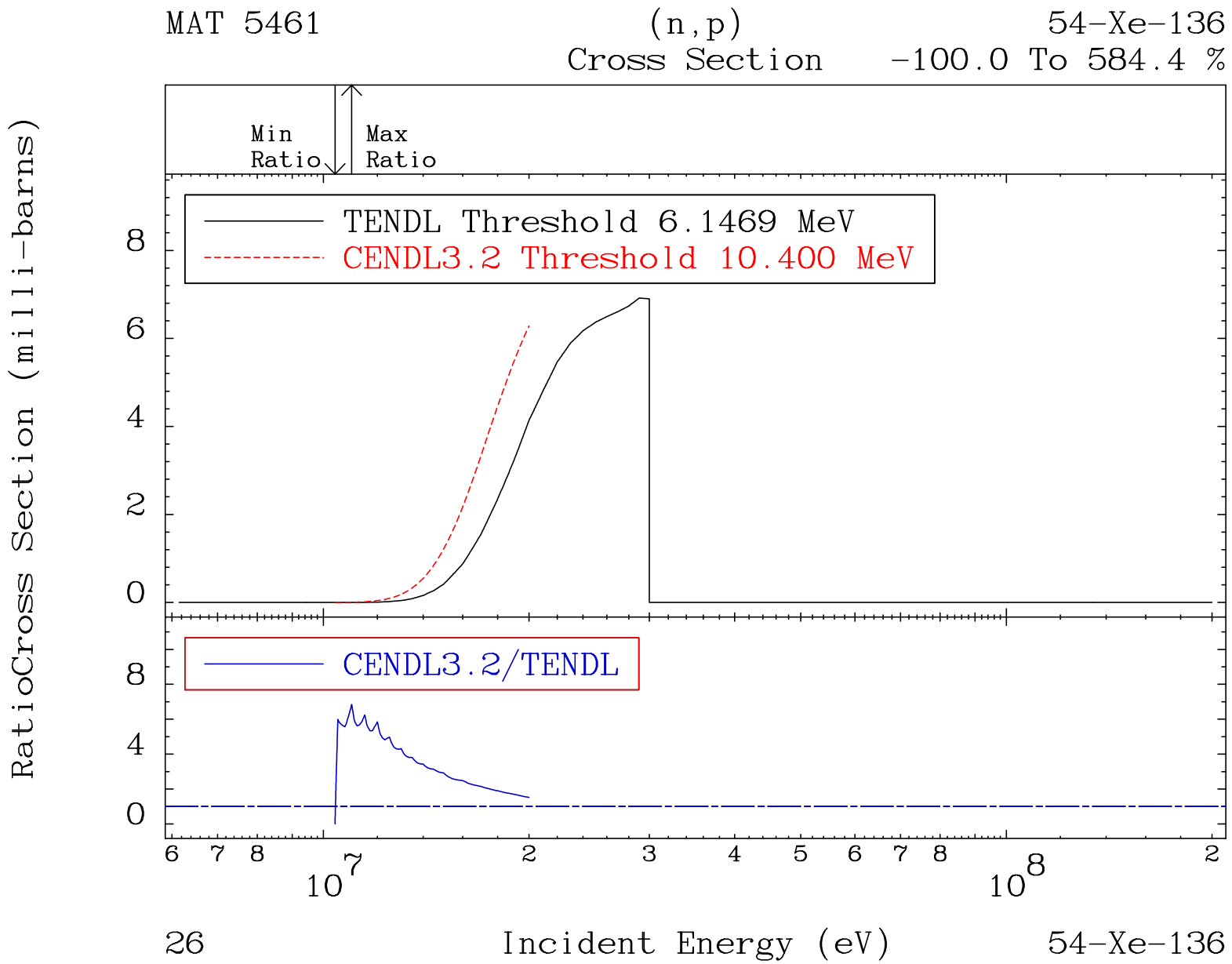

MAT 5461
MT= 64 (n,n') Level
54-Xe-136
Cross Section -100.0 To -5.616%
Max
Ratio
TENDL Threshold 2.8706 MeV
CENDL3.2 Threshold 3.0012 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
1.2
0.6
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
54-Xe-136

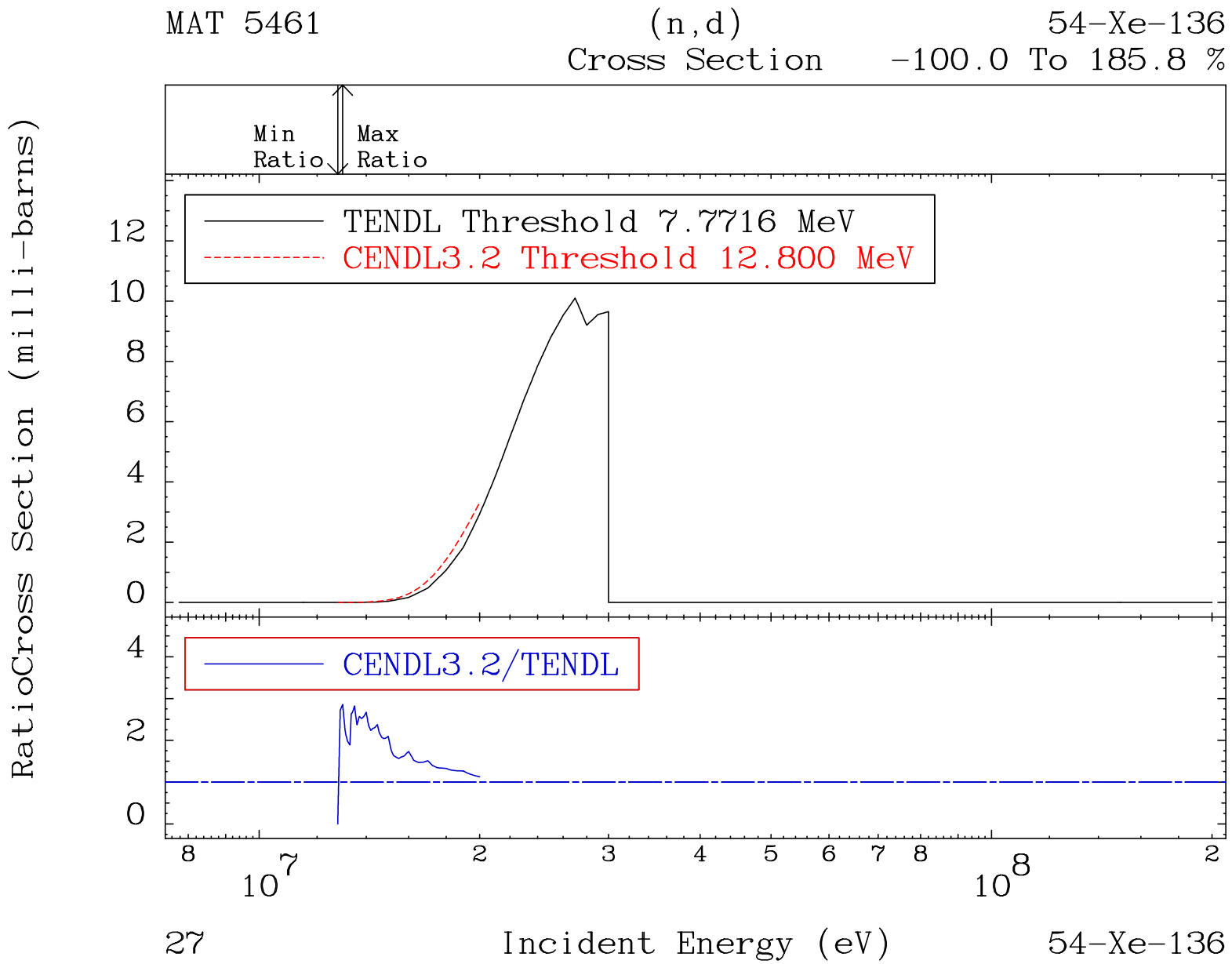

MAT 5461
MT= 65 (n,n') Level
54-Xe-136
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 2.8881 MeV
CENDL3.2 Threshold 3.2357 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
200
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
22
Incident Energy (eV)
54-Xe-136

