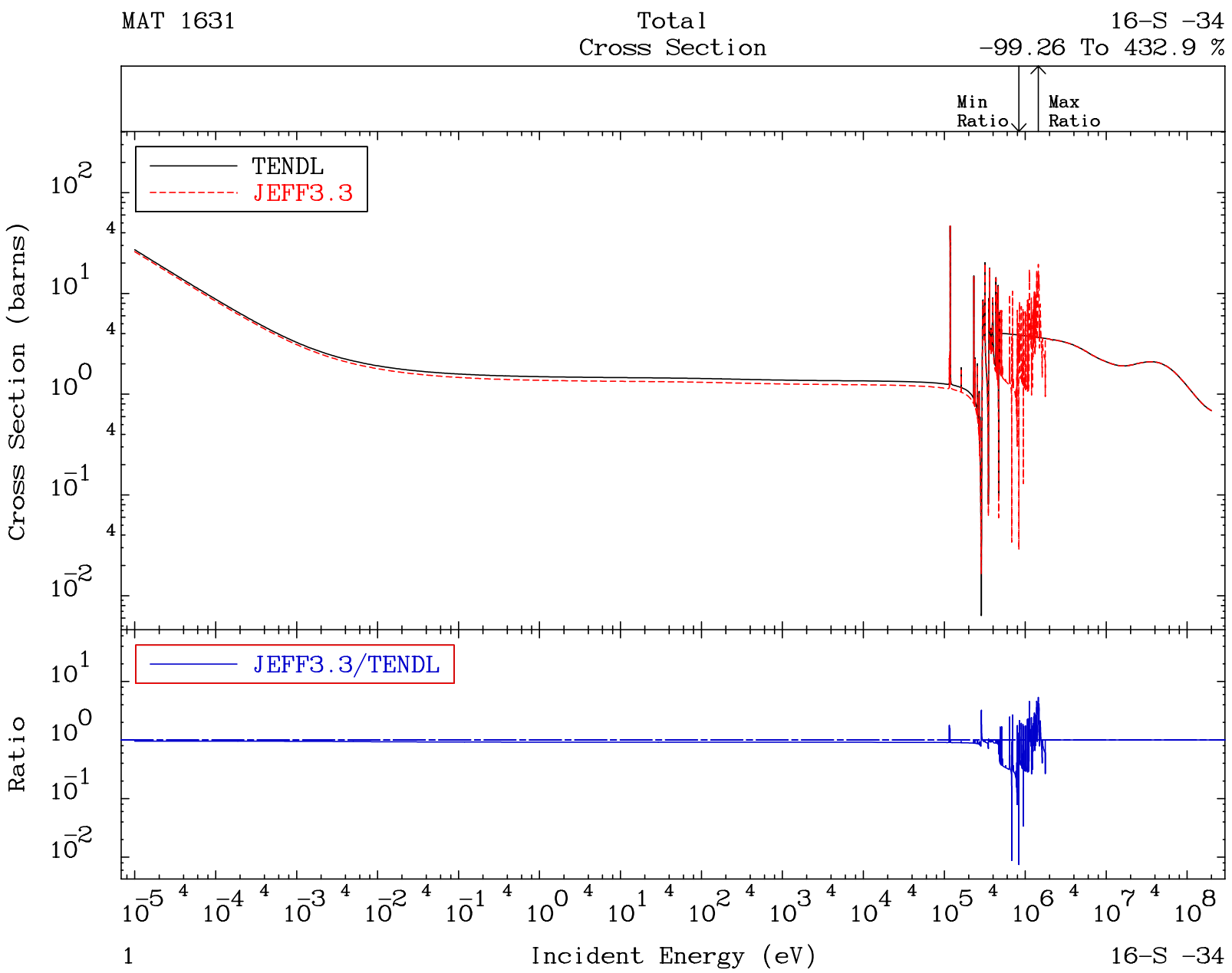
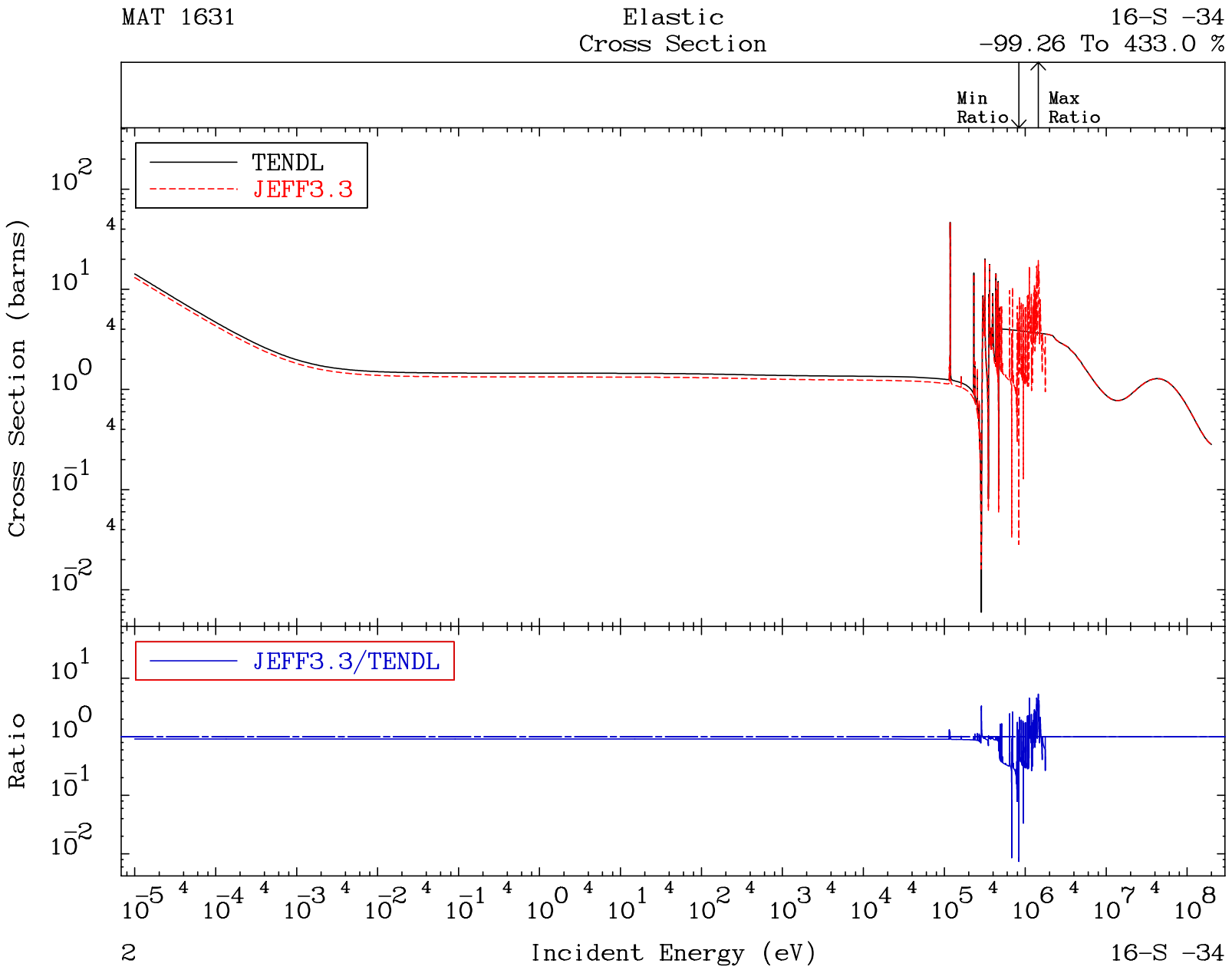
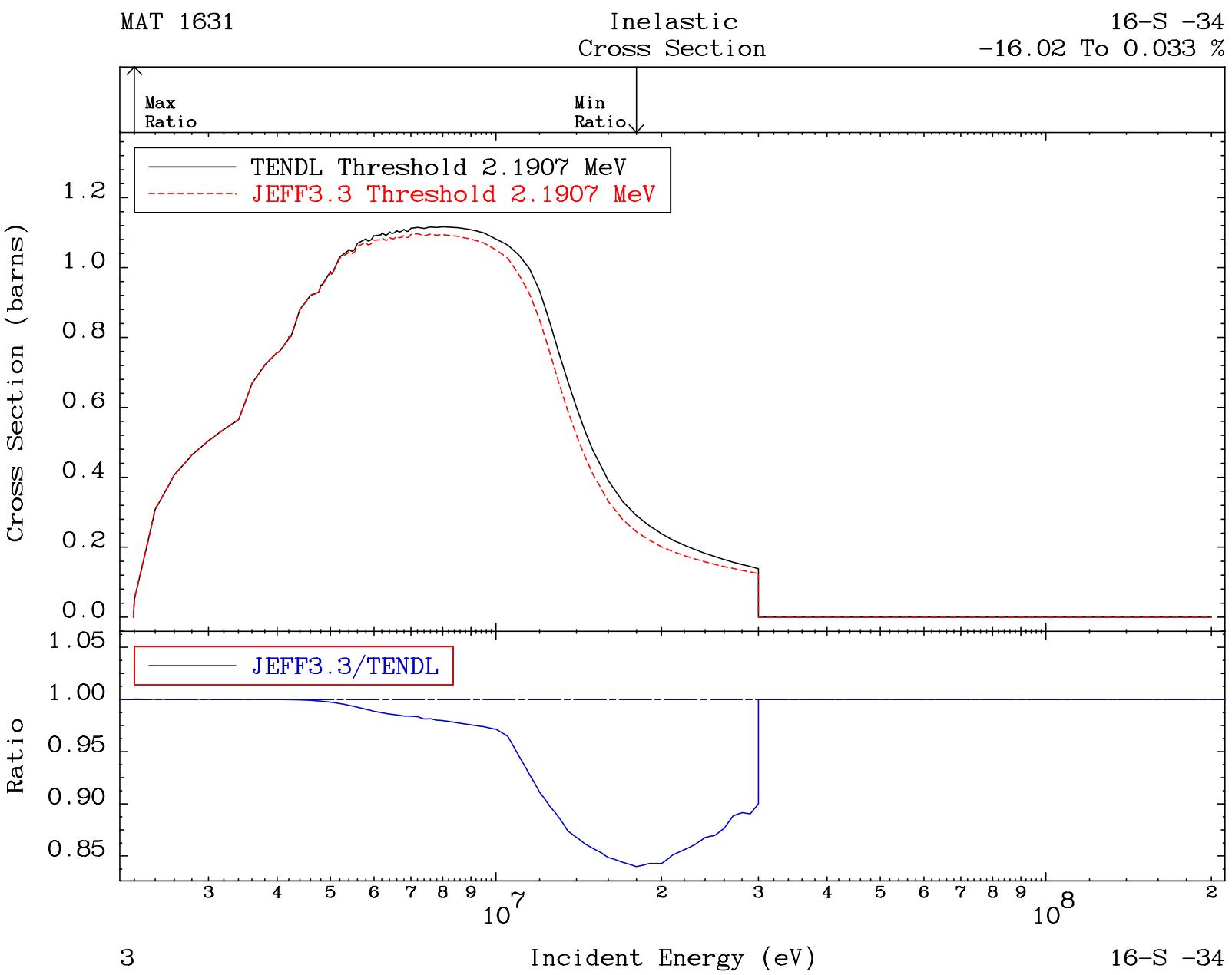
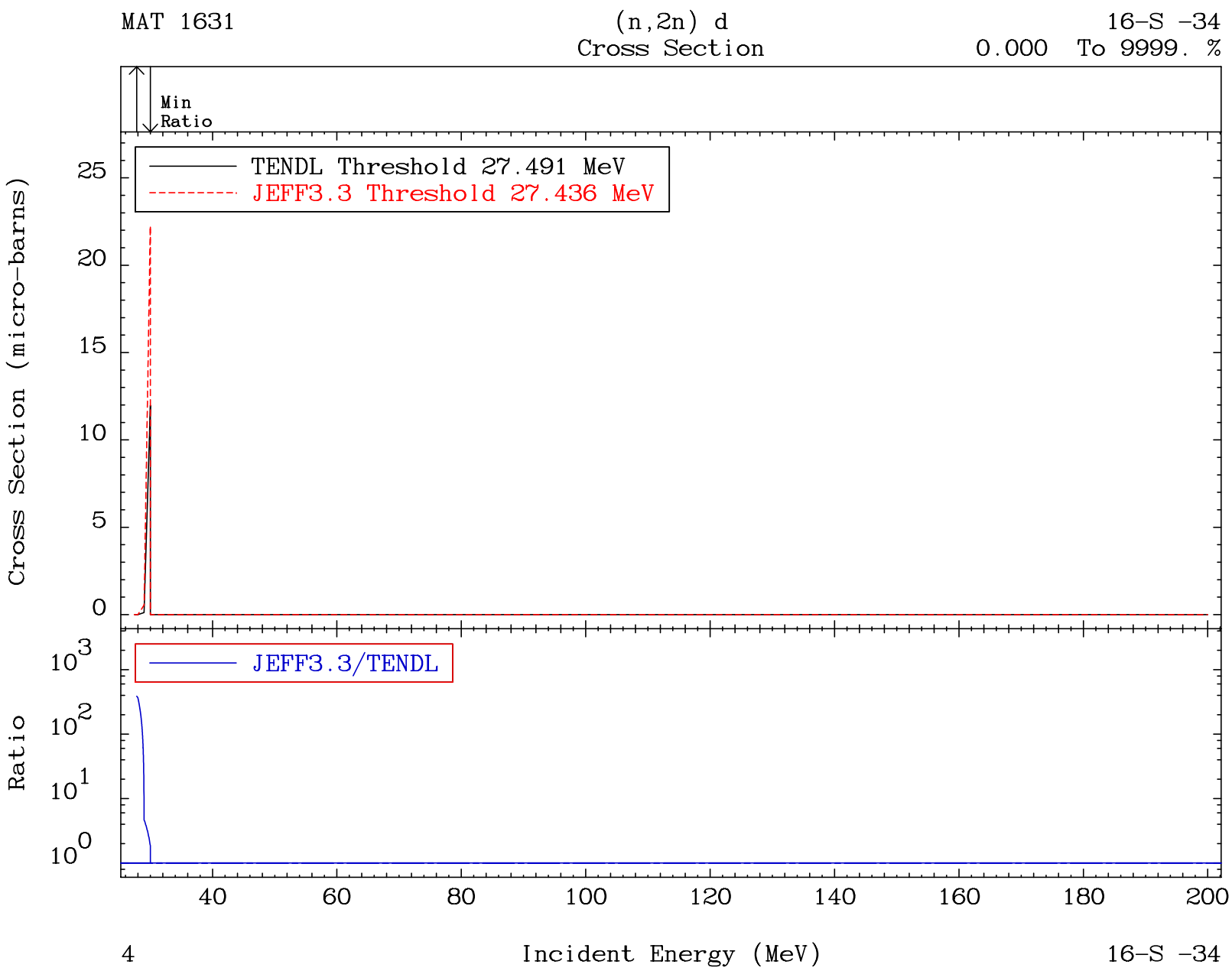
Program Complot
(Version 2018-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

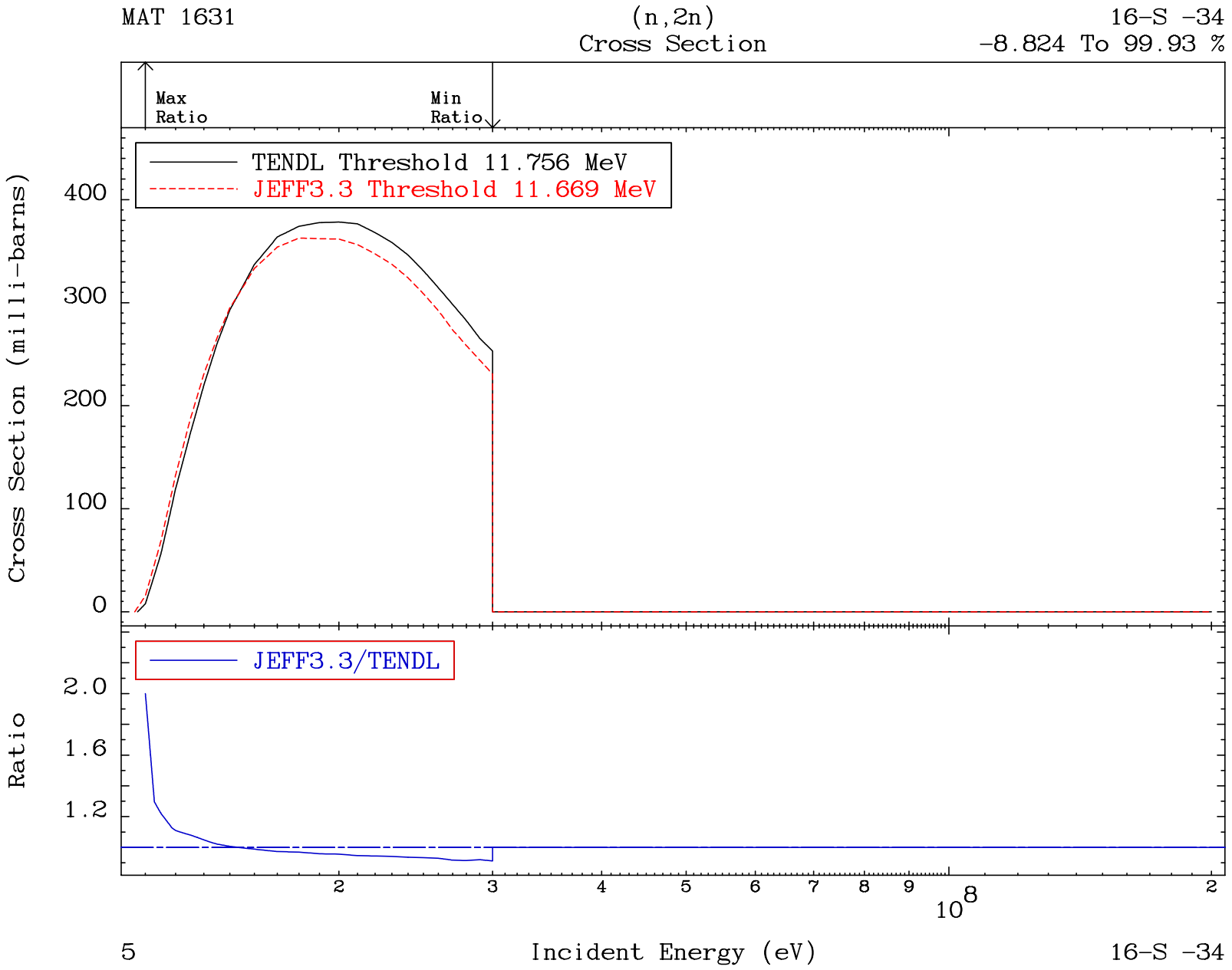
Press Mouse Button to Start

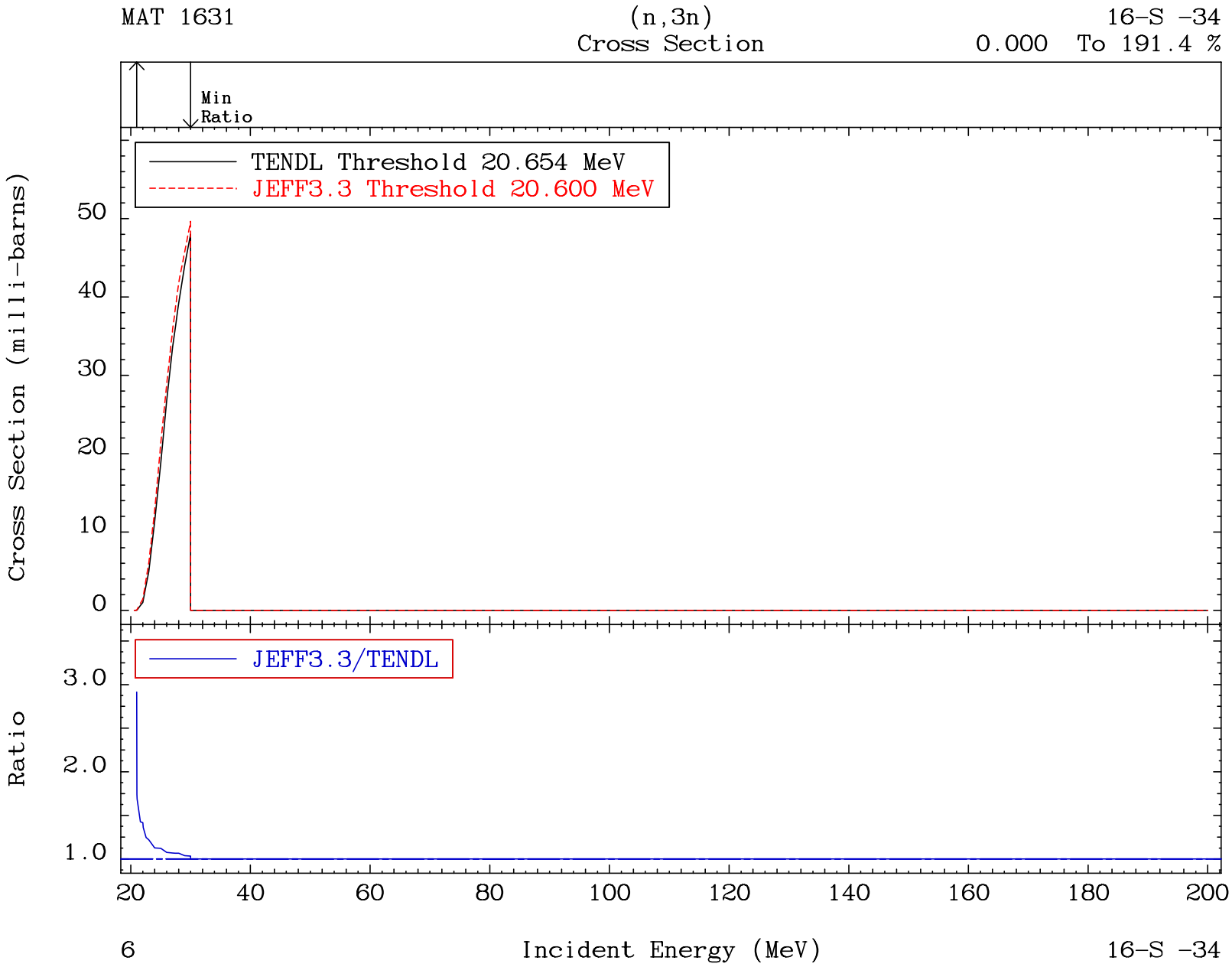

MAT 1631
Total
Cross Section
16-S -34
-99.26 To 432.9 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
1
16-S -34

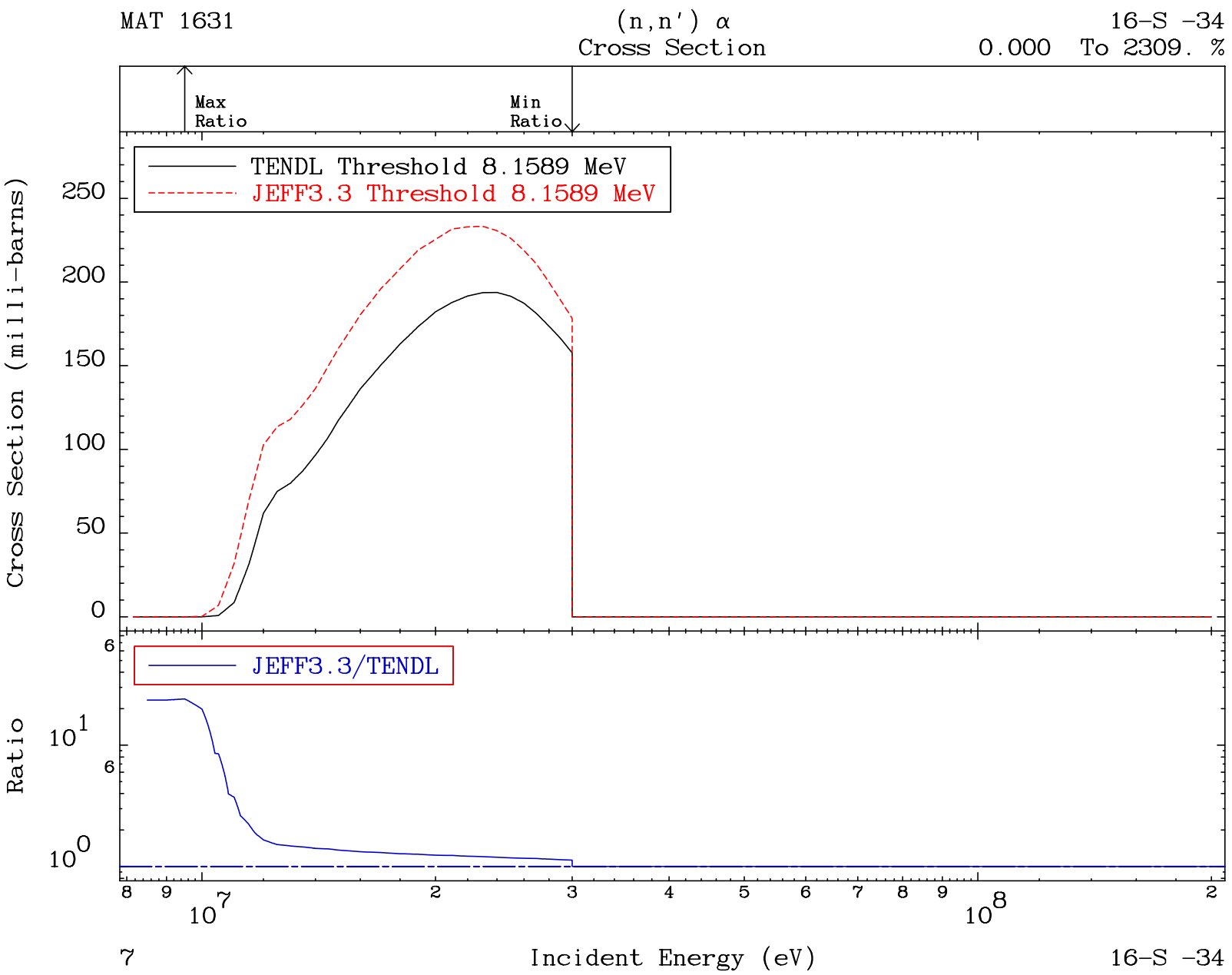

MAT 1631
Elastic
Cross Section
16-S -34
-99.26 To 433.0 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
2
16-S -34

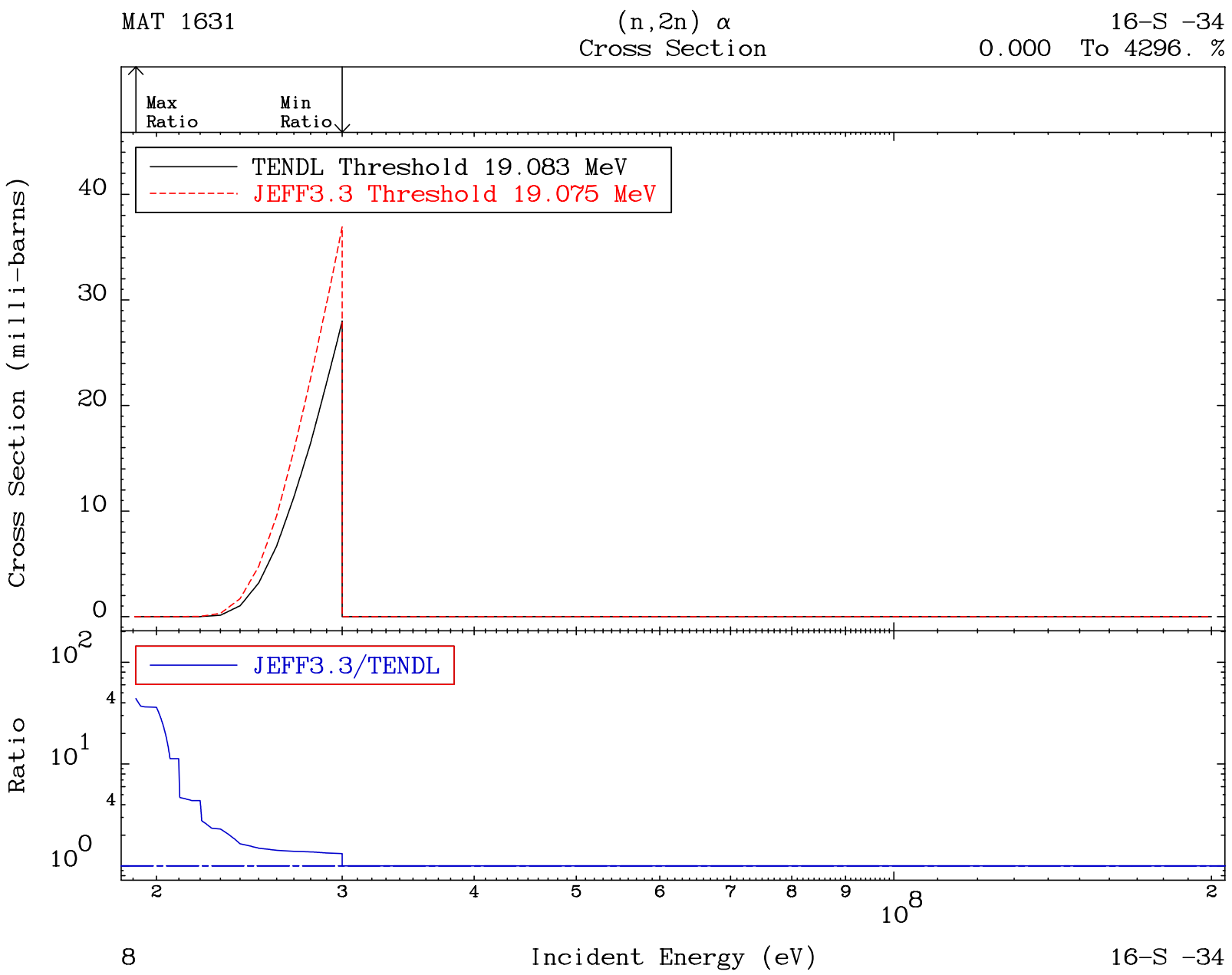

MAT 1631
Inelastic
Cross Section
16-S -34
-16.02 To 0.033 %
Max
Ratio
Min
Ratio
TENDL Threshold 2.1907 MeV
JEFF3.3 Threshold 2.1907 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.05
1.00
0.95
0.90
0.85
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
3
Incident Energy (eV)
16-S -34

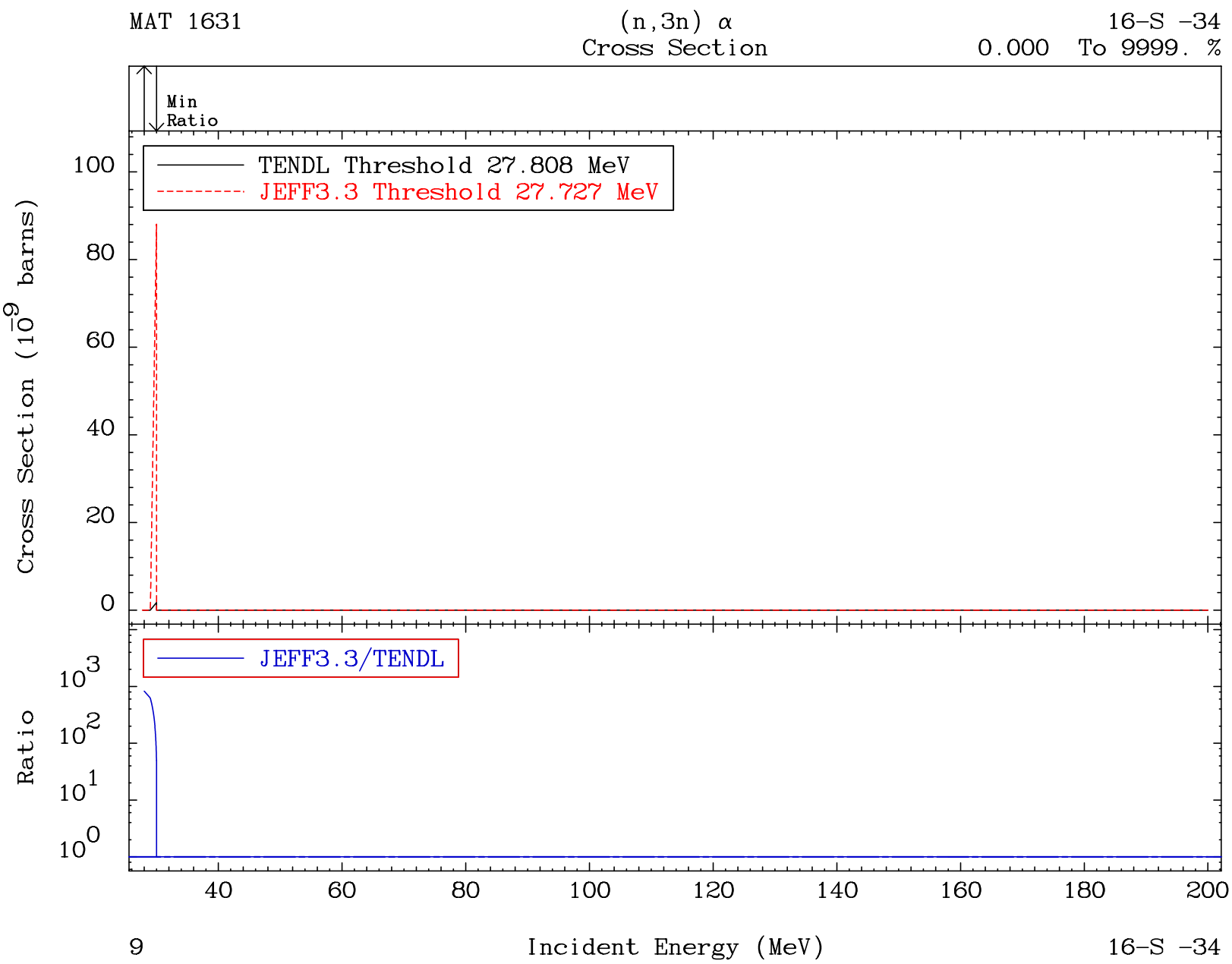

MAT 1631
(n,2n) d
Cross Section
16-S -34
0.000 To 9999. %
Min
Ratio
TENDL Threshold 27.491 MeV
JEFF3.3 Threshold 27.436 MeV
Cross Section (micro-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^3
10^2
10^1
10^0
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
16-S -34

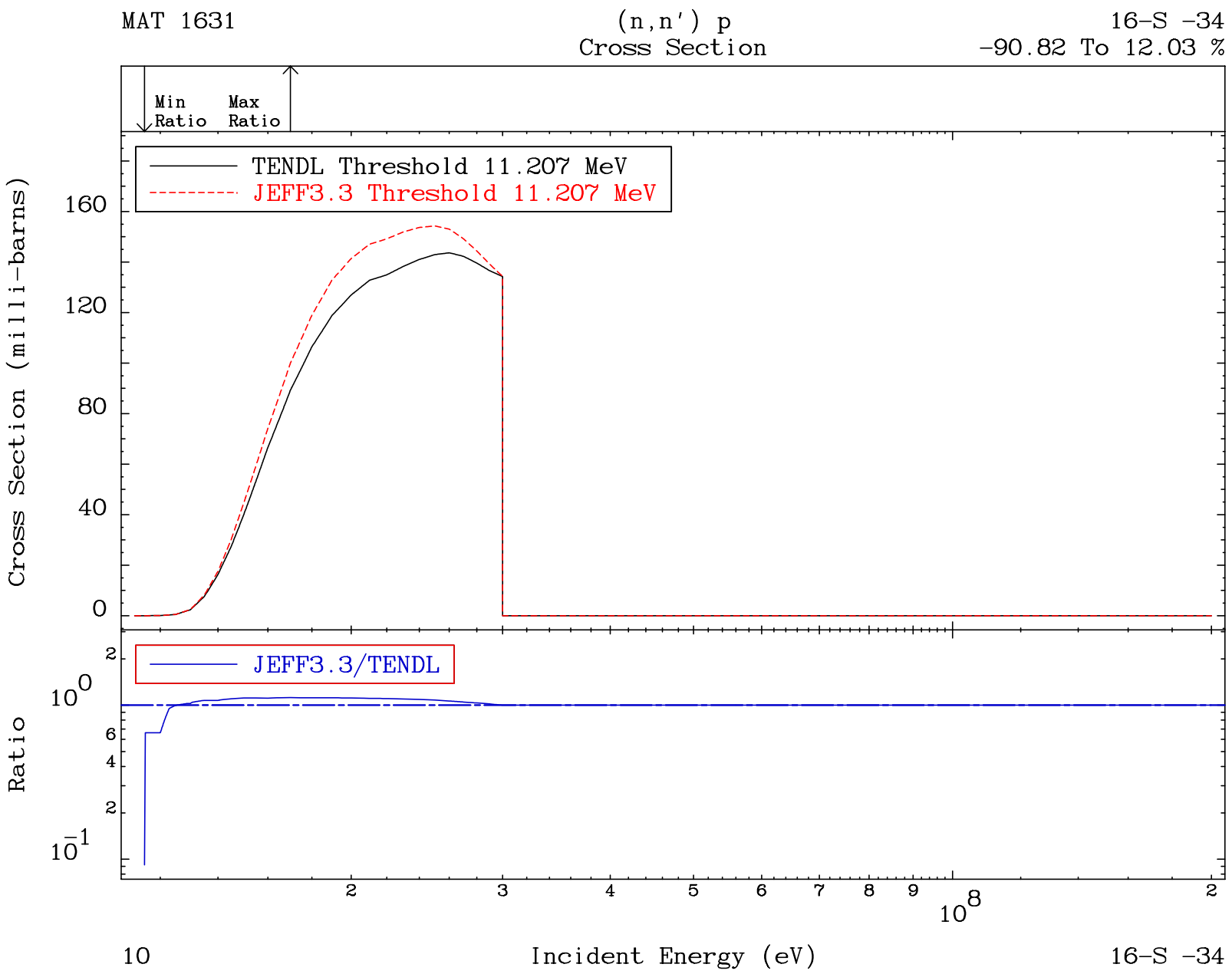

MAT 1631
(n,2n)
Cross Section
16-S -34
-8.824 To 99.93 %
Max Ratio
Min Ratio
TENDL Threshold 11.756 MeV
JEFF3.3 Threshold 11.669 MeV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
2.0
1.6
1.2
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
16-S -34

