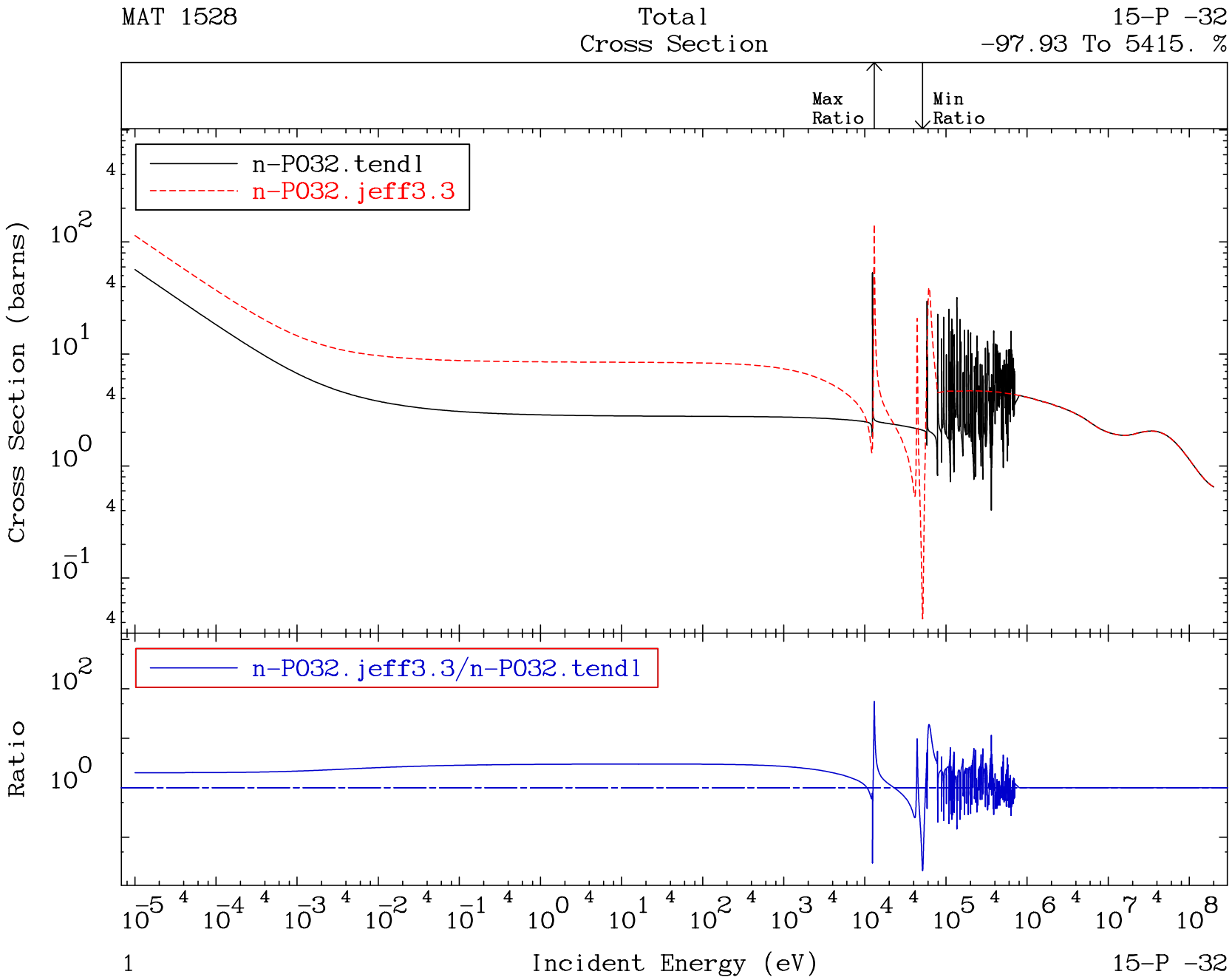
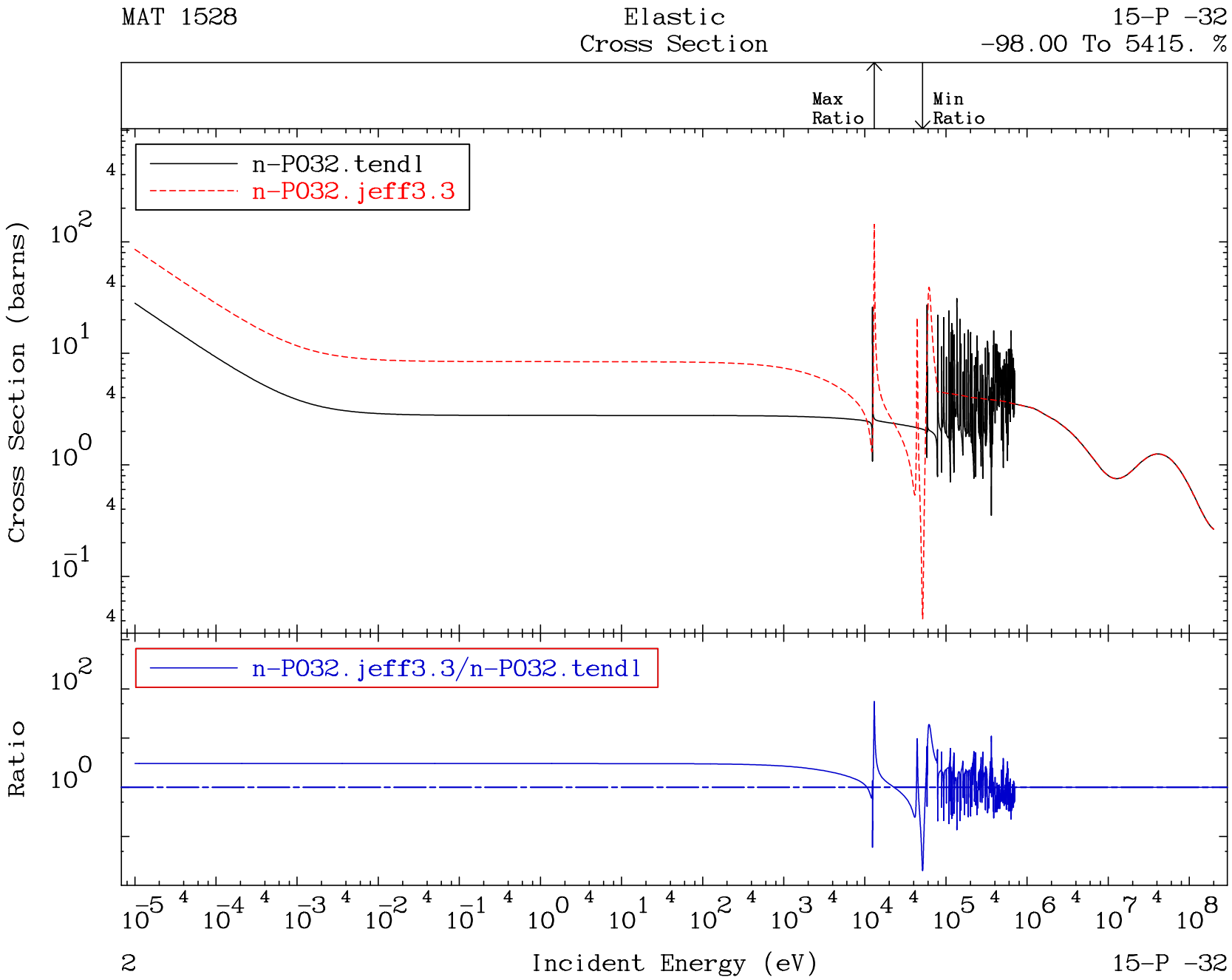
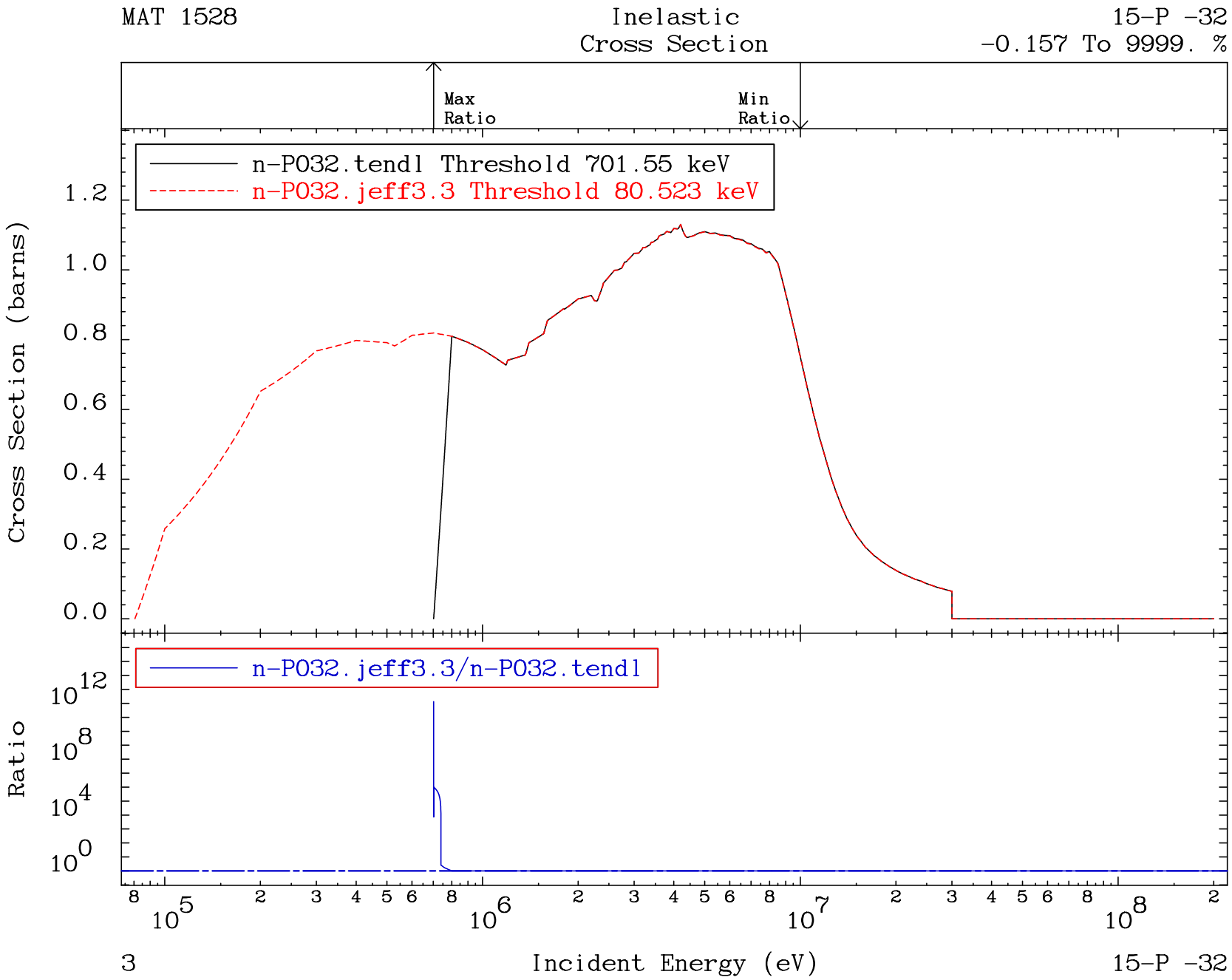
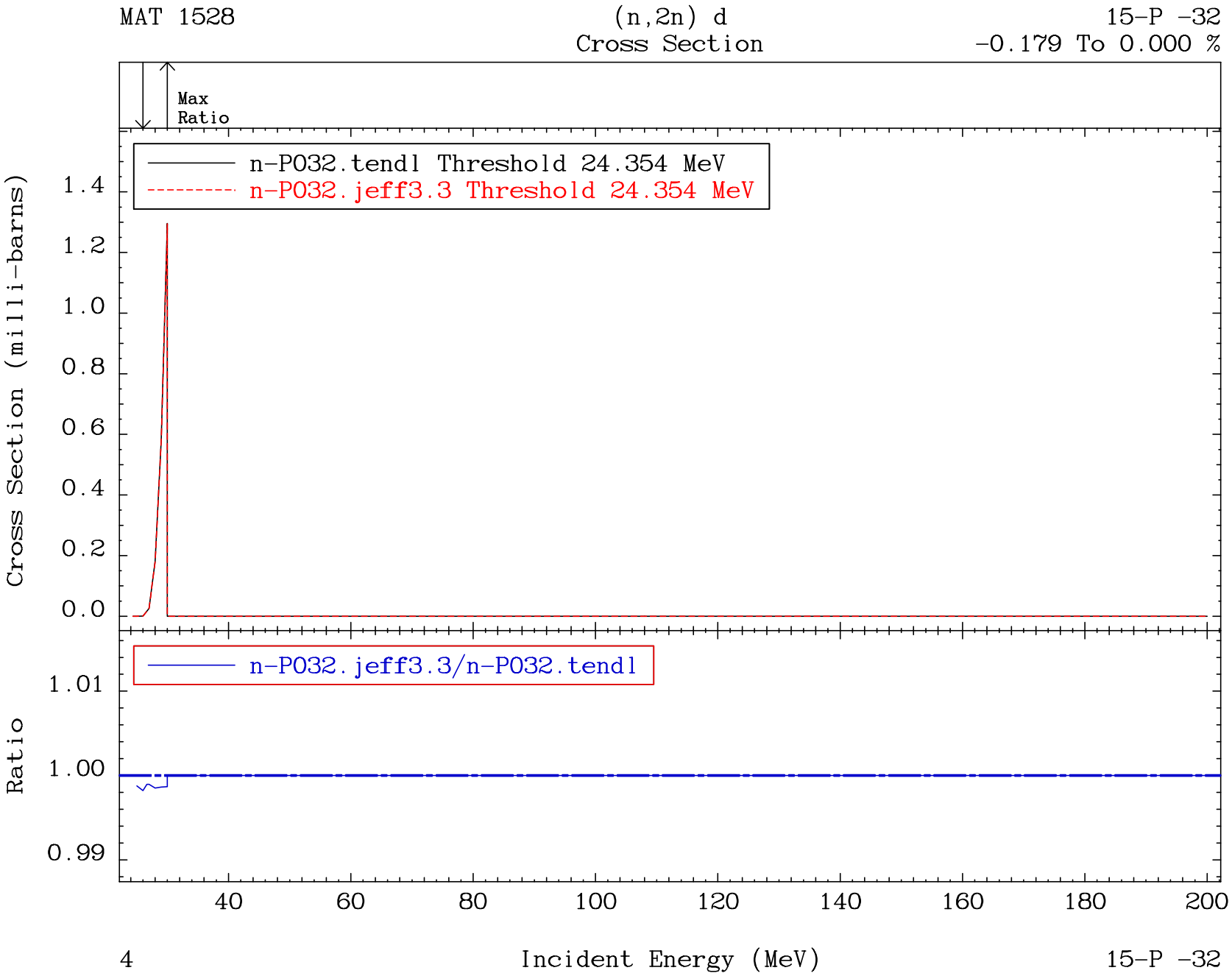
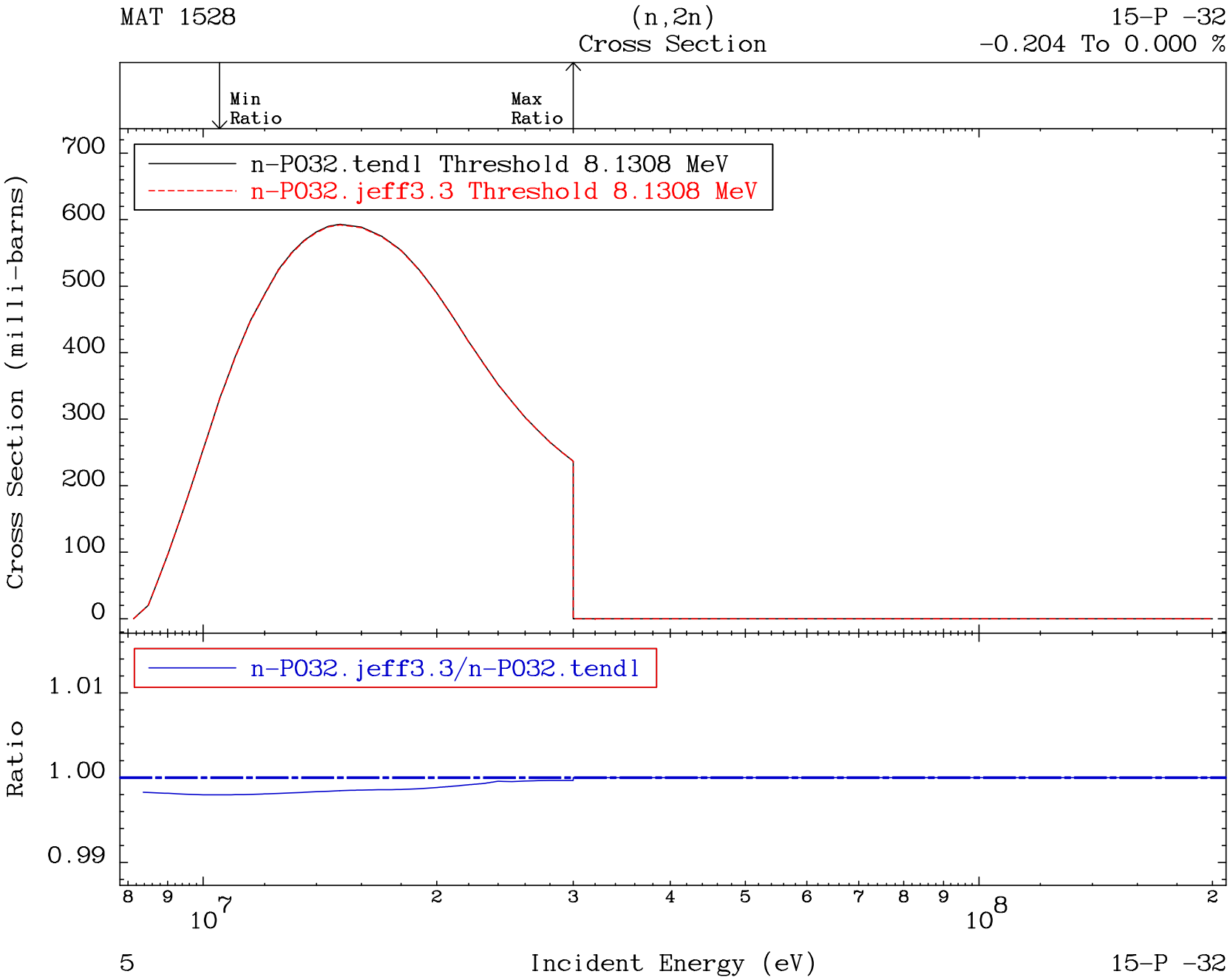
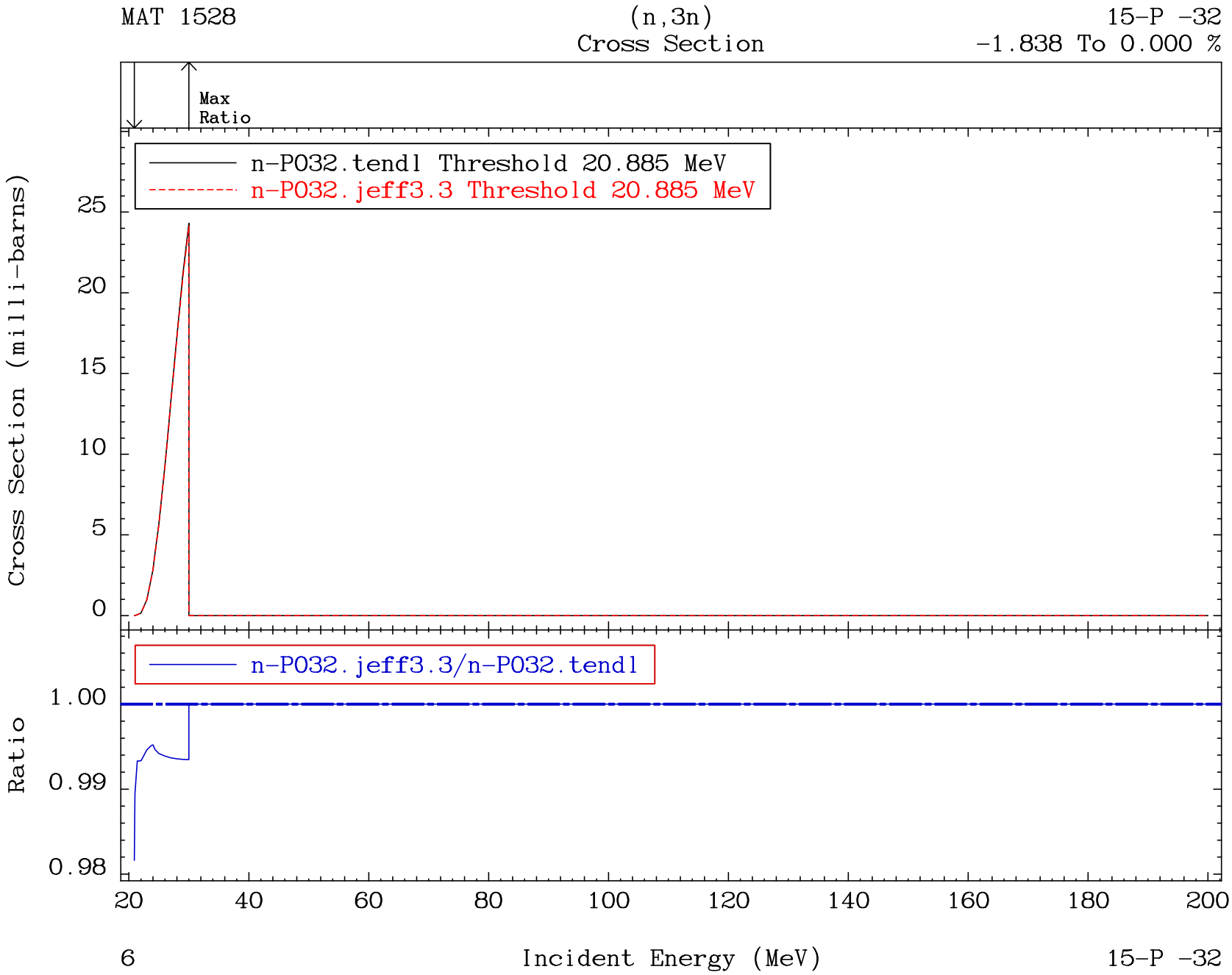

MAT 1528
Total
Cross Section
15-P -32
-97.93 To 5415. %
Max
Ratio
Min
Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
1
15-P -32

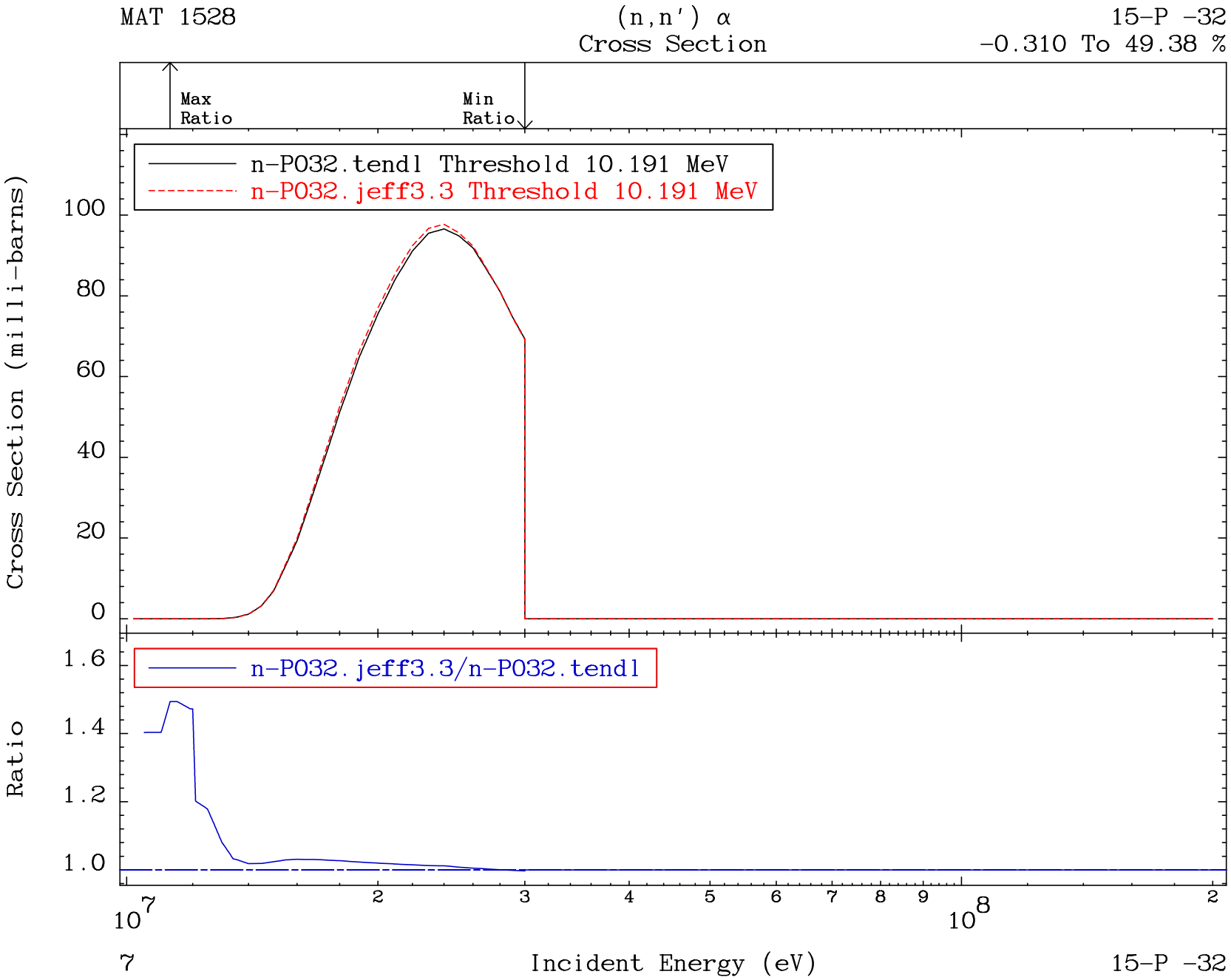

MAT 1528
Elastic
Cross Section
15-P -32
-98.00 To 5415. %
Max
Ratio
Min
Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
2
15-P -32

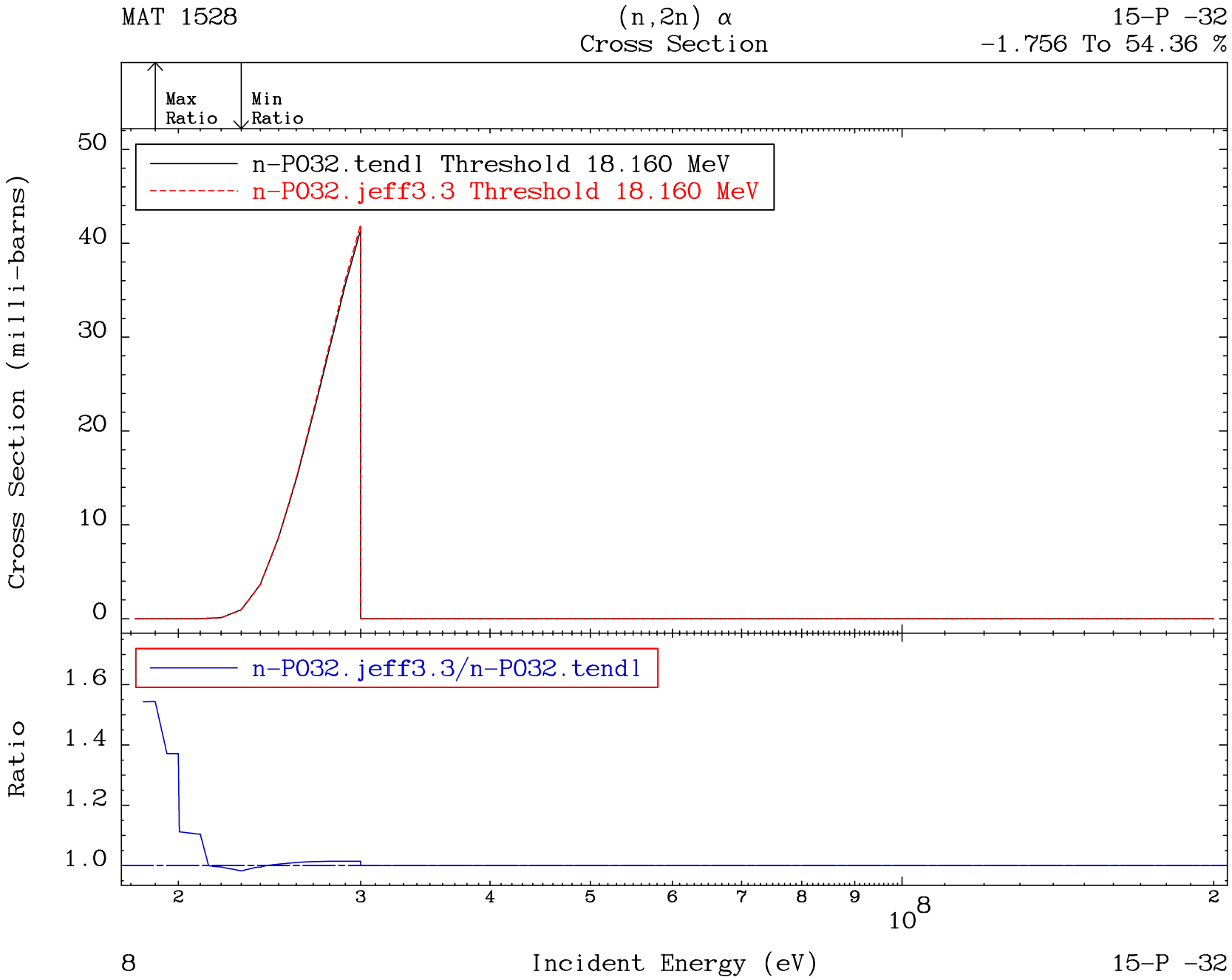

MAT 1528
Inelastic
Cross Section
15-P -32
-0.157 To 9999. %
Max
Ratio
Min
Ratio
n-P032.tendl Threshold 701.55 keV
n-P032.jeff3.3 Threshold 80.523 keV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-P032.jeff3.3/n-P032.tendl
Ratio
10^12
10^8
10^4
10^0
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
3
Incident Energy (eV)
15-P -32

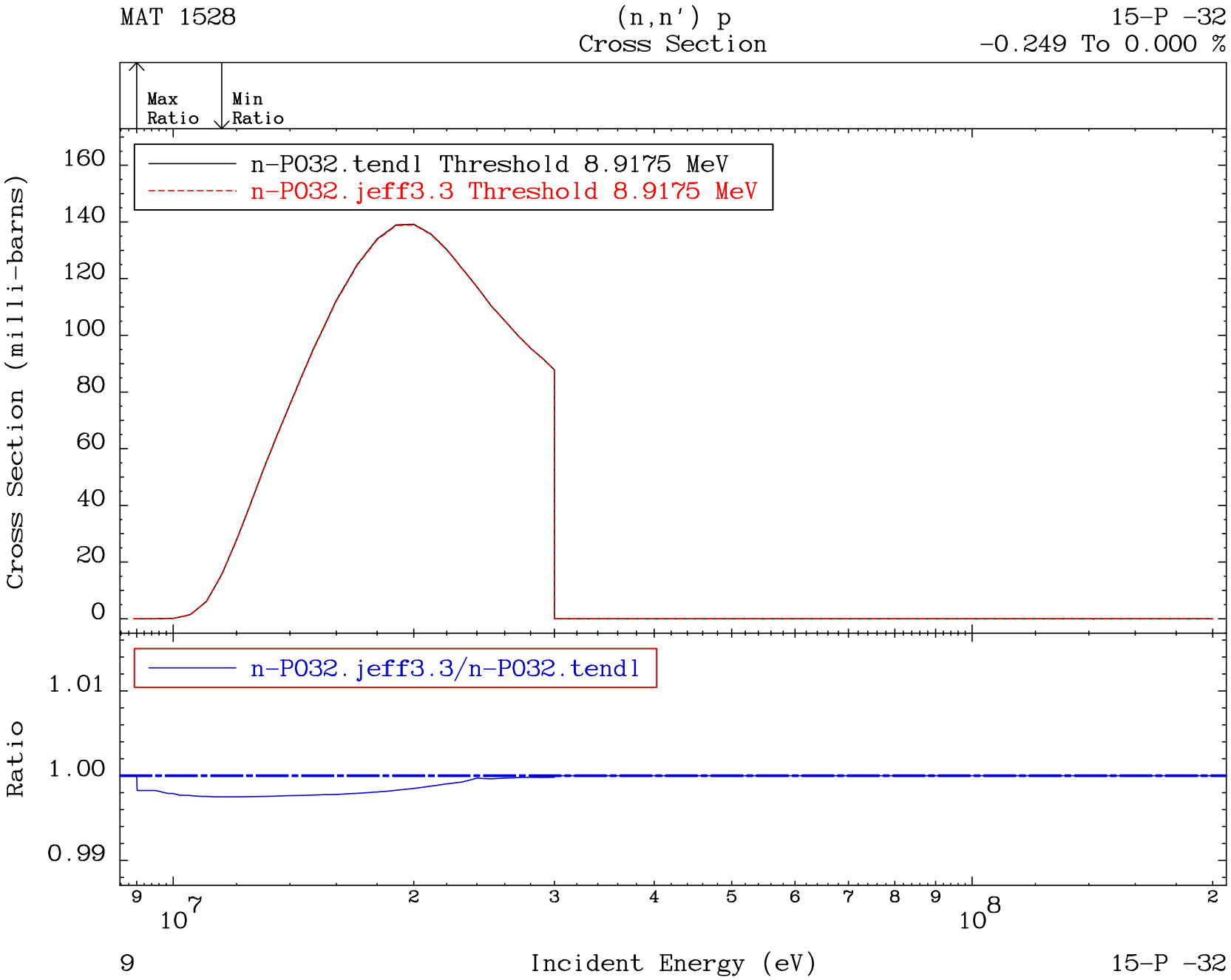

MAT 1528
(n,2n) d
Cross Section
15-P -32
-0.179 To 0.000 %
Max
Ratio
n-P032.tendl Threshold 24.354 MeV
n-P032.jeff3.3 Threshold 24.354 MeV
Cross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
15-P -32

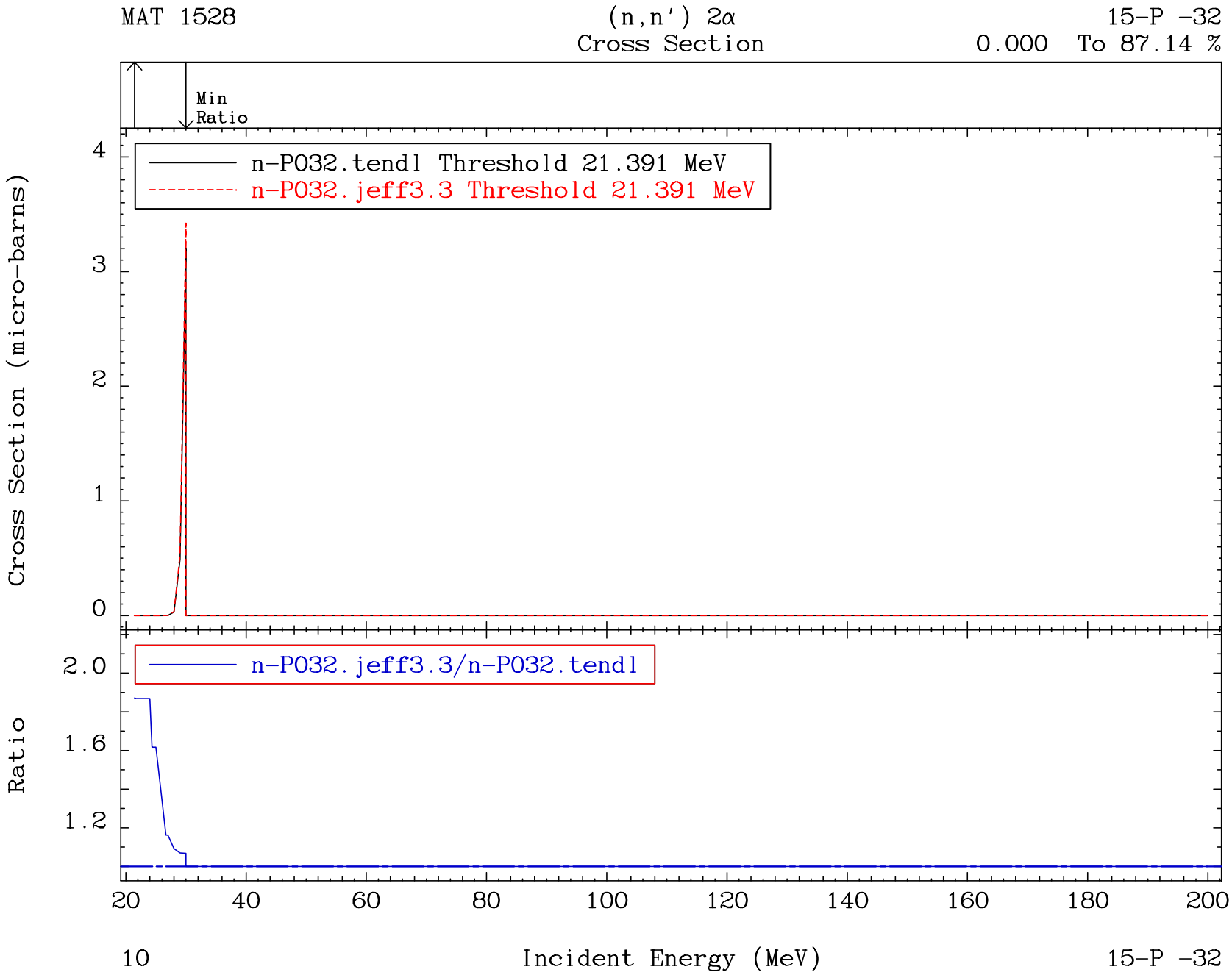

MAT 1528
(n,2n)
Cross Section
15-P -32
-0.204 To 0.000 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 8.1308 MeV
n-P032.jeff3.3 Threshold 8.1308 MeV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
15-P -32

