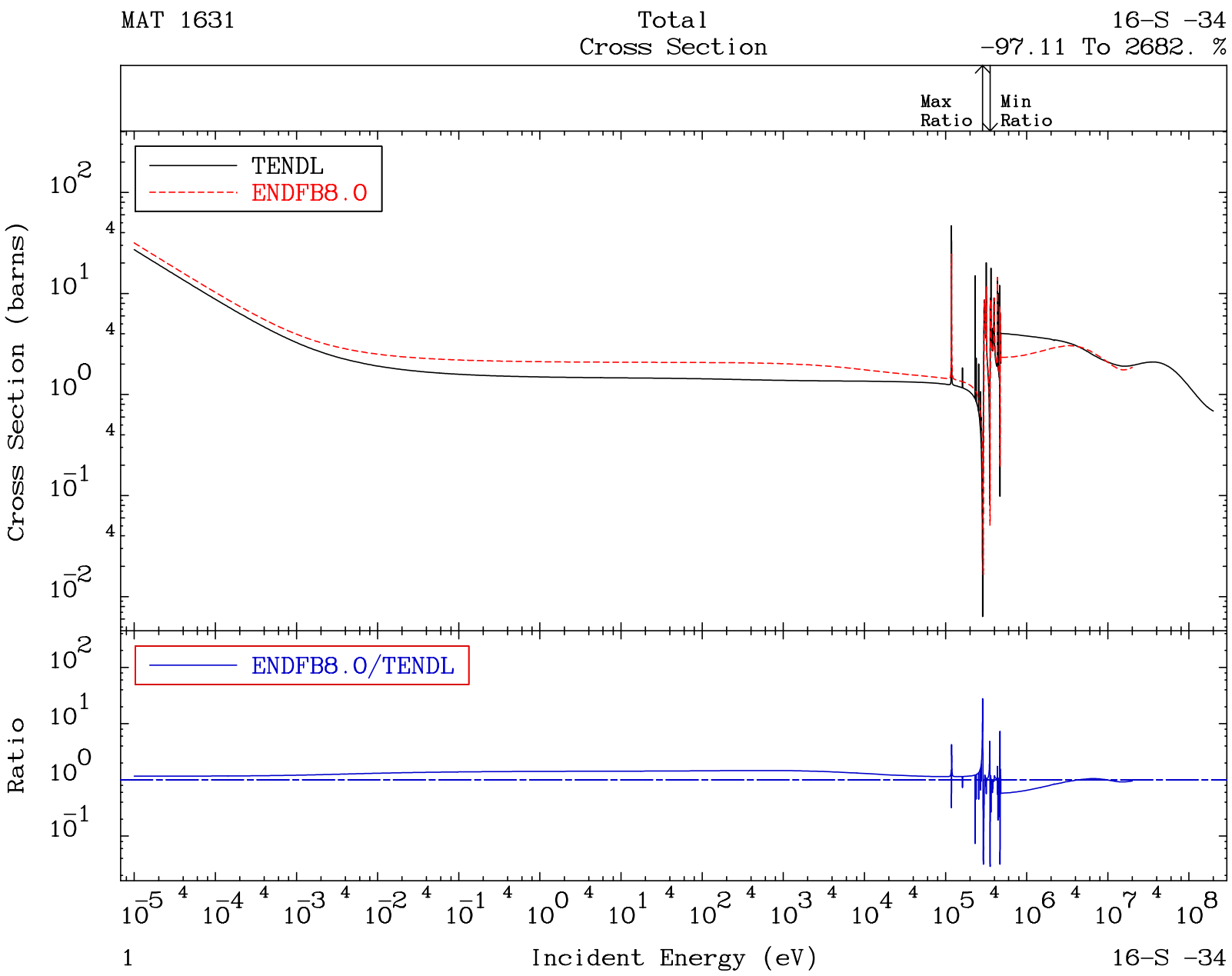
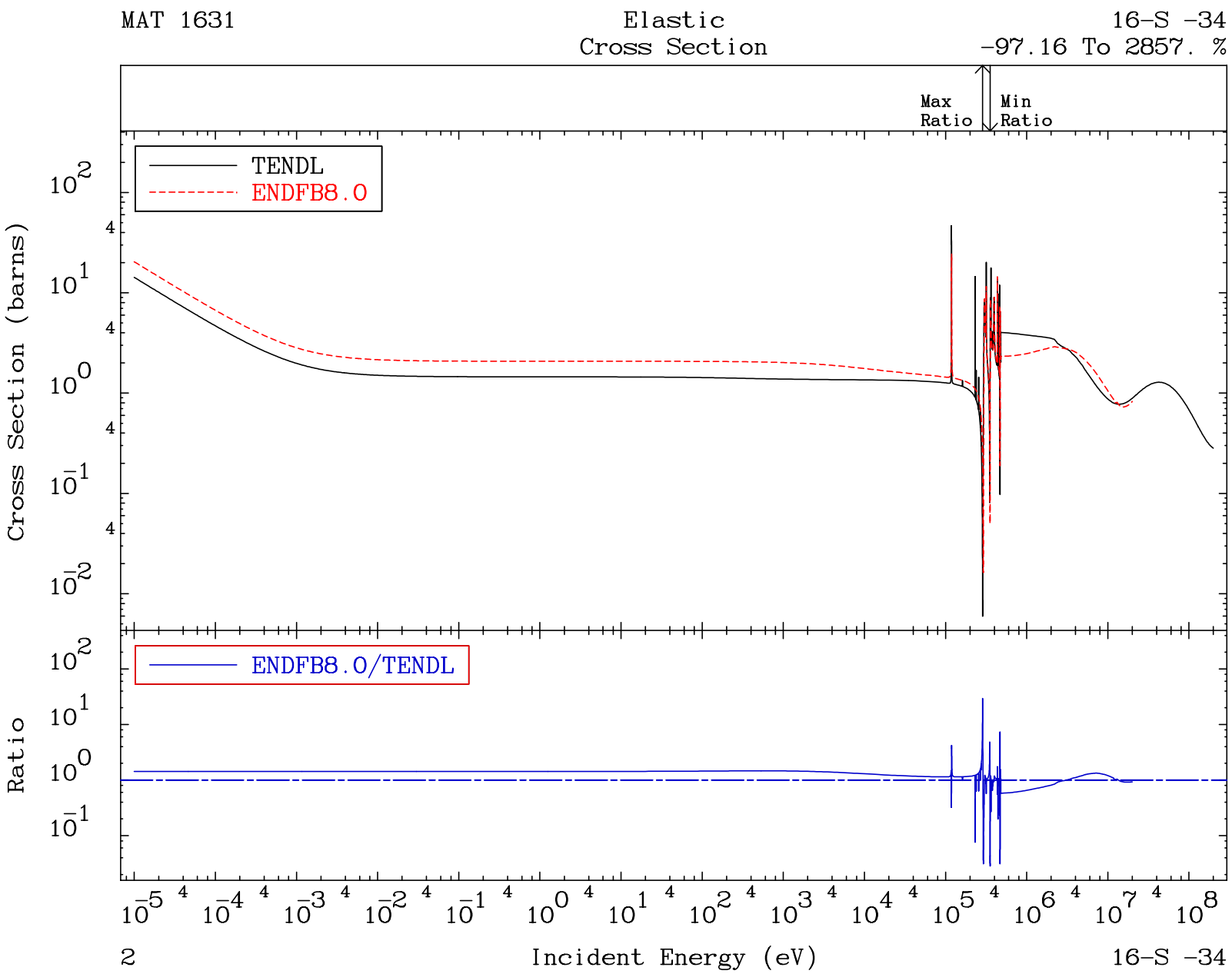
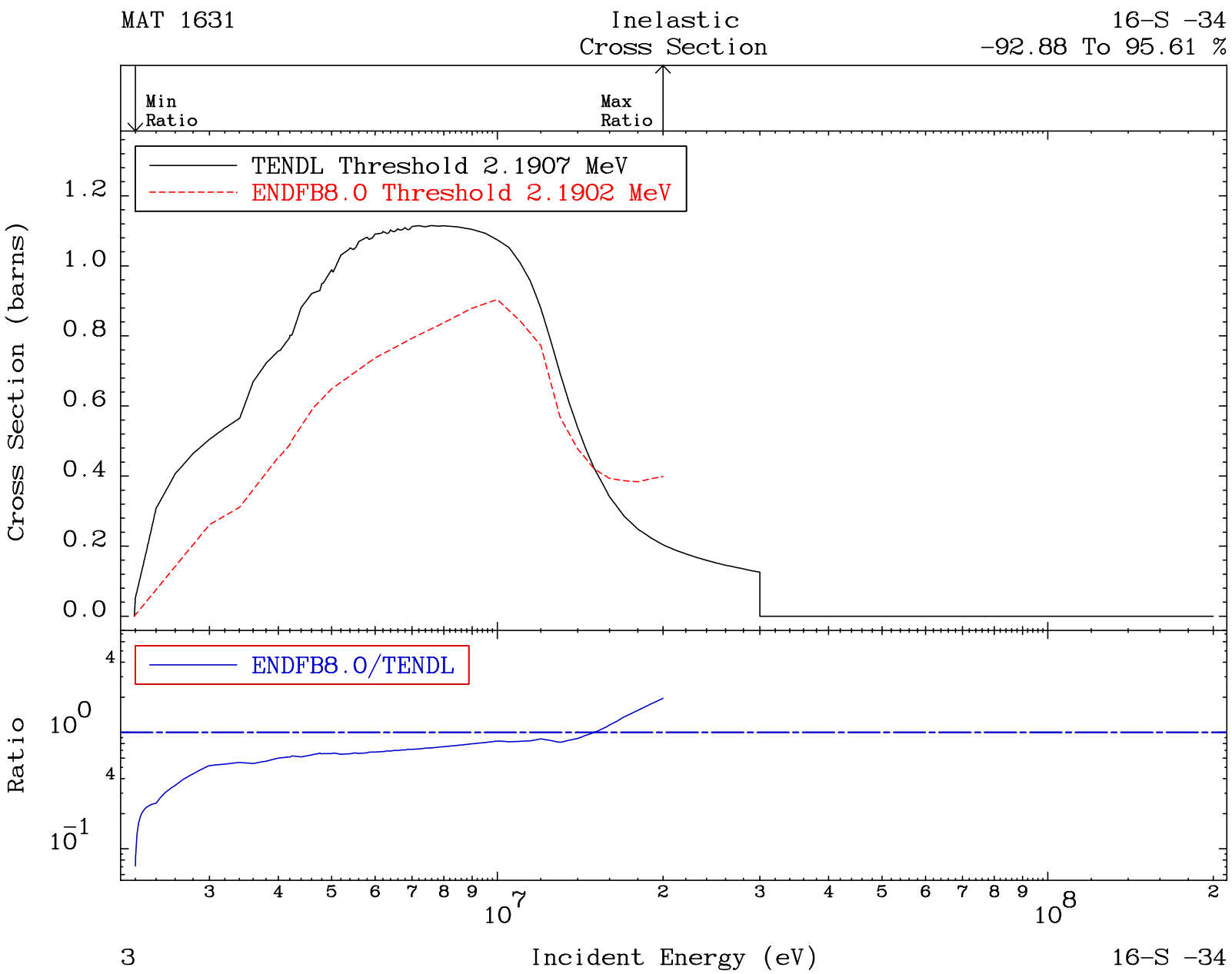
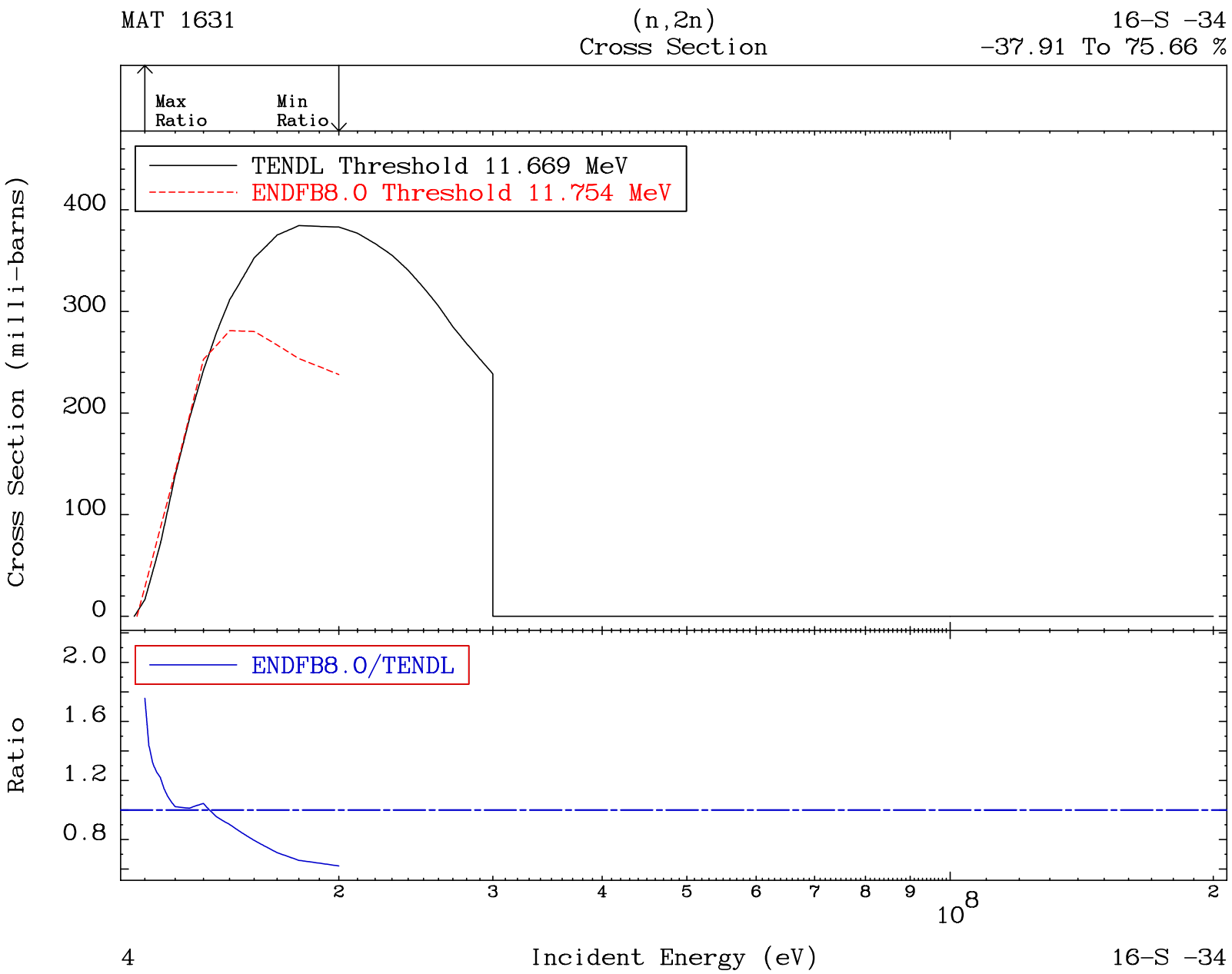
Program Complot
(Version 2018-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

