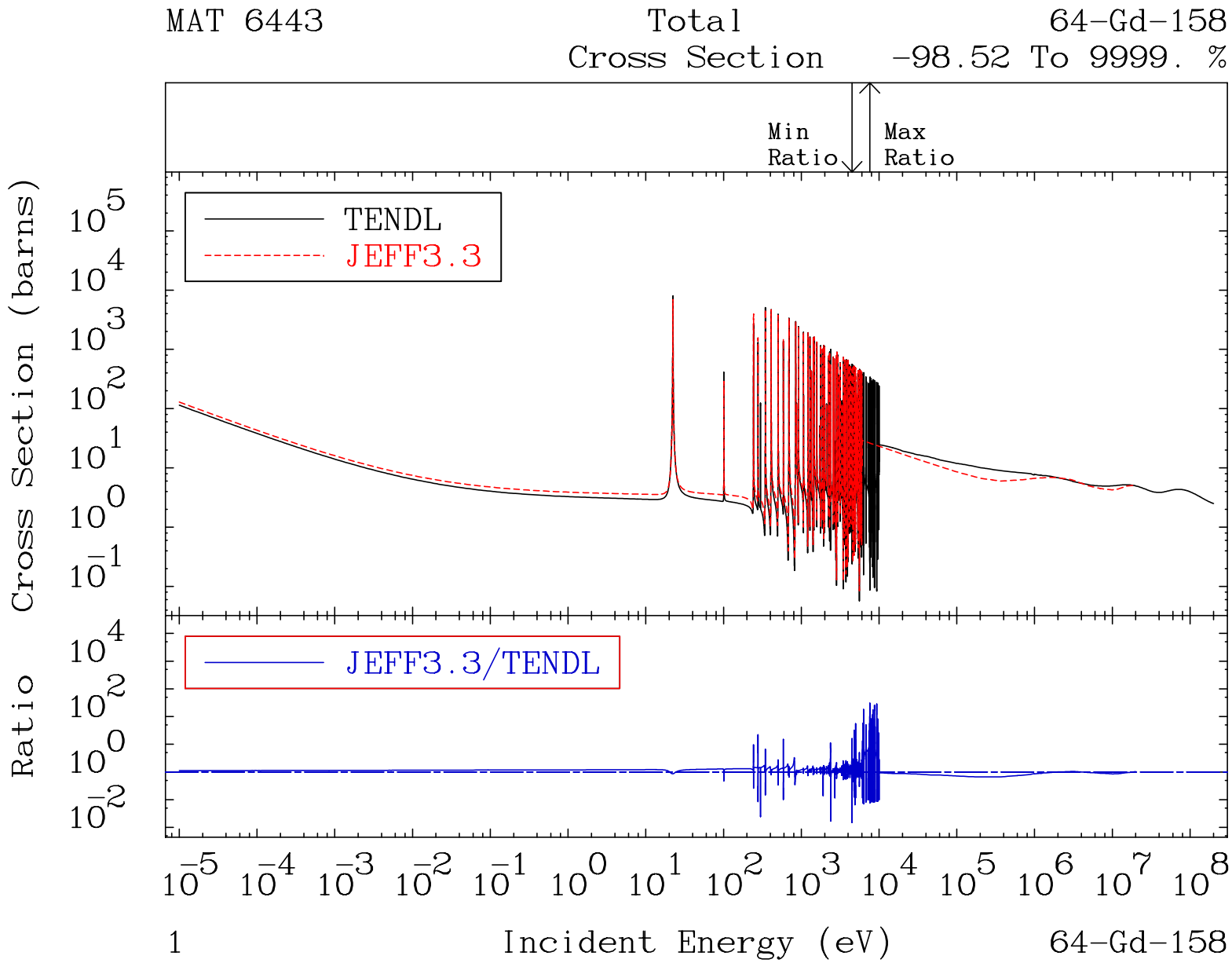
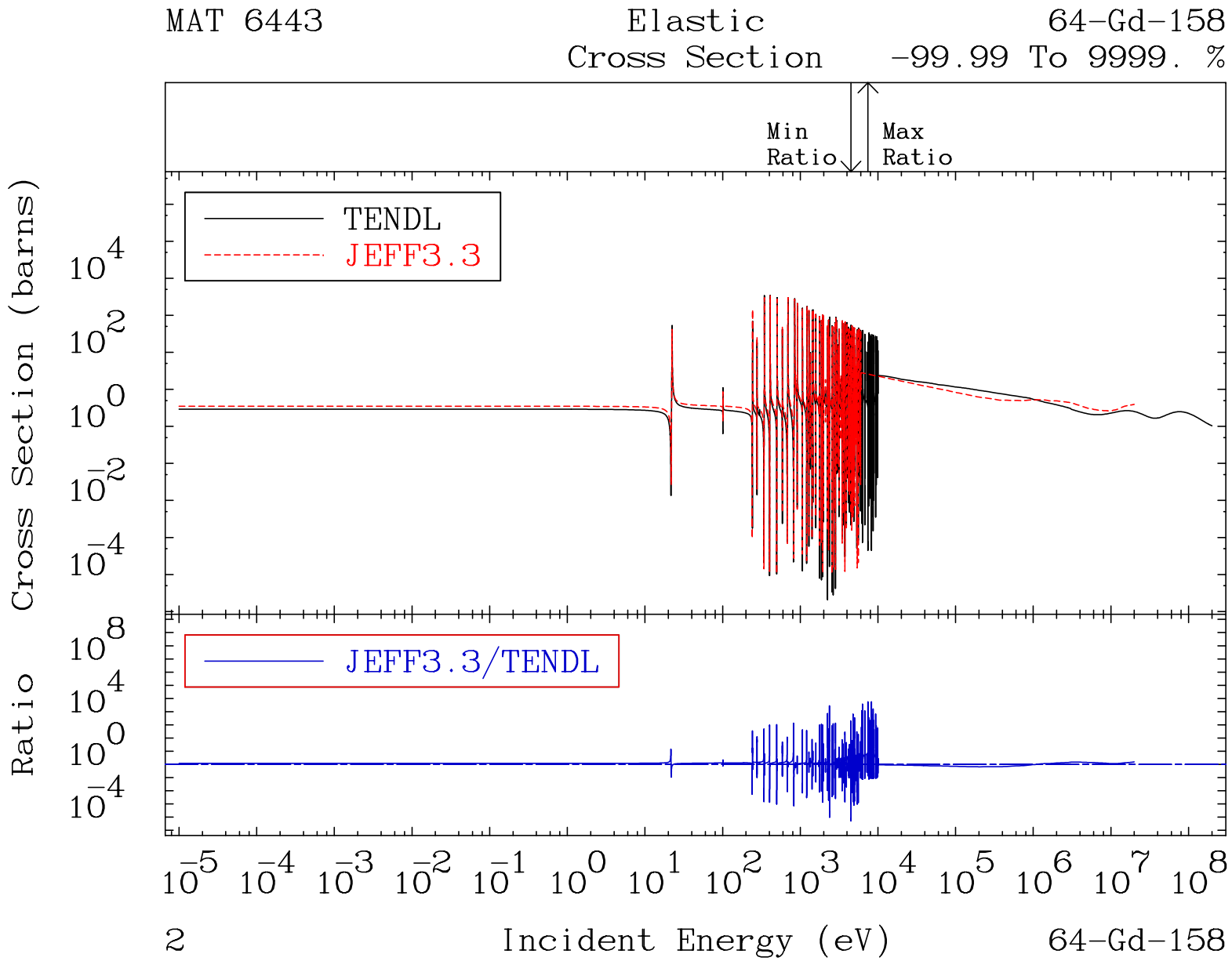
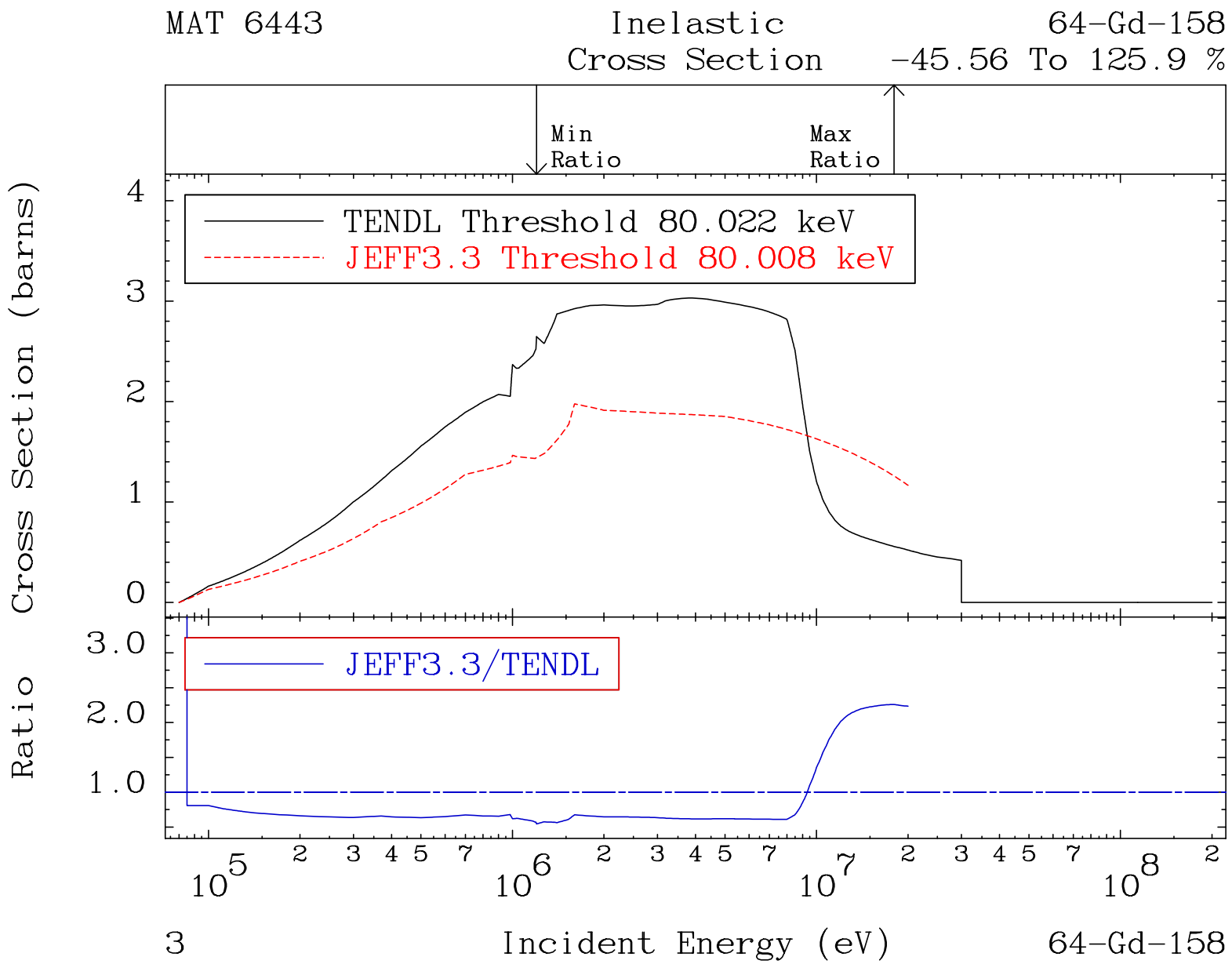
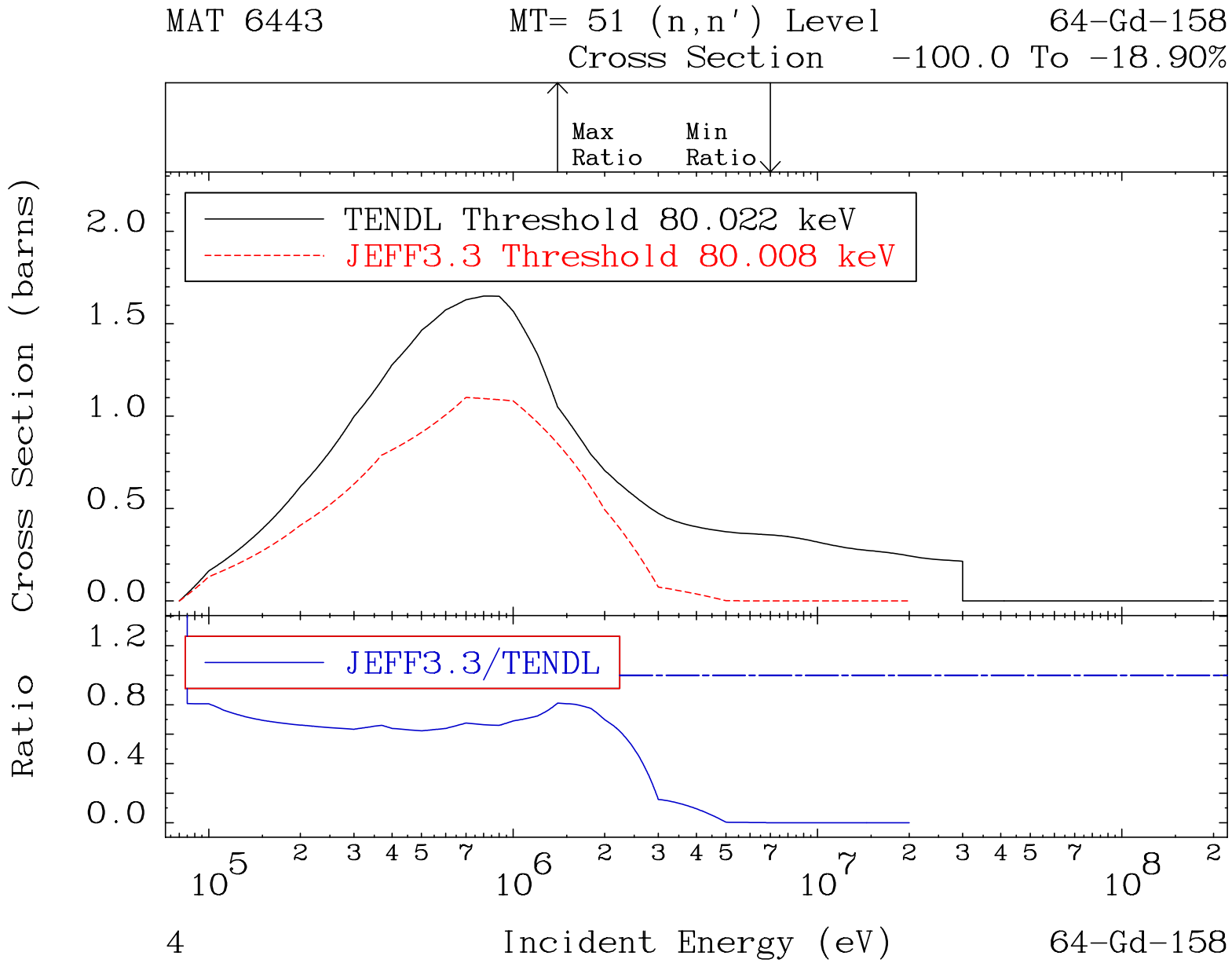
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

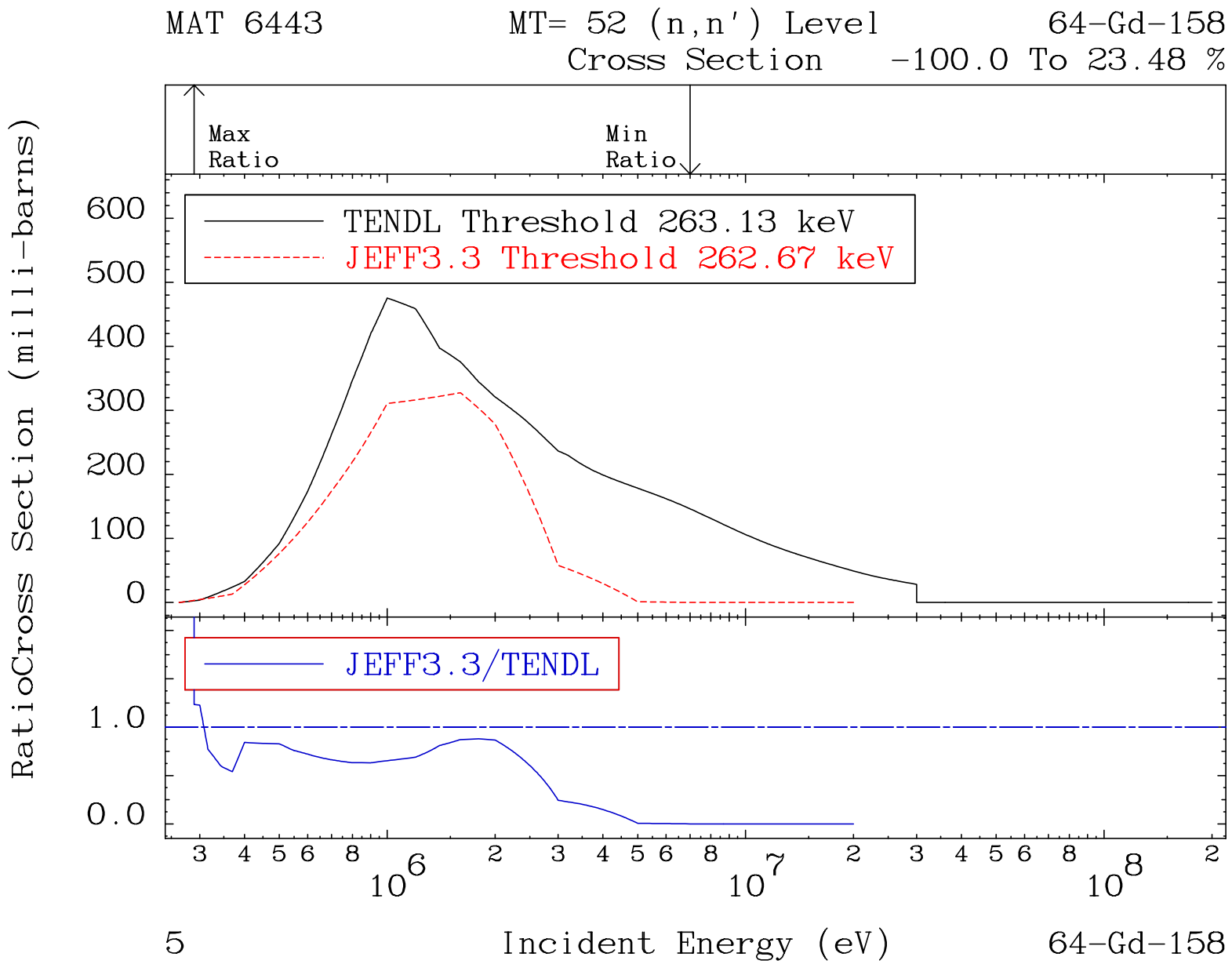
Press Mouse Button to Start

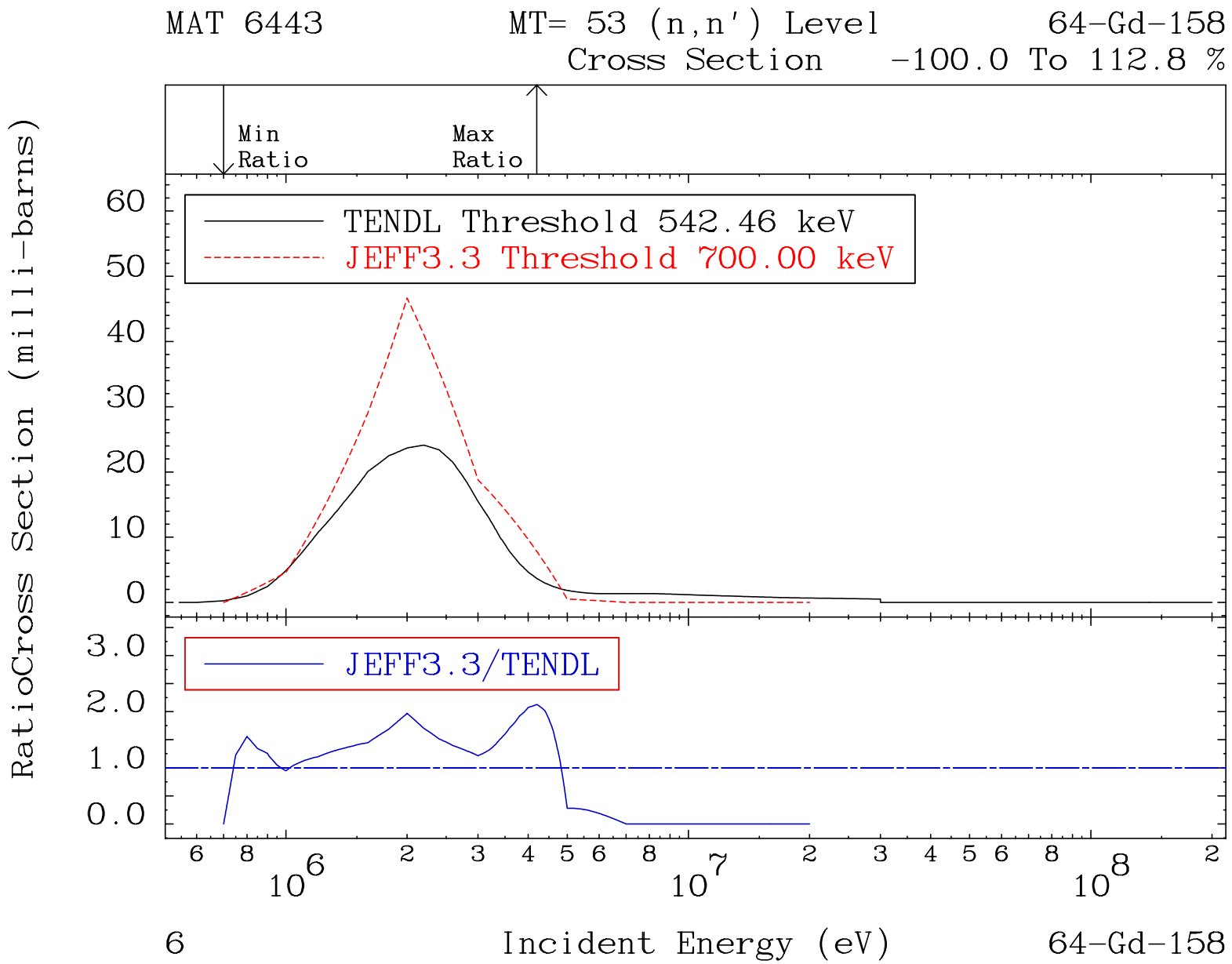

MAT 6443
Total
Cross Section
64-Gd-158
-98.52 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
64-Gd-158

