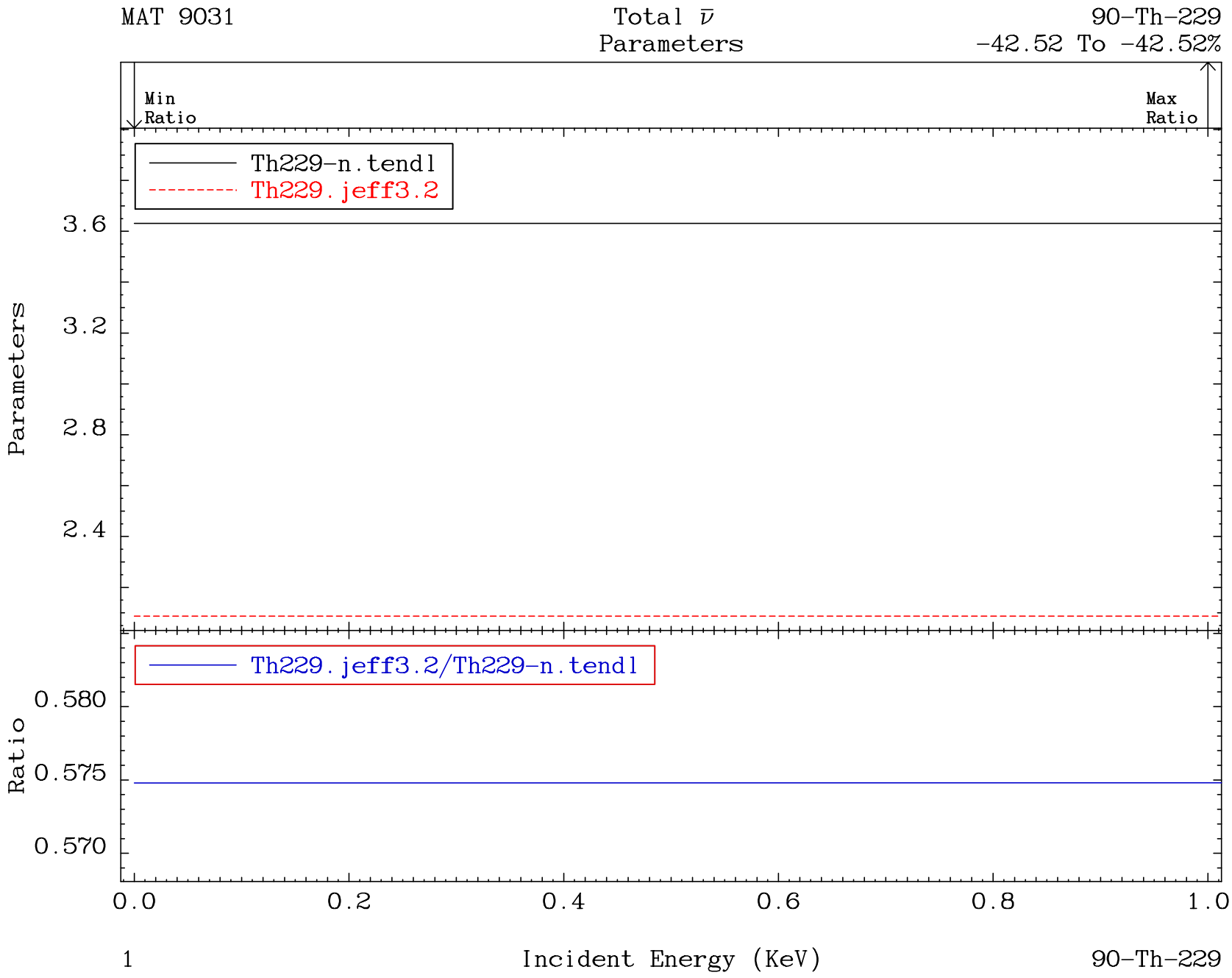
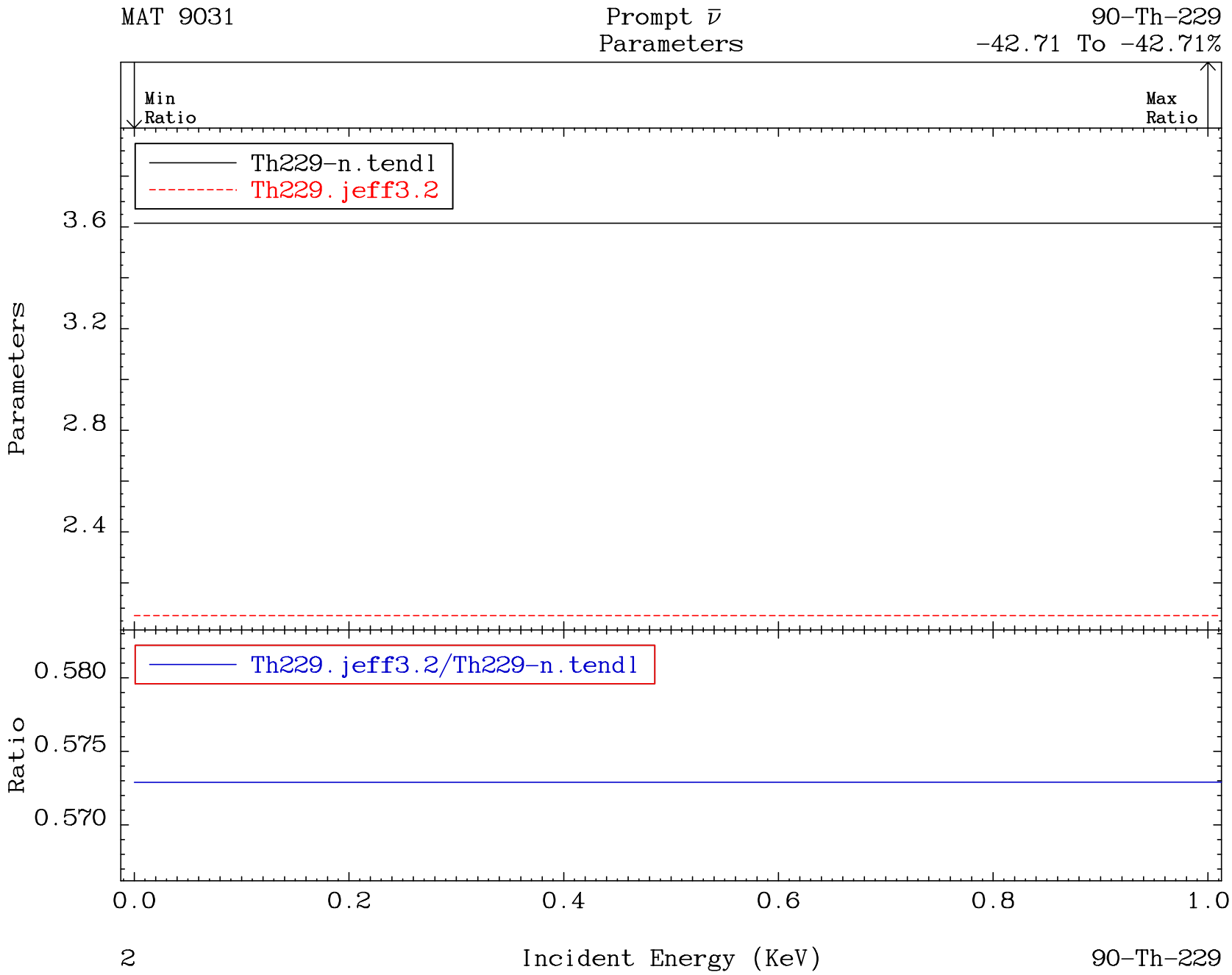