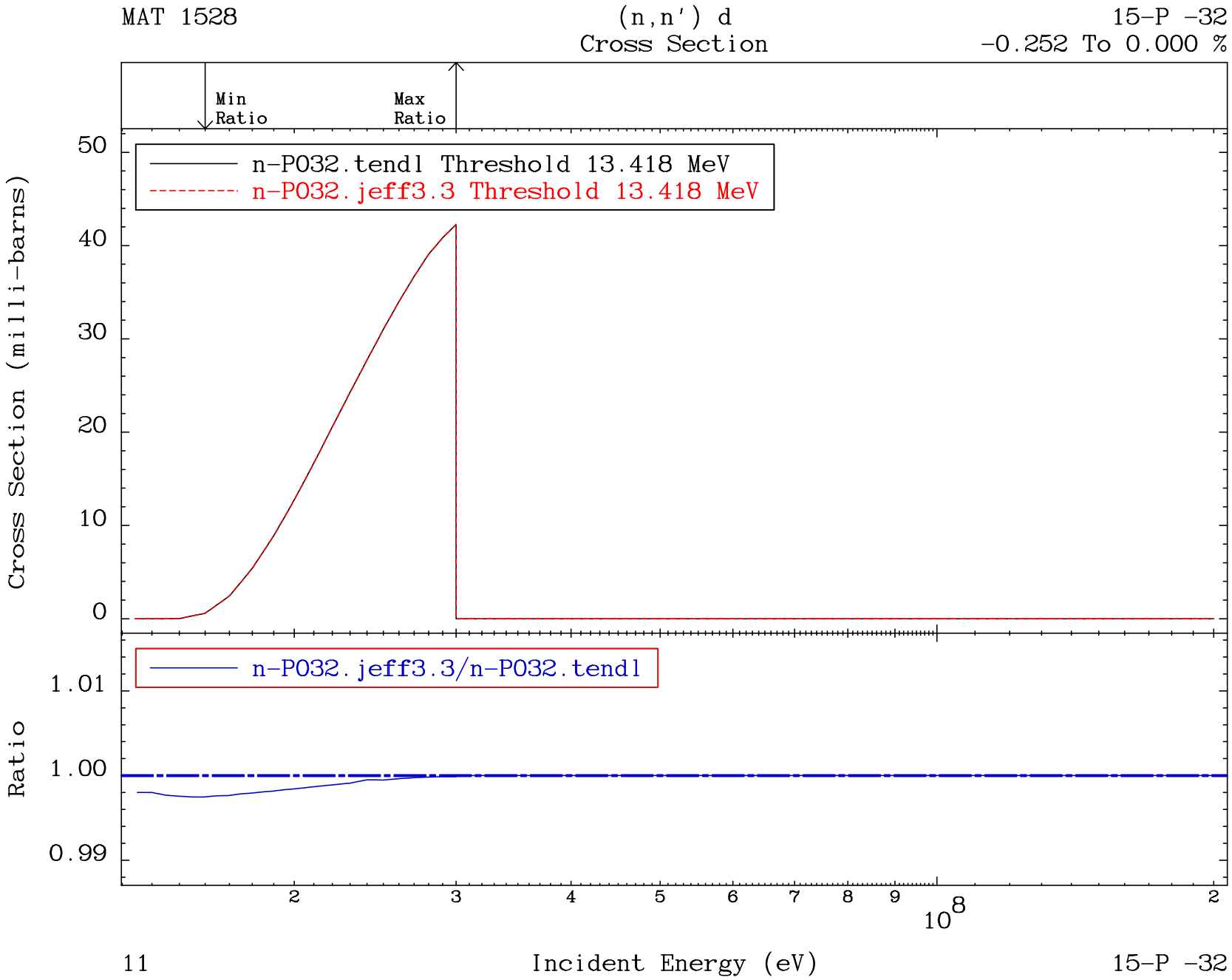

MAT 1528
(n,3n)
Cross Section
15-P -32
-1.838 To 0.000 %
Max
Ratio
n-P032.tendl Threshold 20.885 MeV
n-P032.jeff3.3 Threshold 20.885 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.00
0.99
0.98
20
40
60
80
100
120
140
160
180
200
6
Incident Energy (MeV)
15-P -32

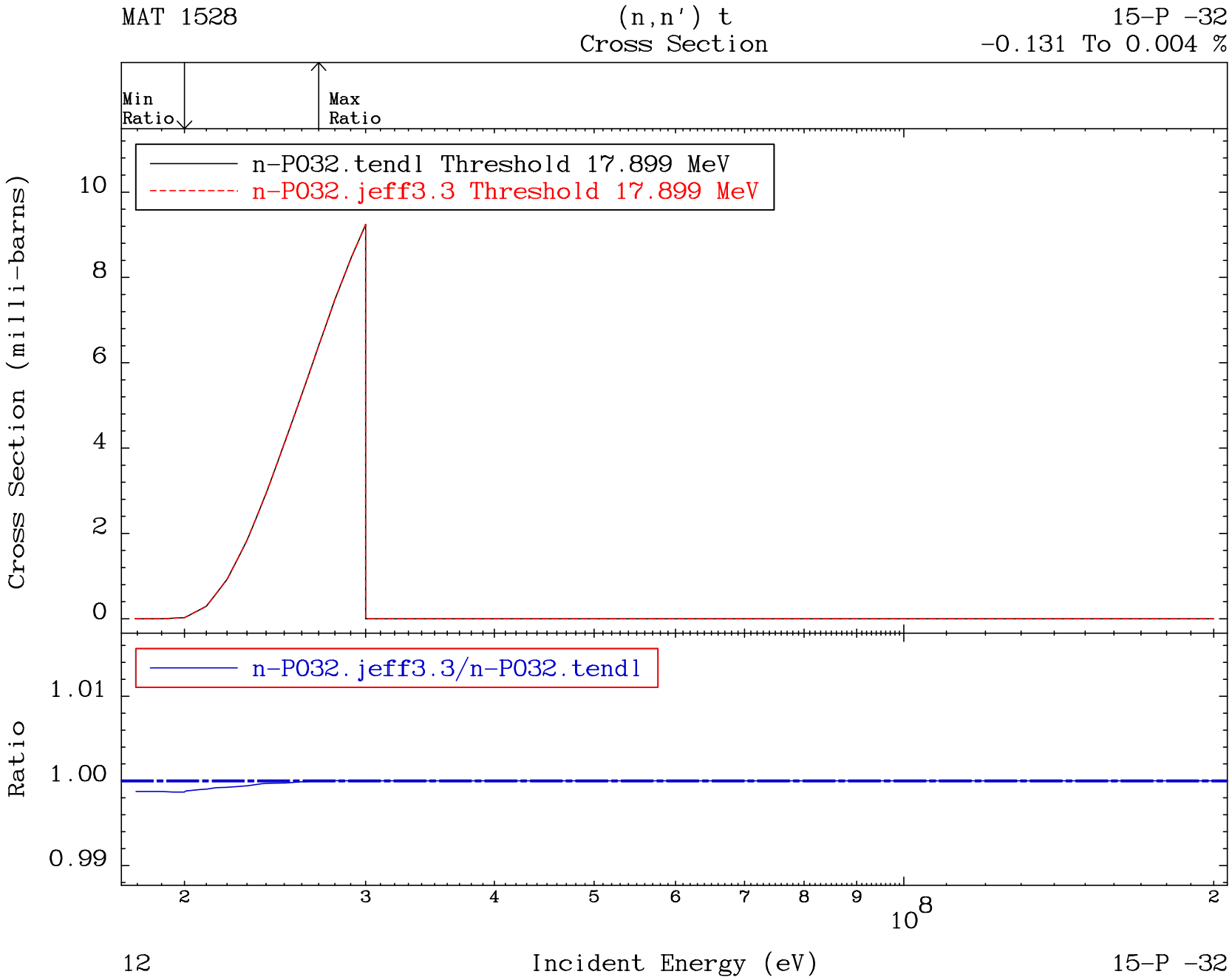

MAT 1528
(n,n') α
Cross Section
15-P -32
-0.310 To 49.38 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 10.191 MeV
n-P032.jeff3.3 Threshold 10.191 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.6
1.4
1.2
1.0
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
15-P -32

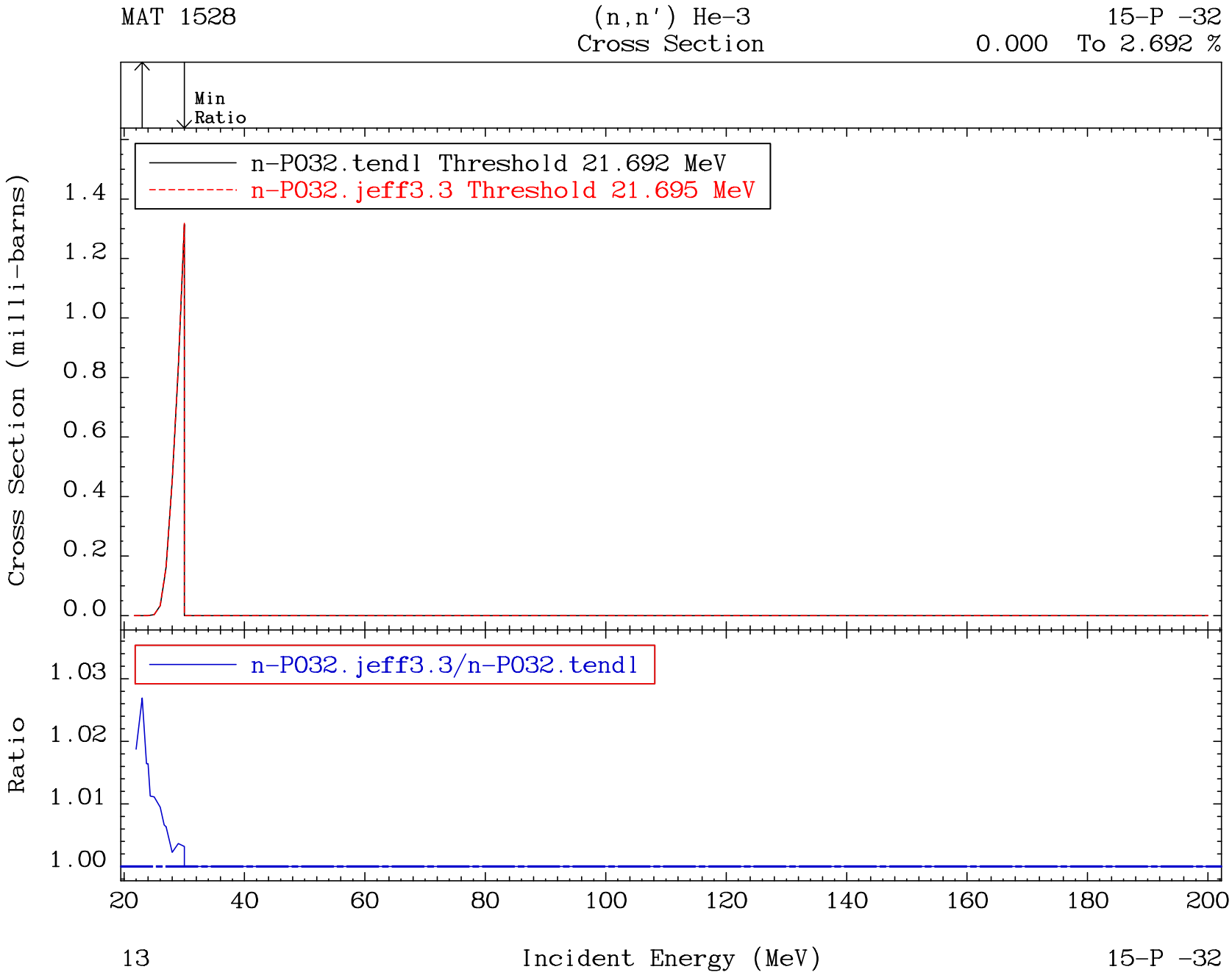

MAT 1528
(n,2n) α
Cross Section
15-P -32
-1.756 To 54.36 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 18.160 MeV
n-P032.jeff3.3 Threshold 18.160 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
15-P -32

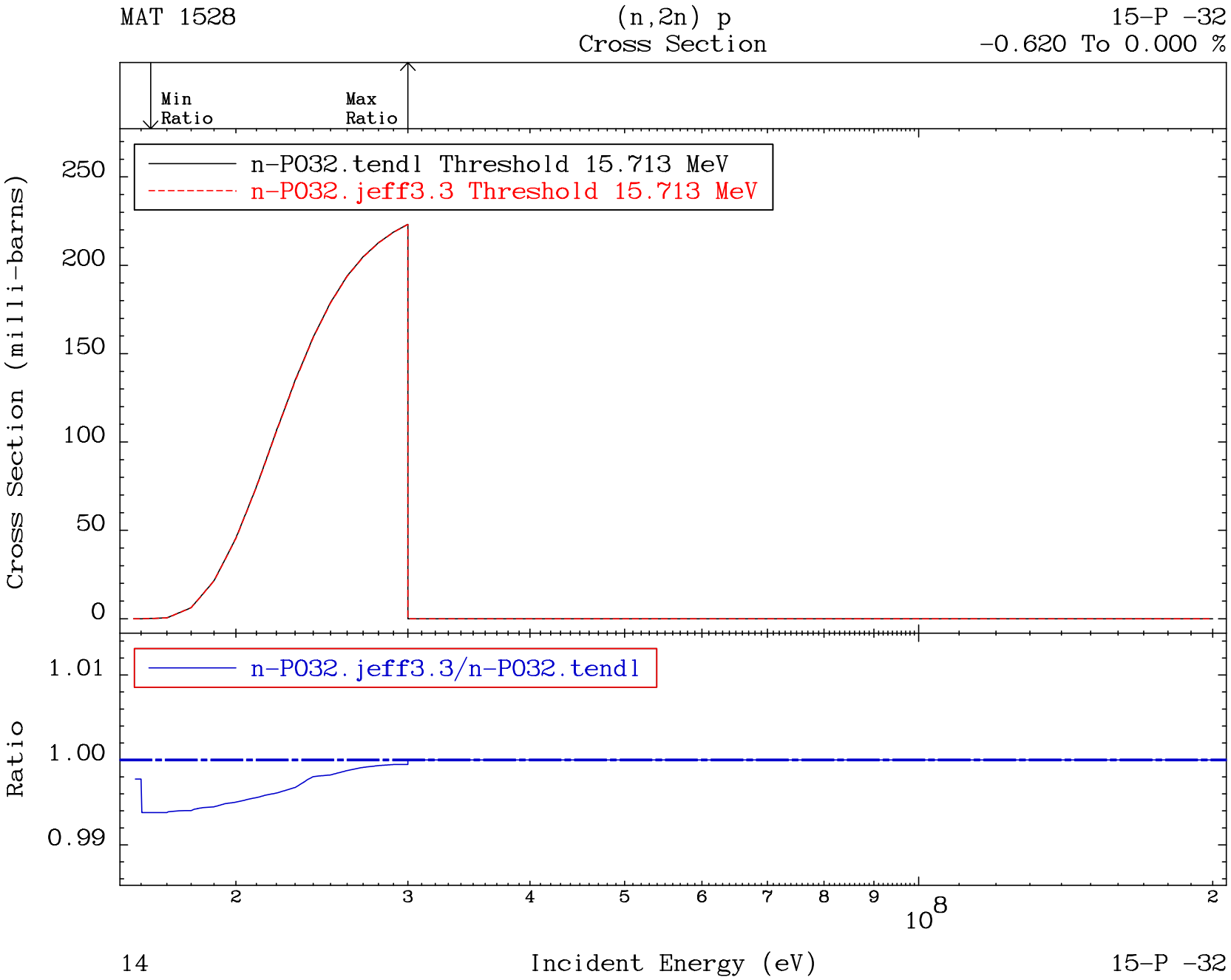

MAT 1528
(n,n') p
Cross Section
15-P -32
-0.249 To 0.000 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 8.9175 MeV
n-P032.jeff3.3 Threshold 8.9175 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
9
10^7
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
15-P -32

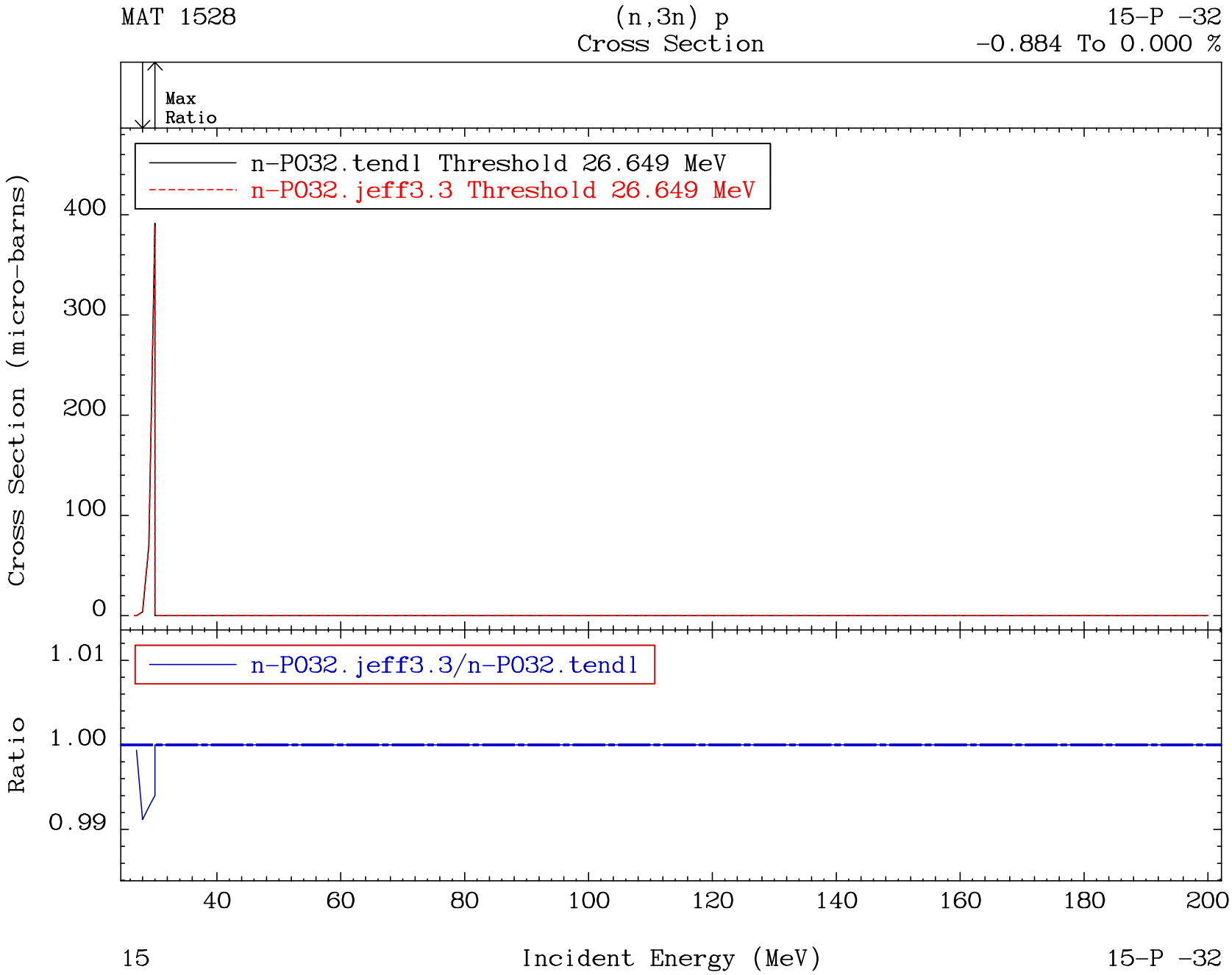

MAT 1528
(n,n') 2α
Cross Section
15-P -32
0.000 To 87.14 %
Min
Ratio
n-P032.tendl Threshold 21.391 MeV
n-P032.jeff3.3 Threshold 21.391 MeV
Cross Section (micro-barns)
0
1
2
3
4
n-P032.jeff3.3/n-P032.tendl
Ratio
1.2
1.6
2.0
20
40
60
80
100
120
140
160
180
200
10
Incident Energy (MeV)
15-P -32

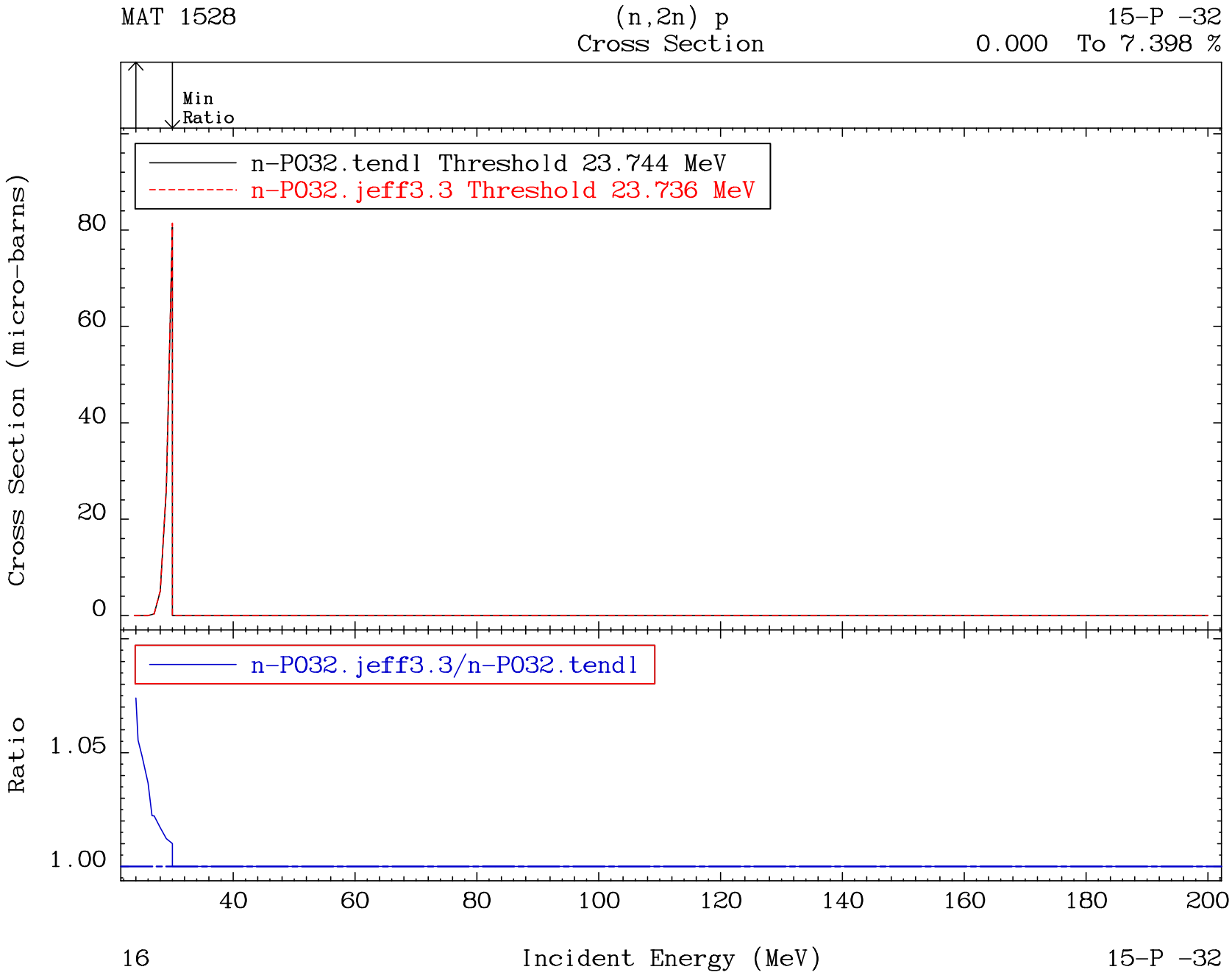

MAT 1528
(n,n') d
Cross Section
15-P -32
-0.252 To 0.000 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 13.418 MeV
n-P032.jeff3.3 Threshold 13.418 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
15-P -32

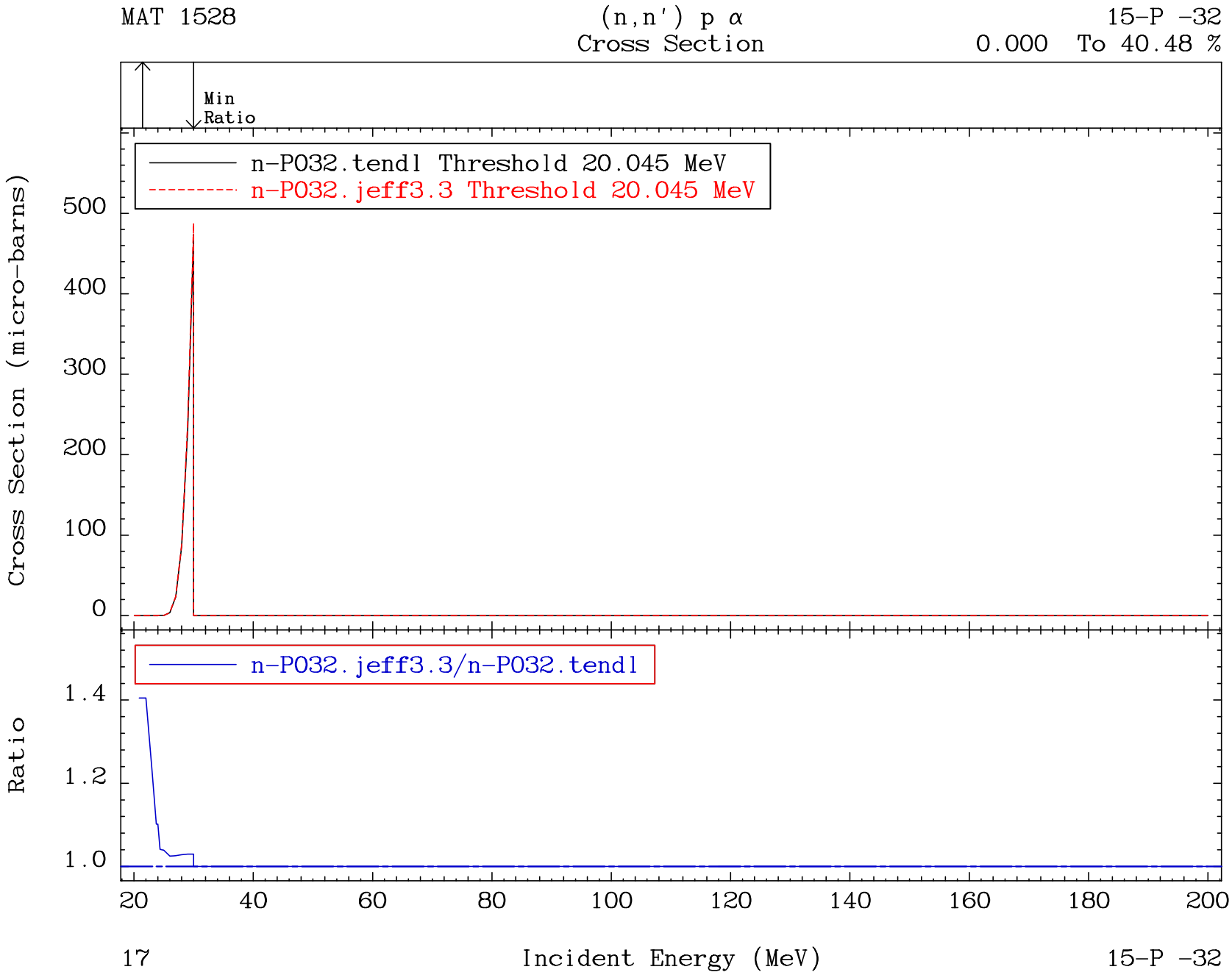

MAT 1528
(n,n') t
Cross Section
15-P -32
-0.131 To 0.004 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 17.899 MeV
n-P032.jeff3.3 Threshold 17.899 MeV
Cross Section (milli-barns)
10
8
6
4
2
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
15-P -32

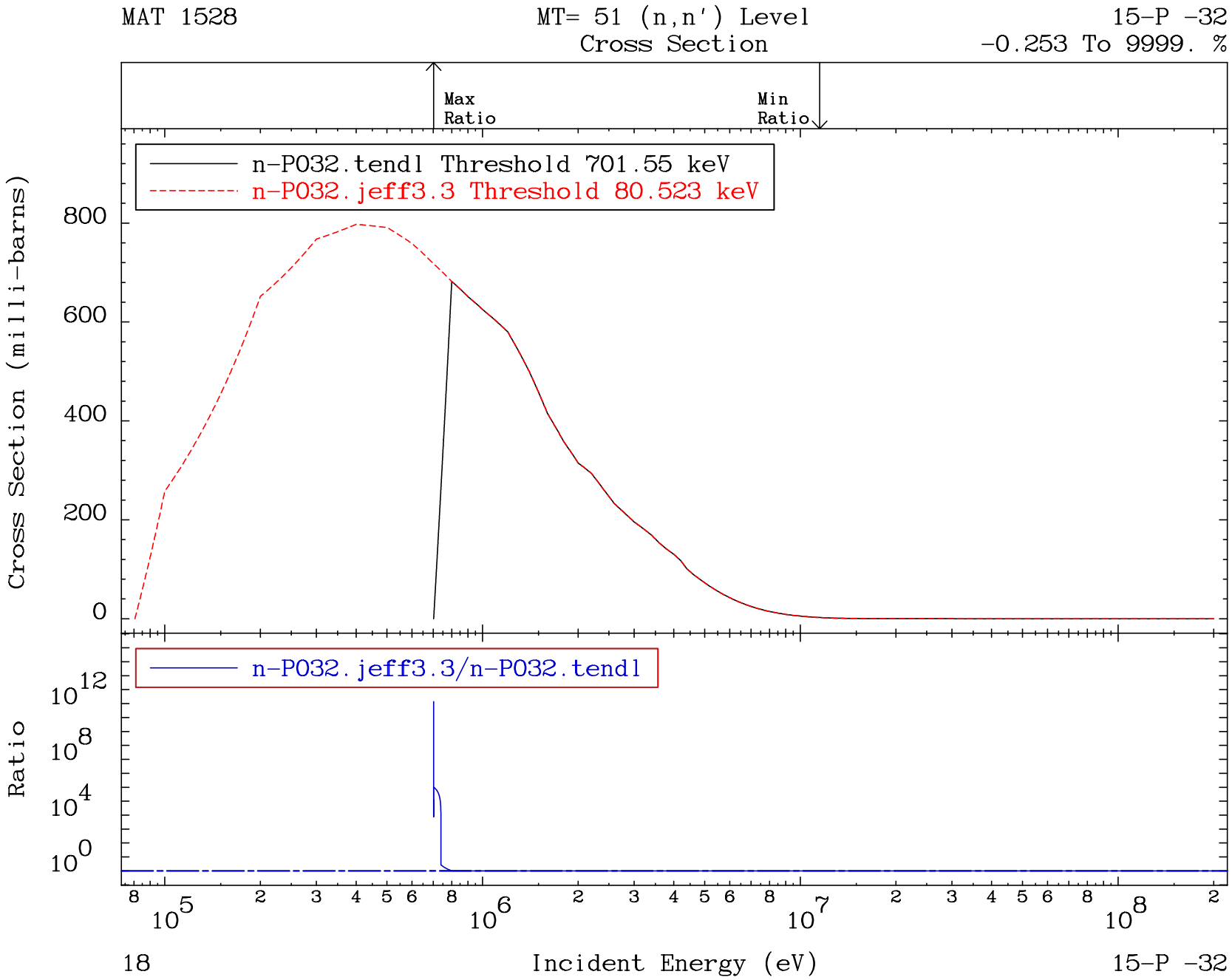

MAT 1528
(n,n') He-3
Cross Section
15-P -32
0.000 To 2.692 %
Min
Ratio
n-P032.tendl Threshold 21.692 MeV
n-P032.jeff3.3 Threshold 21.695 MeV
Cross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.03
1.02
1.01
1.00
20
40
60
80
100
120
140
160
180
200
13
Incident Energy (MeV)
15-P -32

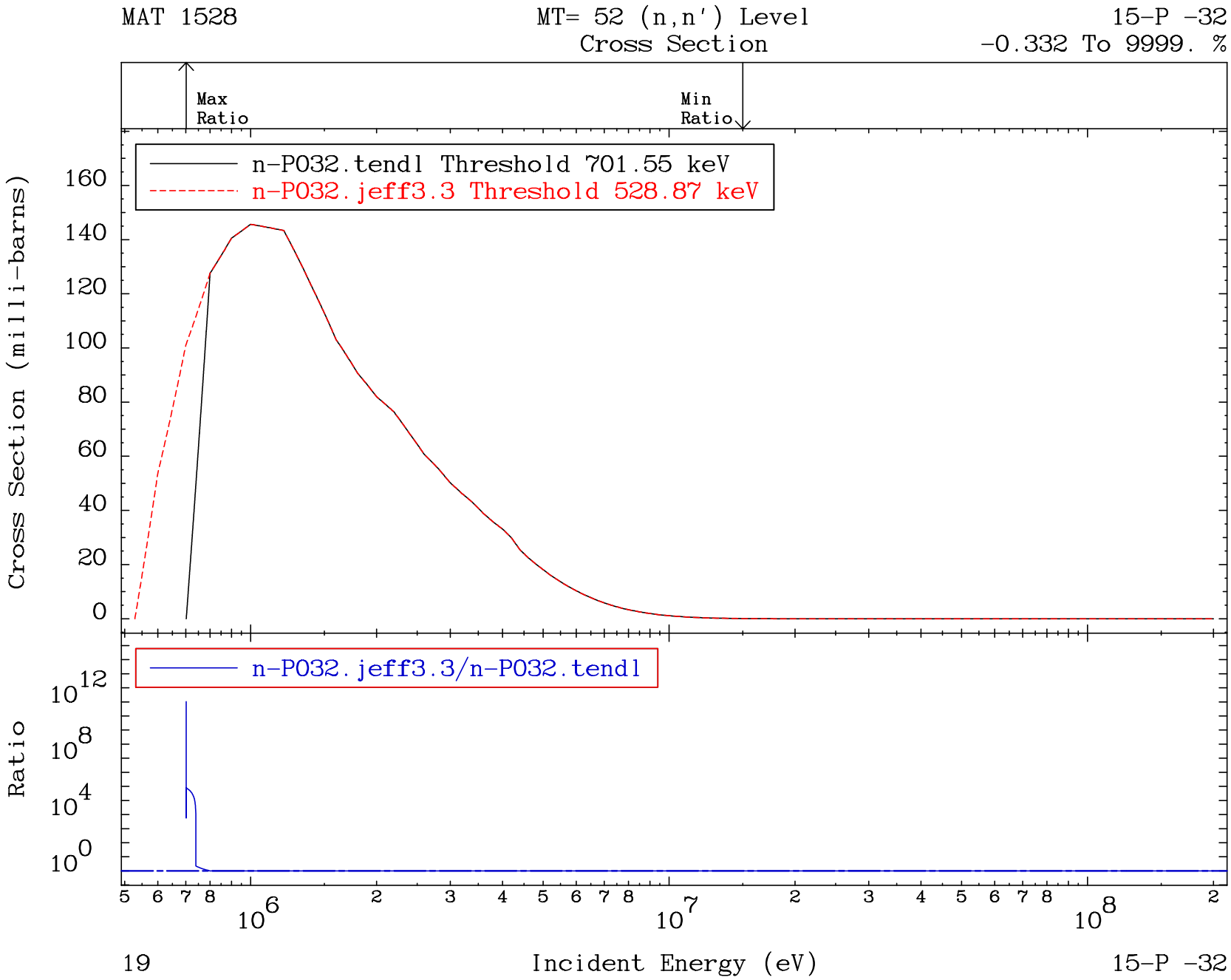

MAT 1528
(n,2n) p
Cross Section
15-P -32
-0.620 To 0.000 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 15.713 MeV
n-P032.jeff3.3 Threshold 15.713 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
15-P -32

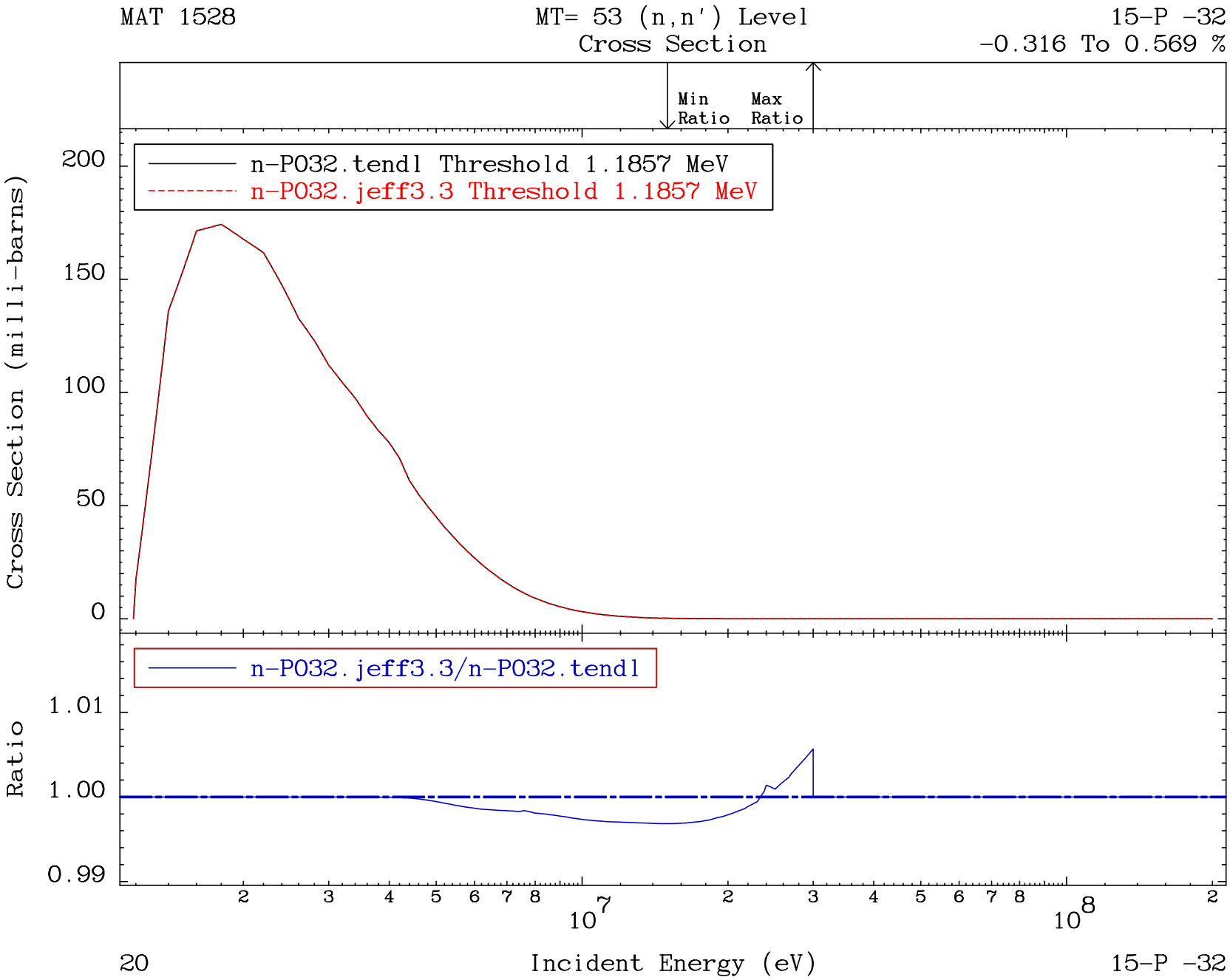

MAT 1528
(n,3n) p
Cross Section
15-P -32
-0.884 To 0.000 %
Max
Ratio
n-P032.tendl Threshold 26.649 MeV
n-P032.jeff3.3 Threshold 26.649 MeV
Cross Section (micro-barns)
400
300
200
100
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
15-P -32