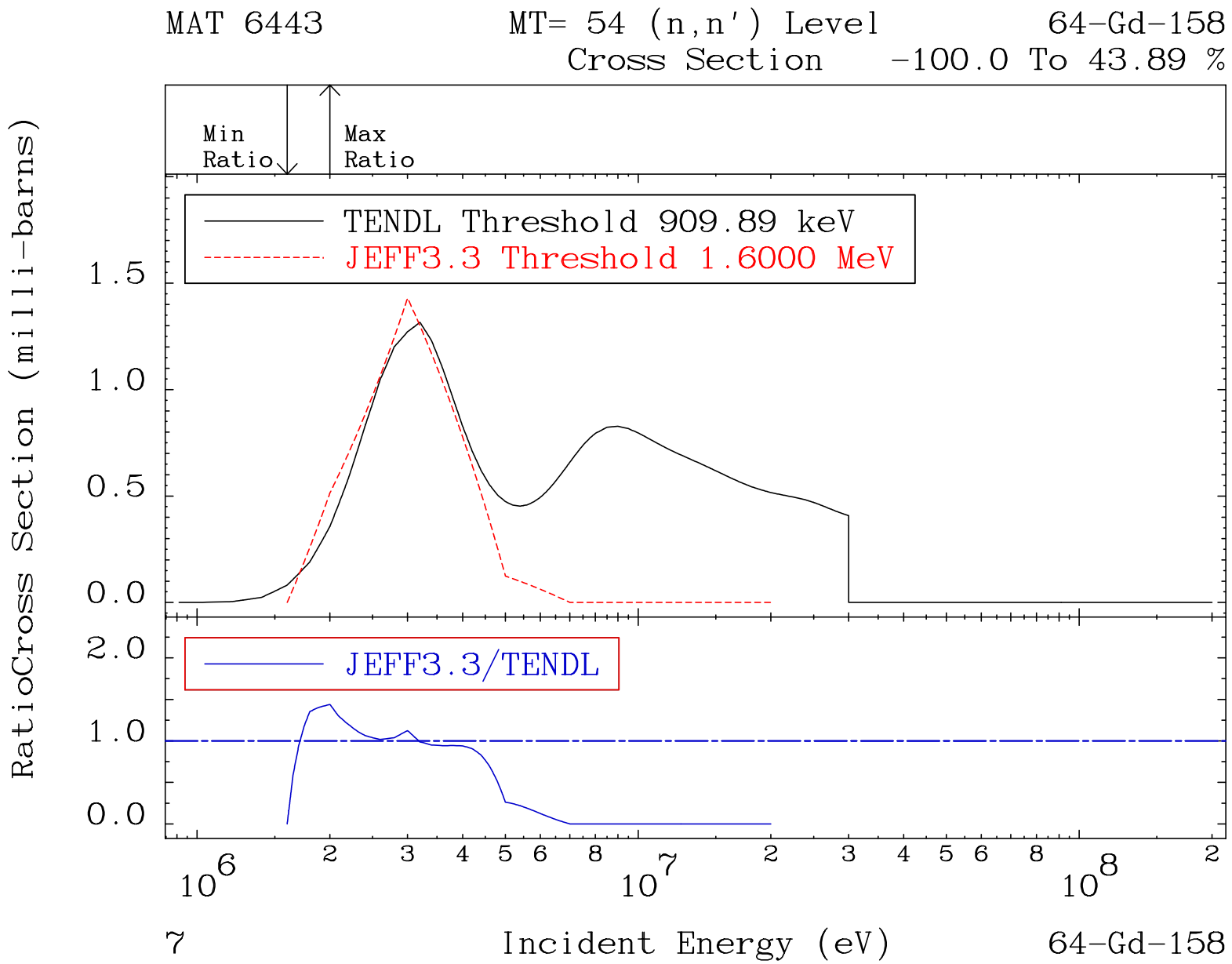

MAT 6443
Elastic
Cross Section
64-Gd-158
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
64-Gd-158

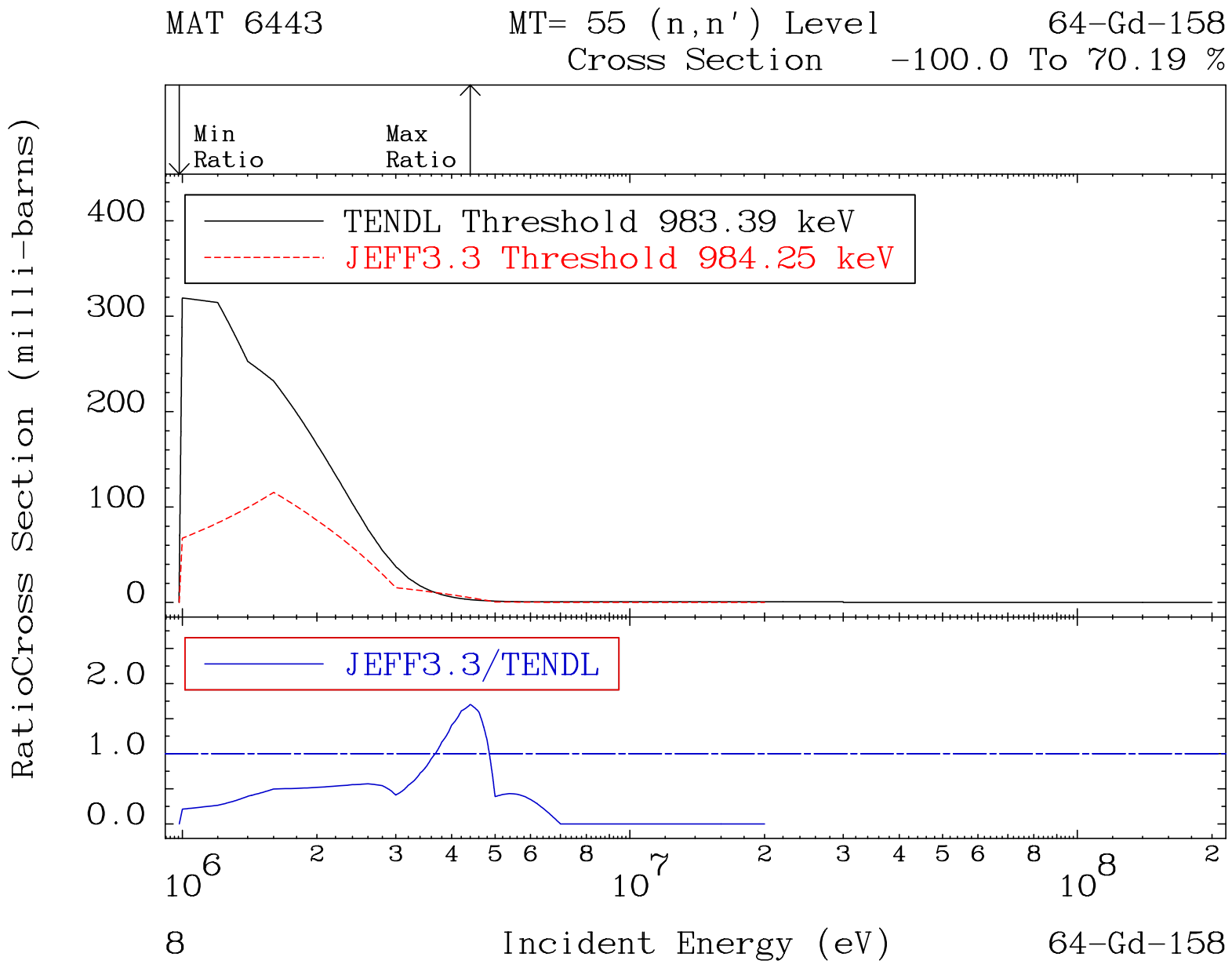

MAT 6443
Inelastic
Cross Section
64-Gd-158
-45.56 To 125.9 %
Min
Ratio
Max
Ratio
TENDL Threshold 80.022 keV
JEFF3.3 Threshold 80.008 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64-Gd-158
3

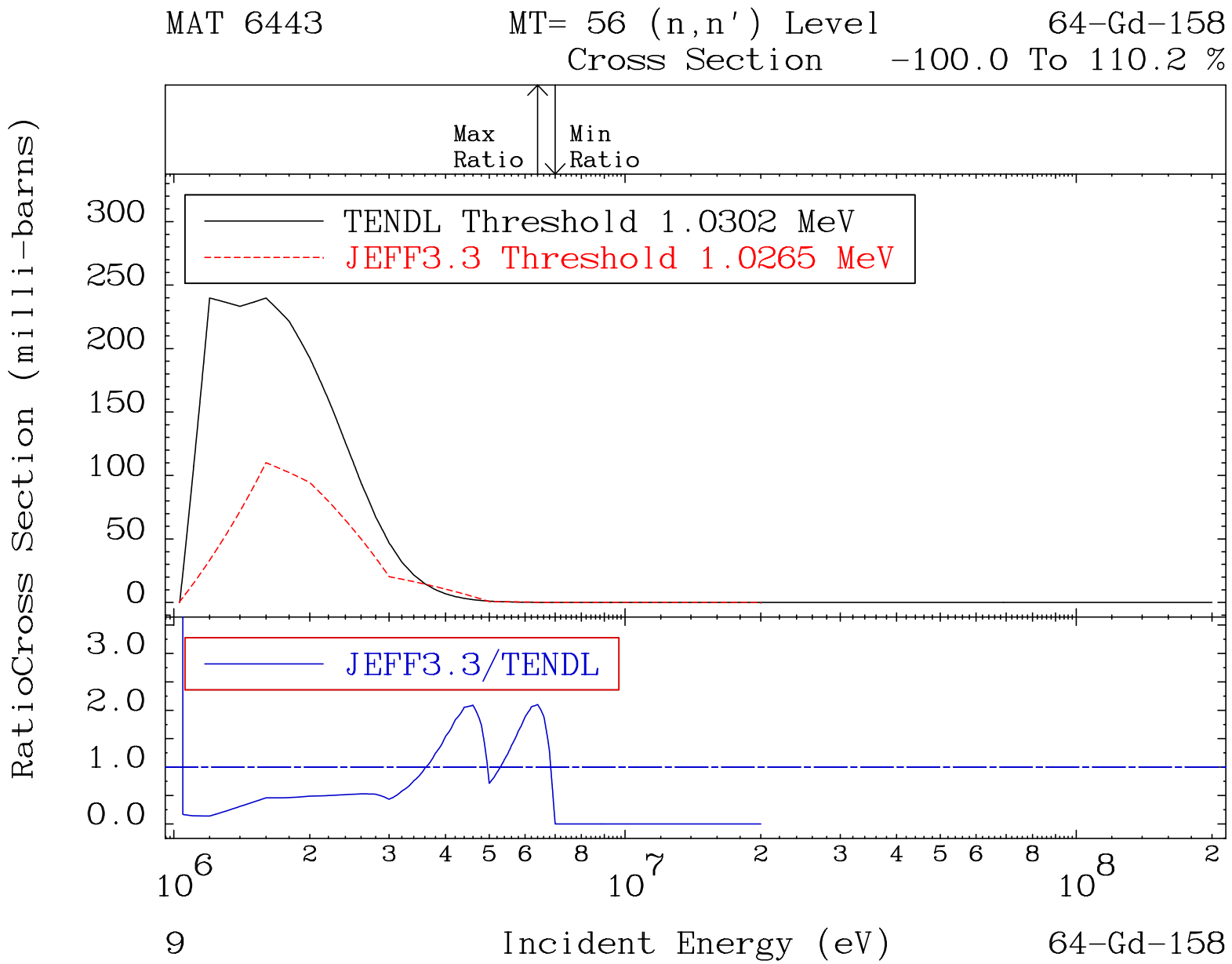

MAT 6443
MT= 51 (n,n') Level
64-Gd-158
Cross Section -100.0 To -18.90%
Max Ratio
Min Ratio
TENDL Threshold 80.022 keV
JEFF3.3 Threshold 80.008 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64-Gd-158
4

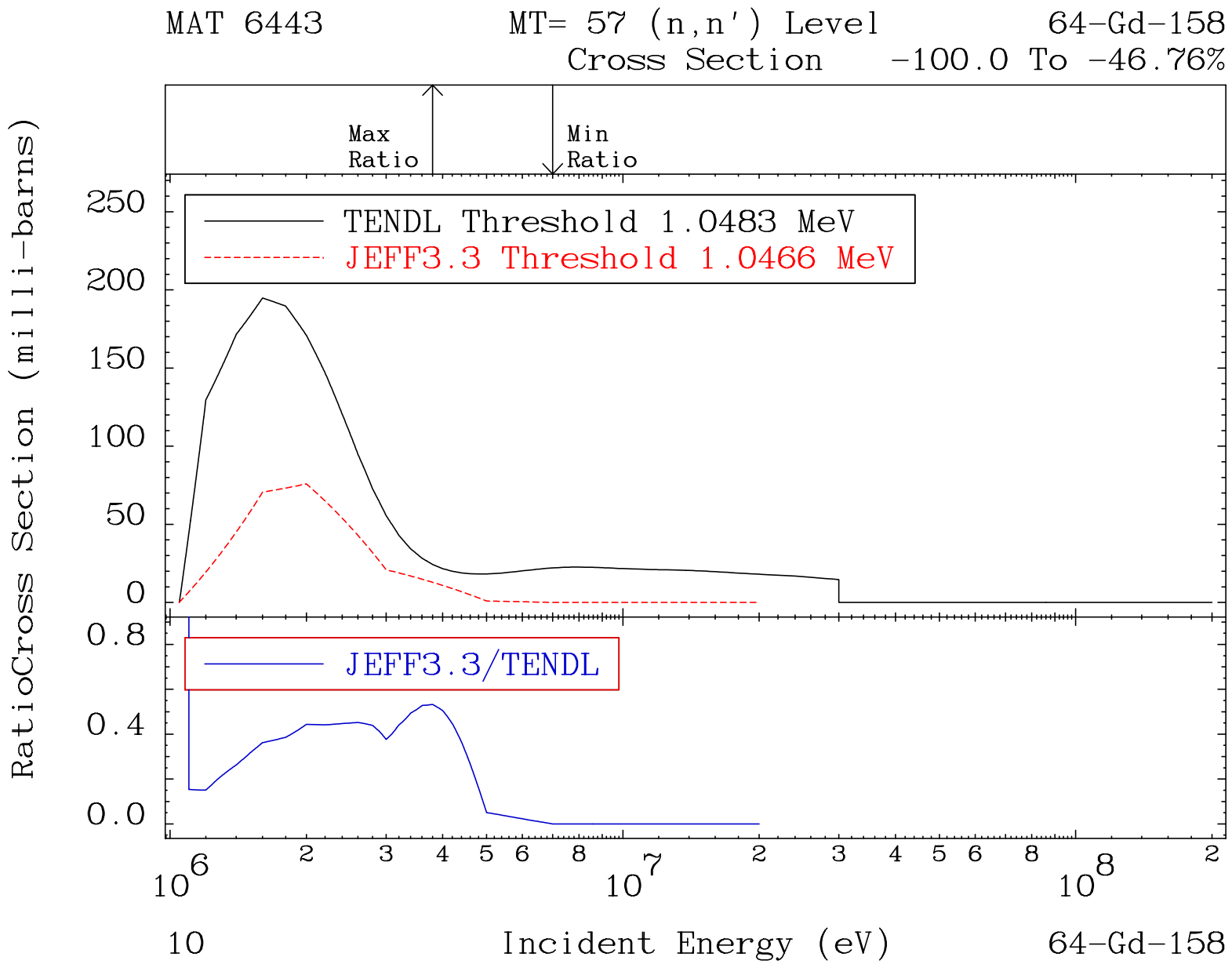

MAT 6443
MT= 52 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 23.48 %
Max Ratio
Min Ratio
TENDL Threshold 263.13 keV
JEFF3.3 Threshold 262.67 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
600
500
400
300
200
100
0
1.0
0.0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
5
64-Gd-158

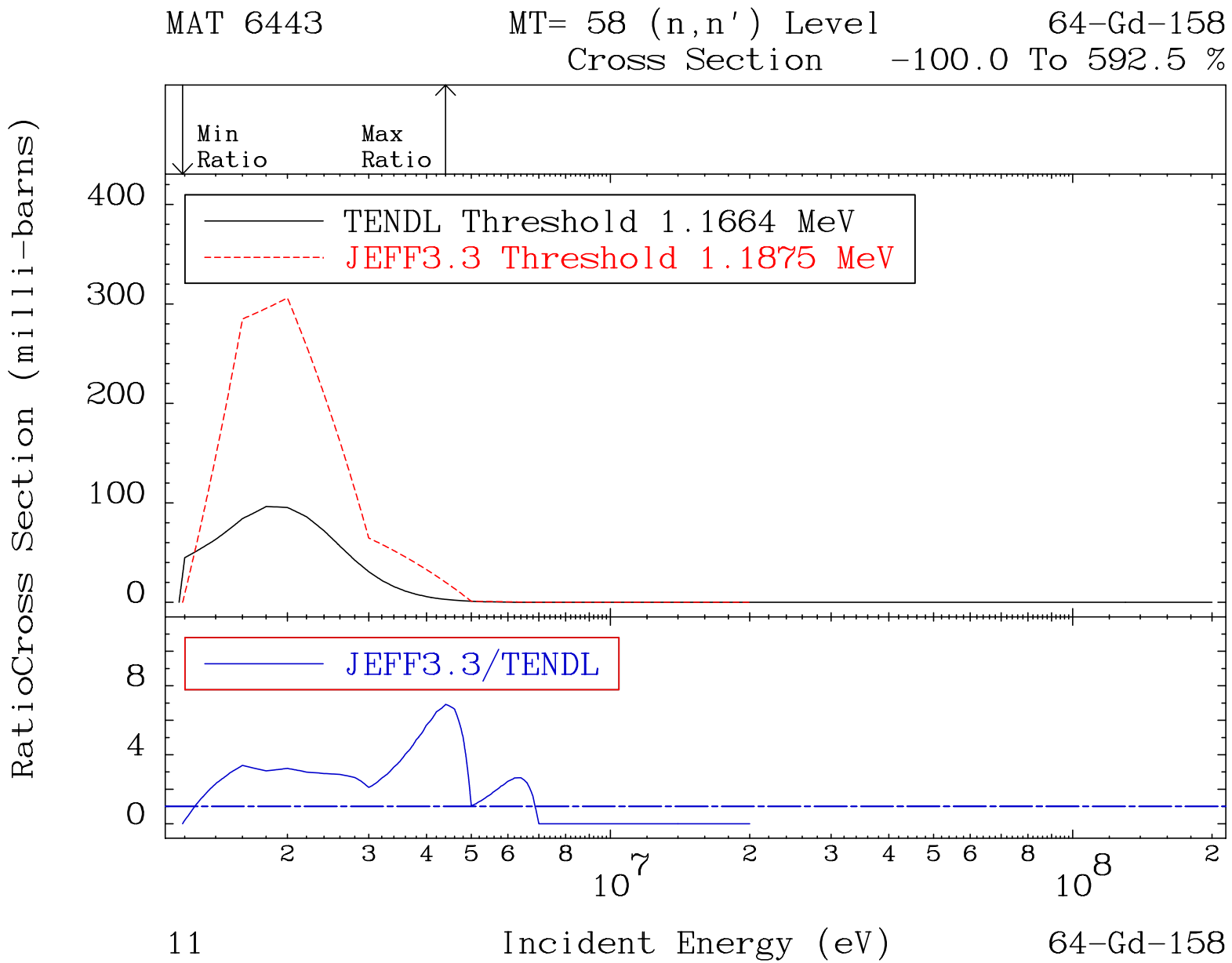

MAT 6443
MT= 53 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 112.8 %
Min Ratio
Max Ratio
TENDL Threshold 542.46 keV
JEFF3.3 Threshold 700.00 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
6
64-Gd-158

