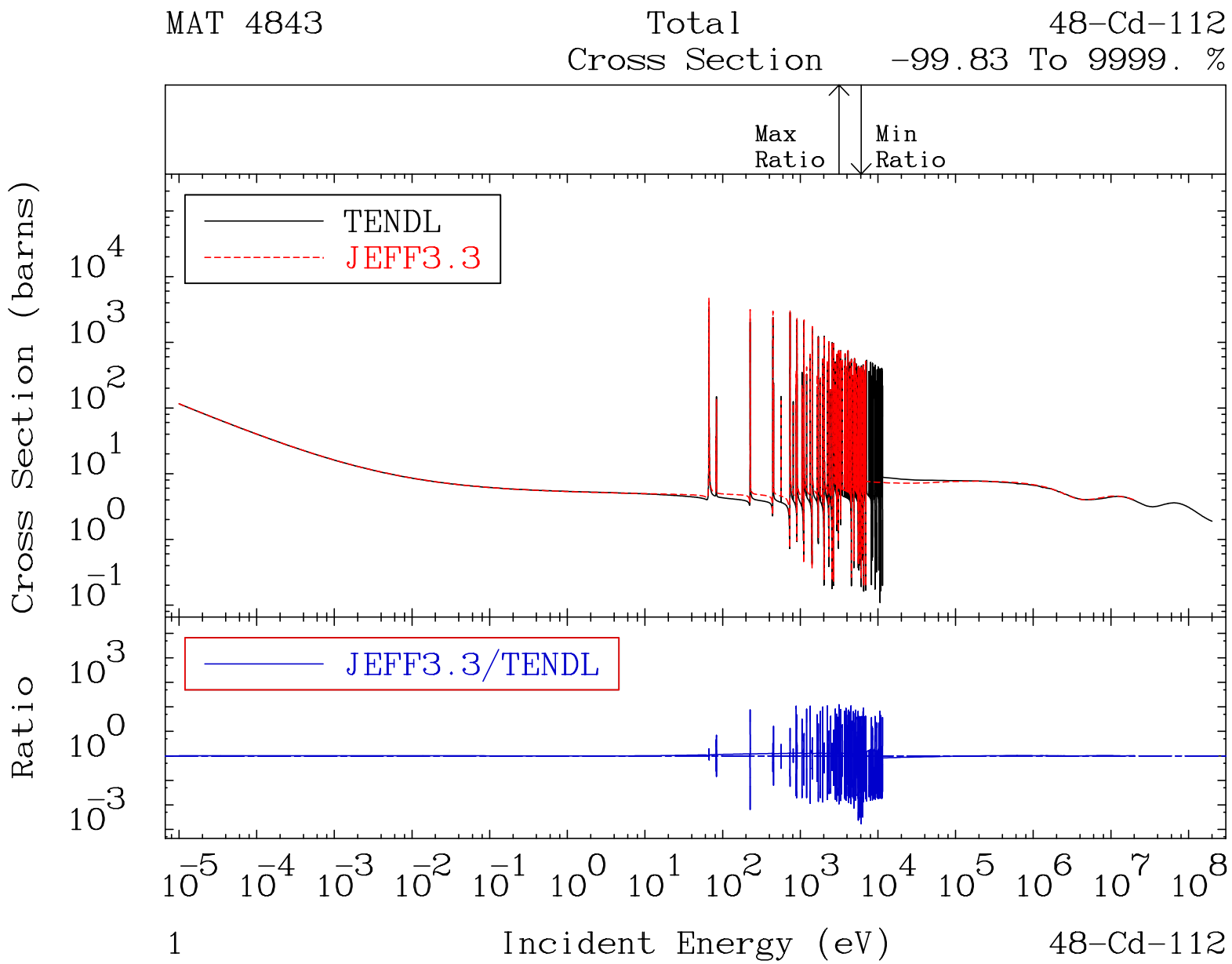
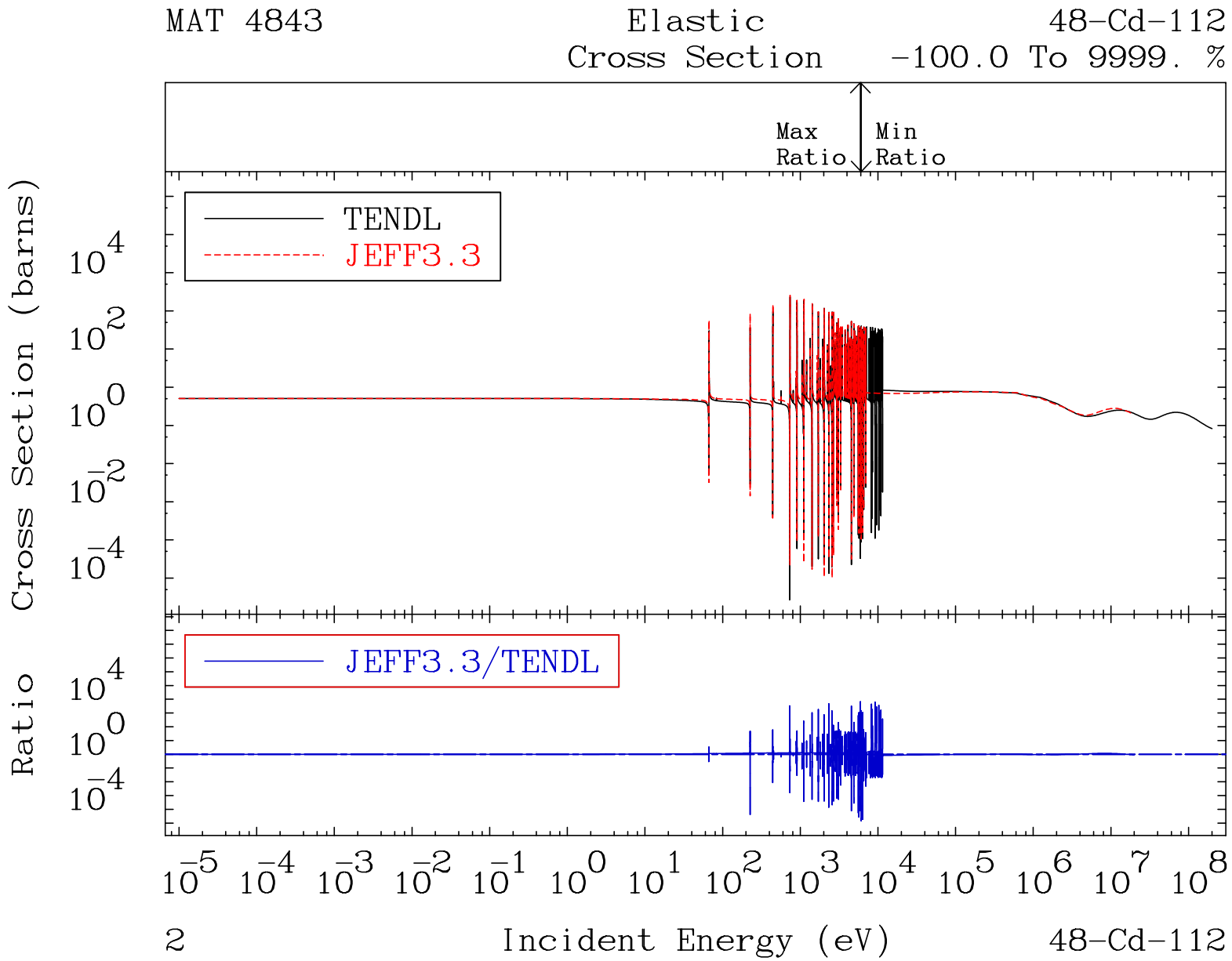
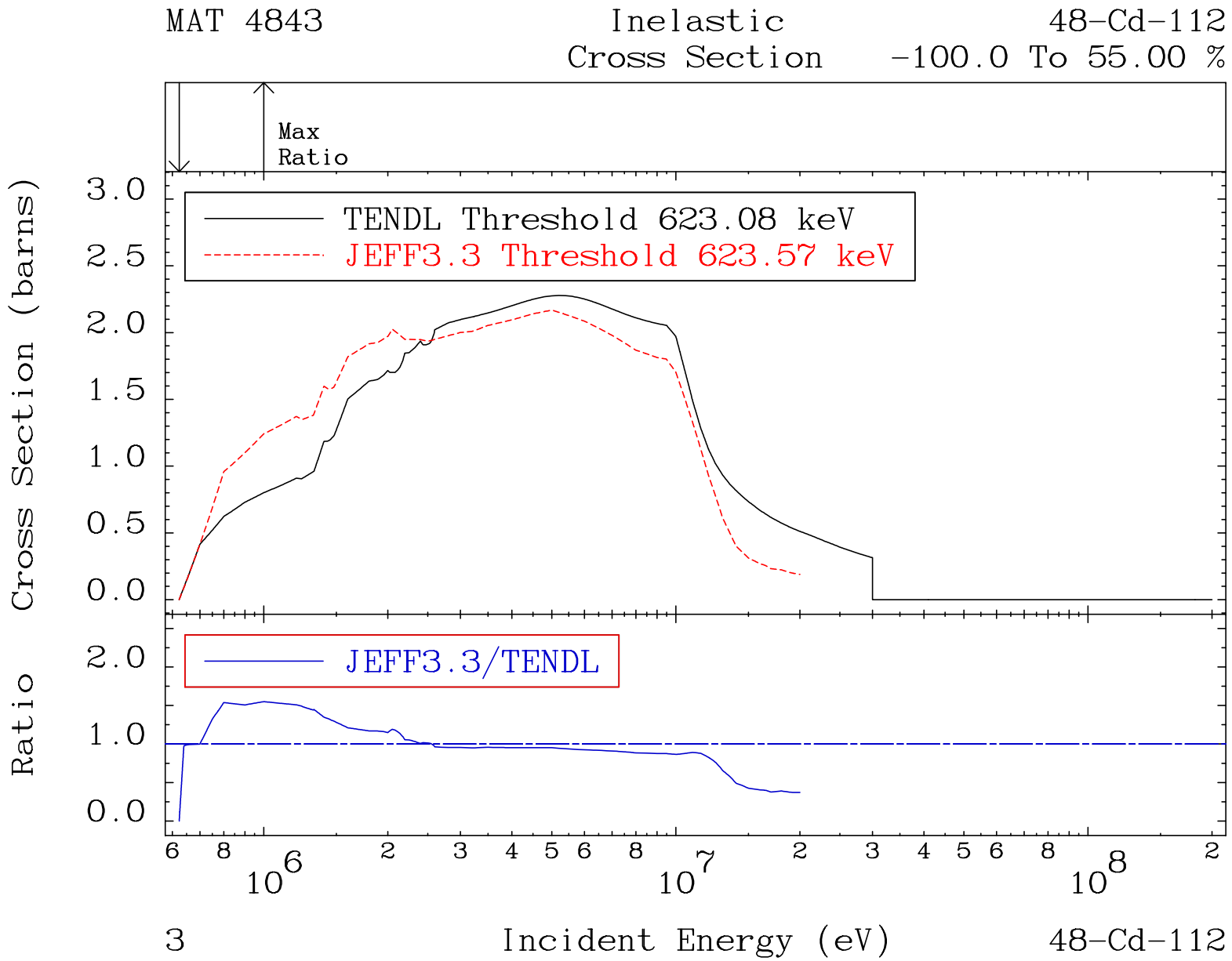
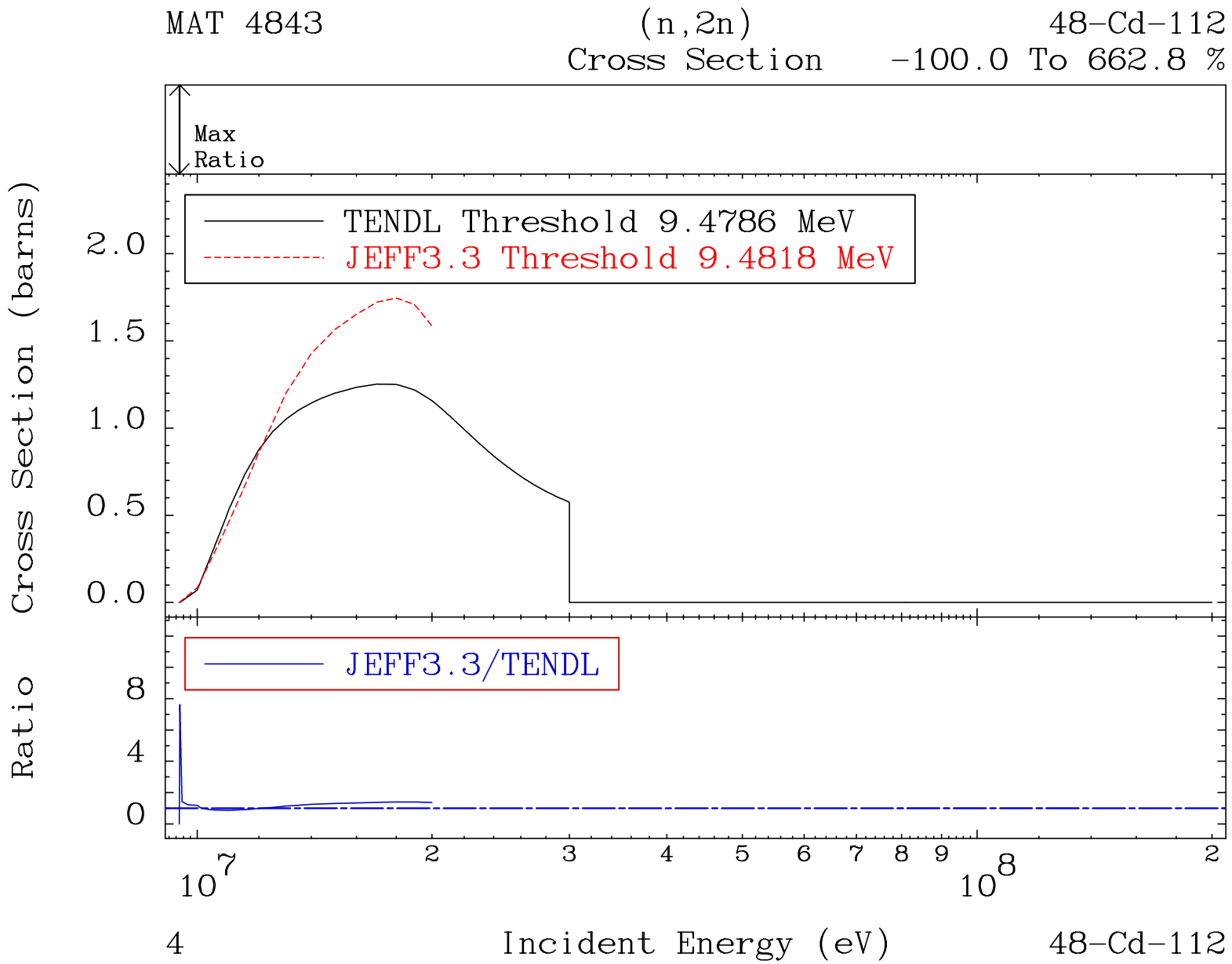
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

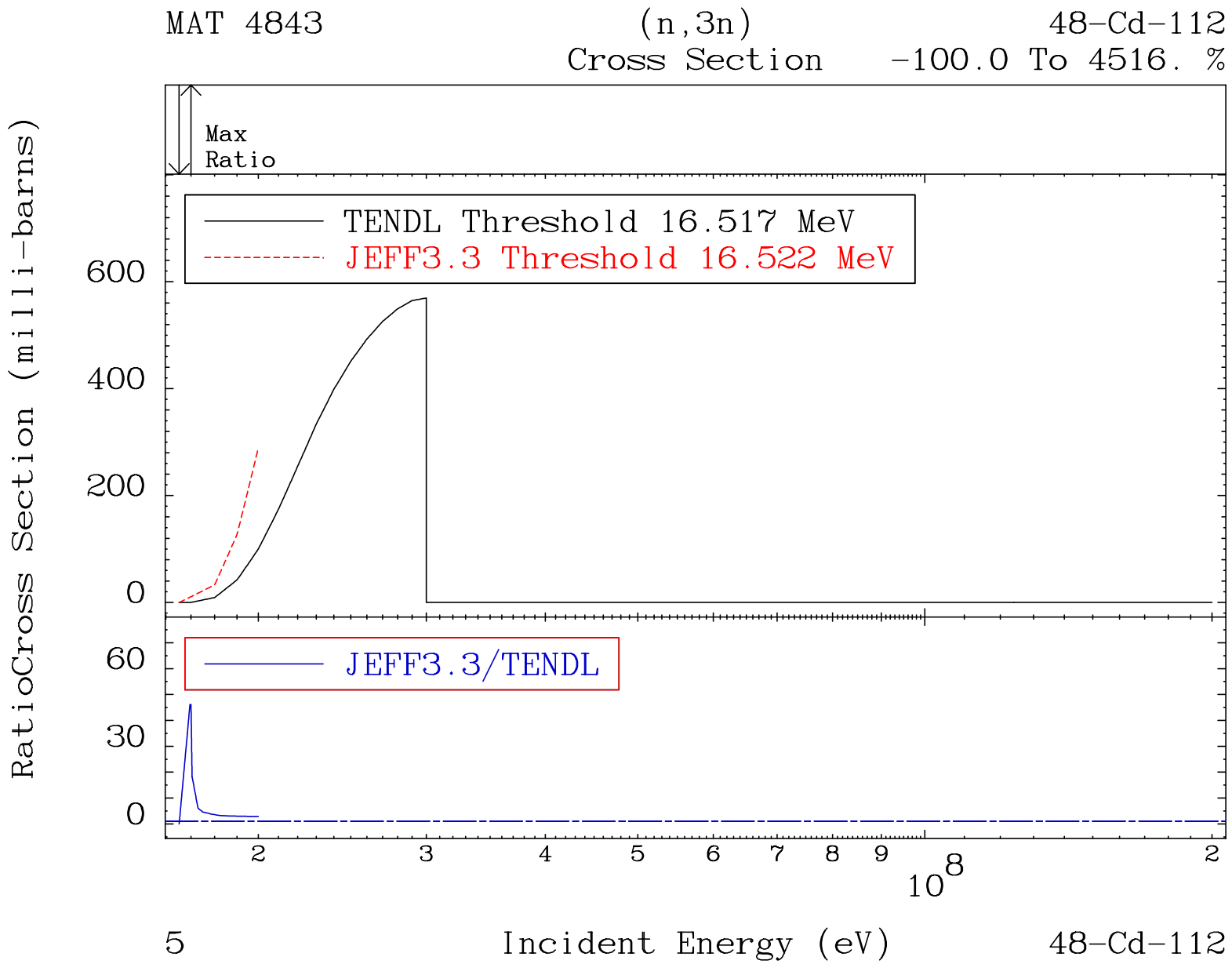
Press Mouse Button to Start

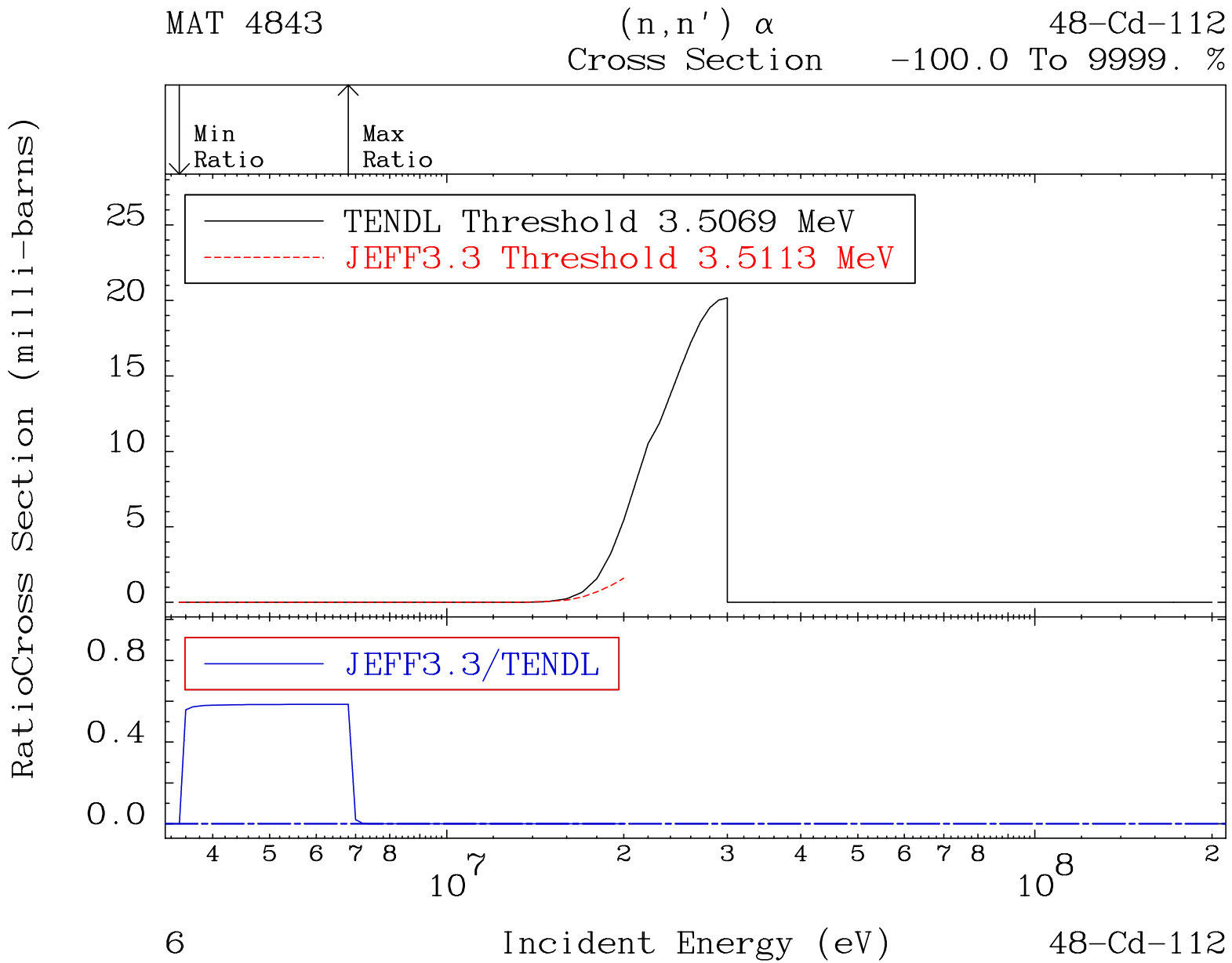

MAT 4843
Total
Cross Section
48-Cd-112
-99.83 To 9999. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
48-Cd-112

