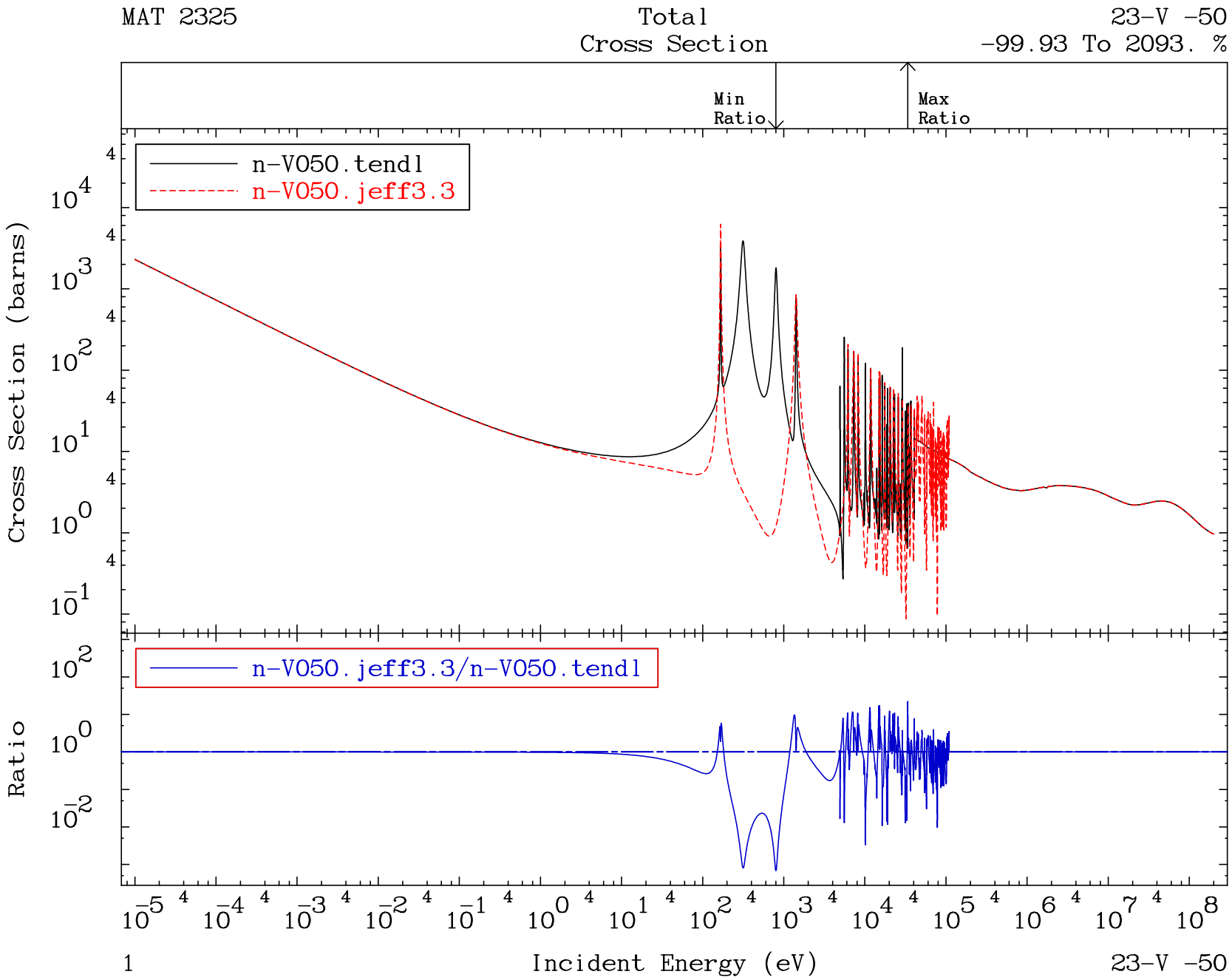
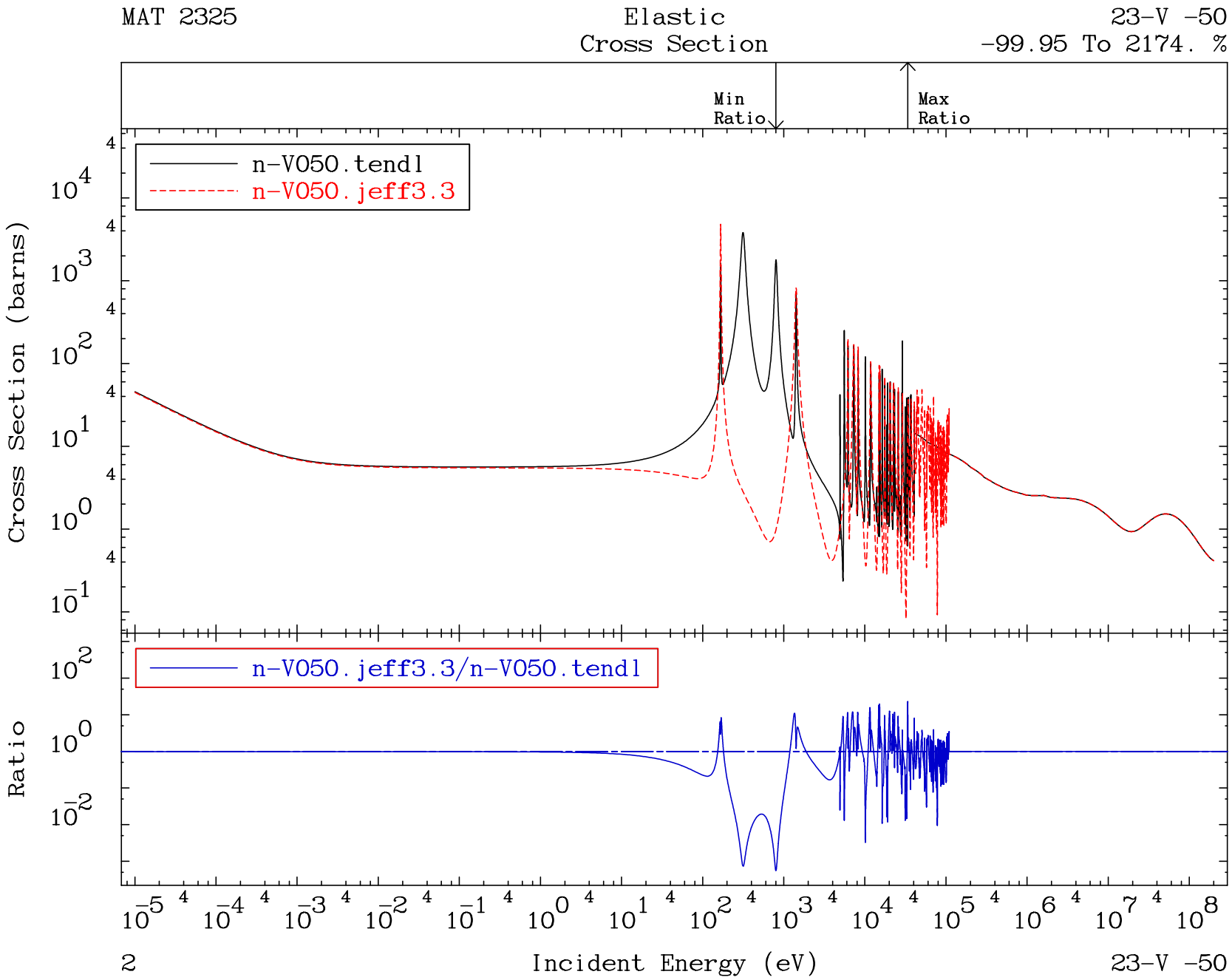
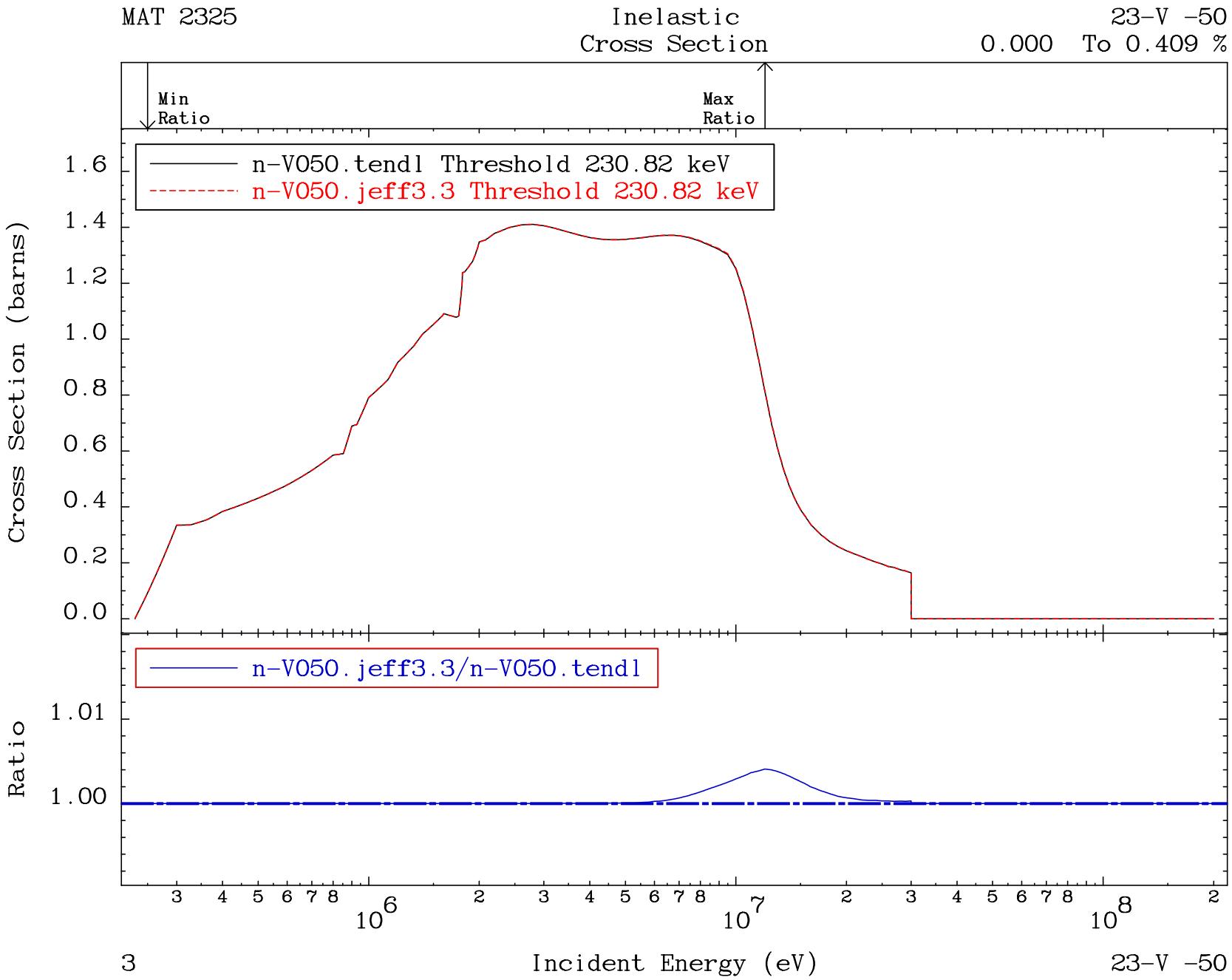
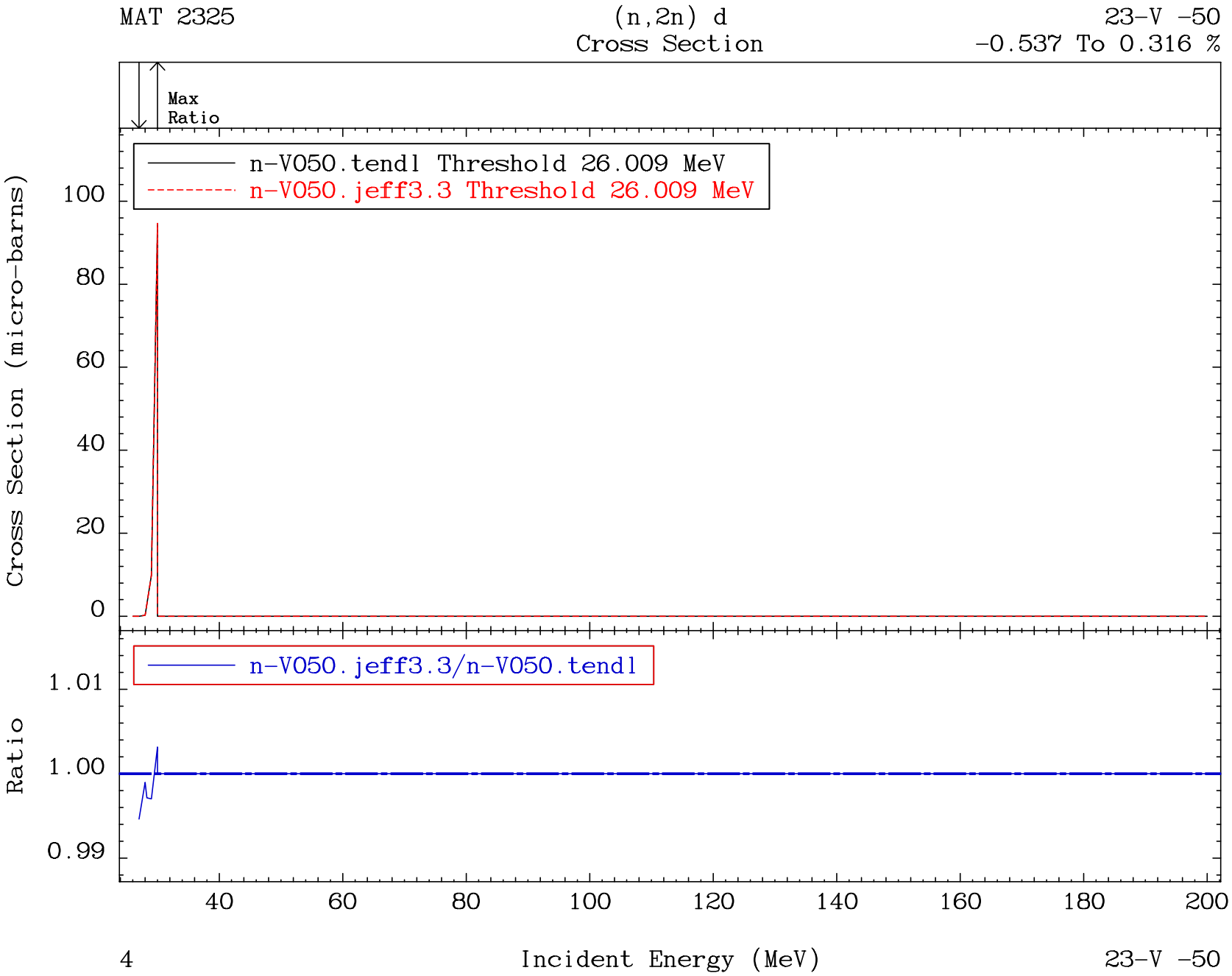
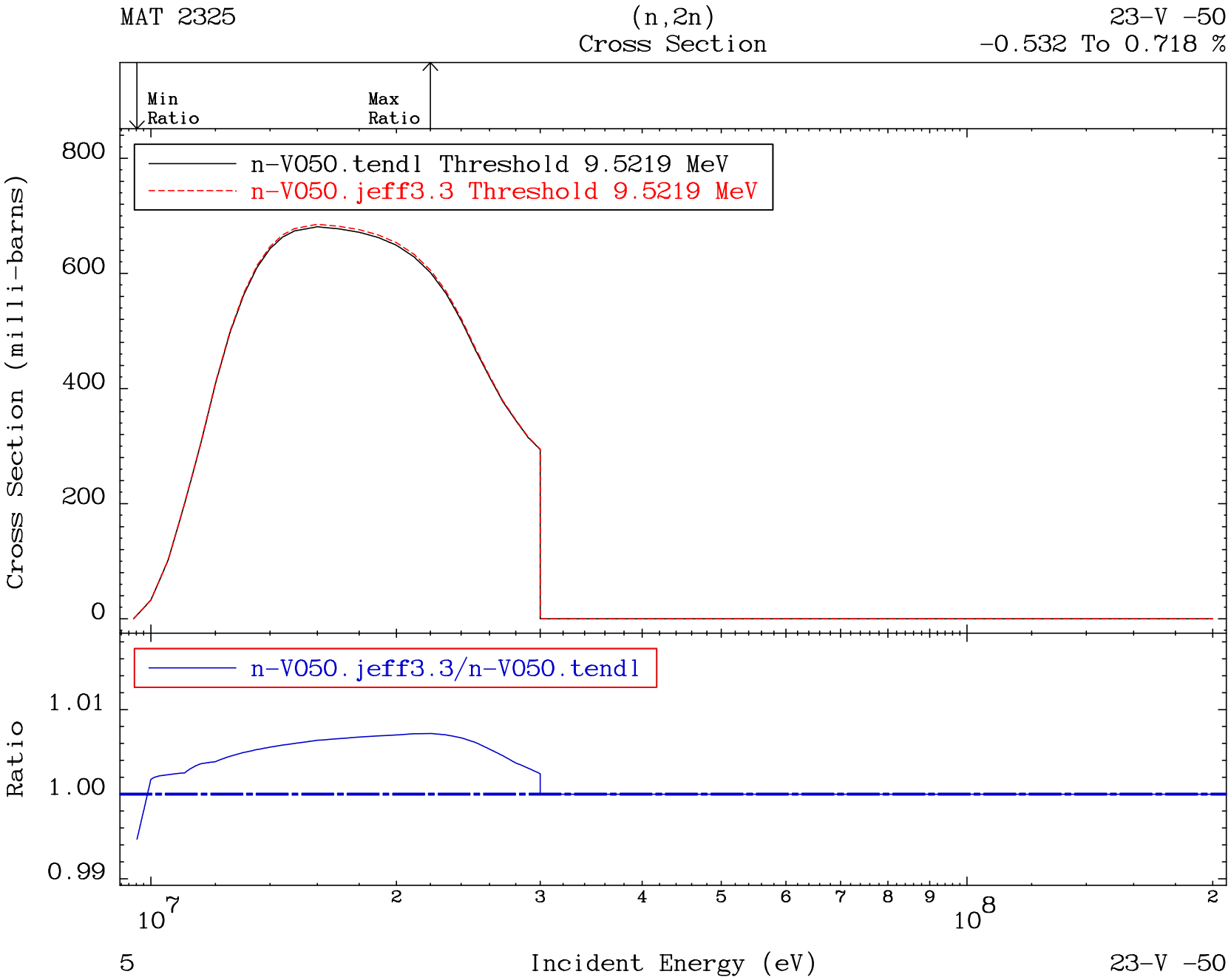
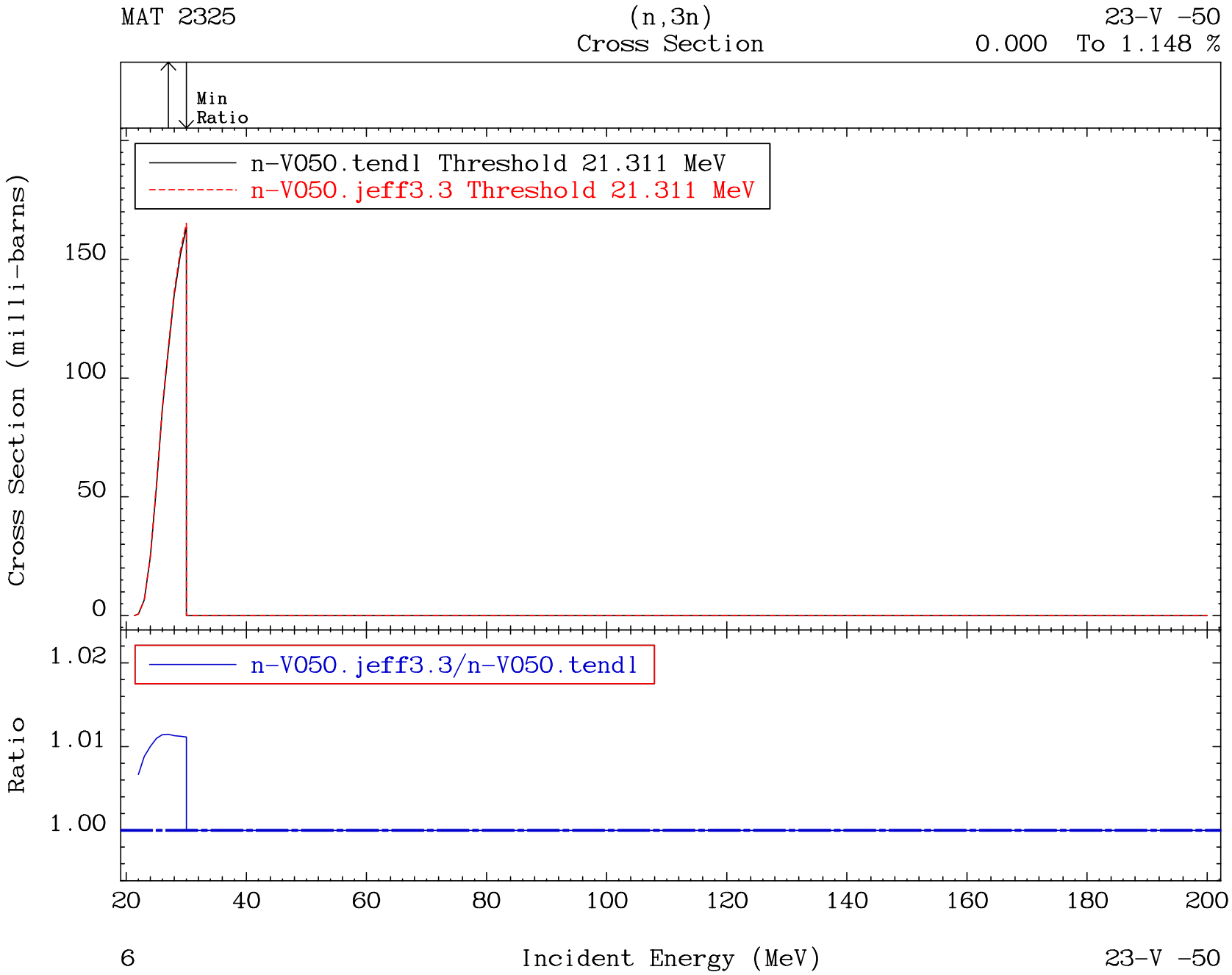

MAT 2325
Total
Cross Section
23-V -50
-99.93 To 2093. %
Min
Ratio
Max
Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
1
23-V -50

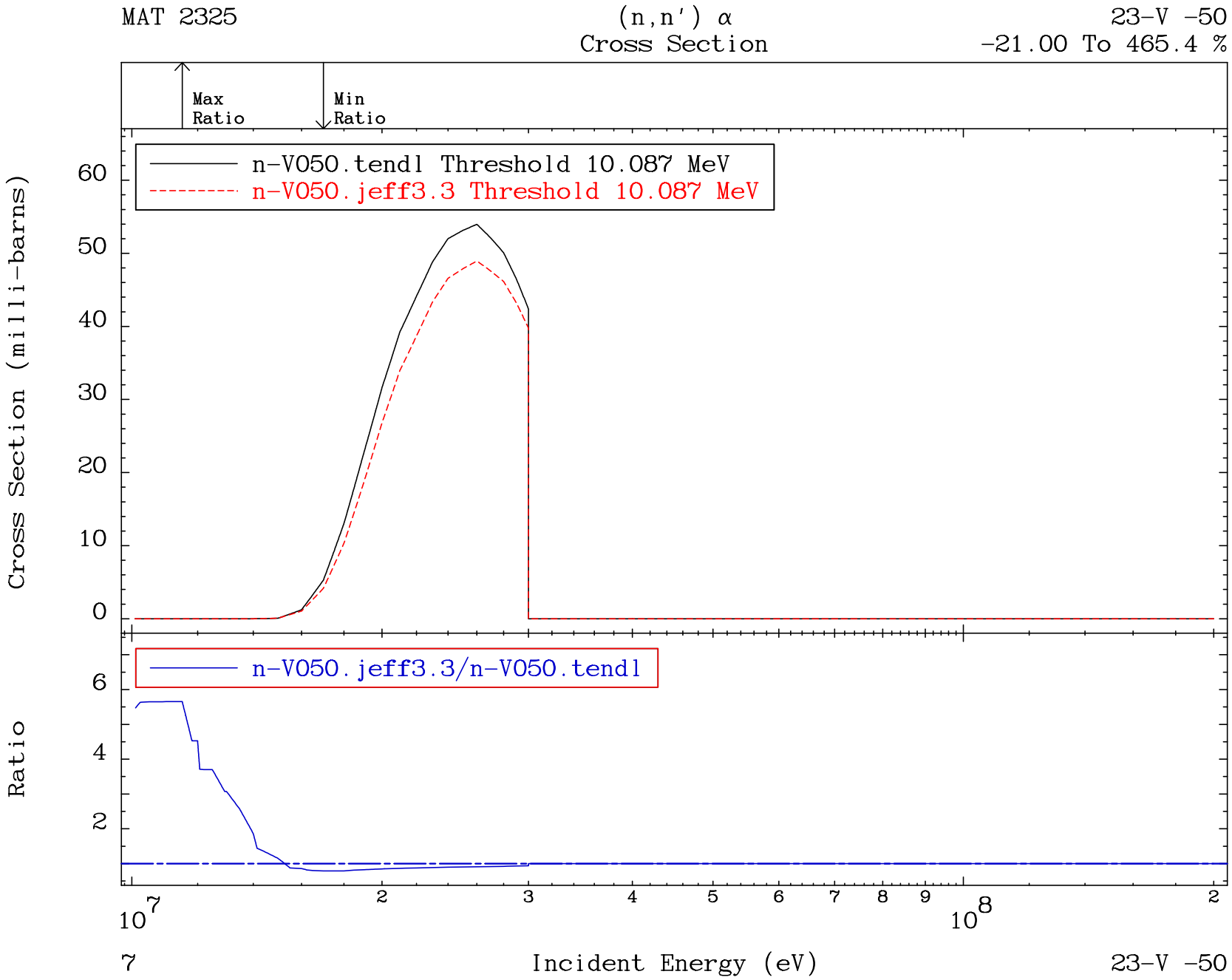

MAT 2325
Elastic
Cross Section
23-V -50
-99.95 To 2174. %
Min
Ratio
Max
Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
2
23-V -50

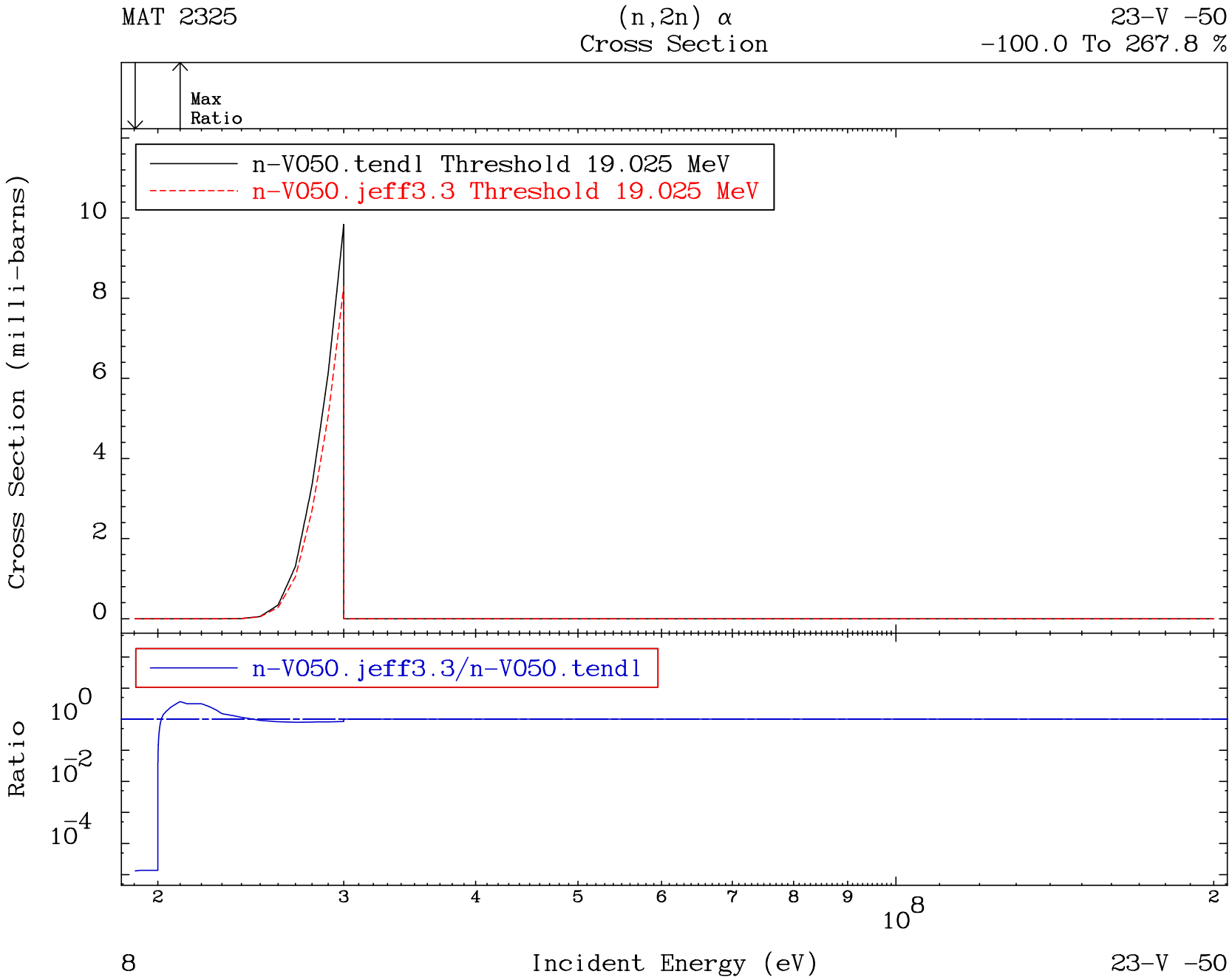

MAT 2325
Inelastic
Cross Section
23-V -50
0.000 To 0.409 %
Min
Ratio
Max
Ratio
n-V050.tendl Threshold 230.82 keV
n-V050.jeff3.3 Threshold 230.82 keV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
3
Incident Energy (eV)
23-V -50

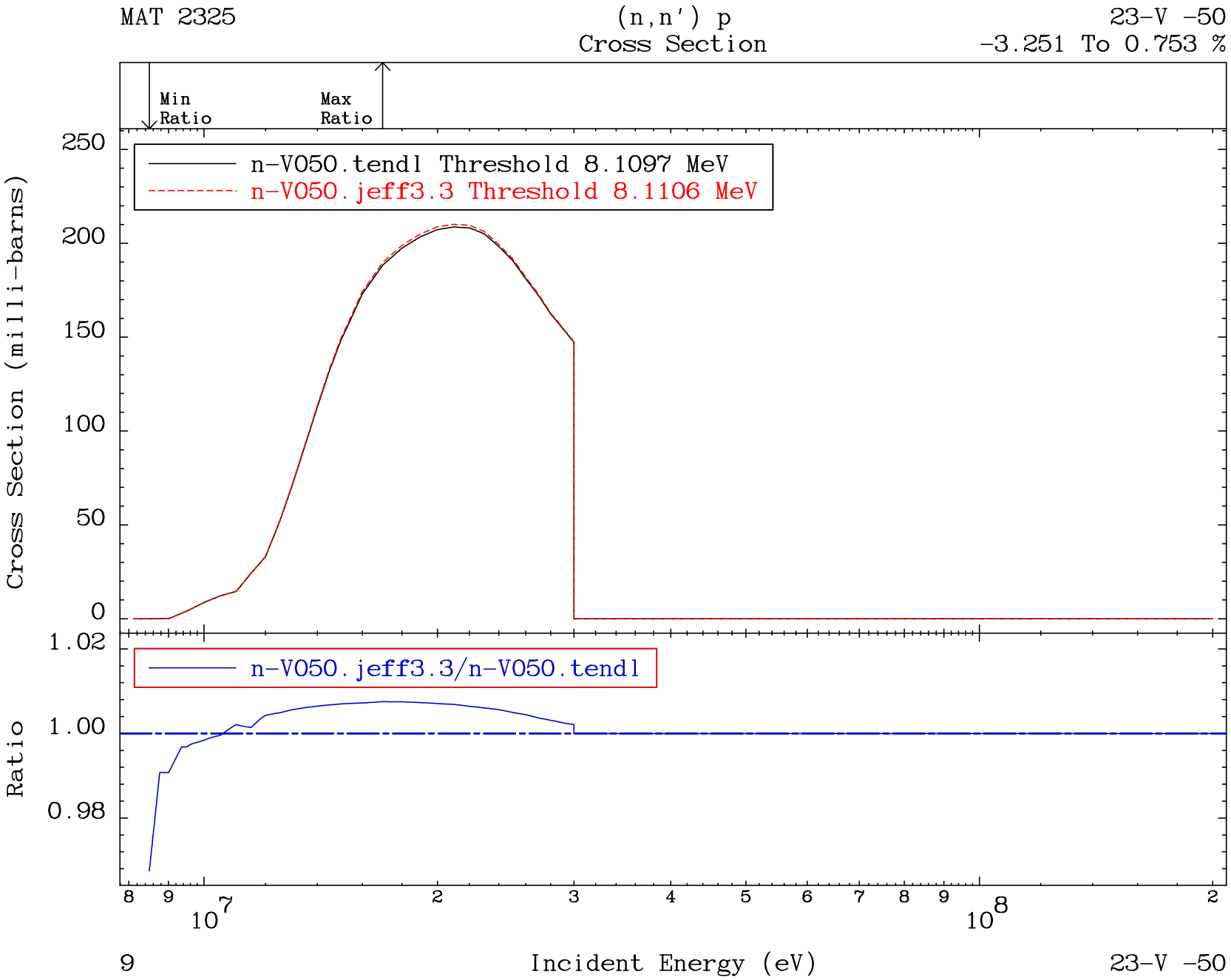

MAT 2325
(n,2n) d
Cross Section
23-V -50
-0.537 To 0.316 %
Max
Ratio
n-V050.tendl Threshold 26.009 MeV
n-V050.jeff3.3 Threshold 26.009 MeV
Cross Section (micro-barns)
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
23-V -50

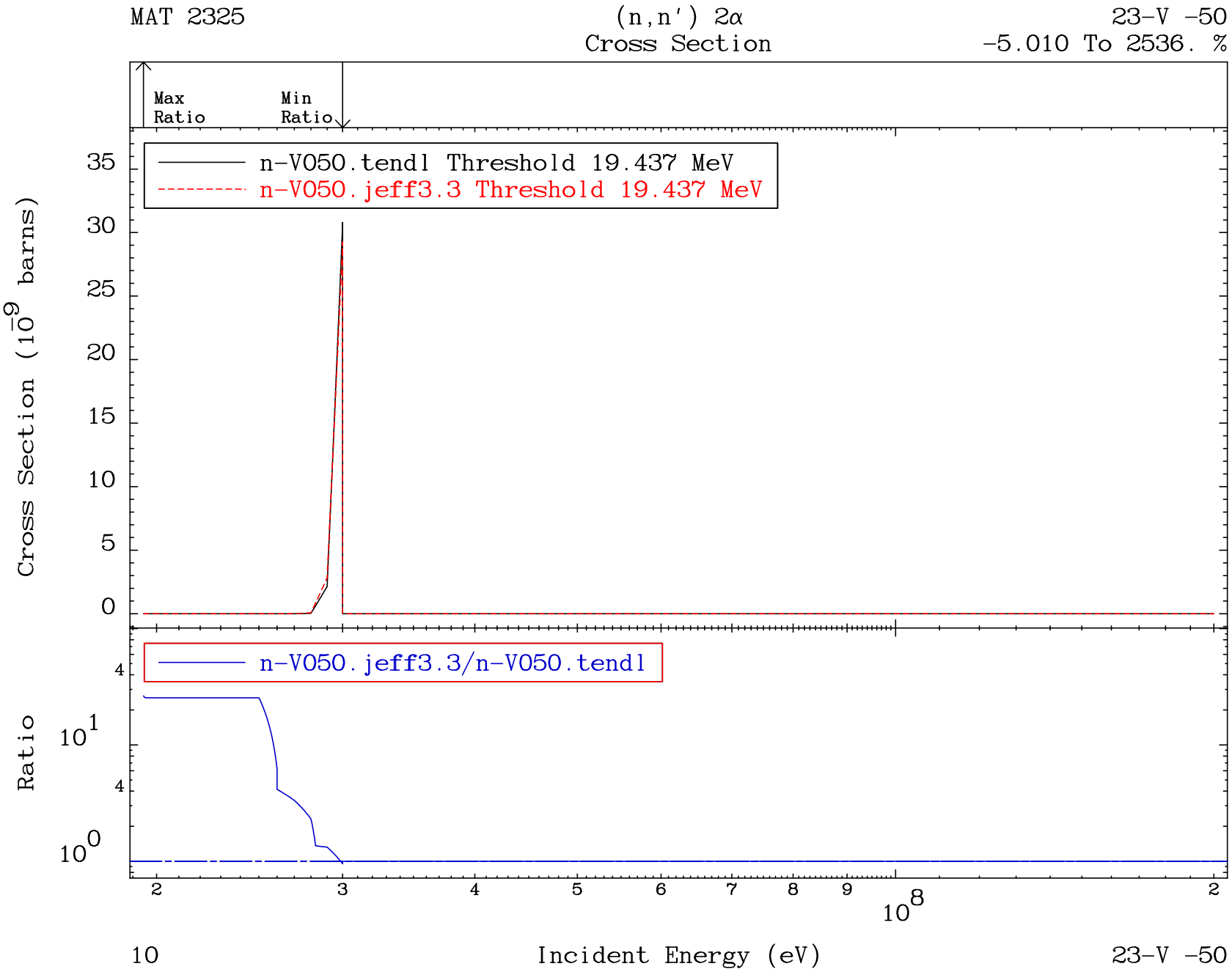

MAT 2325
(n,2n)
Cross Section
23-V -50
-0.532 To 0.718 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 9.5219 MeV
n-V050.jeff3.3 Threshold 9.5219 MeV
Cross Section (milli-barns)
800
600
400
200
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
5
10^7
2
3
4
5
6
7
8
9
10^8
2
Incident Energy (eV)
23-V -50

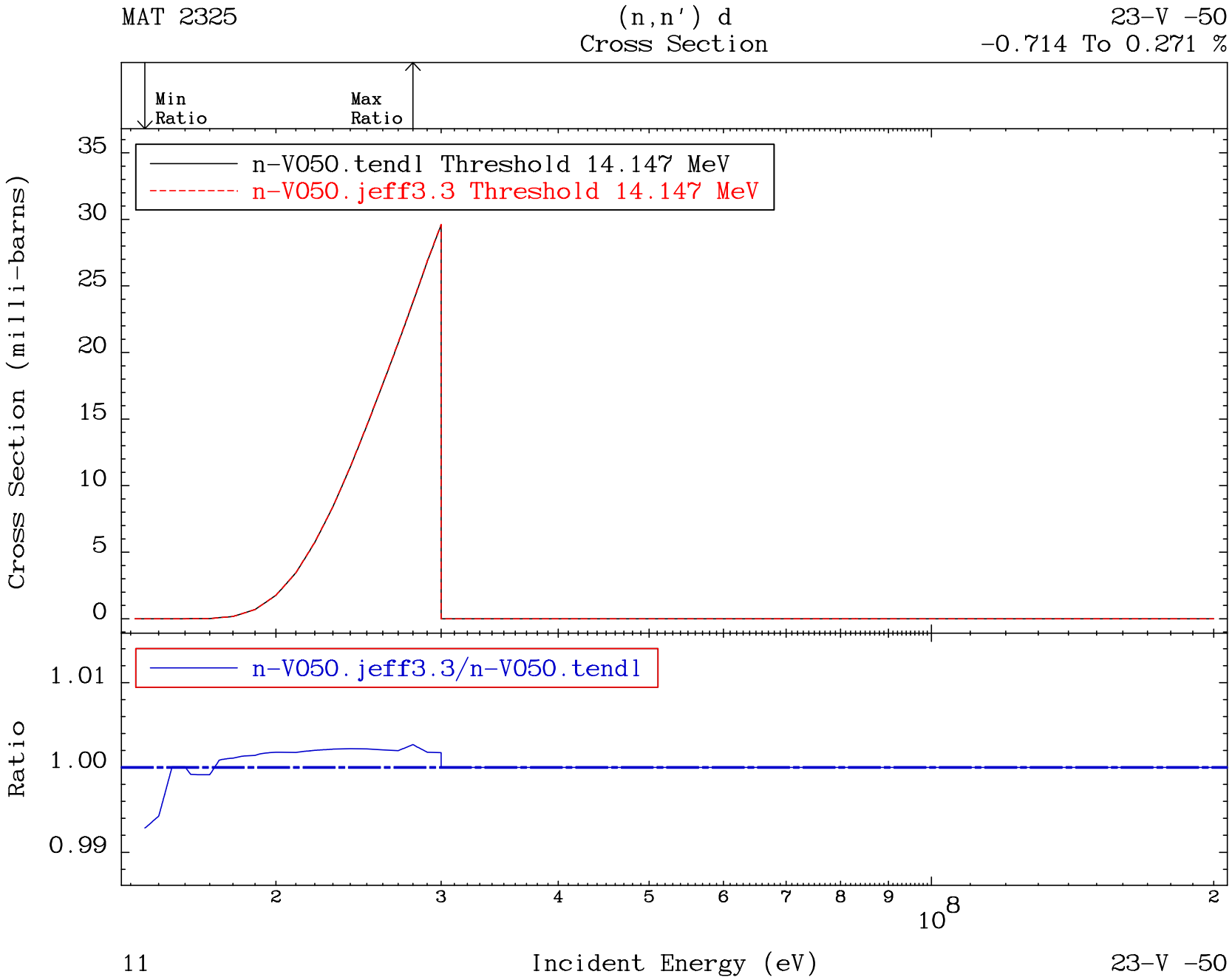

MAT 2325
(n,3n)
Cross Section
23-V -50
0.000 To 1.148 %
Min
Ratio
n-V050.tendl Threshold 21.311 MeV
n-V050.jeff3.3 Threshold 21.311 MeV
Cross Section (milli-barns)
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
20
40
60
80
100
120
140
160
180
200
6
Incident Energy (MeV)
23-V -50