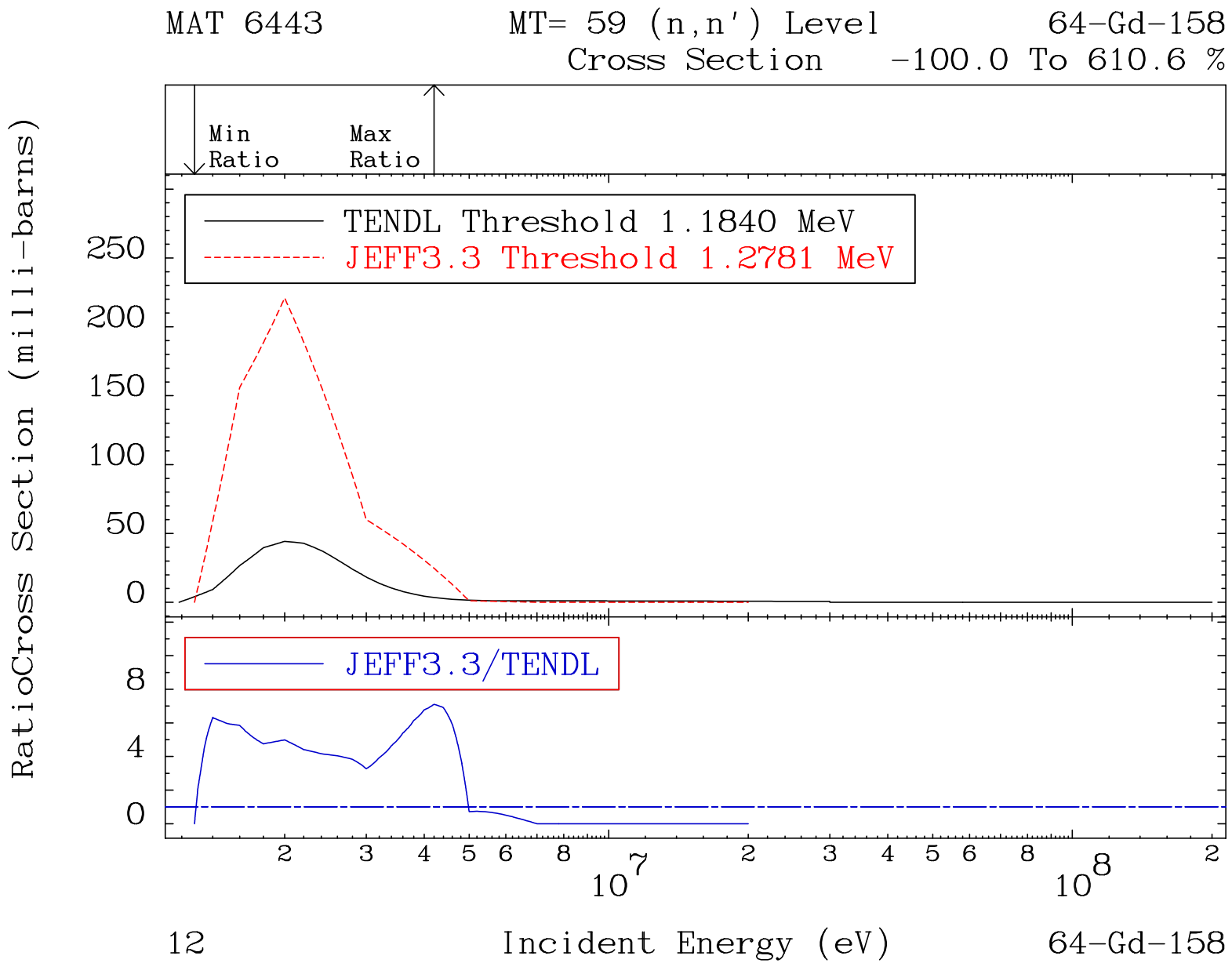

MAT 6443
MT= 54 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 43.89 %
Min Ratio
Max Ratio
TENDL Threshold 909.89 keV
JEFF3.3 Threshold 1.6000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.5
1.0
0.5
0.0
2.0
1.0
0.0
10^6
2 3 4 5 6 8
10^7
2 3 4 5 6 8
10^8
2
7
Incident Energy (eV)
64-Gd-158

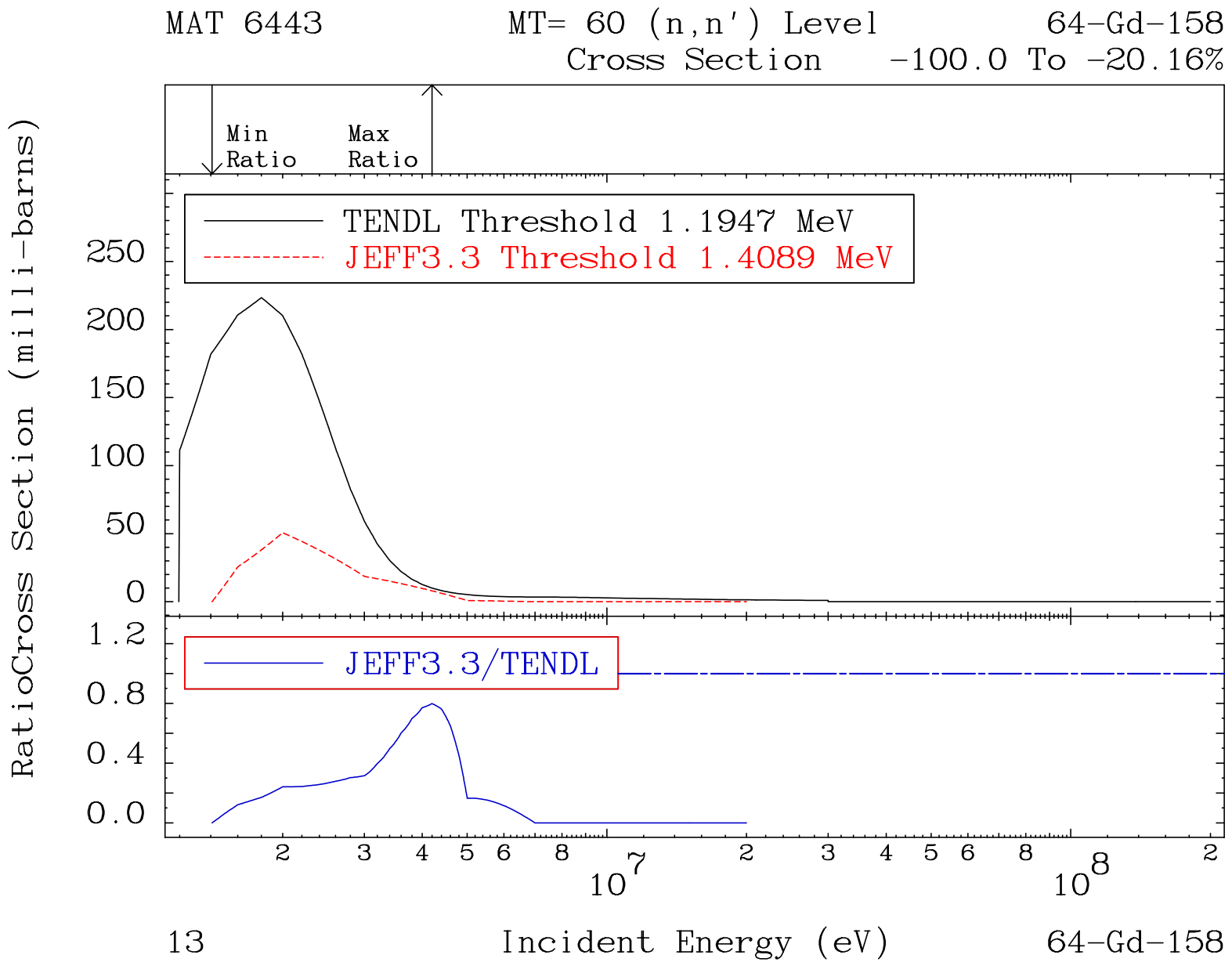

MAT 6443
MT= 55 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 70.19 %
Min Ratio
Max Ratio
TENDL Threshold 983.39 keV
JEFF3.3 Threshold 984.25 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
2.0
1.0
0.0
10^6
10^7
10^8
Incident Energy (eV)
64-Gd-158

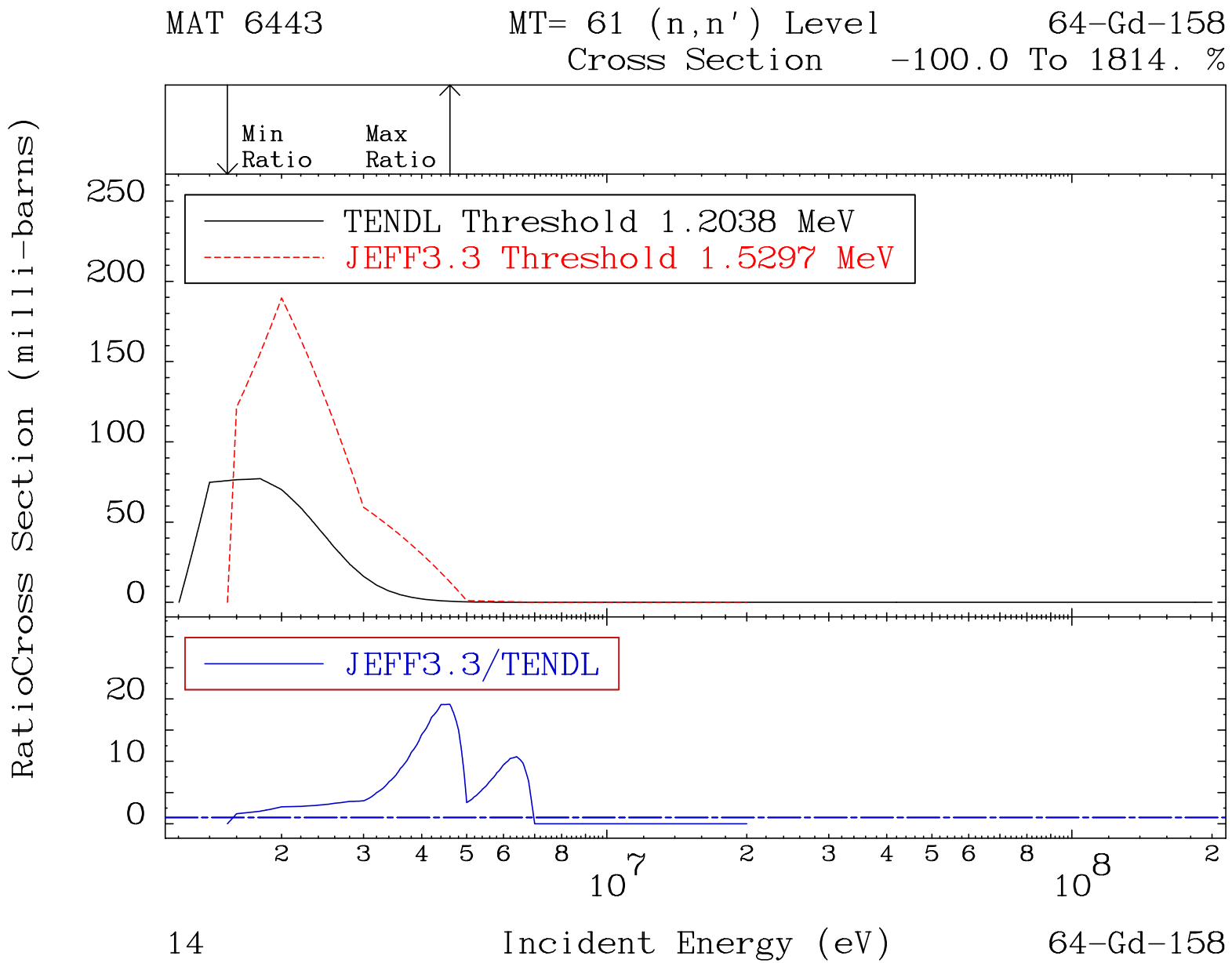

MAT 6443
MT= 56 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 110.2 %
Max Ratio
Min Ratio
TENDL Threshold 1.0302 MeV
JEFF3.3 Threshold 1.0265 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
3.0
2.0
1.0
0.0
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
9
Incident Energy (eV)
64-Gd-158

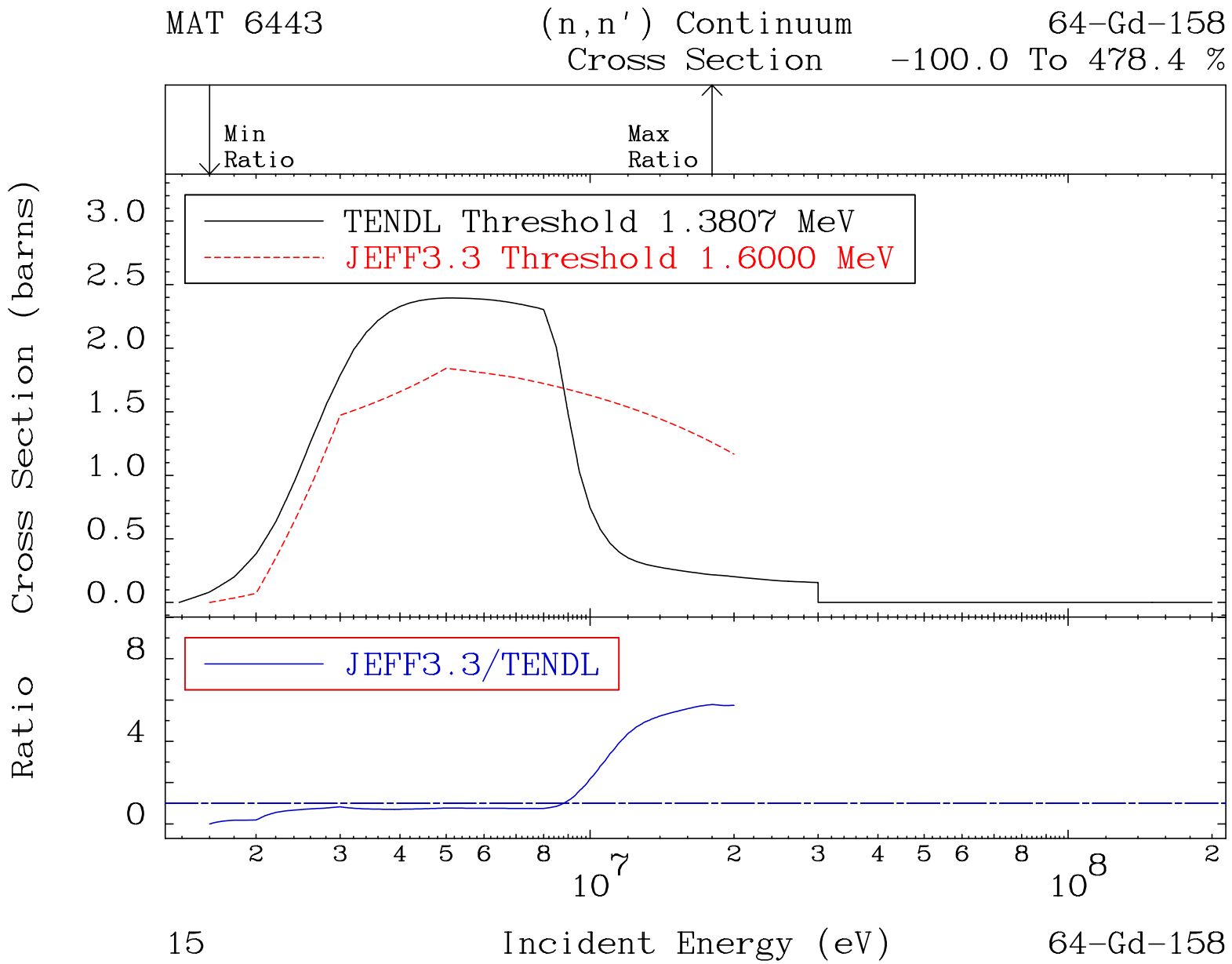

MAT 6443
MT= 57 (n,n') Level
64-Gd-158
Cross Section -100.0 To -46.76%
Max Ratio
Min Ratio
TENDL Threshold 1.0483 MeV
JEFF3.3 Threshold 1.0466 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
0.8
0.4
0.0
10^6
10^7
10^8
Incident Energy (eV)
64-Gd-158

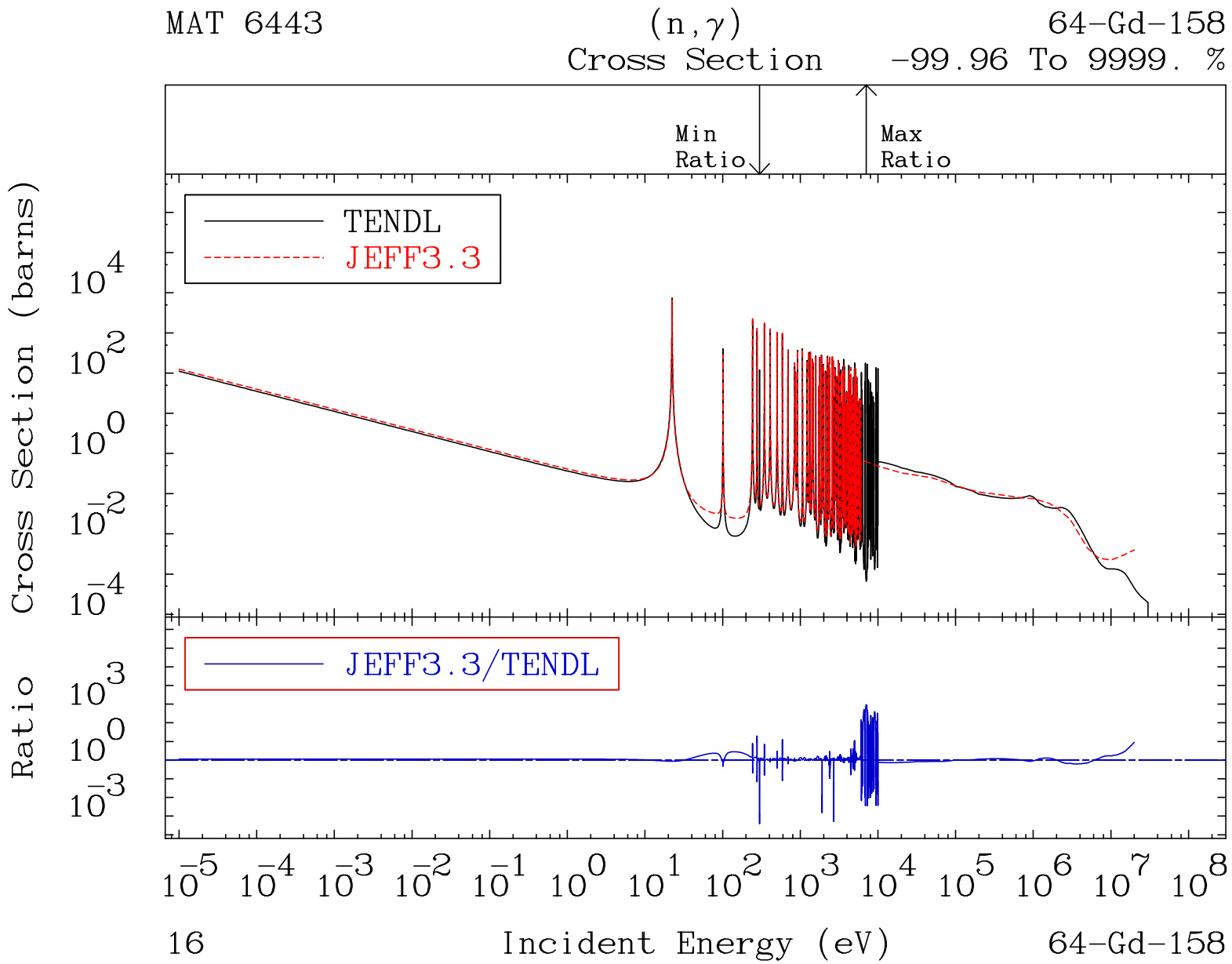

MAT 6443
MT= 58 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 592.5 %
Min Ratio
Max Ratio
TENDL Threshold 1.1664 MeV
JEFF3.3 Threshold 1.1875 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
8
4
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
11
Incident Energy (eV)
64-Gd-158

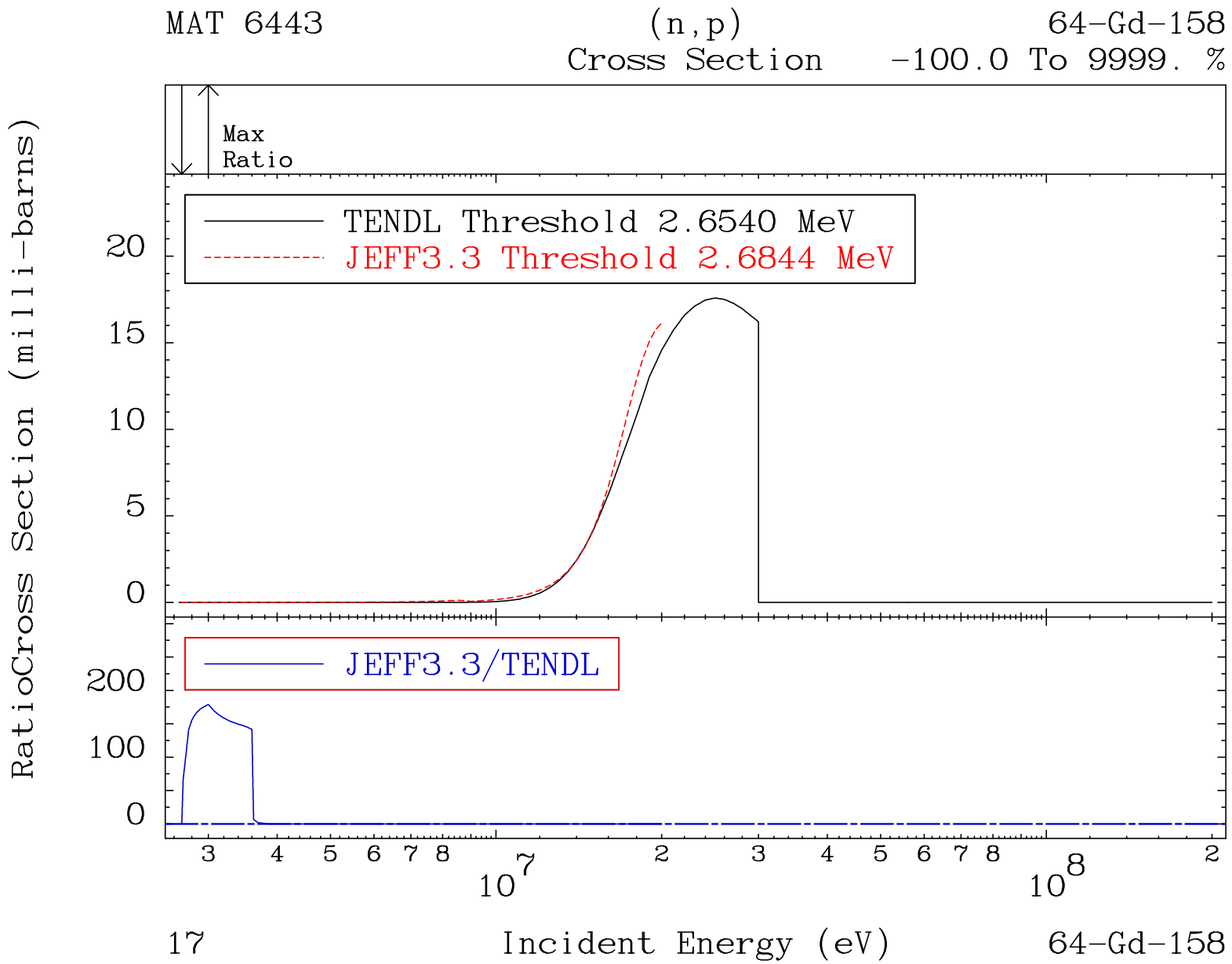

MAT 6443
MT= 59 (n,n') Level
64-Gd-158
Cross Section
-100.0 To 610.6 %
Min Ratio
Max Ratio
TENDL Threshold 1.1840 MeV
JEFF3.3 Threshold 1.2781 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
8
4
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
64-Gd-158

