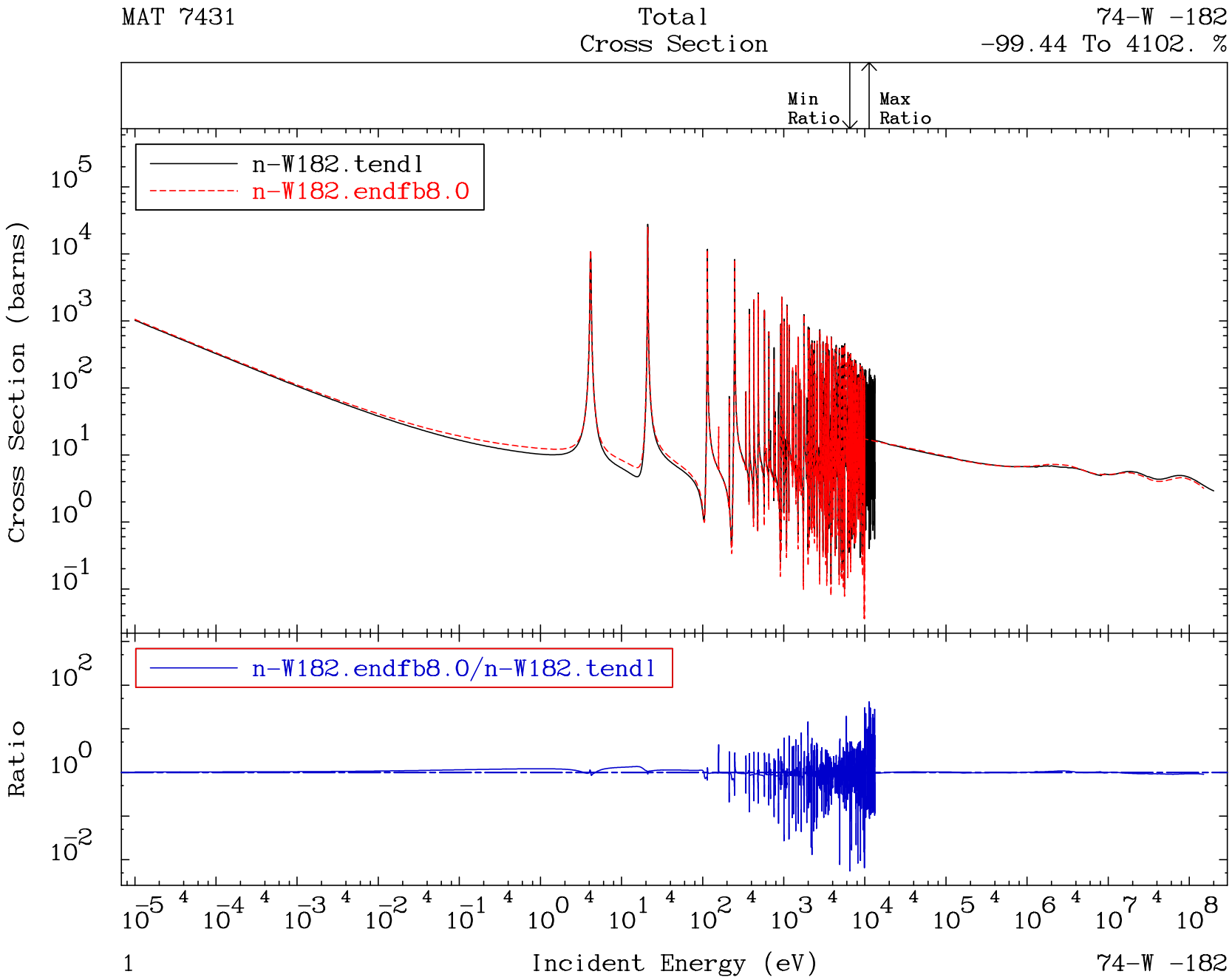
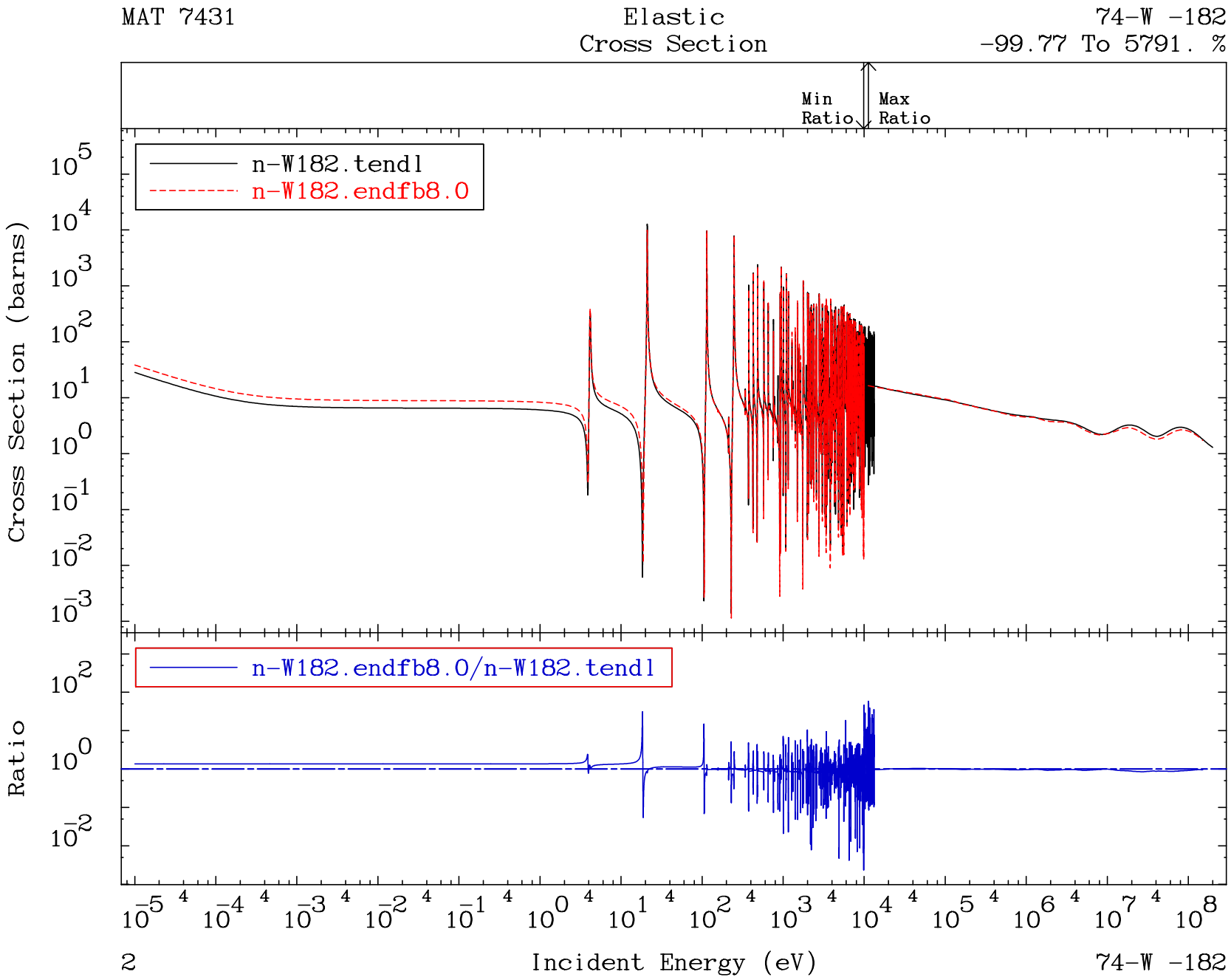
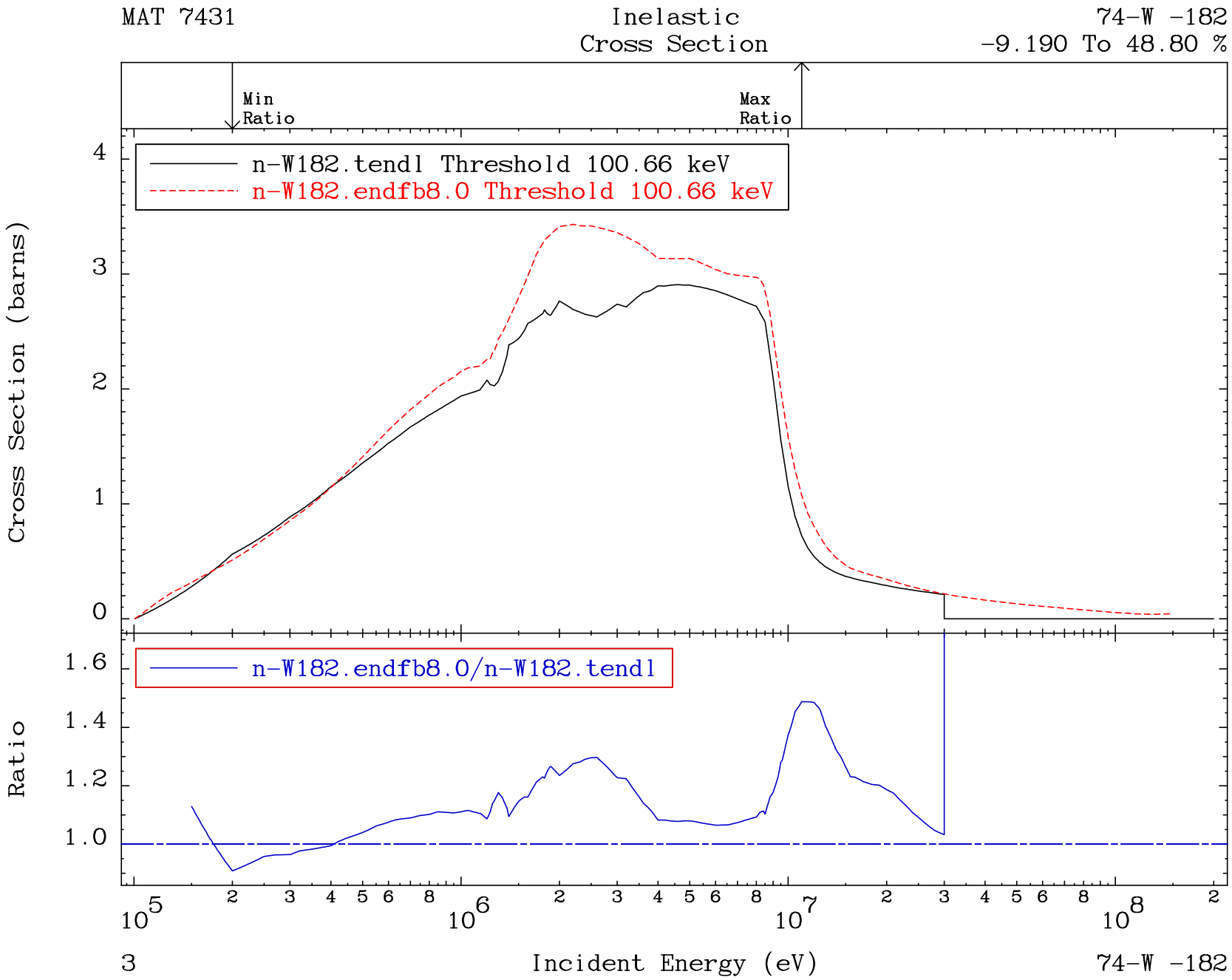
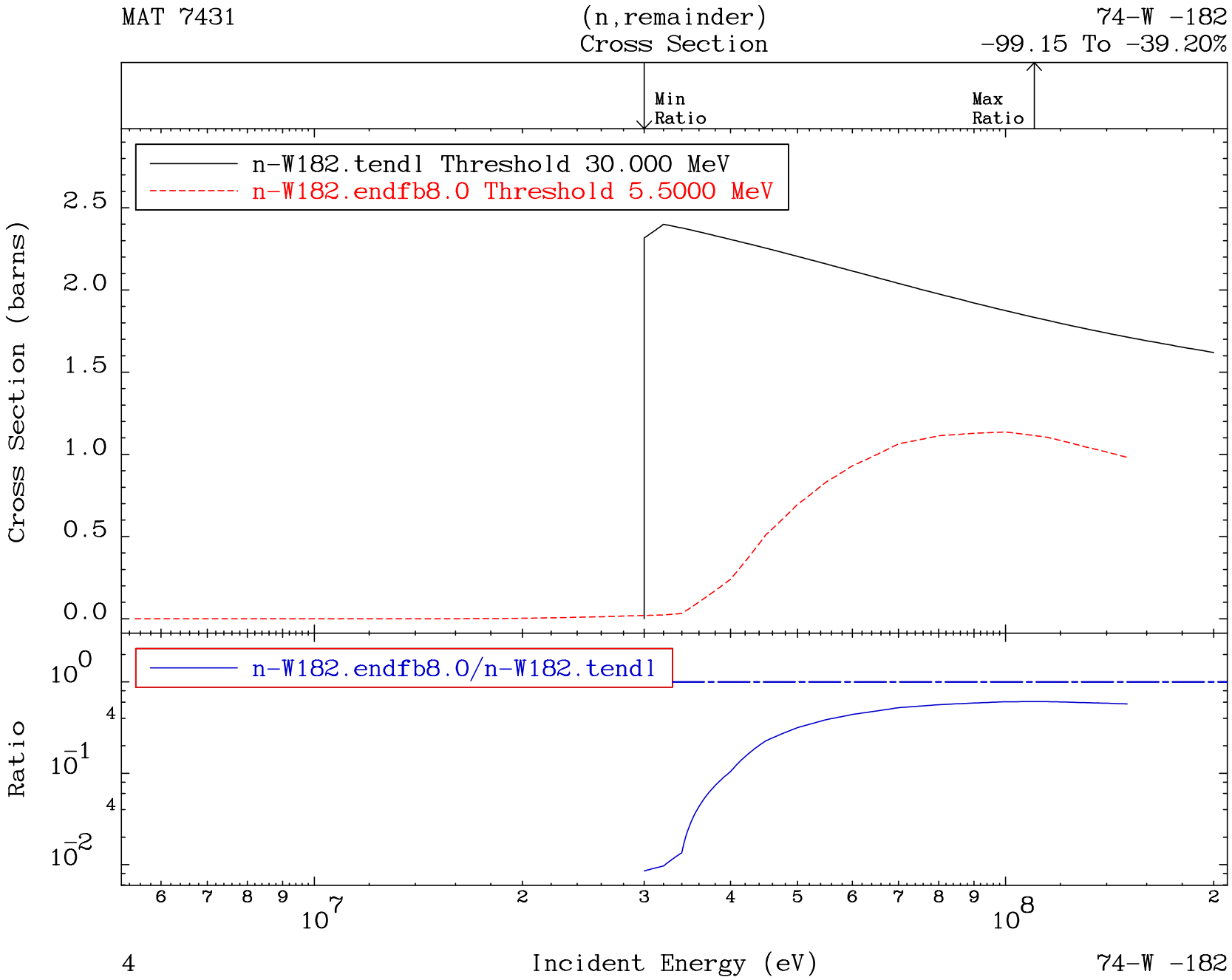
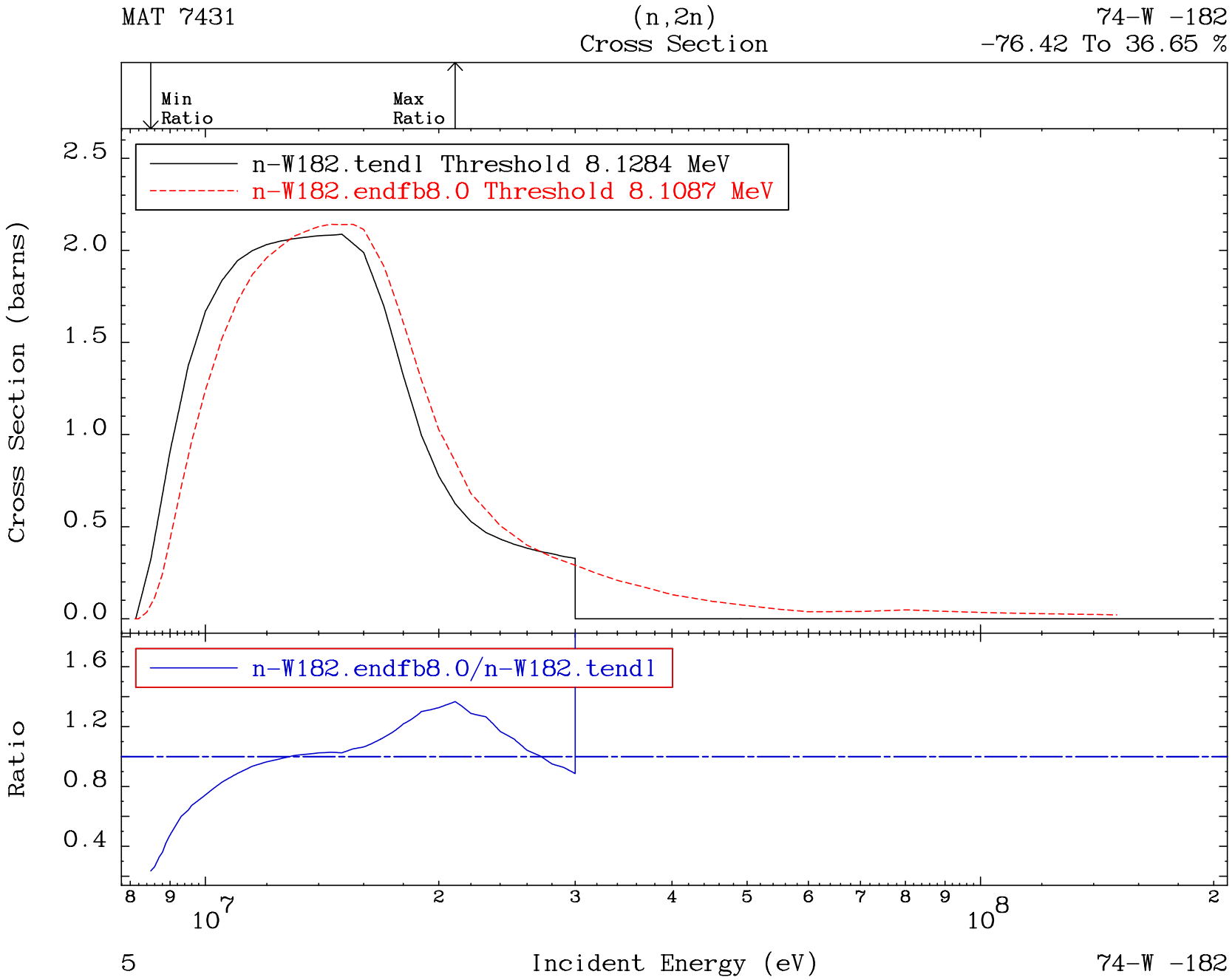
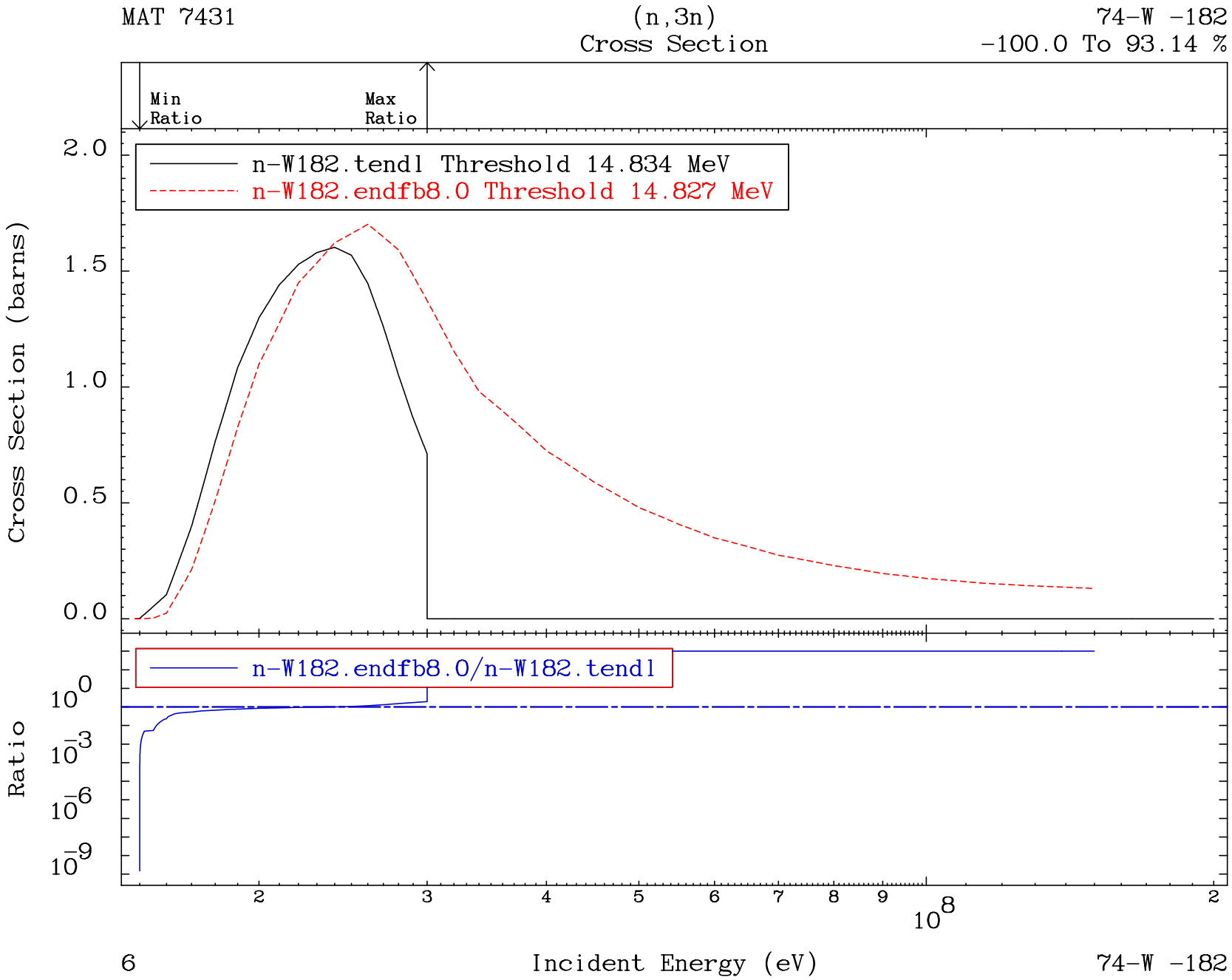