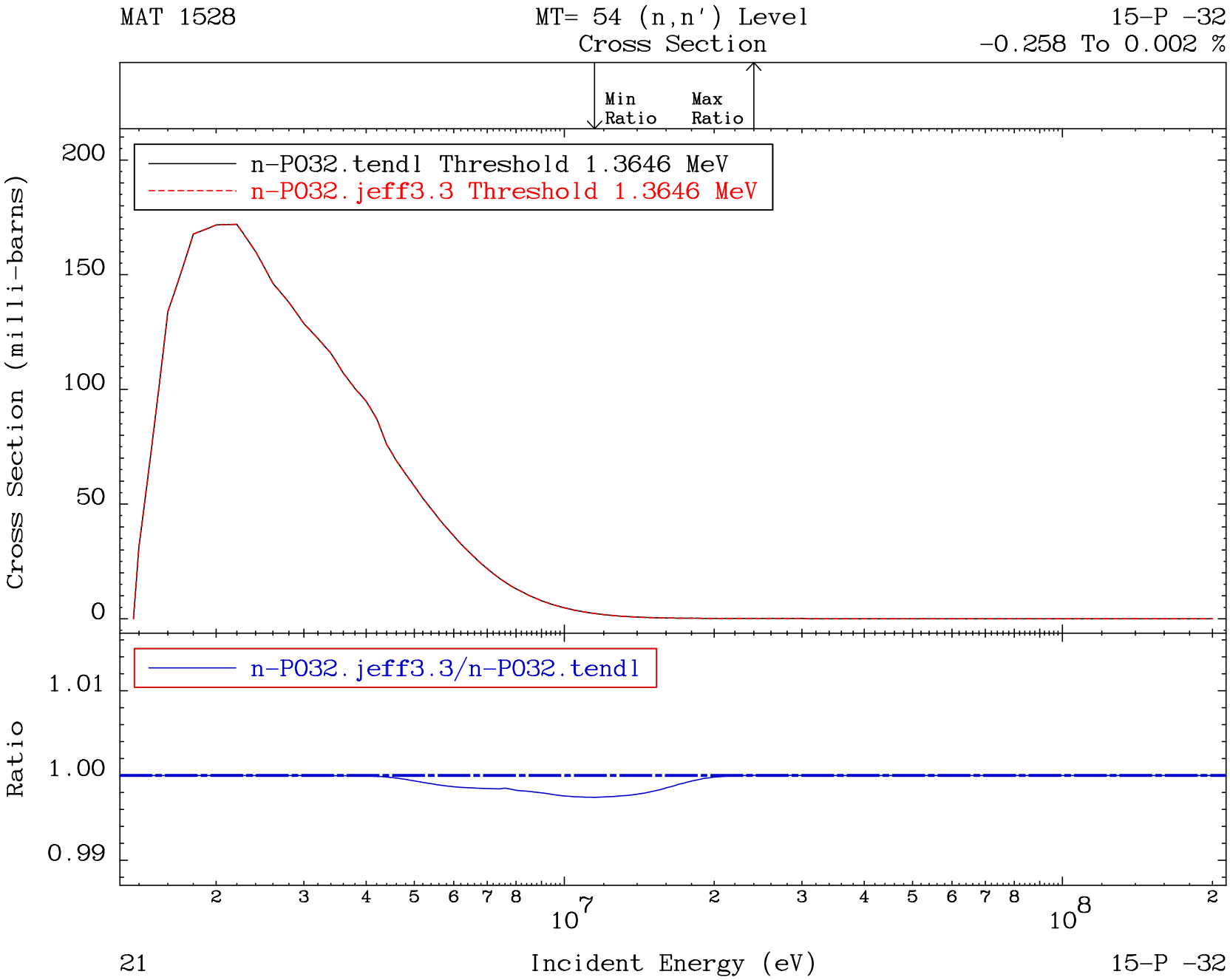

MAT 1528
(n,2n) p
Cross Section
15-P -32
0.000 To 7.398 %
Min
Ratio
n-P032.tendl Threshold 23.744 MeV
n-P032.jeff3.3 Threshold 23.736 MeV
Cross Section (micro-barns)
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.05
1.00
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
15-P -32

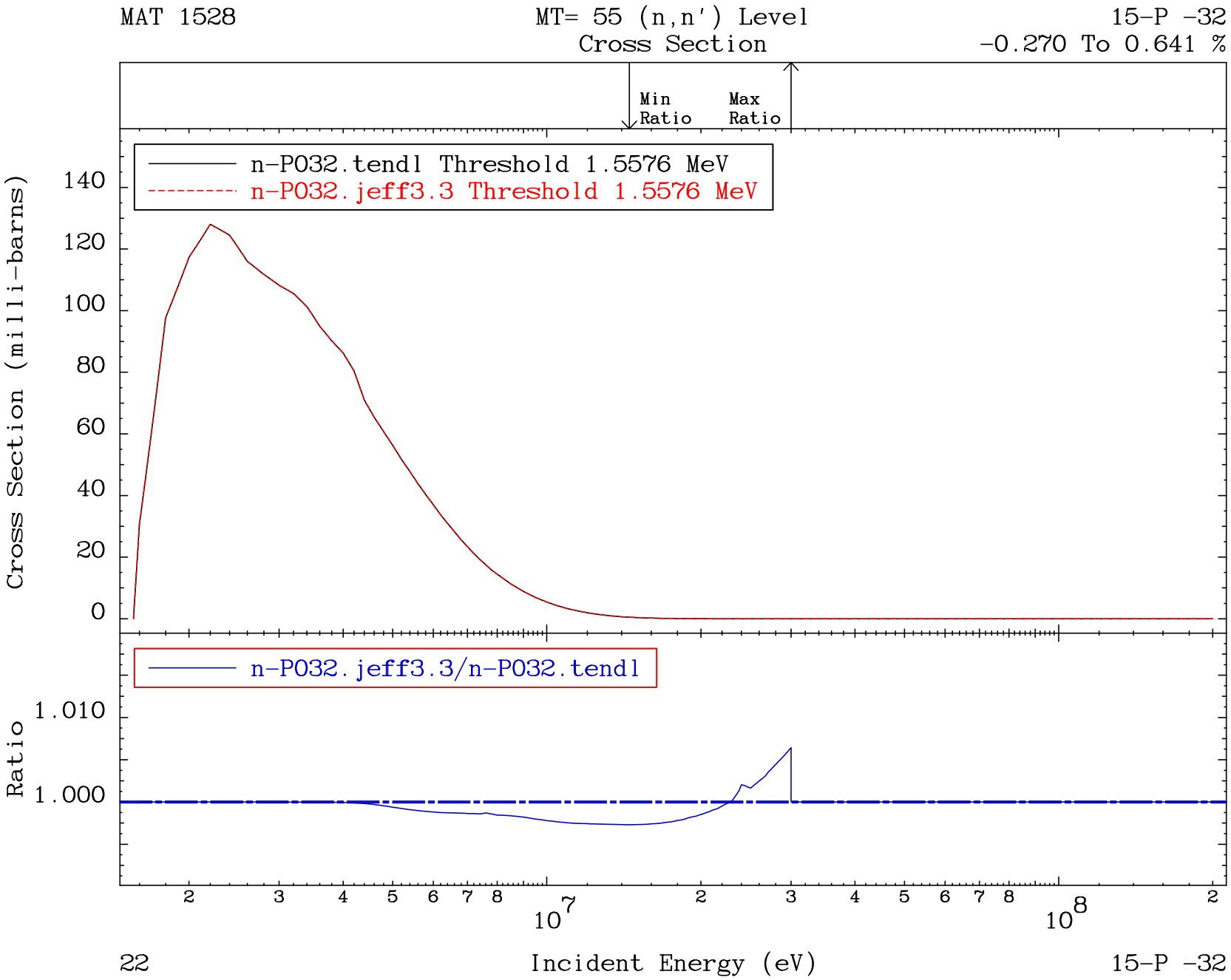

MAT 1528
(n,n') p α
Cross Section
15-P -32
0.000 To 40.48 %
Min
Ratio
n-P032.tendl Threshold 20.045 MeV
n-P032.jeff3.3 Threshold 20.045 MeV
Cross Section (micro-barns)
500
400
300
200
100
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.4
1.2
1.0
20
40
60
80
100
120
140
160
180
200
17
Incident Energy (MeV)
15-P -32

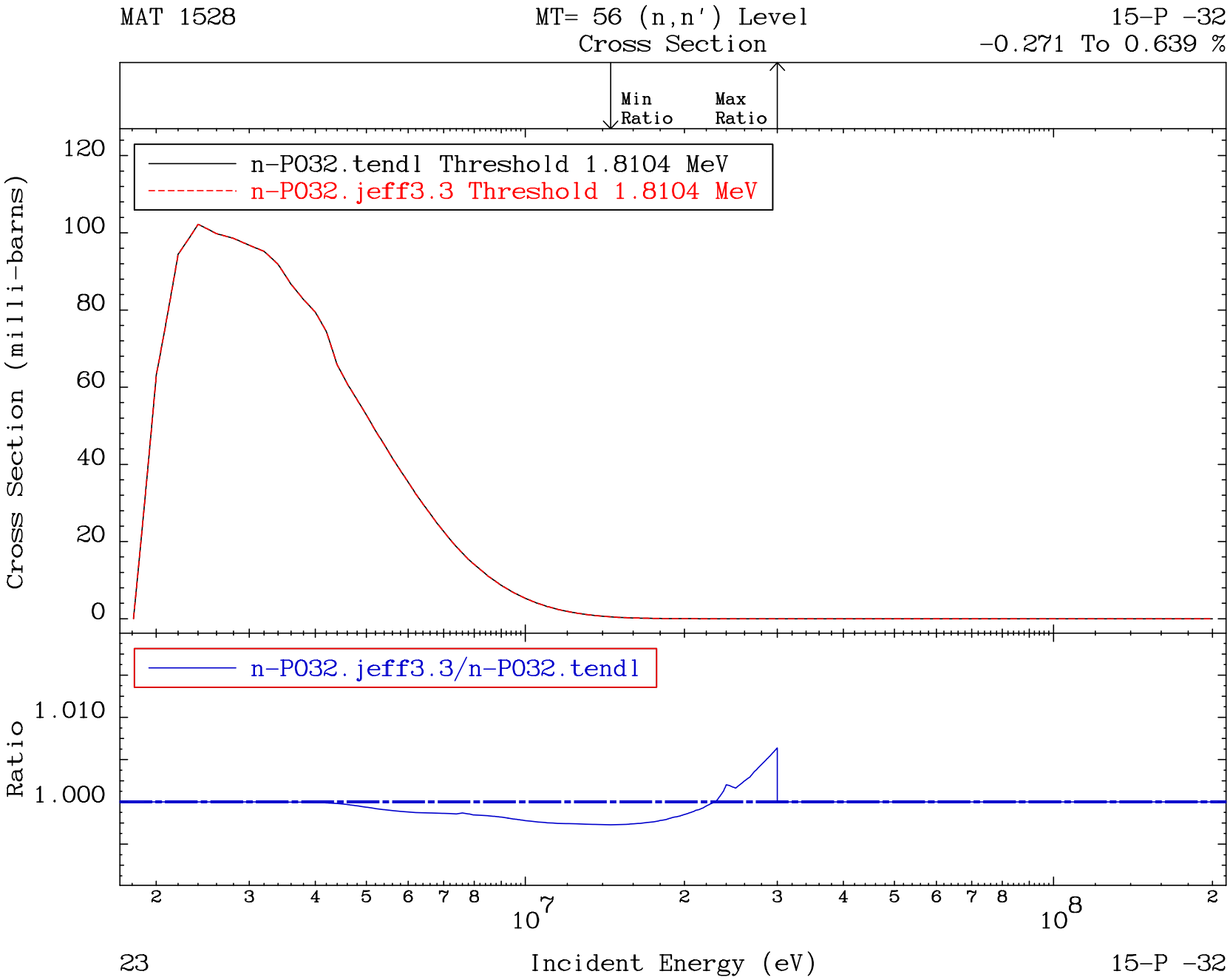

MAT 1528
MT= 51 (n,n') Level
Cross Section
15-P -32
-0.253 To 9999. %
Max Ratio
Min Ratio
n-P032.tendl Threshold 701.55 keV
n-P032.jeff3.3 Threshold 80.523 keV
Cross Section (milli-barns)
800
600
400
200
0
n-P032.jeff3.3/n-P032.tendl
Ratio
10^{12}
10^{8}
10^{4}
10^{0}
10^{5}
10^{6}
10^{7}
10^{8}
18
Incident Energy (eV)
15-P -32

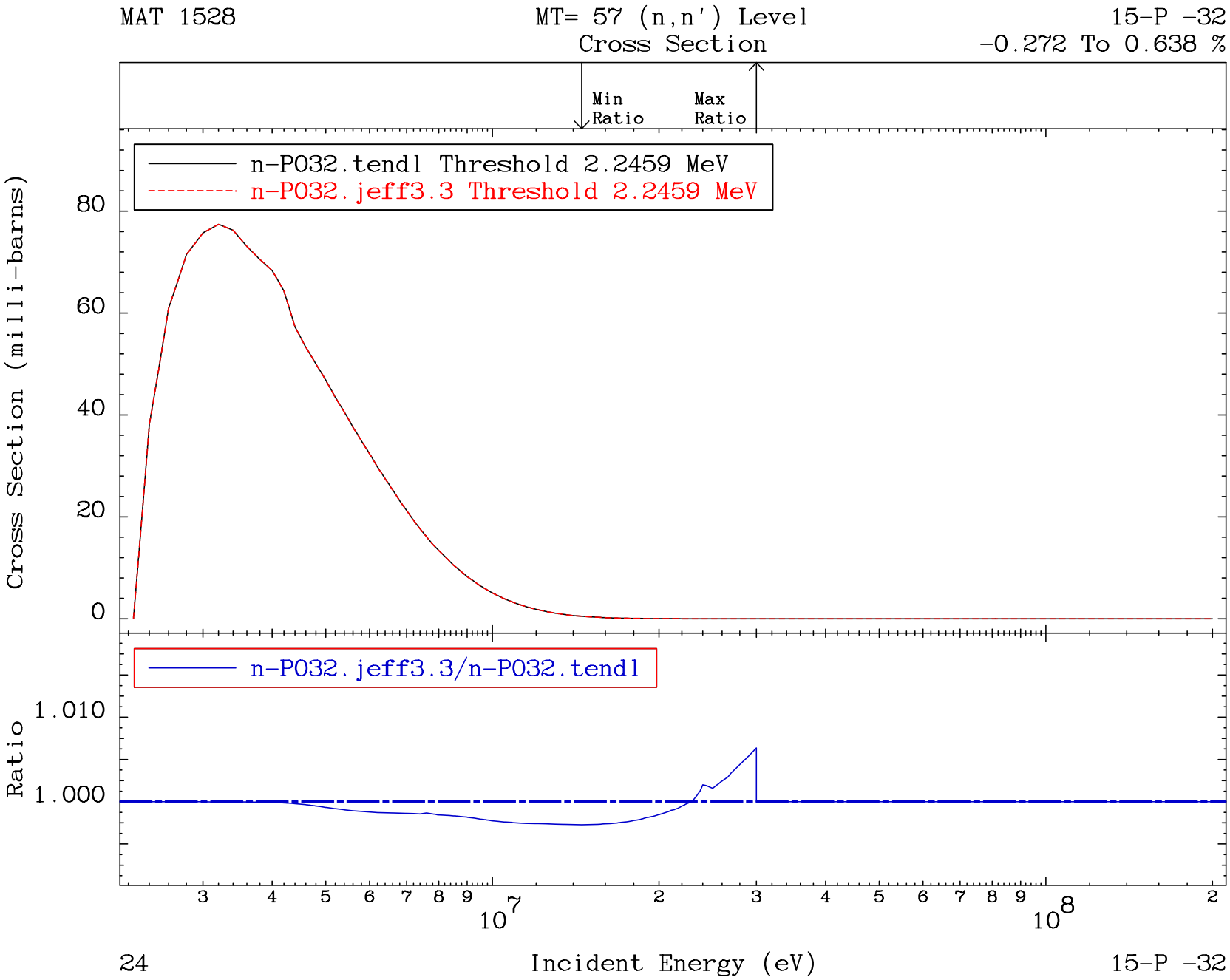

MAT 1528
MT= 52 (n,n') Level
Cross Section
15-P -32
-0.332 To 9999. %
Max Ratio
Min Ratio
n-P032.tendl Threshold 701.55 keV
n-P032.jeff3.3 Threshold 528.87 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
10^12
10^8
10^4
10^0
5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
19
Incident Energy (eV)
15-P -32

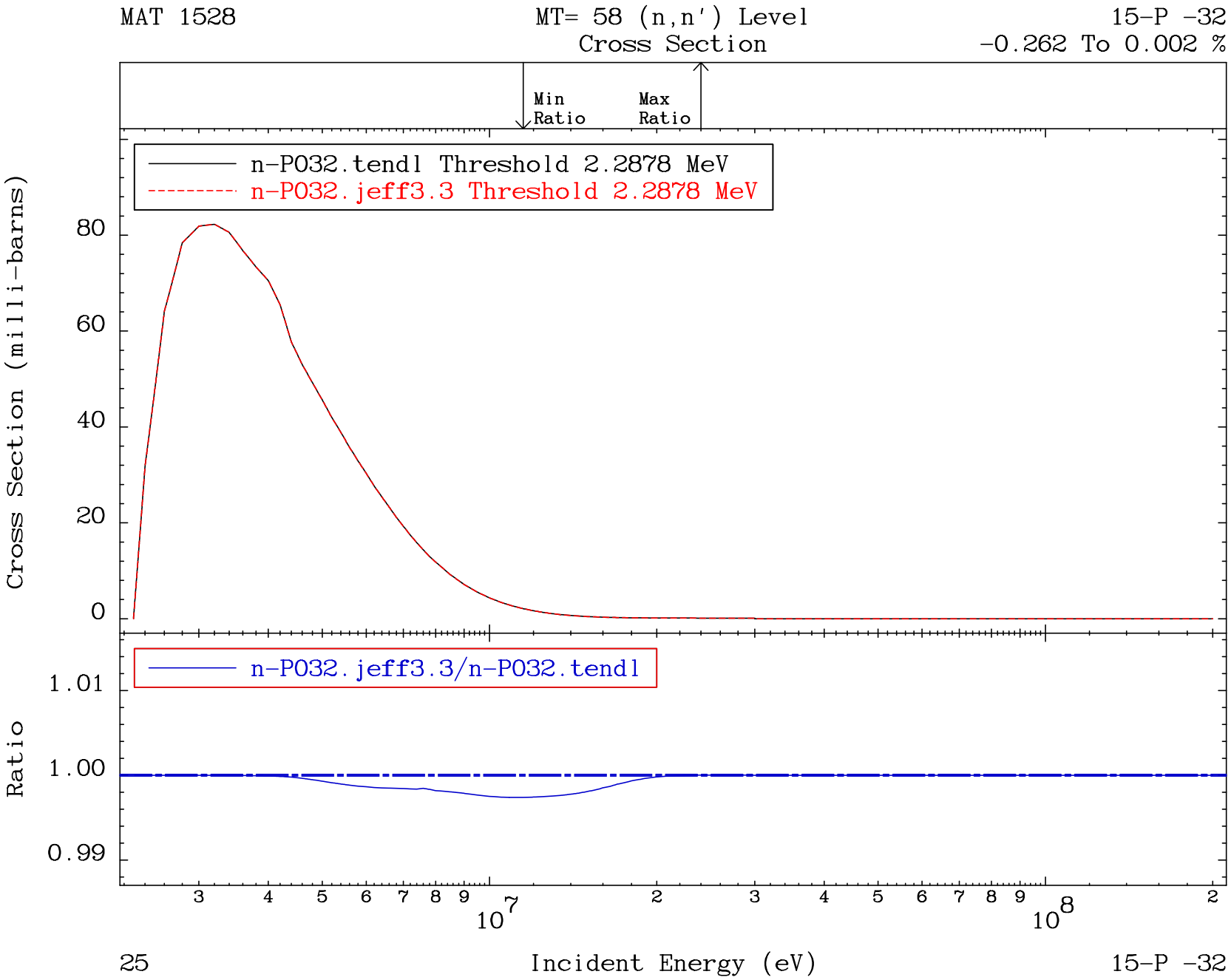

MAT 1528
MT= 53 (n,n') Level
Cross Section
15-P -32
-0.316 To 0.569 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 1.1857 MeV
n-P032.jeff3.3 Threshold 1.1857 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
20
Incident Energy (eV)
15-P -32

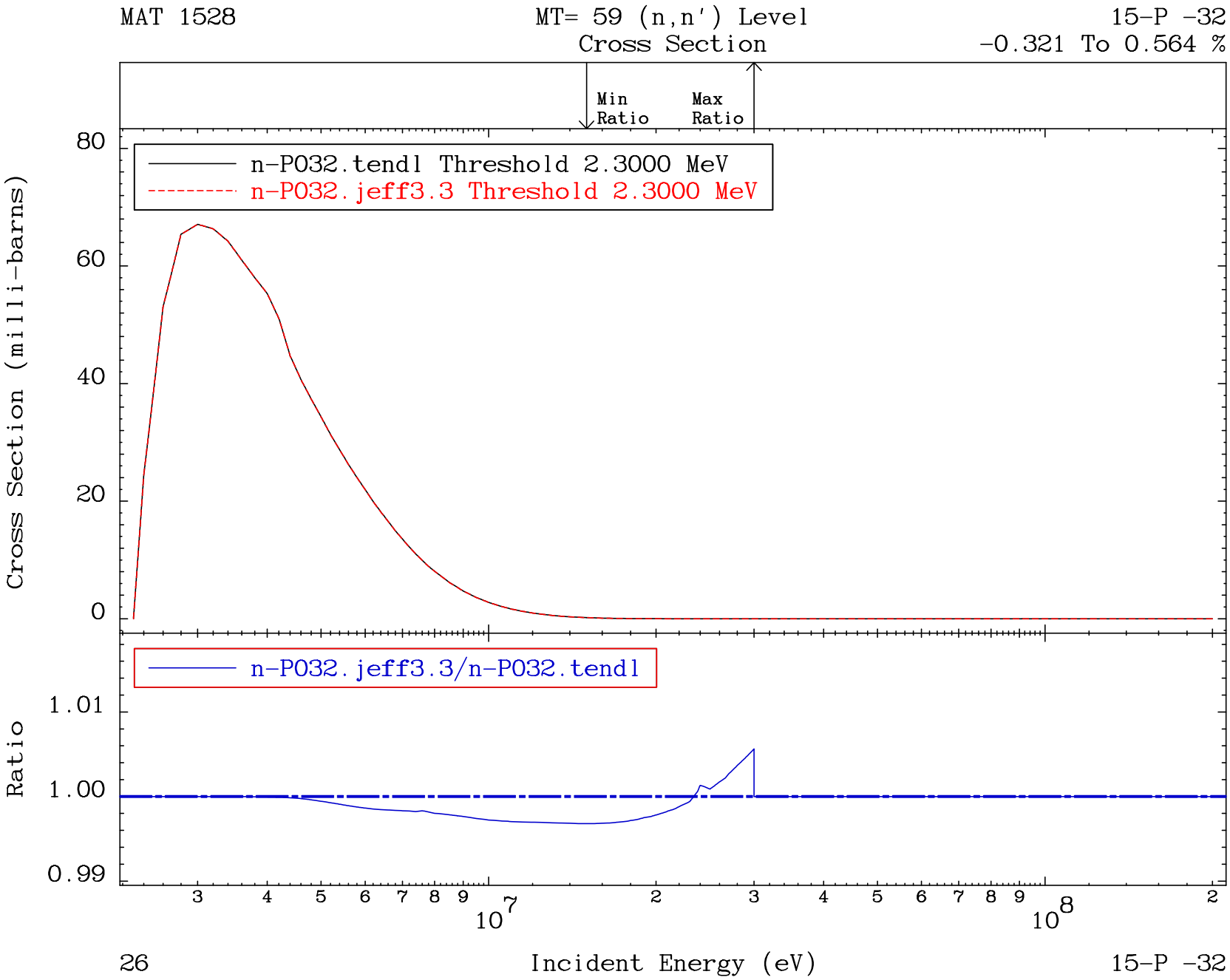

MAT 1528
MT= 54 (n,n') Level
Cross Section
15-P -32
-0.258 To 0.002 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 1.3646 MeV
n-P032.jeff3.3 Threshold 1.3646 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
15-P -32

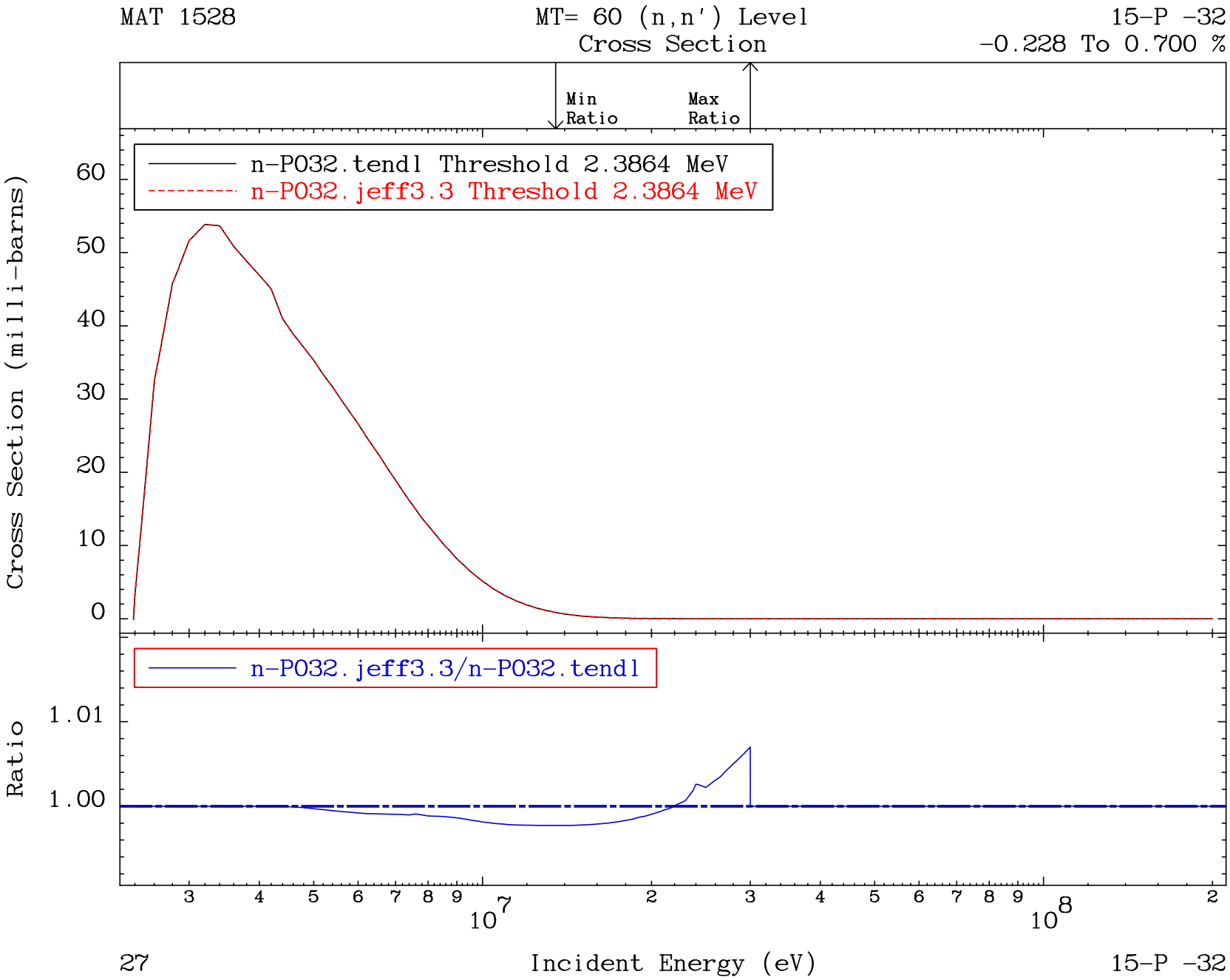

MAT 1528
MT= 55 (n,n') Level
Cross Section
15-P -32
-0.270 To 0.641 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 1.5576 MeV
n-P032.jeff3.3 Threshold 1.5576 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.010
1.000
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
15-P -32

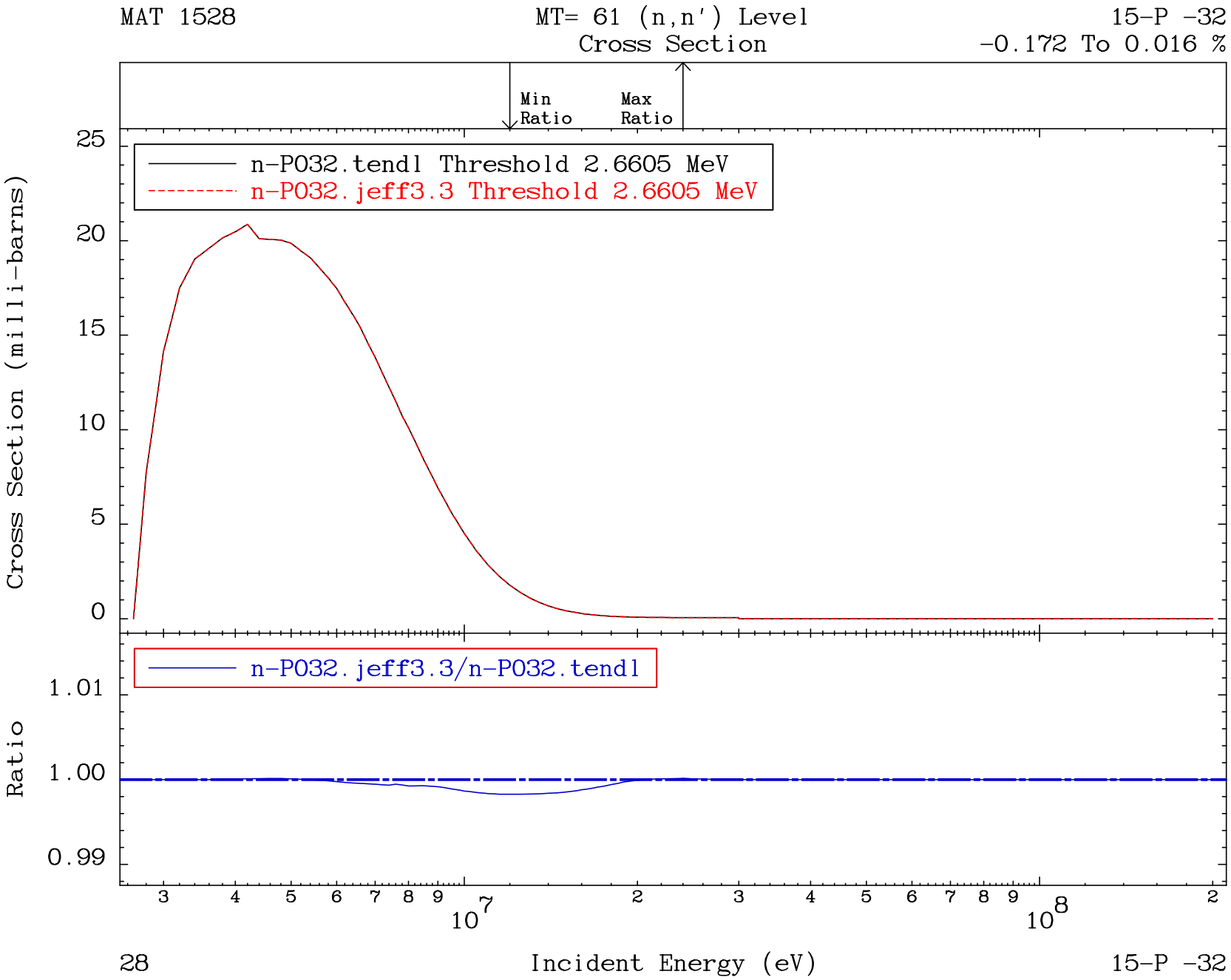

MAT 1528
MT= 56 (n,n') Level
Cross Section
15-P -32
-0.271 To 0.639 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 1.8104 MeV
n-P032.jeff3.3 Threshold 1.8104 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.010
1.000
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
23
Incident Energy (eV)
15-P -32

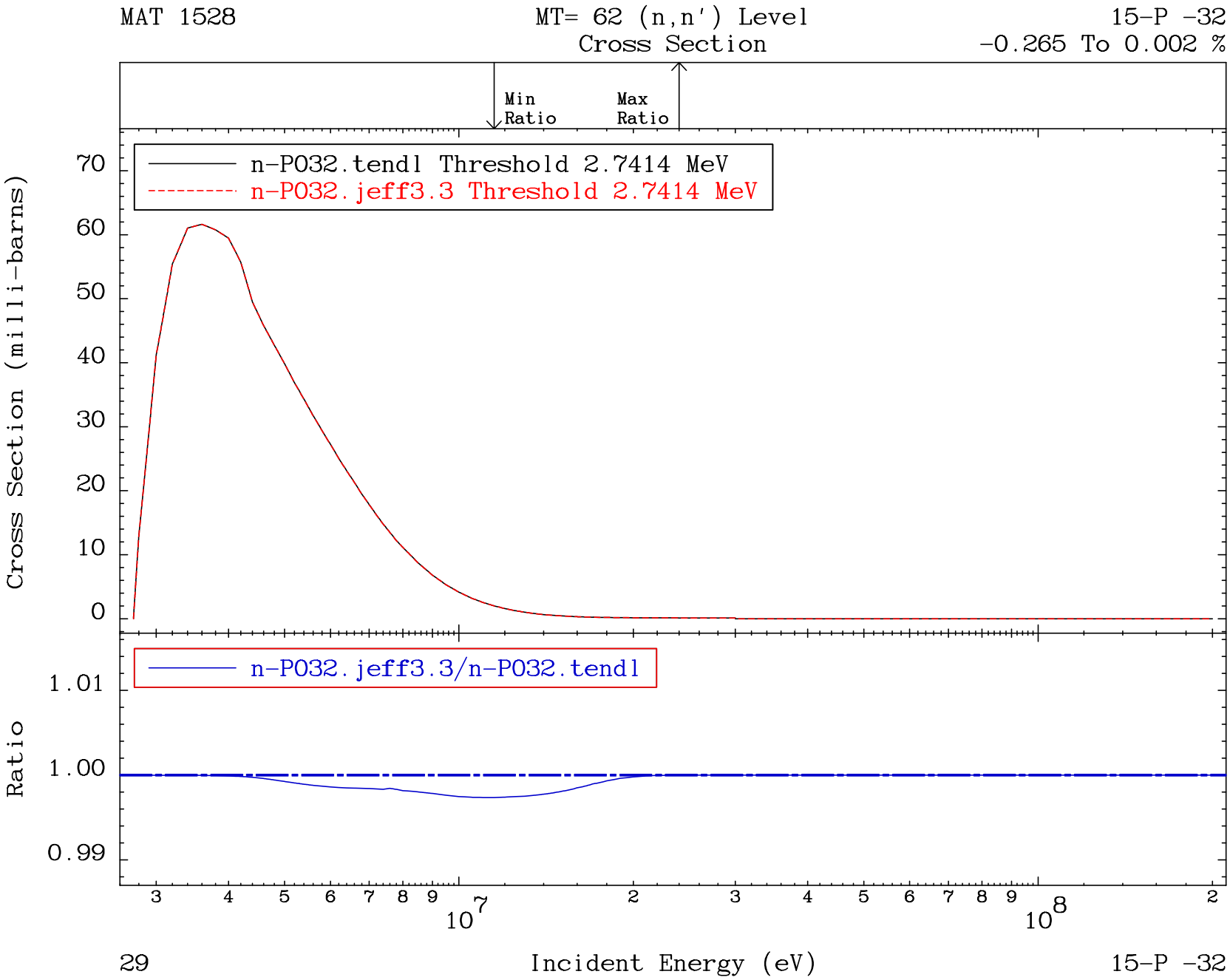

MAT 1528
MT= 57 (n,n') Level
Cross Section
15-P -32
-0.272 To 0.638 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 2.2459 MeV
n-P032.jeff3.3 Threshold 2.2459 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.010
1.000
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
15-P -32

