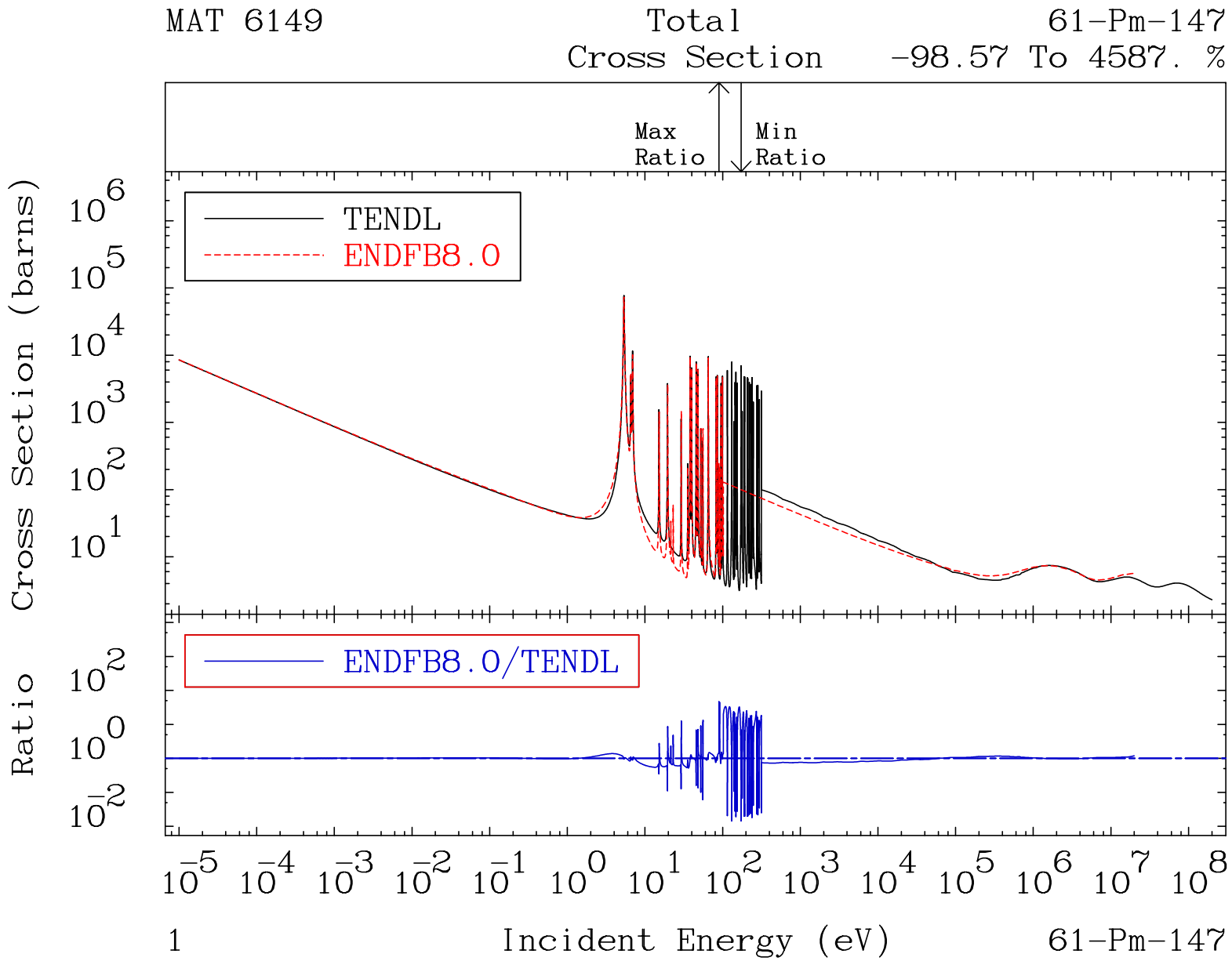
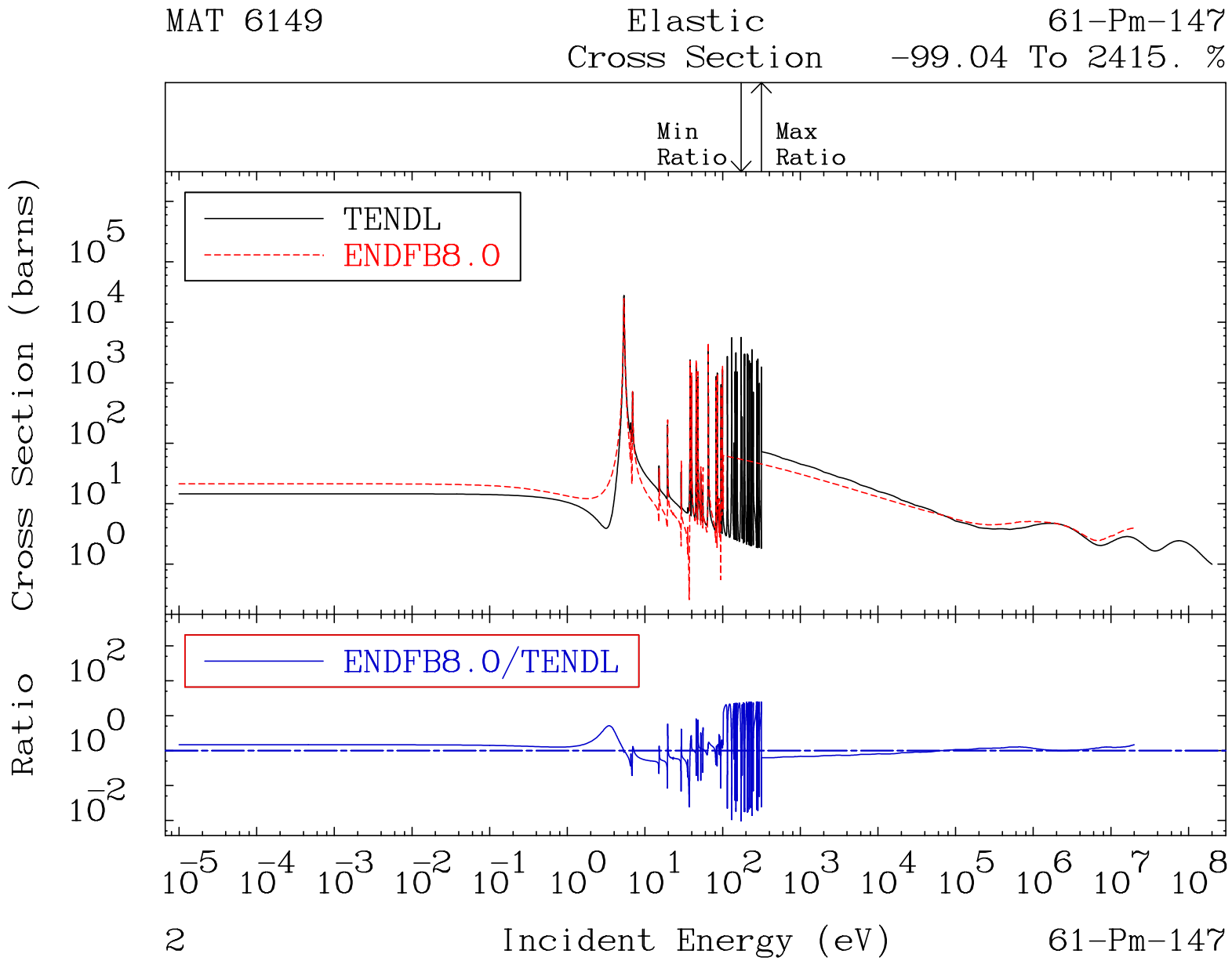
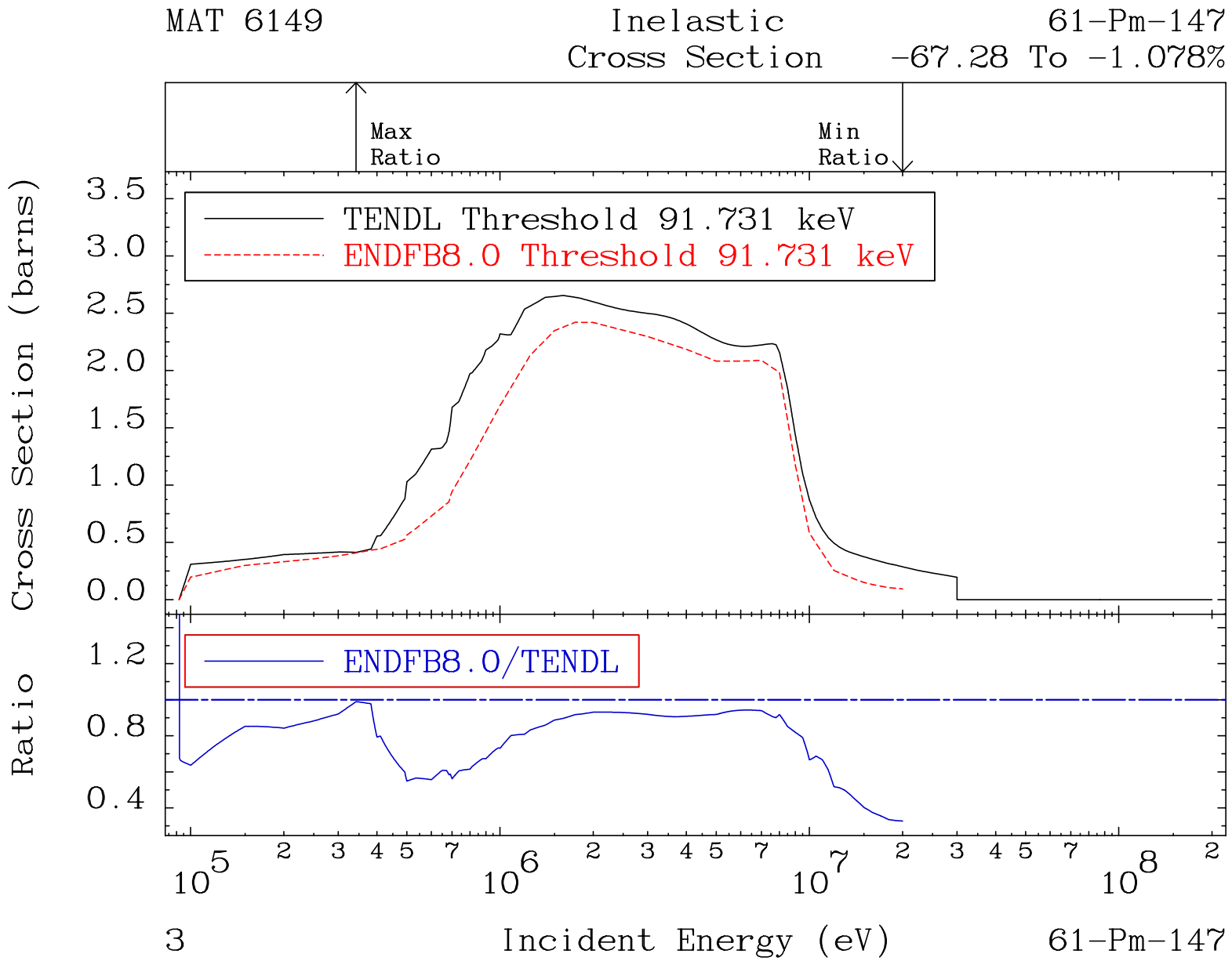
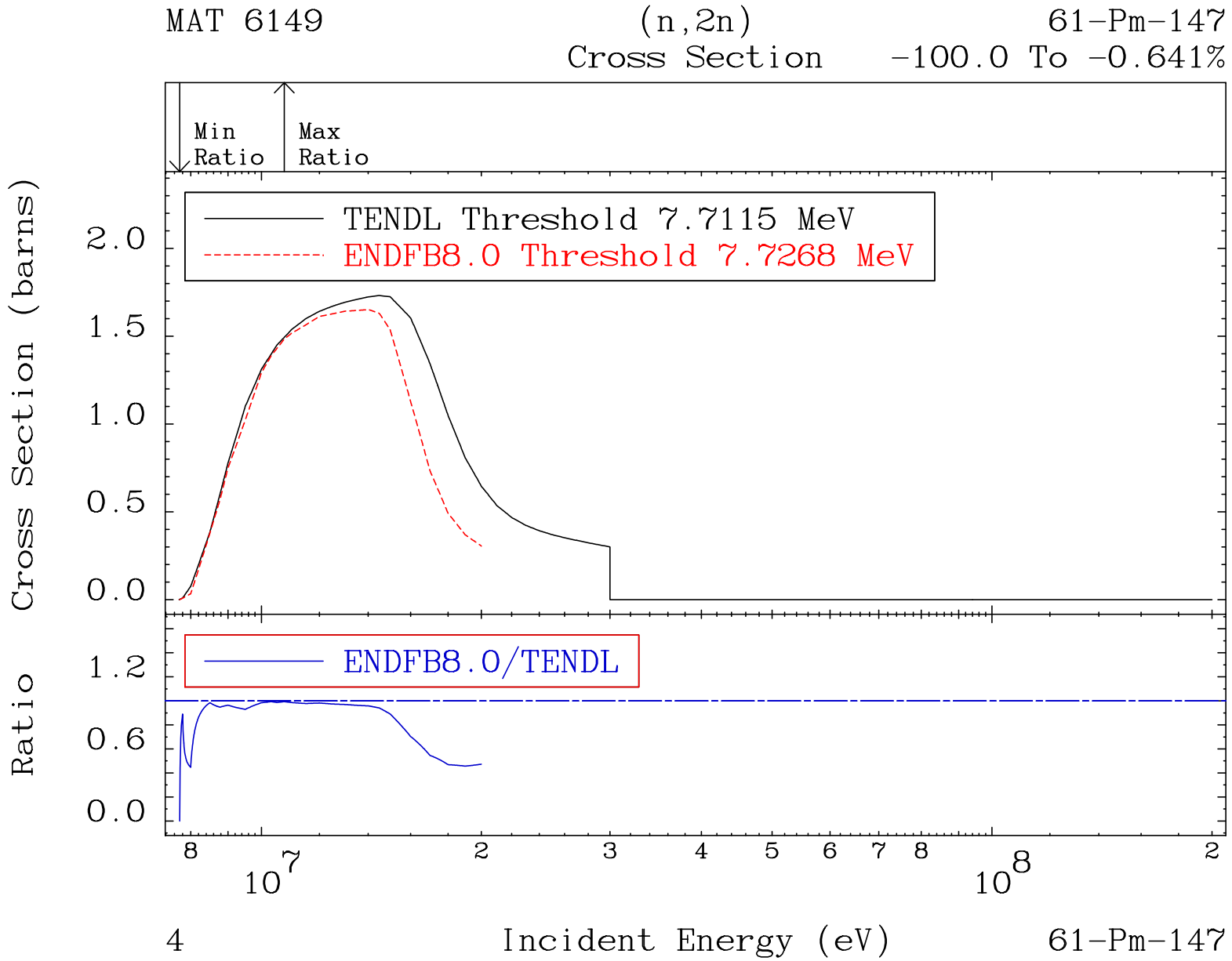
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