MAT 7431
Total
Cross Section
74-W -182
-99.44 To 4102. %
Min
Ratio
Max
Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
1
74-W -182

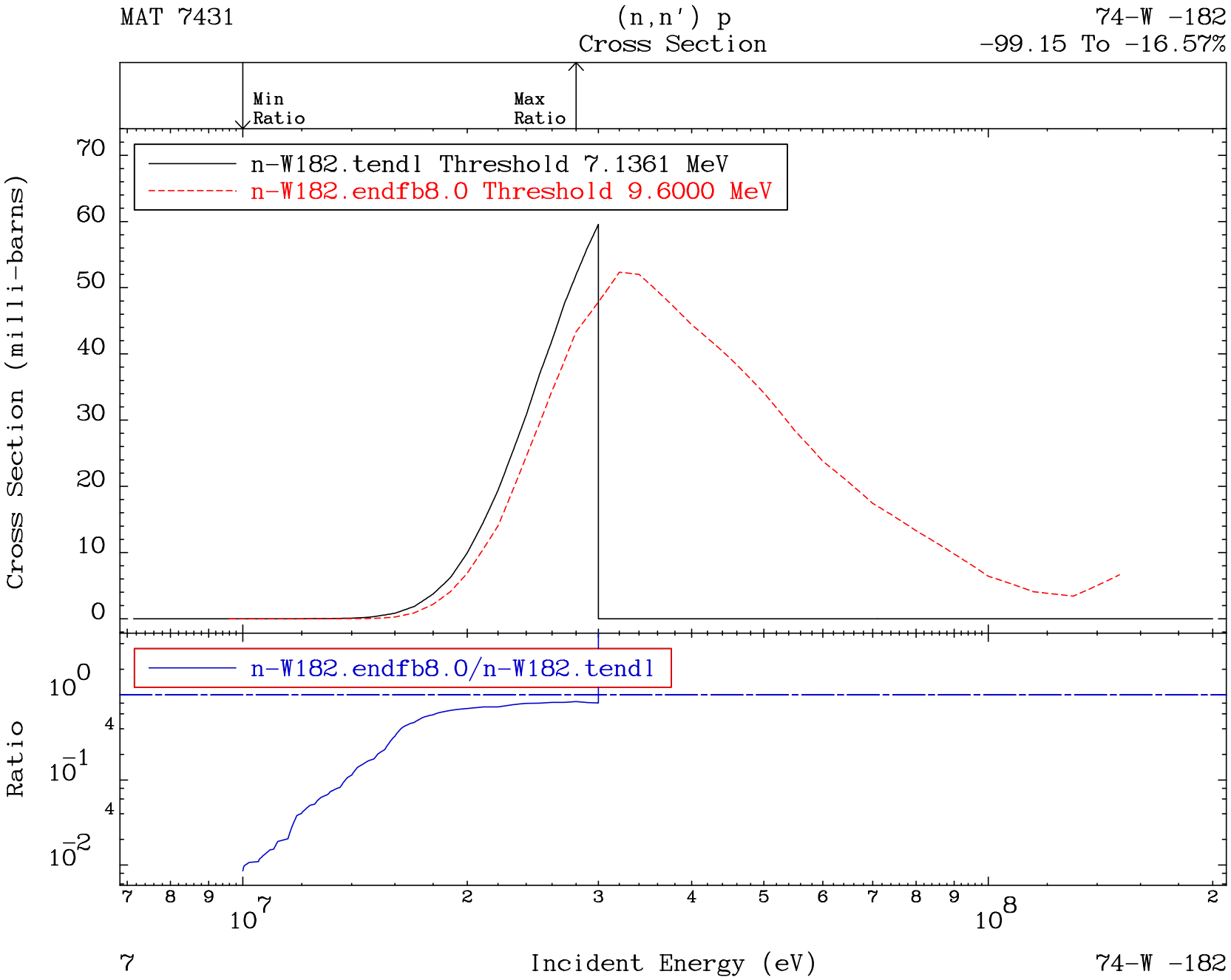

MAT 7431
Elastic
Cross Section
74-W -182
-99.77 To 5791. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
2
74-W -182

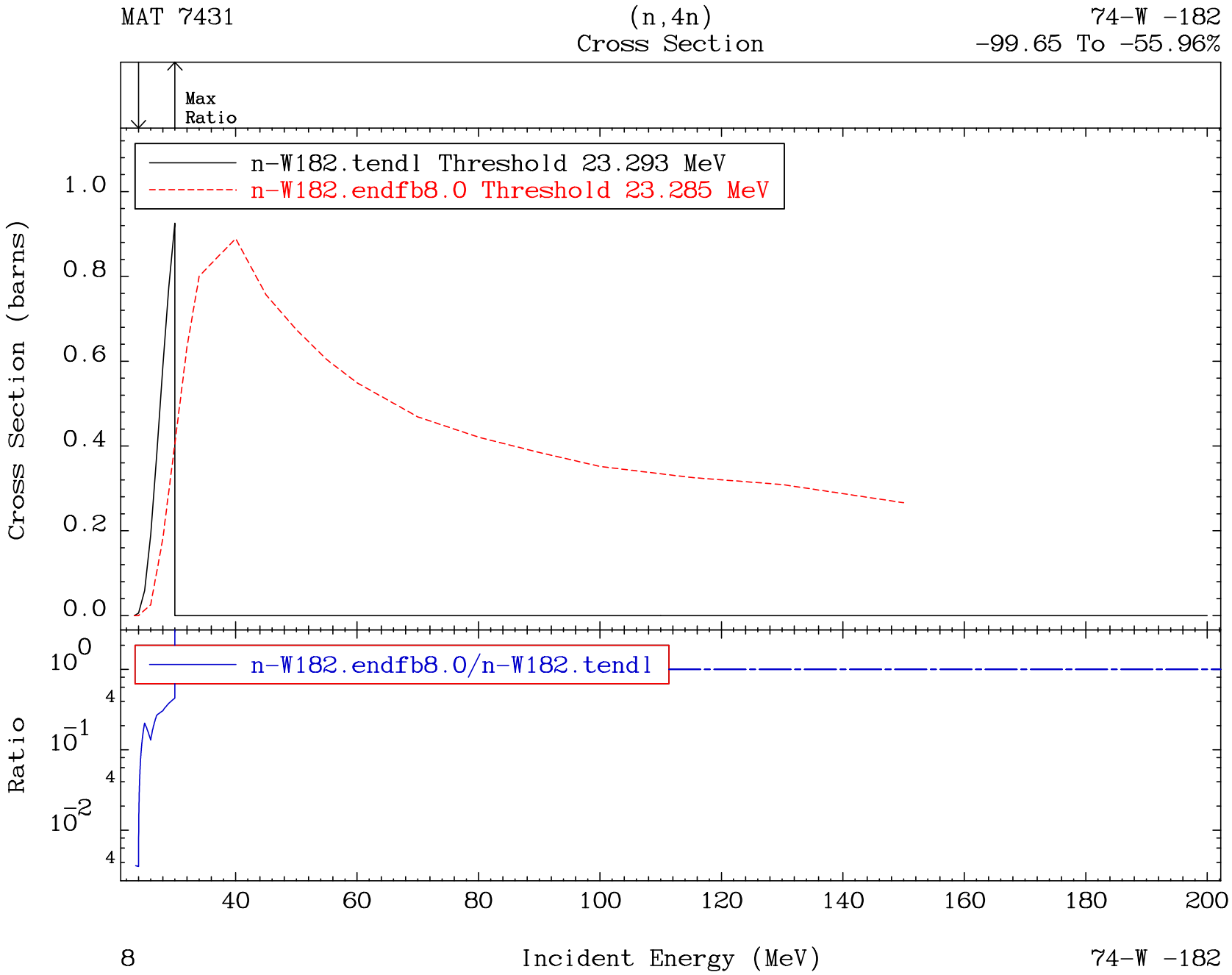

MAT 7431
Inelastic
Cross Section
74-W -182
-9.190 To 48.80 %
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 100.66 keV
n-W182.endfb8.0 Threshold 100.66 keV
Cross Section (barns)
0
1
2
3
4
n-W182.endfb8.0/n-W182.tendl
Ratio
1.0
1.2
1.4
1.6
10^5
10^6
10^7
10^8
Incident Energy (eV)
3
74-W -182

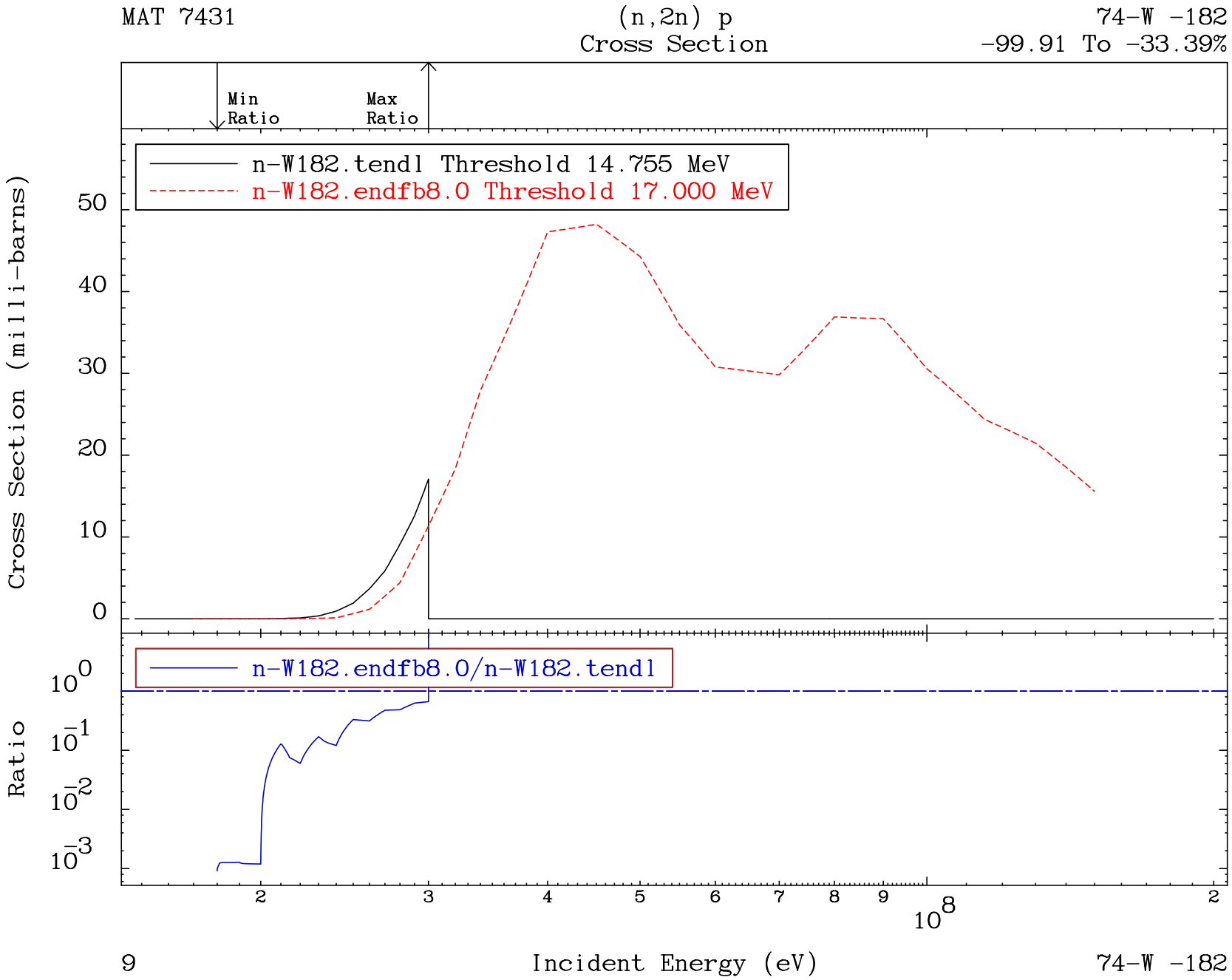

MAT 7431
(n,remainder)
Cross Section
74-W -182
-99.15 To -39.20%
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 30.000 MeV
n-W182.endfb8.0 Threshold 5.5000 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^-2
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
4
Incident Energy (eV)
74-W -182

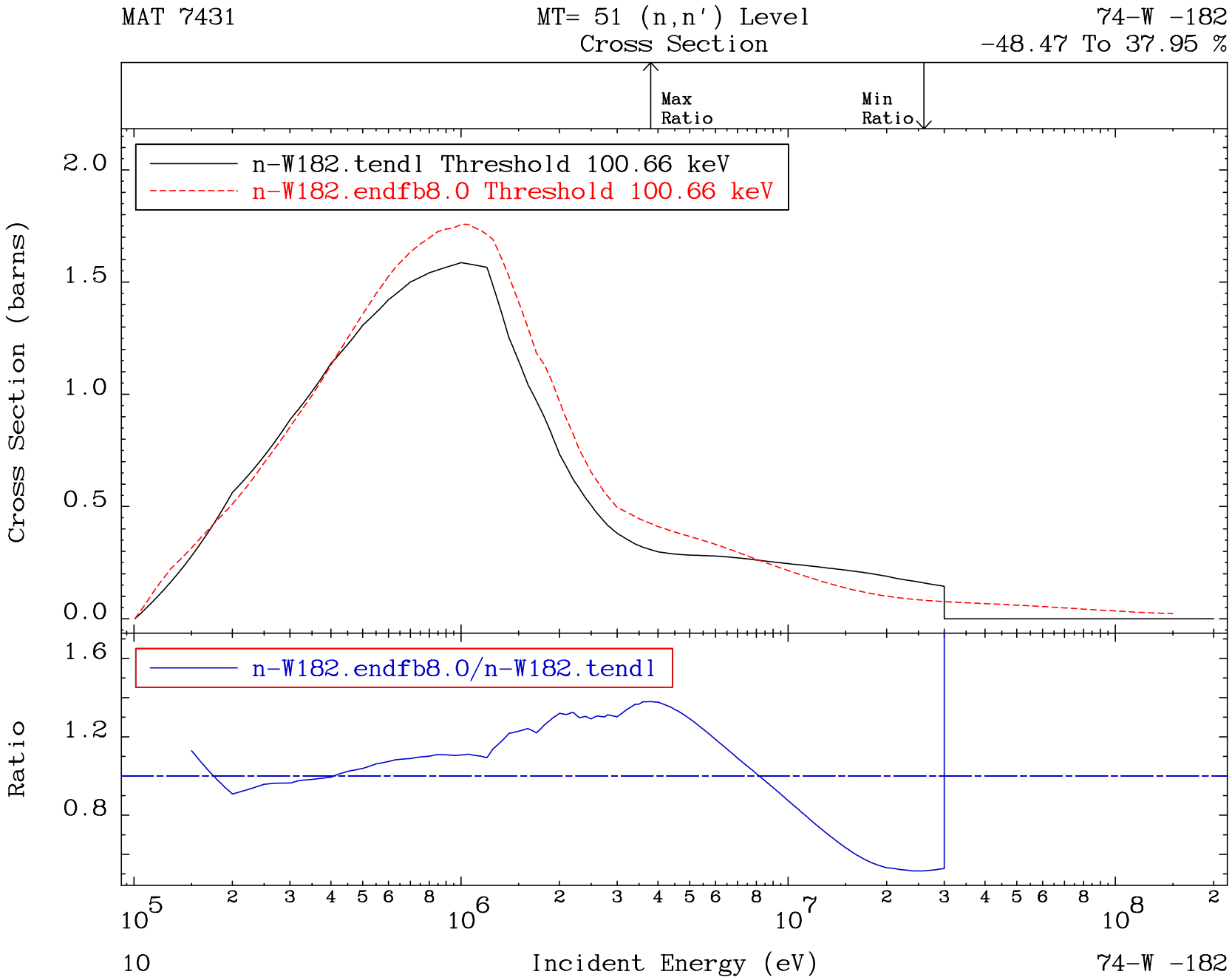

MAT 7431
(n,2n)
Cross Section
74-W -182
-76.42 To 36.65 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 8.1284 MeV
n-W182.endfb8.0 Threshold 8.1087 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
1.6
1.2
0.8
0.4
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
74-W -182

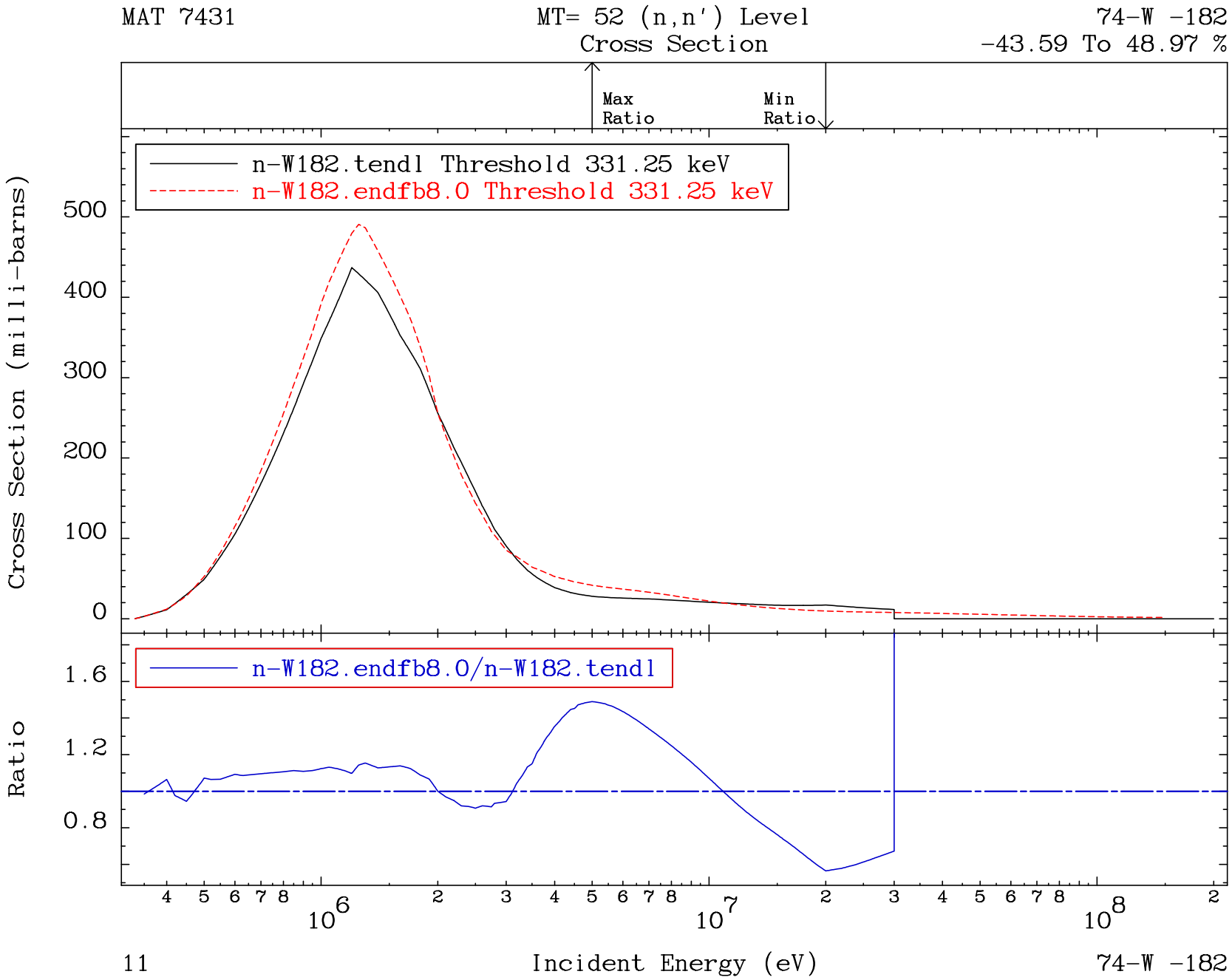

MAT 7431
(n,3n)
Cross Section
74-W -182
-100.0 To 93.14 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 14.834 MeV
n-W182.endfb8.0 Threshold 14.827 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
74-W -182