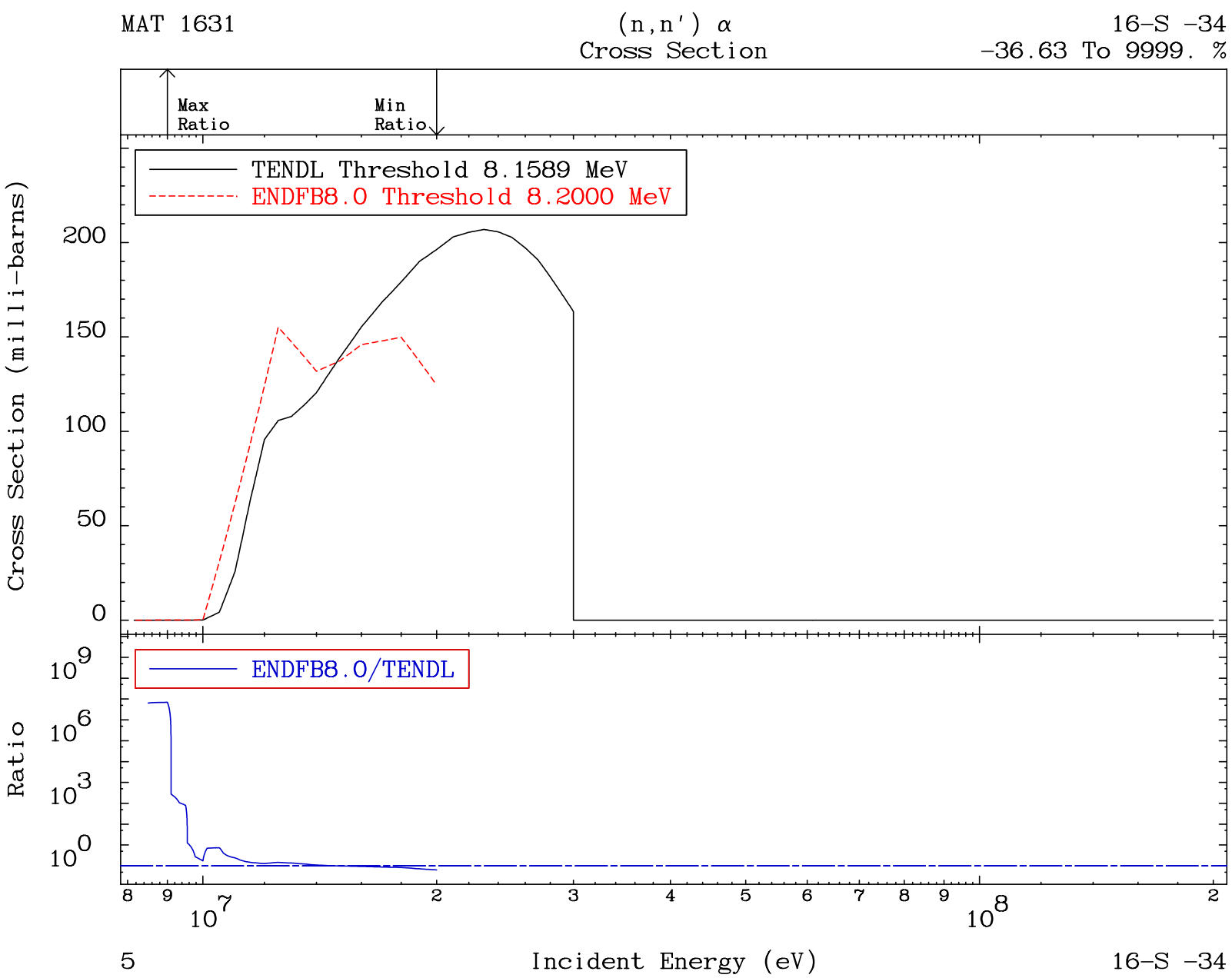
Press Mouse Button to Start

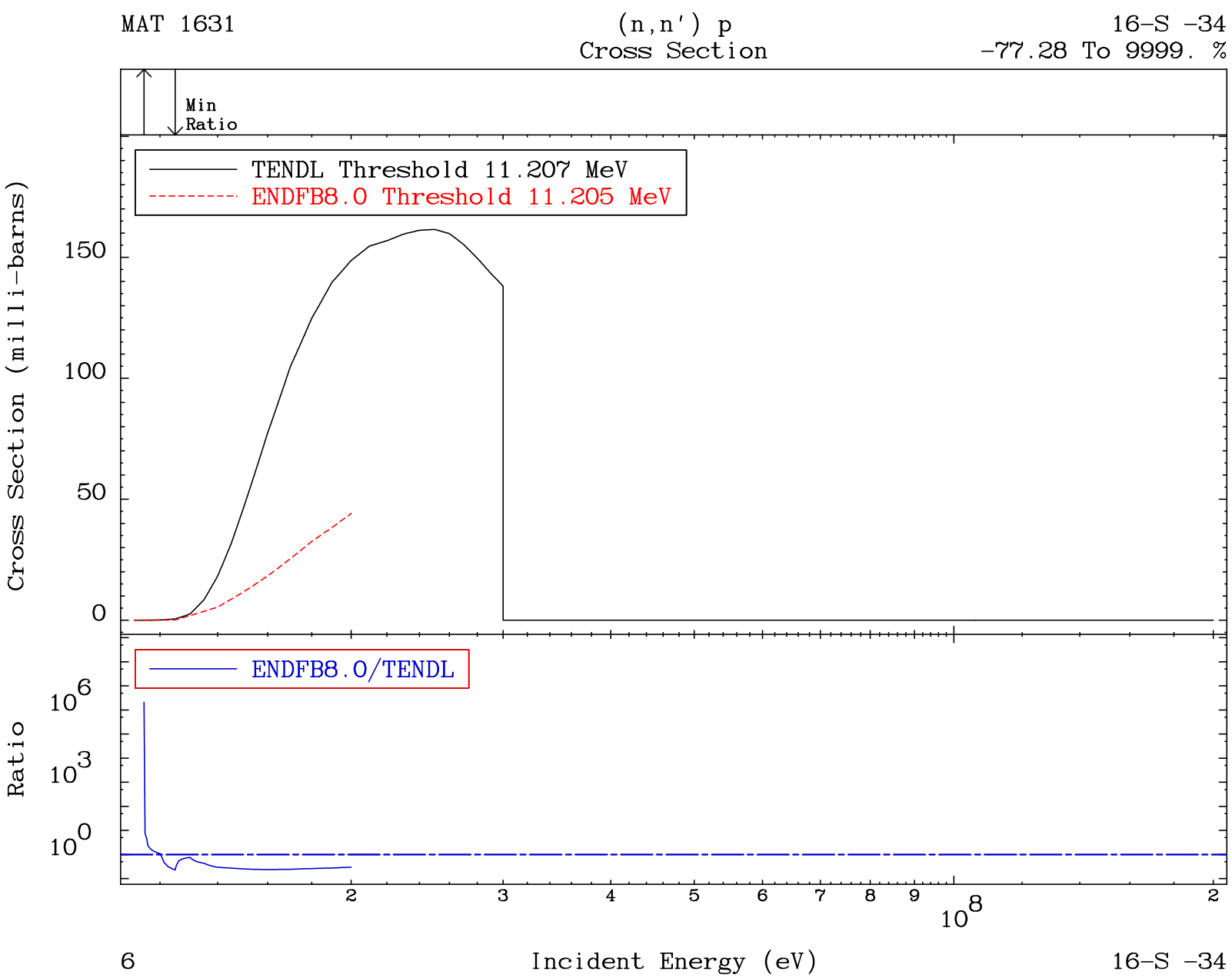

MAT 1631
Total
Cross Section
16-S -34
-97.11 To 2682. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
1
16-S -34

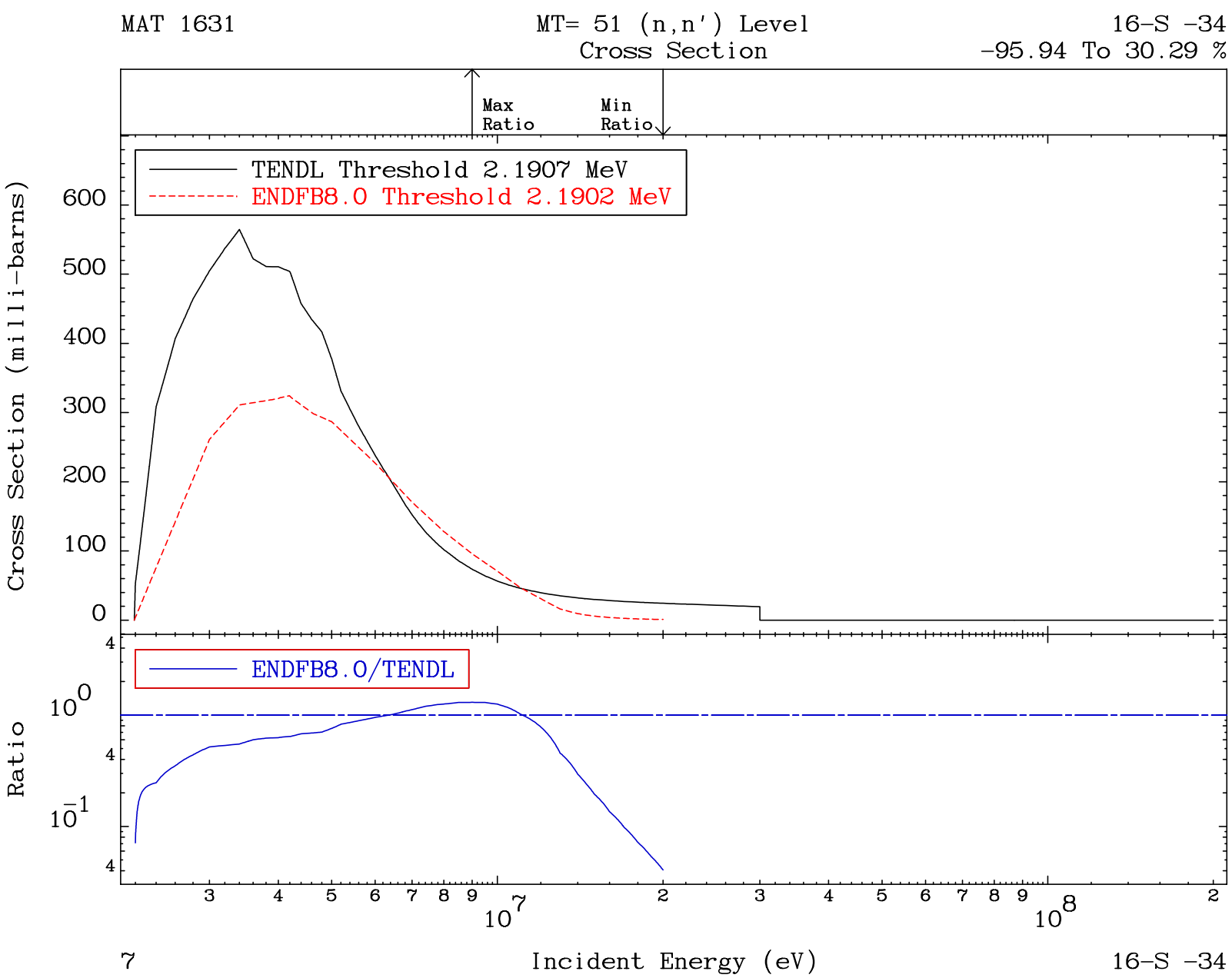

MAT 1631
Elastic
Cross Section
16-S -34
-97.16 To 2857. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
2
16-S -34

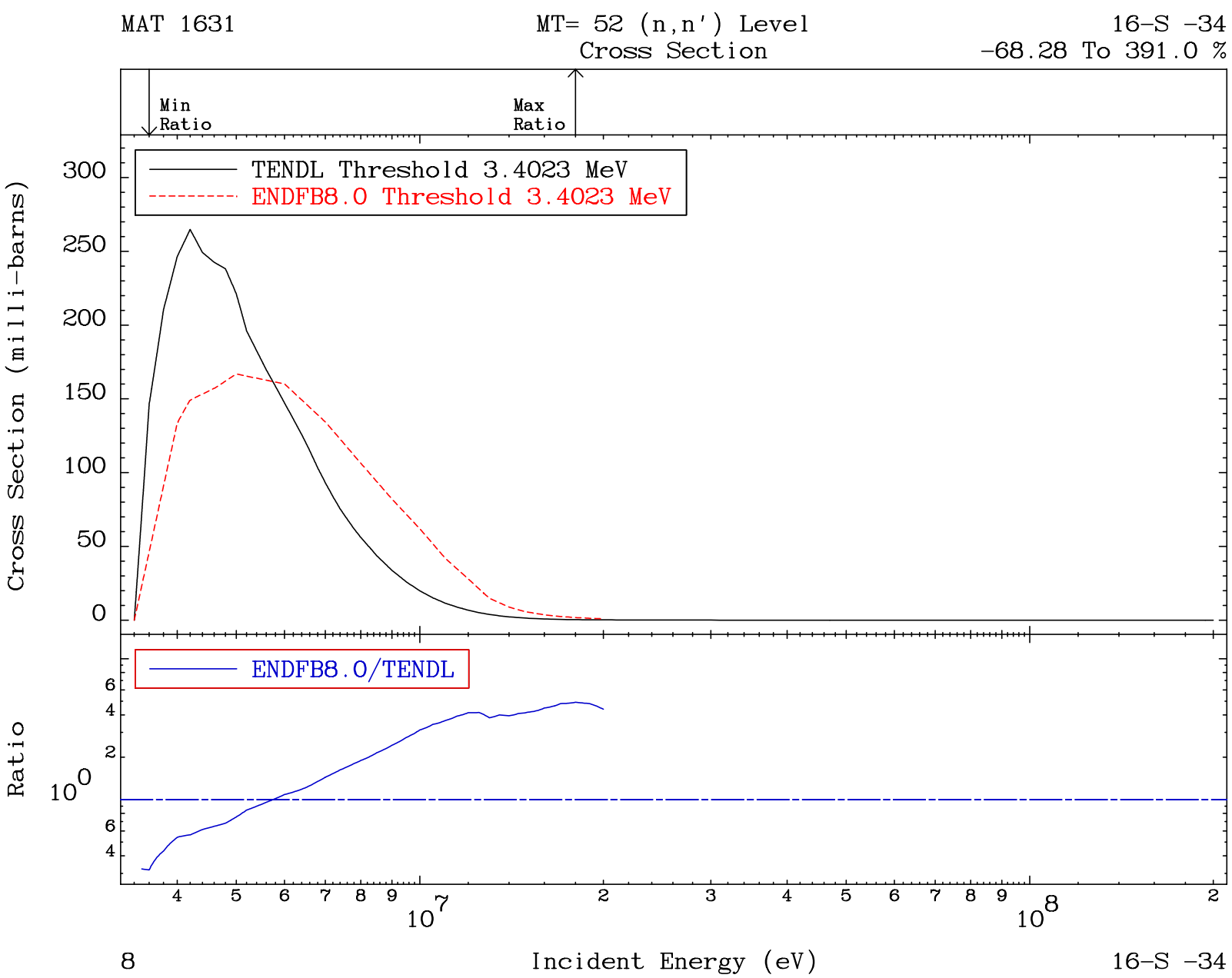

MAT 1631
Inelastic
Cross Section
16-S -34
-92.88 To 95.61 %
Min
Ratio
Max
Ratio
TENDL Threshold 2.1907 MeV
ENDFB8.0 Threshold 2.1902 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
ENDFB8.0/TENDL
Ratio
4
10^{0}
4
10^{-1}
3
4
5
6
7
8
9
10^{7}
2
3
4
5
6
7
8
9
10^{8}
2
3
Incident Energy (eV)
16-S -34

