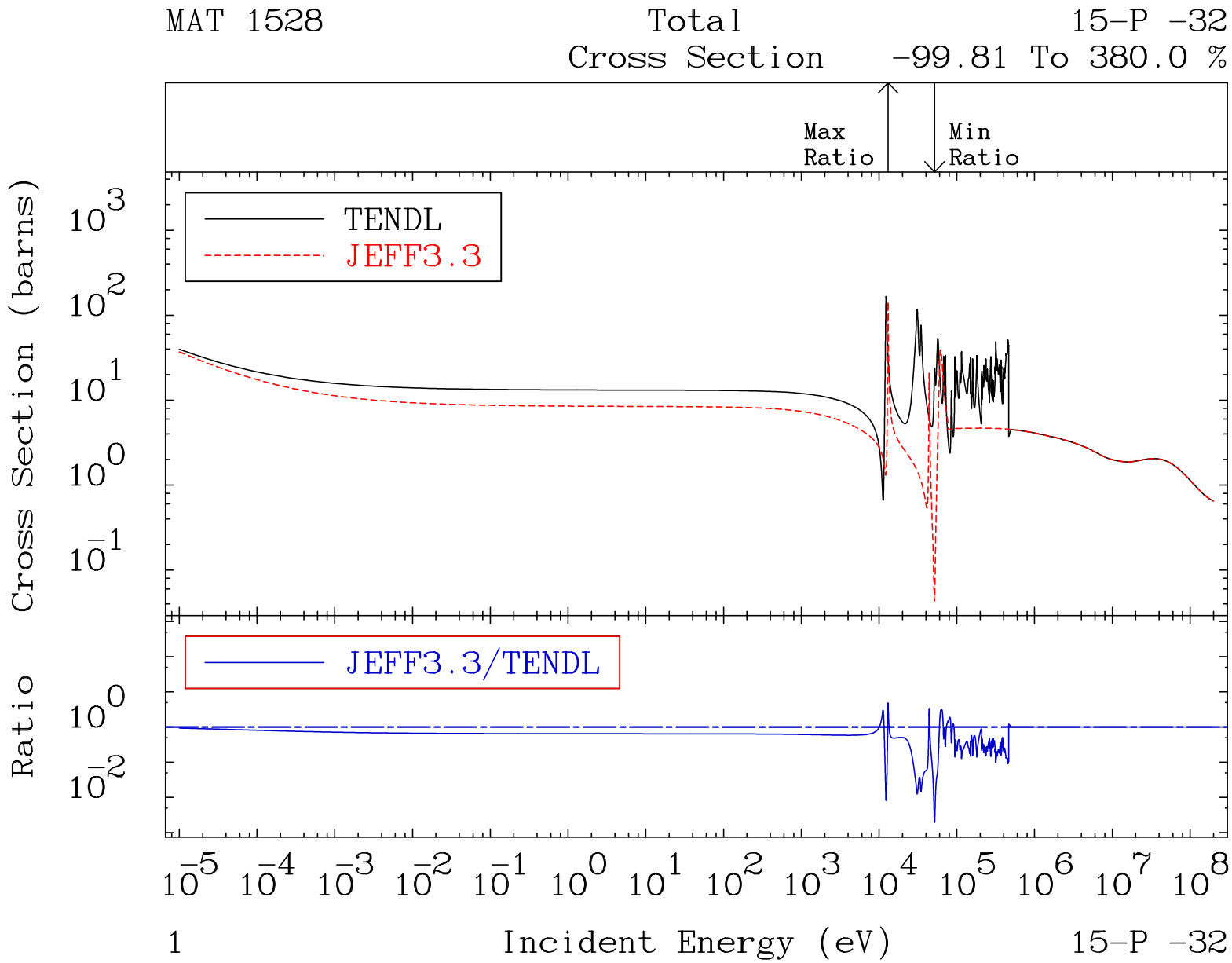
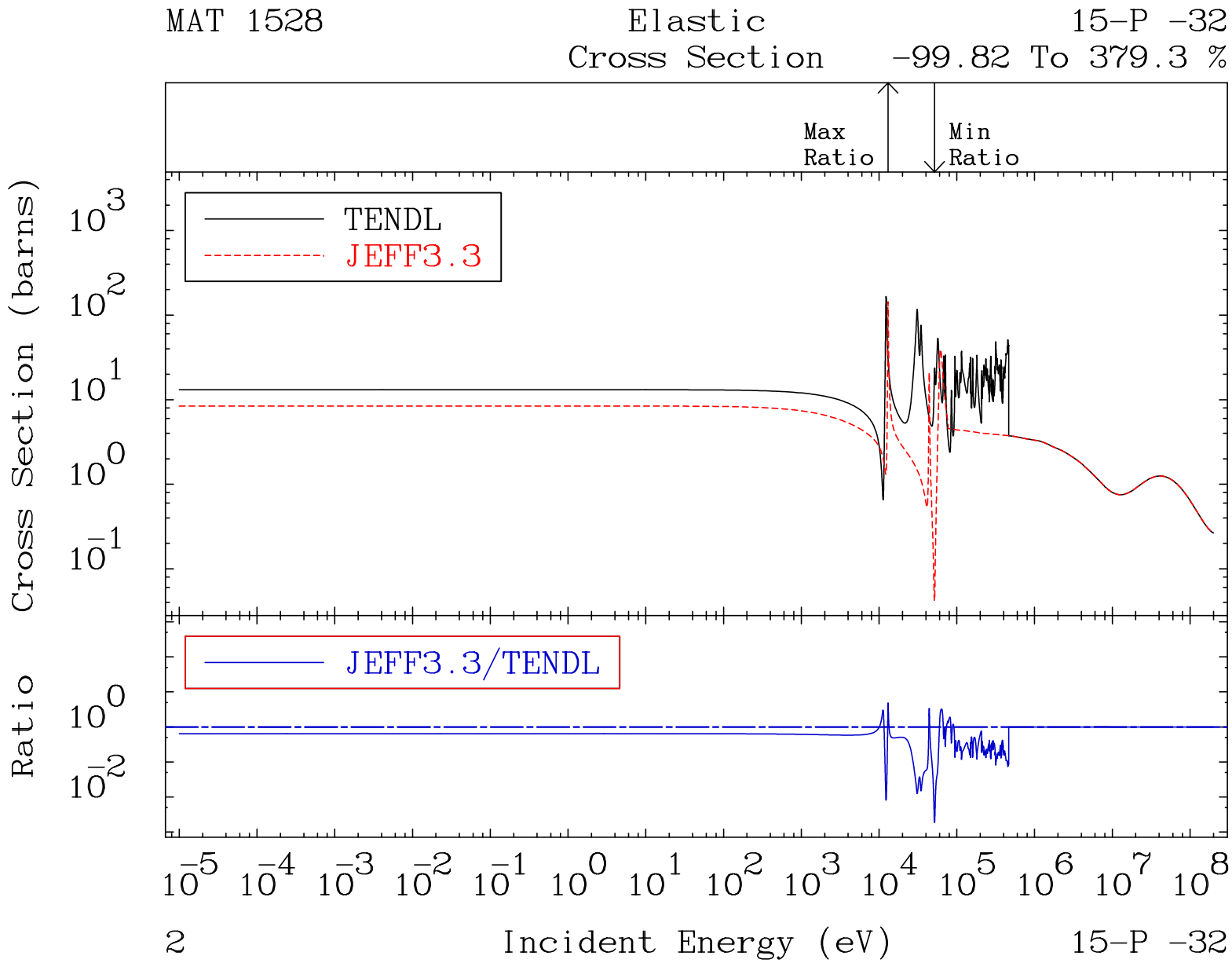
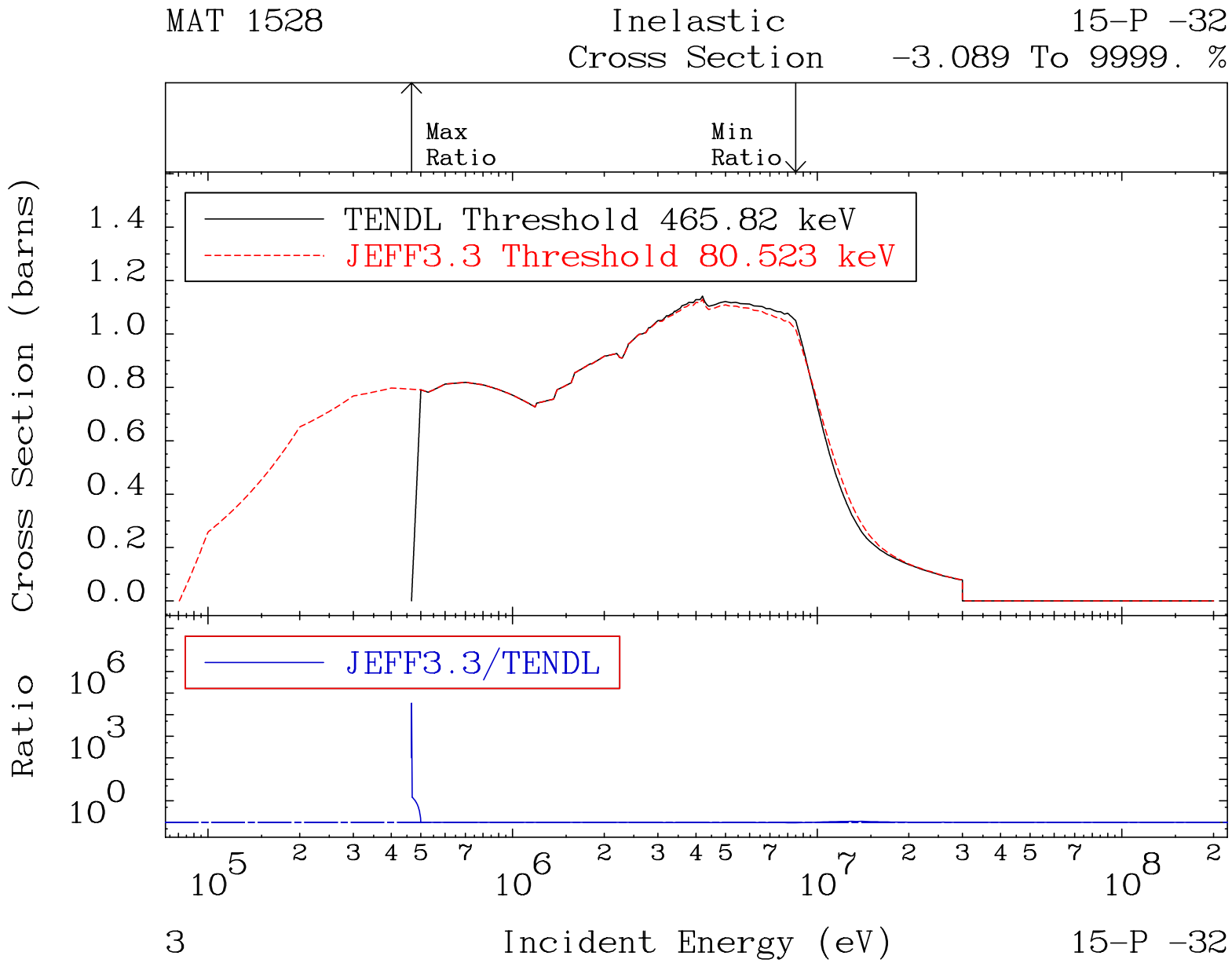
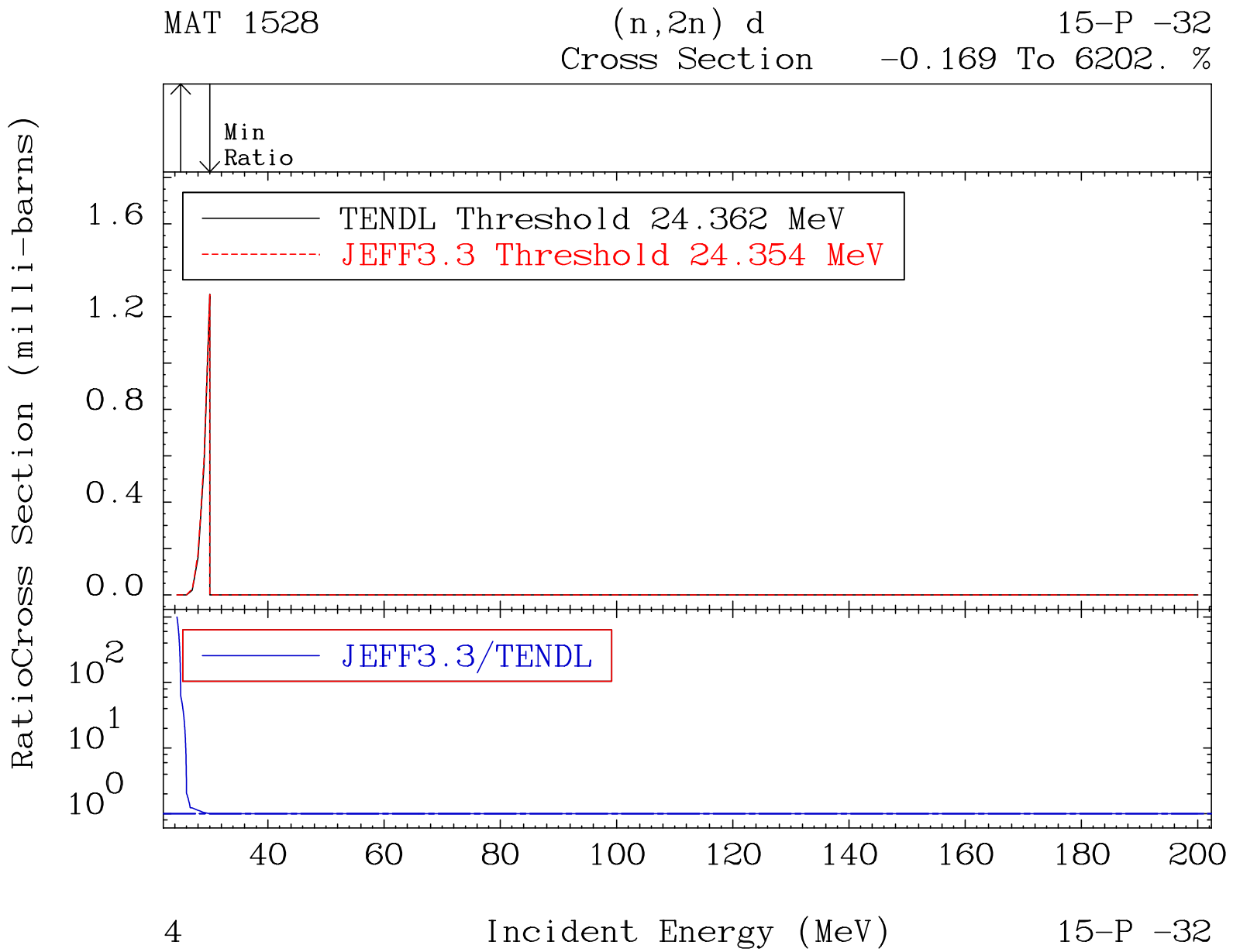
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

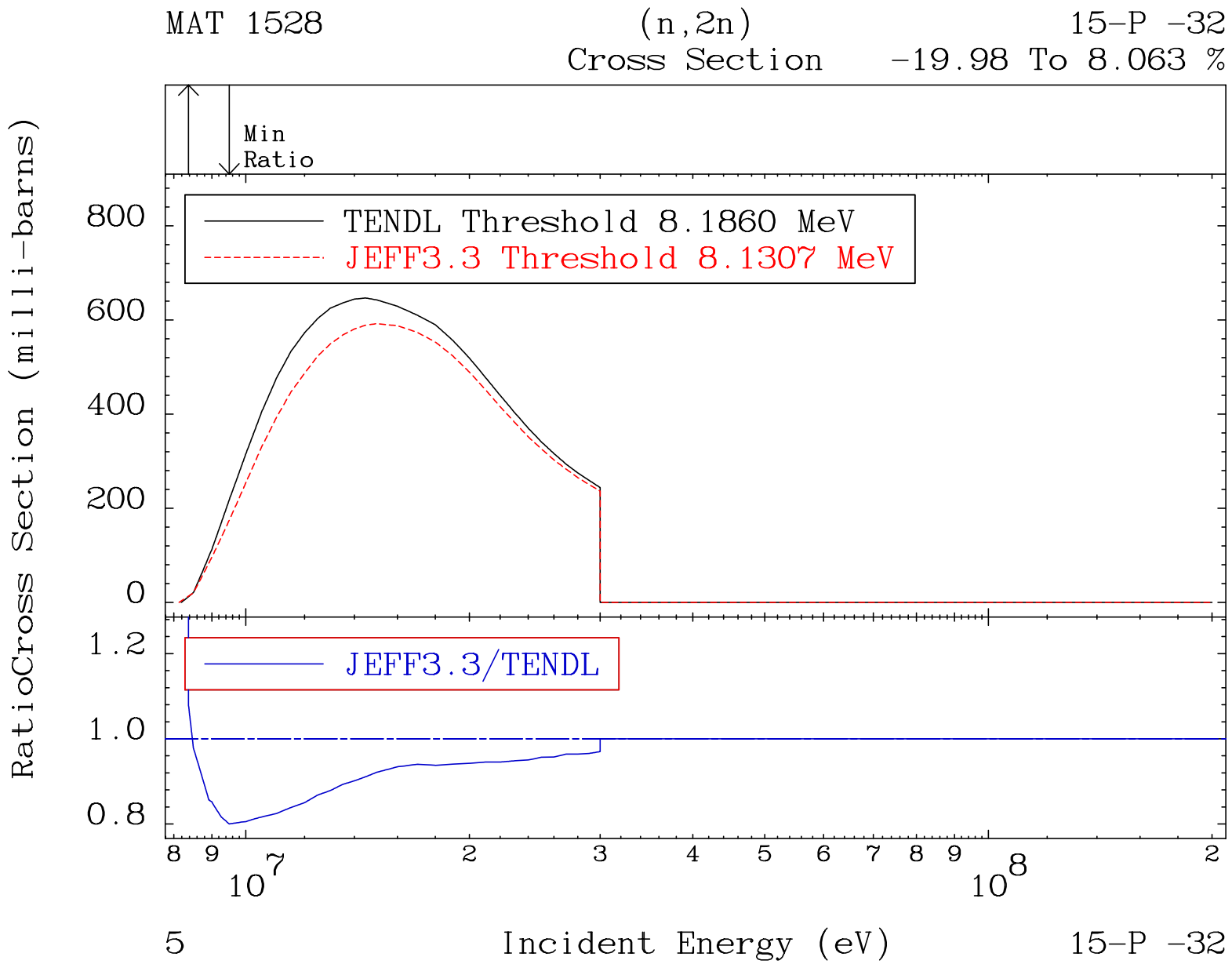
Press Mouse Button to Start

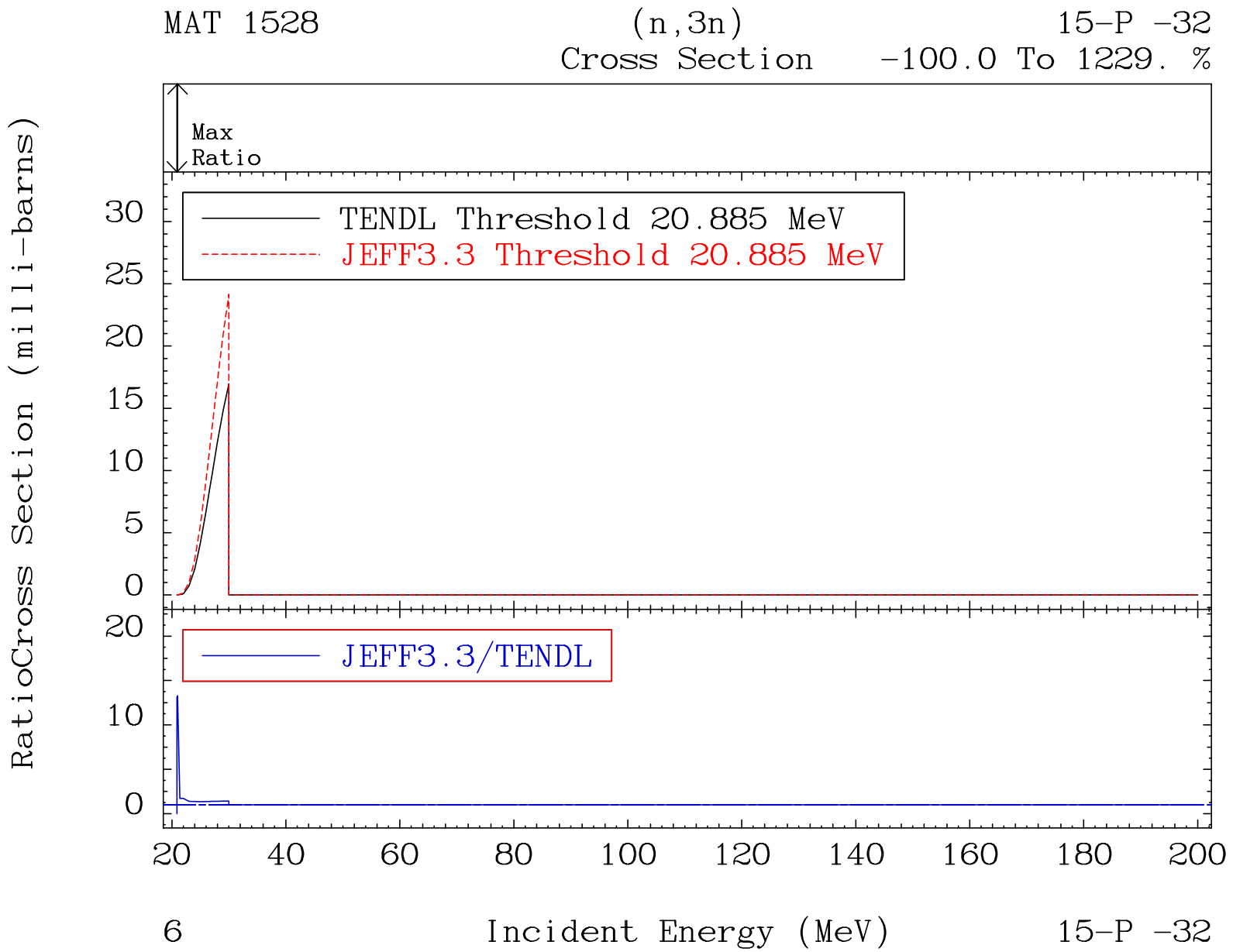

MAT 1528
Total
Cross Section
15-P -32
-99.81 To 380.0 %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
15-P -32

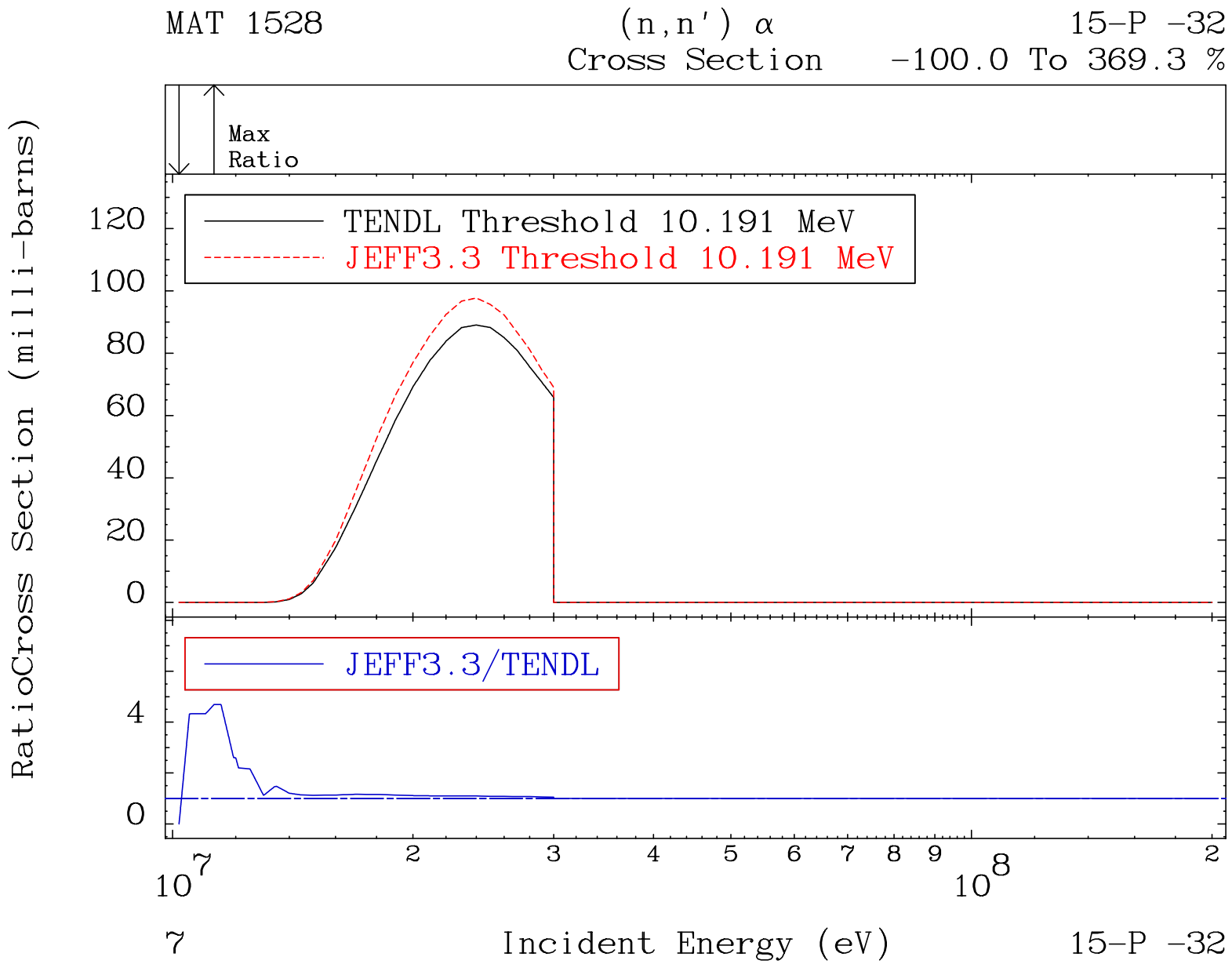

MAT 1528
Elastic
Cross Section
15-P -32
-99.82 To 379.3 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
15-P -32

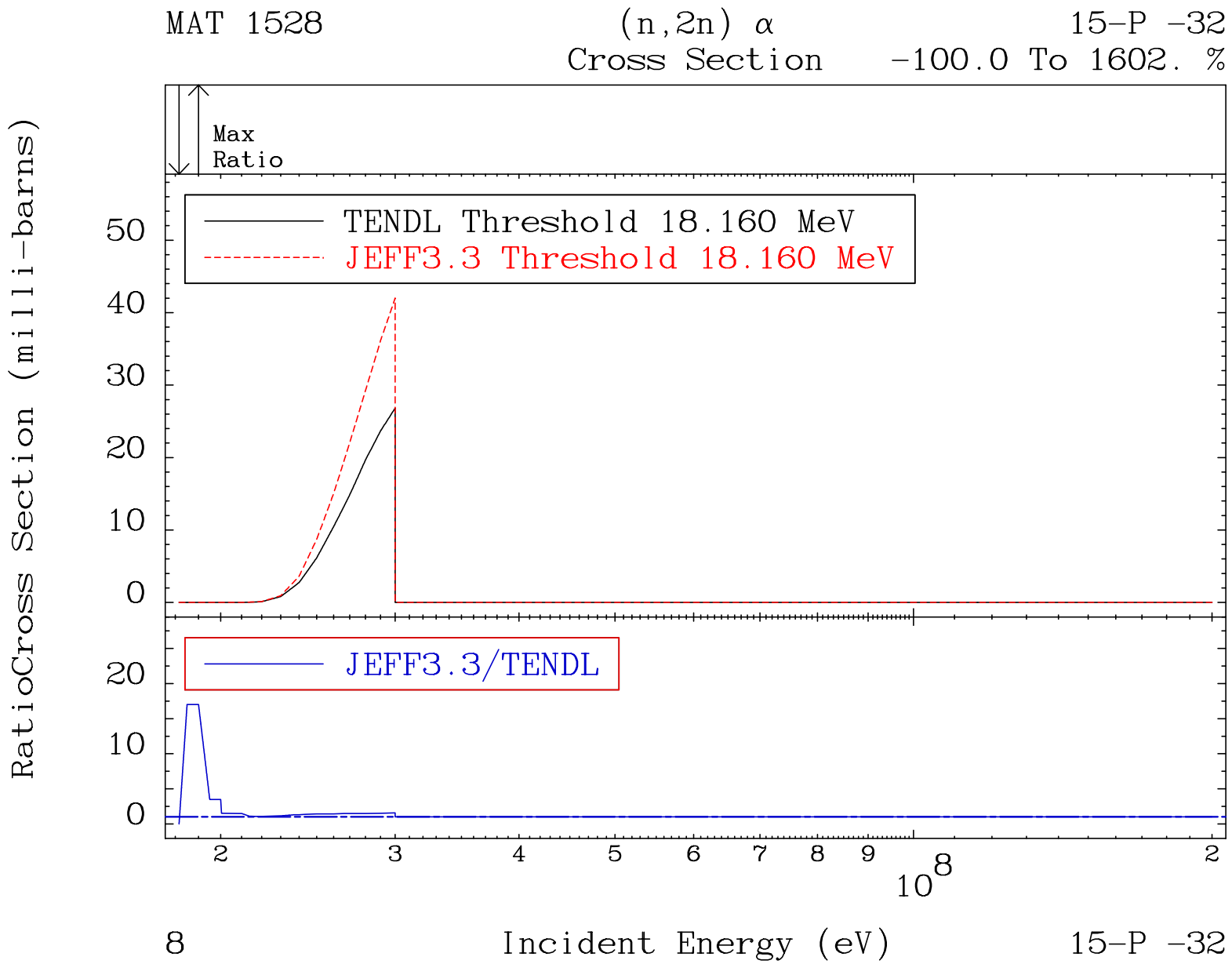

MAT 1528
Inelastic
Cross Section
15-P -32
-3.089 To 9999. %
Max
Ratio
Min
Ratio
TENDL Threshold 465.82 keV
JEFF3.3 Threshold 80.523 keV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
10^6
10^3
10^0
10^5
10^6
10^7
10^8
Incident Energy (eV)
3
15-P -32

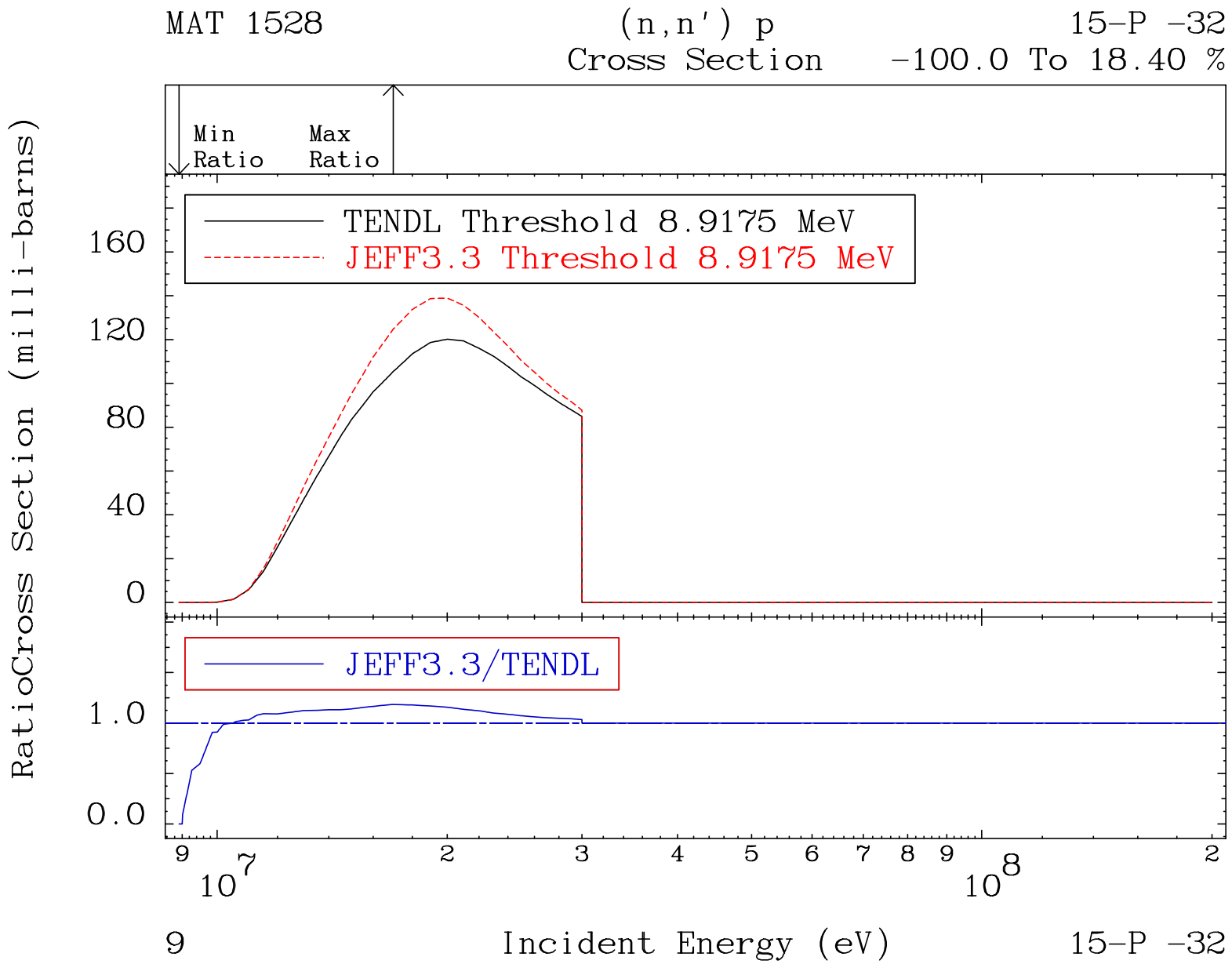

MAT 1528
(n,2n) d
15-P -32
Cross Section
-0.169 To 6202. %
Min
Ratio
TENDL Threshold 24.362 MeV
JEFF3.3 Threshold 24.354 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
10^2
10^1
10^0
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
15-P -32

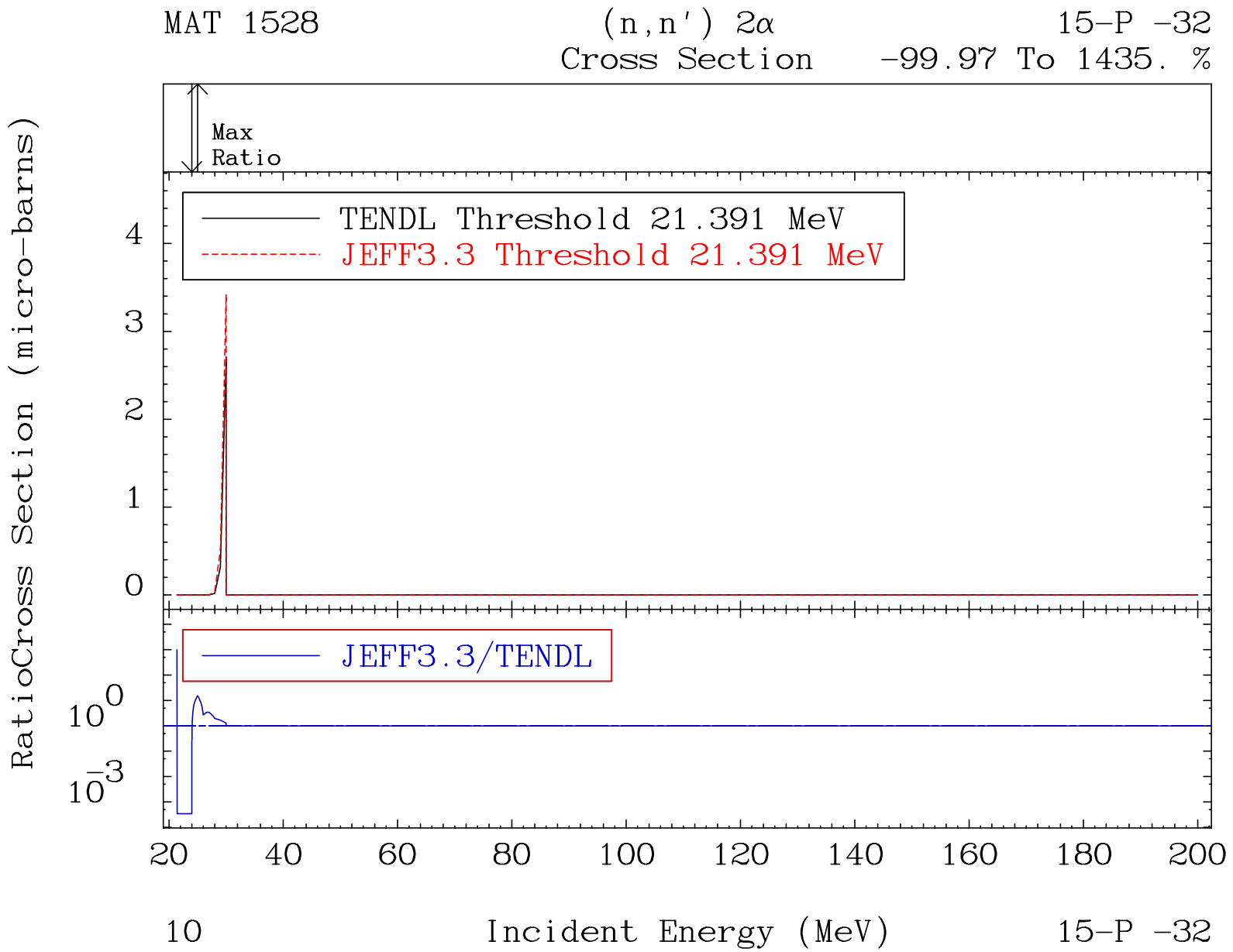

MAT 1528
(n,2n)
Cross Section
15-P -32
-19.98 To 8.063 %
Min
Ratio
TENDL Threshold 8.1860 MeV
JEFF3.3 Threshold 8.1307 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
800
600
400
200
0
1.2
1.0
0.8
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
15-P -32