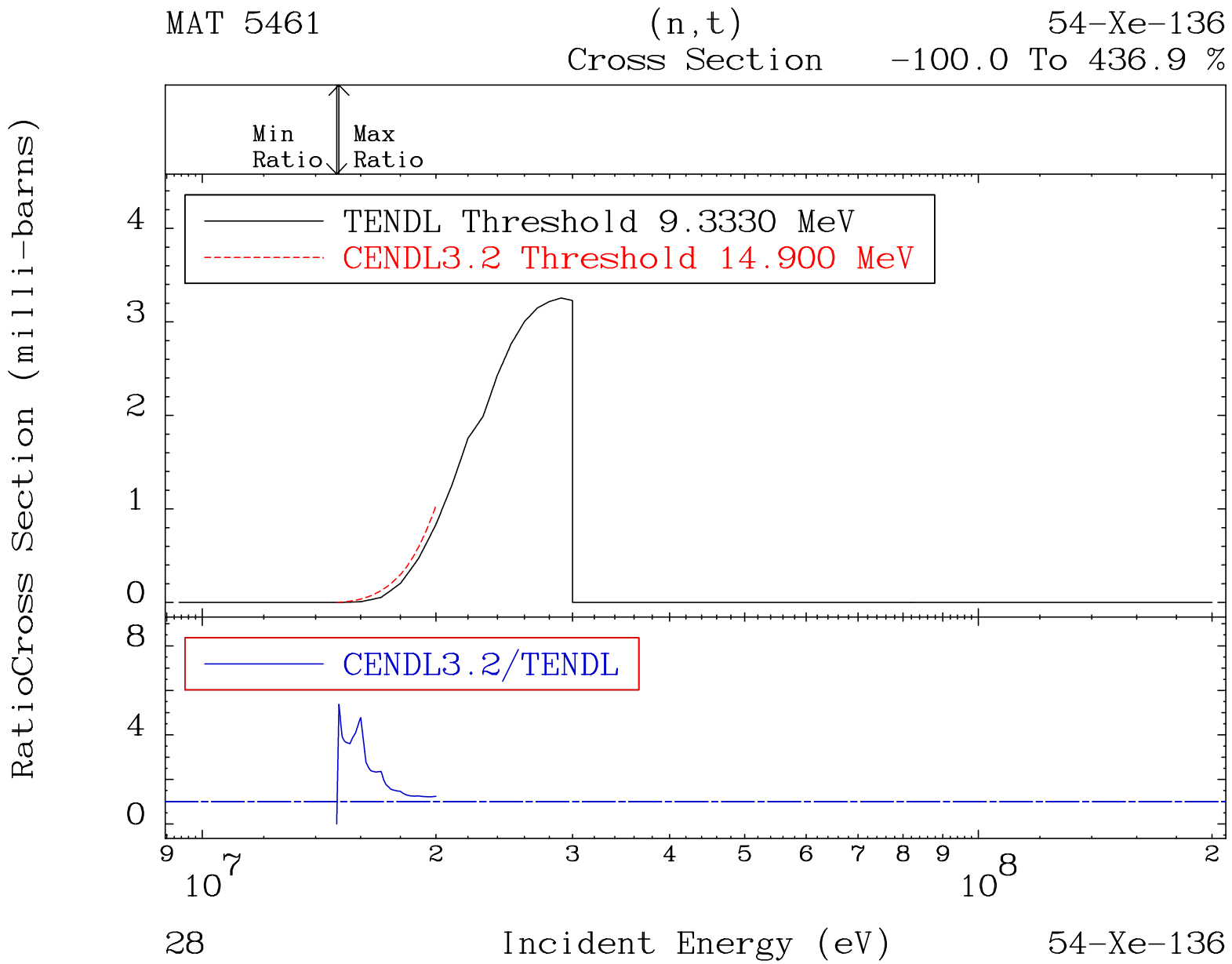

MAT 5461
MT= 66 (n,n') Level
54-Xe-136
Cross Section -100.0 To 1214. %
Min Ratio
Max Ratio
TENDL Threshold 2.8903 MeV
CENDL3.2 Threshold 3.2995 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
20
10
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
23
Incident Energy (eV)
54-Xe-136

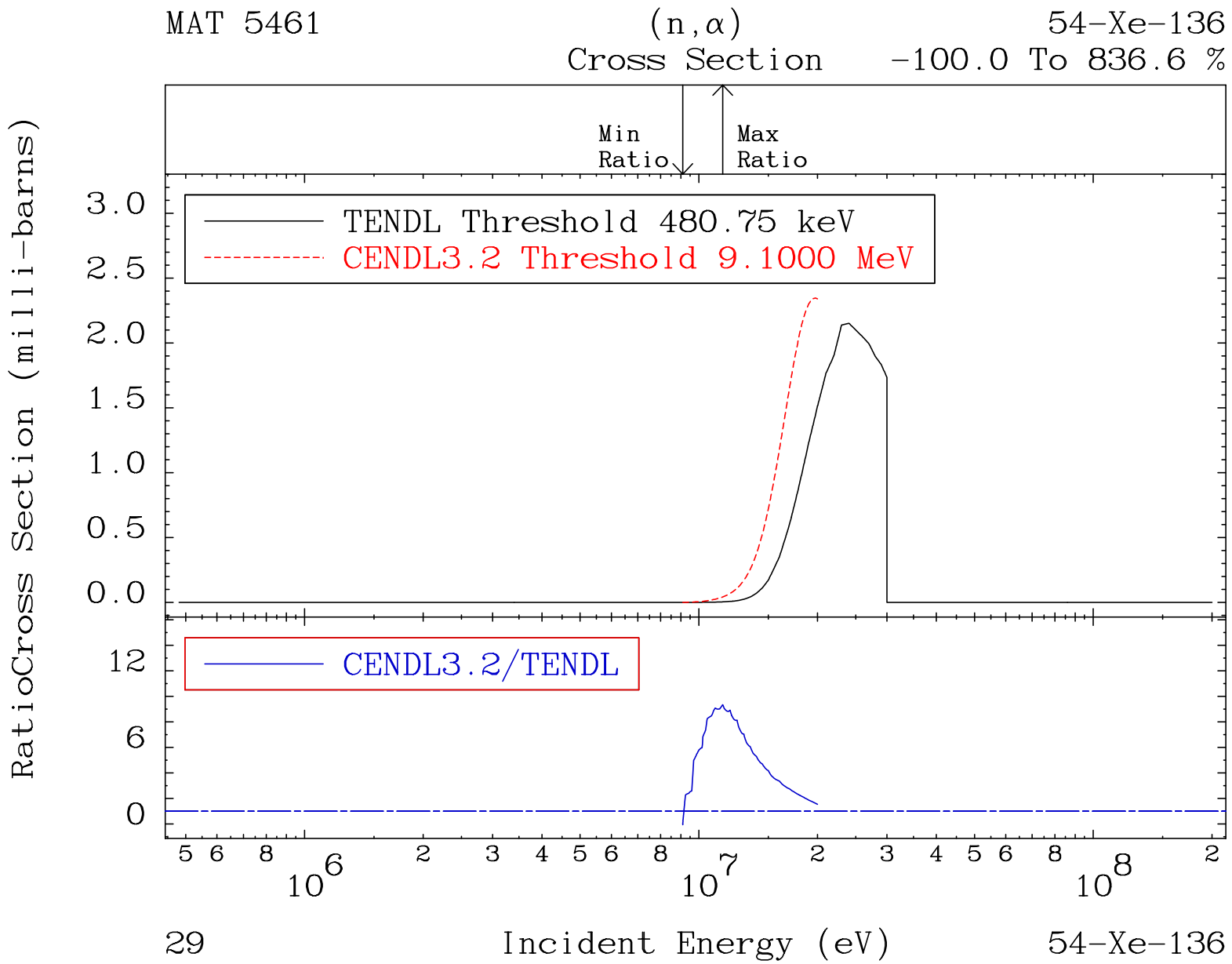

MAT 5461
(n,n') Continuum
Cross Section
54-Xe-136
19.79 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.7023 MeV
CENDL3.2 Threshold 3.2995 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
CENDL3.2/TENDL
Ratio
10^2
10^0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
24
Incident Energy (eV)
54-Xe-136

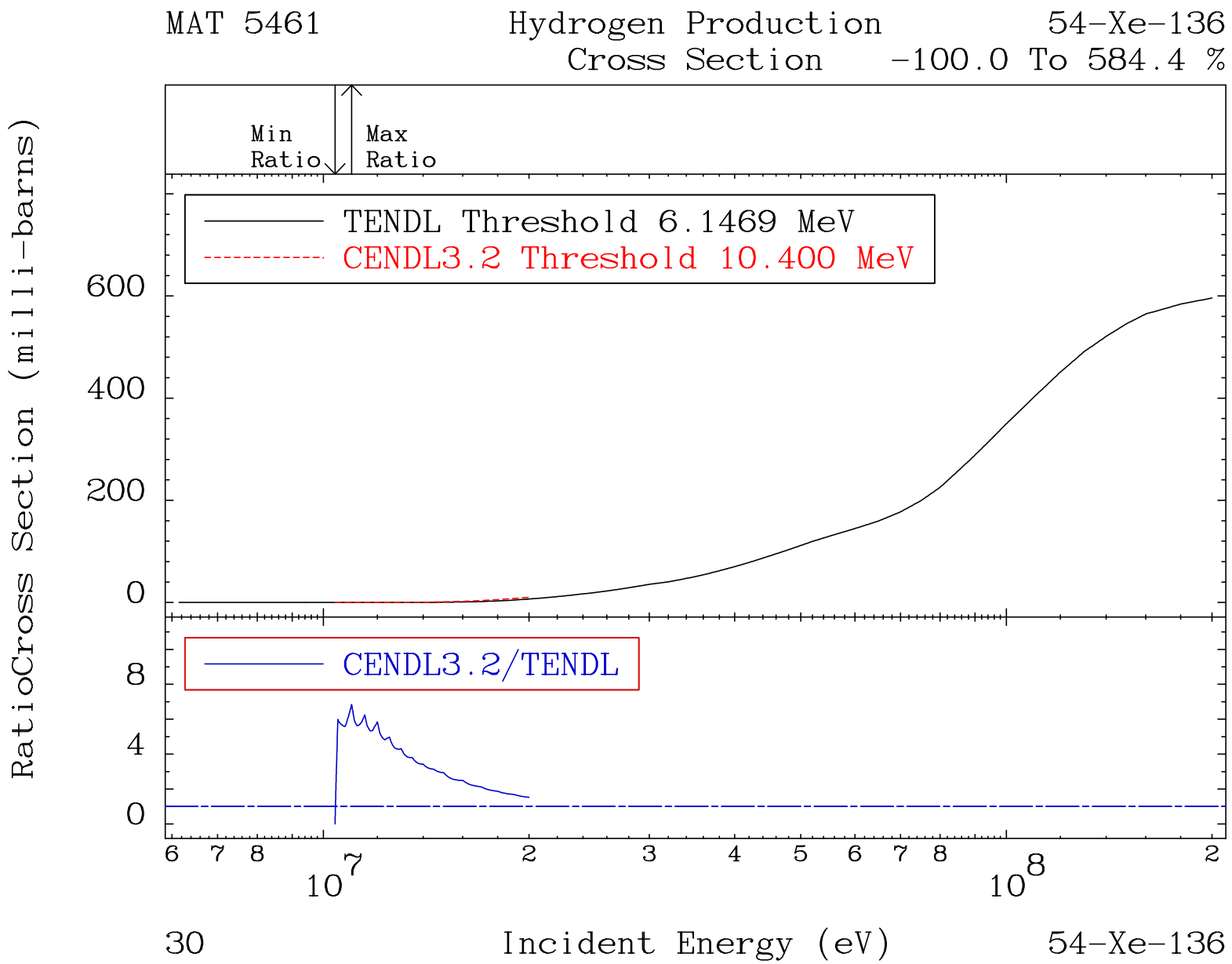

MAT 5461
(n,γ)
Cross Section
54-Xe-136
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
25
54-Xe-136