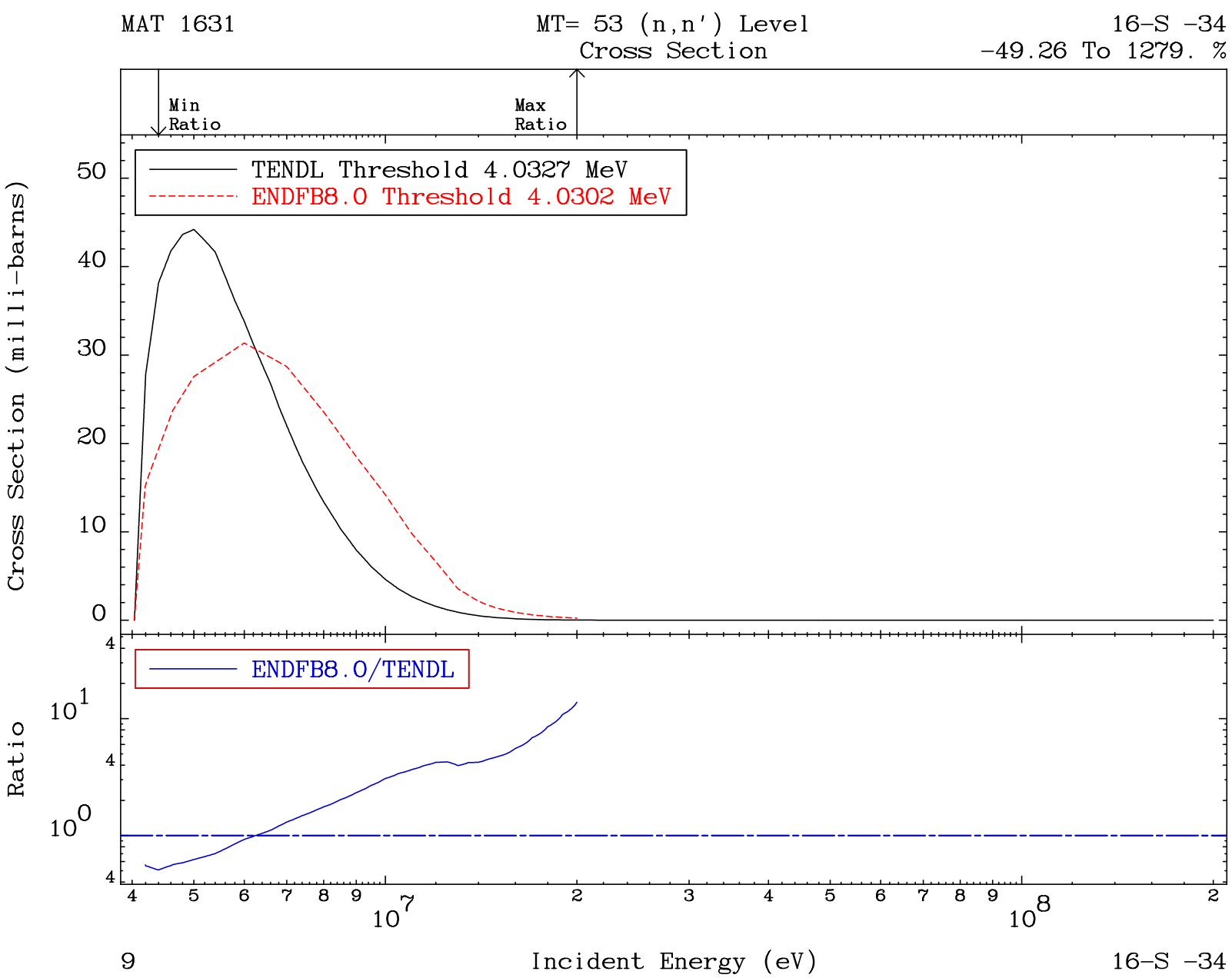

MAT 1631
(n,2n)
Cross Section
16-S -34
-37.91 To 75.66 %
Max Ratio
Min Ratio
TENDL Threshold 11.669 MeV
ENDFB8.0 Threshold 11.754 MeV
Cross Section (milli-barns)
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
2.0
1.6
1.2
0.8
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
16-S -34

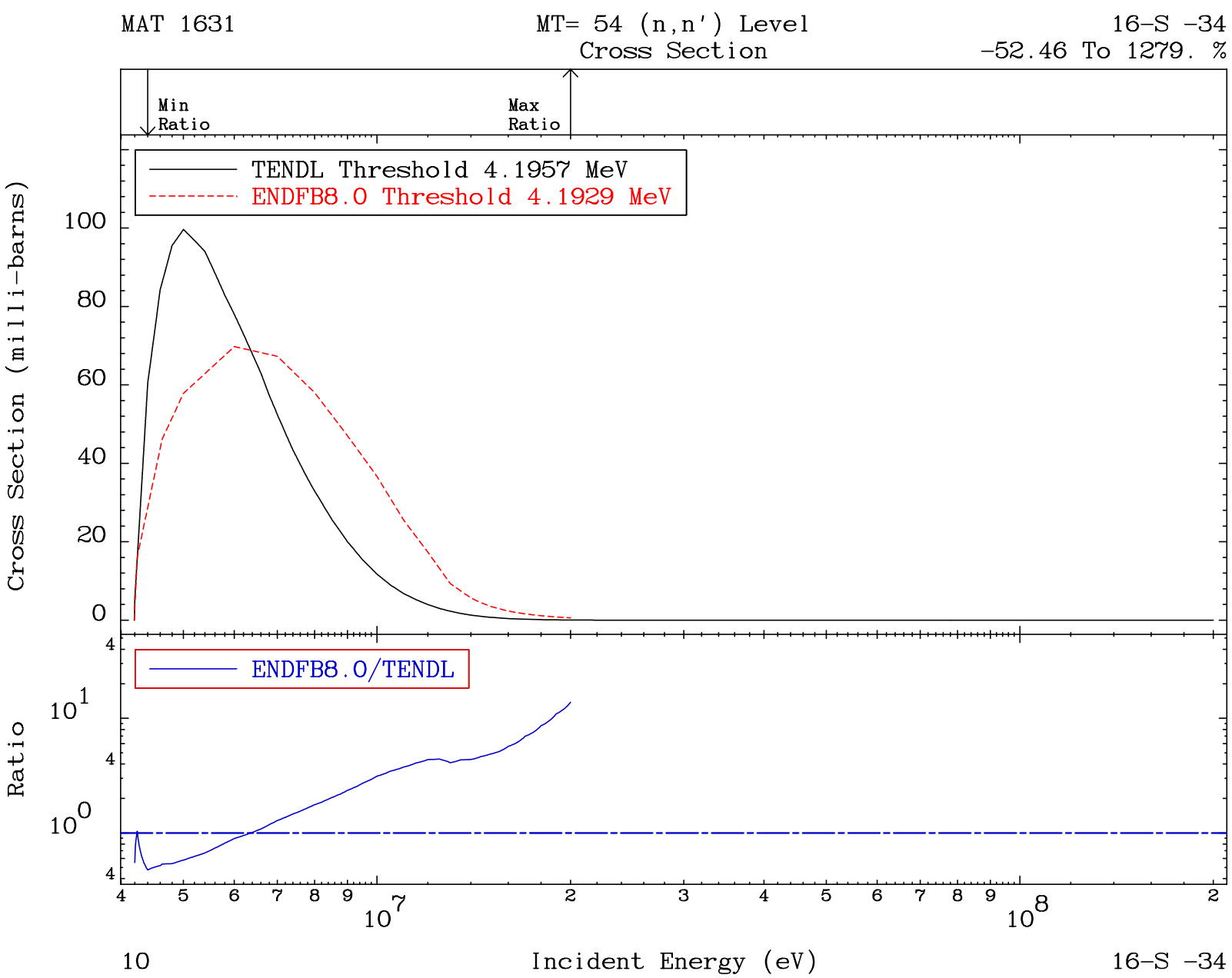

MAT 1631
(n,n') α
Cross Section
16-S -34
-36.63 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.1589 MeV
ENDFB8.0 Threshold 8.2000 MeV
Cross Section (milli-barns)
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^9
10^6
10^3
10^0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
16-S -34

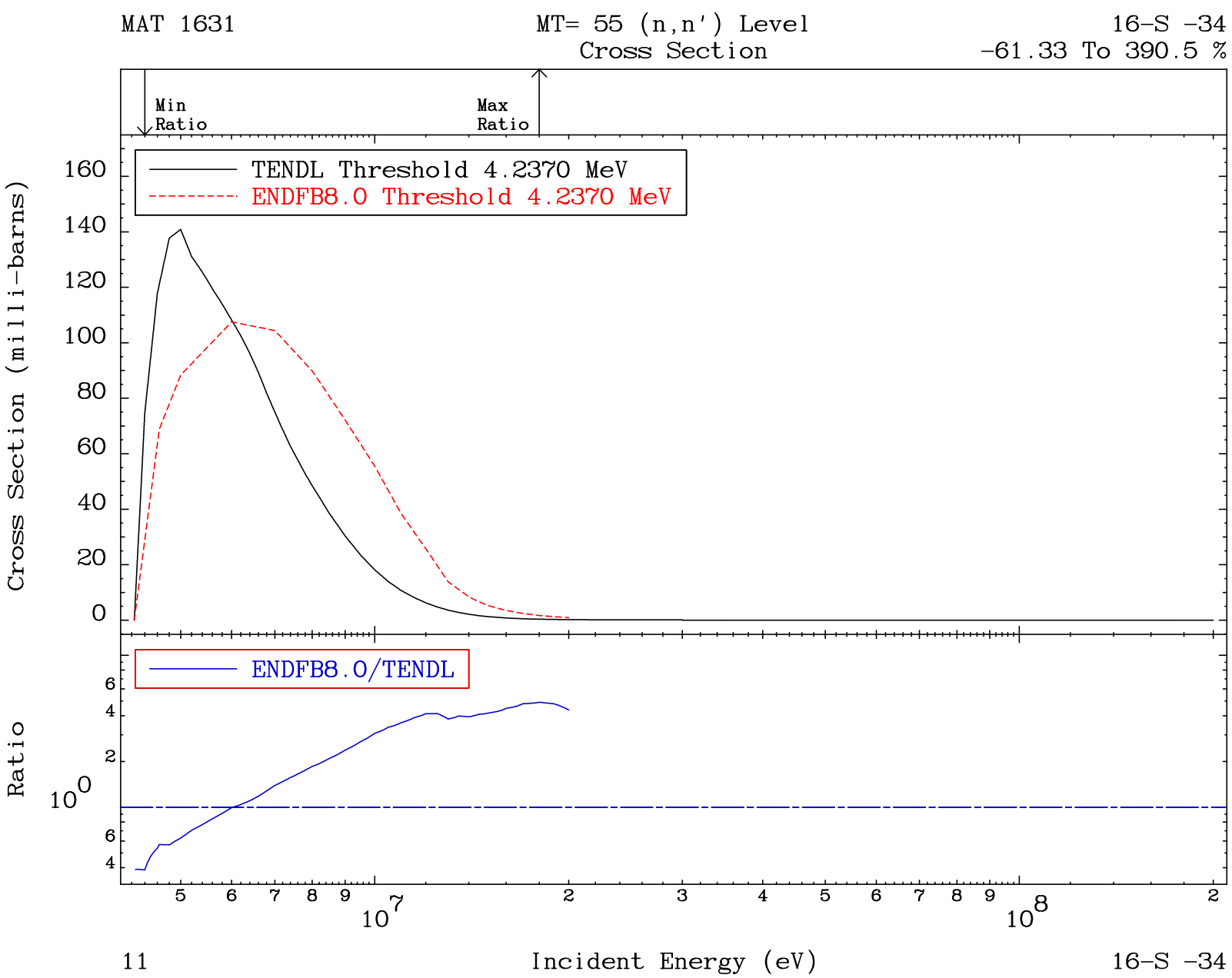

MAT 1631
(n,n') p
Cross Section
16-S -34
-77.28 To 9999. %
Min
Ratio
TENDL Threshold 11.207 MeV
ENDFB8.0 Threshold 11.205 MeV
Cross Section (milli-barns)
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^6
10^3
10^0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
16-S -34