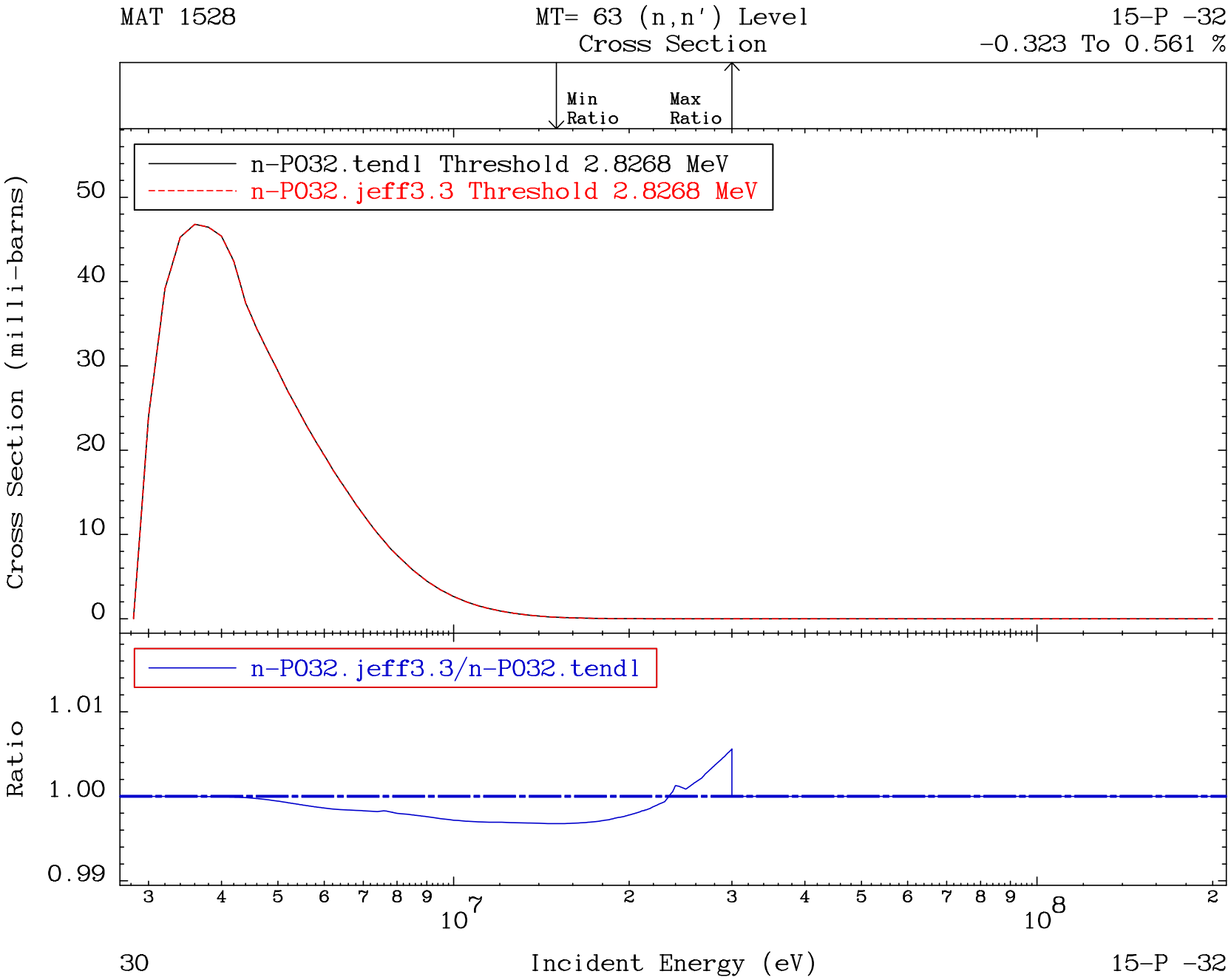

MAT 1528
MT= 58 (n,n') Level
Cross Section
15-P -32
-0.262 To 0.002 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 2.2878 MeV
n-P032.jeff3.3 Threshold 2.2878 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
15-P -32

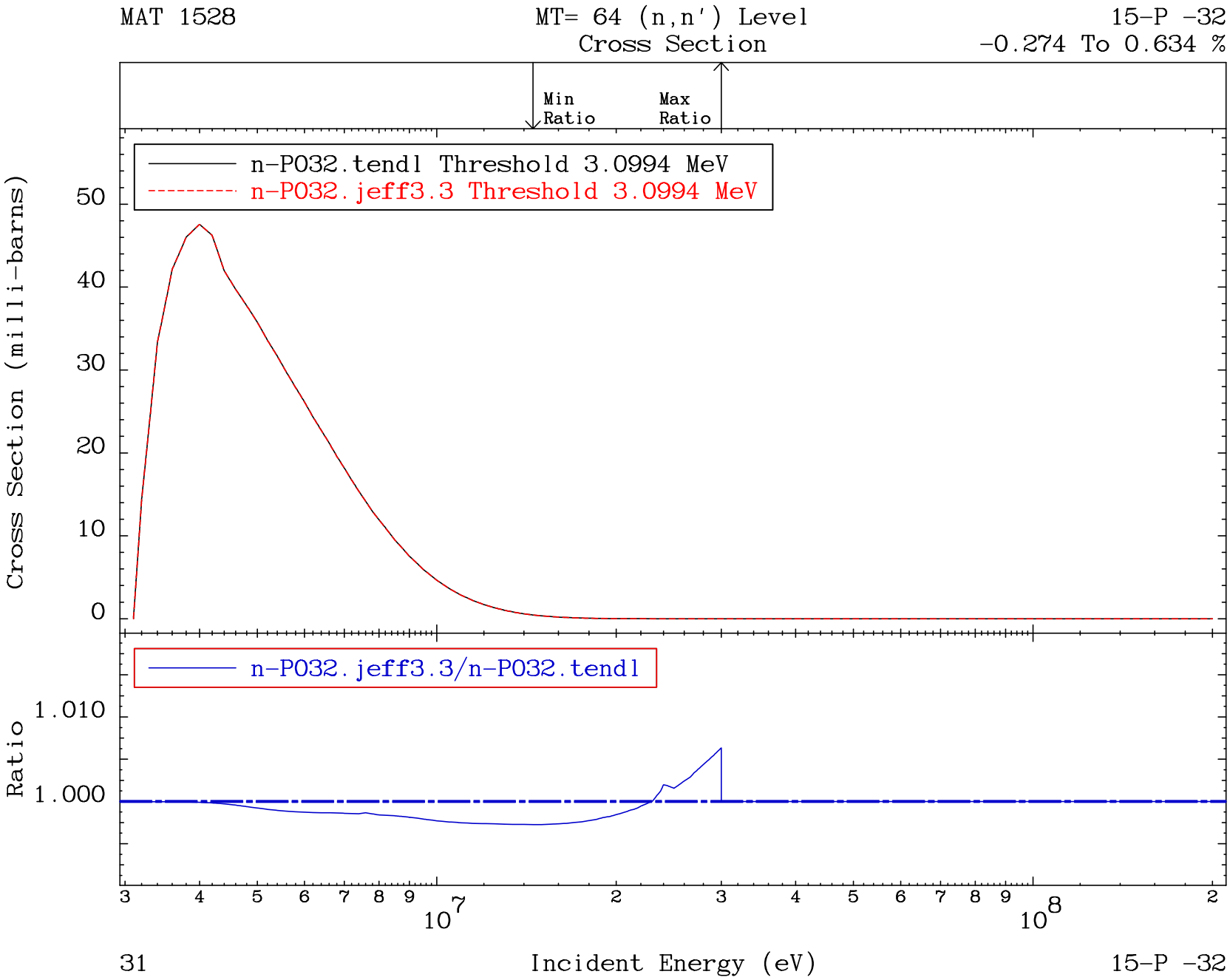

MAT 1528
MT= 59 (n,n') Level
Cross Section
15-P -32
-0.321 To 0.564 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 2.3000 MeV
n-P032.jeff3.3 Threshold 2.3000 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
15-P -32

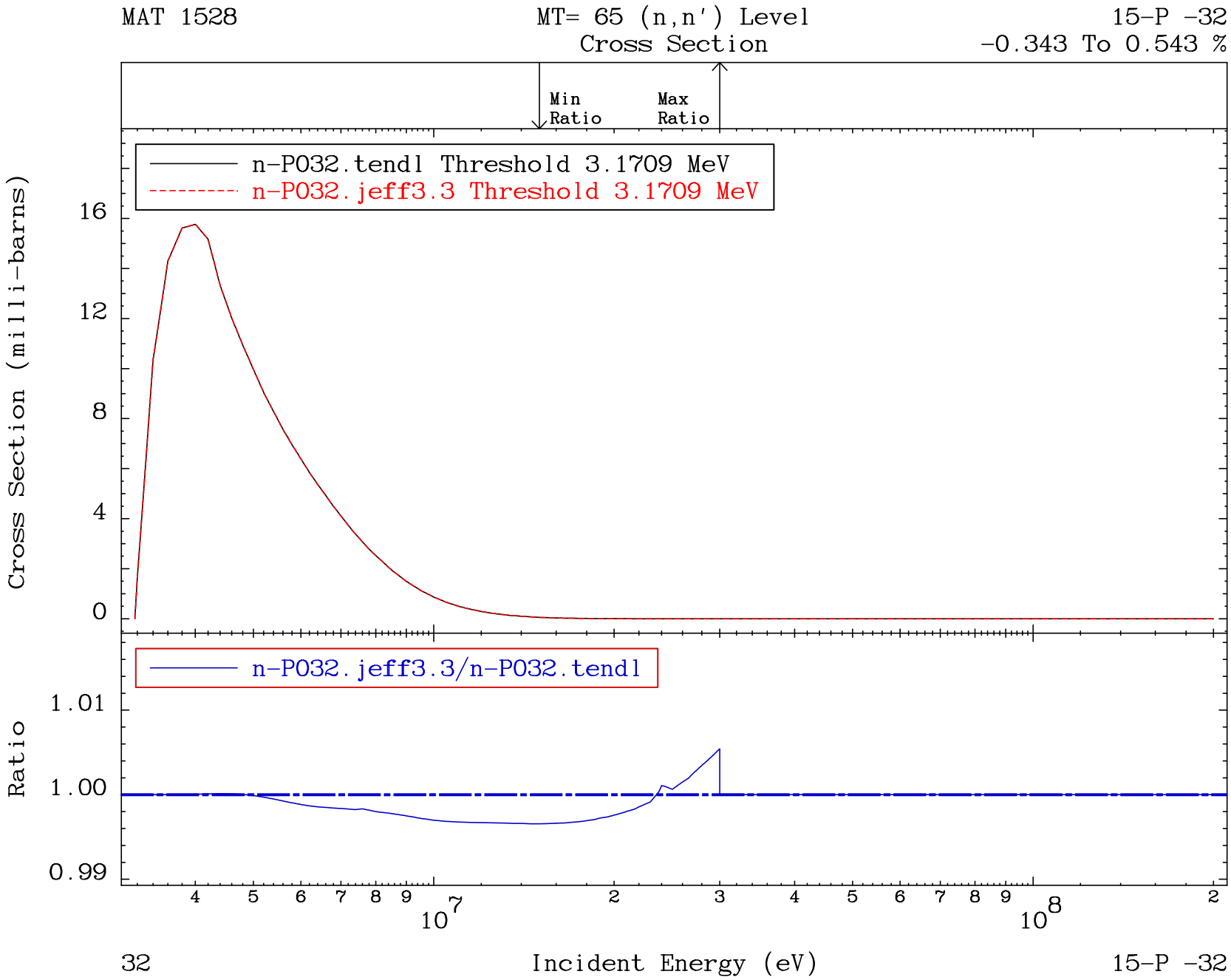

MAT 1528
MT= 60 (n,n') Level
Cross Section
15-P -32
-0.228 To 0.700 %
Min
Ratio
Max
Ratio
n-P032.tendl Threshold 2.3864 MeV
n-P032.jeff3.3 Threshold 2.3864 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
27
Incident Energy (eV)
15-P -32

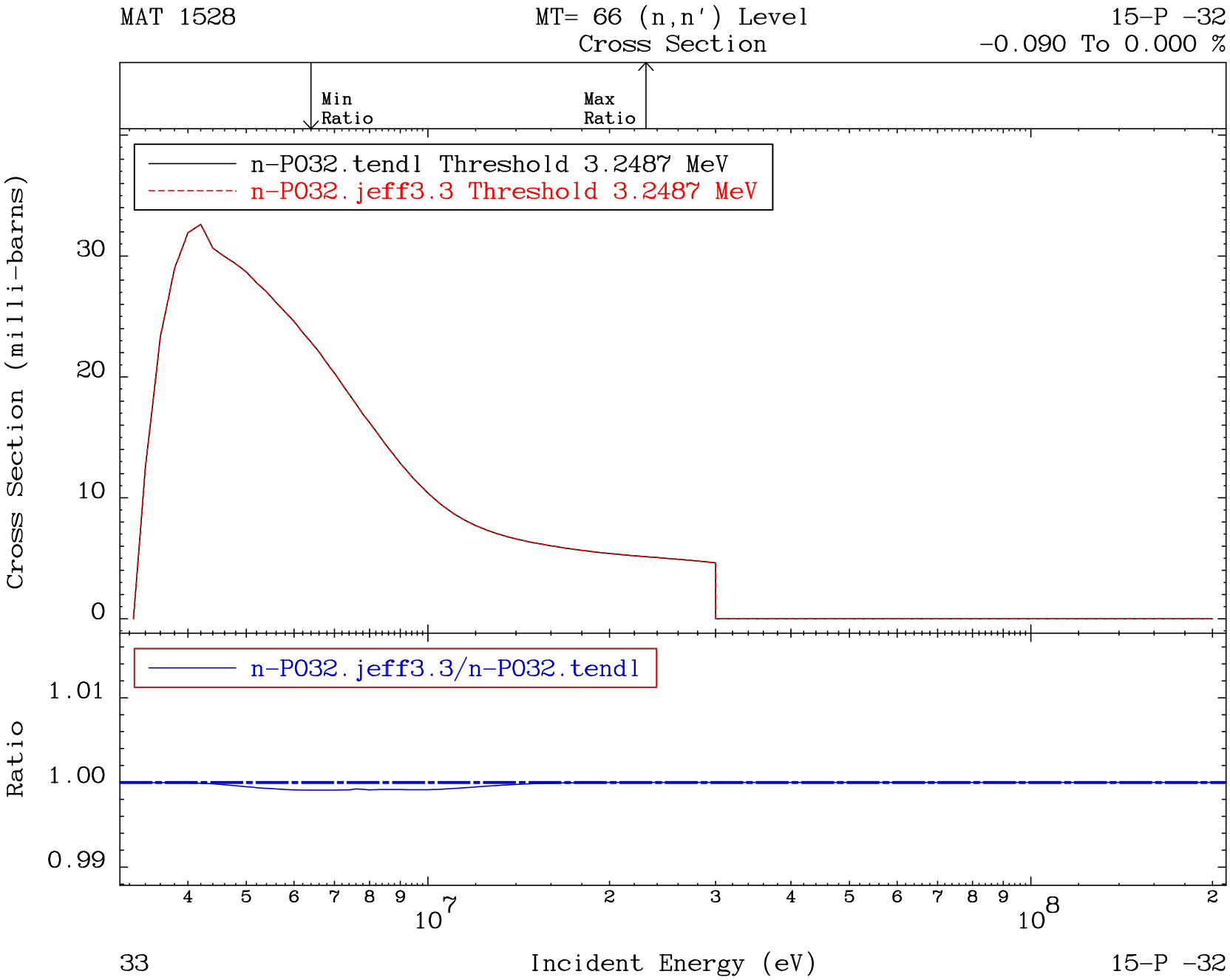

MAT 1528
MT= 61 (n,n') Level
Cross Section
15-P -32
-0.172 To 0.016 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 2.6605 MeV
n-P032.jeff3.3 Threshold 2.6605 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
15-P -32

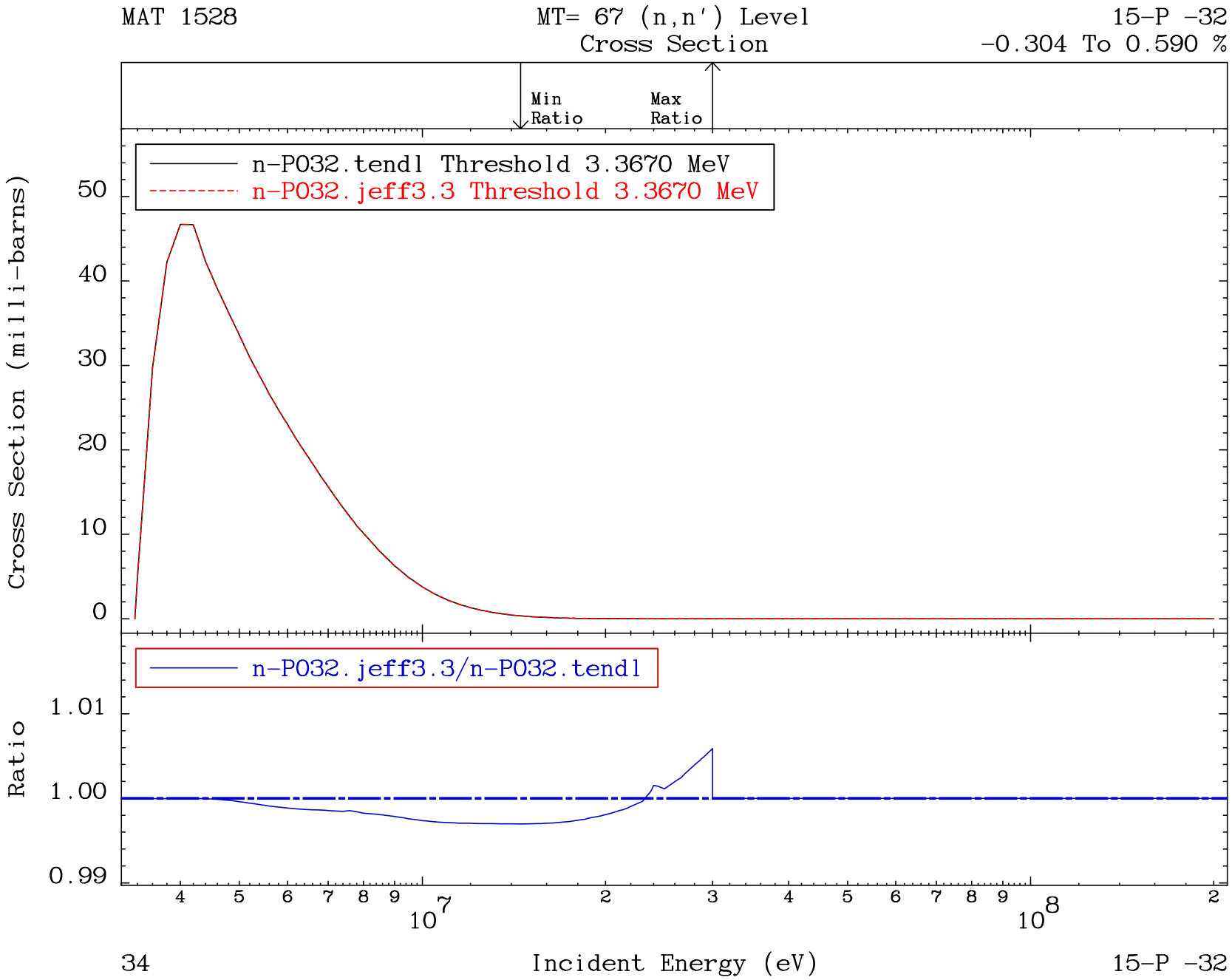

MAT 1528
MT= 62 (n,n') Level
Cross Section
15-P -32
-0.265 To 0.002 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 2.7414 MeV
n-P032.jeff3.3 Threshold 2.7414 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
15-P -32

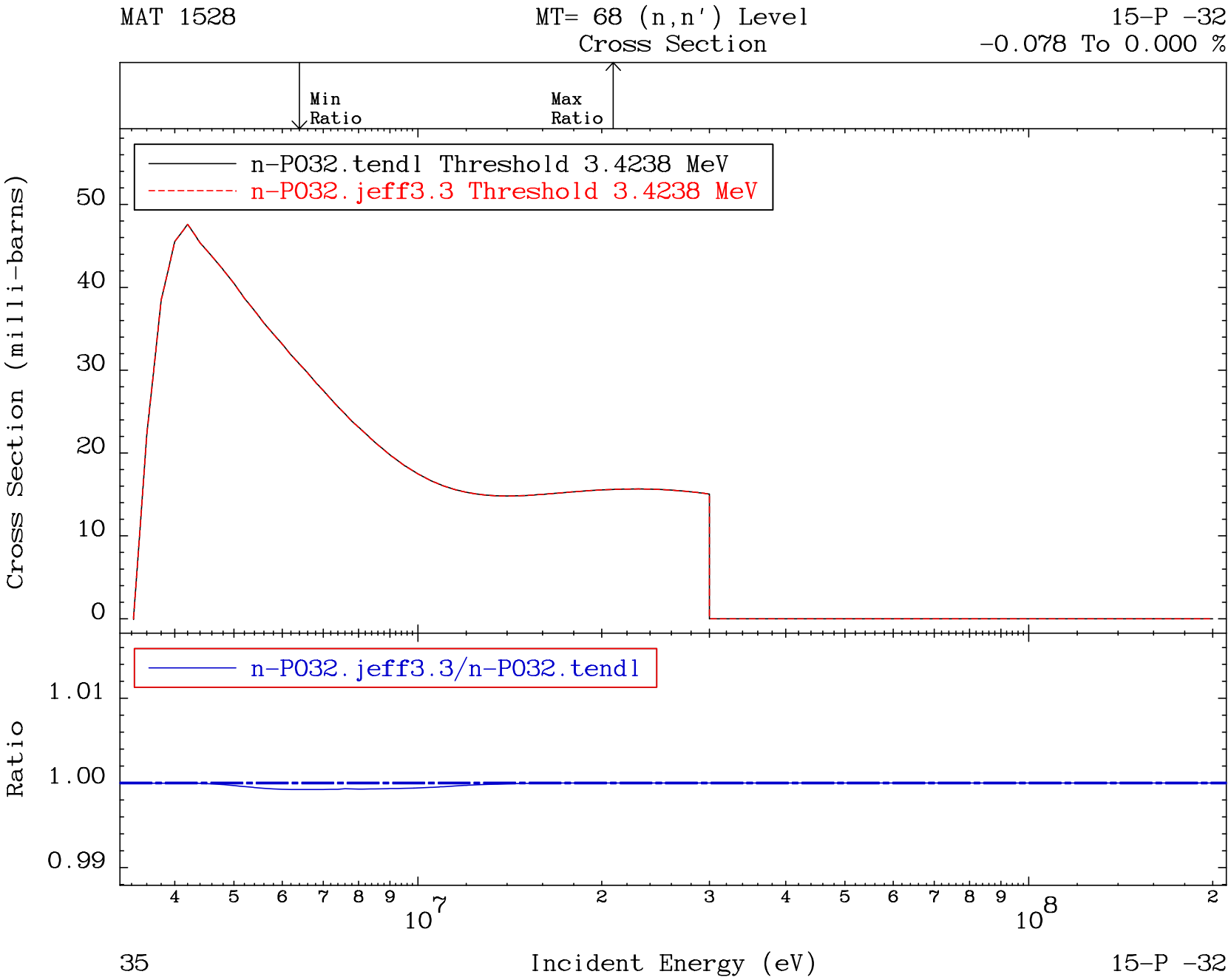

MAT 1528
MT= 63 (n,n') Level
Cross Section
15-P -32
-0.323 To 0.561 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 2.8268 MeV
n-P032.jeff3.3 Threshold 2.8268 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
30
Incident Energy (eV)
15-P -32

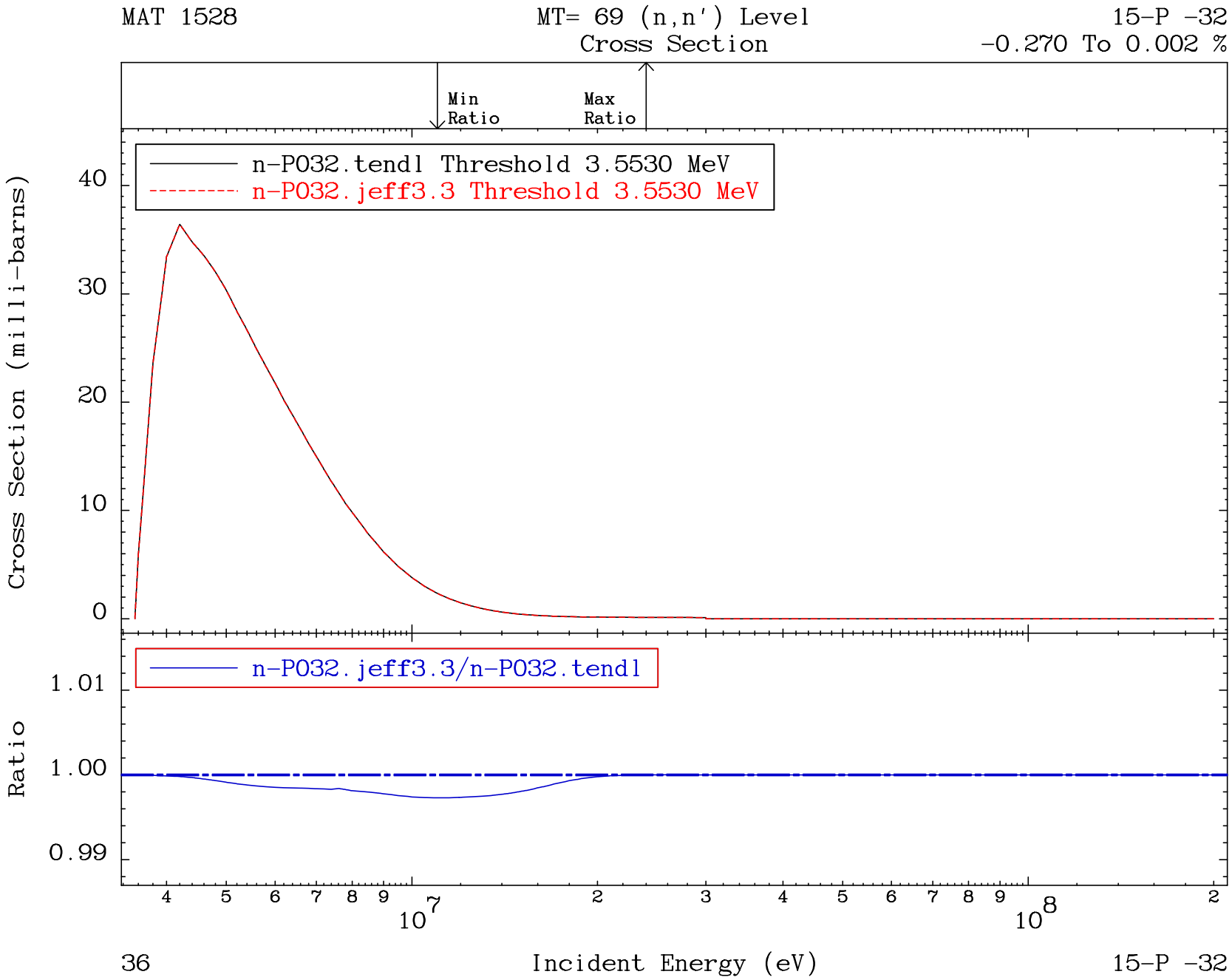

MAT 1528
MT= 64 (n,n') Level
Cross Section
15-P -32
-0.274 To 0.634 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.0994 MeV
n-P032.jeff3.3 Threshold 3.0994 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.010
1.000
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
31
Incident Energy (eV)
15-P -32

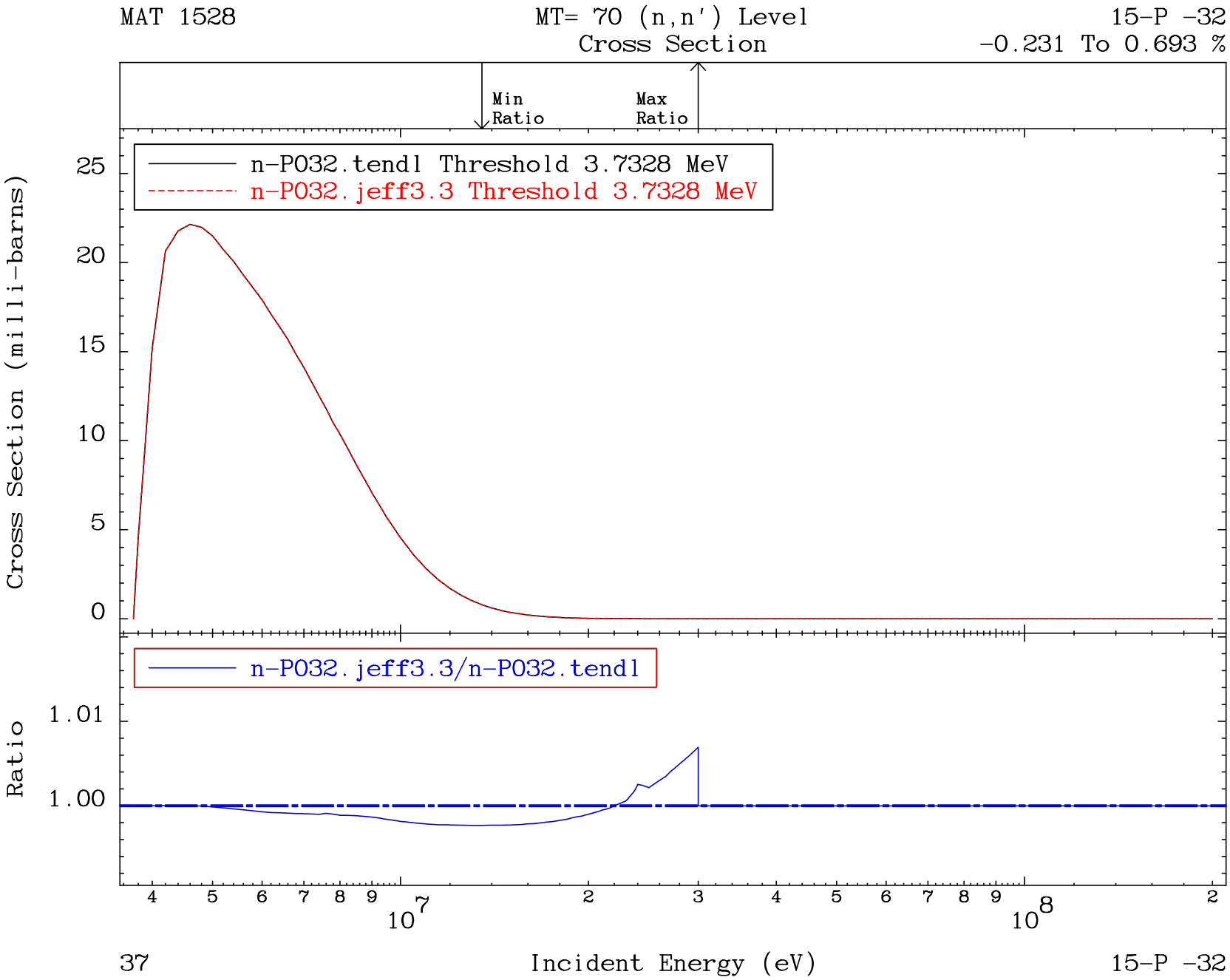

MAT 1528
MT= 65 (n,n') Level
Cross Section
15-P -32
-0.343 To 0.543 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.1709 MeV
n-P032.jeff3.3 Threshold 3.1709 MeV
Cross Section (milli-barns)
16
12
8
4
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
32
Incident Energy (eV)
15-P -32

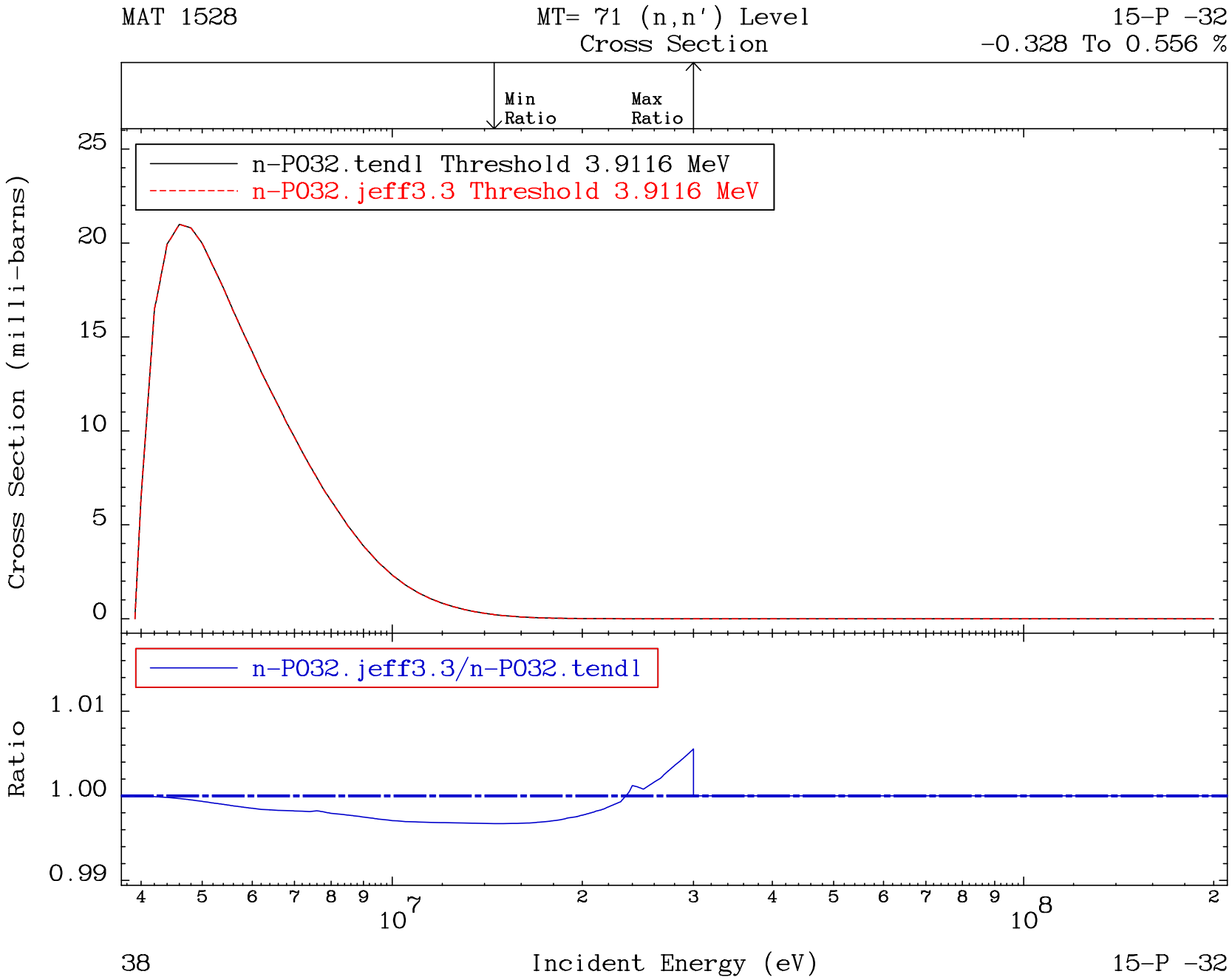

MAT 1528
MT= 66 (n,n') Level
Cross Section
15-P -32
-0.090 To 0.000 %
Min
Ratio
Max
Ratio
n-P032.tendl Threshold 3.2487 MeV
n-P032.jeff3.3 Threshold 3.2487 MeV
Cross Section (milli-barns)
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
33
Incident Energy (eV)
15-P -32

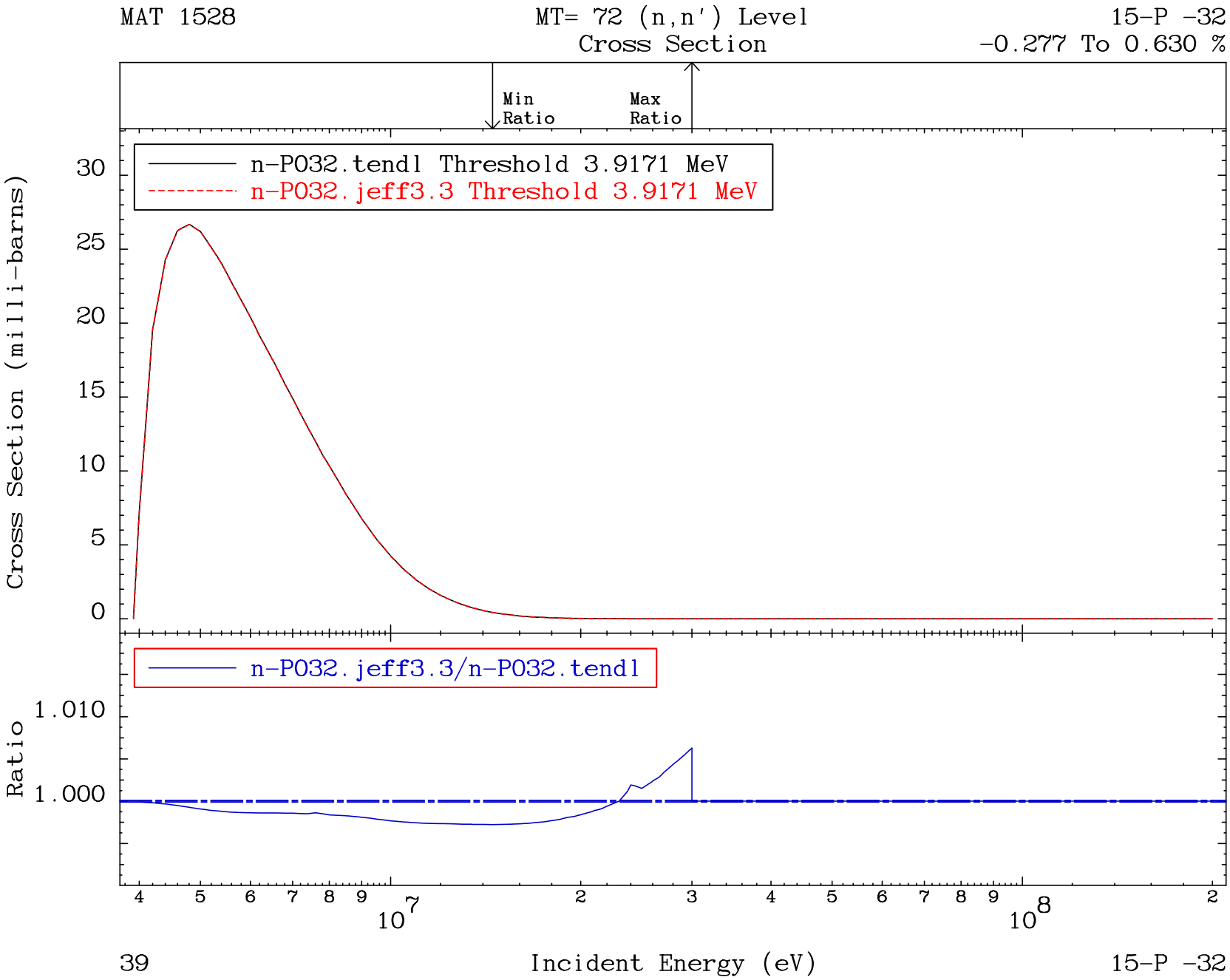

MAT 1528
MT= 67 (n,n') Level
Cross Section
15-P -32
-0.304 To 0.590 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.3670 MeV
n-P032.jeff3.3 Threshold 3.3670 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
34
Incident Energy (eV)
15-P -32

