Program Complot
(Version 2021-1)
by
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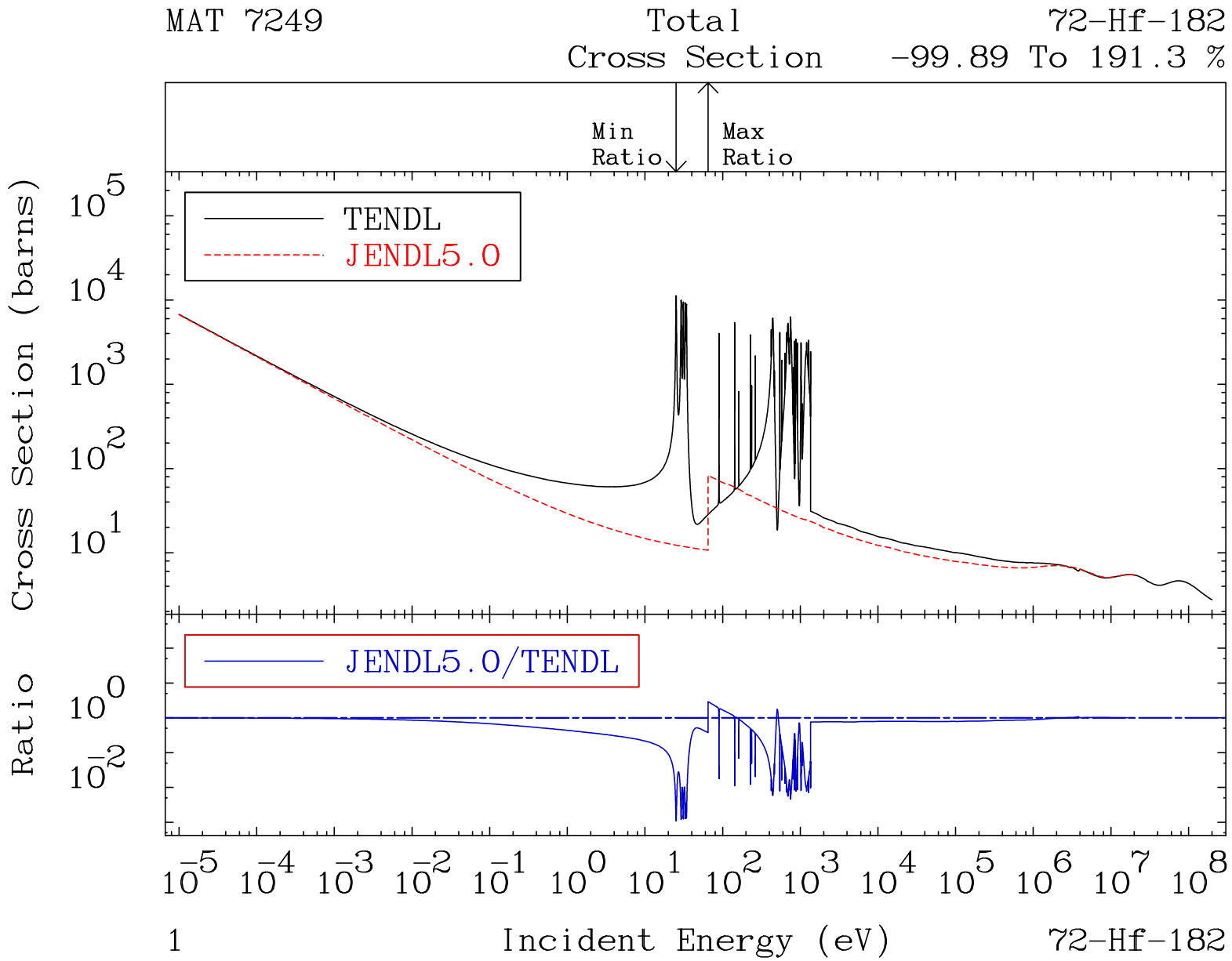
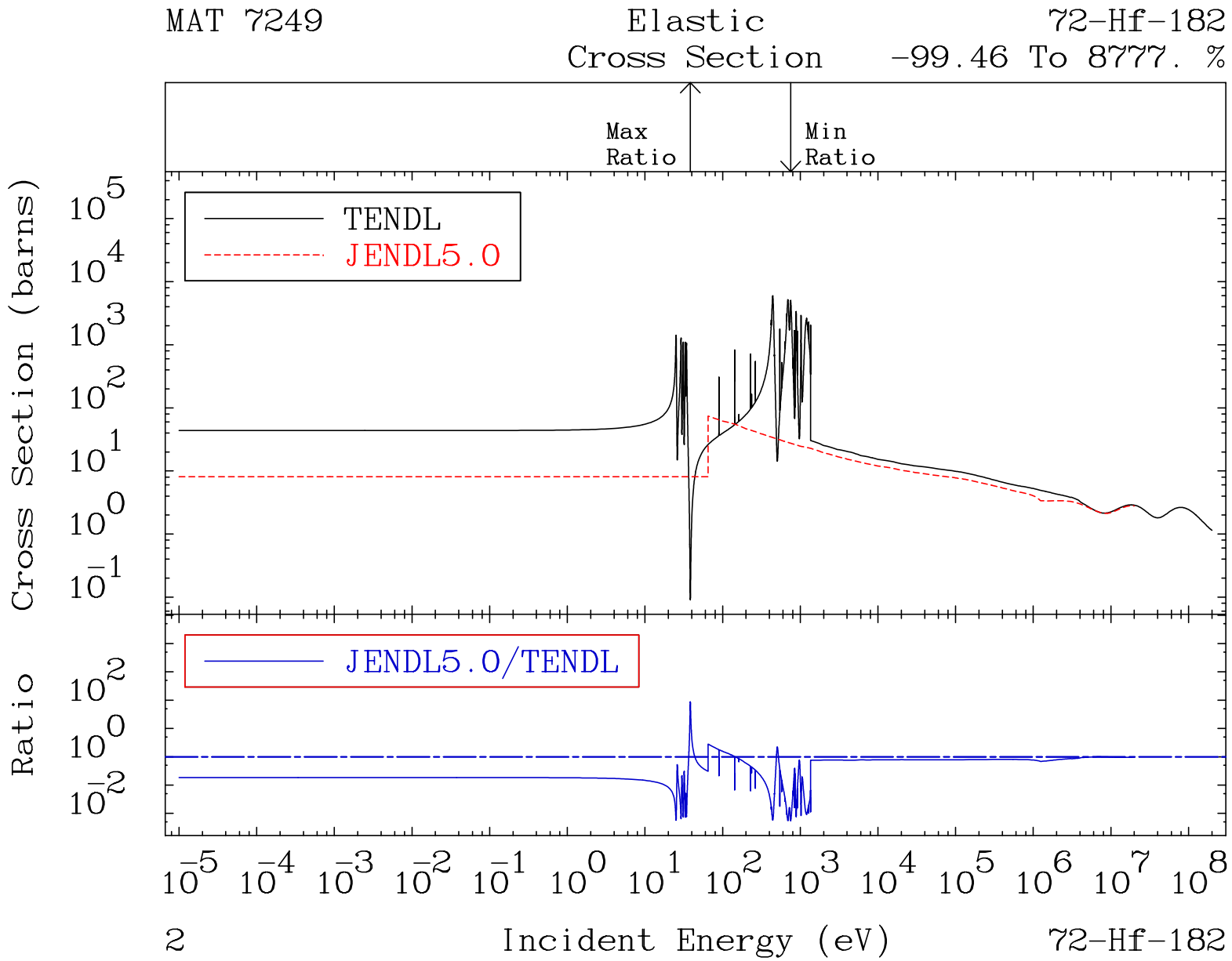
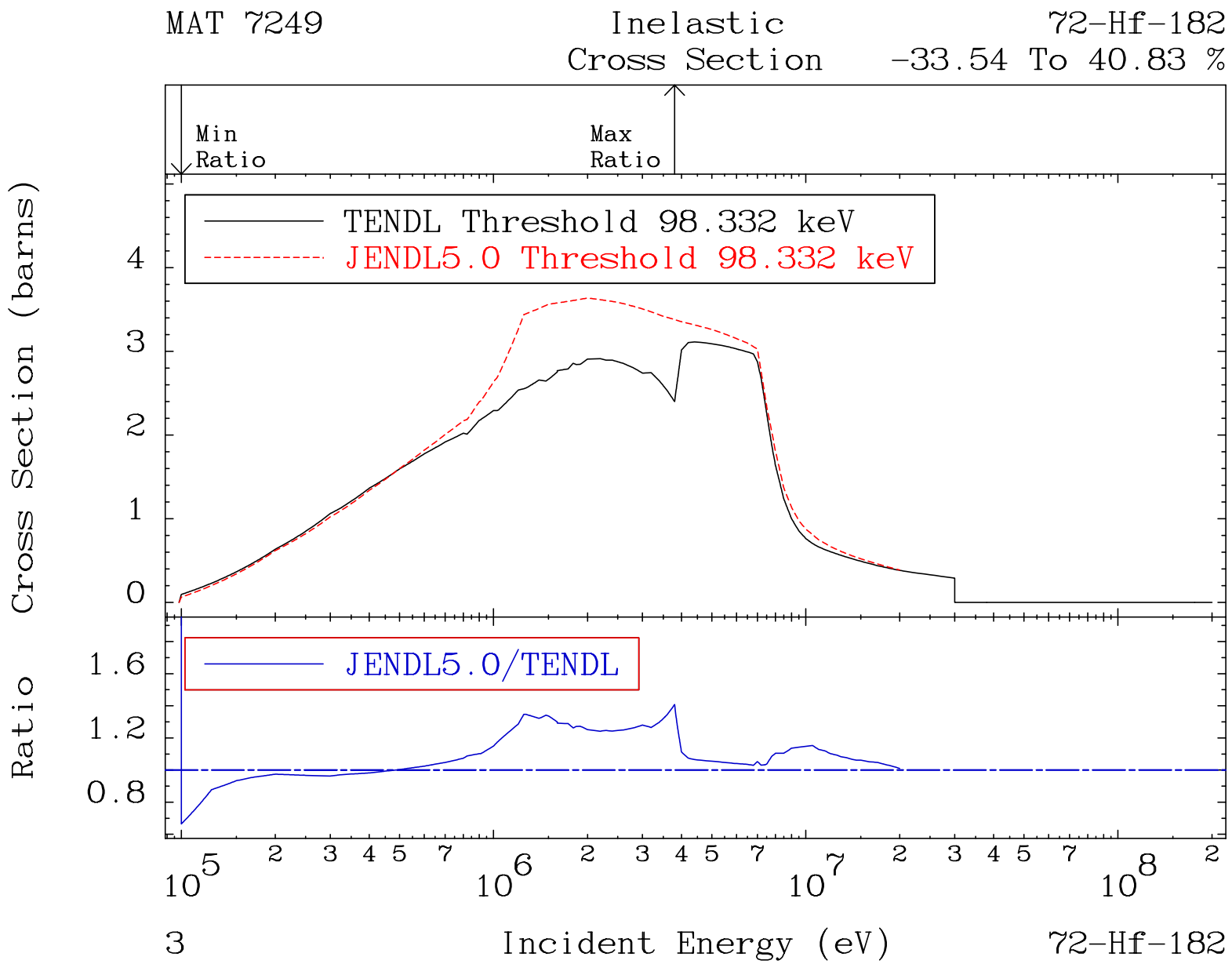
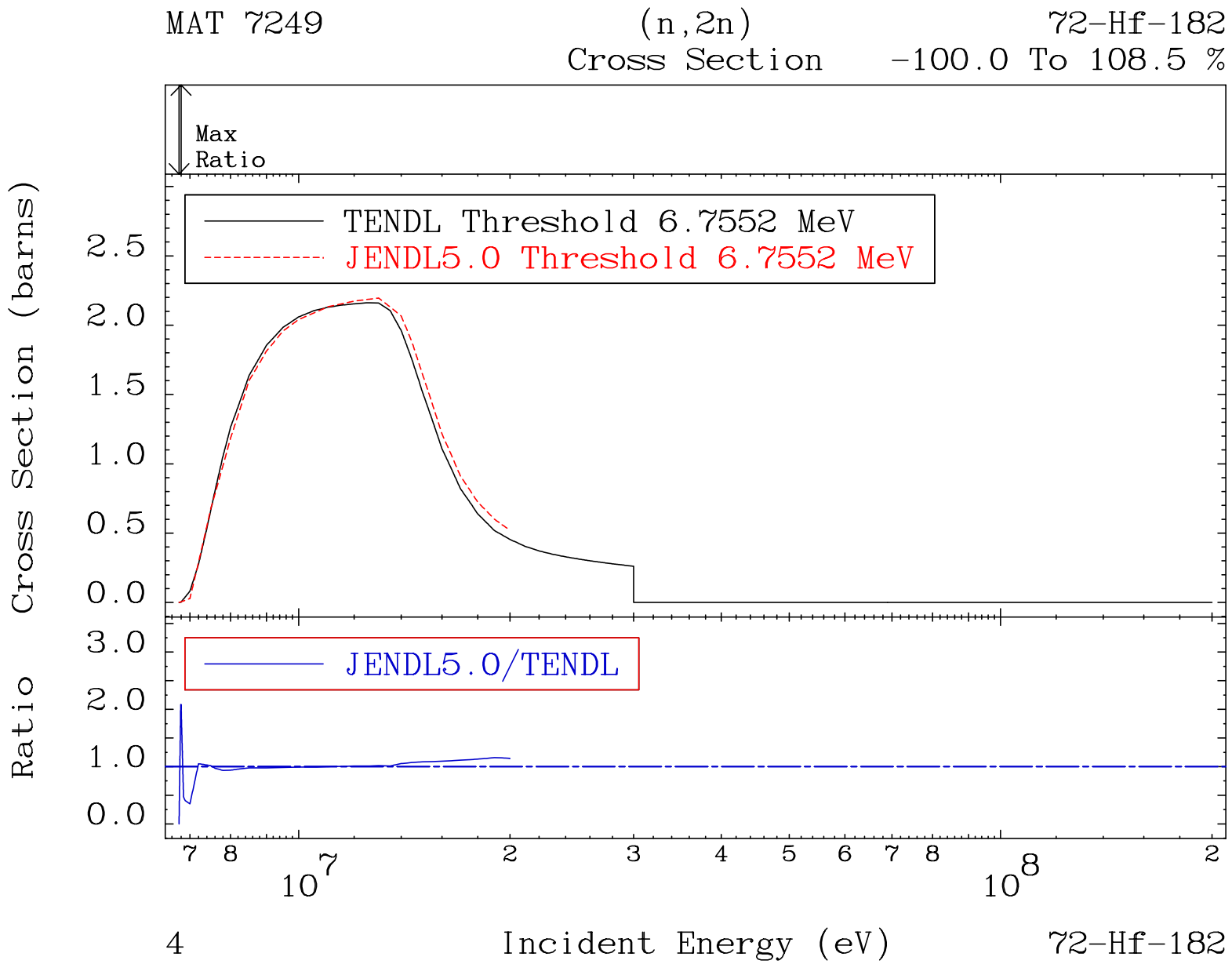
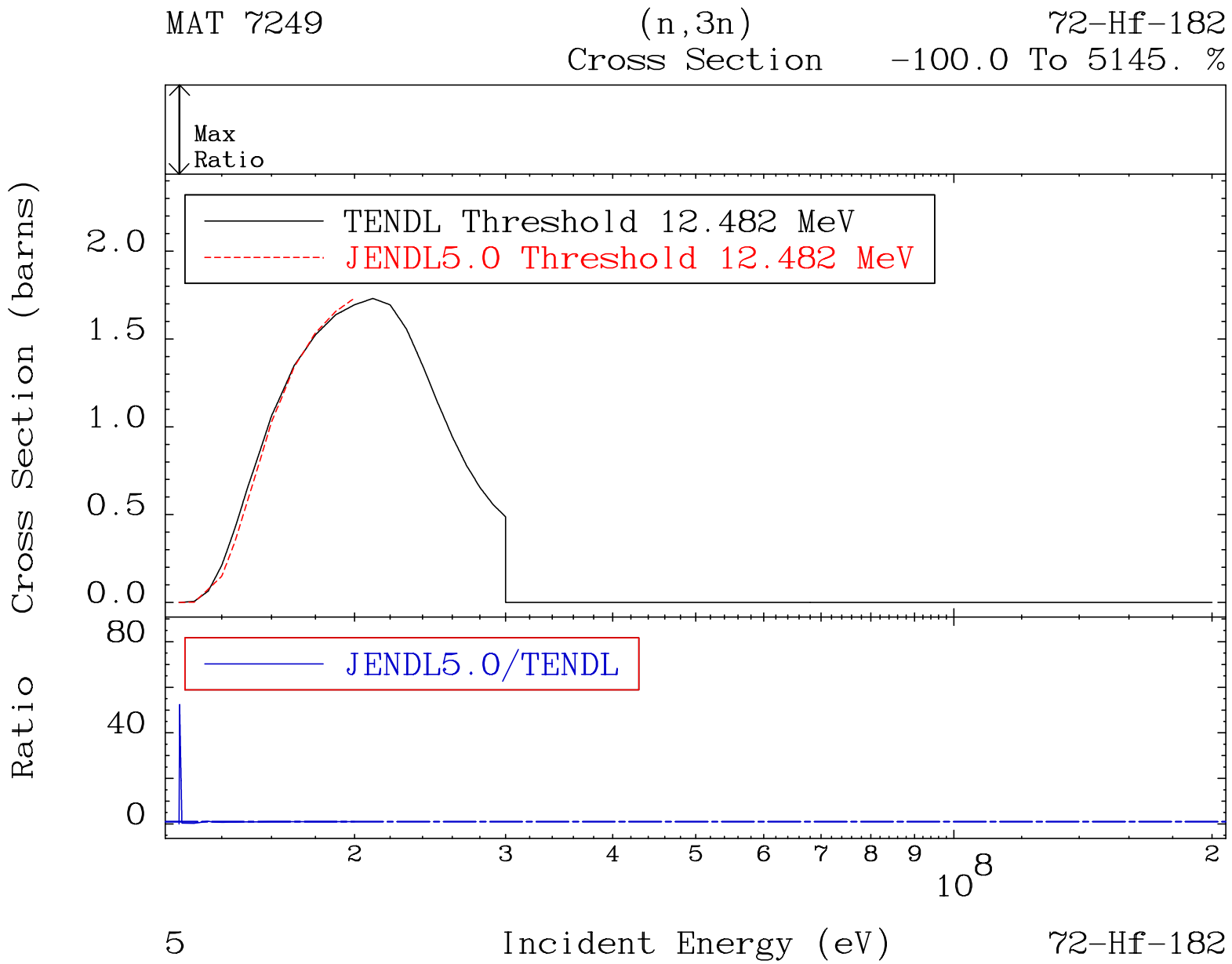
Press Mouse Button to Start

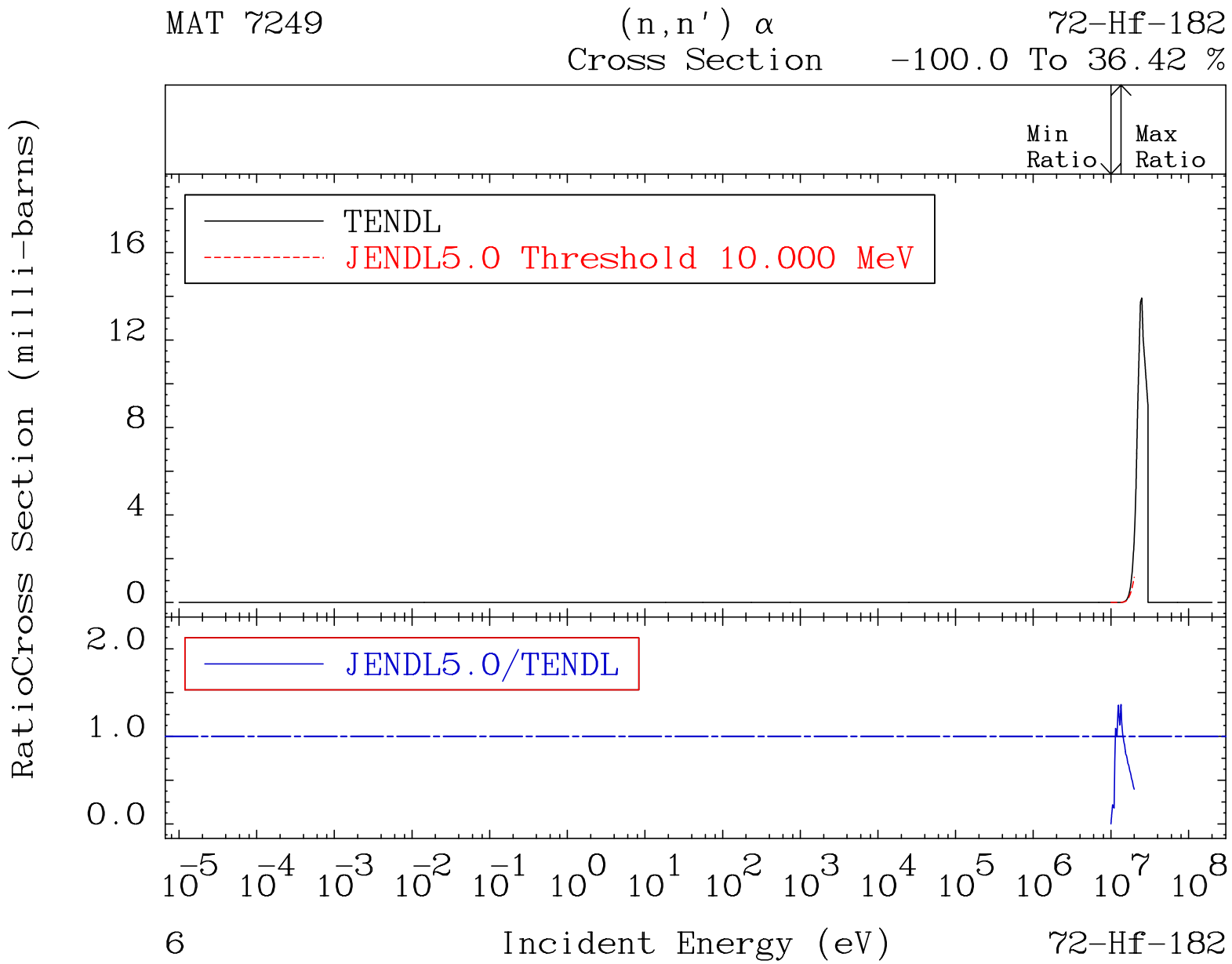

MAT 7249
Total
Cross Section
72-Hf-182
-99.89 To 191.3 %
Min
Ratio
Max
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
72-Hf-182

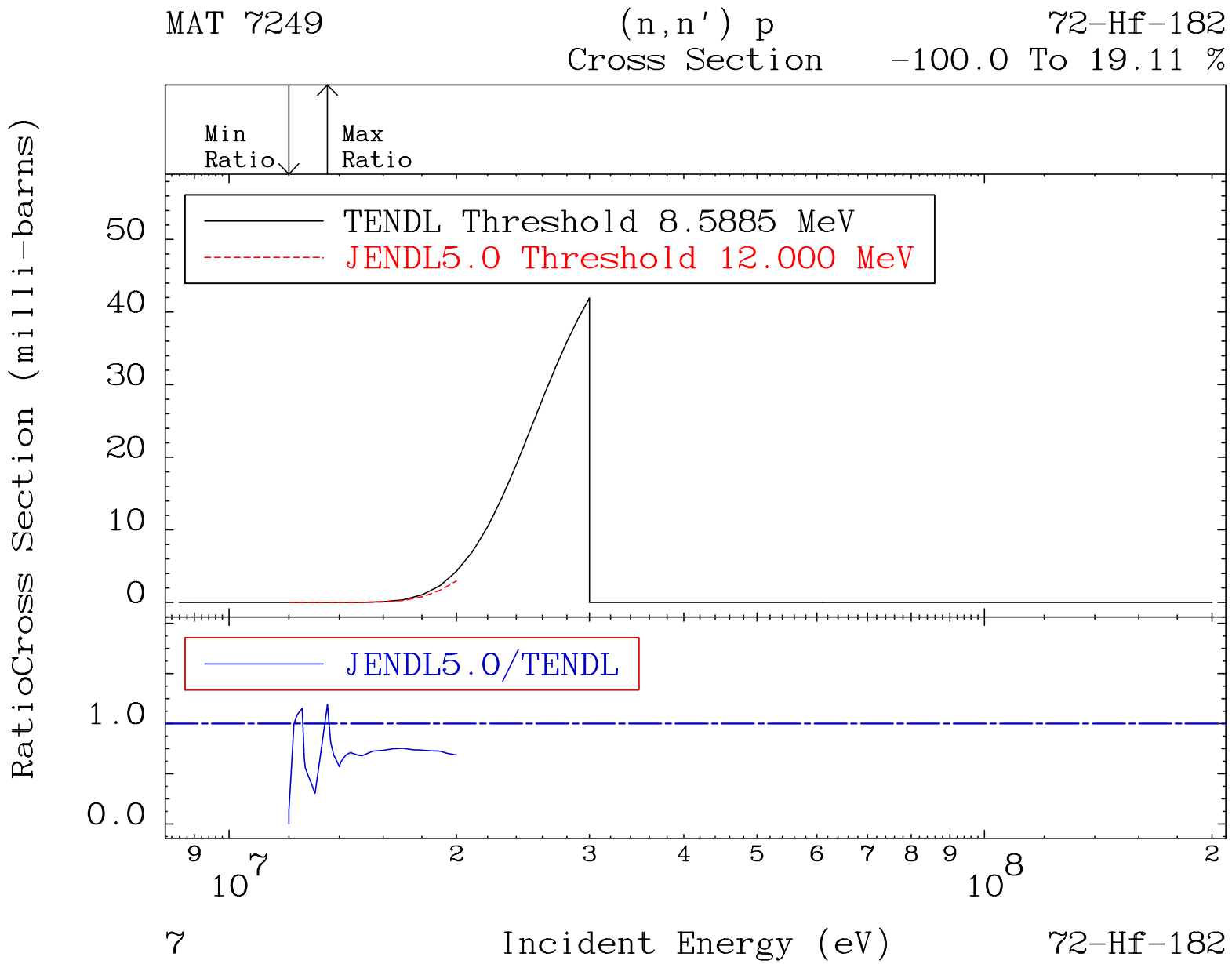

MAT 7249
Elastic
Cross Section
72-Hf-182
-99.46 To 8777. %
Max
Ratio
Min
Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
2
72-Hf-182

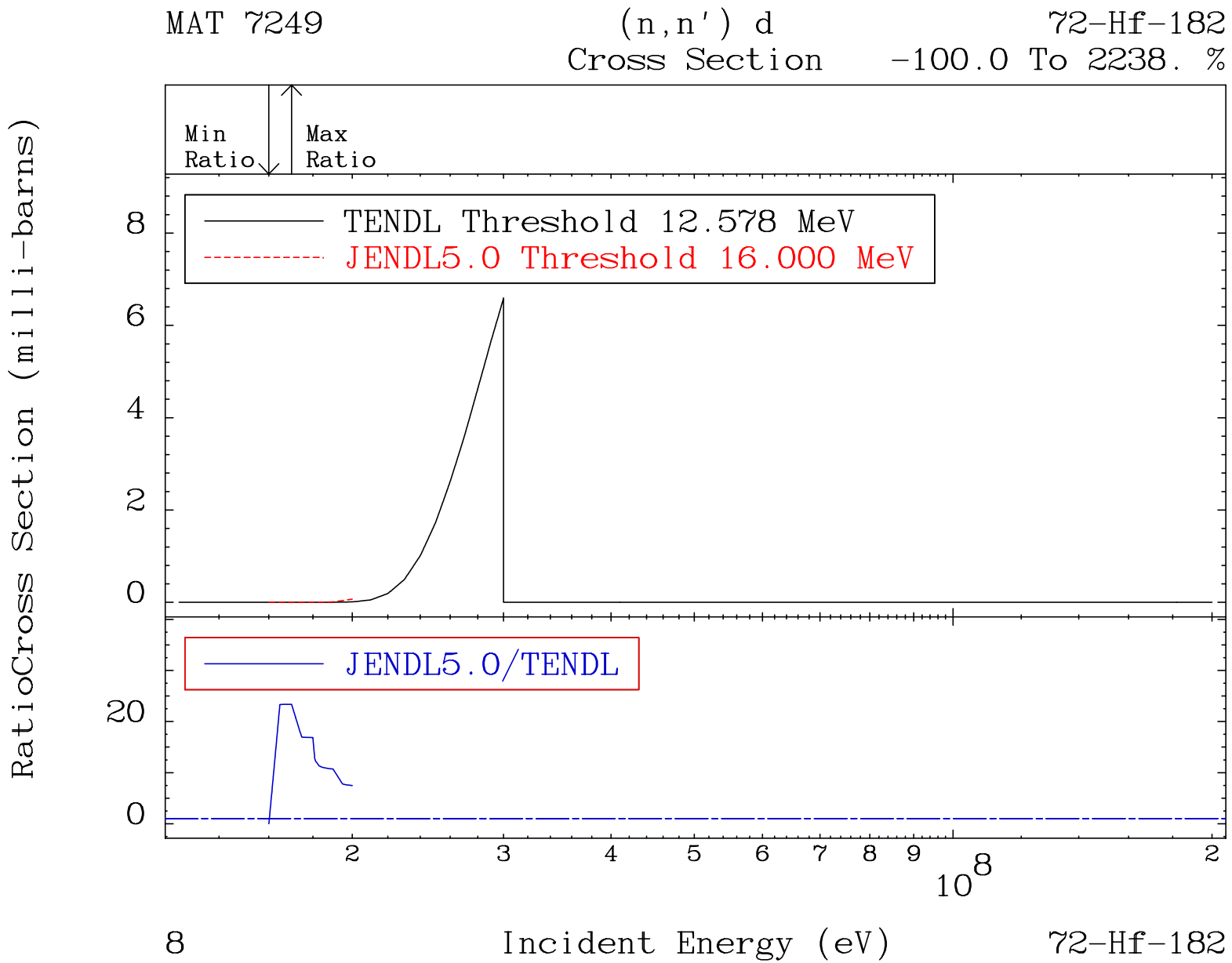

MAT 7249
Inelastic
Cross Section
72-Hf-182
-33.54 To 40.83 %
Min Ratio
Max Ratio
TENDL Threshold 98.332 keV
JENDL5.0 Threshold 98.332 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
72-Hf-182

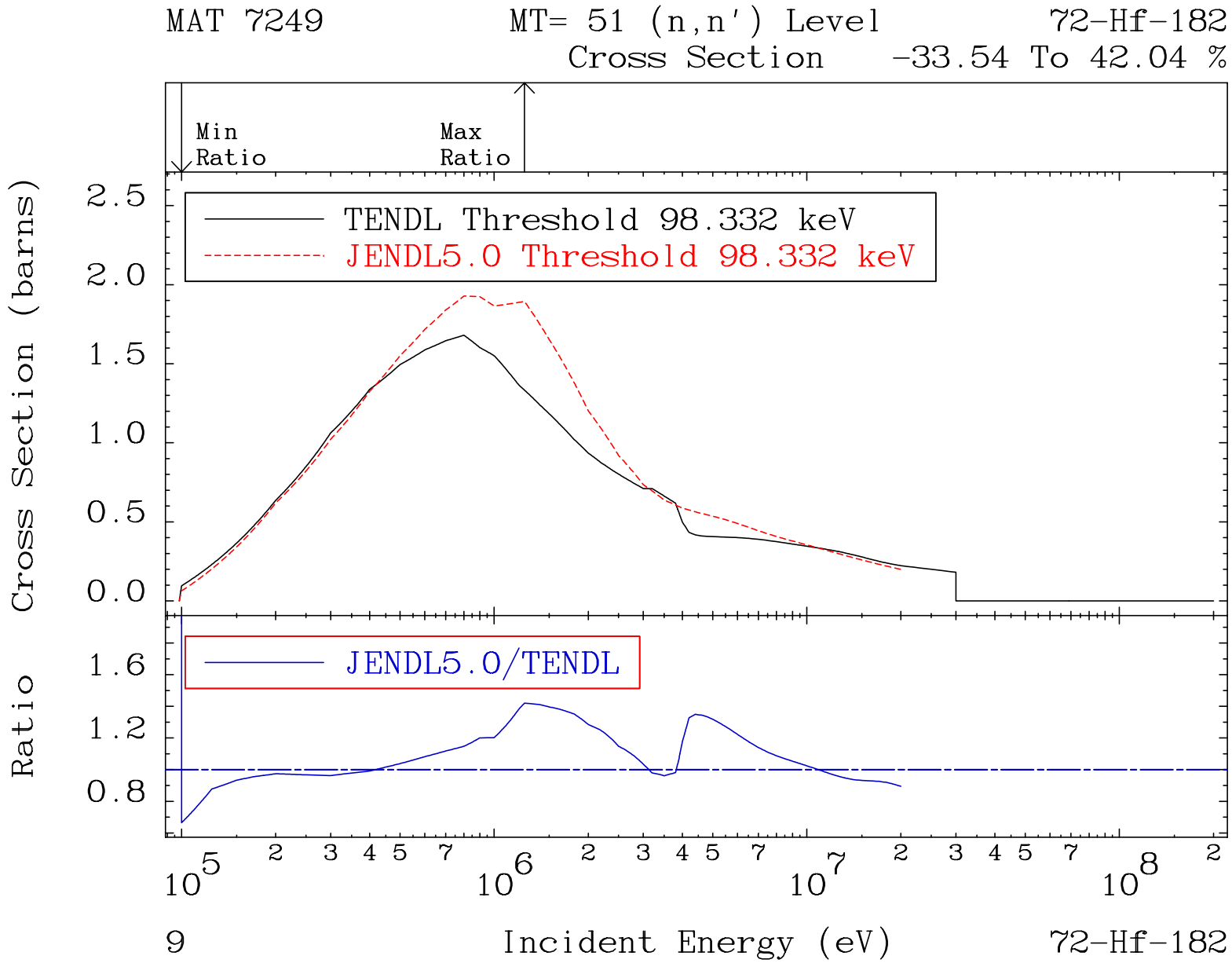

MAT 7249
(n,2n)
Cross Section
72-Hf-182
-100.0 To 108.5 %
Max
Ratio
TENDL Threshold 6.7552 MeV
JENDL5.0 Threshold 6.7552 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
4
72-Hf-182

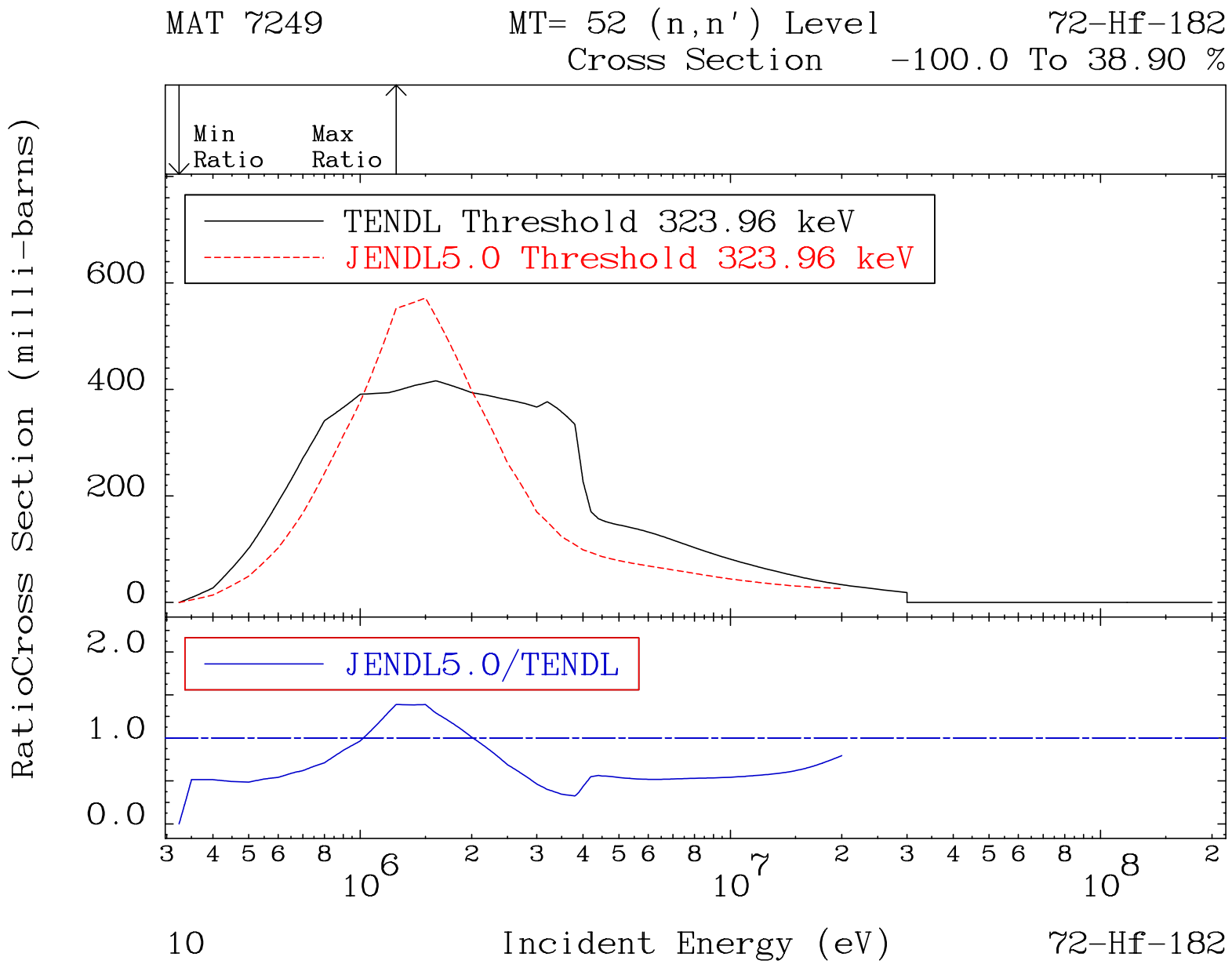

MAT 7249
(n,3n)
72-Hf-182
Cross Section
-100.0 To 5145. %
Max
Ratio
TENDL Threshold 12.482 MeV
JENDL5.0 Threshold 12.482 MeV
JENDL5.0/TENDL
Ratio Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
80
40
0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
72-Hf-182