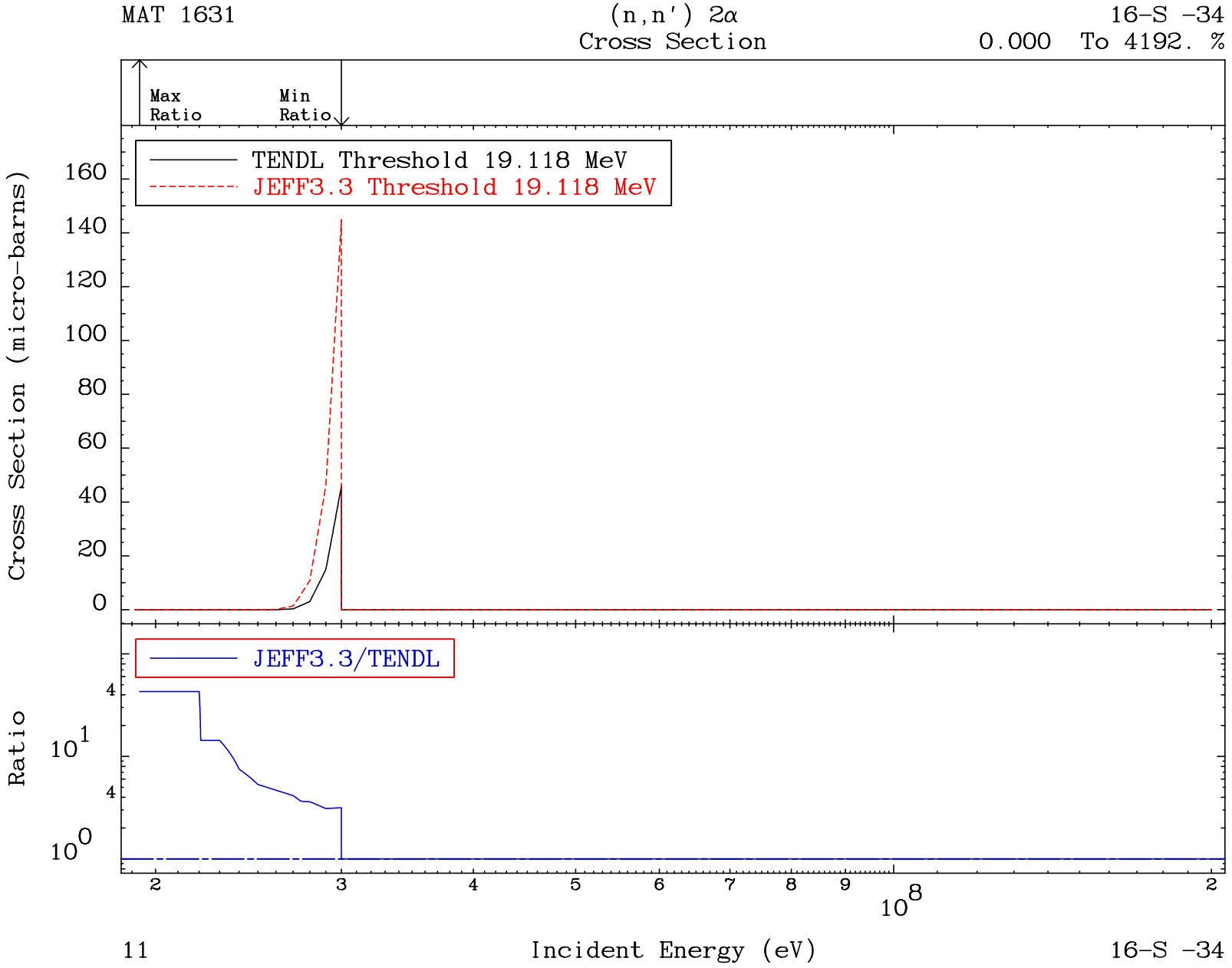

MAT 1631
(n,3n)
Cross Section
16-S -34
0.000 To 191.4 %
Min
Ratio
TENDL Threshold 20.654 MeV
JEFF3.3 Threshold 20.600 MeV
Cross Section (milli-barns)
0
10
20
30
40
50
JEFF3.3/TENDL
Ratio
1.0
2.0
3.0
20
40
60
80
100
120
140
160
180
200
Incident Energy (MeV)
6
16-S -34

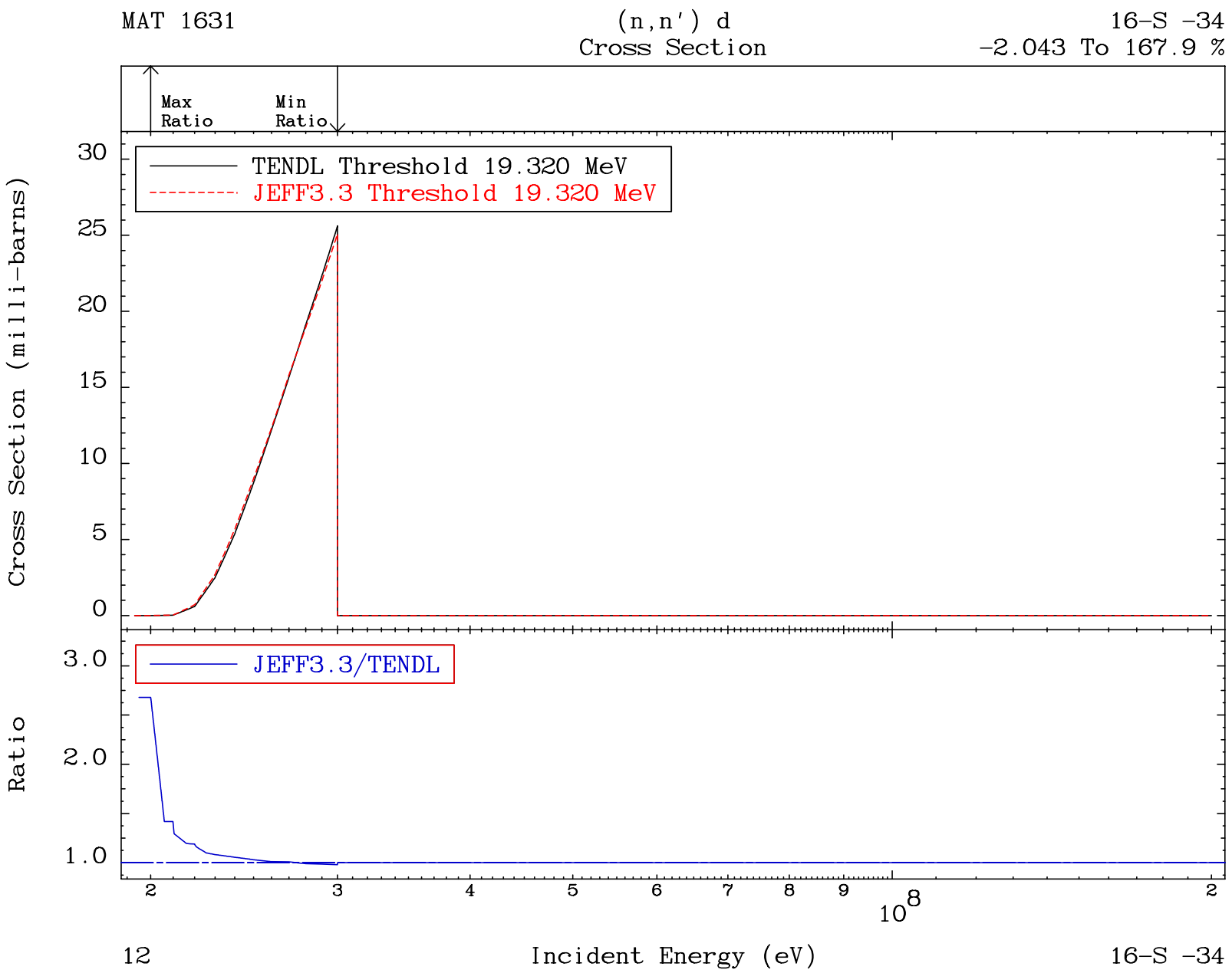

MAT 1631
(n,n') α
Cross Section
16-S -34
0.000 To 2309. %
Max Ratio
Min Ratio
TENDL Threshold 8.1589 MeV
JEFF3.3 Threshold 8.1589 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^1
6
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
16-S -34

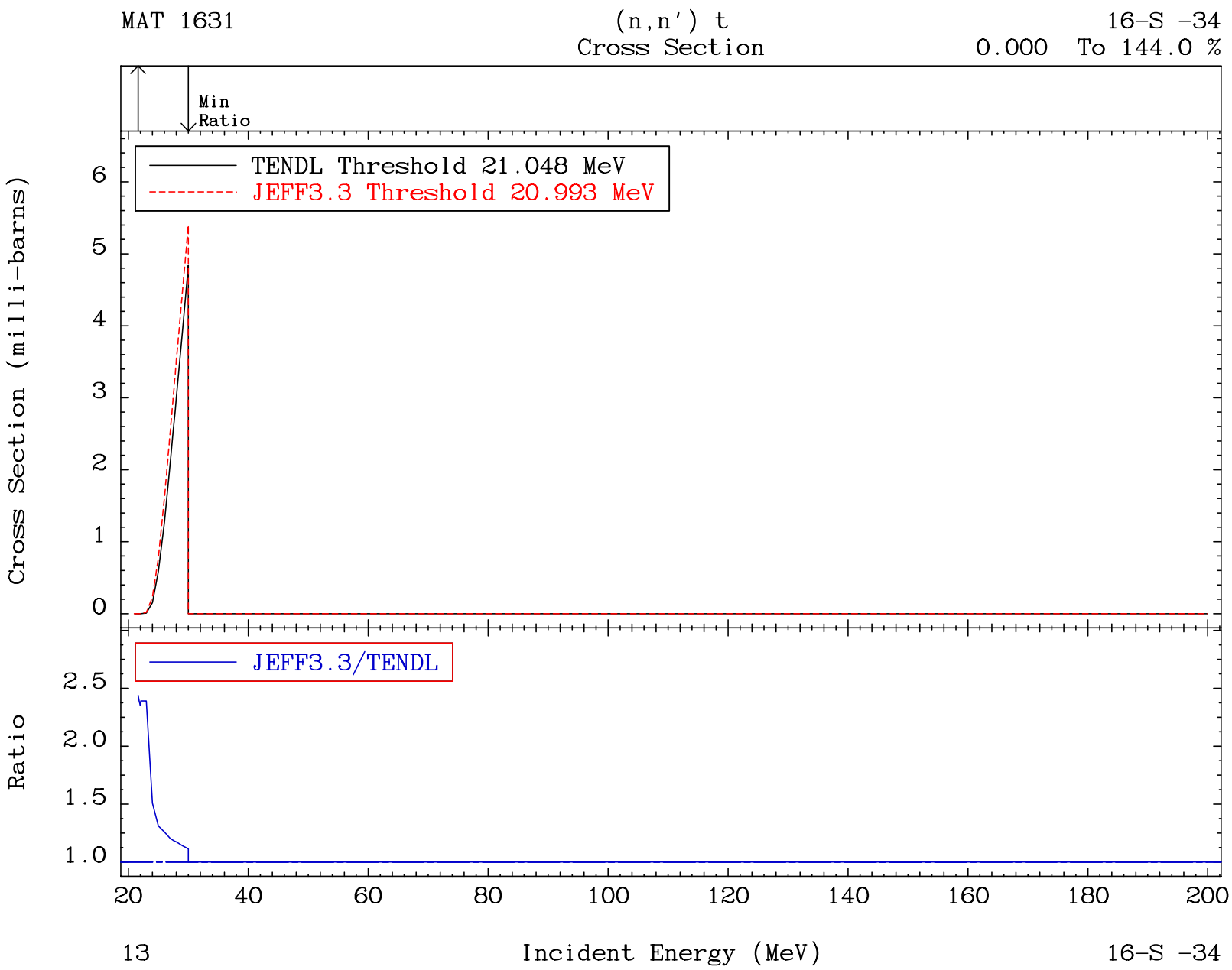

MAT 1631
(n,2n) α
Cross Section
16-S -34
0.000 To 4296. %
Max Ratio
Min Ratio
TENDL Threshold 19.083 MeV
JEFF3.3 Threshold 19.075 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^2
4
10^1
4
10^0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
16-S -34

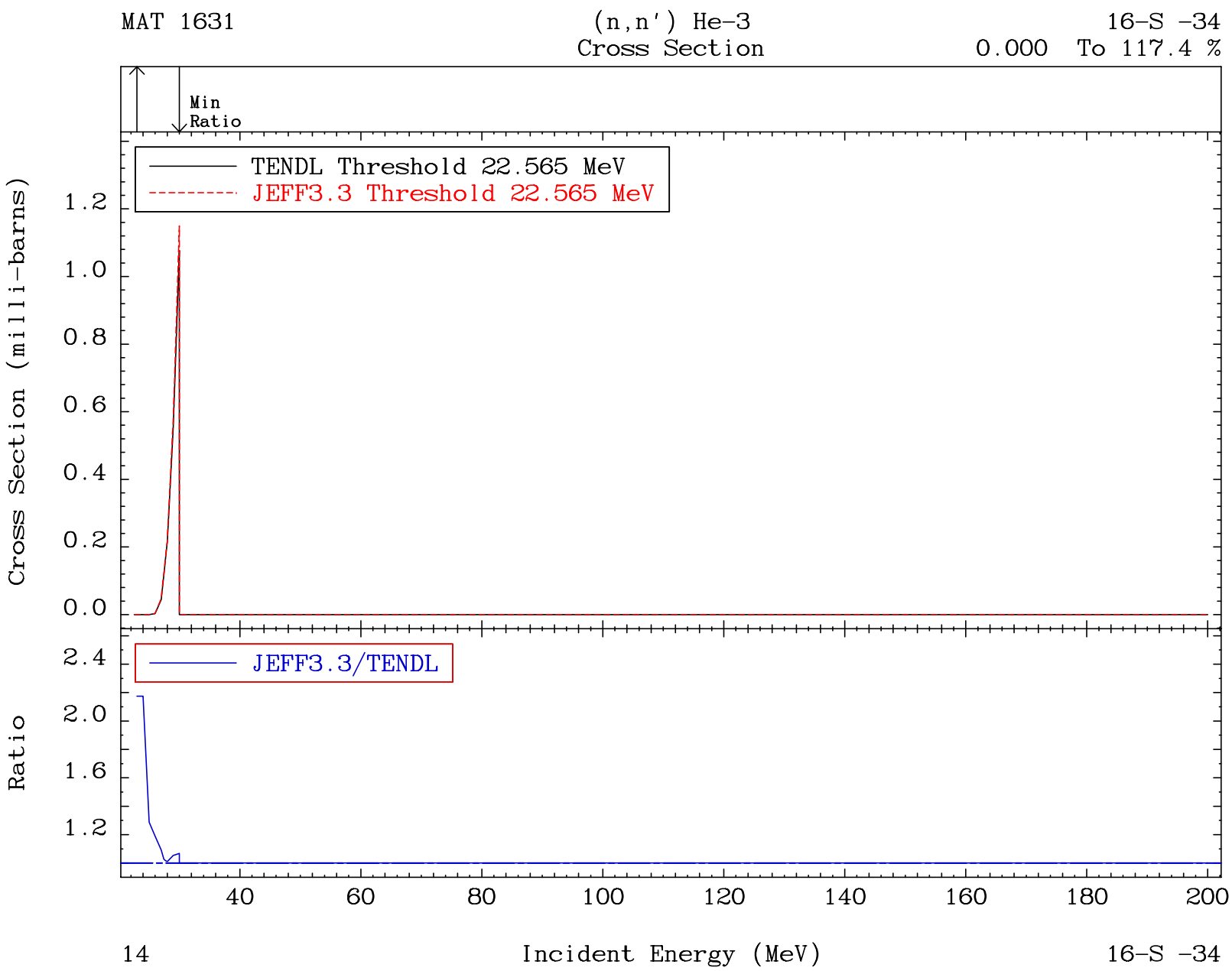

MAT 1631
(n,3n) α
Cross Section
16-S -34
0.000 To 9999. %
Min
Ratio
TENDL Threshold 27.808 MeV
JEFF3.3 Threshold 27.727 MeV
Cross Section (10^{-9} barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^3
10^2
10^1
10^0
40
60
80
100
120
140
160
180
200
9
Incident Energy (MeV)
16-S -34

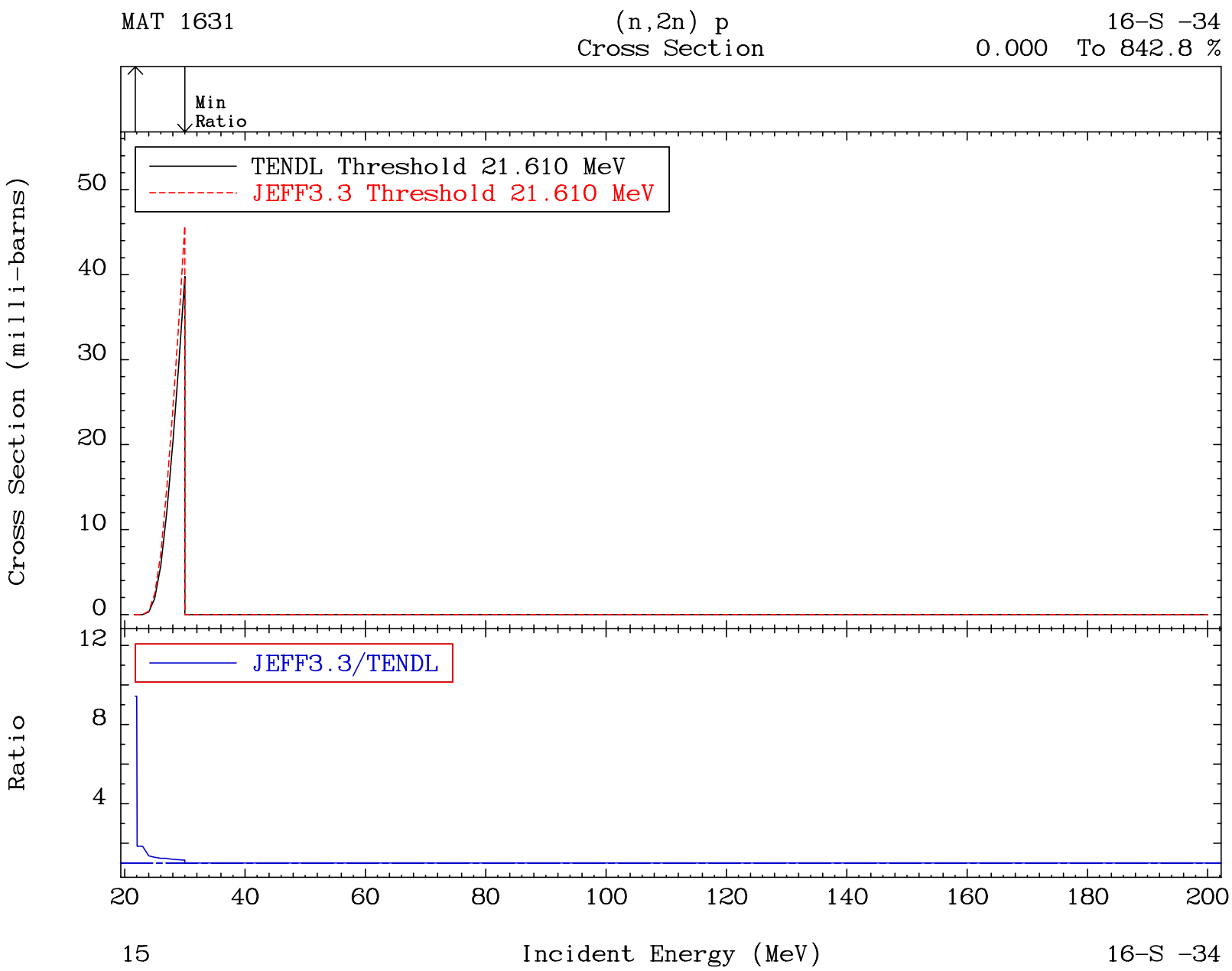

MAT 1631
(n,n') p
Cross Section
16-S -34
-90.82 To 12.03 %
Min Ratio
Max Ratio
TENDL Threshold 11.207 MeV
JEFF3.3 Threshold 11.207 MeV
Cross Section (milli-barns)
160
120
80
40
0
JEFF3.3/TENDL
Ratio
2
10^0
6
4
2
10^-1
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
16-S -34

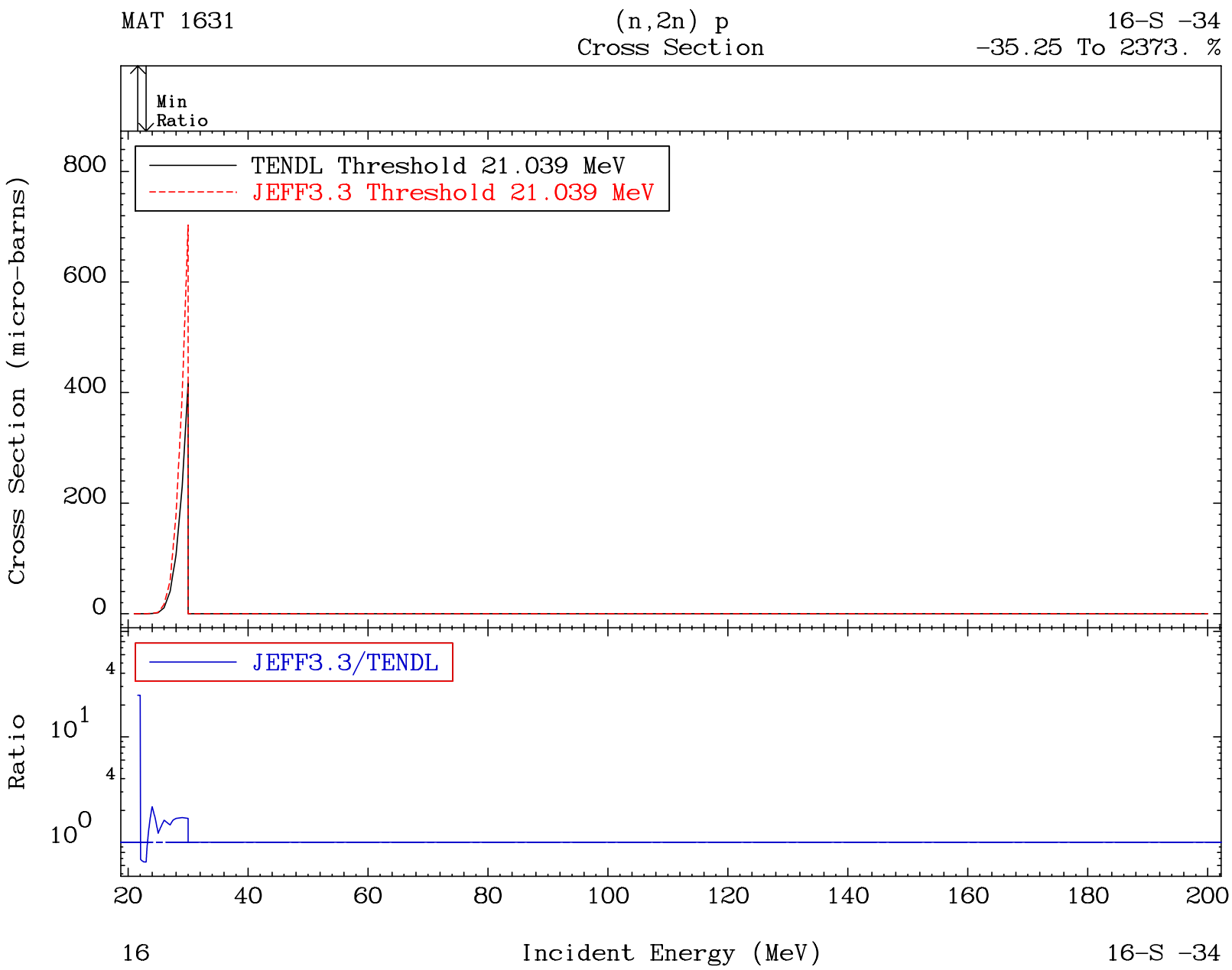

MAT 1631
(n,n') 2α
Cross Section
16-S -34
0.000 To 4192. %
Max Ratio
Min Ratio
TENDL Threshold 19.118 MeV
JEFF3.3 Threshold 19.118 MeV
Cross Section (micro-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
4
10^1
4
10^0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
16-S -34

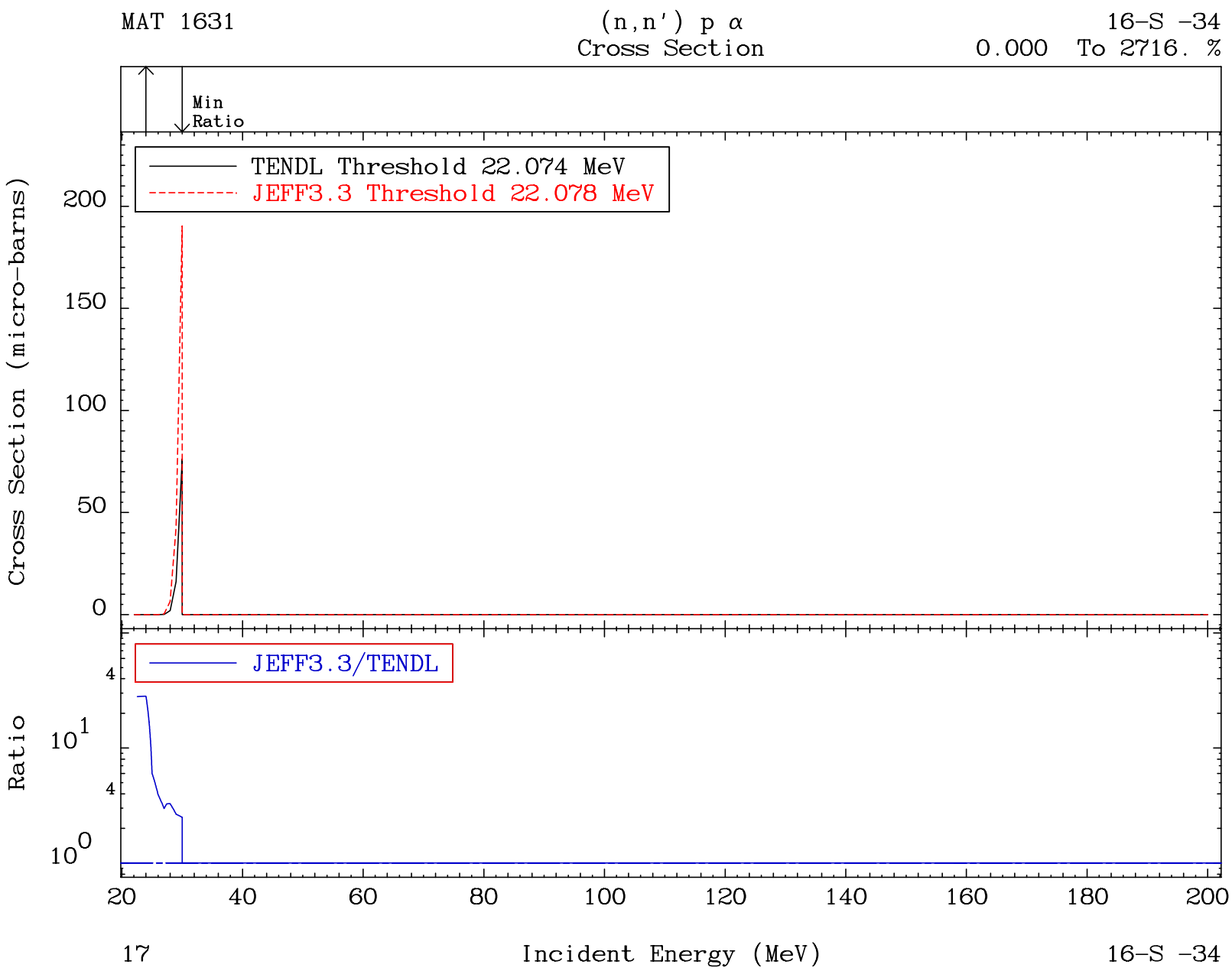

MAT 1631
(n,n') d
Cross Section
16-S -34
-2.043 To 167.9 %
Max Ratio
Min Ratio
TENDL Threshold 19.320 MeV
JEFF3.3 Threshold 19.320 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
16-S -34

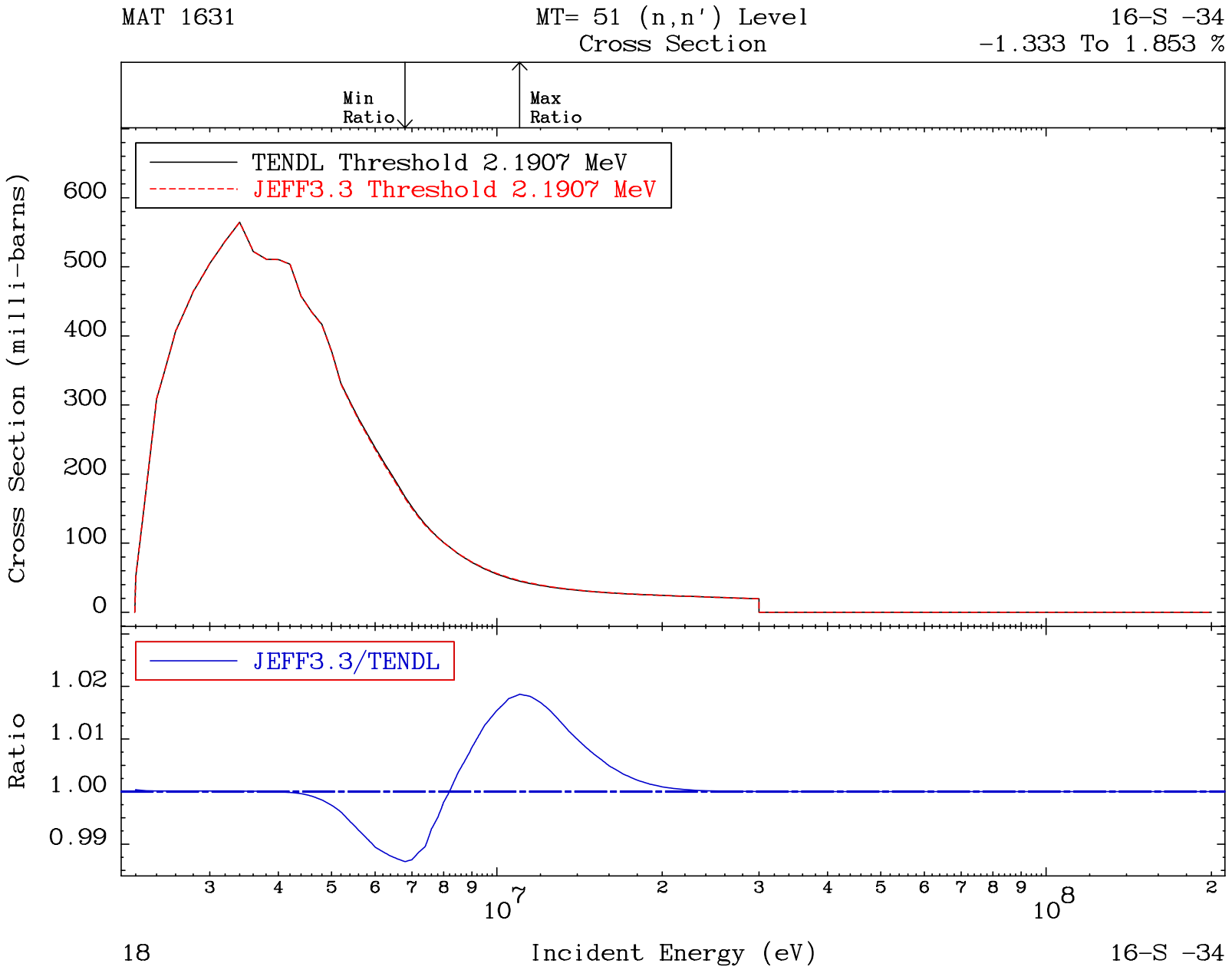

MAT 1631
(n,n') t
Cross Section
16-S -34
0.000 To 144.0 %
Min
Ratio
TENDL Threshold 21.048 MeV
JEFF3.3 Threshold 20.993 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
JEFF3.3/TENDL
Ratio
1.0
1.5
2.0
2.5
20
40
60
80
100
120
140
160
180
200
13
Incident Energy (MeV)
16-S -34

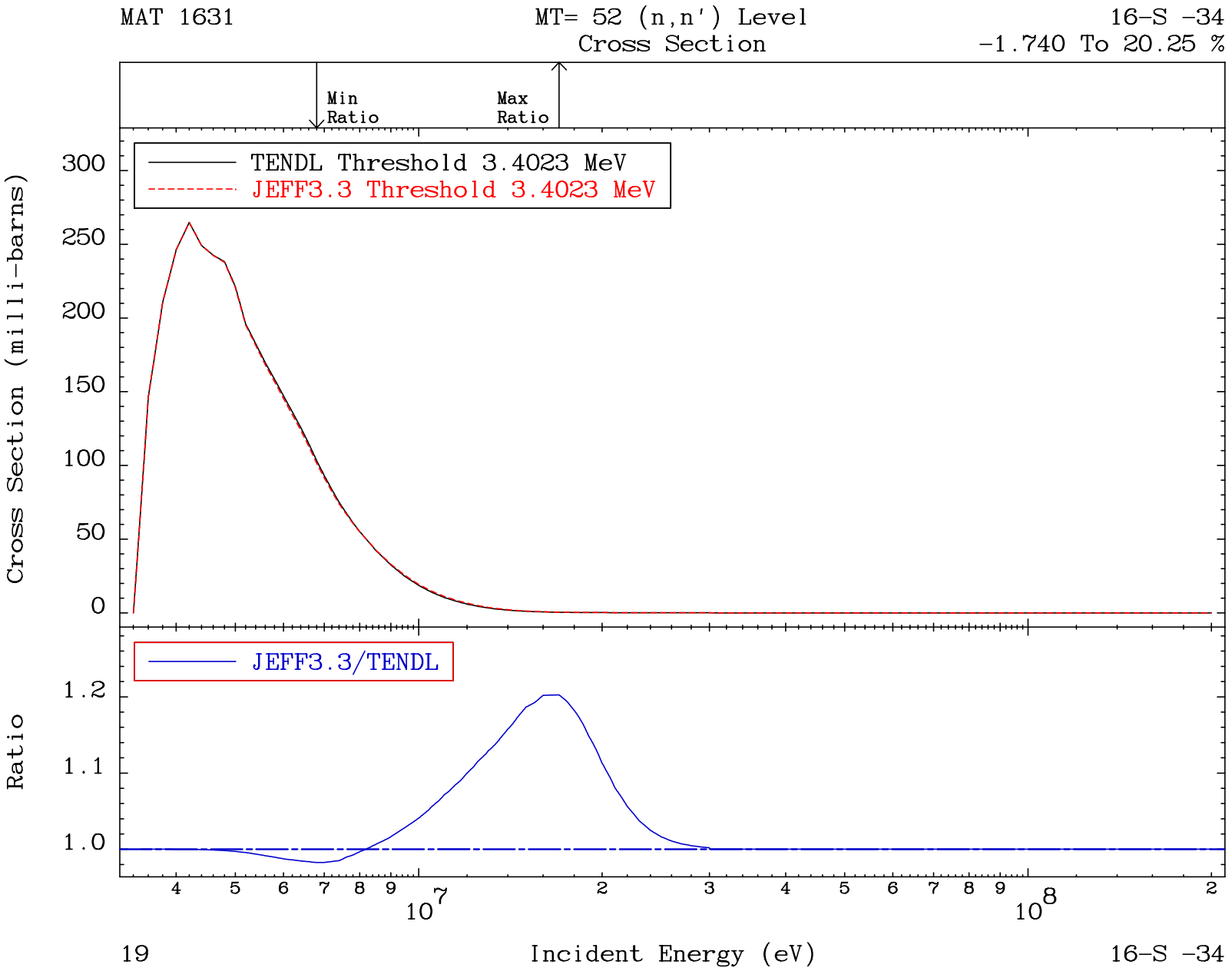

MAT 1631
(n,n') He-3
Cross Section
16-S -34
0.000 To 117.4 %
Min
Ratio
TENDL Threshold 22.565 MeV
JEFF3.3 Threshold 22.565 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
2.4
2.0
1.6
1.2
40
60
80
100
120
140
160
180
200
14
Incident Energy (MeV)
16-S -34

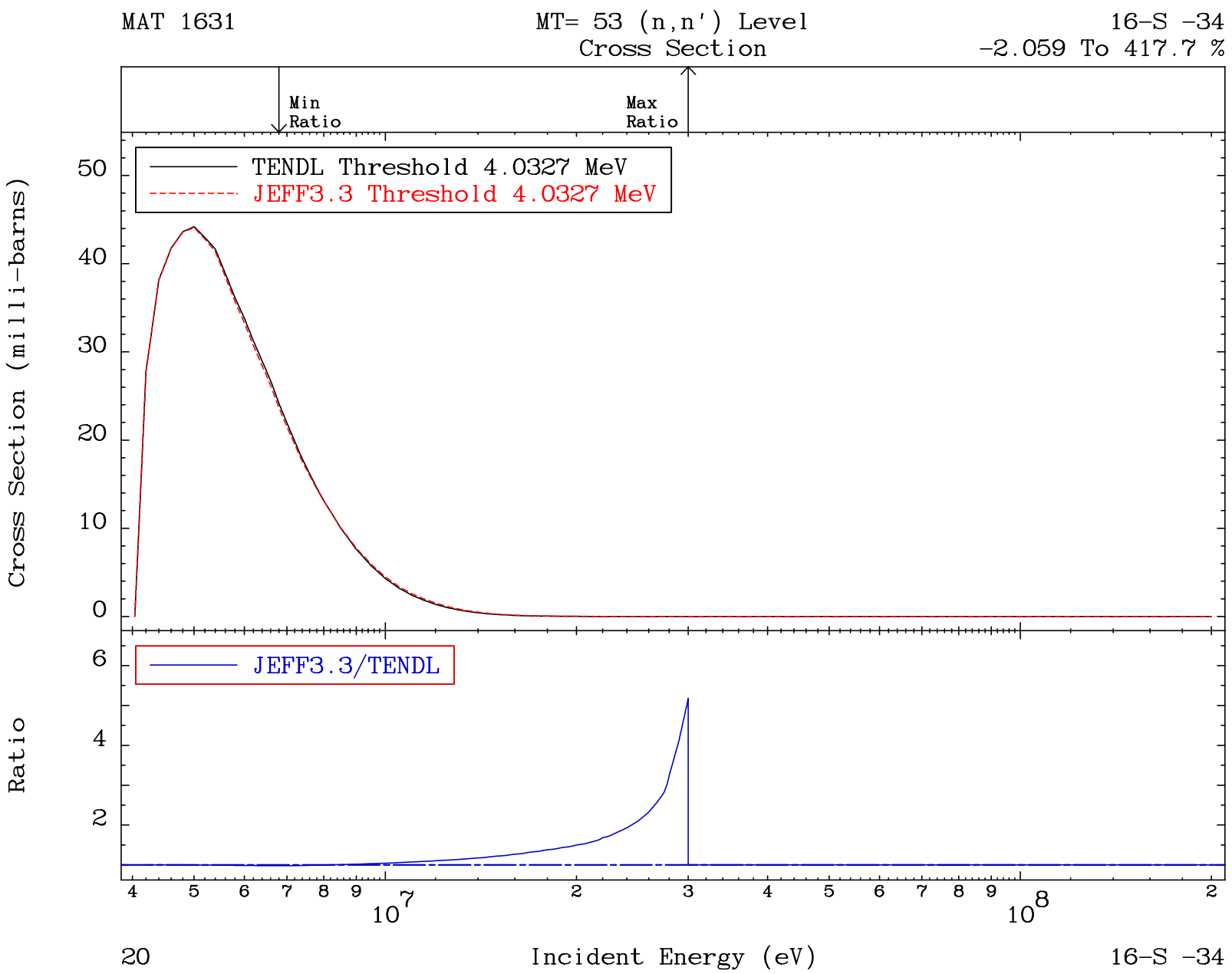

MAT 1631
(n,2n) p
Cross Section
16-S -34
0.000 To 842.8 %
Min
Ratio
TENDL Threshold 21.610 MeV
JEFF3.3 Threshold 21.610 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
12
8
4
20
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
16-S -34

