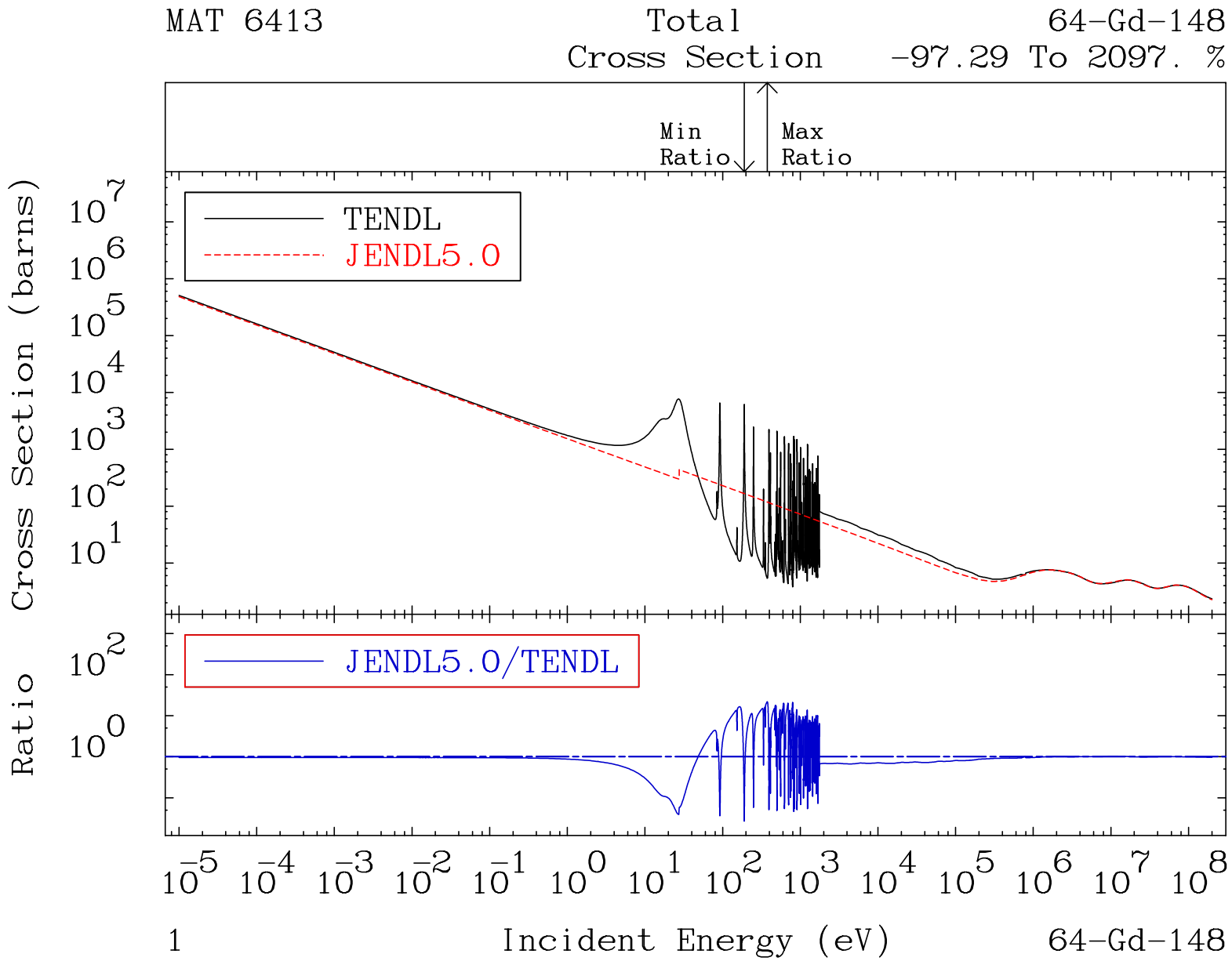
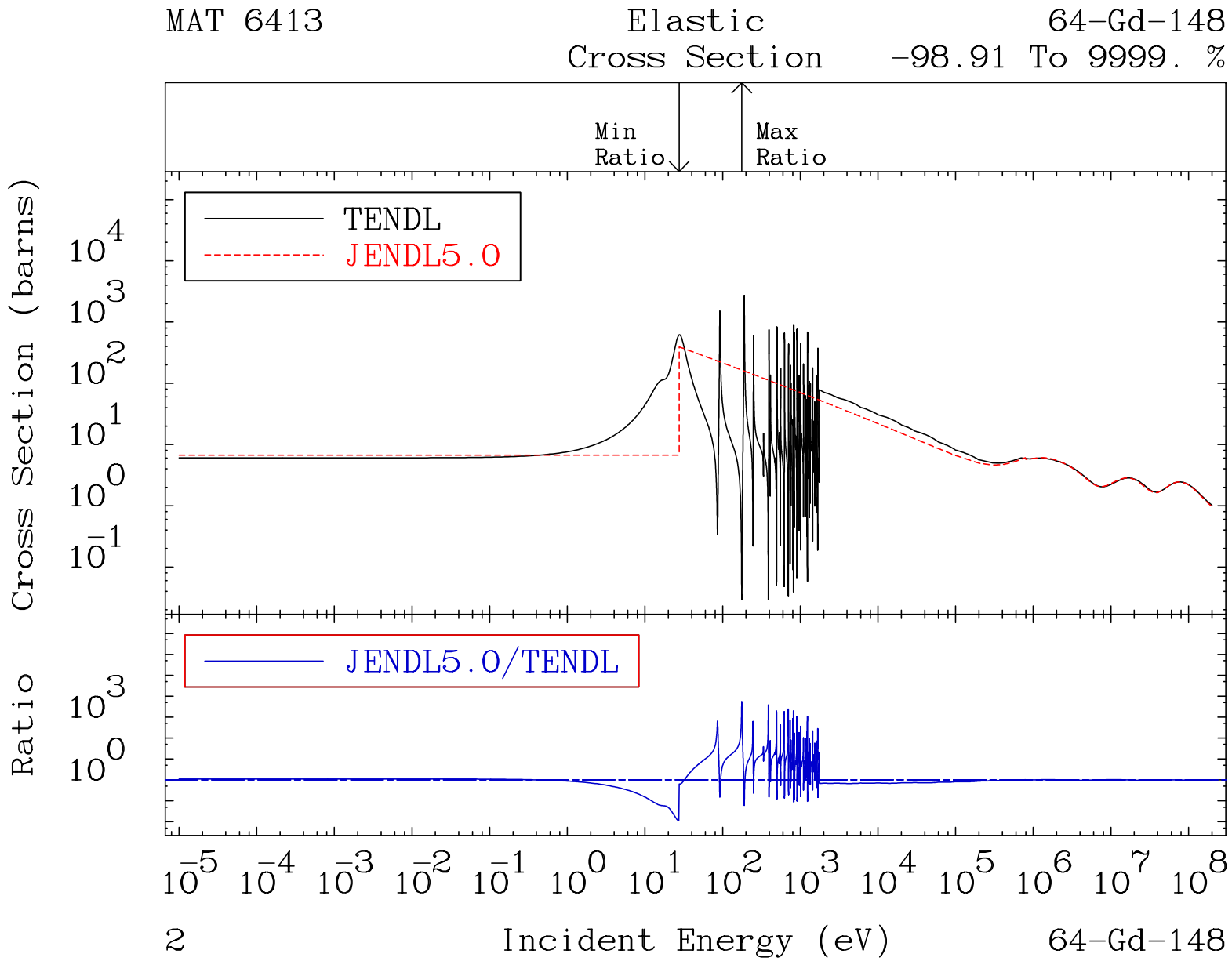
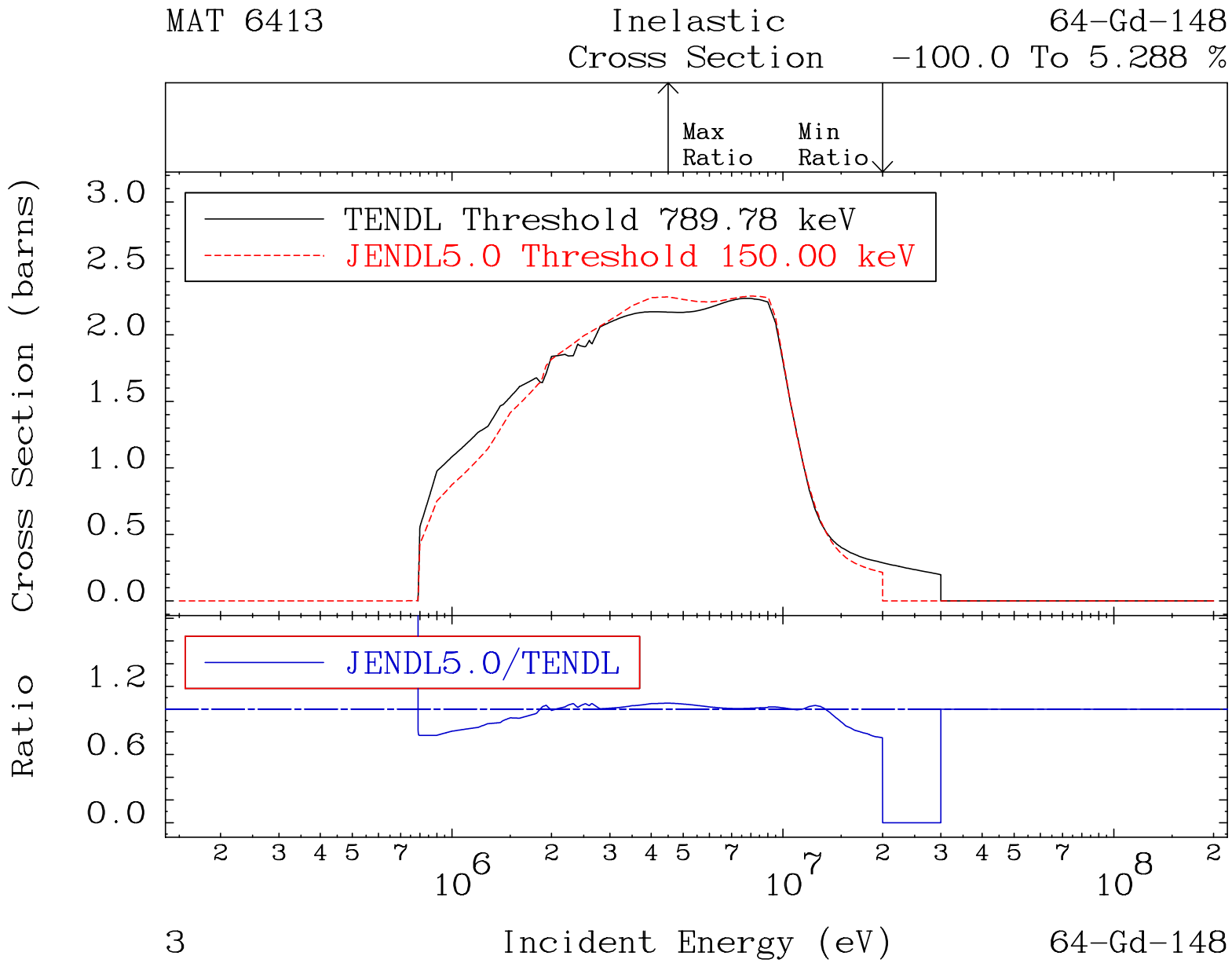
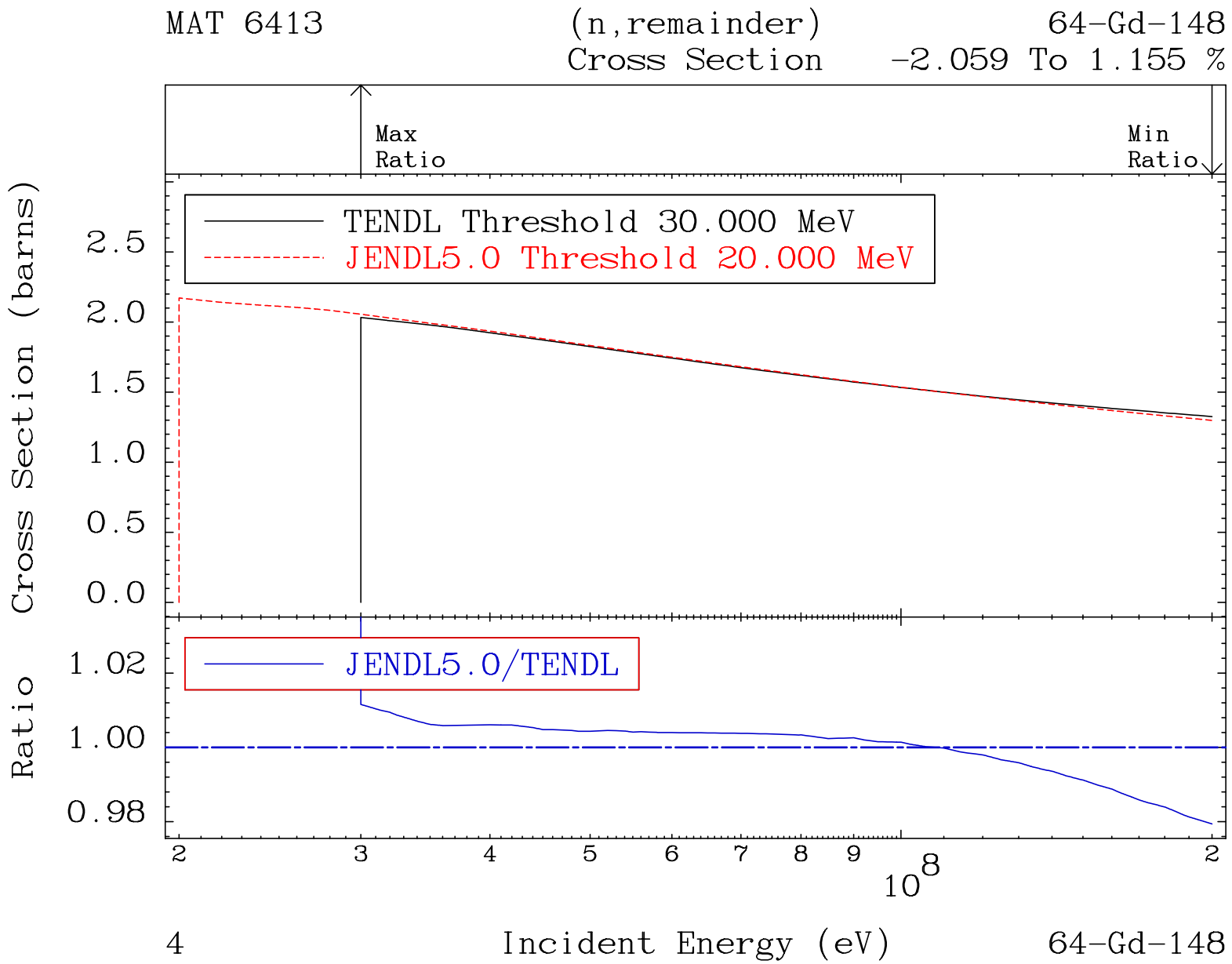
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

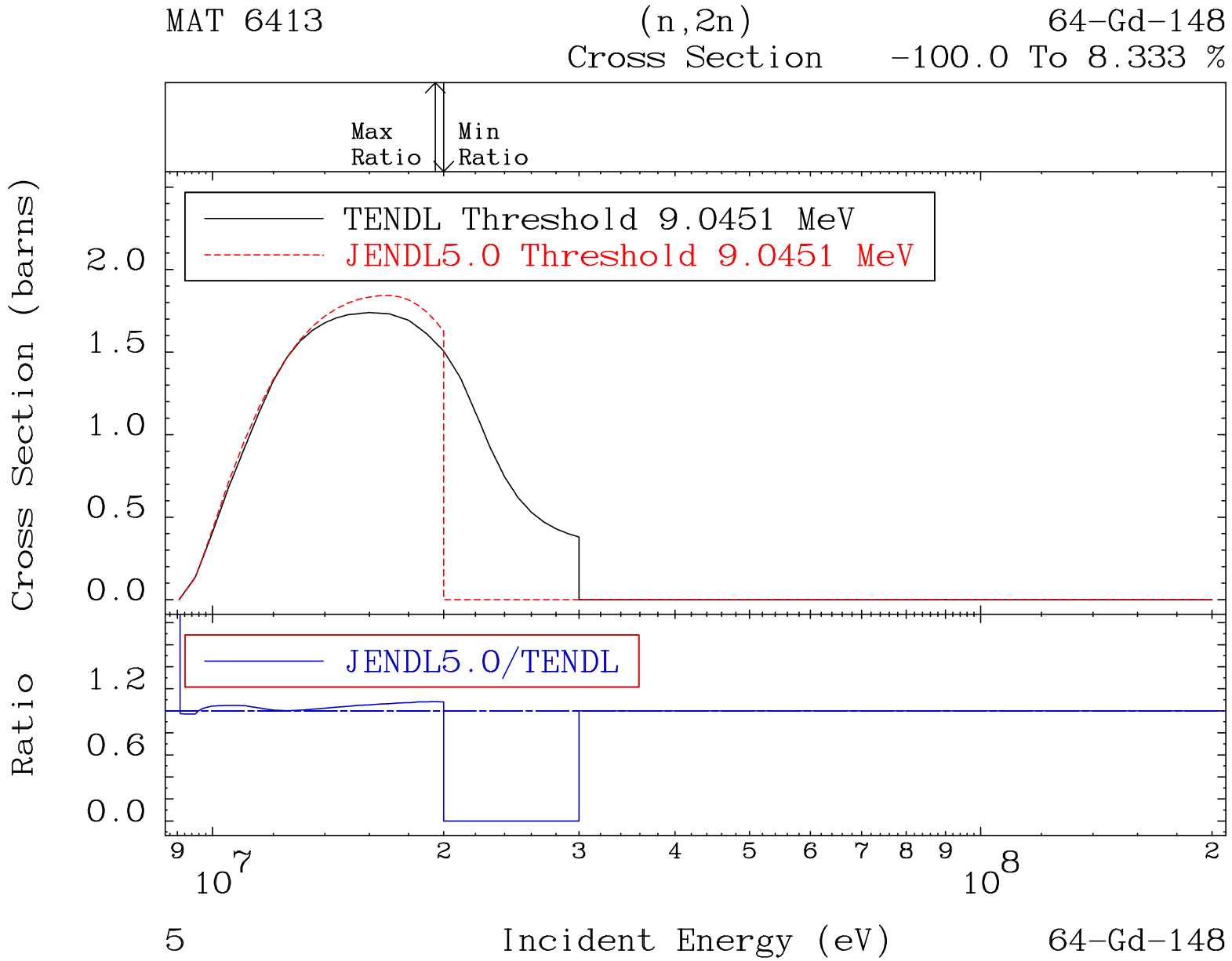
Press Mouse Button to Start

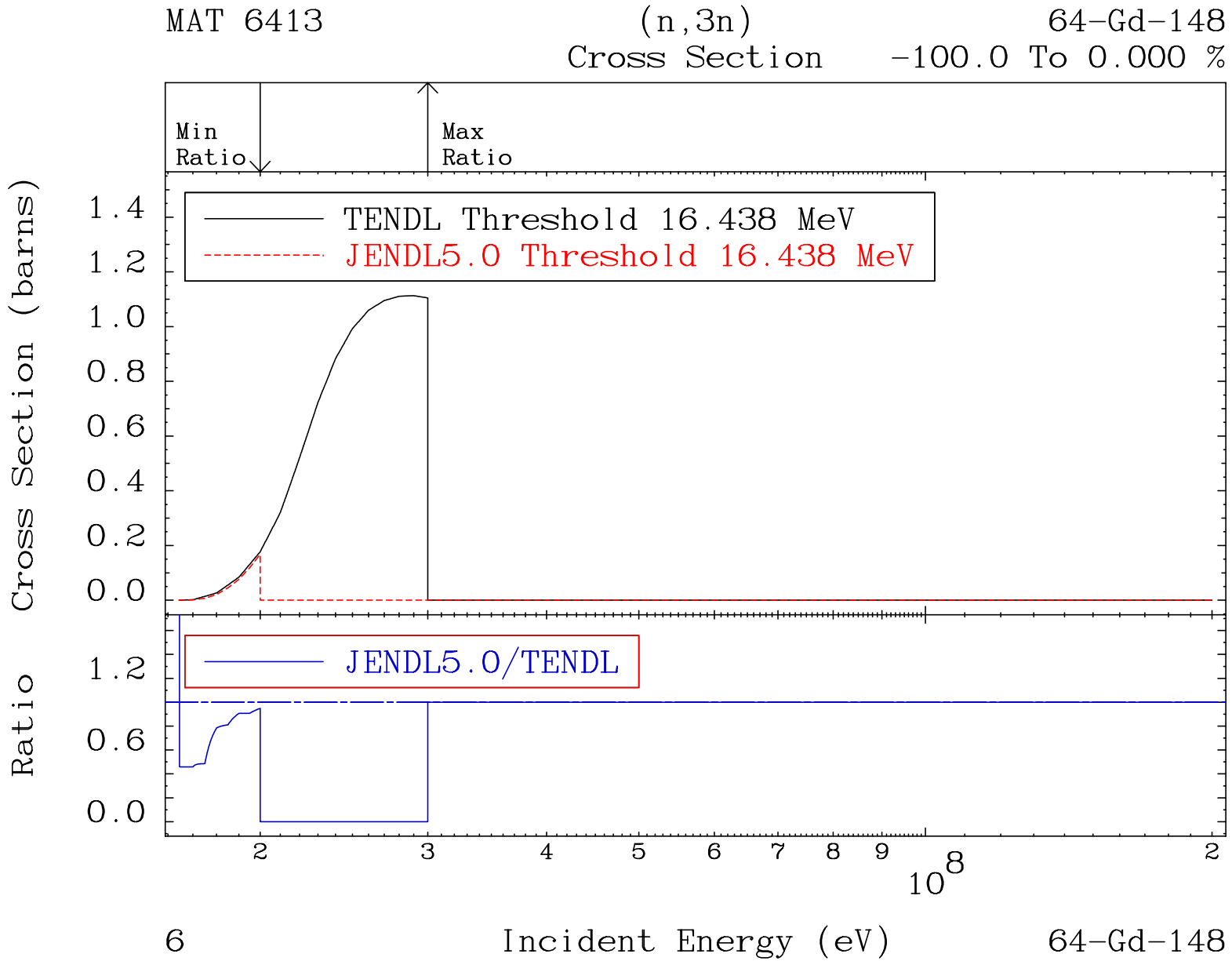

MAT 6413
Total
Cross Section
64-Gd-148
-97.29 To 2097. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
64-Gd-148
1

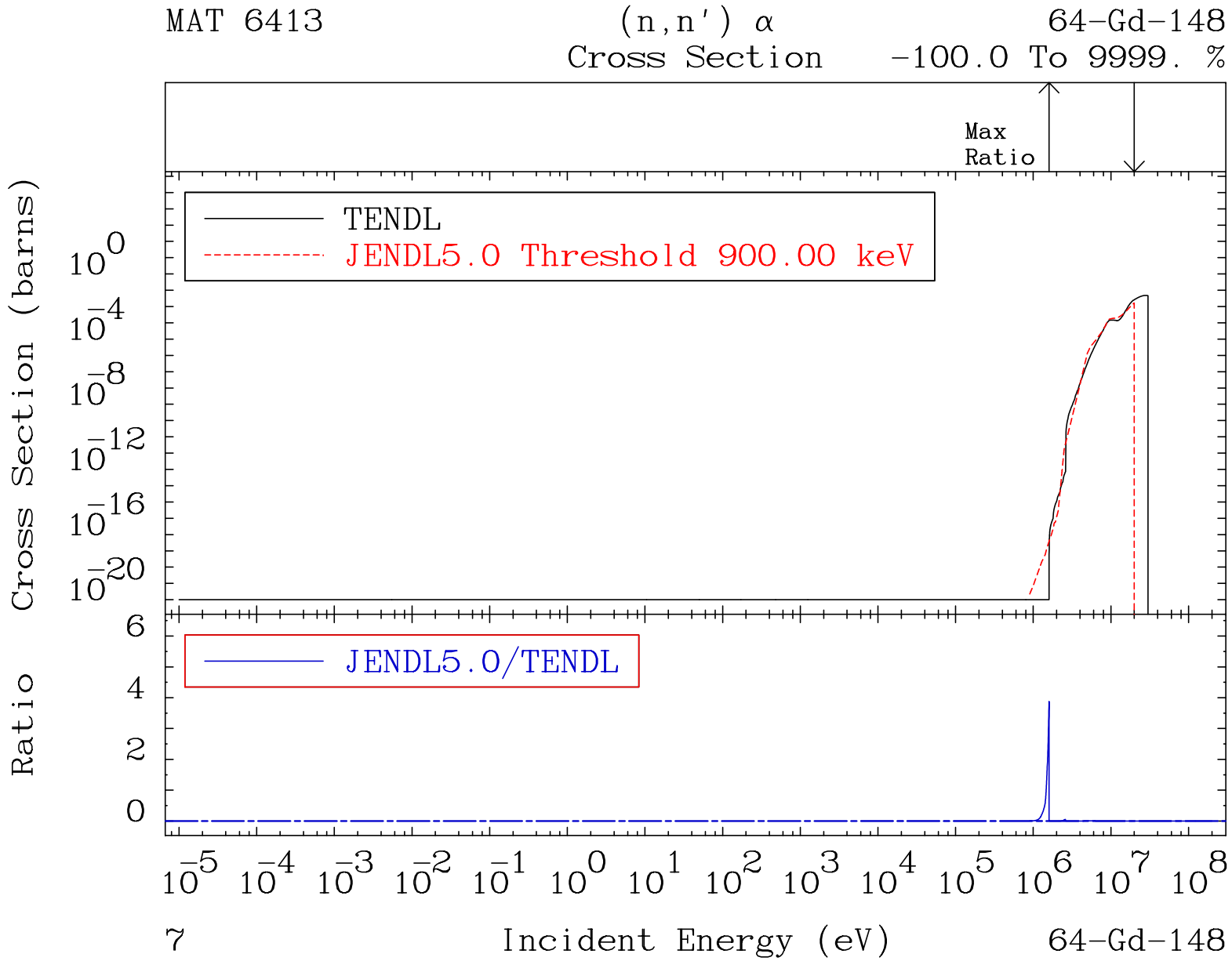

MAT 6413
Elastic
Cross Section
64-Gd-148
-98.91 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
64-Gd-148
2

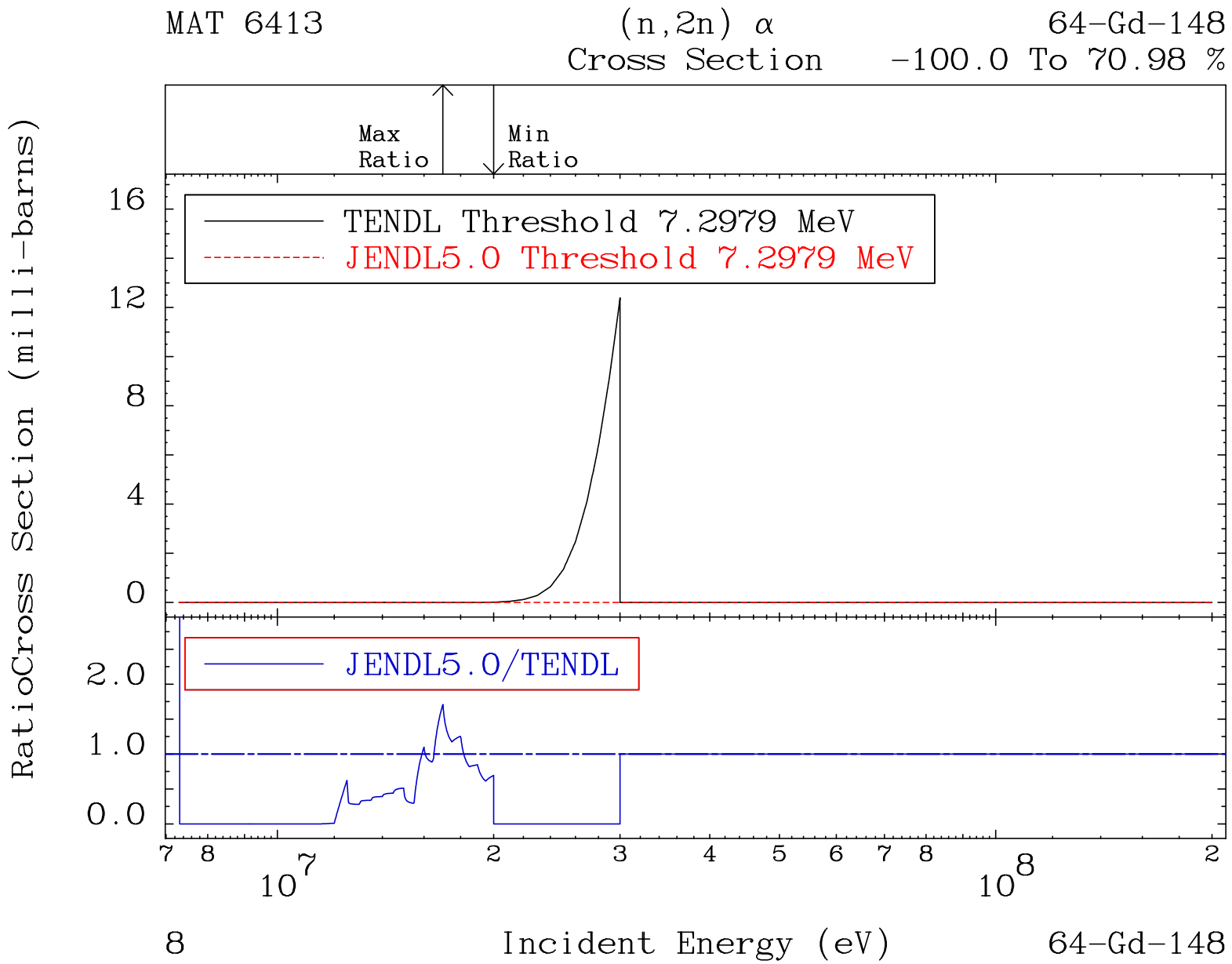

MAT 6413
Inelastic
Cross Section
64-Gd-148
-100.0 To 5.288 %
Max Ratio
Min Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
64-Gd-148

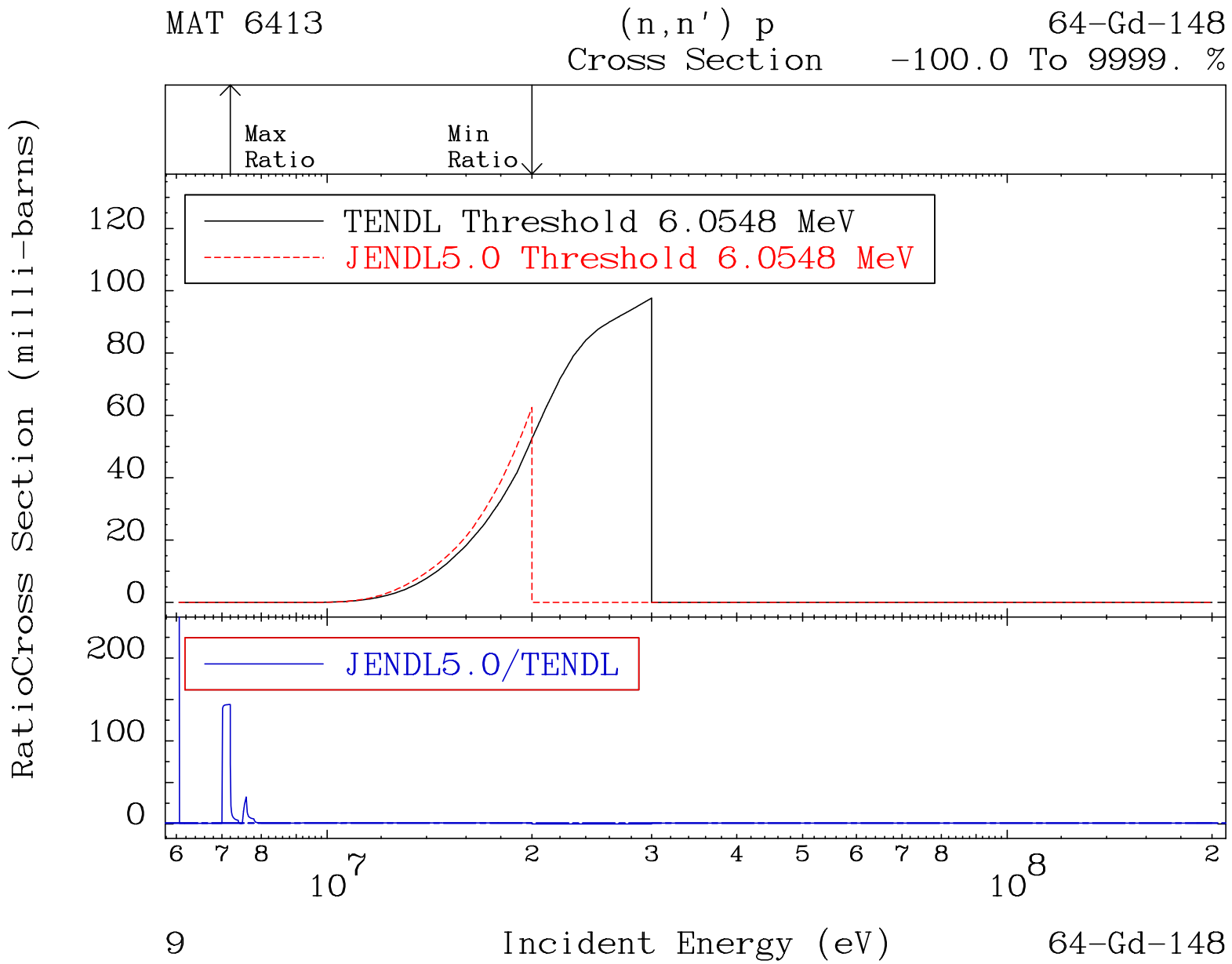

MAT 6413
(n,remainder)
Cross Section
64-Gd-148
-2.059 To 1.155 %
Max Ratio
Min Ratio
TENDL Threshold 30.000 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.5
2.0
1.5
1.0
0.5
0.0
1.02
1.00
0.98
2
3
4
5
6
7
8
9
2
10^8
4
Incident Energy (eV)
64-Gd-148