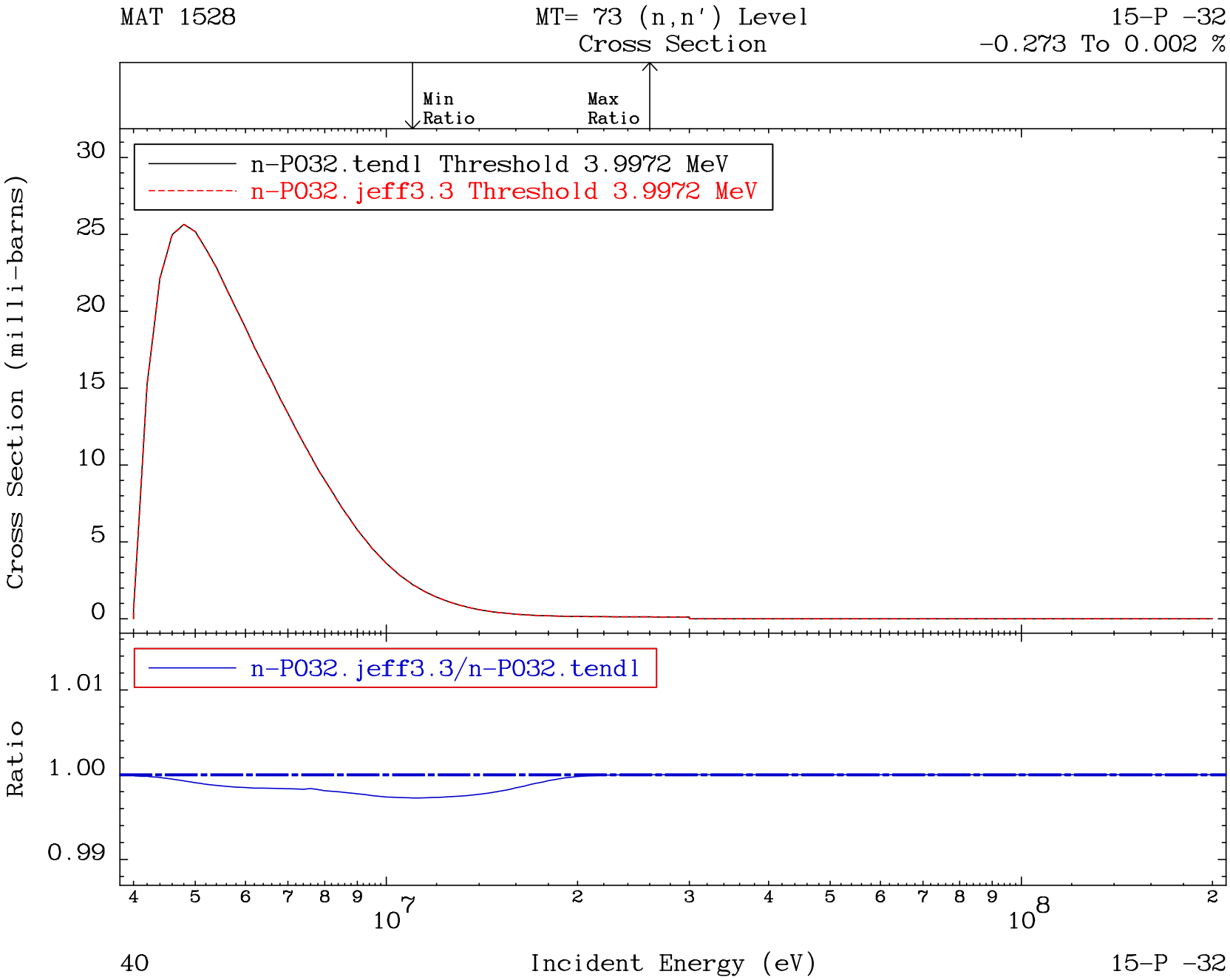

MAT 1528
MT= 68 (n,n') Level
Cross Section
15-P -32
-0.078 To 0.000 %
Min
Ratio
Max
Ratio
n-P032.tendl Threshold 3.4238 MeV
n-P032.jeff3.3 Threshold 3.4238 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
35
Incident Energy (eV)
15-P -32

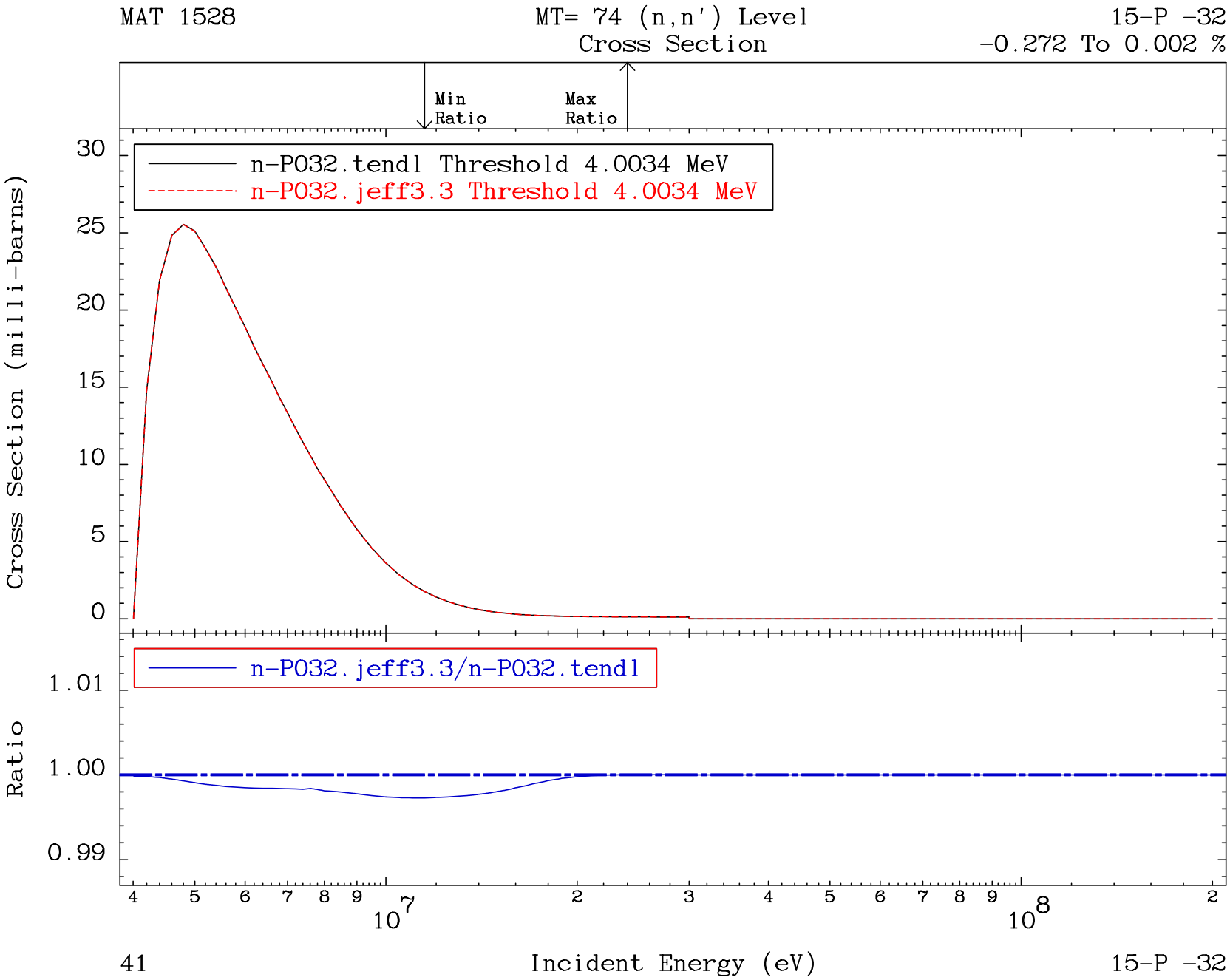

MAT 1528
MT= 69 (n,n') Level
Cross Section
15-P -32
-0.270 To 0.002 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.5530 MeV
n-P032.jeff3.3 Threshold 3.5530 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
36
Incident Energy (eV)
15-P -32

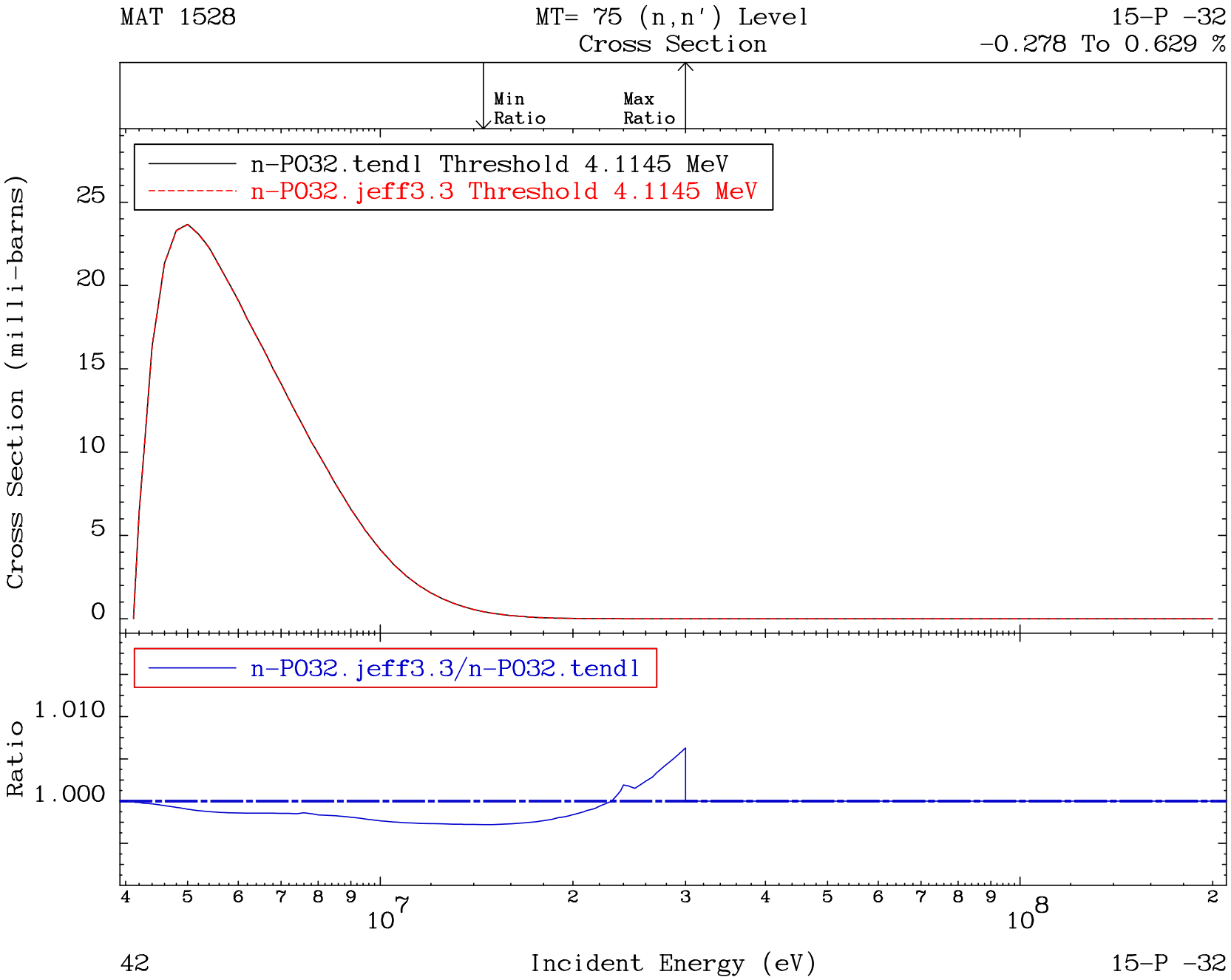

MAT 1528
MT= 70 (n,n') Level
Cross Section
15-P -32
-0.231 To 0.693 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.7328 MeV
n-P032.jeff3.3 Threshold 3.7328 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
37
Incident Energy (eV)
15-P -32

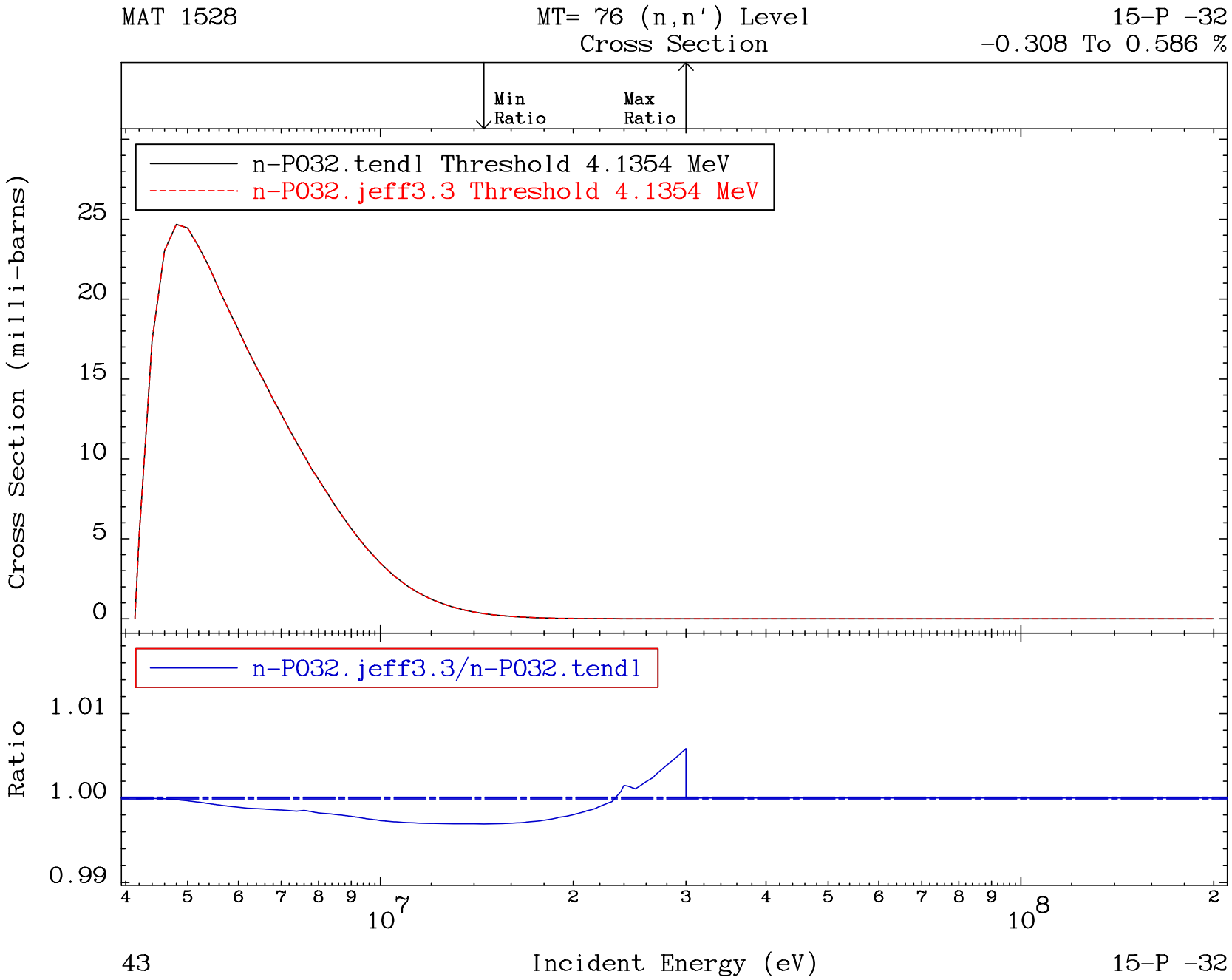

MAT 1528
MT= 71 (n,n') Level
Cross Section
15-P -32
-0.328 To 0.556 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.9116 MeV
n-P032.jeff3.3 Threshold 3.9116 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
38
Incident Energy (eV)
15-P -32

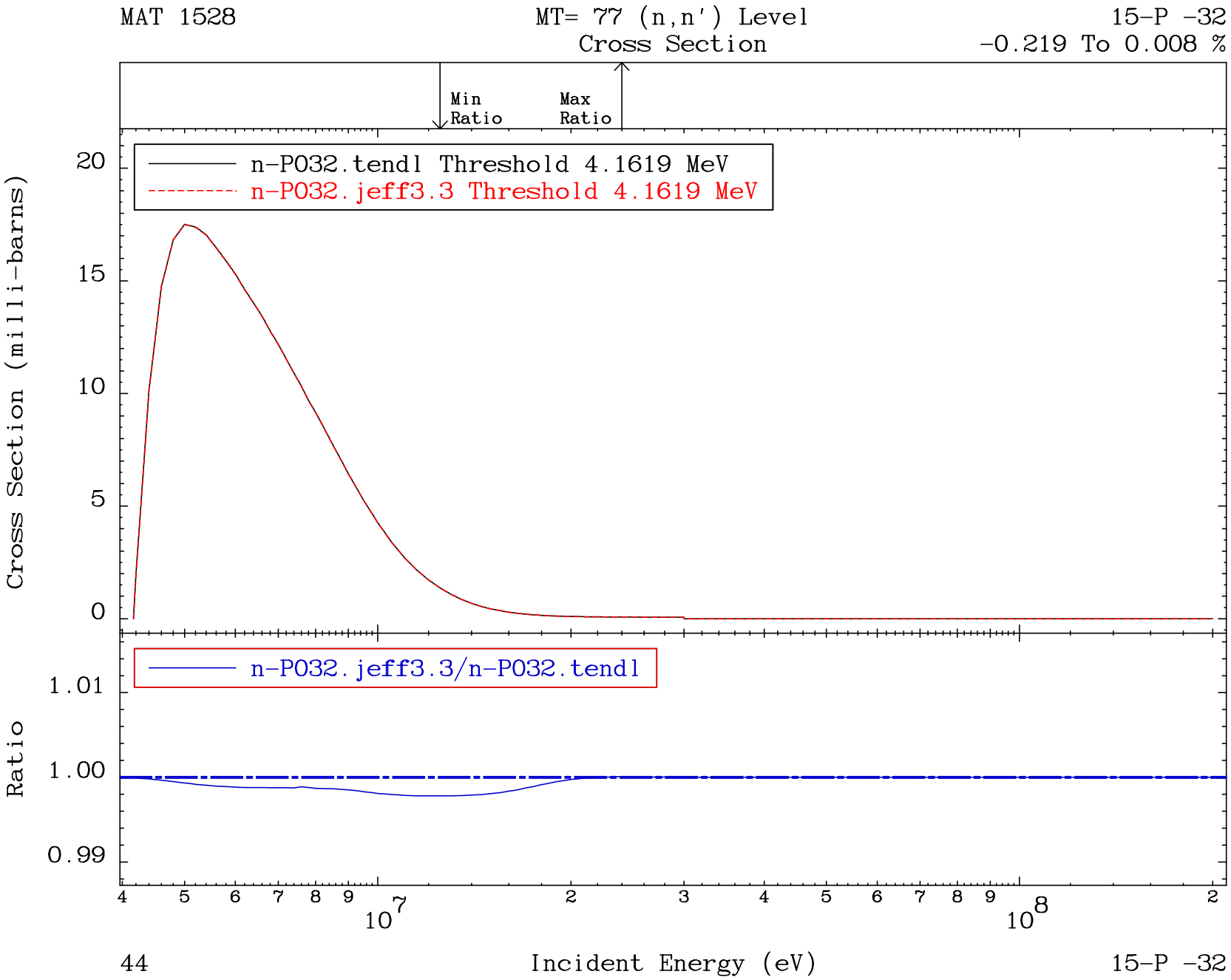

MAT 1528
MT= 72 (n,n') Level
Cross Section
15-P -32
-0.277 To 0.630 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.9171 MeV
n-P032.jeff3.3 Threshold 3.9171 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.010
1.000
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
39
Incident Energy (eV)
15-P -32

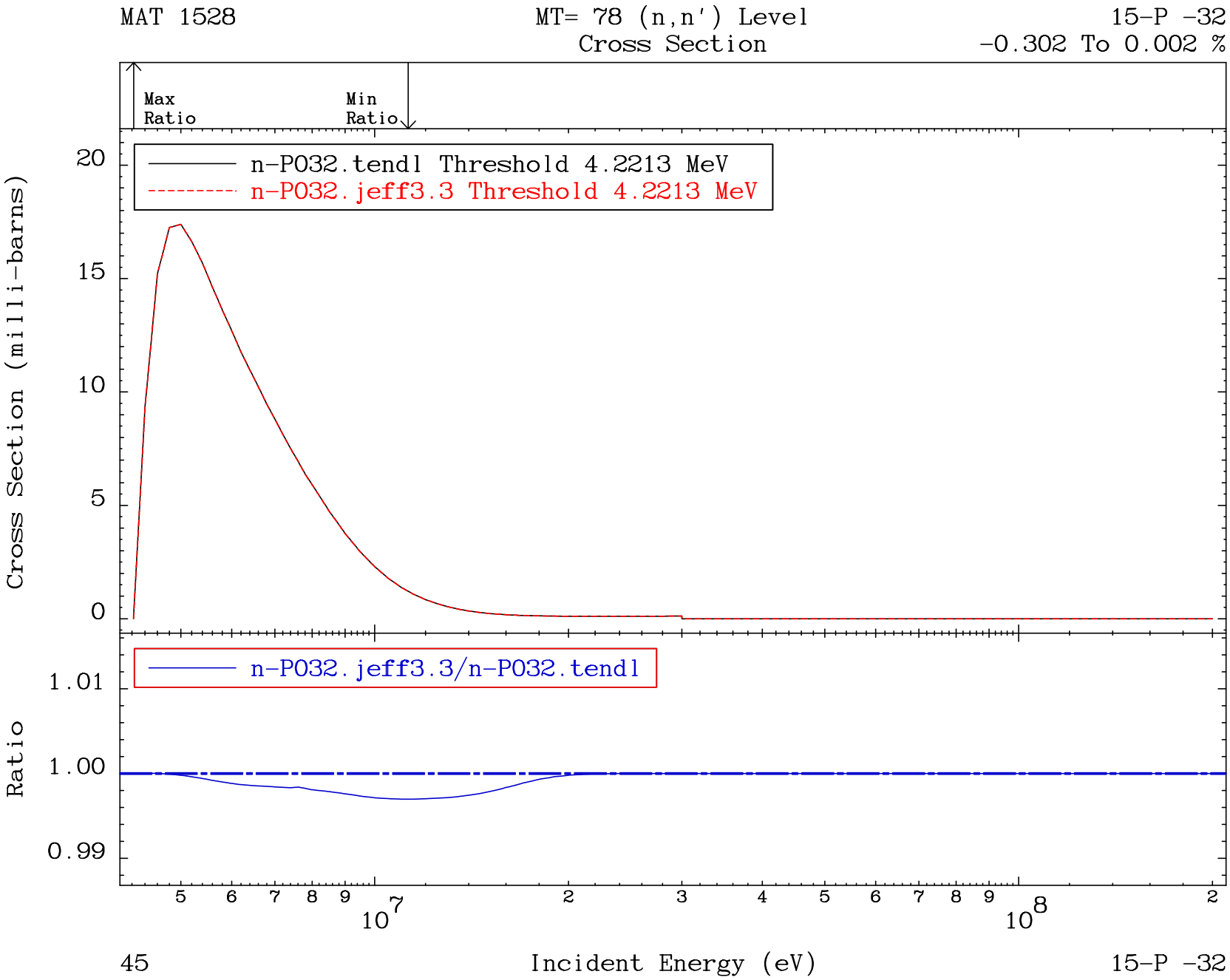

MAT 1528
MT= 73 (n,n') Level
Cross Section
15-P -32
-0.273 To 0.002 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 3.9972 MeV
n-P032.jeff3.3 Threshold 3.9972 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
40
Incident Energy (eV)
15-P -32

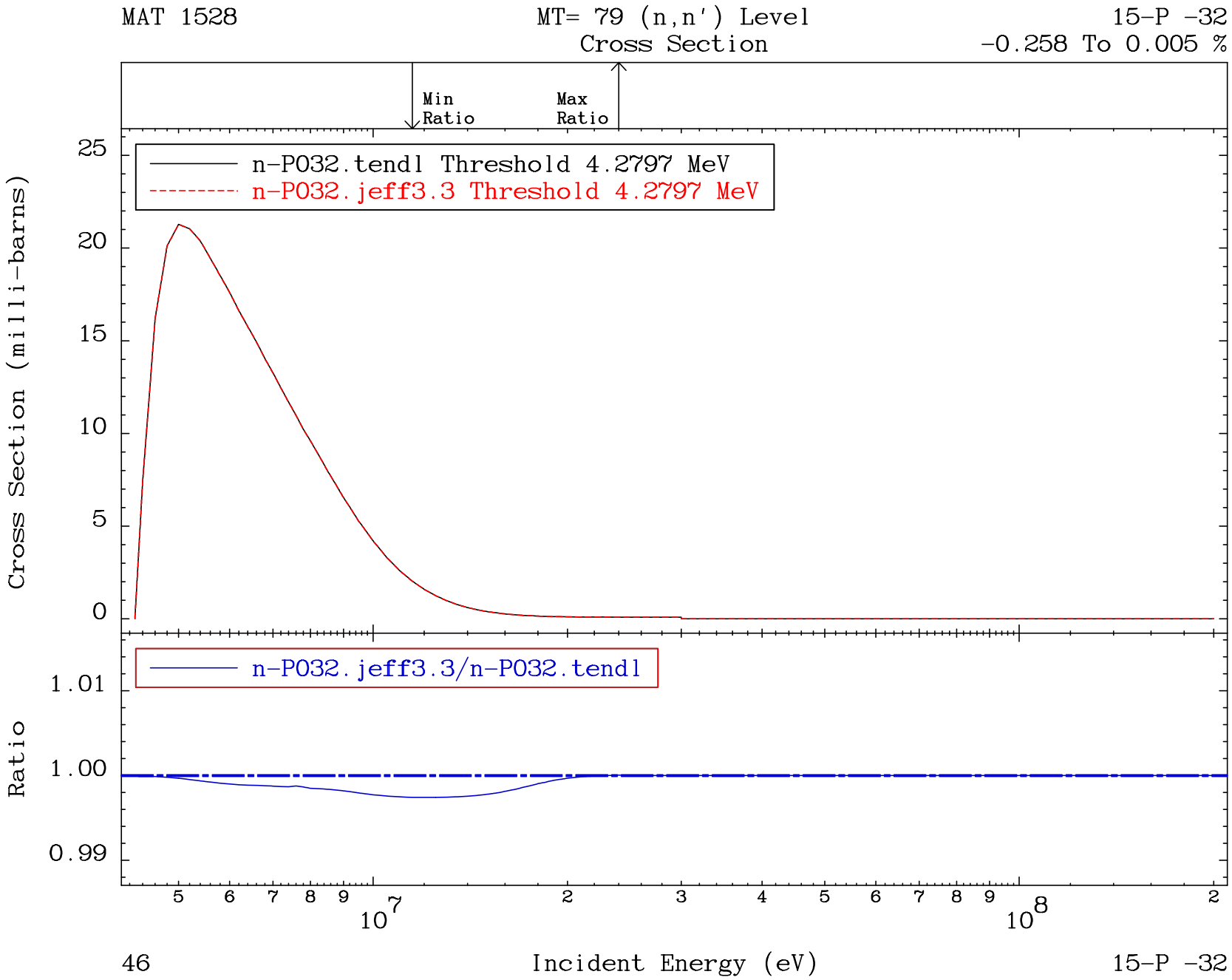

MAT 1528
MT= 74 (n,n') Level
Cross Section
15-P -32
-0.272 To 0.002 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 4.0034 MeV
n-P032.jeff3.3 Threshold 4.0034 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
41
Incident Energy (eV)
15-P -32

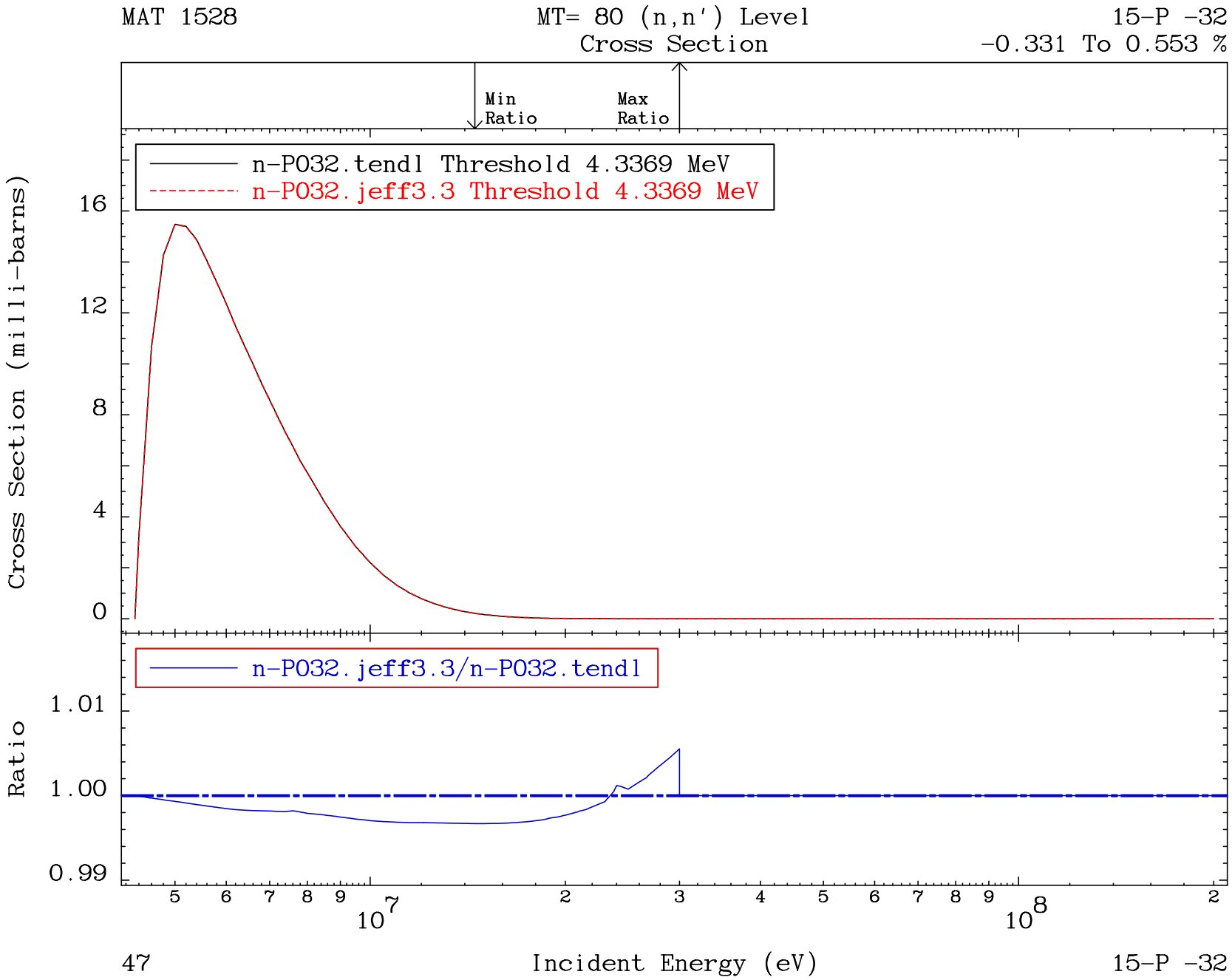

MAT 1528
MT= 75 (n,n') Level
Cross Section
15-P -32
-0.278 To 0.629 %
Min
Ratio
Max
Ratio
n-P032.tendl Threshold 4.1145 MeV
n-P032.jeff3.3 Threshold 4.1145 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.010
1.000
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
42
Incident Energy (eV)
15-P -32

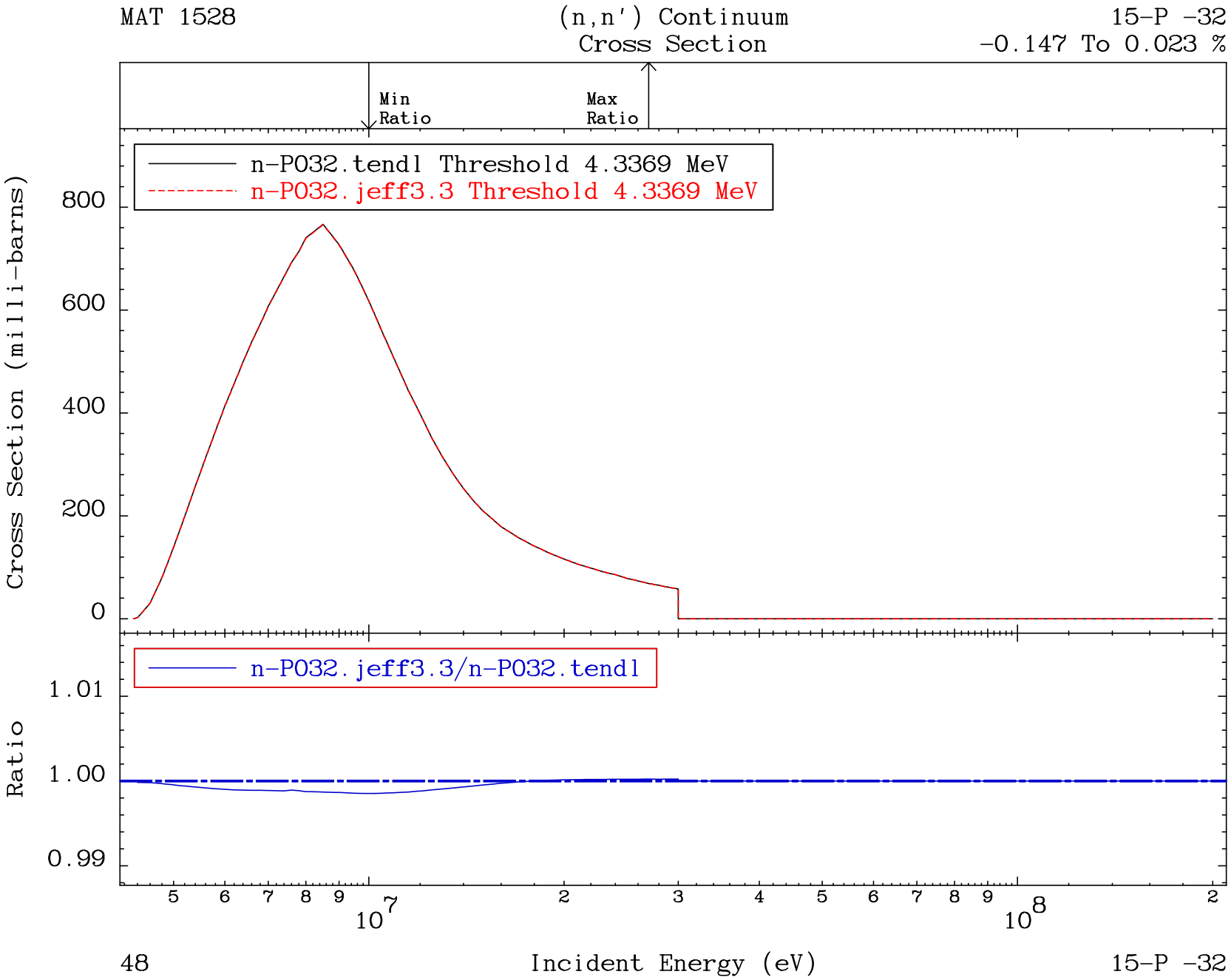

MAT 1528
MT= 76 (n,n') Level
Cross Section
15-P -32
-0.308 To 0.586 %
Min
Ratio
Max
Ratio
n-P032.tendl Threshold 4.1354 MeV
n-P032.jeff3.3 Threshold 4.1354 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
15-P -32