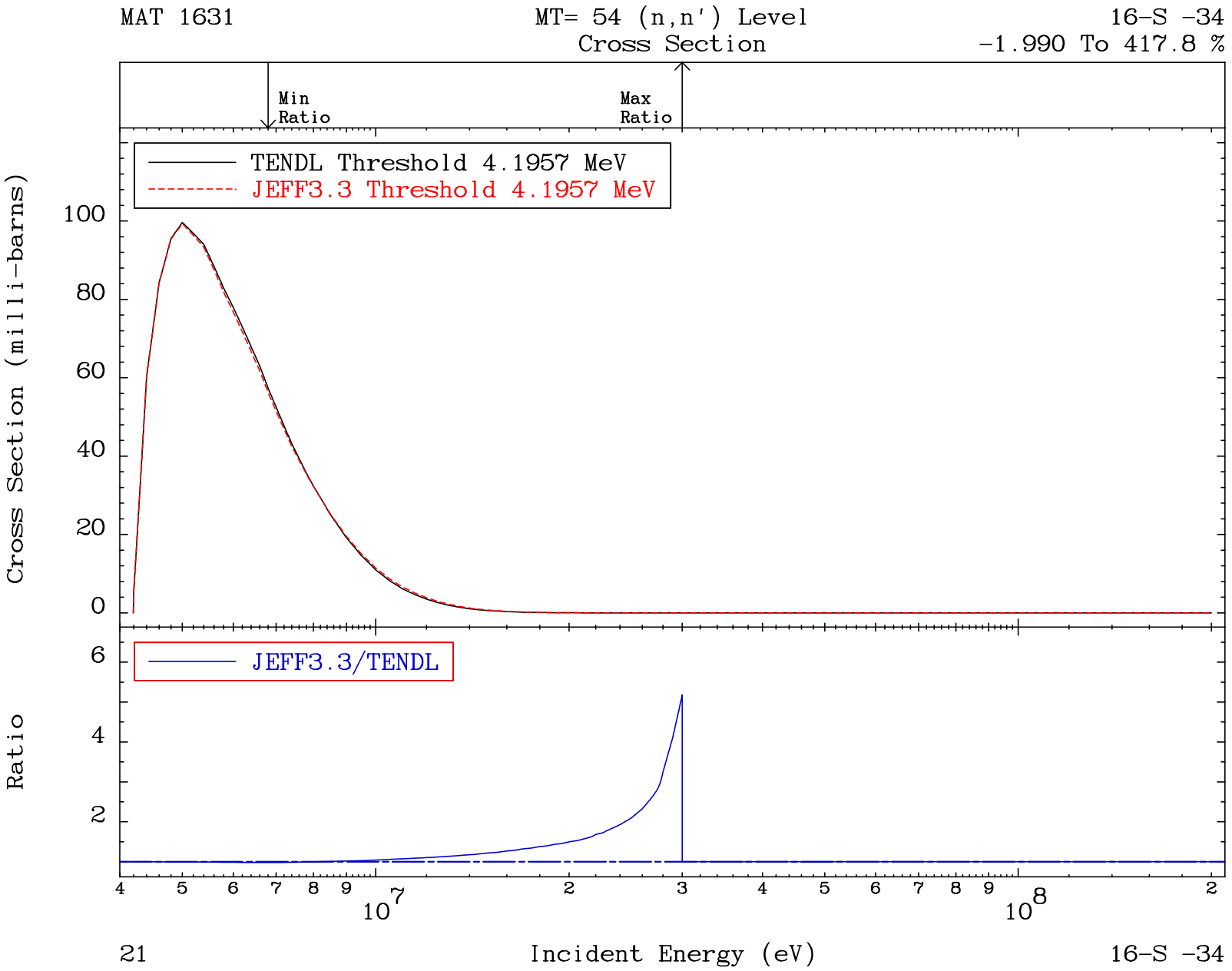

MAT 1631
(n,2n) p
Cross Section
16-S -34
-35.25 To 2373. %
Min
Ratio
TENDL Threshold 21.039 MeV
JEFF3.3 Threshold 21.039 MeV
Cross Section (micro-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
4
10^1
4
10^0
20
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
16-S -34

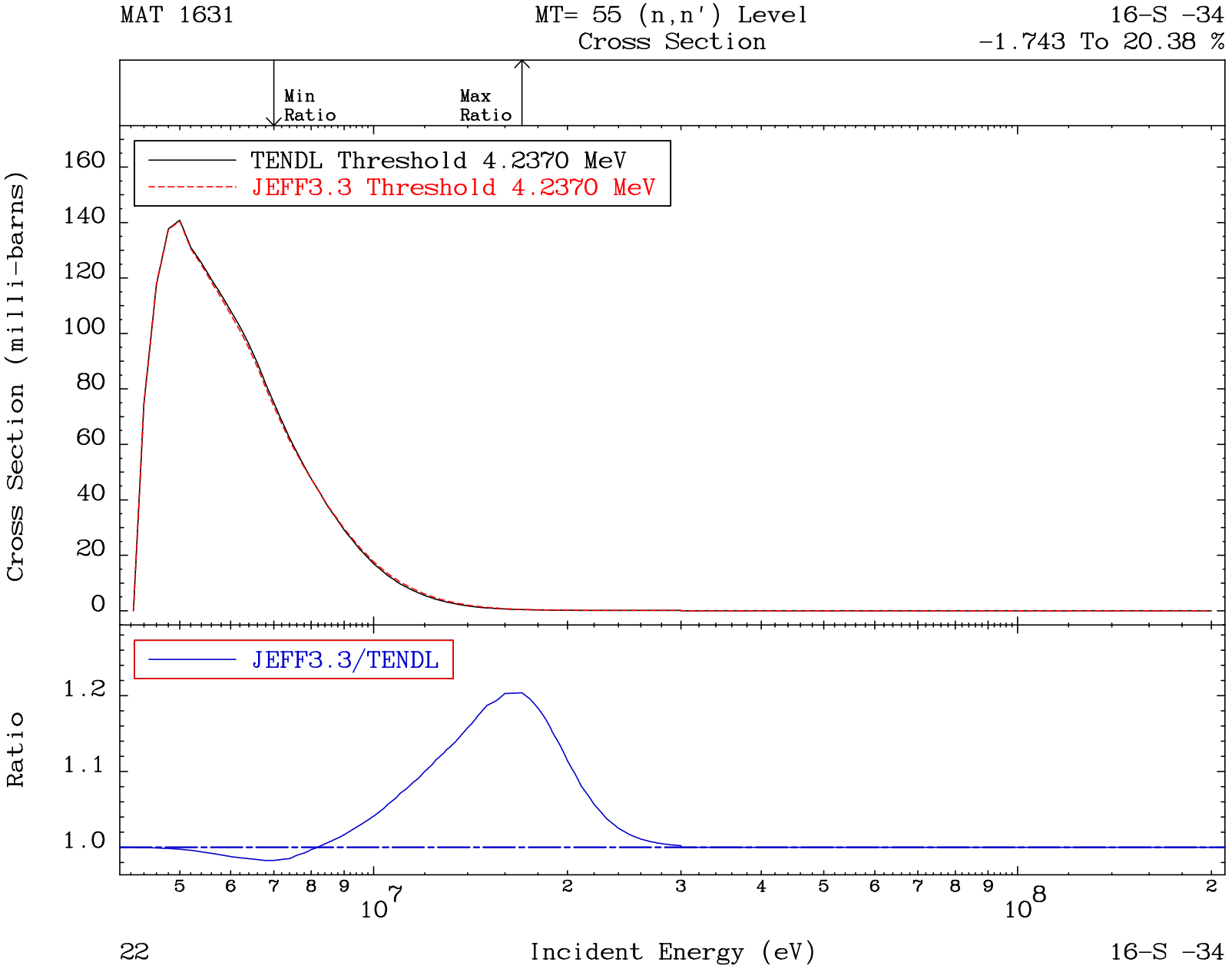

MAT 1631
(n,n') p α
Cross Section
16-S -34
0.000 To 2716. %
Min
Ratio
TENDL Threshold 22.074 MeV
JEFF3.3 Threshold 22.078 MeV
Cross Section (micro-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
4
10^1
4
10^0
20
40
60
80
100
120
140
160
180
200
17
Incident Energy (MeV)
16-S -34

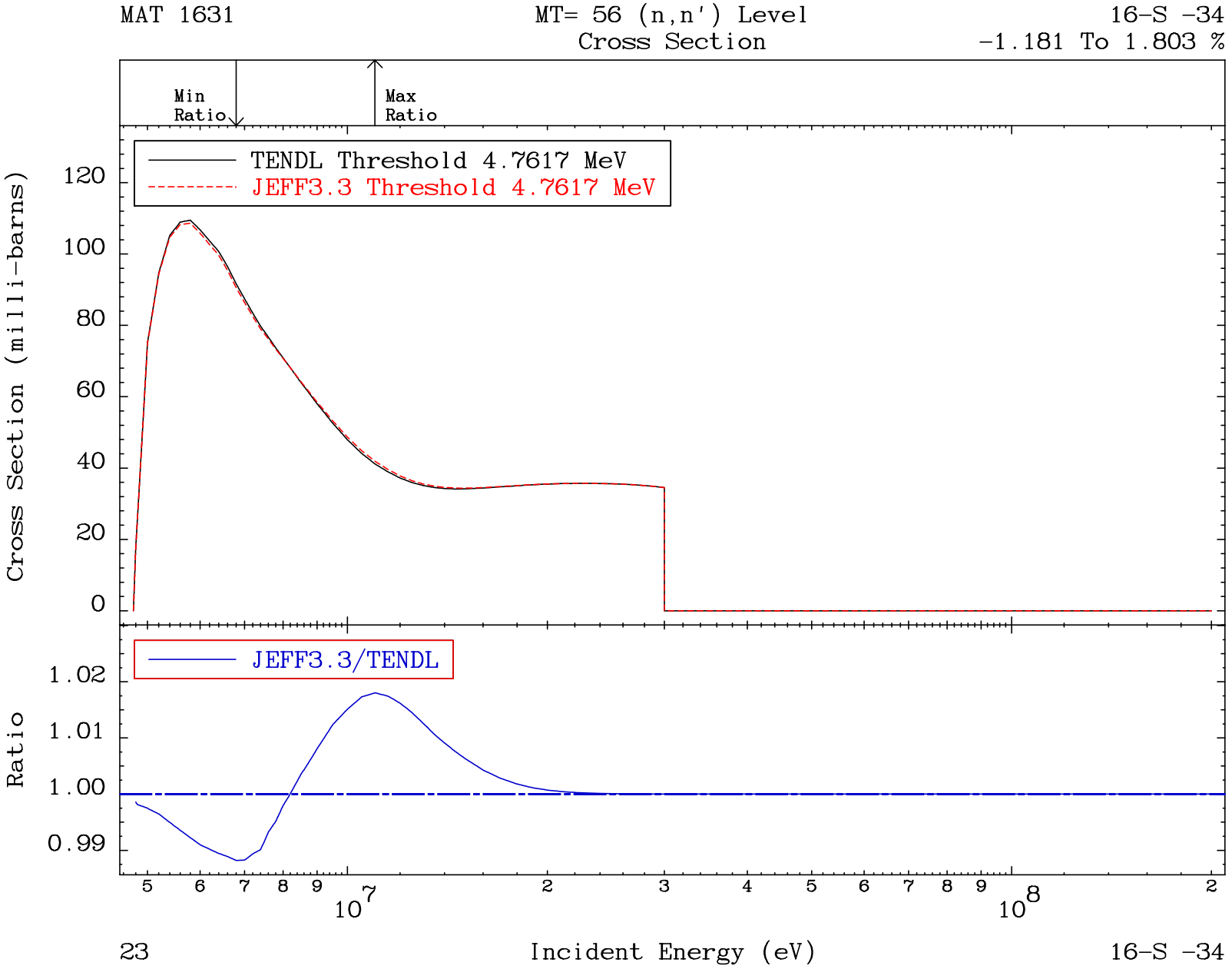

MAT 1631
MT= 51 (n,n') Level
Cross Section
16-S -34
-1.333 To 1.853 %
Min Ratio
Max Ratio
TENDL Threshold 2.1907 MeV
JEFF3.3 Threshold 2.1907 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.02
1.01
1.00
0.99
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
18
Incident Energy (eV)
16-S -34

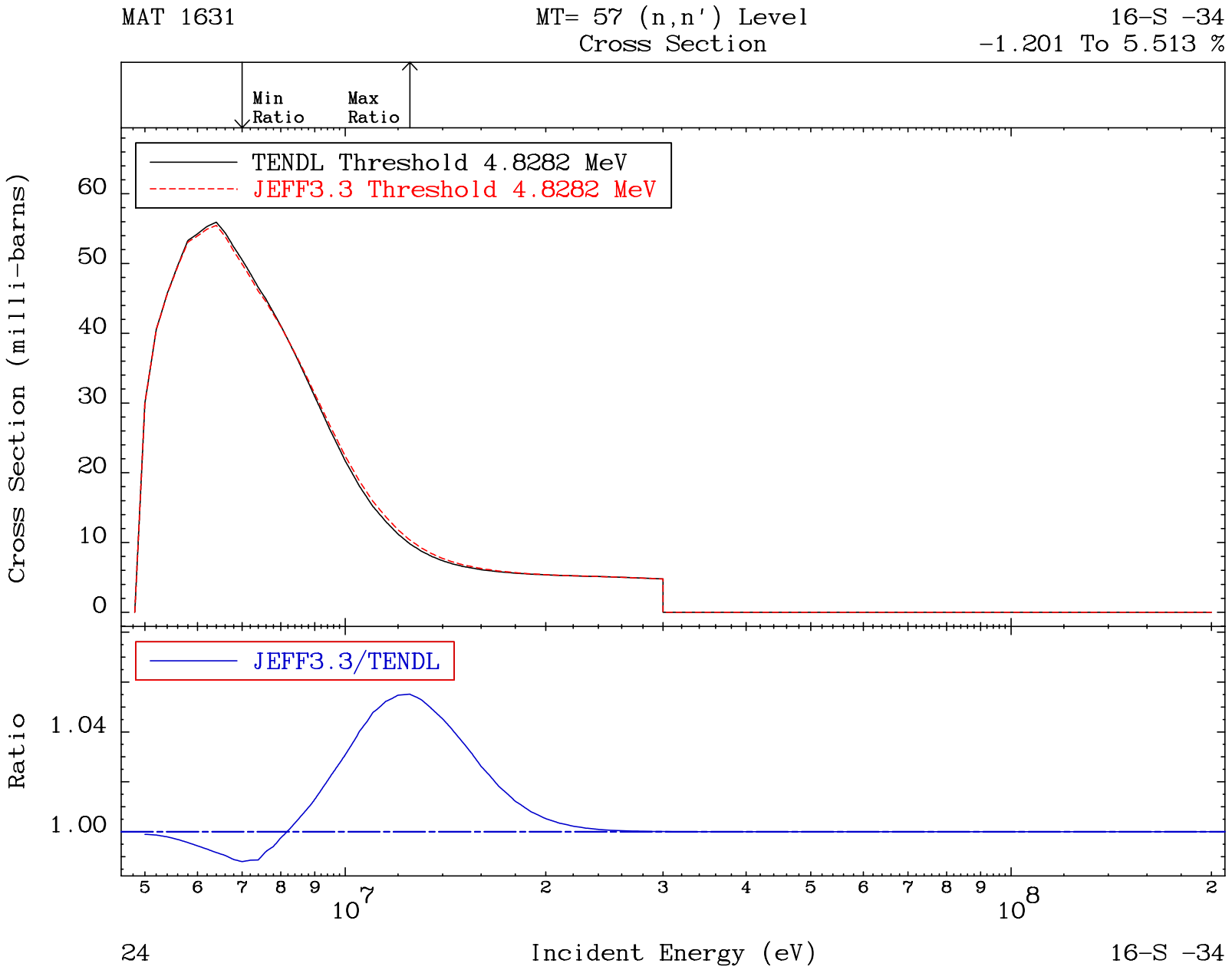

MAT 1631
MT= 52 (n,n') Level
Cross Section
16-S -34
-1.740 To 20.25 %
Min Ratio
Max Ratio
TENDL Threshold 3.4023 MeV
JEFF3.3 Threshold 3.4023 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
19
Incident Energy (eV)
16-S -34

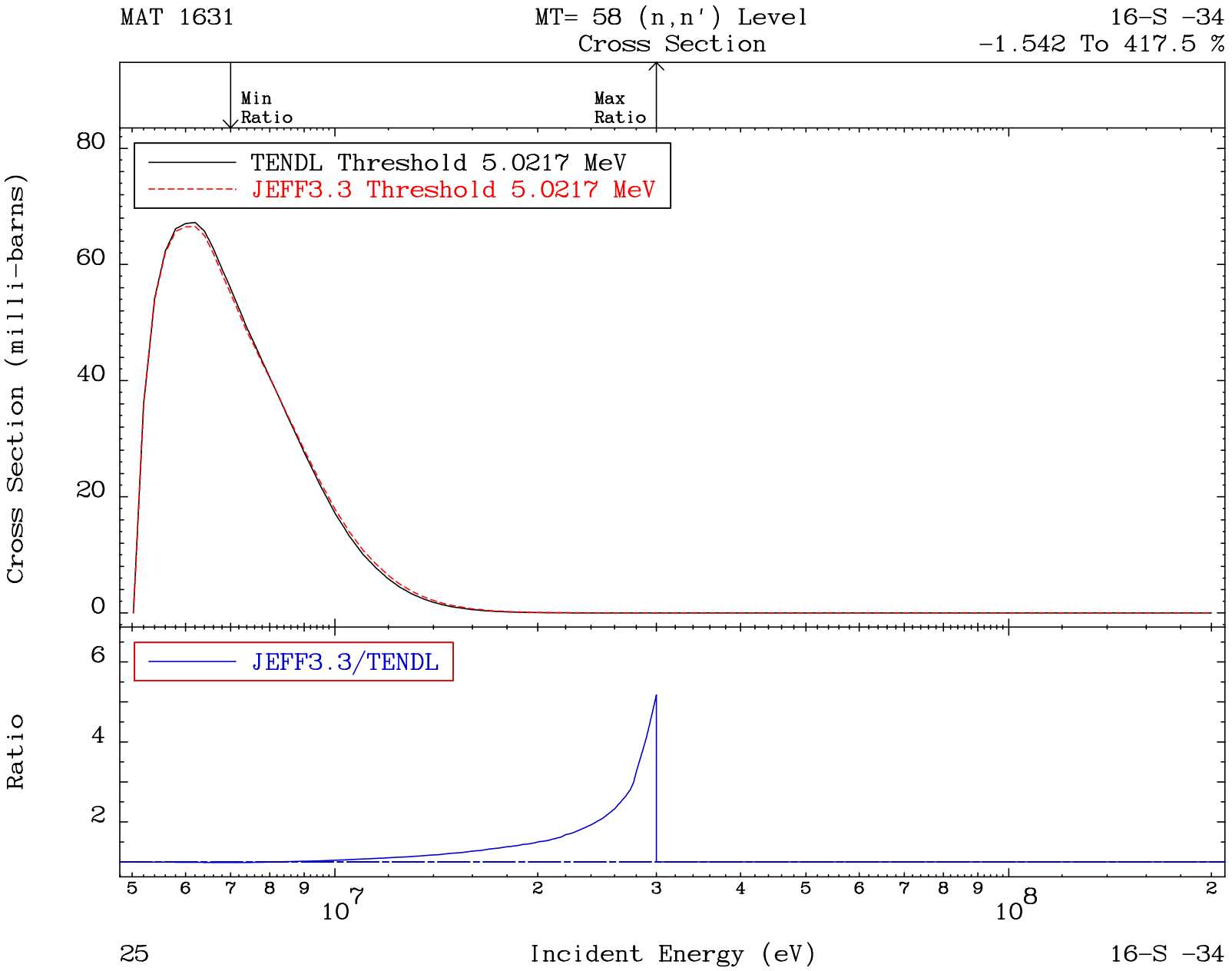

MAT 1631
MT= 53 (n,n') Level
Cross Section
16-S -34
-2.059 To 417.7 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.0327 MeV
JEFF3.3 Threshold 4.0327 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
6
4
2
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
16-S -34

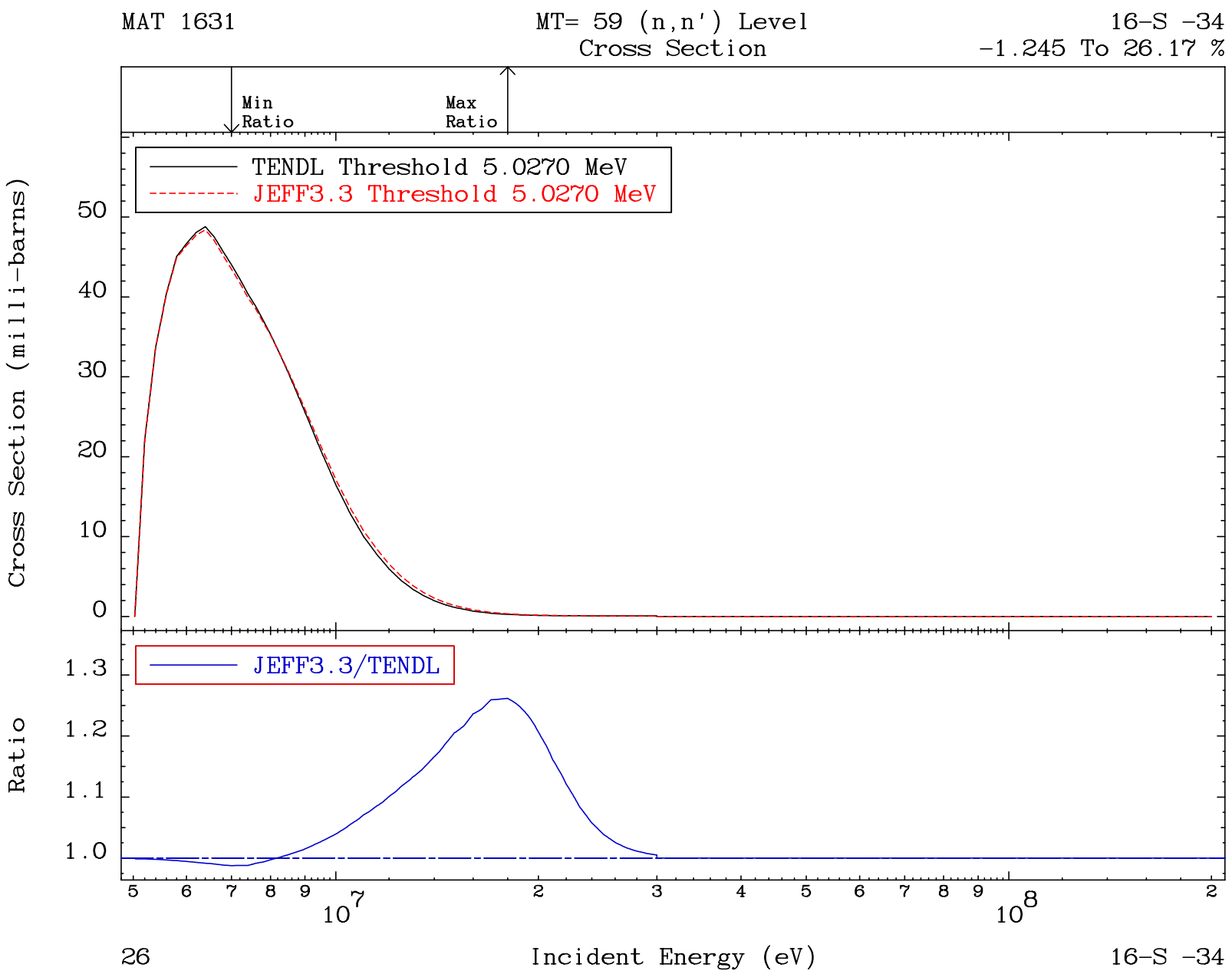

MAT 1631
MT= 54 (n,n') Level
Cross Section
16-S -34
-1.990 To 417.8 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.1957 MeV
JEFF3.3 Threshold 4.1957 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
6
4
2
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
21
Incident Energy (eV)
16-S -34

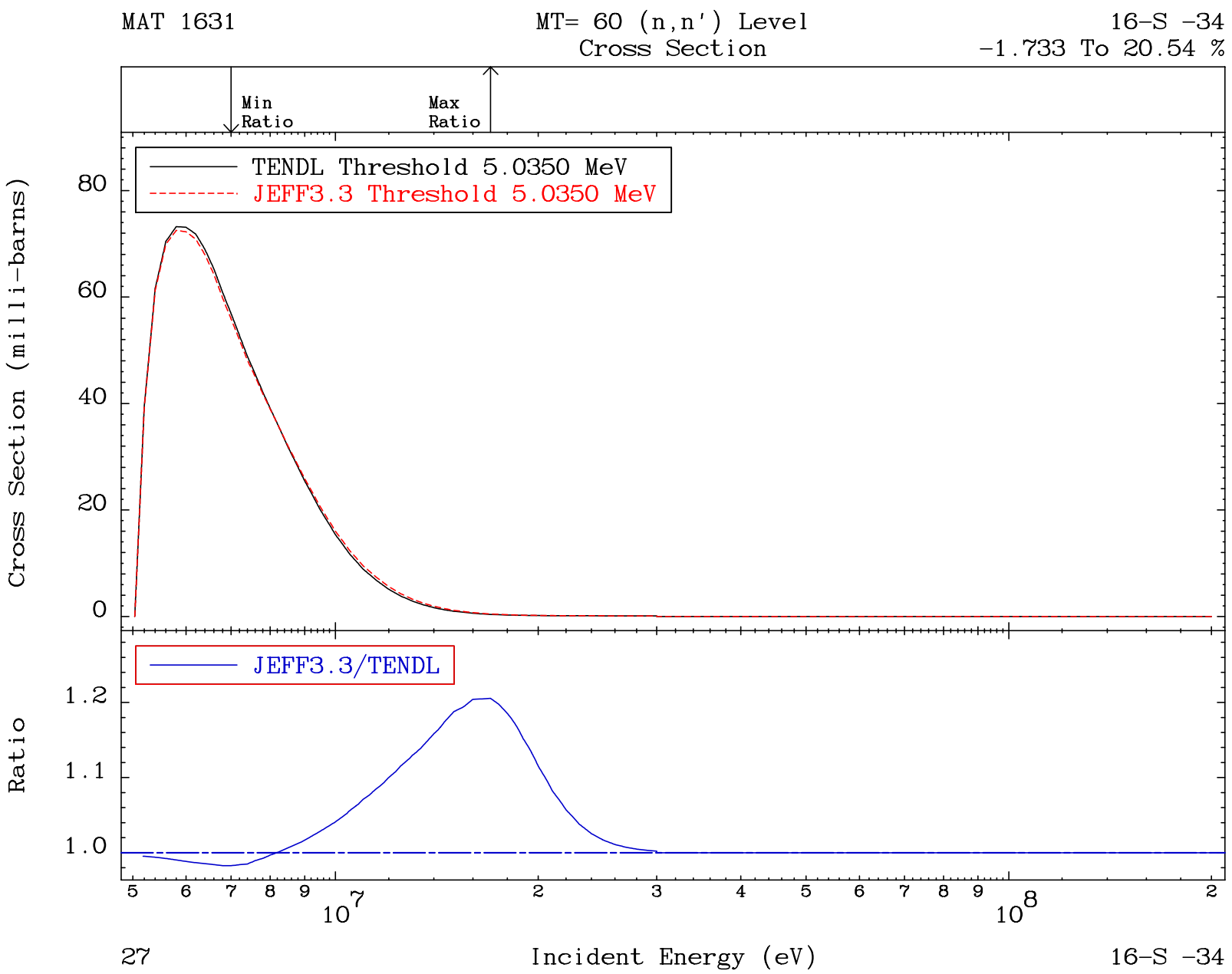

MAT 1631
MT= 55 (n,n') Level
Cross Section
16-S -34
-1.743 To 20.38 %
Min Ratio
Max Ratio
TENDL Threshold 4.2370 MeV
JEFF3.3 Threshold 4.2370 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
22
Incident Energy (eV)
16-S -34

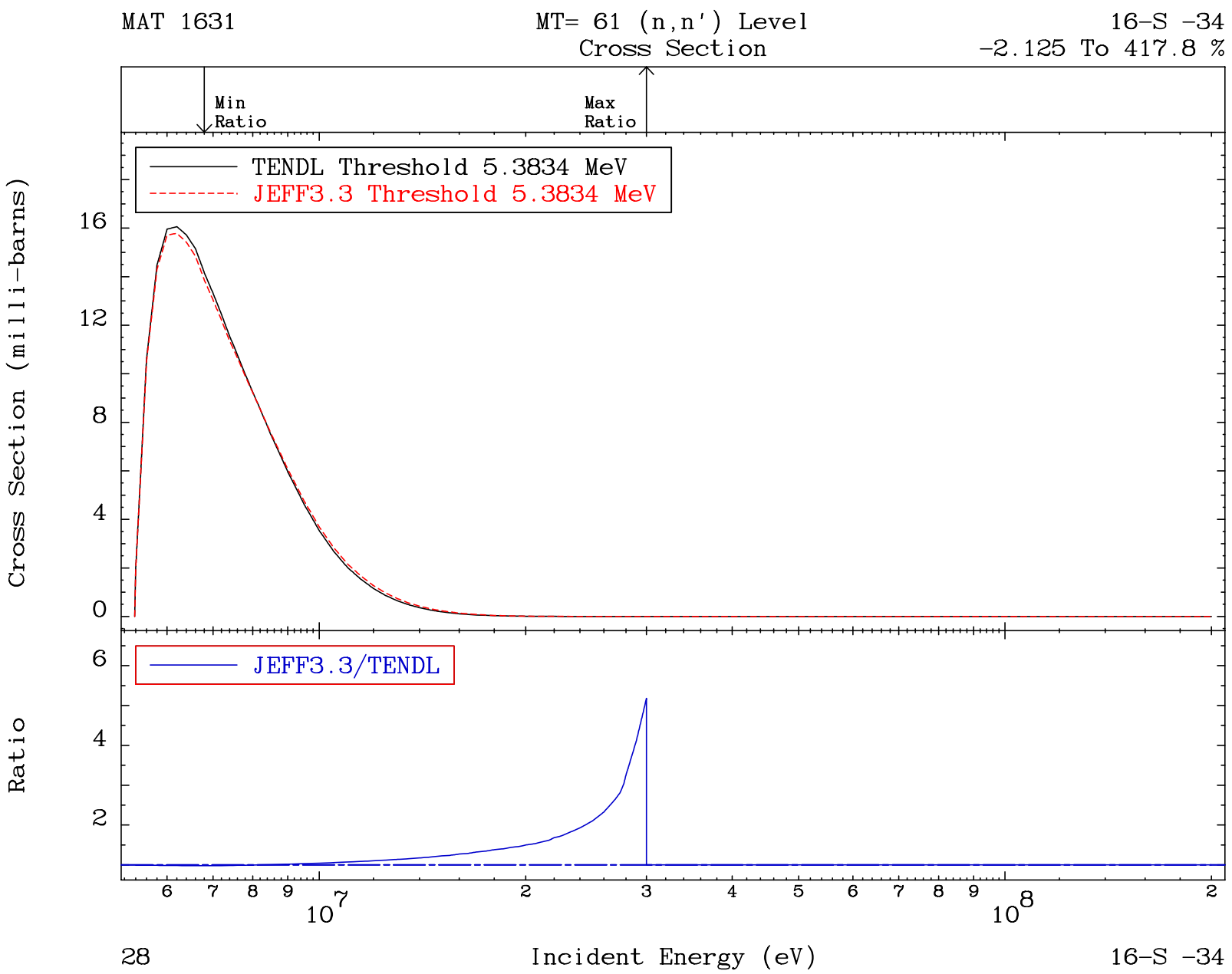

MAT 1631
MT= 56 (n,n') Level
Cross Section
16-S -34
-1.181 To 1.803 %
Min Ratio
Max Ratio
TENDL Threshold 4.7617 MeV
JEFF3.3 Threshold 4.7617 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.02
1.01
1.00
0.99
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
23
16-S -34

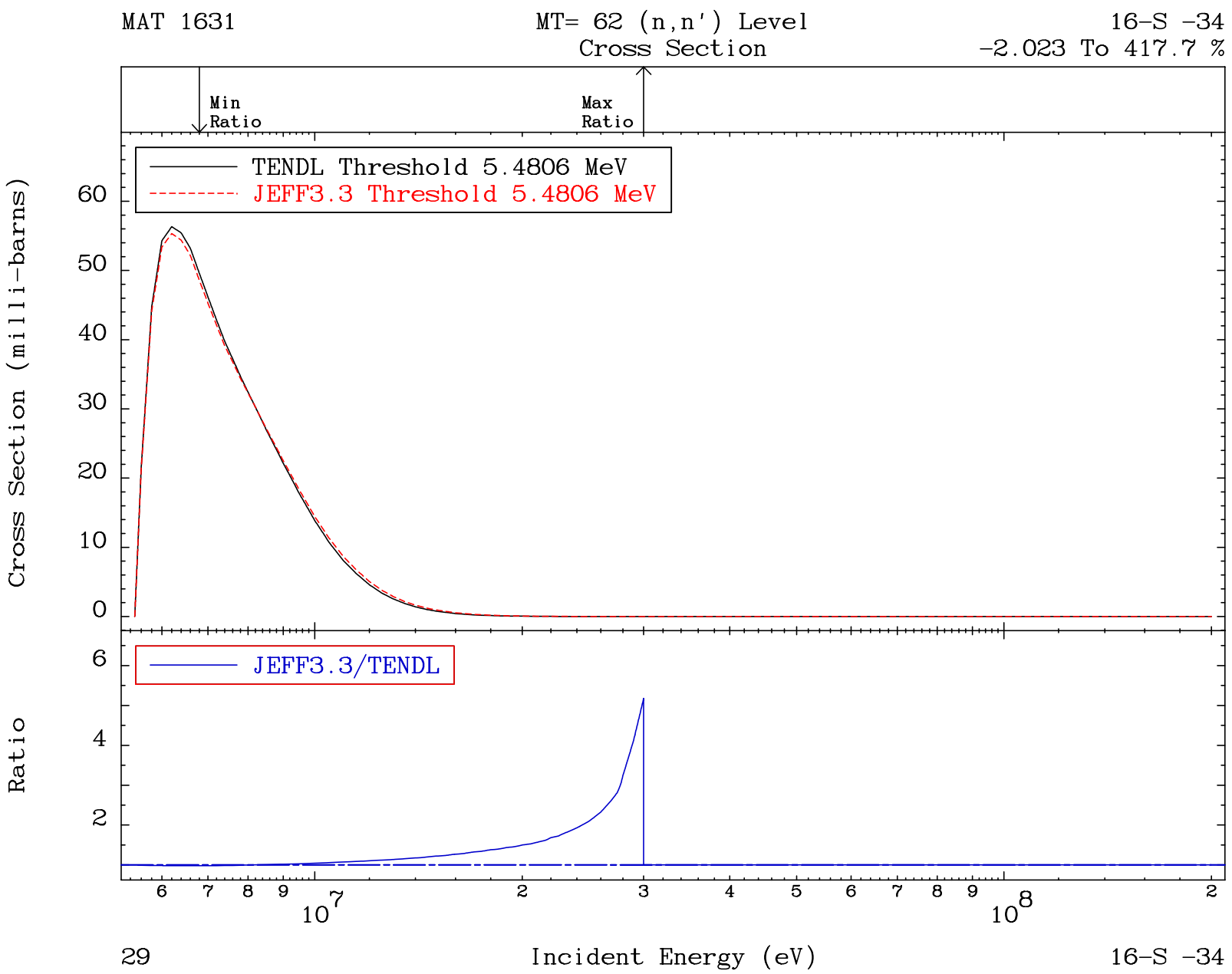

MAT 1631
MT= 57 (n,n') Level
Cross Section
16-S -34
-1.201 To 5.513 %
Min Ratio
Max Ratio
TENDL Threshold 4.8282 MeV
JEFF3.3 Threshold 4.8282 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.04
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
16-S -34