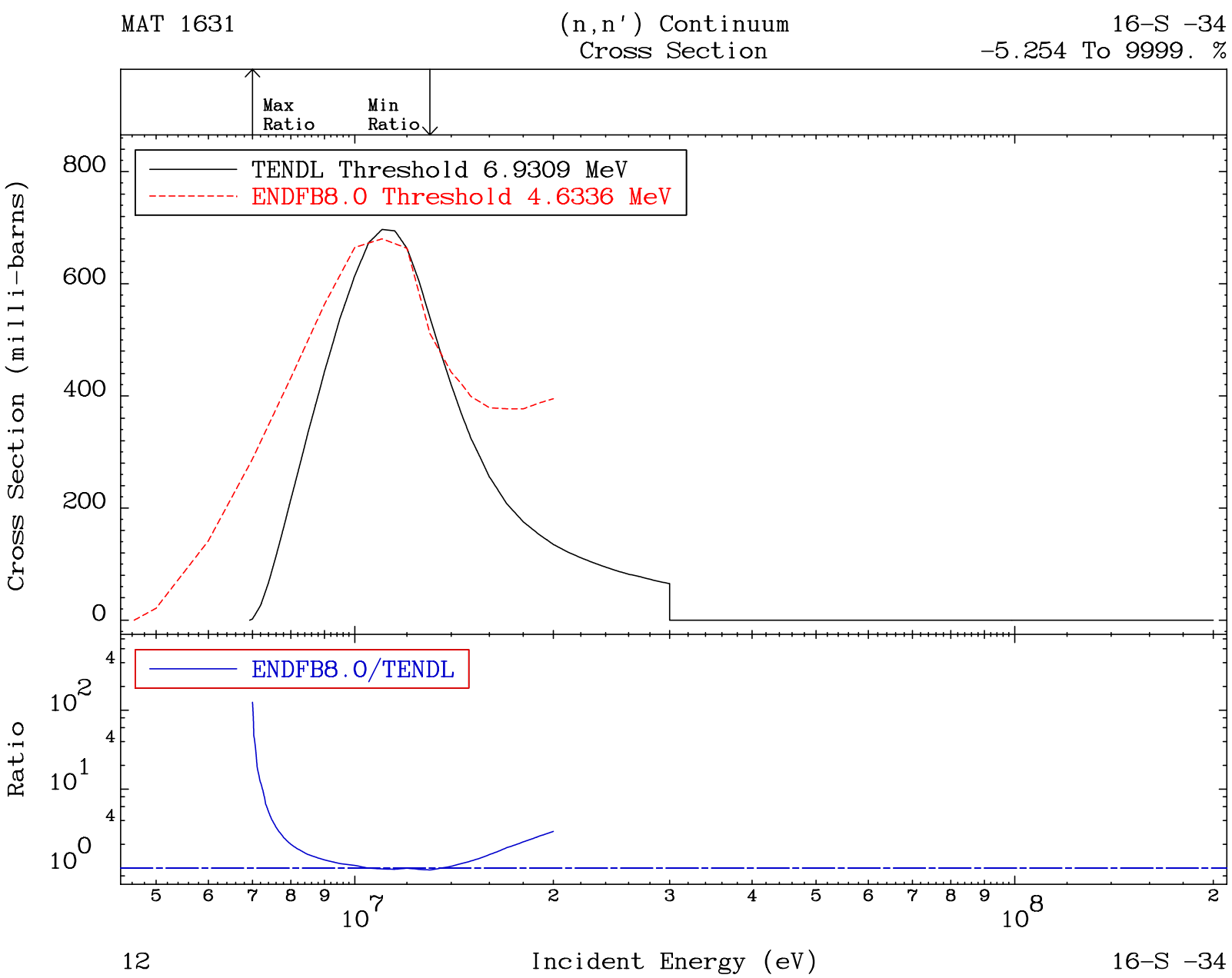

MAT 1631
MT= 51 (n,n') Level
Cross Section
16-S -34
-95.94 To 30.29 %
Max Ratio
Min Ratio
TENDL Threshold 2.1907 MeV
ENDFB8.0 Threshold 2.1902 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
4
10^0
4
10^-1
4
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
7
Incident Energy (eV)
16-S -34

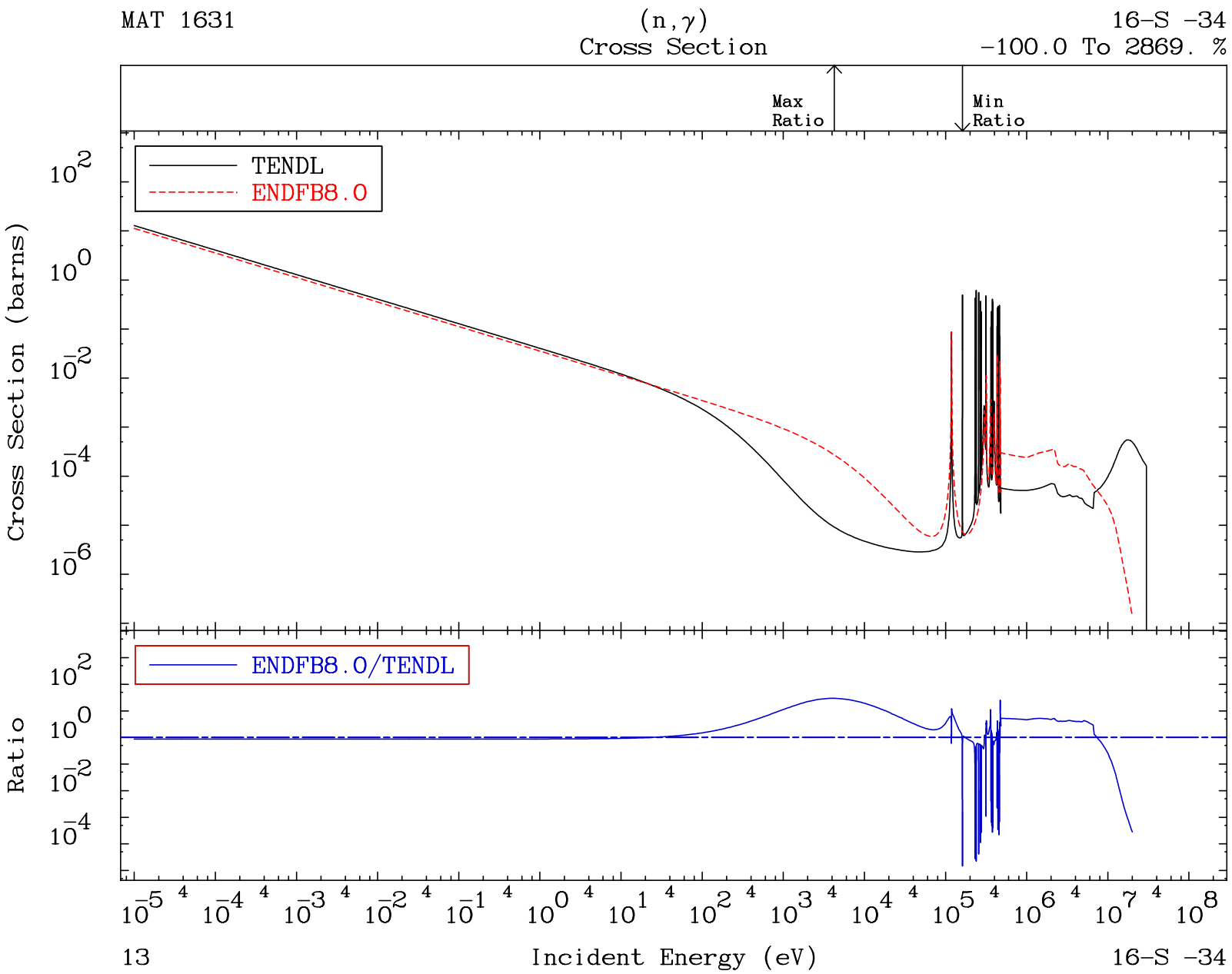

MAT 1631
MT= 52 (n,n') Level
Cross Section
16-S -34
-68.28 To 391.0 %
Min
Ratio
Max
Ratio
TENDL Threshold 3.4023 MeV
ENDFB8.0 Threshold 3.4023 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^0
6
4
2
6
4
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
8
16-S -34

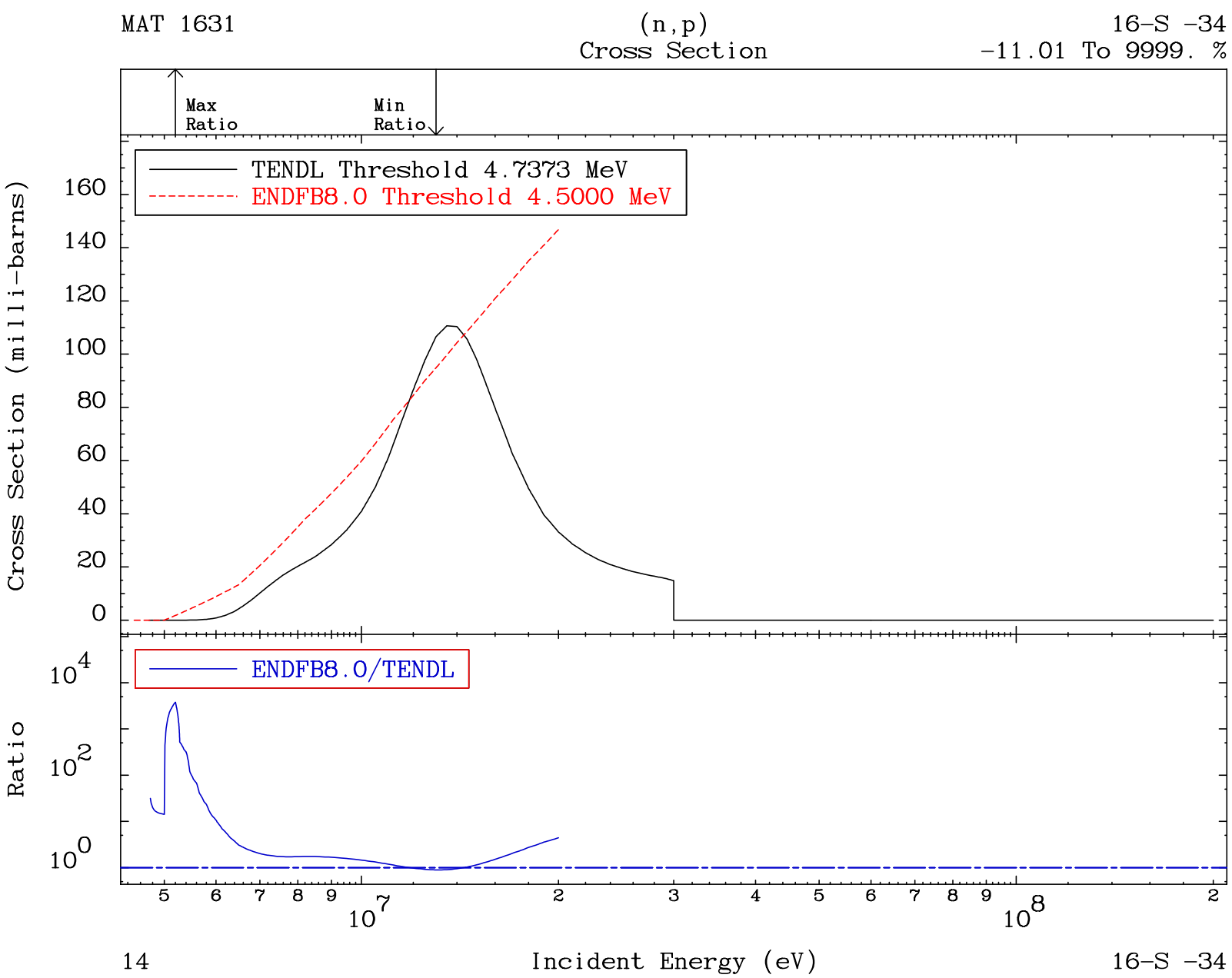

MAT 1631
MT= 53 (n,n') Level
Cross Section
16-S -34
-49.26 To 1279. %
Min Ratio
Max Ratio
TENDL Threshold 4.0327 MeV
ENDFB8.0 Threshold 4.0302 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
ENDFB8.0/TENDL
Ratio
10^1
10^0
4
4
4
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
9
Incident Energy (eV)
16-S -34

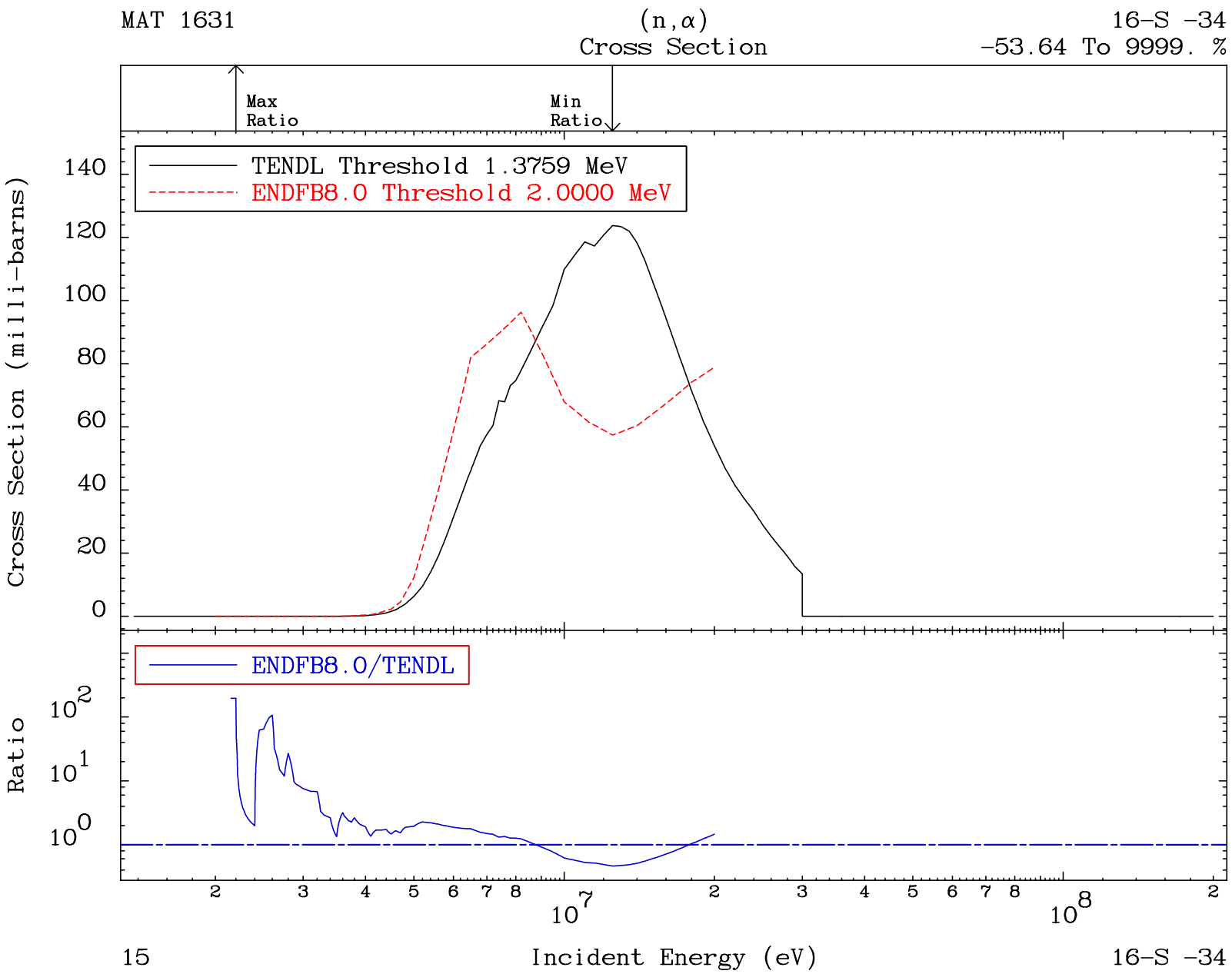

MAT 1631
MT= 54 (n,n') Level
Cross Section
16-S -34
-52.46 To 1279. %
Min Ratio
Max Ratio
TENDL Threshold 4.1957 MeV
ENDFB8.0 Threshold 4.1929 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^1
10^0
4
5
6
7
8
9
10^7
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
16-S -34