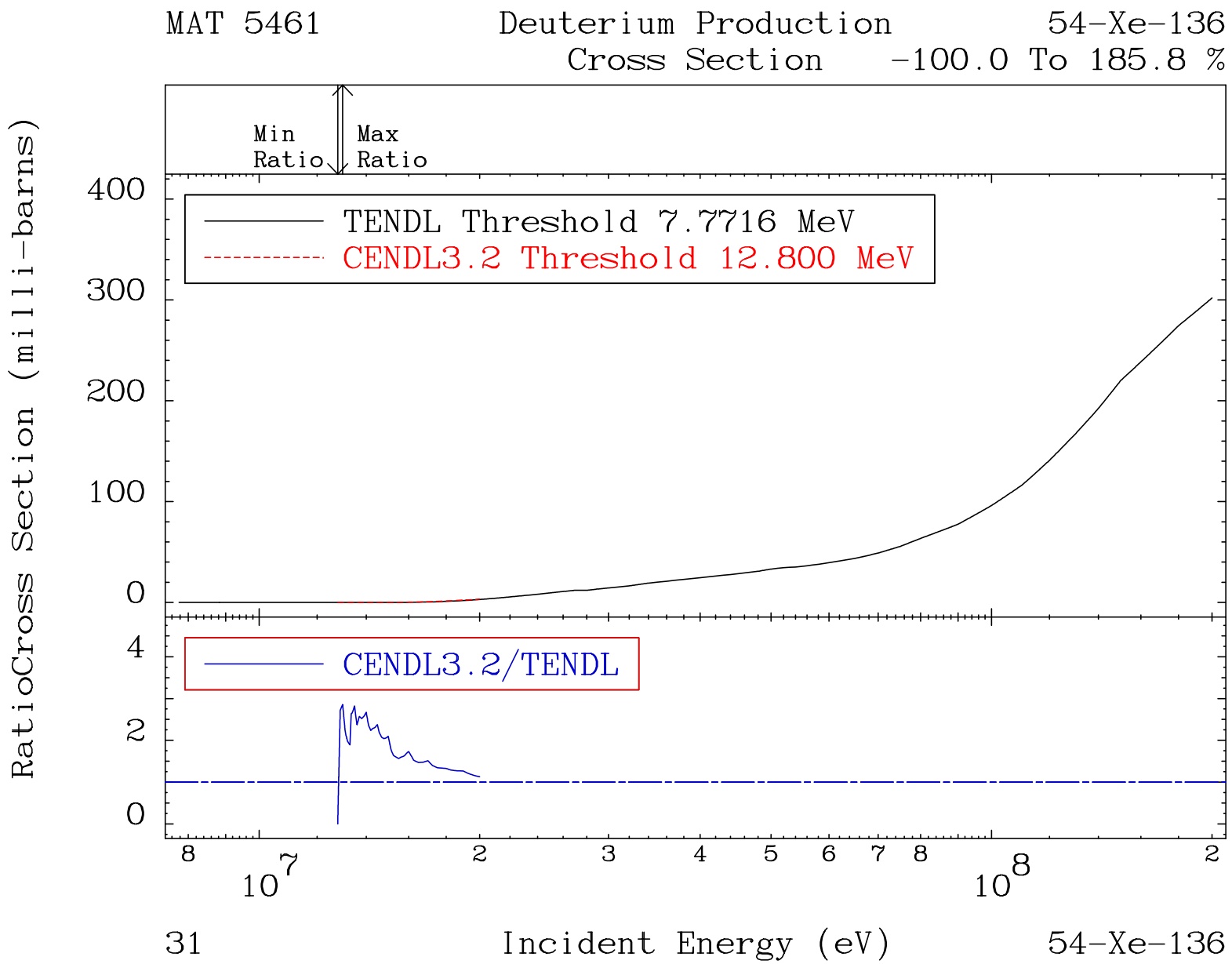

MAT 5461
(n,p)
54-Xe-136
Cross Section
-100.0 To 584.4 %
Min Ratio
Max Ratio
TENDL Threshold 6.1469 MeV
CENDL3.2 Threshold 10.400 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
26
54-Xe-136

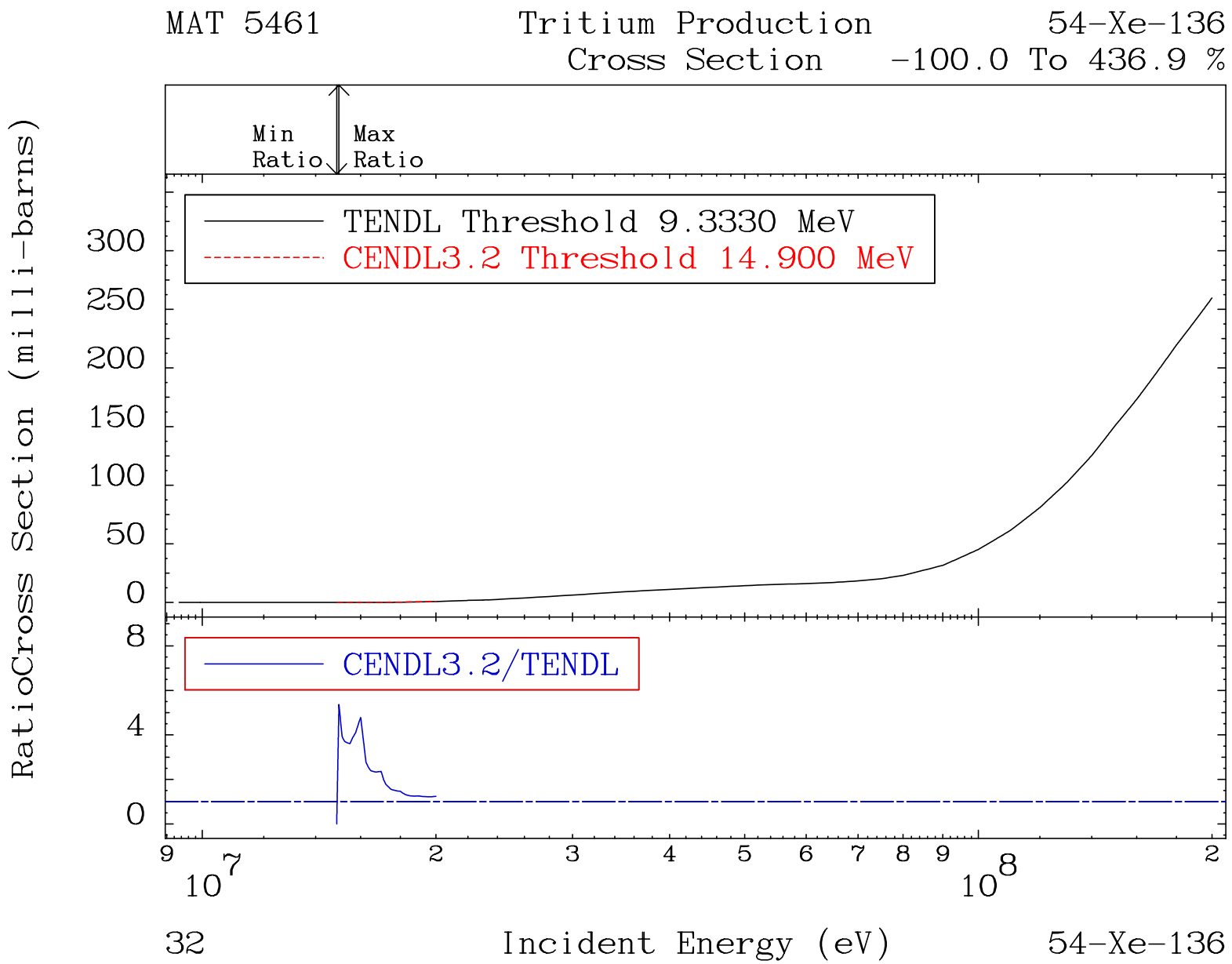

MAT 5461
(n,d)
54-Xe-136
Cross Section
-100.0 To 185.8 %
Min Ratio
Max Ratio
TENDL Threshold 7.7716 MeV
CENDL3.2 Threshold 12.800 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
27
54-Xe-136