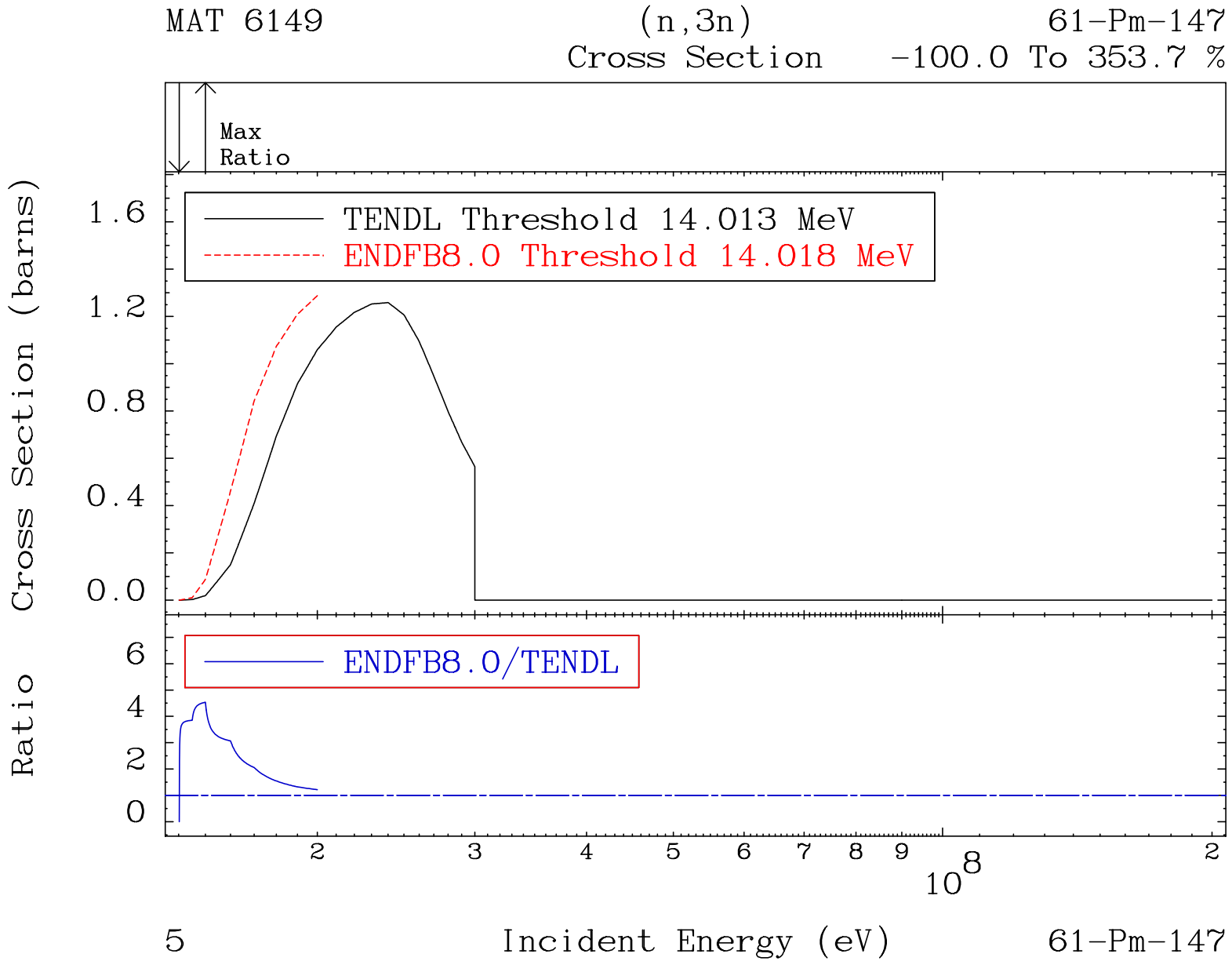
Press Mouse Button to Start

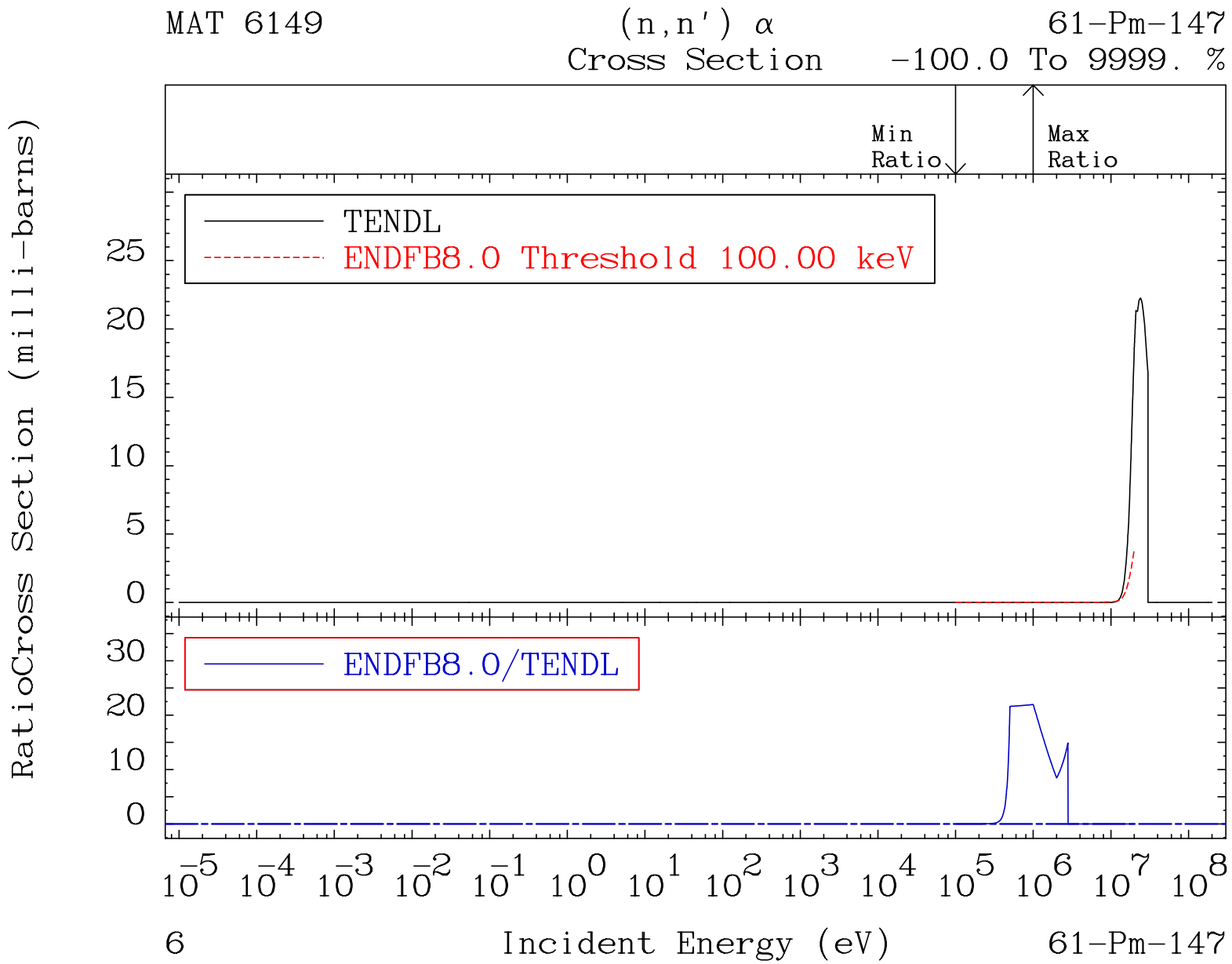

MAT 6149
Total
Cross Section
61-Pm-147
-98.57 To 4587. %
Max
Ratio
Min
Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
61-Pm-147

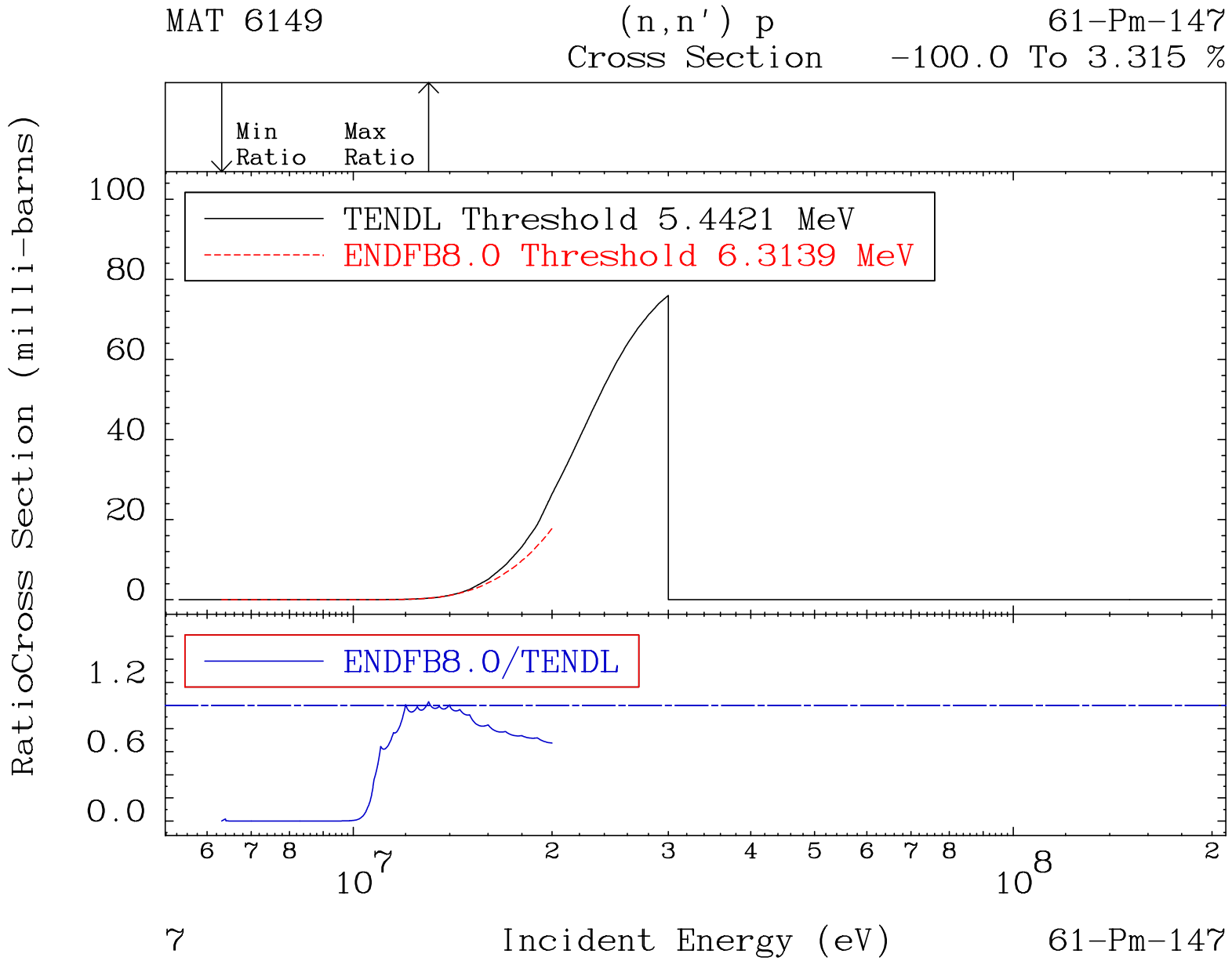

MAT 6149
Elastic
Cross Section
61-Pm-147
-99.04 To 2415. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
2
61-Pm-147

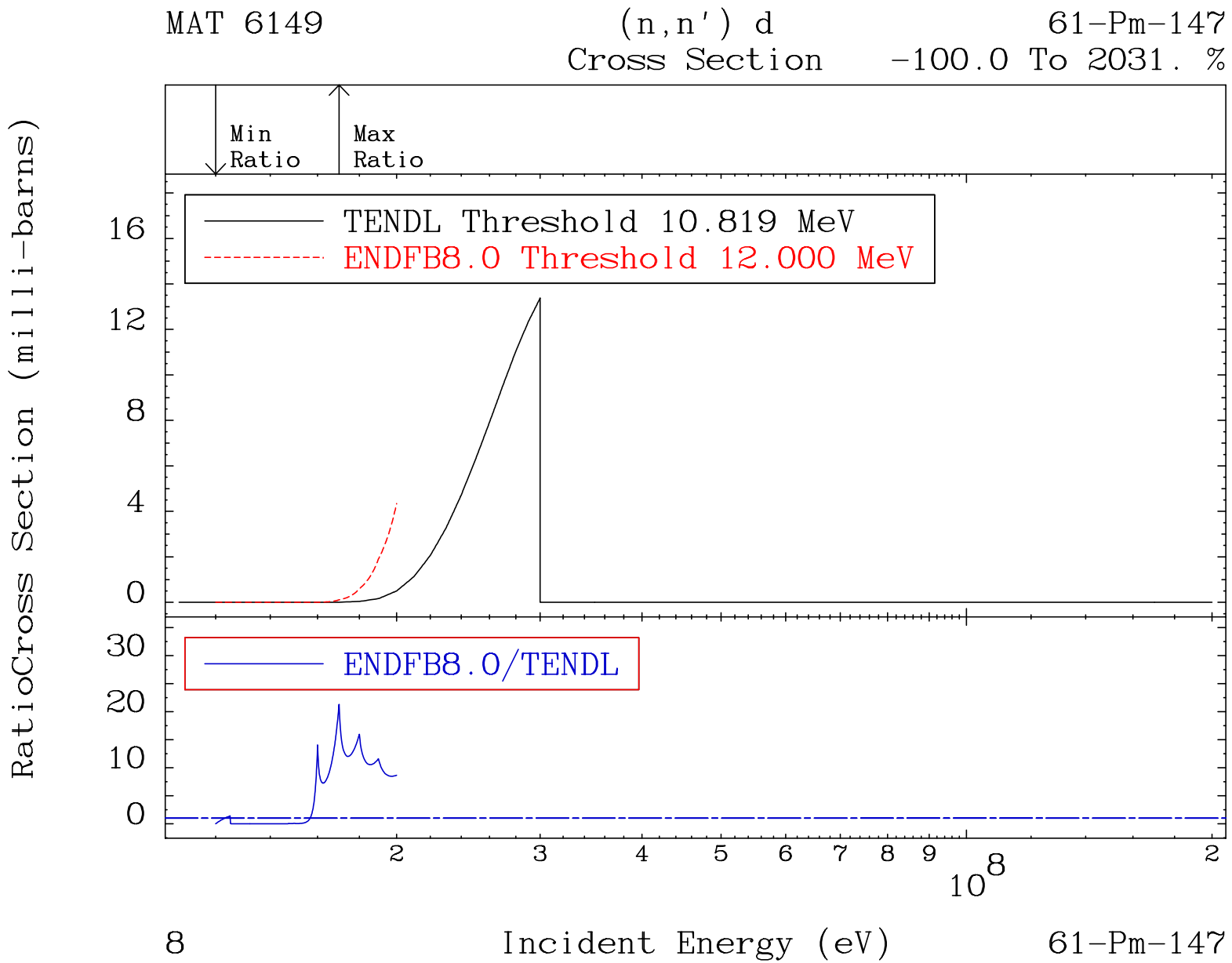

MAT 6149
Inelastic
Cross Section
61-Pm-147
-67.28 To -1.078%
Max
Ratio
Min
Ratio
TENDL Threshold 91.731 keV
ENDFB8.0 Threshold 91.731 keV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
3
61-Pm-147

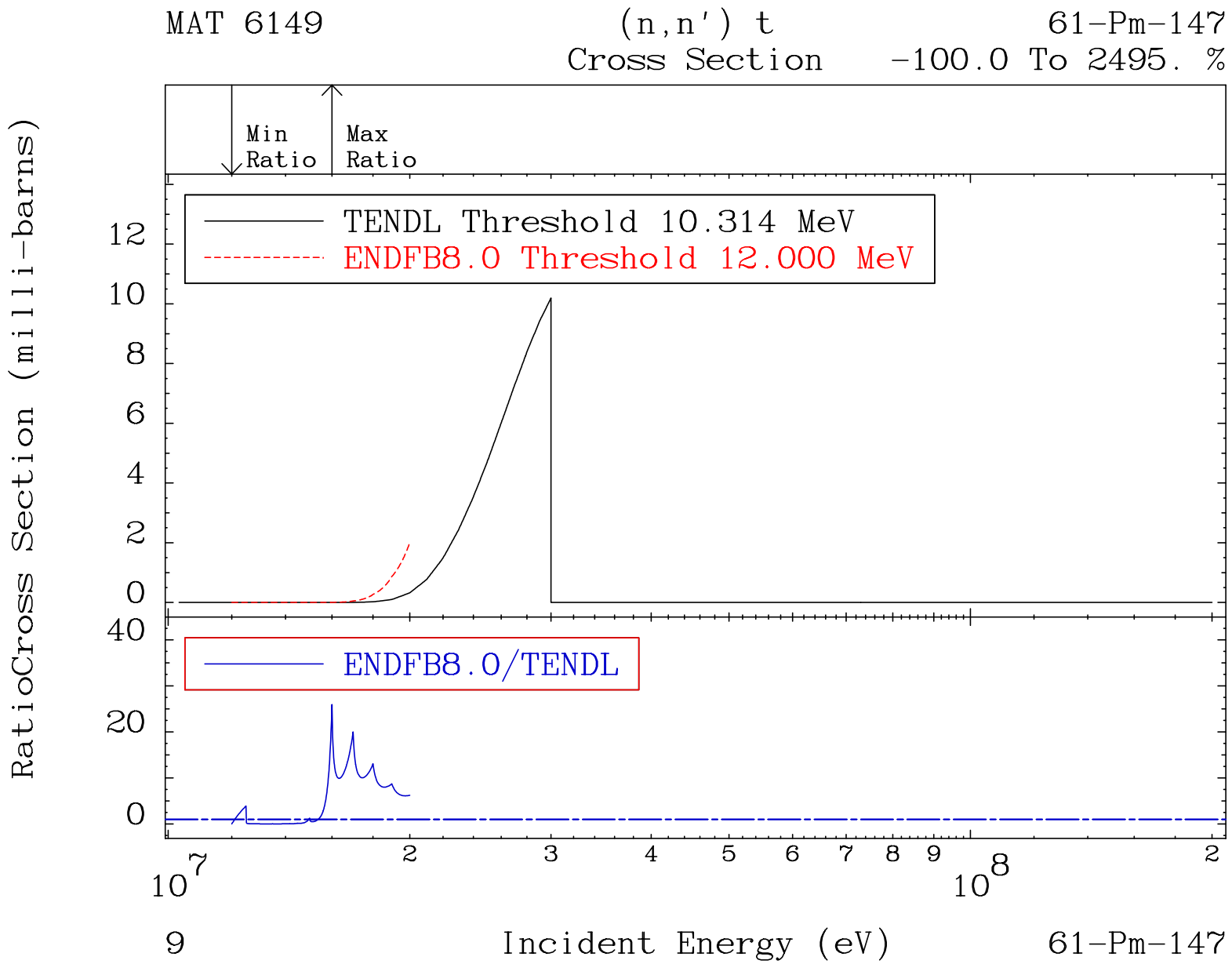

MAT 6149
(n,2n)
Cross Section
61-Pm-147
-100.0 To -0.641%
Min Ratio
Max Ratio
TENDL Threshold 7.7115 MeV
ENDFB8.0 Threshold 7.7268 MeV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
1.2
0.6
0.0
8
10^7
2
3
4
5
6
7
8
10^8
2
4
Incident Energy (eV)
61-Pm-147

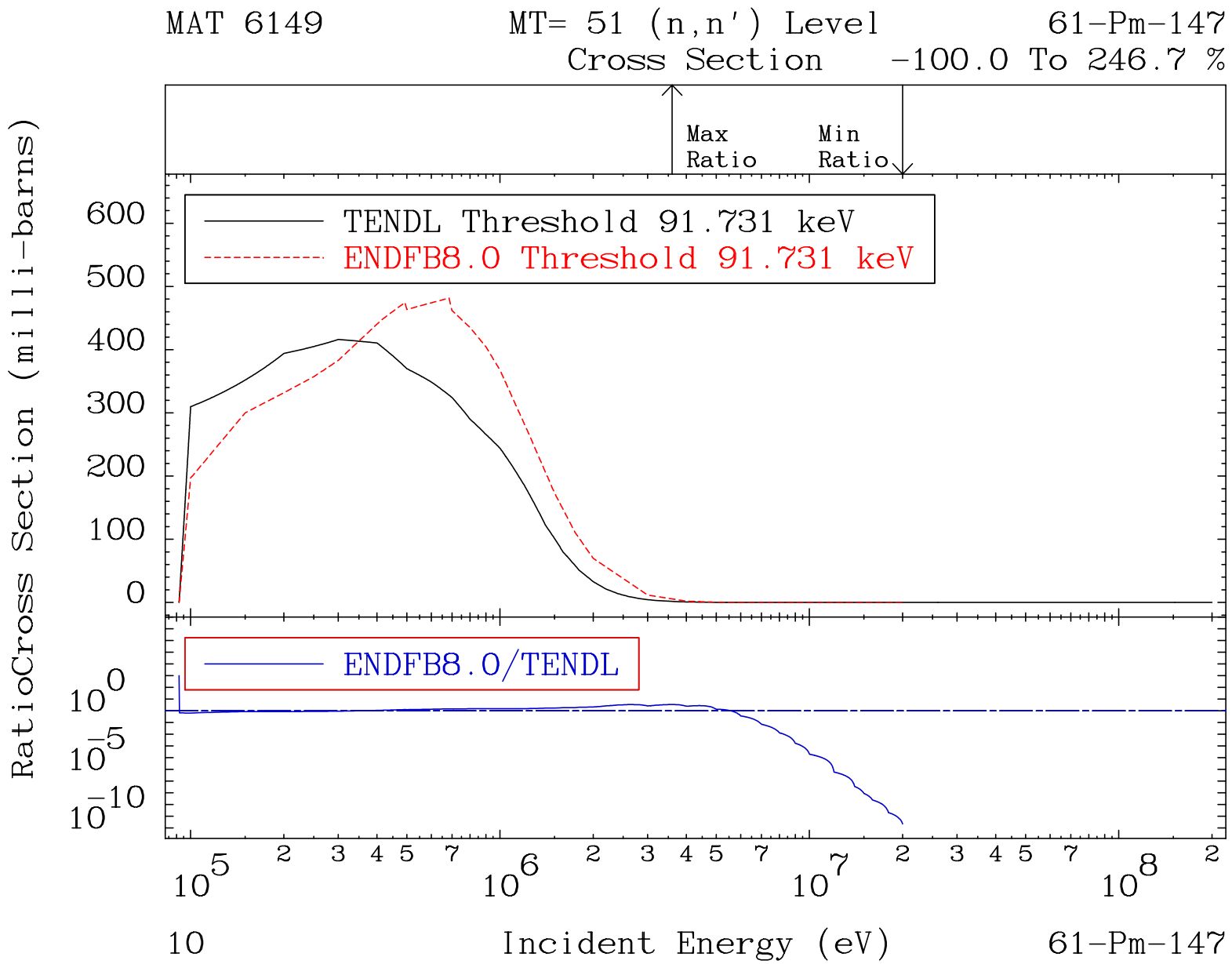

MAT 6149
(n,3n)
Cross Section
61-Pm-147
-100.0 To 353.7 %
Max
Ratio
TENDL Threshold 14.013 MeV
ENDFB8.0 Threshold 14.018 MeV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.6
1.2
0.8
0.4
0.0
6
4
2
0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
61-Pm-147

