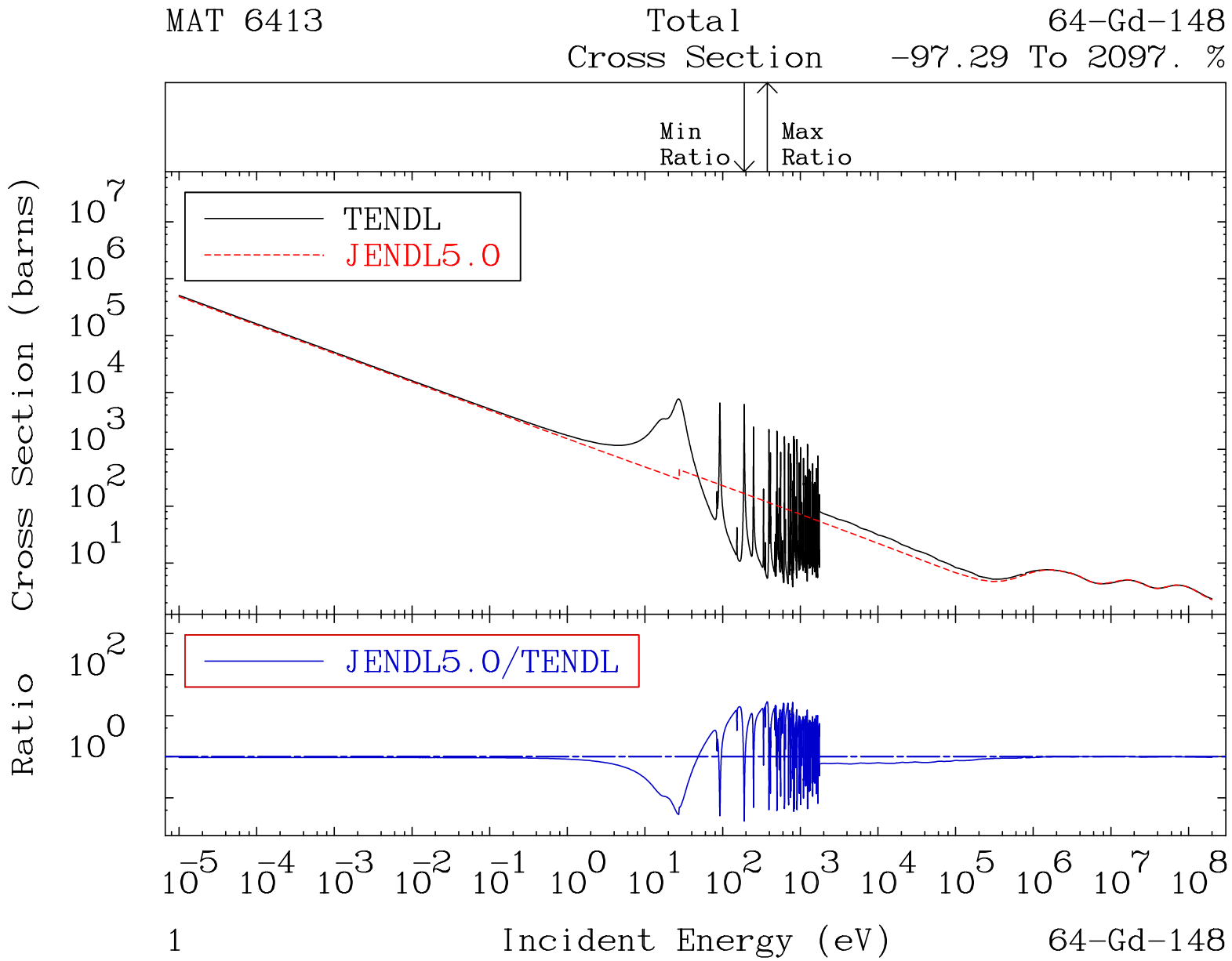
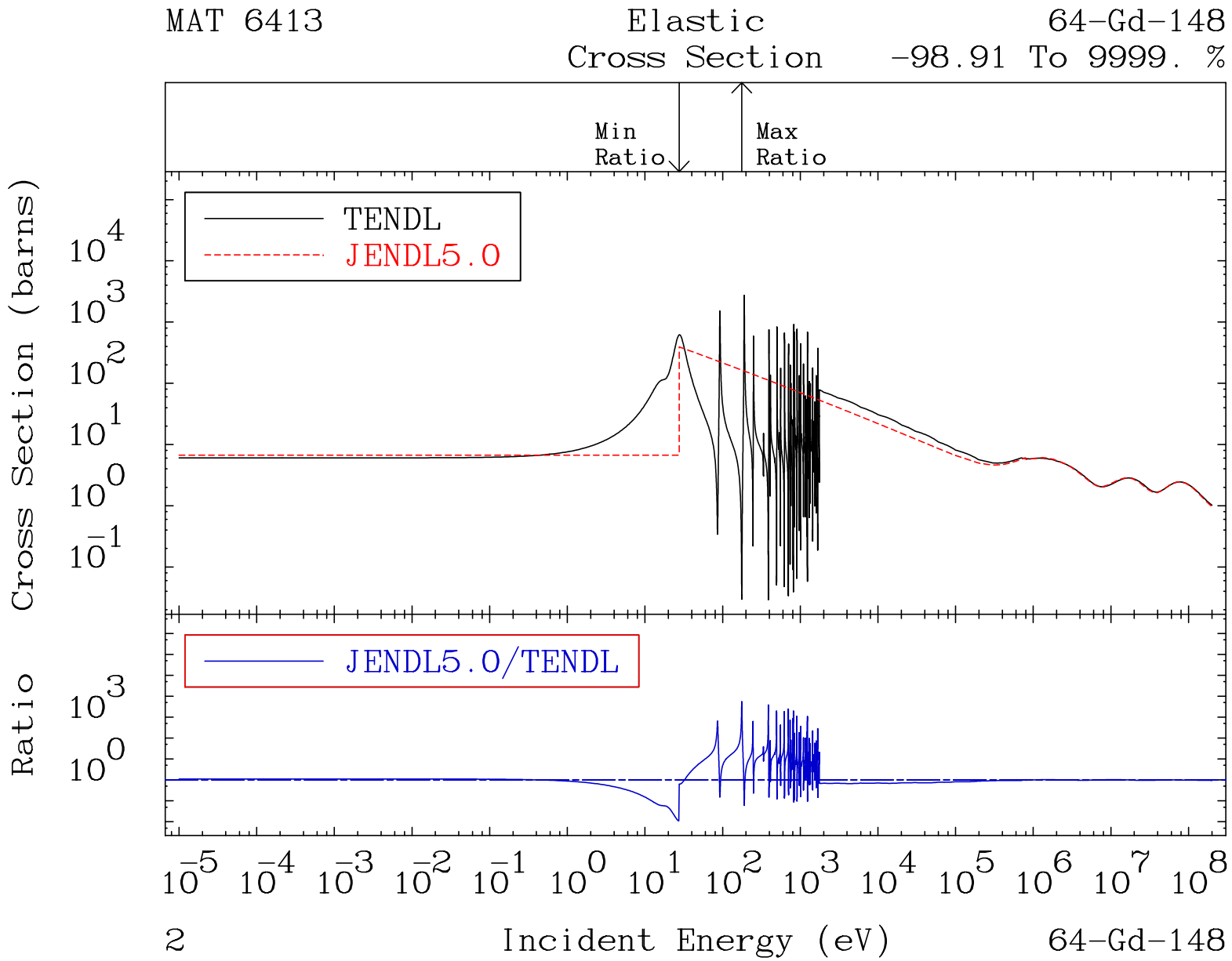
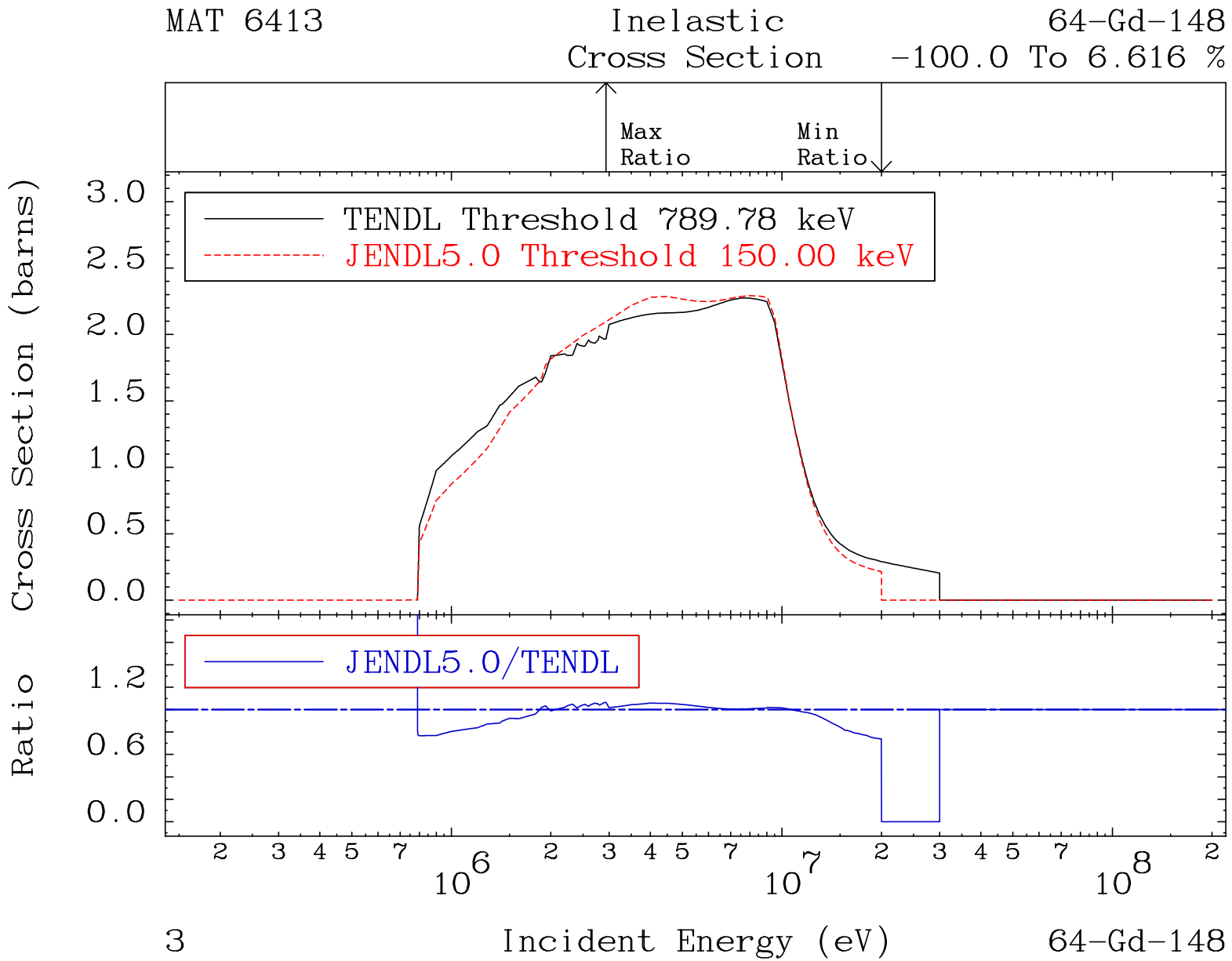
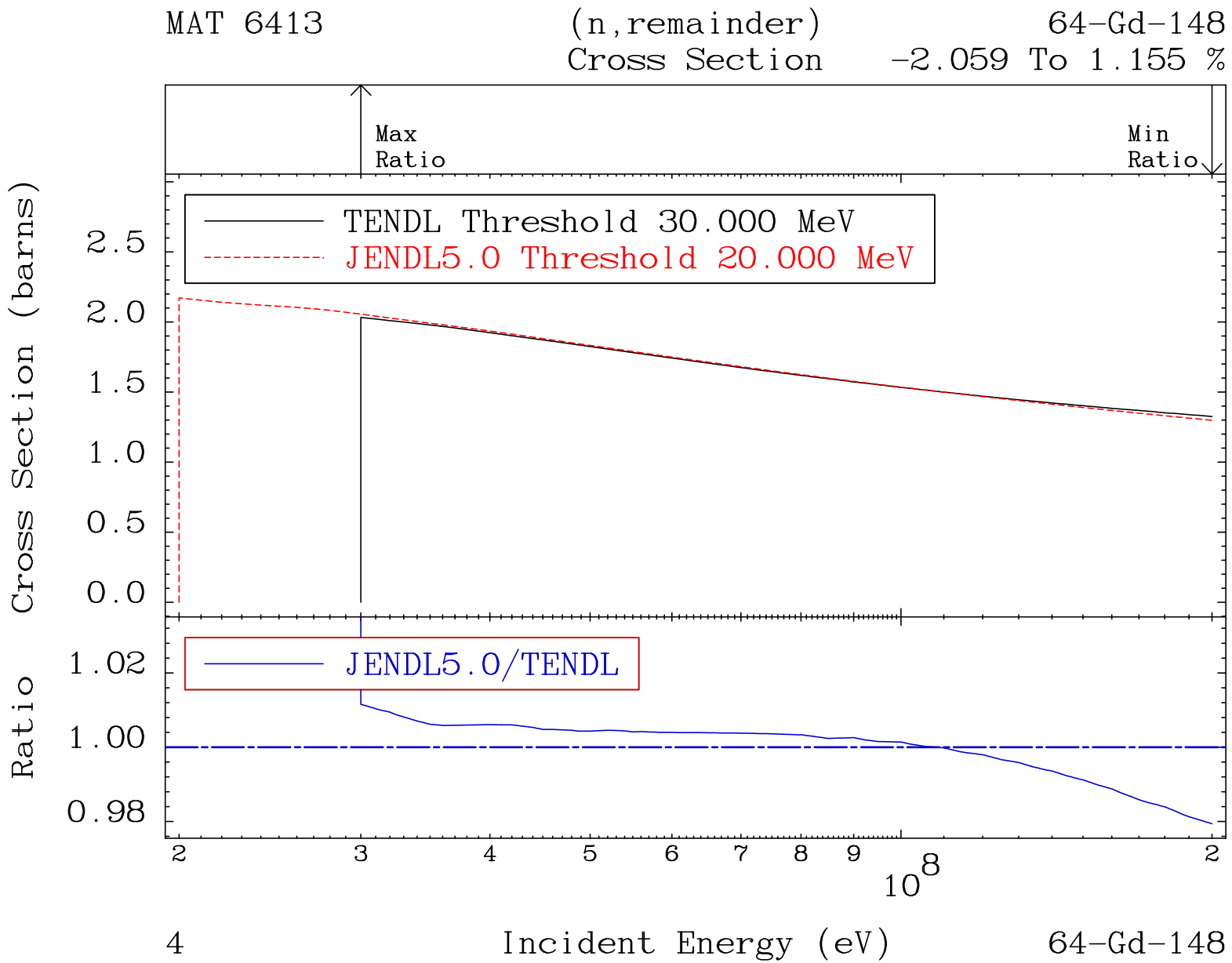
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

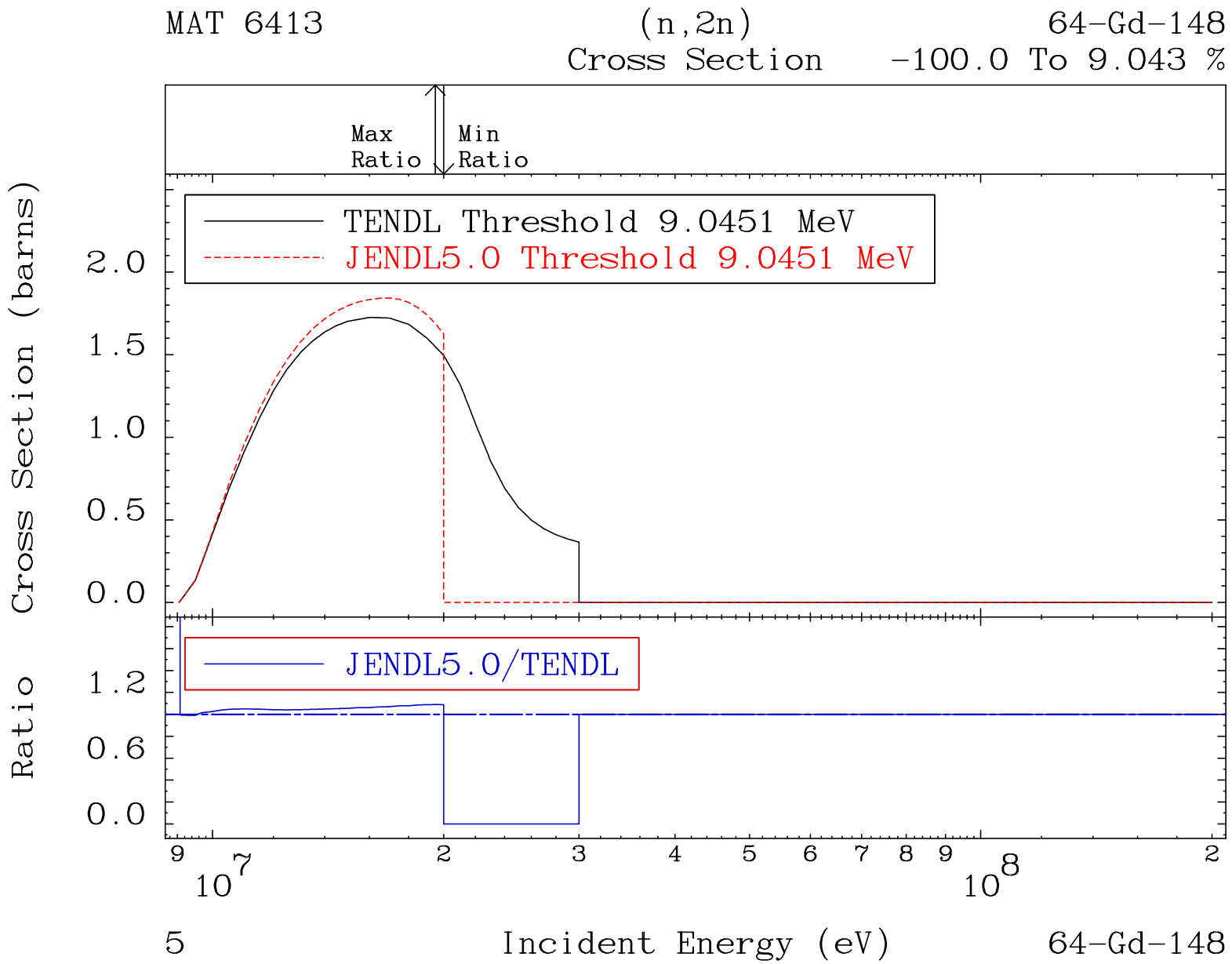
Press Mouse Button to Start

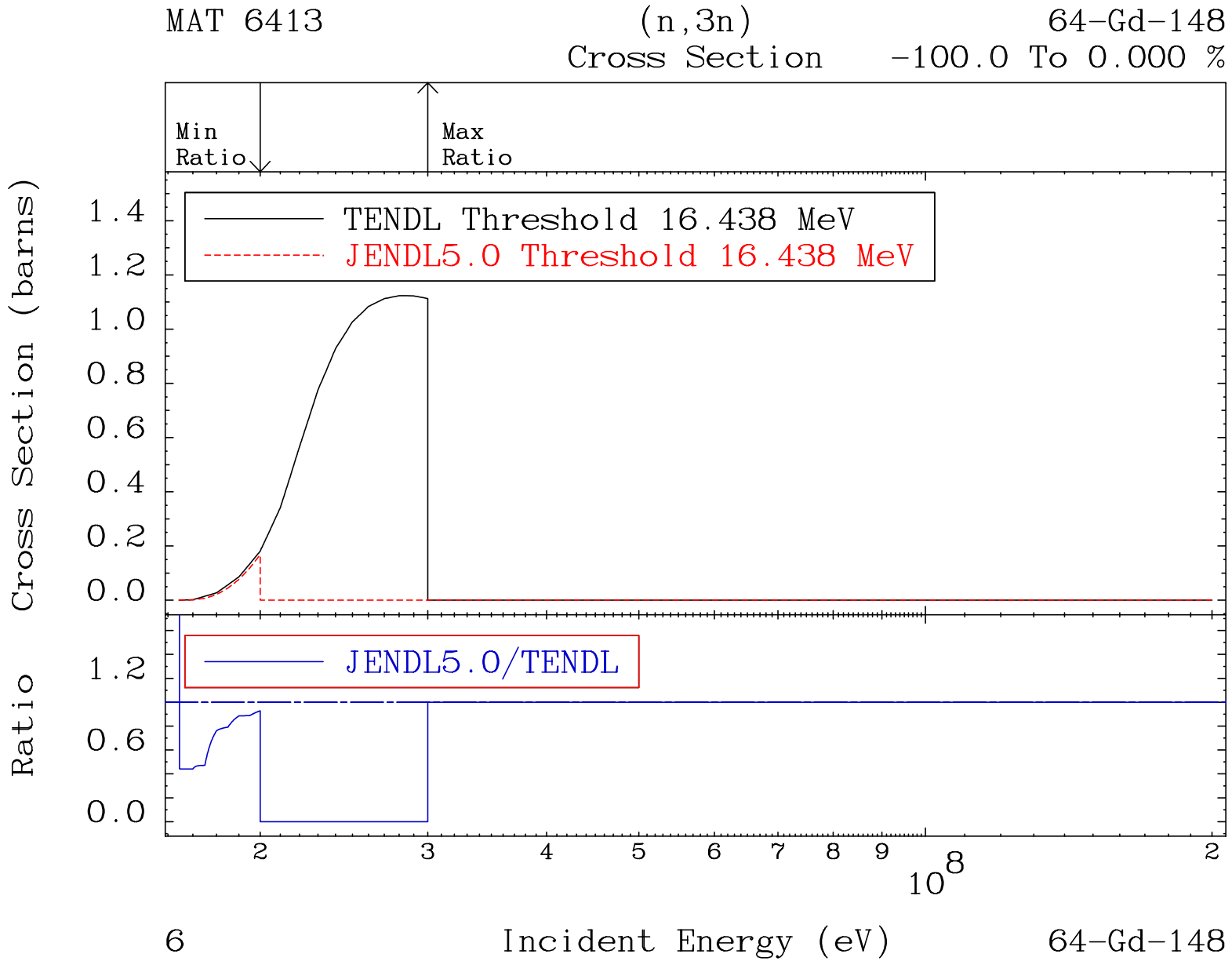

MAT 6413
Total
Cross Section
64-Gd-148
-97.29 To 2097. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
64-Gd-148
1

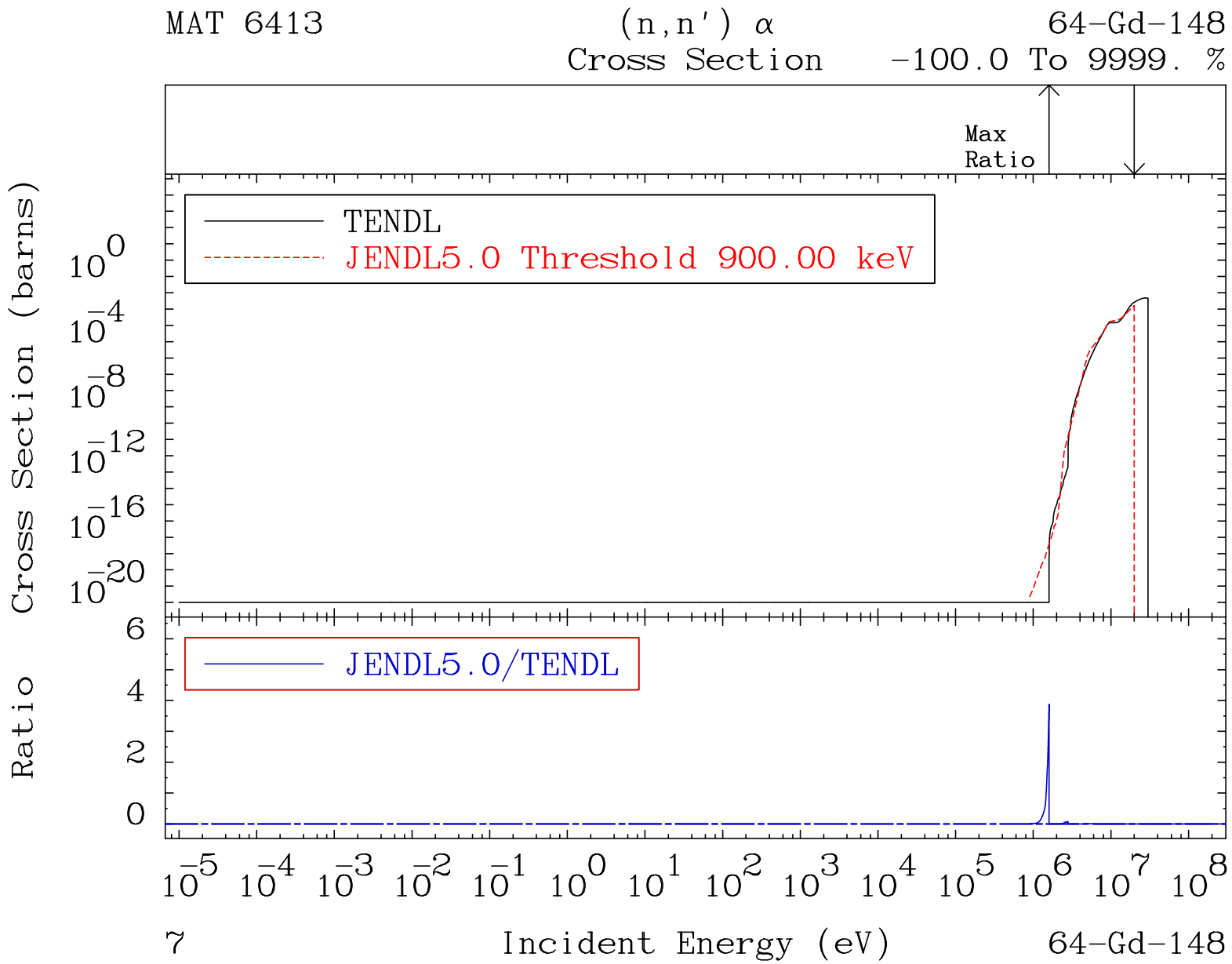

MAT 6413
Elastic
Cross Section
64-Gd-148
-98.91 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
64-Gd-148
2

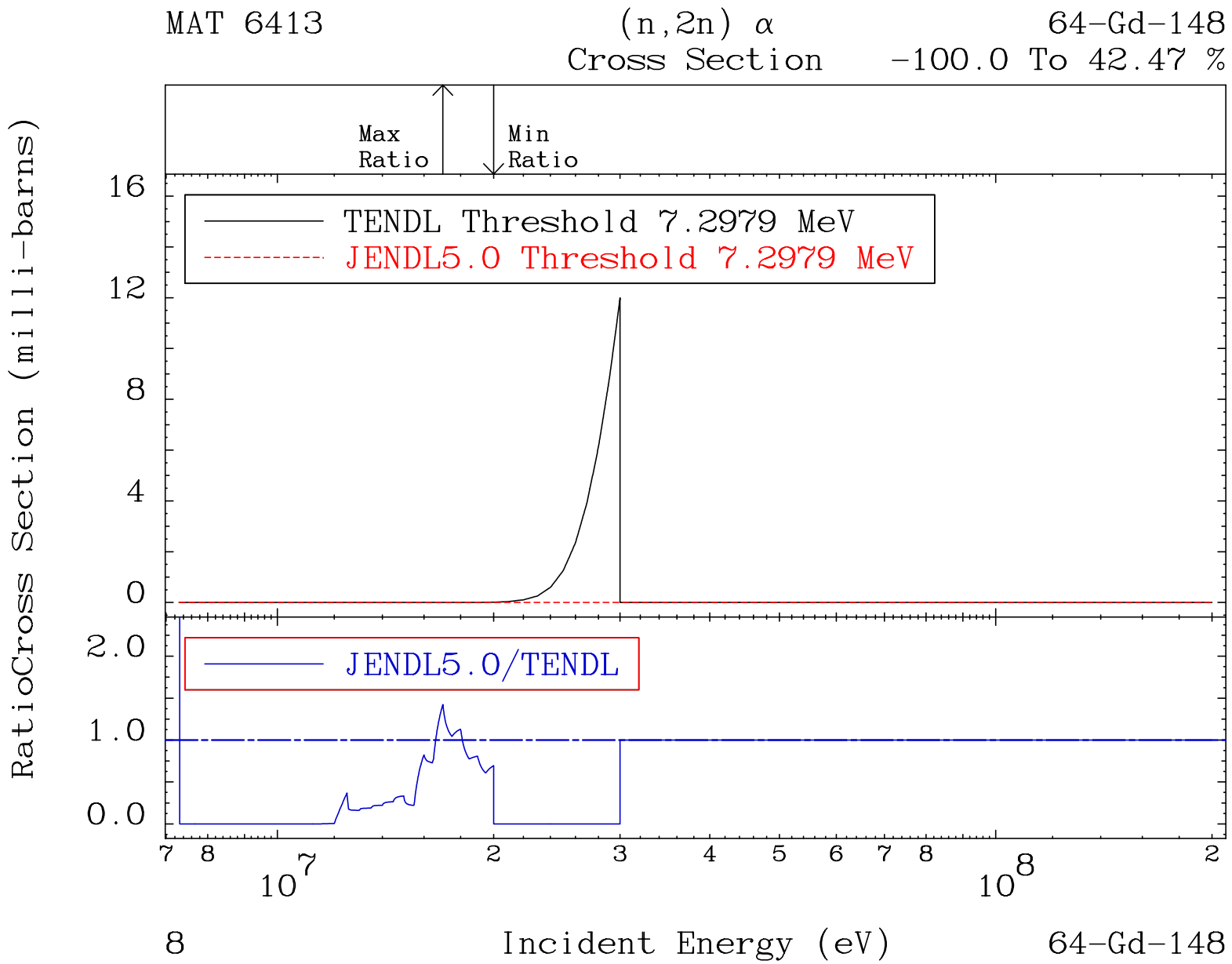

MAT 6413
Inelastic
Cross Section
64-Gd-148
-100.0 To 6.616 %
Max
Ratio
Min
Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
Incident Energy (eV)
3
64-Gd-148

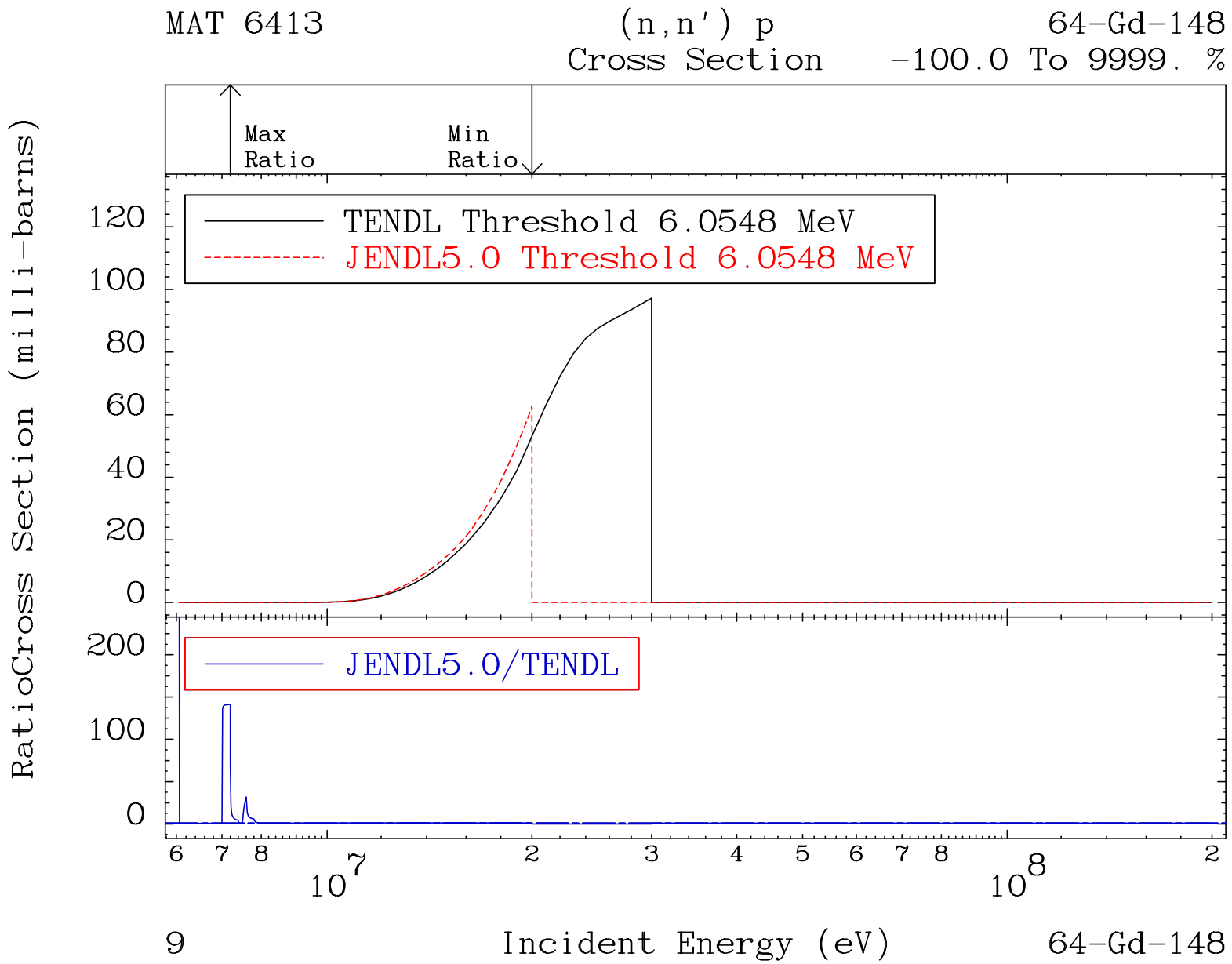

MAT 6413
(n,remainder)
Cross Section
64-Gd-148
-2.059 To 1.155 %
Max Ratio
Min Ratio
TENDL Threshold 30.000 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.5
2.0
1.5
1.0
0.5
0.0
1.02
1.00
0.98
2
3
4
5
6
7
8
9
2
10^8
4
Incident Energy (eV)
64-Gd-148

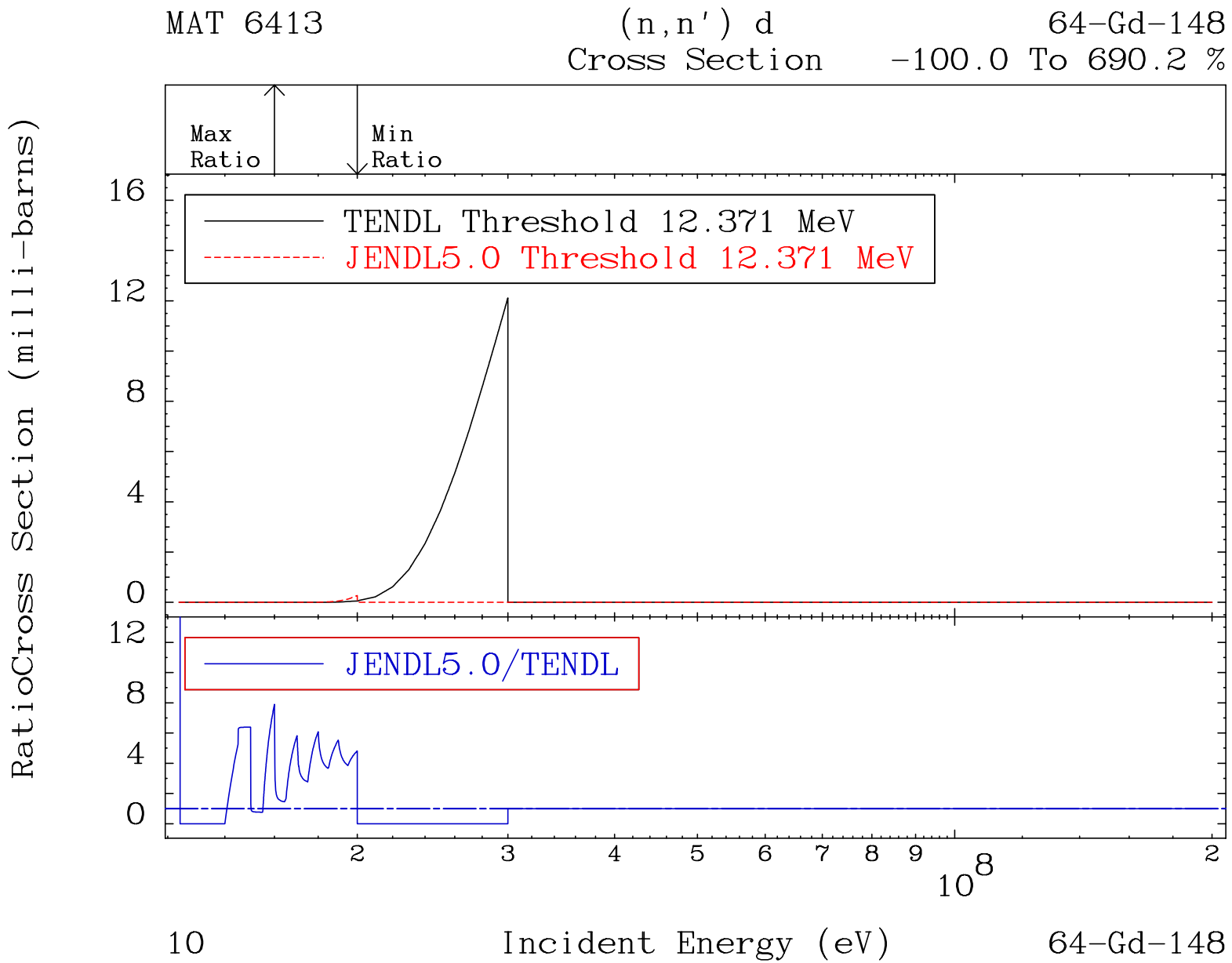

MAT 6413
(n,2n)
Cross Section
64-Gd-148
-100.0 To 9.043 %
Max Ratio
Min Ratio
TENDL Threshold 9.0451 MeV
JENDL5.0 Threshold 9.0451 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
64-Gd-148