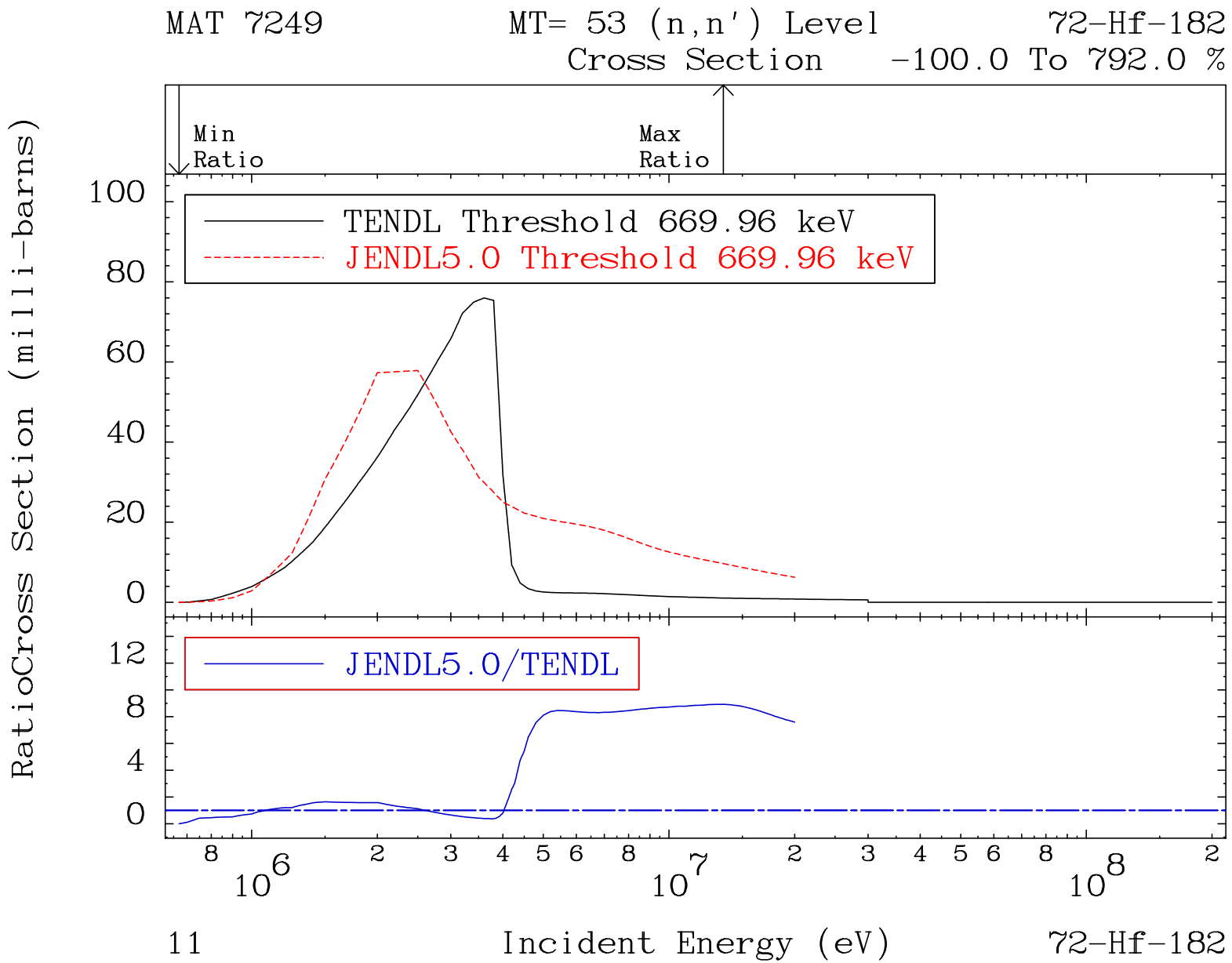

MAT 7249
(n,n') α
Cross Section
72-Hf-182
-100.0 To 36.42 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
2.0
1.0
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
Incident Energy (eV)
6
72-Hf-182

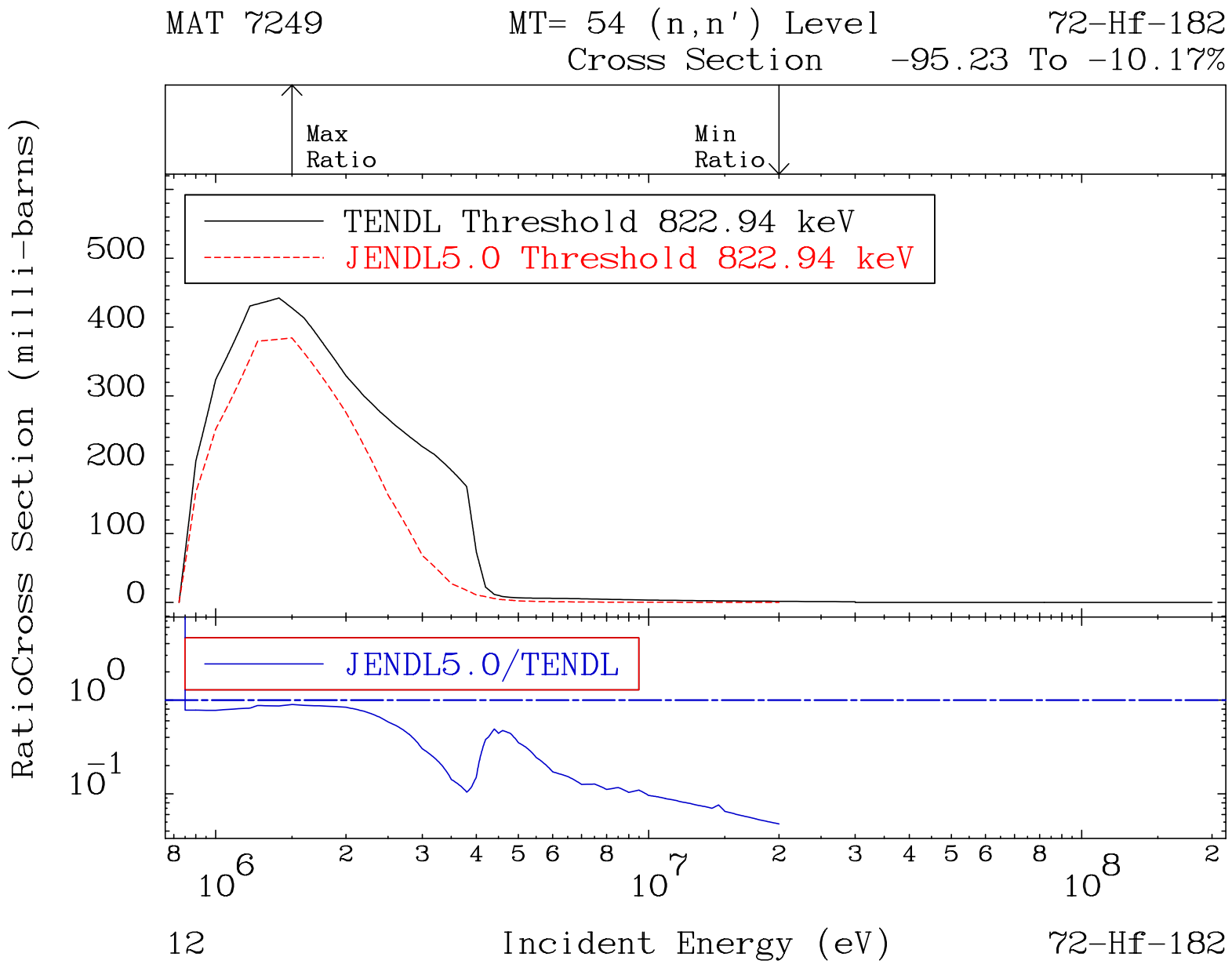

MAT 7249
(n,n') p
Cross Section
72-Hf-182
-100.0 To 19.11 %
Min Ratio
Max Ratio
TENDL Threshold 8.5885 MeV
JENDL5.0 Threshold 12.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
1.0
0.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
72-Hf-182

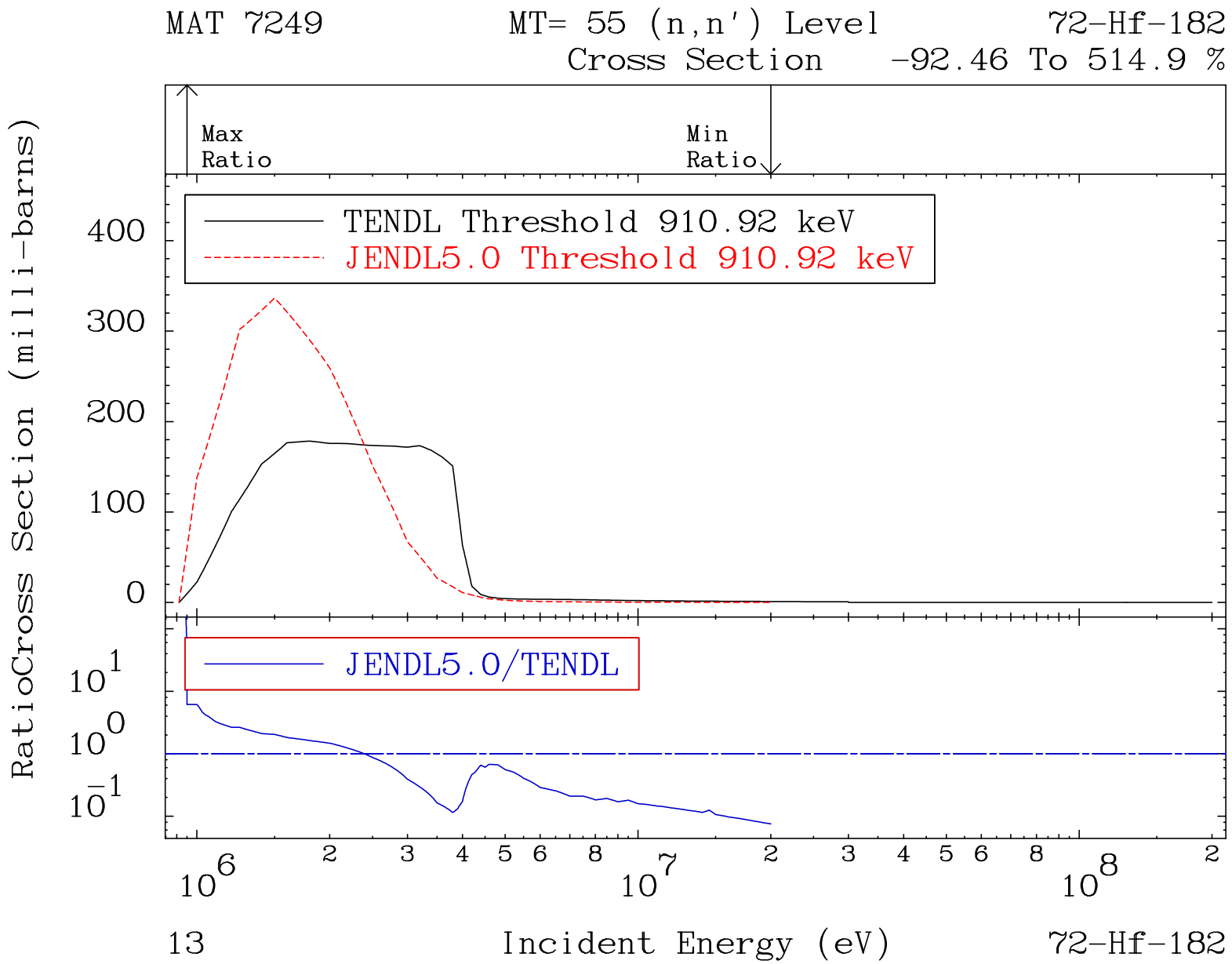

MAT 7249
(n,n') d
72-Hf-182
Cross Section
-100.0 To 2238. %
Min Ratio
Max Ratio
TENDL Threshold 12.578 MeV
JENDL5.0 Threshold 16.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
8
6
4
2
0
20
0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
72-Hf-182

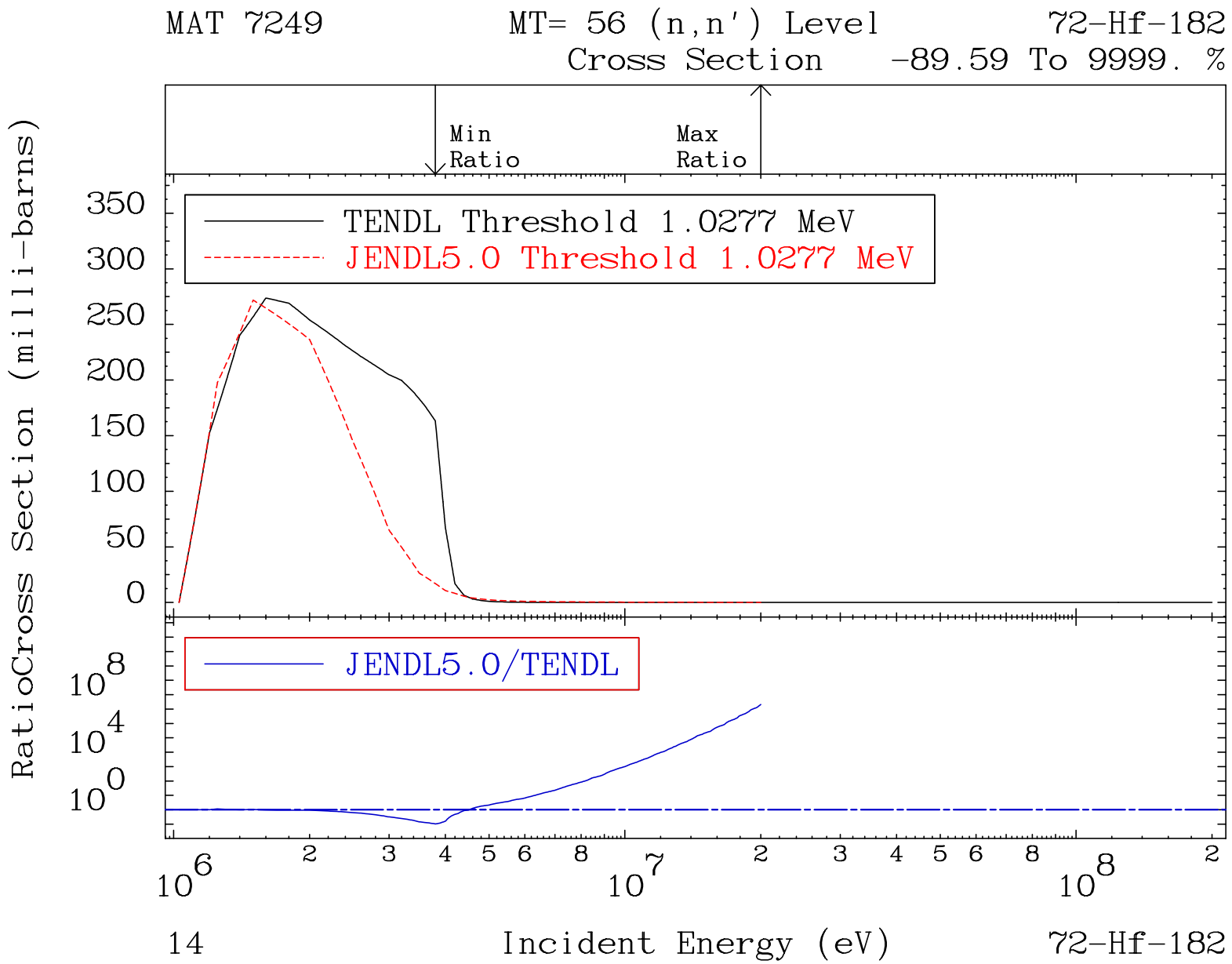

MAT 7249
MT= 51 (n,n') Level
72-Hf-182
Cross Section
-33.54 To 42.04 %
Min Ratio
Max Ratio
TENDL Threshold 98.332 keV
JENDL5.0 Threshold 98.332 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
9
72-Hf-182

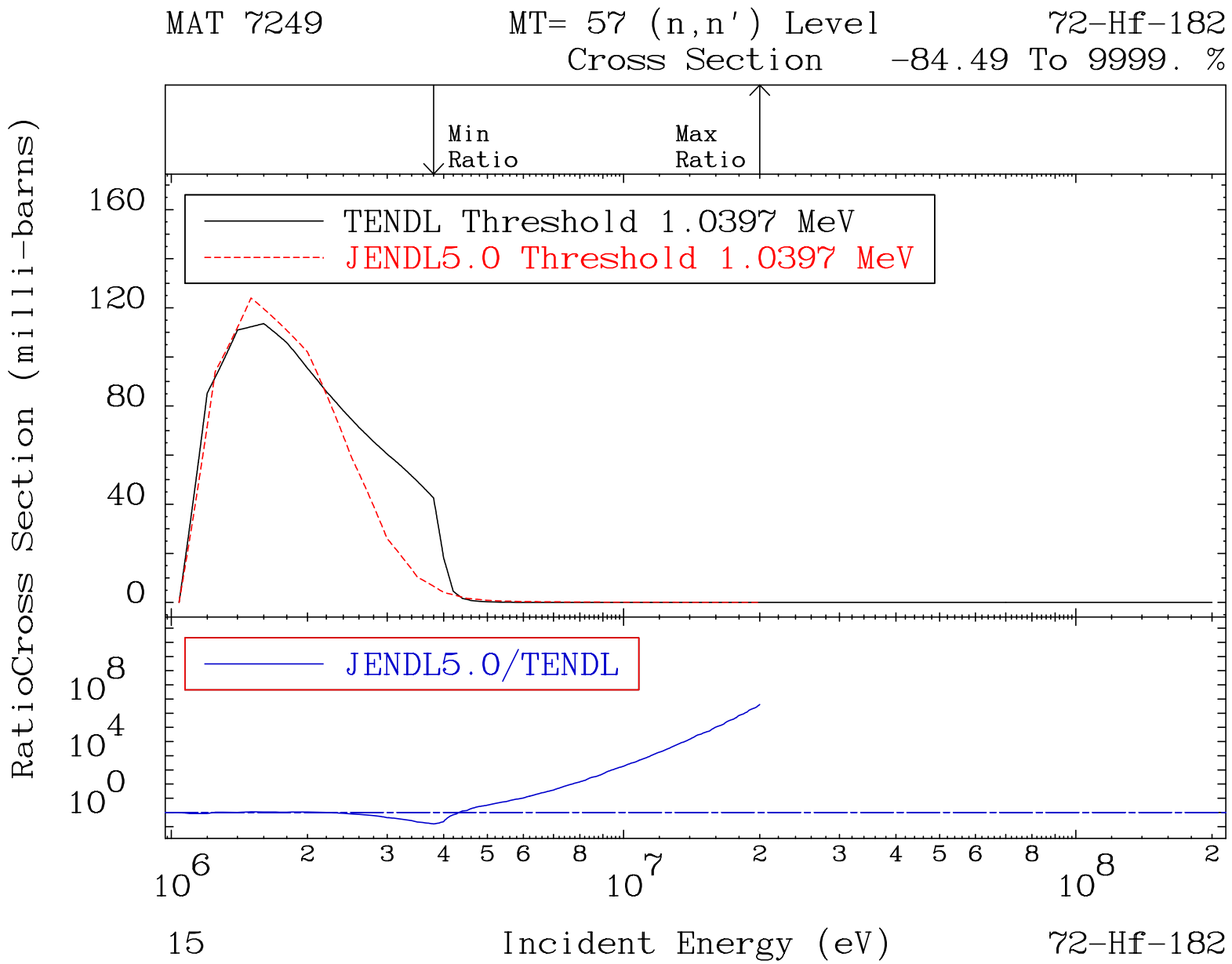

MAT 7249
MT= 52 (n,n') Level
72-Hf-182
Cross Section
-100.0 To 38.90 %
Min Ratio
Max Ratio
TENDL Threshold 323.96 keV
JENDL5.0 Threshold 323.96 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
600
400
200
0
2.0
1.0
0.0
3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
10
Incident Energy (eV)
72-Hf-182

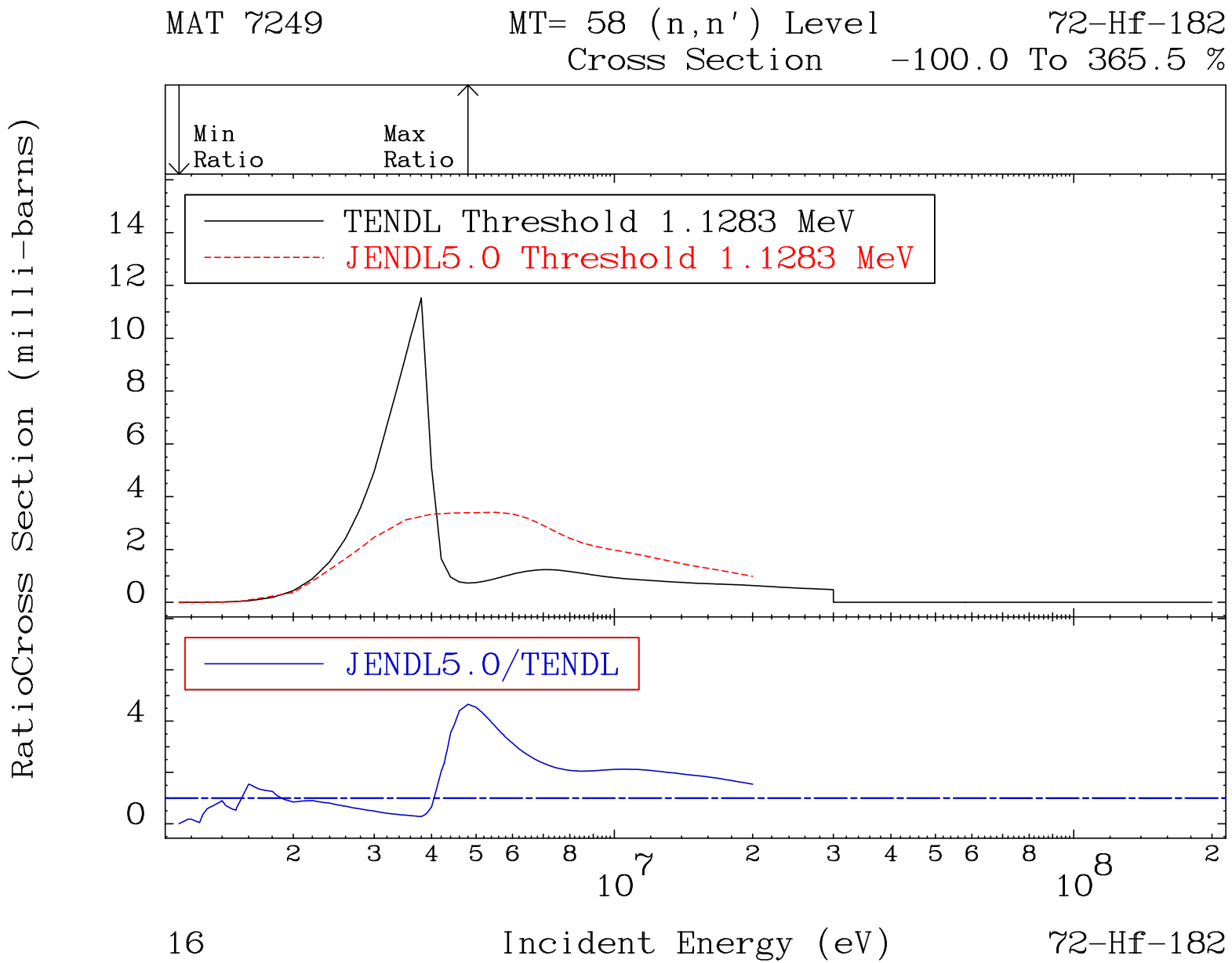

MAT 7249
MT= 53 (n,n') Level
72-Hf-182
Cross Section
-100.0 To 792.0 %
Min Ratio
Max Ratio
TENDL Threshold 669.96 keV
JENDL5.0 Threshold 669.96 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
11
72-Hf-182

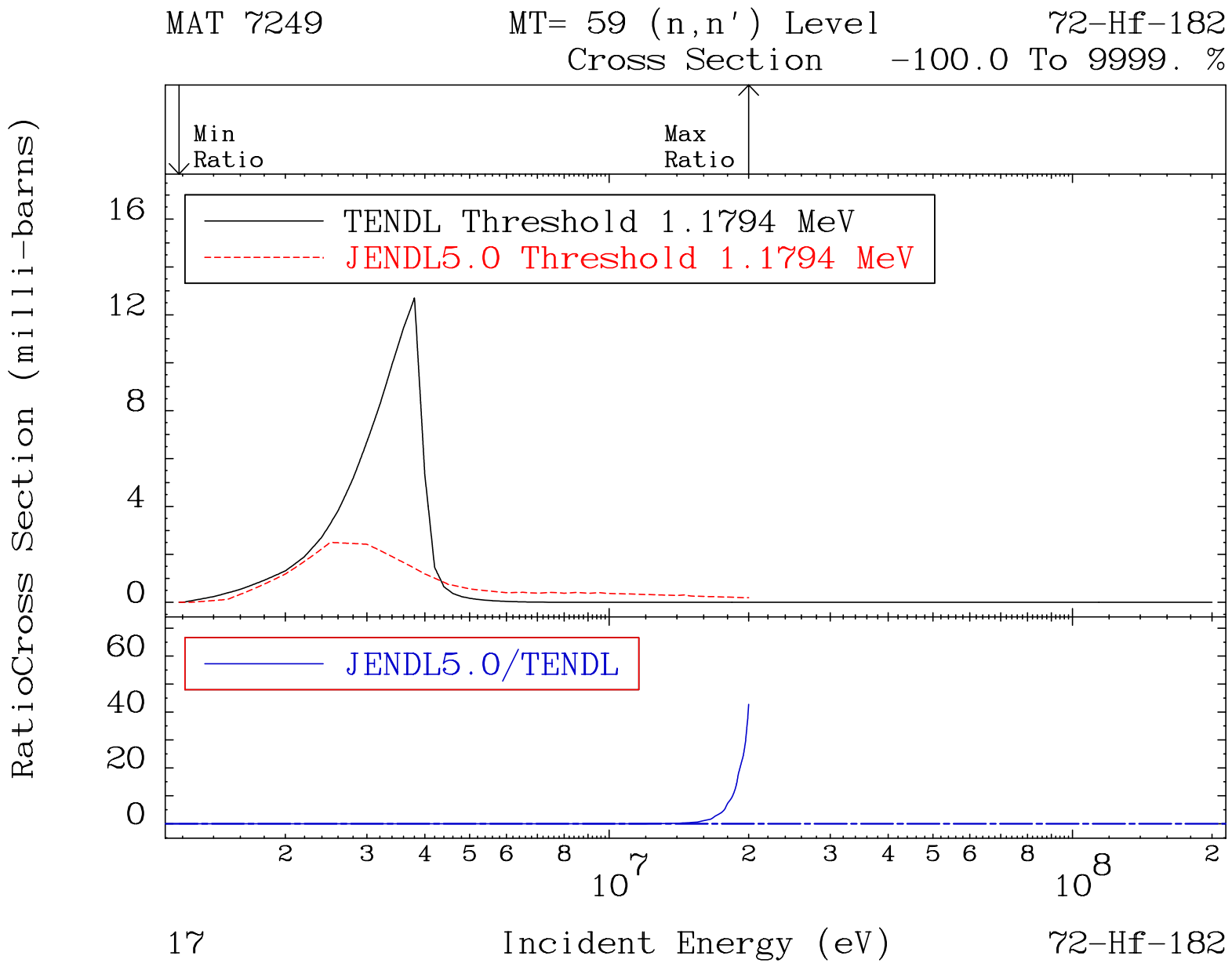

MAT 7249
MT= 54 (n,n') Level
72-Hf-182
Cross Section
-95.23 To -10.17%
Max Ratio
Min Ratio
TENDL Threshold 822.94 keV
JENDL5.0 Threshold 822.94 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
10^0
10^-1
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
12
Incident Energy (eV)
72-Hf-182

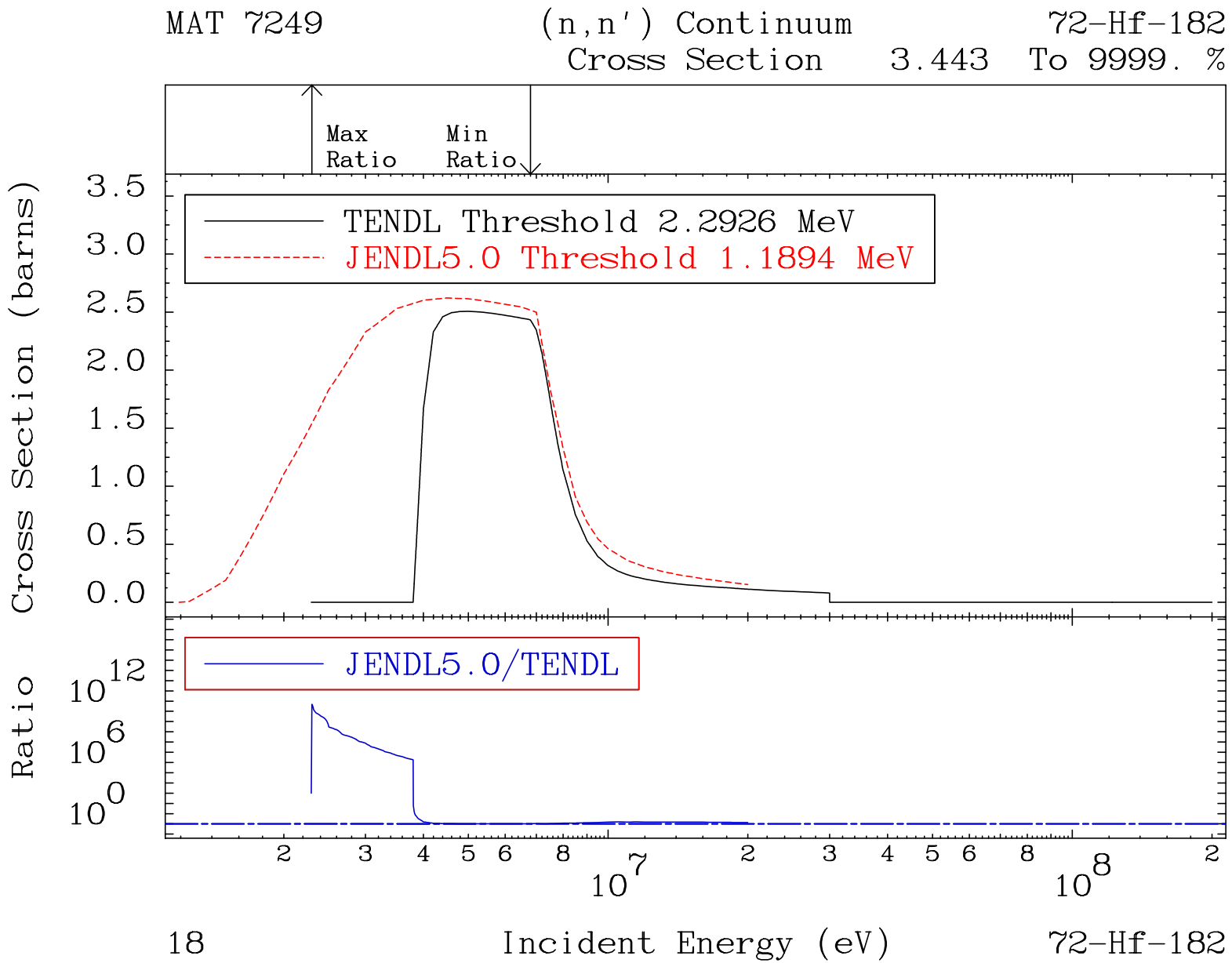

MAT 7249
MT= 55 (n,n') Level
72-Hf-182
Cross Section
-92.46 To 514.9 %
Max Ratio
Min Ratio
TENDL Threshold 910.92 keV
JENDL5.0 Threshold 910.92 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
10^1
10^0
10^-1
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
13
Incident Energy (eV)
72-Hf-182

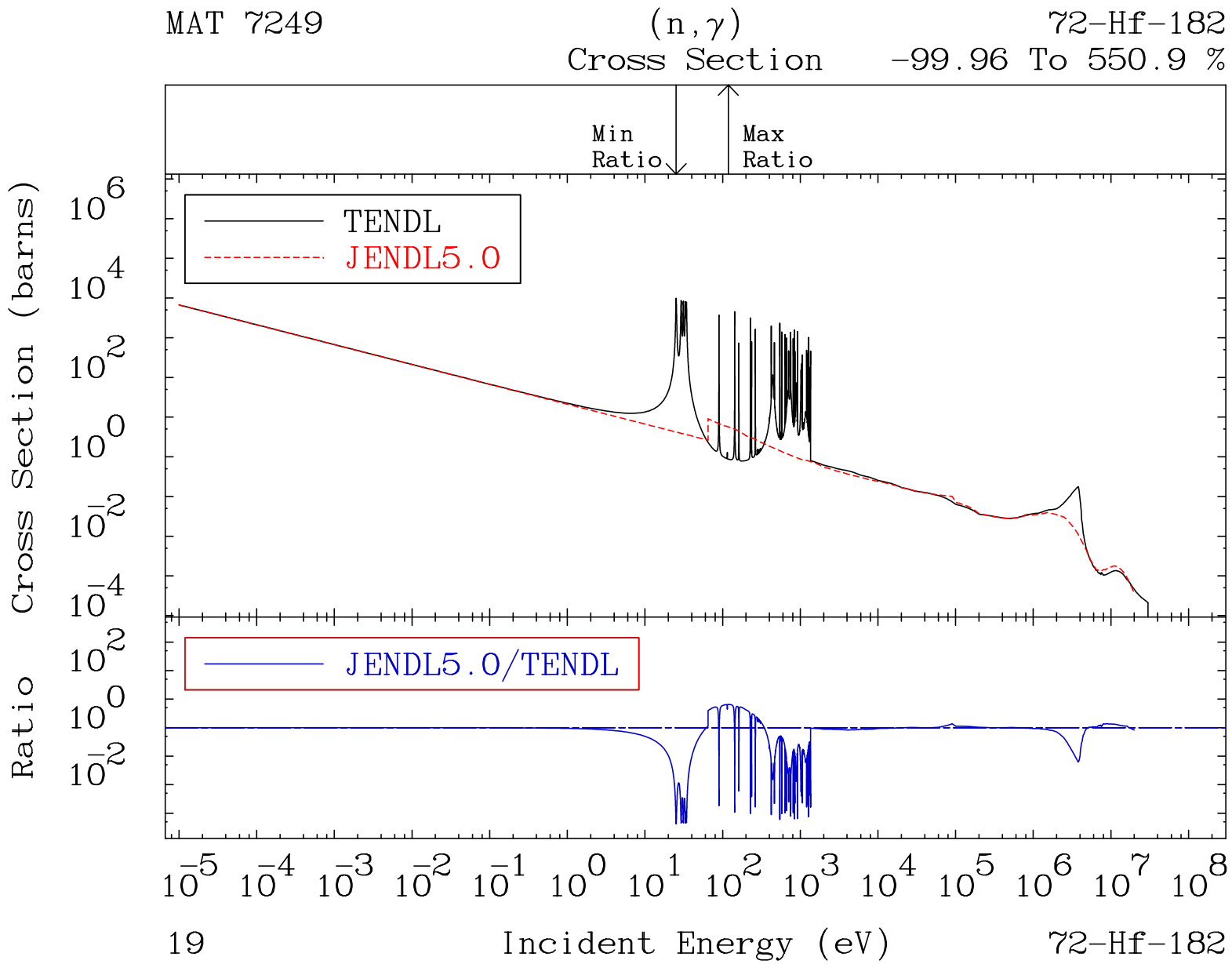

MAT 7249
MT= 56 (n,n') Level
72-Hf-182
Cross Section -89.59 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.0277 MeV
JENDL5.0 Threshold 1.0277 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
10^8
10^4
10^0
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
14
Incident Energy (eV)
72-Hf-182

