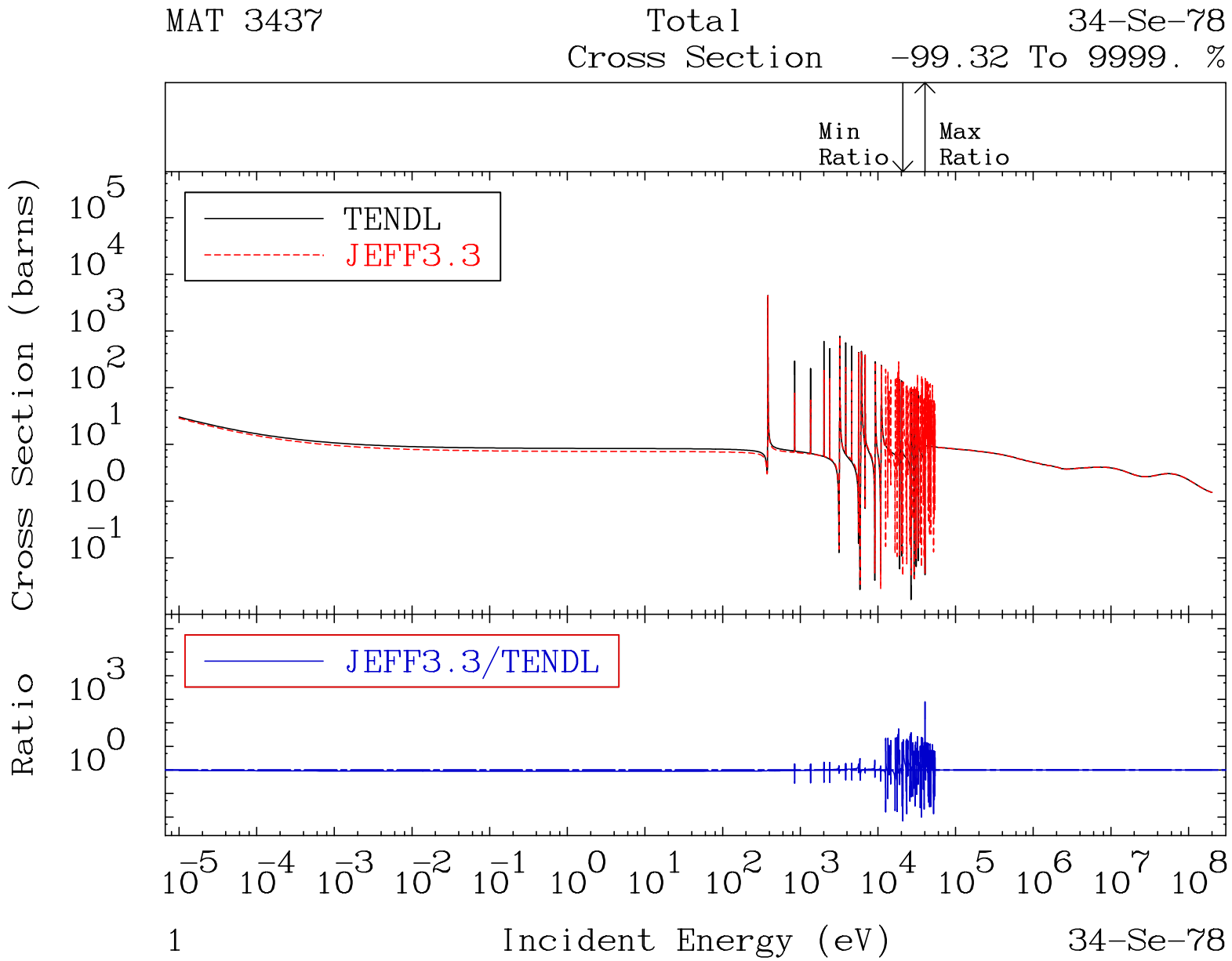
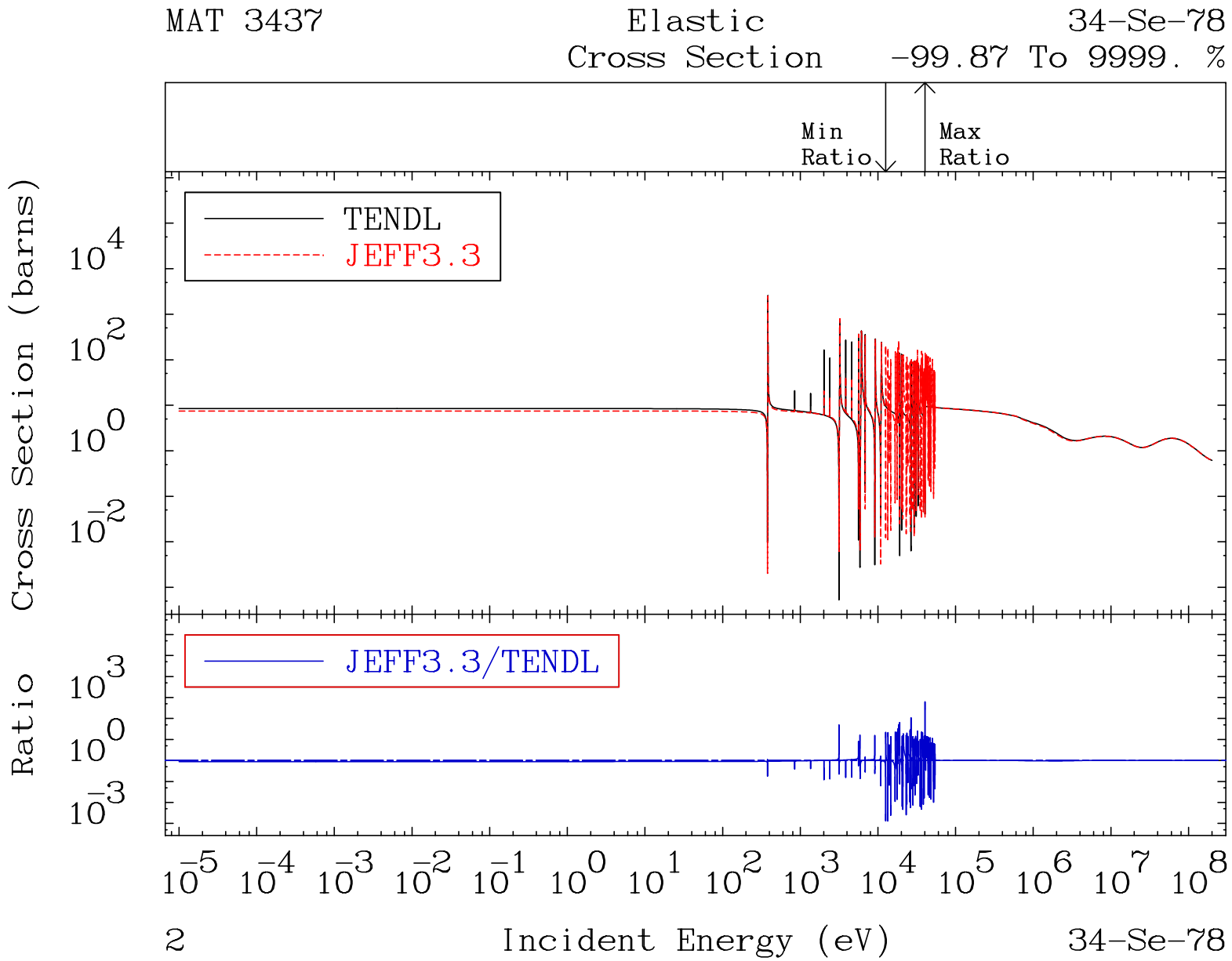
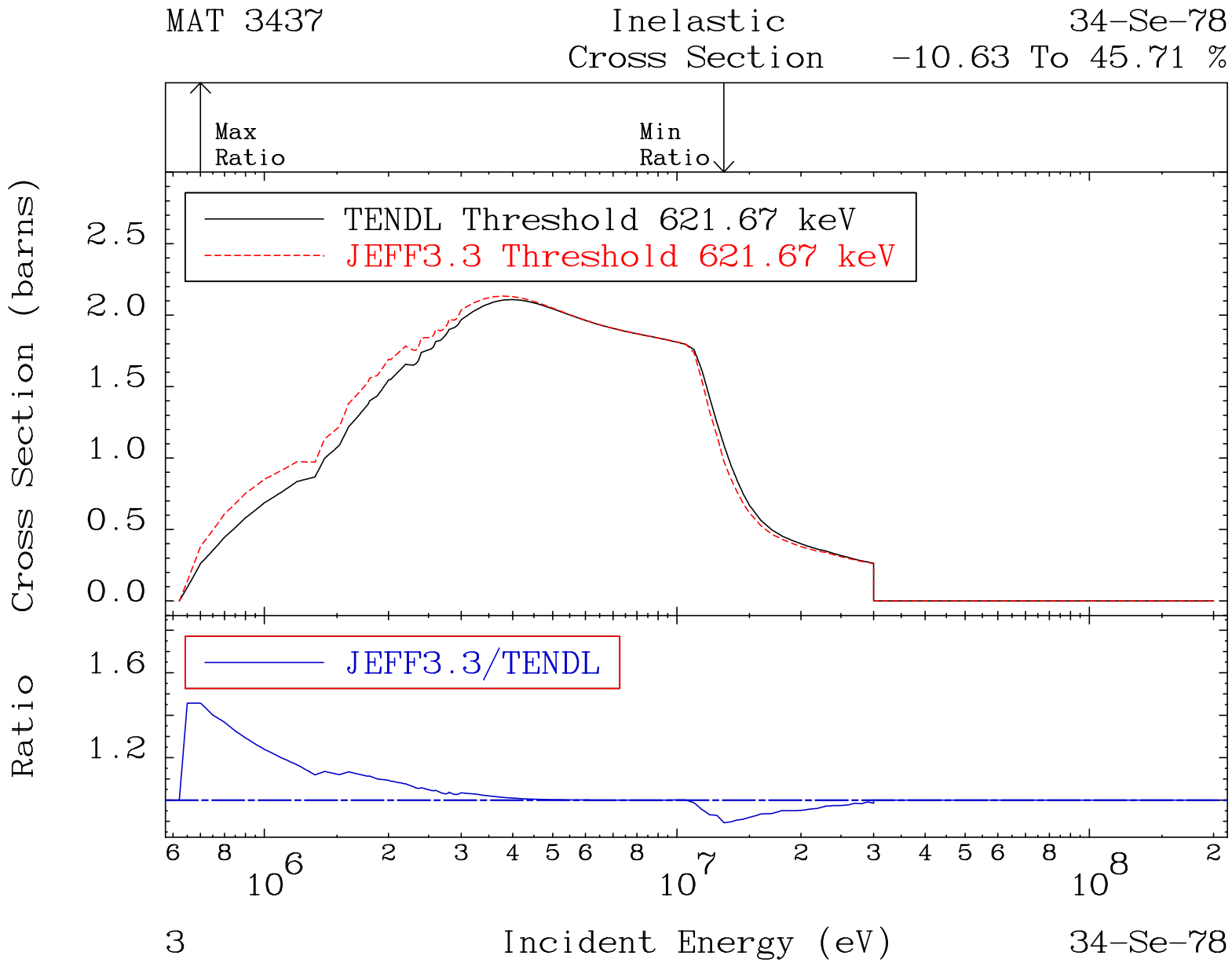
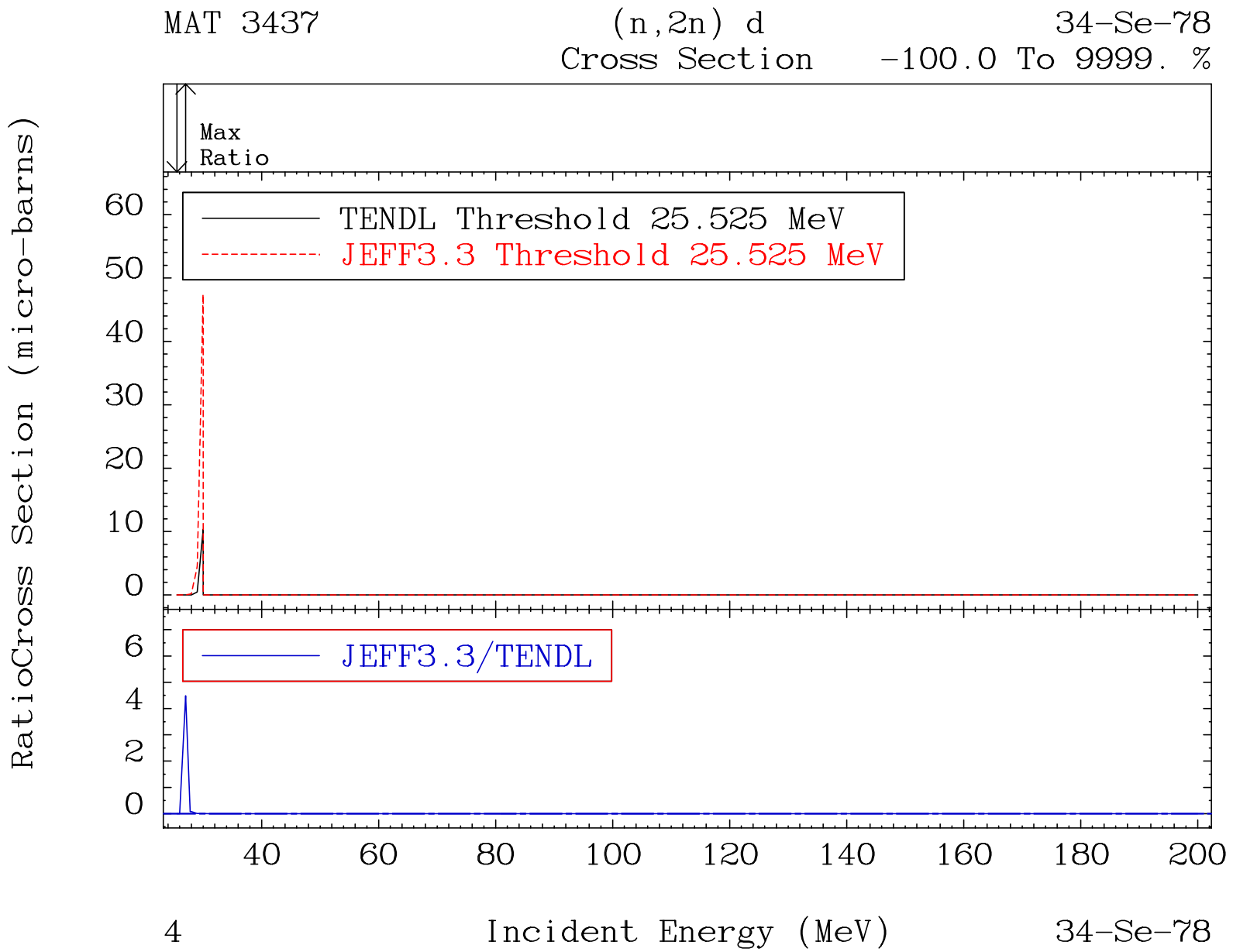
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

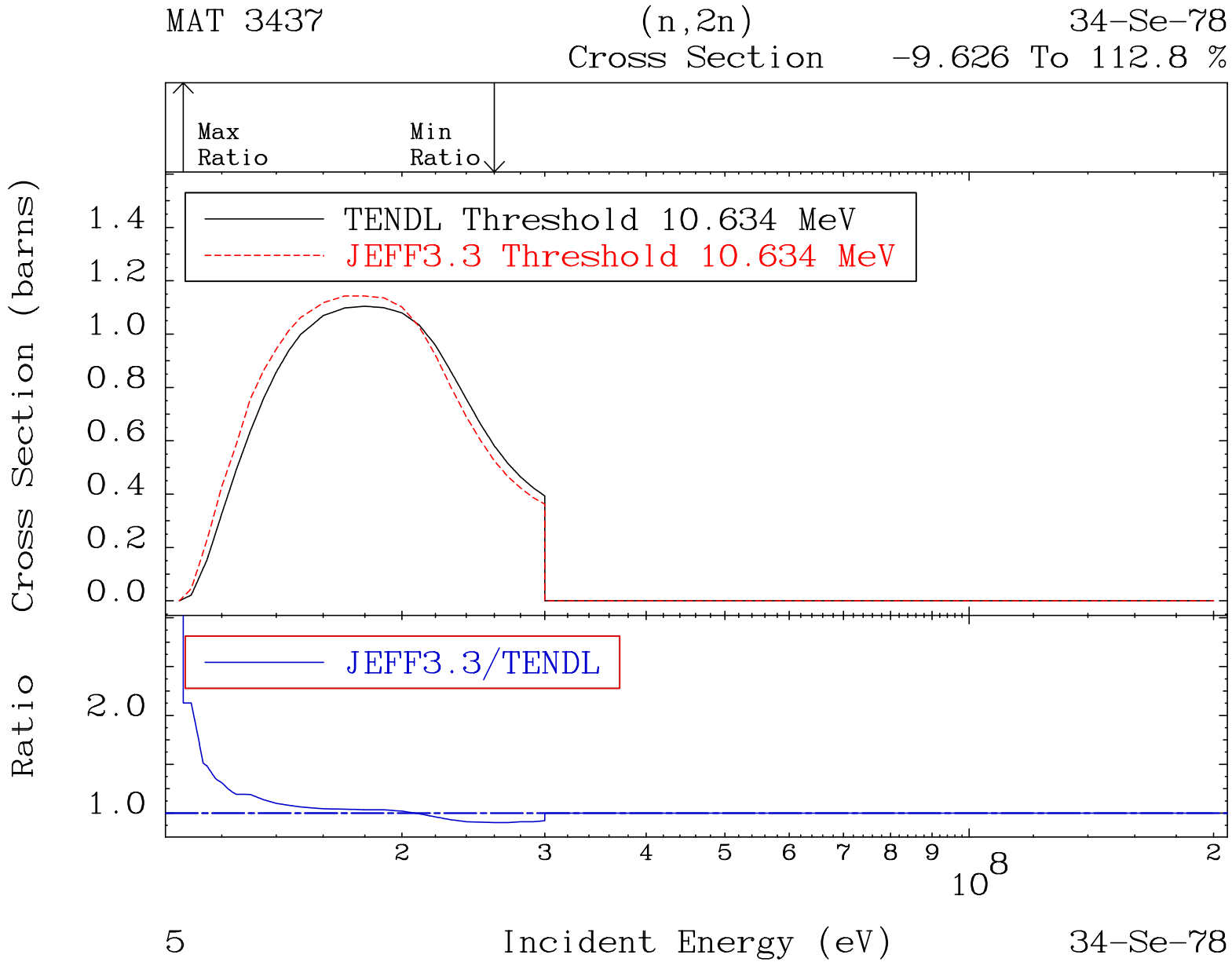
Press Mouse Button to Start

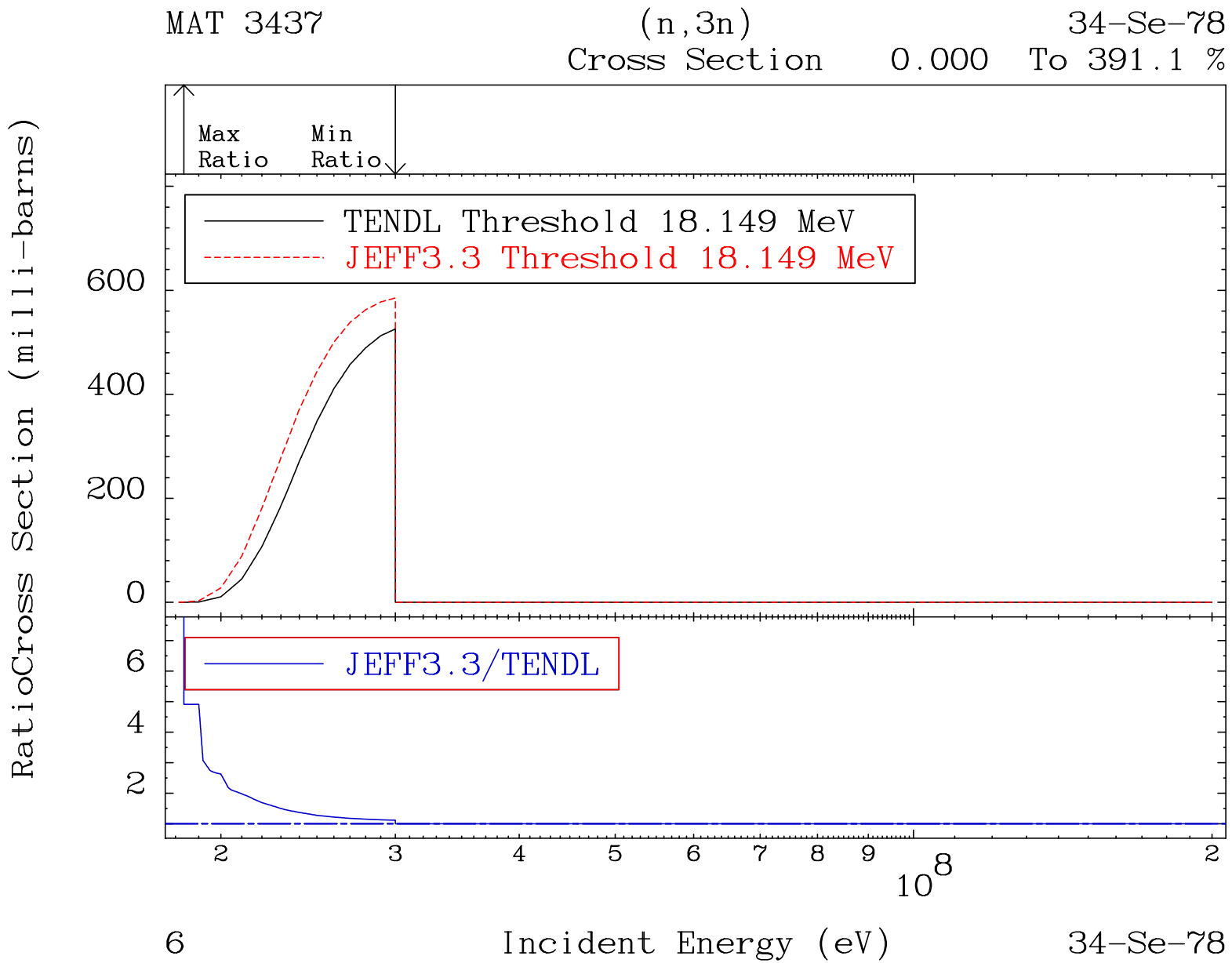

MAT 3437
Total
Cross Section
34-Se-78
-99.32 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
34-Se-78

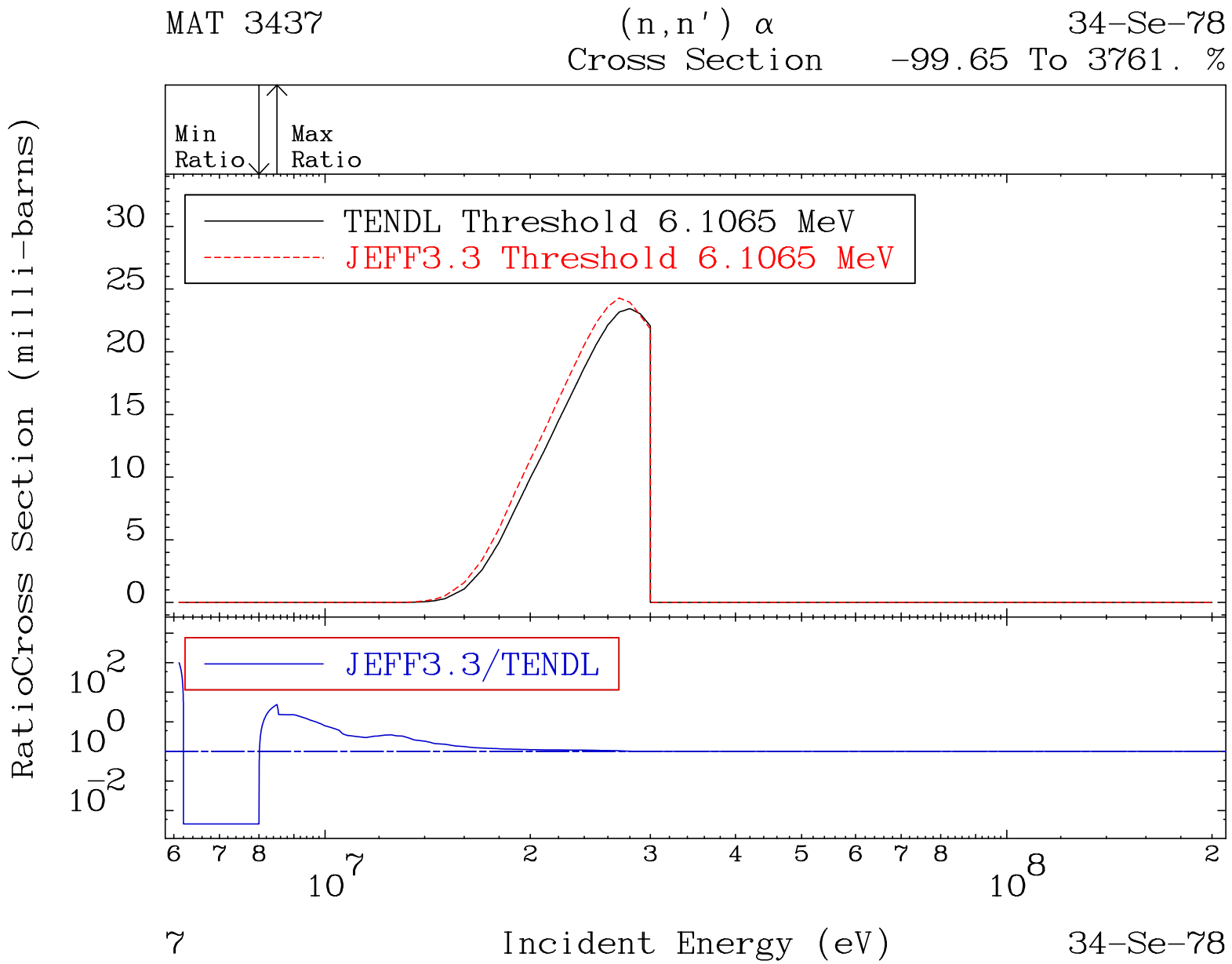

MAT 3437
Elastic
Cross Section
34-Se-78
-99.87 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
34-Se-78

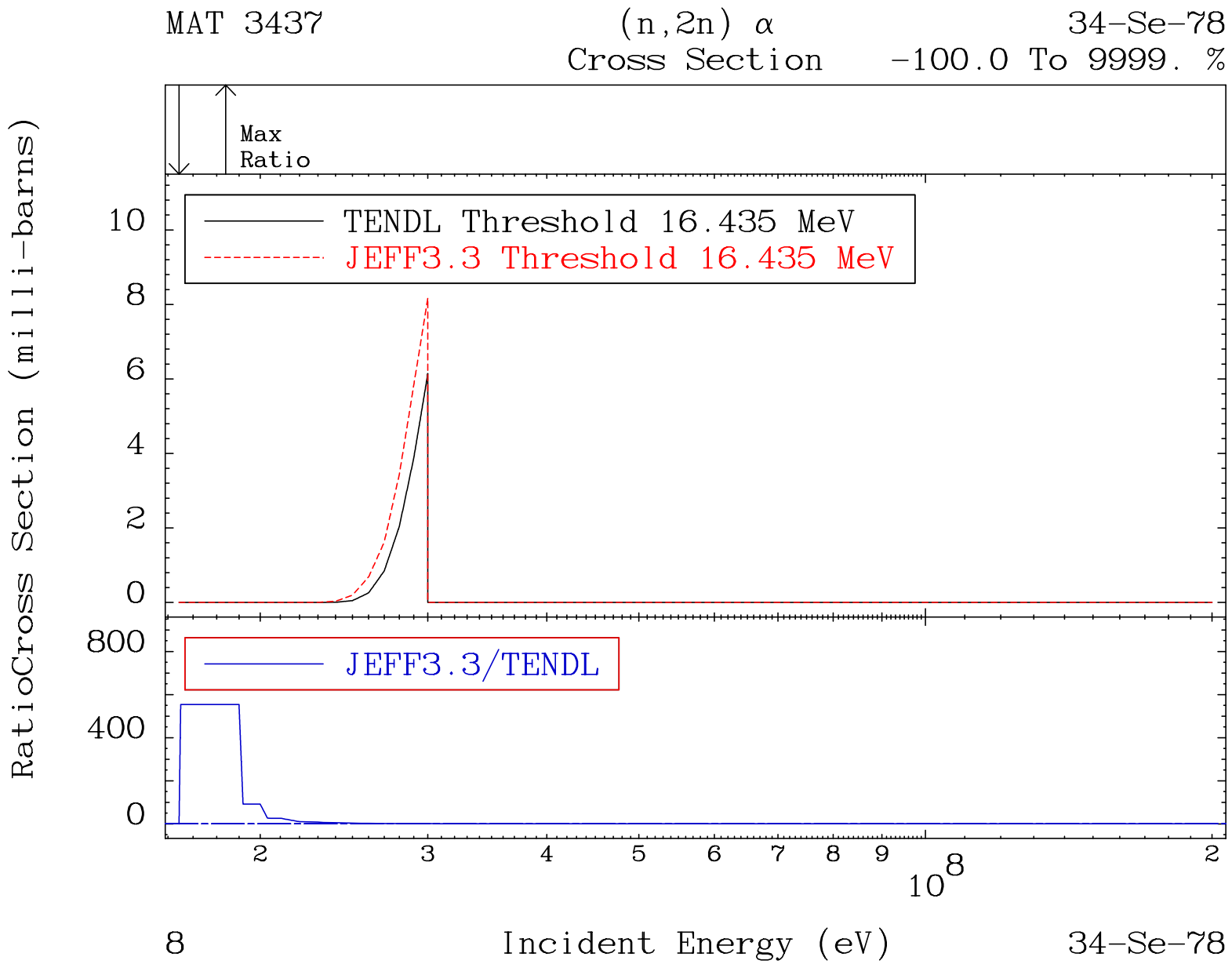

MAT 3437
Inelastic
Cross Section
34-Se-78
-10.63 To 45.71 %
Max
Ratio
Min
Ratio
TENDL Threshold 621.67 keV
JEFF3.3 Threshold 621.67 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.6
1.2
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
3
Incident Energy (eV)
34-Se-78

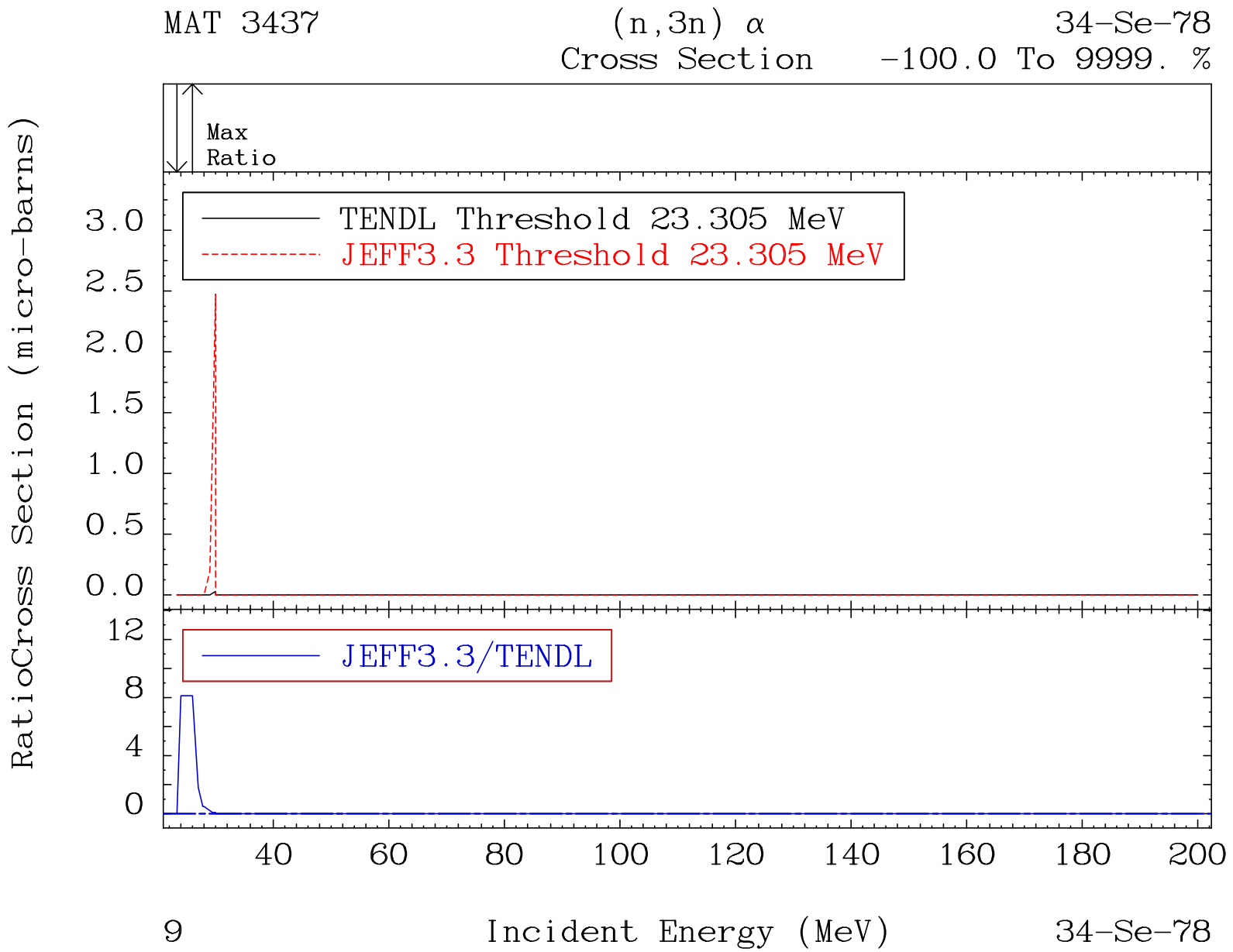

MAT 3437
(n,2n) d
Cross Section
34-Se-78
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 25.525 MeV
JEFF3.3 Threshold 25.525 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
60
50
40
30
20
10
0
6
4
2
0
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
34-Se-78

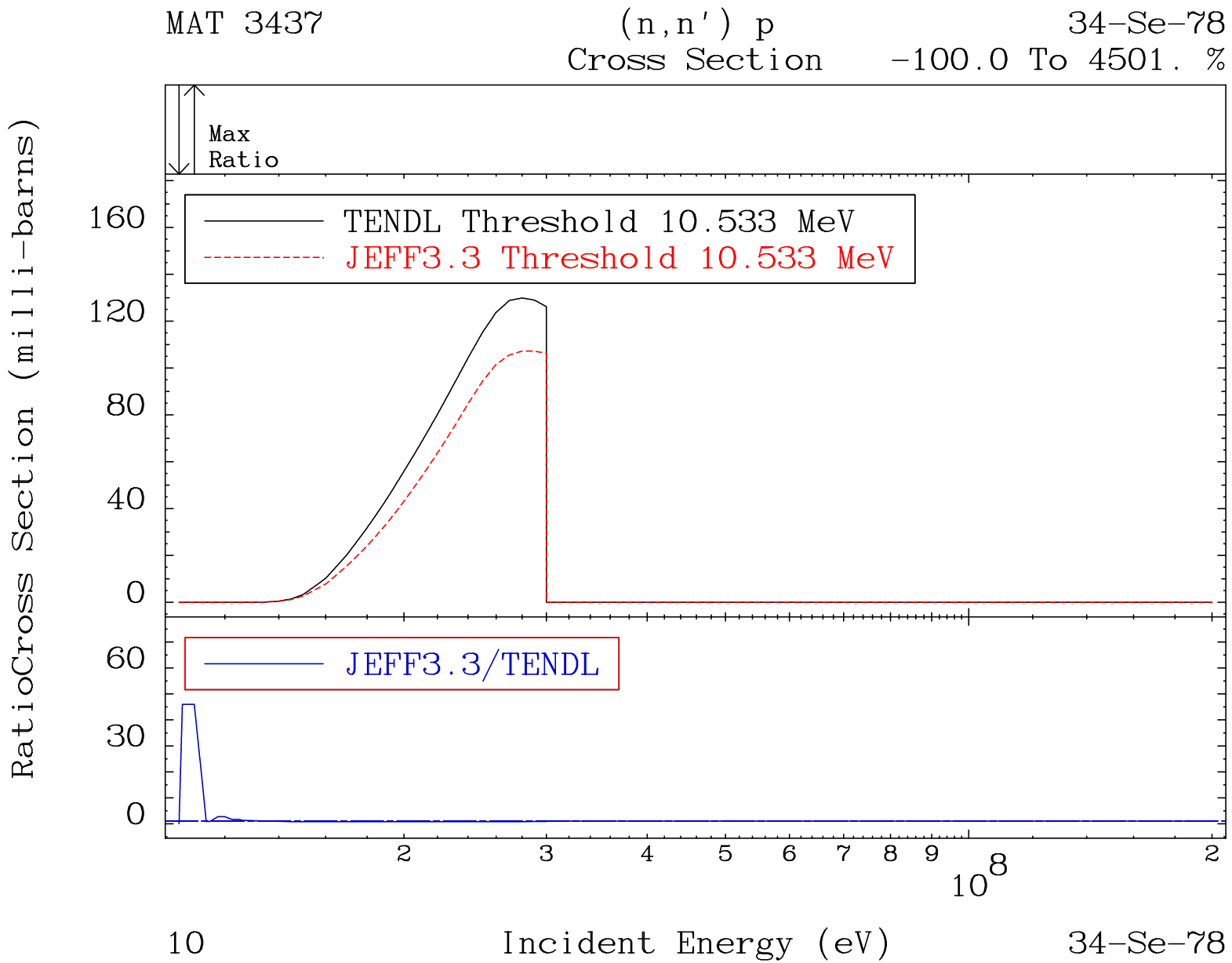

MAT 3437
(n,2n)
34-Se-78
Cross Section
-9.626 To 112.8 %
Max Ratio
Min Ratio
TENDL Threshold 10.634 MeV
JEFF3.3 Threshold 10.634 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.0
1.0
2
3
4
5
6
7
8
9
2
10^8
Incident Energy (eV)
5
34-Se-78

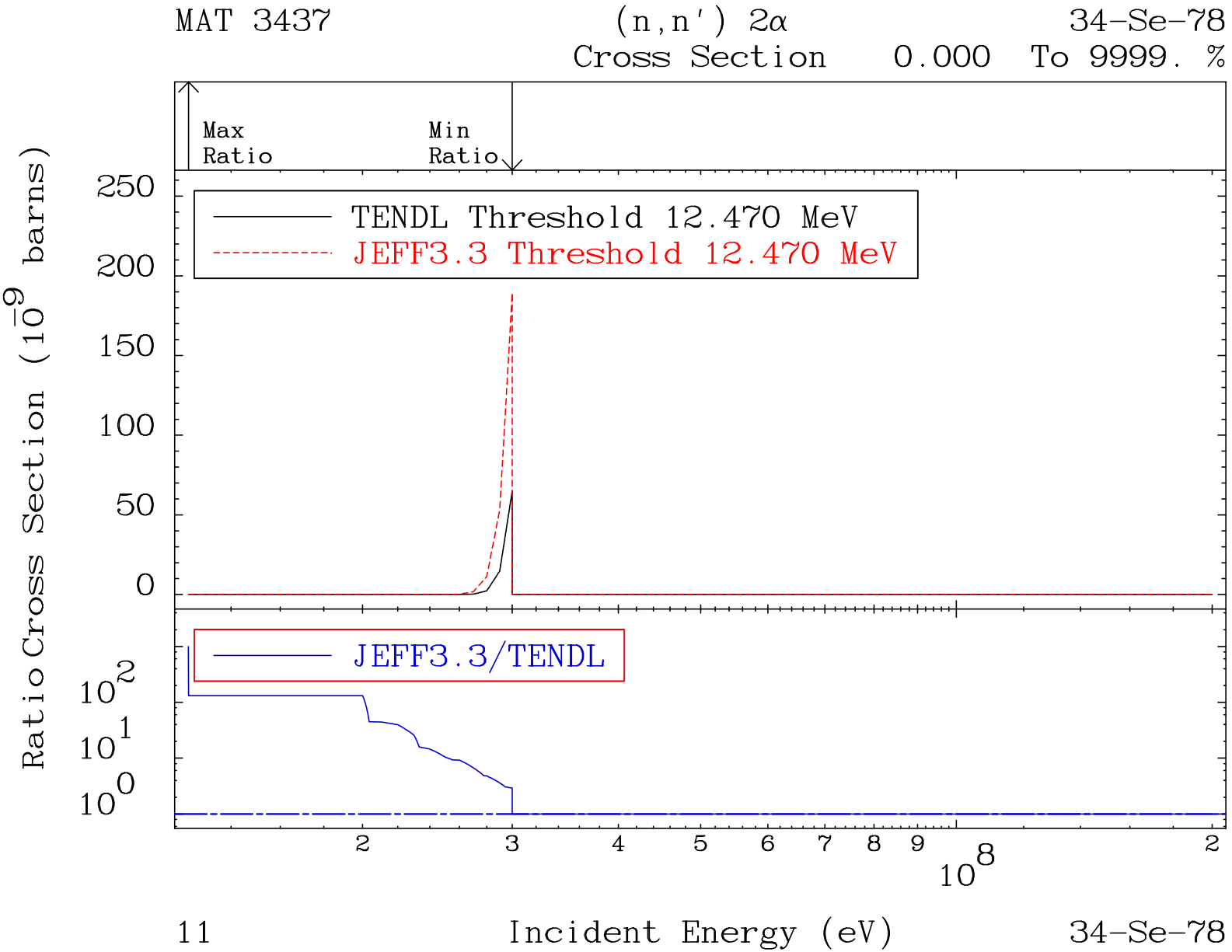

MAT 3437
(n,3n)
34-Se-78
Cross Section 0.000 To 391.1 %
Max Ratio
Min Ratio
TENDL Threshold 18.149 MeV
JEFF3.3 Threshold 18.149 MeV
600
400
200
0
JEFF3.3/TENDL
6
4
2
2
3
4
5
6
7
8
9
10^8
2
RatioCross Section (milli-barns)
6
Incident Energy (eV)
34-Se-78

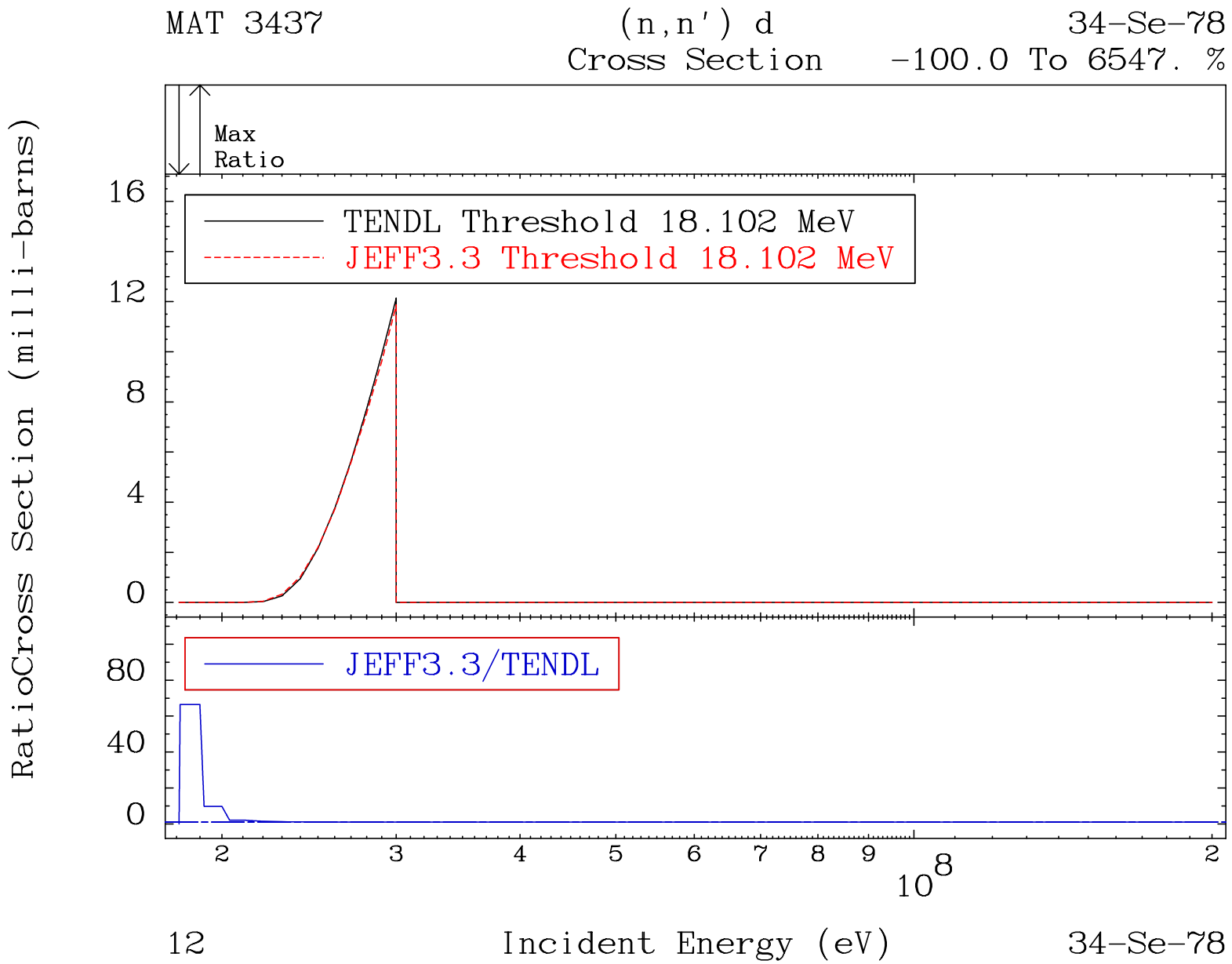

MAT 3437
(n,n') α
Cross Section
34-Se-78
-99.65 To 3761. %
Min Ratio
Max Ratio
TENDL Threshold 6.1065 MeV
JEFF3.3 Threshold 6.1065 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
34-Se-78
7