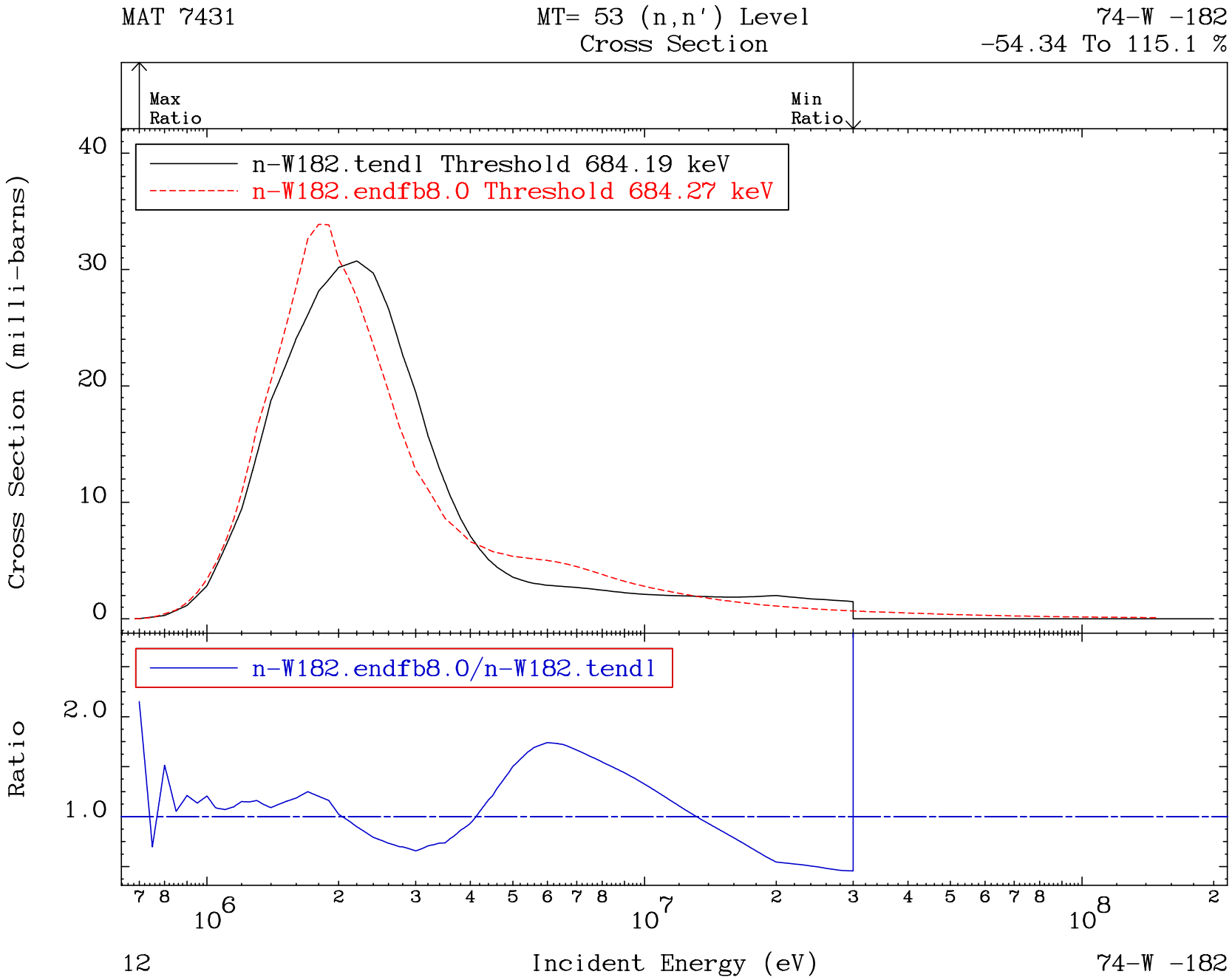

MAT 7431
(n,n') p
Cross Section
74-W -182
-99.15 To -16.57%
Min Ratio
Max Ratio
n-W182.tendl Threshold 7.1361 MeV
n-W182.endfb8.0 Threshold 9.6000 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^-2
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
74-W -182

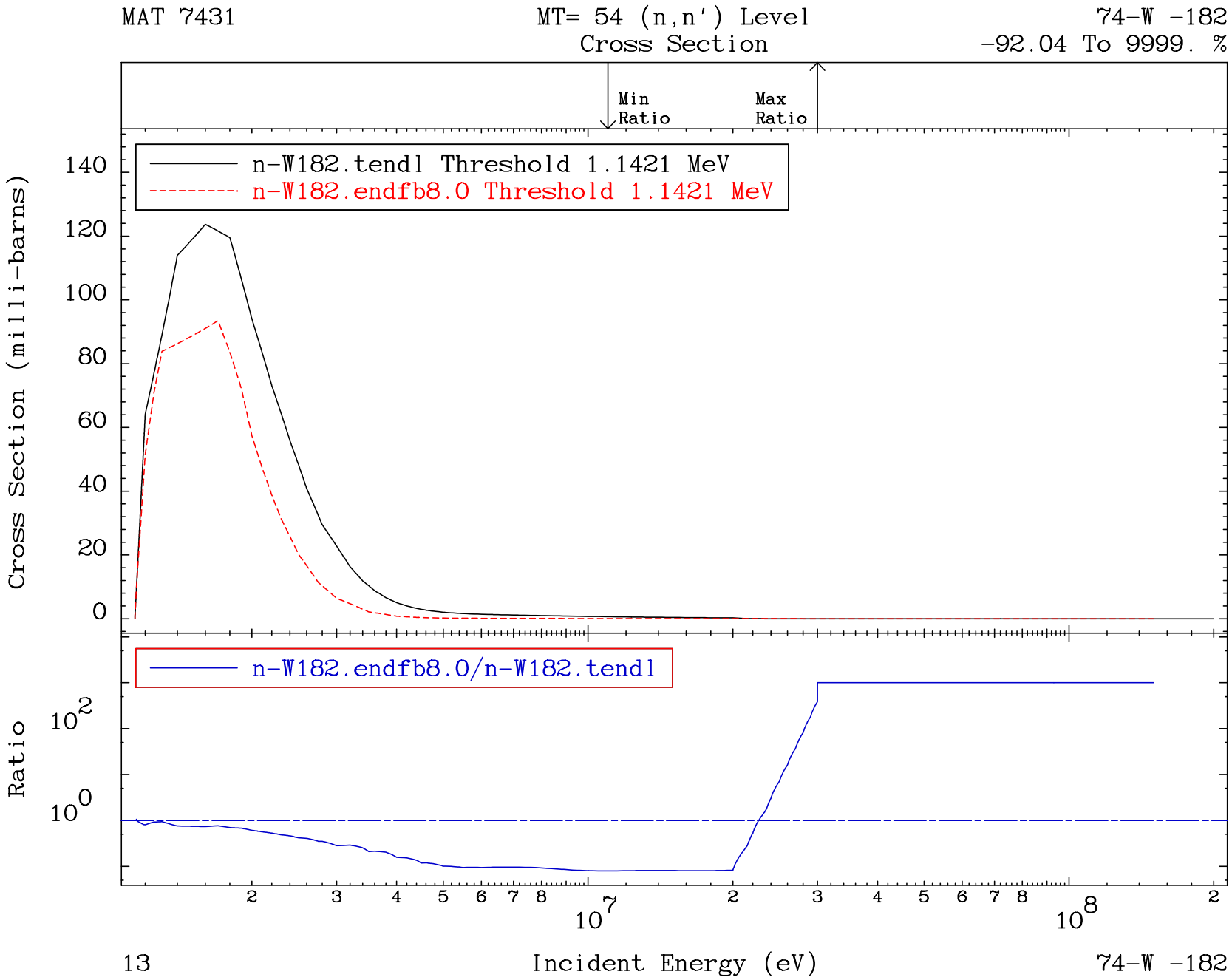

MAT 7431
(n,4n)
Cross Section
74-W -182
-99.65 To -55.96%
Max
Ratio
n-W182.tendl Threshold 23.293 MeV
n-W182.endfb8.0 Threshold 23.285 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^-2
40
60
80
100
120
140
160
180
200
8
Incident Energy (MeV)
74-W -182

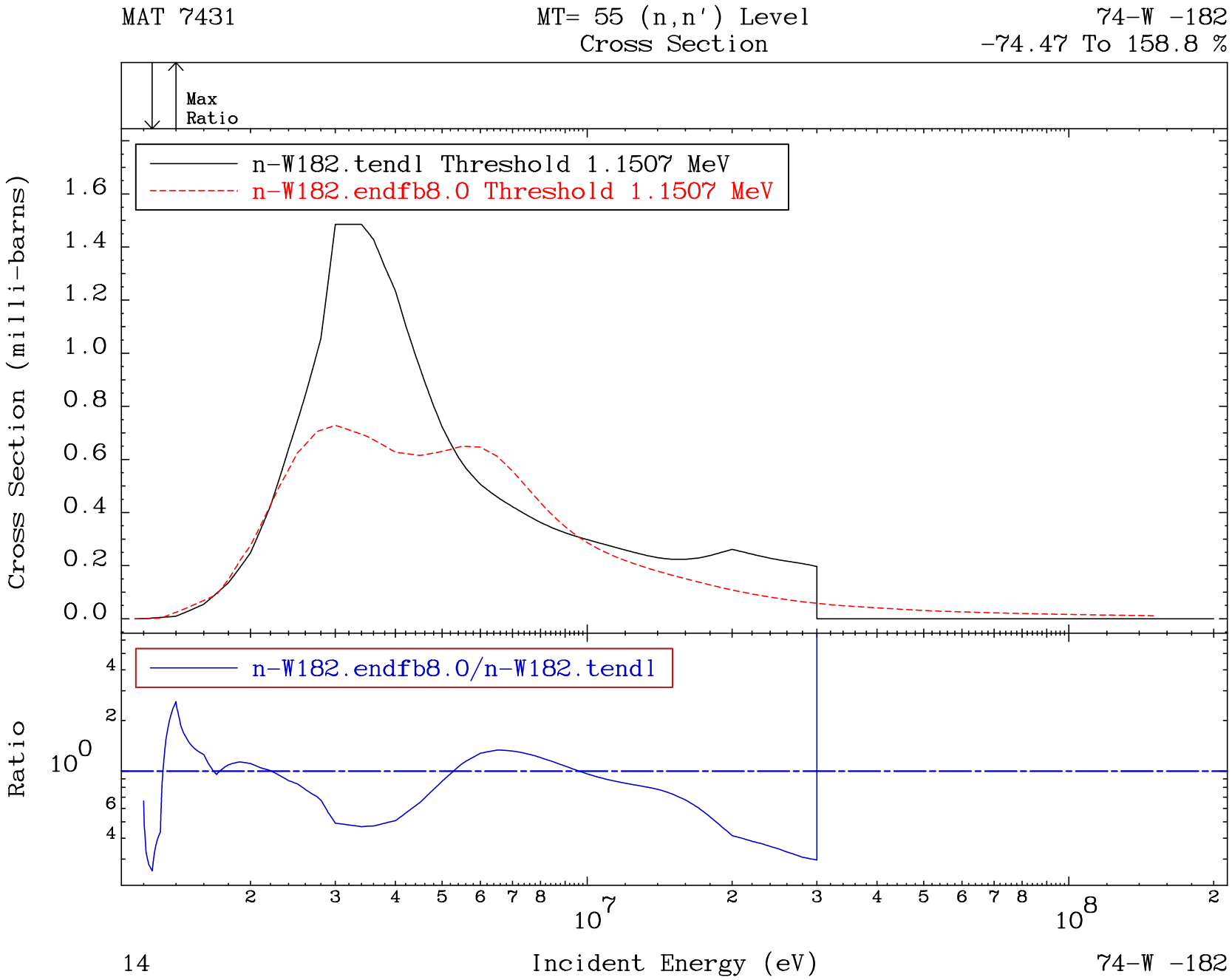

MAT 7431
(n,2n) p
Cross Section
74-W -182
-99.91 To -33.39%
Min Ratio
Max Ratio
n-W182.tendl Threshold 14.755 MeV
n-W182.endfb8.0 Threshold 17.000 MeV
Cross Section (milli-barns)
0
10
20
30
40
50
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^-2
10^-3
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
74-W -182

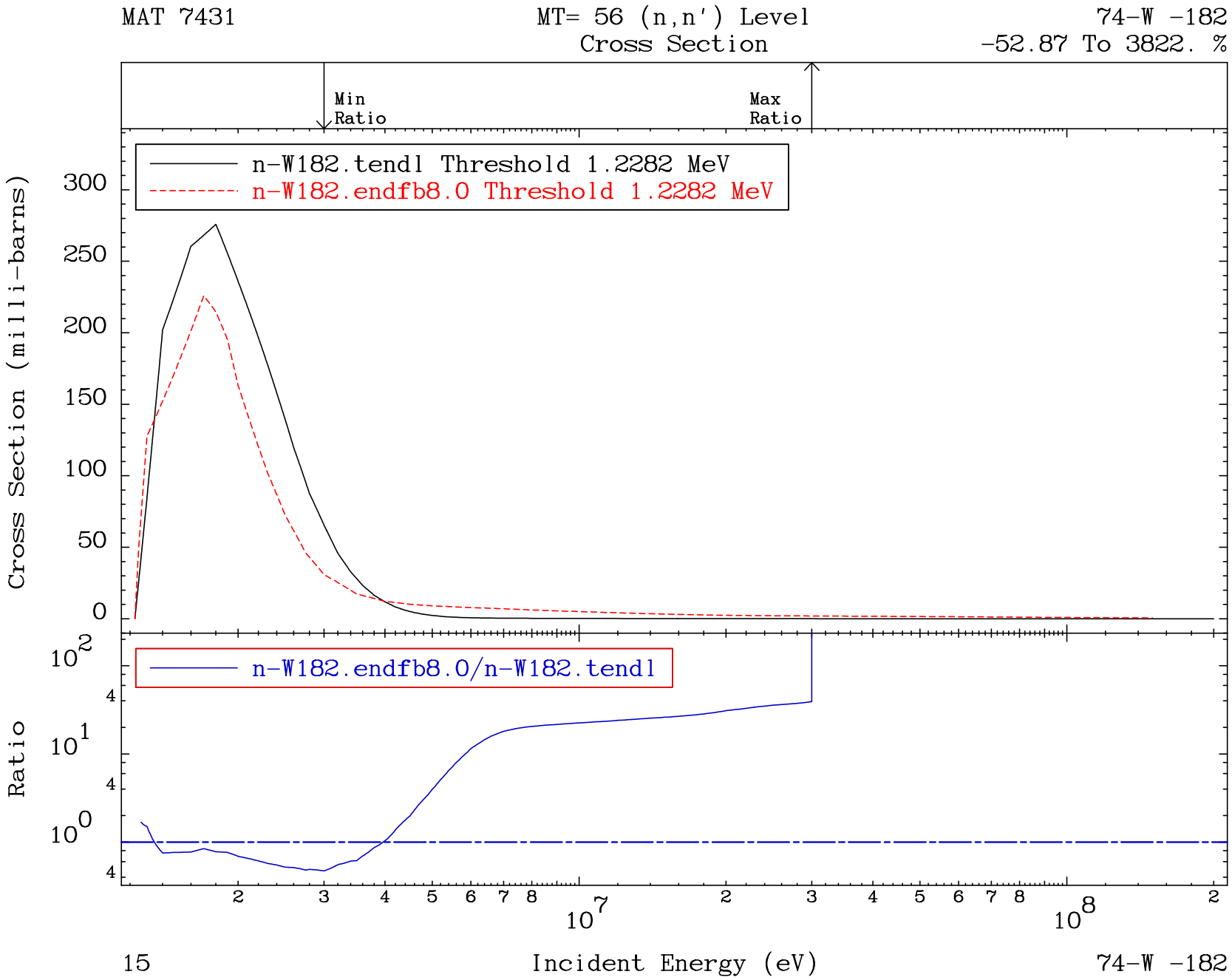

MAT 7431
MT= 51 (n,n') Level
Cross Section
74-W -182
-48.47 To 37.95 %
Max Ratio
Min Ratio
n-W182.tendl Threshold 100.66 keV
n-W182.endfb8.0 Threshold 100.66 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
1.6
1.2
0.8
10^5
2 3 4 5 6 8
10^6
2 3 4 5 6 8
10^7
2 3 4 5 6 8
10^8
2
10
Incident Energy (eV)
74-W -182

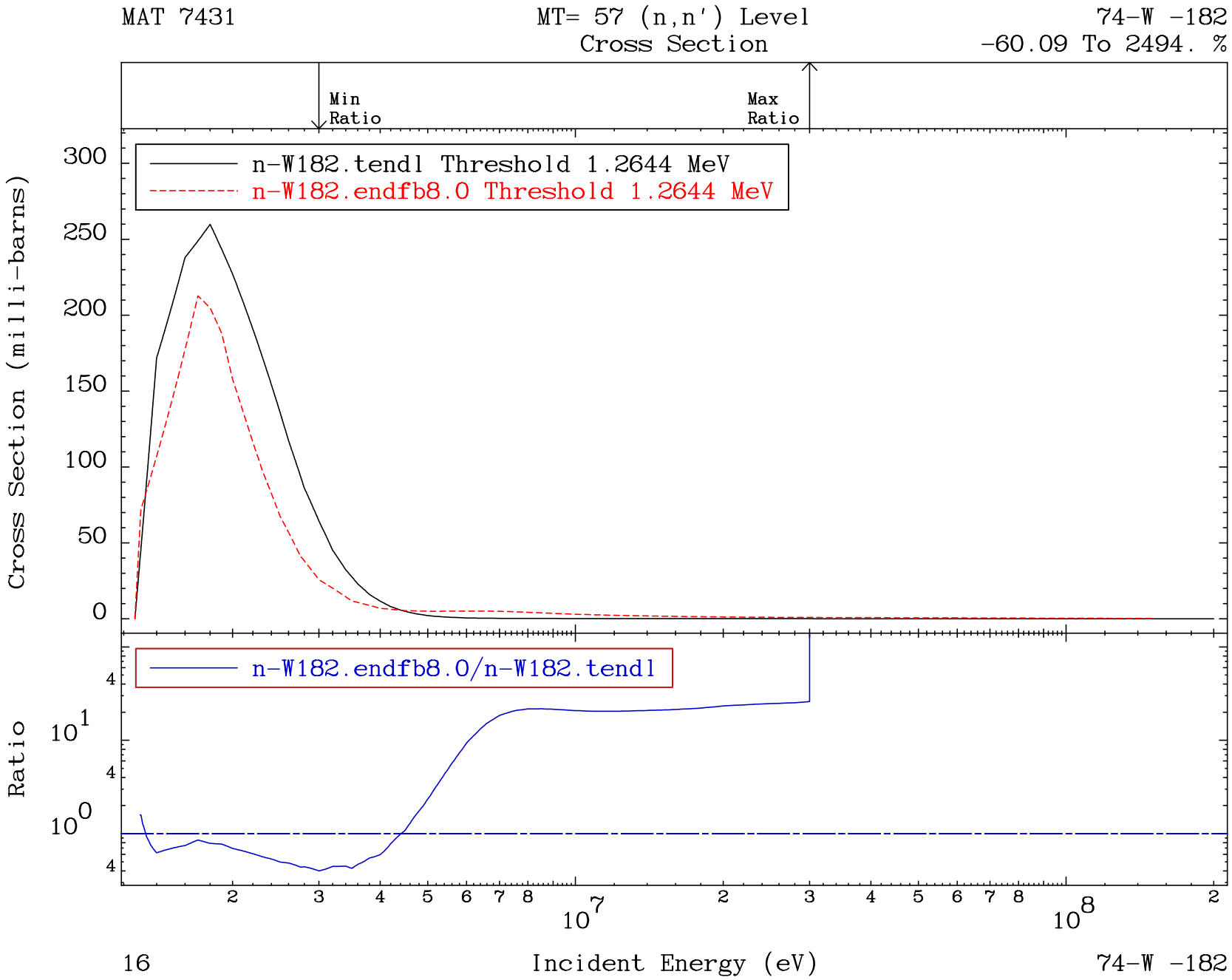

MAT 7431
MT= 52 (n,n') Level
Cross Section
74-W -182
-43.59 To 48.97 %
Max Ratio
Min Ratio
n-W182.tendl Threshold 331.25 keV
n-W182.endfb8.0 Threshold 331.25 keV
Cross Section (milli-barns)
500
400
300
200
100
0
n-W182.endfb8.0/n-W182.tendl
Ratio
1.6
1.2
0.8
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
11
Incident Energy (eV)
74-W -182