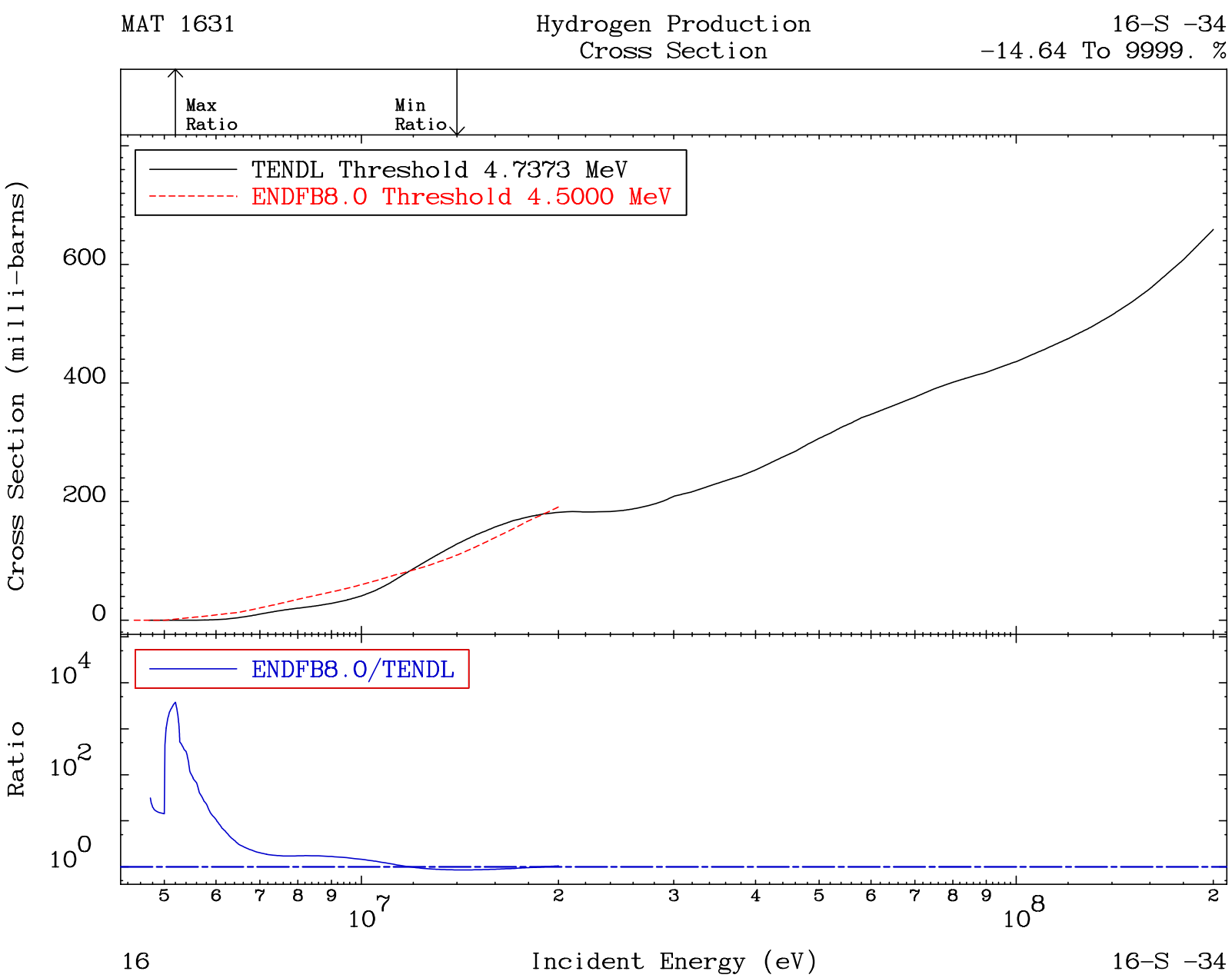

MAT 1631
MT= 55 (n,n') Level
Cross Section
16-S -34
-61.33 To 390.5 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.2370 MeV
ENDFB8.0 Threshold 4.2370 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^0
6
4
2
6
4
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
11
Incident Energy (eV)
16-S -34

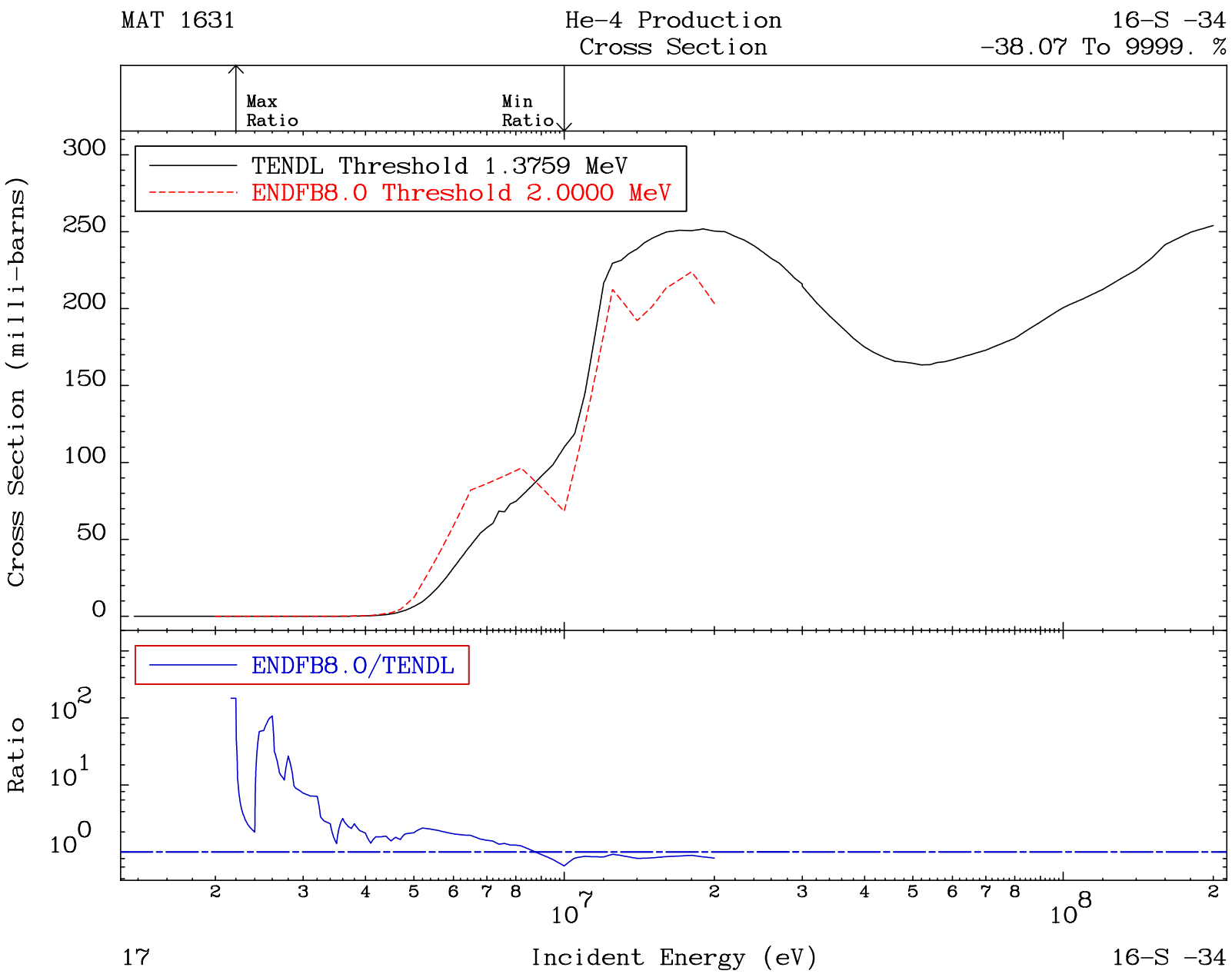

MAT 1631
(n,n') Continuum
Cross Section
16-S -34
-5.254 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.9309 MeV
ENDFB8.0 Threshold 4.6336 MeV
Cross Section (milli-barns)
800
600
400
200
0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
4
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
12
Incident Energy (eV)
16-S -34

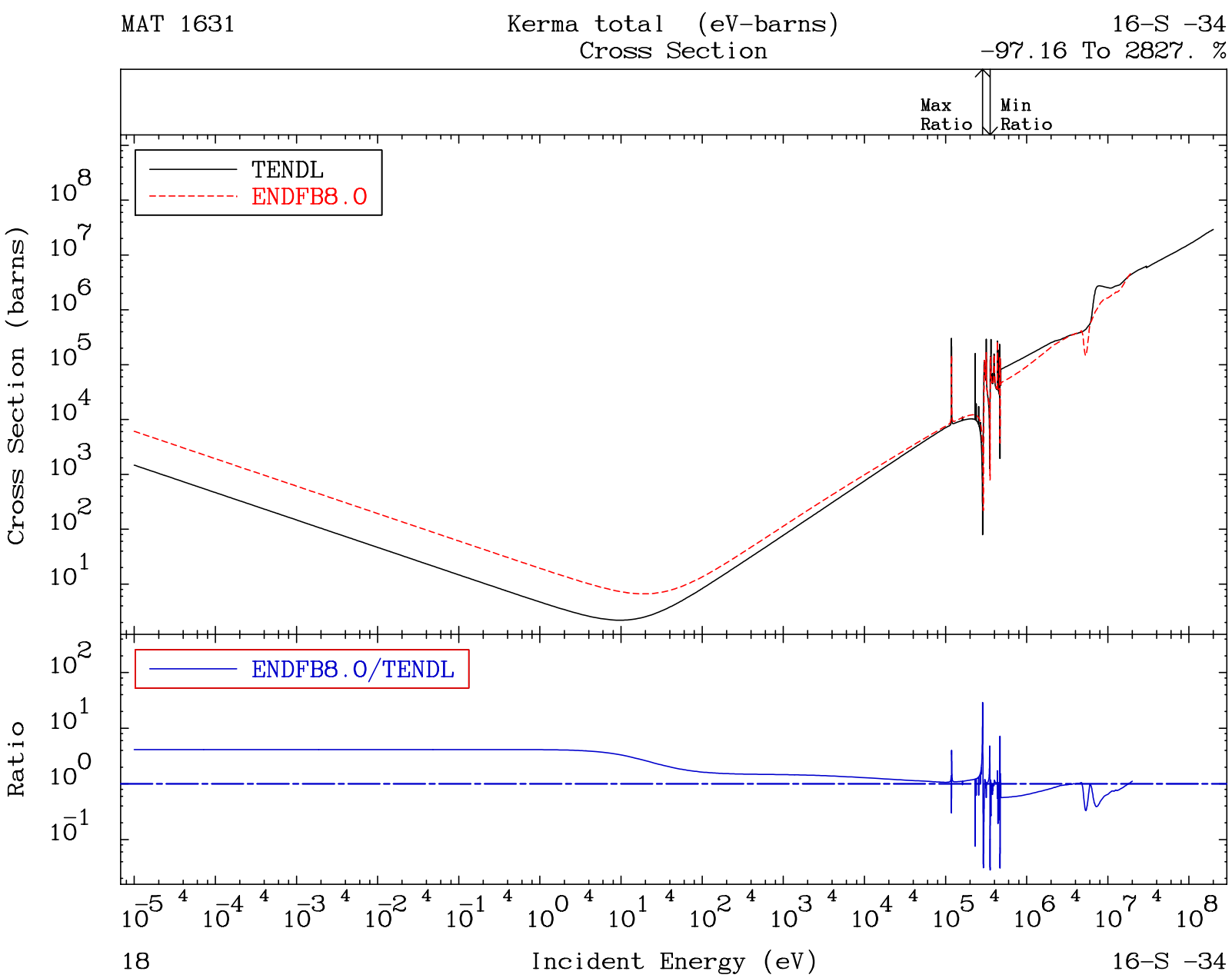

MAT 1631
(n,γ)
Cross Section
16-S -34
-100.0 To 2869. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
13
16-S -34