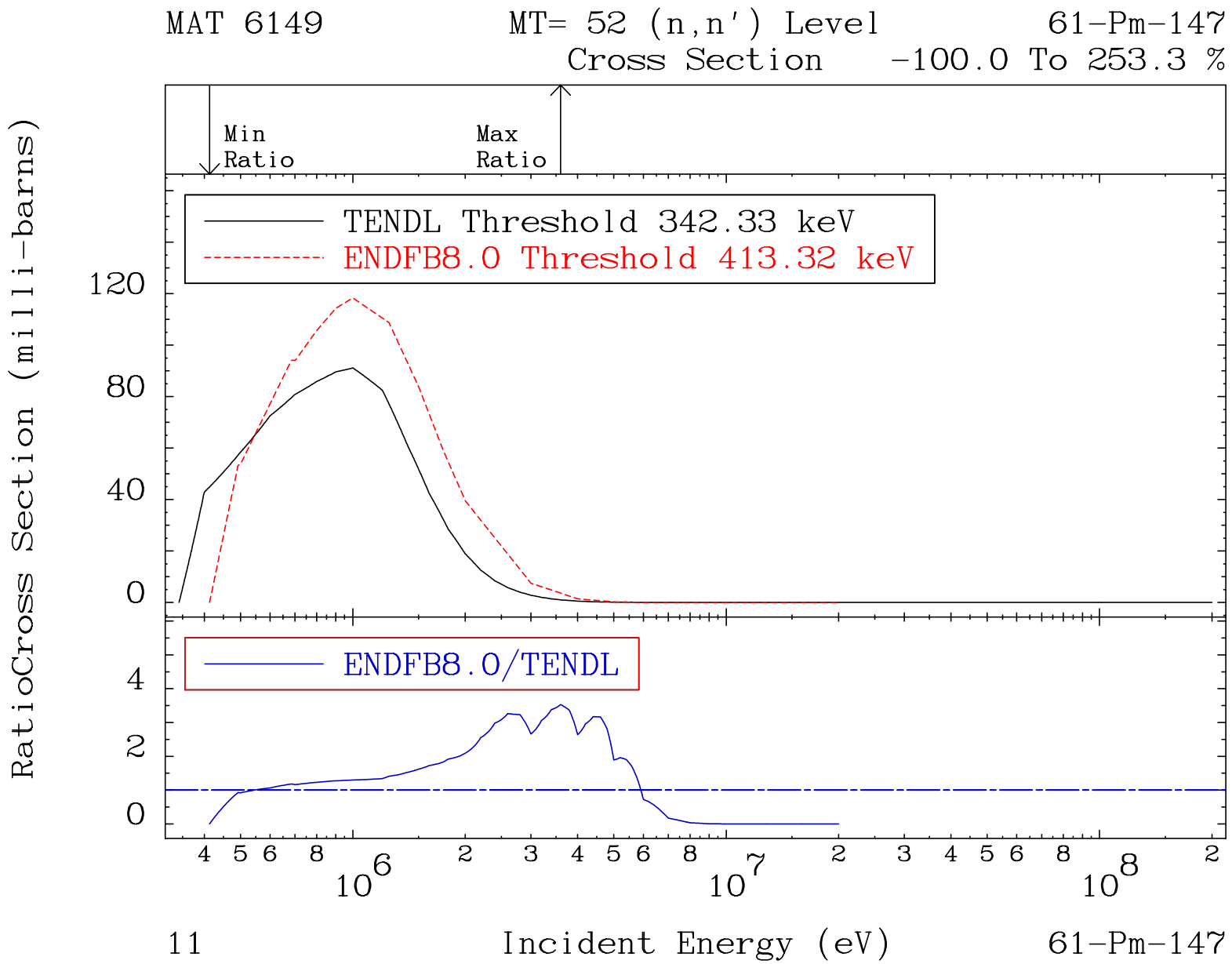

MAT 6149
(n,n') α
Cross Section
61-Pm-147
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 100.00 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
6
61-Pm-147

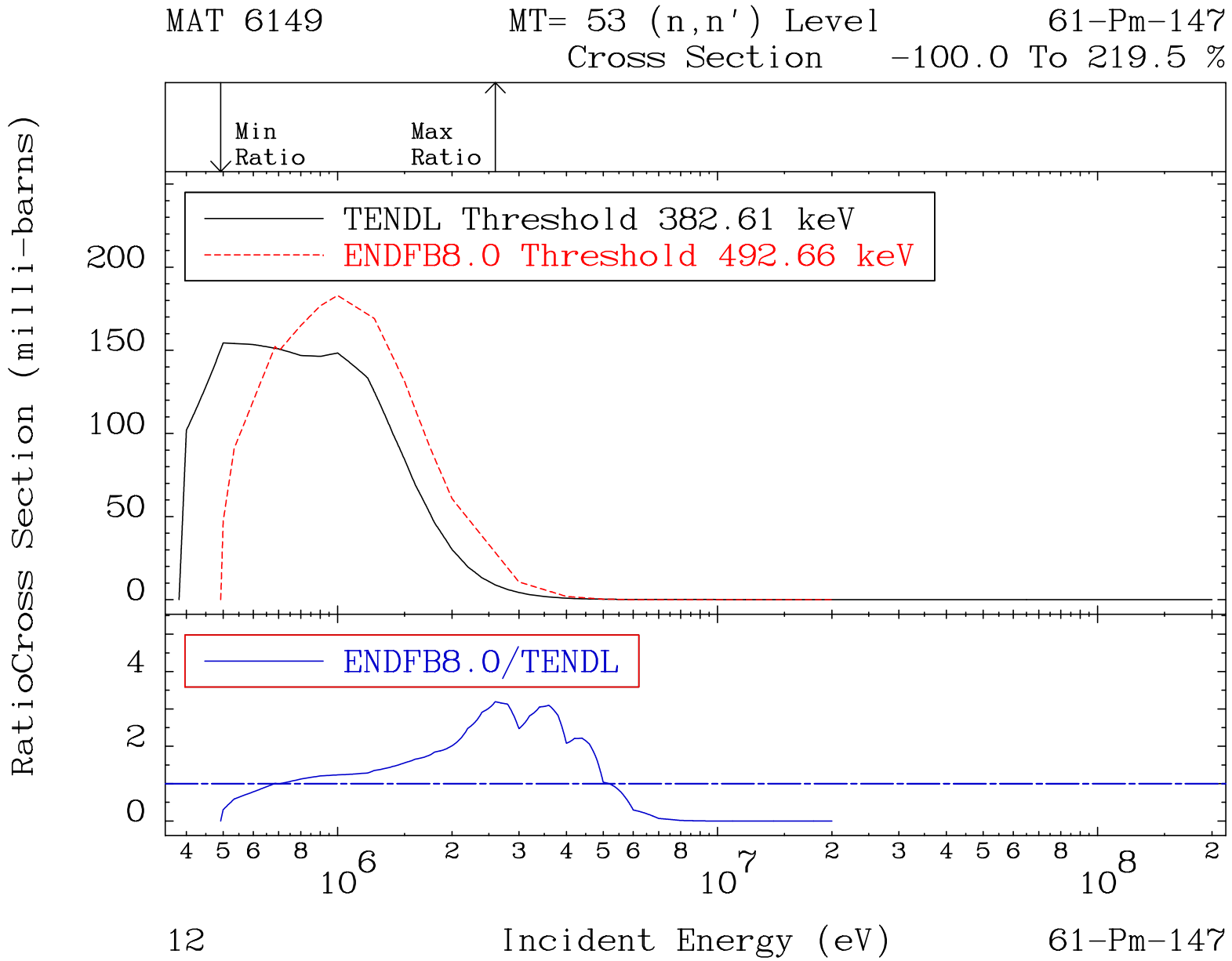

MAT 6149
(n,n') p
Cross Section
61-Pm-147
-100.0 To 3.315 %
Min Ratio
Max Ratio
TENDL Threshold 5.4421 MeV
ENDFB8.0 Threshold 6.3139 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
61-Pm-147

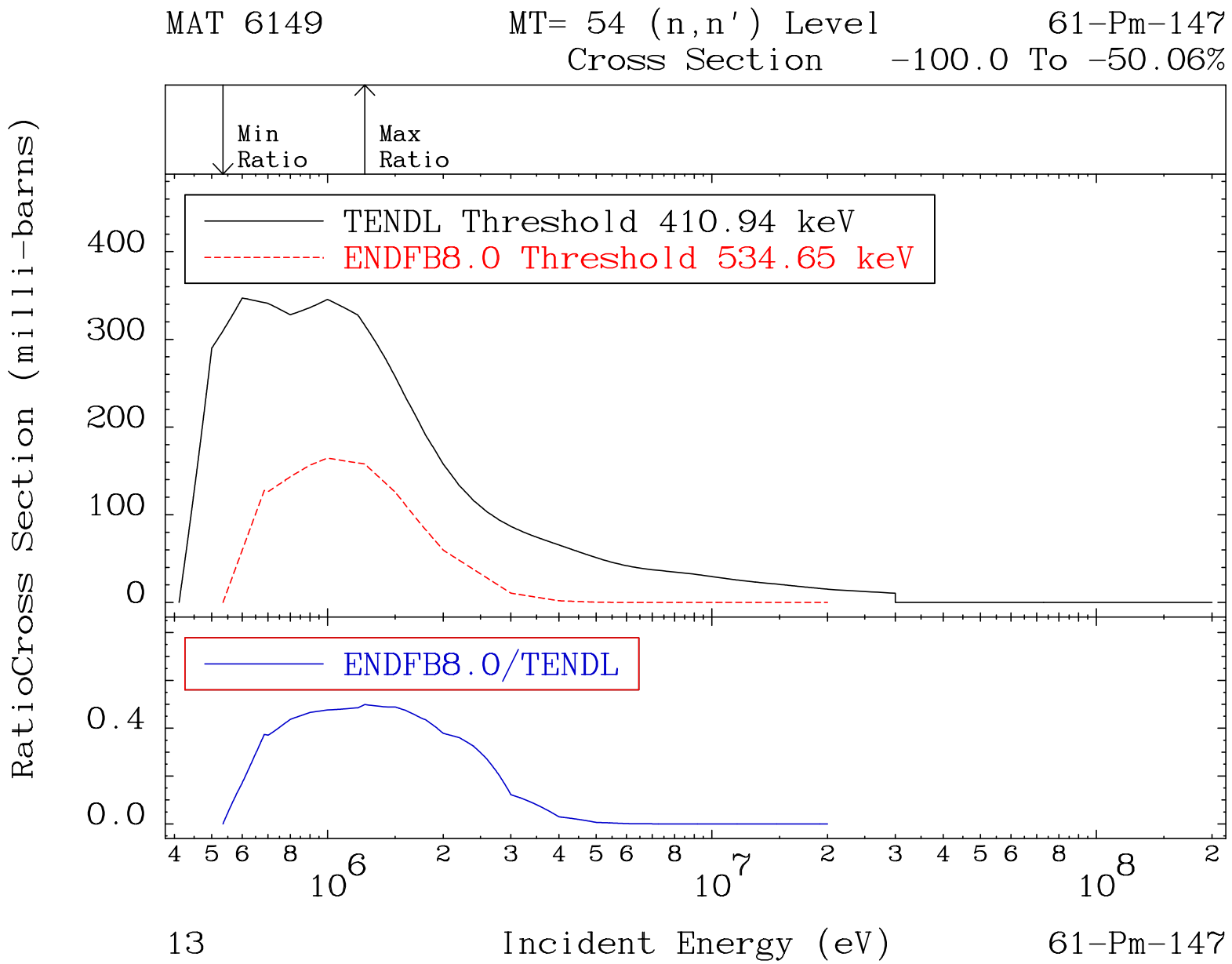

MAT 6149
(n,n') d
61-Pm-147
Cross Section
-100.0 To 2031. %
Min Ratio
Max Ratio
TENDL Threshold 10.819 MeV
ENDFB8.0 Threshold 12.000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
30
20
10
0
2
3
4
5
6
7
8
9
2
10^8
8
Incident Energy (eV)
61-Pm-147

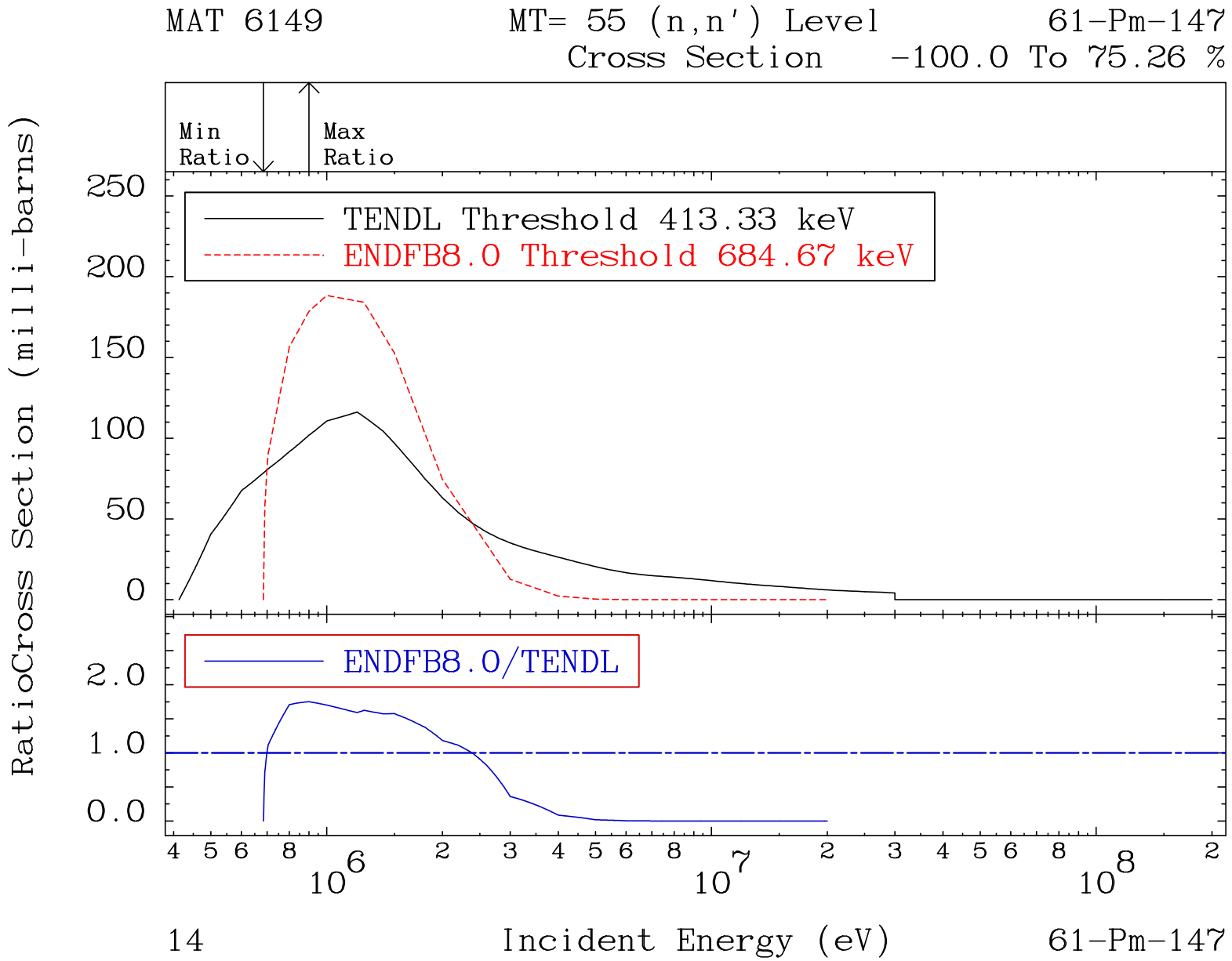

MAT 6149
(n,n') t
61-Pm-147
Cross Section
-100.0 To 2495. %
Min Ratio
Max Ratio
TENDL Threshold 10.314 MeV
ENDFB8.0 Threshold 12.000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
61-Pm-147
9

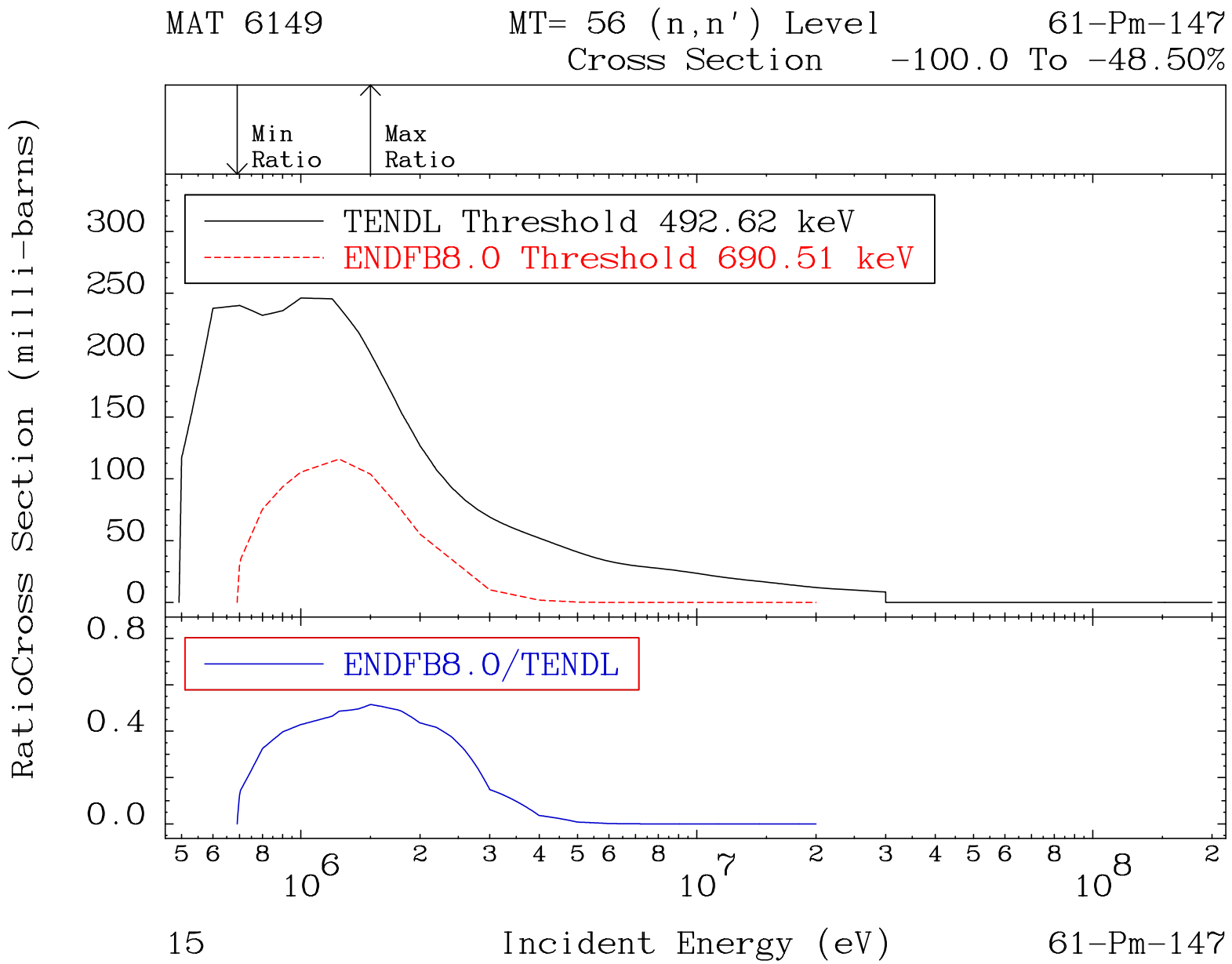

MAT 6149
MT= 51 (n,n') Level
61-Pm-147
Cross Section -100.0 To 246.7 %
Max Ratio
Min Ratio
TENDL Threshold 91.731 keV
ENDFB8.0 Threshold 91.731 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
600
500
400
300
200
100
0
10^0
10^-5
10^-10
10^5
10^6
10^7
10^8
2 3 4 5 7
10
Incident Energy (eV)
61-Pm-147