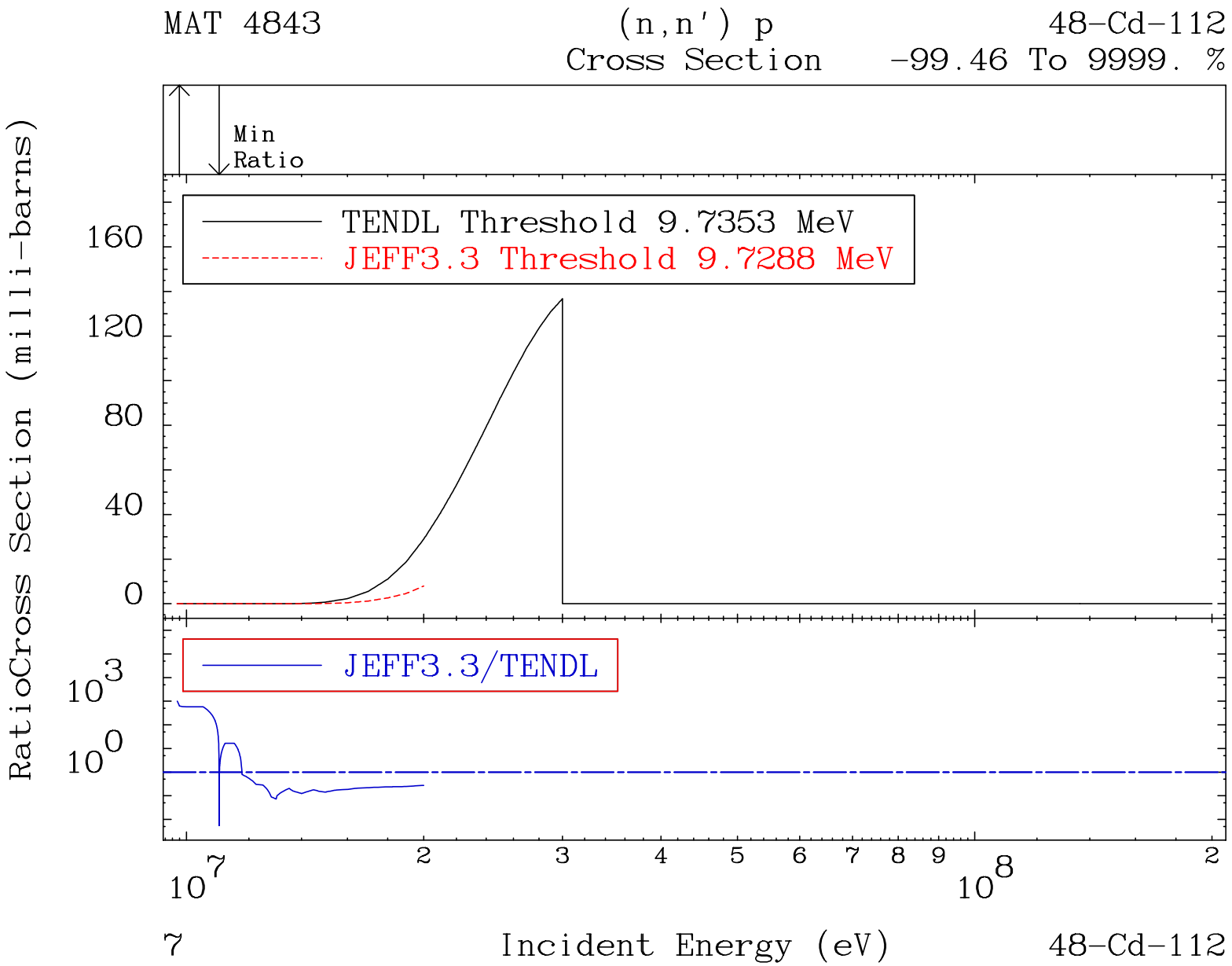

MAT 4843
Elastic
Cross Section
48-Cd-112
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
48-Cd-112

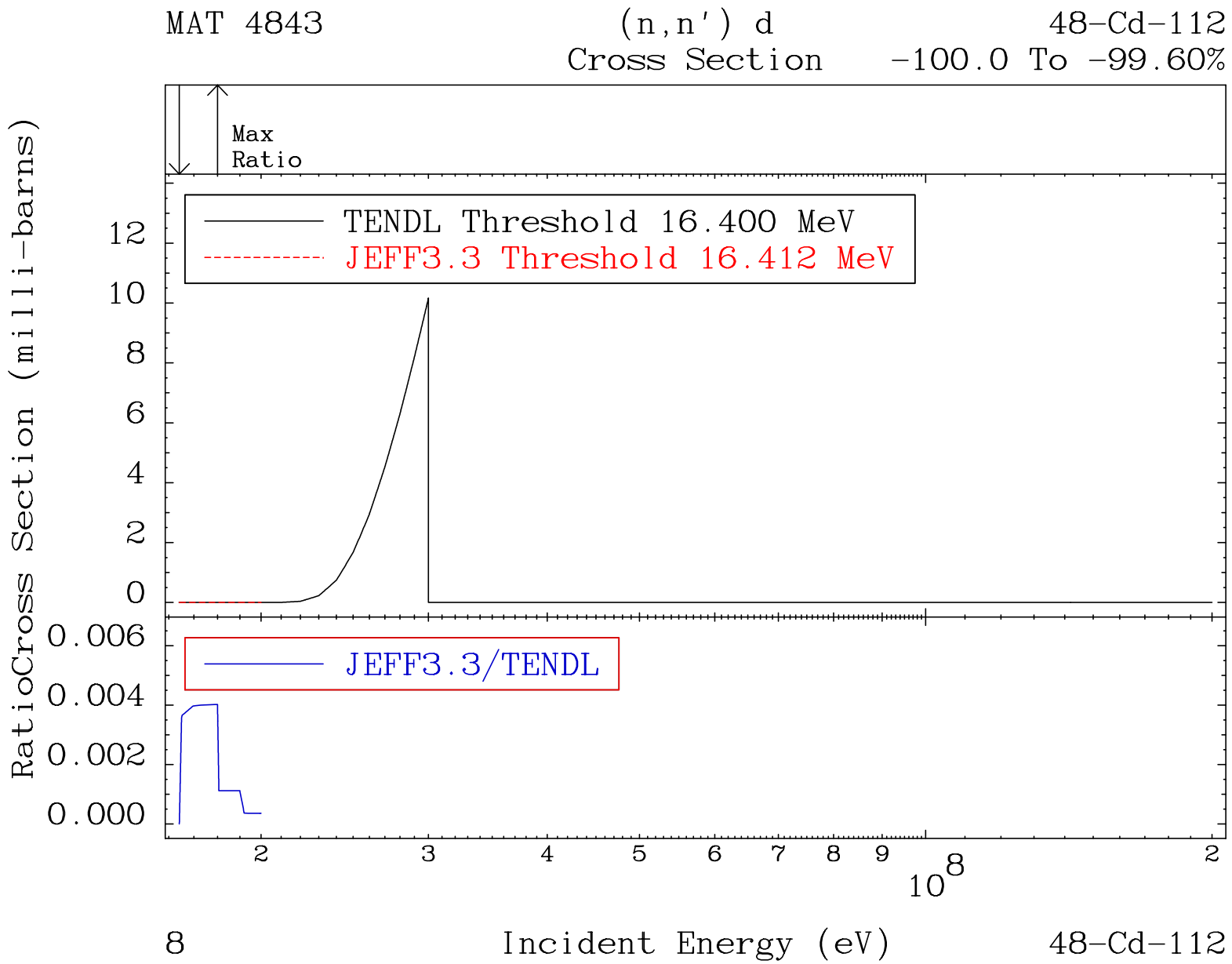

MAT 4843
Inelastic
Cross Section
48-Cd-112
-100.0 To 55.00 %
Max
Ratio
TENDL Threshold 623.08 keV
JEFF3.3 Threshold 623.57 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
48-Cd-112

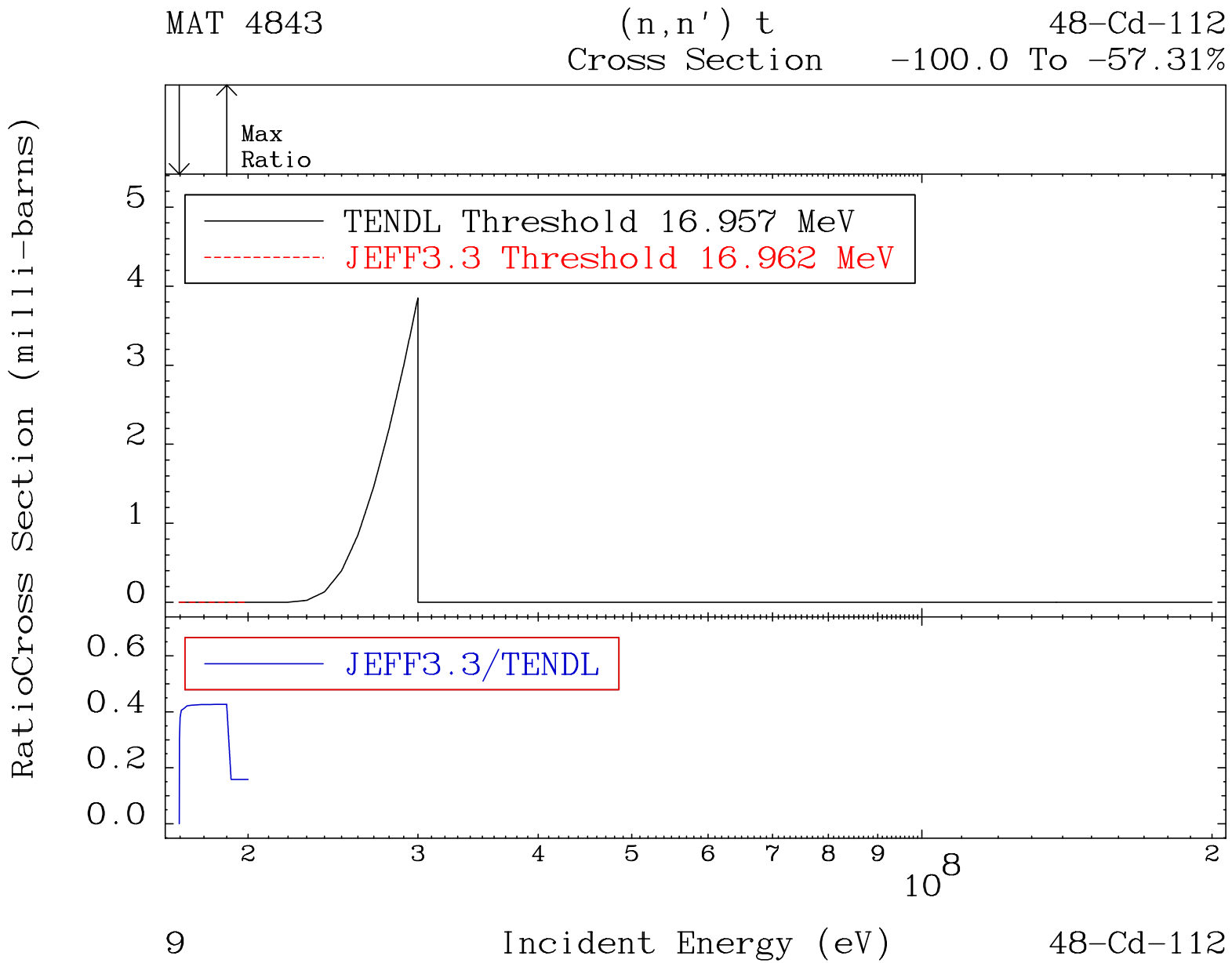

MAT 4843
(n,2n)
Cross Section
48-Cd-112
-100.0 To 662.8 %
Max
Ratio
TENDL Threshold 9.4786 MeV
JEFF3.3 Threshold 9.4818 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
8
4
0
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
48-Cd-112

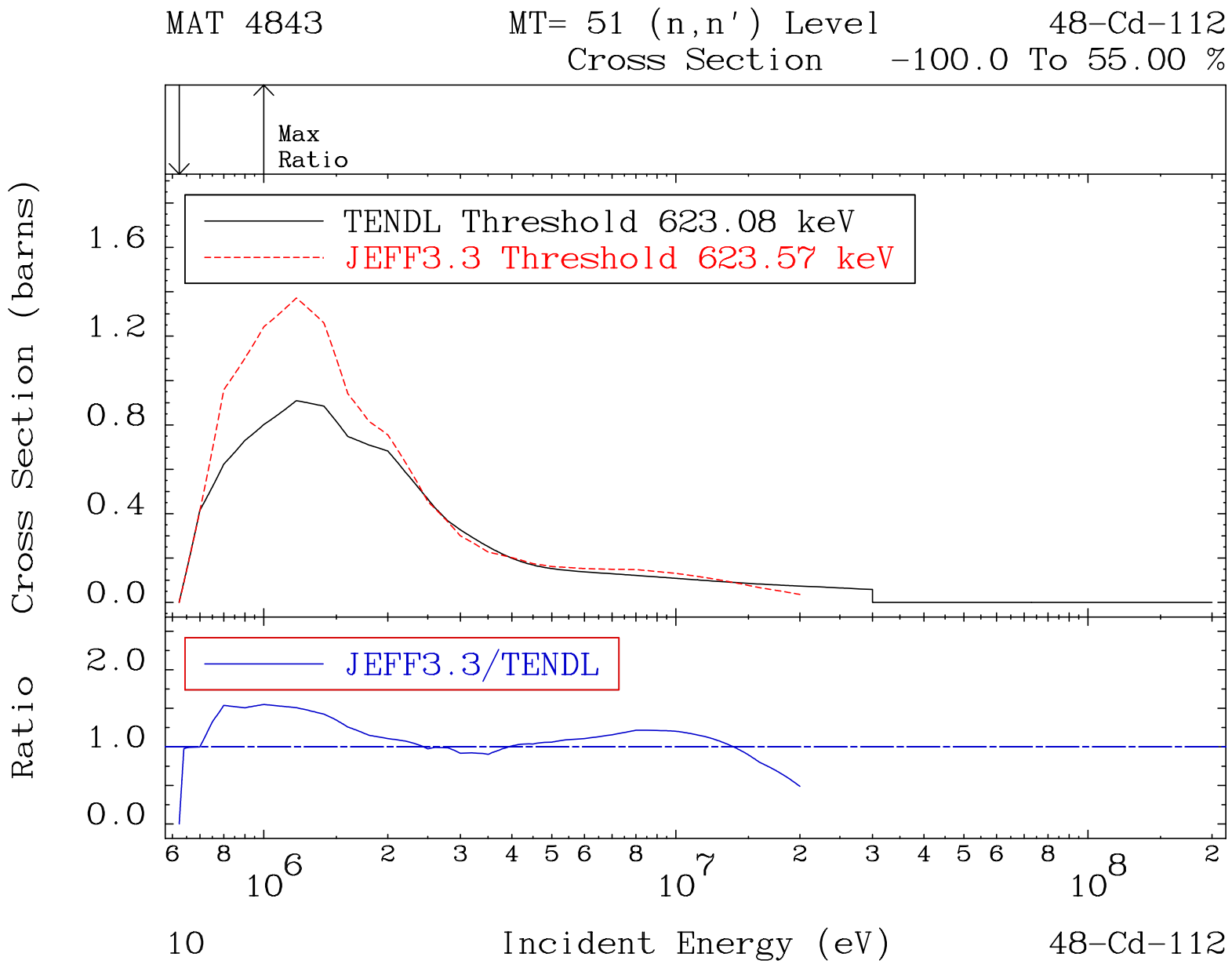

MAT 4843
(n,3n)
48-Cd-112
Cross Section
-100.0 To 4516. %
Max
Ratio
TENDL Threshold 16.517 MeV
JEFF3.3 Threshold 16.522 MeV
600
400
200
0
JEFF3.3/TENDL
60
30
0
2
3
4
5
6
7
8
9
10^8
2
RatioCross Section (milli-barns)
5
Incident Energy (eV)
48-Cd-112