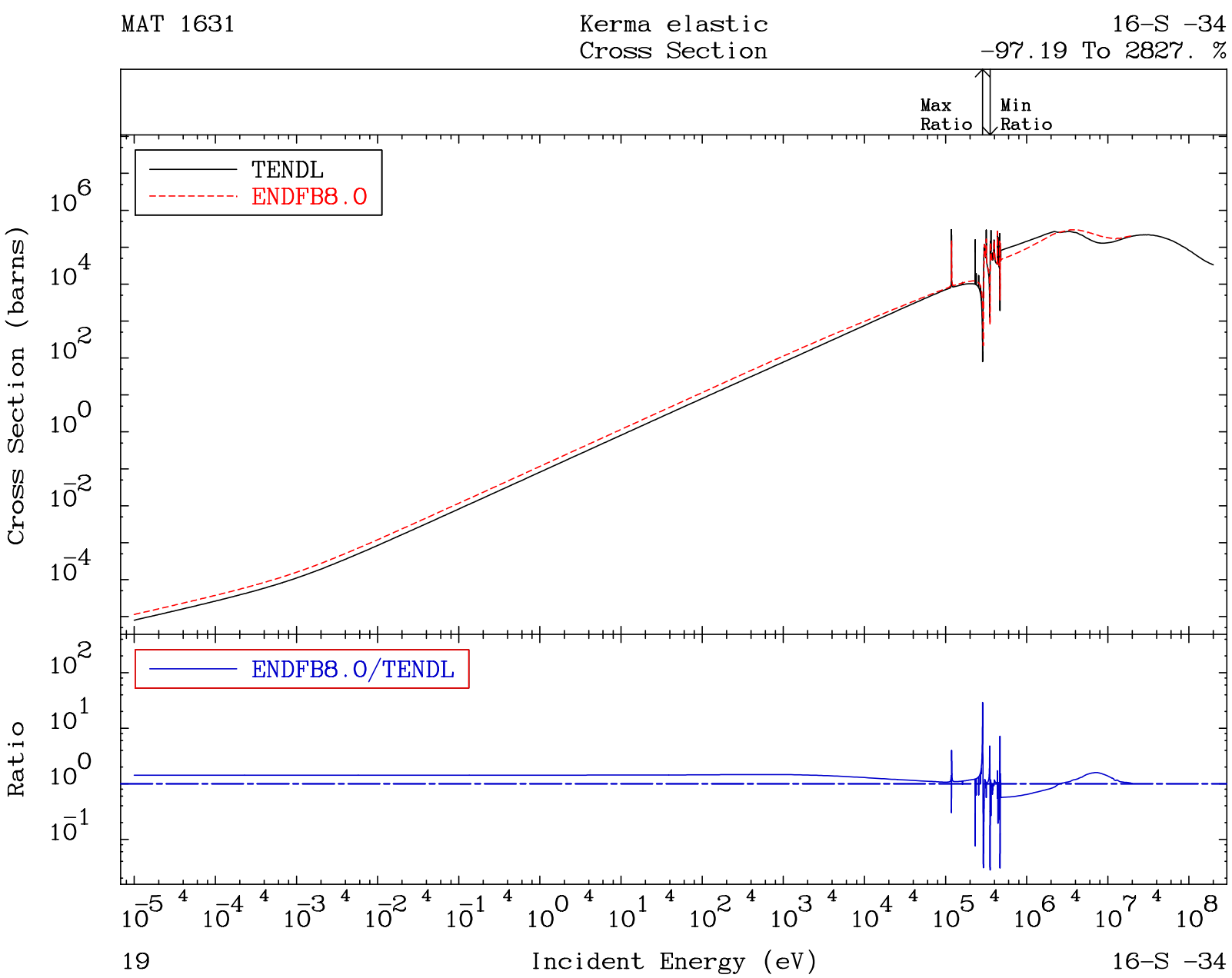

MAT 1631
(n,p)
Cross Section
16-S -34
-11.01 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.7373 MeV
ENDFB8.0 Threshold 4.5000 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^4
10^2
10^0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
14
Incident Energy (eV)
16-S -34

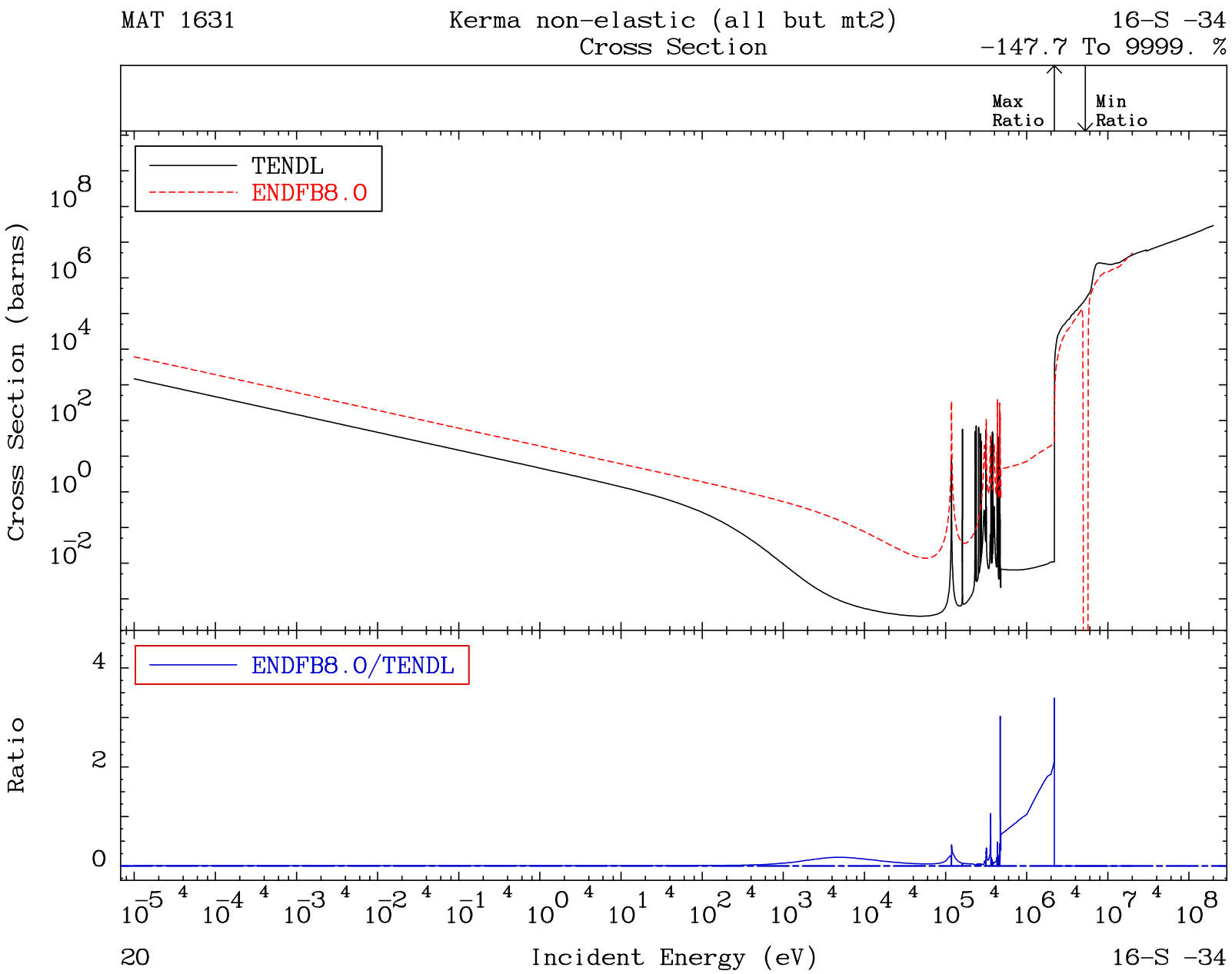

MAT 1631
(n,α)
Cross Section
16-S -34
-53.64 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.3759 MeV
ENDFB8.0 Threshold 2.0000 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
16-S -34

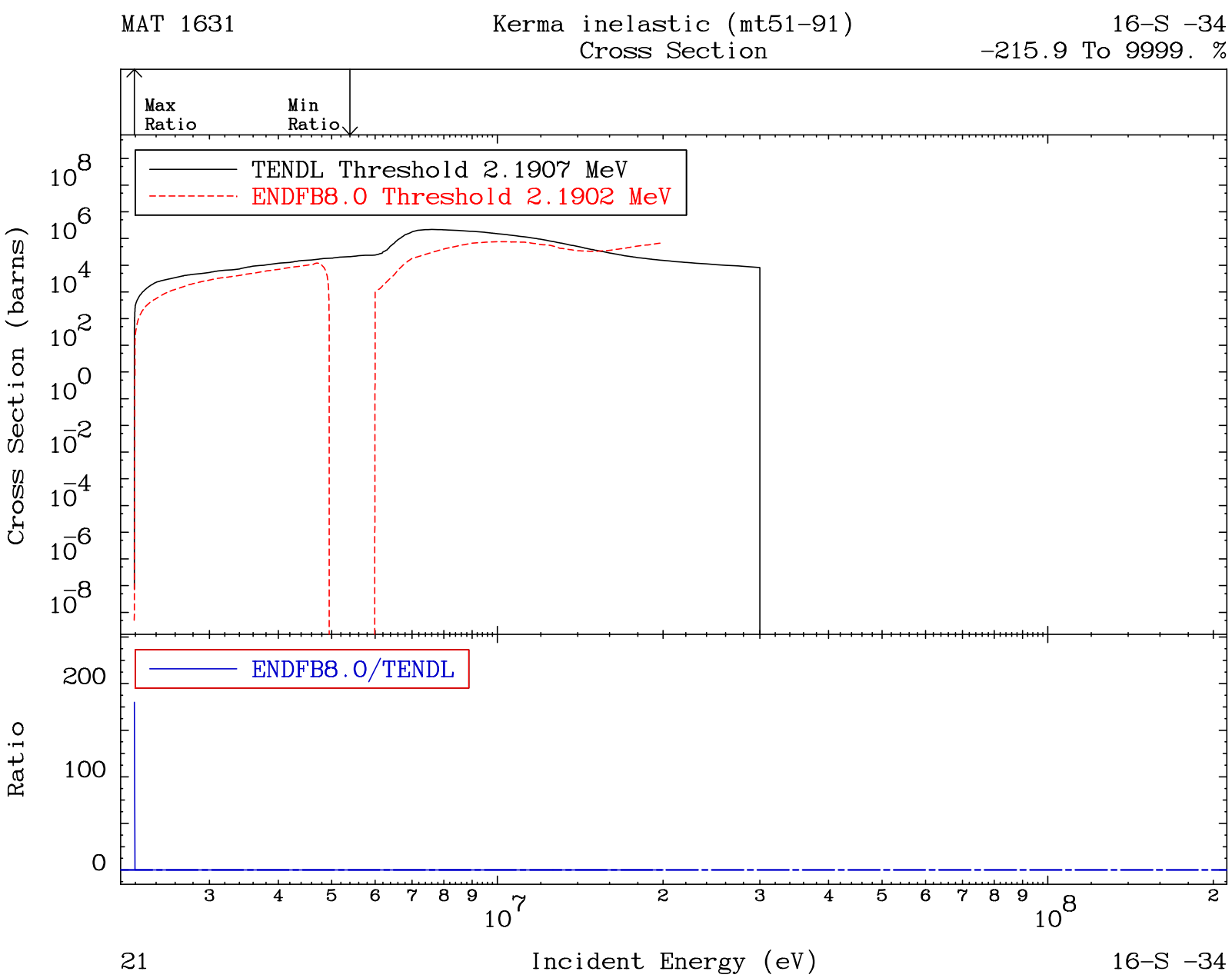

MAT 1631
Hydrogen Production
Cross Section
16-S -34
-14.64 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.7373 MeV
ENDFB8.0 Threshold 4.5000 MeV
Cross Section (milli-barns)
600
400
200
0
ENDFB8.0/TENDL
Ratio
10^4
10^2
10^0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
16
Incident Energy (eV)
16-S -34

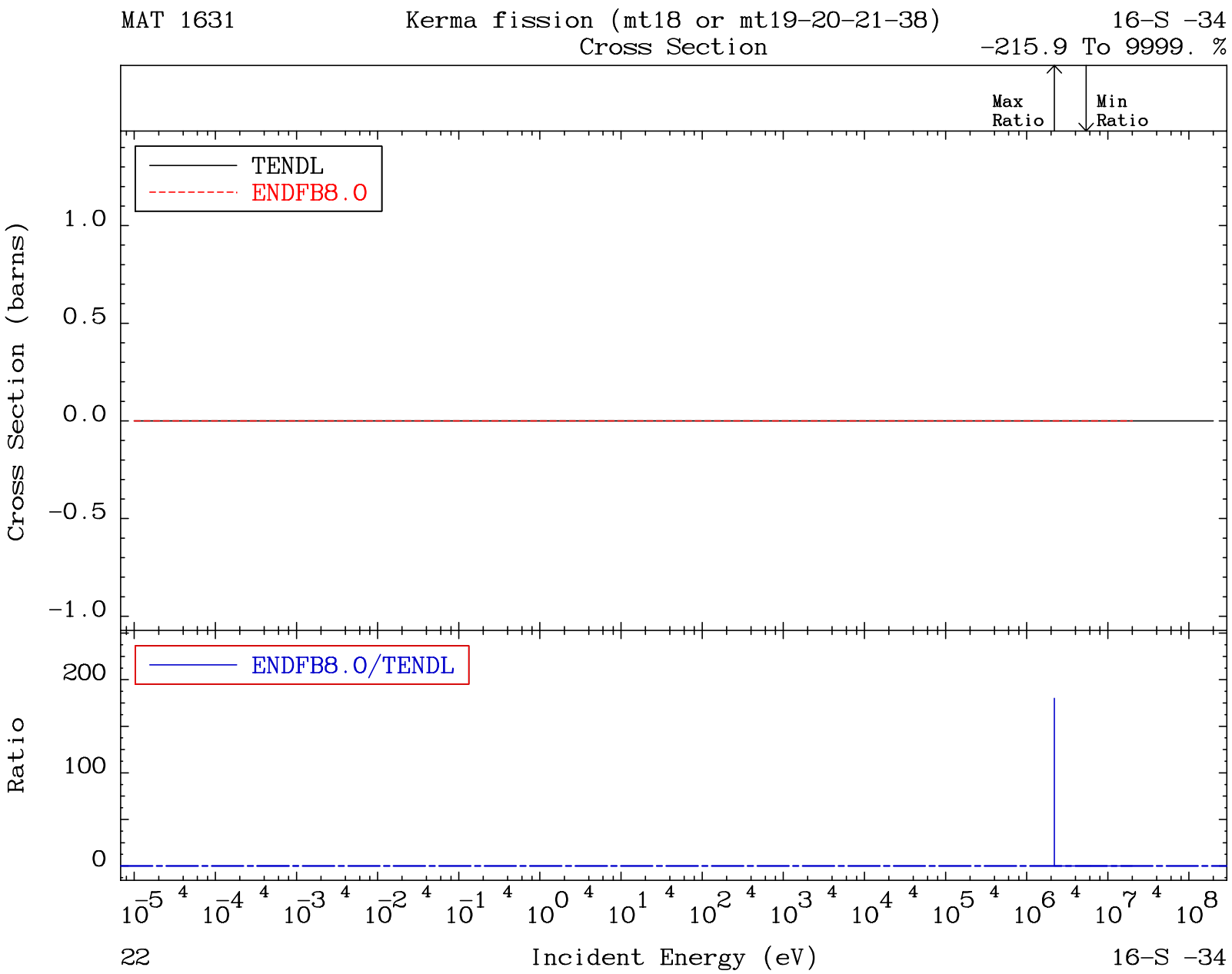

MAT 1631
He-4 Production
Cross Section
16-S -34
-38.07 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.3759 MeV
ENDFB8.0 Threshold 2.0000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
16-S -34