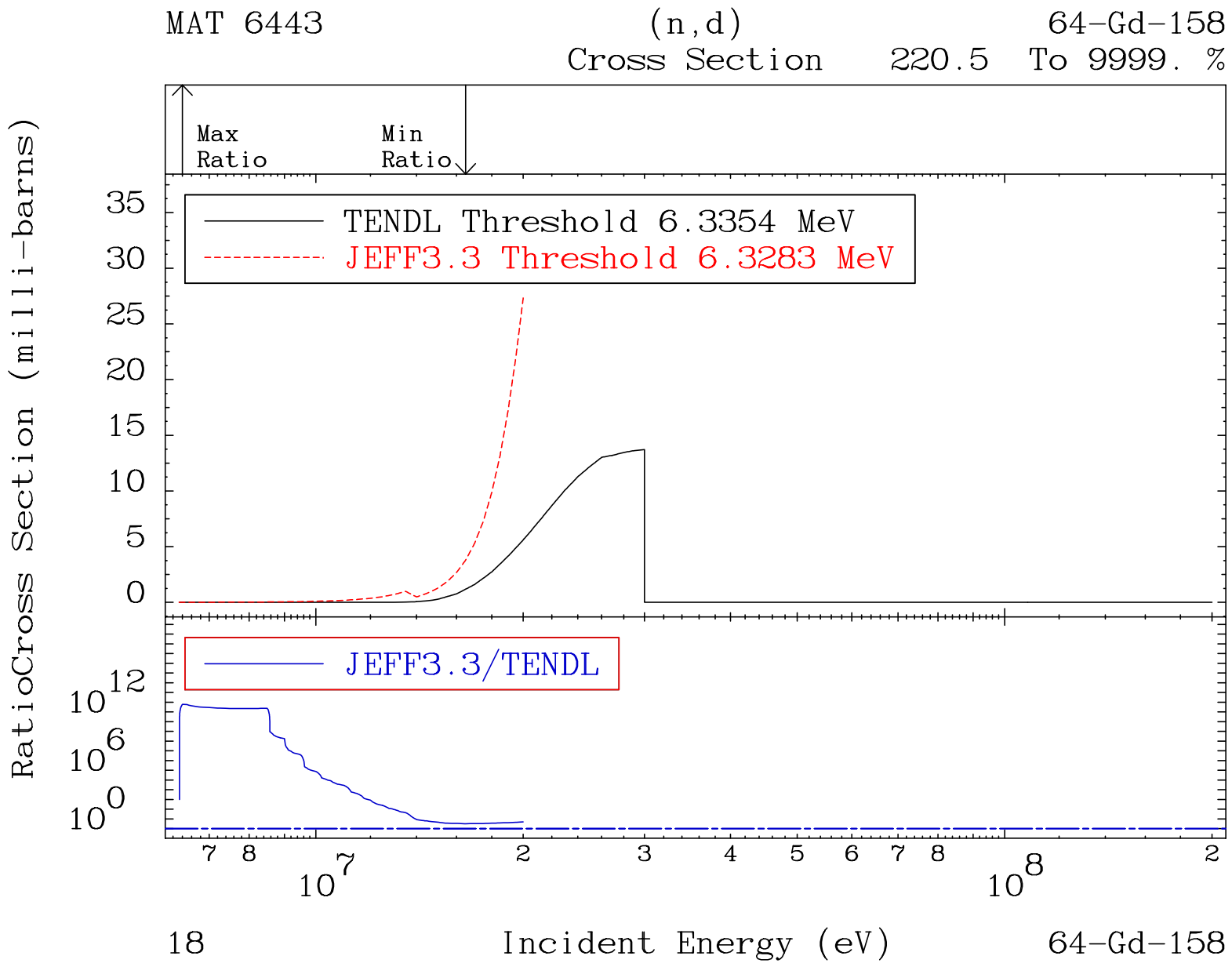

MAT 6443
MT= 60 (n,n') Level
64-Gd-158
Cross Section -100.0 To -20.16%
Min Ratio
Max Ratio
TENDL Threshold 1.1947 MeV
JEFF3.3 Threshold 1.4089 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
1.2
0.8
0.4
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
13
Incident Energy (eV)
64-Gd-158

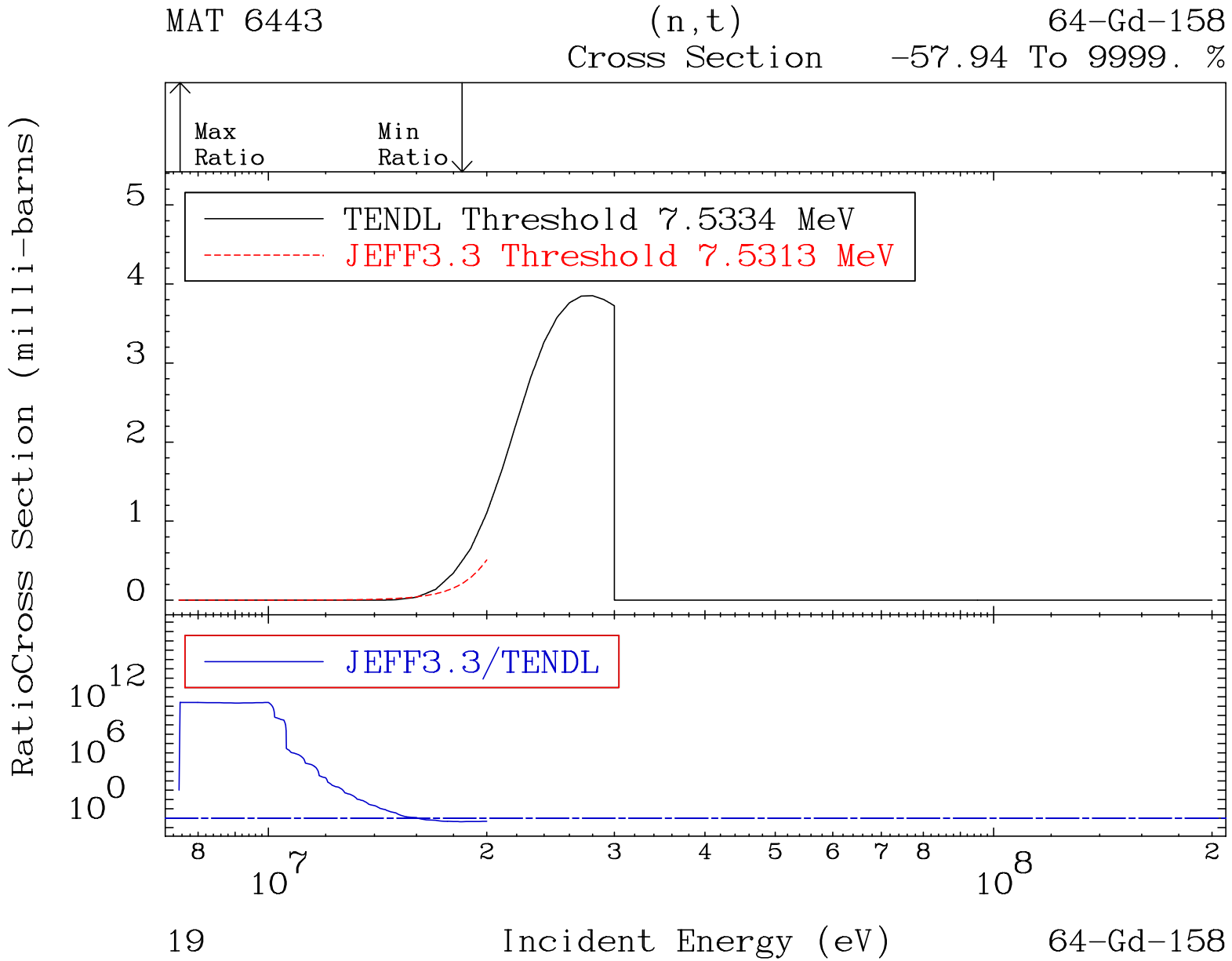

MAT 6443
MT= 61 (n,n') Level
64-Gd-158
Cross Section -100.0 To 1814. %
Min Ratio
Max Ratio
TENDL Threshold 1.2038 MeV
JEFF3.3 Threshold 1.5297 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
20
10
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
14
Incident Energy (eV)
64-Gd-158

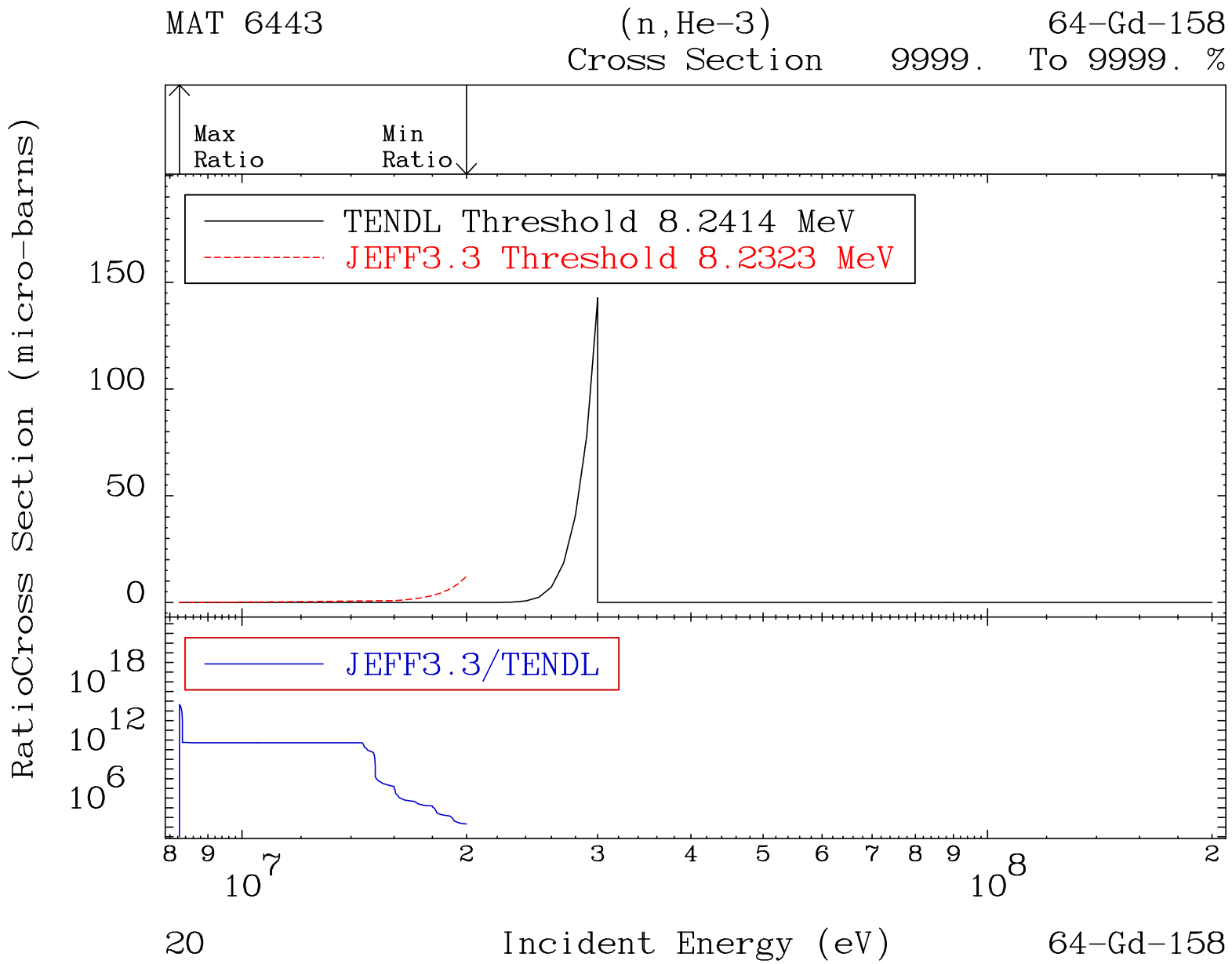

MAT 6443
(n,n') Continuum
Cross Section
64-Gd-158
-100.0 To 478.4 %
Min Ratio
Max Ratio
TENDL Threshold 1.3807 MeV
JEFF3.3 Threshold 1.6000 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
8
4
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
15
Incident Energy (eV)
64-Gd-158

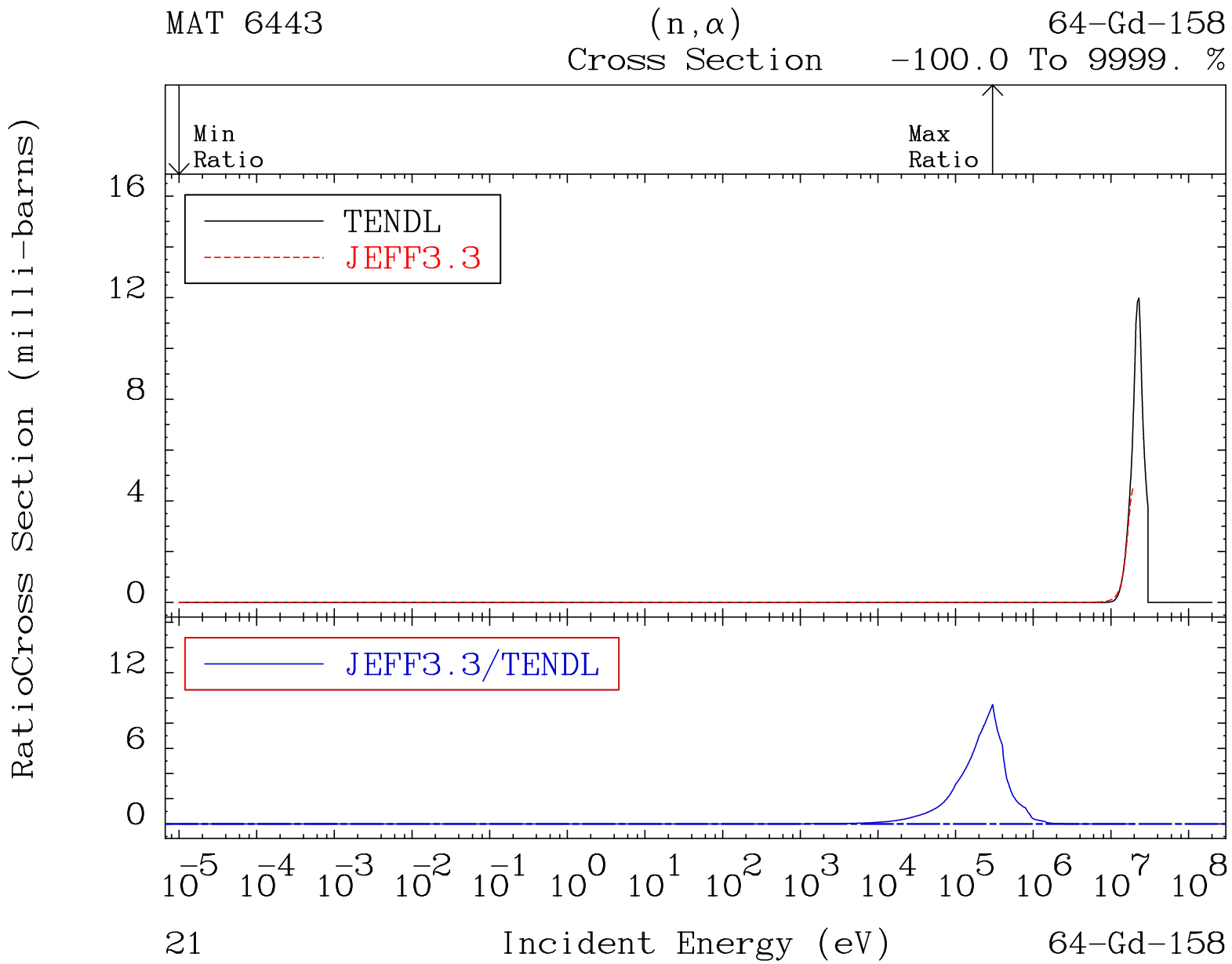

MAT 6443
(n,γ)
Cross Section
64-Gd-158
-99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
16
64-Gd-158

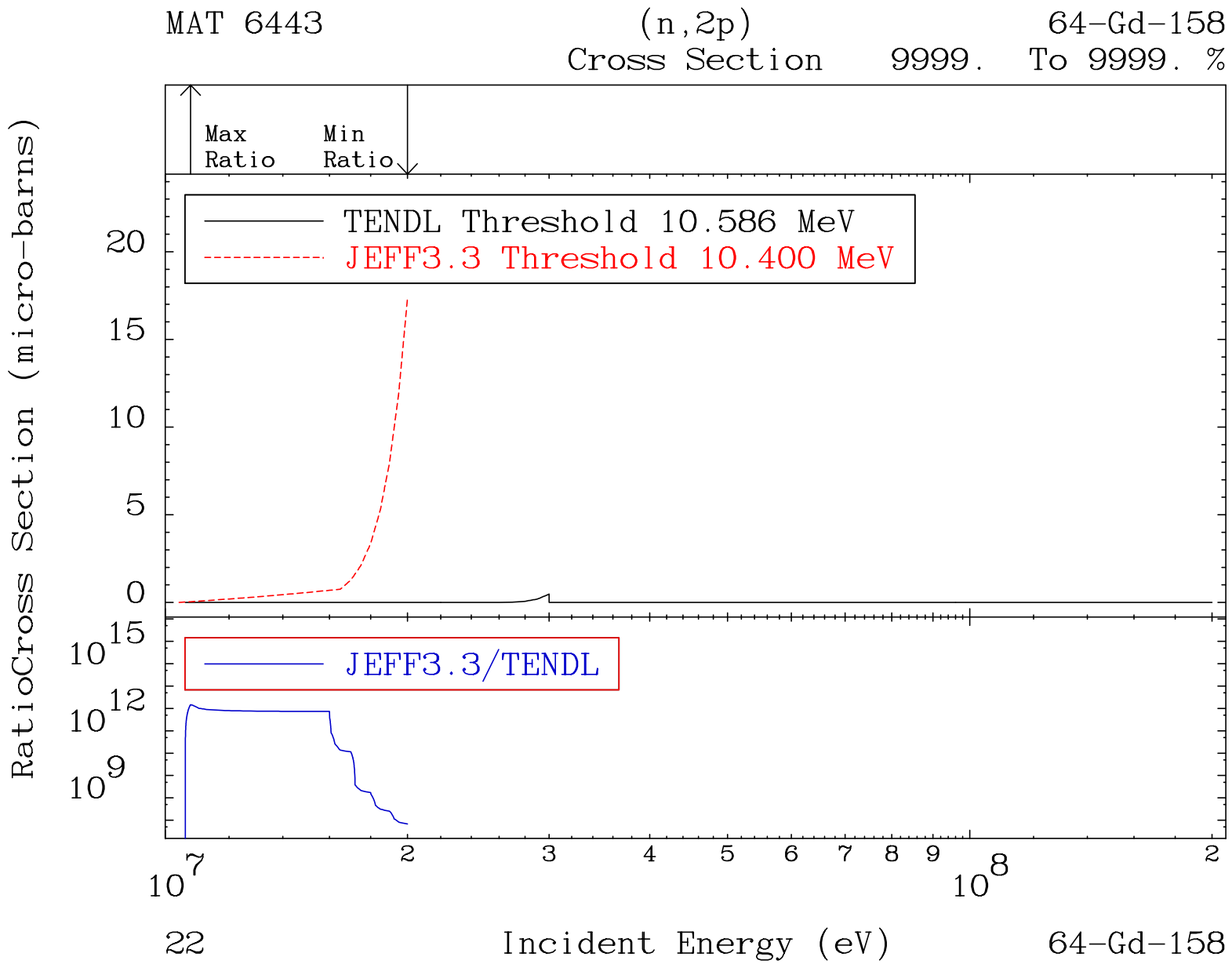

MAT 6443
(n,p)
64-Gd-158
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 2.6540 MeV
JEFF3.3 Threshold 2.6844 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
200
100
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
64-Gd-158