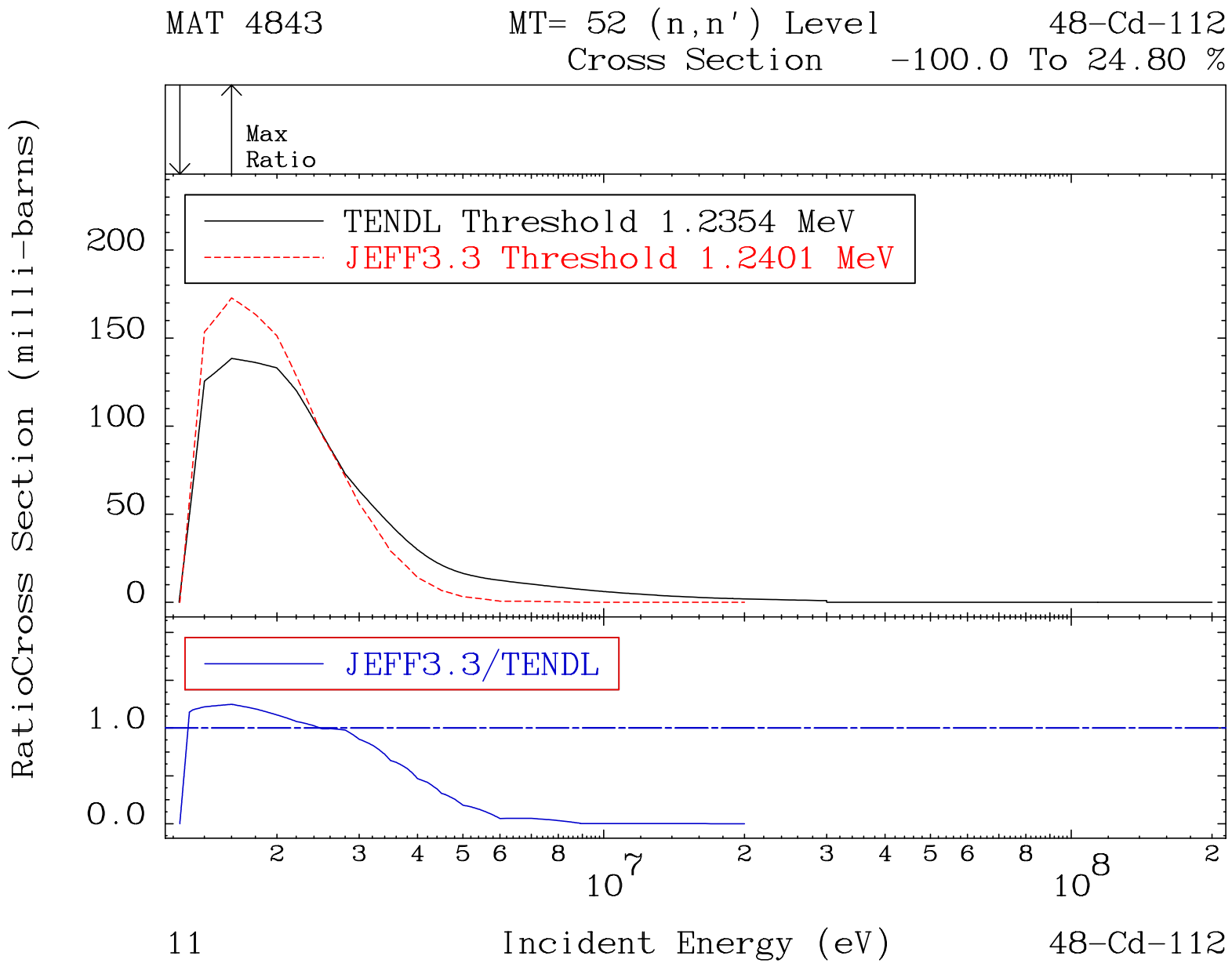

MAT 4843
(n,n') α
Cross Section
48-Cd-112
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 3.5069 MeV
JEFF3.3 Threshold 3.5113 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
0.8
0.4
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
6
Incident Energy (eV)
48-Cd-112

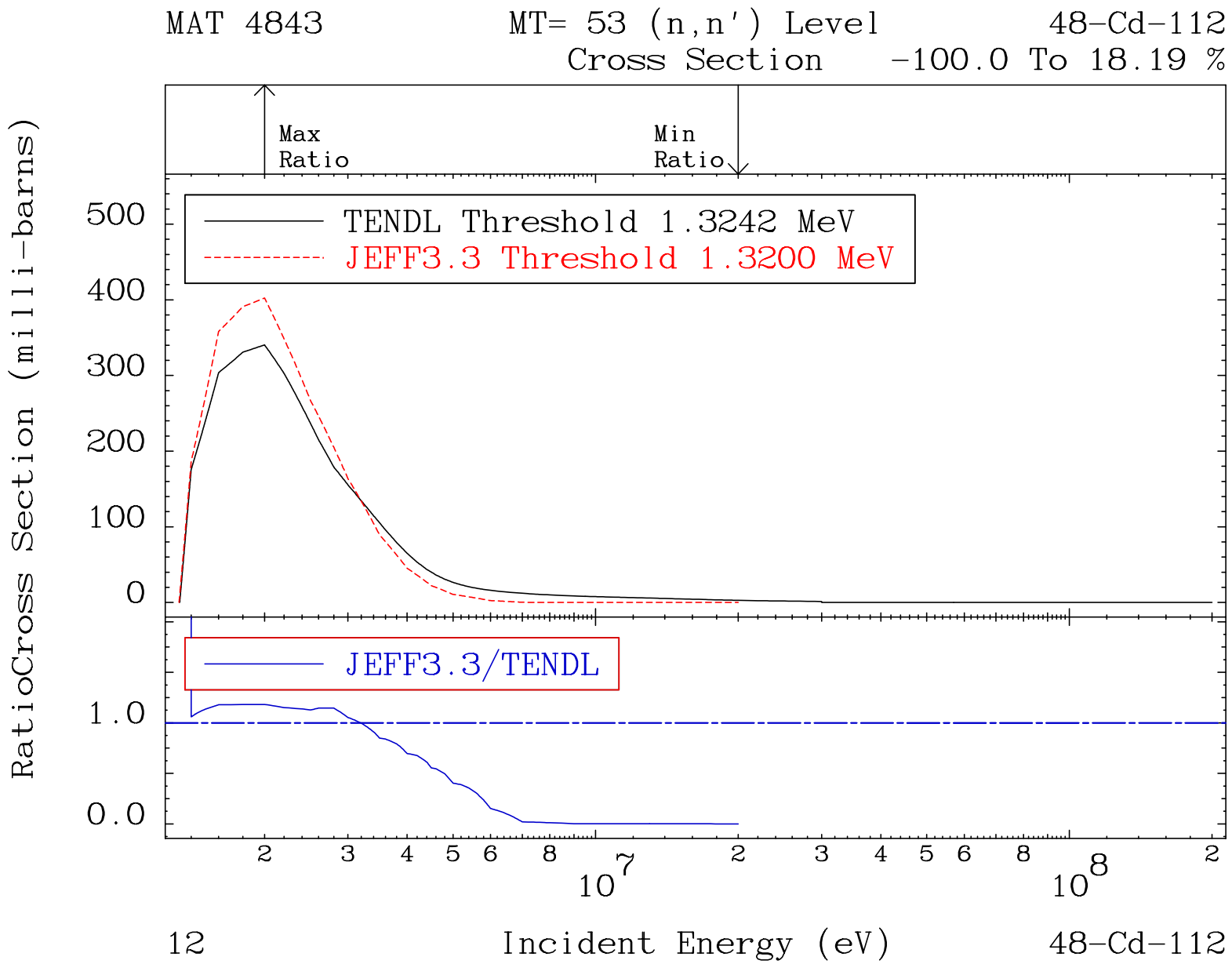

MAT 4843
(n,n') p
Cross Section
48-Cd-112
-99.46 To 9999. %
Min
Ratio
TENDL Threshold 9.7353 MeV
JEFF3.3 Threshold 9.7288 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
10^3
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
48-Cd-112

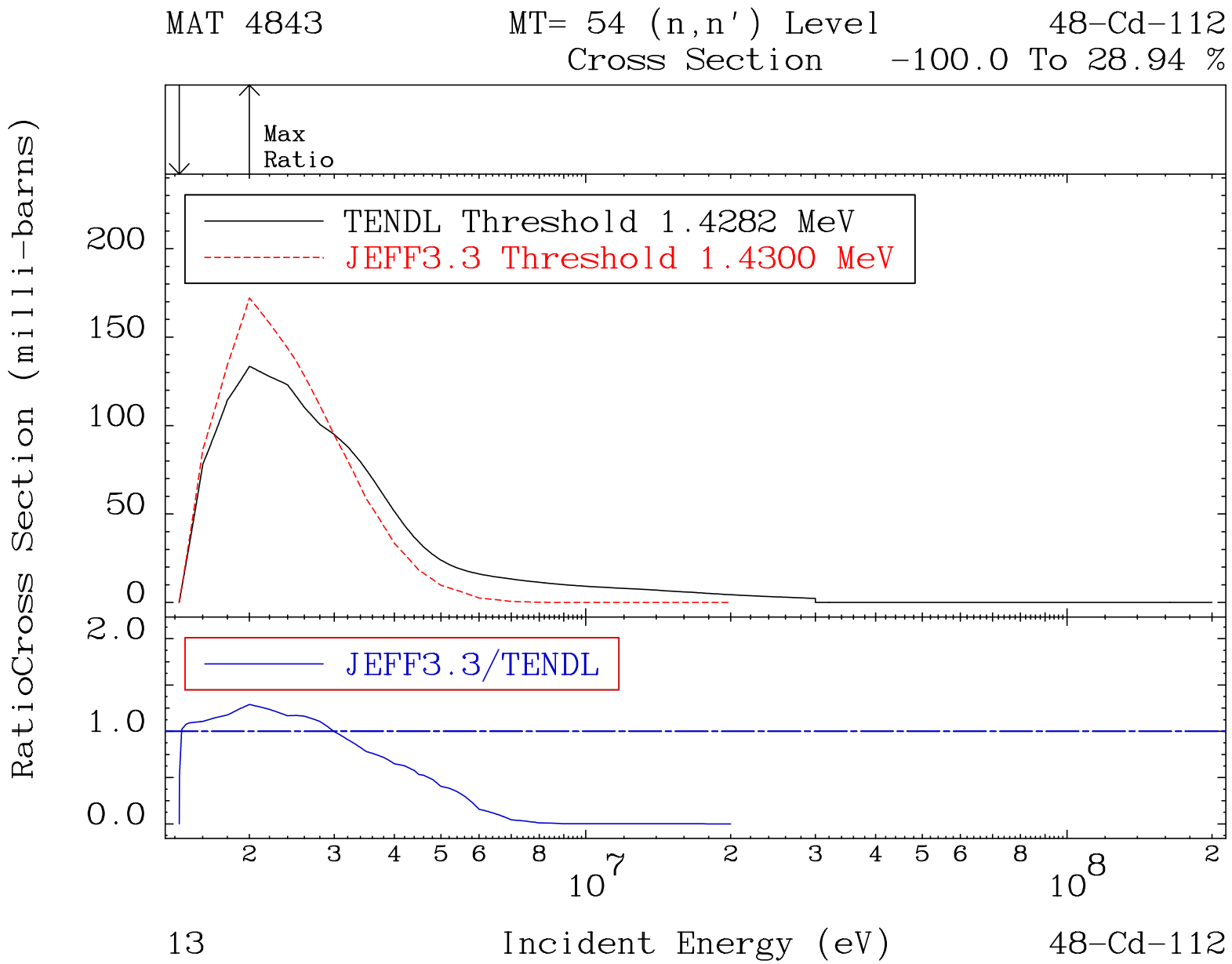

MAT 4843
(n,n') d
Cross Section
48-Cd-112
-100.0 To -99.60%
Max
Ratio
TENDL Threshold 16.400 MeV
JEFF3.3 Threshold 16.412 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
0
2
4
6
8
10
12
0.000
0.002
0.004
0.006
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
48-Cd-112

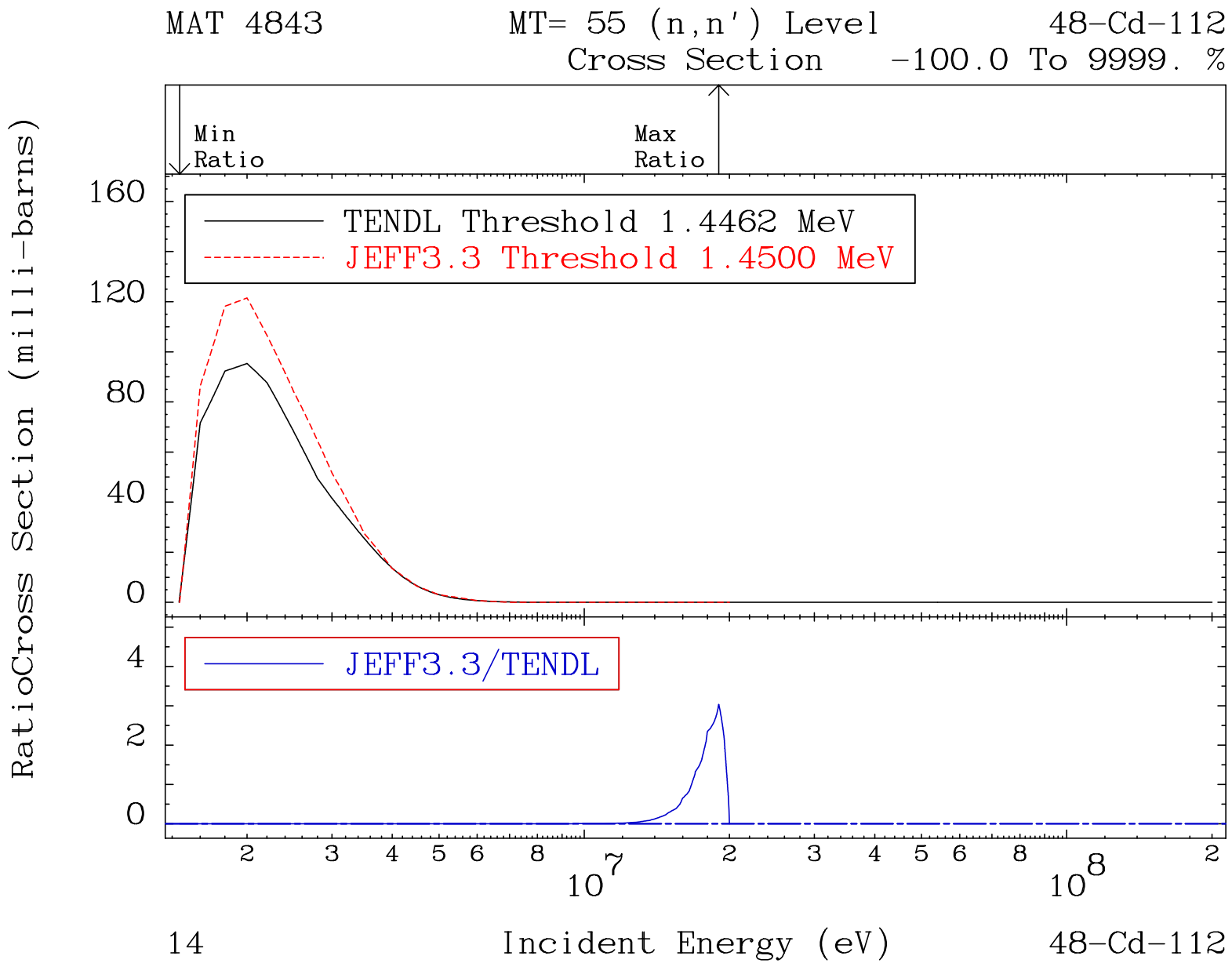

MAT 4843
(n,n') t
Cross Section
48-Cd-112
-100.0 To -57.31%
Max
Ratio
TENDL Threshold 16.957 MeV
JEFF3.3 Threshold 16.962 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
9
48-Cd-112

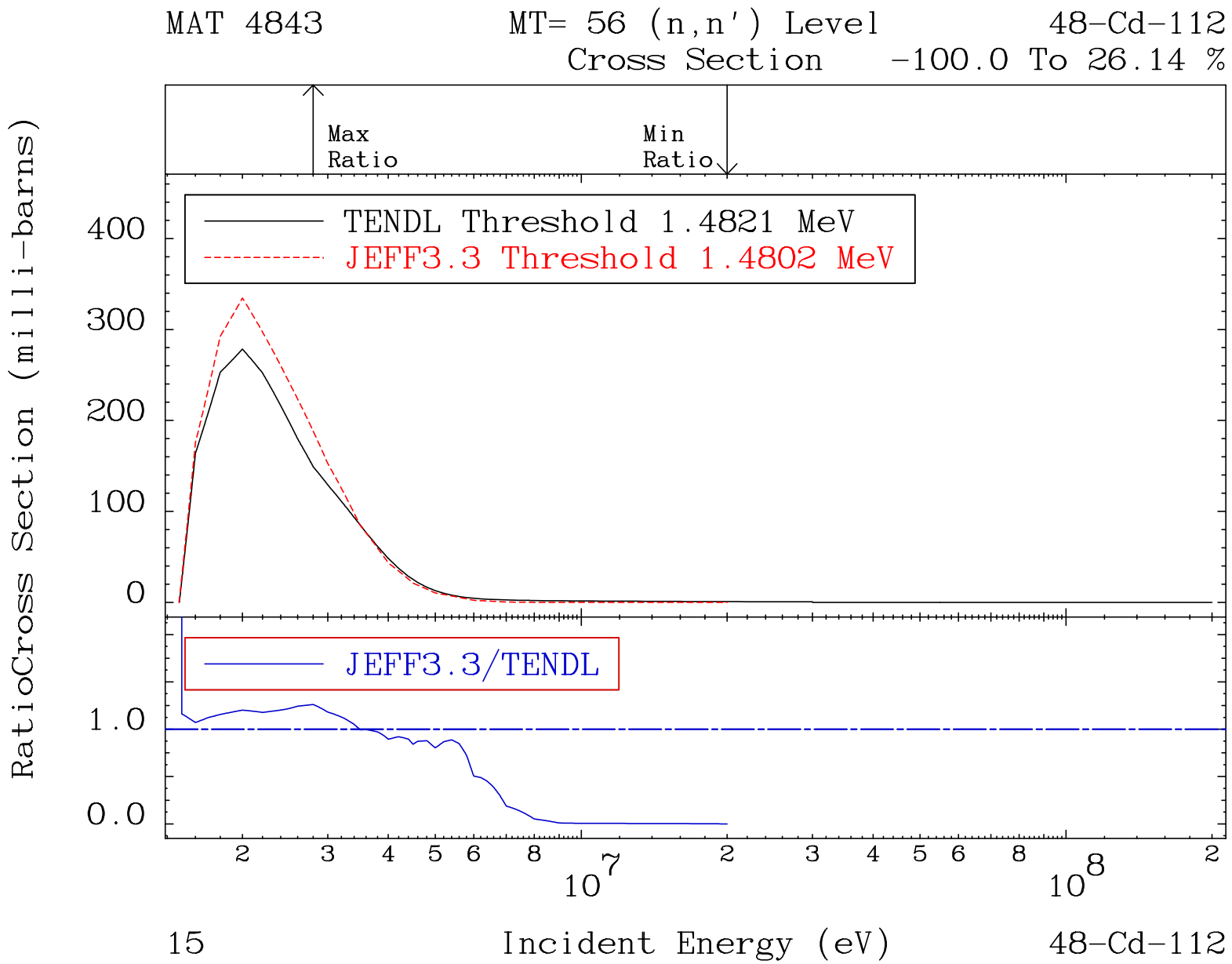

MAT 4843
MT= 51 (n,n') Level
48-Cd-112
Cross Section
-100.0 To 55.00 %
Max
Ratio
TENDL Threshold 623.08 keV
JEFF3.3 Threshold 623.57 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.6
1.2
0.8
0.4
0.0
2.0
1.0
0.0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
10
Incident Energy (eV)
48-Cd-112

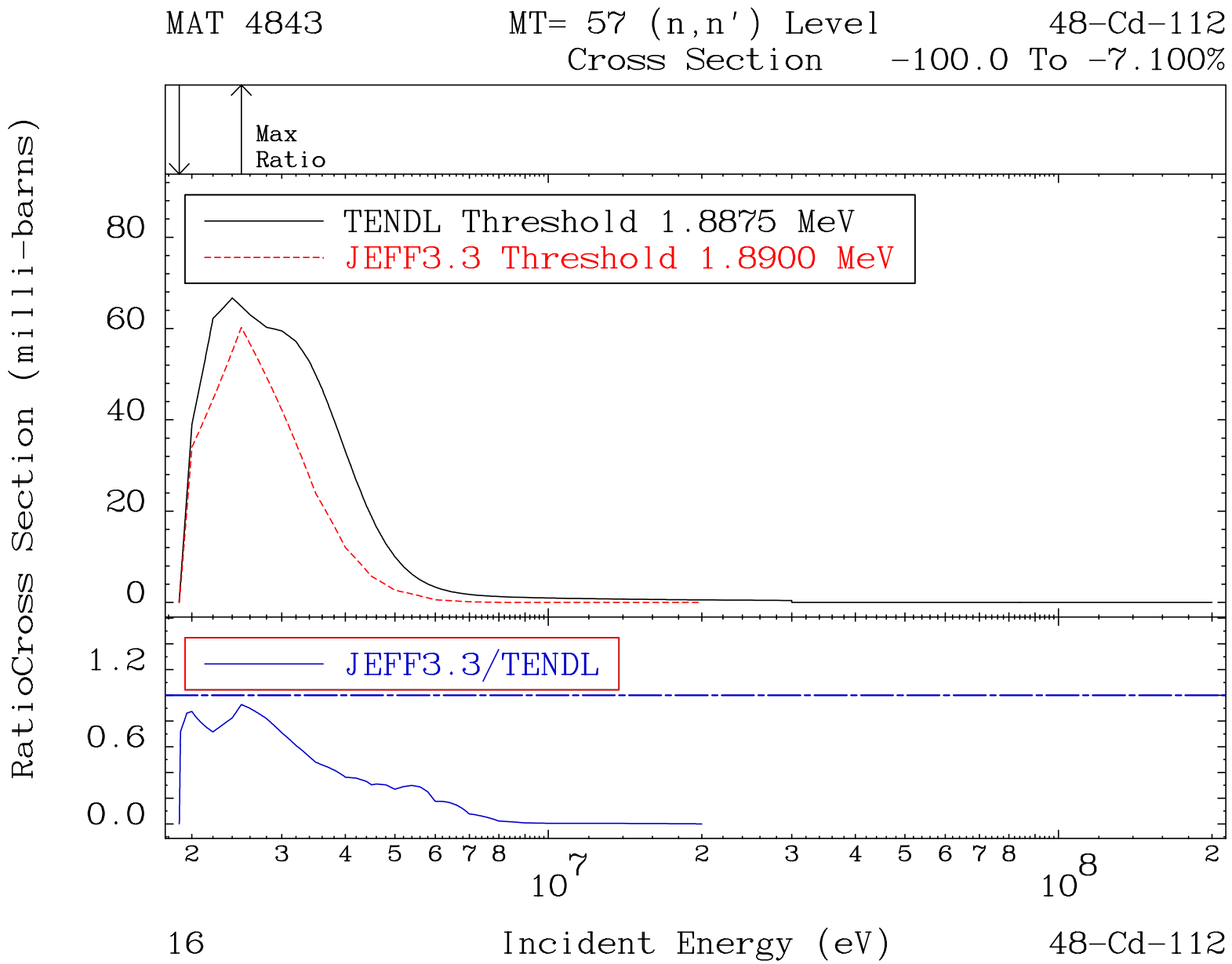

MAT 4843
MT= 52 (n,n') Level
48-Cd-112
Cross Section
-100.0 To 24.80 %
Max
Ratio
TENDL Threshold 1.2354 MeV
JEFF3.3 Threshold 1.2401 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
11
Incident Energy (eV)
48-Cd-112