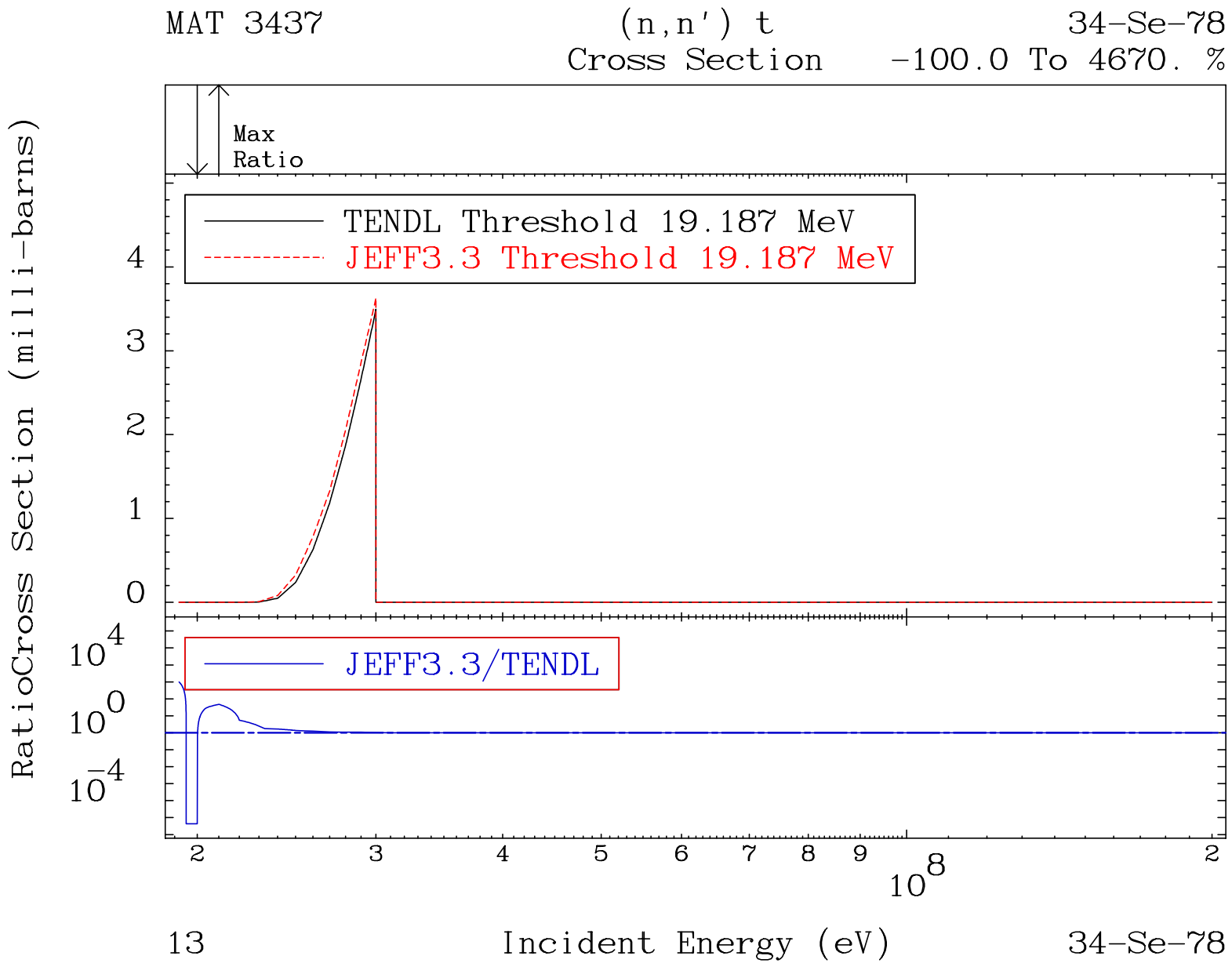

MAT 3437
(n,2n) α
34-Se-78
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 16.435 MeV
JEFF3.3 Threshold 16.435 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
800
400
0
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
34-Se-78

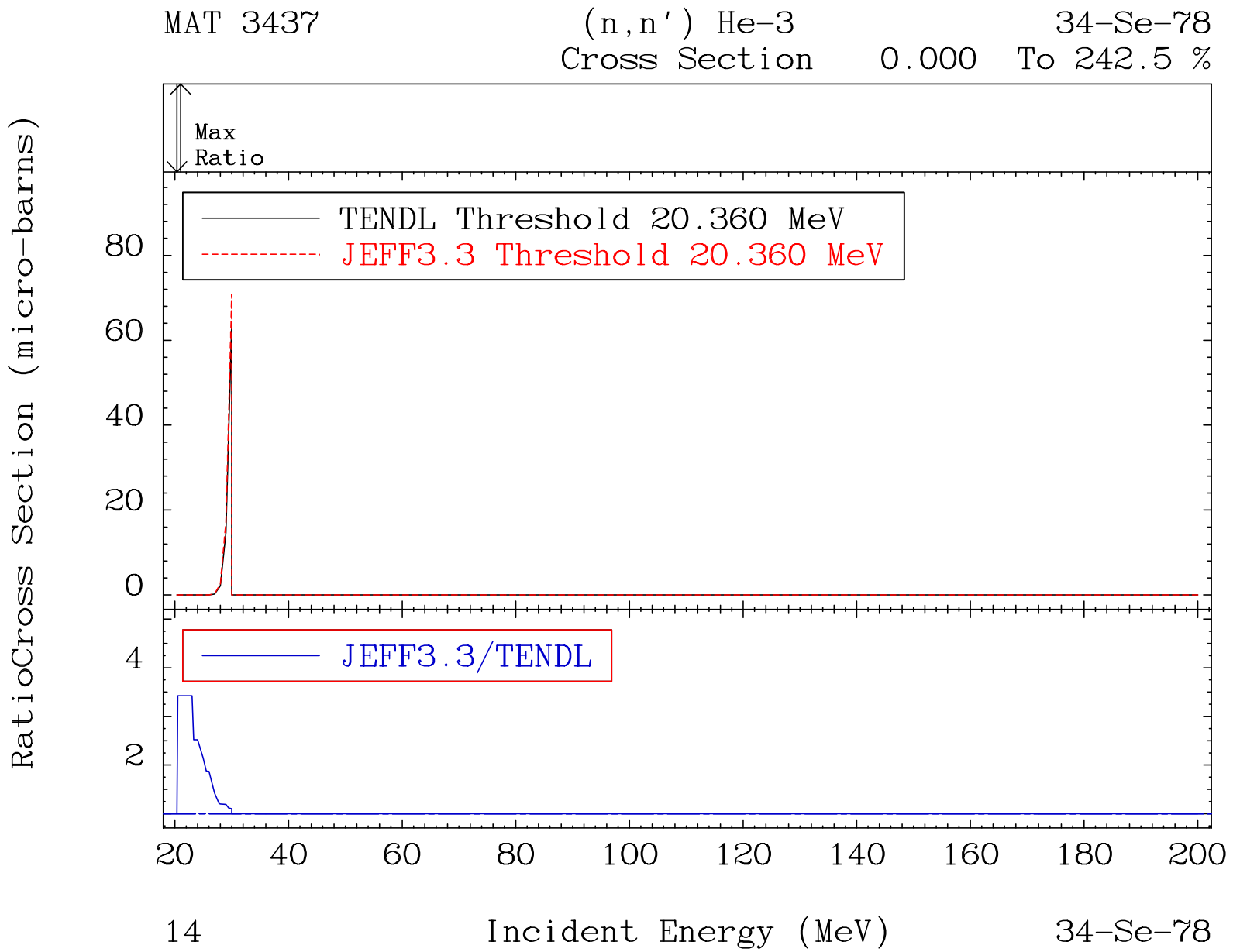

MAT 3437
(n,3n) α
34-Se-78
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 23.305 MeV
JEFF3.3 Threshold 23.305 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
12
8
4
0
40
60
80
100
120
140
160
180
200
9
Incident Energy (MeV)
34-Se-78

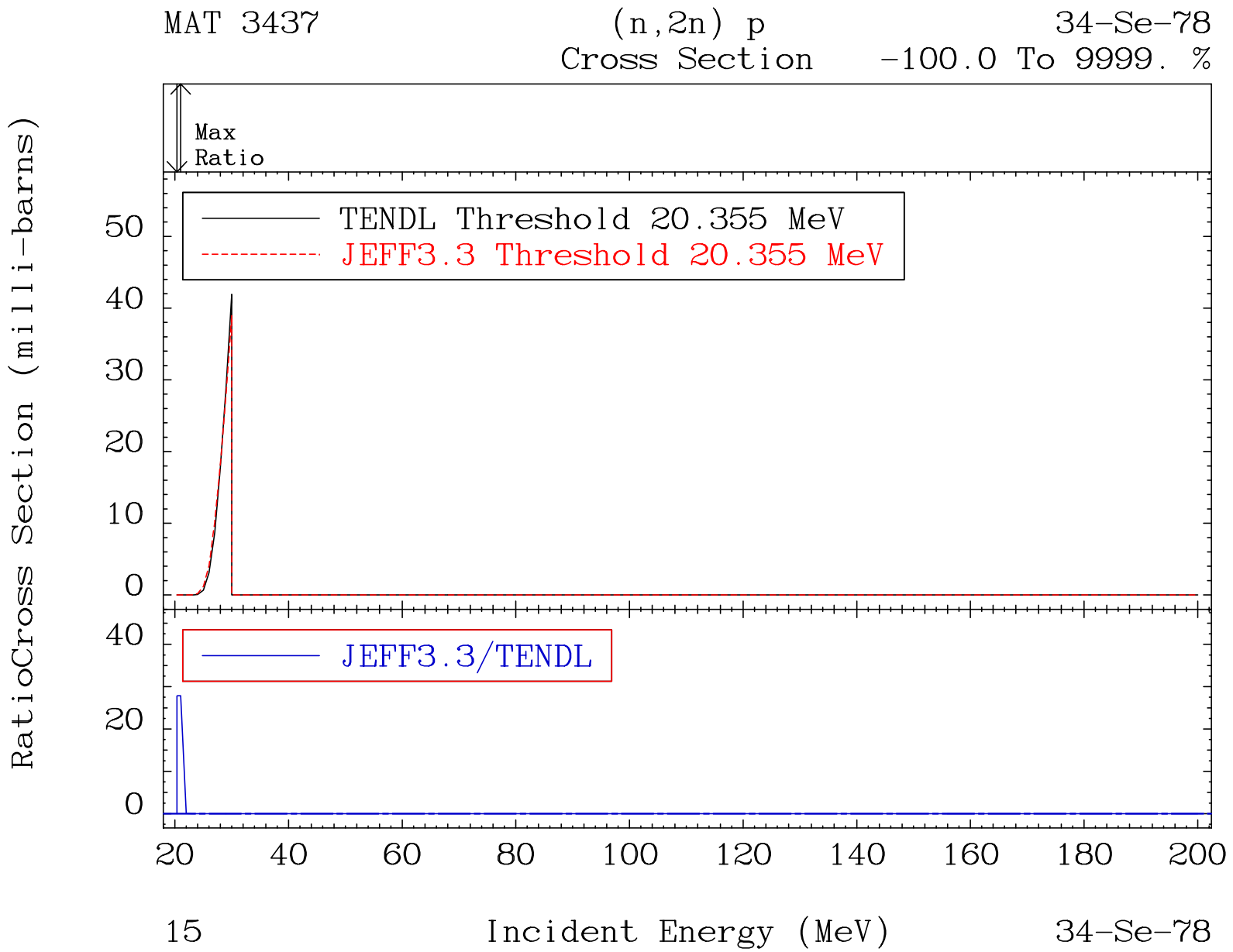

MAT 3437
(n,n') p
Cross Section
34-Se-78
-100.0 To 4501. %
Max
Ratio
TENDL Threshold 10.533 MeV
JEFF3.3 Threshold 10.533 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
60
30
0
2
3
4
5
6
7
8
9
2
10^8
10
Incident Energy (eV)
34-Se-78

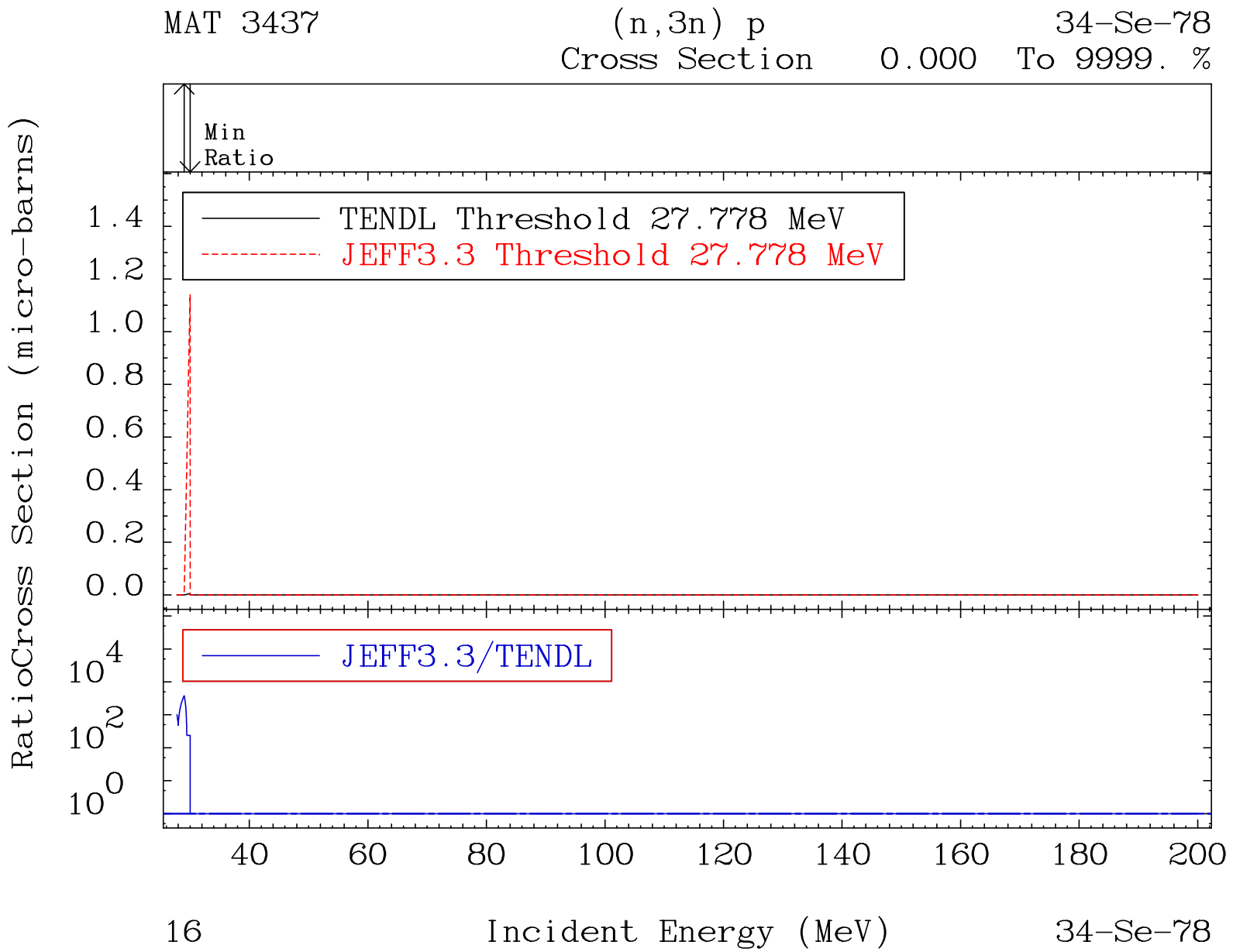

MAT 3437
(n,n') 2α
34-Se-78
Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 12.470 MeV
JEFF3.3 Threshold 12.470 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
250
200
150
100
50
0
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
34-Se-78

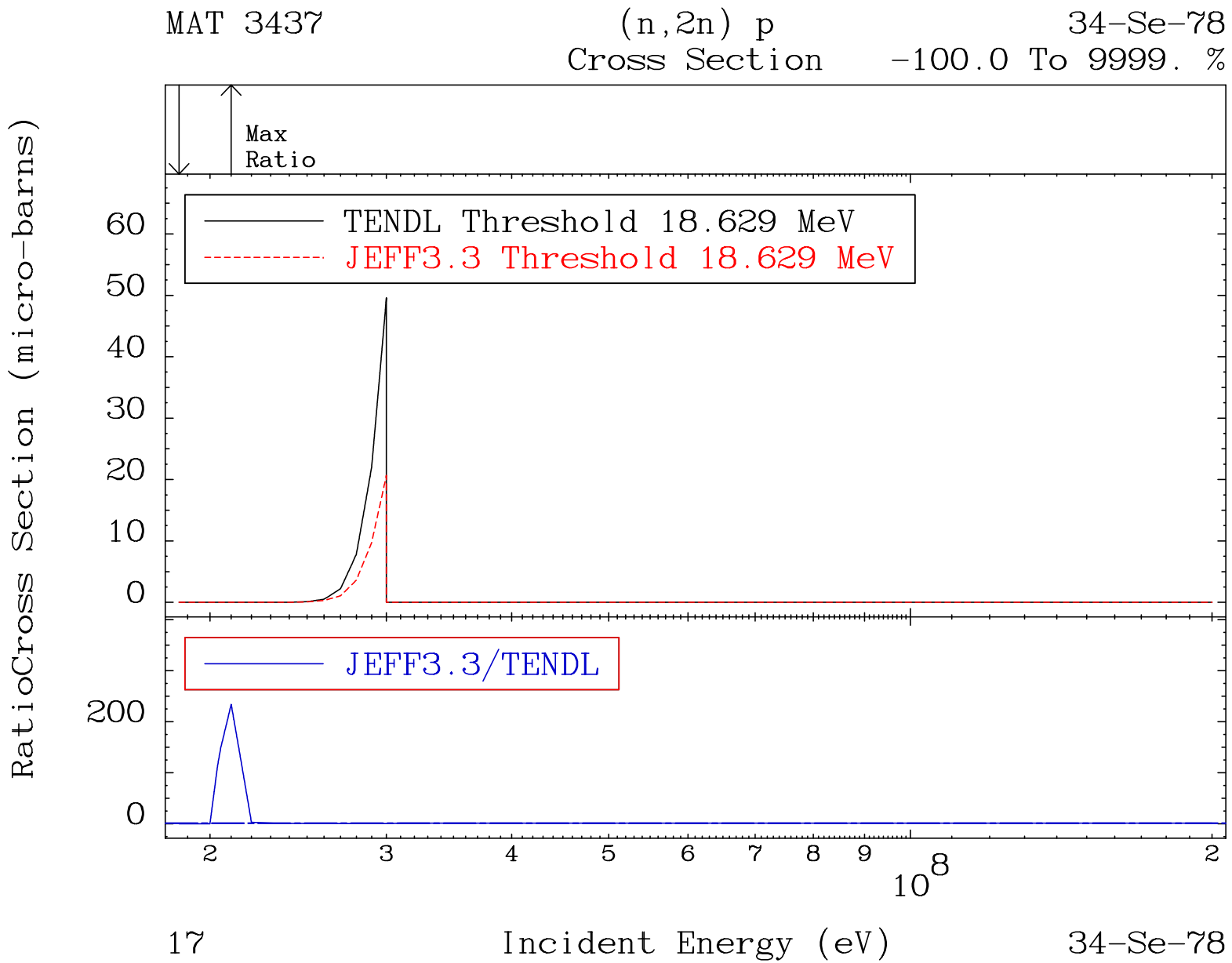

MAT 3437
(n,n') d
Cross Section
34-Se-78
-100.0 To 6547. %
Max
Ratio
TENDL Threshold 18.102 MeV
JEFF3.3 Threshold 18.102 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
80
40
0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
34-Se-78

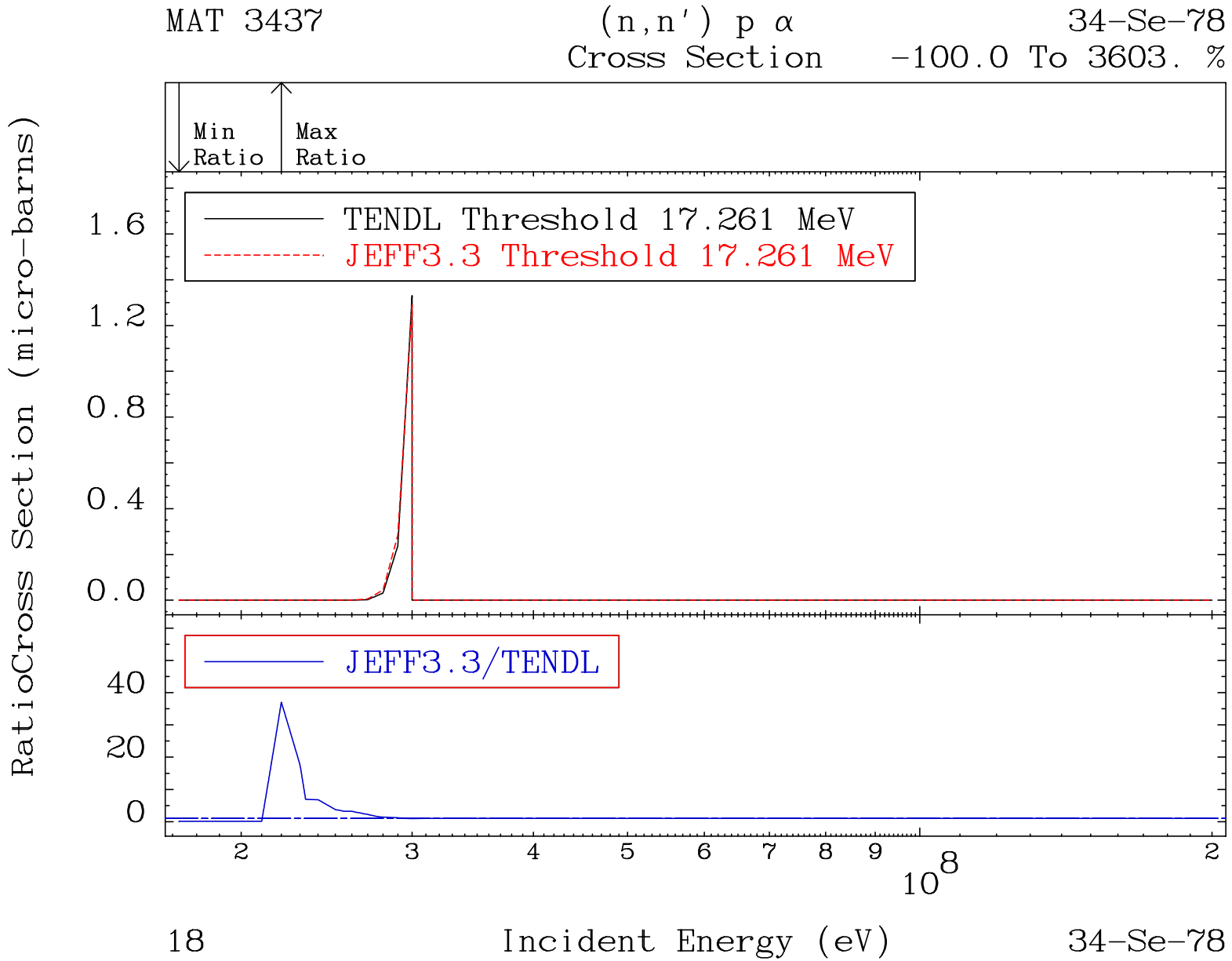

MAT 3437
(n,n') t
Cross Section
34-Se-78
-100.0 To 4670. %
Max
Ratio
TENDL Threshold 19.187 MeV
JEFF3.3 Threshold 19.187 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
13
34-Se-78

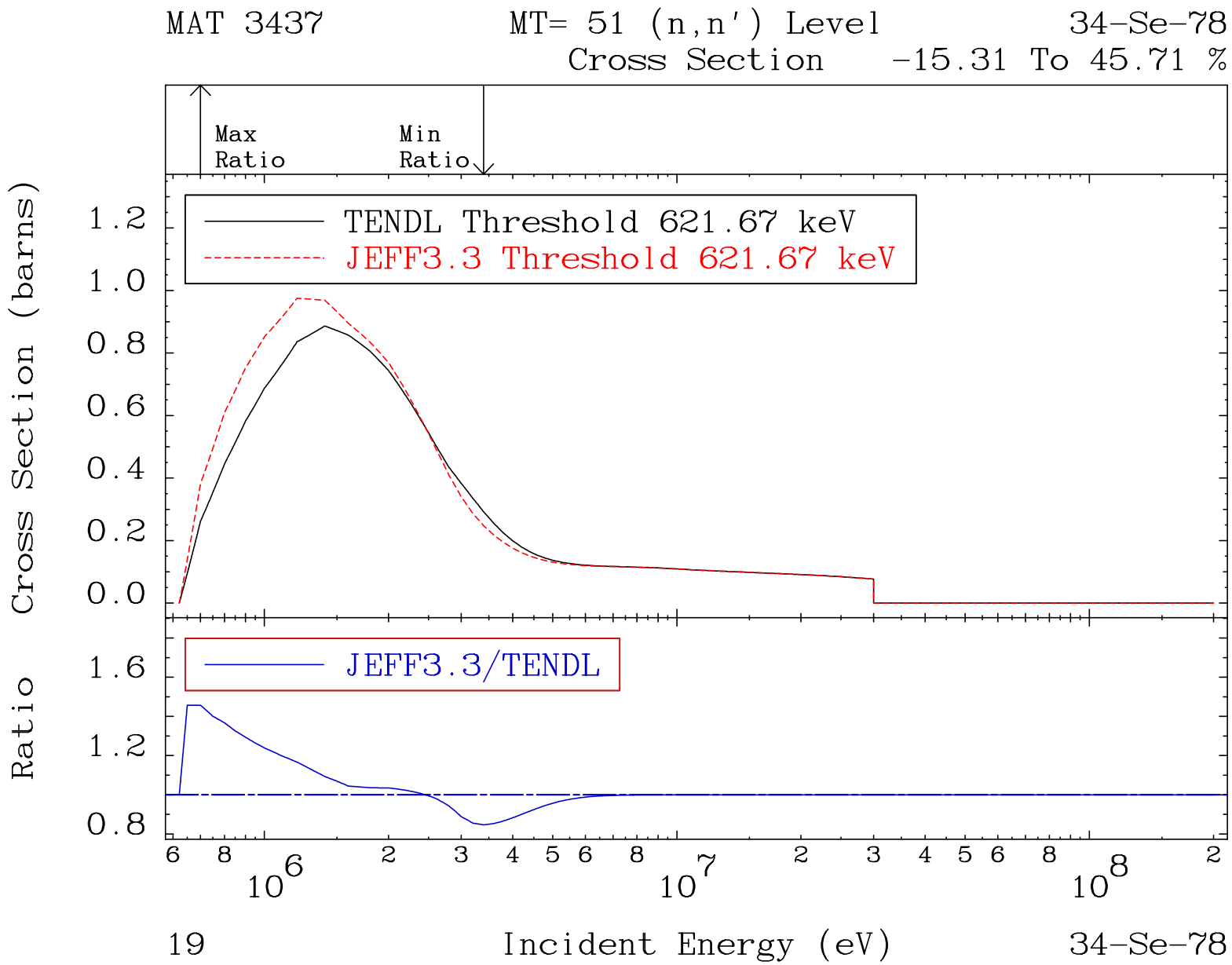

MAT 3437
(n,n') He-3
34-Se-78
Cross Section 0.000 To 242.5 %
Max
Ratio
TENDL Threshold 20.360 MeV
JEFF3.3 Threshold 20.360 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
80
60
40
20
0
4
2
20
40
60
80
100
120
140
160
180
200
14
Incident Energy (MeV)
34-Se-78

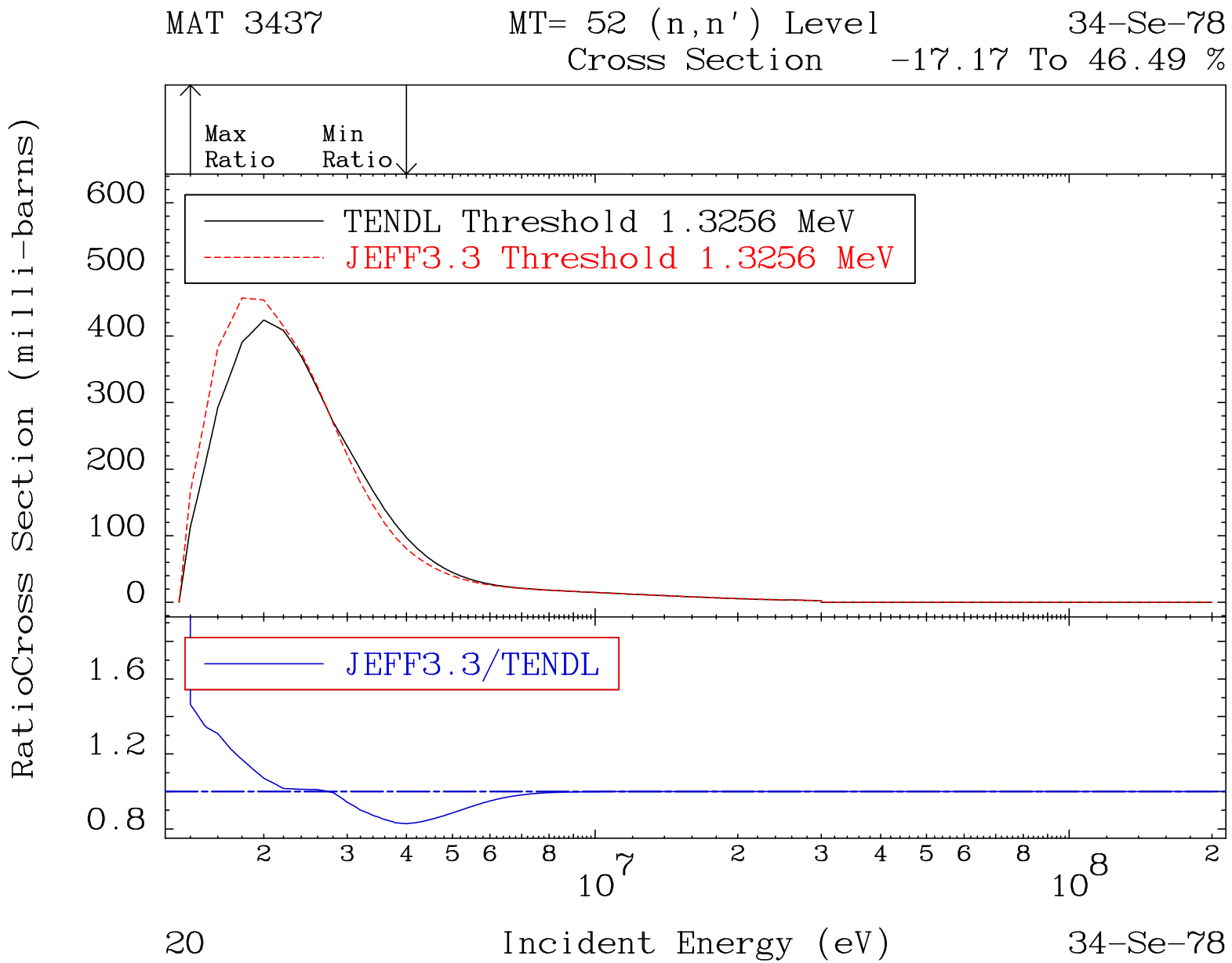

MAT 3437
(n,2n) p
34-Se-78
Cross Section
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 20.355 MeV
JEFF3.3 Threshold 20.355 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
40
20
0
20
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
34-Se-78

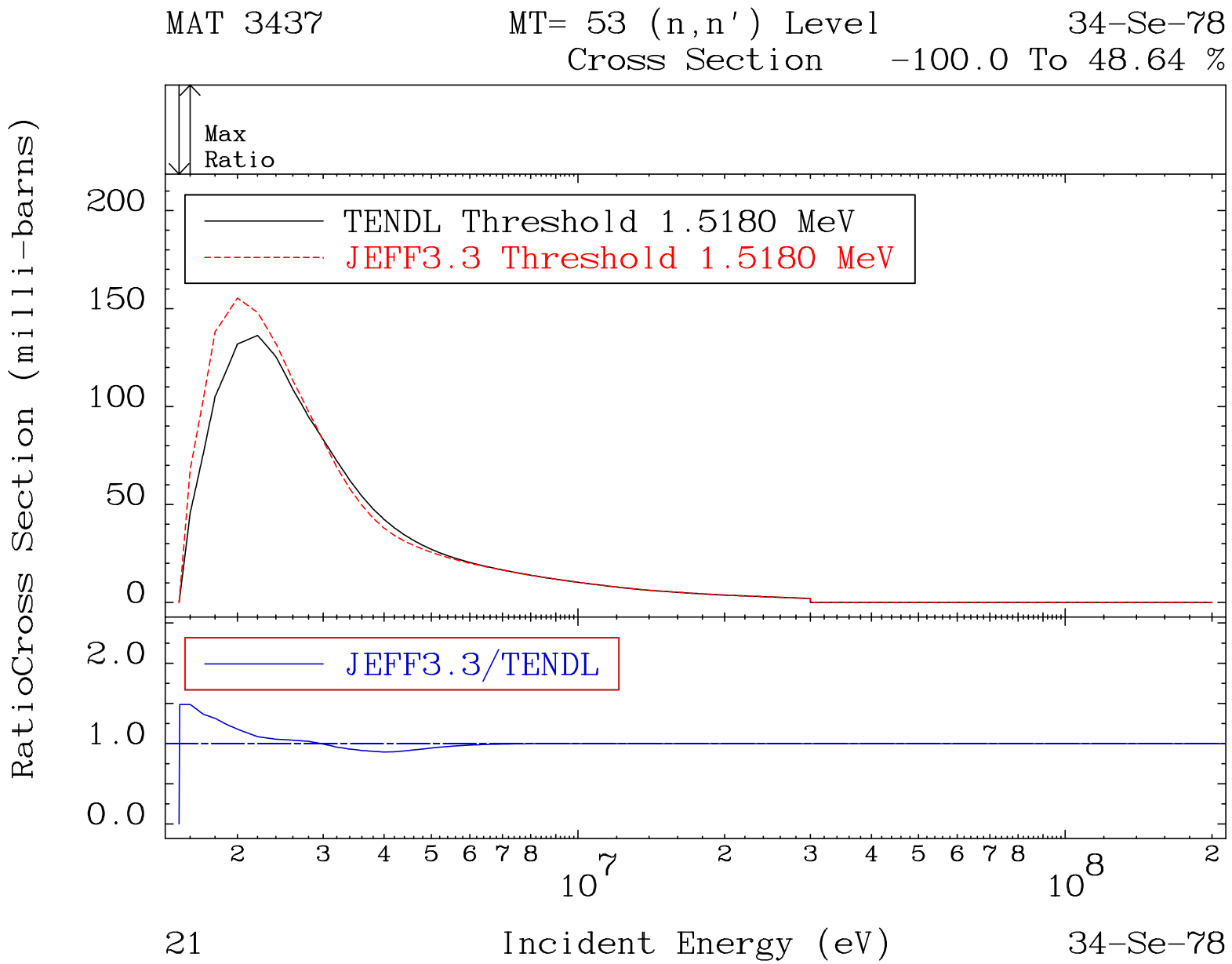

MAT 3437
(n,3n) p
34-Se-78
Cross Section 0.000 To 9999. %
Min
Ratio
TENDL Threshold 27.778 MeV
JEFF3.3 Threshold 27.778 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
10^4
10^2
10^0
40
60
80
100
120
140
160
180
200
16
Incident Energy (MeV)
34-Se-78

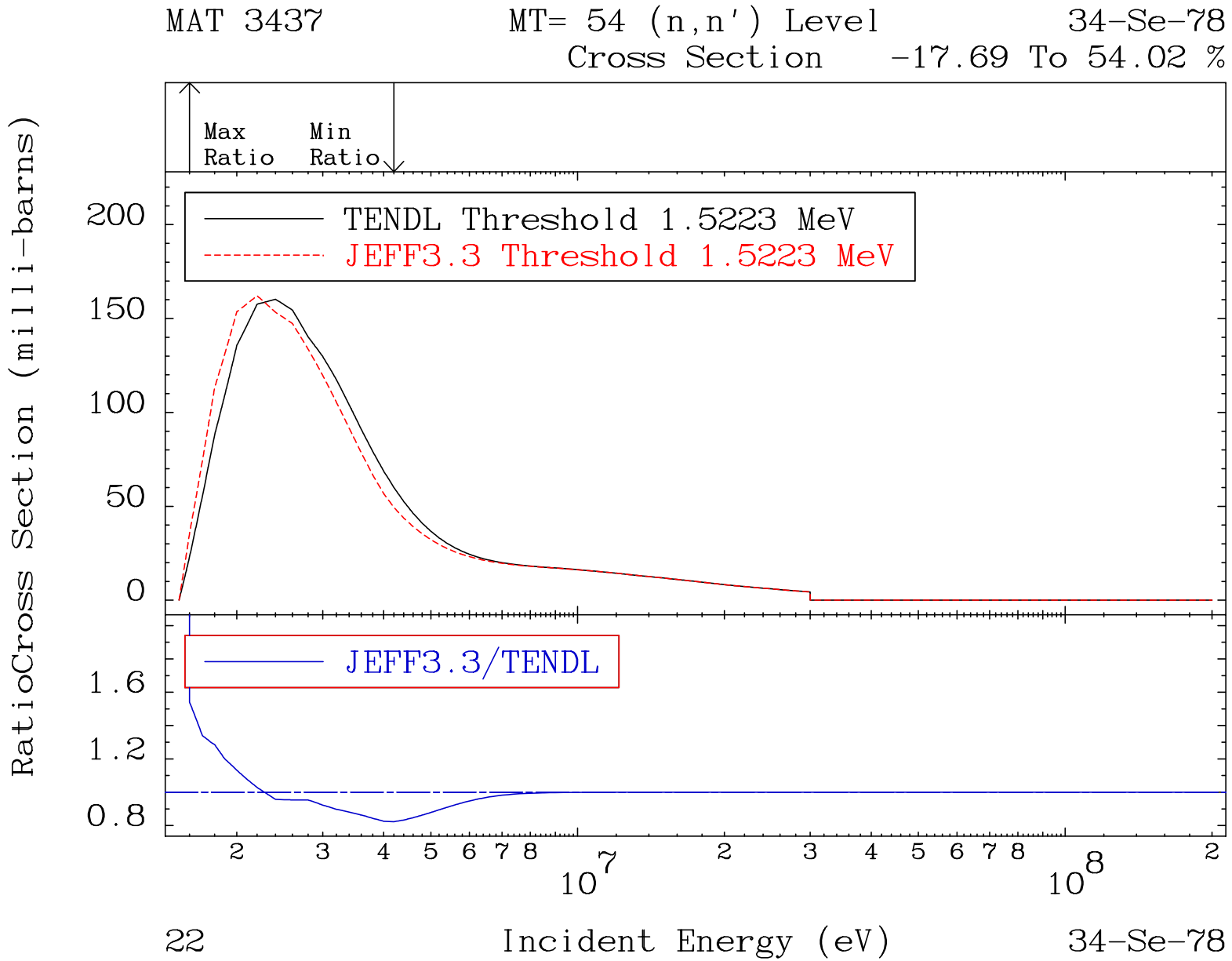

MAT 3437
(n,2n) p
Cross Section
34-Se-78
-100.0 To 9999. %
Max
Ratio
TENDL Threshold 18.629 MeV
JEFF3.3 Threshold 18.629 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
60
50
40
30
20
10
0
200
0
2
3
4
5
6
7
8
9
10^8
2
17
Incident Energy (eV)
34-Se-78

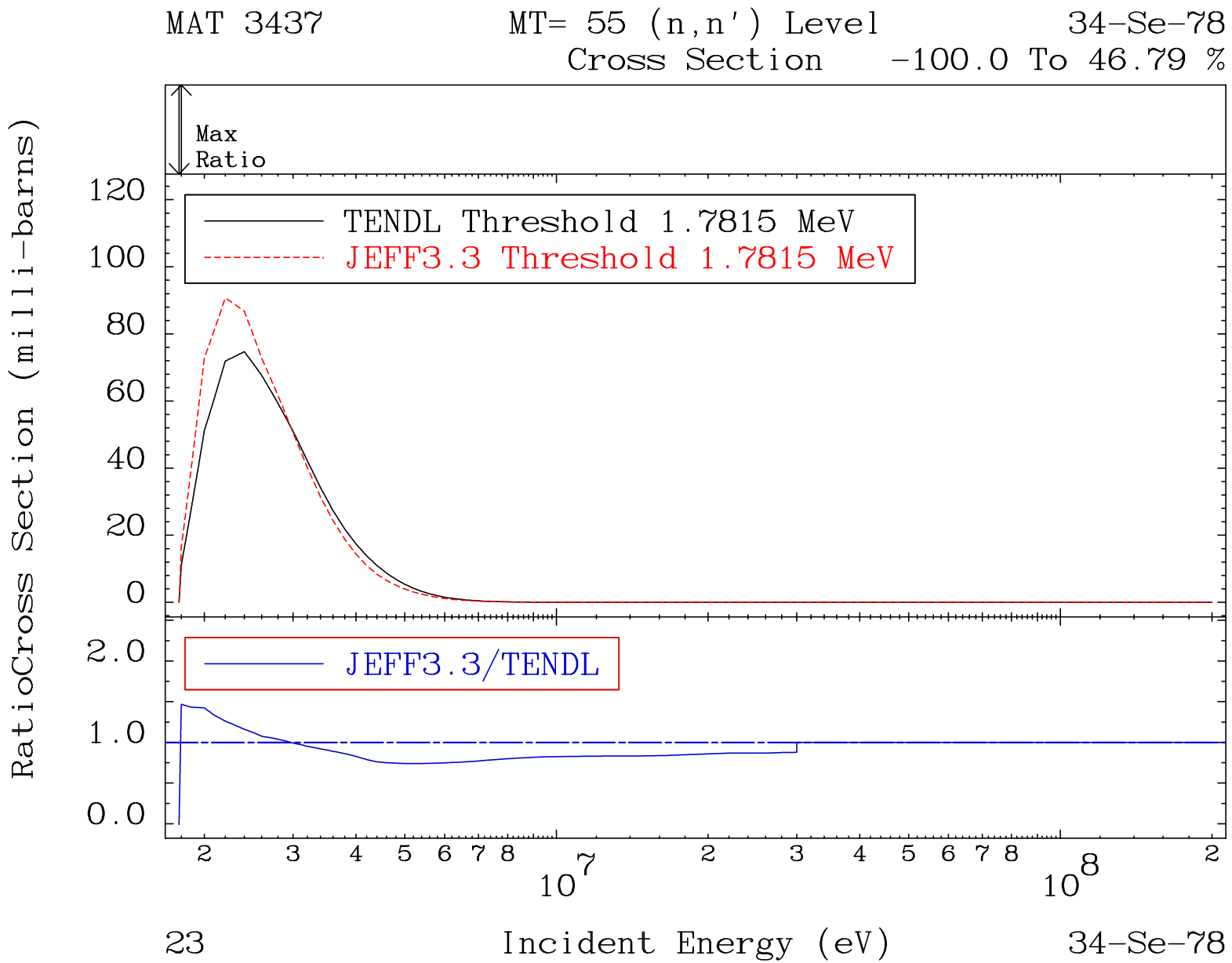

MAT 3437
(n,n') p α
34-Se-78
Cross Section
-100.0 To 3603. %
Min Ratio
Max Ratio
TENDL Threshold 17.261 MeV
JEFF3.3 Threshold 17.261 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
1.6
1.2
0.8
0.4
0.0
40
20
0
2
3
4
5
6
7
8
9
10^8
2
18
Incident Energy (eV)
34-Se-78