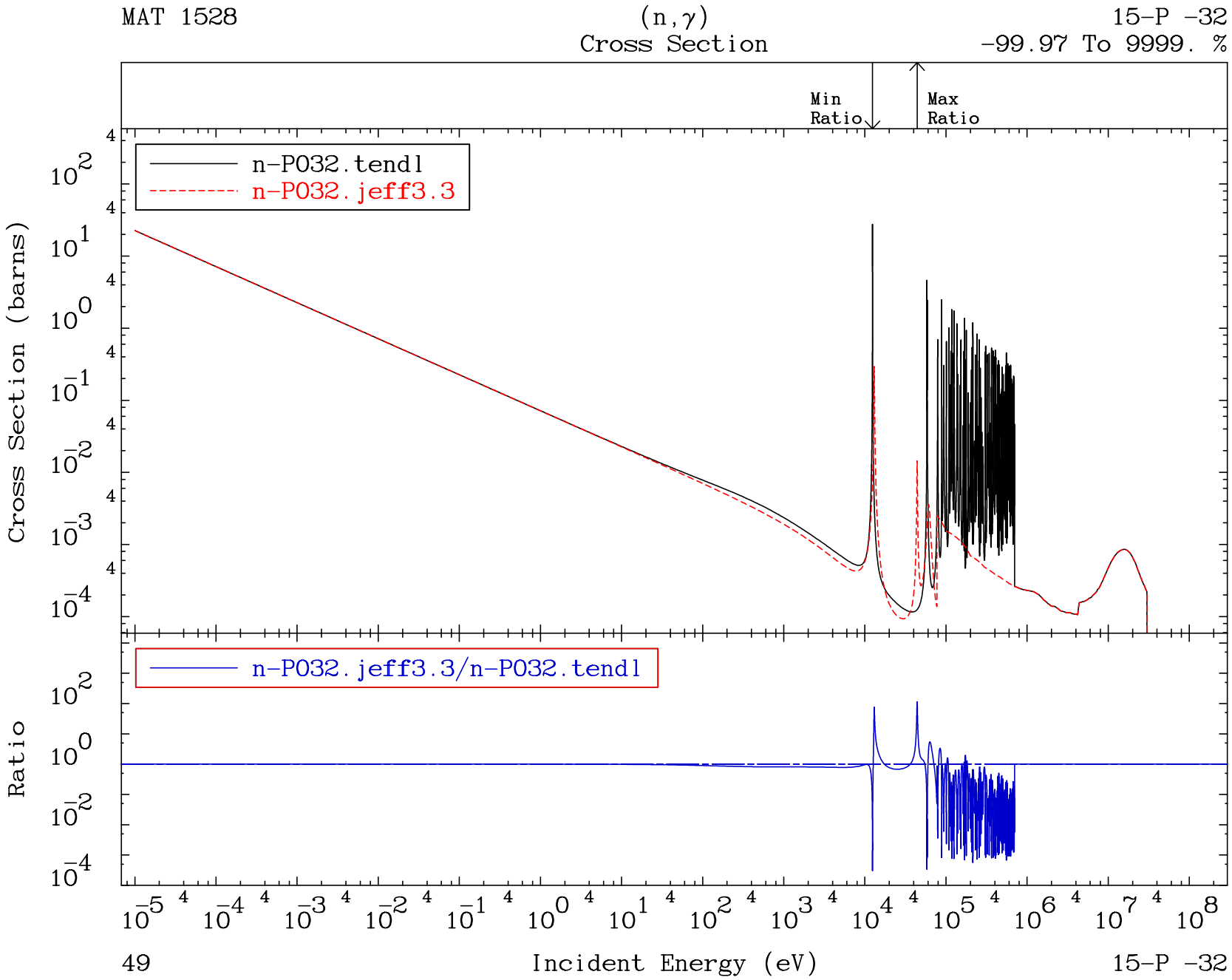

MAT 1528
MT= 77 (n,n') Level
Cross Section
15-P -32
-0.219 To 0.008 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 4.1619 MeV
n-P032.jeff3.3 Threshold 4.1619 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
44
Incident Energy (eV)
15-P -32

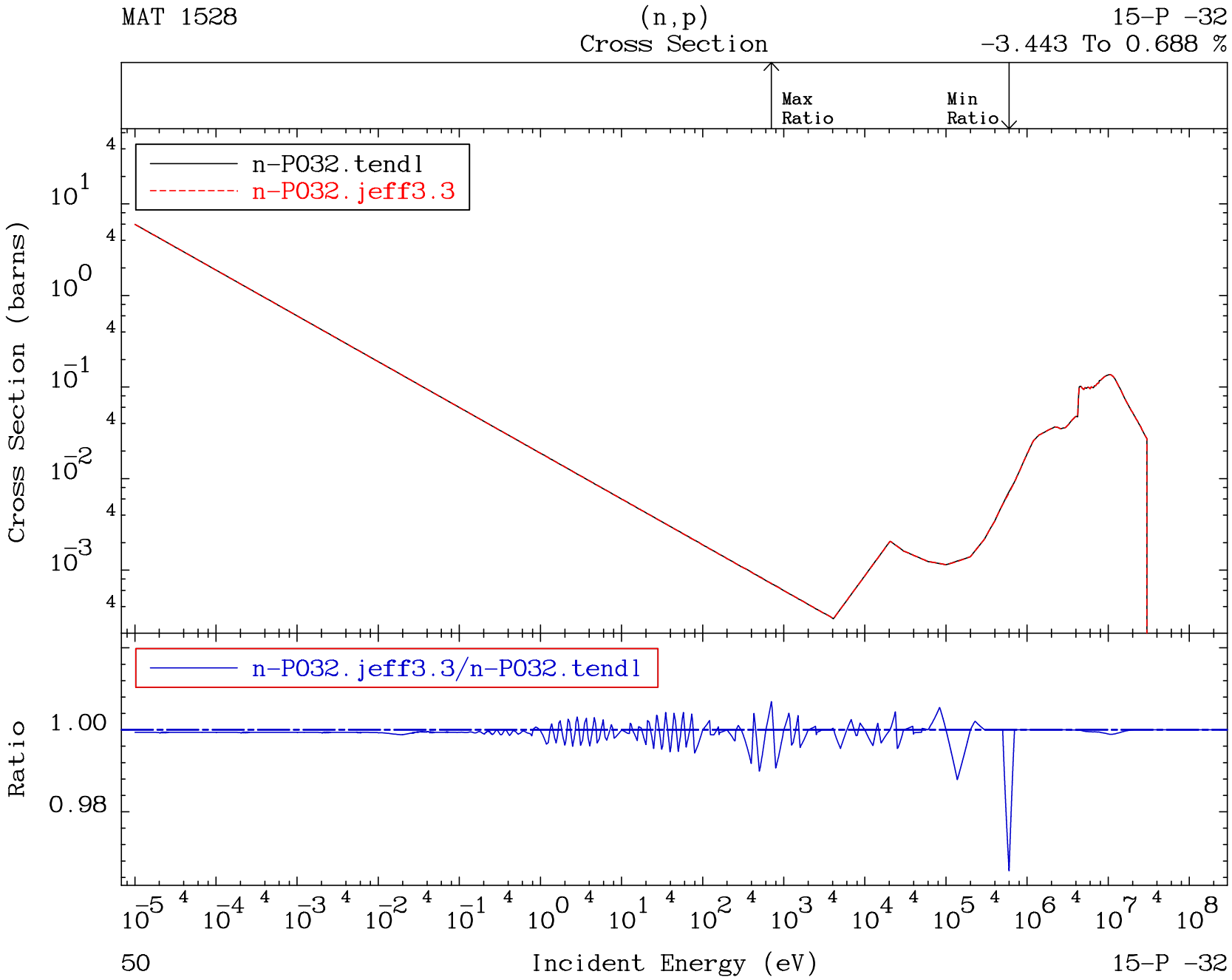

MAT 1528
MT= 78 (n,n') Level
Cross Section
15-P -32
-0.302 To 0.002 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 4.2213 MeV
n-P032.jeff3.3 Threshold 4.2213 MeV
Cross Section (milli-barns)
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
45
Incident Energy (eV)
15-P -32

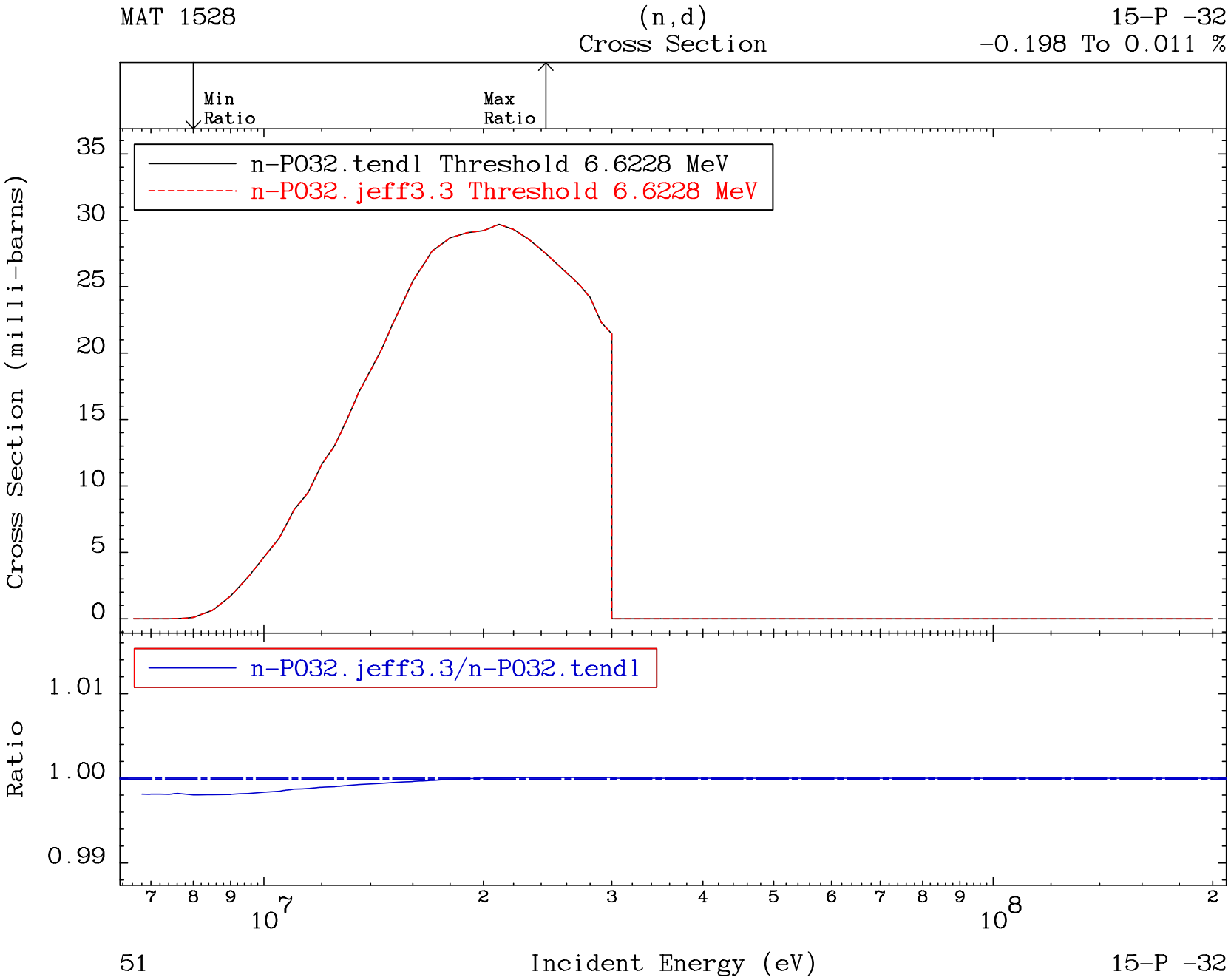

MAT 1528
MT= 79 (n,n') Level
Cross Section
15-P -32
-0.258 To 0.005 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 4.2797 MeV
n-P032.jeff3.3 Threshold 4.2797 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
46
Incident Energy (eV)
15-P -32

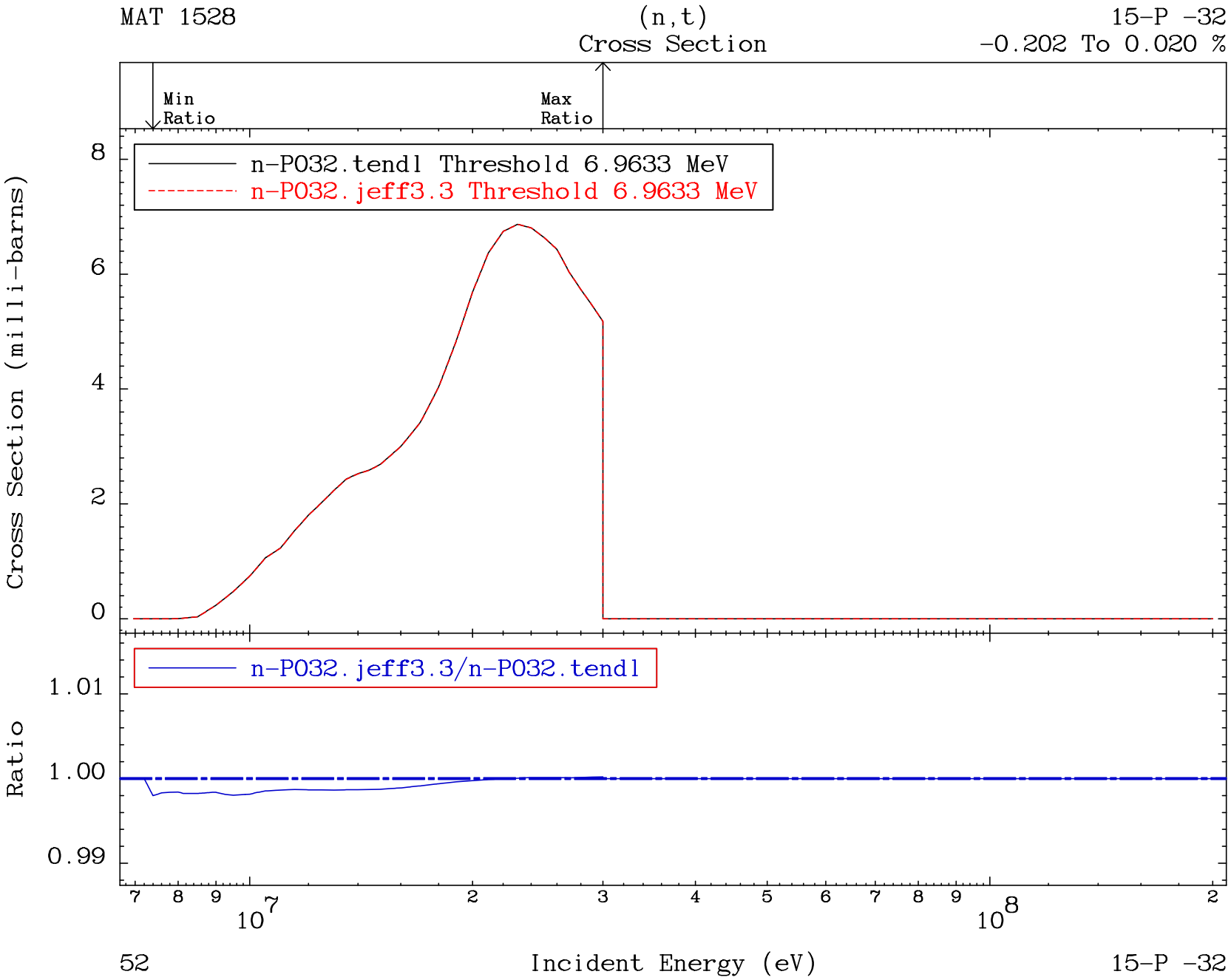

MAT 1528
MT= 80 (n,n') Level
Cross Section
15-P -32
-0.331 To 0.553 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 4.3369 MeV
n-P032.jeff3.3 Threshold 4.3369 MeV
Cross Section (milli-barns)
16
12
8
4
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
15-P -32

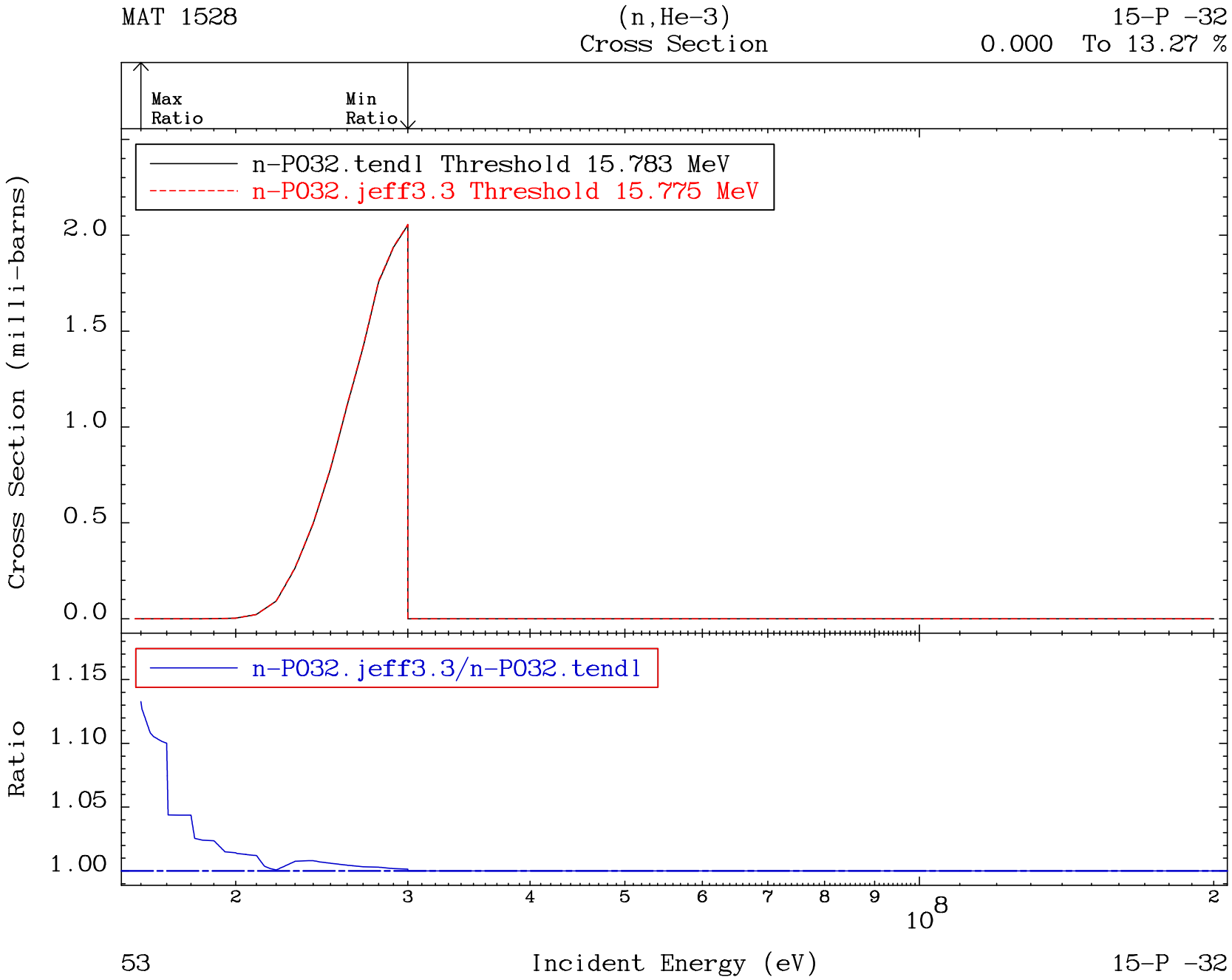

MAT 1528
(n,n') Continuum
Cross Section
15-P -32
-0.147 To 0.023 %
Min
Ratio
Max
Ratio
n-P032.tendl Threshold 4.3369 MeV
n-P032.jeff3.3 Threshold 4.3369 MeV
Cross Section (milli-barns)
800
600
400
200
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
15-P -32

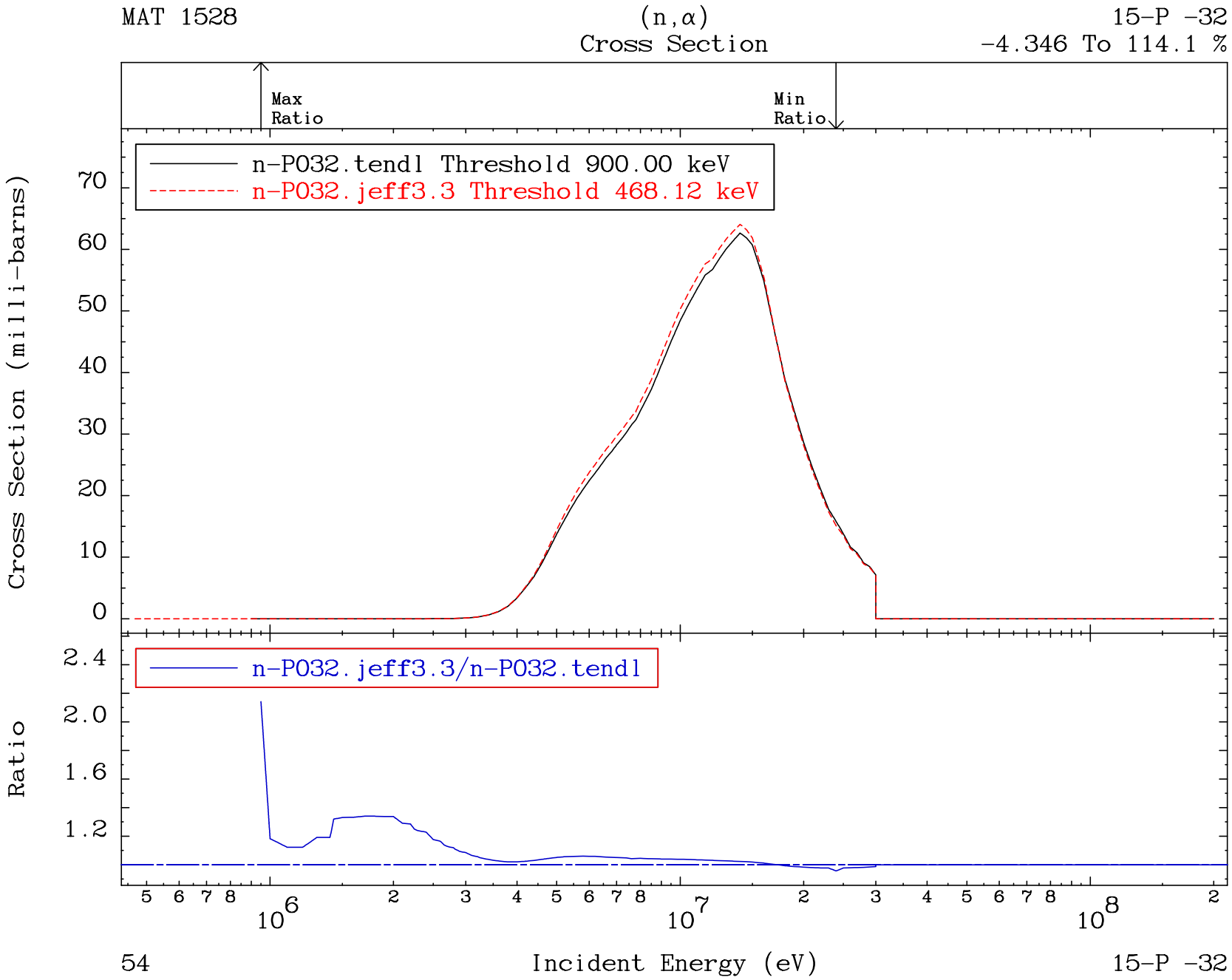

MAT 1528
(n,γ)
Cross Section
15-P -32
-99.97 To 9999. %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
49
15-P -32

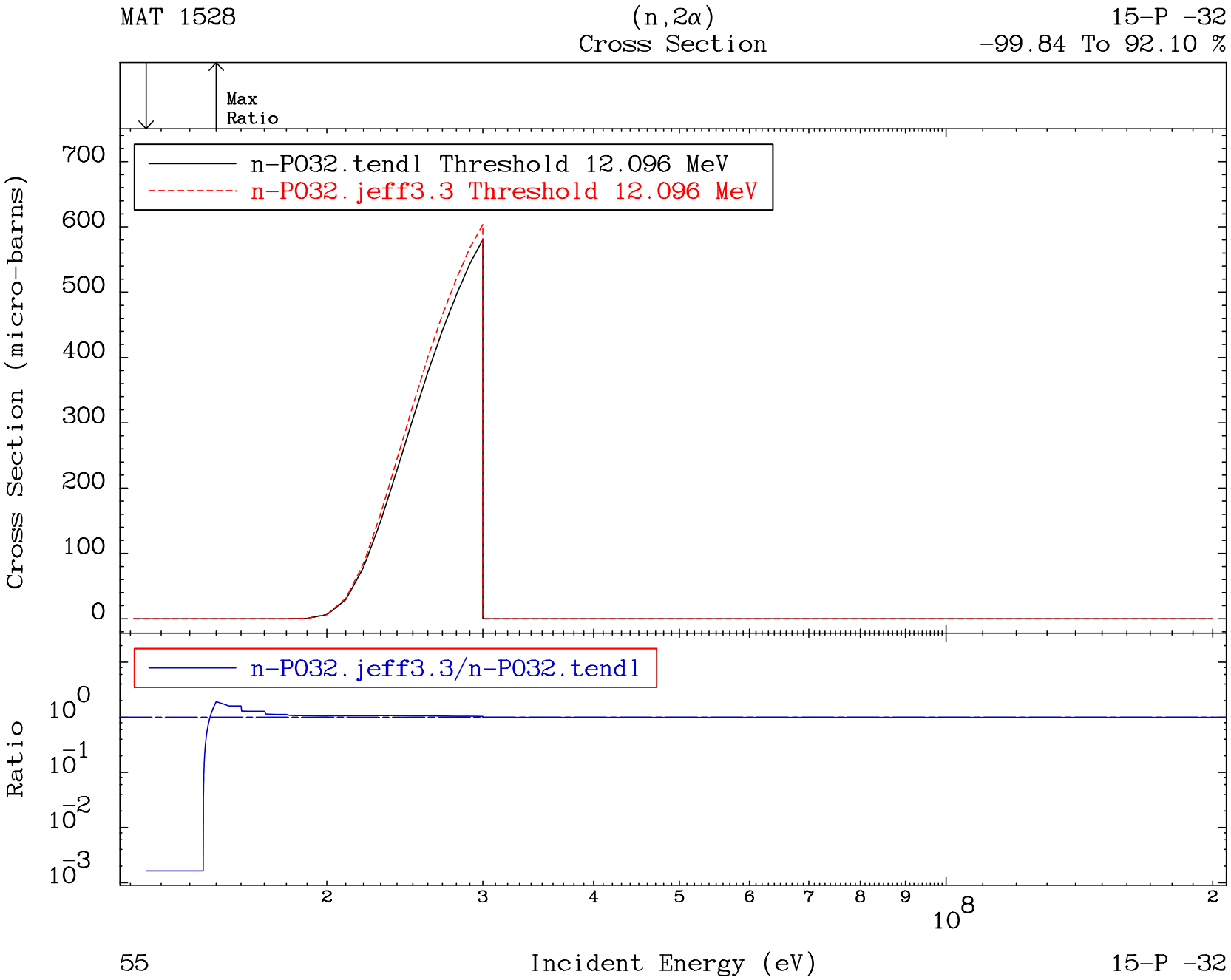

MAT 1528
(n,p)
Cross Section
15-P -32
-3.443 To 0.688 %
Max Ratio
Min Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
1.00
0.98
Incident Energy (eV)
50
15-P -32

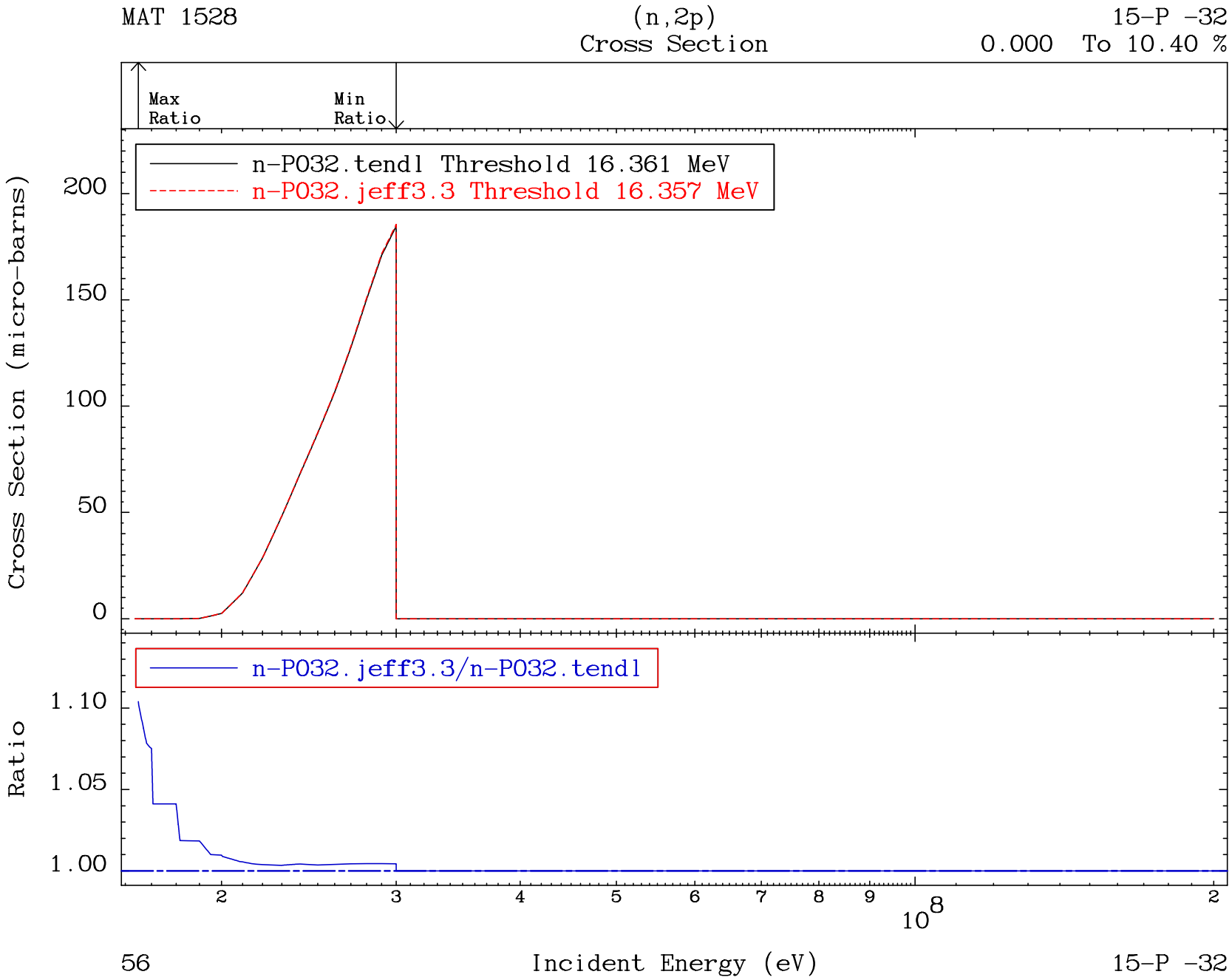

MAT 1528
(n,d)
Cross Section
15-P -32
-0.198 To 0.011 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 6.6228 MeV
n-P032.jeff3.3 Threshold 6.6228 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
51
Incident Energy (eV)
15-P -32

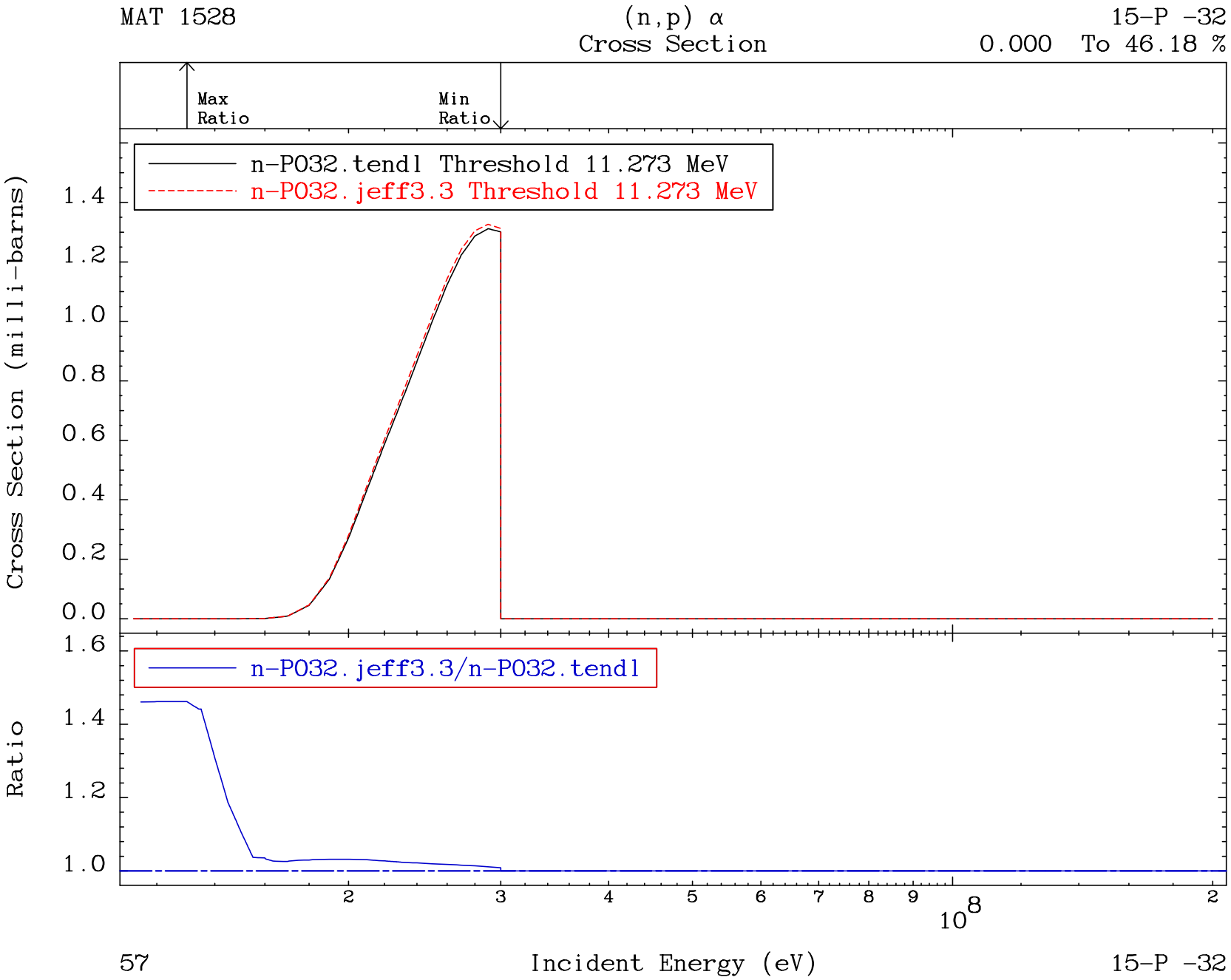

MAT 1528
(n,t)
Cross Section
15-P -32
-0.202 To 0.020 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 6.9633 MeV
n-P032.jeff3.3 Threshold 6.9633 MeV
Cross Section (milli-barns)
0
2
4
6
8
n-P032.jeff3.3/n-P032.tendl
Ratio
0.99
1.00
1.01
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
52
Incident Energy (eV)
15-P -32

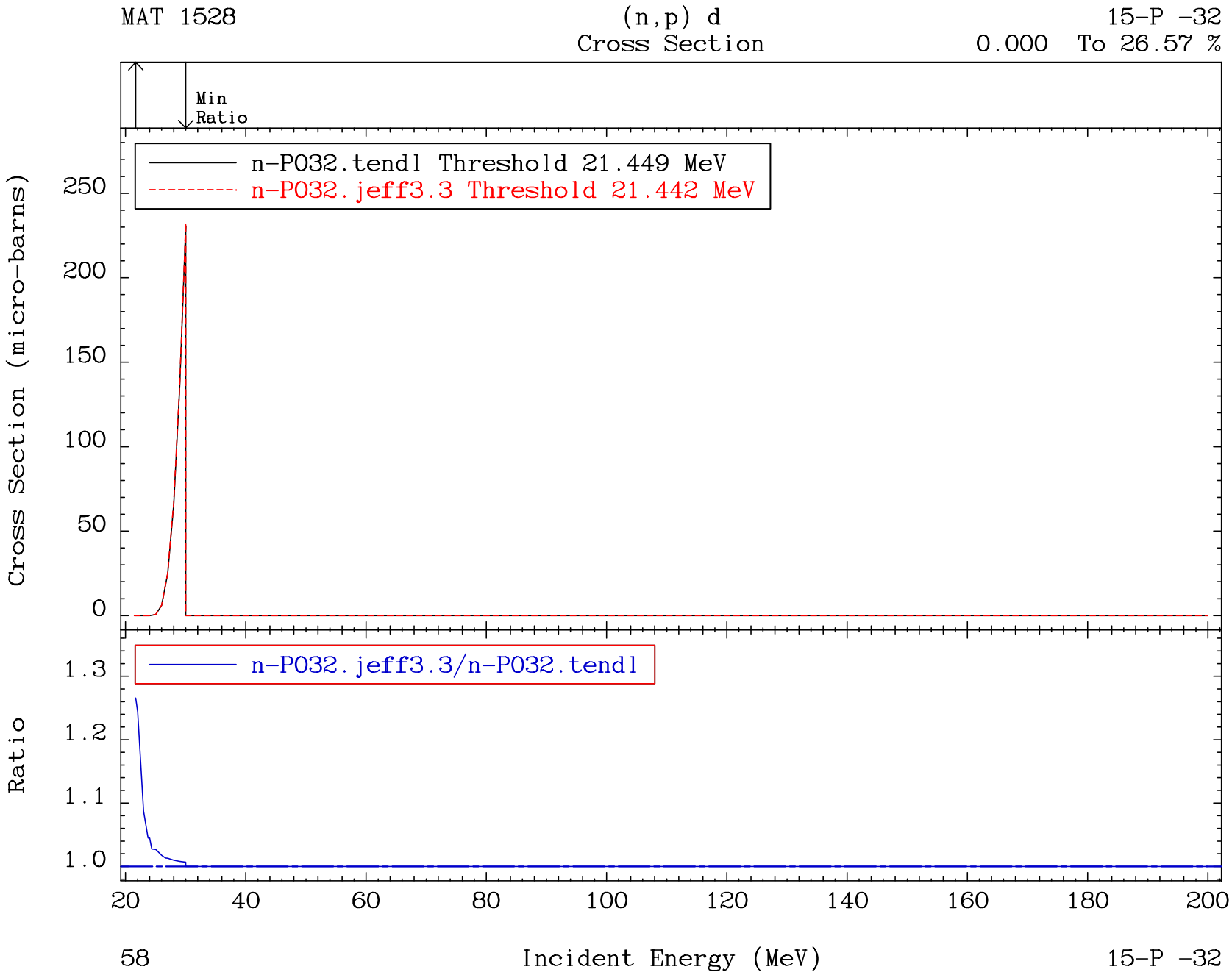

MAT 1528
(n,He-3)
Cross Section
15-P -32
0.000 To 13.27 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 15.783 MeV
n-P032.jeff3.3 Threshold 15.775 MeV
Cross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.15
1.10
1.05
1.00
2
3
4
5
6
7
8
9
10^8
2
53
Incident Energy (eV)
15-P -32