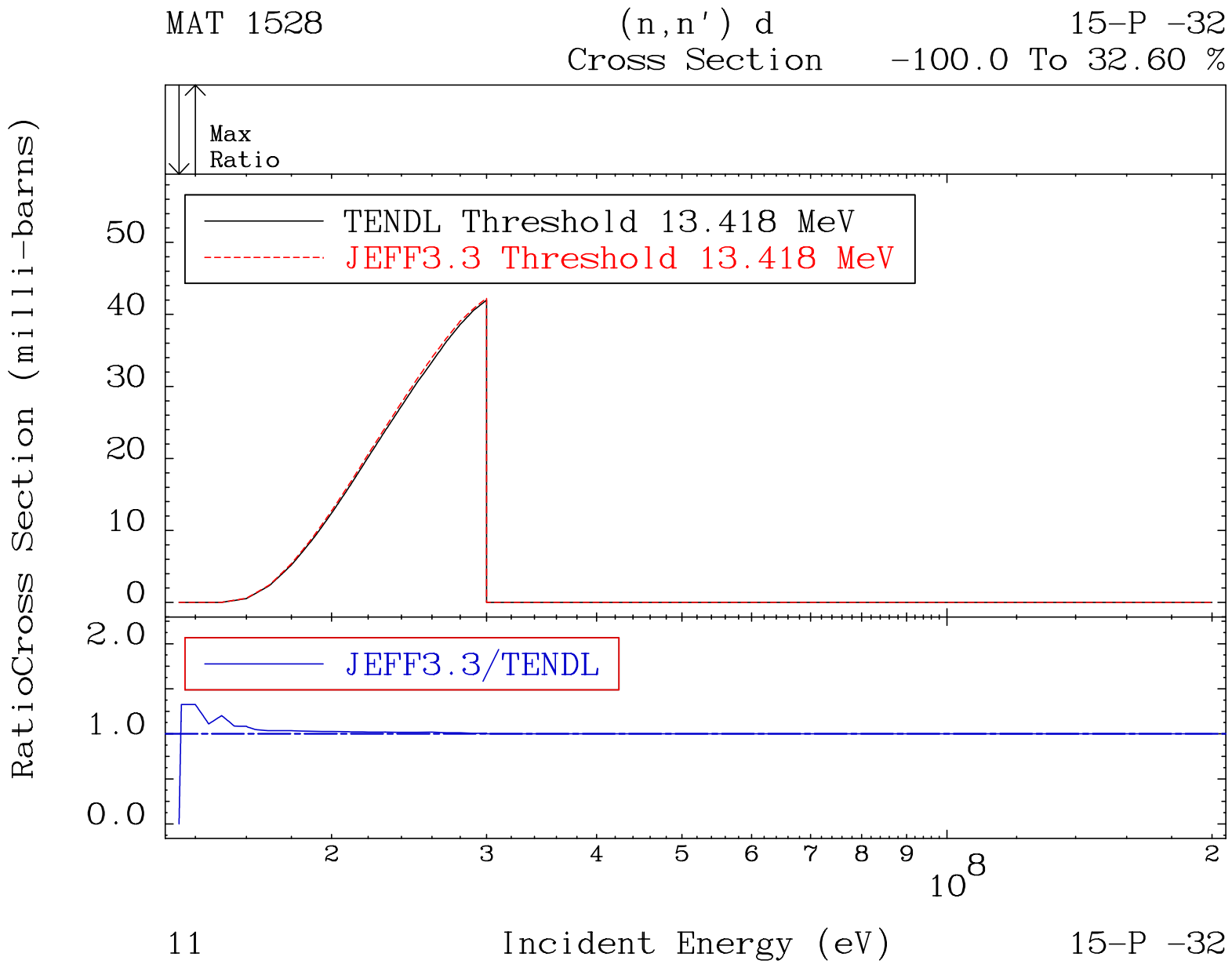

MAT 1528
(n,3n)
15-P -32
Cross Section
-100.0 To 1229. %
Max
Ratio
TENDL Threshold 20.885 MeV
JEFF3.3 Threshold 20.885 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
20
10
0
20
40
60
80
100
120
140
160
180
200
6
Incident Energy (MeV)
15-P -32

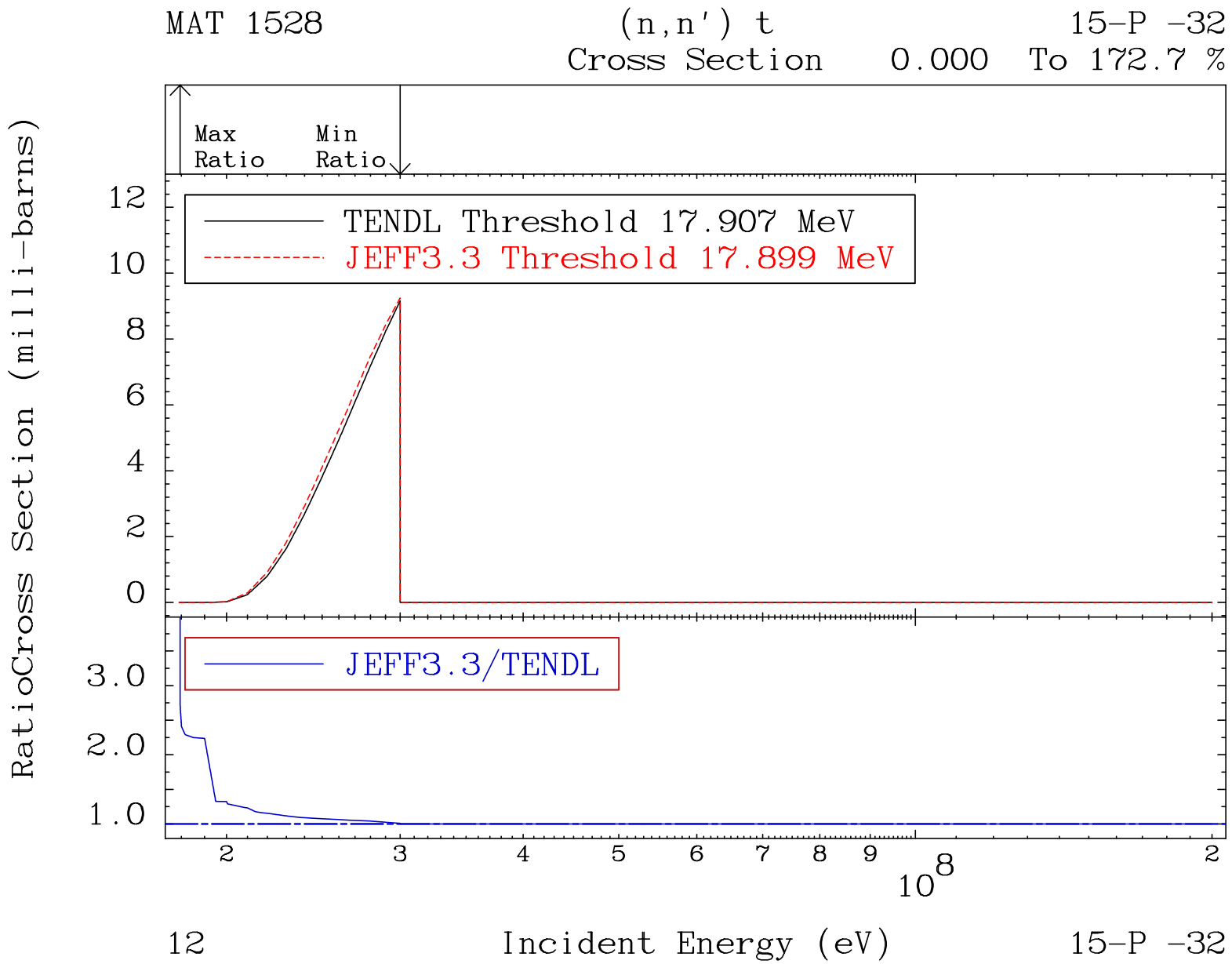

MAT 1528
(n,n') α
Cross Section
15-P -32
-100.0 To 369.3 %
Max
Ratio
TENDL Threshold 10.191 MeV
JEFF3.3 Threshold 10.191 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
4
0
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
15-P -32

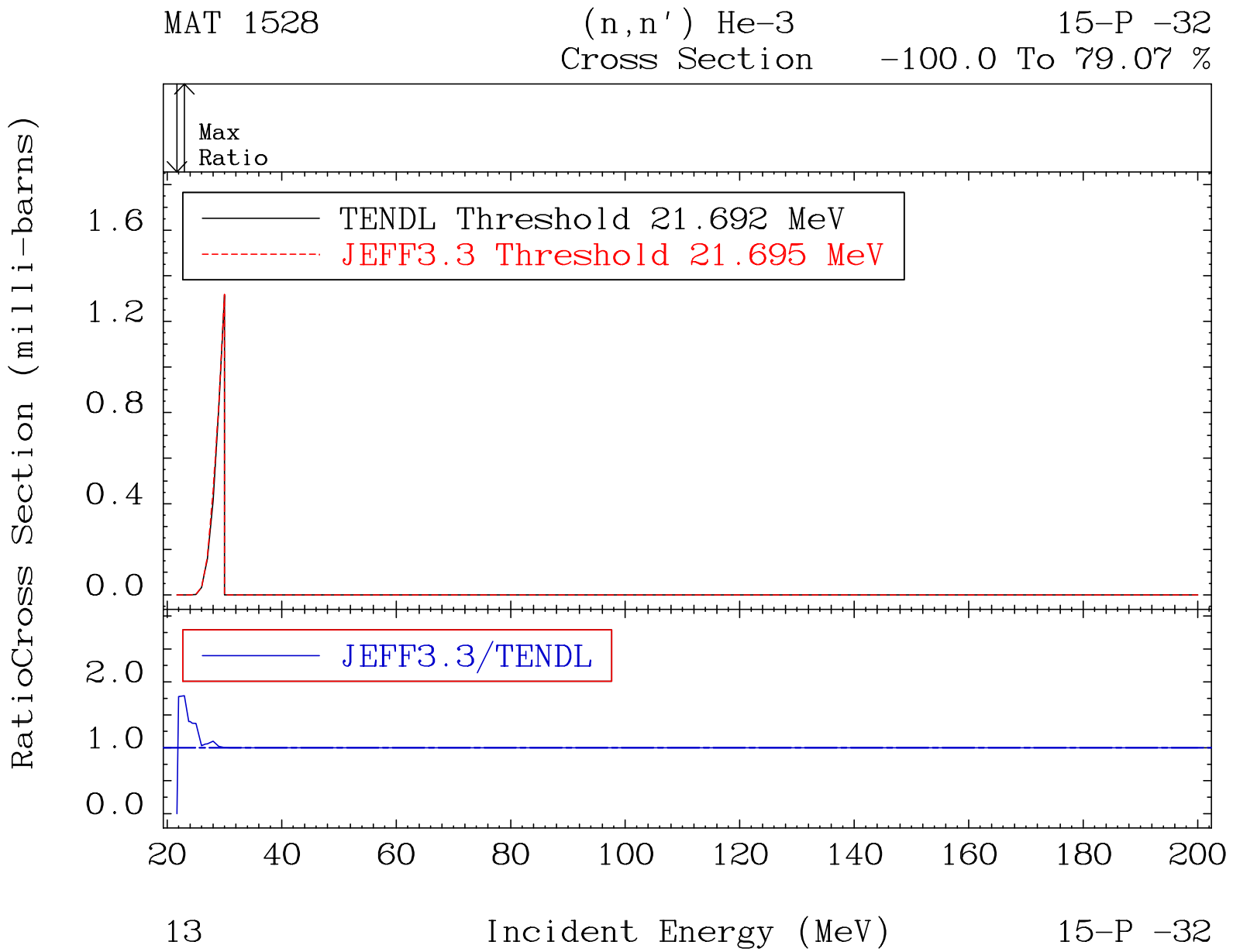

MAT 1528
(n,2n) α
15-P -32
Cross Section
-100.0 To 1602. %
Max
Ratio
TENDL Threshold 18.160 MeV
JEFF3.3 Threshold 18.160 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
20
10
0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
15-P -32

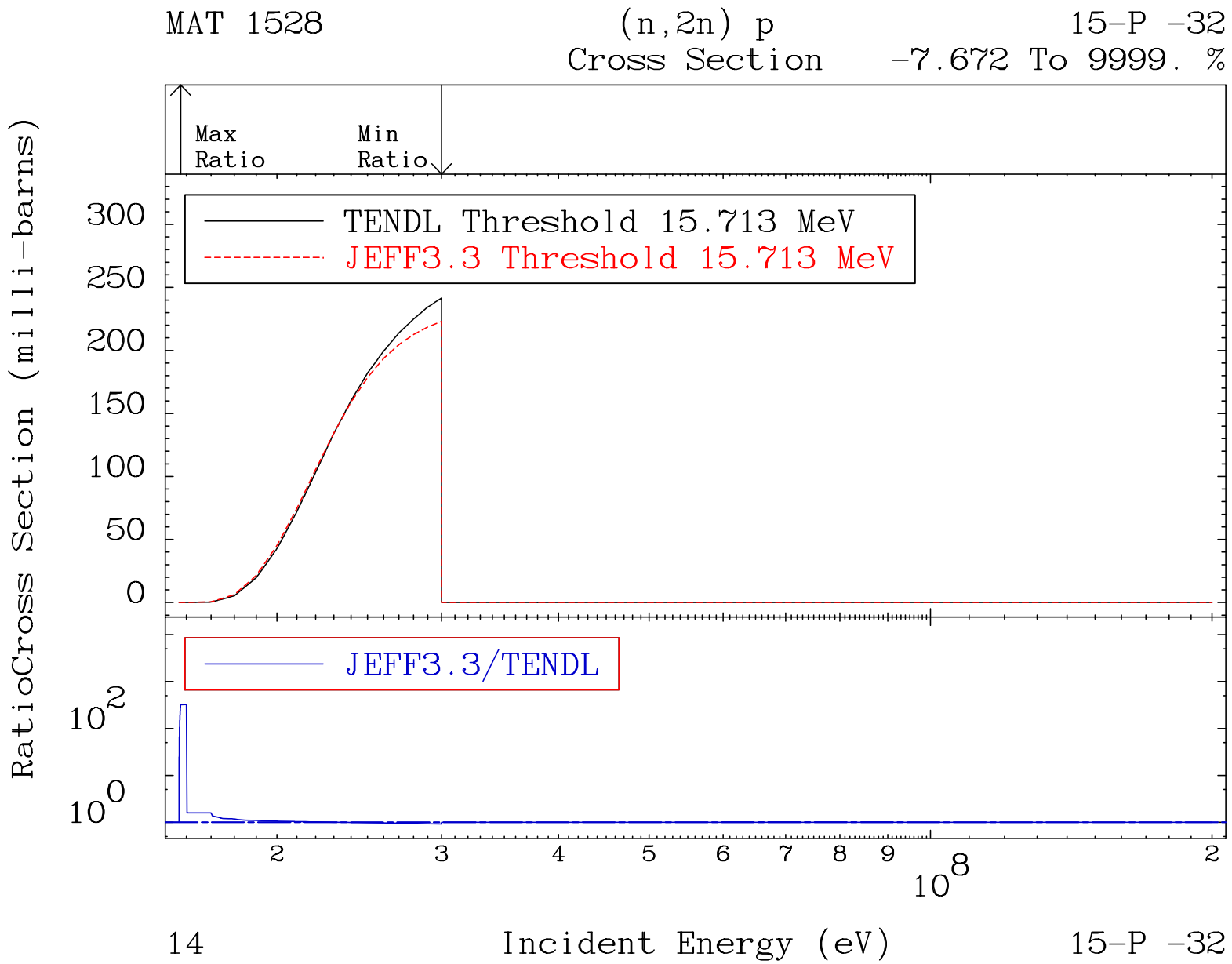

MAT 1528
(n,n') p
Cross Section
15-P -32
-100.0 To 18.40 %
Min Ratio
Max Ratio
TENDL Threshold 8.9175 MeV
JEFF3.3 Threshold 8.9175 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
1.0
0.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
15-P -32

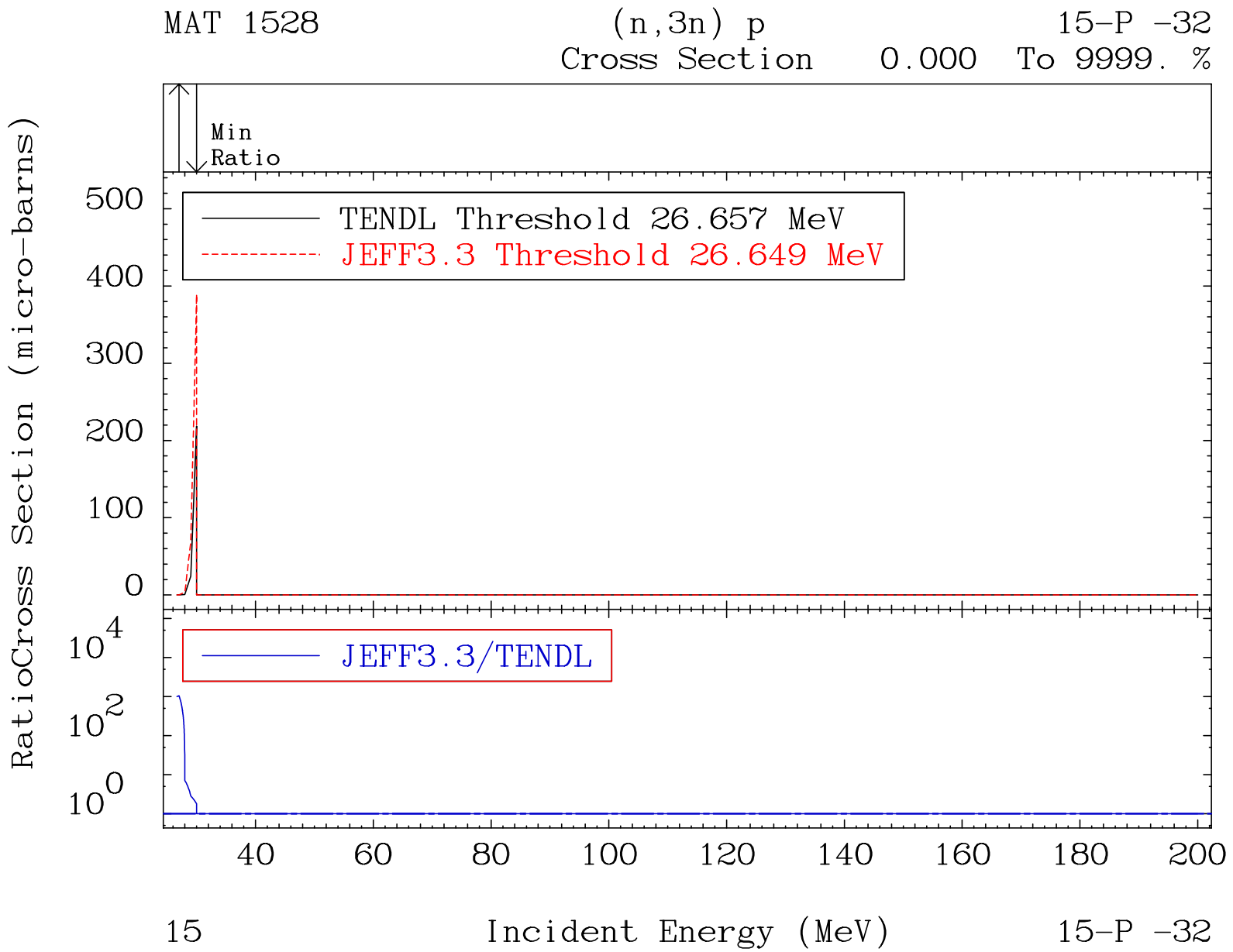

MAT 1528
(n,n') 2α
15-P -32
Cross Section
-99.97 To 1435. %
Max
Ratio
TENDL Threshold 21.391 MeV
JEFF3.3 Threshold 21.391 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (MeV)
15-P -32
10

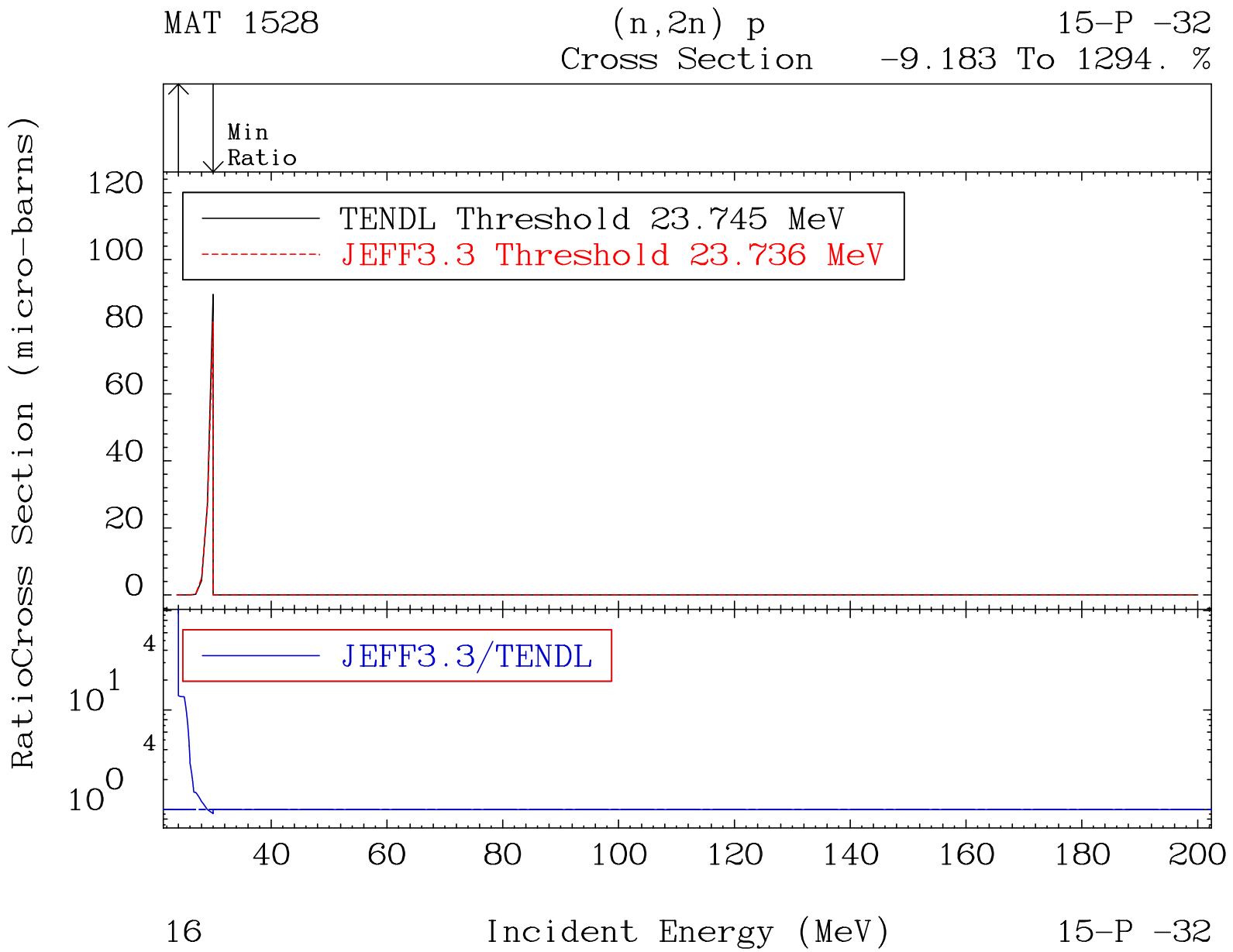

MAT 1528
(n,n') d
Cross Section
15-P -32
-100.0 To 32.60 %
Max
Ratio
TENDL Threshold 13.418 MeV
JEFF3.3 Threshold 13.418 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
15-P -32

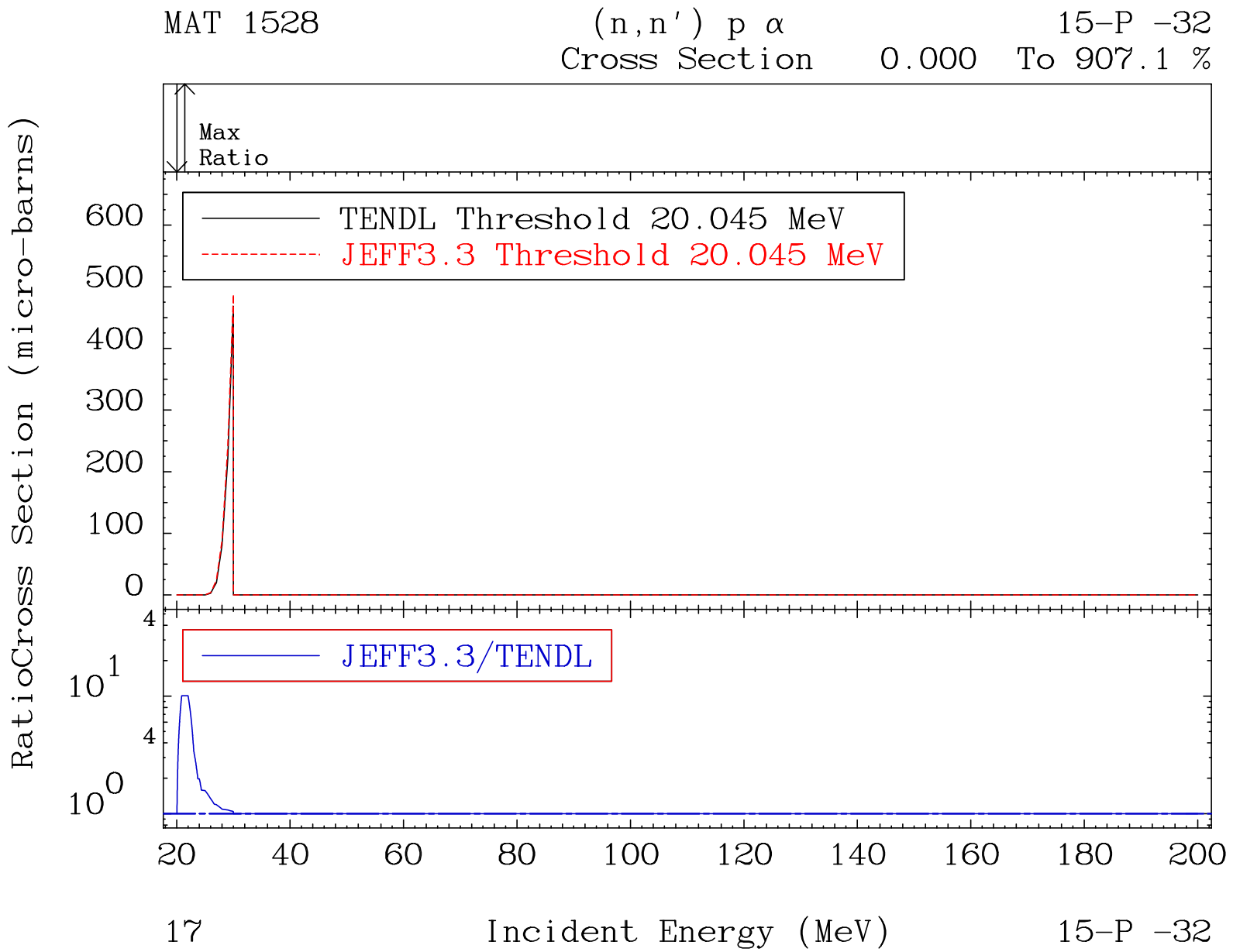

MAT 1528
(n,n') t
Cross Section
15-P -32
0.000 To 172.7 %
Max Ratio
Min Ratio
TENDL Threshold 17.907 MeV
JEFF3.3 Threshold 17.899 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
12
15-P -32

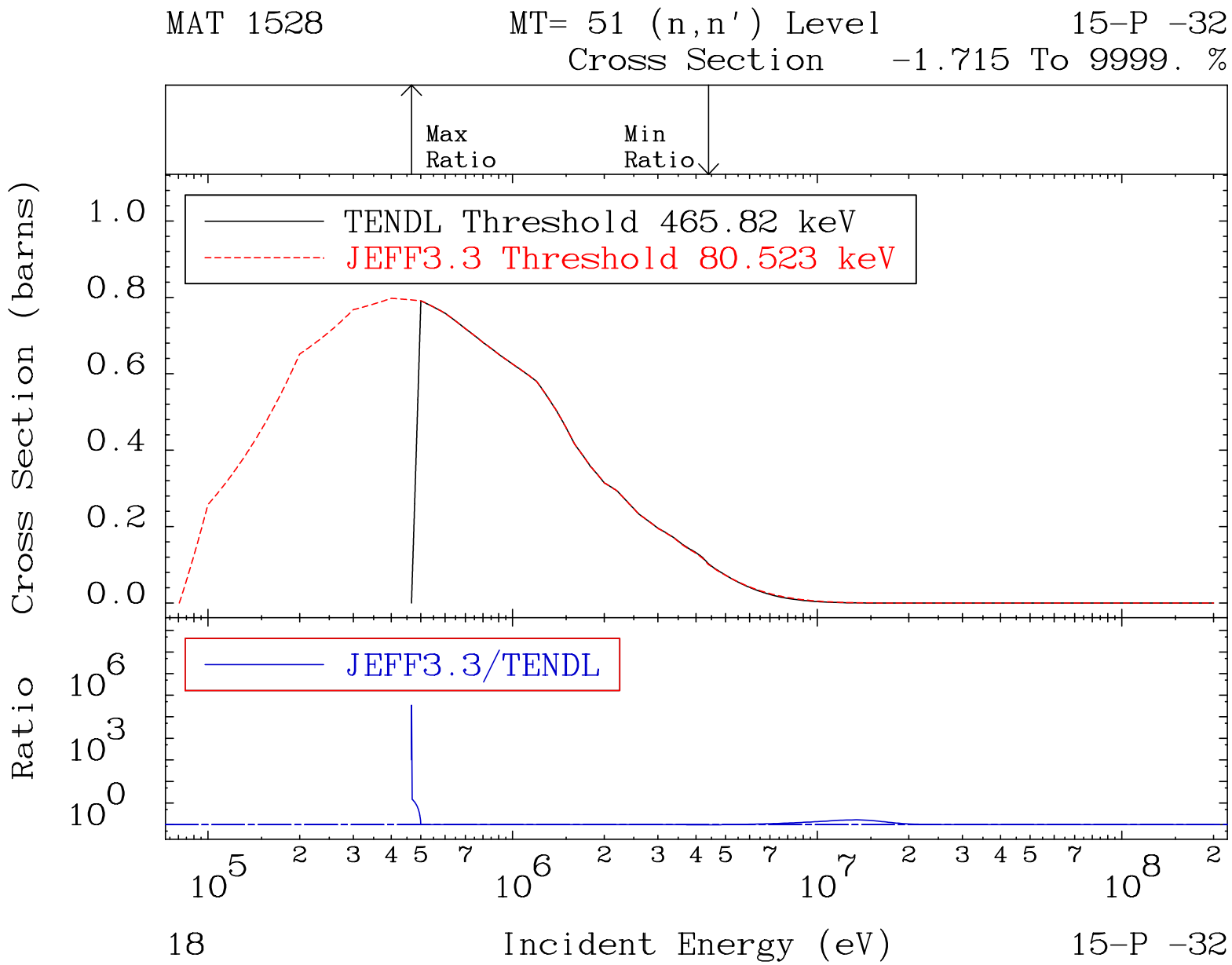

MAT 1528
(n,n') He-3
Cross Section
15-P -32
-100.0 To 79.07 %
Max
Ratio
TENDL Threshold 21.692 MeV
JEFF3.3 Threshold 21.695 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
2.0
1.0
0.0
20
40
60
80
100
120
140
160
180
200
13
Incident Energy (MeV)
15-P -32

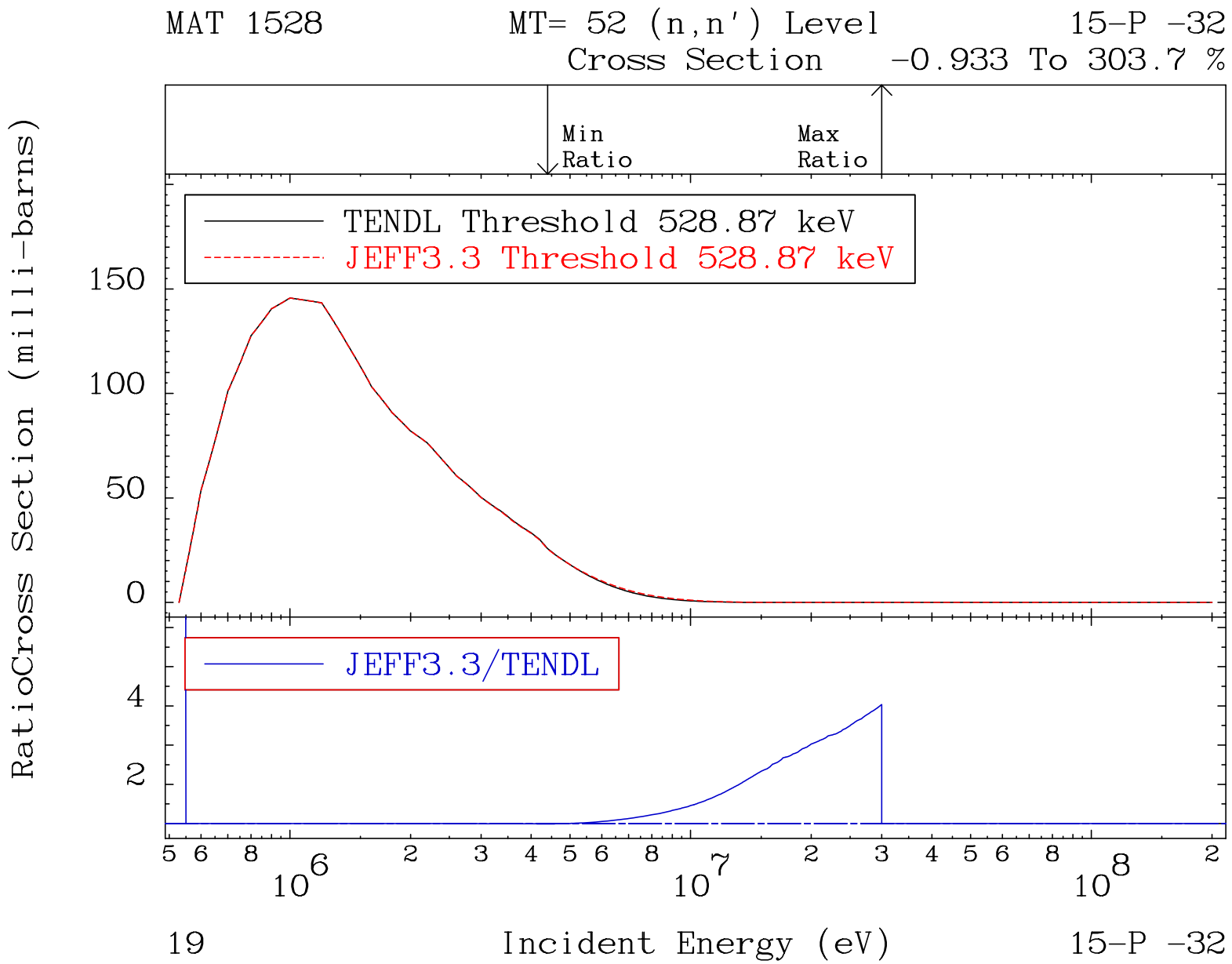

MAT 1528
(n,2n) p
15-P -32
Cross Section
-7.672 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 15.713 MeV
JEFF3.3 Threshold 15.713 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
14
Incident Energy (eV)
15-P -32

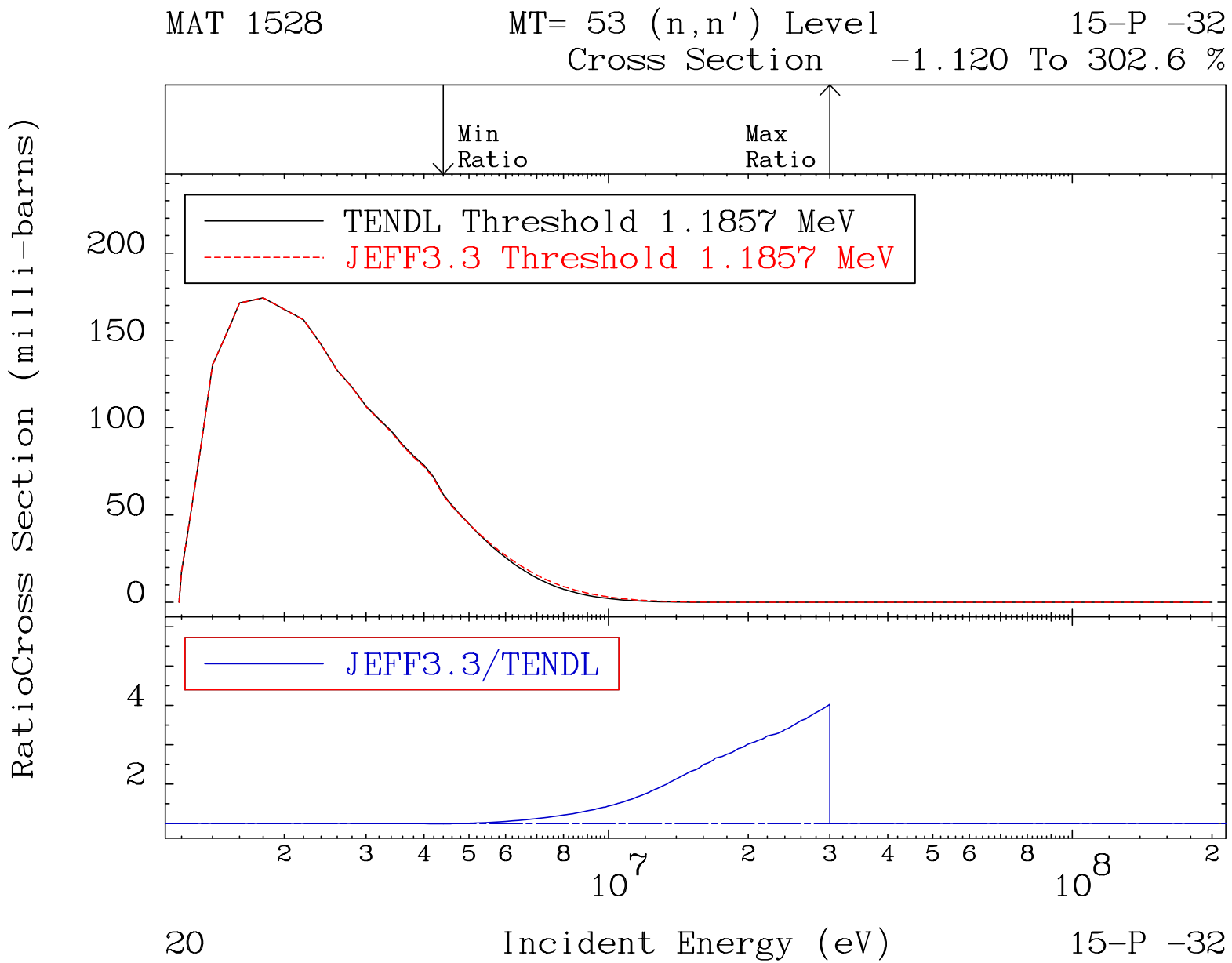

MAT 1528
(n,3n) p
15-P -32
Cross Section 0.000 To 9999. %
Min
Ratio
500
400
300
200
100
0
TENDL Threshold 26.657 MeV
JEFF3.3 Threshold 26.649 MeV
10^4
10^2
10^0
JEFF3.3/TENDL
RatioCross Section (micro-barns)
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
15-P -32