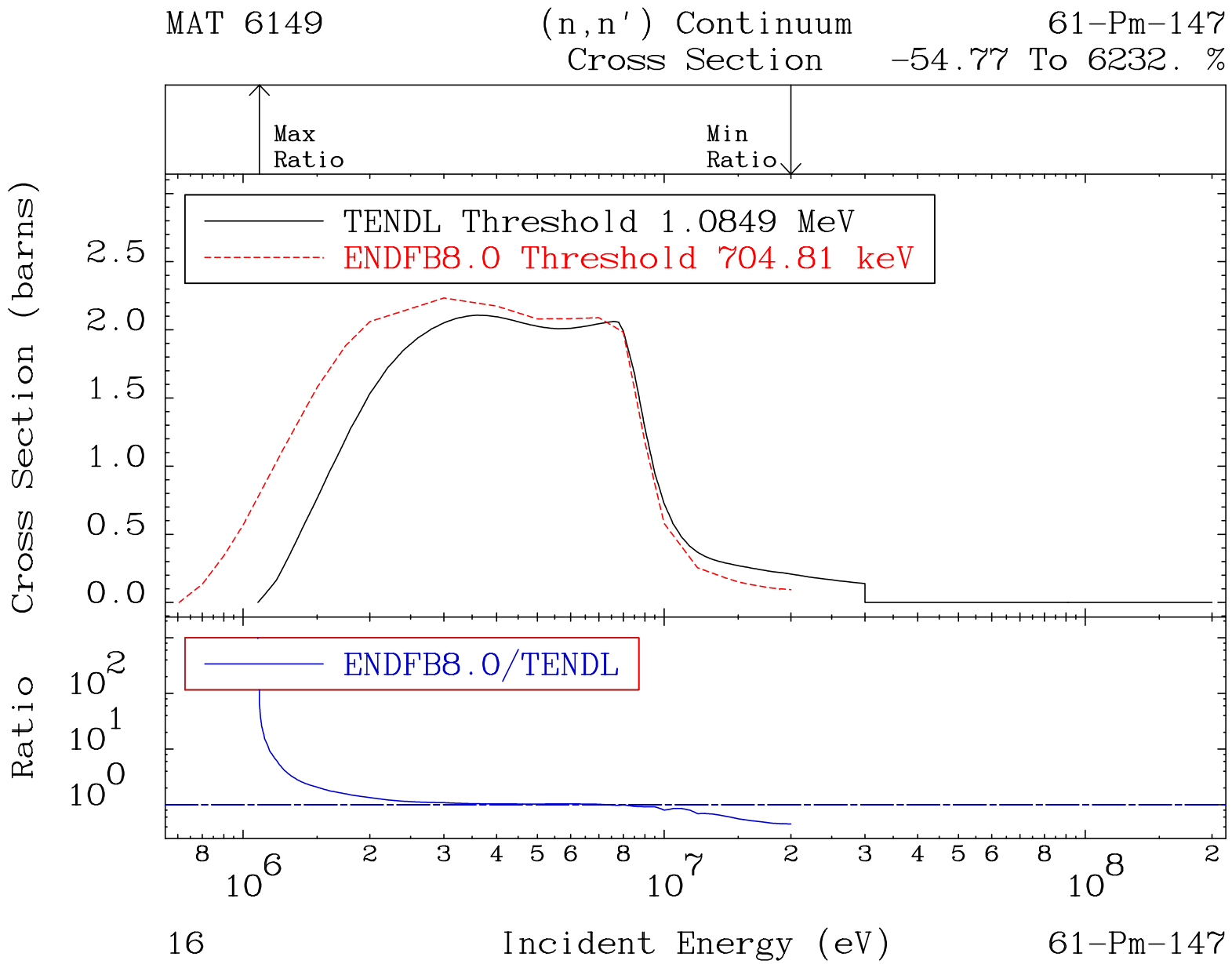

MAT 6149
MT= 52 (n,n') Level
61-Pm-147
Cross Section
-100.0 To 253.3 %
Min Ratio
Max Ratio
TENDL Threshold 342.33 keV
ENDFB8.0 Threshold 413.32 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
120
80
40
0
4
2
0
4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
11
Incident Energy (eV)
61-Pm-147

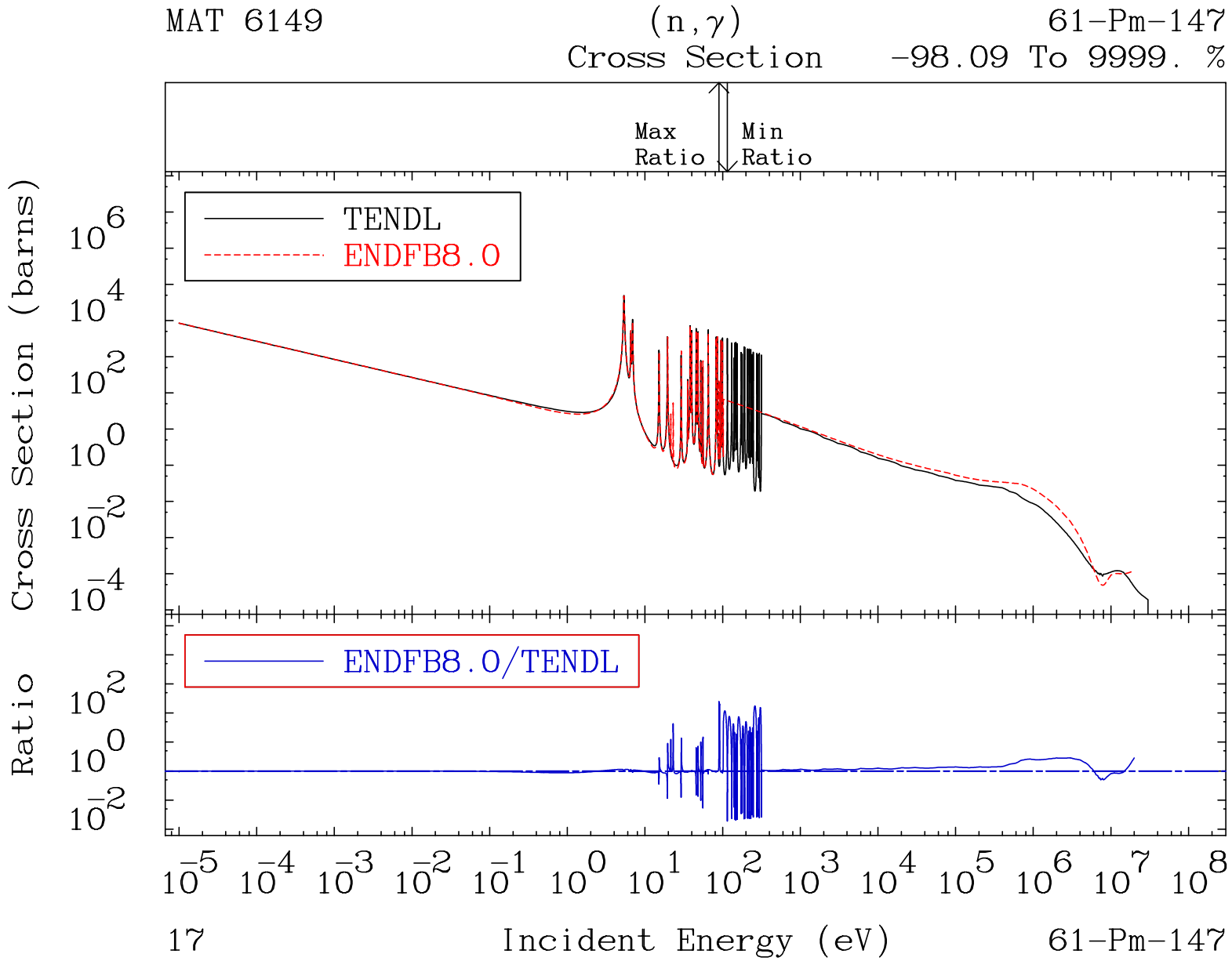

MAT 6149
MT= 53 (n,n') Level
61-Pm-147
Cross Section
-100.0 To 219.5 %
Min Ratio
Max Ratio
TENDL Threshold 382.61 keV
ENDFB8.0 Threshold 492.66 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
4
2
0
4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
61-Pm-147

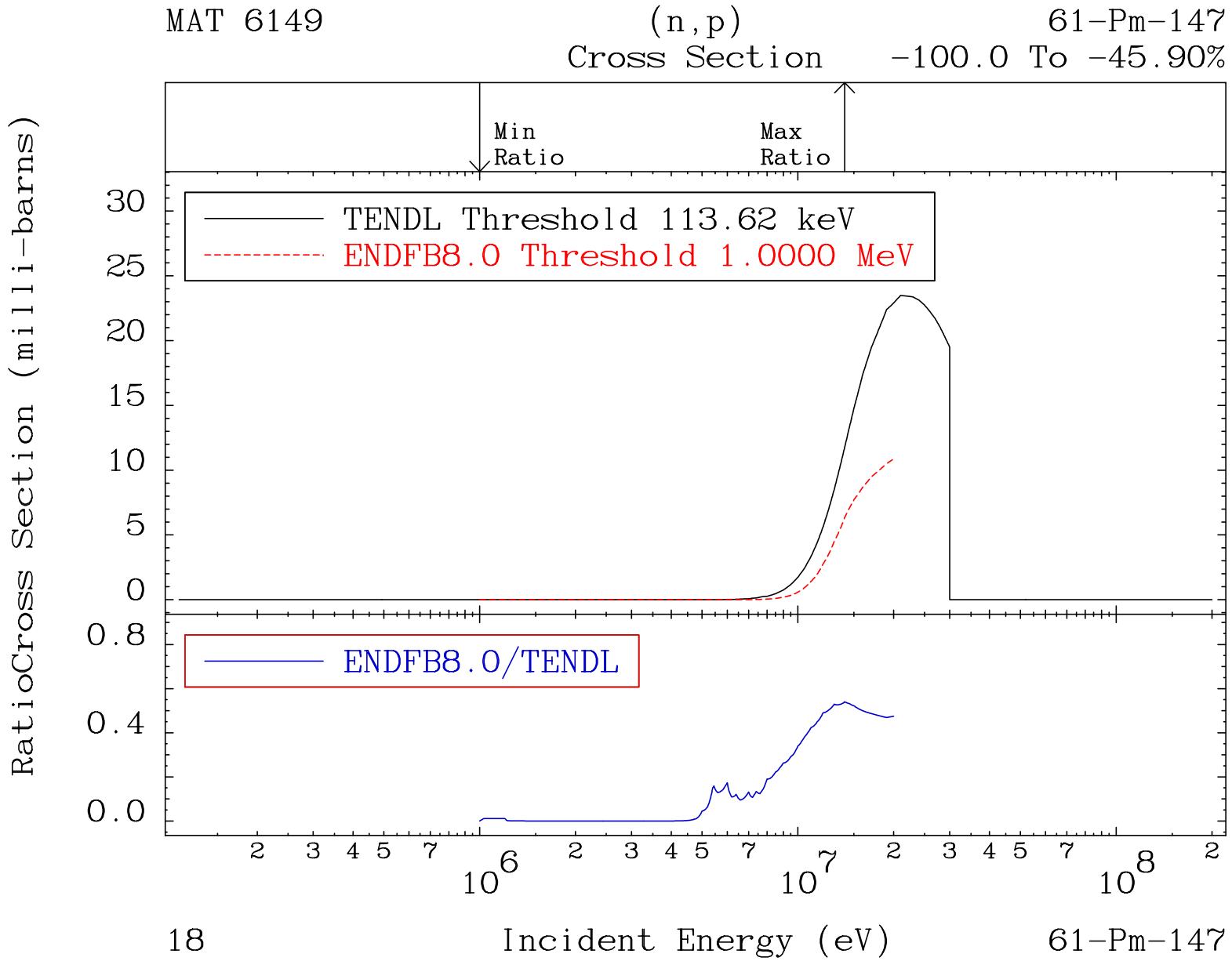

MAT 6149
MT= 54 (n,n') Level
61-Pm-147
Cross Section -100.0 To -50.06%
Min Ratio
Max Ratio
TENDL Threshold 410.94 keV
ENDFB8.0 Threshold 534.65 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
0.4
0.0
4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
13
Incident Energy (eV)
61-Pm-147

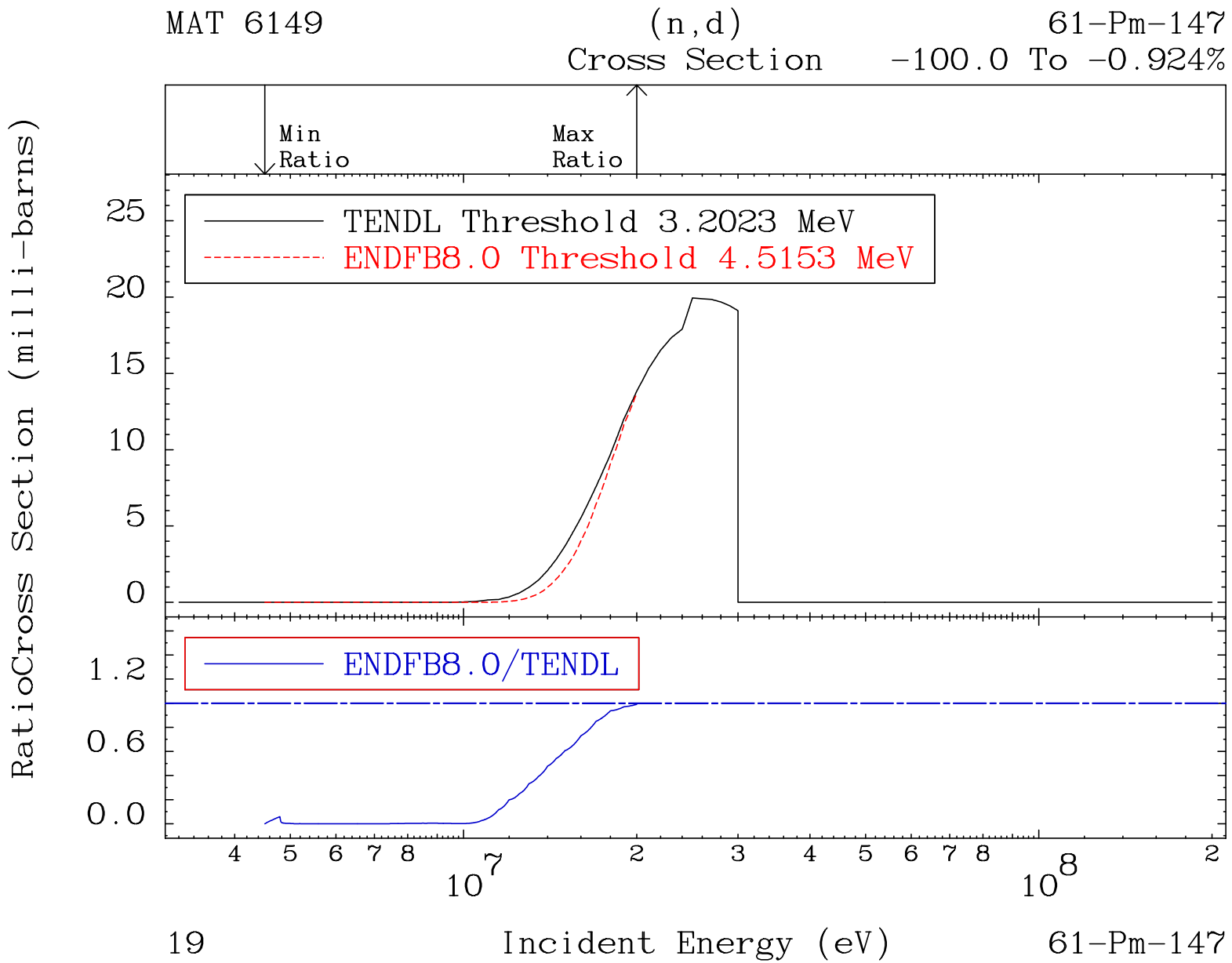

MAT 6149
MT= 55 (n,n') Level
61-Pm-147
Cross Section
-100.0 To 75.26 %
Min Ratio
Max Ratio
TENDL Threshold 413.33 keV
ENDFB8.0 Threshold 684.67 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
2.0
1.0
0.0
4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
14
Incident Energy (eV)
61-Pm-147

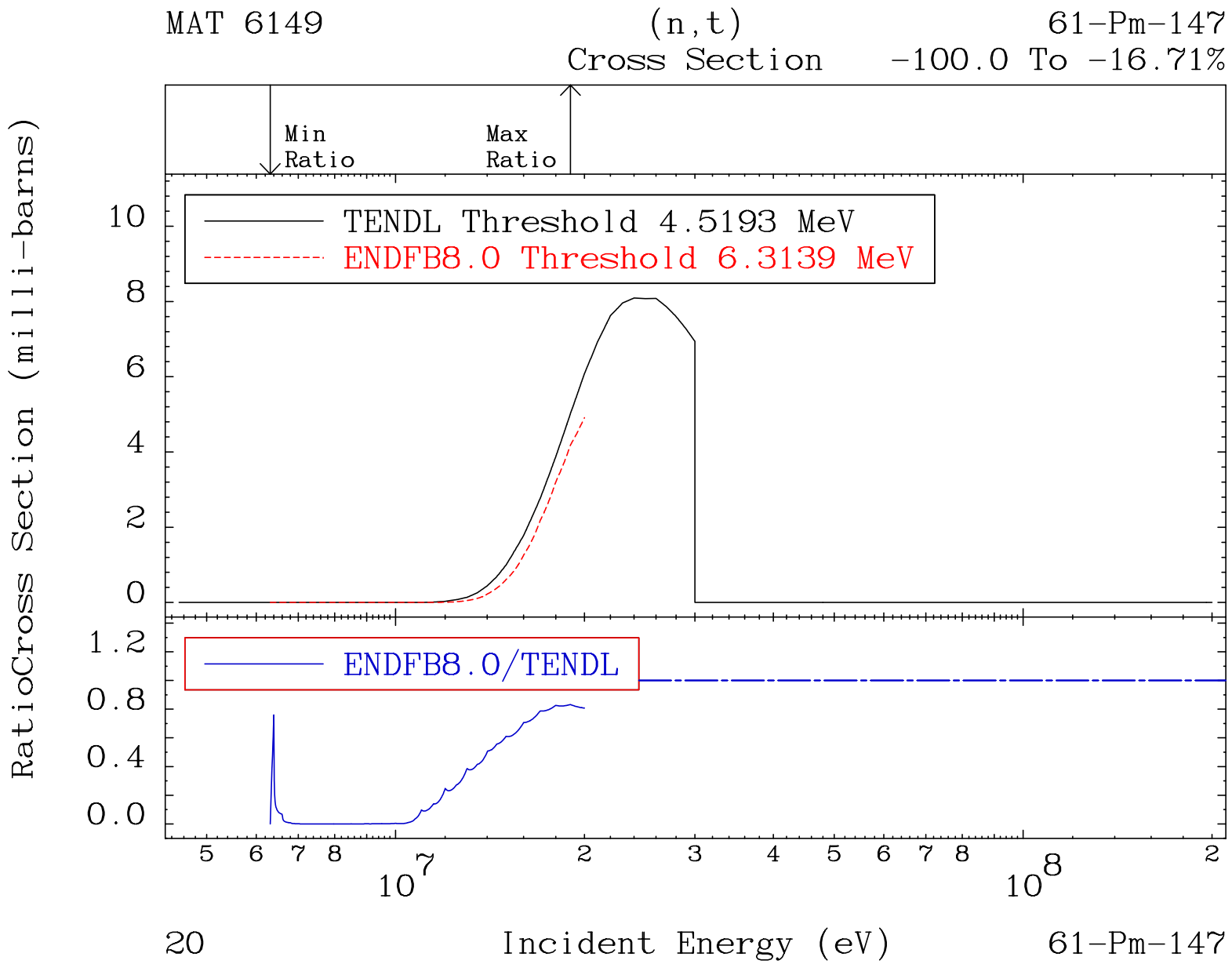

MAT 6149
MT= 56 (n,n') Level
61-Pm-147
Cross Section -100.0 To -48.50%
Min Ratio
Max Ratio
TENDL Threshold 492.62 keV
ENDFB8.0 Threshold 690.51 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
0.8
0.4
0.0
5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
15
Incident Energy (eV)
61-Pm-147