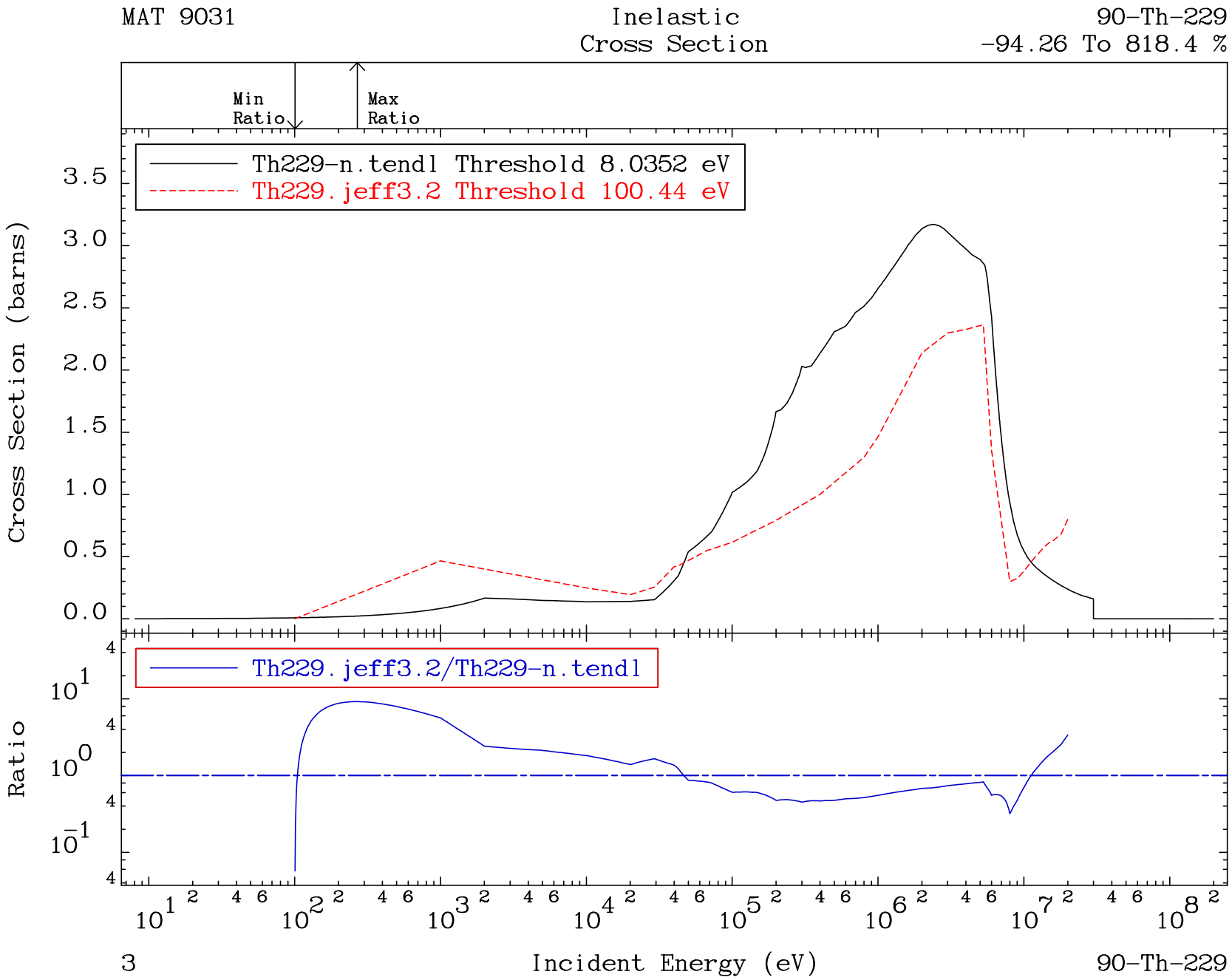
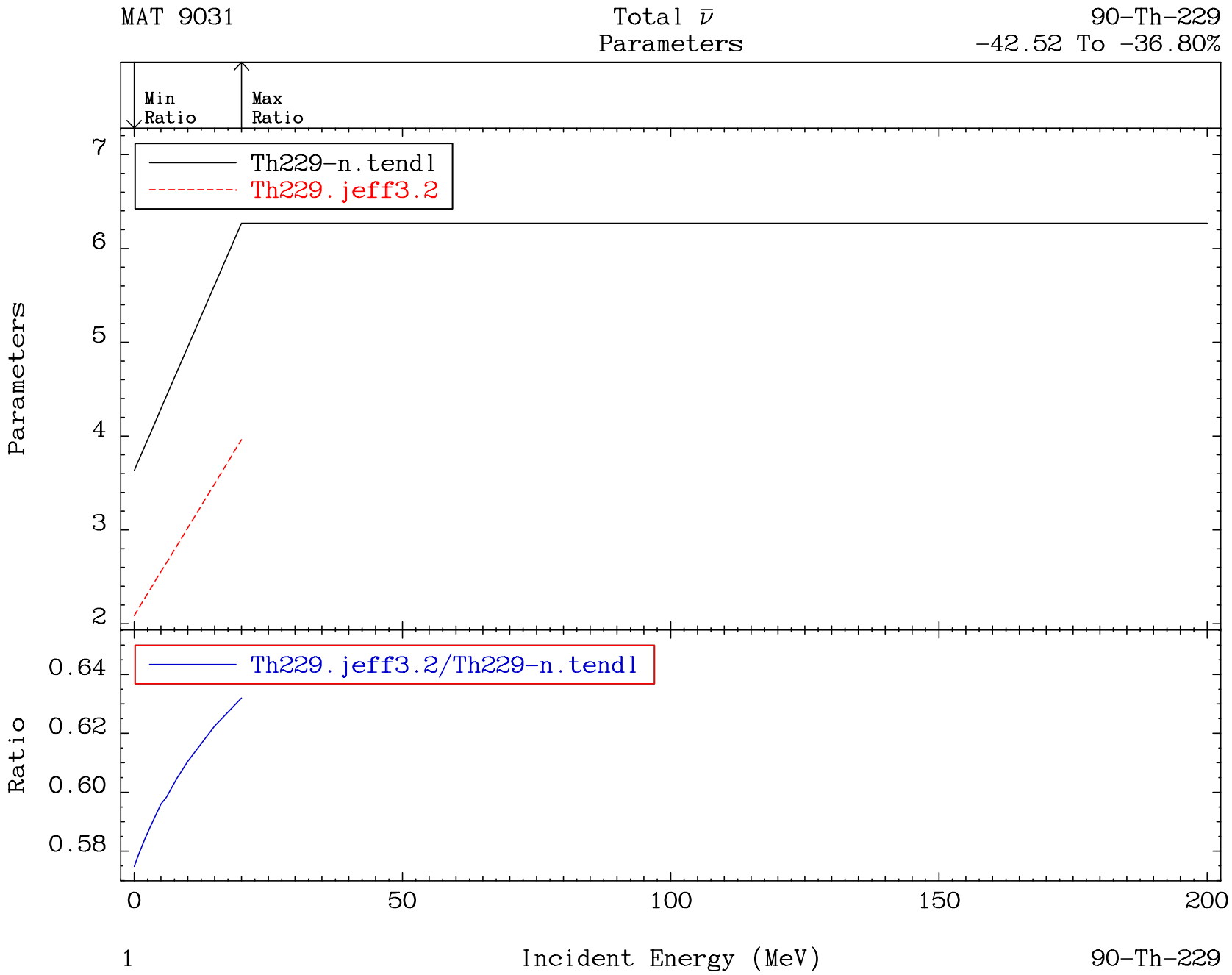