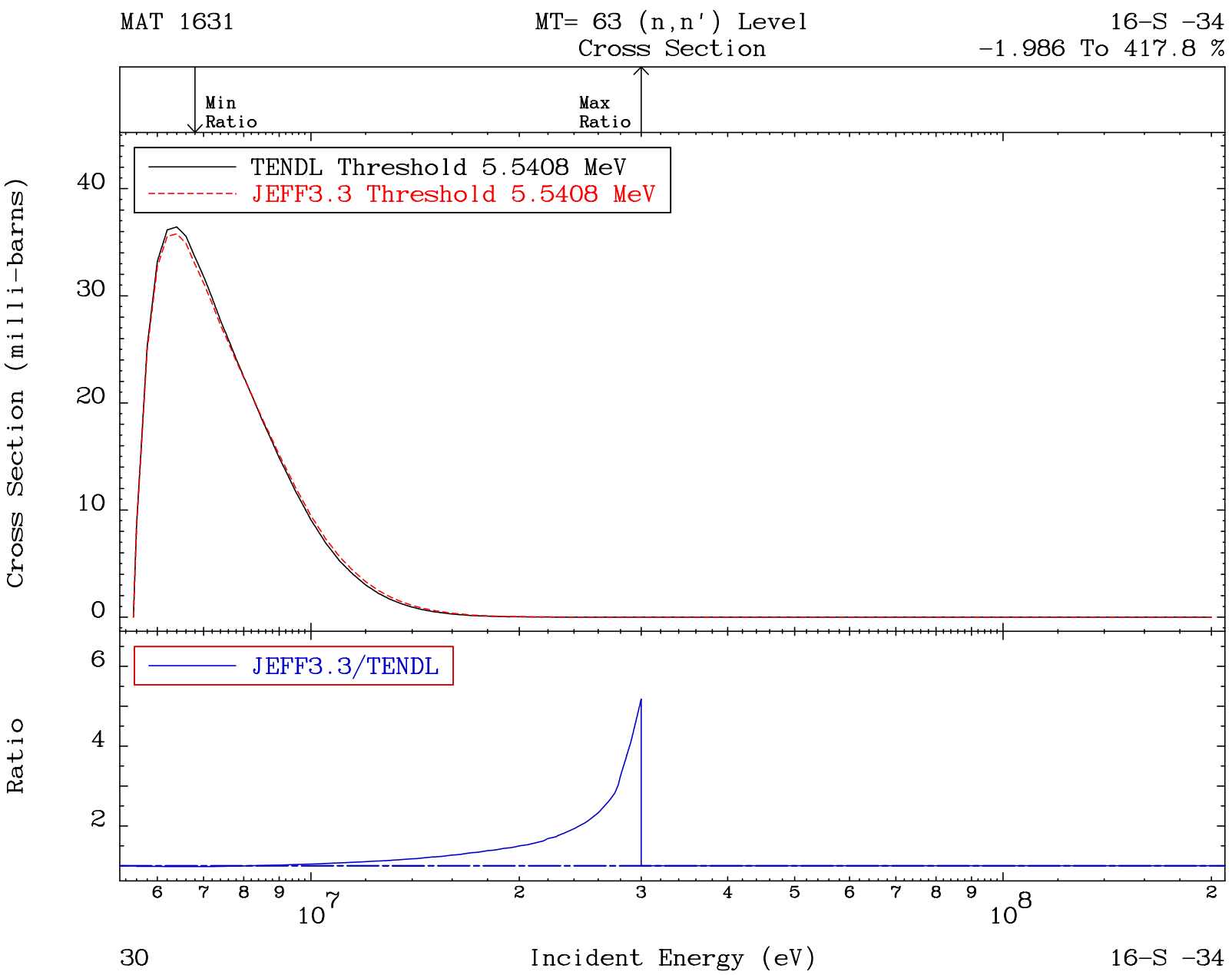

MAT 1631
MT= 58 (n,n') Level
Cross Section
16-S -34
-1.542 To 417.5 %
Min
Ratio
Max
Ratio
TENDL Threshold 5.0217 MeV
JEFF3.3 Threshold 5.0217 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
6
4
2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
16-S -34

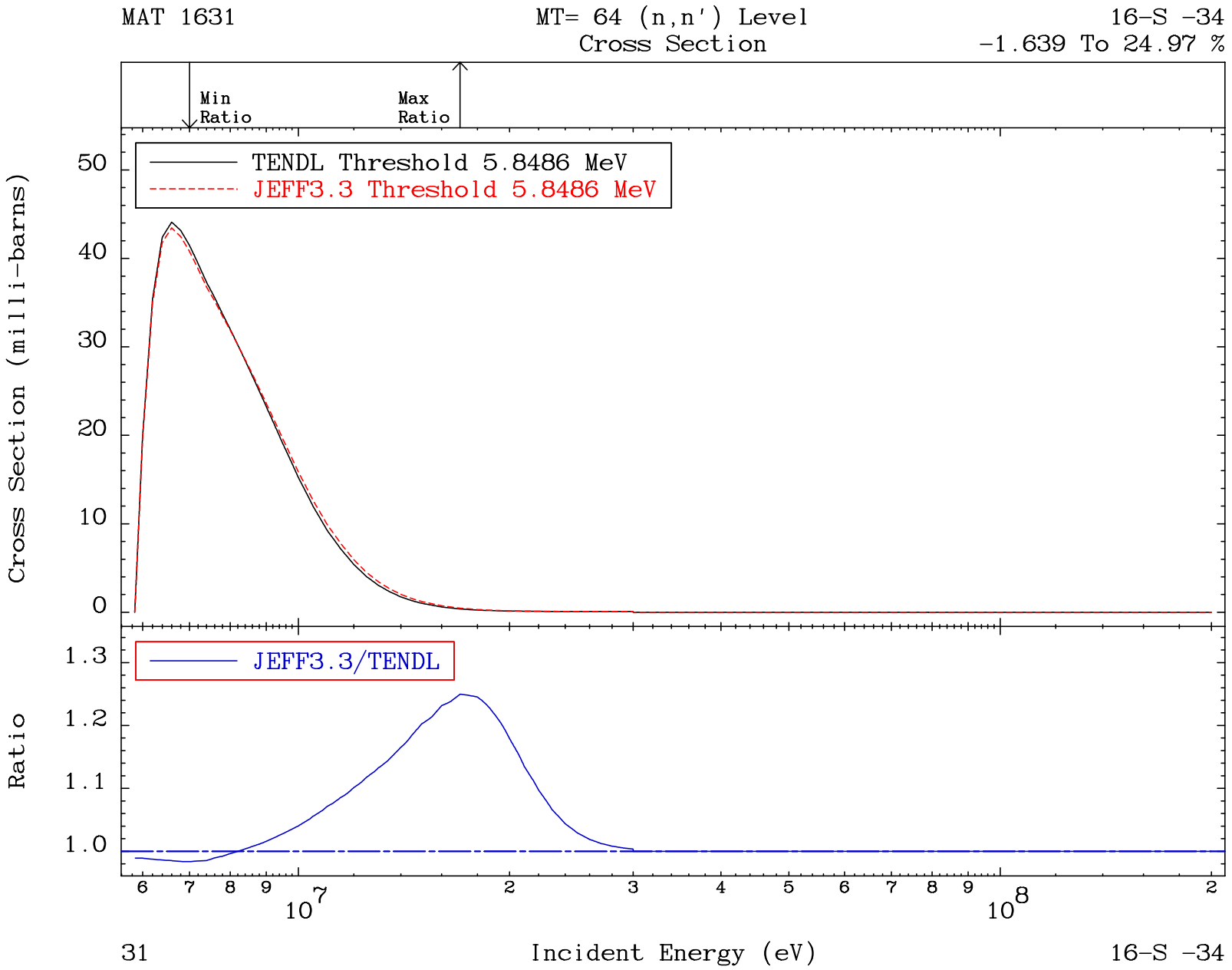

MAT 1631
MT= 59 (n,n') Level
Cross Section
16-S -34
-1.245 To 26.17 %
Min Ratio
Max Ratio
TENDL Threshold 5.0270 MeV
JEFF3.3 Threshold 5.0270 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.3
1.2
1.1
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
26
16-S -34

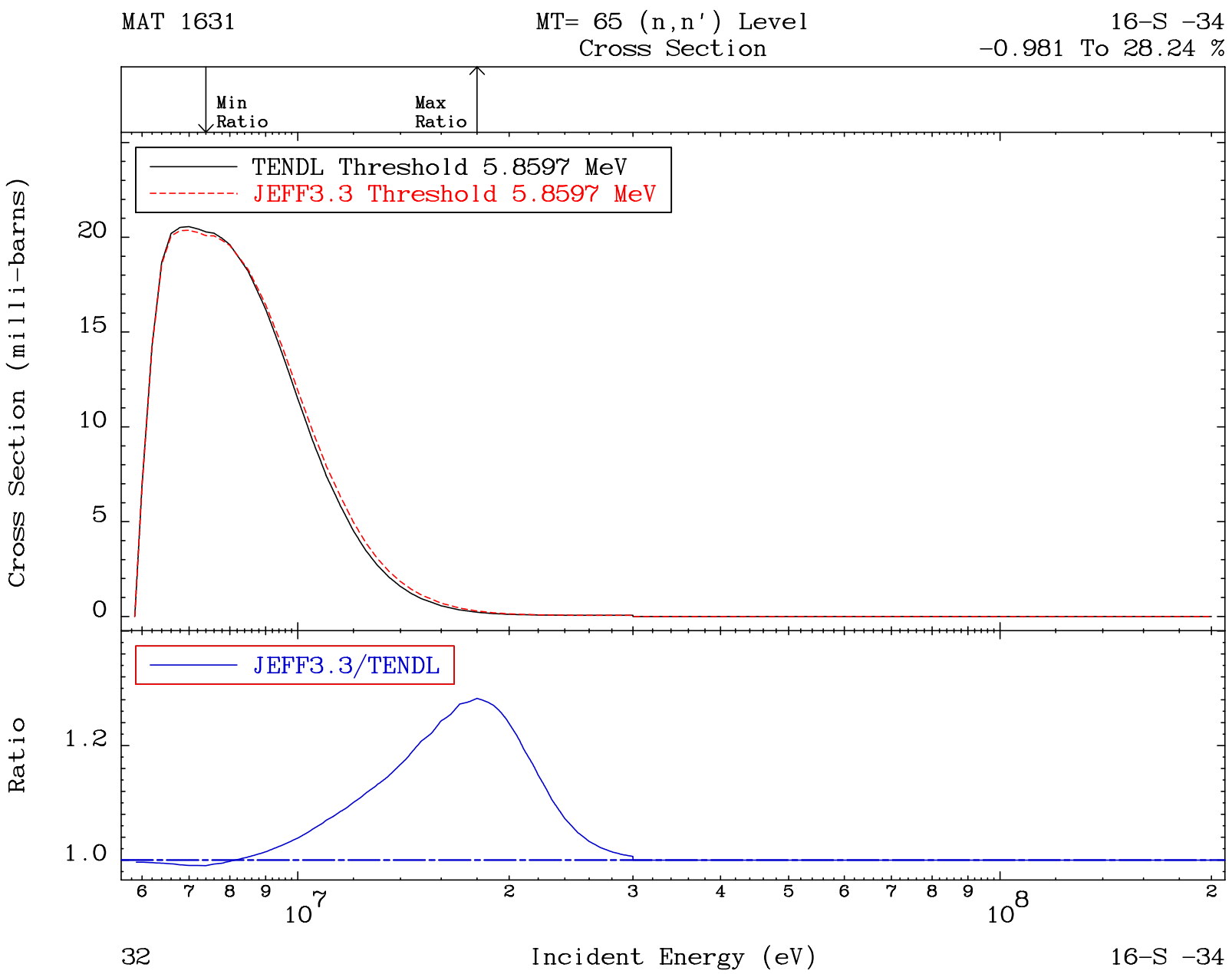

MAT 1631
MT= 60 (n,n') Level
Cross Section
16-S -34
-1.733 To 20.54 %
Min Ratio
Max Ratio
TENDL Threshold 5.0350 MeV
JEFF3.3 Threshold 5.0350 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
27
Incident Energy (eV)
16-S -34

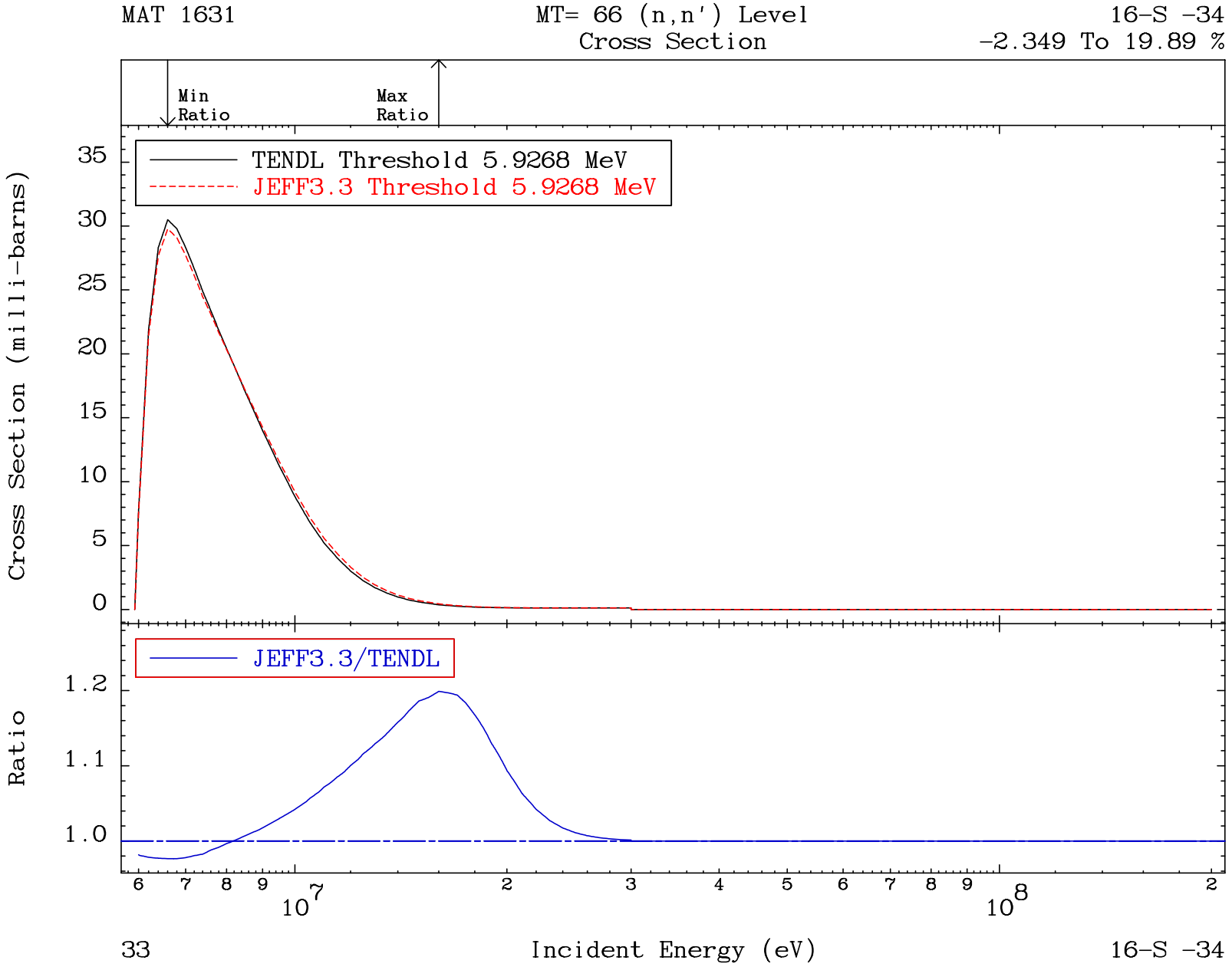

MAT 1631
MT= 61 (n,n') Level
Cross Section
16-S -34
-2.125 To 417.8 %
Min
Ratio
Max
Ratio
TENDL Threshold 5.3834 MeV
JEFF3.3 Threshold 5.3834 MeV
Cross Section (milli-barns)
16
12
8
4
0
JEFF3.3/TENDL
Ratio
6
4
2
6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
28
Incident Energy (eV)
16-S -34

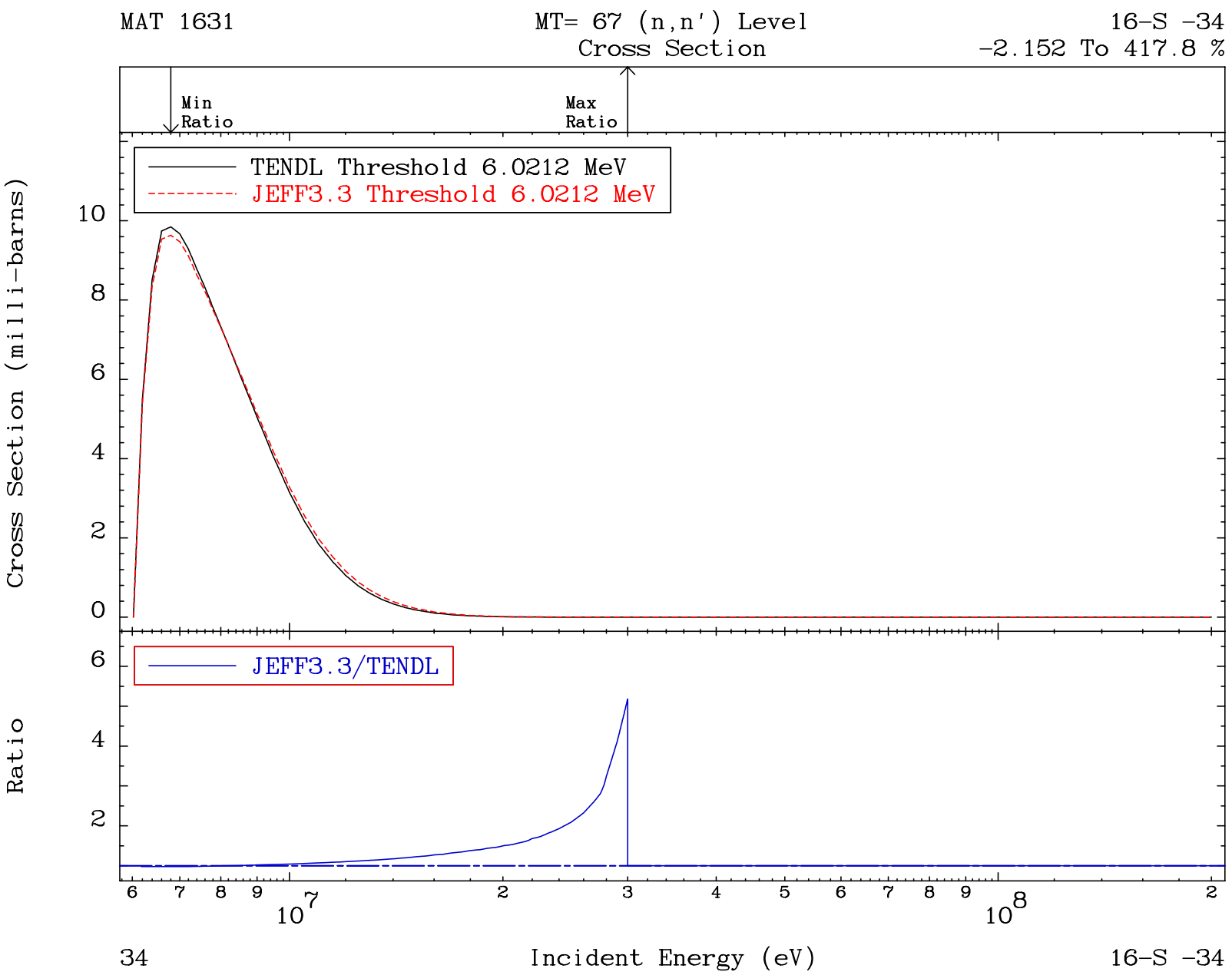

MAT 1631
MT= 62 (n,n') Level
Cross Section
16-S -34
-2.023 To 417.7 %
Min
Ratio
Max
Ratio
TENDL Threshold 5.4806 MeV
JEFF3.3 Threshold 5.4806 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
6
4
2
6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
29
Incident Energy (eV)
16-S -34

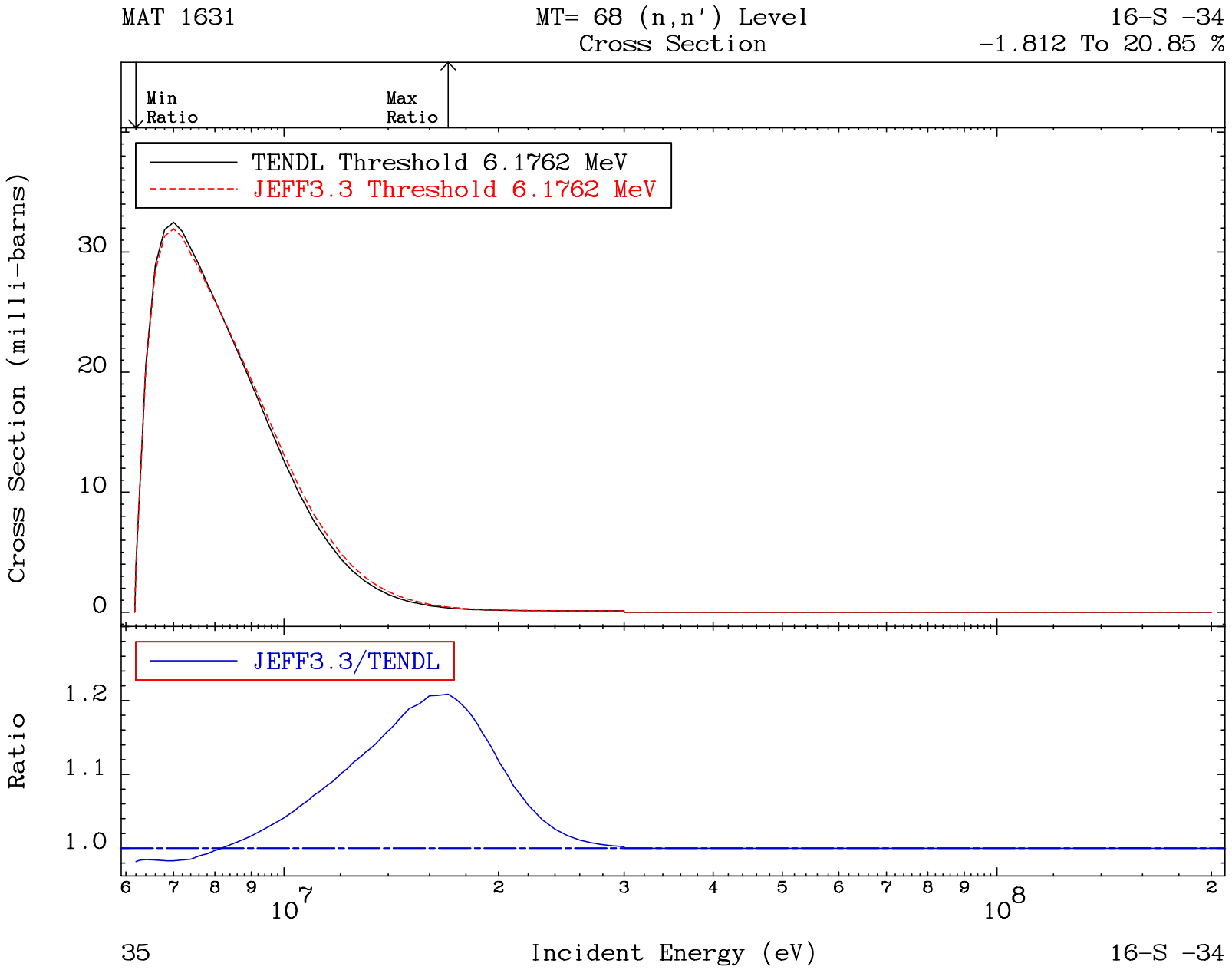

MAT 1631
MT= 63 (n,n') Level
Cross Section
16-S -34
-1.986 To 417.8 %
Min
Ratio
Max
Ratio
TENDL Threshold 5.5408 MeV
JEFF3.3 Threshold 5.5408 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
6
4
2
6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
30
Incident Energy (eV)
16-S -34

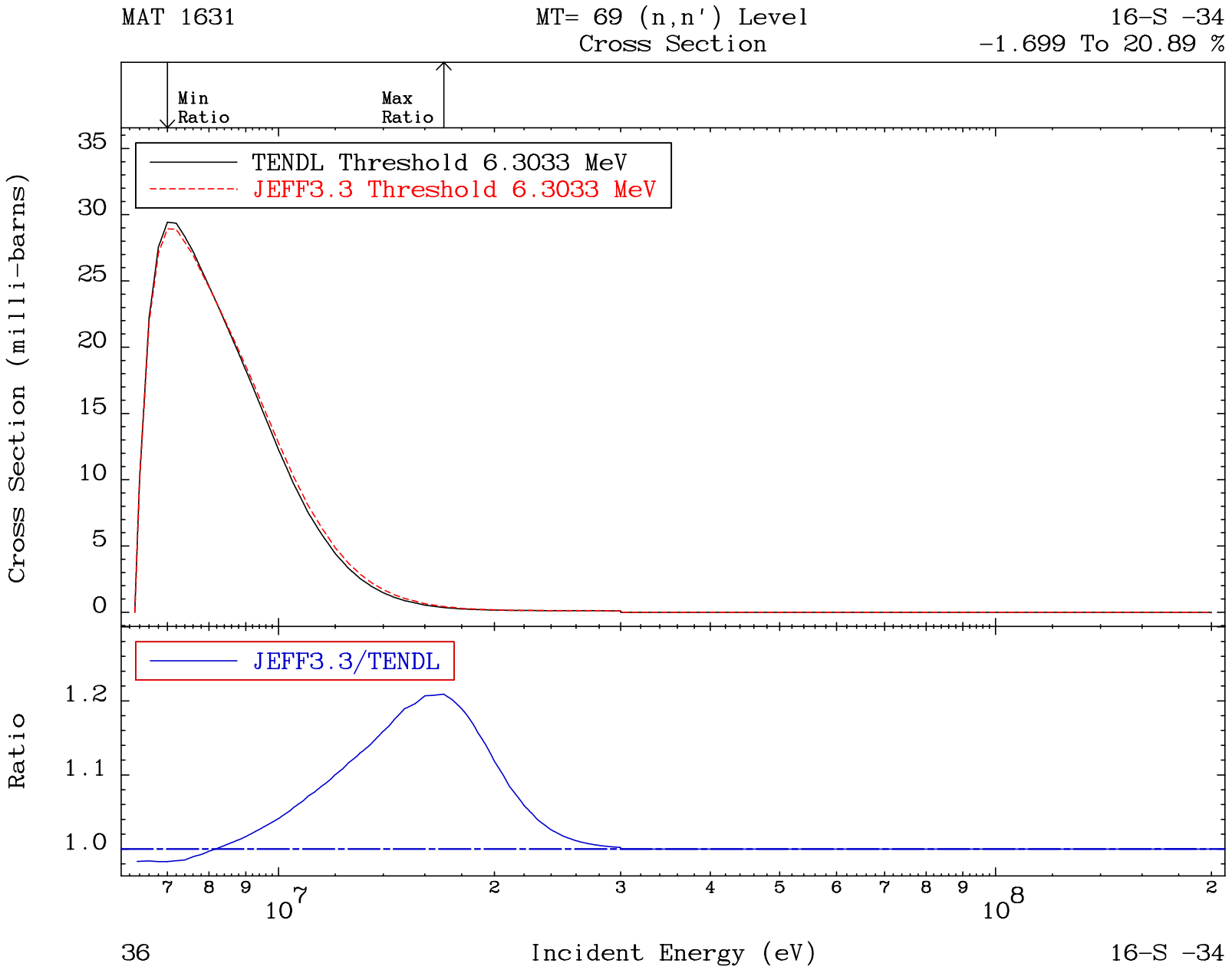

MAT 1631
MT= 64 (n,n') Level
Cross Section
16-S -34
-1.639 To 24.97 %
Min Ratio
Max Ratio
TENDL Threshold 5.8486 MeV
JEFF3.3 Threshold 5.8486 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.3
1.2
1.1
1.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
31
Incident Energy (eV)
16-S -34

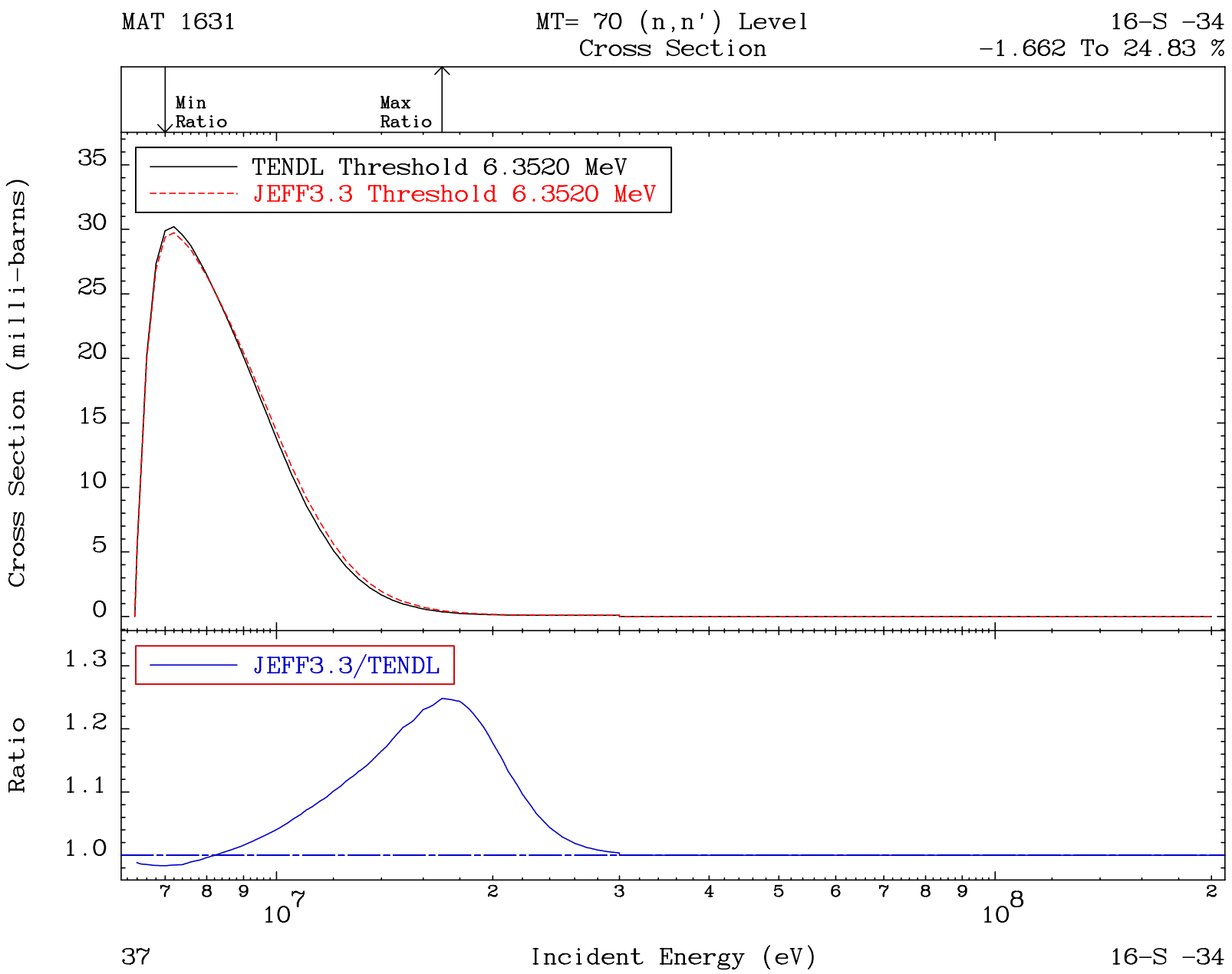

MAT 1631
MT= 65 (n,n') Level
Cross Section
16-S -34
-0.981 To 28.24 %
Min Ratio
Max Ratio
TENDL Threshold 5.8597 MeV
JEFF3.3 Threshold 5.8597 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
1.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
32
Incident Energy (eV)
16-S -34

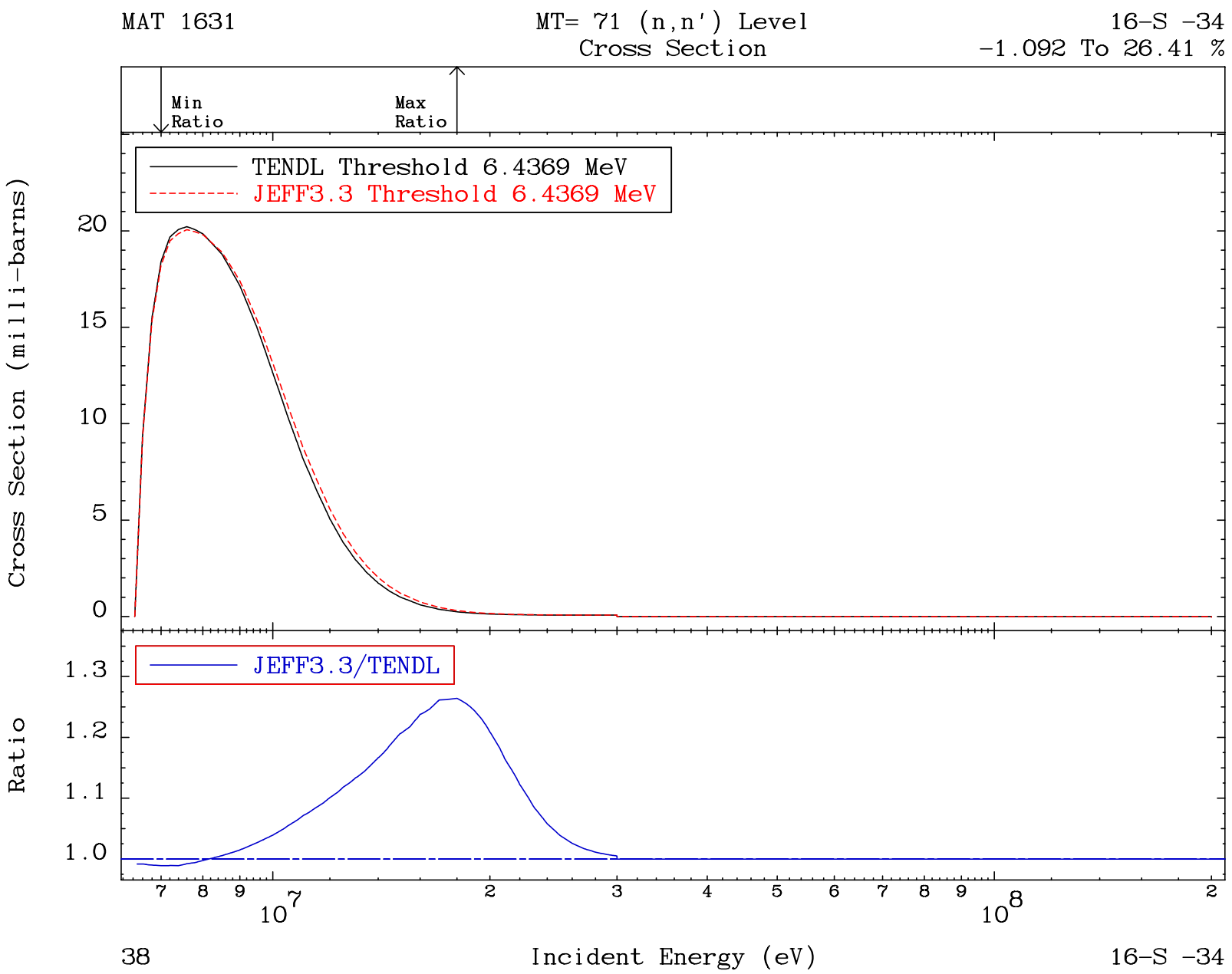

MAT 1631
MT= 66 (n,n') Level
Cross Section
16-S -34
-2.349 To 19.89 %
Min Ratio
Max Ratio
TENDL Threshold 5.9268 MeV
JEFF3.3 Threshold 5.9268 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
33
16-S -34

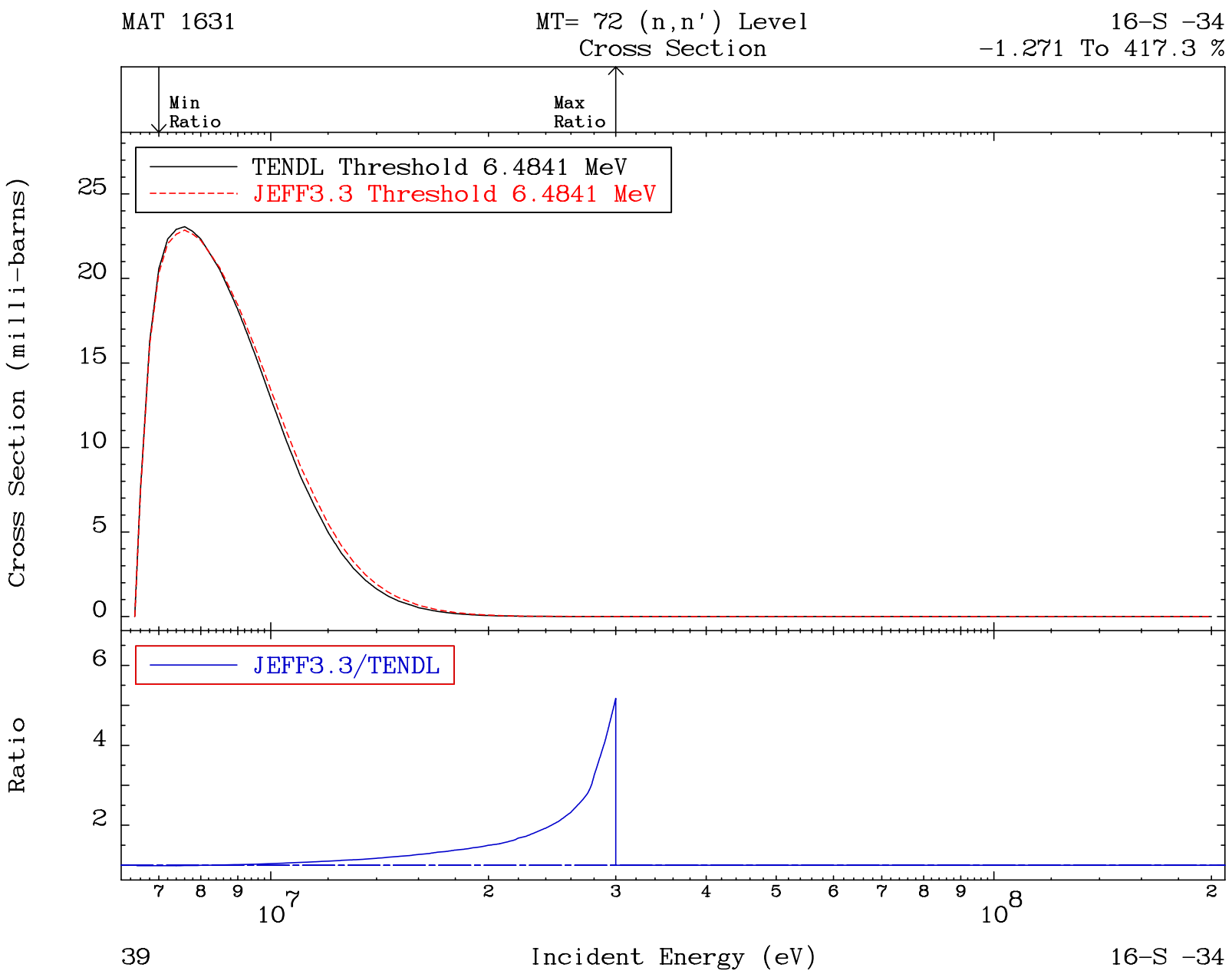

MAT 1631
MT= 67 (n,n') Level
Cross Section
16-S -34
-2.152 To 417.8 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.0212 MeV
JEFF3.3 Threshold 6.0212 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
34
16-S -34