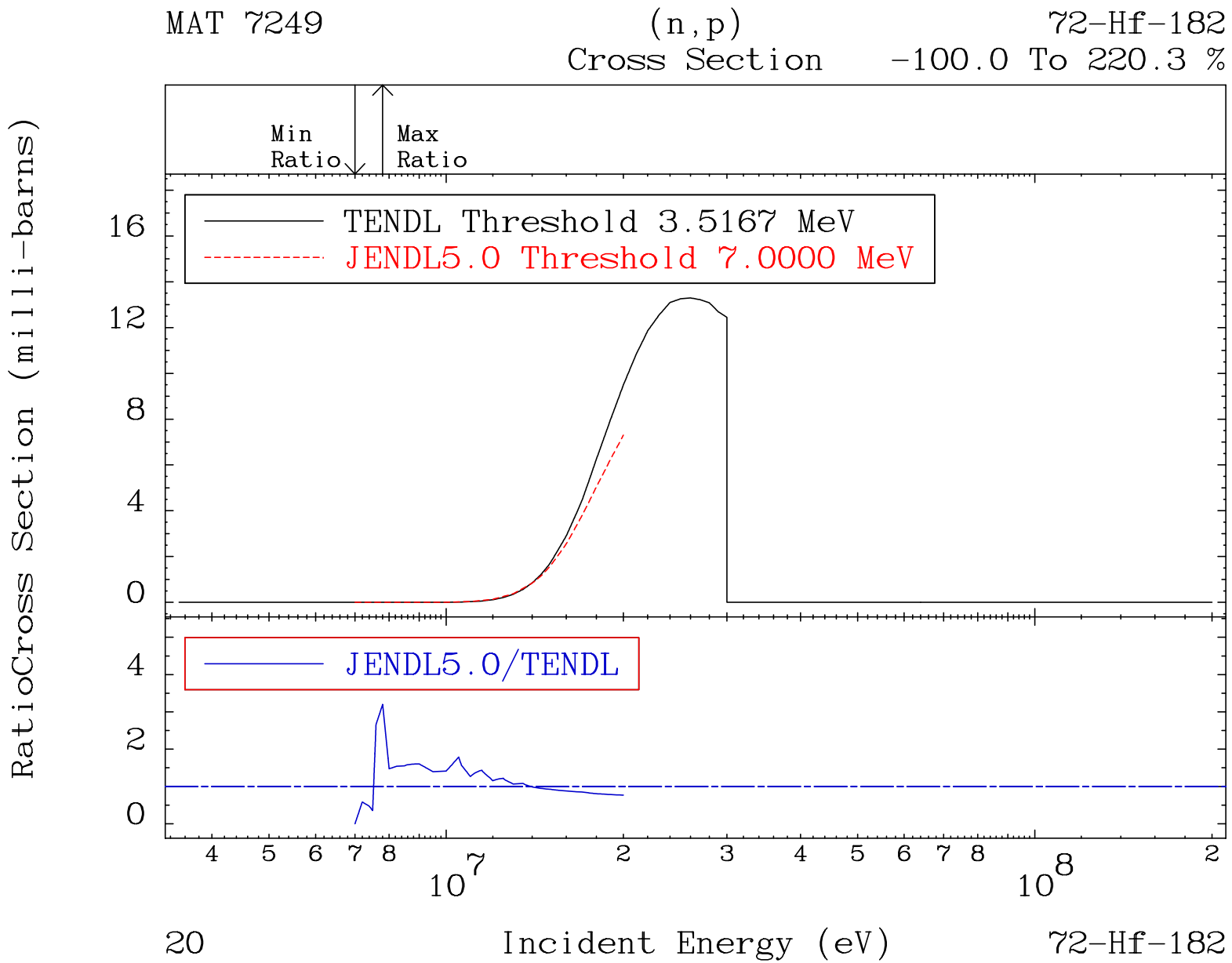

MAT 7249
MT= 57 (n,n') Level
72-Hf-182
Cross Section -84.49 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.0397 MeV
JENDL5.0 Threshold 1.0397 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
10^8
10^4
10^0
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
15
Incident Energy (eV)
72-Hf-182

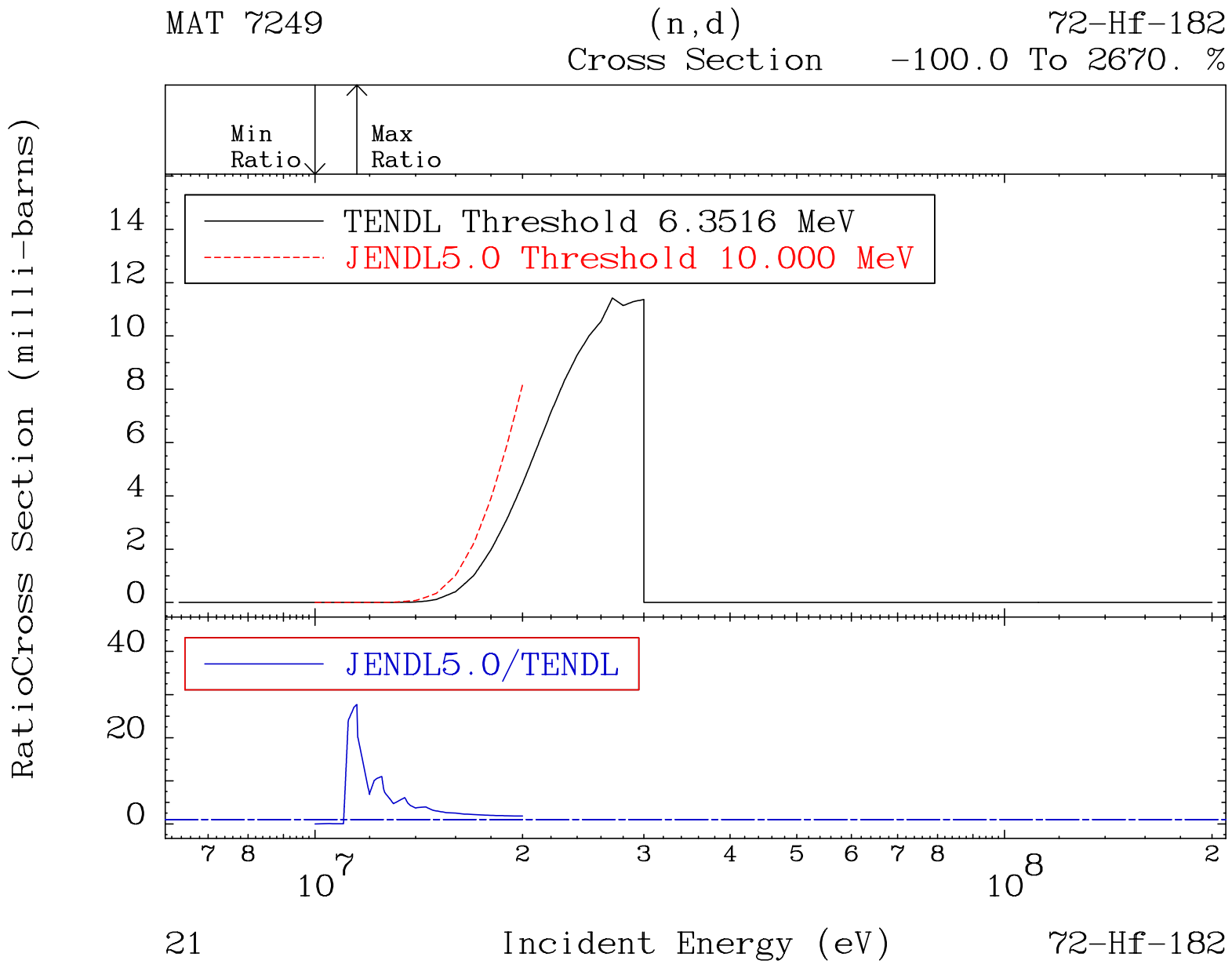

MAT 7249
MT= 58 (n,n') Level
72-Hf-182
Cross Section
-100.0 To 365.5 %
Min Ratio
Max Ratio
TENDL Threshold 1.1283 MeV
JENDL5.0 Threshold 1.1283 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
4
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
16
Incident Energy (eV)
72-Hf-182

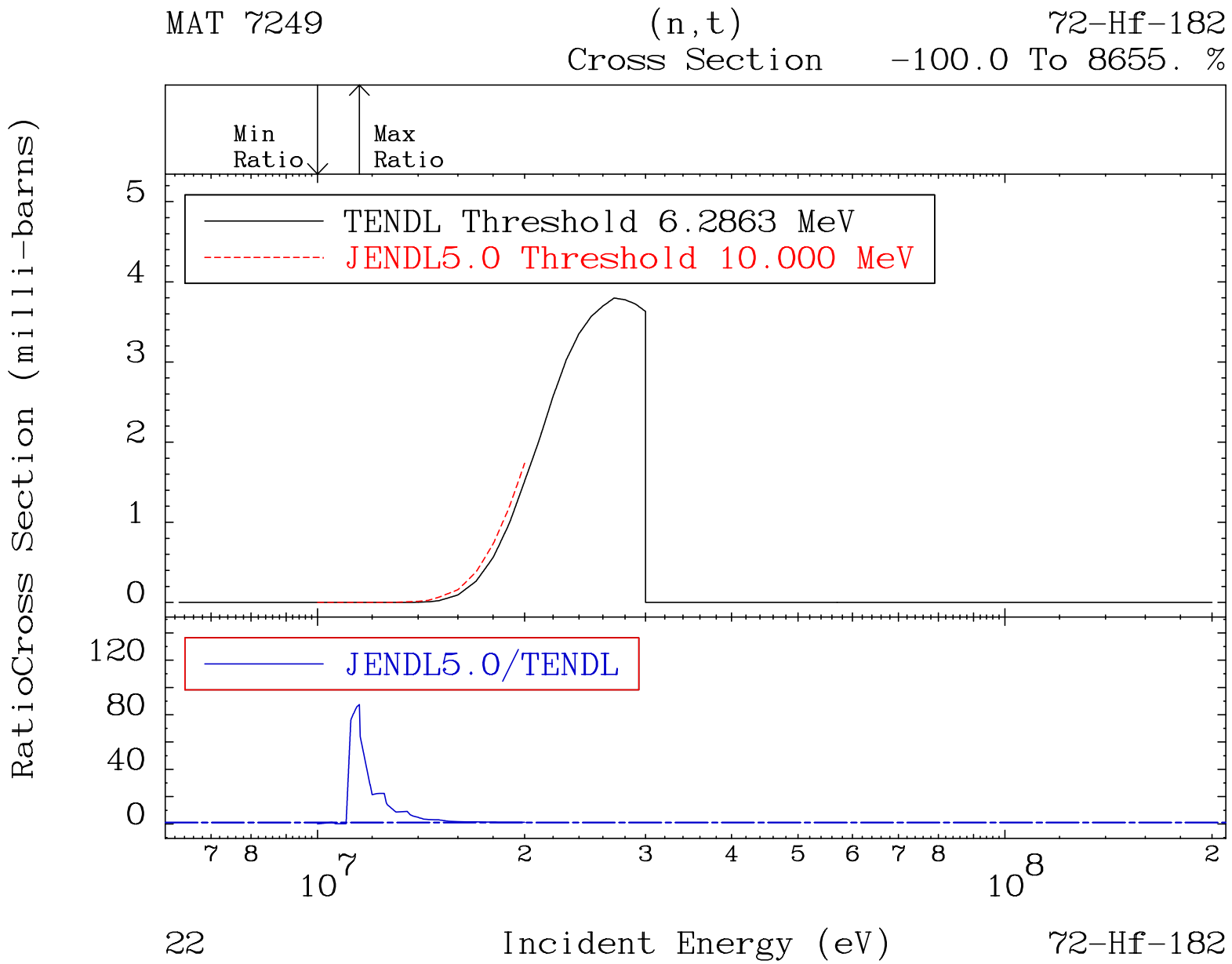

MAT 7249
MT= 59 (n,n') Level
72-Hf-182
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.1794 MeV
JENDL5.0 Threshold 1.1794 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
60
40
20
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
17
Incident Energy (eV)
72-Hf-182

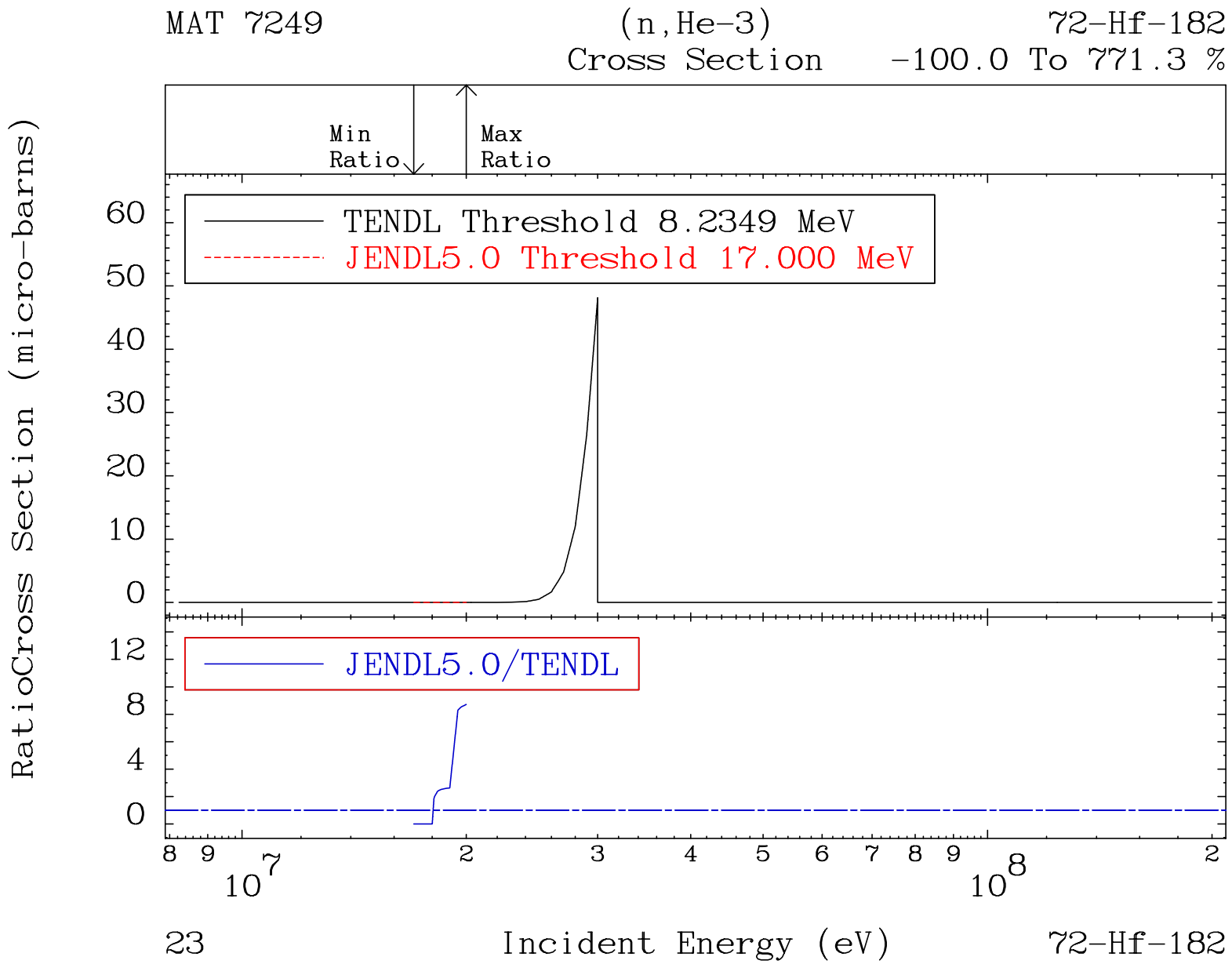

MAT 7249
(n,n') Continuum
Cross Section
72-Hf-182
3.443
To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.2926 MeV
JENDL5.0 Threshold 1.1894 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
18
72-Hf-182

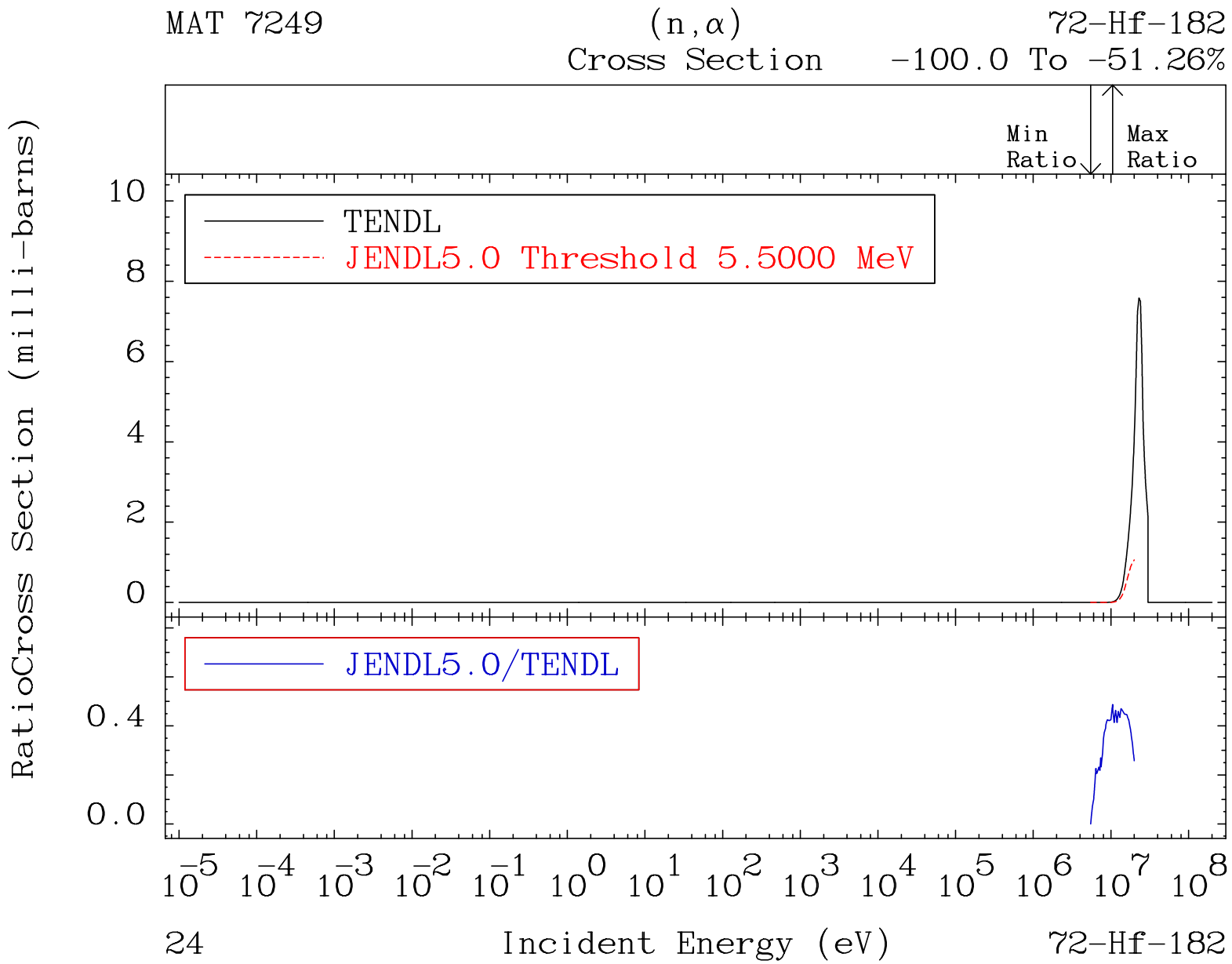

MAT 7249
(n,γ)
Cross Section
72-Hf-182
-99.96 To 550.9 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
19
72-Hf-182

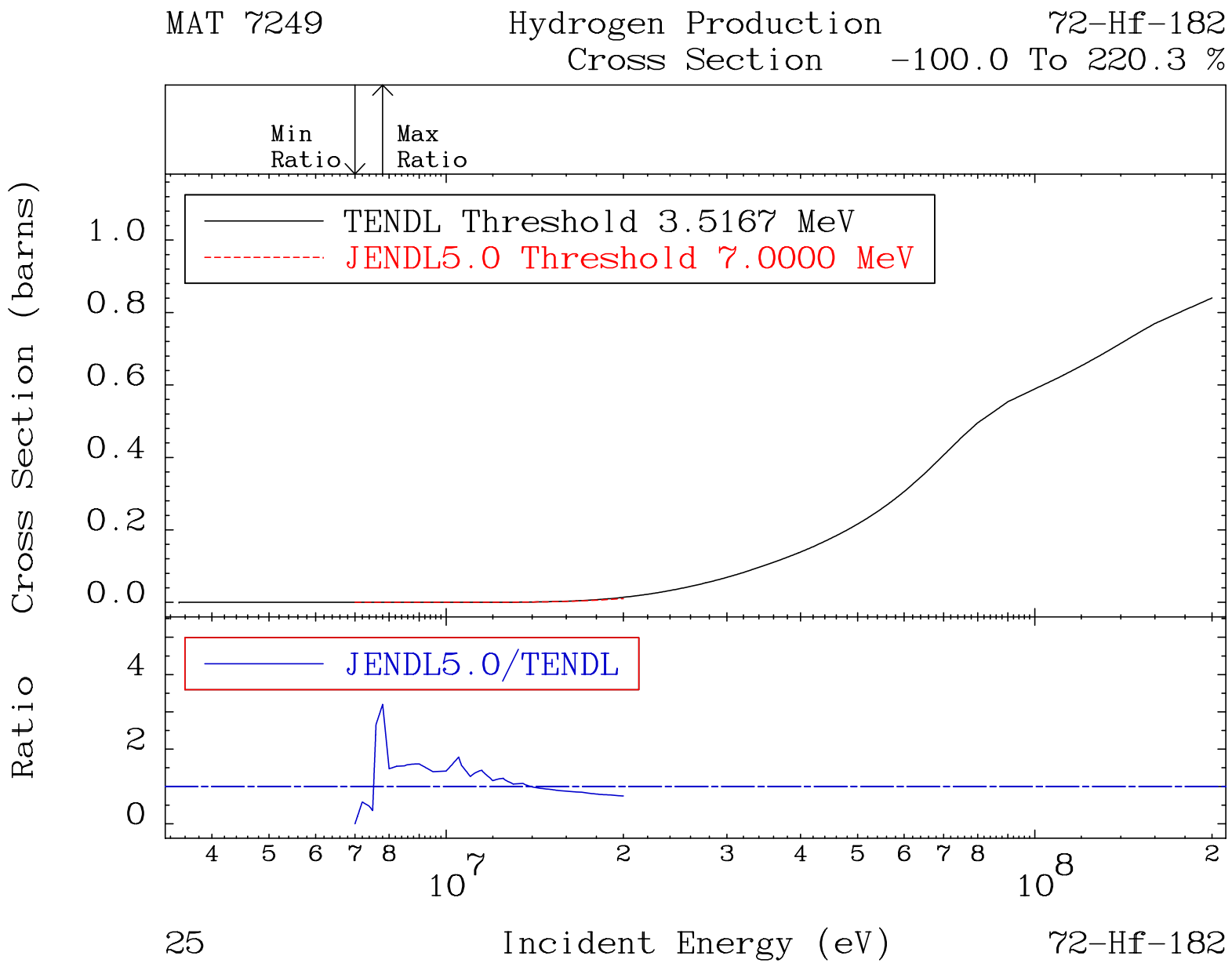

MAT 7249
(n,p)
72-Hf-182
Cross Section
-100.0 To 220.3 %
Min Ratio
Max Ratio
TENDL Threshold 3.5167 MeV
JENDL5.0 Threshold 7.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
20
72-Hf-182

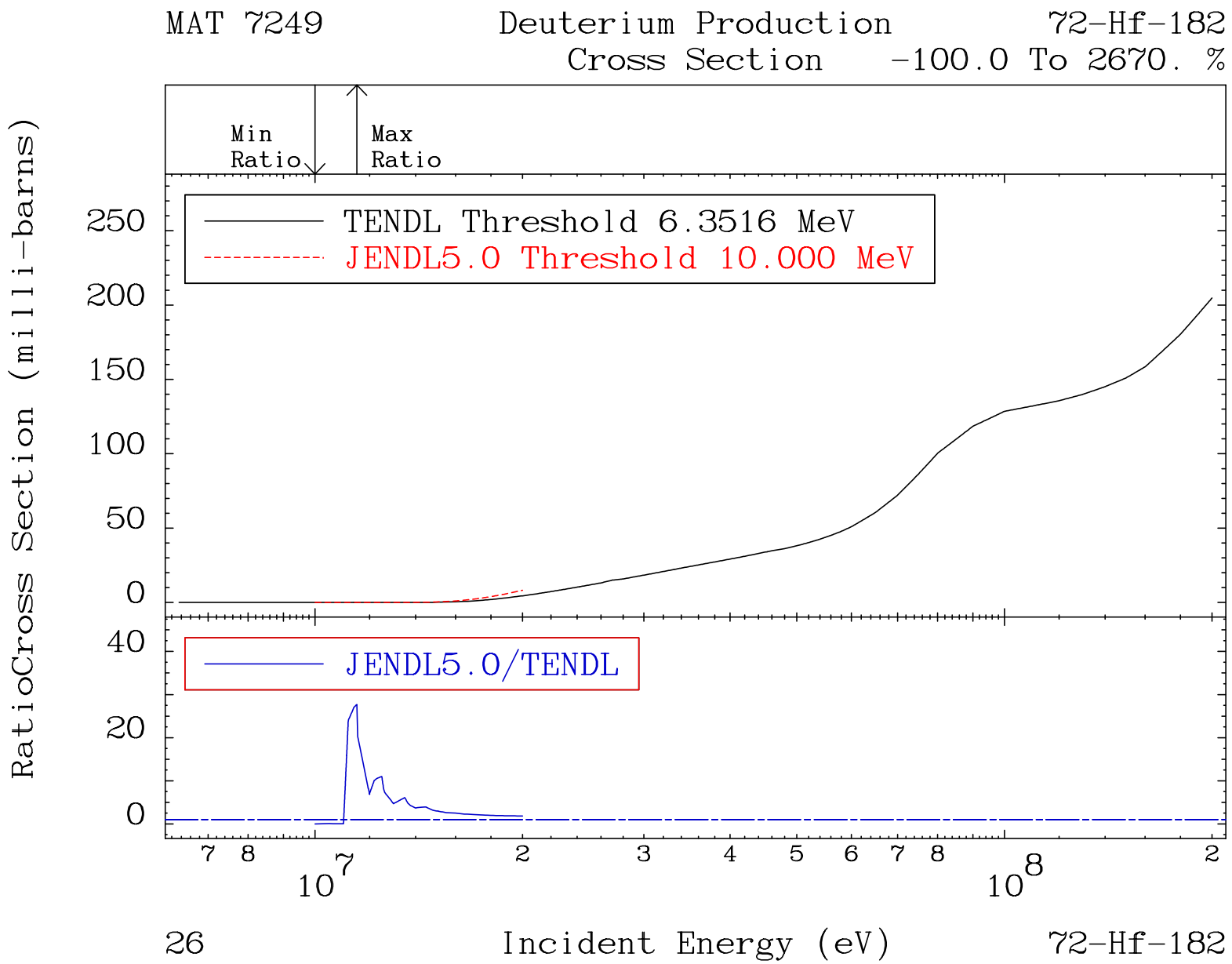

MAT 7249
(n,d)
72-Hf-182
Cross Section
-100.0 To 2670. %
Min Ratio
Max Ratio
TENDL Threshold 6.3516 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
40
20
0
7 8
10^7
2
3
4
5
6
7
8
10^8
2
21
Incident Energy (eV)
72-Hf-182

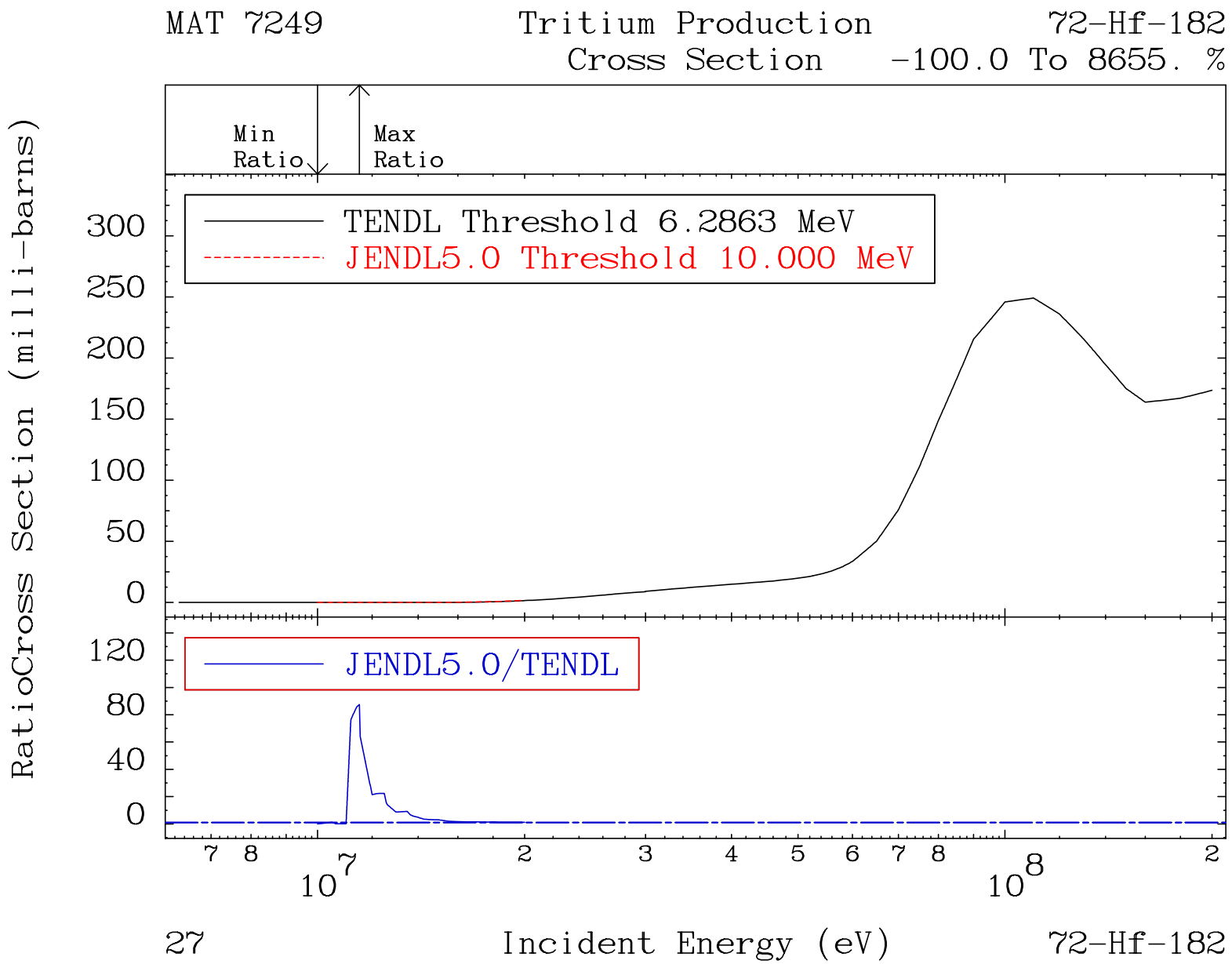

MAT 7249
(n,t)
72-Hf-182
Cross Section
-100.0 To 8655. %
Min Ratio
Max Ratio
TENDL Threshold 6.2863 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
22
72-Hf-182

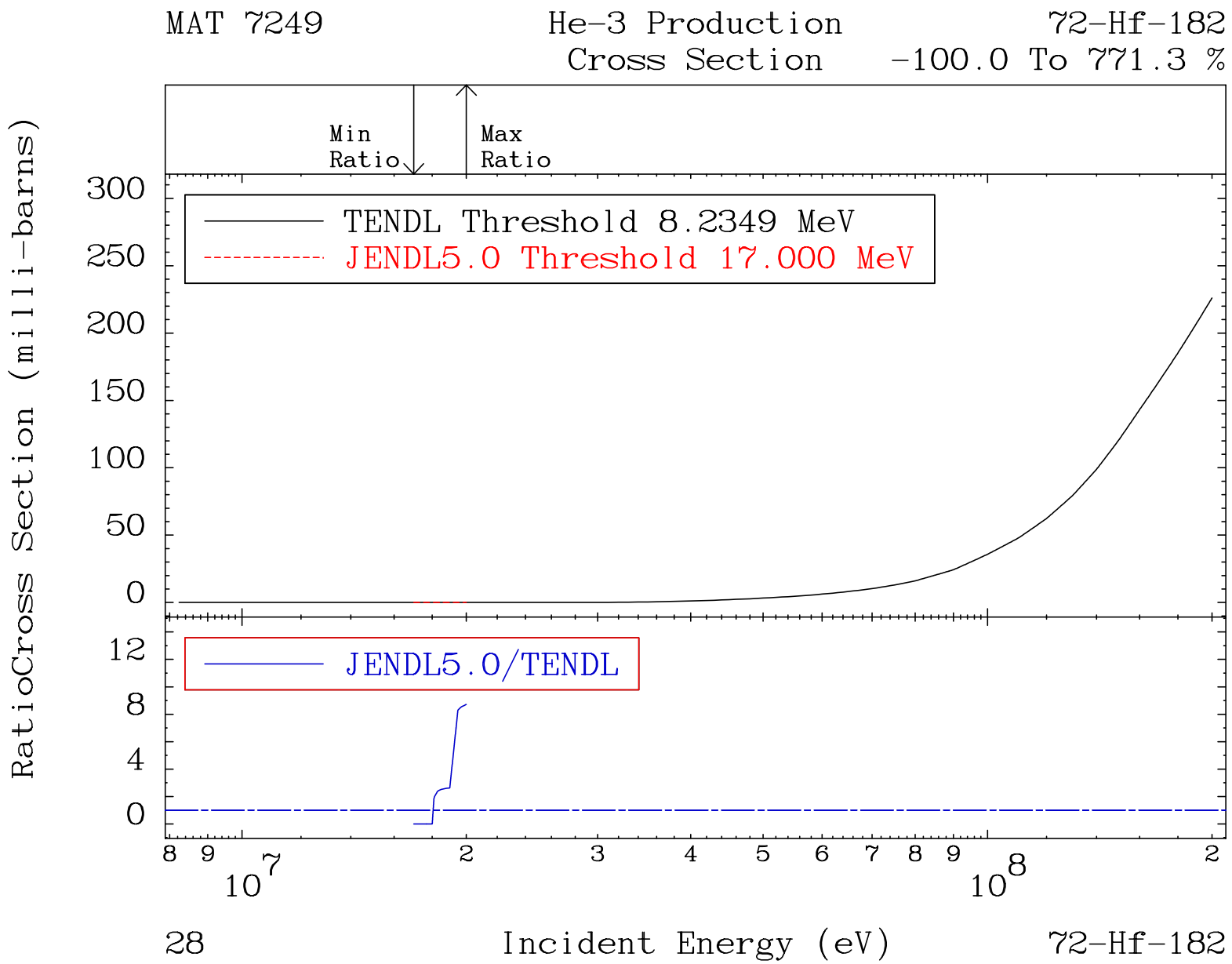

MAT 7249
(n,He-3)
Cross Section
72-Hf-182
-100.0 To 771.3 %
Min Ratio
Max Ratio
TENDL Threshold 8.2349 MeV
JENDL5.0 Threshold 17.000 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
23
72-Hf-182