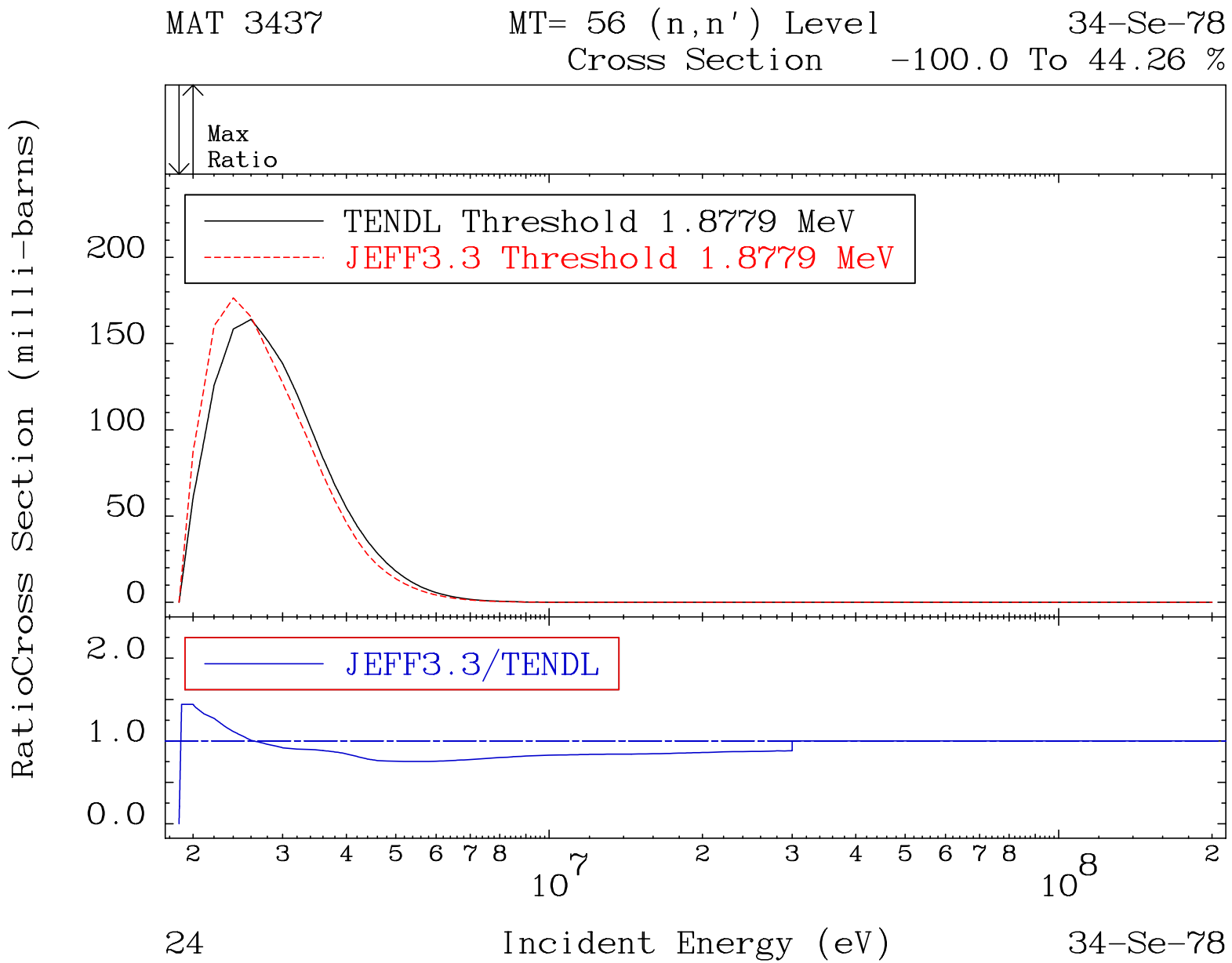

MAT 3437
MT= 51 (n,n') Level
34-Se-78
Cross Section
-15.31 To 45.71 %
Max Ratio
Min Ratio
TENDL Threshold 621.67 keV
JEFF3.3 Threshold 621.67 keV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1.6
1.2
0.8
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
19
Incident Energy (eV)
34-Se-78

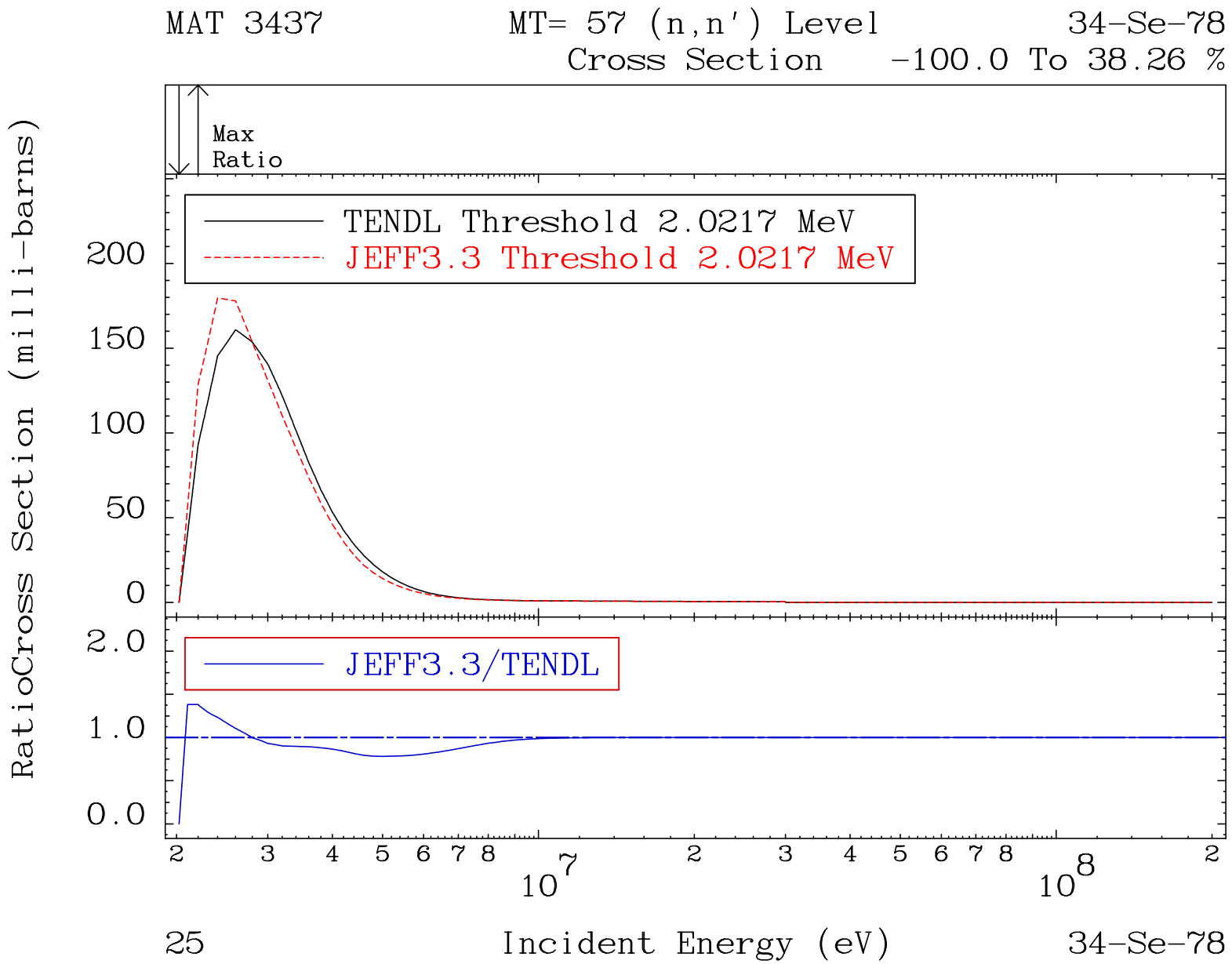

MAT 3437
MT= 52 (n,n') Level
34-Se-78
Cross Section -17.17 To 46.49 %
Max Ratio
Min Ratio
TENDL Threshold 1.3256 MeV
JEFF3.3 Threshold 1.3256 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
600
500
400
300
200
100
0
1.6
1.2
0.8
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
20
Incident Energy (eV)
34-Se-78

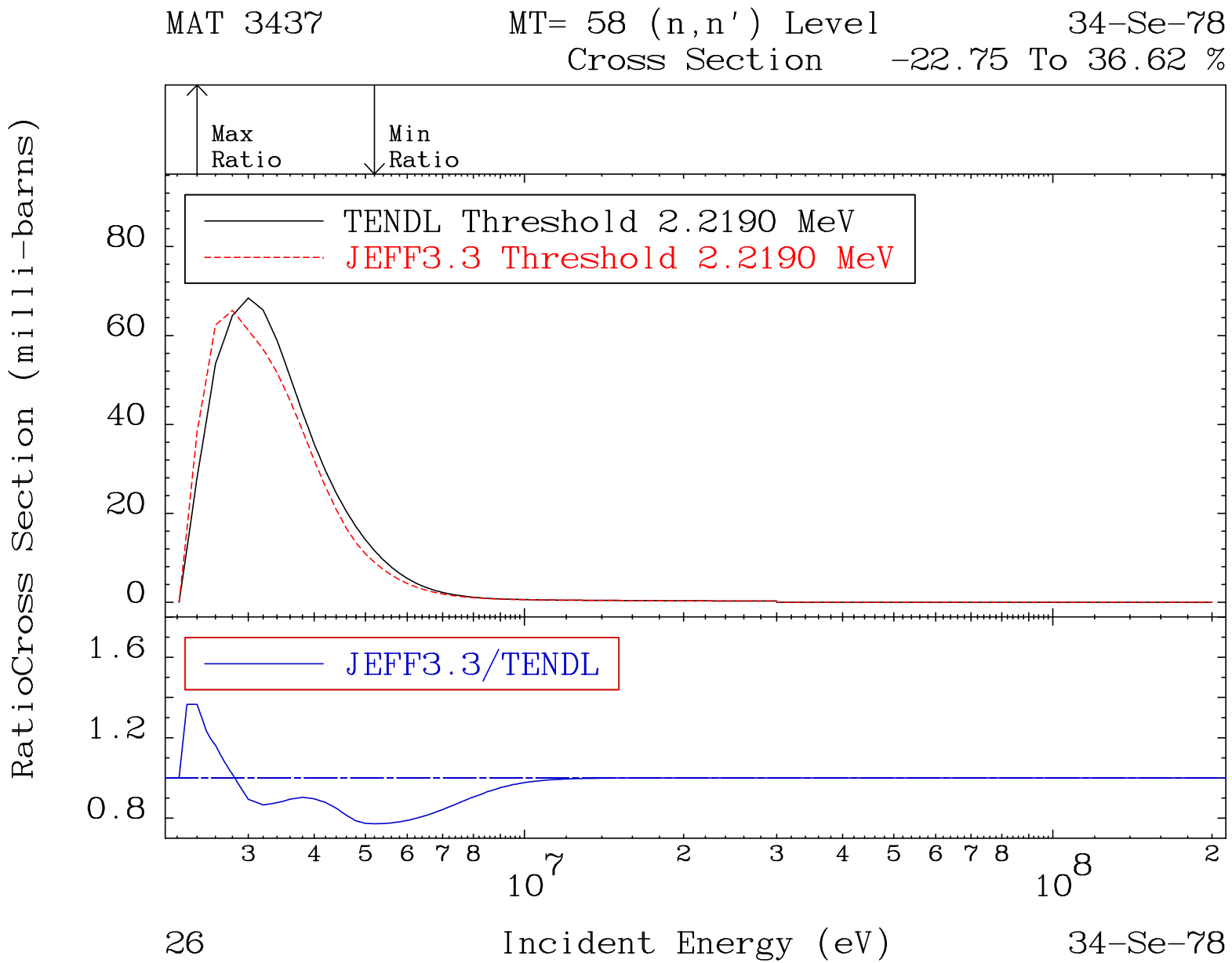

MAT 3437
MT= 53 (n,n') Level
34-Se-78
Cross Section -100.0 To 48.64 %
Max
Ratio
TENDL Threshold 1.5180 MeV
JEFF3.3 Threshold 1.5180 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
21
Incident Energy (eV)
34-Se-78

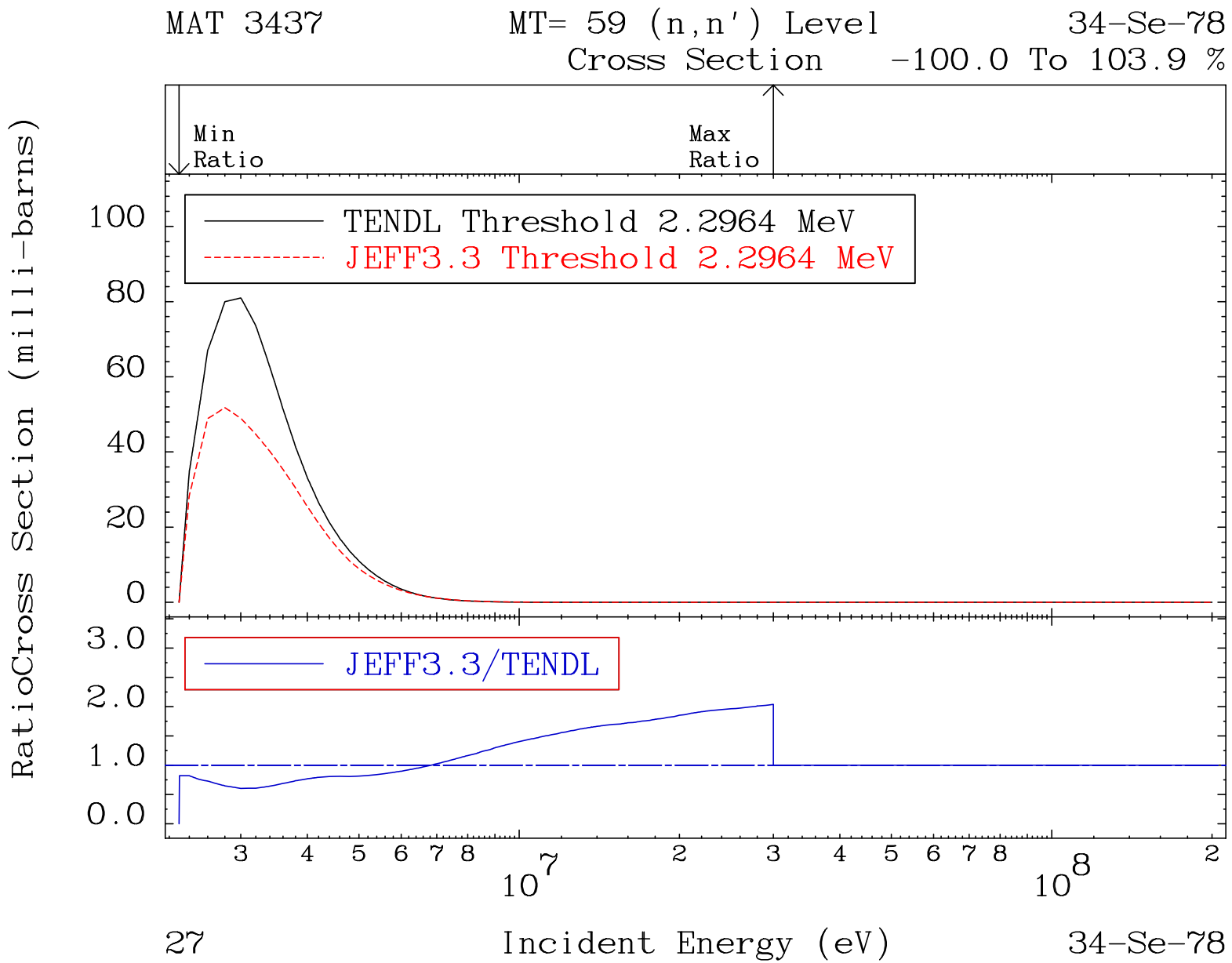

MAT 3437
MT= 54 (n,n') Level
34-Se-78
Cross Section
-17.69 To 54.02 %
Max Ratio
Min Ratio
TENDL Threshold 1.5223 MeV
JEFF3.3 Threshold 1.5223 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
1.6
1.2
0.8
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
22
Incident Energy (eV)
34-Se-78

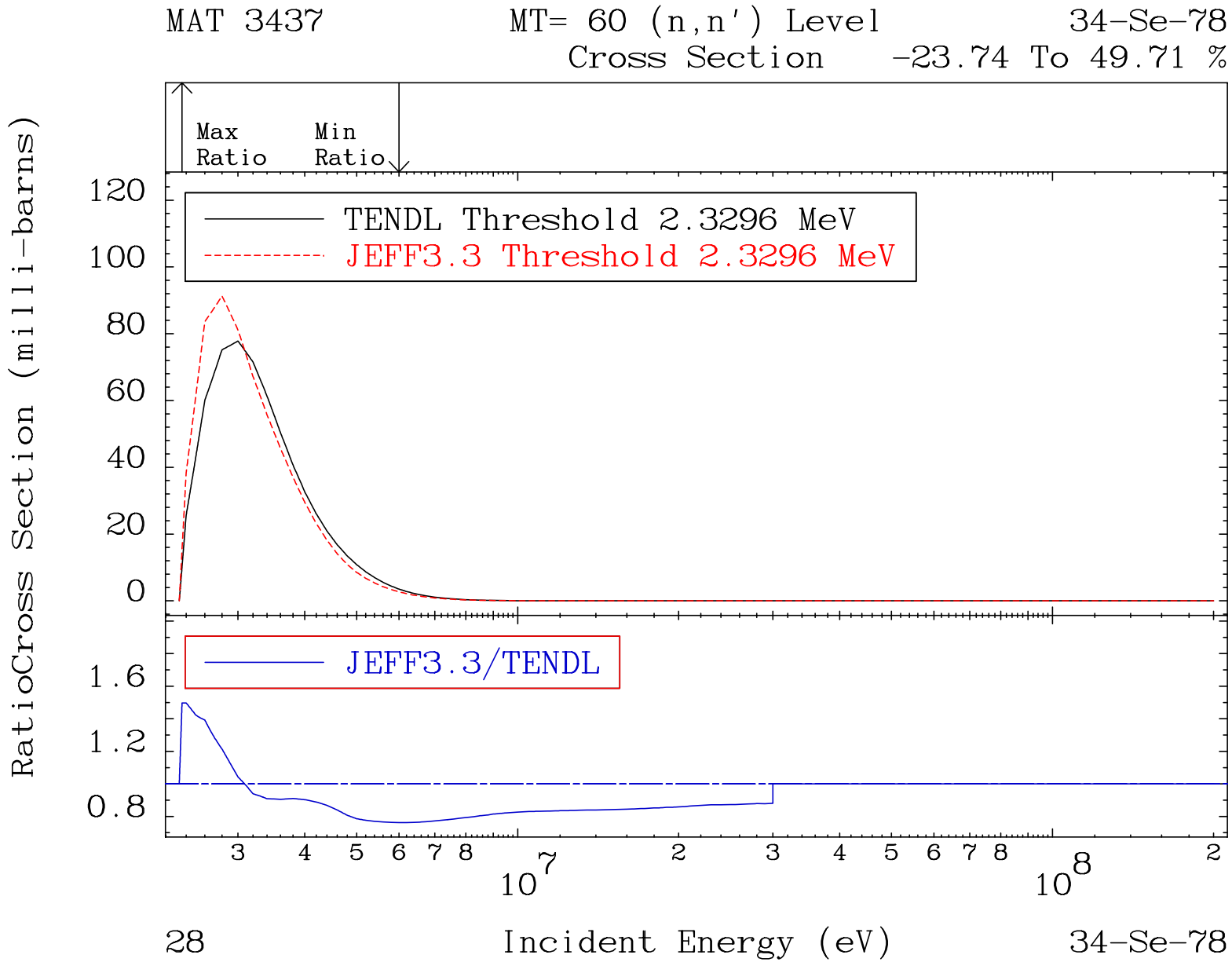

MAT 3437
MT= 55 (n,n') Level
34-Se-78
Cross Section -100.0 To 46.79 %
Max
Ratio
TENDL Threshold 1.7815 MeV
JEFF3.3 Threshold 1.7815 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
23
Incident Energy (eV)
34-Se-78

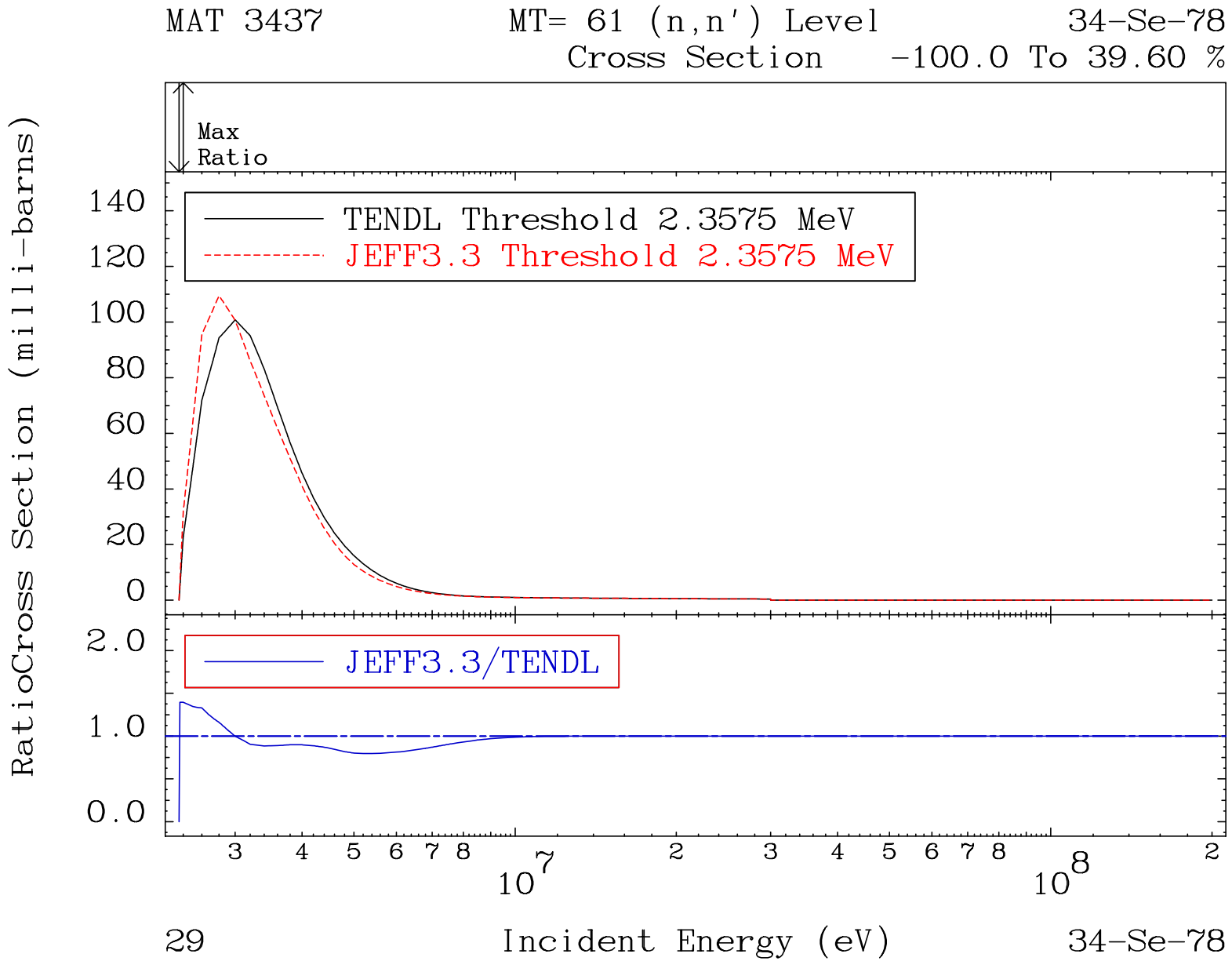

MAT 3437
MT= 56 (n,n') Level
34-Se-78
Cross Section
-100.0 To 44.26 %
Max
Ratio
TENDL Threshold 1.8779 MeV
JEFF3.3 Threshold 1.8779 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
34-Se-78

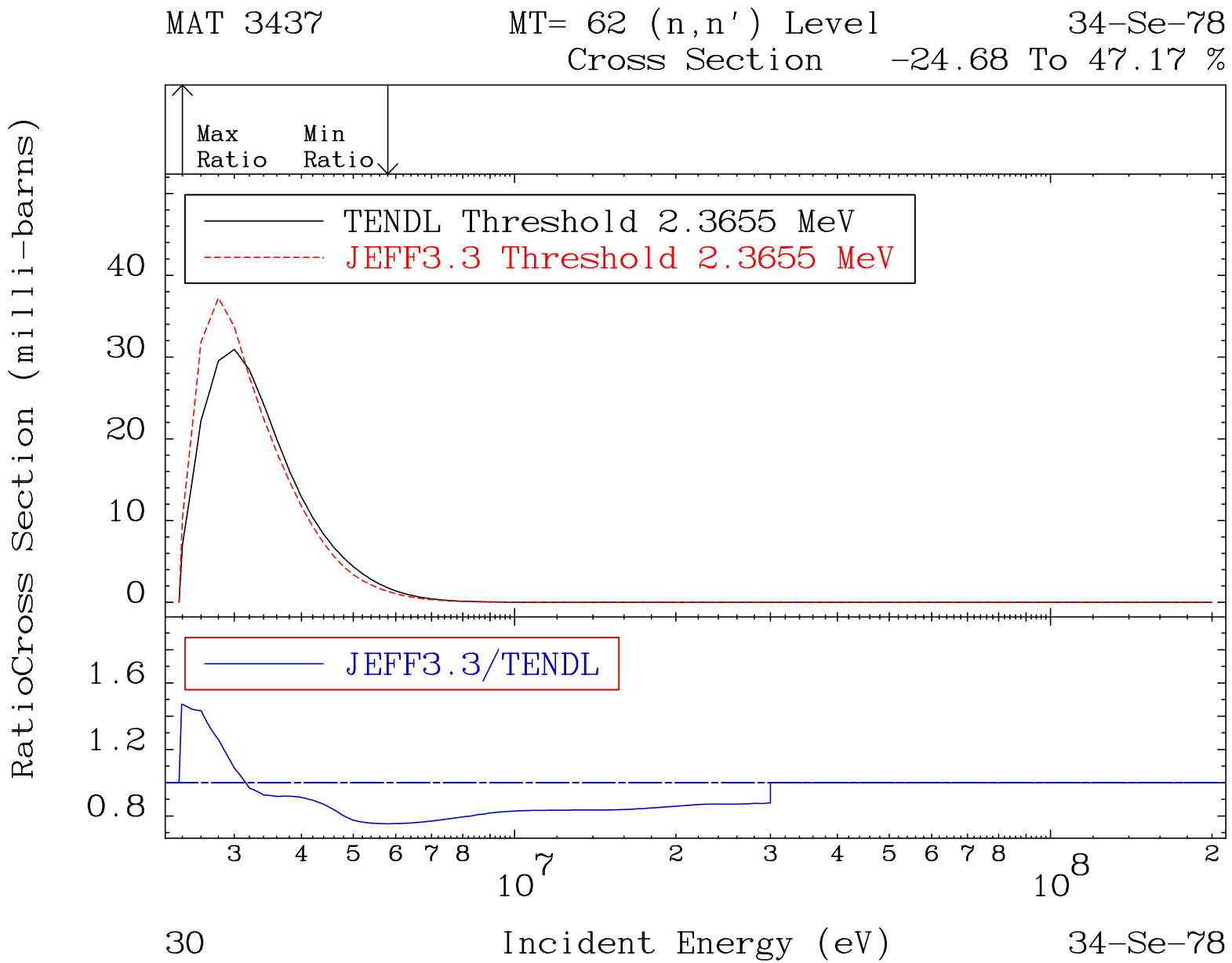

MAT 3437
MT= 57 (n,n') Level
34-Se-78
Cross Section
-100.0 To 38.26 %
Max
Ratio
TENDL Threshold 2.0217 MeV
JEFF3.3 Threshold 2.0217 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
34-Se-78

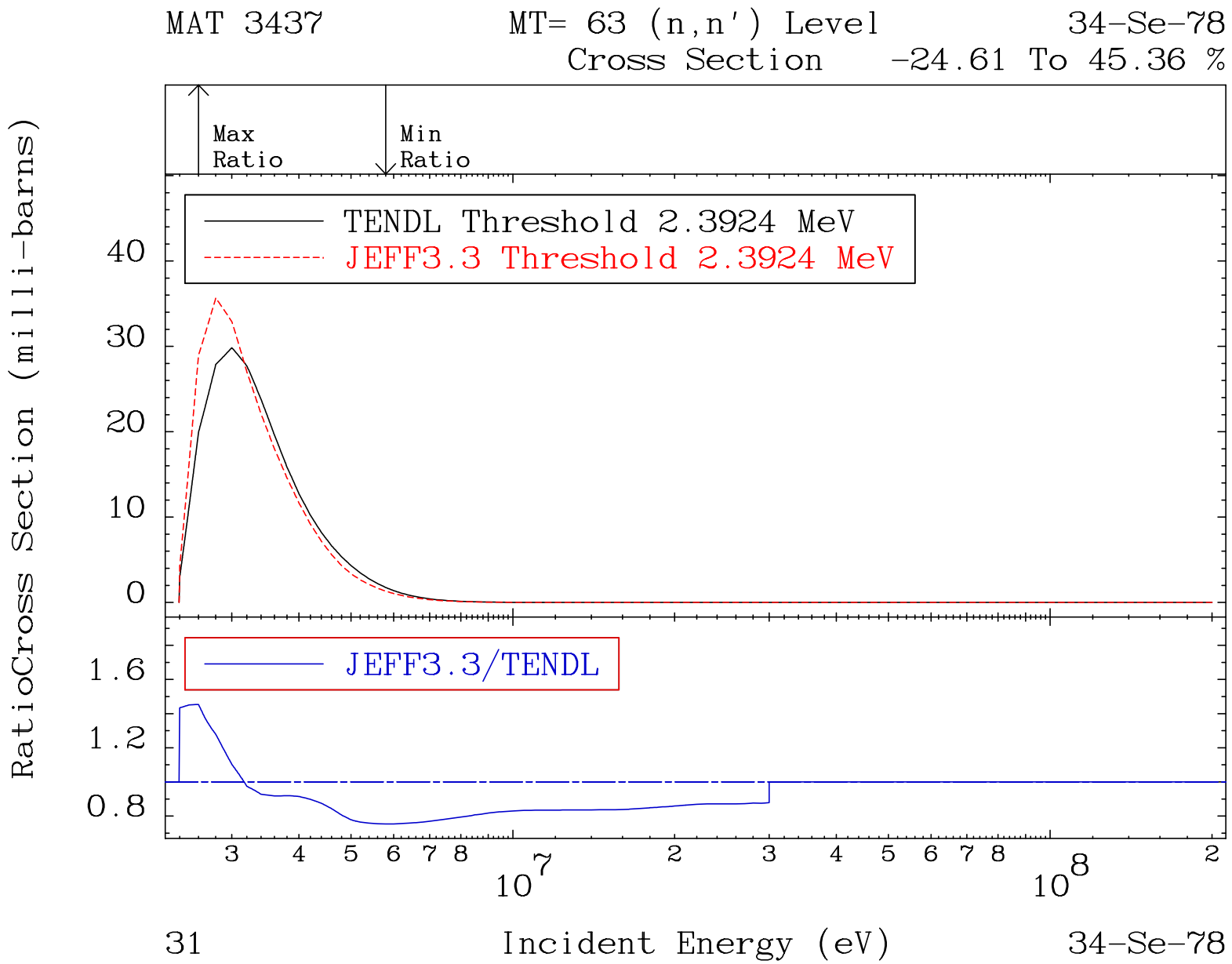

MAT 3437
MT= 58 (n,n') Level
34-Se-78
Cross Section
-22.75 To 36.62 %
Max Ratio
Min Ratio
TENDL Threshold 2.2190 MeV
JEFF3.3 Threshold 2.2190 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.6
1.2
0.8
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
34-Se-78

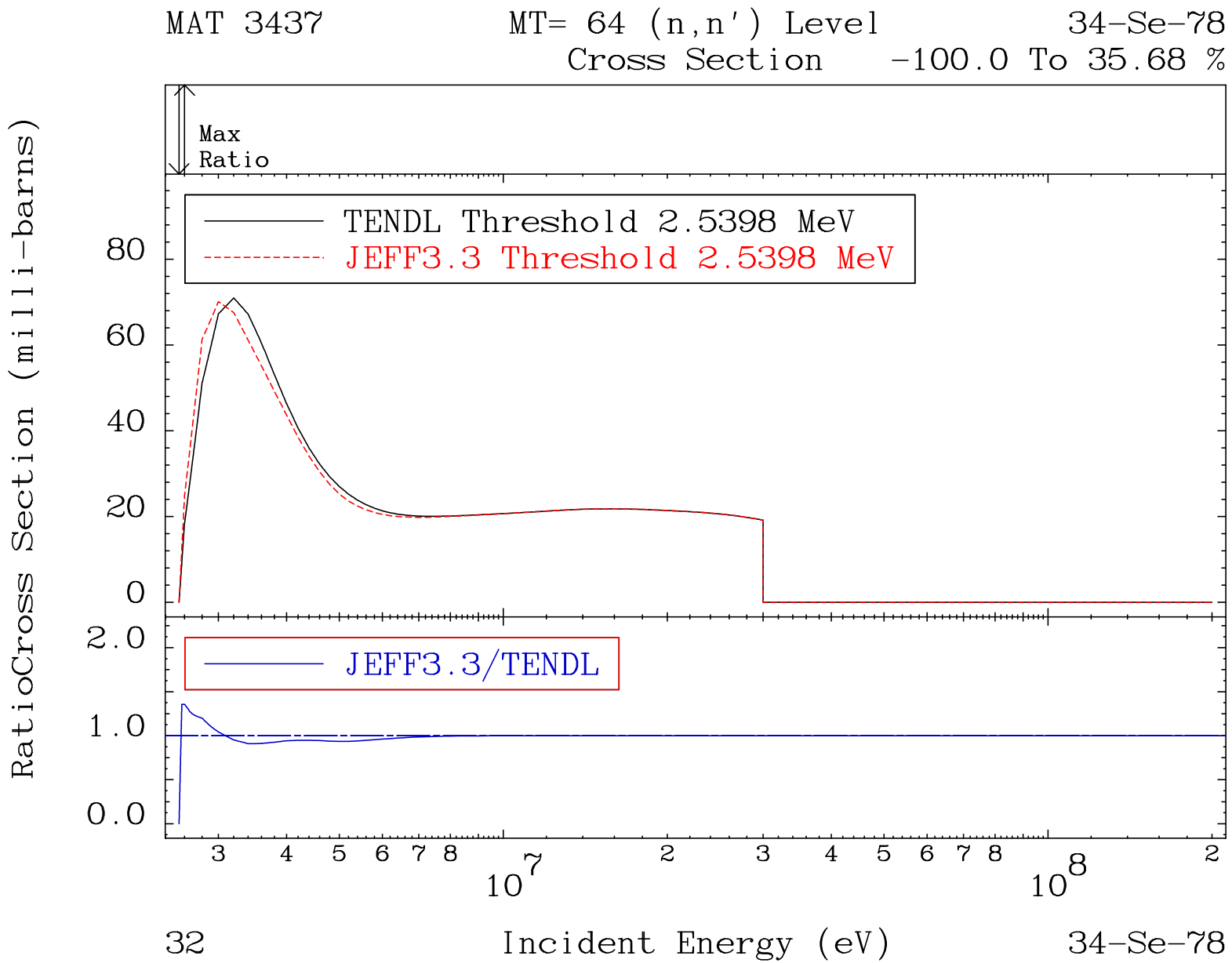

MAT 3437
MT= 59 (n,n') Level
34-Se-78
Cross Section -100.0 To 103.9 %
Min Ratio
Max Ratio
TENDL Threshold 2.2964 MeV
JEFF3.3 Threshold 2.2964 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
3.0
2.0
1.0
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
27
Incident Energy (eV)
34-Se-78

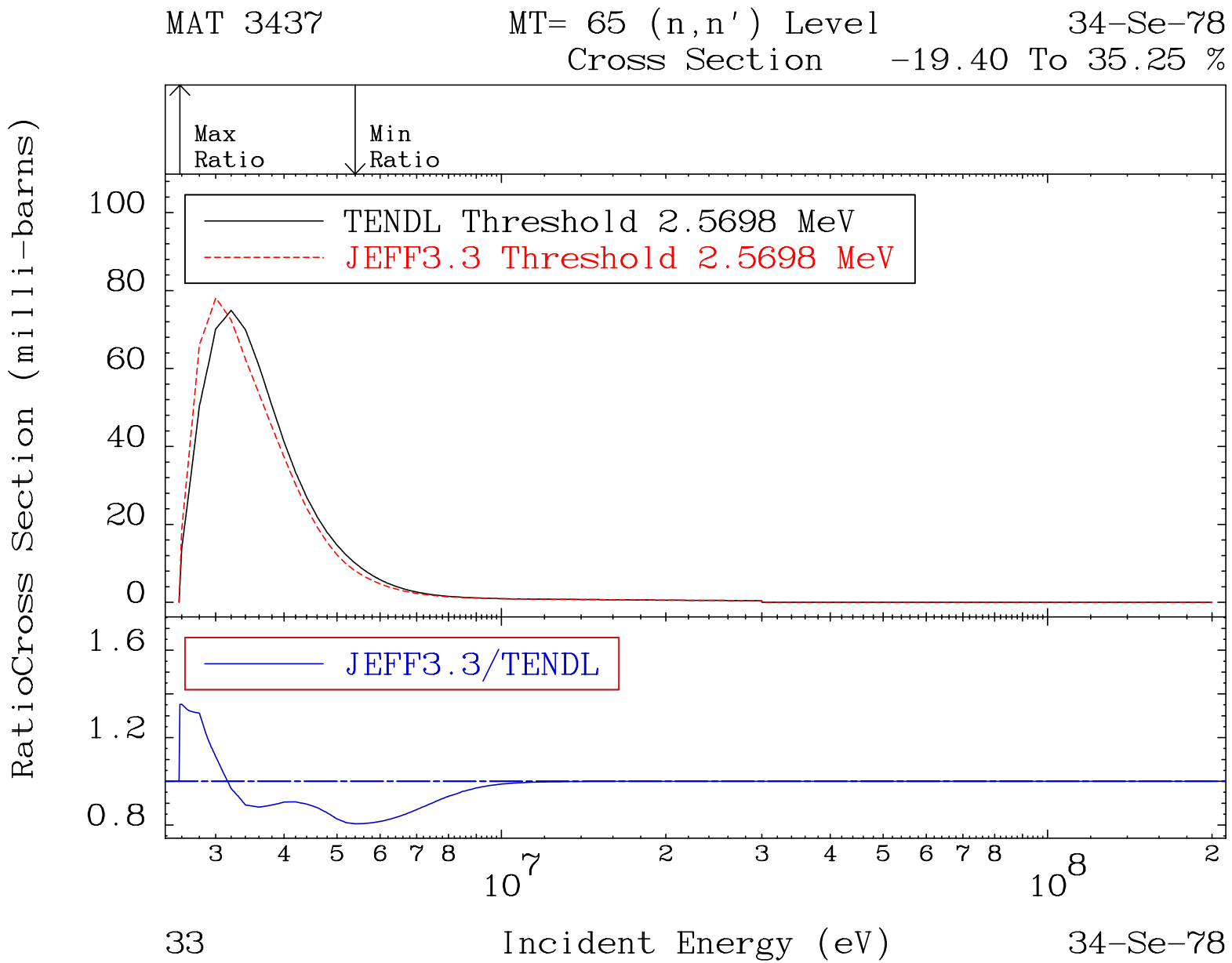

MAT 3437
MT= 60 (n,n') Level
34-Se-78
Cross Section -23.74 To 49.71 %
Max Ratio
Min Ratio
TENDL Threshold 2.3296 MeV
JEFF3.3 Threshold 2.3296 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
1.6
1.2
0.8
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
28
Incident Energy (eV)
34-Se-78

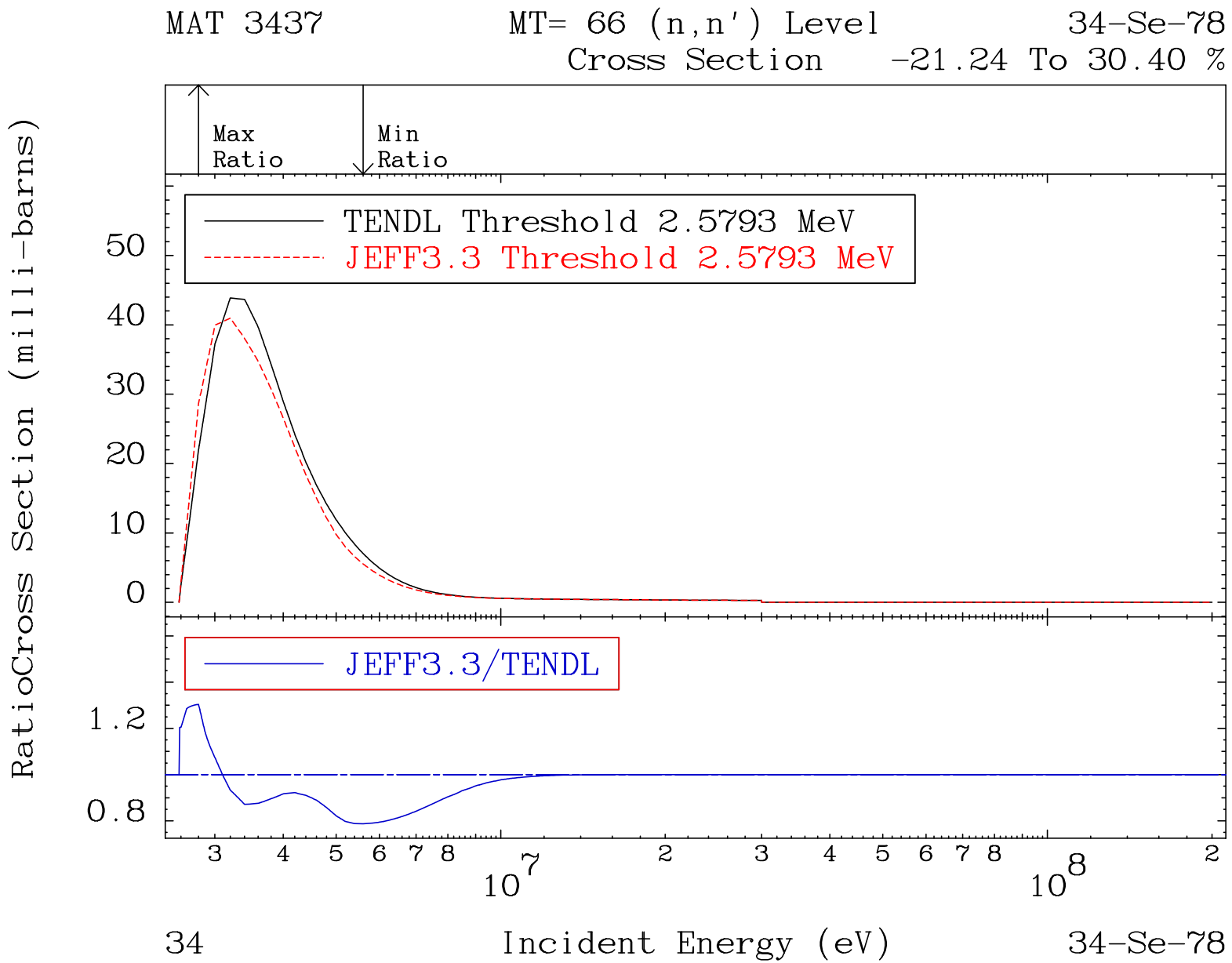

MAT 3437
MT= 61 (n,n') Level
34-Se-78
Cross Section
-100.0 To 39.60 %
Max
Ratio
TENDL Threshold 2.3575 MeV
JEFF3.3 Threshold 2.3575 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
29
Incident Energy (eV)
34-Se-78

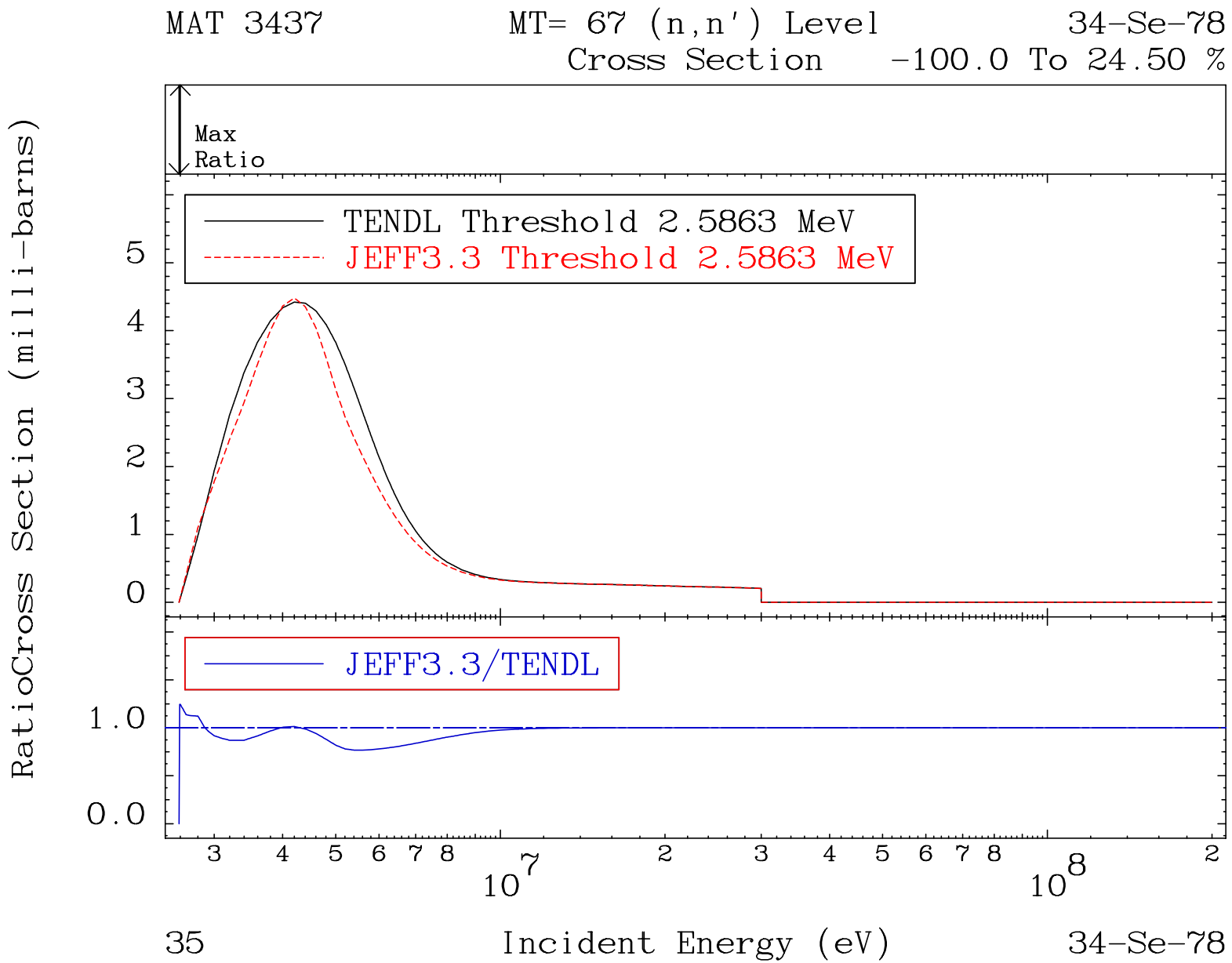

MAT 3437
MT= 62 (n,n') Level
34-Se-78
Cross Section
-24.68 To 47.17 %
Max Ratio
Min Ratio
TENDL Threshold 2.3655 MeV
JEFF3.3 Threshold 2.3655 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
1.6
1.2
0.8
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
34-Se-78