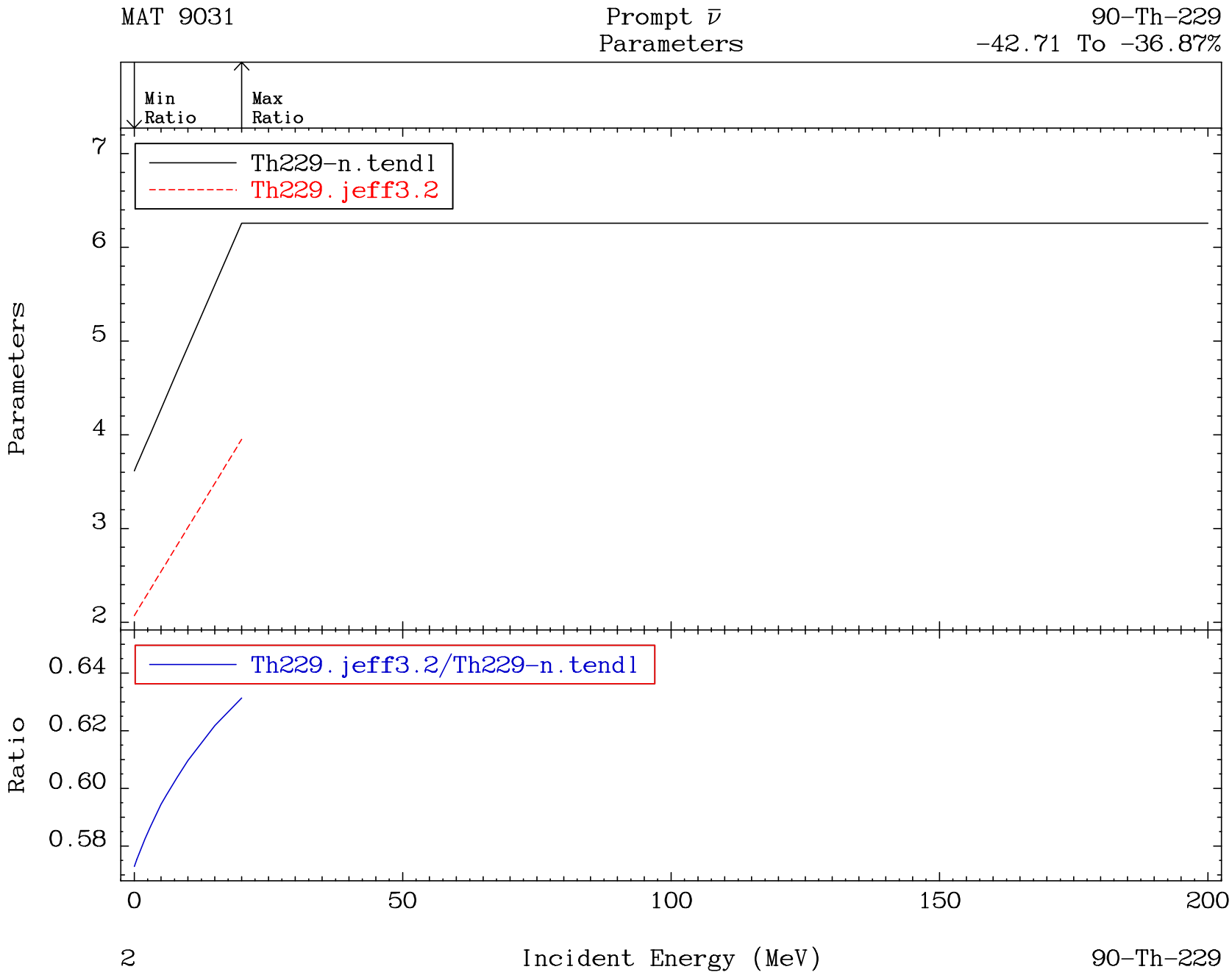
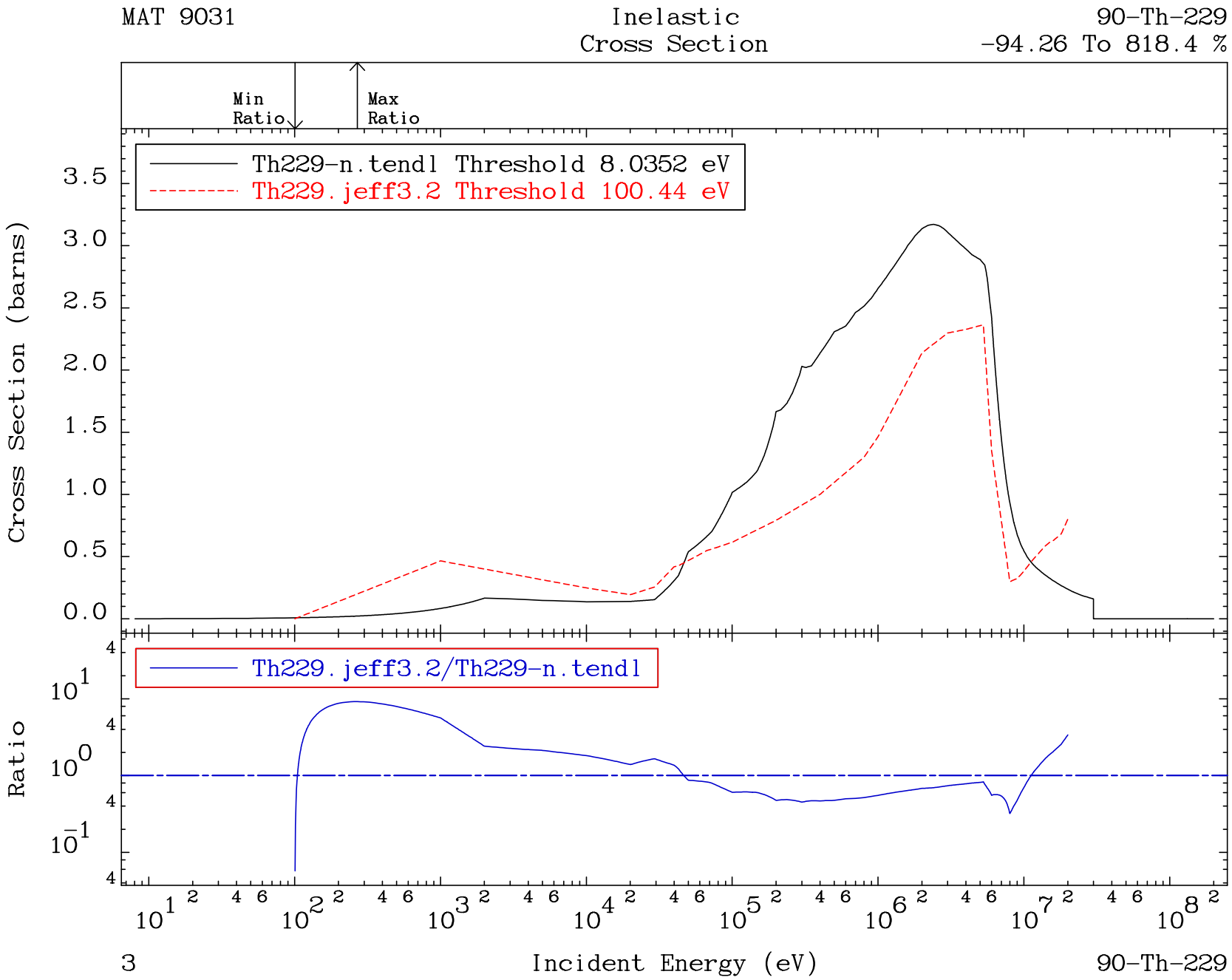