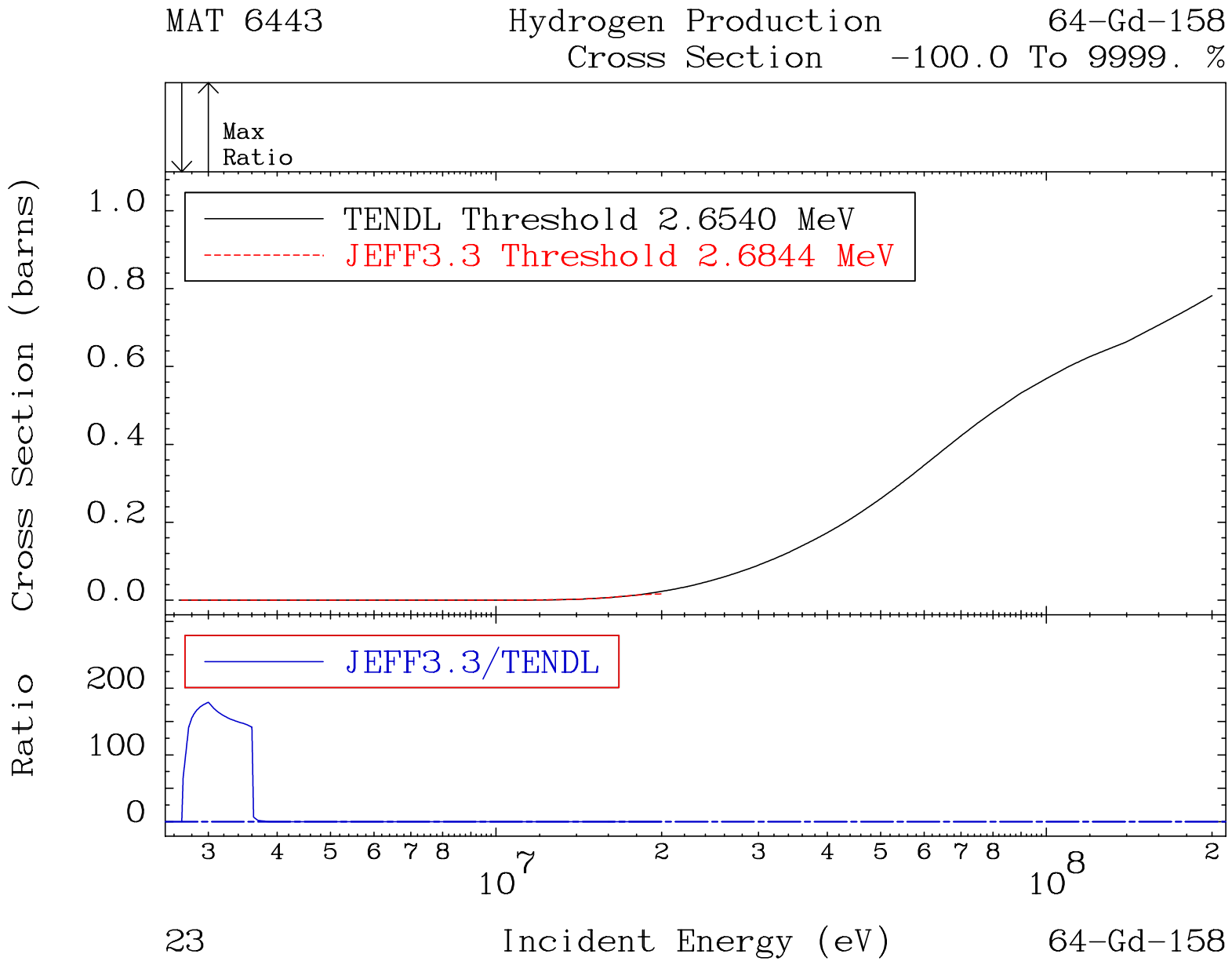

MAT 6443
(n,d)
64-Gd-158
Cross Section 220.5 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.3354 MeV
JEFF3.3 Threshold 6.3283 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
35
30
25
20
15
10
5
0
10^{12}
10^{6}
10^{0}
7 8 10^{7} 2 3 4 5 6 7 8 10^{8} 2
18
Incident Energy (eV)
64-Gd-158

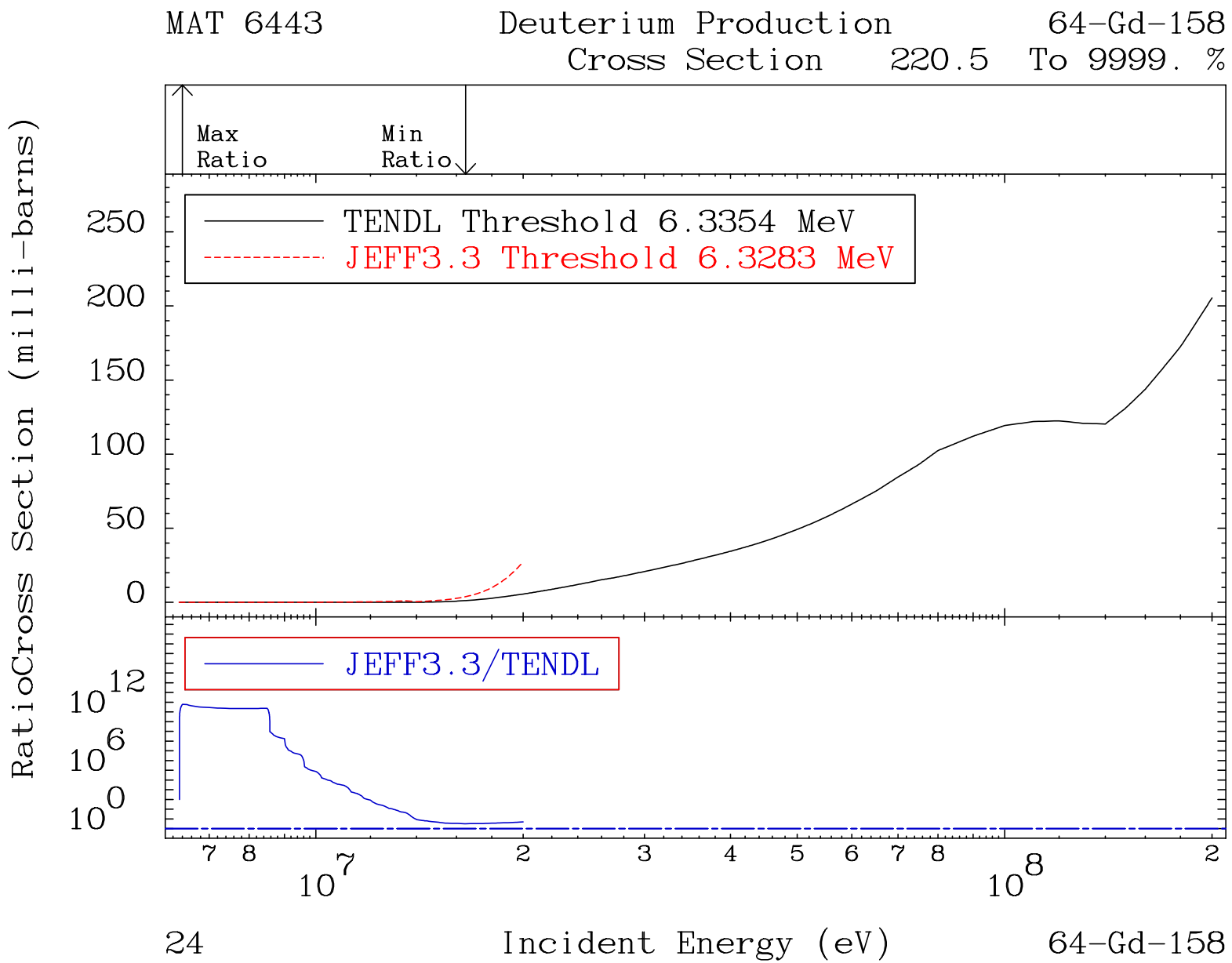

MAT 6443
(n,t)
Cross Section
64-Gd-158
-57.94 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.5334 MeV
JEFF3.3 Threshold 7.5313 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
19
64-Gd-158

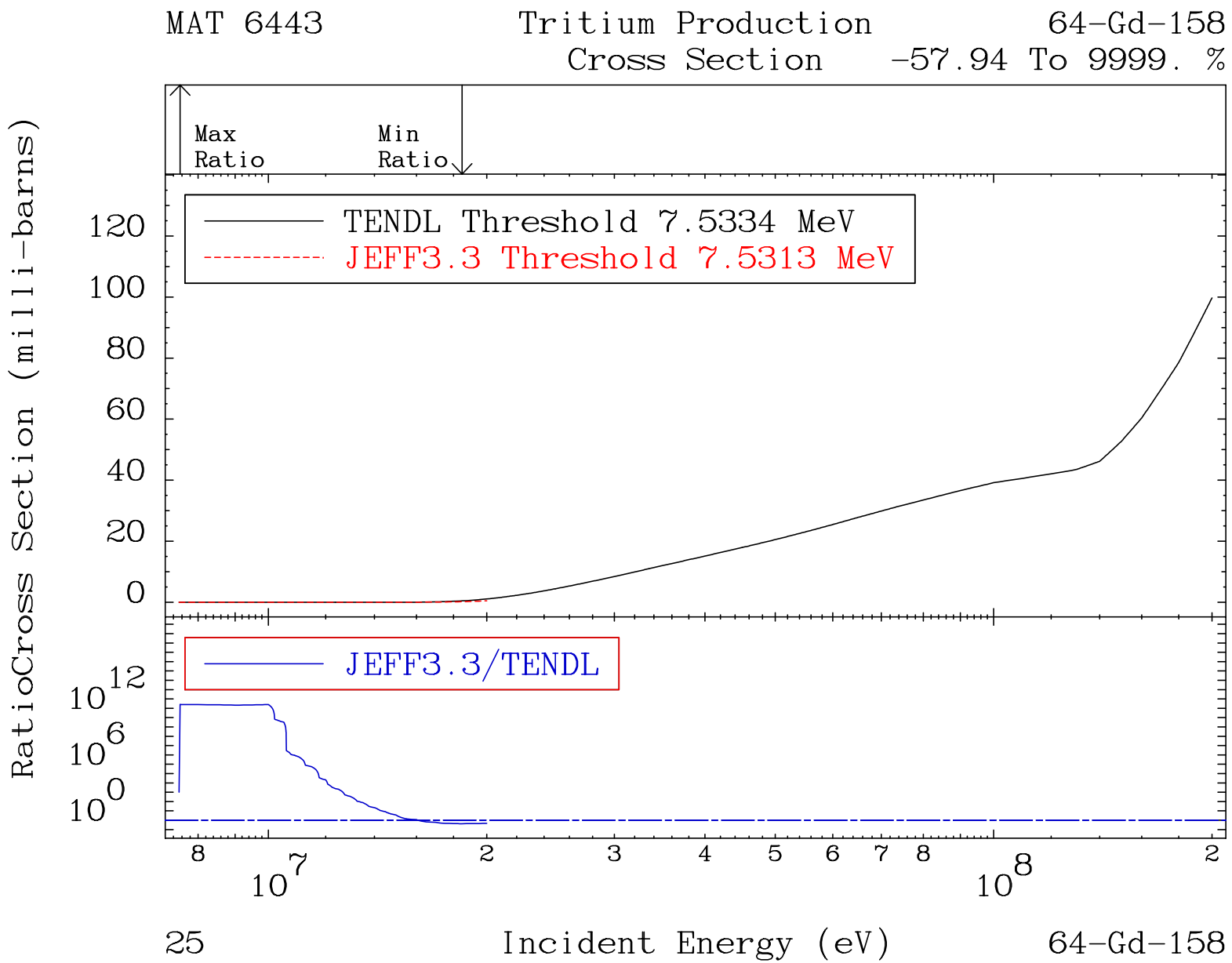

MAT 6443
(n,He-3)
64-Gd-158
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.2414 MeV
JEFF3.3 Threshold 8.2323 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
150
100
50
0
10^18
10^12
10^6
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
64-Gd-158

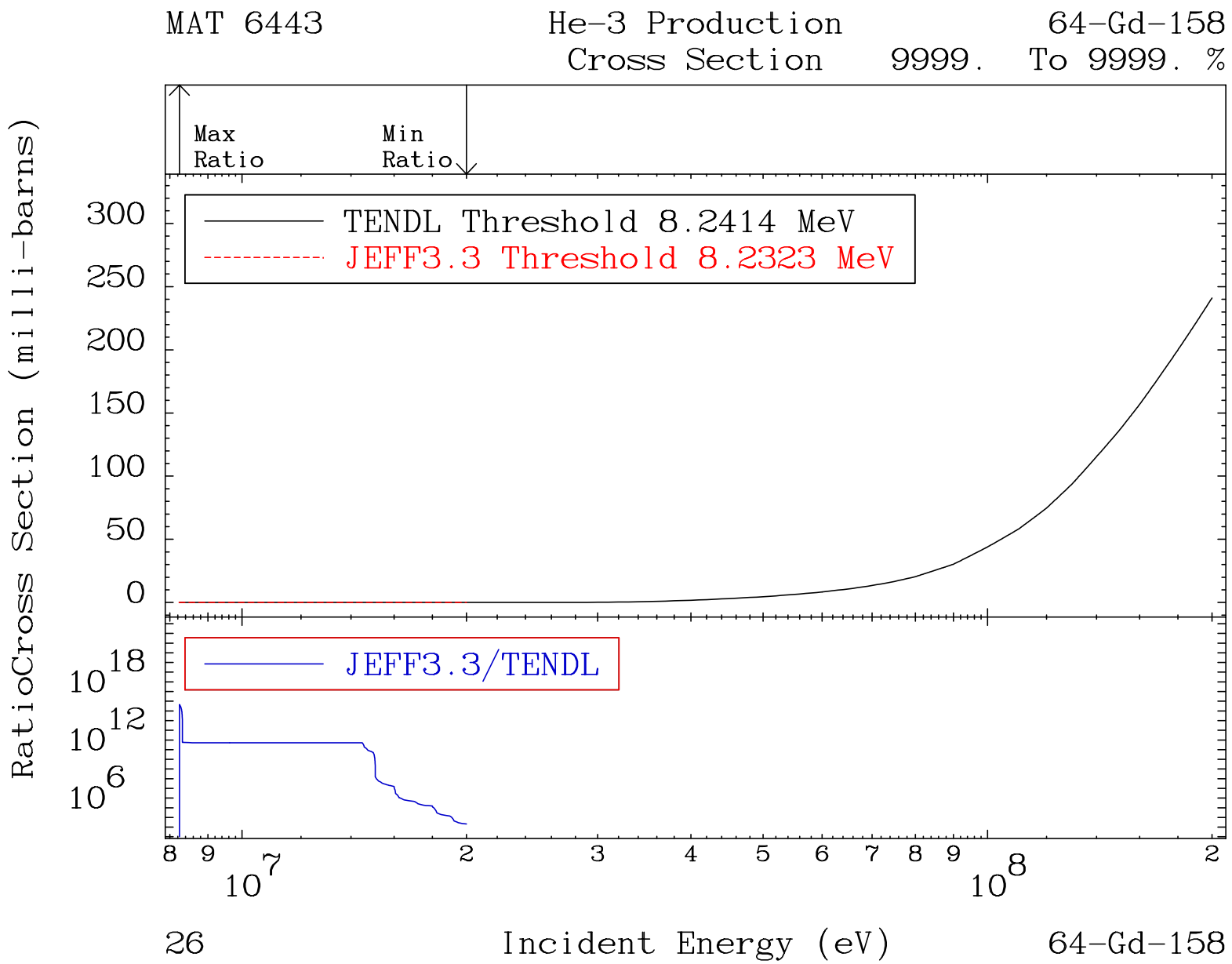

MAT 6443
(n,α)
Cross Section
64-Gd-158
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
12
6
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
21
Incident Energy (eV)
64-Gd-158

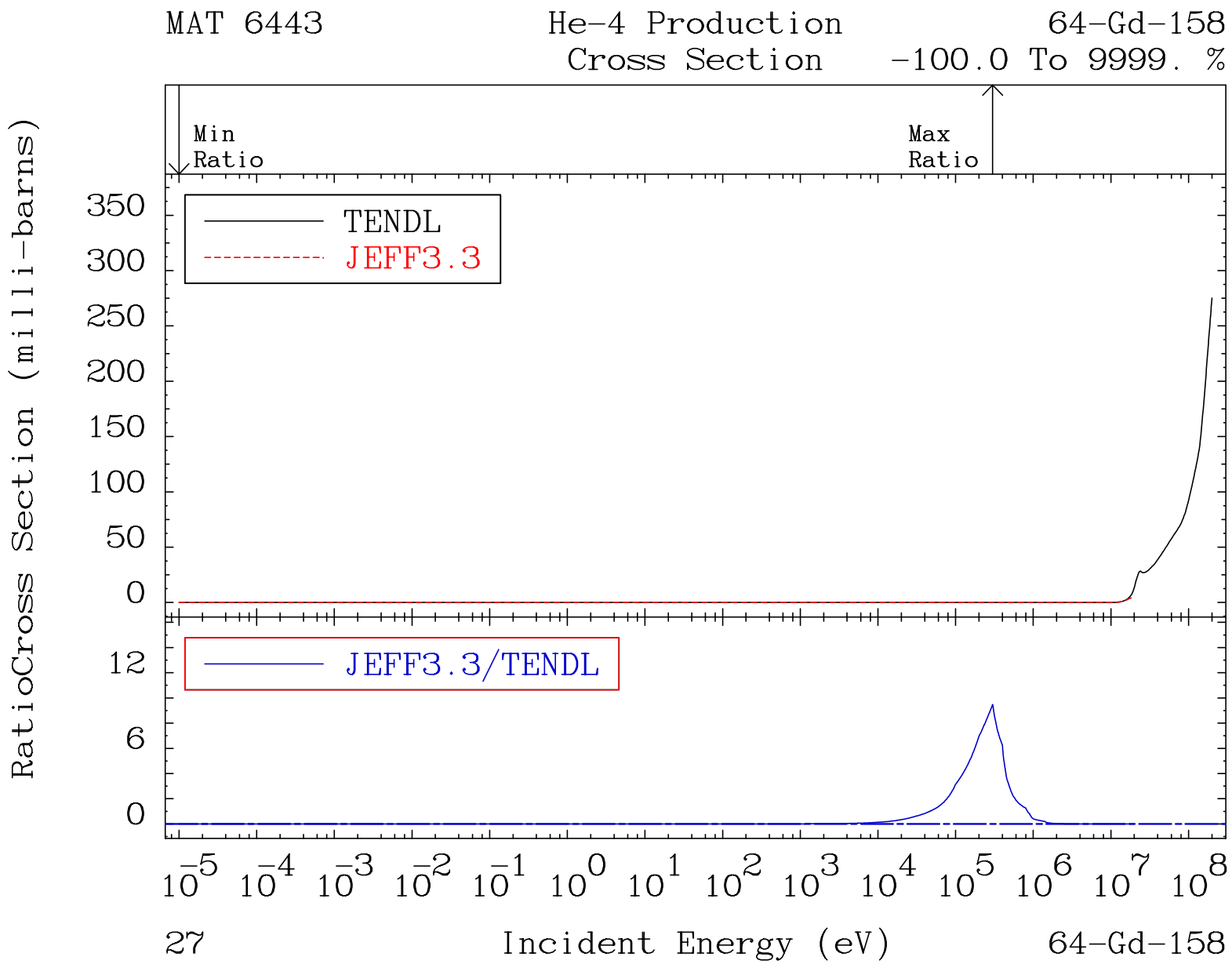

MAT 6443
(n,2p)
64-Gd-158
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 10.586 MeV
JEFF3.3 Threshold 10.400 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
20
15
10
5
0
10^15
10^12
10^9
10^7
2
3
4
5
6
7
8
9
10^8
2
22
Incident Energy (eV)
64-Gd-158

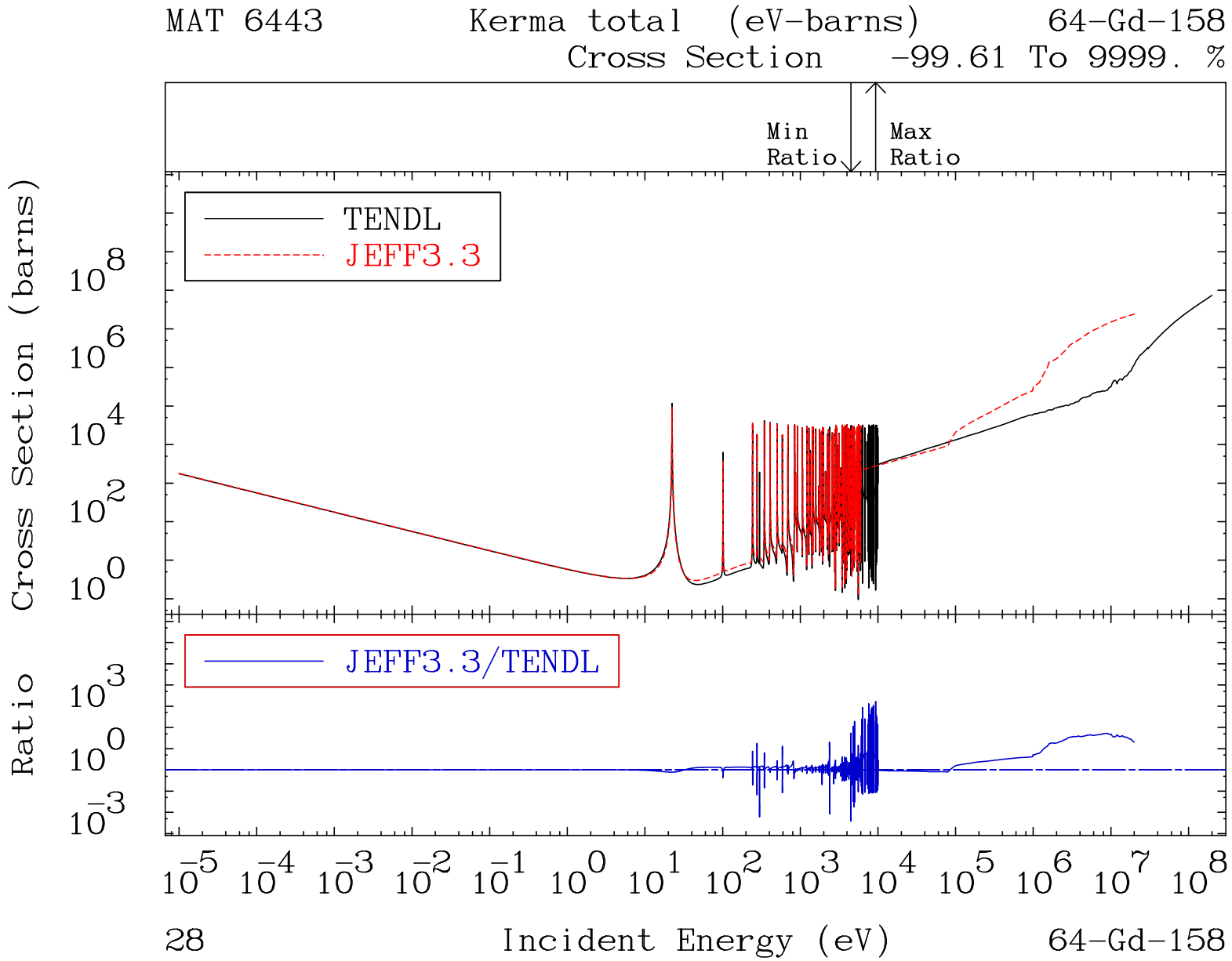

MAT 6443
Hydrogen Production
64-Gd-158
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 2.6540 MeV
JEFF3.3 Threshold 2.6844 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
200
100
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
23
Incident Energy (eV)
64-Gd-158