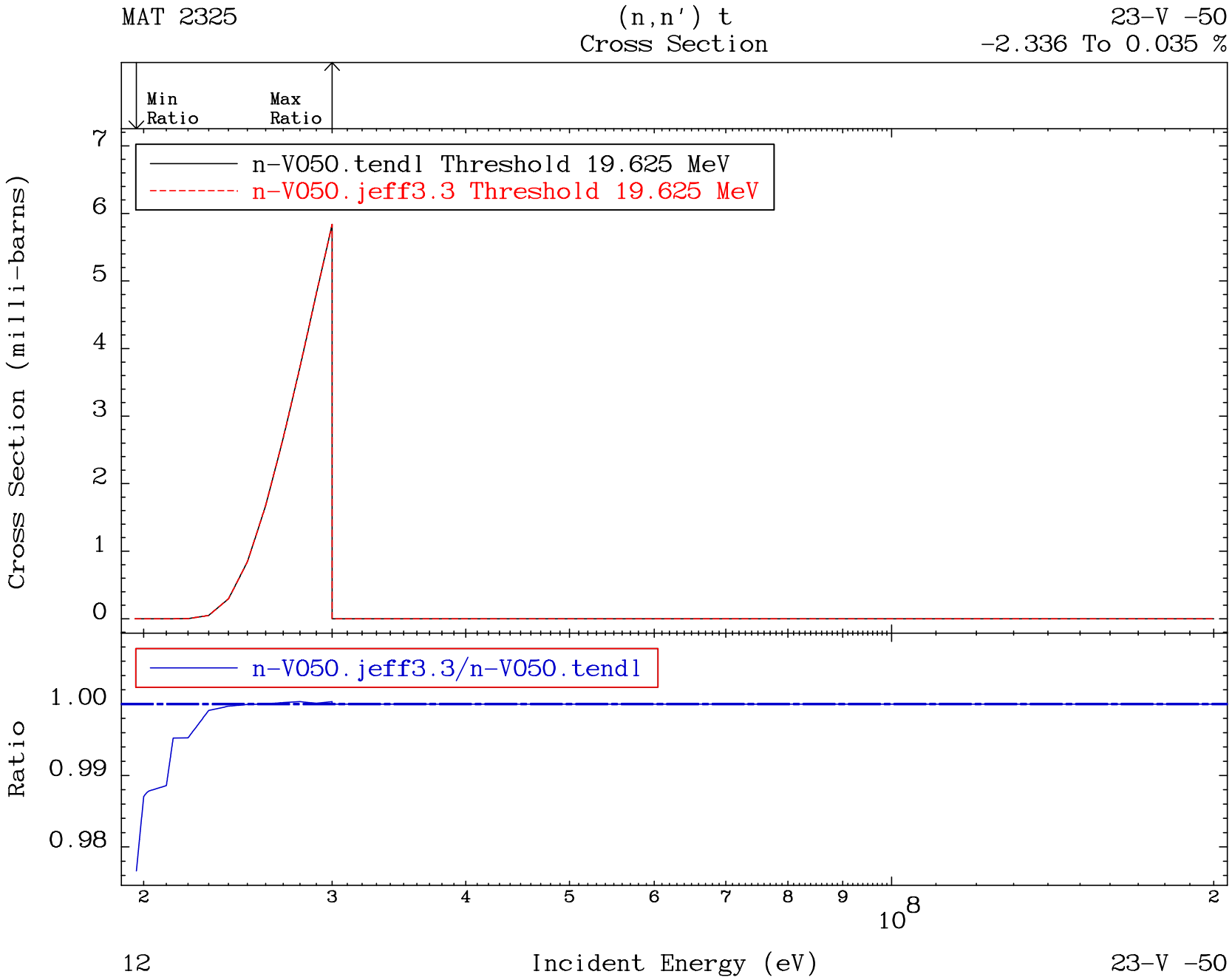

MAT 2325
(n,n') α
Cross Section
23-V -50
-21.00 To 465.4 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 10.087 MeV
n-V050.jeff3.3 Threshold 10.087 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-V050.jeff3.3/n-V050.tendl
Ratio
6
4
2
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
23-V -50

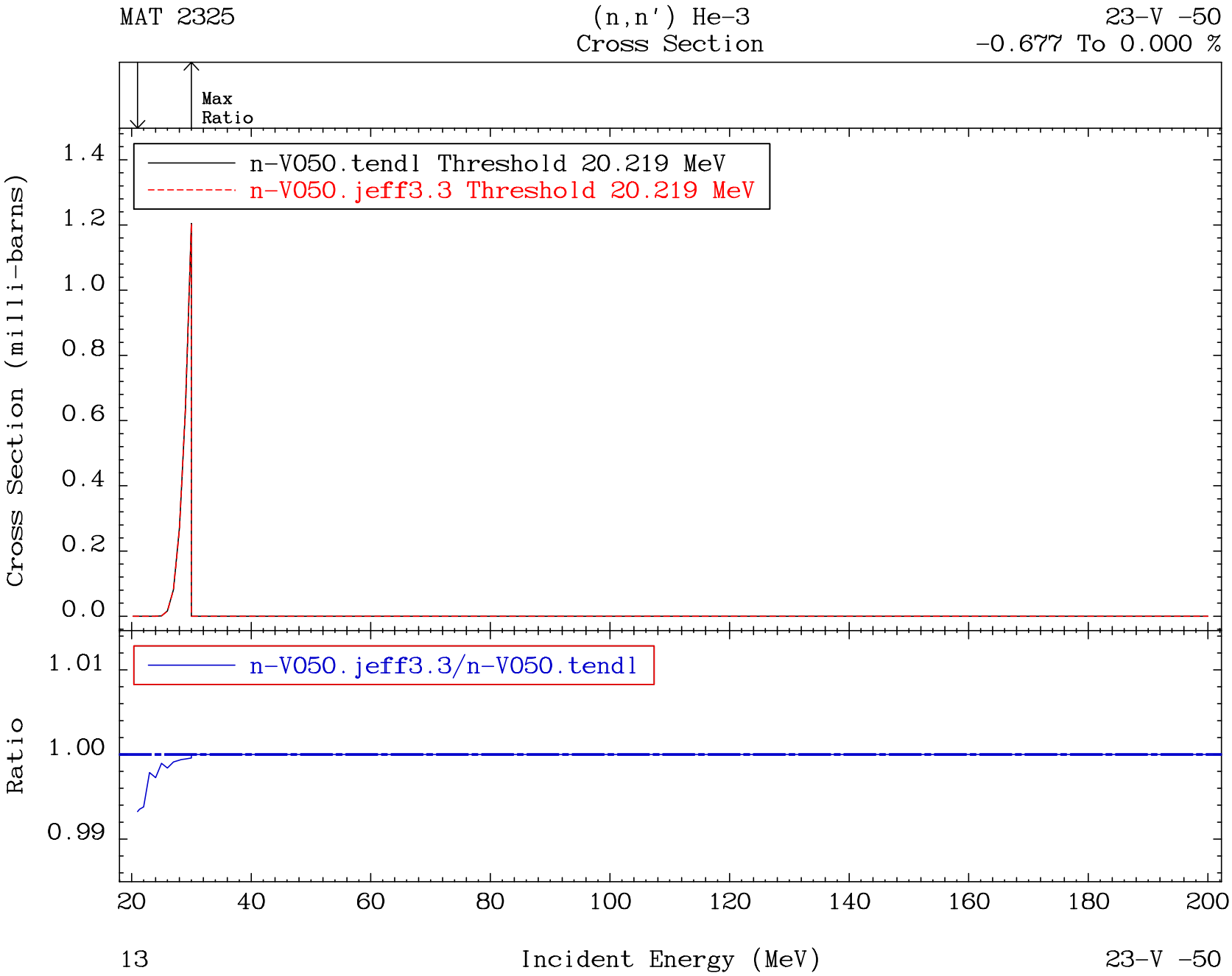

MAT 2325
(n,2n) α
Cross Section
23-V -50
-100.0 To 267.8 %
Max
Ratio
n-V050.tendl Threshold 19.025 MeV
n-V050.jeff3.3 Threshold 19.025 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^0
10^-2
10^-4
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
23-V -50

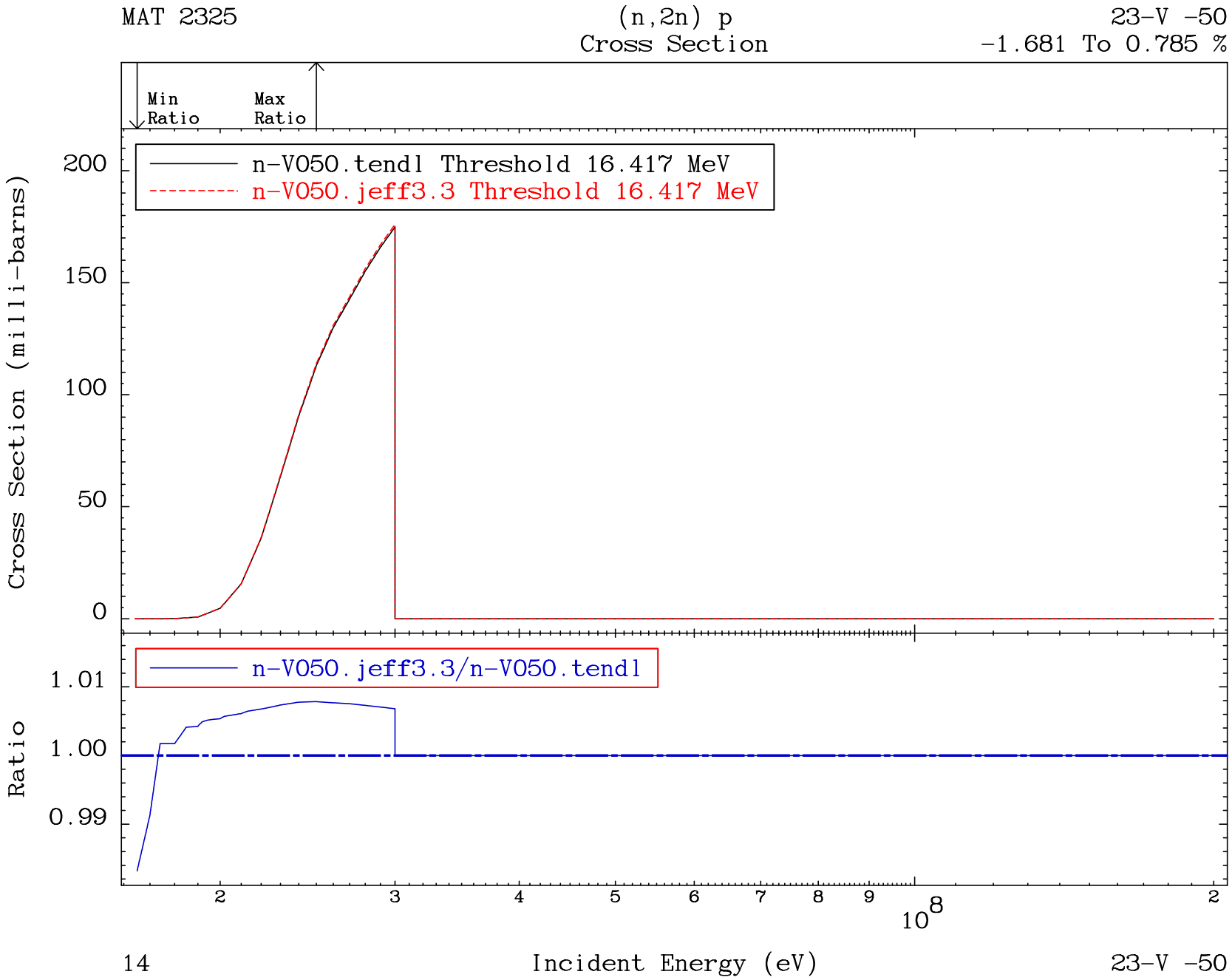

MAT 2325
(n,n') p
Cross Section
23-V -50
-3.251 To 0.753 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 8.1097 MeV
n-V050.jeff3.3 Threshold 8.1106 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.00
0.98
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
9
Incident Energy (eV)
23-V -50

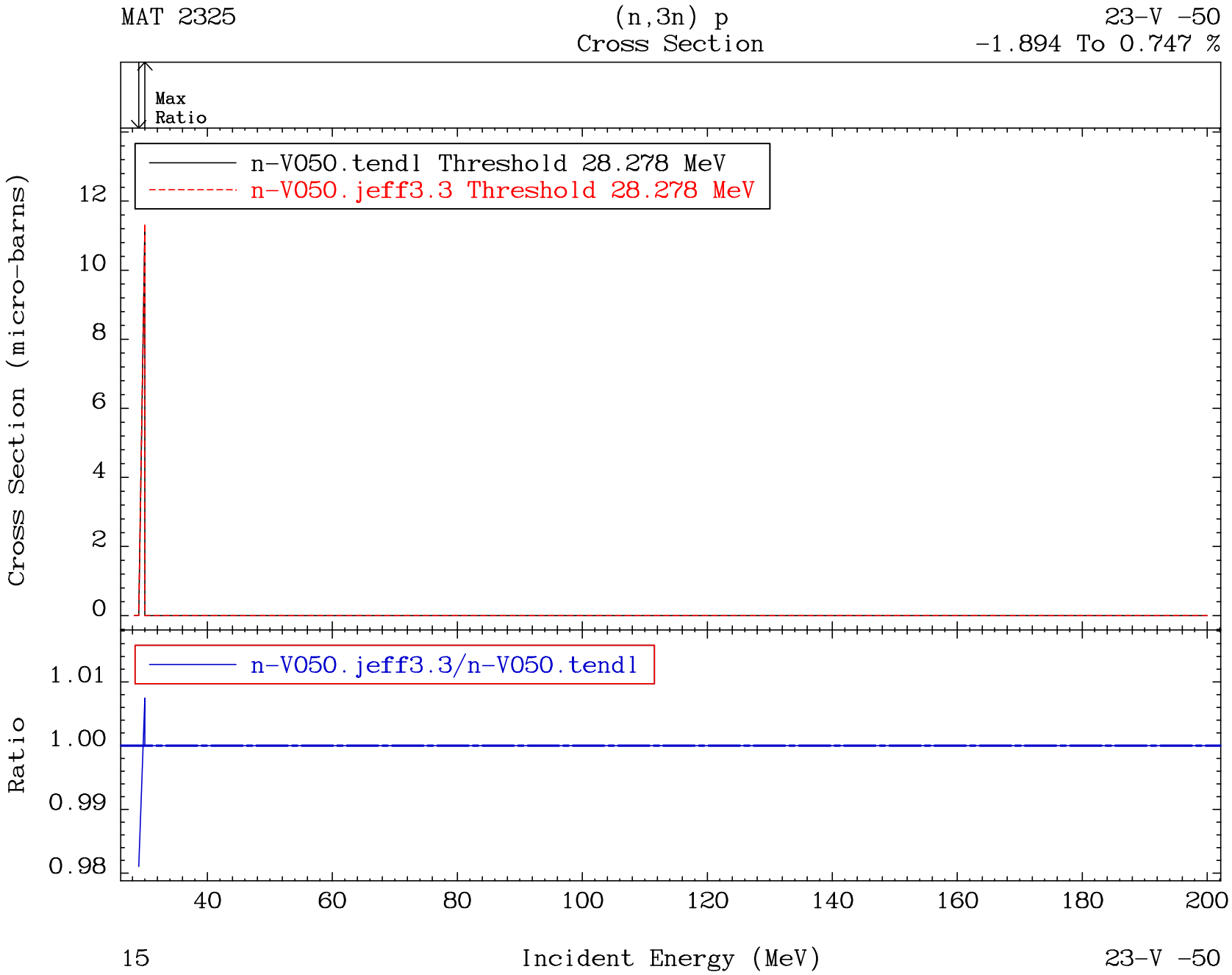

MAT 2325
(n,n') 2α
Cross Section
23-V -50
-5.010 To 2536. %
Max Ratio
Min Ratio
n-V050.tendl Threshold 19.437 MeV
n-V050.jeff3.3 Threshold 19.437 MeV
Cross Section ($10^{-9}$ barns)
35
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
$10^{1}$
4
$10^{0}$
4
2
3
4
5
6
7
8
9
$10^{8}$
2
10
Incident Energy (eV)
23-V -50

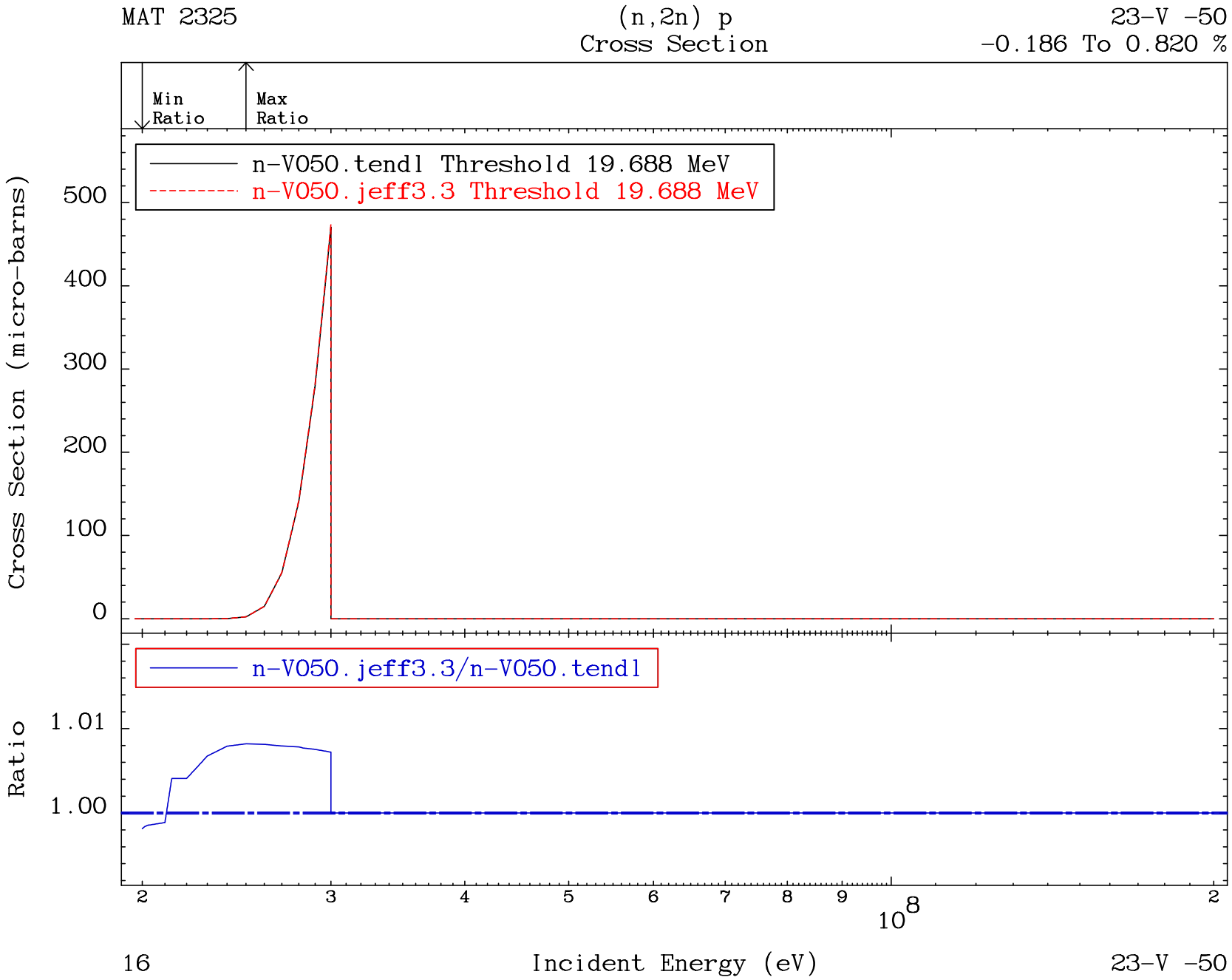

MAT 2325
(n,n') d
Cross Section
23-V -50
-0.714 To 0.271 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 14.147 MeV
n-V050.jeff3.3 Threshold 14.147 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
23-V -50

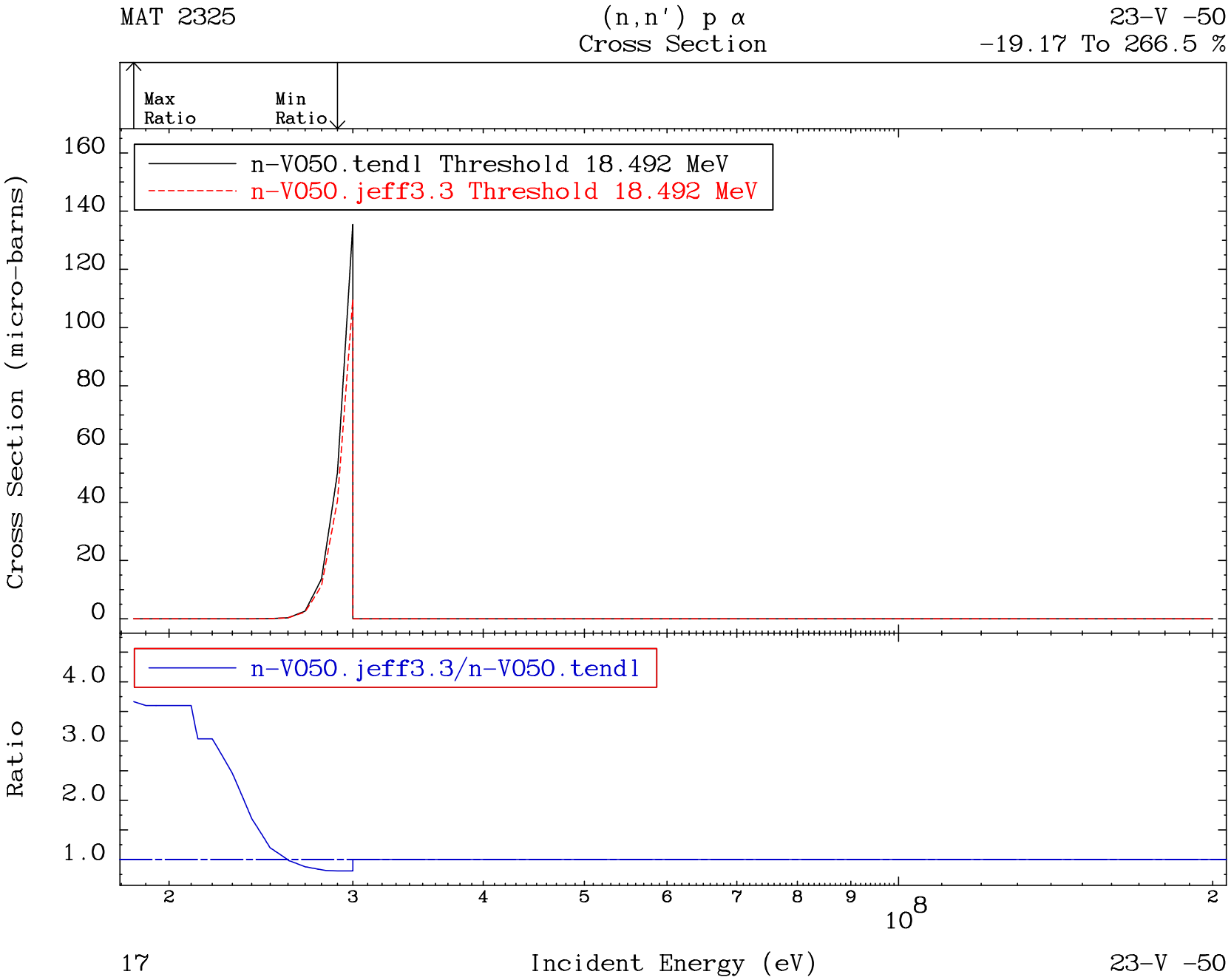

MAT 2325
(n,n') t
Cross Section
23-V -50
-2.336 To 0.035 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 19.625 MeV
n-V050.jeff3.3 Threshold 19.625 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
7
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.99
0.98
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
23-V -50

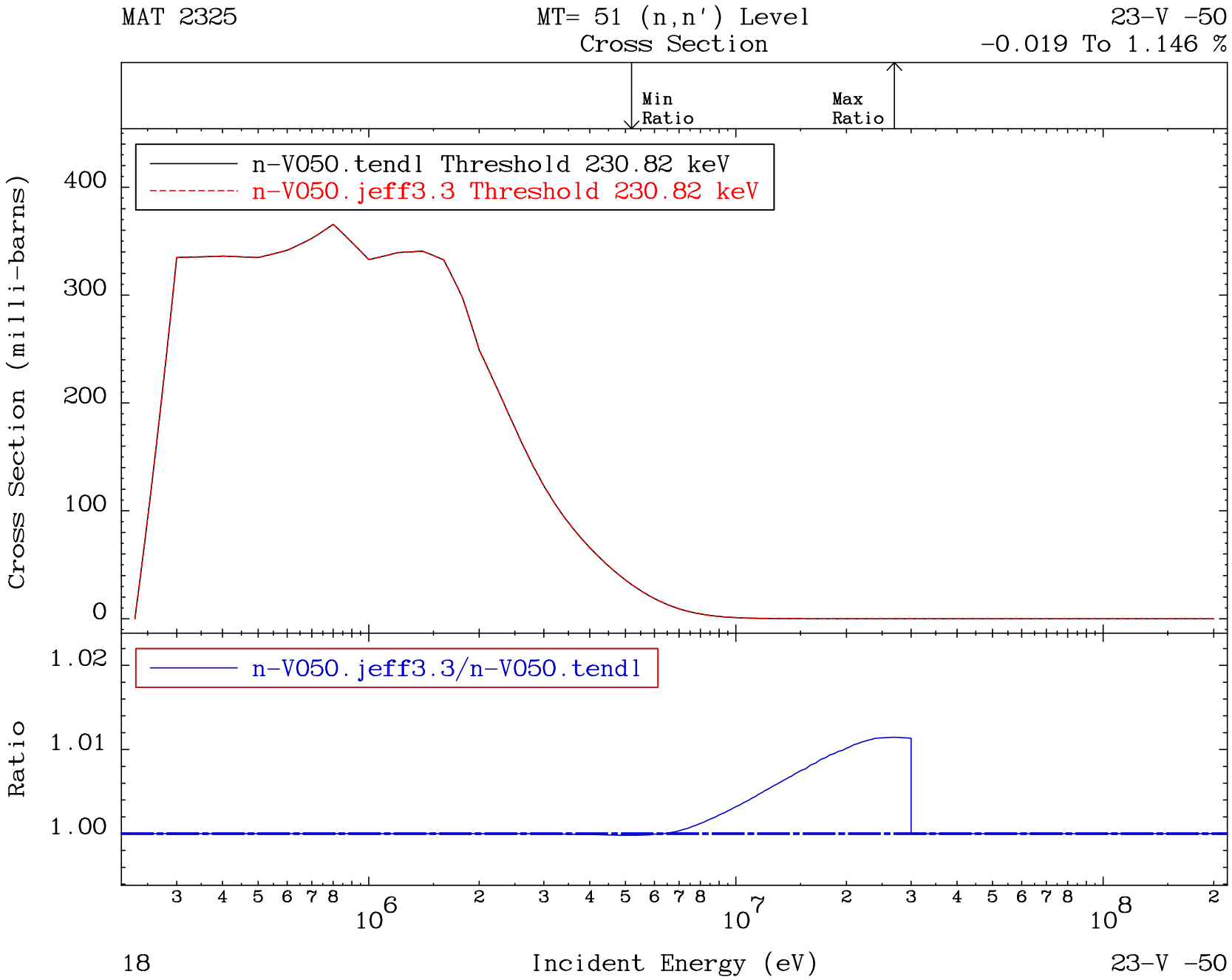

MAT 2325
(n,n') He-3
Cross Section
23-V -50
-0.677 To 0.000 %
Max
Ratio
n-V050.tendl Threshold 20.219 MeV
n-V050.jeff3.3 Threshold 20.219 MeV
Cross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
20
40
60
80
100
120
140
160
180
200
13
Incident Energy (MeV)
23-V -50

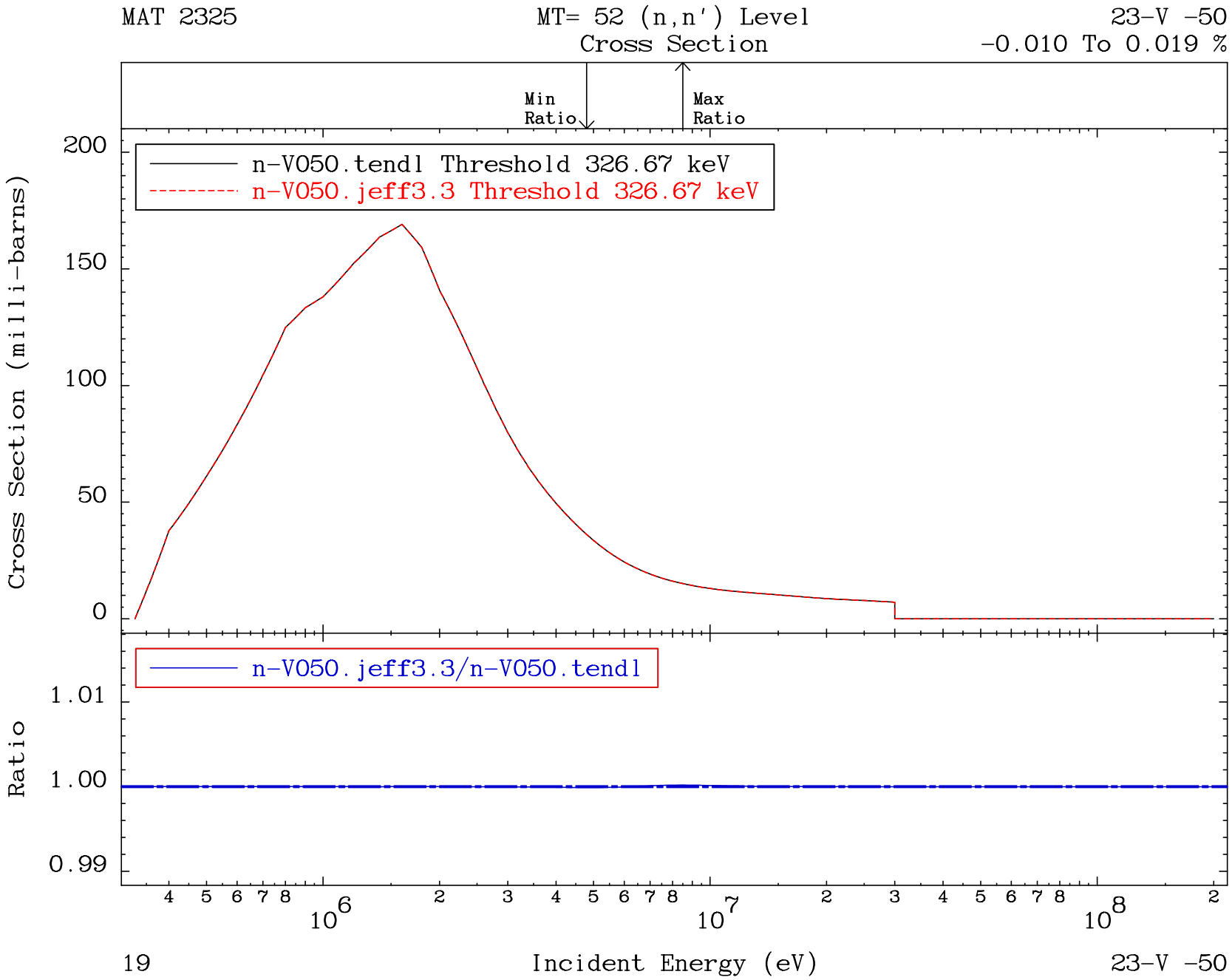

MAT 2325
(n,2n) p
Cross Section
23-V -50
-1.681 To 0.785 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 16.417 MeV
n-V050.jeff3.3 Threshold 16.417 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
23-V -50

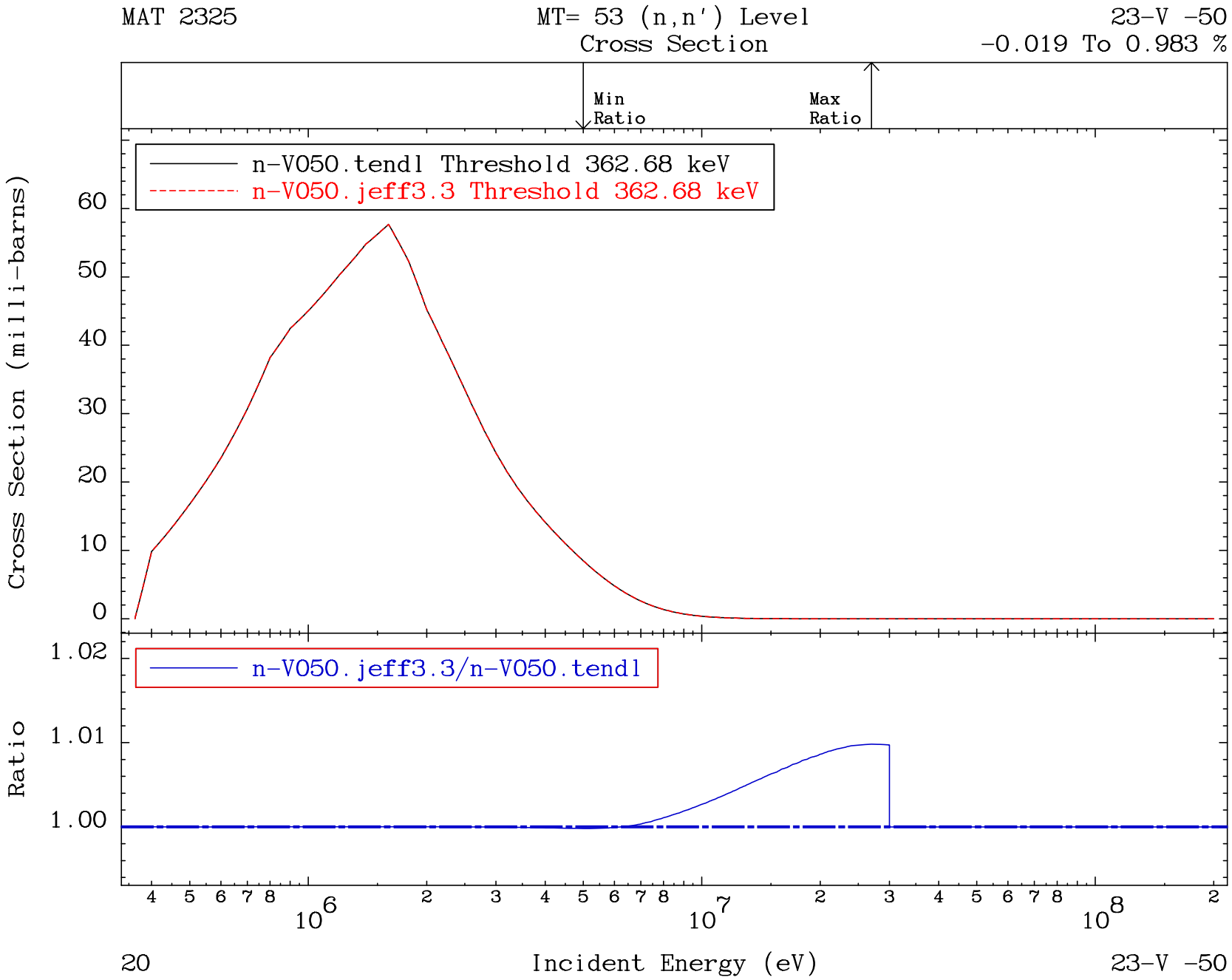

MAT 2325
(n,3n) p
Cross Section
23-V -50
-1.894 To 0.747 %
Max
Ratio
n-V050.tendl Threshold 28.278 MeV
n-V050.jeff3.3 Threshold 28.278 MeV
Cross Section (micro-barns)
0
2
4
6
8
10
12
n-V050.jeff3.3/n-V050.tendl
Ratio
0.98
0.99
1.00
1.01
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
23-V -50

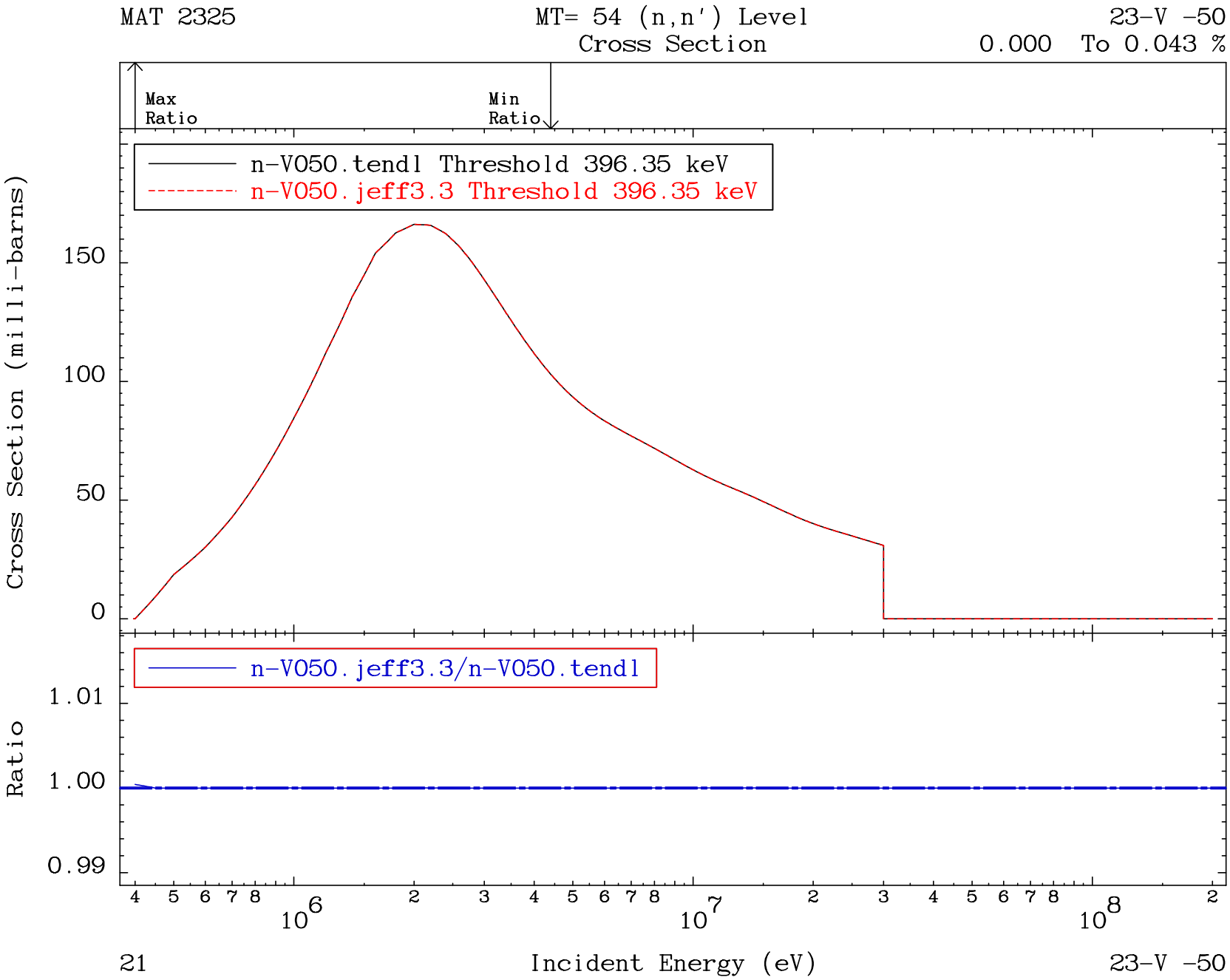

MAT 2325
(n,2n) p
Cross Section
23-V -50
-0.186 To 0.820 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 19.688 MeV
n-V050.jeff3.3 Threshold 19.688 MeV
Cross Section (micro-barns)
500
400
300
200
100
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
2
3
4
5
6
7
8
9
10^8
2
16
Incident Energy (eV)
23-V -50

