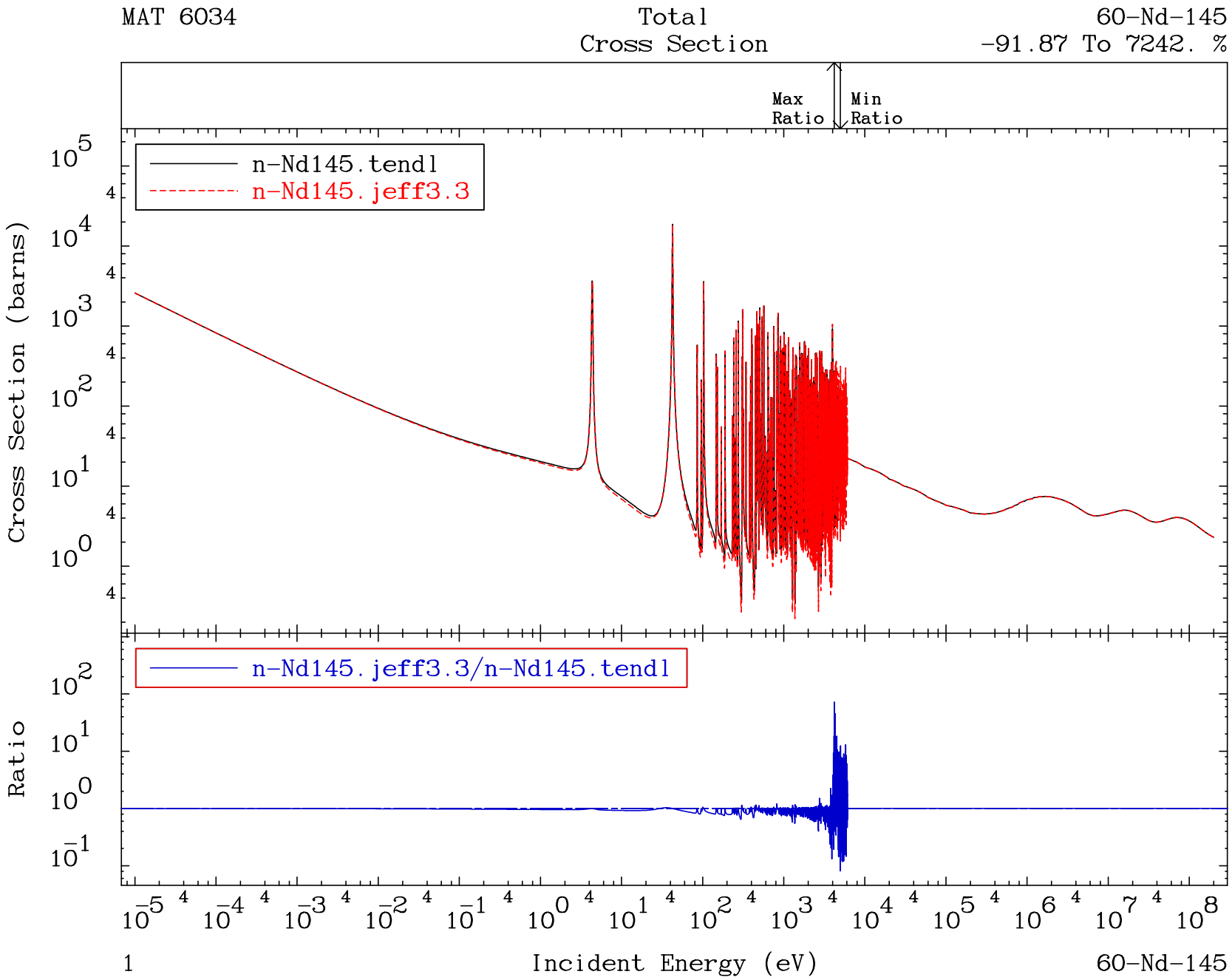
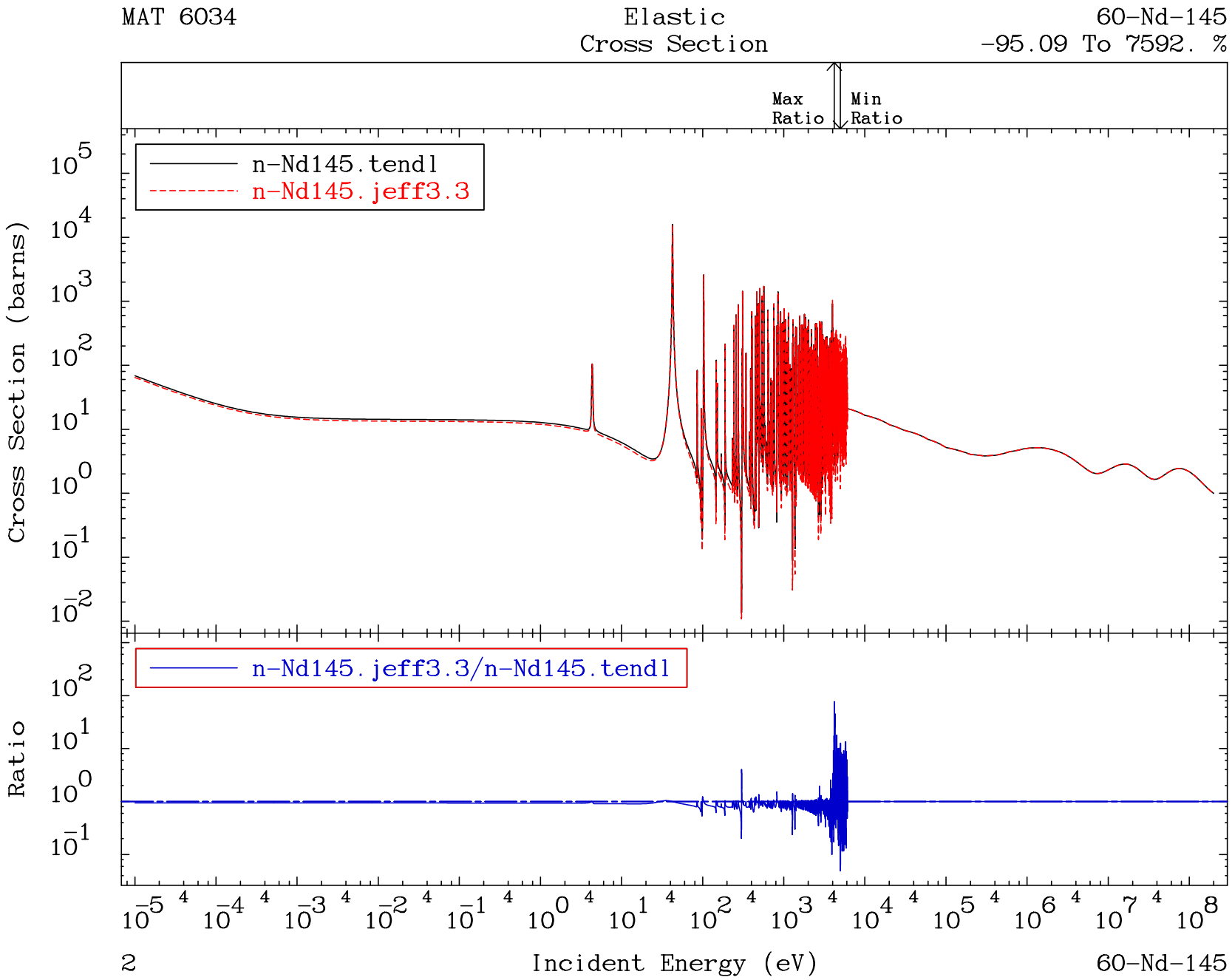
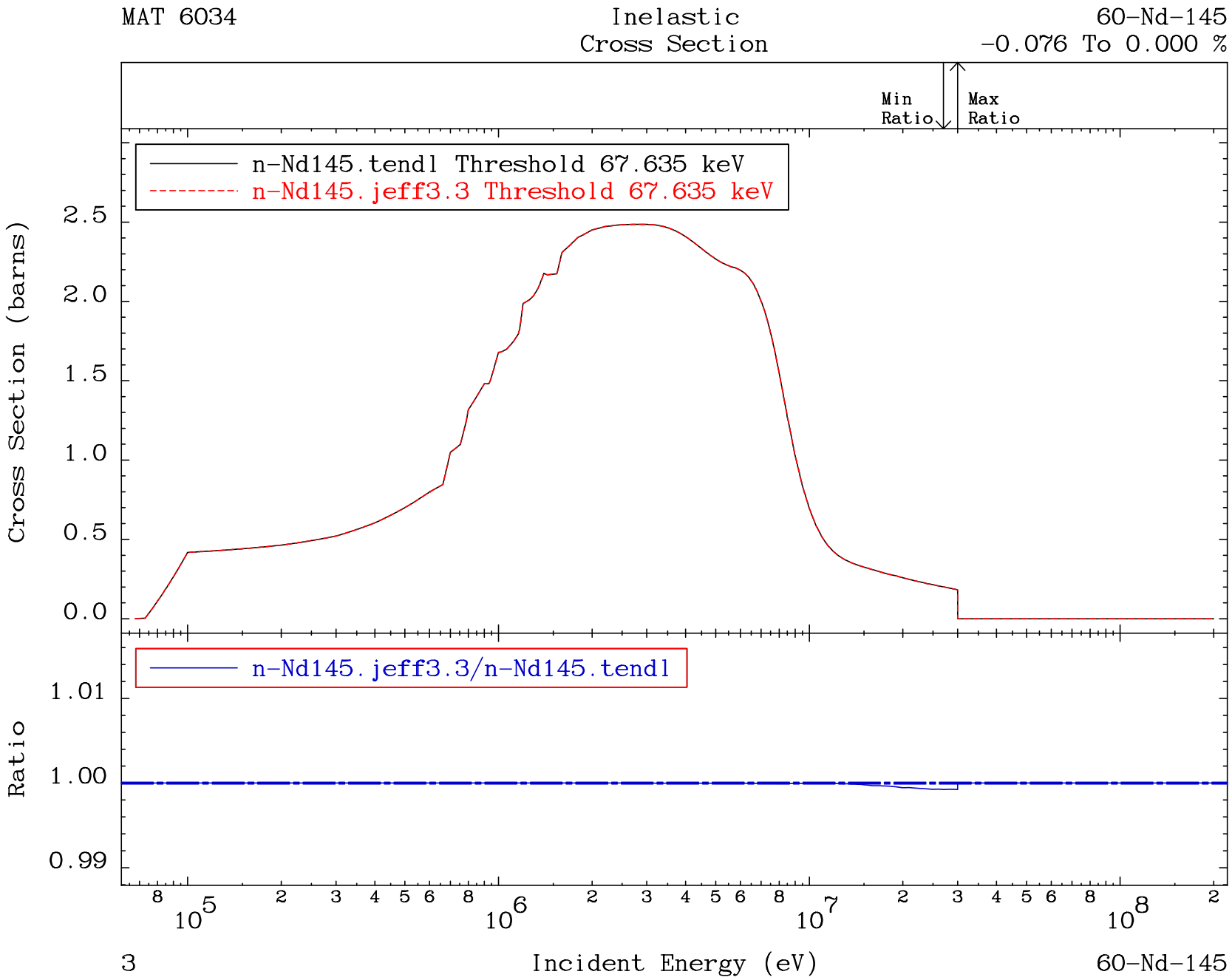
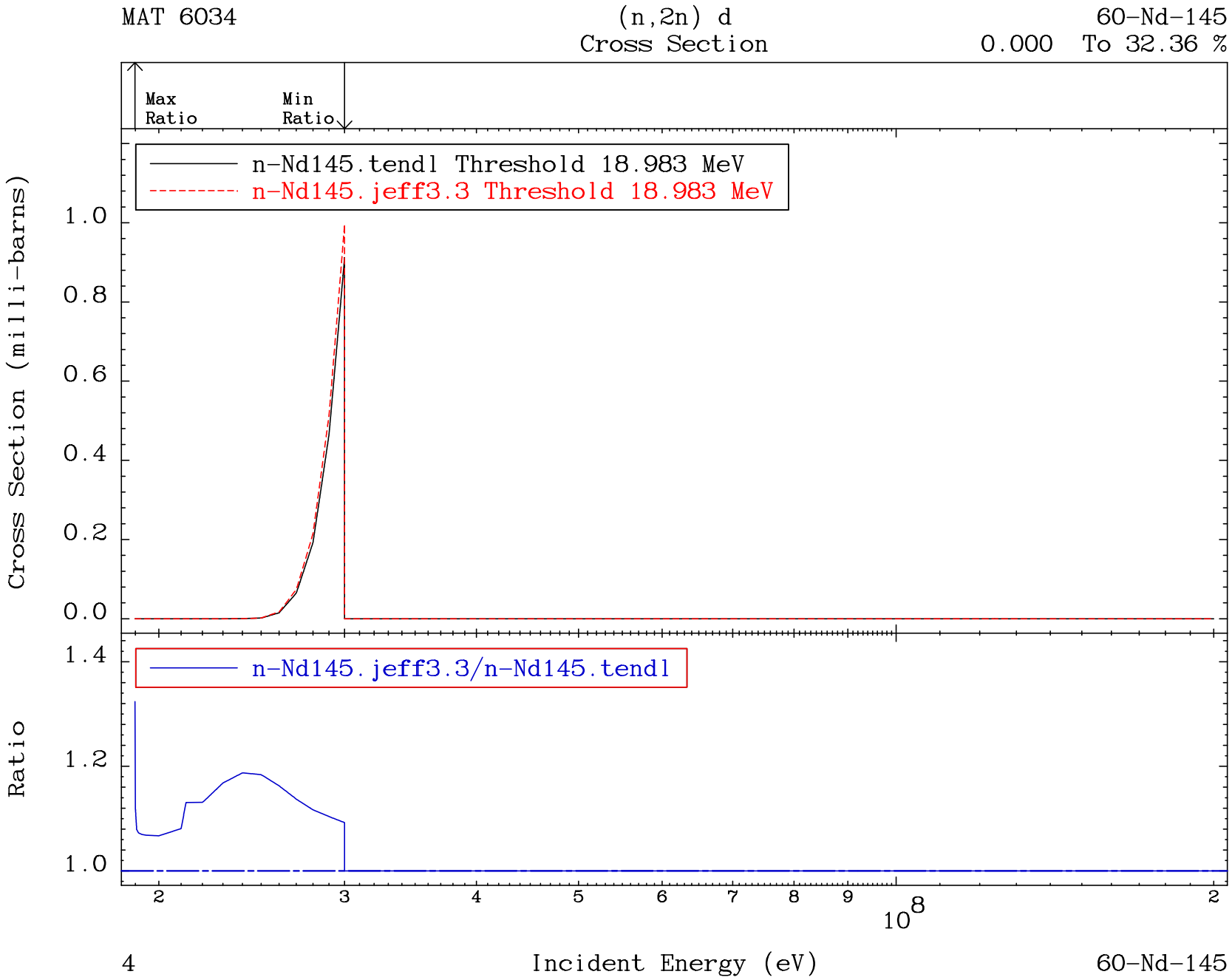
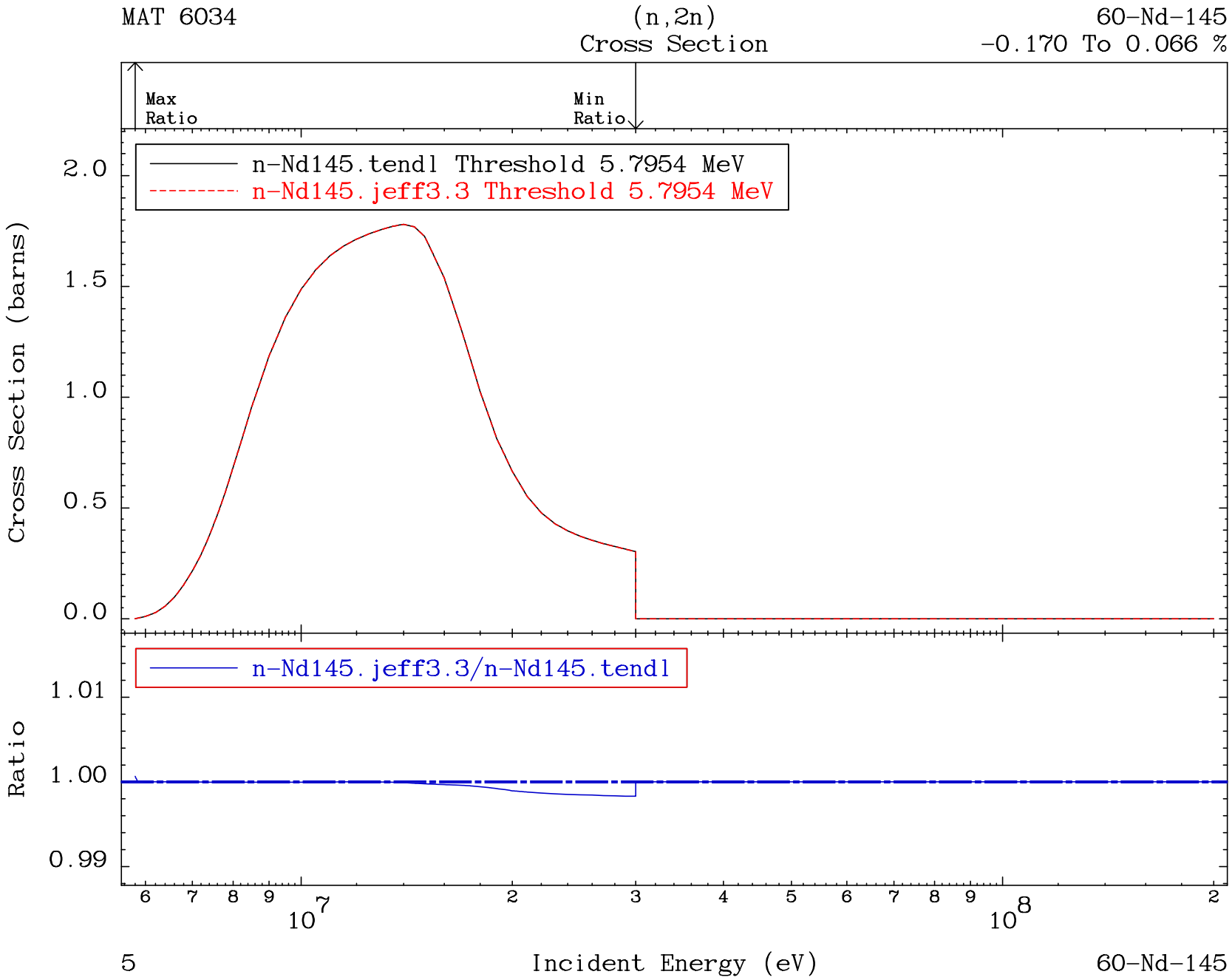
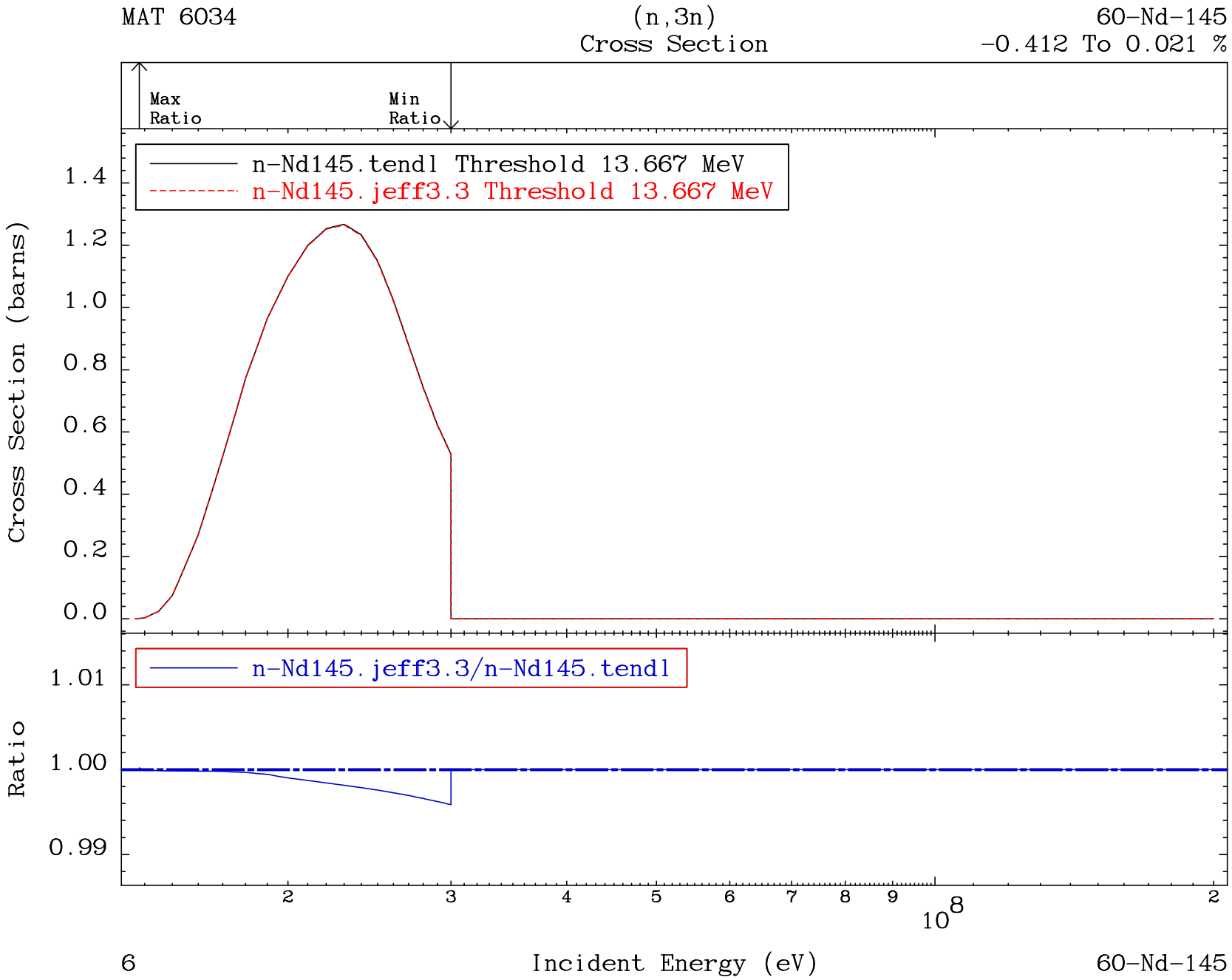

MAT 6034
Total
Cross Section
60-Nd-145
-91.87 To 7242. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
1
60-Nd-145

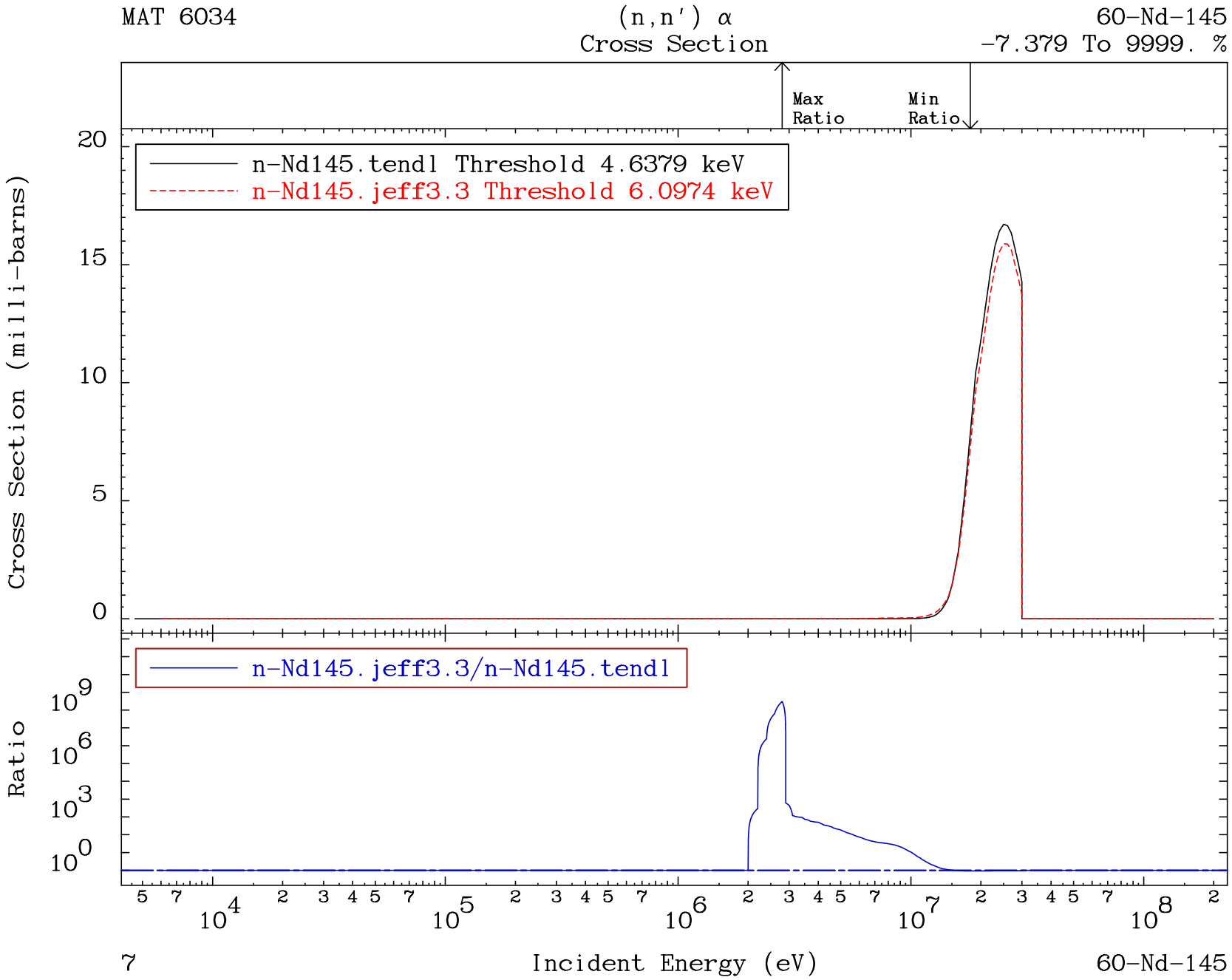

MAT 6034
Elastic
Cross Section
60-Nd-145
-95.09 To 7592. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
2
60-Nd-145

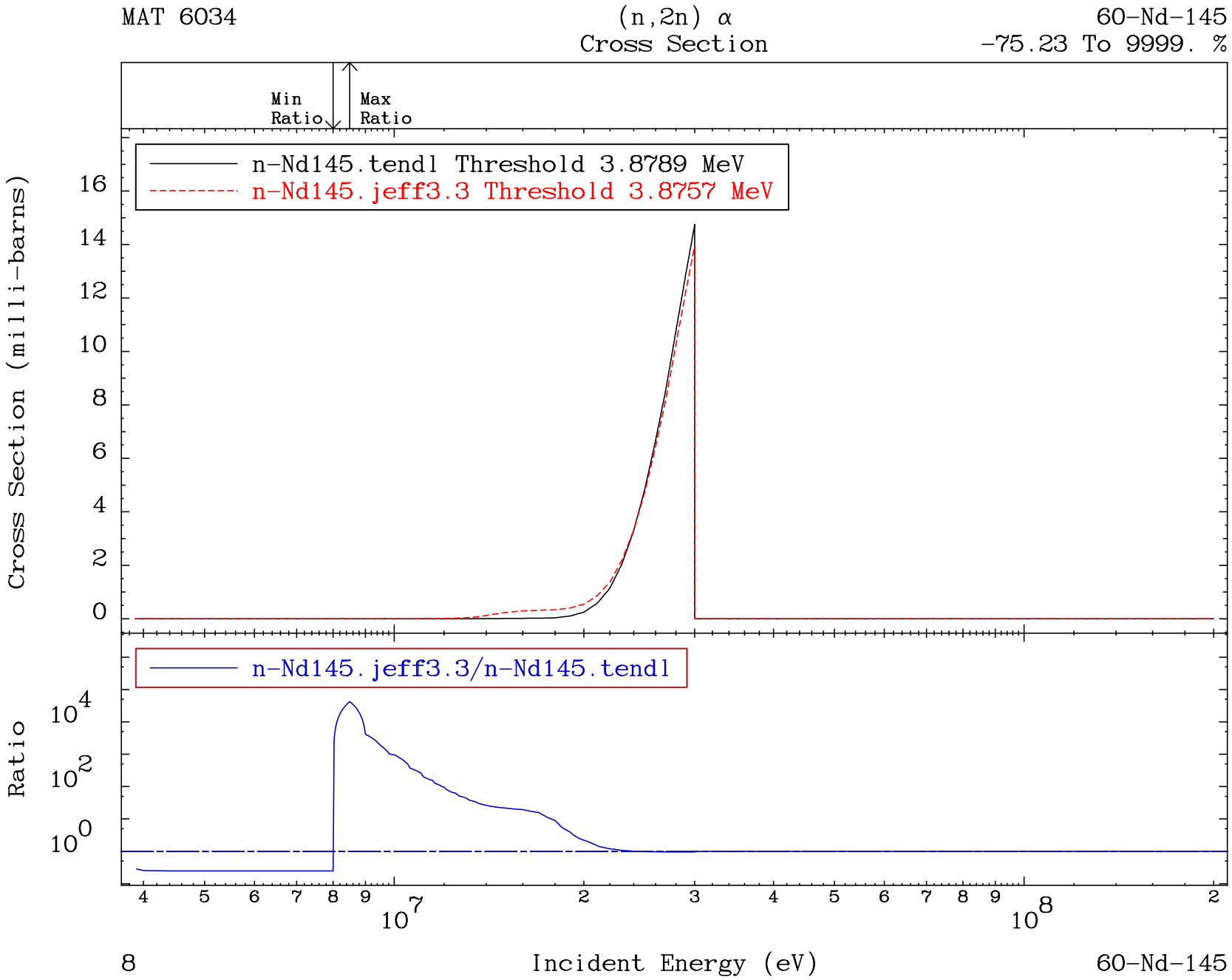

MAT 6034
Inelastic
Cross Section
60-Nd-145
-0.076 To 0.000 %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 67.635 keV
n-Nd145.jeff3.3 Threshold 67.635 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
3
Incident Energy (eV)
60-Nd-145