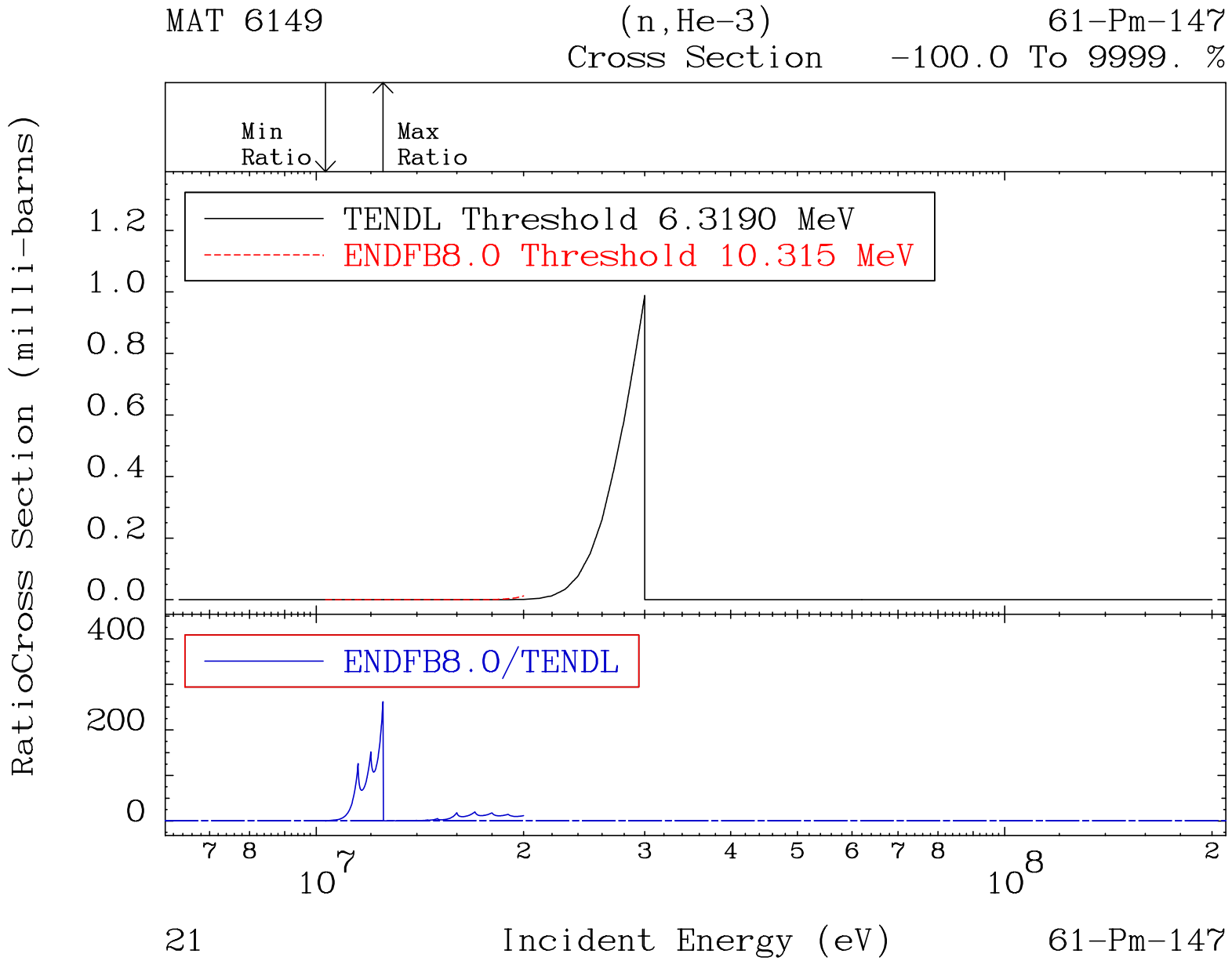

MAT 6149
(n,n') Continuum
Cross Section
61-Pm-147
-54.77 To 6232. %
Max Ratio
Min Ratio
TENDL Threshold 1.0849 MeV
ENDFB8.0 Threshold 704.81 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
10^2
10^1
10^0
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
16
Incident Energy (eV)
61-Pm-147

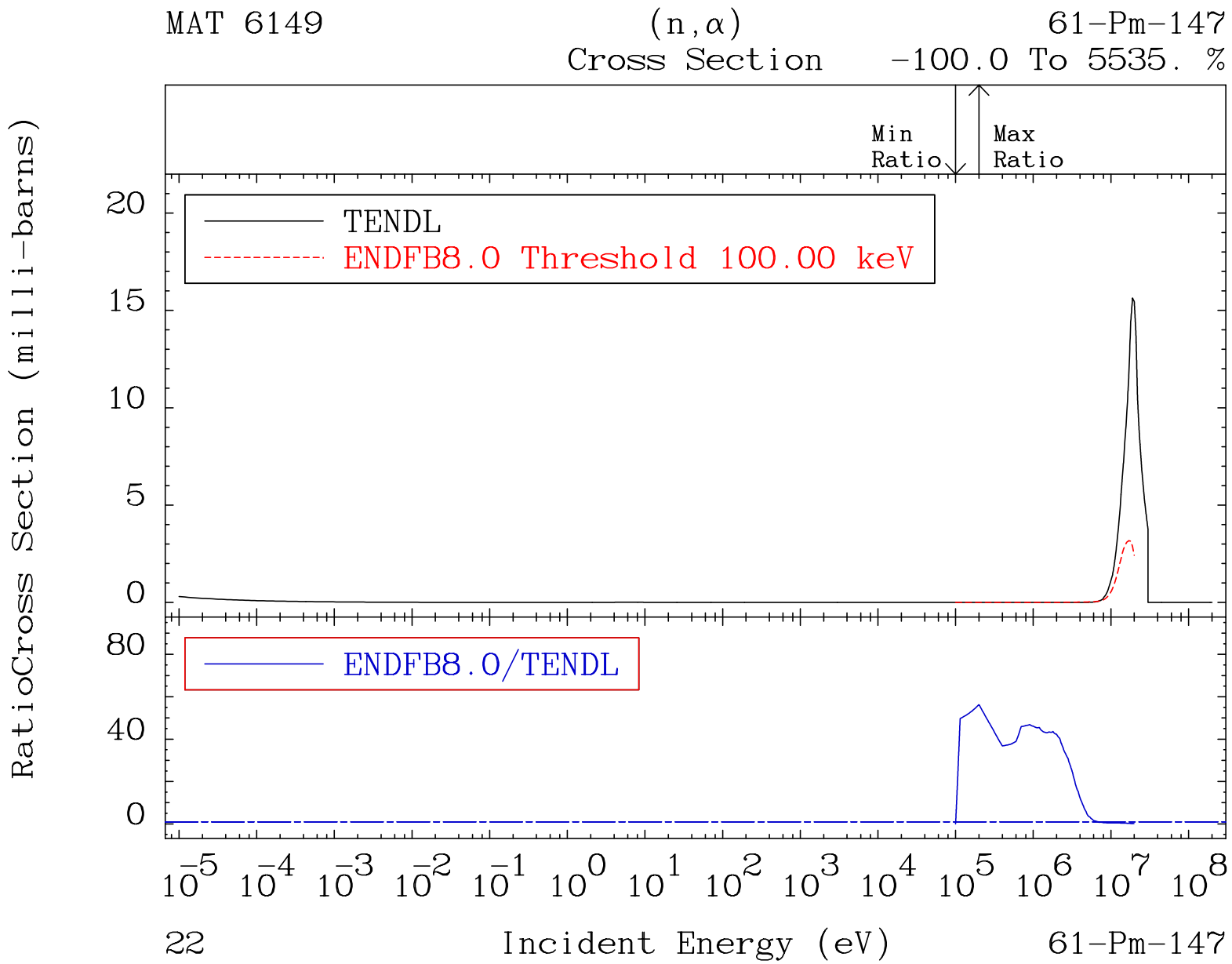

MAT 6149
(n,γ)
Cross Section
61-Pm-147
-98.09 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
17
61-Pm-147

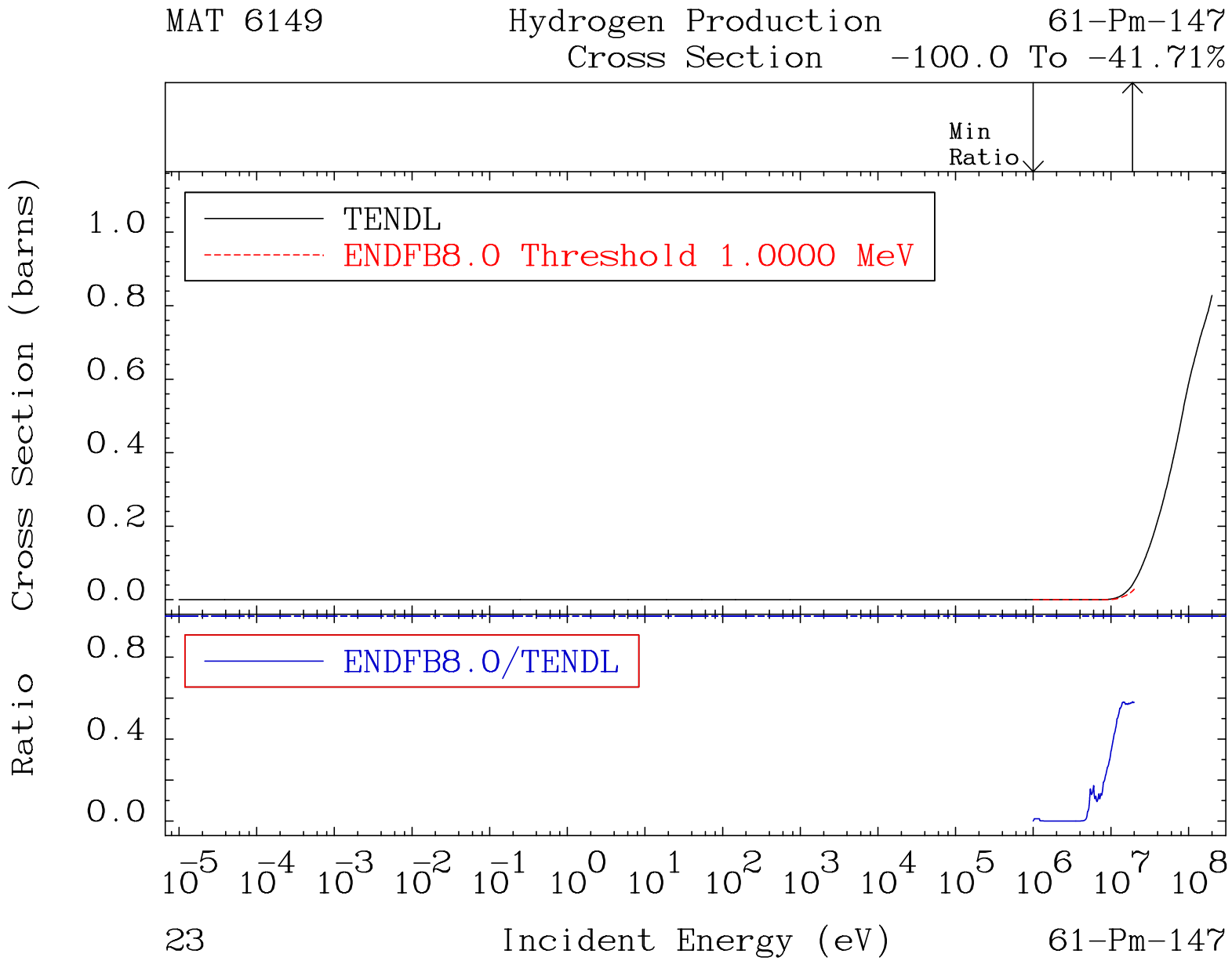

MAT 6149
(n,p)
Cross Section
61-Pm-147
-100.0 To -45.90%
Min Ratio
Max Ratio
TENDL Threshold 113.62 keV
ENDFB8.0 Threshold 1.0000 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
30
25
20
15
10
5
0
0.8
0.4
0.0
2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
18
Incident Energy (eV)
61-Pm-147

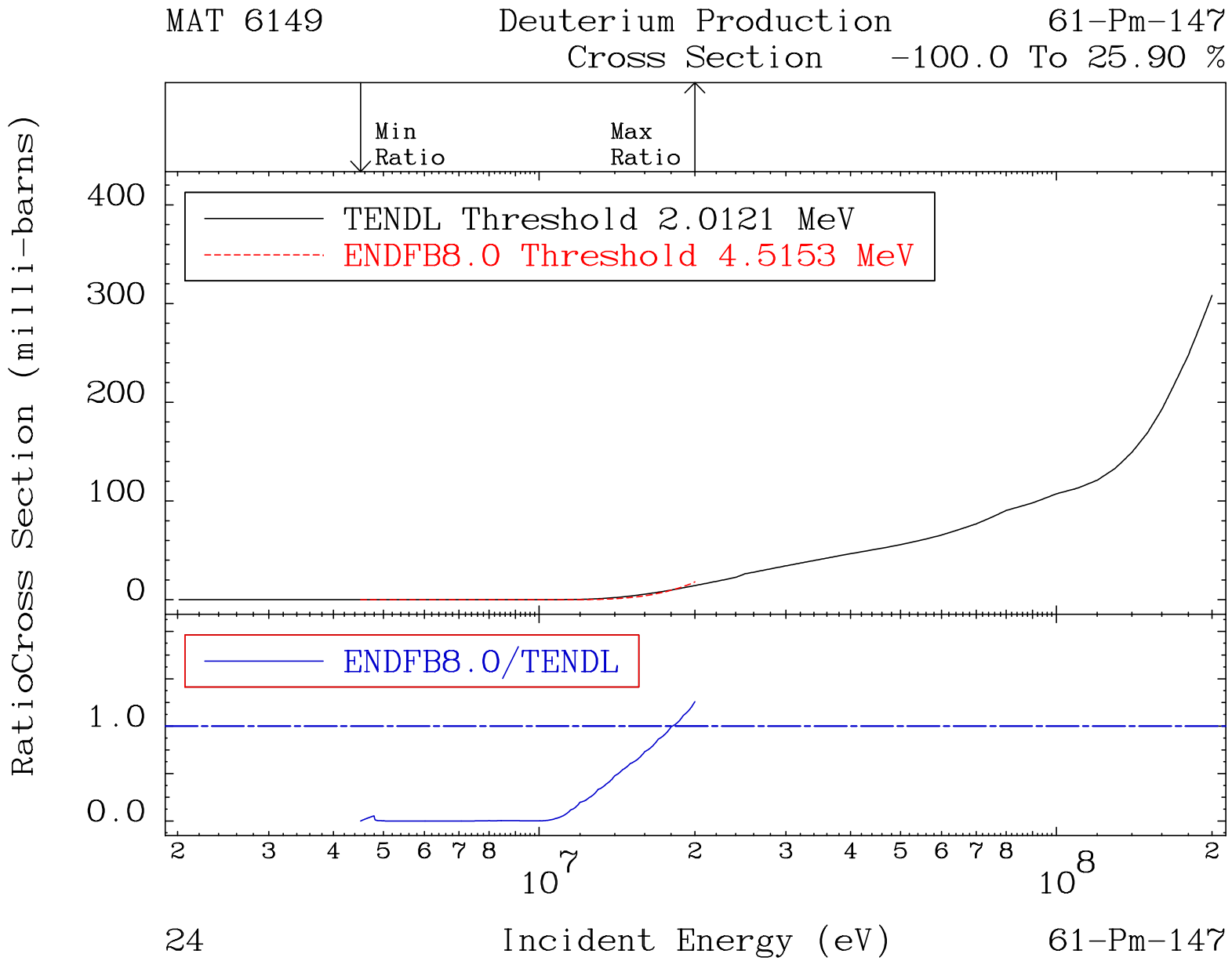

MAT 6149
(n,d)
61-Pm-147
Cross Section
-100.0 To -0.924%
Min Ratio
Max Ratio
TENDL Threshold 3.2023 MeV
ENDFB8.0 Threshold 4.5153 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
1.2
0.6
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
19
Incident Energy (eV)
61-Pm-147