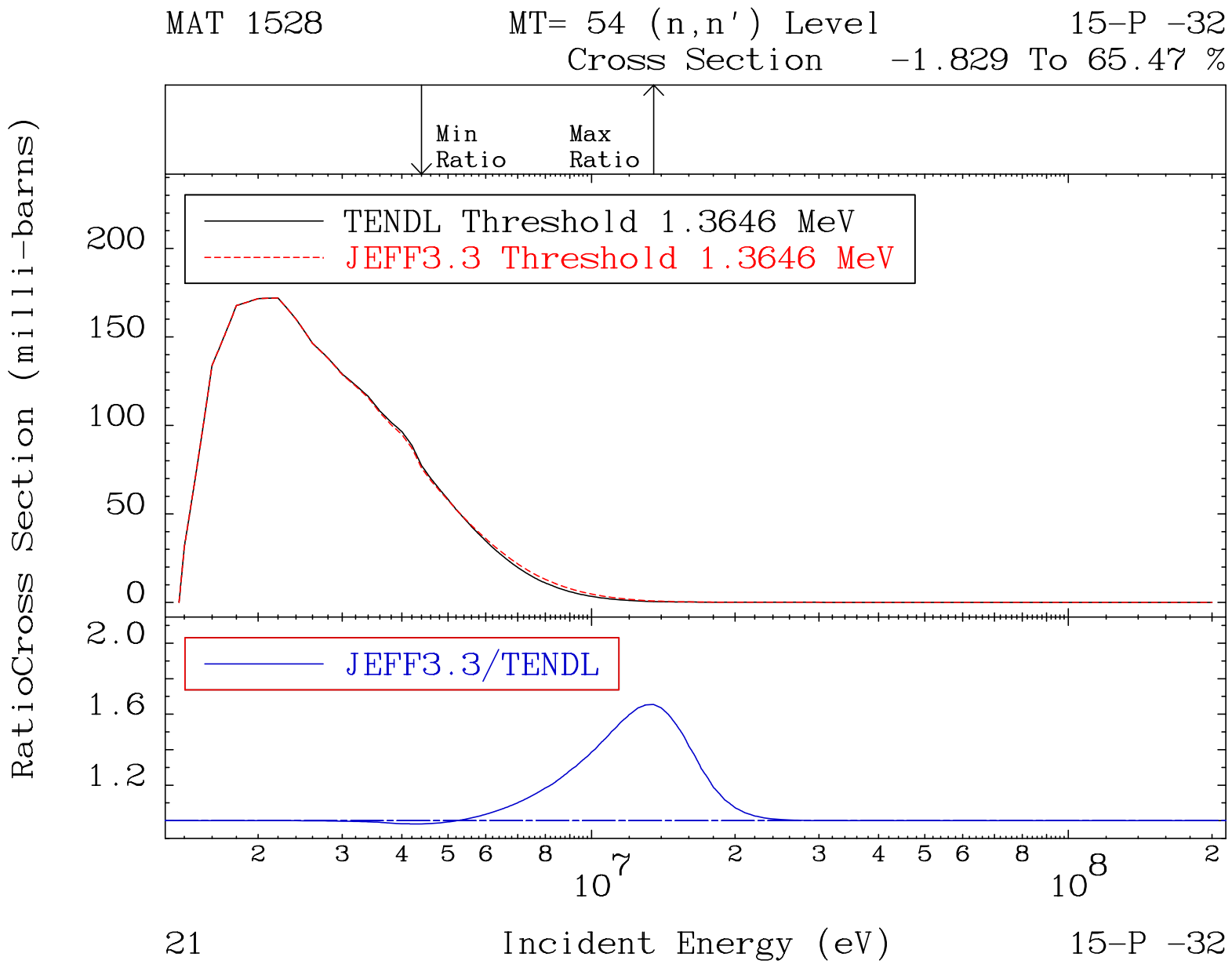

MAT 1528
(n,2n) p
15-P -32
Cross Section
-9.183 To 1294. %
Min
Ratio
120
100
80
60
40
20
0
TENDL Threshold 23.745 MeV
JEFF3.3 Threshold 23.736 MeV
JEFF3.3/TENDL
4
10^1
4
10^0
RatioCross Section (micro-barns)
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
15-P -32

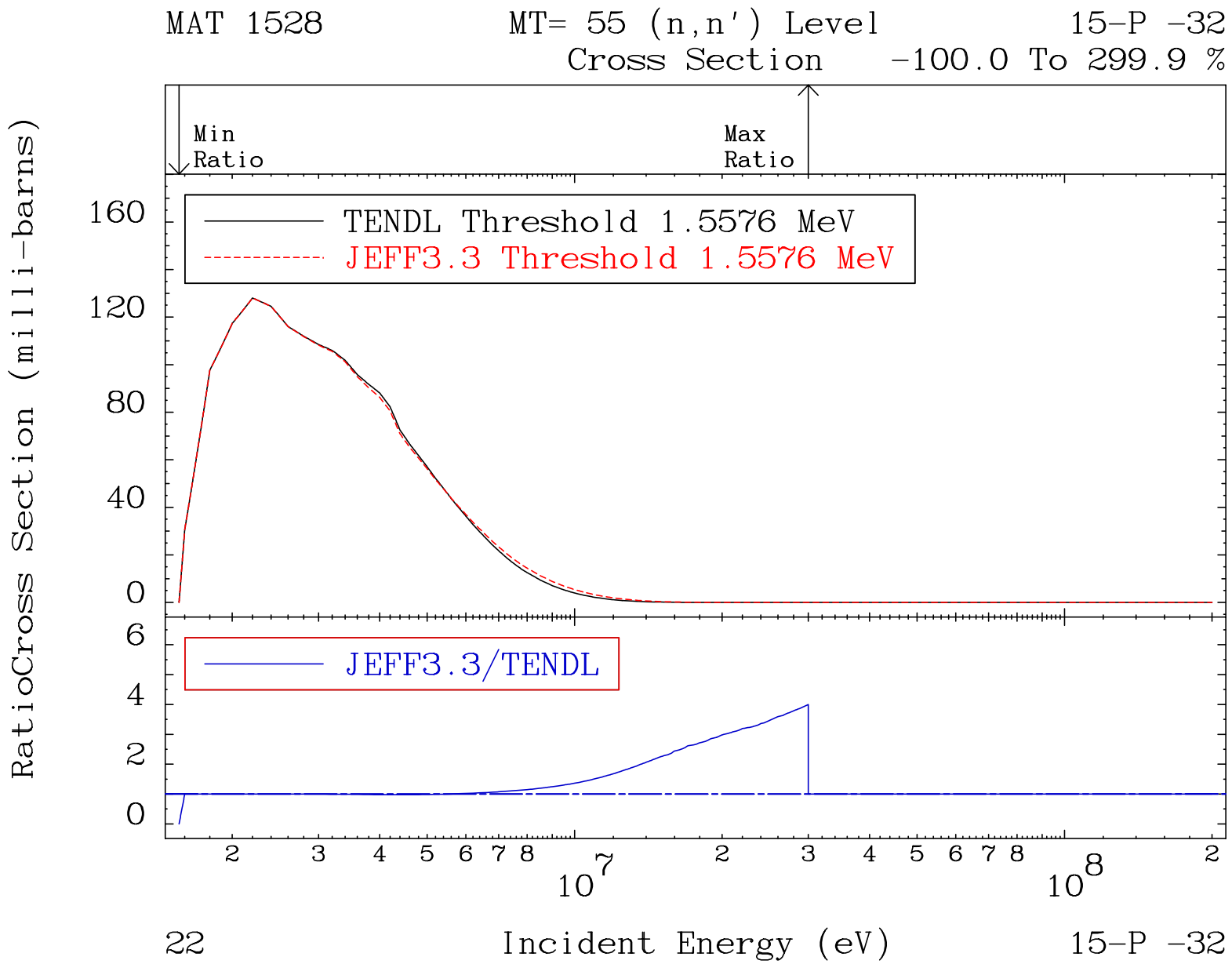

MAT 1528
(n,n') p α
15-P -32
Cross Section 0.000 To 907.1 %
Max
Ratio
TENDL Threshold 20.045 MeV
JEFF3.3 Threshold 20.045 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
600
500
400
300
200
100
0
4
10^1
4
10^0
20
40
60
80
100
120
140
160
180
200
17
Incident Energy (MeV)
15-P -32

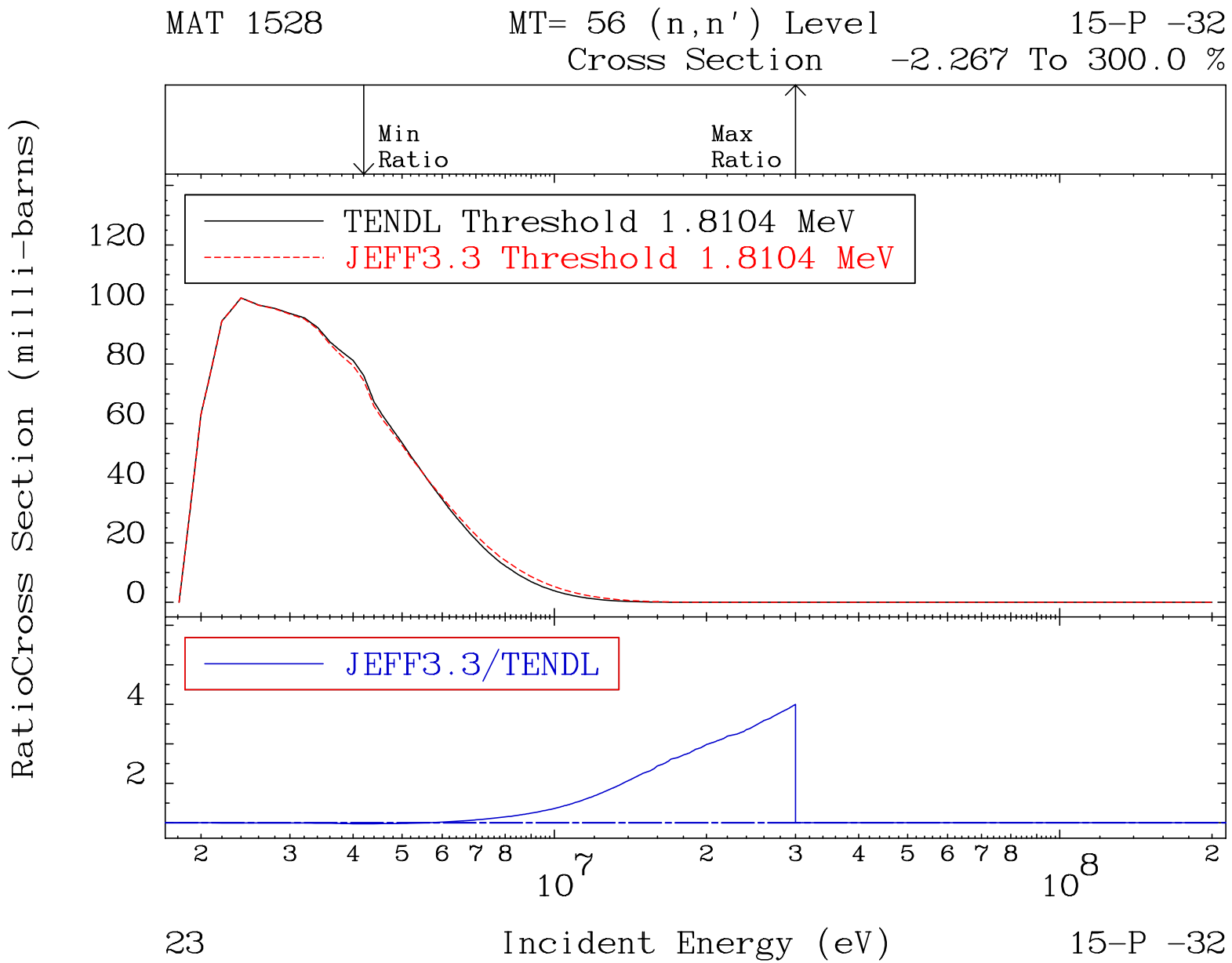

MAT 1528
MT= 51 (n,n') Level
15-P -32
Cross Section
-1.715 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 465.82 keV
JEFF3.3 Threshold 80.523 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
10^6
10^3
10^0
10^5
10^6
10^7
10^8
Incident Energy (eV)
18
15-P -32

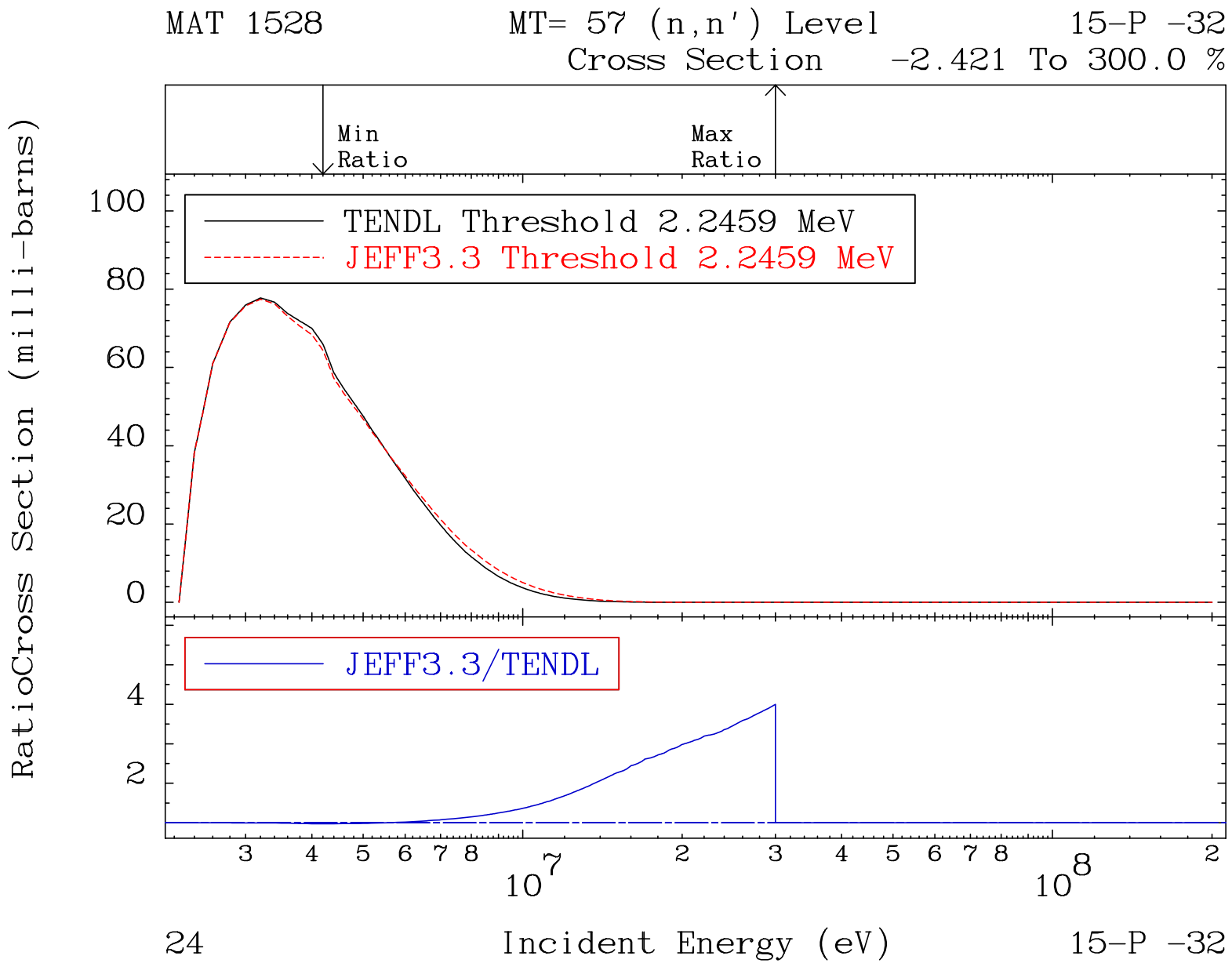

MAT 1528
MT= 52 (n,n') Level
15-P -32
Cross Section
-0.933 To 303.7 %
Min Ratio
Max Ratio
TENDL Threshold 528.87 keV
JEFF3.3 Threshold 528.87 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
150
100
50
0
4
2
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
19
Incident Energy (eV)
15-P -32

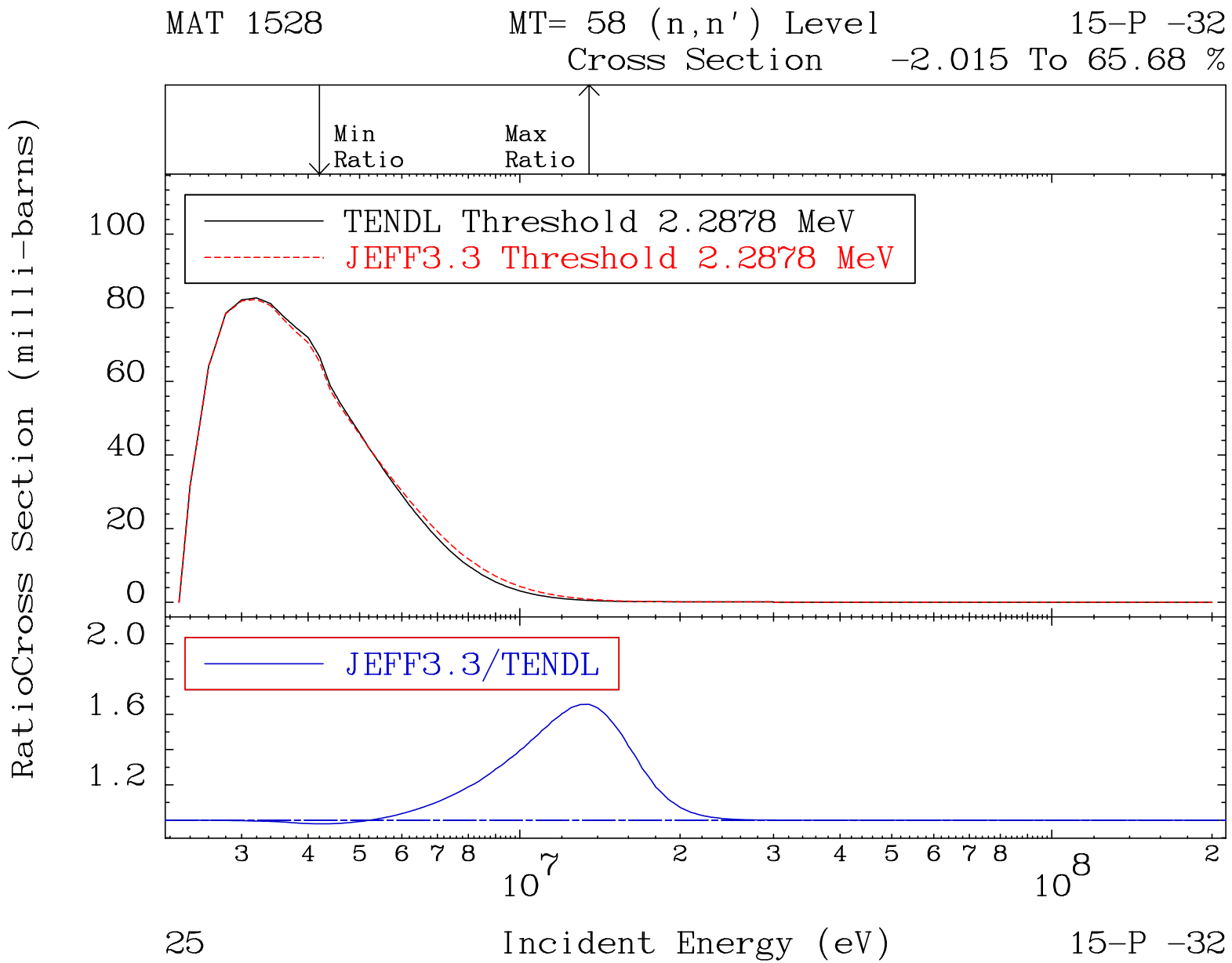

MAT 1528
MT= 53 (n,n') Level
15-P -32
Cross Section -1.120 To 302.6 %
Min Ratio
Max Ratio
TENDL Threshold 1.1857 MeV
JEFF3.3 Threshold 1.1857 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
4
2
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
20
Incident Energy (eV)
15-P -32

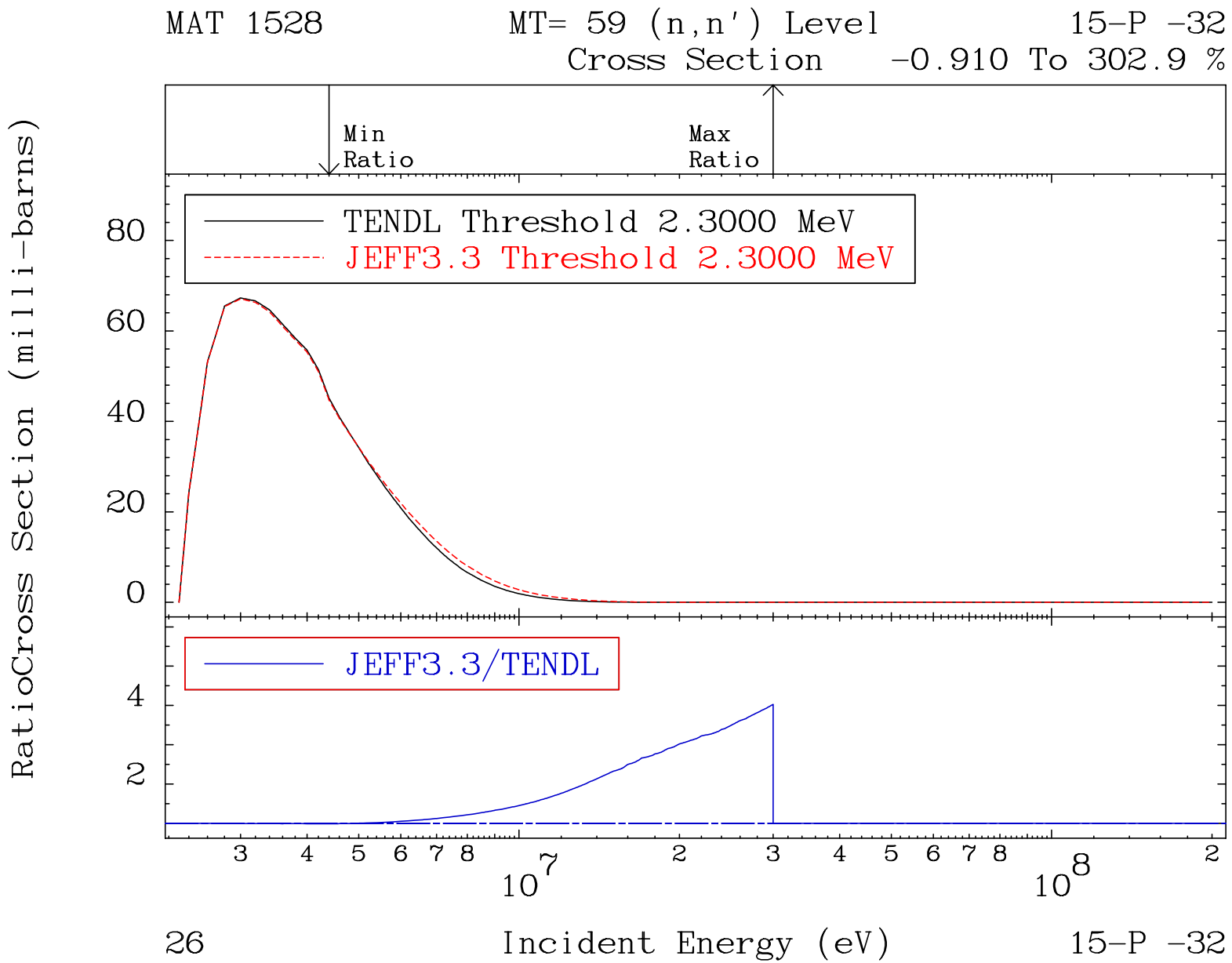

MAT 1528
MT= 54 (n,n') Level
15-P -32
Cross Section -1.829 To 65.47 %
Min Ratio
Max Ratio
TENDL Threshold 1.3646 MeV
JEFF3.3 Threshold 1.3646 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
2.0
1.6
1.2
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
21
Incident Energy (eV)
15-P -32

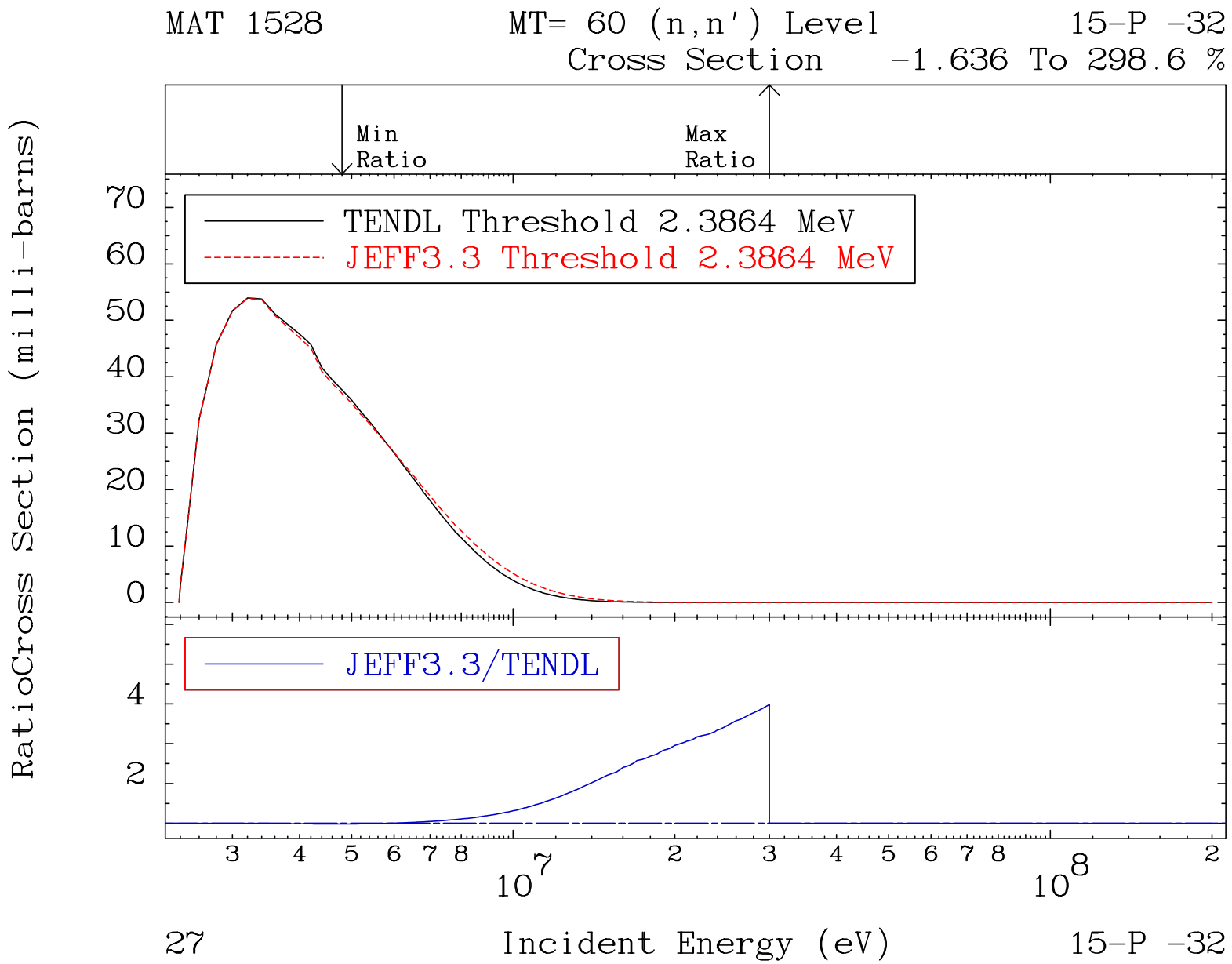

MAT 1528
MT= 55 (n,n') Level
15-P -32
Cross Section
-100.0 To 299.9 %
Min Ratio
Max Ratio
TENDL Threshold 1.5576 MeV
JEFF3.3 Threshold 1.5576 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
6
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
15-P -32

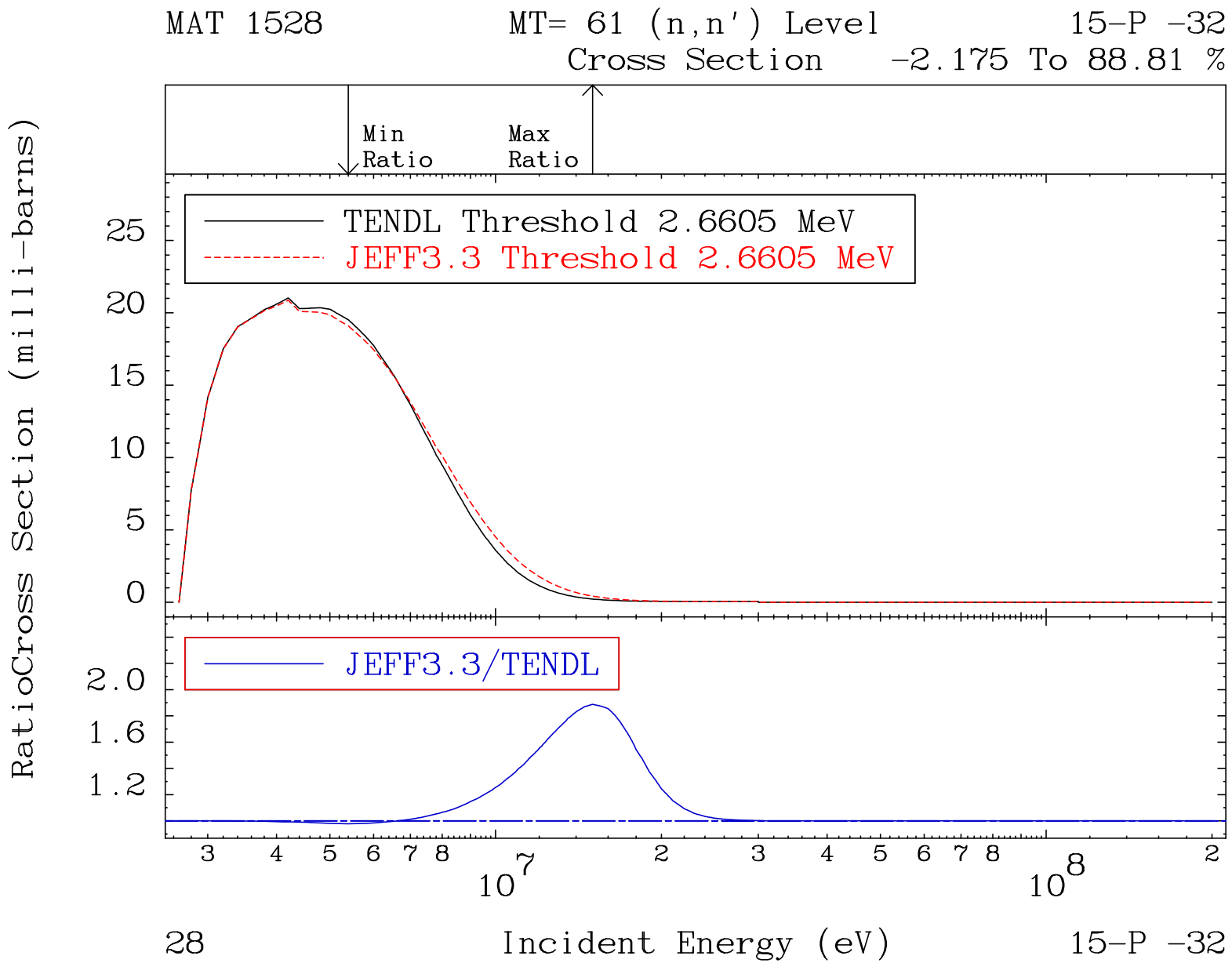

MAT 1528
MT= 56 (n,n') Level
15-P -32
Cross Section
-2.267 To 300.0 %
Min Ratio
Max Ratio
TENDL Threshold 1.8104 MeV
JEFF3.3 Threshold 1.8104 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
4
2
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
15-P -32

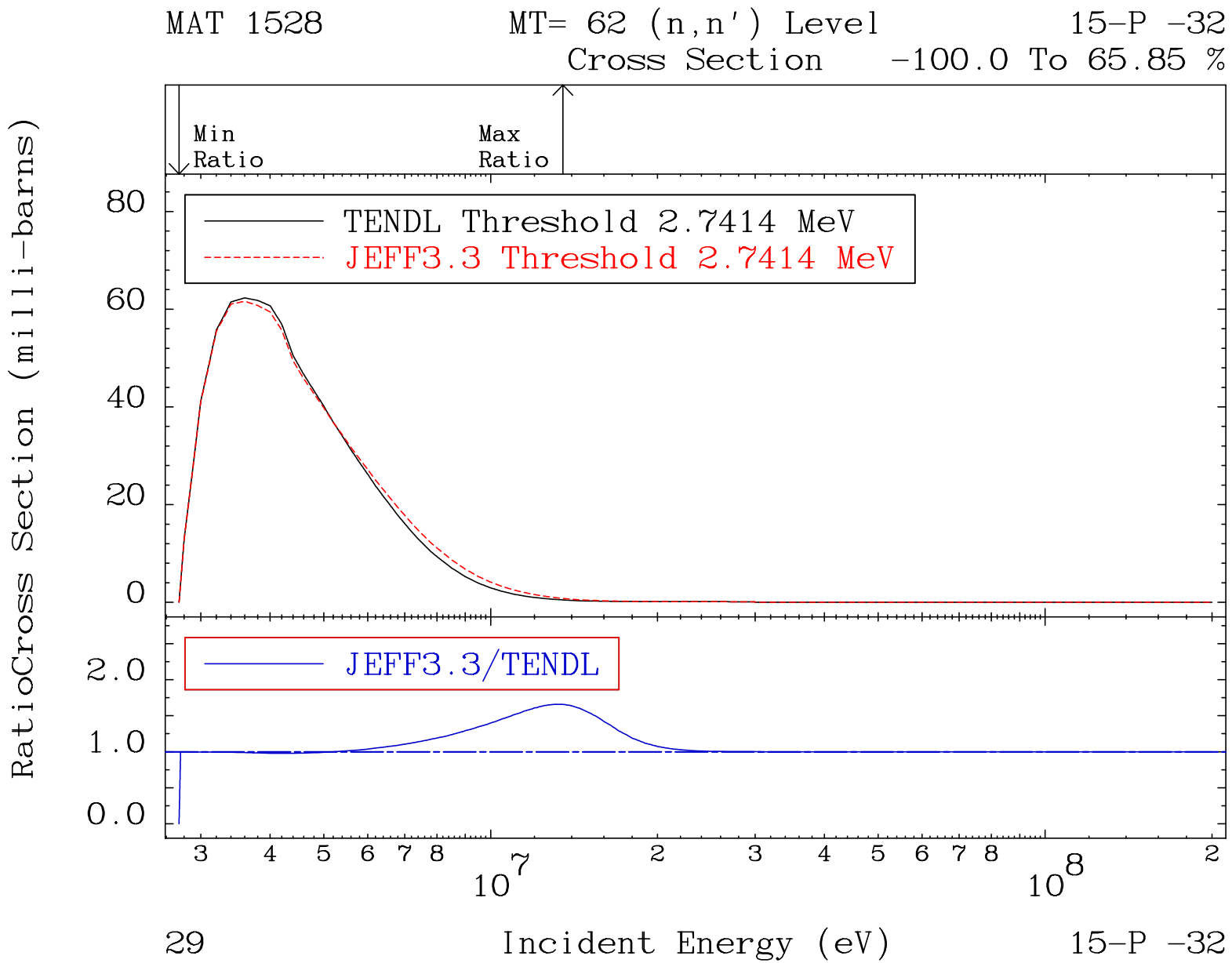

MAT 1528
MT= 57 (n,n') Level
15-P -32
Cross Section -2.421 To 300.0 %
Min Ratio
Max Ratio
TENDL Threshold 2.2459 MeV
JEFF3.3 Threshold 2.2459 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
4
2
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
15-P -32