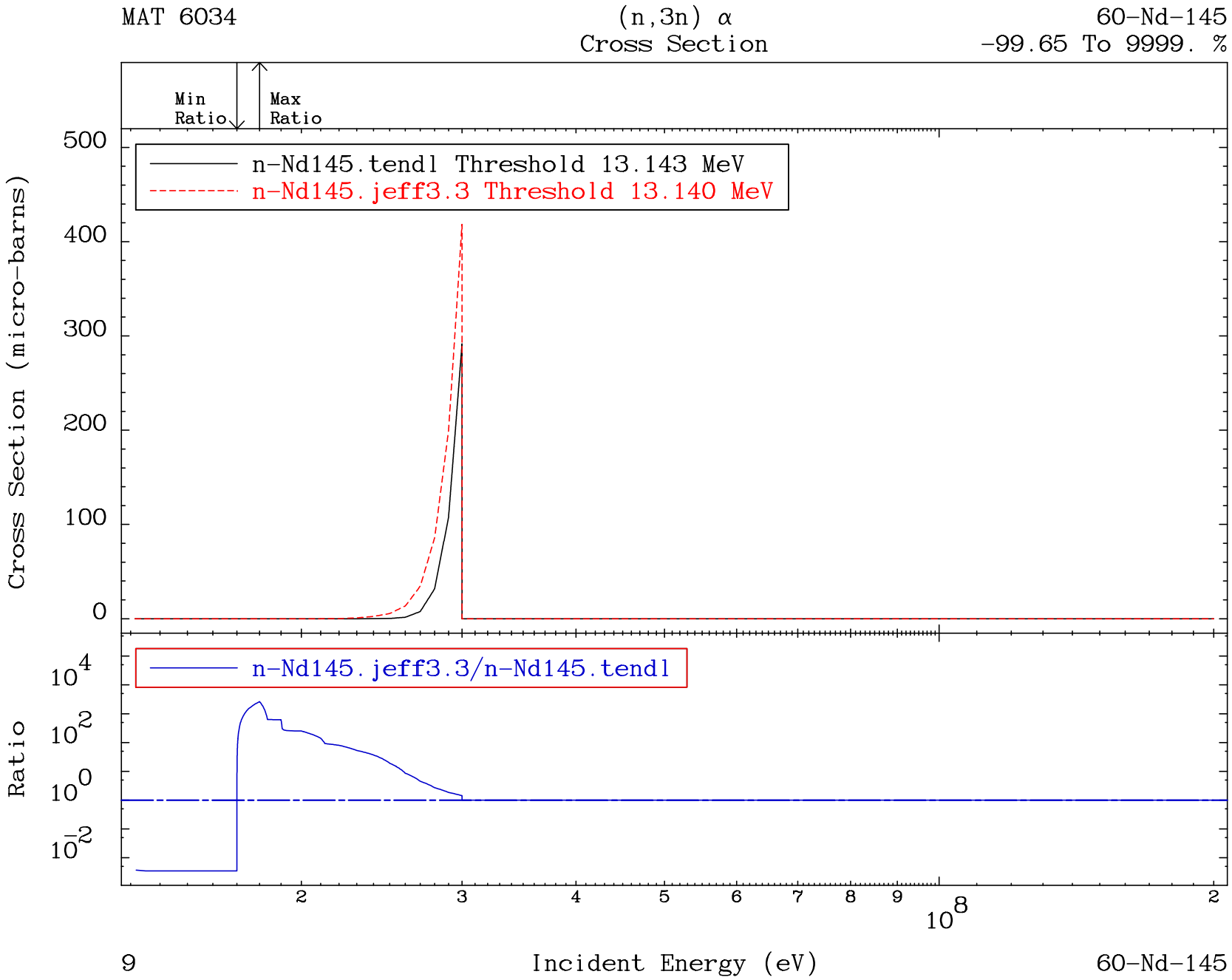

MAT 6034
(n,2n) d
Cross Section
60-Nd-145
0.000 To 32.36 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 18.983 MeV
n-Nd145.jeff3.3 Threshold 18.983 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
60-Nd-145

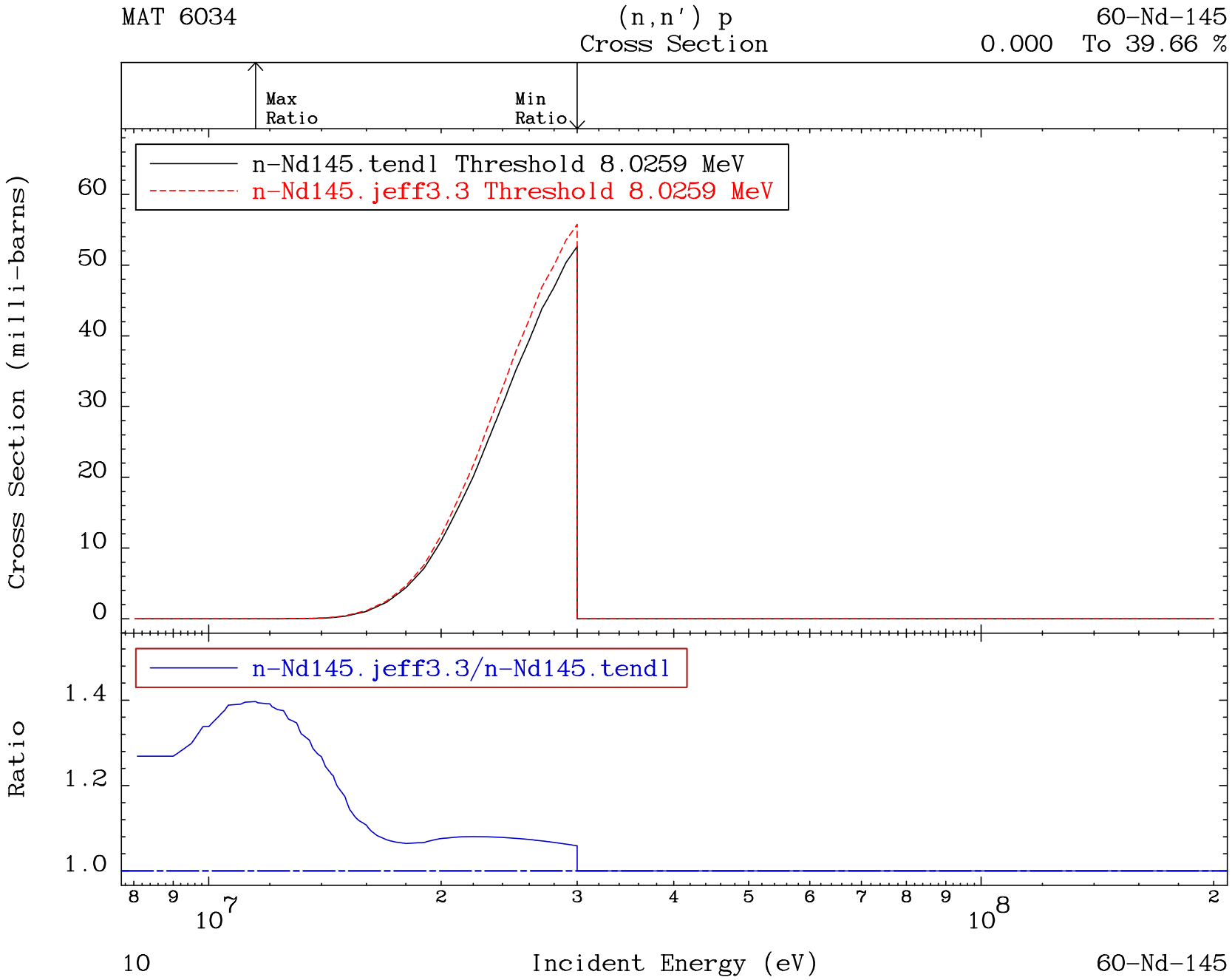

MAT 6034
(n,2n)
Cross Section
60-Nd-145
-0.170 To 0.066 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 5.7954 MeV
n-Nd145.jeff3.3 Threshold 5.7954 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
60-Nd-145

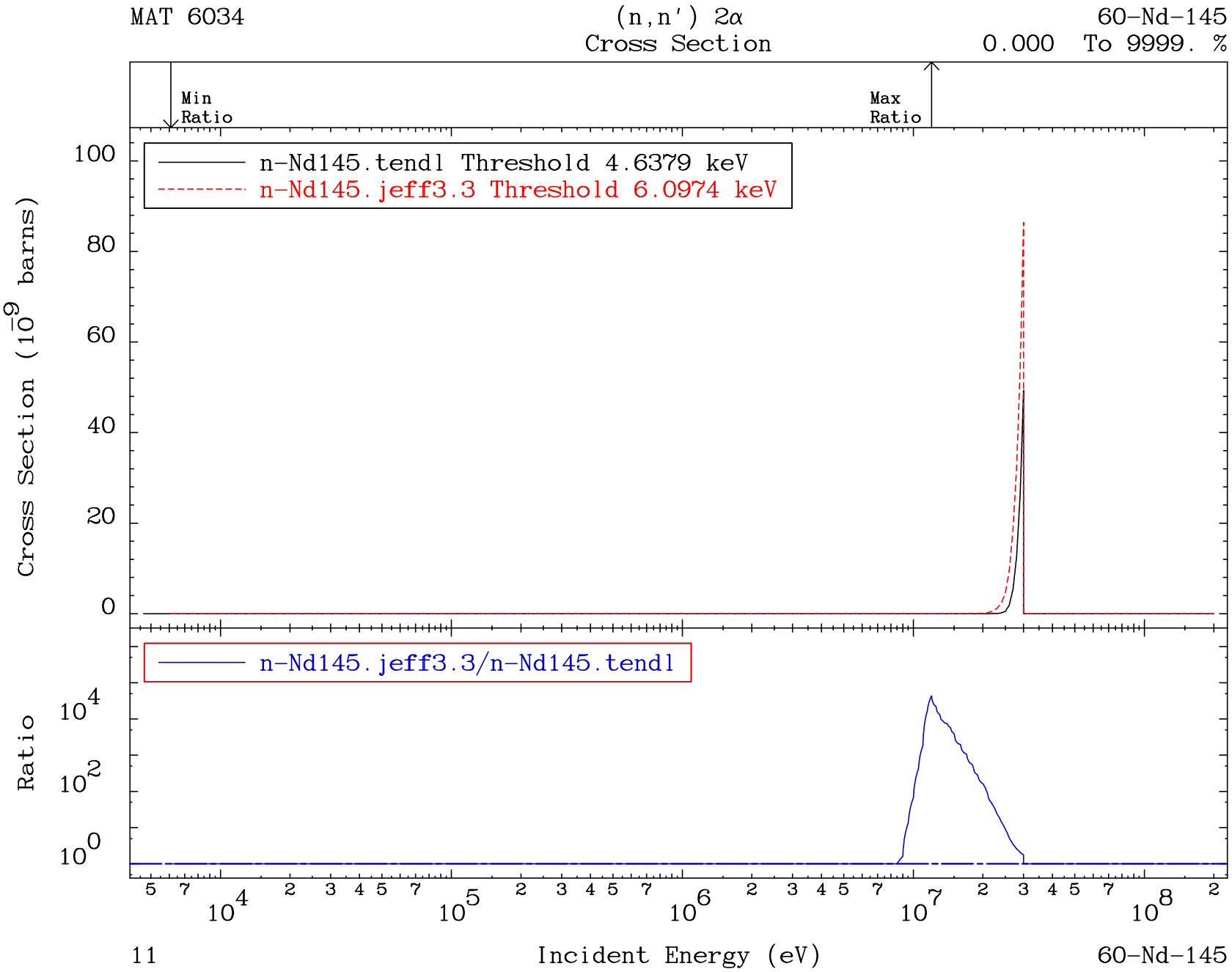

MAT 6034
(n,3n)
Cross Section
60-Nd-145
-0.412 To 0.021 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 13.667 MeV
n-Nd145.jeff3.3 Threshold 13.667 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
60-Nd-145

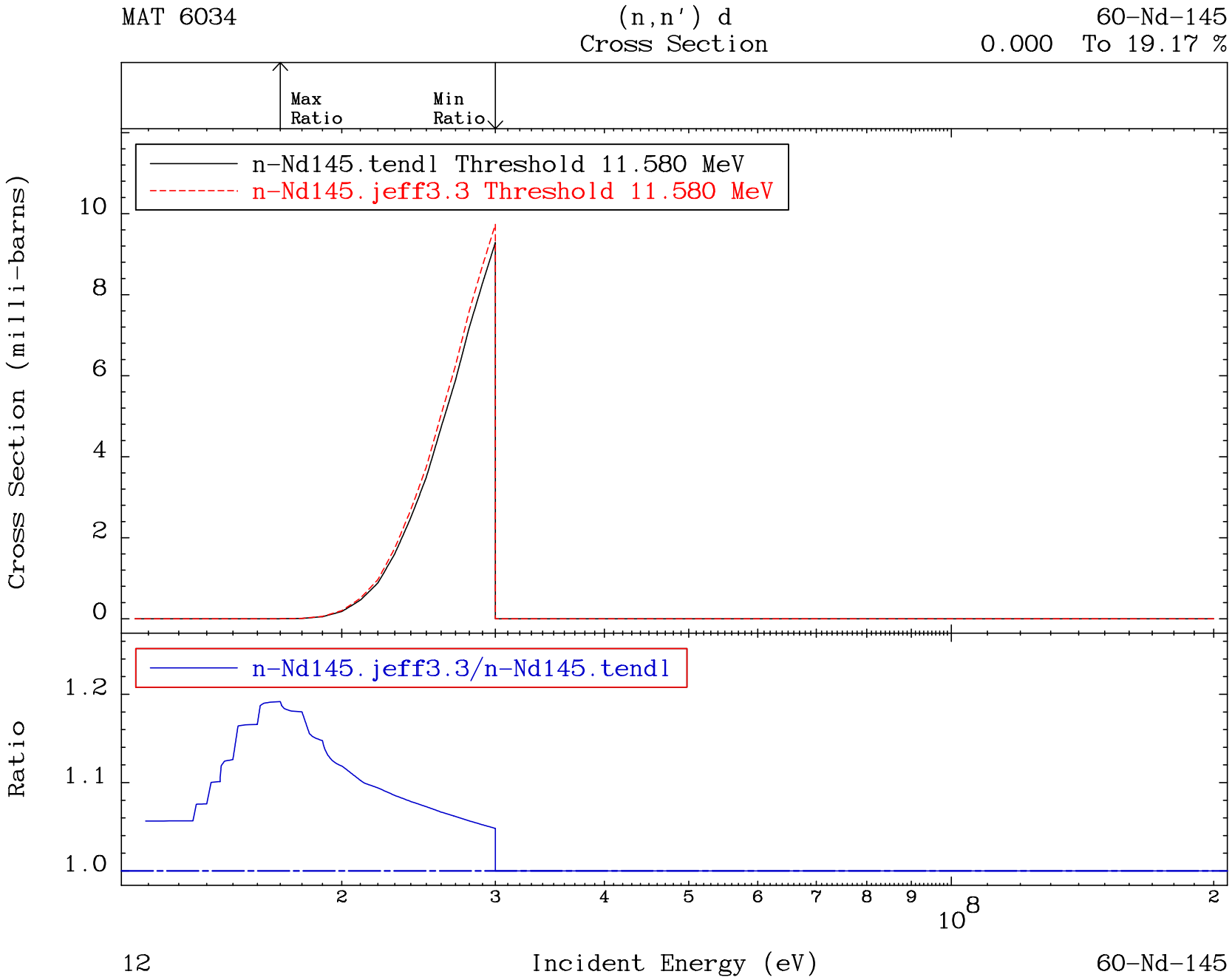

MAT 6034
(n,n') α
Cross Section
60-Nd-145
-7.379 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 4.6379 keV
n-Nd145.jeff3.3 Threshold 6.0974 keV
Cross Section (milli-barns)
20
15
10
5
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^9
10^6
10^3
10^0
5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
7
Incident Energy (eV)
60-Nd-145

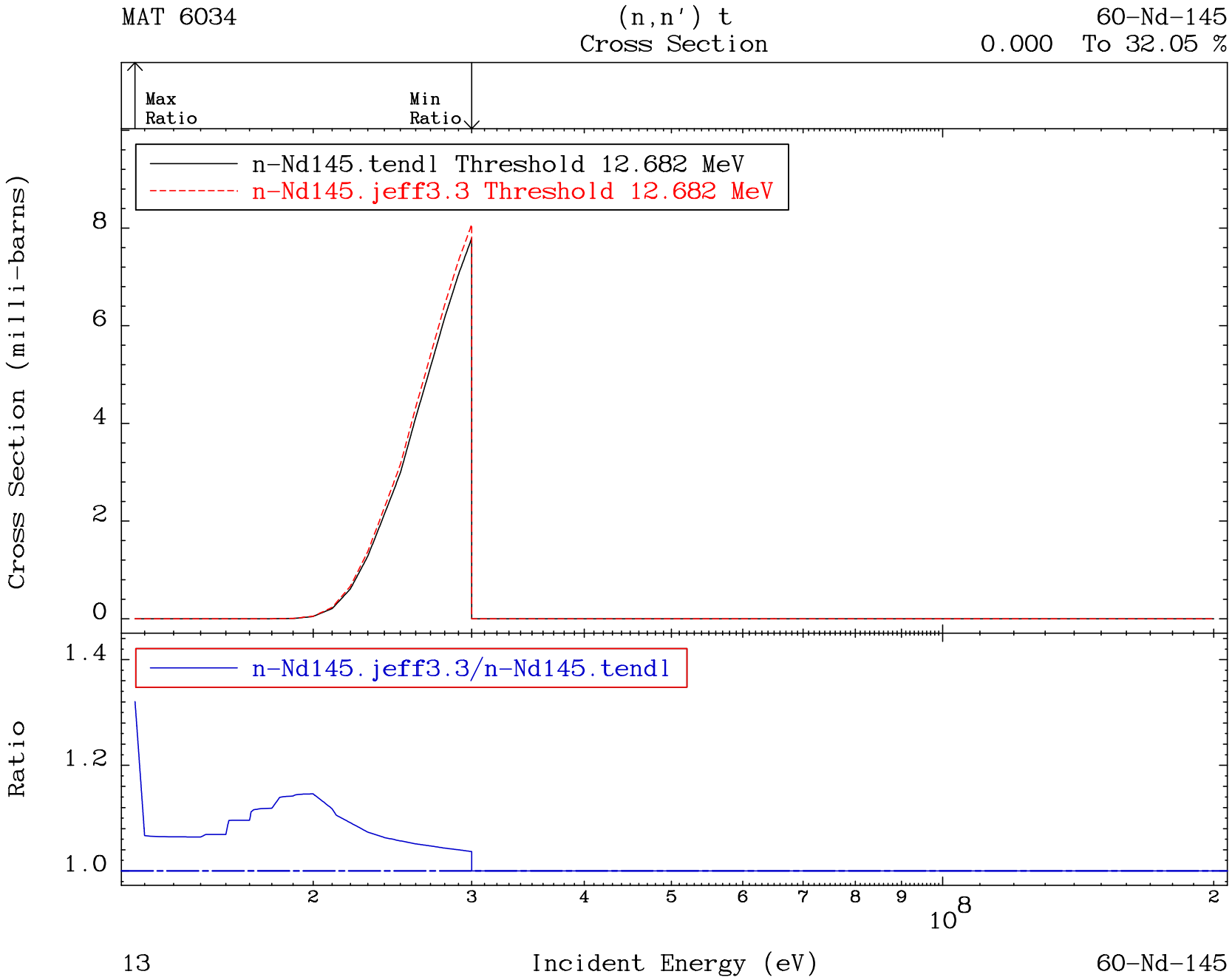

MAT 6034
(n,2n) α
Cross Section
60-Nd-145
-75.23 To 9999. %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 3.8789 MeV
n-Nd145.jeff3.3 Threshold 3.8757 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
14
16
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^0
10^2
10^4
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
8
60-Nd-145

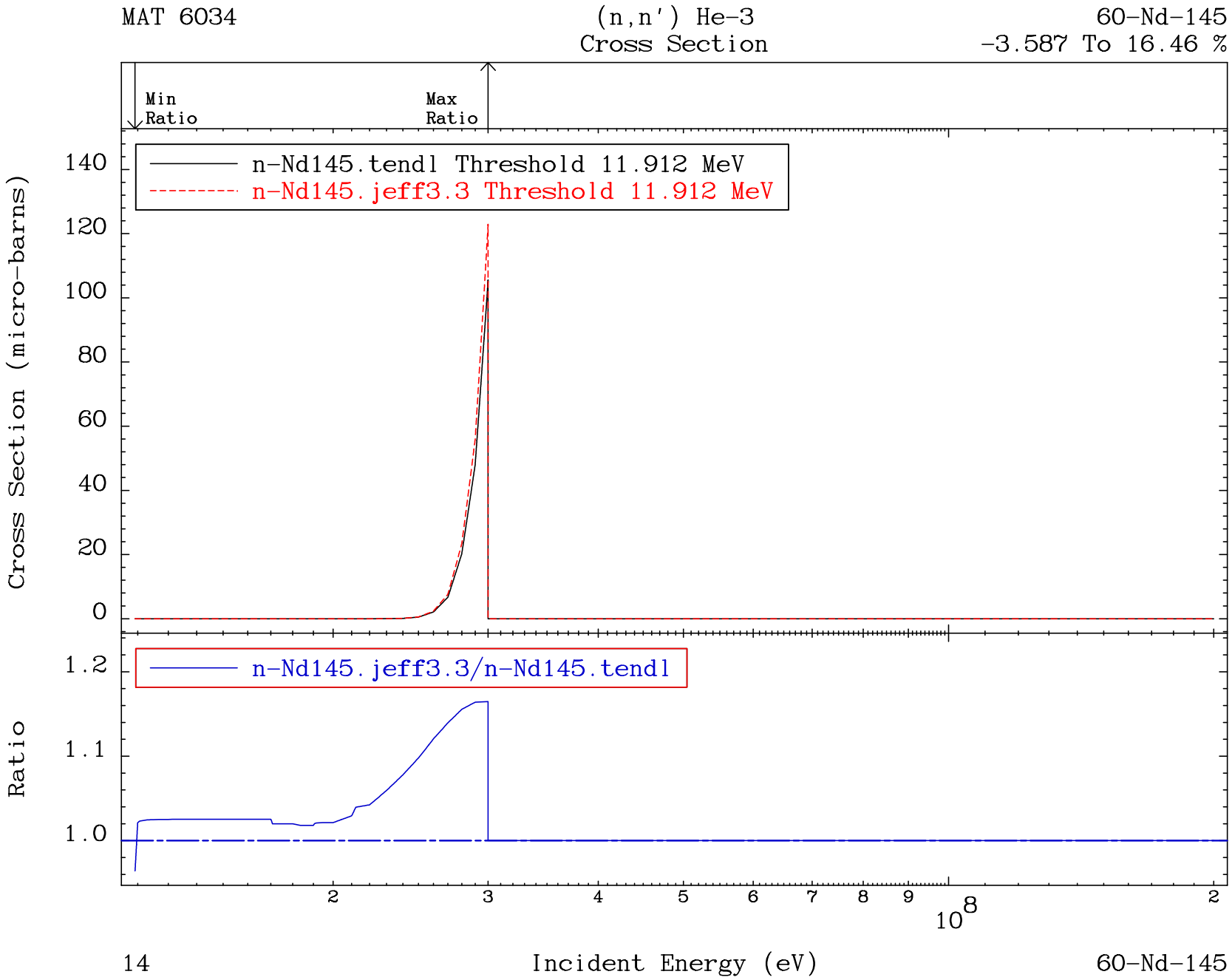

MAT 6034
(n,3n) α
Cross Section
60-Nd-145
-99.65 To 9999. %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 13.143 MeV
n-Nd145.jeff3.3 Threshold 13.140 MeV
Cross Section (micro-barns)
500
400
300
200
100
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^4
10^2
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
60-Nd-145

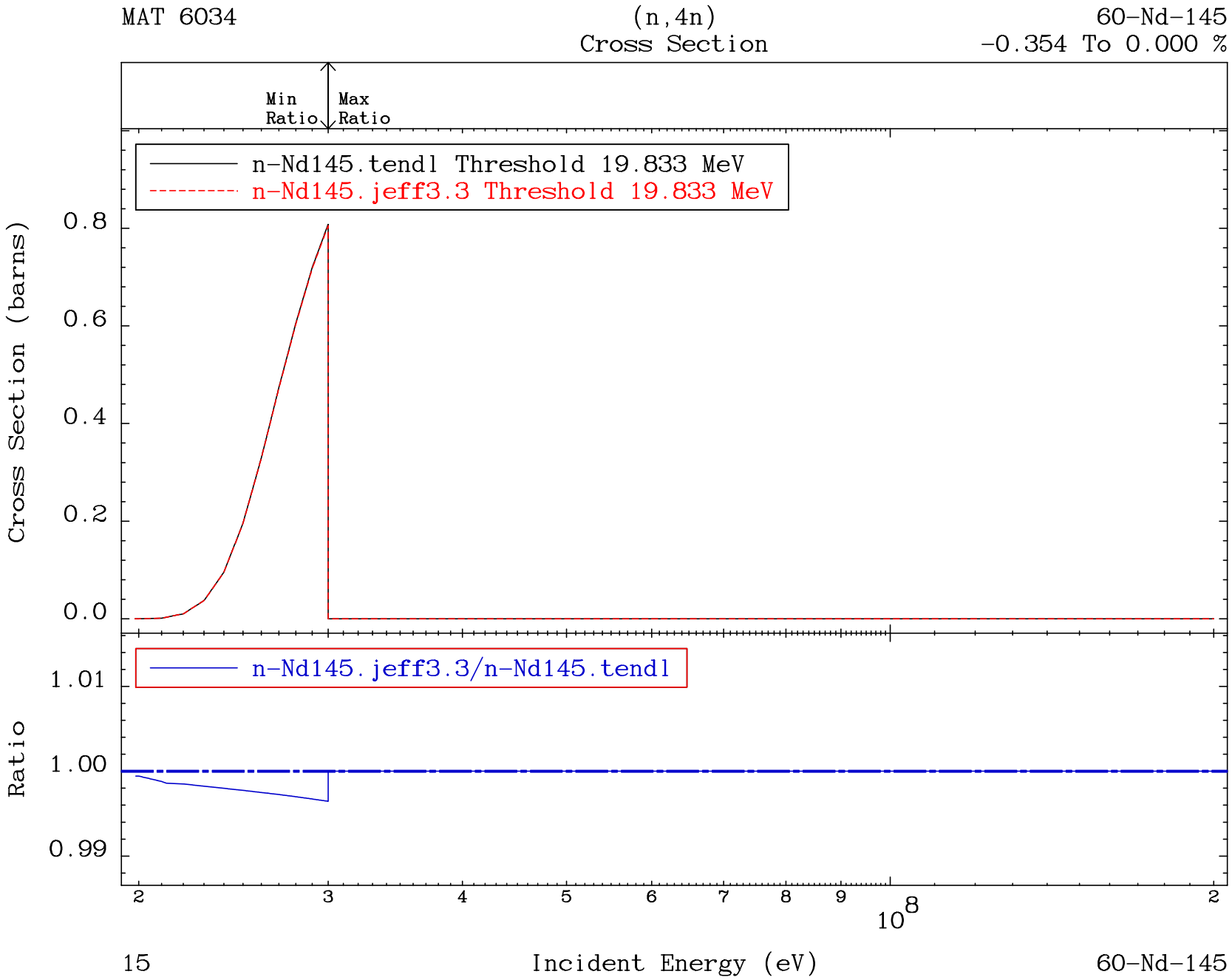

MAT 6034
(n,n') p
Cross Section
60-Nd-145
0.000 To 39.66 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 8.0259 MeV
n-Nd145.jeff3.3 Threshold 8.0259 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
10
Incident Energy (eV)
60-Nd-145

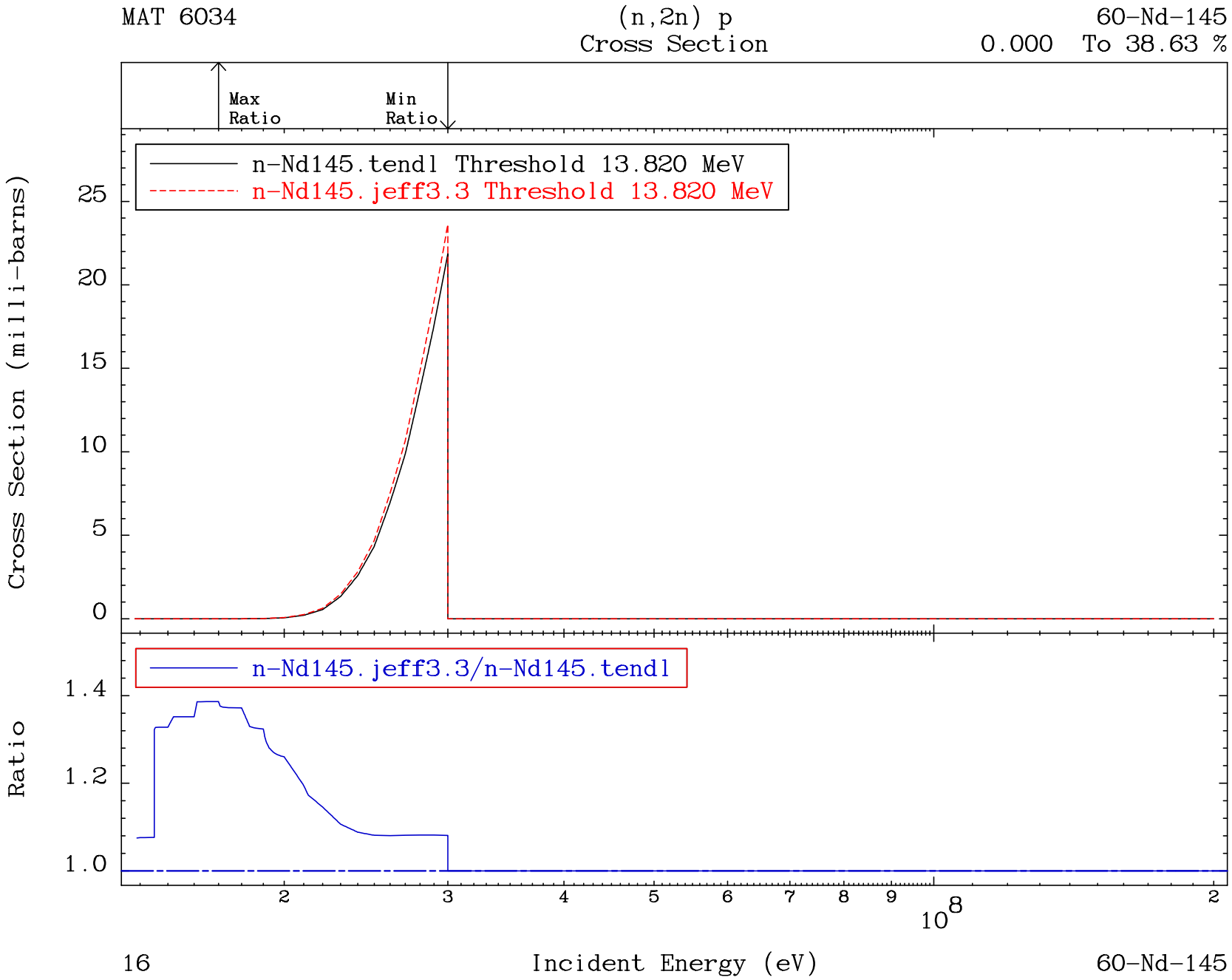

MAT 6034
(n,n') 2α
Cross Section
60-Nd-145
0.000 To 9999. %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 4.6379 keV
n-Nd145.jeff3.3 Threshold 6.0974 keV
Cross Section (10^-9 barns)
100
80
60
40
20
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^4
10^2
10^0
5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
11
Incident Energy (eV)
60-Nd-145