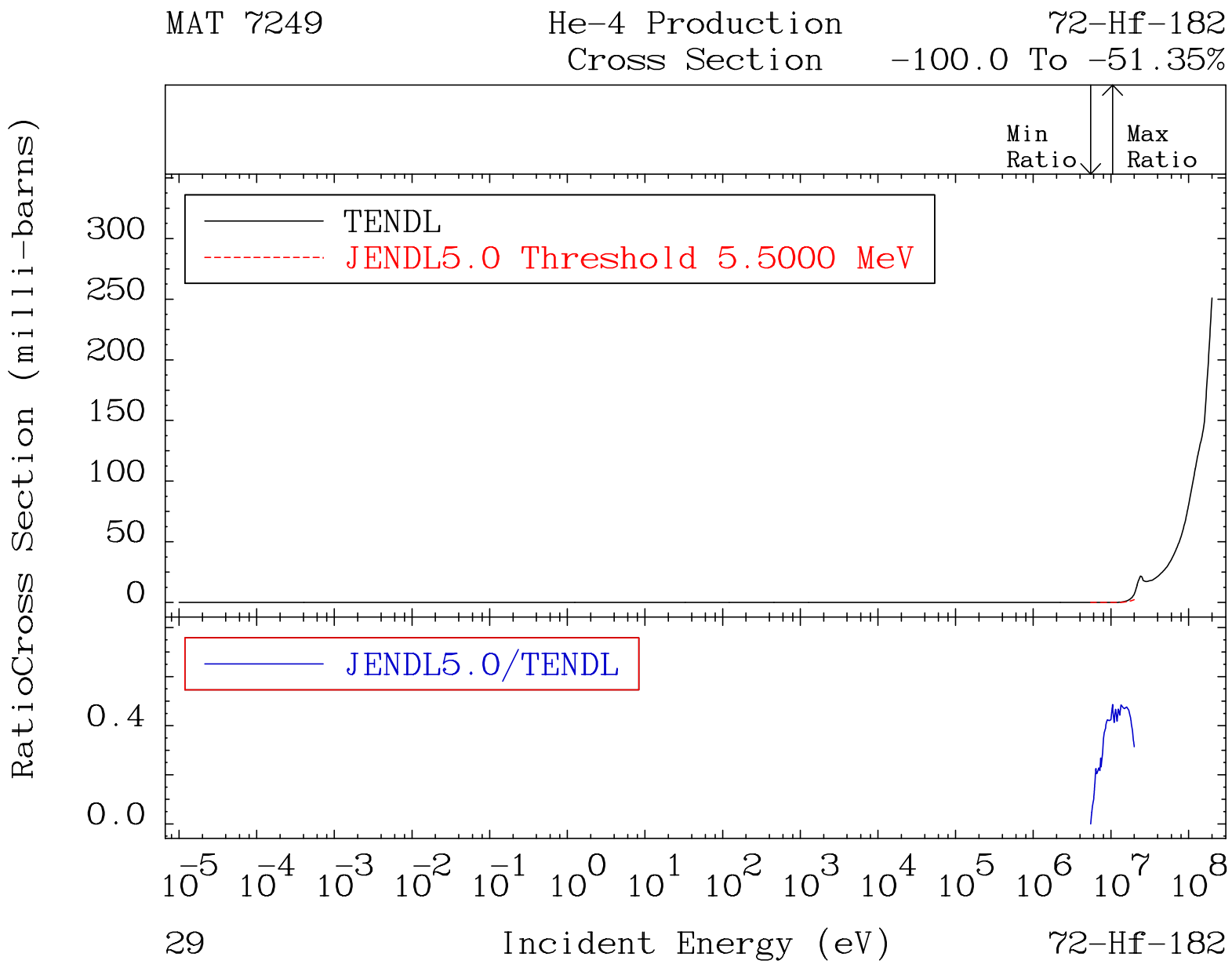

MAT 7249
(n,α)
72-Hf-182
Cross Section
-100.0 To -51.26%
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 5.5000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
0.4
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
24
Incident Energy (eV)
72-Hf-182

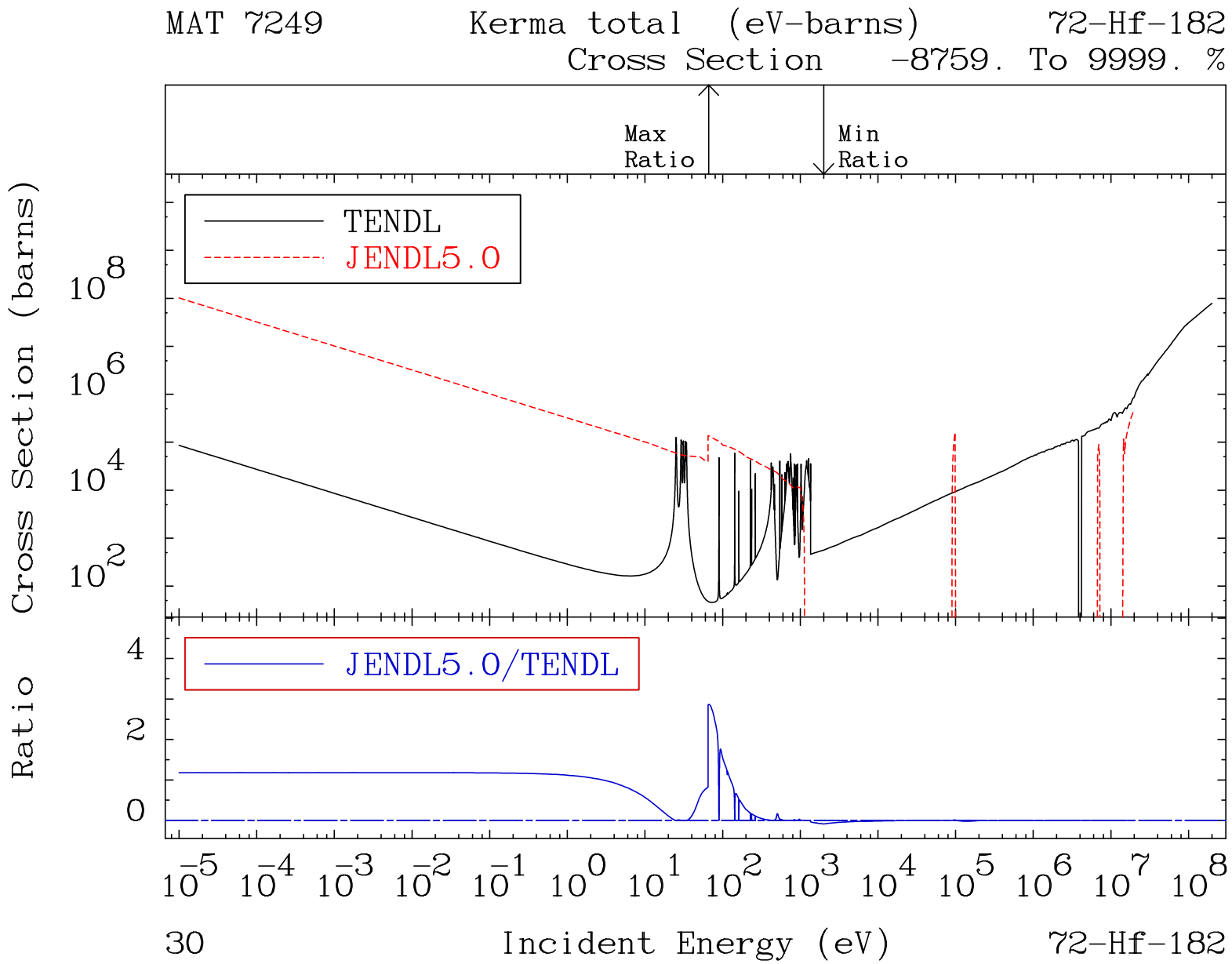

MAT 7249
Hydrogen Production
72-Hf-182
Cross Section
-100.0 To 220.3 %
Min Ratio
Max Ratio
TENDL Threshold 3.5167 MeV
JENDL5.0 Threshold 7.0000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
4
2
0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
72-Hf-182

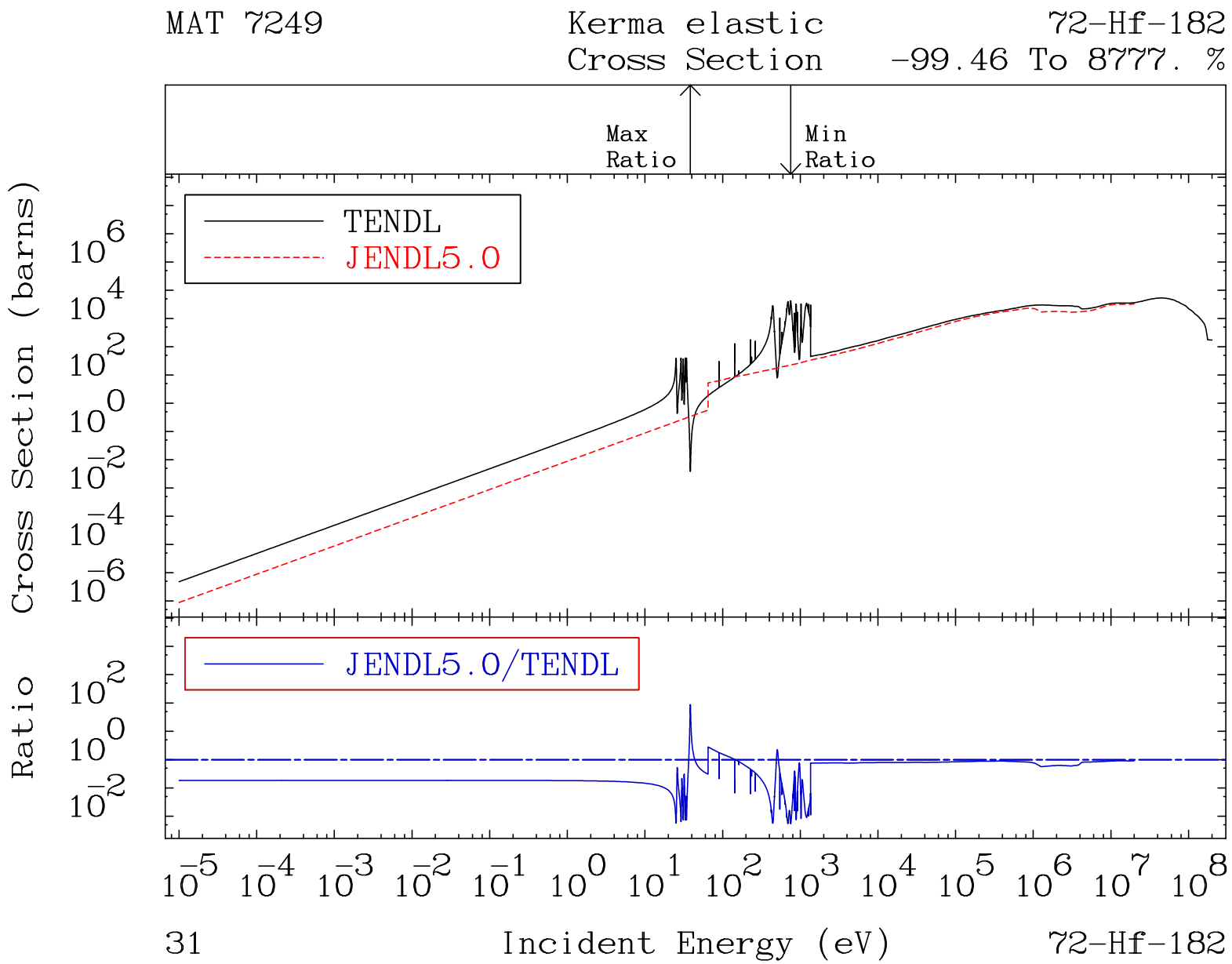

MAT 7249
Deuterium Production
72-Hf-182
Cross Section -100.0 To 2670. %
Min Ratio
Max Ratio
TENDL Threshold 6.3516 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
40
20
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
72-Hf-182

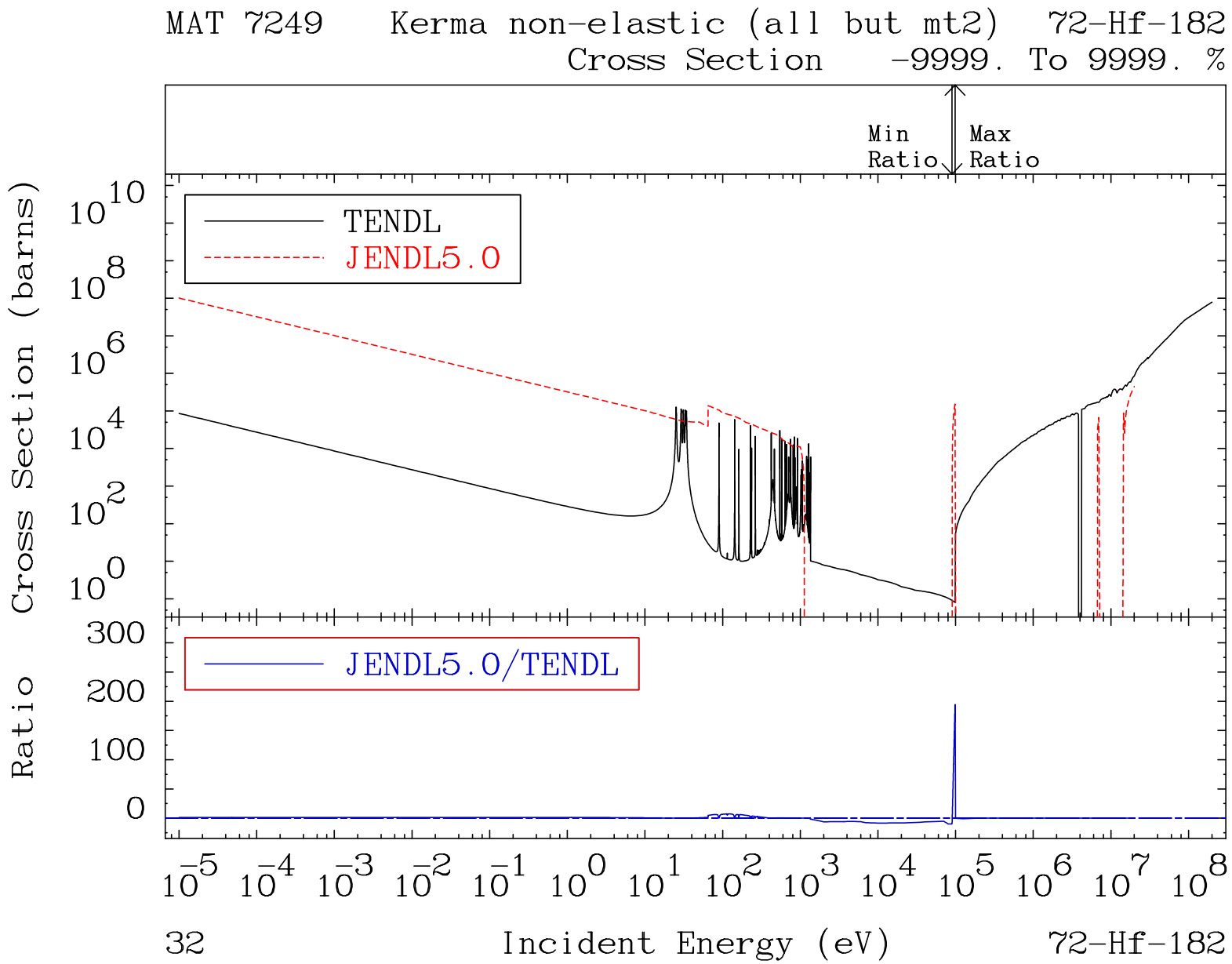

MAT 7249
Tritium Production
72-Hf-182
Cross Section
-100.0 To 8655. %
Min Ratio
Max Ratio
TENDL Threshold 6.2863 MeV
JENDL5.0 Threshold 10.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
120
80
40
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
27
Incident Energy (eV)
72-Hf-182

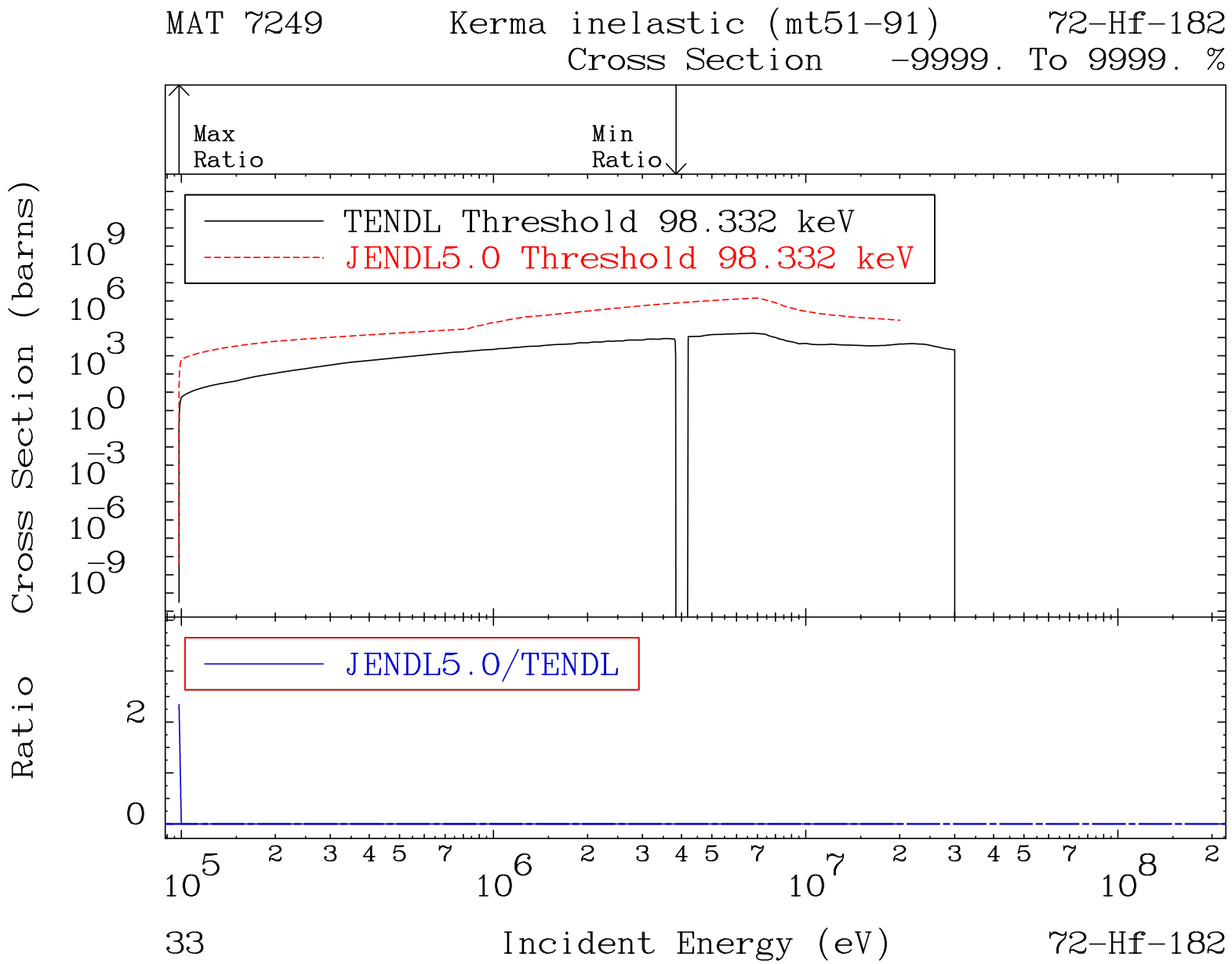

MAT 7249
He-3 Production
Cross Section
72-Hf-182
-100.0 To 771.3 %
Min Ratio
Max Ratio
TENDL Threshold 8.2349 MeV
JENDL5.0 Threshold 17.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
12
8
4
0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
72-Hf-182

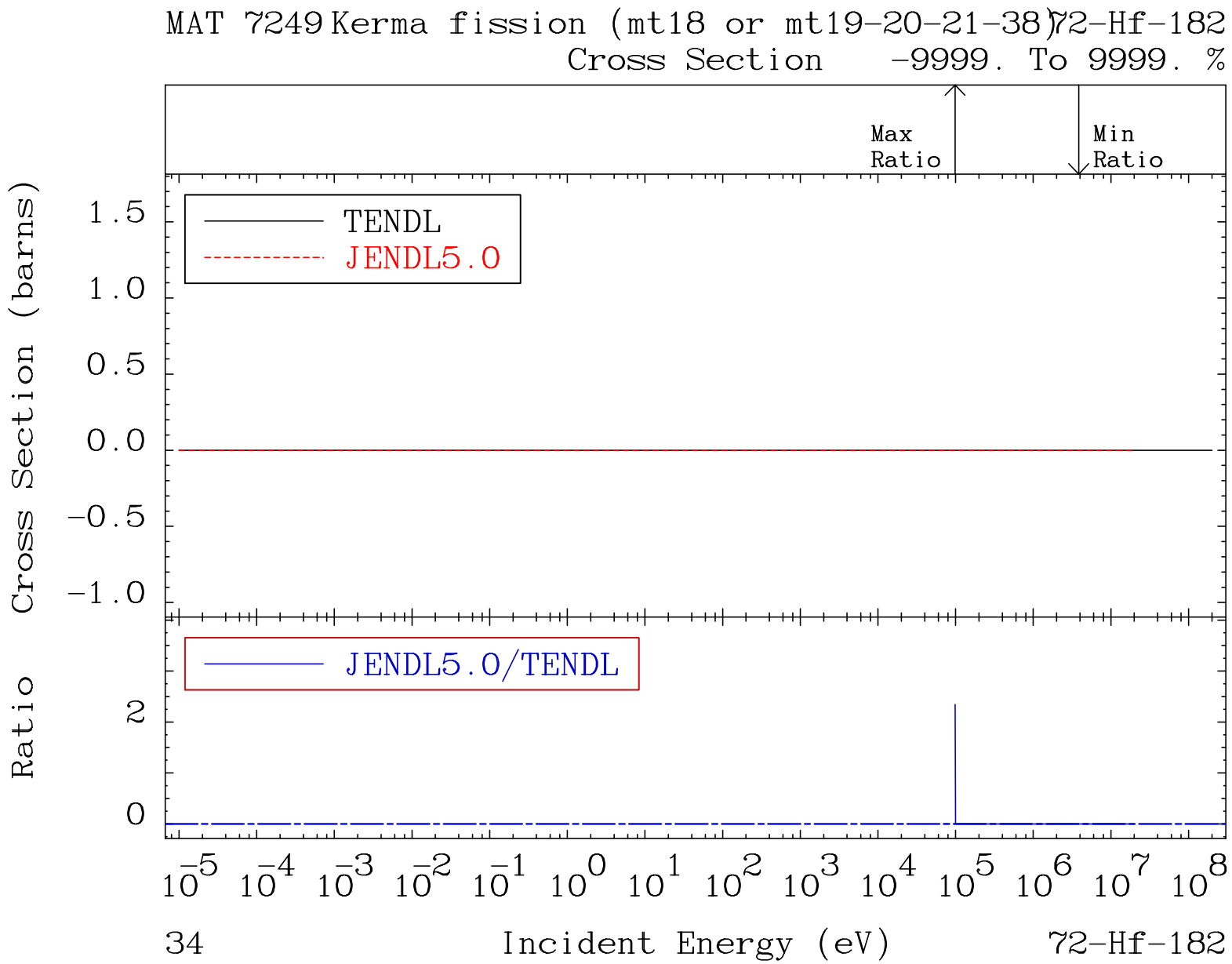

MAT 7249
He-4 Production
Cross Section
72-Hf-182
-100.0 To -51.35%
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 5.5000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
0.4
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
72-Hf-182

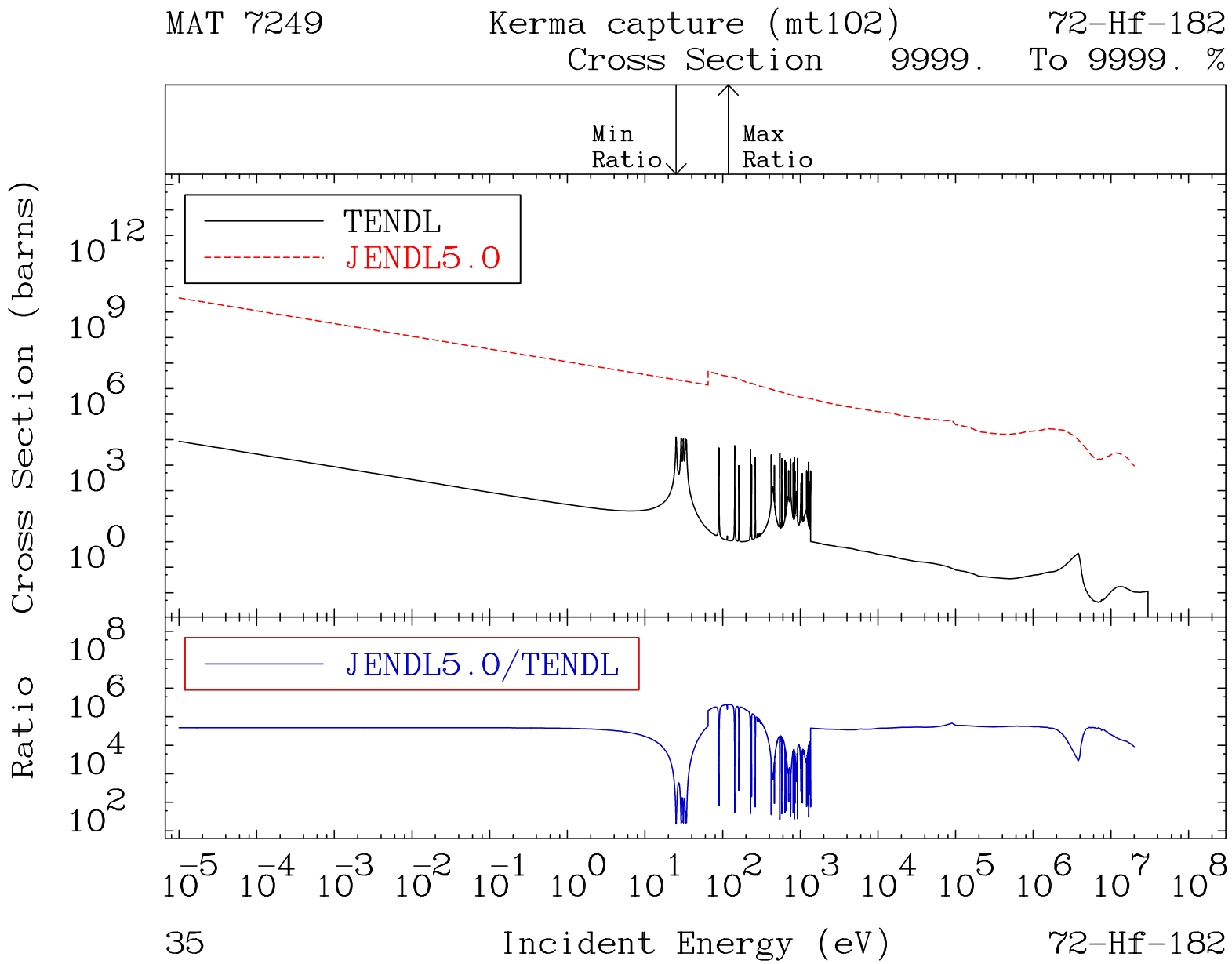

MAT 7249
Kerma total (eV-barns)
72-Hf-182
Cross Section -8759. To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
30
72-Hf-182

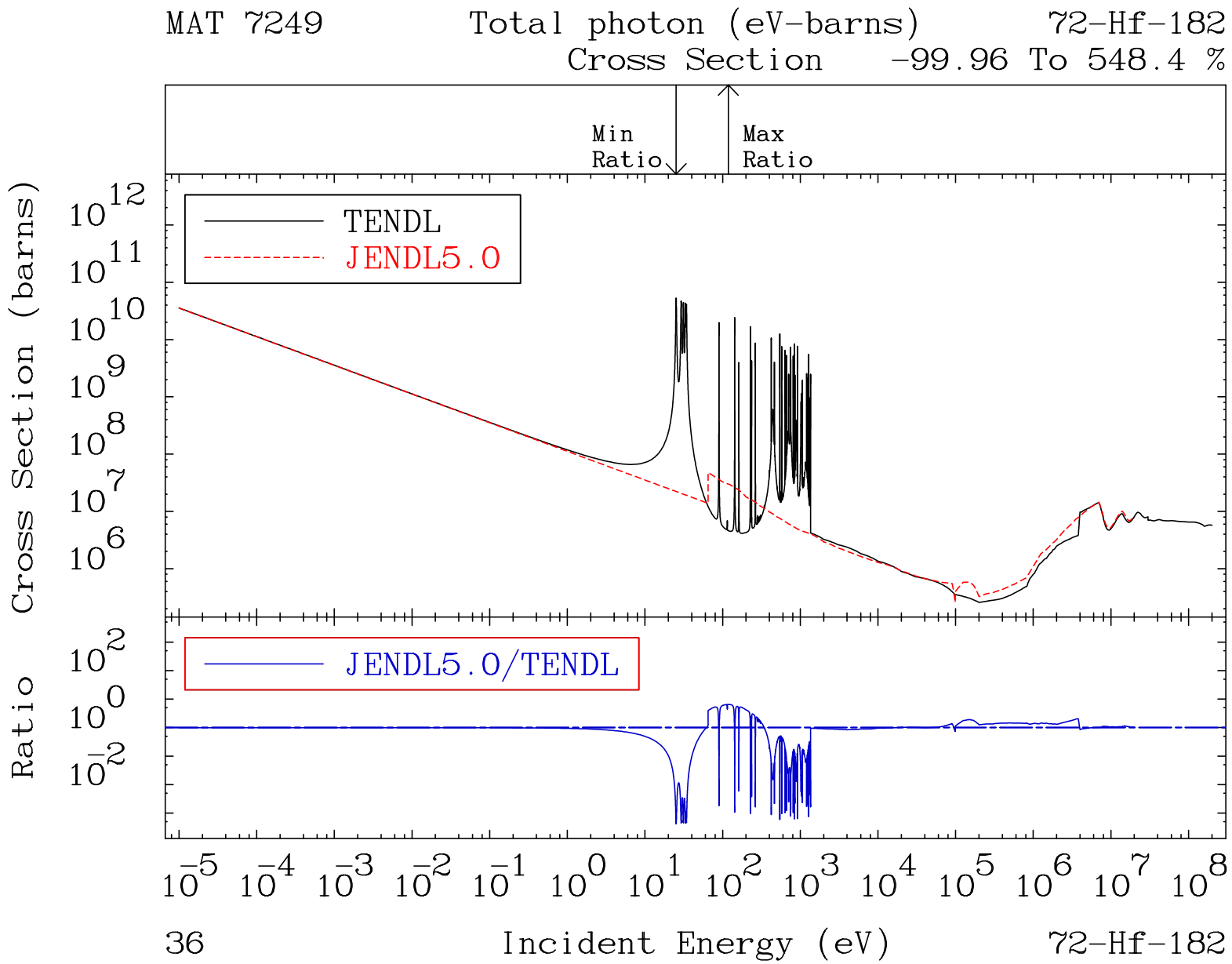

MAT 7249
Kerma elastic
Cross Section
72-Hf-182
-99.46 To 8777. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
31
72-Hf-182

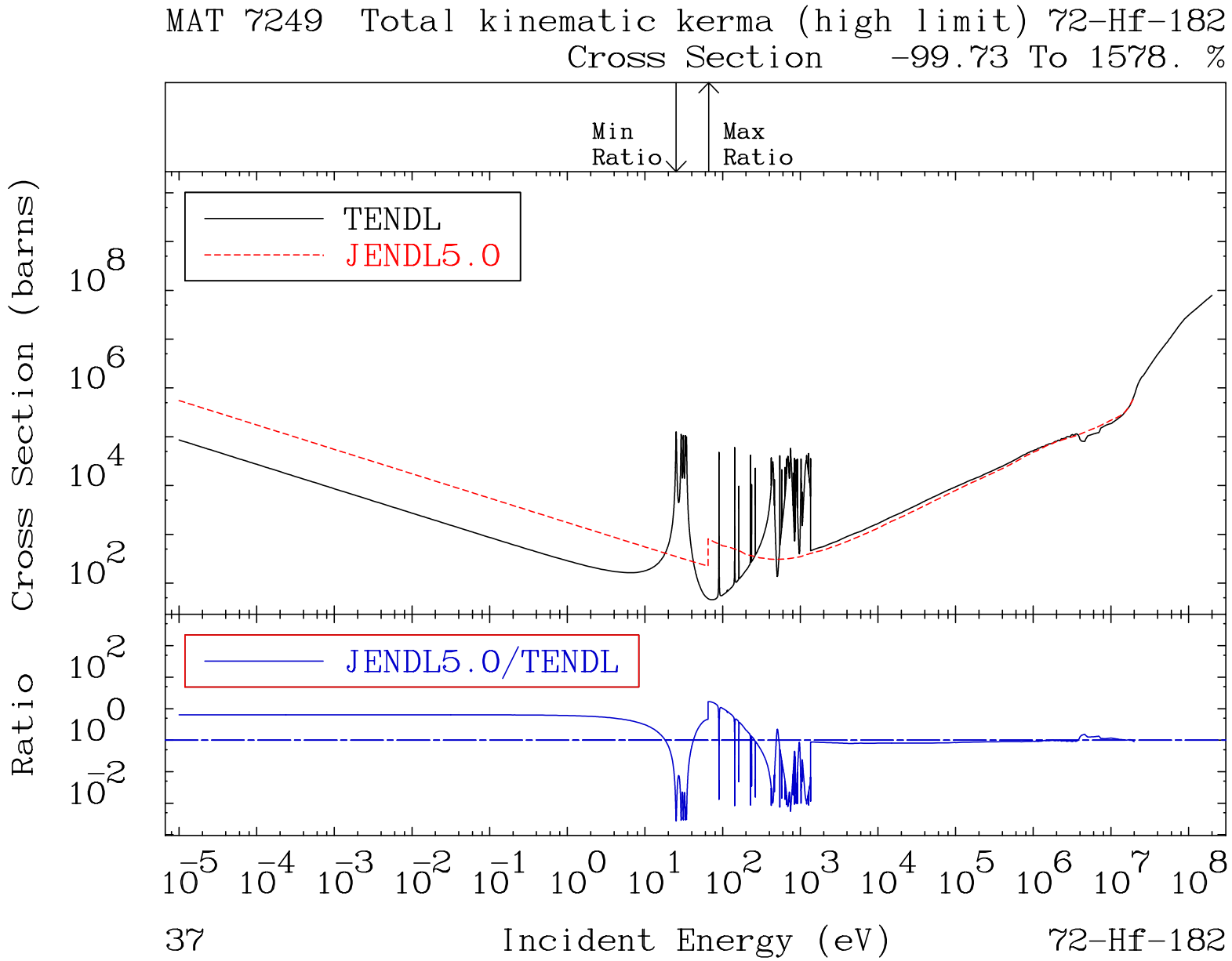

MAT 7249 Kerma non-elastic (all but mt2) 72-Hf-182
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
32
72-Hf-182

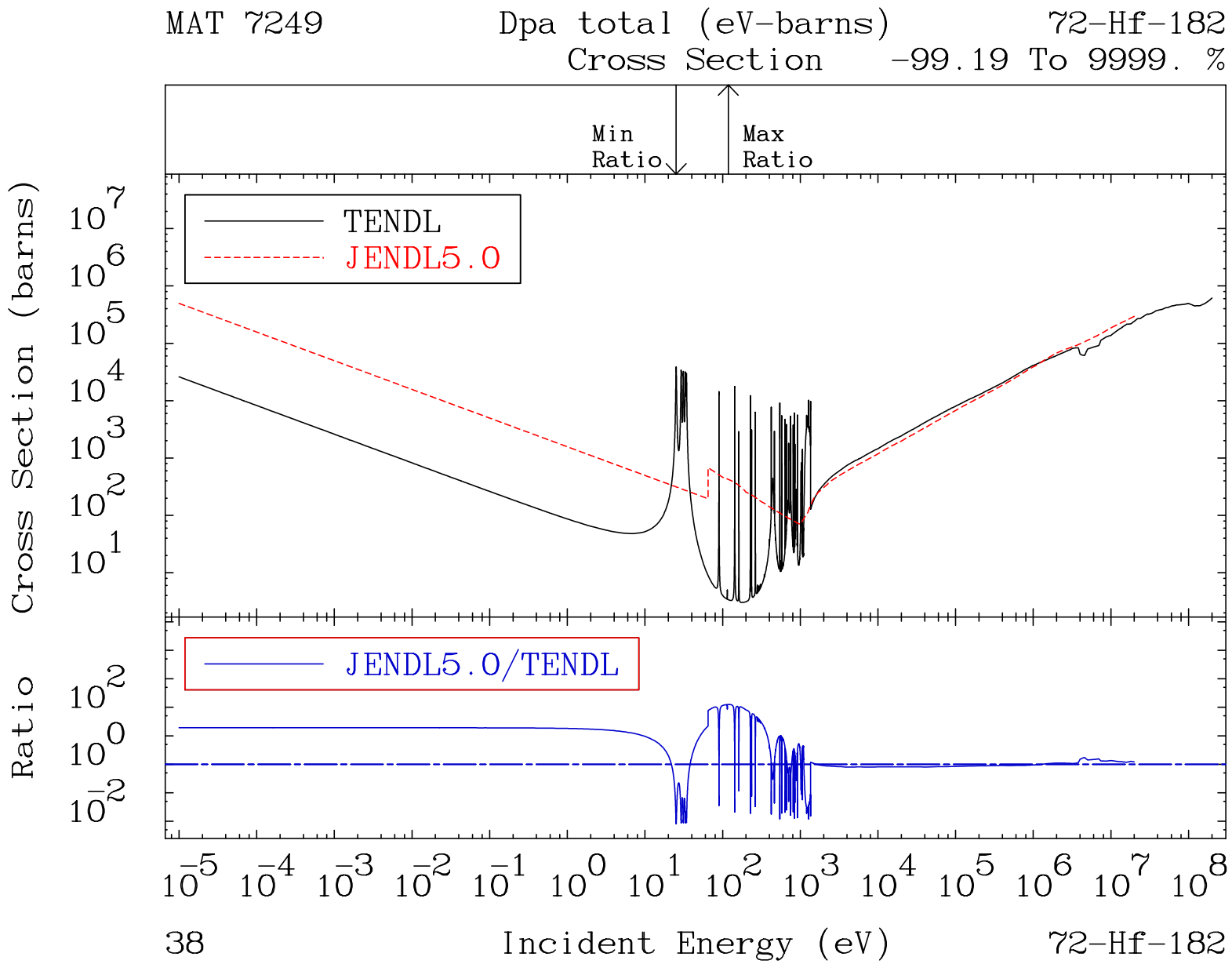

MAT 7249
Kerma inelastic (mt51-91)
72-Hf-182
Cross Section -9999. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 98.332 keV
JENDL5.0 Threshold 98.332 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
33
72-Hf-182