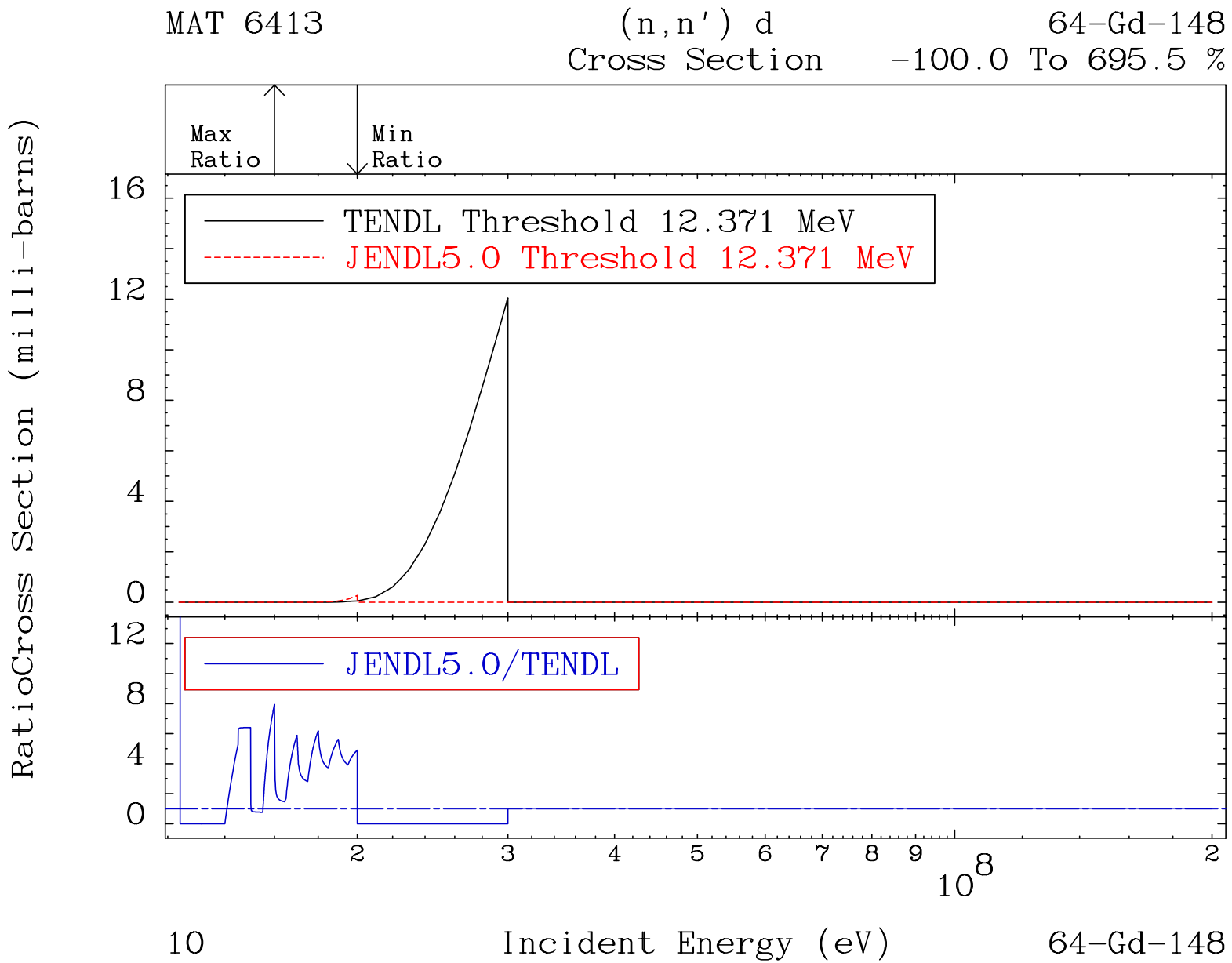

MAT 6413
(n,2n)
Cross Section
64-Gd-148
-100.0 To 8.333 %
Max Ratio
Min Ratio
TENDL Threshold 9.0451 MeV
JENDL5.0 Threshold 9.0451 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
Incident Energy (eV)
5
64-Gd-148

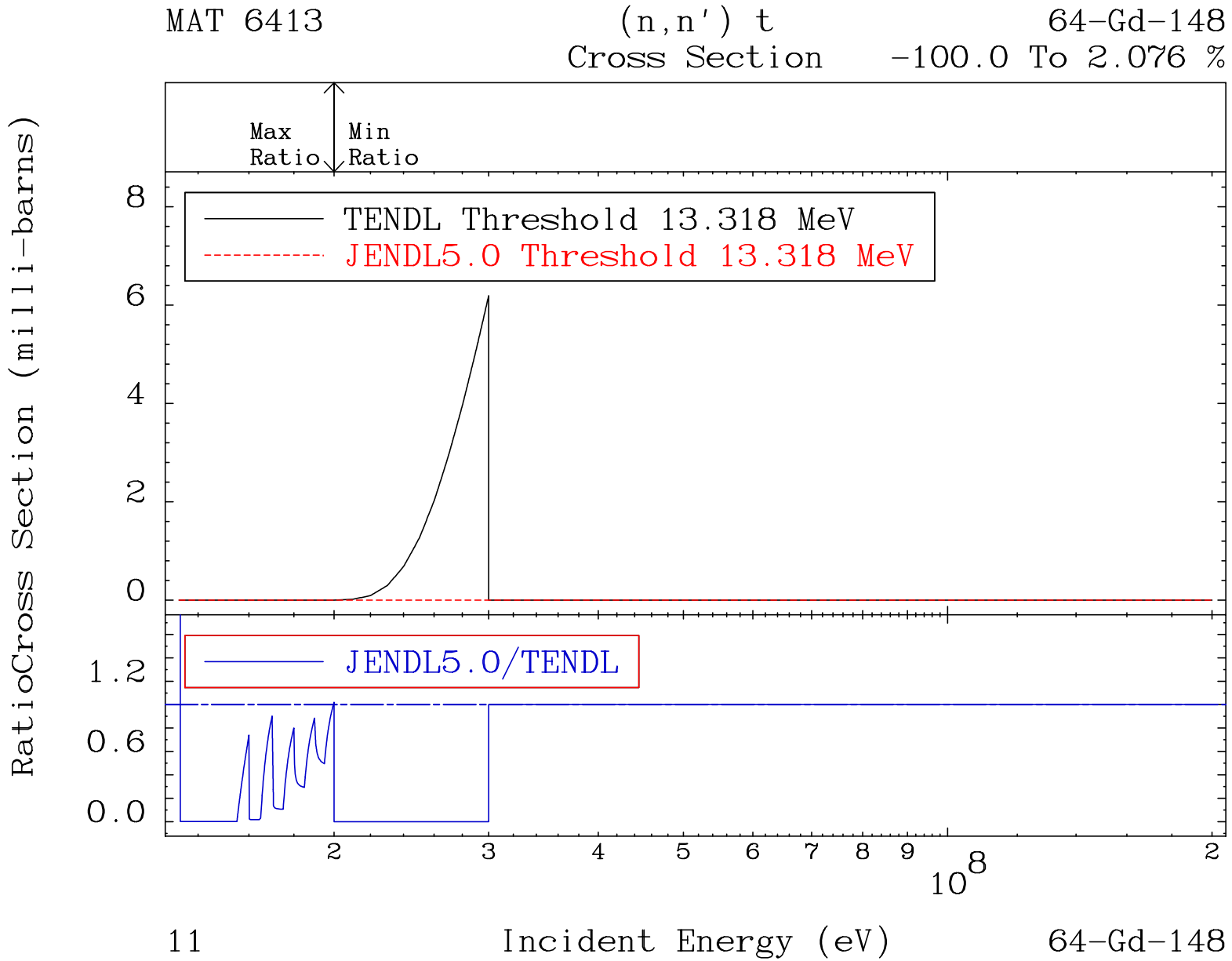

MAT 6413
(n,3n)
64-Gd-148
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 16.438 MeV
JENDL5.0 Threshold 16.438 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
64-Gd-148

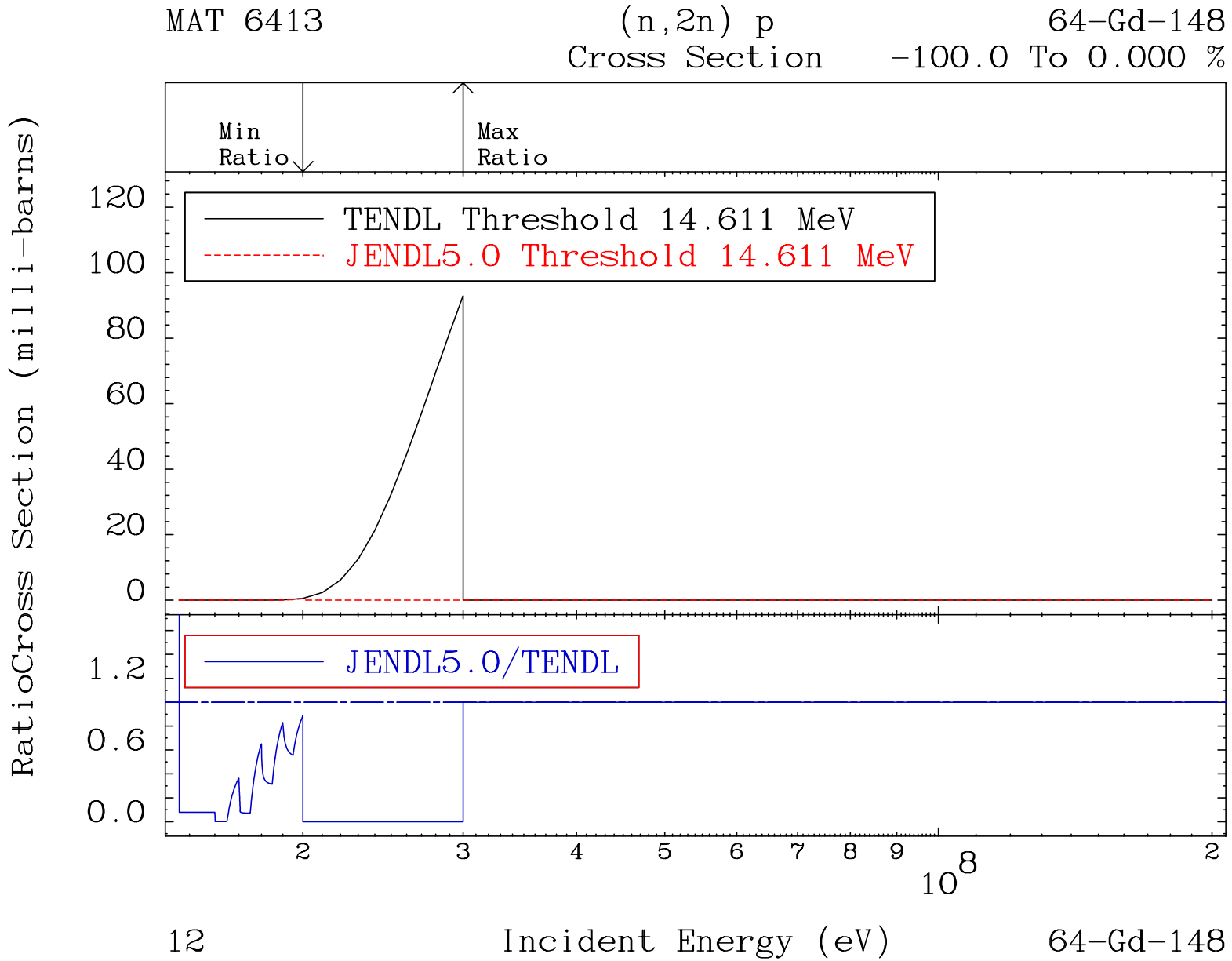

MAT 6413
(n,n') α
Cross Section
64-Gd-148
-100.0 To 9999. %
Max
Ratio
TENDL
JENDL5.0 Threshold 900.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64-Gd-148
7

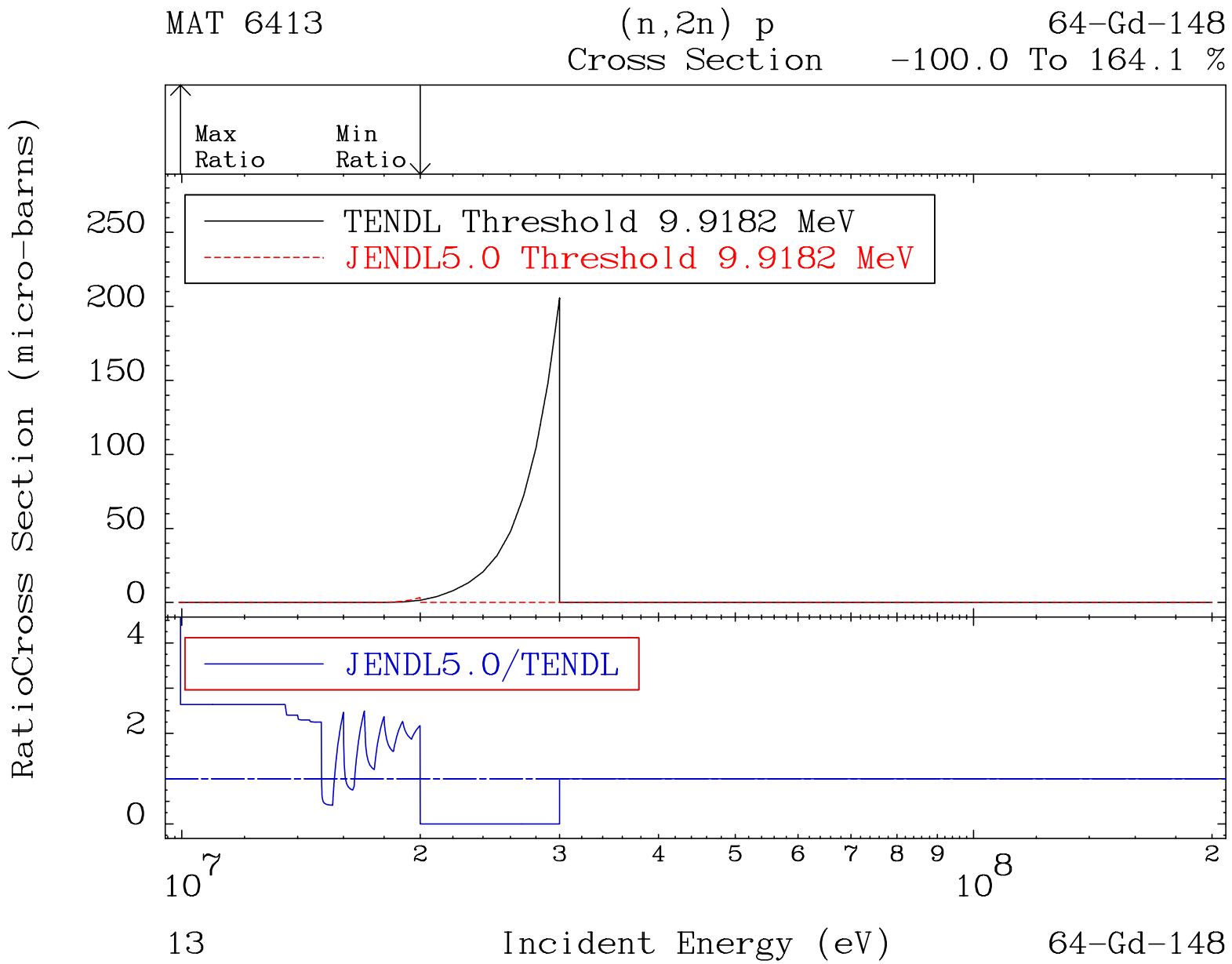

MAT 6413
(n,2n) α
Cross Section
64-Gd-148
-100.0 To 70.98 %
Max Ratio
Min Ratio
TENDL Threshold 7.2979 MeV
JENDL5.0 Threshold 7.2979 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
2.0
1.0
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
8
64-Gd-148

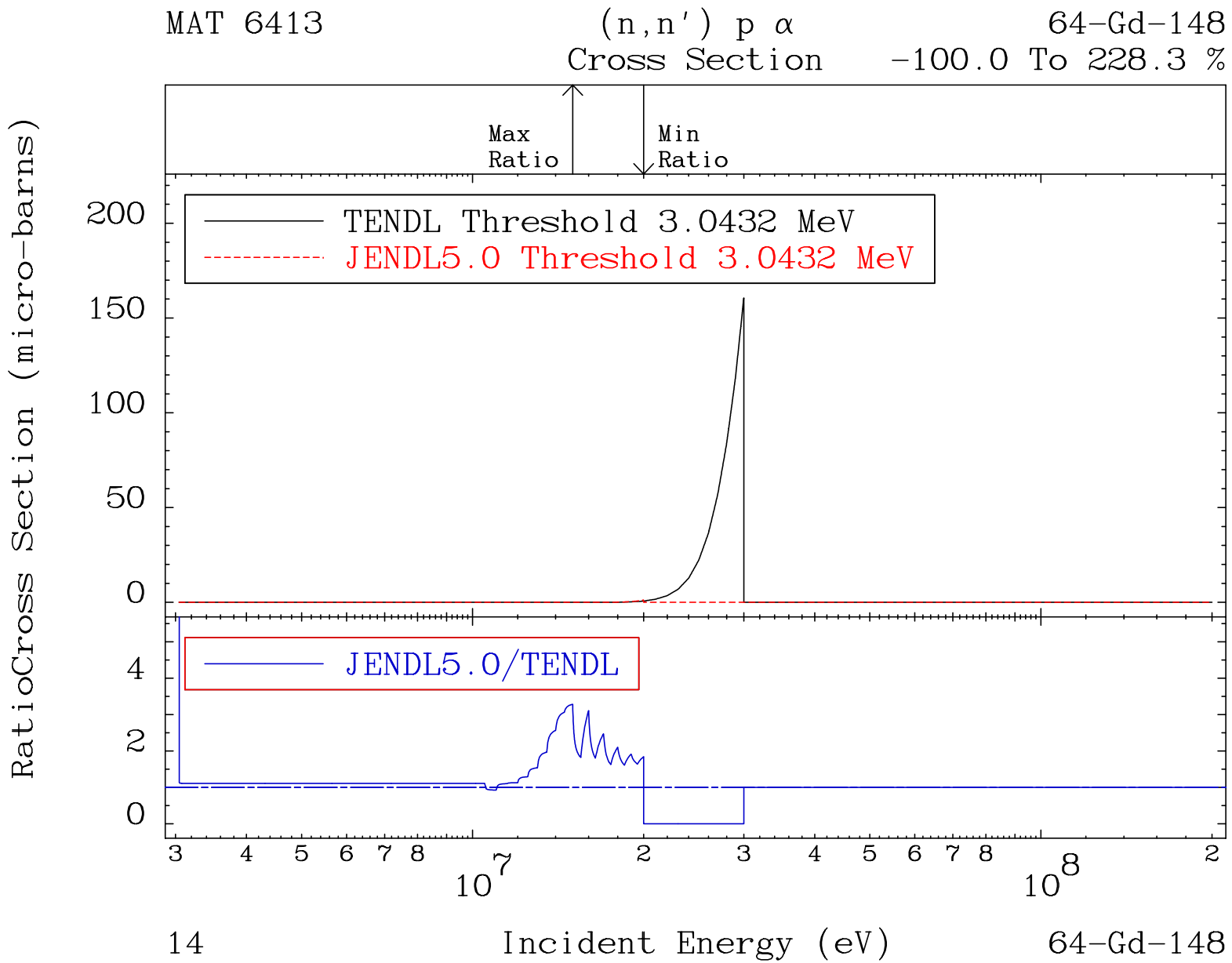

MAT 6413
(n,n') p
Cross Section
64-Gd-148
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.0548 MeV
JENDL5.0 Threshold 6.0548 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
200
100
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
9
Incident Energy (eV)
64-Gd-148

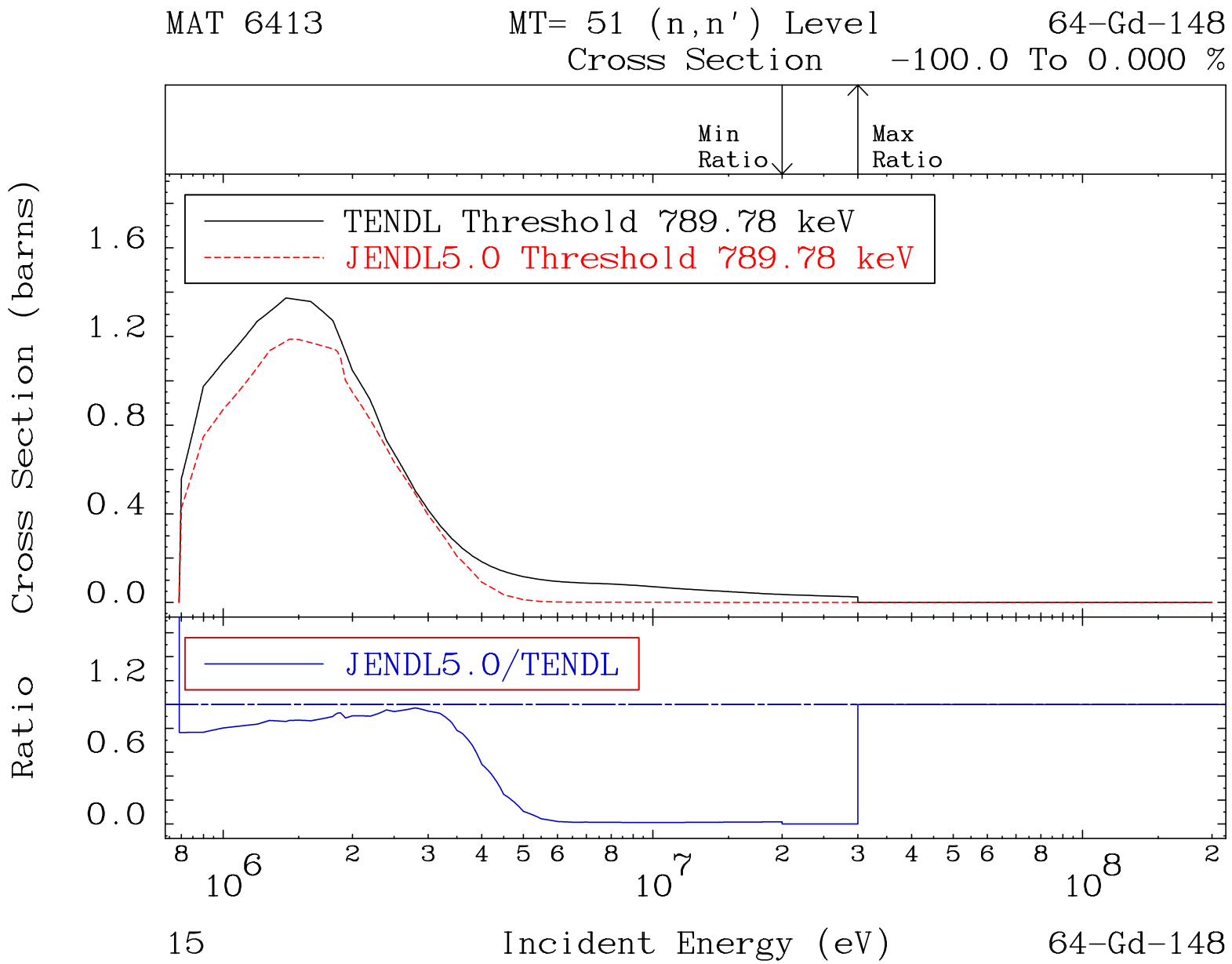

MAT 6413
(n,n') d
Cross Section
64-Gd-148
-100.0 To 695.5 %
Max Ratio
Min Ratio
TENDL Threshold 12.371 MeV
JENDL5.0 Threshold 12.371 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
12
8
4
0
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
64-Gd-148

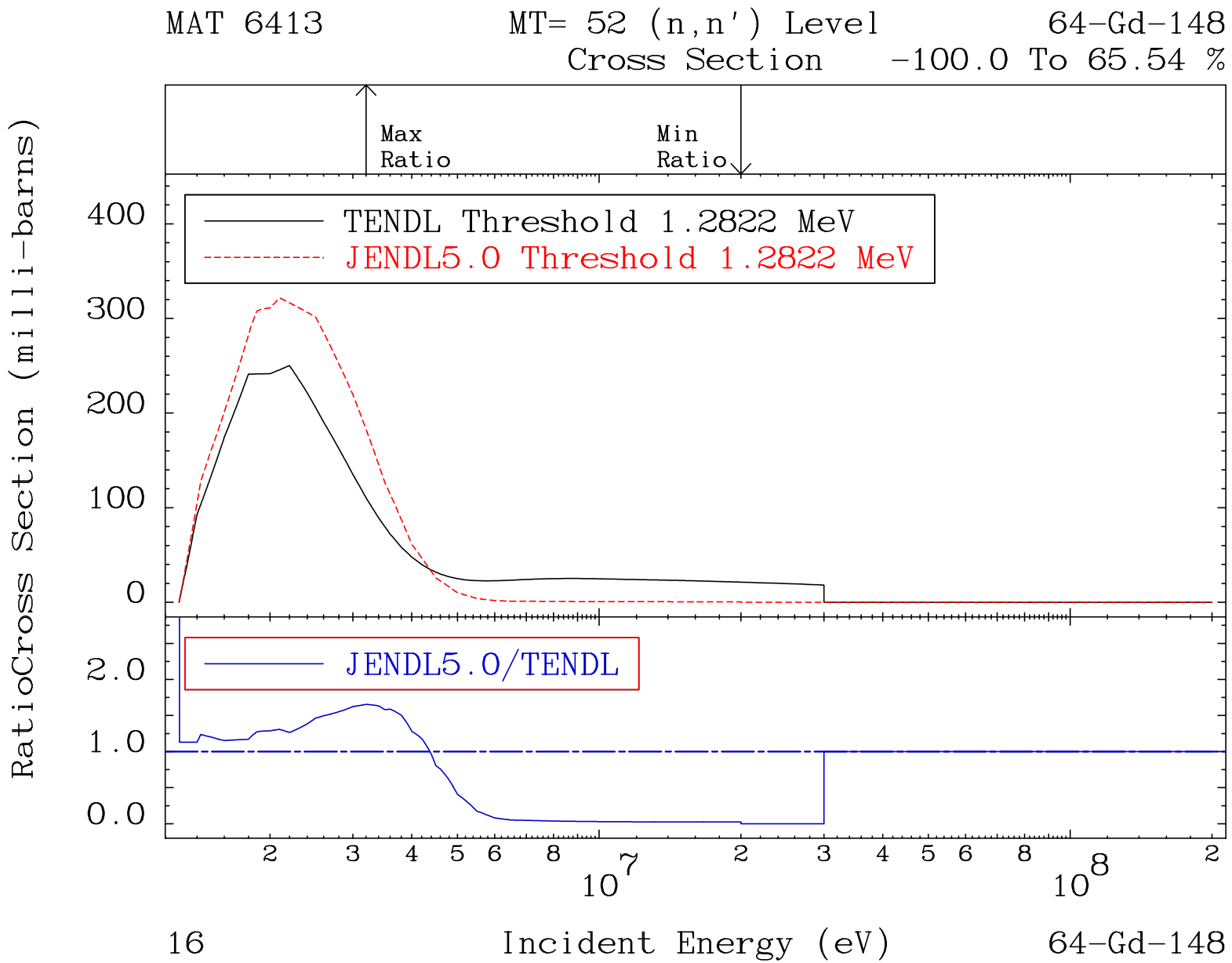

MAT 6413
(n,n') t
Cross Section
64-Gd-148
-100.0 To 2.076 %
Max Ratio
Min Ratio
TENDL Threshold 13.318 MeV
JENDL5.0 Threshold 13.318 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
8
6
4
2
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
64-Gd-148

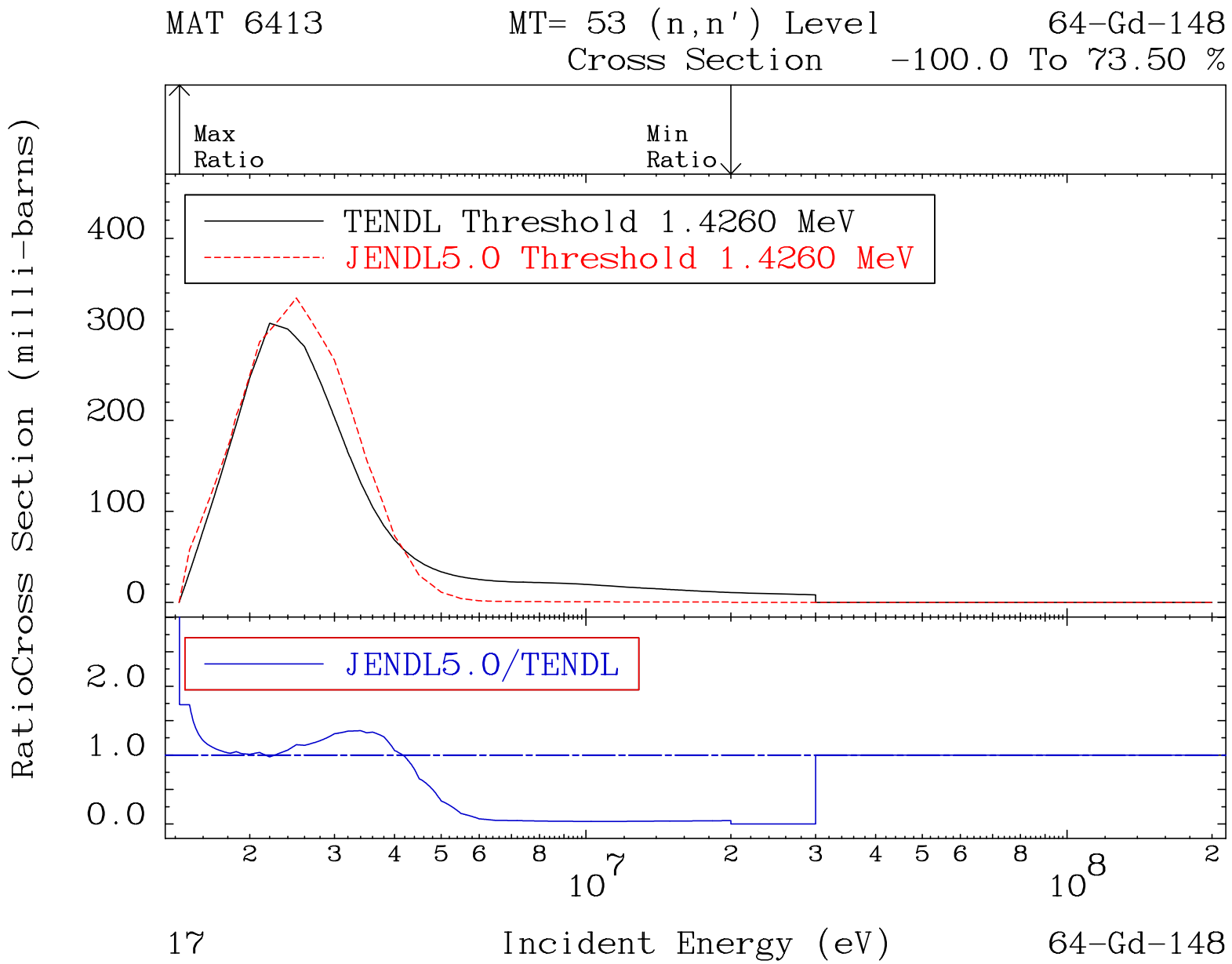

MAT 6413
(n,2n) p
Cross Section
64-Gd-148
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 14.611 MeV
JENDL5.0 Threshold 14.611 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
64-Gd-148

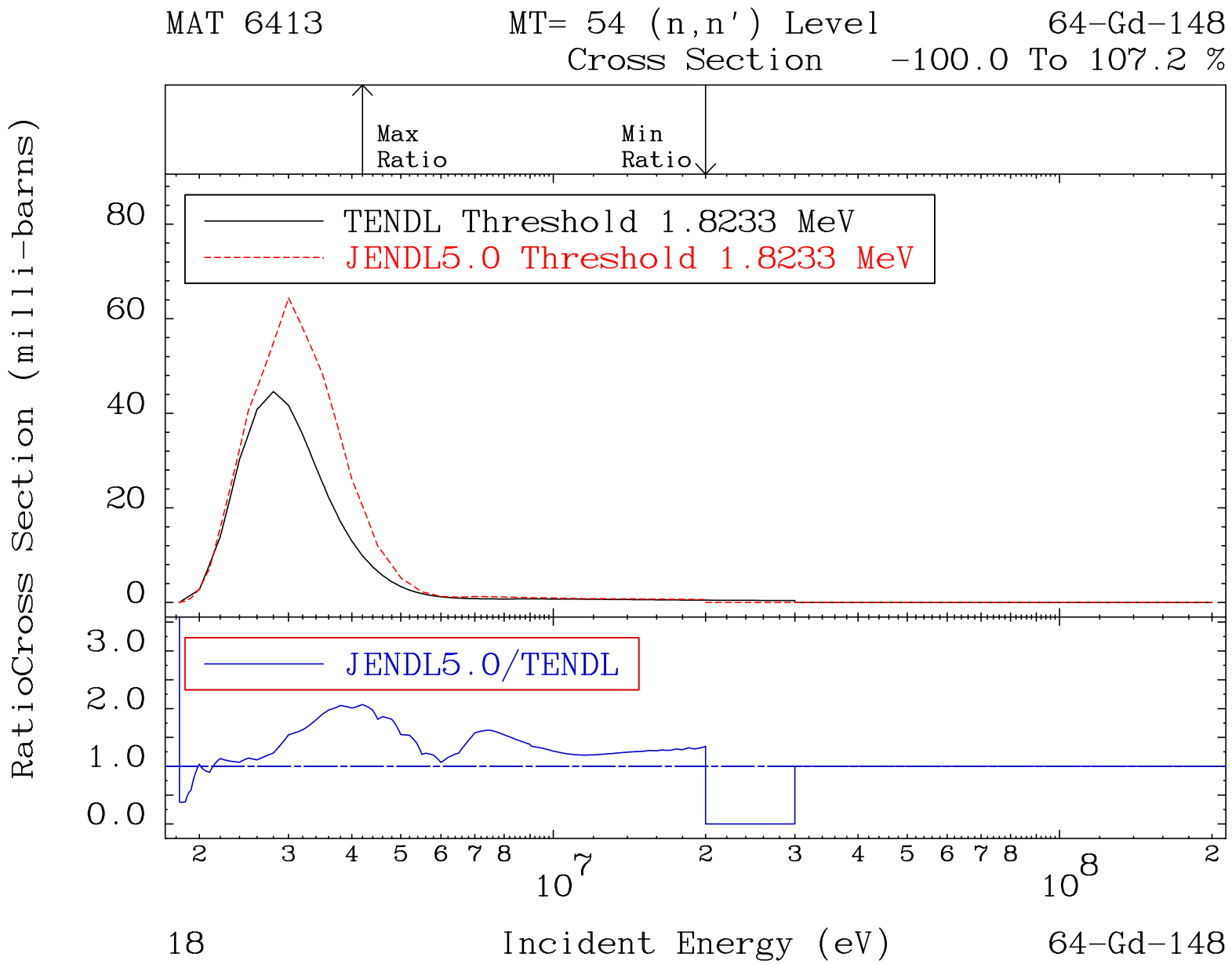

MAT 6413
(n,2n) p
Cross Section
64-Gd-148
-100.0 To 164.1 %
Max Ratio
Min Ratio
TENDL Threshold 9.9182 MeV
JENDL5.0 Threshold 9.9182 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
250
200
150
100
50
0
4
2
0
10^7
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
64-Gd-148