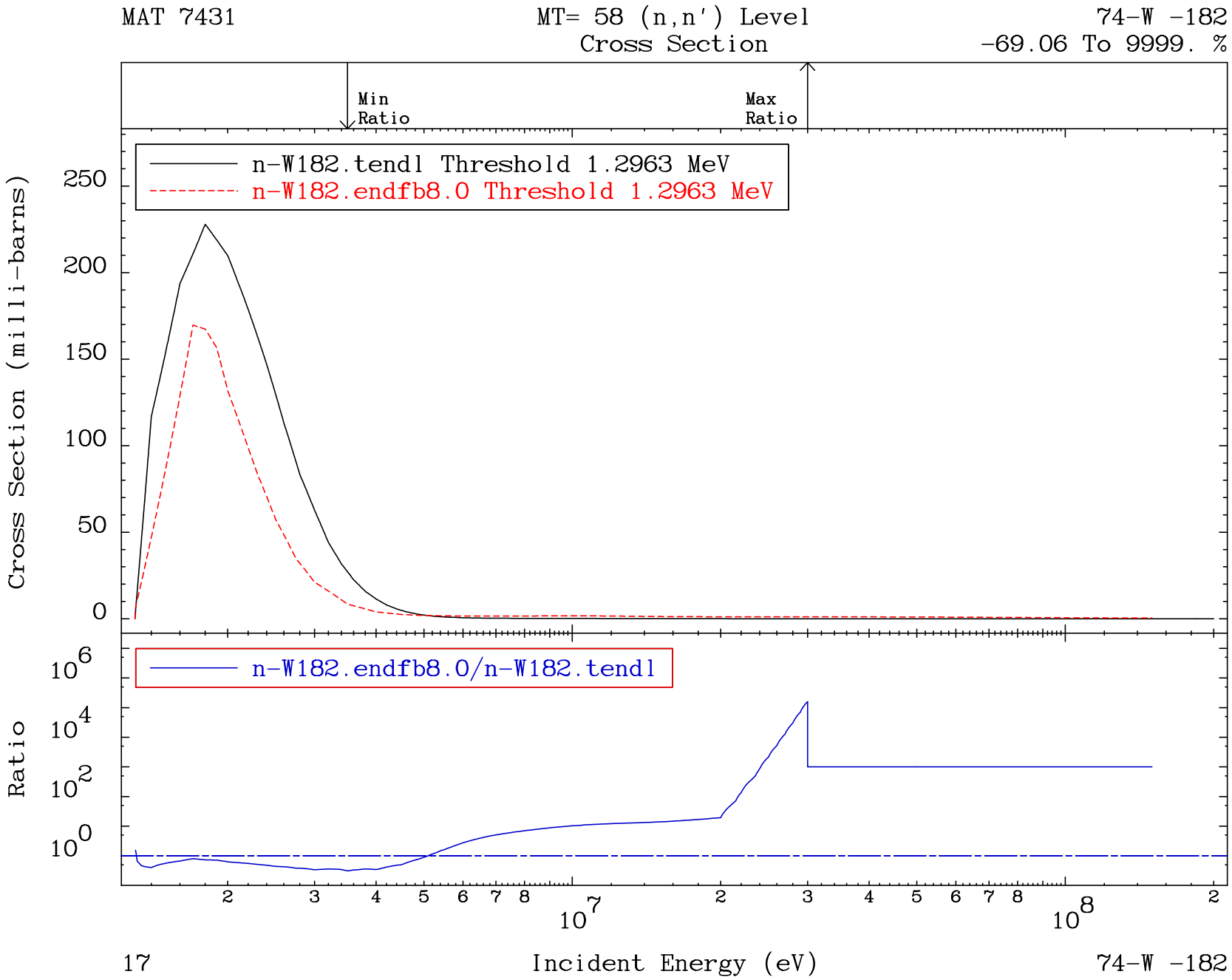

MAT 7431
MT= 53 (n,n') Level
Cross Section
74-W -182
-54.34 To 115.1 %
Max
Ratio
Min
Ratio
n-W182.tendl Threshold 684.19 keV
n-W182.endfb8.0 Threshold 684.27 keV
Cross Section (milli-barns)
40
30
20
10
0
n-W182.endfb8.0/n-W182.tendl
Ratio
2.0
1.0
7 8
10^6
2
3
4
5
6
7 8
10^7
2
3
4
5
6
7 8
10^8
2
12
Incident Energy (eV)
74-W -182

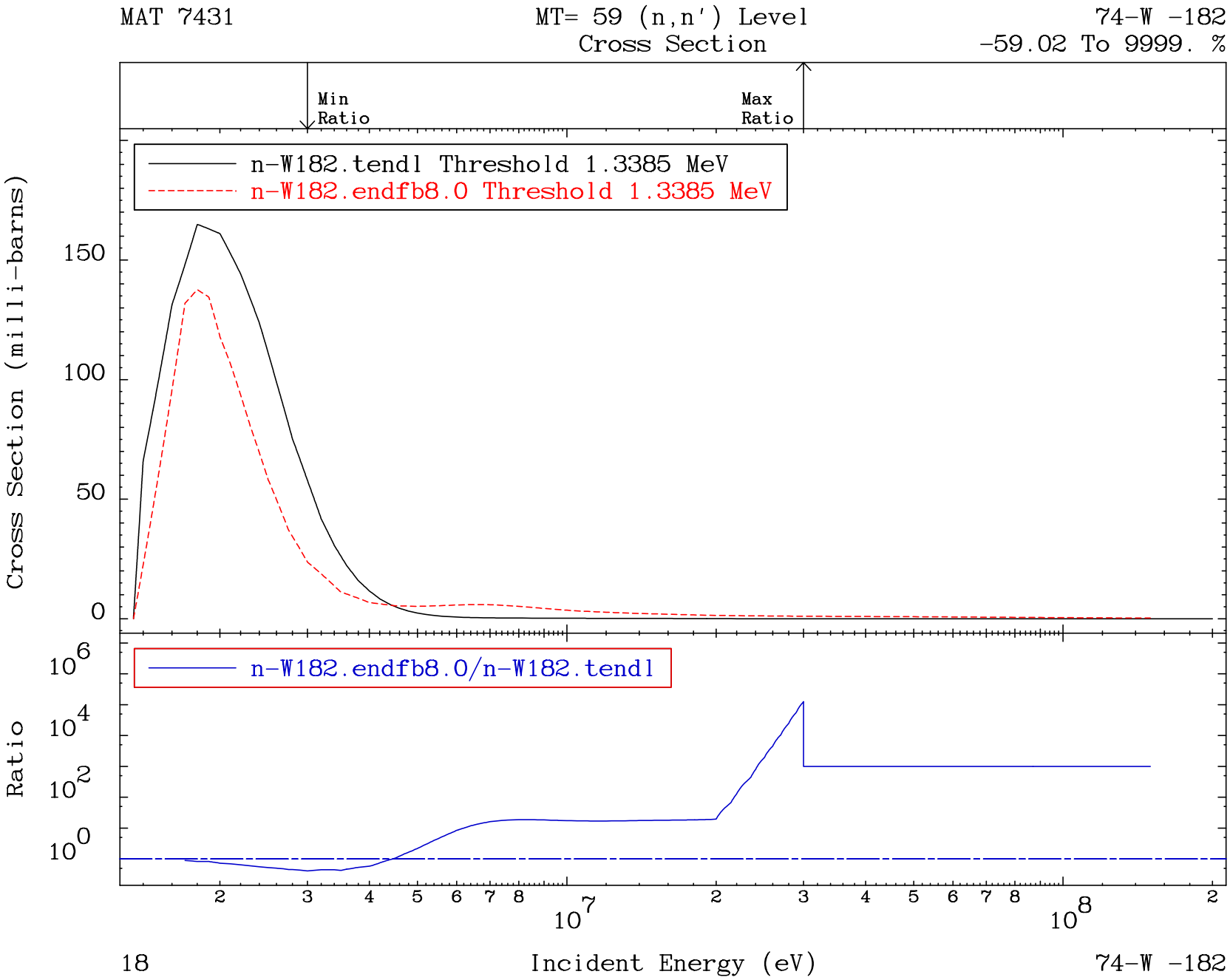

MAT 7431
MT= 54 (n,n') Level
Cross Section
74-W -182
-92.04 To 9999. %
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 1.1421 MeV
n-W182.endfb8.0 Threshold 1.1421 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^2
10^0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
13
Incident Energy (eV)
74-W -182

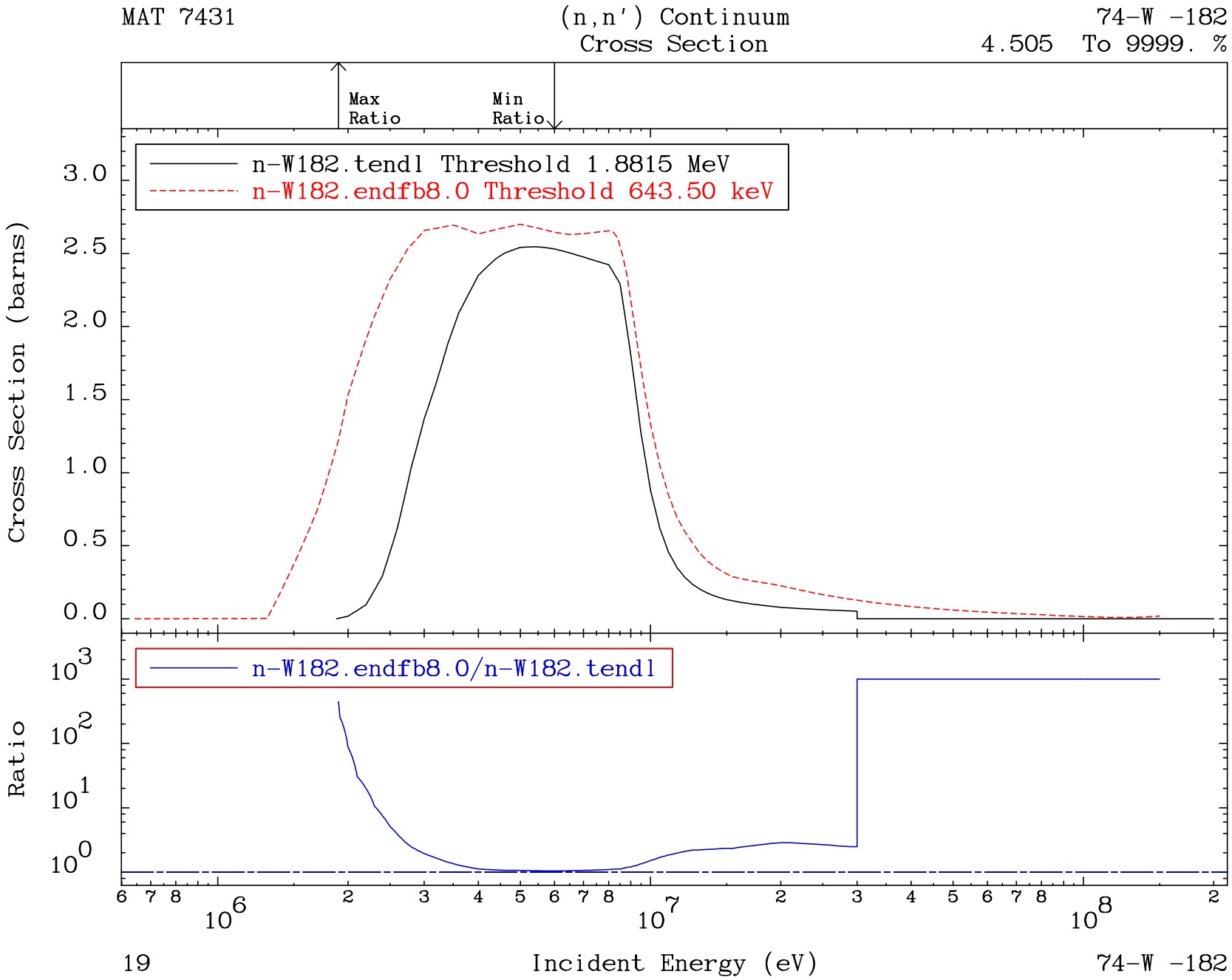

MAT 7431
MT= 55 (n,n') Level
Cross Section
74-W -182
-74.47 To 158.8 %
Max
Ratio
n-W182.tendl Threshold 1.1507 MeV
n-W182.endfb8.0 Threshold 1.1507 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
4
2
10^0
6
4
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
14
Incident Energy (eV)
74-W -182

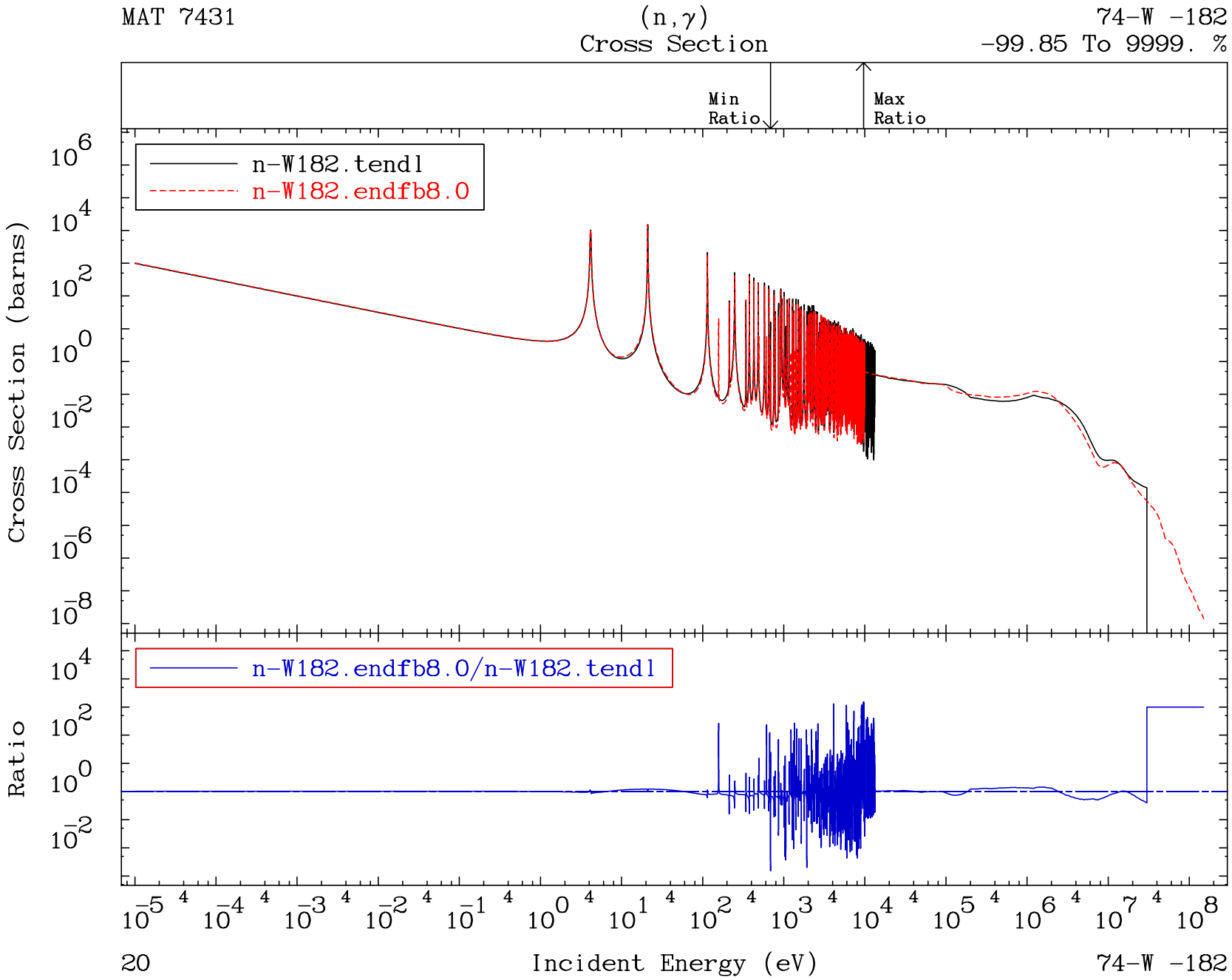

MAT 7431
MT= 56 (n,n') Level
Cross Section
74-W -182
-52.87 To 3822. %
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 1.2282 MeV
n-W182.endfb8.0 Threshold 1.2282 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^2
10^1
10^0
2
3
4
5
6
7
8
10^7
10^8
15
Incident Energy (eV)
74-W -182

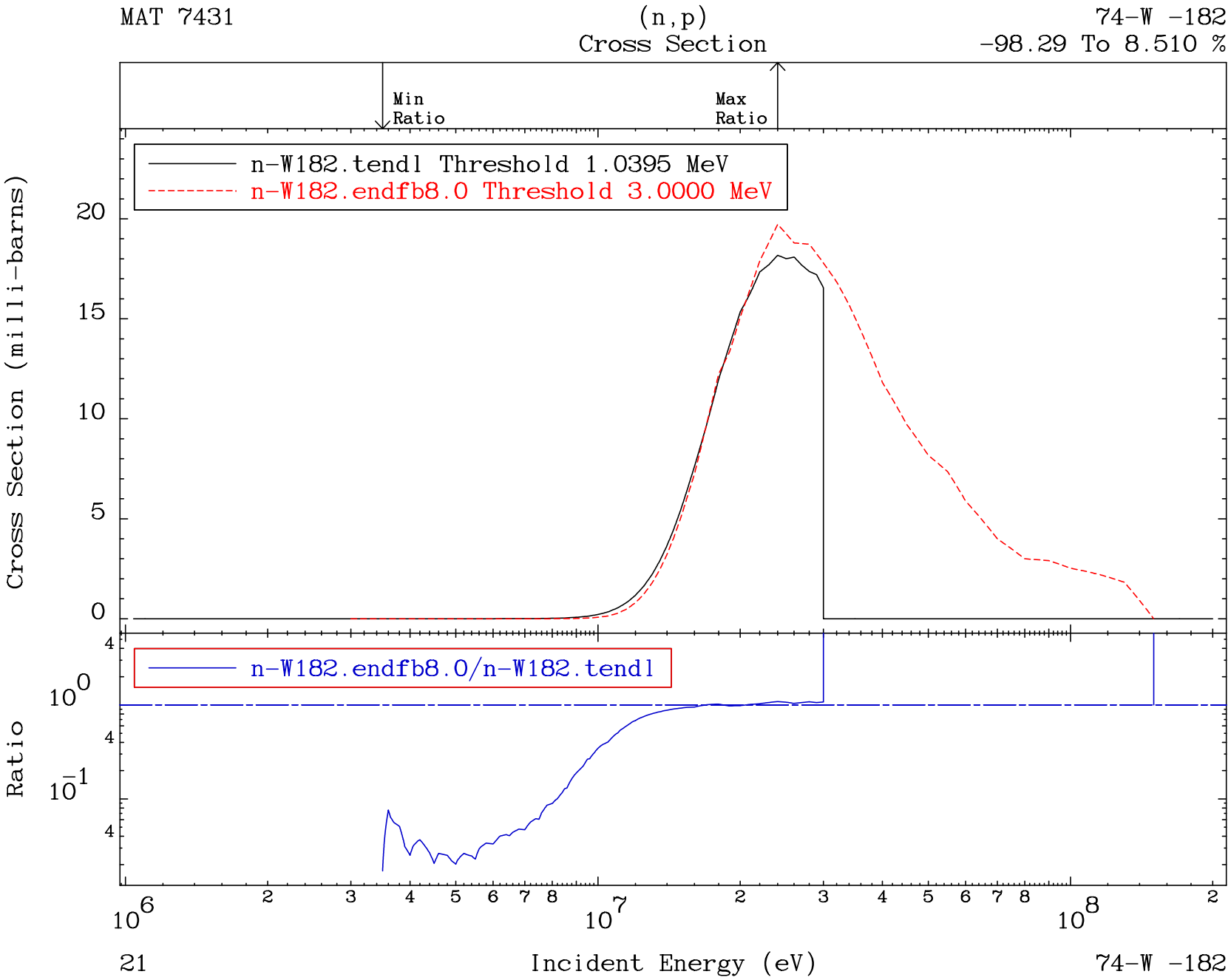

MAT 7431
MT= 57 (n,n') Level
Cross Section
74-W -182
-60.09 To 2494. %
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 1.2644 MeV
n-W182.endfb8.0 Threshold 1.2644 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^1
10^0
2
3
4
5
6
7
8
10^7
10^8
16
Incident Energy (eV)
74-W -182

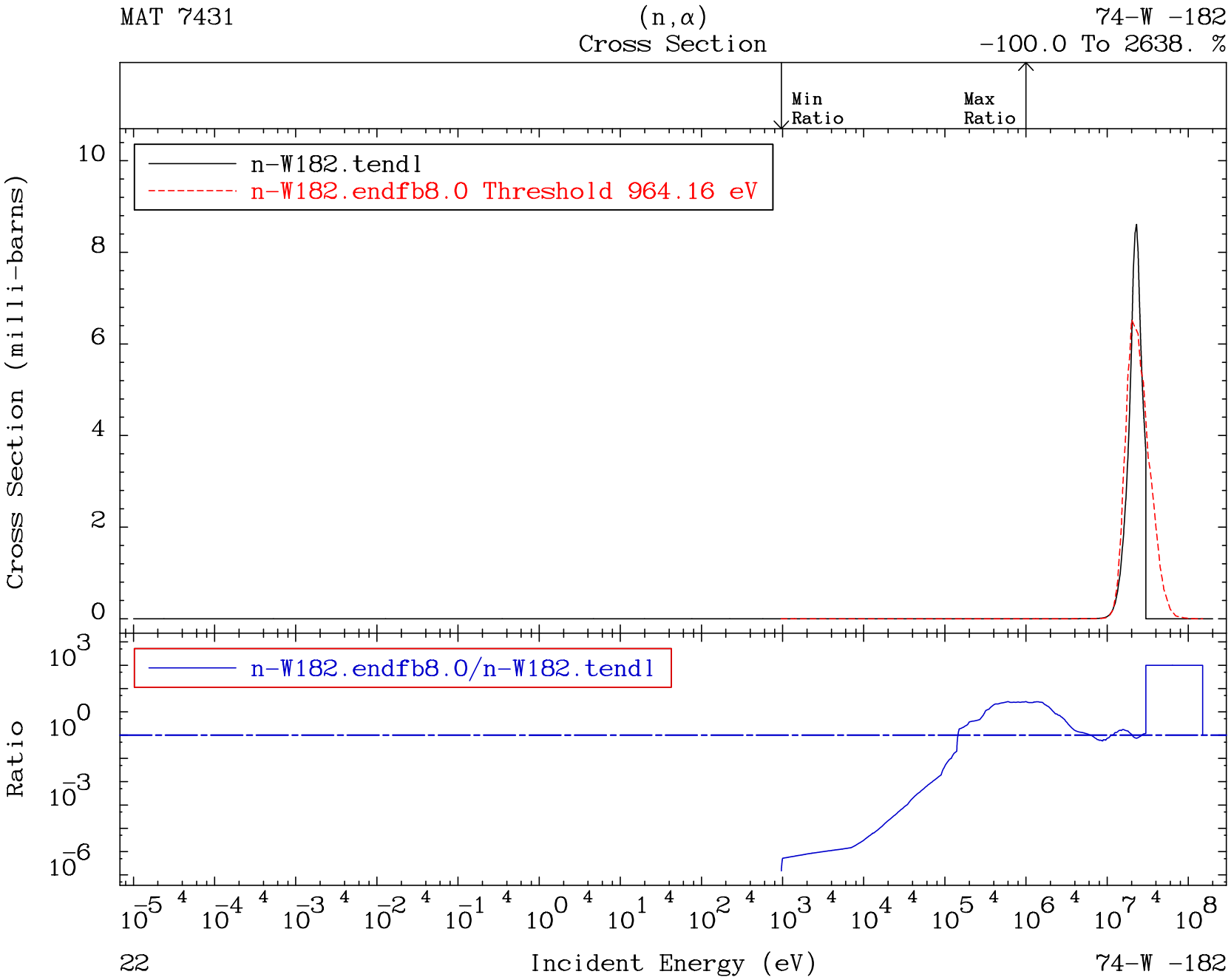

MAT 7431
MT= 58 (n,n') Level
Cross Section
74-W -182
-69.06 To 9999. %
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 1.2963 MeV
n-W182.endfb8.0 Threshold 1.2963 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
74-W -182