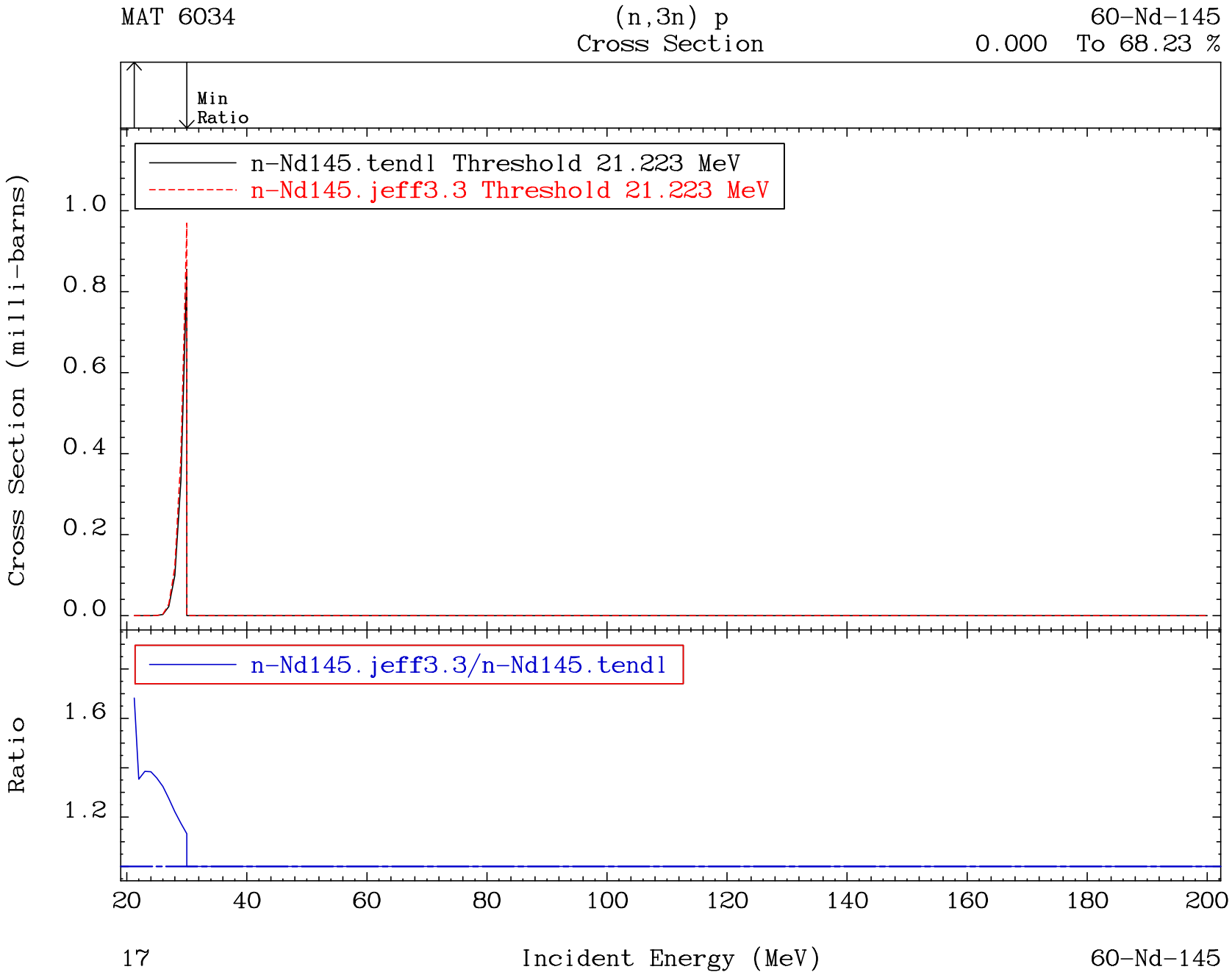

MAT 6034
(n,n') d
Cross Section
60-Nd-145
0.000 To 19.17 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 11.580 MeV
n-Nd145.jeff3.3 Threshold 11.580 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.0
1.1
1.2
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
60-Nd-145

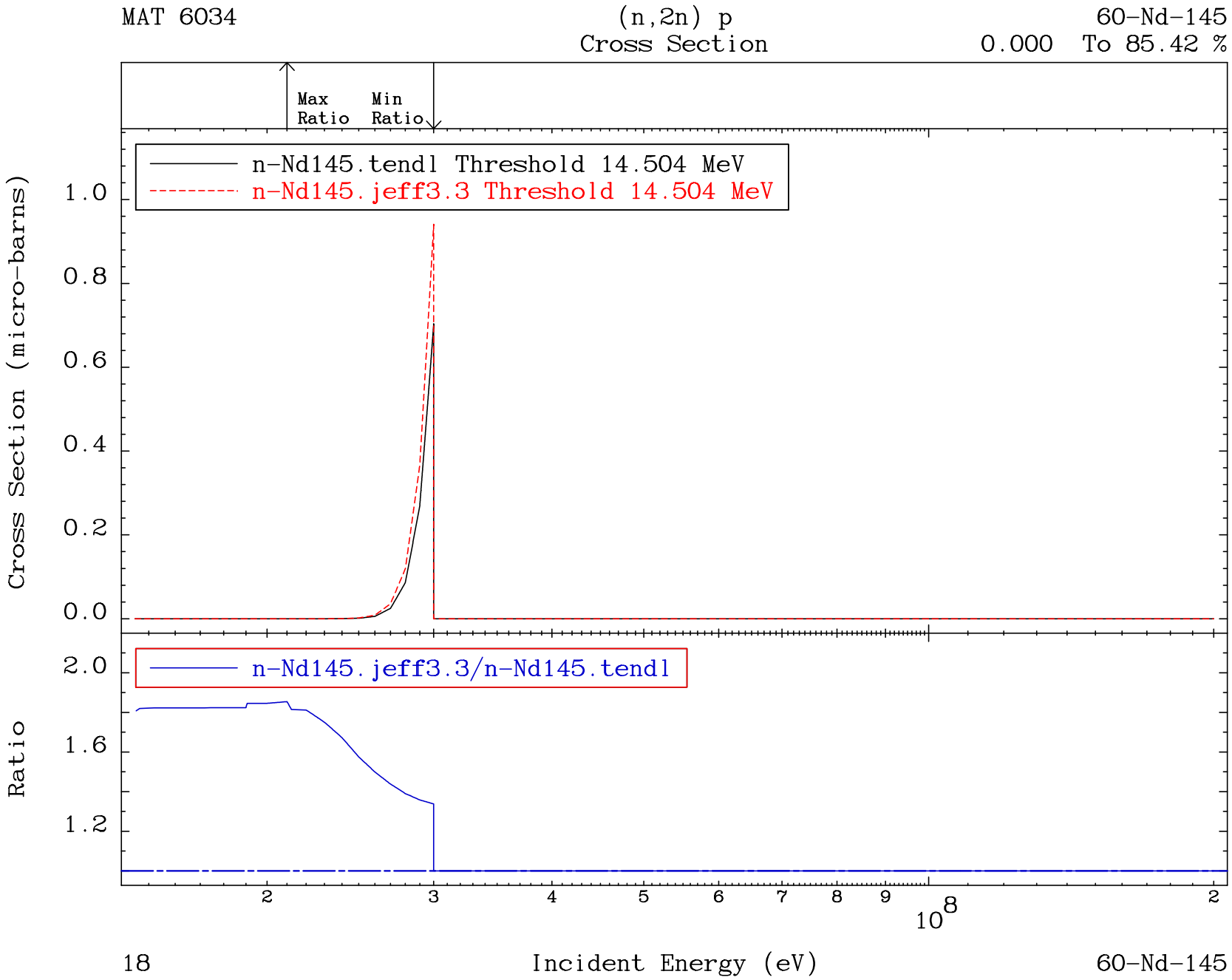

MAT 6034
(n,n') t
Cross Section
60-Nd-145
0.000 To 32.05 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 12.682 MeV
n-Nd145.jeff3.3 Threshold 12.682 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.0
1.2
1.4
2
3
4
5
6
7
8
9
10^8
2
13
Incident Energy (eV)
60-Nd-145

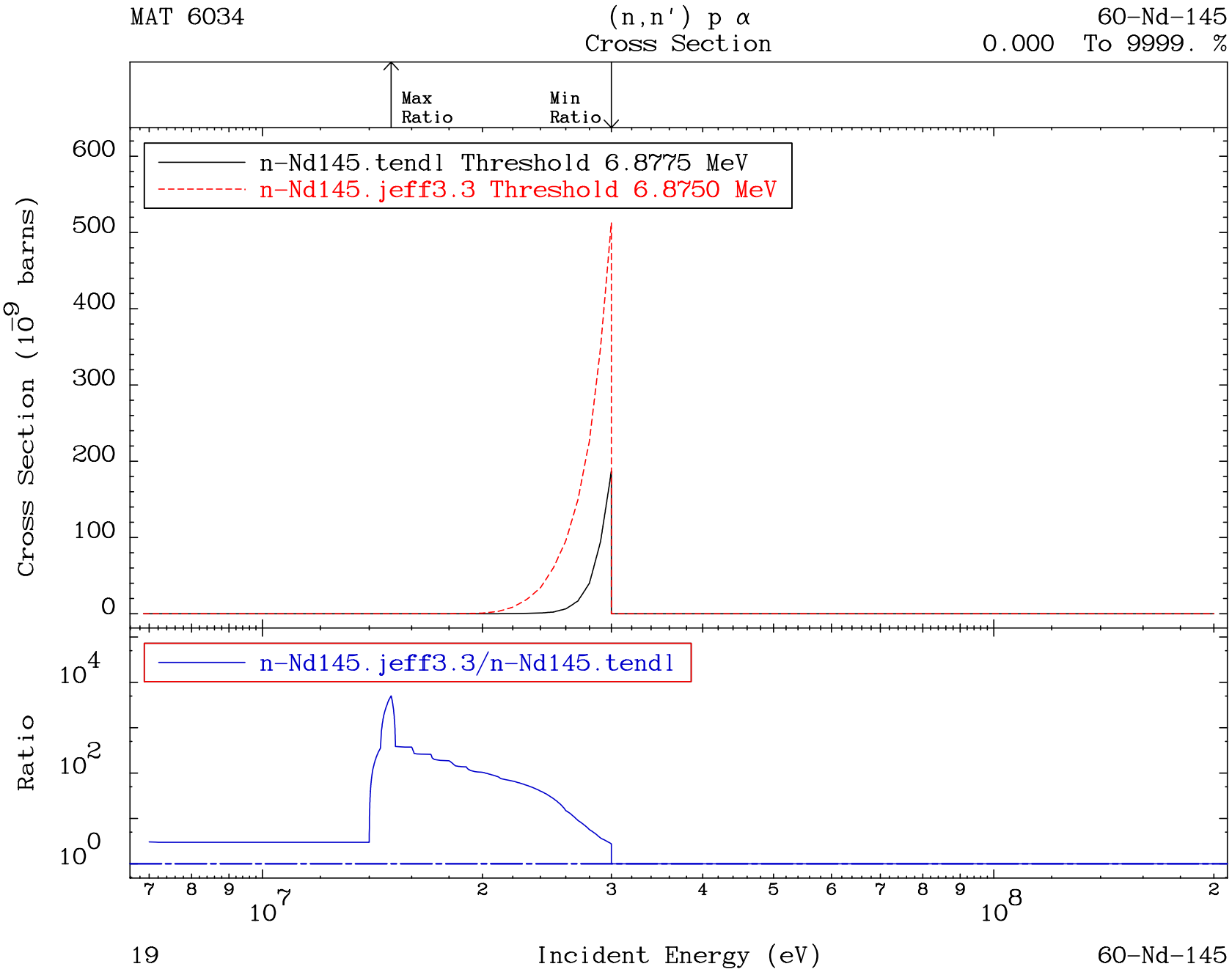

MAT 6034
(n,n') He-3
Cross Section
60-Nd-145
-3.587 To 16.46 %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 11.912 MeV
n-Nd145.jeff3.3 Threshold 11.912 MeV
Cross Section (micro-barns)
140
120
100
80
60
40
20
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.1
1.0
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
60-Nd-145

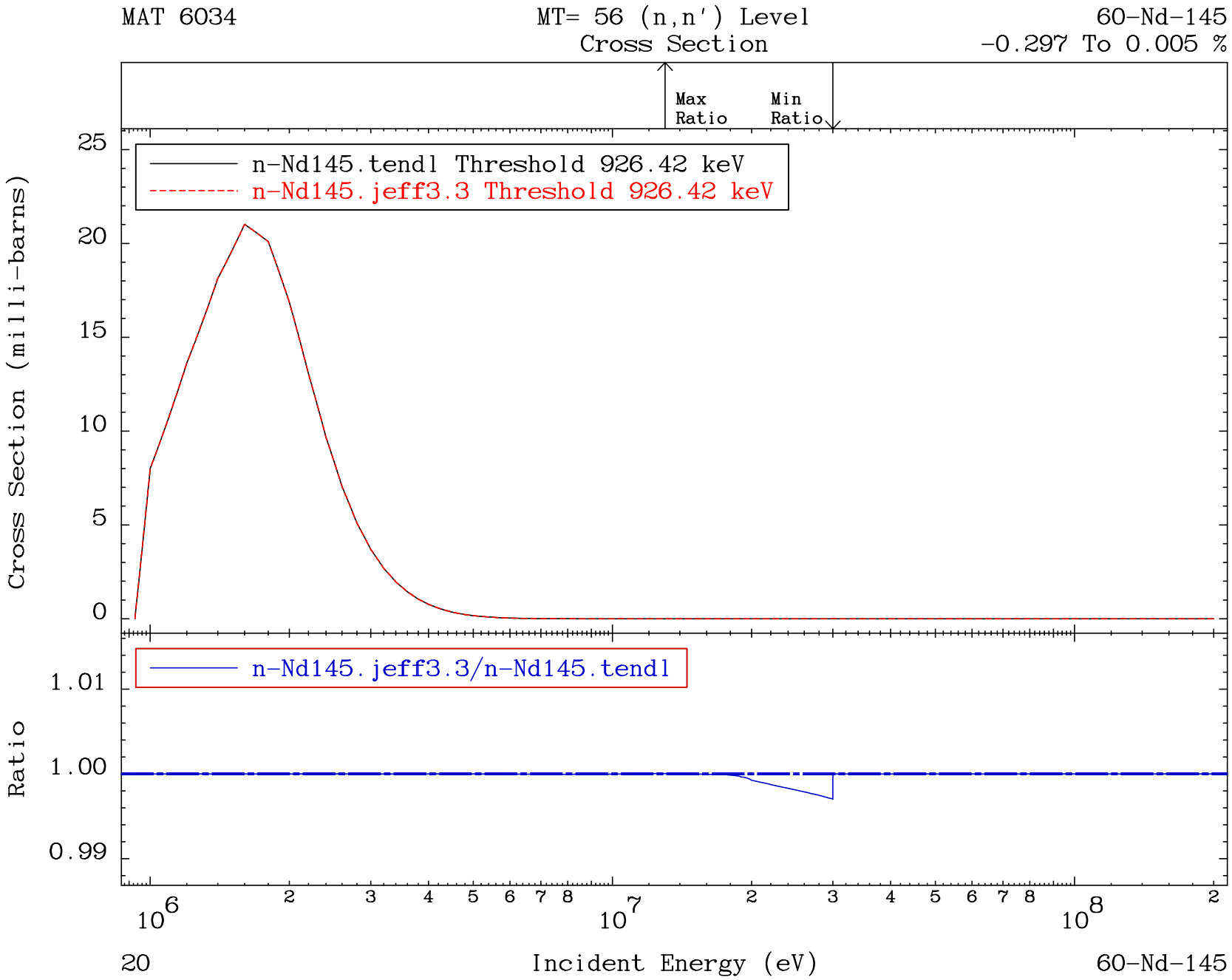

MAT 6034
(n,4n)
Cross Section
60-Nd-145
-0.354 To 0.000 %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 19.833 MeV
n-Nd145.jeff3.3 Threshold 19.833 MeV
Cross Section (barns)
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
15
Incident Energy (eV)
60-Nd-145

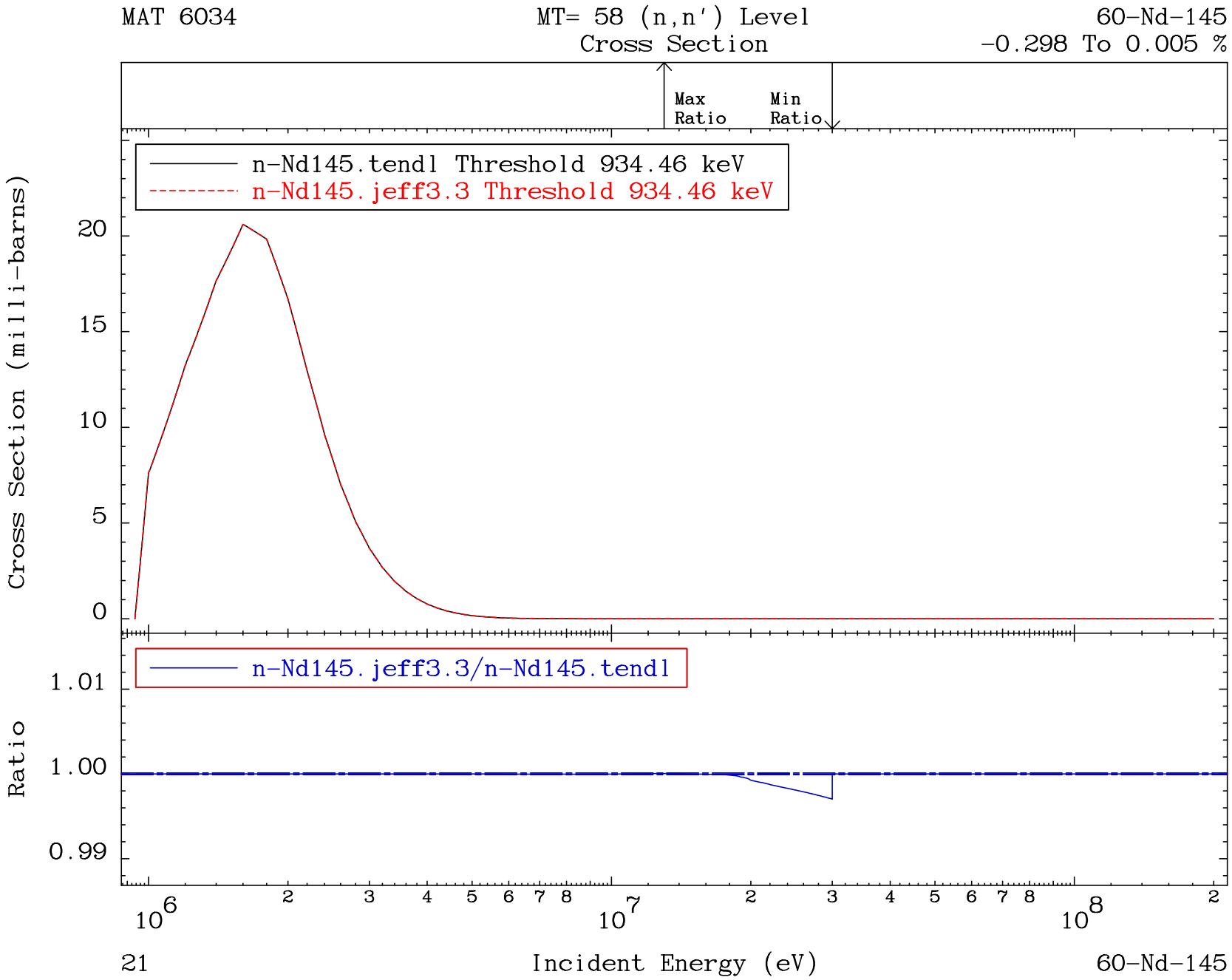

MAT 6034
(n,2n) p
Cross Section
60-Nd-145
0.000 To 38.63 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 13.820 MeV
n-Nd145.jeff3.3 Threshold 13.820 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
16
Incident Energy (eV)
60-Nd-145

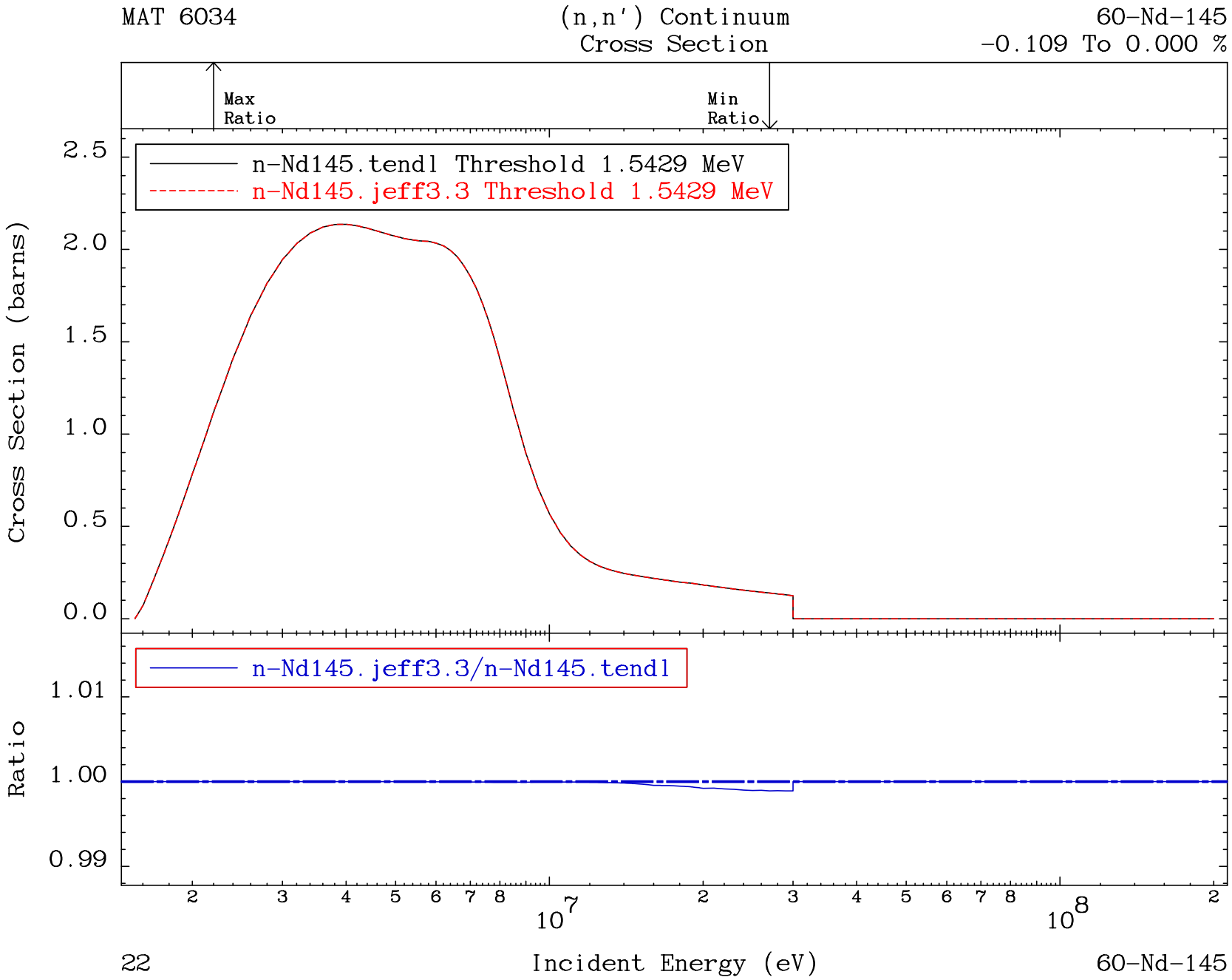

MAT 6034
(n,3n) p
Cross Section
60-Nd-145
0.000 To 68.23 %
Min
Ratio
n-Nd145.tendl Threshold 21.223 MeV
n-Nd145.jeff3.3 Threshold 21.223 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.6
1.2
20
40
60
80
100
120
140
160
180
200
17
Incident Energy (MeV)
60-Nd-145

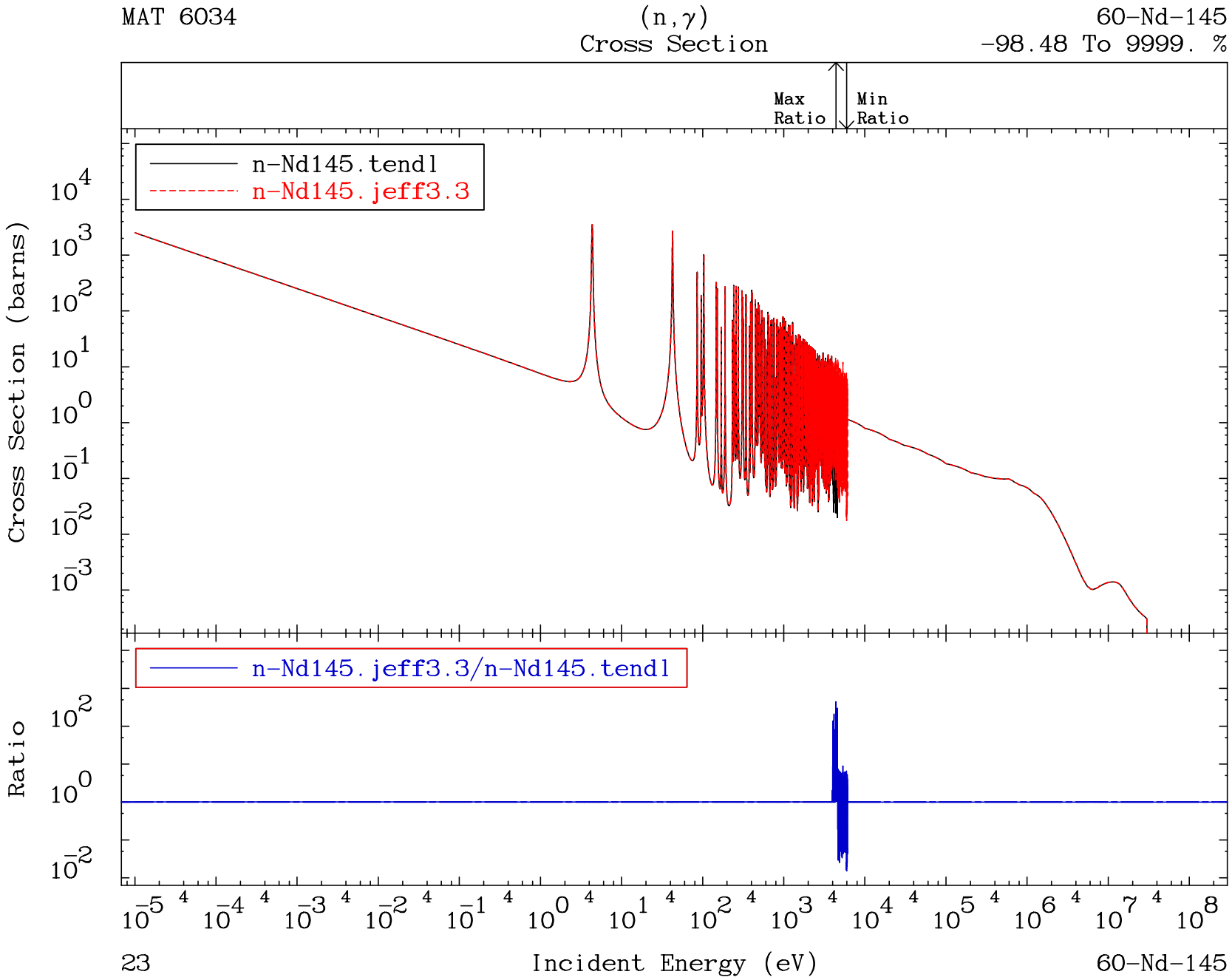

MAT 6034
(n,2n) p
Cross Section
60-Nd-145
0.000 To 85.42 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 14.504 MeV
n-Nd145.jeff3.3 Threshold 14.504 MeV
Cross Section (micro-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
2.0
1.6
1.2
2
3
4
5
6
7
8
9
10^8
2
18
Incident Energy (eV)
60-Nd-145

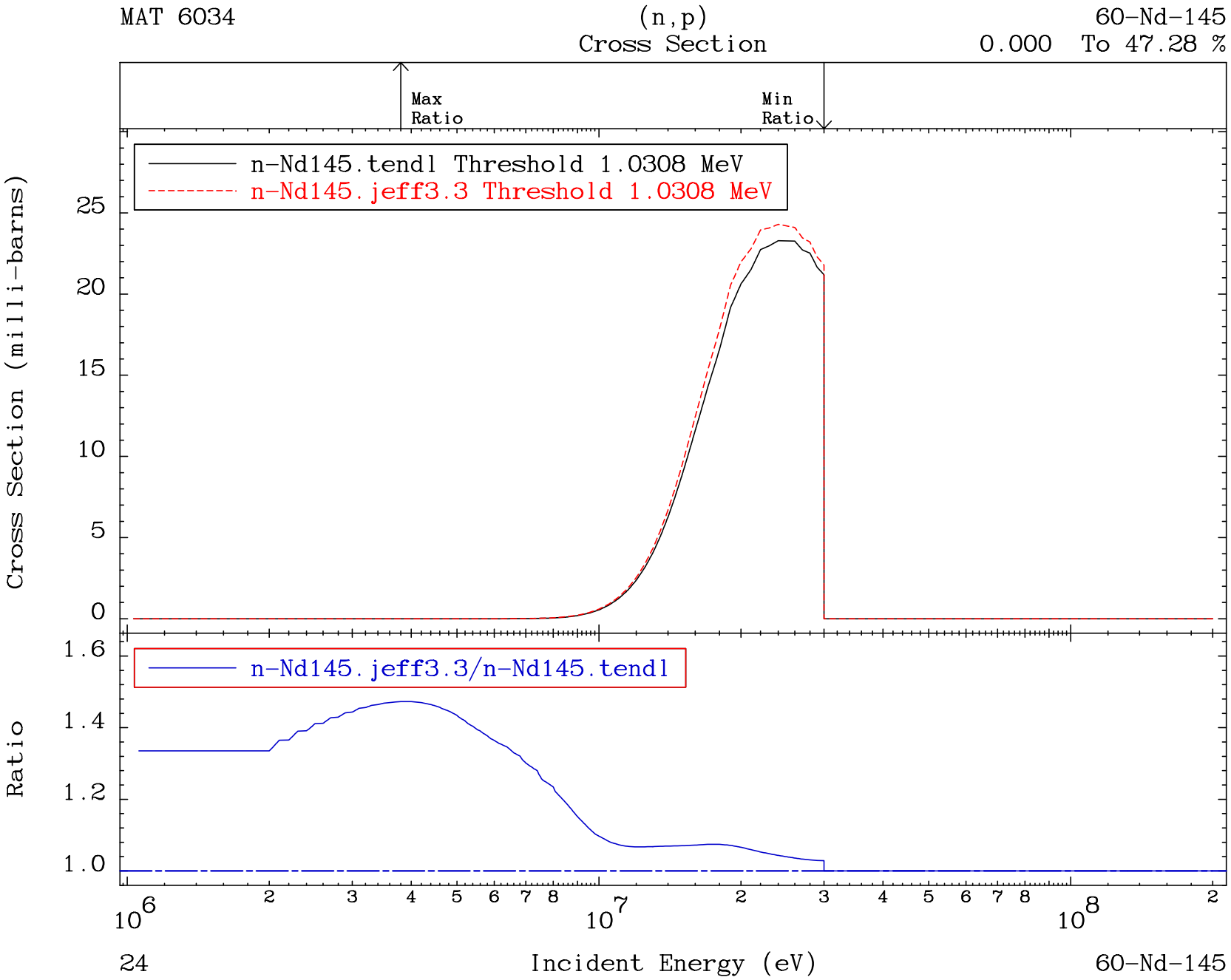

MAT 6034
(n,n') p α
Cross Section
60-Nd-145
0.000 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 6.8775 MeV
n-Nd145.jeff3.3 Threshold 6.8750 MeV
Cross Section (10^-9 barns)
600
500
400
300
200
100
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^4
10^2
10^0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
19
Incident Energy (eV)
60-Nd-145