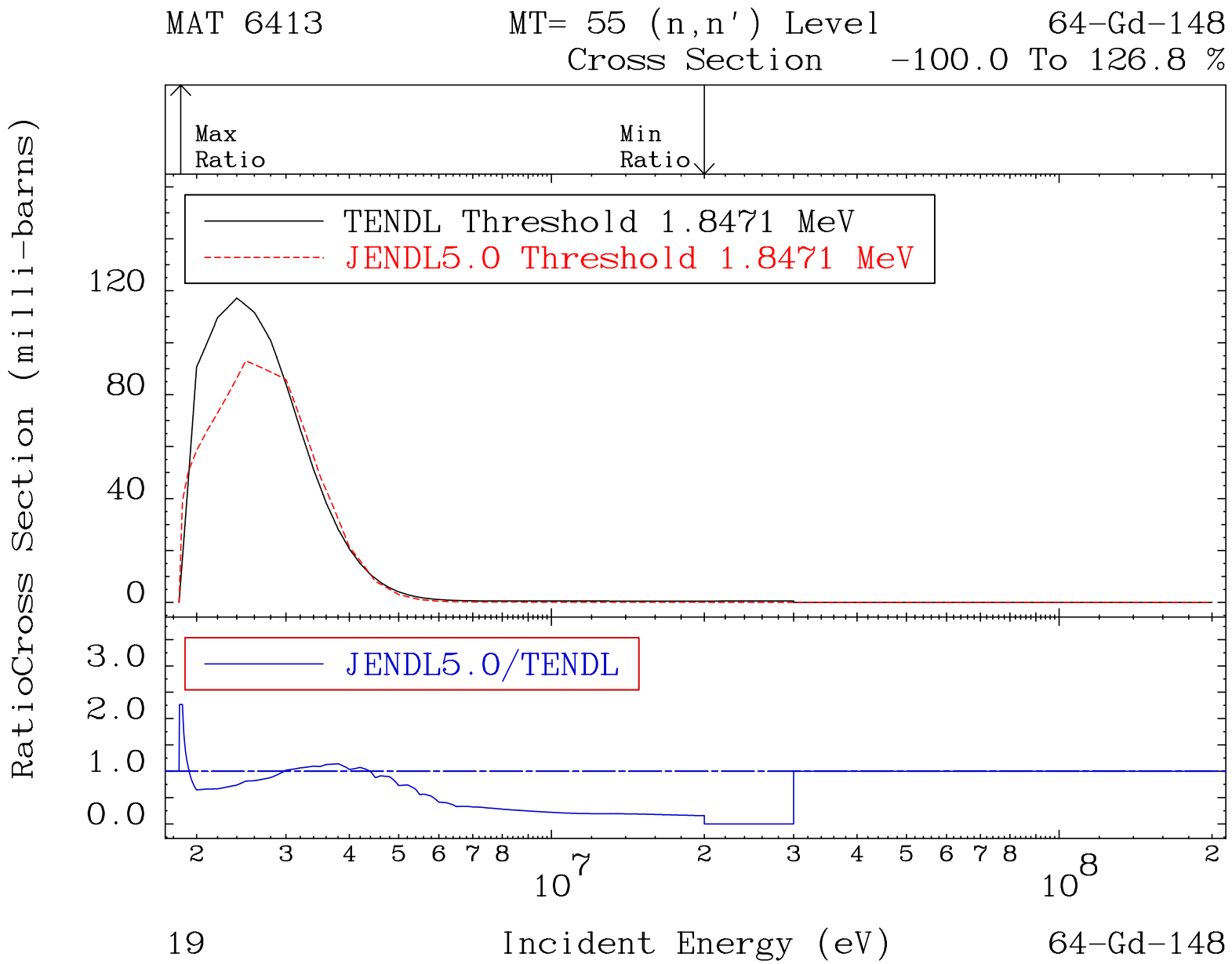

MAT 6413
(n,n') p α
64-Gd-148
Cross Section
-100.0 To 228.3 %
Max Ratio
Min Ratio
TENDL Threshold 3.0432 MeV
JENDL5.0 Threshold 3.0432 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
4
2
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
64-Gd-148

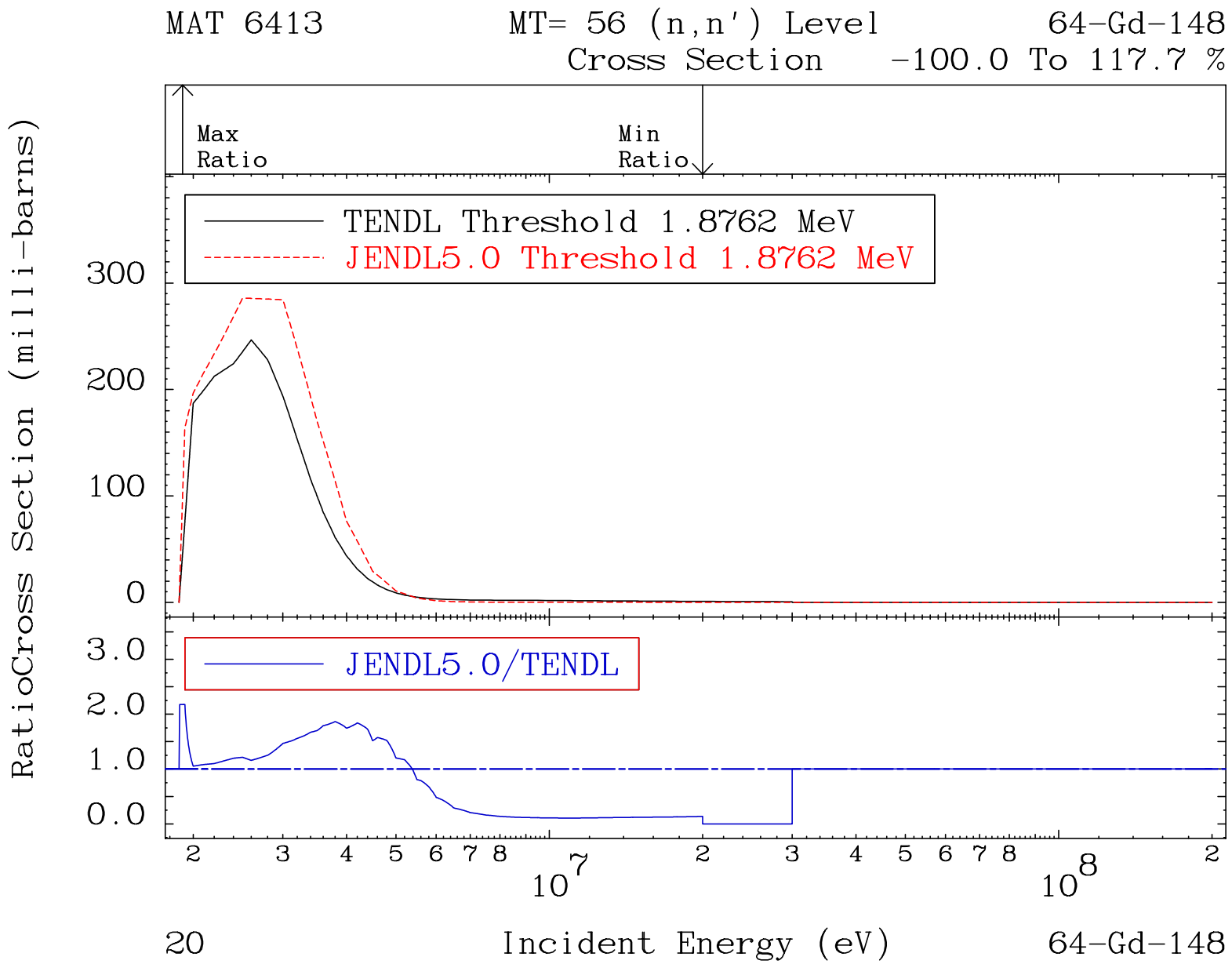

MAT 6413
MT= 51 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 789.78 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
15
64-Gd-148

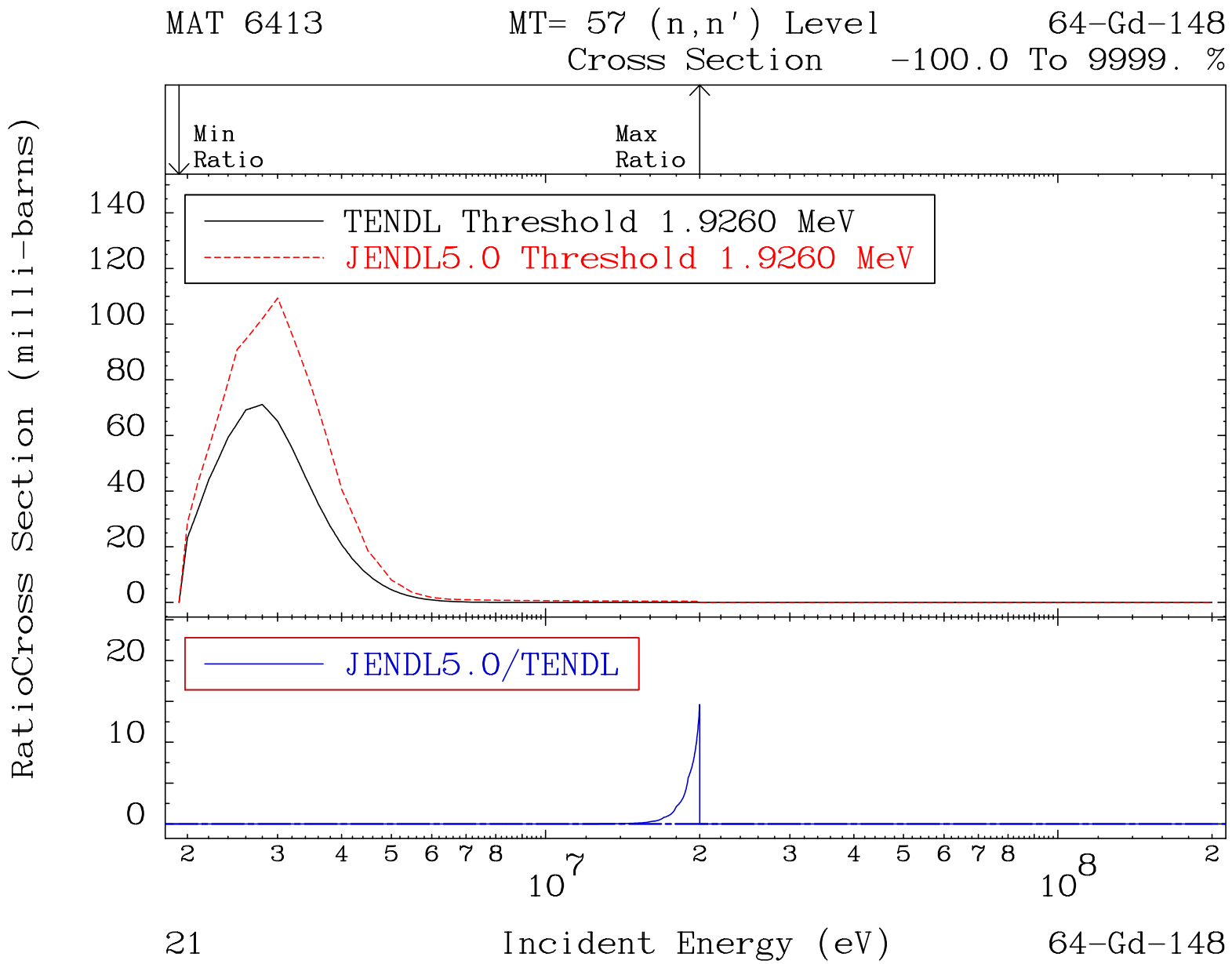

MAT 6413
MT= 52 (n,n') Level
64-Gd-148
Cross Section -100.0 To 65.54 %
Max Ratio
Min Ratio
TENDL Threshold 1.2822 MeV
JENDL5.0 Threshold 1.2822 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
2.0
1.0
0.0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
16
Incident Energy (eV)
64-Gd-148

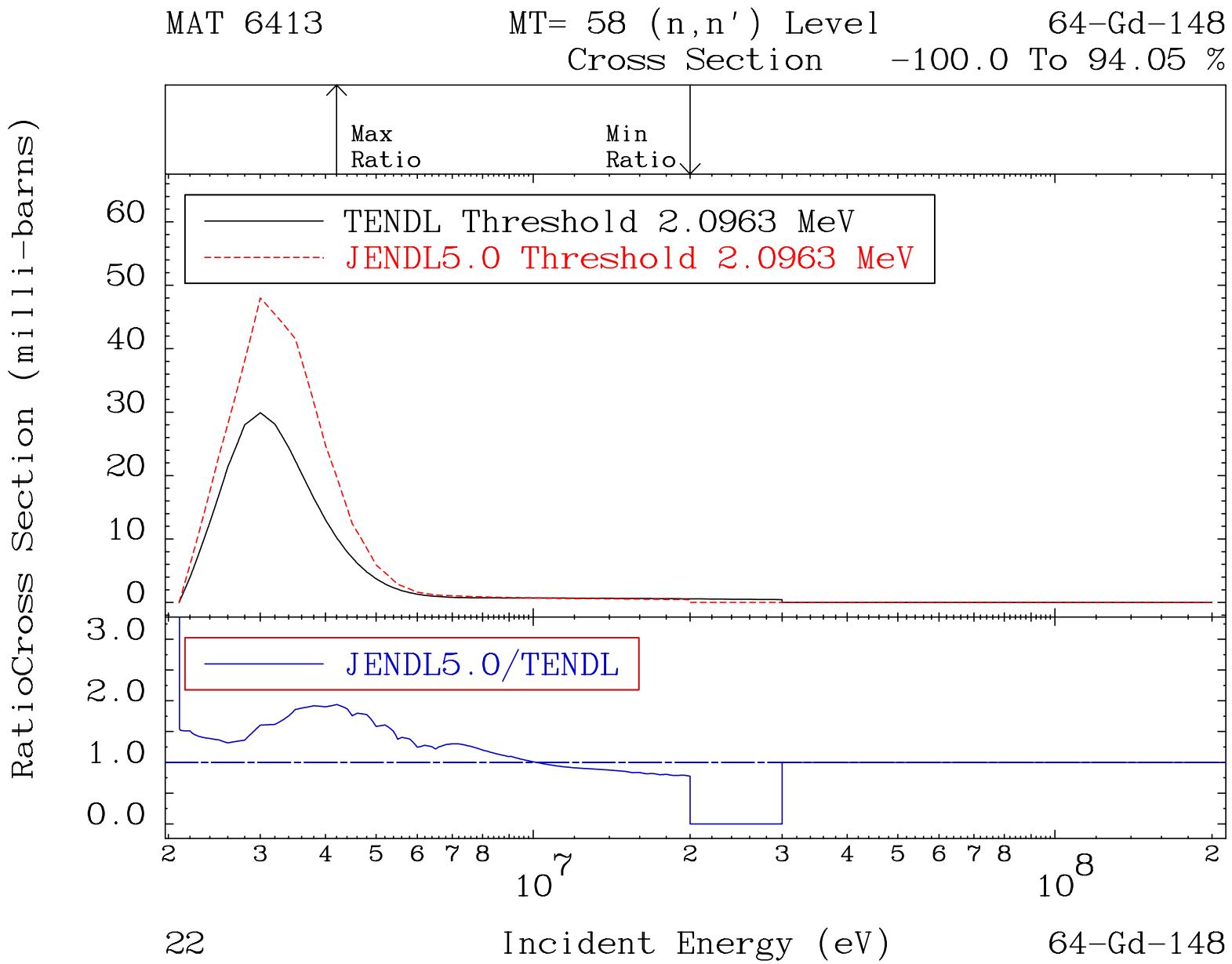

MAT 6413
MT= 53 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 73.50 %
Max Ratio
Min Ratio
TENDL Threshold 1.4260 MeV
JENDL5.0 Threshold 1.4260 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
2.0
1.0
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
17
Incident Energy (eV)
64-Gd-148

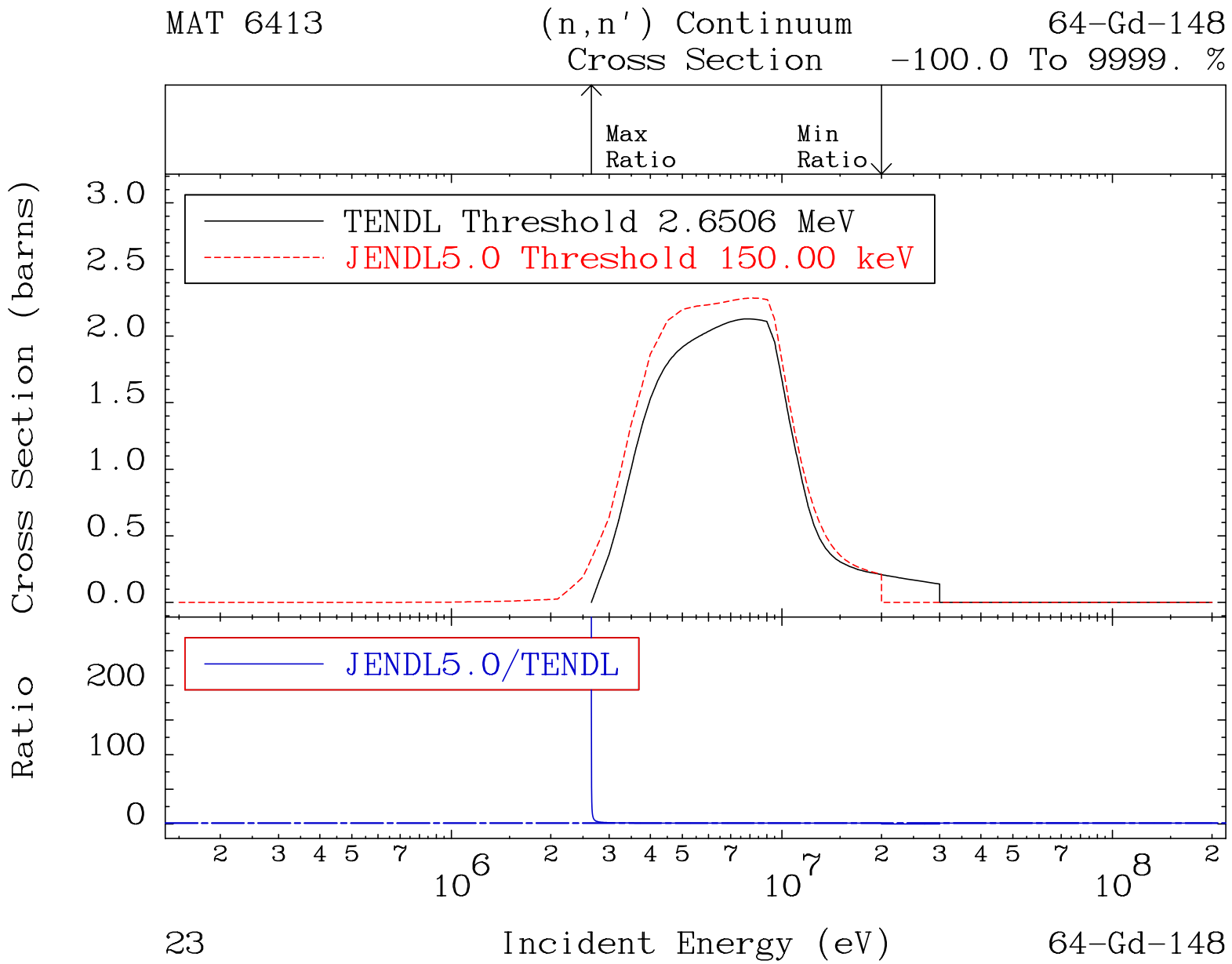

MAT 6413
MT= 54 (n,n') Level
64-Gd-148
Cross Section -100.0 To 107.2 %
Max Ratio
Min Ratio
TENDL Threshold 1.8233 MeV
JENDL5.0 Threshold 1.8233 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
64-Gd-148

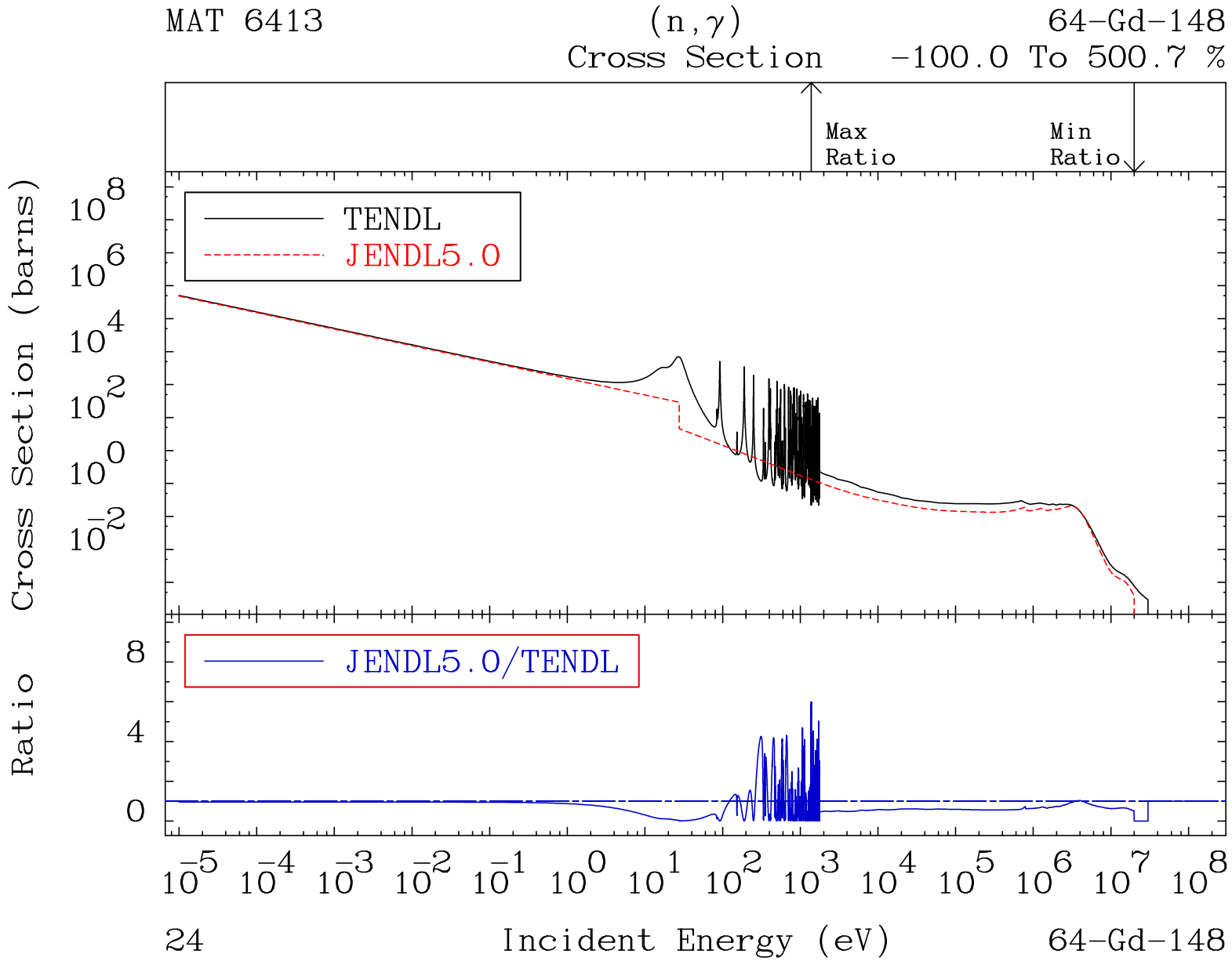

MAT 6413
MT= 55 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 126.8 %
Max Ratio
Min Ratio
TENDL Threshold 1.8471 MeV
JENDL5.0 Threshold 1.8471 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
120
80
40
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
64-Gd-148

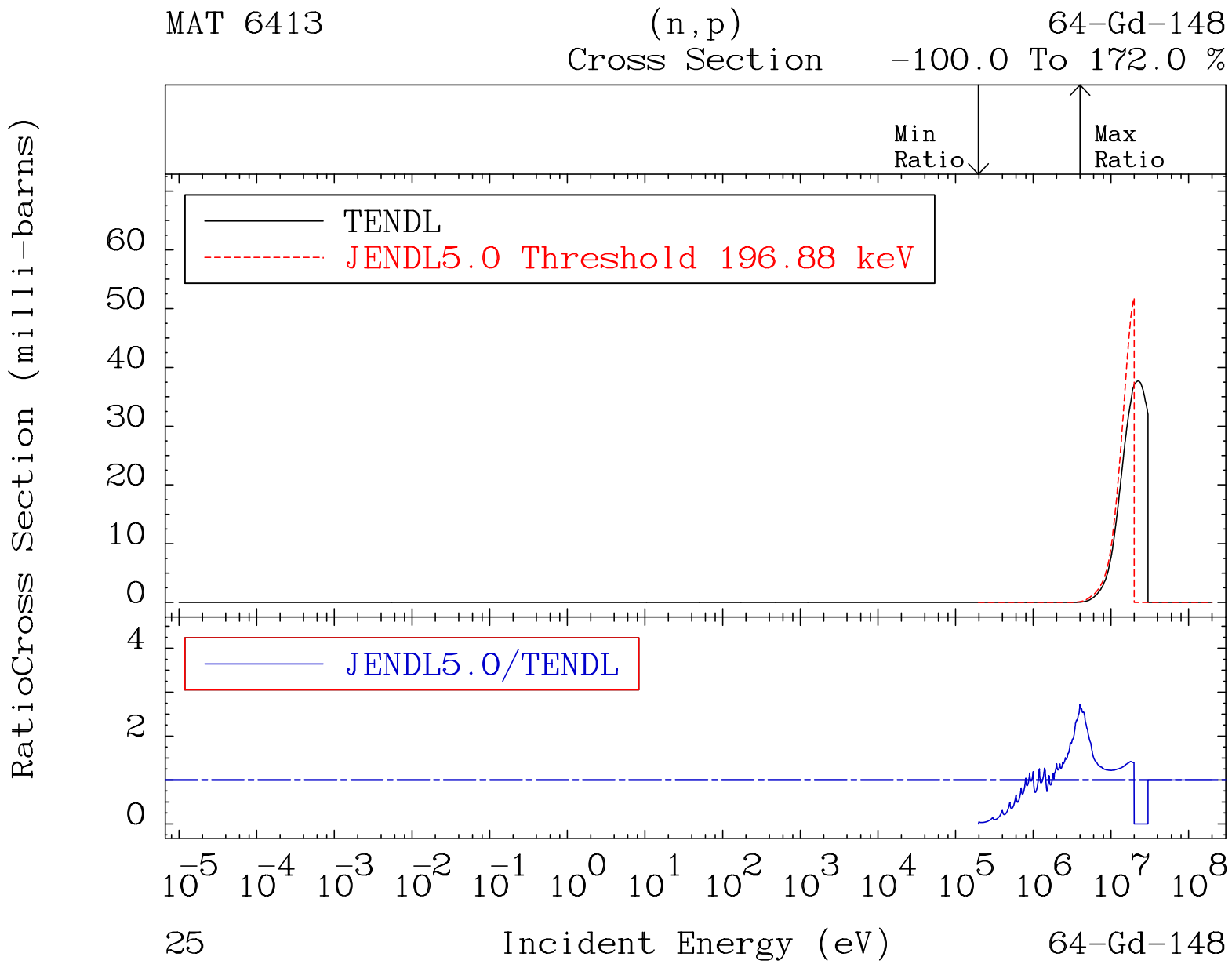

MAT 6413
MT= 56 (n,n') Level
64-Gd-148
Cross Section -100.0 To 117.7 %
Max Ratio
Min Ratio
TENDL Threshold 1.8762 MeV
JENDL5.0 Threshold 1.8762 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
64-Gd-148

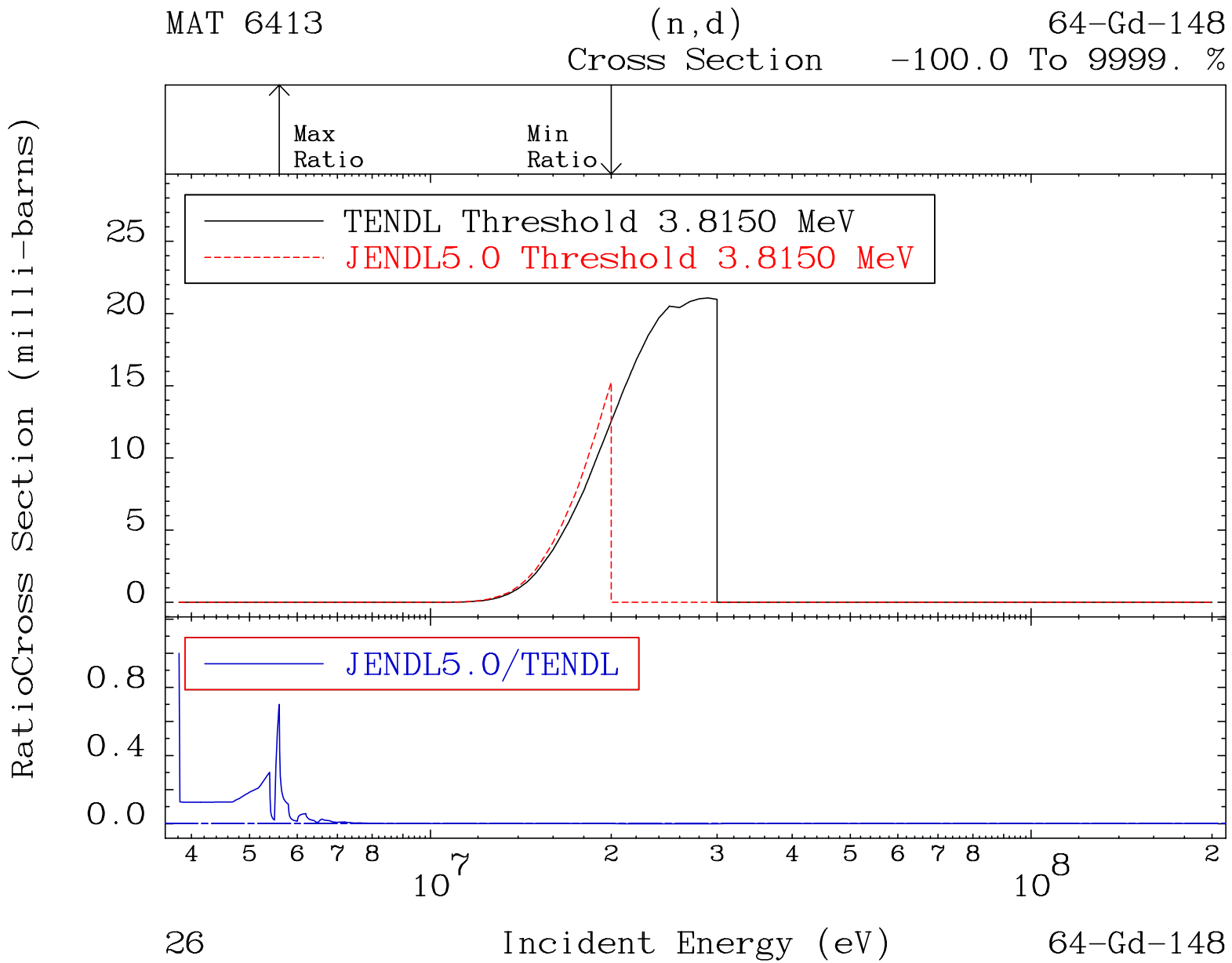

MAT 6413
MT= 57 (n,n') Level
64-Gd-148
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9260 MeV
JENDL5.0 Threshold 1.9260 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
20
10
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
64-Gd-148

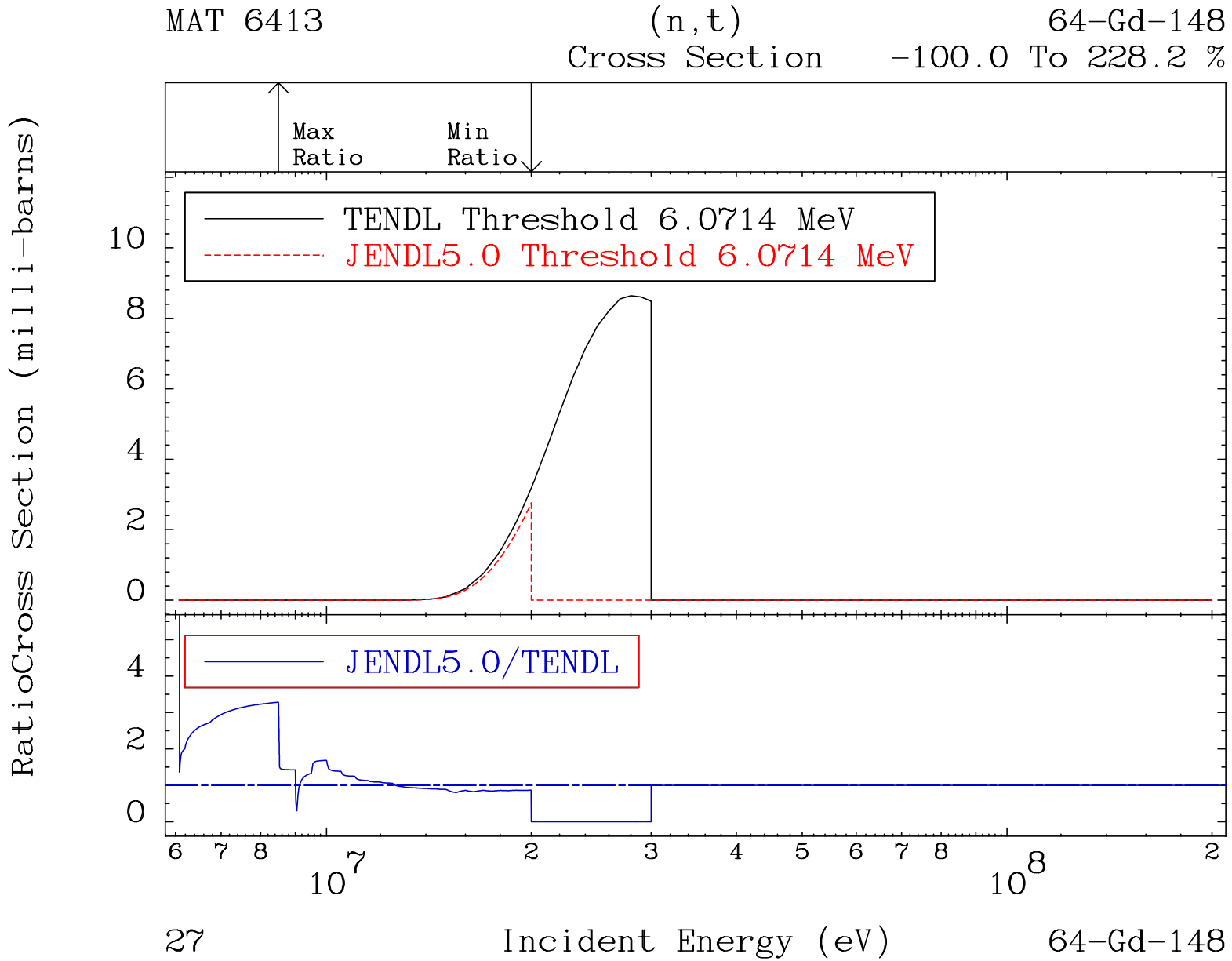

MAT 6413
MT= 58 (n,n') Level
64-Gd-148
Cross Section
-100.0 To 94.05 %
Max Ratio
Min Ratio
TENDL Threshold 2.0963 MeV
JENDL5.0 Threshold 2.0963 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
64-Gd-148