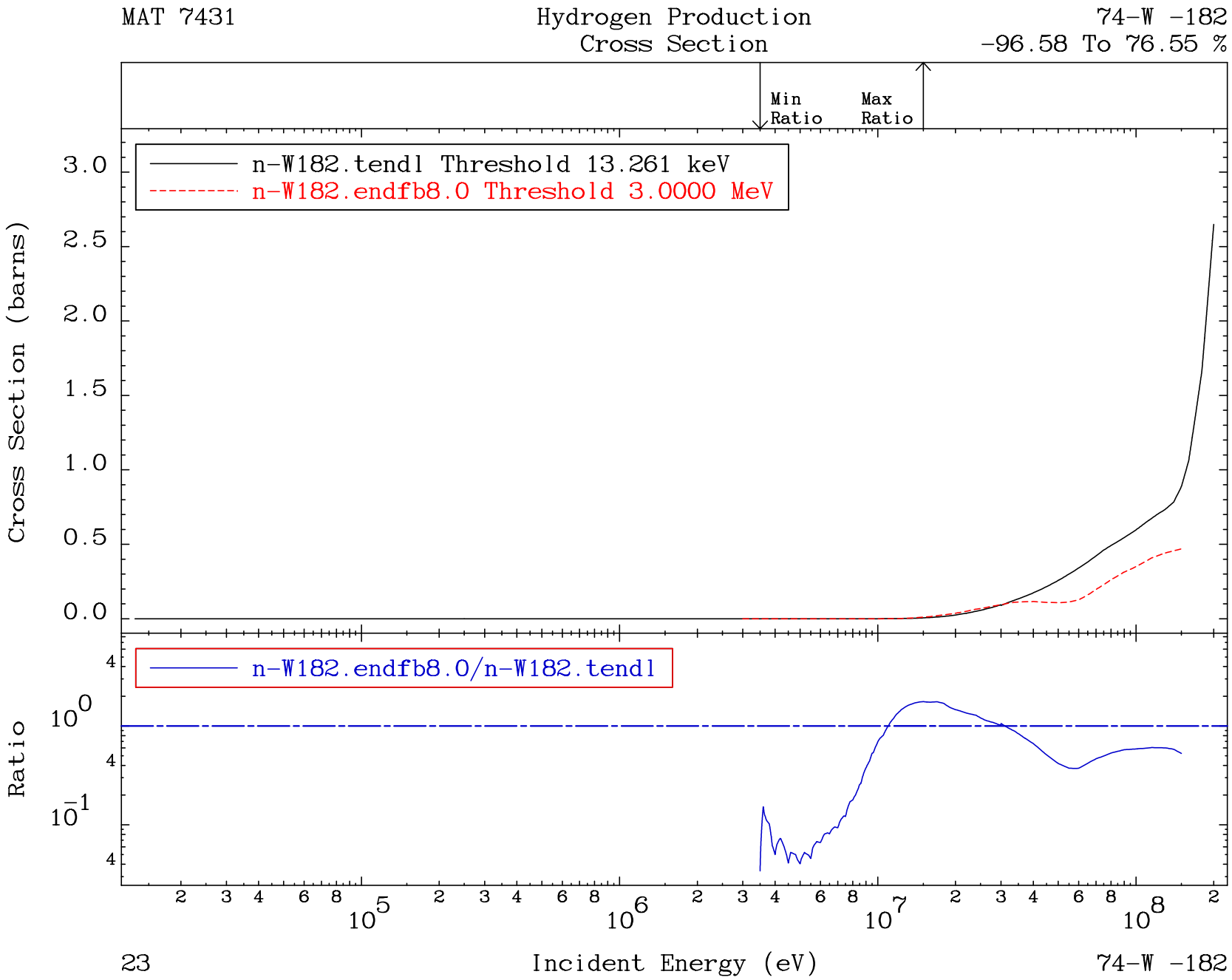

MAT 7431
MT= 59 (n,n') Level
Cross Section
74-W -182
-59.02 To 9999. %
Min
Ratio
Max
Ratio
n-W182.tendl Threshold 1.3385 MeV
n-W182.endfb8.0 Threshold 1.3385 MeV
Cross Section (milli-barns)
150
100
50
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^6
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
74-W -182

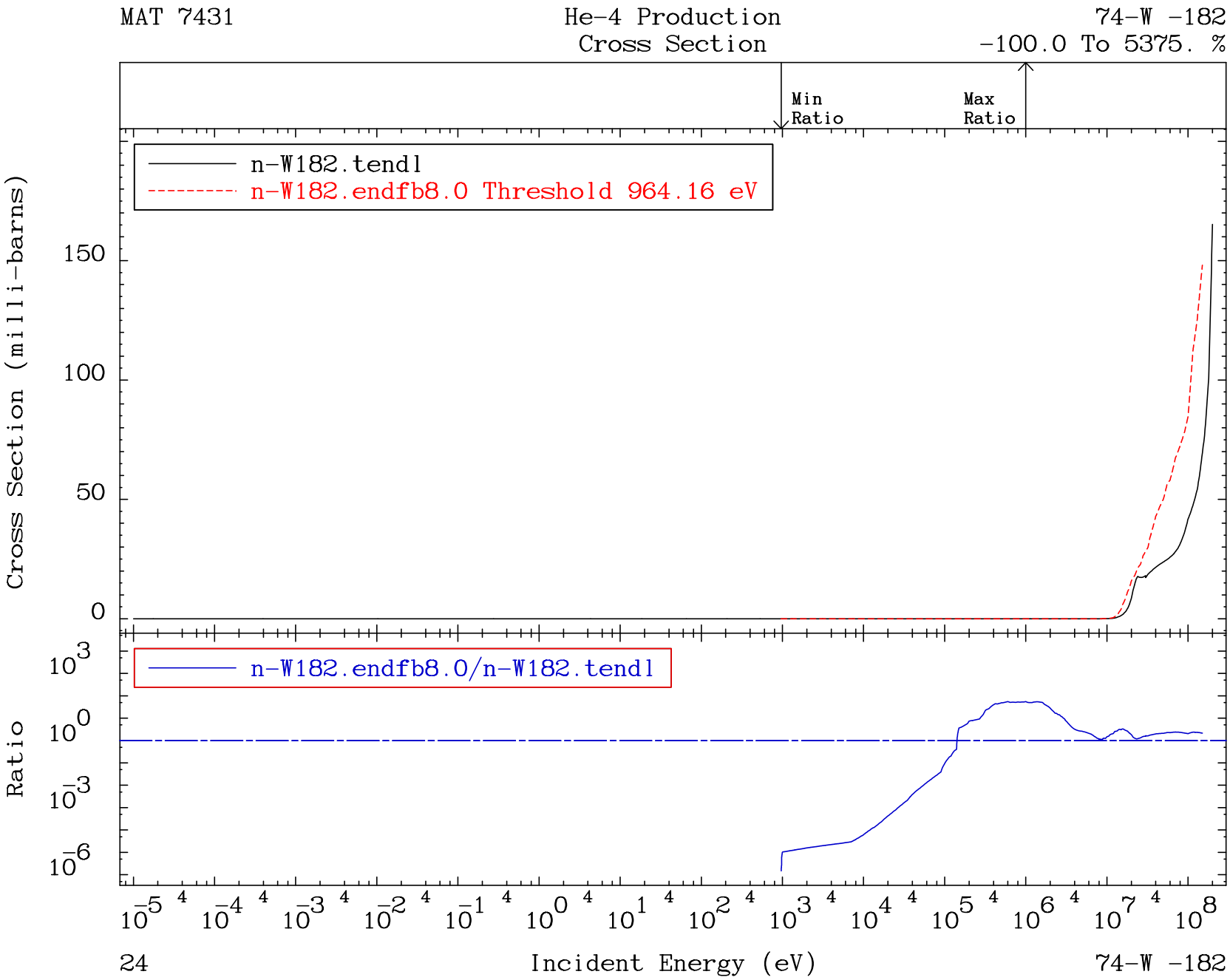

MAT 7431
(n,n') Continuum
Cross Section
74-W -182
4.505 To 9999. %
Max Ratio
Min Ratio
n-W182.tendl Threshold 1.8815 MeV
n-W182.endfb8.0 Threshold 643.50 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^3
10^2
10^1
10^0
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
19
Incident Energy (eV)
74-W -182

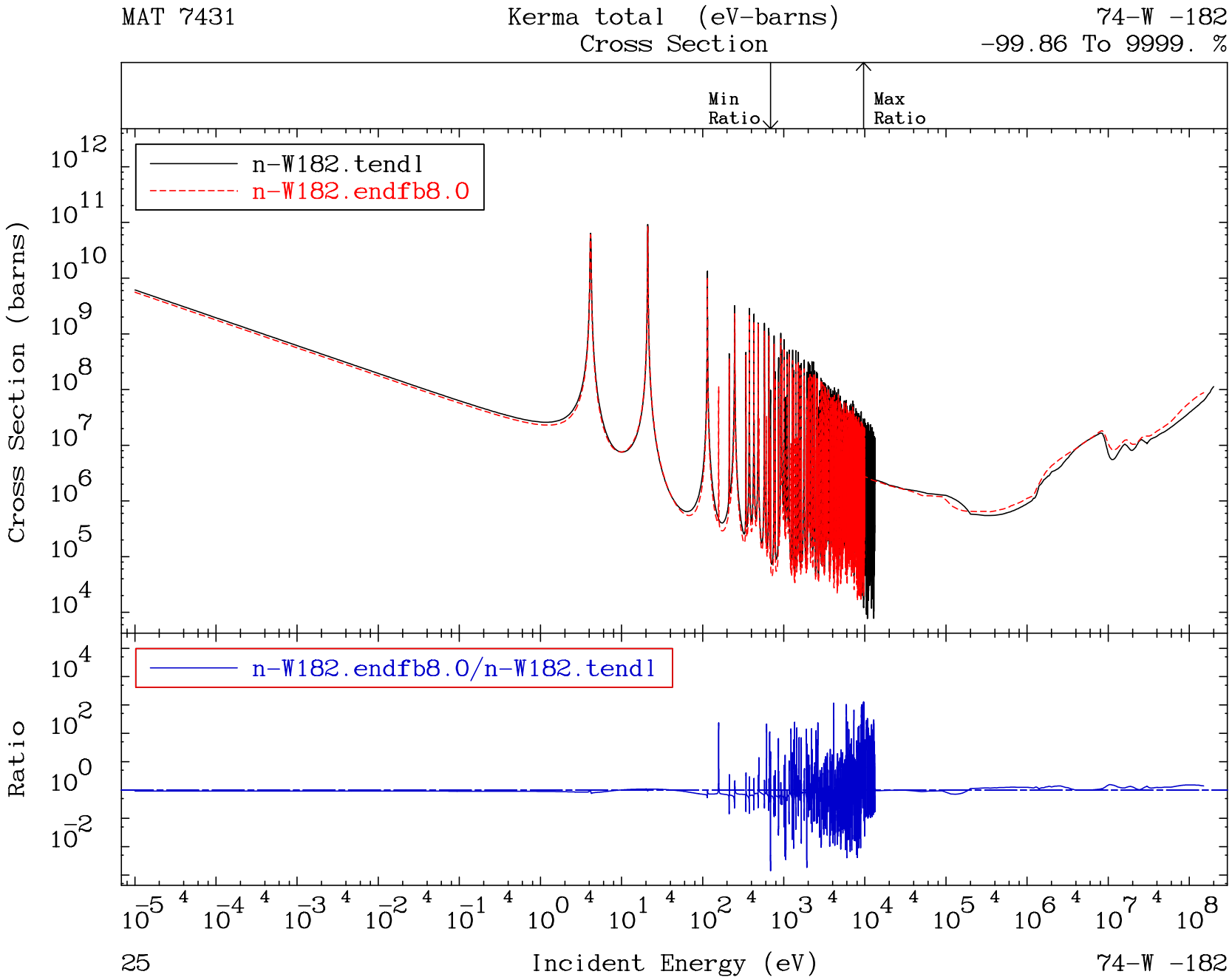

MAT 7431
(n,γ)
Cross Section
74-W -182
-99.85 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
20
74-W -182

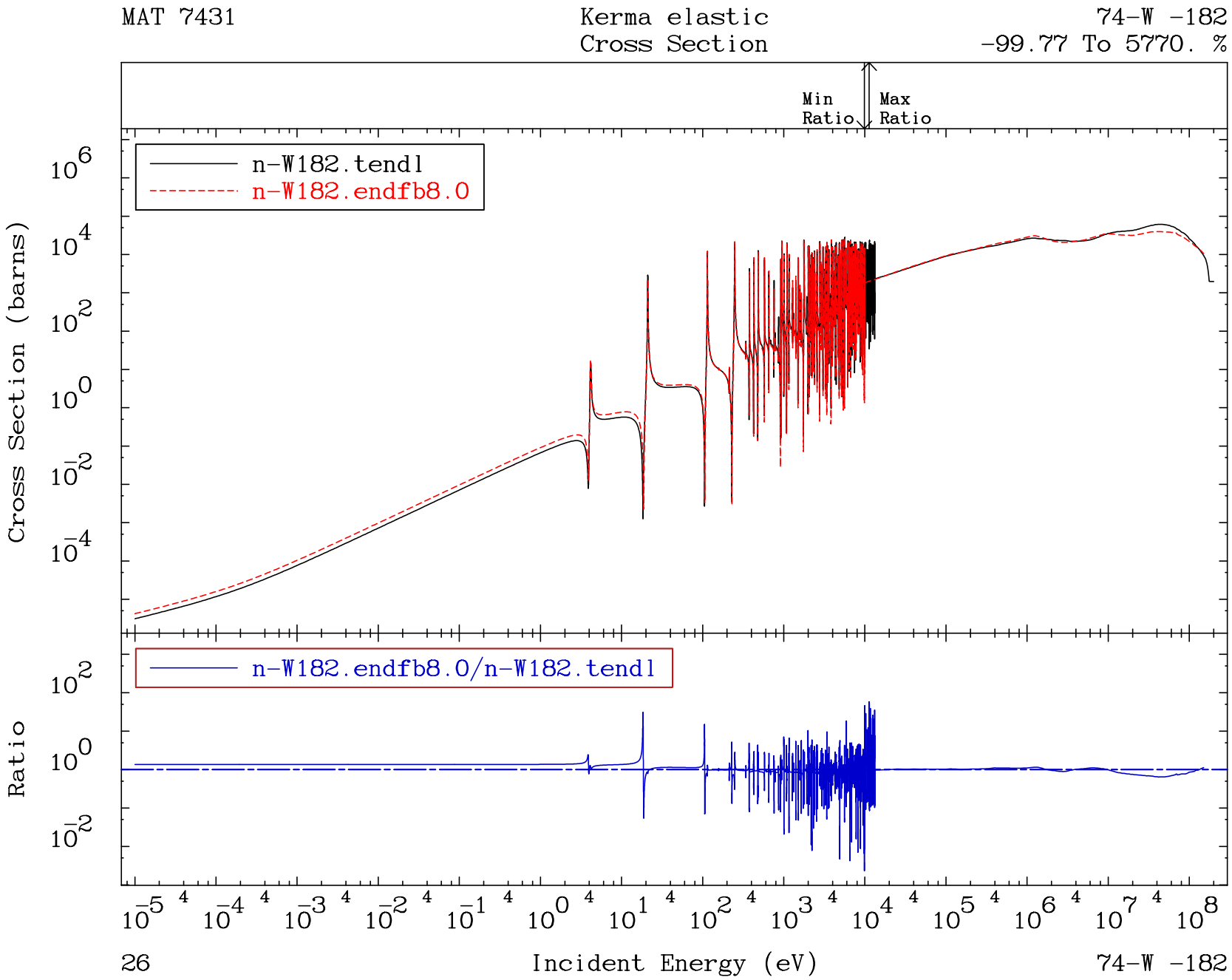

MAT 7431
(n,p)
Cross Section
74-W -182
-98.29 To 8.510 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 1.0395 MeV
n-W182.endfb8.0 Threshold 3.0000 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^6
10^7
10^8
Incident Energy (eV)
21
74-W -182

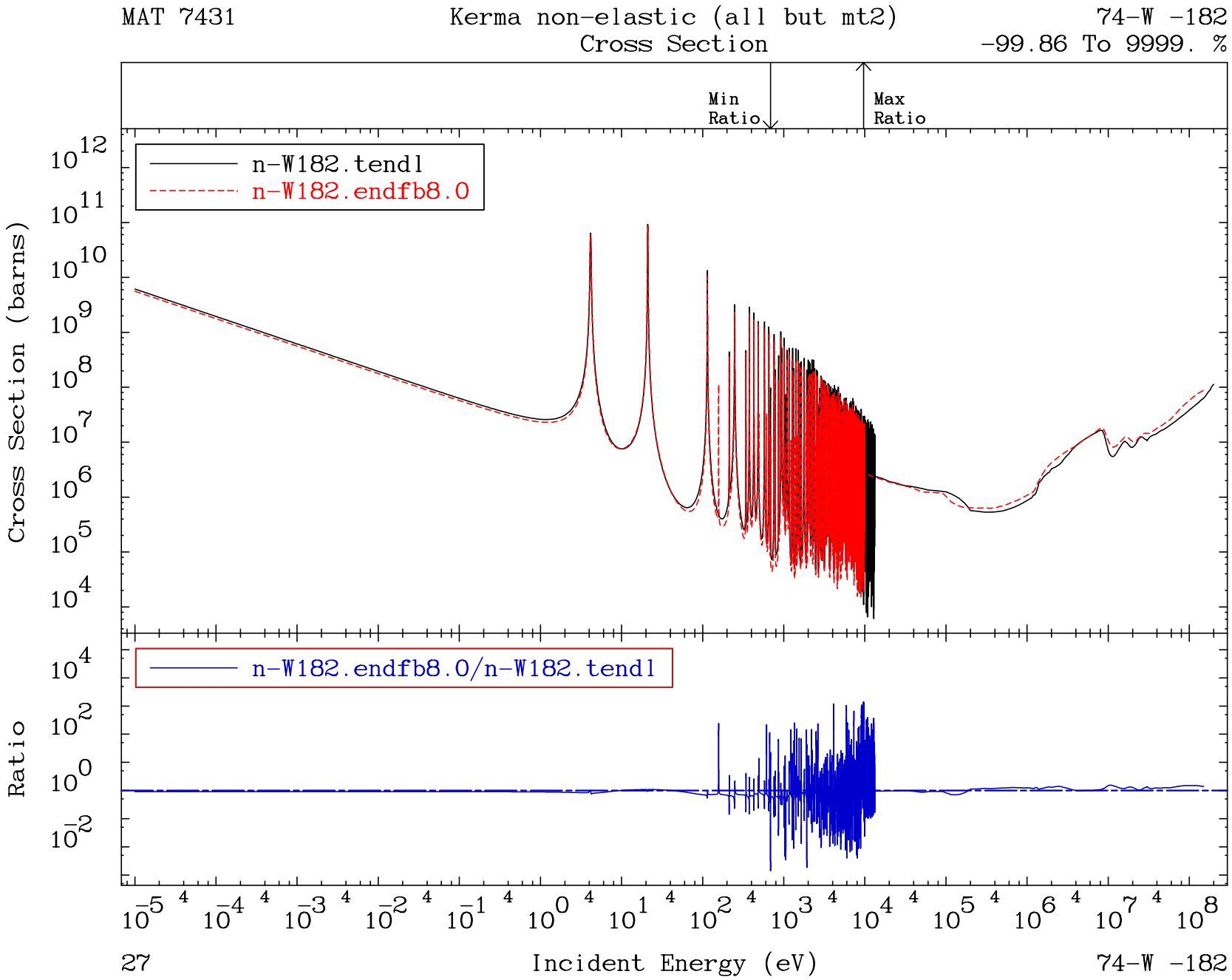

MAT 7431
(n,α)
Cross Section
74-W -182
-100.0 To 2638. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0 Threshold 964.16 eV
Cross Section (milli-barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
22
74-W -182