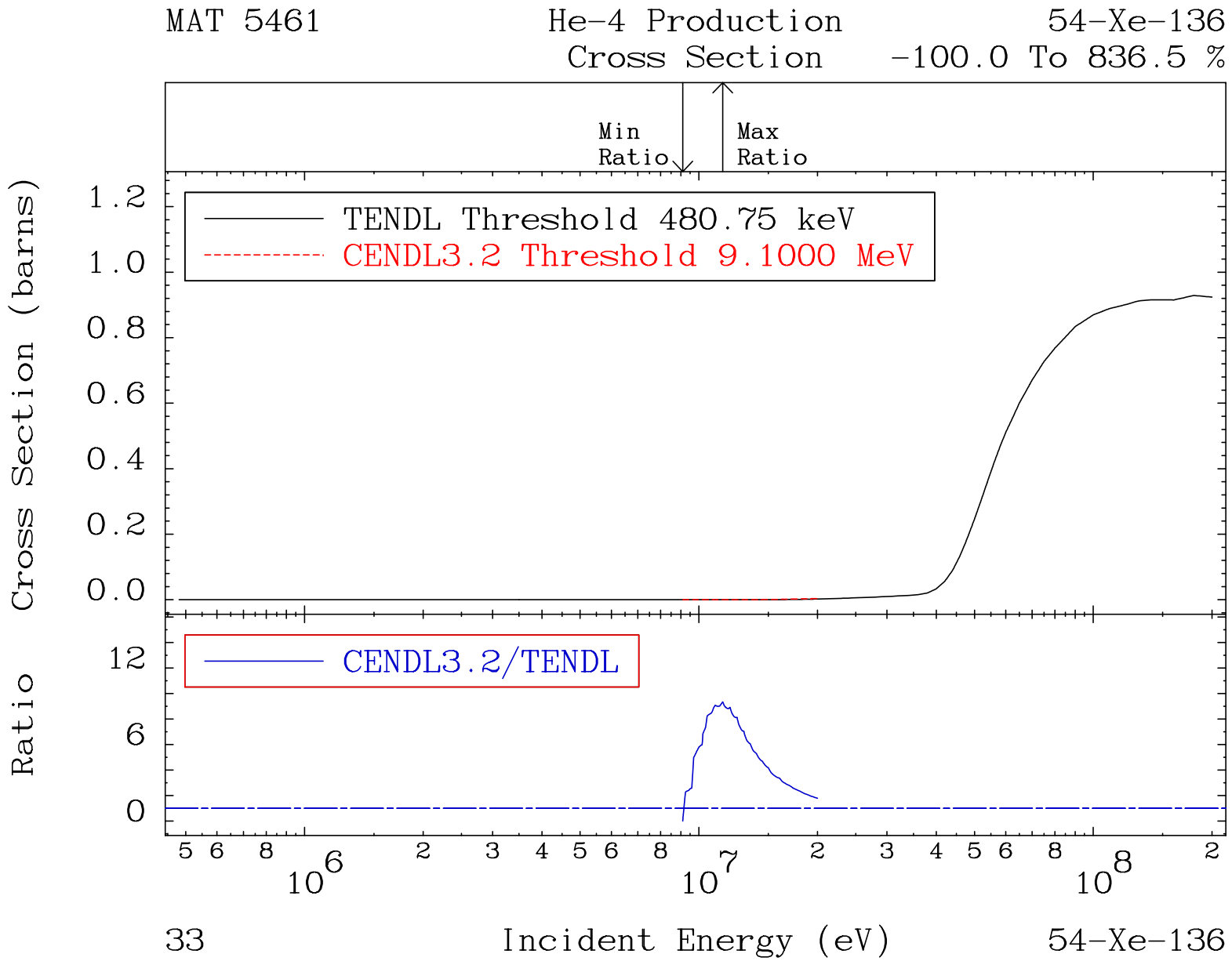

MAT 5461
(n,t)
54-Xe-136
Cross Section
-100.0 To 436.9 %
Min Ratio
Max Ratio
TENDL Threshold 9.3330 MeV
CENDL3.2 Threshold 14.900 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
28
54-Xe-136

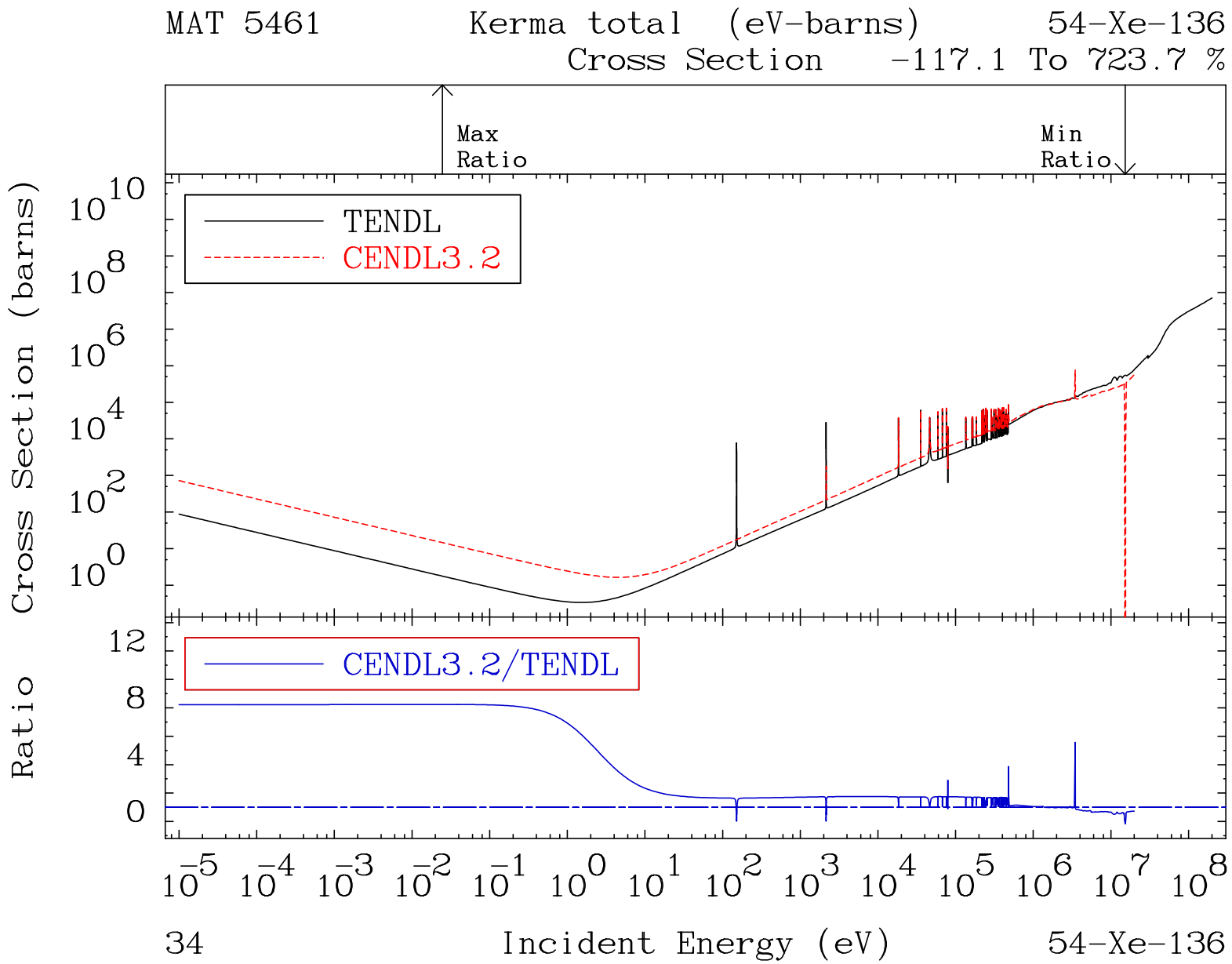

MAT 5461
(n,α)
Cross Section
54-Xe-136
-100.0 To 836.6 %
Min Ratio
Max Ratio
TENDL Threshold 480.75 keV
CENDL3.2 Threshold 9.1000 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
12
6
0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
29
Incident Energy (eV)
54-Xe-136

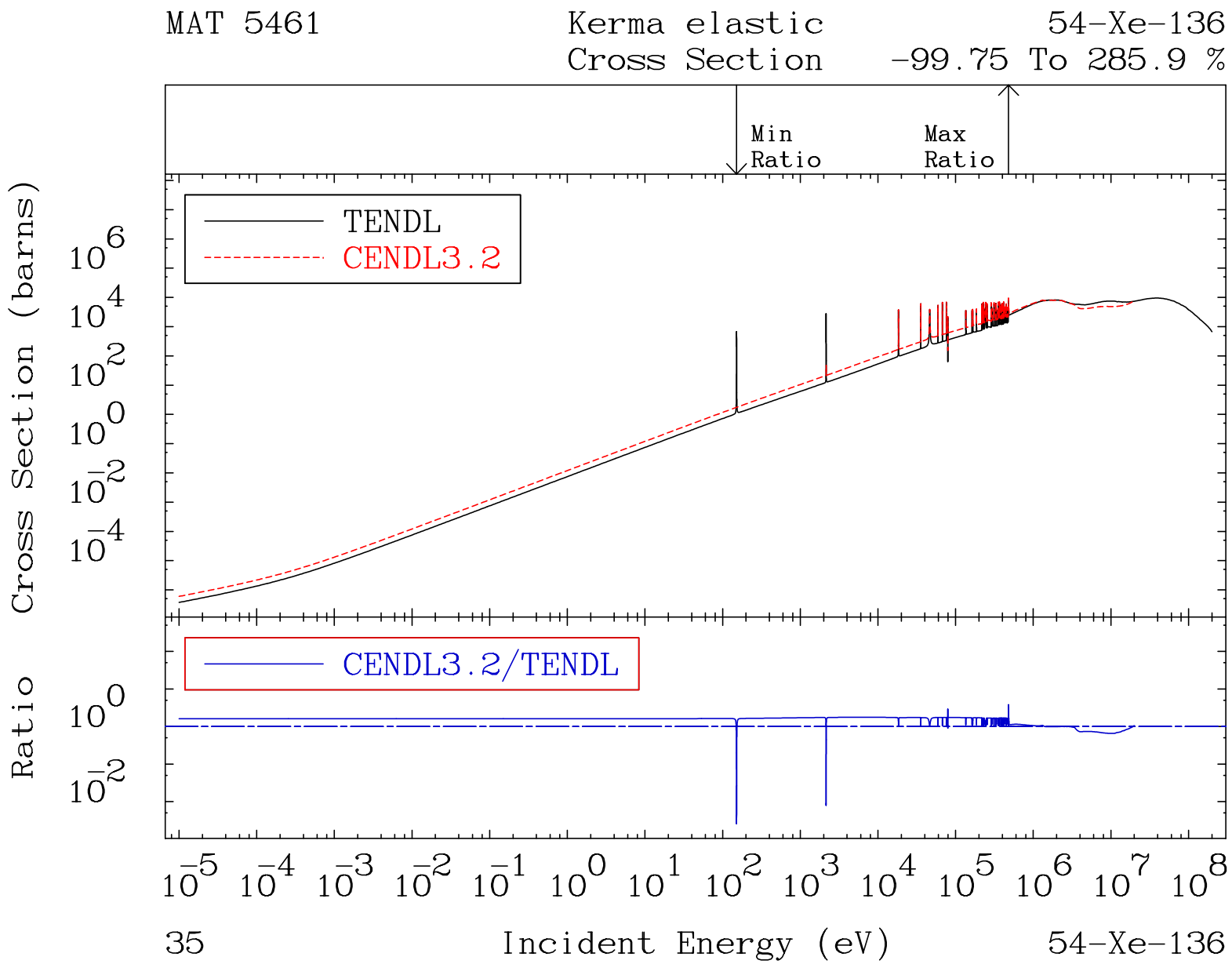

MAT 5461
Hydrogen Production
54-Xe-136
Cross Section -100.0 To 584.4 %
Min Ratio
Max Ratio
TENDL Threshold 6.1469 MeV
CENDL3.2 Threshold 10.400 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
600
400
200
0
8
4
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
30
Incident Energy (eV)
54-Xe-136