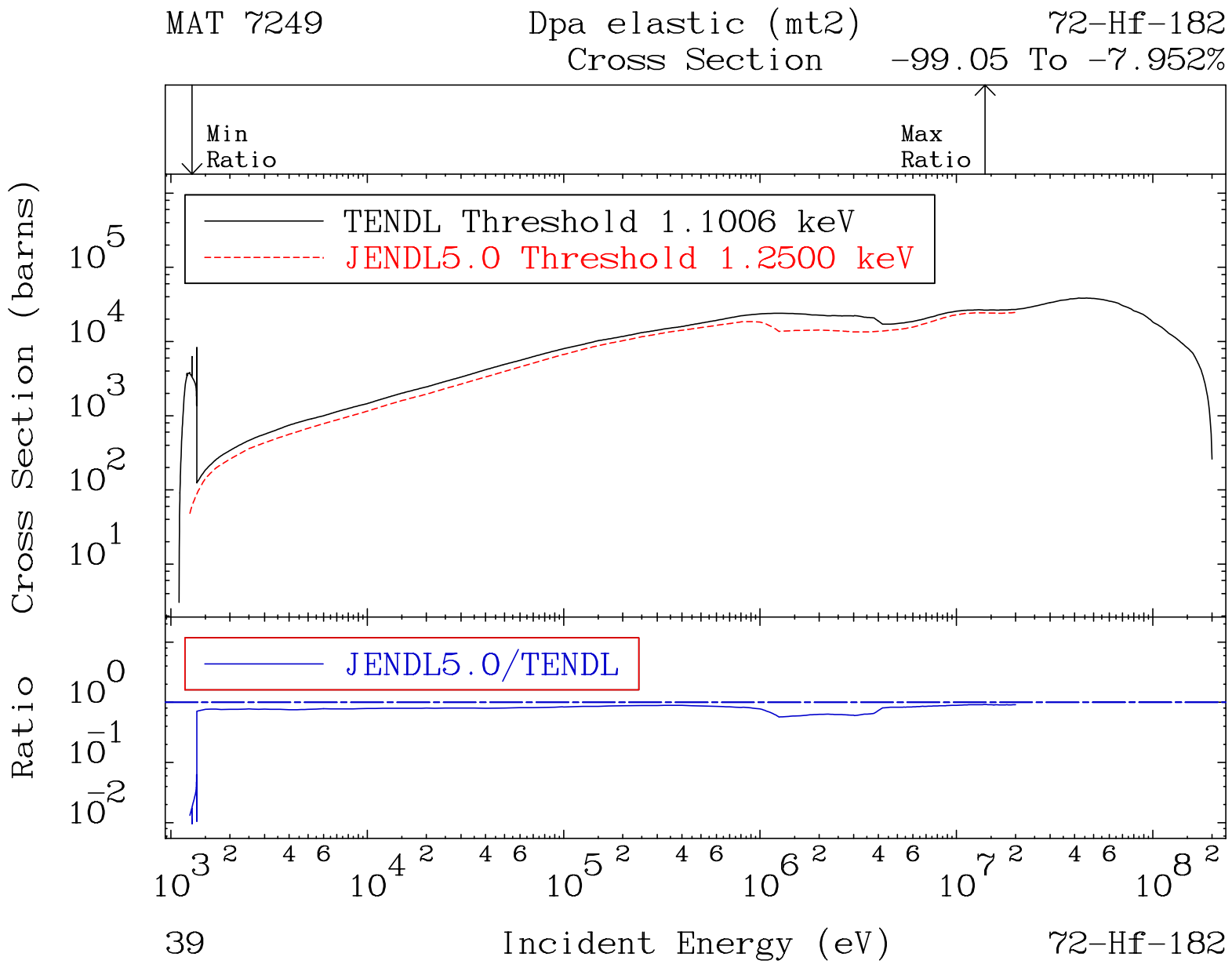

MAT 7249 Kerma fission (mt18 or mt19-20-21-38) 72-Hf-182
Cross Section -9999. To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
2
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
34
Incident Energy (eV)
72-Hf-182

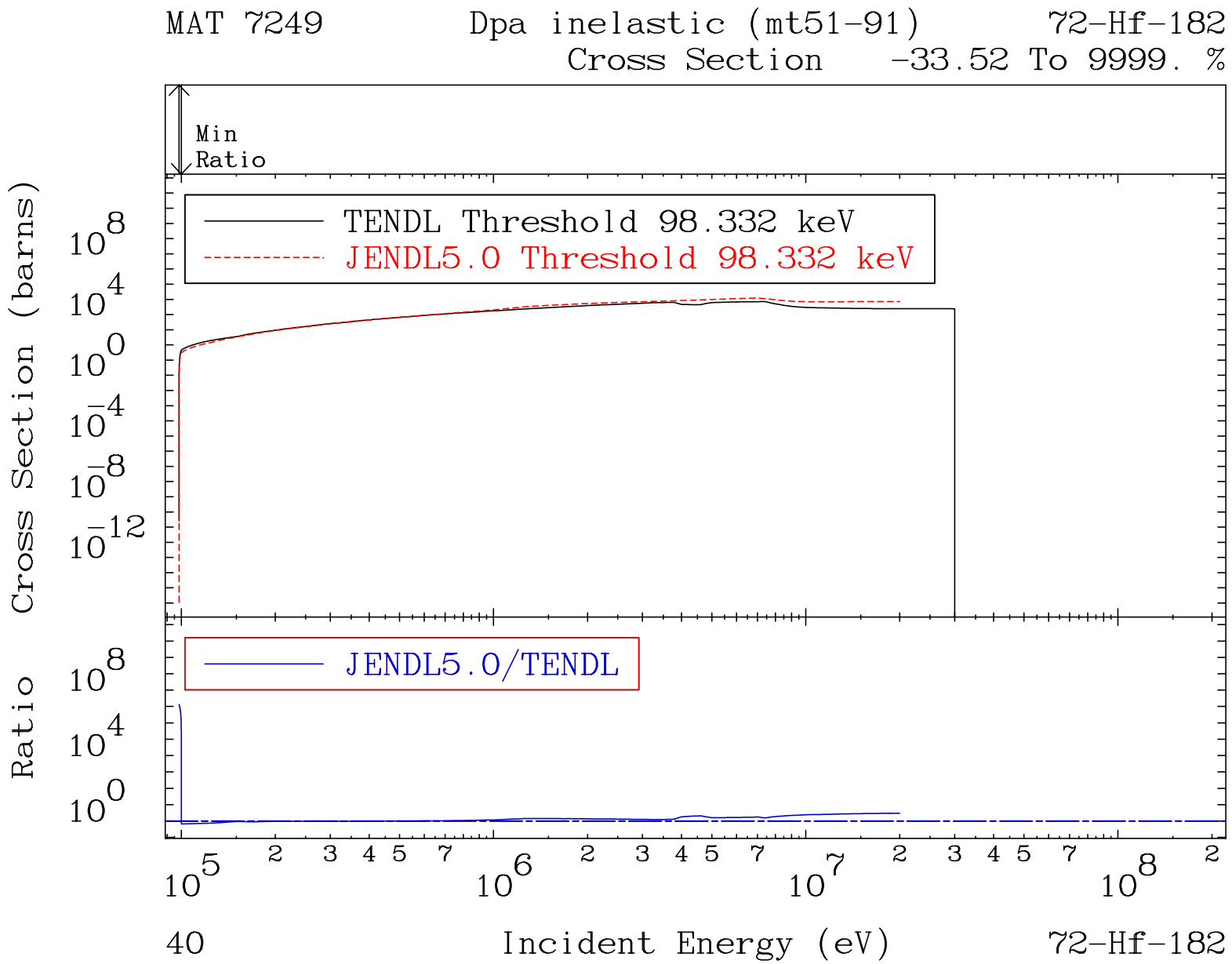

MAT 7249
Kerma capture (mt102)
72-Hf-182
Cross Section 9999. To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
35
72-Hf-182

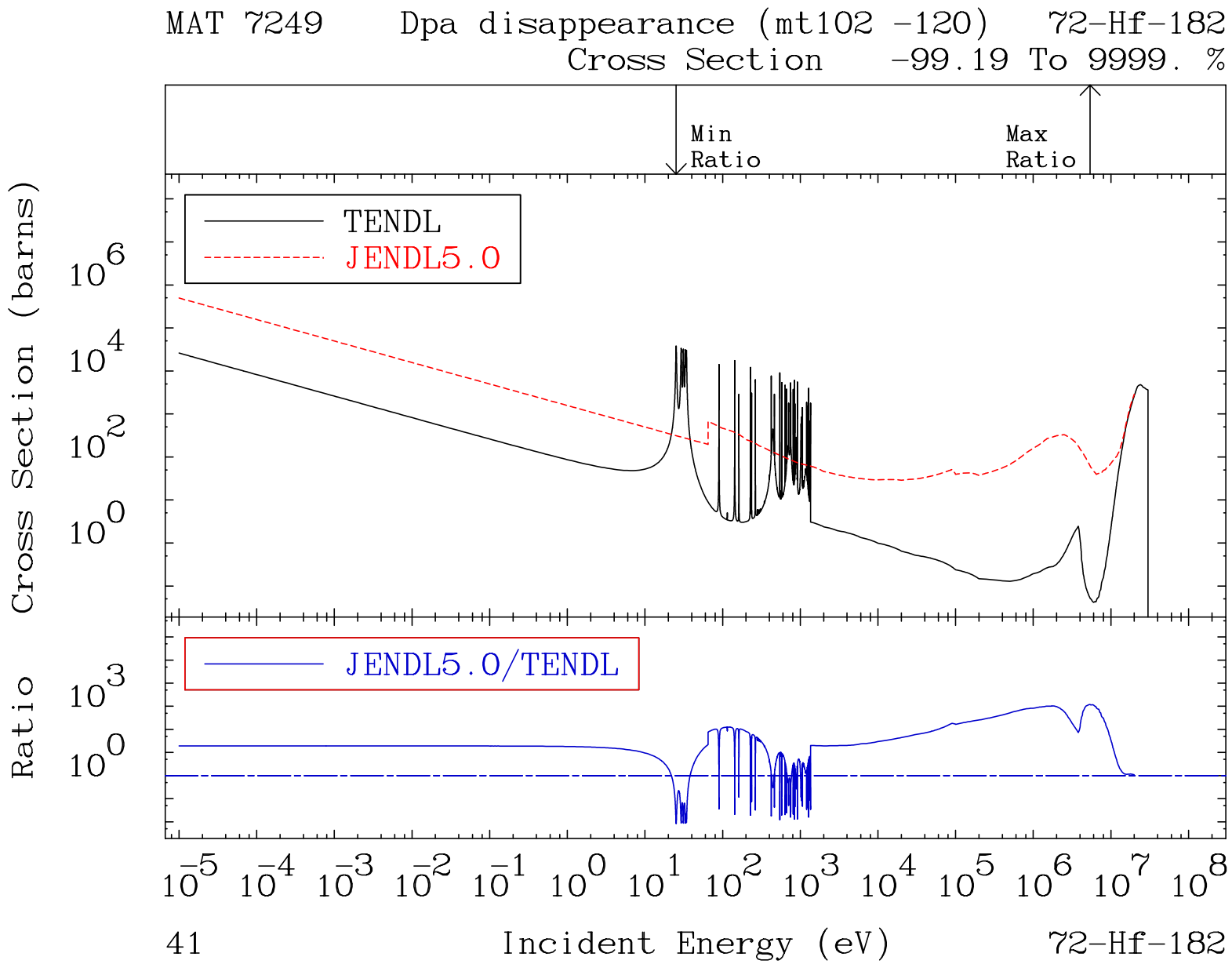

MAT 7249
Total photon (eV-barns)
72-Hf-182
Cross Section -99.96 To 548.4 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
36
72-Hf-182

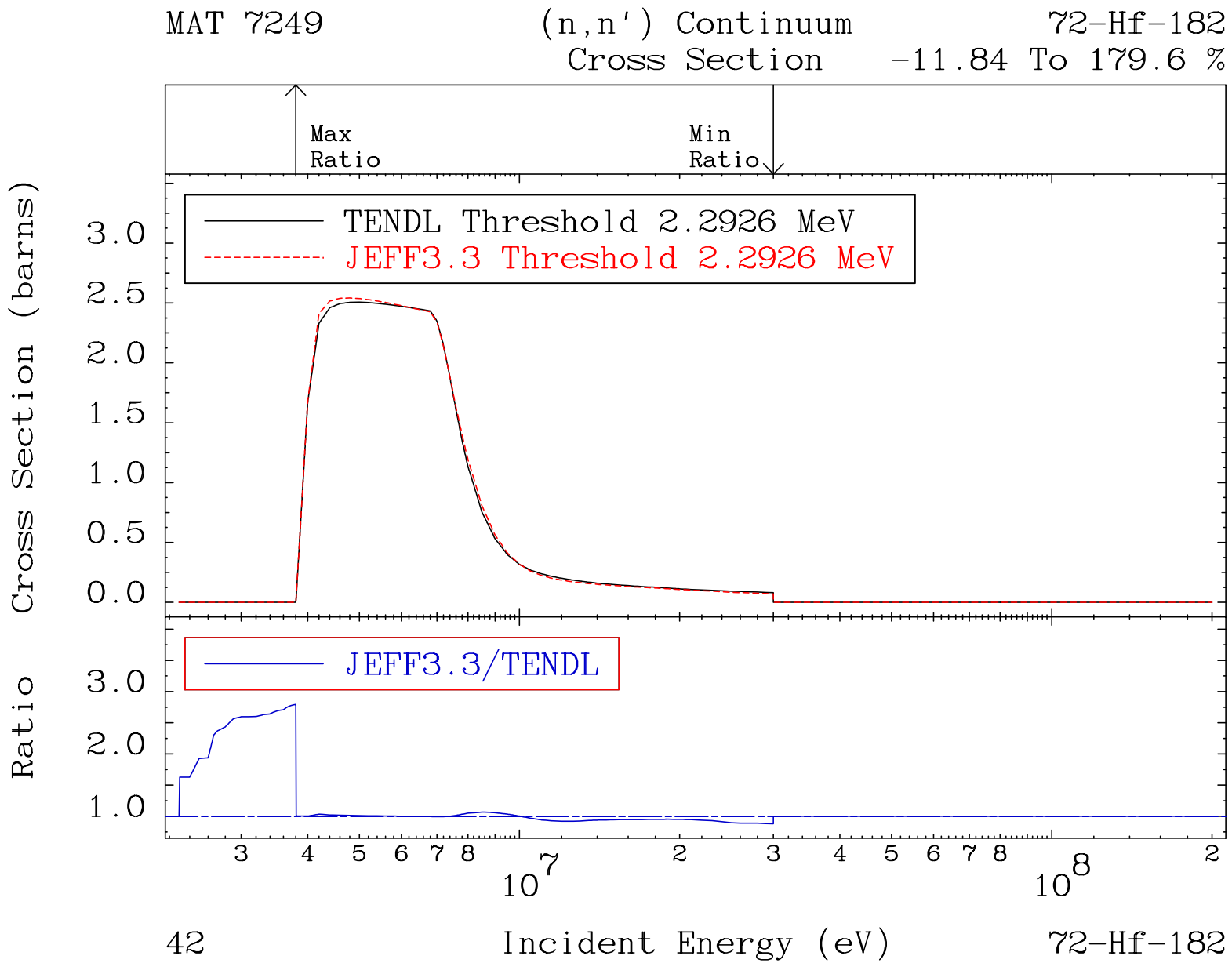

MAT 7249 Total kinematic kerma (high limit) 72-Hf-182
Cross Section -99.73 To 1578. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
37
72-Hf-182

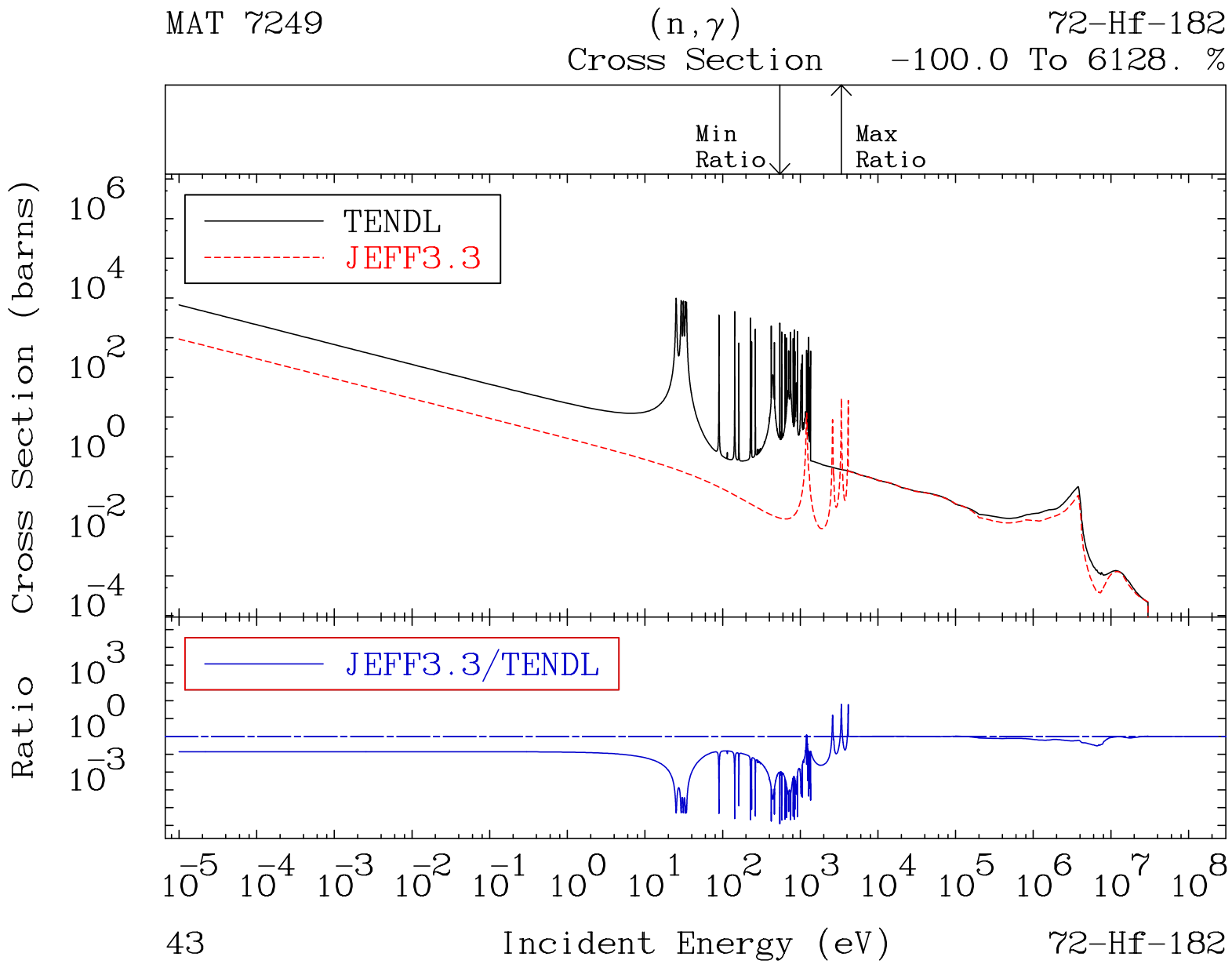

MAT 7249
Dpa total (eV-barns)
72-Hf-182
Cross Section -99.19 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
38
Incident Energy (eV)
72-Hf-182

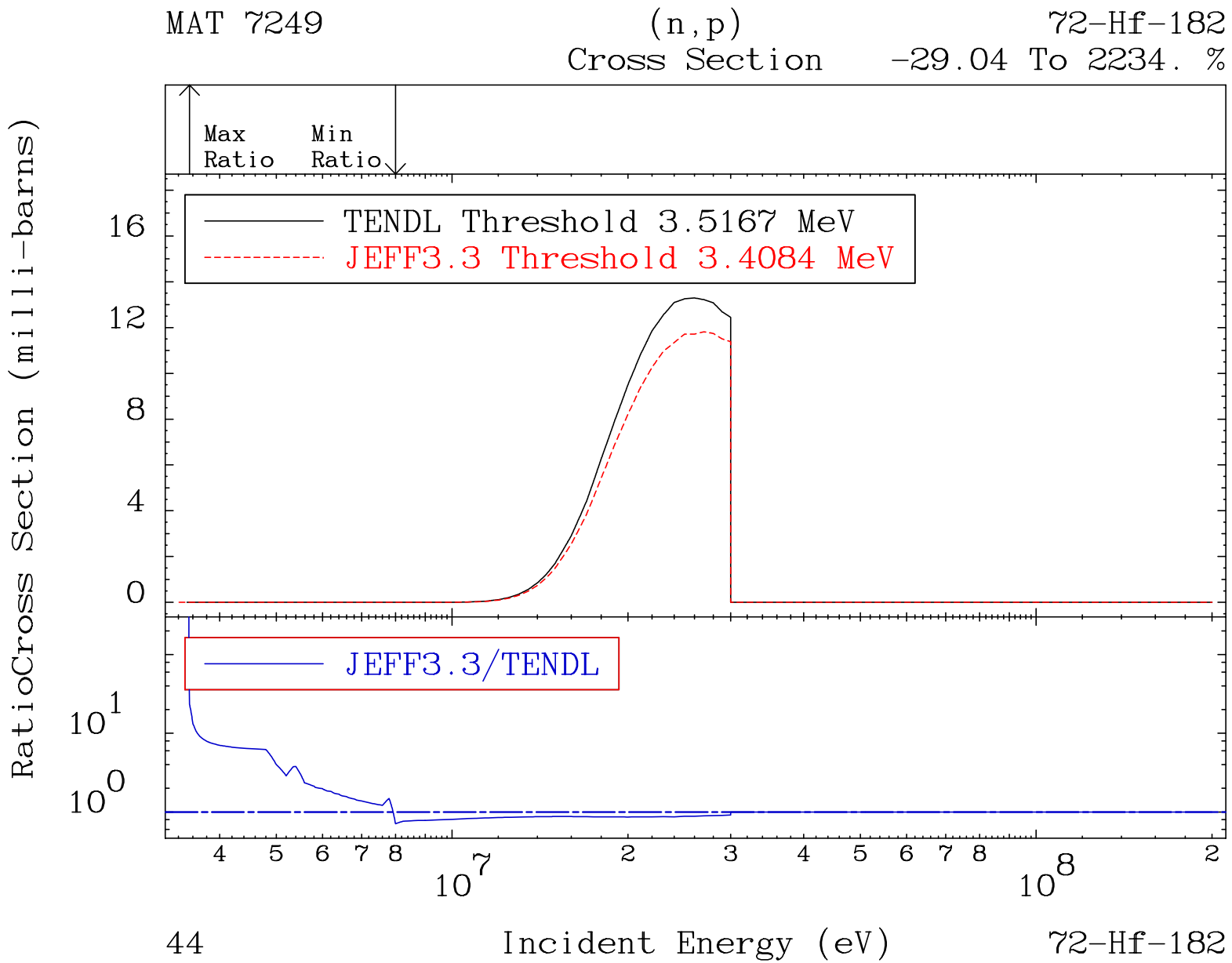

MAT 7249
Dpa elastic (mt2)
Cross Section
72-Hf-182
-99.05 To -7.952%
Min Ratio
Max Ratio
TENDL Threshold 1.1006 keV
JENDL5.0 Threshold 1.2500 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
72-Hf-182

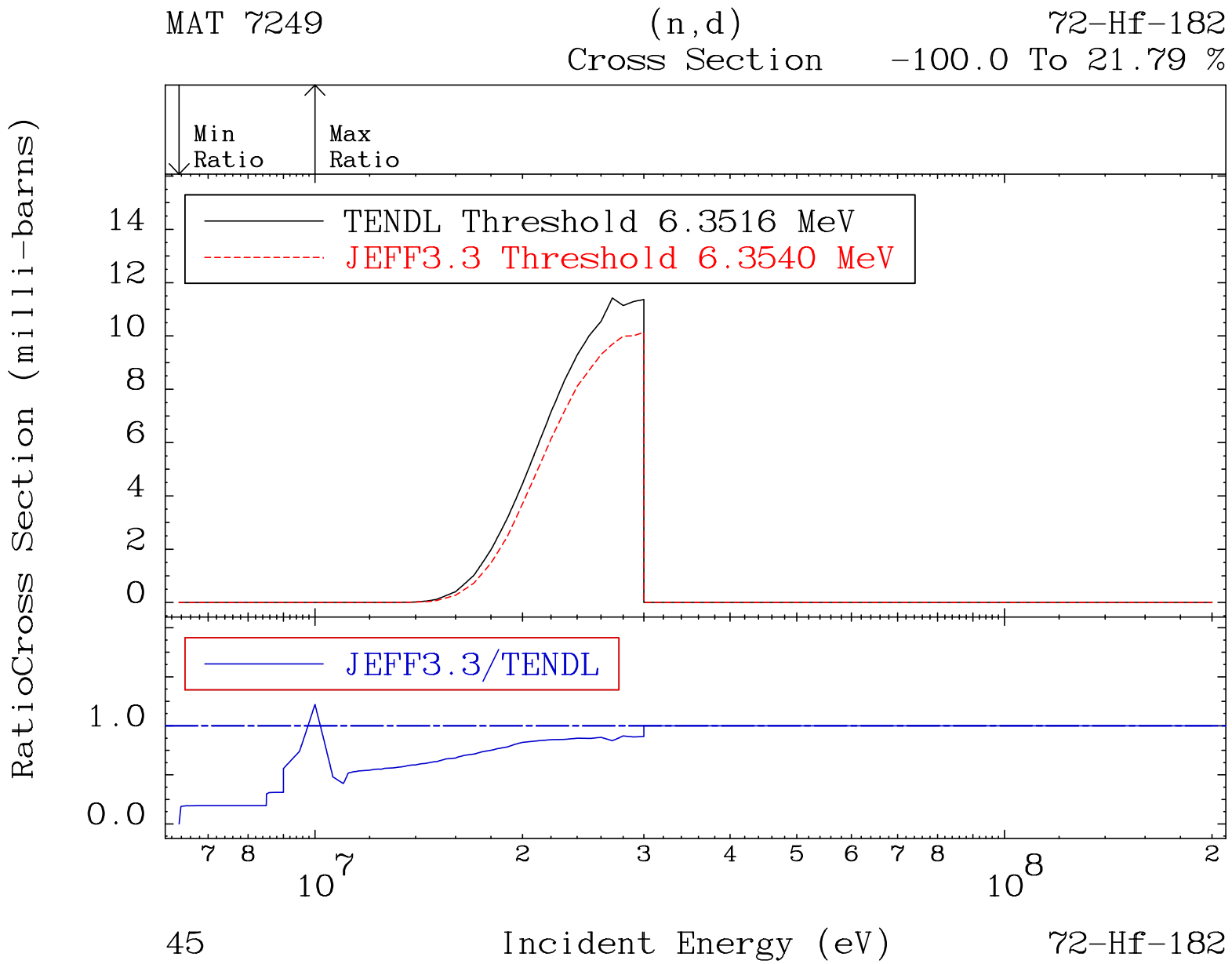

MAT 7249
Dpa inelastic (mt51-91)
72-Hf-182
Cross Section
-33.52 To 9999. %
Min
Ratio
TENDL Threshold 98.332 keV
JENDL5.0 Threshold 98.332 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
72-Hf-182

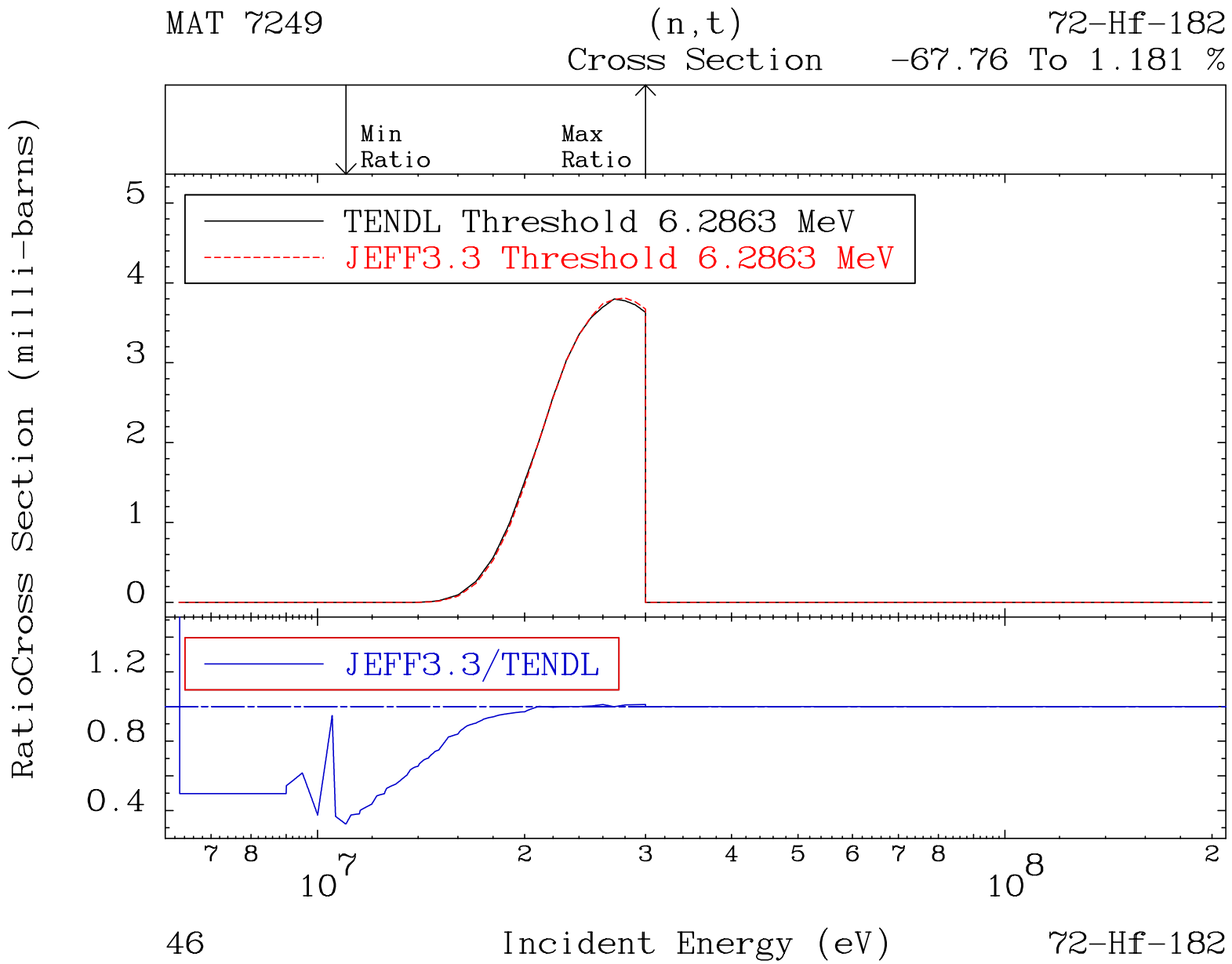

MAT 7249 Dpa disappearance (mt102 -120) 72-Hf-182
Cross Section -99.19 To 9999. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^6
10^4
10^2
10^0
JENDL5.0/TENDL
Ratio
10^3
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
41
Incident Energy (eV)
72-Hf-182

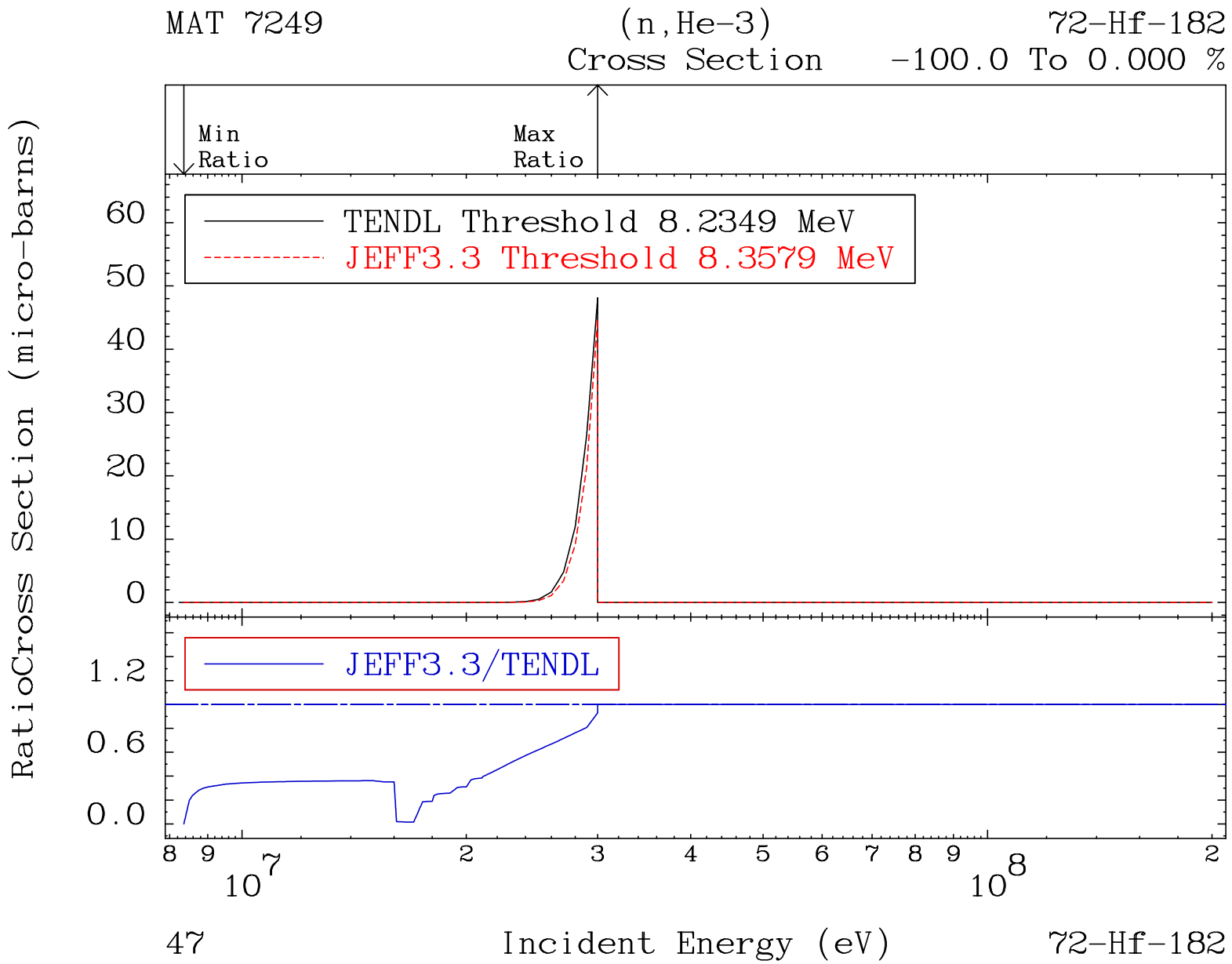

MAT 7249
(n,n') Continuum
Cross Section
72-Hf-182
-11.84 To 179.6 %
Max
Ratio
Min
Ratio
TENDL Threshold 2.2926 MeV
JEFF3.3 Threshold 2.2926 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
42
Incident Energy (eV)
72-Hf-182