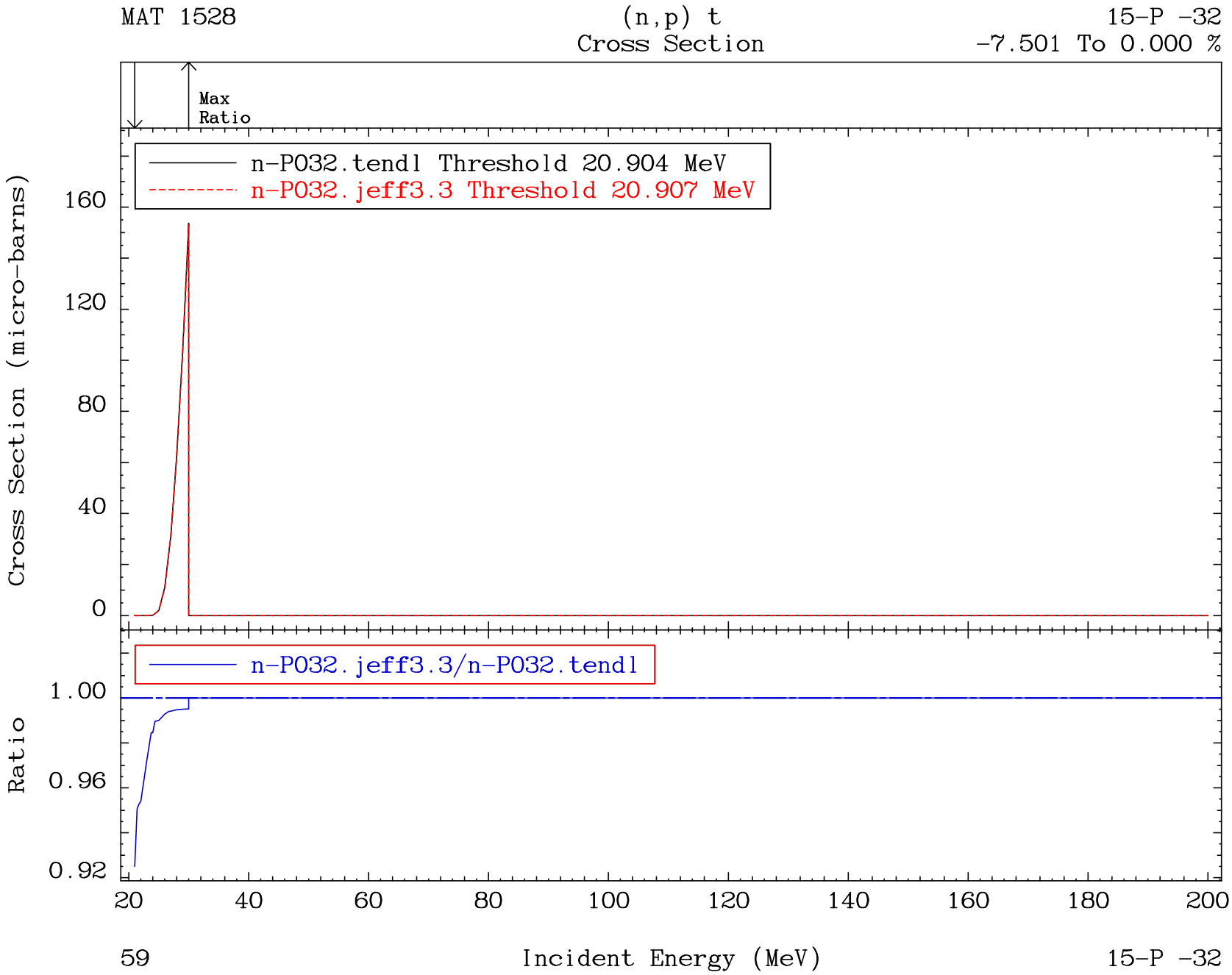

MAT 1528
(n,α)
Cross Section
15-P -32
-4.346 To 114.1 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 900.00 keV
n-P032.jeff3.3 Threshold 468.12 keV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-P032.jeff3.3/n-P032.tendl
Ratio
2.4
2.0
1.6
1.2
5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
54
Incident Energy (eV)
15-P -32

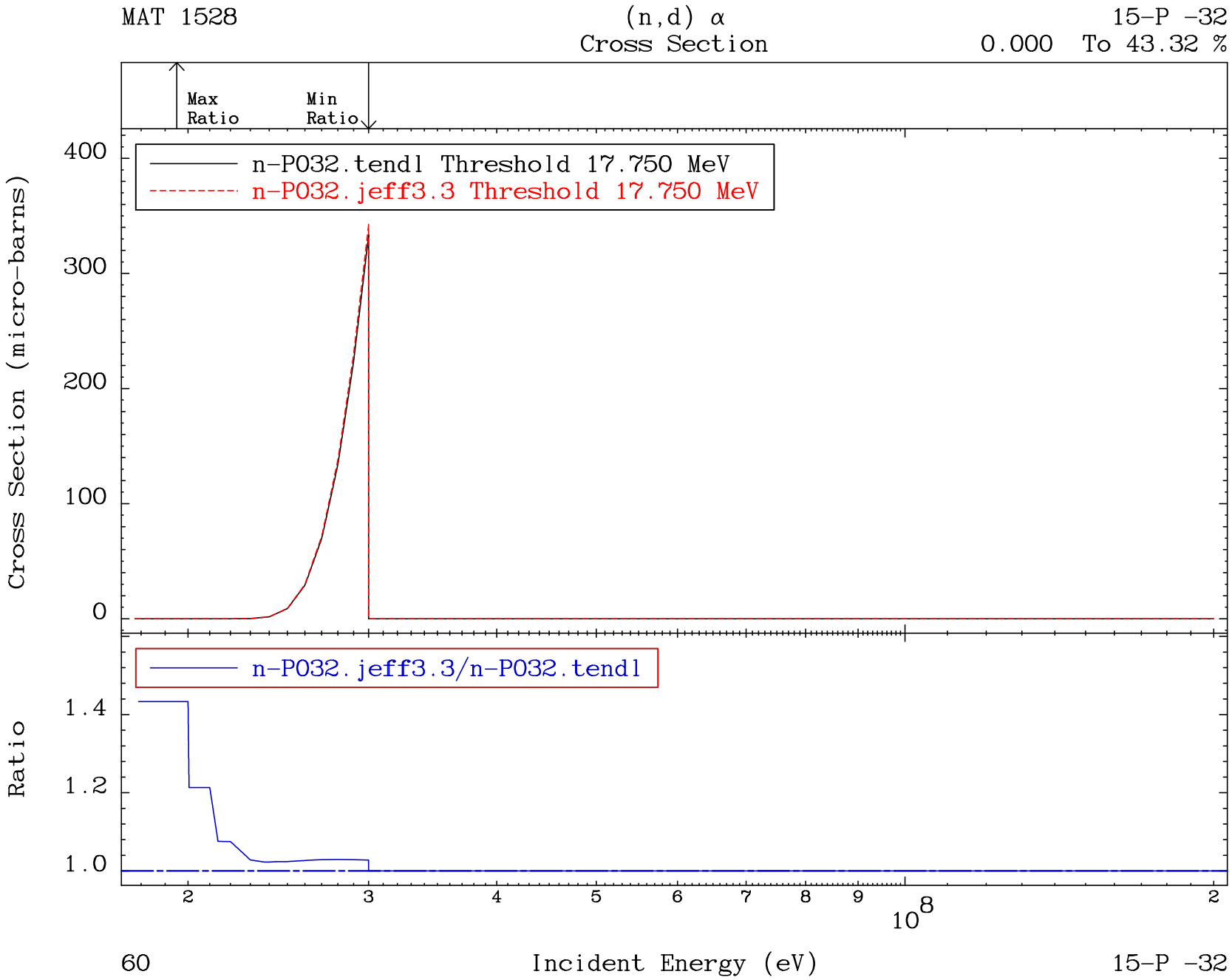

MAT 1528
(n,2α)
Cross Section
15-P -32
-99.84 To 92.10 %
Max
Ratio
n-P032.tendl Threshold 12.096 MeV
n-P032.jeff3.3 Threshold 12.096 MeV
Cross Section (micro-barns)
700
600
500
400
300
200
100
0
n-P032.jeff3.3/n-P032.tendl
Ratio
10^0
10^-1
10^-2
10^-3
2
3
4
5
6
7
8
9
10^8
2
55
Incident Energy (eV)
15-P -32

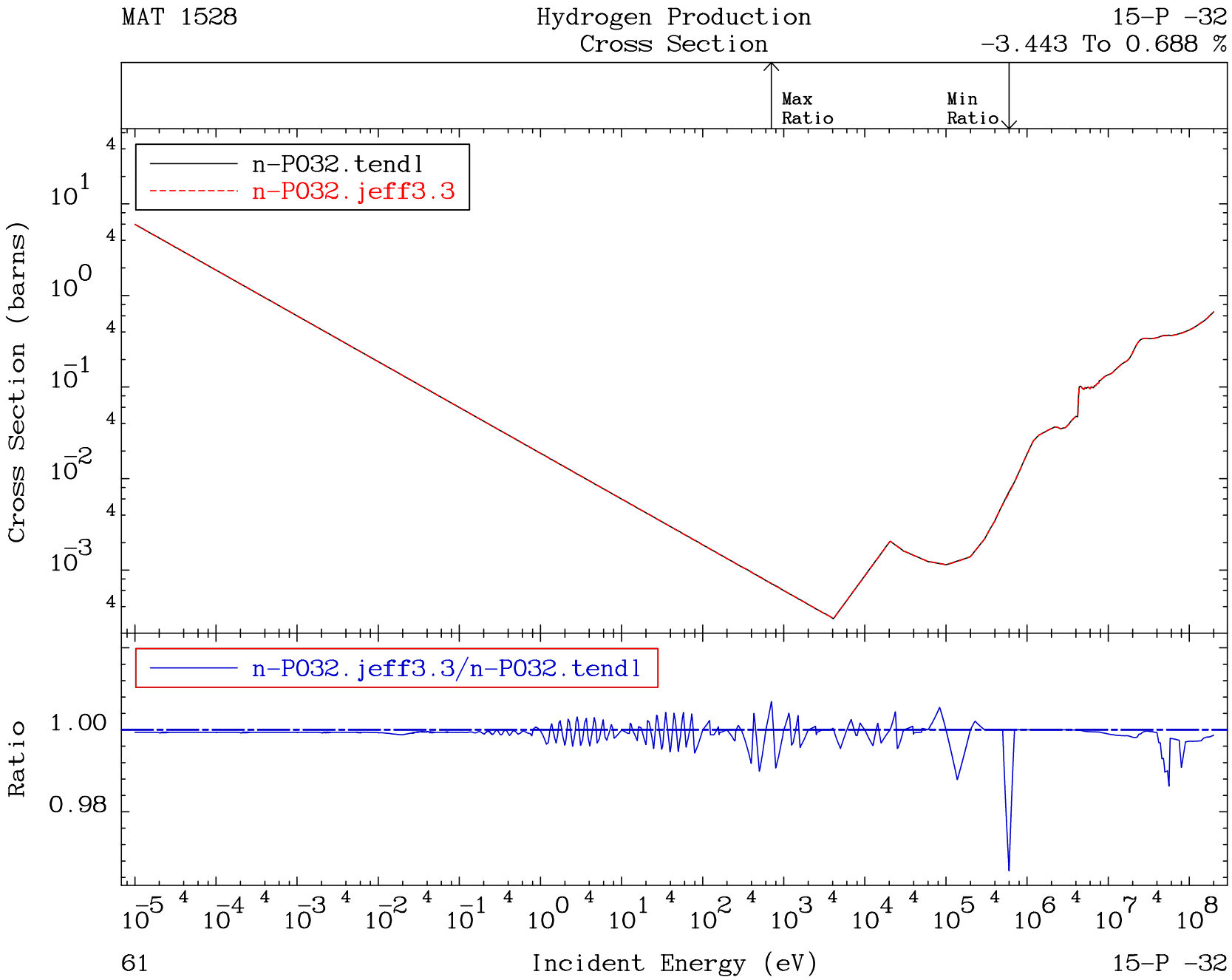

MAT 1528
(n,2p)
Cross Section
15-P -32
0.000 To 10.40 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 16.361 MeV
n-P032.jeff3.3 Threshold 16.357 MeV
Cross Section (micro-barns)
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.10
1.05
1.00
2
3
4
5
6
7
8
9
10^8
2
56
Incident Energy (eV)
15-P -32

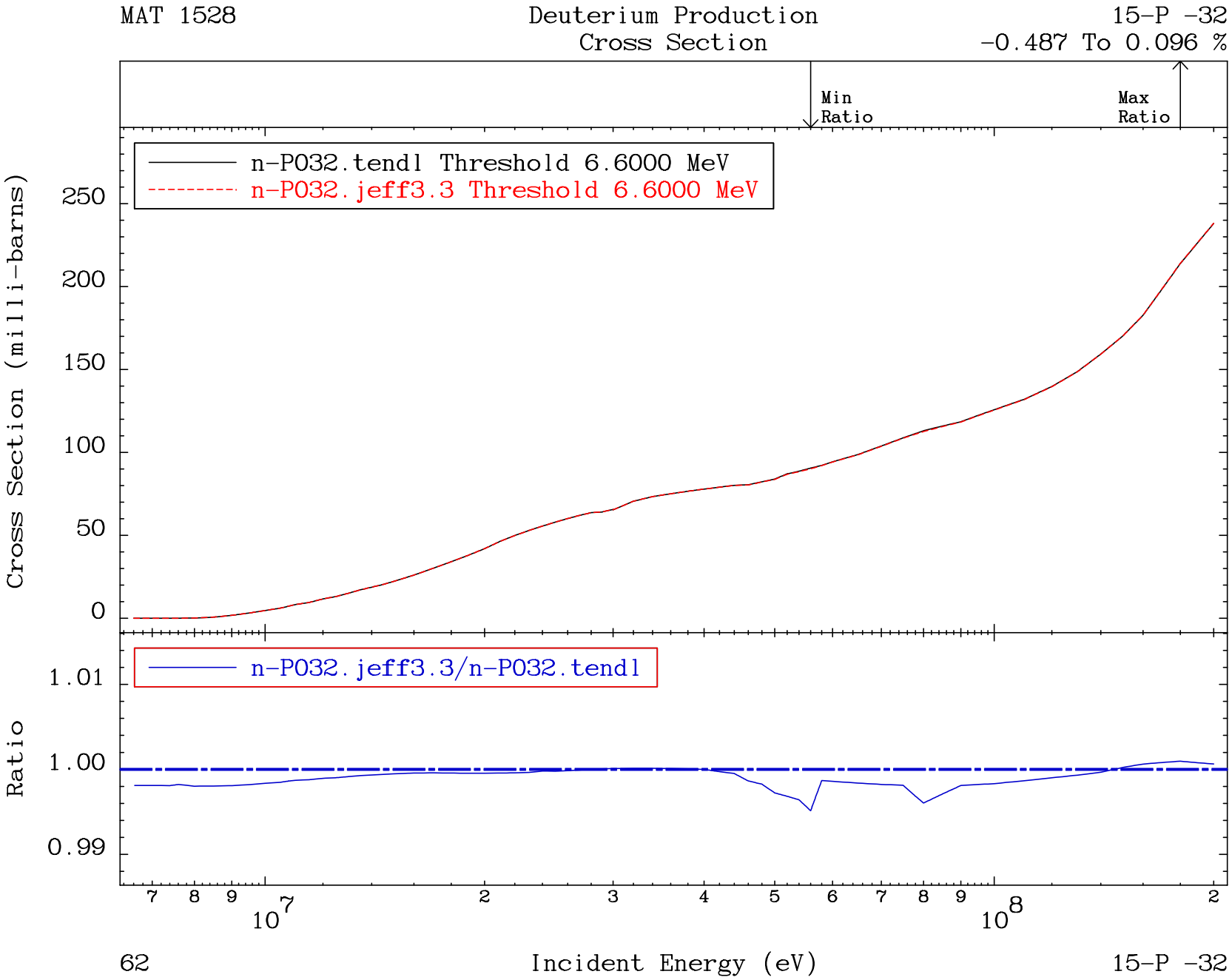

MAT 1528
(n,p) α
Cross Section
15-P -32
0.000 To 46.18 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 11.273 MeV
n-P032.jeff3.3 Threshold 11.273 MeV
Cross Section (milli-barns)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
n-P032.jeff3.3/n-P032.tendl
Ratio
1.0
1.2
1.4
1.6
2
3
4
5
6
7
8
9
10^8
2
57
Incident Energy (eV)
15-P -32

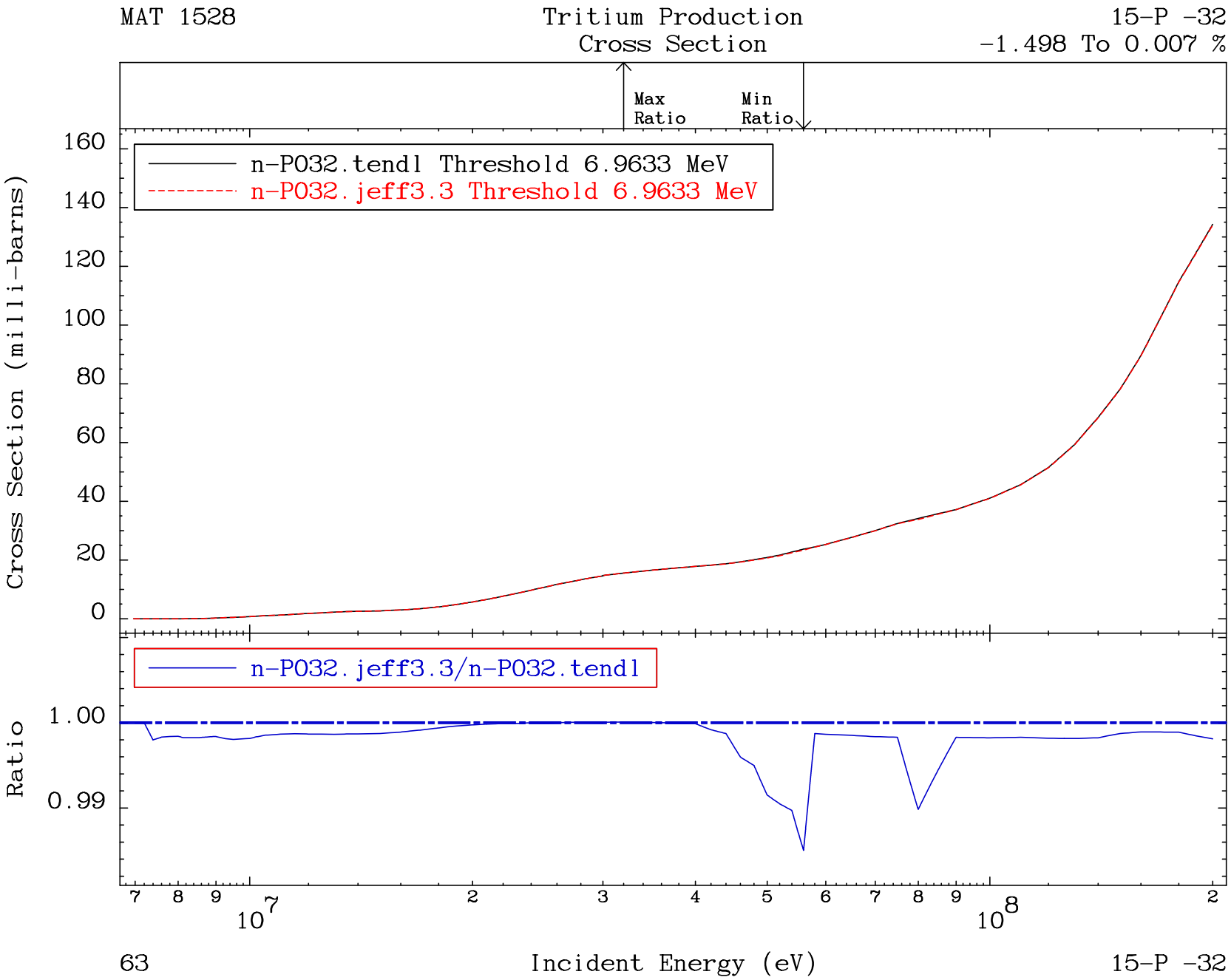

MAT 1528
(n,p) d
Cross Section
15-P -32
0.000 To 26.57 %
Min
Ratio
n-P032.tendl Threshold 21.449 MeV
n-P032.jeff3.3 Threshold 21.442 MeV
Cross Section (micro-barns)
250
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.3
1.2
1.1
1.0
20
40
60
80
100
120
140
160
180
200
58
Incident Energy (MeV)
15-P -32

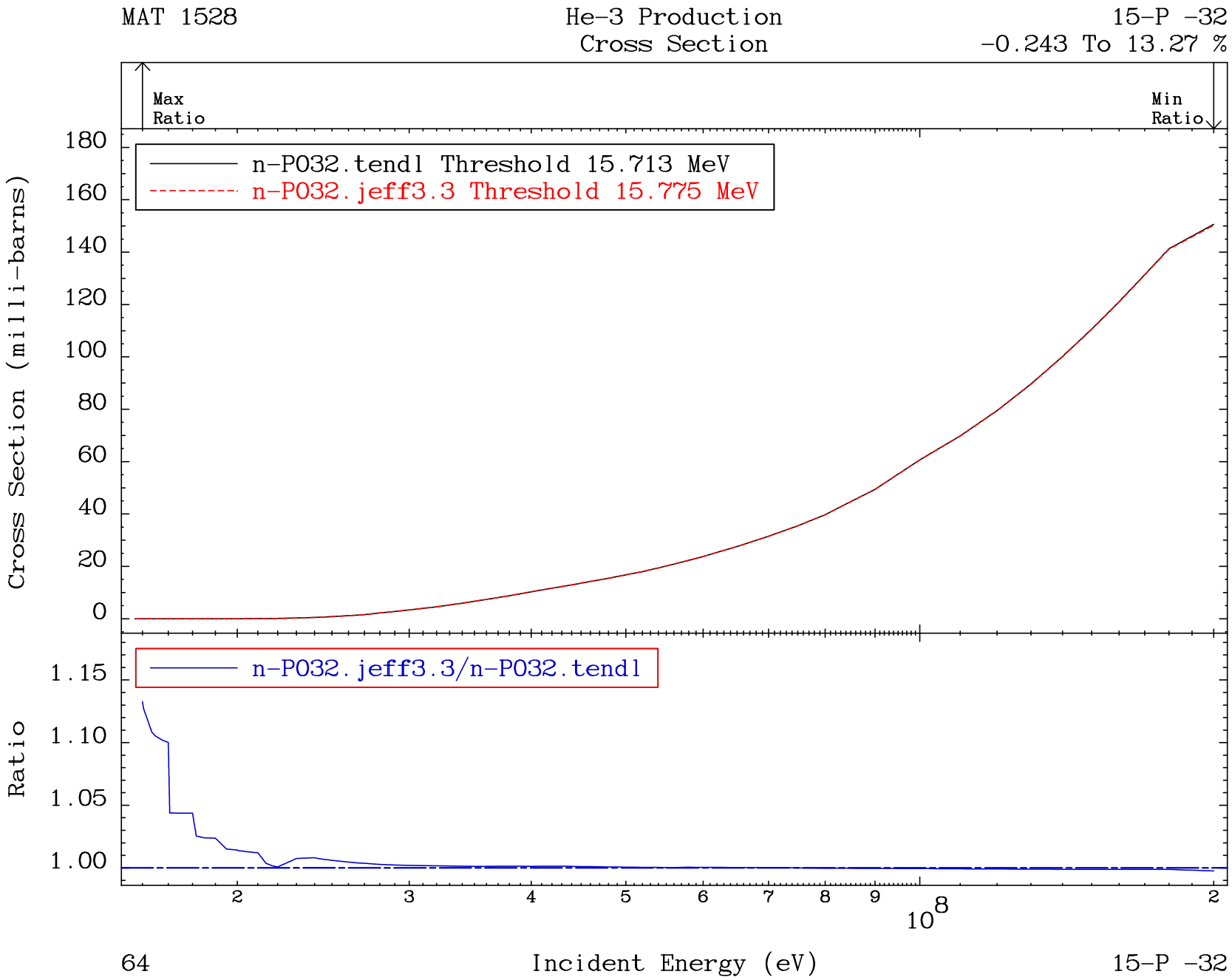

MAT 1528
(n,p) t
Cross Section
15-P -32
-7.501 To 0.000 %
Max
Ratio
n-P032.tendl Threshold 20.904 MeV
n-P032.jeff3.3 Threshold 20.907 MeV
Cross Section (micro-barns)
160
120
80
40
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.00
0.96
0.92
20
40
60
80
100
120
140
160
180
200
59
Incident Energy (MeV)
15-P -32

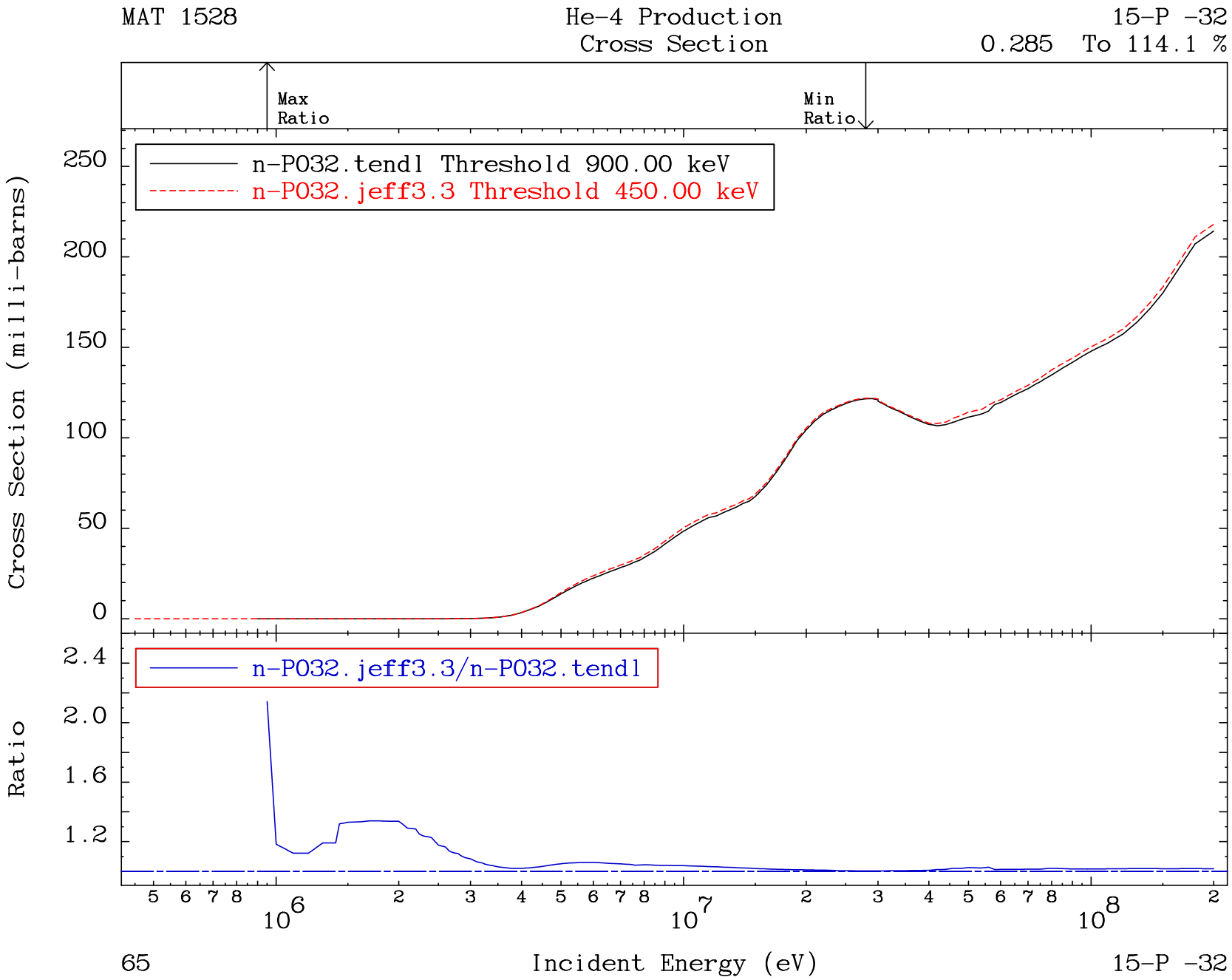

MAT 1528
(n,d) α
Cross Section
15-P -32
0.000 To 43.32 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 17.750 MeV
n-P032.jeff3.3 Threshold 17.750 MeV
Cross Section (micro-barns)
400
300
200
100
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
15-P -32

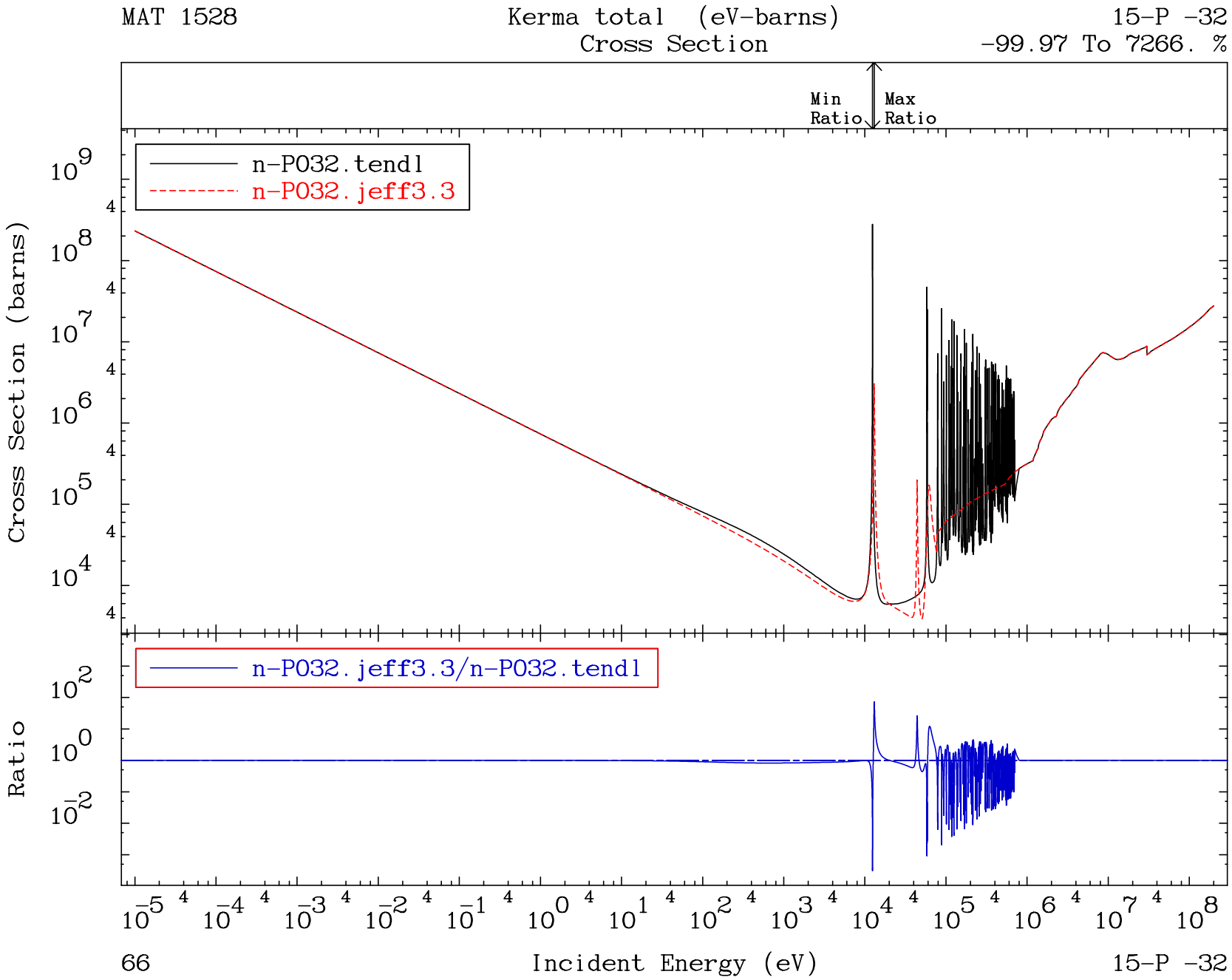

MAT 1528
Hydrogen Production
Cross Section
15-P -32
-3.443 To 0.688 %
Max Ratio
Min Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
1.00
0.98
61
Incident Energy (eV)
15-P -32

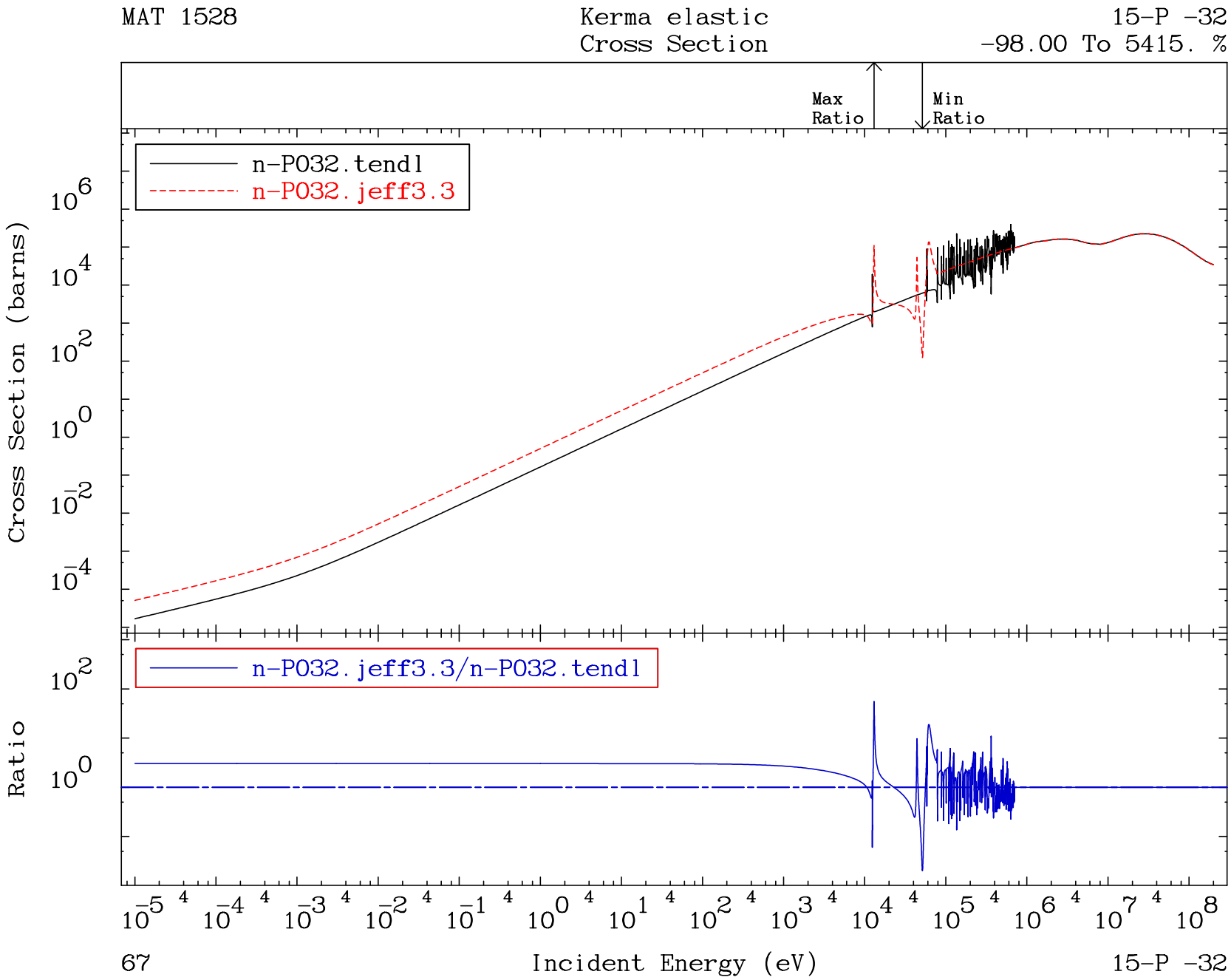

MAT 1528
Deuterium Production
Cross Section
15-P -32
-0.487 To 0.096 %
Min Ratio
Max Ratio
n-P032.tendl Threshold 6.6000 MeV
n-P032.jeff3.3 Threshold 6.6000 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.01
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
62
Incident Energy (eV)
15-P -32

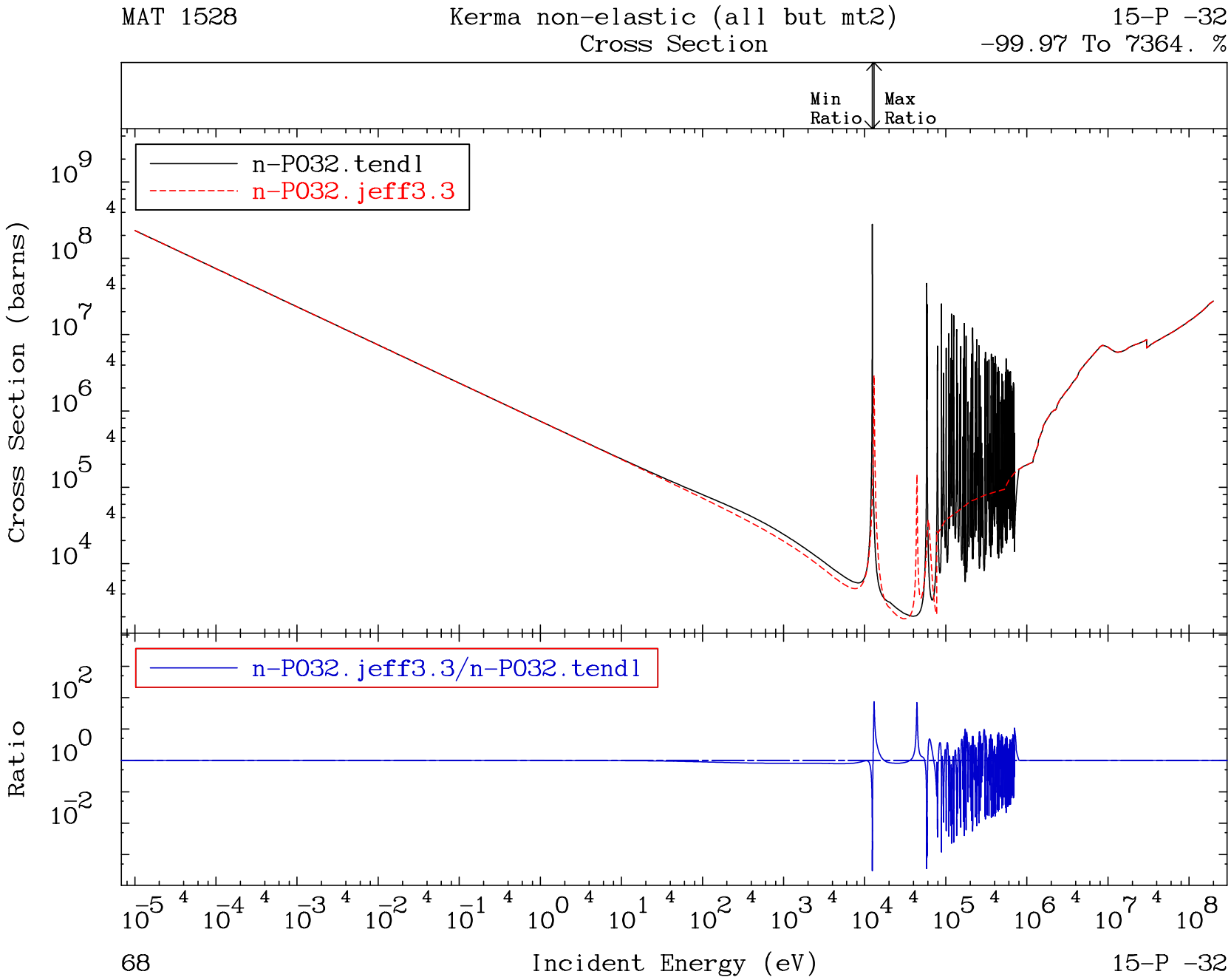

MAT 1528
Tritium Production
Cross Section
15-P -32
-1.498 To 0.007 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 6.9633 MeV
n-P032.jeff3.3 Threshold 6.9633 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.00
0.99
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
63
Incident Energy (eV)
15-P -32