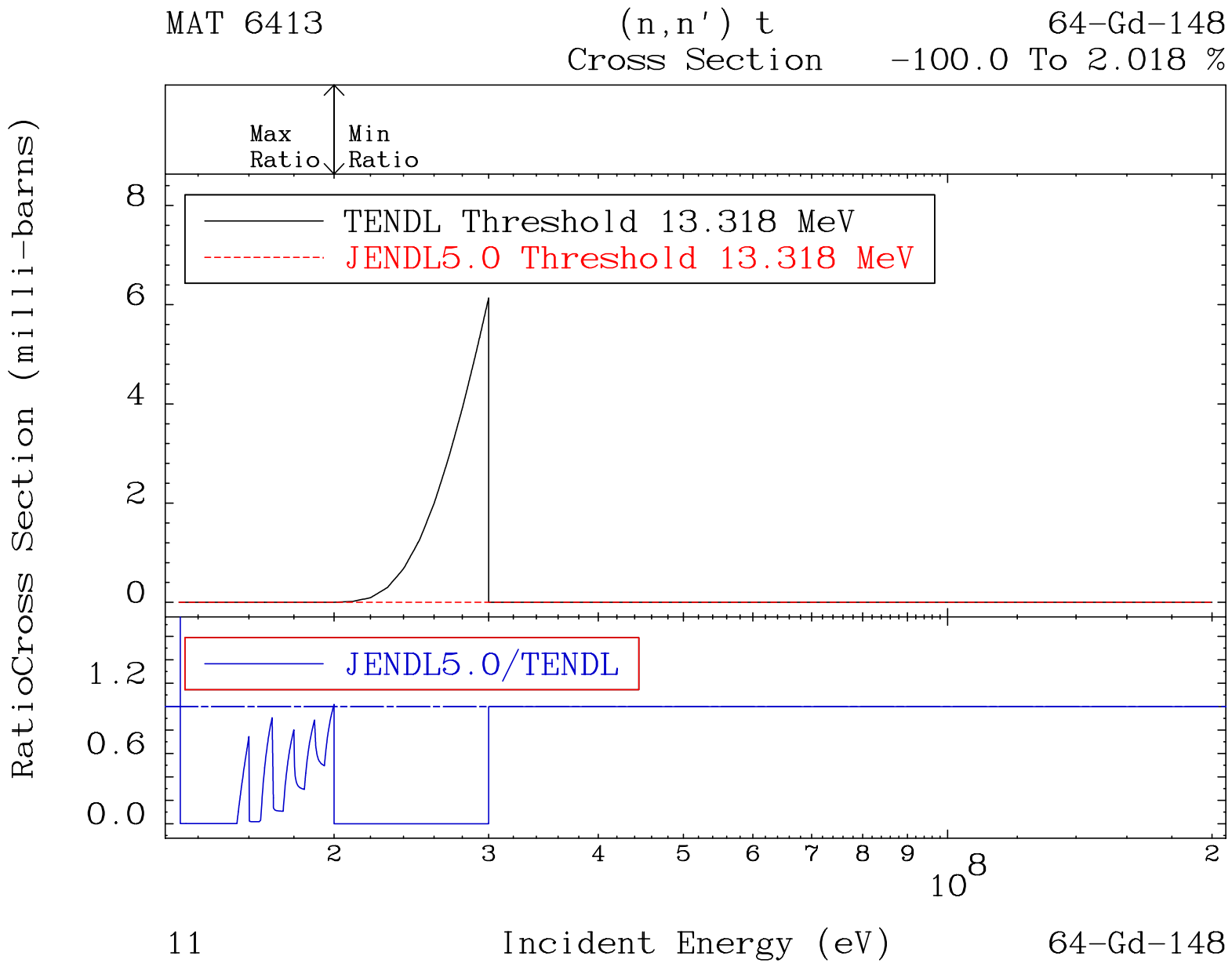

MAT 6413
(n,3n)
64-Gd-148
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 16.438 MeV
JENDL5.0 Threshold 16.438 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
64-Gd-148

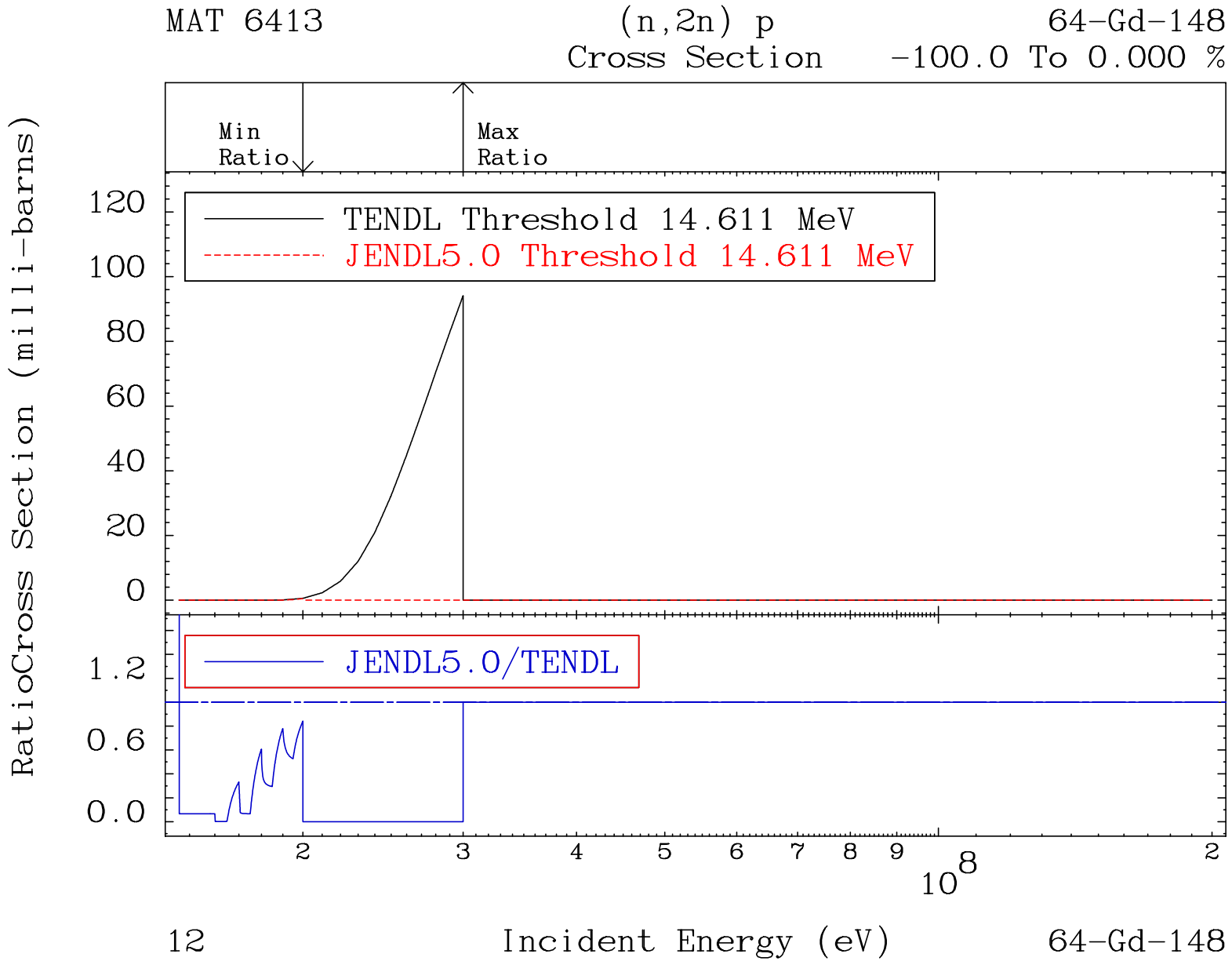

MAT 6413
(n,n') α
Cross Section
64-Gd-148
-100.0 To 9999. %
Max
Ratio
TENDL
JENDL5.0 Threshold 900.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64-Gd-148
7

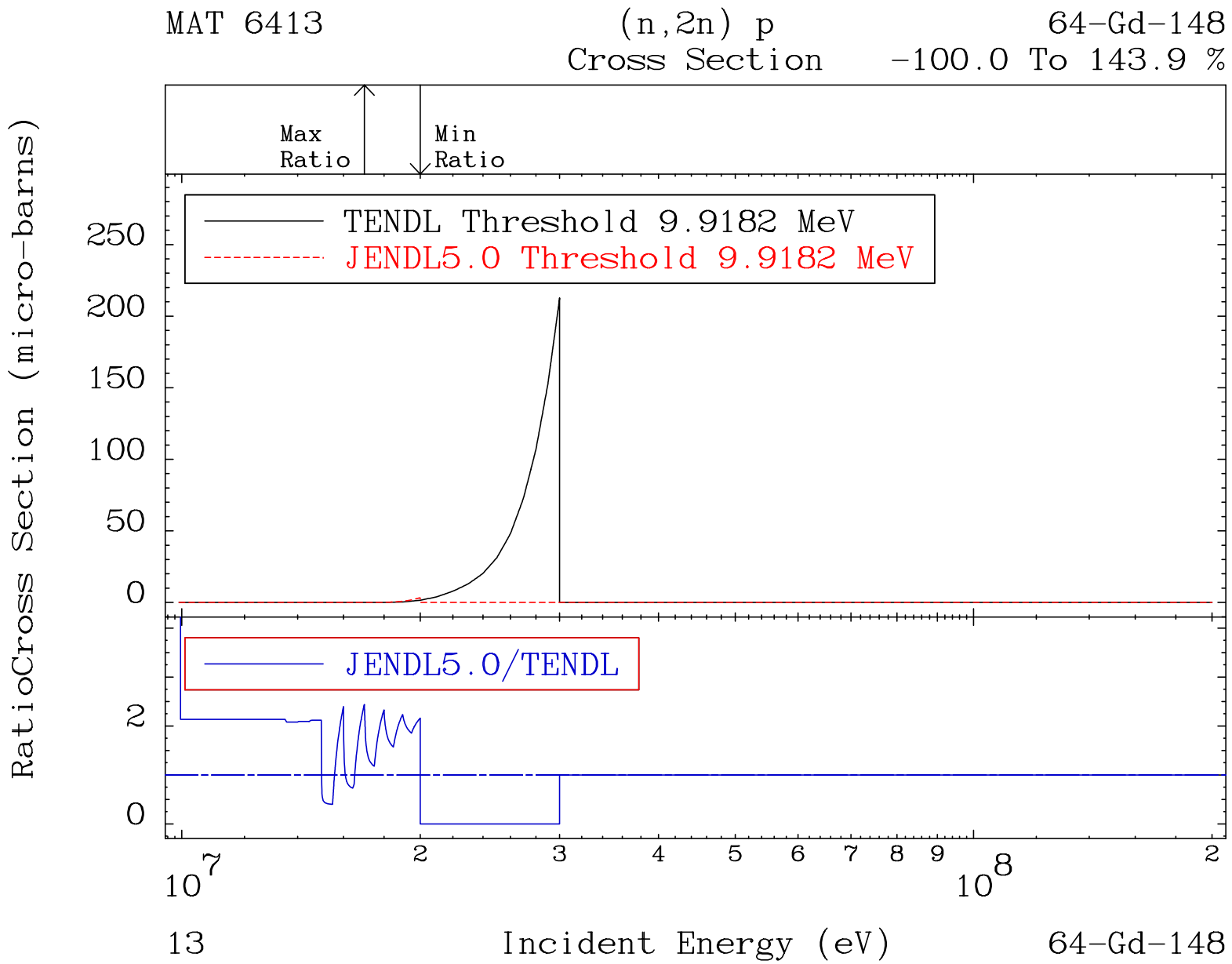

MAT 6413
(n,2n) α
64-Gd-148
Cross Section
-100.0 To 42.47 %
Max Ratio
Min Ratio
TENDL Threshold 7.2979 MeV
JENDL5.0 Threshold 7.2979 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
2.0
1.0
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
8
Incident Energy (eV)
64-Gd-148

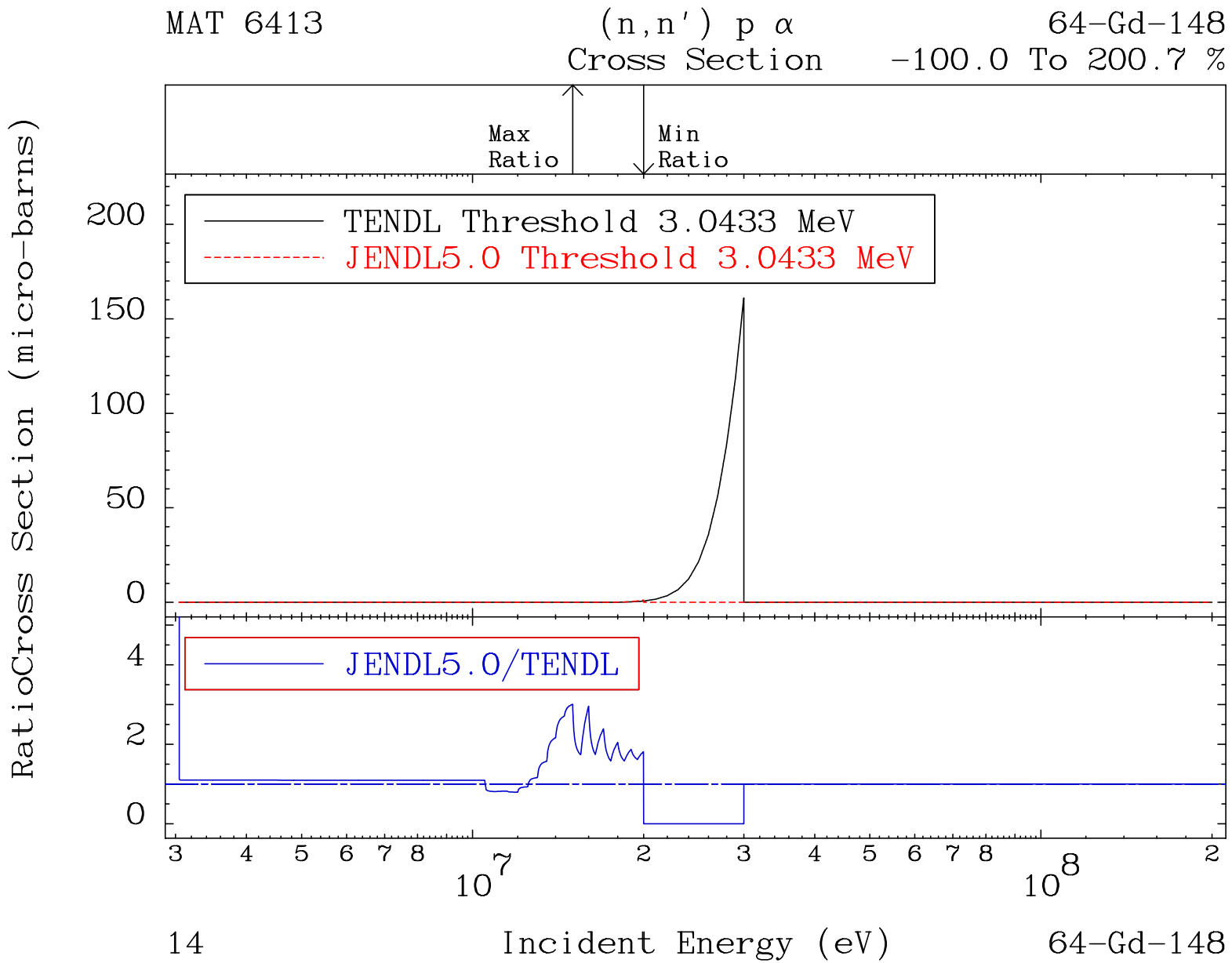

MAT 6413
(n,n') p
Cross Section
64-Gd-148
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.0548 MeV
JENDL5.0 Threshold 6.0548 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
200
100
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
9
Incident Energy (eV)
64-Gd-148

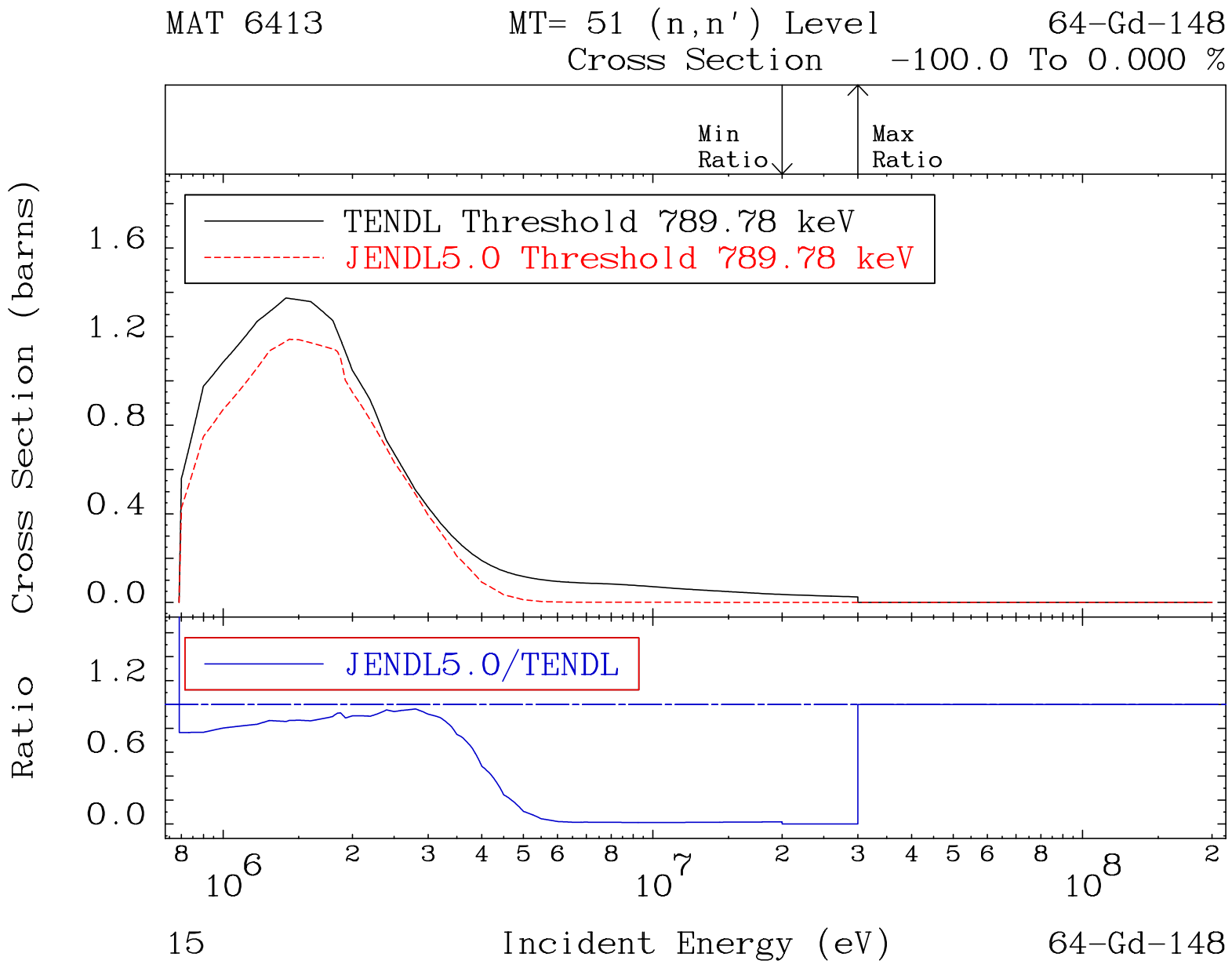

MAT 6413
(n,n') d
Cross Section
64-Gd-148
-100.0 To 690.2 %
Max Ratio
Min Ratio
TENDL Threshold 12.371 MeV
JENDL5.0 Threshold 12.371 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
12
8
4
0
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
64-Gd-148

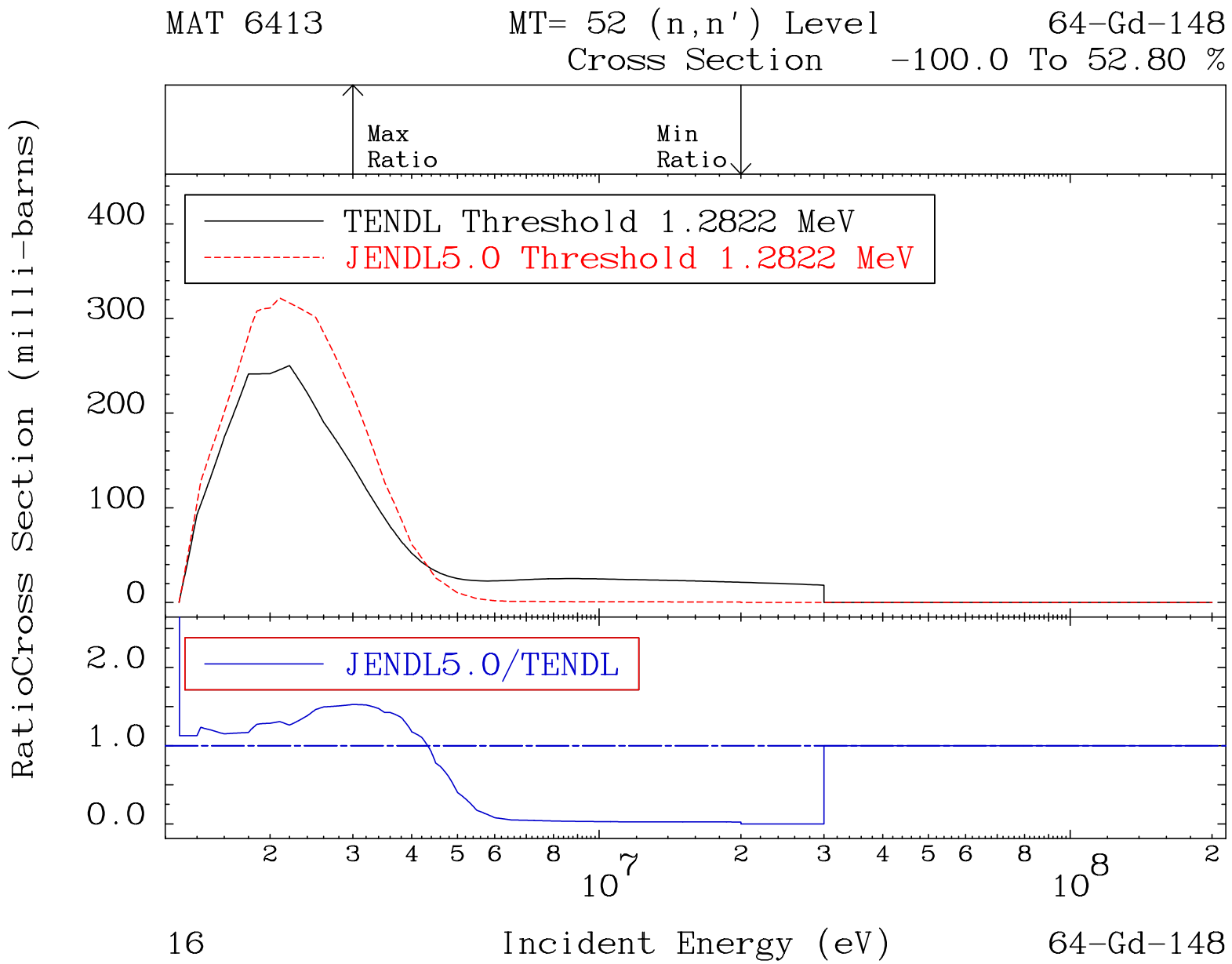

MAT 6413
(n,n') t
Cross Section
64-Gd-148
-100.0 To 2.018 %
Max Ratio
Min Ratio
TENDL Threshold 13.318 MeV
JENDL5.0 Threshold 13.318 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
8
6
4
2
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
64-Gd-148

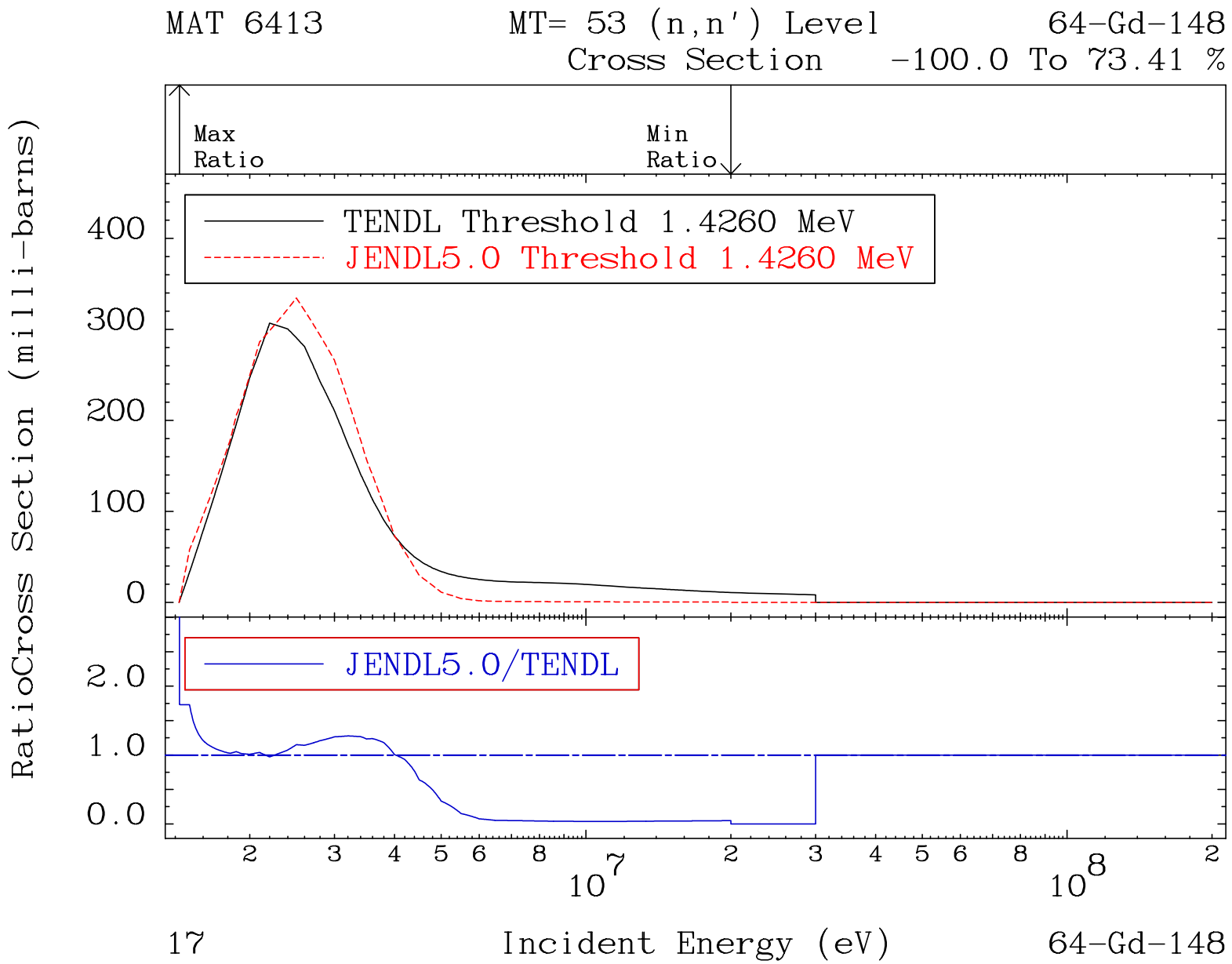

MAT 6413
(n,2n) p
Cross Section
64-Gd-148
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 14.611 MeV
JENDL5.0 Threshold 14.611 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
2
10^8
12
Incident Energy (eV)
64-Gd-148

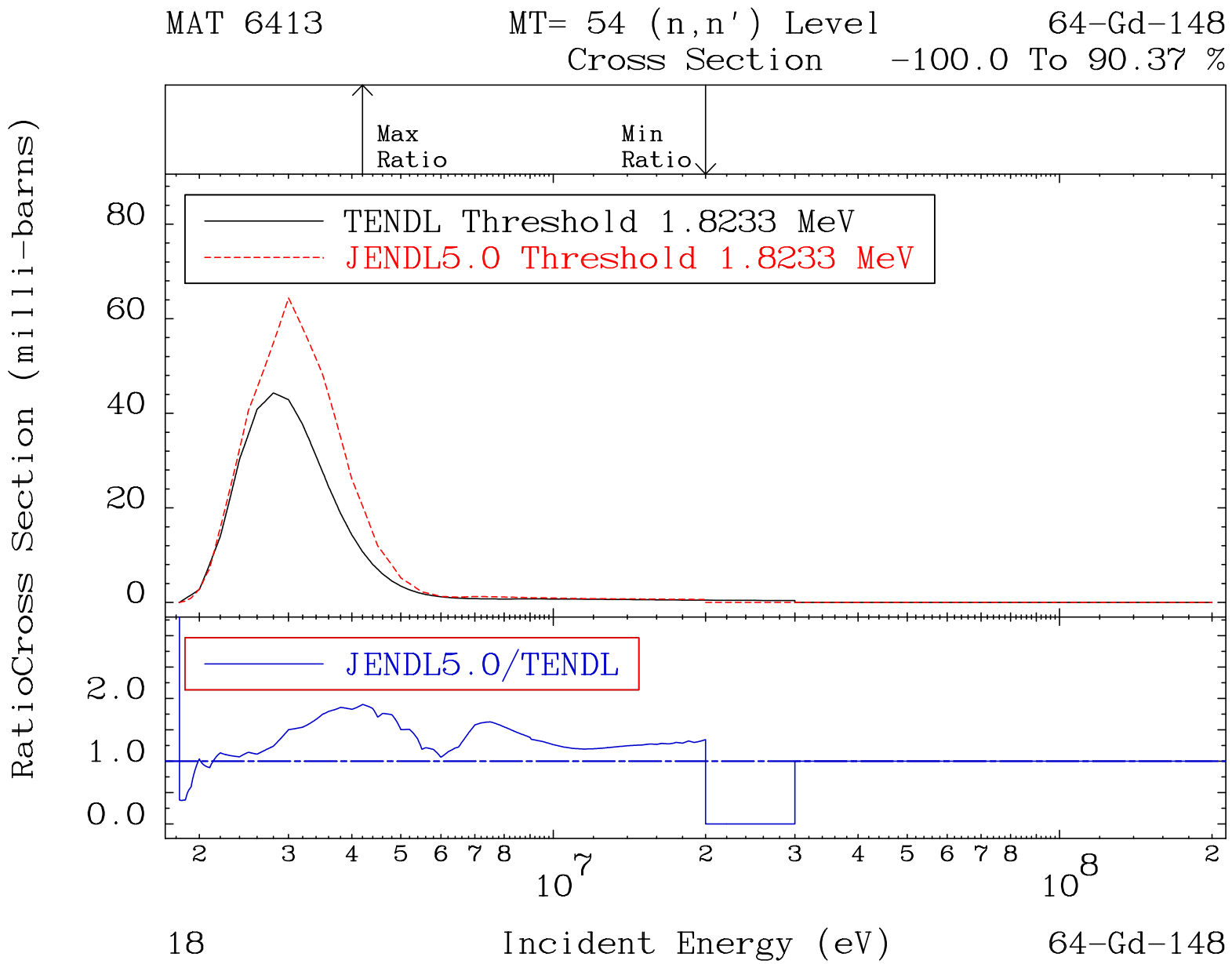

MAT 6413
(n,2n) p
Cross Section
64-Gd-148
-100.0 To 143.9 %
Max Ratio
Min Ratio
TENDL Threshold 9.9182 MeV
JENDL5.0 Threshold 9.9182 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
250
200
150
100
50
0
2
0
10^7
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
64-Gd-148

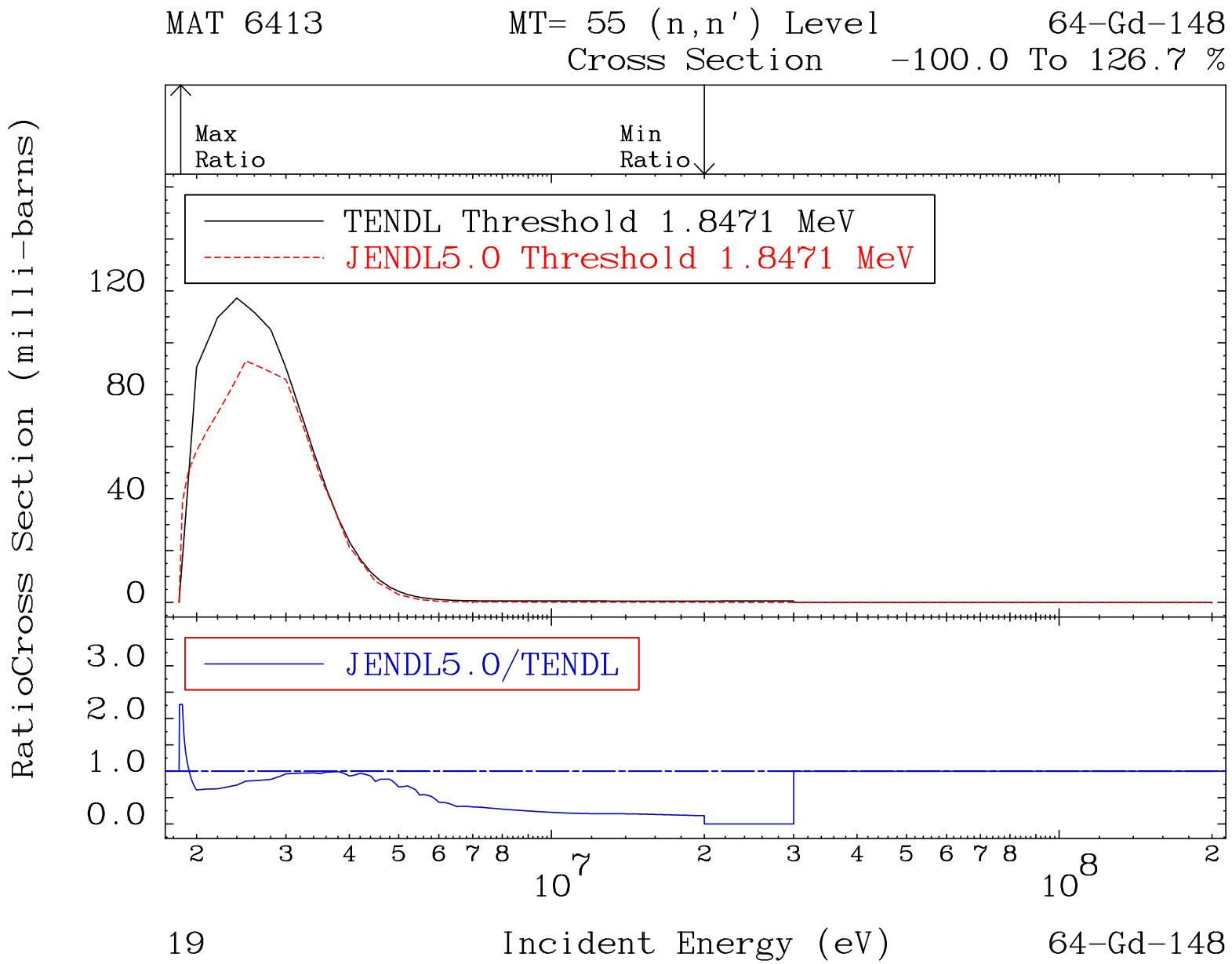

MAT 6413
(n,n') p α
64-Gd-148
Cross Section
-100.0 To 200.7 %
Max Ratio
Min Ratio
TENDL Threshold 3.0433 MeV
JENDL5.0 Threshold 3.0433 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
4
2
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
64-Gd-148

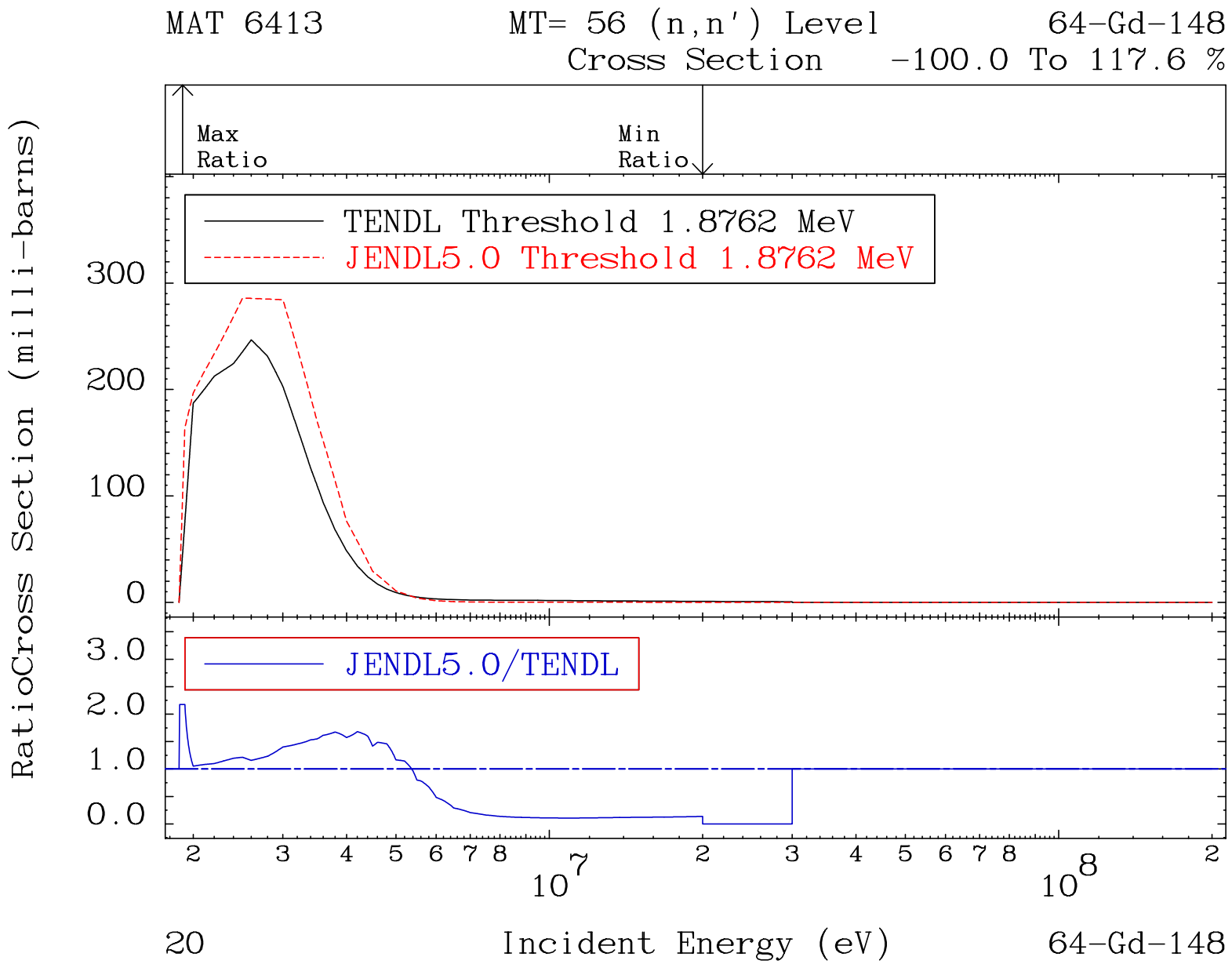

MAT 6413
MT= 51 (n,n') Level
64-Gd-148
Cross Section -100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 789.78 keV
Cross Section (barns)
1.6
1.2
0.8
0.4
0.0
JENDL5.0/TENDL
Ratio
1.2
0.6
0.0
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
15
Incident Energy (eV)
64-Gd-148