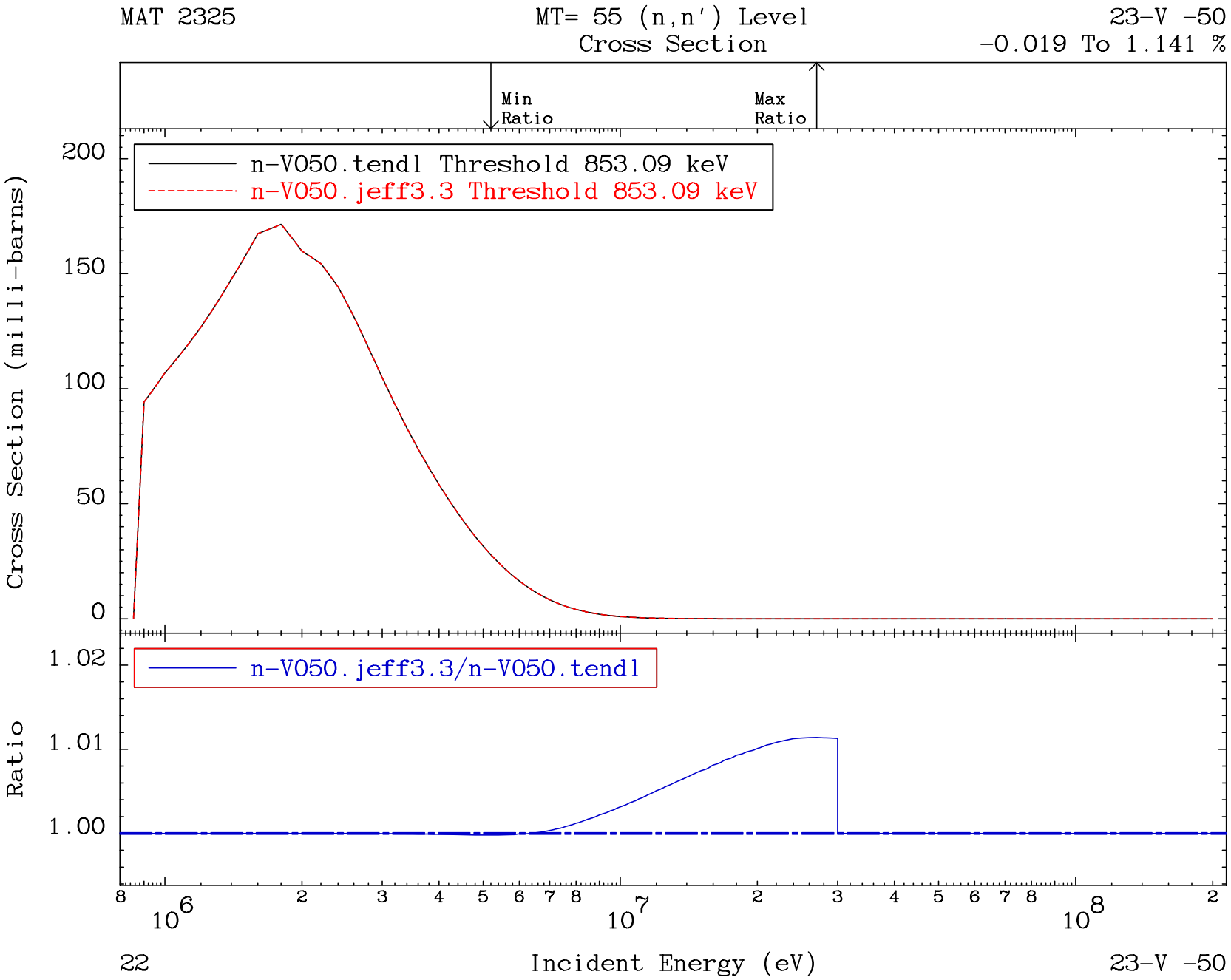

MAT 2325
(n,n') p α
Cross Section
23-V -50
-19.17 To 266.5 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 18.492 MeV
n-V050.jeff3.3 Threshold 18.492 MeV
Cross Section (micro-barns)
160
140
120
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
17
Incident Energy (eV)
23-V -50

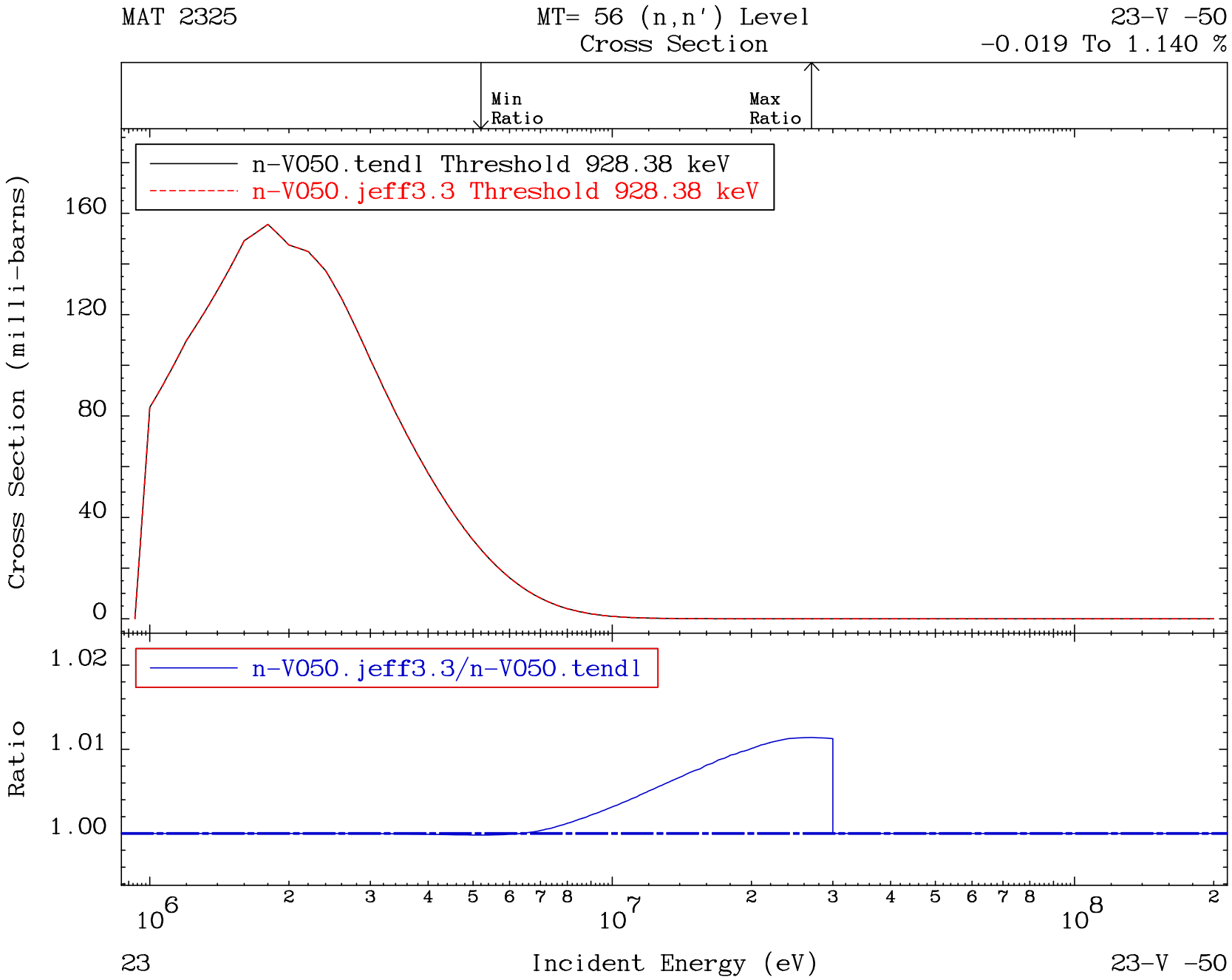

MAT 2325
MT= 51 (n,n') Level
Cross Section
23-V -50
-0.019 To 1.146 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 230.82 keV
n-V050.jeff3.3 Threshold 230.82 keV
Cross Section (milli-barns)
400
300
200
100
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
23-V -50

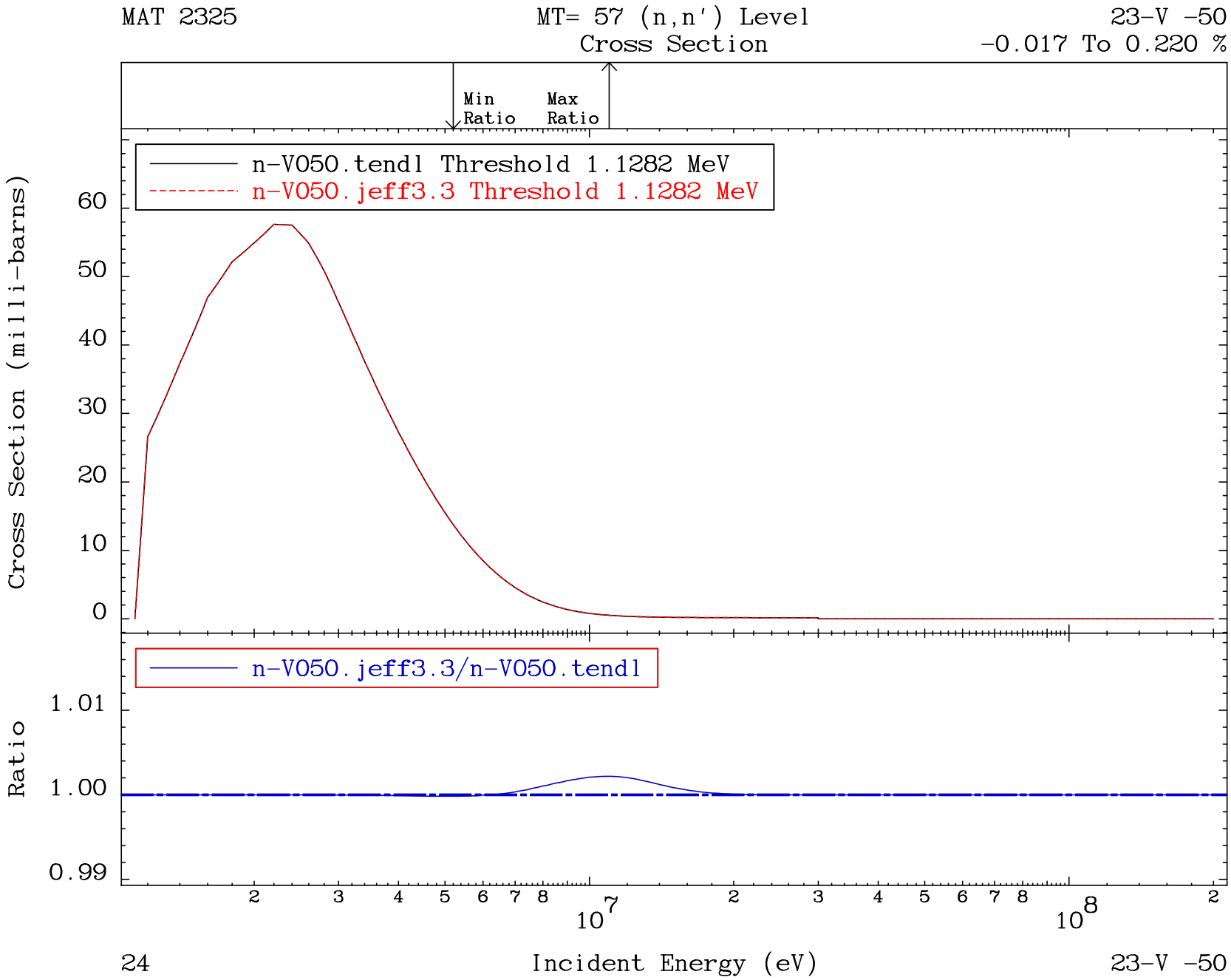

MAT 2325
MT= 52 (n,n') Level
Cross Section
23-V -50
-0.010 To 0.019 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 326.67 keV
n-V050.jeff3.3 Threshold 326.67 keV
Cross Section (milli-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
19
Incident Energy (eV)
23-V -50

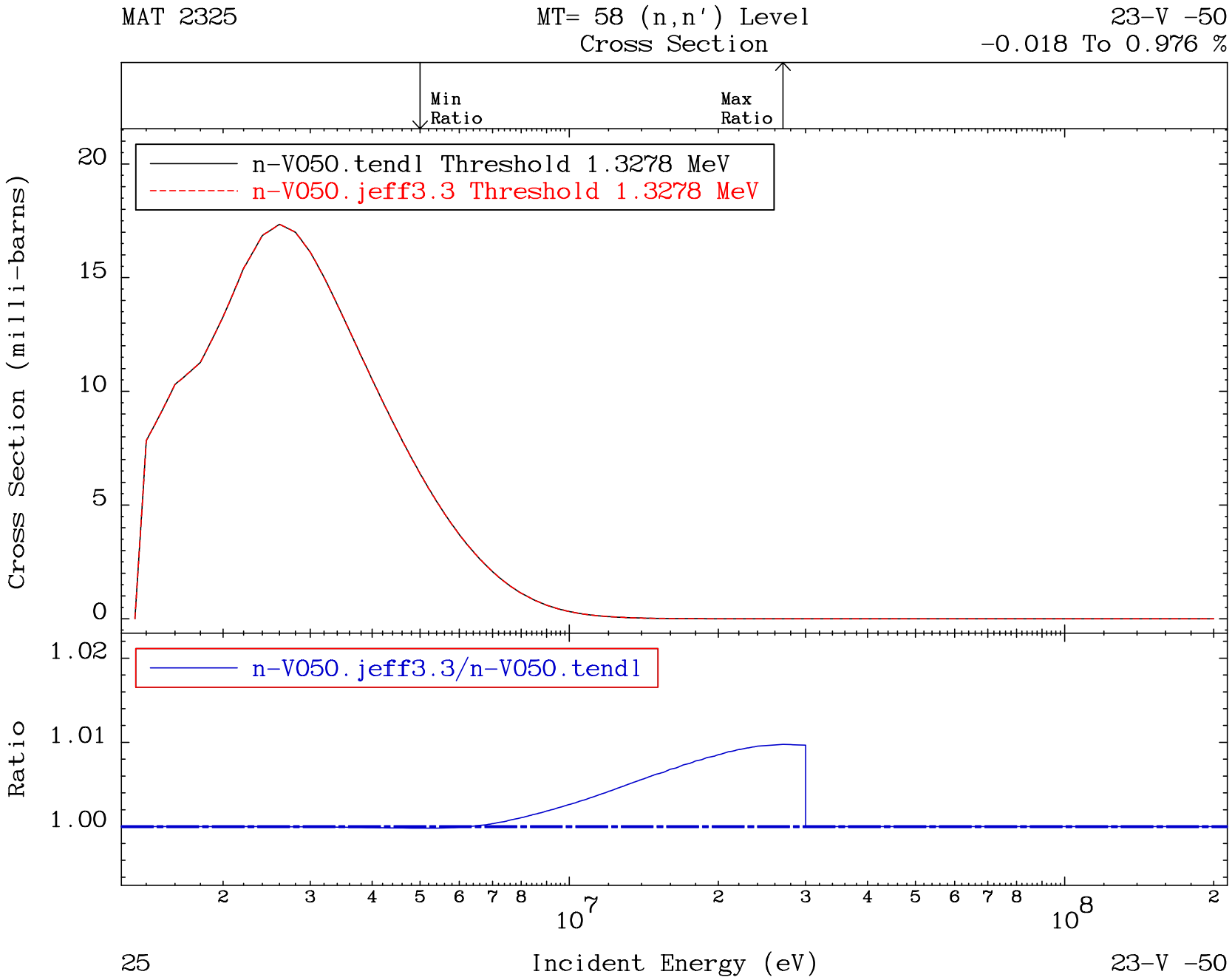

MAT 2325
MT= 53 (n,n') Level
Cross Section
23-V -50
-0.019 To 0.983 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 362.68 keV
n-V050.jeff3.3 Threshold 362.68 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
1.02
1.01
1.00
Ratio
n-V050.jeff3.3/n-V050.tendl
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
20
Incident Energy (eV)
23-V -50

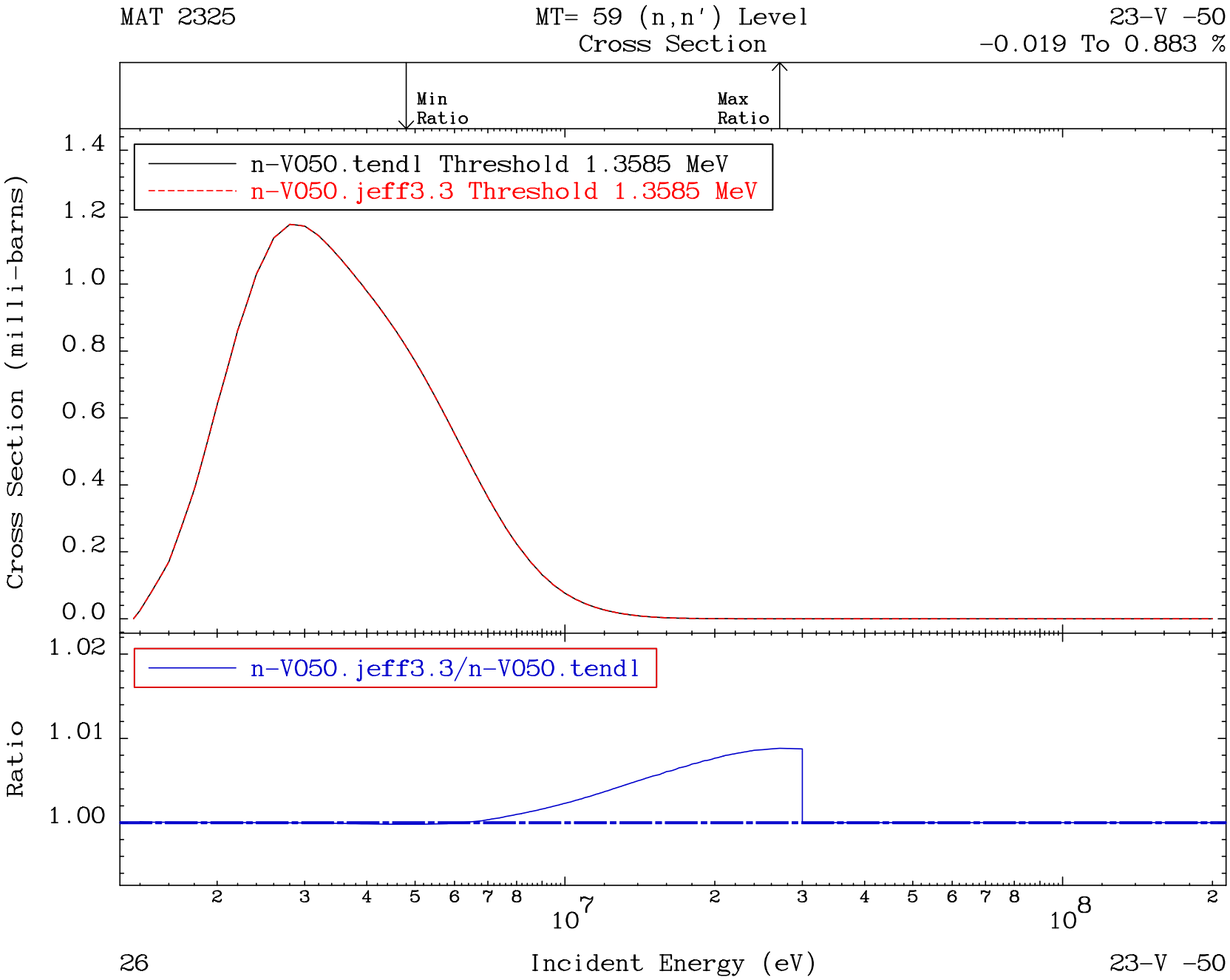

MAT 2325
MT= 54 (n,n') Level
Cross Section
23-V -50
0.000 To 0.043 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 396.35 keV
n-V050.jeff3.3 Threshold 396.35 keV
Cross Section (milli-barns)
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
23-V -50

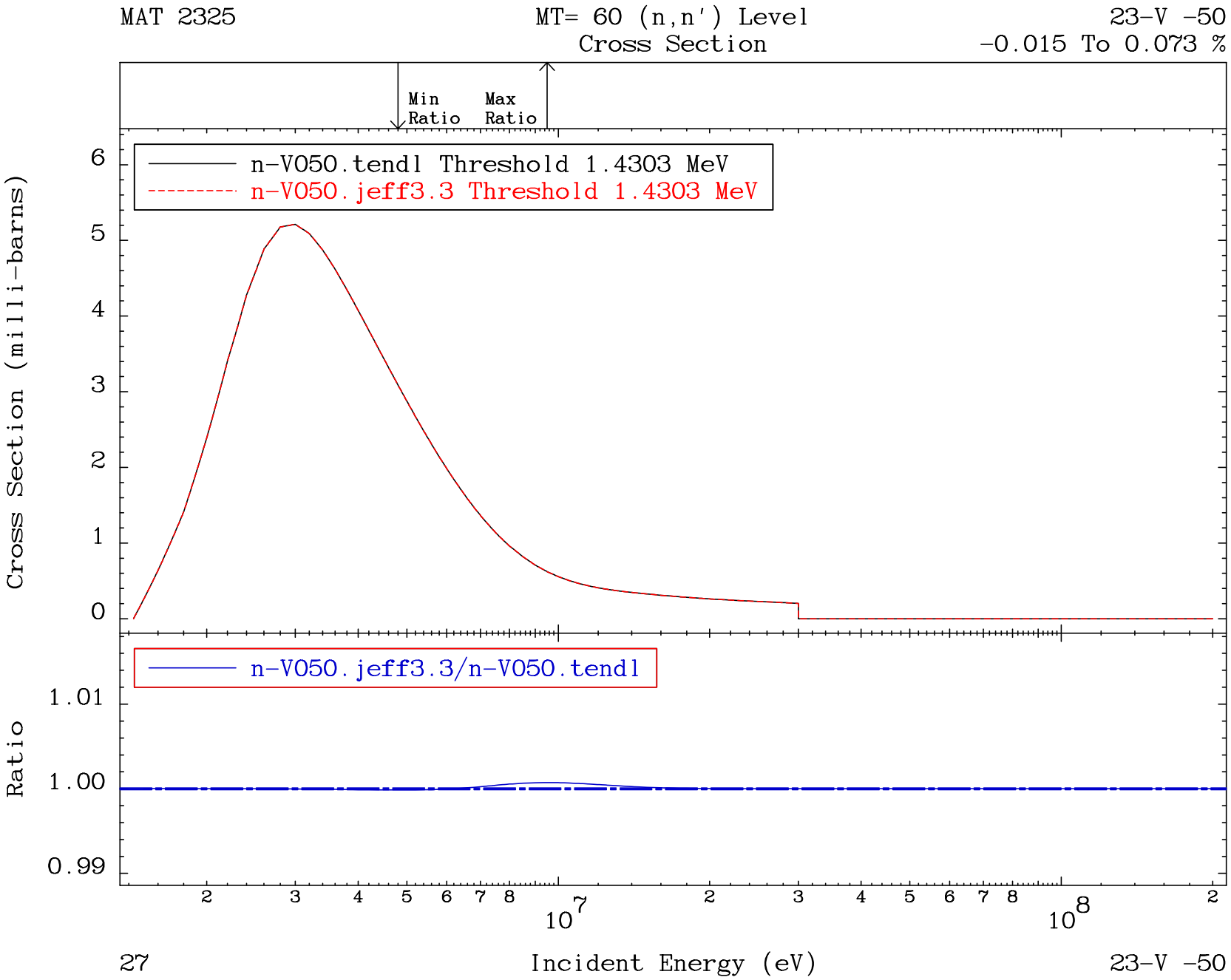

MAT 2325
MT= 55 (n,n') Level
Cross Section
23-V -50
-0.019 To 1.141 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 853.09 keV
n-V050.jeff3.3 Threshold 853.09 keV
Cross Section (milli-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
22
Incident Energy (eV)
23-V -50

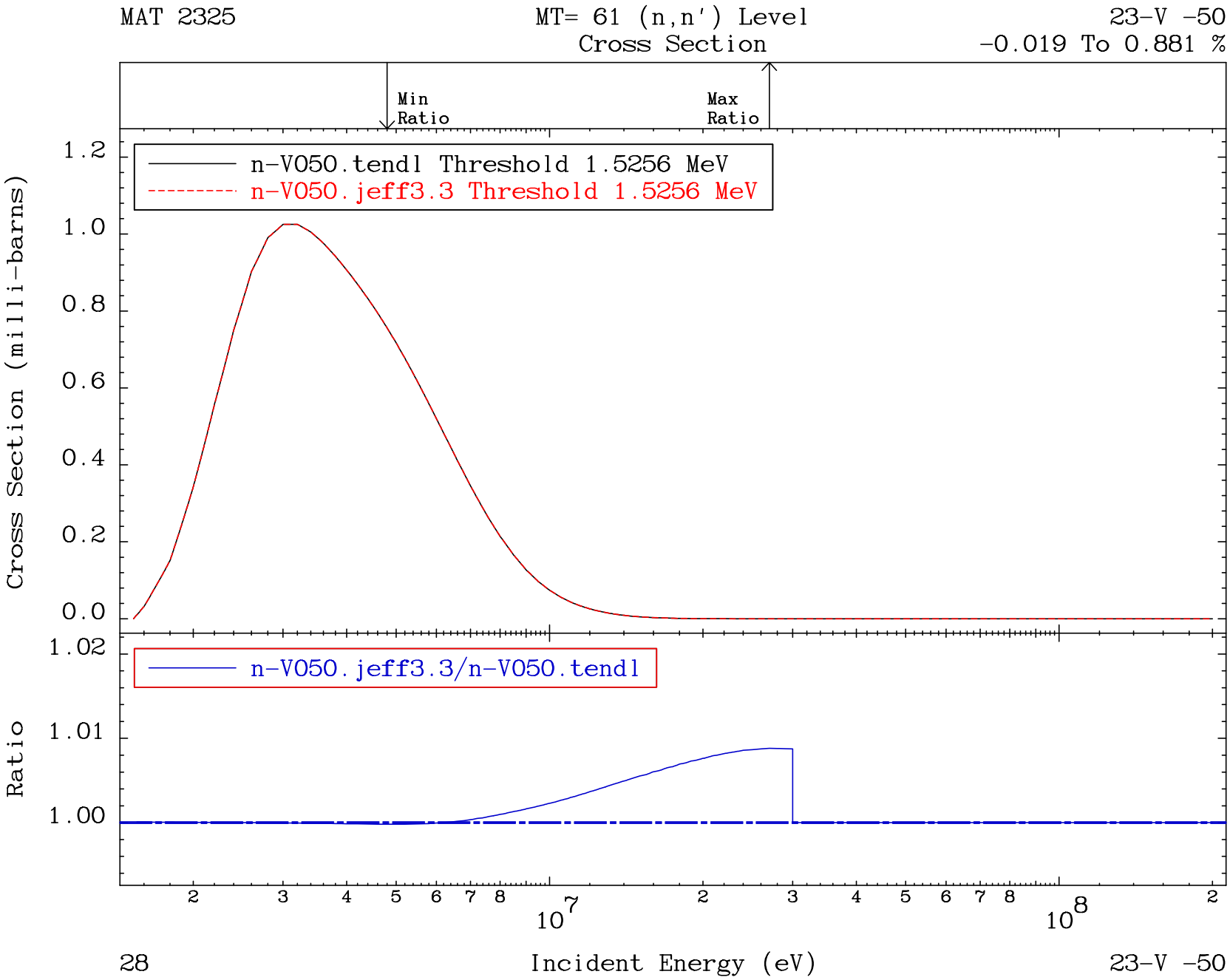

MAT 2325
MT= 56 (n,n') Level
Cross Section
23-V -50
-0.019 To 1.140 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 928.38 keV
n-V050.jeff3.3 Threshold 928.38 keV
Cross Section (milli-barns)
160
120
80
40
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
10^6
10^7
10^8
23
Incident Energy (eV)
23-V -50

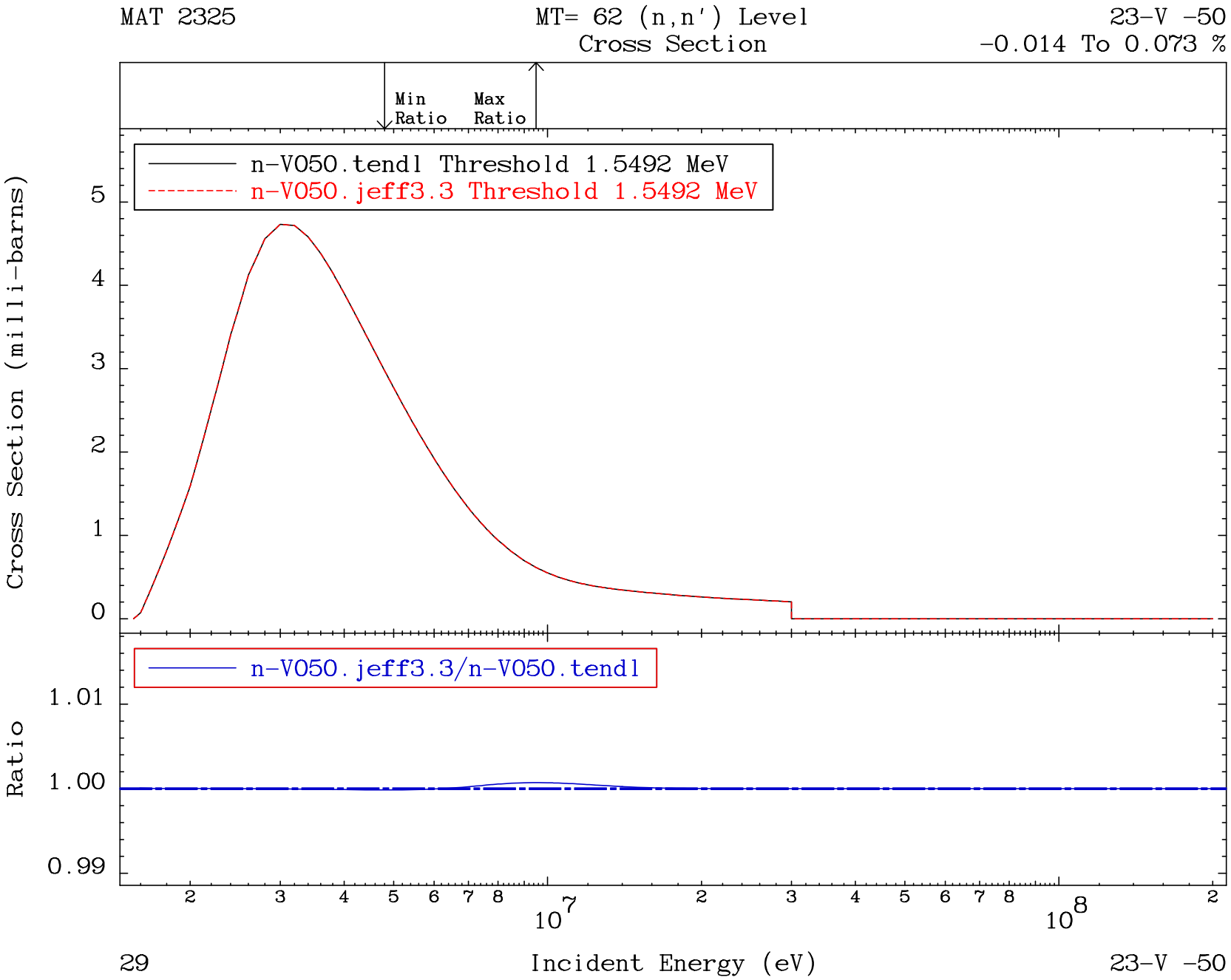

MAT 2325
MT= 57 (n,n') Level
Cross Section
23-V -50
-0.017 To 0.220 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.1282 MeV
n-V050.jeff3.3 Threshold 1.1282 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
23-V -50

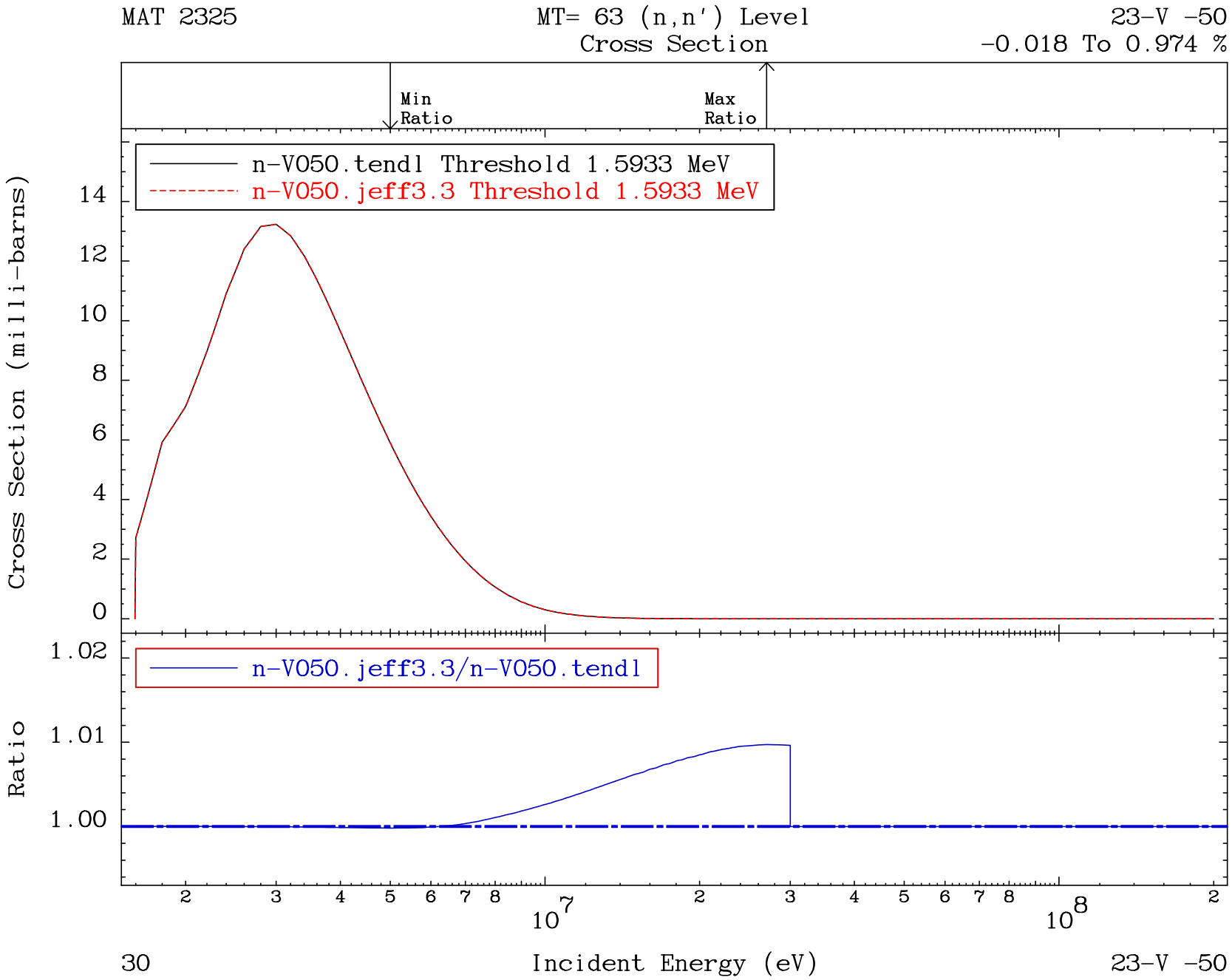

MAT 2325
MT= 58 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.976 %
Min
Ratio
Max
Ratio
n-V050.tendl Threshold 1.3278 MeV
n-V050.jeff3.3 Threshold 1.3278 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
25
Incident Energy (eV)
23-V -50

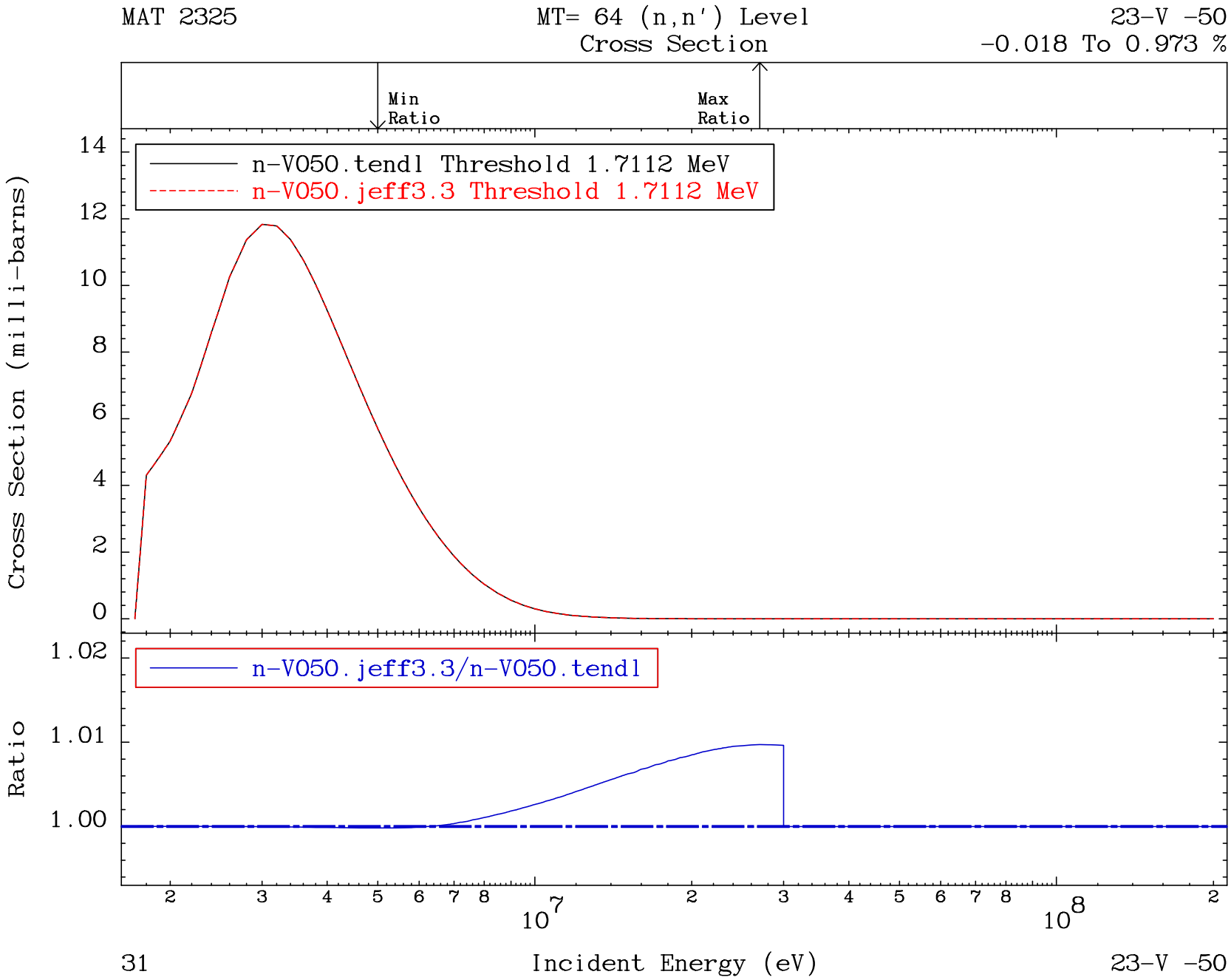

MAT 2325
MT= 59 (n,n') Level
Cross Section
23-V -50
-0.019 To 0.883 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.3585 MeV
n-V050.jeff3.3 Threshold 1.3585 MeV
Cross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
23-V -50