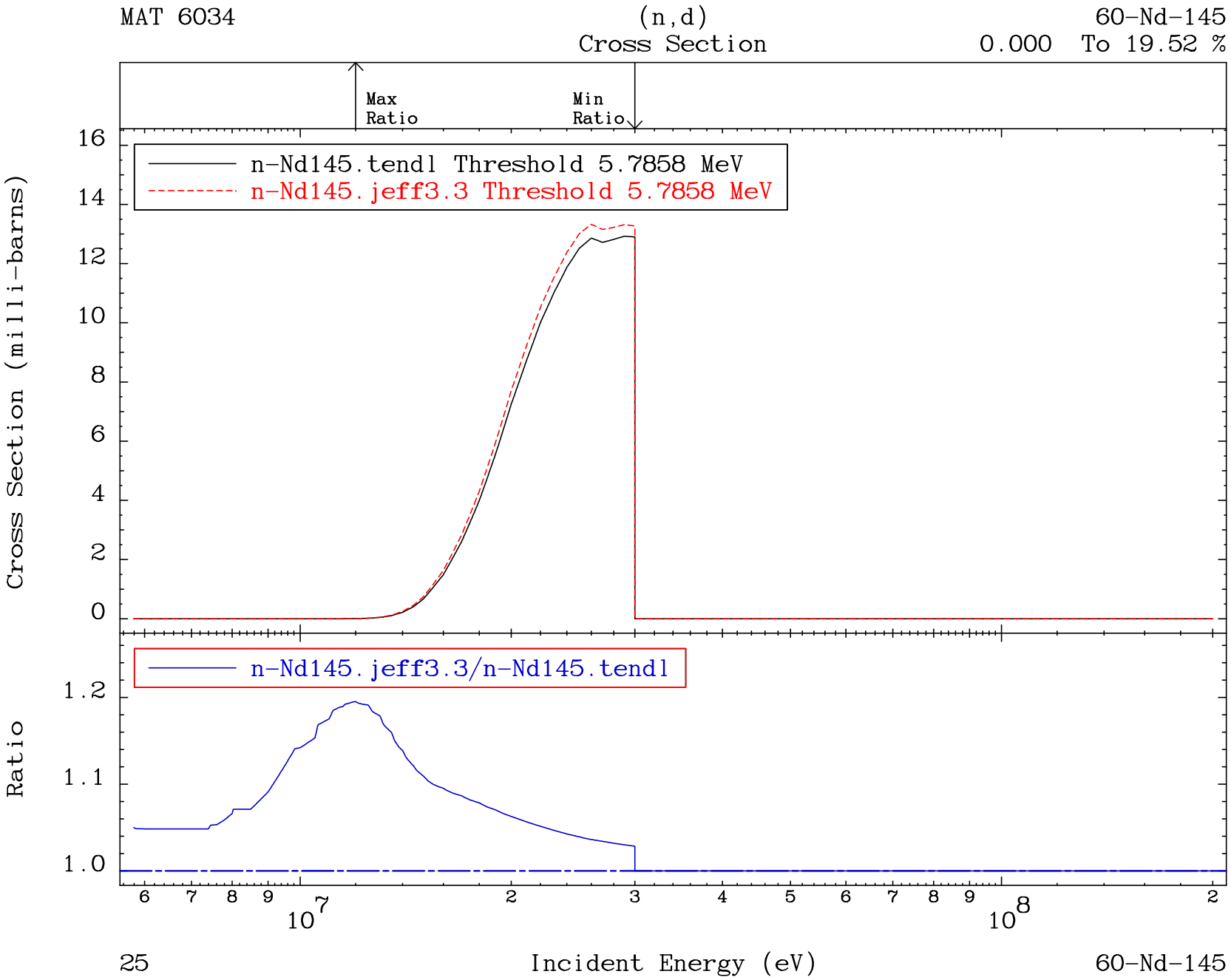

MAT 6034
MT= 56 (n,n') Level
Cross Section
60-Nd-145
-0.297 To 0.005 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 926.42 keV
n-Nd145.jeff3.3 Threshold 926.42 keV
Cross Section (milli-barns)
25
20
15
10
5
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
10^6
10^7
10^8
20
Incident Energy (eV)
60-Nd-145

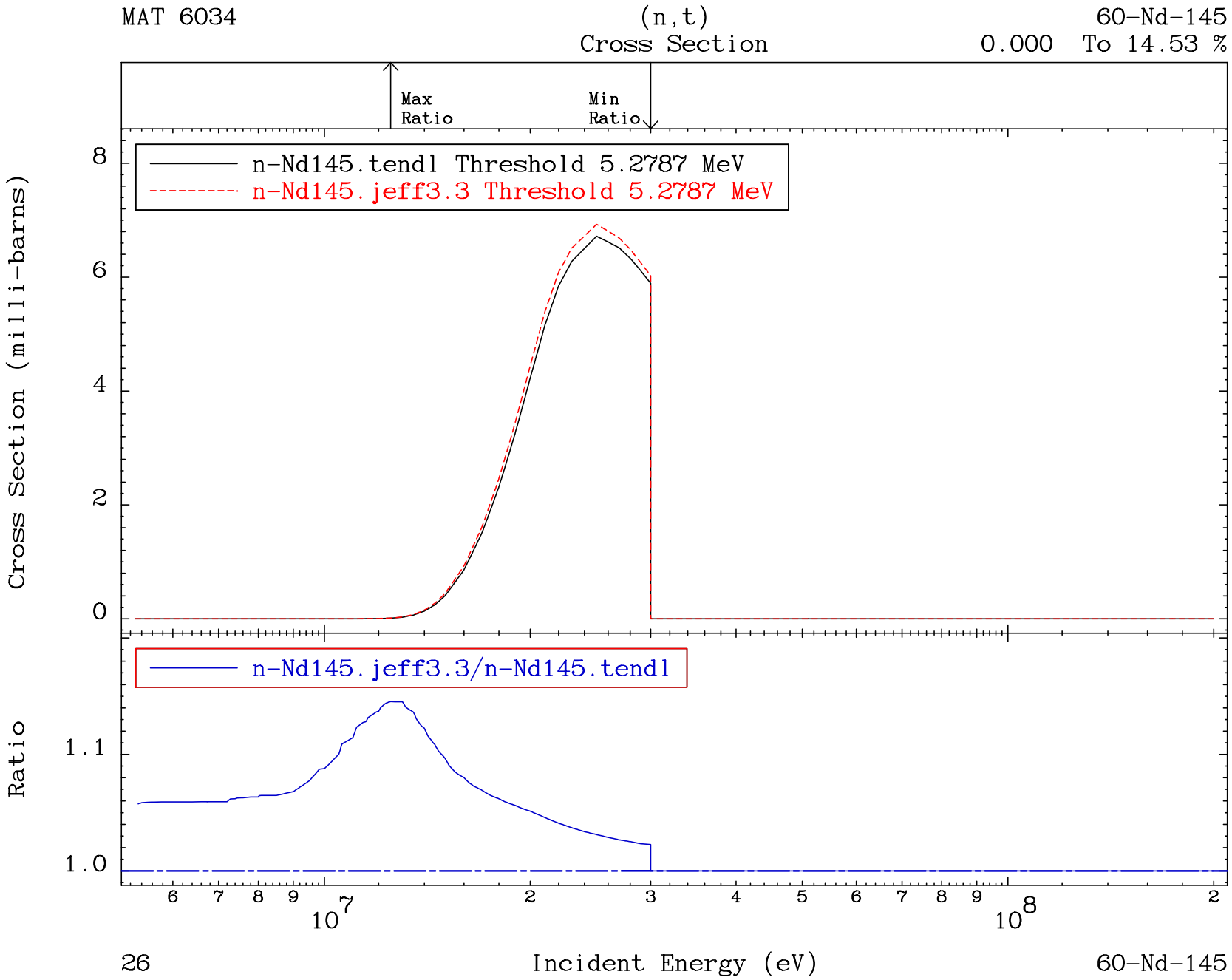

MAT 6034
MT= 58 (n,n') Level
Cross Section
60-Nd-145
-0.298 To 0.005 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 934.46 keV
n-Nd145.jeff3.3 Threshold 934.46 keV
Cross Section (milli-barns)
20
15
10
5
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
60-Nd-145

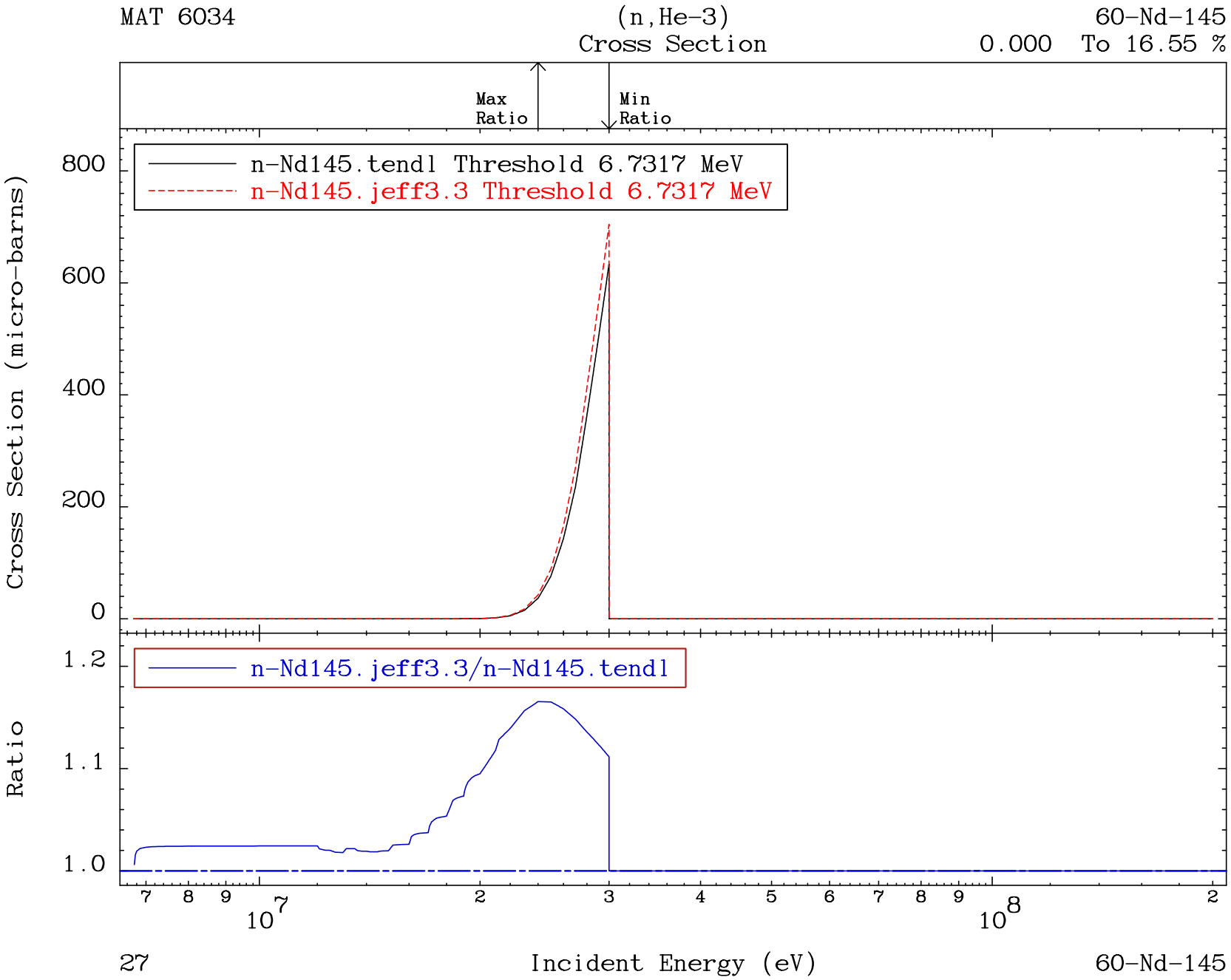

MAT 6034
(n,n') Continuum
Cross Section
60-Nd-145
-0.109 To 0.000 %
Max
Ratio
Min
Ratio
n-Nd145.tendl Threshold 1.5429 MeV
n-Nd145.jeff3.3 Threshold 1.5429 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
22
Incident Energy (eV)
60-Nd-145

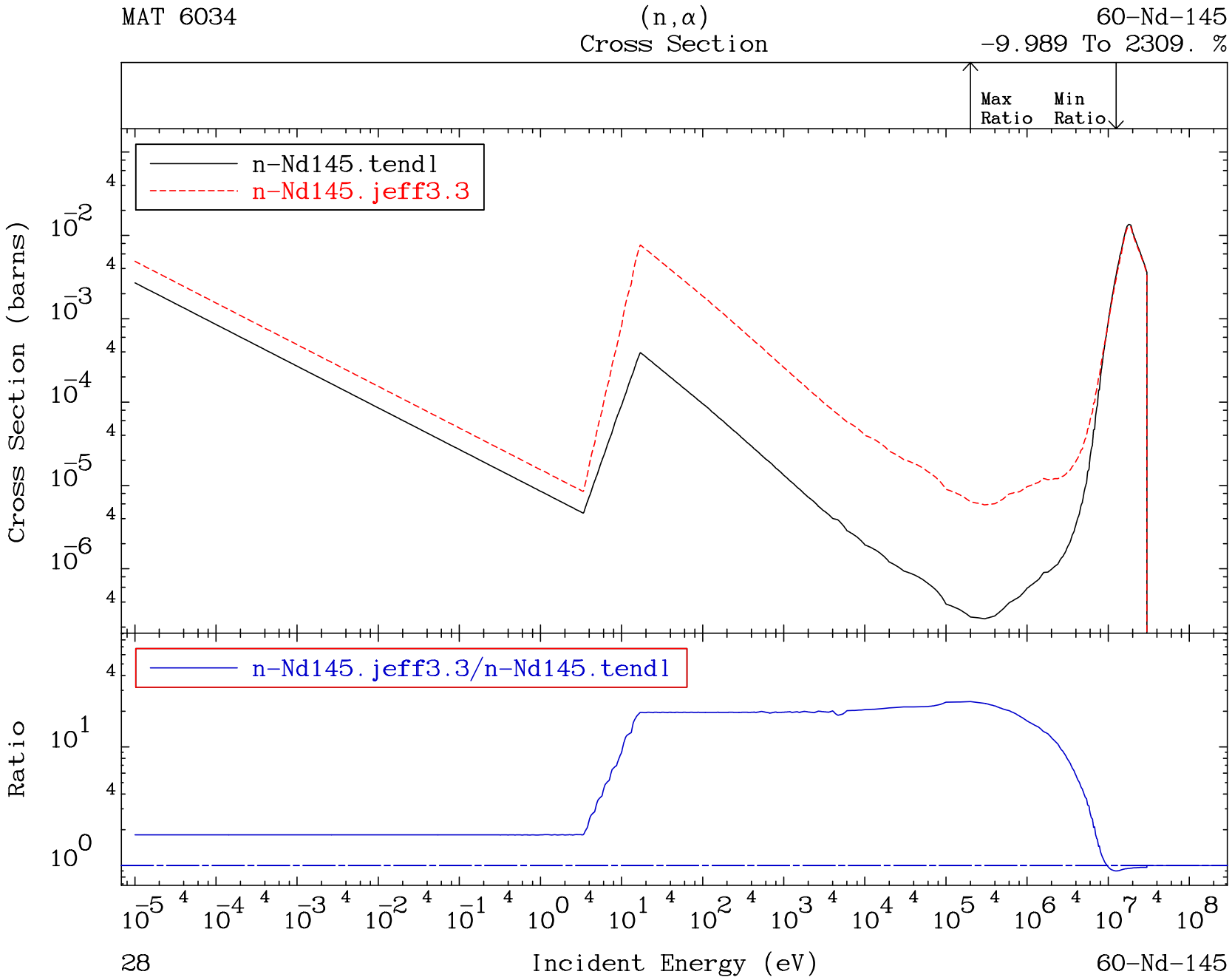

MAT 6034
(n,γ)
Cross Section
60-Nd-145
-98.48 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
23
60-Nd-145

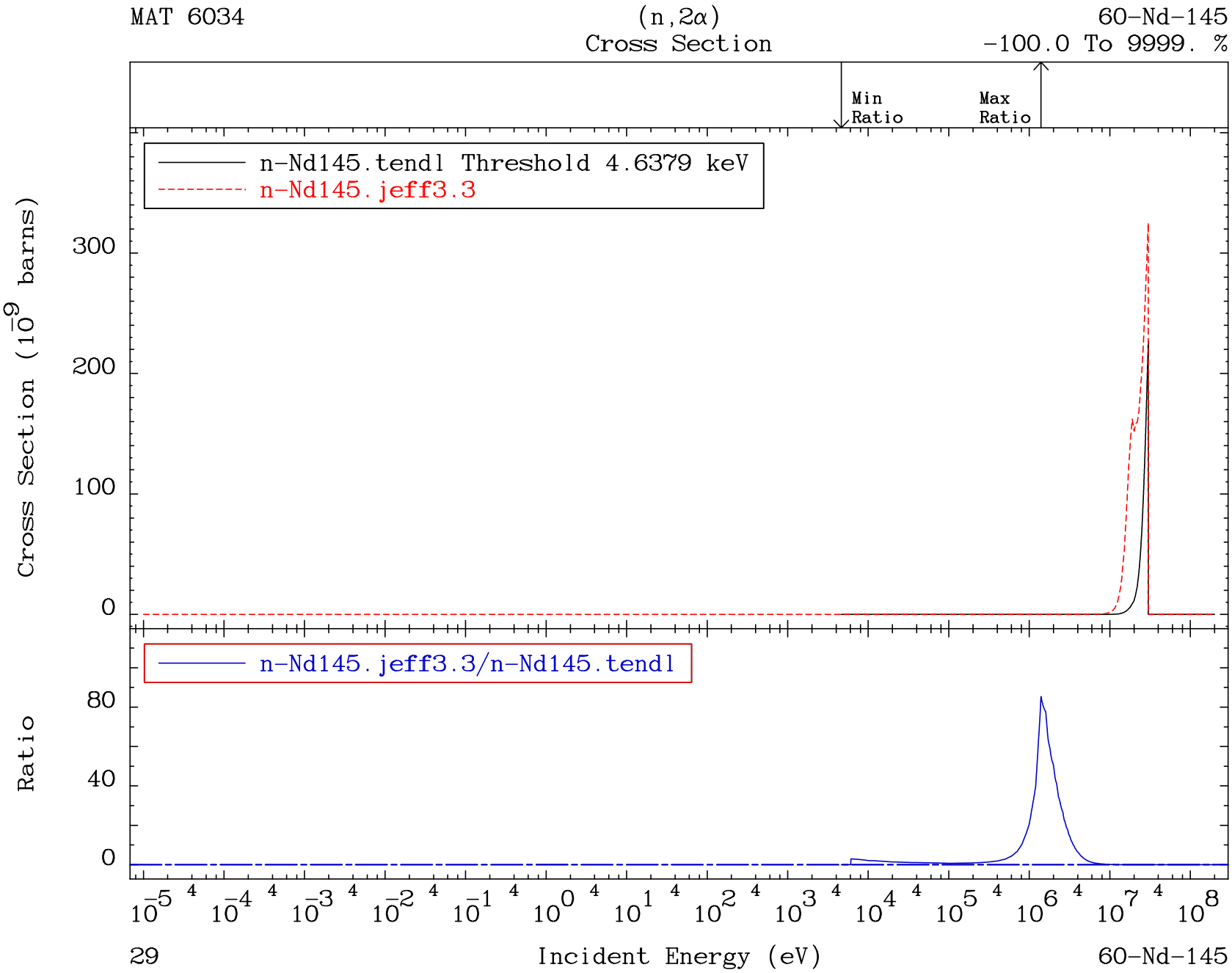

MAT 6034
(n,p)
Cross Section
60-Nd-145
0.000 To 47.28 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 1.0308 MeV
n-Nd145.jeff3.3 Threshold 1.0308 MeV
Cross Section (milli-barns)
0
5
10
15
20
25
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.0
1.2
1.4
1.6
10^6
10^7
10^8
Incident Energy (eV)
24
60-Nd-145

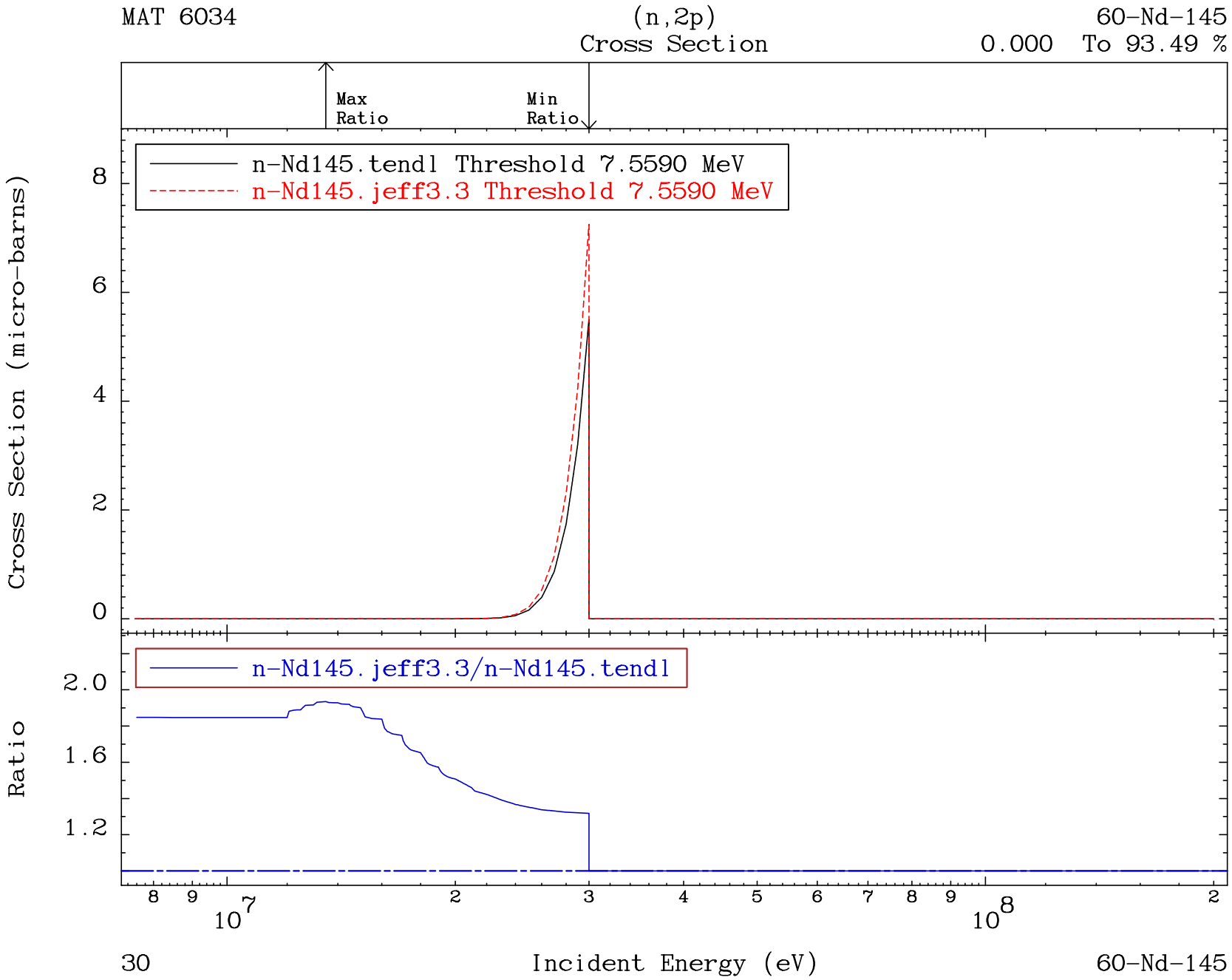

MAT 6034
(n,d)
Cross Section
60-Nd-145
0.000 To 19.52 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 5.7858 MeV
n-Nd145.jeff3.3 Threshold 5.7858 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.1
1.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
60-Nd-145

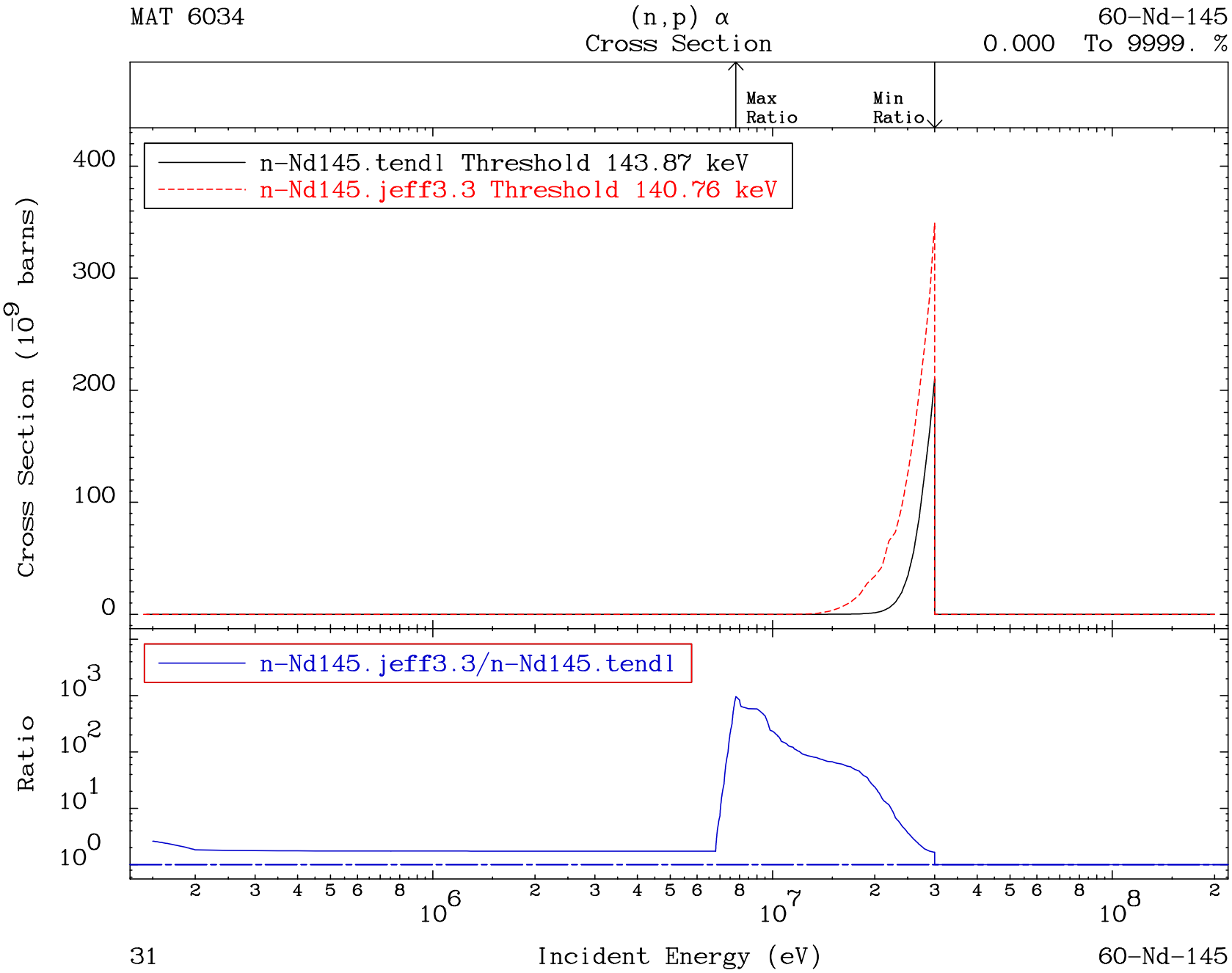

MAT 6034
(n,t)
Cross Section
60-Nd-145
0.000 To 14.53 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 5.2787 MeV
n-Nd145.jeff3.3 Threshold 5.2787 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.0
1.1
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
60-Nd-145

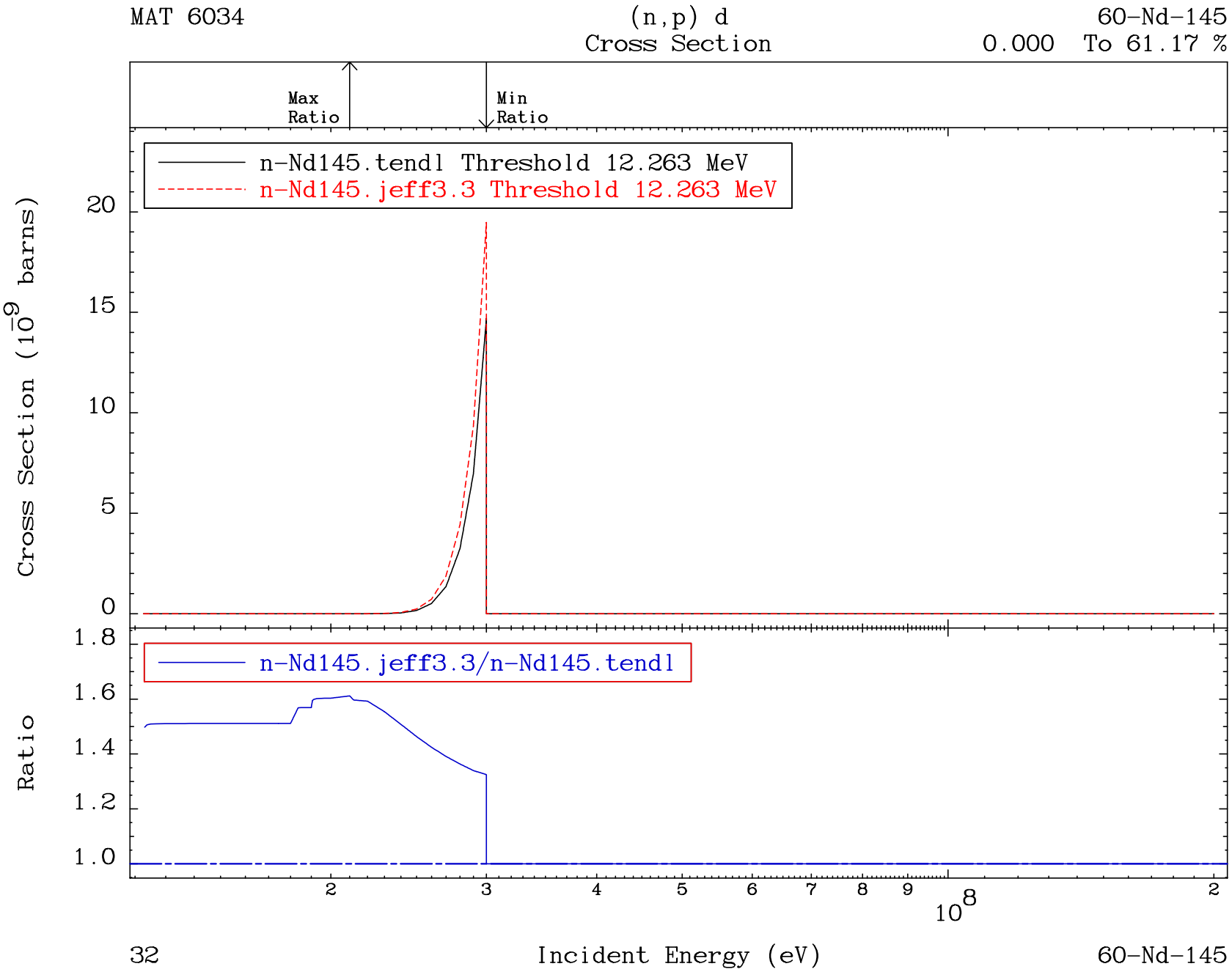

MAT 6034
(n,He-3)
Cross Section
60-Nd-145
0.000 To 16.55 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 6.7317 MeV
n-Nd145.jeff3.3 Threshold 6.7317 MeV
Cross Section (micro-barns)
800
600
400
200
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
27
Incident Energy (eV)
60-Nd-145