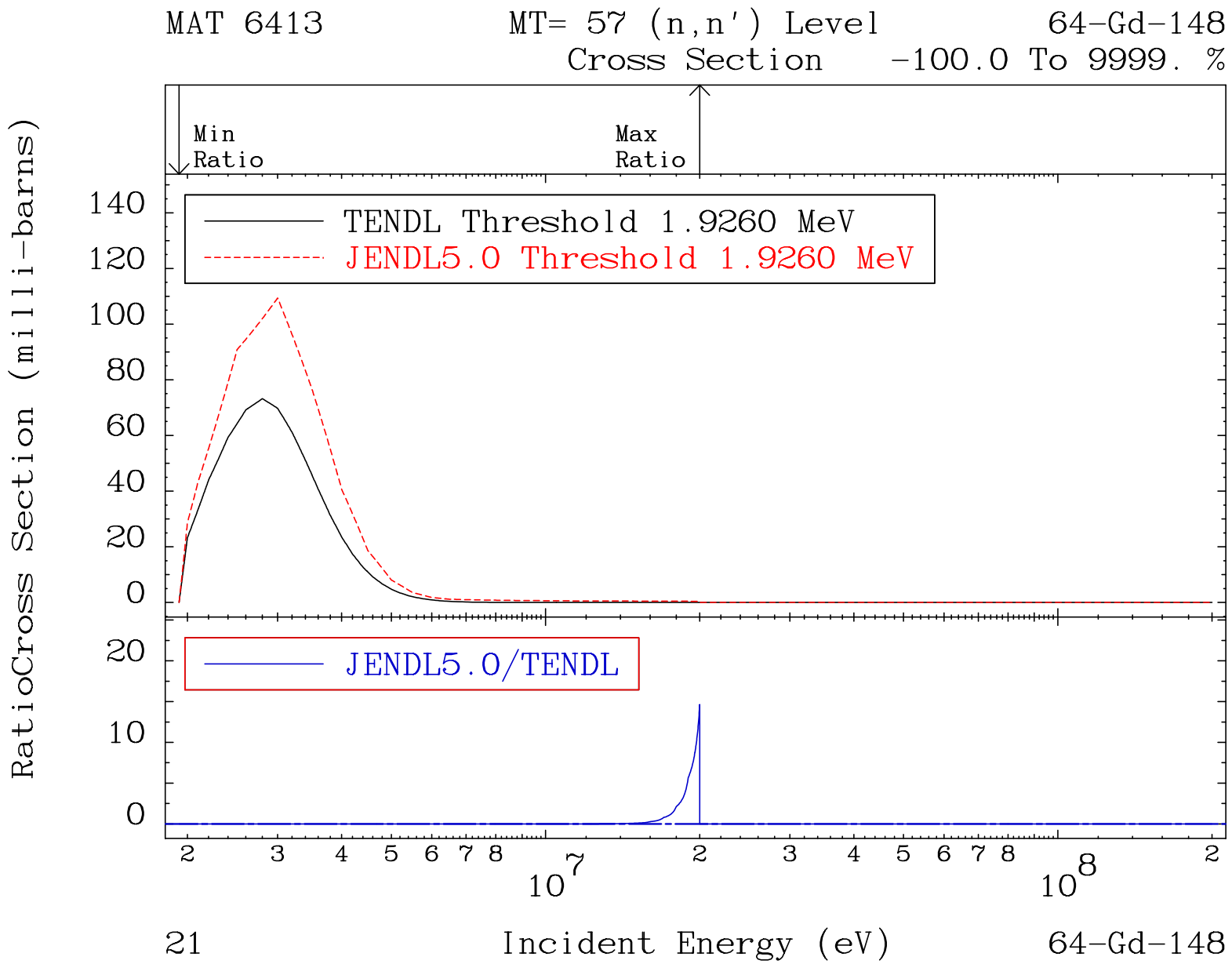

MAT 6413
MT= 52 (n,n') Level
64-Gd-148
Cross Section -100.0 To 52.80 %
Max Ratio
Min Ratio
TENDL Threshold 1.2822 MeV
JENDL5.0 Threshold 1.2822 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
2.0
1.0
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
16
Incident Energy (eV)
64-Gd-148

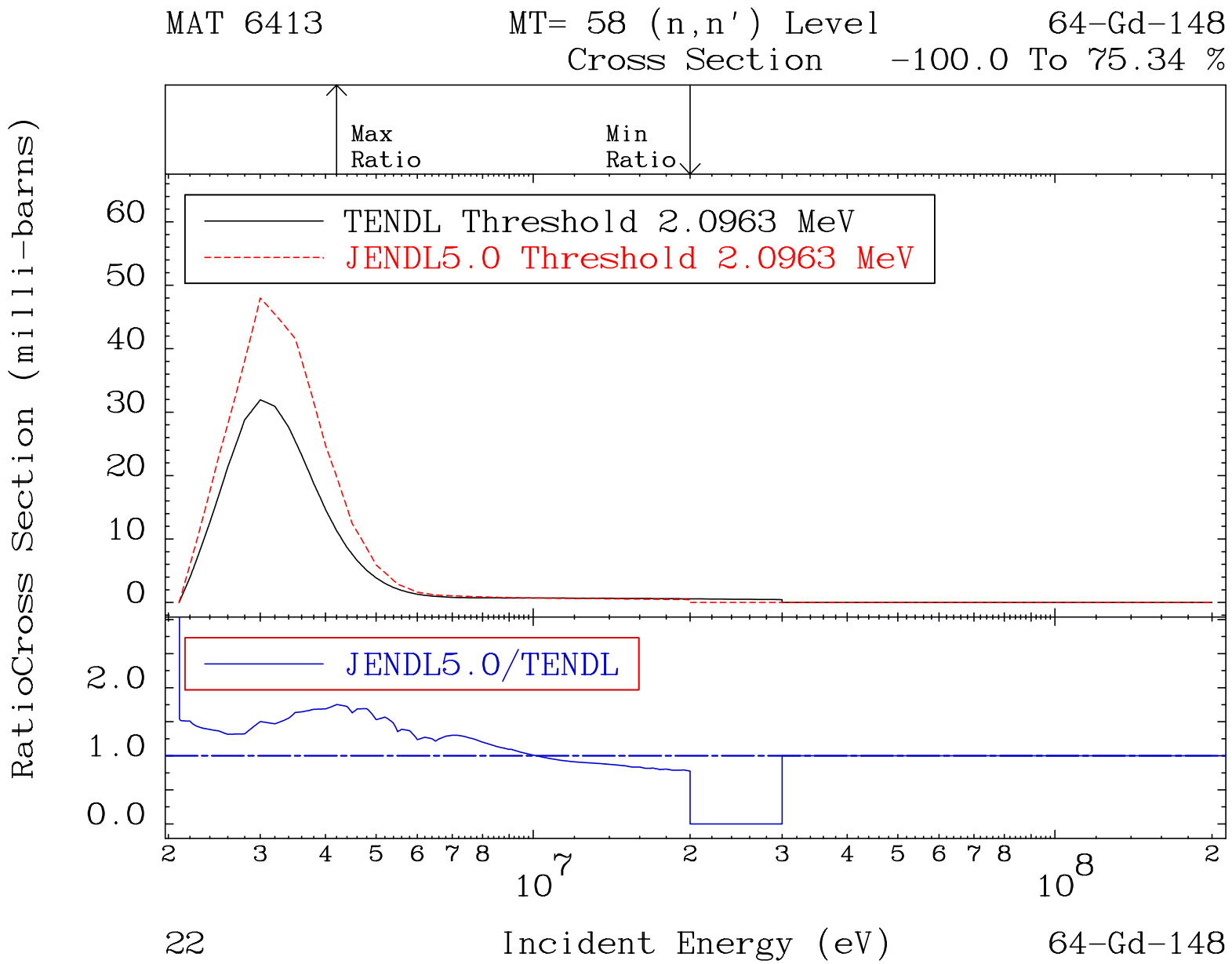

MAT 6413
MT= 53 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 73.41 %
Max Ratio
Min Ratio
TENDL Threshold 1.4260 MeV
JENDL5.0 Threshold 1.4260 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
2.0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
17
Incident Energy (eV)
64-Gd-148

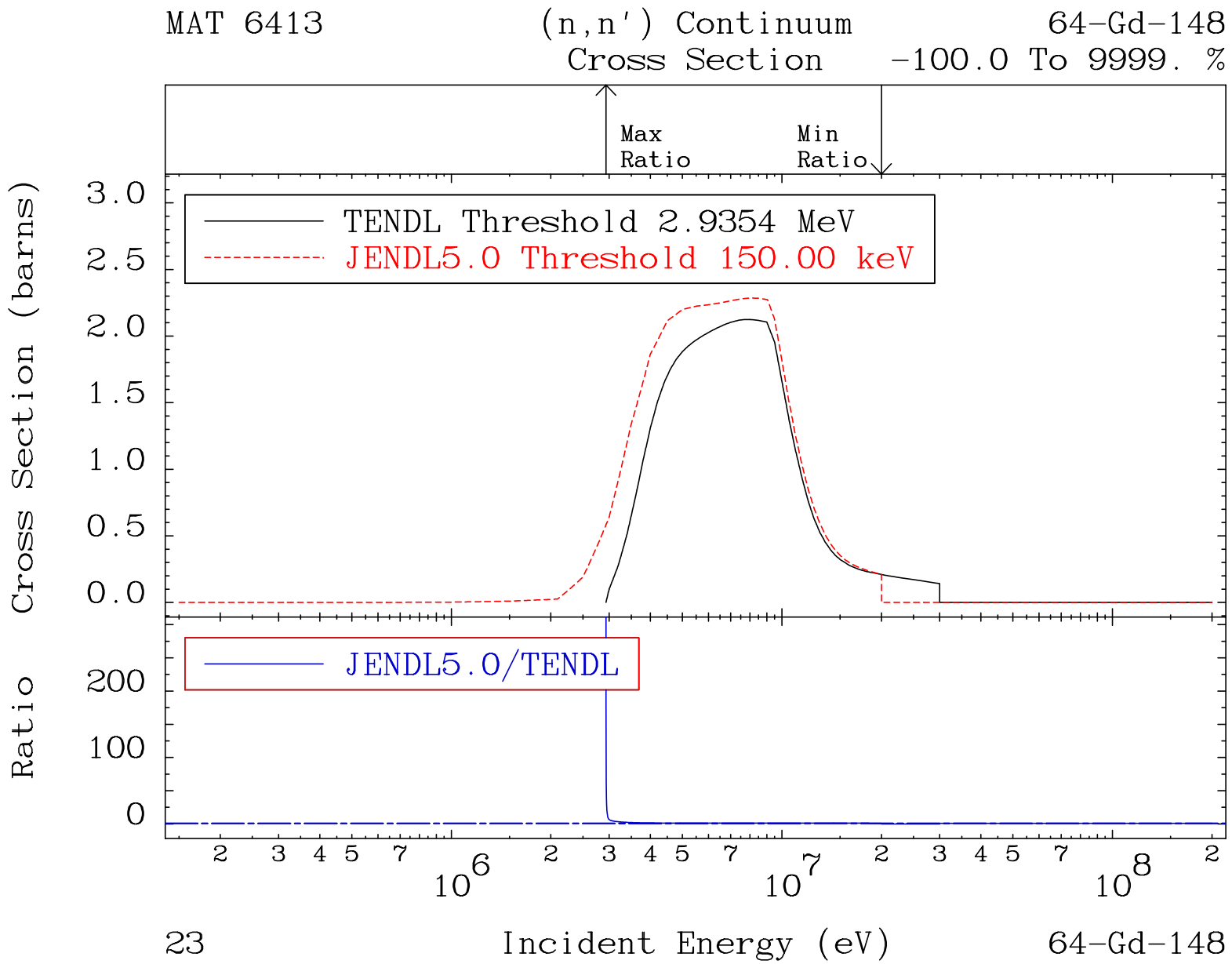

MAT 6413
MT= 54 (n,n') Level
64-Gd-148
Cross Section -100.0 To 90.37 %
Max Ratio
Min Ratio
TENDL Threshold 1.8233 MeV
JENDL5.0 Threshold 1.8233 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
64-Gd-148

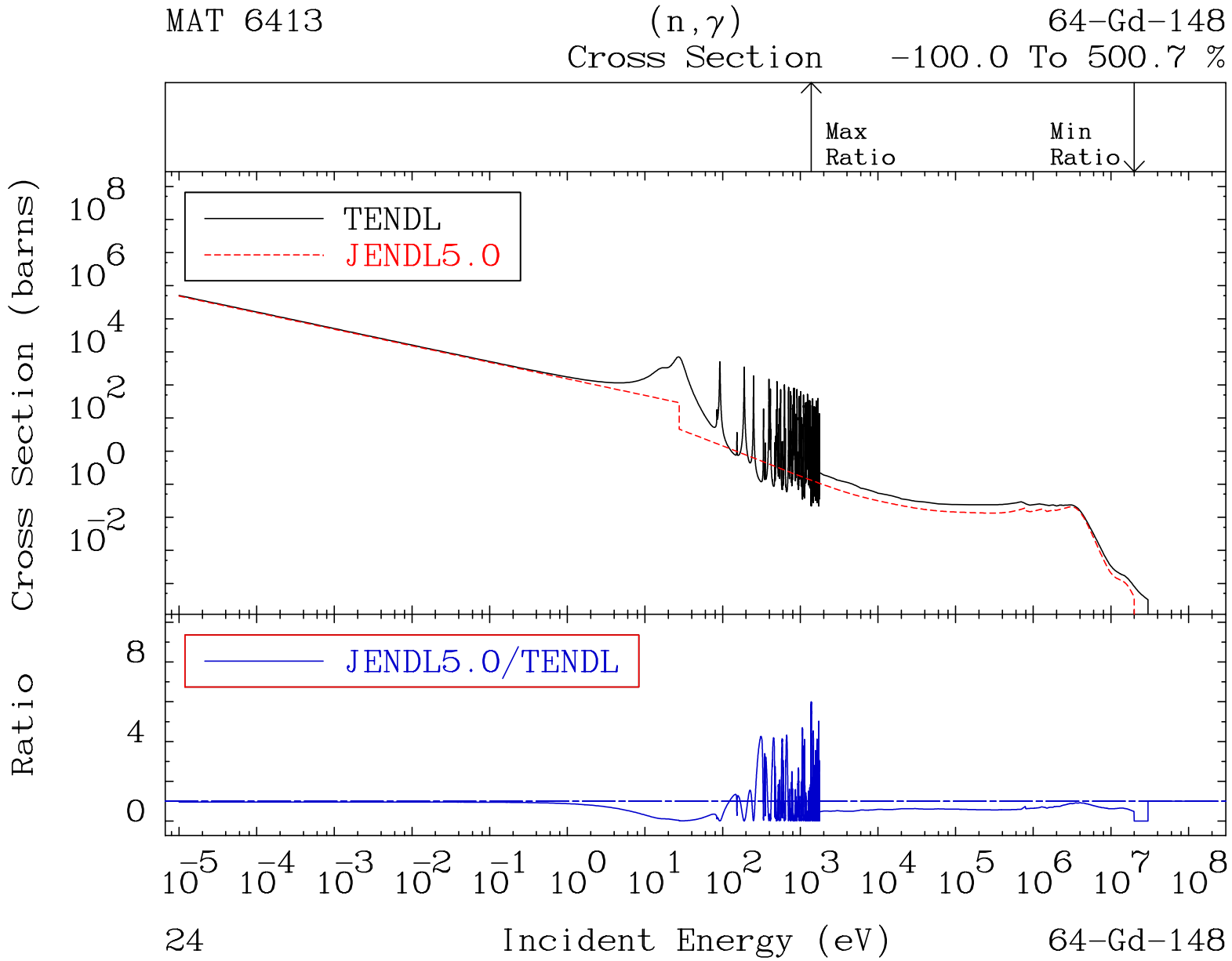

MAT 6413
MT= 55 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 126.7 %
Max Ratio
Min Ratio
TENDL Threshold 1.8471 MeV
JENDL5.0 Threshold 1.8471 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
80
40
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
64-Gd-148

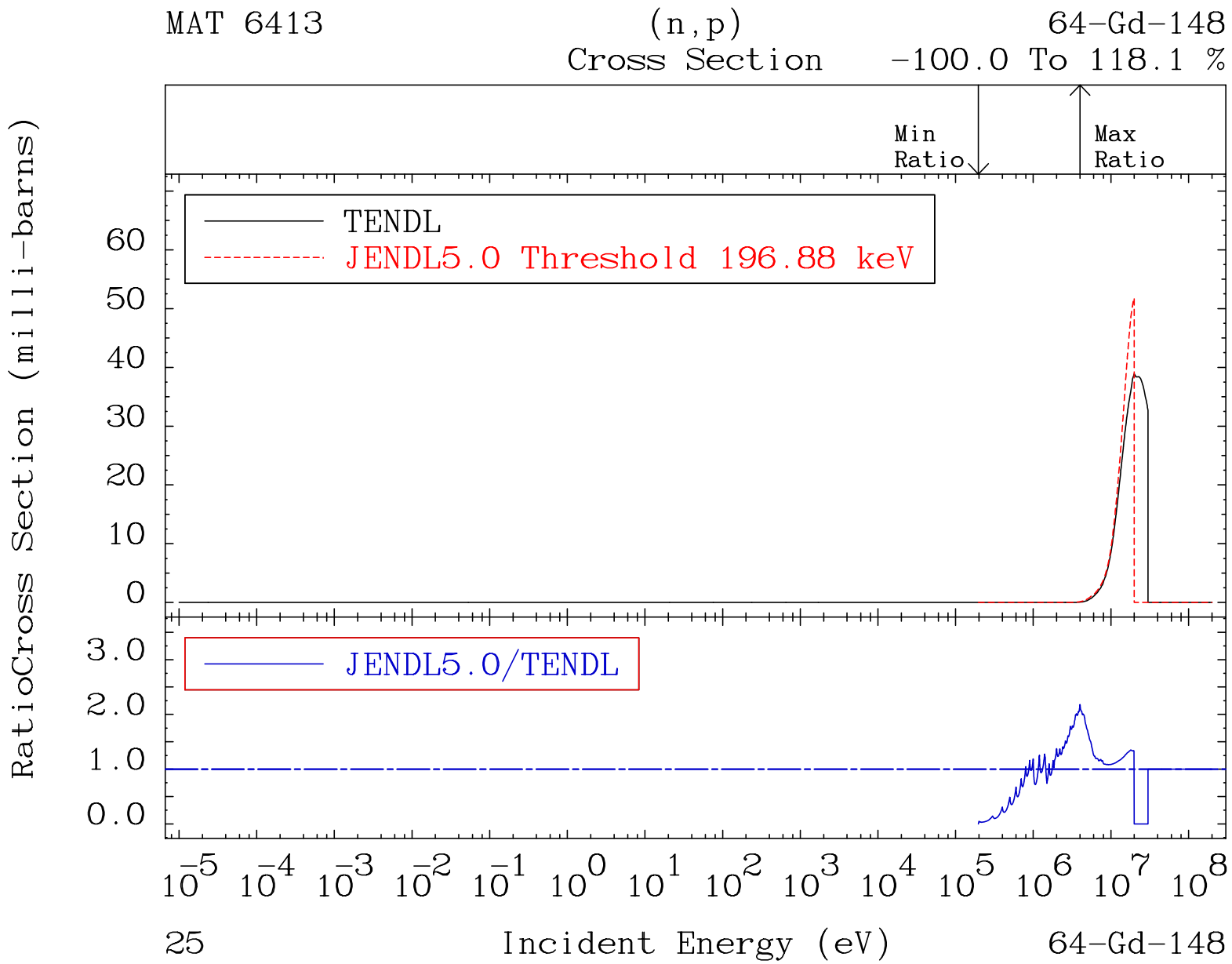

MAT 6413
MT= 56 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 117.6 %
Max Ratio
Min Ratio
TENDL Threshold 1.8762 MeV
JENDL5.0 Threshold 1.8762 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
64-Gd-148

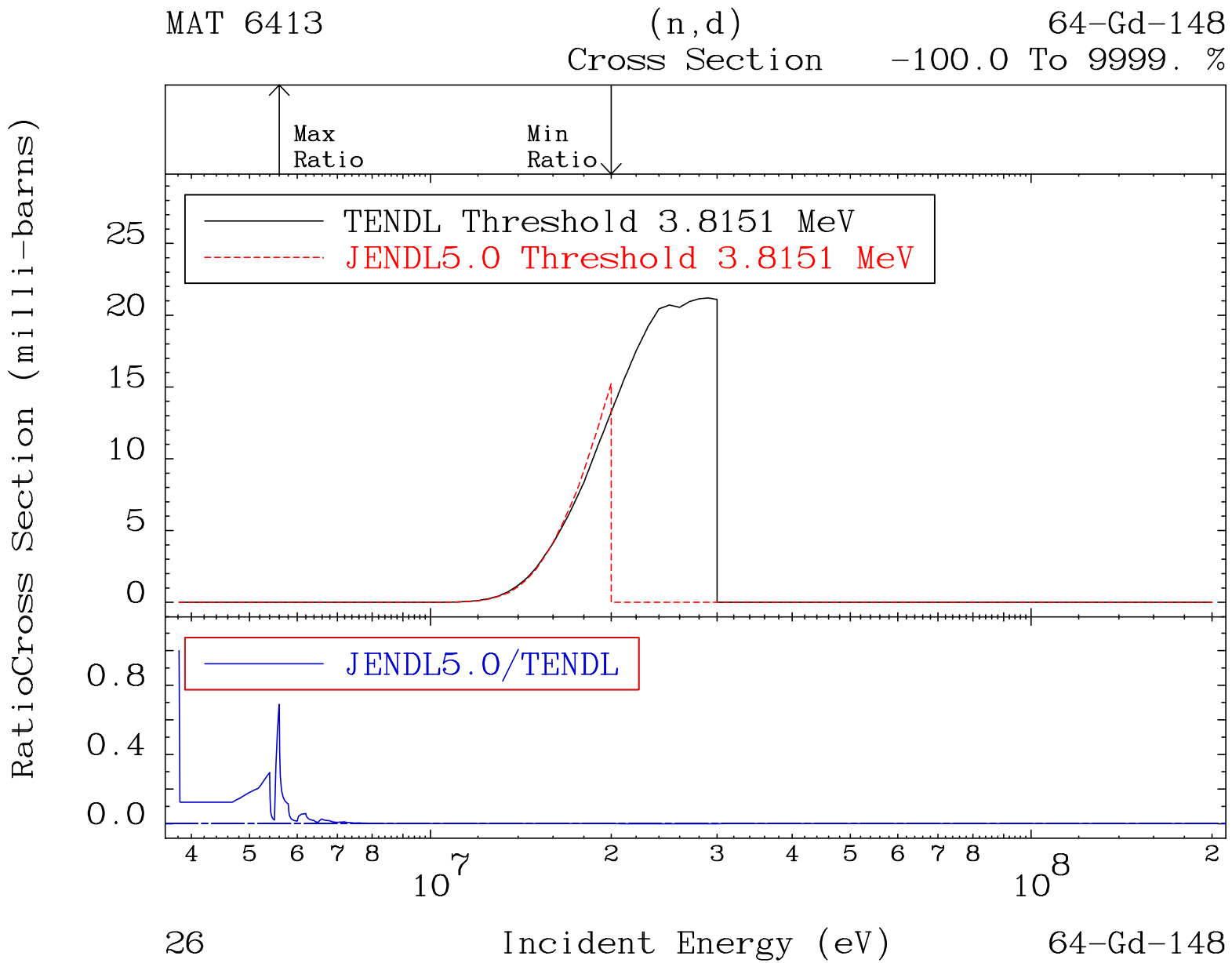

MAT 6413
MT= 57 (n,n') Level
64-Gd-148
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9260 MeV
JENDL5.0 Threshold 1.9260 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
20
10
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
64-Gd-148

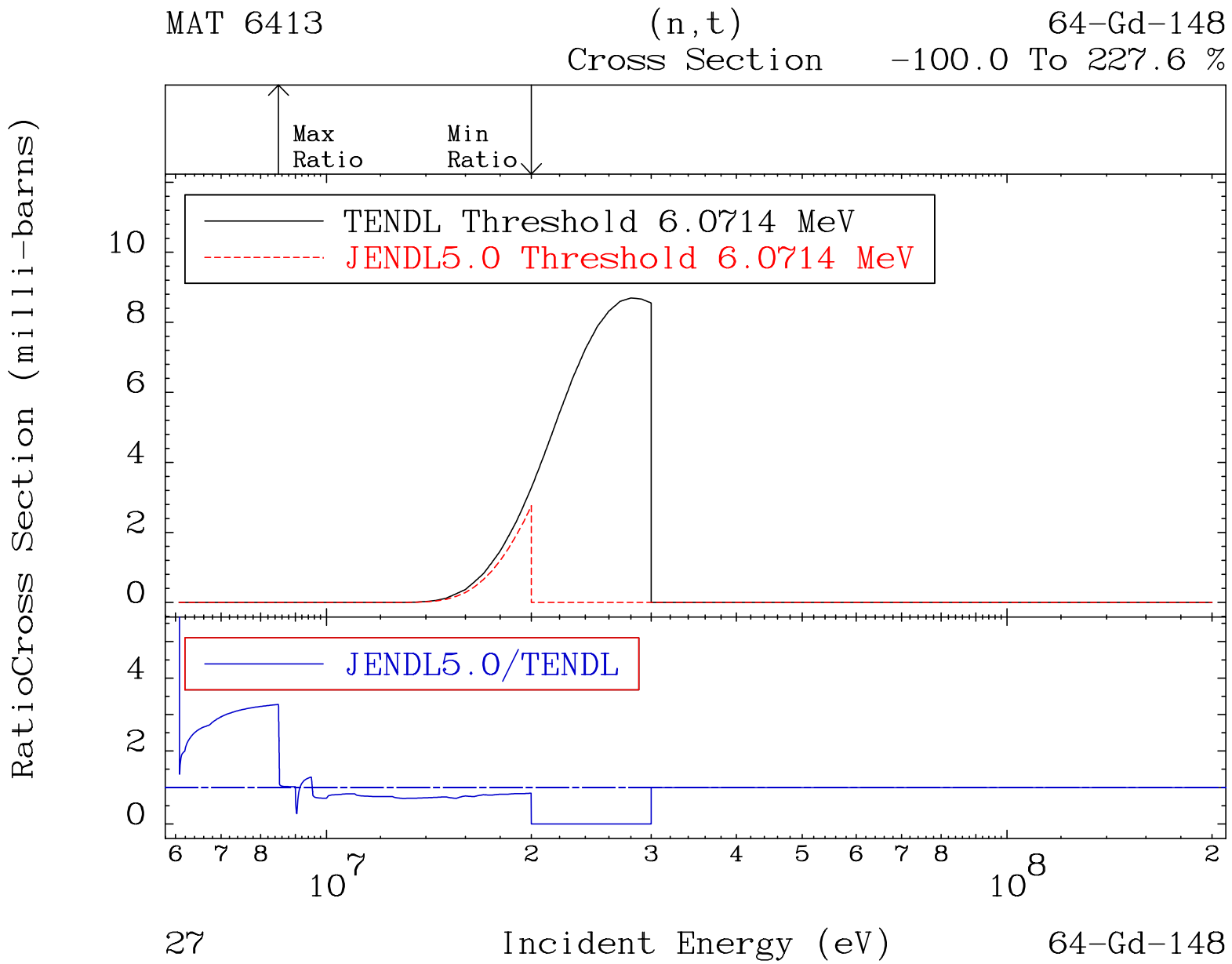

MAT 6413
MT= 58 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 75.34 %
Max Ratio
Min Ratio
TENDL Threshold 2.0963 MeV
JENDL5.0 Threshold 2.0963 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
64-Gd-148

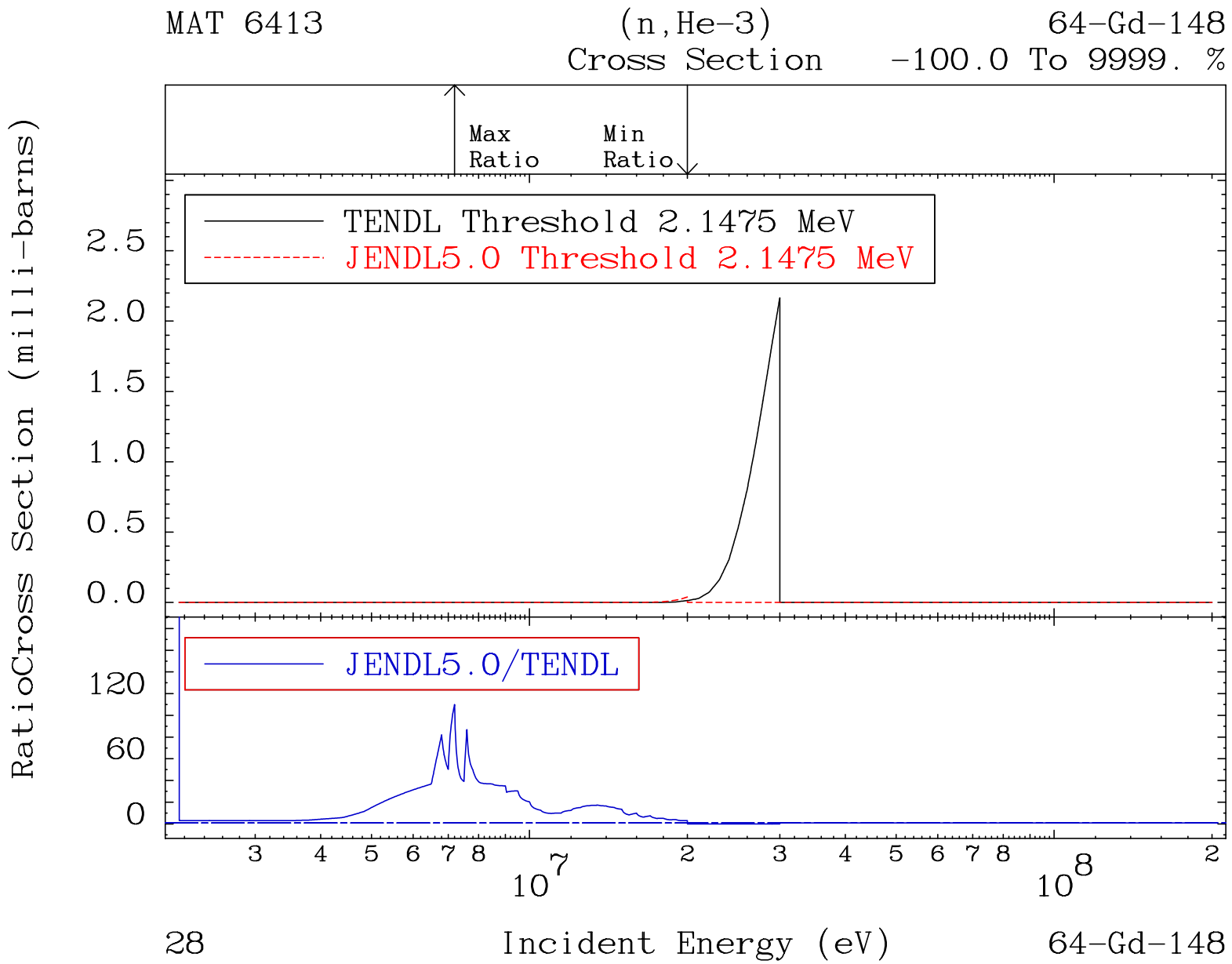

MAT 6413
(n,n') Continuum
Cross Section
64-Gd-148
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.9354 MeV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
200
100
0
2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
23
Incident Energy (eV)
64-Gd-148

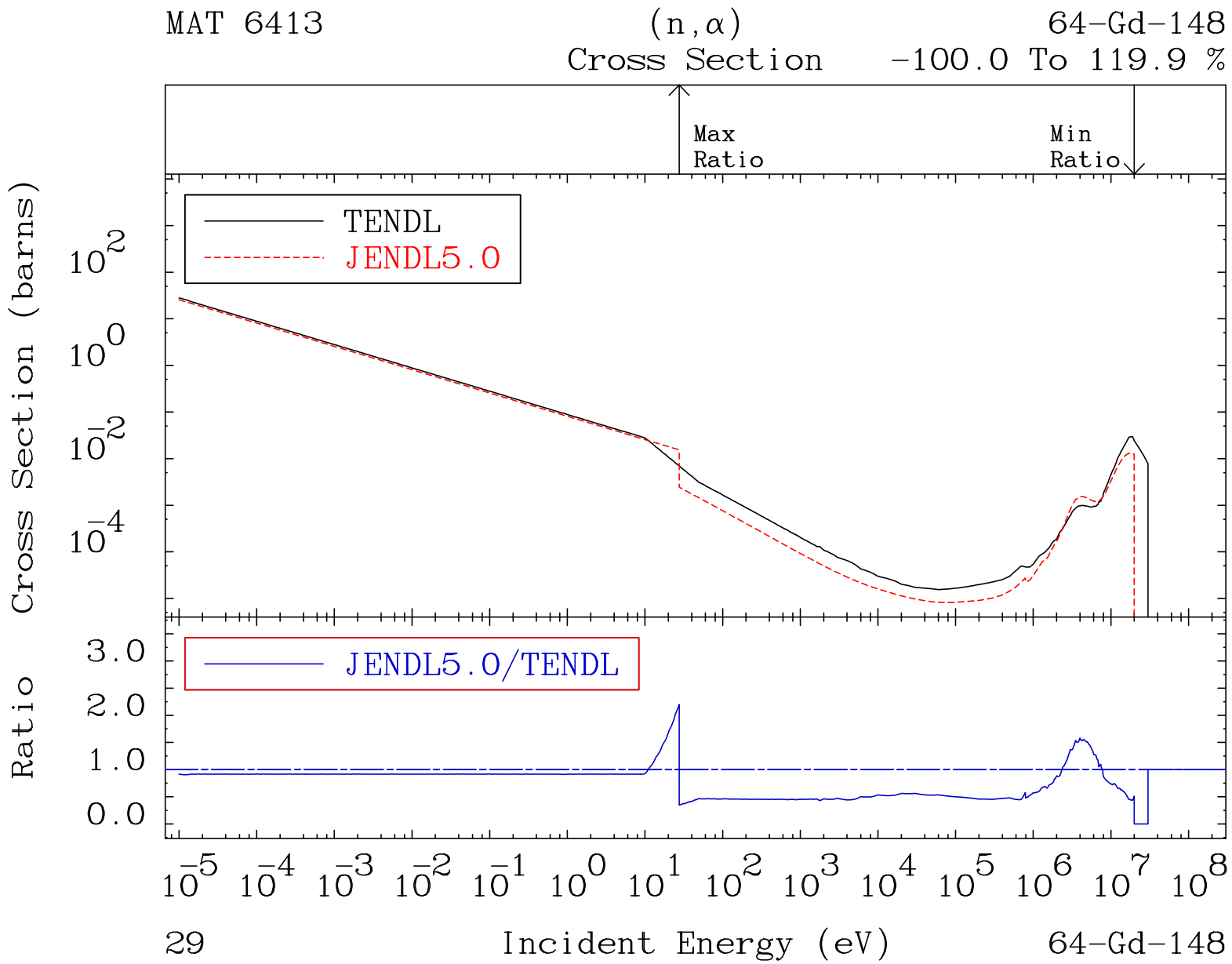

MAT 6413
(n,γ)
Cross Section
64-Gd-148
-100.0 To 500.7 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
24
64-Gd-148

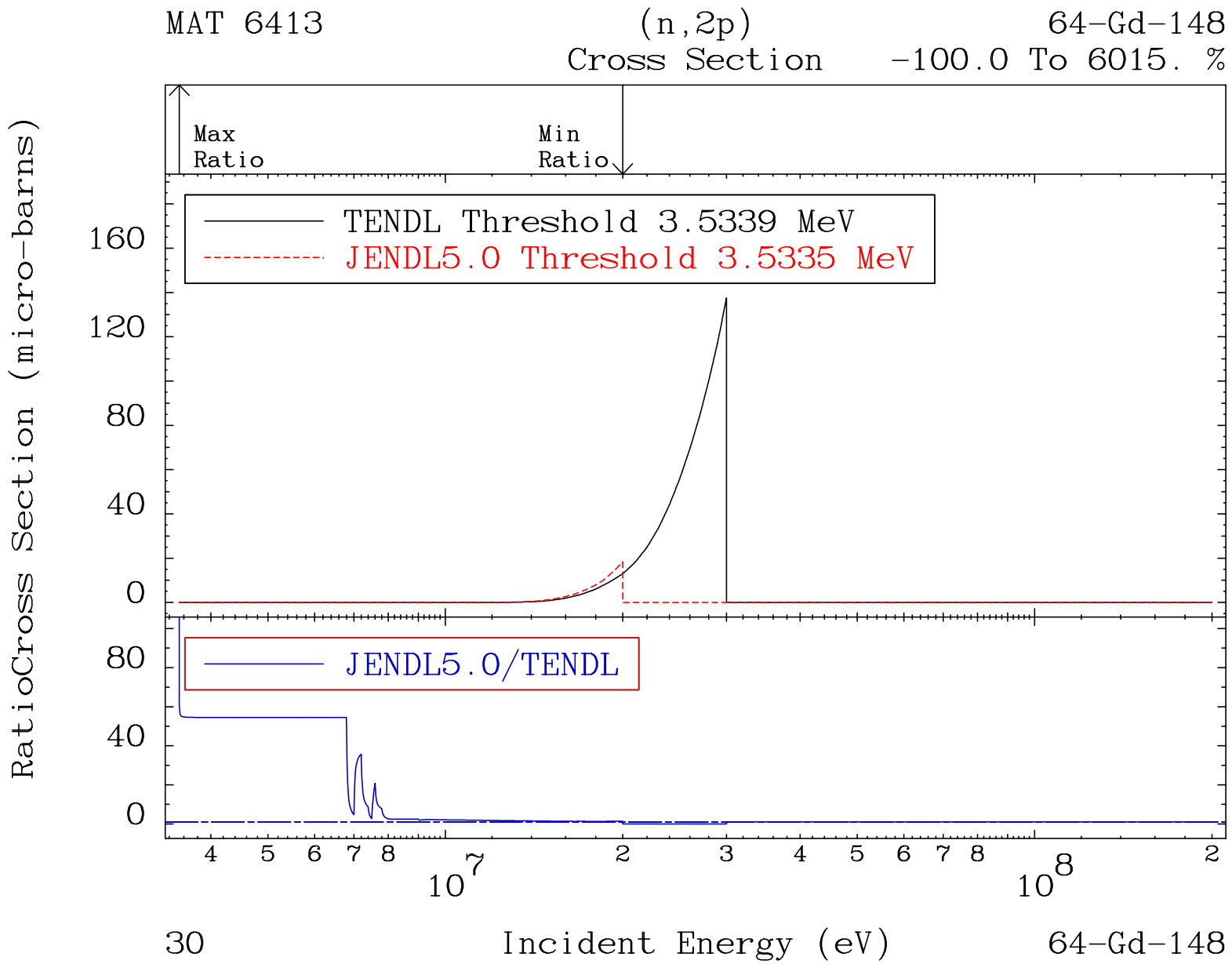

MAT 6413
(n,p)
Cross Section
64-Gd-148
-100.0 To 118.1 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 196.88 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
3.0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
Incident Energy (eV)
25
64-Gd-148

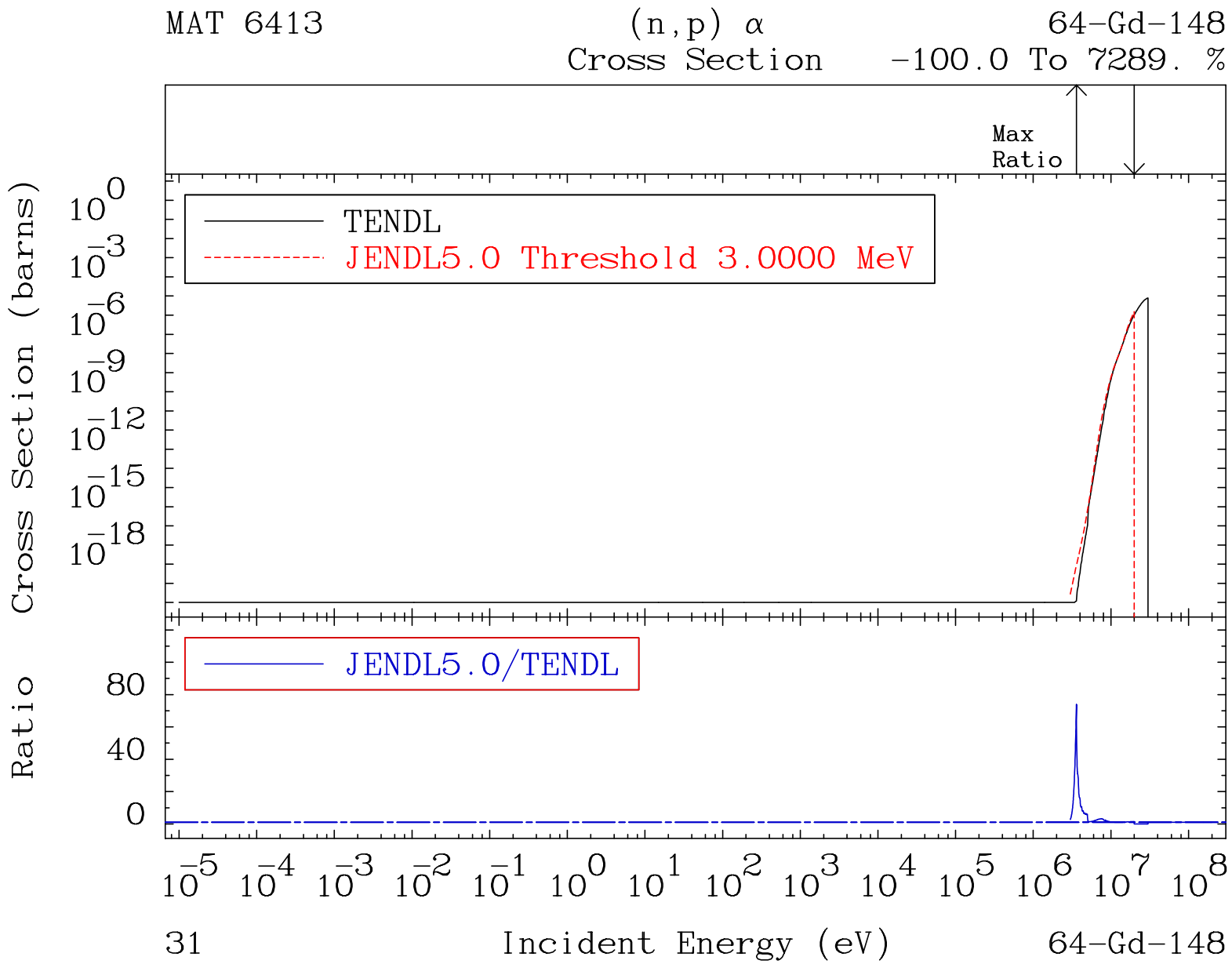

MAT 6413
(n,d)
64-Gd-148
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.8151 MeV
JENDL5.0 Threshold 3.8151 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
0.8
0.4
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
64-Gd-148