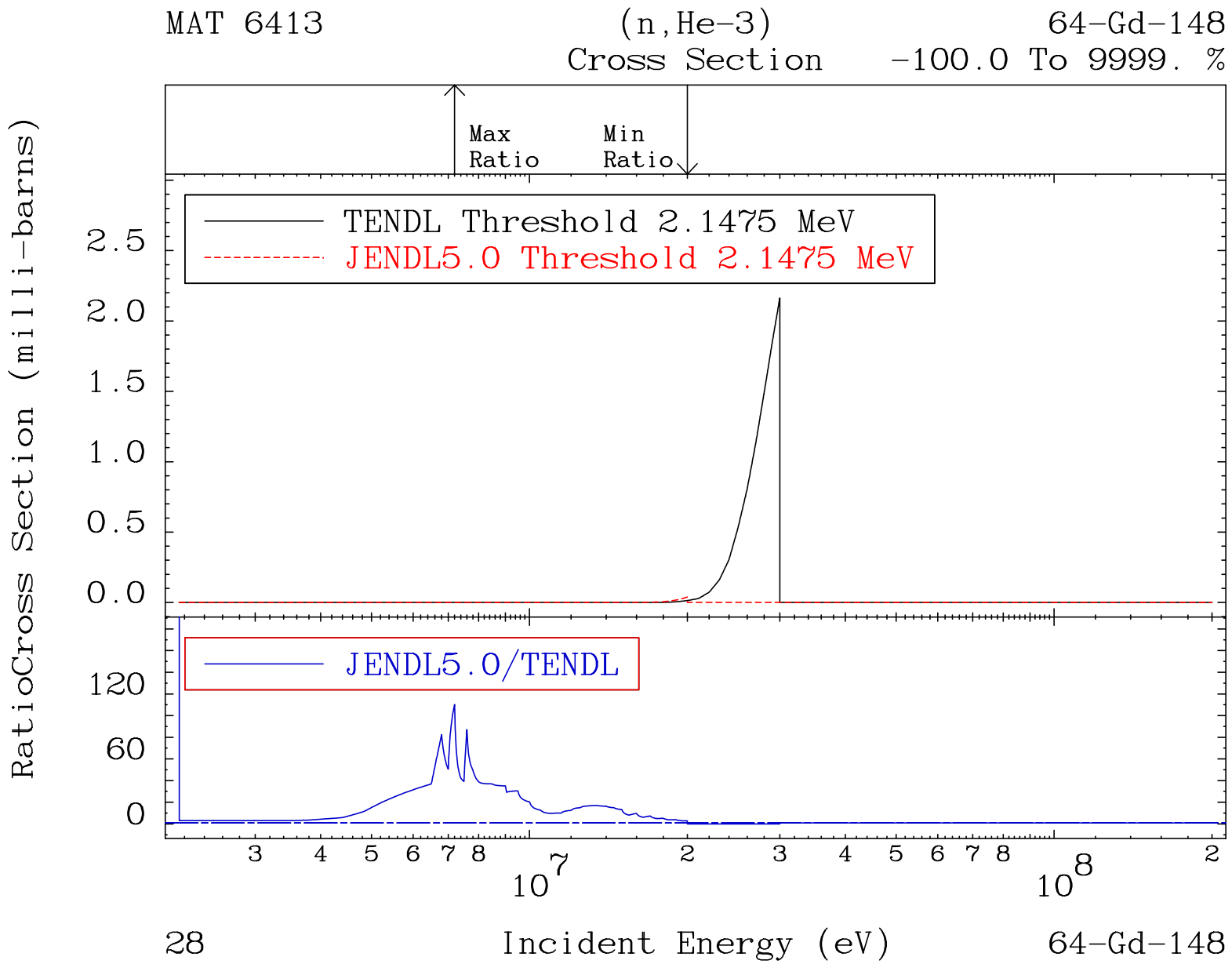

MAT 6413
(n,n') Continuum
Cross Section
64-Gd-148
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.6506 MeV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
200
100
0
2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
Incident Energy (eV)
23
64-Gd-148

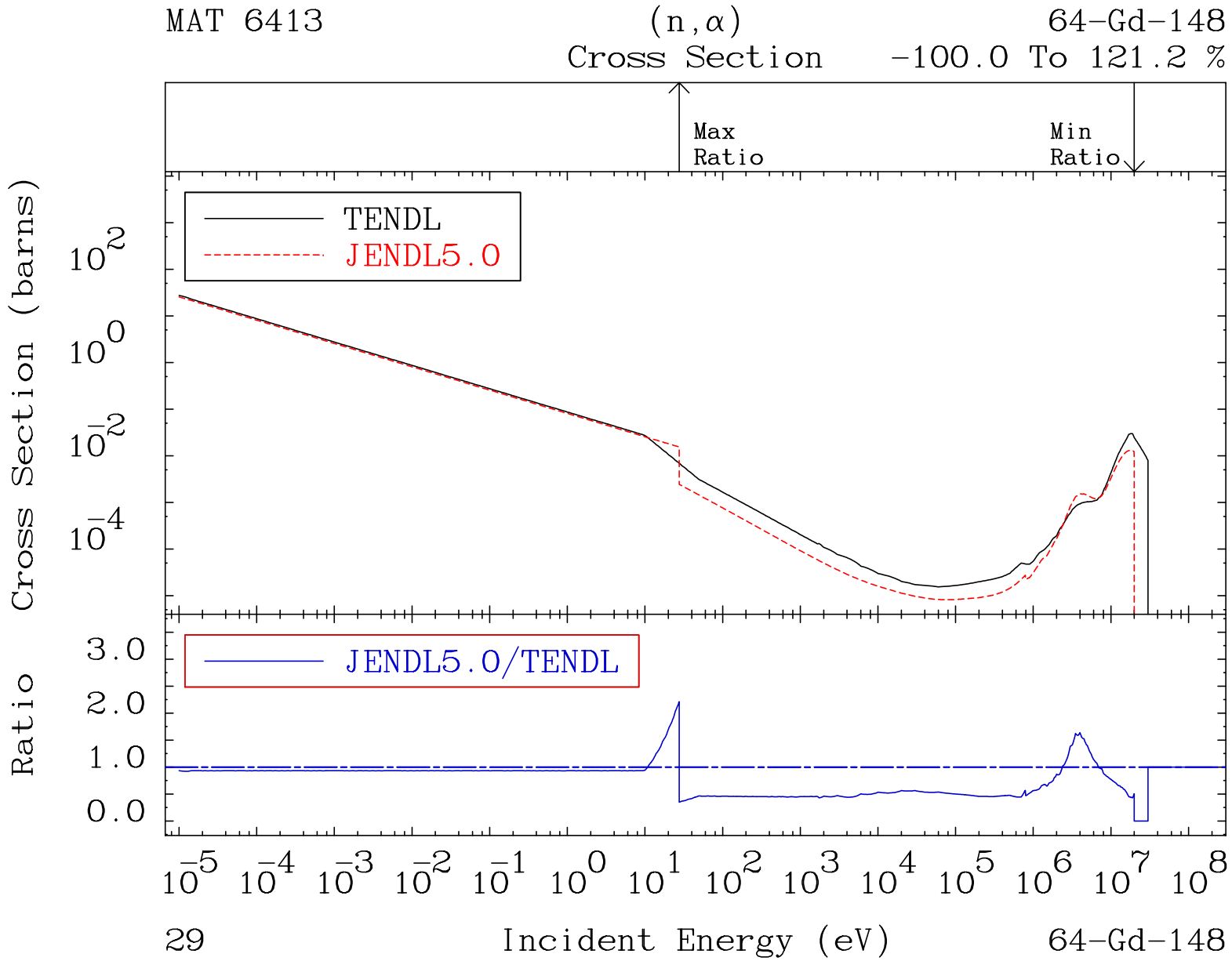

MAT 6413
(n,γ)
Cross Section
64-Gd-148
-100.0 To 500.7 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
24
64-Gd-148

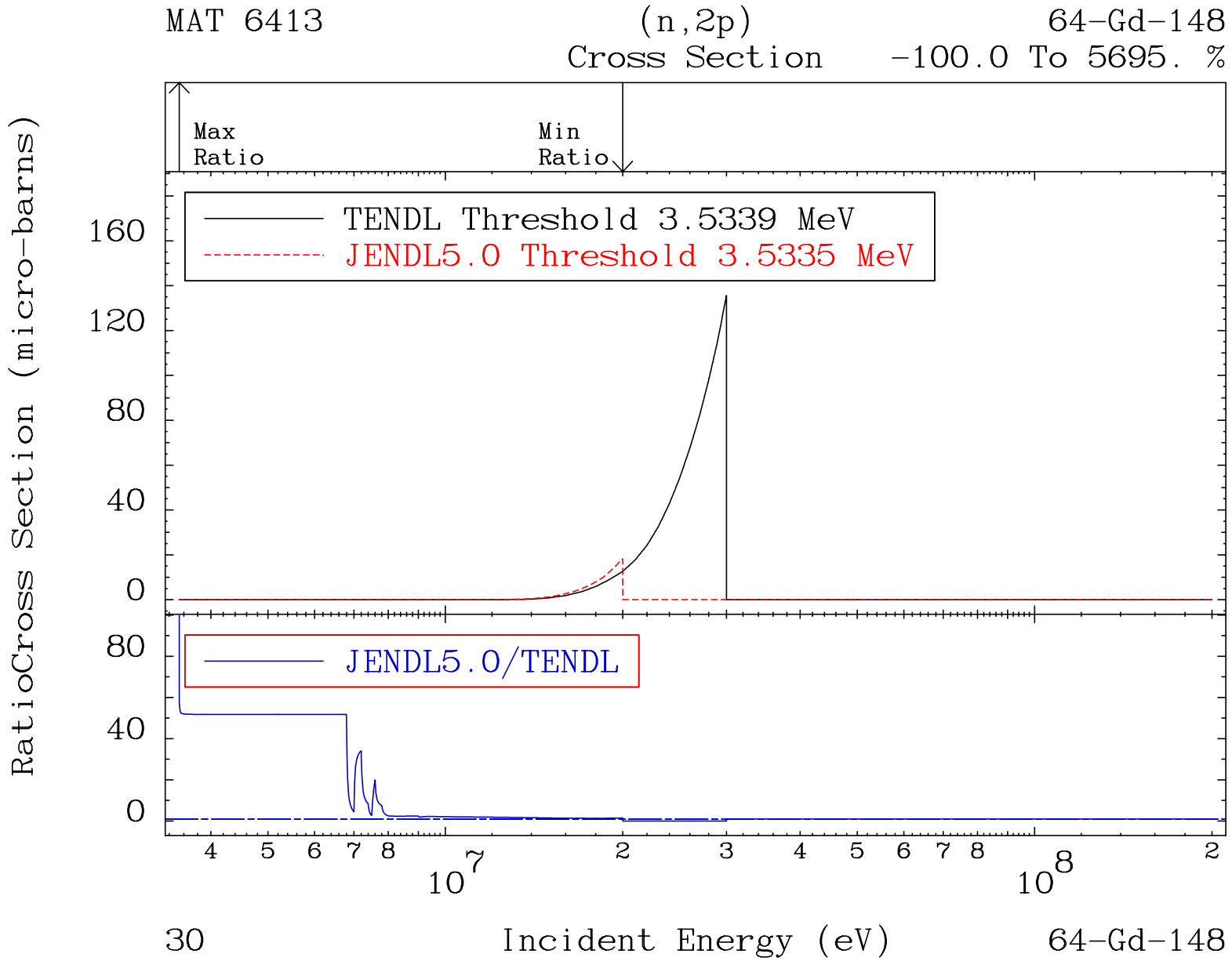

MAT 6413
(n,p)
Cross Section
64-Gd-148
-100.0 To 172.0 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 196.88 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
4
2
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
25
Incident Energy (eV)
64-Gd-148

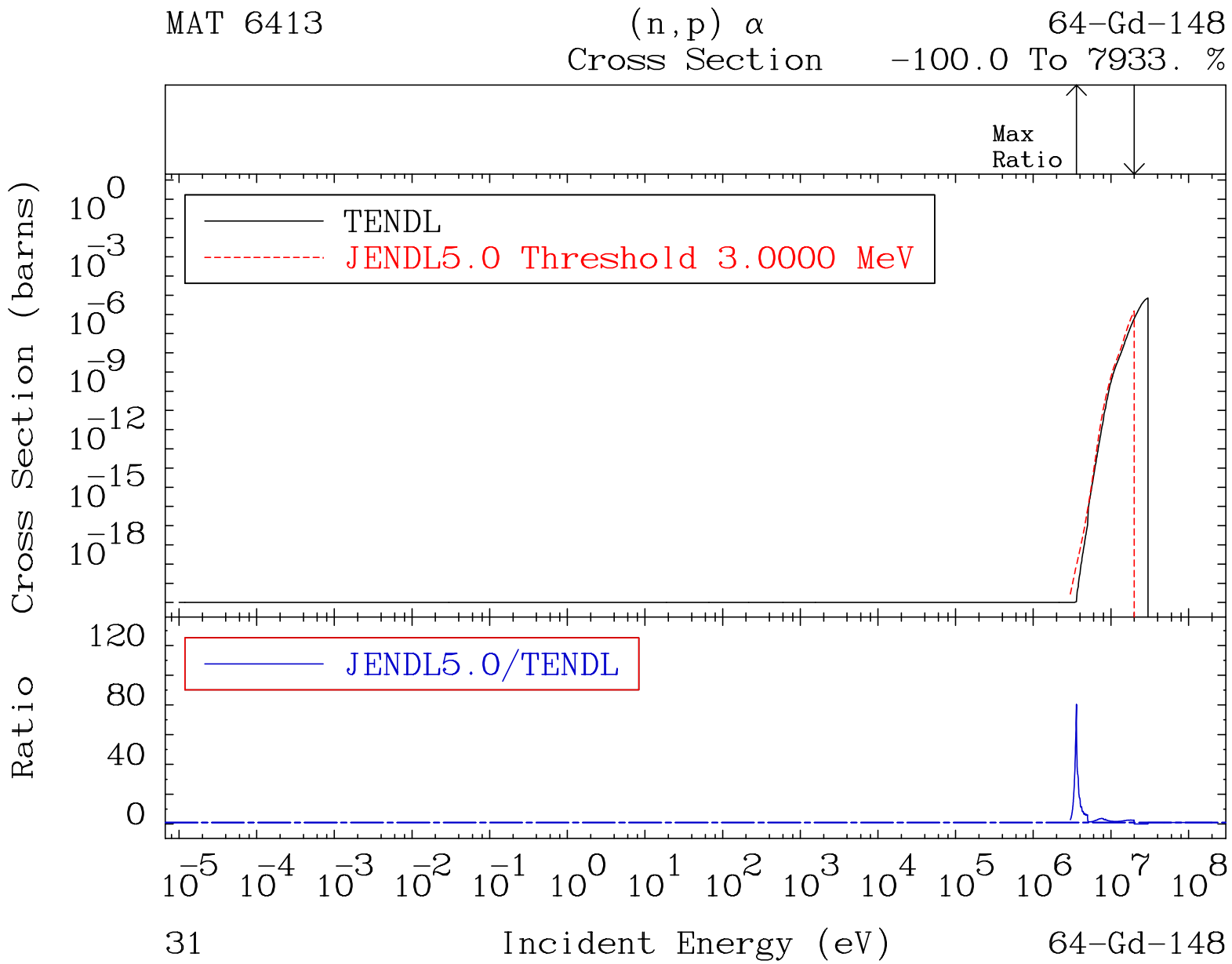

MAT 6413
(n,d)
64-Gd-148
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.8150 MeV
JENDL5.0 Threshold 3.8150 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
0.8
0.4
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
64-Gd-148

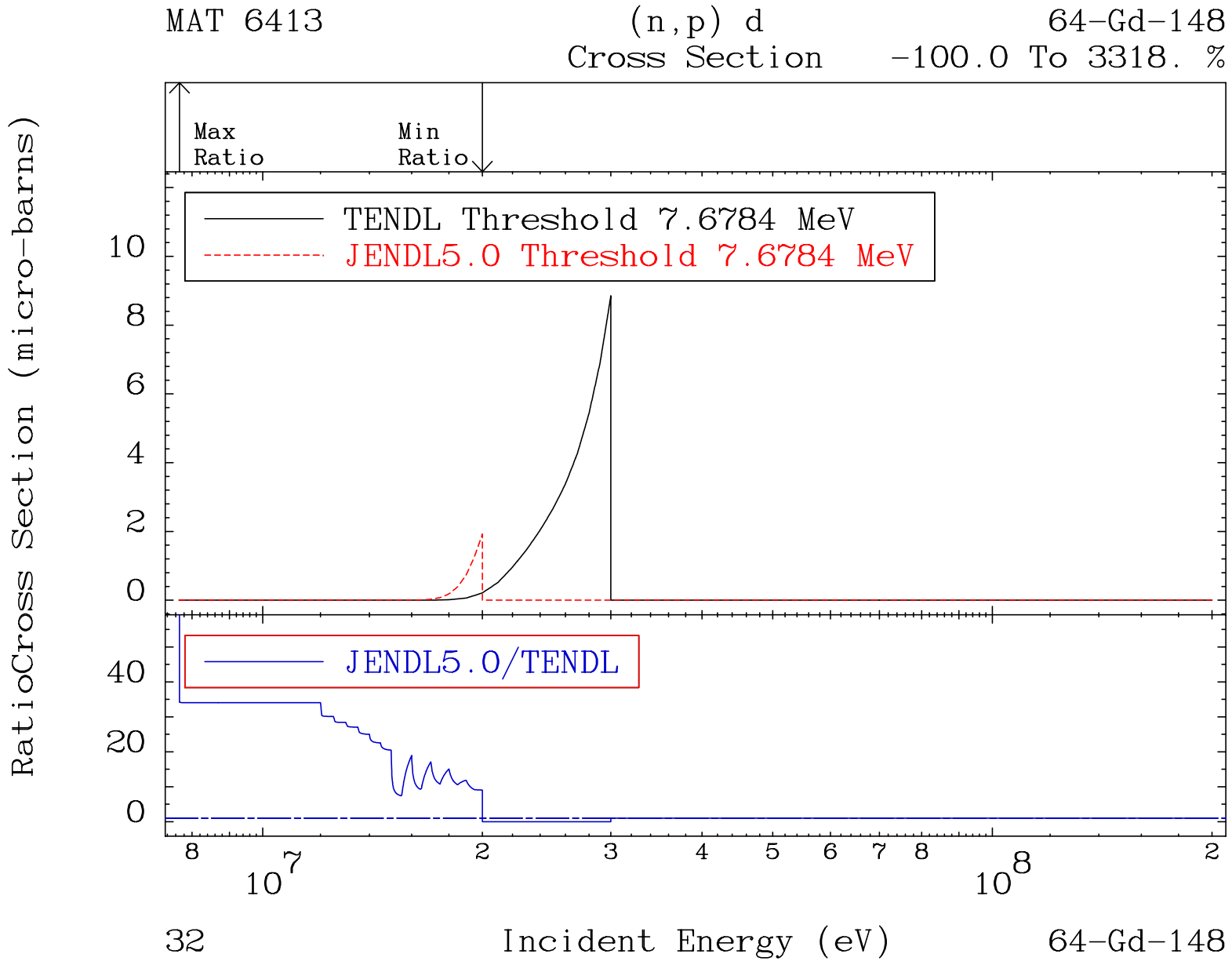

MAT 6413
(n,t)
Cross Section
64-Gd-148
-100.0 To 228.2 %
Max Ratio
Min Ratio
TENDL Threshold 6.0714 MeV
JENDL5.0 Threshold 6.0714 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
27
64-Gd-148

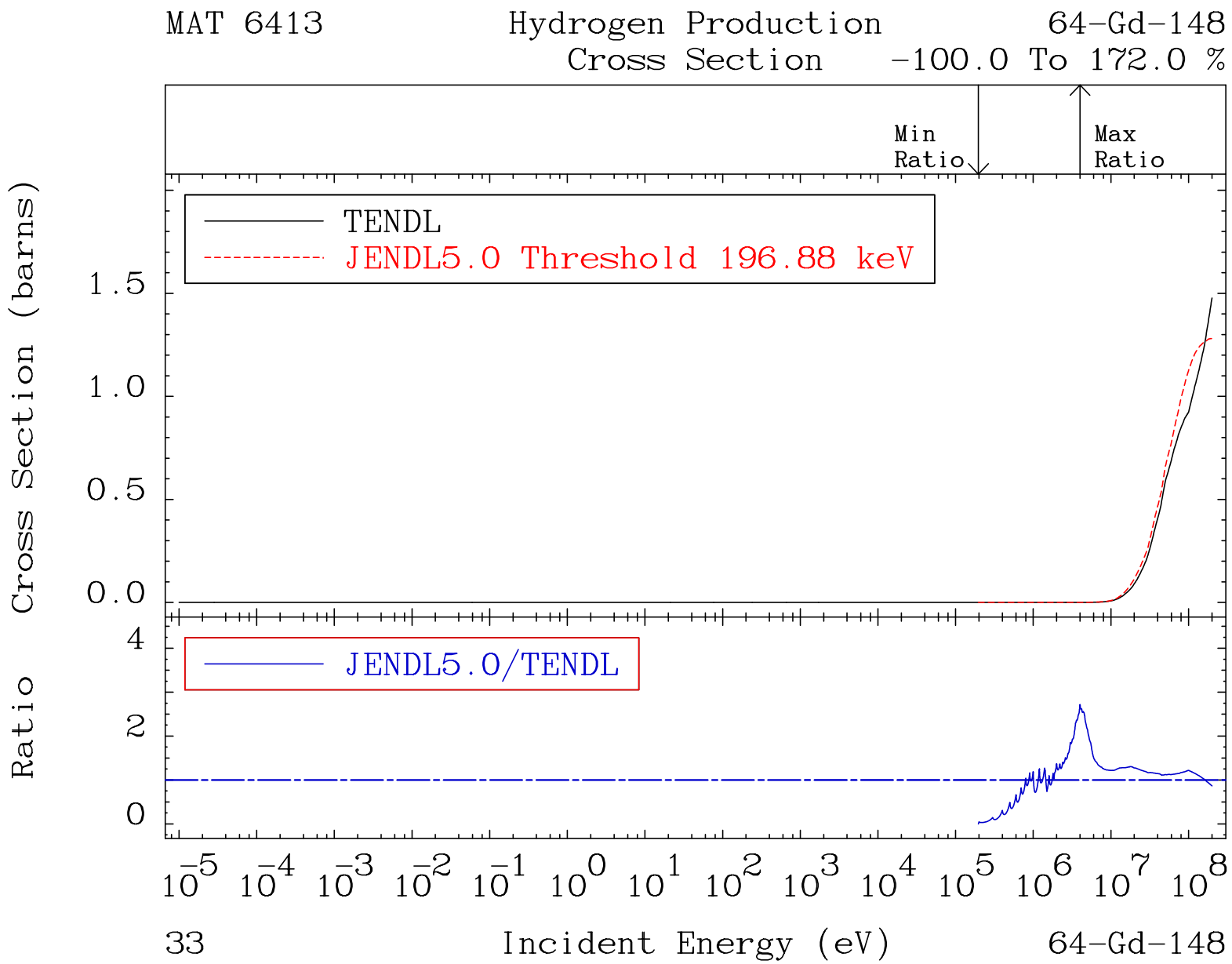

MAT 6413
(n,He-3)
64-Gd-148
Cross Section
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.1475 MeV
JENDL5.0 Threshold 2.1475 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
120
60
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
28
Incident Energy (eV)
64-Gd-148

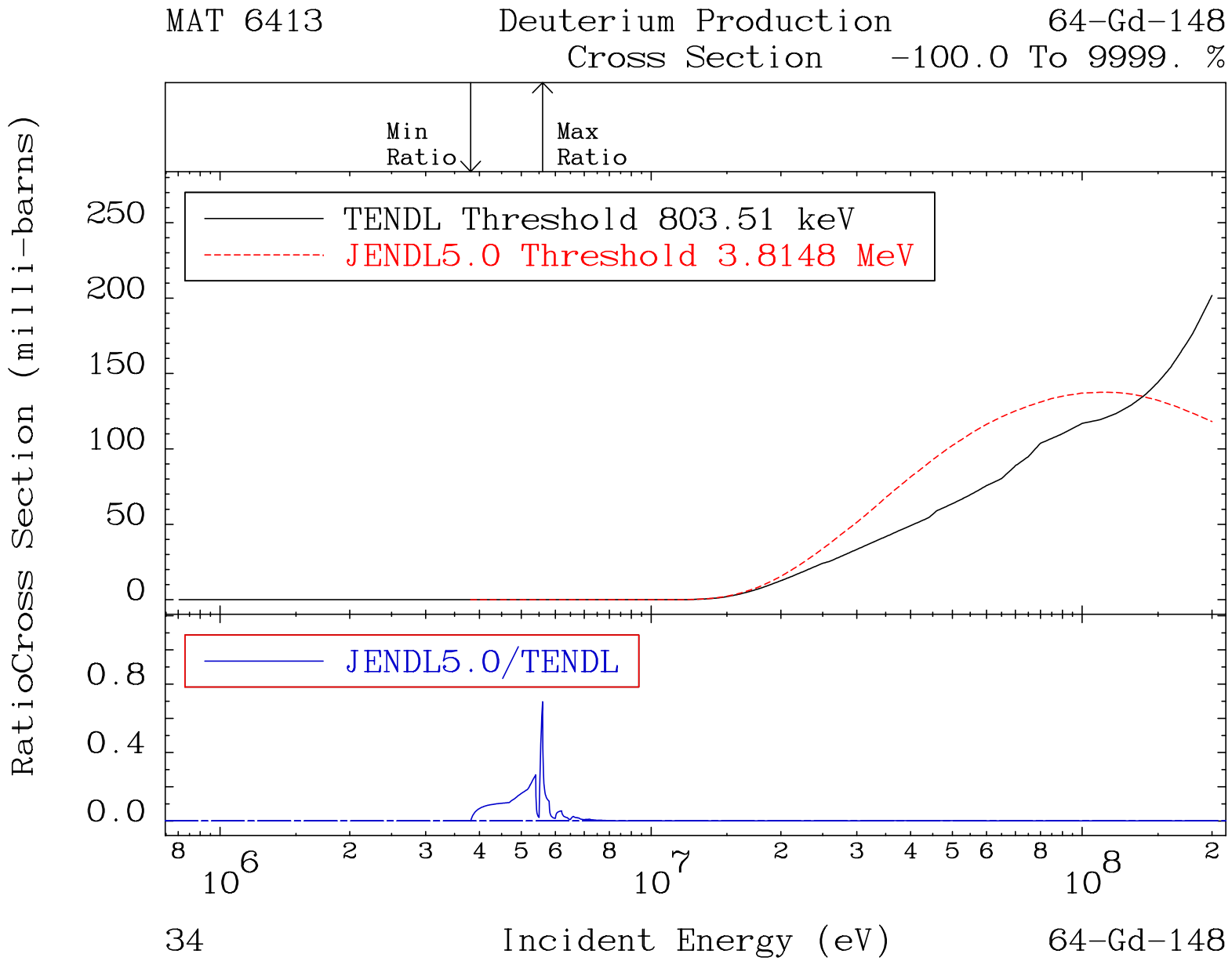

MAT 6413
(n,α)
Cross Section
64-Gd-148
-100.0 To 121.2 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
29
64-Gd-148

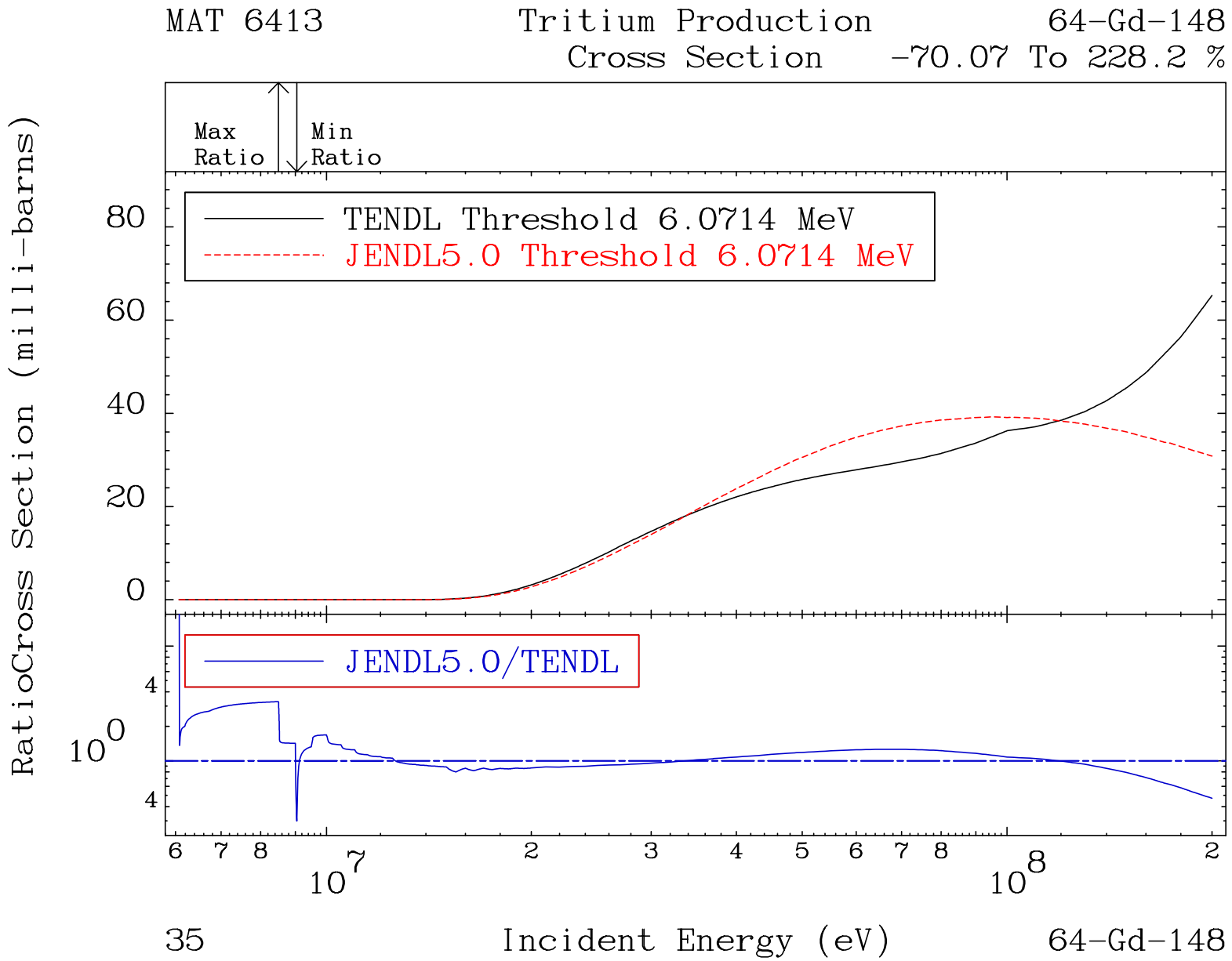

MAT 6413
(n,2p)
64-Gd-148
Cross Section
-100.0 To 5695. %
Max Ratio
Min Ratio
TENDL Threshold 3.5339 MeV
JENDL5.0 Threshold 3.5335 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
160
120
80
40
0
80
40
0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
64-Gd-148

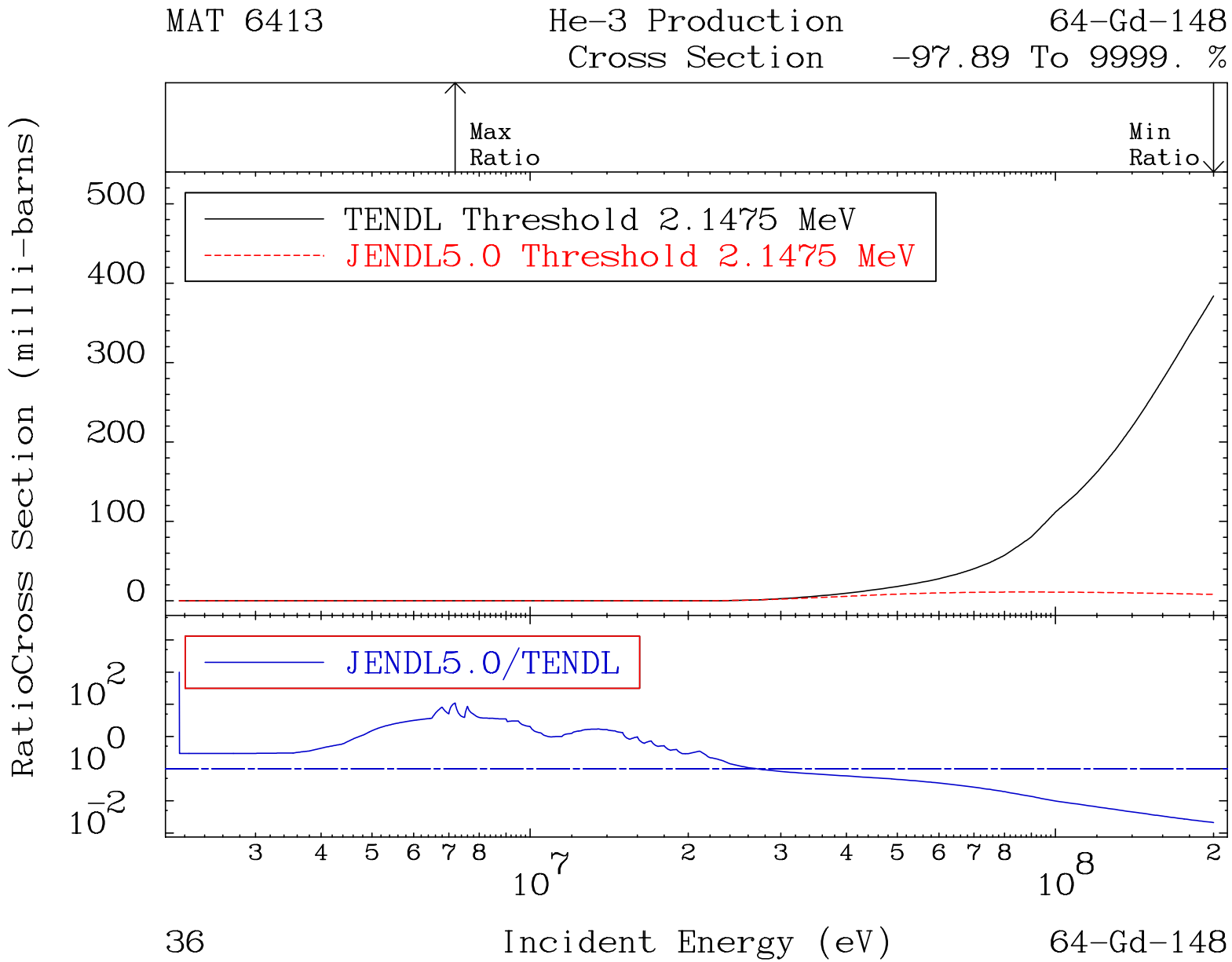

MAT 6413
(n,p) α
Cross Section
64-Gd-148
-100.0 To 7933. %
Max
Ratio
TENDL
JENDL5.0 Threshold 3.0000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
31
64-Gd-148