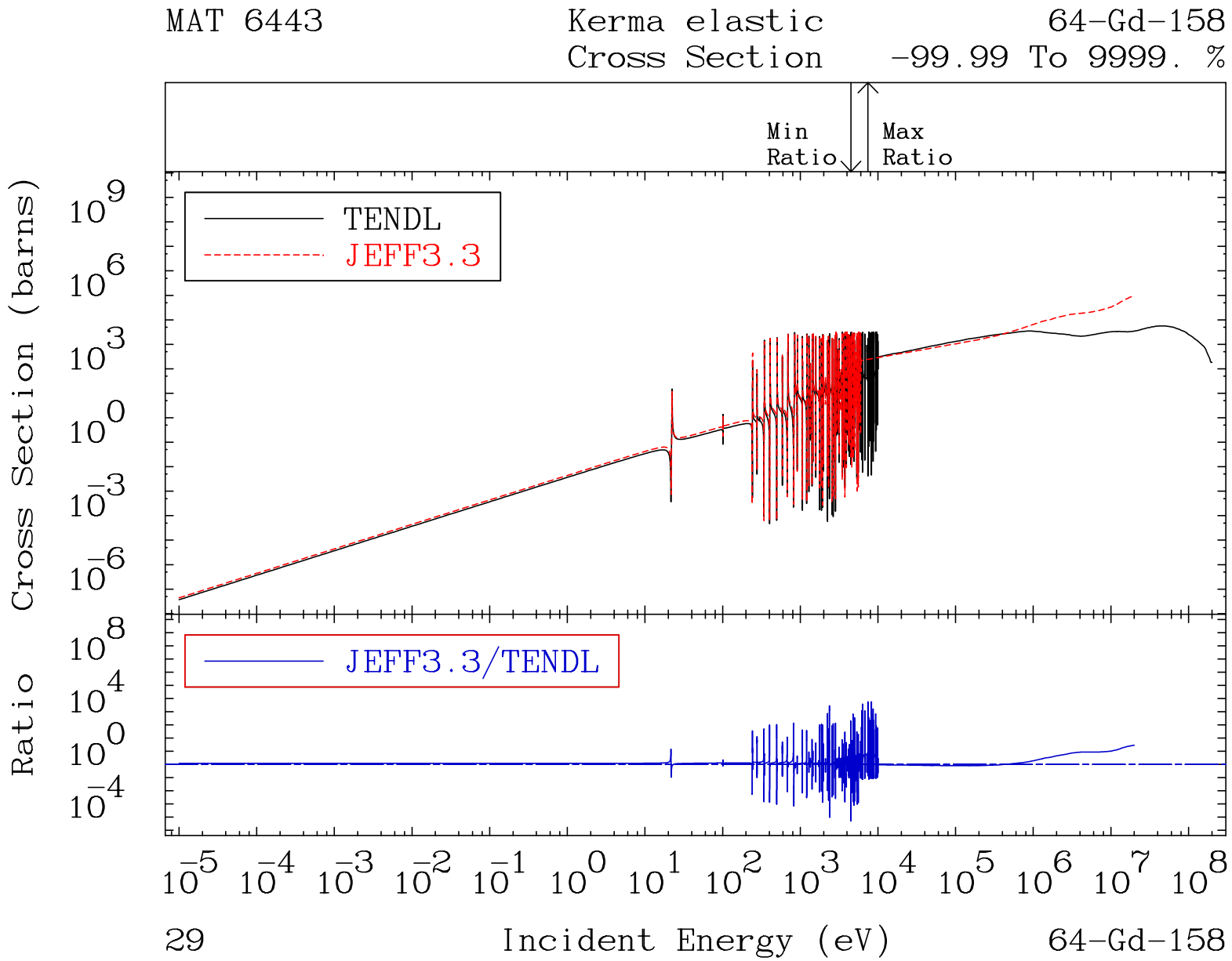

MAT 6443
Deuterium Production
64-Gd-158
Cross Section 220.5 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.3354 MeV
JEFF3.3 Threshold 6.3283 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
10^12
10^6
10^0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
24
Incident Energy (eV)
64-Gd-158

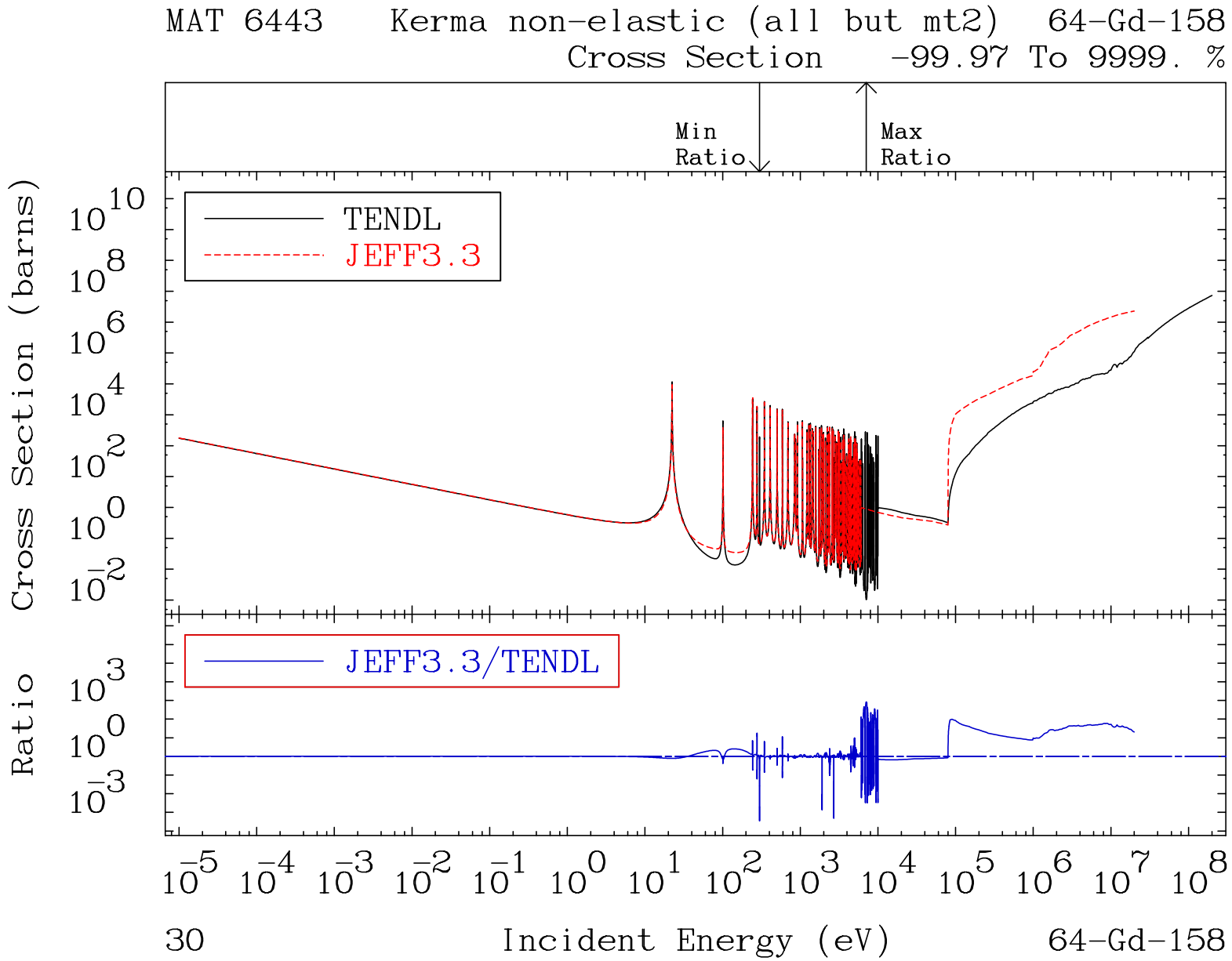

MAT 6443
Tritium Production
64-Gd-158
Cross Section
-57.94 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.5334 MeV
JEFF3.3 Threshold 7.5313 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
10^{12}
10^{6}
10^{0}
8
10^{7}
2
3
4
5
6
7
8
10^{8}
2
25
Incident Energy (eV)
64-Gd-158

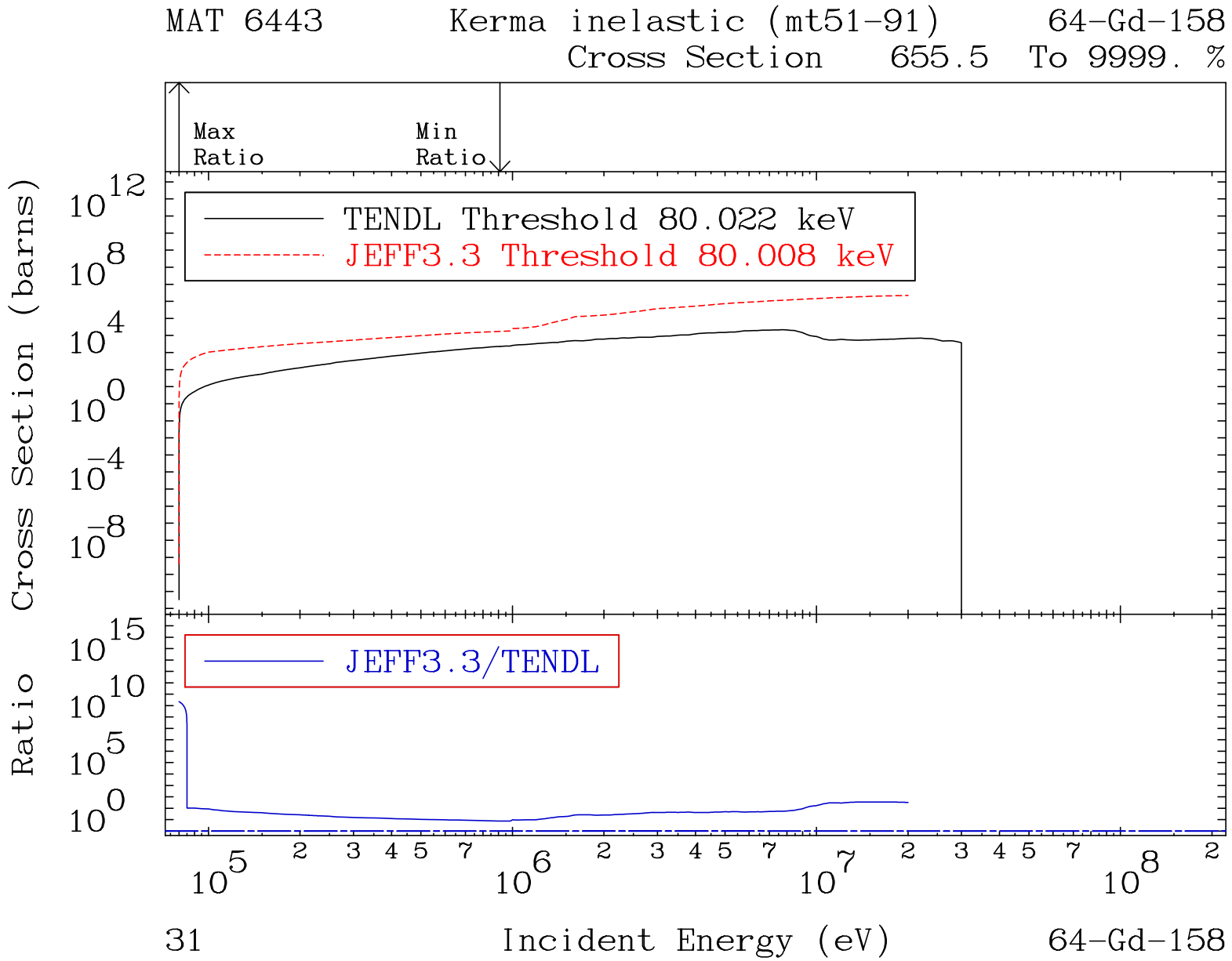

MAT 6443
He-3 Production
Cross Section
64-Gd-158
9999.
To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.2414 MeV
JEFF3.3 Threshold 8.2323 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
10^18
10^12
10^6
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
64-Gd-158

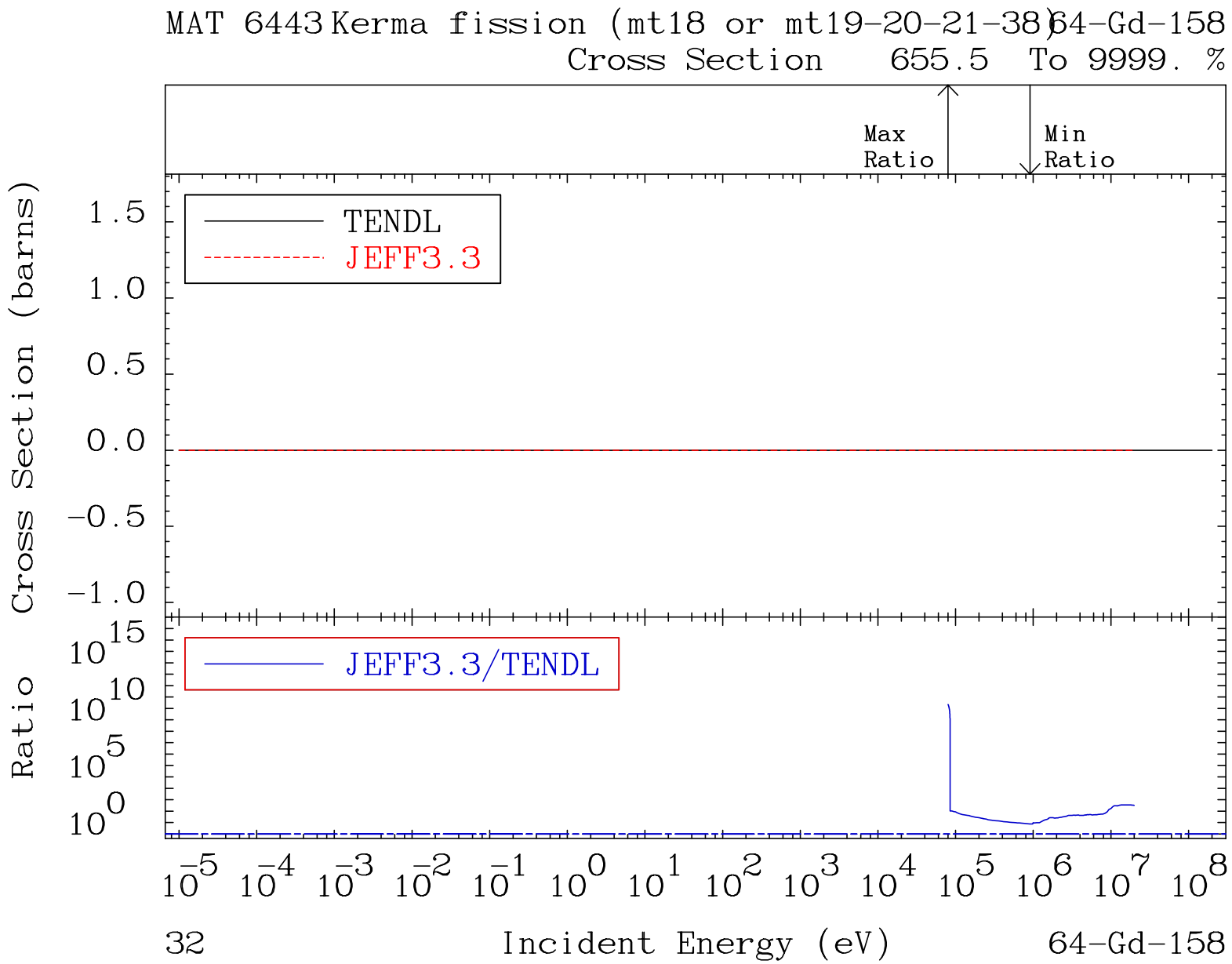

MAT 6443
He-4 Production
Cross Section
64-Gd-158
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
12
6
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
27
Incident Energy (eV)
64-Gd-158

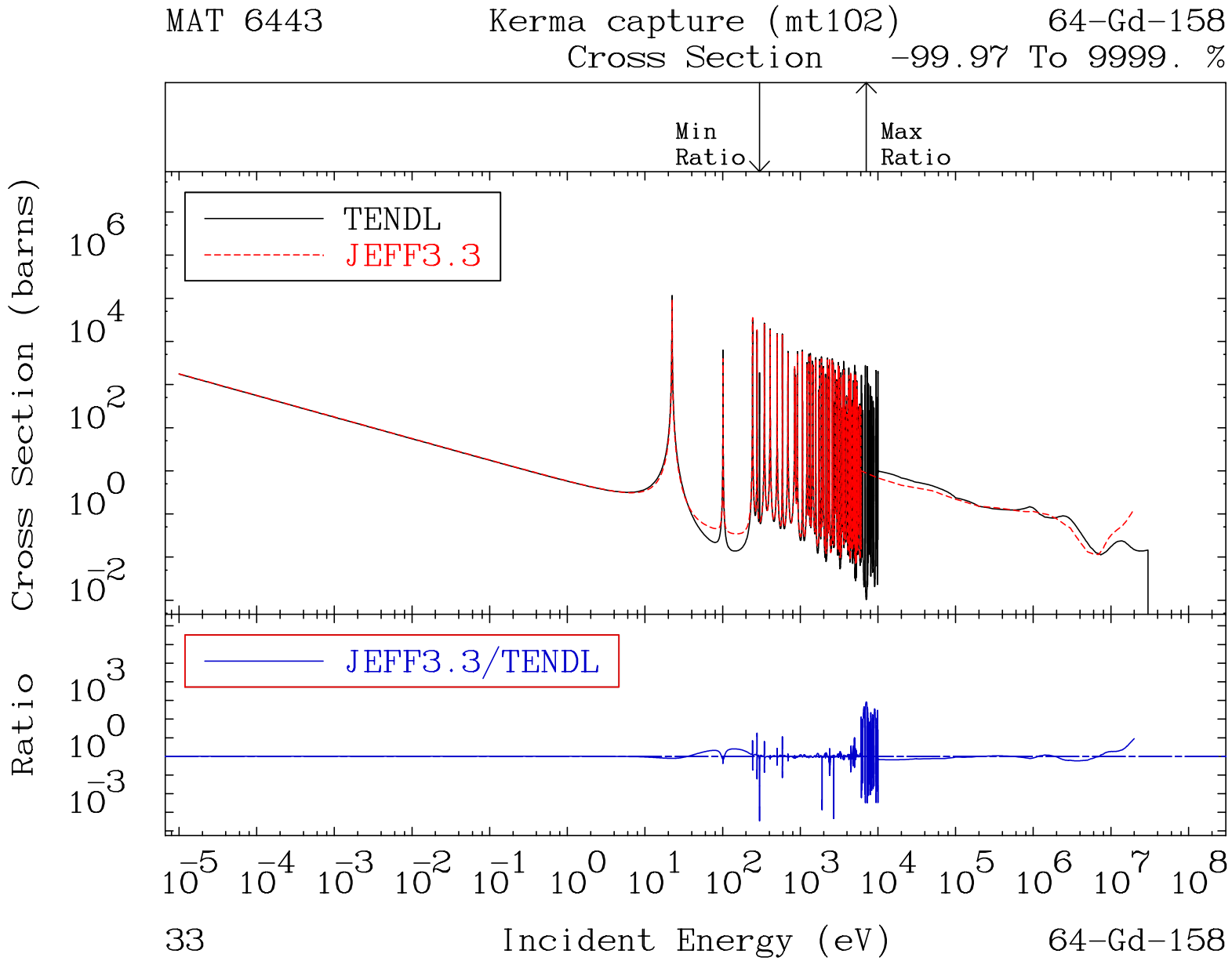

MAT 6443
Kerma total (eV-barns)
64-Gd-158
Cross Section -99.61 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
28
64-Gd-158