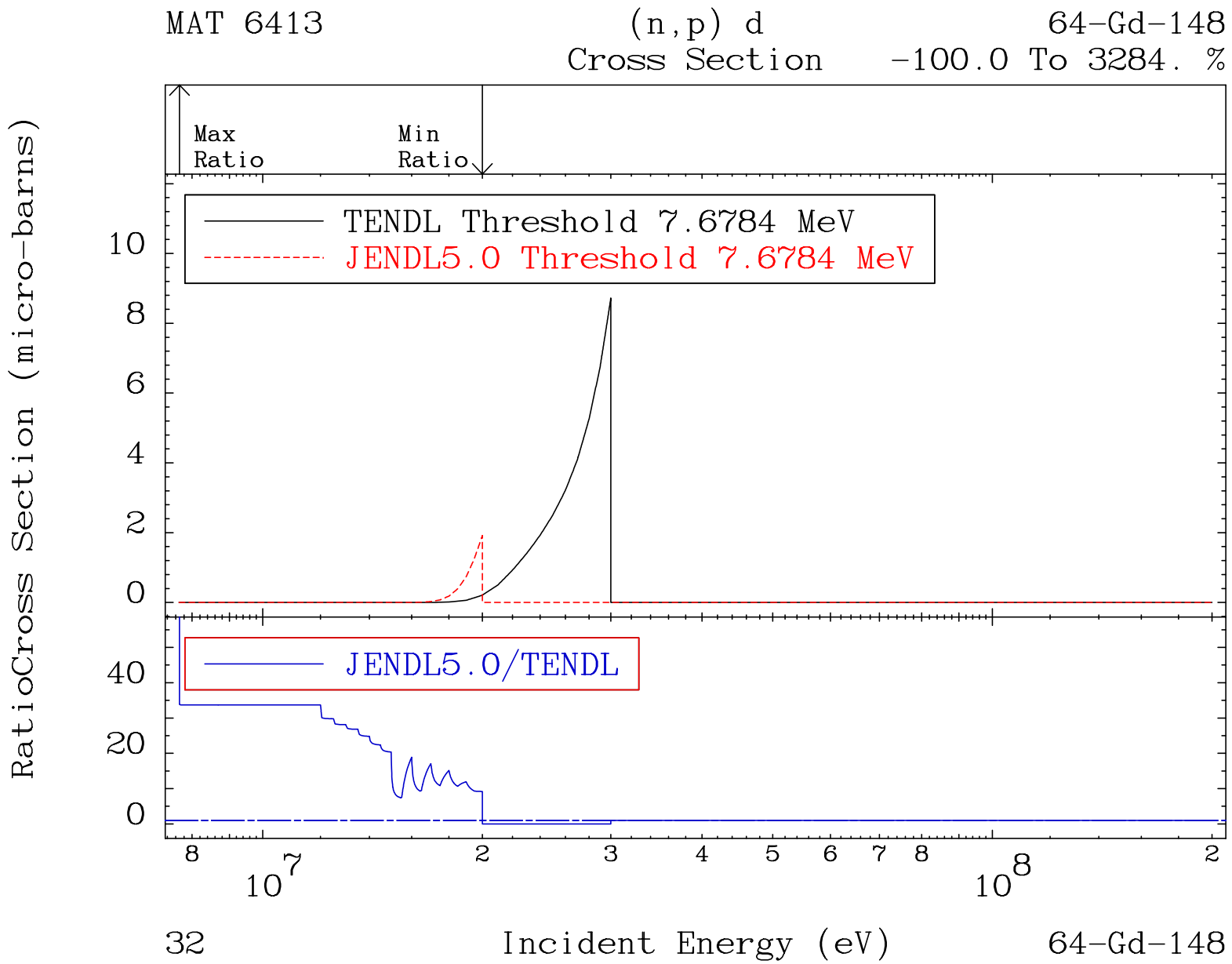

MAT 6413
(n,t)
Cross Section
64-Gd-148
-100.0 To 227.6 %
Max Ratio
Min Ratio
TENDL Threshold 6.0714 MeV
JENDL5.0 Threshold 6.0714 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
27
64-Gd-148

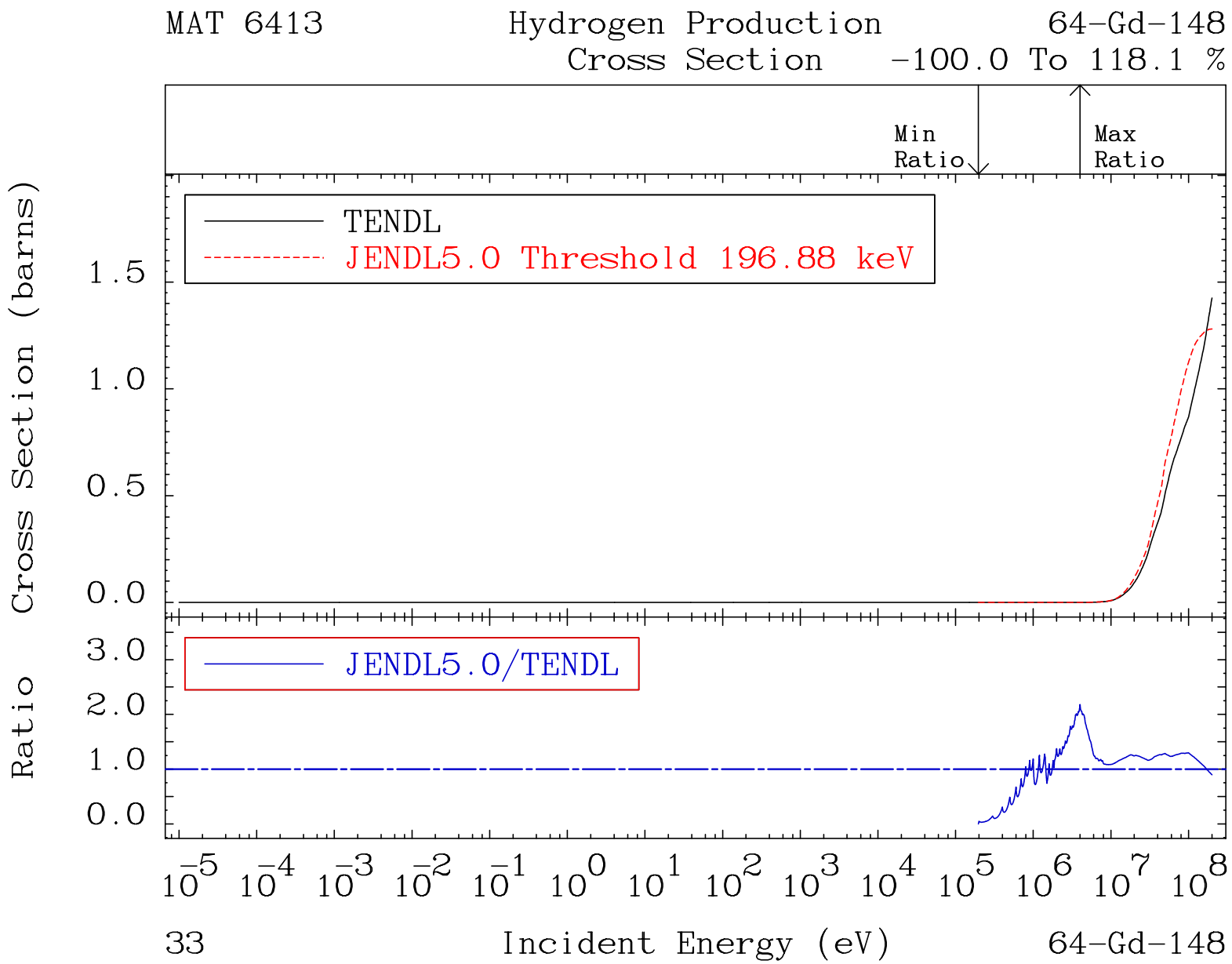

MAT 6413
(n,He-3)
64-Gd-148
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.1475 MeV
JENDL5.0 Threshold 2.1475 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
120
60
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
64-Gd-148

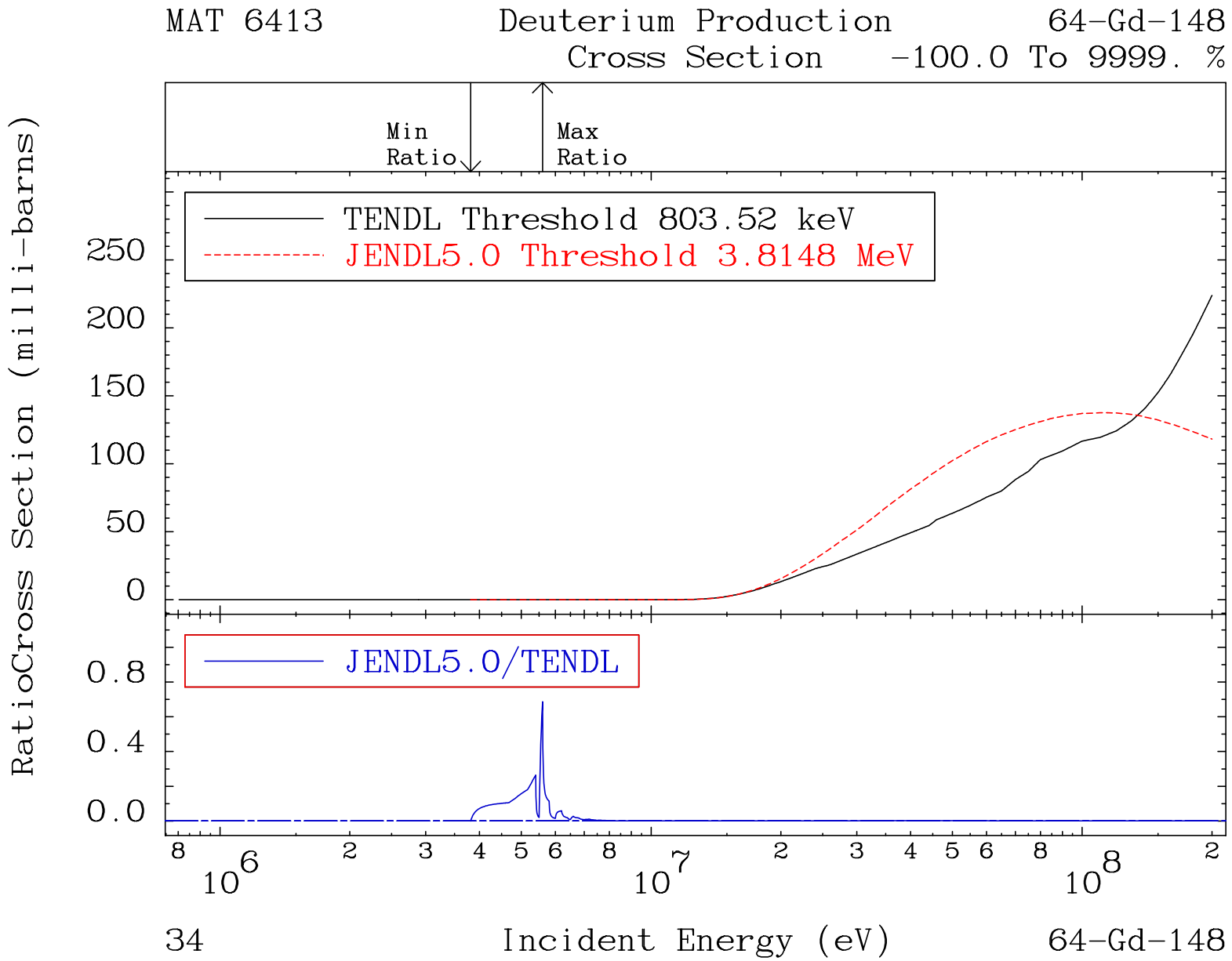

MAT 6413
(n,α)
Cross Section
64-Gd-148
-100.0 To 119.9 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^2
10^0
10^-2
10^-4
JENDL5.0/TENDL
Ratio
3.0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
64-Gd-148

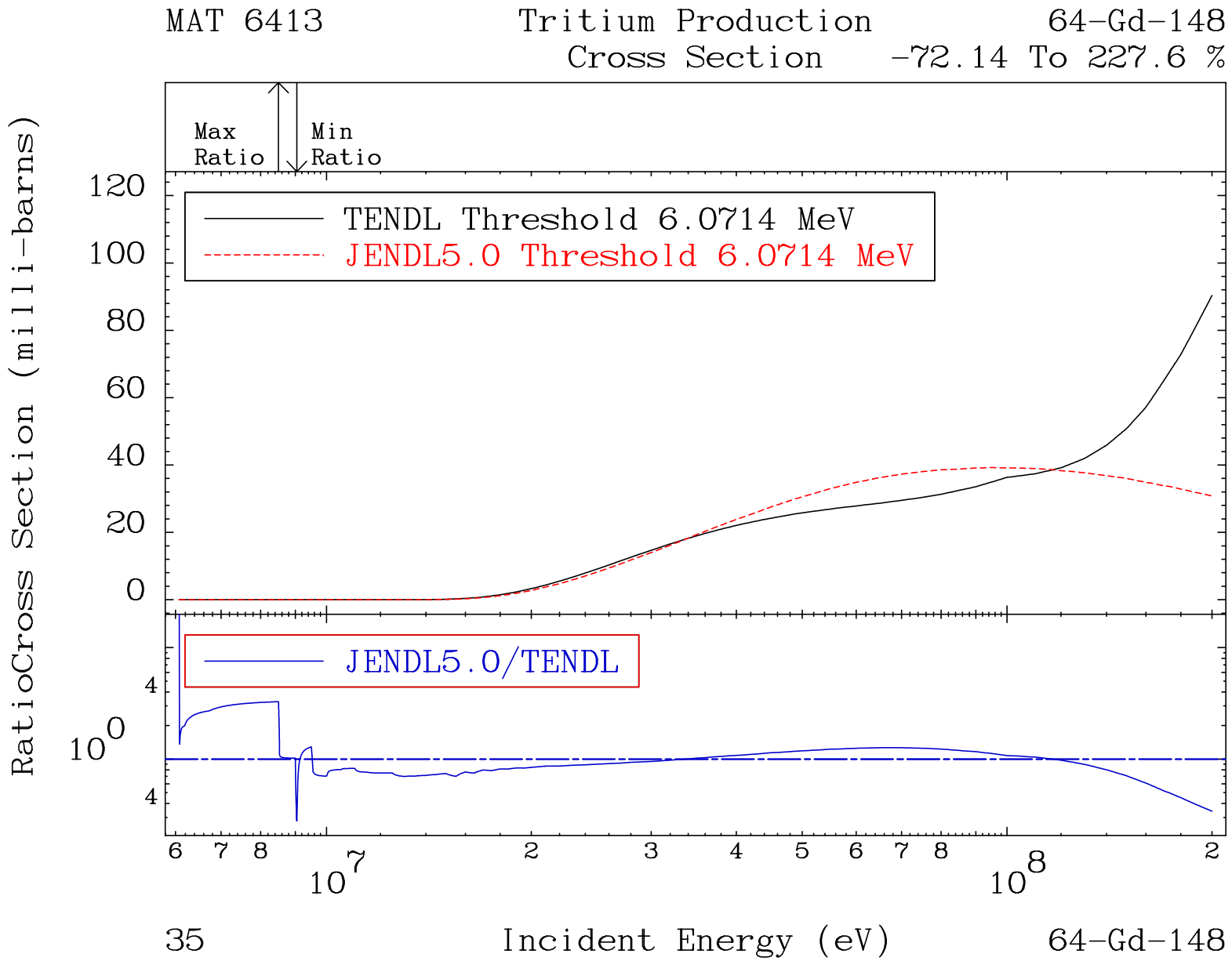

MAT 6413
(n,2p)
Cross Section
64-Gd-148
-100.0 To 6015. %
Max Ratio
Min Ratio
TENDL Threshold 3.5339 MeV
JENDL5.0 Threshold 3.5335 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
160
120
80
40
0
80
40
0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
64-Gd-148

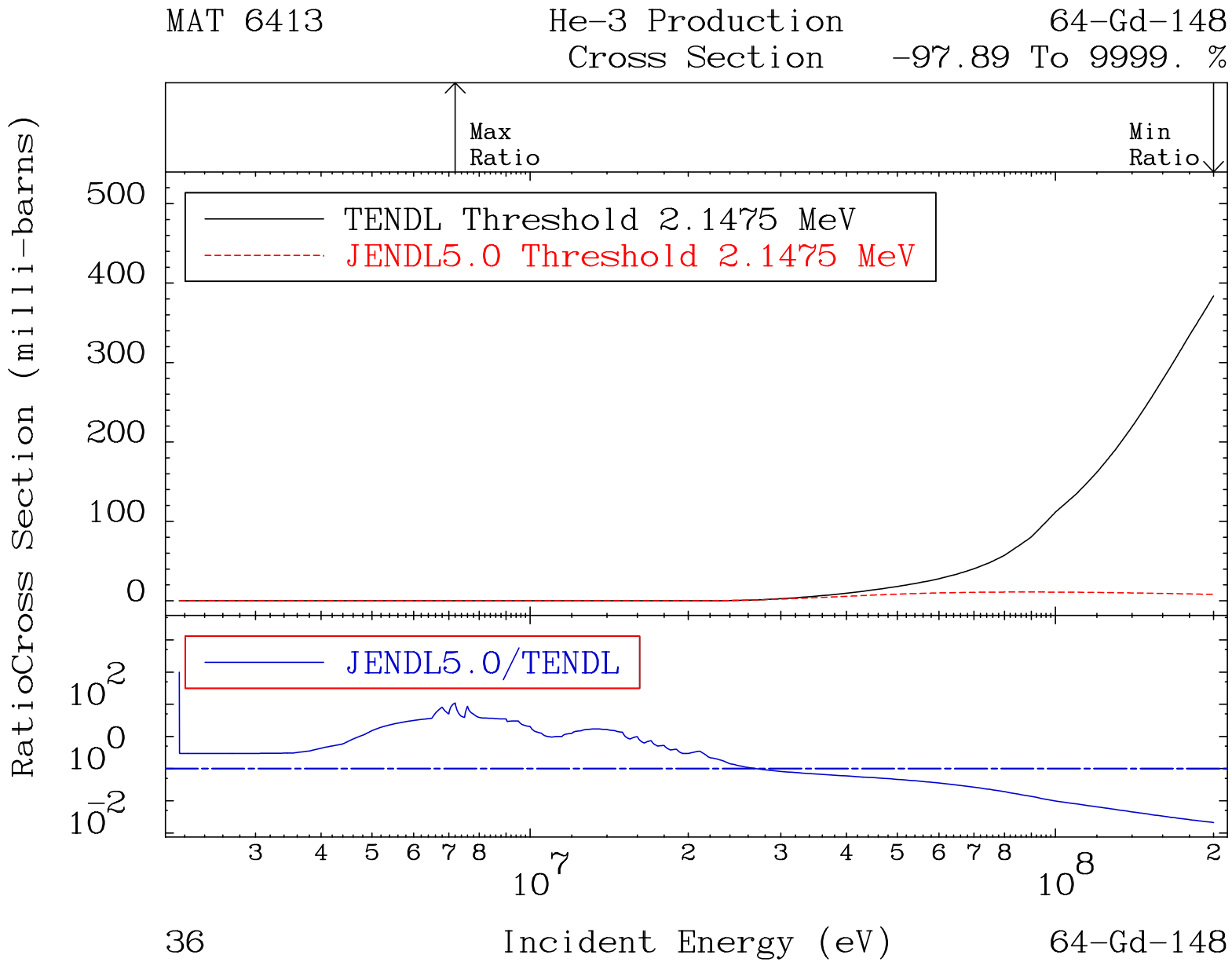

MAT 6413
(n,p) α
64-Gd-148
Cross Section
-100.0 To 7289. %
Max
Ratio
TENDL
JENDL5.0 Threshold 3.0000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
31
64-Gd-148

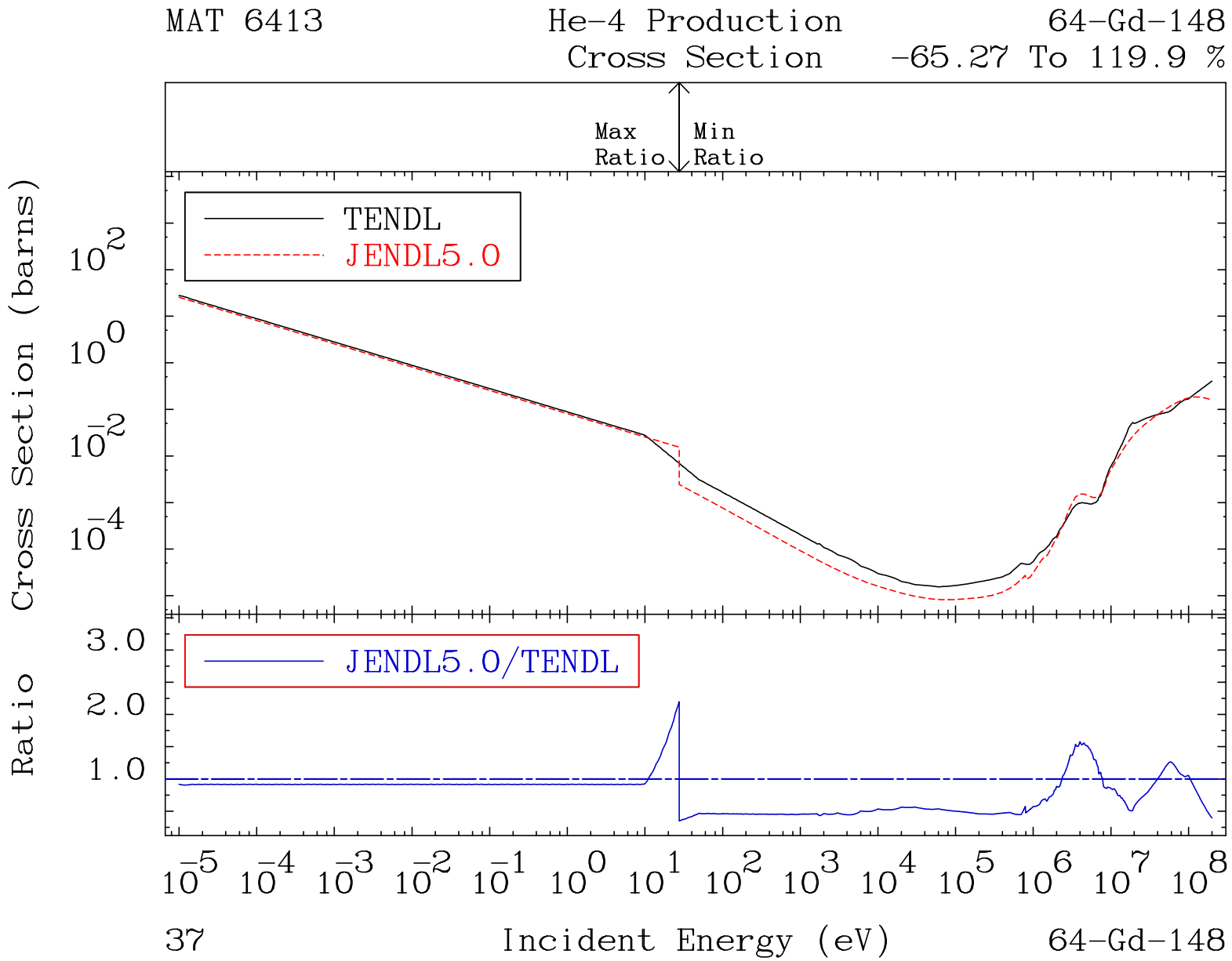

MAT 6413
(n,p) d
Cross Section
64-Gd-148
-100.0 To 3284. %
Max Ratio
Min Ratio
TENDL Threshold 7.6784 MeV
JENDL5.0 Threshold 7.6784 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
10
8
6
4
2
0
40
20
0
8
10^7
2
3
4
5
6
7
8
10^8
2
32
Incident Energy (eV)
64-Gd-148

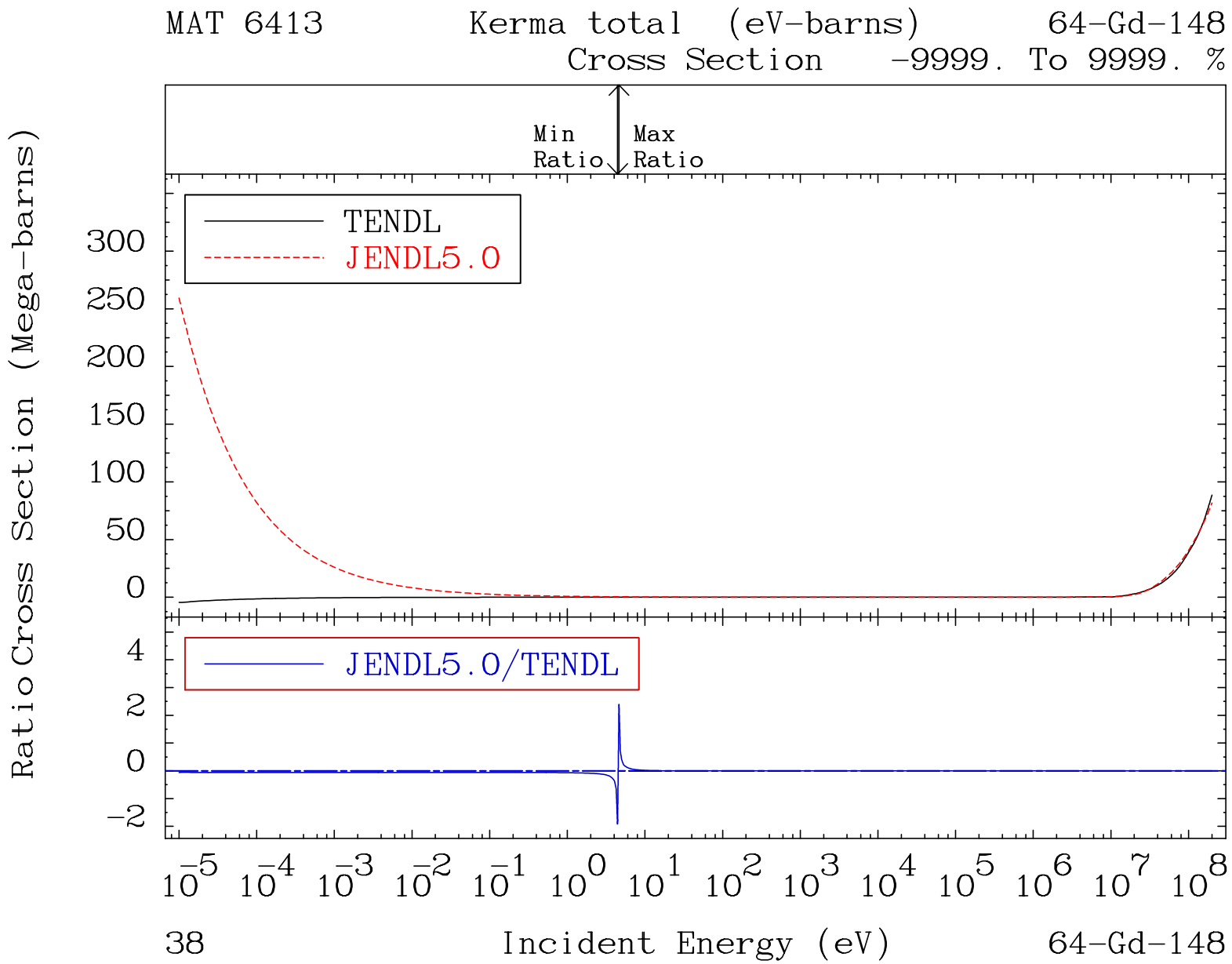

MAT 6413
Hydrogen Production
64-Gd-148
Cross Section
-100.0 To 118.1 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 196.88 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
3.0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
33
Incident Energy (eV)
64-Gd-148

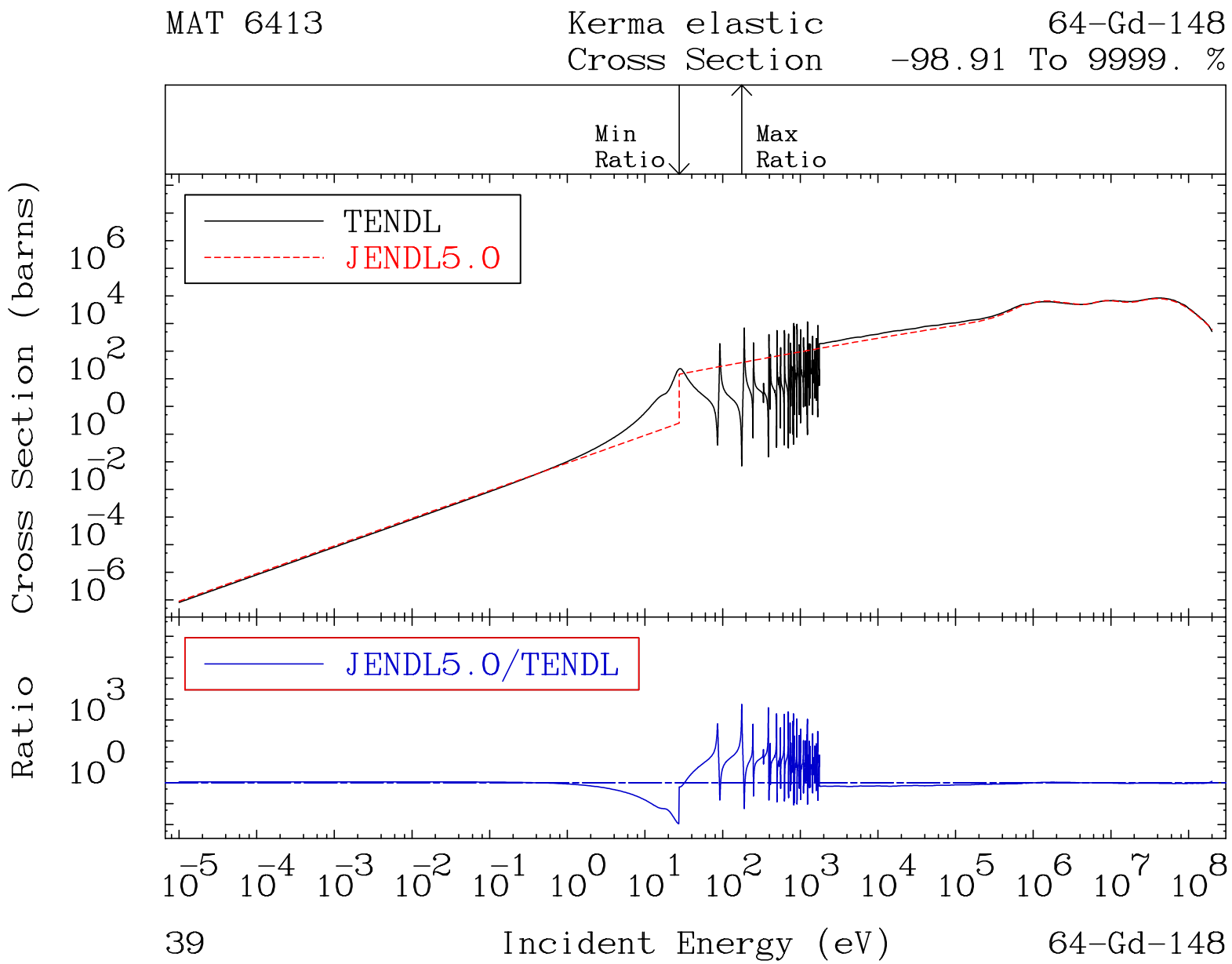

MAT 6413
Deuterium Production
64-Gd-148
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 803.52 keV
JENDL5.0 Threshold 3.8148 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
0.8
0.4
0.0
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
34
Incident Energy (eV)
64-Gd-148

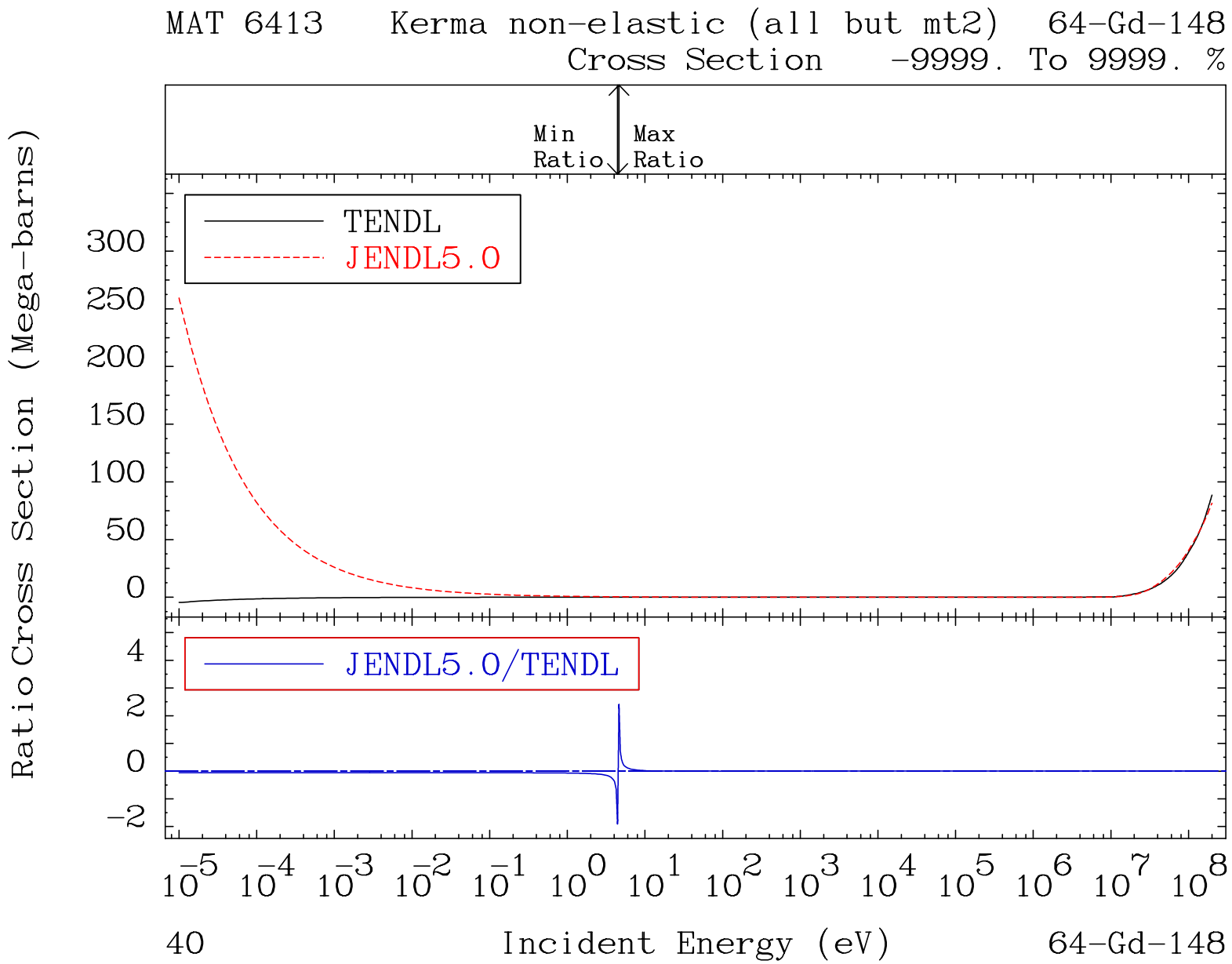

MAT 6413
Tritium Production
Cross Section
64-Gd-148
-72.14 To 227.6 %
Max Ratio
Min Ratio
TENDL Threshold 6.0714 MeV
JENDL5.0 Threshold 6.0714 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
4
10^0
4
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
35
Incident Energy (eV)
64-Gd-148

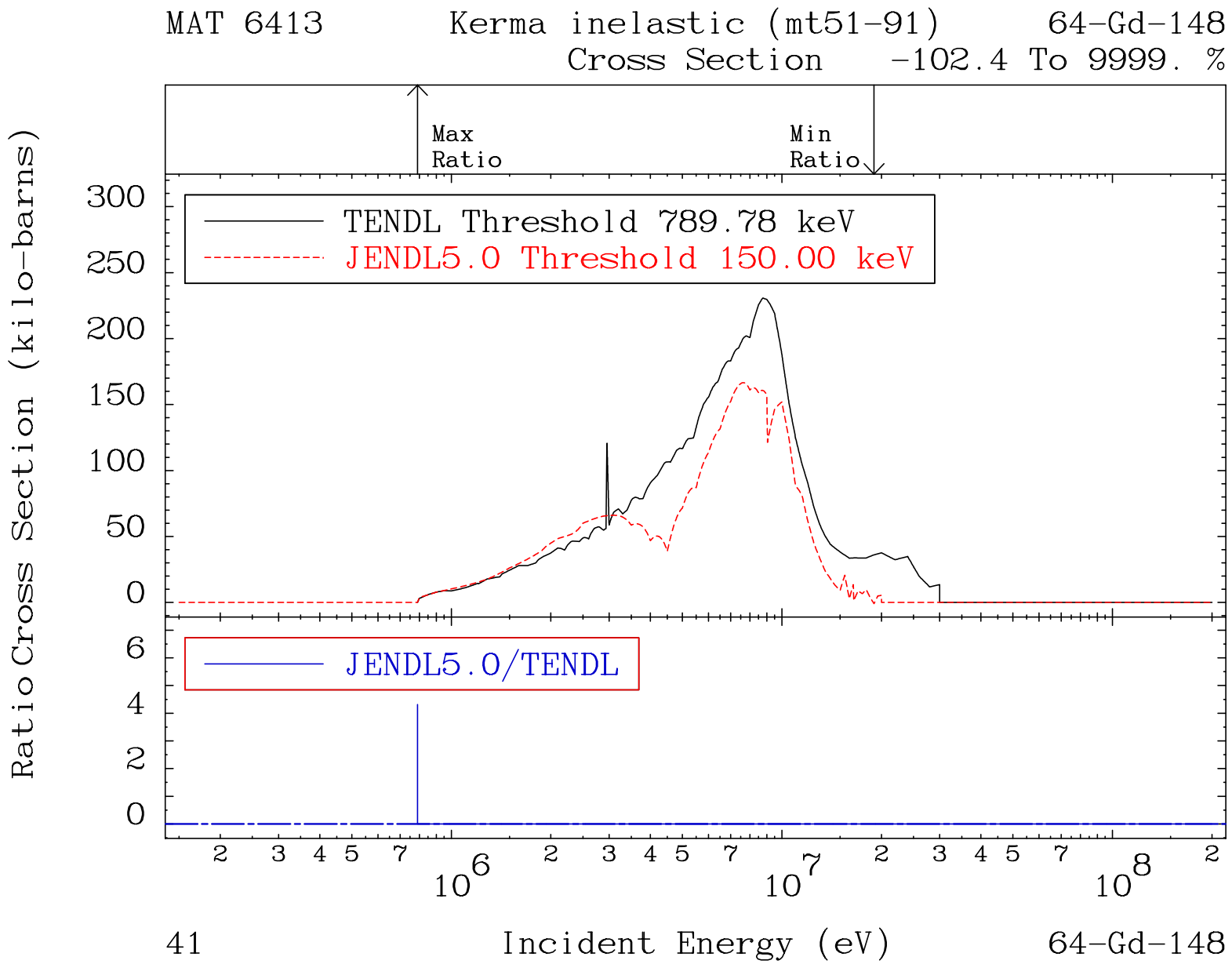

MAT 6413
He-3 Production
Cross Section
64-Gd-148
-97.89 To 9999. %
Max
Ratio
Min
Ratio
TENDL Threshold 2.1475 MeV
JENDL5.0 Threshold 2.1475 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
10^2
10^0
10^-2
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
36
Incident Energy (eV)
64-Gd-148