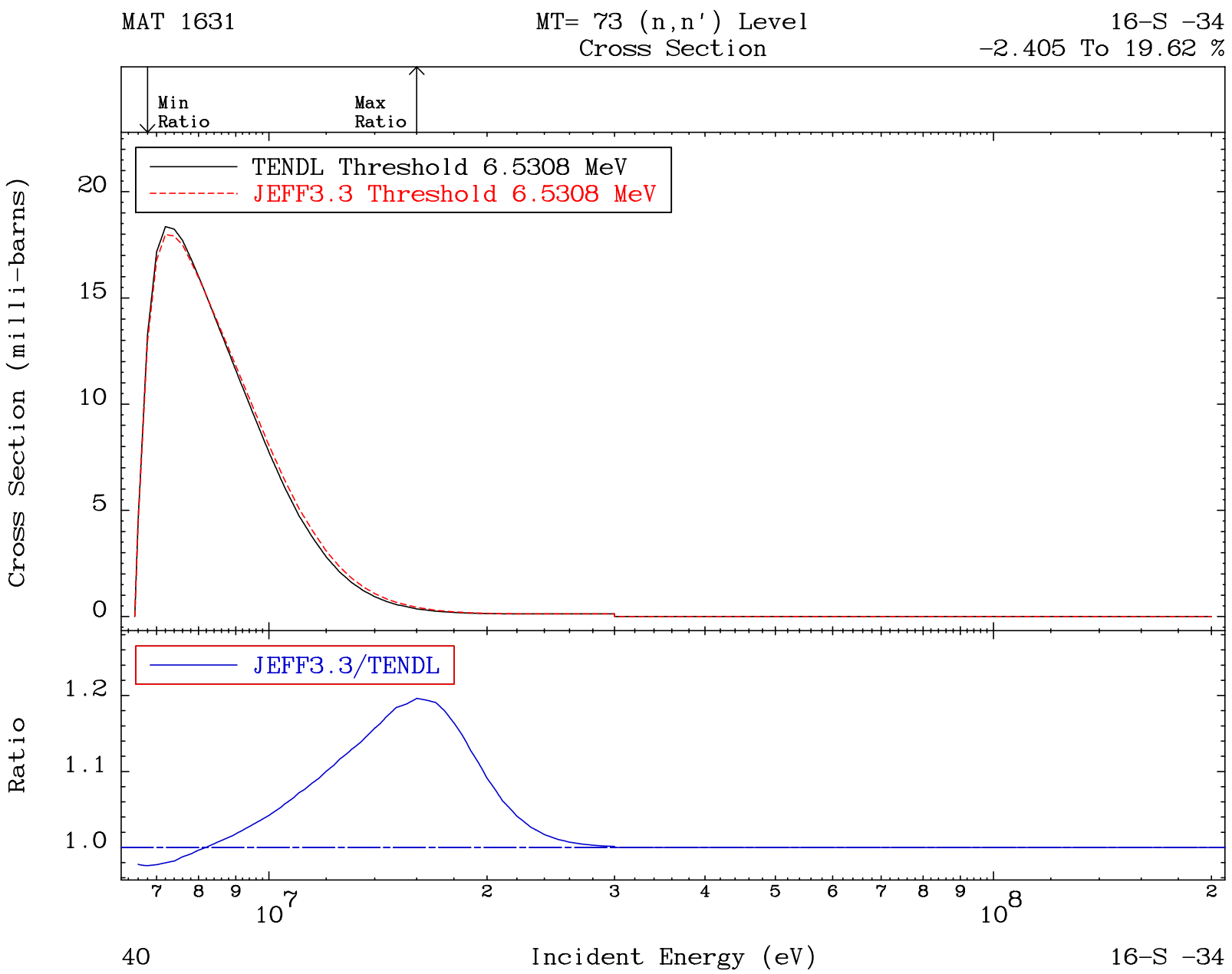

MAT 1631
MT= 68 (n,n') Level
Cross Section
16-S -34
-1.812 To 20.85 %
Min Ratio
Max Ratio
TENDL Threshold 6.1762 MeV
JEFF3.3 Threshold 6.1762 MeV
Cross Section (milli-barns)
30
20
10
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
35
Incident Energy (eV)
16-S -34

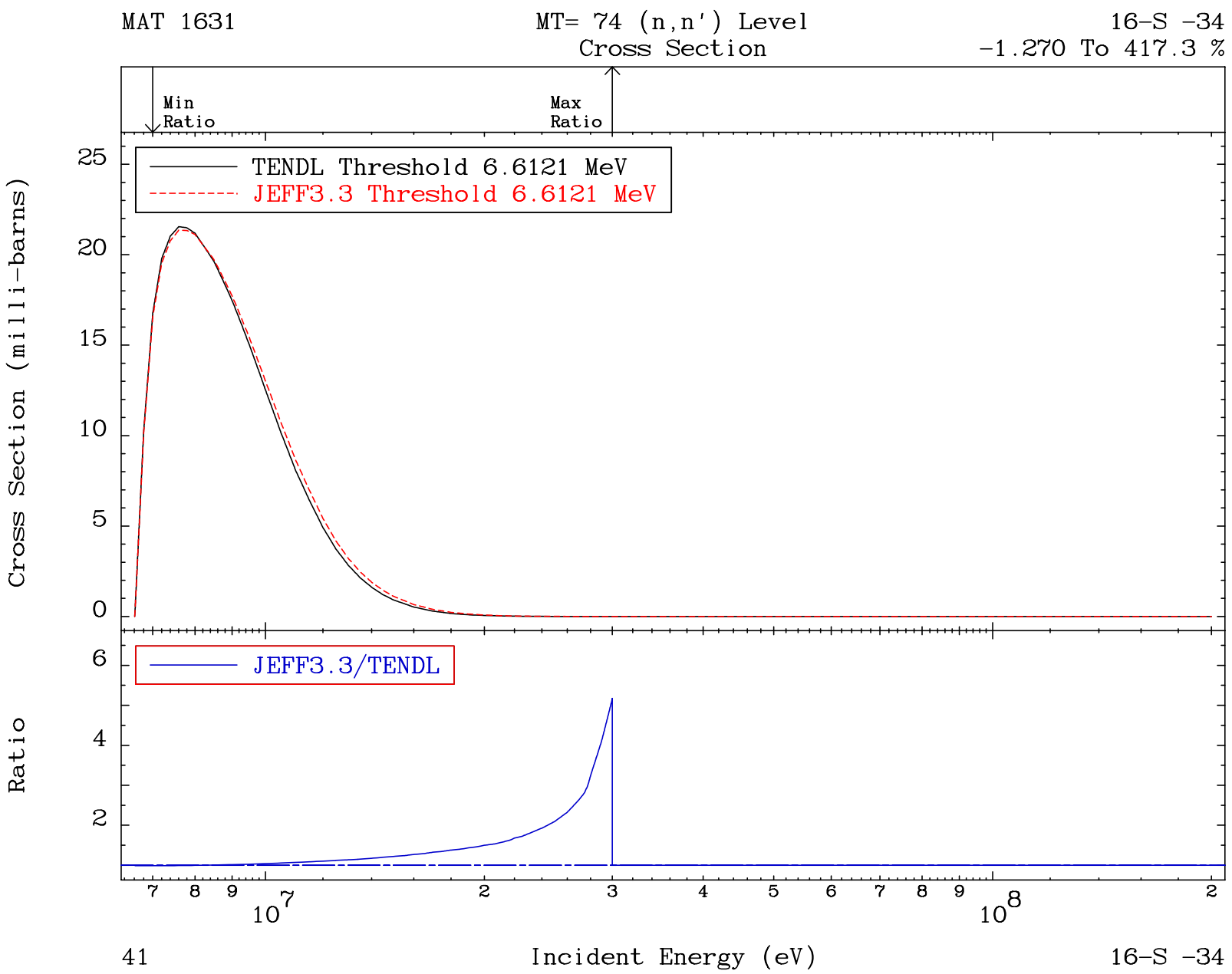

MAT 1631
MT= 69 (n,n') Level
Cross Section
16-S -34
-1.699 To 20.89 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.3033 MeV
JEFF3.3 Threshold 6.3033 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
36
Incident Energy (eV)
16-S -34

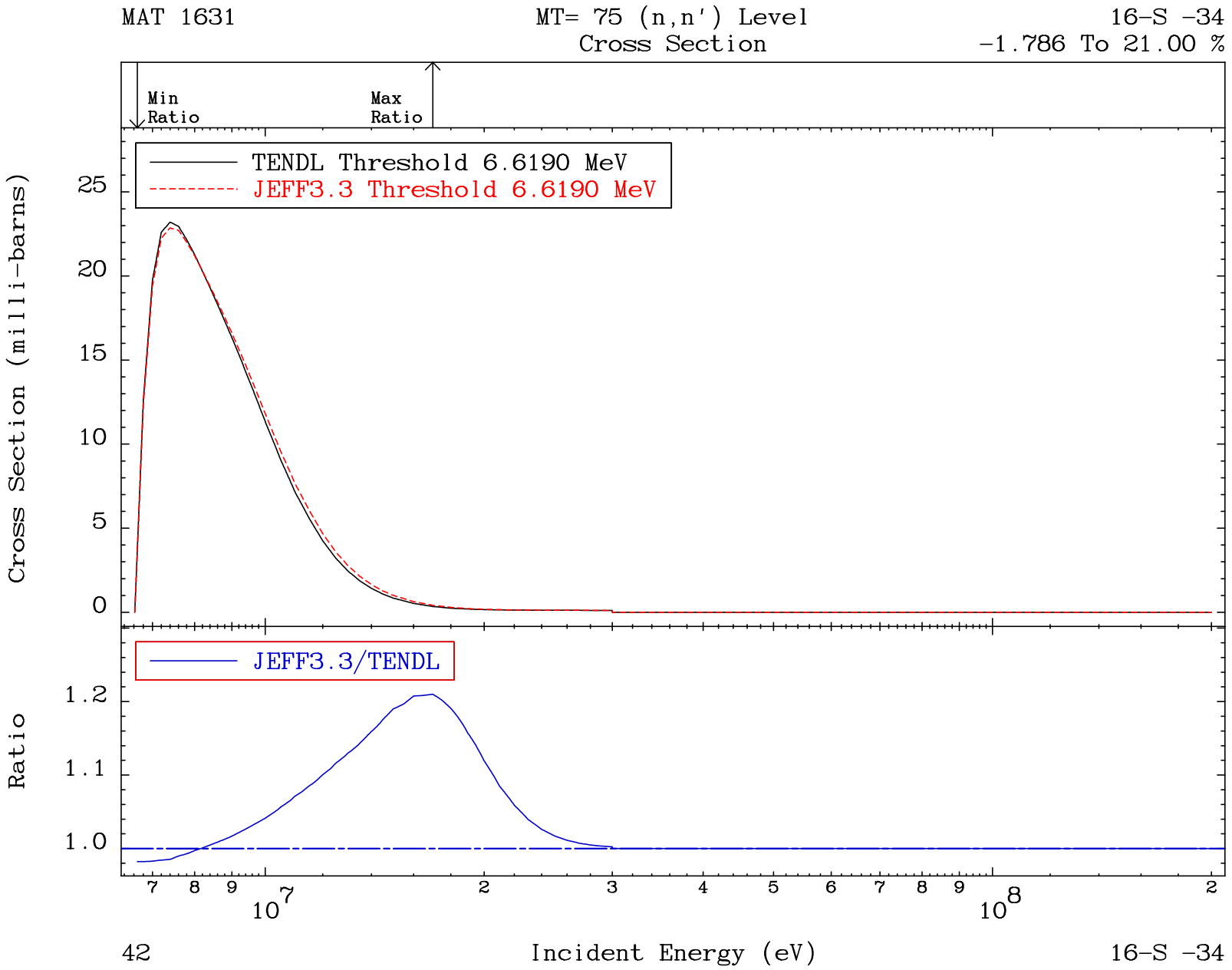

MAT 1631
MT= 70 (n,n') Level
Cross Section
16-S -34
-1.662 To 24.83 %
Min Ratio
Max Ratio
TENDL Threshold 6.3520 MeV
JEFF3.3 Threshold 6.3520 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.3
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
37
Incident Energy (eV)
16-S -34

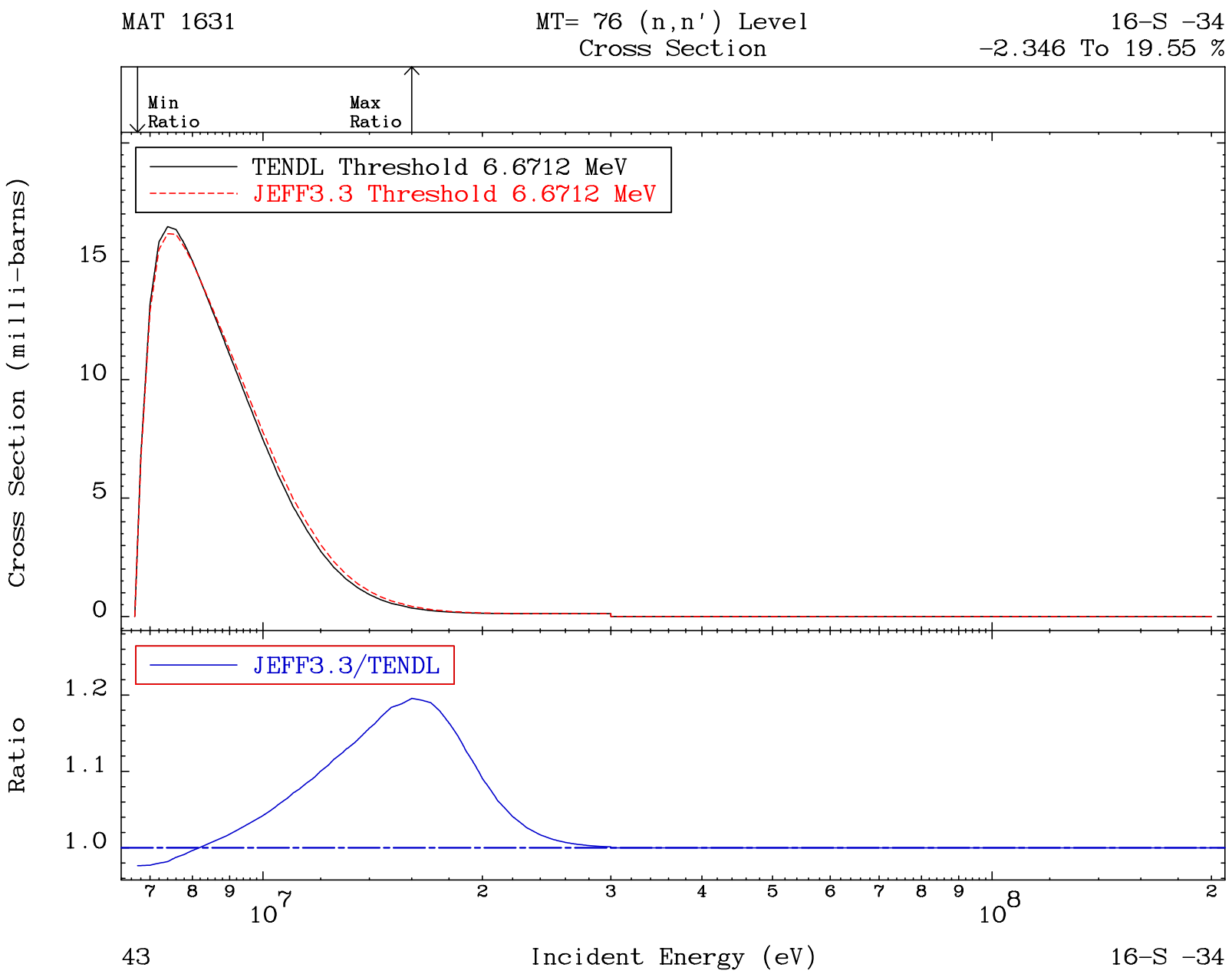

MAT 1631
MT= 71 (n,n') Level
Cross Section
16-S -34
-1.092 To 26.41 %
Min Ratio
Max Ratio
TENDL Threshold 6.4369 MeV
JEFF3.3 Threshold 6.4369 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.3
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
38
Incident Energy (eV)
16-S -34

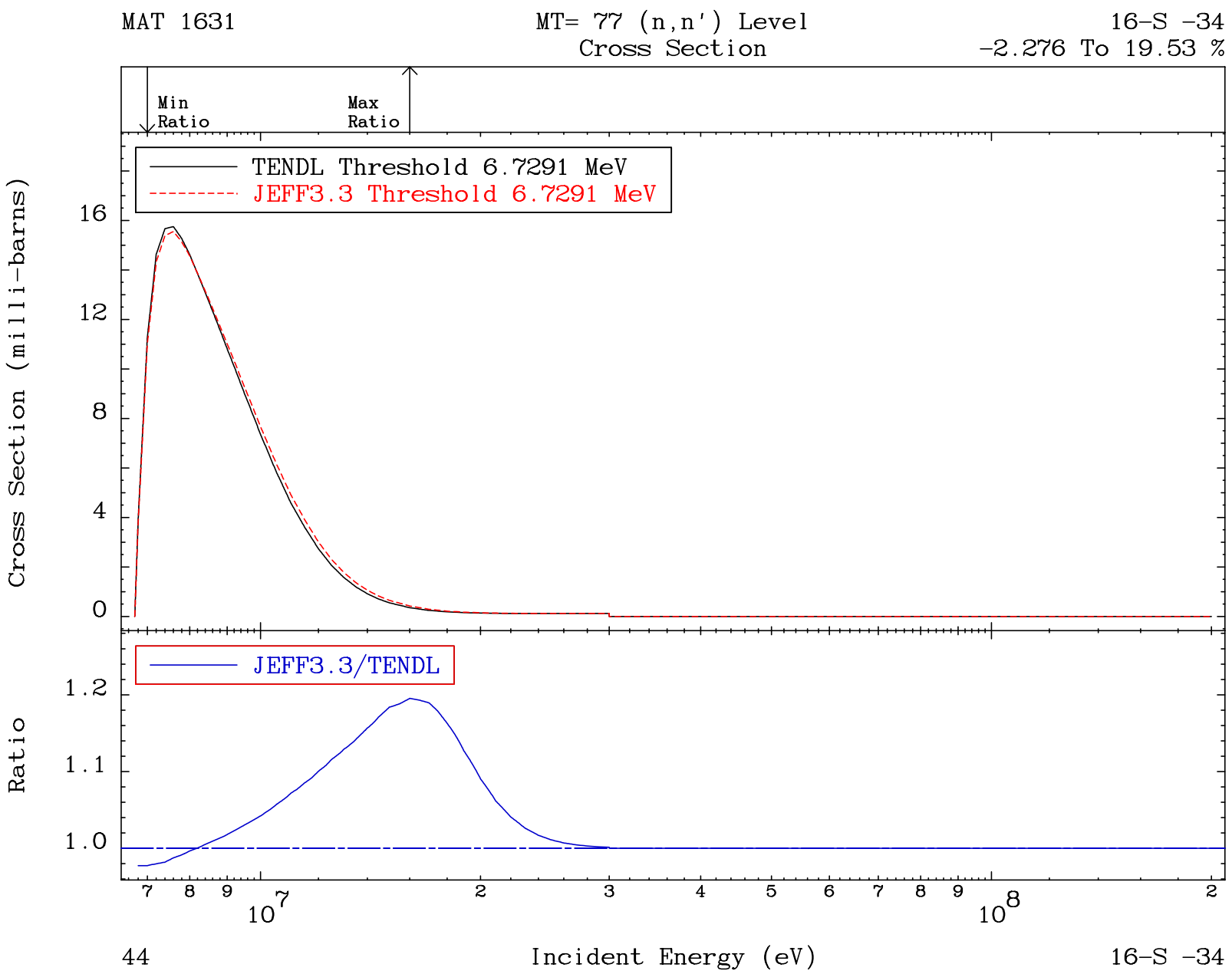

MAT 1631
MT= 72 (n,n') Level
Cross Section
16-S -34
-1.271 To 417.3 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.4841 MeV
JEFF3.3 Threshold 6.4841 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
6
4
2
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
39
Incident Energy (eV)
16-S -34

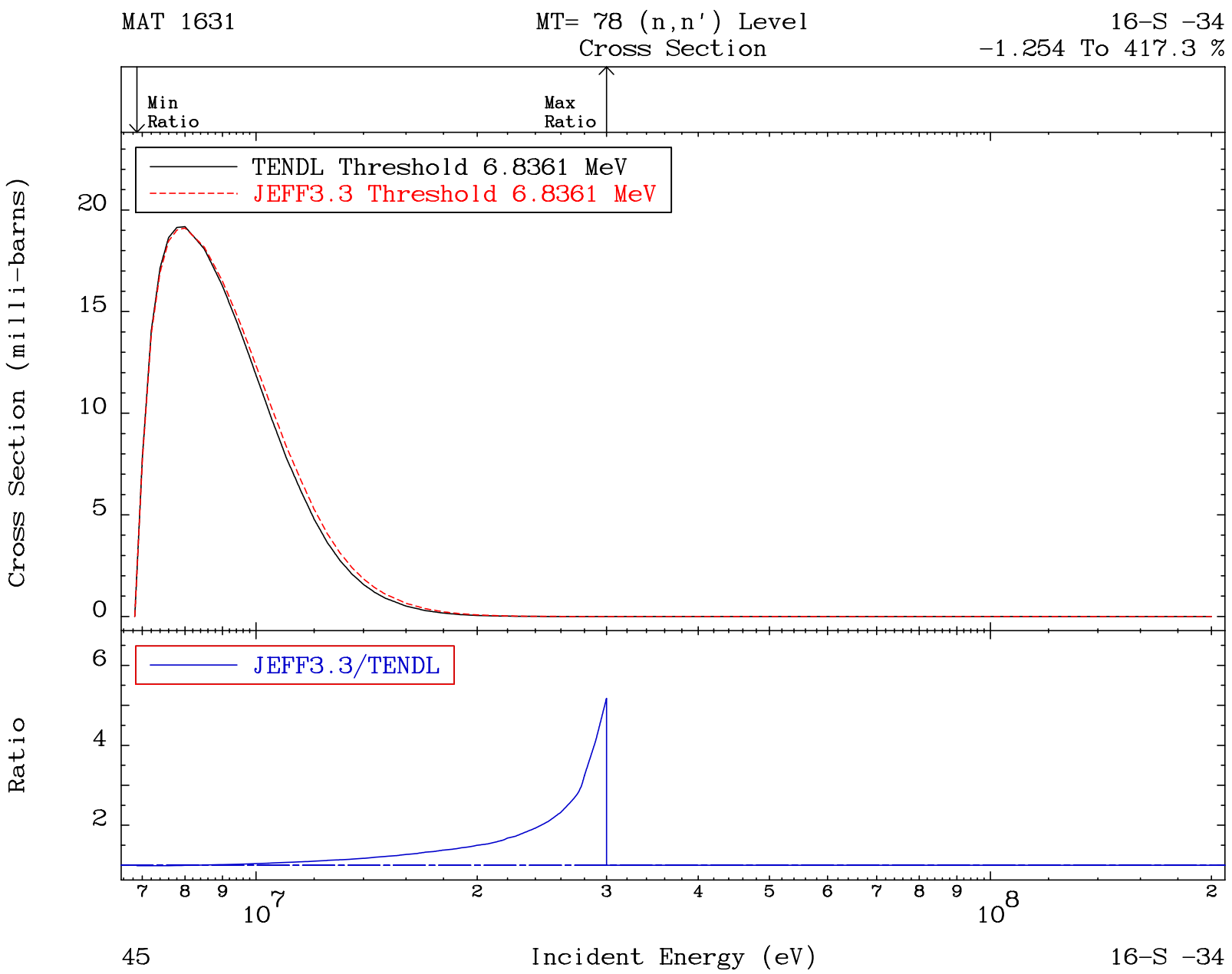

MAT 1631
MT= 73 (n,n') Level
Cross Section
16-S -34
-2.405 To 19.62 %
Min Ratio
Max Ratio
TENDL Threshold 6.5308 MeV
JEFF3.3 Threshold 6.5308 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
40
Incident Energy (eV)
16-S -34

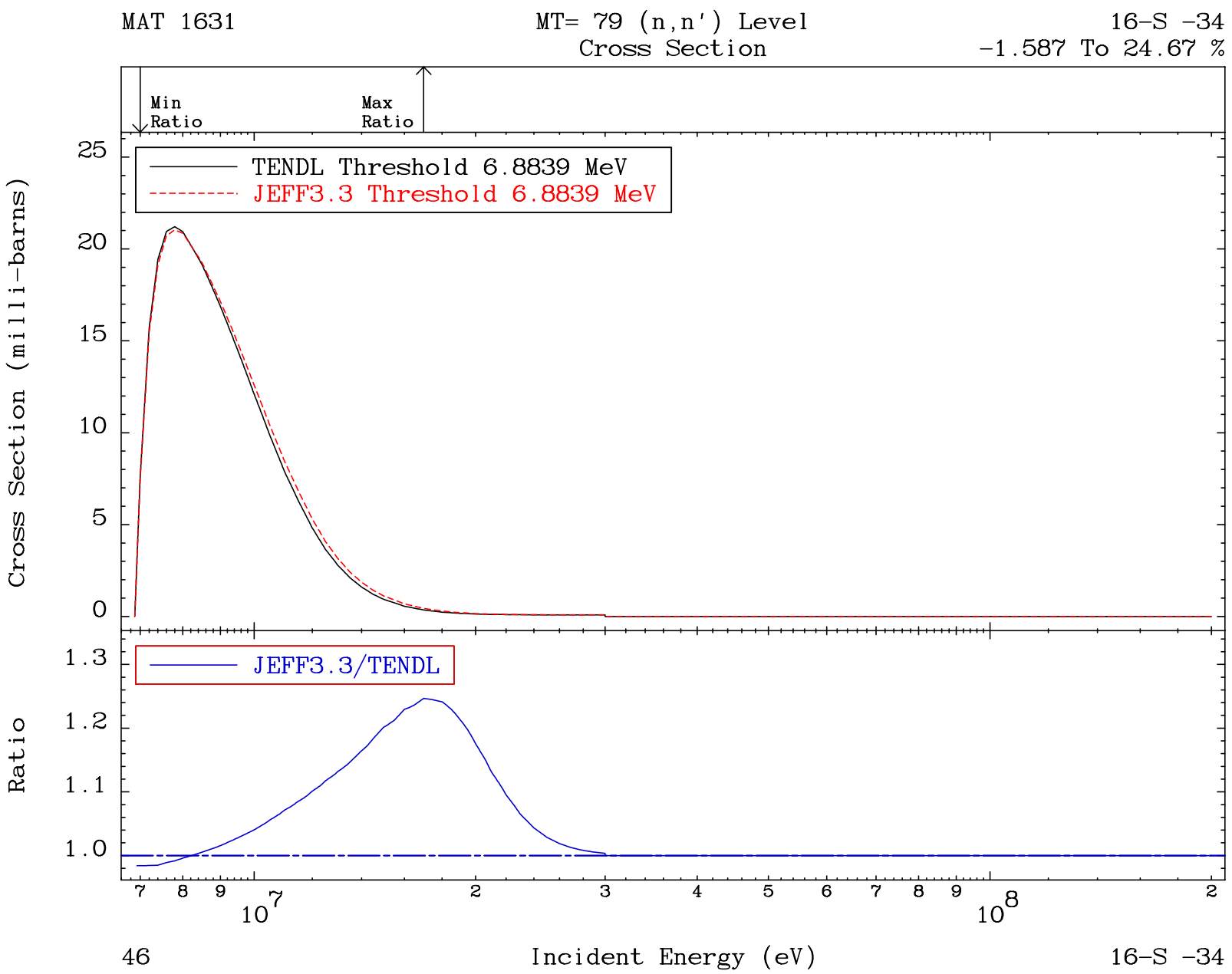

MAT 1631
MT= 74 (n,n') Level
Cross Section
16-S -34
-1.270 To 417.3 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.6121 MeV
JEFF3.3 Threshold 6.6121 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
6
4
2
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
41
Incident Energy (eV)
16-S -34

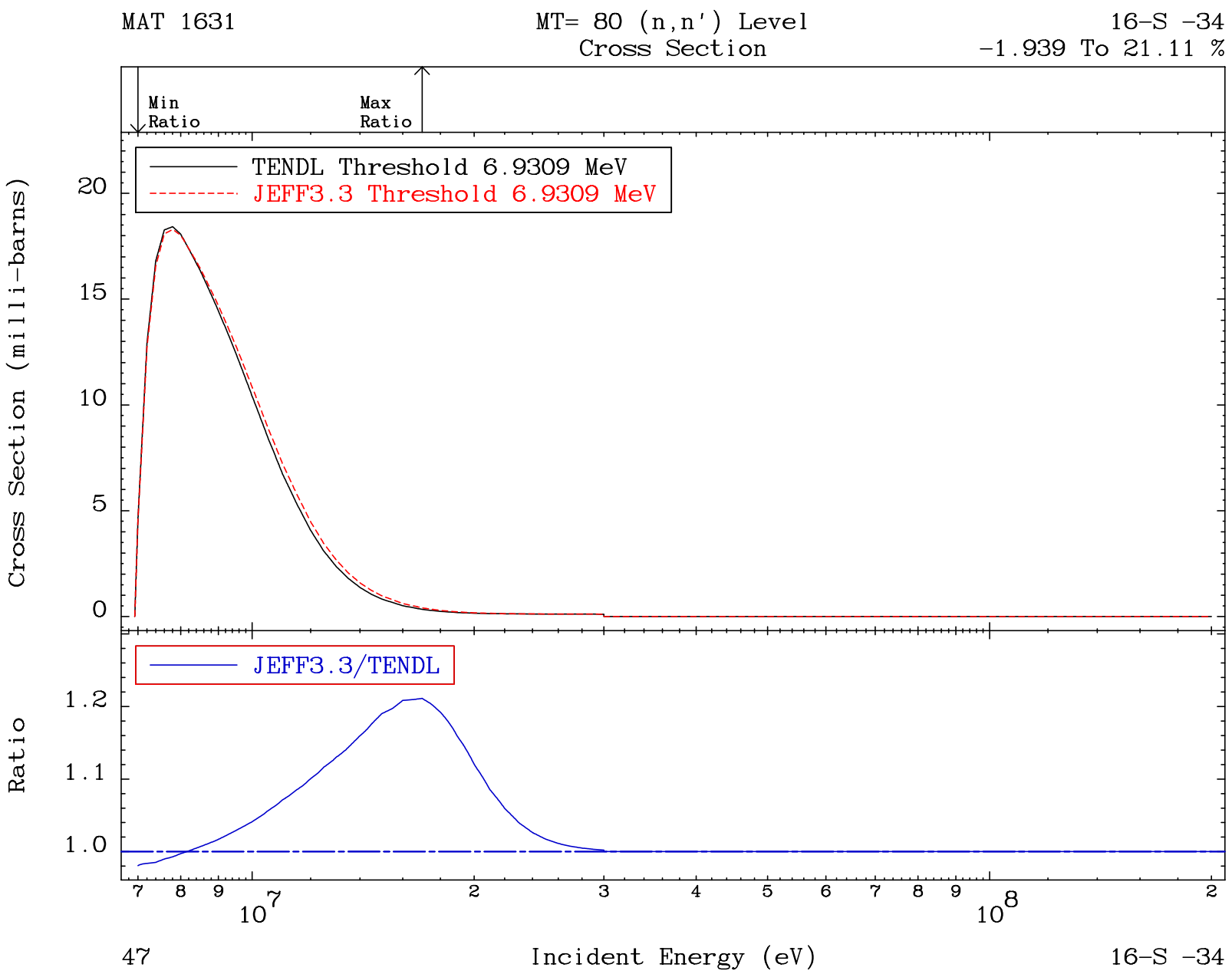

MAT 1631
MT= 75 (n,n') Level
Cross Section
16-S -34
-1.786 To 21.00 %
Min Ratio
Max Ratio
TENDL Threshold 6.6190 MeV
JEFF3.3 Threshold 6.6190 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
42
Incident Energy (eV)
16-S -34

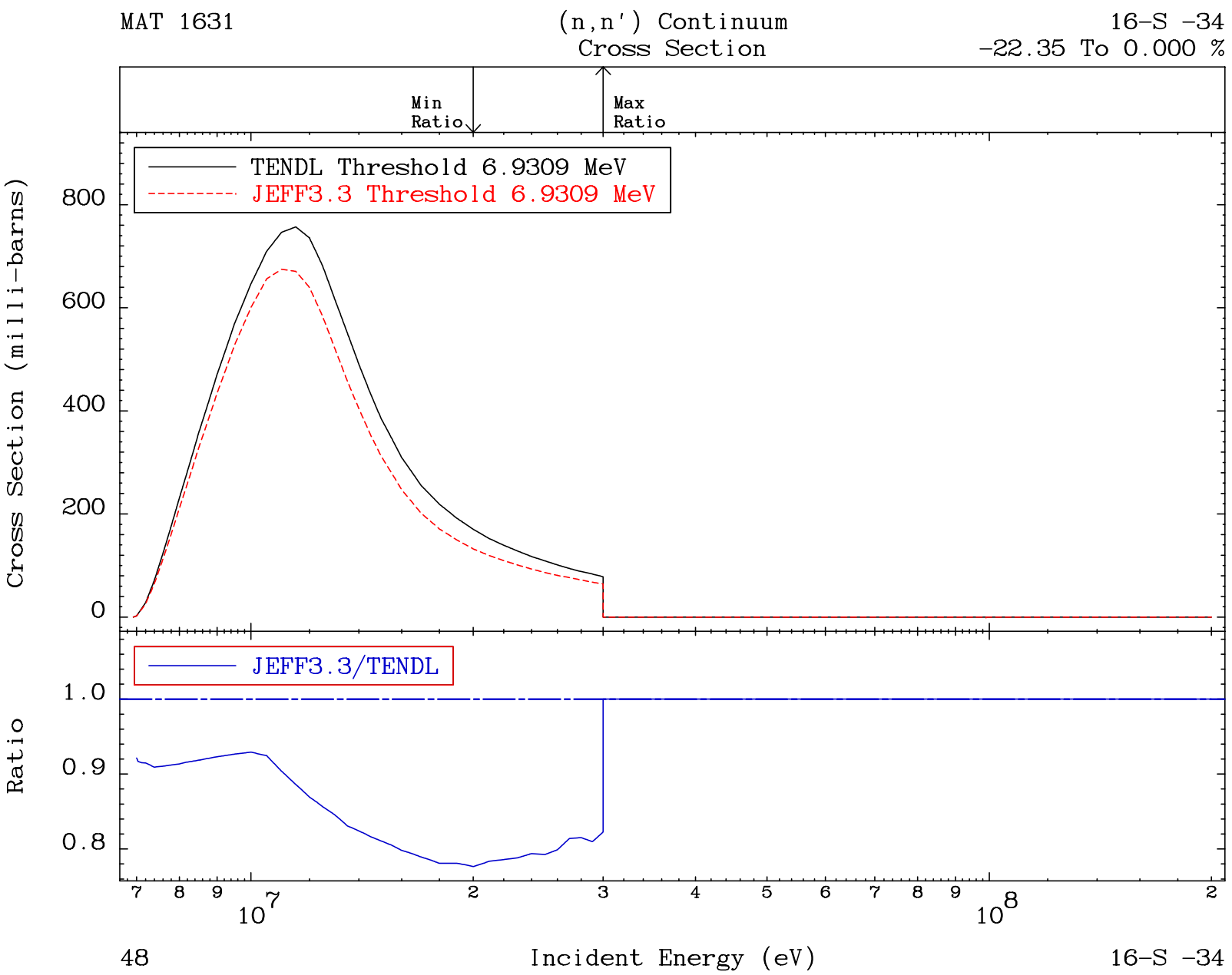

MAT 1631
MT= 76 (n,n') Level
Cross Section
16-S -34
-2.346 To 19.55 %
Min Ratio
Max Ratio
TENDL Threshold 6.6712 MeV
JEFF3.3 Threshold 6.6712 MeV
Cross Section (milli-barns)
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
16-S -34