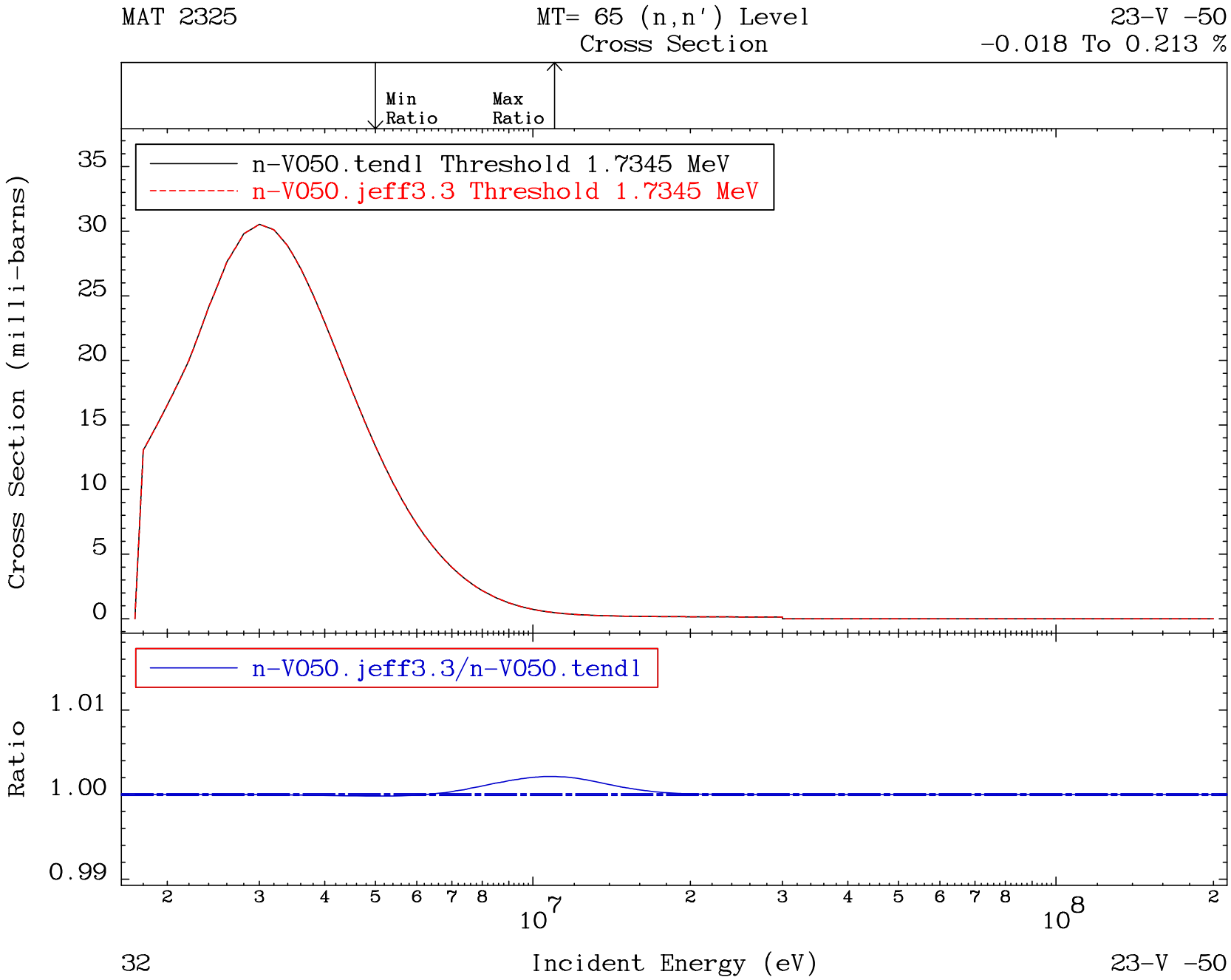

MAT 2325
MT= 60 (n,n') Level
Cross Section
23-V -50
-0.015 To 0.073 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.4303 MeV
n-V050.jeff3.3 Threshold 1.4303 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
n-V050.jeff3.3/n-V050.tendl
Ratio
0.99
1.00
1.01
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
27
23-V -50

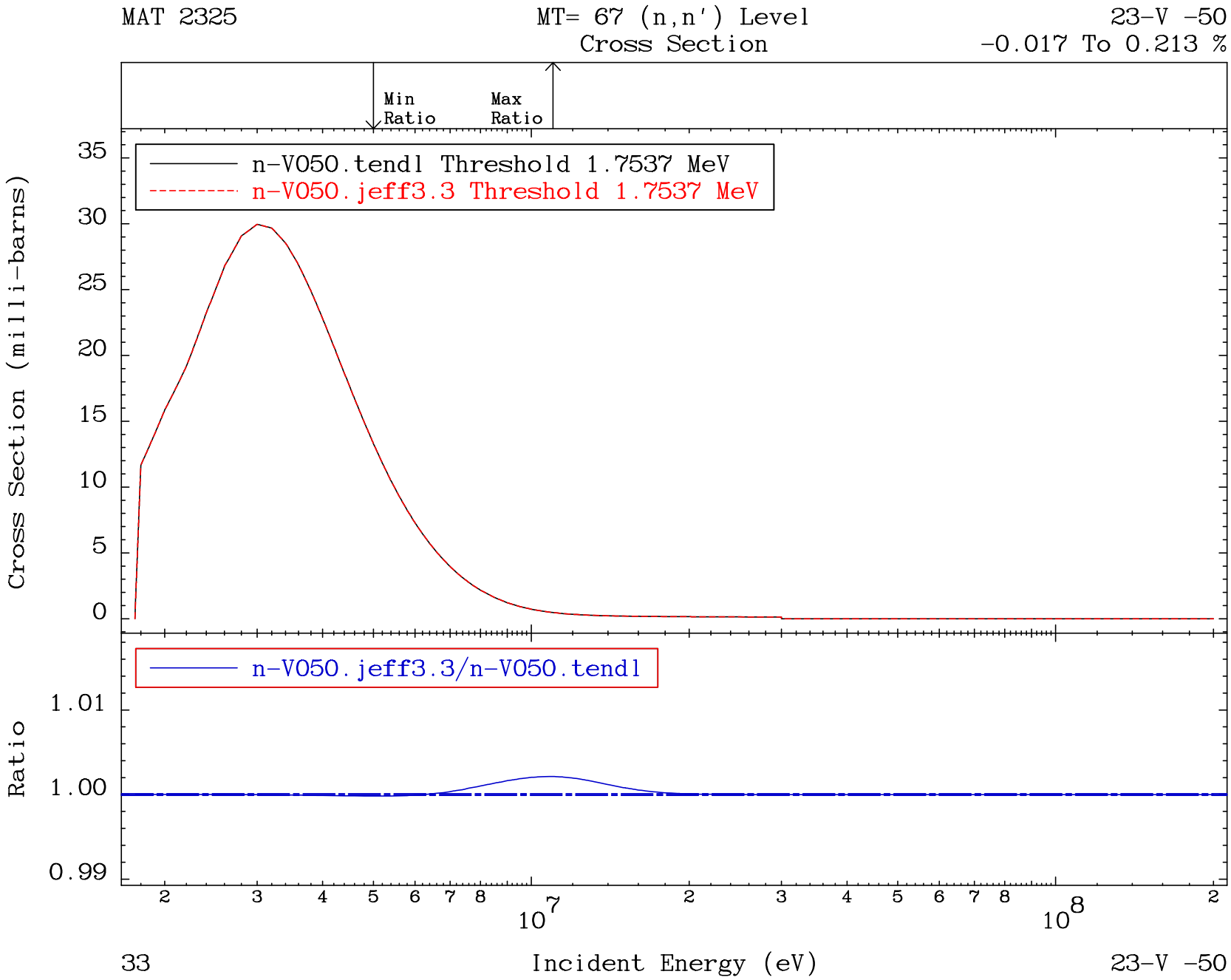

MAT 2325
MT= 61 (n,n') Level
Cross Section
23-V -50
-0.019 To 0.881 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.5256 MeV
n-V050.jeff3.3 Threshold 1.5256 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
23-V -50

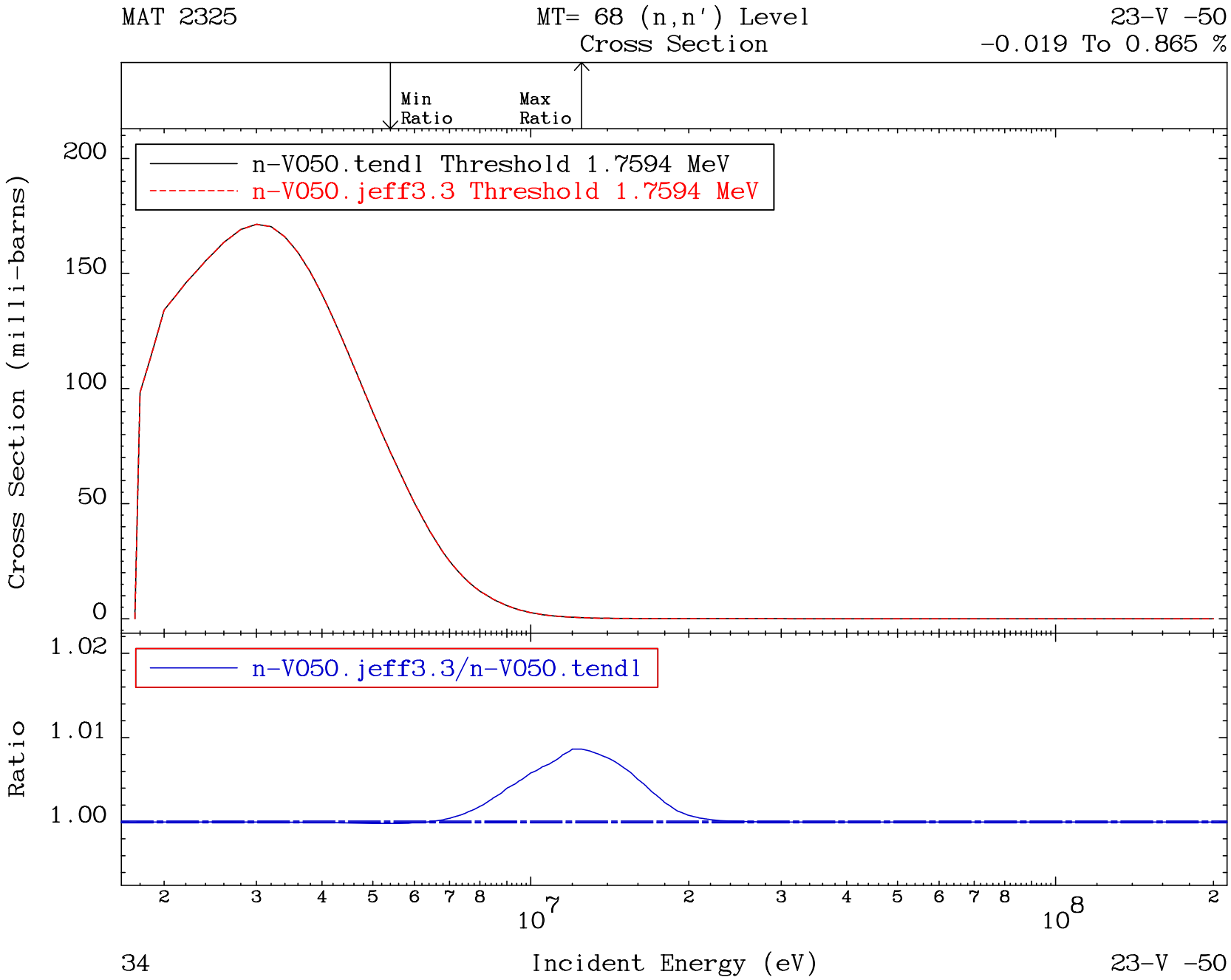

MAT 2325
MT= 62 (n,n') Level
Cross Section
23-V -50
-0.014 To 0.073 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.5492 MeV
n-V050.jeff3.3 Threshold 1.5492 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
n-V050.jeff3.3/n-V050.tendl
Ratio
0.99
1.00
1.01
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
29
Incident Energy (eV)
23-V -50

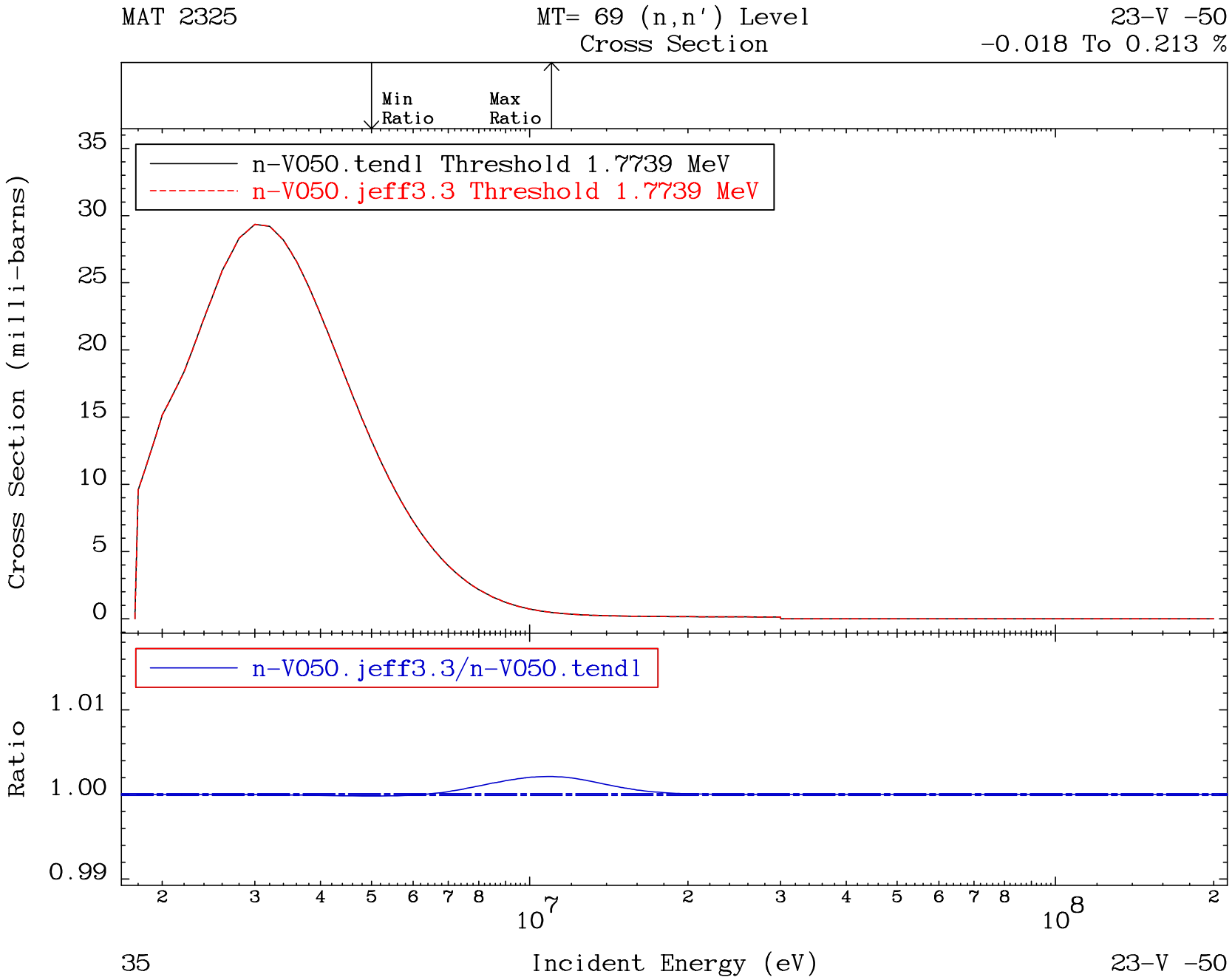

MAT 2325
MT= 63 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.974 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.5933 MeV
n-V050.jeff3.3 Threshold 1.5933 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
23-V -50

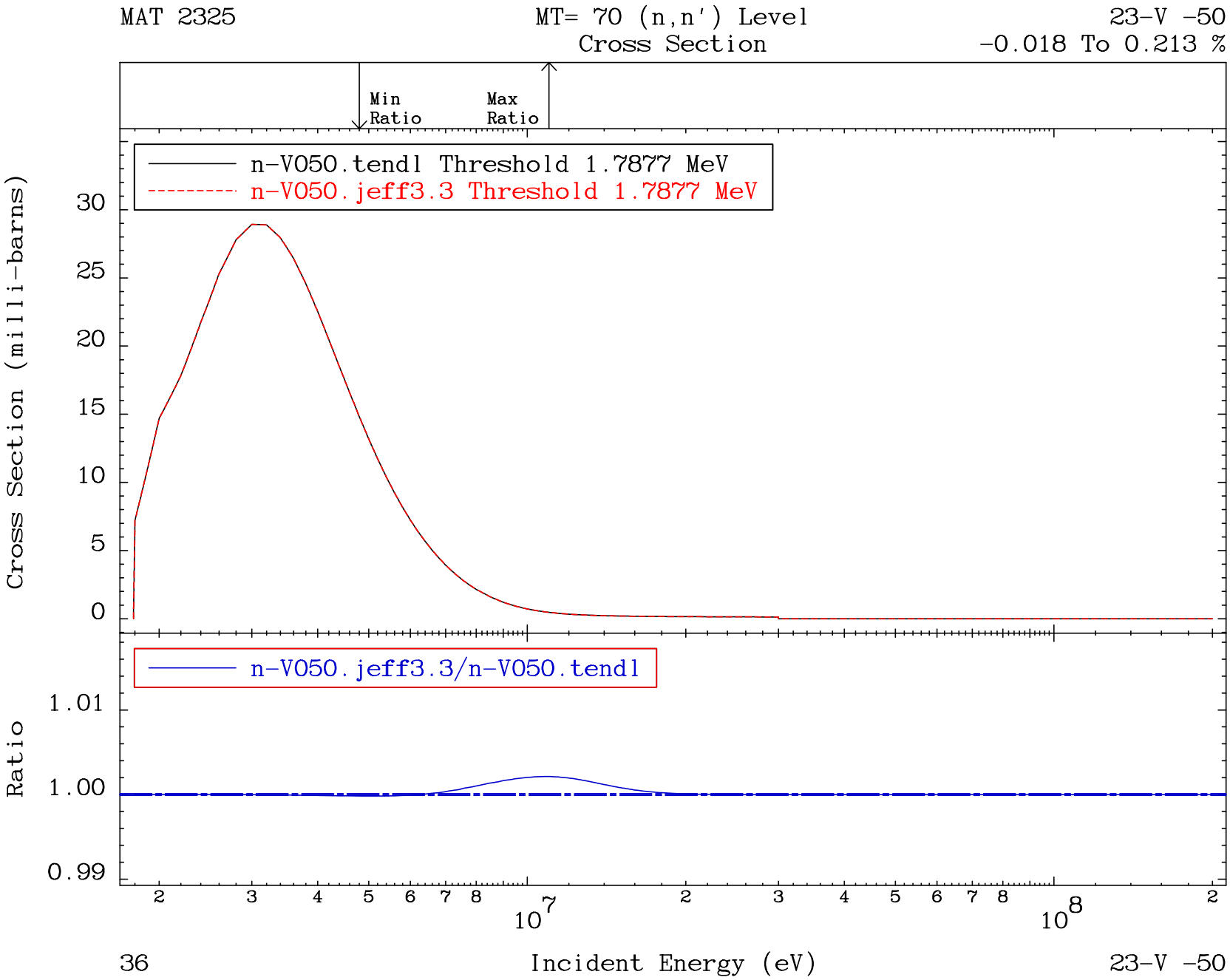

MAT 2325
MT= 64 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.973 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7112 MeV
n-V050.jeff3.3 Threshold 1.7112 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
31
Incident Energy (eV)
23-V -50

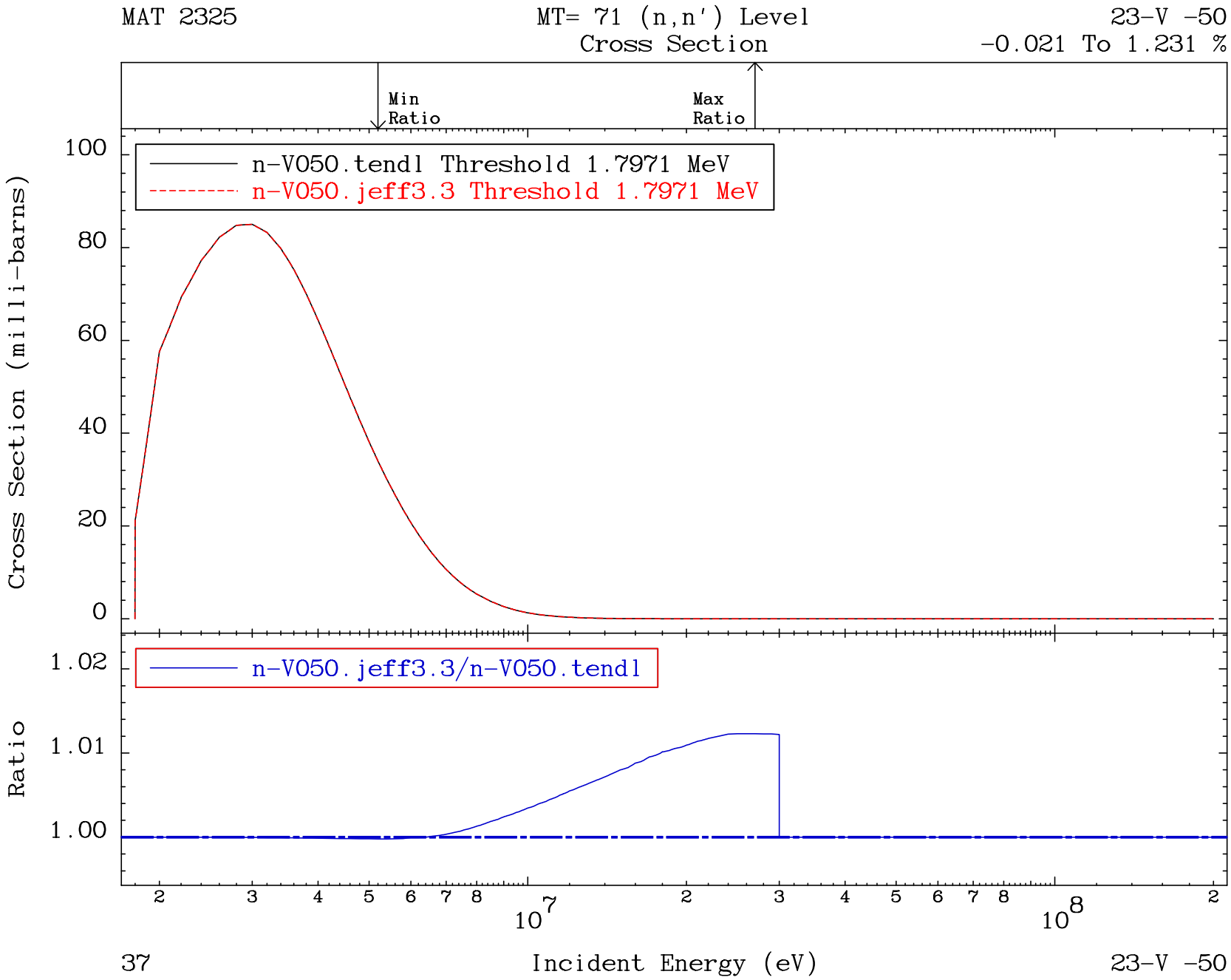

MAT 2325
MT= 65 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.213 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7345 MeV
n-V050.jeff3.3 Threshold 1.7345 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
32
Incident Energy (eV)
23-V -50

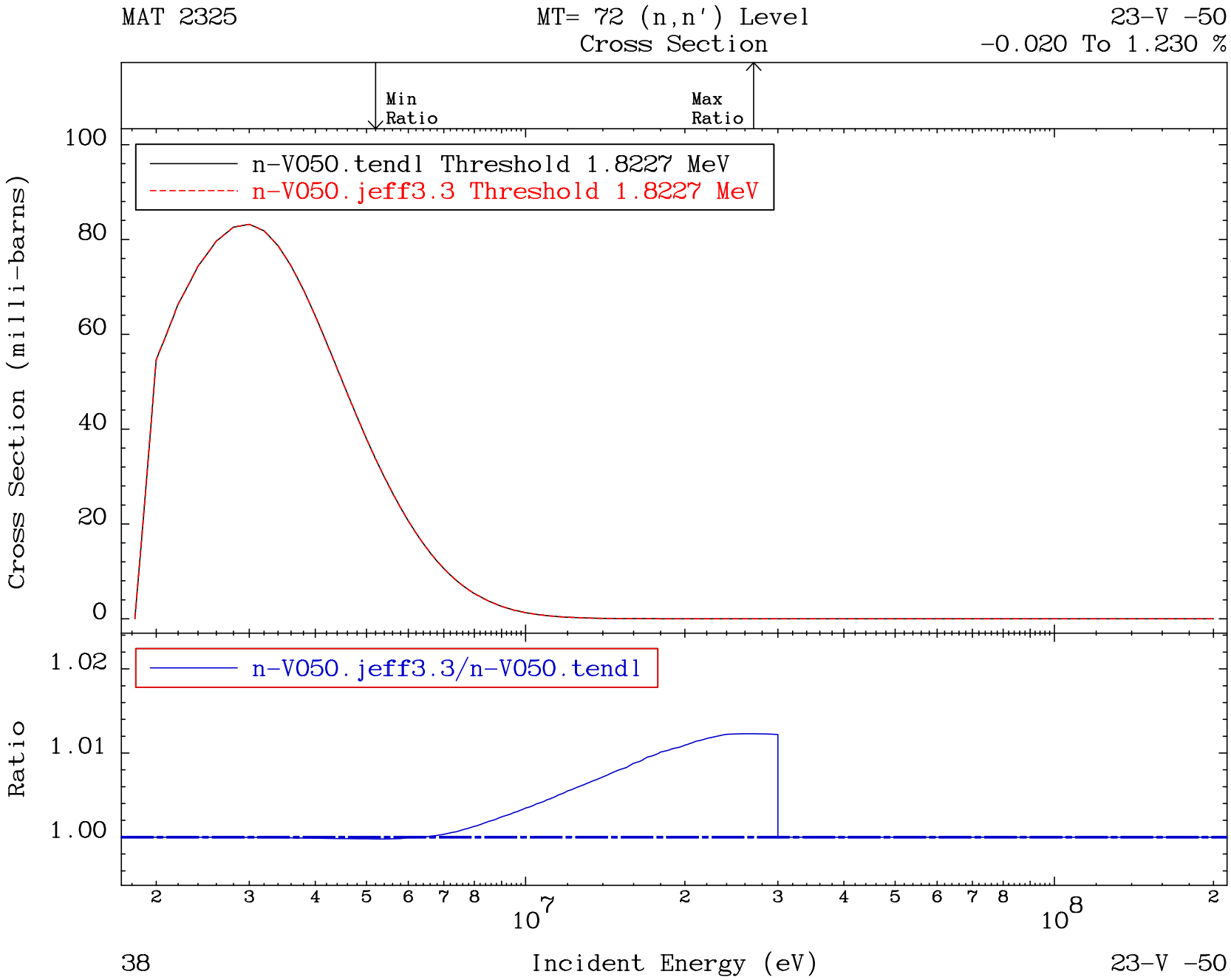

MAT 2325
MT= 67 (n,n') Level
Cross Section
23-V -50
-0.017 To 0.213 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7537 MeV
n-V050.jeff3.3 Threshold 1.7537 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
33
Incident Energy (eV)
23-V -50

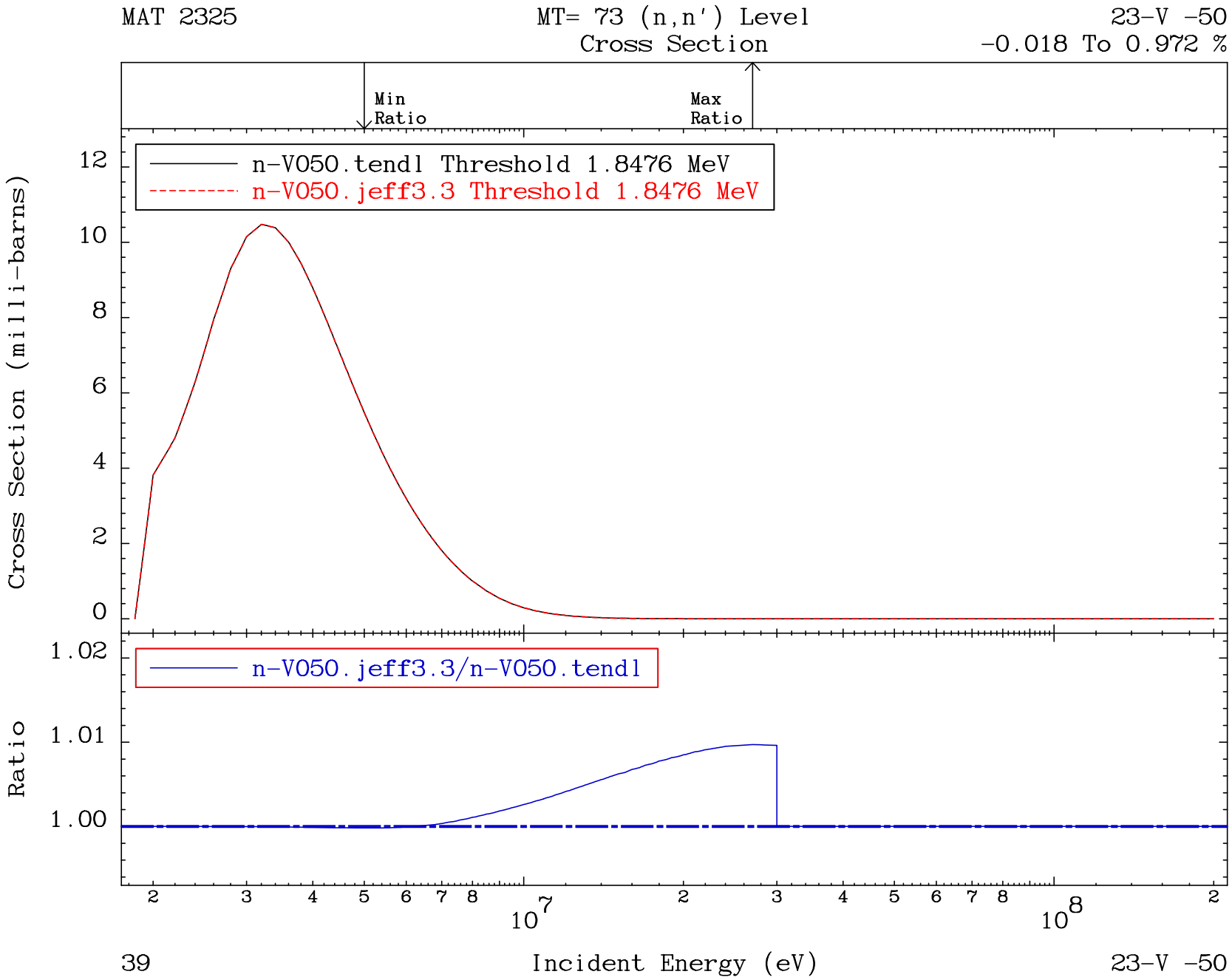

MAT 2325
MT= 68 (n,n') Level
Cross Section
23-V -50
-0.019 To 0.865 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7594 MeV
n-V050.jeff3.3 Threshold 1.7594 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
34
Incident Energy (eV)
23-V -50

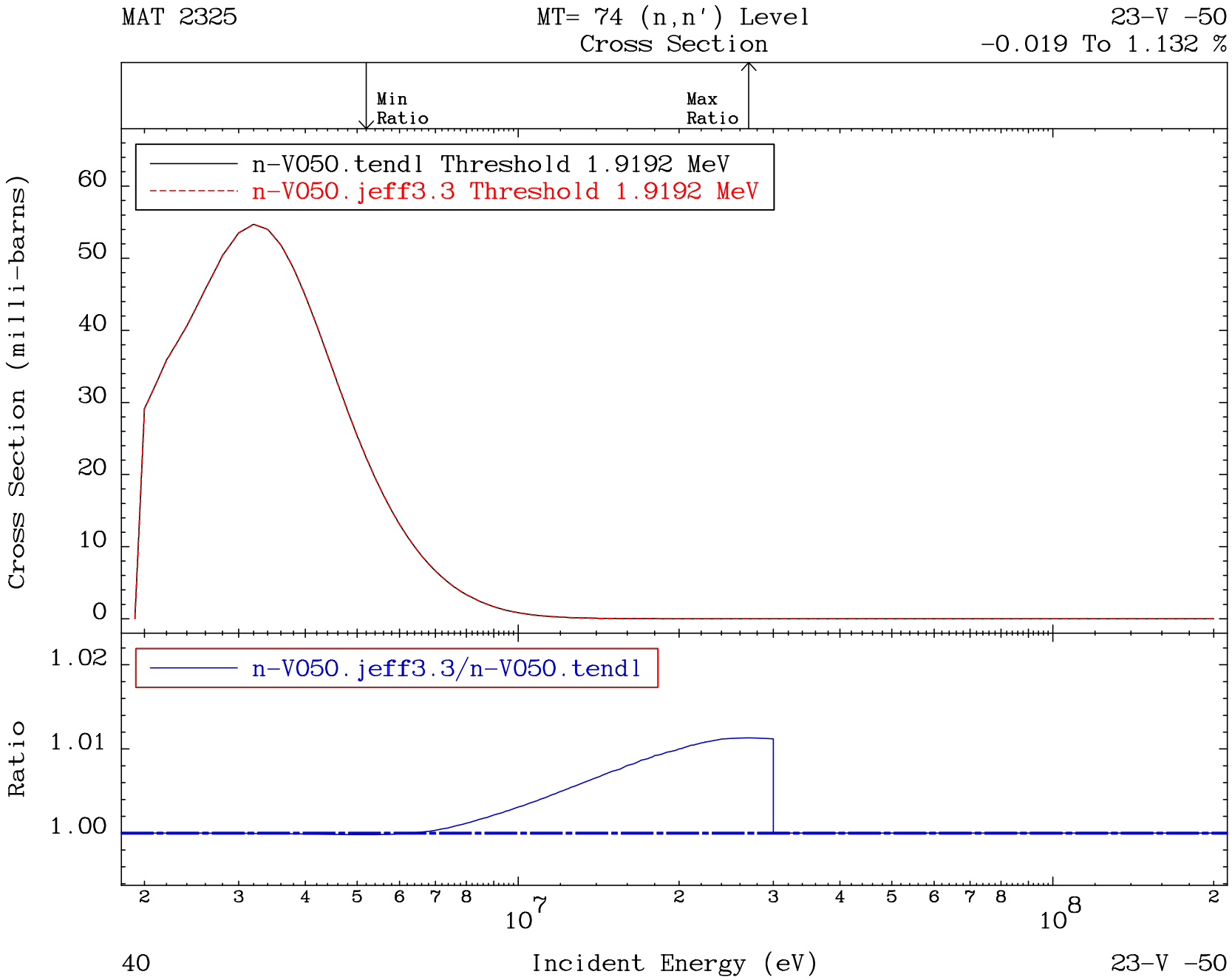

MAT 2325
MT= 69 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.213 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7739 MeV
n-V050.jeff3.3 Threshold 1.7739 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
35
Incident Energy (eV)
23-V -50

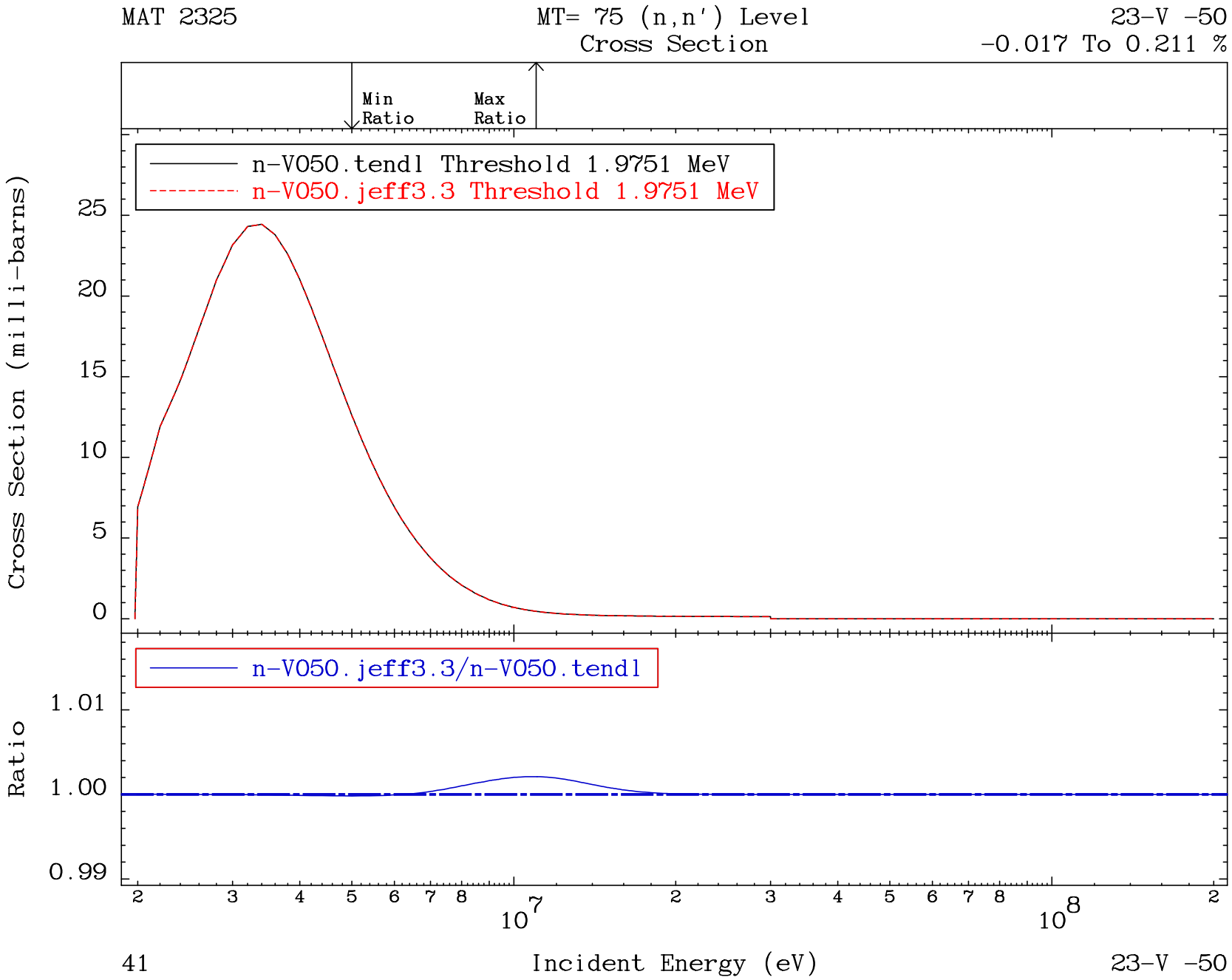

MAT 2325
MT= 70 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.213 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7877 MeV
n-V050.jeff3.3 Threshold 1.7877 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
36
Incident Energy (eV)
23-V -50

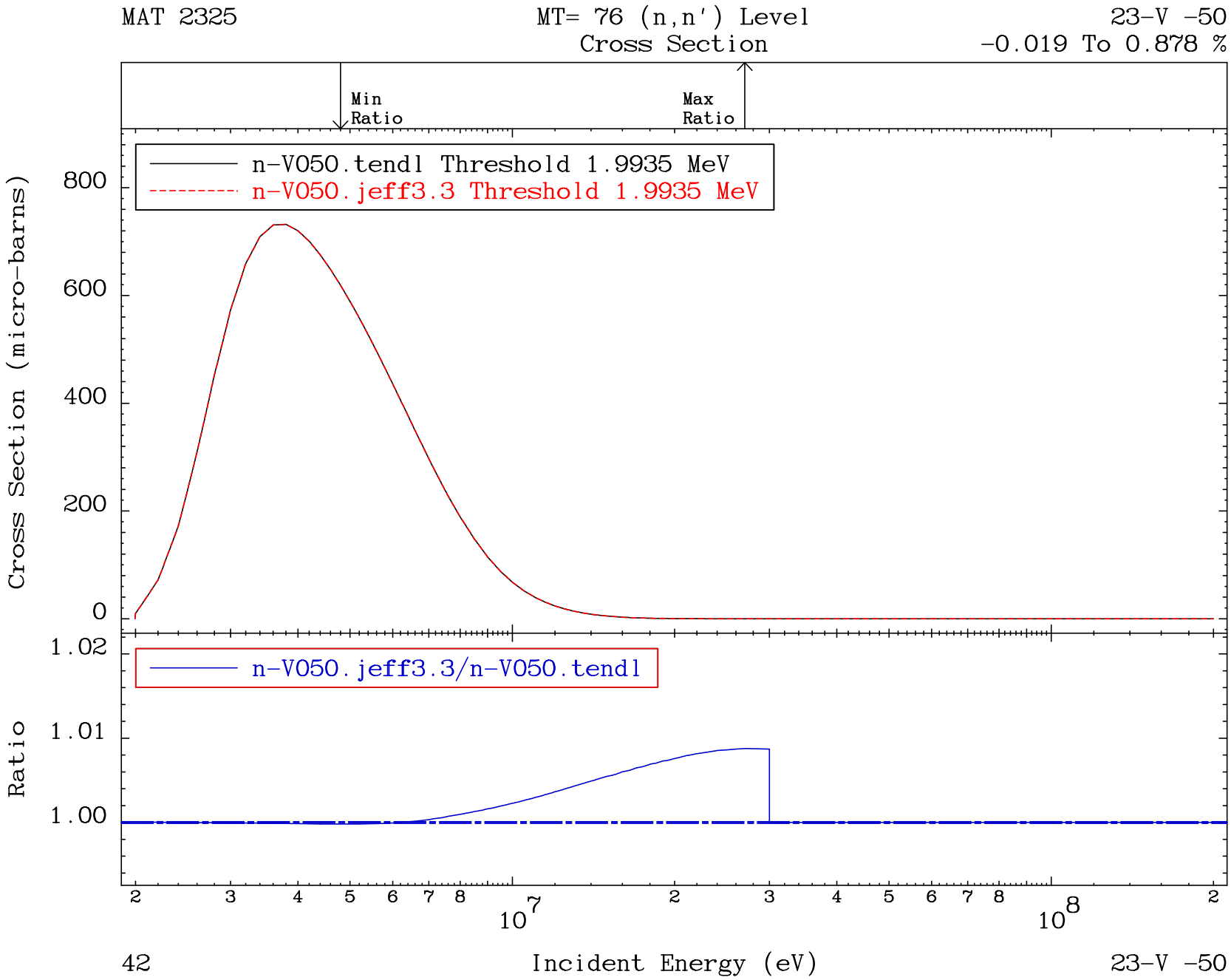

MAT 2325
MT= 71 (n,n') Level
Cross Section
23-V -50
-0.021 To 1.231 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.7971 MeV
n-V050.jeff3.3 Threshold 1.7971 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
37
Incident Energy (eV)
23-V -50