MAT 9031
Total $\bar{\nu}$
Parameters
90-Th-229
-42.52 To -42.52%
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Th229.jeff3.2/Th229-n.tendl
Parameters
Ratio
3.6
3.2
2.8
2.4
0.580
0.575
0.570
0.0
0.2
0.4
0.6
0.8
1.0
1
Incident Energy (KeV)
90-Th-229

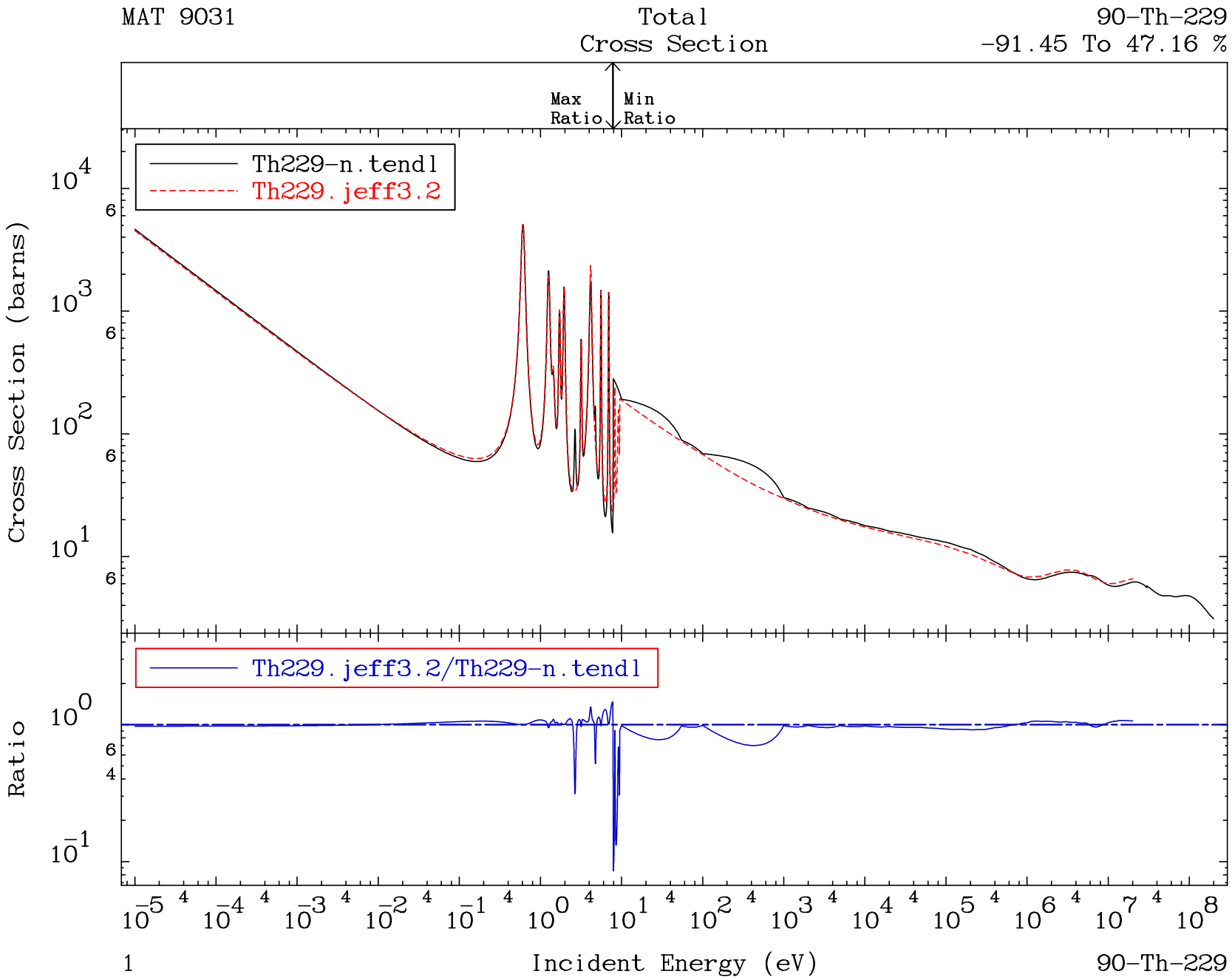

MAT 9031
Prompt $\bar{\nu}$
Parameters
90-Th-229
-42.71 To -42.71%
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jeff3.2
Parameters
3.6
3.2
2.8
2.4
Th229.jeff3.2/Th229-n.tendl
Ratio
0.580
0.575
0.570
0.0
0.2
0.4
0.6
0.8
1.0
2
Incident Energy (KeV)
90-Th-229

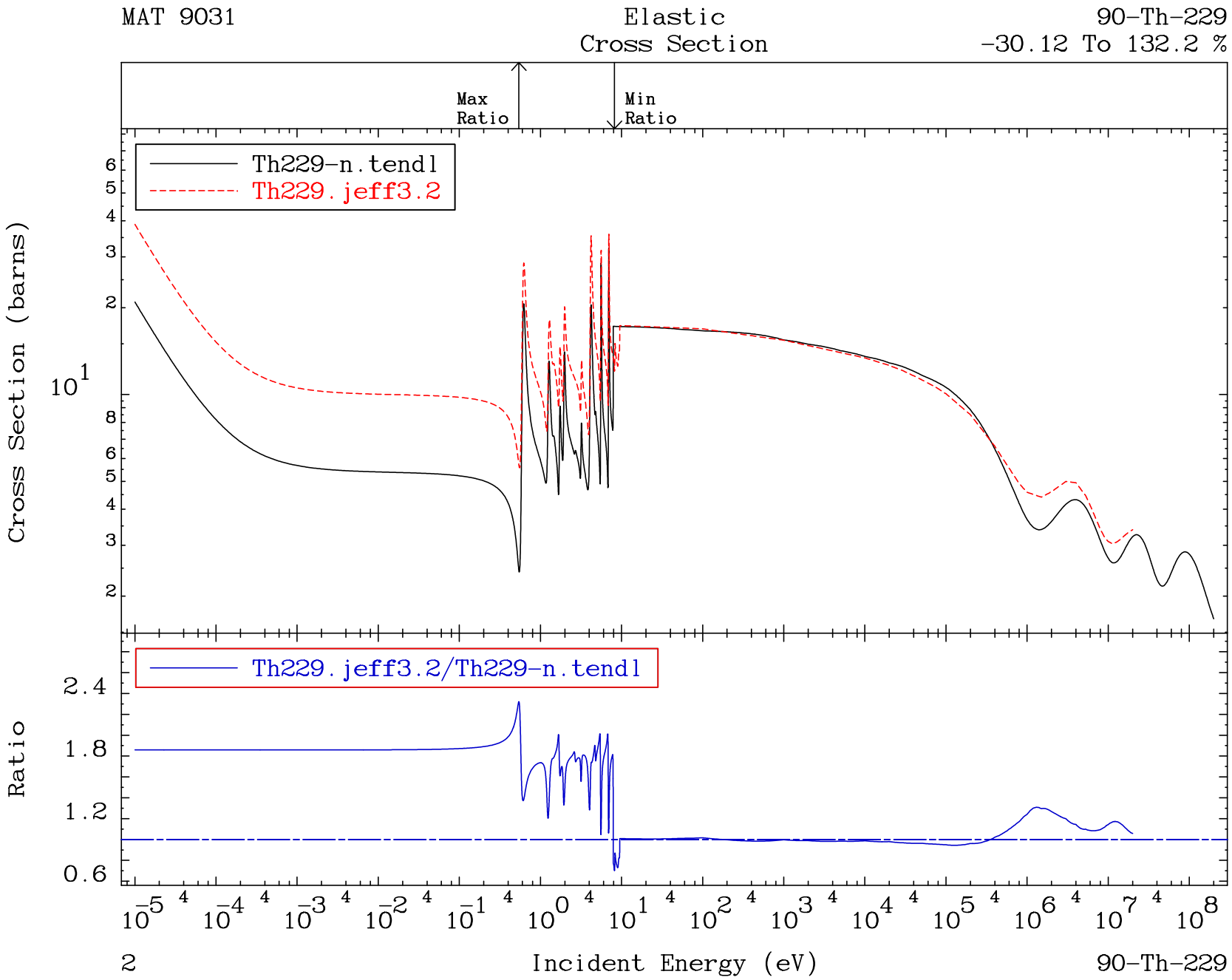

MAT 9031
Inelastic
Cross Section
90-Th-229
-94.26 To 818.4 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 8.0352 eV
Th229.jeff3.2 Threshold 100.44 eV
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
3
90-Th-229