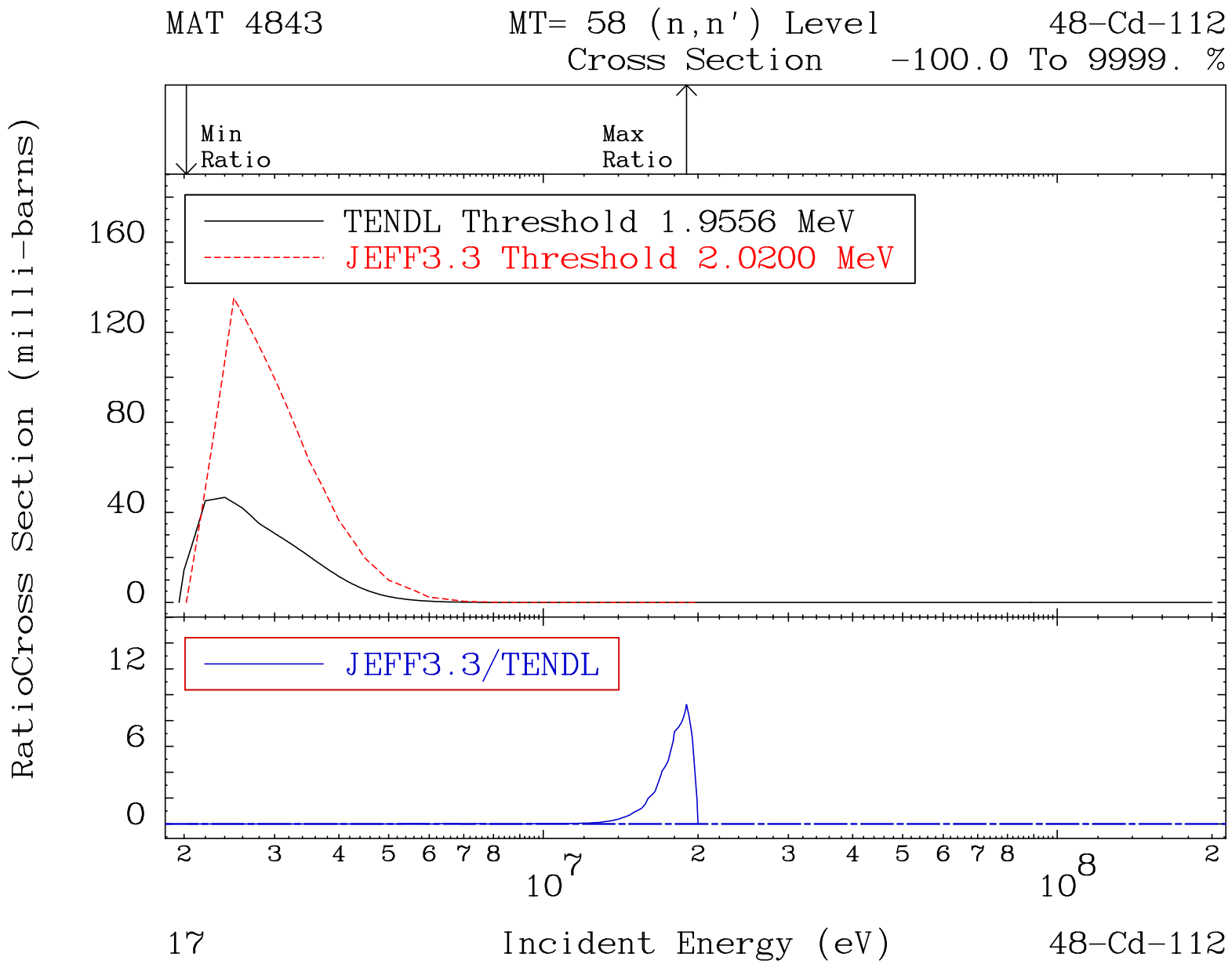

MAT 4843
MT= 53 (n,n') Level
48-Cd-112
Cross Section -100.0 To 18.19 %
Max Ratio
Min Ratio
TENDL Threshold 1.3242 MeV
JEFF3.3 Threshold 1.3200 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
1.0
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
48-Cd-112

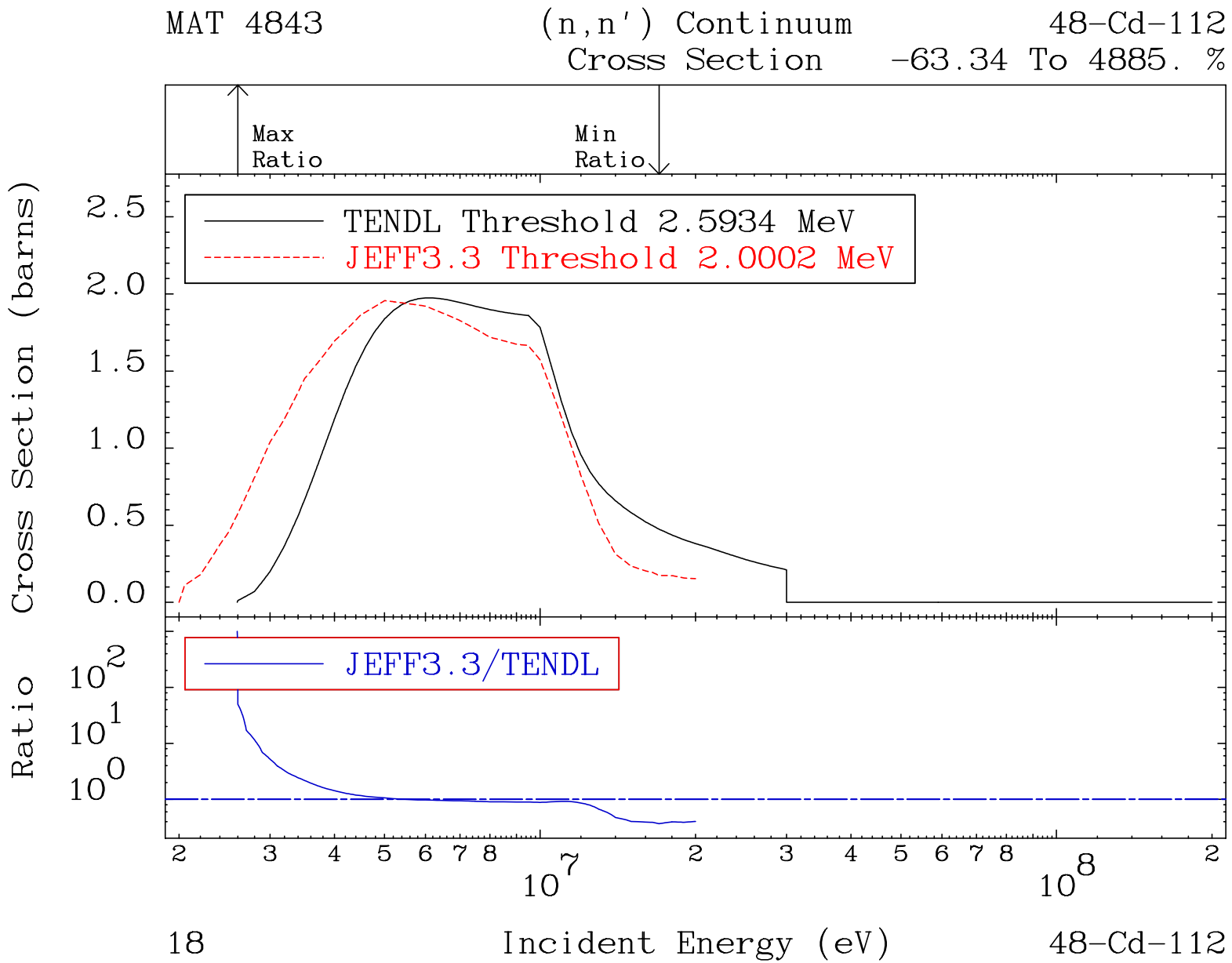

MAT 4843
MT= 54 (n,n') Level
48-Cd-112
Cross Section -100.0 To 28.94 %
Max
Ratio
TENDL Threshold 1.4282 MeV
JEFF3.3 Threshold 1.4300 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
2.0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
13
Incident Energy (eV)
48-Cd-112

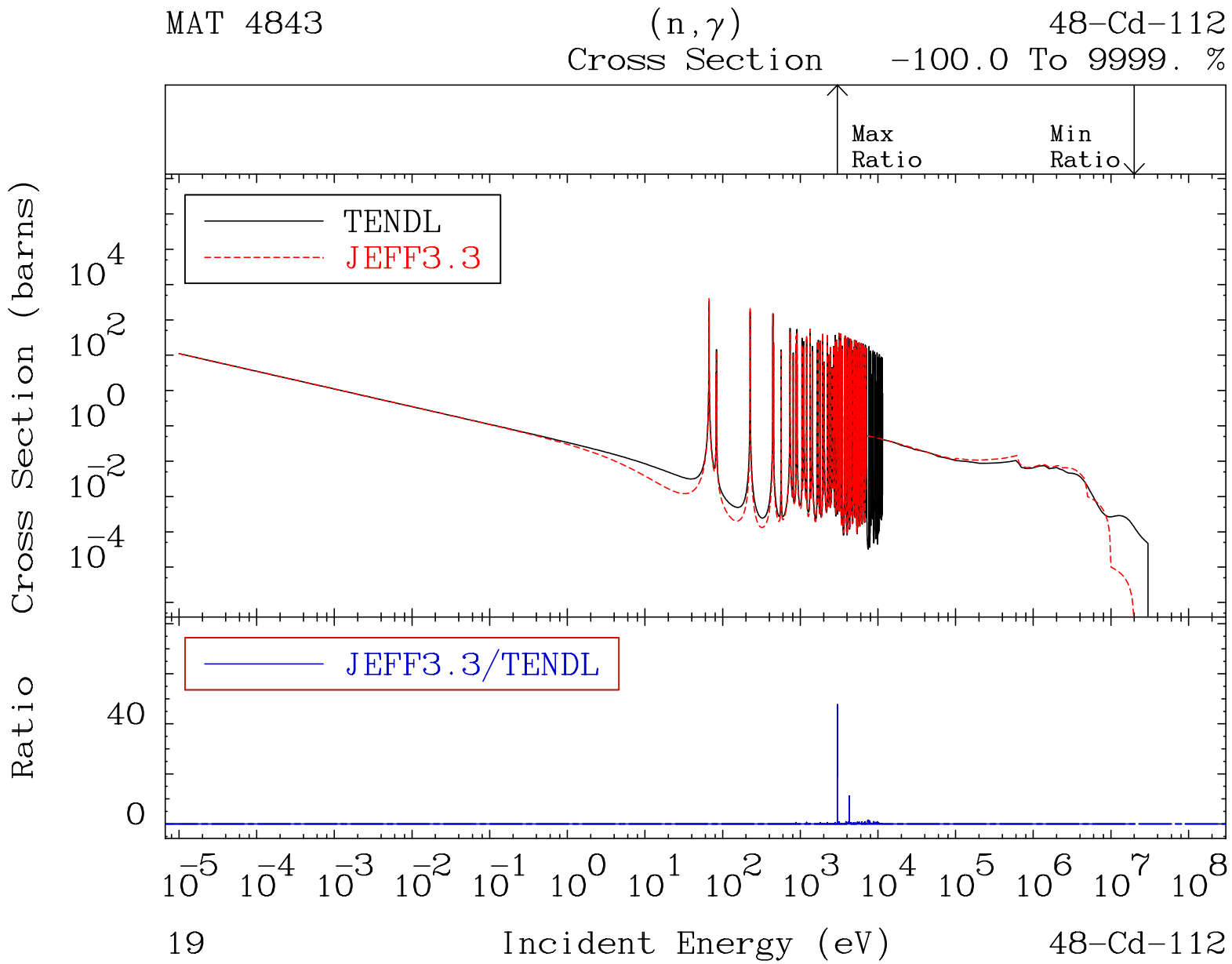

MAT 4843
MT= 55 (n,n') Level
48-Cd-112
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.4462 MeV
JEFF3.3 Threshold 1.4500 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
4
2
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
14
Incident Energy (eV)
48-Cd-112

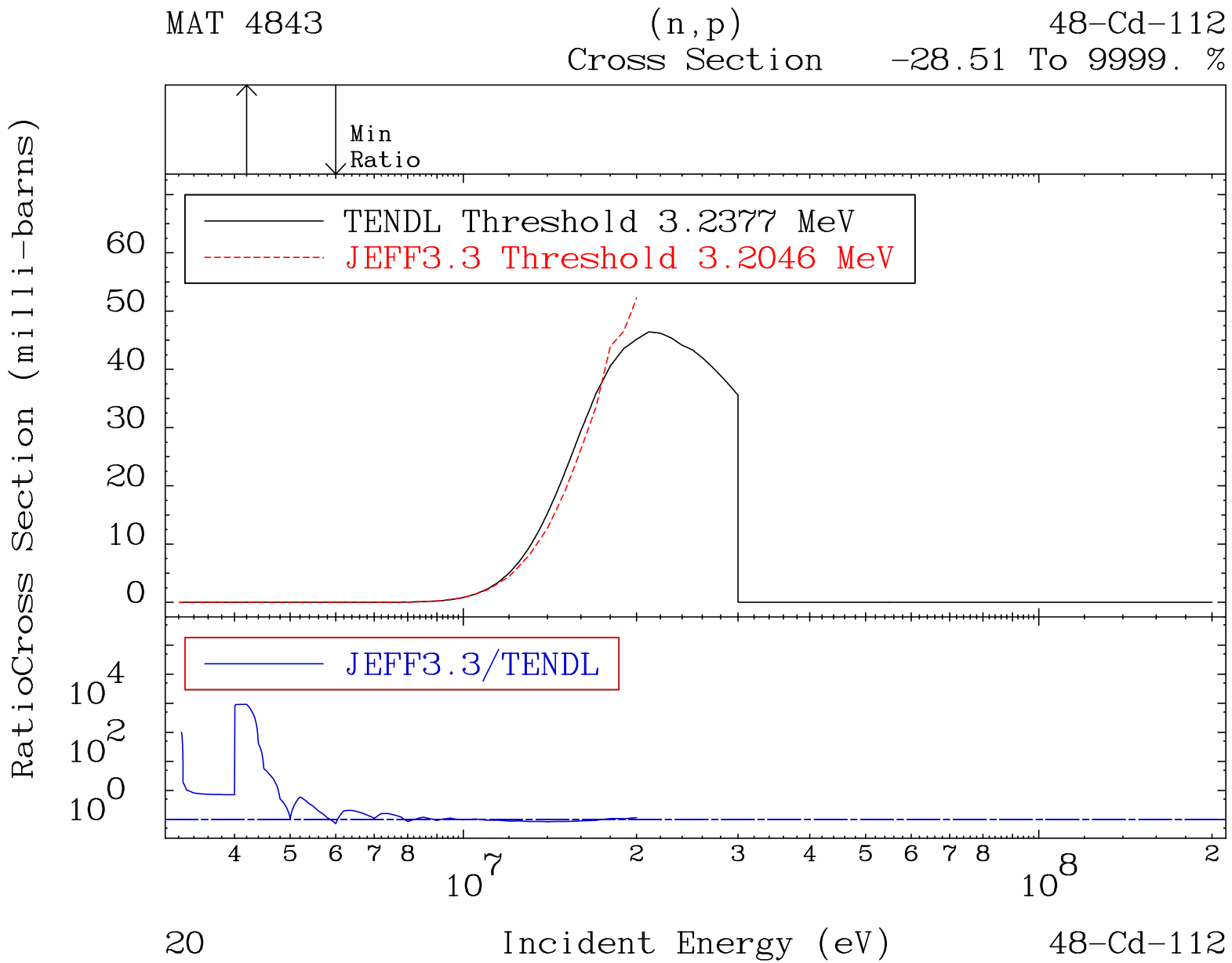

MAT 4843
MT= 56 (n,n') Level
48-Cd-112
Cross Section
-100.0 To 26.14 %
Max Ratio
Min Ratio
TENDL Threshold 1.4821 MeV
JEFF3.3 Threshold 1.4802 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
1.0
0.0
2
3
4
5
6
8
10^7
10^8
15
Incident Energy (eV)
48-Cd-112

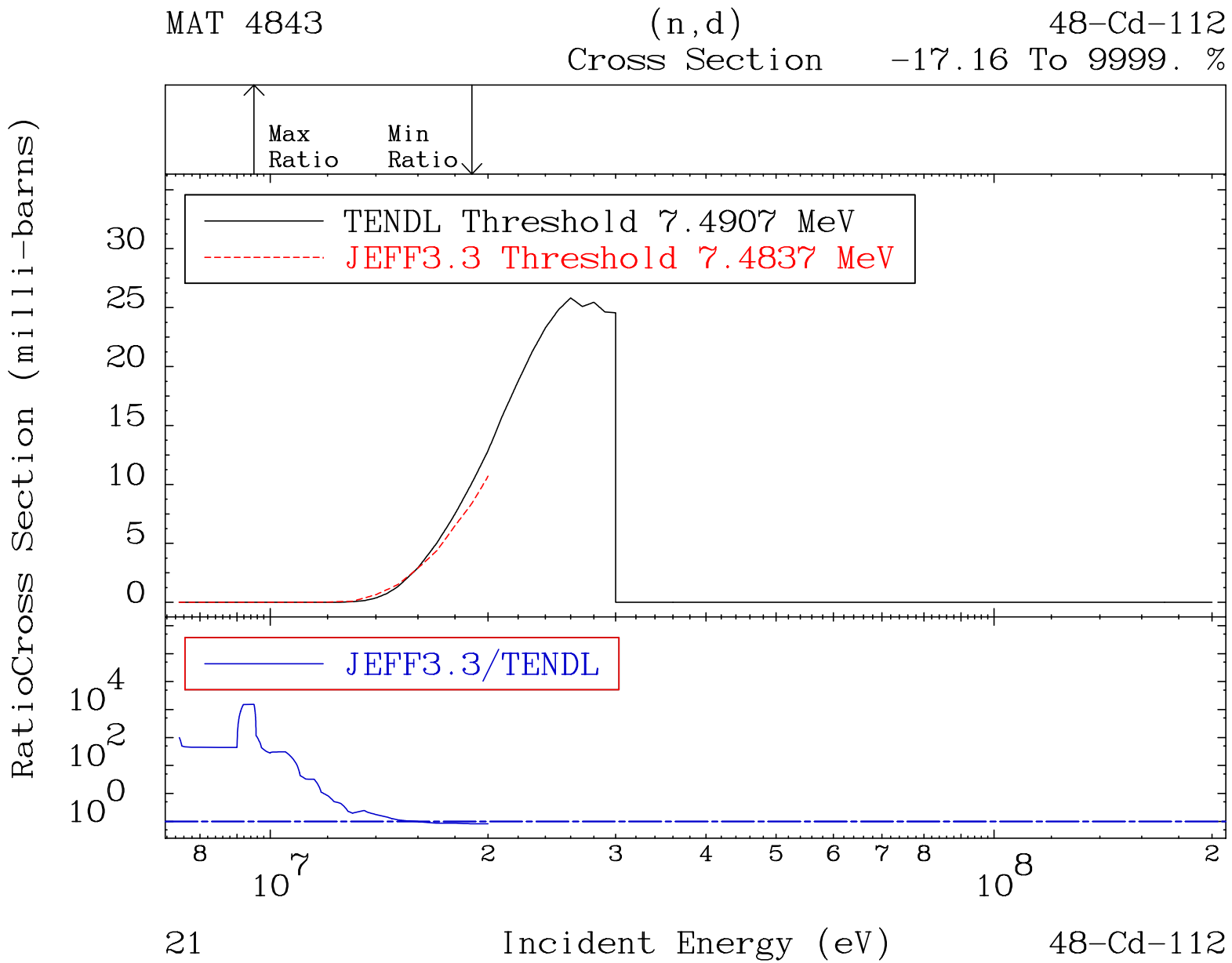

MAT 4843
MT= 57 (n,n') Level
48-Cd-112
Cross Section
-100.0 To -7.100%
Max
Ratio
TENDL Threshold 1.8875 MeV
JEFF3.3 Threshold 1.8900 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
48-Cd-112