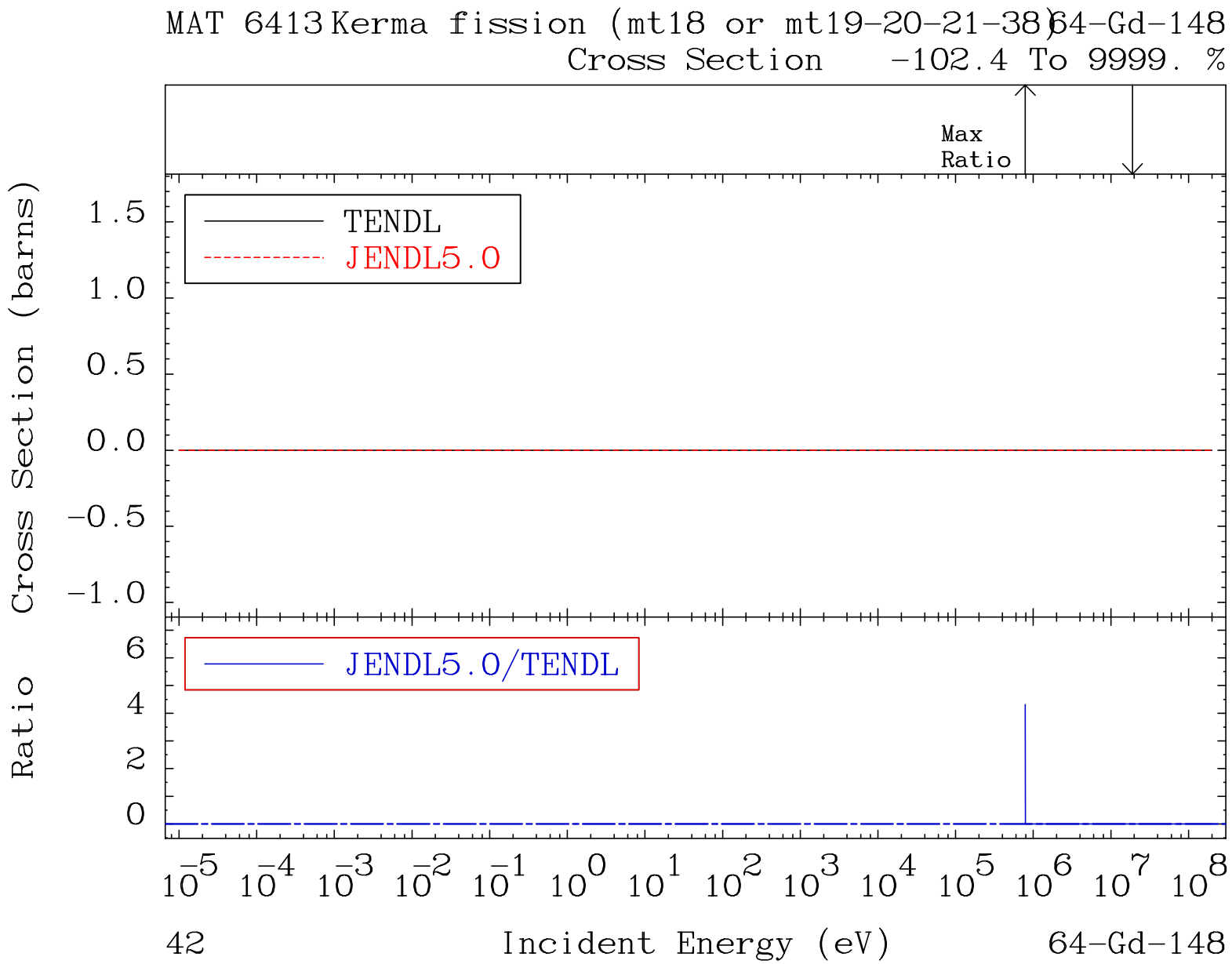

MAT 6413
He-4 Production
Cross Section
64-Gd-148
-65.27 To 119.9 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
37
64-Gd-148

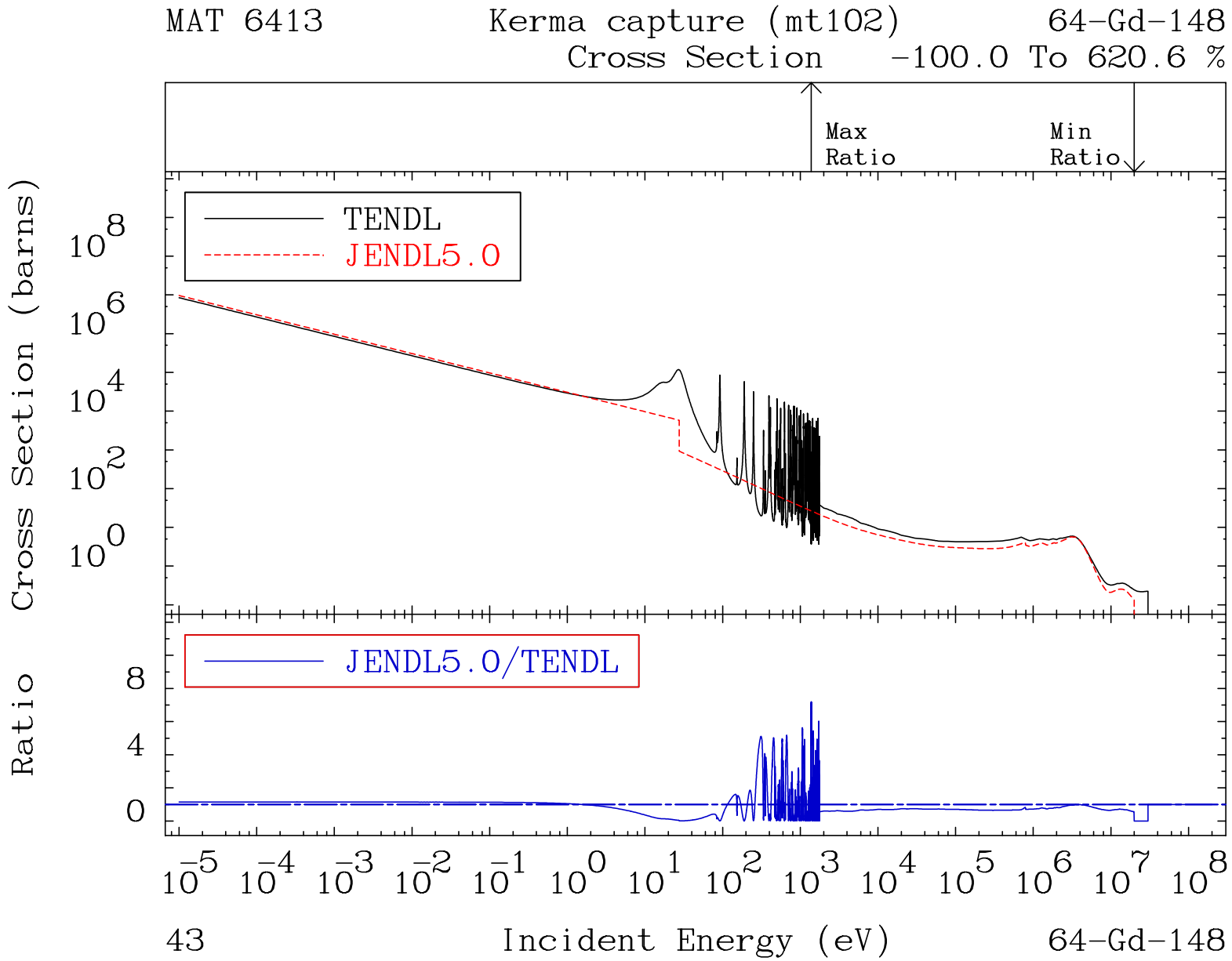

MAT 6413
Kerma total (eV-barns)
64-Gd-148
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Ratio Cross Section (Mega-barns)
300
250
200
150
100
50
0
4
2
0
-2
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
38
Incident Energy (eV)
64-Gd-148

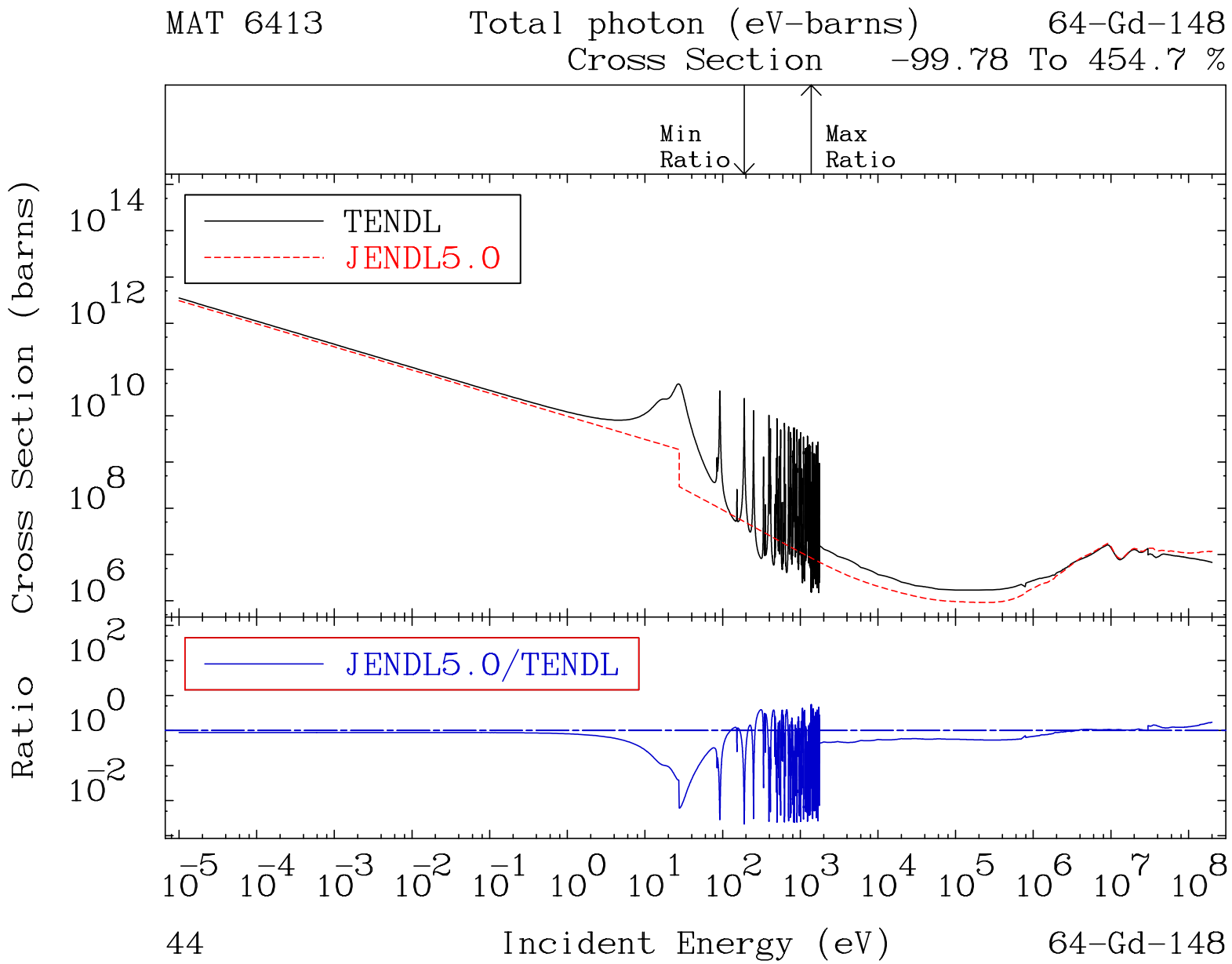

MAT 6413
Kerma elastic
Cross Section
64-Gd-148
-98.91 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
64-Gd-148

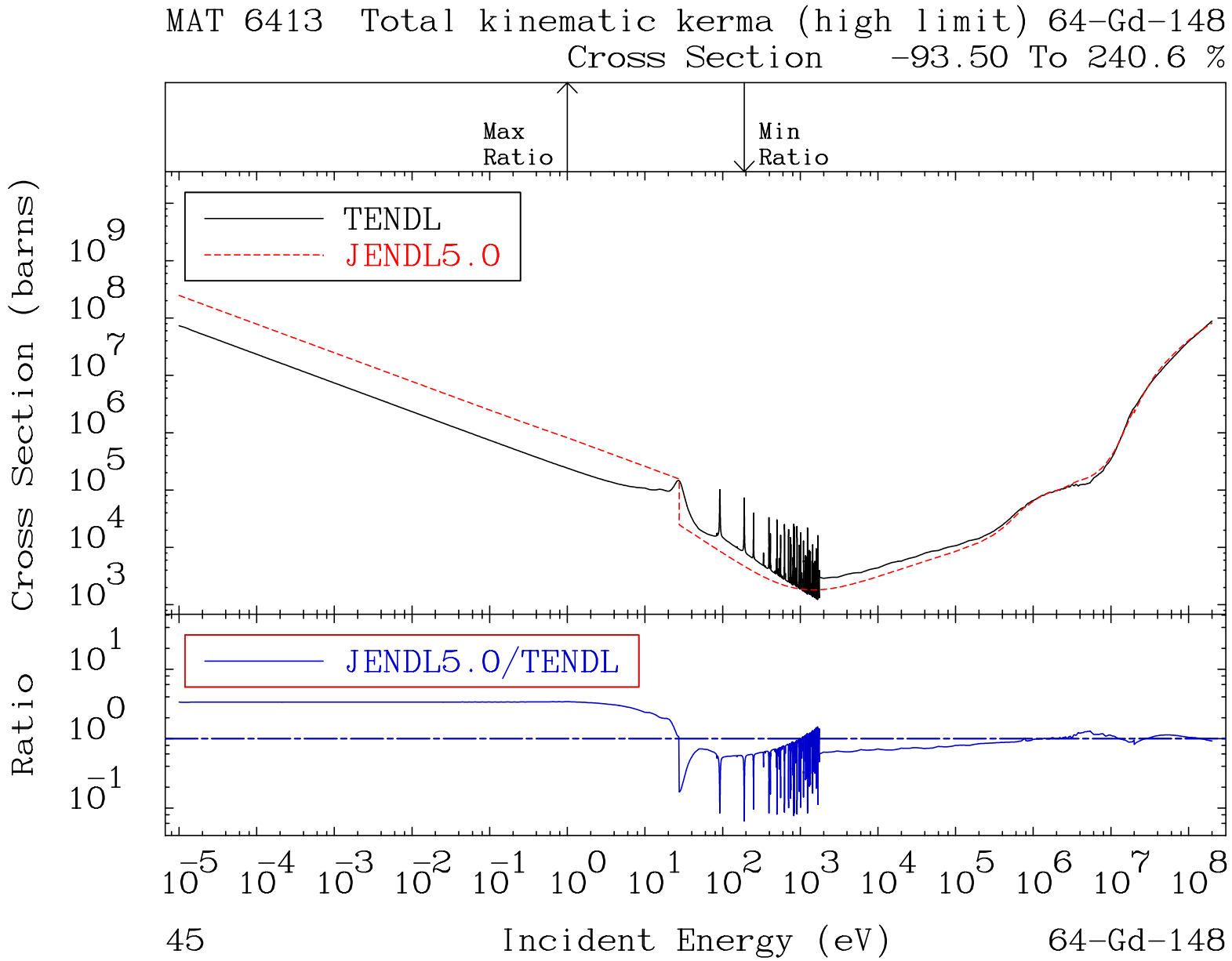

MAT 6413 Kerma non-elastic (all but mt2) 64-Gd-148
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Ratio Cross Section (Mega-barns)
300
250
200
150
100
50
0
4
2
0
-2
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
40
Incident Energy (eV)
64-Gd-148

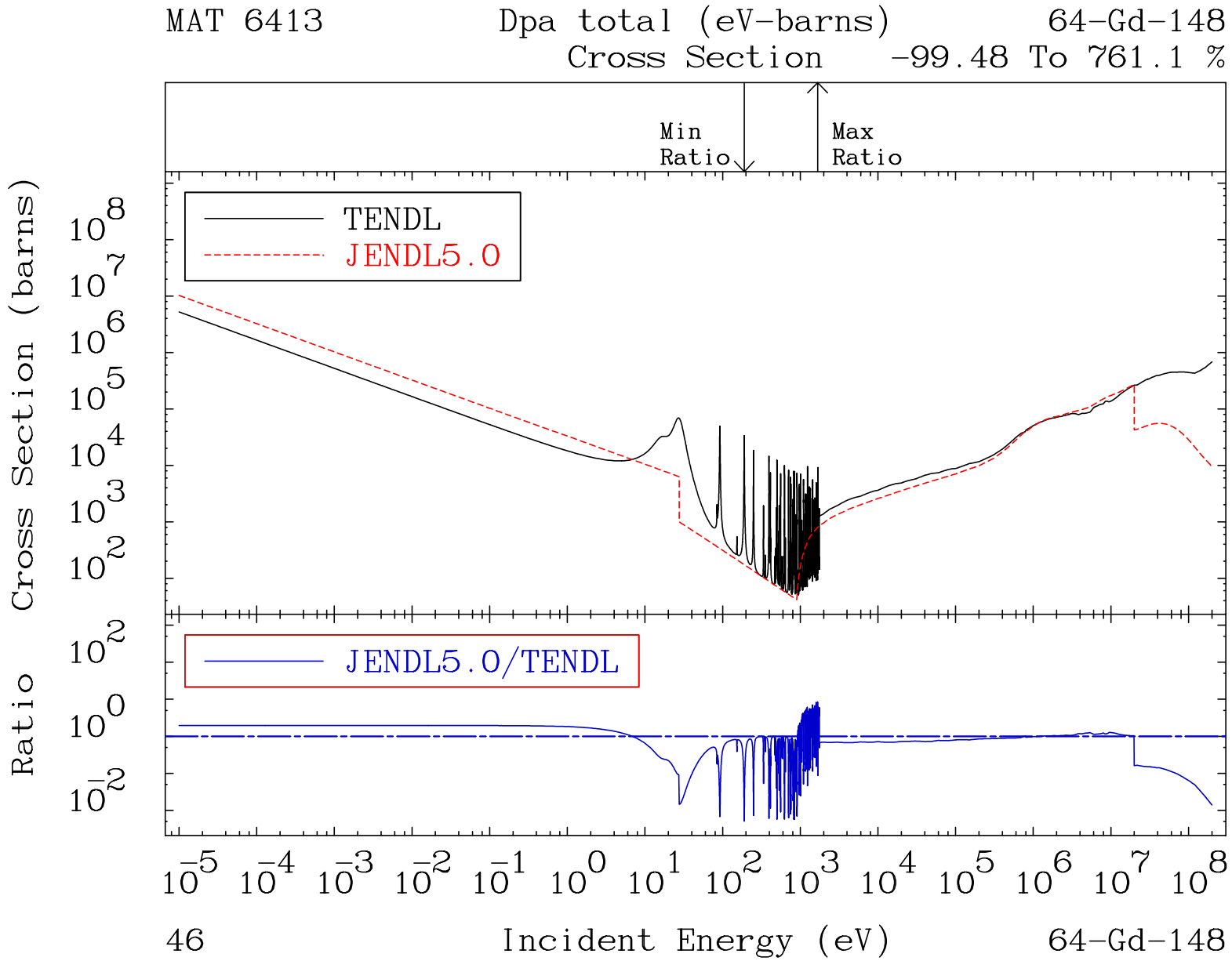

MAT 6413
Kerma inelastic (mt51-91)
64-Gd-148
Cross Section -102.4 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Ratio Cross Section (kilo-barns)
Incident Energy (eV)
41
64-Gd-148

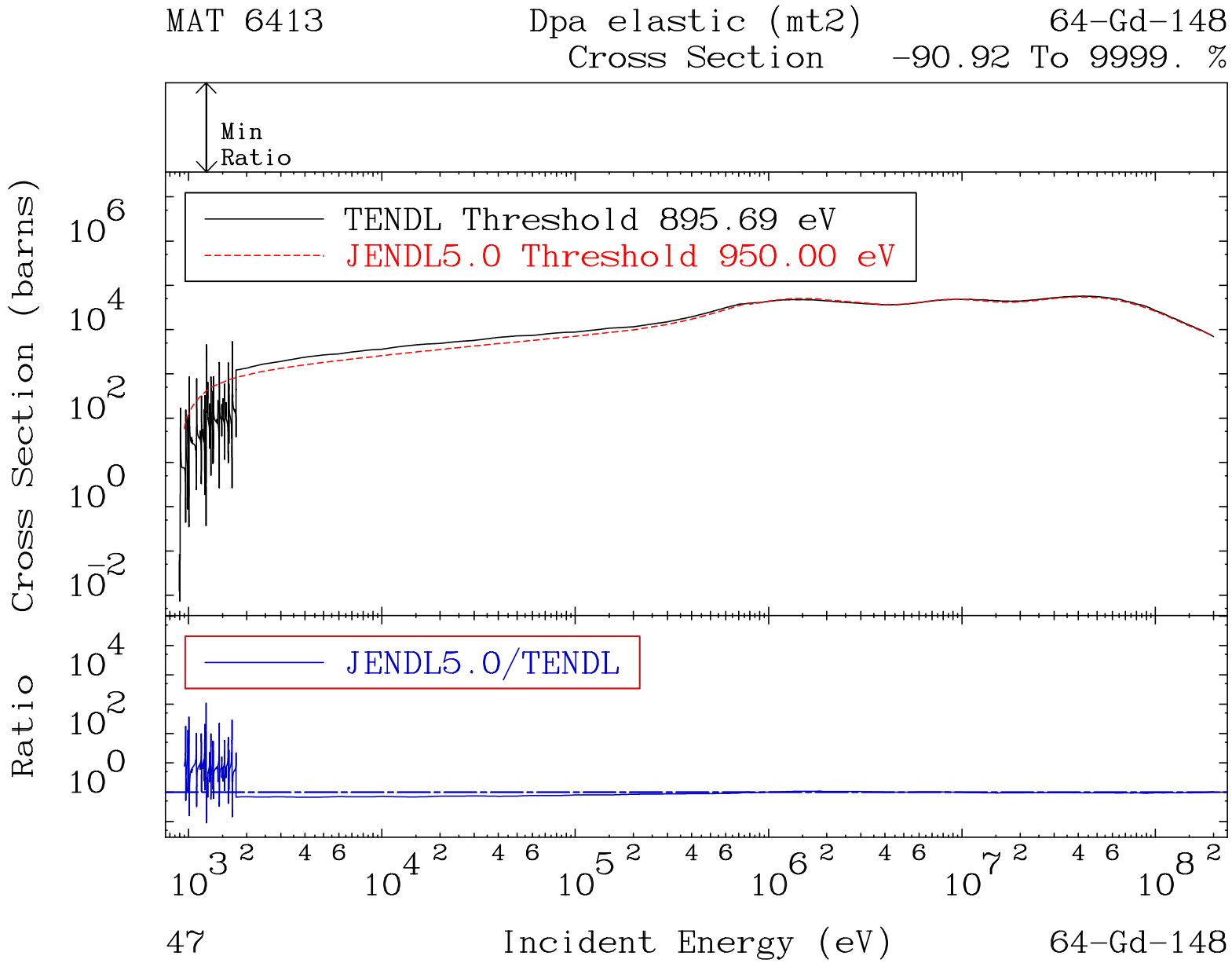

MAT 6413 Kerma fission (mt18 or mt19-20-21-38) 64-Gd-148
Cross Section -102.4 To 9999. %
Max
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
6
4
2
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
42
Incident Energy (eV)
64-Gd-148

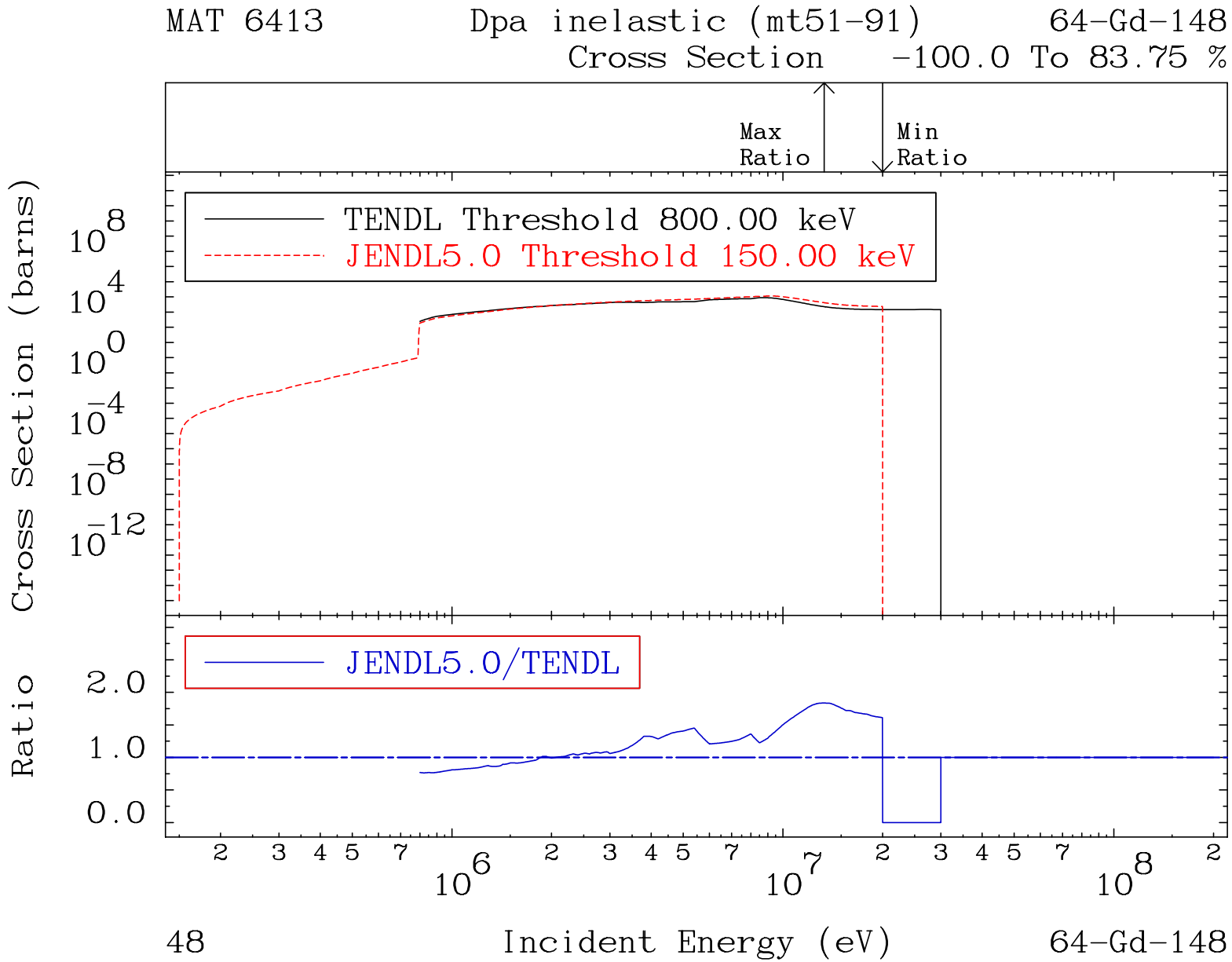

MAT 6413
Kerma capture (mt102)
64-Gd-148
Cross Section -100.0 To 620.6 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
43
64-Gd-148

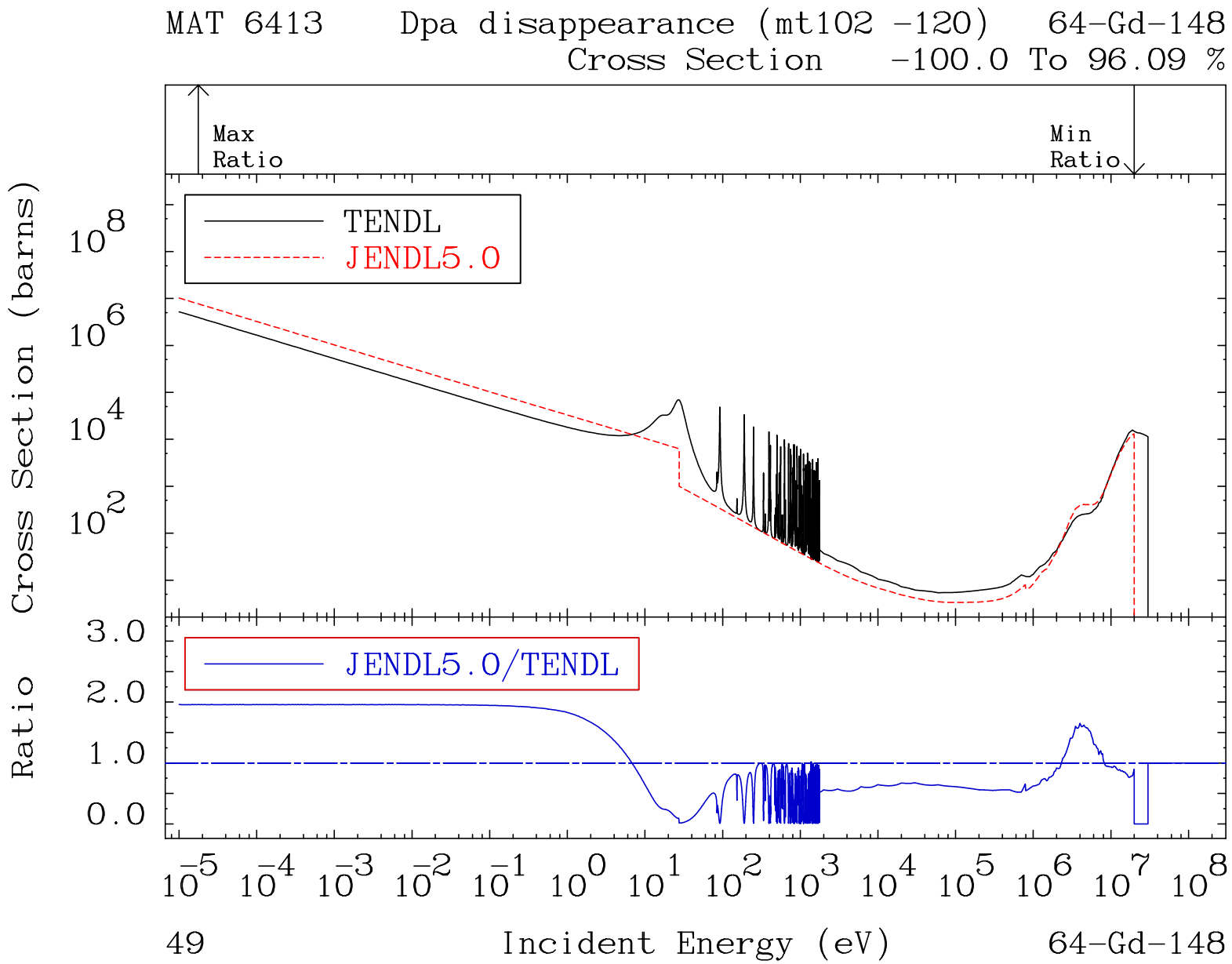

MAT 6413
Total photon (eV-barns)
64-Gd-148
Cross Section -99.78 To 454.7 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
64-Gd-148

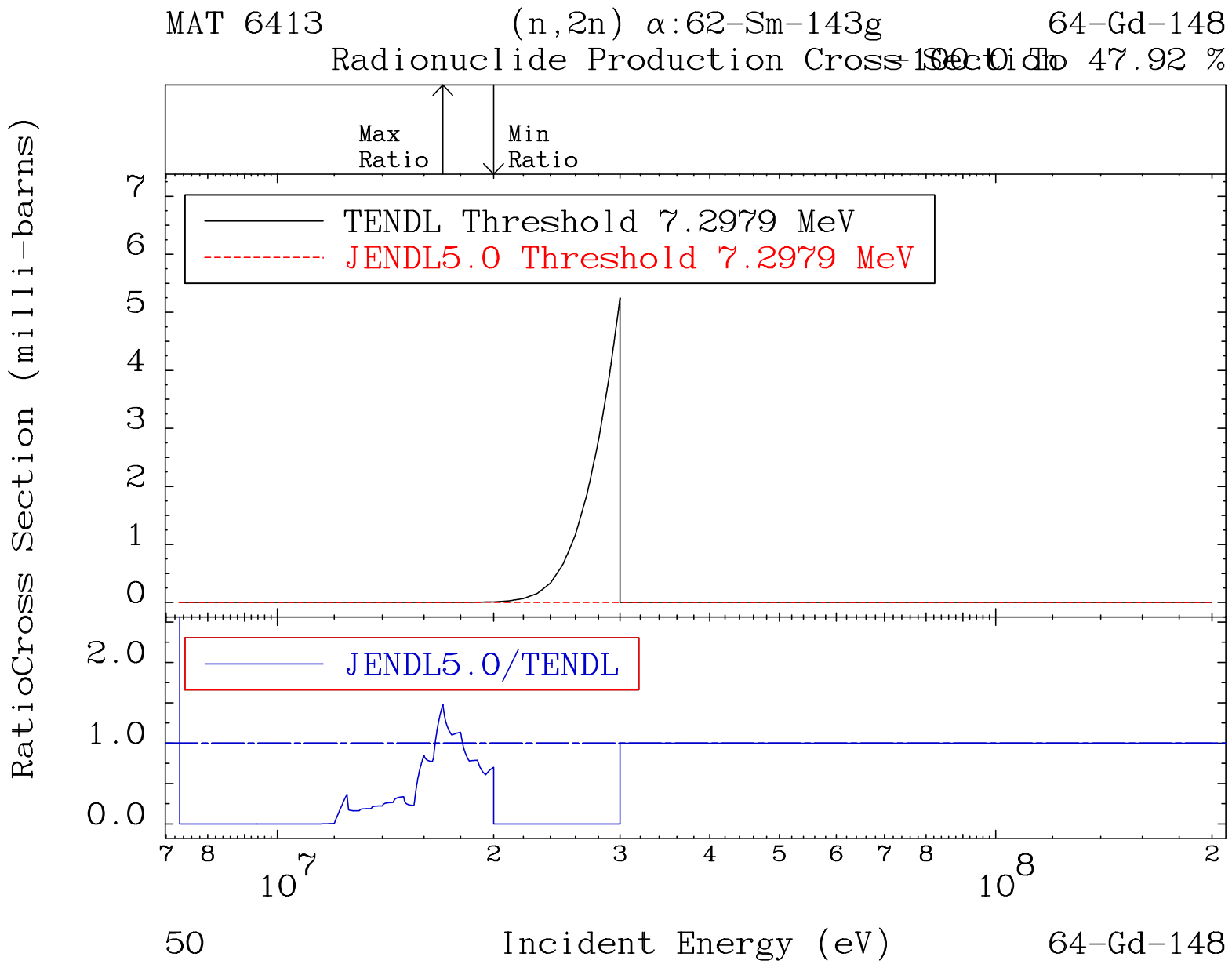

MAT 6413 Total kinematic kerma (high limit) 64-Gd-148
Cross Section -93.50 To 240.6 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
64-Gd-148

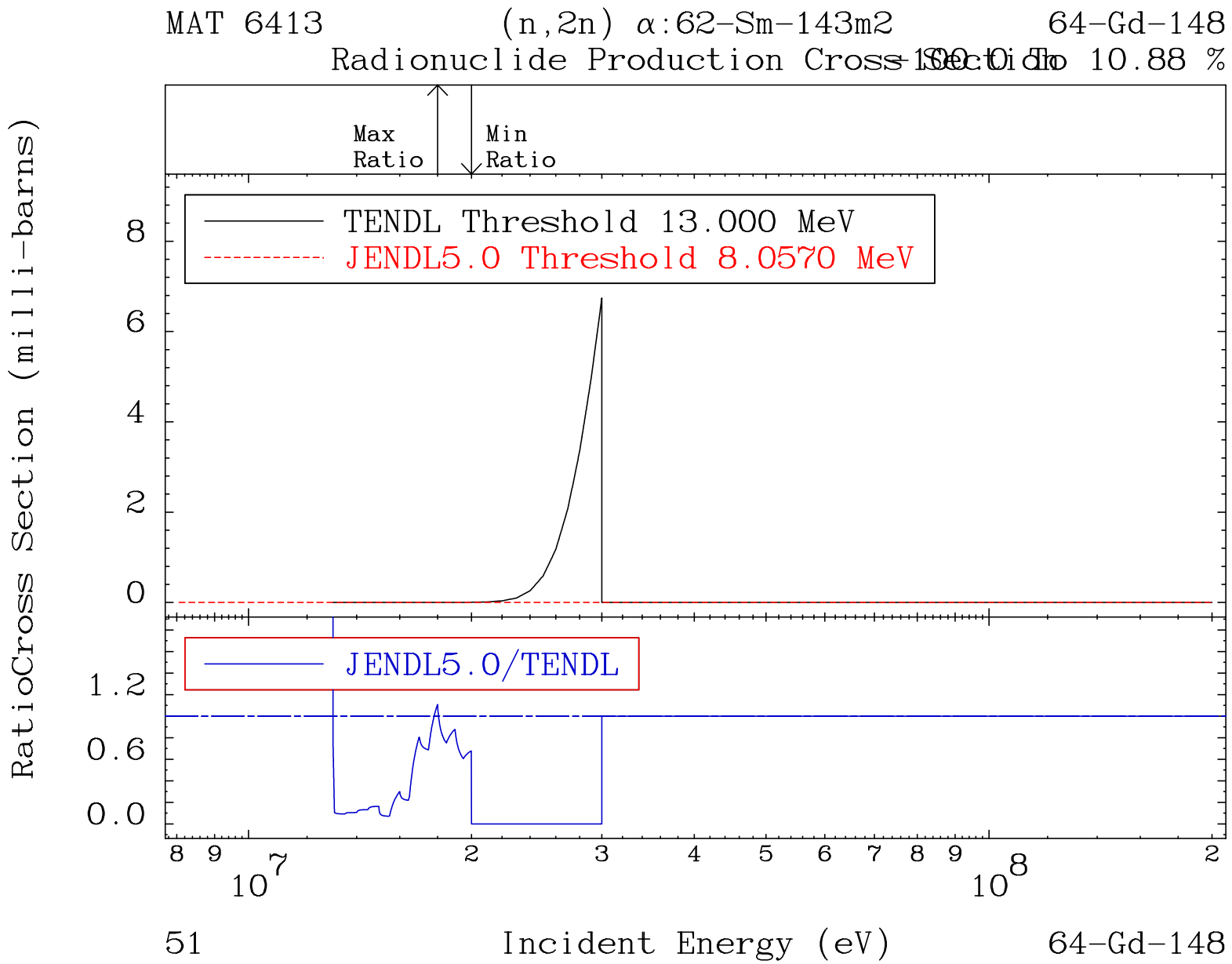

MAT 6413
Dpa total (eV-barns)
64-Gd-148
Cross Section -99.48 To 761.1 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
46
64-Gd-148