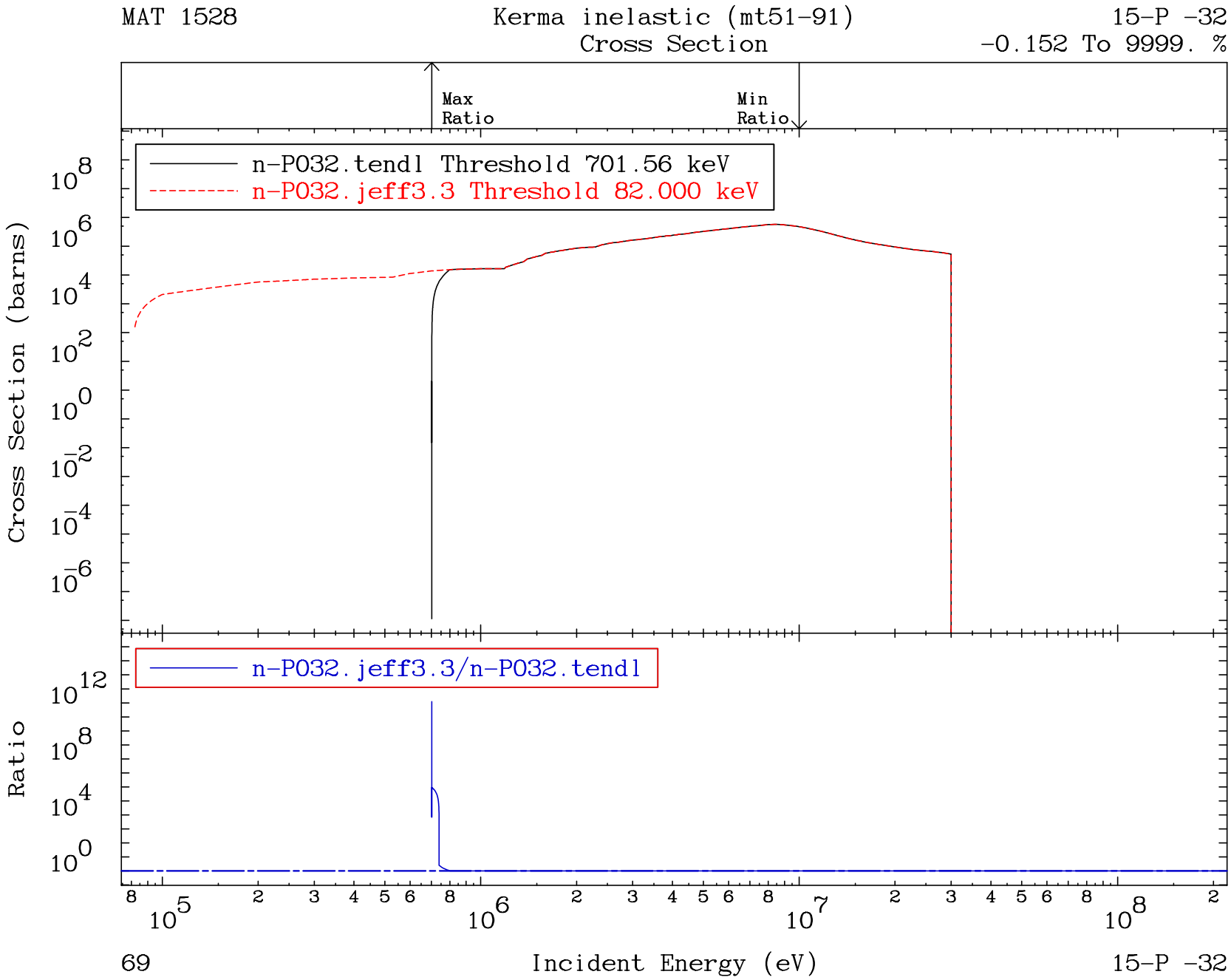

MAT 1528
He-3 Production
Cross Section
15-P -32
-0.243 To 13.27 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 15.713 MeV
n-P032.jeff3.3 Threshold 15.775 MeV
Cross Section (milli-barns)
180
160
140
120
100
80
60
40
20
0
n-P032.jeff3.3/n-P032.tendl
Ratio
1.15
1.10
1.05
1.00
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
15-P -32

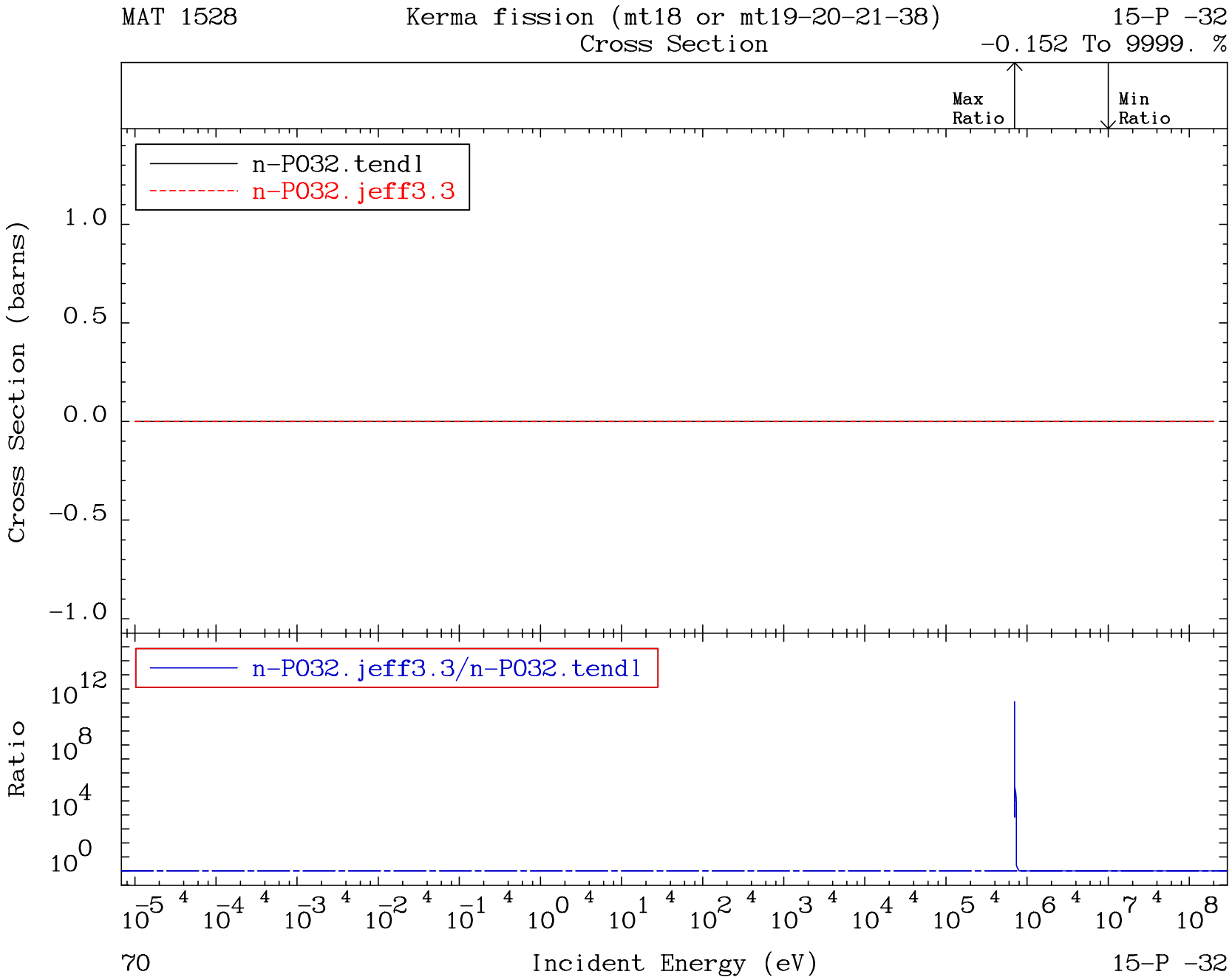

MAT 1528
He-4 Production
Cross Section
15-P -32
0.285 To 114.1 %
Max Ratio
Min Ratio
n-P032.tendl Threshold 900.00 keV
n-P032.jeff3.3 Threshold 450.00 keV
Cross Section (milli-barns)
250
200
150
100
50
0
n-P032.jeff3.3/n-P032.tendl
Ratio
2.4
2.0
1.6
1.2
5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
65
Incident Energy (eV)
15-P -32

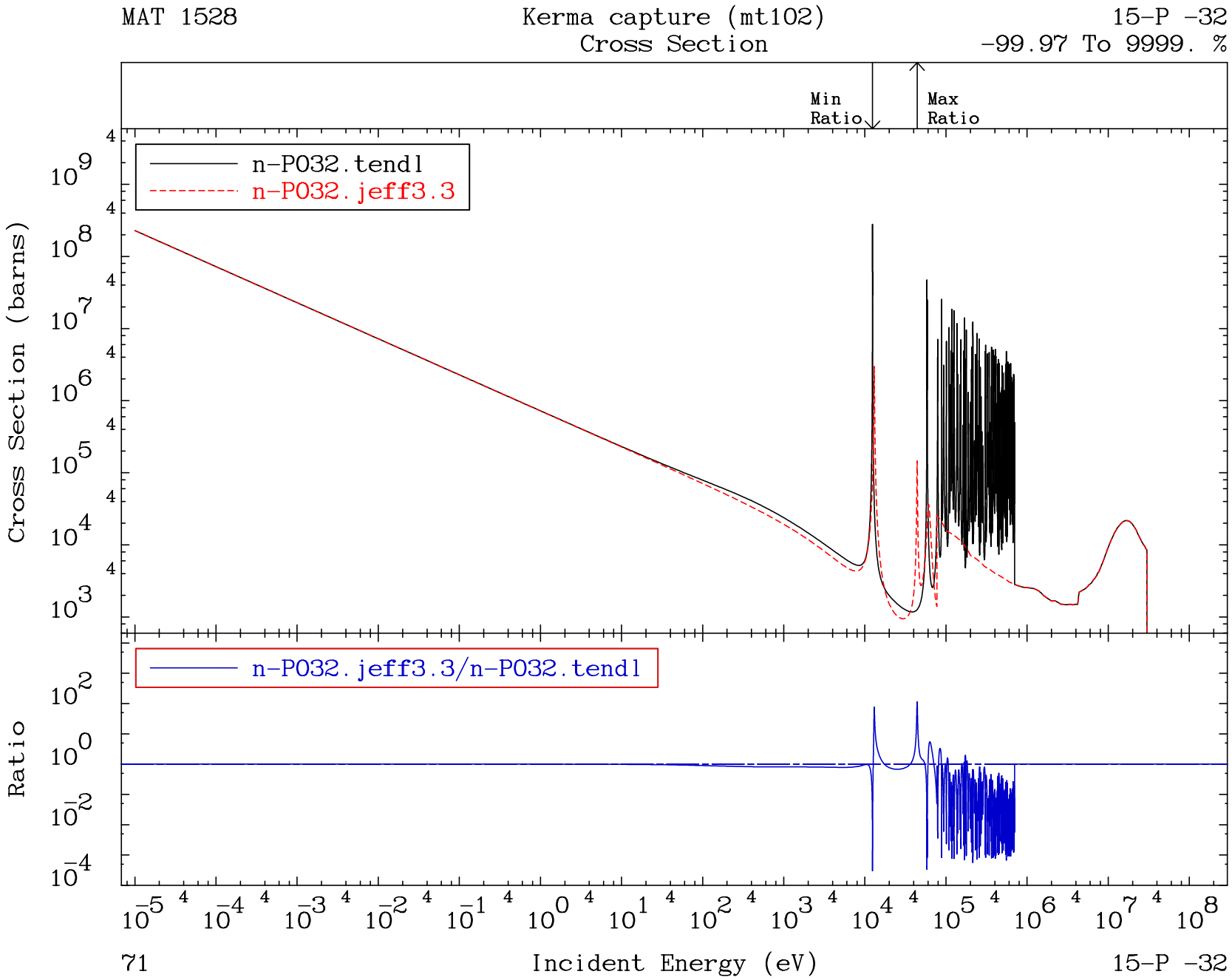

MAT 1528
Kerma total (eV-barns)
Cross Section
15-P -32
-99.97 To 7266. %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
66
15-P -32

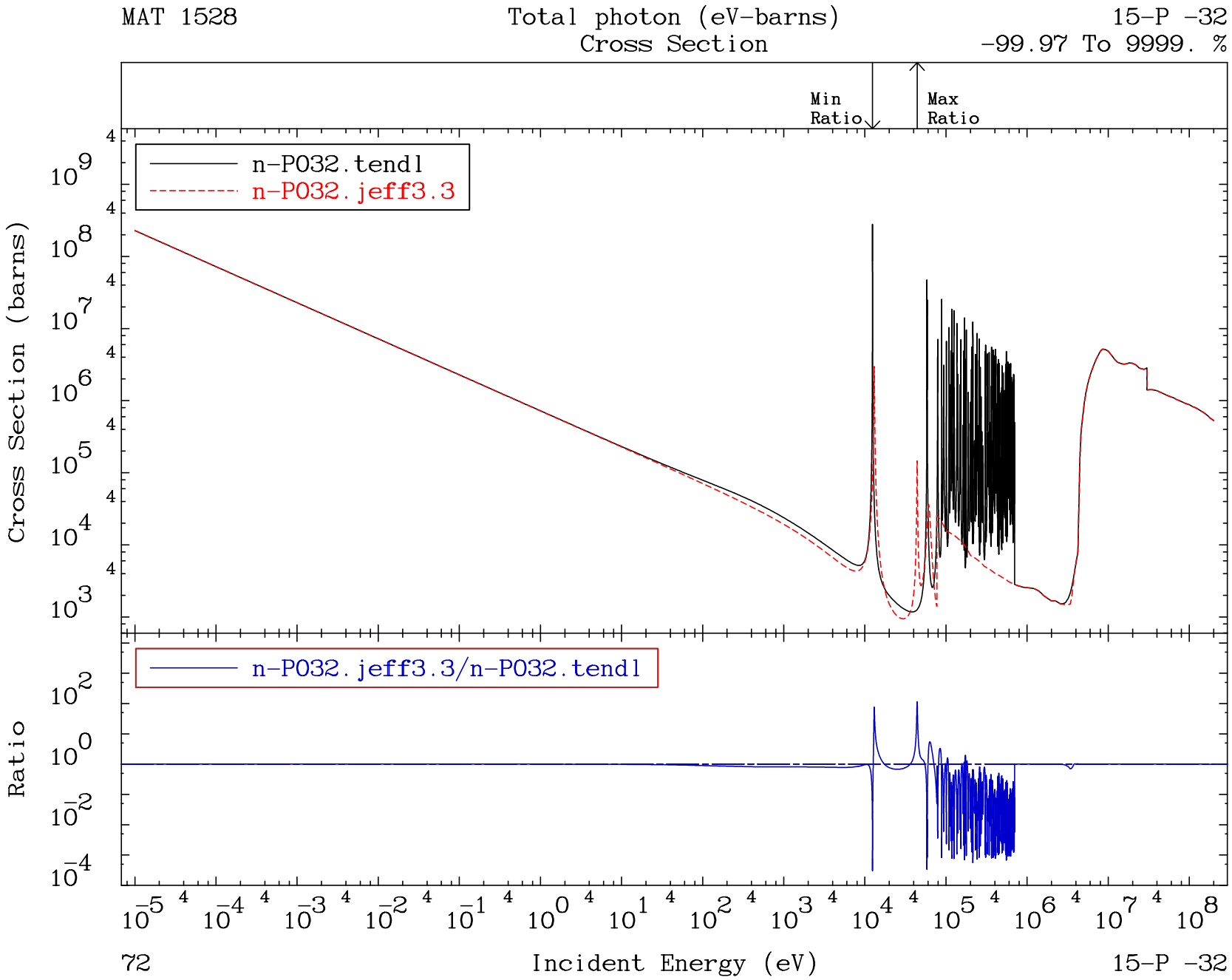

MAT 1528
Kerma elastic
Cross Section
15-P -32
-98.00 To 5415. %
Max
Ratio
Min
Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
67
Incident Energy (eV)
15-P -32

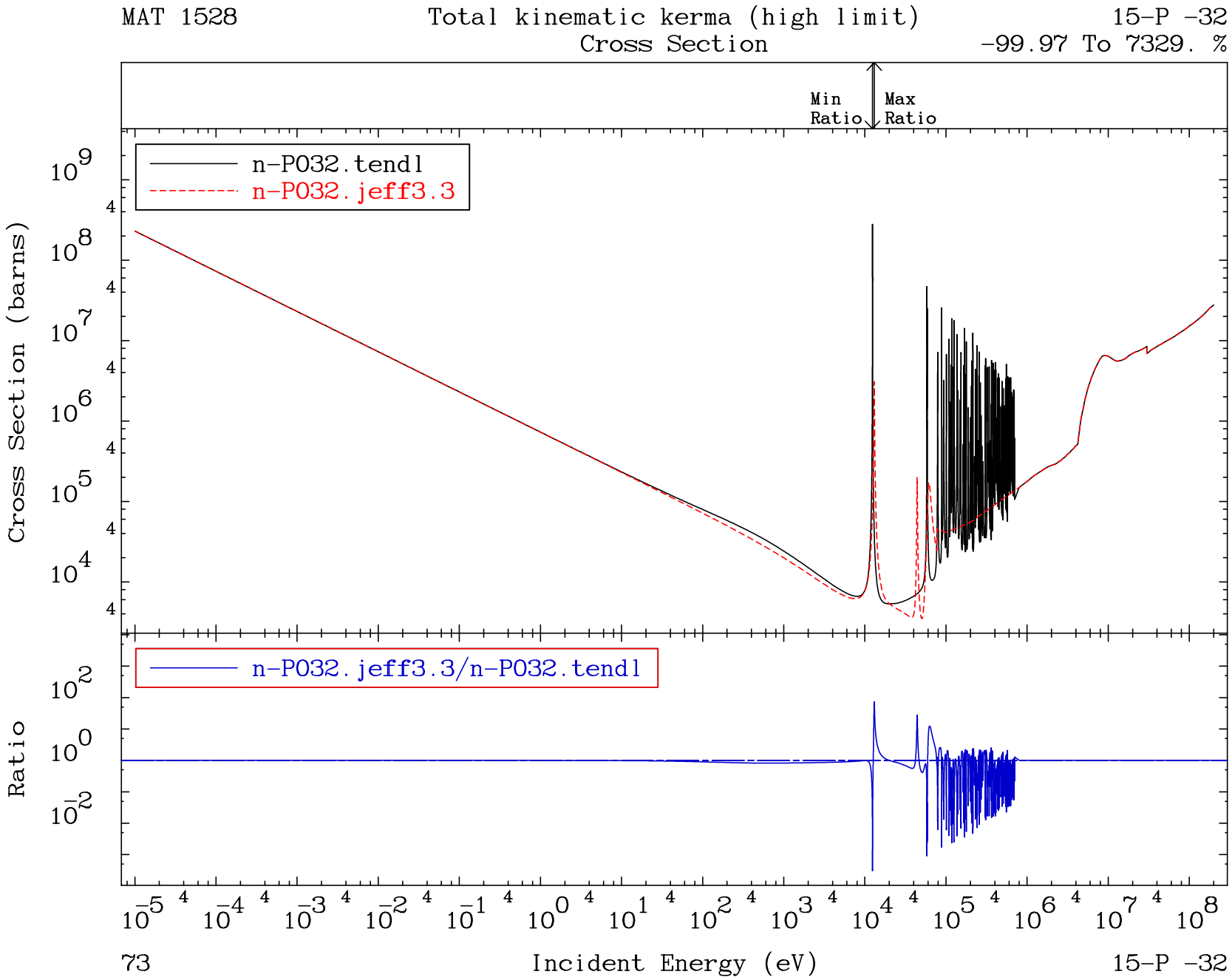

MAT 1528
Kerma non-elastic (all but mt2)
Cross Section
15-P -32
-99.97 To 7364. %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
68
15-P -32

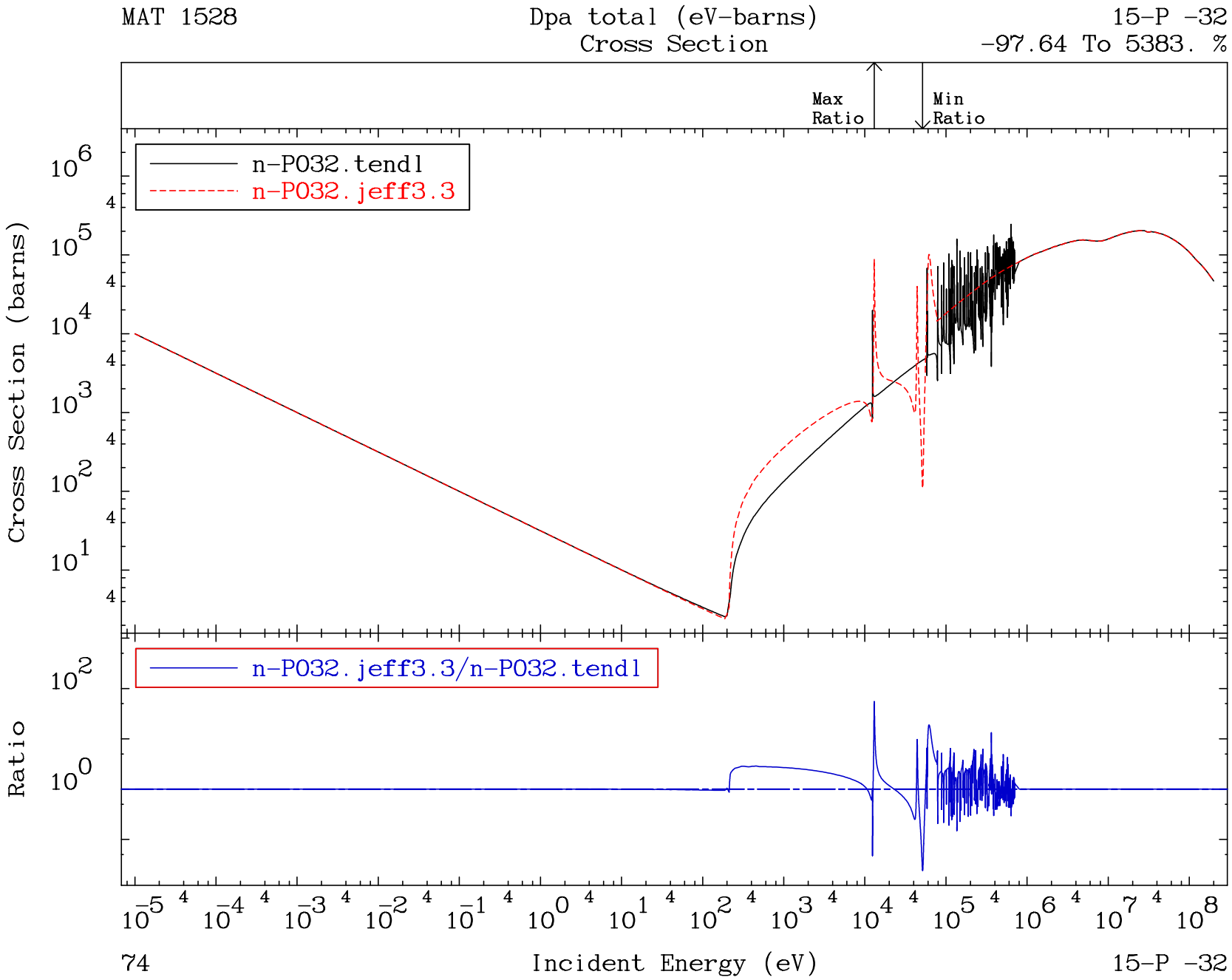

MAT 1528
Kerma inelastic (mt51-91)
Cross Section
15-P -32
-0.152 To 9999. %
Max Ratio
Min Ratio
n-P032.tendl Threshold 701.56 keV
n-P032.jeff3.3 Threshold 82.000 keV
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
69
15-P -32

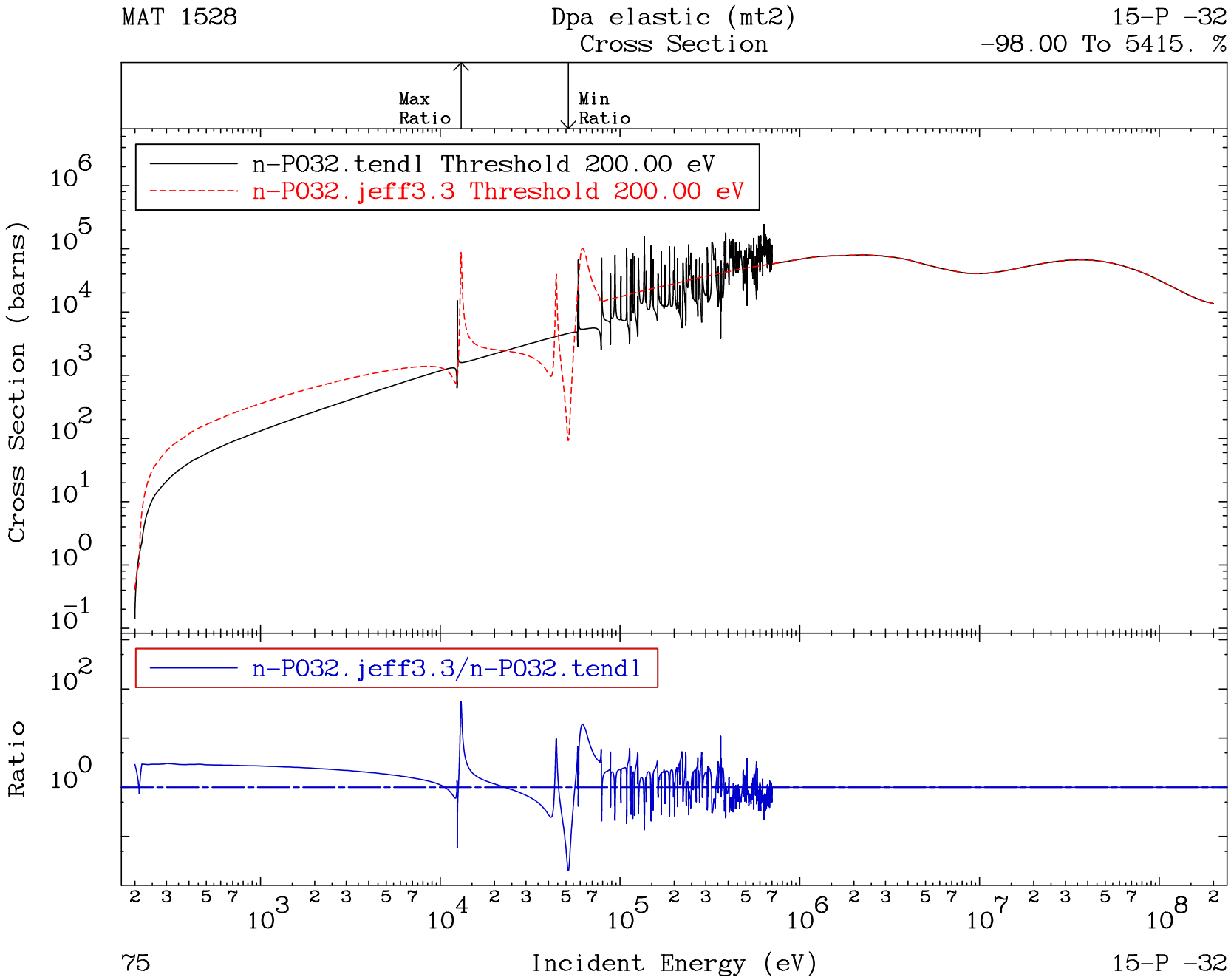

MAT 1528
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
15-P -32
-0.152 To 9999. %
Max Ratio
Min Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-P032.jeff3.3/n-P032.tendl
Ratio
10^12
10^8
10^4
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
70
Incident Energy (eV)
15-P -32

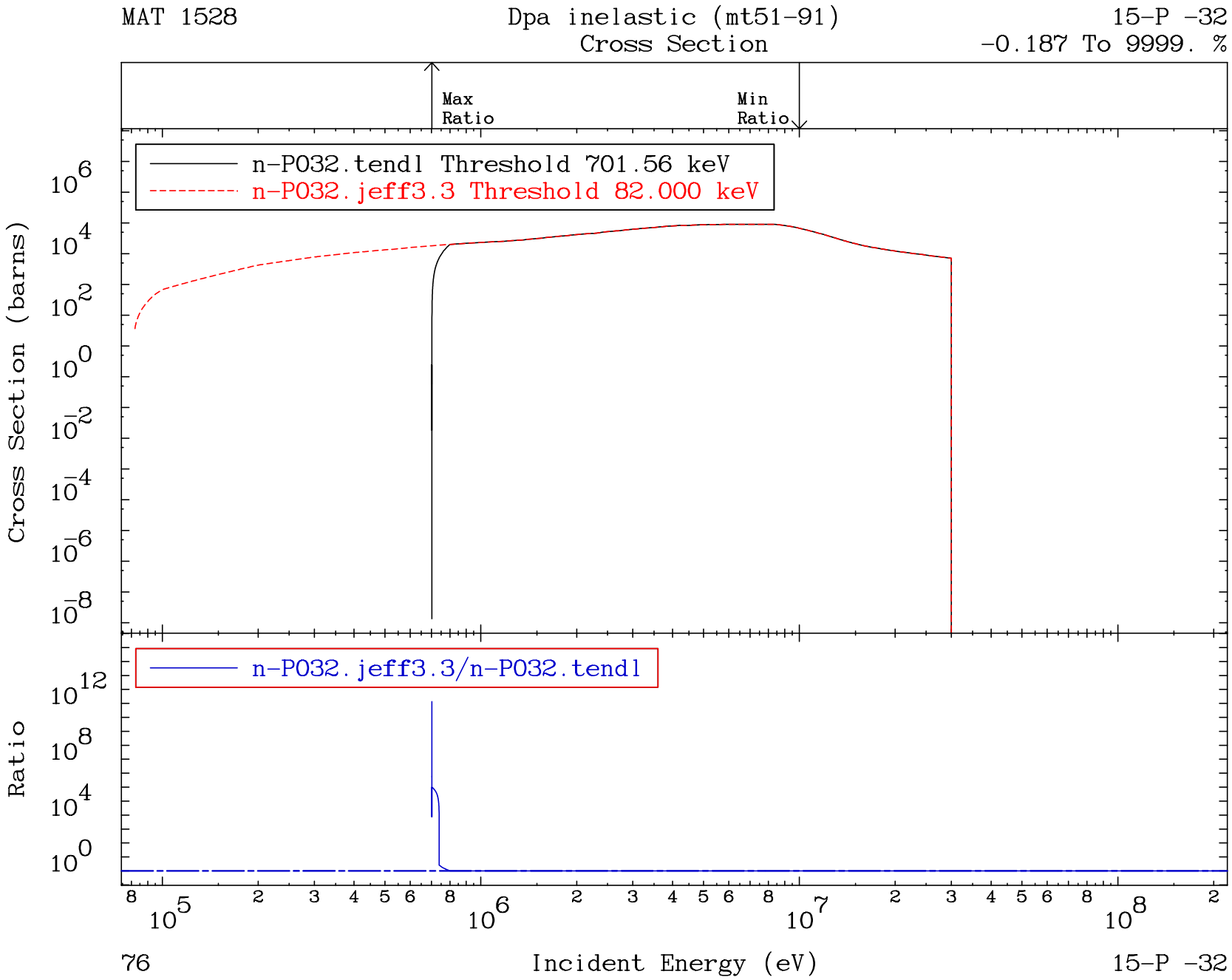

MAT 1528
Kerma capture (mt102)
Cross Section
15-P -32
-99.97 To 9999. %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
71
15-P -32

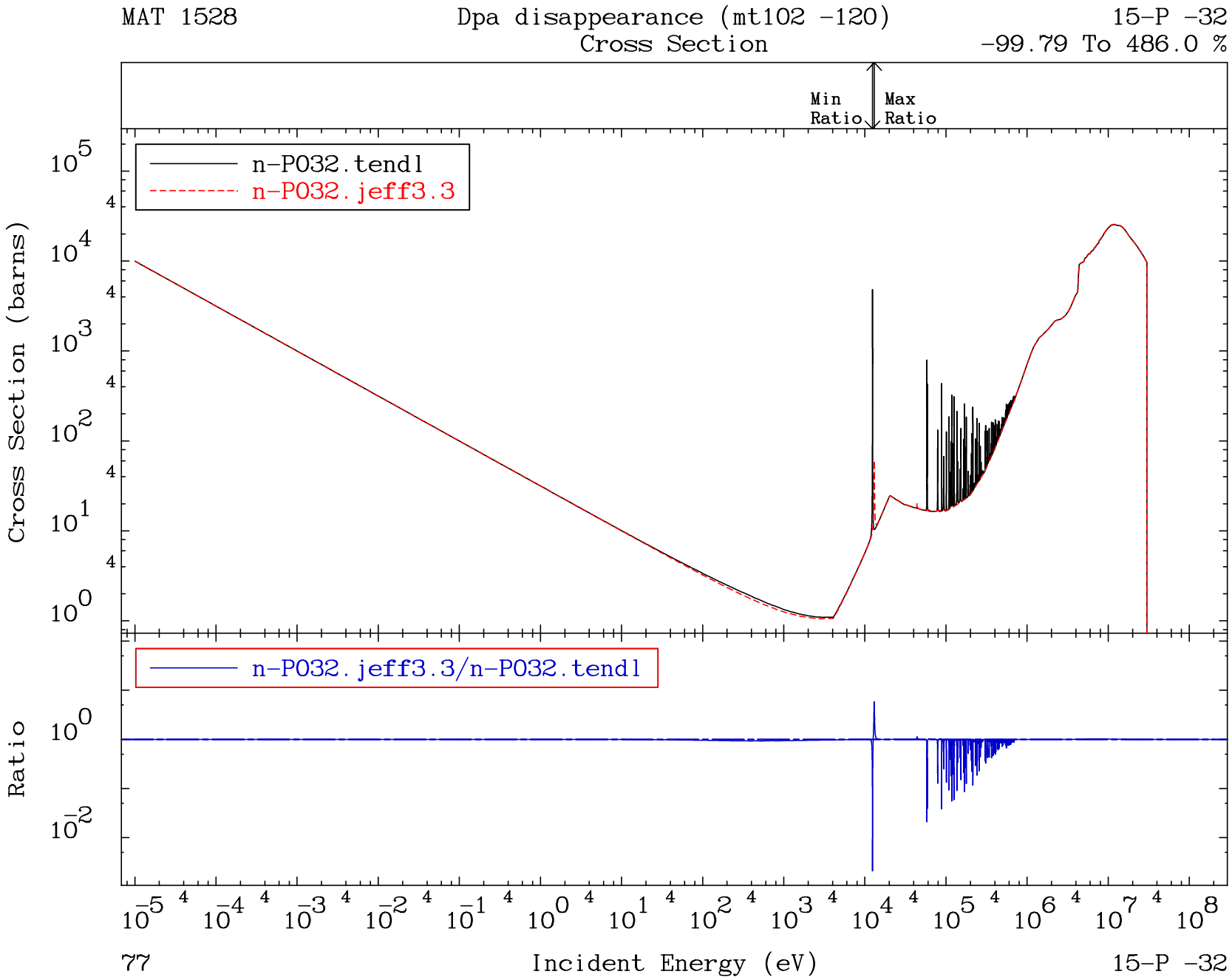

MAT 1528
Total photon (eV-barns)
Cross Section
15-P -32
-99.97 To 9999. %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
72
15-P -32


MAT 1528
Total kinematic kerma (high limit)
Cross Section
15-P -32
-99.97 To 7329. %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
73
15-P -32


MAT 1528
Dpa total (eV-barns)
Cross Section
15-P -32
-97.64 To 5383. %
Max Ratio
Min Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
74
Incident Energy (eV)
15-P -32


MAT 1528
Dpa elastic (mt2)
Cross Section
15-P -32
-98.00 To 5415. %
Max Ratio
Min Ratio
n-P032.tendl Threshold 200.00 eV
n-P032.jeff3.3 Threshold 200.00 eV
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
75
15-P -32


MAT 1528
Dpa inelastic (mt51-91)
Cross Section
15-P -32
-0.187 To 9999. %
Max Ratio
Min Ratio
n-P032.tendl Threshold 701.56 keV
n-P032.jeff3.3 Threshold 82.000 keV
Cross Section (barns)
Ratio
n-P032.jeff3.3/n-P032.tendl
Incident Energy (eV)
76
15-P -32


MAT 1528
Dpa disappearance (mt102 -120)
Cross Section
15-P -32
-99.79 To 486.0 %
Min Ratio
Max Ratio
n-P032.tendl
n-P032.jeff3.3
Cross Section (barns)
n-P032.jeff3.3/n-P032.tendl
Ratio
Incident Energy (eV)
77
15-P -32