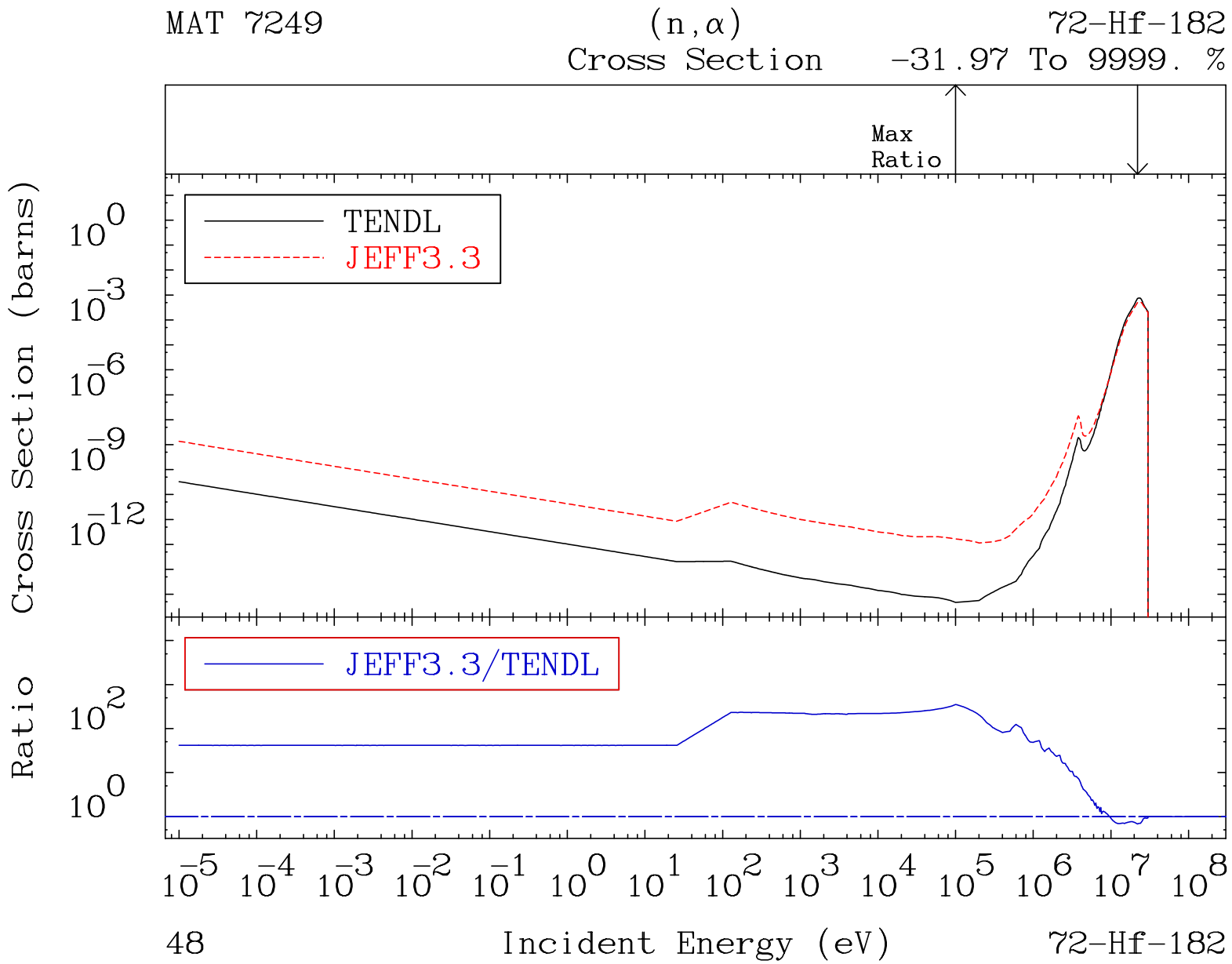

MAT 7249
(n,γ)
Cross Section
72-Hf-182
-100.0 To 6128. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
72-Hf-182

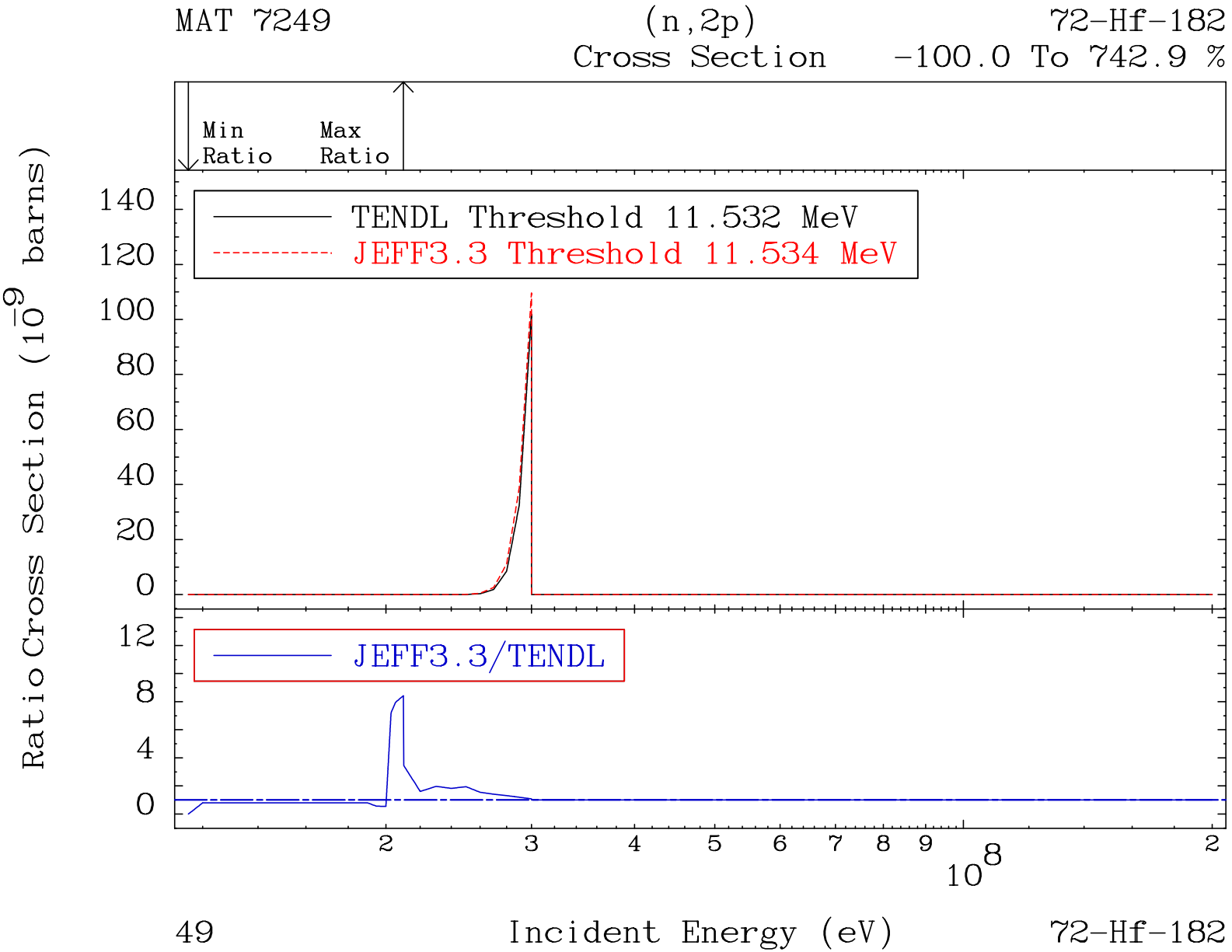

MAT 7249
(n,p)
72-Hf-182
Cross Section
-29.04 To 2234. %
Max Ratio
Min Ratio
TENDL Threshold 3.5167 MeV
JEFF3.3 Threshold 3.4084 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
10^1
10^0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
44
Incident Energy (eV)
72-Hf-182

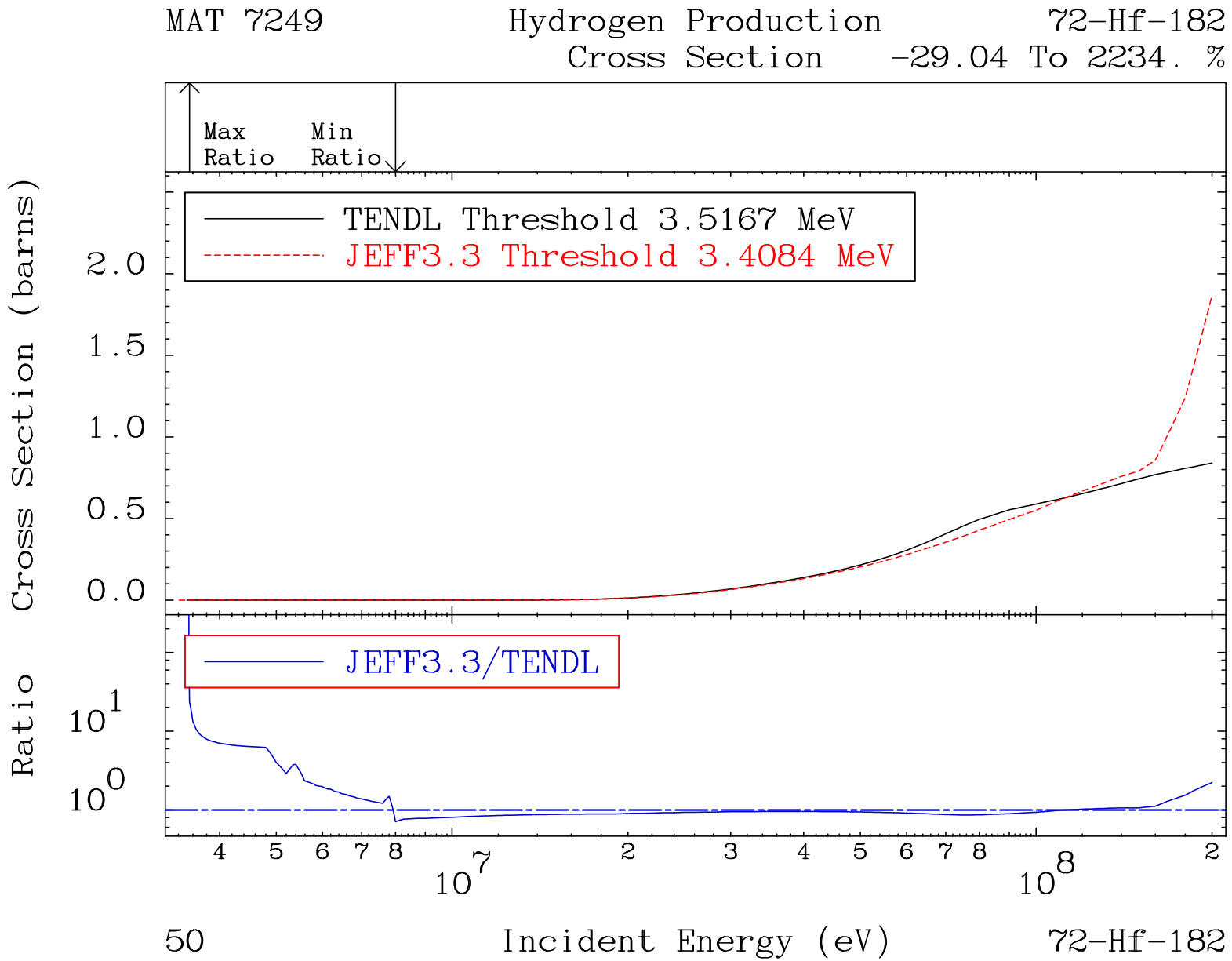

MAT 7249
(n,d)
72-Hf-182
Cross Section
-100.0 To 21.79 %
Min Ratio
Max Ratio
TENDL Threshold 6.3516 MeV
JEFF3.3 Threshold 6.3540 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
1.0
0.0
7 8
10^7
2
3
4
5
6
7
8
10^8
2
45
Incident Energy (eV)
72-Hf-182

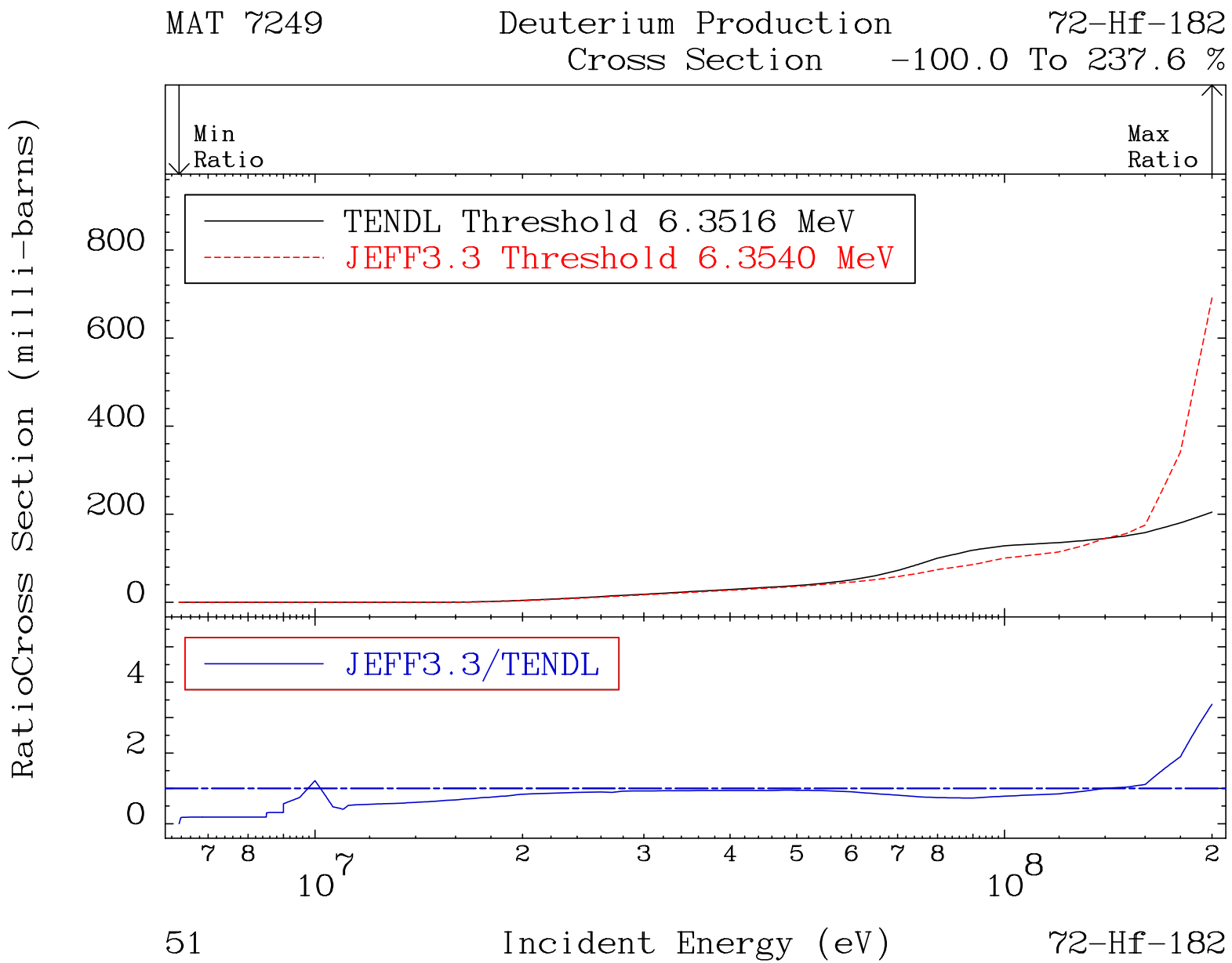

MAT 7249
(n,t)
72-Hf-182
Cross Section
-67.76 To 1.181 %
Min Ratio
Max Ratio
TENDL Threshold 6.2863 MeV
JEFF3.3 Threshold 6.2863 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
46
72-Hf-182

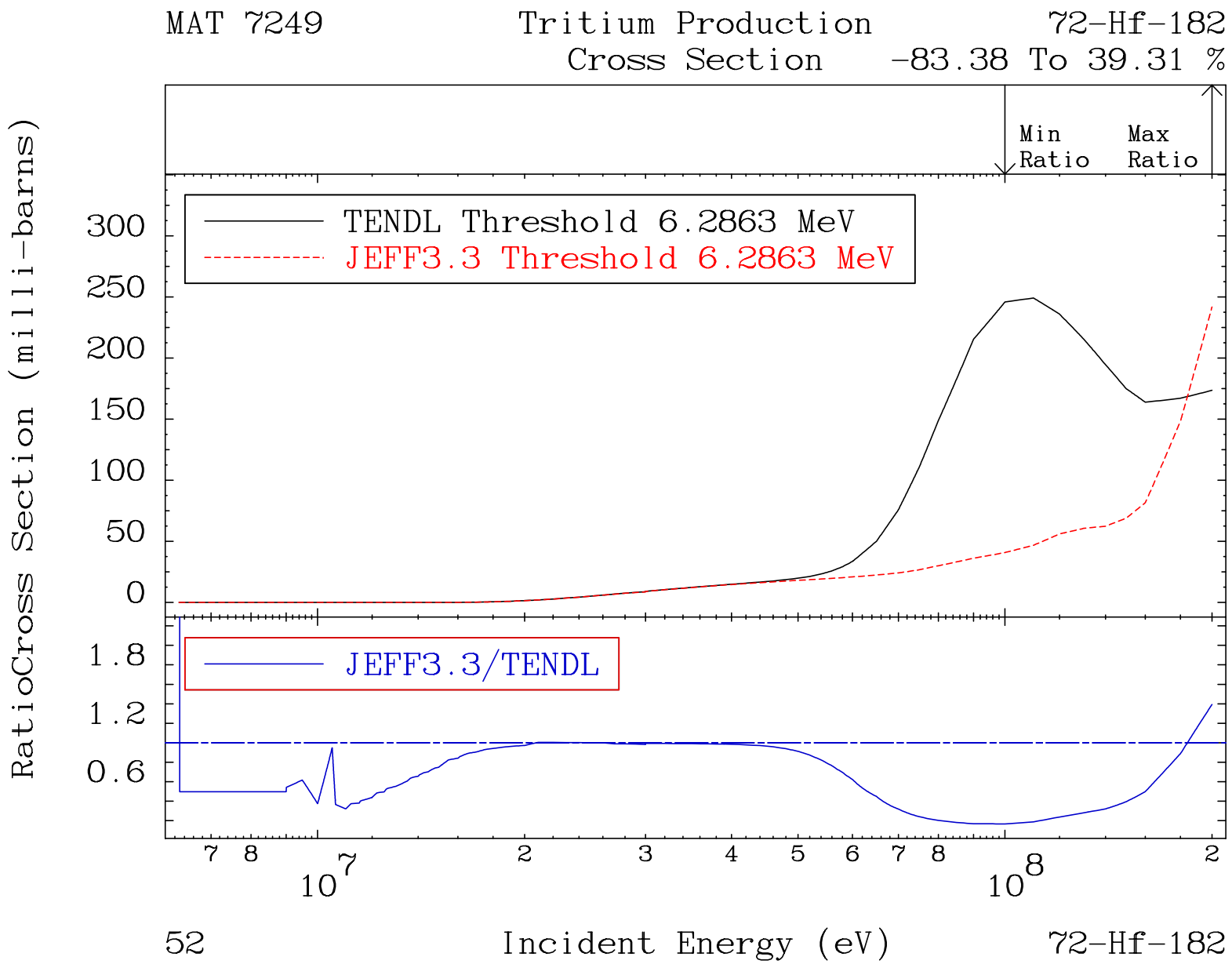

MAT 7249
(n,He-3)
72-Hf-182
Cross Section
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 8.2349 MeV
JEFF3.3 Threshold 8.3579 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
60
50
40
30
20
10
0
1.2
0.6
0.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
72-Hf-182

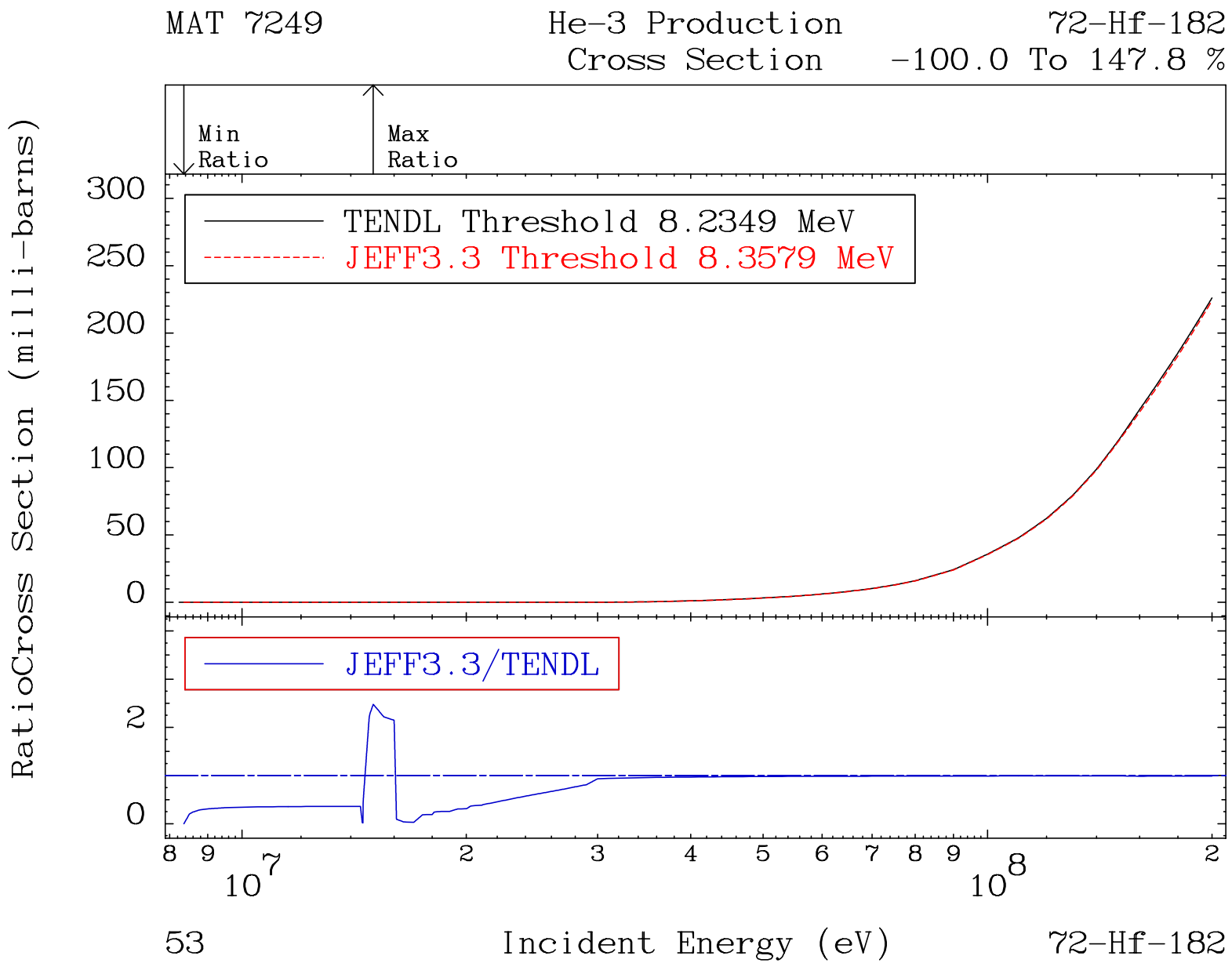

MAT 7249
(n,α)
Cross Section
72-Hf-182
-31.97 To 9999. %
Max
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
48
72-Hf-182

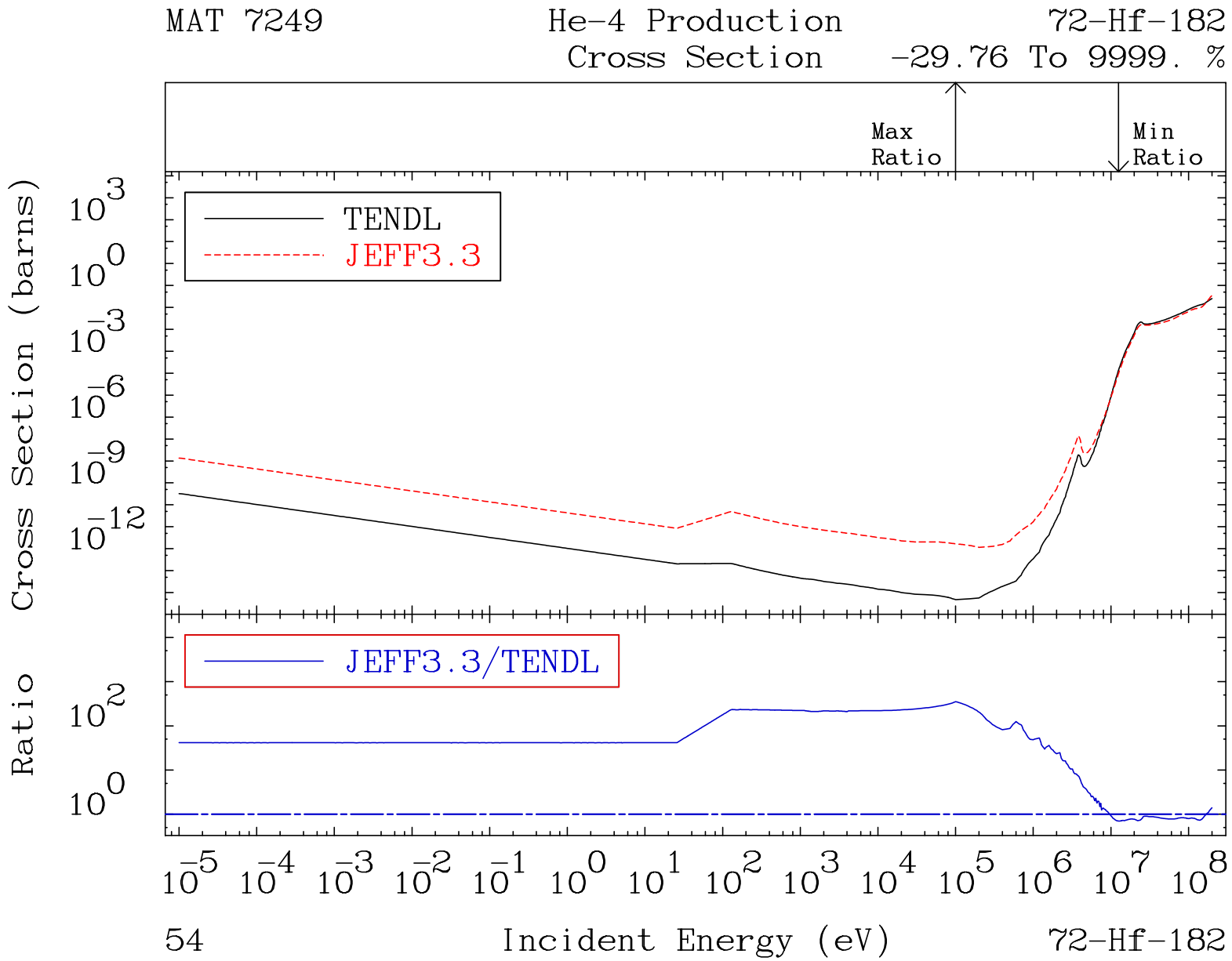

MAT 7249
(n,2p)
72-Hf-182
Cross Section
-100.0 To 742.9 %
Min Ratio
Max Ratio
TENDL Threshold 11.532 MeV
JEFF3.3 Threshold 11.534 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
140
120
100
80
60
40
20
0
12
8
4
0
2
3
4
5
6
7
8
9
10^{8}
2
49
Incident Energy (eV)
72-Hf-182

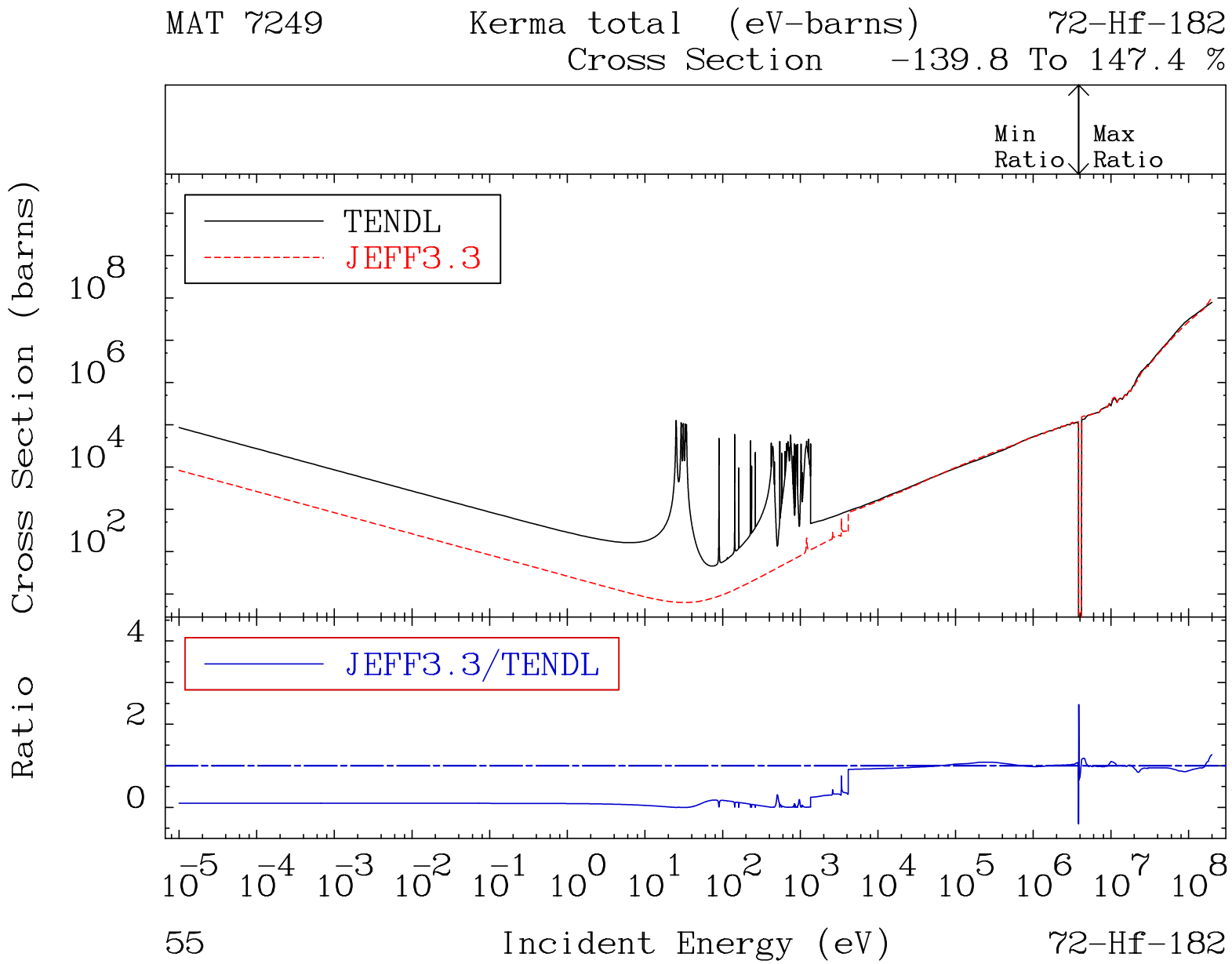

MAT 7249
Hydrogen Production
72-Hf-182
Cross Section
-29.04 To 2234. %
Max Ratio
Min Ratio
TENDL Threshold 3.5167 MeV
JEFF3.3 Threshold 3.4084 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
10^1
10^0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
50
72-Hf-182

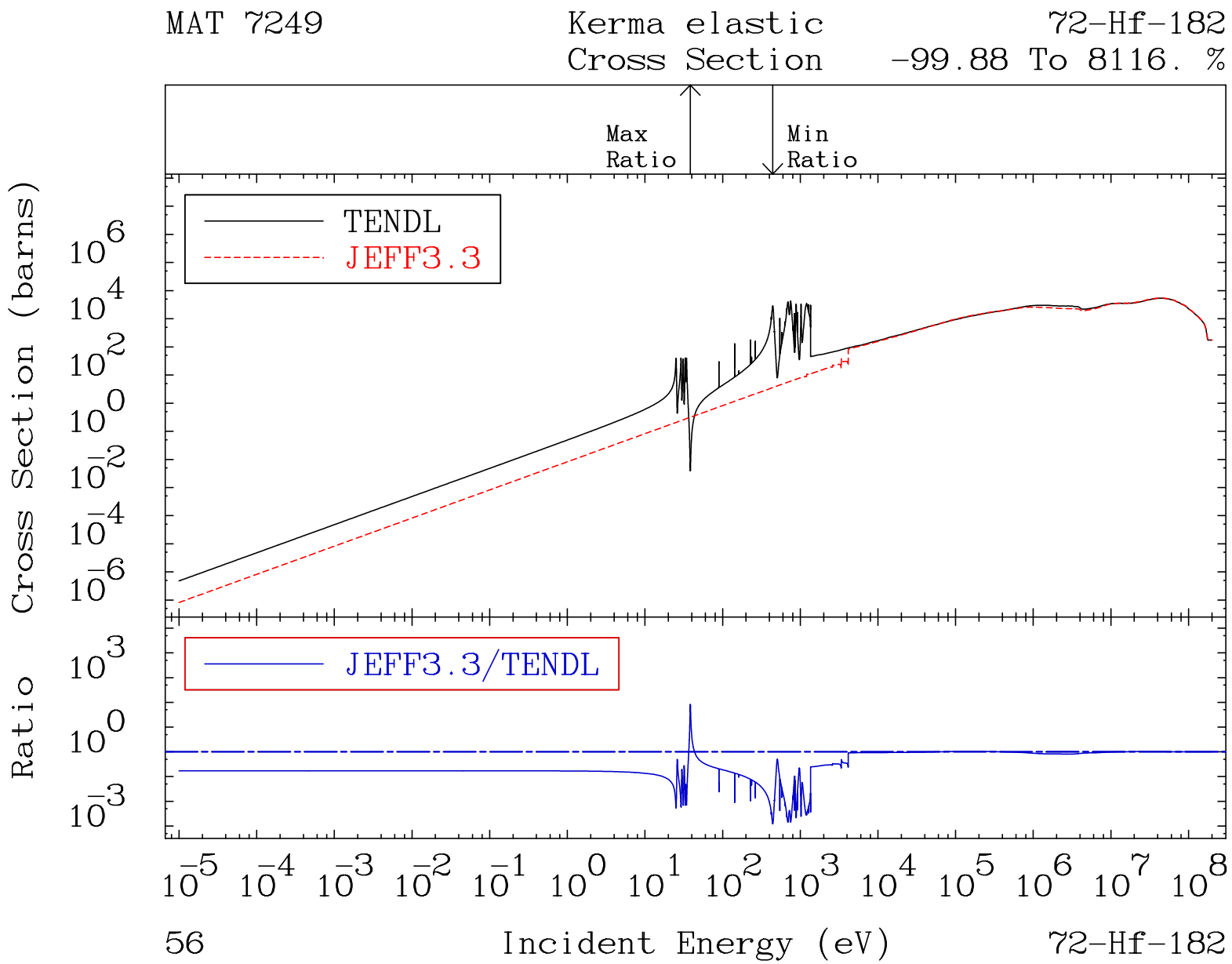

MAT 7249
Deuterium Production
72-Hf-182
Cross Section
-100.0 To 237.6 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.3516 MeV
JEFF3.3 Threshold 6.3540 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
800
600
400
200
0
4
2
0
7 8
10^7
2 3 4 5 6 7 8
10^8
2
51
Incident Energy (eV)
72-Hf-182