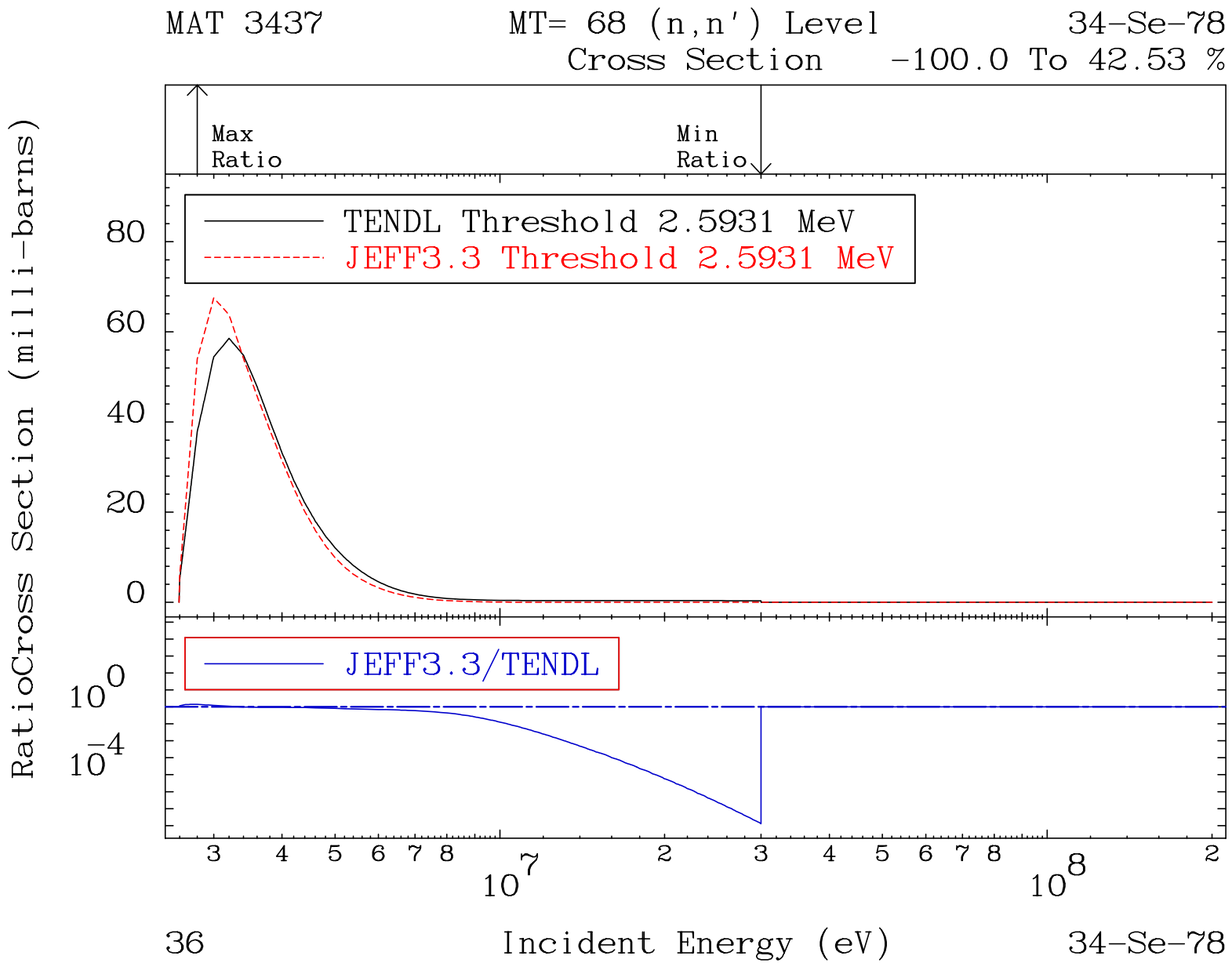

MAT 3437
MT= 63 (n,n') Level
34-Se-78
Cross Section -24.61 To 45.36 %
Max Ratio
Min Ratio
TENDL Threshold 2.3924 MeV
JEFF3.3 Threshold 2.3924 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
1.6
1.2
0.8
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
31
Incident Energy (eV)
34-Se-78

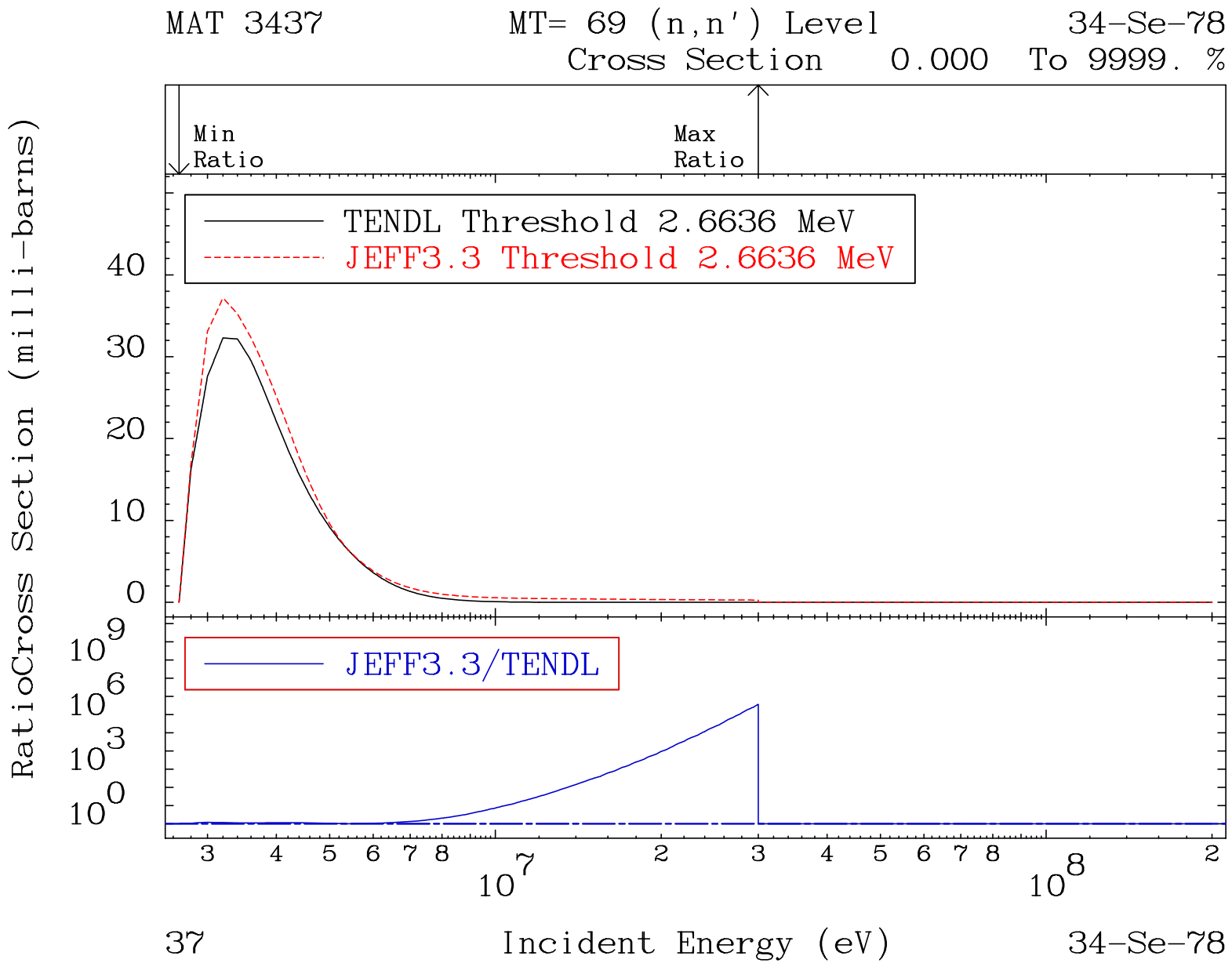

MAT 3437
MT= 64 (n,n') Level
34-Se-78
Cross Section
-100.0 To 35.68 %
Max
Ratio
TENDL Threshold 2.5398 MeV
JEFF3.3 Threshold 2.5398 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
32
Incident Energy (eV)
34-Se-78

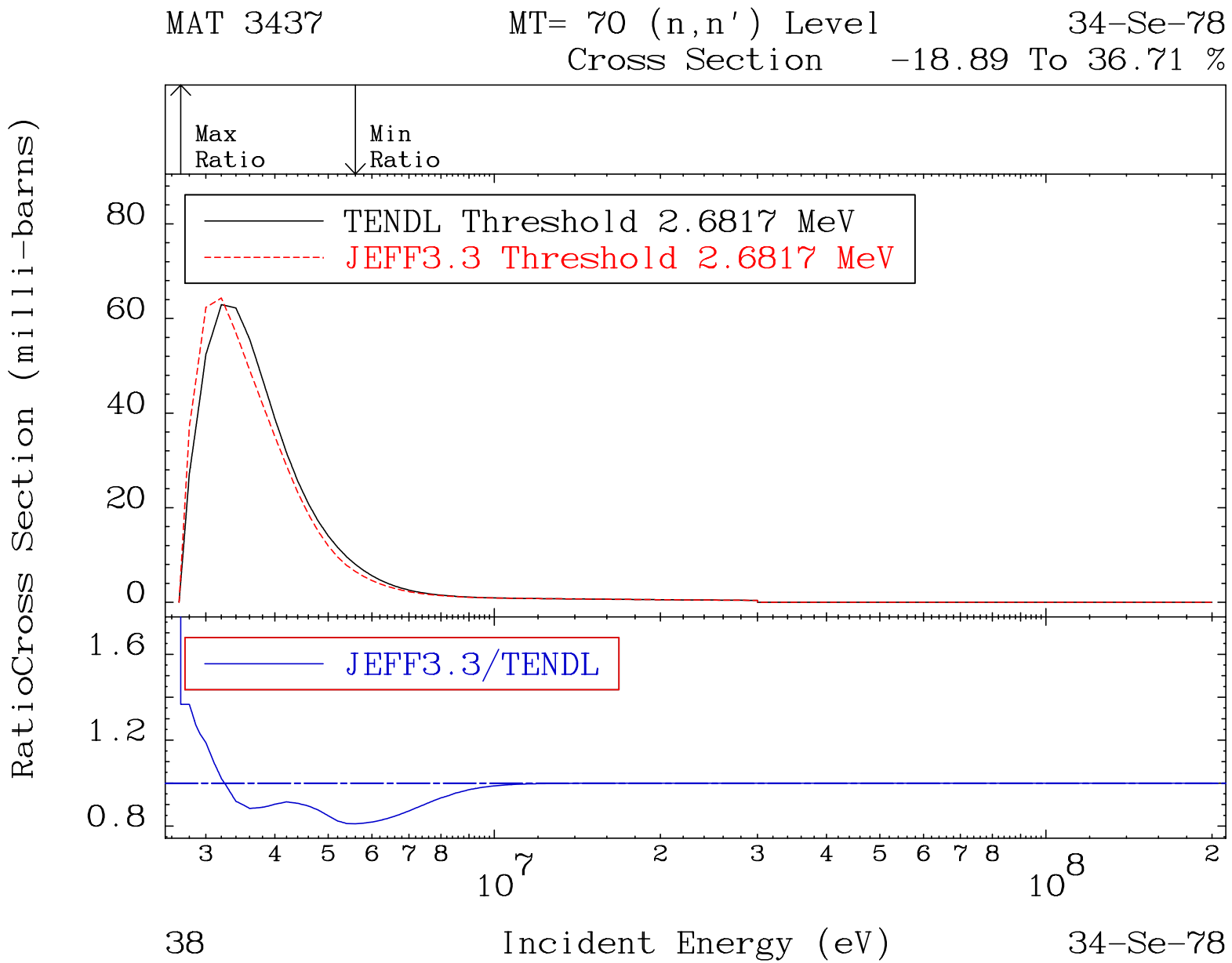

MAT 3437
MT= 65 (n,n') Level
34-Se-78
Cross Section -19.40 To 35.25 %
Max Ratio
Min Ratio
TENDL Threshold 2.5698 MeV
JEFF3.3 Threshold 2.5698 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
1.6
1.2
0.8
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
33
Incident Energy (eV)
34-Se-78

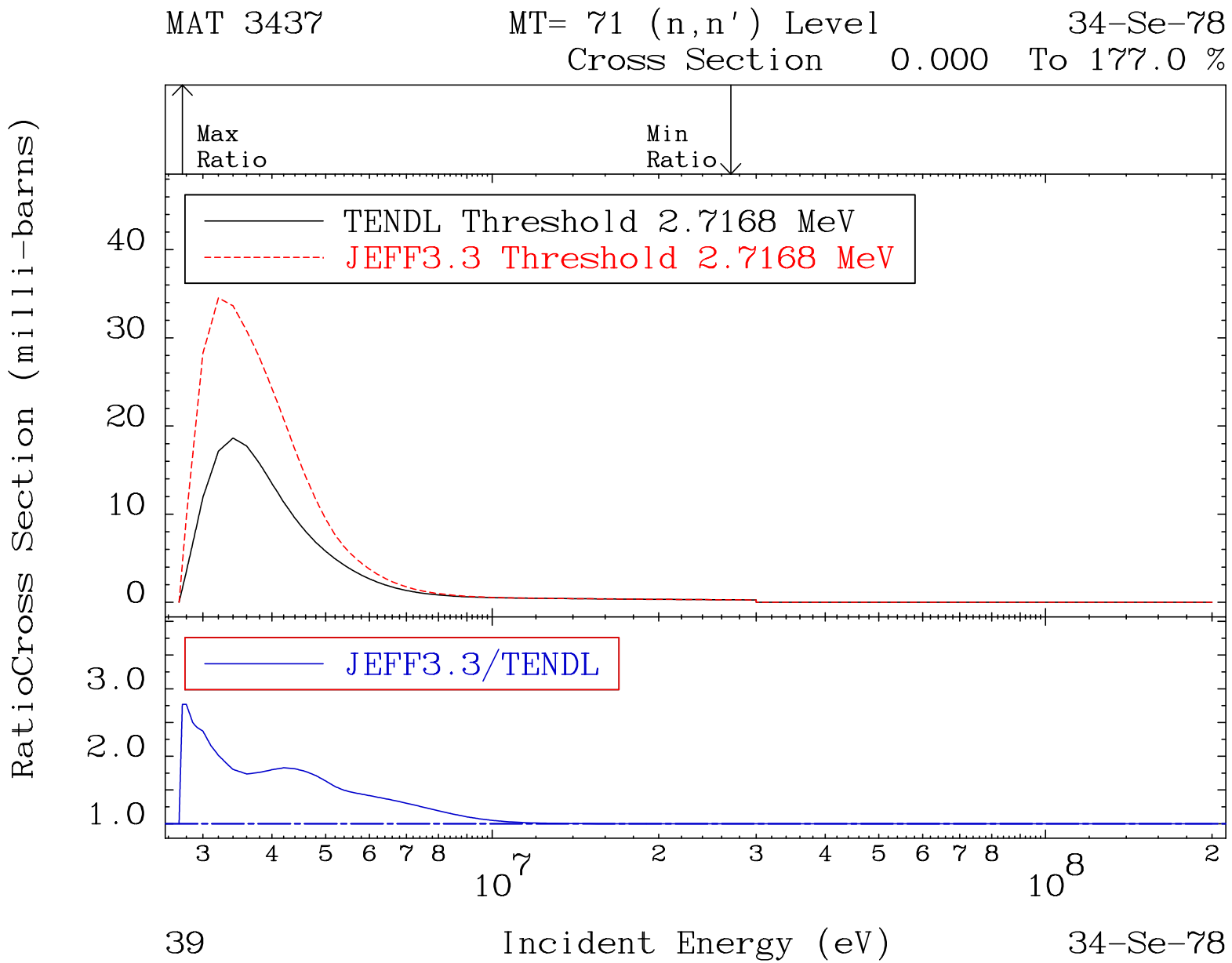

MAT 3437
MT= 66 (n,n') Level
34-Se-78
Cross Section -21.24 To 30.40 %
Max Ratio
Min Ratio
TENDL Threshold 2.5793 MeV
JEFF3.3 Threshold 2.5793 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
1.2
0.8
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
34
Incident Energy (eV)
34-Se-78

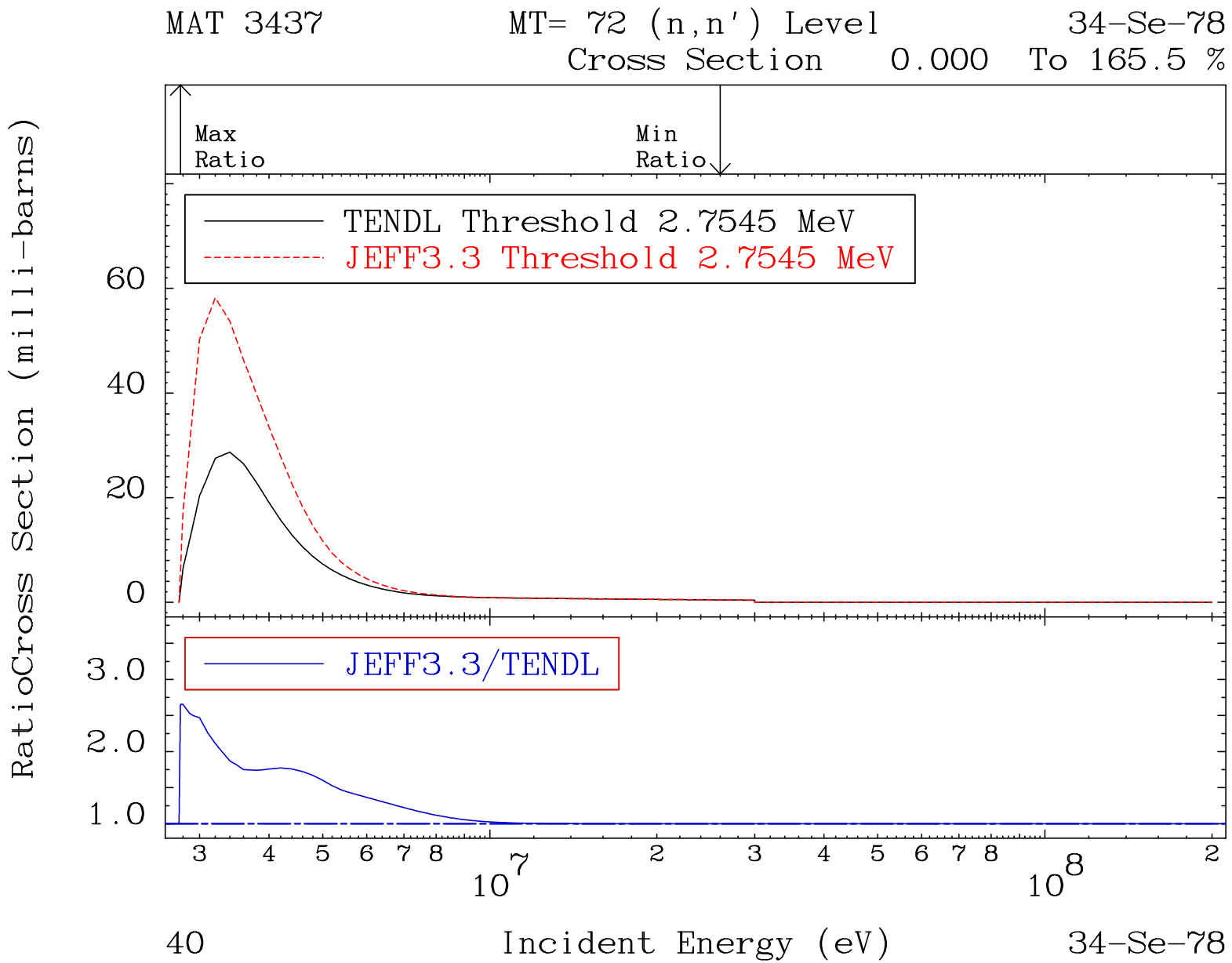

MAT 3437
MT= 67 (n,n') Level
34-Se-78
Cross Section
-100.0 To 24.50 %
Max
Ratio
TENDL Threshold 2.5863 MeV
JEFF3.3 Threshold 2.5863 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
35
34-Se-78

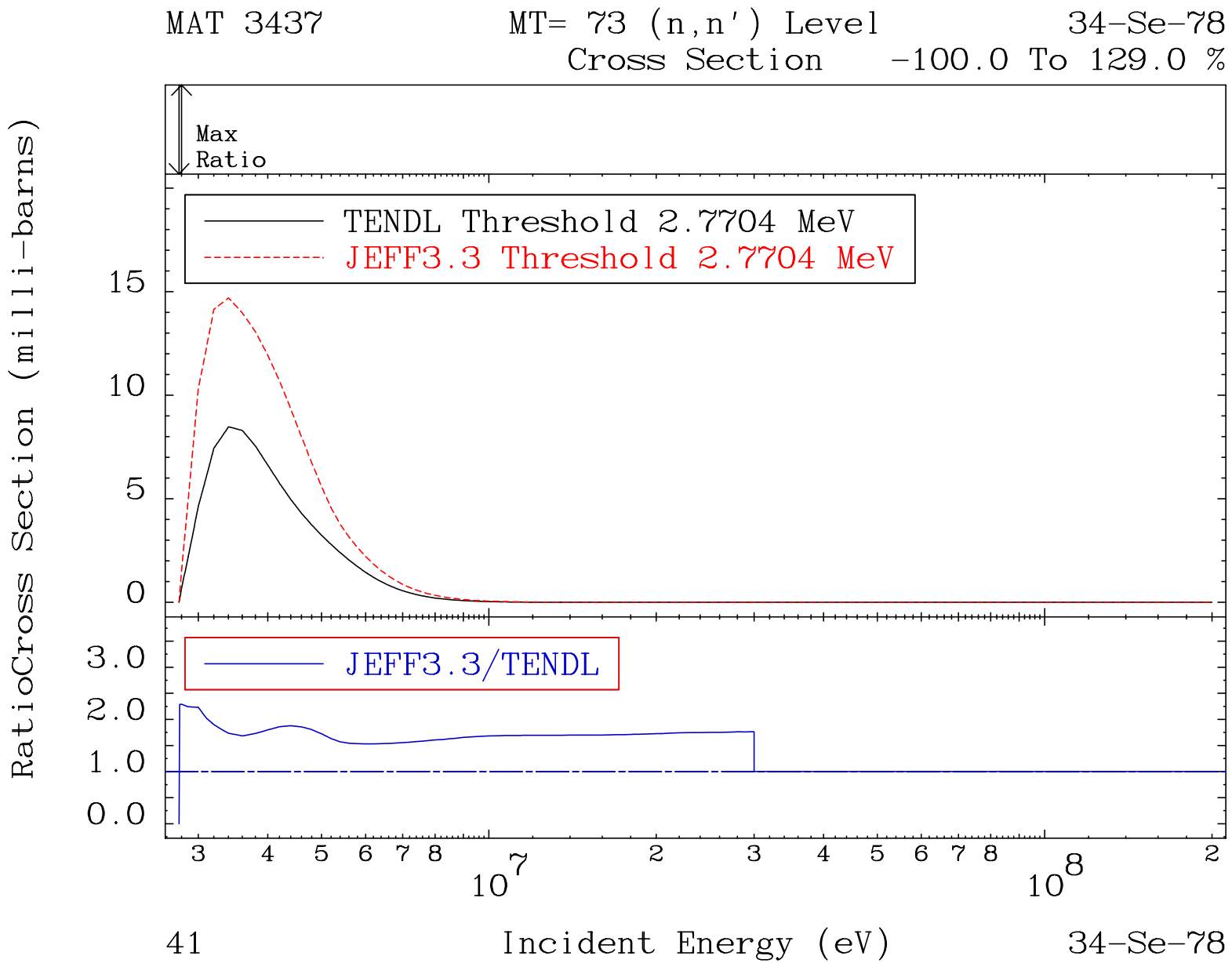

MAT 3437
MT= 68 (n,n') Level
34-Se-78
Cross Section
-100.0 To 42.53 %
Max Ratio
Min Ratio
TENDL Threshold 2.5931 MeV
JEFF3.3 Threshold 2.5931 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
10^0
10^-4
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
36
Incident Energy (eV)
34-Se-78

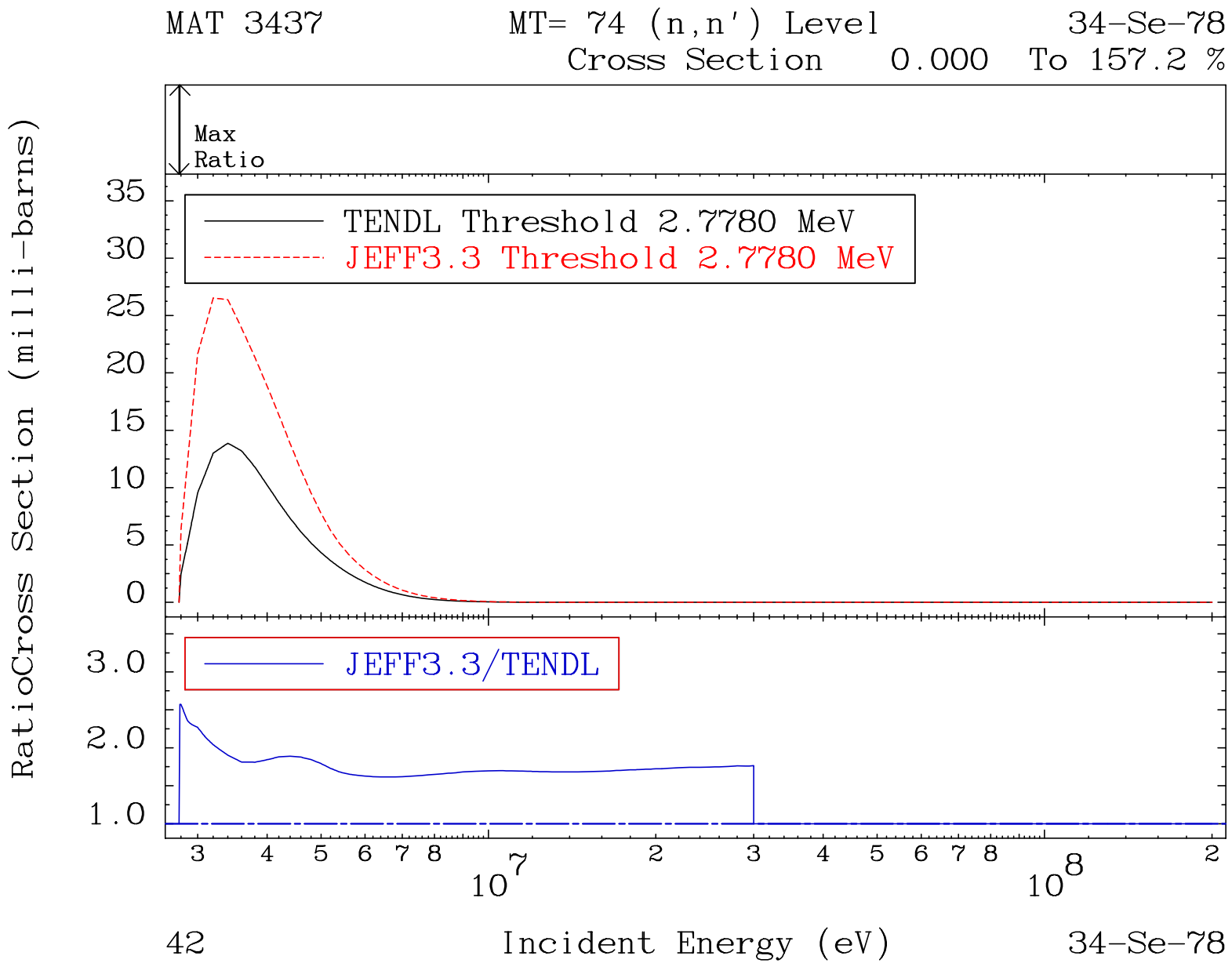

MAT 3437
MT= 69 (n,n') Level
34-Se-78
Cross Section 0.000 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.6636 MeV
JEFF3.3 Threshold 2.6636 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
10^9
10^6
10^3
10^0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
37
Incident Energy (eV)
34-Se-78

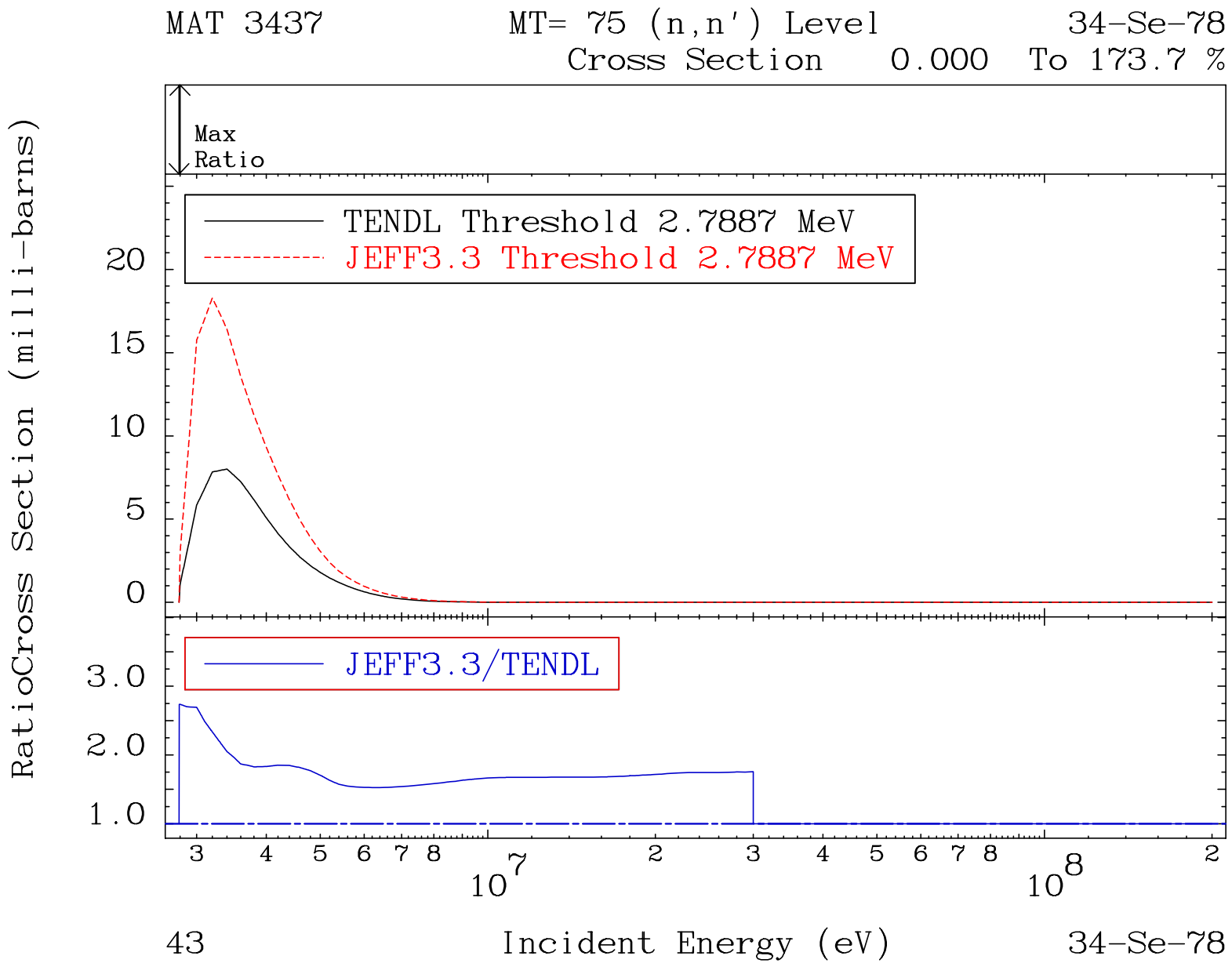

MAT 3437
MT= 70 (n,n') Level
34-Se-78
Cross Section -18.89 To 36.71 %
Max Ratio
Min Ratio
TENDL Threshold 2.6817 MeV
JEFF3.3 Threshold 2.6817 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.6
1.2
0.8
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
38
Incident Energy (eV)
34-Se-78

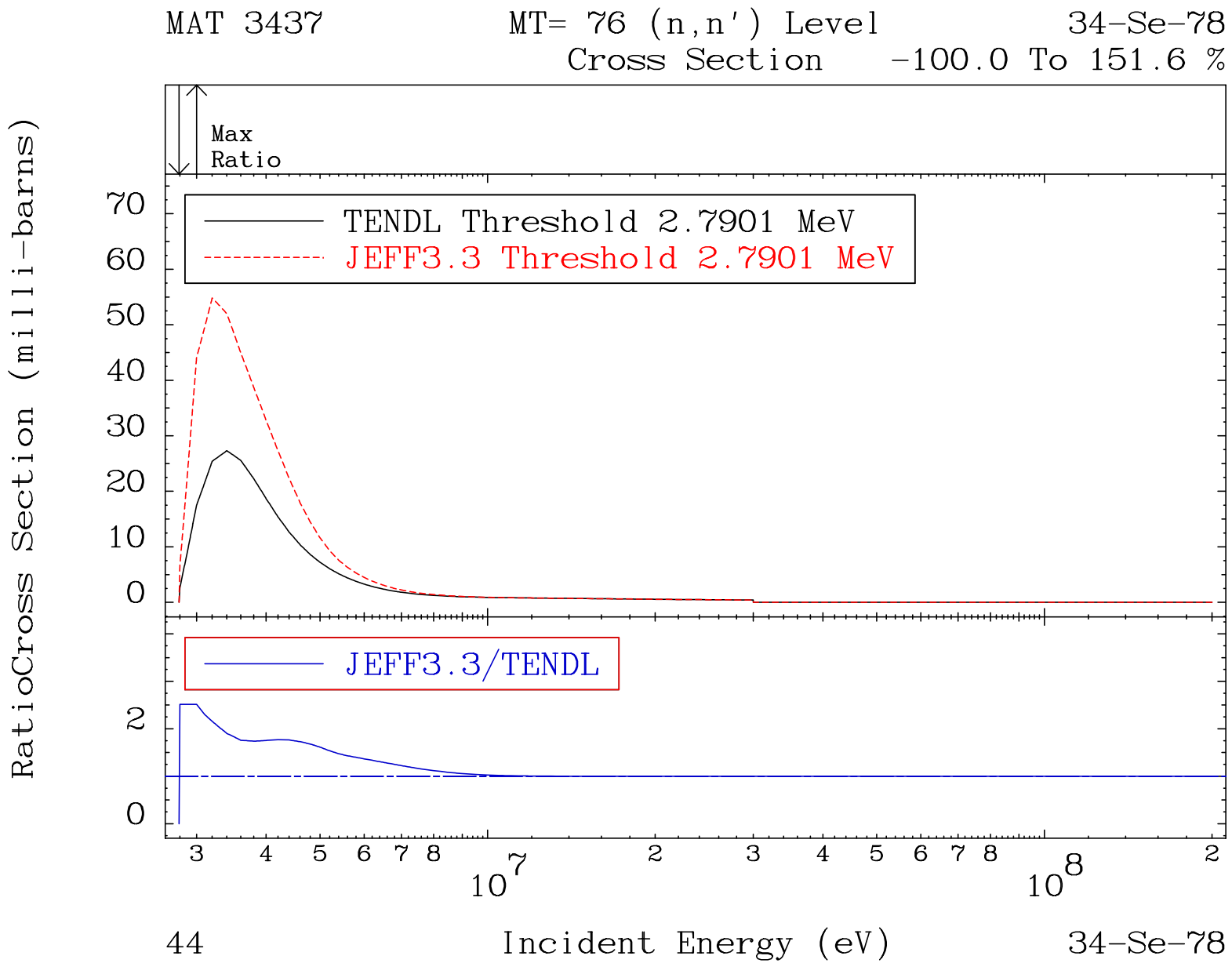

MAT 3437
MT= 71 (n,n') Level
34-Se-78
Cross Section 0.000 To 177.0 %
Max Ratio
Min Ratio
TENDL Threshold 2.7168 MeV
JEFF3.3 Threshold 2.7168 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
3.0
2.0
1.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
39
Incident Energy (eV)
34-Se-78

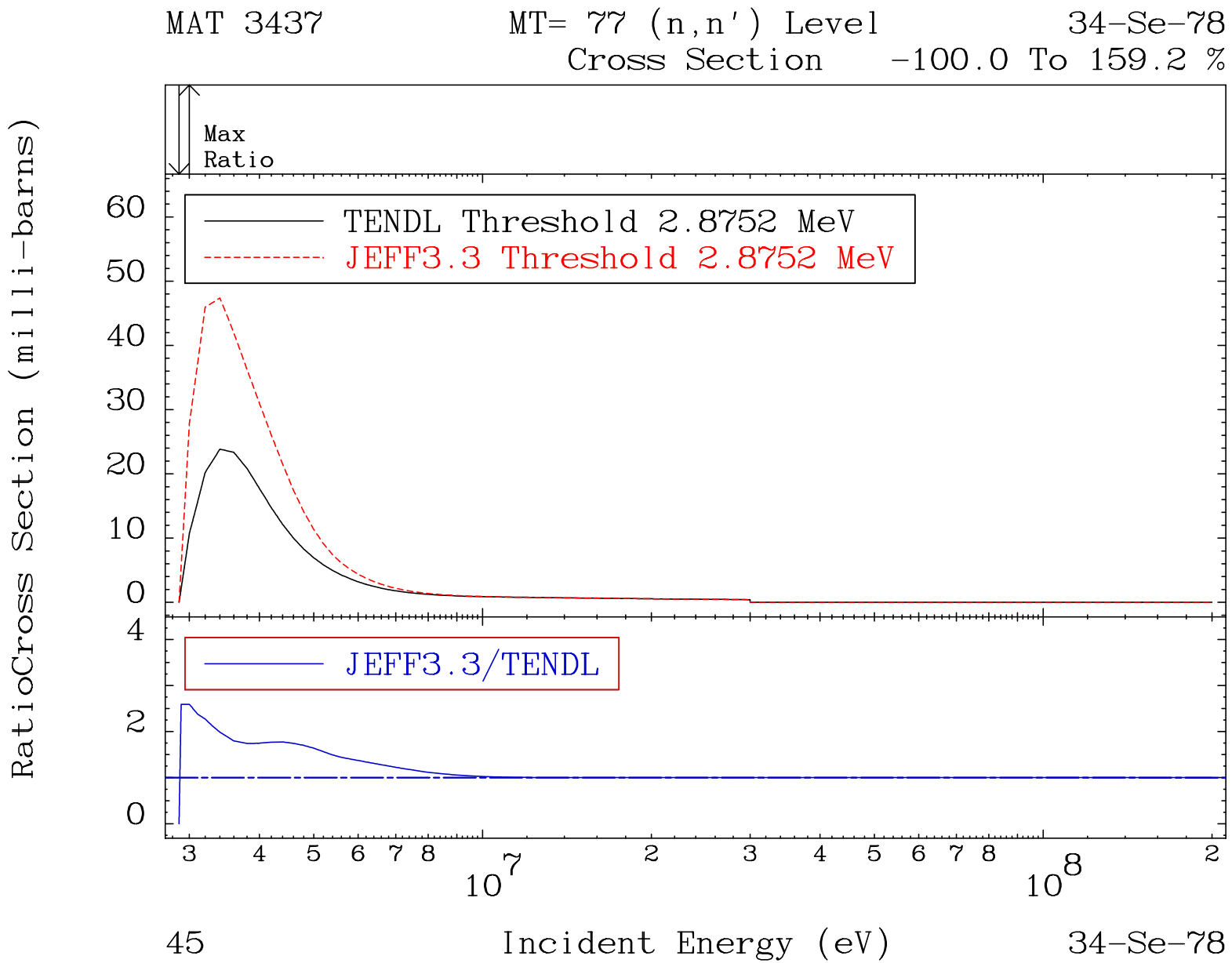

MAT 3437
MT= 72 (n,n') Level
34-Se-78
Cross Section 0.000 To 165.5 %
Max Ratio
Min Ratio
TENDL Threshold 2.7545 MeV
JEFF3.3 Threshold 2.7545 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
60
40
20
0
3.0
2.0
1.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
40
Incident Energy (eV)
34-Se-78

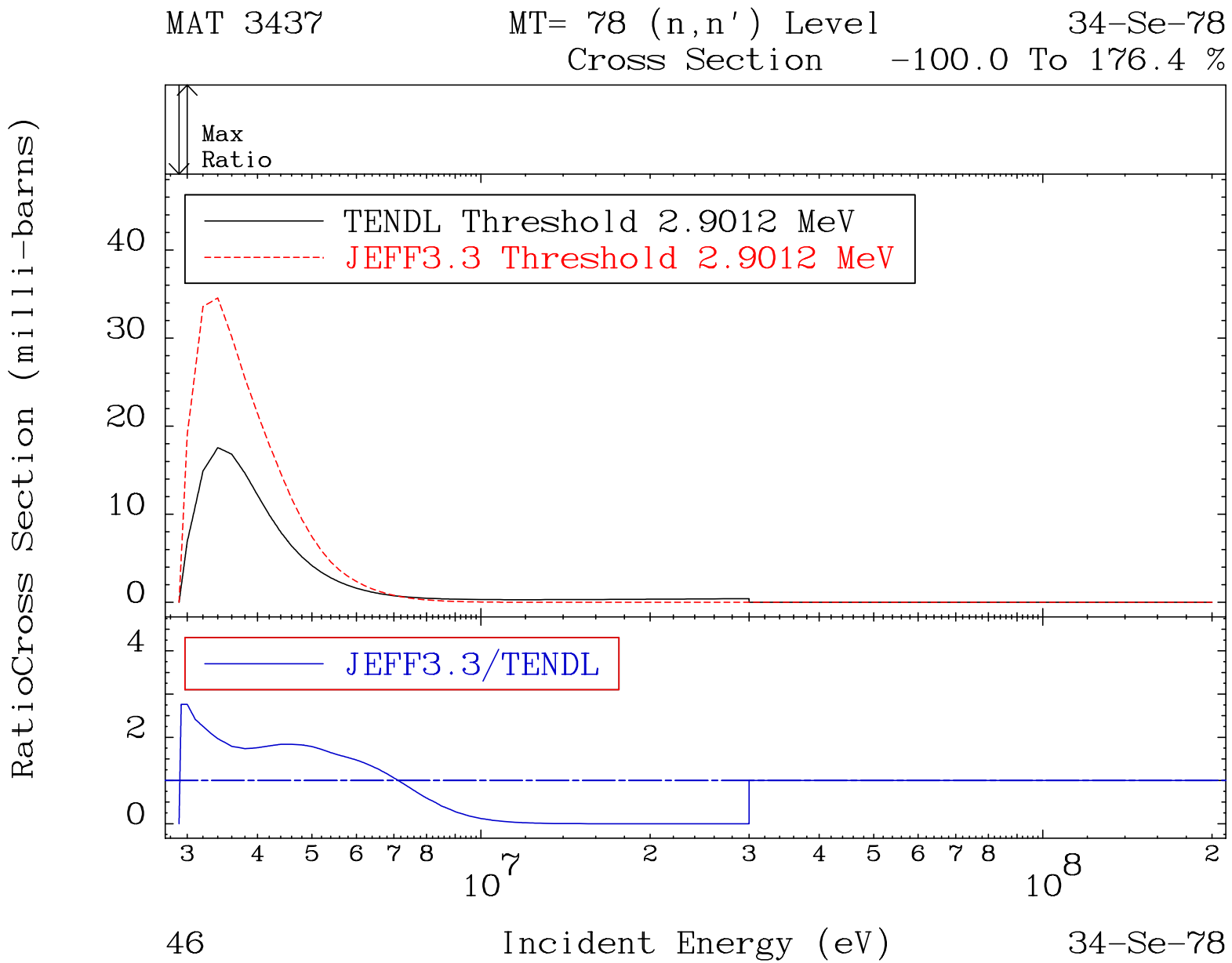

MAT 3437
MT= 73 (n,n') Level
34-Se-78
Cross Section -100.0 To 129.0 %
Max
Ratio
TENDL Threshold 2.7704 MeV
JEFF3.3 Threshold 2.7704 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
15
10
5
0
3.0
2.0
1.0
0.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
41
Incident Energy (eV)
34-Se-78