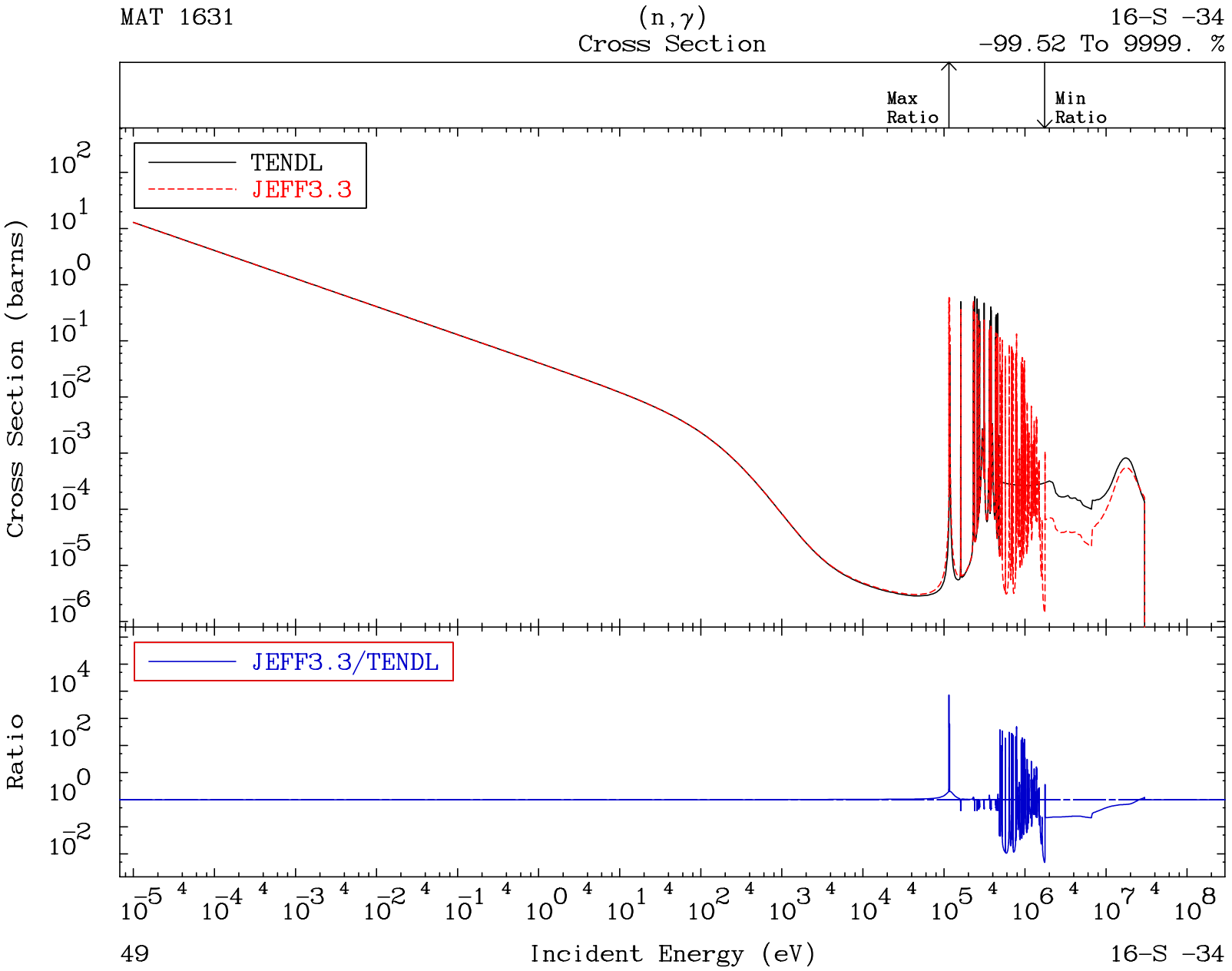

MAT 1631
MT= 77 (n,n') Level
Cross Section
16-S -34
-2.276 To 19.53 %
Min Ratio
Max Ratio
TENDL Threshold 6.7291 MeV
JEFF3.3 Threshold 6.7291 MeV
Cross Section (milli-barns)
16
12
8
4
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
44
Incident Energy (eV)
16-S -34

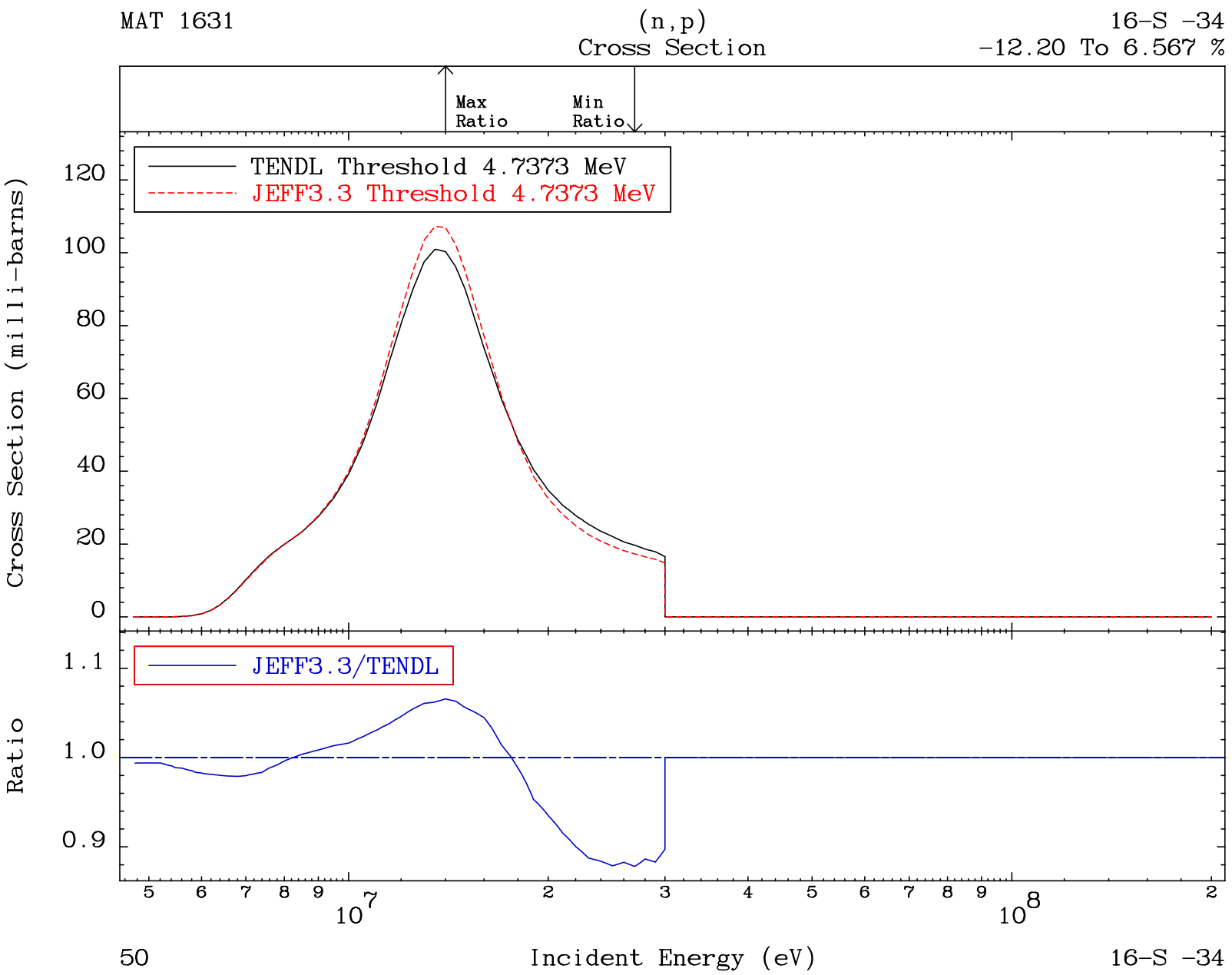

MAT 1631
MT= 78 (n,n') Level
Cross Section
16-S -34
-1.254 To 417.3 %
Min
Ratio
Max
Ratio
TENDL Threshold 6.8361 MeV
JEFF3.3 Threshold 6.8361 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
6
4
2
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
45
Incident Energy (eV)
16-S -34

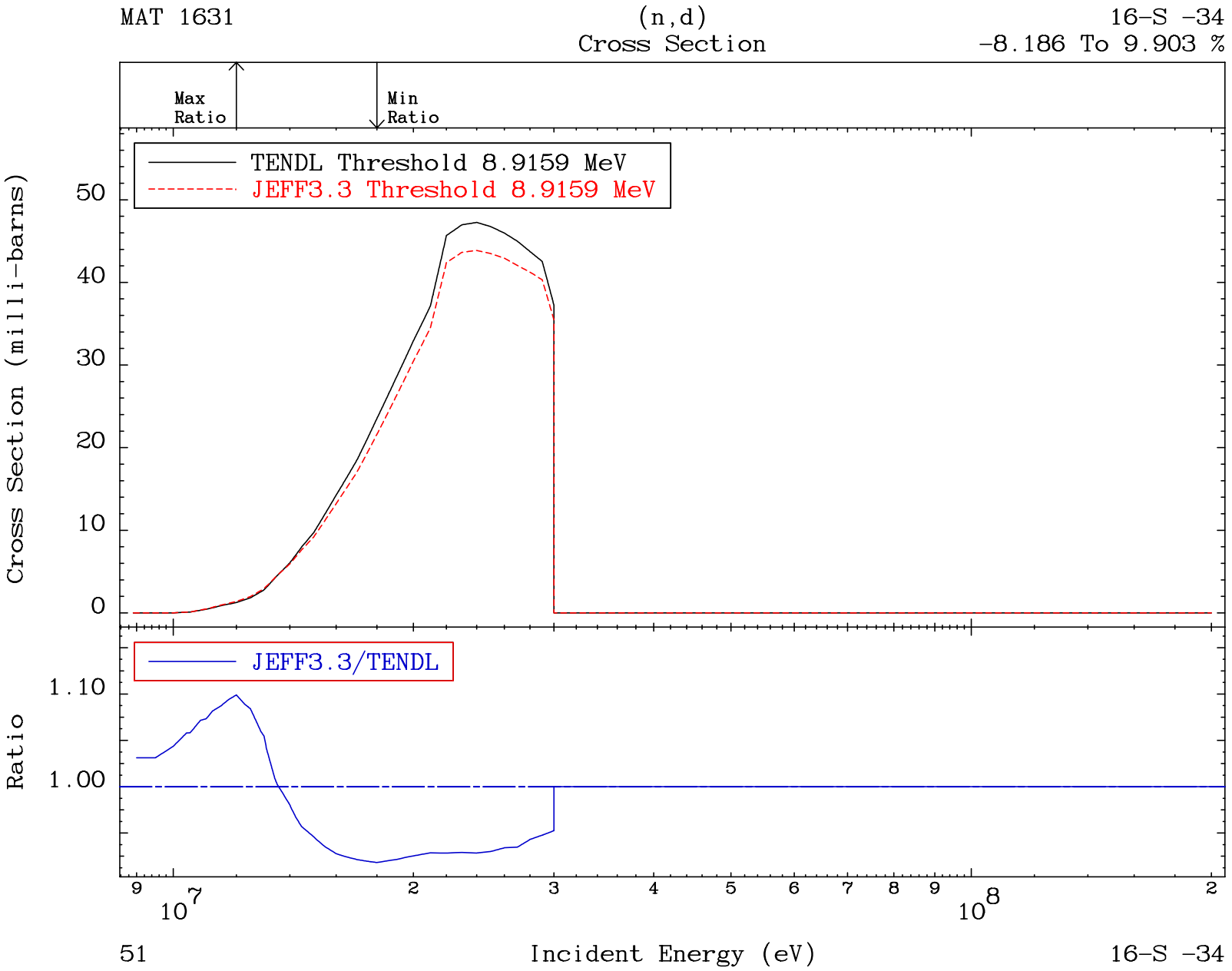

MAT 1631
MT= 79 (n,n') Level
Cross Section
16-S -34
-1.587 To 24.67 %
Min Ratio
Max Ratio
TENDL Threshold 6.8839 MeV
JEFF3.3 Threshold 6.8839 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.3
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
46
Incident Energy (eV)
16-S -34

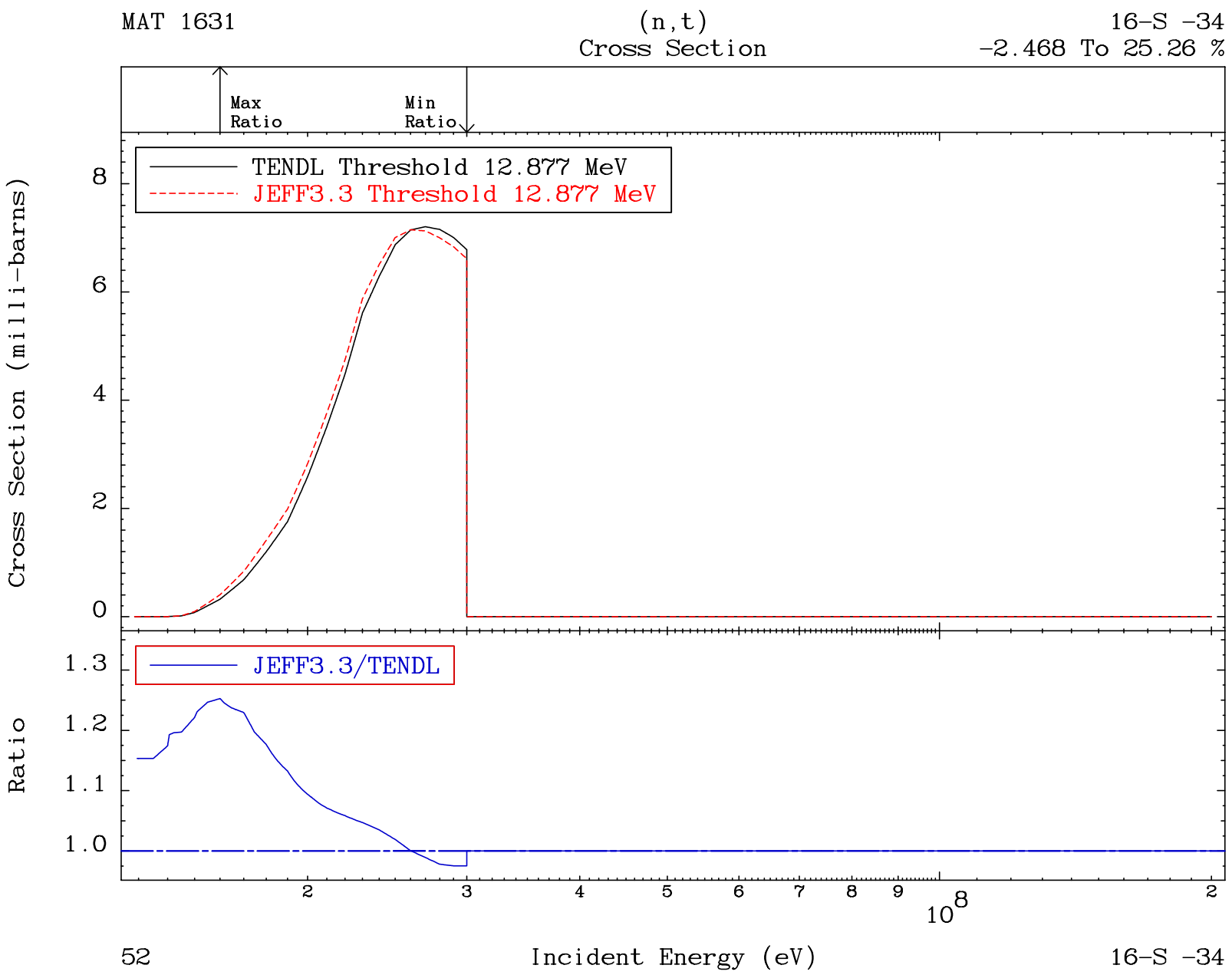

MAT 1631
MT= 80 (n,n') Level
Cross Section
16-S -34
-1.939 To 21.11 %
Min Ratio
Max Ratio
TENDL Threshold 6.9309 MeV
JEFF3.3 Threshold 6.9309 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
1.1
1.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
16-S -34

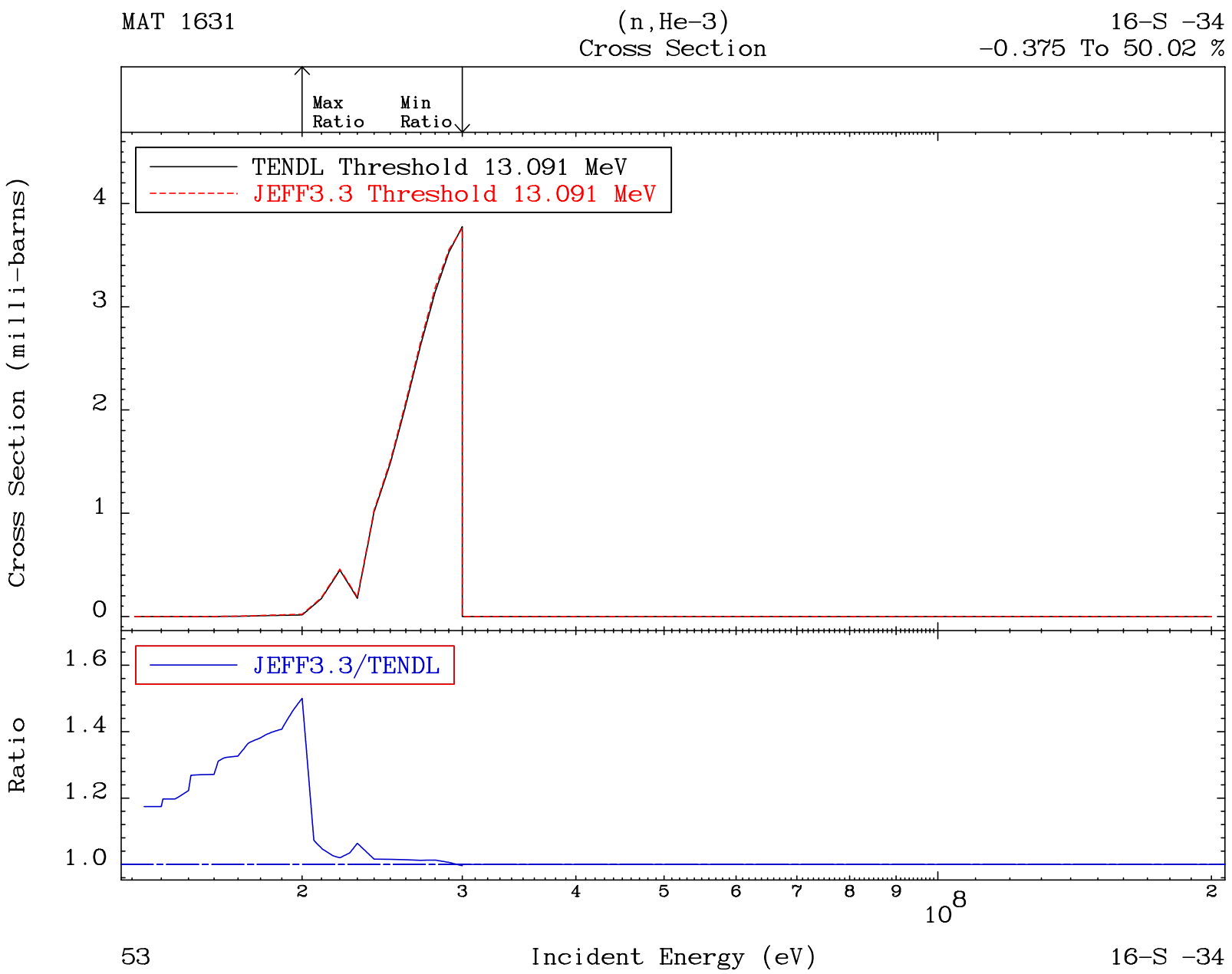

MAT 1631
(n,n') Continuum
Cross Section
16-S -34
-22.35 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 6.9309 MeV
JEFF3.3 Threshold 6.9309 MeV
Cross Section (milli-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
1.0
0.9
0.8
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
16-S -34

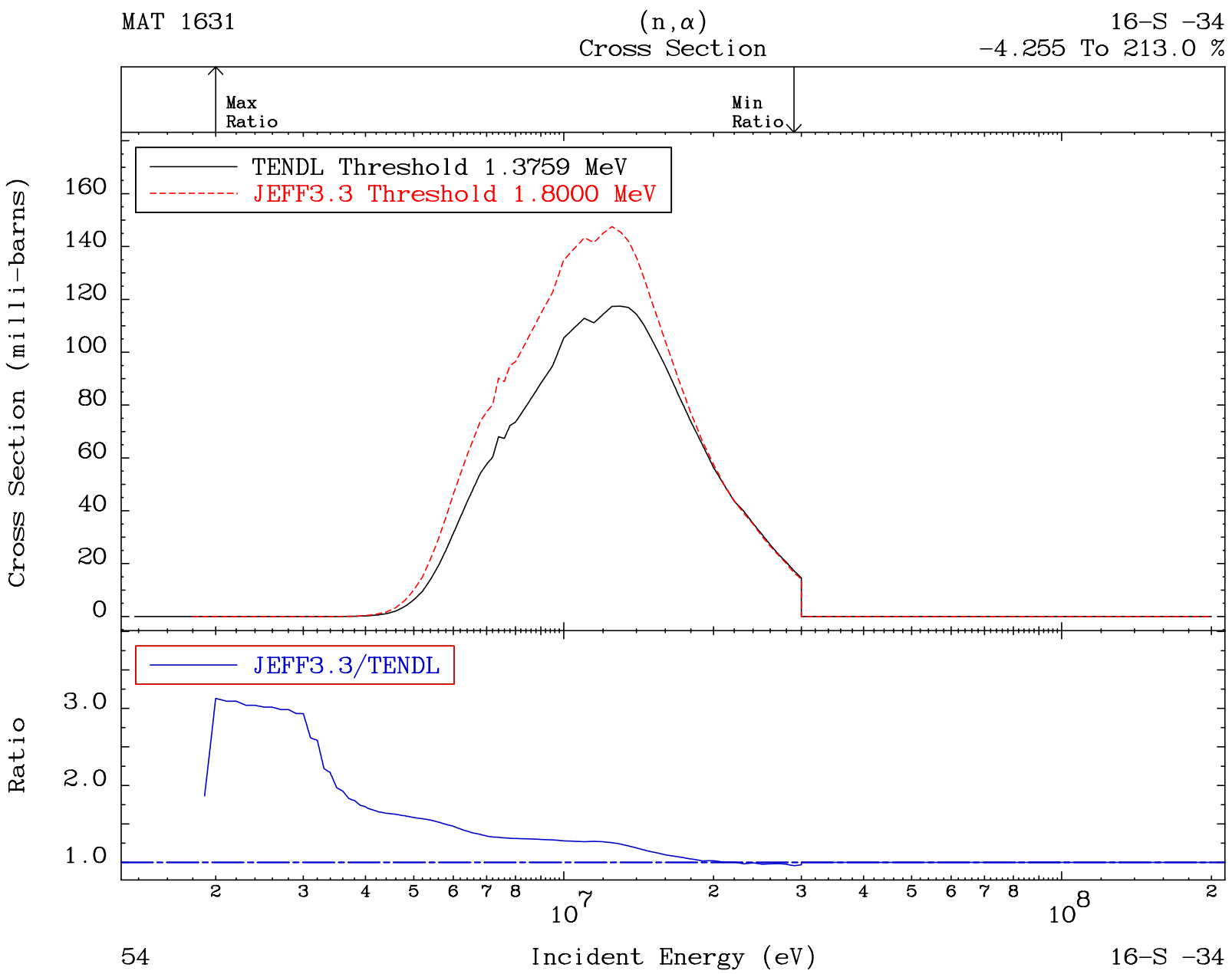

MAT 1631
(n,γ)
Cross Section
16-S -34
-99.52 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
49
16-S -34

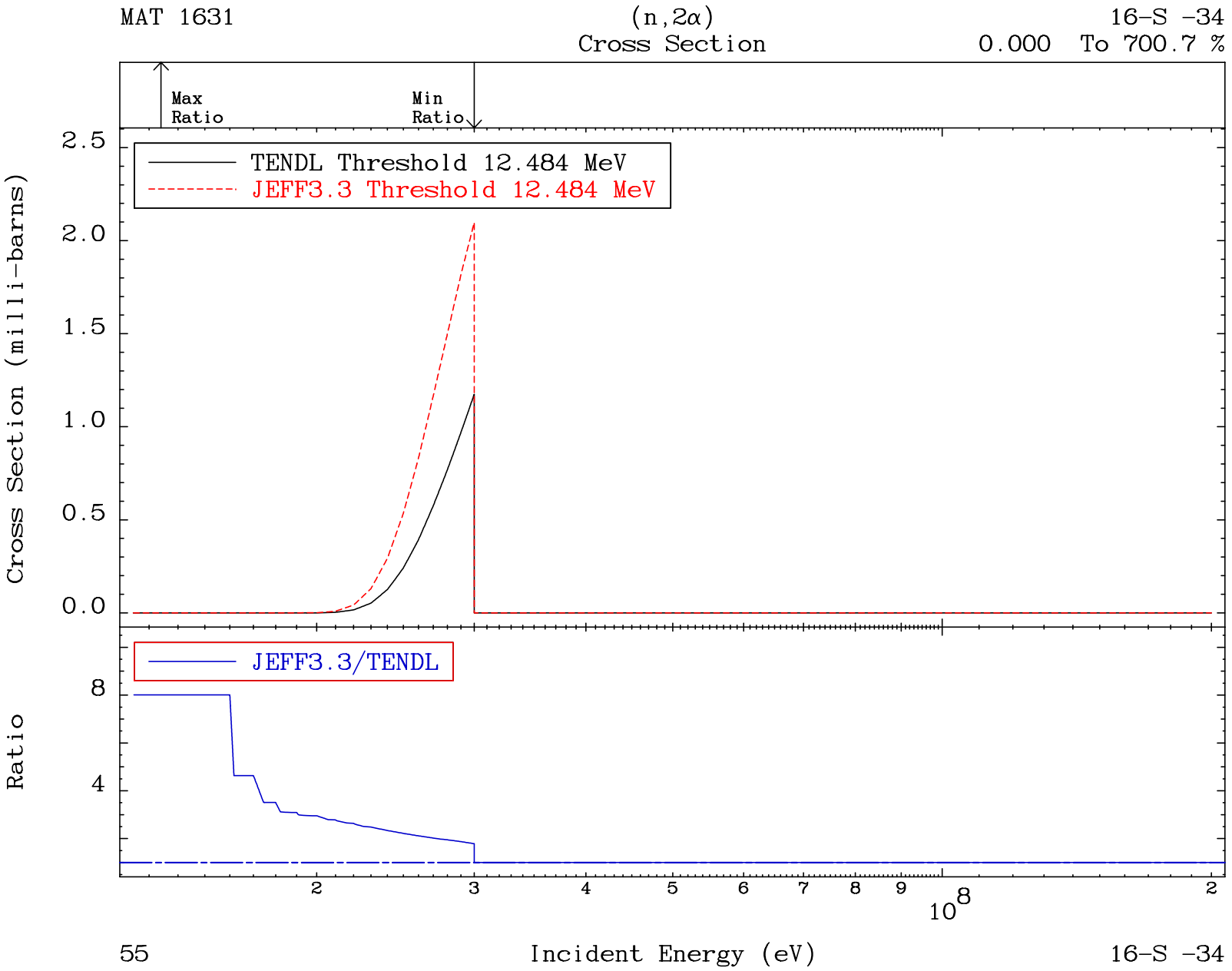

MAT 1631
(n,p)
Cross Section
16-S -34
-12.20 To 6.567 %
Max Ratio
Min Ratio
TENDL Threshold 4.7373 MeV
JEFF3.3 Threshold 4.7373 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.1
1.0
0.9
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
50
Incident Energy (eV)
16-S -34

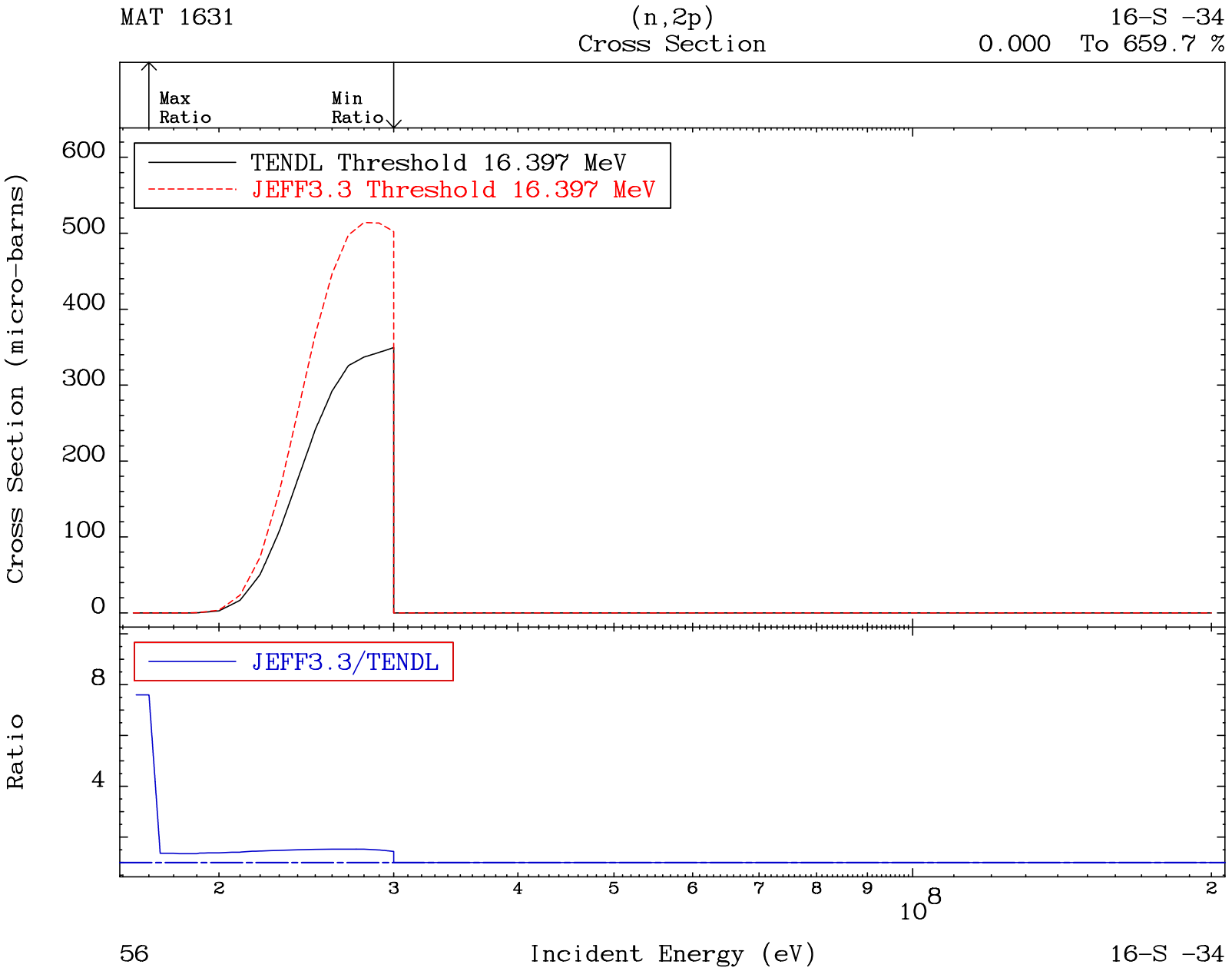

MAT 1631
(n,d)
Cross Section
16-S -34
-8.186 To 9.903 %
Max Ratio
Min Ratio
TENDL Threshold 8.9159 MeV
JEFF3.3 Threshold 8.9159 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.10
1.00
9
10^7
2
3
4
5
6
7
8
9
10^8
2
51
Incident Energy (eV)
16-S -34

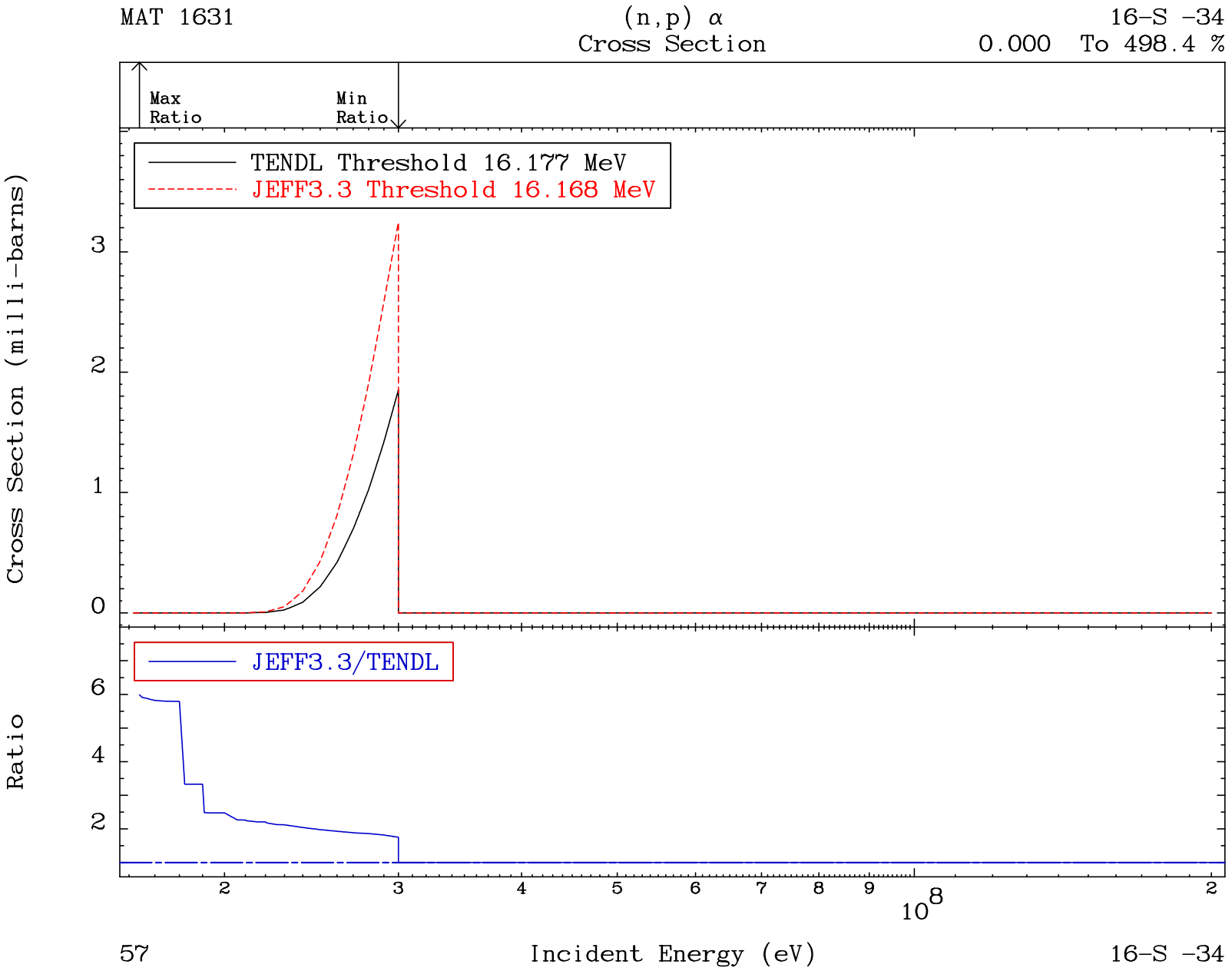

MAT 1631
(n,t)
Cross Section
16-S -34
-2.468 To 25.26 %
Max Ratio
Min Ratio
TENDL Threshold 12.877 MeV
JEFF3.3 Threshold 12.877 MeV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
1.0
1.1
1.2
1.3
2
3
4
5
6
7
8
9
10^8
2
52
Incident Energy (eV)
16-S -34

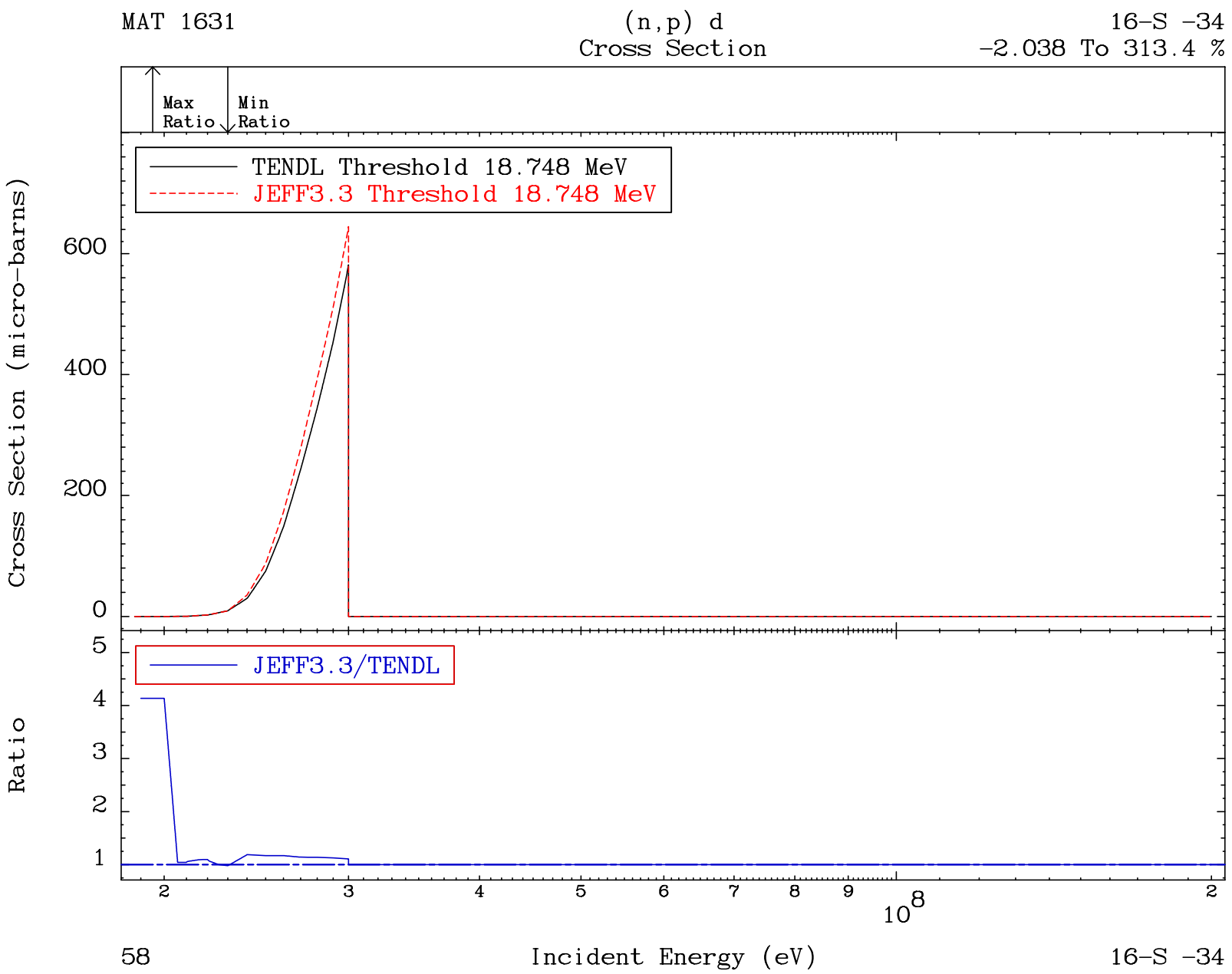

MAT 1631
(n,He-3)
Cross Section
16-S -34
-0.375 To 50.02 %
Max Ratio
Min Ratio
TENDL Threshold 13.091 MeV
JEFF3.3 Threshold 13.091 MeV
Cross Section (milli-barns)
0
1
2
3
4
JEFF3.3/TENDL
Ratio
1.0
1.2
1.4
1.6
2
3
4
5
6
7
8
9
10^8
2
53
Incident Energy (eV)
16-S -34