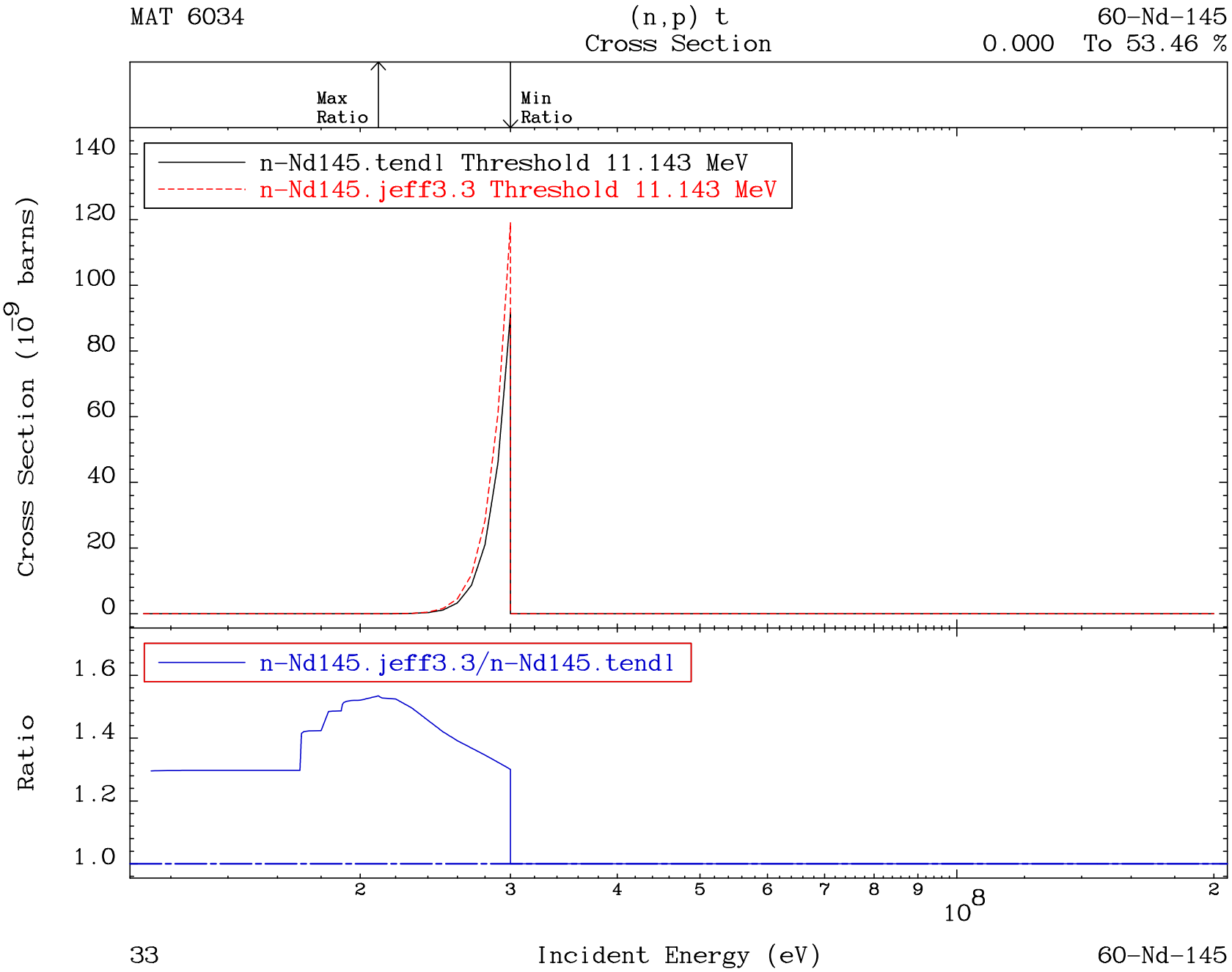

MAT 6034
(n,α)
Cross Section
60-Nd-145
-9.989 To 2309. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
28
60-Nd-145

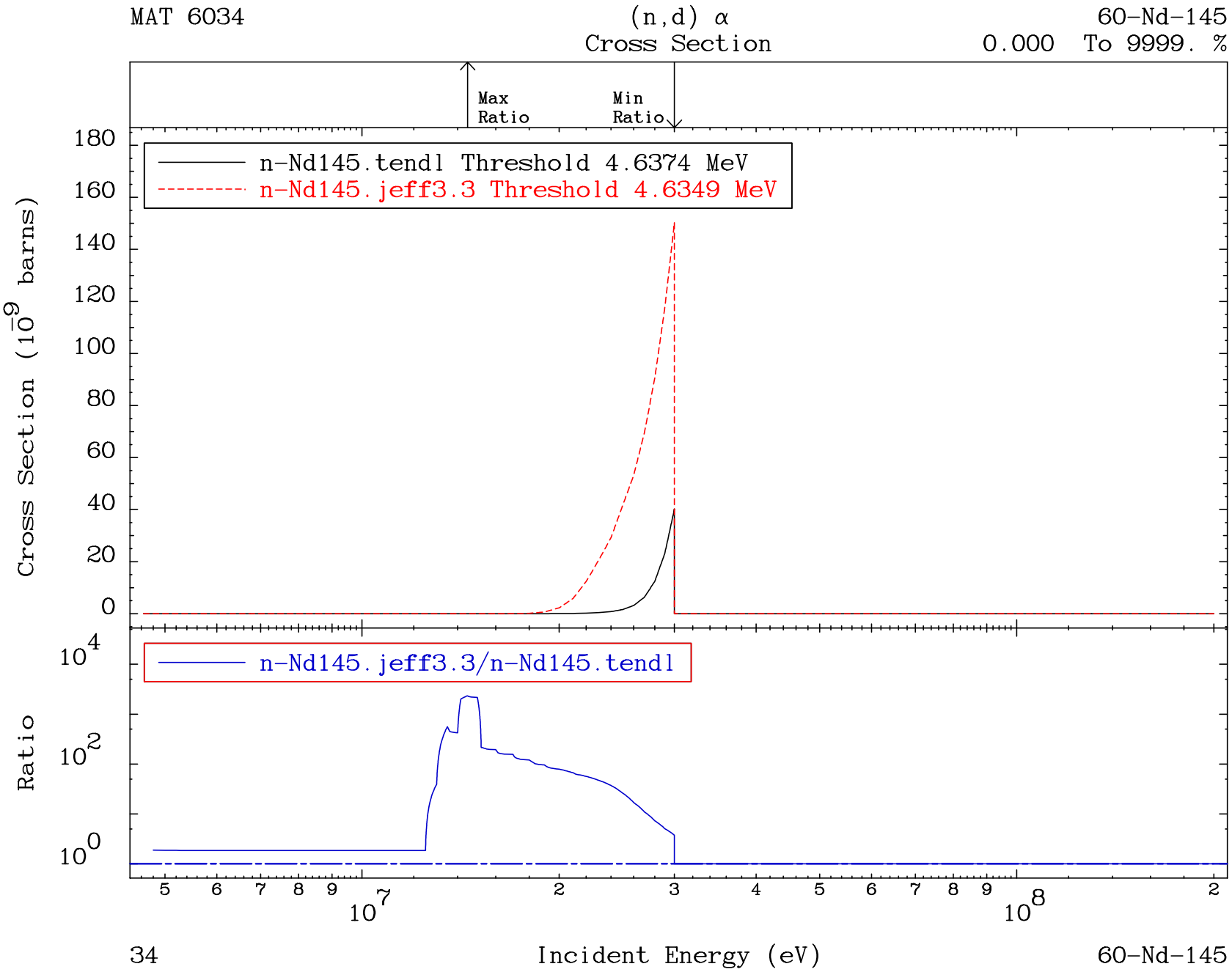

MAT 6034
(n,2α)
Cross Section
60-Nd-145
-100.0 To 9999. %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 4.6379 keV
n-Nd145.jeff3.3
Cross Section (10^-9 barns)
300
200
100
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
80
40
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
60-Nd-145

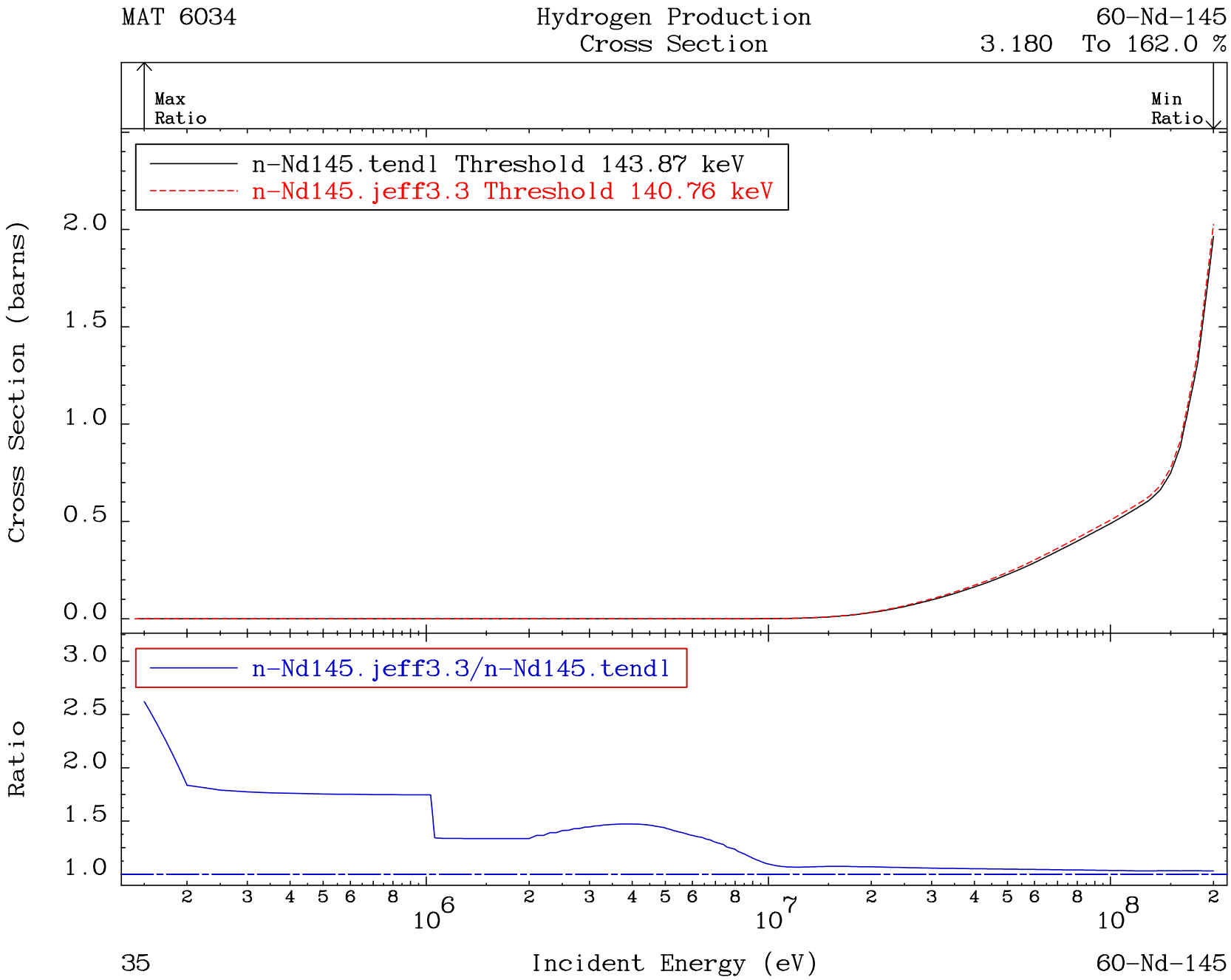

MAT 6034
(n,2p)
Cross Section
60-Nd-145
0.000 To 93.49 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 7.5590 MeV
n-Nd145.jeff3.3 Threshold 7.5590 MeV
Cross Section (micro-barns)
0
2
4
6
8
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.6
2.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
30
Incident Energy (eV)
60-Nd-145

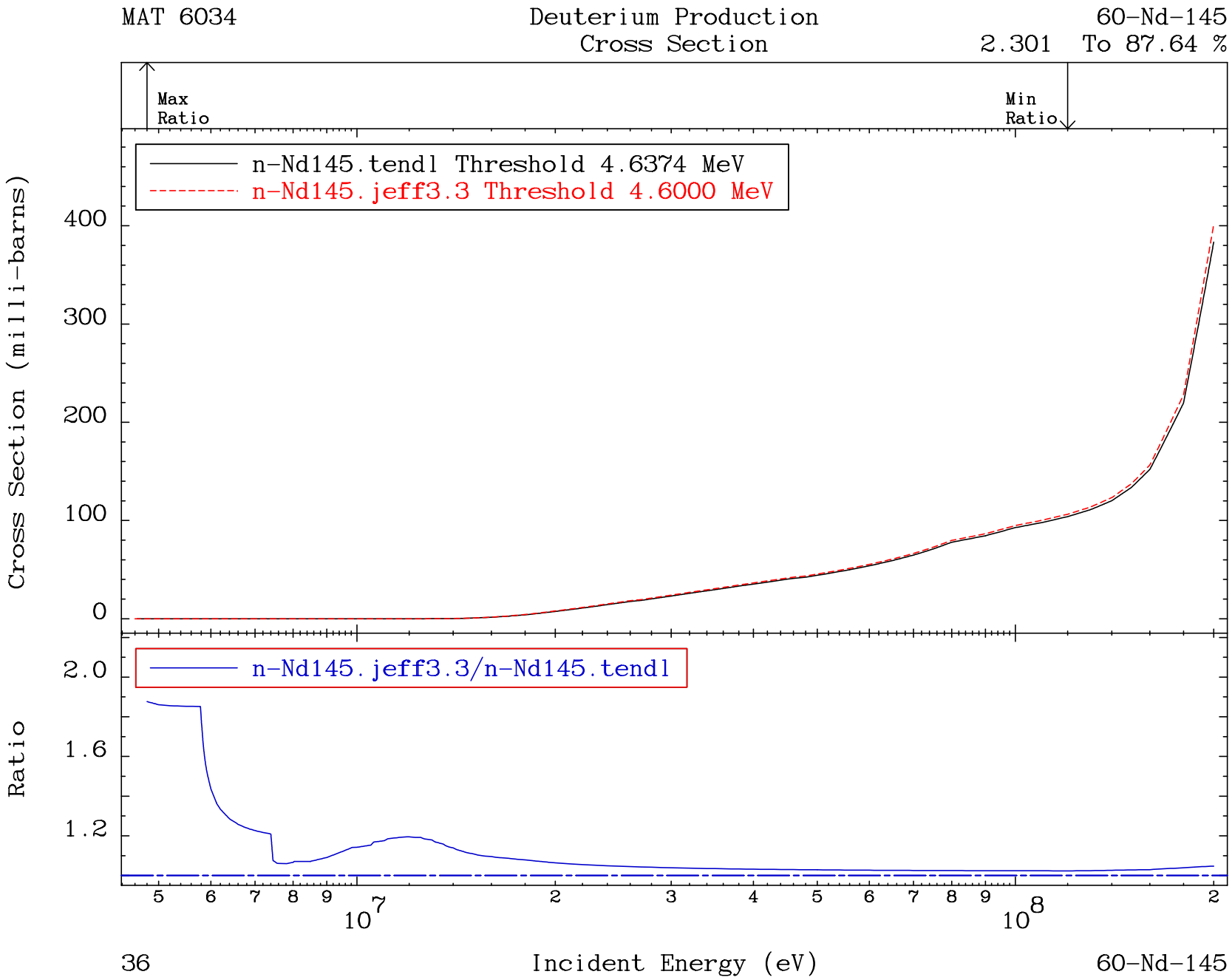

MAT 6034
(n,p) α
Cross Section
60-Nd-145
0.000 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 143.87 keV
n-Nd145.jeff3.3 Threshold 140.76 keV
Cross Section (10^{-9} barns)
400
300
200
100
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^3
10^2
10^1
10^0
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
31
Incident Energy (eV)
60-Nd-145

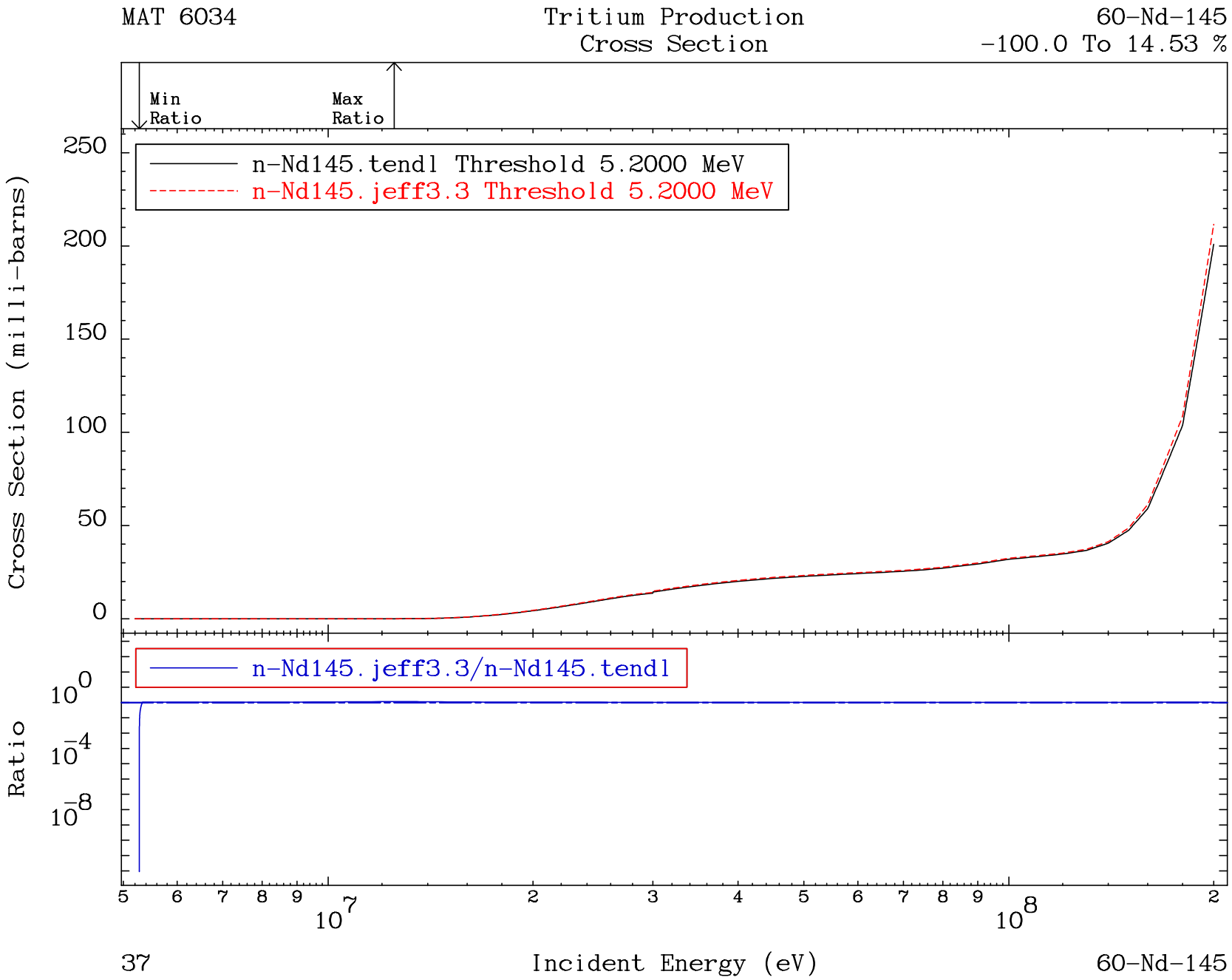

MAT 6034
(n,p) d
Cross Section
60-Nd-145
0.000 To 61.17 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 12.263 MeV
n-Nd145.jeff3.3 Threshold 12.263 MeV
Cross Section (10^{-9} barns)
20
15
10
5
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.8
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
32
Incident Energy (eV)
60-Nd-145

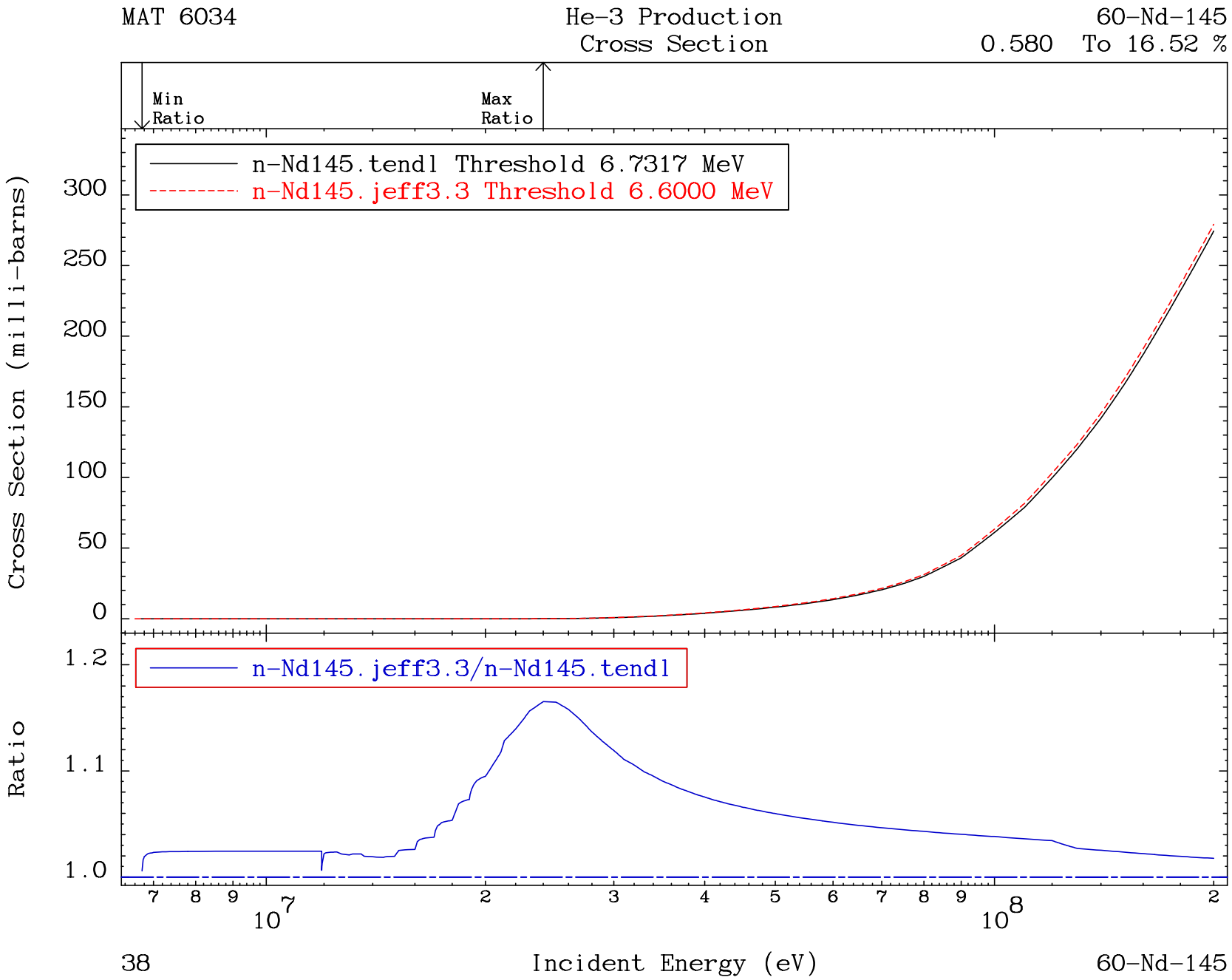

MAT 6034
(n,p) t
Cross Section
60-Nd-145
0.000 To 53.46 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 11.143 MeV
n-Nd145.jeff3.3 Threshold 11.143 MeV
Cross Section (10^{-9} barns)
140
120
100
80
60
40
20
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
33
Incident Energy (eV)
60-Nd-145

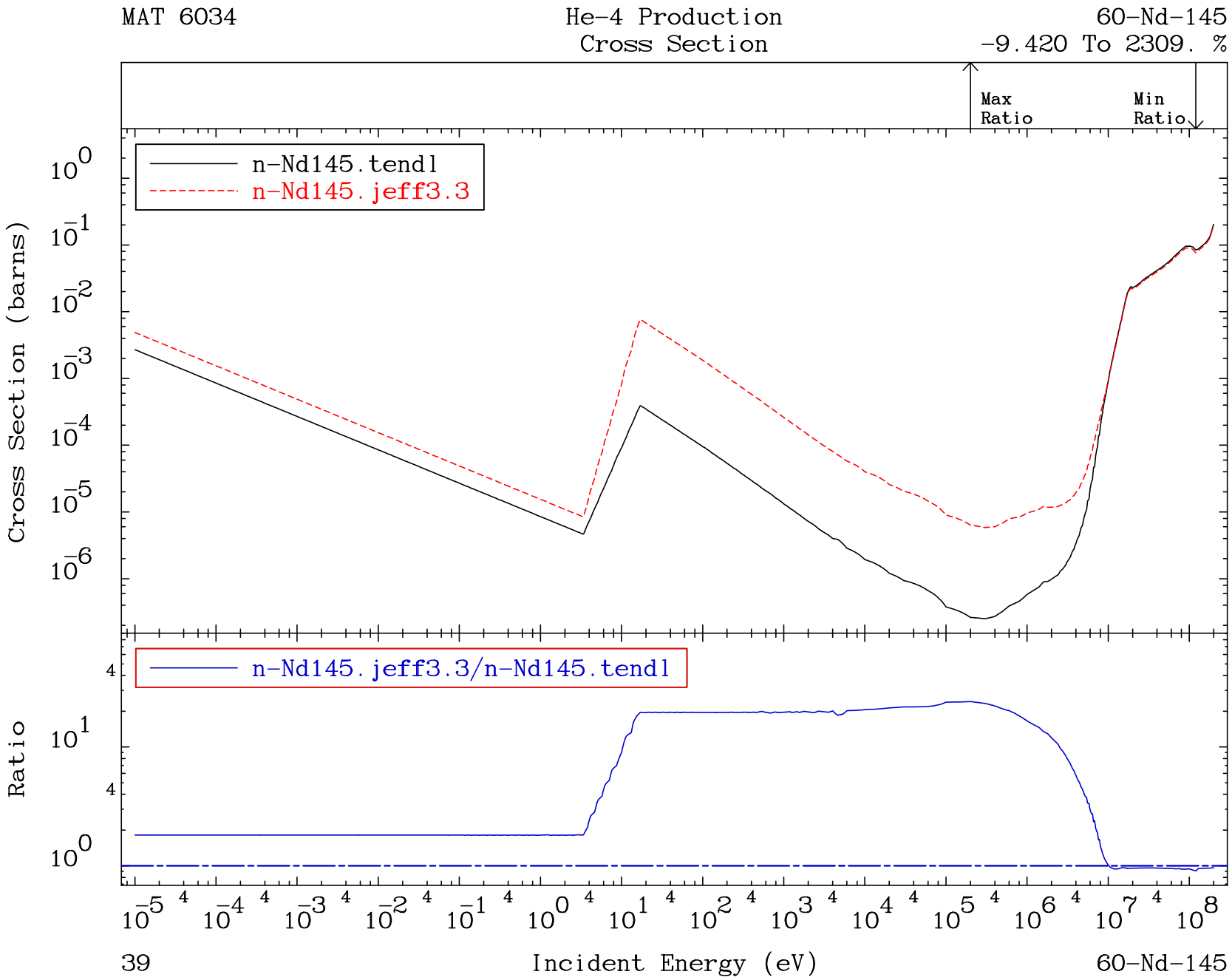

MAT 6034
(n,d) α
Cross Section
60-Nd-145
0.000 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 4.6374 MeV
n-Nd145.jeff3.3 Threshold 4.6349 MeV
Cross Section (10^{-9} barns)
180
160
140
120
100
80
60
40
20
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^4
10^2
10^0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
34
Incident Energy (eV)
60-Nd-145

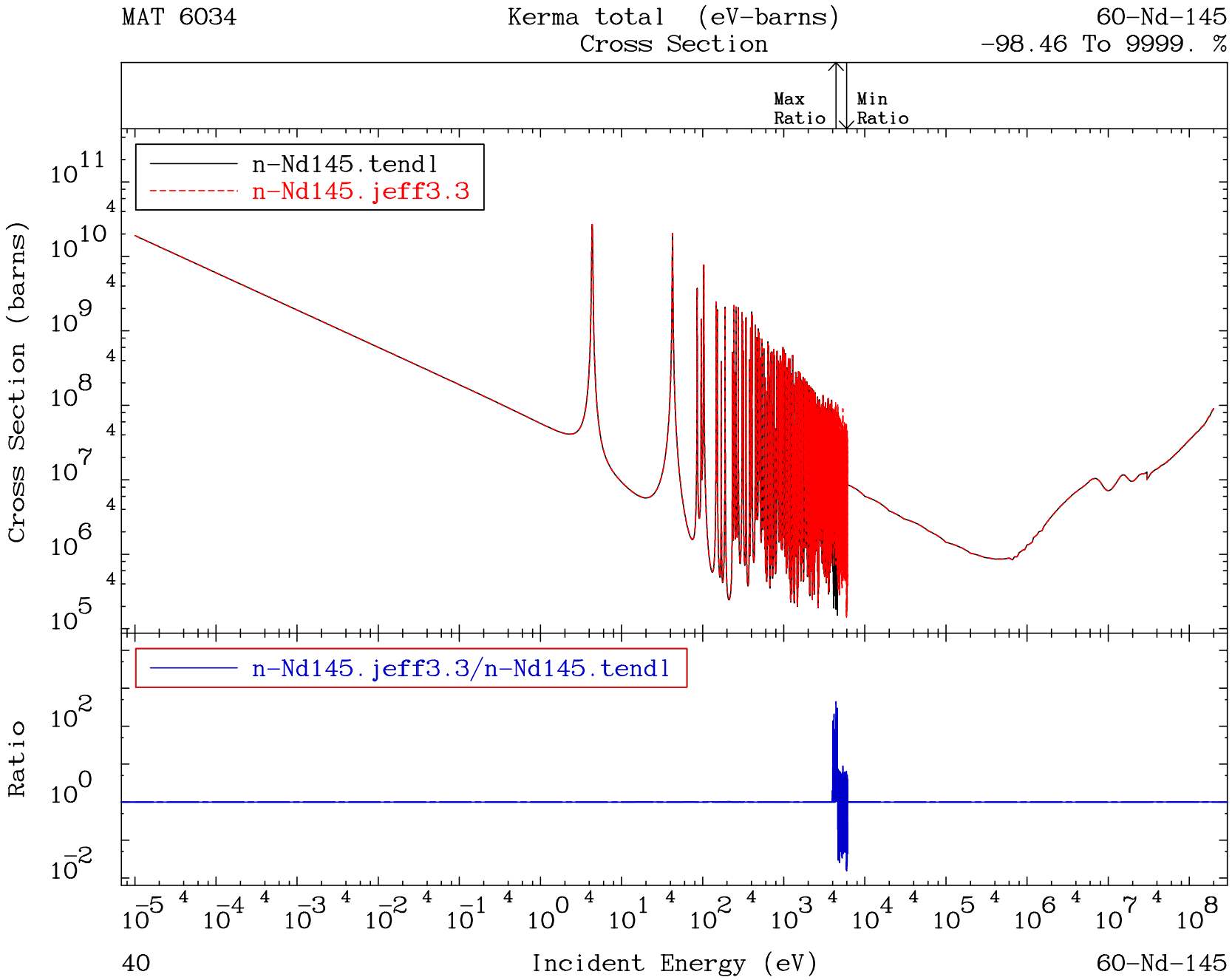

MAT 6034
Hydrogen Production
Cross Section
60-Nd-145
3.180 To 162.0 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 143.87 keV
n-Nd145.jeff3.3 Threshold 140.76 keV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
3.0
2.5
2.0
1.5
1.0
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
35
Incident Energy (eV)
60-Nd-145