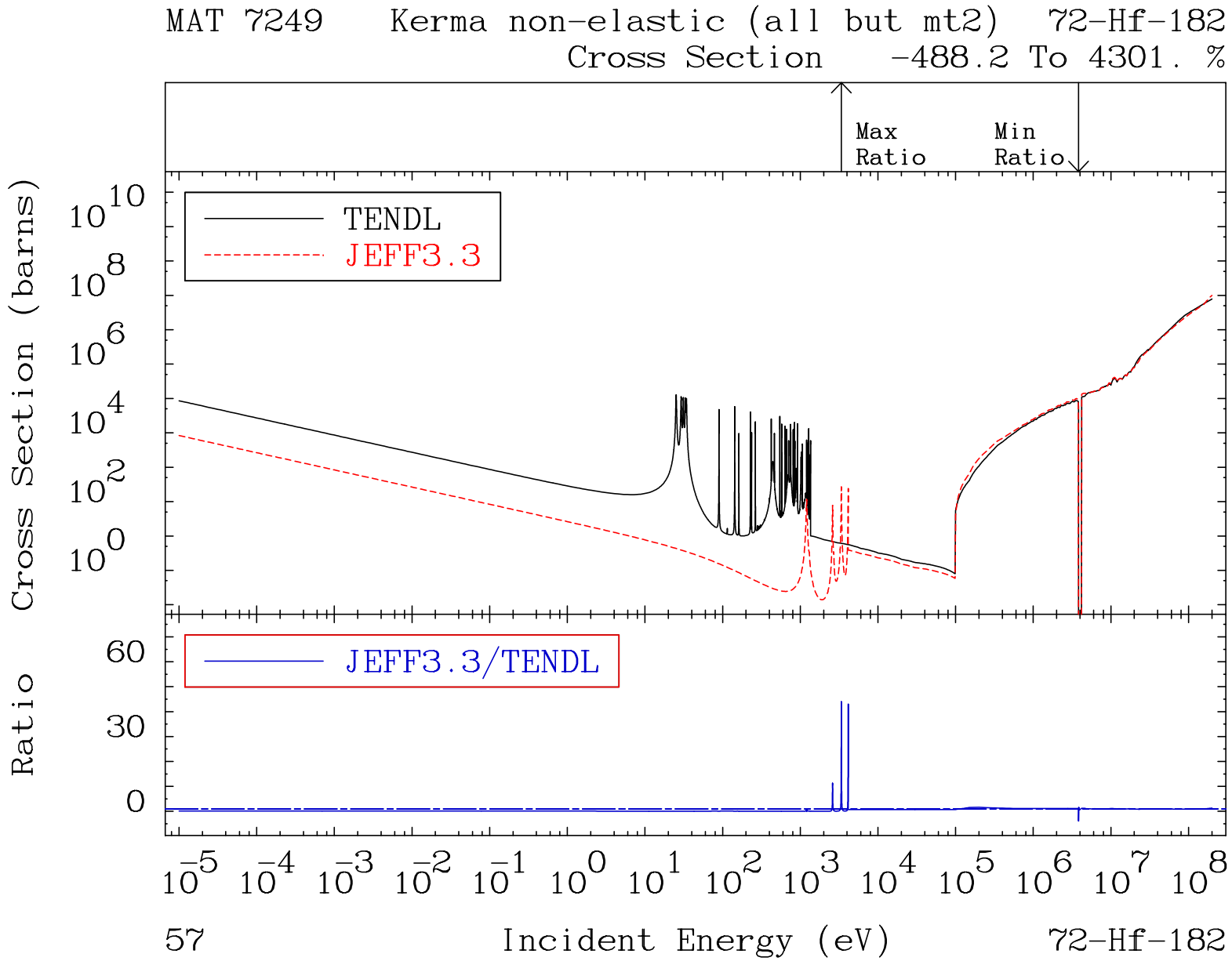

MAT 7249
Tritium Production
Cross Section
72-Hf-182
-83.38 To 39.31 %
Min Ratio
Max Ratio
TENDL Threshold 6.2863 MeV
JEFF3.3 Threshold 6.2863 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
1.8
1.2
0.6
7 8 10^7 2 3 4 5 6 7 8 10^8 2
52
Incident Energy (eV)
72-Hf-182

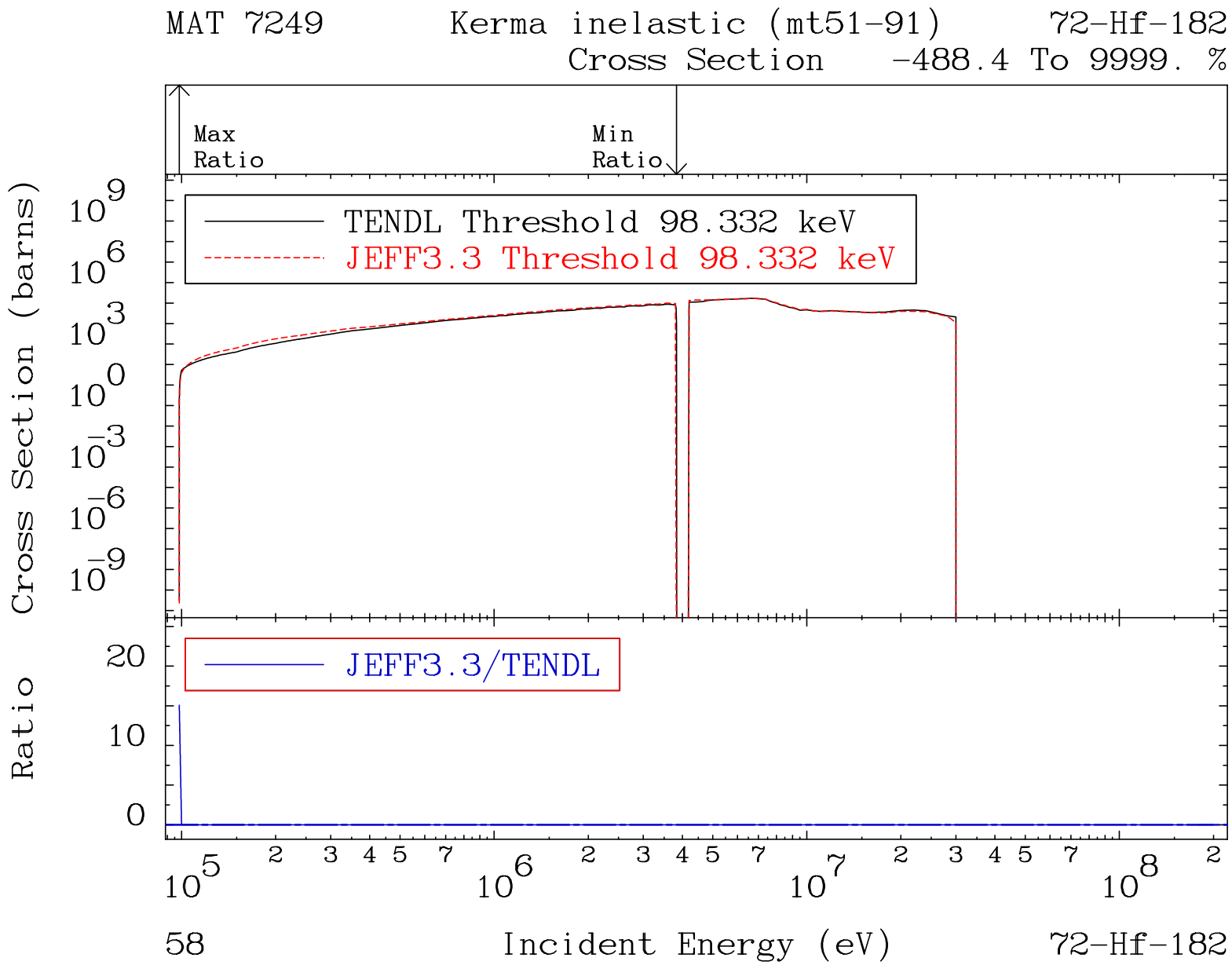

MAT 7249
He-3 Production
Cross Section
72-Hf-182
-100.0 To 147.8 %
Min Ratio
Max Ratio
TENDL Threshold 8.2349 MeV
JEFF3.3 Threshold 8.3579 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
2
0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
53
Incident Energy (eV)
72-Hf-182

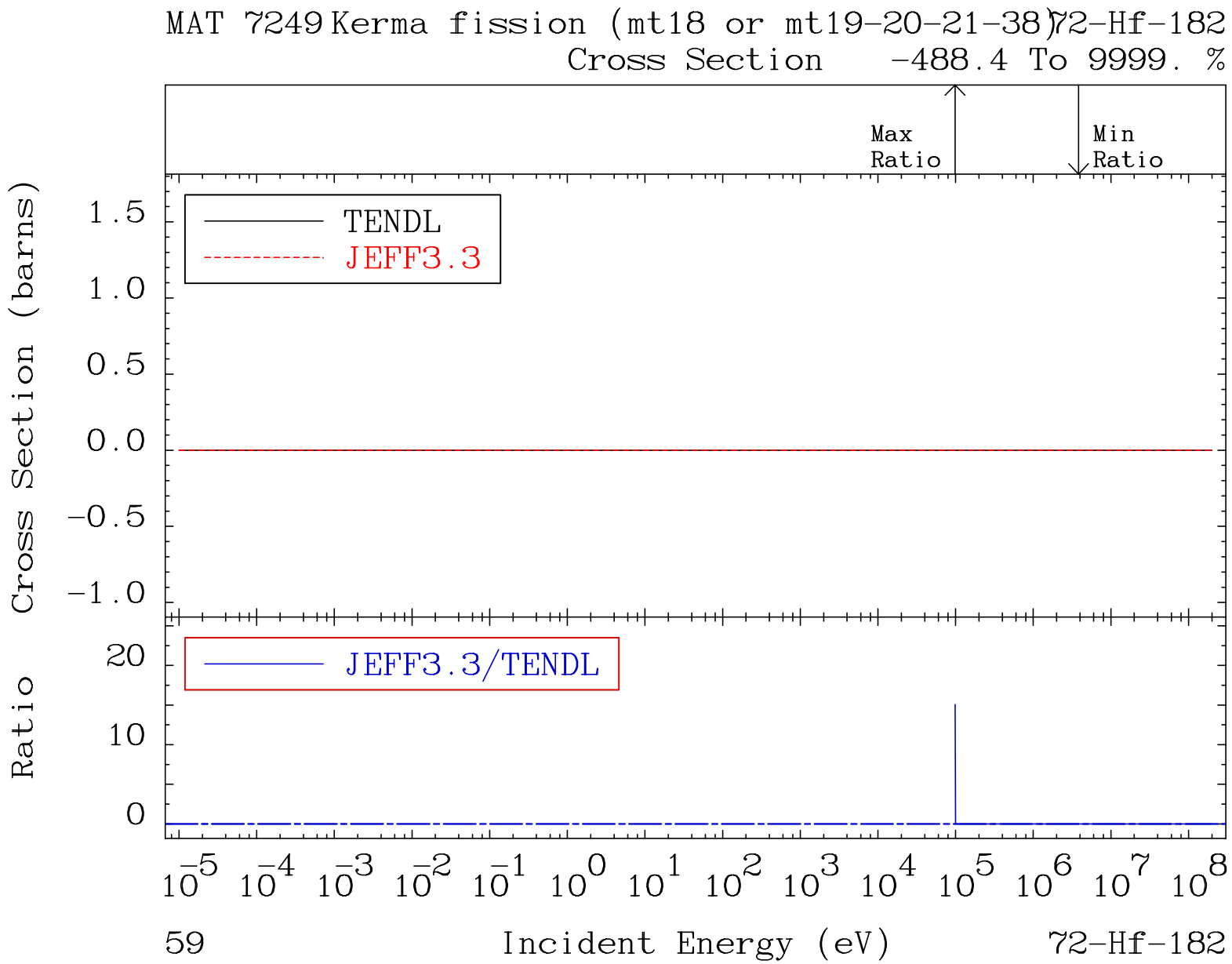

MAT 7249
He-4 Production
Cross Section
72-Hf-182
-29.76 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
54
72-Hf-182

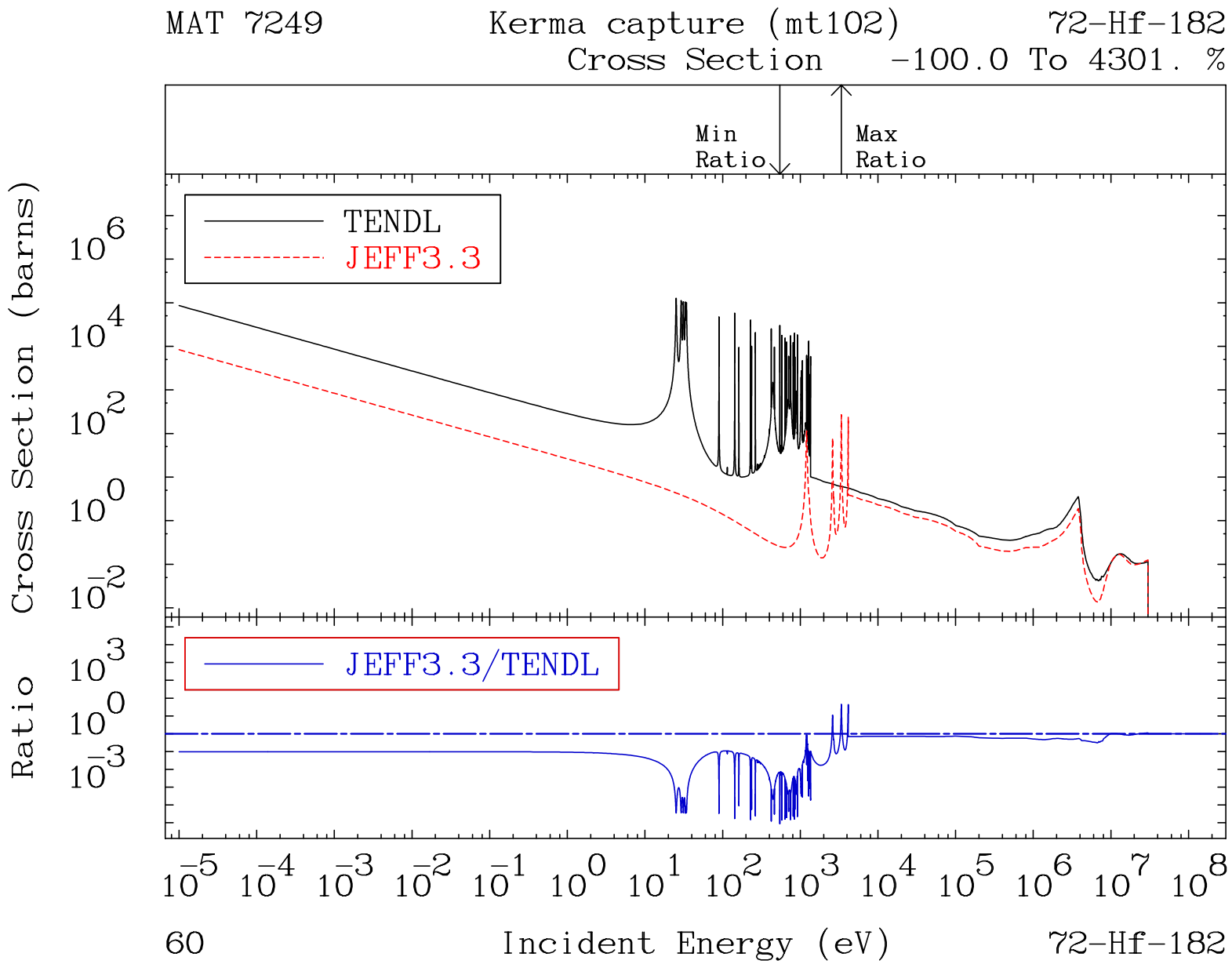

MAT 7249
Kerma total (eV-barns)
72-Hf-182
Cross Section -139.8 To 147.4 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
55
72-Hf-182

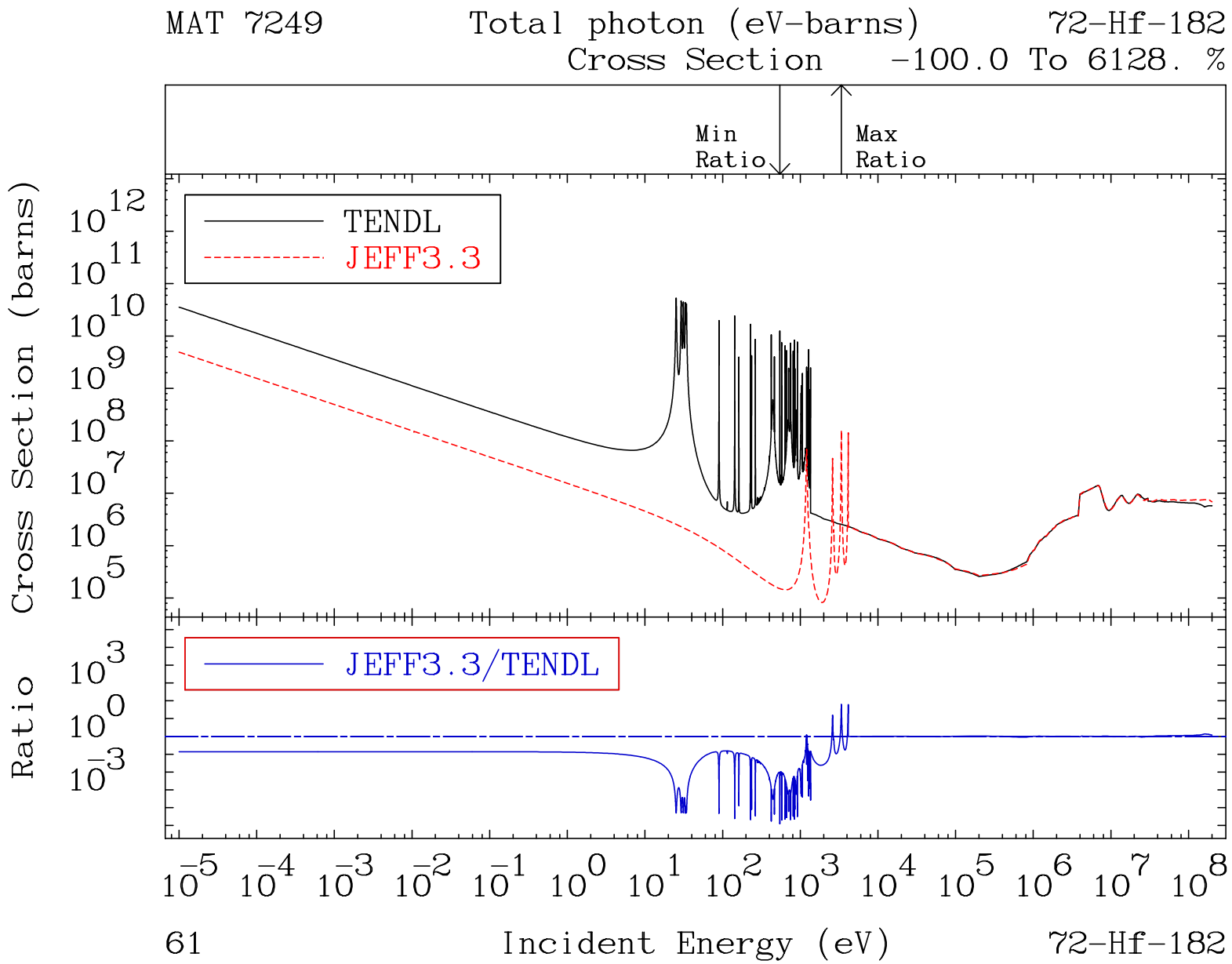

MAT 7249
Kerma elastic
Cross Section
72-Hf-182
-99.88 To 8116. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
56
72-Hf-182

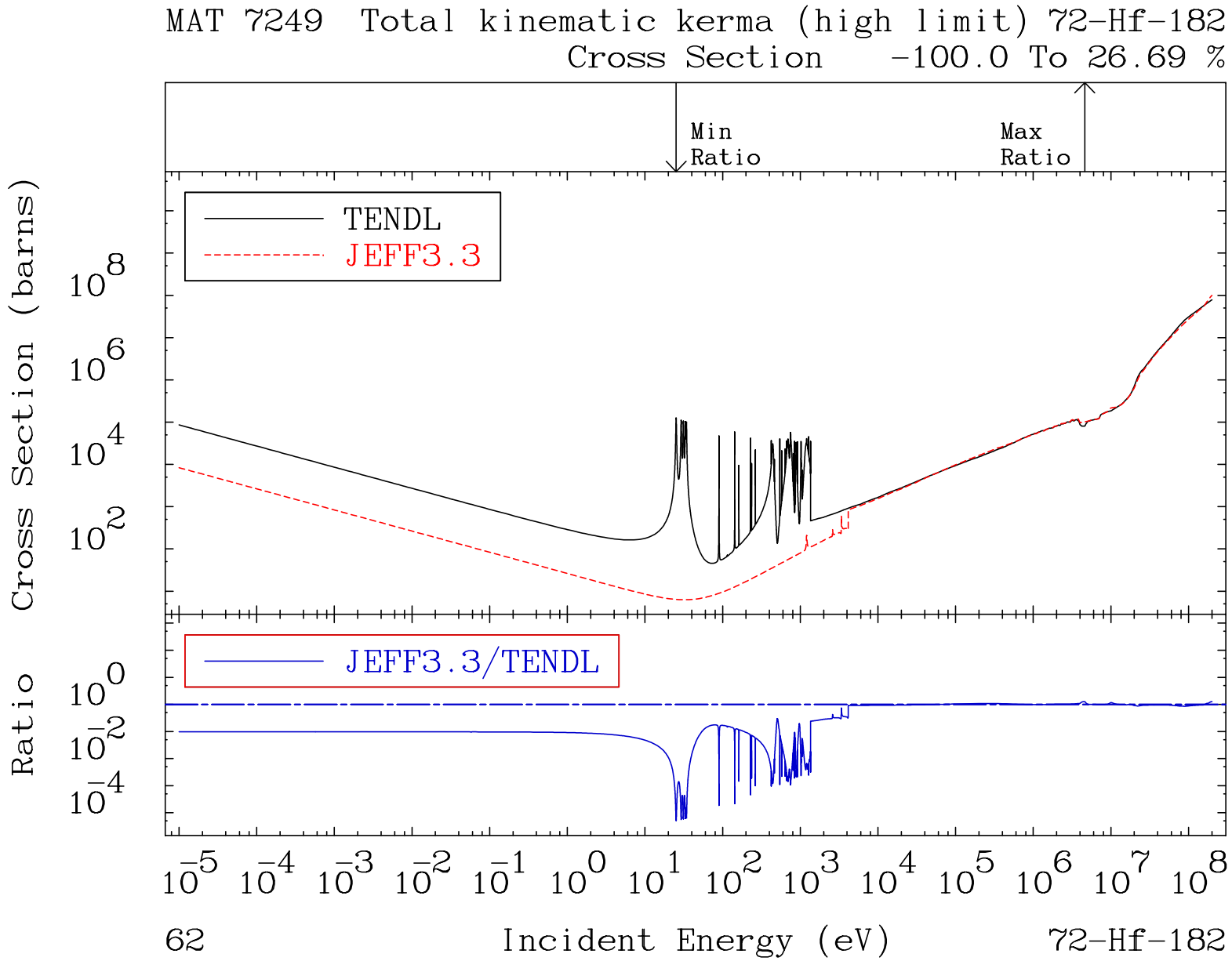

MAT 7249 Kerma non-elastic (all but mt2) 72-Hf-182
Cross Section -488.2 To 4301. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
57
72-Hf-182

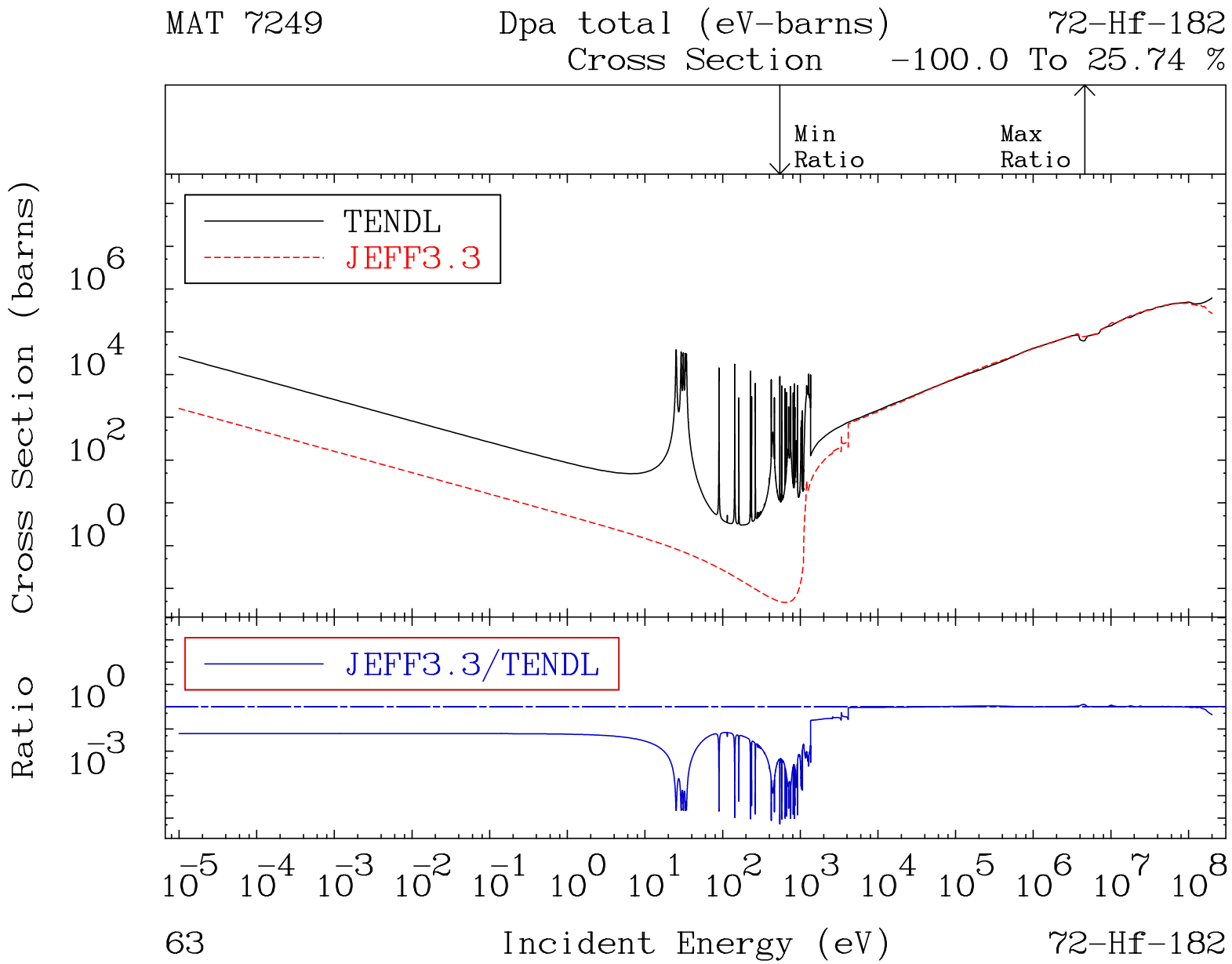

MAT 7249
Kerma inelastic (mt51-91)
72-Hf-182
Cross Section
-488.4 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 98.332 keV
JEFF3.3 Threshold 98.332 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
58
72-Hf-182

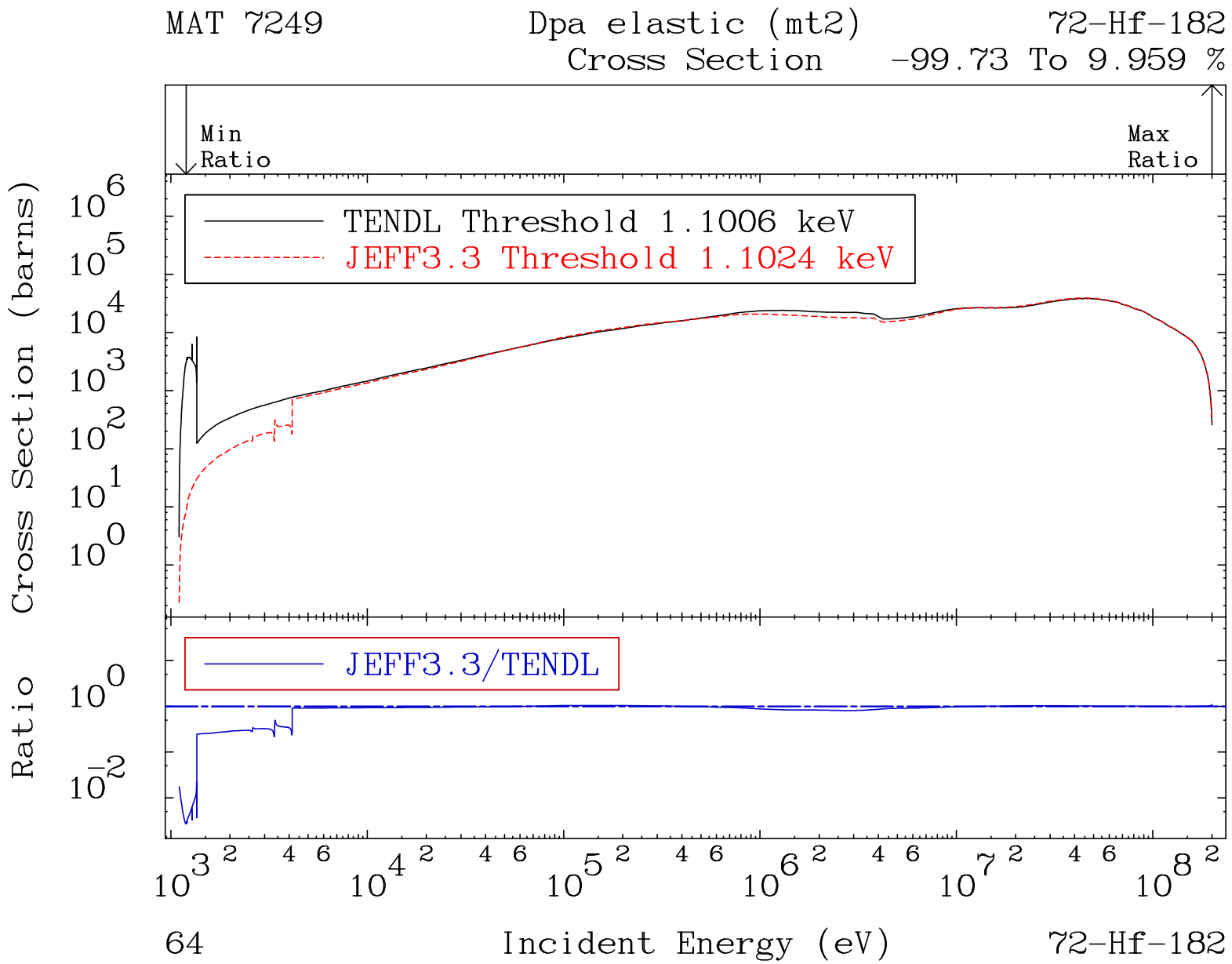

MAT 7249 Kerma fission (mt18 or mt19-20-21-38) 72-Hf-182
Cross Section -488.4 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
20
10
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
59
Incident Energy (eV)
72-Hf-182

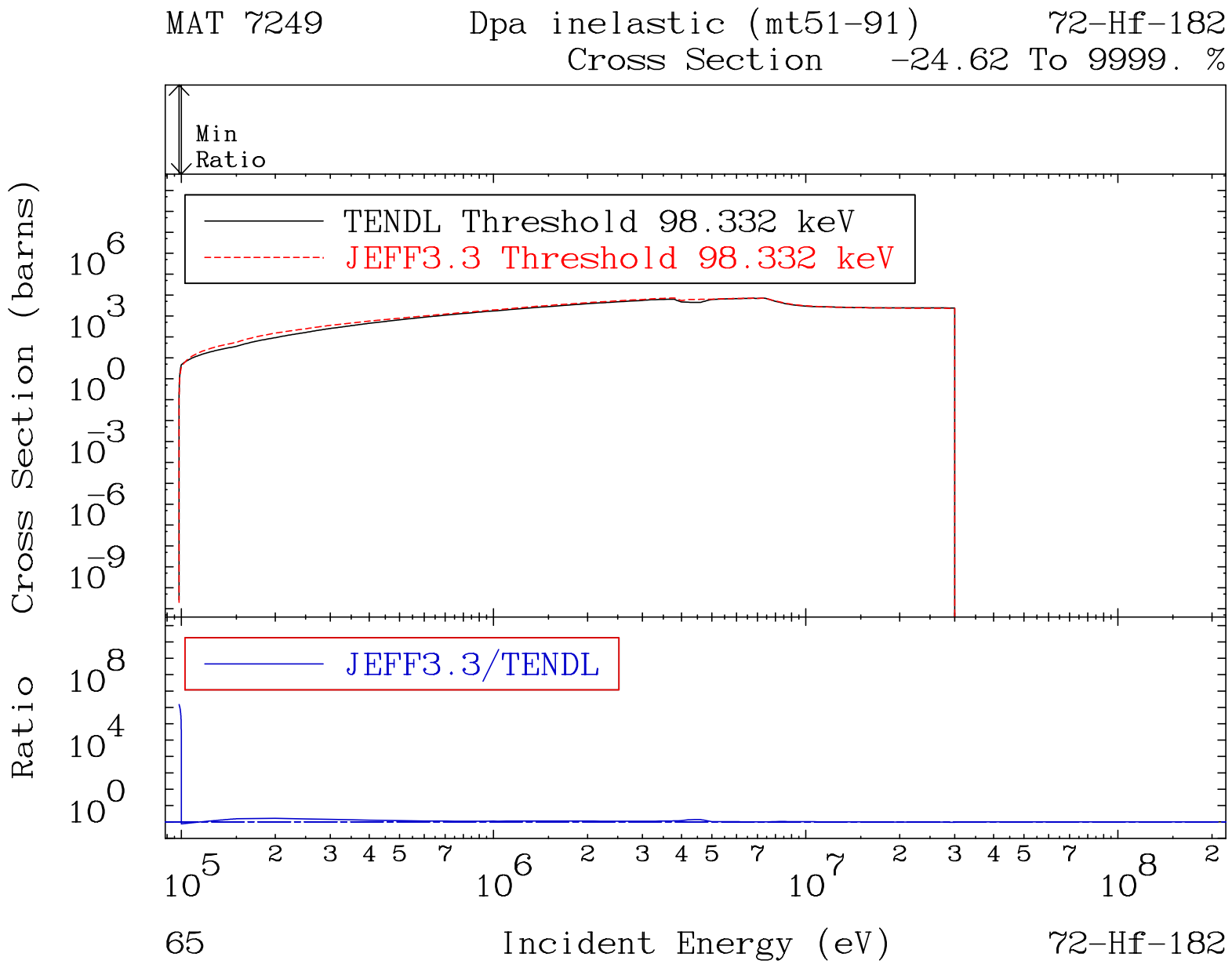

MAT 7249
Kerma capture (mt102)
72-Hf-182
Cross Section -100.0 To 4301. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
60
72-Hf-182

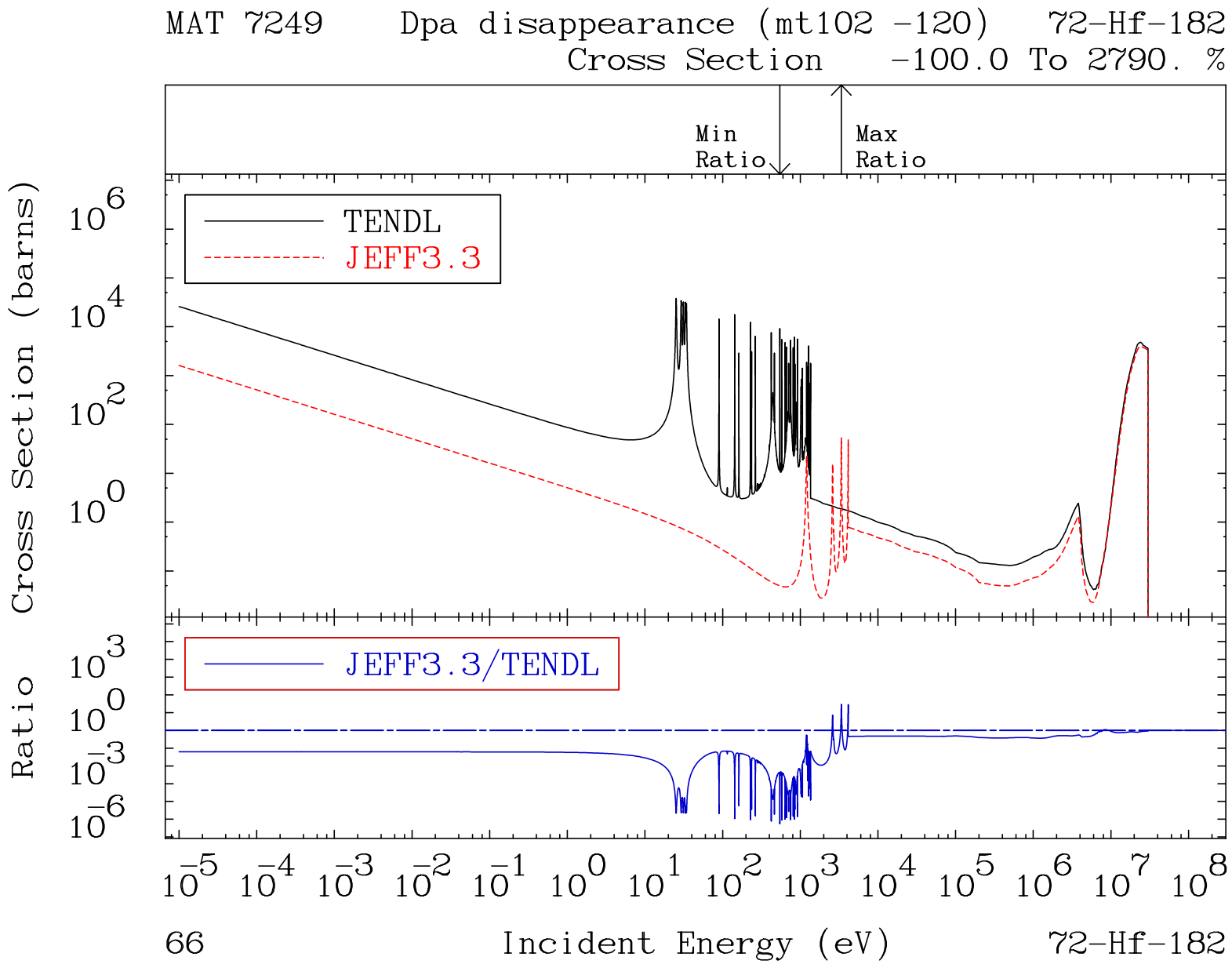

MAT 7249
Total photon (eV-barns)
72-Hf-182
Cross Section -100.0 To 6128. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
61
72-Hf-182