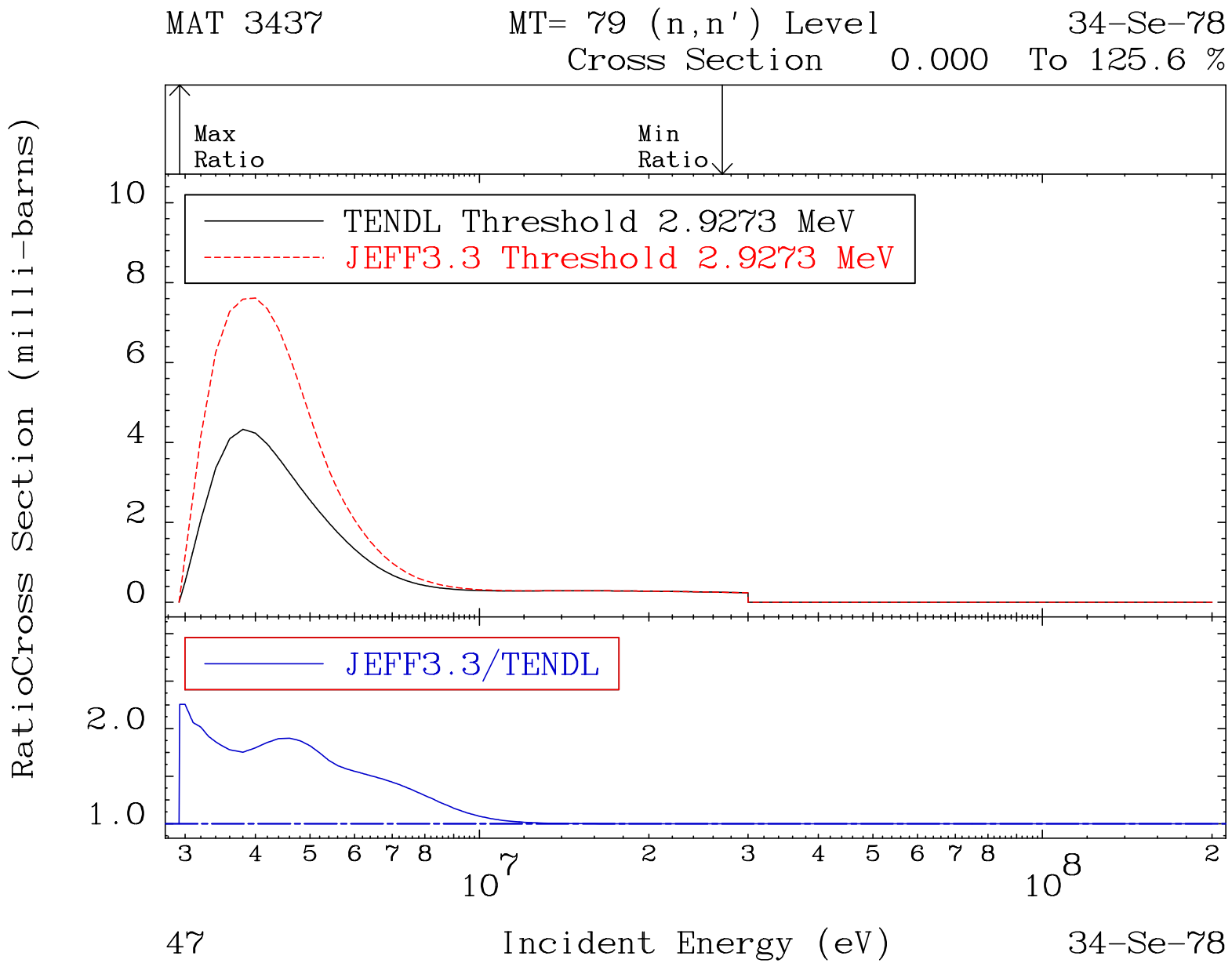

MAT 3437
MT= 74 (n,n') Level
34-Se-78
Cross Section 0.000 To 157.2 %
Max
Ratio
TENDL Threshold 2.7780 MeV
JEFF3.3 Threshold 2.7780 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
35
30
25
20
15
10
5
0
3.0
2.0
1.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
42
Incident Energy (eV)
34-Se-78

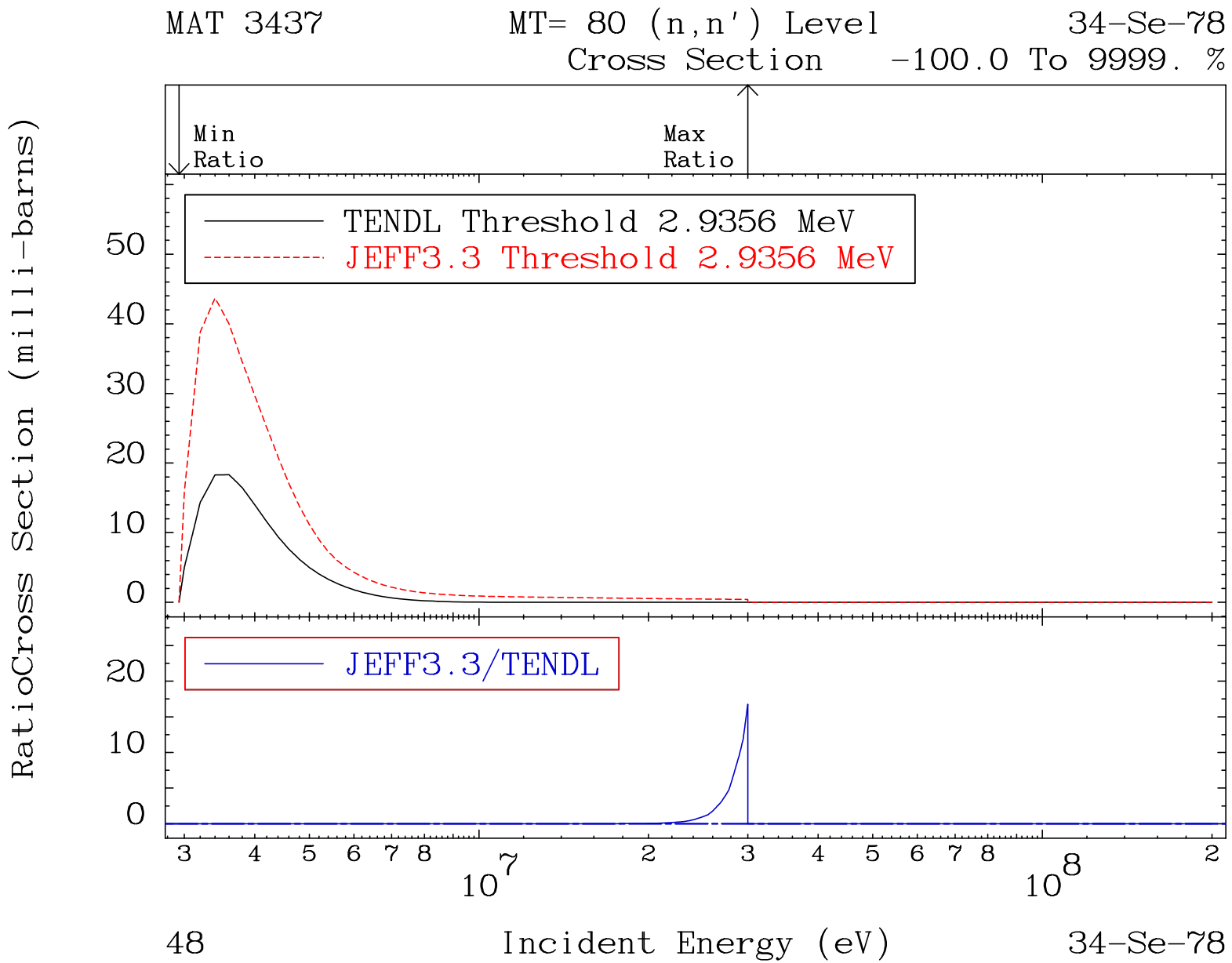

MAT 3437
MT= 75 (n,n') Level
34-Se-78
Cross Section 0.000 To 173.7 %
Max
Ratio
TENDL Threshold 2.7887 MeV
JEFF3.3 Threshold 2.7887 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
3.0
2.0
1.0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
43
Incident Energy (eV)
34-Se-78

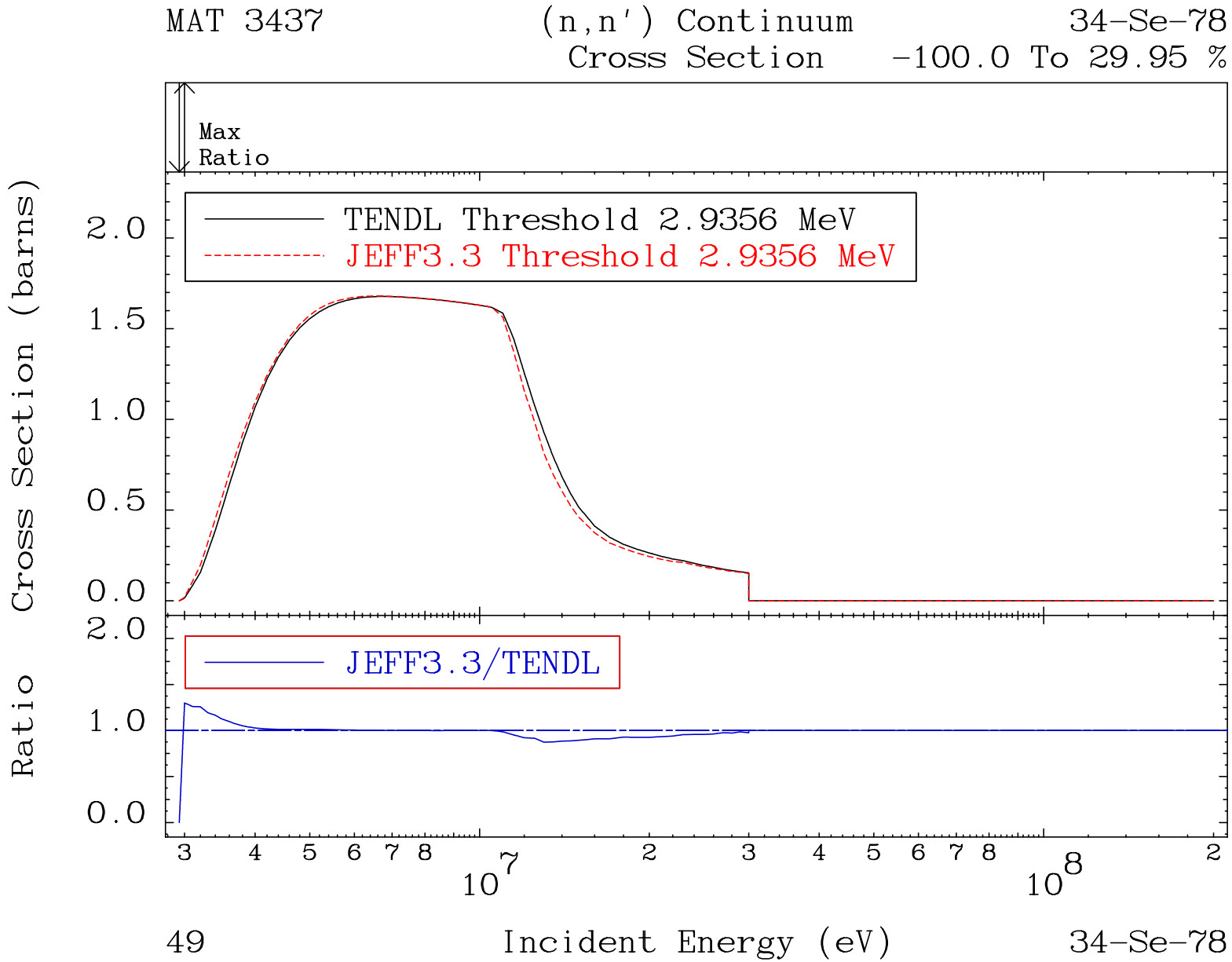

MAT 3437
MT= 76 (n,n') Level
34-Se-78
Cross Section -100.0 To 151.6 %
Max
Ratio
TENDL Threshold 2.7901 MeV
JEFF3.3 Threshold 2.7901 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
2
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
44
Incident Energy (eV)
34-Se-78

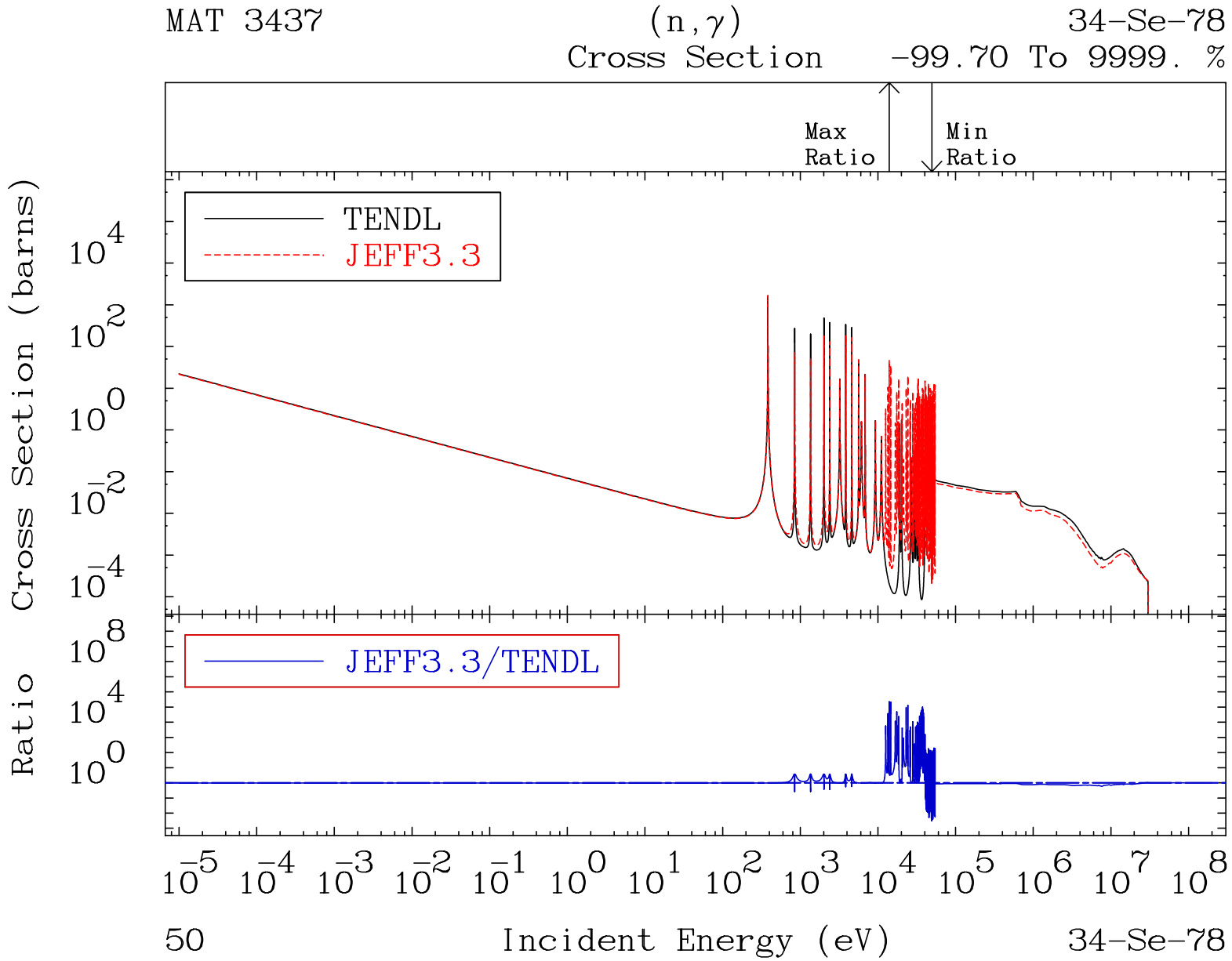

MAT 3437
MT= 77 (n,n') Level
34-Se-78
Cross Section -100.0 To 159.2 %
Max
Ratio
TENDL Threshold 2.8752 MeV
JEFF3.3 Threshold 2.8752 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
4
2
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
45
Incident Energy (eV)
34-Se-78

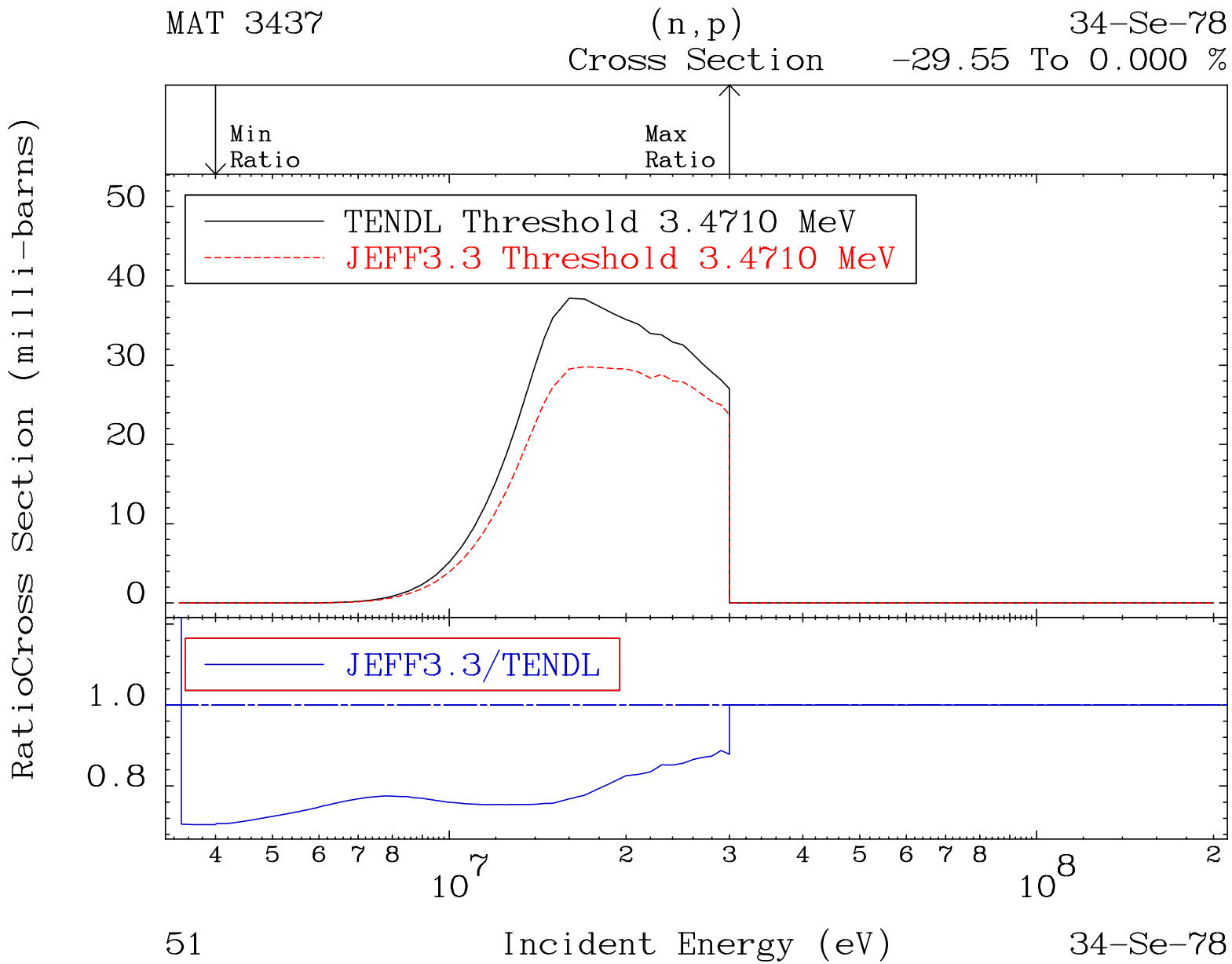

MAT 3437
MT= 78 (n,n') Level
34-Se-78
Cross Section -100.0 To 176.4 %
Max
Ratio
TENDL Threshold 2.9012 MeV
JEFF3.3 Threshold 2.9012 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
4
2
0
3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
46
Incident Energy (eV)
34-Se-78

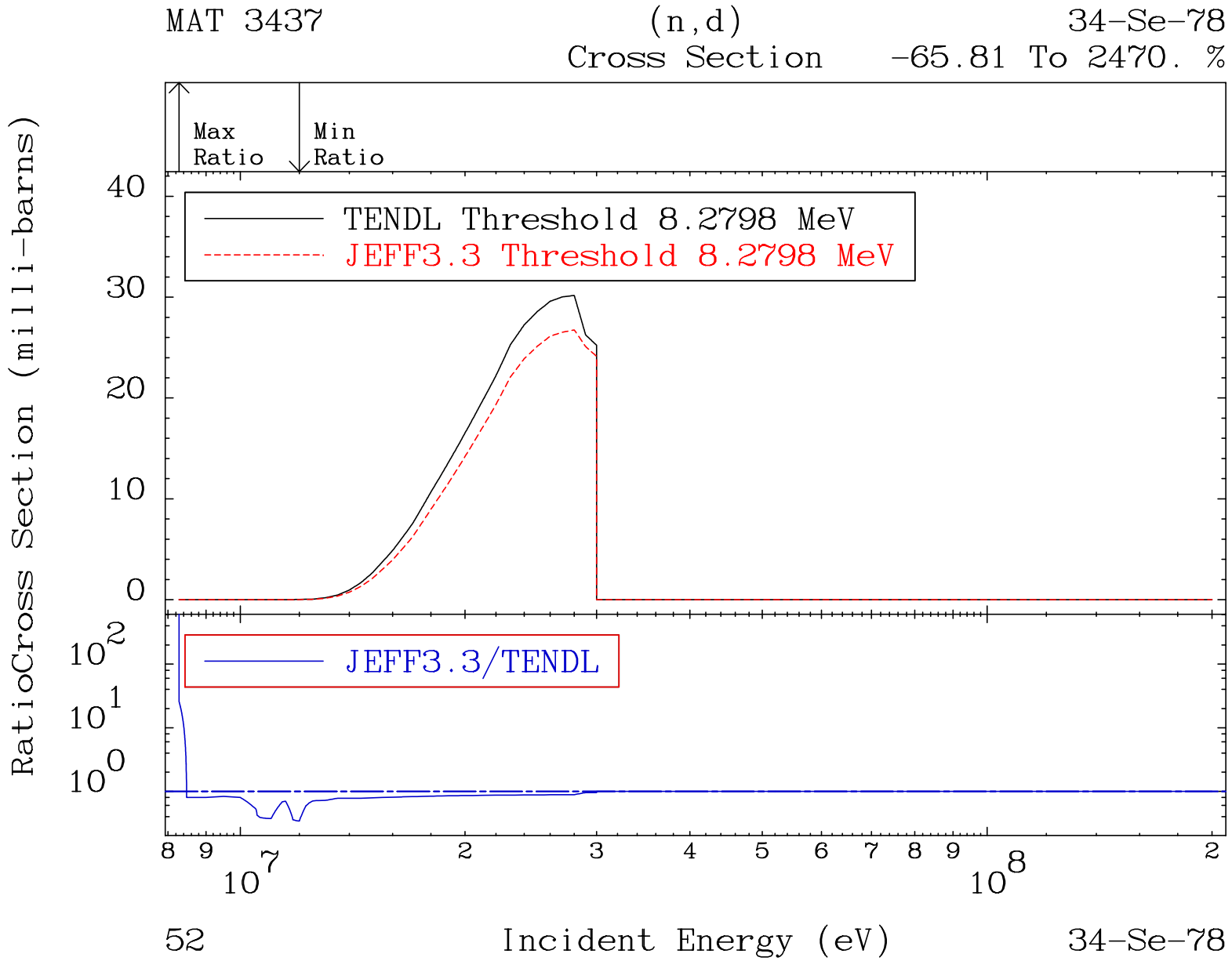

MAT 3437
MT= 79 (n,n') Level
34-Se-78
Cross Section 0.000 To 125.6 %
Max Ratio
Min Ratio
TENDL Threshold 2.9273 MeV
JEFF3.3 Threshold 2.9273 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
2.0
1.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
47
Incident Energy (eV)
34-Se-78

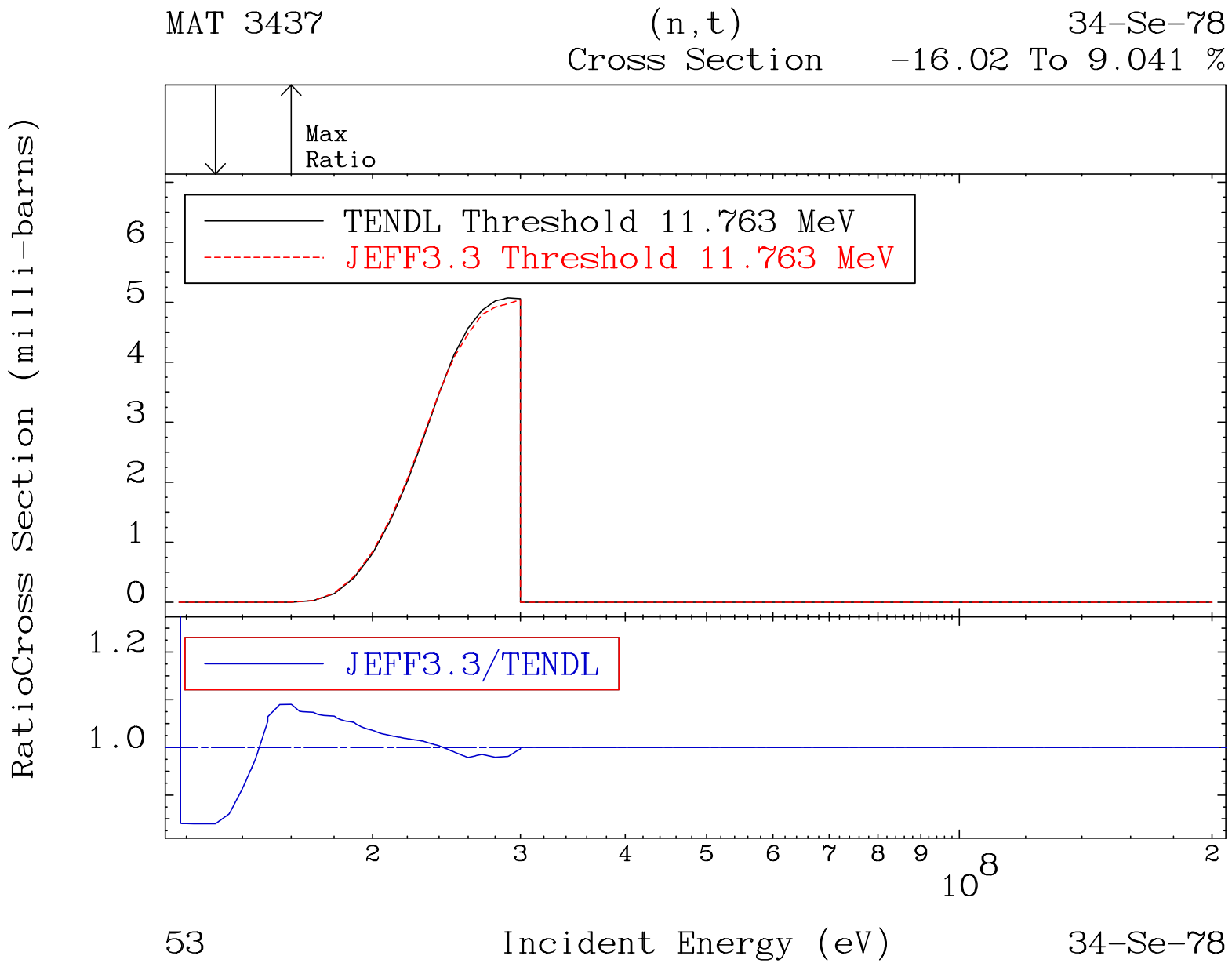

MAT 3437
MT= 80 (n,n') Level
34-Se-78
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.9356 MeV
JEFF3.3 Threshold 2.9356 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
20
10
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
48
Incident Energy (eV)
34-Se-78

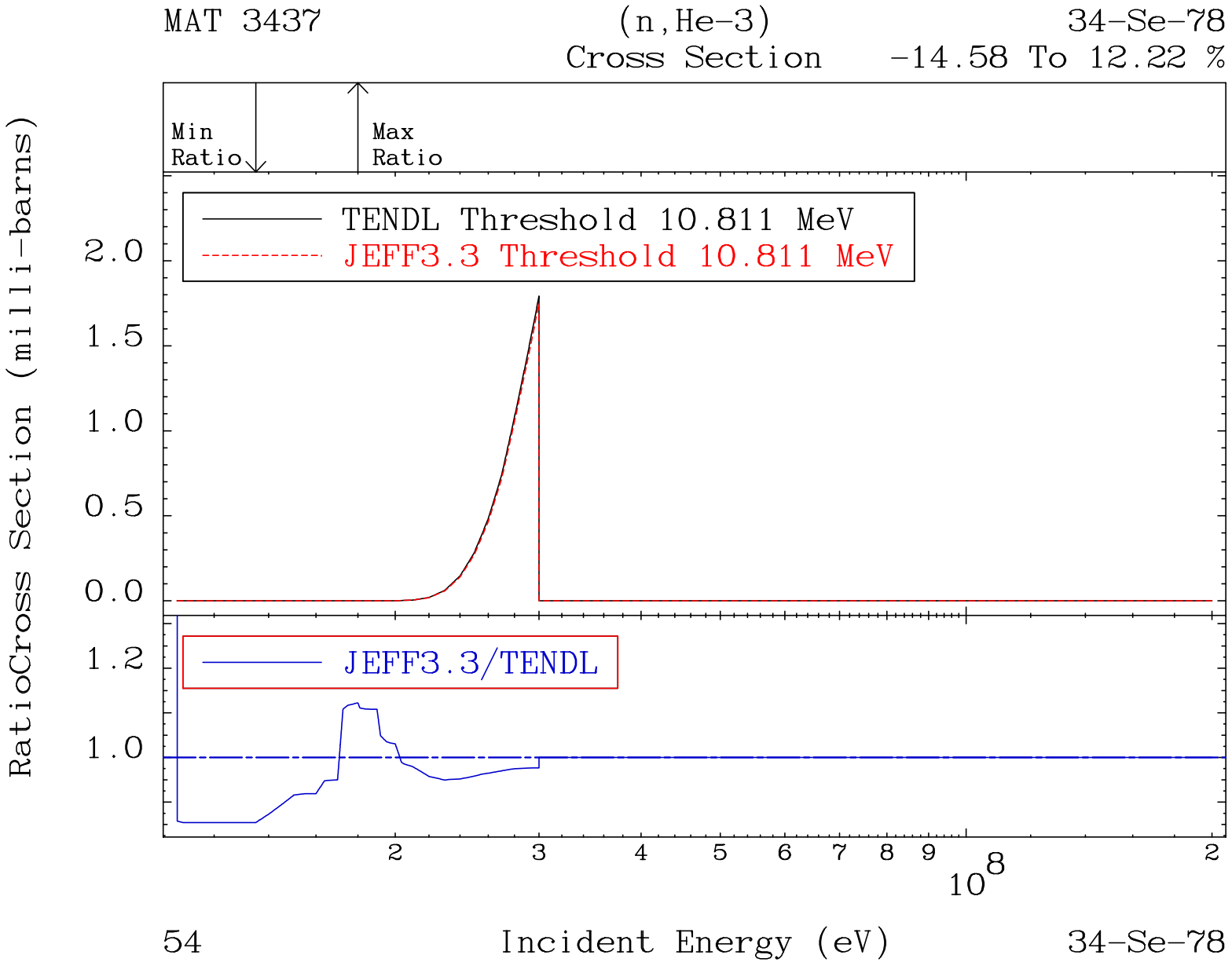

MAT 3437
(n,n') Continuum
Cross Section
34-Se-78
-100.0 To 29.95 %
Max
Ratio
TENDL Threshold 2.9356 MeV
JEFF3.3 Threshold 2.9356 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
49
34-Se-78

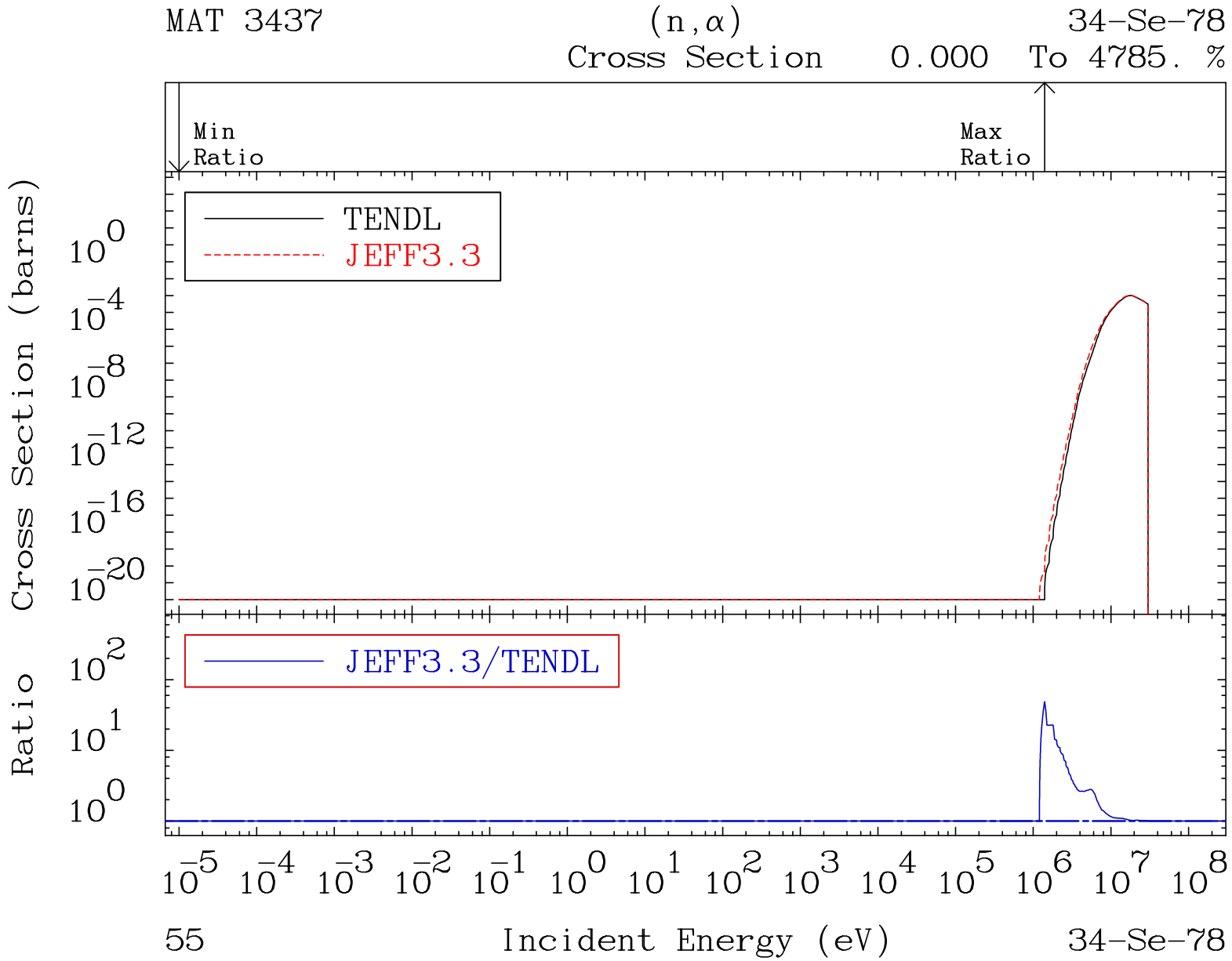

MAT 3437
(n,γ)
34-Se-78
Cross Section
-99.70 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
50
34-Se-78

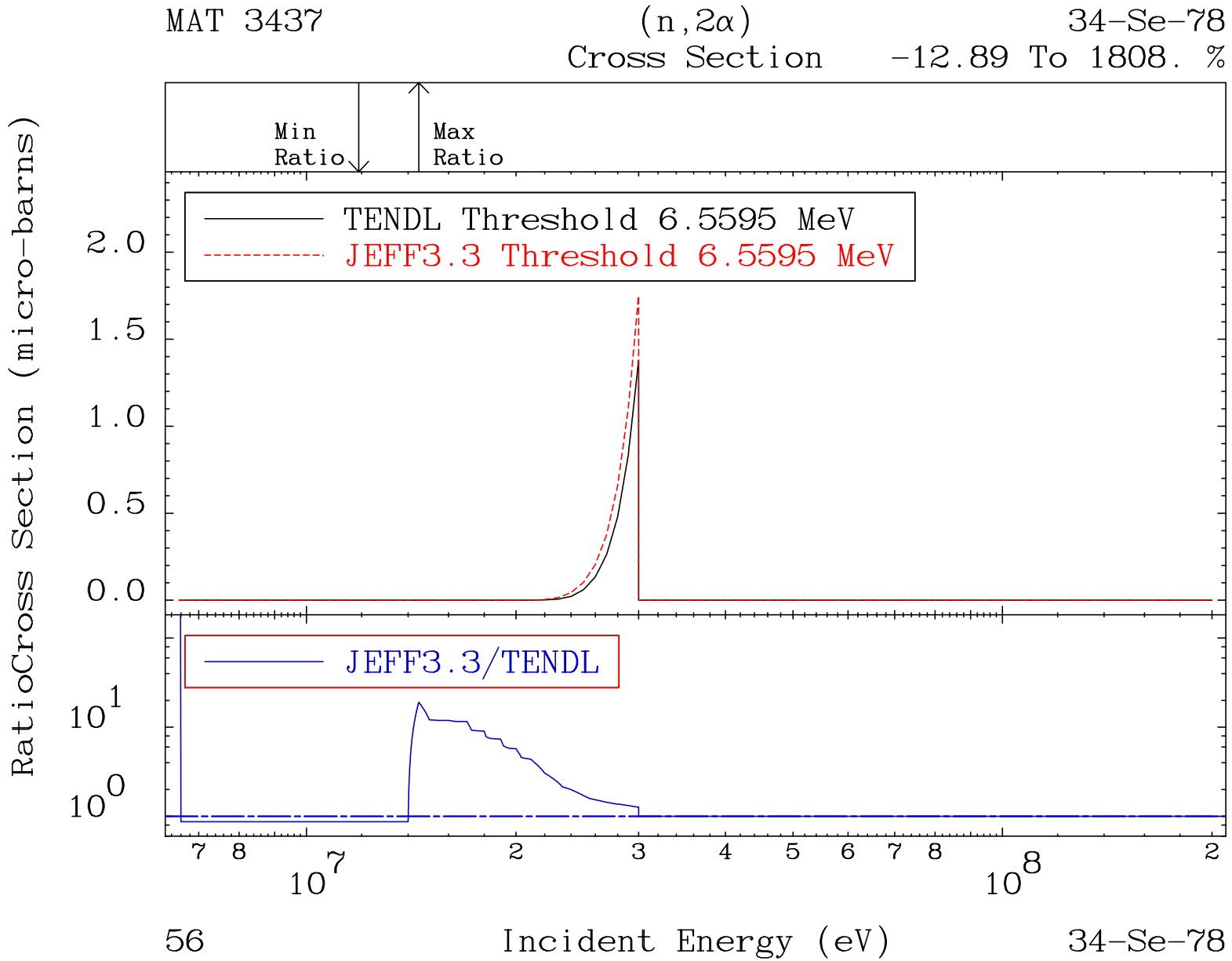

MAT 3437
(n,p)
Cross Section
34-Se-78
-29.55 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 3.4710 MeV
JEFF3.3 Threshold 3.4710 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
1.0
0.8
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
51
Incident Energy (eV)
34-Se-78

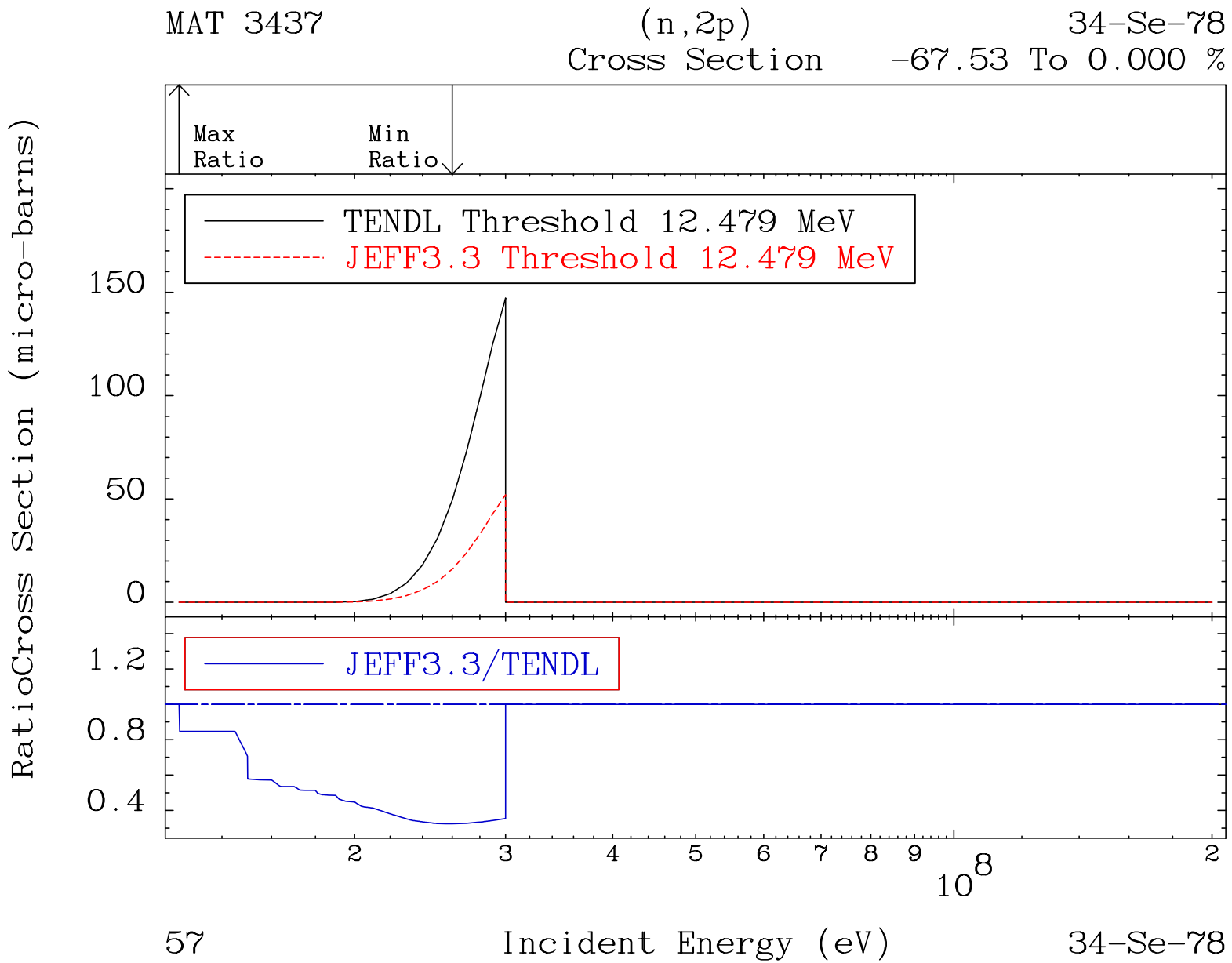

MAT 3437
(n,d)
34-Se-78
Cross Section
-65.81 To 2470. %
Max Ratio
Min Ratio
TENDL Threshold 8.2798 MeV
JEFF3.3 Threshold 8.2798 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
10^2
10^1
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
52
Incident Energy (eV)
34-Se-78

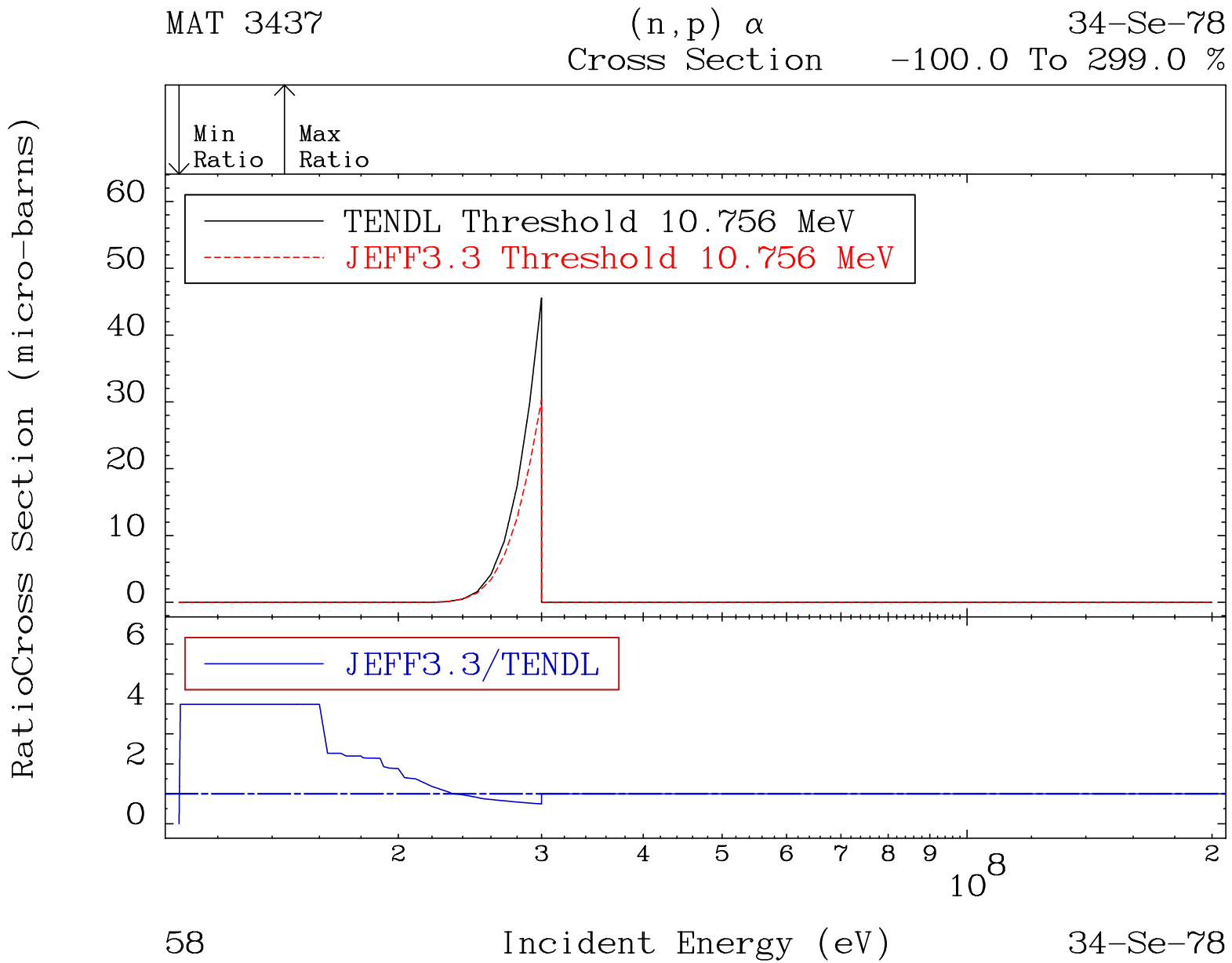

MAT 3437
(n,t)
34-Se-78
Cross Section
-16.02 To 9.041 %
Max
Ratio
TENDL Threshold 11.763 MeV
JEFF3.3 Threshold 11.763 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
6
5
4
3
2
1
0
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
53
Incident Energy (eV)
34-Se-78