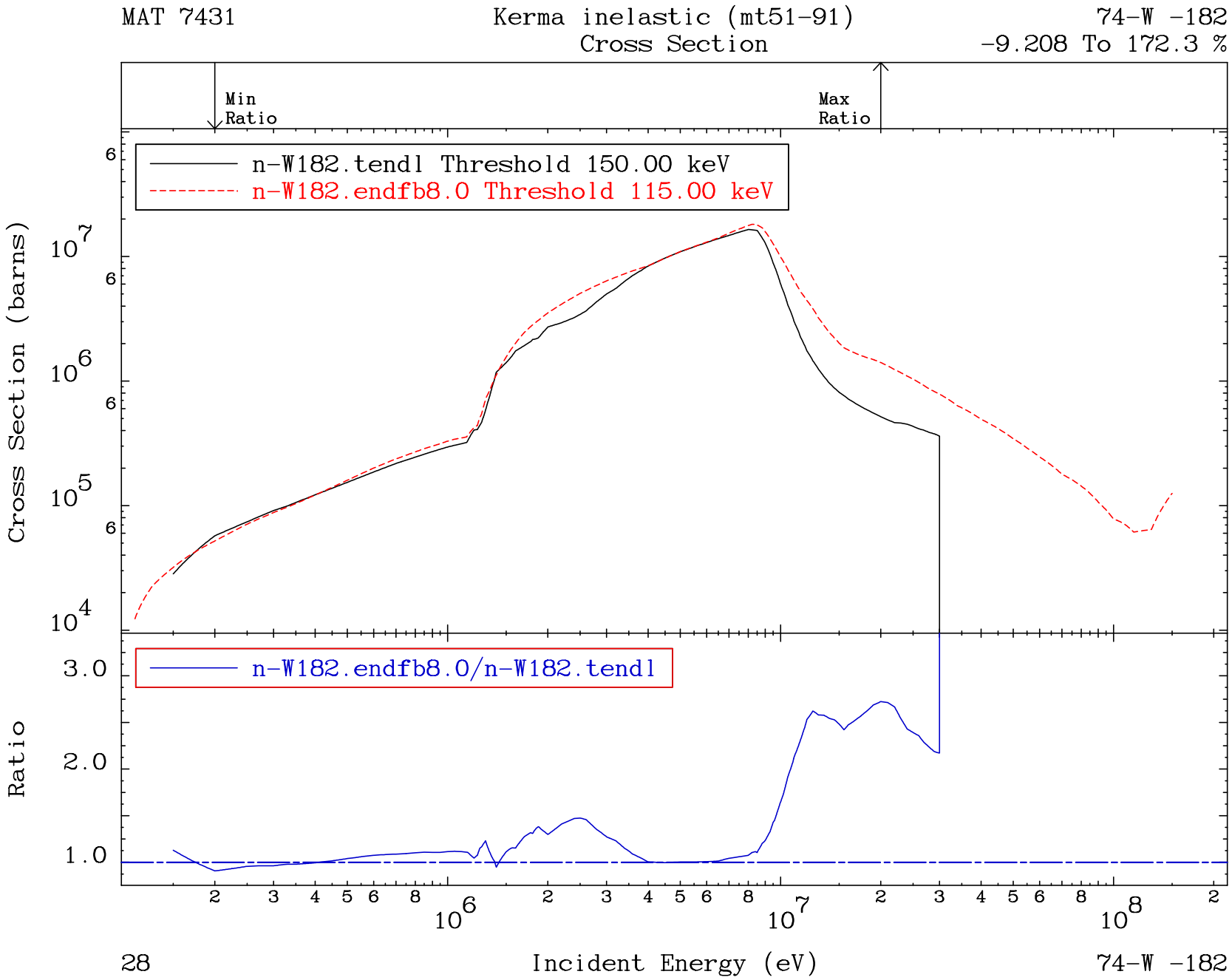

MAT 7431
Hydrogen Production
Cross Section
74-W -182
-96.58 To 76.55 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 13.261 keV
n-W182.endfb8.0 Threshold 3.0000 MeV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^{0}
10^{-1}
10^{5}
10^{6}
10^{7}
10^{8}
23
Incident Energy (eV)
74-W -182

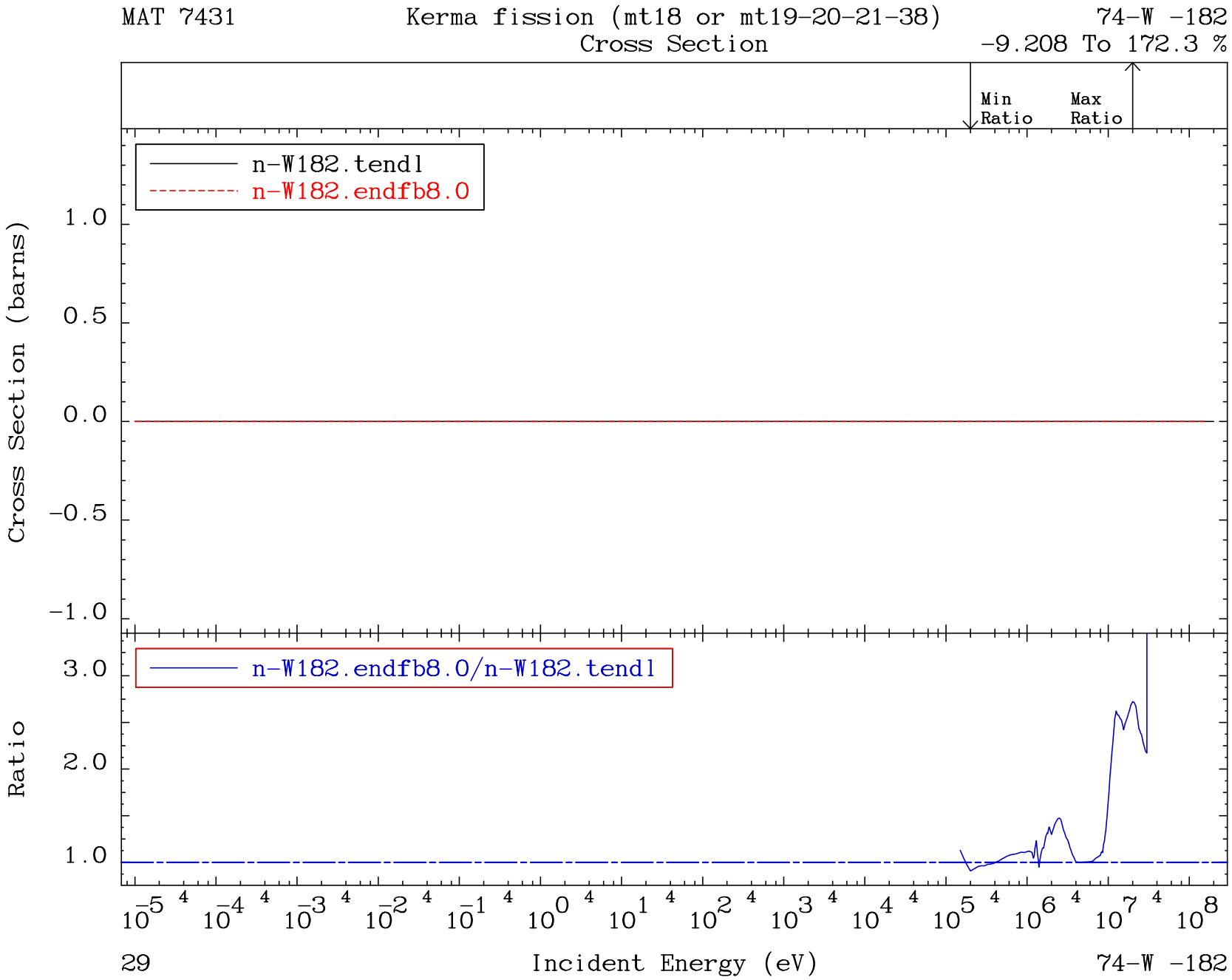

MAT 7431
He-4 Production
Cross Section
74-W -182
-100.0 To 5375. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0 Threshold 964.16 eV
Cross Section (milli-barns)
150
100
50
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^3
10^0
10^-3
10^-6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
24
Incident Energy (eV)
74-W -182

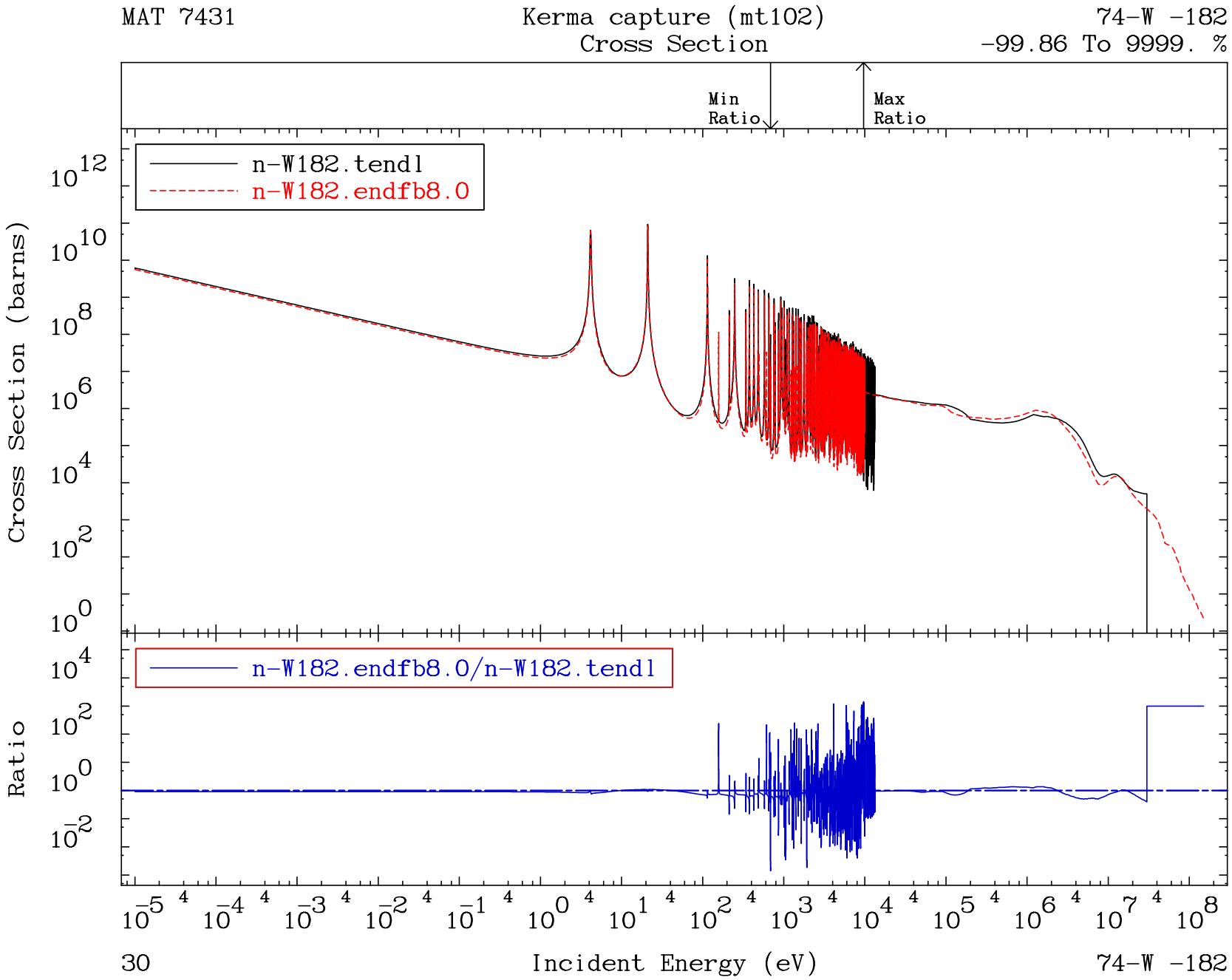

MAT 7431
Kerma total (eV-barns)
Cross Section
74-W -182
-99.86 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
25
74-W -182

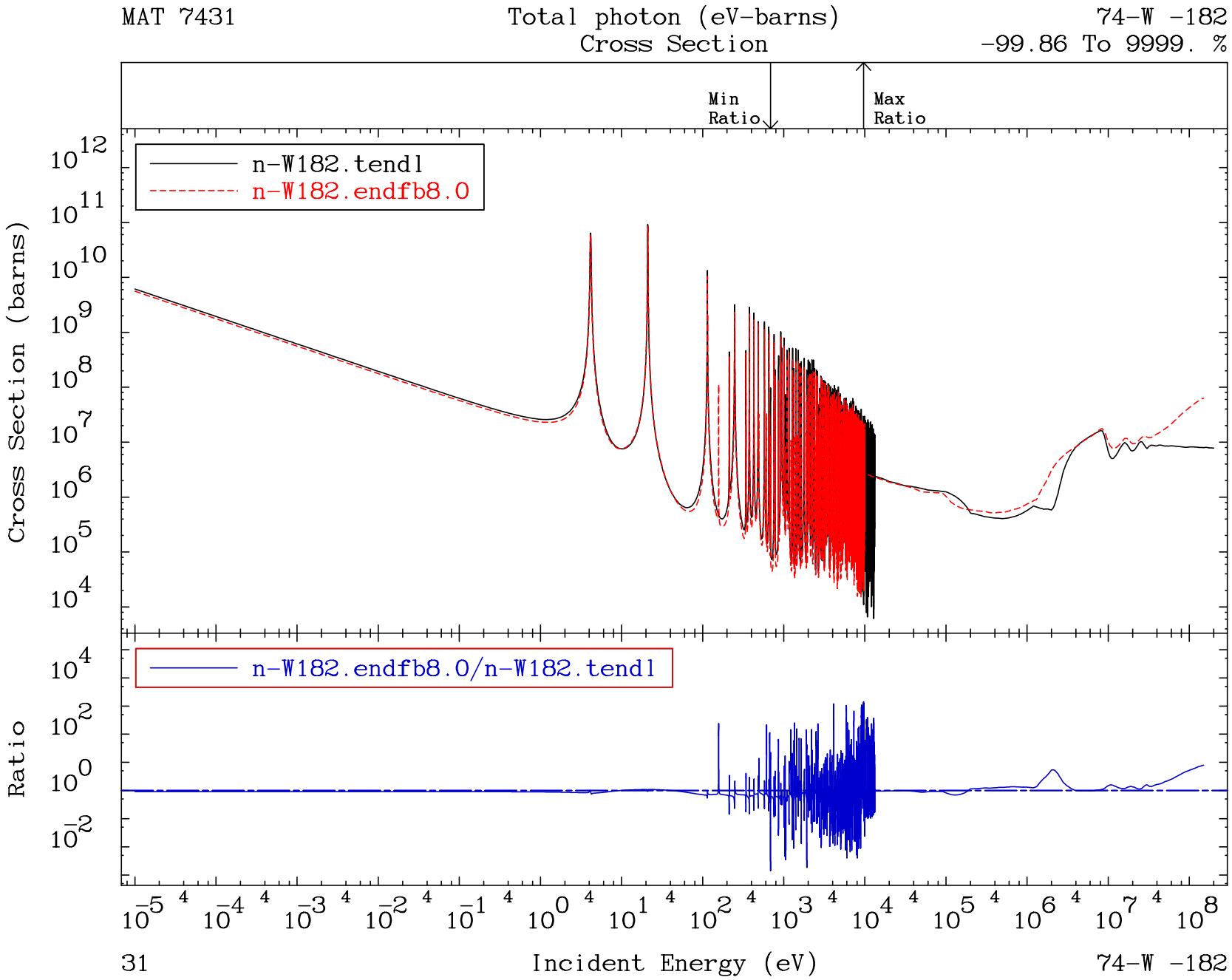

MAT 7431
Kerma elastic
Cross Section
74-W -182
-99.77 To 5770. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
26
74-W -182

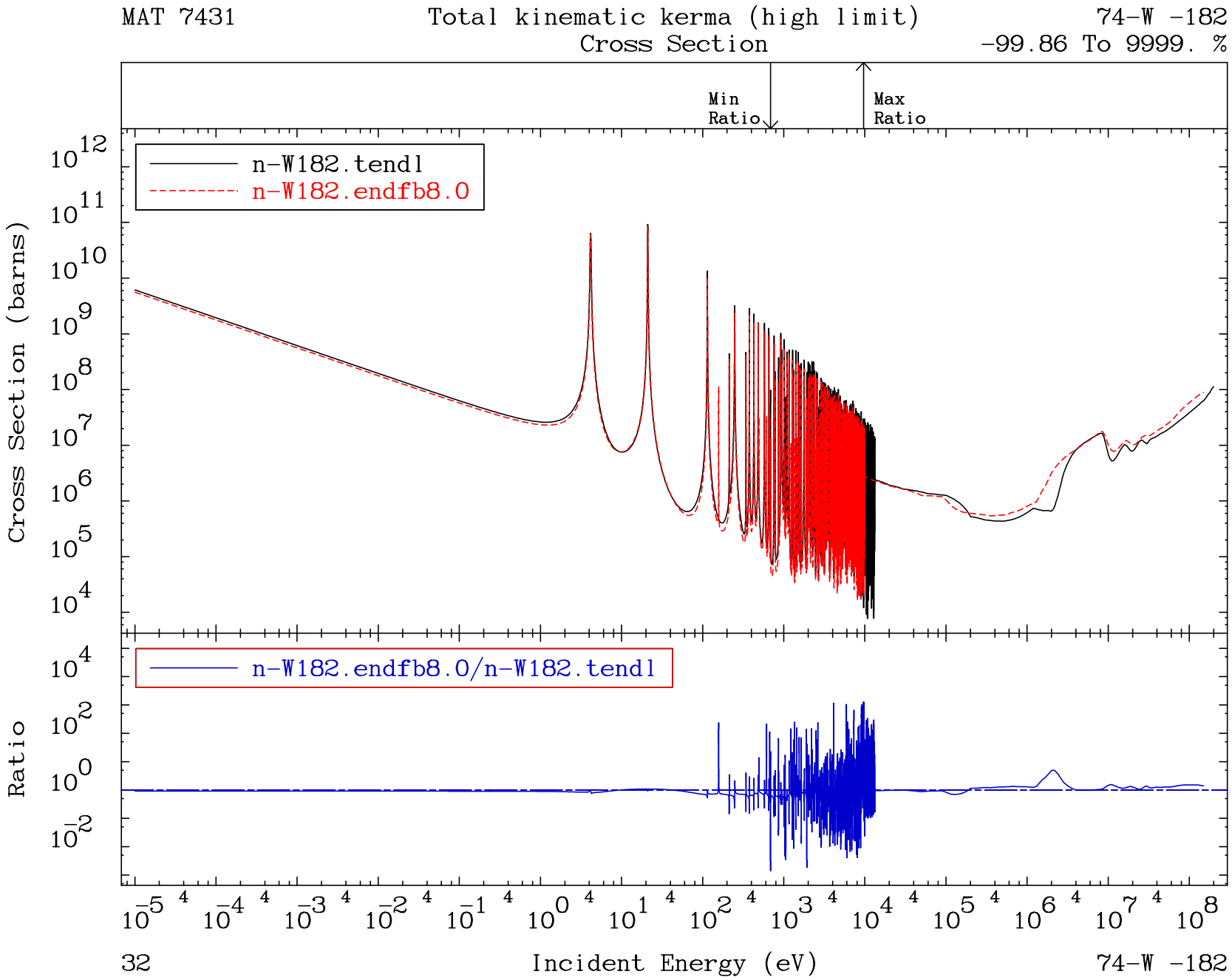

MAT 7431
Kerma non-elastic (all but mt2)
Cross Section
74-W -182
-99.86 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
27
74-W -182

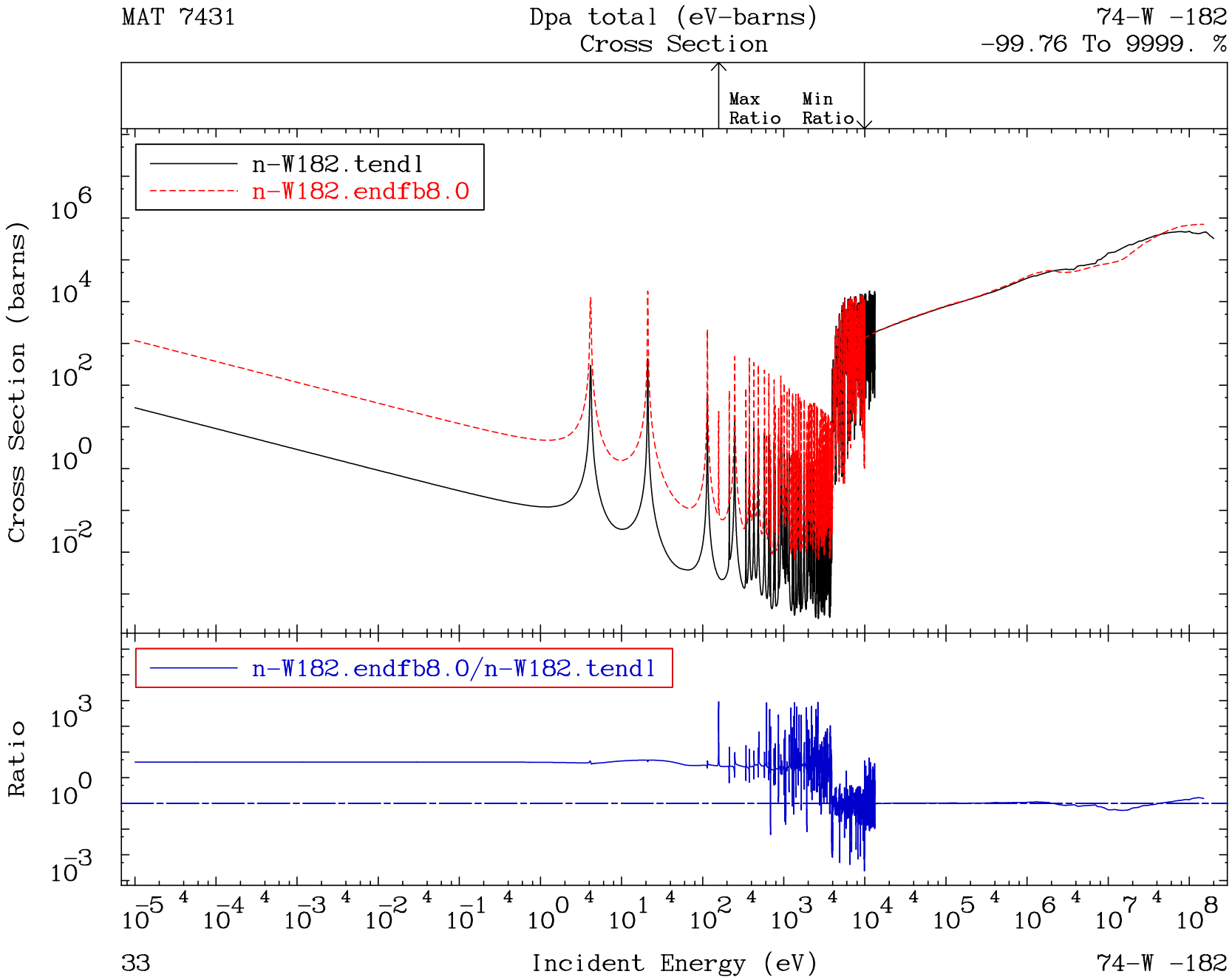

MAT 7431
Kerma inelastic (mt51-91)
Cross Section
74-W -182
-9.208 To 172.3 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 150.00 keV
n-W182.endfb8.0 Threshold 115.00 keV
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
28
74-W -182