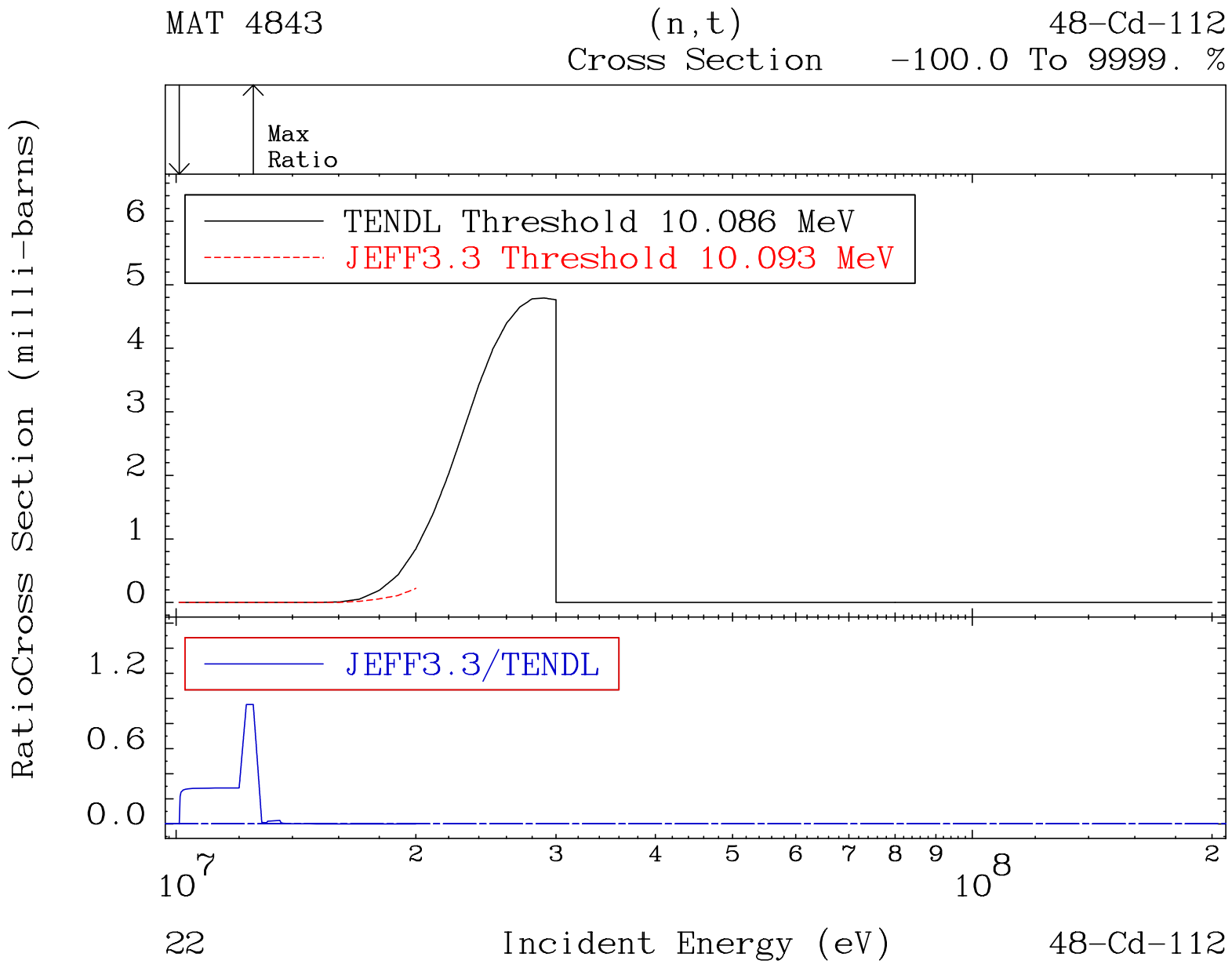

MAT 4843
MT= 58 (n,n') Level
48-Cd-112
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9556 MeV
JEFF3.3 Threshold 2.0200 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
12
6
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
48-Cd-112

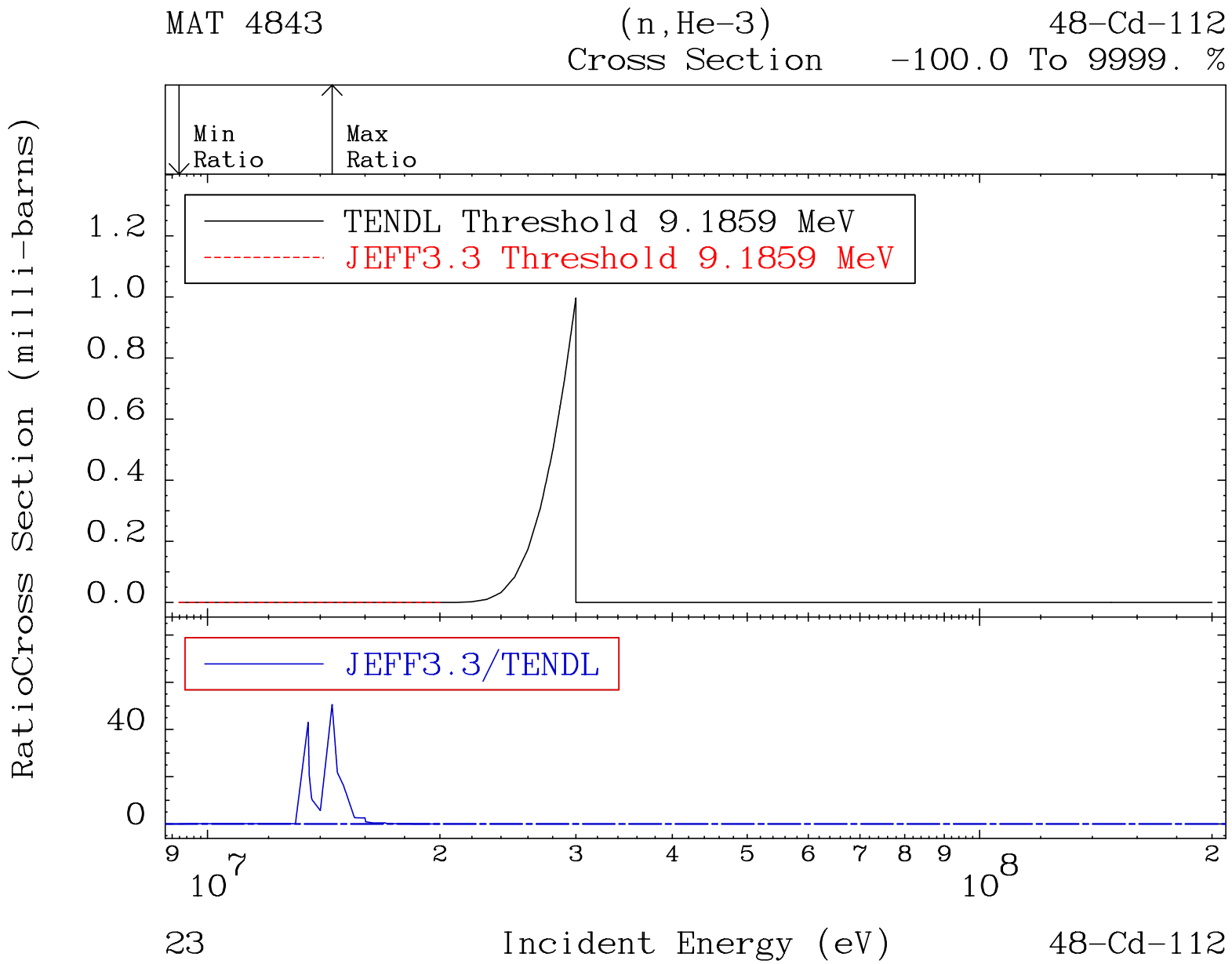

MAT 4843
(n,n') Continuum
Cross Section
48-Cd-112
-63.34 To 4885. %
Max Ratio
Min Ratio
TENDL Threshold 2.5934 MeV
JEFF3.3 Threshold 2.0002 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
48-Cd-112

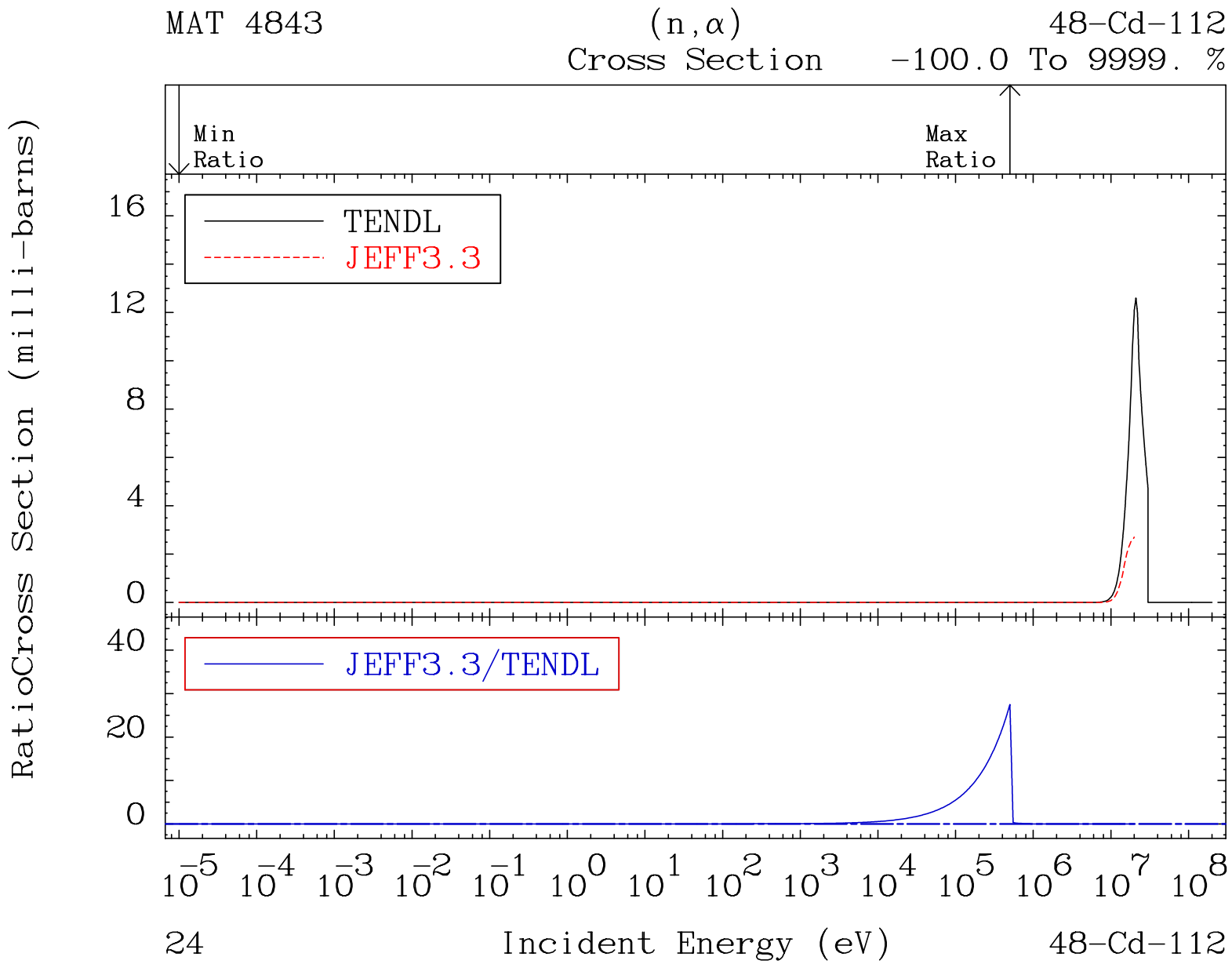

MAT 4843
(n,γ)
Cross Section
48-Cd-112
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
19
48-Cd-112

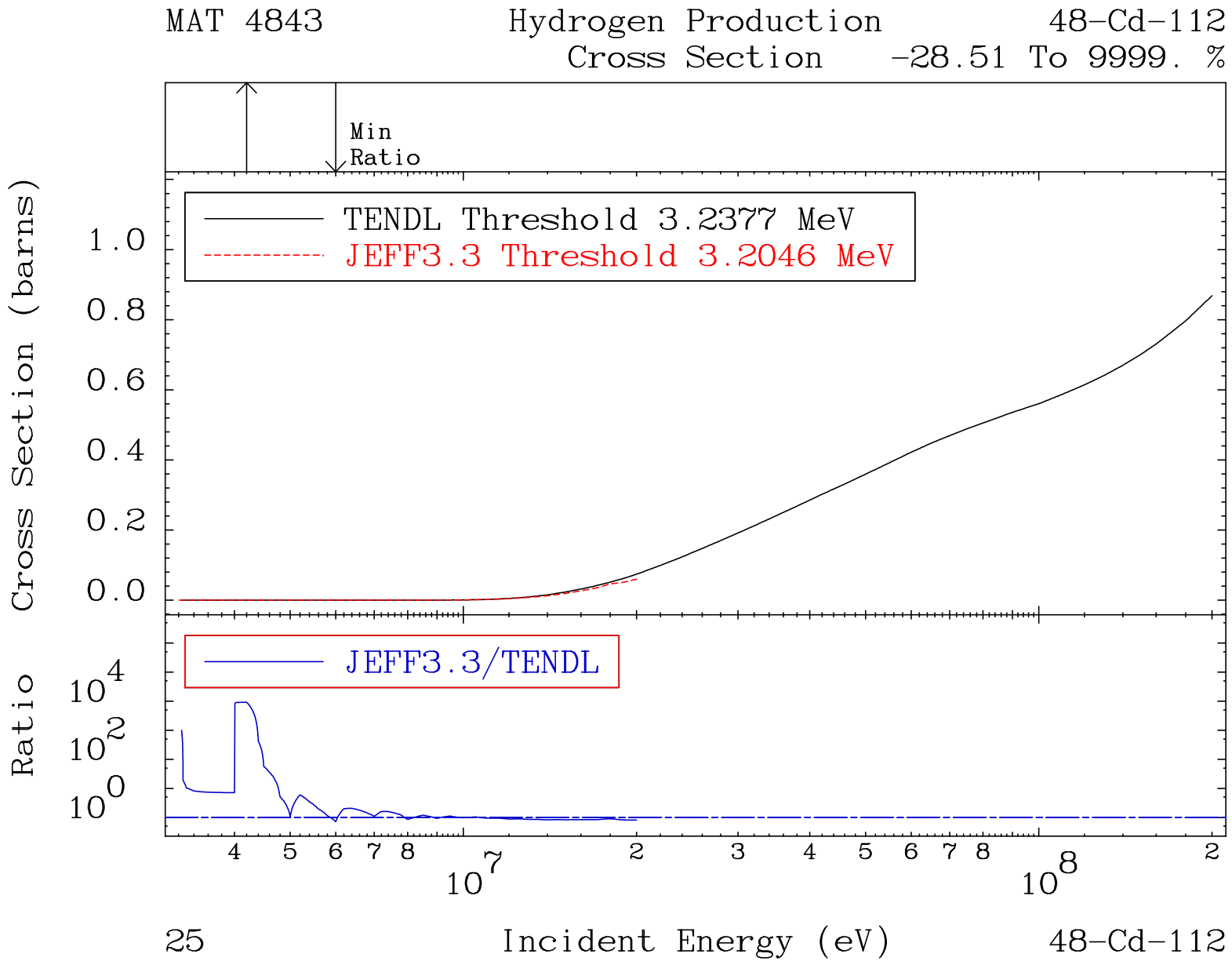

MAT 4843
(n,p)
48-Cd-112
Cross Section
-28.51 To 9999. %
Min
Ratio
TENDL Threshold 3.2377 MeV
JEFF3.3 Threshold 3.2046 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
10^4
10^2
10^0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
48-Cd-112

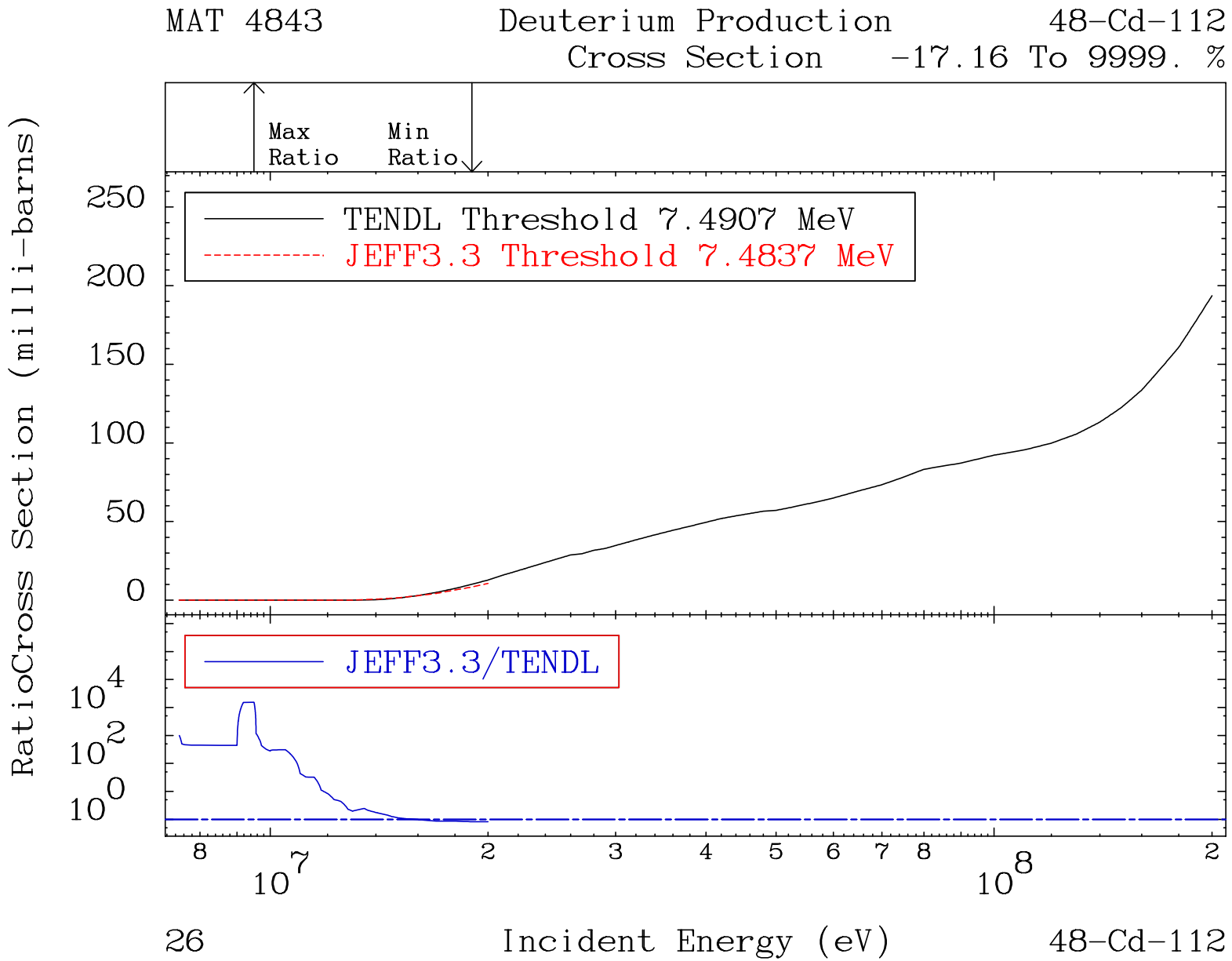

MAT 4843
(n,d)
48-Cd-112
Cross Section
-17.16 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.4907 MeV
JEFF3.3 Threshold 7.4837 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
10^4
10^2
10^0
8
10^7
2
3
4
5
6
7
8
10^8
2
21
Incident Energy (eV)
48-Cd-112