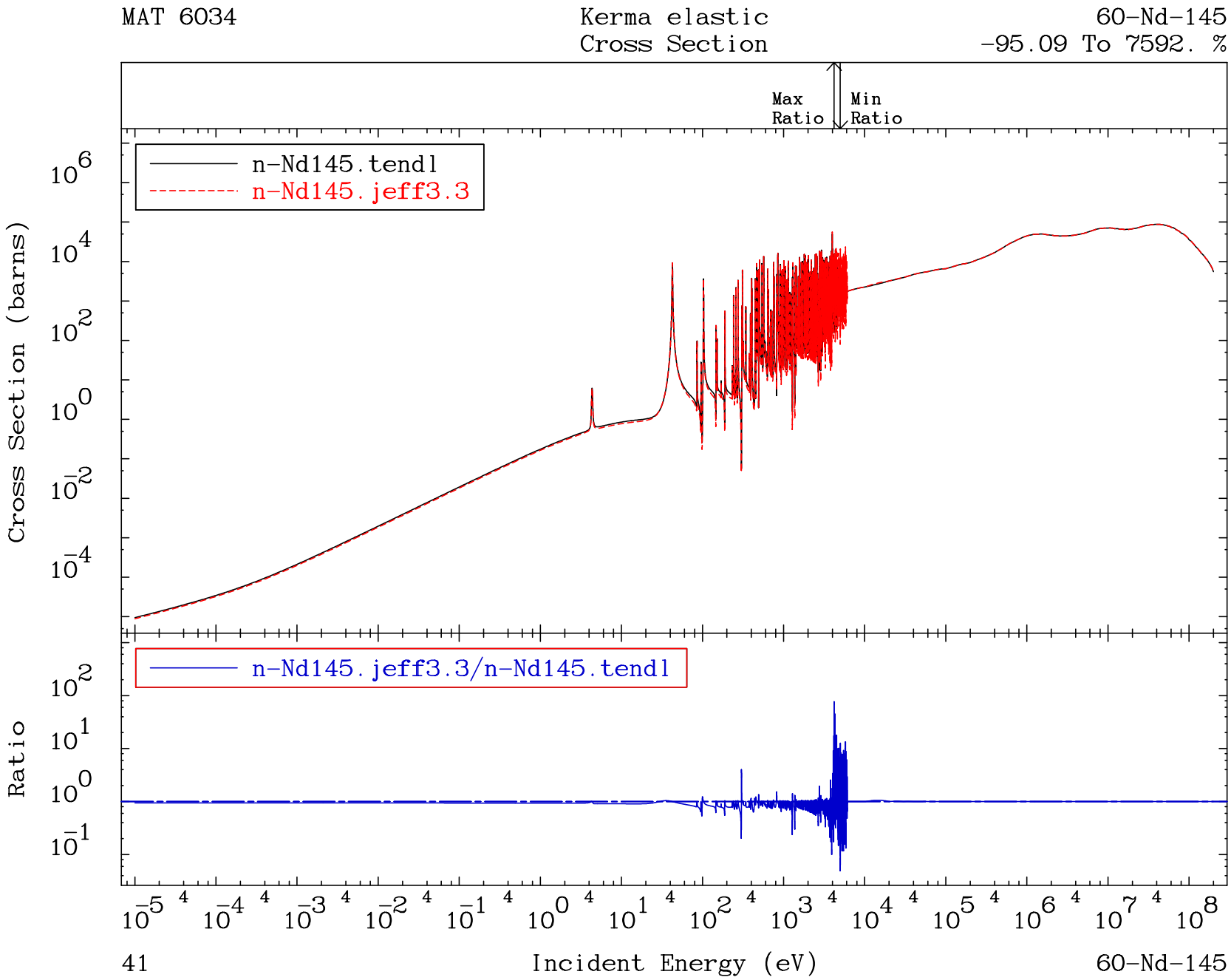

MAT 6034
Deuterium Production
Cross Section
60-Nd-145
2.301 To 87.64 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 4.6374 MeV
n-Nd145.jeff3.3 Threshold 4.6000 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
2.0
1.6
1.2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
36
Incident Energy (eV)
60-Nd-145

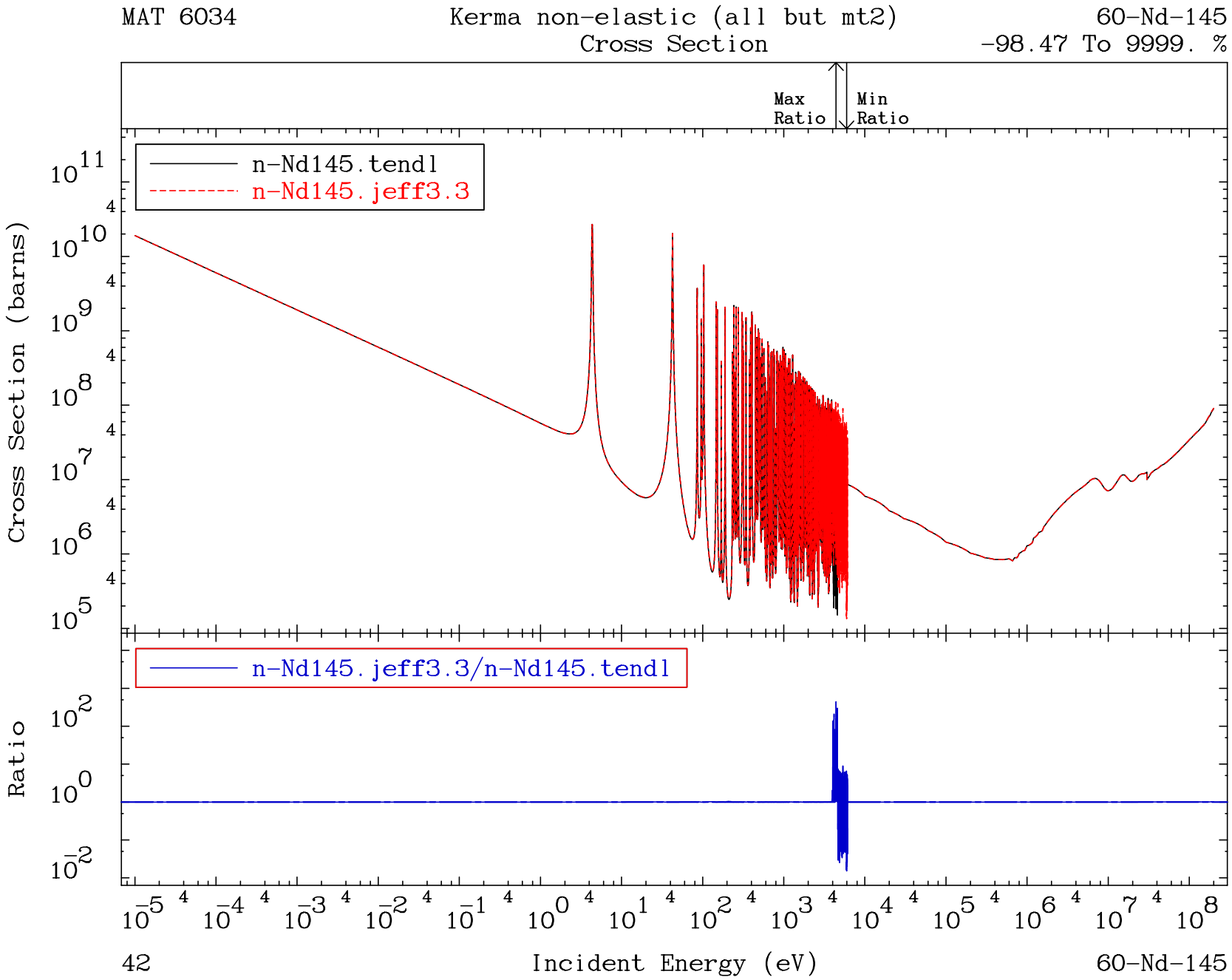

MAT 6034
Tritium Production
Cross Section
60-Nd-145
-100.0 To 14.53 %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 5.2000 MeV
n-Nd145.jeff3.3 Threshold 5.2000 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^0
10^-4
10^-8
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
37
Incident Energy (eV)
60-Nd-145

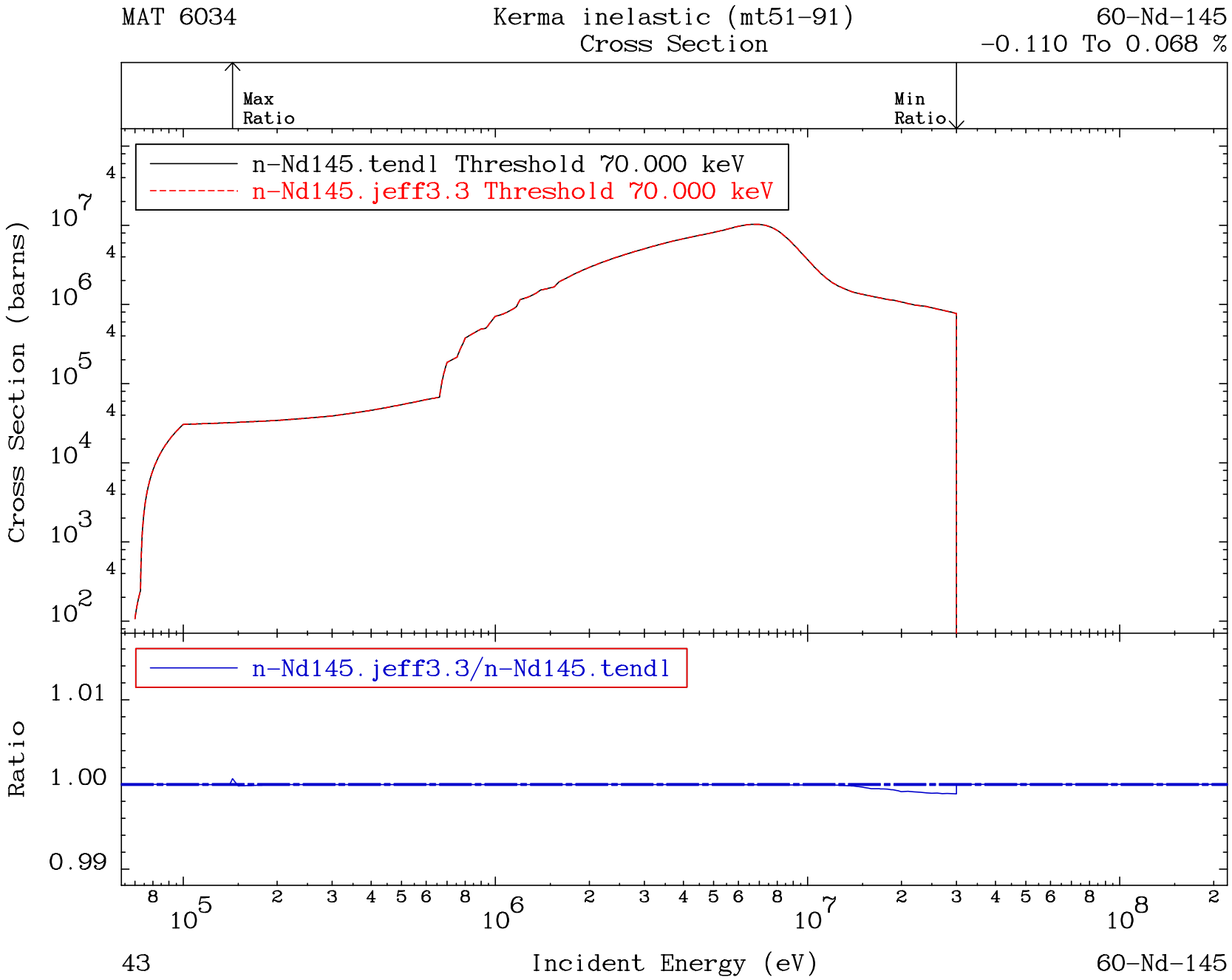

MAT 6034
He-3 Production
Cross Section
60-Nd-145
0.580 To 16.52 %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 6.7317 MeV
n-Nd145.jeff3.3 Threshold 6.6000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
38
Incident Energy (eV)
60-Nd-145

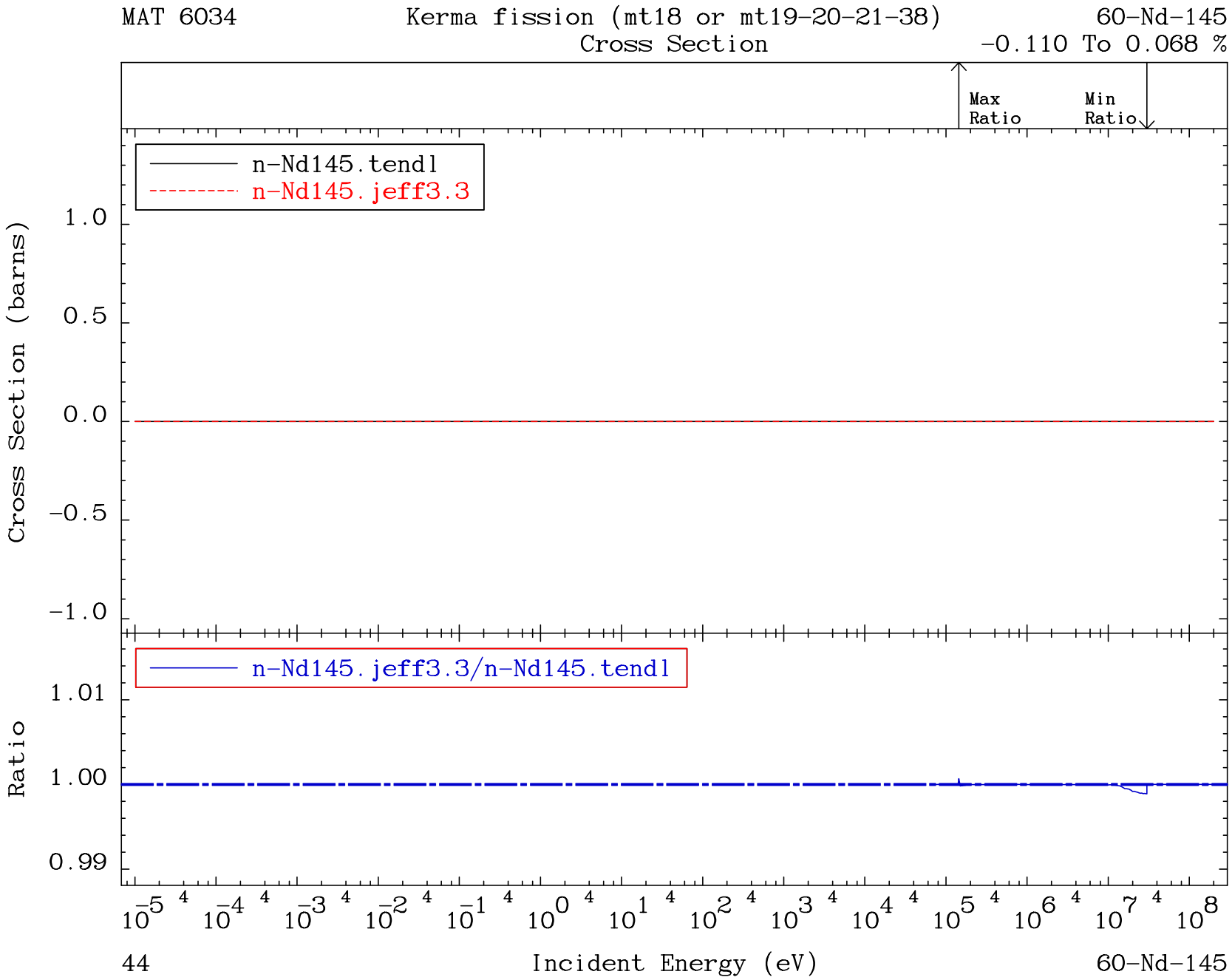

MAT 6034
He-4 Production
Cross Section
60-Nd-145
-9.420 To 2309. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
39
60-Nd-145

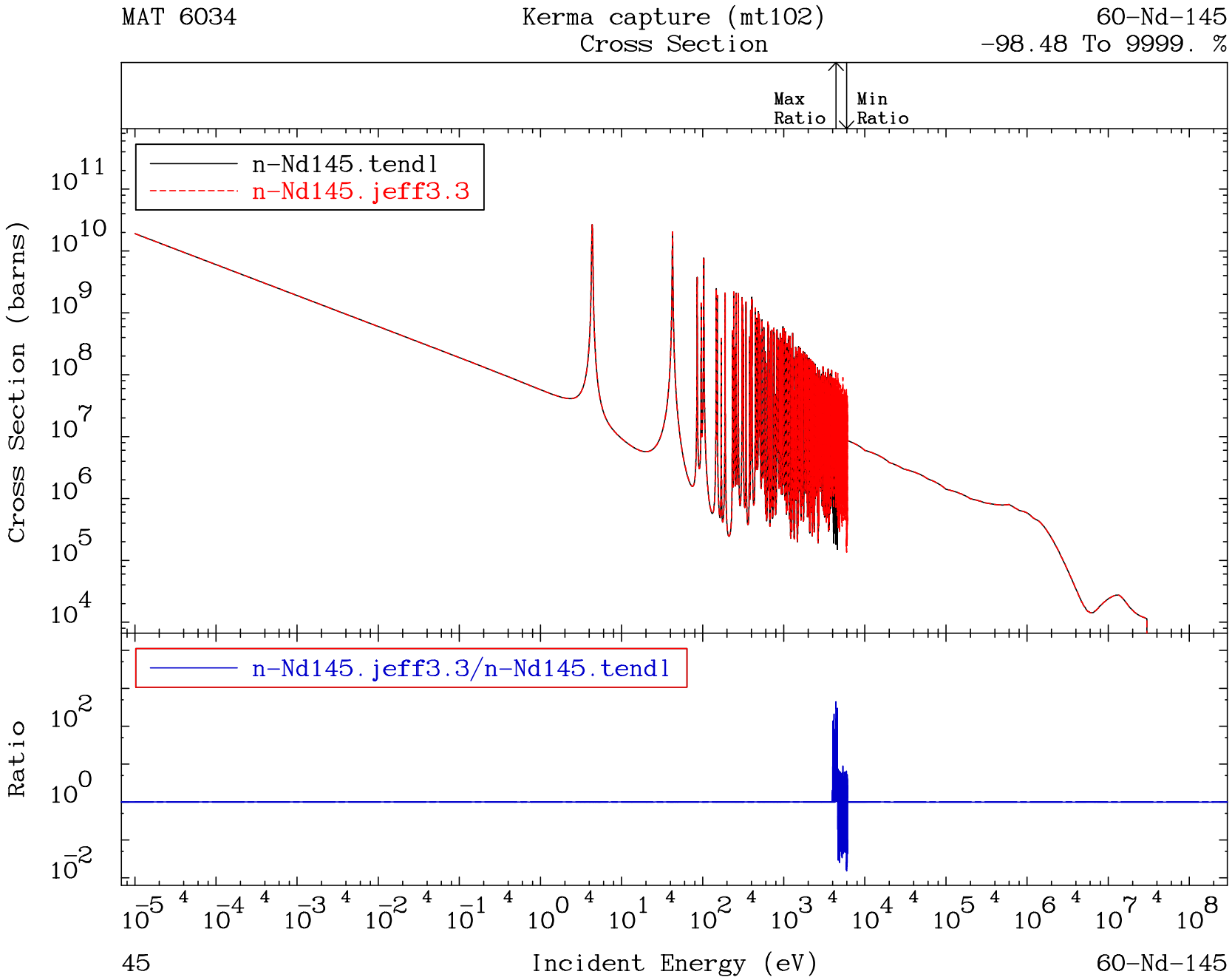

MAT 6034
Kerma total (eV-barns)
Cross Section
60-Nd-145
-98.46 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
40
60-Nd-145

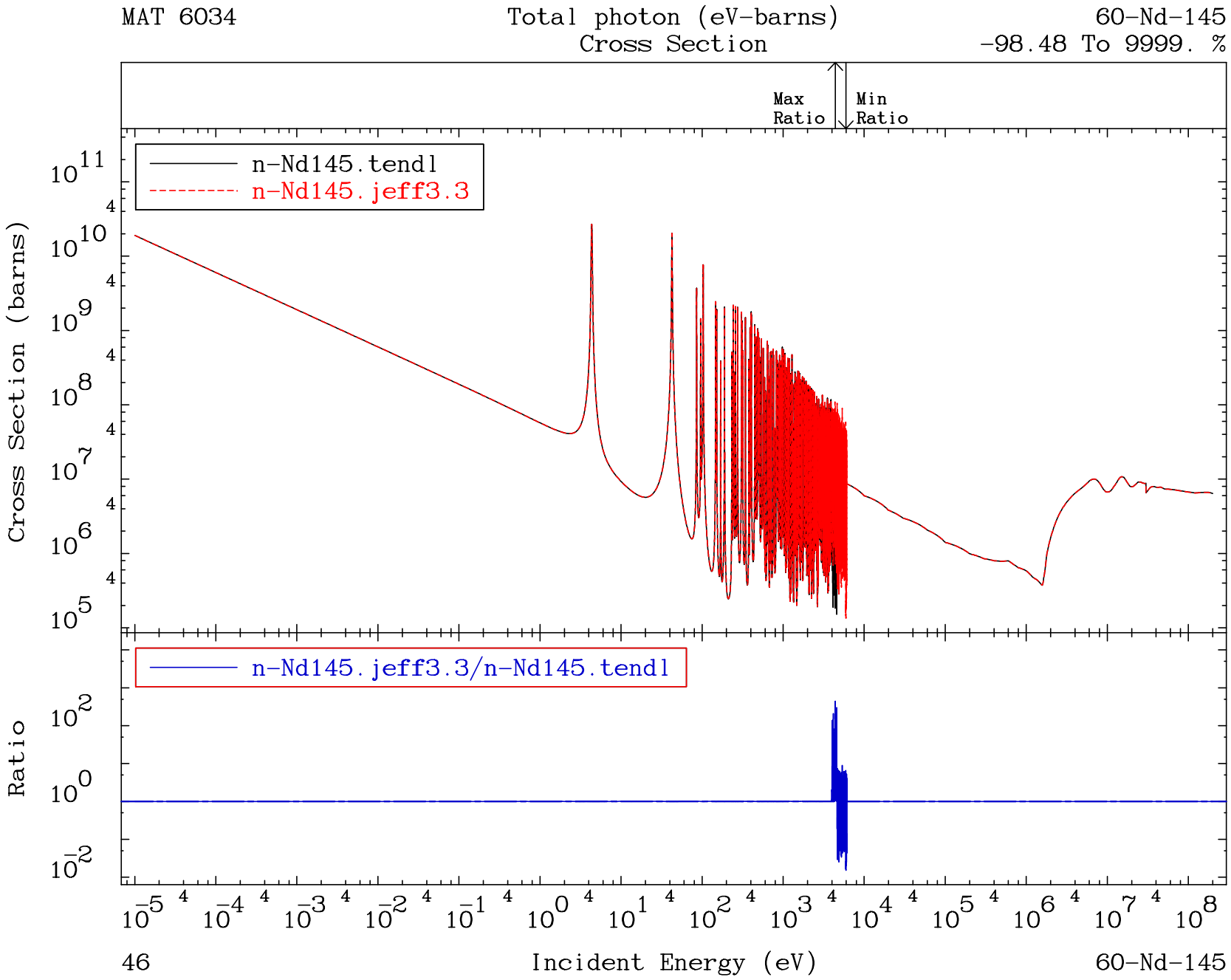

MAT 6034
Kerma elastic
Cross Section
60-Nd-145
-95.09 To 7592. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
41
60-Nd-145

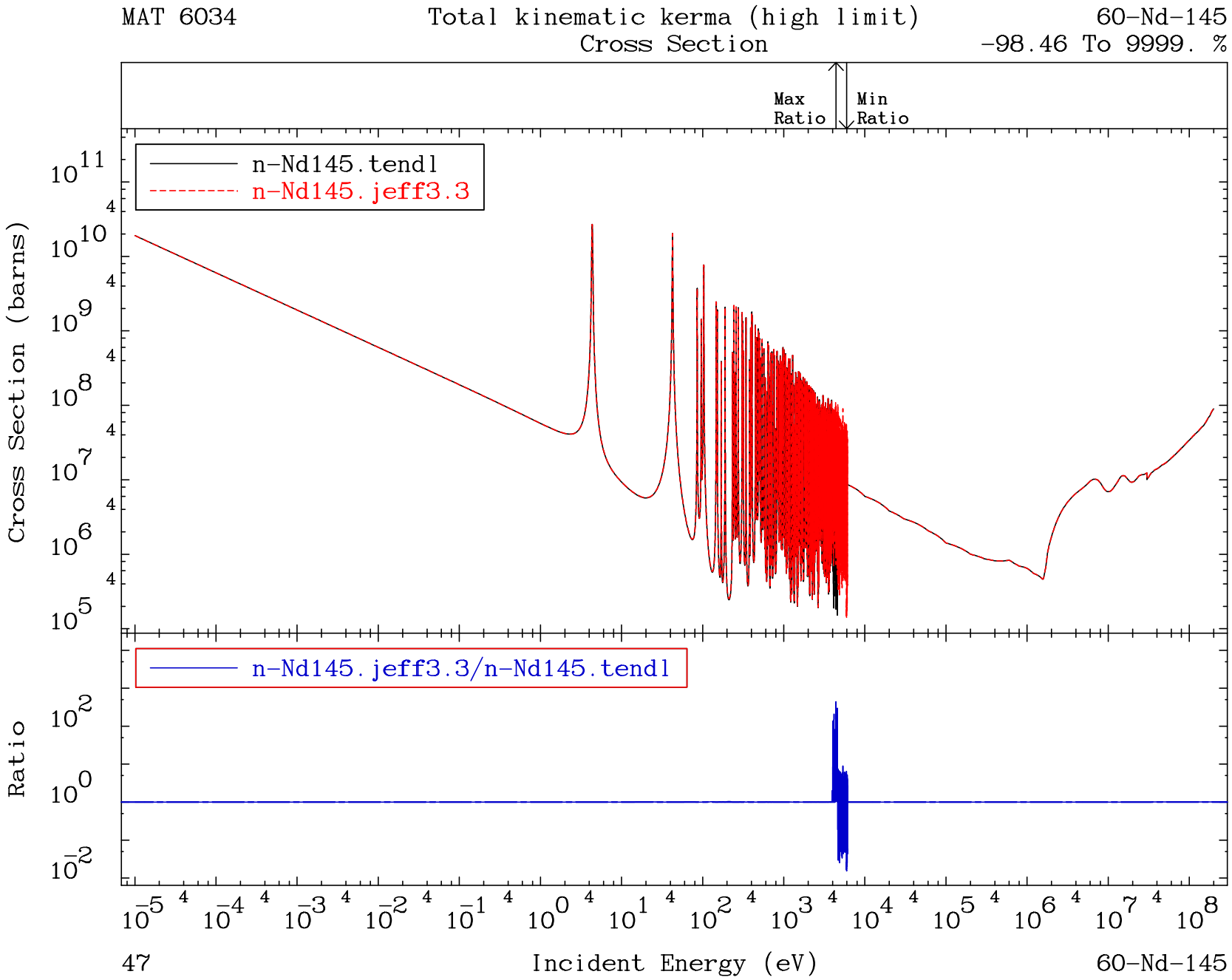

MAT 6034
Kerma non-elastic (all but mt2)
Cross Section
60-Nd-145
-98.47 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
42
60-Nd-145

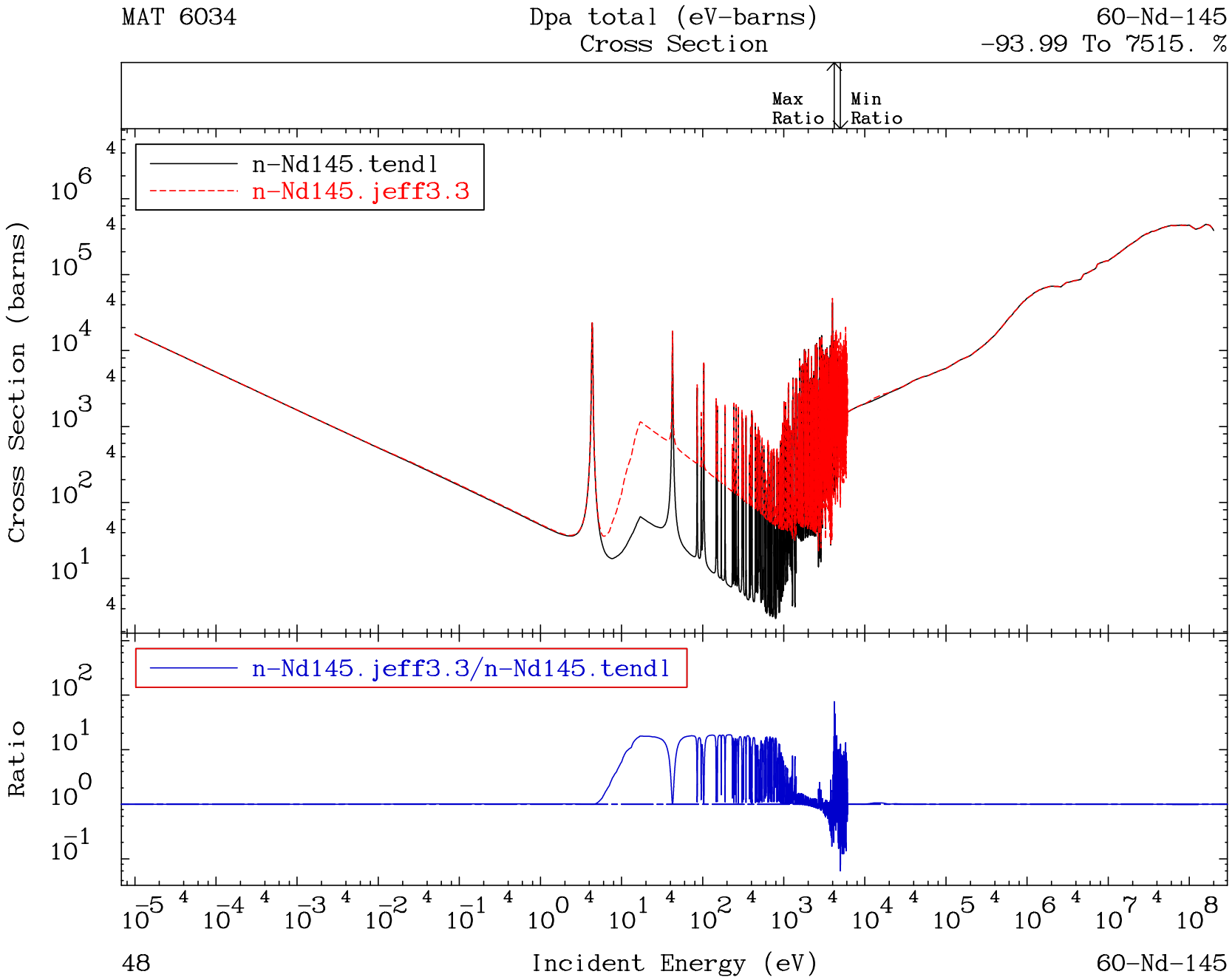

MAT 6034
Kerma inelastic (mt51-91)
Cross Section
60-Nd-145
-0.110 To 0.068 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 70.000 keV
n-Nd145.jeff3.3 Threshold 70.000 keV
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
43
60-Nd-145