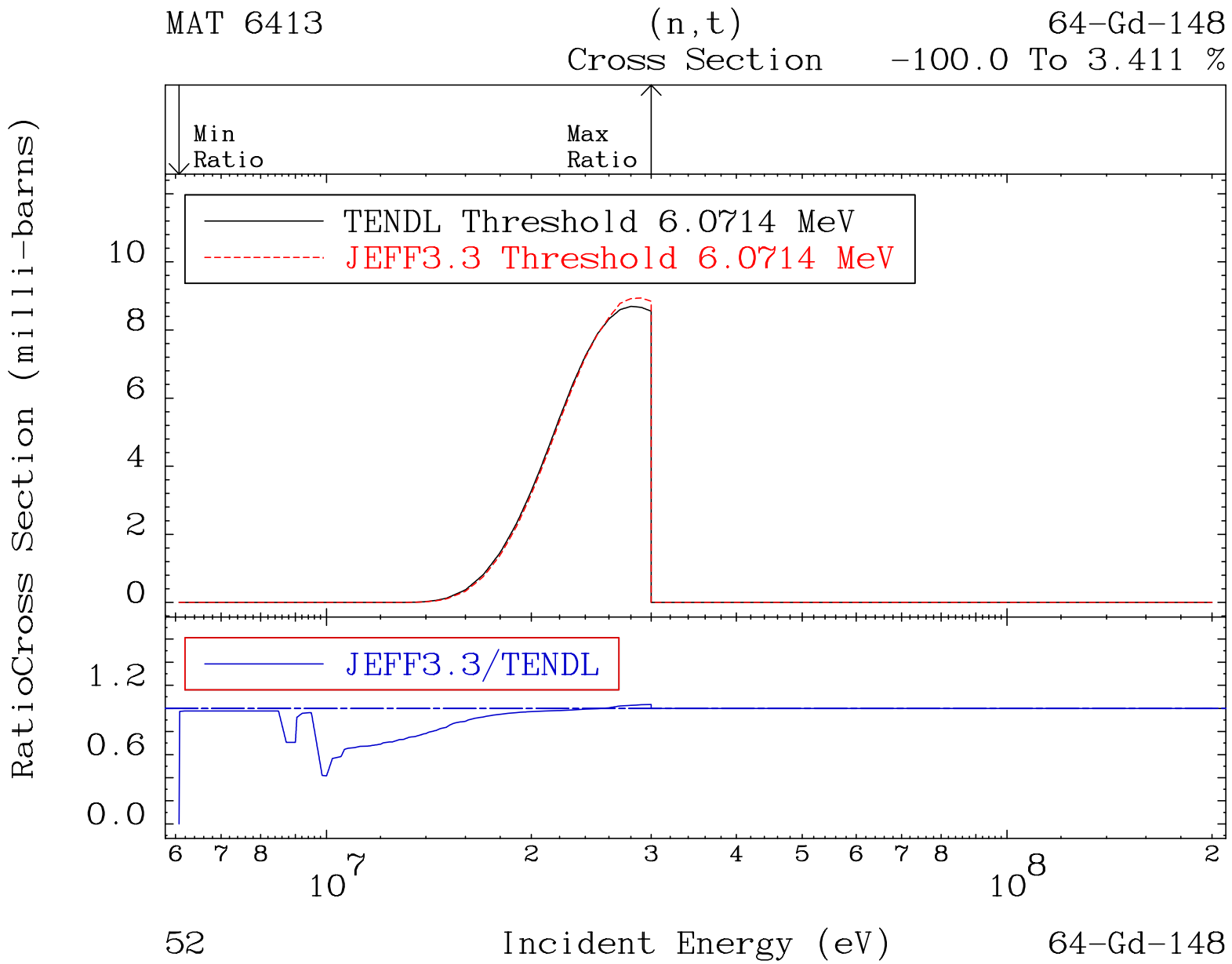

MAT 6413
Dpa elastic (mt2)
Cross Section
64-Gd-148
-90.92 To 9999. %
Min
Ratio
TENDL Threshold 895.69 eV
JENDL5.0 Threshold 950.00 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
64-Gd-148

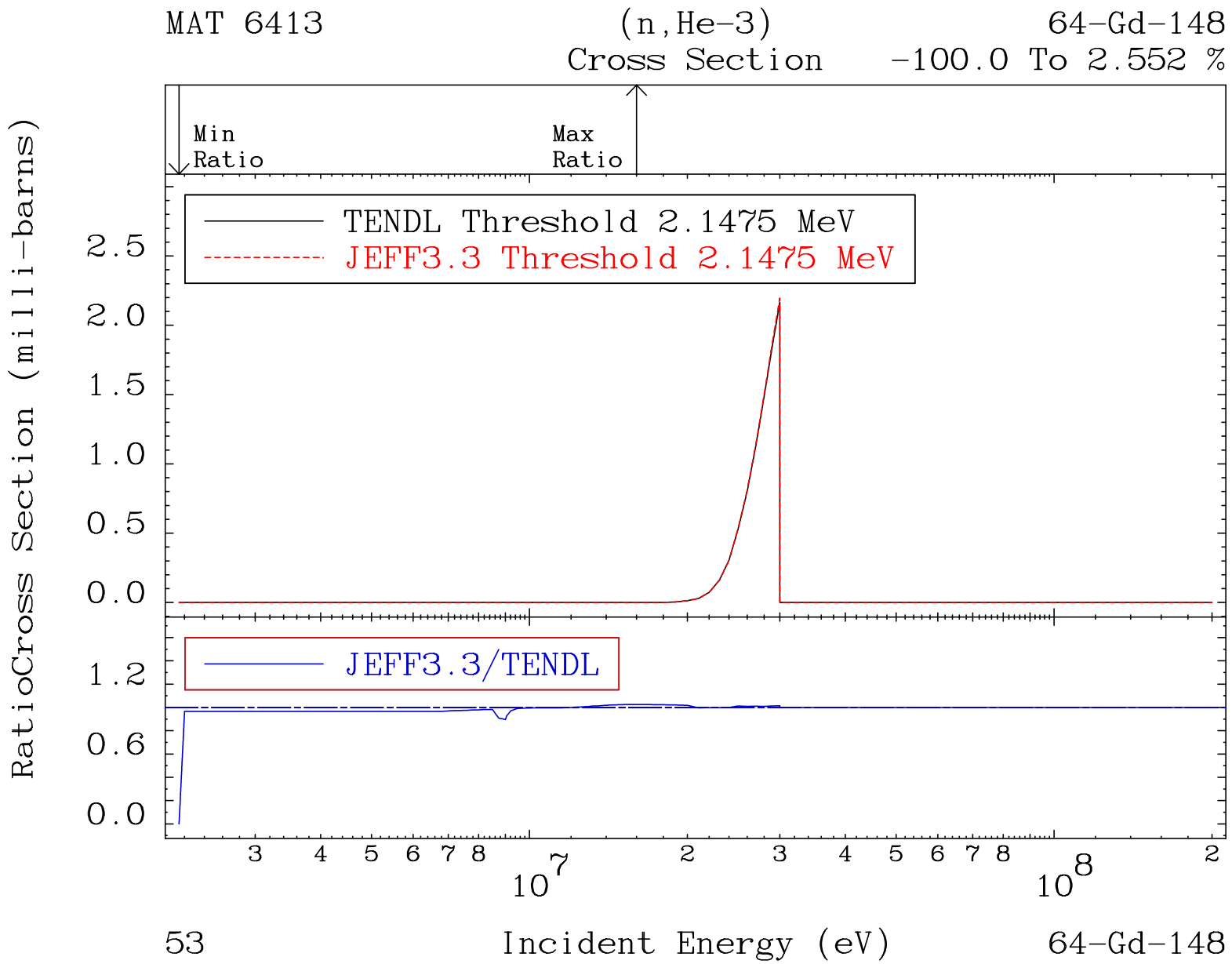

MAT 6413
Dpa inelastic (mt51-91)
64-Gd-148
Cross Section
-100.0 To 83.75 %
Max Ratio
Min Ratio
TENDL Threshold 800.00 keV
JENDL5.0 Threshold 150.00 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
48
64-Gd-148

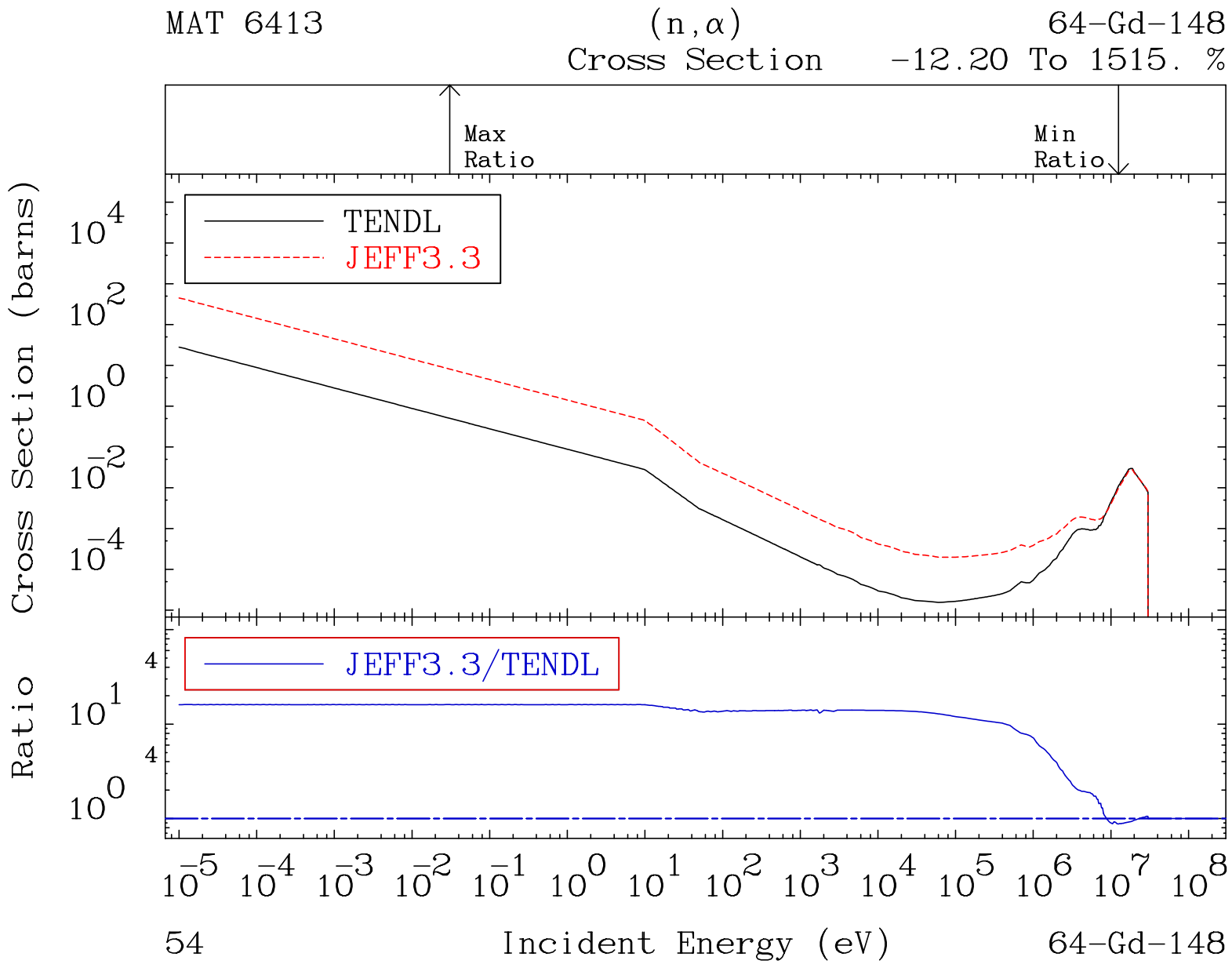

MAT 6413 Dpa disappearance (mt102 -120) 64-Gd-148
Cross Section -100.0 To 96.09 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
49
64-Gd-148

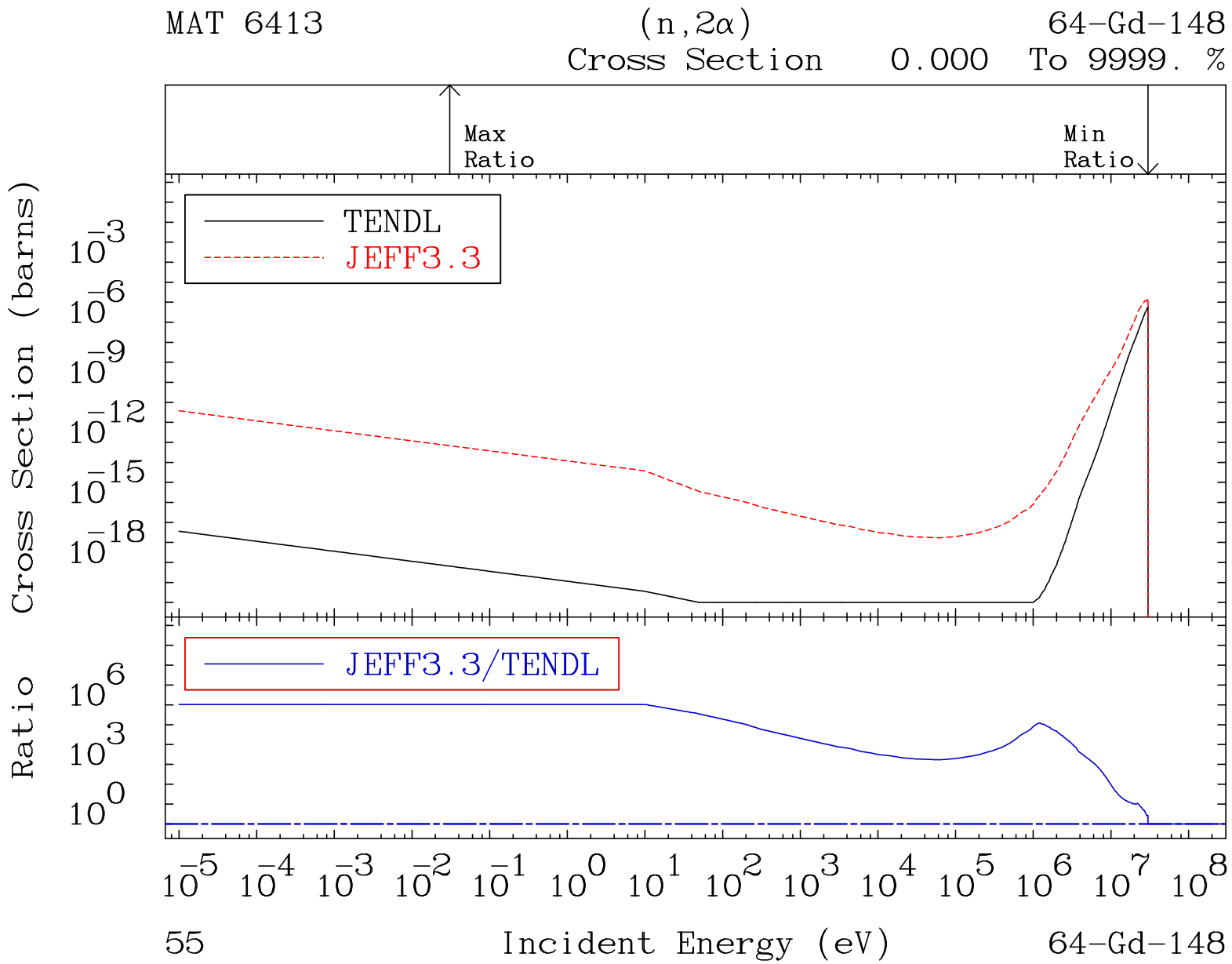

MAT 6413
(n,2n) α:62-Sm-143g
64-Gd-148
Radionuclide Production Cross Section To 47.92 %
Max Ratio
Min Ratio
TENDL Threshold 7.2979 MeV
JENDL5.0 Threshold 7.2979 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
50
64-Gd-148

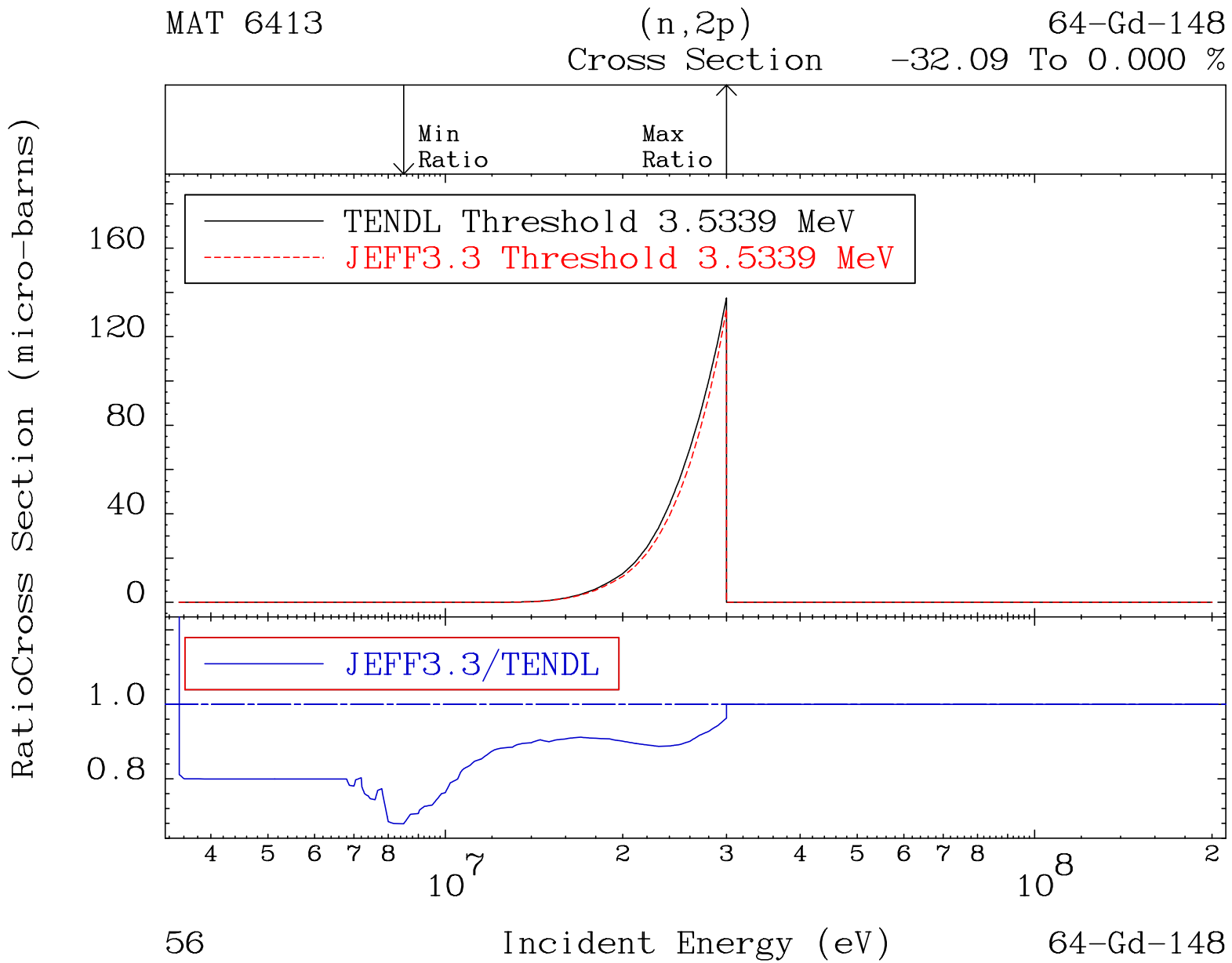

MAT 6413
(n,2n) α:62-Sm-143m2
64-Gd-148
Radionuclide Production Cross Section To 10.88 %
Max Ratio
Min Ratio
TENDL Threshold 13.000 MeV
JENDL5.0 Threshold 8.0570 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
0
2
4
6
8
0.0
0.6
1.2
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
51
Incident Energy (eV)
64-Gd-148

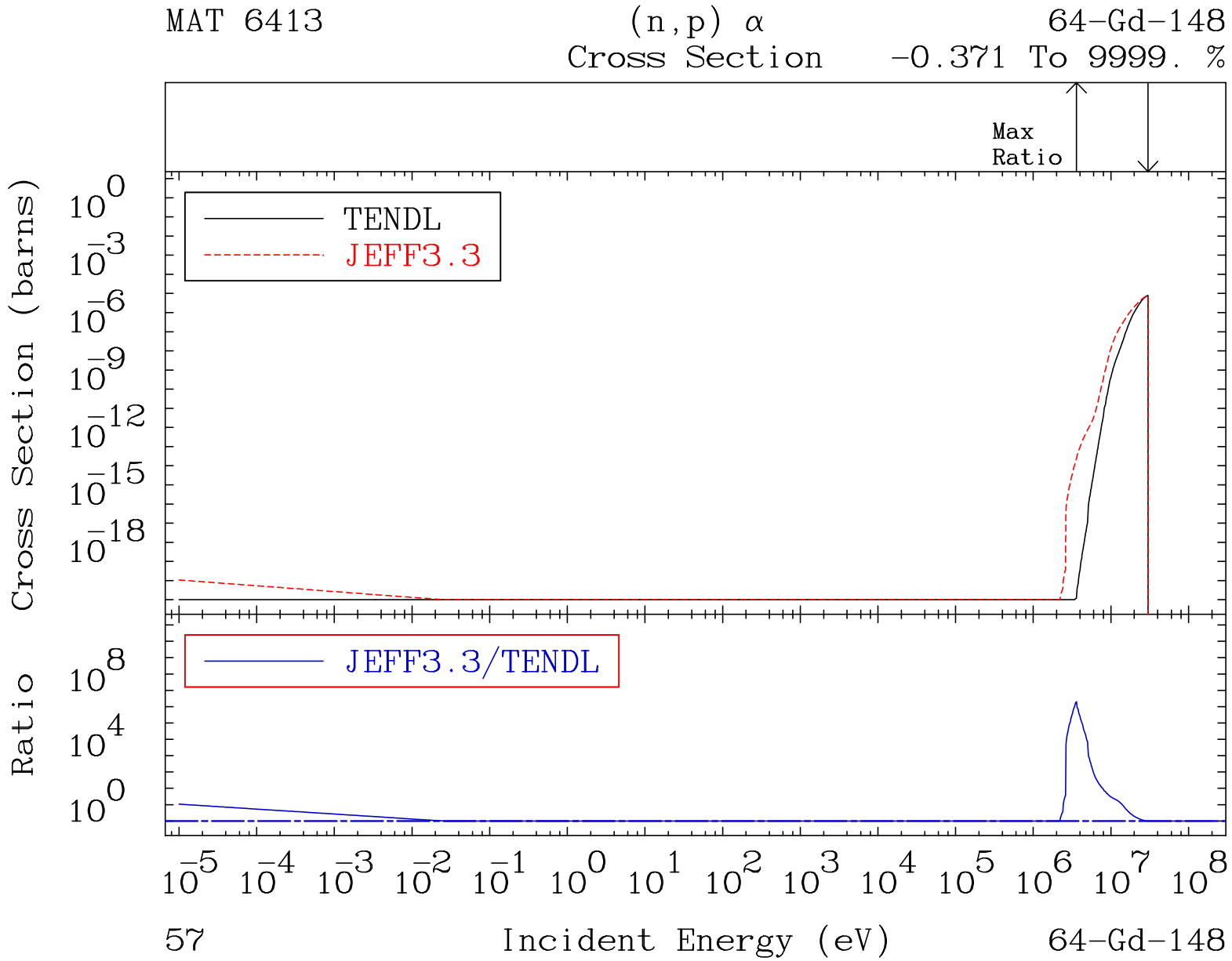

MAT 6413
(n,t)
64-Gd-148
Cross Section
-100.0 To 3.411 %
Min Ratio
Max Ratio
TENDL Threshold 6.0714 MeV
JEFF3.3 Threshold 6.0714 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
1.2
0.6
0.0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
52
Incident Energy (eV)
64-Gd-148

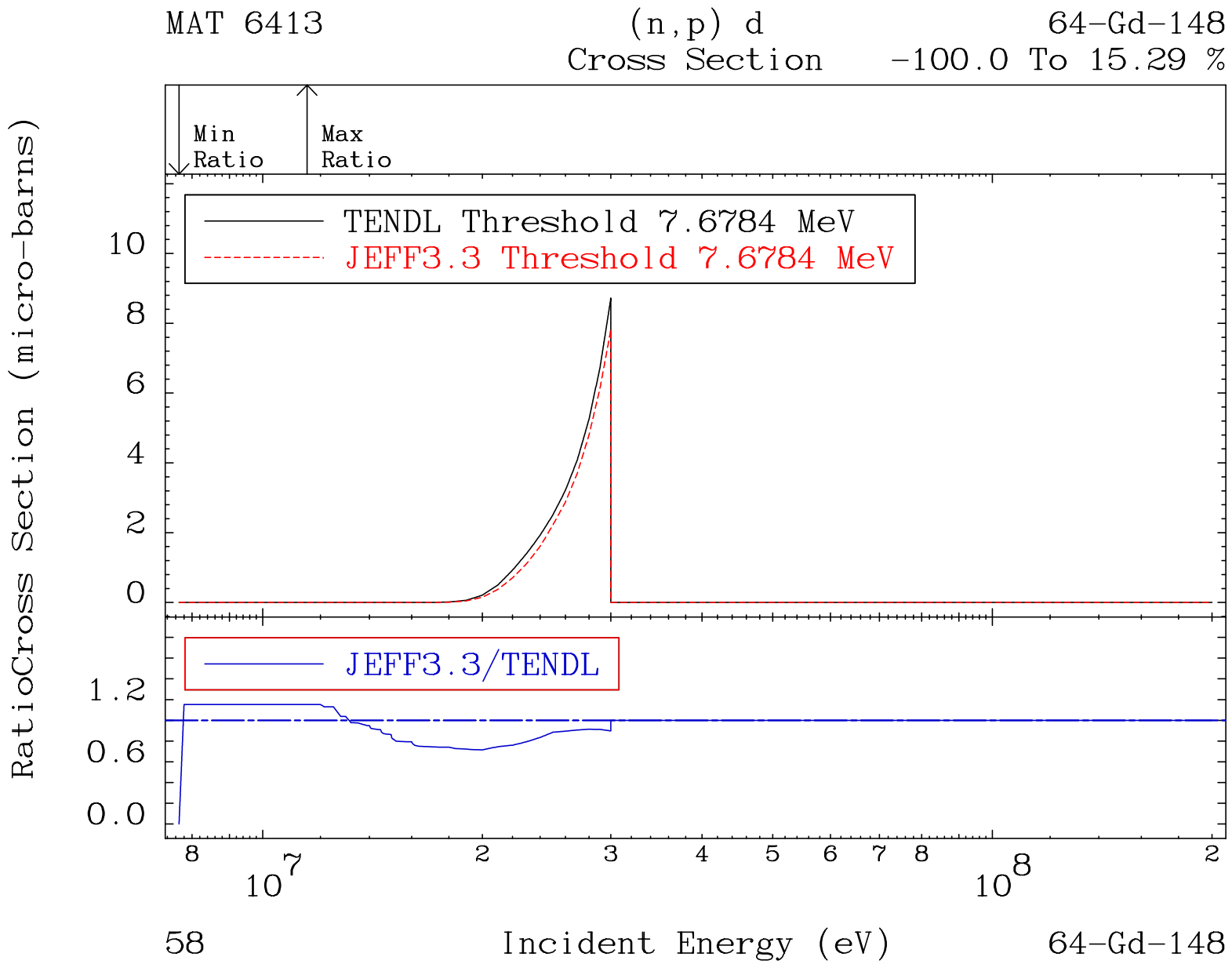

MAT 6413
(n,He-3)
64-Gd-148
Cross Section
-100.0 To 2.552 %
Min Ratio
Max Ratio
TENDL Threshold 2.1475 MeV
JEFF3.3 Threshold 2.1475 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
53
Incident Energy (eV)
64-Gd-148

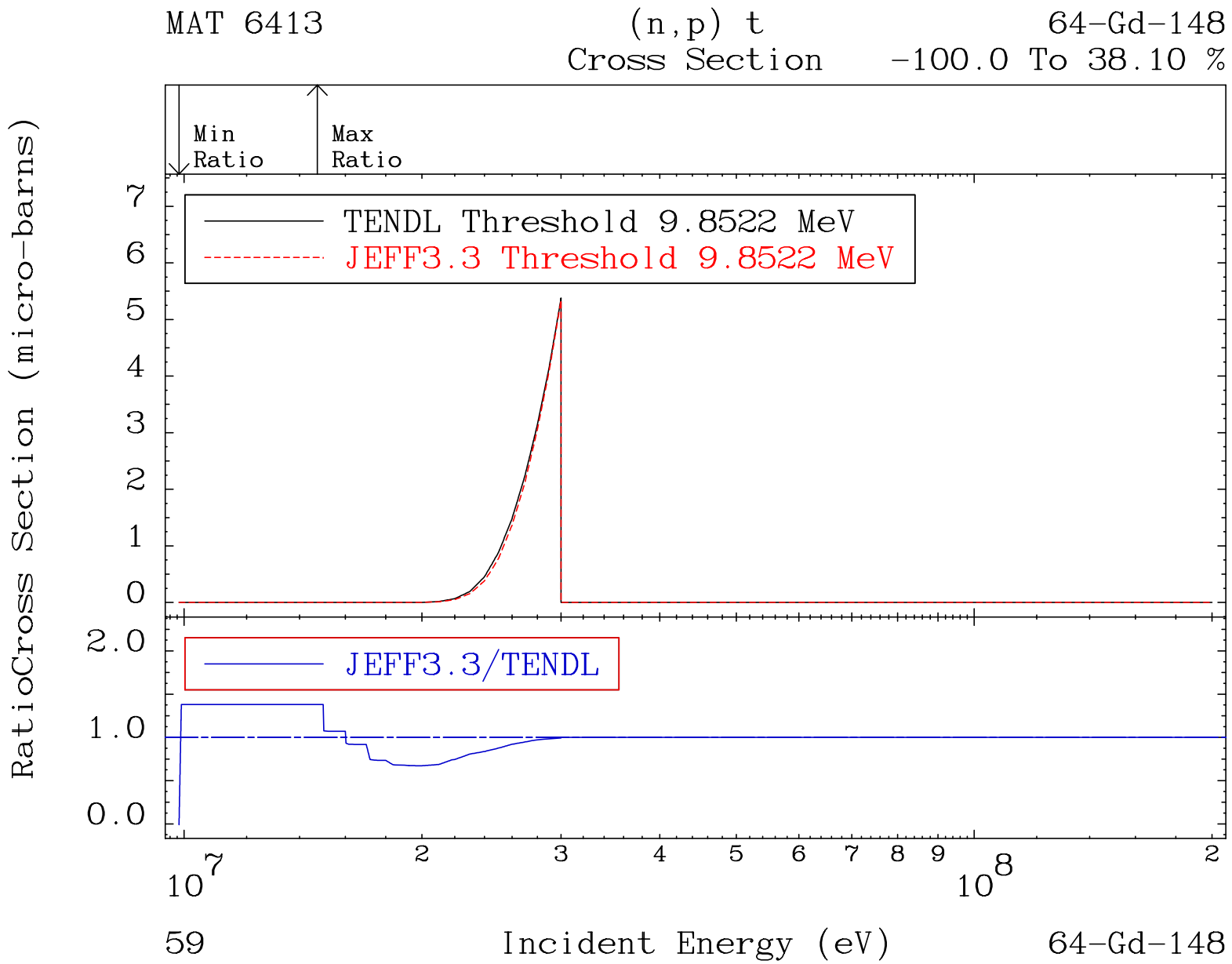

MAT 6413
(n,α)
64-Gd-148
Cross Section
-12.20 To 1515. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
54
64-Gd-148

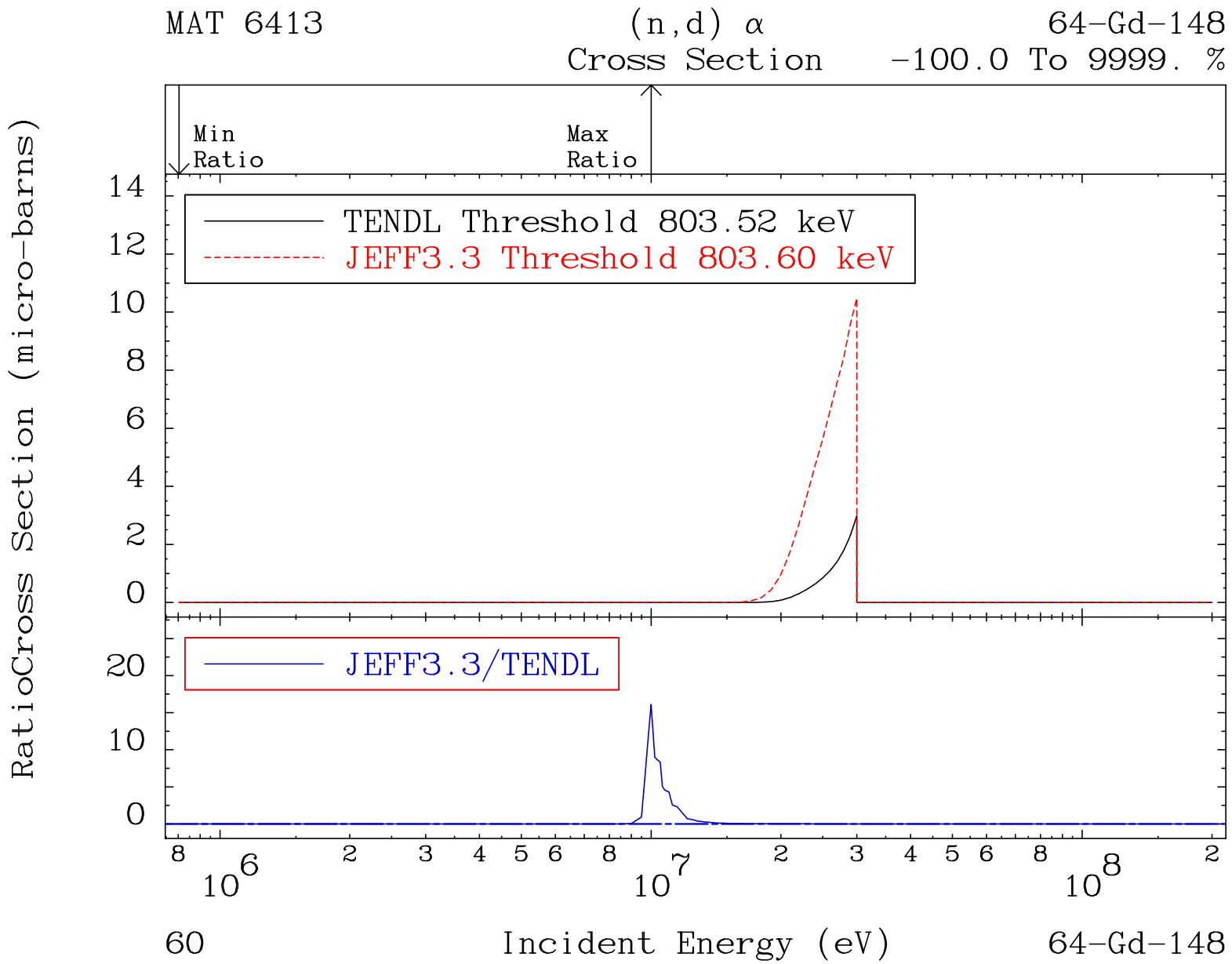

MAT 6413
(n,2α)
64-Gd-148
Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
55
64-Gd-148

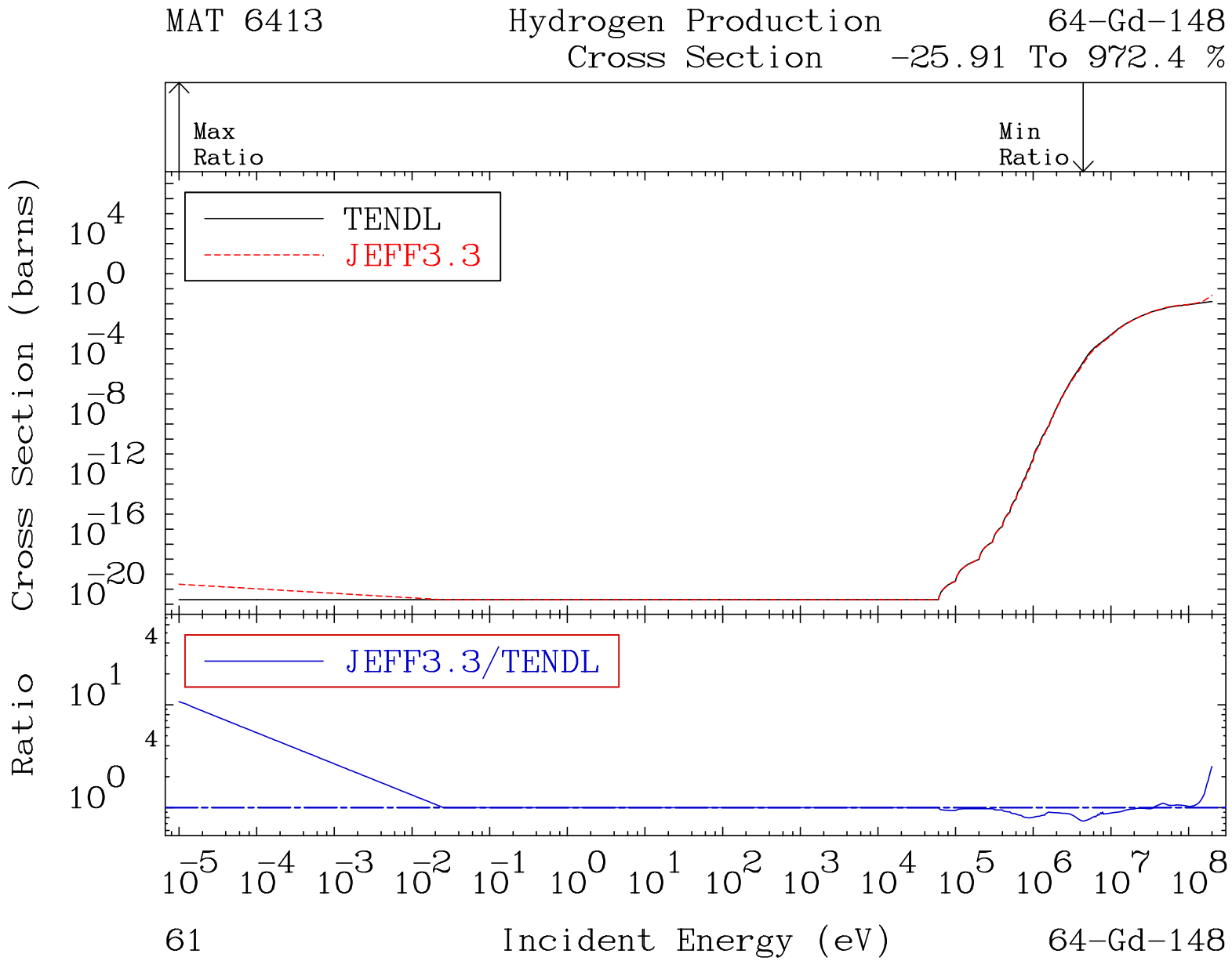

MAT 6413
(n,2p)
Cross Section
64-Gd-148
-32.09 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 3.5339 MeV
JEFF3.3 Threshold 3.5339 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
160
120
80
40
0
1.0
0.8
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
56
Incident Energy (eV)
64-Gd-148