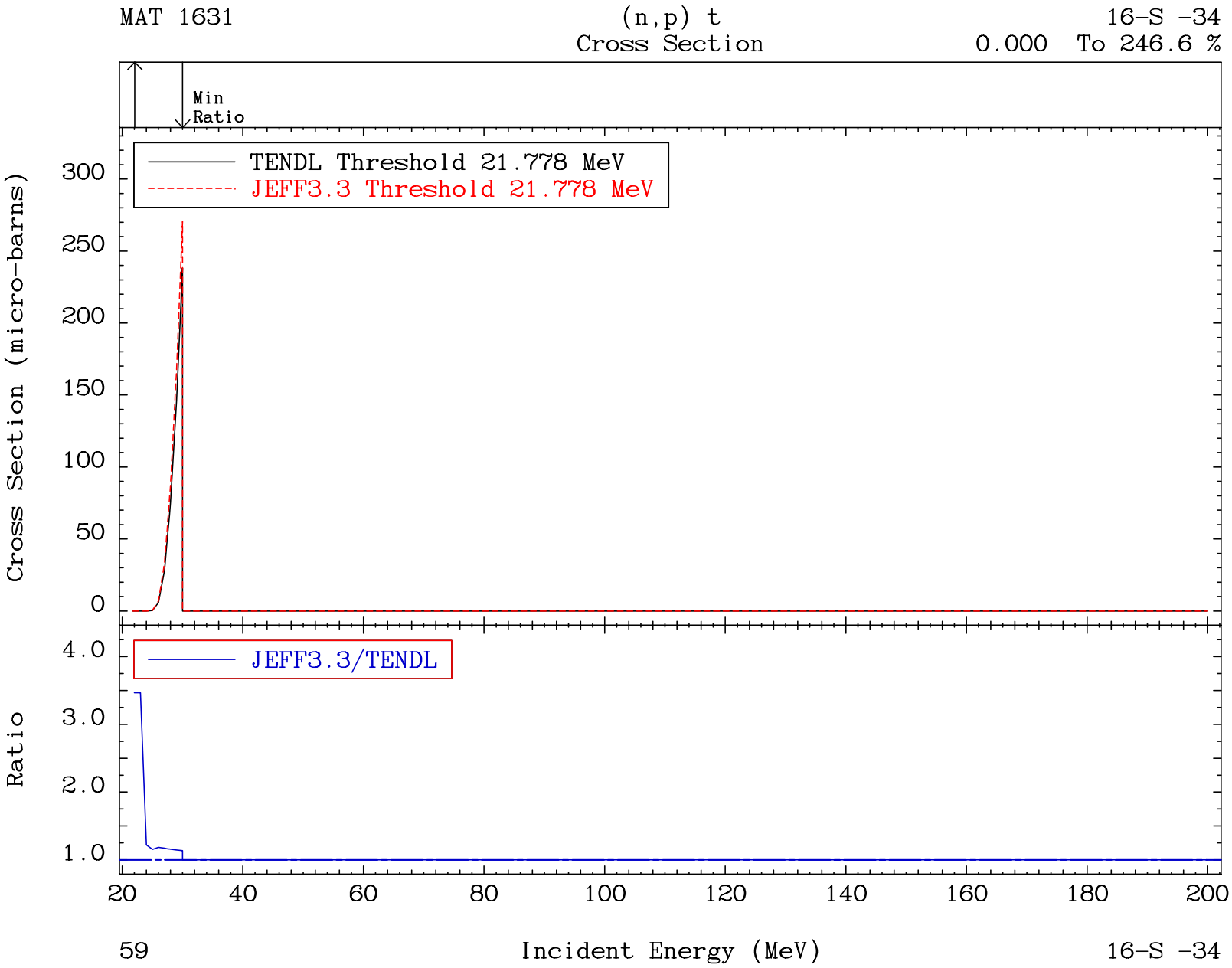

MAT 1631
(n,α)
Cross Section
16-S -34
-4.255 To 213.0 %
Max Ratio
Min Ratio
TENDL Threshold 1.3759 MeV
JEFF3.3 Threshold 1.8000 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
54
Incident Energy (eV)
16-S -34

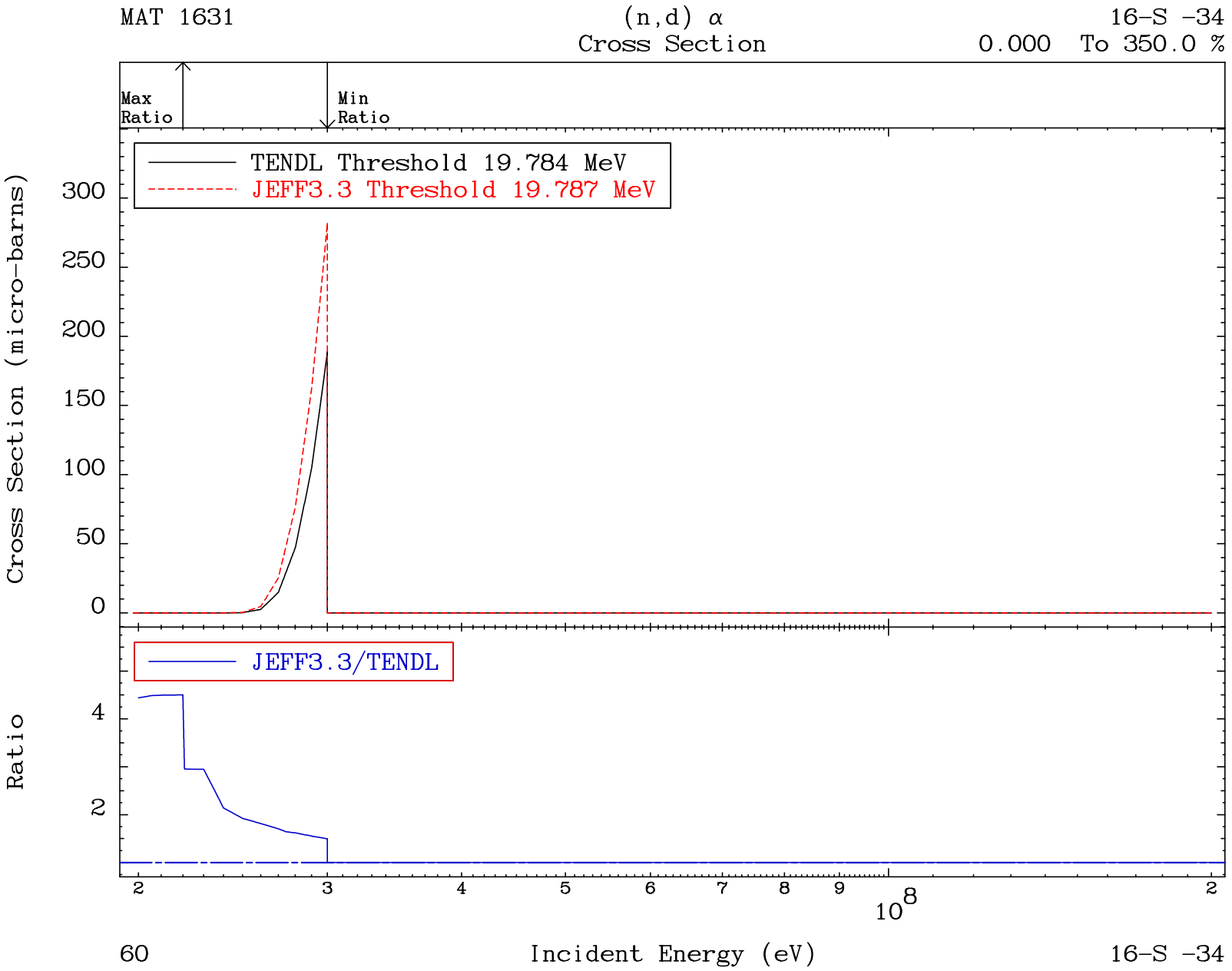

MAT 1631
(n,2α)
Cross Section
16-S -34
0.000 To 700.7 %
Max Ratio
Min Ratio
TENDL Threshold 12.484 MeV
JEFF3.3 Threshold 12.484 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
8
4
2
3
4
5
6
7
8
9
10^8
2
55
Incident Energy (eV)
16-S -34

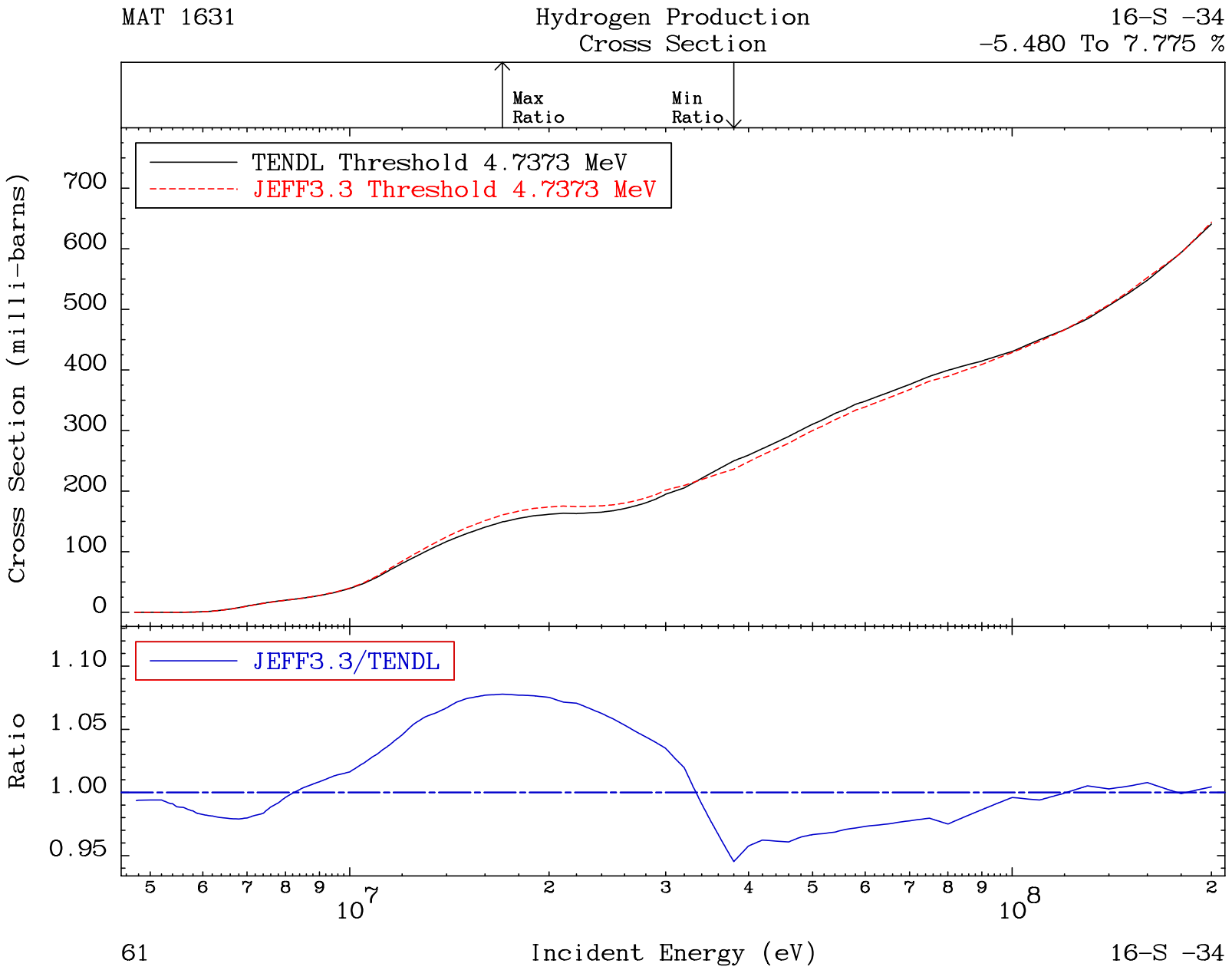

MAT 1631
(n,2p)
Cross Section
16-S -34
0.000 To 659.7 %
Max Ratio
Min Ratio
TENDL Threshold 16.397 MeV
JEFF3.3 Threshold 16.397 MeV
Cross Section (micro-barns)
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
8
4
2
3
4
5
6
7
8
9
10^8
2
56
Incident Energy (eV)
16-S -34

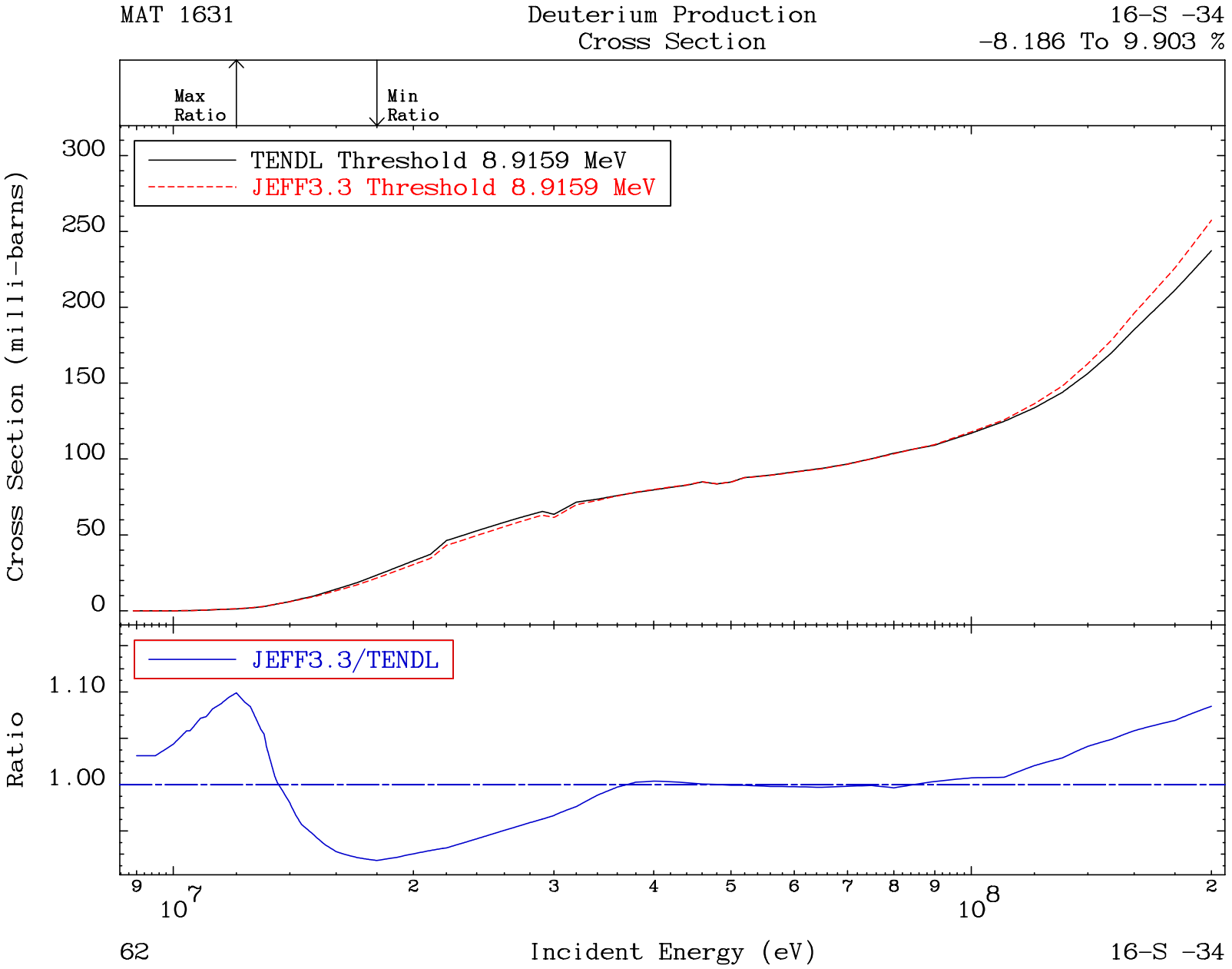

MAT 1631
(n,p) α
Cross Section
16-S -34
0.000 To 498.4 %
Max Ratio
Min Ratio
TENDL Threshold 16.177 MeV
JEFF3.3 Threshold 16.168 MeV
Cross Section (milli-barns)
0
1
2
3
JEFF3.3/TENDL
Ratio
2
4
6
2
3
4
5
6
7
8
9
10^8
2
57
Incident Energy (eV)
16-S -34

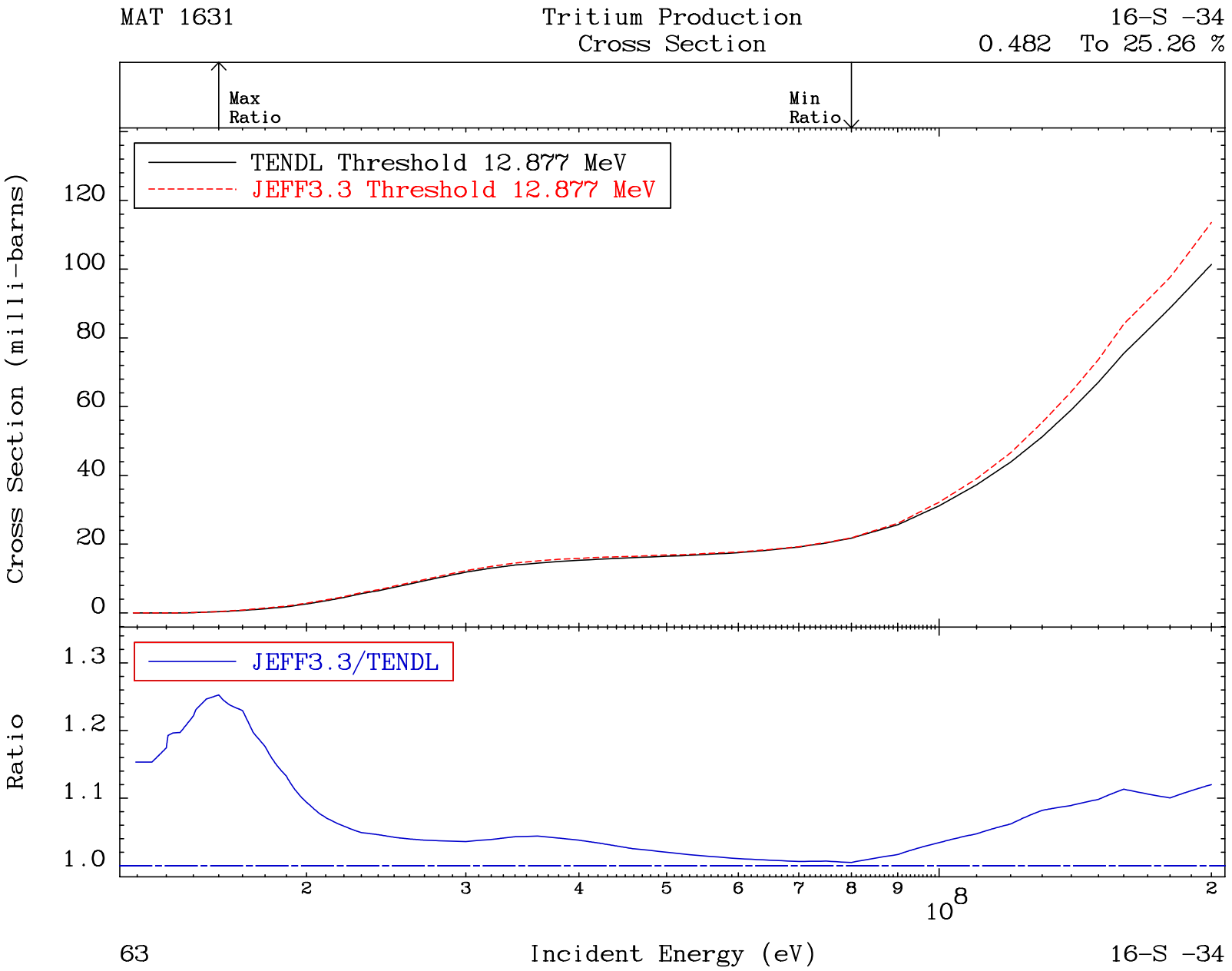

MAT 1631
(n,p) d
Cross Section
16-S -34
-2.038 To 313.4 %
Max Ratio
Min Ratio
TENDL Threshold 18.748 MeV
JEFF3.3 Threshold 18.748 MeV
Cross Section (micro-barns)
600
400
200
0
JEFF3.3/TENDL
Ratio
5
4
3
2
1
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
16-S -34

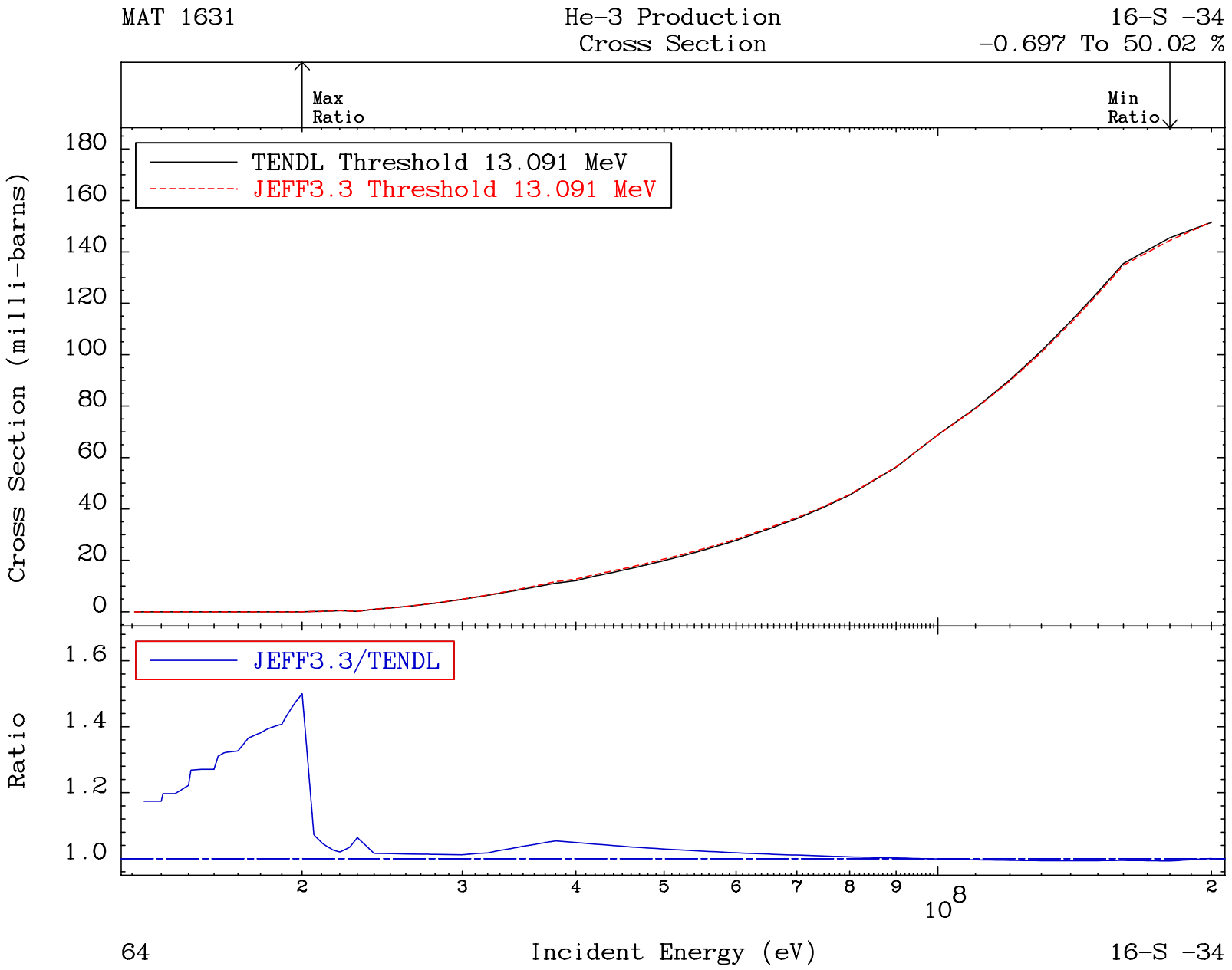

MAT 1631
(n,p) t
Cross Section
16-S -34
0.000 To 246.6 %
Min
Ratio
TENDL Threshold 21.778 MeV
JEFF3.3 Threshold 21.778 MeV
Cross Section (micro-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
4.0
3.0
2.0
1.0
20
40
60
80
100
120
140
160
180
200
59
Incident Energy (MeV)
16-S -34

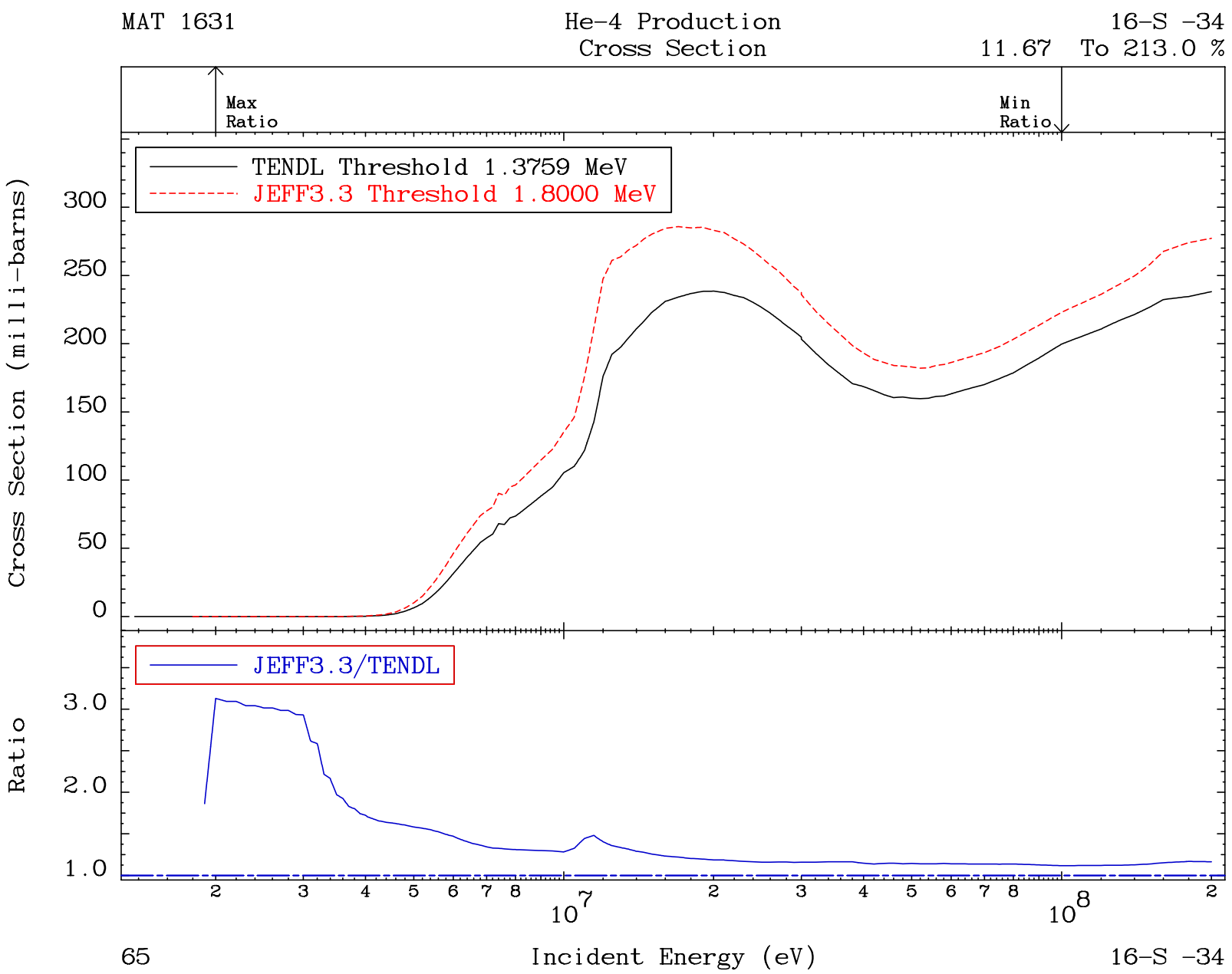

MAT 1631
(n,d) α
Cross Section
16-S -34
0.000 To 350.0 %
Max Ratio
Min Ratio
TENDL Threshold 19.784 MeV
JEFF3.3 Threshold 19.787 MeV
Cross Section (micro-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
4
2
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
16-S -34

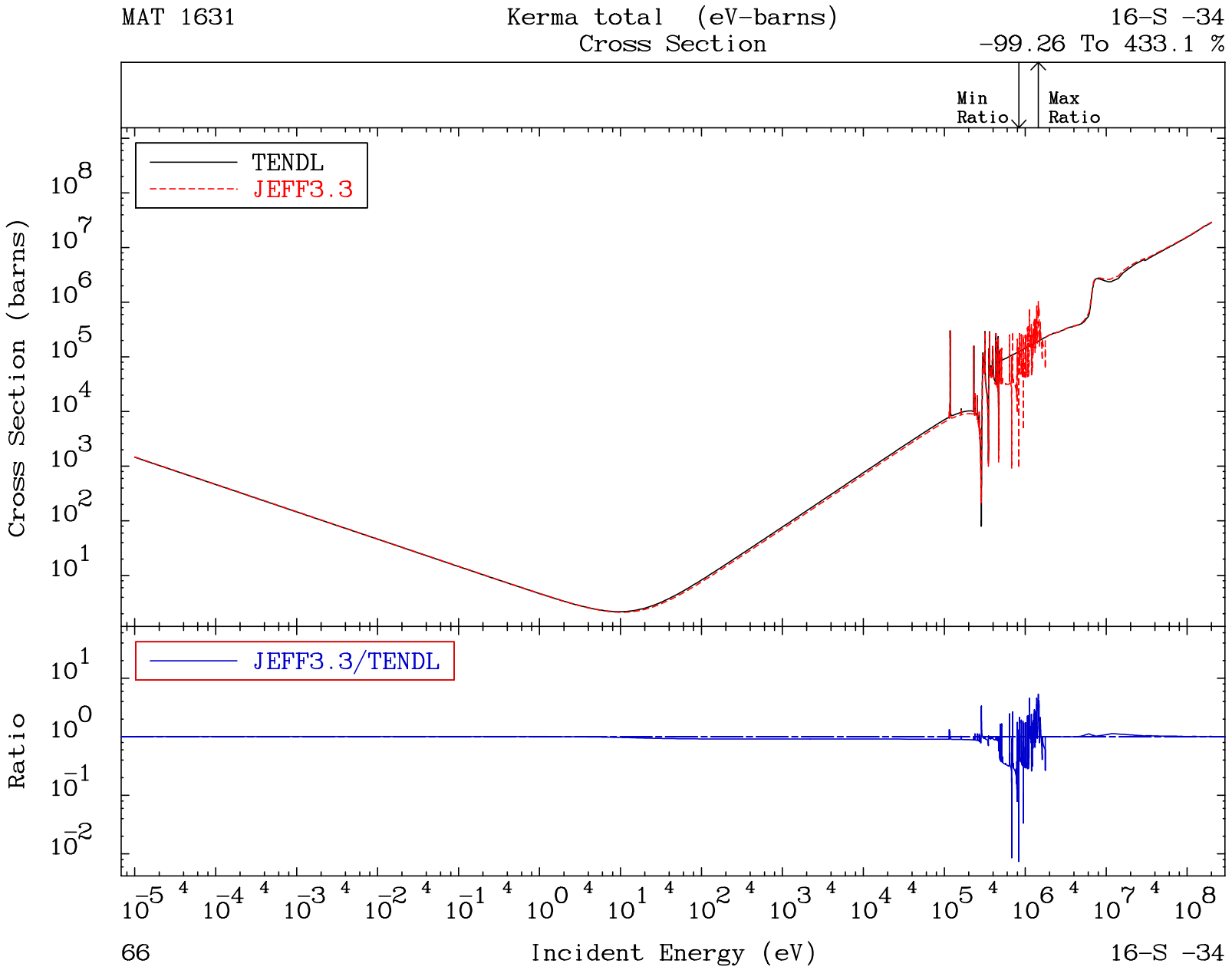

MAT 1631
Hydrogen Production
Cross Section
16-S -34
-5.480 To 7.775 %
Max Ratio
Min Ratio
TENDL Threshold 4.7373 MeV
JEFF3.3 Threshold 4.7373 MeV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
0.95
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
61
Incident Energy (eV)
16-S -34

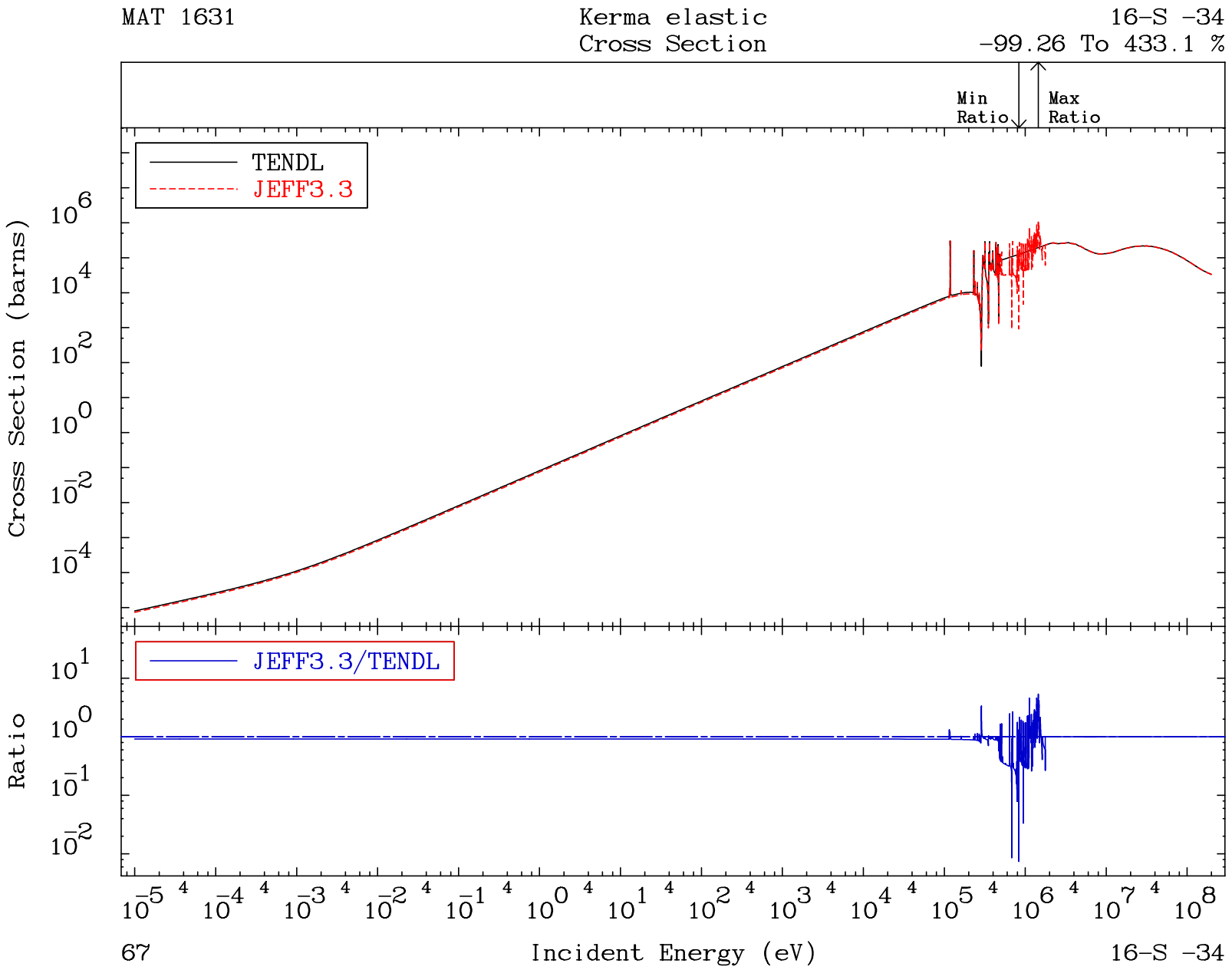

MAT 1631
Deuterium Production
Cross Section
16-S -34
-8.186 To 9.903 %
Max Ratio
Min Ratio
TENDL Threshold 8.9159 MeV
JEFF3.3 Threshold 8.9159 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.10
1.00
9
10^7
2
3
4
5
6
7
8
9
10^8
2
62
Incident Energy (eV)
16-S -34