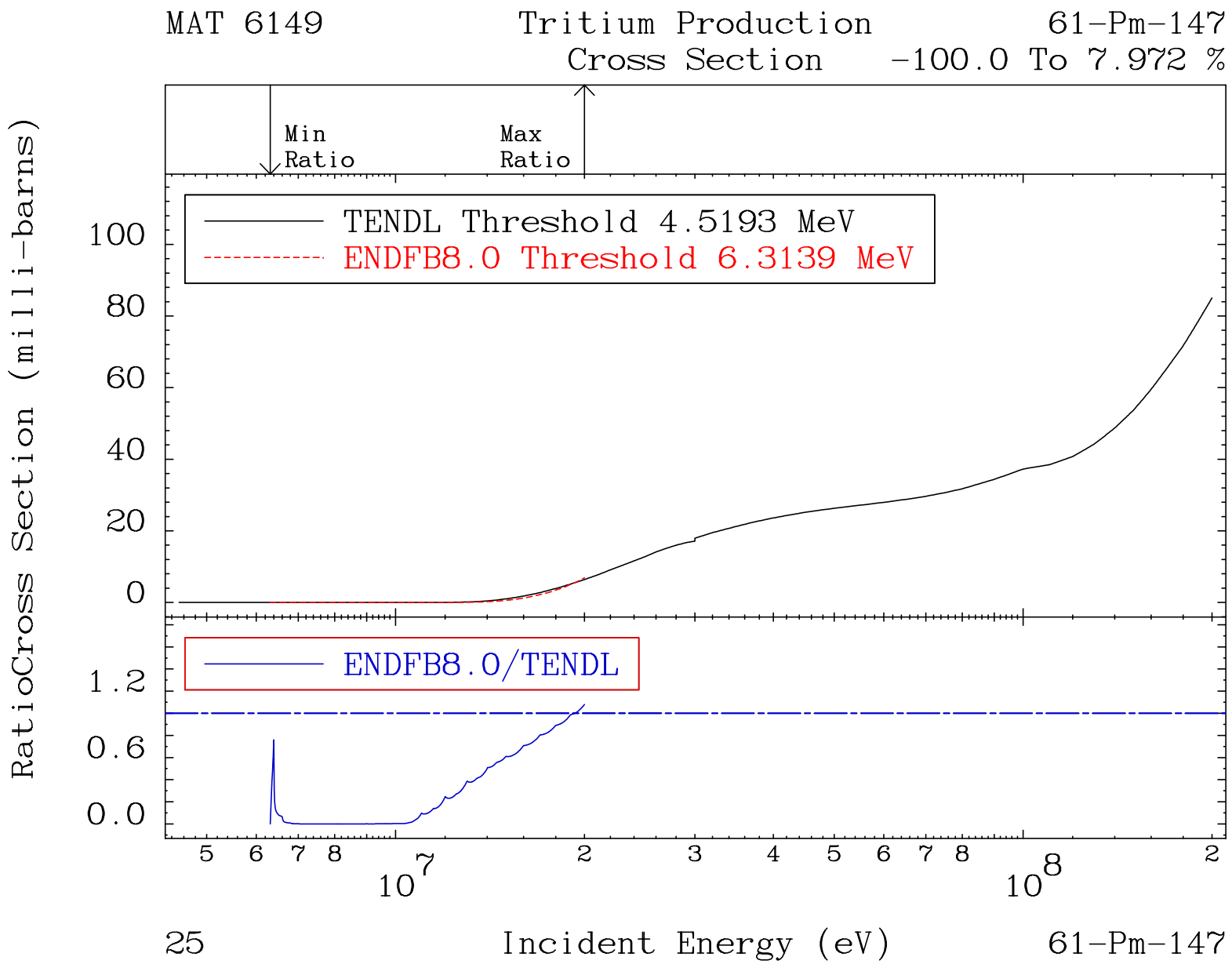

MAT 6149
(n,t)
Cross Section
61-Pm-147
-100.0 To -16.71%
Min Ratio
Max Ratio
TENDL Threshold 4.5193 MeV
ENDFB8.0 Threshold 6.3139 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
20
61-Pm-147

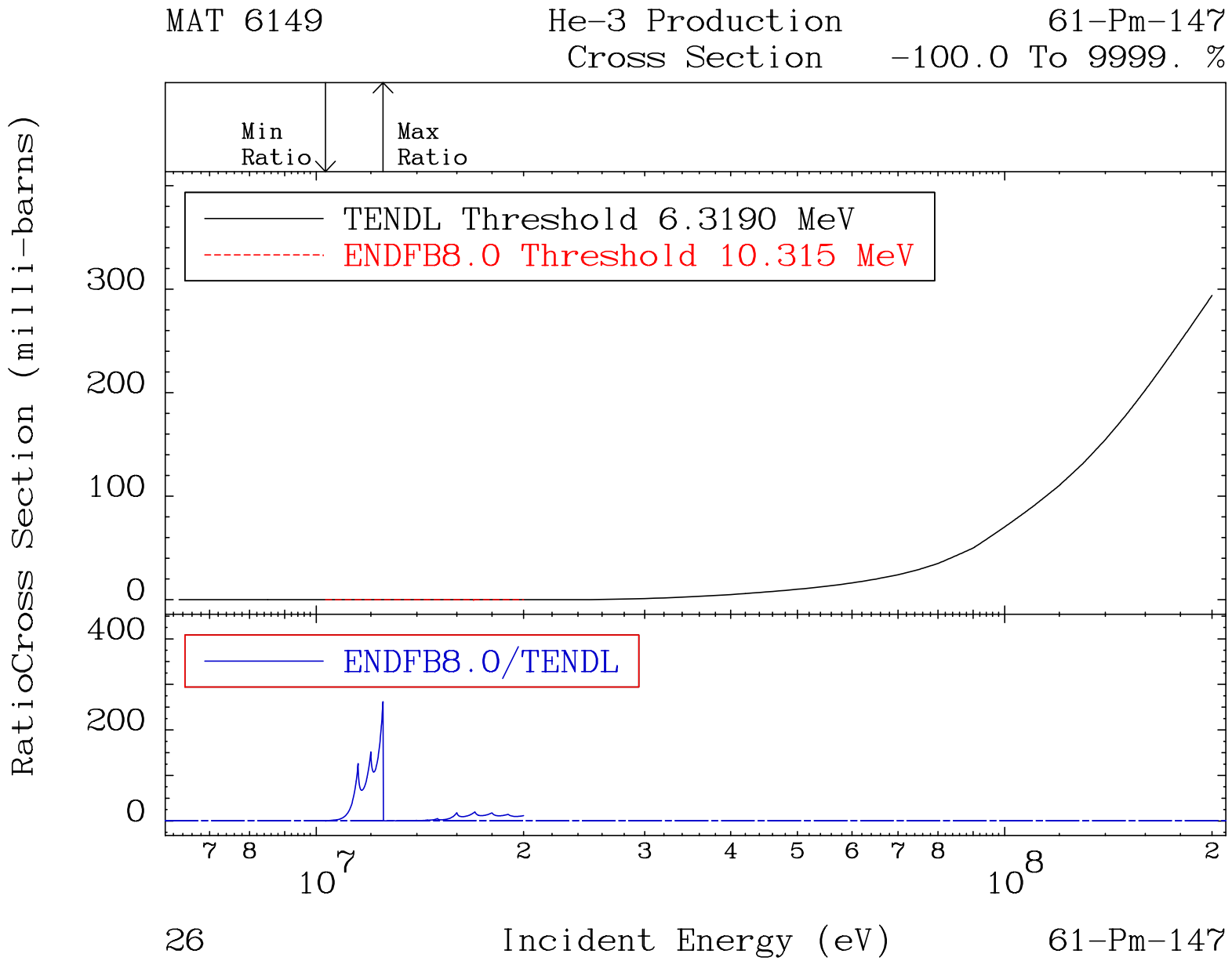

MAT 6149
(n,He-3)
61-Pm-147
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.3190 MeV
ENDFB8.0 Threshold 10.315 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
400
200
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
61-Pm-147

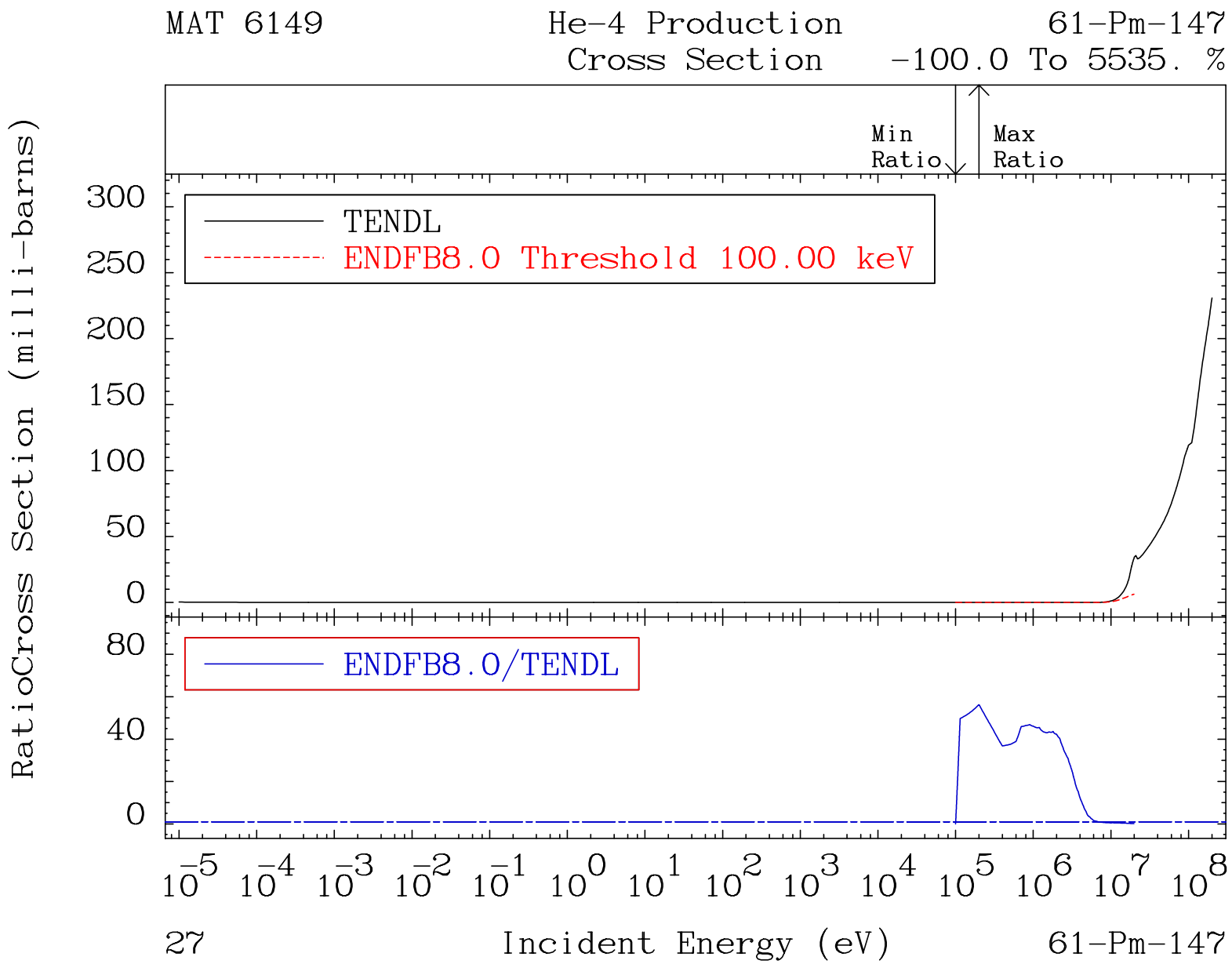

MAT 6149
(n,α)
61-Pm-147
Cross Section
-100.0 To 5535. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 100.00 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
80
40
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
22
Incident Energy (eV)
61-Pm-147

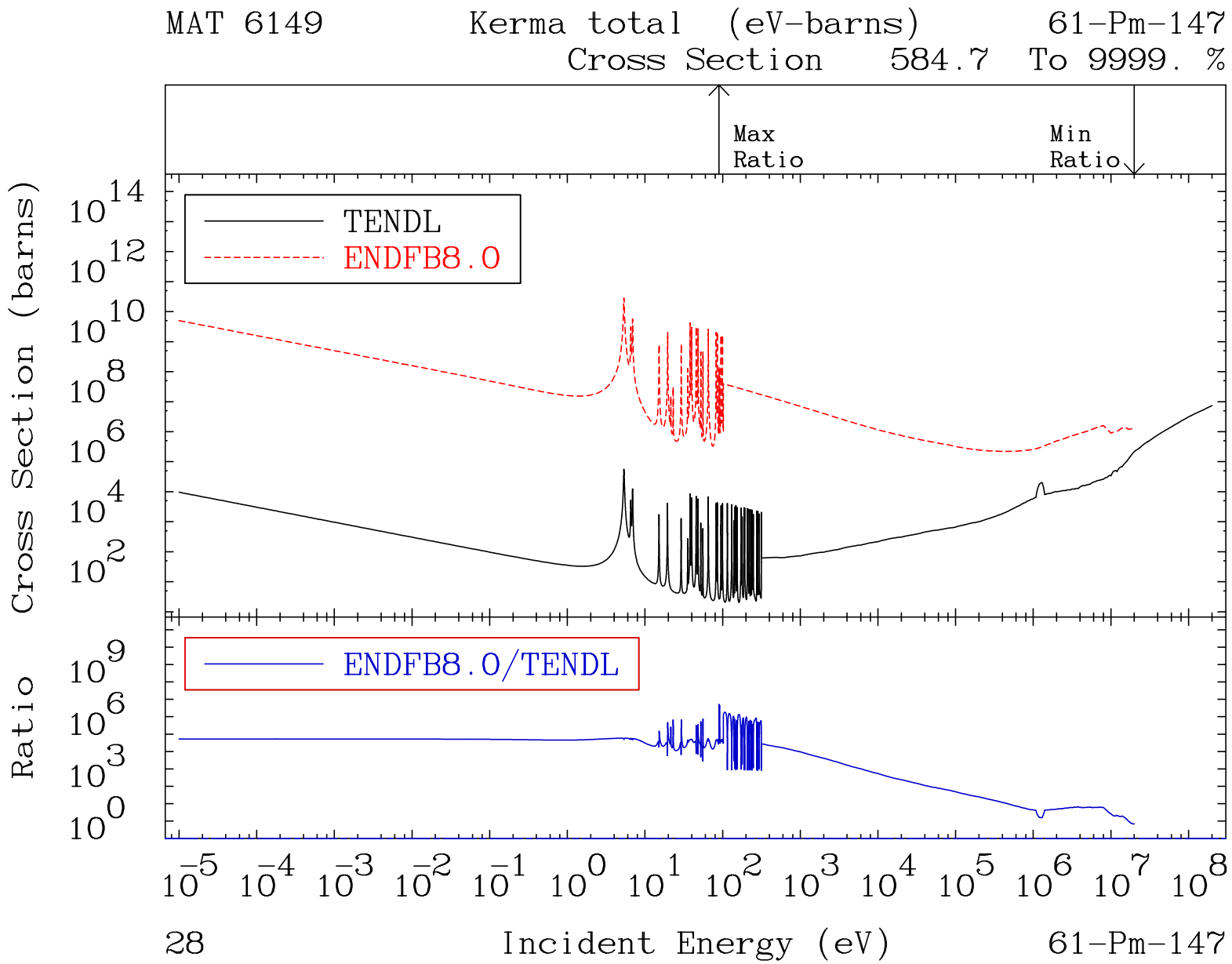

MAT 6149
Hydrogen Production
61-Pm-147
Cross Section
-100.0 To -41.71%
Min
Ratio
TENDL
ENDFB8.0 Threshold 1.0000 MeV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
0.8
0.4
0.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
23
Incident Energy (eV)
61-Pm-147

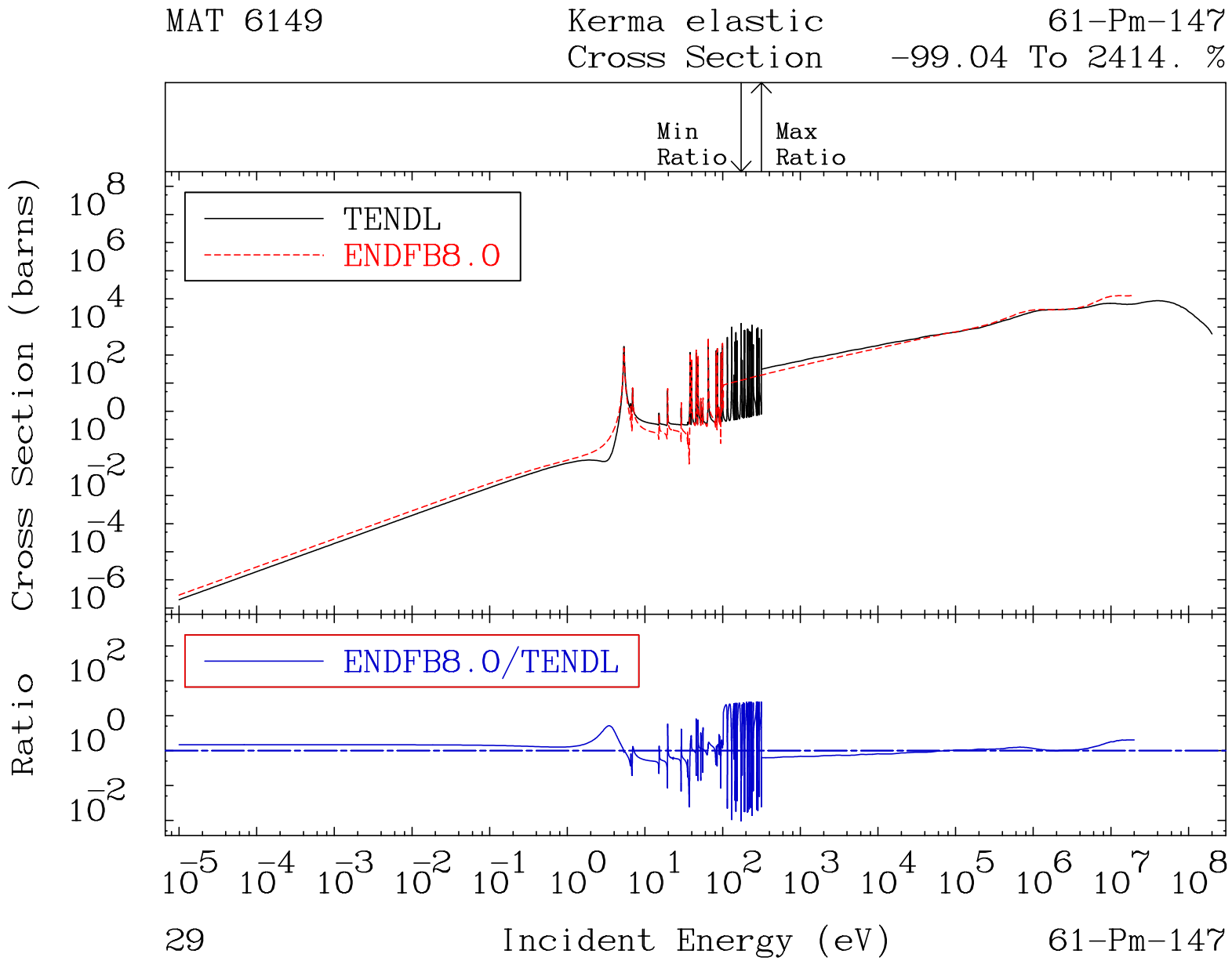

MAT 6149
Deuterium Production
61-Pm-147
Cross Section -100.0 To 25.90 %
Min Ratio
Max Ratio
TENDL Threshold 2.0121 MeV
ENDFB8.0 Threshold 4.5153 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
61-Pm-147