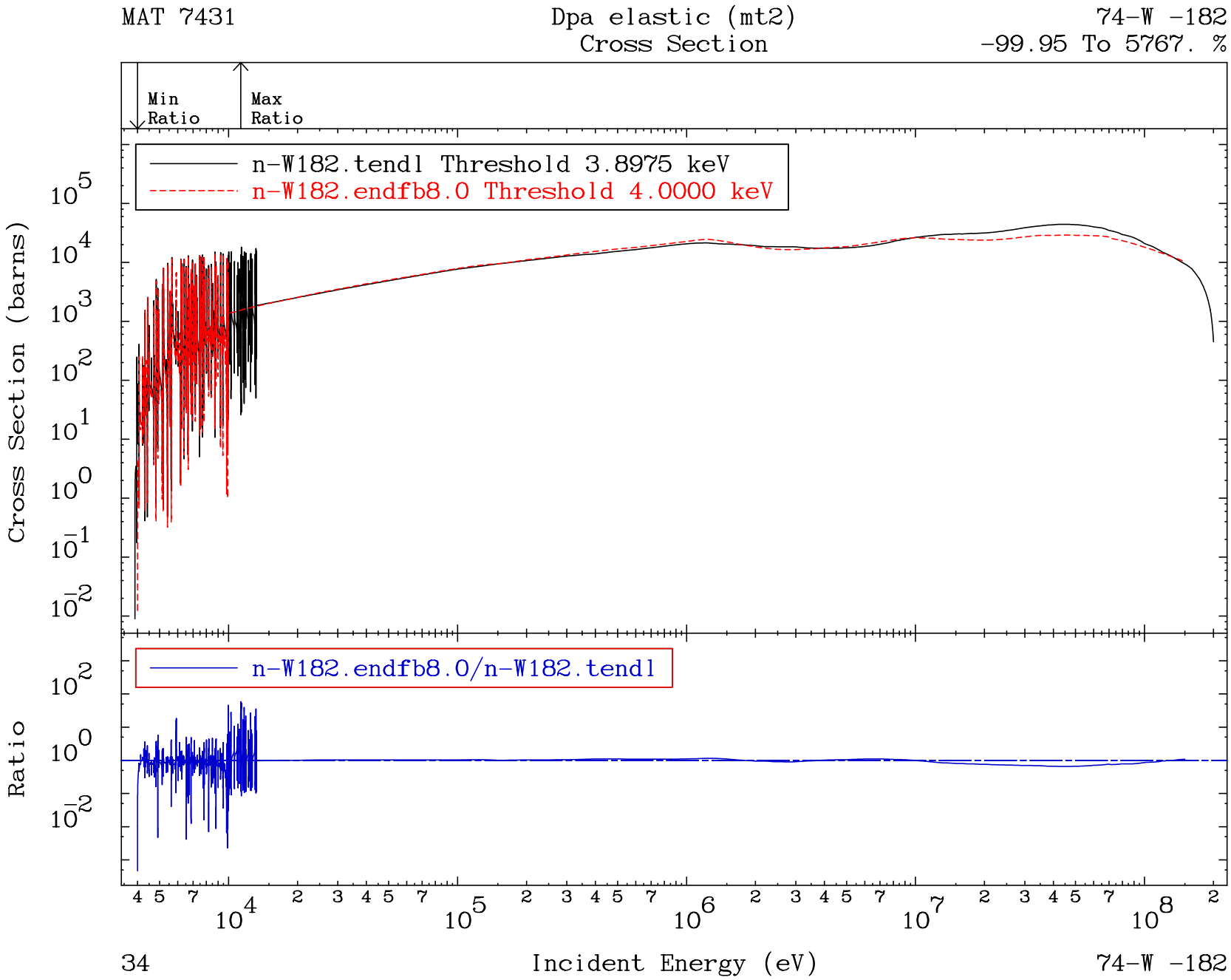

MAT 7431
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
74-W -182
-9.208 To 172.3 %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-W182.endfb8.0/n-W182.tendl
Ratio
3.0
2.0
1.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
74-W -182

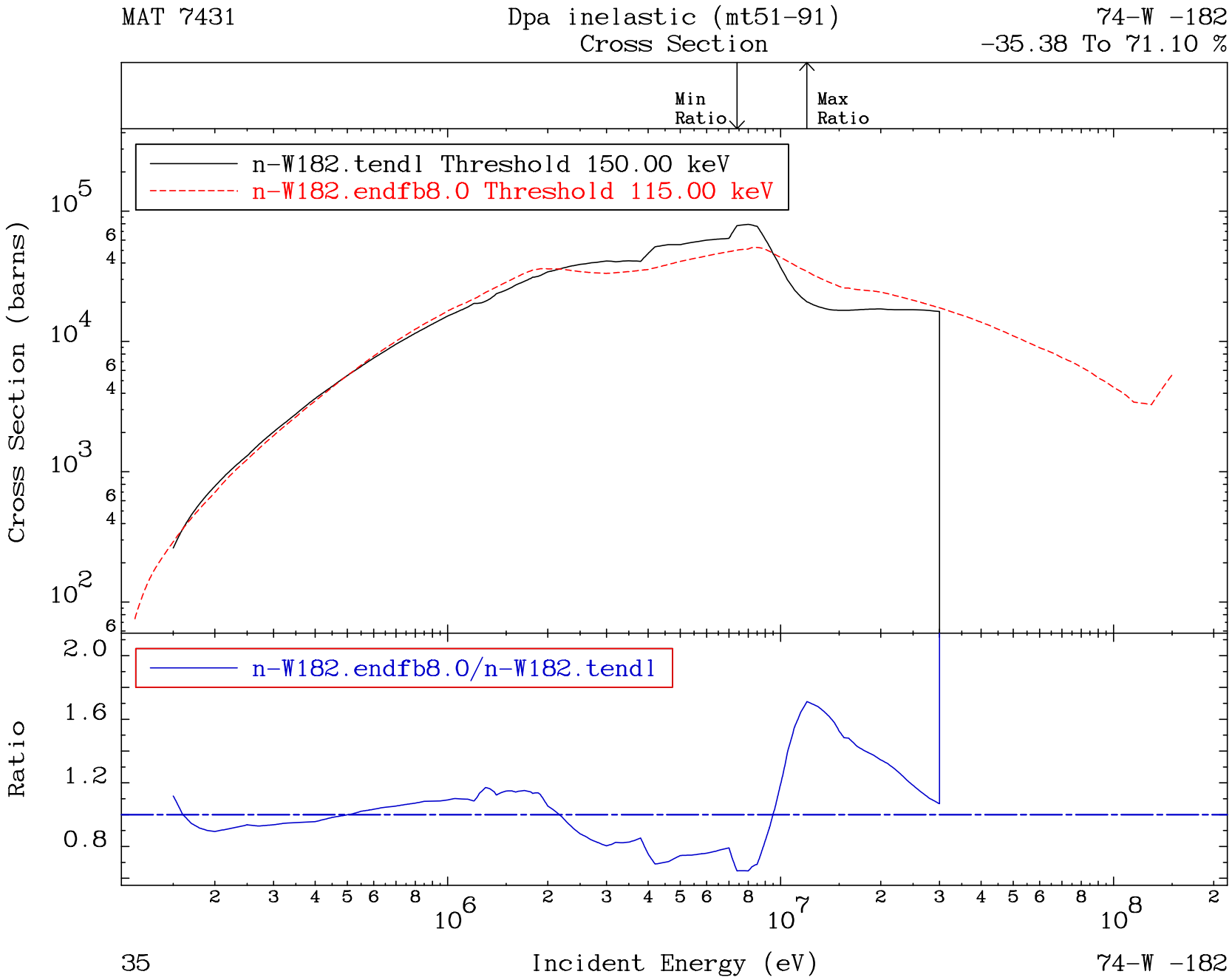

MAT 7431
Kerma capture (mt102)
Cross Section
74-W -182
-99.86 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
30
74-W -182

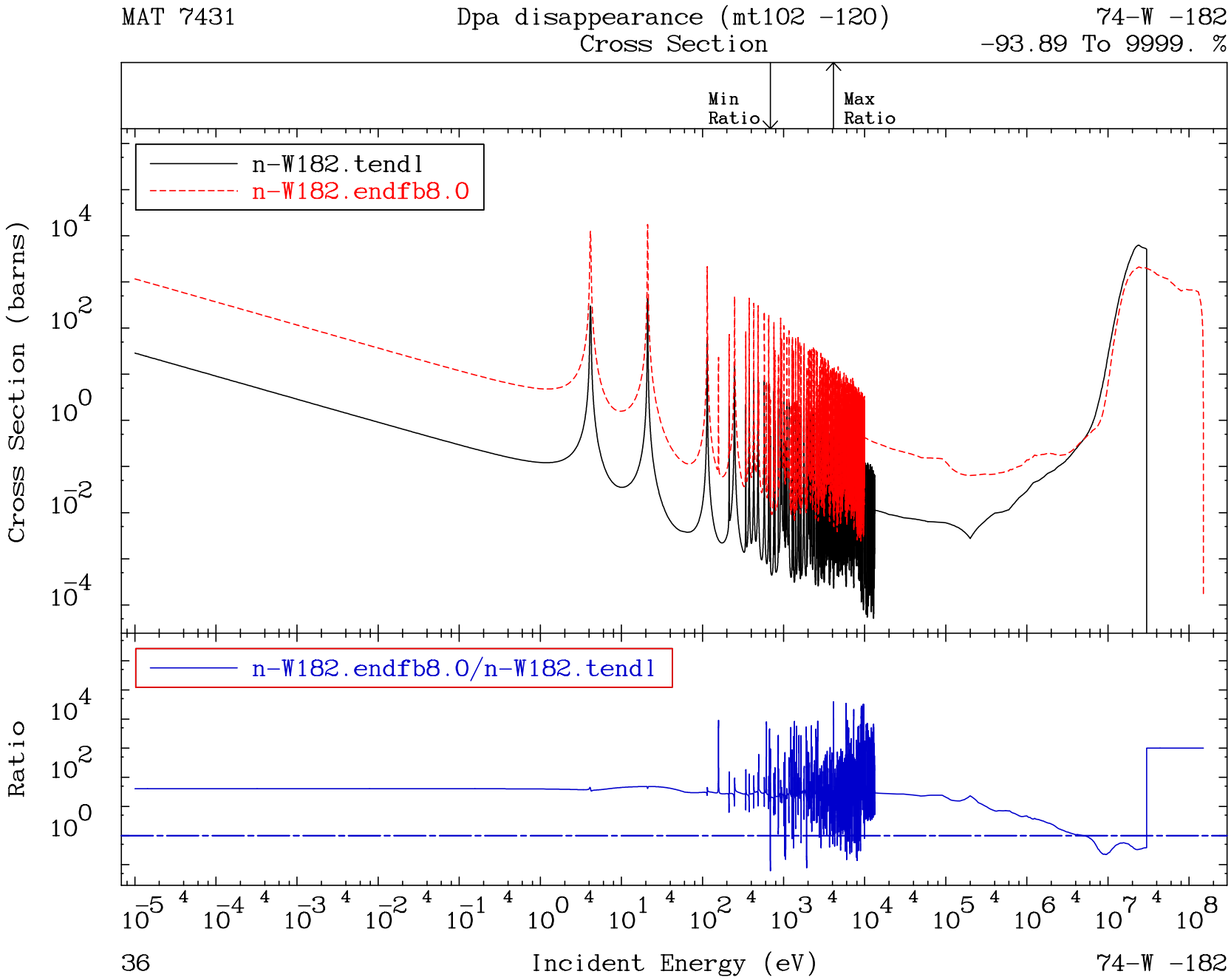

MAT 7431
Total photon (eV-barns)
Cross Section
74-W -182
-99.86 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
31
74-W -182

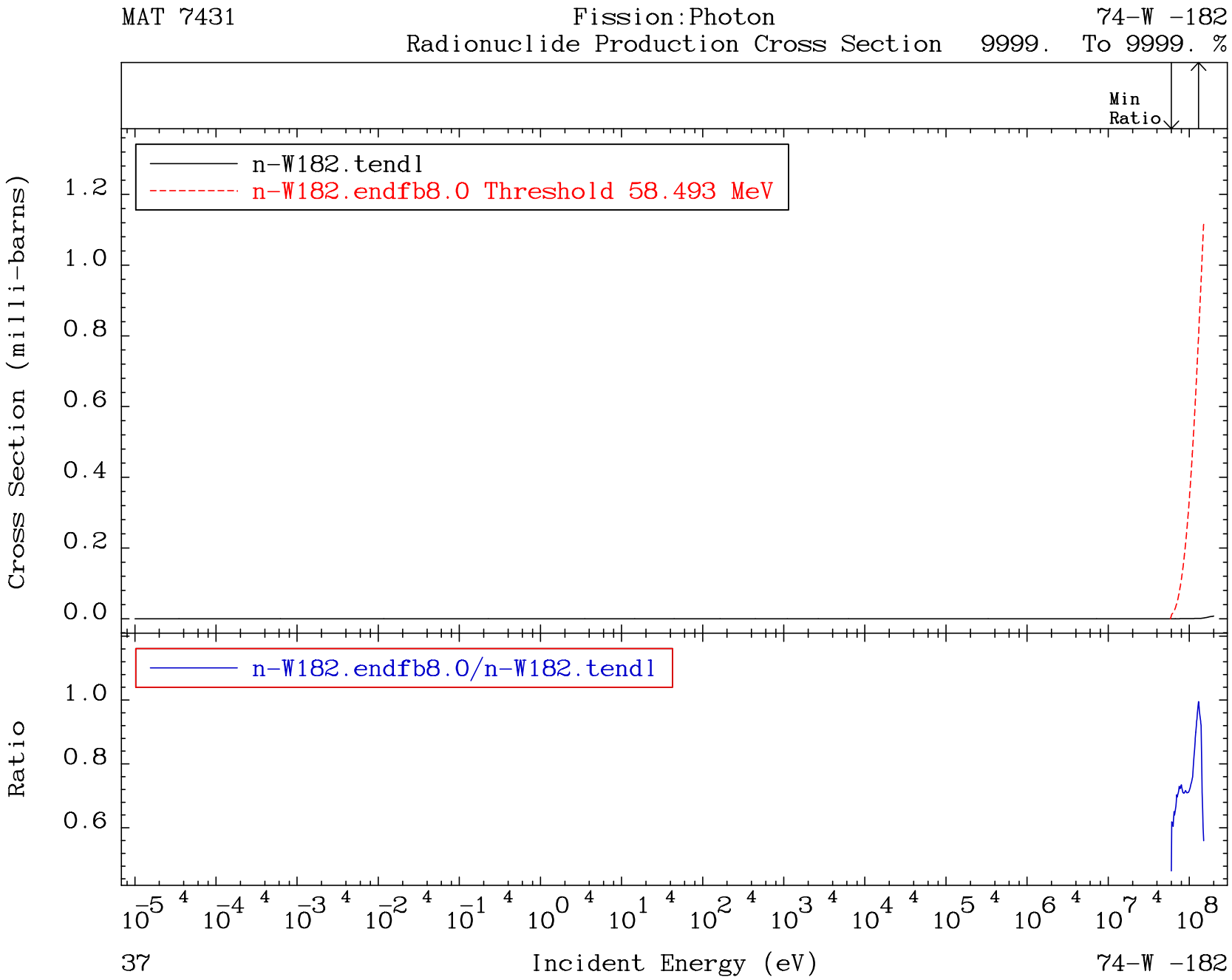

MAT 7431
Total kinematic kerma (high limit)
Cross Section
74-W -182
-99.86 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
32
74-W -182

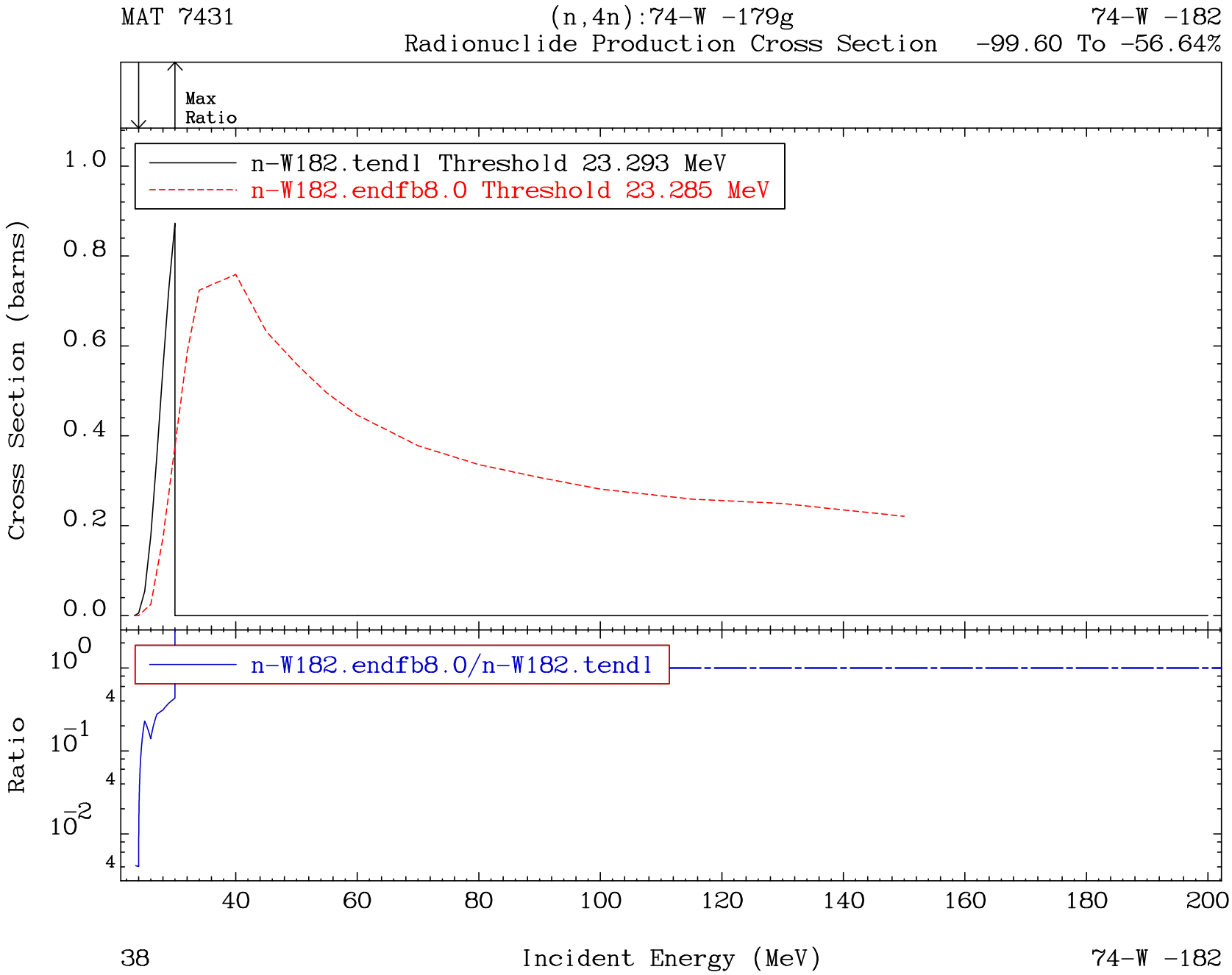

MAT 7431
Dpa total (eV-barns)
Cross Section
74-W -182
-99.76 To 9999. %
Max Ratio
Min Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
33
74-W -182