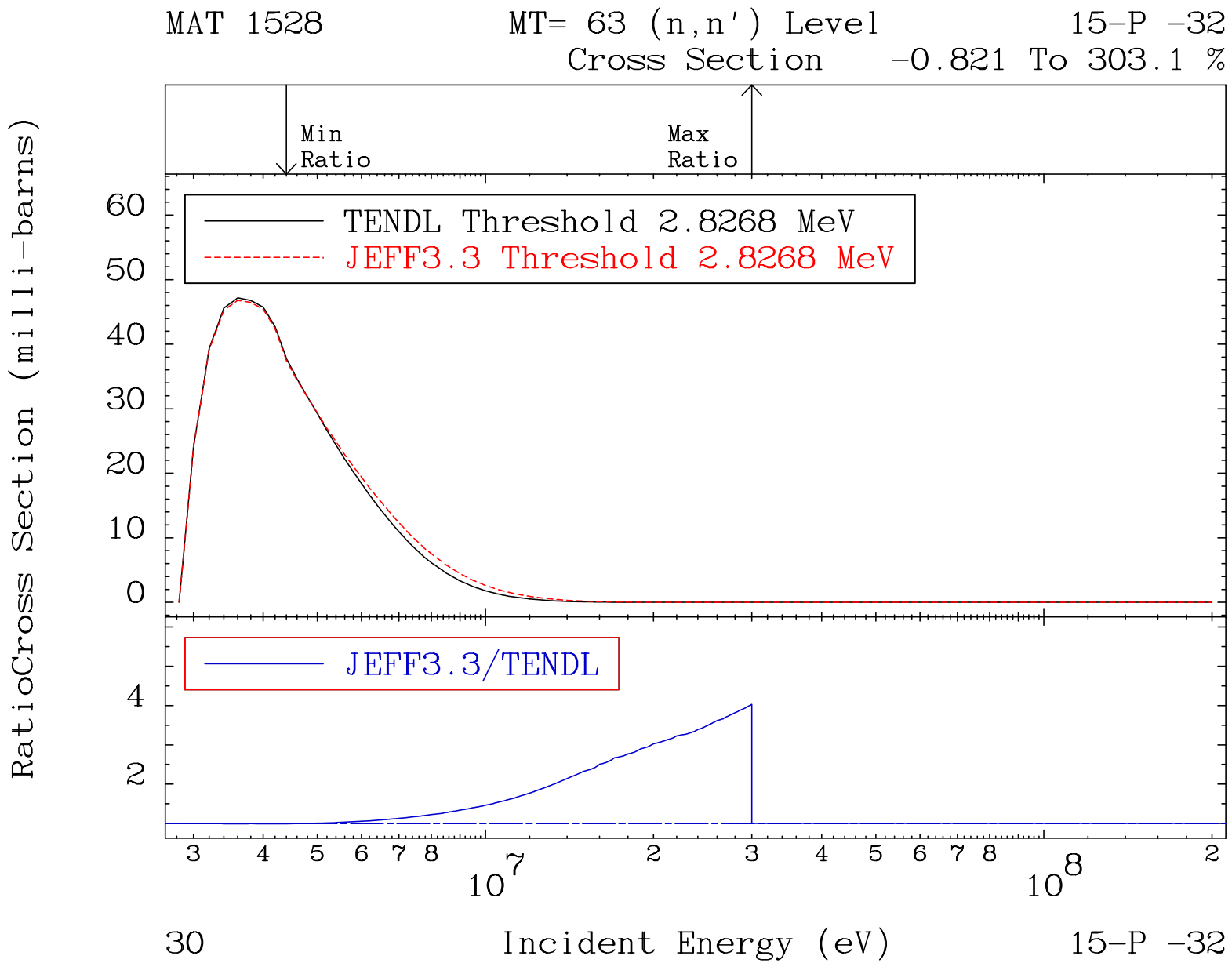

MAT 1528
MT= 58 (n,n') Level
15-P -32
Cross Section
-2.015 To 65.68 %
Min Ratio
Max Ratio
TENDL Threshold 2.2878 MeV
JEFF3.3 Threshold 2.2878 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
2.0
1.6
1.2
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
15-P -32

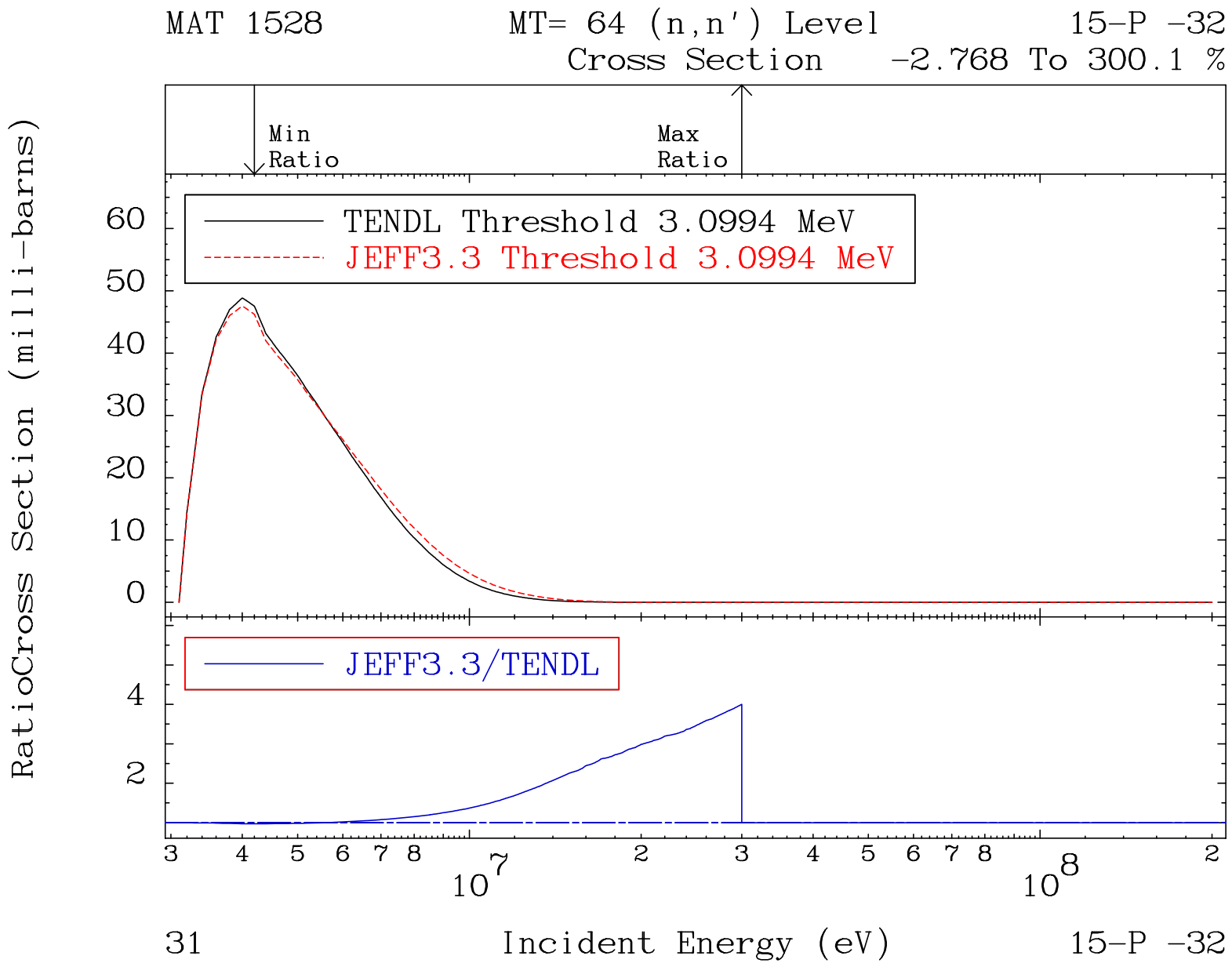

MAT 1528
MT= 59 (n,n') Level
15-P -32
Cross Section -0.910 To 302.9 %
Min Ratio
Max Ratio
TENDL Threshold 2.3000 MeV
JEFF3.3 Threshold 2.3000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
4
2
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
15-P -32

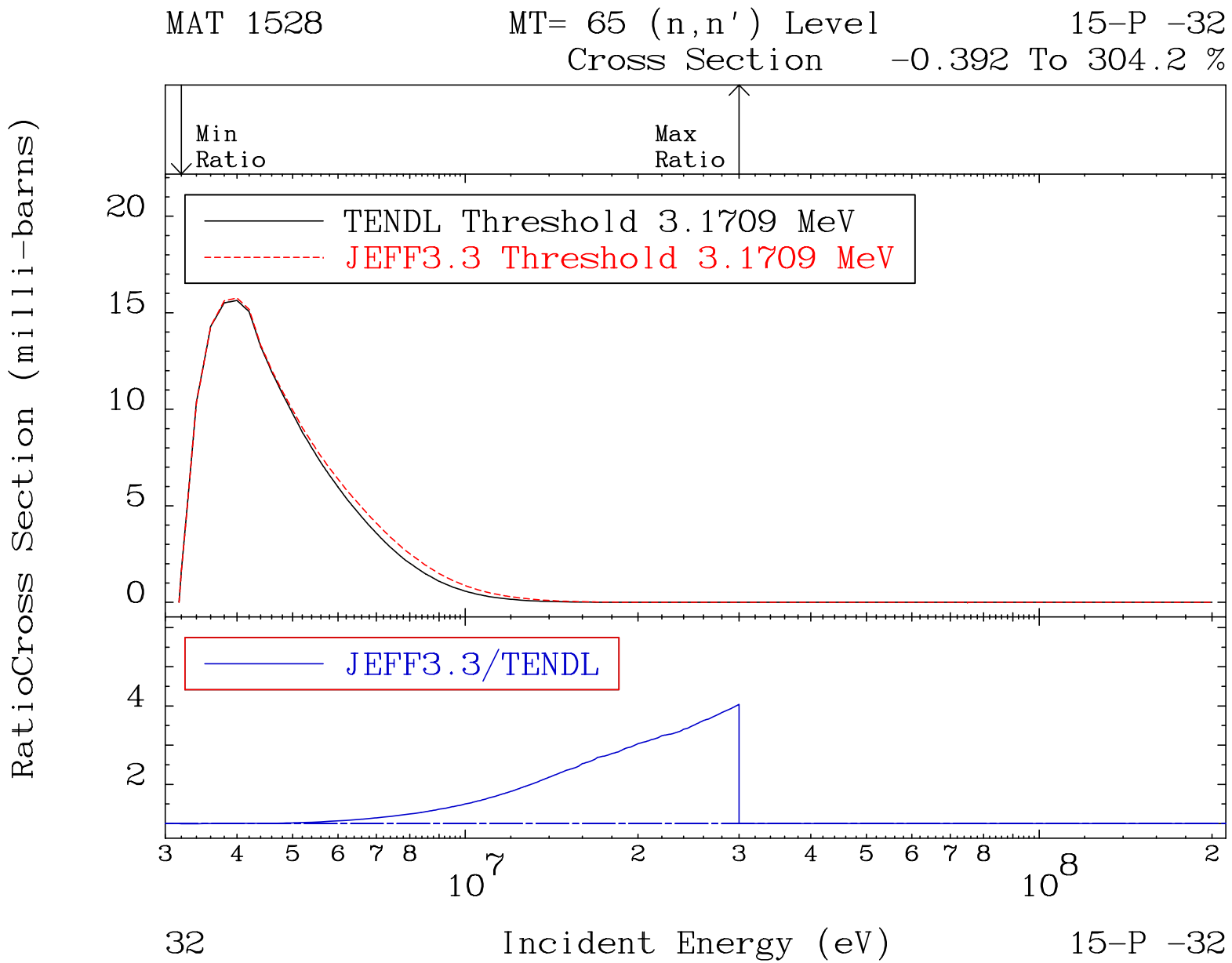

MAT 1528
MT= 60 (n,n') Level
15-P -32
Cross Section -1.636 To 298.6 %
Min Ratio
Max Ratio
TENDL Threshold 2.3864 MeV
JEFF3.3 Threshold 2.3864 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
4
2
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
27
Incident Energy (eV)
15-P -32

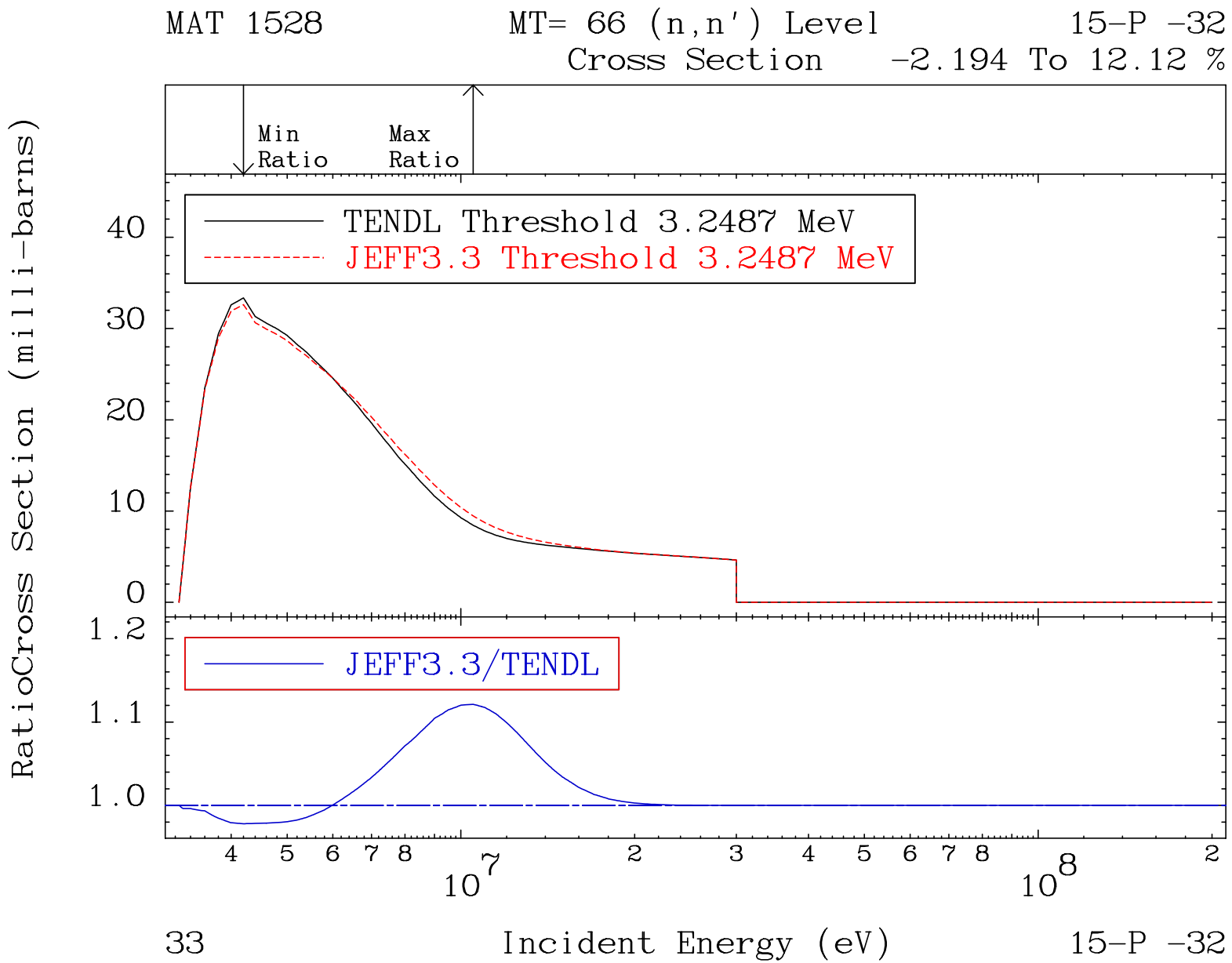

MAT 1528
MT= 61 (n,n') Level
15-P -32
Cross Section -2.175 To 88.81 %
Min Ratio
Max Ratio
TENDL Threshold 2.6605 MeV
JEFF3.3 Threshold 2.6605 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
2.0
1.6
1.2
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
28
Incident Energy (eV)
15-P -32

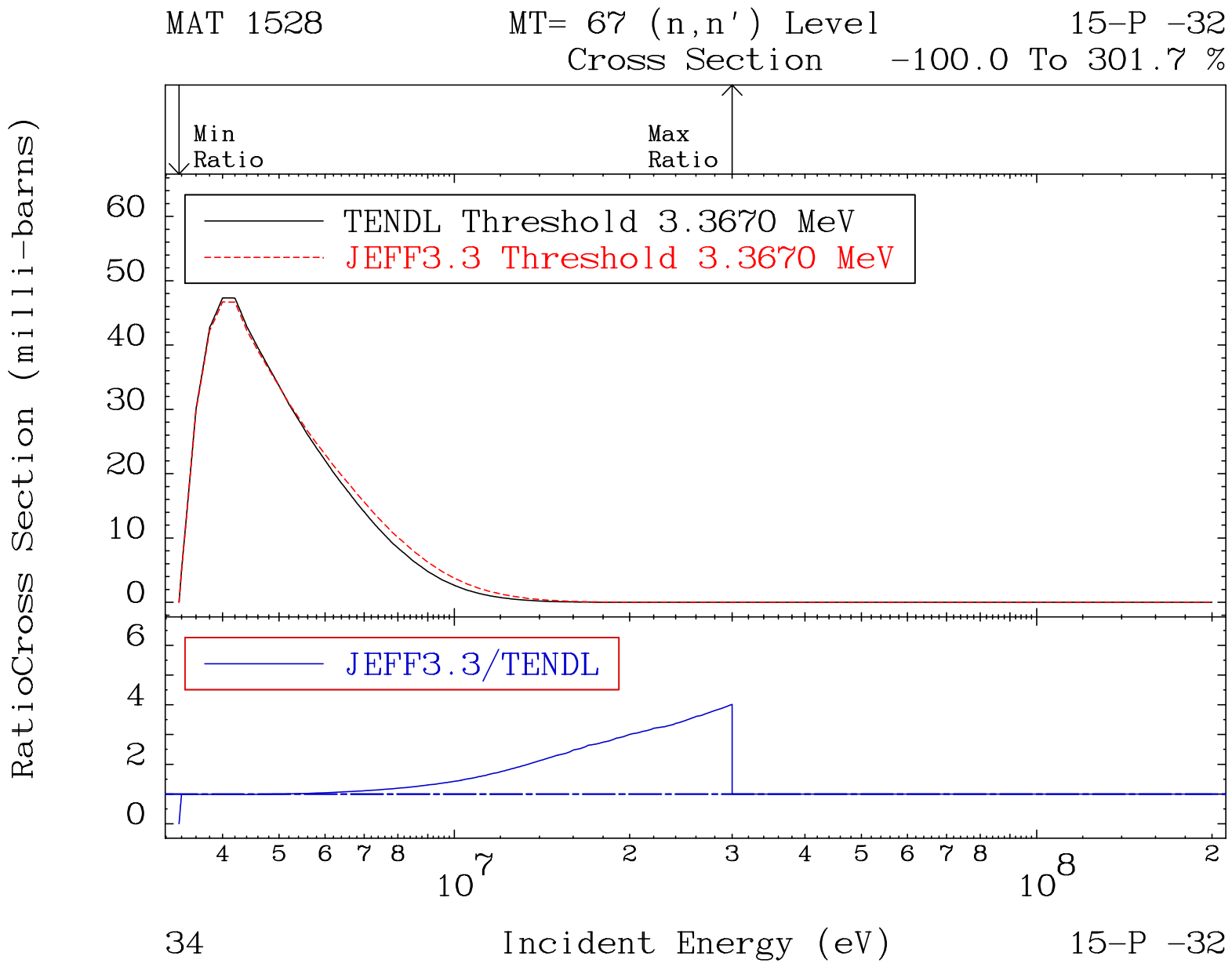

MAT 1528
MT= 62 (n,n') Level
15-P -32
Cross Section
-100.0 To 65.85 %
Min Ratio
Max Ratio
TENDL Threshold 2.7414 MeV
JEFF3.3 Threshold 2.7414 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
29
Incident Energy (eV)
15-P -32

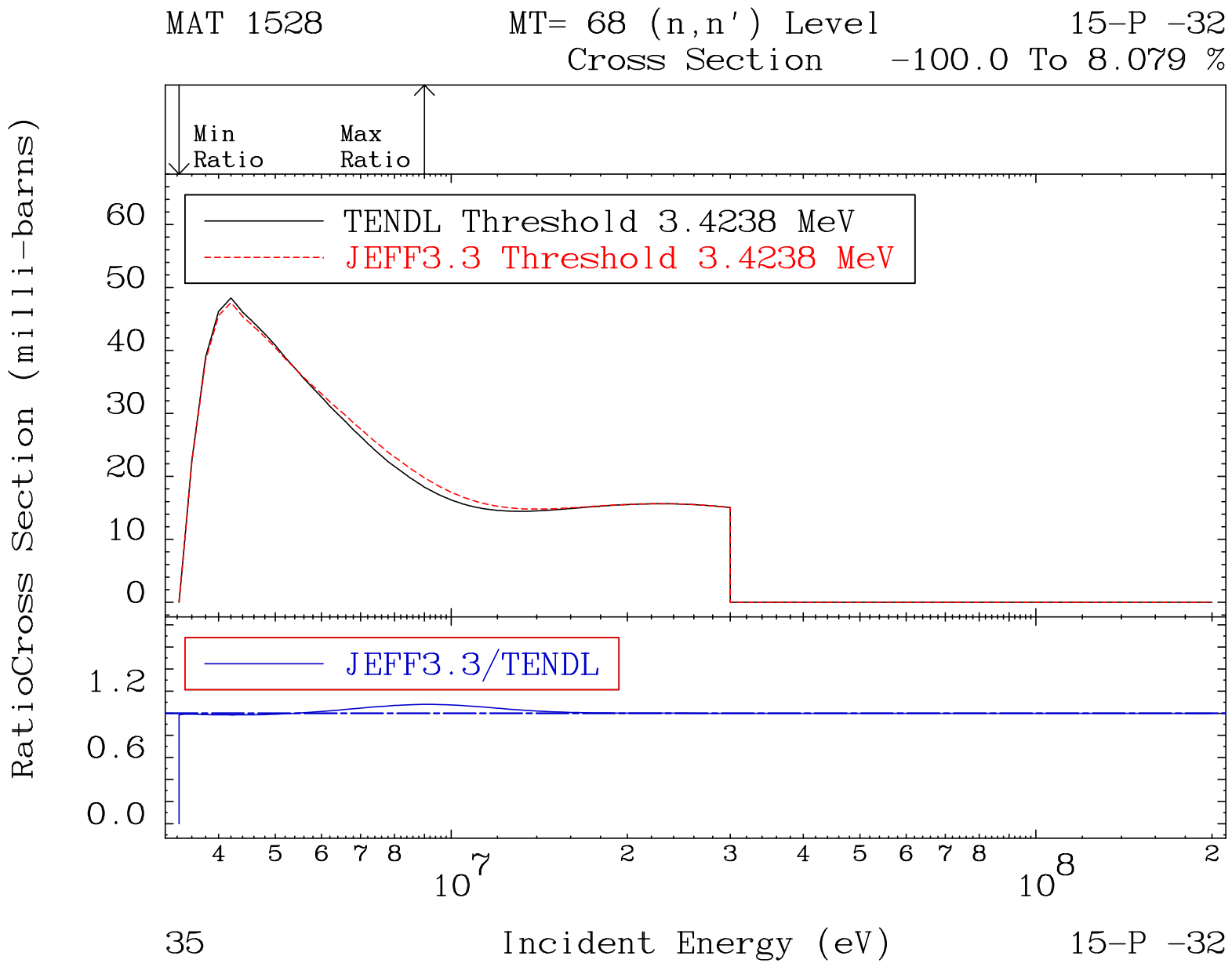

MAT 1528
MT= 63 (n,n') Level
15-P -32
Cross Section -0.821 To 303.1 %
Min Ratio
Max Ratio
TENDL Threshold 2.8268 MeV
JEFF3.3 Threshold 2.8268 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
30
15-P -32

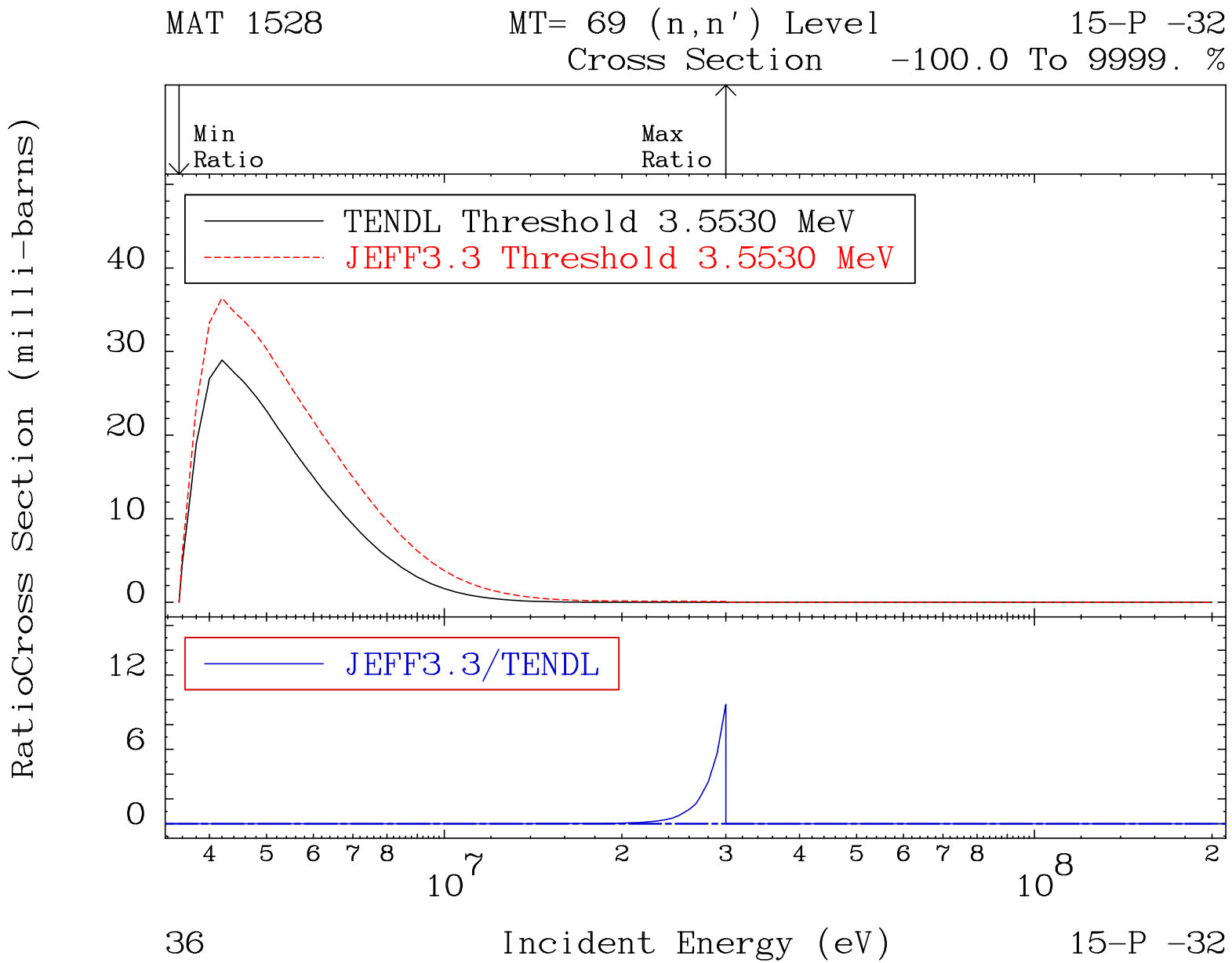

MAT 1528
MT= 64 (n,n') Level
15-P -32
Cross Section -2.768 To 300.1 %
Min Ratio
Max Ratio
TENDL Threshold 3.0994 MeV
JEFF3.3 Threshold 3.0994 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
31
15-P -32

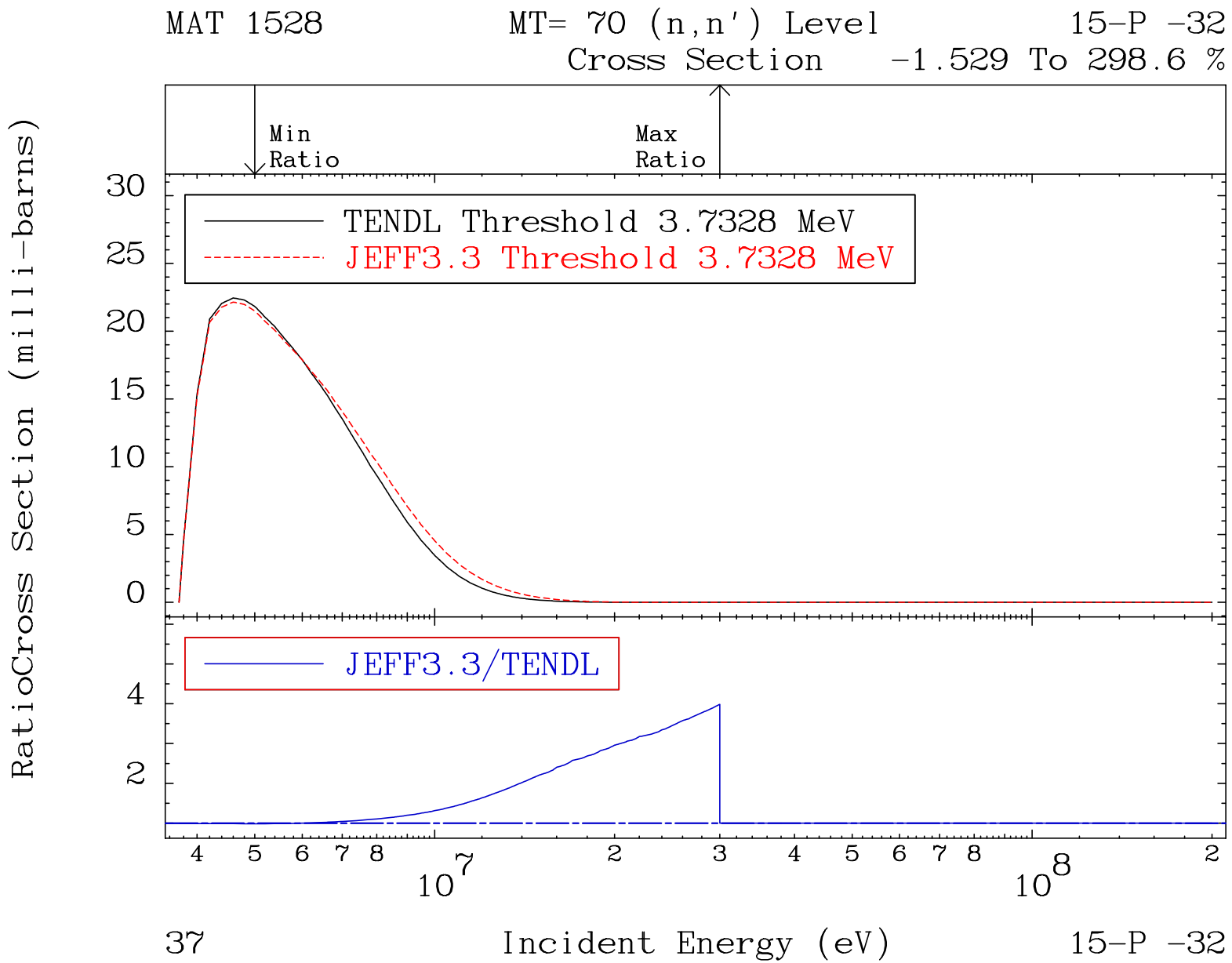

MAT 1528
MT= 65 (n,n') Level
15-P -32
Cross Section
-0.392 To 304.2 %
Min Ratio
Max Ratio
TENDL Threshold 3.1709 MeV
JEFF3.3 Threshold 3.1709 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
4
2
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
32
Incident Energy (eV)
15-P -32

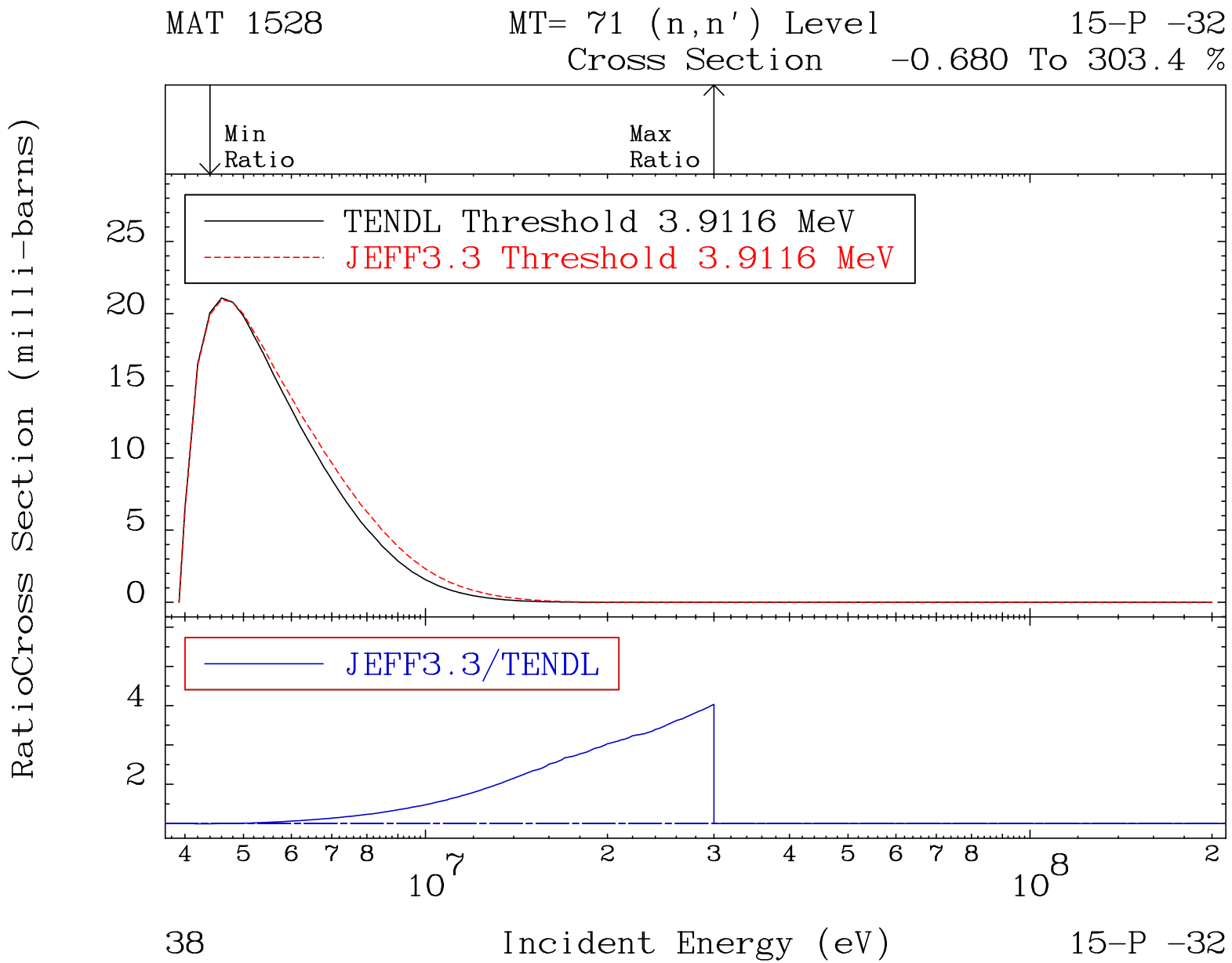

MAT 1528
MT= 66 (n,n') Level
15-P -32
Cross Section
-2.194 To 12.12 %
Min Ratio
Max Ratio
TENDL Threshold 3.2487 MeV
JEFF3.3 Threshold 3.2487 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
1.2
1.1
1.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
33
Incident Energy (eV)
15-P -32

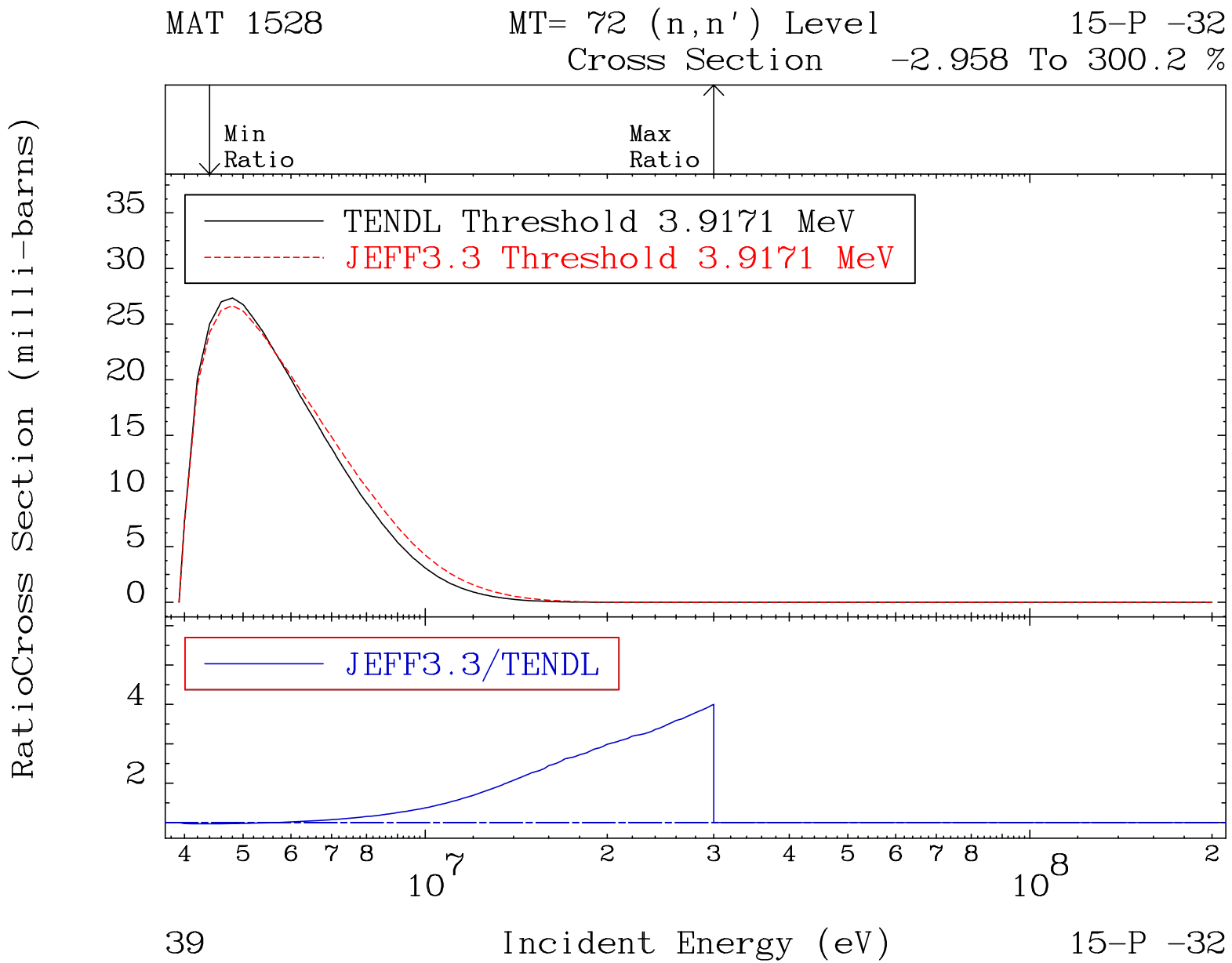

MAT 1528
MT= 67 (n,n') Level
15-P -32
Cross Section
-100.0 To 301.7 %
Min Ratio
Max Ratio
TENDL Threshold 3.3670 MeV
JEFF3.3 Threshold 3.3670 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
34
15-P -32