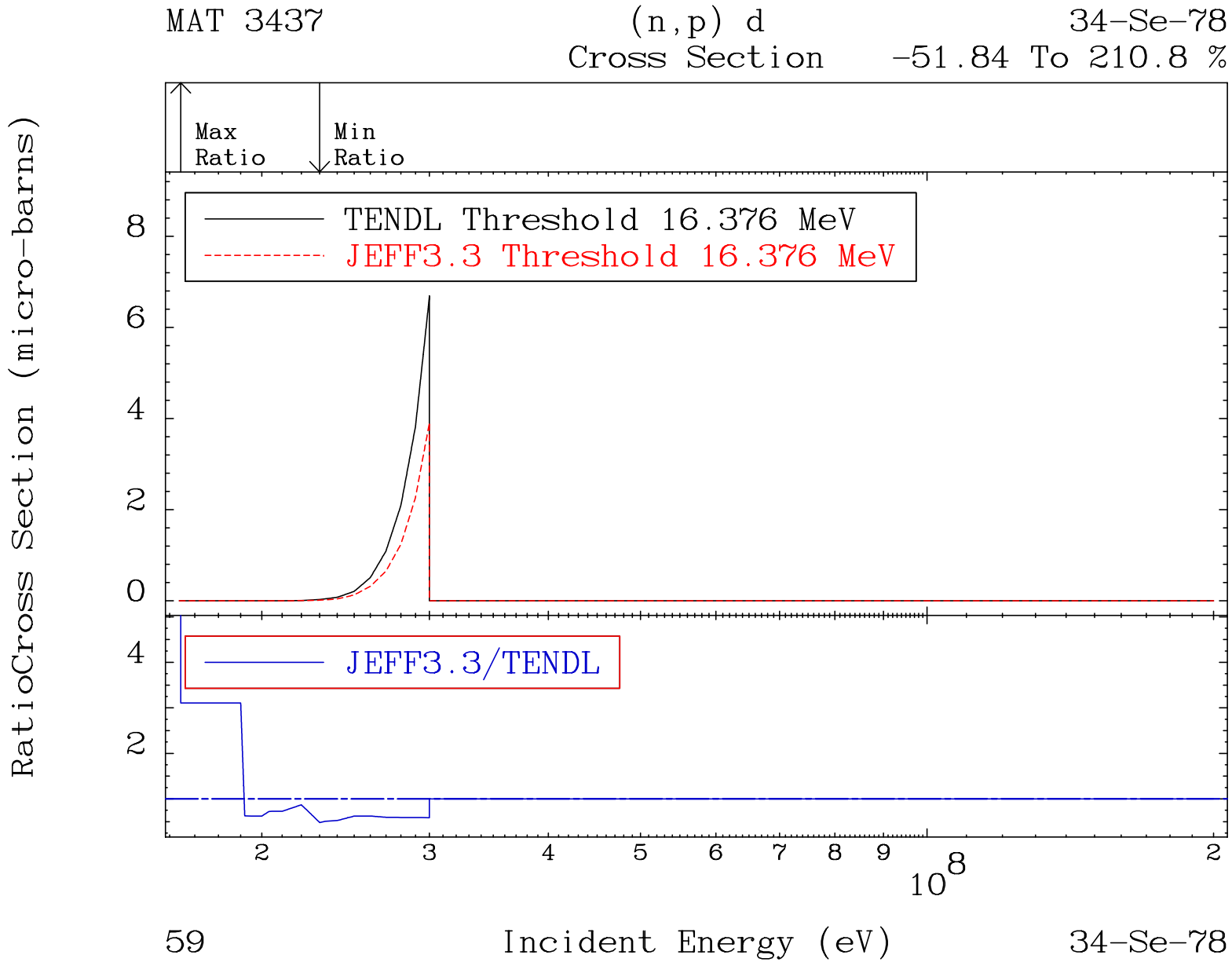

MAT 3437
(n,He-3)
Cross Section
34-Se-78
-14.58 To 12.22 %
Min Ratio
Max Ratio
TENDL Threshold 10.811 MeV
JEFF3.3 Threshold 10.811 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
1.2
1.0
2
3
4
5
6
7
8
9
2
10^8
54
Incident Energy (eV)
34-Se-78

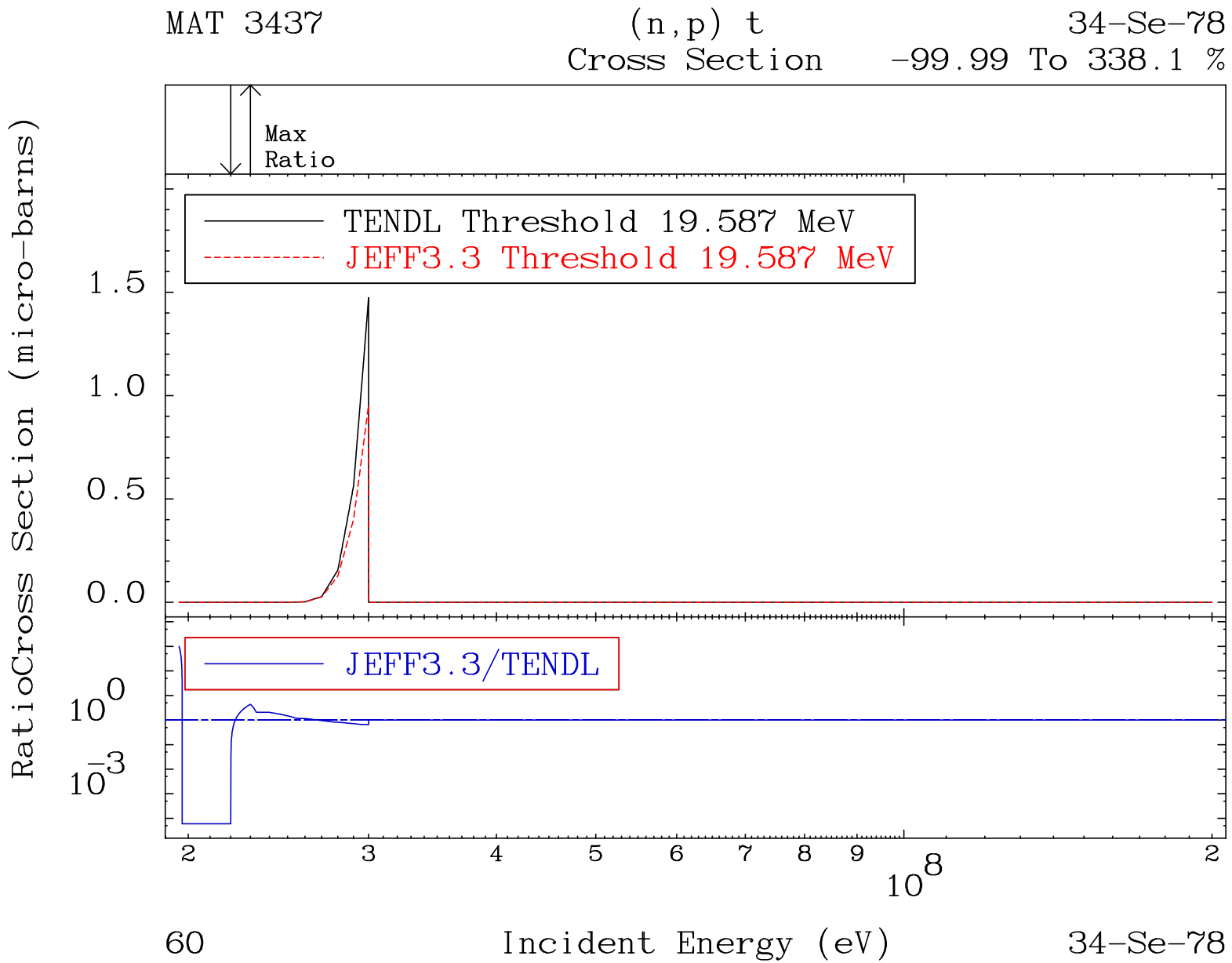

MAT 3437
(n,α)
34-Se-78
Cross Section
0.000
To 4785. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
55
34-Se-78

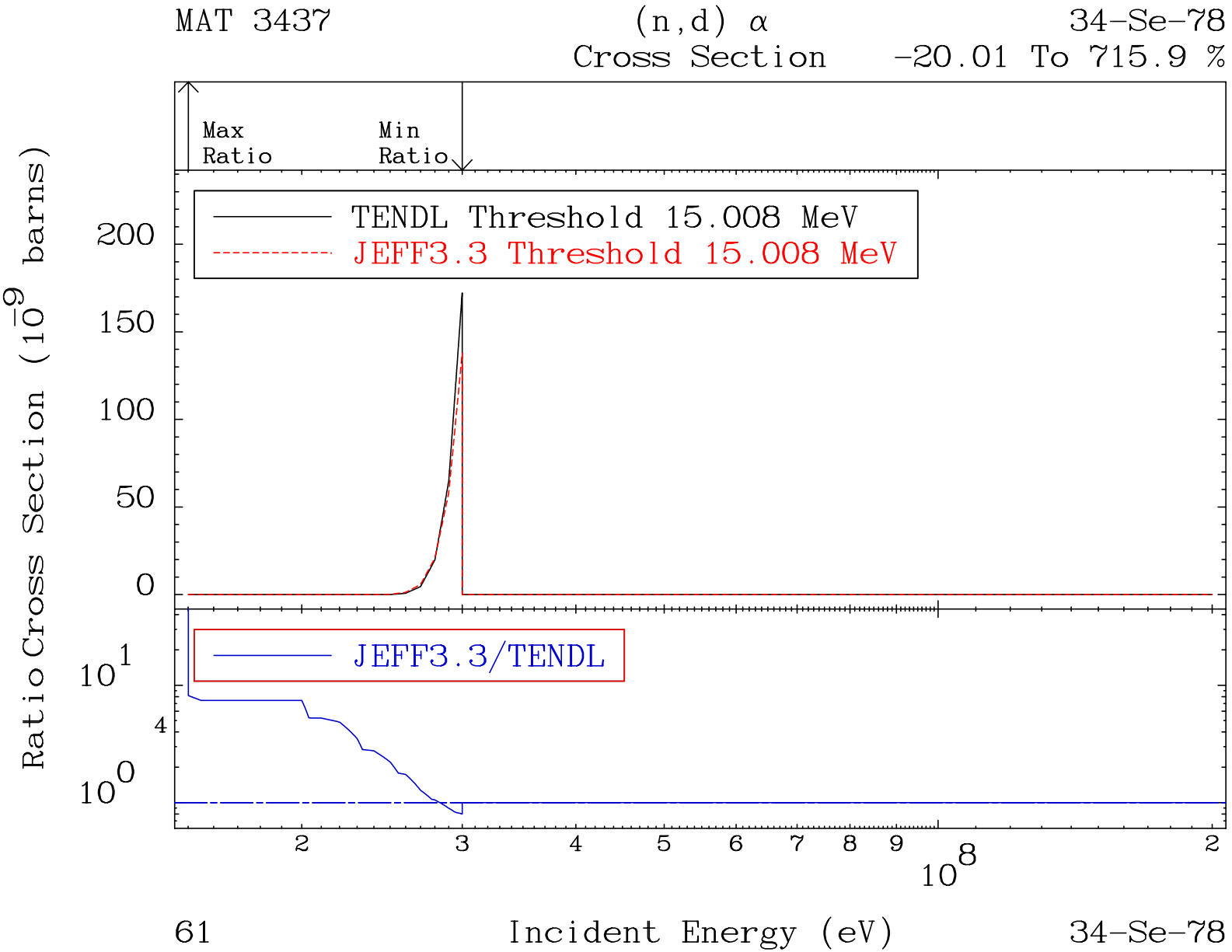

MAT 3437
(n,2α)
34-Se-78
Cross Section
-12.89 To 1808. %
Min Ratio
Max Ratio
TENDL Threshold 6.5595 MeV
JEFF3.3 Threshold 6.5595 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
10^1
10^0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
56
Incident Energy (eV)
34-Se-78

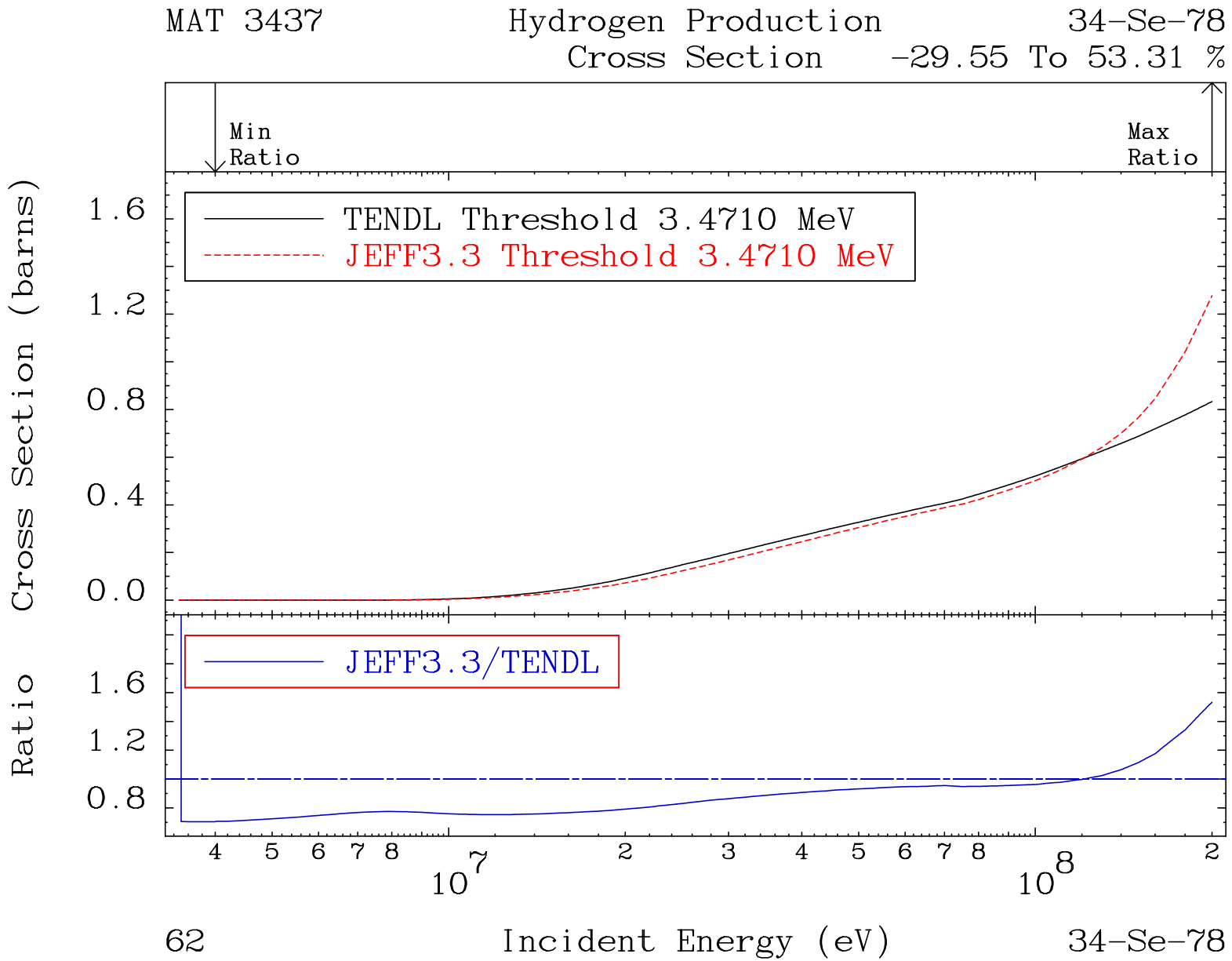

MAT 3437
(n,2p)
Cross Section
34-Se-78
-67.53 To 0.000 %
Max Ratio
Min Ratio
TENDL Threshold 12.479 MeV
JEFF3.3 Threshold 12.479 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
150
100
50
0
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
57
Incident Energy (eV)
34-Se-78

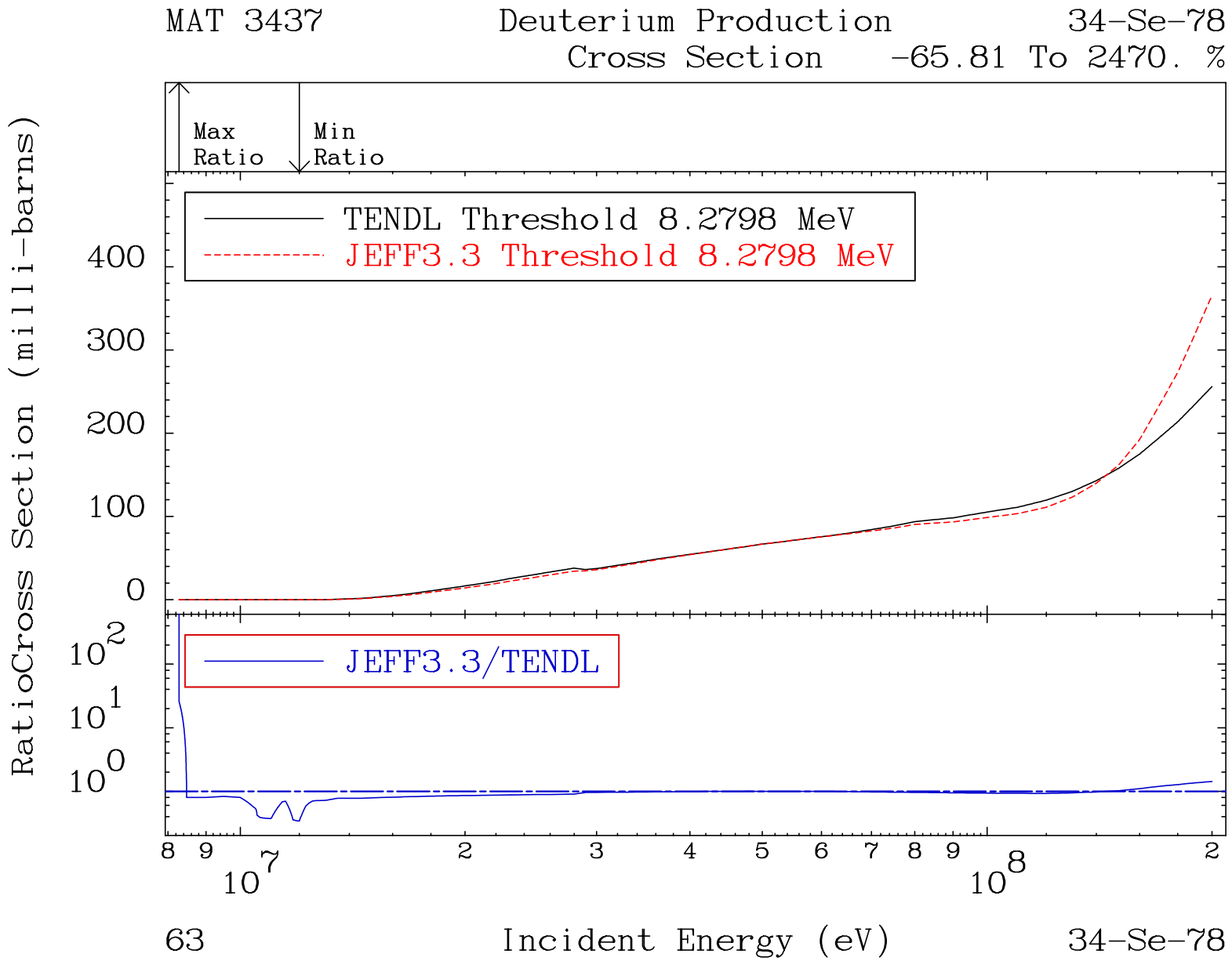

MAT 3437
(n,p) α
34-Se-78
Cross Section
-100.0 To 299.0 %
Min Ratio
Max Ratio
TENDL Threshold 10.756 MeV
JEFF3.3 Threshold 10.756 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
60
50
40
30
20
10
0
6
4
2
0
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
34-Se-78

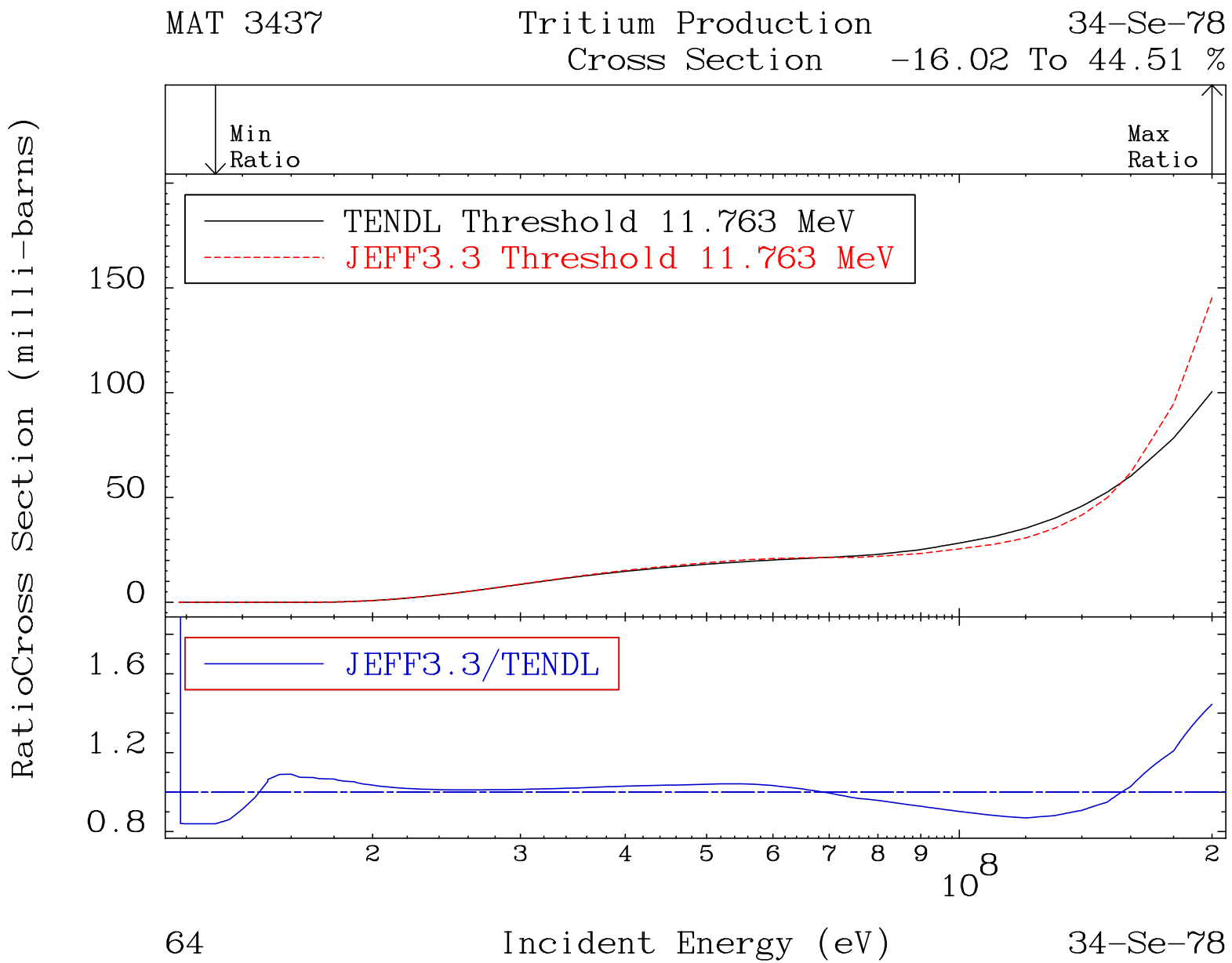

MAT 3437
(n,p) d
Cross Section
34-Se-78
-51.84 To 210.8 %
Max Ratio
Min Ratio
TENDL Threshold 16.376 MeV
JEFF3.3 Threshold 16.376 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
8
6
4
2
0
4
2
2
3
4
5
6
7
8
9
10^8
2
59
Incident Energy (eV)
34-Se-78

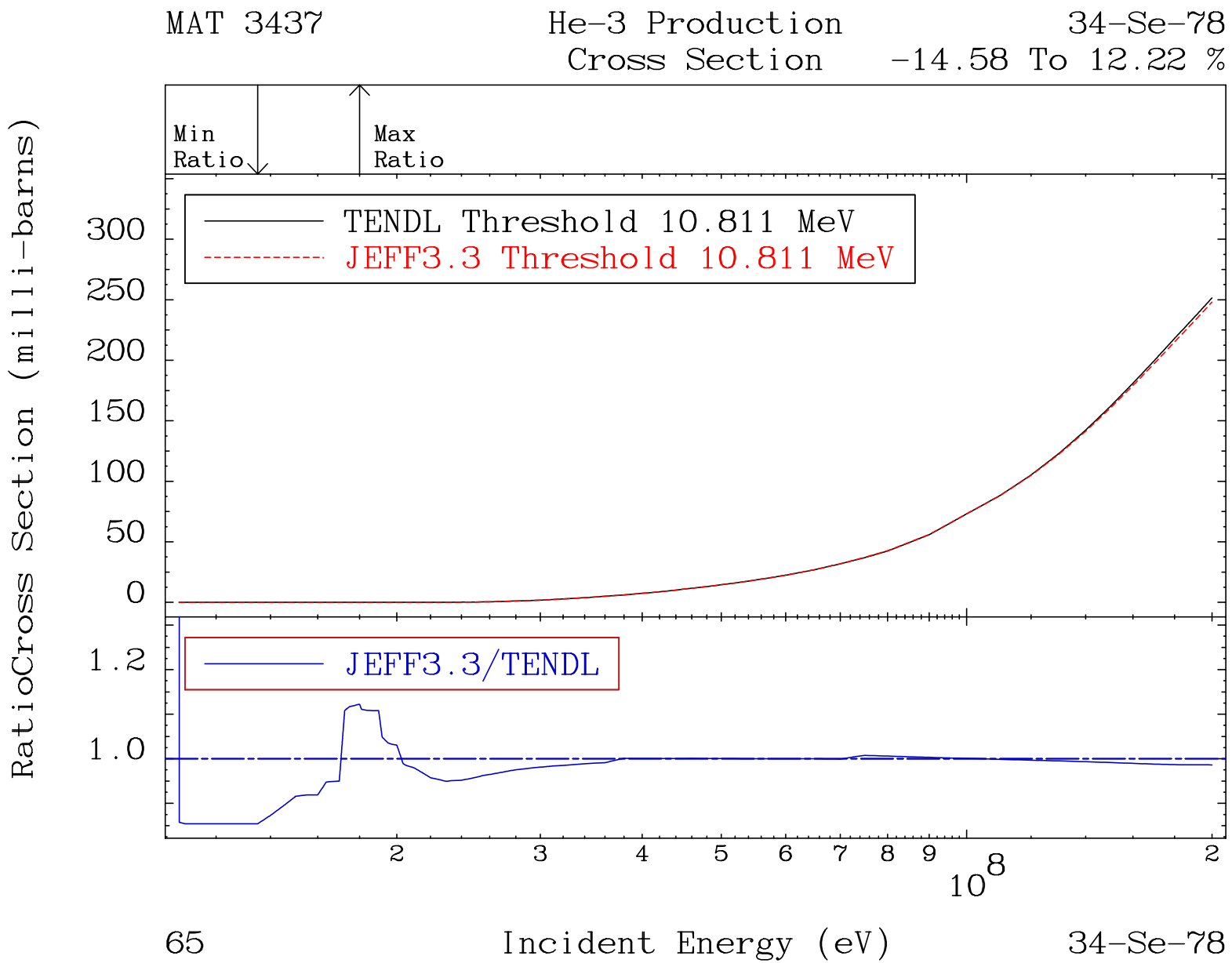

MAT 3437
(n,p) t
Cross Section
34-Se-78
-99.99 To 338.1 %
Max
Ratio
TENDL Threshold 19.587 MeV
JEFF3.3 Threshold 19.587 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
1.5
1.0
0.5
0.0
10^0
10^-3
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
34-Se-78

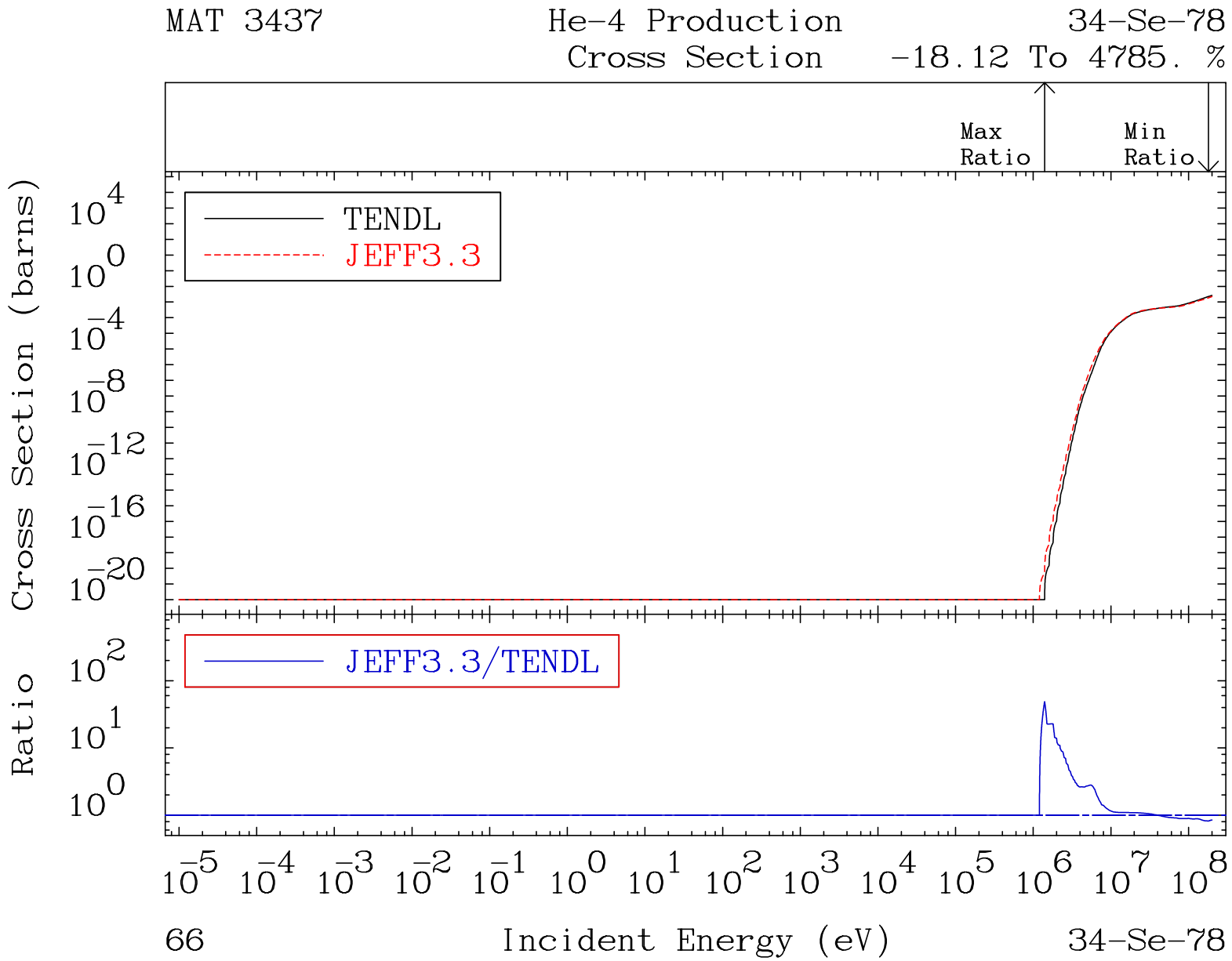

MAT 3437
(n,d) α
34-Se-78
Cross Section
-20.01 To 715.9 %
Max Ratio
Min Ratio
TENDL Threshold 15.008 MeV
JEFF3.3 Threshold 15.008 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
200
150
100
50
0
10^1
10^0
4
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
34-Se-78

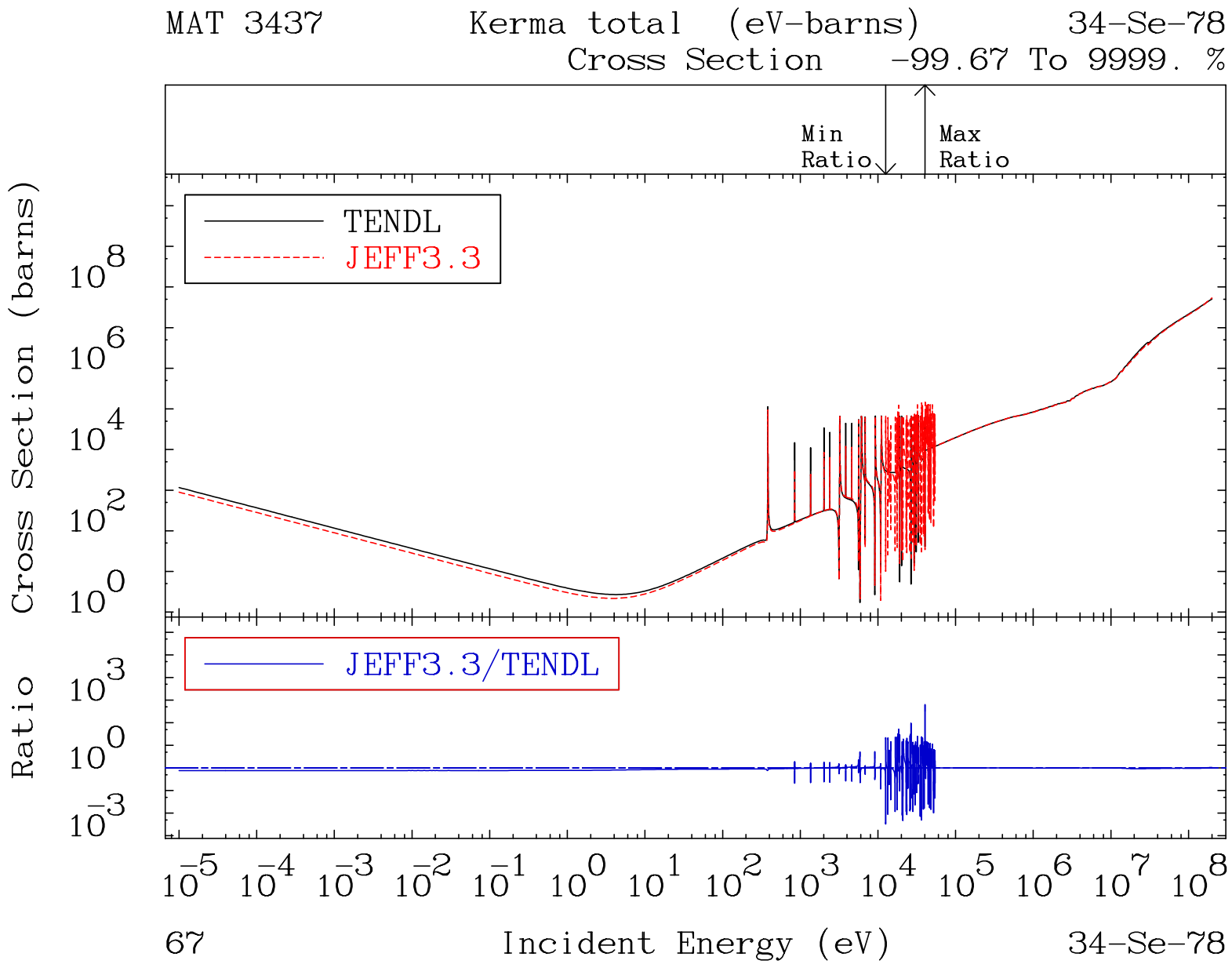

MAT 3437
Hydrogen Production
34-Se-78
Cross Section
-29.55 To 53.31 %
Min
Ratio
Max
Ratio
TENDL Threshold 3.4710 MeV
JEFF3.3 Threshold 3.4710 MeV
Cross Section (barns)
1.6
1.2
0.8
0.4
0.0
JEFF3.3/TENDL
Ratio
1.6
1.2
0.8
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
62
Incident Energy (eV)
34-Se-78

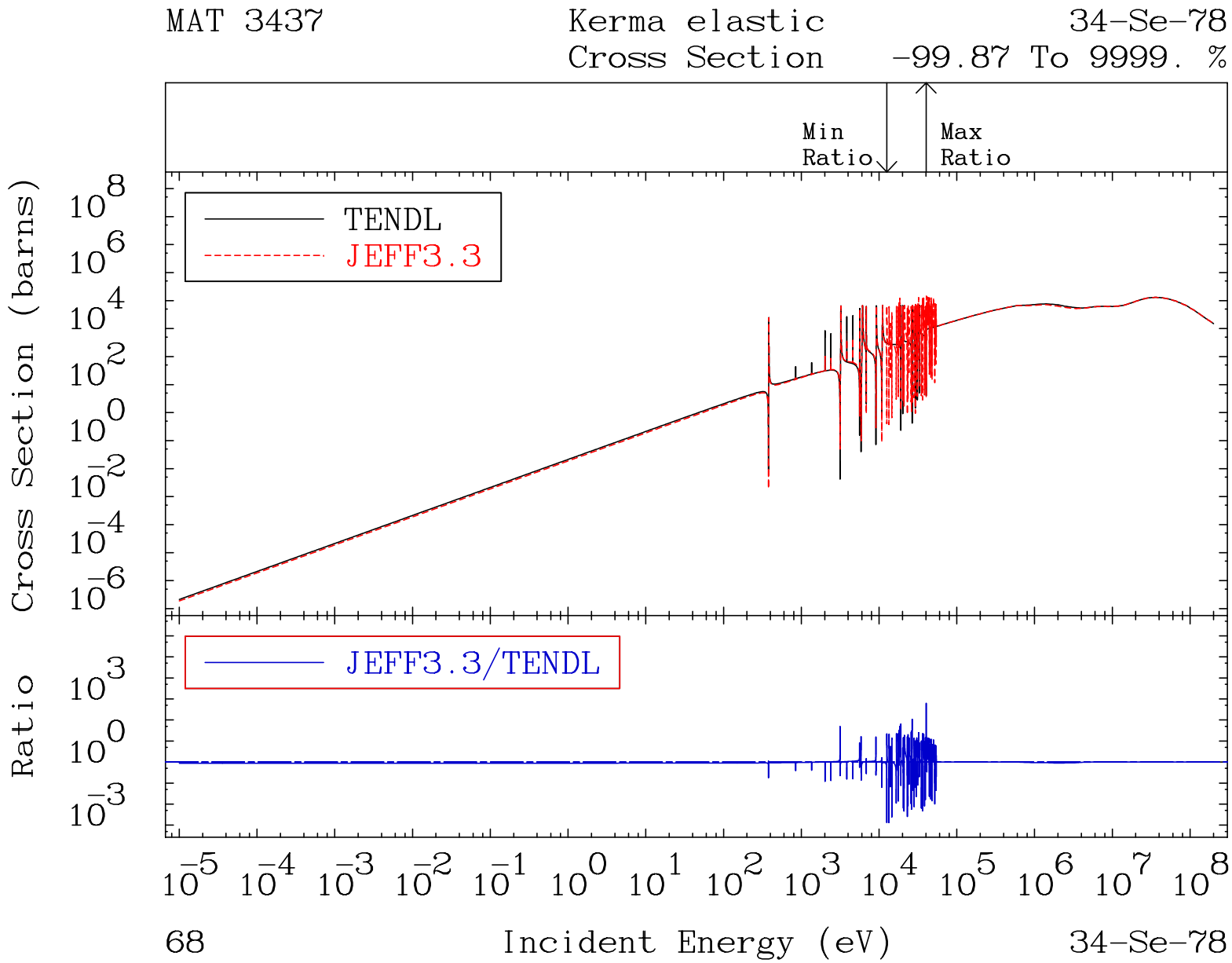

MAT 3437
Deuterium Production
34-Se-78
Cross Section -65.81 To 2470. %
Max Ratio
Min Ratio
TENDL Threshold 8.2798 MeV
JEFF3.3 Threshold 8.2798 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
10^2
10^1
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
63
Incident Energy (eV)
34-Se-78

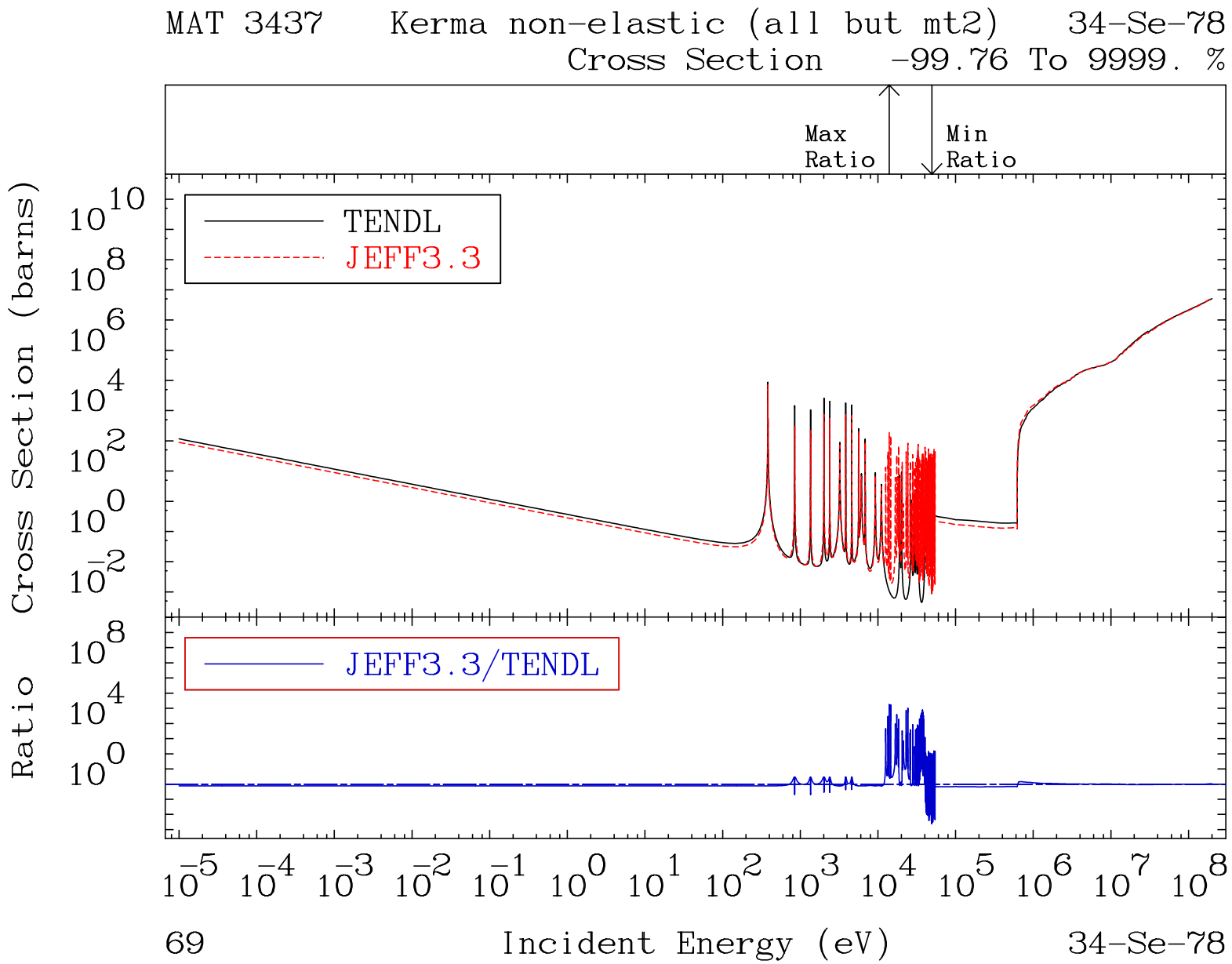

MAT 3437
Tritium Production
34-Se-78
Cross Section
-16.02 To 44.51 %
Min
Ratio
Max
Ratio
TENDL Threshold 11.763 MeV
JEFF3.3 Threshold 11.763 MeV
150
100
50
0
JEFF3.3/TENDL
1.6
1.2
0.8
2
3
4
5
6
7
8
9
10^8
2
RatioCross Section (milli-barns)
64
Incident Energy (eV)
34-Se-78