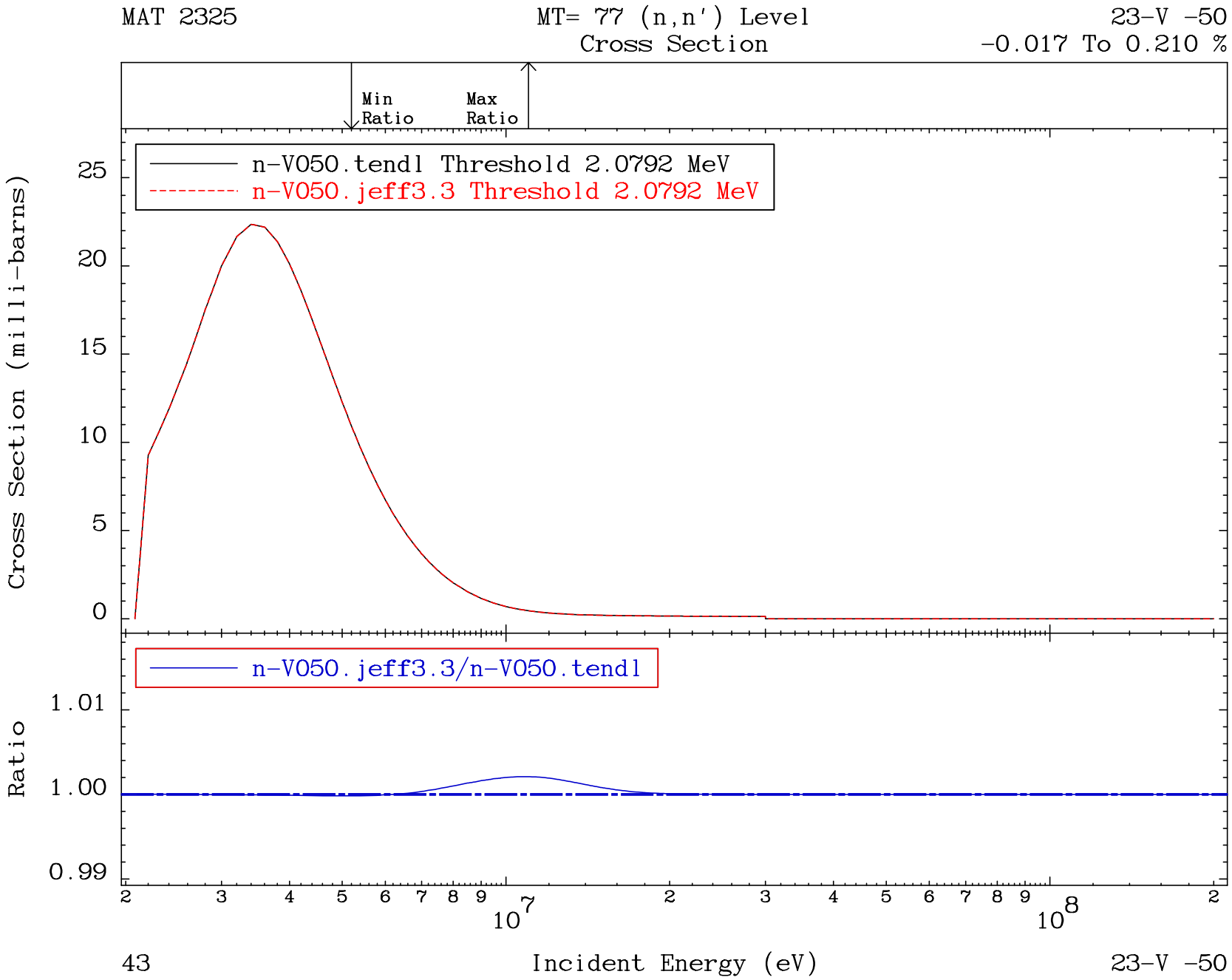

MAT 2325
MT= 72 (n,n') Level
Cross Section
23-V -50
-0.020 To 1.230 %
Min
Ratio
Max
Ratio
n-V050.tendl Threshold 1.8227 MeV
n-V050.jeff3.3 Threshold 1.8227 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
38
Incident Energy (eV)
23-V -50

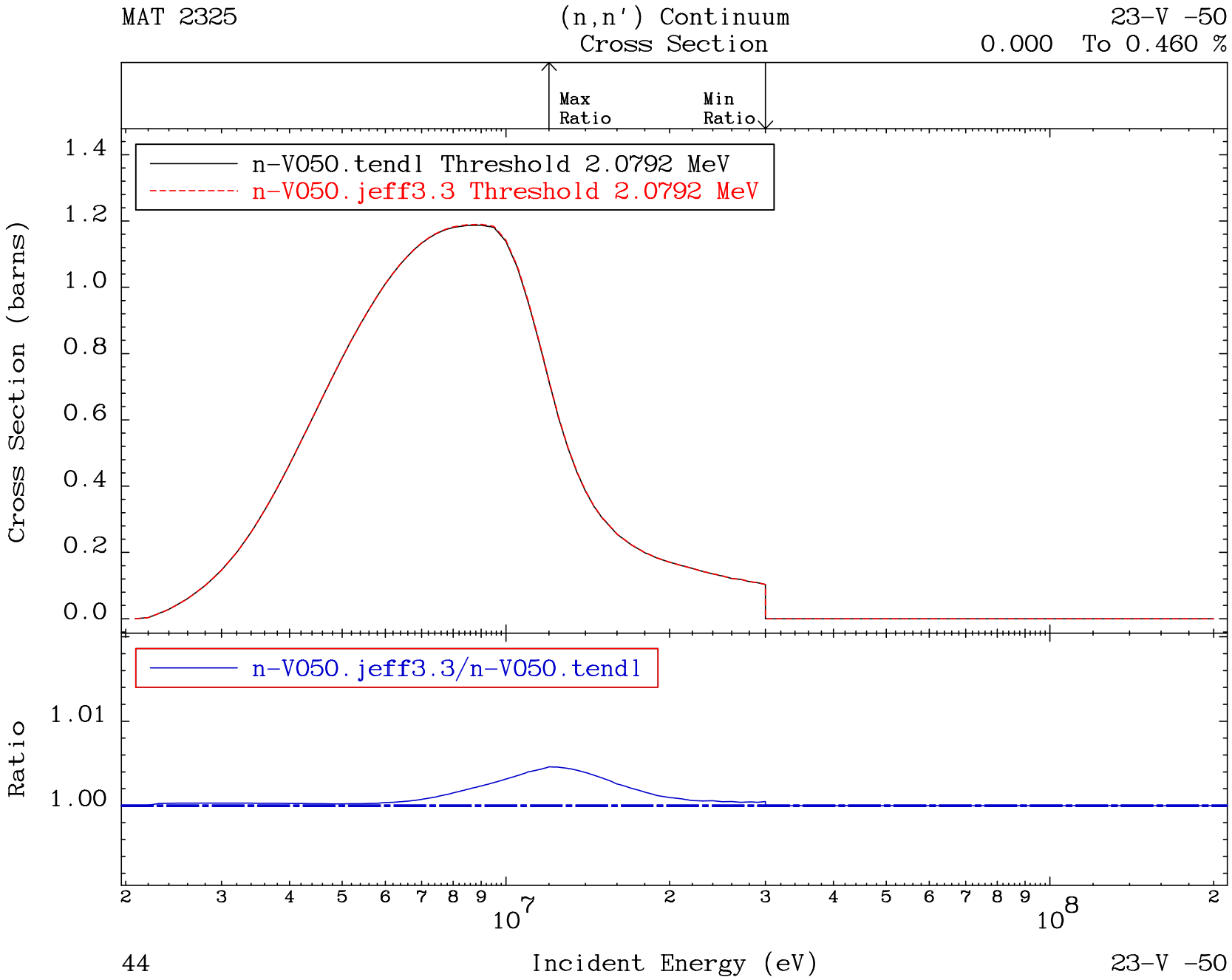

MAT 2325
MT= 73 (n,n') Level
Cross Section
23-V -50
-0.018 To 0.972 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.8476 MeV
n-V050.jeff3.3 Threshold 1.8476 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
39
Incident Energy (eV)
23-V -50

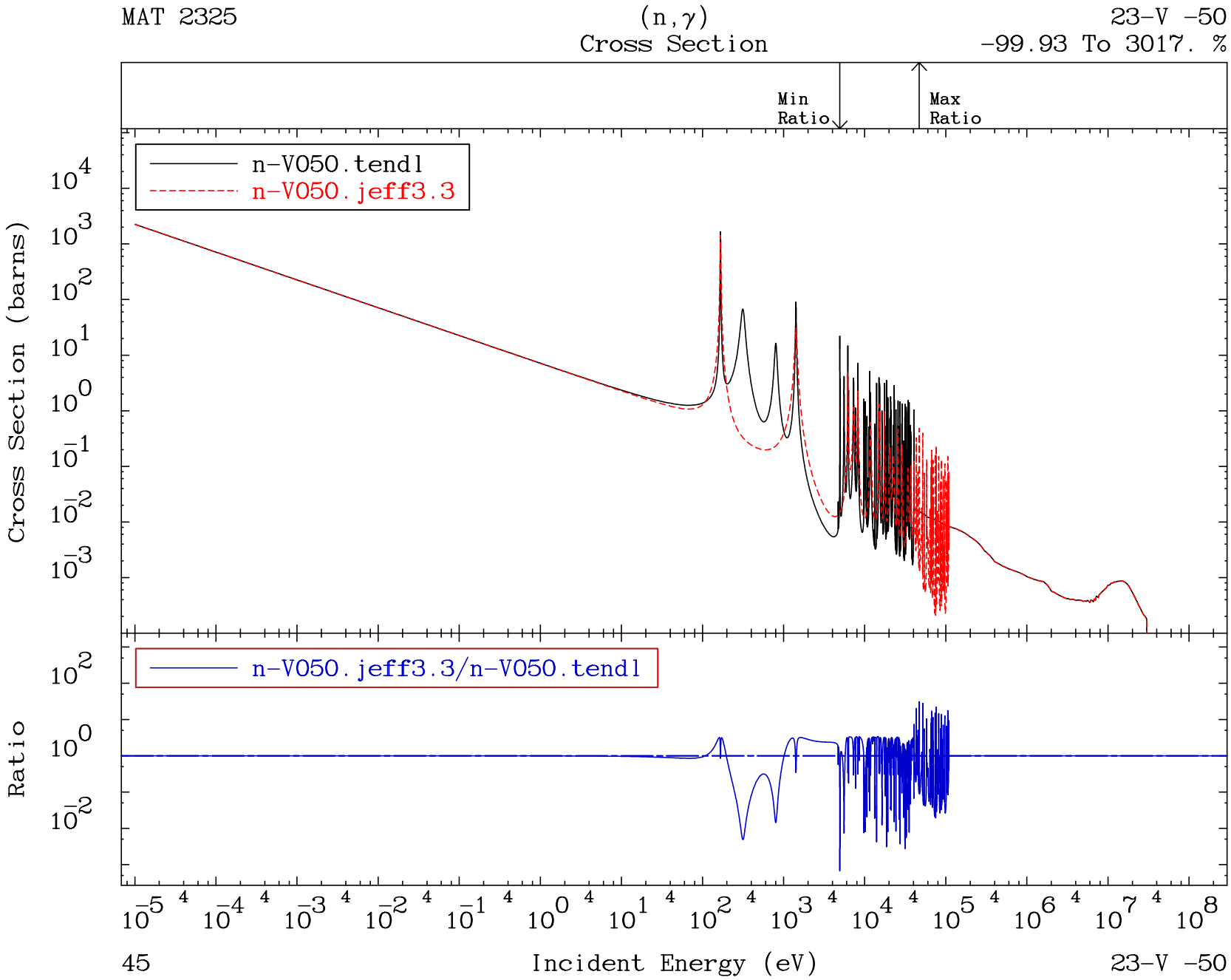

MAT 2325
MT= 74 (n,n') Level
Cross Section
23-V -50
-0.019 To 1.132 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.9192 MeV
n-V050.jeff3.3 Threshold 1.9192 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
40
Incident Energy (eV)
23-V -50

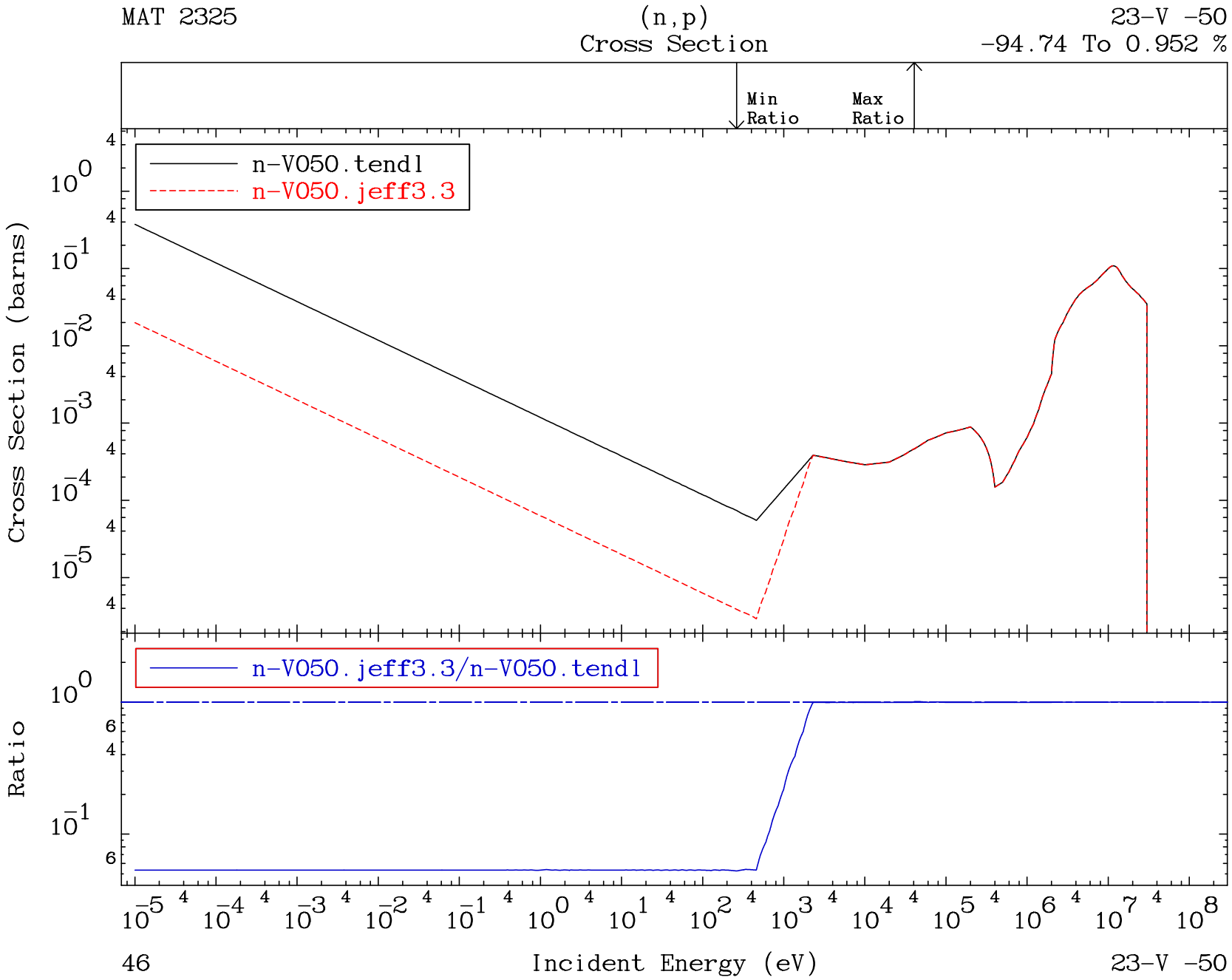

MAT 2325
MT= 75 (n,n') Level
Cross Section
23-V -50
-0.017 To 0.211 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 1.9751 MeV
n-V050.jeff3.3 Threshold 1.9751 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
41
Incident Energy (eV)
23-V -50

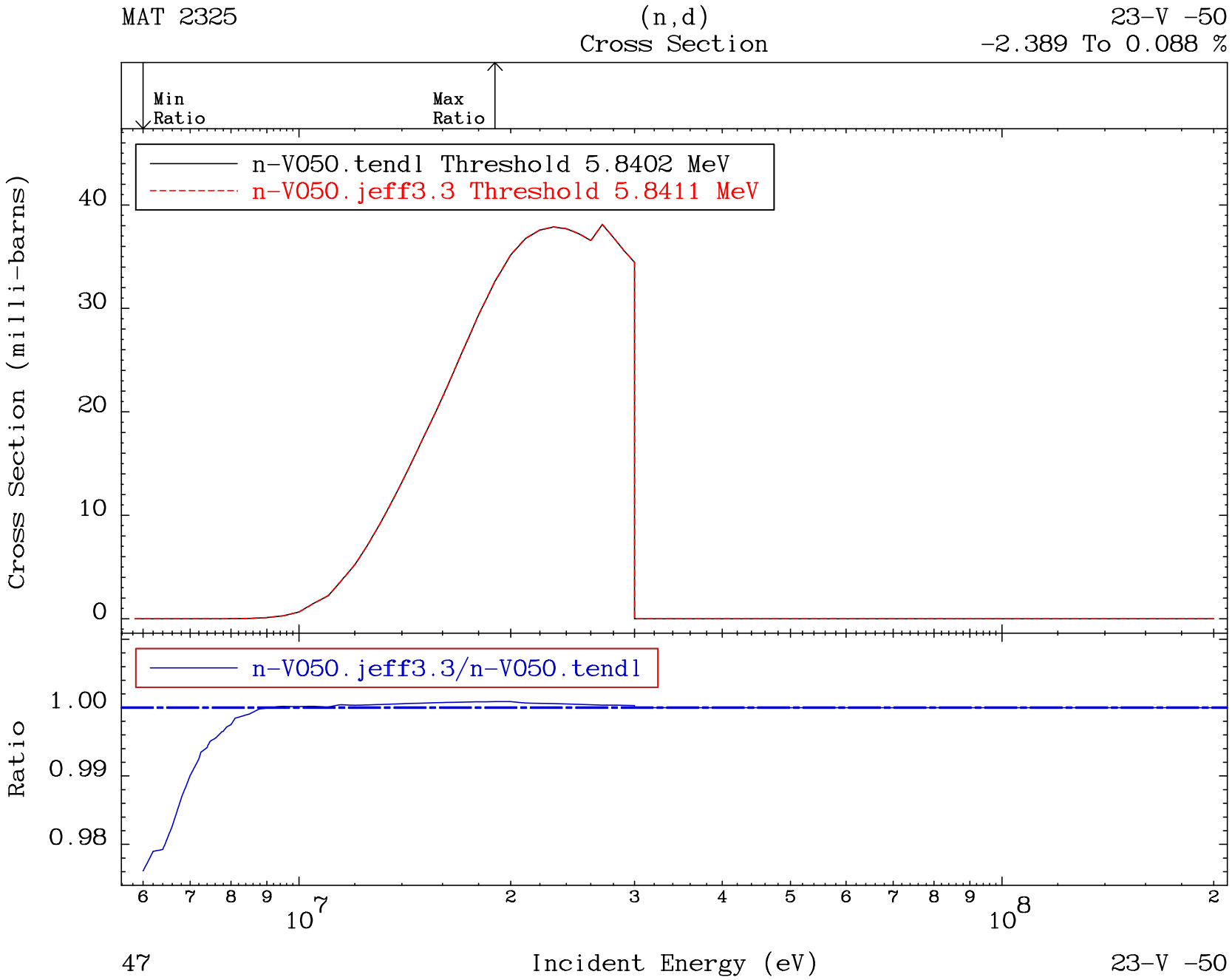

MAT 2325
MT= 76 (n,n') Level
Cross Section
23-V -50
-0.019 To 0.878 %
Min
Ratio
Max
Ratio
n-V050.tendl Threshold 1.9935 MeV
n-V050.jeff3.3 Threshold 1.9935 MeV
Cross Section (micro-barns)
800
600
400
200
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.02
1.01
1.00
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
42
Incident Energy (eV)
23-V -50

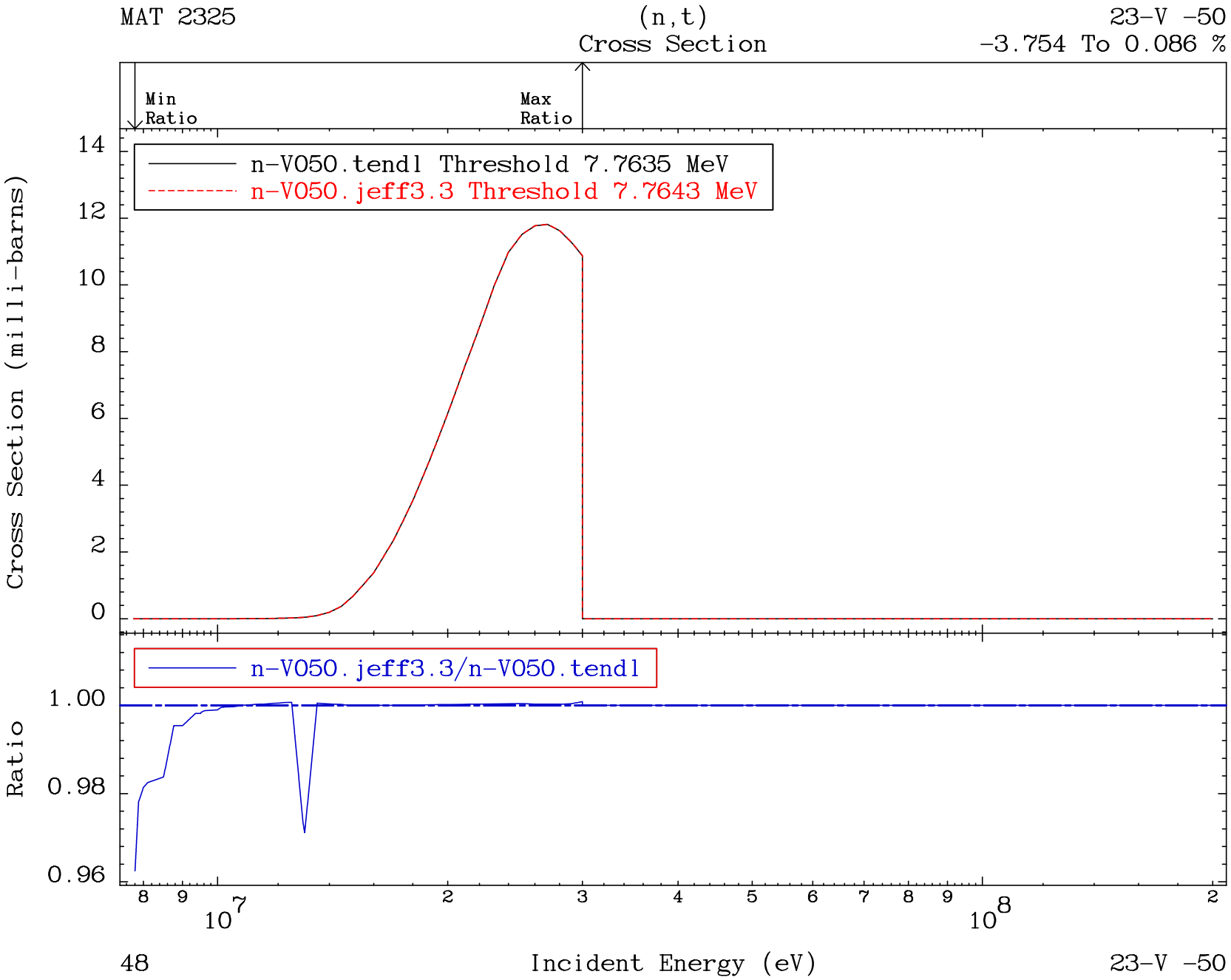

MAT 2325
MT= 77 (n,n') Level
Cross Section
23-V -50
-0.017 To 0.210 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 2.0792 MeV
n-V050.jeff3.3 Threshold 2.0792 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
23-V -50

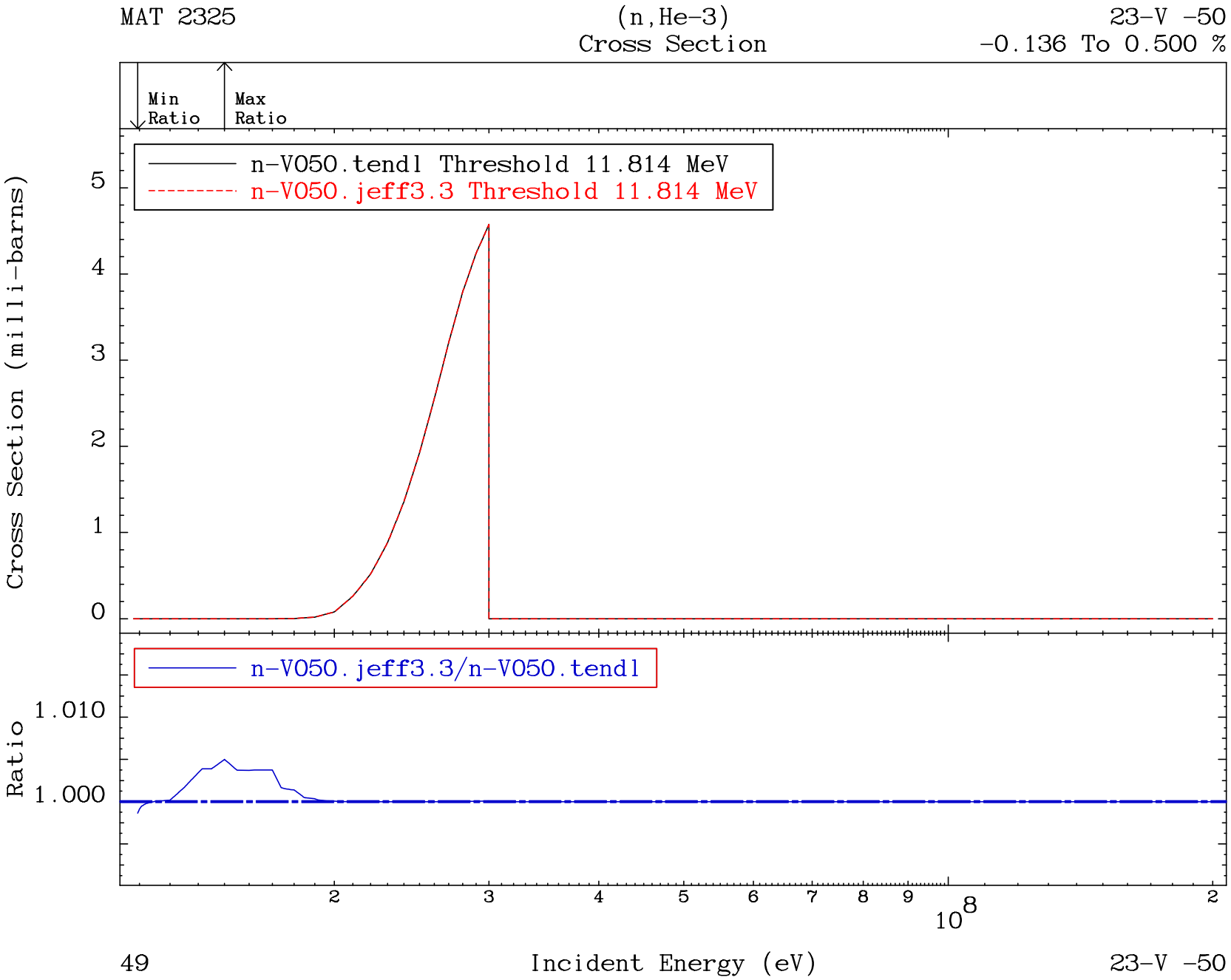

MAT 2325
(n,n') Continuum
Cross Section
23-V -50
0.000 To 0.460 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 2.0792 MeV
n-V050.jeff3.3 Threshold 2.0792 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
44
Incident Energy (eV)
23-V -50

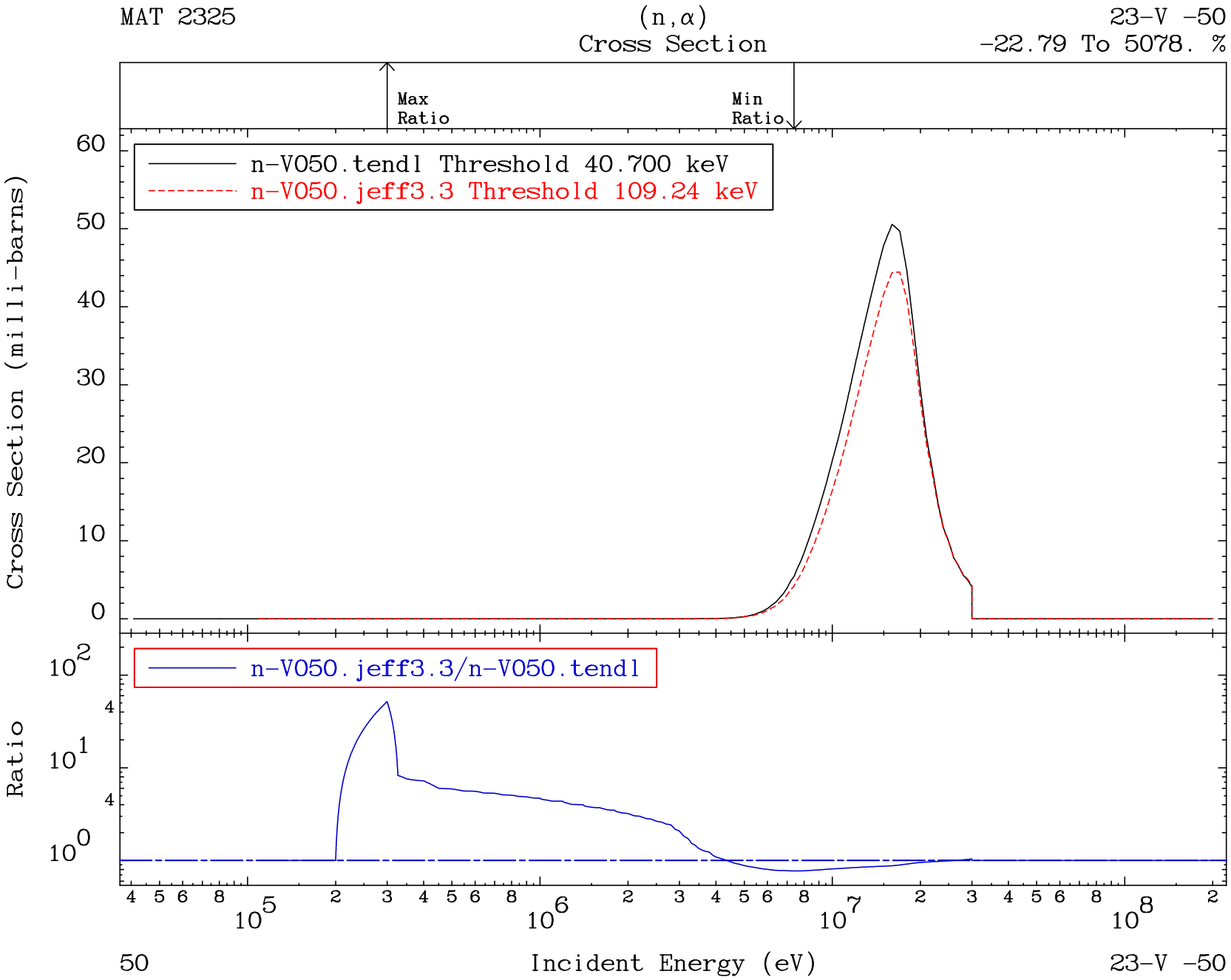

MAT 2325
(n,γ)
Cross Section
23-V -50
-99.93 To 3017. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
45
23-V -50

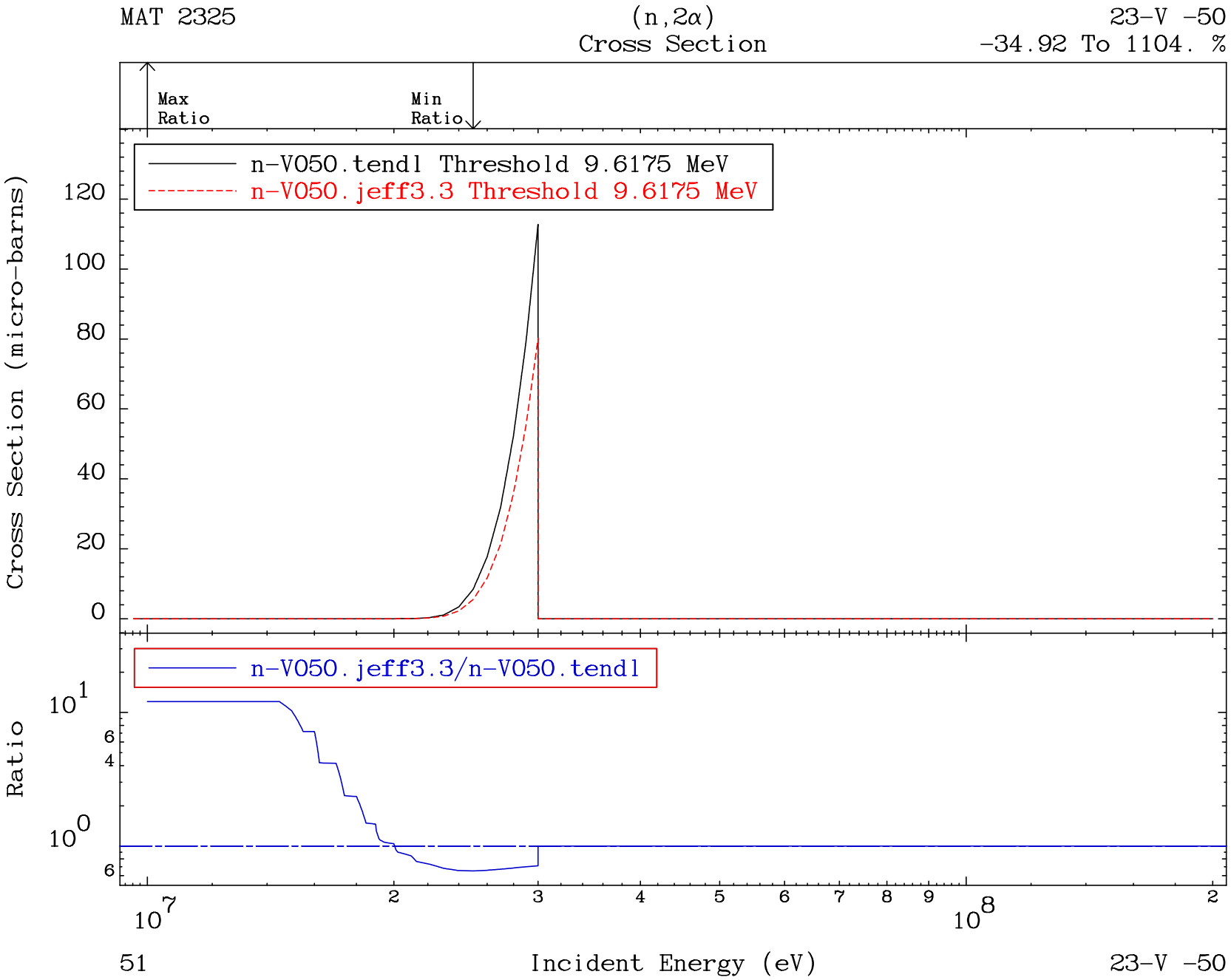

MAT 2325
(n,p)
Cross Section
23-V -50
-94.74 To 0.952 %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
46
23-V -50

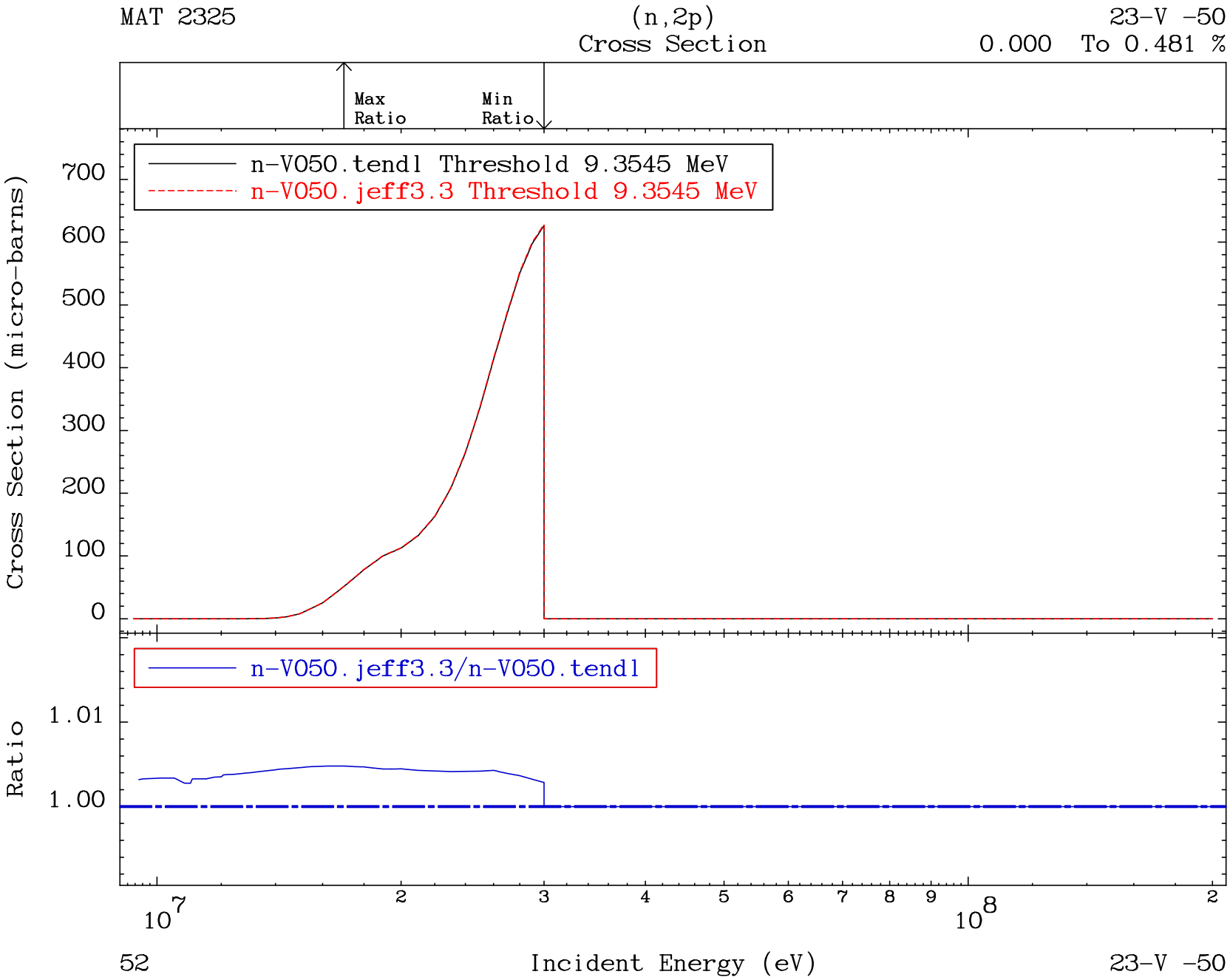

MAT 2325
(n,d)
Cross Section
23-V -50
-2.389 To 0.088 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 5.8402 MeV
n-V050.jeff3.3 Threshold 5.8411 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.99
0.98
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
23-V -50