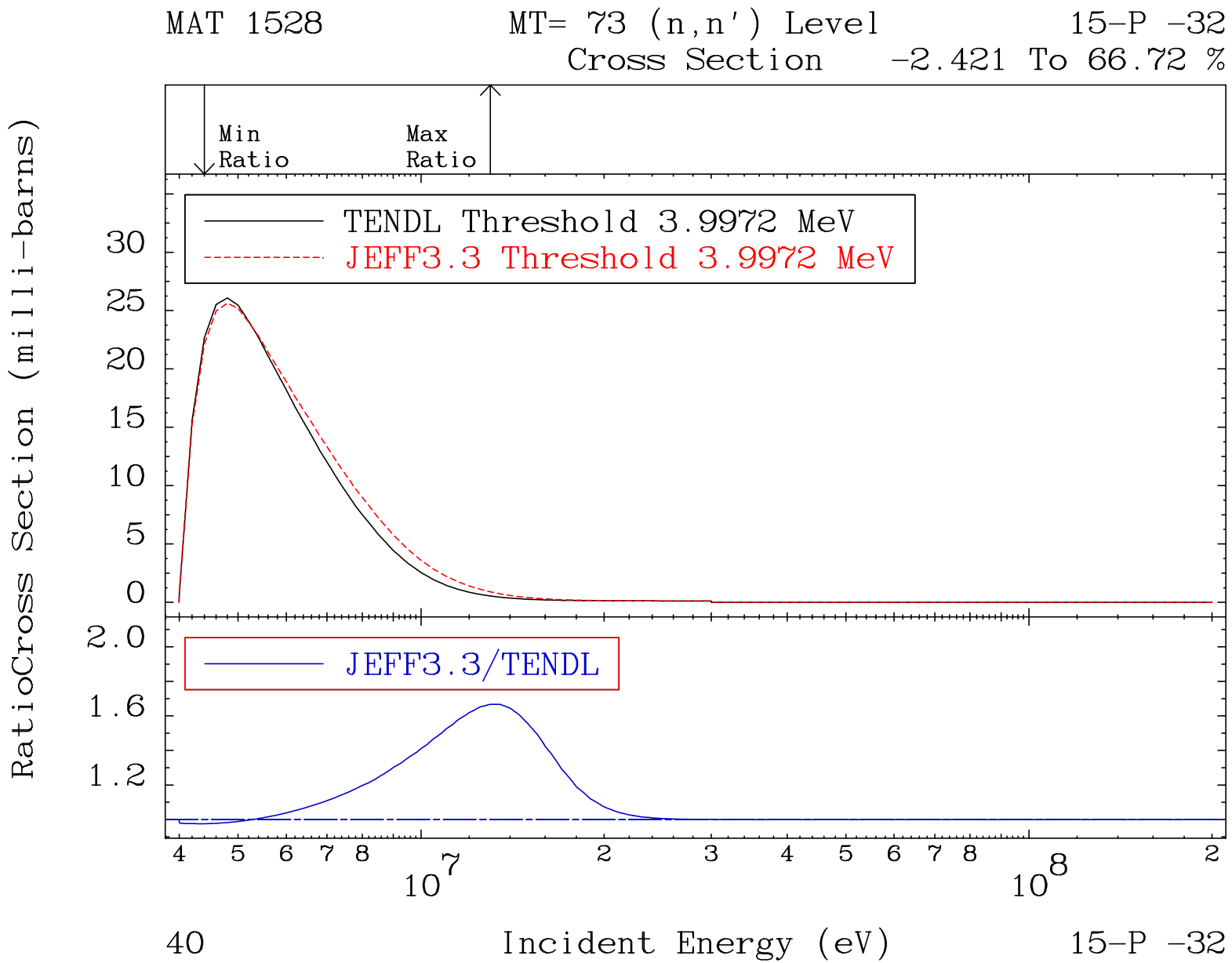

MAT 1528
MT= 68 (n,n') Level
15-P -32
Cross Section -100.0 To 8.079 %
Min Ratio
Max Ratio
TENDL Threshold 3.4238 MeV
JEFF3.3 Threshold 3.4238 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
1.2
0.6
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
35
Incident Energy (eV)
15-P -32

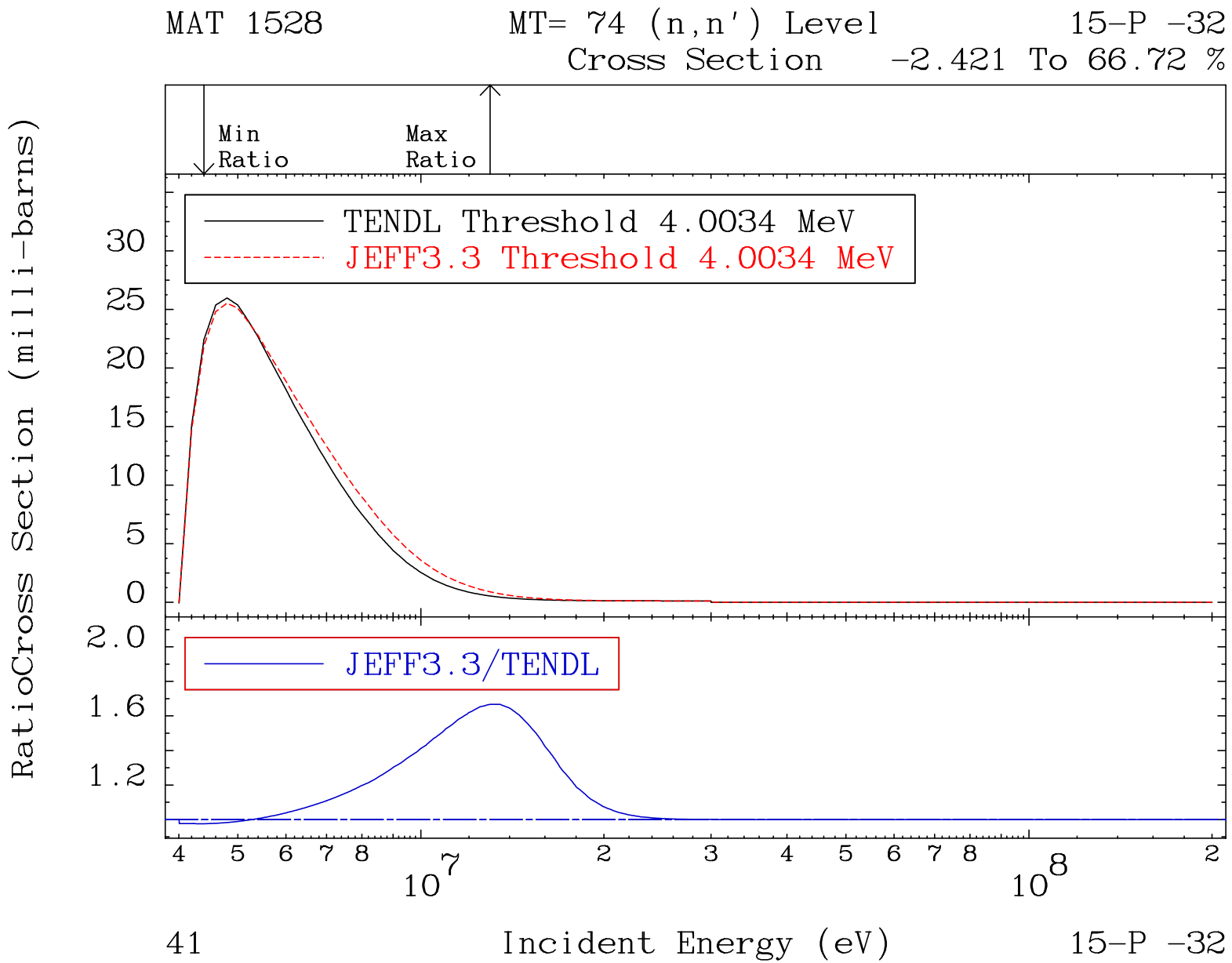

MAT 1528
MT= 69 (n,n') Level
15-P -32
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 3.5530 MeV
JEFF3.3 Threshold 3.5530 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
12
6
0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
36
Incident Energy (eV)
15-P -32

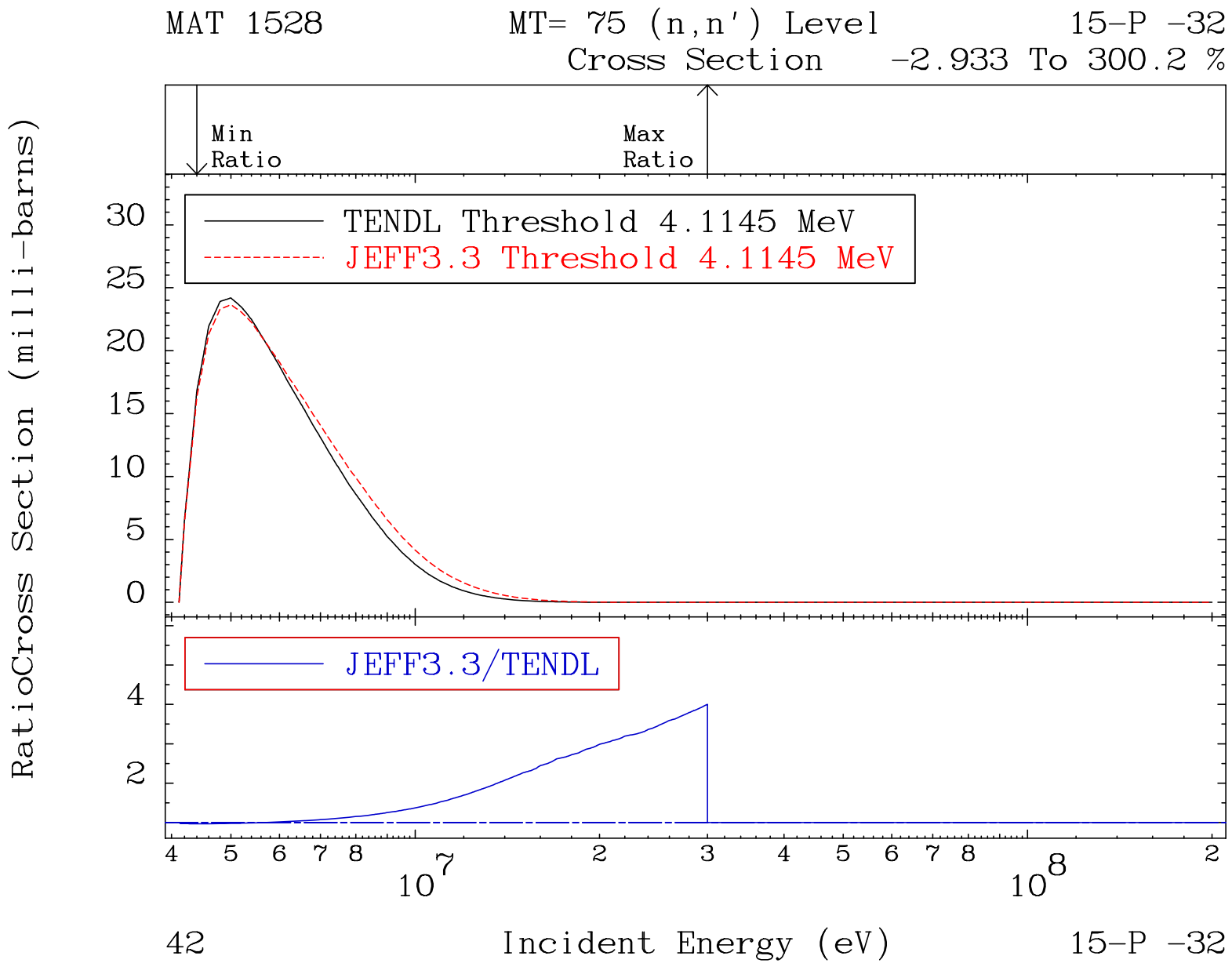

MAT 1528
MT= 70 (n,n') Level
15-P -32
Cross Section
-1.529 To 298.6 %
Min Ratio
Max Ratio
TENDL Threshold 3.7328 MeV
JEFF3.3 Threshold 3.7328 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
37
15-P -32

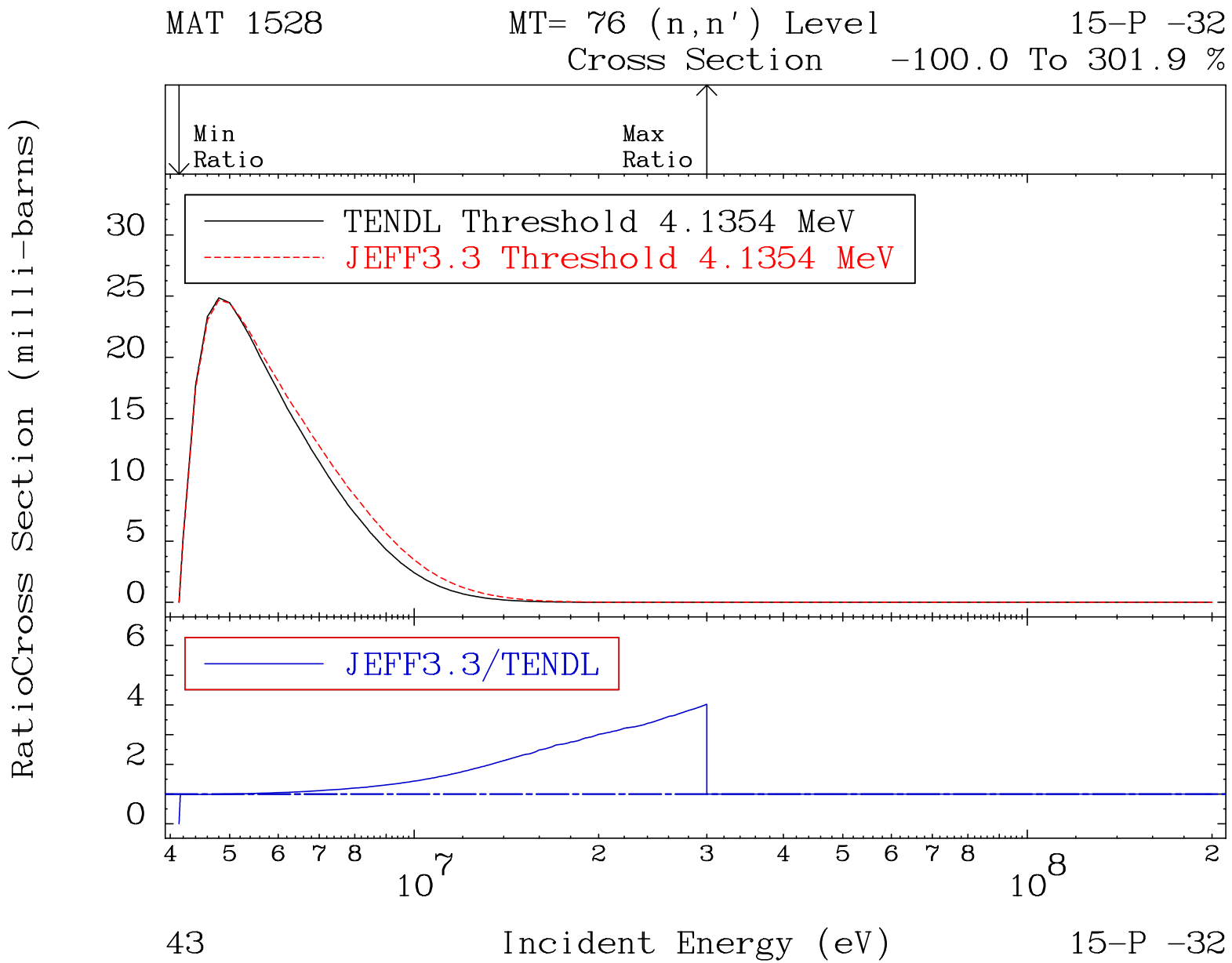

MAT 1528
MT= 71 (n,n') Level
15-P -32
Cross Section -0.680 To 303.4 %
Min Ratio
Max Ratio
TENDL Threshold 3.9116 MeV
JEFF3.3 Threshold 3.9116 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
4
2
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
38
Incident Energy (eV)
15-P -32

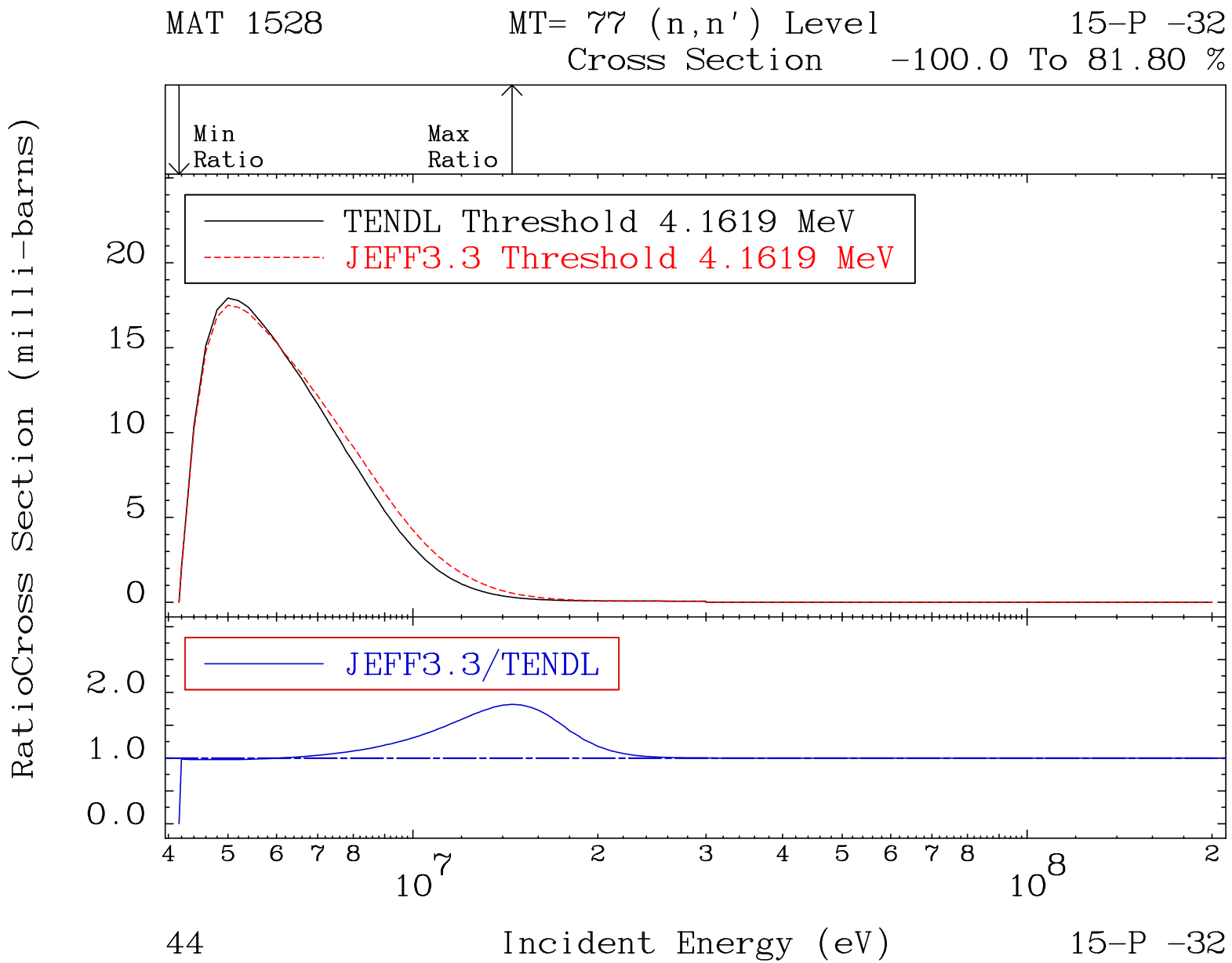

MAT 1528
MT= 72 (n,n') Level
15-P -32
Cross Section -2.958 To 300.2 %
Min Ratio
Max Ratio
TENDL Threshold 3.9171 MeV
JEFF3.3 Threshold 3.9171 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
39
15-P -32

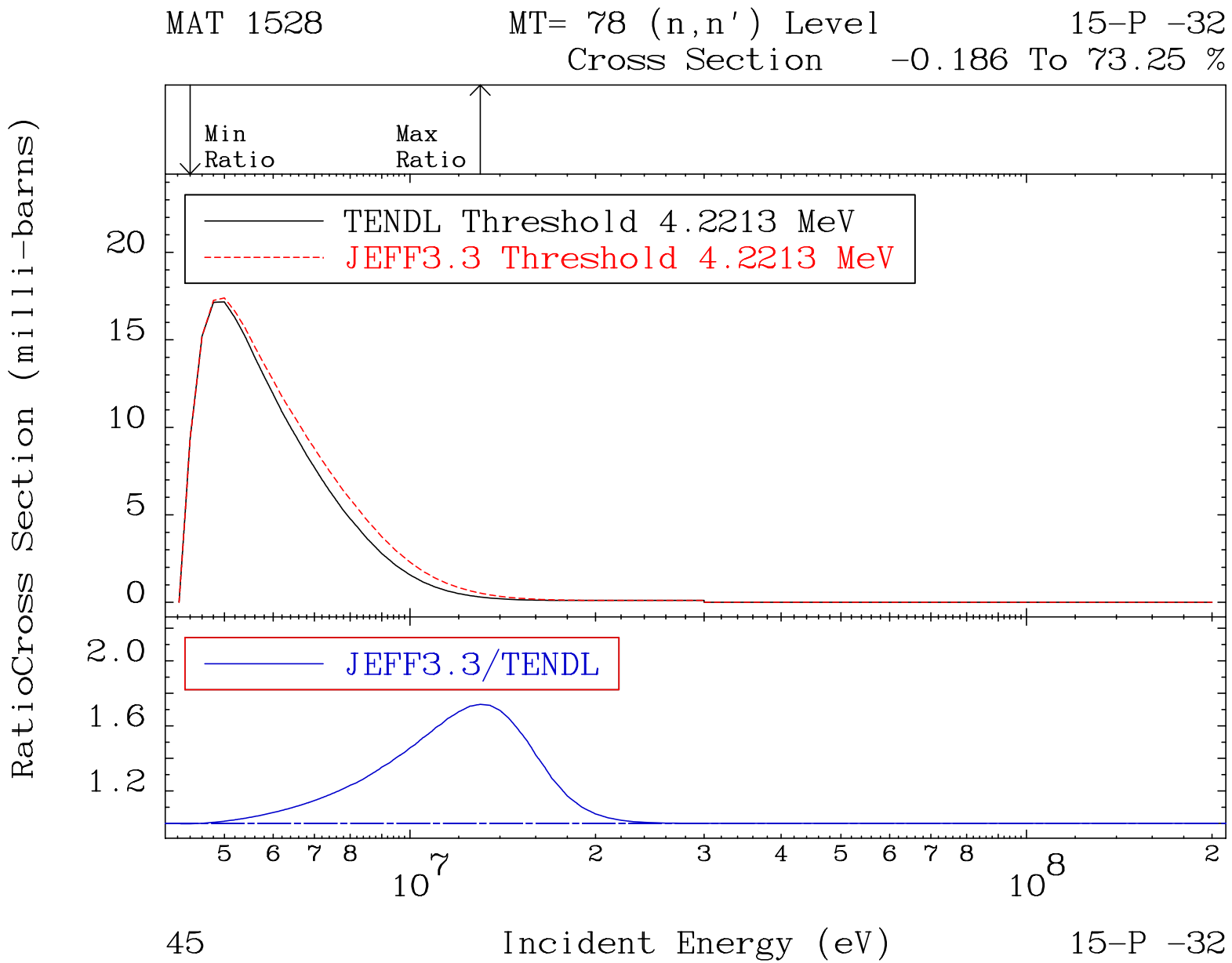

MAT 1528
MT= 73 (n,n') Level
15-P -32
Cross Section -2.421 To 66.72 %
Min Ratio
Max Ratio
TENDL Threshold 3.9972 MeV
JEFF3.3 Threshold 3.9972 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
2.0
1.6
1.2
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
40
Incident Energy (eV)
15-P -32

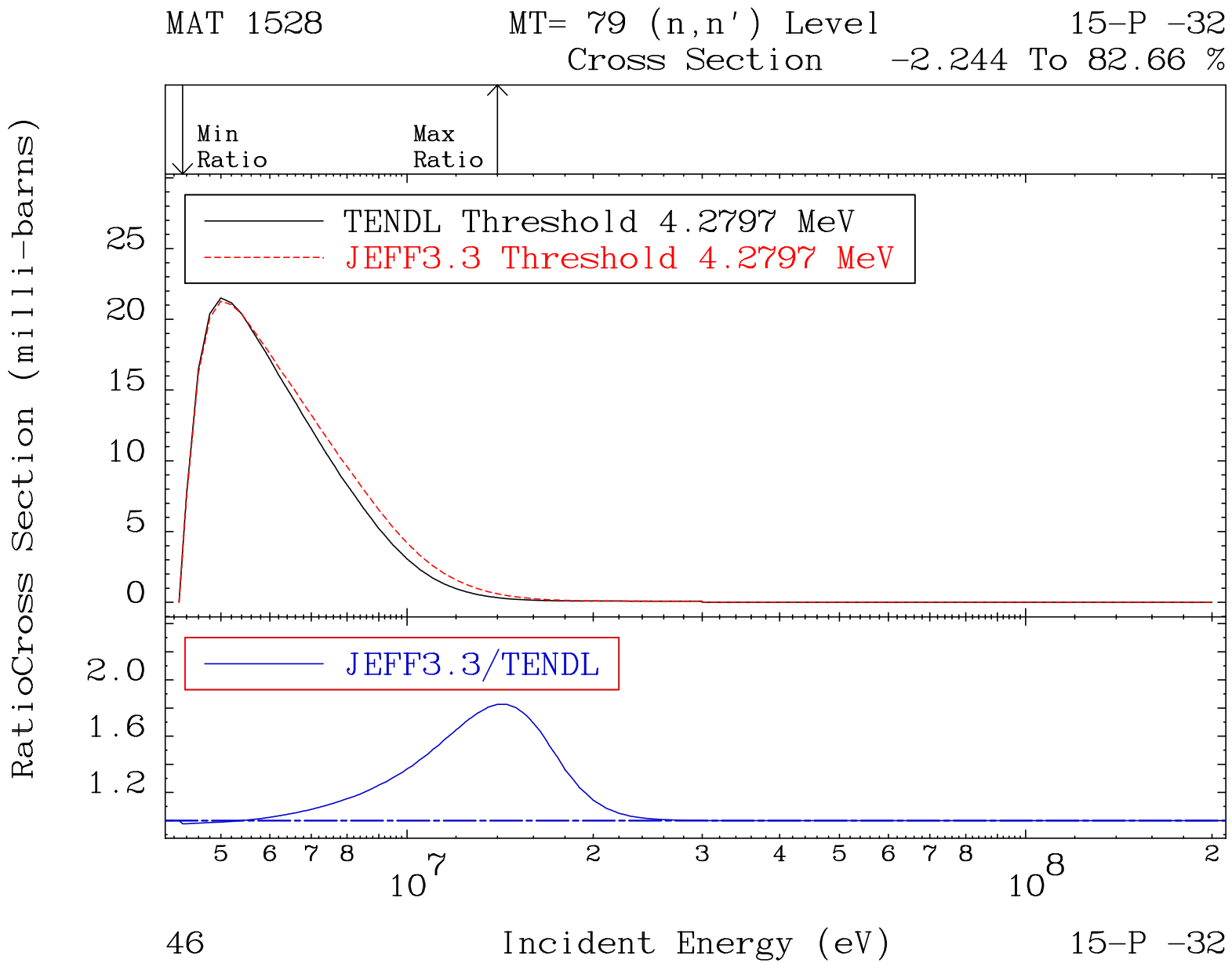

MAT 1528
MT= 74 (n,n') Level
15-P -32
Cross Section -2.421 To 66.72 %
Min Ratio
Max Ratio
TENDL Threshold 4.0034 MeV
JEFF3.3 Threshold 4.0034 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
2.0
1.6
1.2
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
41
Incident Energy (eV)
15-P -32

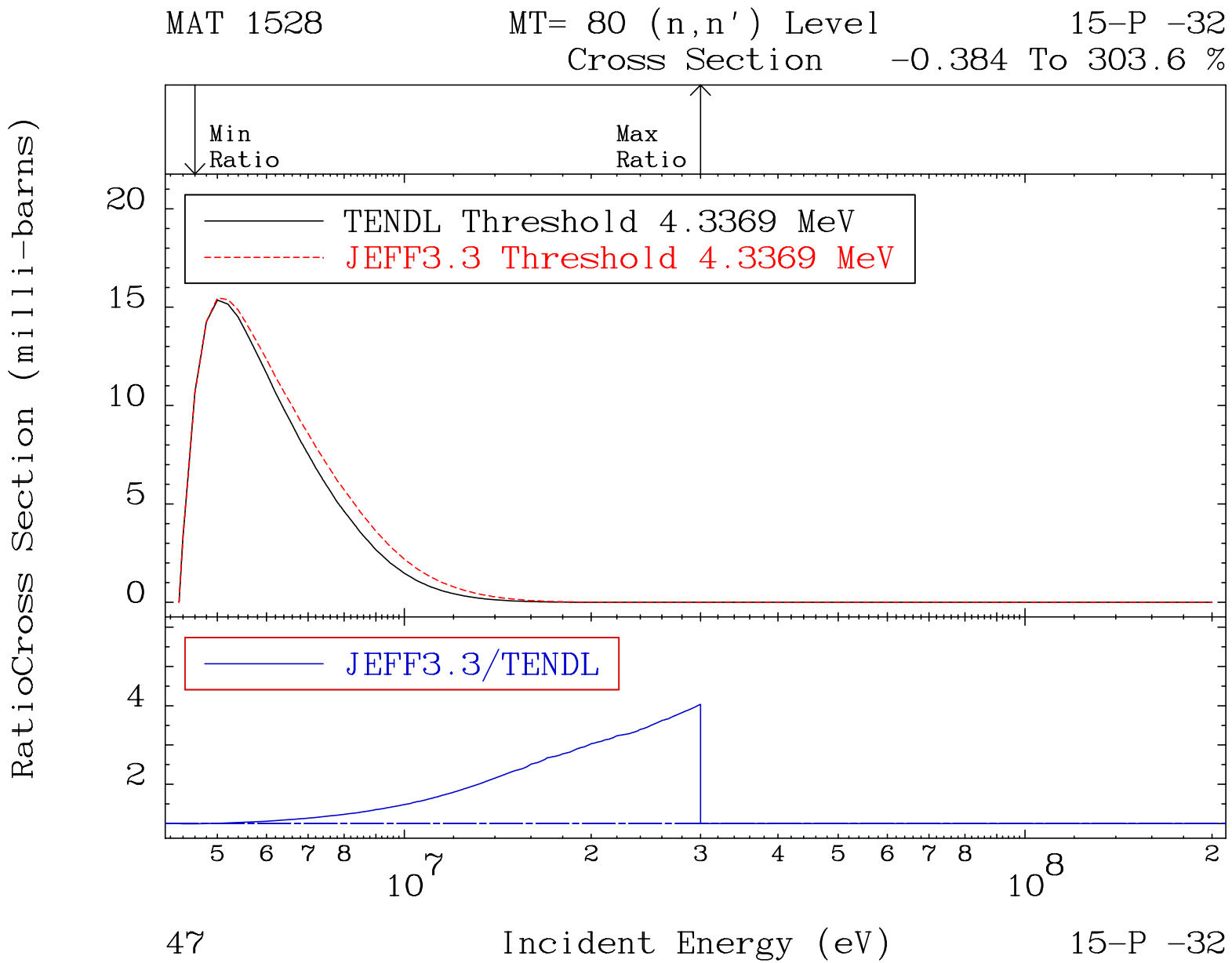

MAT 1528
MT= 75 (n,n') Level
15-P -32
Cross Section -2.933 To 300.2 %
Min Ratio
Max Ratio
TENDL Threshold 4.1145 MeV
JEFF3.3 Threshold 4.1145 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
4
2
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
42
15-P -32

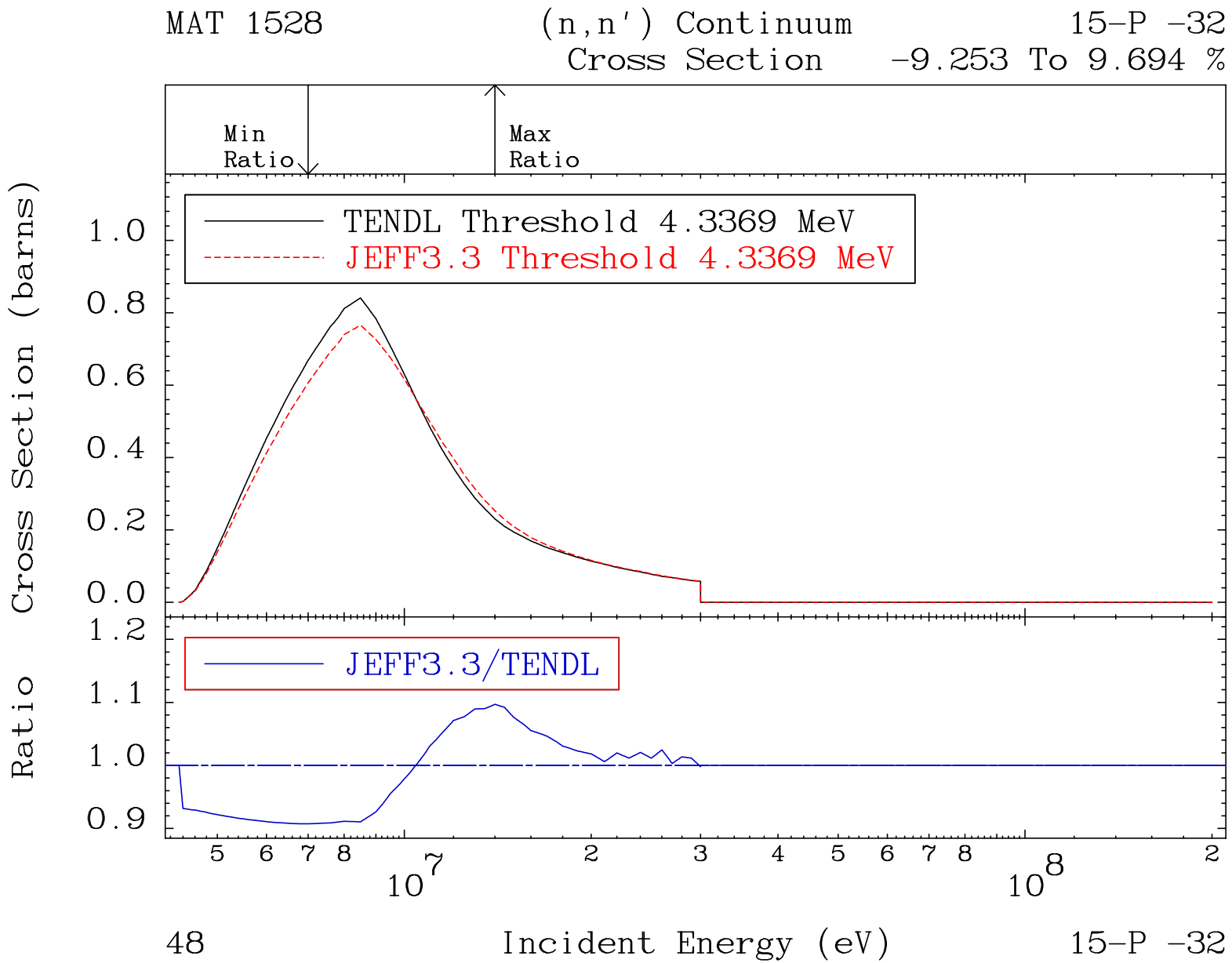

MAT 1528
MT= 76 (n,n') Level
15-P -32
Cross Section -100.0 To 301.9 %
Min Ratio
Max Ratio
TENDL Threshold 4.1354 MeV
JEFF3.3 Threshold 4.1354 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
43
15-P -32