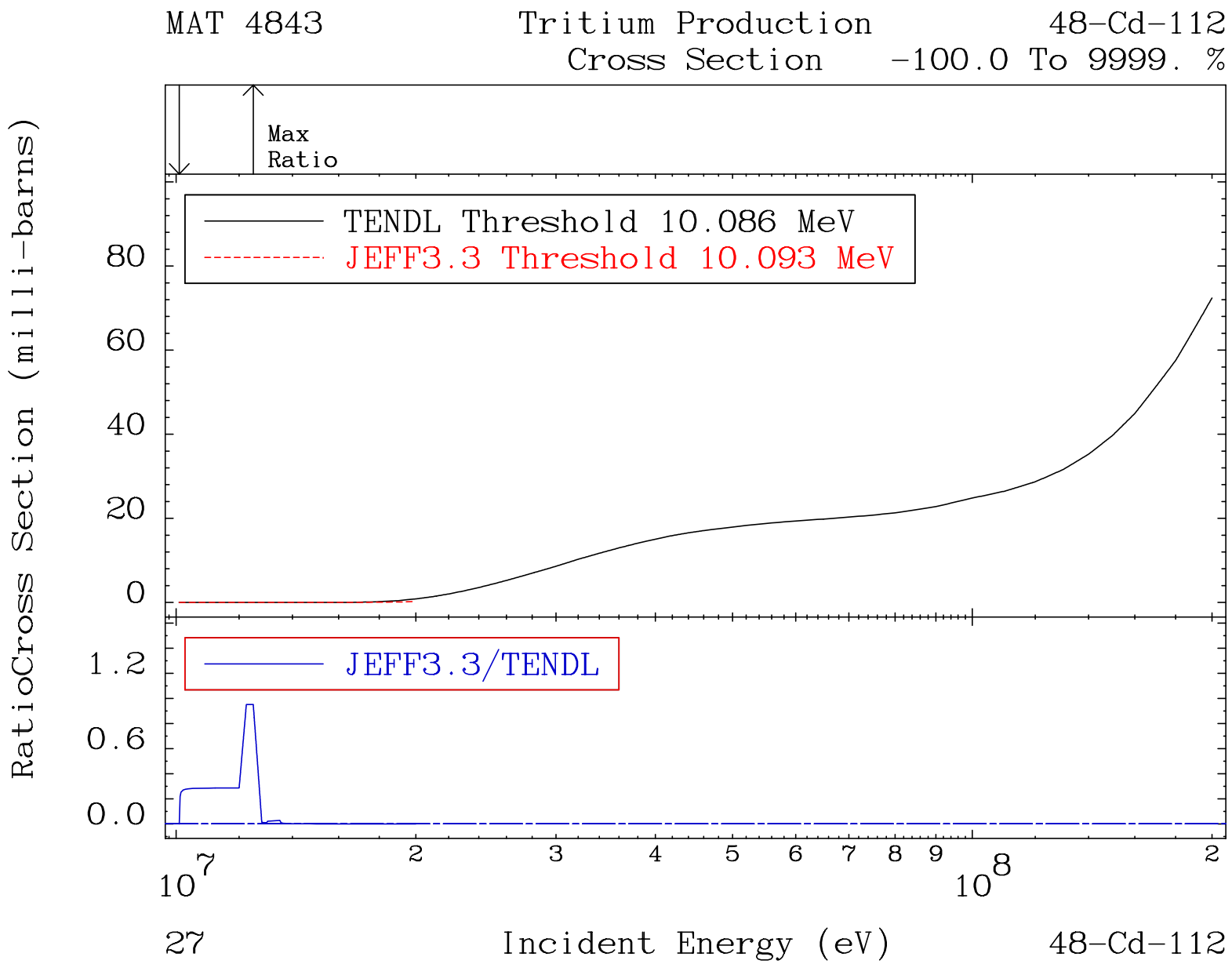

MAT 4843
(n,t)
Cross Section
48-Cd-112
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 10.086 MeV
JEFF3.3 Threshold 10.093 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
22
48-Cd-112

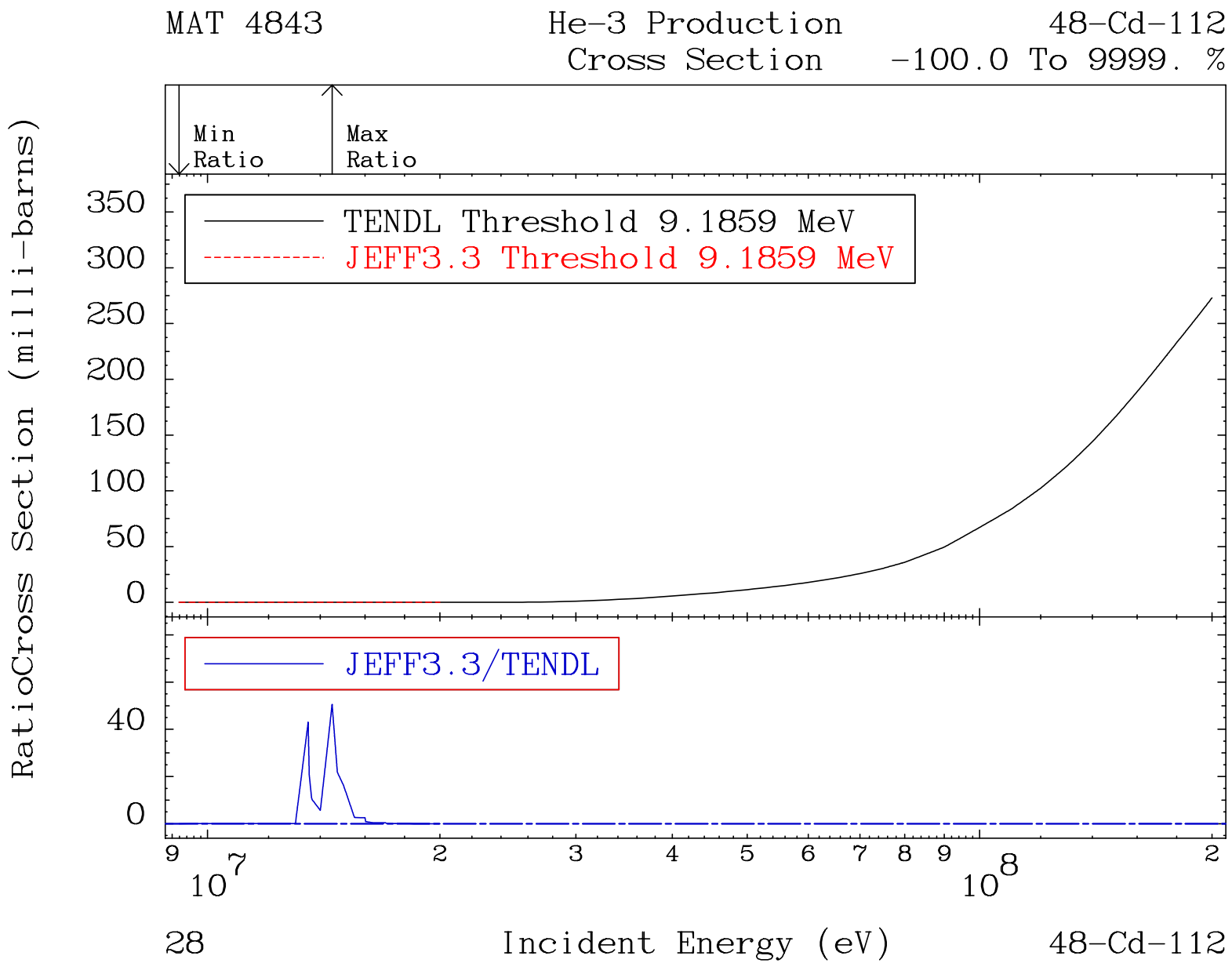

MAT 4843
(n,He-3)
48-Cd-112
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 9.1859 MeV
JEFF3.3 Threshold 9.1859 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
40
0
9
2
3
4
5
6
7
8
9
2
10^7
10^8
23
Incident Energy (eV)
48-Cd-112

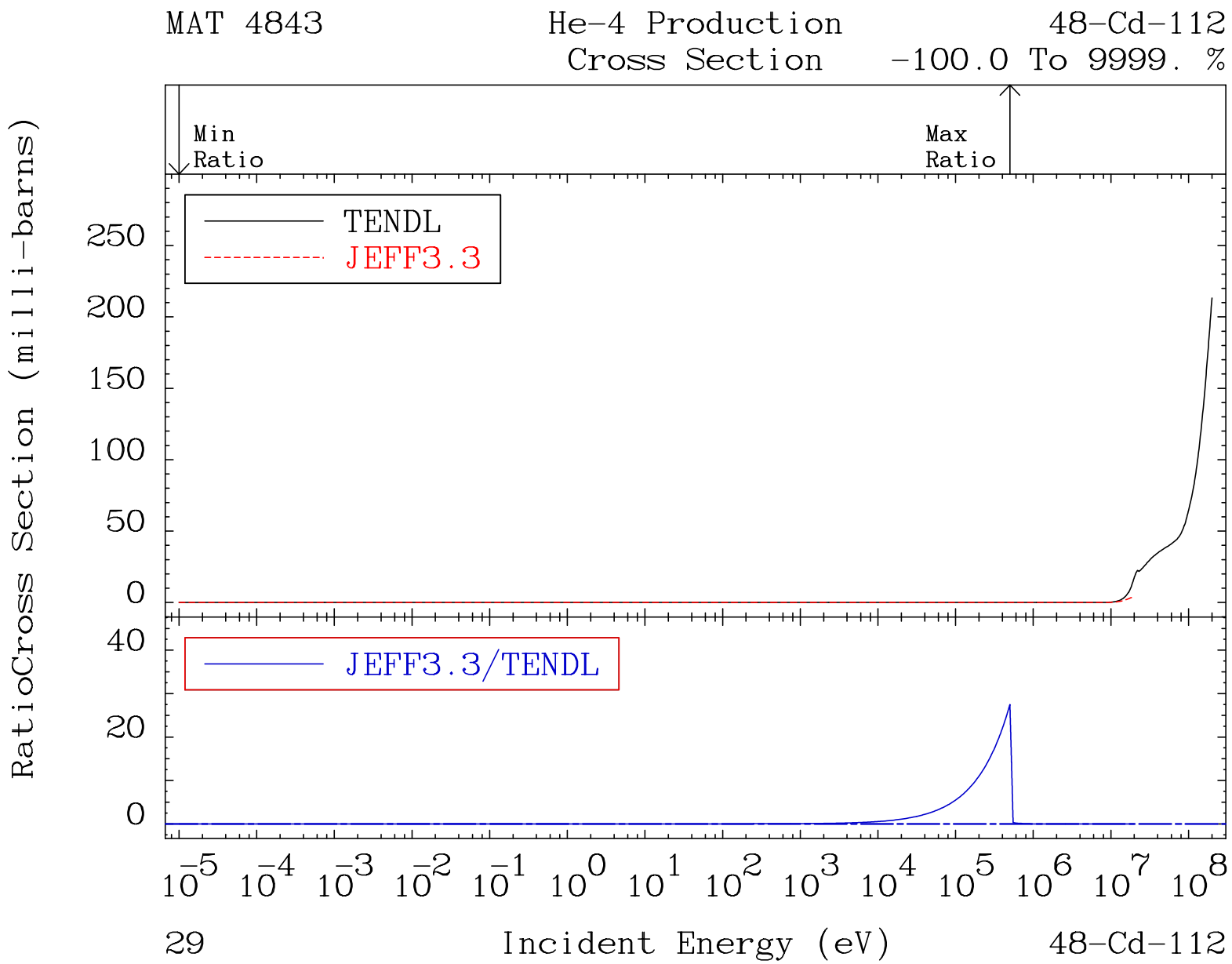

MAT 4843
(n,α)
48-Cd-112
Cross Section
-100.0 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
40
20
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
24
Incident Energy (eV)
48-Cd-112

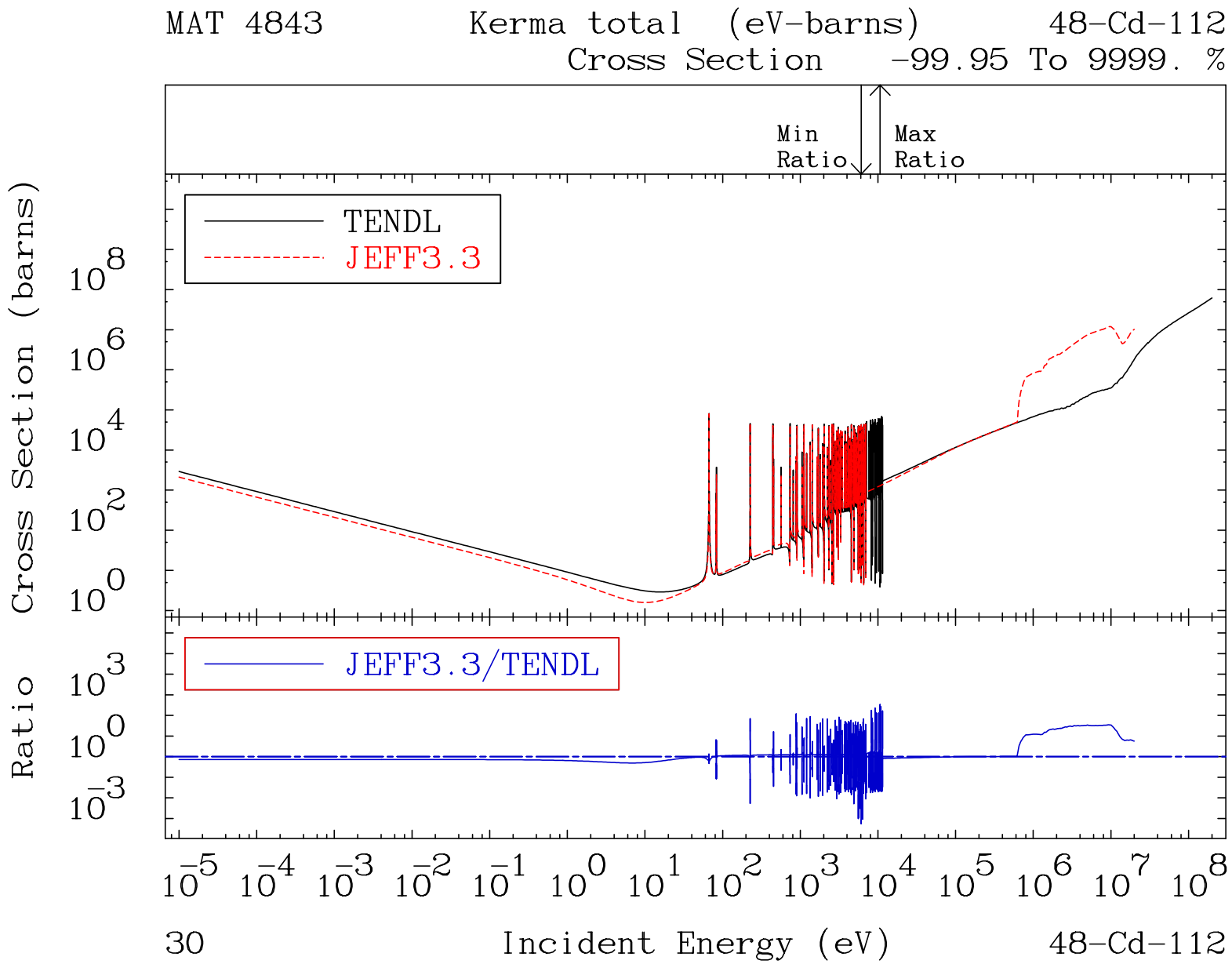

MAT 4843
Hydrogen Production
48-Cd-112
Cross Section
-28.51 To 9999. %
Min
Ratio
TENDL Threshold 3.2377 MeV
JEFF3.3 Threshold 3.2046 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
48-Cd-112

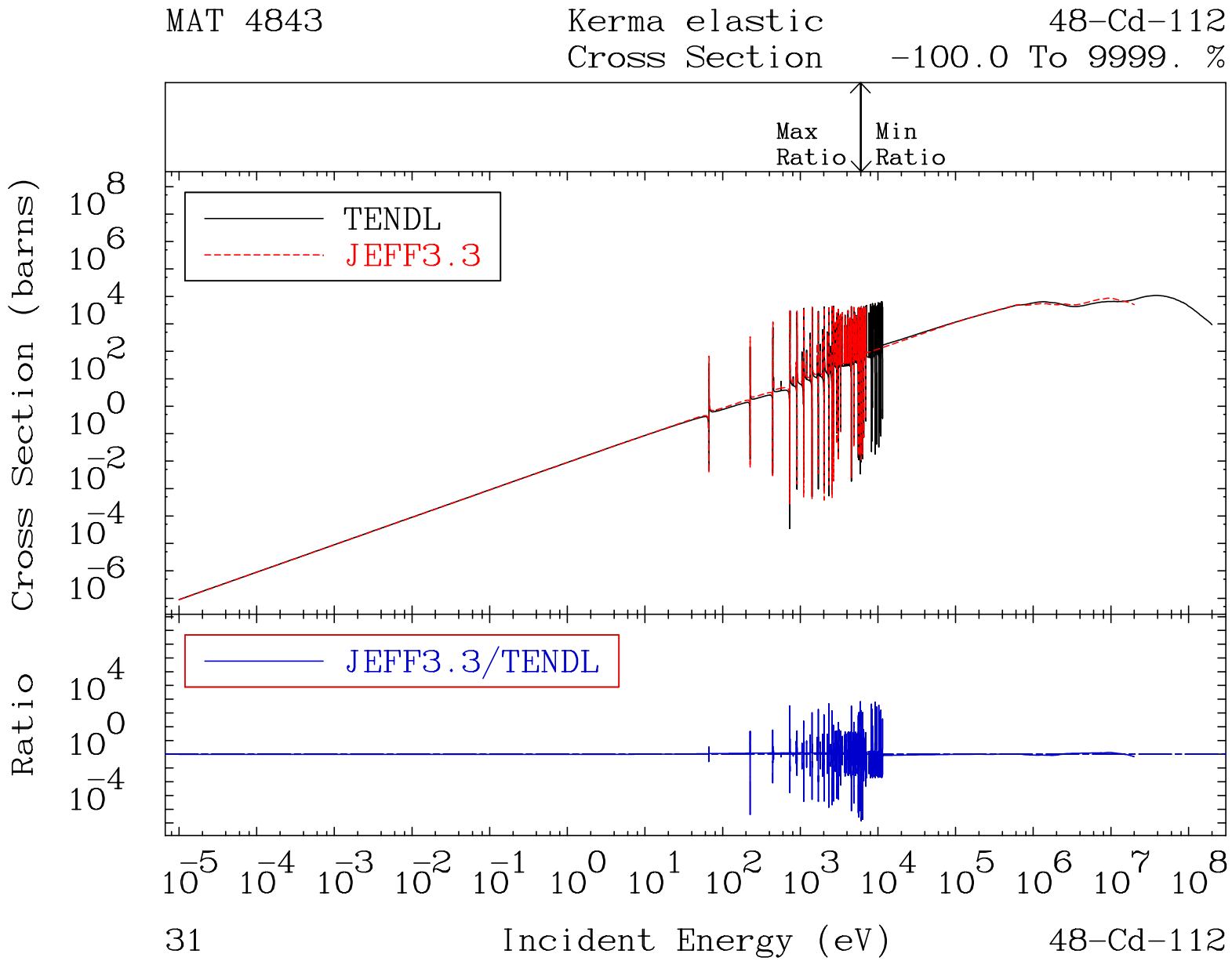

MAT 4843
Deuterium Production
48-Cd-112
Cross Section
-17.16 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.4907 MeV
JEFF3.3 Threshold 7.4837 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
10^4
10^2
10^0
8
10^7
2
3
4
5
6
7
8
10^8
2
26
Incident Energy (eV)
48-Cd-112