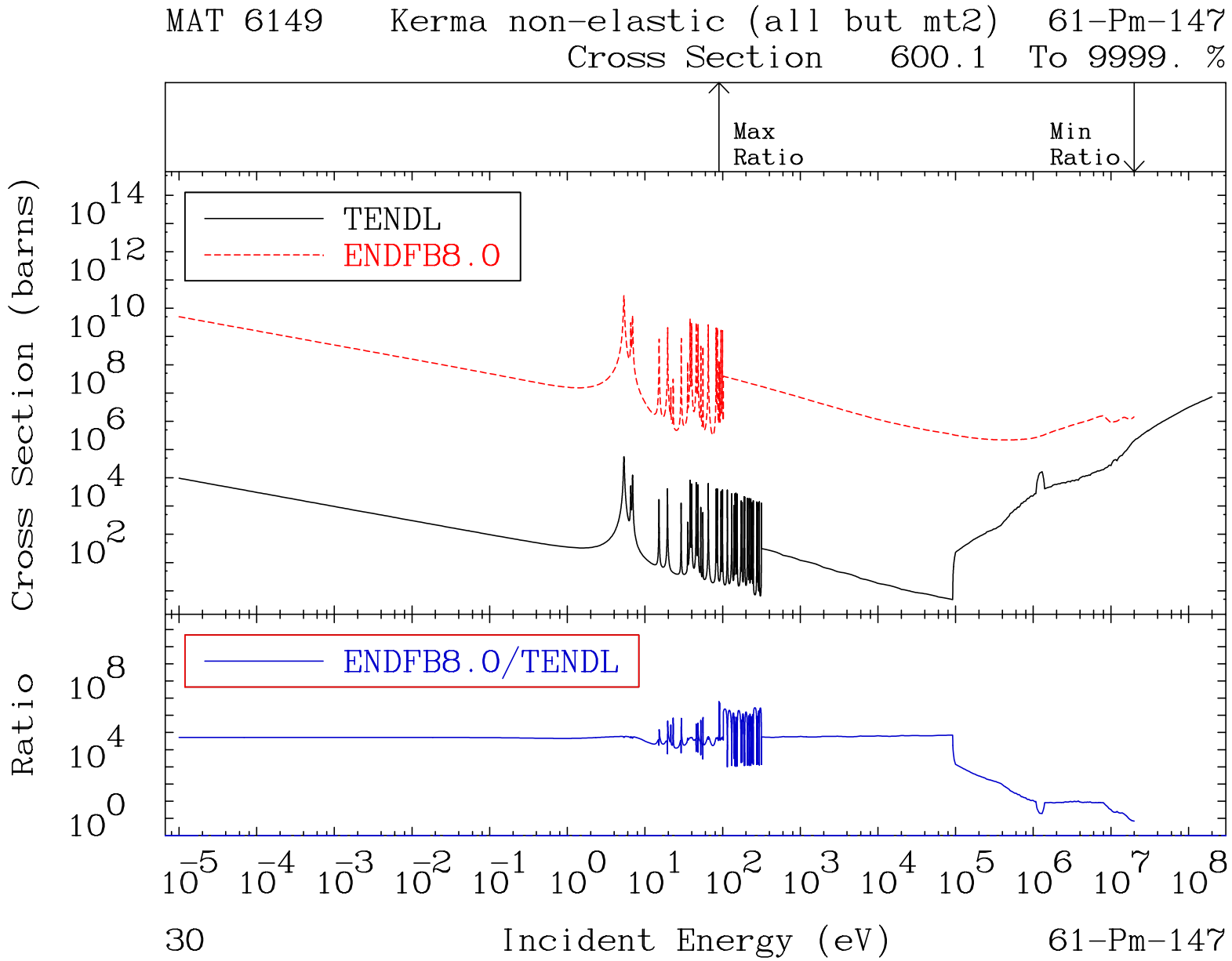

MAT 6149
Tritium Production
61-Pm-147
Cross Section
-100.0 To 7.972 %
Min Ratio
Max Ratio
TENDL Threshold 4.5193 MeV
ENDFB8.0 Threshold 6.3139 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
1.2
0.6
0.0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
25
Incident Energy (eV)
61-Pm-147

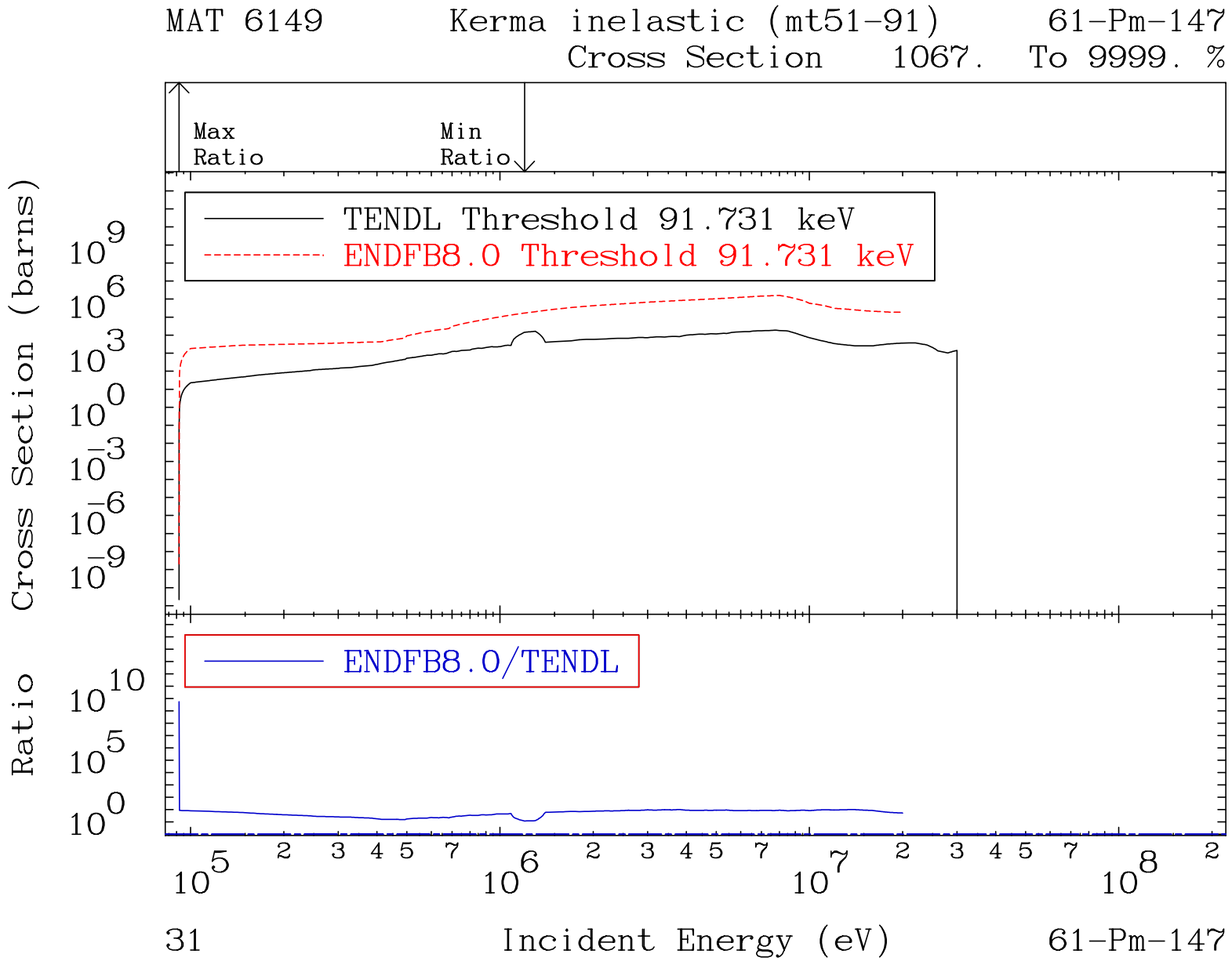

MAT 6149
He-3 Production
61-Pm-147
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.3190 MeV
ENDFB8.0 Threshold 10.315 MeV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
300
200
100
0
400
200
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
61-Pm-147

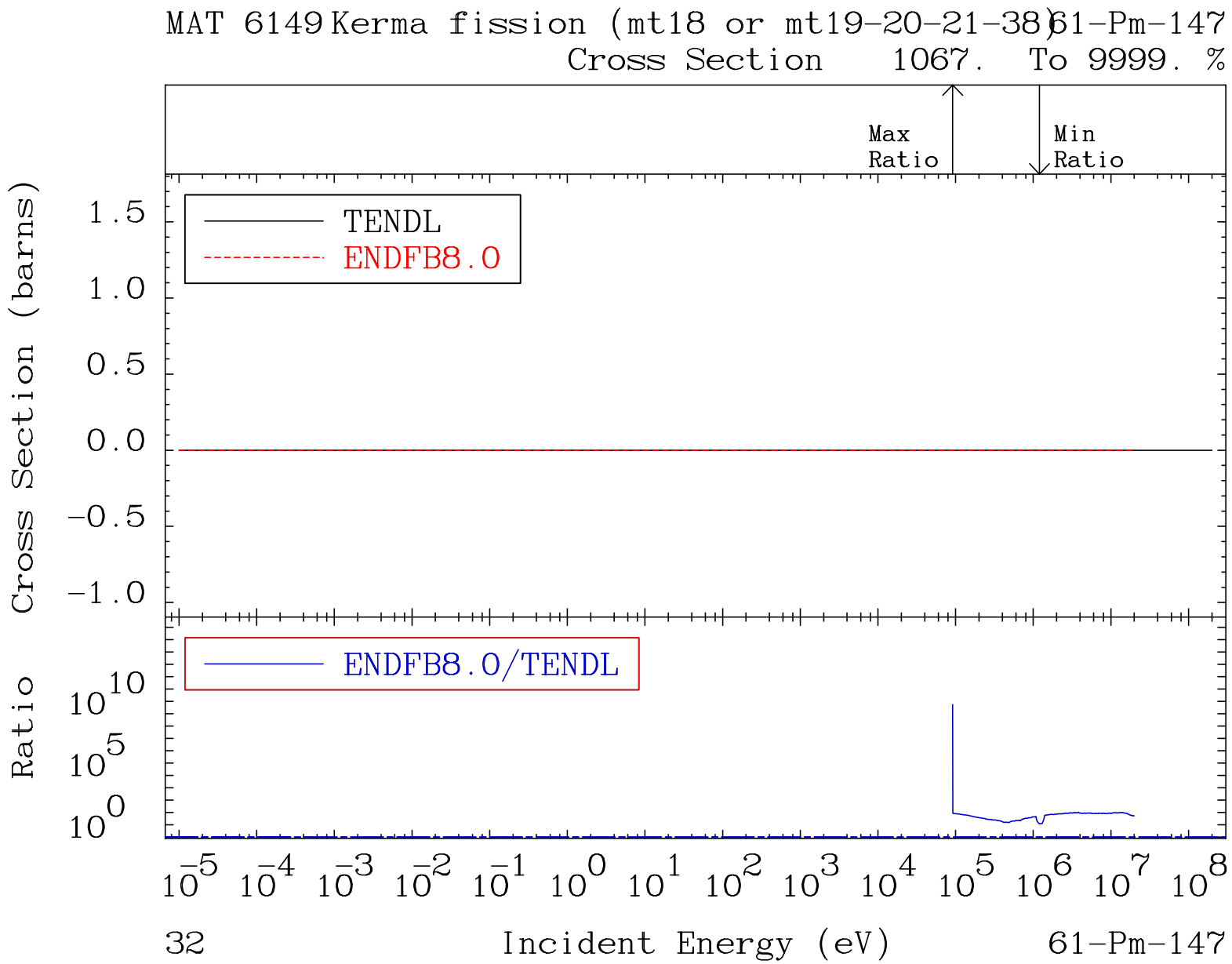

MAT 6149
He-4 Production
Cross Section
61-Pm-147
-100.0 To 5535. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0 Threshold 100.00 keV
ENDFB8.0/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
80
40
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
27
Incident Energy (eV)
61-Pm-147

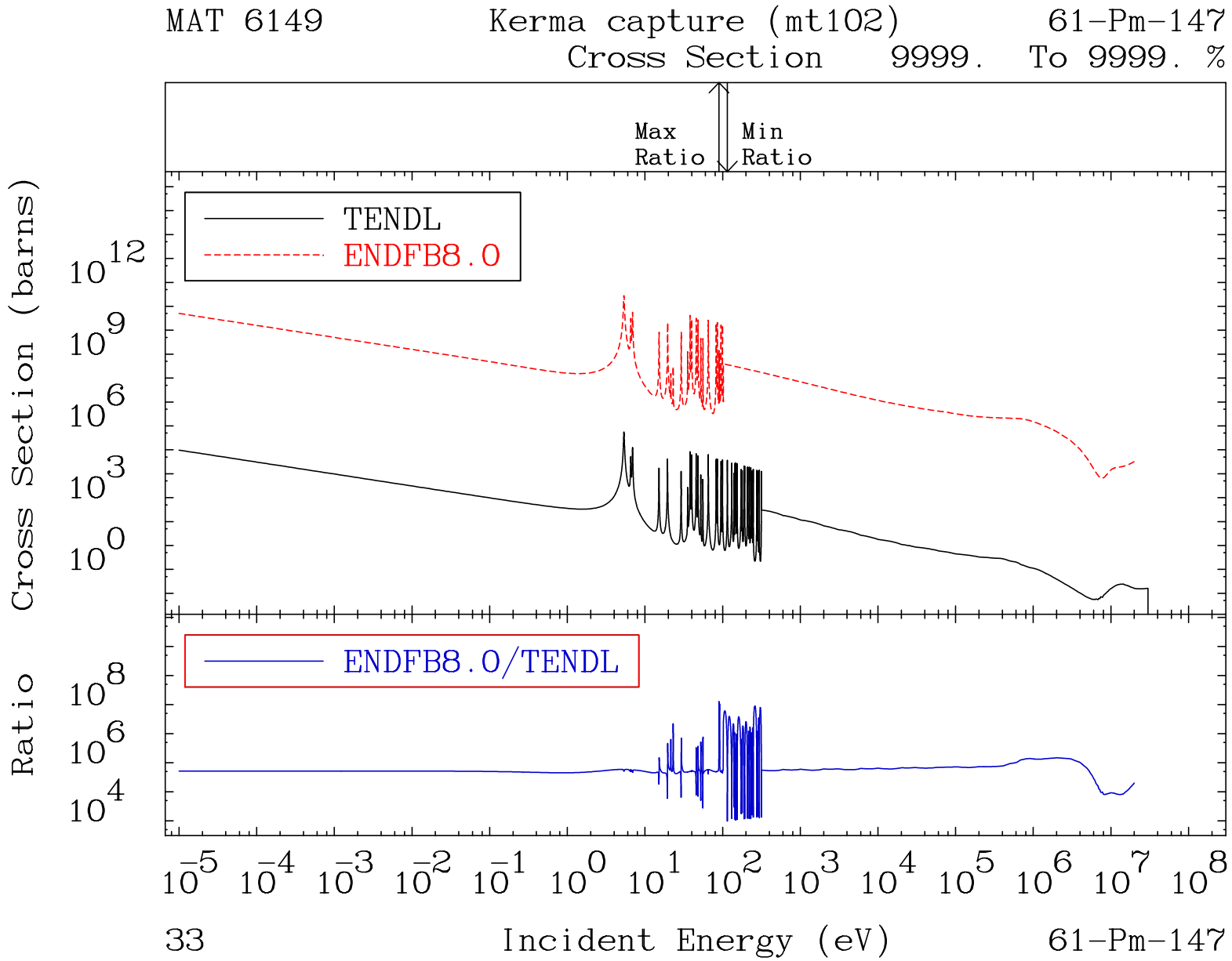

MAT 6149
Kerma total (eV-barns)
61-Pm-147
Cross Section 584.7 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
28
61-Pm-147

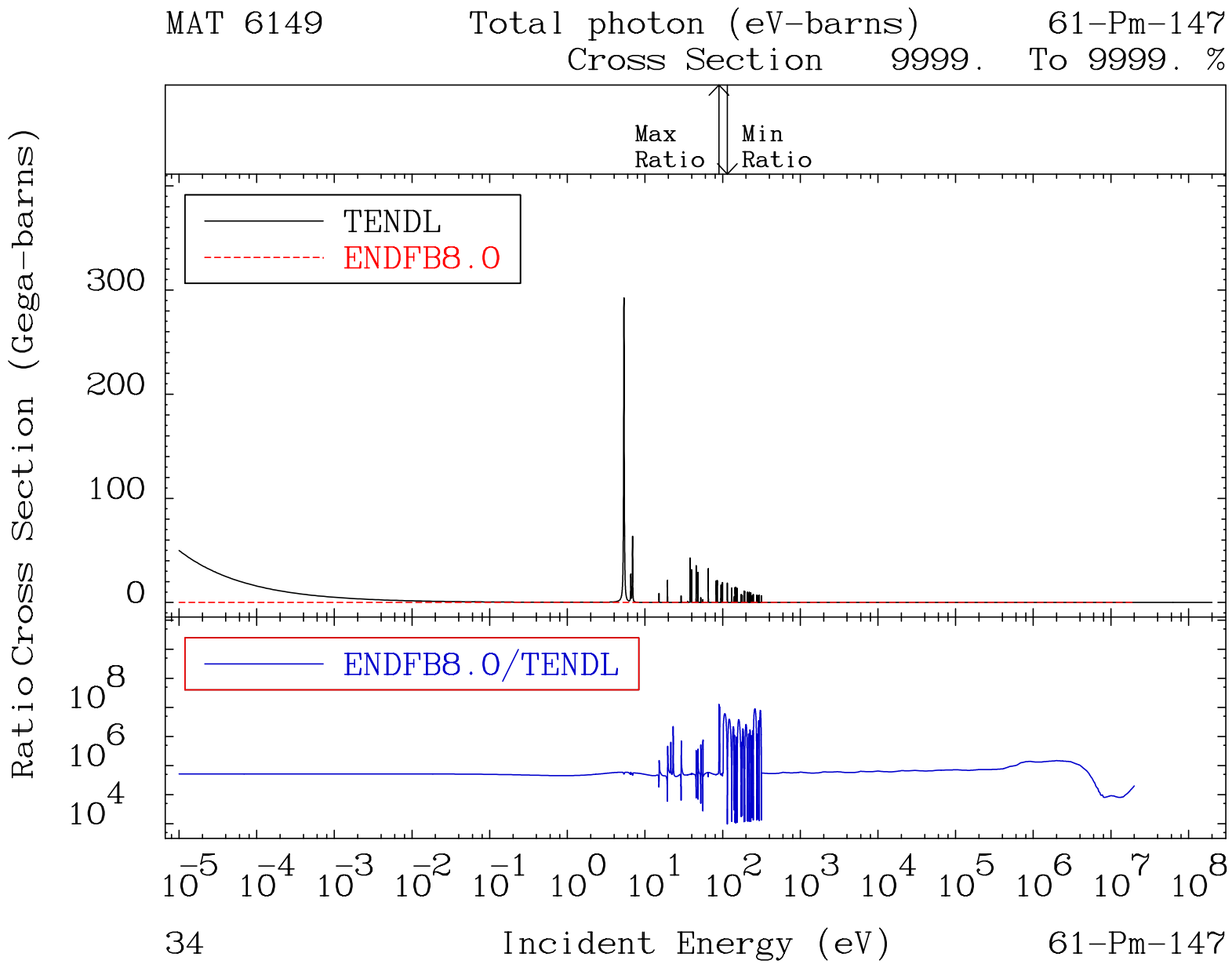

MAT 6149
Kerma elastic
Cross Section
61-Pm-147
-99.04 To 2414. %
Min Ratio
Max Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
29
61-Pm-147