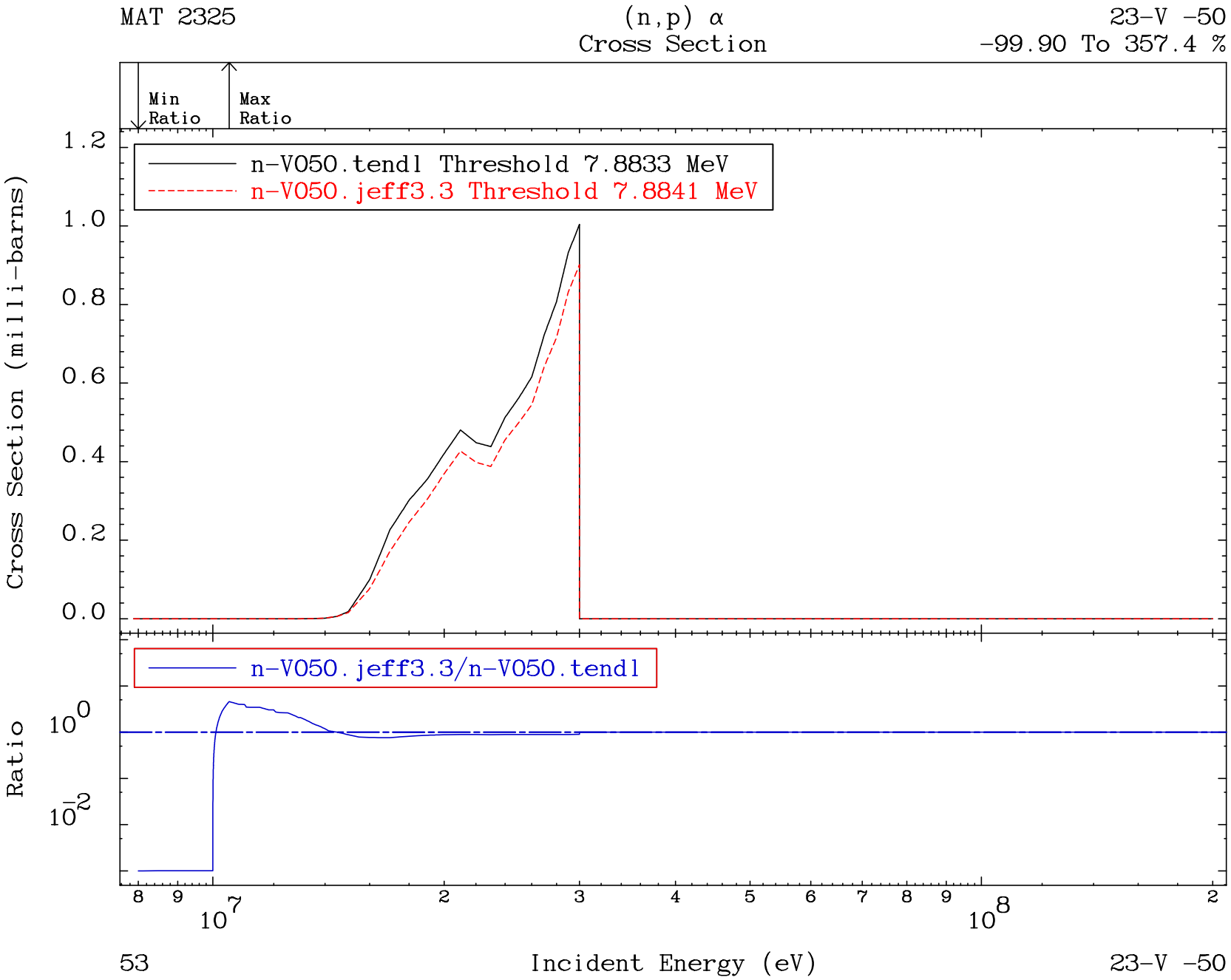

MAT 2325
(n,t)
Cross Section
23-V -50
-3.754 To 0.086 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 7.7635 MeV
n-V050.jeff3.3 Threshold 7.7643 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.98
0.96
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
23-V -50

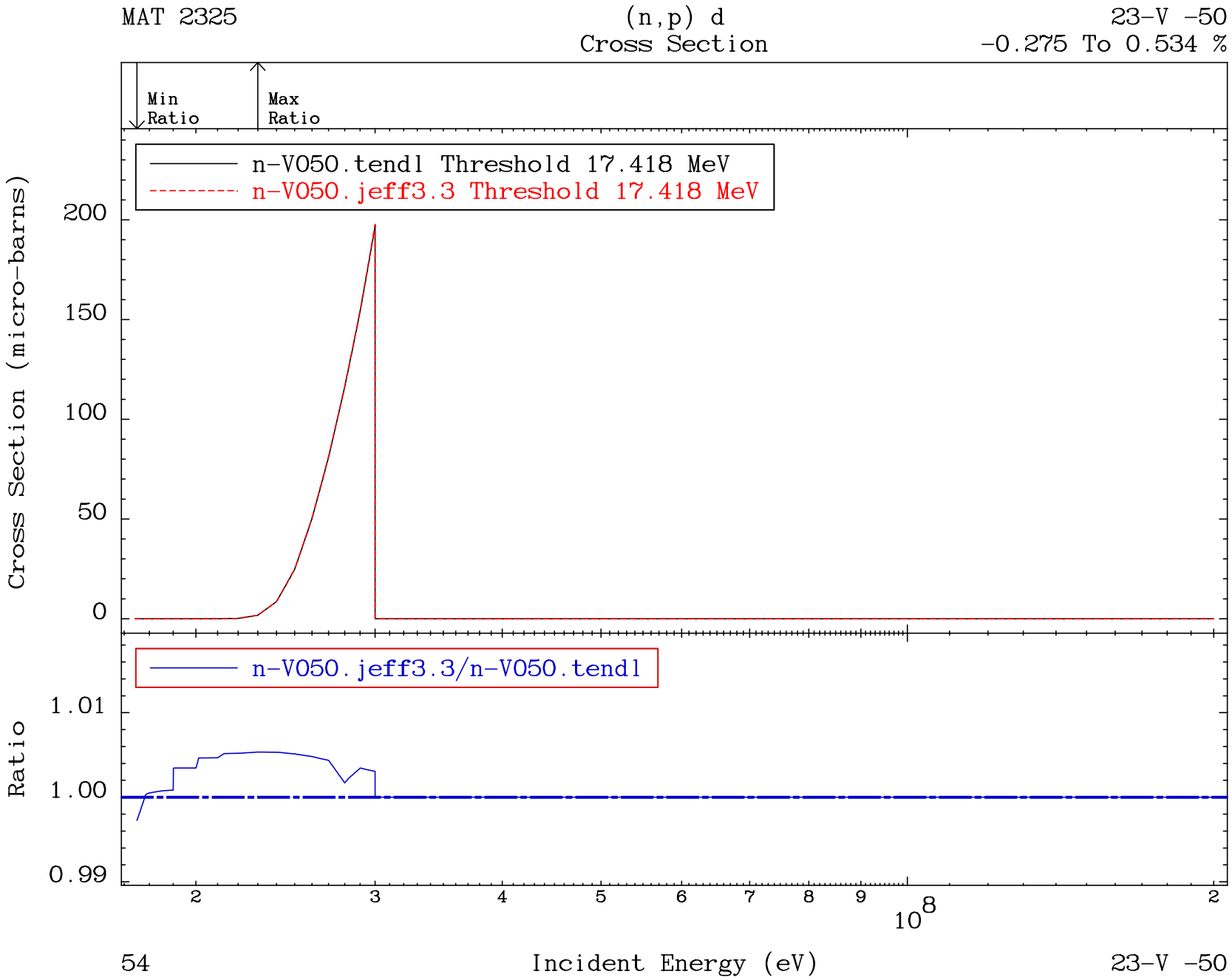

MAT 2325
(n,He-3)
Cross Section
23-V -50
-0.136 To 0.500 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 11.814 MeV
n-V050.jeff3.3 Threshold 11.814 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
n-V050.jeff3.3/n-V050.tendl
Ratio
1.000
1.010
2
3
4
5
6
7
8
9
10^8
2
49
Incident Energy (eV)
23-V -50

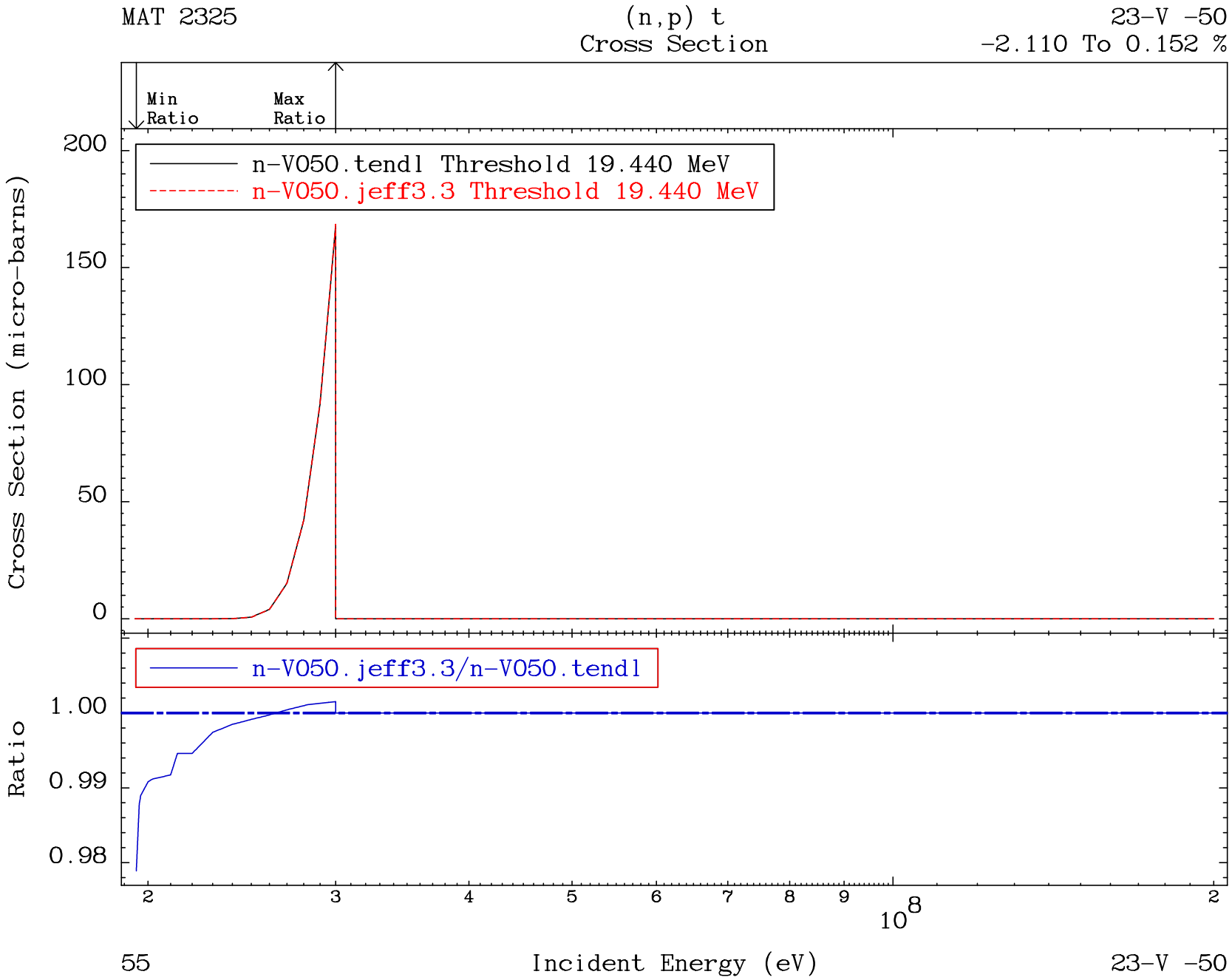

MAT 2325
(n,α)
Cross Section
23-V -50
-22.79 To 5078. %
Max Ratio
Min Ratio
n-V050.tendl Threshold 40.700 keV
n-V050.jeff3.3 Threshold 109.24 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^2
10^1
10^0
4
4
4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
50
Incident Energy (eV)
23-V -50

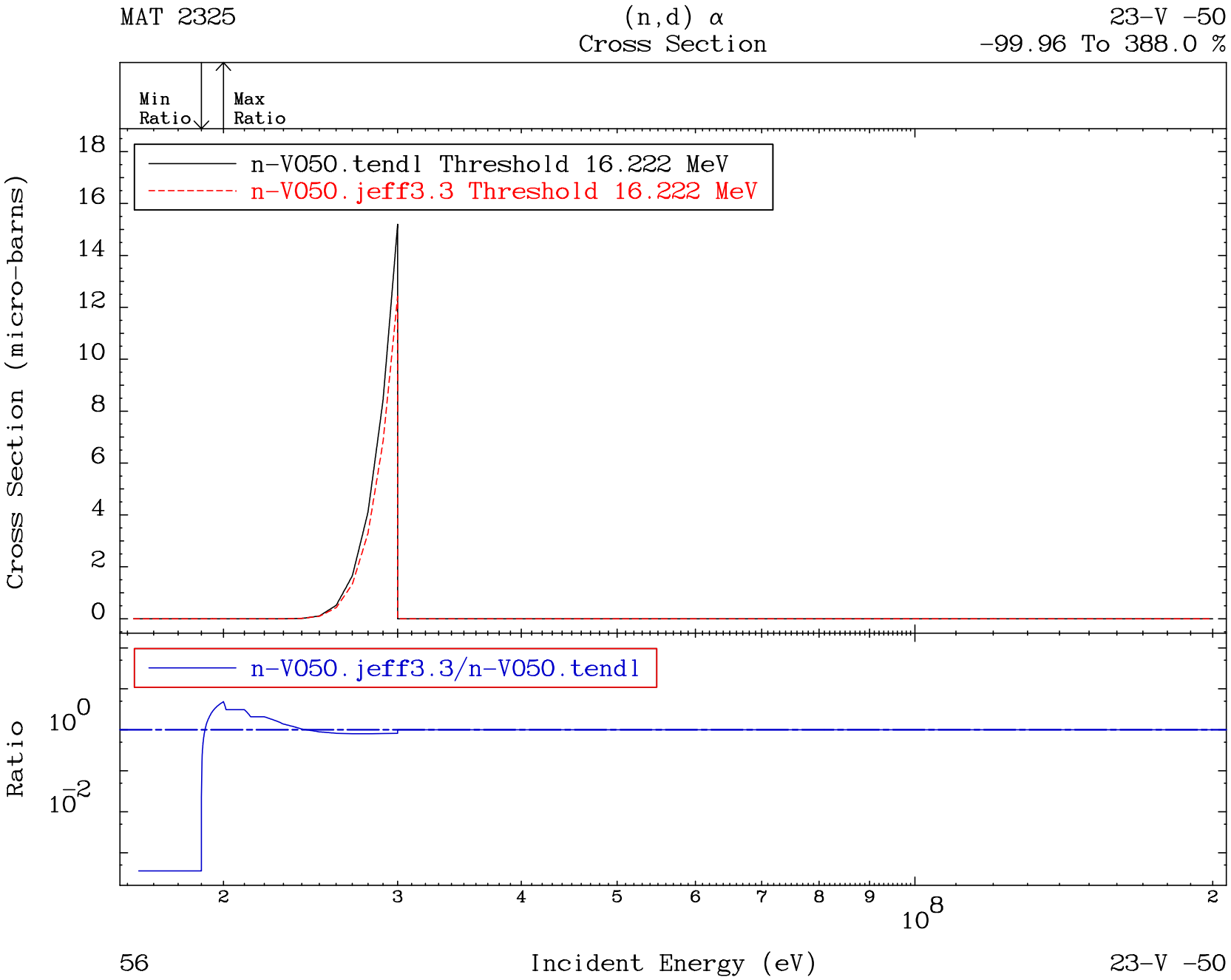

MAT 2325
(n,2α)
Cross Section
23-V -50
-34.92 To 1104. %
Max Ratio
Min Ratio
n-V050.tendl Threshold 9.6175 MeV
n-V050.jeff3.3 Threshold 9.6175 MeV
Cross Section (micro-barns)
120
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^1
6
4
10^0
6
10^7
2
3
4
5
6
7
8
9
10^8
2
51
Incident Energy (eV)
23-V -50

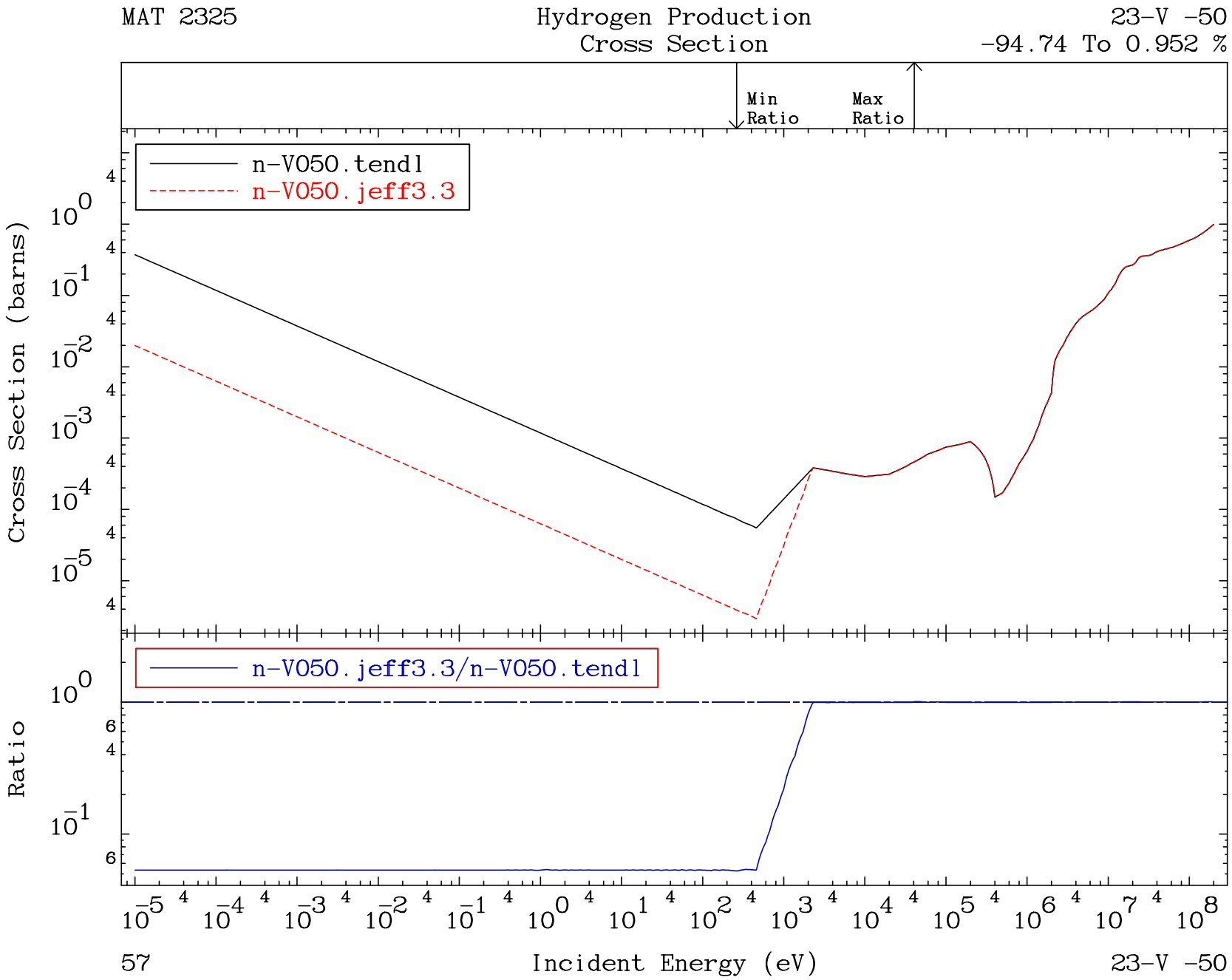

MAT 2325
(n,2p)
Cross Section
23-V -50
0.000 To 0.481 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 9.3545 MeV
n-V050.jeff3.3 Threshold 9.3545 MeV
Cross Section (micro-barns)
700
600
500
400
300
200
100
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
10^7
2
3
4
5
6
7
8
9
10^8
2
52
Incident Energy (eV)
23-V -50

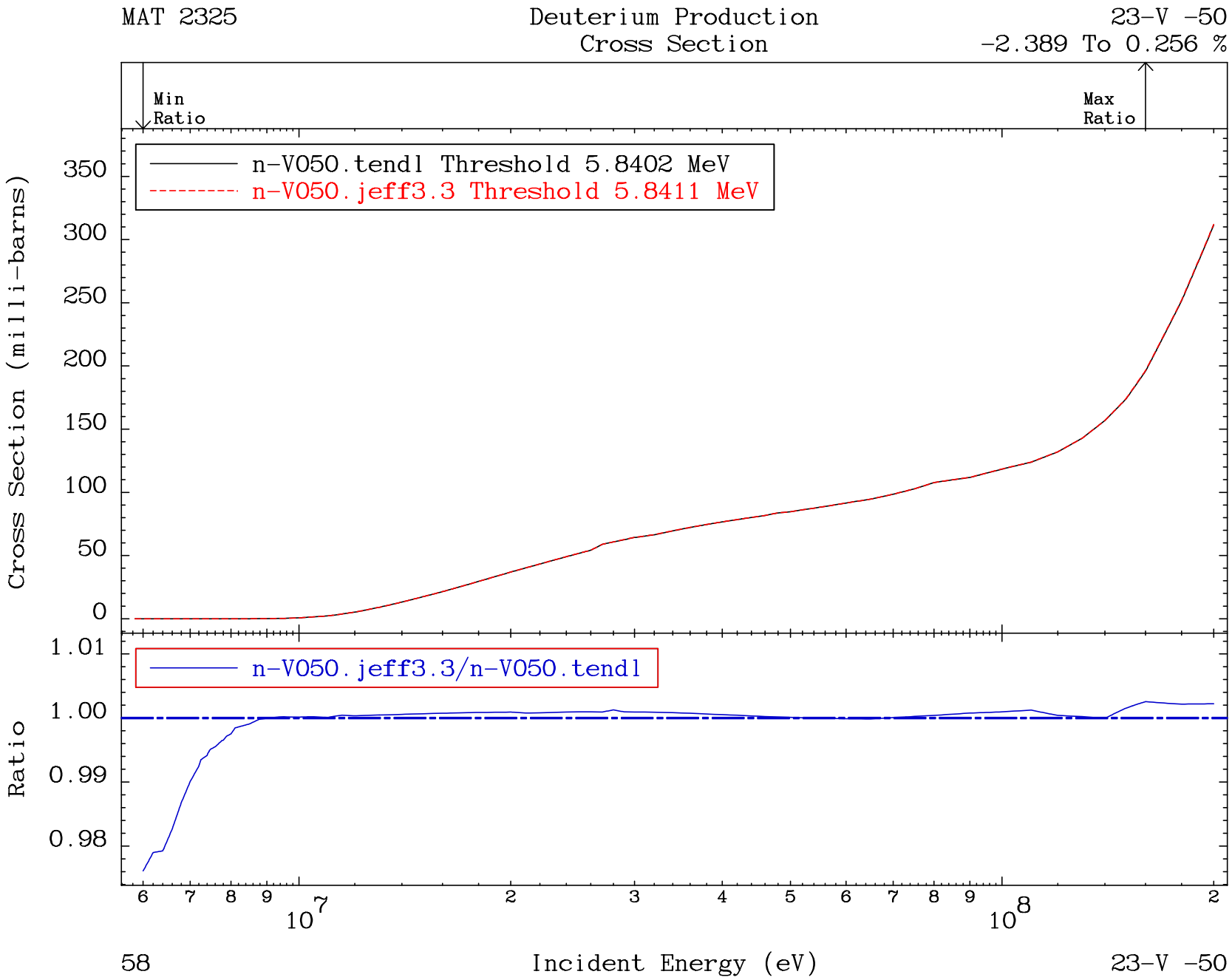

MAT 2325
(n,p) α
Cross Section
23-V -50
-99.90 To 357.4 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 7.8833 MeV
n-V050.jeff3.3 Threshold 7.8841 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^0
10^-2
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
53
Incident Energy (eV)
23-V -50

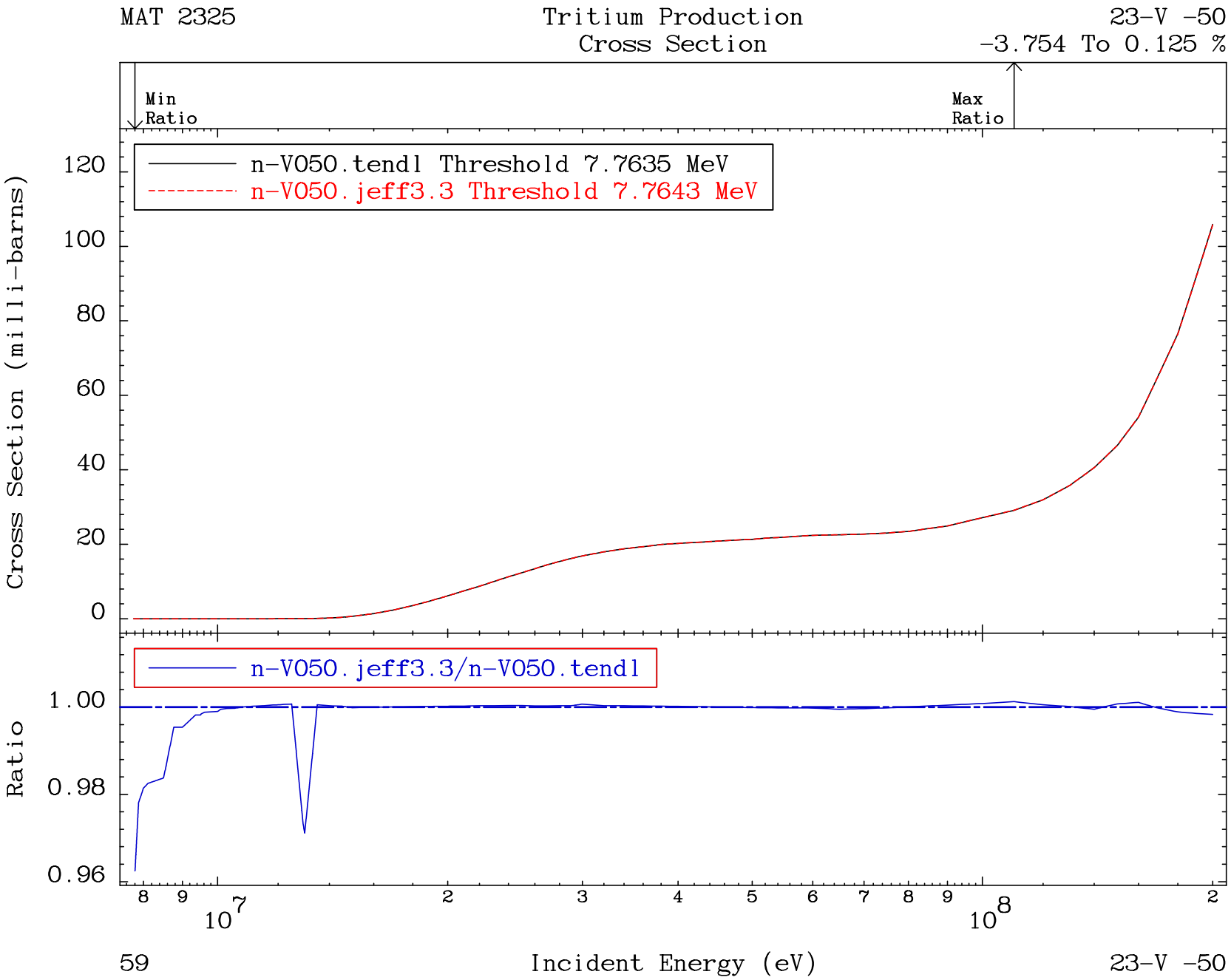

MAT 2325
(n,p) d
Cross Section
23-V -50
-0.275 To 0.534 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 17.418 MeV
n-V050.jeff3.3 Threshold 17.418 MeV
Cross Section (micro-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
54
Incident Energy (eV)
23-V -50

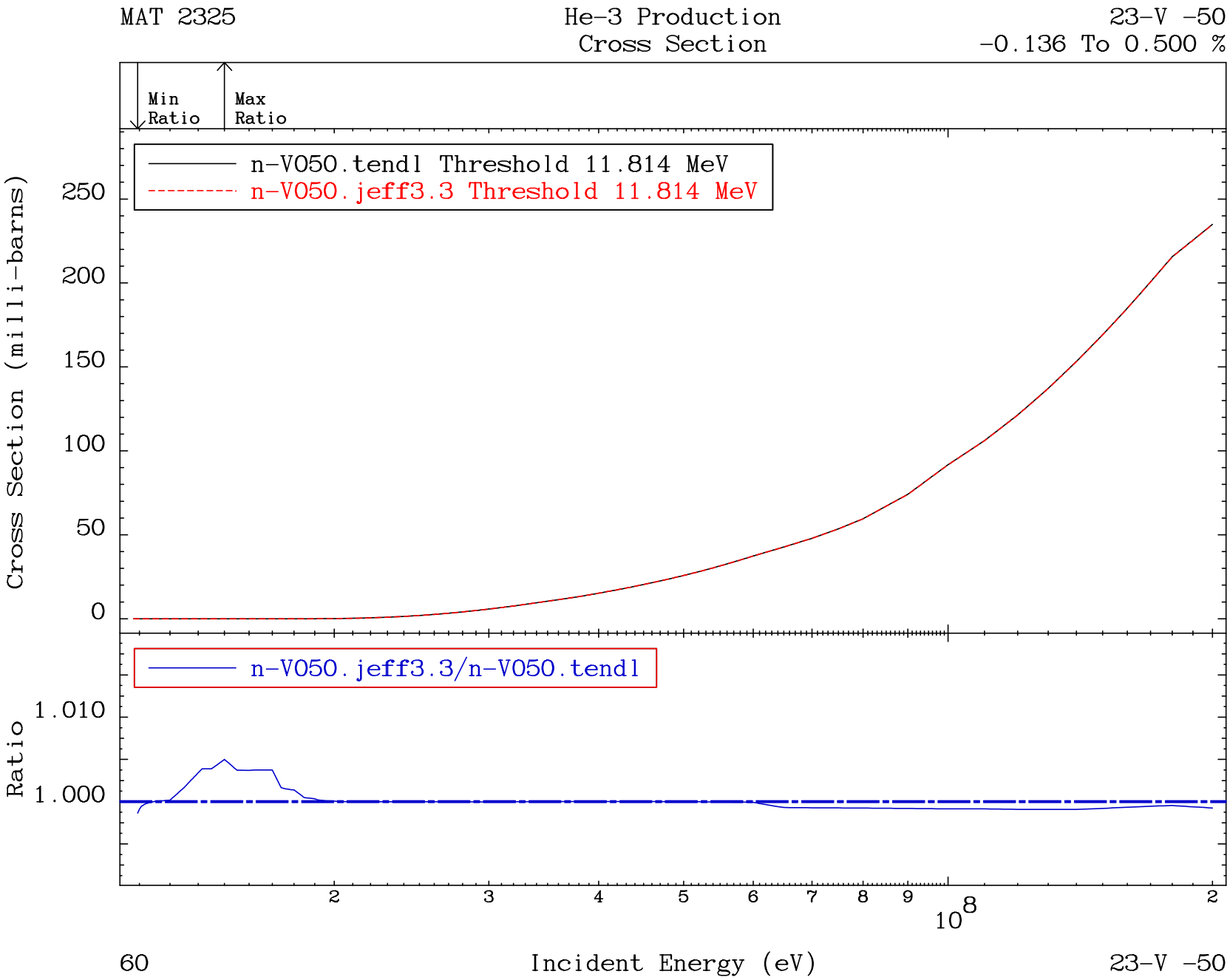

MAT 2325
(n,p) t
Cross Section
23-V -50
-2.110 To 0.152 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 19.440 MeV
n-V050.jeff3.3 Threshold 19.440 MeV
Cross Section (micro-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.99
0.98
2
3
4
5
6
7
8
9
10^8
2
55
Incident Energy (eV)
23-V -50

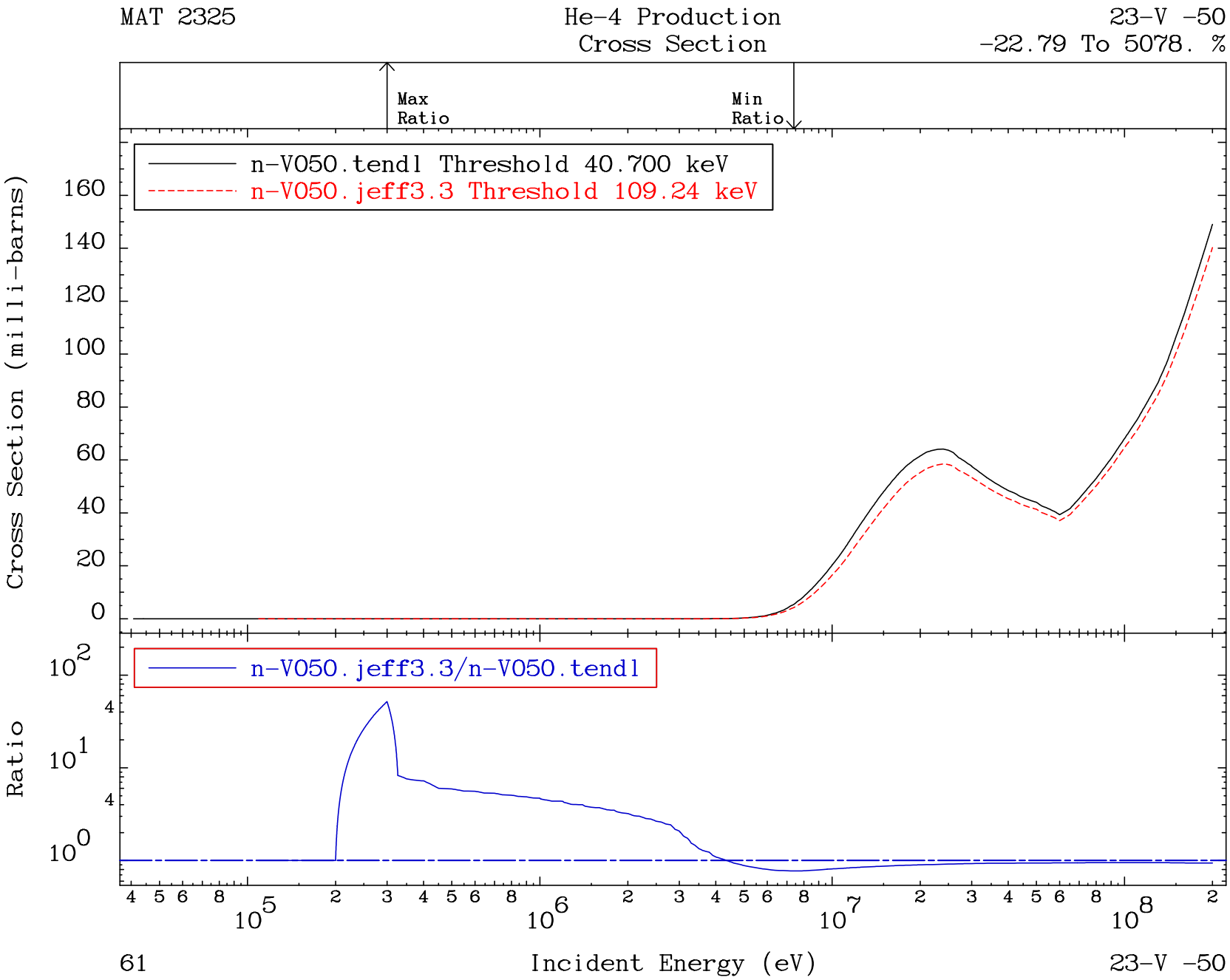

MAT 2325
(n,d) α
Cross Section
23-V -50
-99.96 To 388.0 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 16.222 MeV
n-V050.jeff3.3 Threshold 16.222 MeV
Cross Section (micro-barns)
18
16
14
12
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
56
Incident Energy (eV)
23-V -50

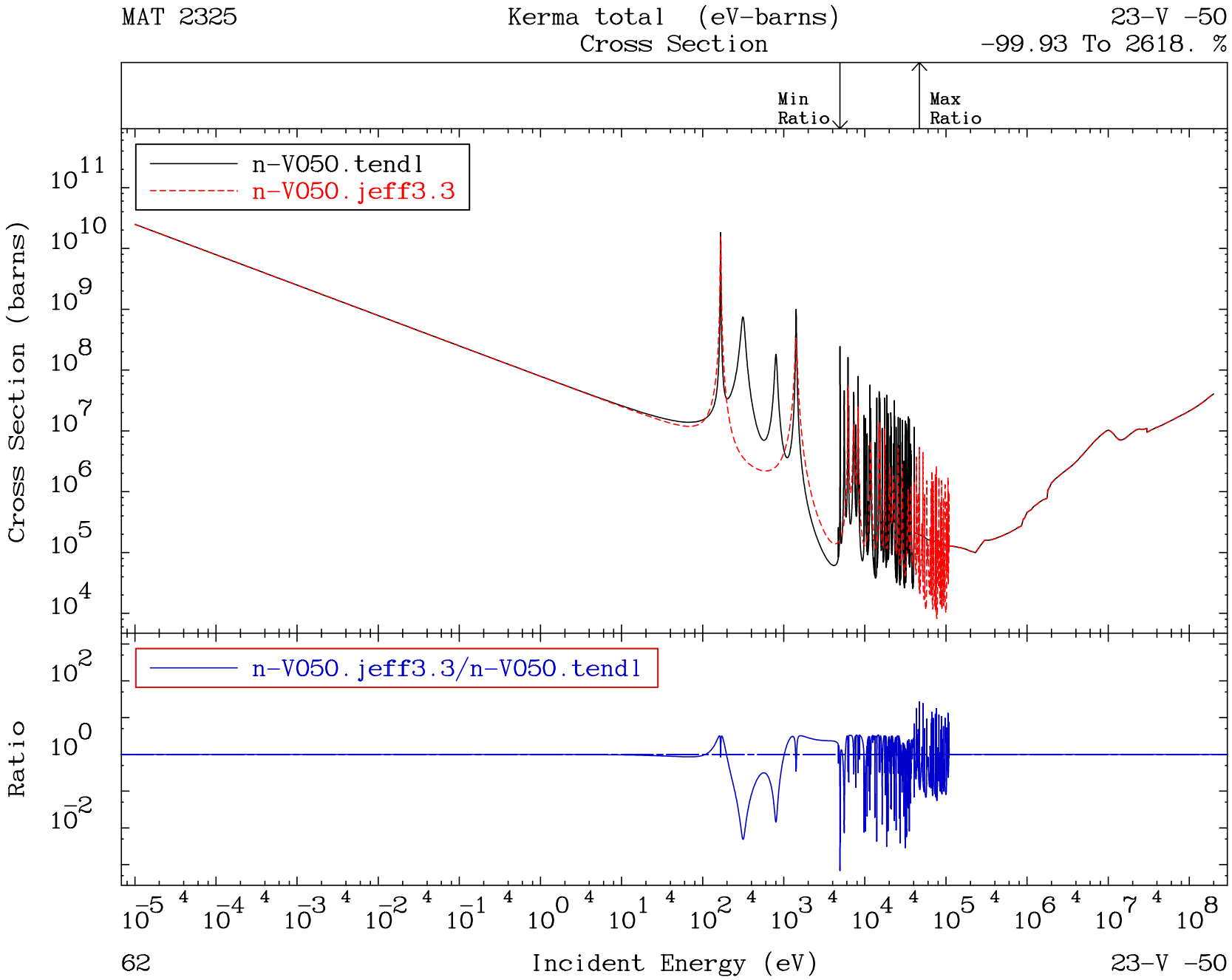

MAT 2325
Hydrogen Production
Cross Section
23-V -50
-94.74 To 0.952 %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
57
23-V -50

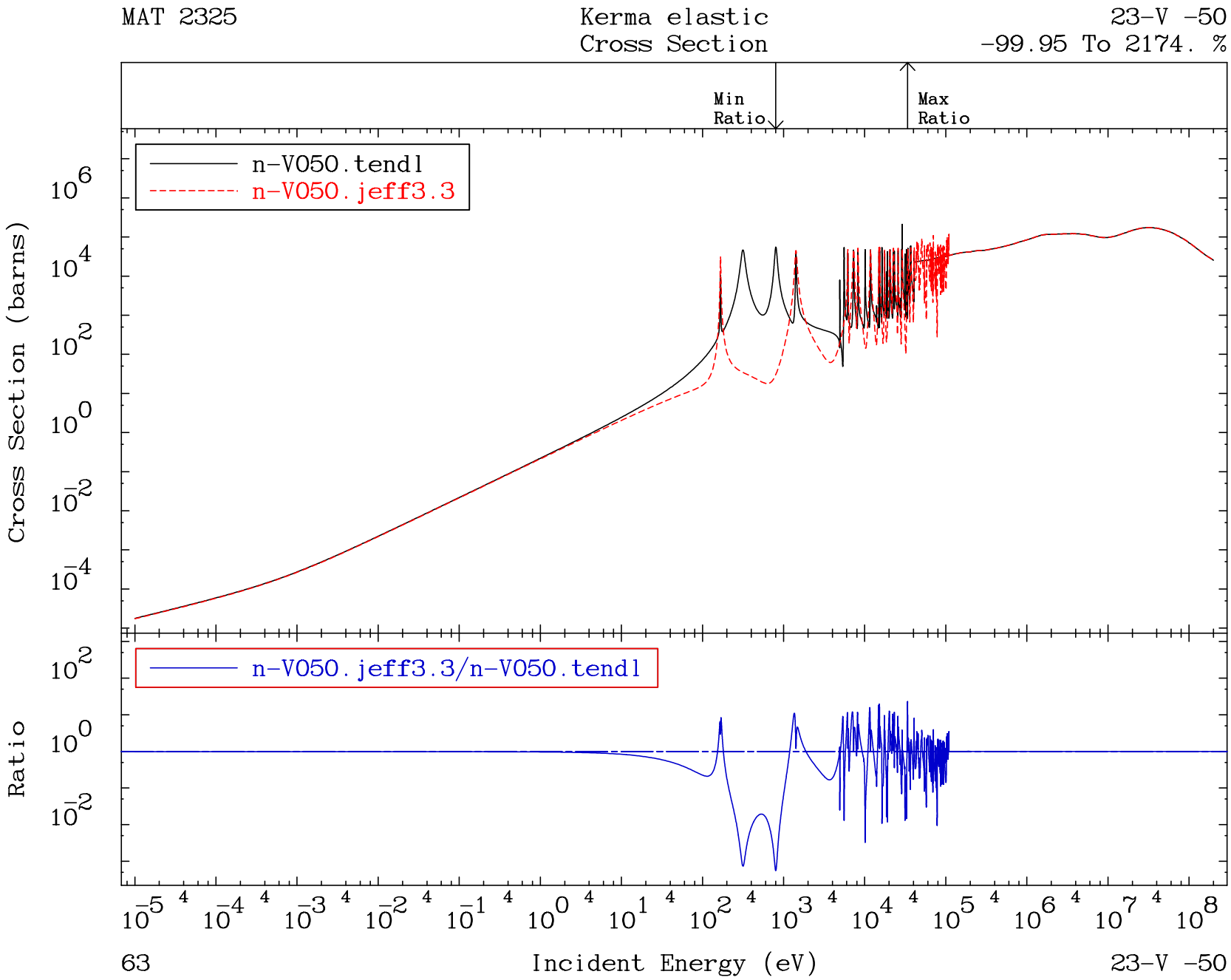

MAT 2325
Deuterium Production
Cross Section
23-V -50
-2.389 To 0.256 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 5.8402 MeV
n-V050.jeff3.3 Threshold 5.8411 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
0.98
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
58
Incident Energy (eV)
23-V -50