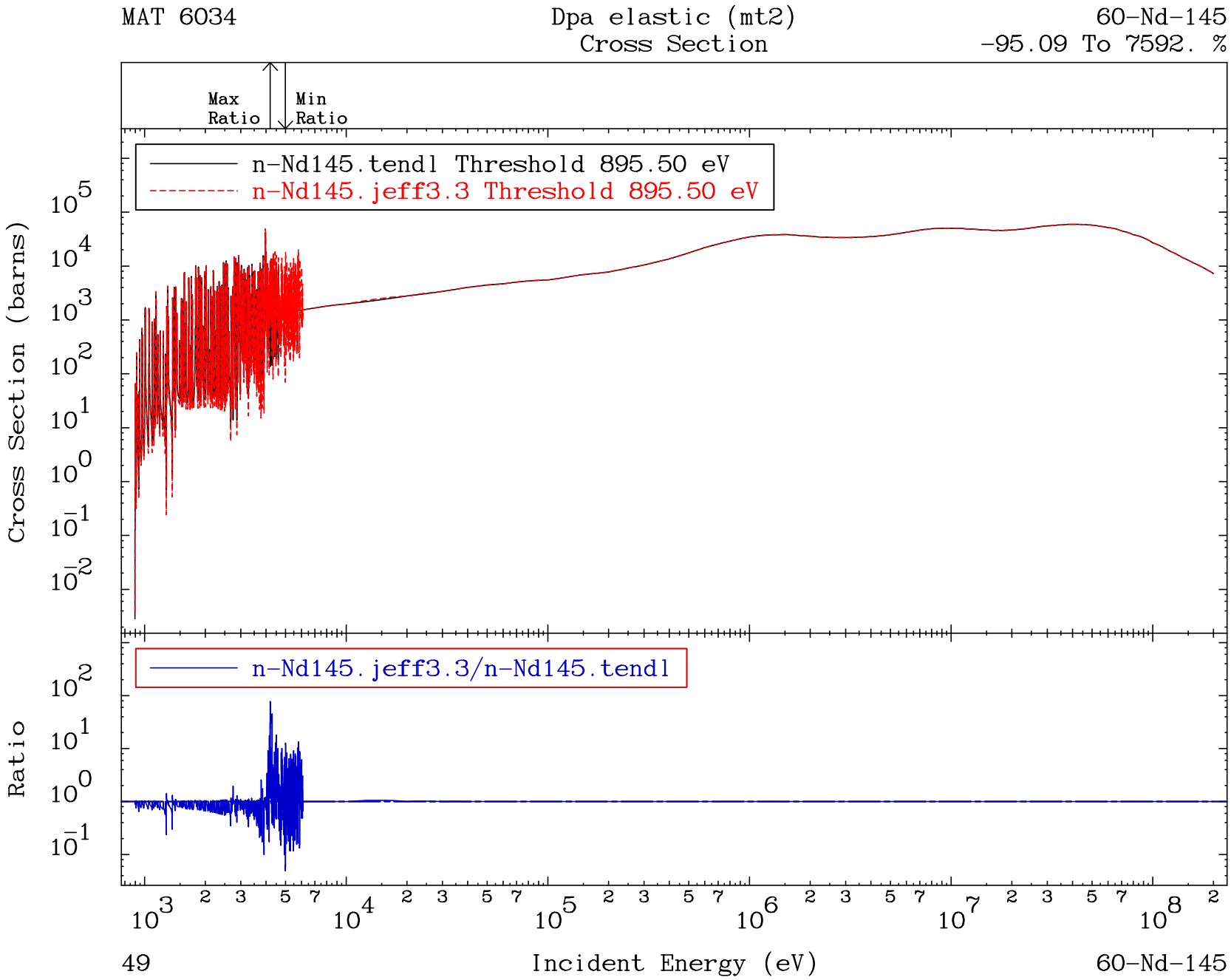

MAT 6034
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
60-Nd-145
-0.110 To 0.068 %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.01
1.00
0.99
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
44
Incident Energy (eV)
60-Nd-145

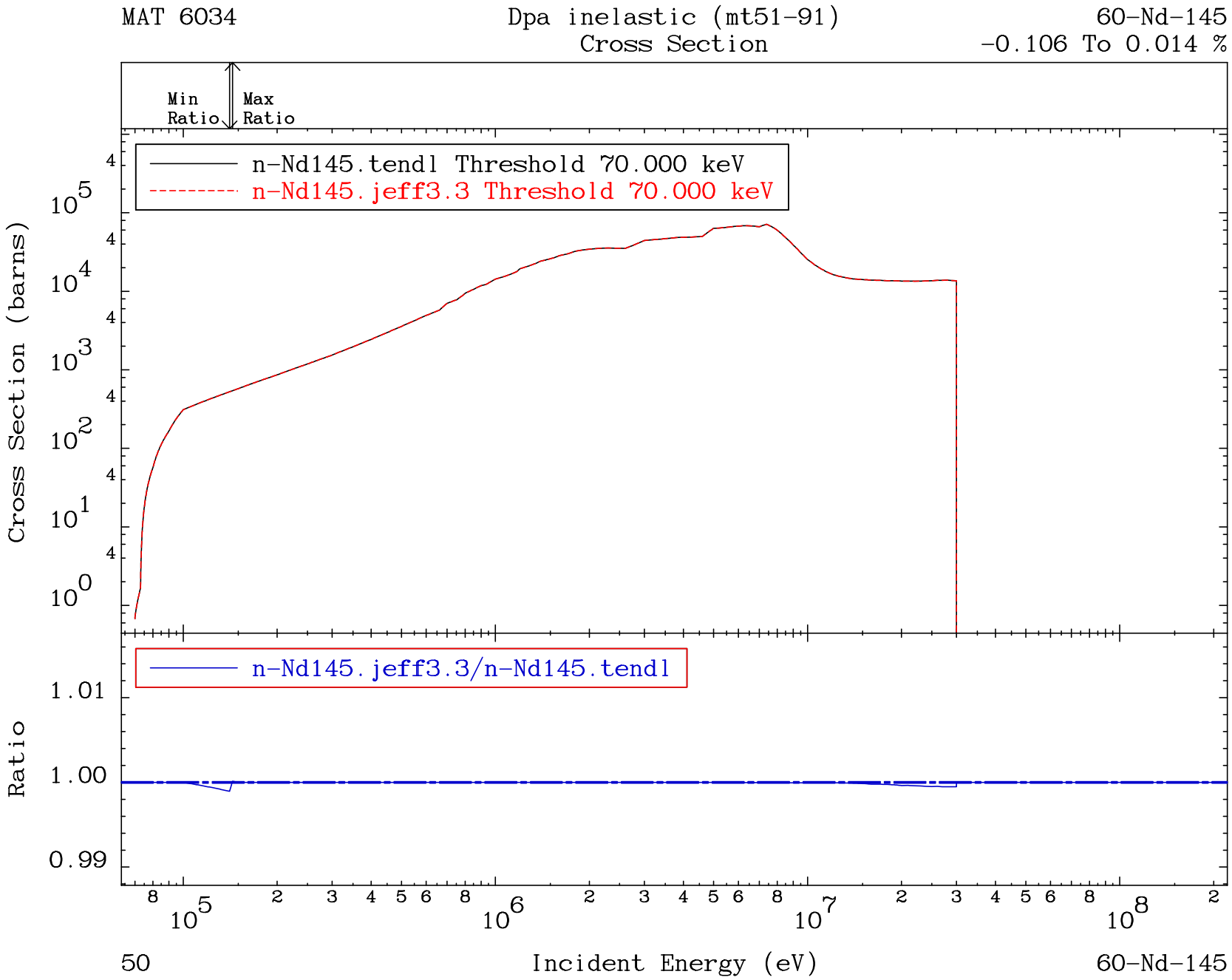

MAT 6034
Kerma capture (mt102)
Cross Section
60-Nd-145
-98.48 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
45
60-Nd-145

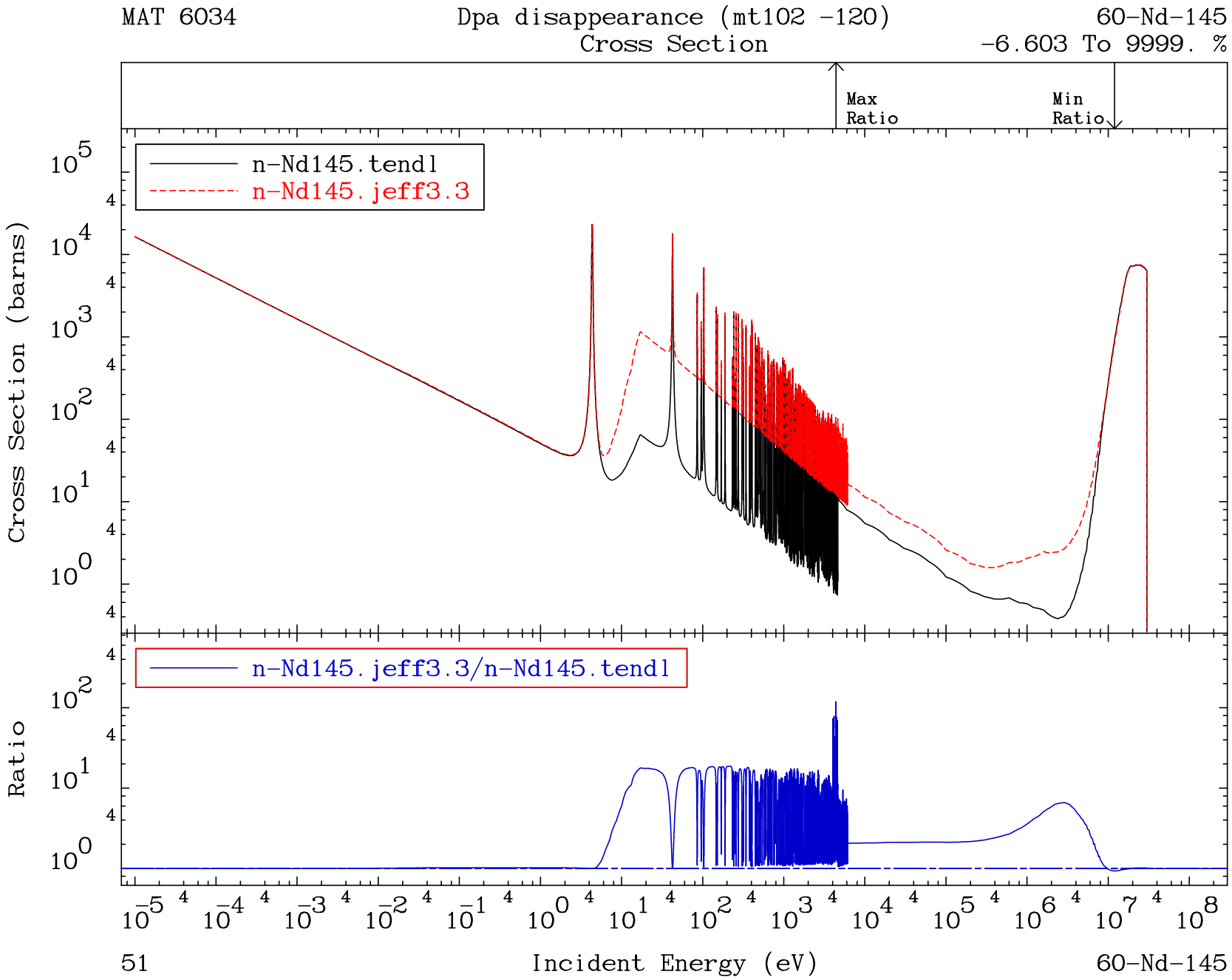

MAT 6034
Total photon (eV-barns)
Cross Section
60-Nd-145
-98.48 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
46
60-Nd-145

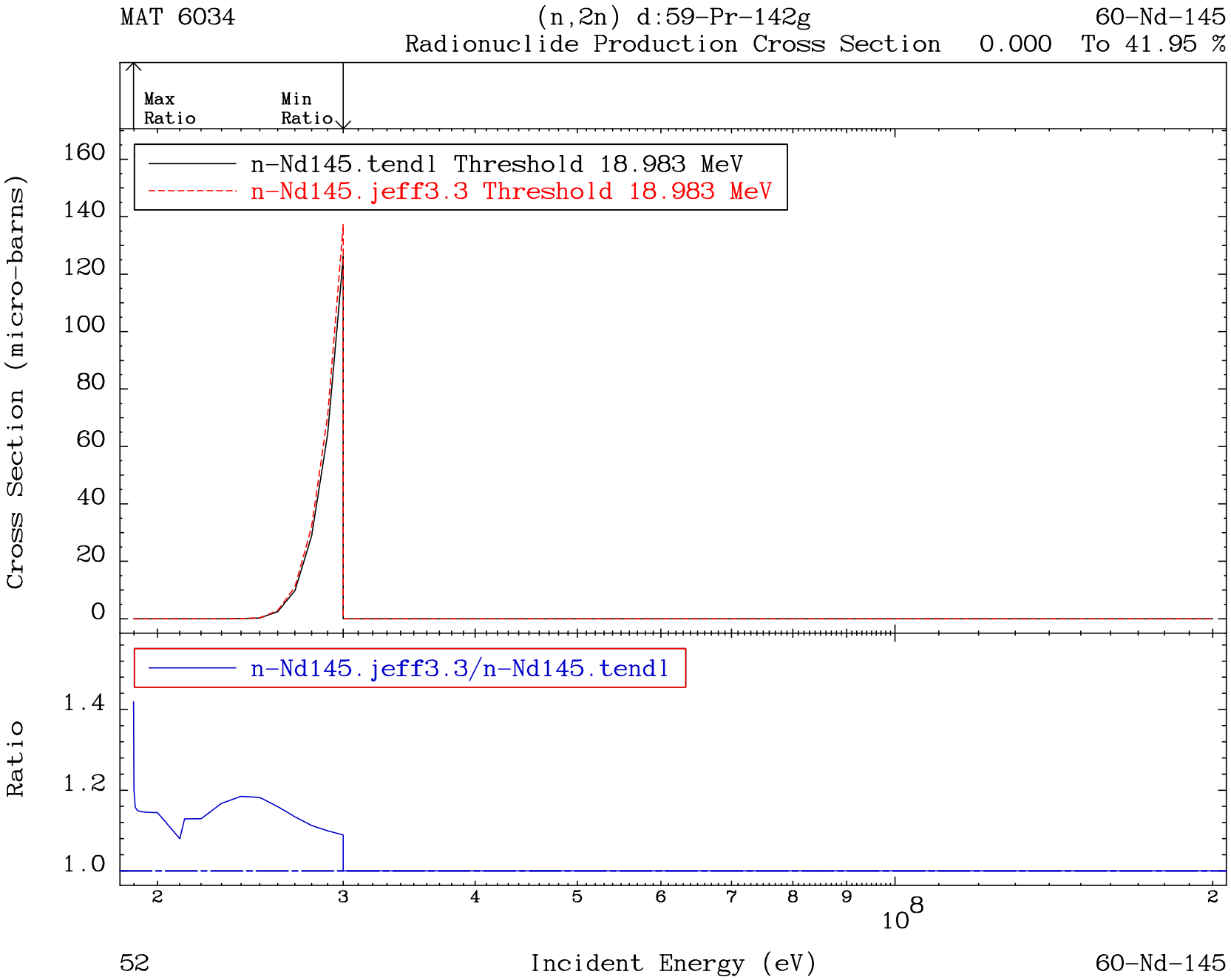

MAT 6034
Total kinematic kerma (high limit)
Cross Section
60-Nd-145
-98.46 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
47
60-Nd-145

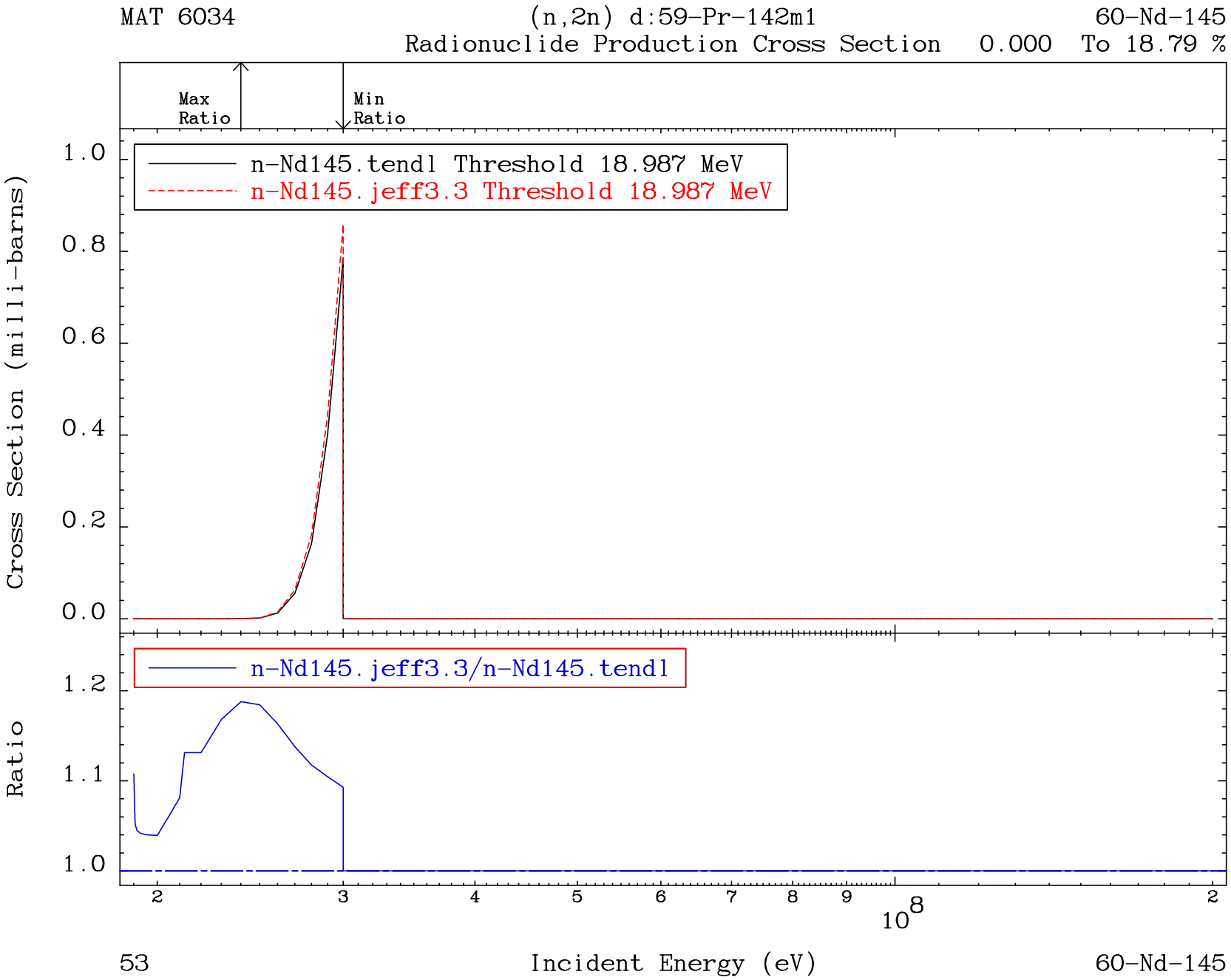

MAT 6034
Dpa total (eV-barns)
Cross Section
60-Nd-145
-93.99 To 7515. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
48
60-Nd-145

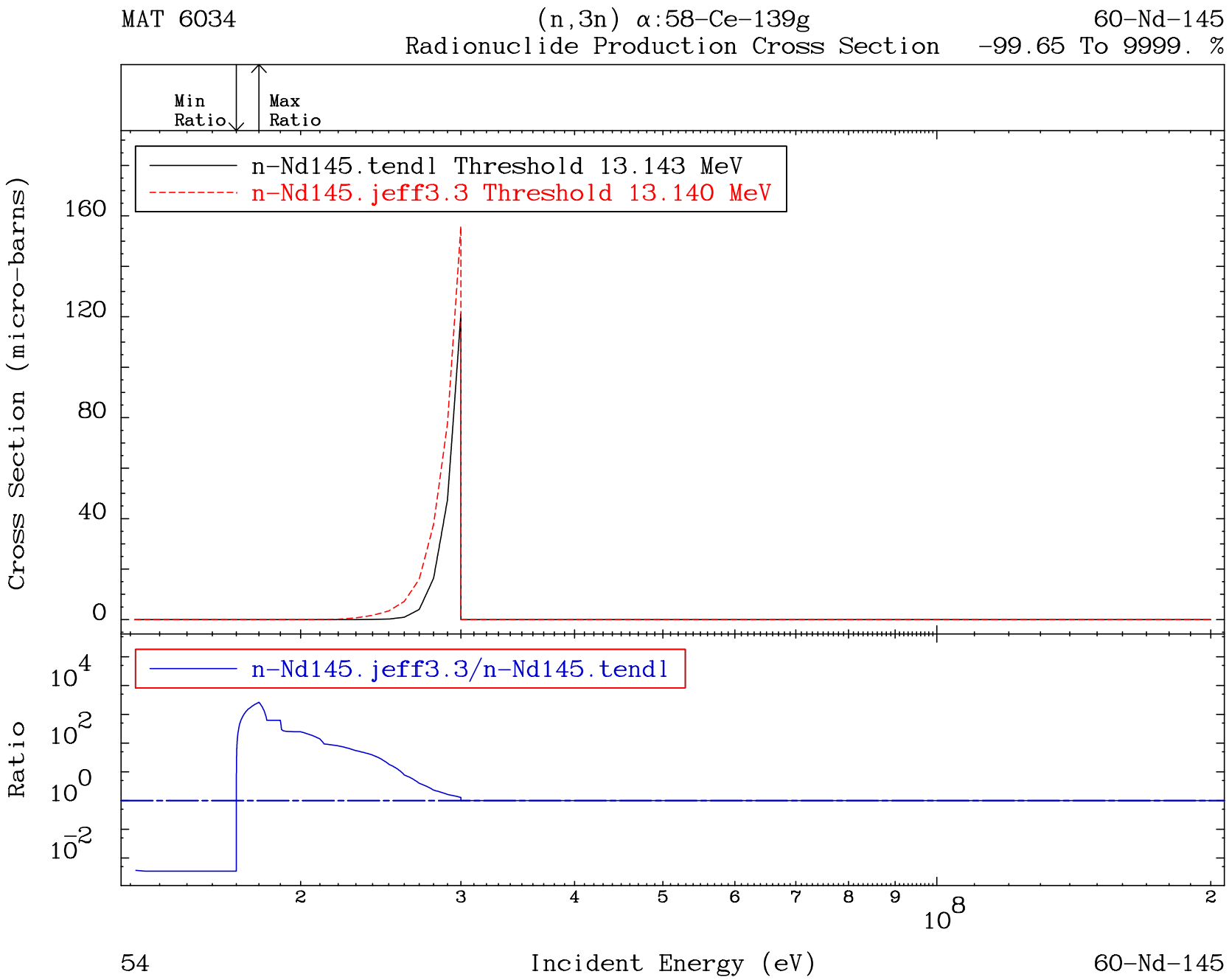

MAT 6034
Dpa elastic (mt2)
Cross Section
60-Nd-145
-95.09 To 7592. %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 895.50 eV
n-Nd145.jeff3.3 Threshold 895.50 eV
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
49
60-Nd-145

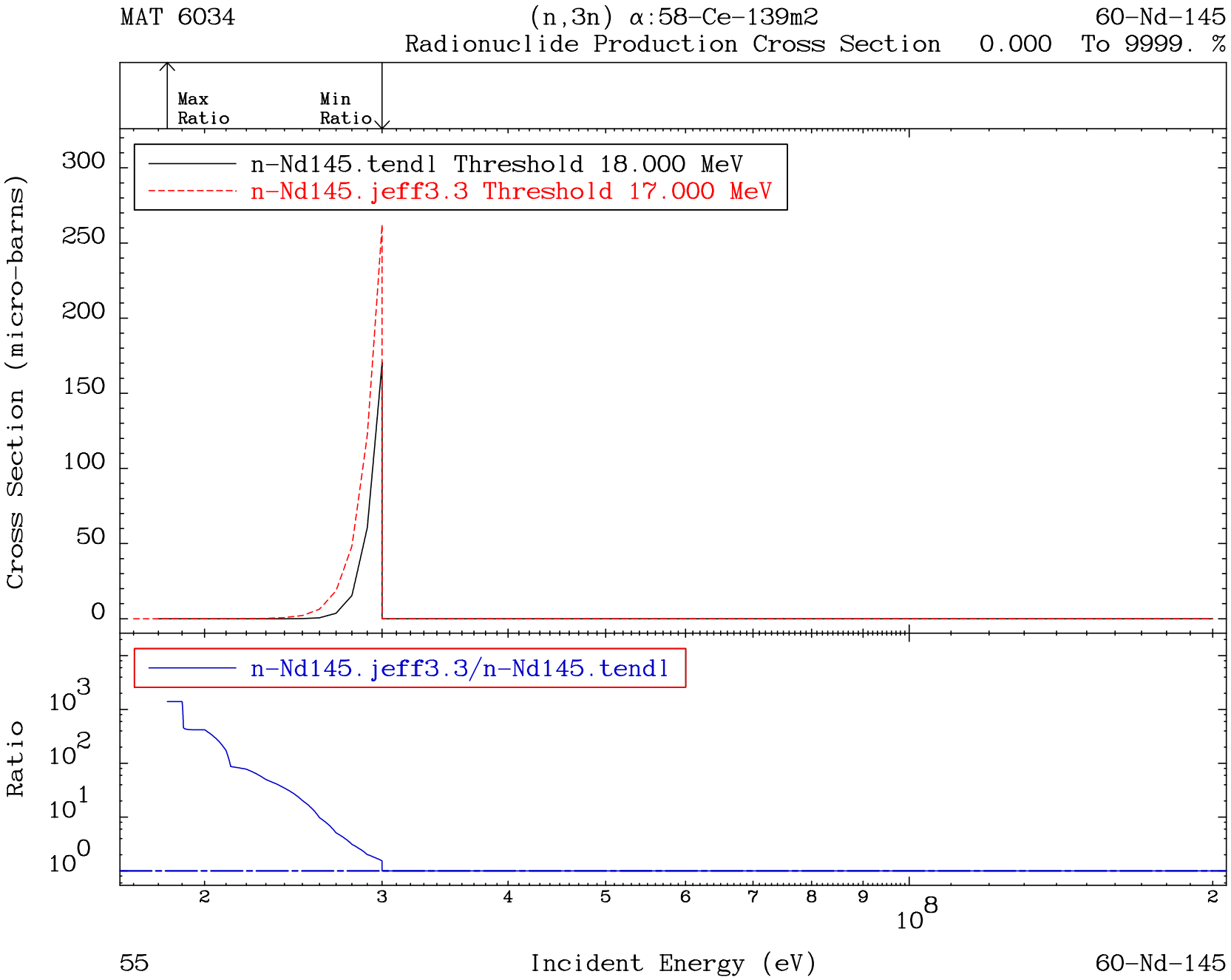

MAT 6034
Dpa inelastic (mt51-91)
Cross Section
60-Nd-145
-0.106 To 0.014 %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 70.000 keV
n-Nd145.jeff3.3 Threshold 70.000 keV
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
50
60-Nd-145

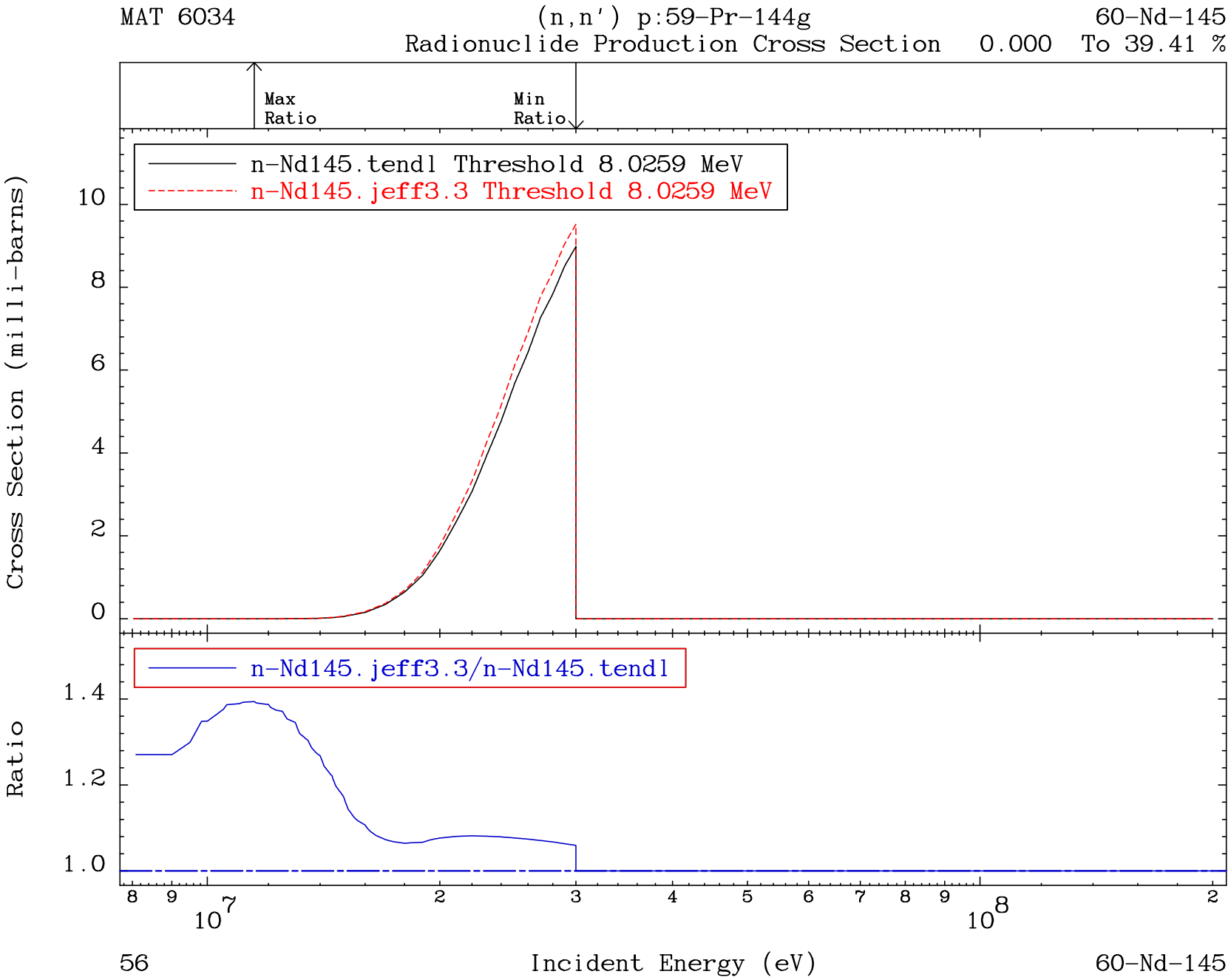

MAT 6034
Dpa disappearance (mt102 -120)
Cross Section
60-Nd-145
-6.603 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl
n-Nd145.jeff3.3
Cross Section (barns)
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
Incident Energy (eV)
51
60-Nd-145