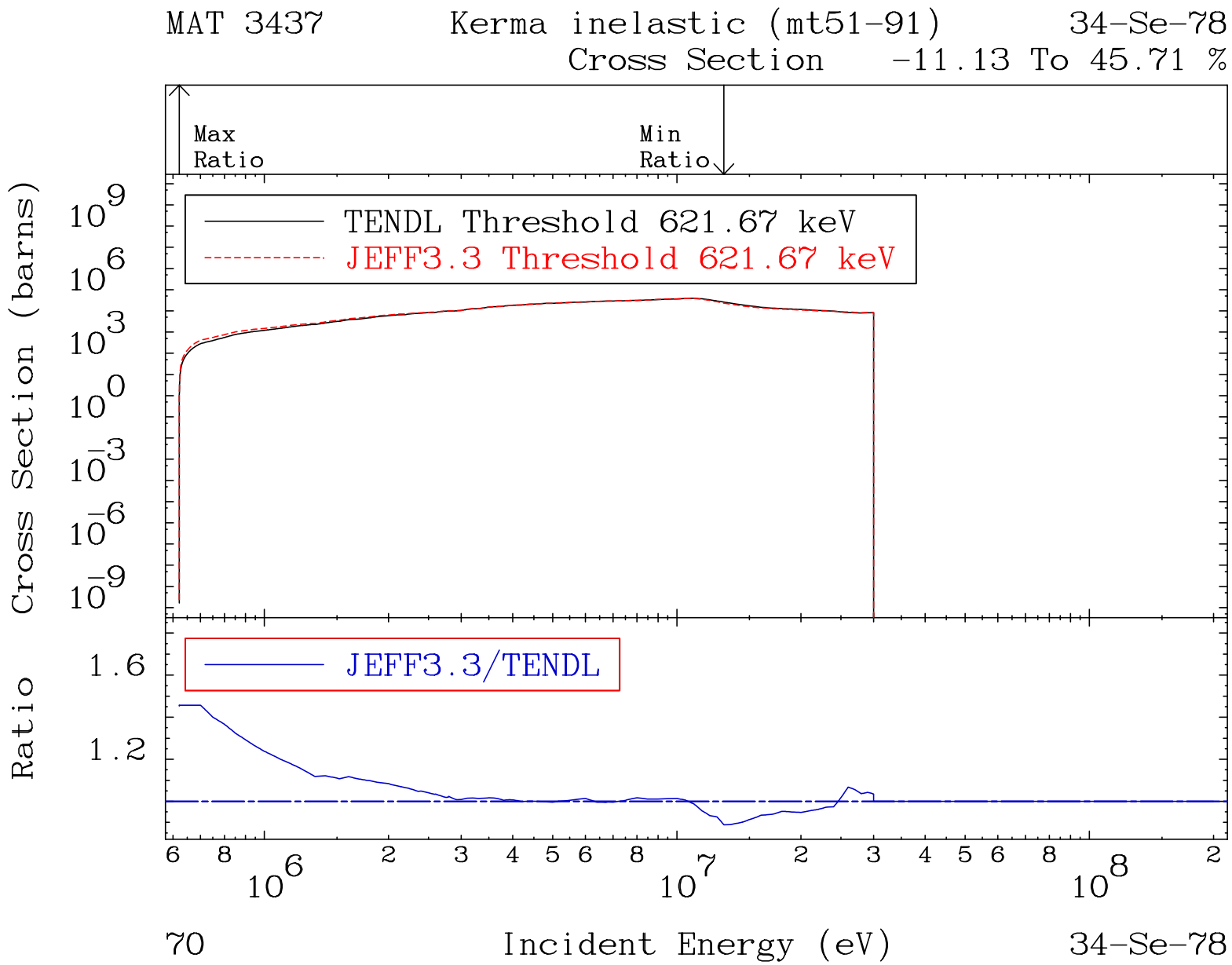

MAT 3437
He-3 Production
Cross Section
34-Se-78
-14.58 To 12.22 %
Min Ratio
Max Ratio
TENDL Threshold 10.811 MeV
JEFF3.3 Threshold 10.811 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
65
Incident Energy (eV)
34-Se-78

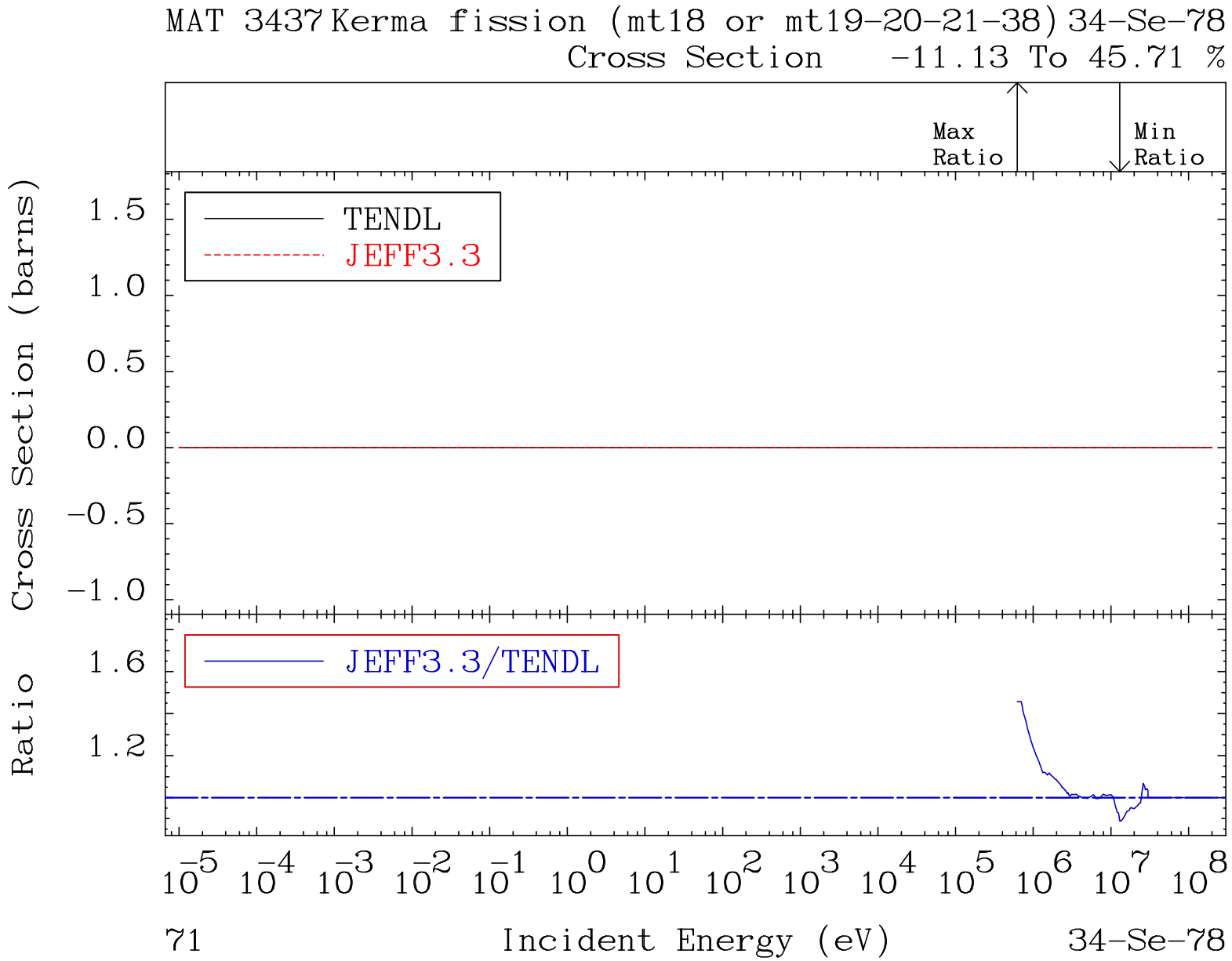

MAT 3437
He-4 Production
Cross Section
34-Se-78
-18.12 To 4785. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
66
34-Se-78

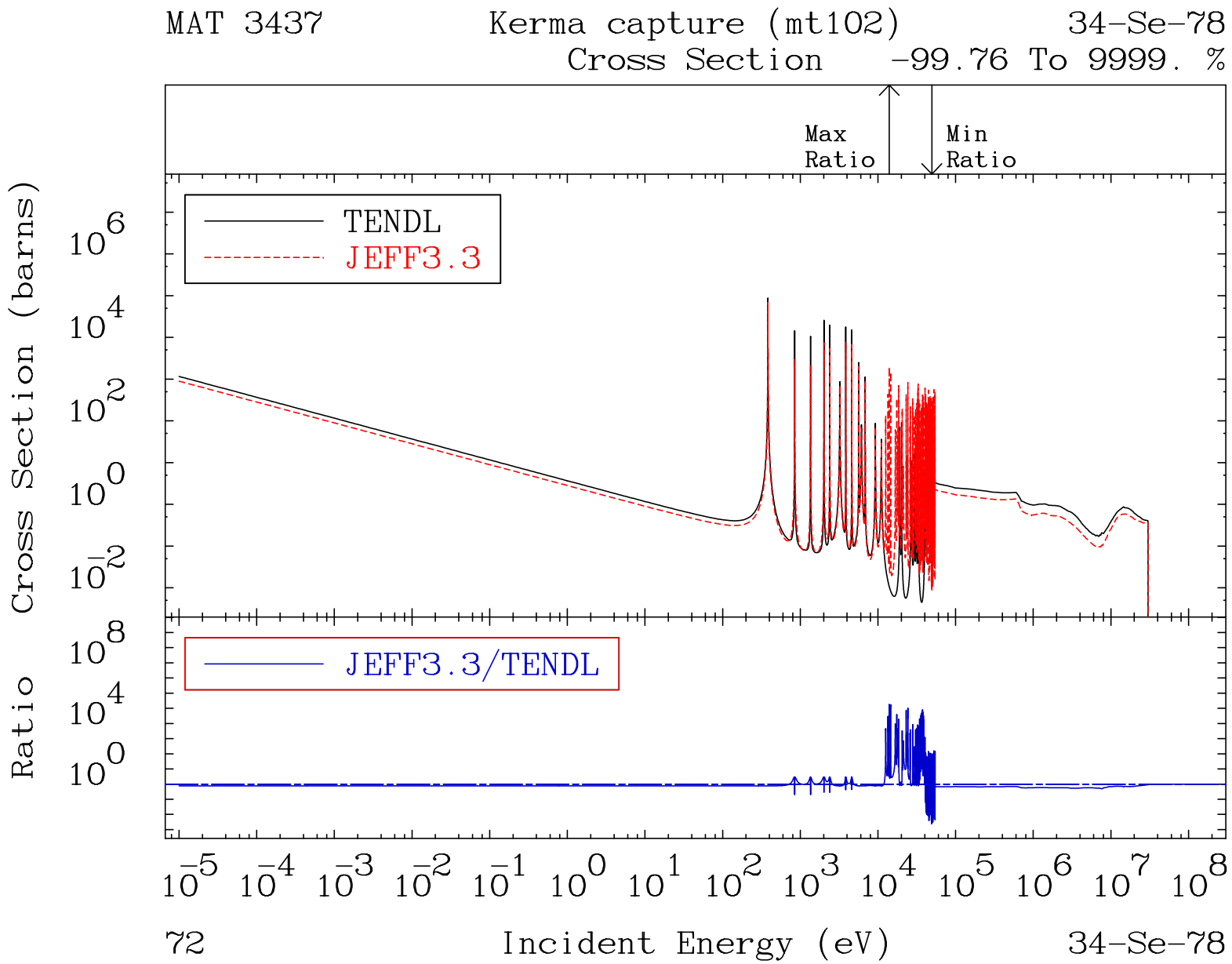

MAT 3437
Kerma total (eV-barns)
34-Se-78
Cross Section -99.67 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
34-Se-78

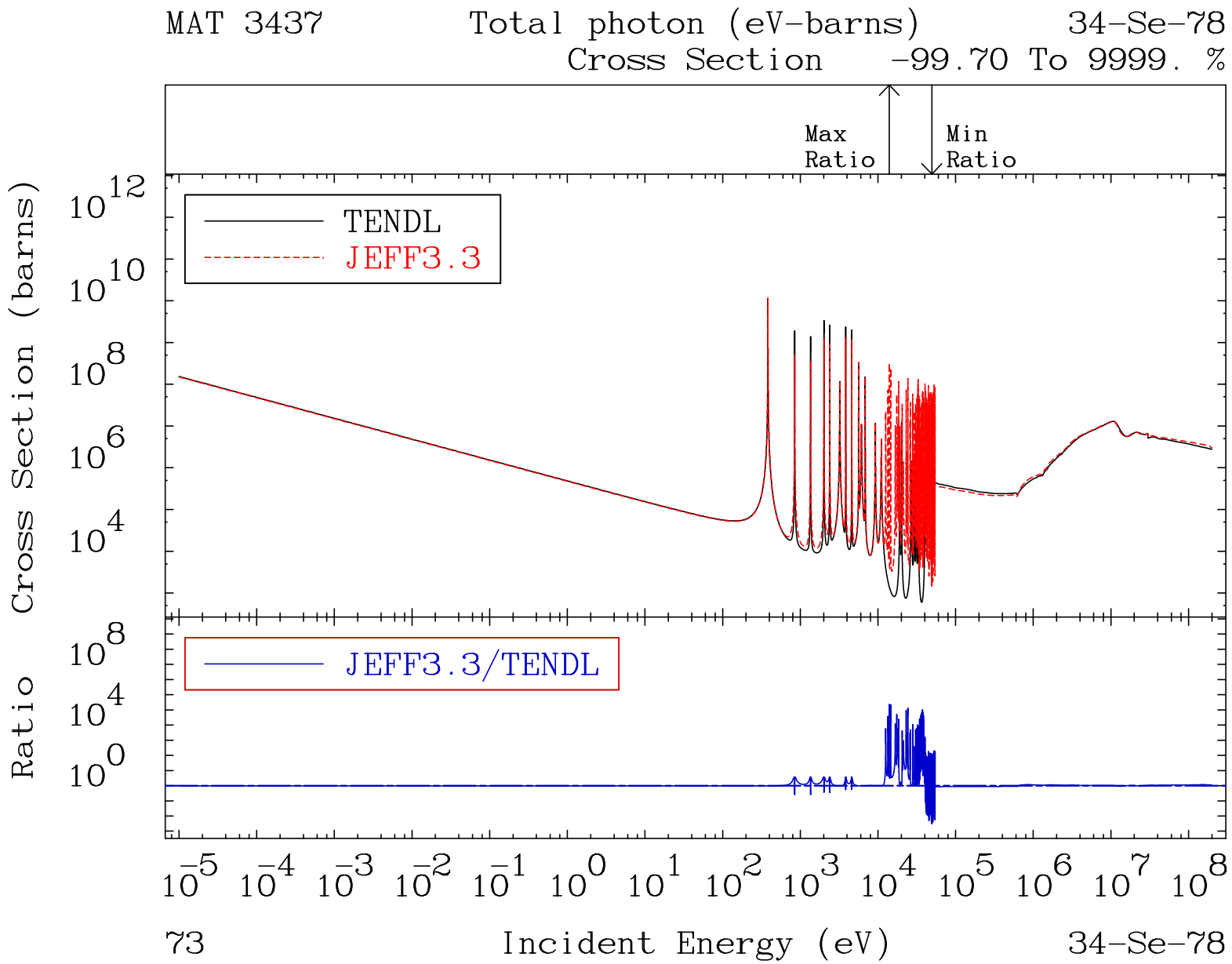

MAT 3437
Kerma elastic
Cross Section
34-Se-78
-99.87 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
68
34-Se-78

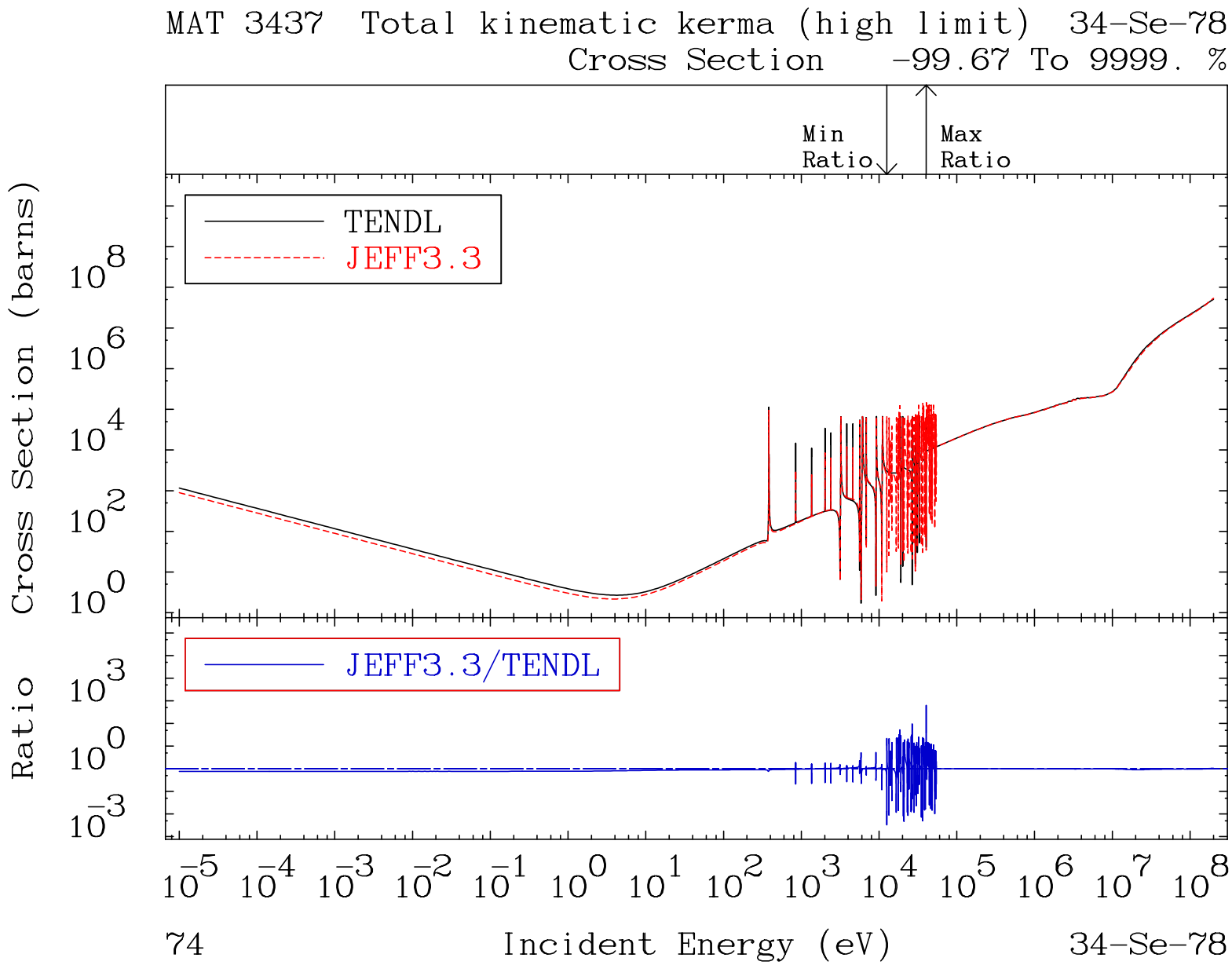

MAT 3437 Kerma non-elastic (all but mt2) 34-Se-78
Cross Section -99.76 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
69
34-Se-78

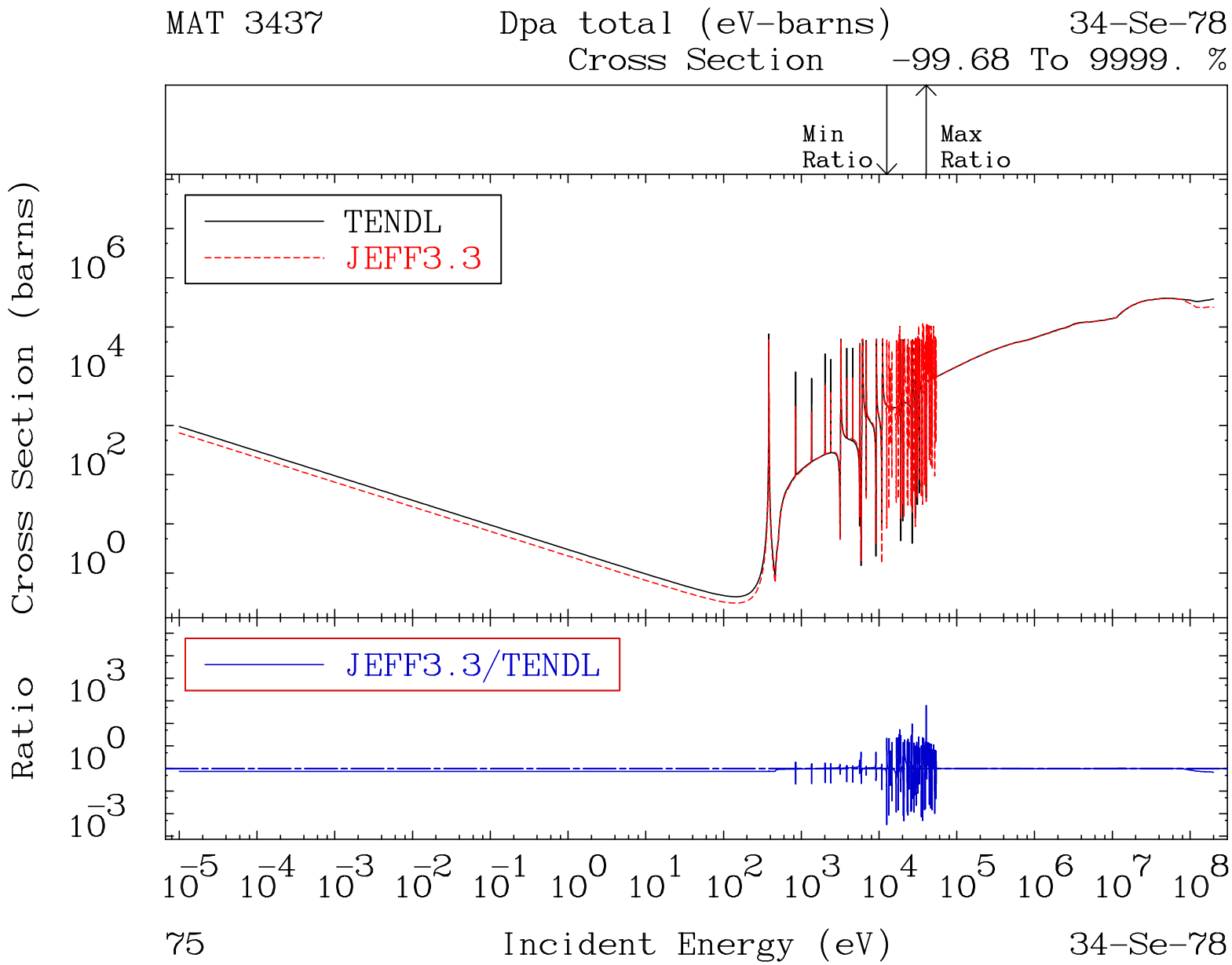

MAT 3437 Kerma inelastic (mt51-91) 34-Se-78
Cross Section -11.13 To 45.71 %
Max Ratio
Min Ratio
TENDL Threshold 621.67 keV
JEFF3.3 Threshold 621.67 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
70
34-Se-78

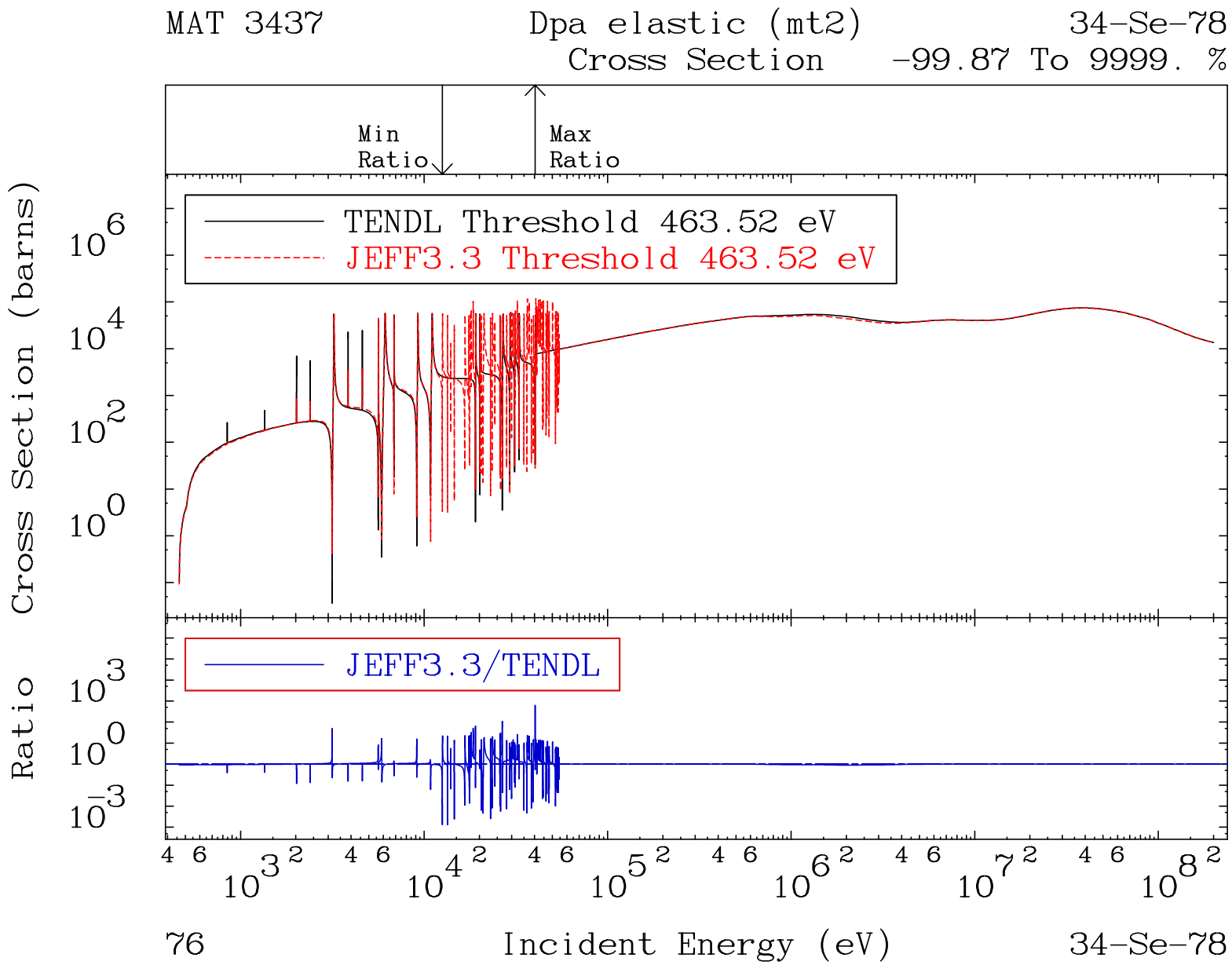

MAT 3437 Kerma fission (mt18 or mt19-20-21-38) 34-Se-78
Cross Section -11.13 To 45.71 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
1.6
1.2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
71
Incident Energy (eV)
34-Se-78

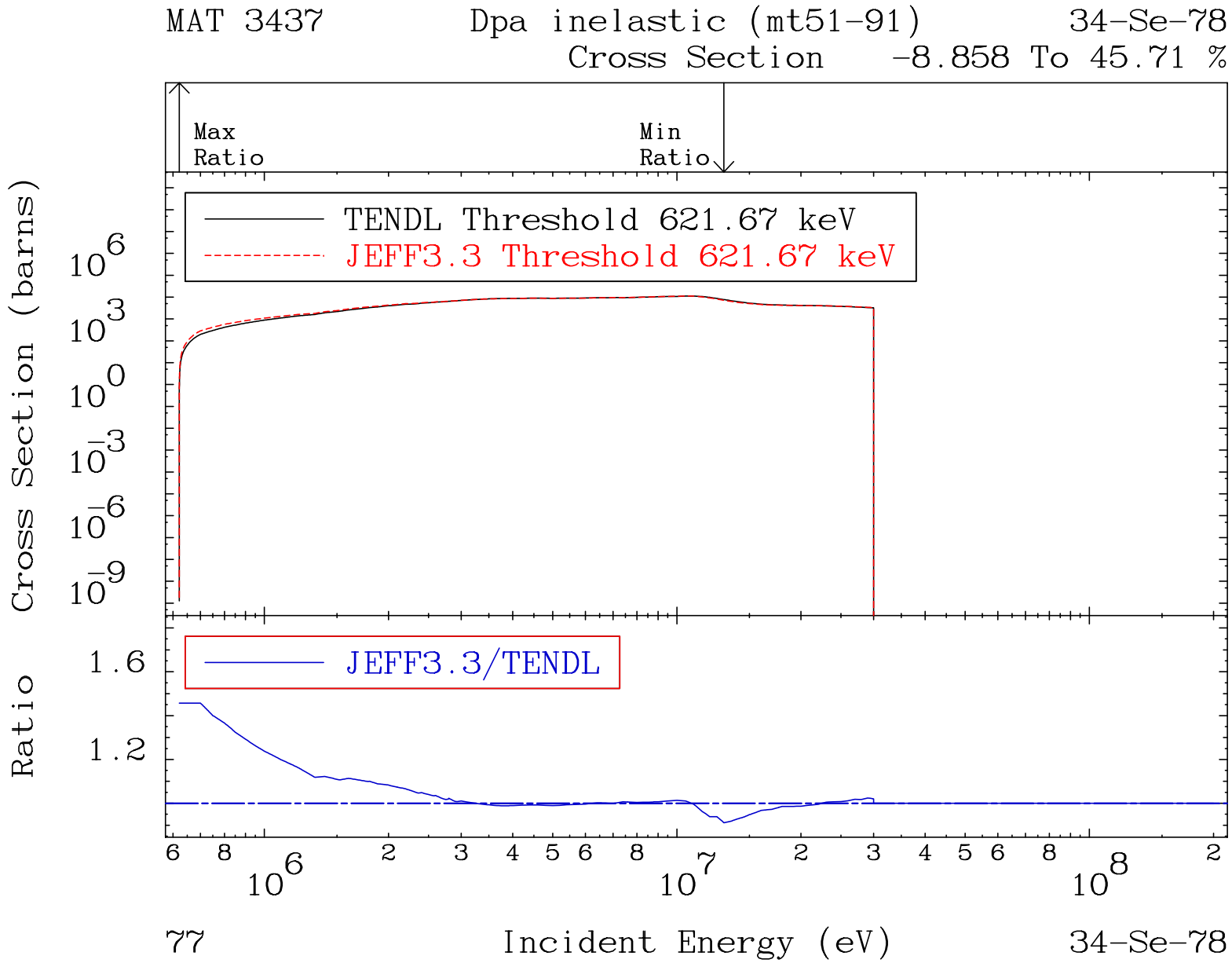

MAT 3437
Kerma capture (mt102)
34-Se-78
Cross Section
-99.76 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
72
34-Se-78

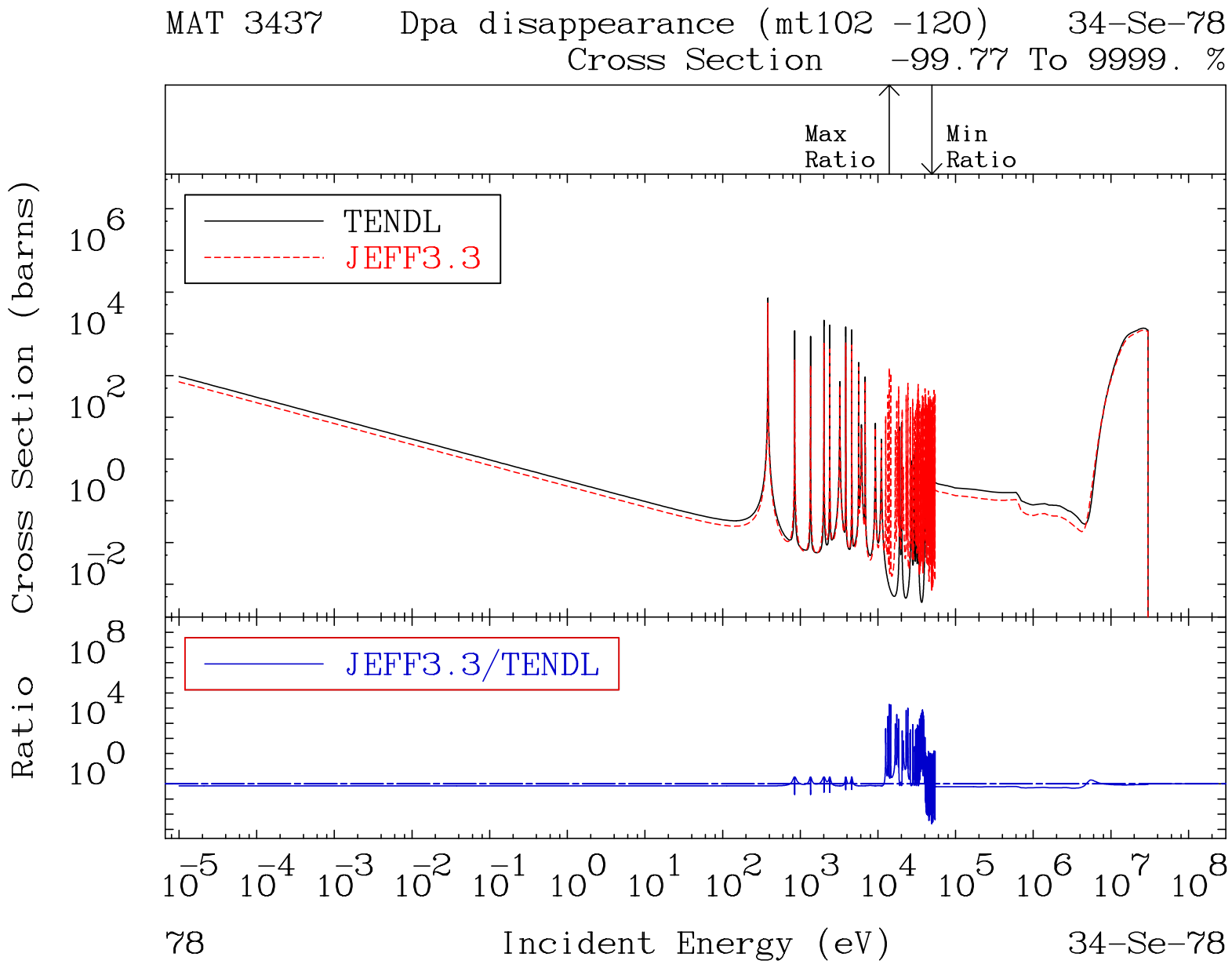

MAT 3437
Total photon (eV-barns)
34-Se-78
Cross Section -99.70 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
73
34-Se-78

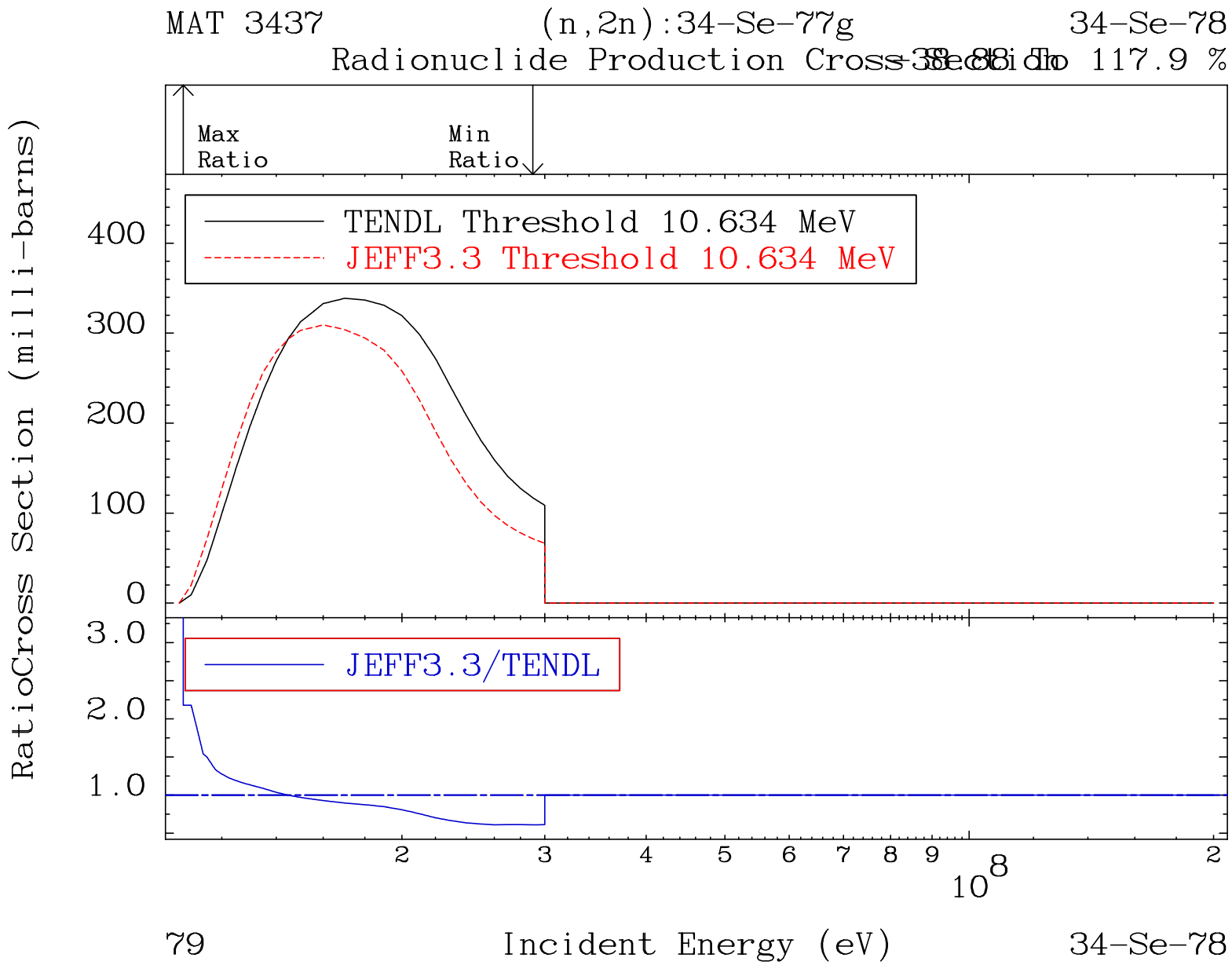

MAT 3437 Total kinematic kerma (high limit) 34-Se-78
Cross Section -99.67 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
74
34-Se-78

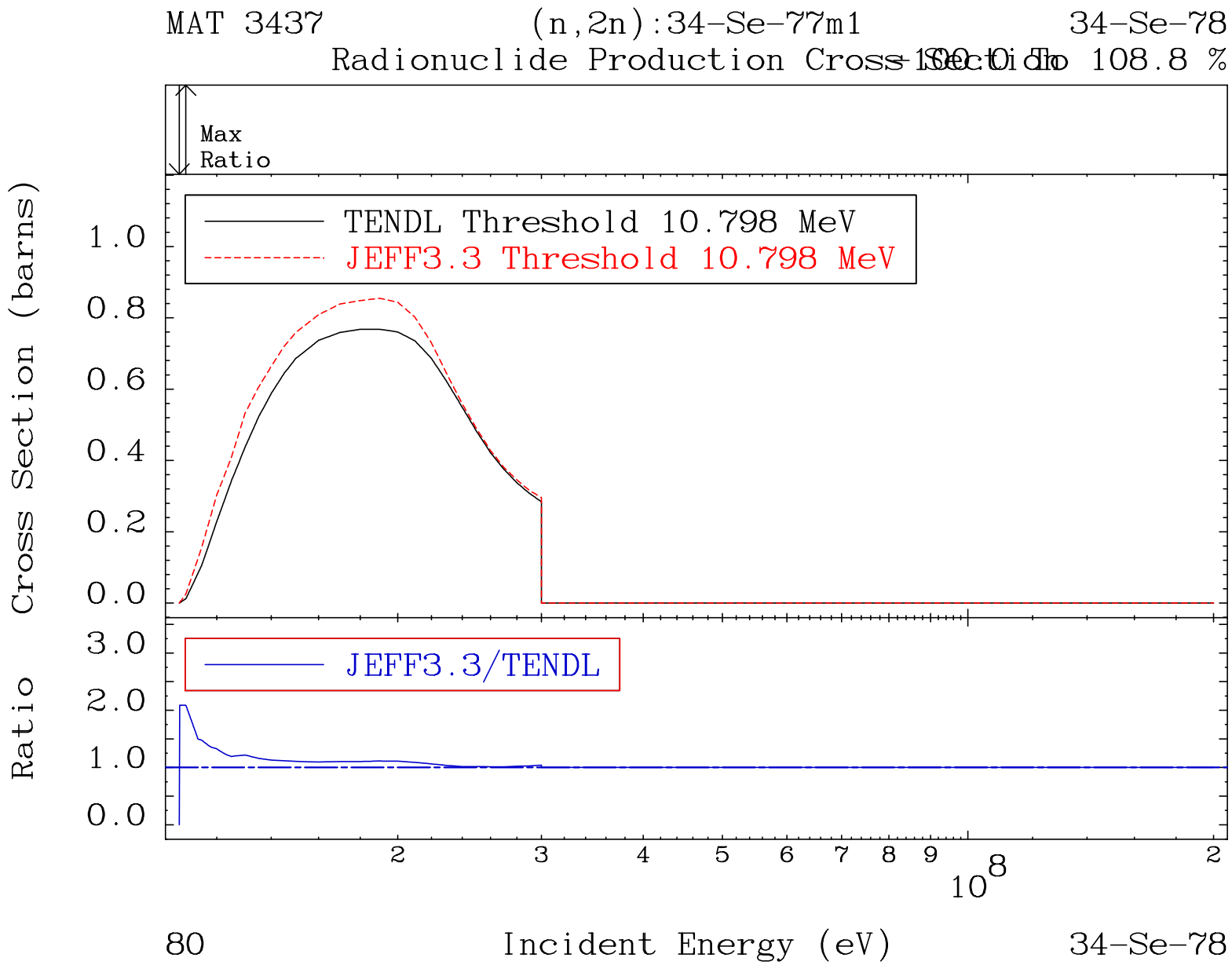

MAT 3437
Dpa total (eV-barns)
34-Se-78
Cross Section
-99.68 To 9999. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
75
34-Se-78

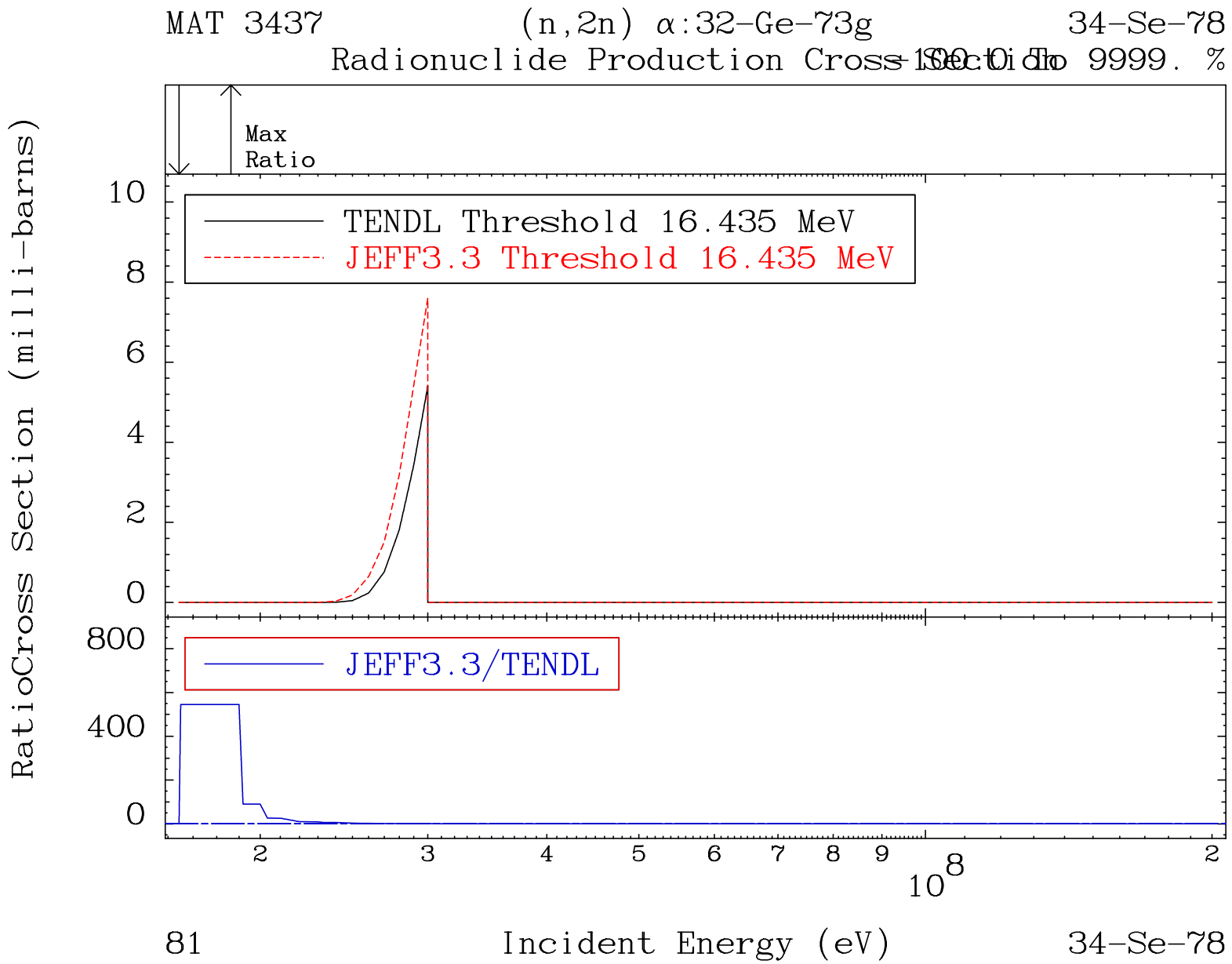

MAT 3437
Dpa elastic (mt2)
Cross Section
34-Se-78
-99.87 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 463.52 eV
JEFF3.3 Threshold 463.52 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
76
34-Se-78