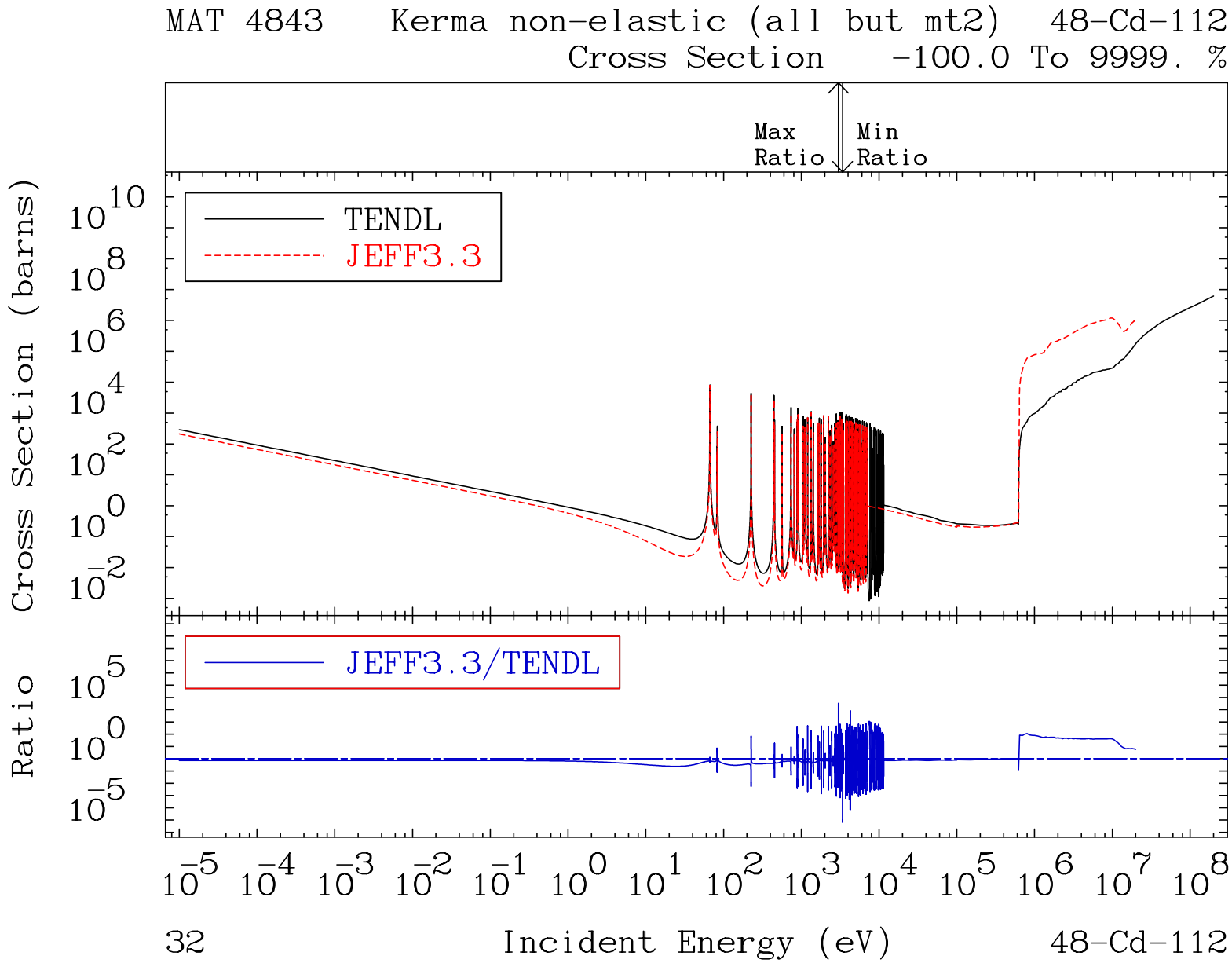

MAT 4843
Tritium Production
48-Cd-112
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 10.086 MeV
JEFF3.3 Threshold 10.093 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.2
0.6
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
27
Incident Energy (eV)
48-Cd-112

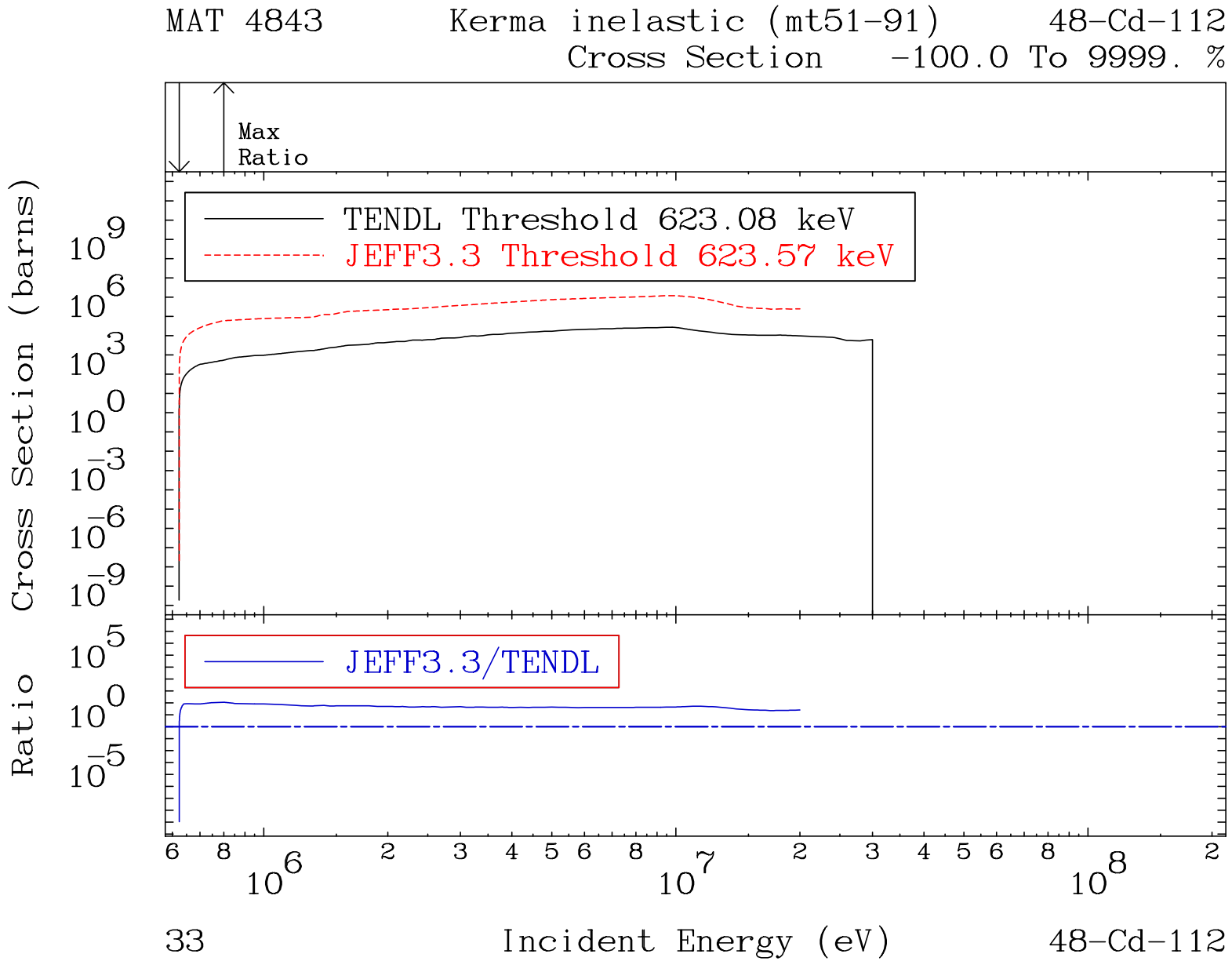

MAT 4843
He-3 Production
48-Cd-112
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 9.1859 MeV
JEFF3.3 Threshold 9.1859 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
40
0
9
2
3
4
5
6
7
8
9
2
10^7
10^8
28
Incident Energy (eV)
48-Cd-112

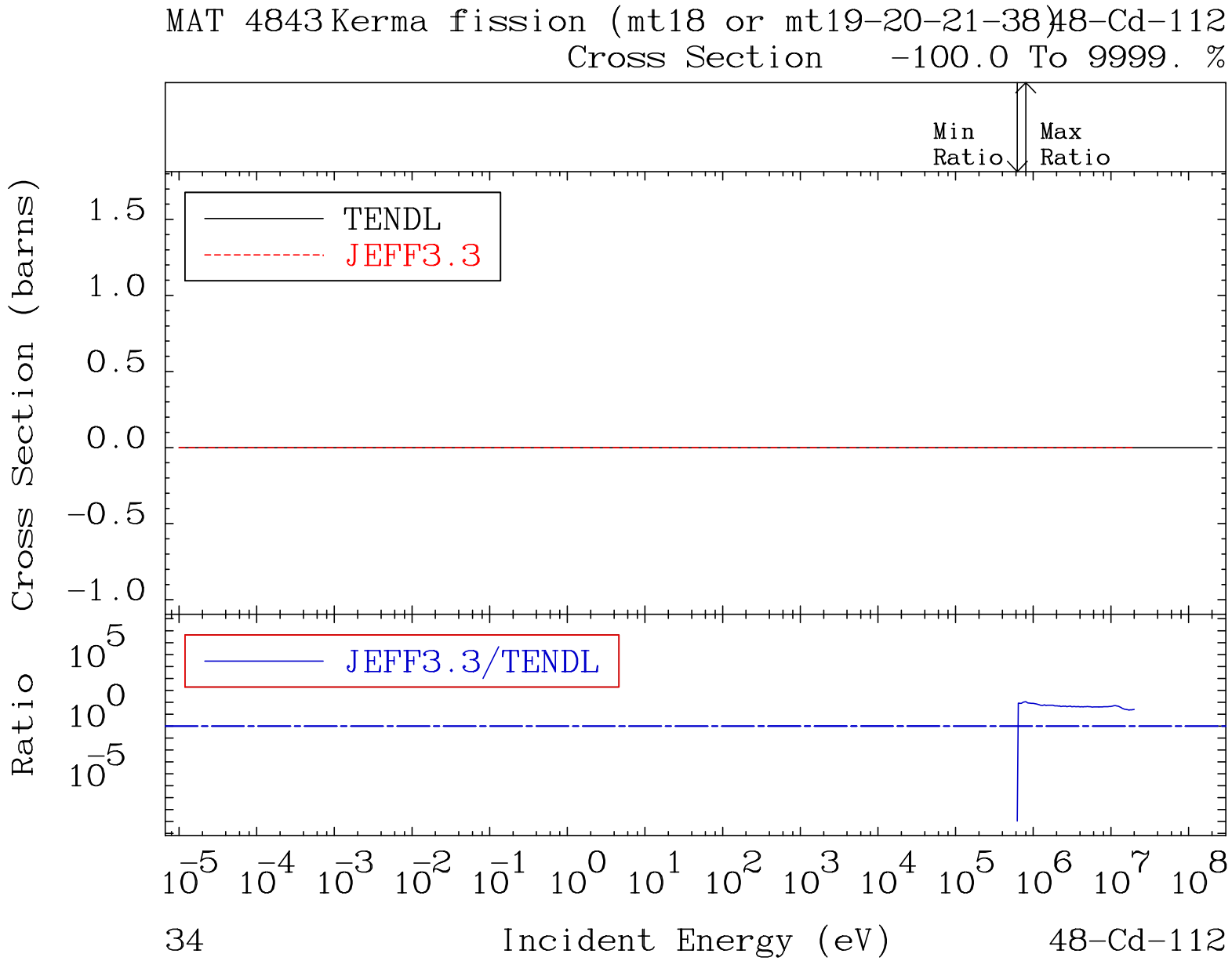

MAT 4843
He-4 Production
Cross Section
48-Cd-112
-100.0 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
40
20
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
48-Cd-112

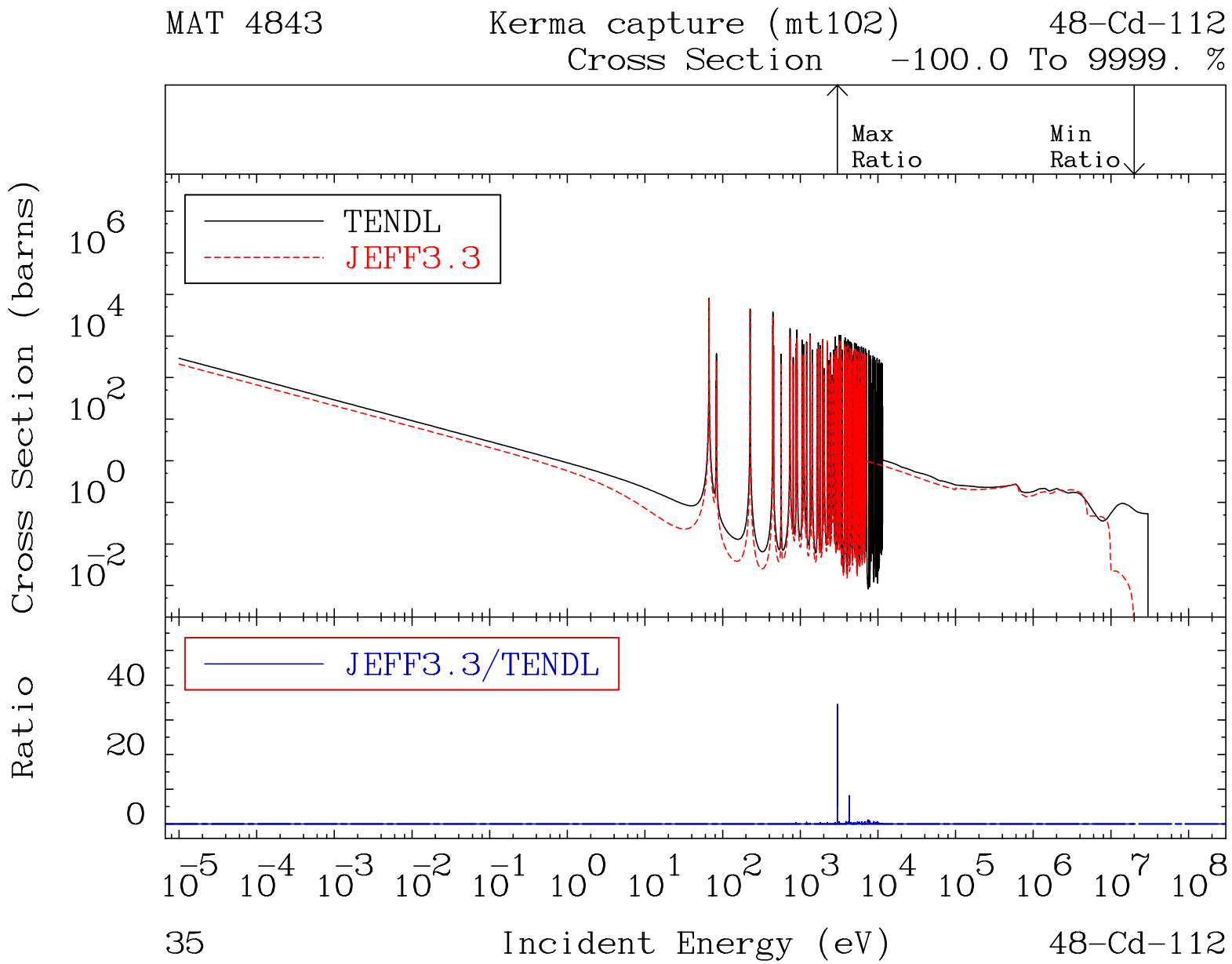

MAT 4843
Kerma total (eV-barns)
48-Cd-112
Cross Section -99.95 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
30
48-Cd-112

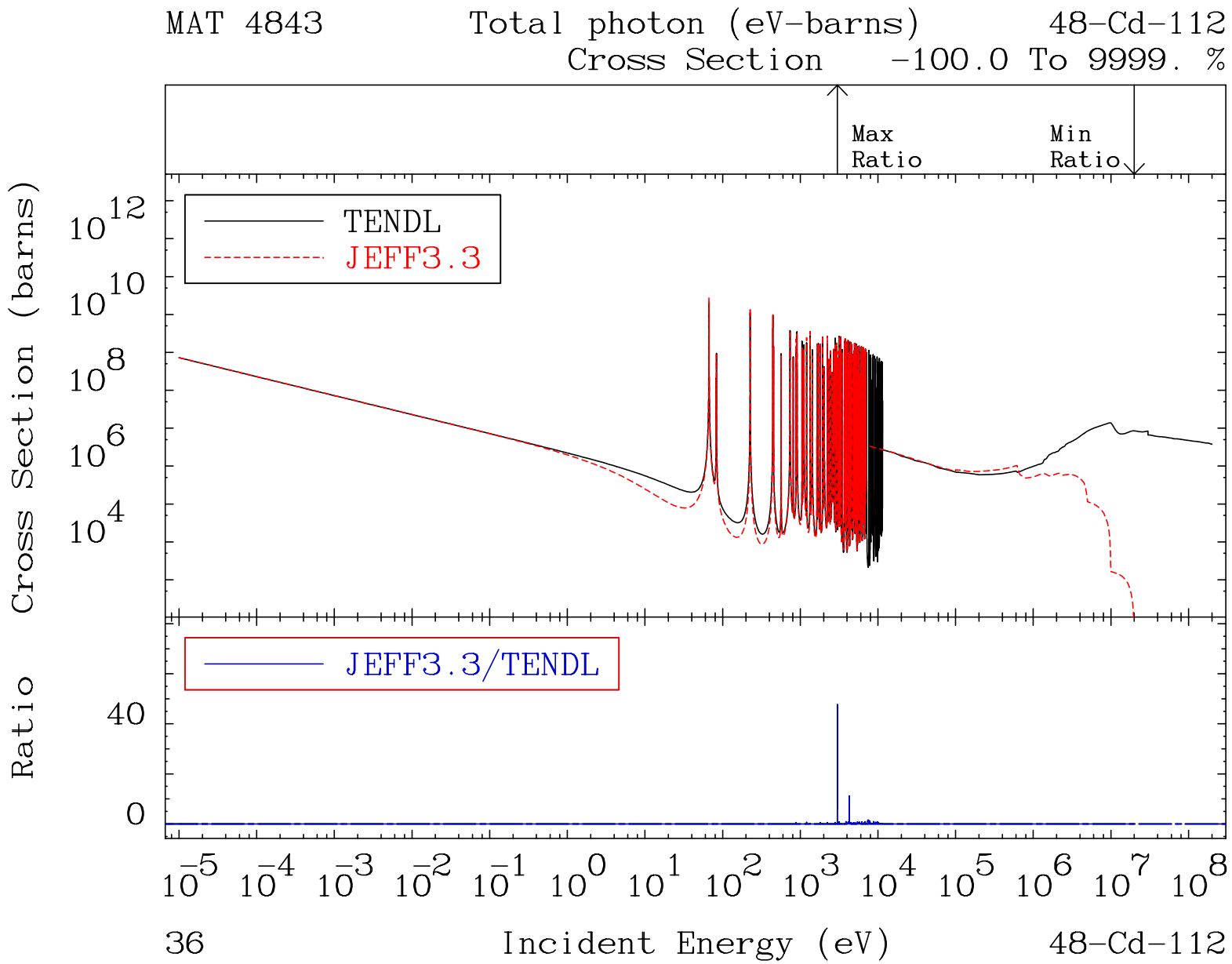

MAT 4843
Kerma elastic
Cross Section
48-Cd-112
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
31
48-Cd-112