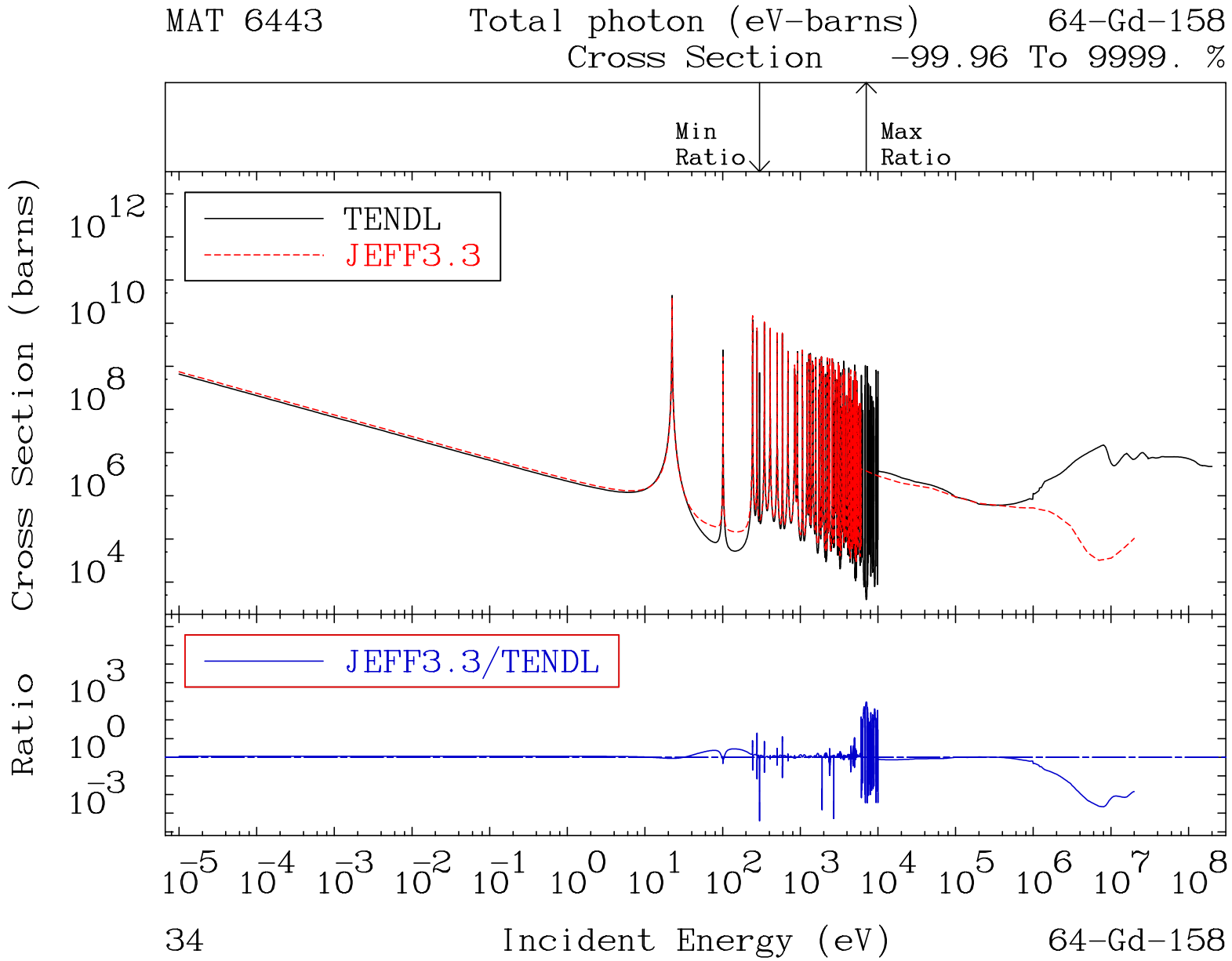

MAT 6443
Kerma elastic
Cross Section
64-Gd-158
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
29
64-Gd-158

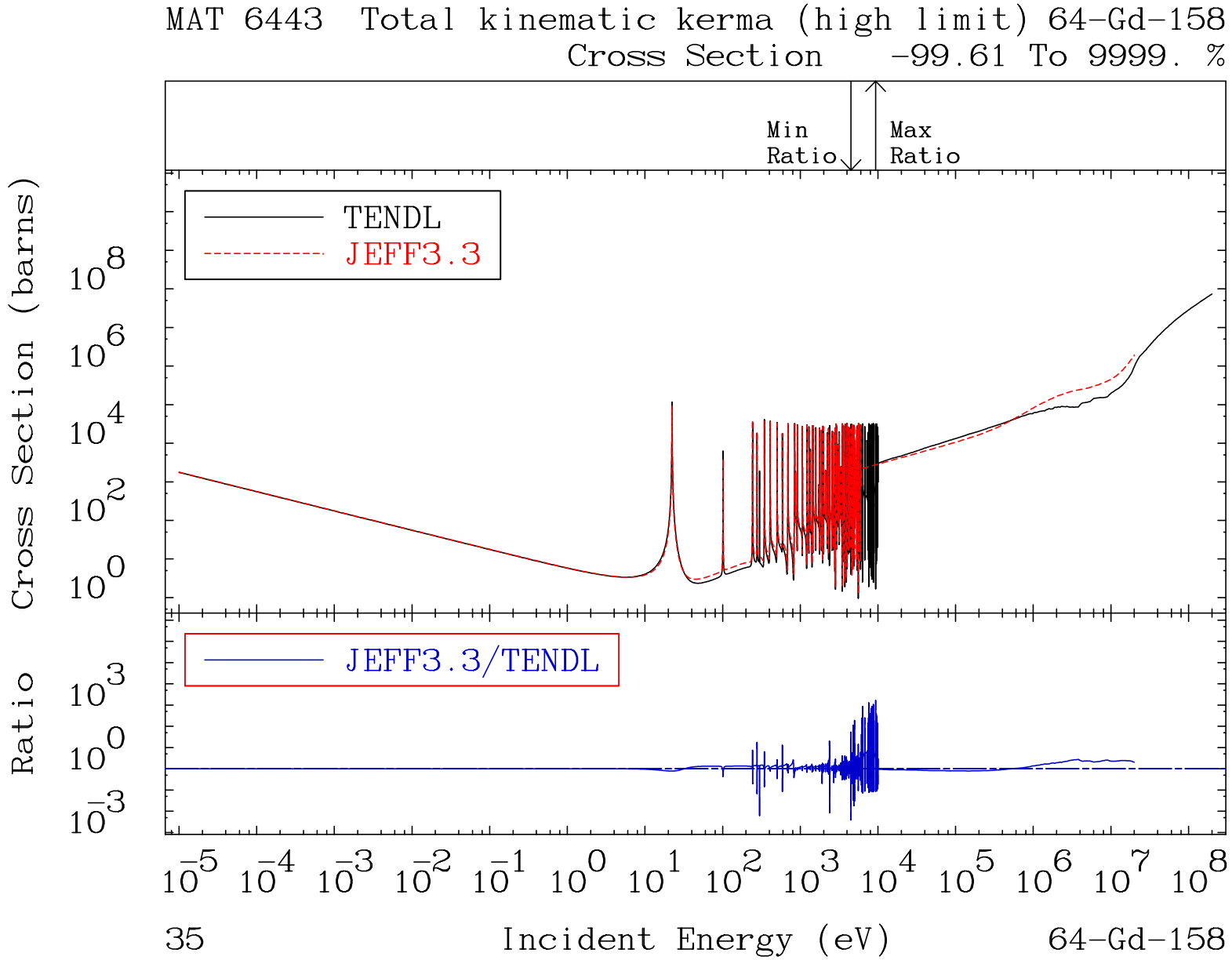

MAT 6443 Kerma non-elastic (all but mt2) 64-Gd-158
Cross Section -99.97 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
30
64-Gd-158

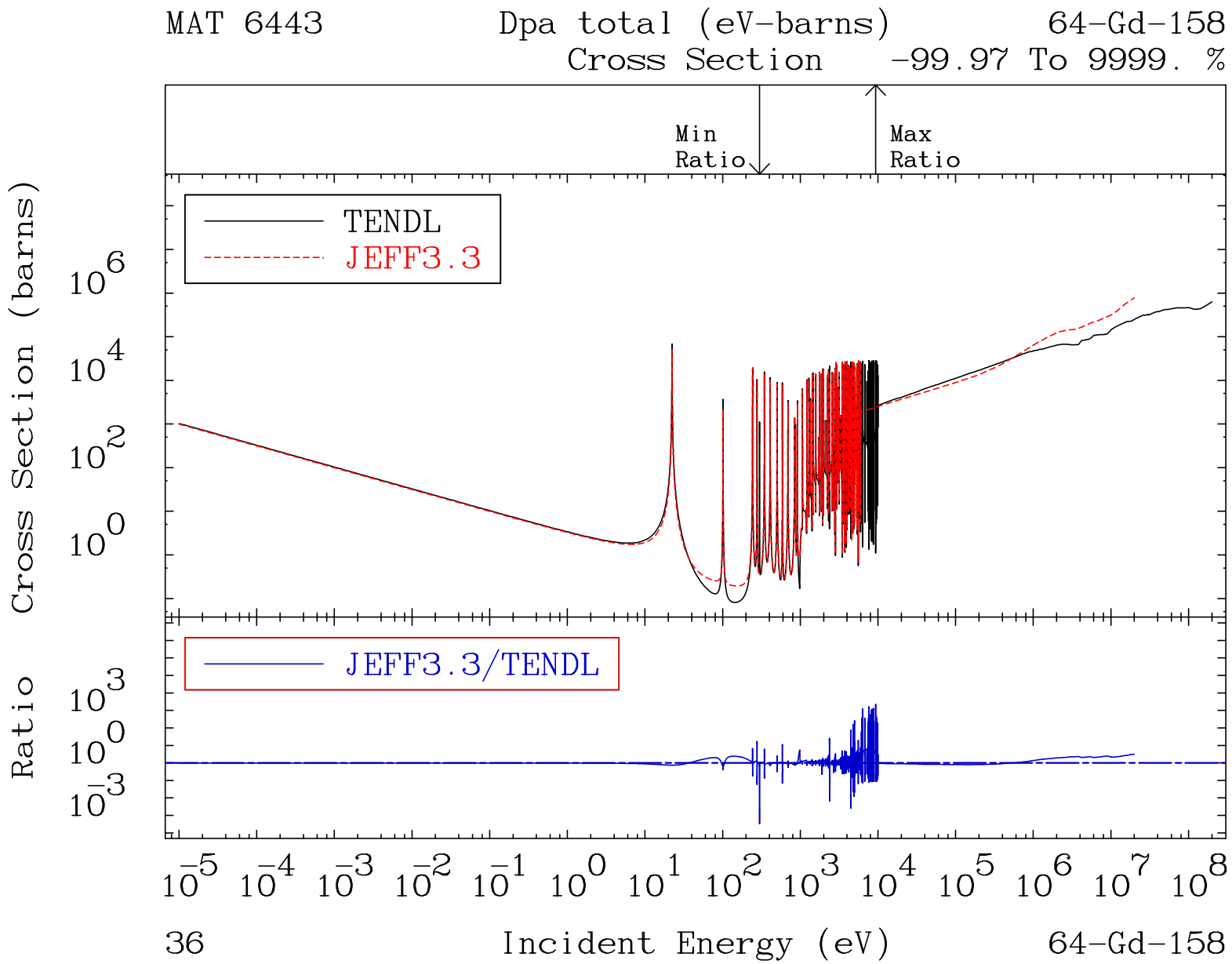

MAT 6443
Kerma inelastic (mt51-91)
64-Gd-158
Cross Section 655.5 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 80.022 keV
JEFF3.3 Threshold 80.008 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
31
64-Gd-158

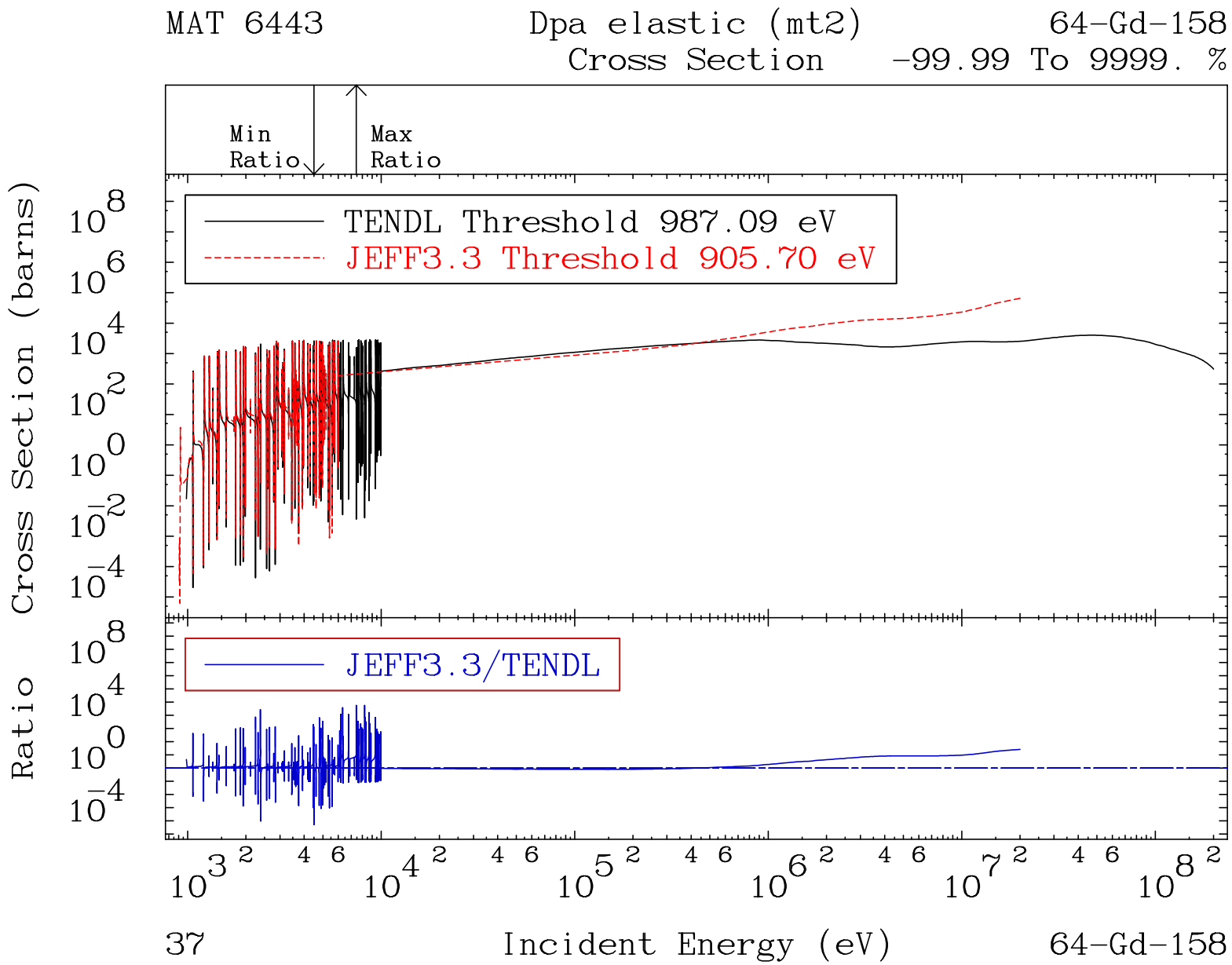

MAT 6443 Kerma fission (mt18 or mt19-20-21-38) 64-Gd-158
Cross Section 655.5 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{15}
10^{10}
10^{5}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
32
Incident Energy (eV)
64-Gd-158

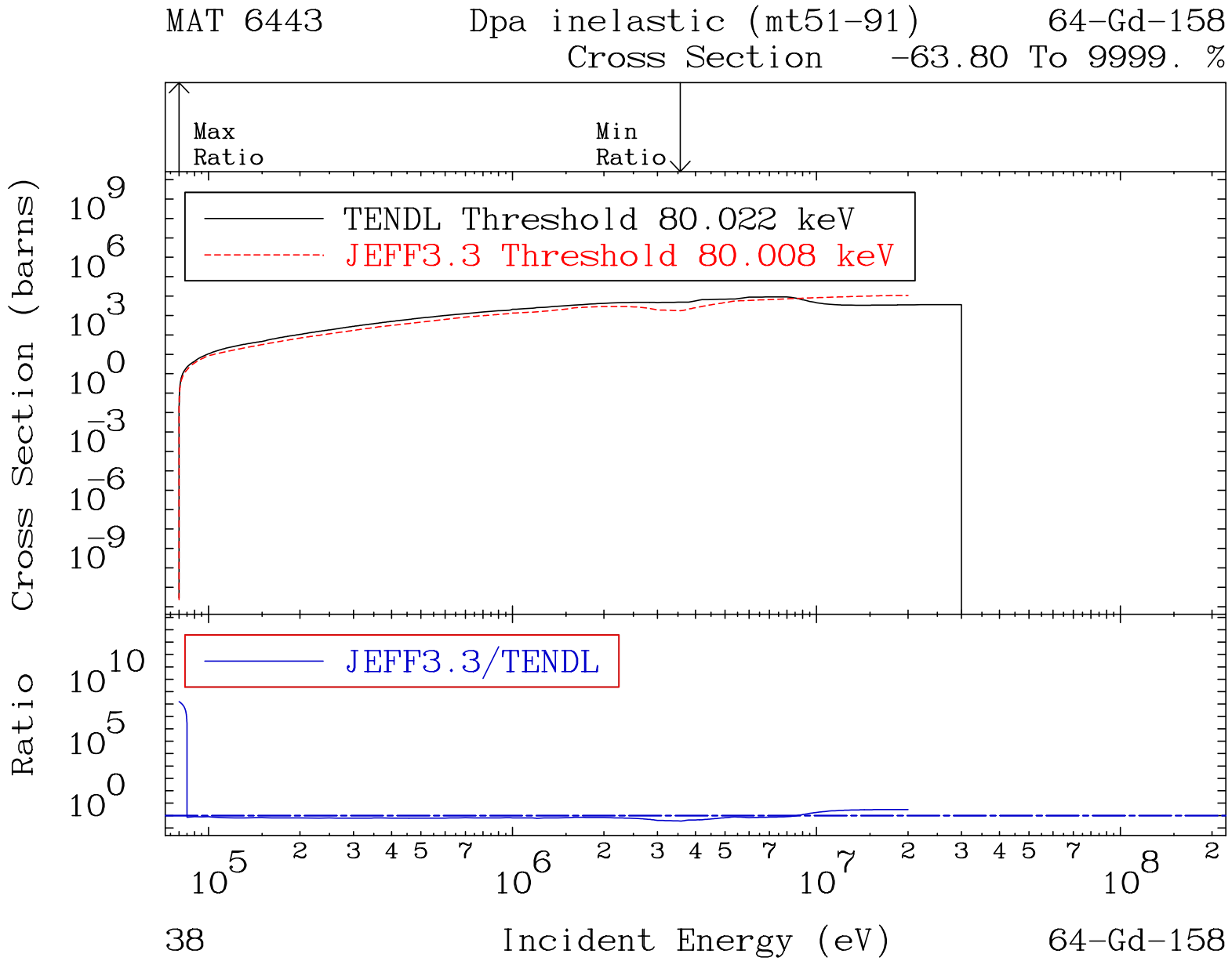

MAT 6443
Kerma capture (mt102)
64-Gd-158
Cross Section
-99.97 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
33
64-Gd-158

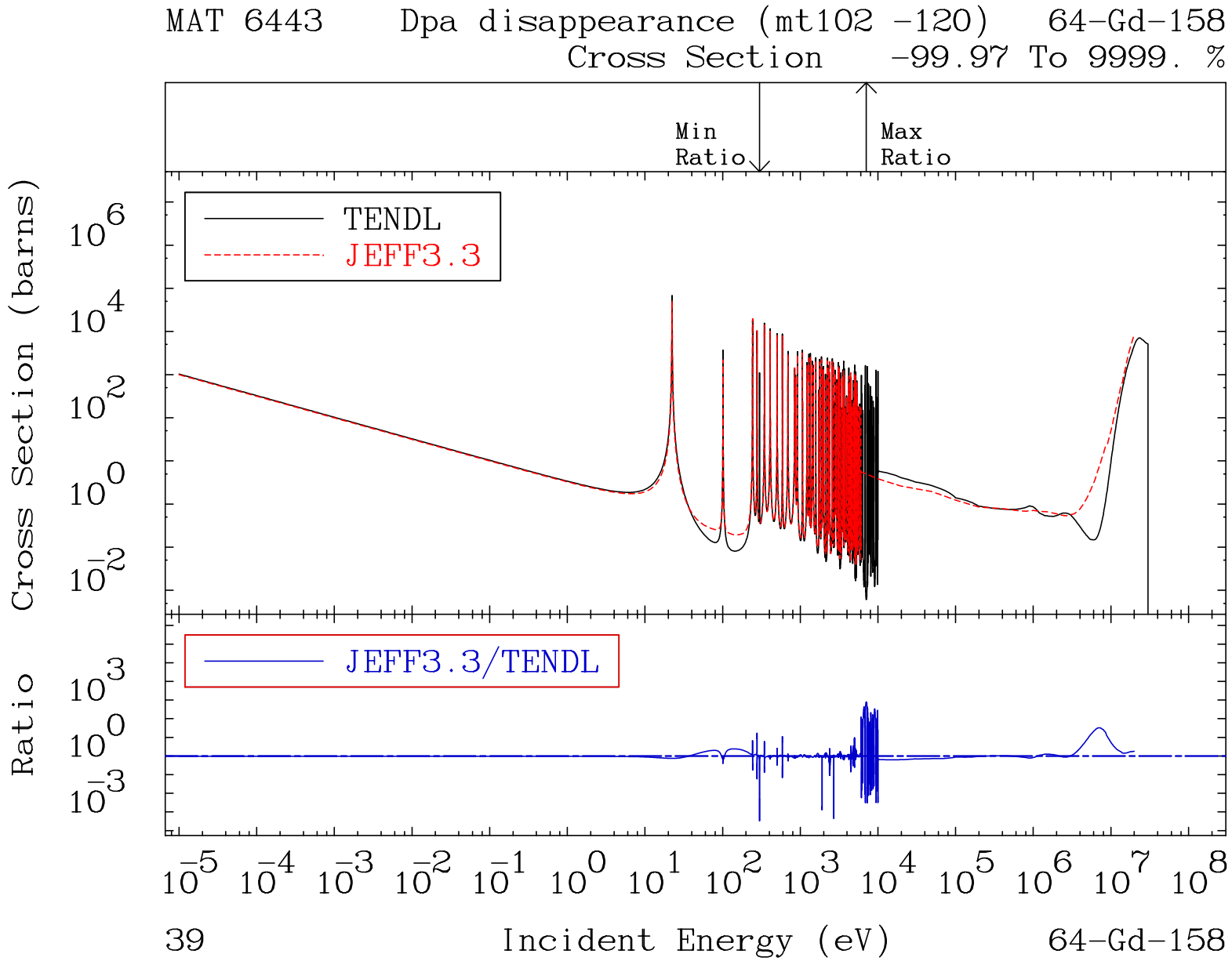

MAT 6443
Total photon (eV-barns)
64-Gd-158
Cross Section -99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
34
64-Gd-158