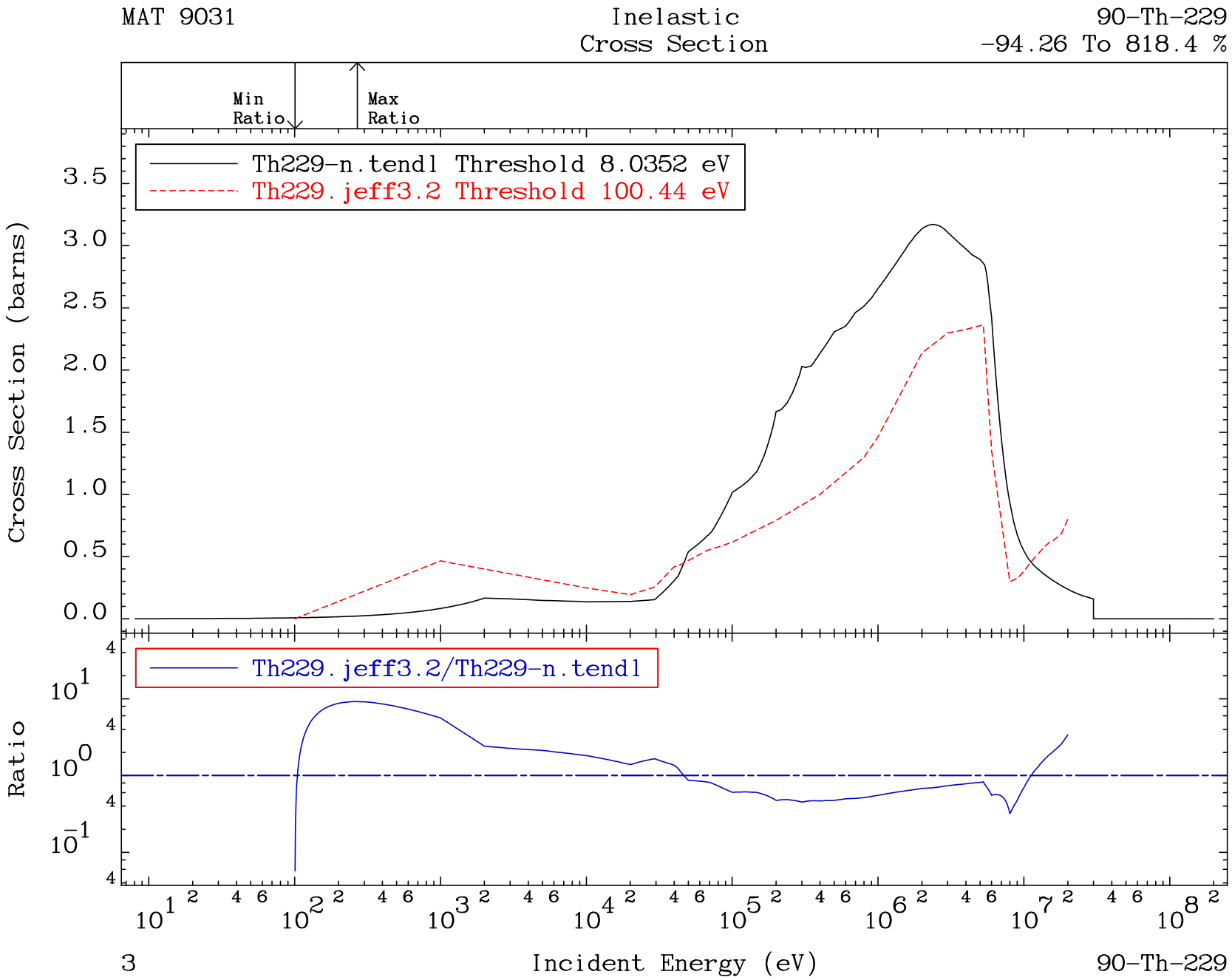

MAT 9031
Total $\bar{\nu}$
Parameters
90-Th-229
-42.52 To -36.80%
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Parameters
7
6
5
4
3
2
Th229.jeff3.2/Th229-n.tendl
Ratio
0.64
0.62
0.60
0.58
0
50
100
150
200
1
Incident Energy (MeV)
90-Th-229

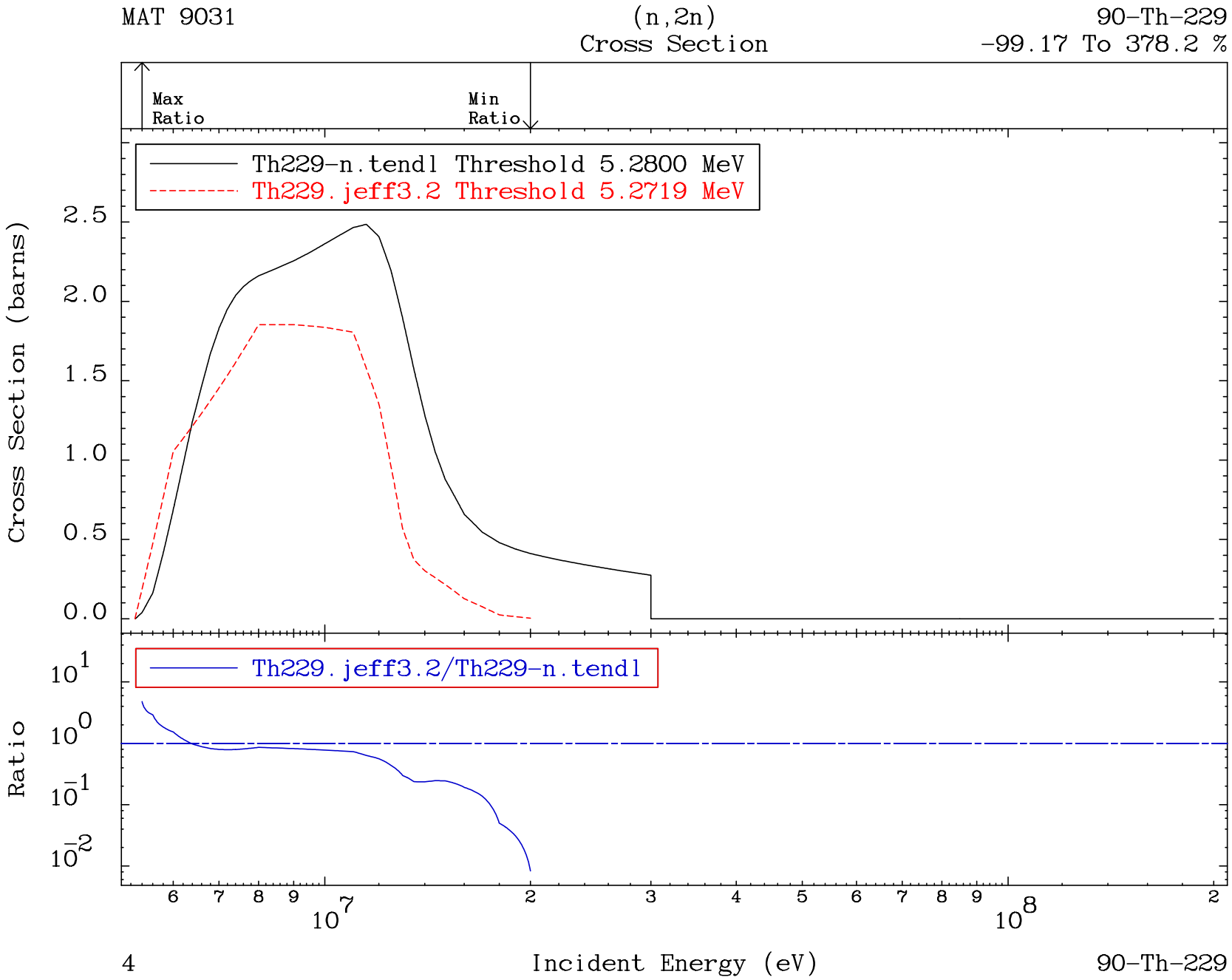

MAT 9031
Prompt $\bar{\nu}$
Parameters
90-Th-229
-42.71 To -36.87%
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jeff3.2
Parameters
7
6
5
4
3
2
Th229.jeff3.2/Th229-n.tendl
Ratio
0.64
0.62
0.60
0.58
0
50
100
150
200
2
Incident Energy (MeV)
90-Th-229