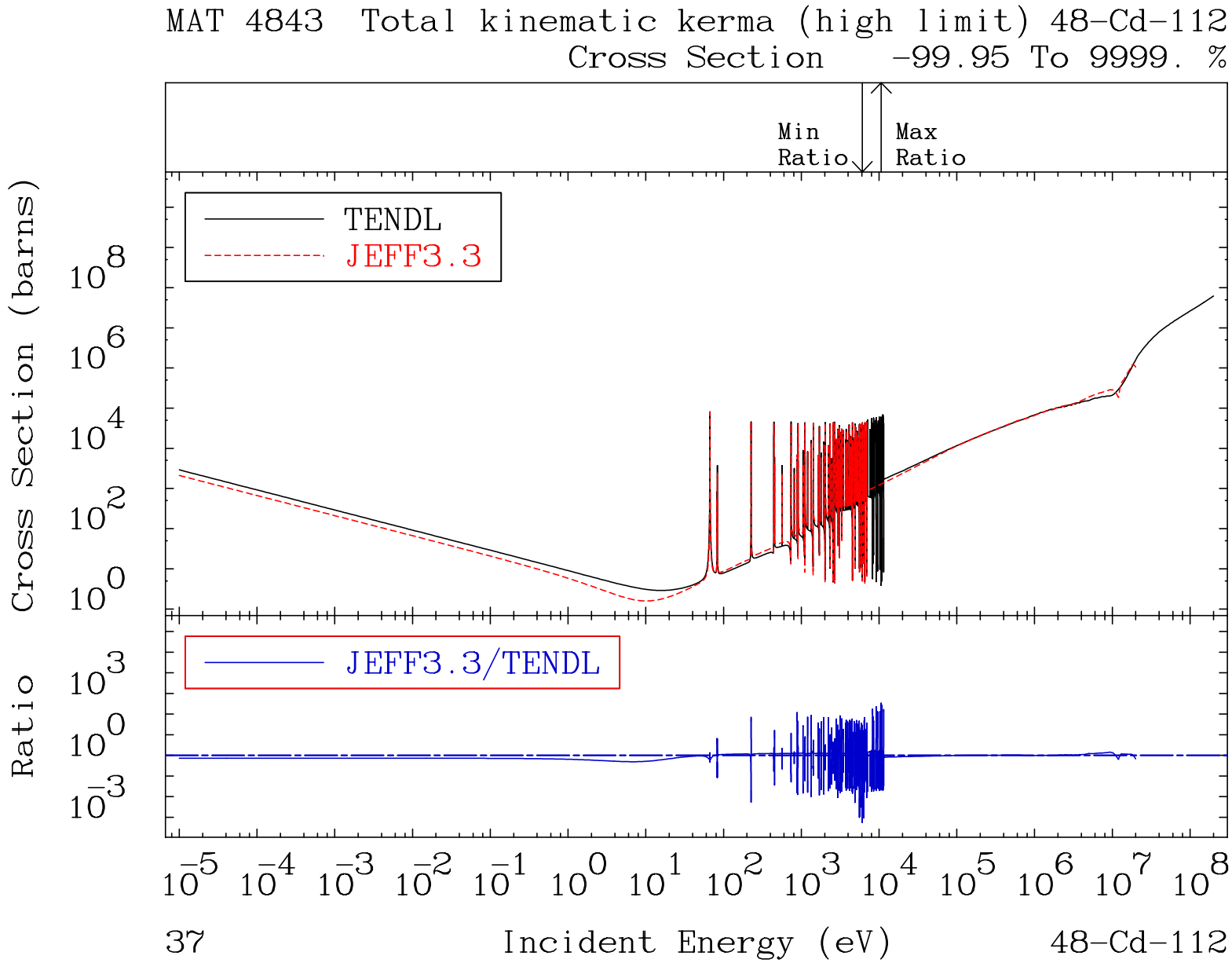

MAT 4843 Kerma non-elastic (all but mt2) 48-Cd-112
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
32
48-Cd-112

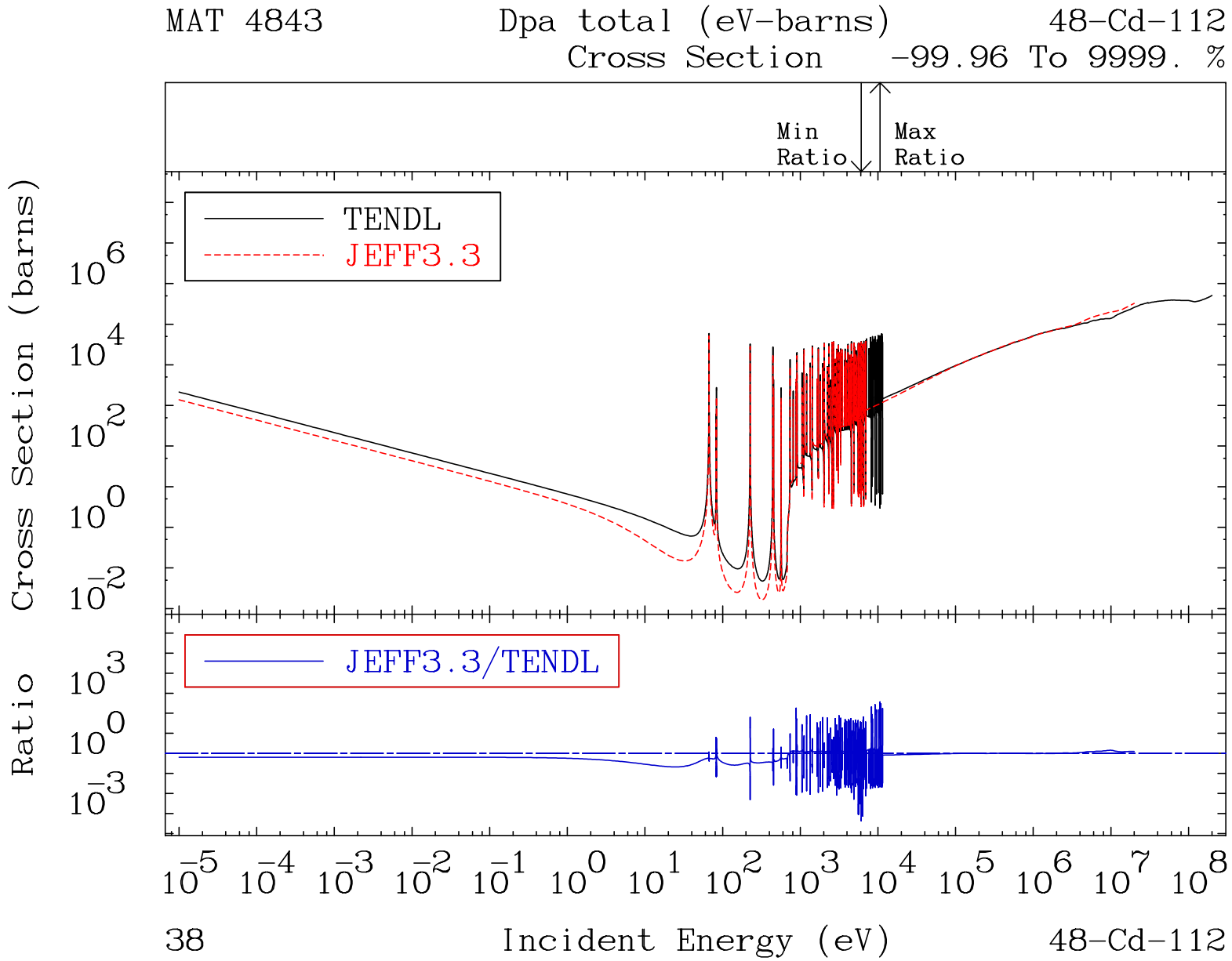

MAT 4843
Kerma inelastic (mt51-91)
48-Cd-112
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 623.08 keV
JEFF3.3 Threshold 623.57 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
33
48-Cd-112

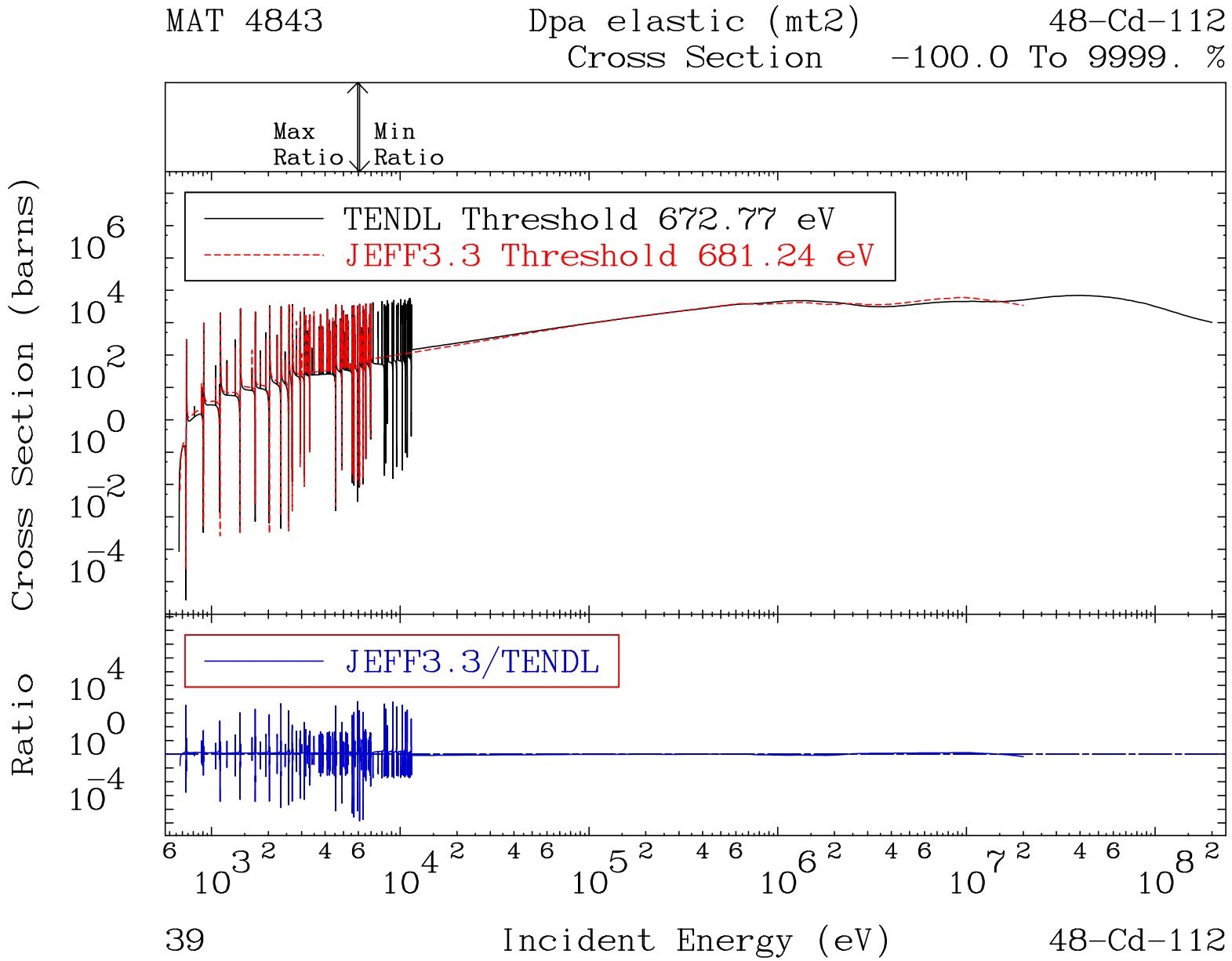

MAT 4843 Kerma fission (mt18 or mt19-20-21-38) 48-Cd-112
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{5}
10^{0}
10^{-5}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
34
Incident Energy (eV)
48-Cd-112

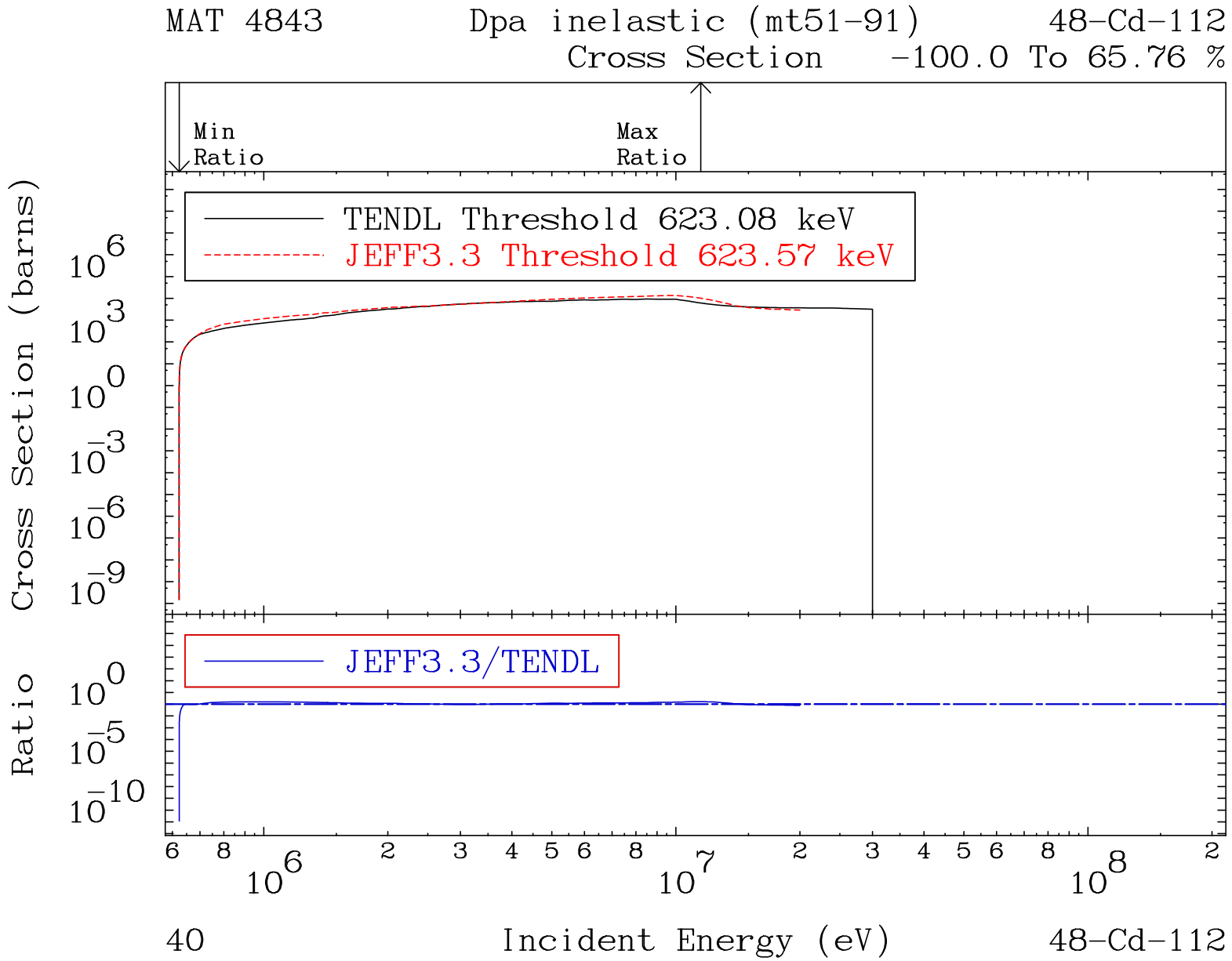

MAT 4843
Kerma capture (mt102)
48-Cd-112
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
35
48-Cd-112

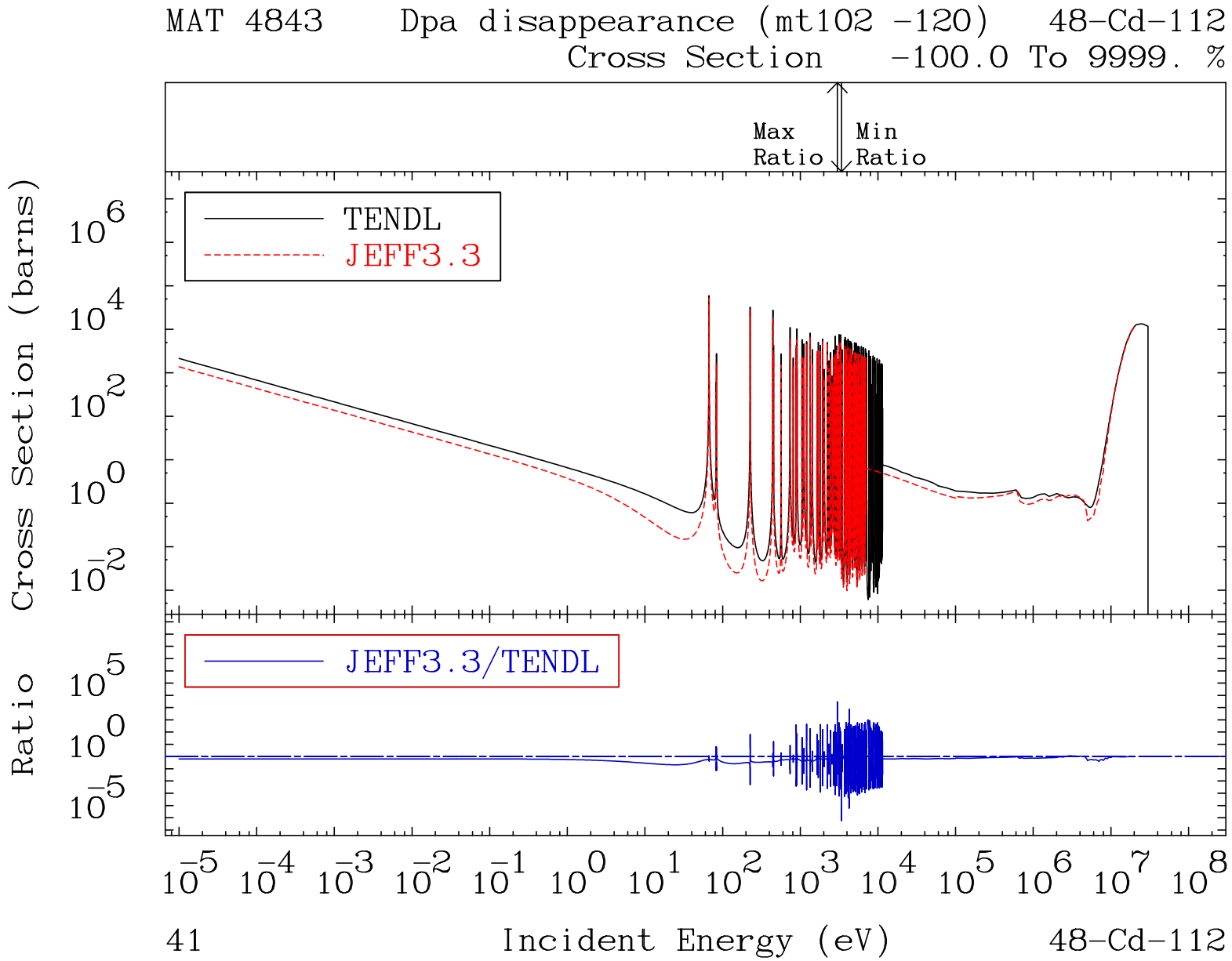

MAT 4843
Total photon (eV-barns)
48-Cd-112
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
36
48-Cd-112


MAT 4843 Total kinematic kerma (high limit) 48-Cd-112
Cross Section -99.95 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
37
48-Cd-112


MAT 4843
Dpa total (eV-barns)
48-Cd-112
Cross Section
-99.96 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
38
48-Cd-112


MAT 4843
Dpa elastic (mt2)
Cross Section
48-Cd-112
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 672.77 eV
JEFF3.3 Threshold 681.24 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
48-Cd-112


MAT 4843
Dpa inelastic (mt51-91)
48-Cd-112
Cross Section -100.0 To 65.76 %
Min Ratio
Max Ratio
TENDL Threshold 623.08 keV
JEFF3.3 Threshold 623.57 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
48-Cd-112


MAT 4843 Dpa disappearance (mt102 -120) 48-Cd-112
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
48-Cd-112