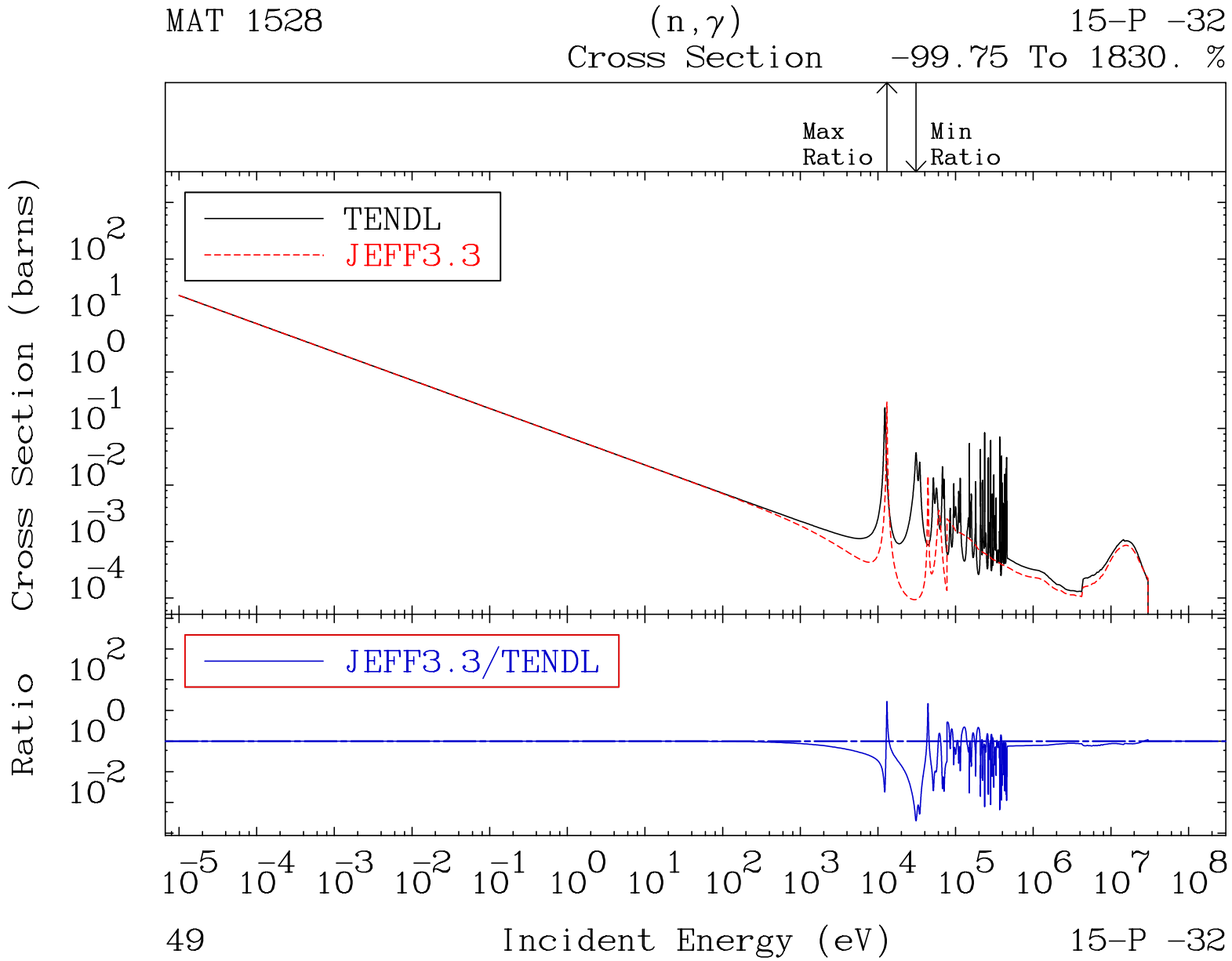

MAT 1528
MT= 77 (n,n') Level
15-P -32
Cross Section -100.0 To 81.80 %
Min Ratio
Max Ratio
TENDL Threshold 4.1619 MeV
JEFF3.3 Threshold 4.1619 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
2.0
1.0
0.0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
44
Incident Energy (eV)
15-P -32

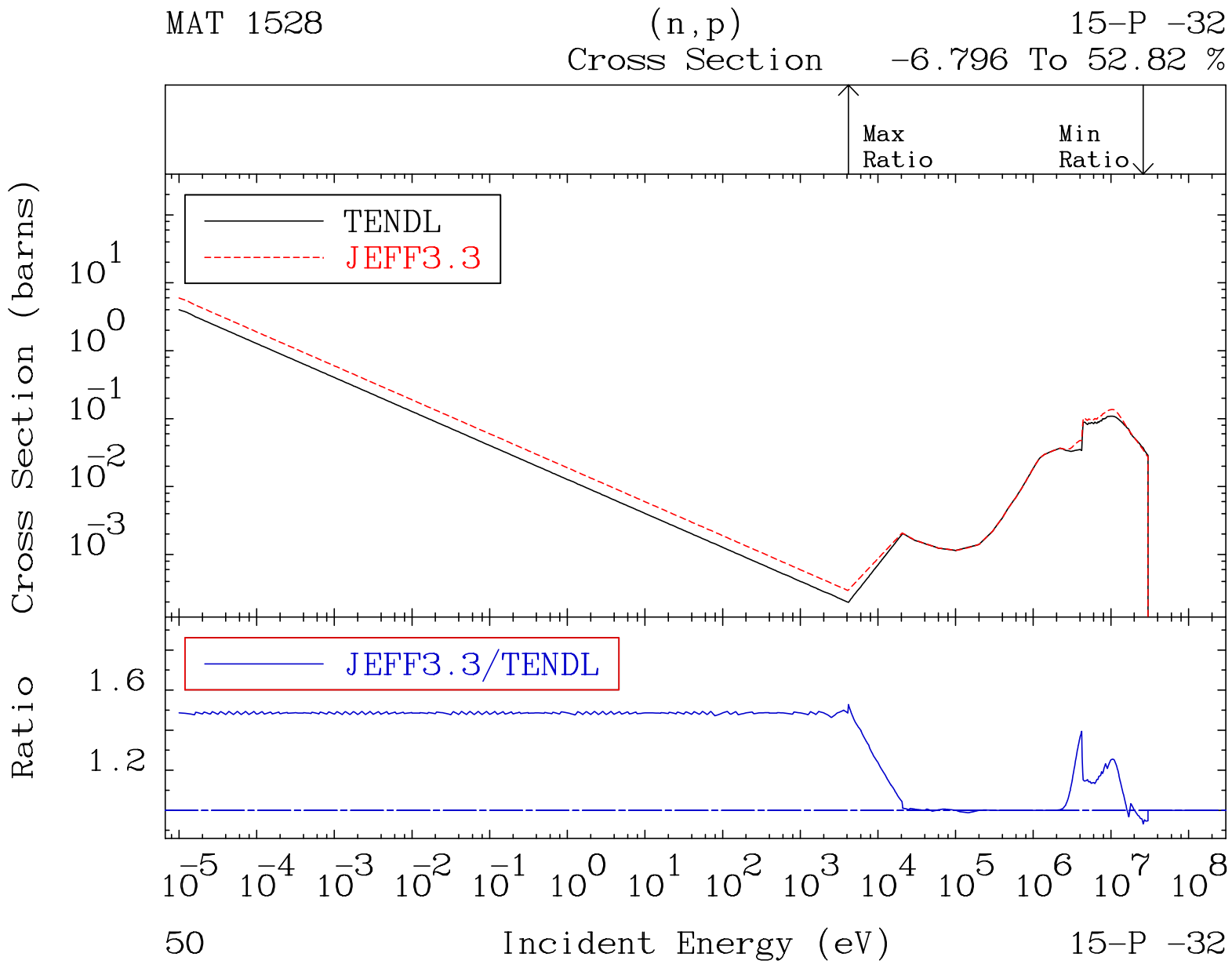

MAT 1528
MT= 78 (n,n') Level
15-P -32
Cross Section -0.186 To 73.25 %
Min Ratio
Max Ratio
TENDL Threshold 4.2213 MeV
JEFF3.3 Threshold 4.2213 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
2.0
1.6
1.2
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
45
Incident Energy (eV)
15-P -32

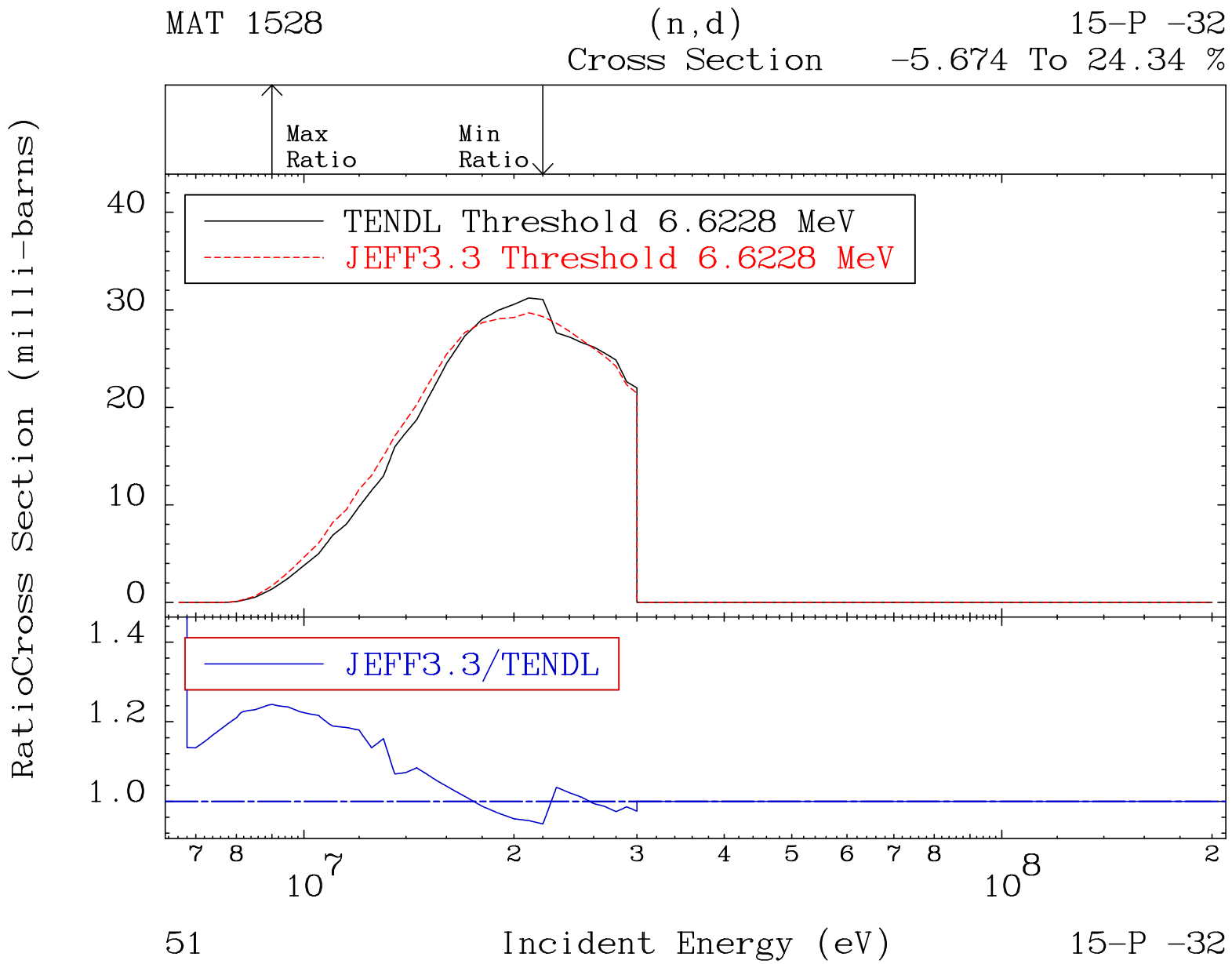

MAT 1528
MT= 79 (n,n') Level
15-P -32
Cross Section
-2.244 To 82.66 %
Min Ratio
Max Ratio
TENDL Threshold 4.2797 MeV
JEFF3.3 Threshold 4.2797 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
2.0
1.6
1.2
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
46
Incident Energy (eV)
15-P -32

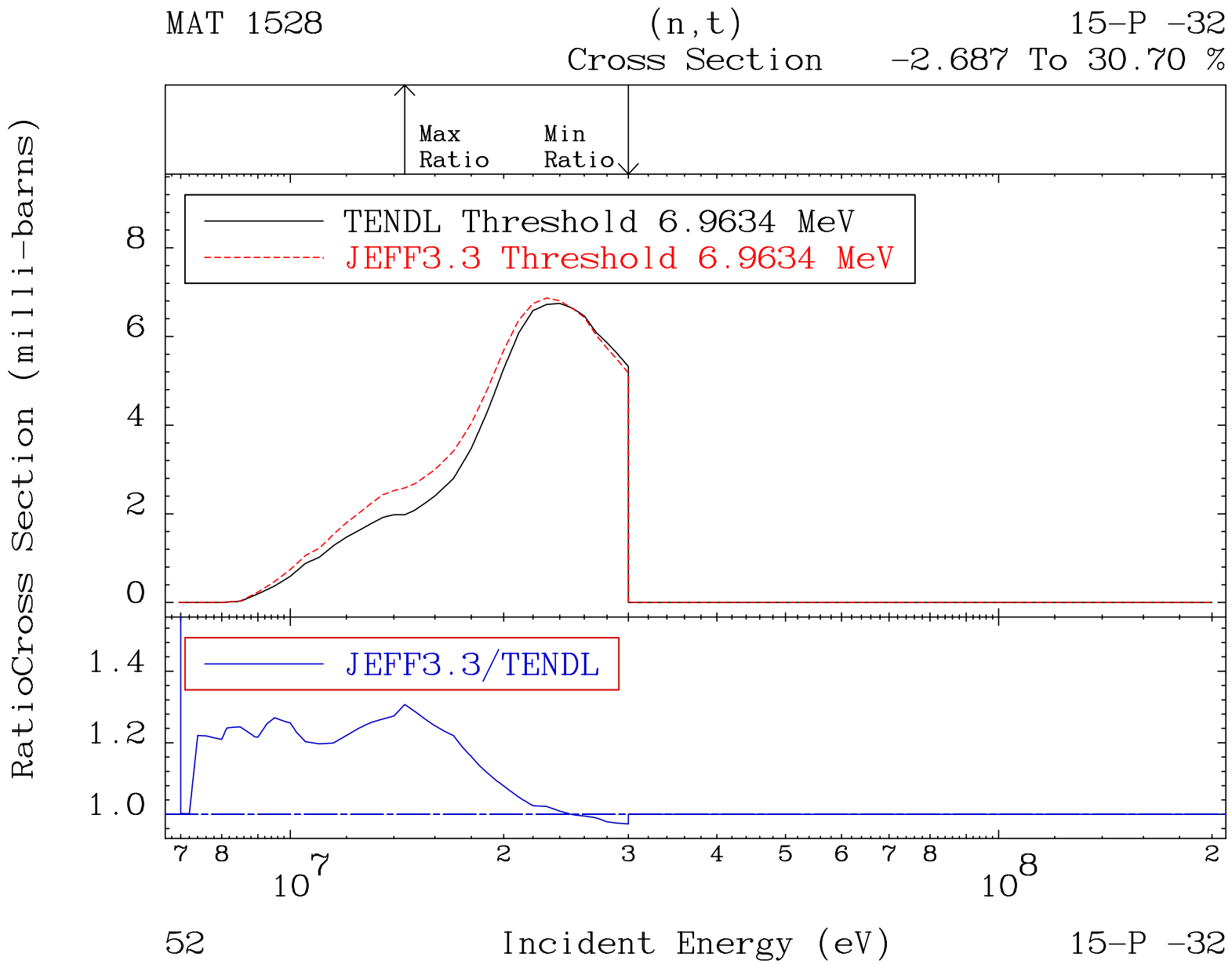

MAT 1528
MT= 80 (n,n') Level
15-P -32
Cross Section -0.384 To 303.6 %
Min Ratio
Max Ratio
TENDL Threshold 4.3369 MeV
JEFF3.3 Threshold 4.3369 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
4
2
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
47
Incident Energy (eV)
15-P -32

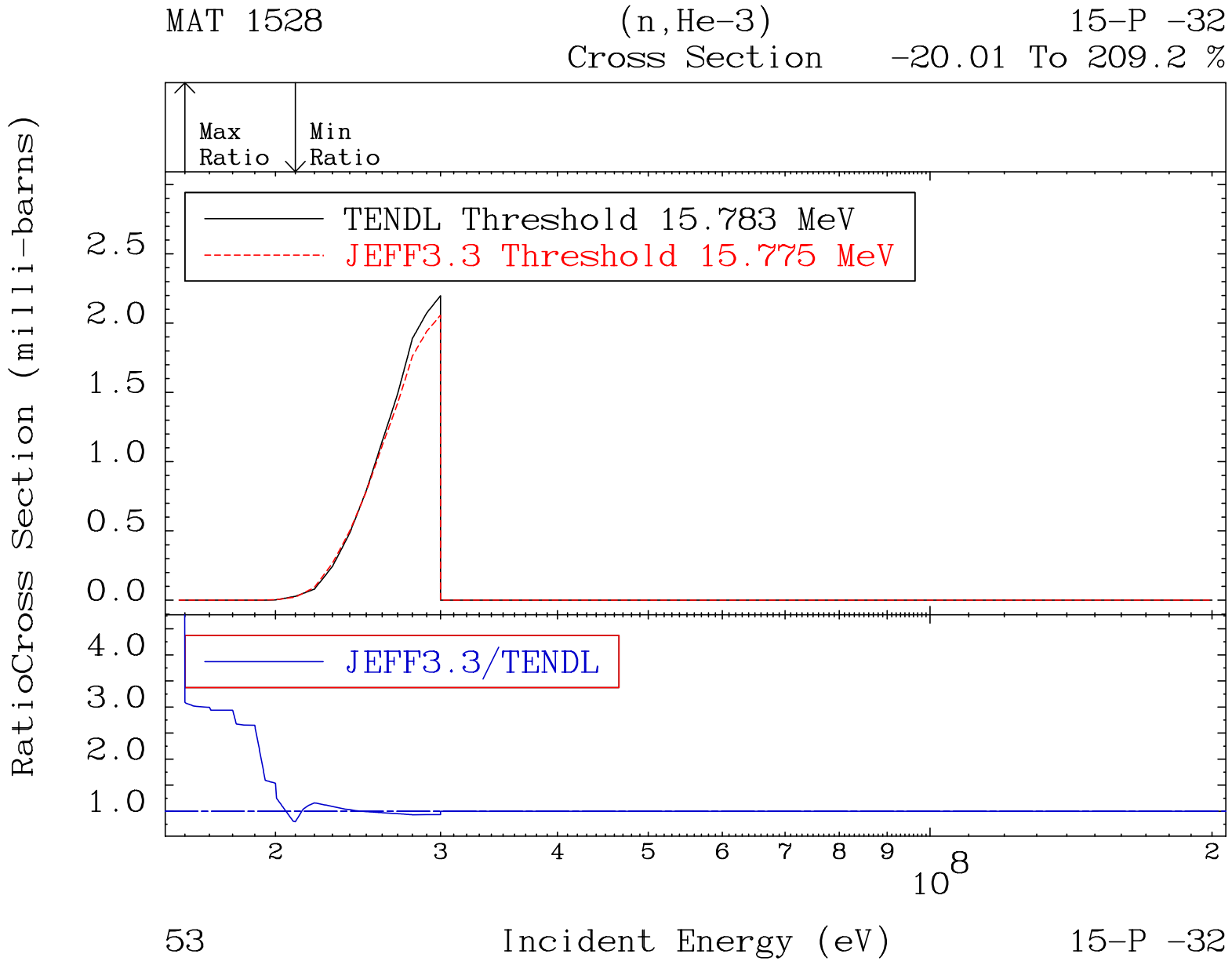

MAT 1528
(n,n') Continuum
Cross Section
15-P -32
-9.253 To 9.694 %
Min Ratio
Max Ratio
TENDL Threshold 4.3369 MeV
JEFF3.3 Threshold 4.3369 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
1.2
1.1
1.0
0.9
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
48
Incident Energy (eV)
15-P -32

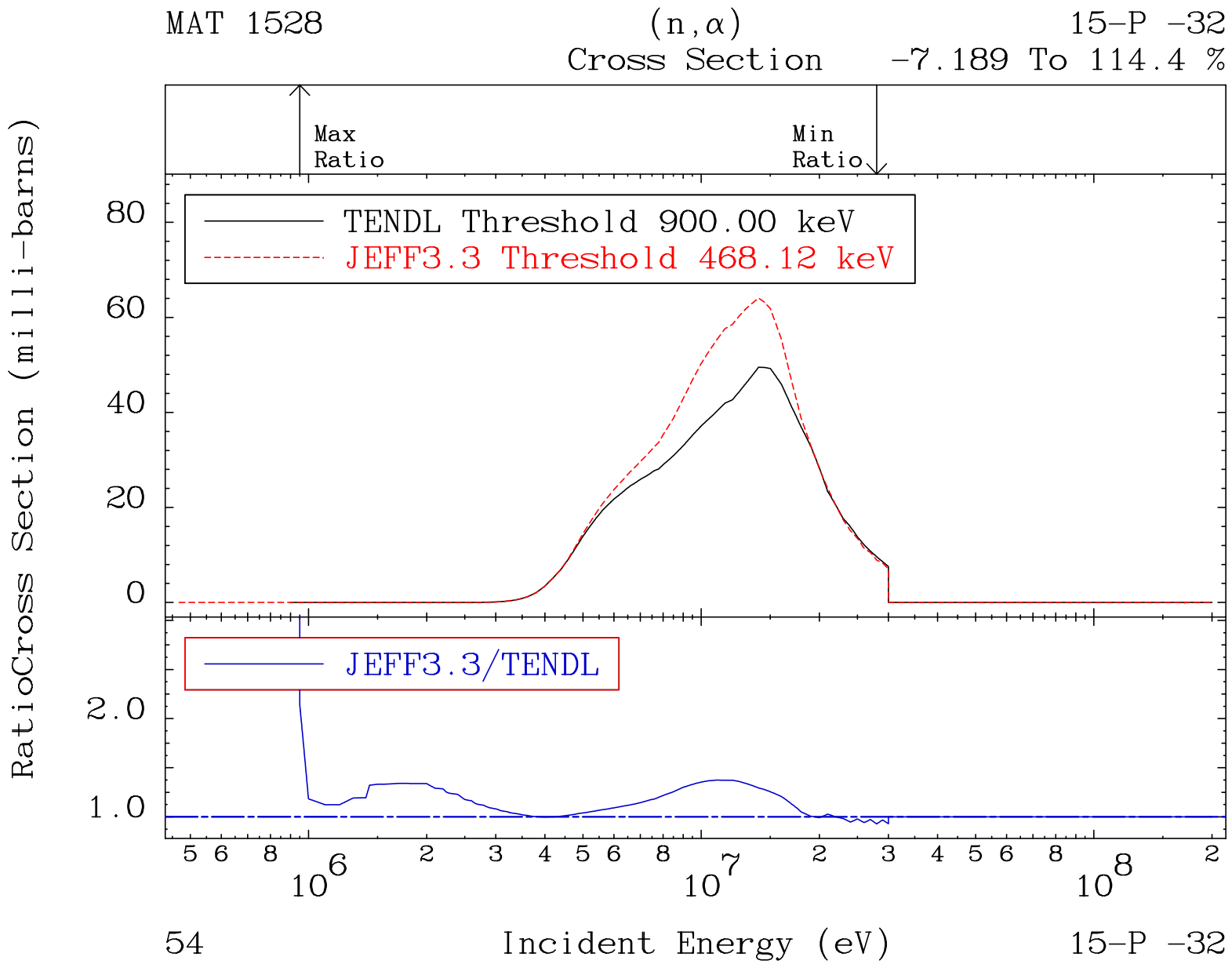

MAT 1528
(n,γ)
15-P -32
Cross Section
-99.75 To 1830. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
49
15-P -32

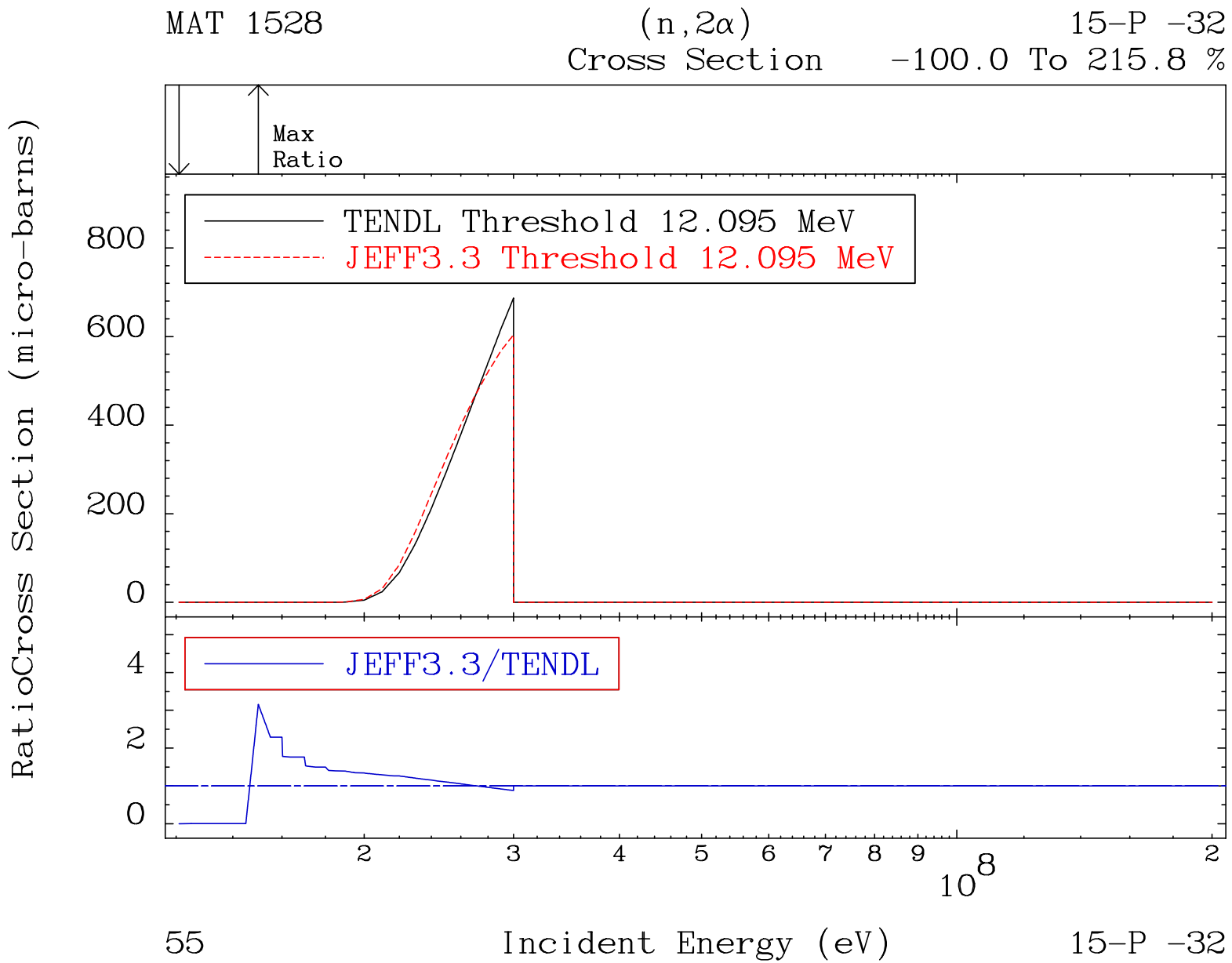

MAT 1528
(n,p)
Cross Section
15-P -32
-6.796 To 52.82 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
50
15-P -32

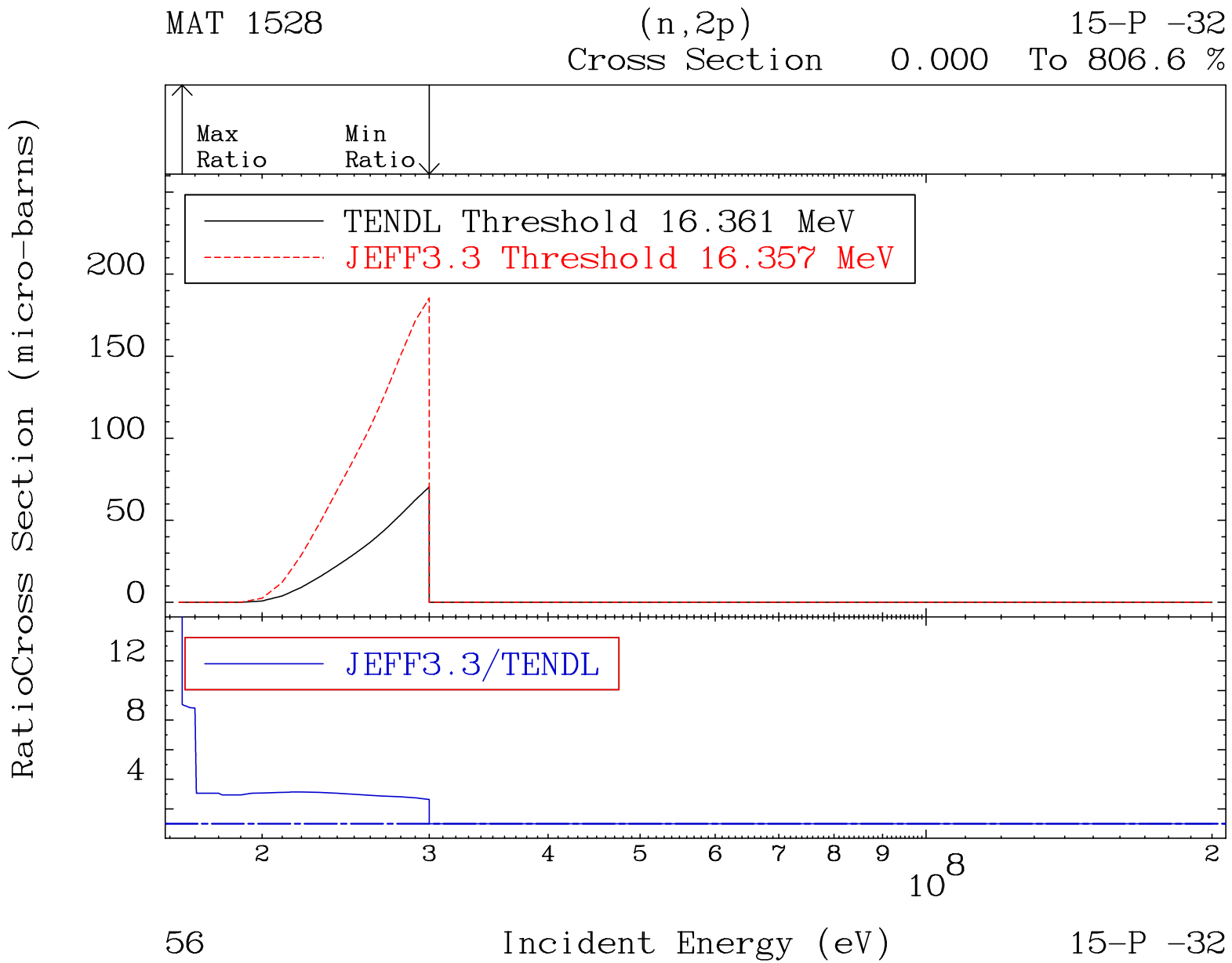

MAT 1528
(n,d)
15-P -32
Cross Section
-5.674 To 24.34 %
Max Ratio
Min Ratio
TENDL Threshold 6.6228 MeV
JEFF3.3 Threshold 6.6228 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
1.4
1.2
1.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
51
Incident Energy (eV)
15-P -32

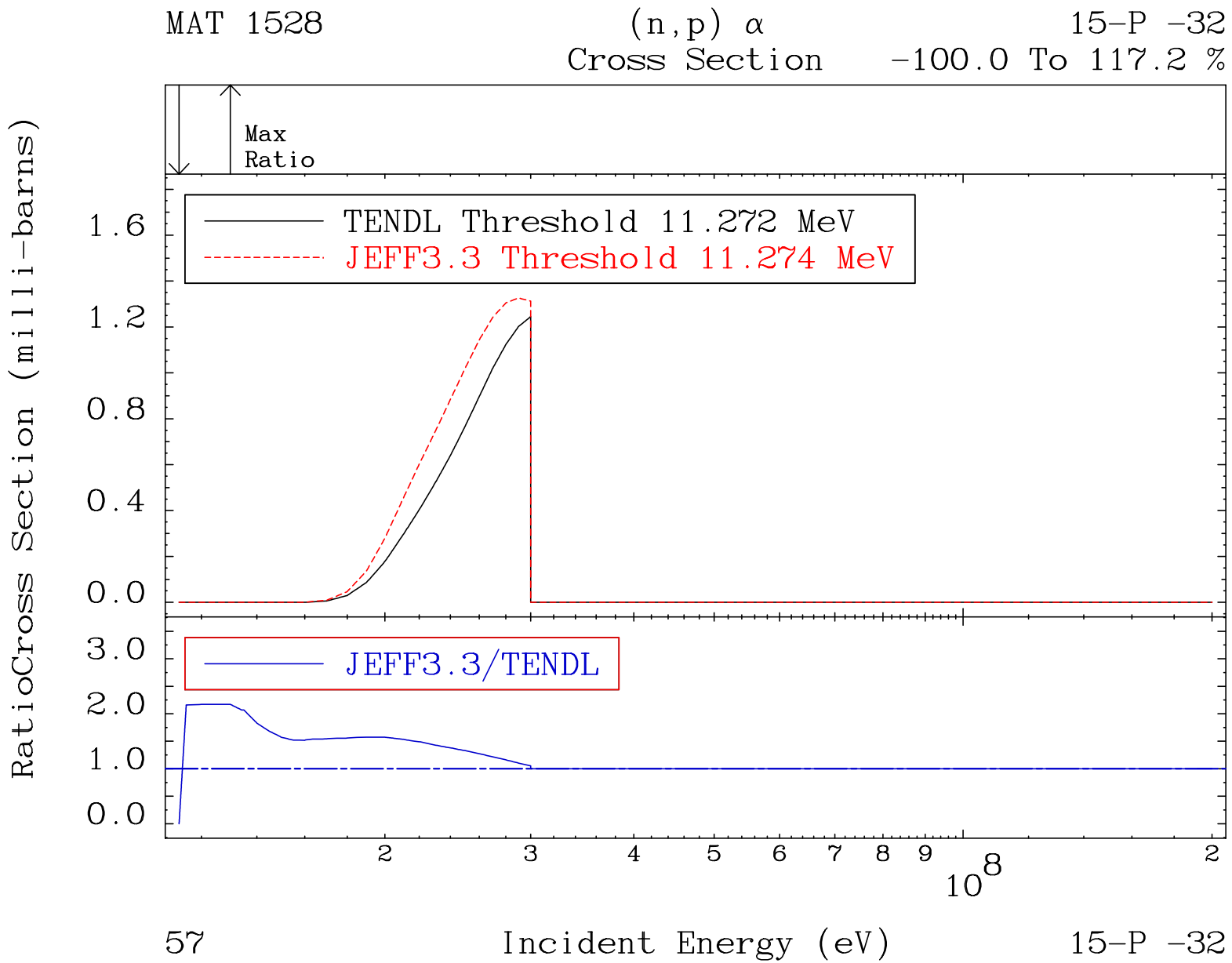

MAT 1528
(n,t)
15-P -32
Cross Section
-2.687 To 30.70 %
Max Ratio
Min Ratio
TENDL Threshold 6.9634 MeV
JEFF3.3 Threshold 6.9634 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
8
6
4
2
0
1.4
1.2
1.0
7 8
10^7
2 3 4 5 6 7 8
10^8
2
52
Incident Energy (eV)
15-P -32

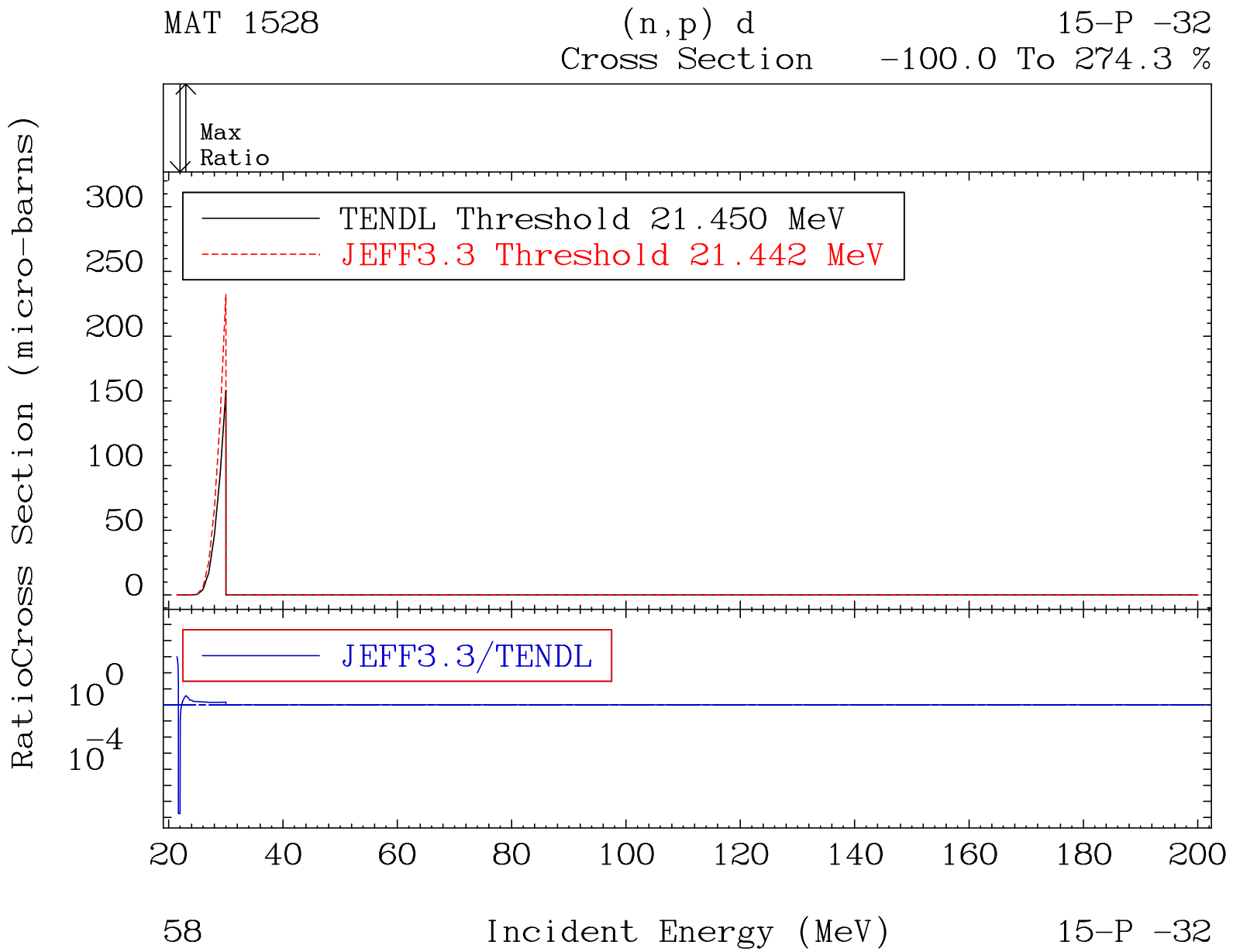

MAT 1528
(n,He-3)
15-P -32
Cross Section
-20.01 To 209.2 %
Max Ratio
Min Ratio
TENDL Threshold 15.783 MeV
JEFF3.3 Threshold 15.775 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
53
Incident Energy (eV)
15-P -32