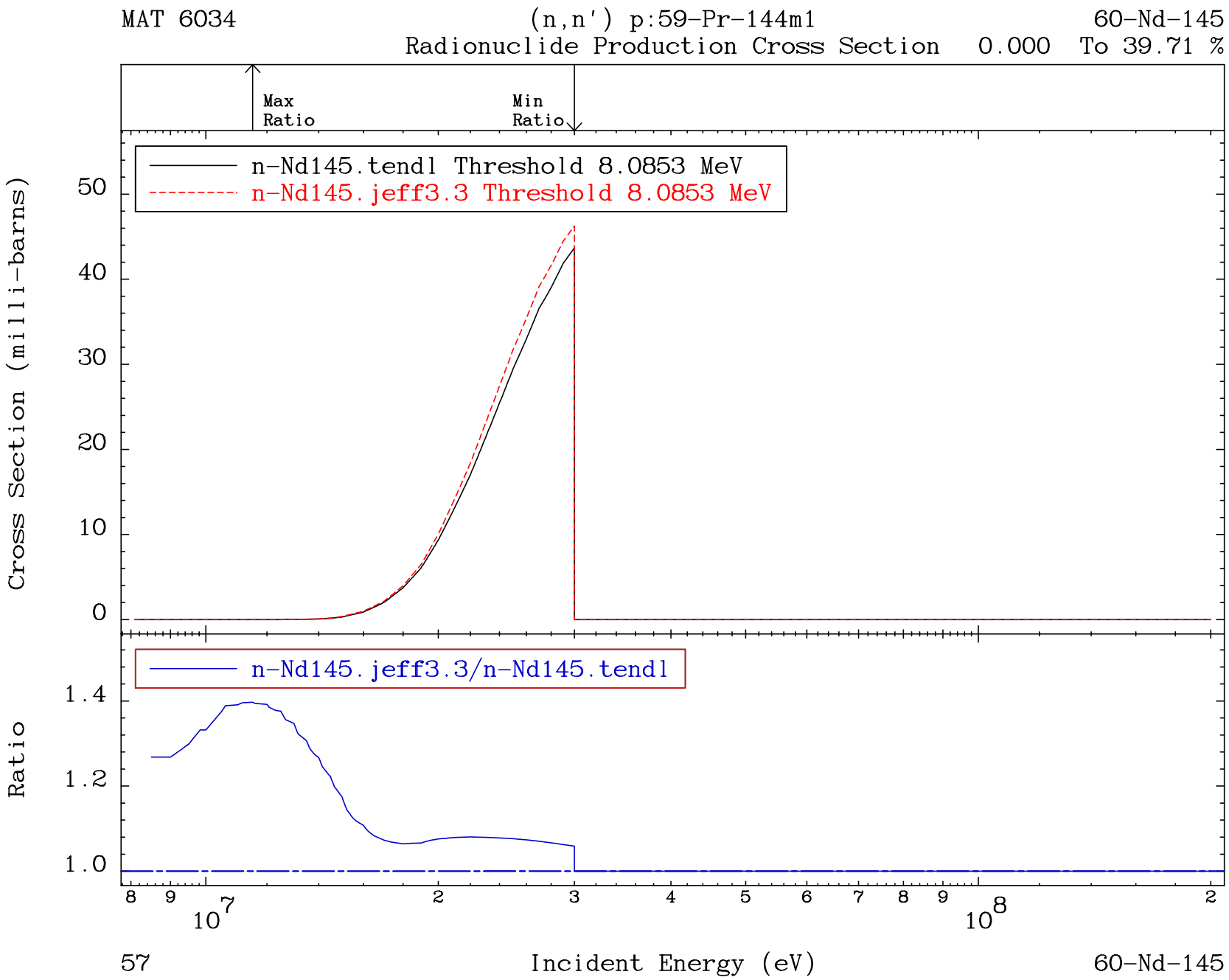

MAT 6034
(n,2n) d:59-Pr-142g
60-Nd-145
Radionuclide Production Cross Section 0.000 To 41.95 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 18.983 MeV
n-Nd145.jeff3.3 Threshold 18.983 MeV
Cross Section (micro-barns)
160
140
120
100
80
60
40
20
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
52
Incident Energy (eV)
60-Nd-145

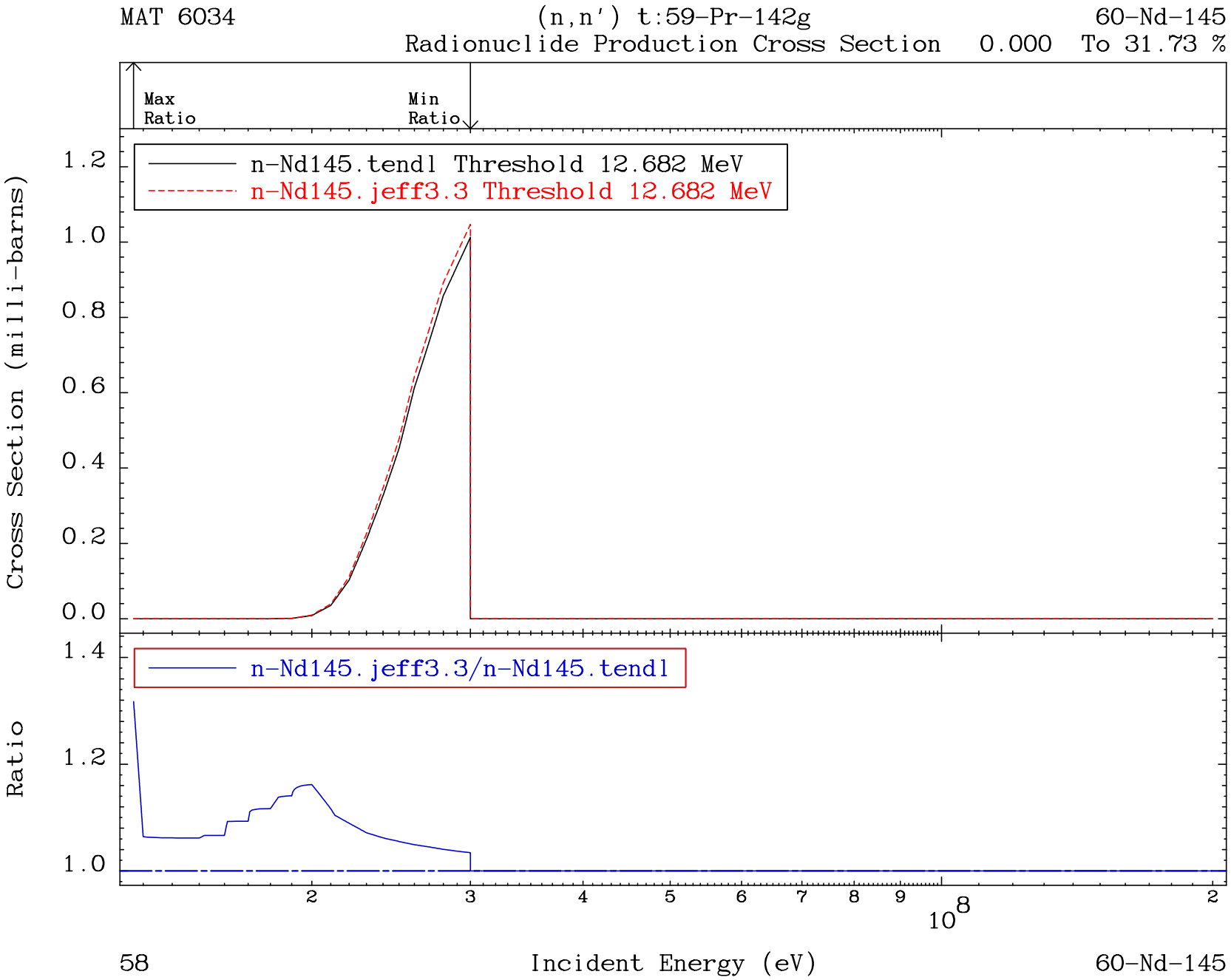

MAT 6034
(n,2n) d:59-Pr-142m1
60-Nd-145
Radionuclide Production Cross Section 0.000 To 18.79 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 18.987 MeV
n-Nd145.jeff3.3 Threshold 18.987 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.1
1.0
2
3
4
5
6
7
8
9
10^8
2
53
Incident Energy (eV)
60-Nd-145

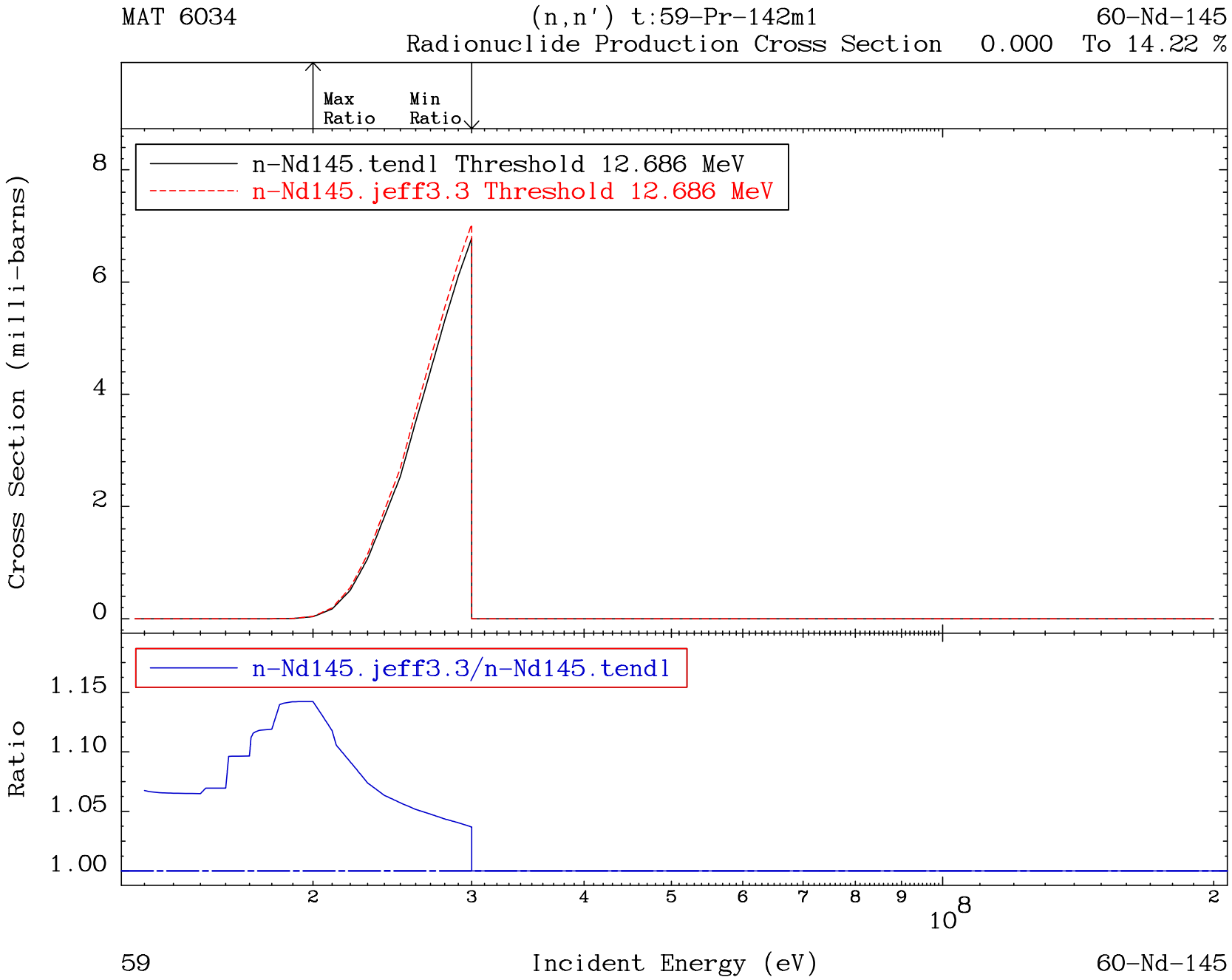

MAT 6034
(n,3n) α:58-Ce-139g
60-Nd-145
Radionuclide Production Cross Section -99.65 To 9999. %
Min Ratio
Max Ratio
n-Nd145.tendl Threshold 13.143 MeV
n-Nd145.jeff3.3 Threshold 13.140 MeV
Cross Section (micro-barns)
160
120
80
40
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^4
10^2
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
54
Incident Energy (eV)
60-Nd-145

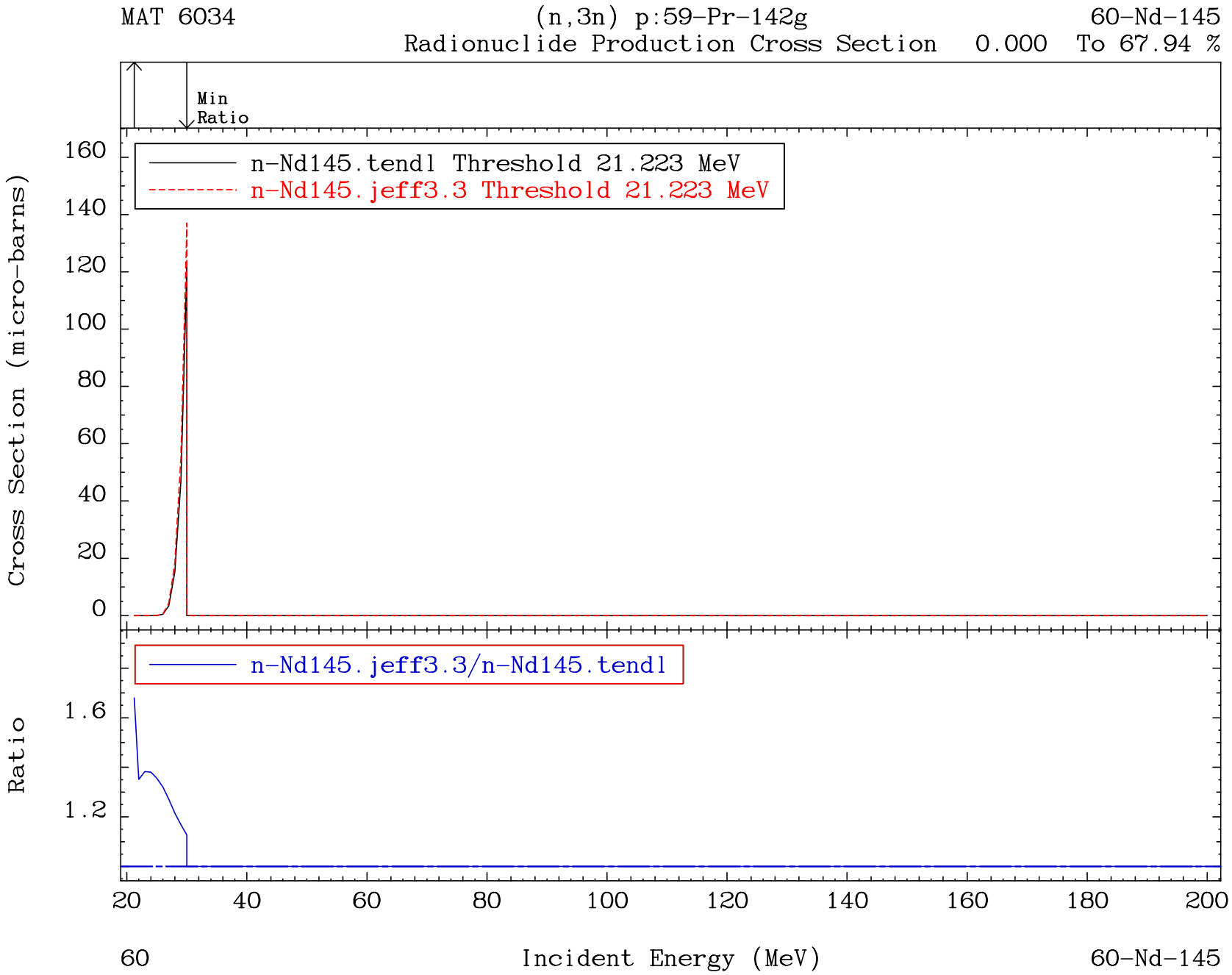

MAT 6034
(n,3n) α:58-Ce-139m2
60-Nd-145
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 18.000 MeV
n-Nd145.jeff3.3 Threshold 17.000 MeV
Cross Section (micro-barns)
300
250
200
150
100
50
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
10^3
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
55
Incident Energy (eV)
60-Nd-145

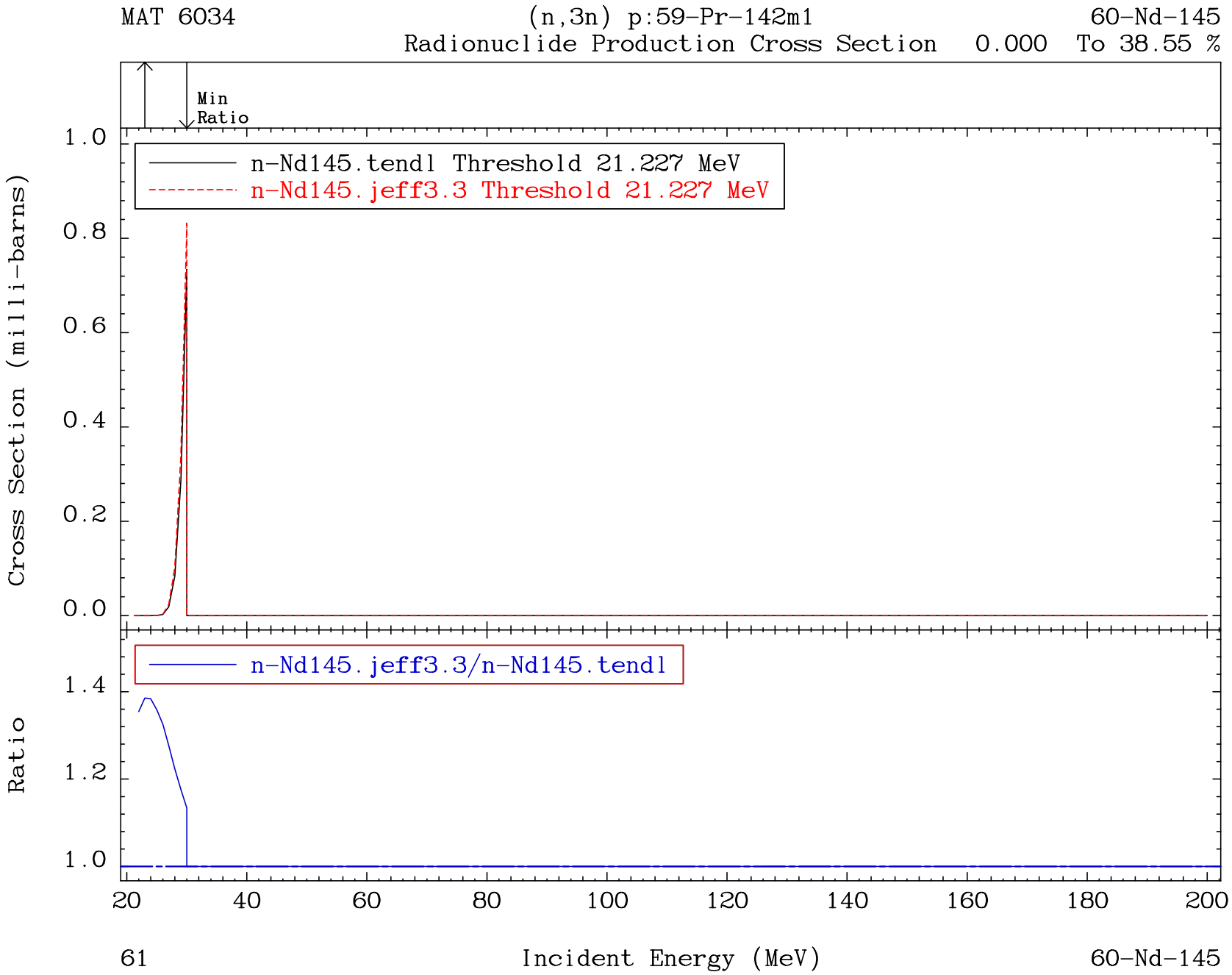

MAT 6034
(n,n') p:59-Pr-144g
60-Nd-145
Radionuclide Production Cross Section 0.000 To 39.41 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 8.0259 MeV
n-Nd145.jeff3.3 Threshold 8.0259 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.0
1.2
1.4
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
56
Incident Energy (eV)
60-Nd-145

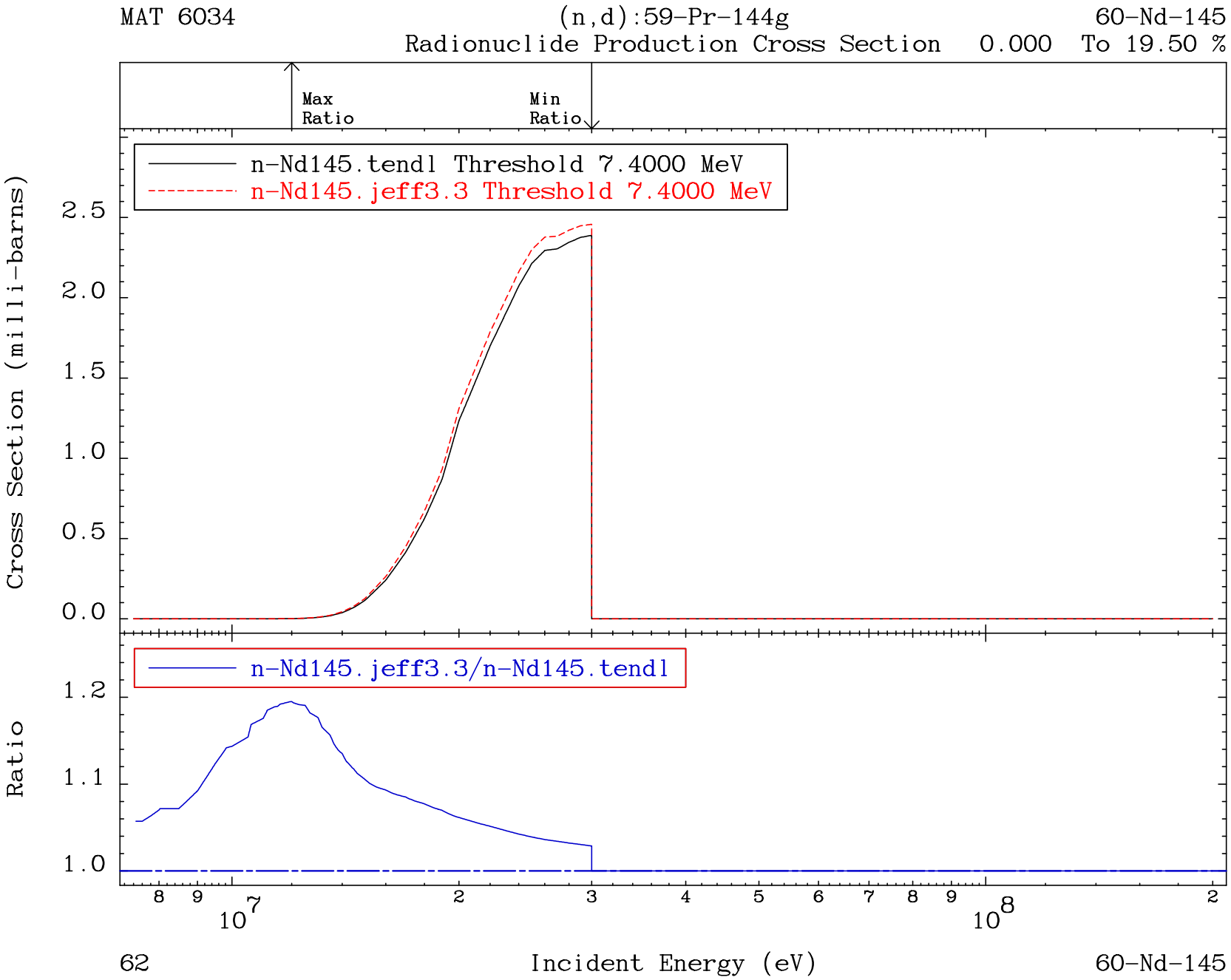

MAT 6034
(n,n') p:59-Pr-144m1
60-Nd-145
Radionuclide Production Cross Section 0.000 To 39.71 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 8.0853 MeV
n-Nd145.jeff3.3 Threshold 8.0853 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
57
Incident Energy (eV)
60-Nd-145

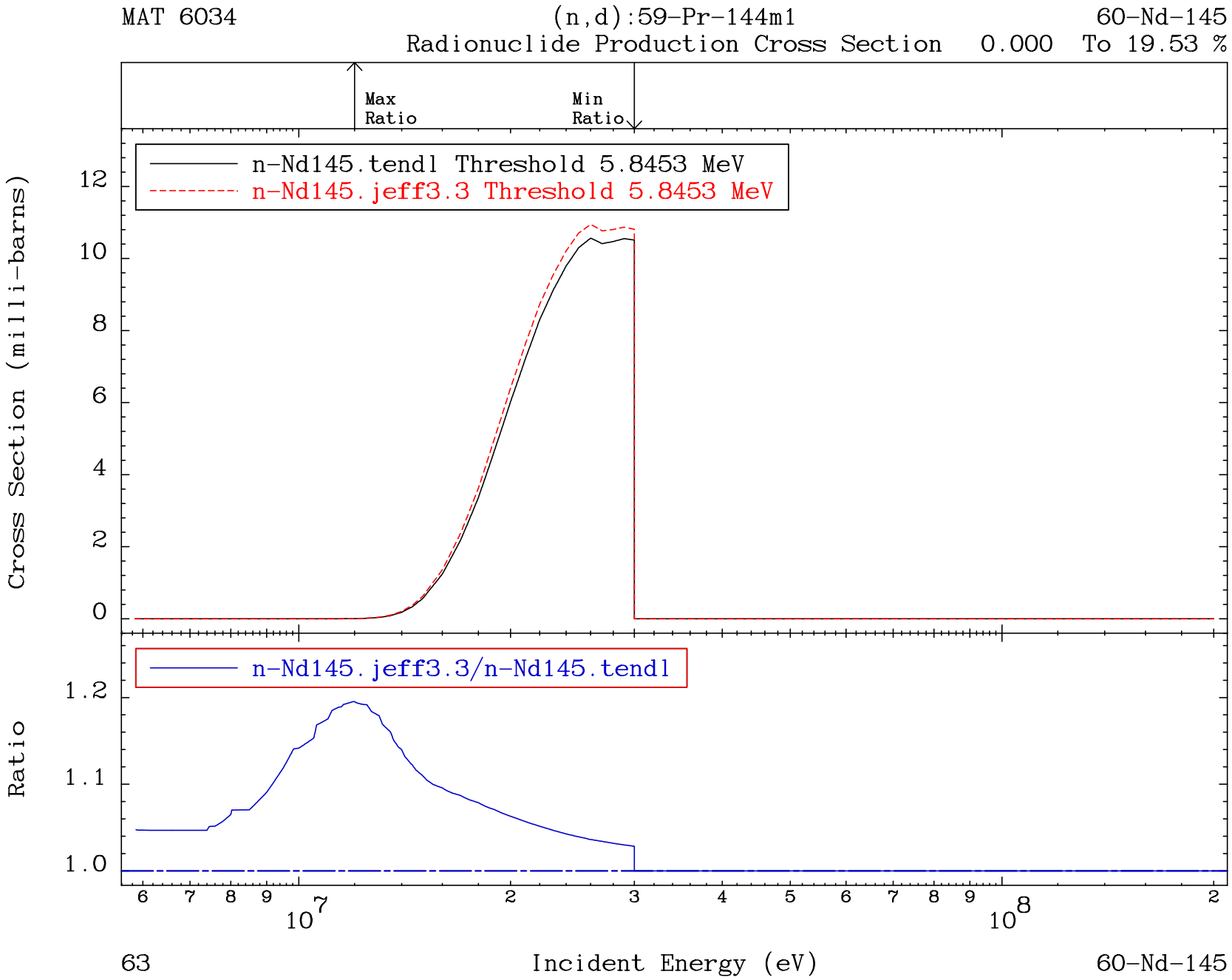

MAT 6034
(n,n') t:59-Pr-142g
60-Nd-145
Radionuclide Production Cross Section 0.000 To 31.73 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 12.682 MeV
n-Nd145.jeff3.3 Threshold 12.682 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
60-Nd-145


MAT 6034
(n,n') t:59-Pr-142m1
60-Nd-145
Radionuclide Production Cross Section 0.000 To 14.22 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 12.686 MeV
n-Nd145.jeff3.3 Threshold 12.686 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.00
1.05
1.10
1.15
2
3
4
5
6
7
8
9
10^8
2
59
Incident Energy (eV)
60-Nd-145


MAT 6034
(n,3n) p:59-Pr-142g
60-Nd-145
Radionuclide Production Cross Section 0.000 To 67.94 %
Min
Ratio
n-Nd145.tendl Threshold 21.223 MeV
n-Nd145.jeff3.3 Threshold 21.223 MeV
Cross Section (micro-barns)
160
140
120
100
80
60
40
20
0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.6
1.2
20
40
60
80
100
120
140
160
180
200
60
Incident Energy (MeV)
60-Nd-145


MAT 6034
(n,3n) p:59-Pr-142m1
60-Nd-145
Radionuclide Production Cross Section 0.000 To 38.55 %
Min Ratio
n-Nd145.tendl Threshold 21.227 MeV
n-Nd145.jeff3.3 Threshold 21.227 MeV
Cross Section (milli-barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.4
1.2
1.0
20
40
60
80
100
120
140
160
180
200
61
Incident Energy (MeV)
60-Nd-145


MAT 6034
(n,d):59-Pr-144g
60-Nd-145
Radionuclide Production Cross Section 0.000 To 19.50 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 7.4000 MeV
n-Nd145.jeff3.3 Threshold 7.4000 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.2
1.1
1.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
62
Incident Energy (eV)
60-Nd-145


MAT 6034
(n,d):59-Pr-144m1
60-Nd-145
Radionuclide Production Cross Section 0.000 To 19.53 %
Max Ratio
Min Ratio
n-Nd145.tendl Threshold 5.8453 MeV
n-Nd145.jeff3.3 Threshold 5.8453 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
n-Nd145.jeff3.3/n-Nd145.tendl
Ratio
1.0
1.1
1.2
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
63
Incident Energy (eV)
60-Nd-145