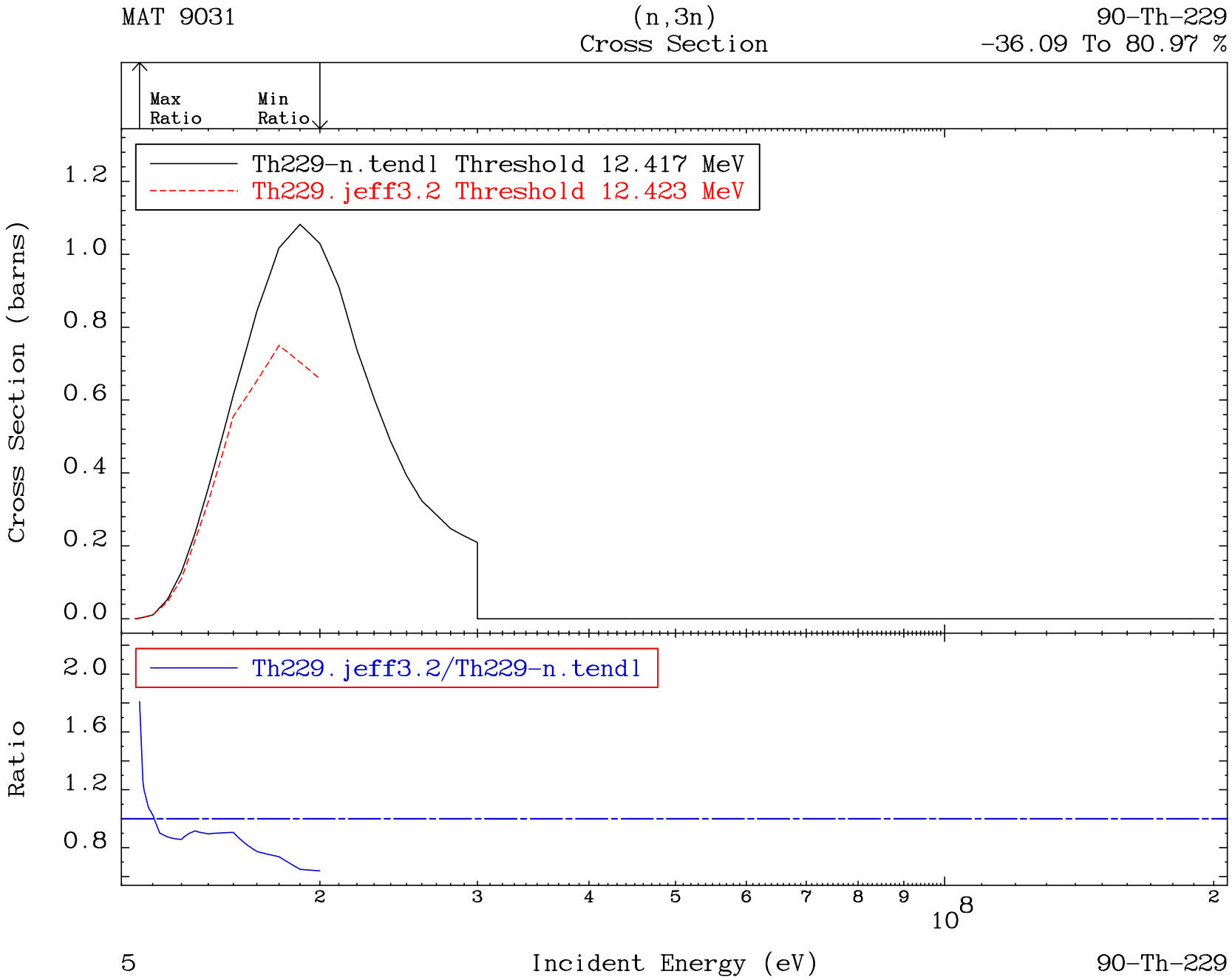

MAT 9031
Inelastic
Cross Section
90-Th-229
-94.26 To 818.4 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 8.0352 eV
Th229.jeff3.2 Threshold 100.44 eV
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
3
90-Th-229

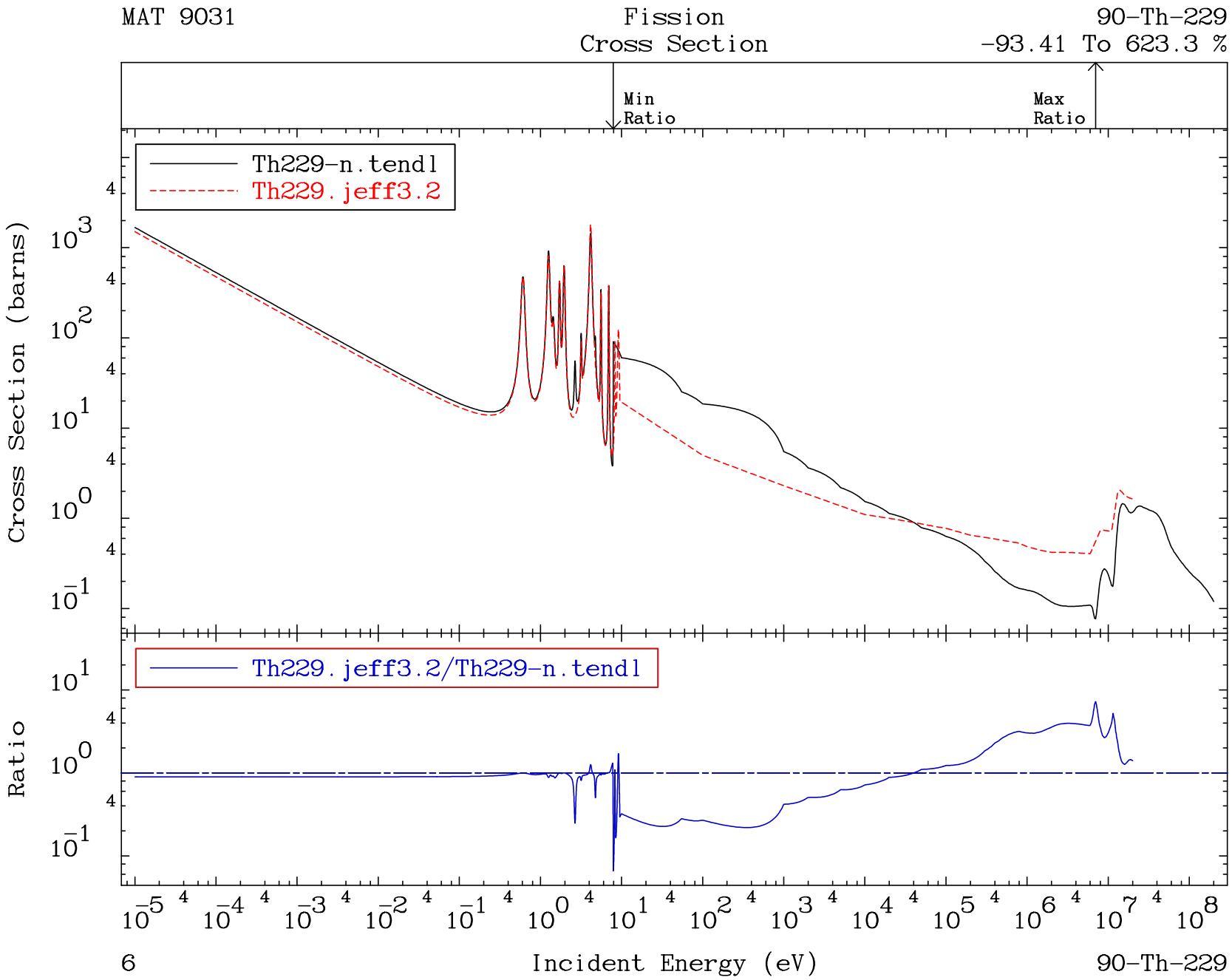

MAT 9031
Total
Cross Section
90-Th-229
-91.45 To 47.16 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
1
90-Th-229