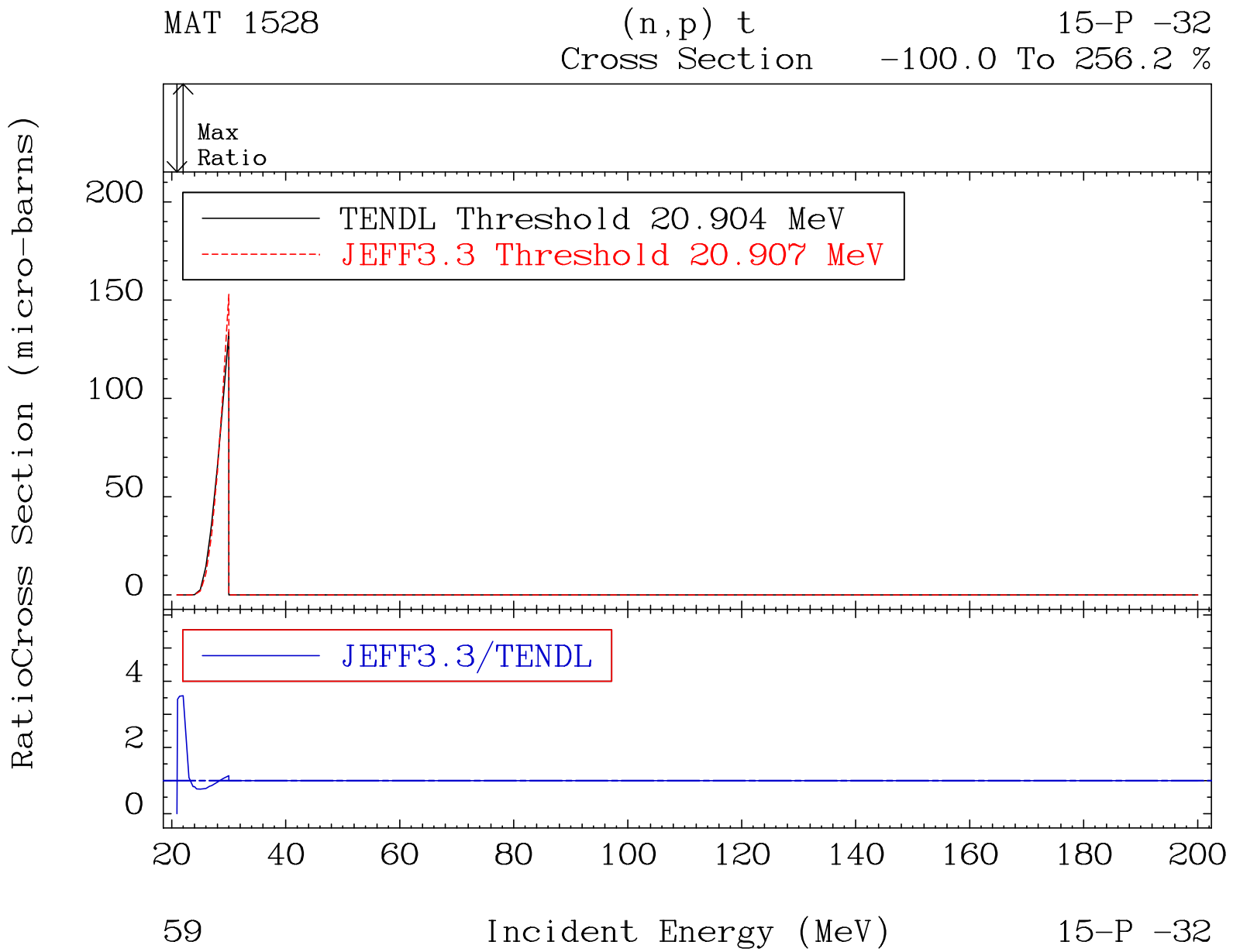

MAT 1528
(n,α)
Cross Section
15-P -32
-7.189 To 114.4 %
Max Ratio
Min Ratio
TENDL Threshold 900.00 keV
JEFF3.3 Threshold 468.12 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
54
Incident Energy (eV)
15-P -32

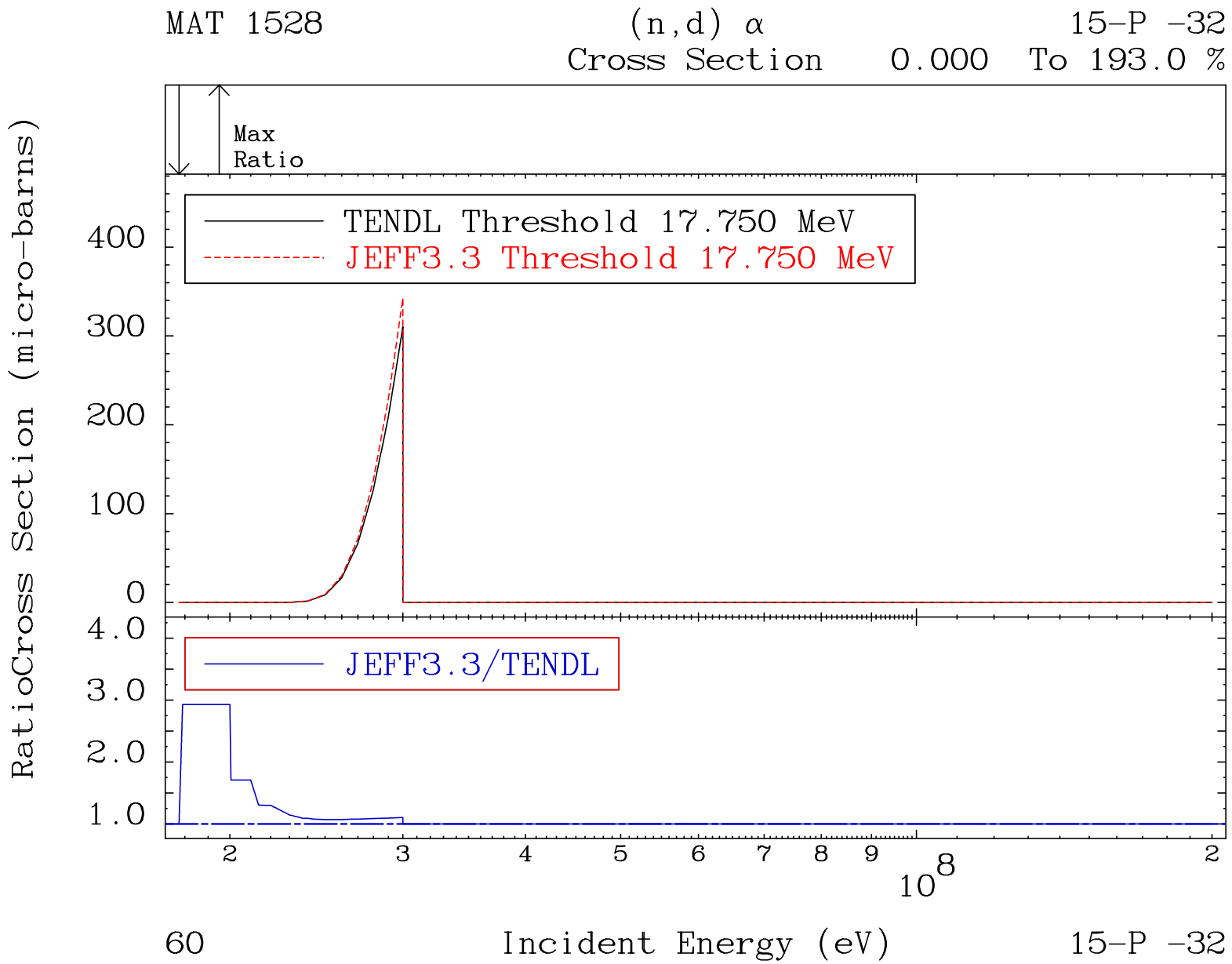

MAT 1528
(n,2α)
15-P -32
Cross Section
-100.0 To 215.8 %
Max
Ratio
TENDL Threshold 12.095 MeV
JEFF3.3 Threshold 12.095 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
800
600
400
200
0
4
2
0
2
3
4
5
6
7
8
9
10^8
2
55
Incident Energy (eV)
15-P -32

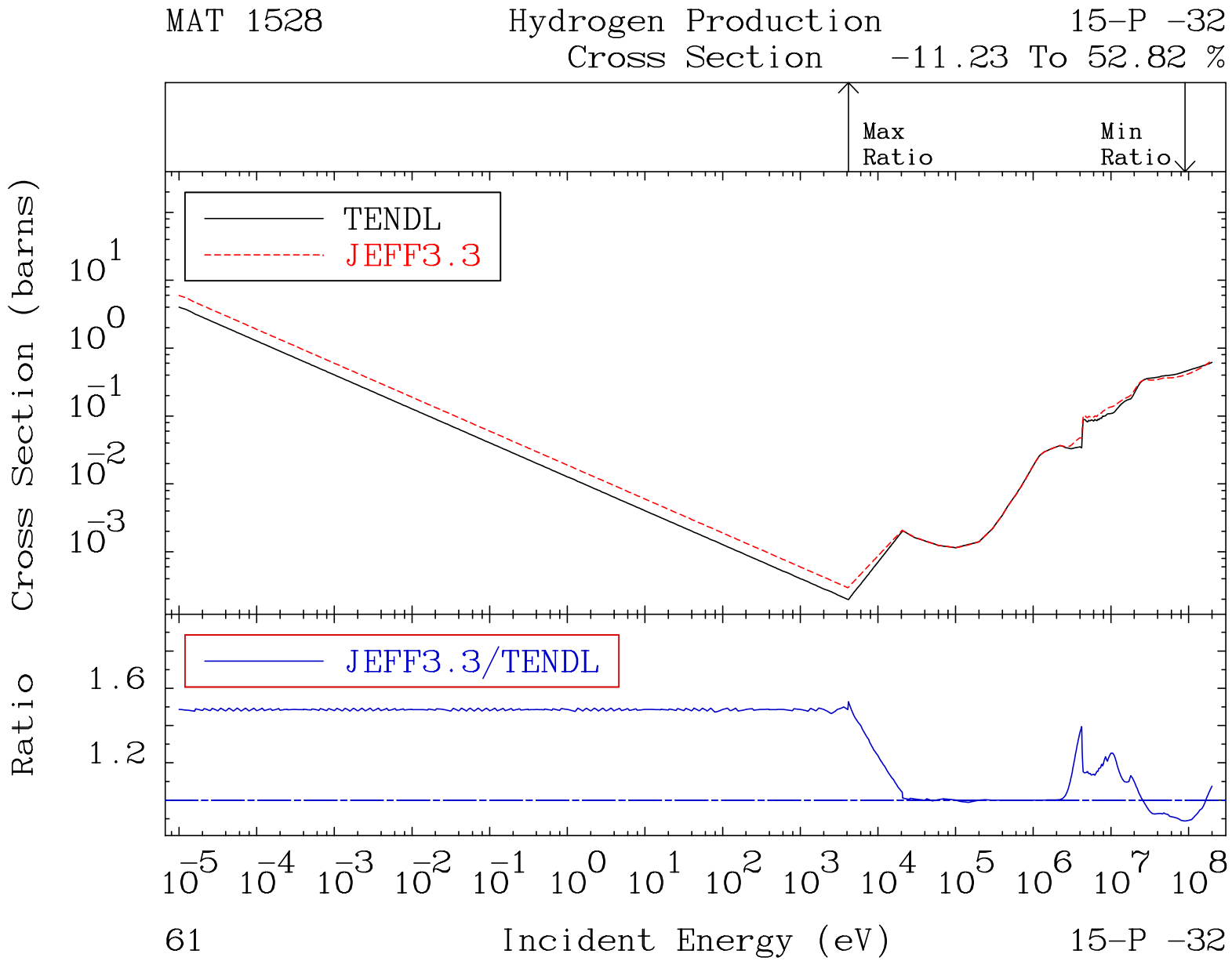

MAT 1528
(n,2p)
15-P -32
Cross Section 0.000 To 806.6 %
Max Ratio
Min Ratio
TENDL Threshold 16.361 MeV
JEFF3.3 Threshold 16.357 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
12
8
4
2
3
4
5
6
7
8
9
10^8
2
56
Incident Energy (eV)
15-P -32

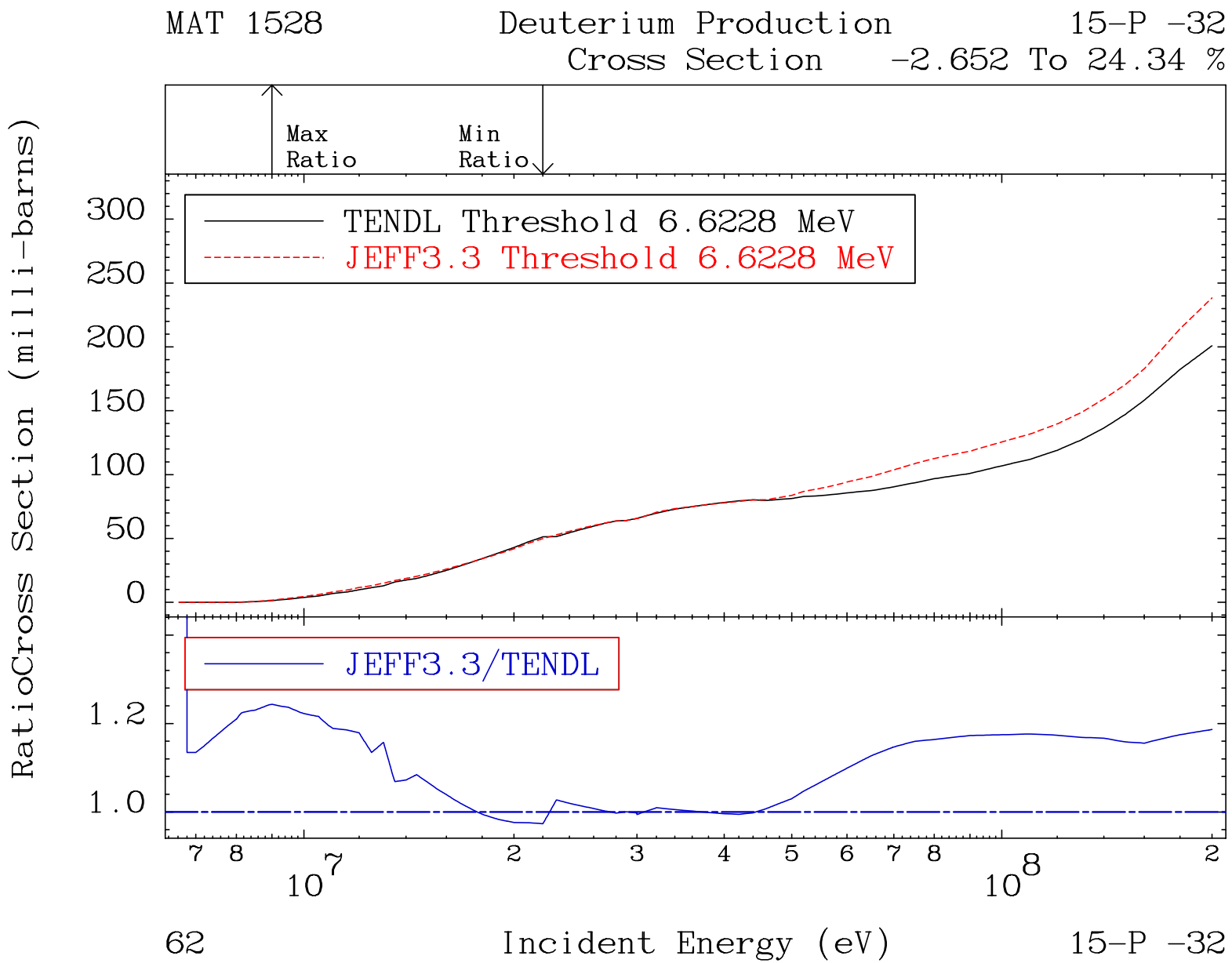

MAT 1528
(n,p) α
15-P -32
Cross Section
-100.0 To 117.2 %
Max
Ratio
TENDL Threshold 11.272 MeV
JEFF3.3 Threshold 11.274 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.6
1.2
0.8
0.4
0.0
3.0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
2
10^8
57
Incident Energy (eV)
15-P -32

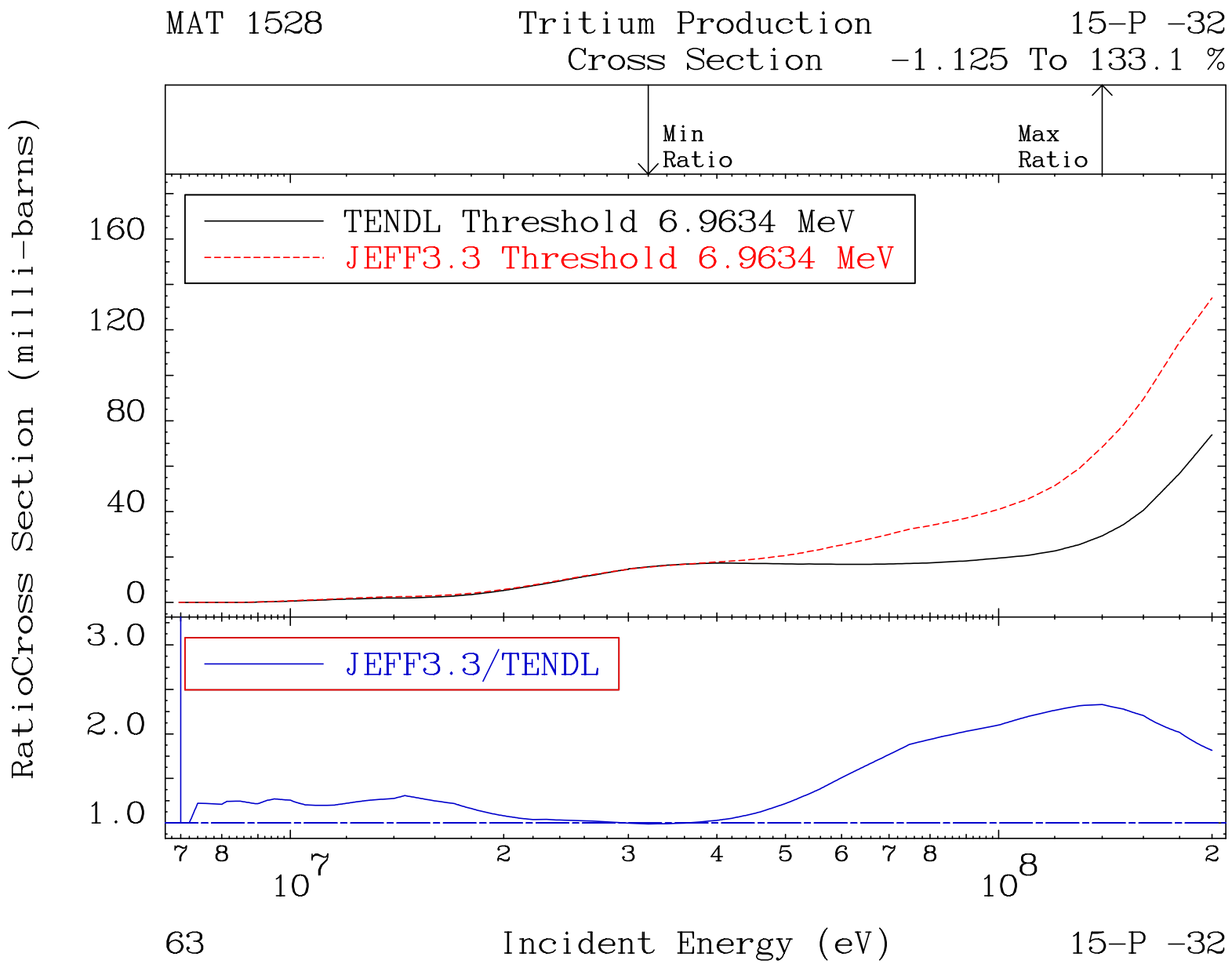

MAT 1528
(n,p) d
15-P -32
Cross Section
-100.0 To 274.3 %
Max
Ratio
TENDL Threshold 21.450 MeV
JEFF3.3 Threshold 21.442 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
300
250
200
150
100
50
0
10^{0}
10^{-4}
20
40
60
80
100
120
140
160
180
200
58
Incident Energy (MeV)
15-P -32

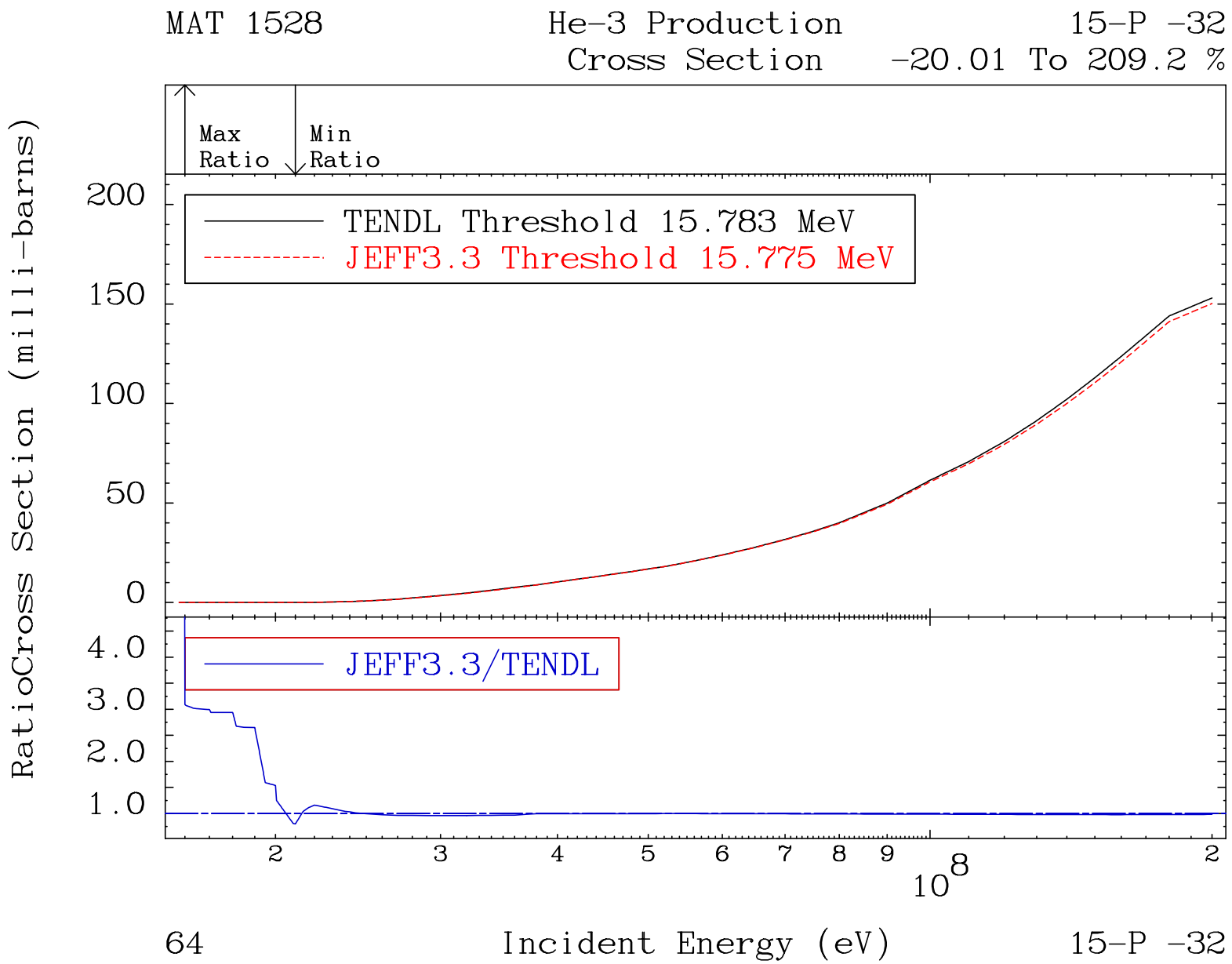

MAT 1528
(n,p) t
15-P -32
Cross Section
-100.0 To 256.2 %
Max
Ratio
TENDL Threshold 20.904 MeV
JEFF3.3 Threshold 20.907 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
4
2
0
20
40
60
80
100
120
140
160
180
200
59
Incident Energy (MeV)
15-P -32

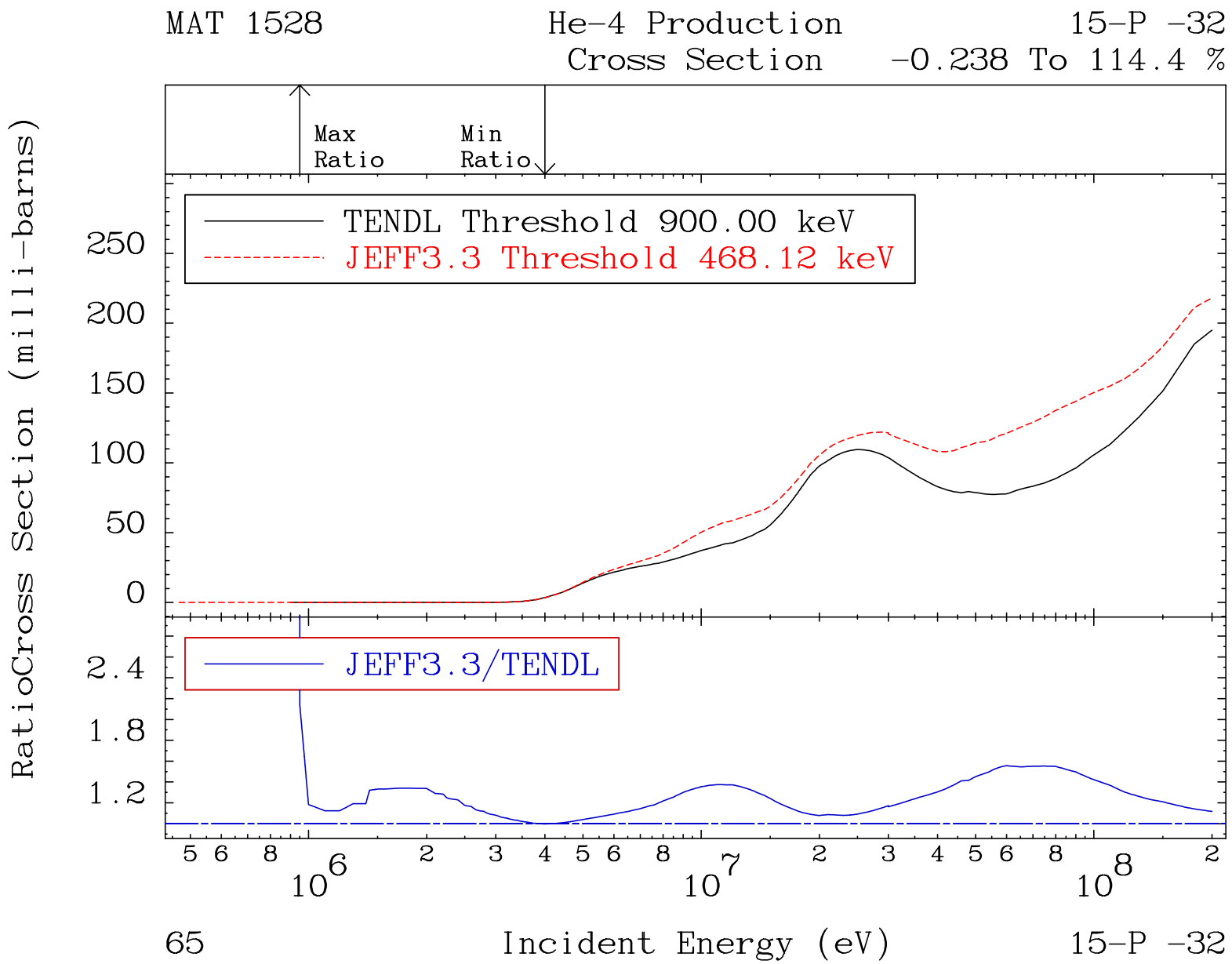

MAT 1528
(n,d) α
15-P -32
Cross Section 0.000 To 193.0 %
Max
Ratio
TENDL Threshold 17.750 MeV
JEFF3.3 Threshold 17.750 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
400
300
200
100
0
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
15-P -32

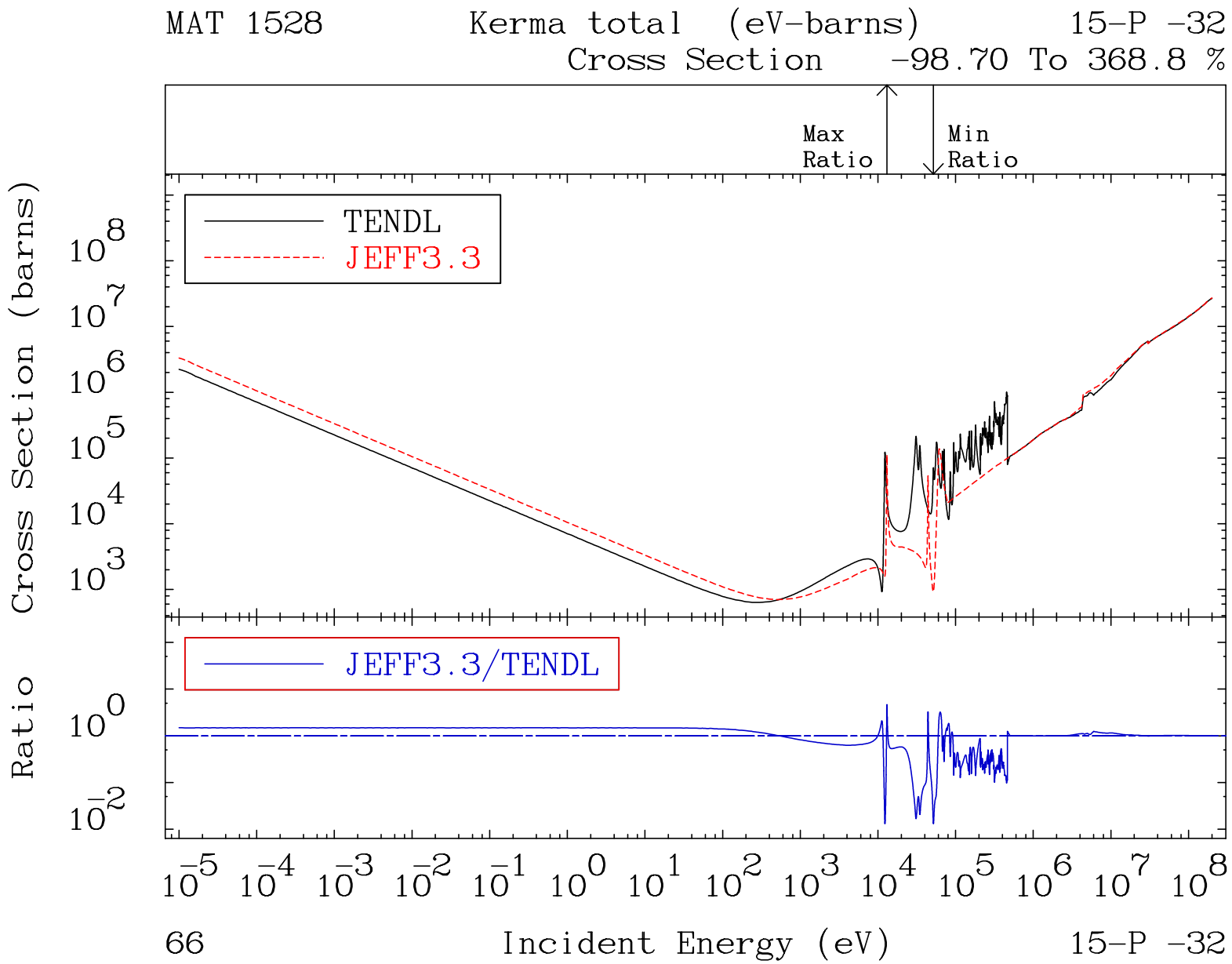

MAT 1528
Hydrogen Production
15-P -32
Cross Section
-11.23 To 52.82 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
10^1
10^0
10^-1
10^-2
10^-3
JEFF3.3/TENDL
Ratio
1.6
1.2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
61
Incident Energy (eV)
15-P -32

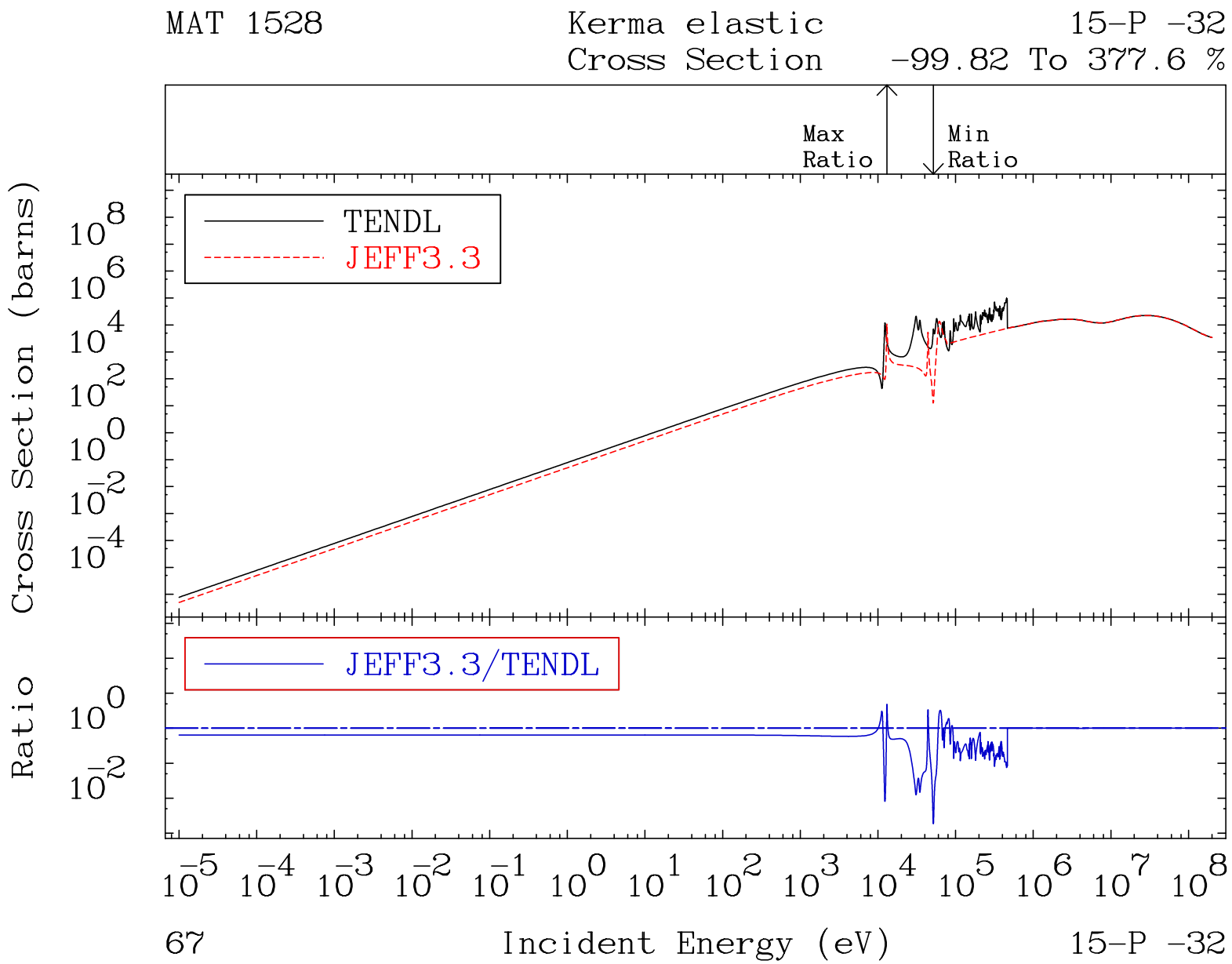

MAT 1528
Deuterium Production
15-P -32
Cross Section
-2.652 To 24.34 %
Max Ratio
Min Ratio
TENDL Threshold 6.6228 MeV
JEFF3.3 Threshold 6.6228 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
1.2
1.0
7 8
10^7
2 3 4 5 6 7 8
10^8
2
62
Incident Energy (eV)
15-P -32