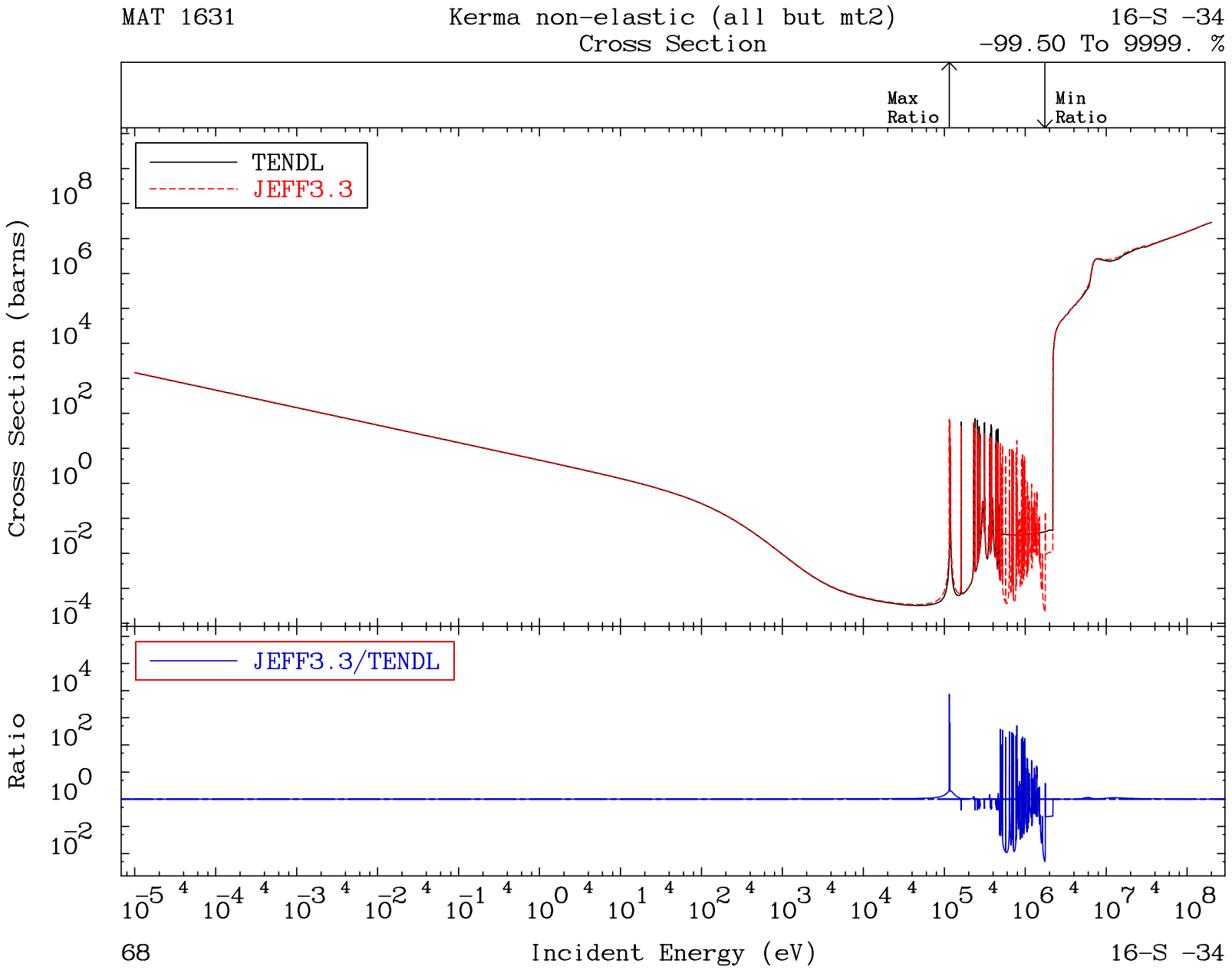

MAT 1631
Tritium Production
Cross Section
16-S -34
0.482 To 25.26 %
Max Ratio
Min Ratio
TENDL Threshold 12.877 MeV
JEFF3.3 Threshold 12.877 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.3
1.2
1.1
1.0
2
3
4
5
6
7
8
9
10^8
2
63
Incident Energy (eV)
16-S -34

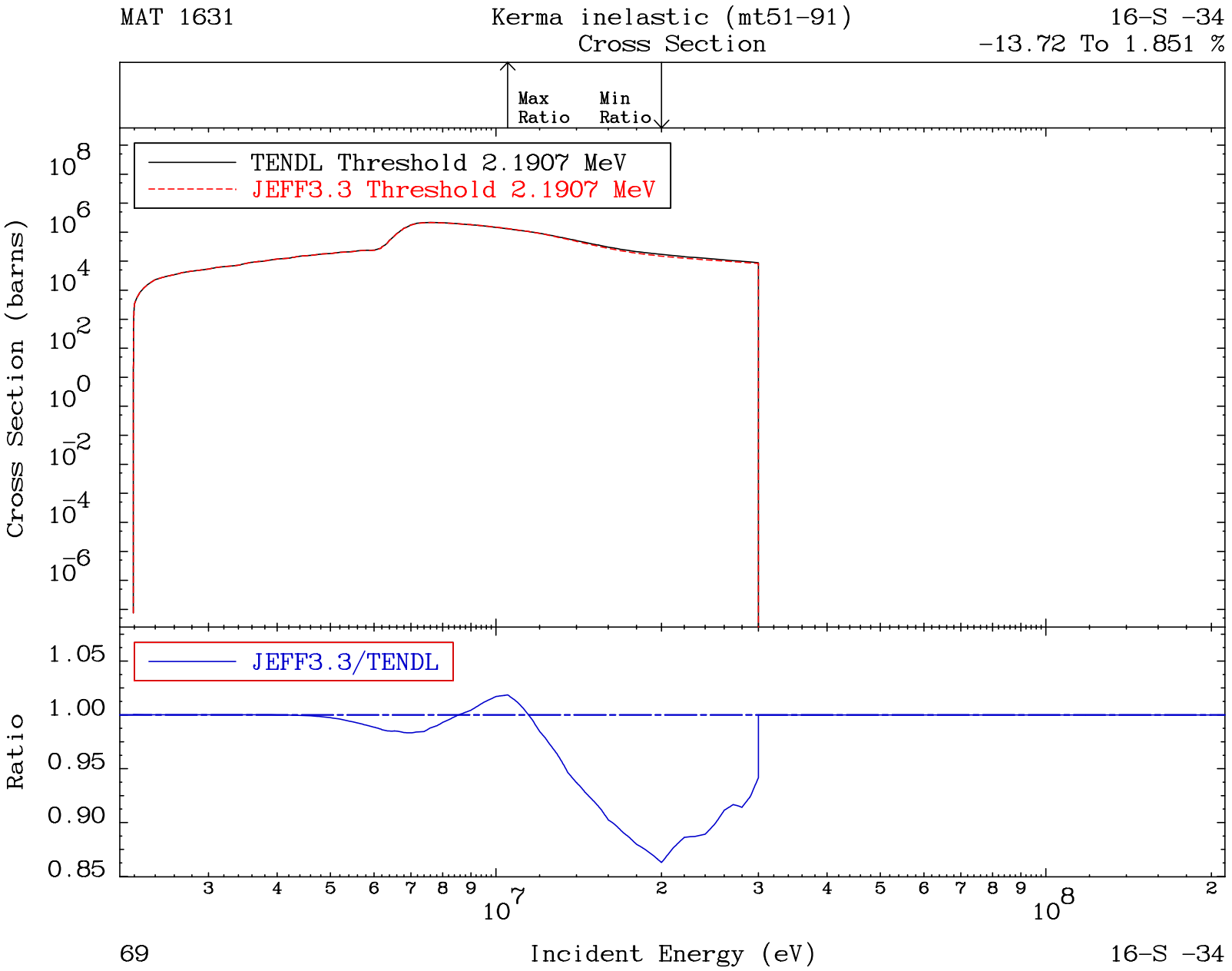

MAT 1631
He-3 Production
Cross Section
16-S -34
-0.697 To 50.02 %
Max Ratio
Min Ratio
TENDL Threshold 13.091 MeV
JEFF3.3 Threshold 13.091 MeV
Cross Section (milli-barns)
180
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
16-S -34

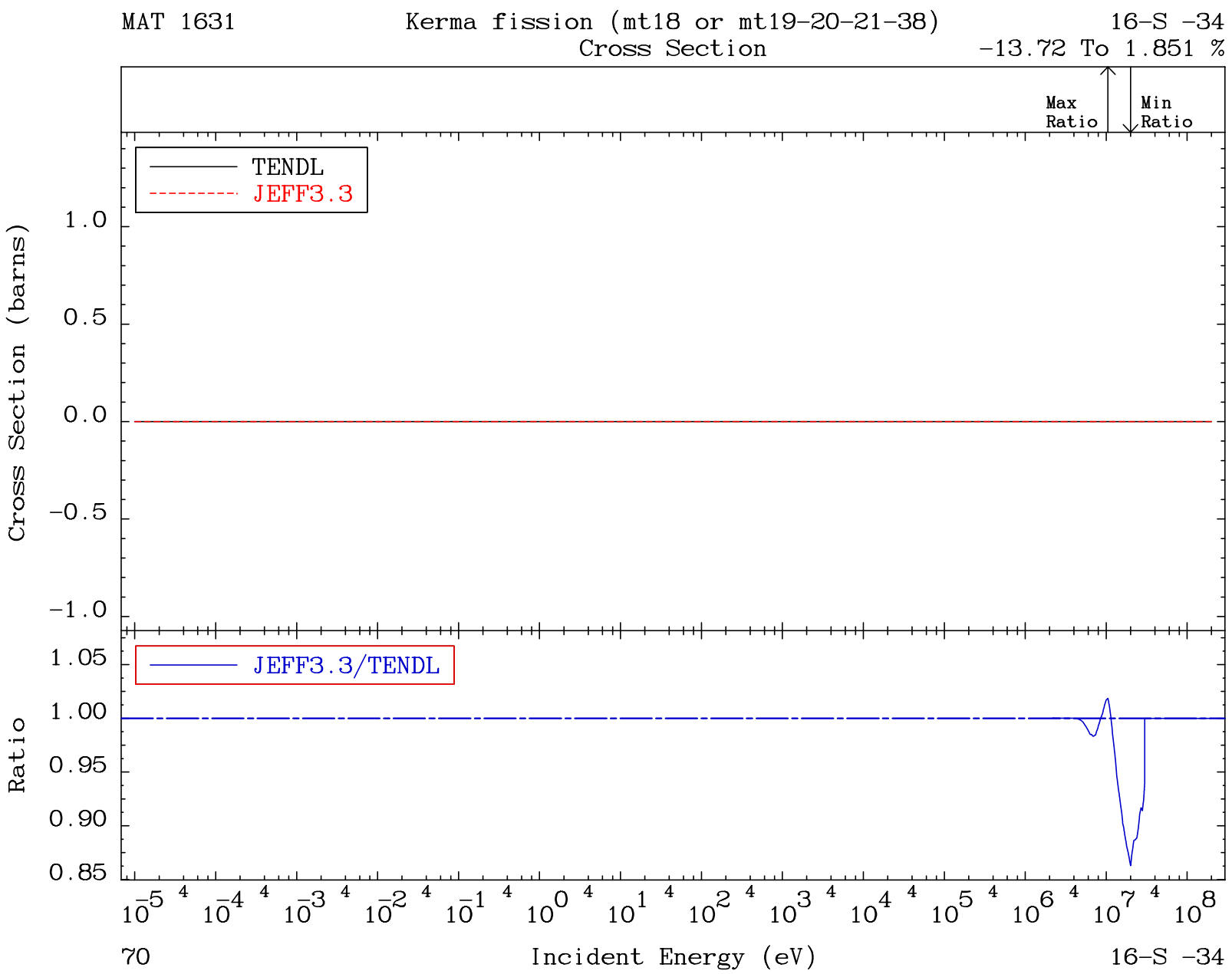

MAT 1631
He-4 Production
Cross Section
16-S -34
11.67 To 213.0 %
Max Ratio
Min Ratio
TENDL Threshold 1.3759 MeV
JEFF3.3 Threshold 1.8000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
65
Incident Energy (eV)
16-S -34

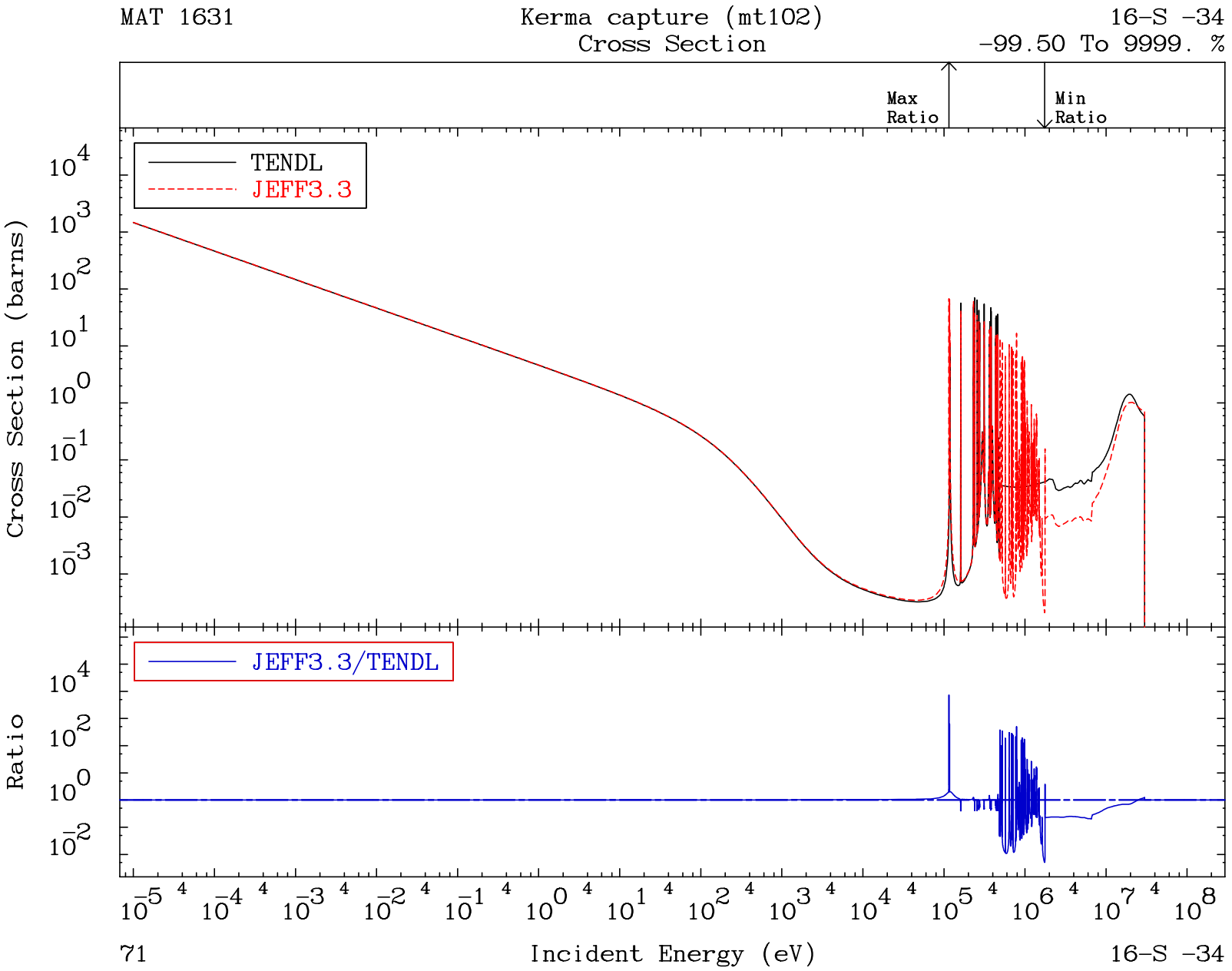

MAT 1631
Kerma total (eV-barns)
Cross Section
16-S -34
-99.26 To 433.1 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
66
16-S -34

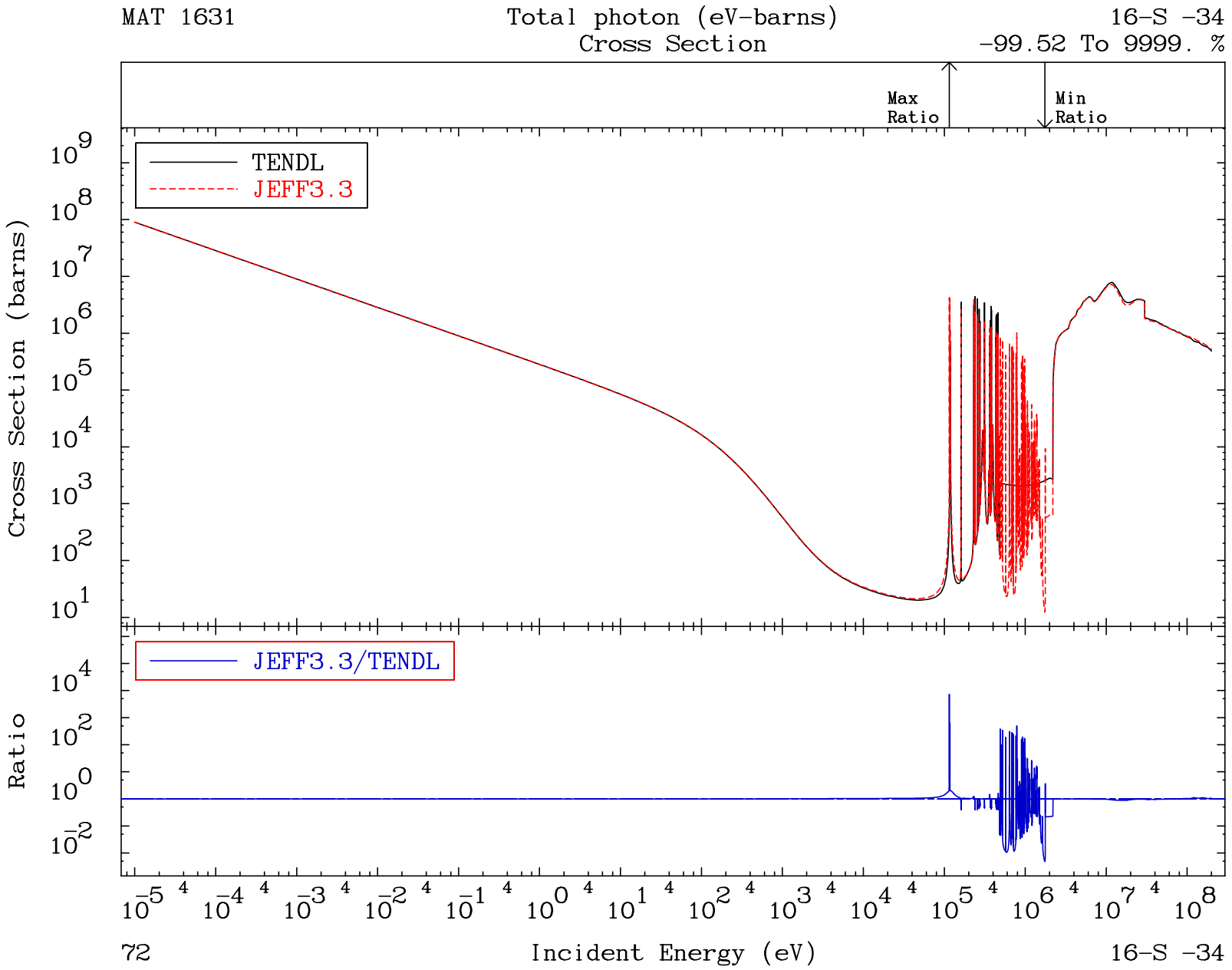

MAT 1631
Kerma elastic
Cross Section
16-S -34
-99.26 To 433.1 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
67
16-S -34

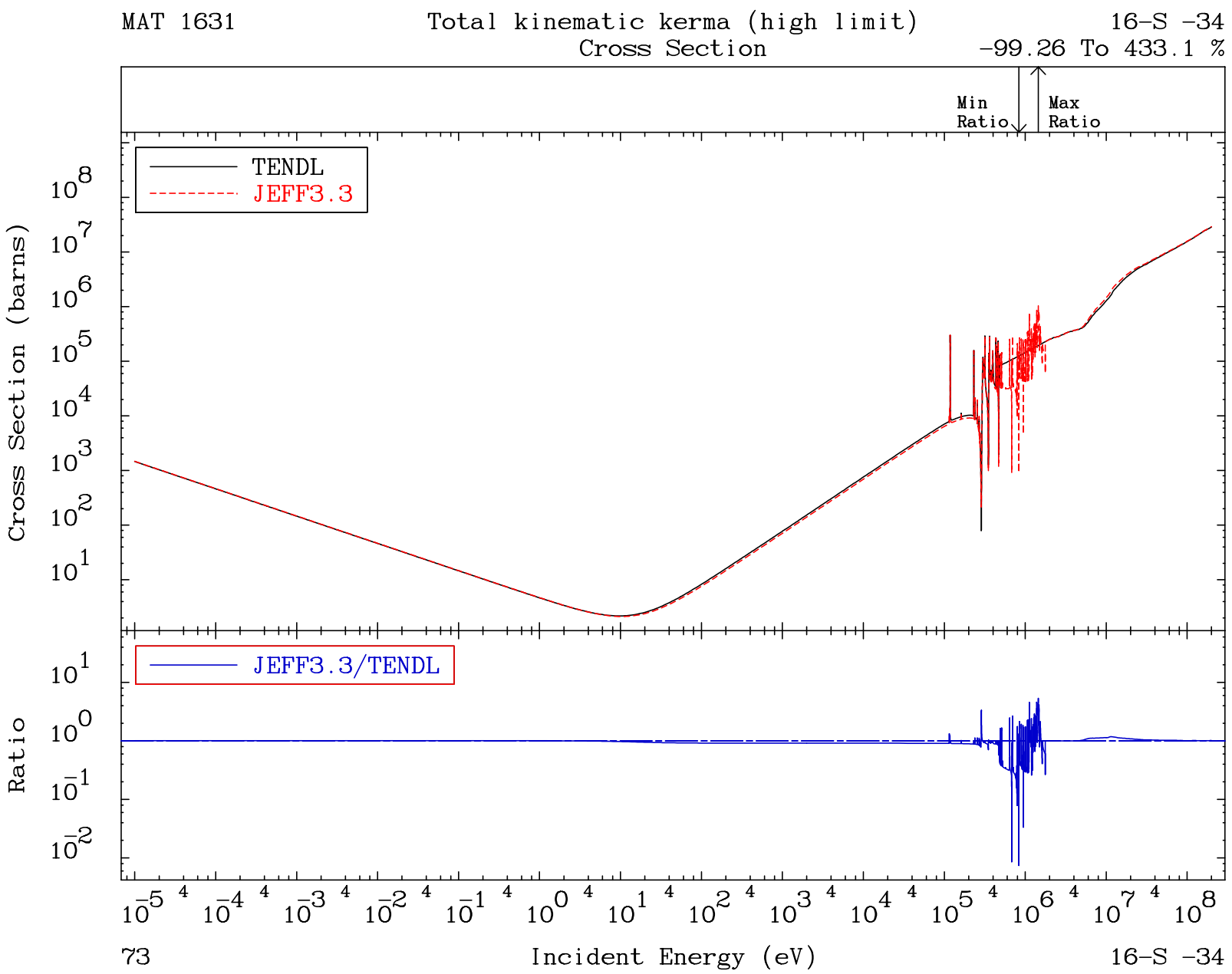

MAT 1631
Kerma non-elastic (all but mt2)
Cross Section
16-S -34
-99.50 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
16-S -34

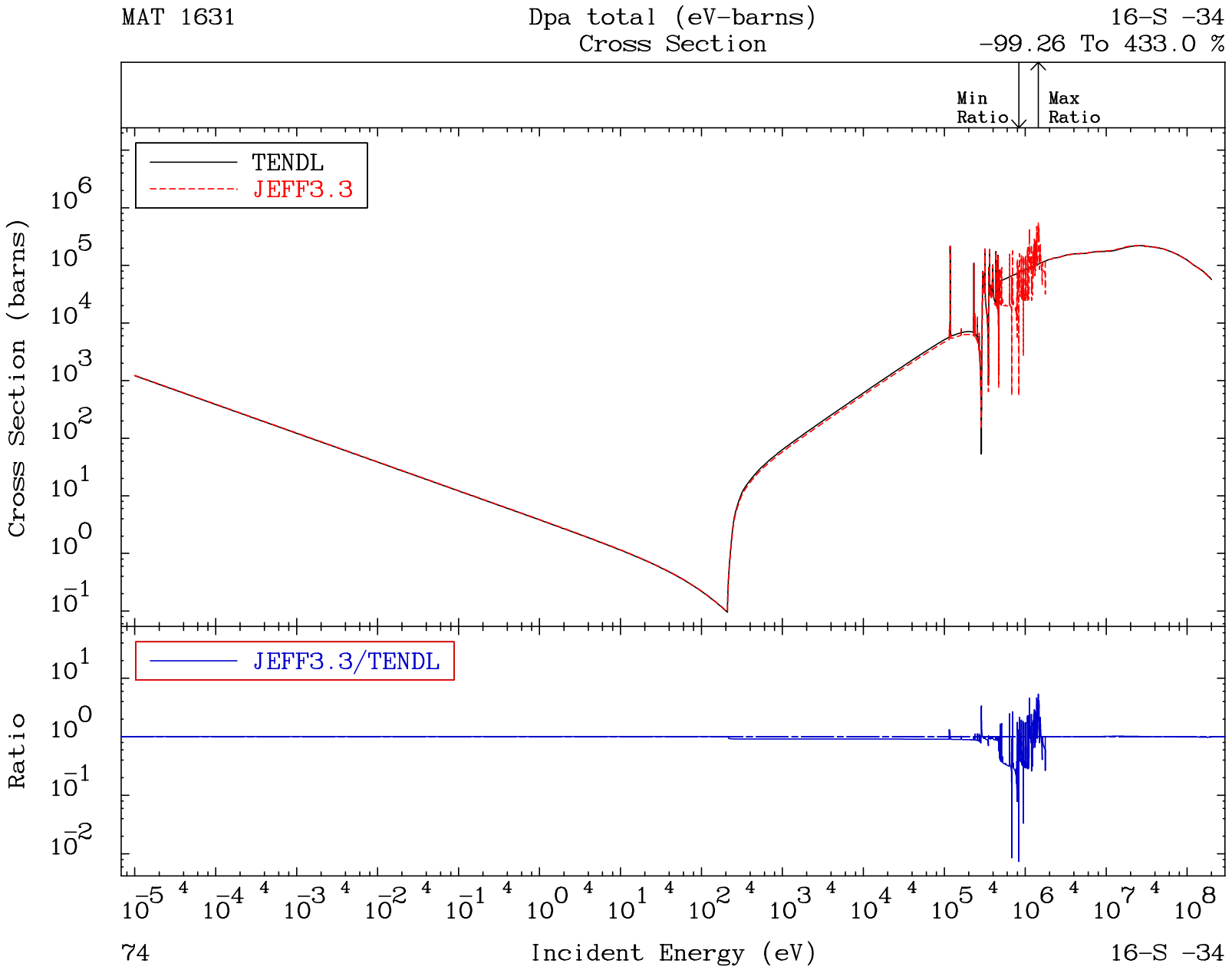

MAT 1631
Kerma inelastic (mt51-91)
Cross Section
16-S -34
-13.72 To 1.851 %
Max Ratio
Min Ratio
TENDL Threshold 2.1907 MeV
JEFF3.3 Threshold 2.1907 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
69
16-S -34

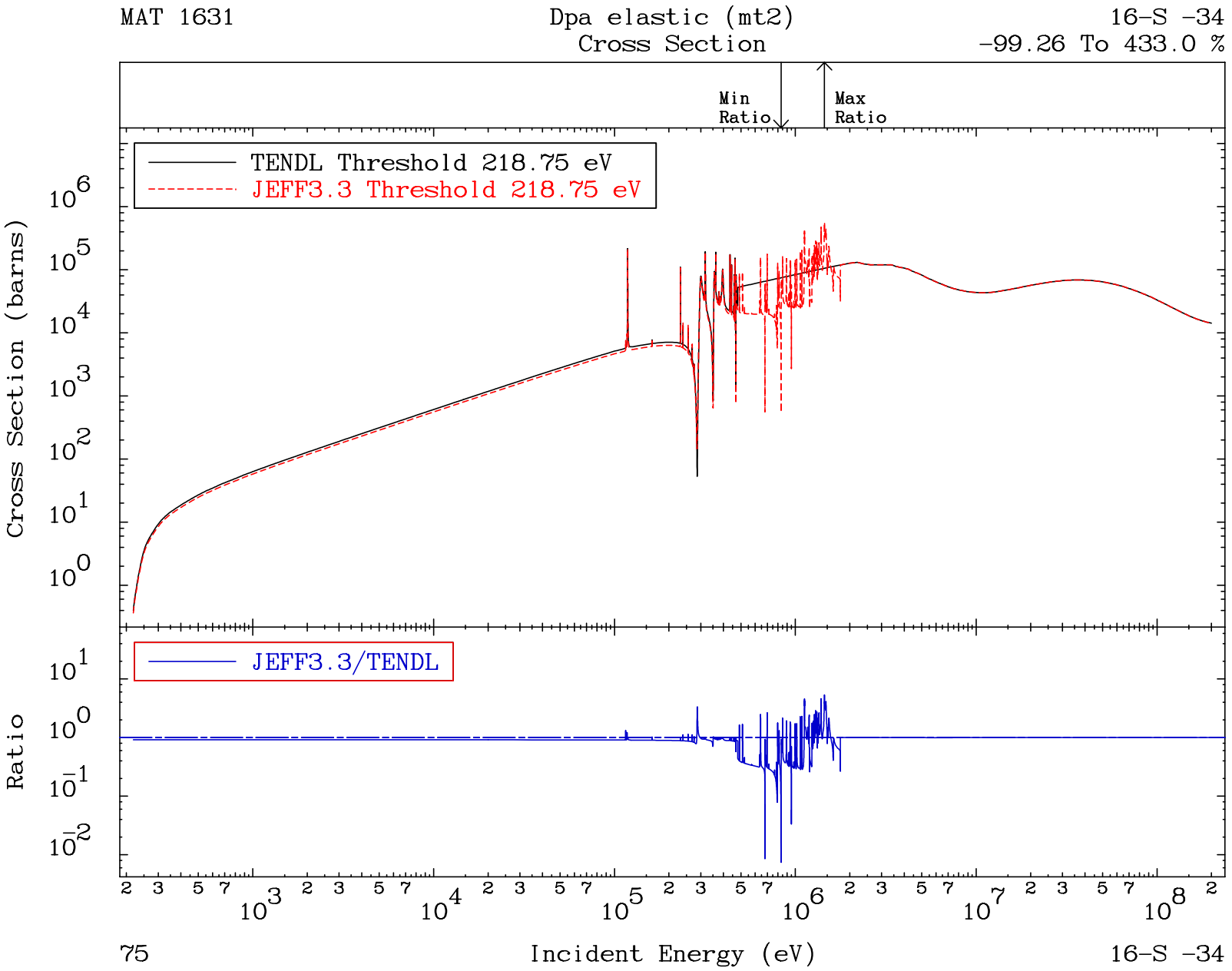

MAT 1631
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
16-S -34
-13.72 To 1.851 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JEFF3.3/TENDL
Ratio
1.05
1.00
0.95
0.90
0.85
10-5 4 10-4 4 10-3 4 10-2 4 10-1 4 100 4 101 4 102 4 103 4 104 4 105 4 106 4 107 4 108
70
Incident Energy (eV)
16-S -34

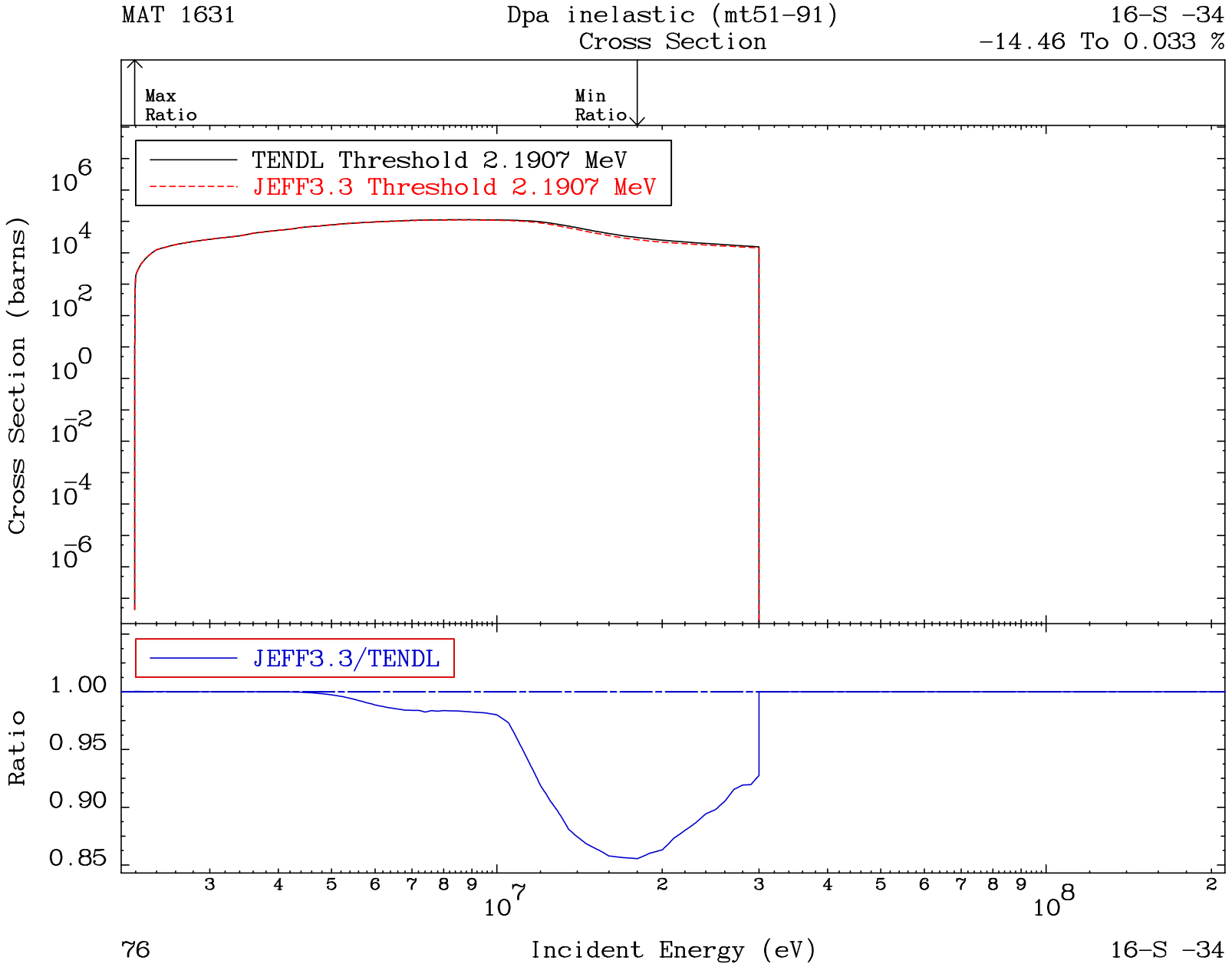

MAT 1631
Kerma capture (mt102)
Cross Section
16-S -34
-99.50 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
71
16-S -34

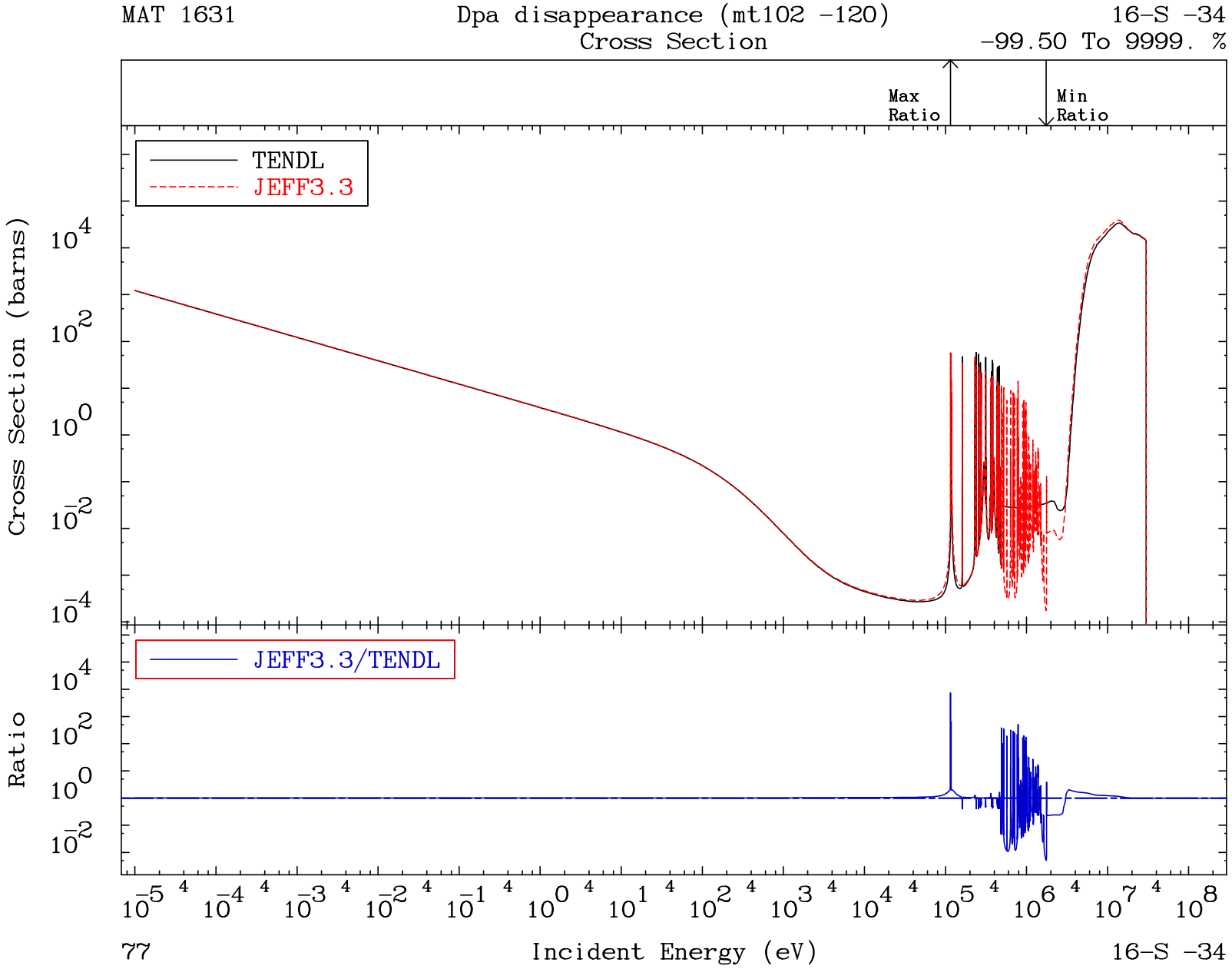

MAT 1631
Total photon (eV-barns)
Cross Section
16-S -34
-99.52 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
72
16-S -34


MAT 1631
Total kinematic kerma (high limit)
Cross Section
16-S -34
-99.26 To 433.1 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
73
16-S -34


MAT 1631
Dpa total (eV-barns)
Cross Section
16-S -34
-99.26 To 433.0 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
74
Incident Energy (eV)
16-S -34


MAT 1631
Dpa elastic (mt2)
Cross Section
16-S -34
-99.26 To 433.0 %
Min Ratio
Max Ratio
TENDL Threshold 218.75 eV
JEFF3.3 Threshold 218.75 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
75
16-S -34


MAT 1631
Dpa inelastic (mt51-91)
Cross Section
16-S -34
-14.46 To 0.033 %
Max Ratio
Min Ratio
TENDL Threshold 2.1907 MeV
JEFF3.3 Threshold 2.1907 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
16-S -34


MAT 1631
Dpa disappearance (mt102 -120)
Cross Section
16-S -34
-99.50 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
77
16-S -34