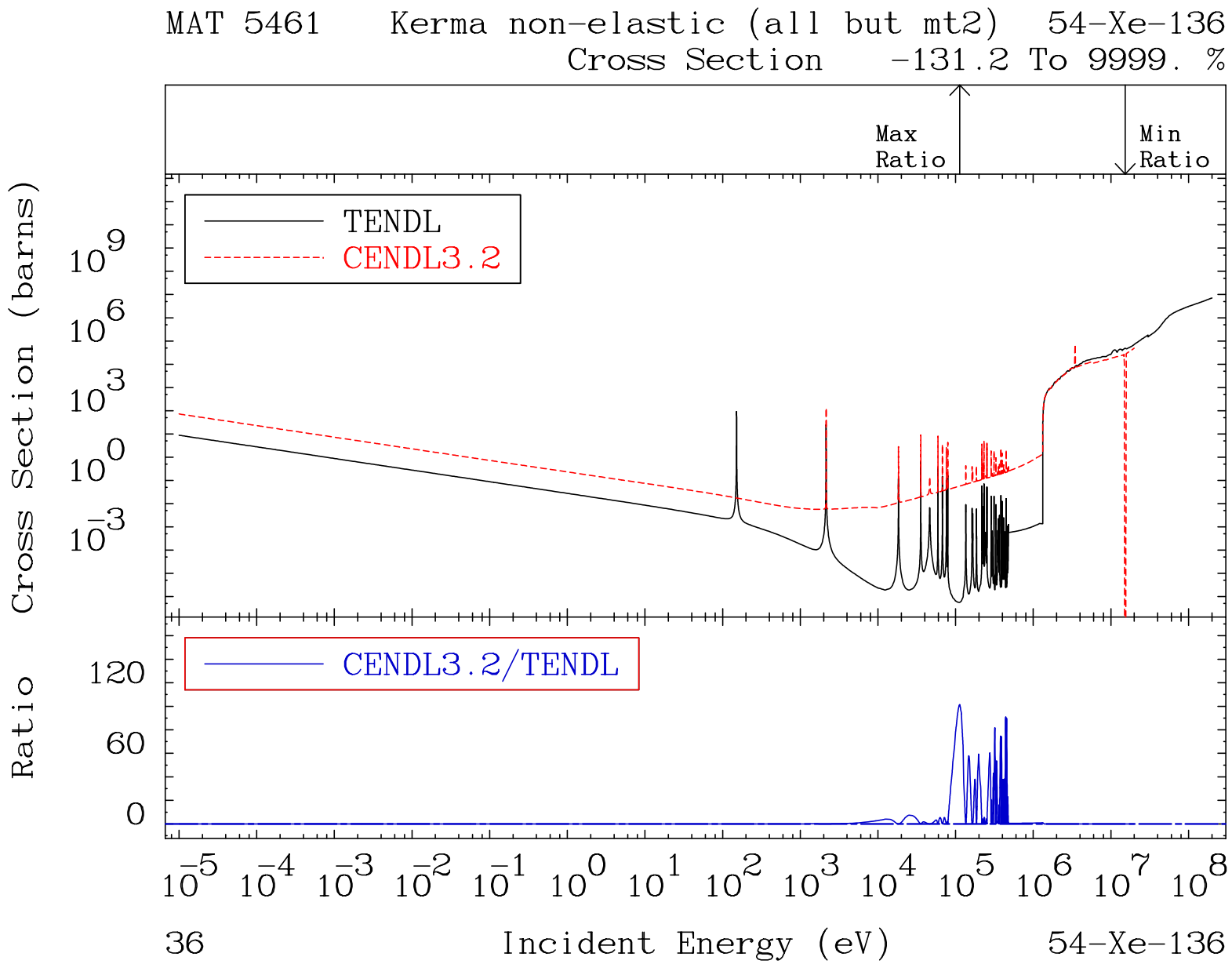

MAT 5461
Deuterium Production
54-Xe-136
Cross Section -100.0 To 185.8 %
Min Ratio
Max Ratio
TENDL Threshold 7.7716 MeV
CENDL3.2 Threshold 12.800 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
4
2
0
8
2
3
4
5
6
7
8
2
10^7
10^8
31
Incident Energy (eV)
54-Xe-136

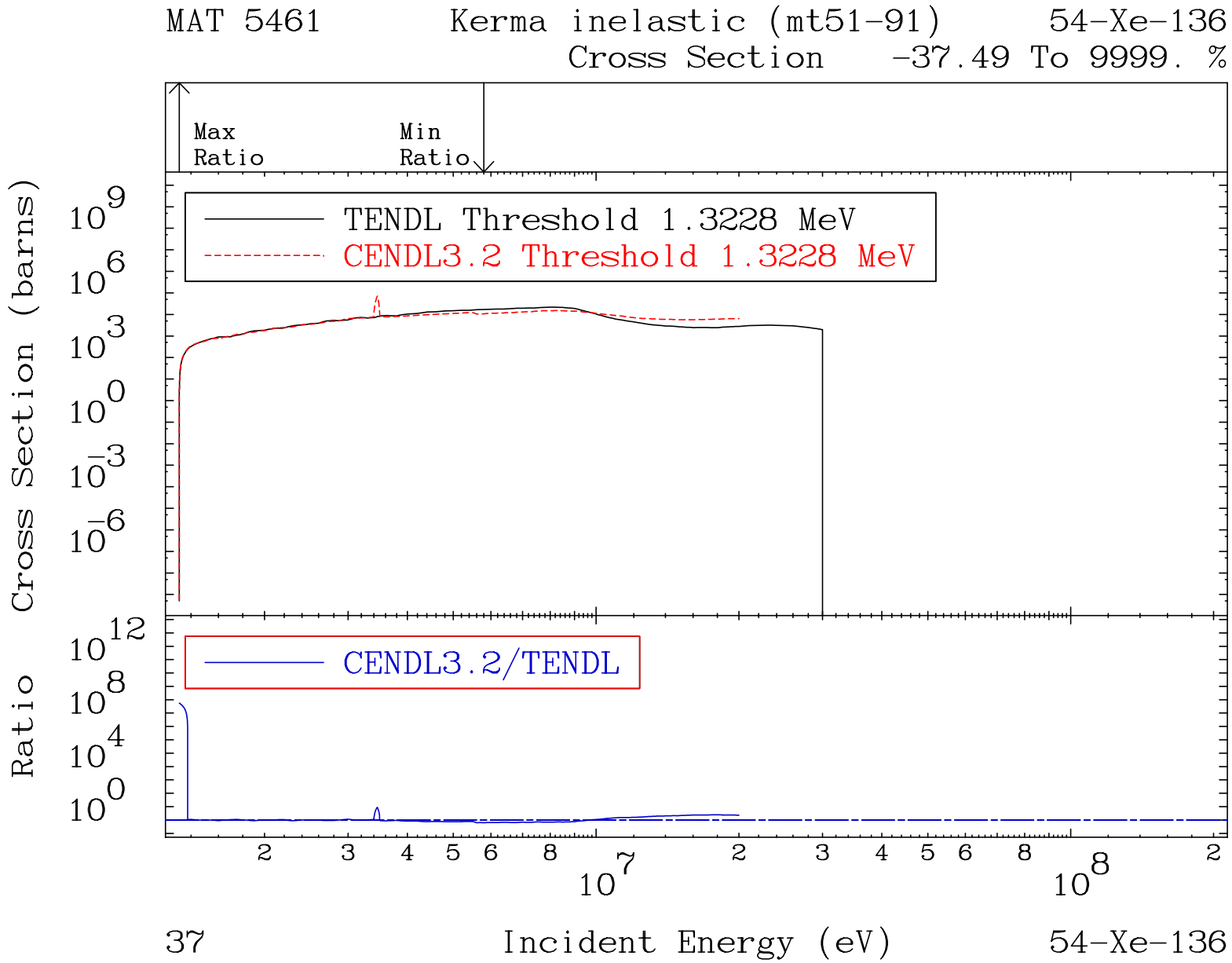

MAT 5461
Tritium Production
54-Xe-136
Cross Section
-100.0 To 436.9 %
Min Ratio
Max Ratio
TENDL Threshold 9.3330 MeV
CENDL3.2 Threshold 14.900 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
8
4
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
32
Incident Energy (eV)
54-Xe-136