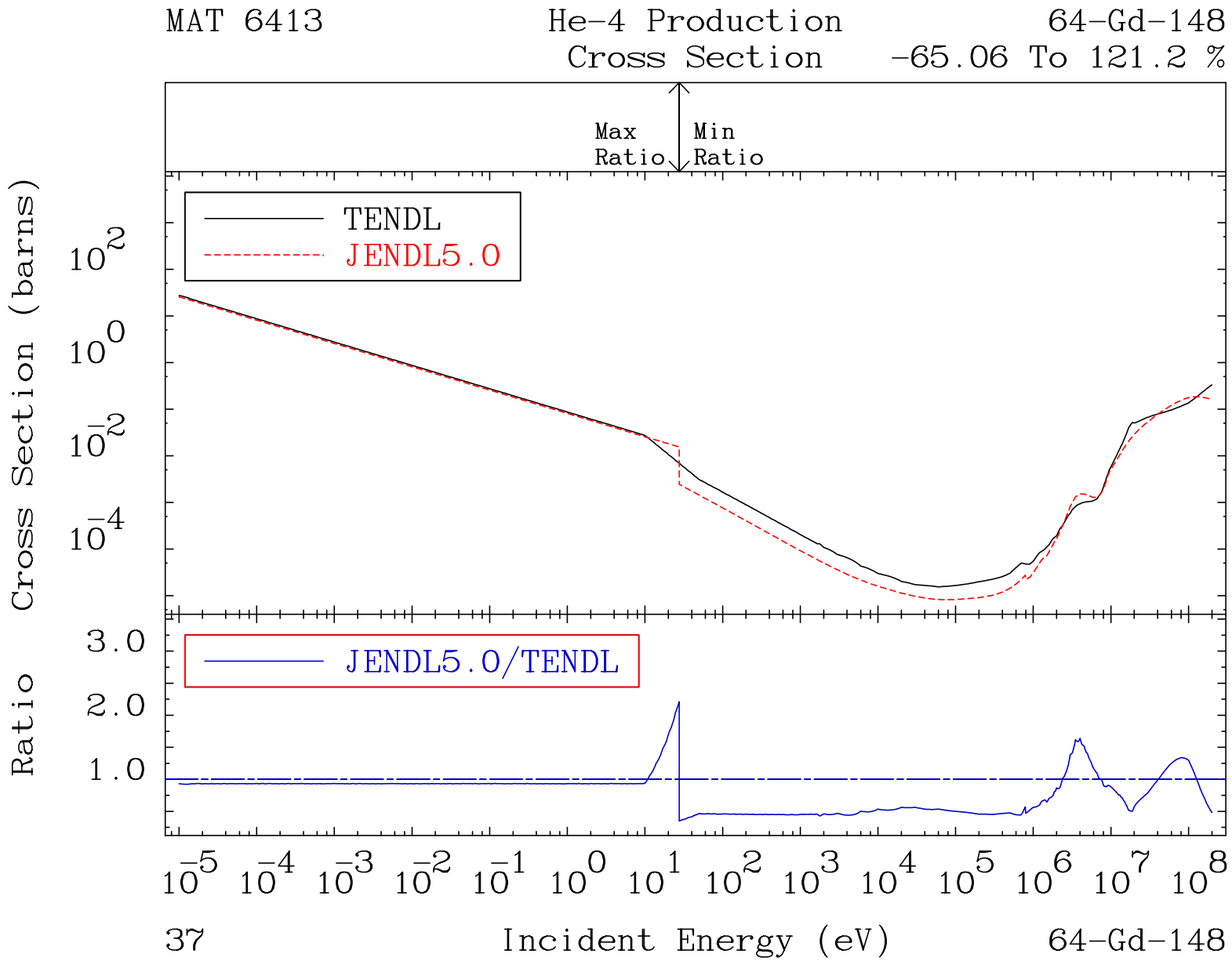

MAT 6413
(n,p) d
Cross Section
64-Gd-148
-100.0 To 3318. %
Max Ratio
Min Ratio
TENDL Threshold 7.6784 MeV
JENDL5.0 Threshold 7.6784 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
32
64-Gd-148

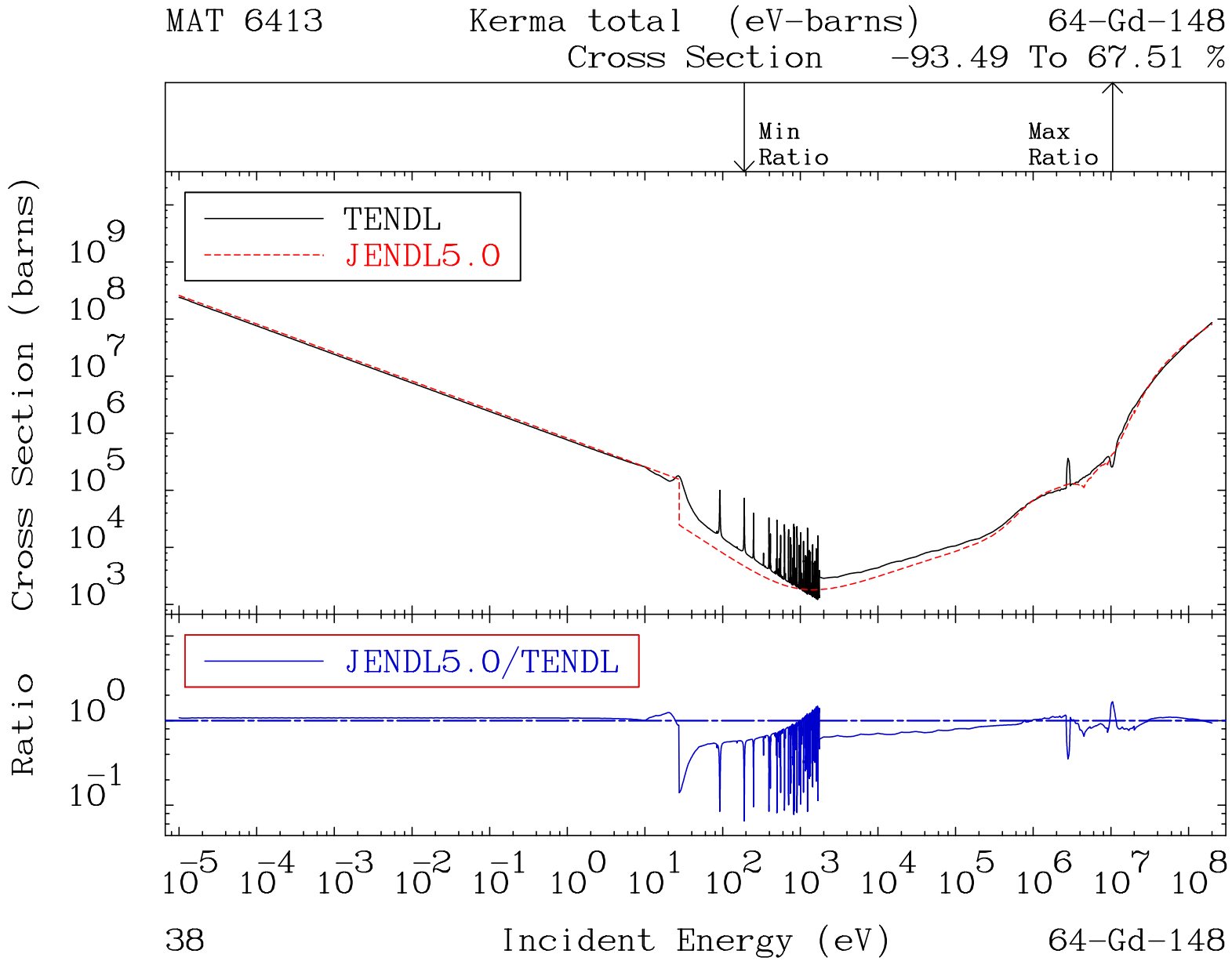

MAT 6413
Hydrogen Production
64-Gd-148
Cross Section
-100.0 To 172.0 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 196.88 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
4
2
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
33
Incident Energy (eV)
64-Gd-148

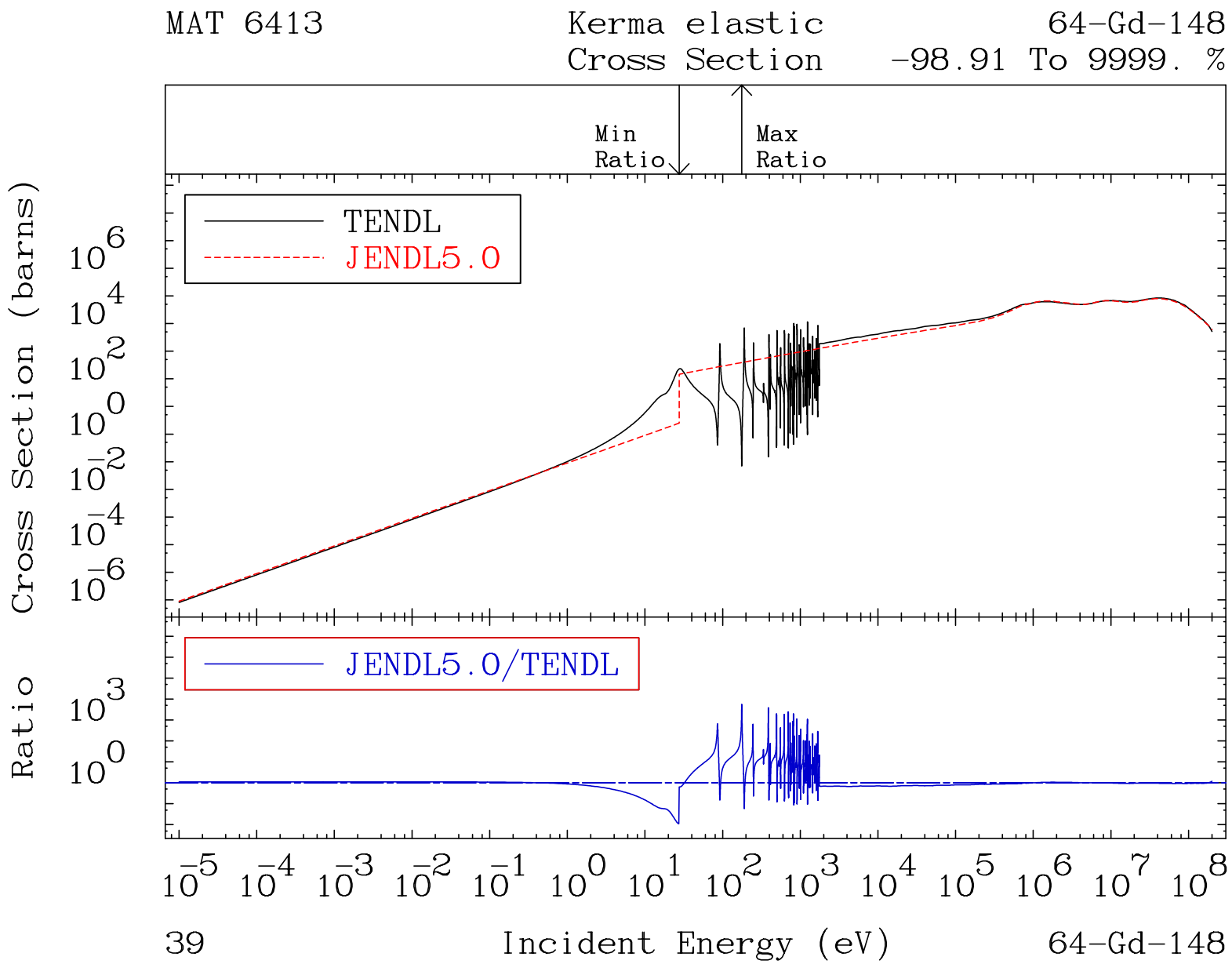

MAT 6413
Deuterium Production
64-Gd-148
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 803.51 keV
JENDL5.0 Threshold 3.8148 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
0.8
0.4
0.0
8
2
3
4
5
6
8
10^6
10^7
10^8
34
Incident Energy (eV)
64-Gd-148

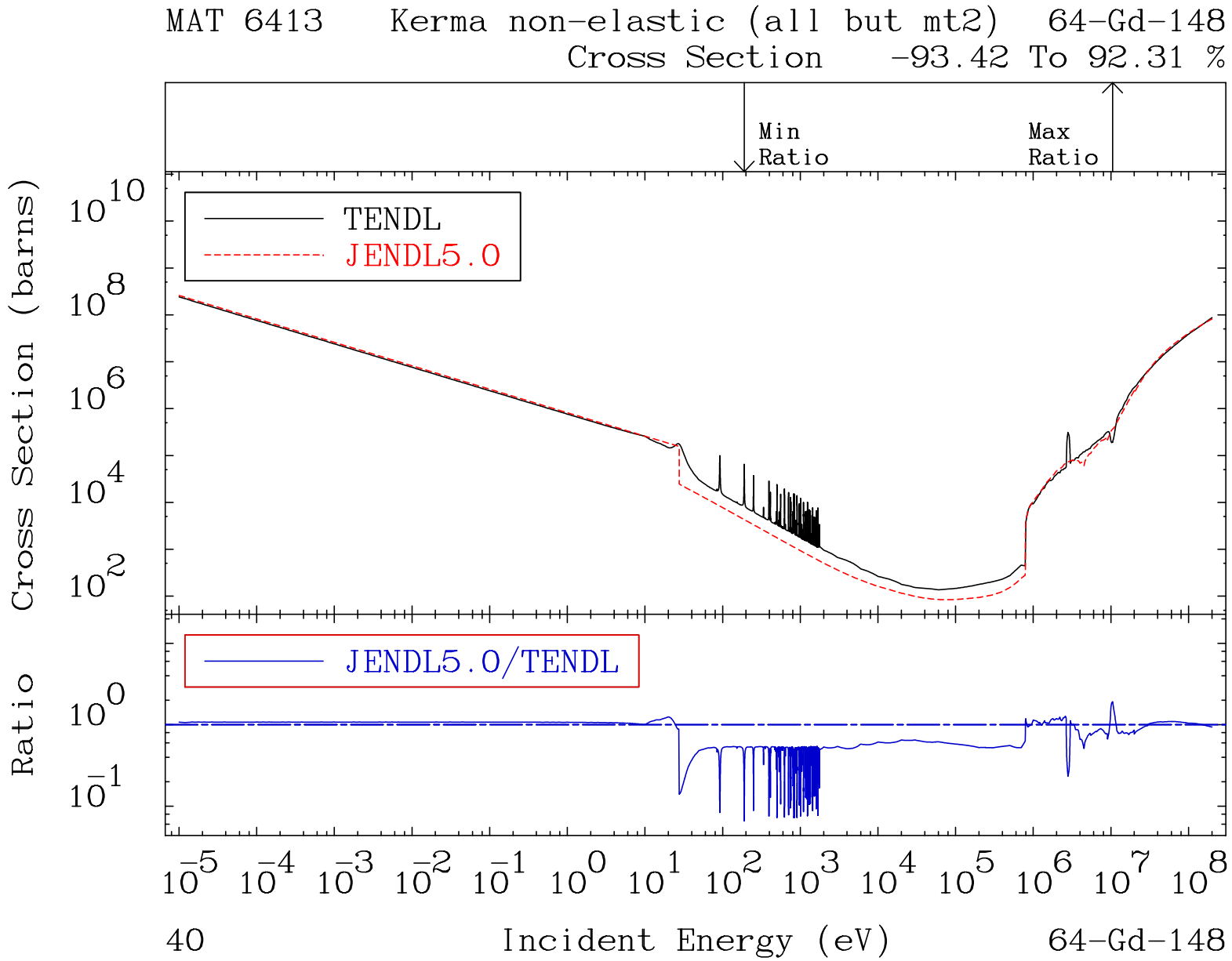

MAT 6413
Tritium Production
Cross Section
64-Gd-148
-70.07 To 228.2 %
Max Ratio
Min Ratio
TENDL Threshold 6.0714 MeV
JENDL5.0 Threshold 6.0714 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
35
64-Gd-148

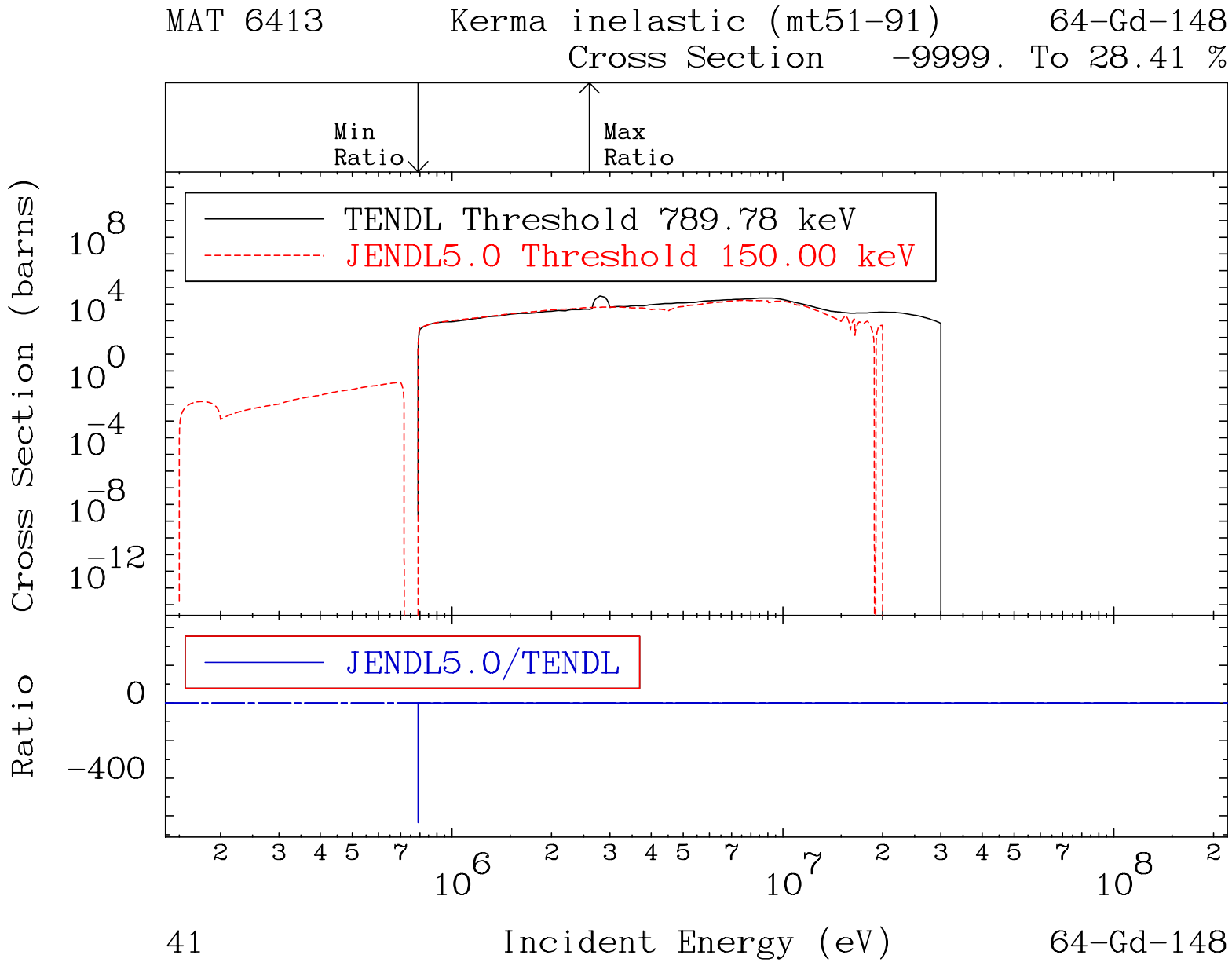

MAT 6413
He-3 Production
Cross Section
64-Gd-148
-97.89 To 9999. %
Max
Ratio
Min
Ratio
TENDL Threshold 2.1475 MeV
JENDL5.0 Threshold 2.1475 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
10^2
10^0
10^-2
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
36
Incident Energy (eV)
64-Gd-148

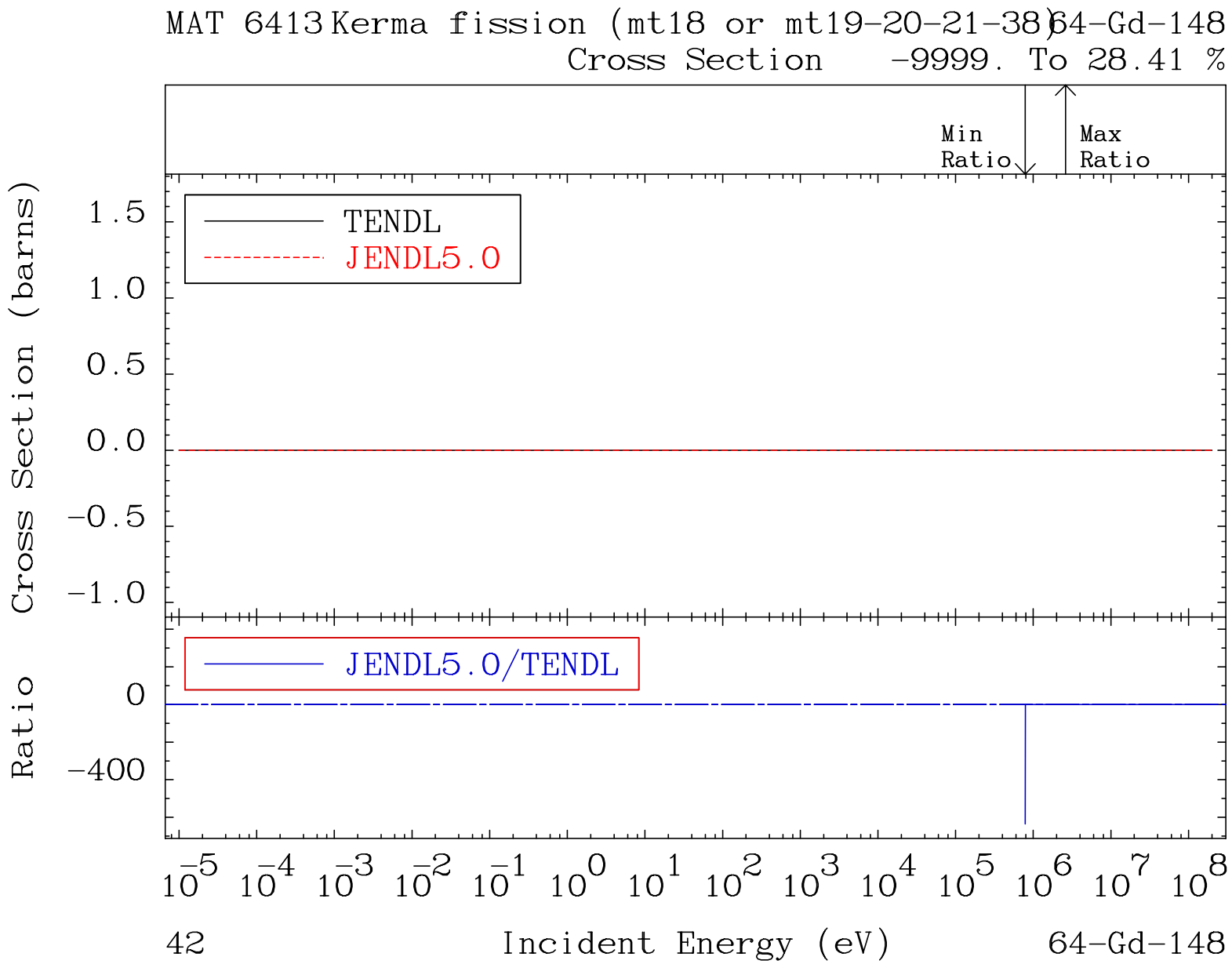

MAT 6413
He-4 Production
Cross Section
64-Gd-148
-65.06 To 121.2 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^2
10^0
10^-2
10^-4
JENDL5.0/TENDL
Ratio
3.0
2.0
1.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
37
Incident Energy (eV)
64-Gd-148

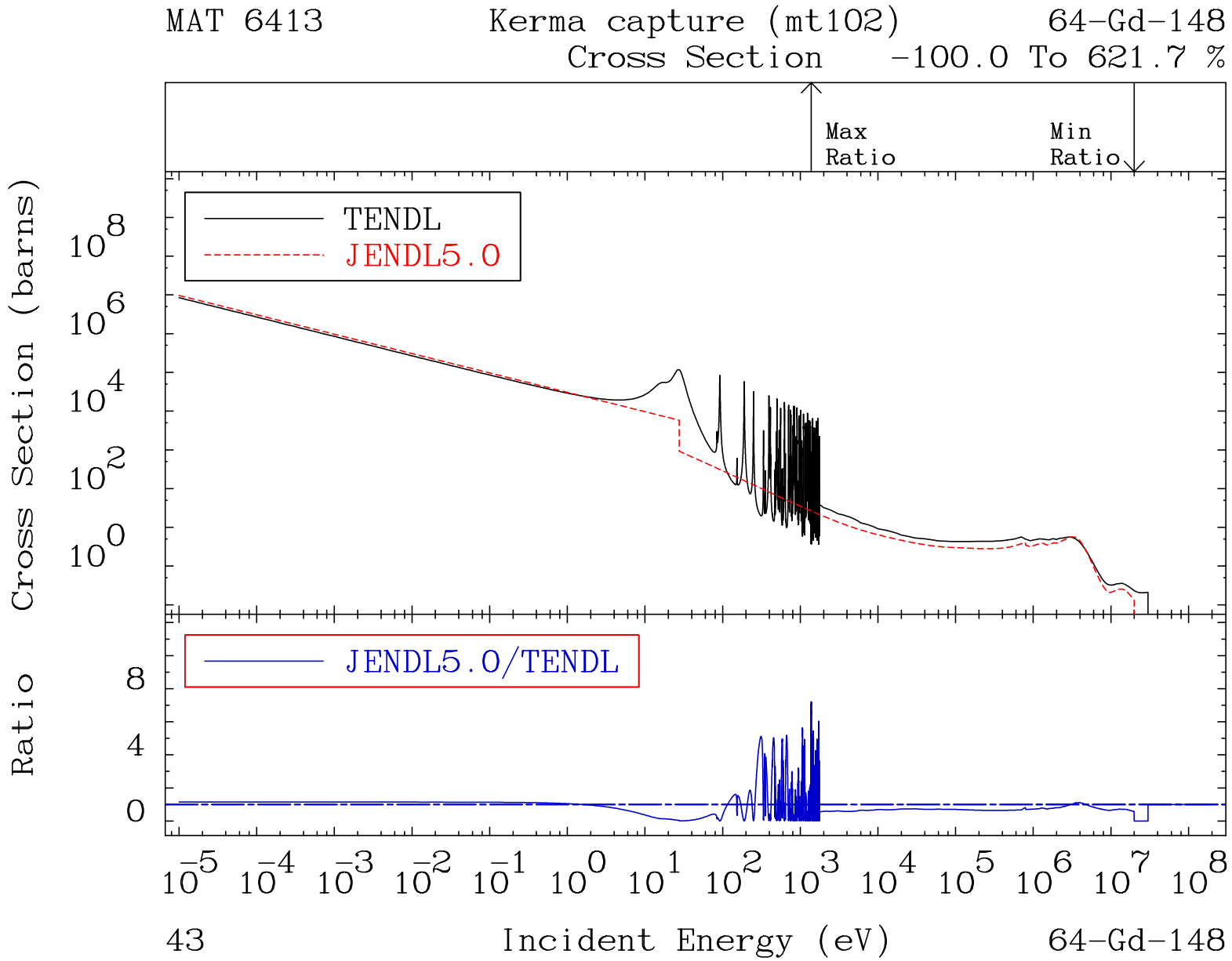

MAT 6413
Kerma total (eV-barns)
64-Gd-148
Cross Section -93.49 To 67.51 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
38
64-Gd-148

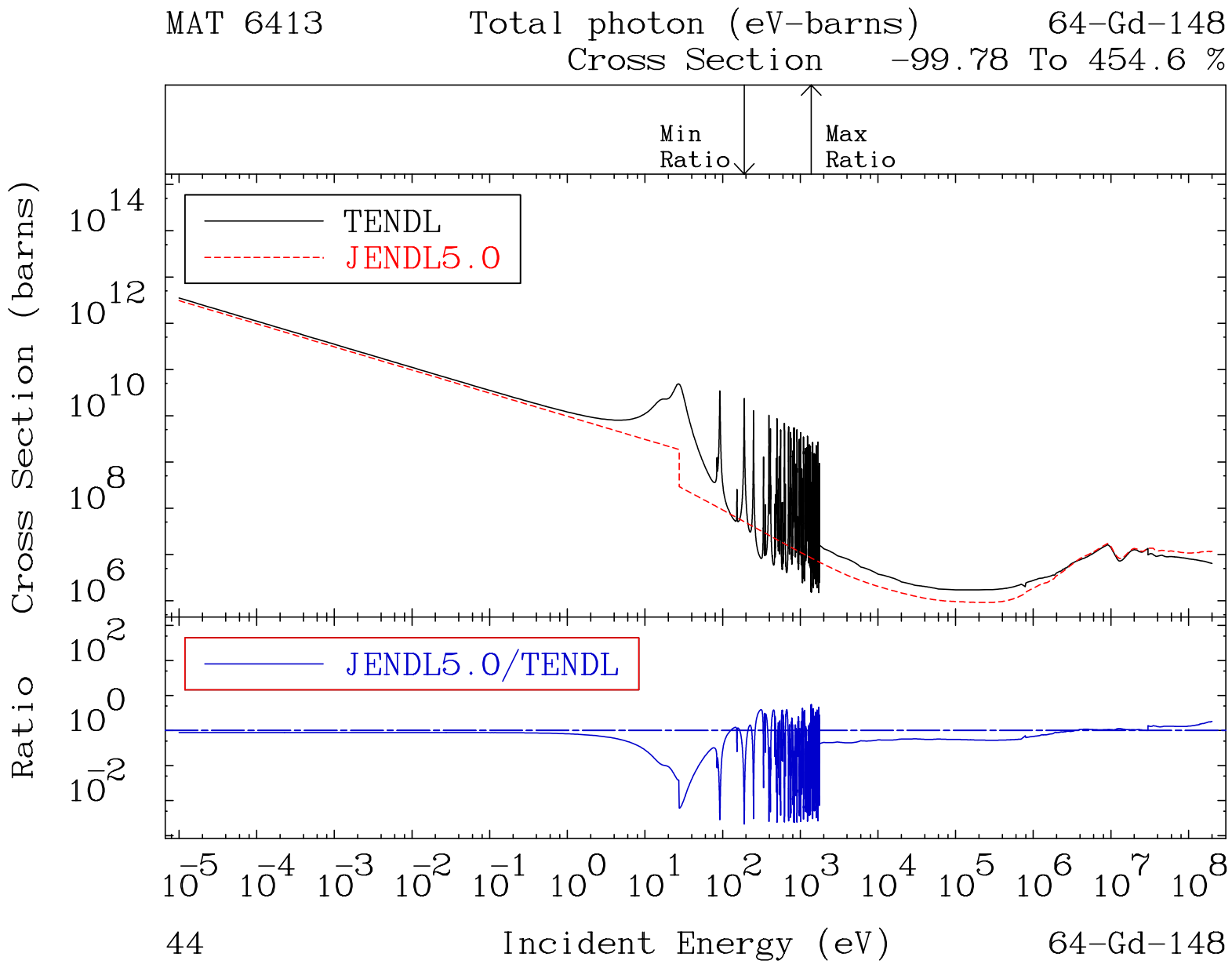

MAT 6413
Kerma elastic
Cross Section
64-Gd-148
-98.91 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
64-Gd-148

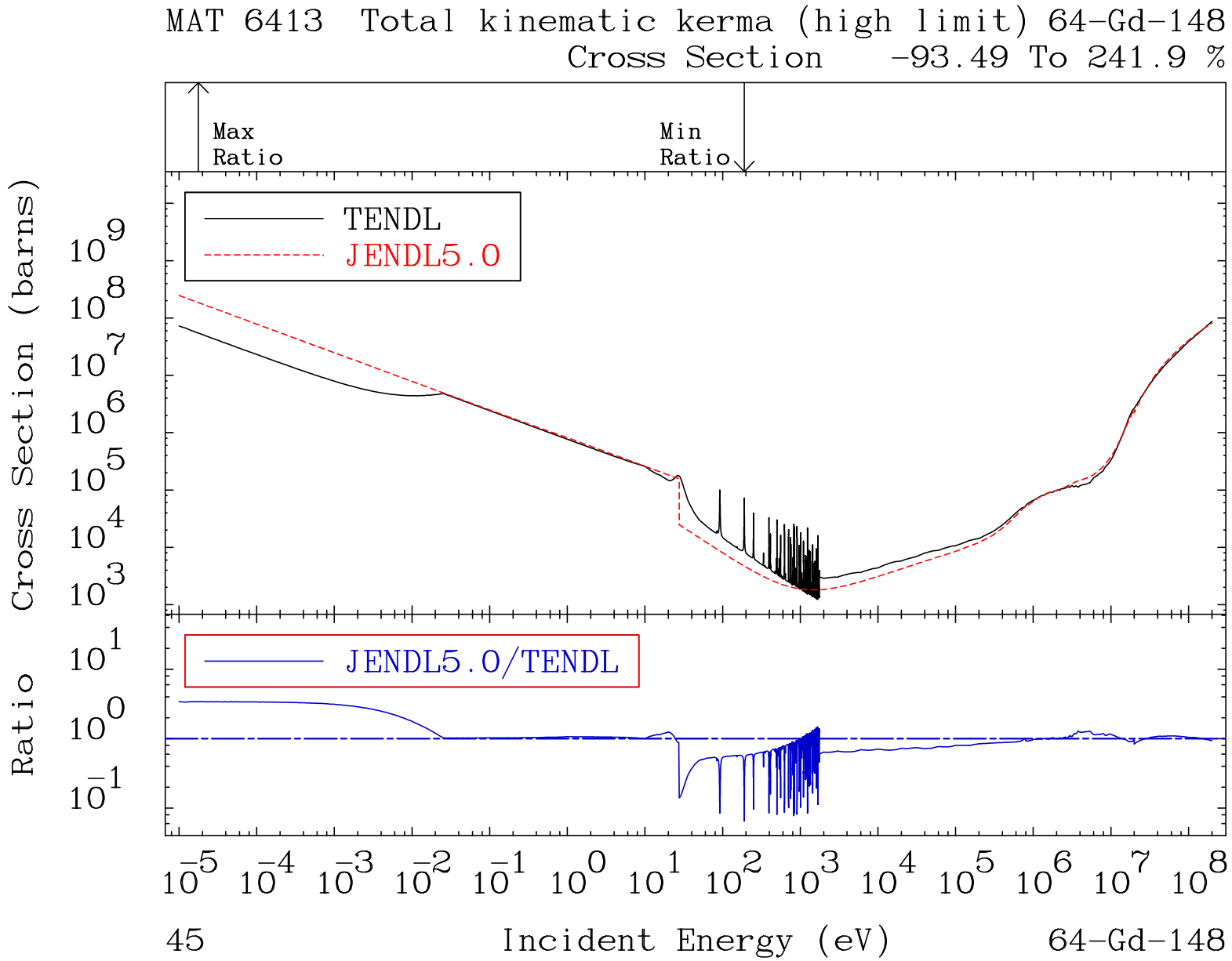

MAT 6413 Kerma non-elastic (all but mt2) 64-Gd-148
Cross Section -93.42 To 92.31 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
64-Gd-148