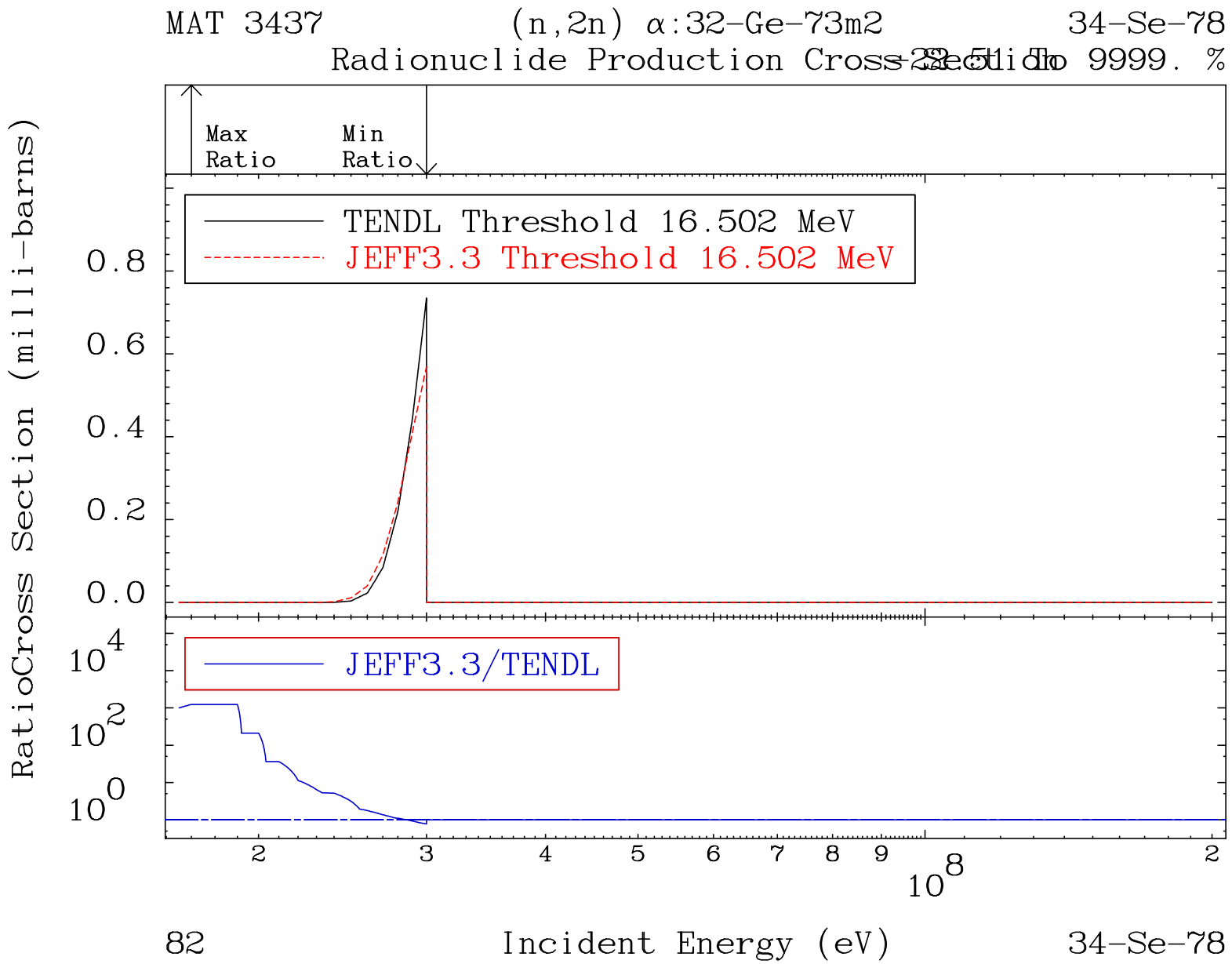

MAT 3437
Dpa inelastic (mt51-91)
34-Se-78
Cross Section
-8.858 To 45.71 %
Max Ratio
Min Ratio
TENDL Threshold 621.67 keV
JEFF3.3 Threshold 621.67 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
77
34-Se-78

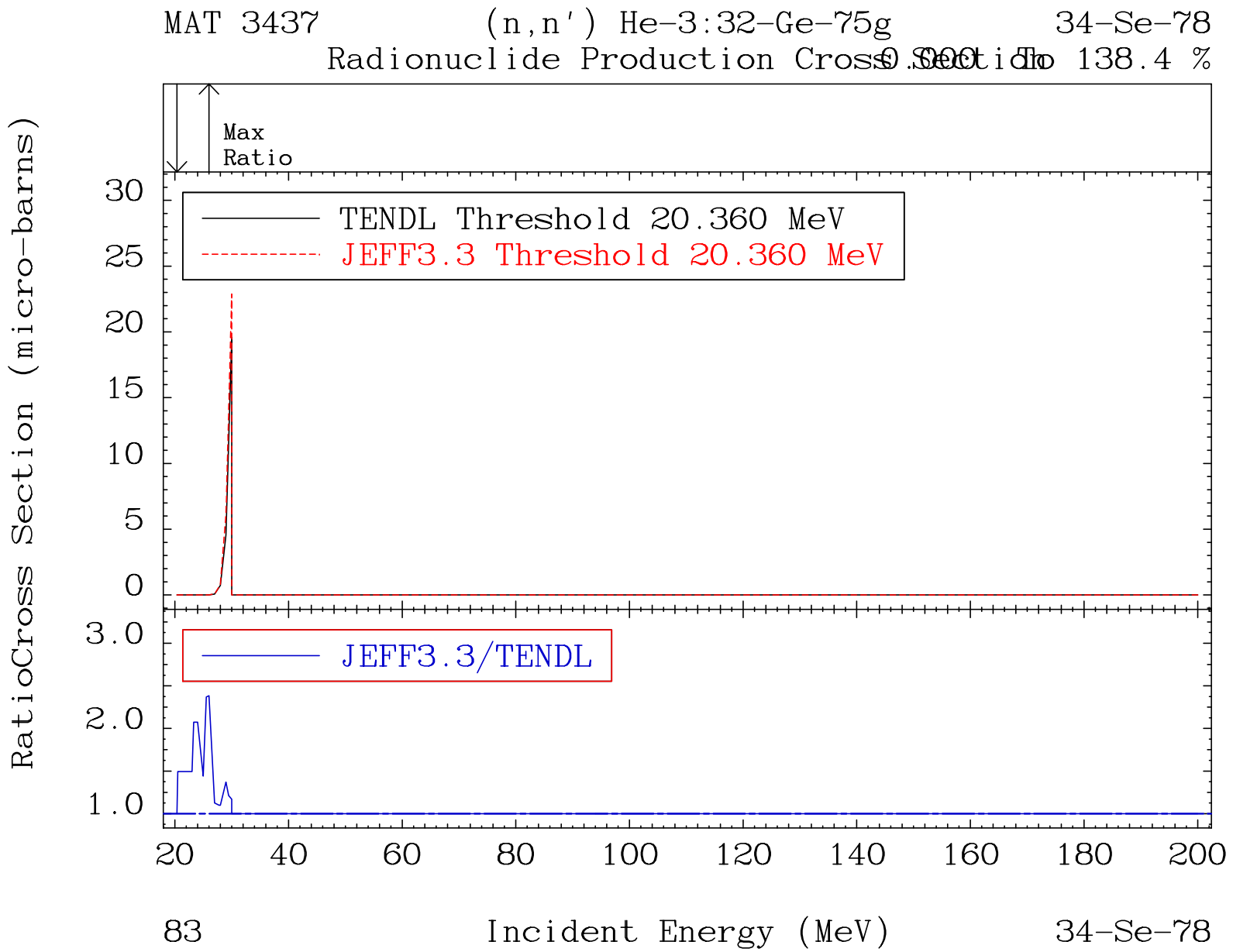

MAT 3437 Dpa disappearance (mt102 -120) 34-Se-78
Cross Section -99.77 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
78
34-Se-78

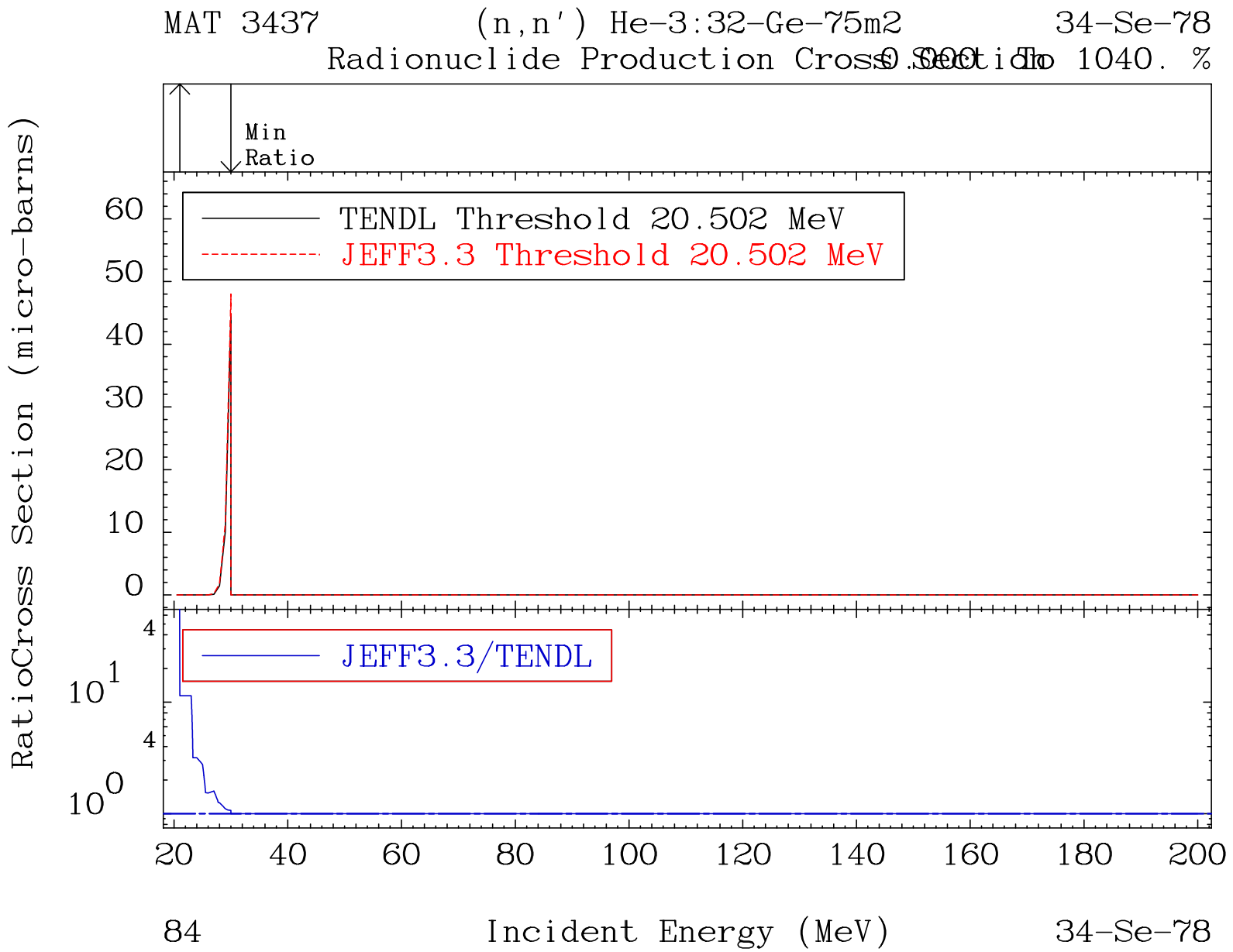

MAT 3437
(n,2n):34-Se-77g
34-Se-78
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 10.634 MeV
JEFF3.3 Threshold 10.634 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
79
34-Se-78

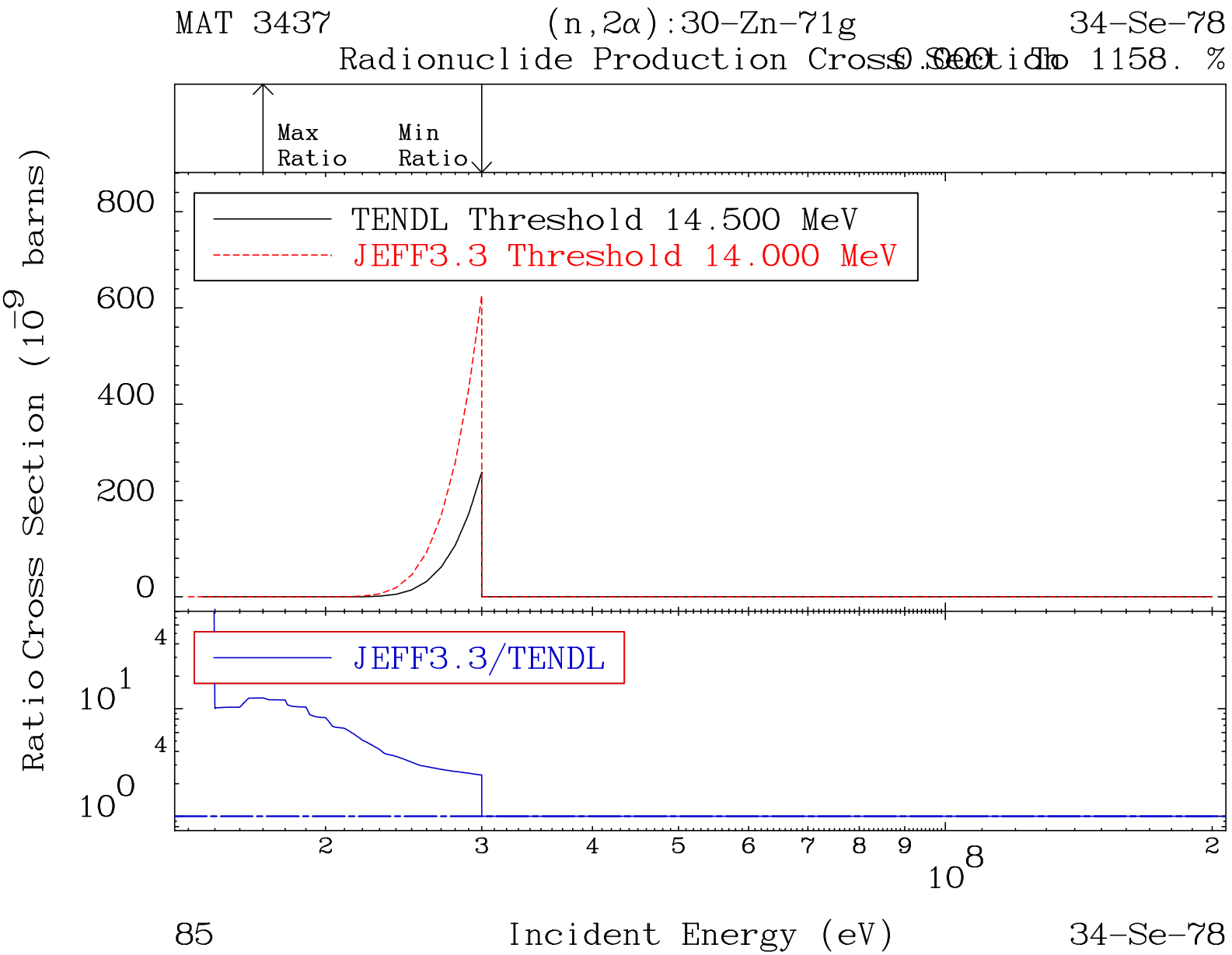

MAT 3437
(n,2n):34-Se-77m1
34-Se-78
Radionuclide Production Cross Section To 108.8 %
Max
Ratio
TENDL Threshold 10.798 MeV
JEFF3.3 Threshold 10.798 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
3.0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
2
10^8
80
Incident Energy (eV)
34-Se-78

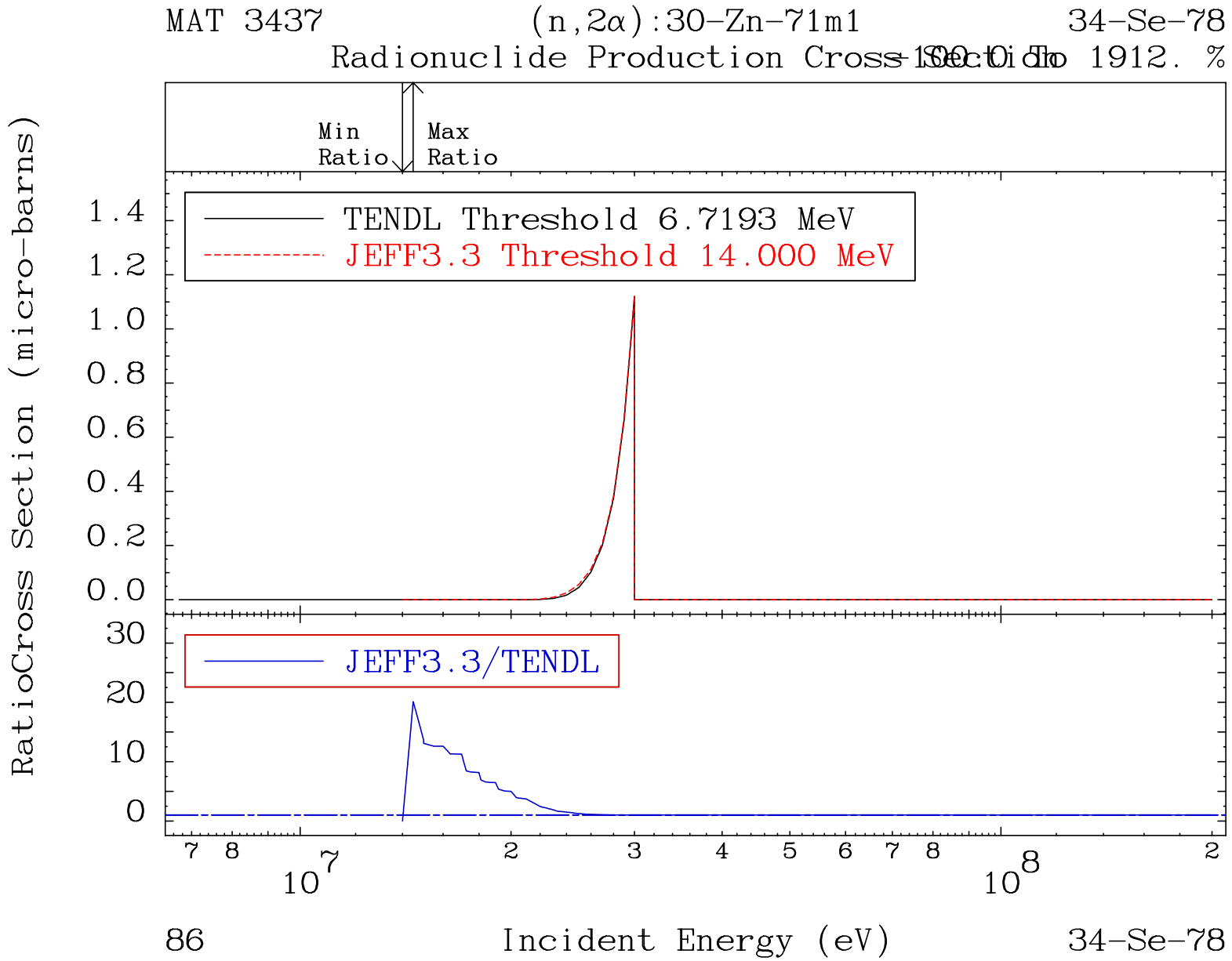

MAT 3437
(n,2n) α:32-Ge-73g
34-Se-78
Radionuclide Production Cross Section To 9999. %
Max
Ratio
TENDL Threshold 16.435 MeV
JEFF3.3 Threshold 16.435 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
10
8
6
4
2
0
800
400
0
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
34-Se-78

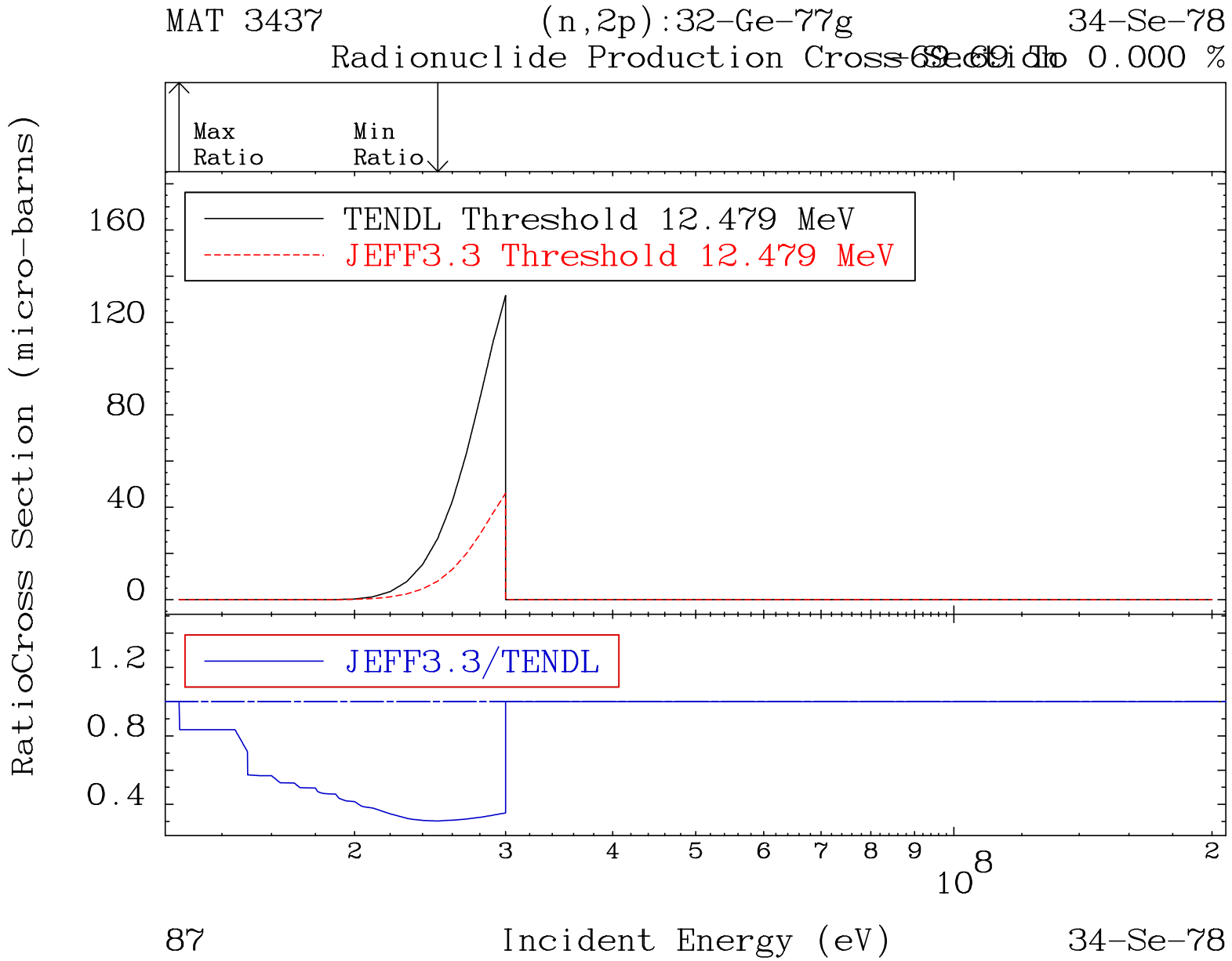

MAT 3437
(n,2n) α:32-Ge-73m2
34-Se-78
Radionuclide Production Cross Section To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.502 MeV
JEFF3.3 Threshold 16.502 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
0.8
0.6
0.4
0.2
0.0
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
82
Incident Energy (eV)
34-Se-78

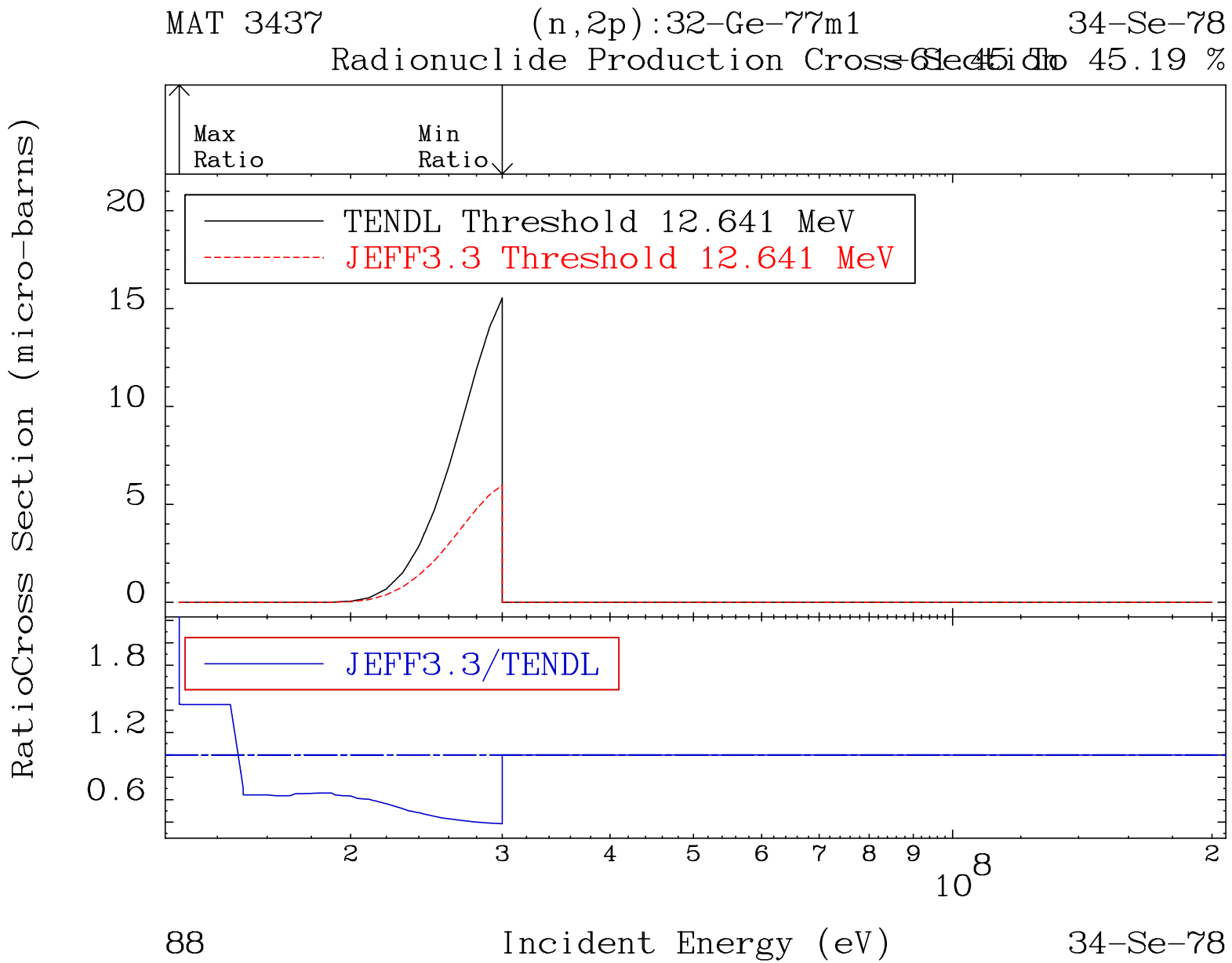

MAT 3437 (n,n') He-3:32-Ge-75g 34-Se-78
Radionuclide Production Cross Section To 138.4 %
Max
Ratio
TENDL Threshold 20.360 MeV
JEFF3.3 Threshold 20.360 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (MeV)
83
34-Se-78

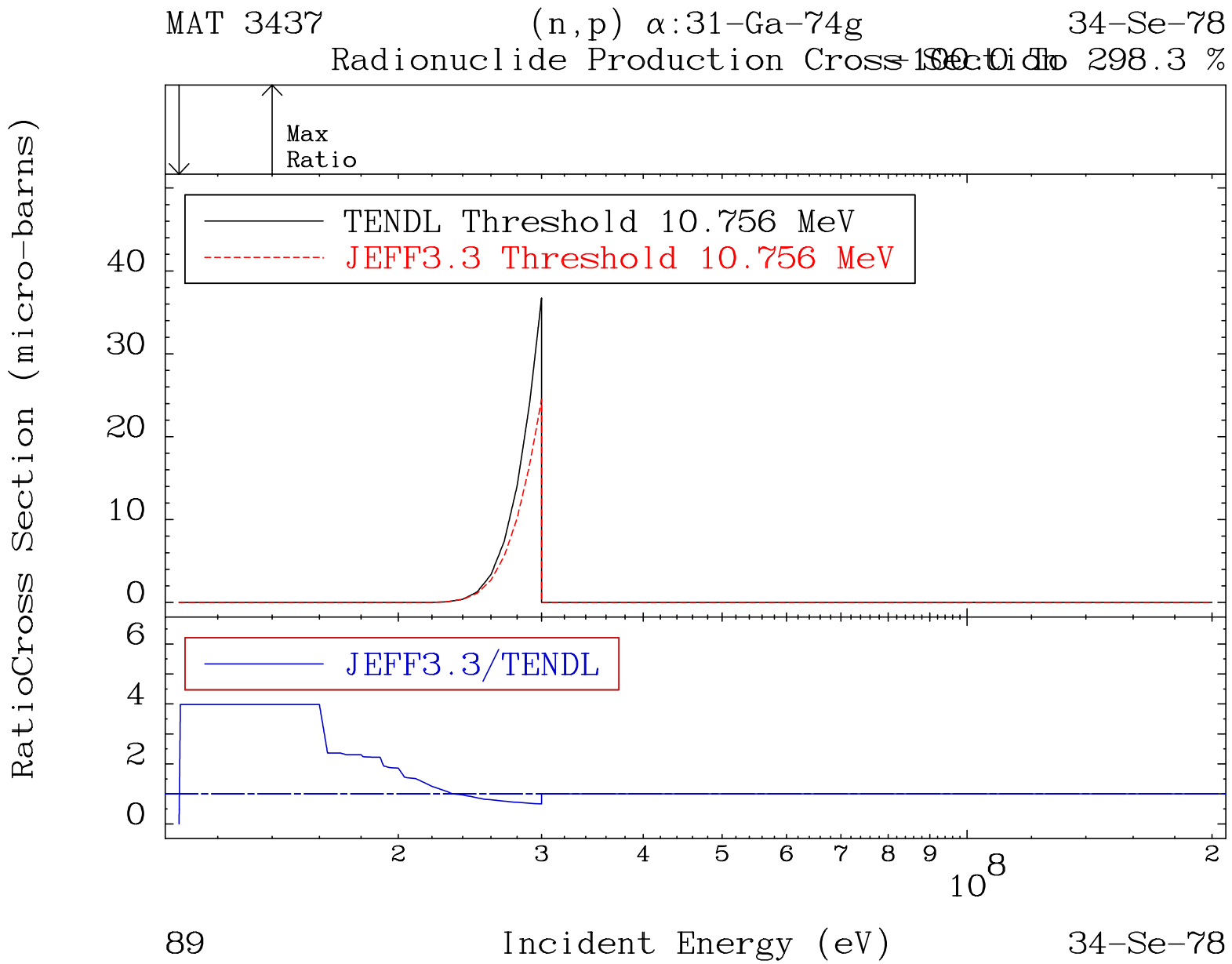

MAT 3437 (n,n') He-3:32-Ge-75m2 34-Se-78
Radionuclide Production Cross Section
0.000 To 1040. %
Min
Ratio
TENDL Threshold 20.502 MeV
JEFF3.3 Threshold 20.502 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (MeV)
84
34-Se-78

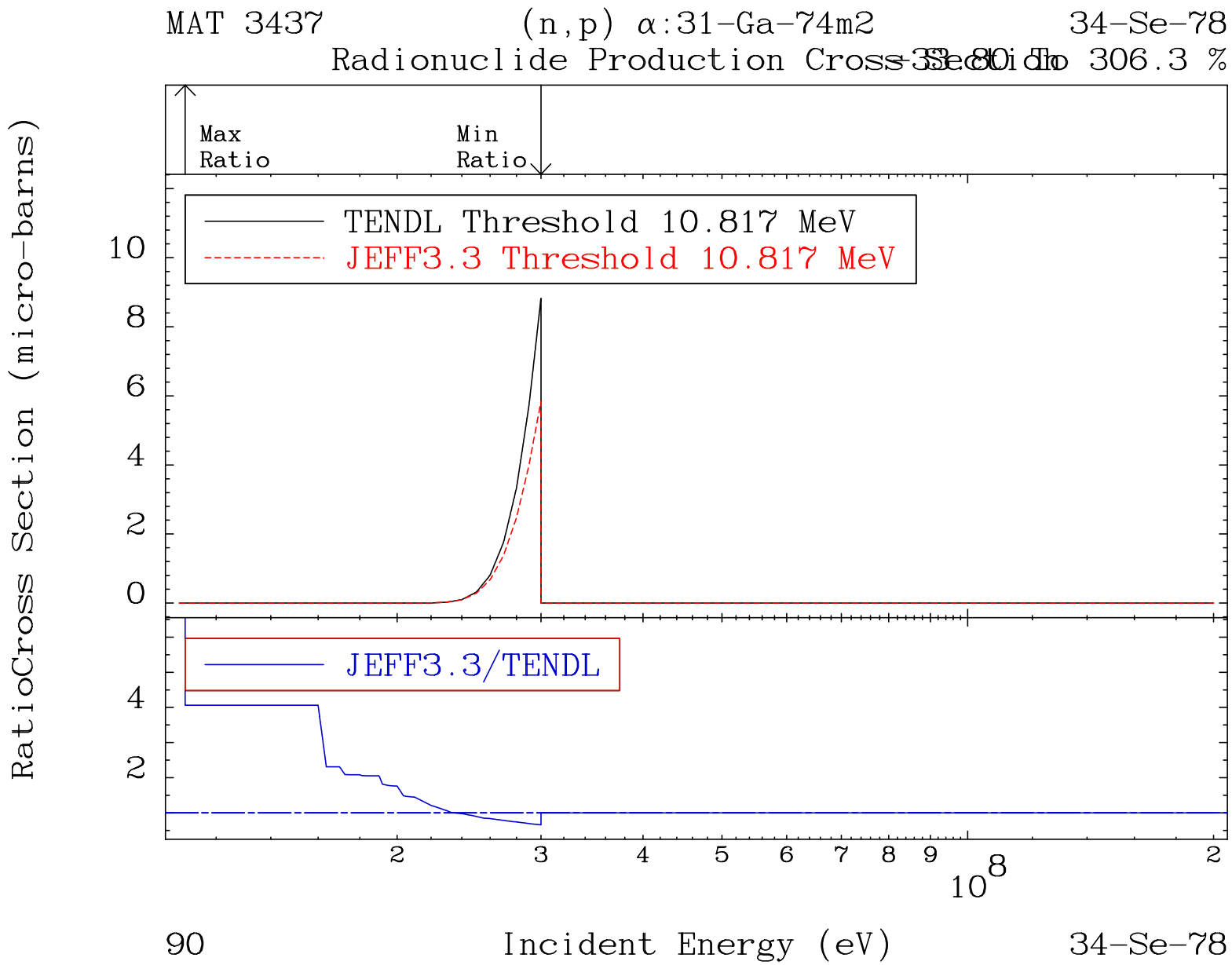

MAT 3437
(n,2α):30-Zn-71g
34-Se-78
Radionuclide Production Cross Section
0.000 To 1158. %
Max Ratio
Min Ratio
TENDL Threshold 14.500 MeV
JEFF3.3 Threshold 14.000 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
800
600
400
200
0
4
10^1
4
10^0
2
3
4
5
6
7
8
9
10^8
2
85
Incident Energy (eV)
34-Se-78

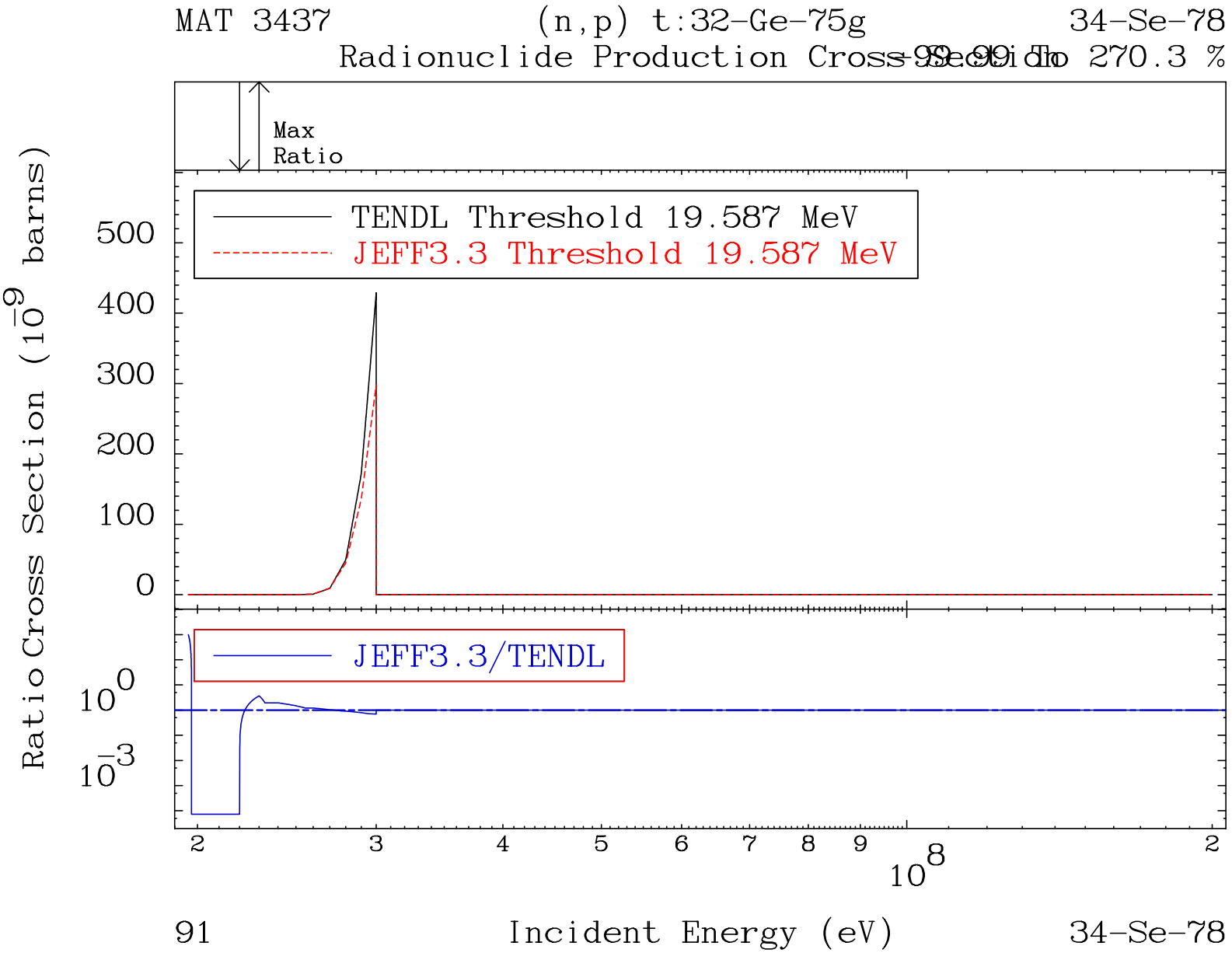

MAT 3437
(n,2α):30-Zn-71m1
34-Se-78
Radionuclide Production Cross Section To 1912. %
Min Ratio
Max Ratio
TENDL Threshold 6.7193 MeV
JEFF3.3 Threshold 14.000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
30
20
10
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
86
Incident Energy (eV)
34-Se-78

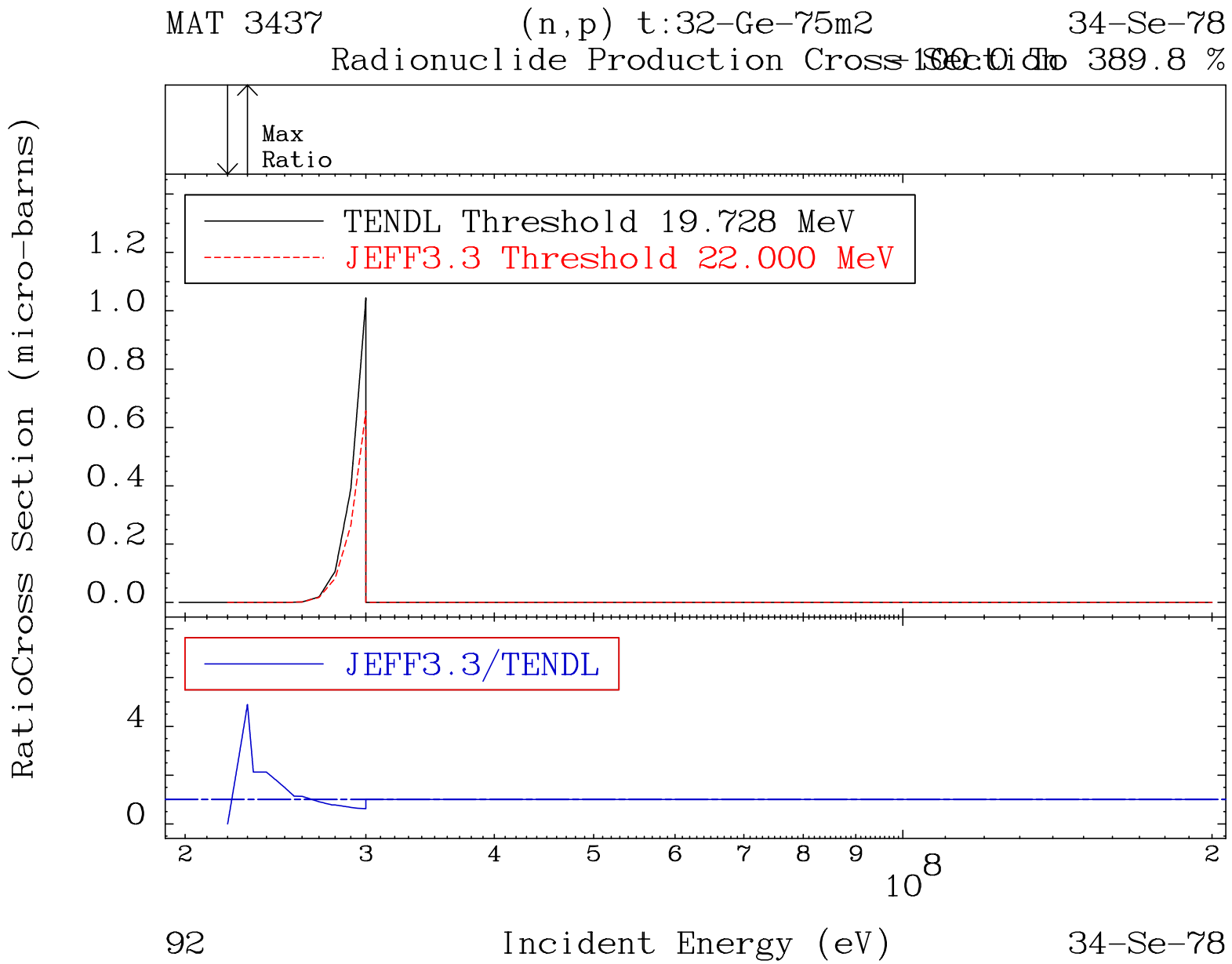

MAT 3437
(n,2p):32-Ge-77g
34-Se-78
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 12.479 MeV
JEFF3.3 Threshold 12.479 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
160
120
80
40
0
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
87
Incident Energy (eV)
34-Se-78


MAT 3437
(n,2p):32-Ge-77m1
34-Se-78
Radionuclide Production Cross Section To 45.19 %
Max Ratio
Min Ratio
TENDL Threshold 12.641 MeV
JEFF3.3 Threshold 12.641 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
20
15
10
5
0
1.8
1.2
0.6
2
3
4
5
6
7
8
9
2
10^8
88
Incident Energy (eV)
34-Se-78


MAT 3437
(n,p) α:31-Ga-74g
34-Se-78
Radionuclide Production Cross Section To 298.3 %
Max
Ratio
TENDL Threshold 10.756 MeV
JEFF3.3 Threshold 10.756 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
40
30
20
10
0
6
4
2
0
2
3
4
5
6
7
8
9
2
10^8
89
Incident Energy (eV)
34-Se-78


MAT 3437
(n,p) α:31-Ga-74m2
34-Se-78
Radionuclide Production Cross Section To 306.3 %
Max Ratio
Min Ratio
TENDL Threshold 10.817 MeV
JEFF3.3 Threshold 10.817 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
90
34-Se-78


MAT 3437
(n,p) t:32-Ge-75g
34-Se-78
Radionuclide Production Cross Section To 270.3 %
Max
Ratio
TENDL Threshold 19.587 MeV
JEFF3.3 Threshold 19.587 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
500
400
300
200
100
0
10^{0}
10^{-3}
2
3
4
5
6
7
8
9
10^{8}
2
91
Incident Energy (eV)
34-Se-78


MAT 3437
(n,p) t:32-Ge-75m2
34-Se-78
Radionuclide Production Cross Section To 389.8 %
Max
Ratio
TENDL Threshold 19.728 MeV
JEFF3.3 Threshold 22.000 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
4
0
2
3
4
5
6
7
8
9
10^8
2
92
Incident Energy (eV)
34-Se-78