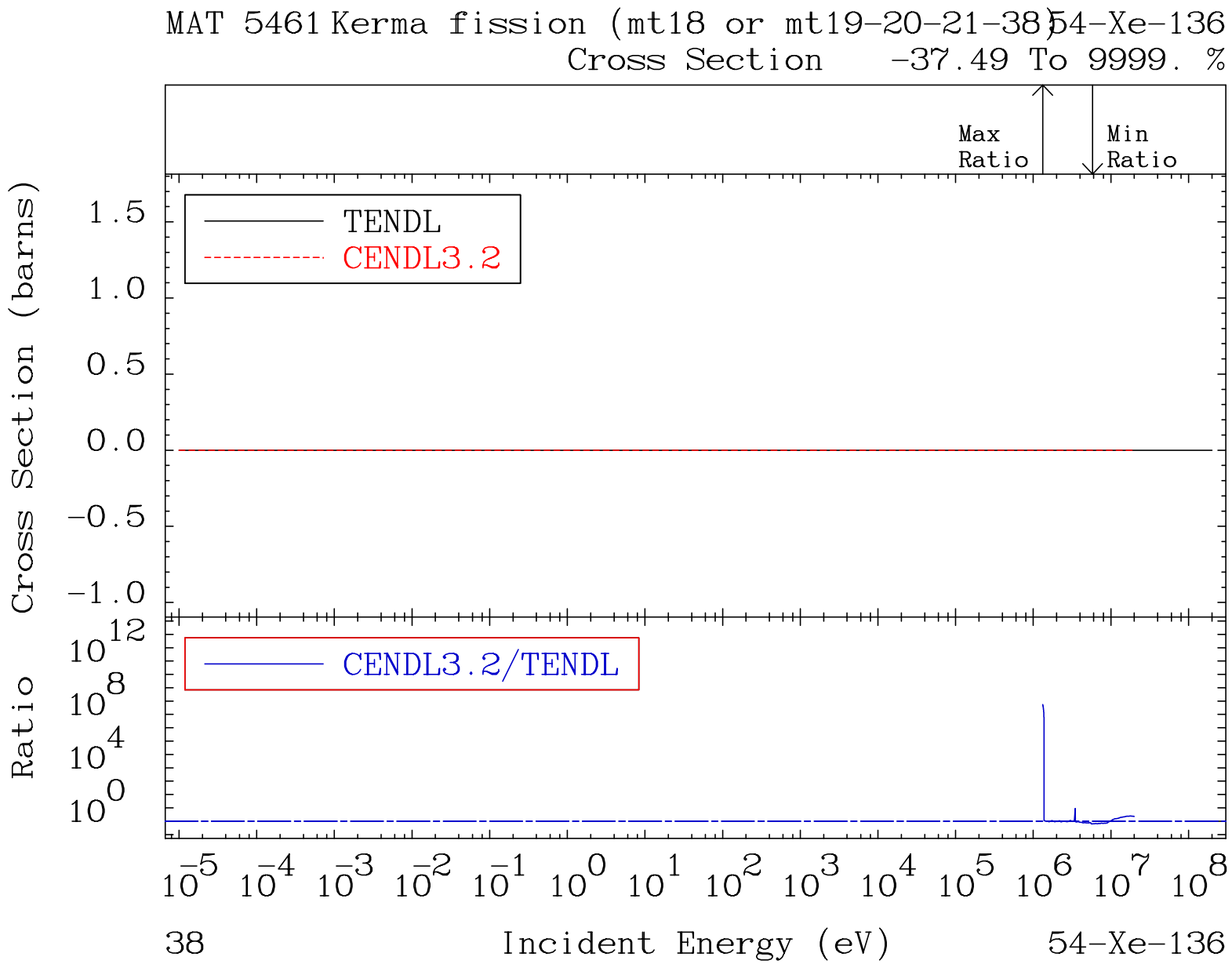

MAT 5461
He-4 Production
Cross Section
54-Xe-136
-100.0 To 836.5 %
Min Ratio
Max Ratio
TENDL Threshold 480.75 keV
CENDL3.2 Threshold 9.1000 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
12
6
0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
33
Incident Energy (eV)
54-Xe-136

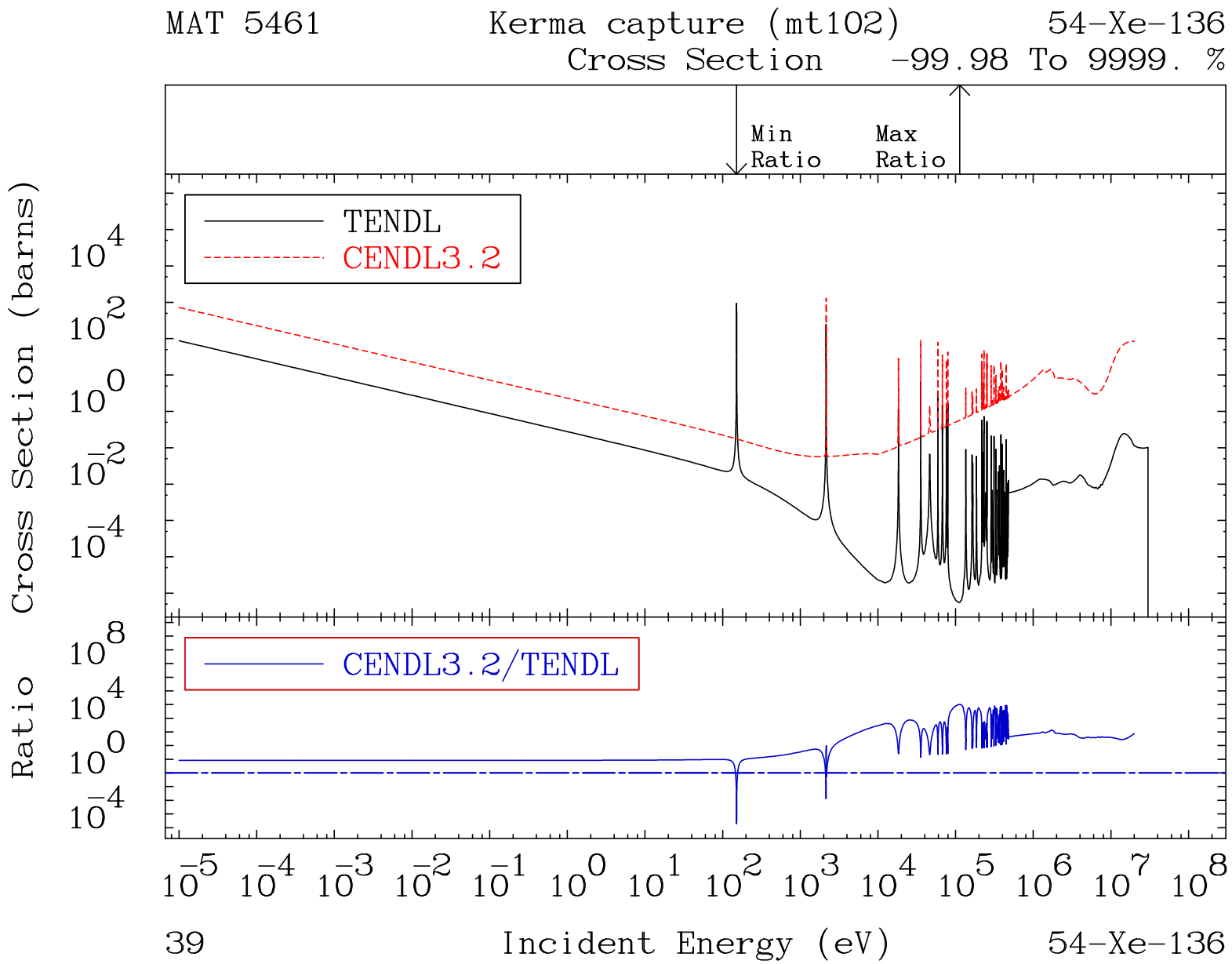

MAT 5461
Kerma total (eV-barns)
54-Xe-136
Cross Section -117.1 To 723.7 %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
34
54-Xe-136

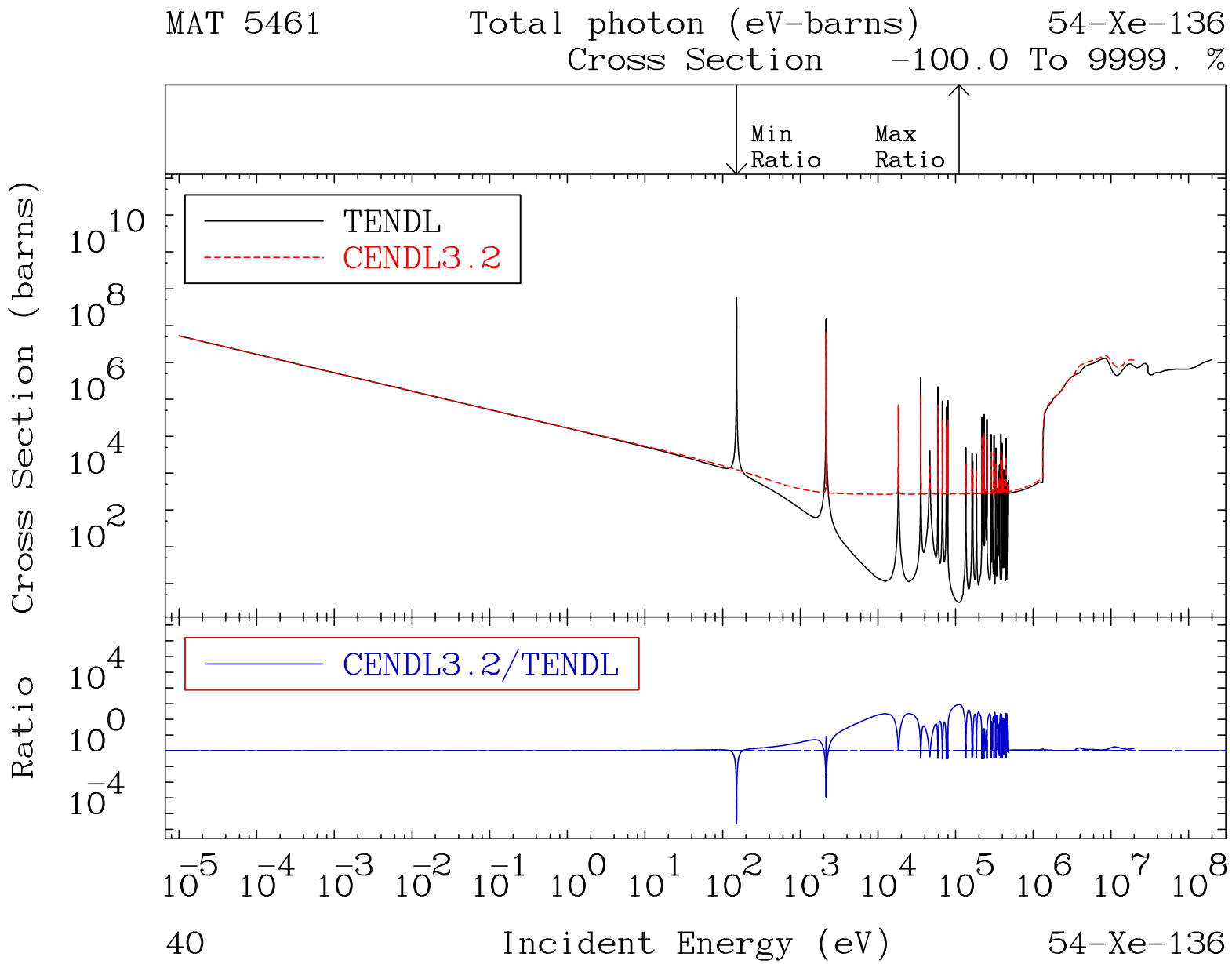

MAT 5461
Kerma elastic
Cross Section
54-Xe-136
-99.75 To 285.9 %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
35
54-Xe-136