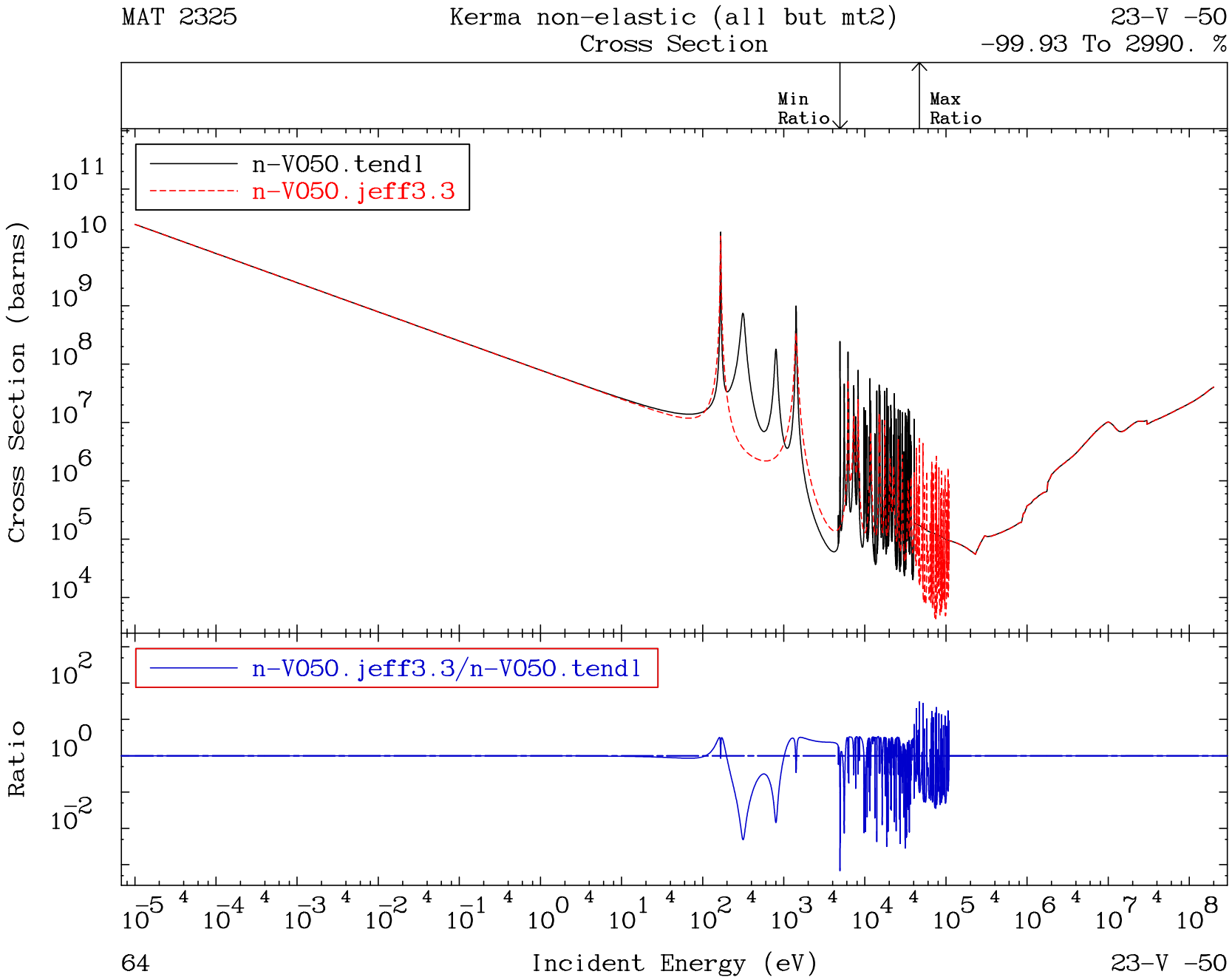

MAT 2325
Tritium Production
Cross Section
23-V -50
-3.754 To 0.125 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 7.7635 MeV
n-V050.jeff3.3 Threshold 7.7643 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.98
0.96
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
59
Incident Energy (eV)
23-V -50

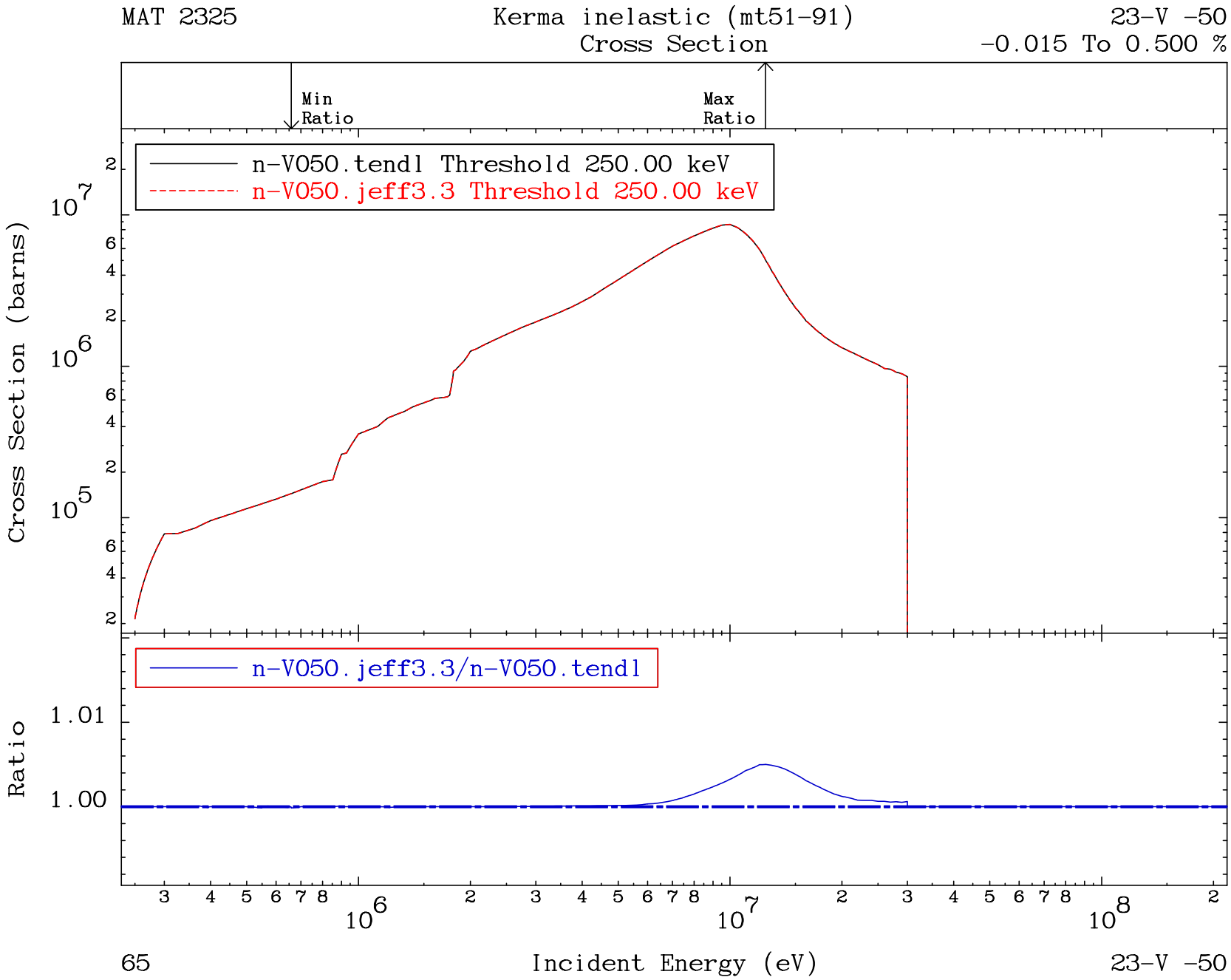

MAT 2325
He-3 Production
Cross Section
23-V -50
-0.136 To 0.500 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 11.814 MeV
n-V050.jeff3.3 Threshold 11.814 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.010
1.000
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
23-V -50

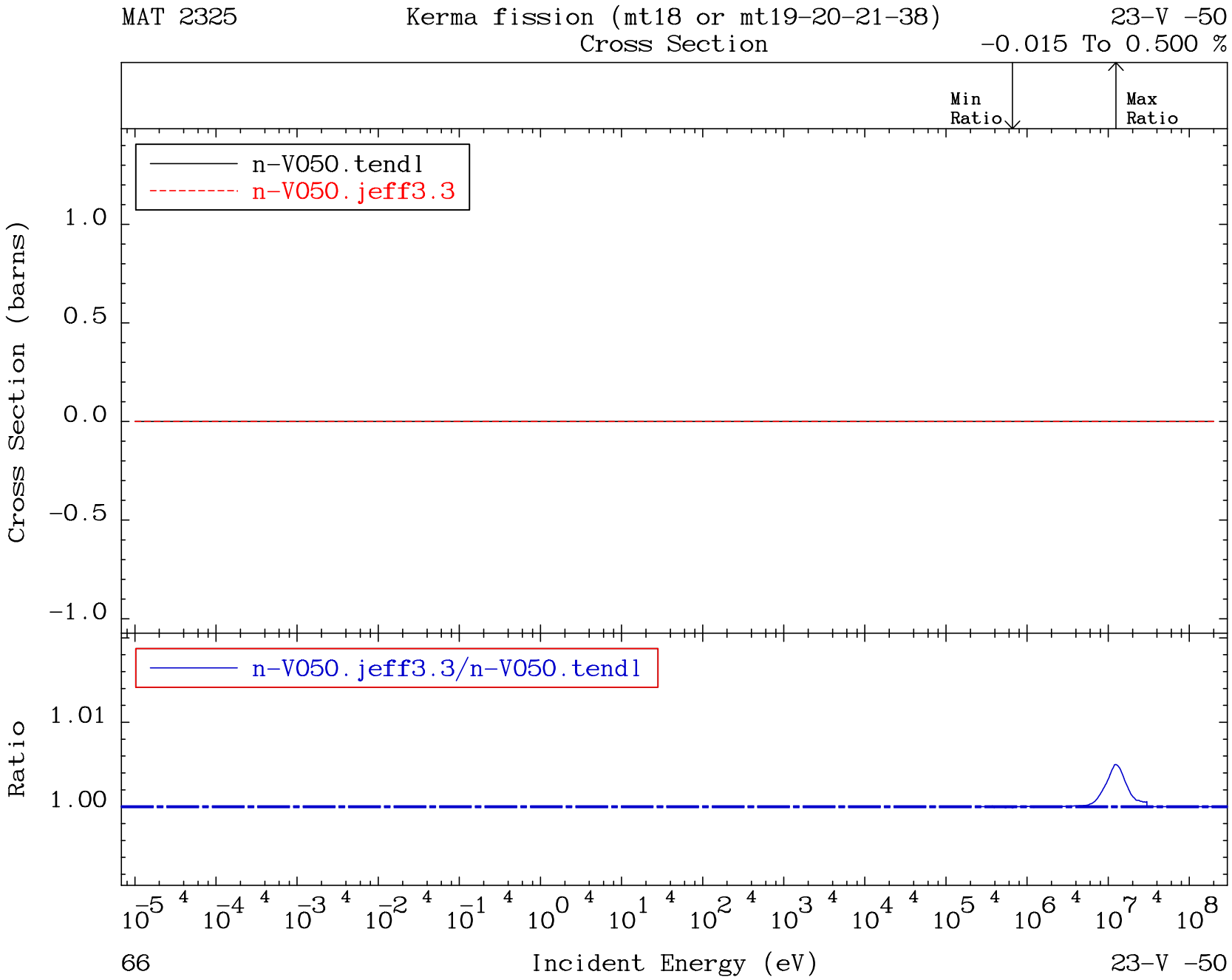

MAT 2325
He-4 Production
Cross Section
23-V -50
-22.79 To 5078. %
Max Ratio
Min Ratio
n-V050.tendl Threshold 40.700 keV
n-V050.jeff3.3 Threshold 109.24 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^2
10^1
10^0
4
4
4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
61
Incident Energy (eV)
23-V -50

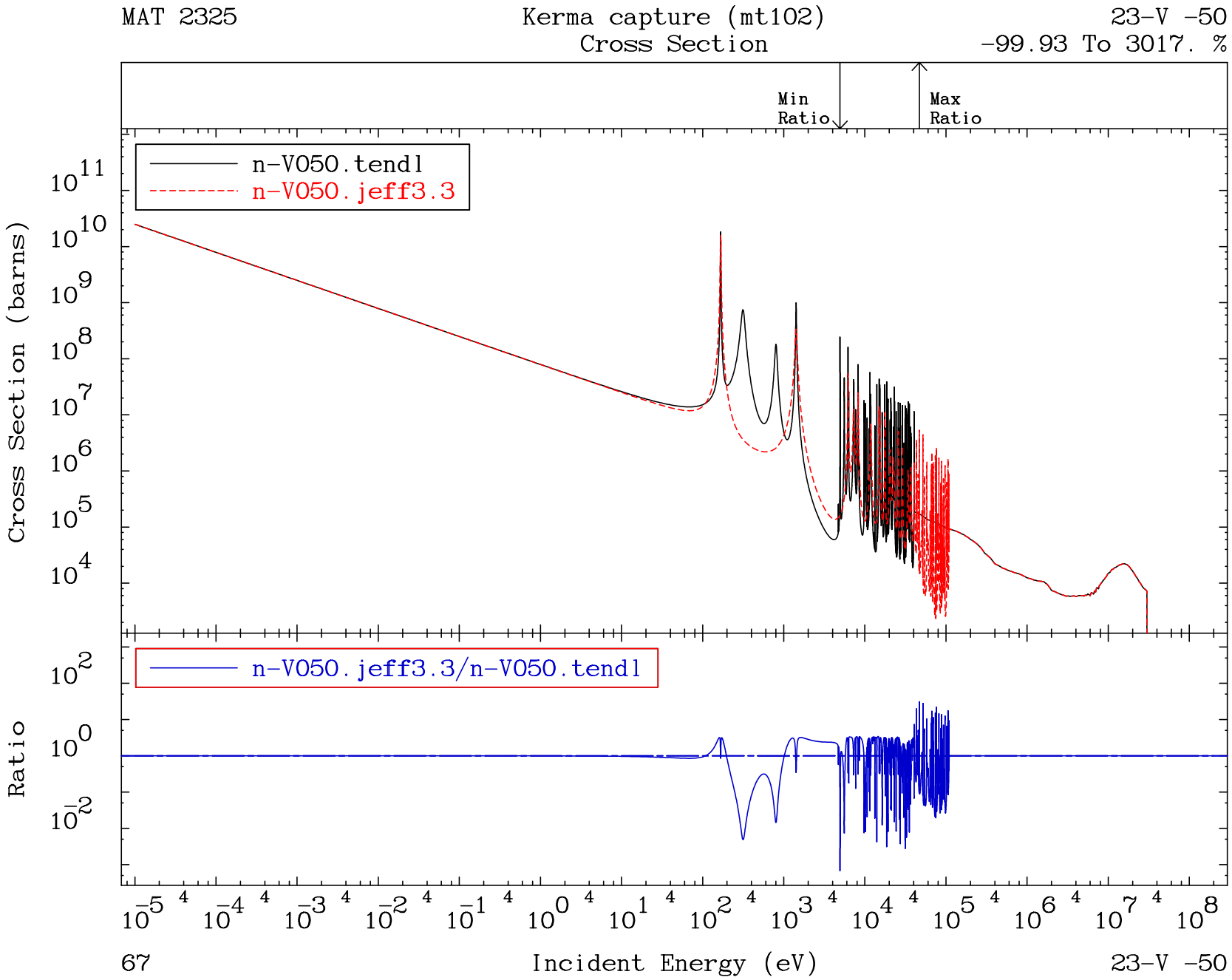

MAT 2325
Kerma total (eV-barns)
Cross Section
23-V -50
-99.93 To 2618. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
62
23-V -50

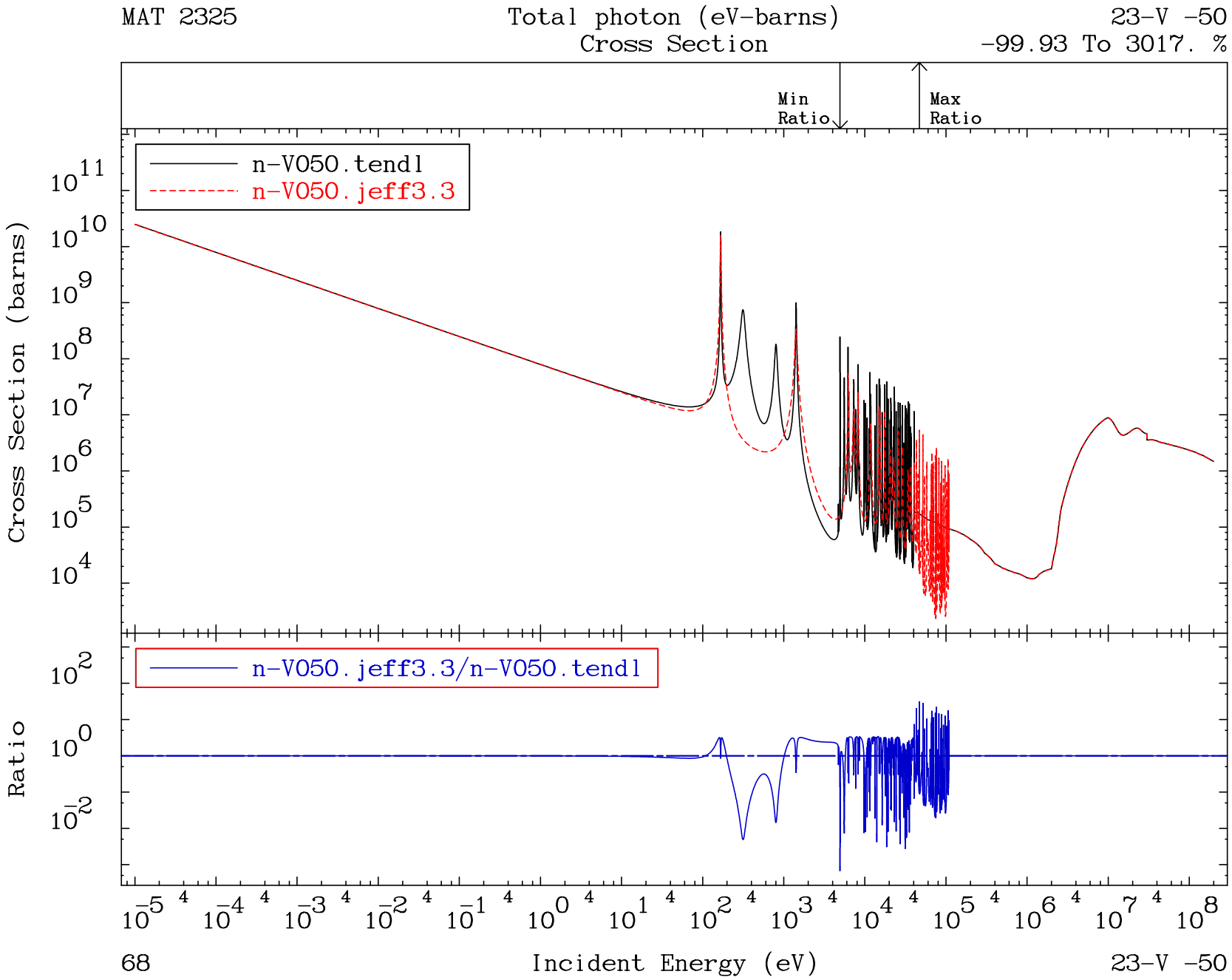

MAT 2325
Kerma elastic
Cross Section
23-V -50
-99.95 To 2174. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
63
23-V -50

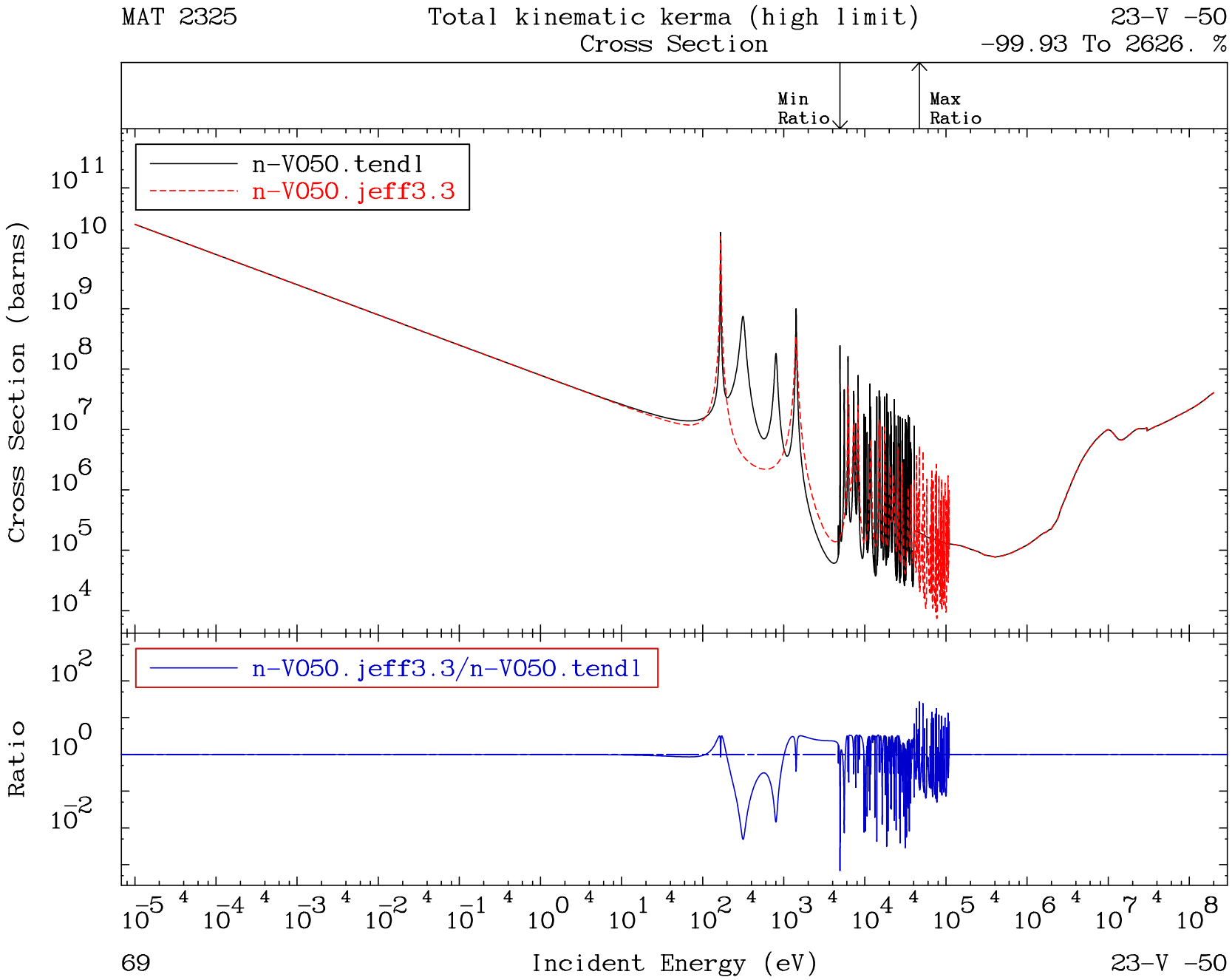

MAT 2325
Kerma non-elastic (all but mt2)
Cross Section
23-V -50
-99.93 To 2990. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
64
23-V -50

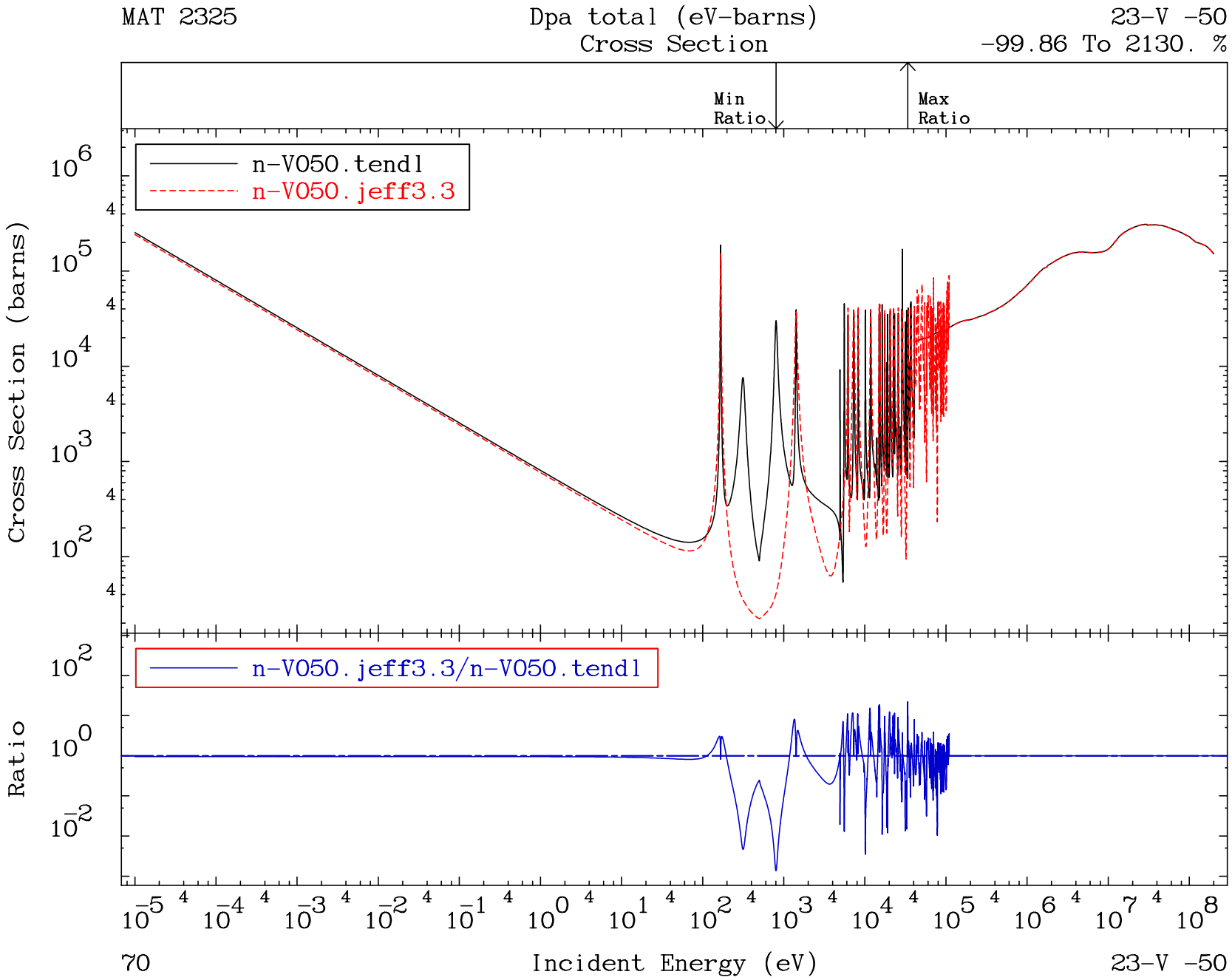

MAT 2325
Kerma inelastic (mt51-91)
Cross Section
23-V -50
-0.015 To 0.500 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 250.00 keV
n-V050.jeff3.3 Threshold 250.00 keV
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
Incident Energy (eV)
65
23-V -50

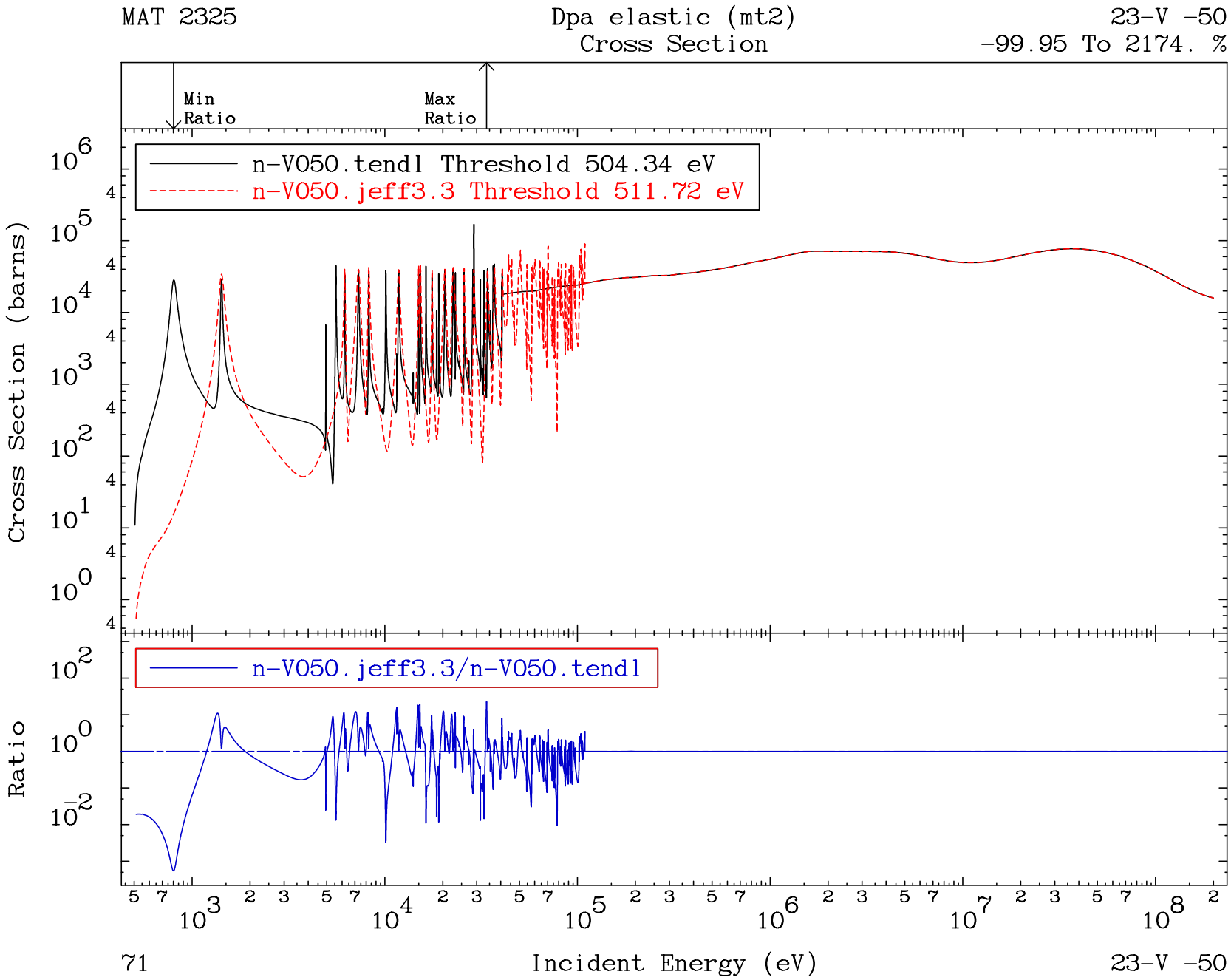

MAT 2325
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
23-V -50
-0.015 To 0.500 %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
66
Incident Energy (eV)
23-V -50

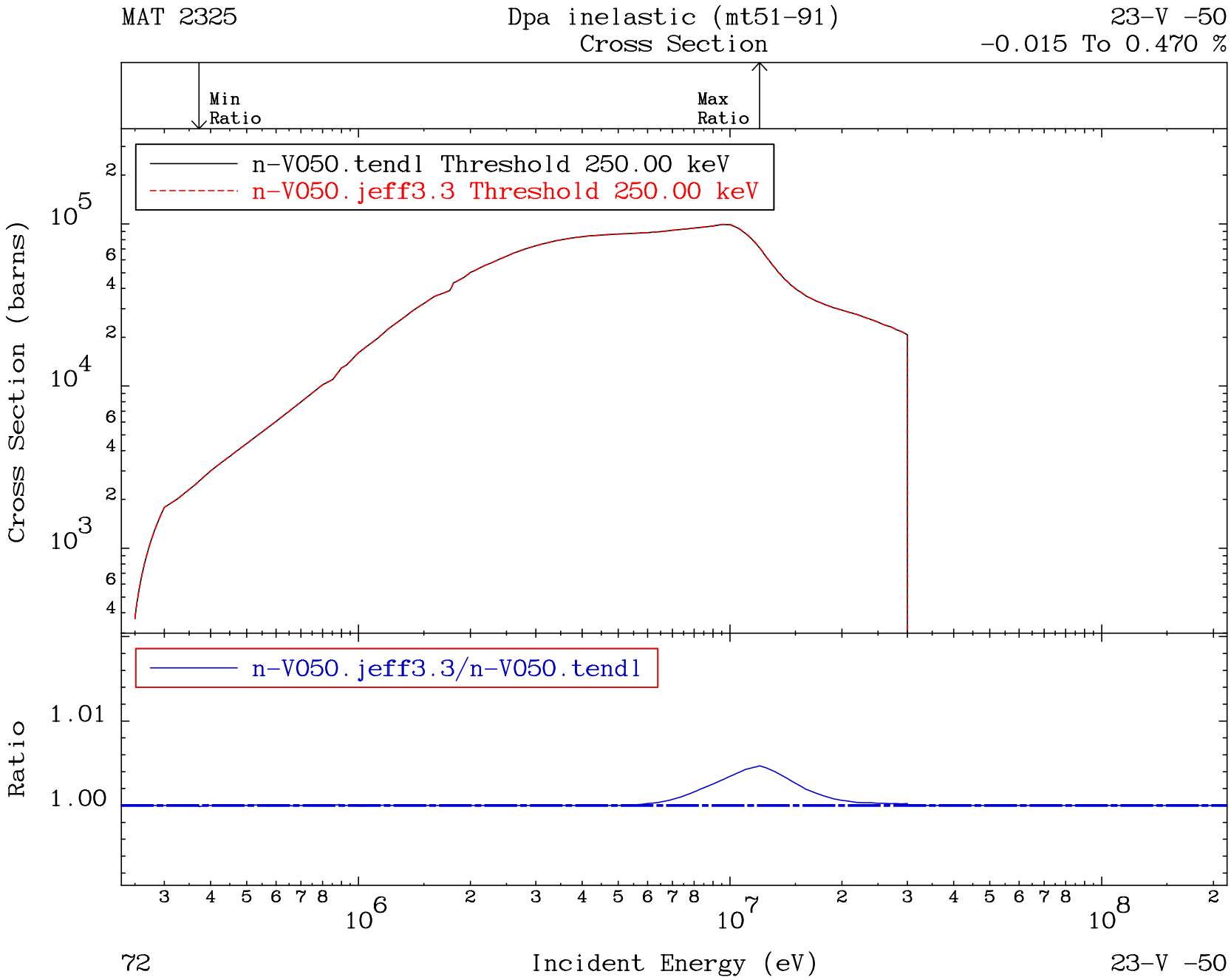

MAT 2325
Kerma capture (mt102)
Cross Section
23-V -50
-99.93 To 3017. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
67
23-V -50

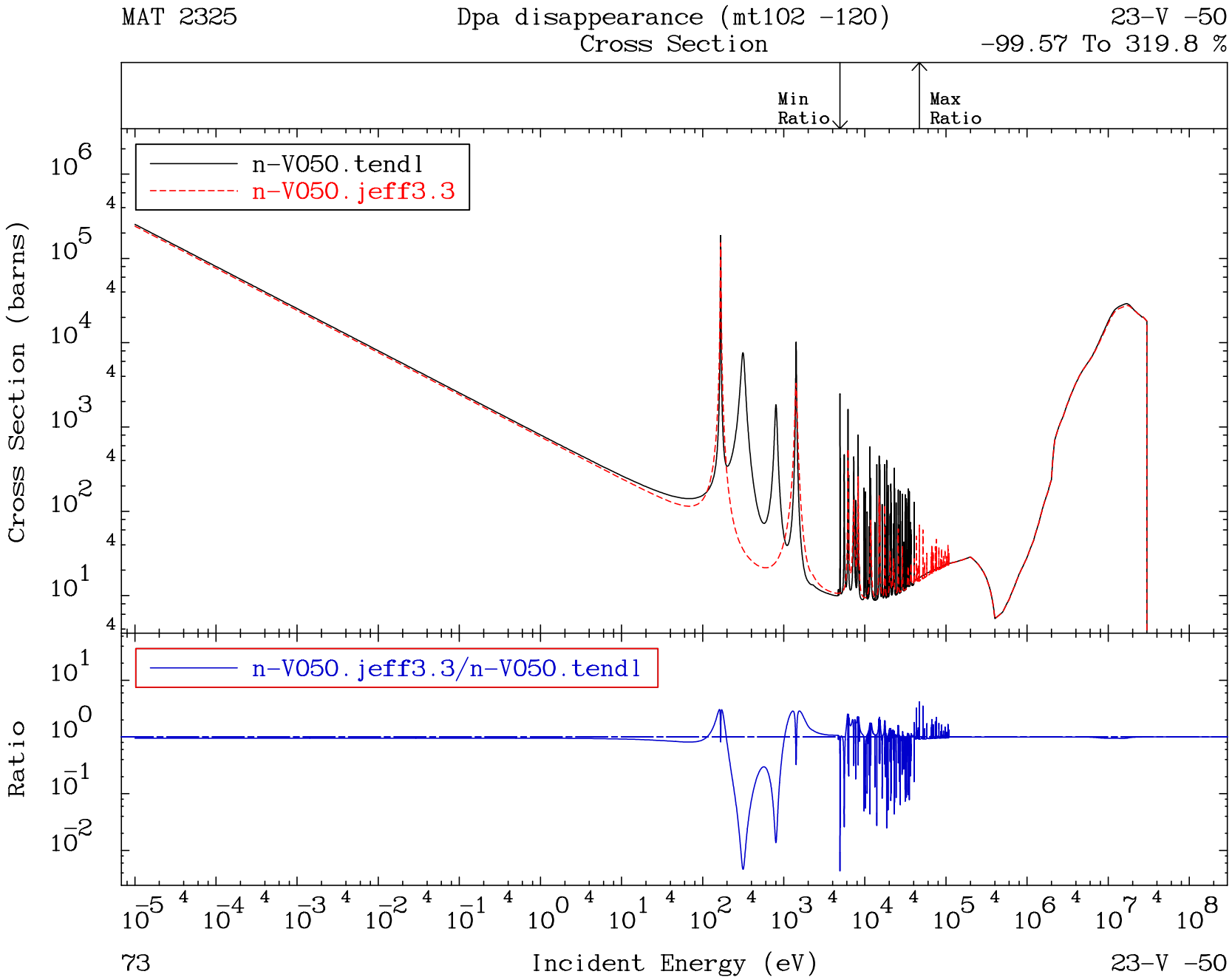

MAT 2325
Total photon (eV-barns)
Cross Section
23-V -50
-99.93 To 3017. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
68
23-V -50