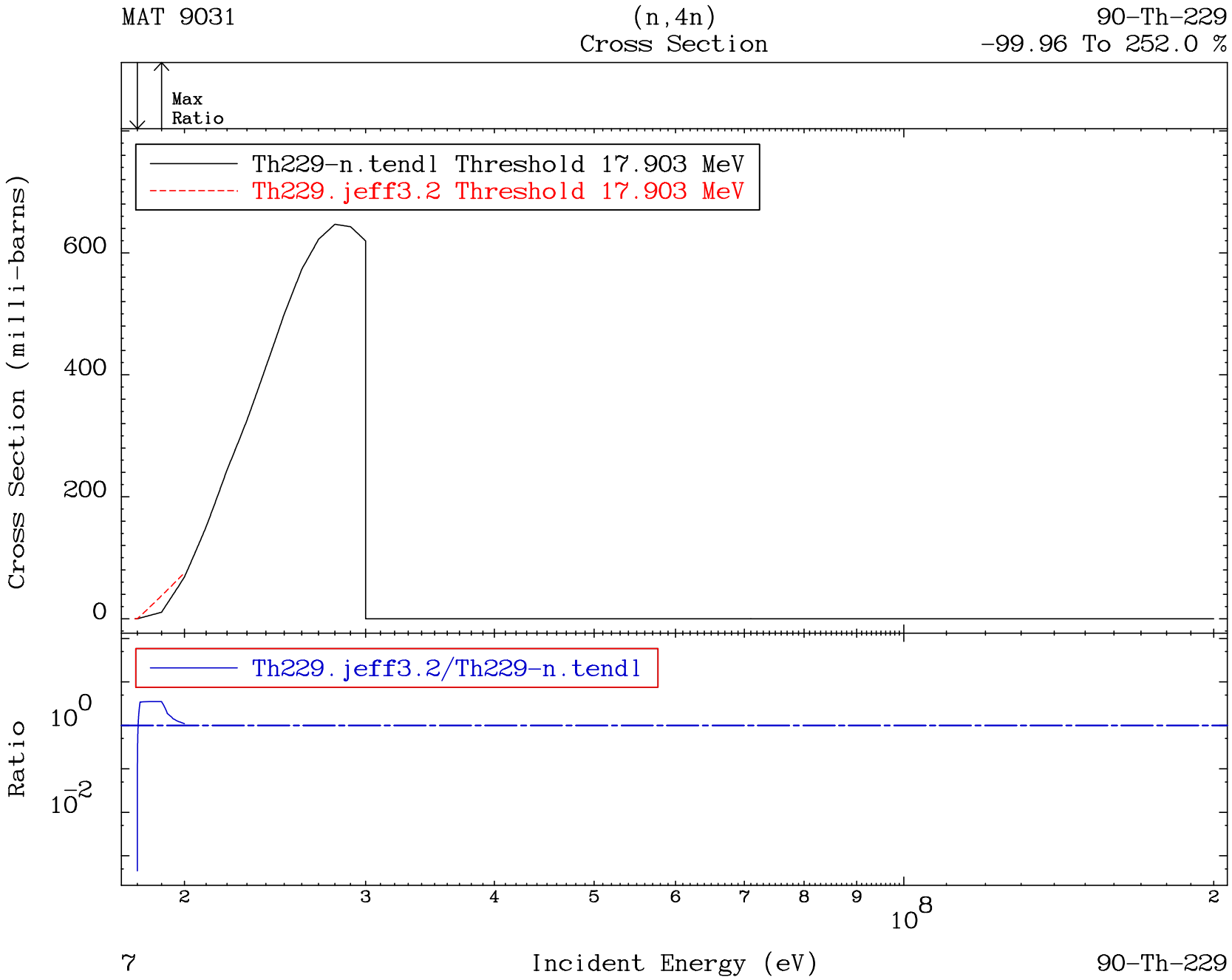

MAT 9031
Elastic
Cross Section
90-Th-229
-30.12 To 132.2 %
Max
Ratio
Min
Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
2
90-Th-229

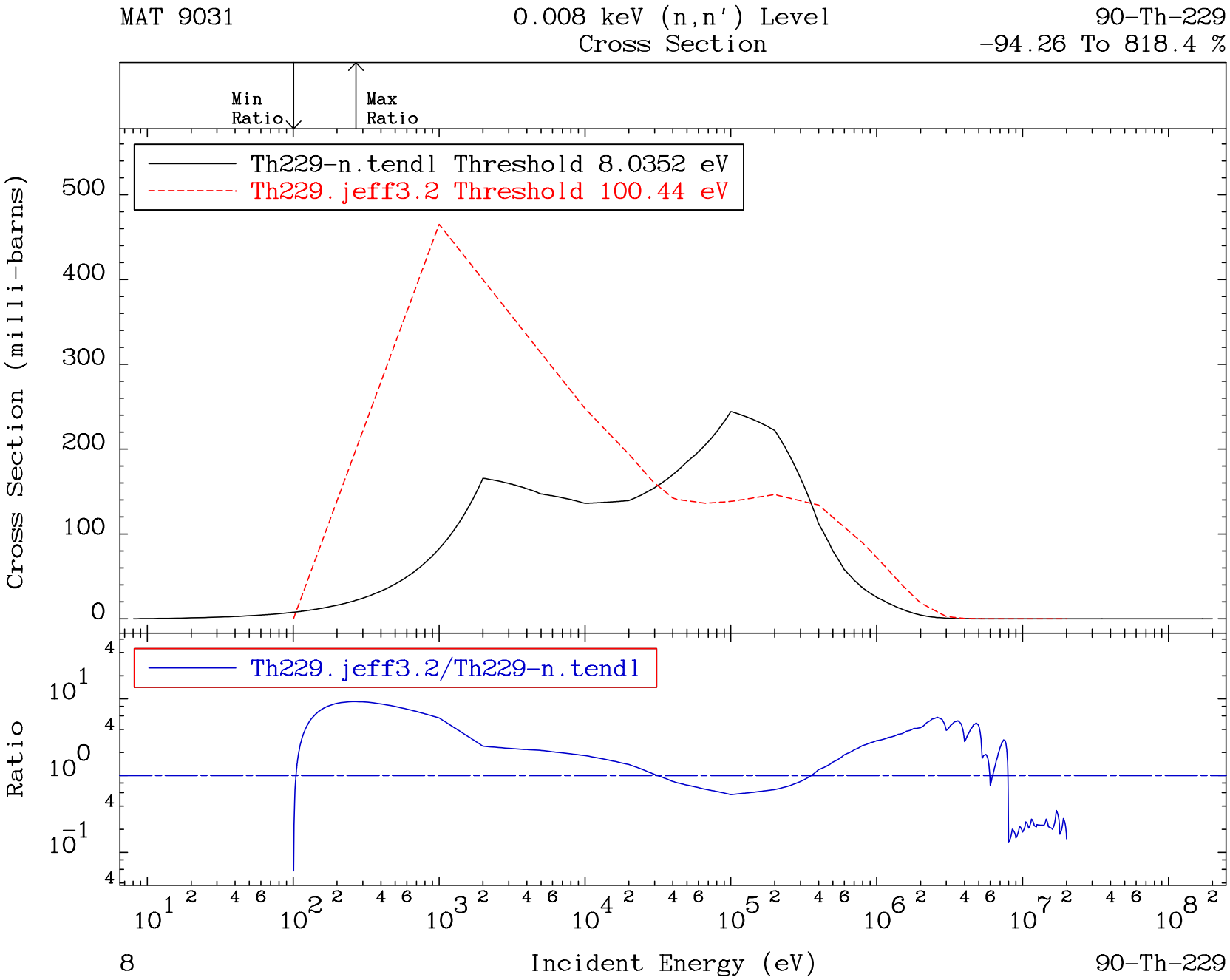

MAT 9031
Inelastic
Cross Section
90-Th-229
-94.26 To 818.4 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 8.0352 eV
Th229.jeff3.2 Threshold 100.44 eV
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
3
90-Th-229