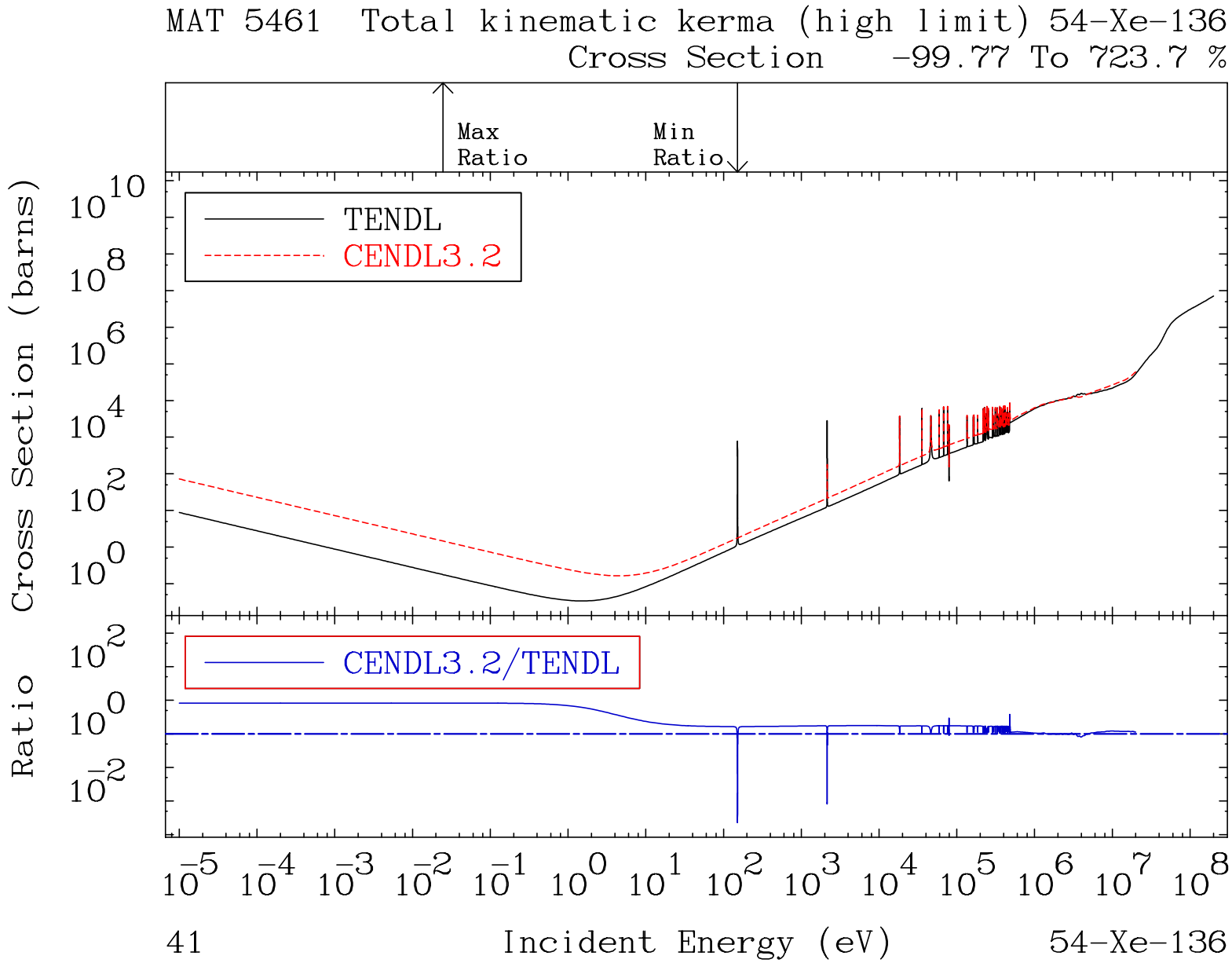

MAT 5461 Kerma non-elastic (all but mt2) 54-Xe-136
Cross Section -131.2 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
10^{9}
10^{6}
10^{3}
10^{0}
10^{-3}
CENDL3.2/TENDL
Ratio
120
60
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
36
Incident Energy (eV)
54-Xe-136

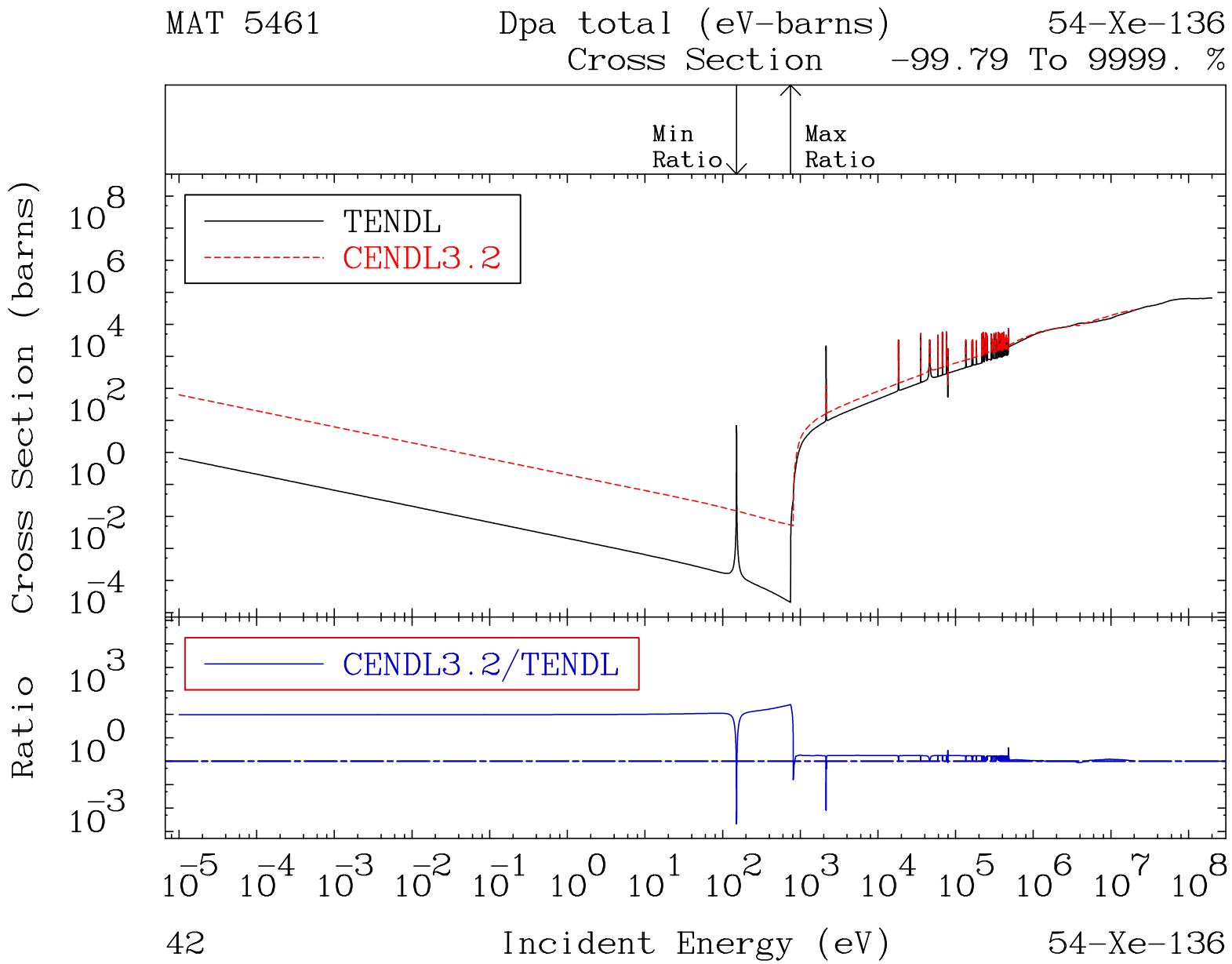

MAT 5461
Kerma inelastic (mt51-91)
54-Xe-136
Cross Section -37.49 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.3228 MeV
CENDL3.2 Threshold 1.3228 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
37
54-Xe-136