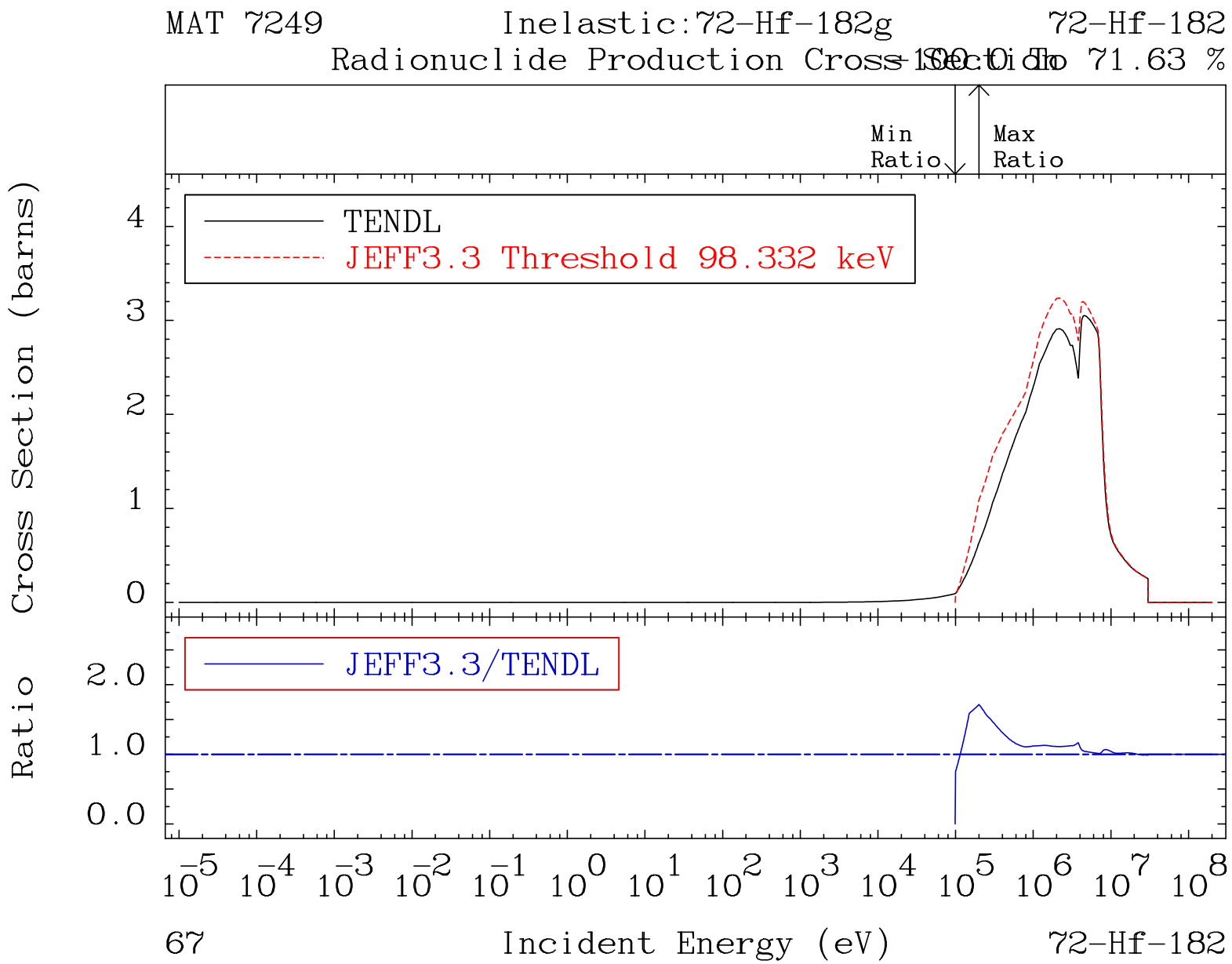

MAT 7249 Total kinematic kerma (high limit) 72-Hf-182
Cross Section -100.0 To 26.69 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
62
72-Hf-182

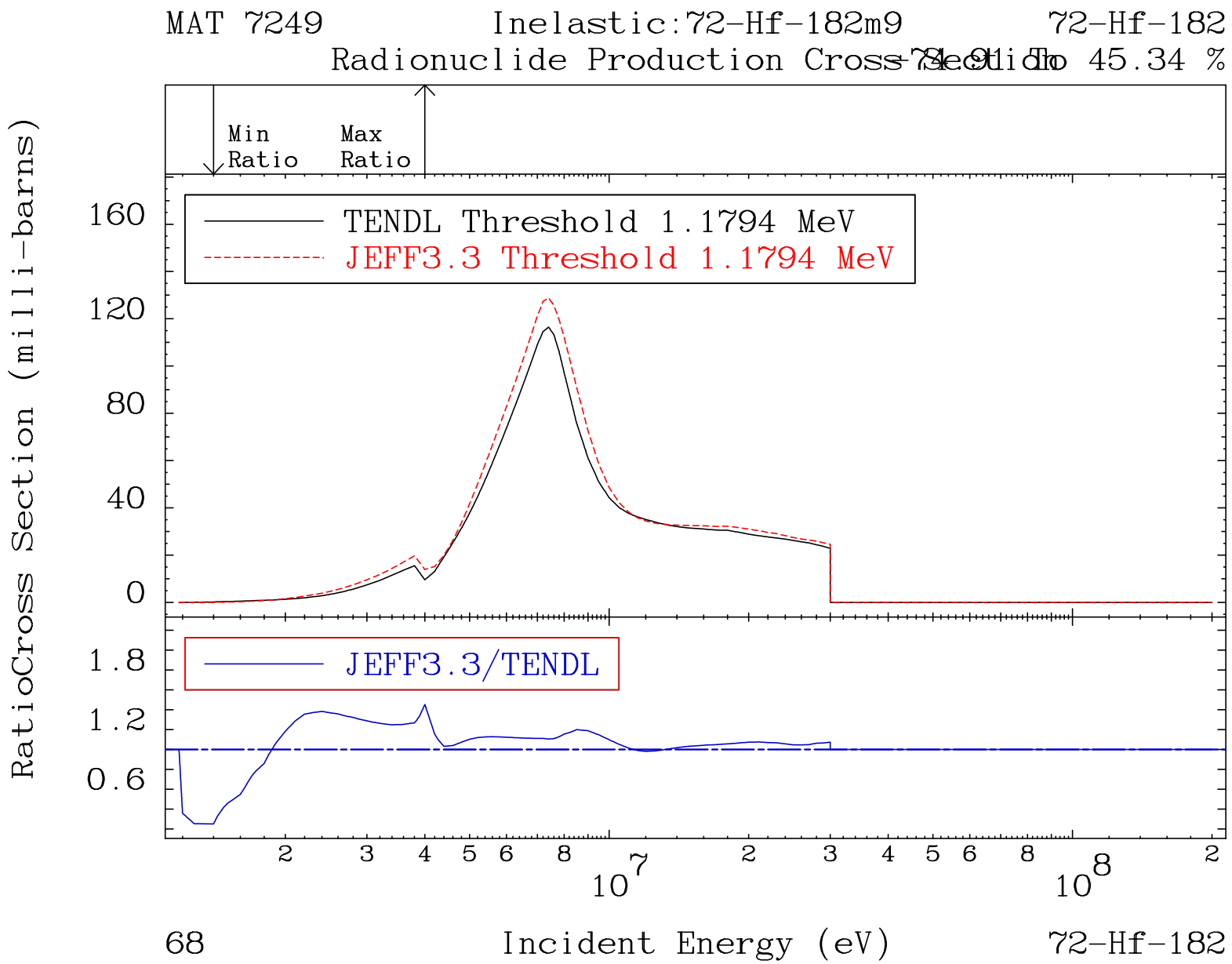

MAT 7249
Dpa total (eV-barns)
72-Hf-182
Cross Section -100.0 To 25.74 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
63
72-Hf-182

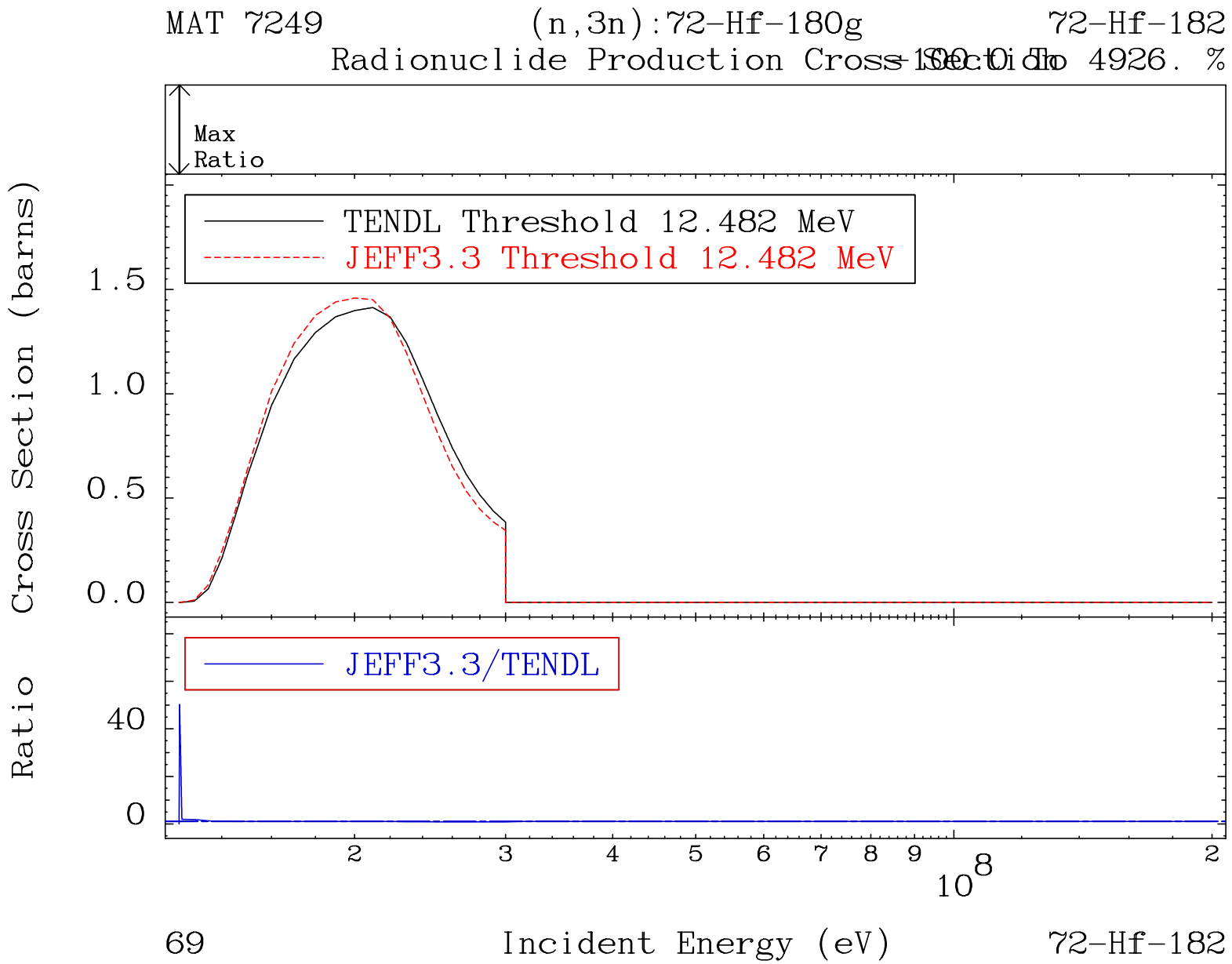

MAT 7249
Dpa elastic (mt2)
Cross Section
72-Hf-182
-99.73 To 9.959 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.1006 keV
JEFF3.3 Threshold 1.1024 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
64
72-Hf-182

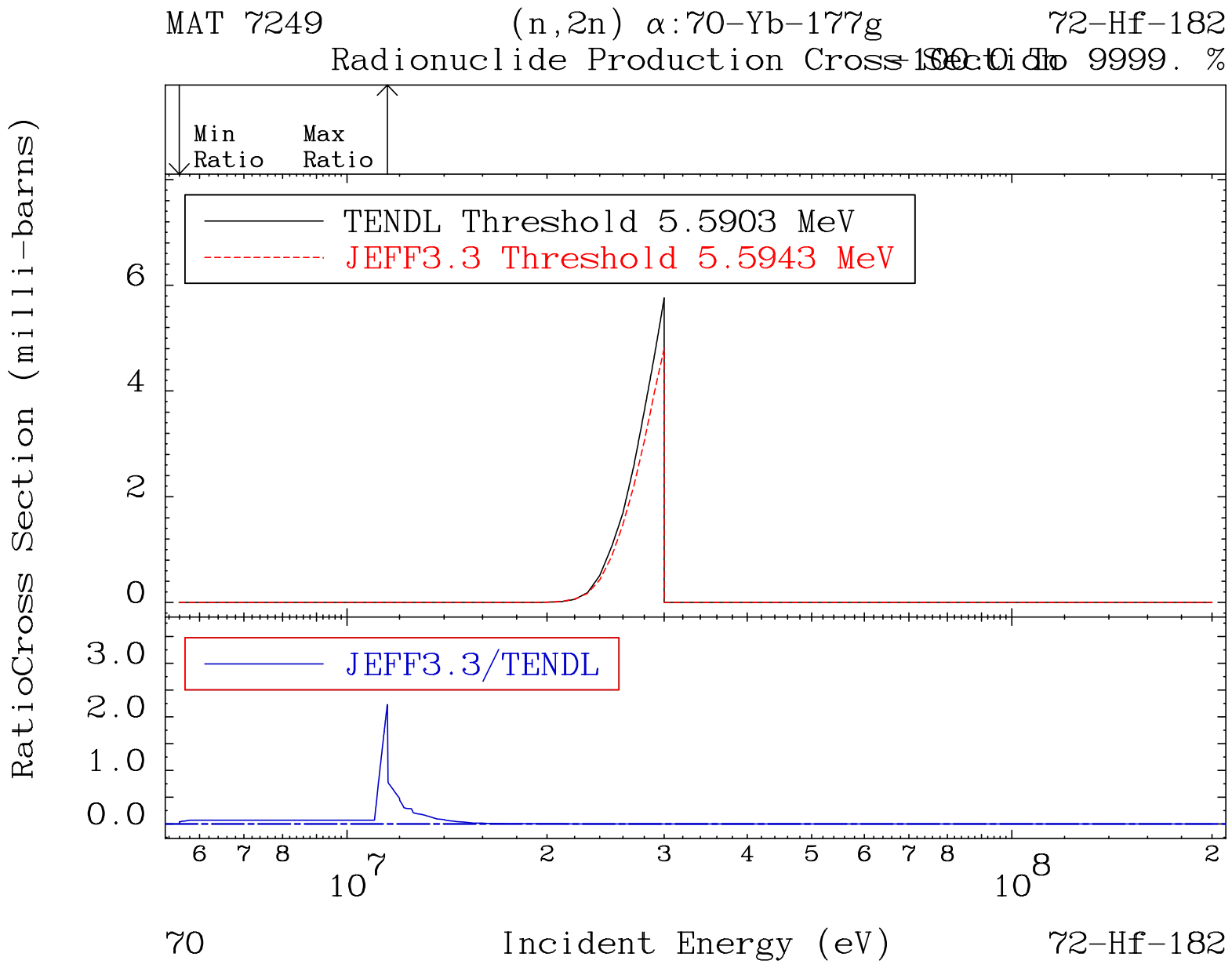

MAT 7249
Dpa inelastic (mt51-91)
72-Hf-182
Cross Section
-24.62 To 9999. %
Min
Ratio
TENDL Threshold 98.332 keV
JEFF3.3 Threshold 98.332 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
65
72-Hf-182

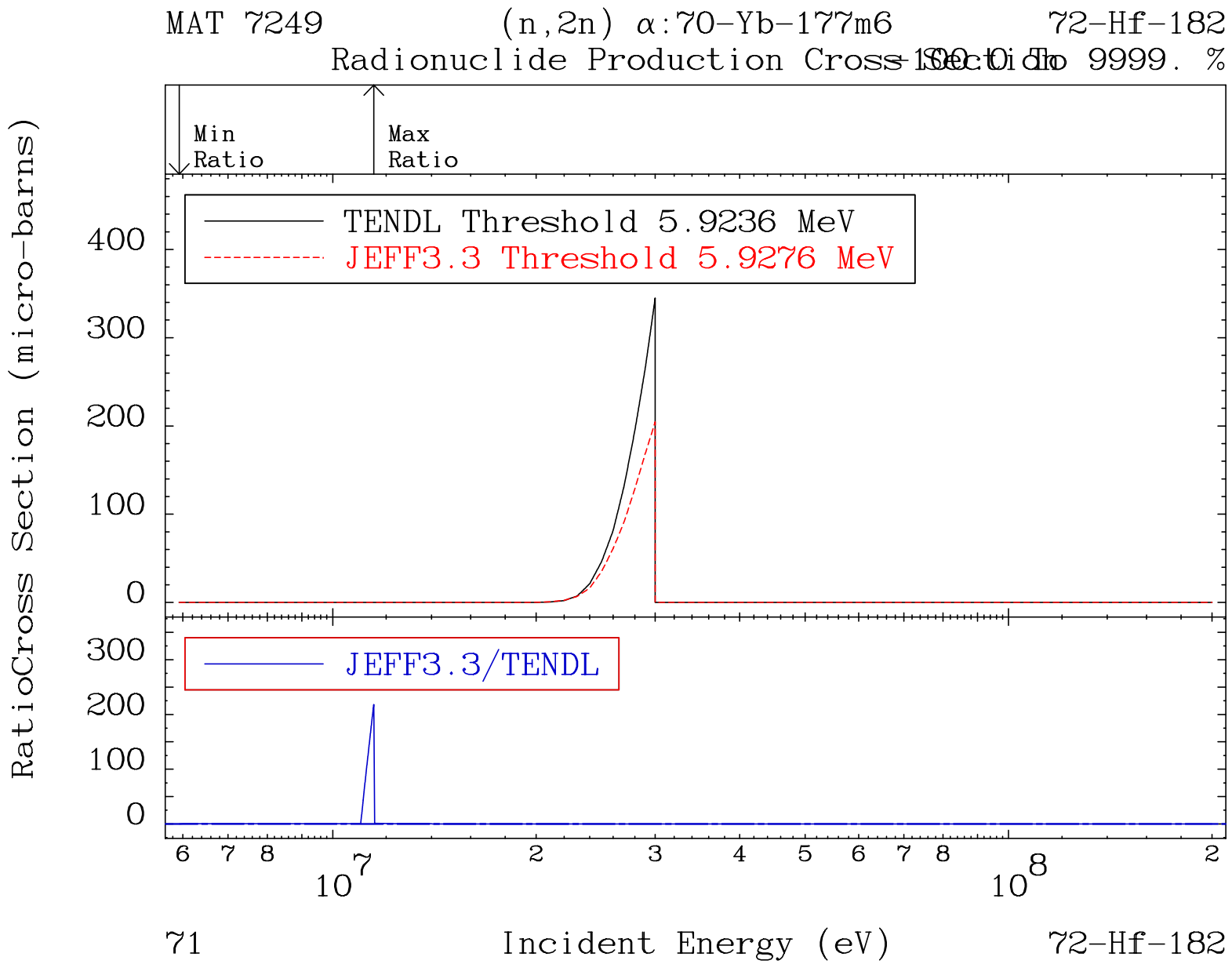

MAT 7249 Dpa disappearance (mt102 -120) 72-Hf-182
Cross Section -100.0 To 2790. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
66
72-Hf-182

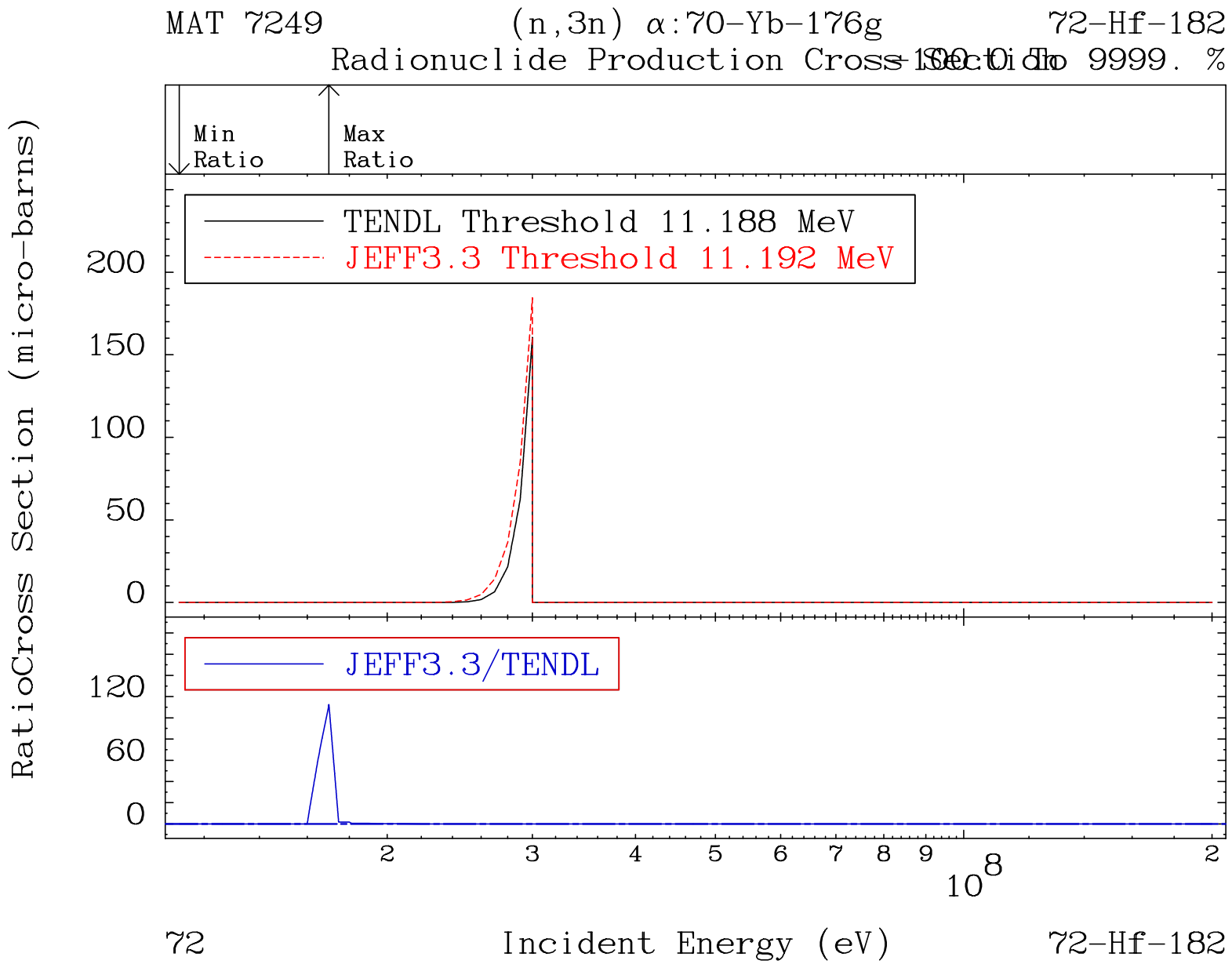

MAT 7249
Inelastic:72-Hf-182g
72-Hf-182
Radionuclide Production Cross Section To 71.63 %
Min Ratio
Max Ratio
TENDL
JEFF3.3 Threshold 98.332 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
72-Hf-182

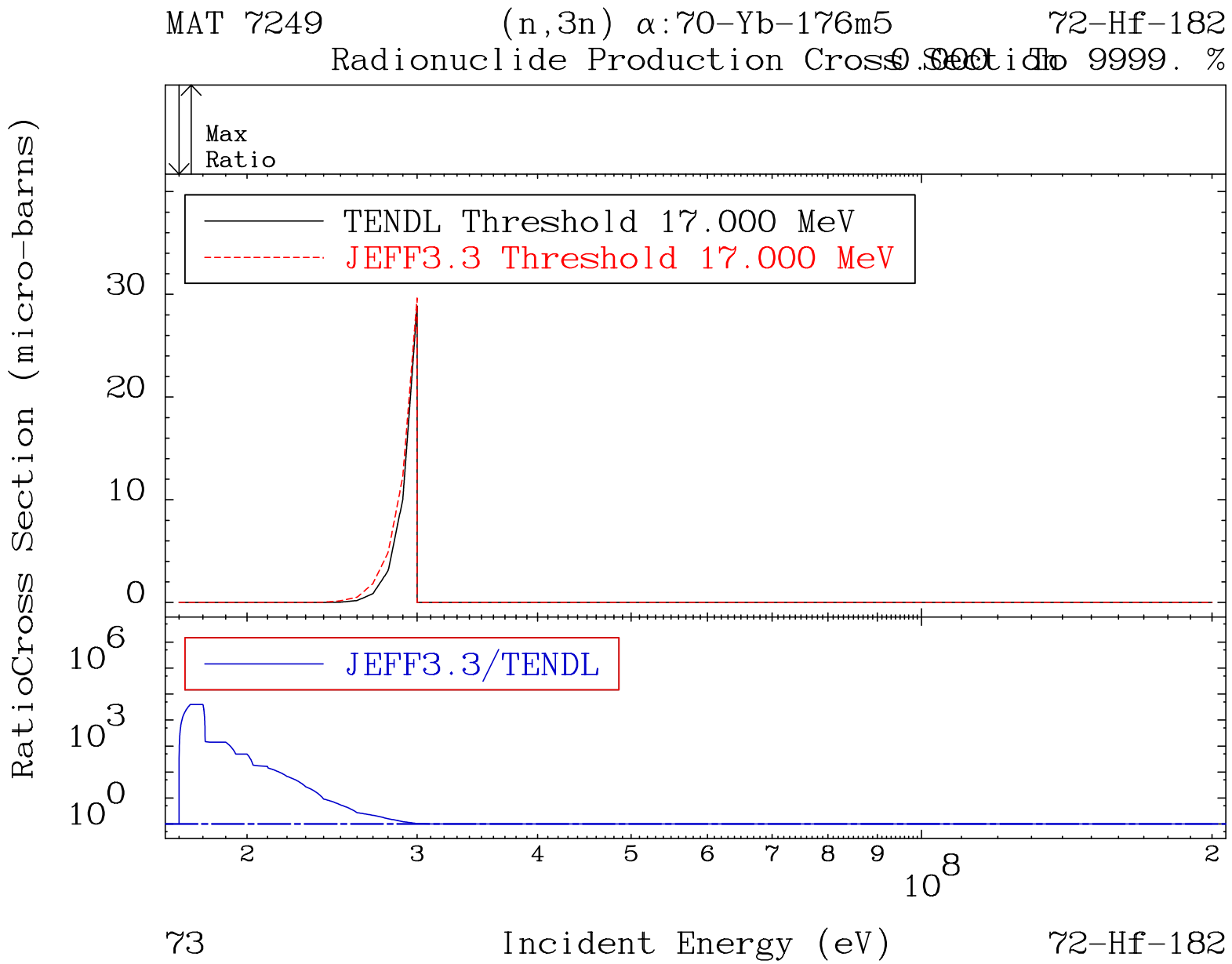

MAT 7249
Inelastic:72-Hf-182m9
72-Hf-182
Radionuclide Production Cross Section To 45.34 %
Min Ratio
Max Ratio
TENDL Threshold 1.1794 MeV
JEFF3.3 Threshold 1.1794 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.8
1.2
0.6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
68
Incident Energy (eV)
72-Hf-182

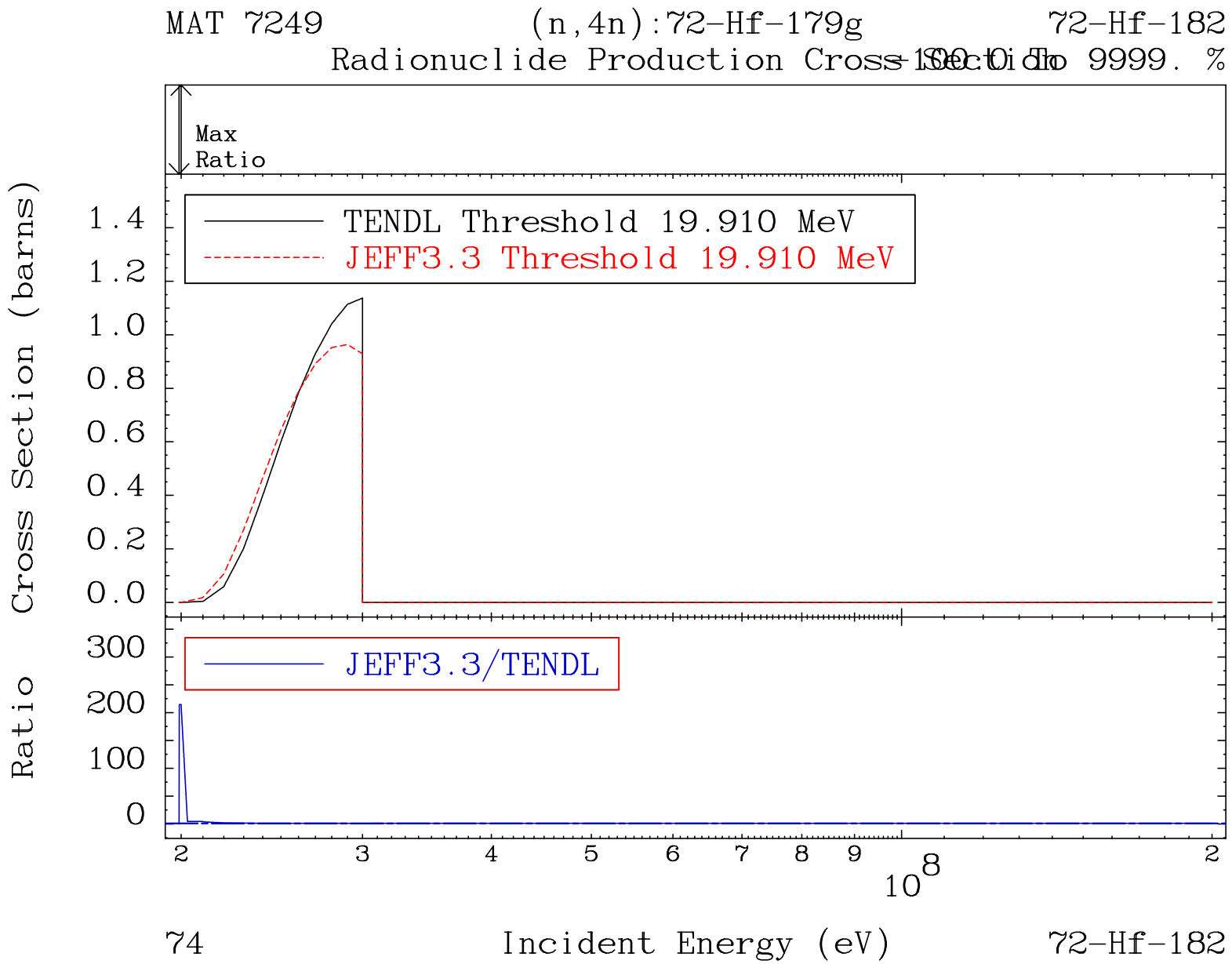

MAT 7249
(n,3n):72-Hf-180g
72-Hf-182
Radionuclide Production Cross Section To 4926. %
Max
Ratio
TENDL Threshold 12.482 MeV
JEFF3.3 Threshold 12.482 MeV
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
40
0
2
3
4
5
6
7
8
9
10^8
2
Cross Section (barns)
Ratio
69
Incident Energy (eV)
72-Hf-182

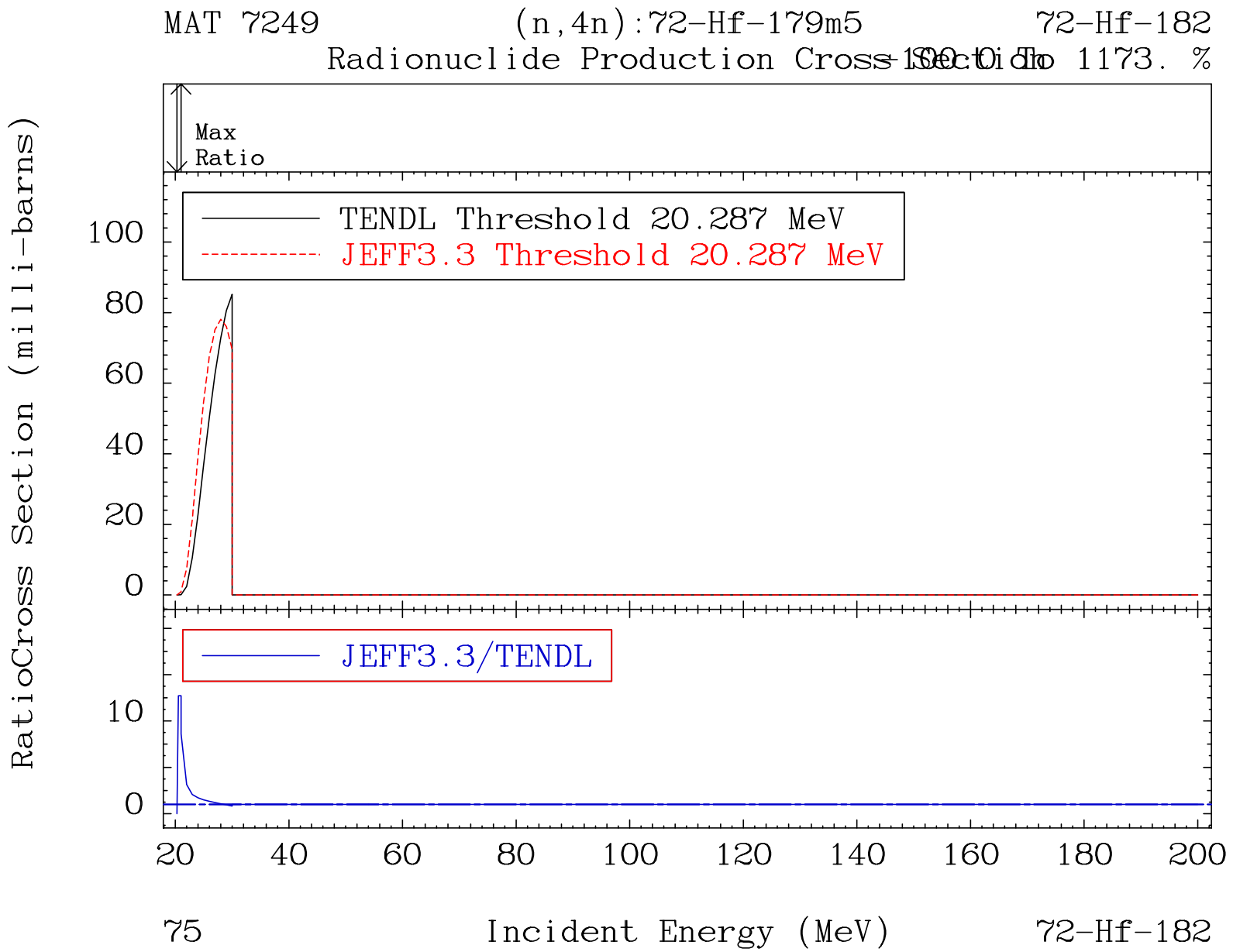

MAT 7249
(n,2n) α:70-Yb-177g
72-Hf-182
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.5903 MeV
JEFF3.3 Threshold 5.5943 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
70
72-Hf-182


MAT 7249
(n,2n) α:70-Yb-177m6
72-Hf-182
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.9236 MeV
JEFF3.3 Threshold 5.9276 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
400
300
200
100
0
300
200
100
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
71
Incident Energy (eV)
72-Hf-182


MAT 7249
(n,3n) α:70-Yb-176g
72-Hf-182
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 11.188 MeV
JEFF3.3 Threshold 11.192 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
120
60
0
2
3
4
5
6
7
8
9
2
10^8
72
Incident Energy (eV)
72-Hf-182


MAT 7249
(n,3n) α:70-Yb-176m5
72-Hf-182
Radionuclide Production Cross Section
0.000 To 9999. %
Max
Ratio
TENDL Threshold 17.000 MeV
JEFF3.3 Threshold 17.000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
30
20
10
0
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
73
Incident Energy (eV)
72-Hf-182


MAT 7249
(n,4n):72-Hf-179g
72-Hf-182
Radionuclide Production Cross Section To 9999. %
Max
Ratio
TENDL Threshold 19.910 MeV
JEFF3.3 Threshold 19.910 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
300
200
100
0
2
3
4
5
6
7
8
9
2
10^8
74
Incident Energy (eV)
72-Hf-182


MAT 7249
(n,4n):72-Hf-179m5
72-Hf-182
Radionuclide Production Cross Section To 1173. %
Max
Ratio
TENDL Threshold 20.287 MeV
JEFF3.3 Threshold 20.287 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
10
0
20
40
60
80
100
120
140
160
180
200
75
Incident Energy (MeV)
72-Hf-182