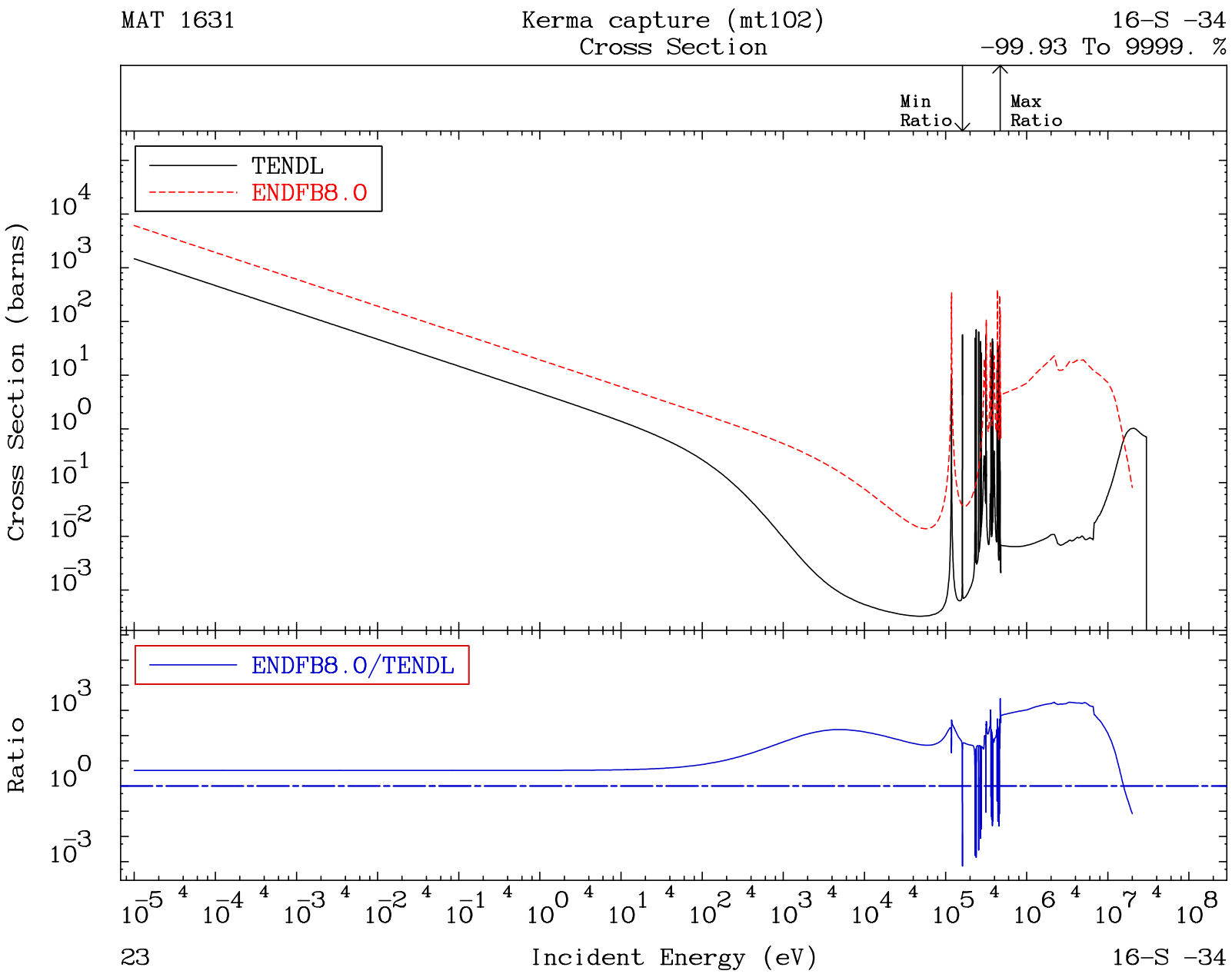

MAT 1631
Kerma total (eV-barns)
Cross Section
16-S -34
-97.16 To 2827. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
18
16-S -34

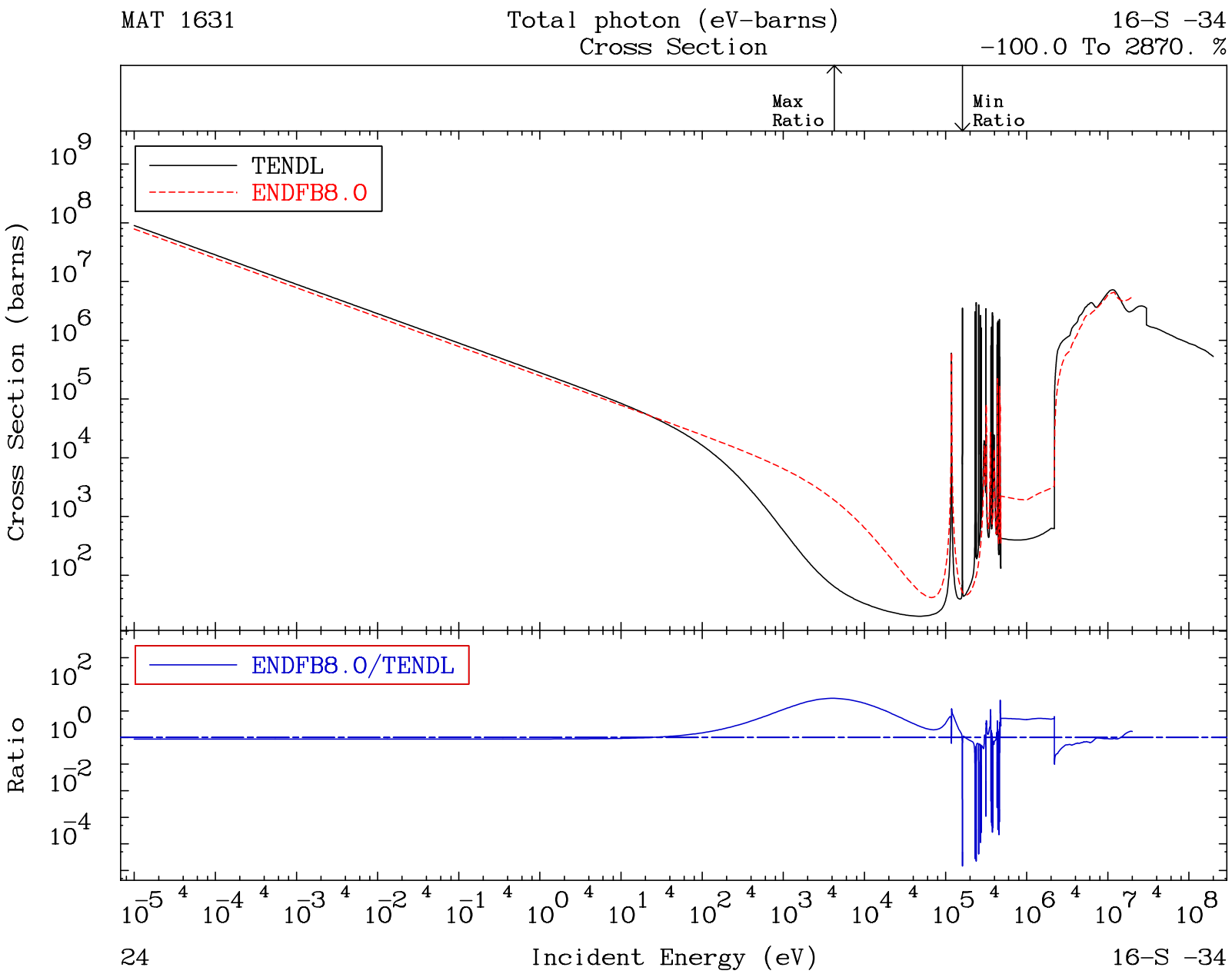

MAT 1631
Kerma elastic
Cross Section
16-S -34
-97.19 To 2827. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
19
16-S -34

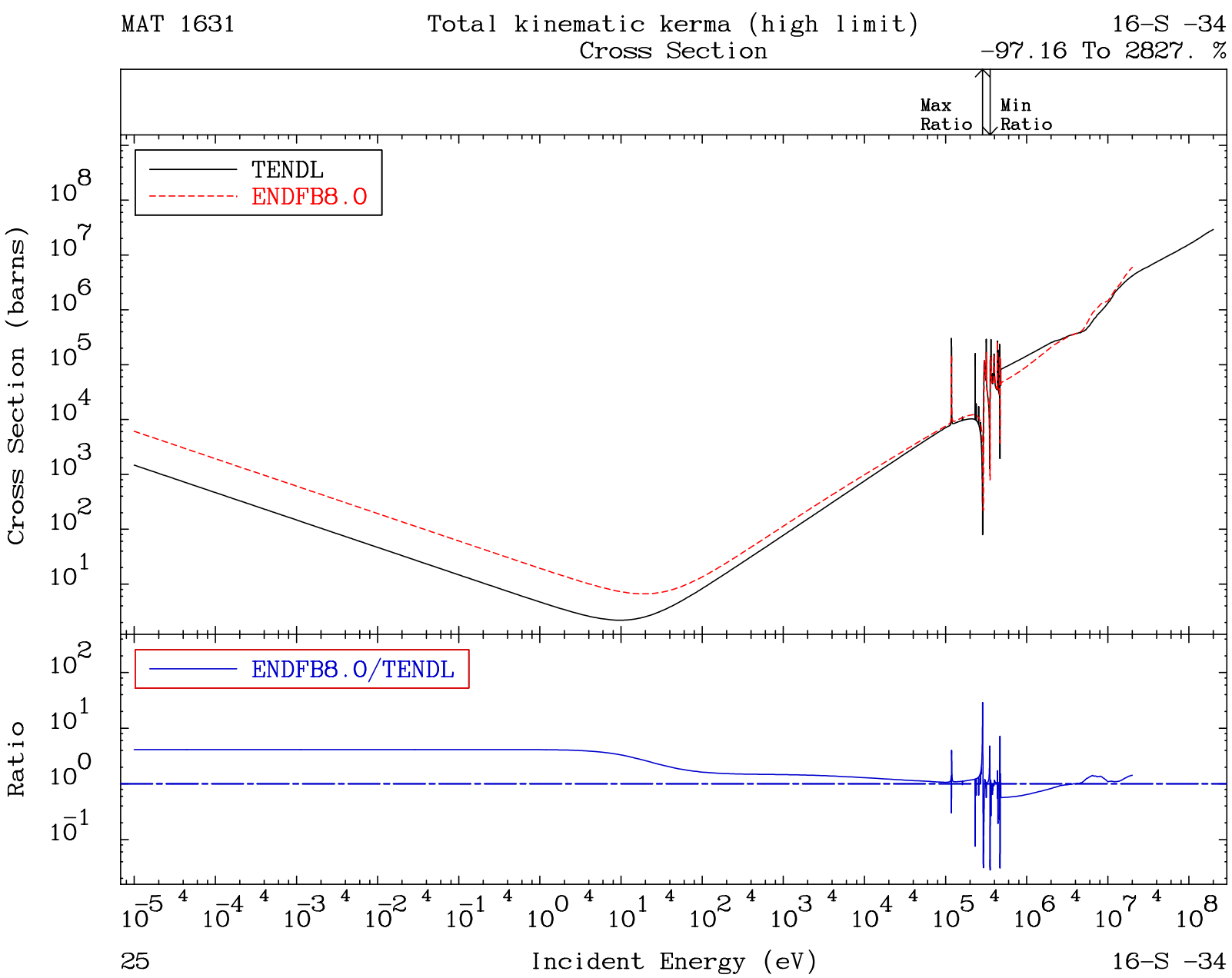

MAT 1631
Kerma non-elastic (all but mt2)
Cross Section
16-S -34
-147.7 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
20
16-S -34

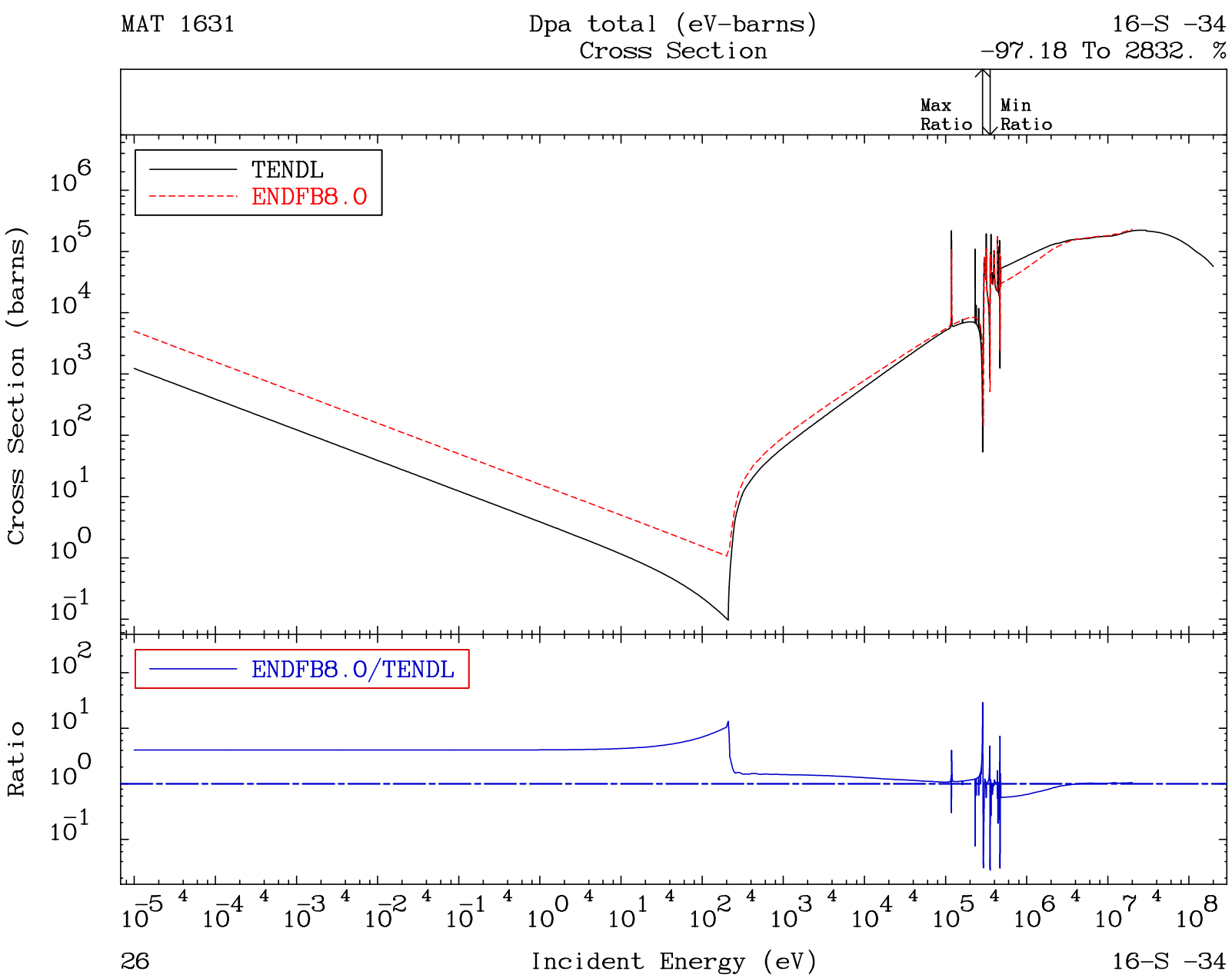

MAT 1631
Kerma inelastic (mt51-91)
Cross Section
16-S -34
-215.9 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 2.1907 MeV
ENDFB8.0 Threshold 2.1902 MeV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
21
16-S -34