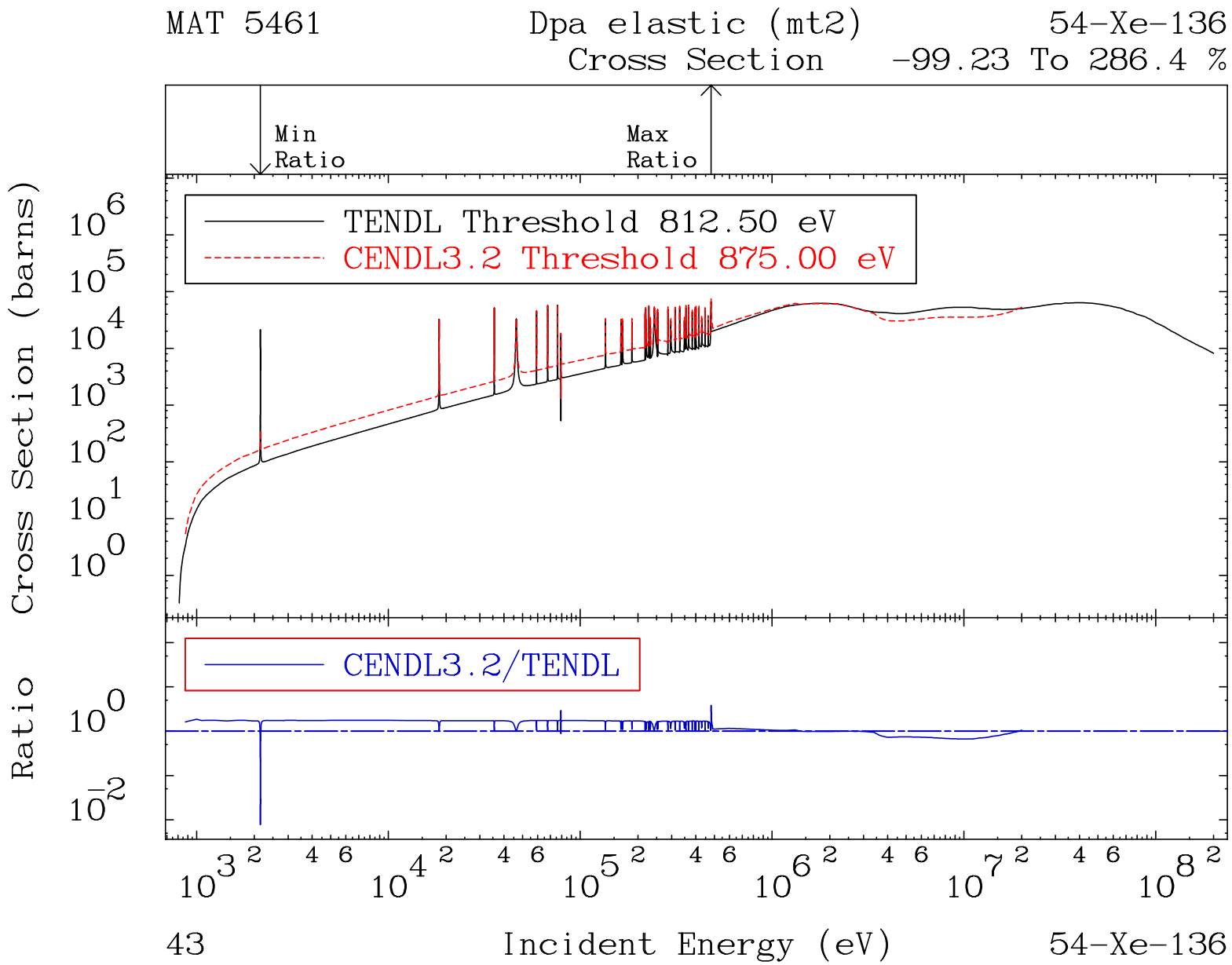

MAT 5461 Kerma fission (mt18 or mt19-20-21-38) 54-Xe-136
Cross Section -37.49 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{12}
10^{8}
10^{4}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
38
Incident Energy (eV)
54-Xe-136

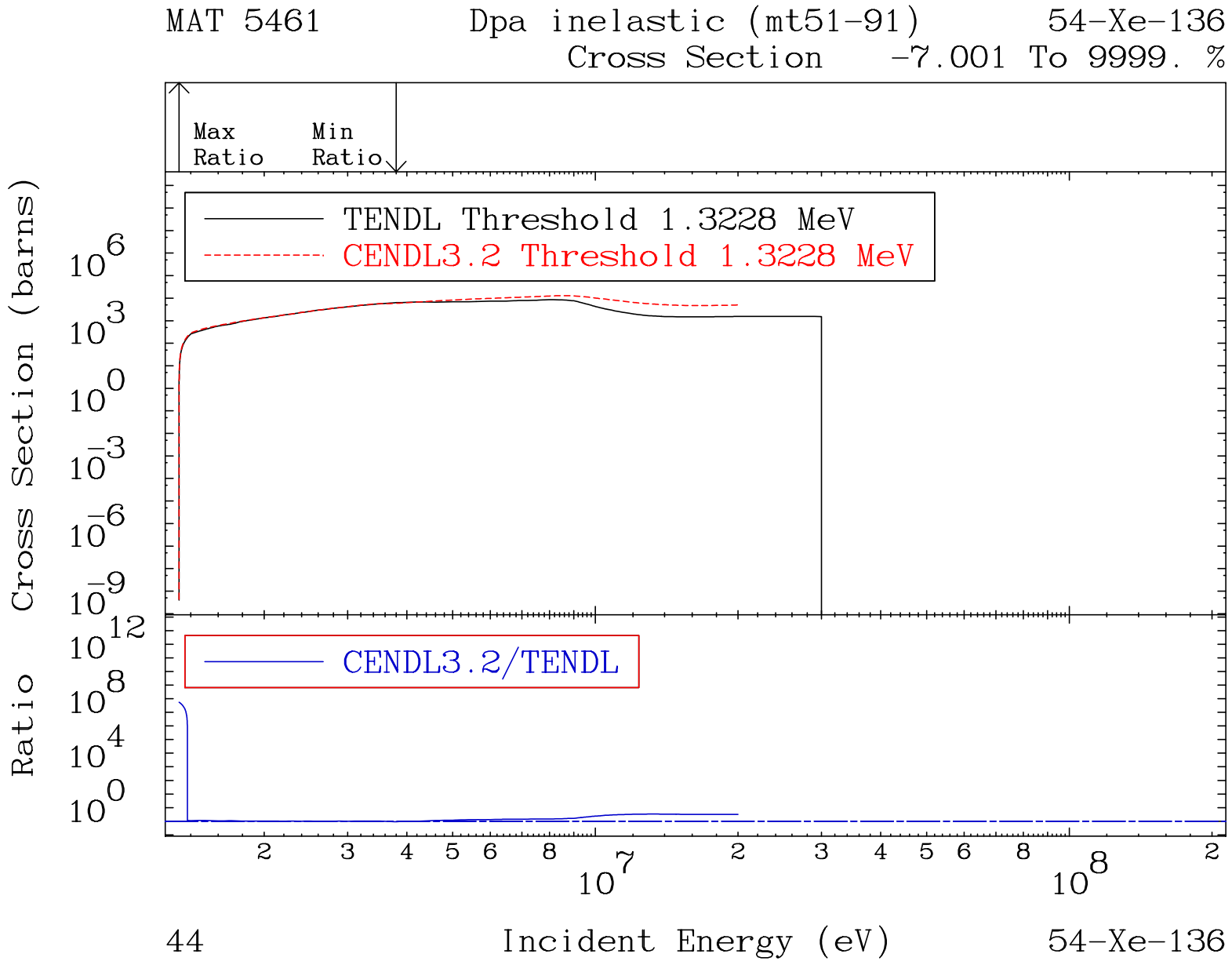

MAT 5461
Kerma capture (mt102)
54-Xe-136
Cross Section -99.98 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
54-Xe-136

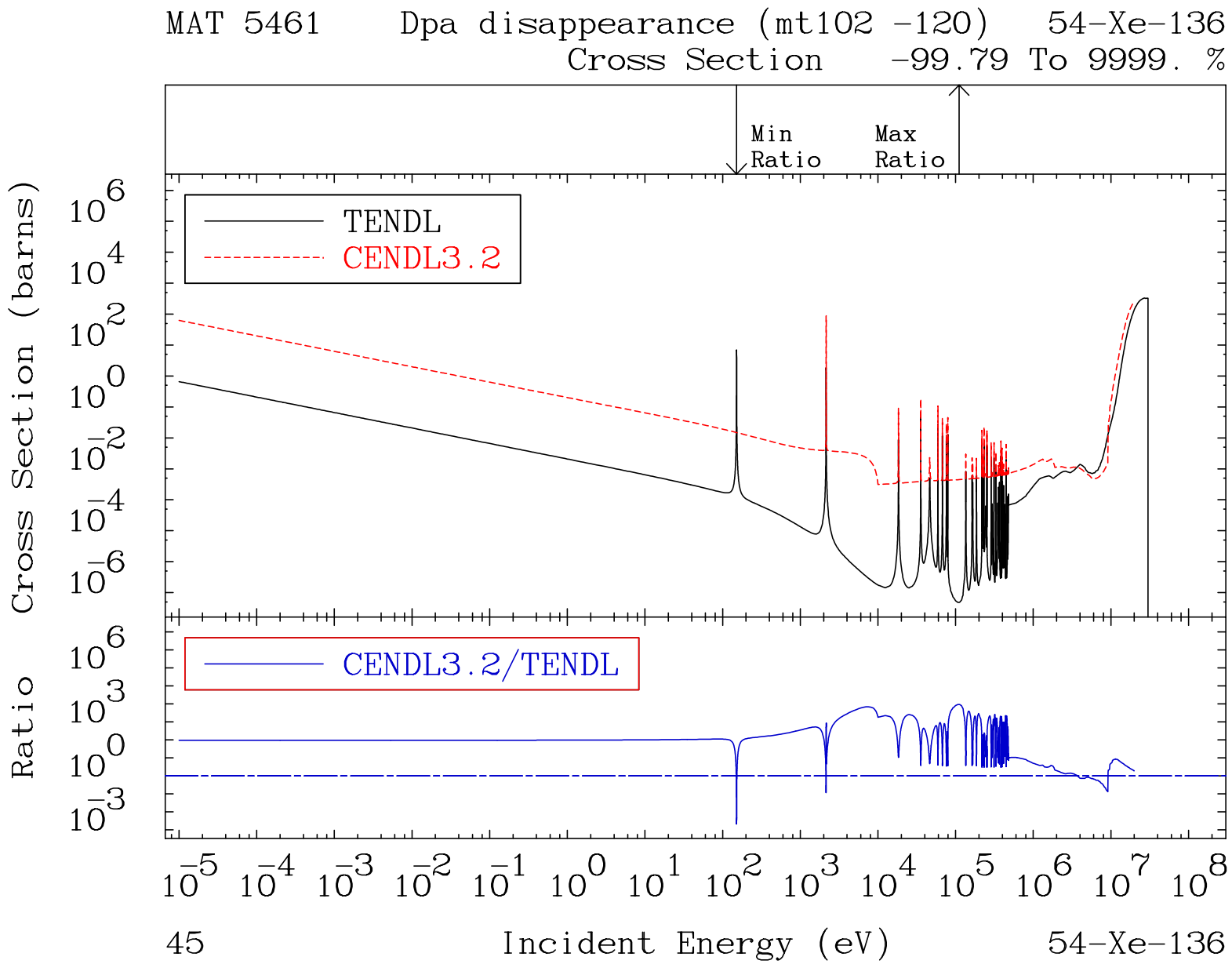

MAT 5461
Total photon (eV-barns)
54-Xe-136
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
40
54-Xe-136


MAT 5461 Total kinematic kerma (high limit) 54-Xe-136
Cross Section -99.77 To 723.7 %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
54-Xe-136


MAT 5461
Dpa total (eV-barns)
54-Xe-136
Cross Section -99.79 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
42
54-Xe-136


MAT 5461
Dpa elastic (mt2)
Cross Section
54-Xe-136
-99.23 To 286.4 %
Min Ratio
Max Ratio
TENDL Threshold 812.50 eV
CENDL3.2 Threshold 875.00 eV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
54-Xe-136


MAT 5461
Dpa inelastic (mt51-91)
54-Xe-136
Cross Section -7.001 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.3228 MeV
CENDL3.2 Threshold 1.3228 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
54-Xe-136


MAT 5461 Dpa disappearance (mt102 -120) 54-Xe-136
Cross Section -99.79 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
54-Xe-136