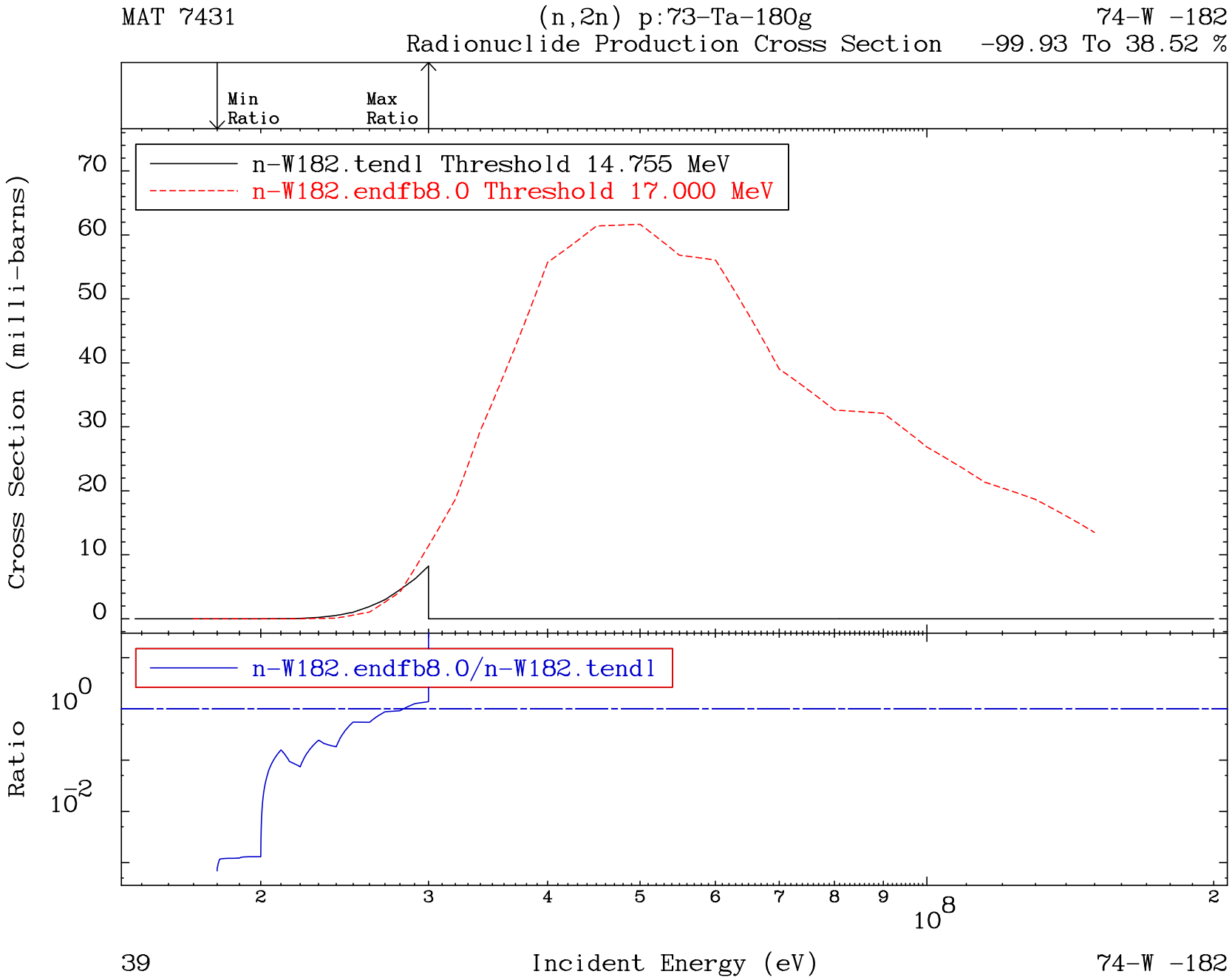

MAT 7431
Dpa elastic (mt2)
Cross Section
74-W -182
-99.95 To 5767. %
Min Ratio
Max Ratio
n-W182.tendl Threshold 3.8975 keV
n-W182.endfb8.0 Threshold 4.0000 keV
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
34
74-W -182

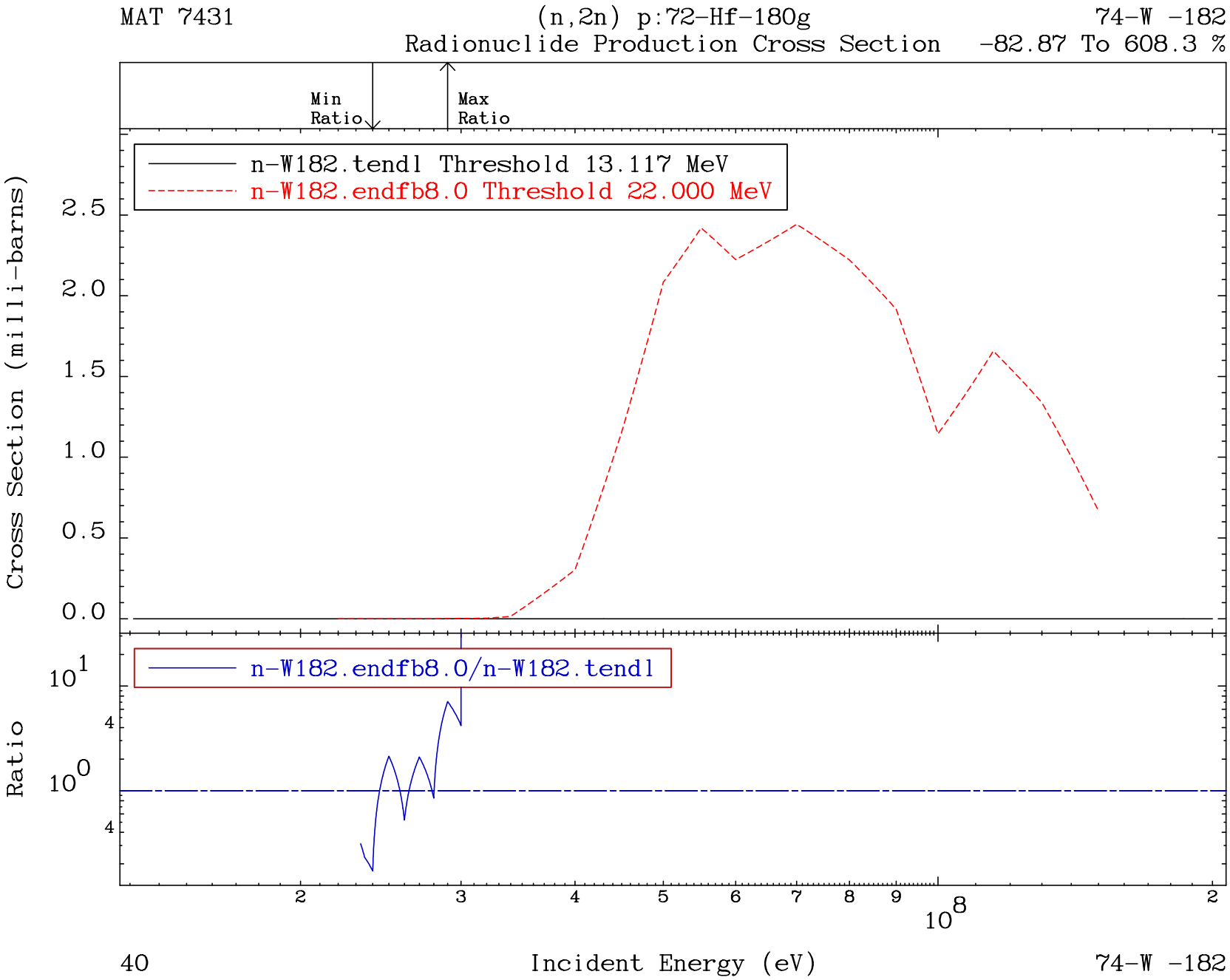

MAT 7431
Dpa inelastic (mt51-91)
Cross Section
74-W -182
-35.38 To 71.10 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 150.00 keV
n-W182.endfb8.0 Threshold 115.00 keV
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
35
74-W -182

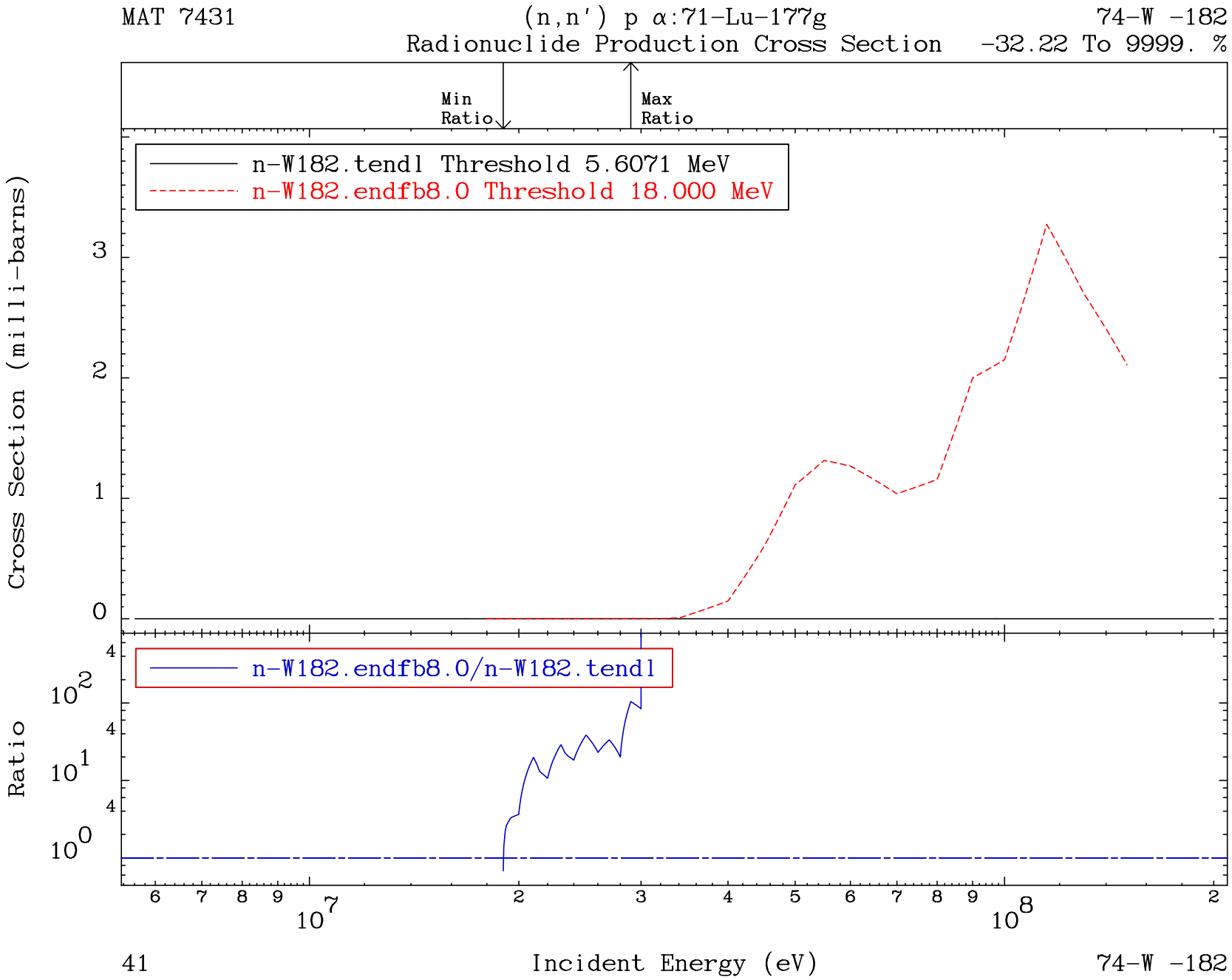

MAT 7431
Dpa disappearance (mt102 -120)
Cross Section
74-W -182
-93.89 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl
n-W182.endfb8.0
Cross Section (barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
36
74-W -182

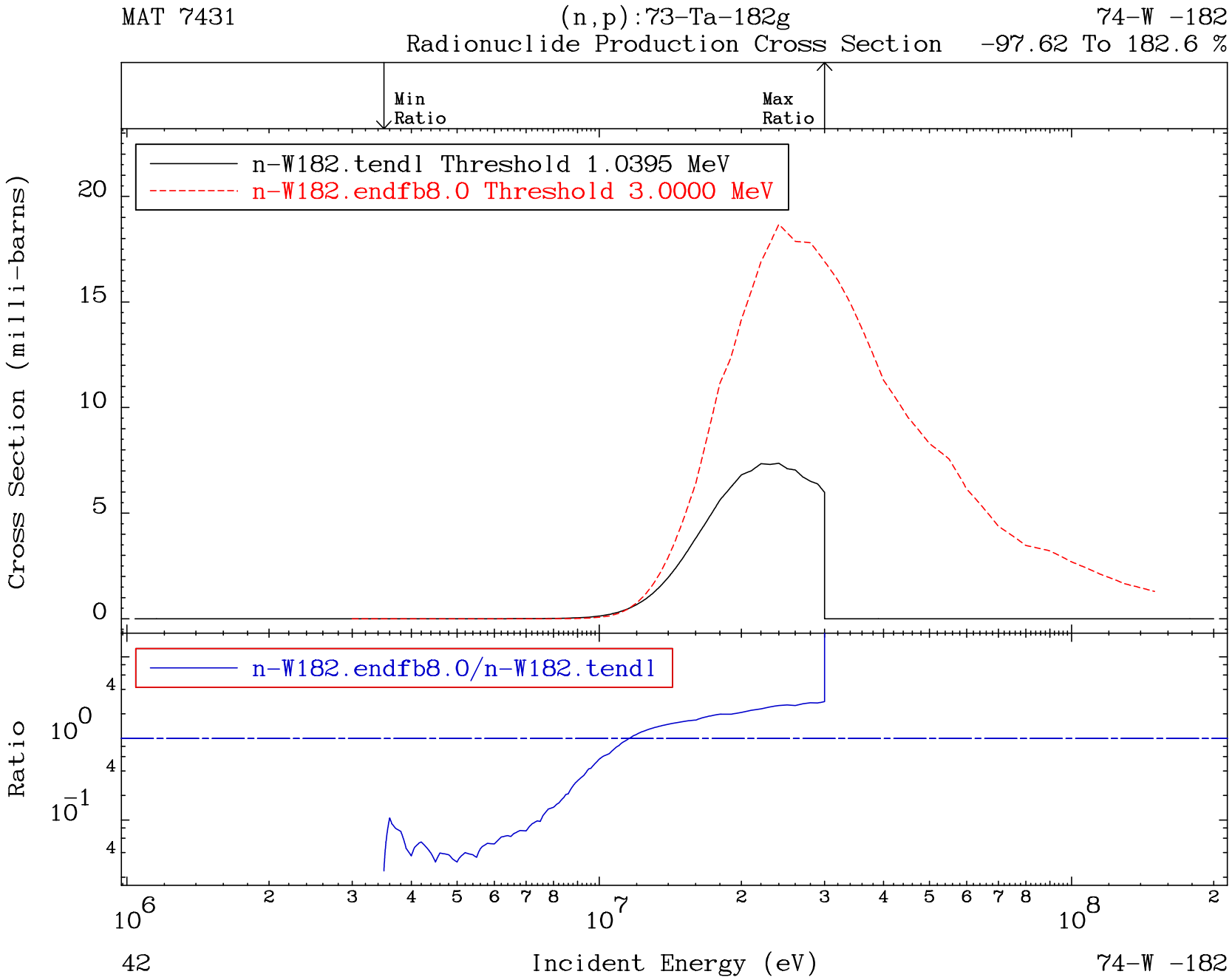

MAT 7431
Fission:Photon
74-W -182
Radionuclide Production Cross Section 9999. To 9999. %
Min Ratio
n-W182.tendl
n-W182.endfb8.0 Threshold 58.493 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
1.0
0.8
0.6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
37
Incident Energy (eV)
74-W -182

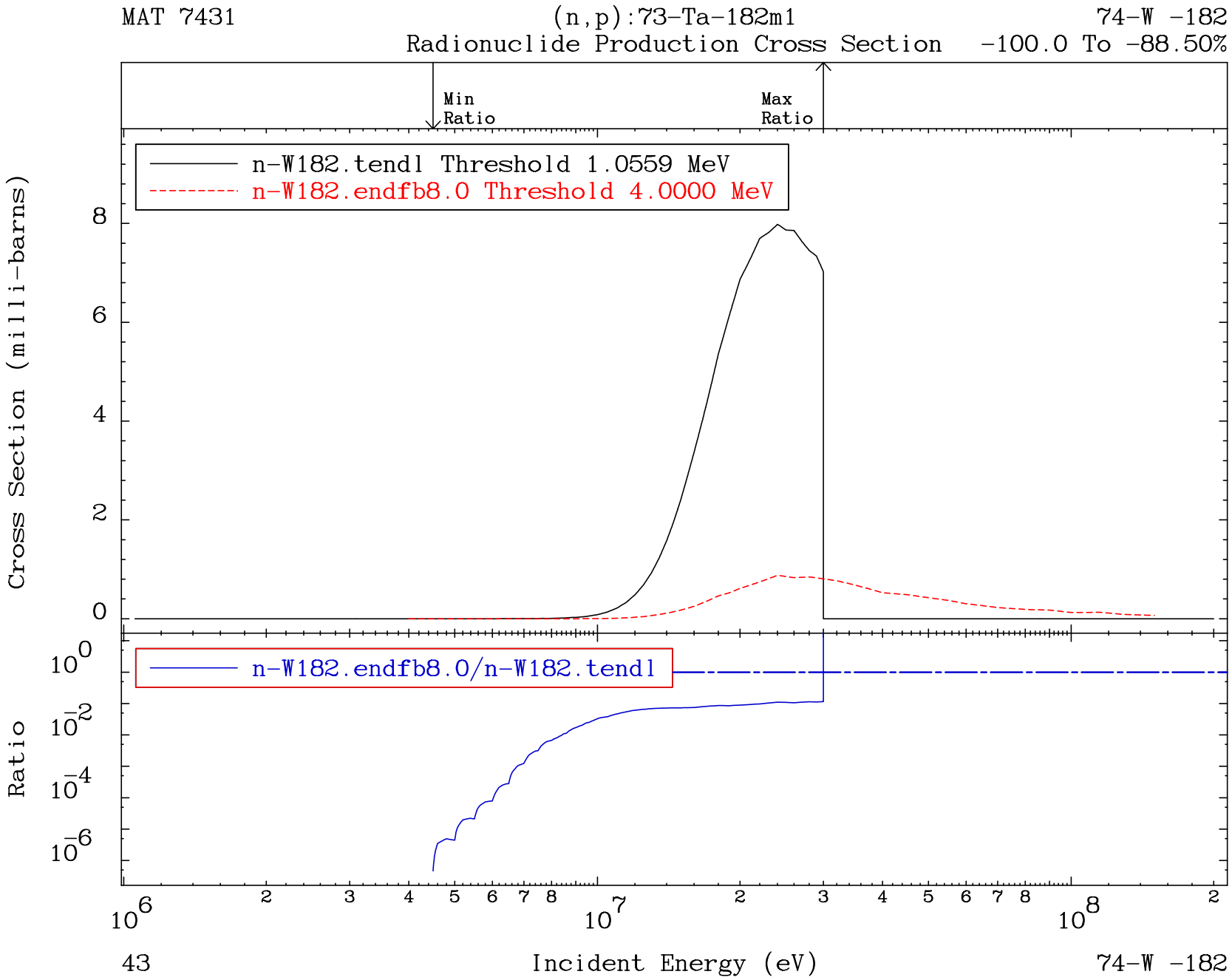

MAT 7431
(n,4n):74-W -179g
74-W -182
Radionuclide Production Cross Section
-99.60 To -56.64%
Max
Ratio
n-W182.tendl Threshold 23.293 MeV
n-W182.endfb8.0 Threshold 23.285 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^-2
40
60
80
100
120
140
160
180
200
38
Incident Energy (MeV)
74-W -182


MAT 7431
(n,2n) p:73-Ta-180g
74-W -182
Radionuclide Production Cross Section
-99.93 To 38.52 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 14.755 MeV
n-W182.endfb8.0 Threshold 17.000 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
39
Incident Energy (eV)
74-W -182


MAT 7431
(n,2n) p:72-Hf-180g
74-W -182
Radionuclide Production Cross Section
-82.87 To 608.3 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 13.117 MeV
n-W182.endfb8.0 Threshold 22.000 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^1
10^0
4
4
2
3
4
5
6
7
8
9
10^8
2
40
Incident Energy (eV)
74-W -182


MAT 7431
(n,n') p α:71-Lu-177g
74-W -182
Radionuclide Production Cross Section
-32.22 To 9999. %
Min Ratio
Max Ratio
n-W182.tendl Threshold 5.6071 MeV
n-W182.endfb8.0 Threshold 18.000 MeV
Cross Section (milli-barns)
n-W182.endfb8.0/n-W182.tendl
Ratio
Incident Energy (eV)
41
74-W -182


MAT 7431
(n,p):73-Ta-182g
74-W -182
Radionuclide Production Cross Section
-97.62 To 182.6 %
Min Ratio
Max Ratio
n-W182.tendl Threshold 1.0395 MeV
n-W182.endfb8.0 Threshold 3.0000 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-1
10^6
10^7
10^8
42
Incident Energy (eV)
74-W -182


MAT 7431
(n,p):73-Ta-182m1
74-W -182
Radionuclide Production Cross Section
-100.0 To -88.50%
Min Ratio
Max Ratio
n-W182.tendl Threshold 1.0559 MeV
n-W182.endfb8.0 Threshold 4.0000 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-W182.endfb8.0/n-W182.tendl
Ratio
10^0
10^-2
10^-4
10^-6
10^6
10^7
10^8
43
Incident Energy (eV)
74-W -182