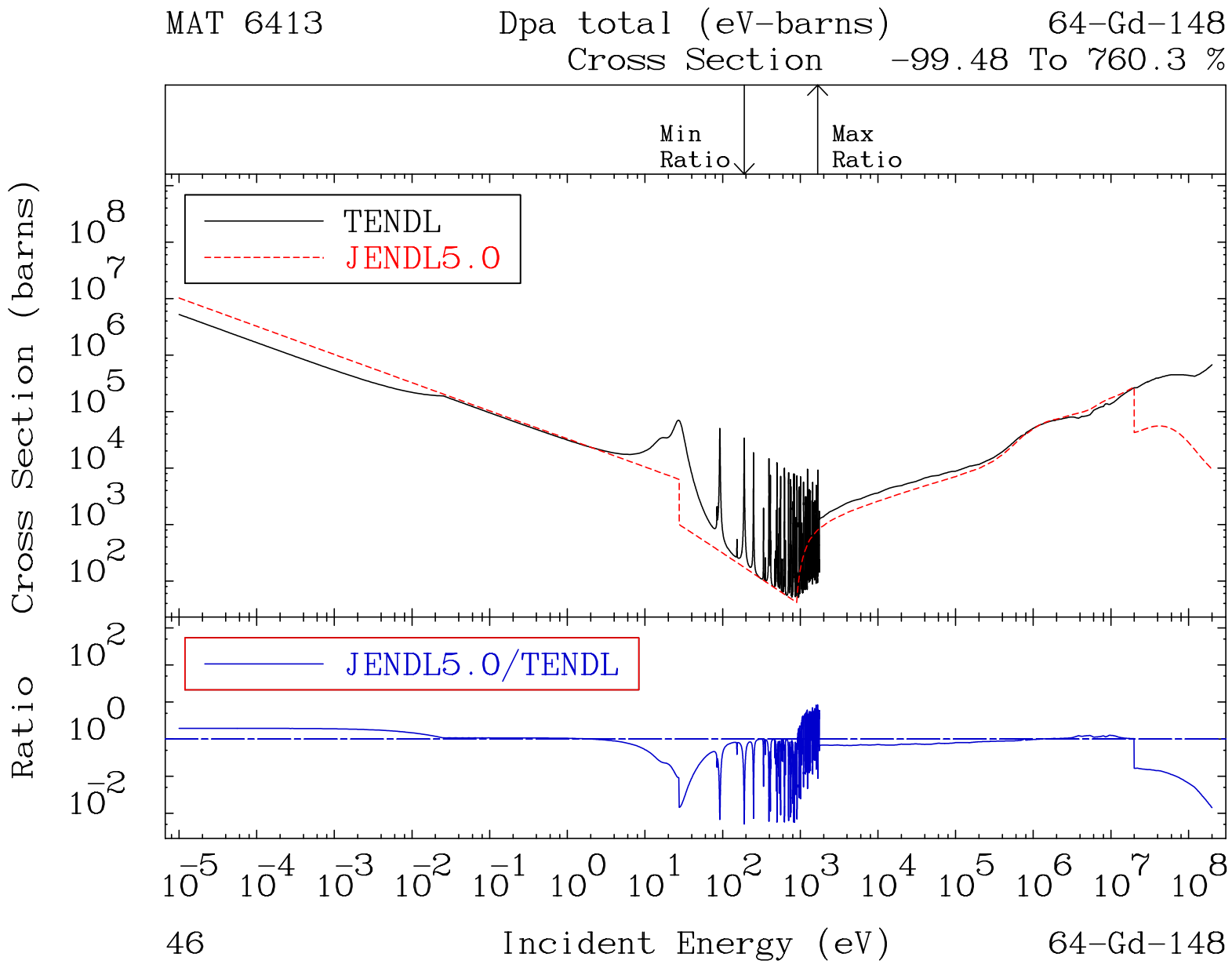

MAT 6413
Kerma inelastic (mt51-91)
64-Gd-148
Cross Section -9999. To 28.41 %
Min Ratio
Max Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 150.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
64-Gd-148

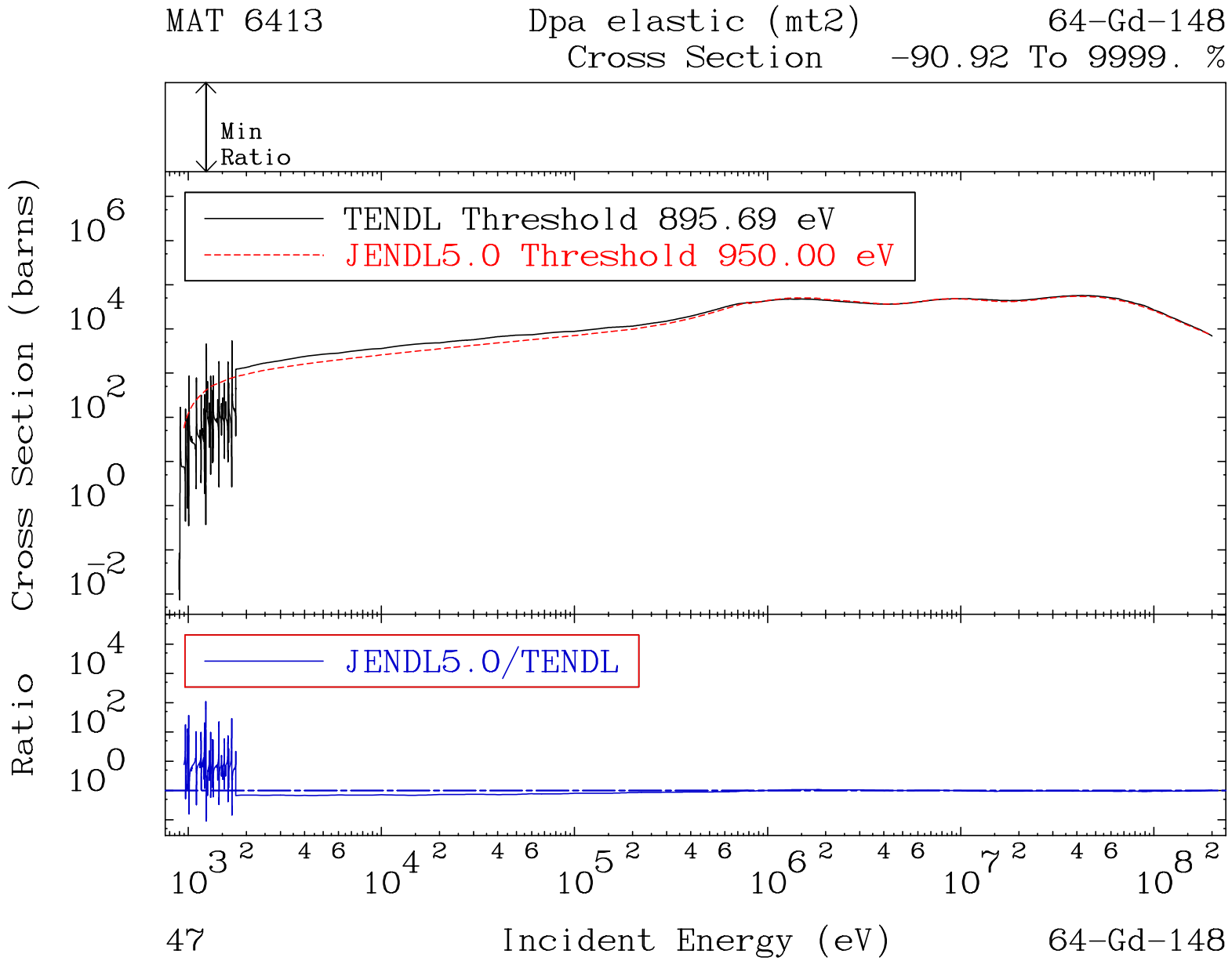

MAT 6413 Kerma fission (mt18 or mt19-20-21-38) 64-Gd-148
Cross Section -9999. To 28.41 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
0
-400
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
42
Incident Energy (eV)
64-Gd-148

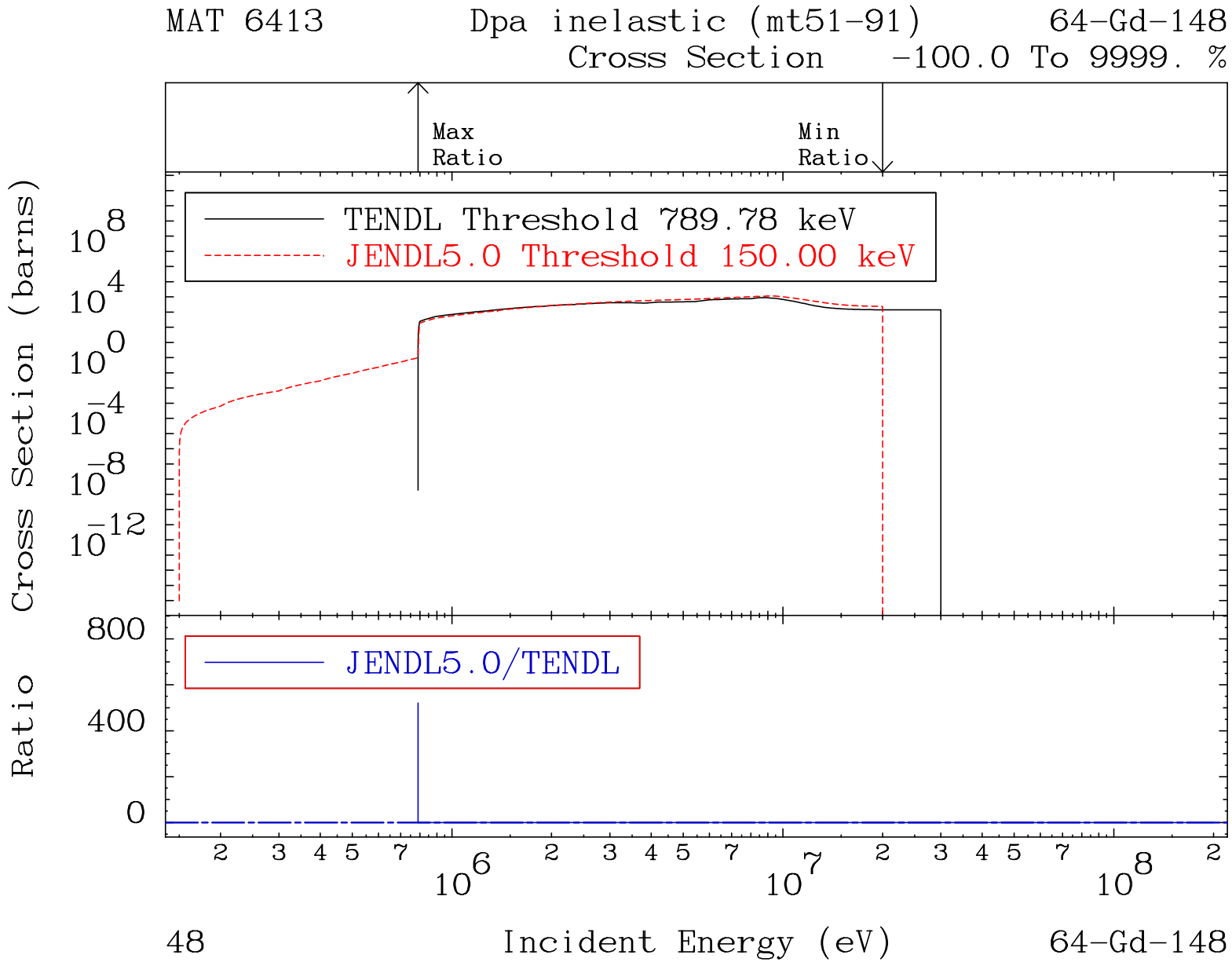

MAT 6413
Kerma capture (mt102)
64-Gd-148
Cross Section -100.0 To 621.7 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
43
64-Gd-148

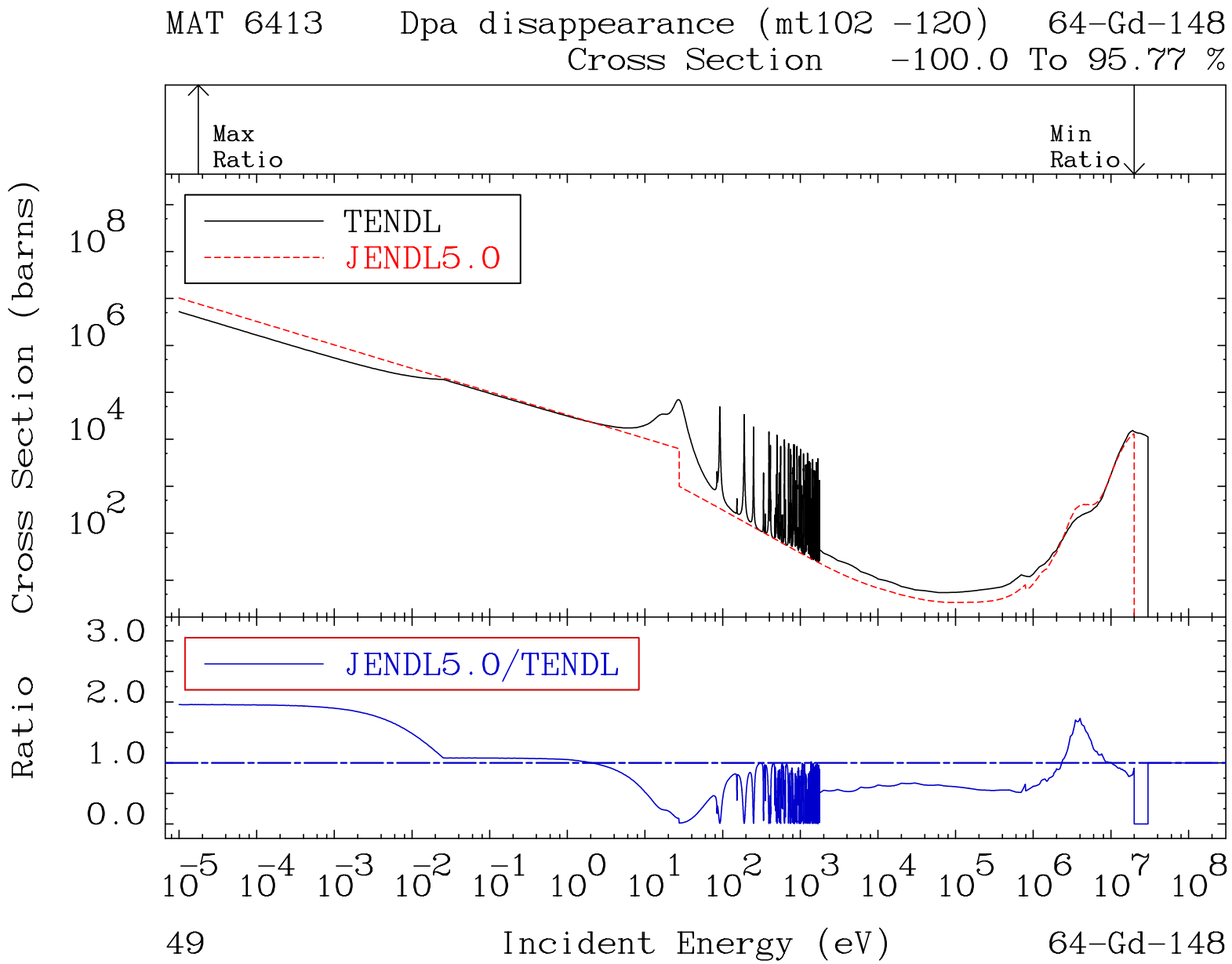

MAT 6413
Total photon (eV-barns)
64-Gd-148
Cross Section -99.78 To 454.6 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
64-Gd-148

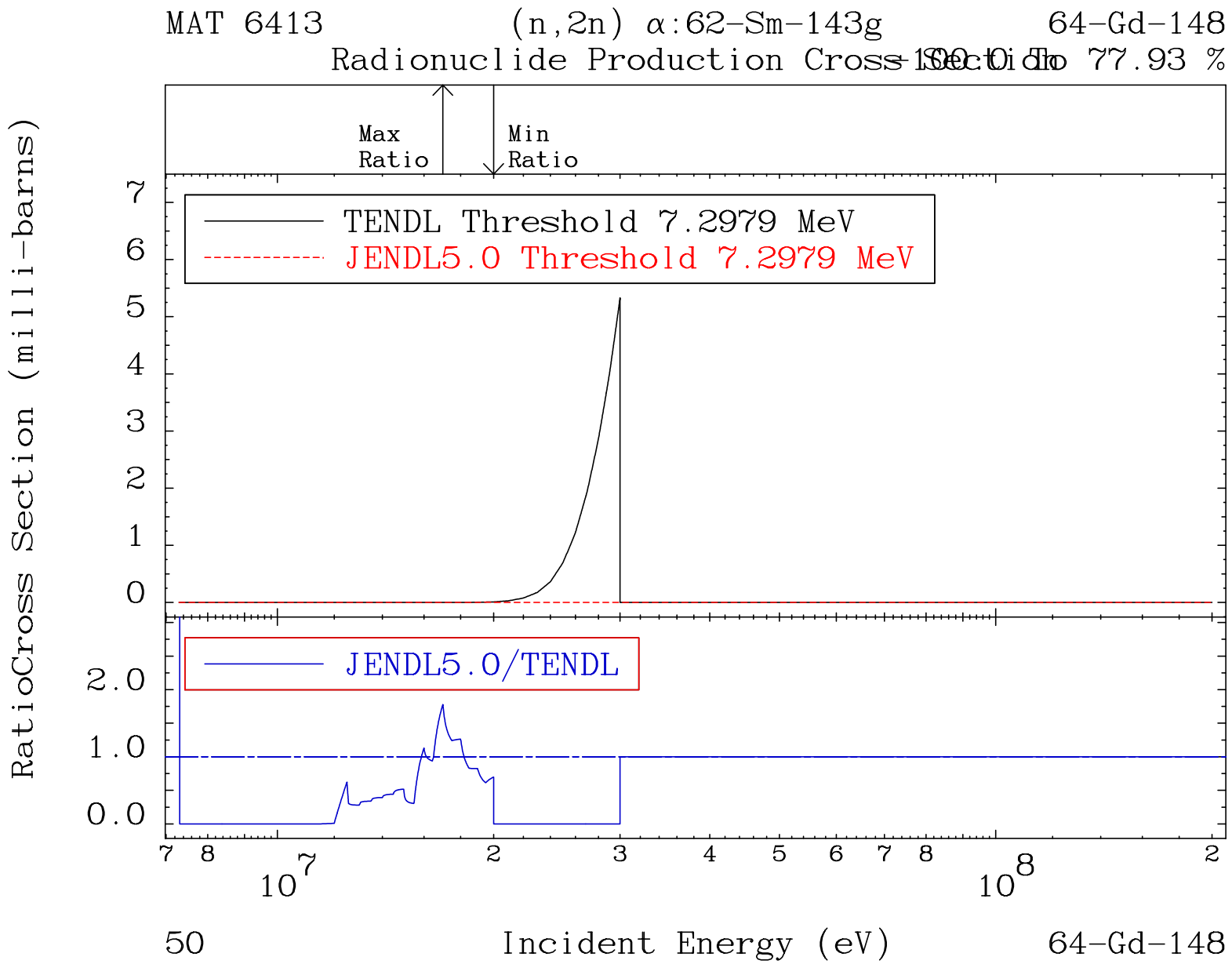

MAT 6413 Total kinematic kerma (high limit) 64-Gd-148
Cross Section -93.49 To 241.9 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
64-Gd-148

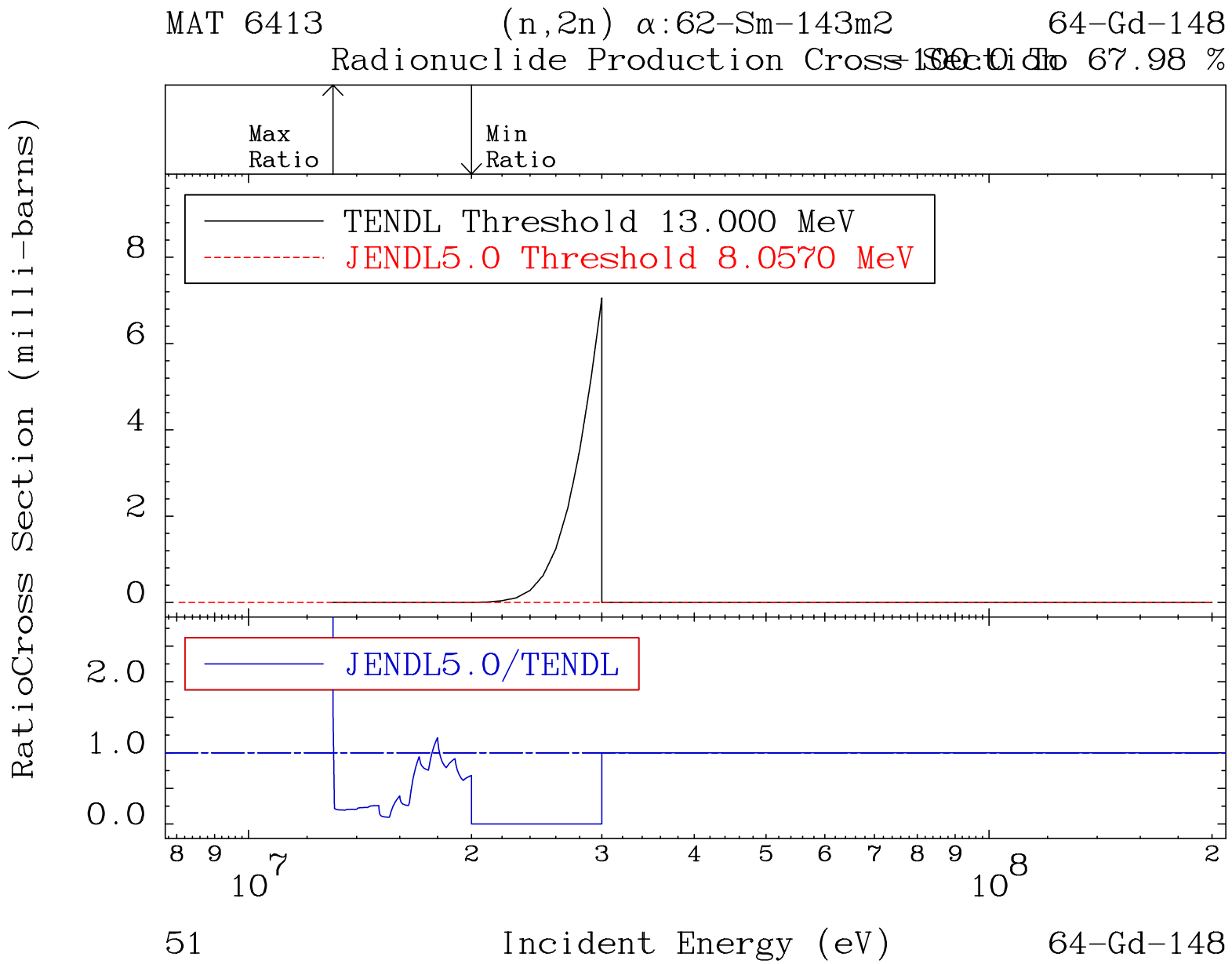

MAT 6413
Dpa total (eV-barns)
64-Gd-148
Cross Section -99.48 To 760.3 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
46
64-Gd-148

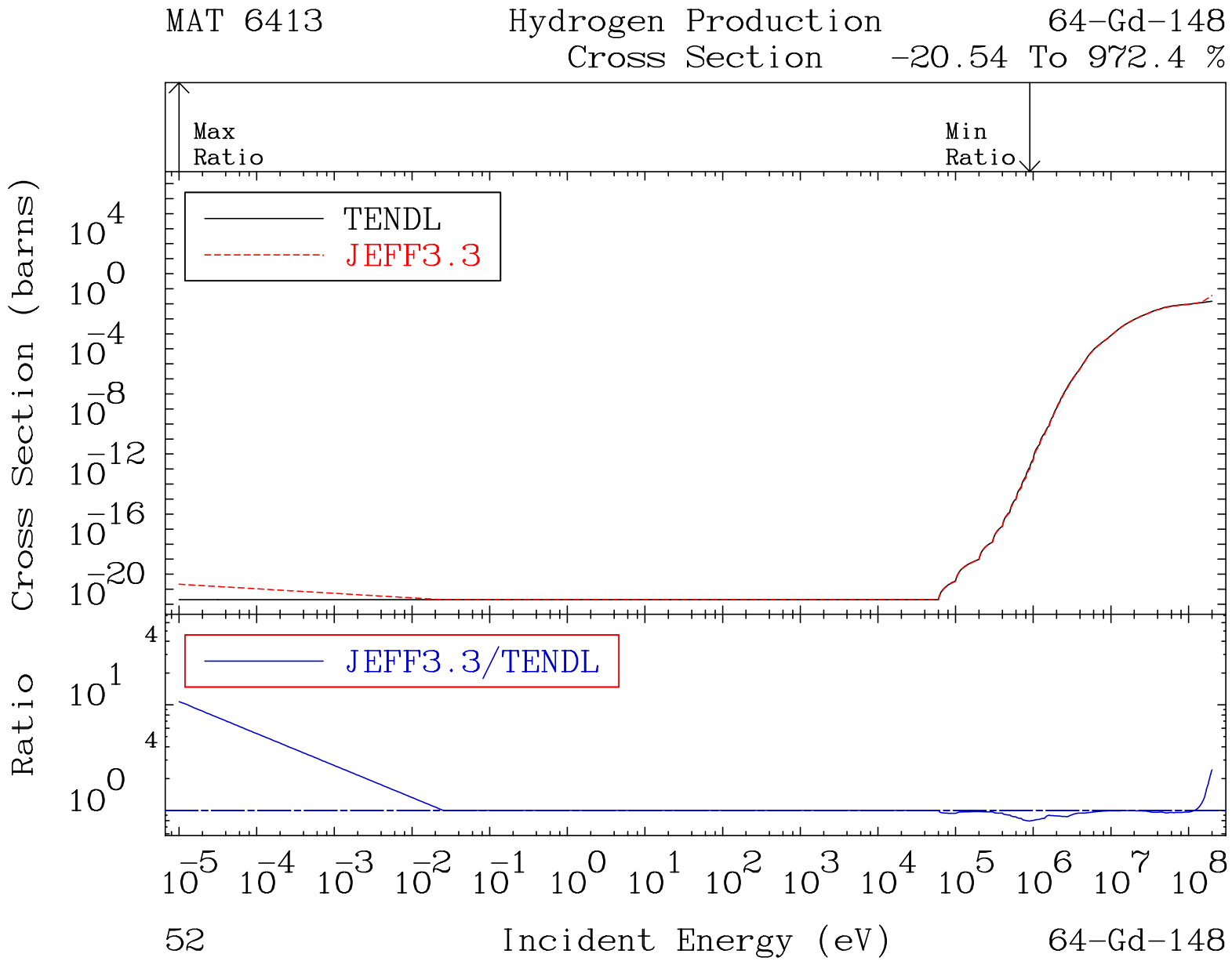

MAT 6413
Dpa elastic (mt2)
Cross Section
64-Gd-148
-90.92 To 9999. %
Min
Ratio
TENDL Threshold 895.69 eV
JENDL5.0 Threshold 950.00 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
47
64-Gd-148

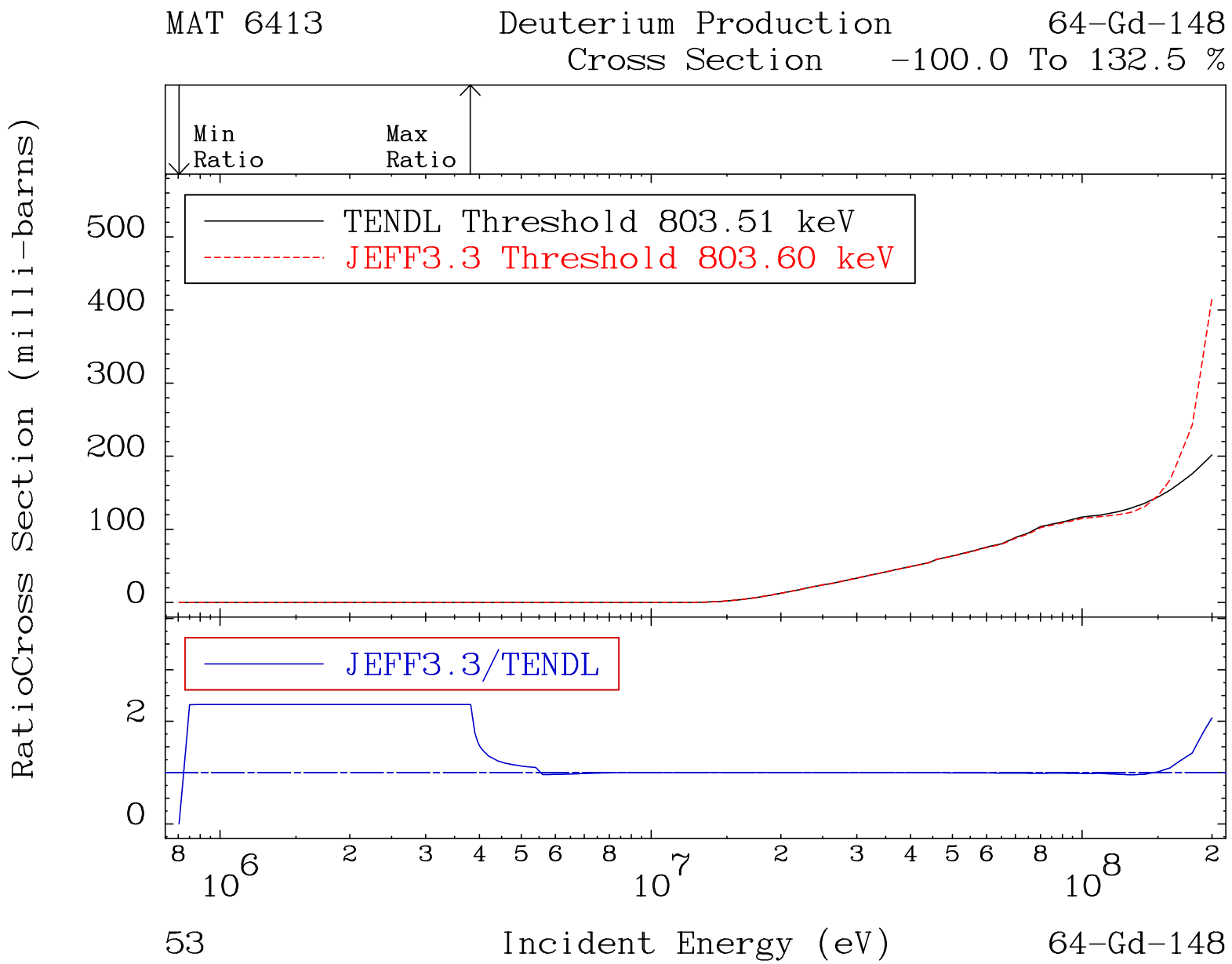

MAT 6413
Dpa inelastic (mt51-91)
64-Gd-148
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 789.78 keV
JENDL5.0 Threshold 150.00 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
48
64-Gd-148

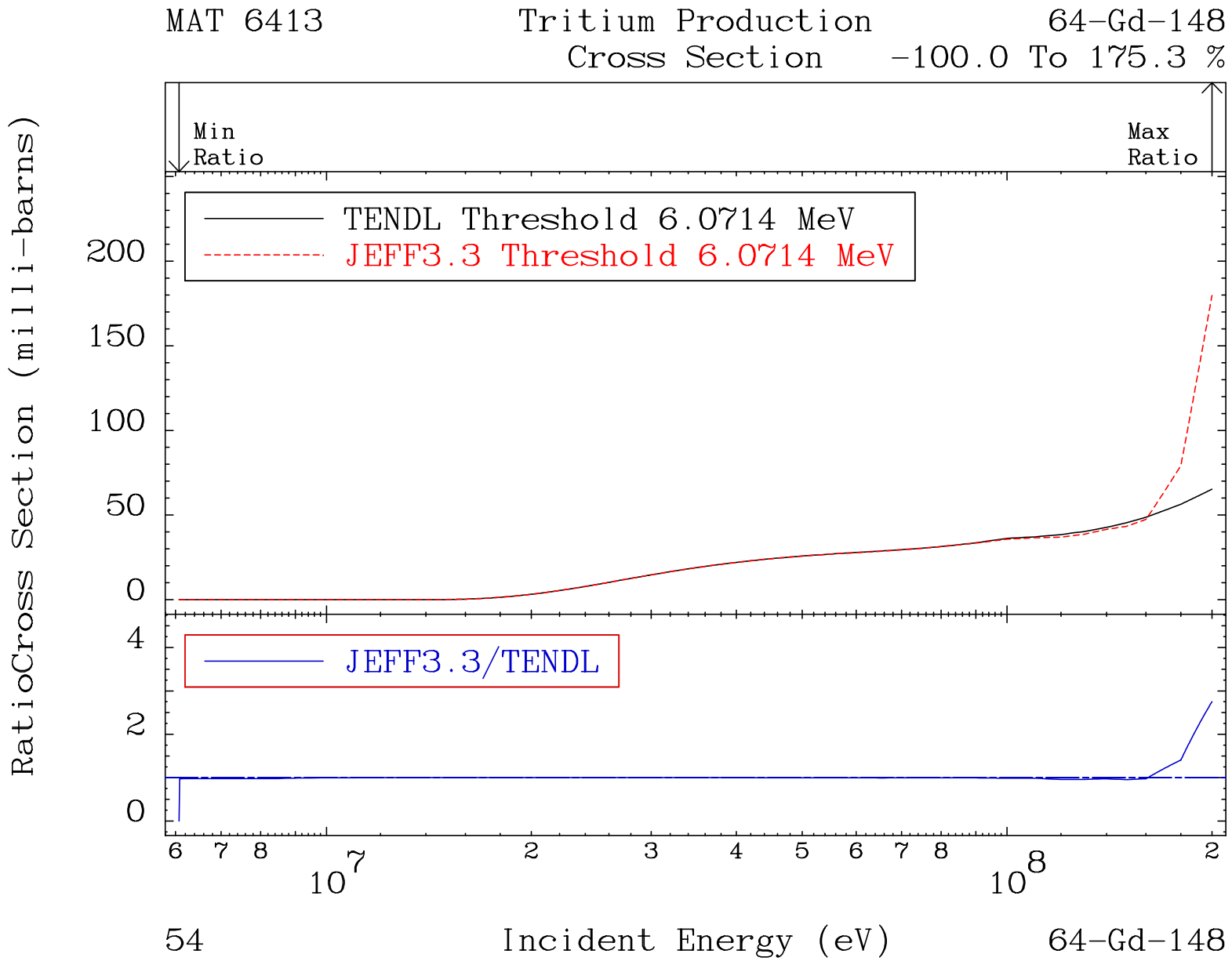

MAT 6413 Dpa disappearance (mt102 -120) 64-Gd-148
Cross Section -100.0 To 95.77 %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
49
64-Gd-148