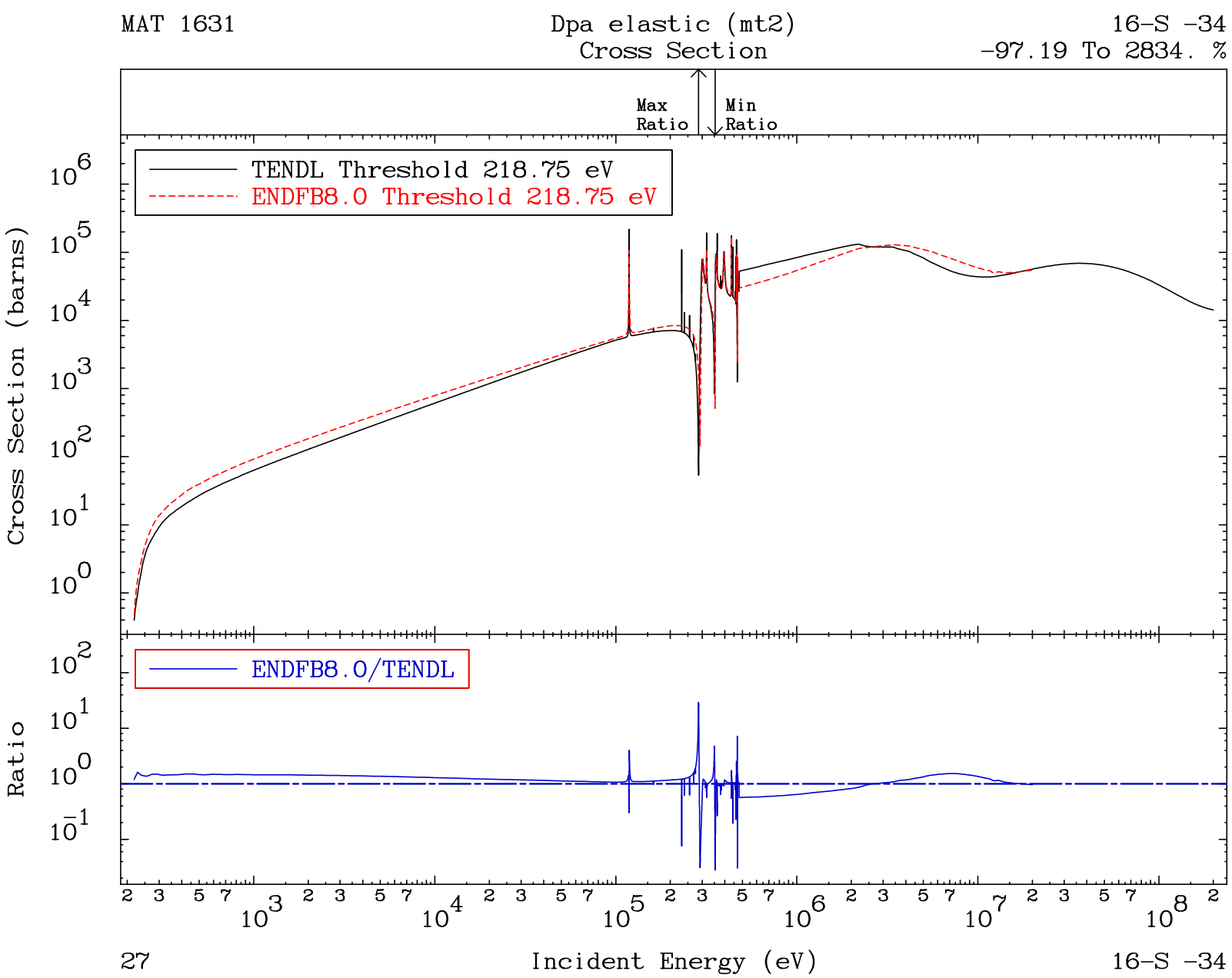

MAT 1631
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
16-S -34
-215.9 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
ENDFB8.0/TENDL
Ratio
200
100
0
10-5 4 10-4 4 10-3 4 10-2 4 10-1 4 100 4 101 4 102 4 103 4 104 4 105 4 106 4 107 4 108
22
Incident Energy (eV)
16-S -34

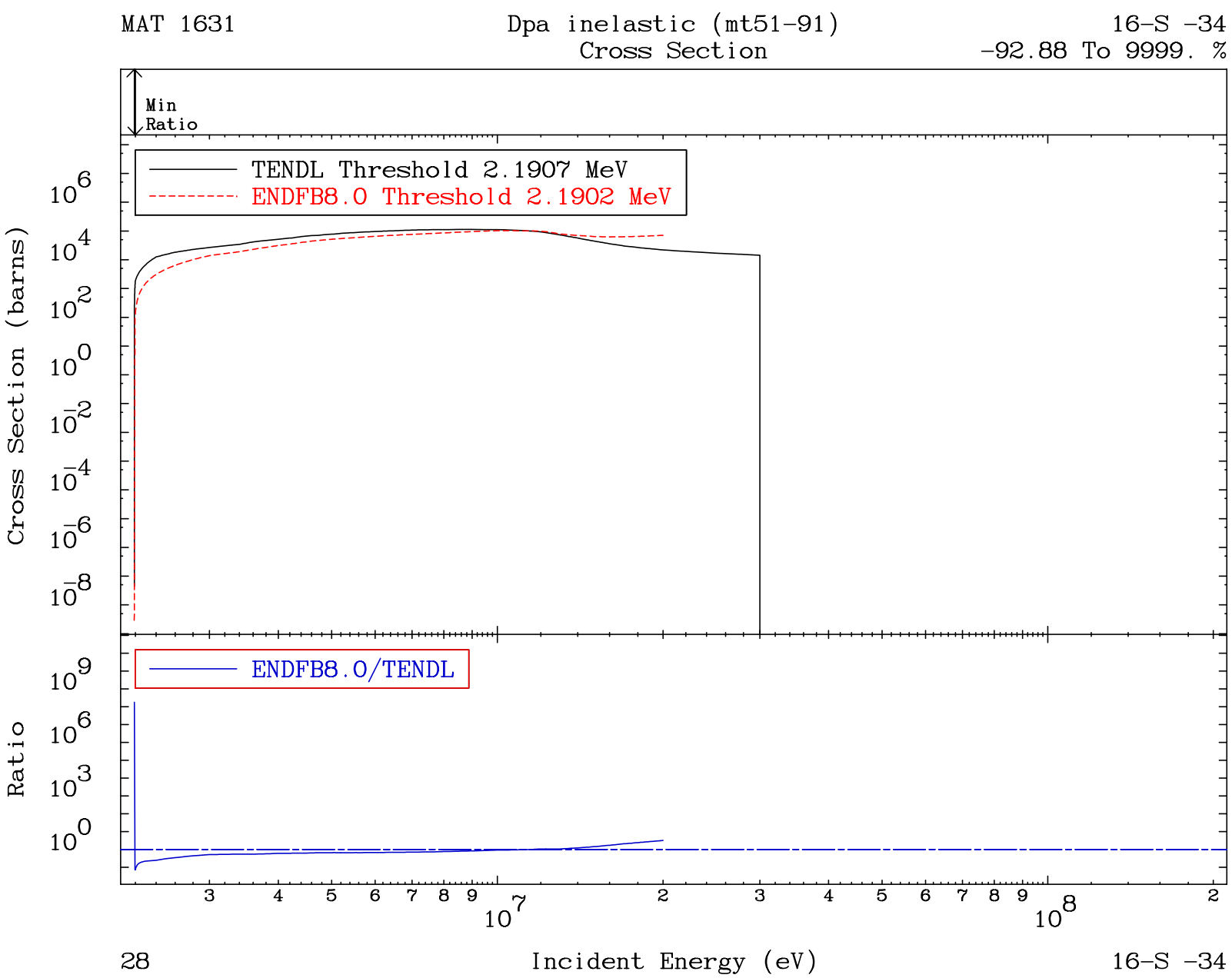

MAT 1631
Kerma capture (mt102)
Cross Section
16-S -34
-99.93 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
23
16-S -34

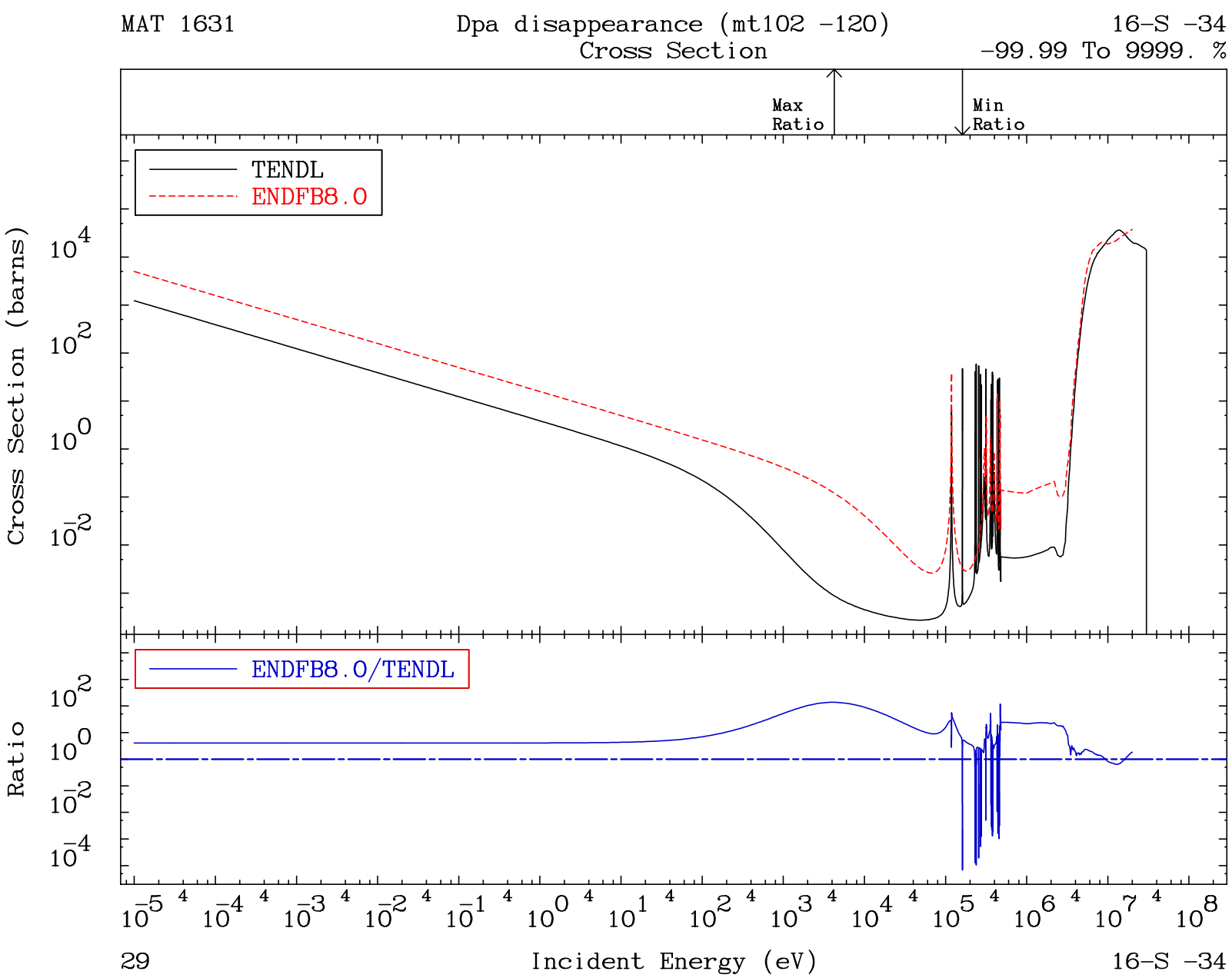

MAT 1631
Total photon (eV-barns)
Cross Section
16-S -34
-100.0 To 2870. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
24
16-S -34


MAT 1631
Total kinematic kerma (high limit)
Cross Section
16-S -34
-97.16 To 2827. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
25
16-S -34


MAT 1631
Dpa total (eV-barns)
Cross Section
16-S -34
-97.18 To 2832. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
26
16-S -34


MAT 1631
Dpa elastic (mt2)
Cross Section
16-S -34
-97.19 To 2834. %
Max Ratio
Min Ratio
TENDL Threshold 218.75 eV
ENDFB8.0 Threshold 218.75 eV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
27
16-S -34


MAT 1631
Dpa inelastic (mt51-91)
Cross Section
16-S -34
-92.88 To 9999. %
Min
Ratio
TENDL Threshold 2.1907 MeV
ENDFB8.0 Threshold 2.1902 MeV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
28
16-S -34


MAT 1631
Dpa disappearance (mt102 -120)
Cross Section
16-S -34
-99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
29
16-S -34