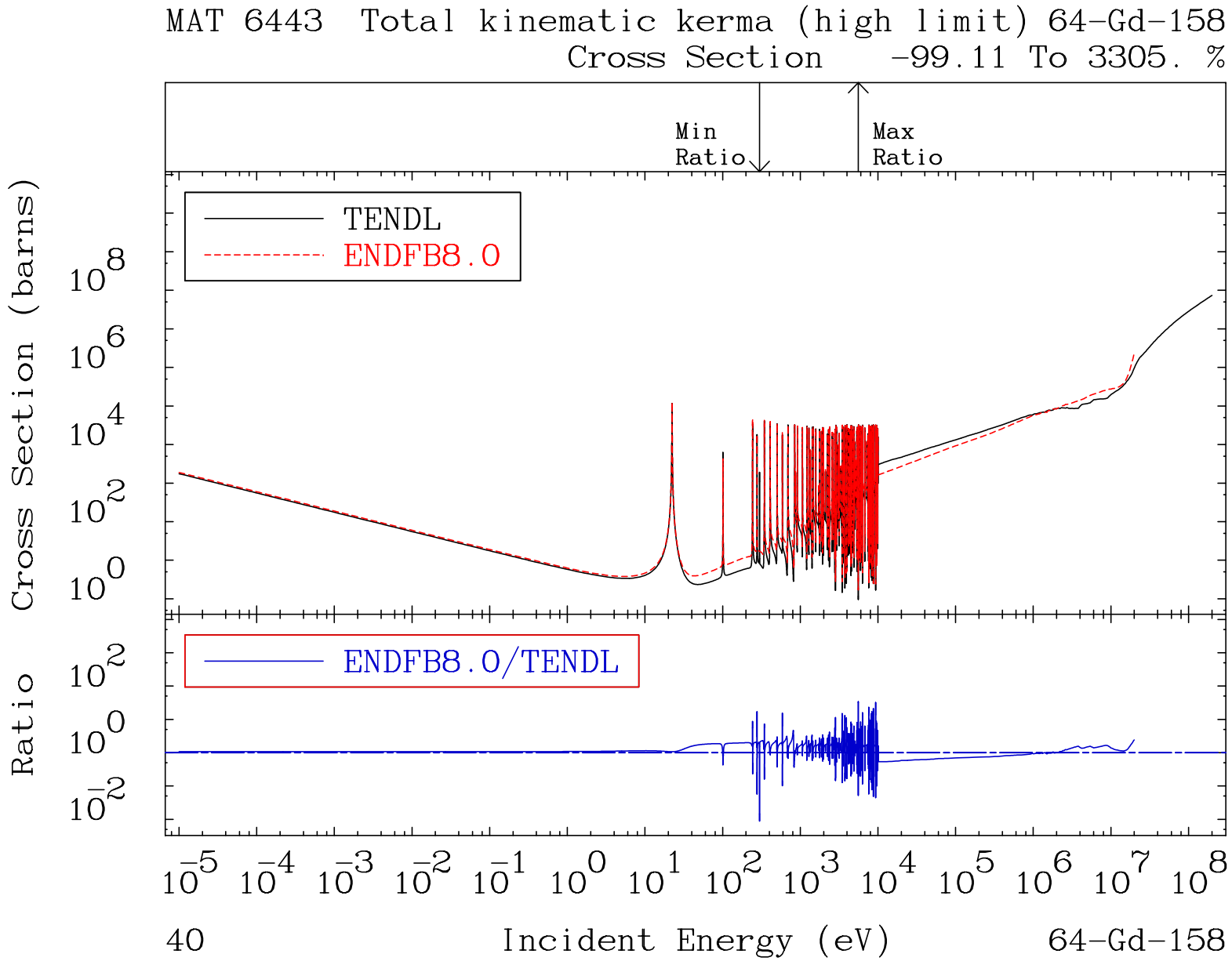

MAT 6443 Total kinematic kerma (high limit) 64-Gd-158
Cross Section -99.61 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
35
64-Gd-158

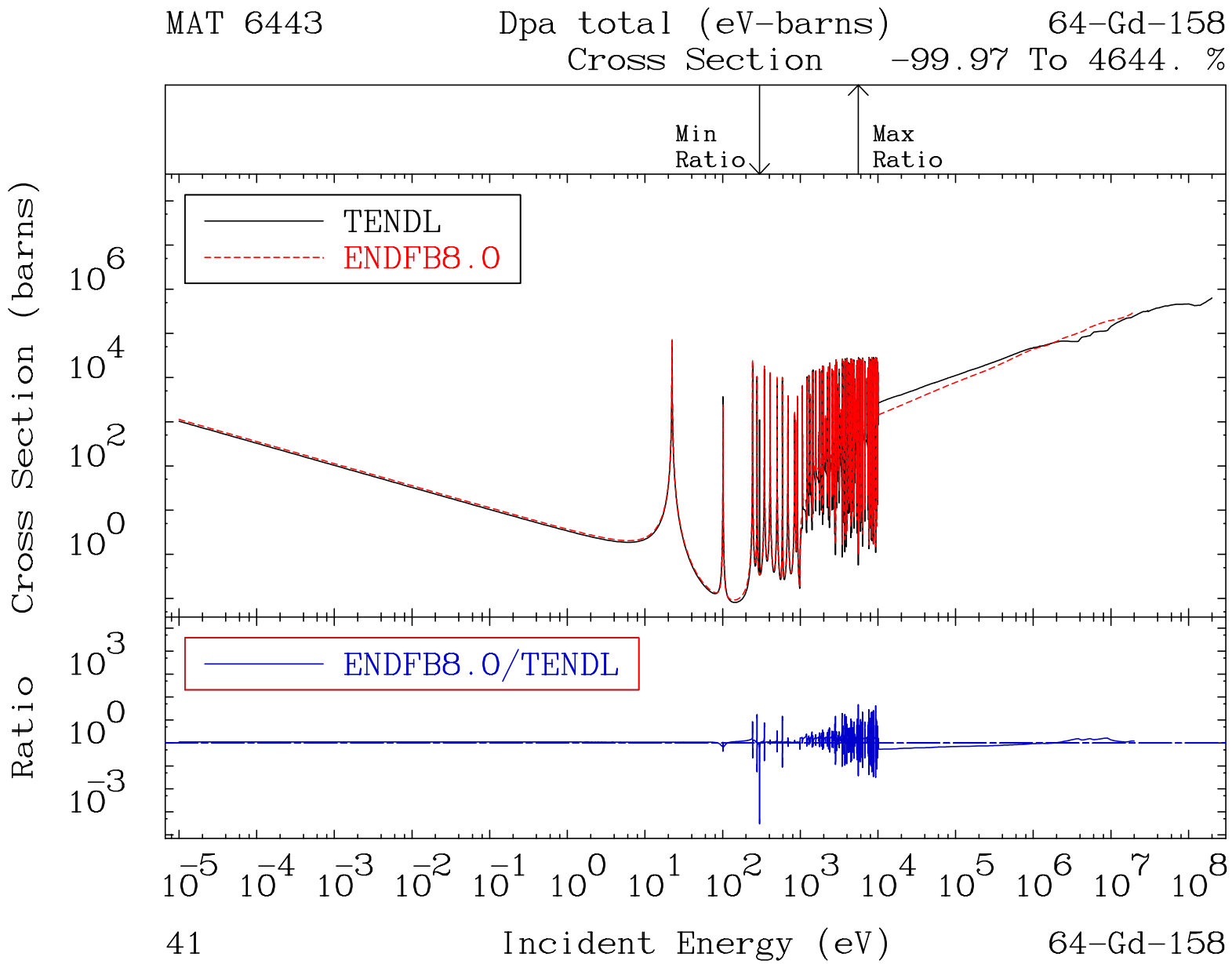

MAT 6443
Dpa total (eV-barns)
64-Gd-158
Cross Section -99.97 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
36
64-Gd-158

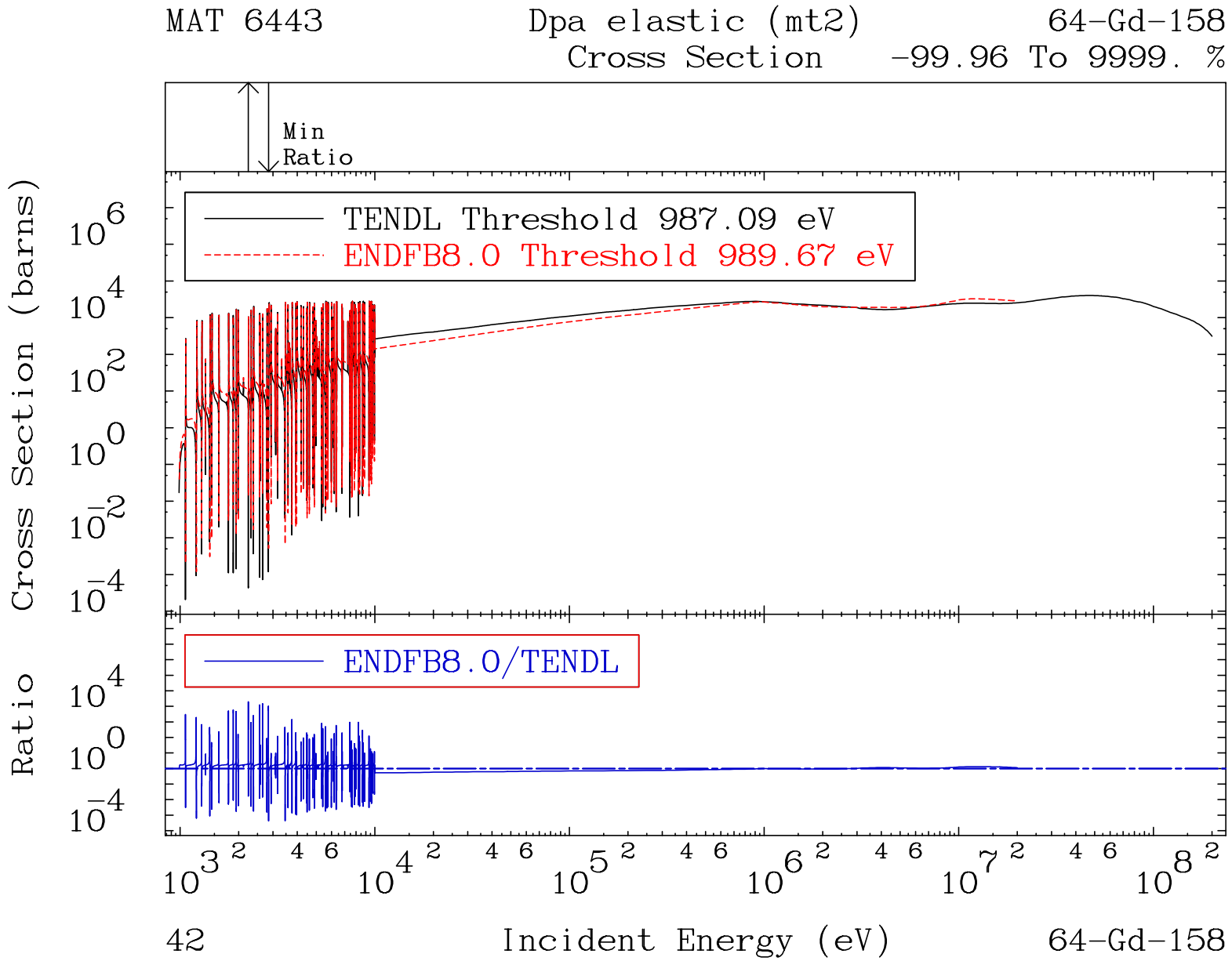

MAT 6443
Dpa elastic (mt2)
Cross Section
64-Gd-158
-99.99 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 987.09 eV
JEFF3.3 Threshold 905.70 eV
JEFF3.3/TENDL
Ratio Cross Section (barns)
Incident Energy (eV)
37
64-Gd-158

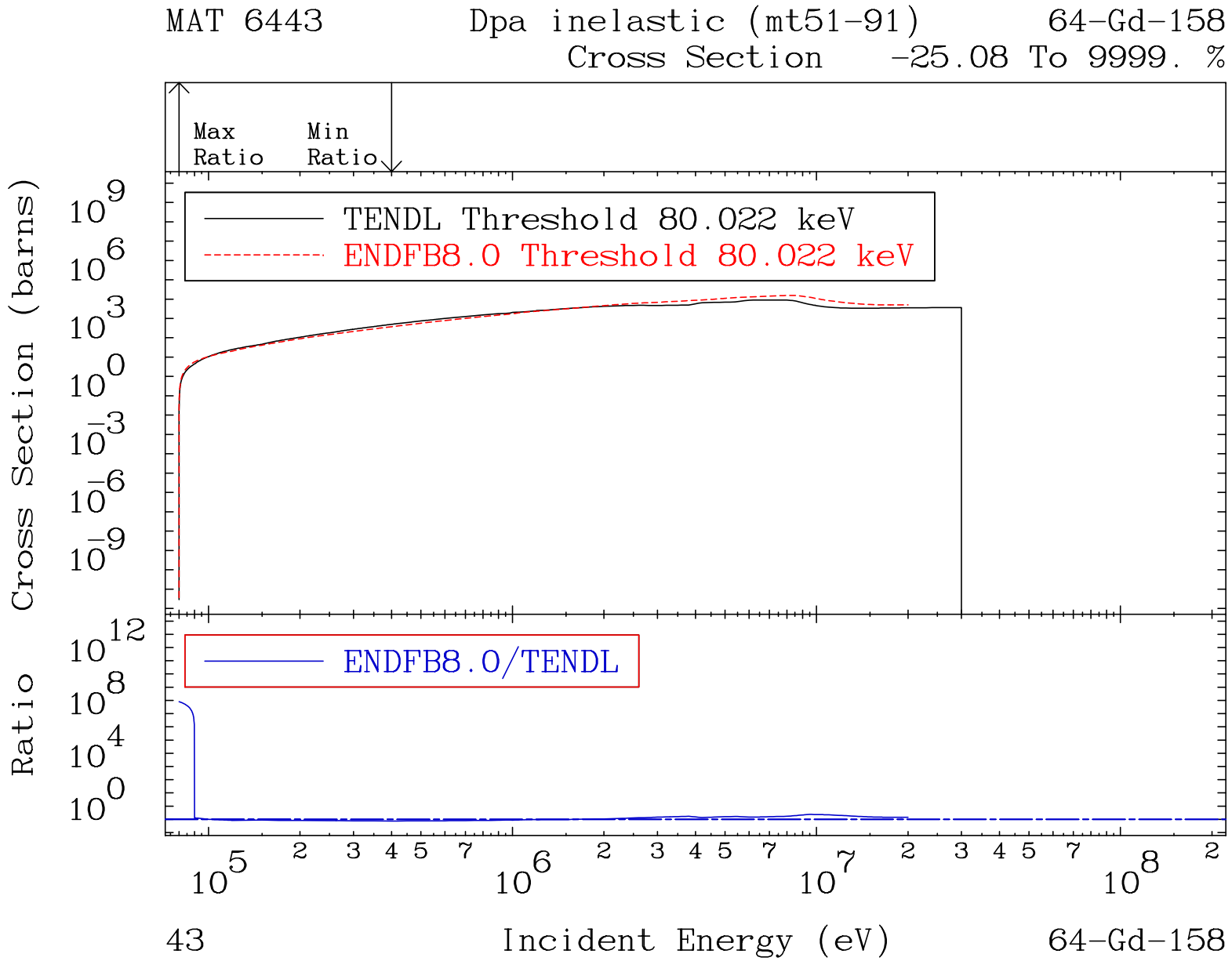

MAT 6443
Dpa inelastic (mt51-91)
64-Gd-158
Cross Section -63.80 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 80.022 keV
JEFF3.3 Threshold 80.008 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
38
64-Gd-158

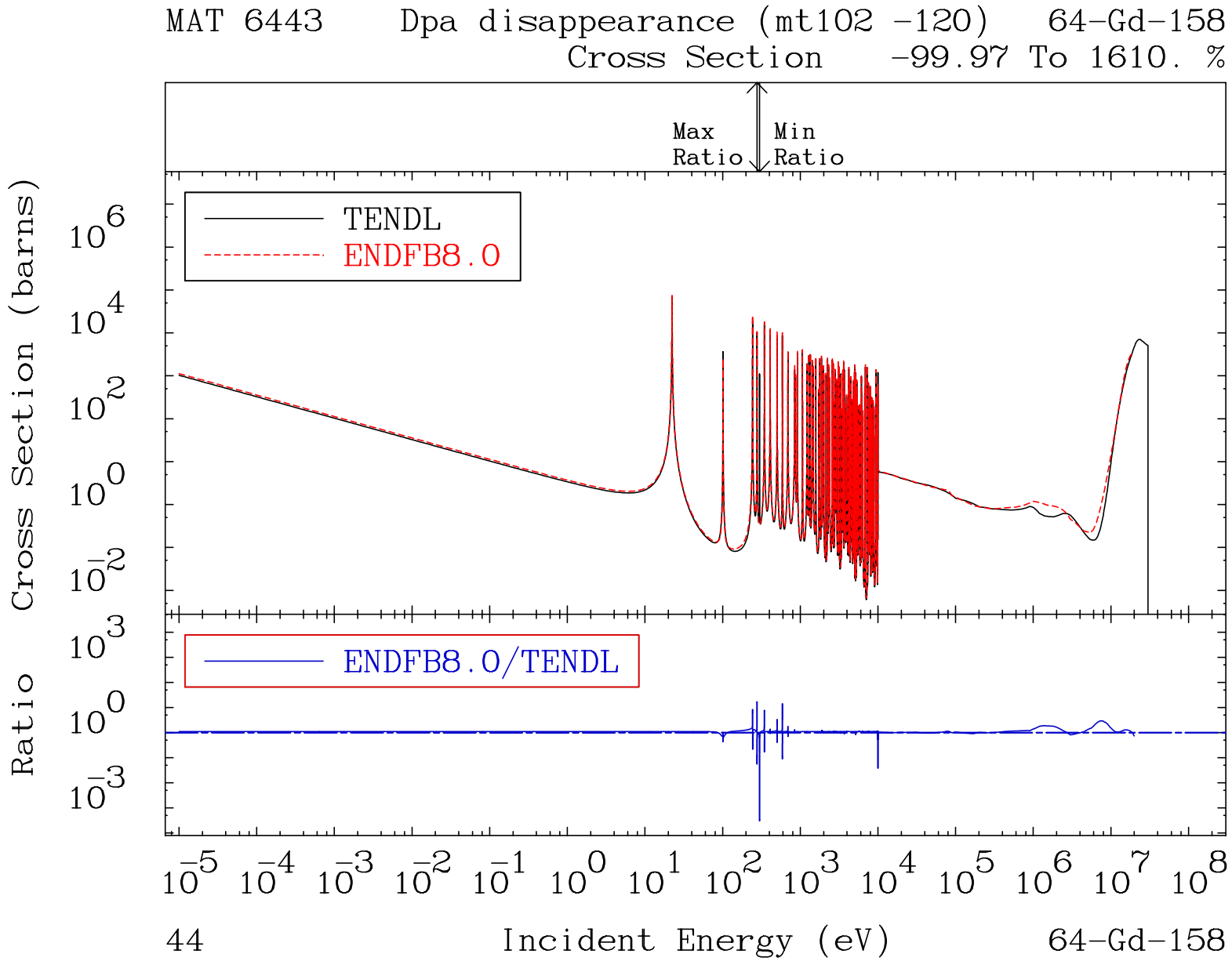

MAT 6443 Dpa disappearance (mt102 -120) 64-Gd-158
Cross Section -99.97 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
64-Gd-158


MAT 6443 Total kinematic kerma (high limit) 64-Gd-158
Cross Section -99.11 To 3305. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
64-Gd-158


MAT 6443
Dpa total (eV-barns)
64-Gd-158
Cross Section -99.97 To 4644. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
64-Gd-158


MAT 6443
Dpa elastic (mt2)
Cross Section
64-Gd-158
-99.96 To 9999. %
Min
Ratio
TENDL Threshold 987.09 eV
ENDFB8.0 Threshold 989.67 eV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
42
64-Gd-158


MAT 6443
Dpa inelastic (mt51-91)
64-Gd-158
Cross Section
-25.08 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 80.022 keV
ENDFB8.0 Threshold 80.022 keV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
64-Gd-158


MAT 6443 Dpa disappearance (mt102 -120) 64-Gd-158
Cross Section -99.97 To 1610. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
64-Gd-158