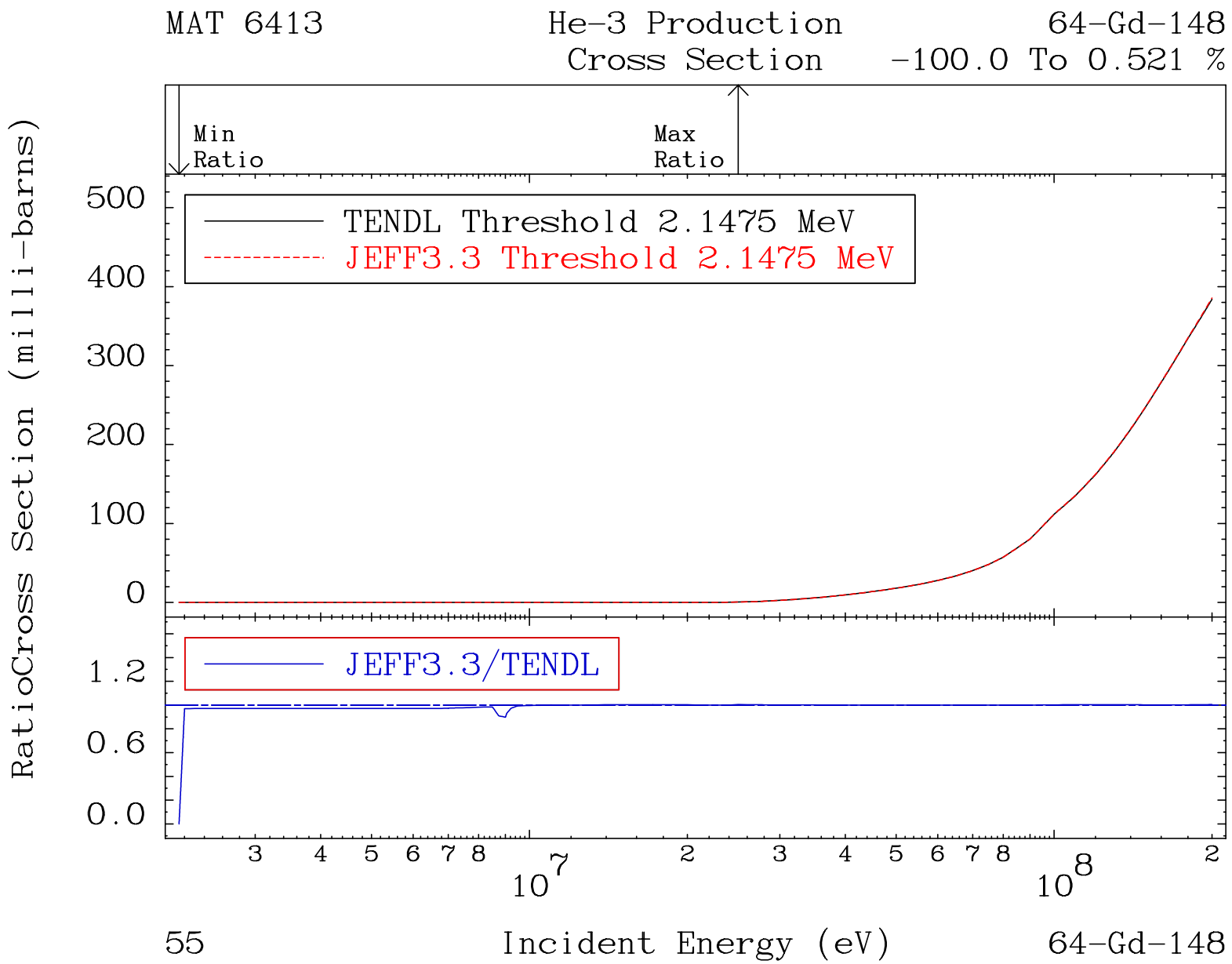

MAT 6413
(n,2n) α:62-Sm-143g
64-Gd-148
Radionuclide Production Cross Section To 77.93 %
Max Ratio
Min Ratio
TENDL Threshold 7.2979 MeV
JENDL5.0 Threshold 7.2979 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
50
64-Gd-148

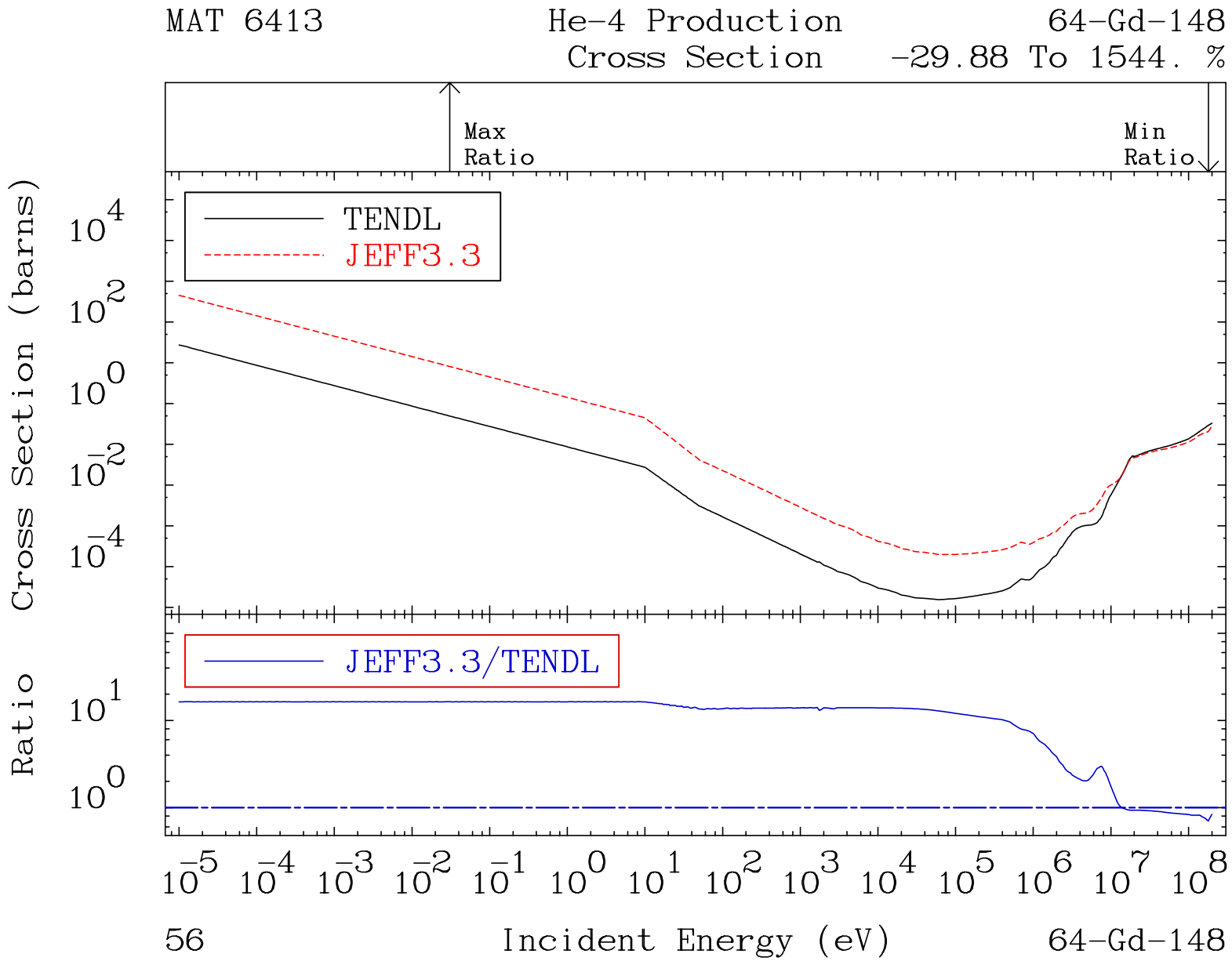

MAT 6413
(n,2n) α:62-Sm-143m2
64-Gd-148
Radionuclide Production Cross Section To 67.98 %
Max Ratio
Min Ratio
TENDL Threshold 13.000 MeV
JENDL5.0 Threshold 8.0570 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
51
64-Gd-148

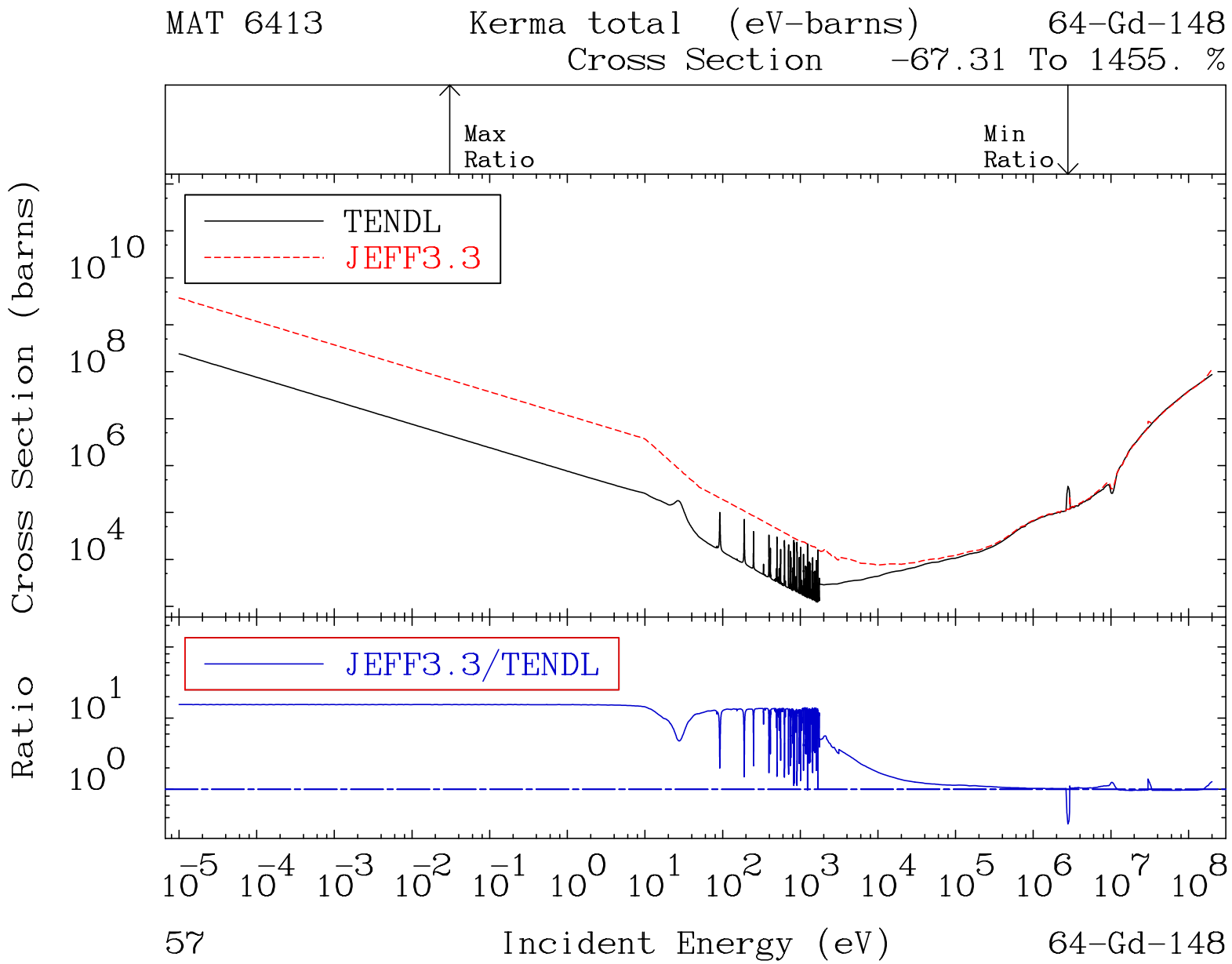

MAT 6413
Hydrogen Production
64-Gd-148
Cross Section
-20.54 To 972.4 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
52
64-Gd-148

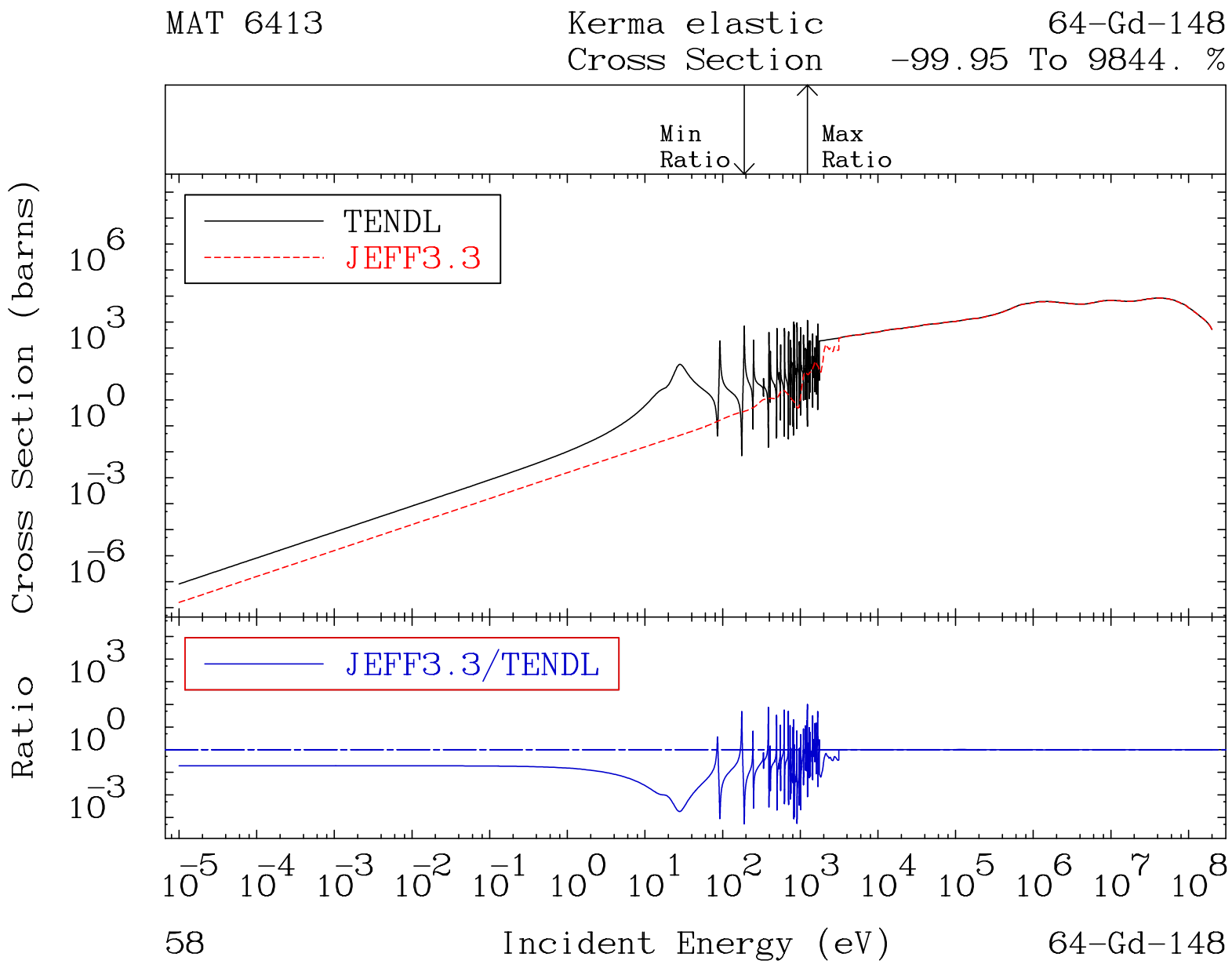

MAT 6413
Deuterium Production
64-Gd-148
Cross Section
-100.0 To 132.5 %
Min Ratio
Max Ratio
TENDL Threshold 803.51 keV
JEFF3.3 Threshold 803.60 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
2
0
8
2
3
4
5
6
8
2
3
4
5
6
8
2
10^6
10^7
10^8
53
Incident Energy (eV)
64-Gd-148

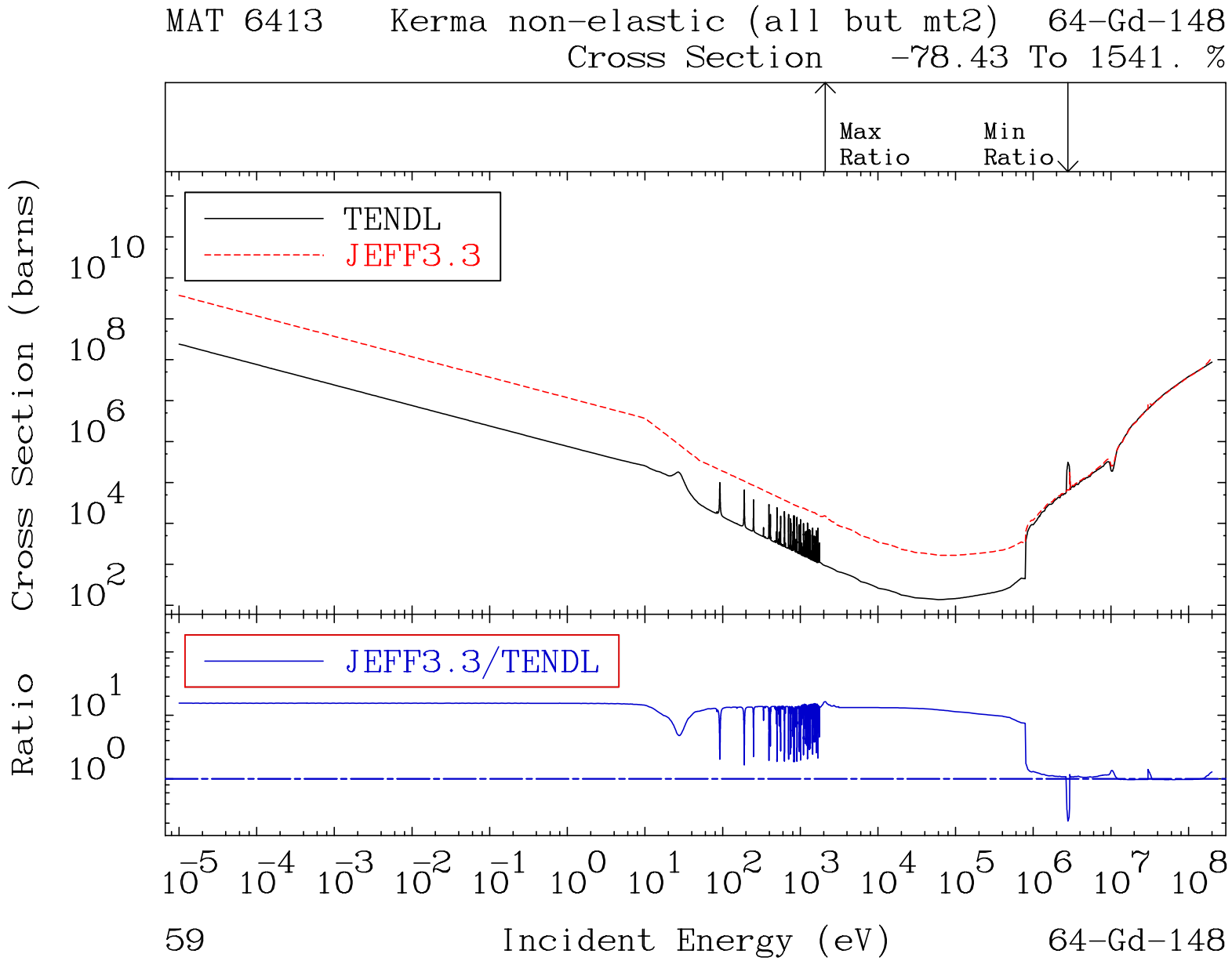

MAT 6413
Tritium Production
64-Gd-148
Cross Section
-100.0 To 175.3 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.0714 MeV
JEFF3.3 Threshold 6.0714 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
4
2
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
54
Incident Energy (eV)
64-Gd-148

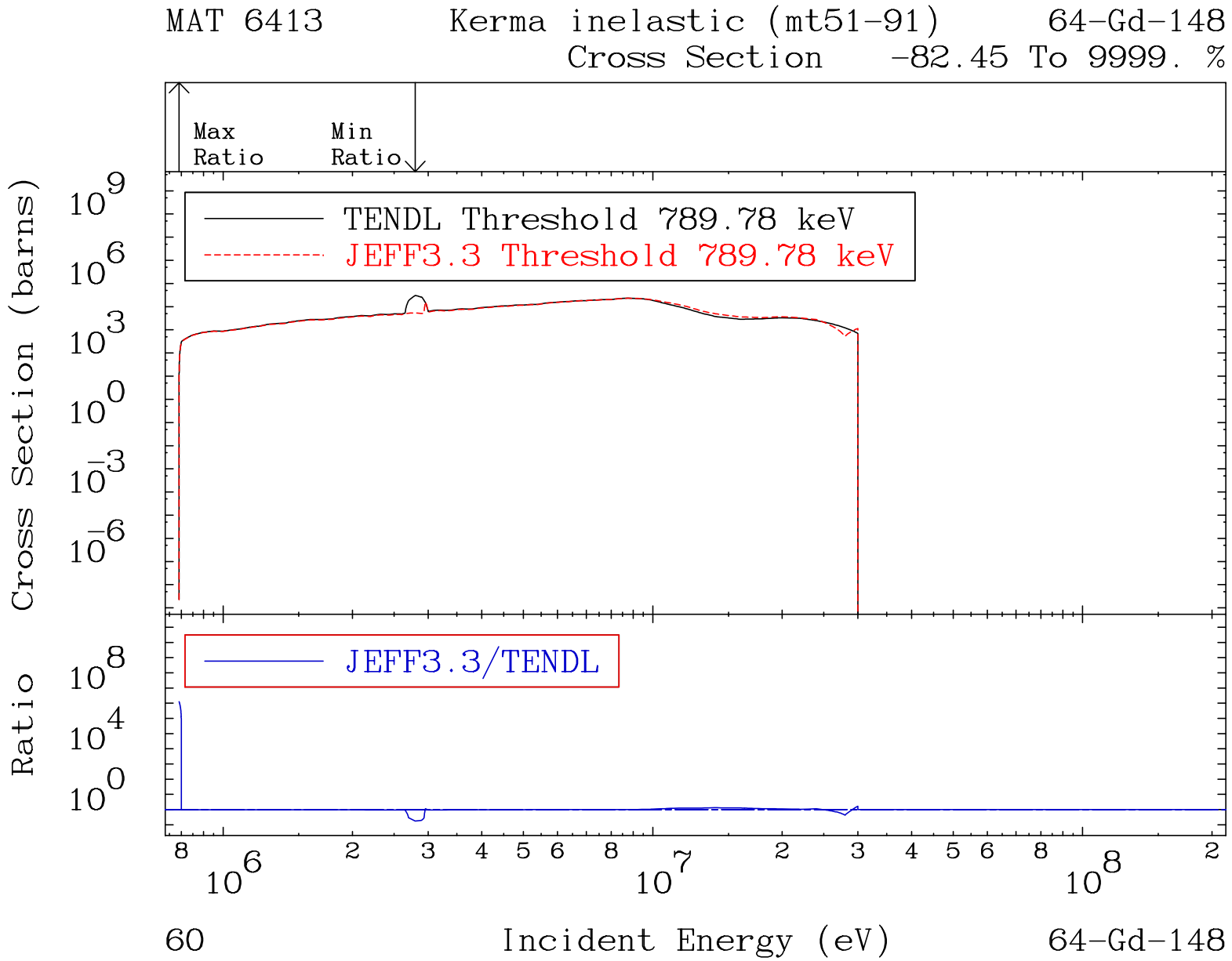

MAT 6413
He-3 Production
Cross Section
64-Gd-148
-100.0 To 0.521 %
Min Ratio
Max Ratio
TENDL Threshold 2.1475 MeV
JEFF3.3 Threshold 2.1475 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
1.2
0.6
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
55
Incident Energy (eV)
64-Gd-148

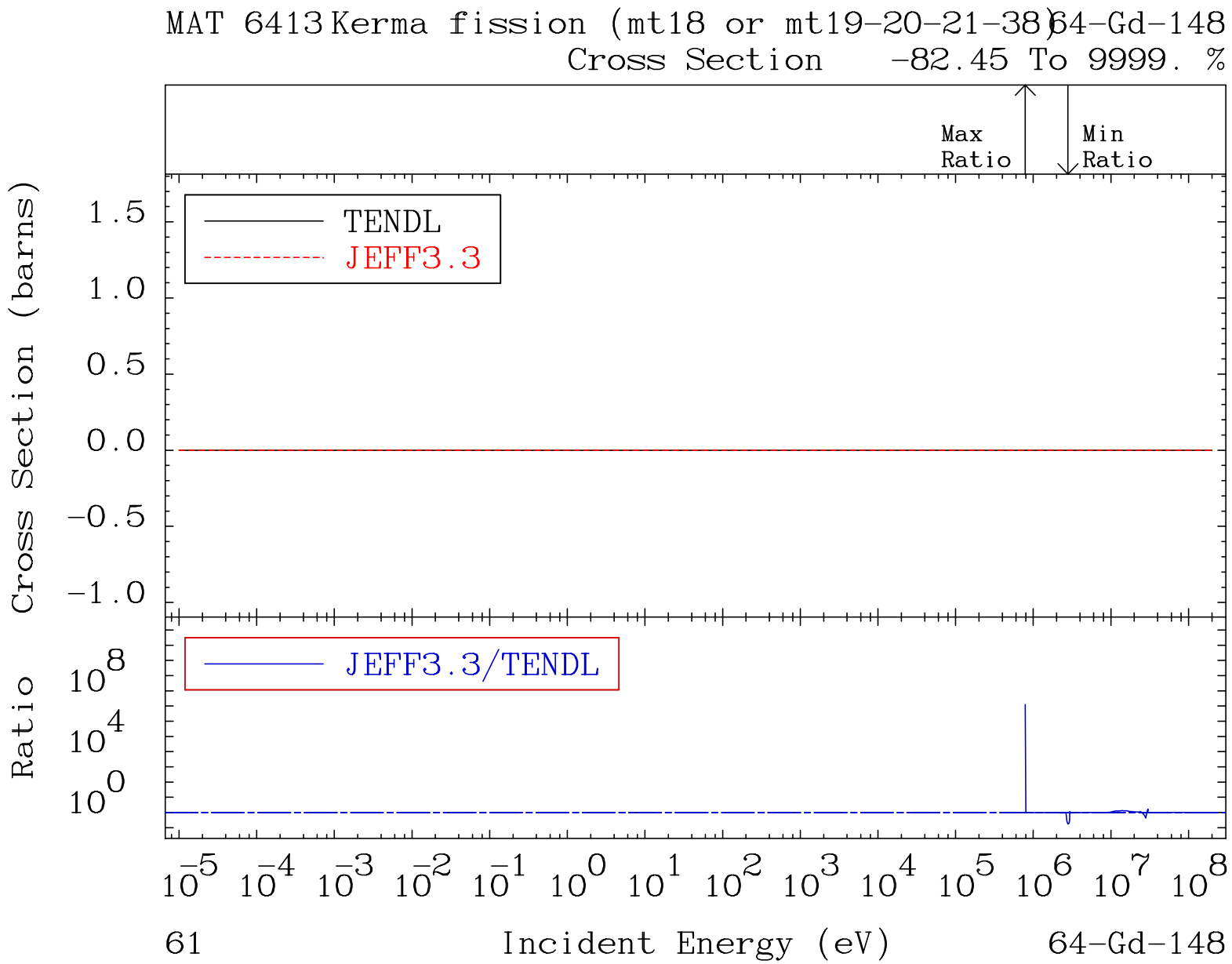

MAT 6413
He-4 Production
Cross Section
64-Gd-148
-29.88 To 1544. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
56
64-Gd-148

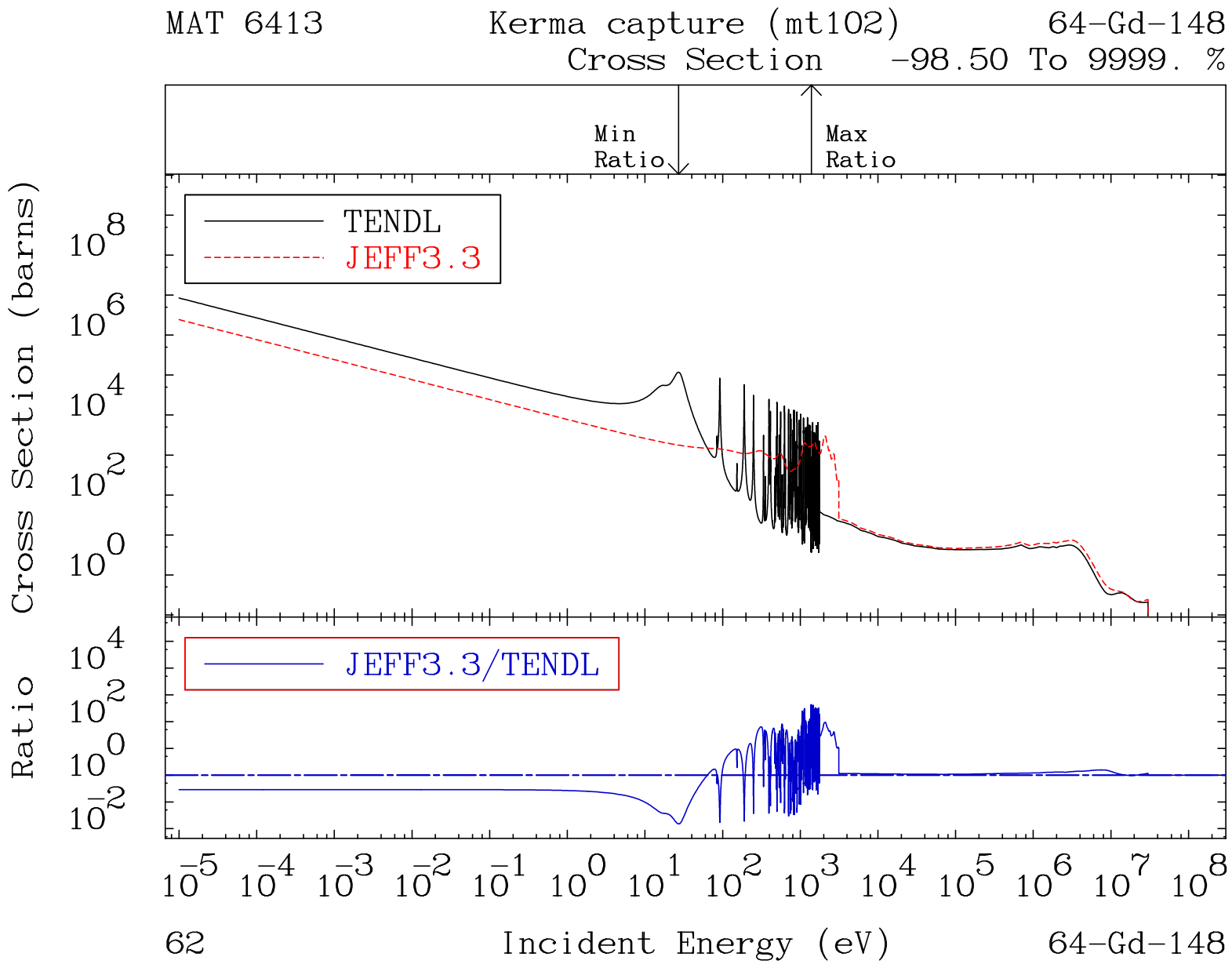

MAT 6413
Kerma total (eV-barns)
64-Gd-148
Cross Section -67.31 To 1455. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
57
64-Gd-148

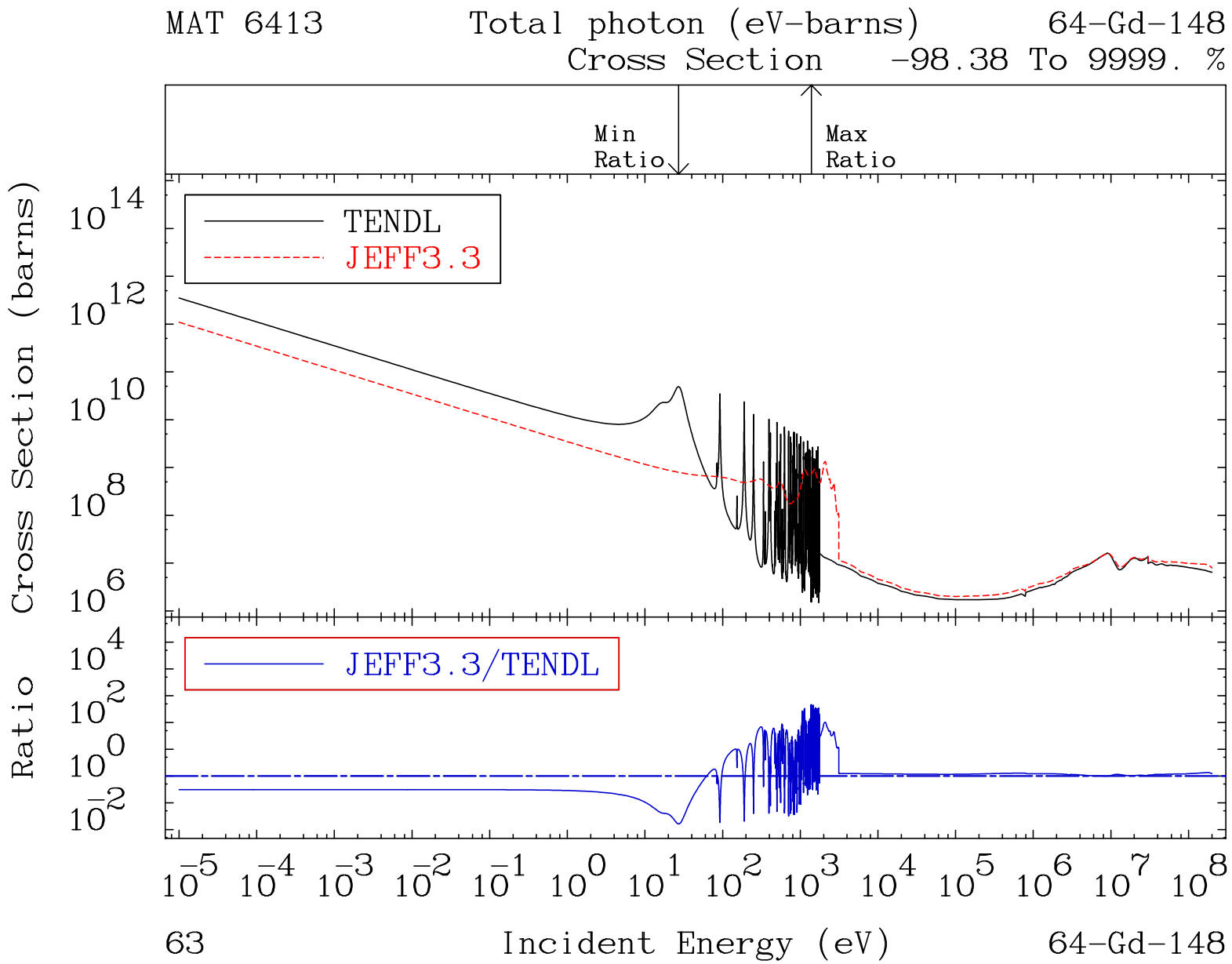

MAT 6413
Kerma elastic
Cross Section
64-Gd-148
-99.95 To 9844. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
58
64-Gd-148