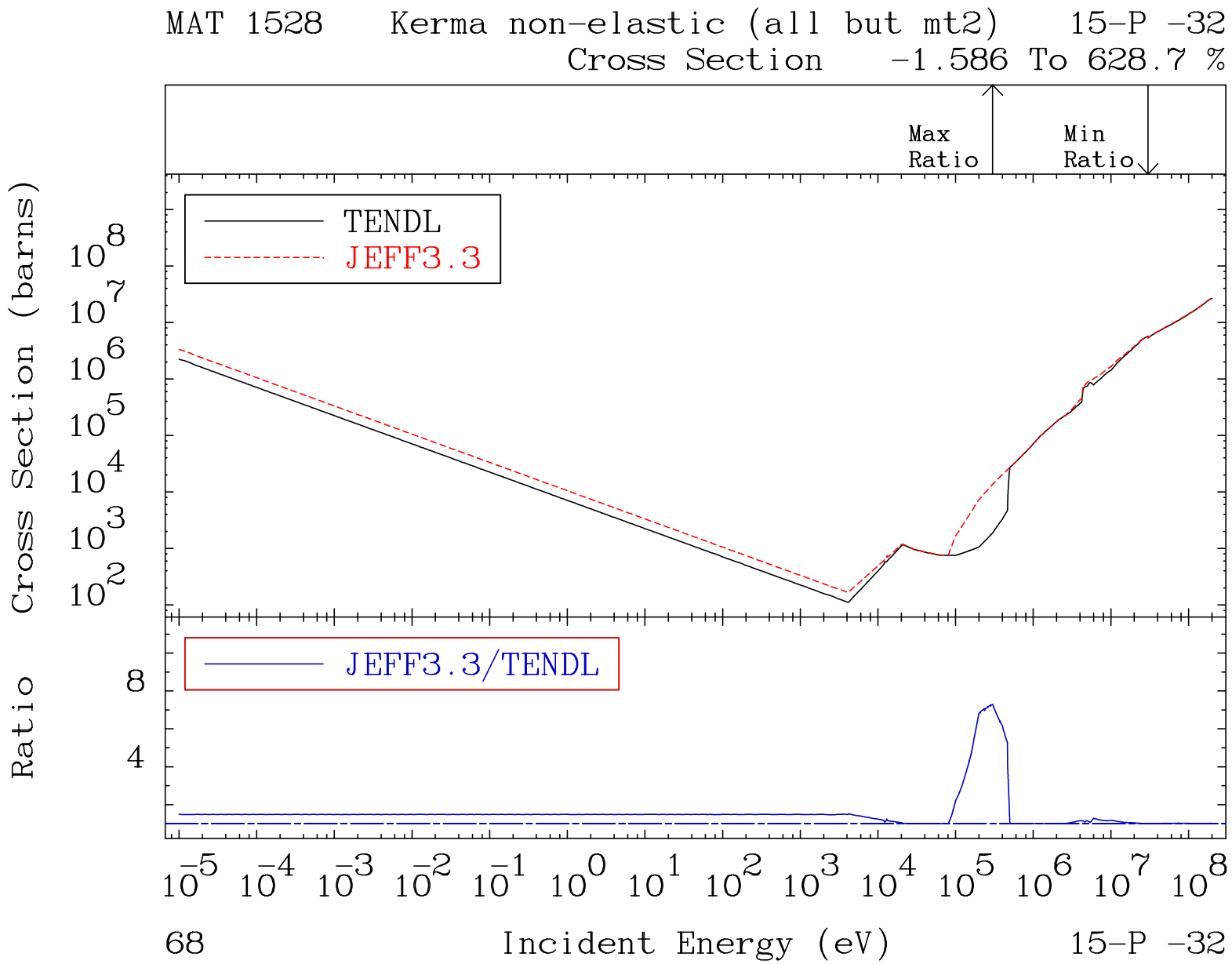

MAT 1528
Tritium Production
15-P -32
Cross Section
-1.125 To 133.1 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.9634 MeV
JEFF3.3 Threshold 6.9634 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
3.0
2.0
1.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
63
Incident Energy (eV)
15-P -32

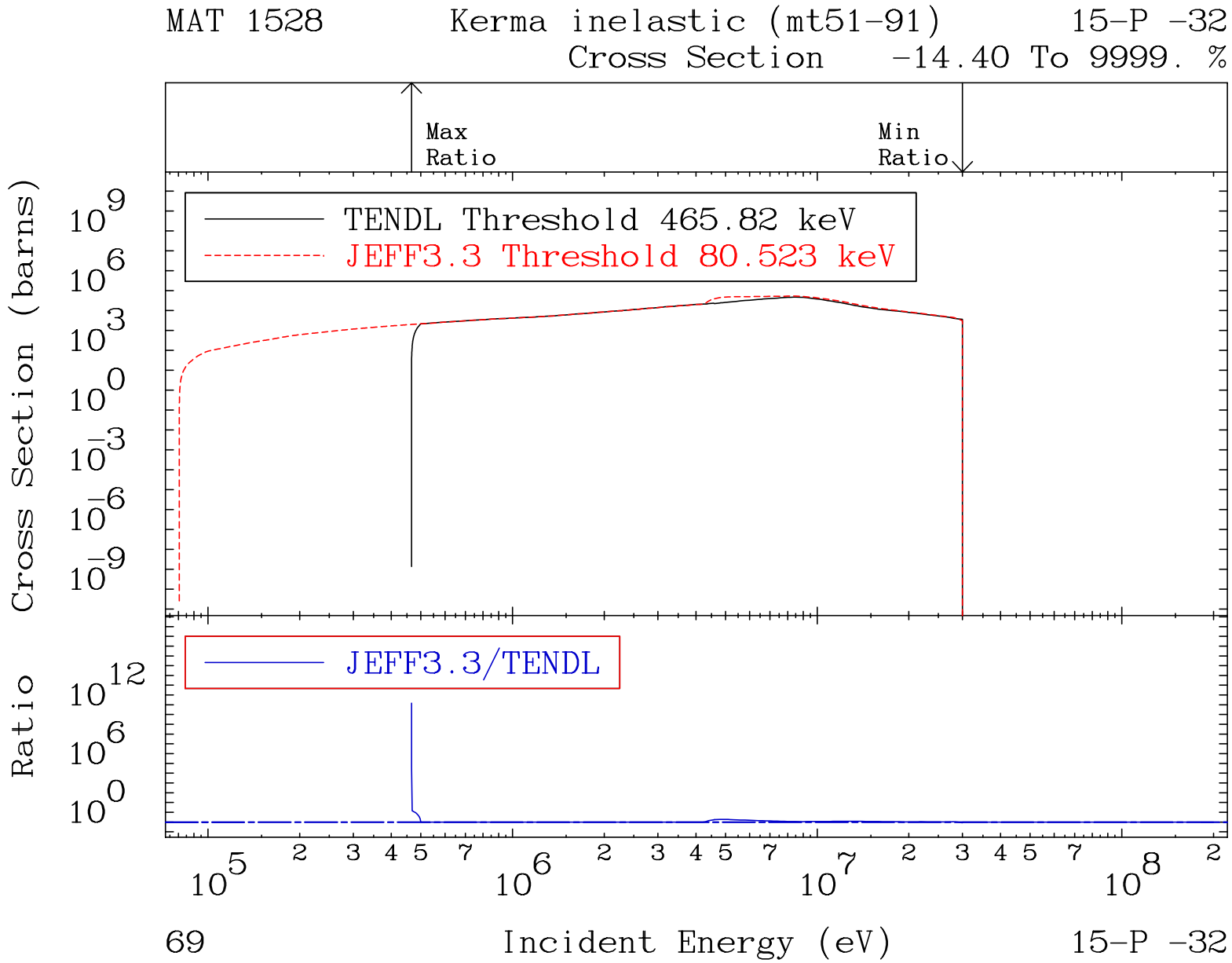

MAT 1528
He-3 Production
Cross Section
15-P -32
-20.01 To 209.2 %
Max Ratio
Min Ratio
TENDL Threshold 15.783 MeV
JEFF3.3 Threshold 15.775 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
15-P -32

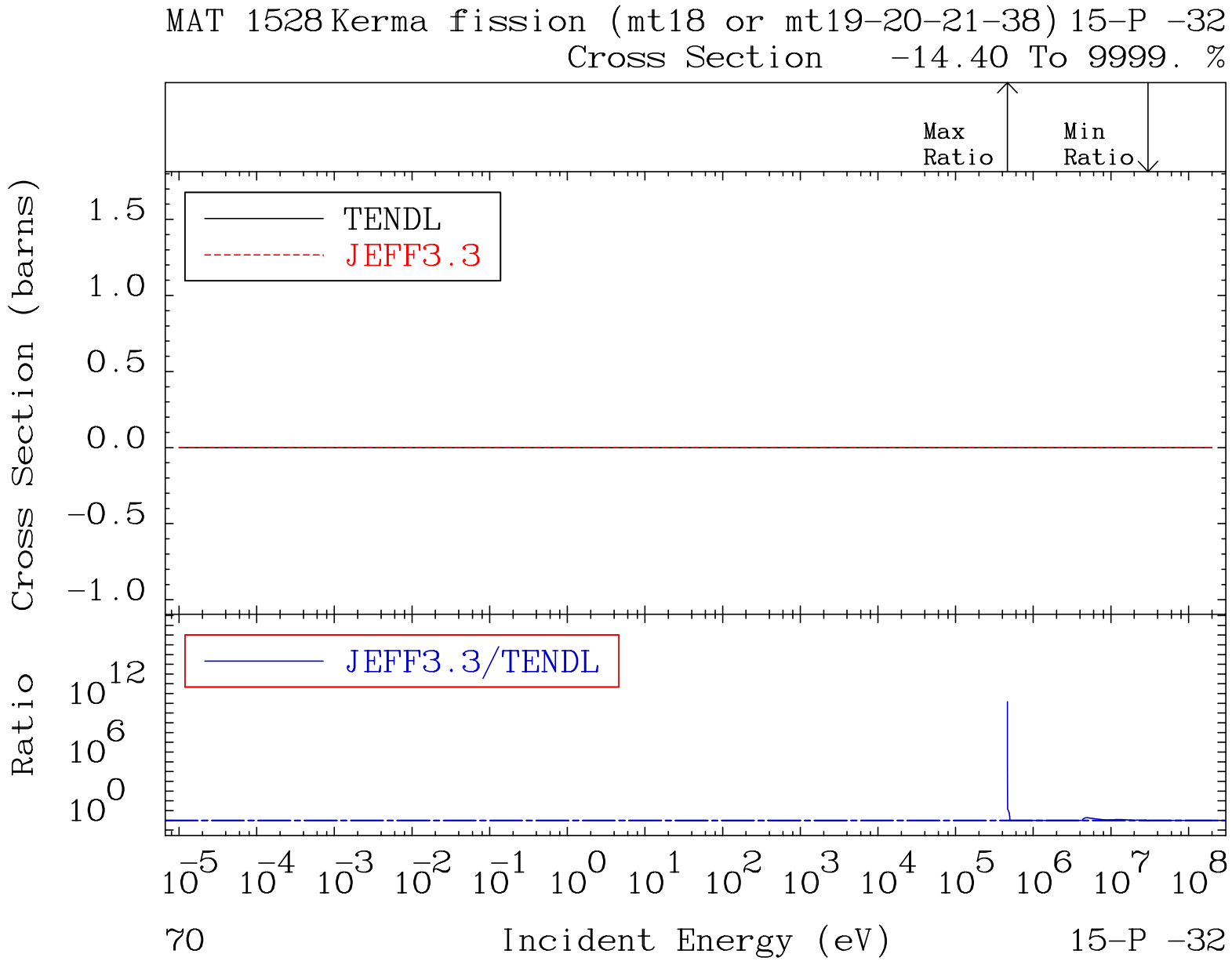

MAT 1528
He-4 Production
Cross Section
15-P -32
-0.238 To 114.4 %
Max Ratio
Min Ratio
TENDL Threshold 900.00 keV
JEFF3.3 Threshold 468.12 keV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
2.4
1.8
1.2
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
65
Incident Energy (eV)
15-P -32

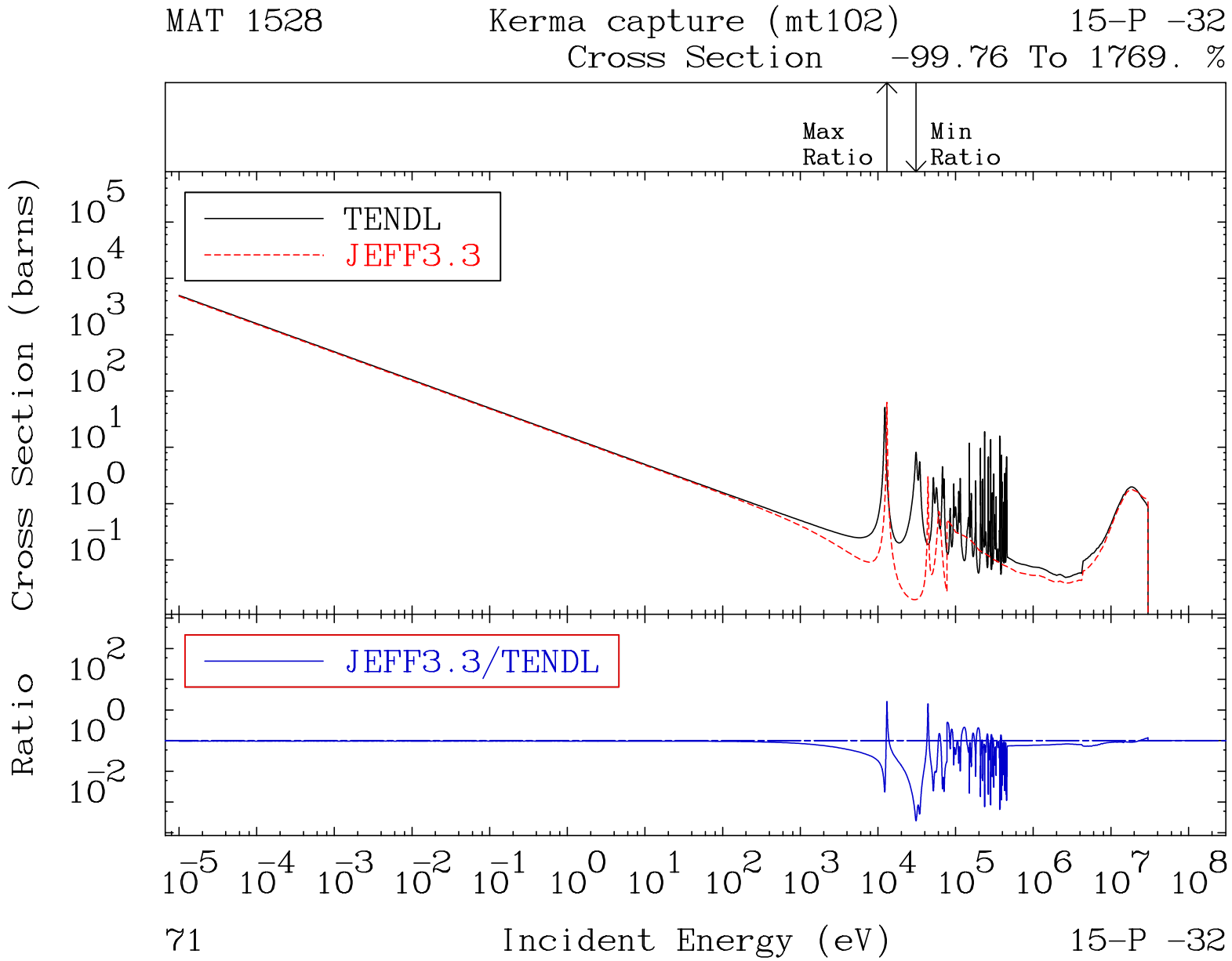

MAT 1528
Kerma total (eV-barns)
15-P -32
Cross Section -98.70 To 368.8 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
66
15-P -32

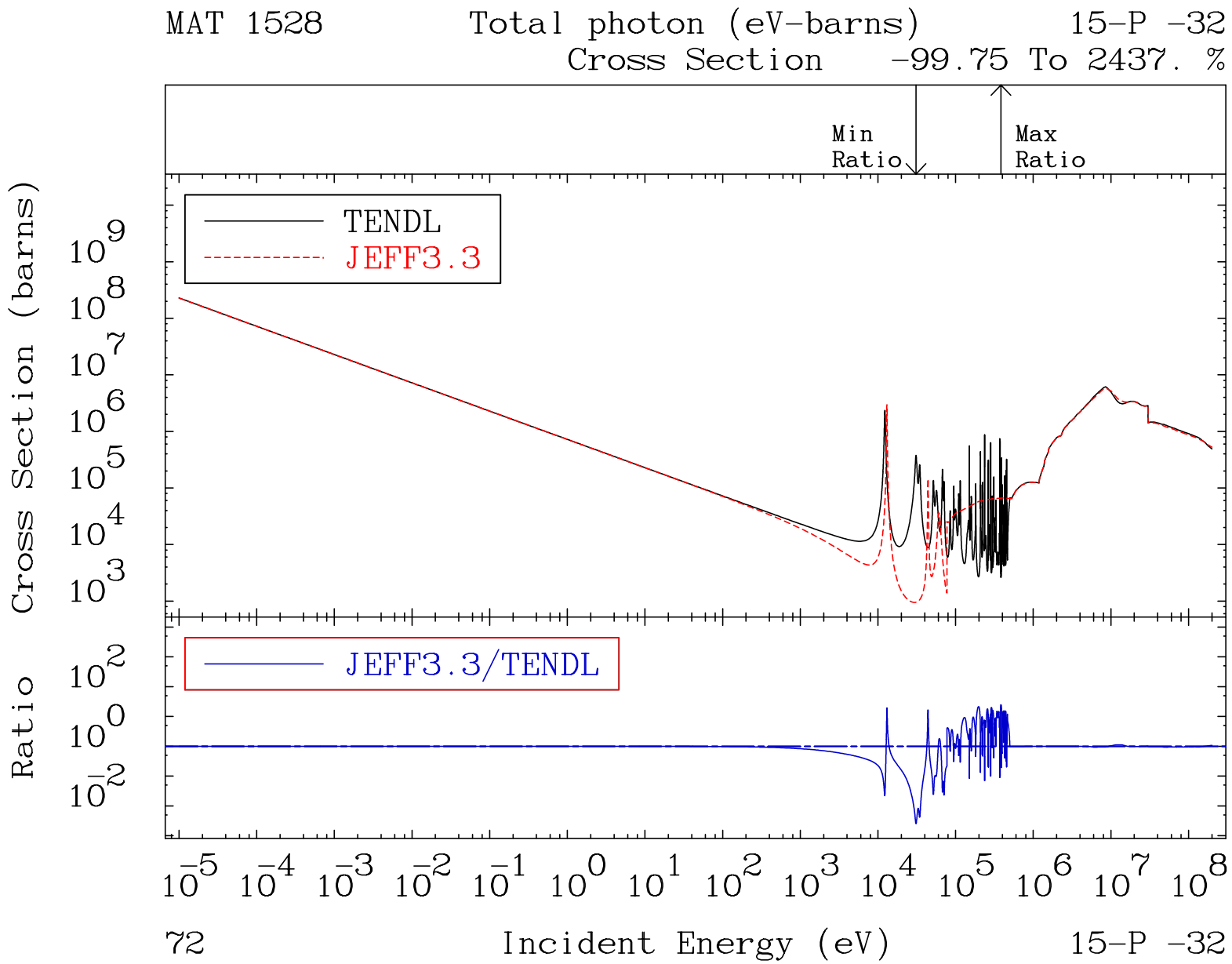

MAT 1528
Kerma elastic
15-P -32
Cross Section
-99.82 To 377.6 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
15-P -32

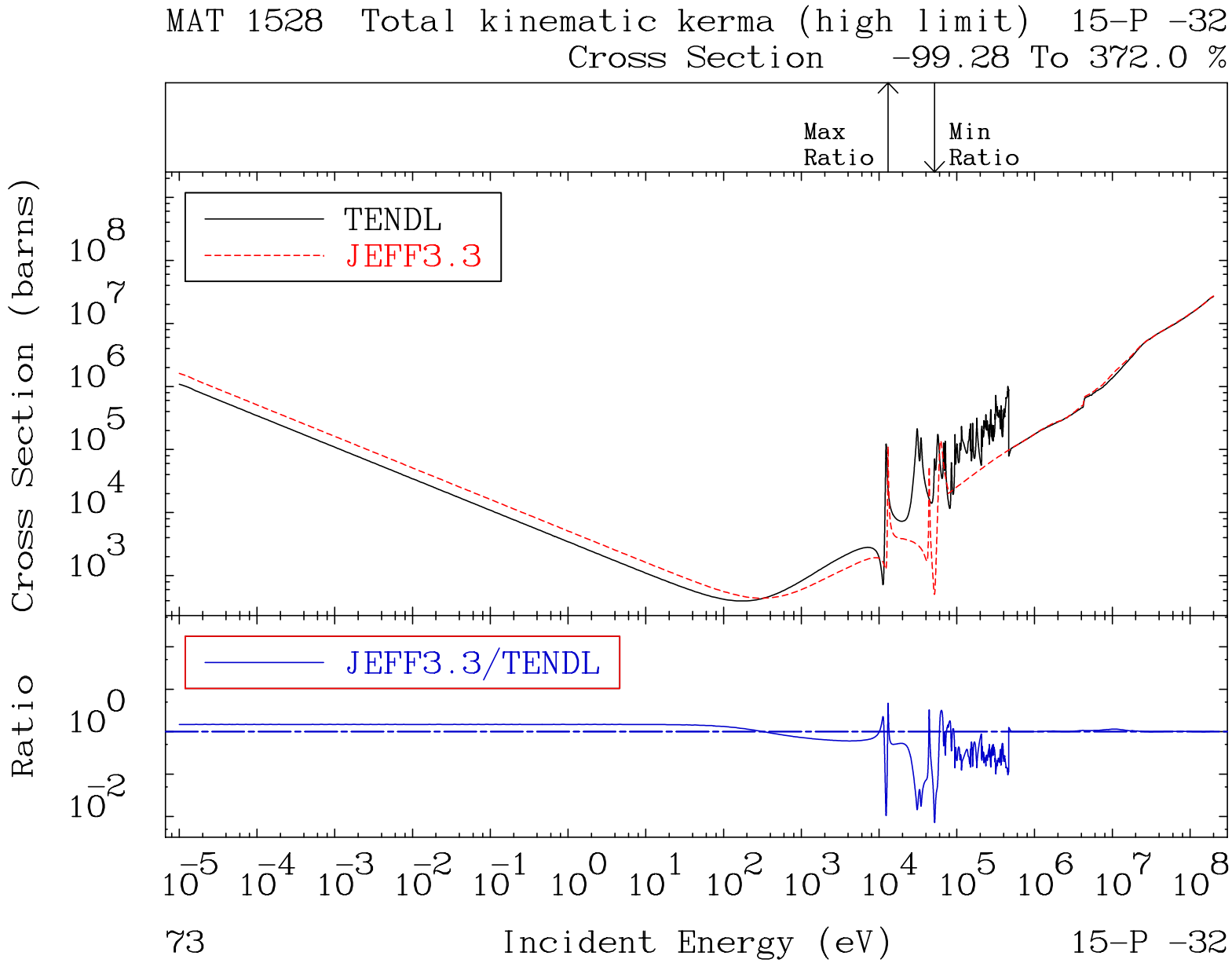

MAT 1528 Kerma non-elastic (all but mt2) 15-P -32
Cross Section -1.586 To 628.7 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
15-P -32

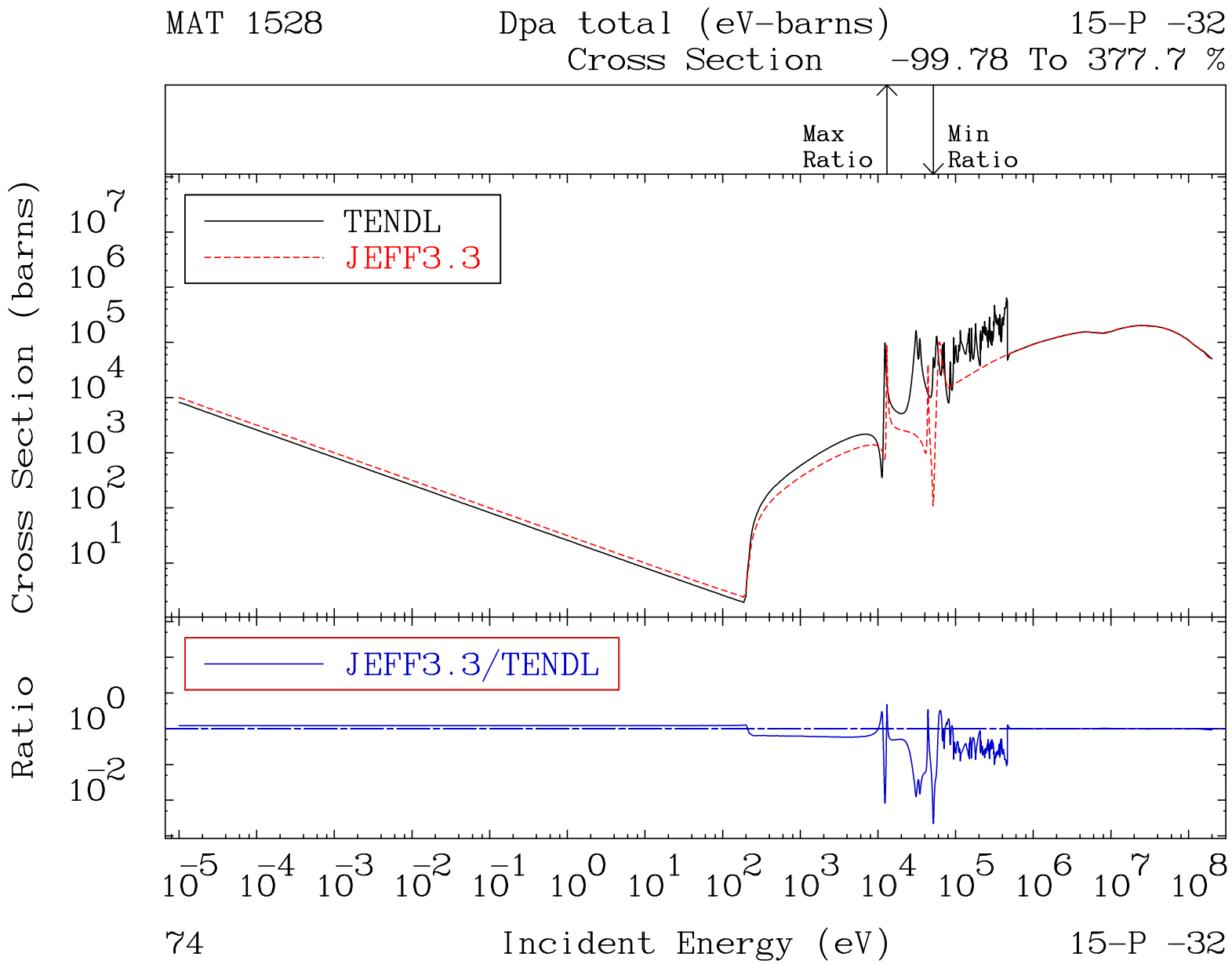

MAT 1528
Kerma inelastic (mt51-91)
15-P -32
Cross Section -14.40 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 465.82 keV
JEFF3.3 Threshold 80.523 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
69
15-P -32

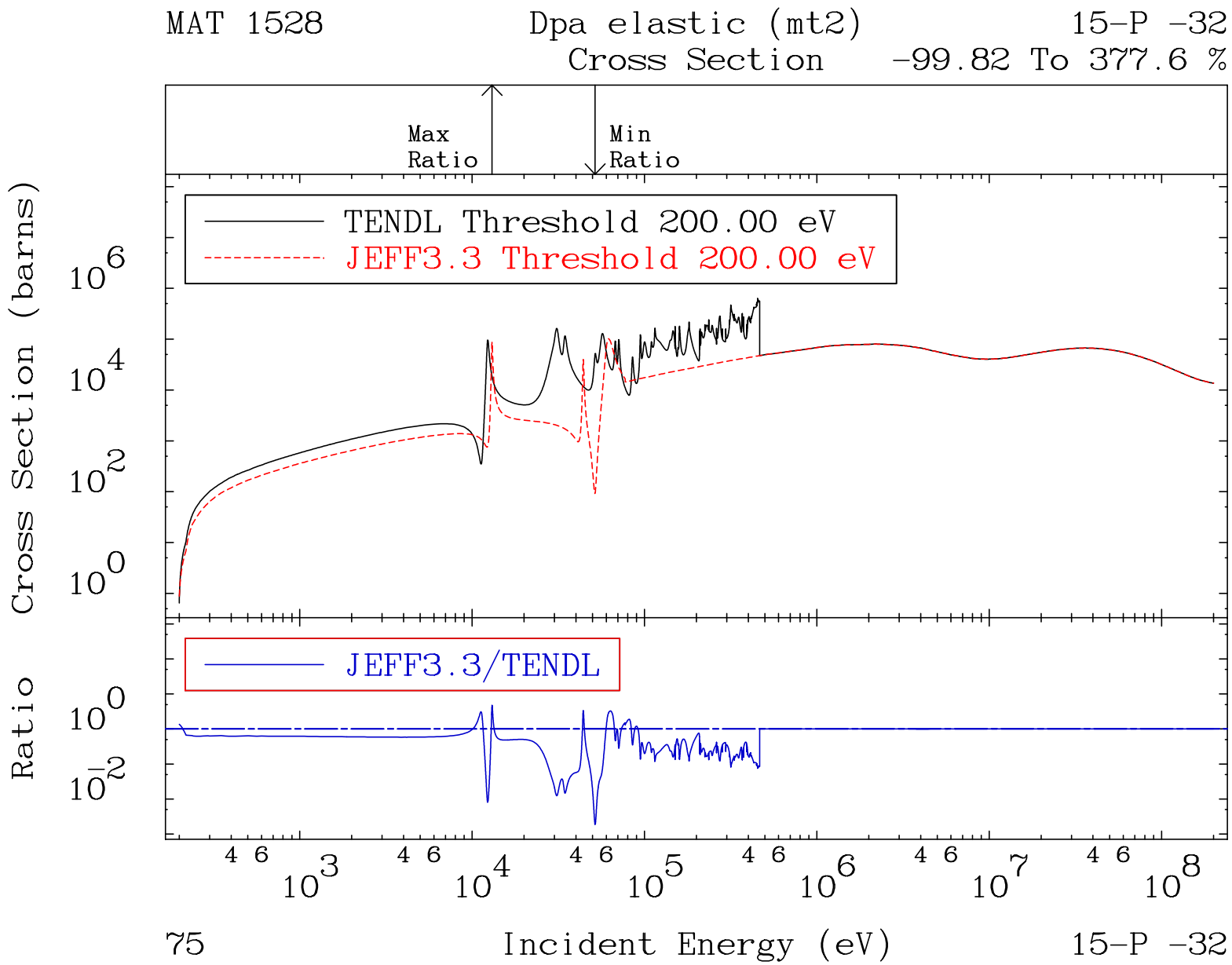

MAT 1528 Kerma fission (mt18 or mt19-20-21-38) 15-P -32
Cross Section -14.40 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{12}
10^{6}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
70
Incident Energy (eV)
15-P -32

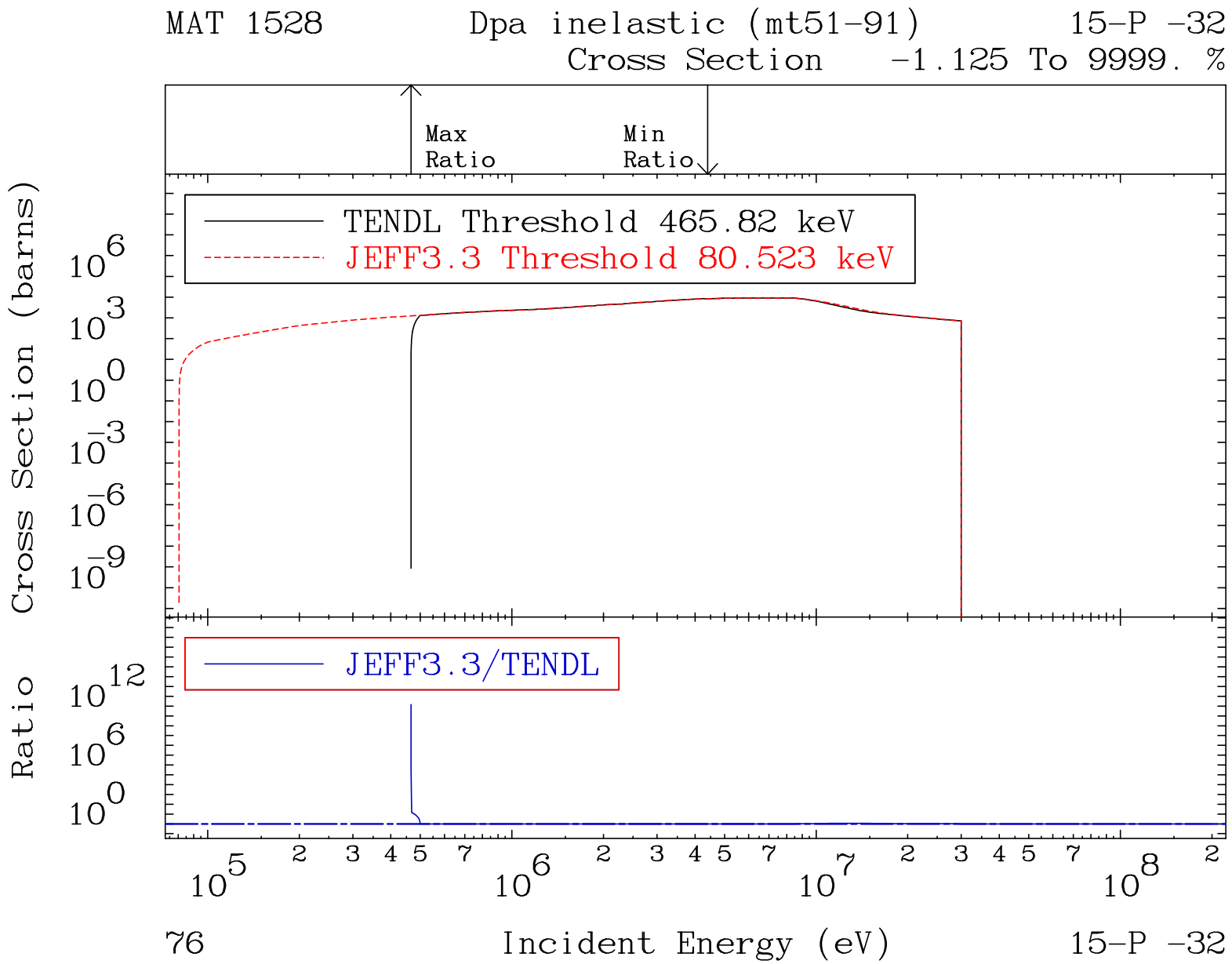

MAT 1528
Kerma capture (mt102)
15-P -32
Cross Section -99.76 To 1769. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
71
15-P -32

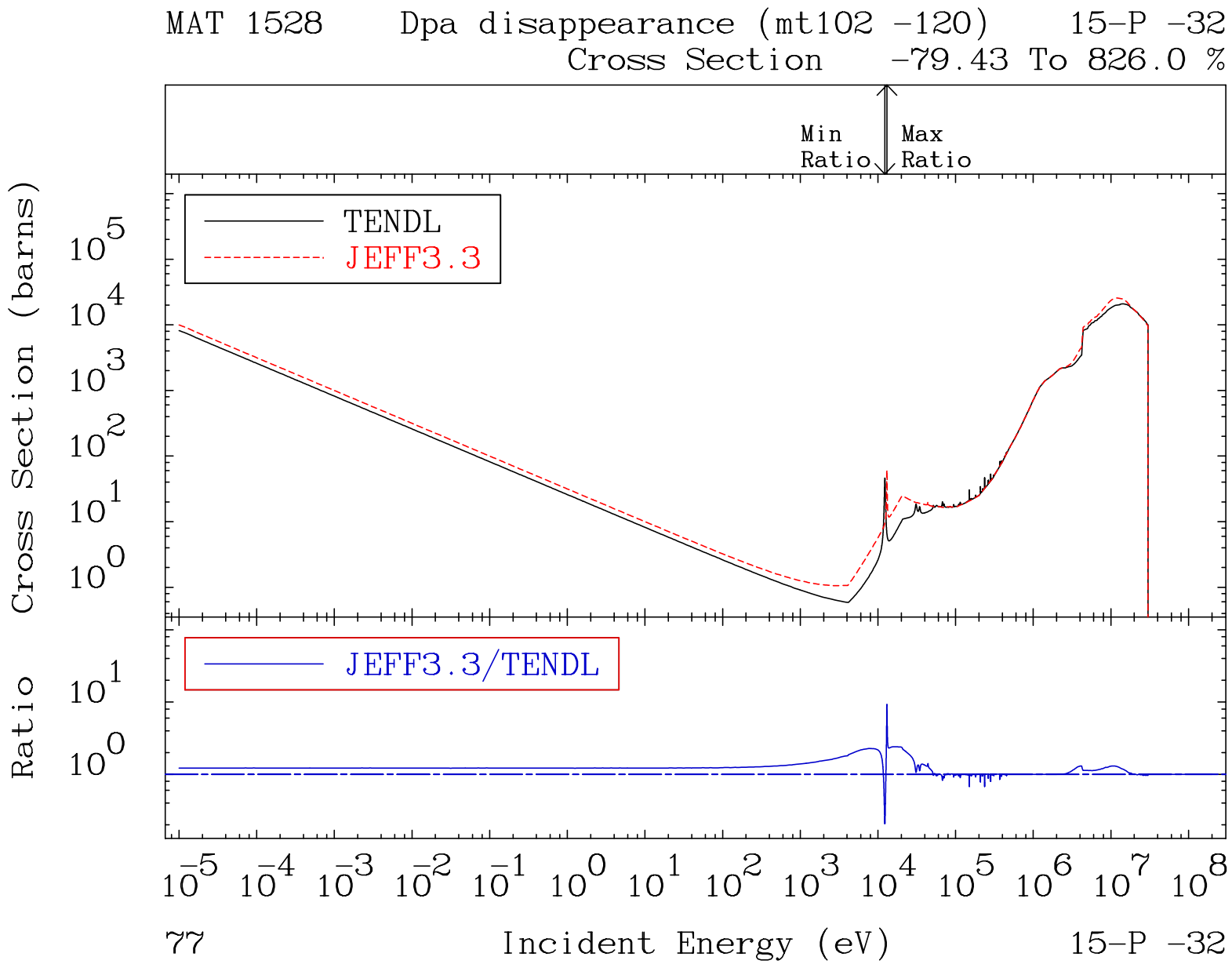

MAT 1528
Total photon (eV-barns)
15-P -32
Cross Section -99.75 To 2437. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
72
15-P -32


MAT 1528 Total kinematic kerma (high limit) 15-P -32
Cross Section -99.28 To 372.0 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
73
15-P -32


MAT 1528
Dpa total (eV-barns)
15-P -32
Cross Section -99.78 To 377.7 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
74
15-P -32


MAT 1528
Dpa elastic (mt2)
Cross Section
15-P -32
-99.82 To 377.6 %
Max Ratio
Min Ratio
TENDL Threshold 200.00 eV
JEFF3.3 Threshold 200.00 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
75
15-P -32


MAT 1528
Dpa inelastic (mt51-91)
15-P -32
Cross Section
-1.125 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 465.82 keV
JEFF3.3 Threshold 80.523 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
76
15-P -32


MAT 1528 Dpa disappearance (mt102 -120) 15-P -32
Cross Section -79.43 To 826.0 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
77
15-P -32