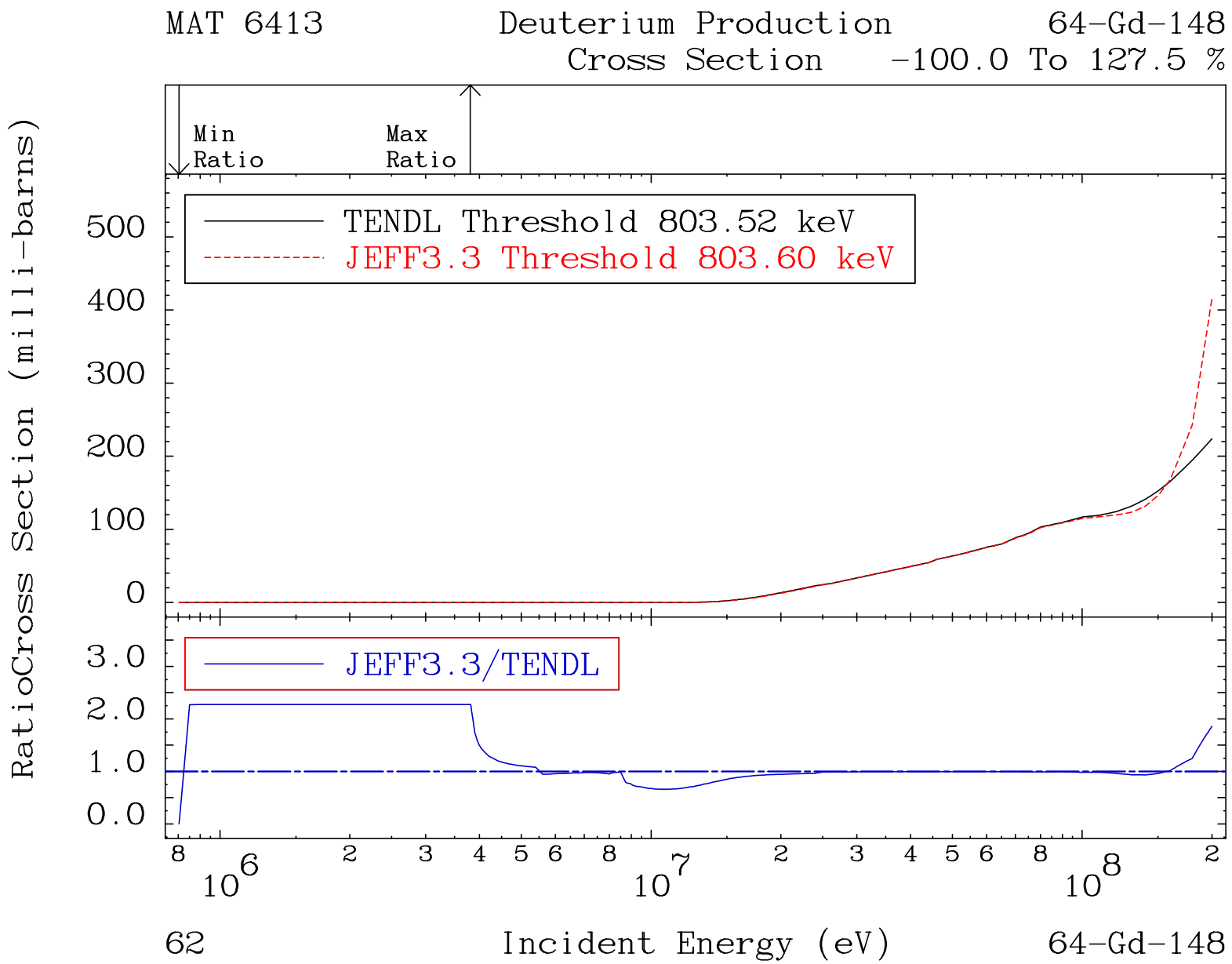

MAT 6413
(n,p) α
64-Gd-148
Cross Section
-0.371 To 9999. %
Max
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
57
64-Gd-148

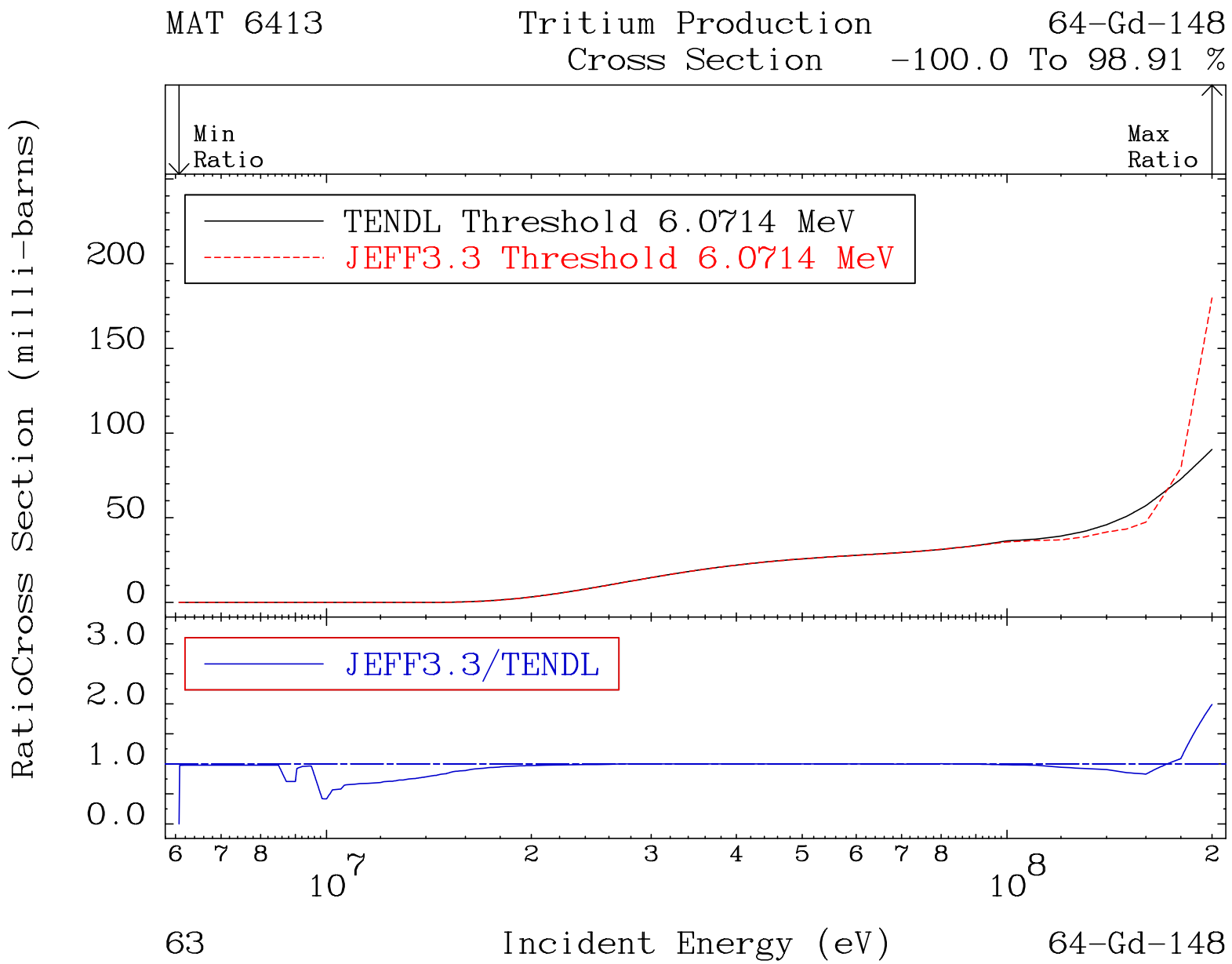

MAT 6413
(n,p) d
Cross Section
64-Gd-148
-100.0 To 15.29 %
Min Ratio
Max Ratio
TENDL Threshold 7.6784 MeV
JEFF3.3 Threshold 7.6784 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
10
8
6
4
2
0
1.2
0.6
0.0
8
10^7
2
3
4
5
6
7
8
10^8
2
58
Incident Energy (eV)
64-Gd-148

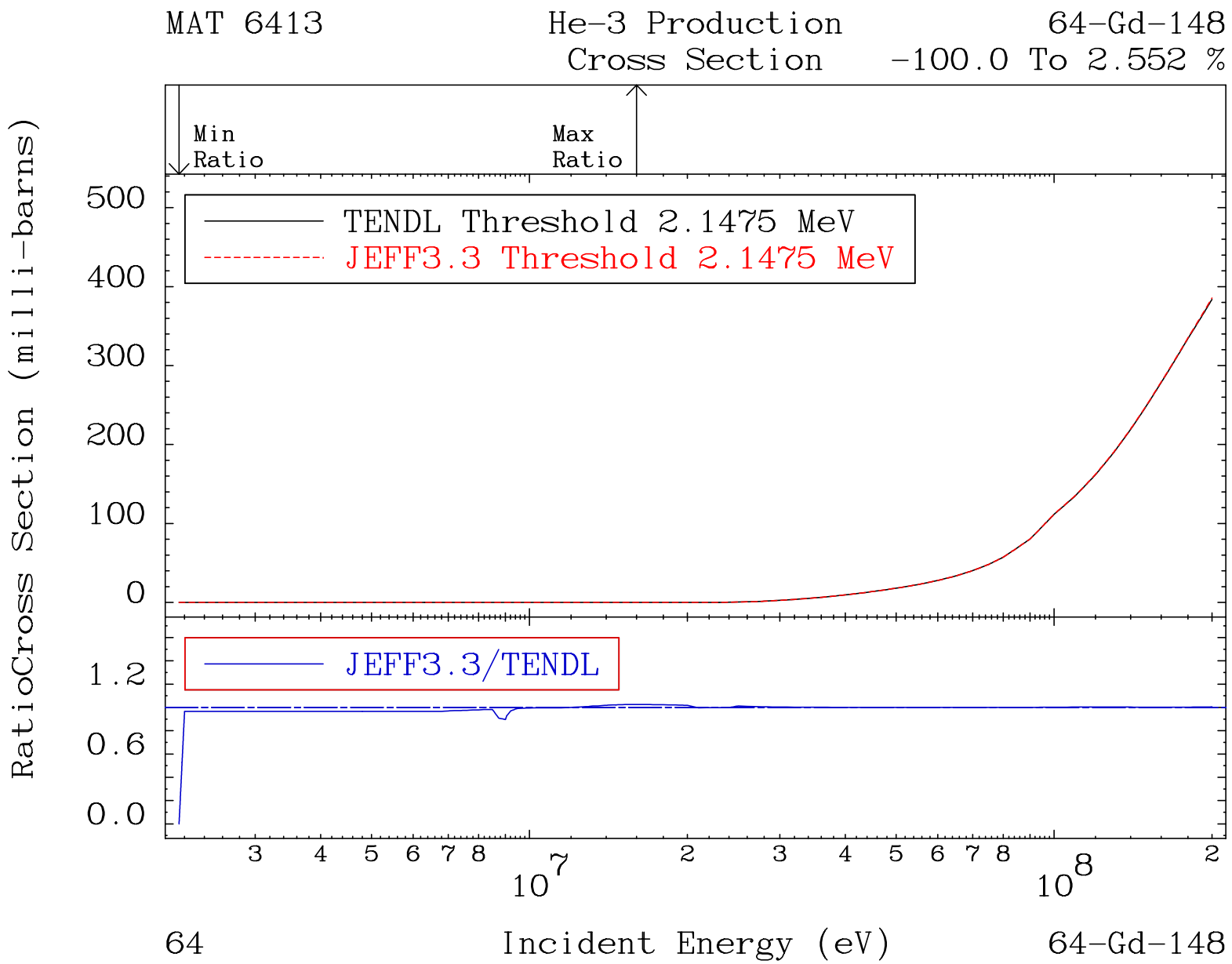

MAT 6413
(n,p) t
Cross Section
64-Gd-148
-100.0 To 38.10 %
Min Ratio
Max Ratio
TENDL Threshold 9.8522 MeV
JEFF3.3 Threshold 9.8522 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
59
64-Gd-148

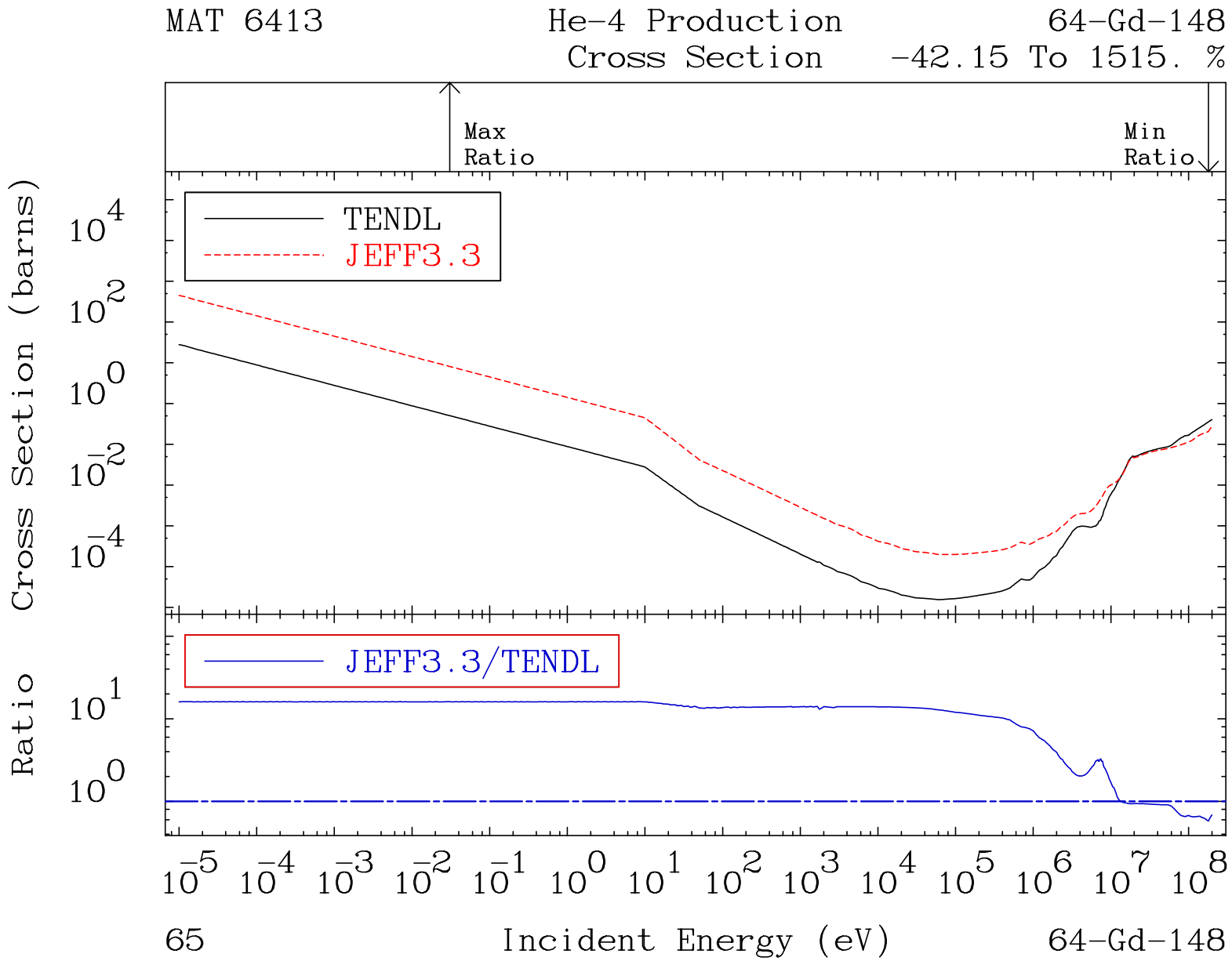

MAT 6413
(n,d) α
64-Gd-148
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 803.52 keV
JEFF3.3 Threshold 803.60 keV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
60
64-Gd-148

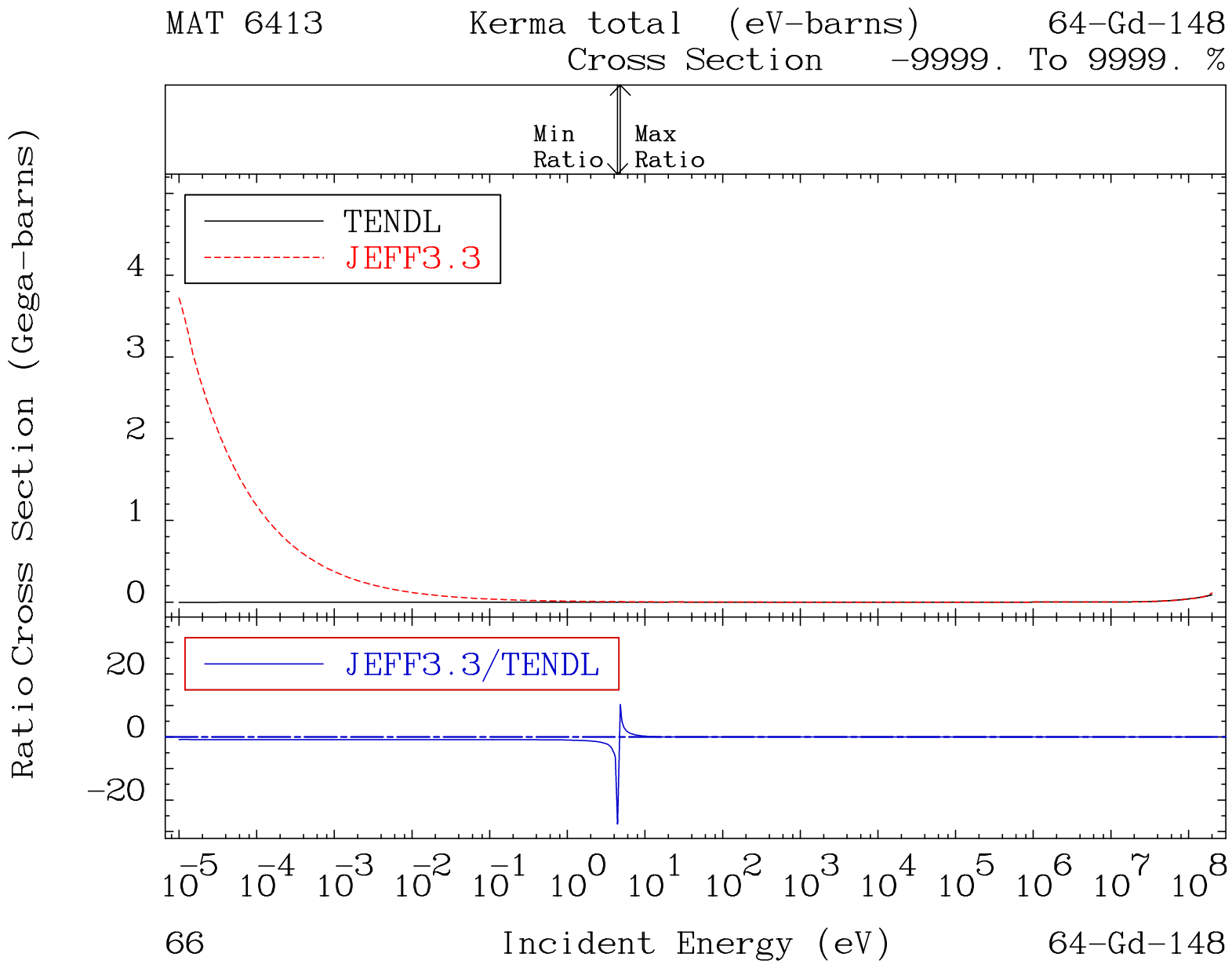

MAT 6413
Hydrogen Production
64-Gd-148
Cross Section
-25.91 To 972.4 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
61
64-Gd-148

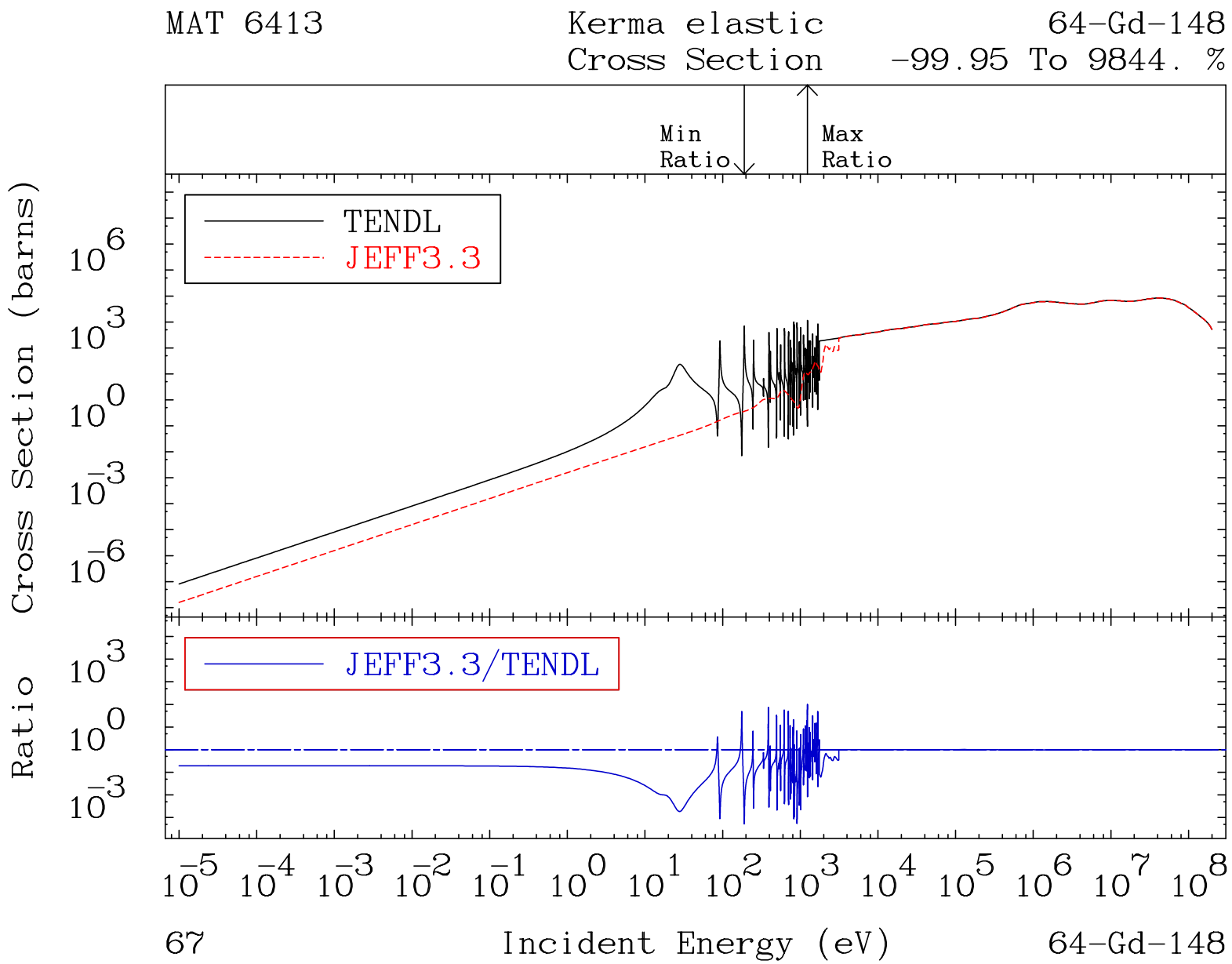

MAT 6413
Deuterium Production
64-Gd-148
Cross Section
-100.0 To 127.5 %
Min Ratio
Max Ratio
TENDL Threshold 803.52 keV
JEFF3.3 Threshold 803.60 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
3.0
2.0
1.0
0.0
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
62
Incident Energy (eV)
64-Gd-148

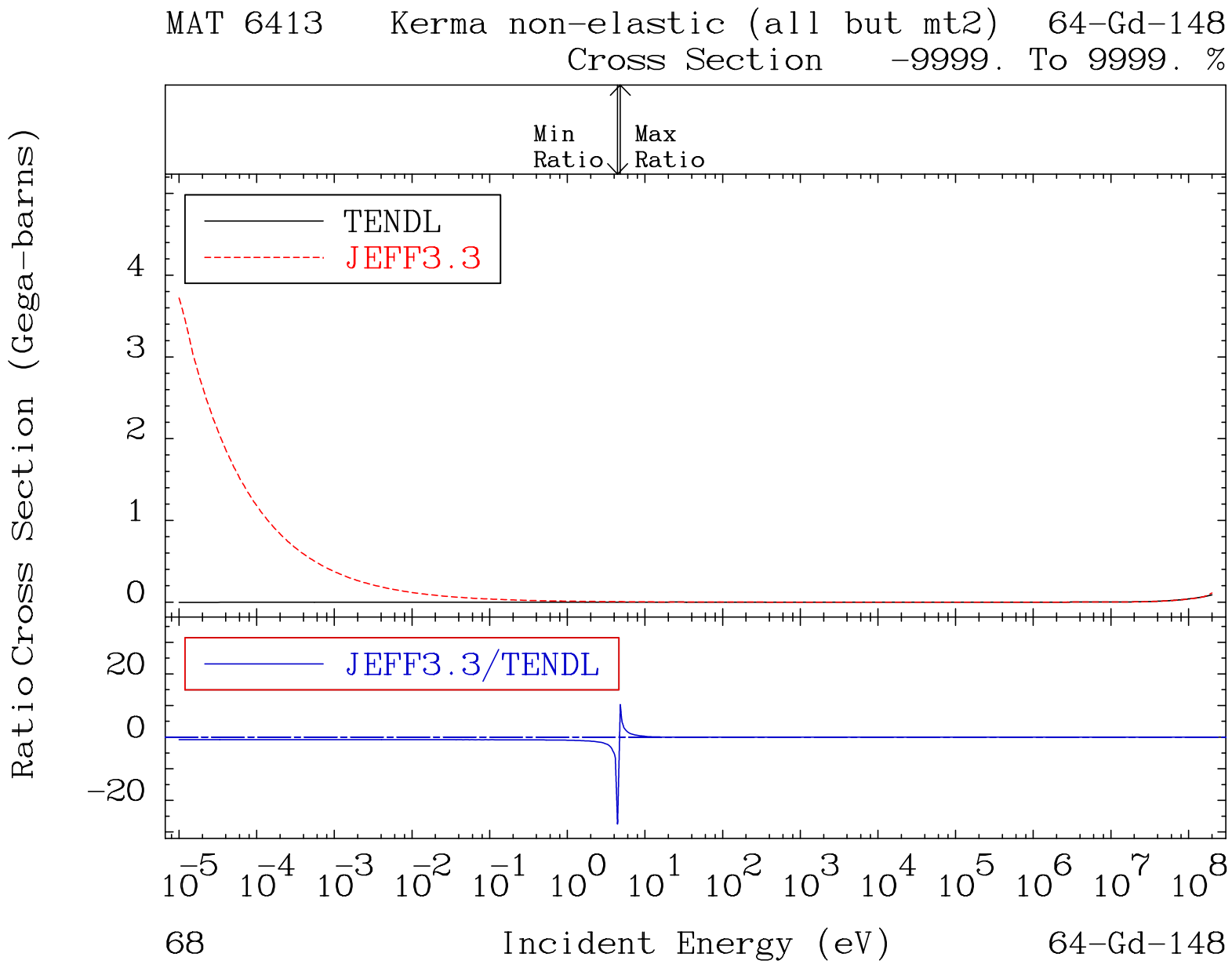

MAT 6413
Tritium Production
Cross Section
64-Gd-148
-100.0 To 98.91 %
Min Ratio
Max Ratio
TENDL Threshold 6.0714 MeV
JEFF3.3 Threshold 6.0714 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
3.0
2.0
1.0
0.0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
63
Incident Energy (eV)
64-Gd-148

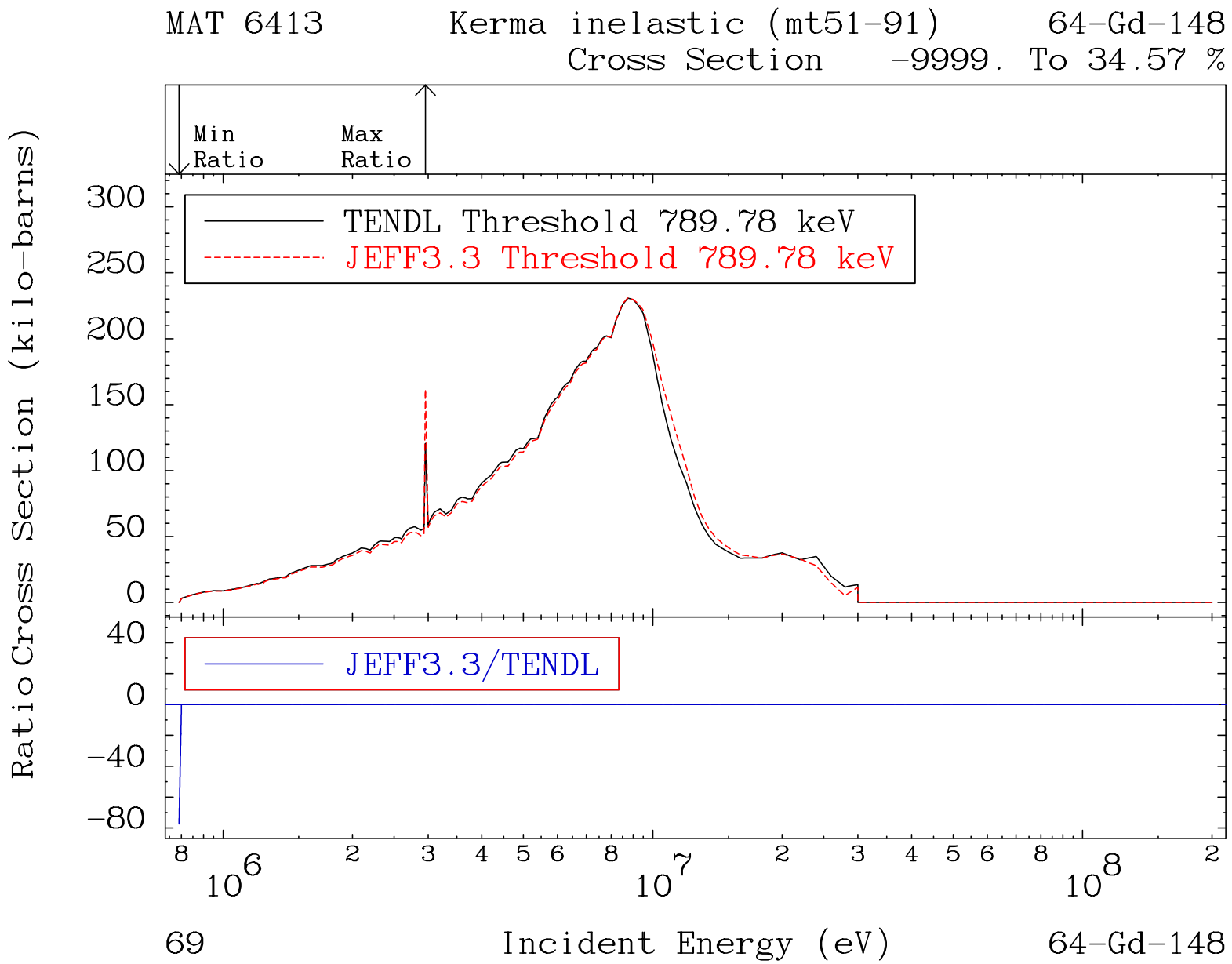

MAT 6413
He-3 Production
Cross Section
64-Gd-148
-100.0 To 2.552 %
Min Ratio
Max Ratio
TENDL Threshold 2.1475 MeV
JEFF3.3 Threshold 2.1475 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
1.2
0.6
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
64
Incident Energy (eV)
64-Gd-148

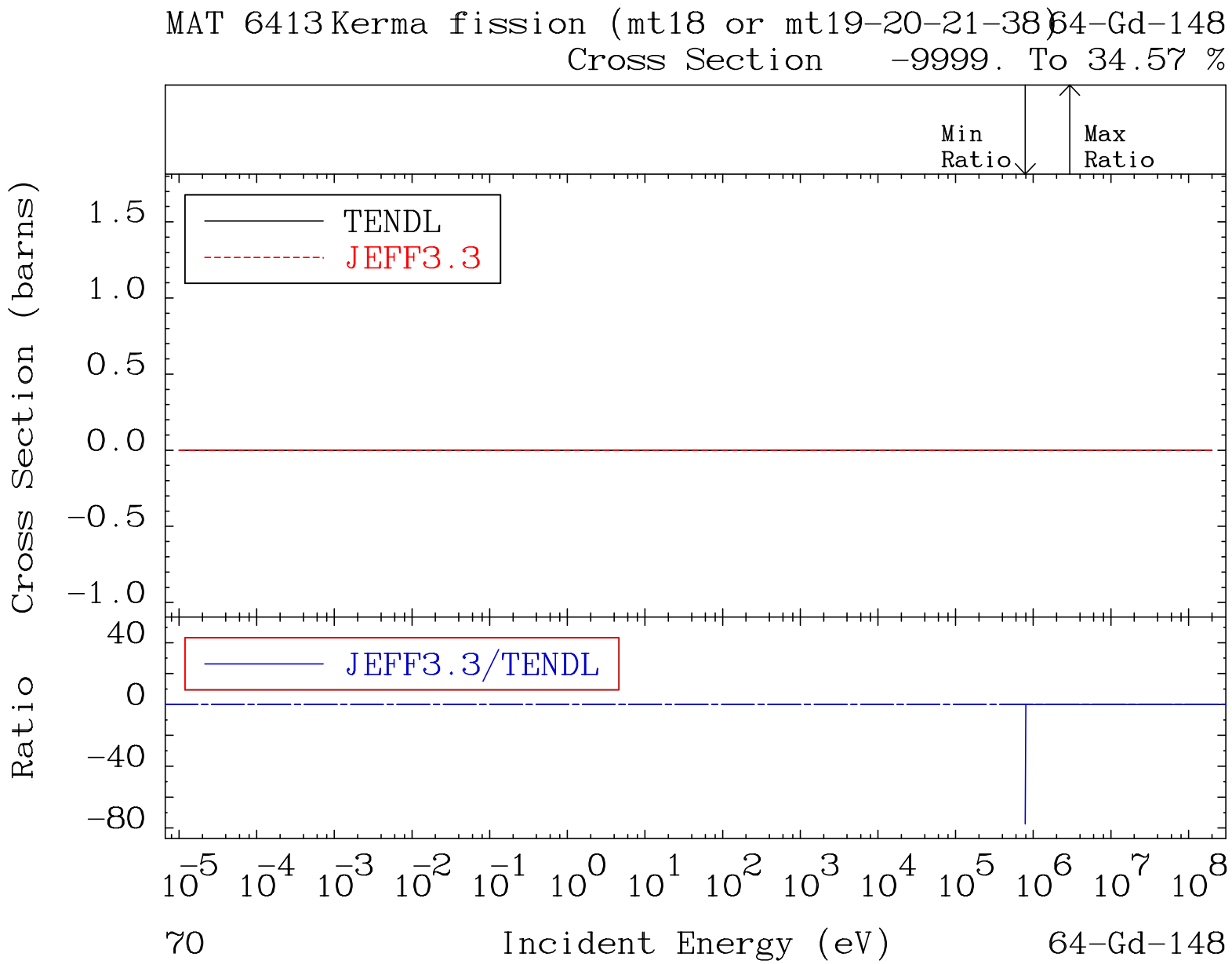

MAT 6413
He-4 Production
Cross Section
64-Gd-148
-42.15 To 1515. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
65
64-Gd-148

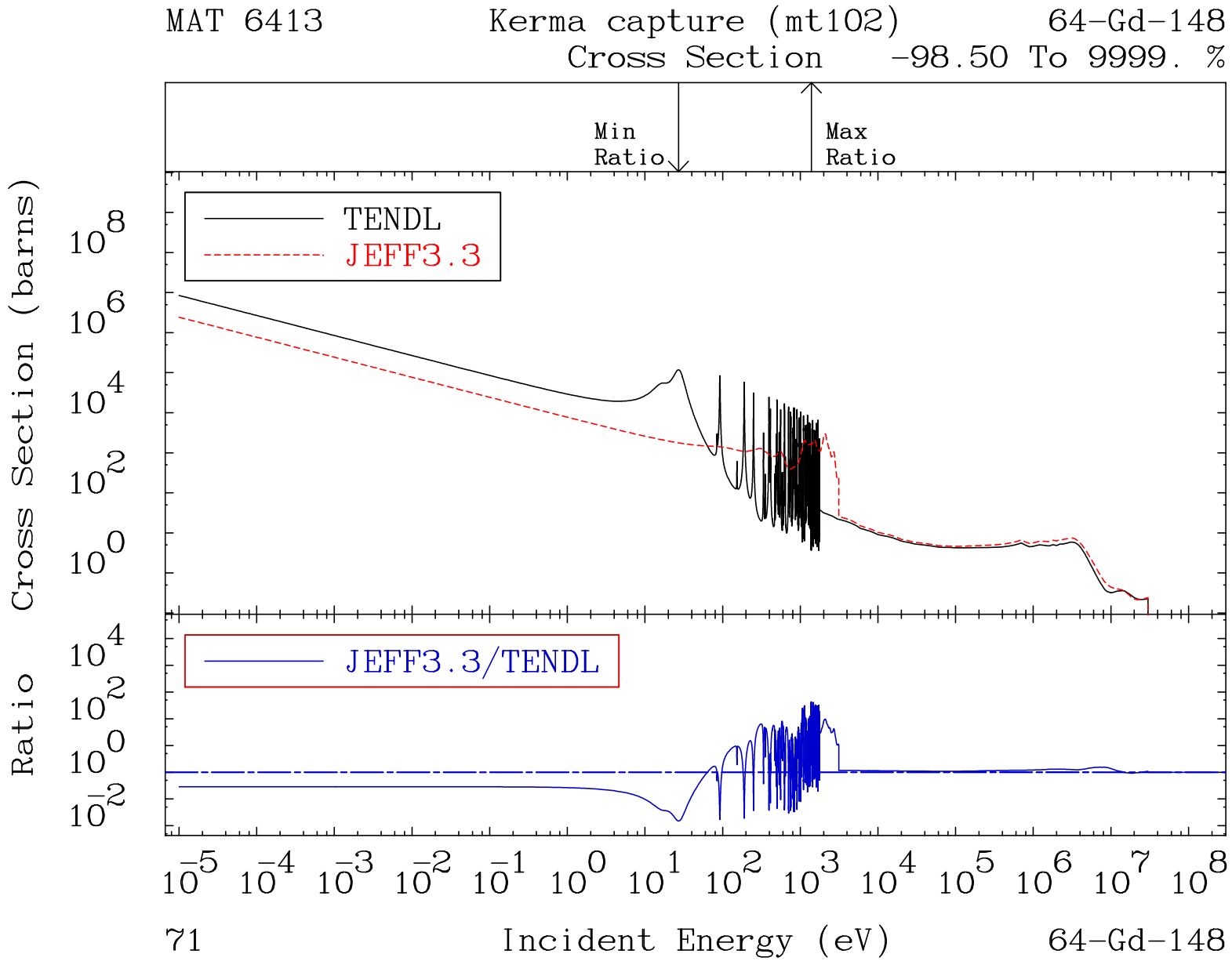

MAT 6413
Kerma total (eV-barns)
64-Gd-148
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Ratio Cross Section (Gega-barns)
4
3
2
1
0
20
0
-20
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
66
Incident Energy (eV)
64-Gd-148