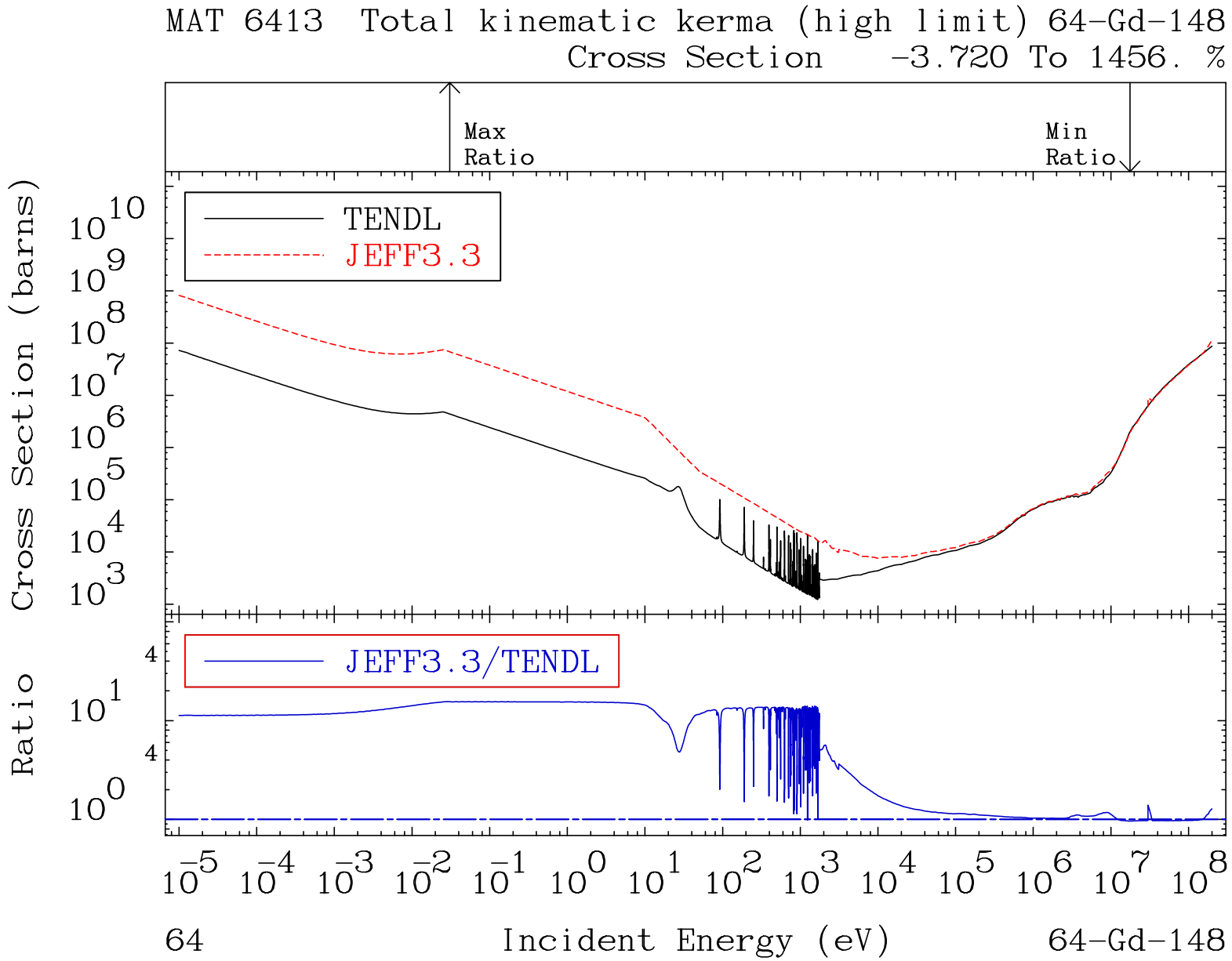

MAT 6413 Kerma non-elastic (all but mt2) 64-Gd-148
Cross Section -78.43 To 1541. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
59
64-Gd-148

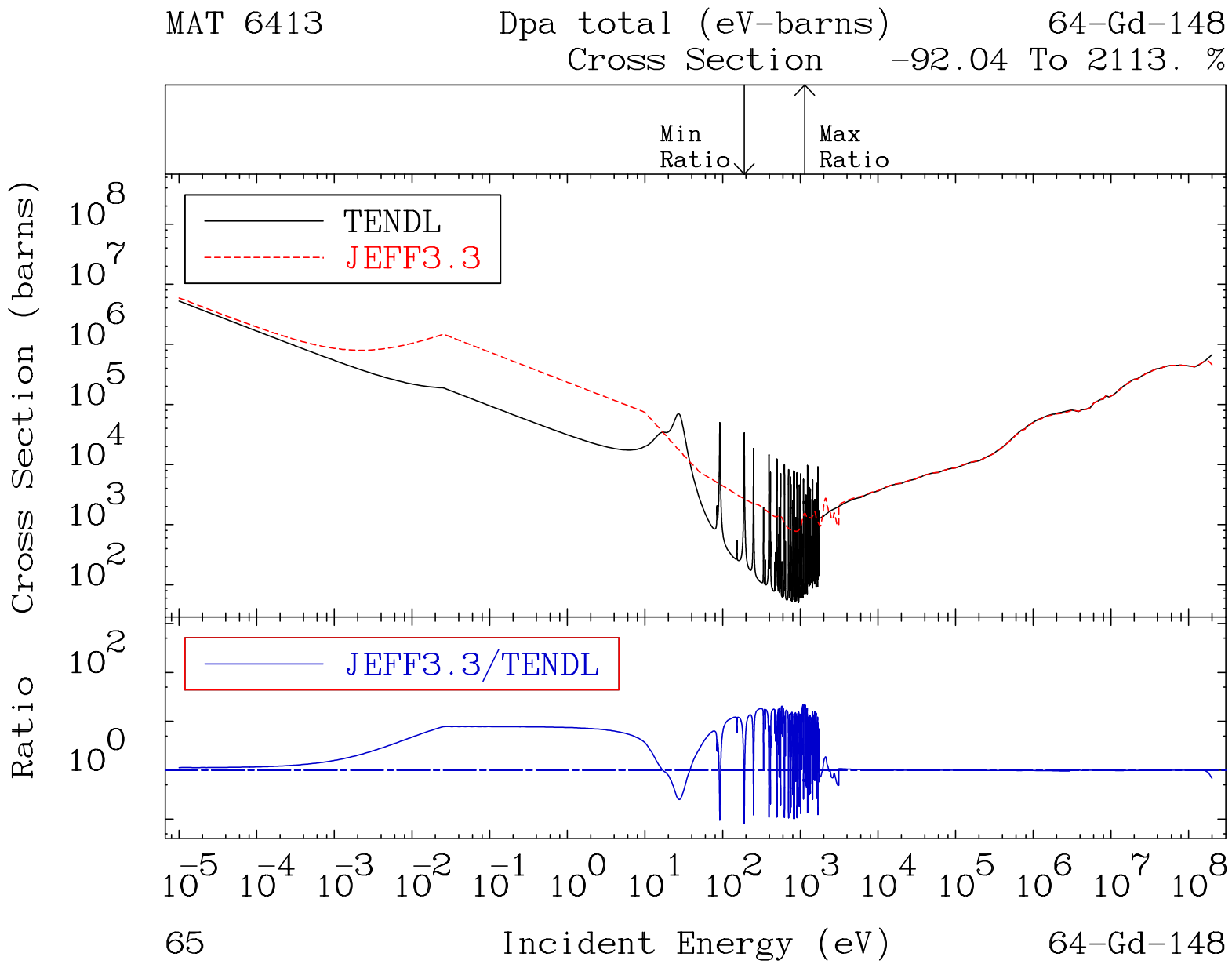

MAT 6413
Kerma inelastic (mt51-91)
64-Gd-148
Cross Section -82.45 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 789.78 keV
JEFF3.3 Threshold 789.78 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
60
64-Gd-148

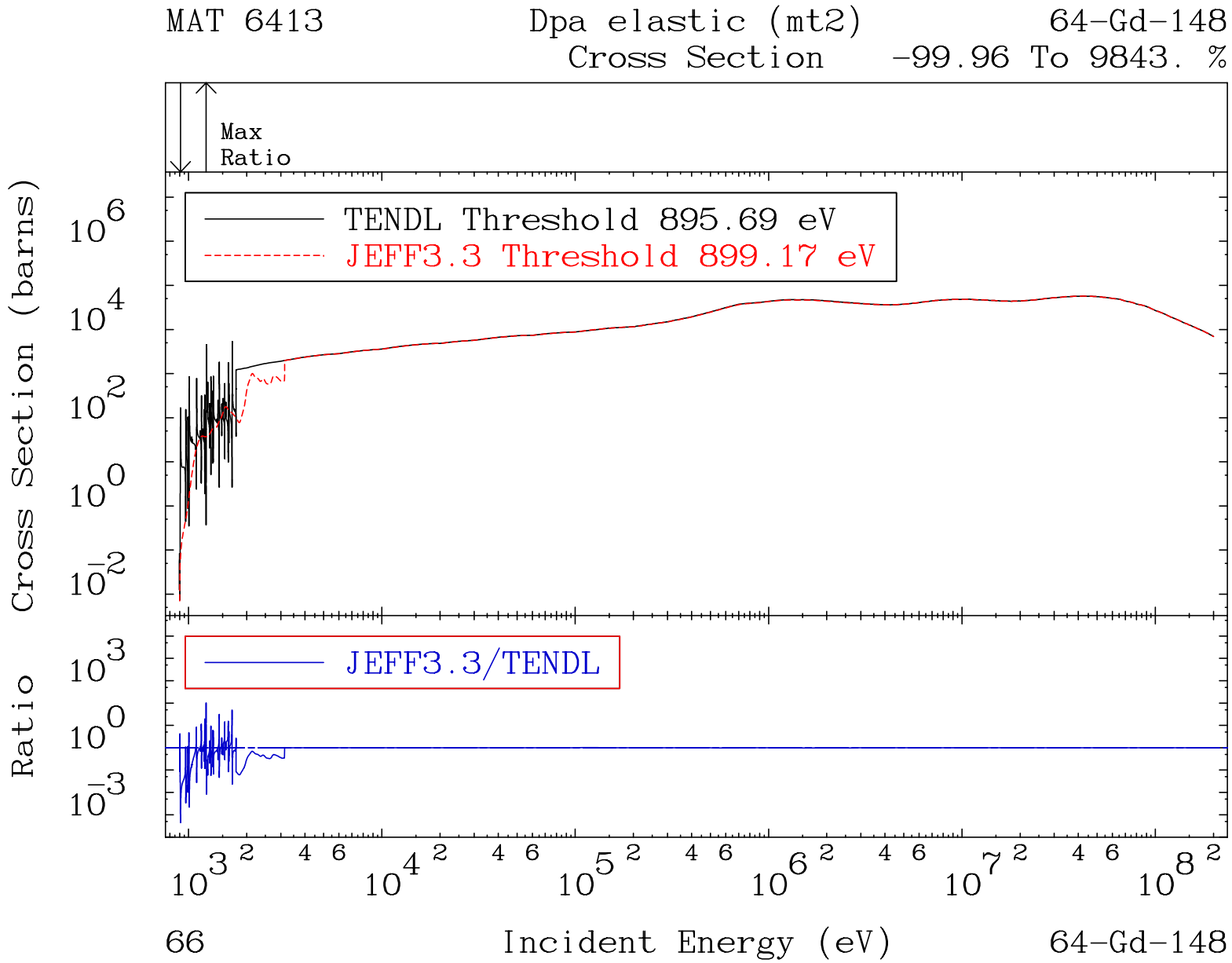

MAT 6413 Kerma fission (mt18 or mt19-20-21-38) 64-Gd-148
Cross Section -82.45 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{8}
10^{4}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
61
Incident Energy (eV)
64-Gd-148

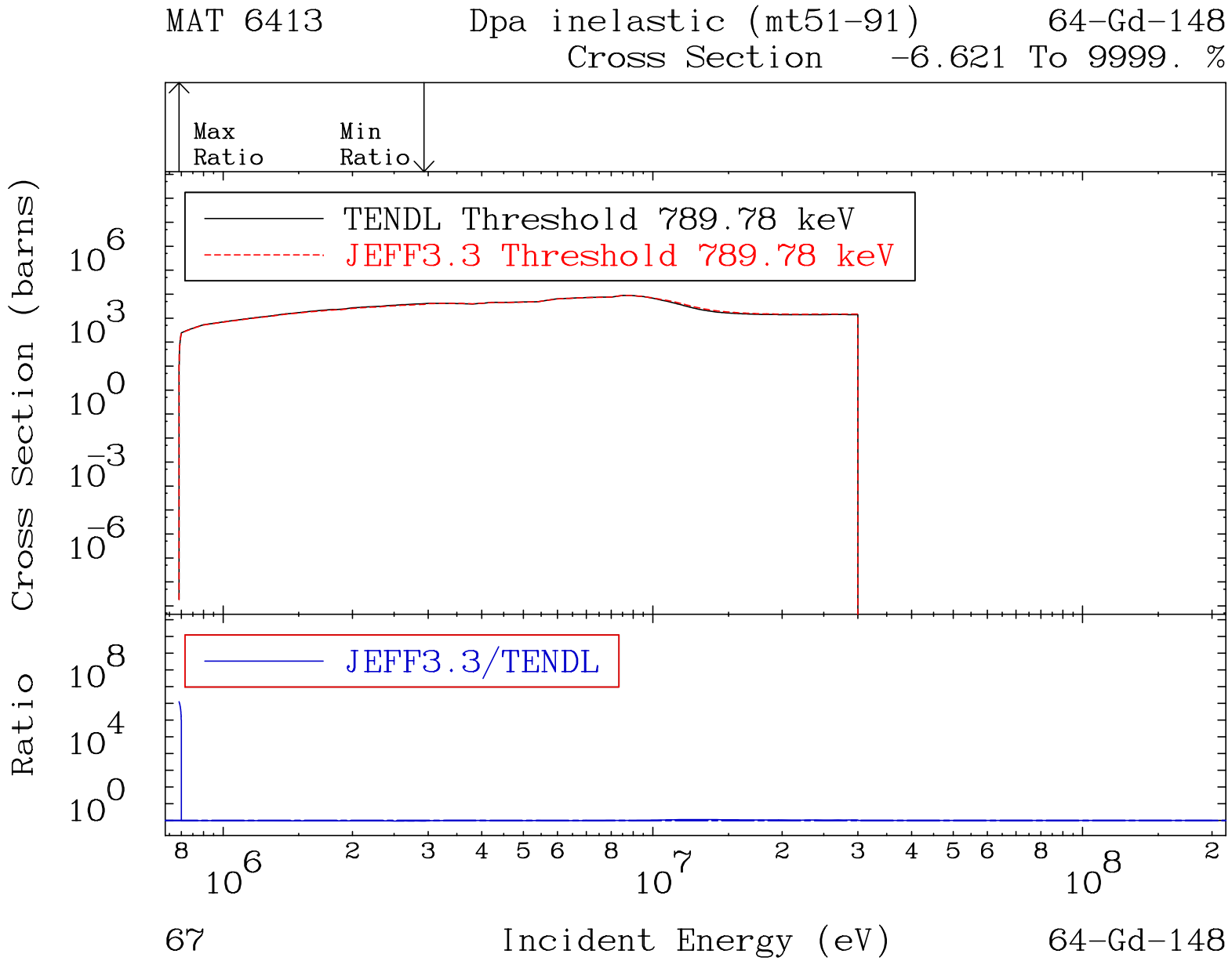

MAT 6413
Kerma capture (mt102)
64-Gd-148
Cross Section -98.50 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
62
64-Gd-148

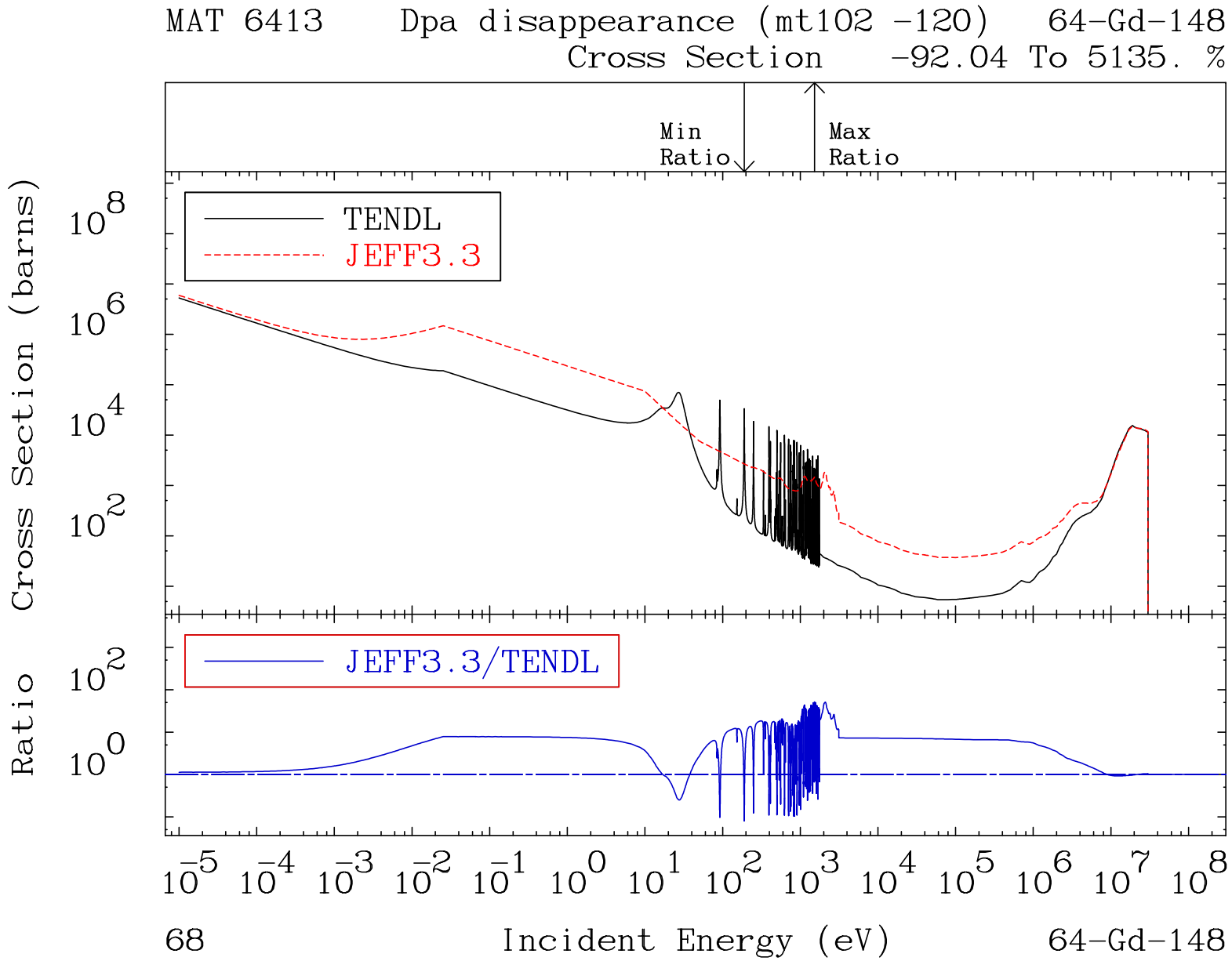

MAT 6413
Total photon (eV-barns)
64-Gd-148
Cross Section -98.38 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
63
64-Gd-148

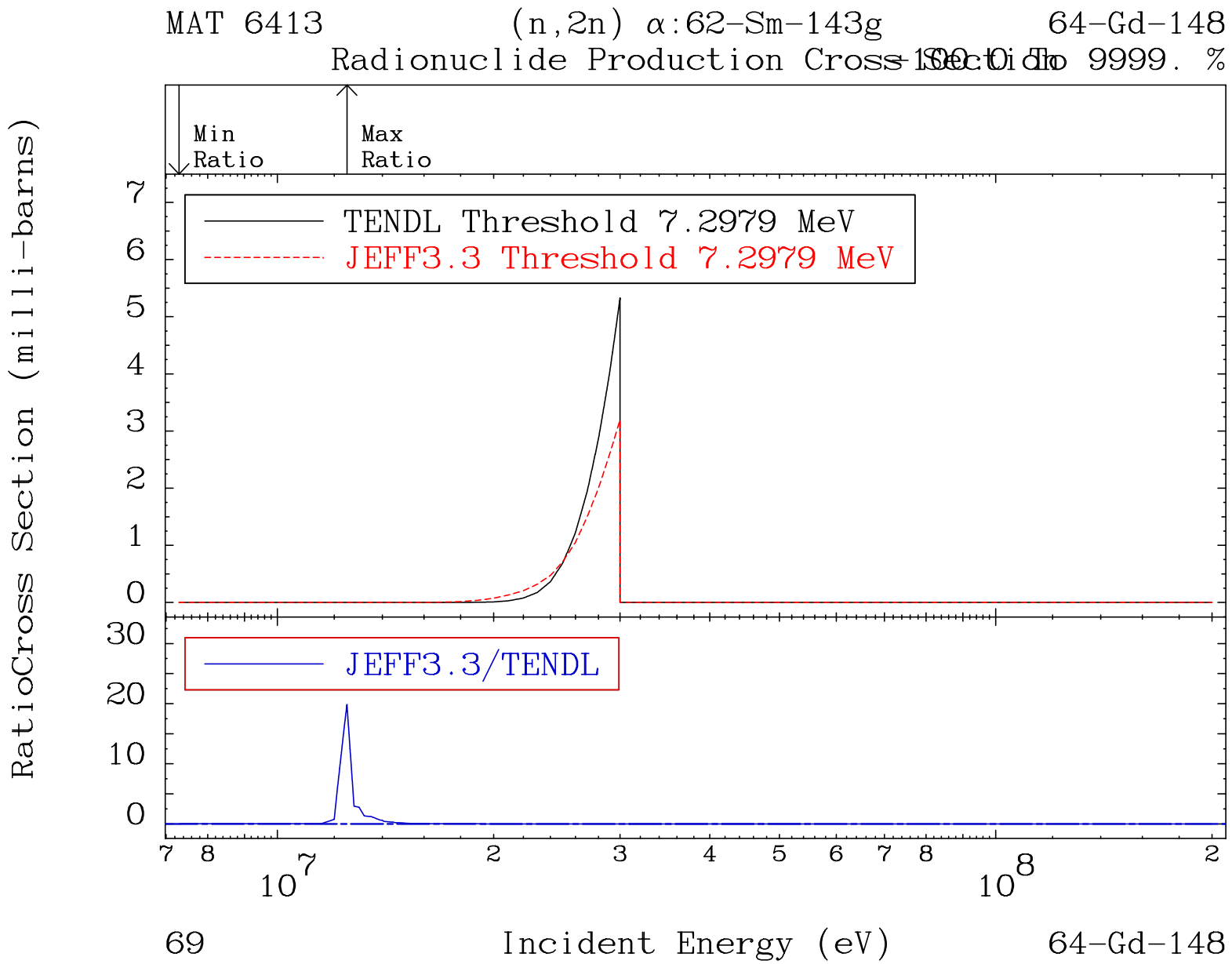

MAT 6413 Total kinematic kerma (high limit) 64-Gd-148
Cross Section -3.720 To 1456. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64
64-Gd-148

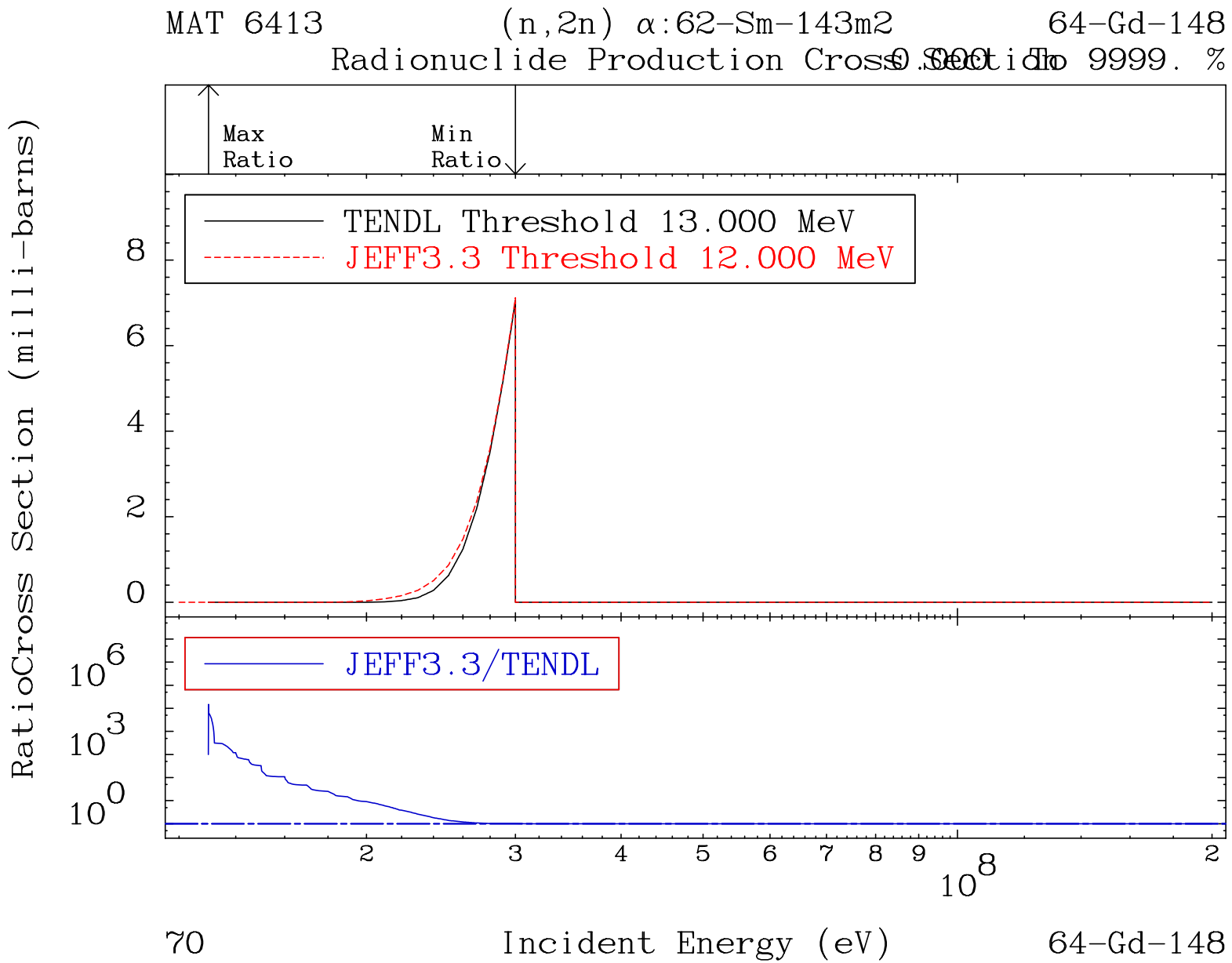

MAT 6413
Dpa total (eV-barns)
64-Gd-148
Cross Section -92.04 To 2113. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
65
64-Gd-148

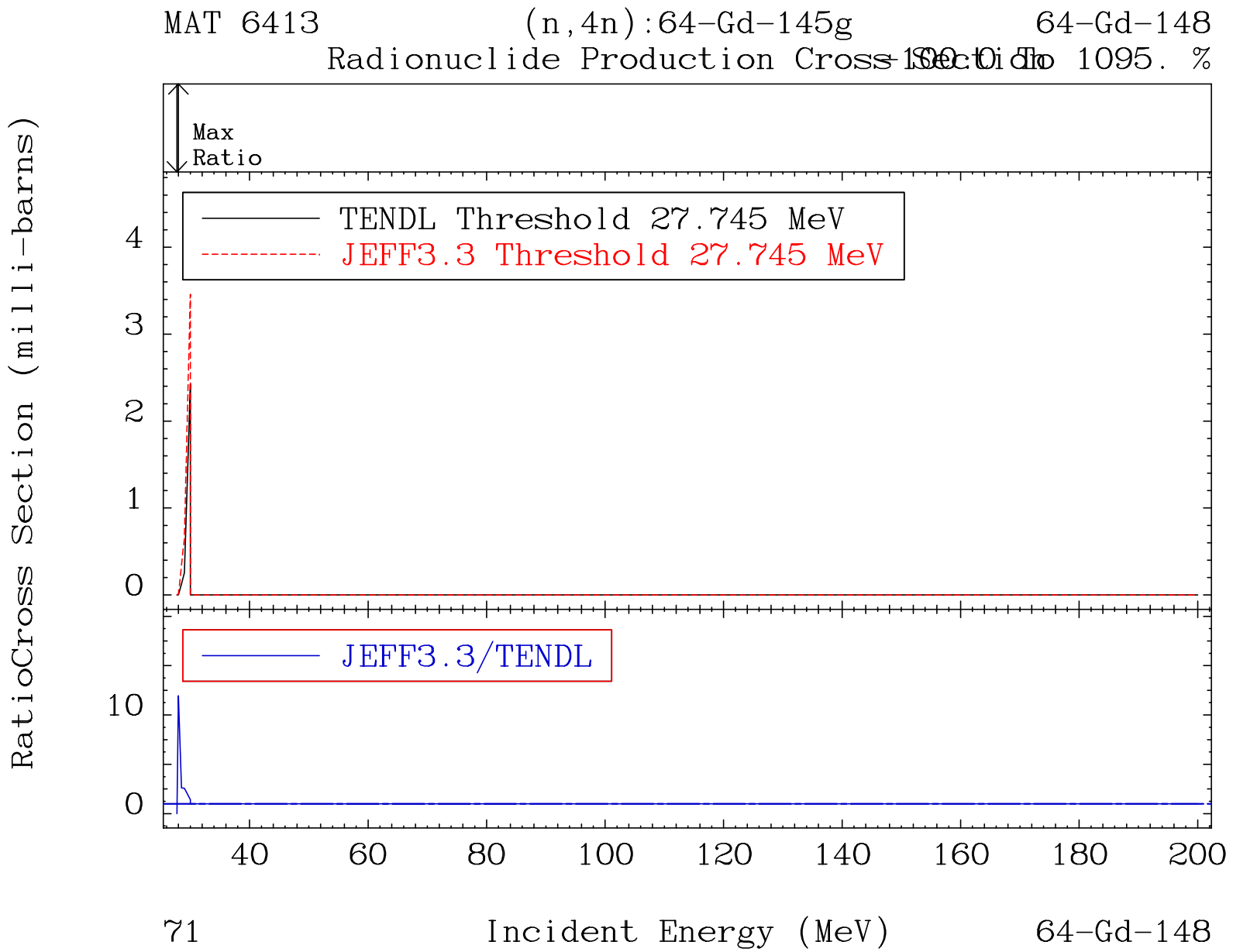

MAT 6413
Dpa elastic (mt2)
Cross Section
64-Gd-148
-99.96 To 9843. %
Max
Ratio
TENDL Threshold 895.69 eV
JEFF3.3 Threshold 899.17 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
66
64-Gd-148

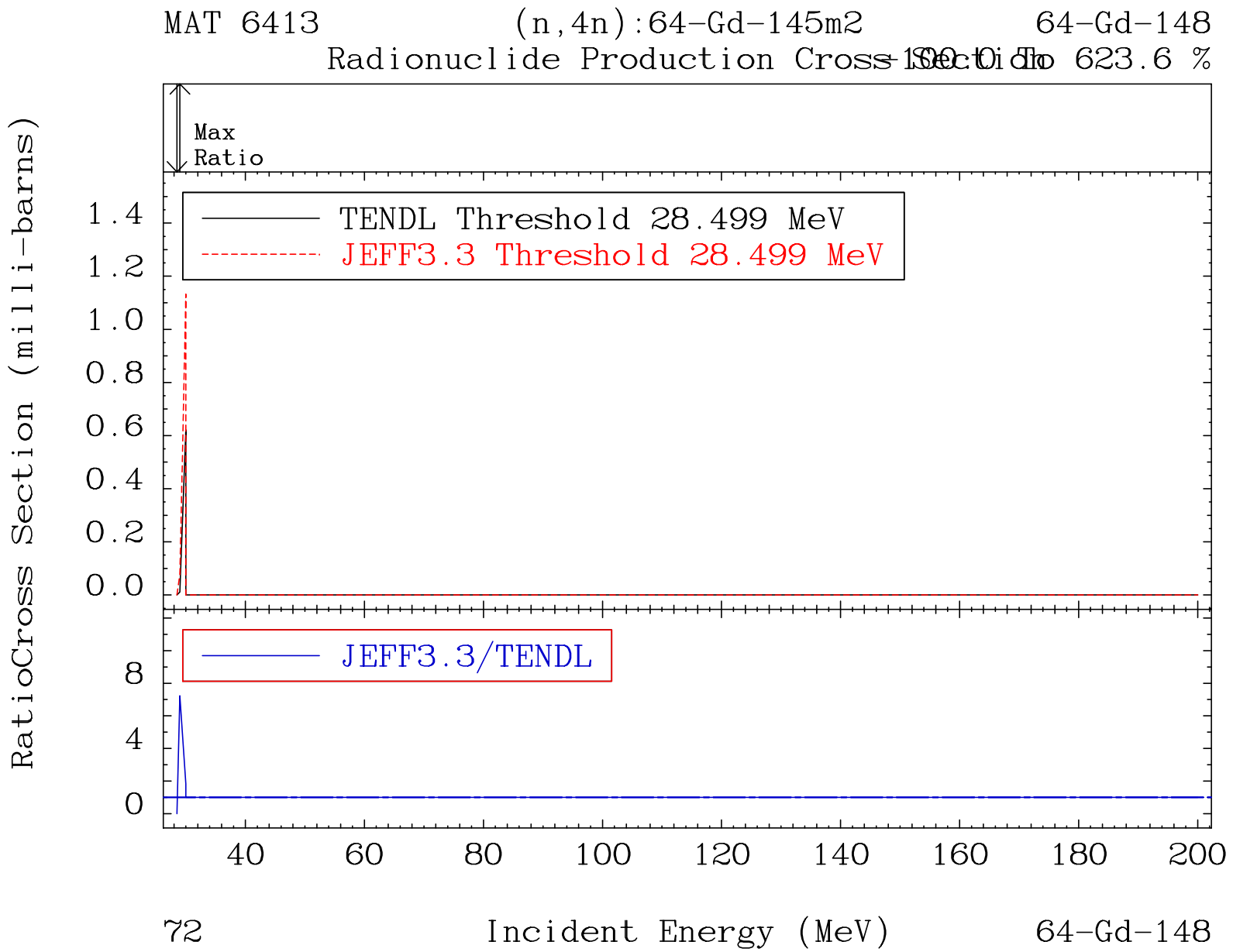

MAT 6413
Dpa inelastic (mt51-91)
64-Gd-148
Cross Section -6.621 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 789.78 keV
JEFF3.3 Threshold 789.78 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
64-Gd-148


MAT 6413 Dpa disappearance (mt102 -120) 64-Gd-148
Cross Section -92.04 To 5135. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
68
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)
69
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)
70
64-Gd-148


MAT 6413
(n,4n):64-Gd-145g
64-Gd-148
Radionuclide Production Cross Section To 1095. %
Max
Ratio
TENDL Threshold 27.745 MeV
JEFF3.3 Threshold 27.745 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
4
3
2
1
0
10
0
40
60
80
100
120
140
160
180
200
71
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)
72
64-Gd-148