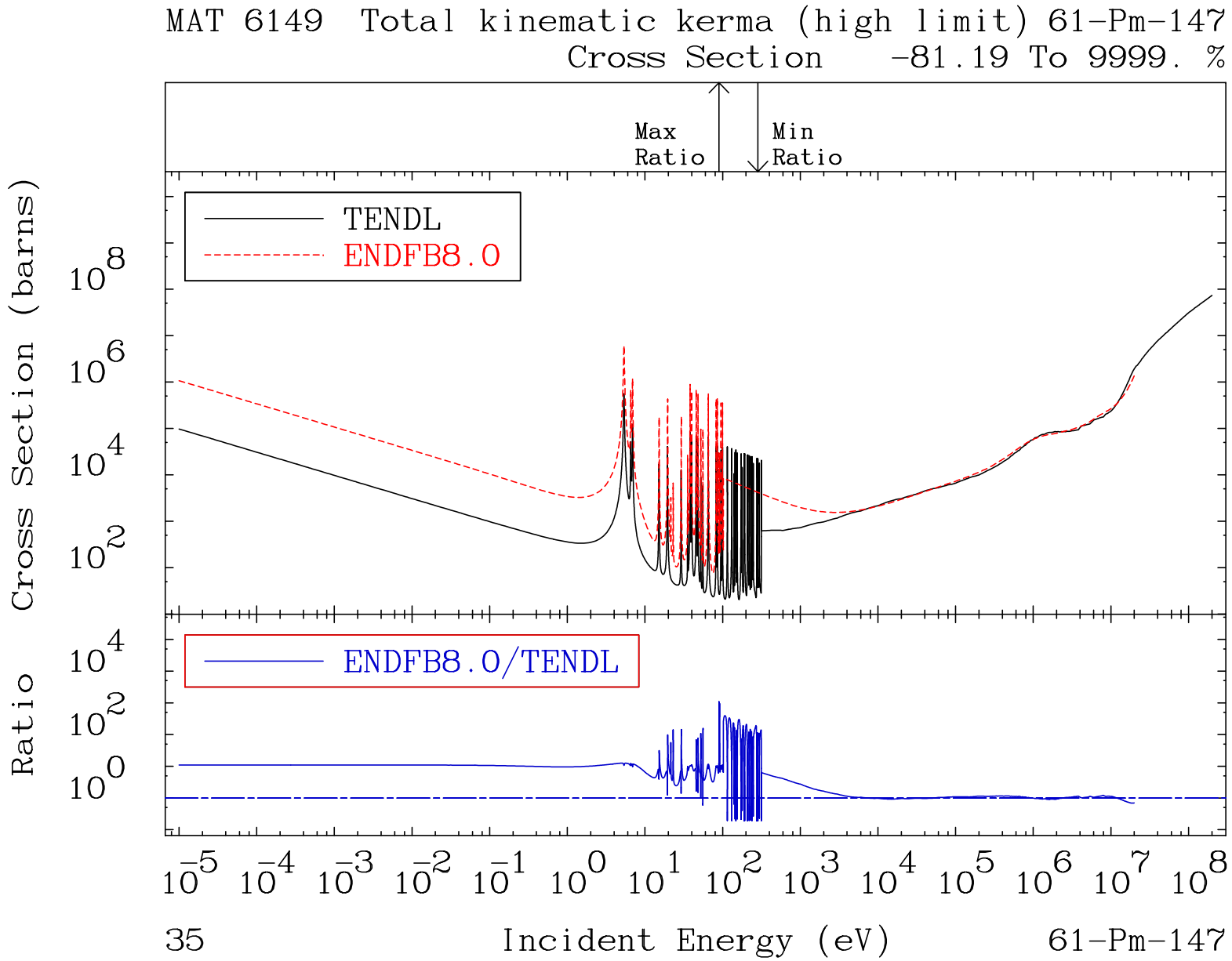

MAT 6149 Kerma non-elastic (all but mt2) 61-Pm-147
Cross Section 600.1 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
30
61-Pm-147

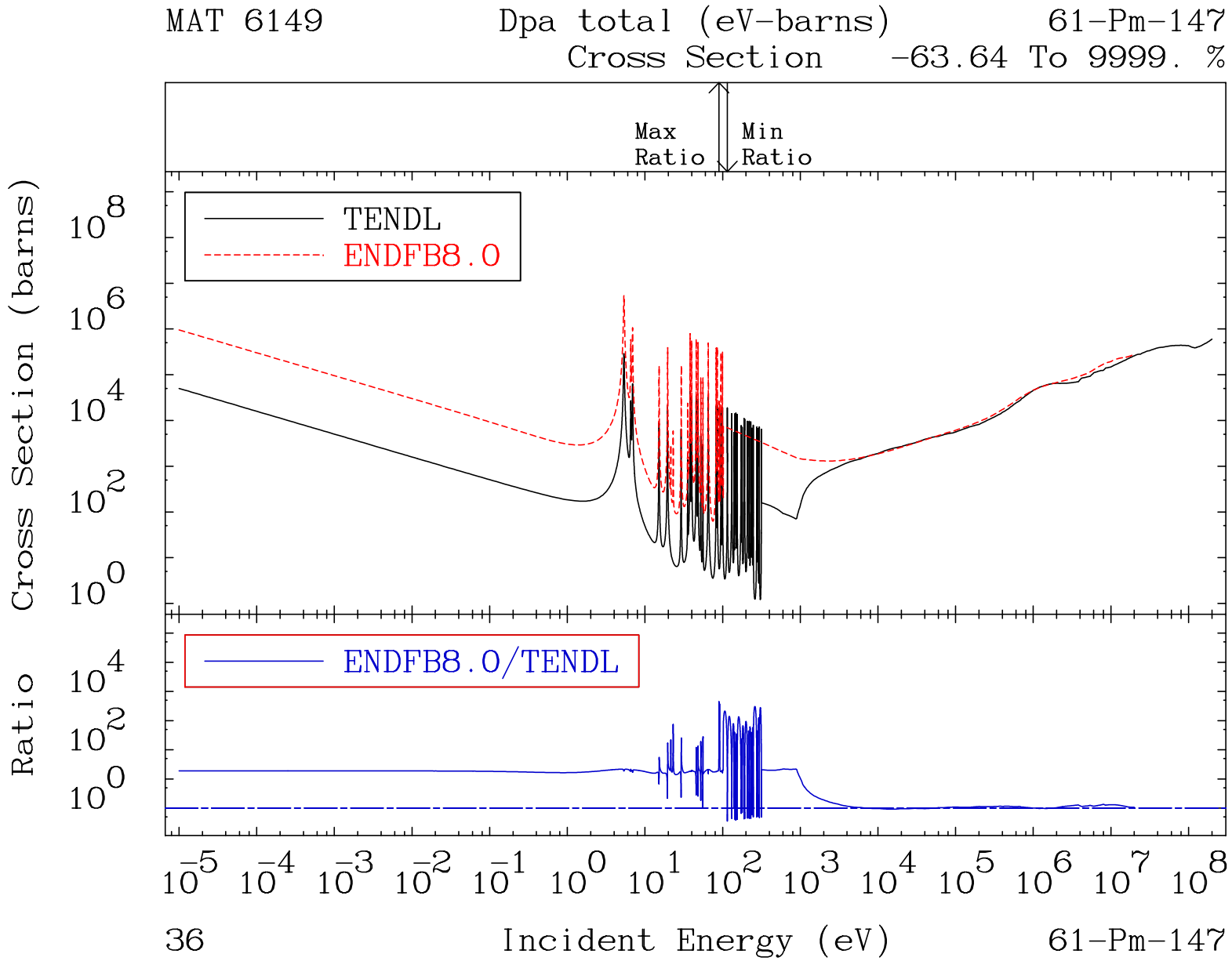

MAT 6149
Kerma inelastic (mt51-91)
61-Pm-147
Cross Section 1067. To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 91.731 keV
ENDFB8.0 Threshold 91.731 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
31
61-Pm-147

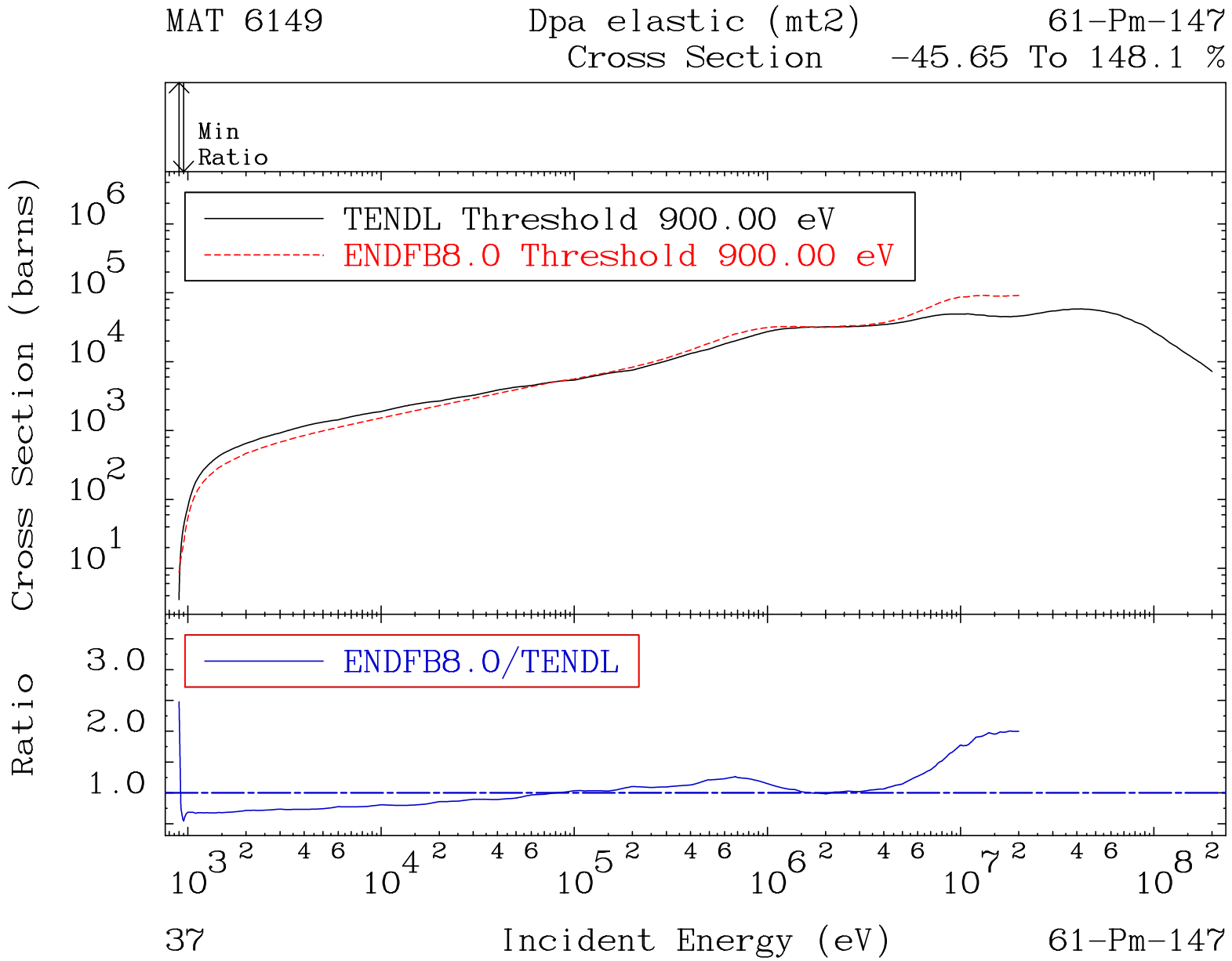

MAT 6149 Kerma fission (mt18 or mt19-20-21-38) 61-Pm-147
Cross Section 1067. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
10^{10}
10^{5}
10^{0}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
32
Incident Energy (eV)
61-Pm-147

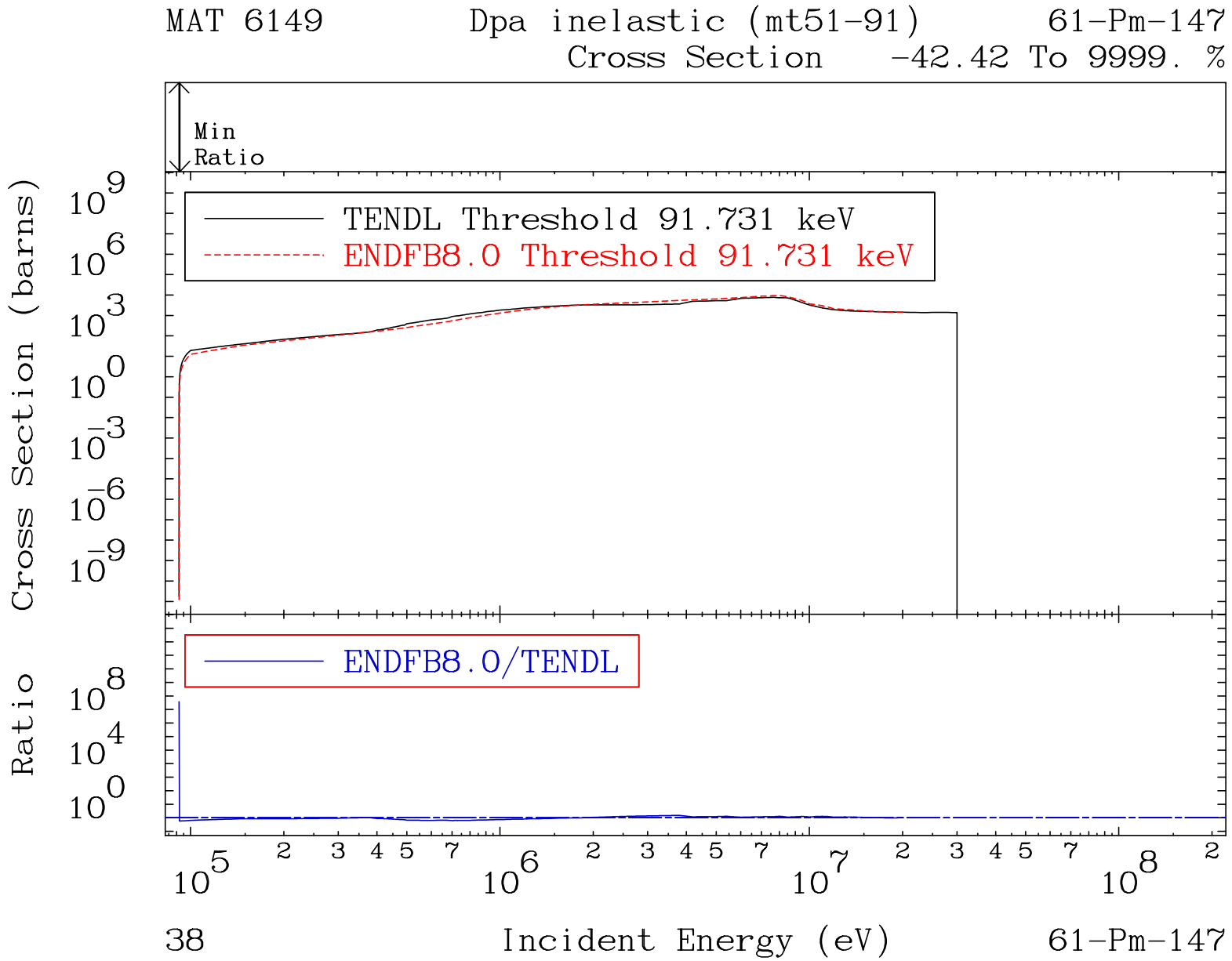

MAT 6149
Kerma capture (mt102)
61-Pm-147
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
10^{12}
10^{9}
10^{6}
10^{3}
10^{0}
ENDFB8.0/TENDL
Ratio
10^{8}
10^{6}
10^{4}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
33
Incident Energy (eV)
61-Pm-147

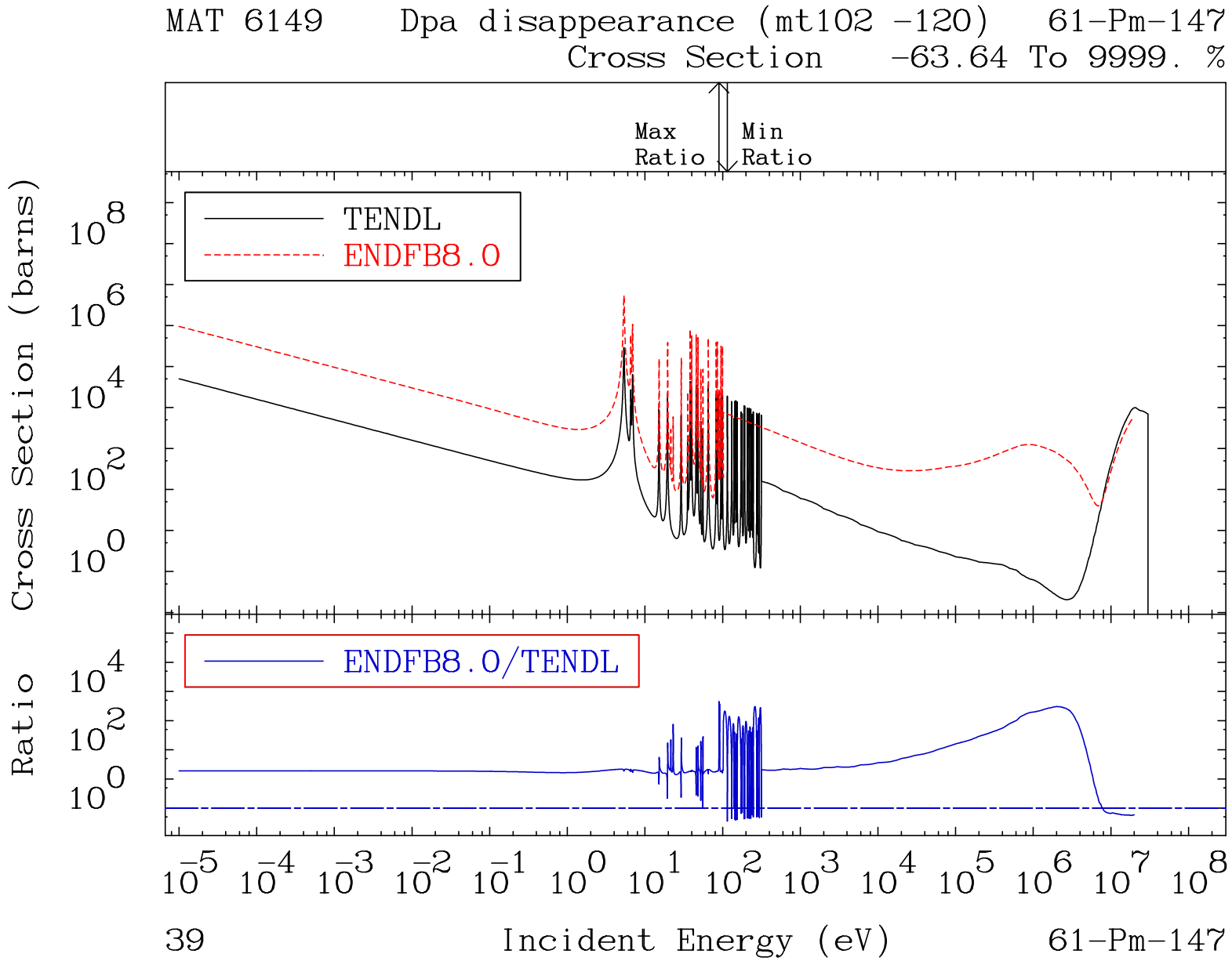

MAT 6149
Total photon (eV-barns)
61-Pm-147
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Ratio Cross Section (Giga-barns)
300
200
100
0
10^{8}
10^{6}
10^{4}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
34
Incident Energy (eV)
61-Pm-147


MAT 6149 Total kinematic kerma (high limit) 61-Pm-147
Cross Section -81.19 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
35
61-Pm-147


MAT 6149
Dpa total (eV-barns)
61-Pm-147
Cross Section -63.64 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
36
61-Pm-147


MAT 6149
Dpa elastic (mt2)
Cross Section
61-Pm-147
-45.65 To 148.1 %
Min
Ratio
TENDL Threshold 900.00 eV
ENDFB8.0 Threshold 900.00 eV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
37
61-Pm-147


MAT 6149
Dpa inelastic (mt51-91)
61-Pm-147
Cross Section
-42.42 To 9999. %
Min
Ratio
TENDL Threshold 91.731 keV
ENDFB8.0 Threshold 91.731 keV
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
38
61-Pm-147


MAT 6149 Dpa disappearance (mt102 -120) 61-Pm-147
Cross Section -63.64 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
ENDFB8.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
61-Pm-147