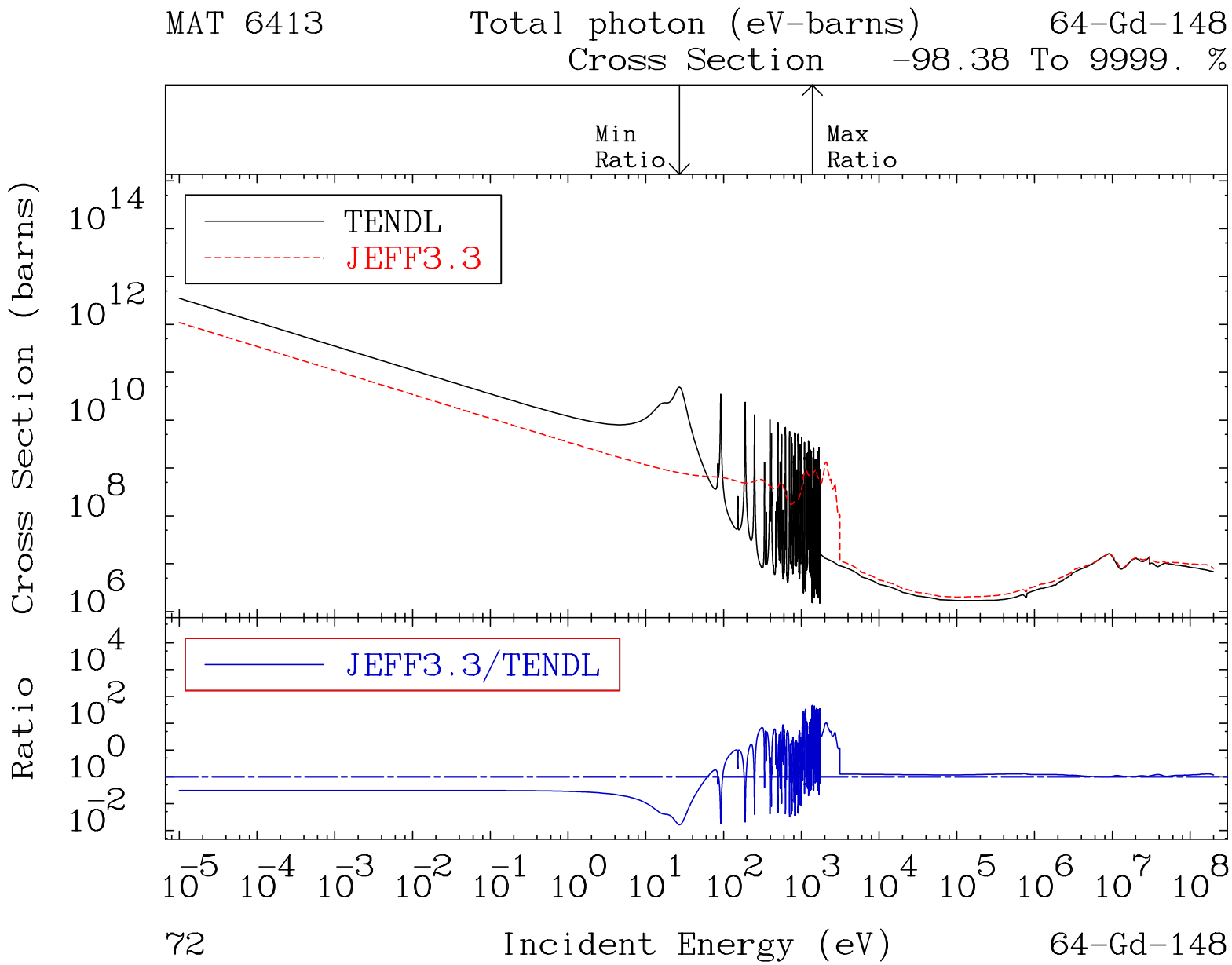

MAT 6413
Kerma elastic
Cross Section
64-Gd-148
-99.95 To 9844. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
64-Gd-148

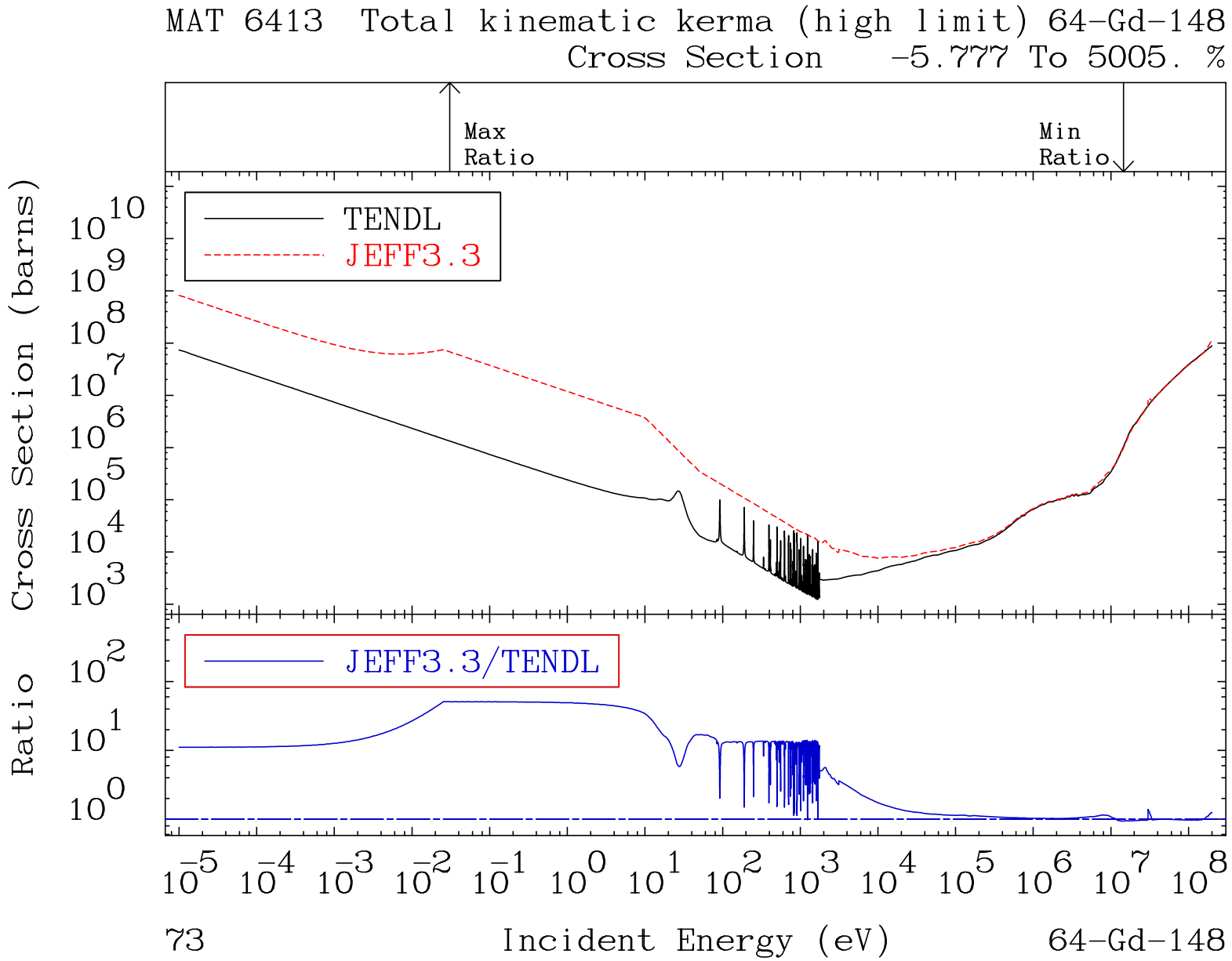

MAT 6413 Kerma non-elastic (all but mt2) 64-Gd-148
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Ratio Cross Section (Gega-barns)
4
3
2
1
0
20
0
-20
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
68
Incident Energy (eV)
64-Gd-148

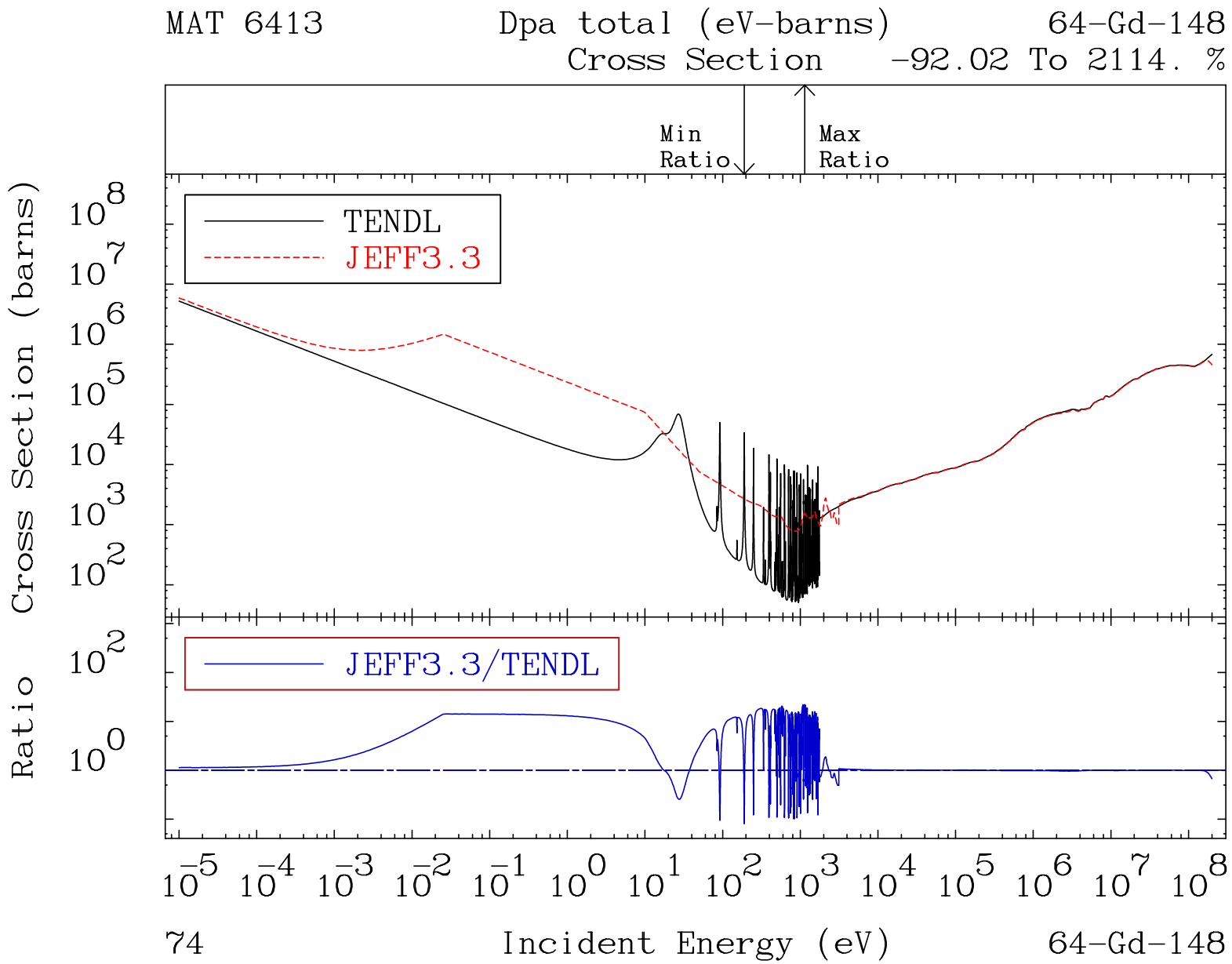

MAT 6413
Kerma inelastic (mt51-91)
64-Gd-148
Cross Section -9999. To 34.57 %
Min Ratio
Max Ratio
TENDL Threshold 789.78 keV
JEFF3.3 Threshold 789.78 keV
JEFF3.3/TENDL
Ratio Cross Section (kilo-barns)
300
250
200
150
100
50
0
40
0
-40
-80
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
69
Incident Energy (eV)
64-Gd-148

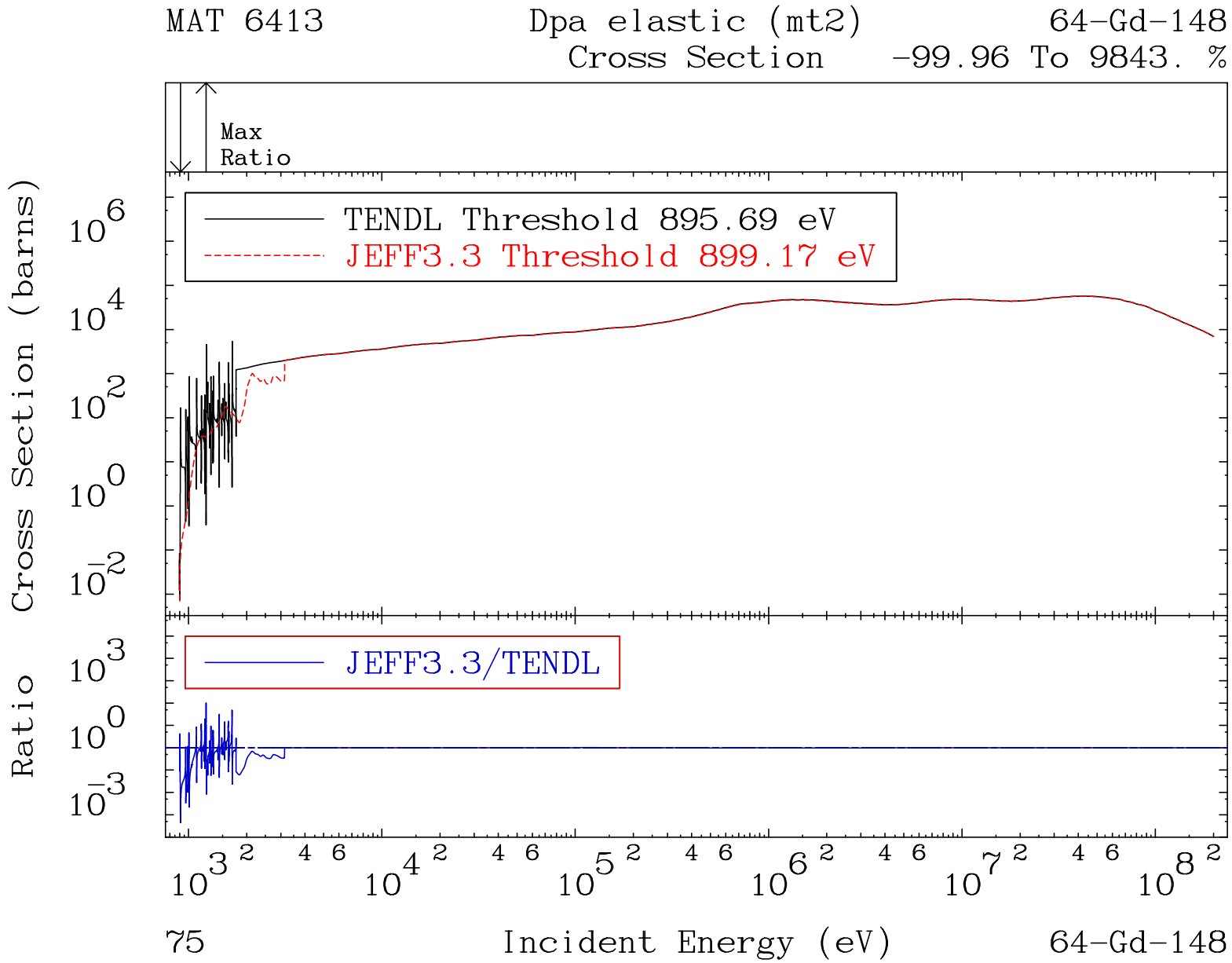

MAT 6413 Kerma fission (mt18 or mt19-20-21-38) 64-Gd-148
Cross Section -9999. To 34.57 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
40
0
-40
-80
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
70
Incident Energy (eV)
64-Gd-148

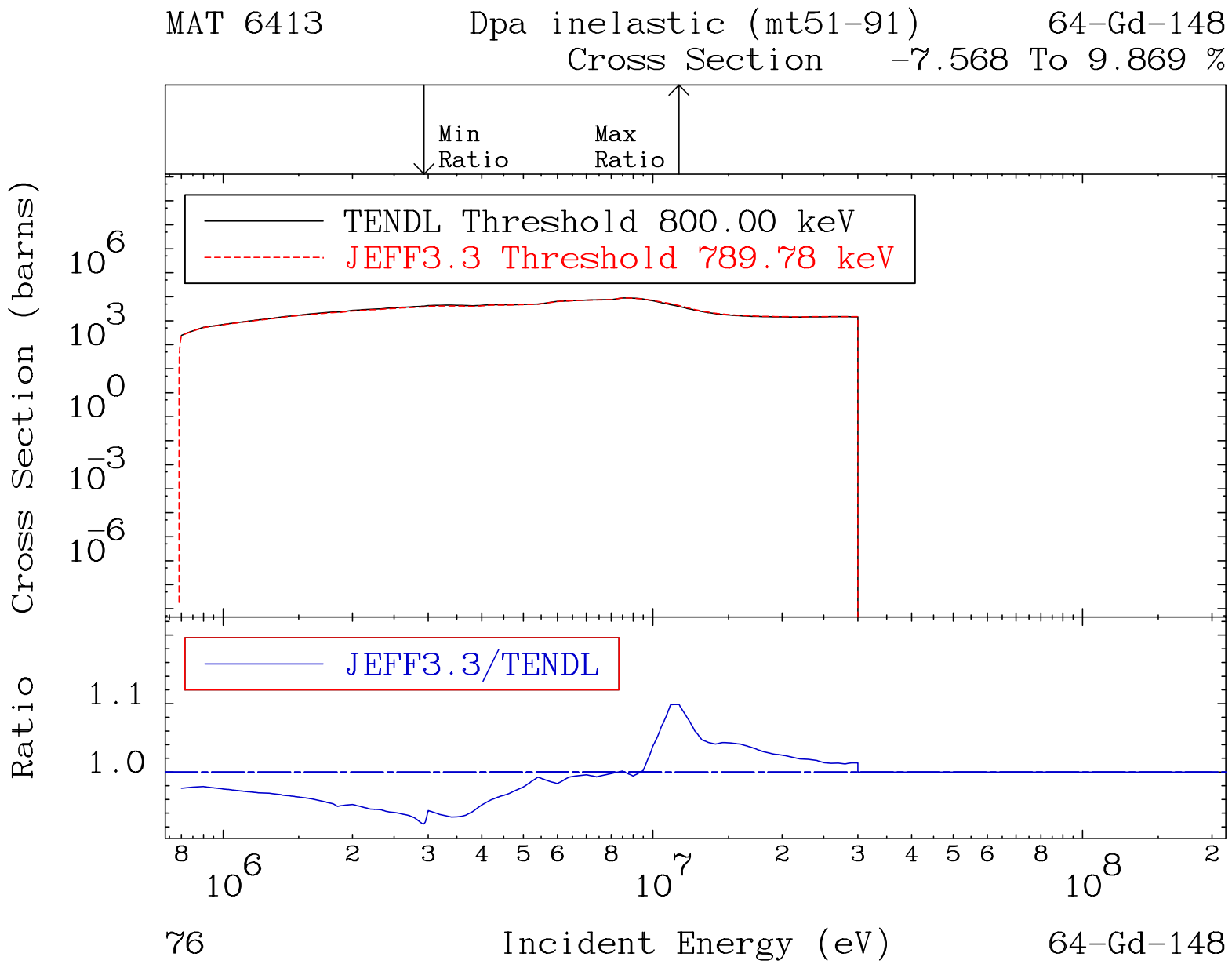

MAT 6413
Kerma capture (mt102)
64-Gd-148
Cross Section -98.50 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
71
64-Gd-148

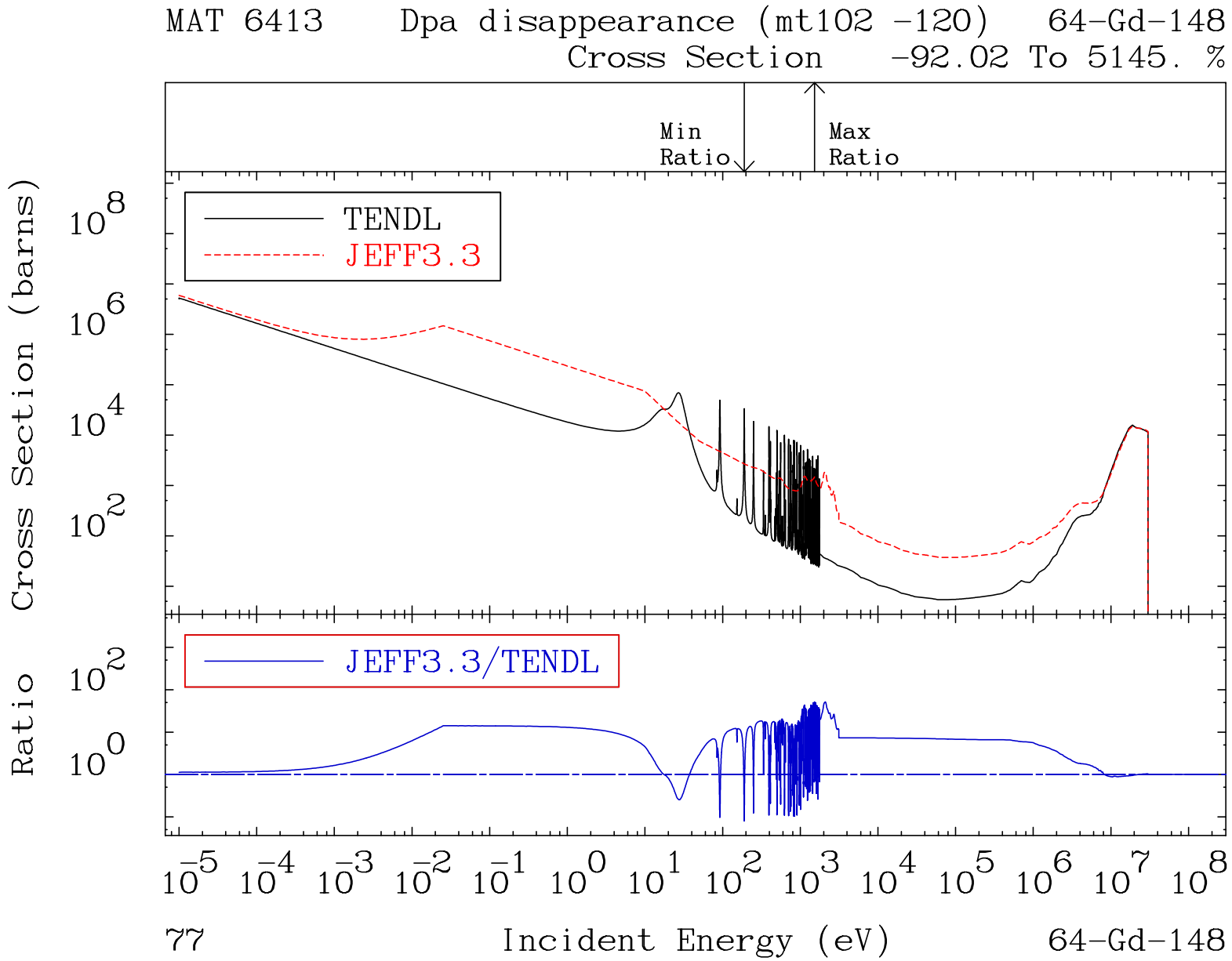

MAT 6413
Total photon (eV-barns)
64-Gd-148
Cross Section -98.38 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
72
64-Gd-148

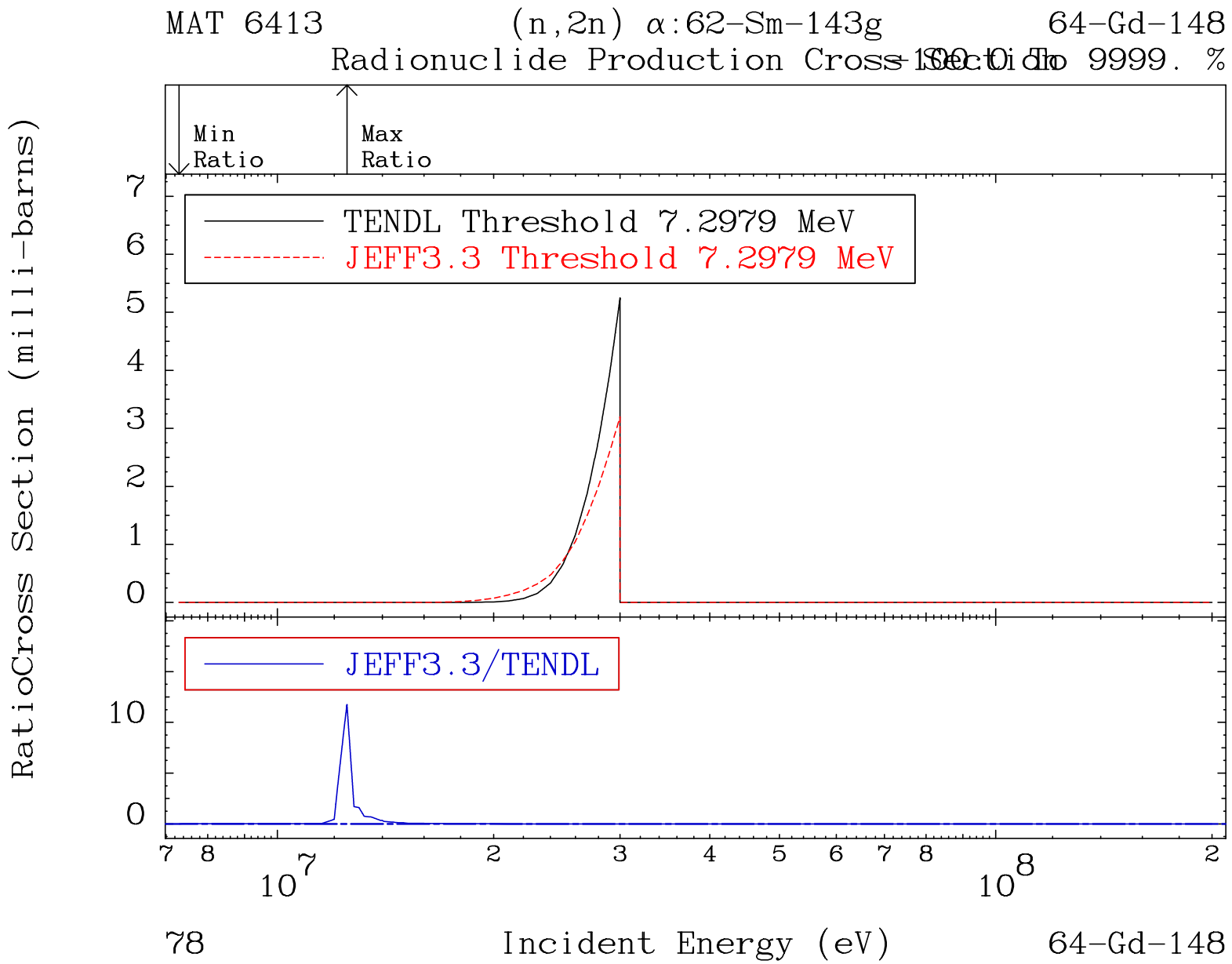

MAT 6413 Total kinematic kerma (high limit) 64-Gd-148
Cross Section -5.777 To 5005. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
73
64-Gd-148

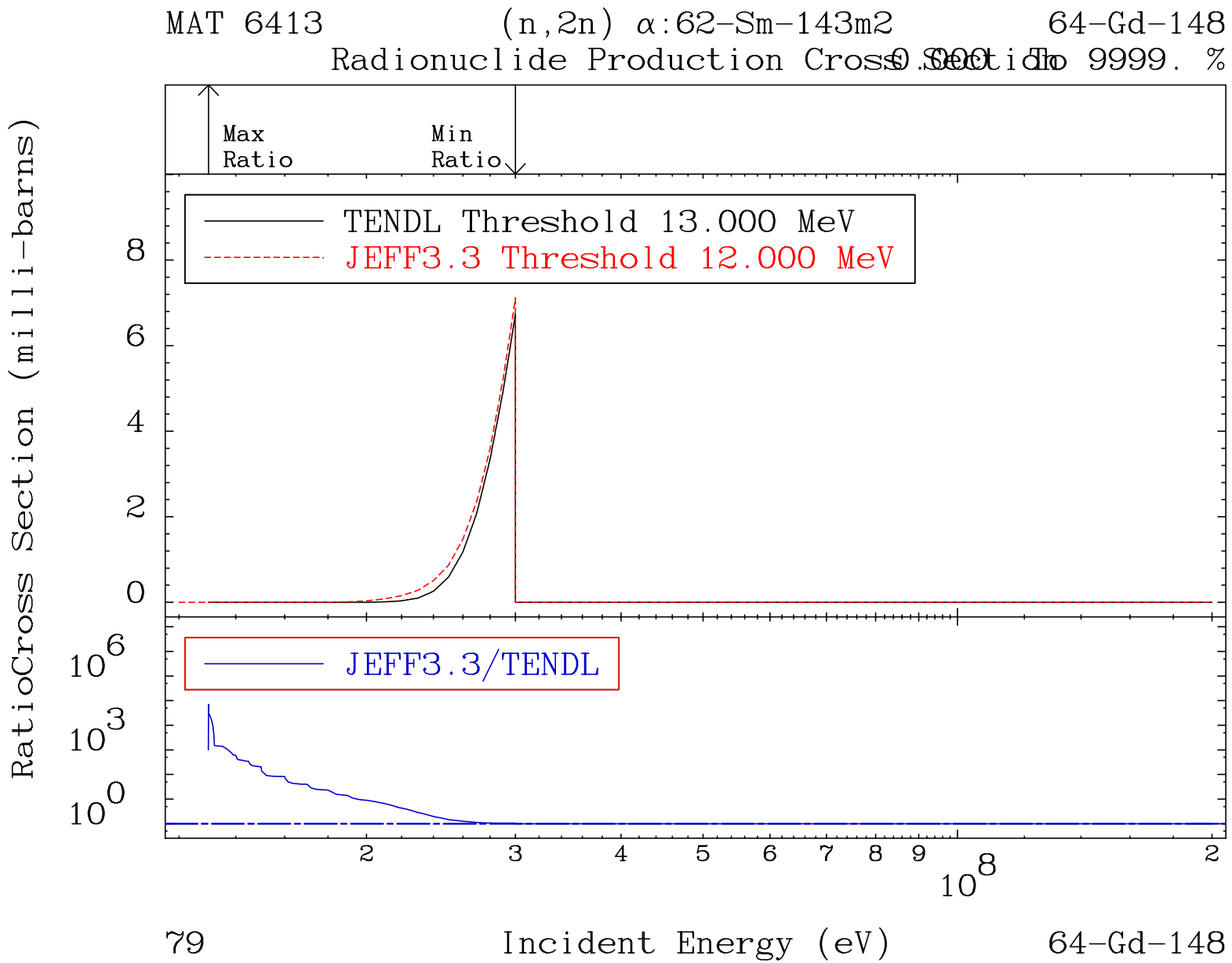

MAT 6413
Dpa total (eV-barns)
64-Gd-148
Cross Section -92.02 To 2114. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
74
64-Gd-148

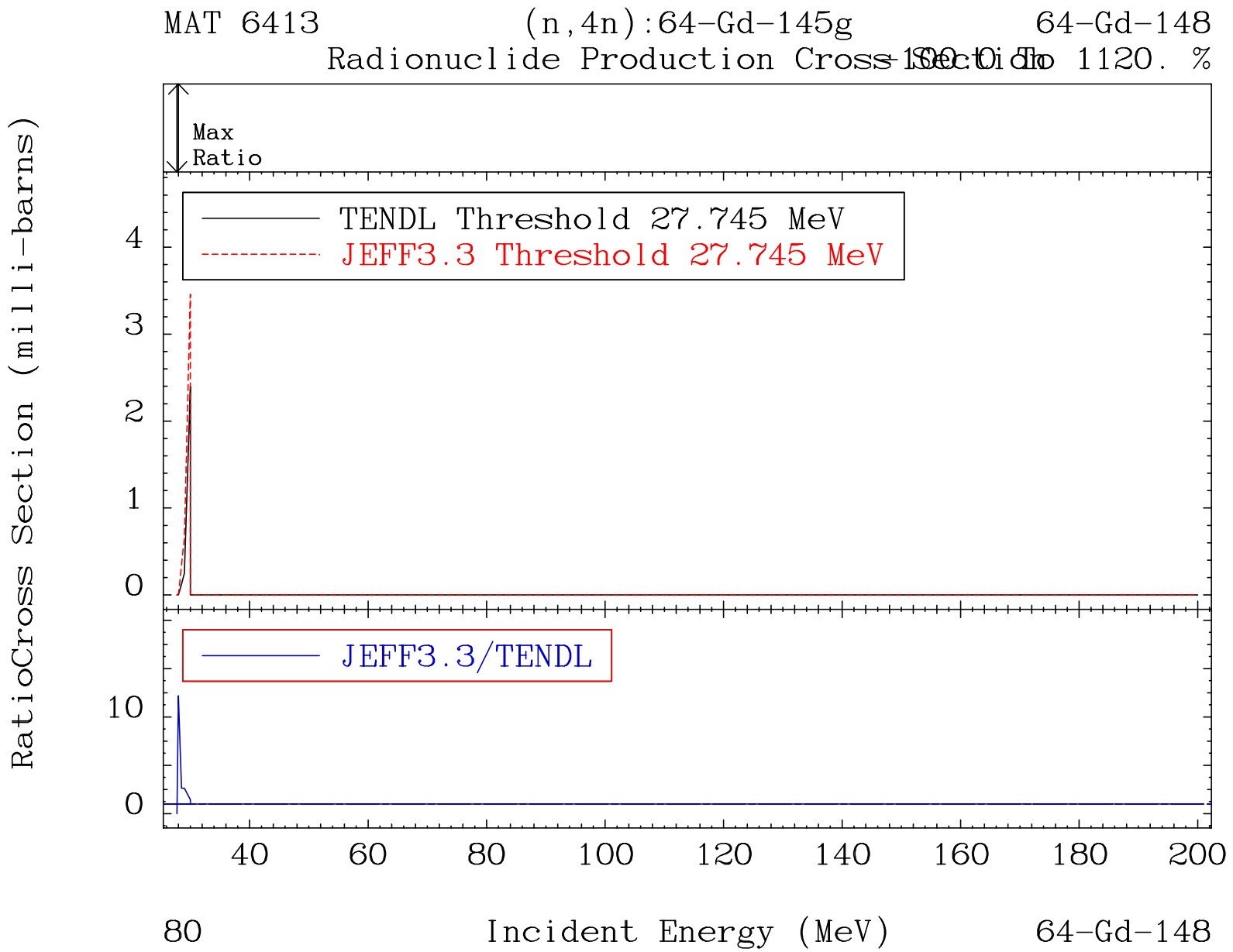

MAT 6413
Dpa elastic (mt2)
Cross Section
64-Gd-148
-99.96 To 9843. %
Max
Ratio
TENDL Threshold 895.69 eV
JEFF3.3 Threshold 899.17 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
75
64-Gd-148

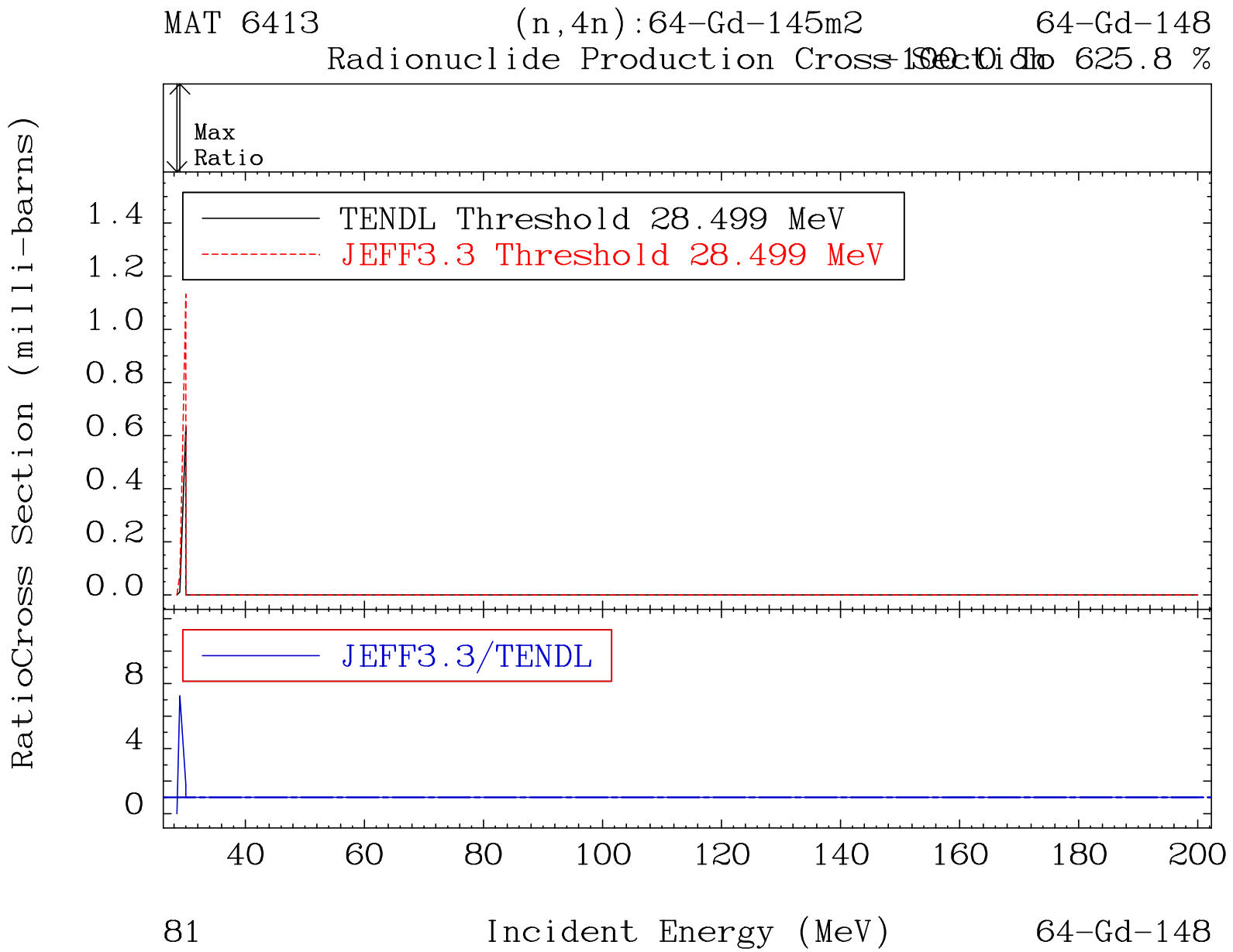

MAT 6413
Dpa inelastic (mt51-91)
64-Gd-148
Cross Section -7.568 To 9.869 %
Min Ratio
Max Ratio
TENDL Threshold 800.00 keV
JEFF3.3 Threshold 789.78 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
64-Gd-148


MAT 6413 Dpa disappearance (mt102 -120) 64-Gd-148
Cross Section -92.02 To 5145. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
77
64-Gd-148


MAT 6413
(n,2n) α:62-Sm-143g
64-Gd-148
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 7.2979 MeV
JEFF3.3 Threshold 7.2979 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
78
64-Gd-148


MAT 6413
(n,2n) α:62-Sm-143m2
64-Gd-148
Radionuclide Production Cross Section
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 13.000 MeV
JEFF3.3 Threshold 12.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
79
64-Gd-148


MAT 6413
(n,4n):64-Gd-145g
64-Gd-148
Radionuclide Production Cross Section
Max
Ratio
TENDL Threshold 27.745 MeV
JEFF3.3 Threshold 27.745 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (MeV)
64-Gd-148


MAT 6413
(n,4n):64-Gd-145m2
64-Gd-148
Radionuclide Production Cross Section
Max Ratio
TENDL Threshold 28.499 MeV
JEFF3.3 Threshold 28.499 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (MeV)
81
64-Gd-148