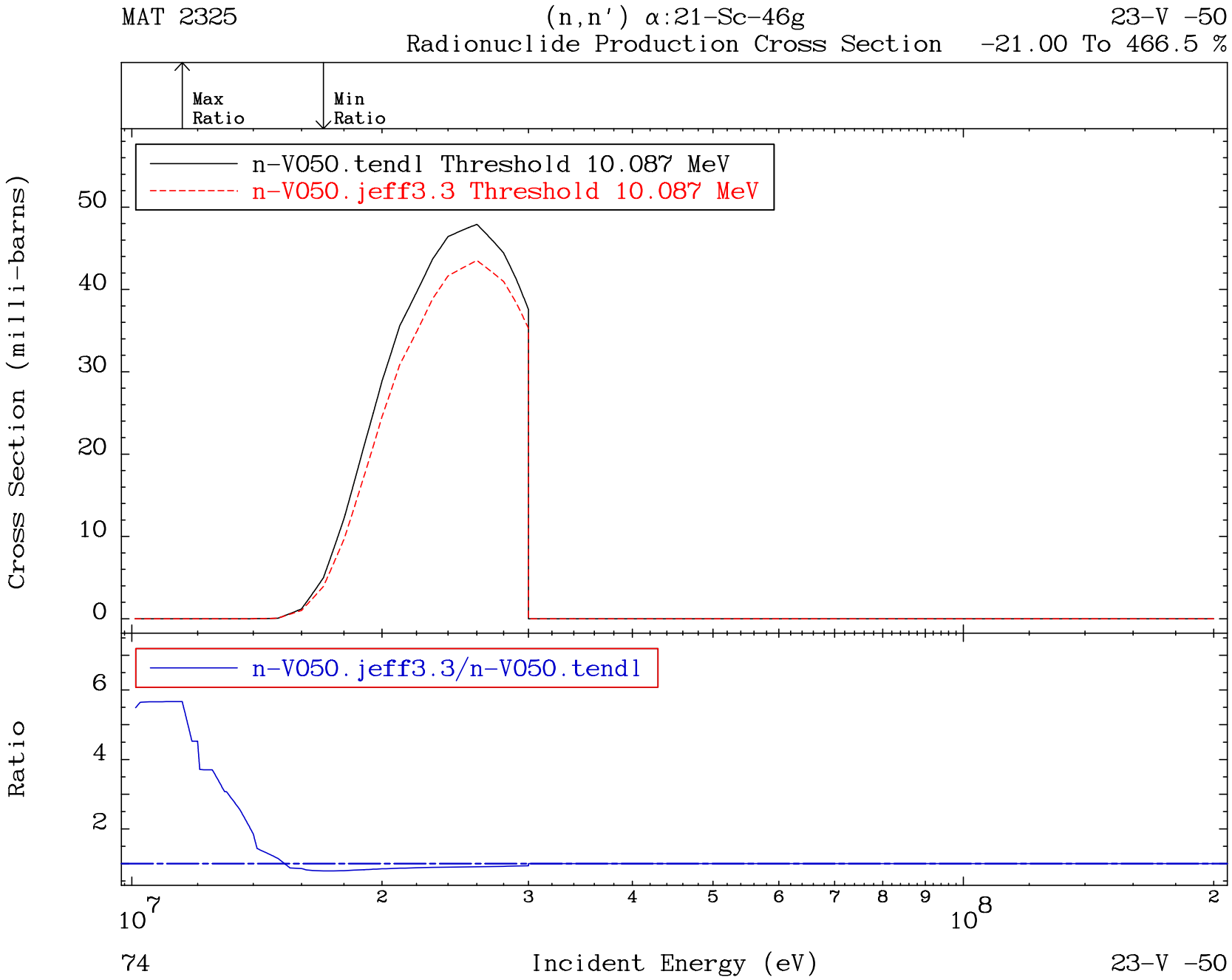

MAT 2325
Total kinematic kerma (high limit)
Cross Section
23-V -50
-99.93 To 2626. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
69
23-V -50

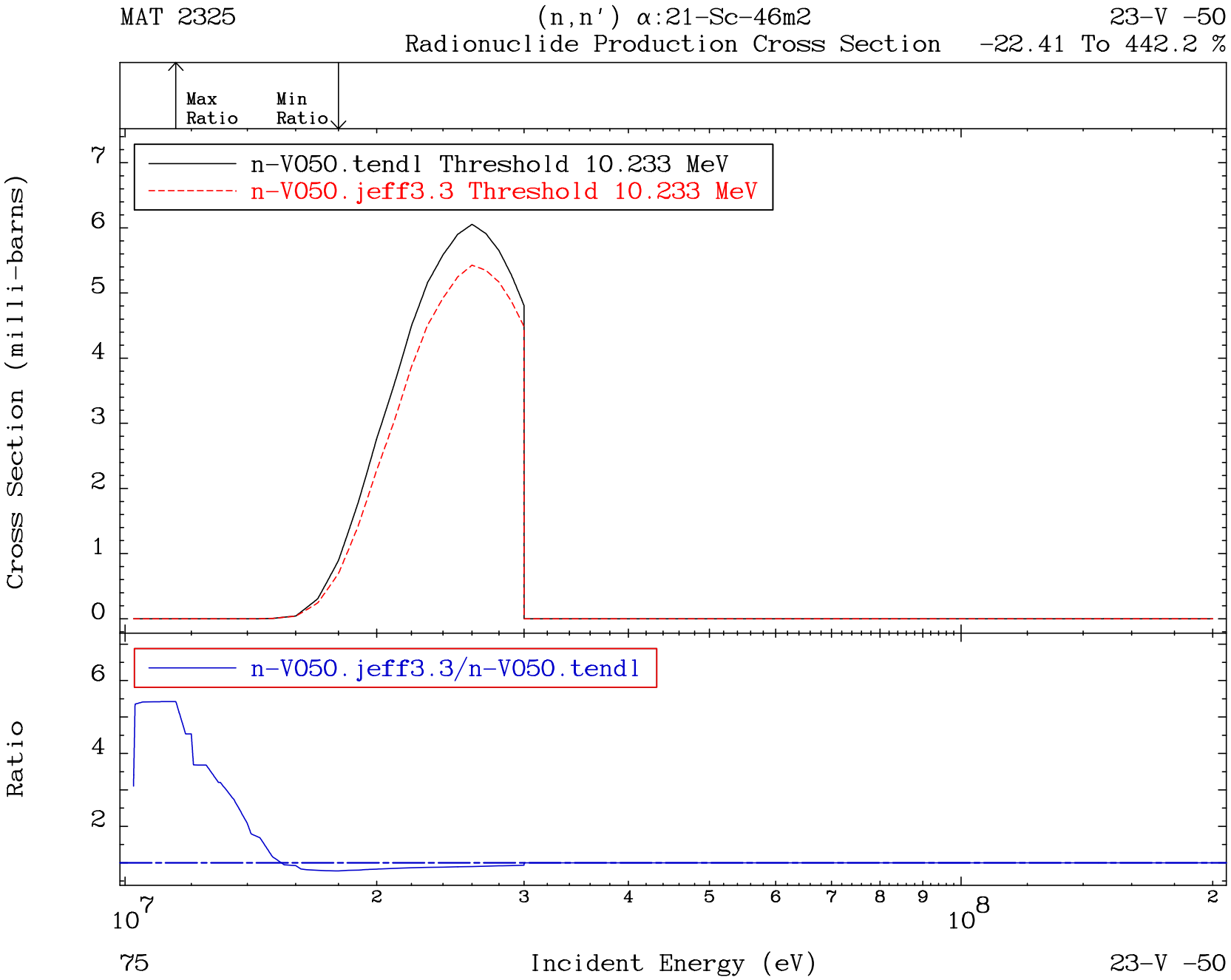

MAT 2325
Dpa total (eV-barns)
Cross Section
23-V -50
-99.86 To 2130. %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
70
23-V -50

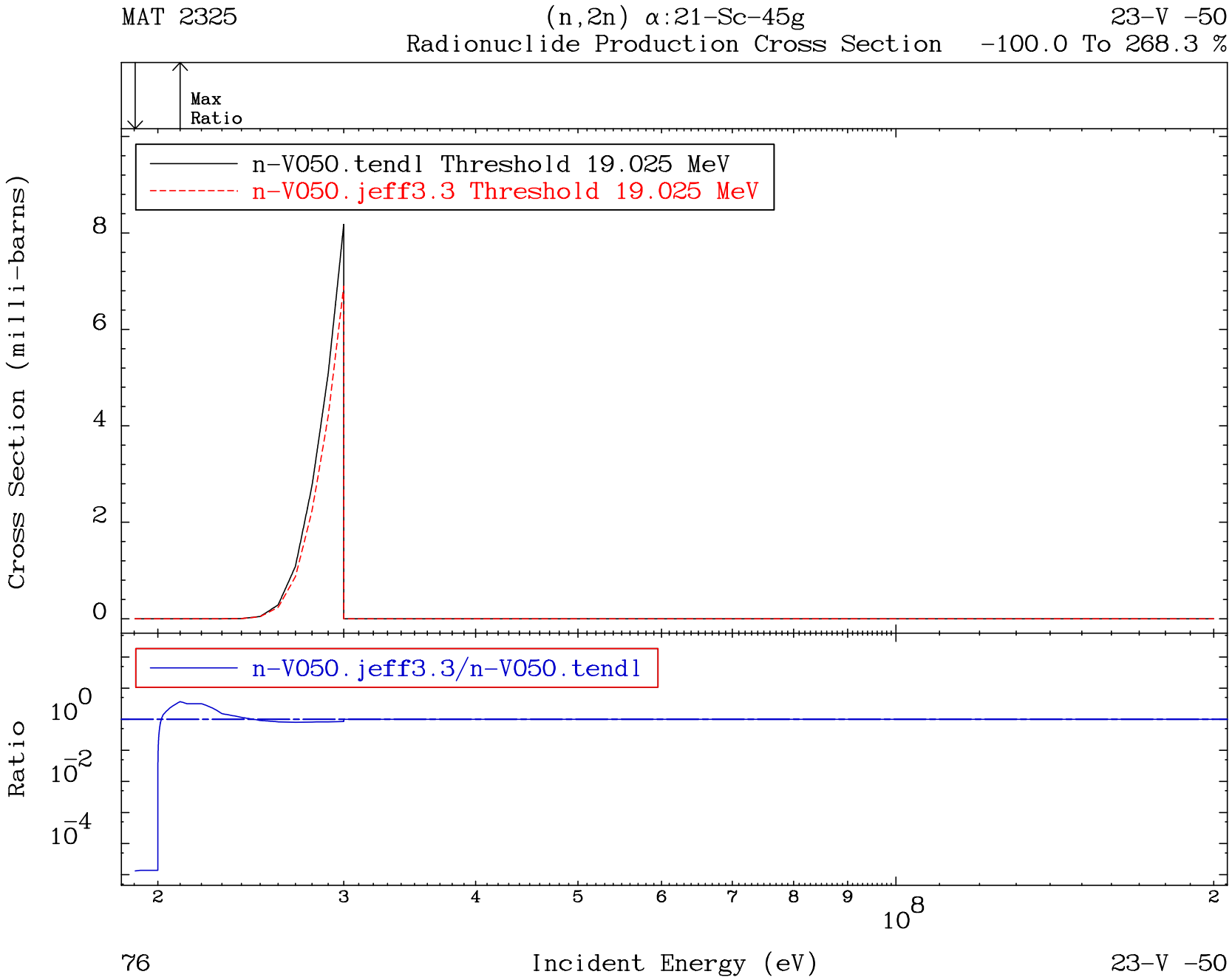

MAT 2325
Dpa elastic (mt2)
Cross Section
23-V -50
-99.95 To 2174. %
Min Ratio
Max Ratio
n-V050.tendl Threshold 504.34 eV
n-V050.jeff3.3 Threshold 511.72 eV
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
71
23-V -50

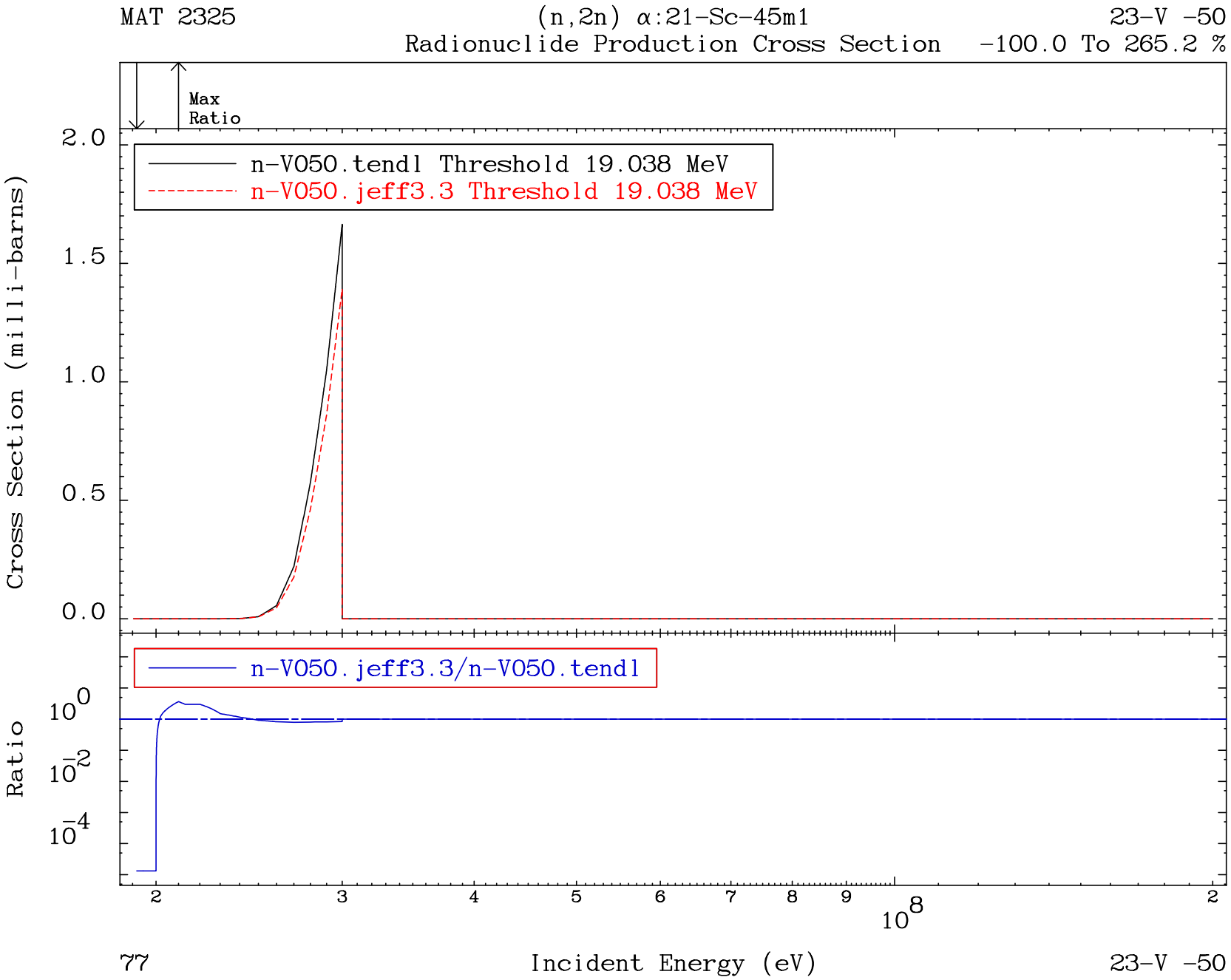

MAT 2325
Dpa inelastic (mt51-91)
Cross Section
23-V -50
-0.015 To 0.470 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 250.00 keV
n-V050.jeff3.3 Threshold 250.00 keV
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
72
23-V -50

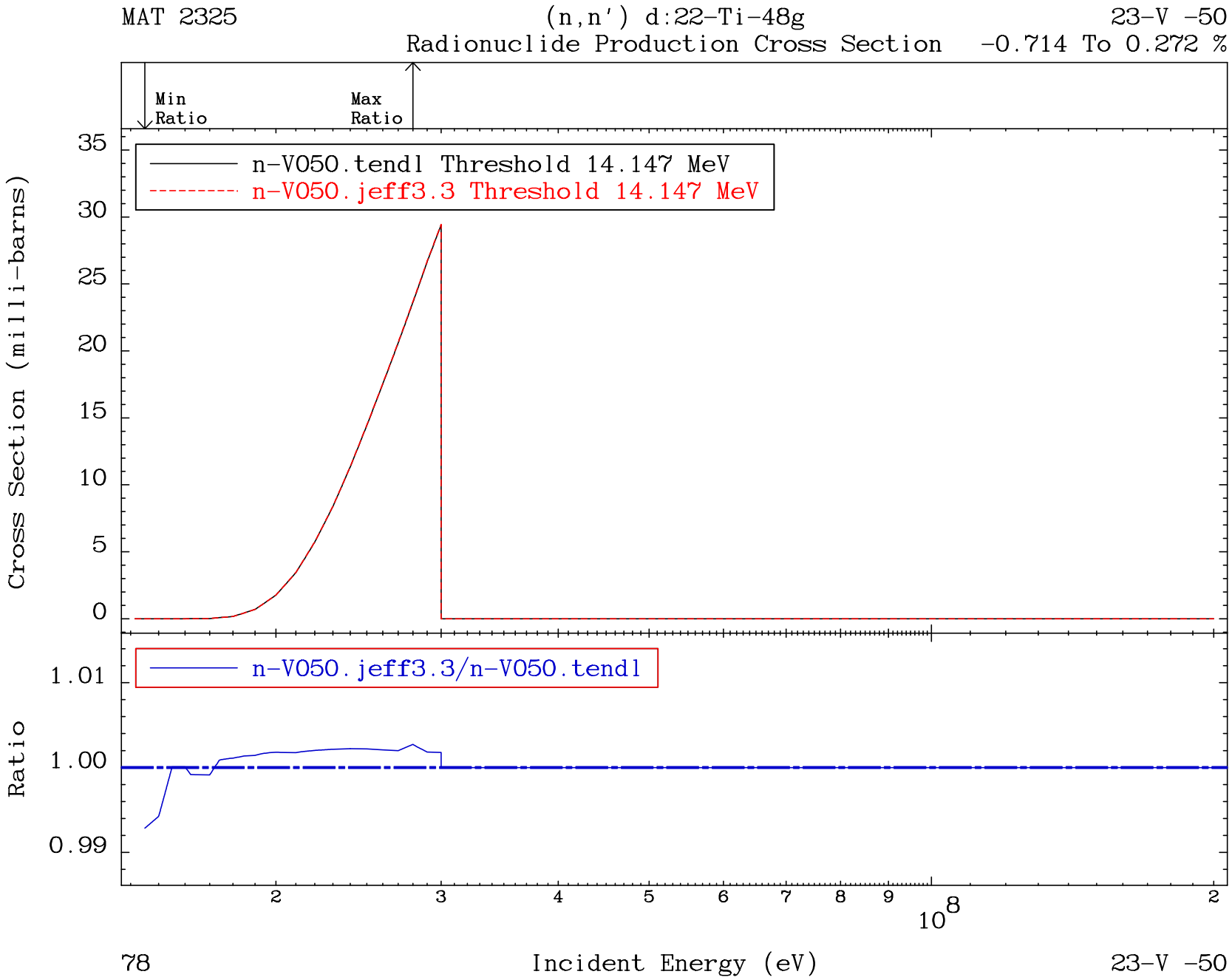

MAT 2325
Dpa disappearance (mt102 -120)
Cross Section
23-V -50
-99.57 To 319.8 %
Min Ratio
Max Ratio
n-V050.tendl
n-V050.jeff3.3
Cross Section (barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
73
23-V -50

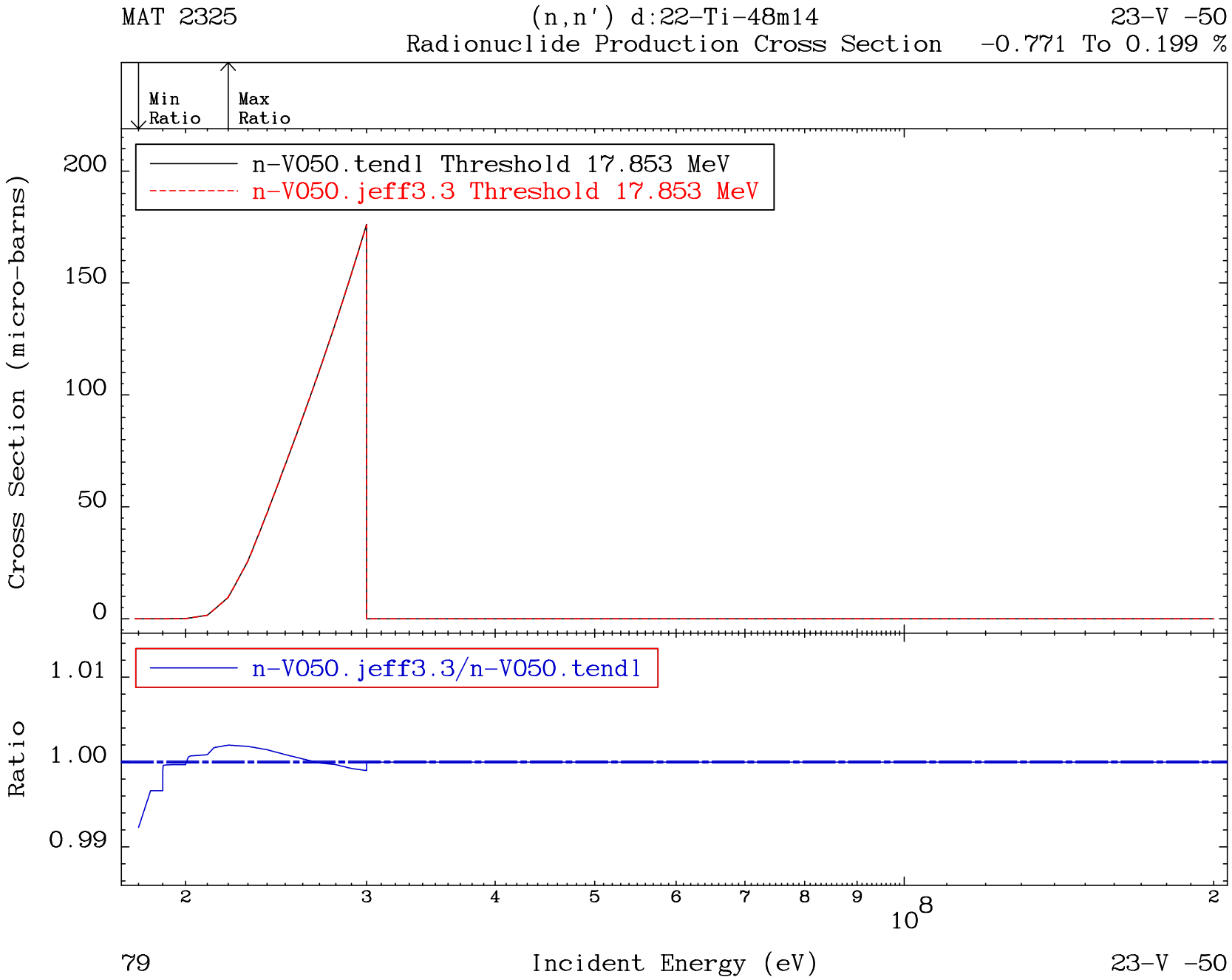

MAT 2325
(n,n') α:21-Sc-46g
23-V -50
Radionuclide Production Cross Section
-21.00 To 466.5 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 10.087 MeV
n-V050.jeff3.3 Threshold 10.087 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-V050.jeff3.3/n-V050.tendl
Ratio
6
4
2
10^7
2
3
4
5
6
7
8
9
10^8
2
74
Incident Energy (eV)
23-V -50

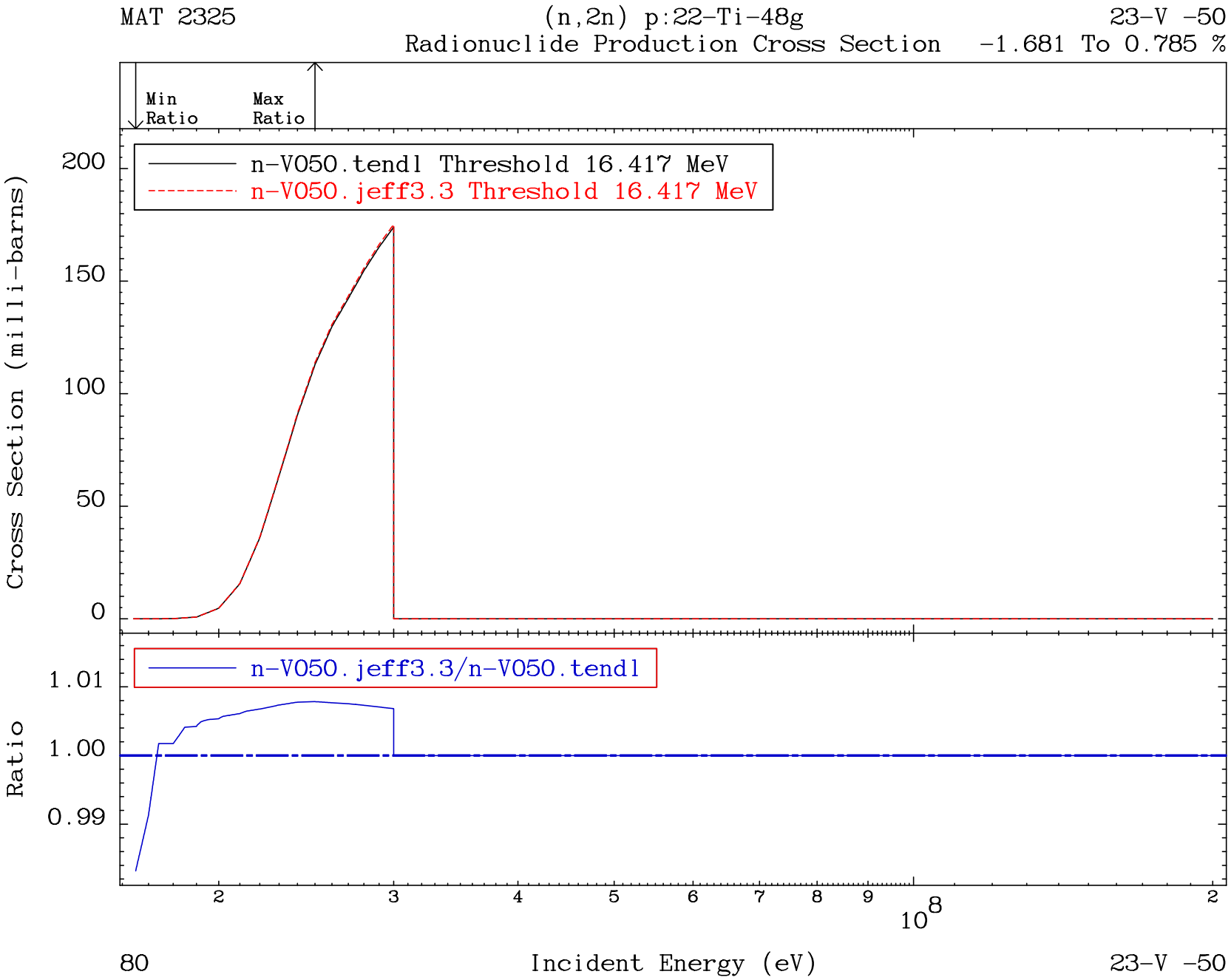

MAT 2325
(n,n') α:21-Sc-46m2
23-V -50
Radionuclide Production Cross Section
-22.41 To 442.2 %
Max Ratio
Min Ratio
n-V050.tendl Threshold 10.233 MeV
n-V050.jeff3.3 Threshold 10.233 MeV
Cross Section (milli-barns)
n-V050.jeff3.3/n-V050.tendl
Ratio
Incident Energy (eV)
75
23-V -50

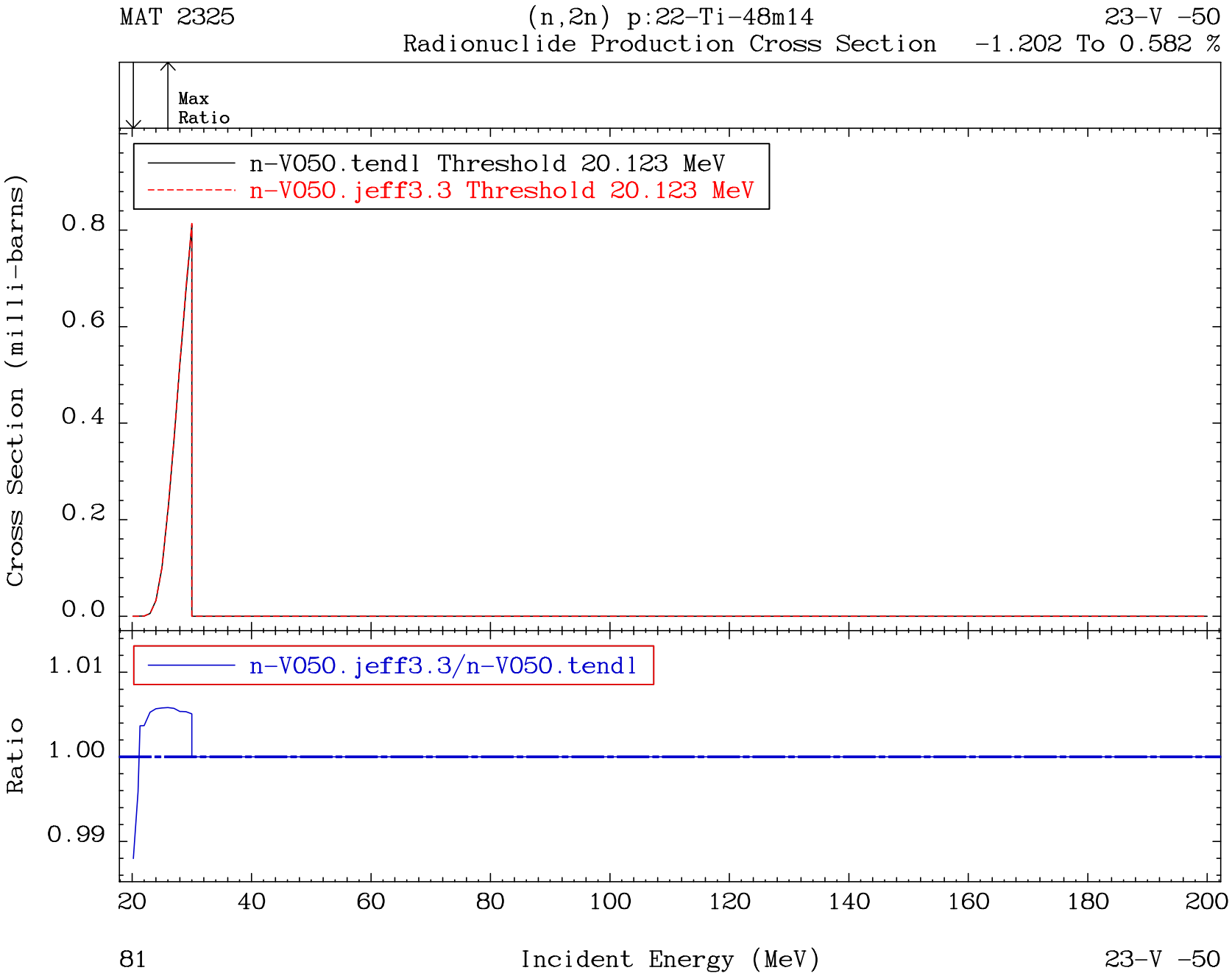

MAT 2325
(n,2n) α:21-Sc-45g
23-V -50
Radionuclide Production Cross Section
-100.0 To 268.3 %
Max
Ratio
n-V050.tendl Threshold 19.025 MeV
n-V050.jeff3.3 Threshold 19.025 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-V050.jeff3.3/n-V050.tendl
Ratio
10^0
10^-2
10^-4
2
3
4
5
6
7
8
9
10^8
2
76
Incident Energy (eV)
23-V -50

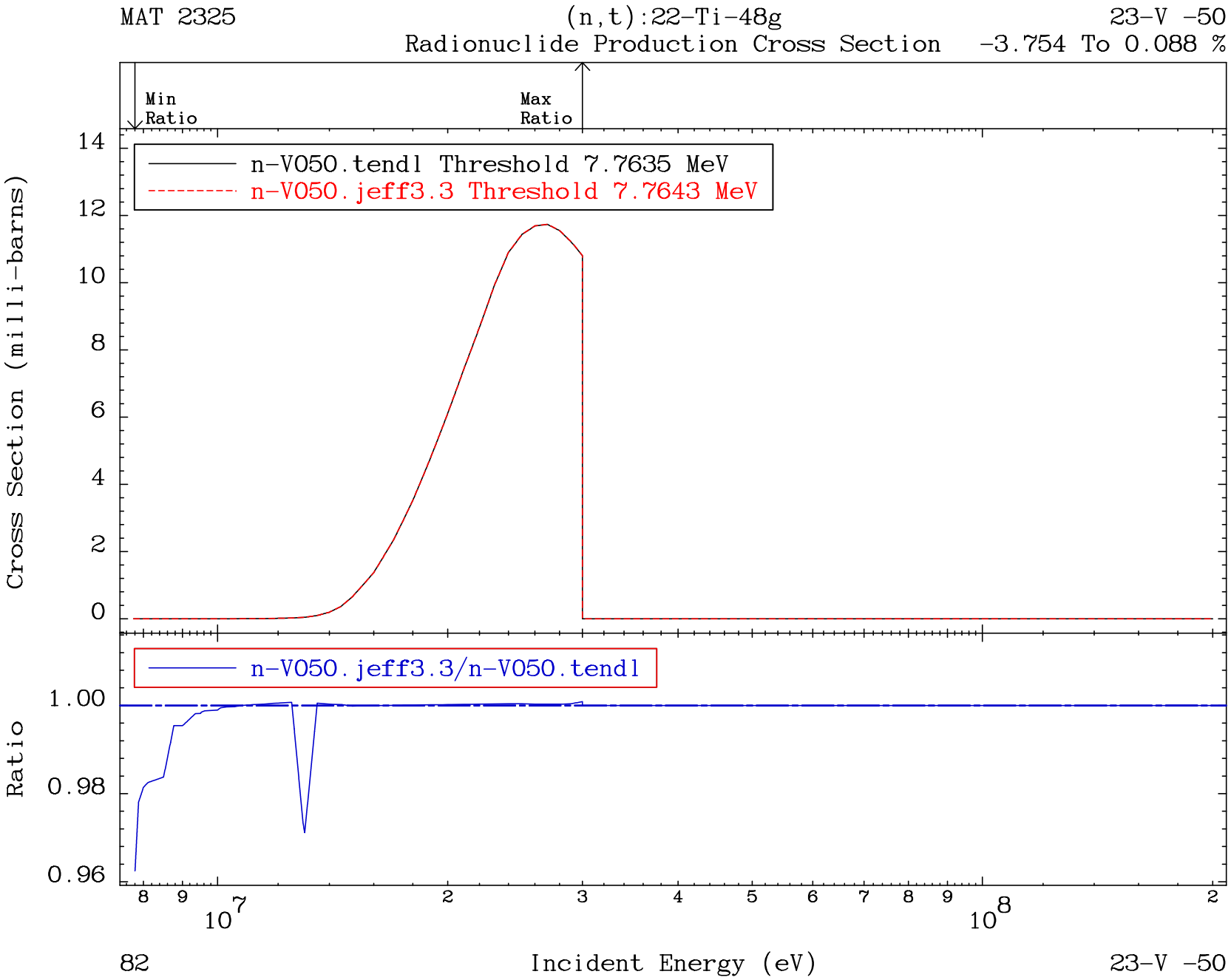

MAT 2325
(n,2n) α:21-Sc-45m1
23-V -50
Radionuclide Production Cross Section -100.0 To 265.2 %
Max
Ratio
n-V050.tendl Threshold 19.038 MeV
n-V050.jeff3.3 Threshold 19.038 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
10^0
10^-2
10^-4
2
3
4
5
6
7
8
9
10^8
2
77
Incident Energy (eV)
23-V -50

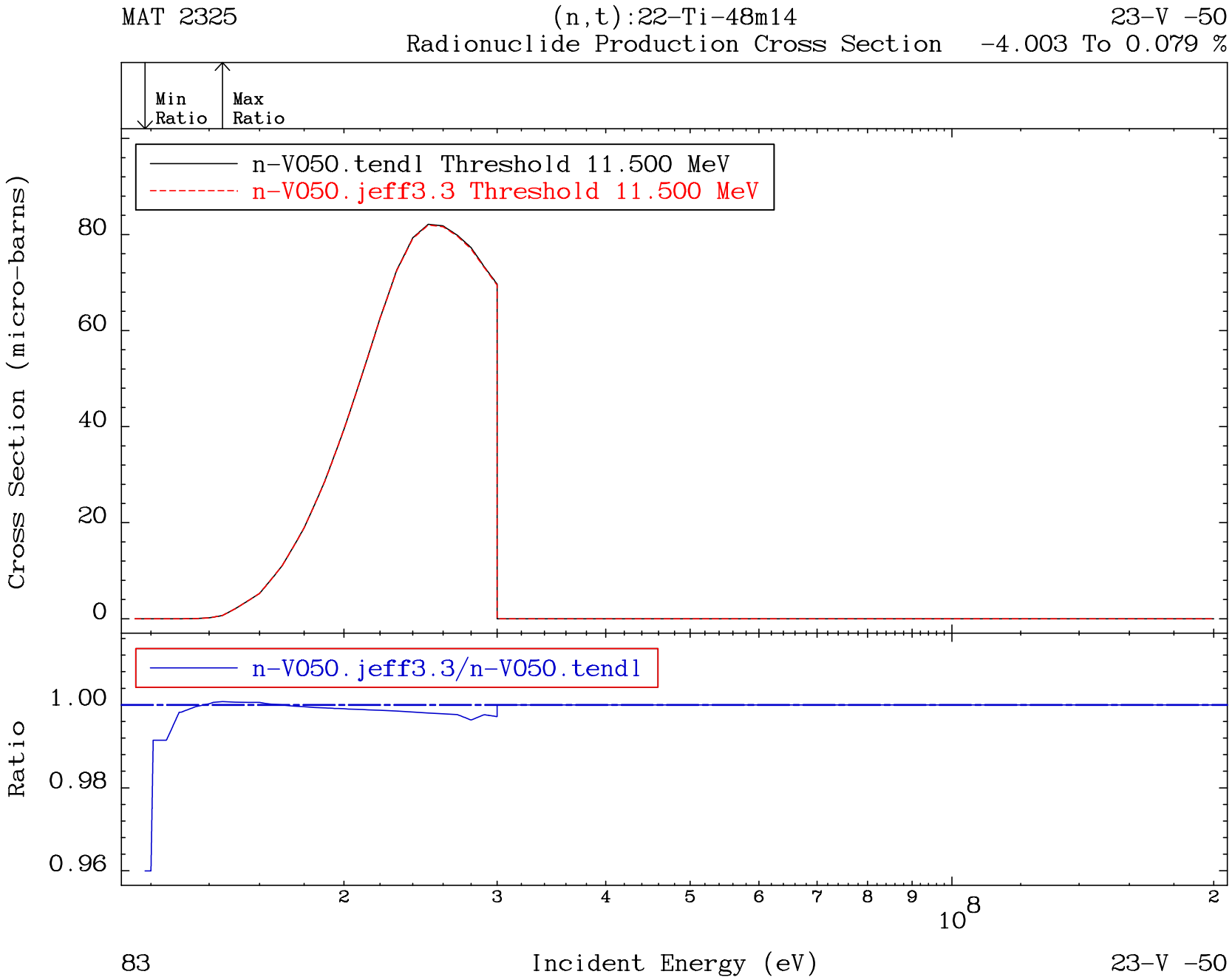

MAT 2325
(n,n') d:22-Ti-48g
23-V -50
Radionuclide Production Cross Section
-0.714 To 0.272 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 14.147 MeV
n-V050.jeff3.3 Threshold 14.147 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
78
Incident Energy (eV)
23-V -50


MAT 2325
(n,n') d:22-Ti-48m14
23-V -50
Radionuclide Production Cross Section -0.771 To 0.199 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 17.853 MeV
n-V050.jeff3.3 Threshold 17.853 MeV
Cross Section (micro-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
79
Incident Energy (eV)
23-V -50


MAT 2325
(n,2n) p:22-Ti-48g
23-V -50
Radionuclide Production Cross Section
-1.681 To 0.785 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 16.417 MeV
n-V050.jeff3.3 Threshold 16.417 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
23-V -50


MAT 2325
(n,2n) p:22-Ti-48m14
23-V -50
Radionuclide Production Cross Section -1.202 To 0.582 %
Max
Ratio
n-V050.tendl Threshold 20.123 MeV
n-V050.jeff3.3 Threshold 20.123 MeV
Cross Section (milli-barns)
0.8
0.6
0.4
0.2
0.0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.01
1.00
0.99
20
40
60
80
100
120
140
160
180
200
81
Incident Energy (MeV)
23-V -50


MAT 2325
(n,t):22-Ti-48g
23-V -50
Radionuclide Production Cross Section
-3.754 To 0.088 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 7.7635 MeV
n-V050.jeff3.3 Threshold 7.7643 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.98
0.96
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
82
Incident Energy (eV)
23-V -50


MAT 2325
(n,t):22-Ti-48m14
23-V -50
Radionuclide Production Cross Section
-4.003 To 0.079 %
Min Ratio
Max Ratio
n-V050.tendl Threshold 11.500 MeV
n-V050.jeff3.3 Threshold 11.500 MeV
Cross Section (micro-barns)
80
60
40
20
0
n-V050.jeff3.3/n-V050.tendl
Ratio
1.00
0.98
0.96
2
3
4
5
6
7
8
9
10^8
2
83
Incident Energy (eV)
23-V -50