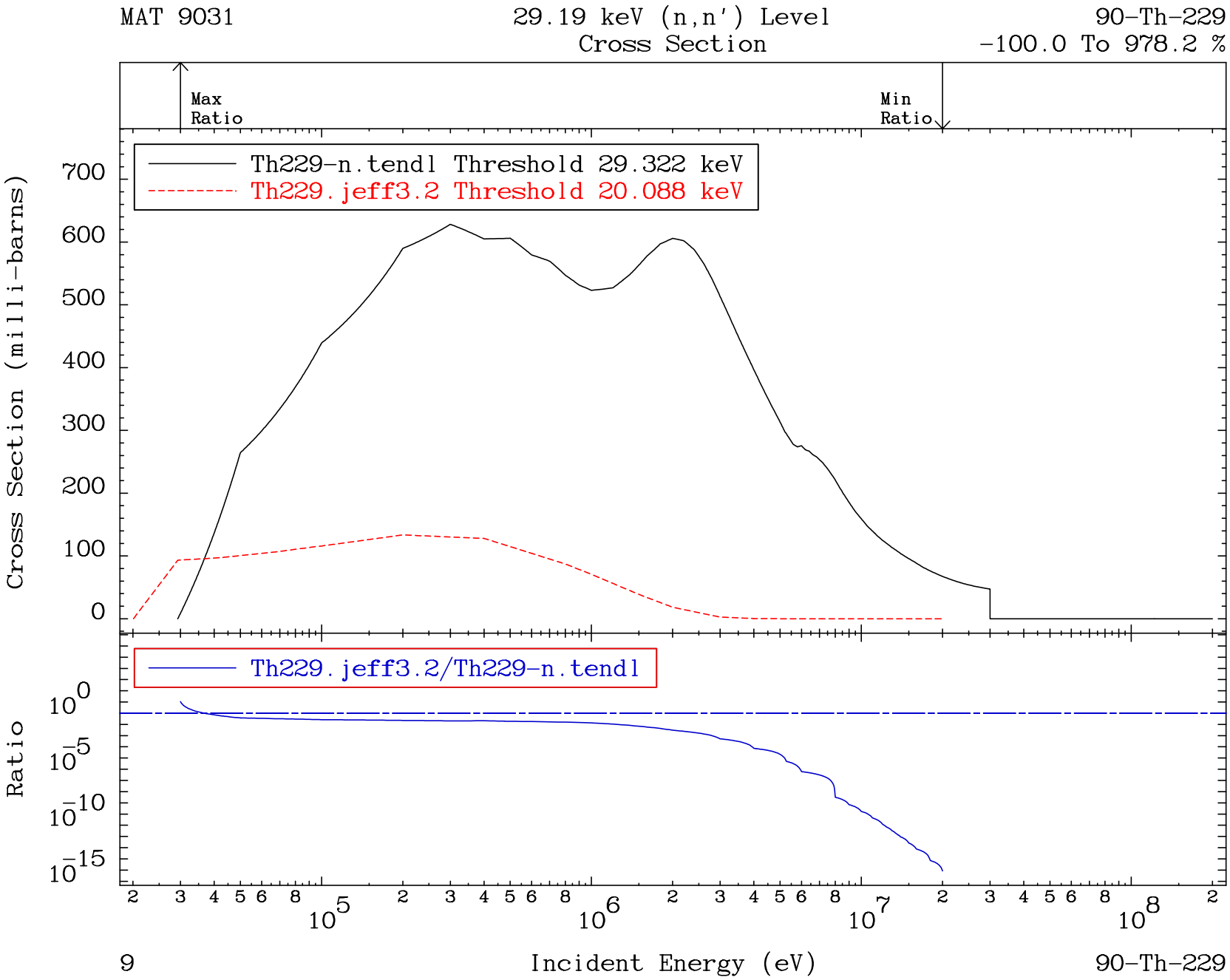

MAT 9031
(n,2n)
Cross Section
90-Th-229
-99.17 To 378.2 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 5.2800 MeV
Th229.jeff3.2 Threshold 5.2719 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^1
10^0
10^-1
10^-2
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
4
Incident Energy (eV)
90-Th-229

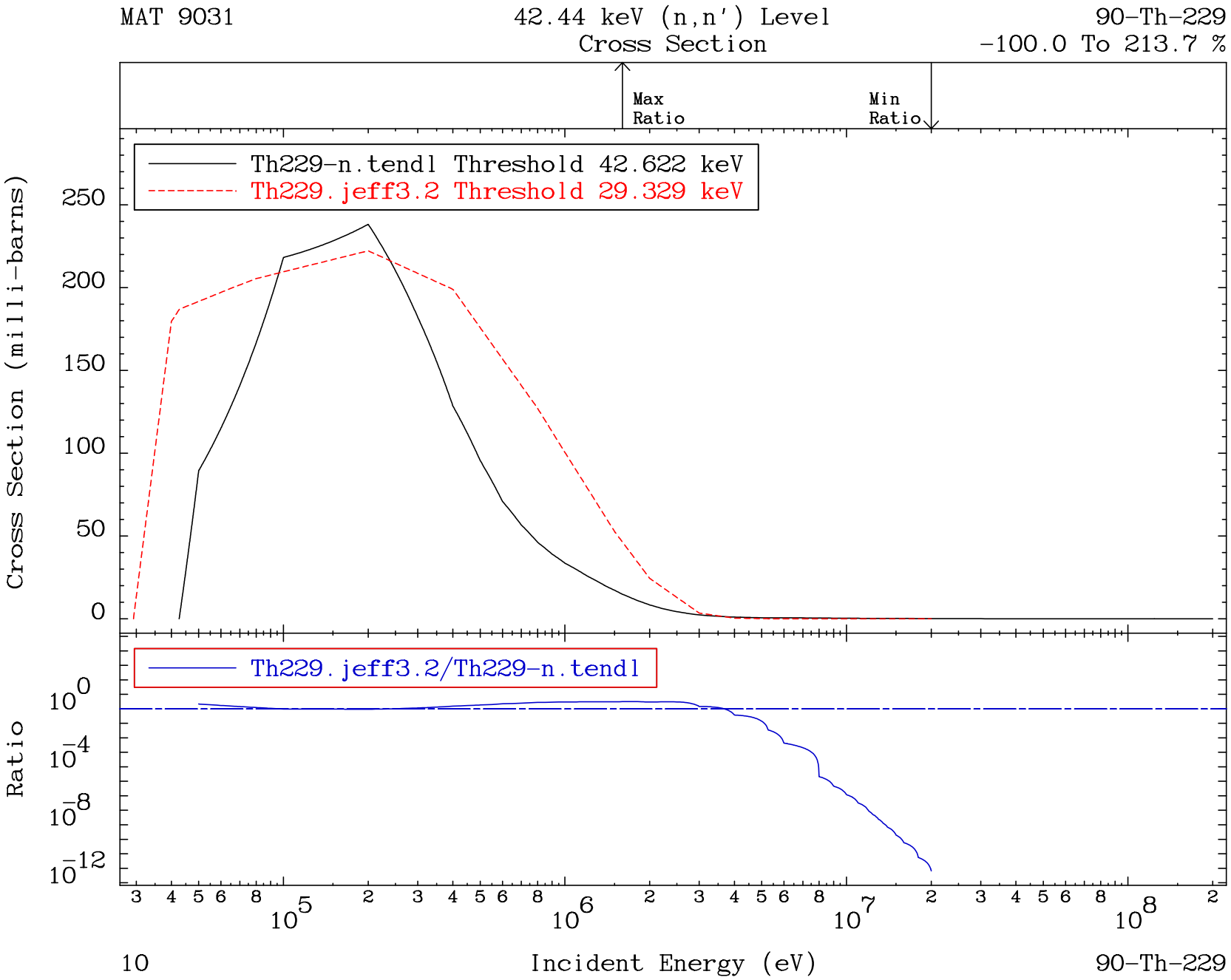

MAT 9031
(n,3n)
Cross Section
90-Th-229
-36.09 To 80.97 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 12.417 MeV
Th229.jeff3.2 Threshold 12.423 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Th229.jeff3.2/Th229-n.tendl
Ratio
2.0
1.6
1.2
0.8
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
90-Th-229

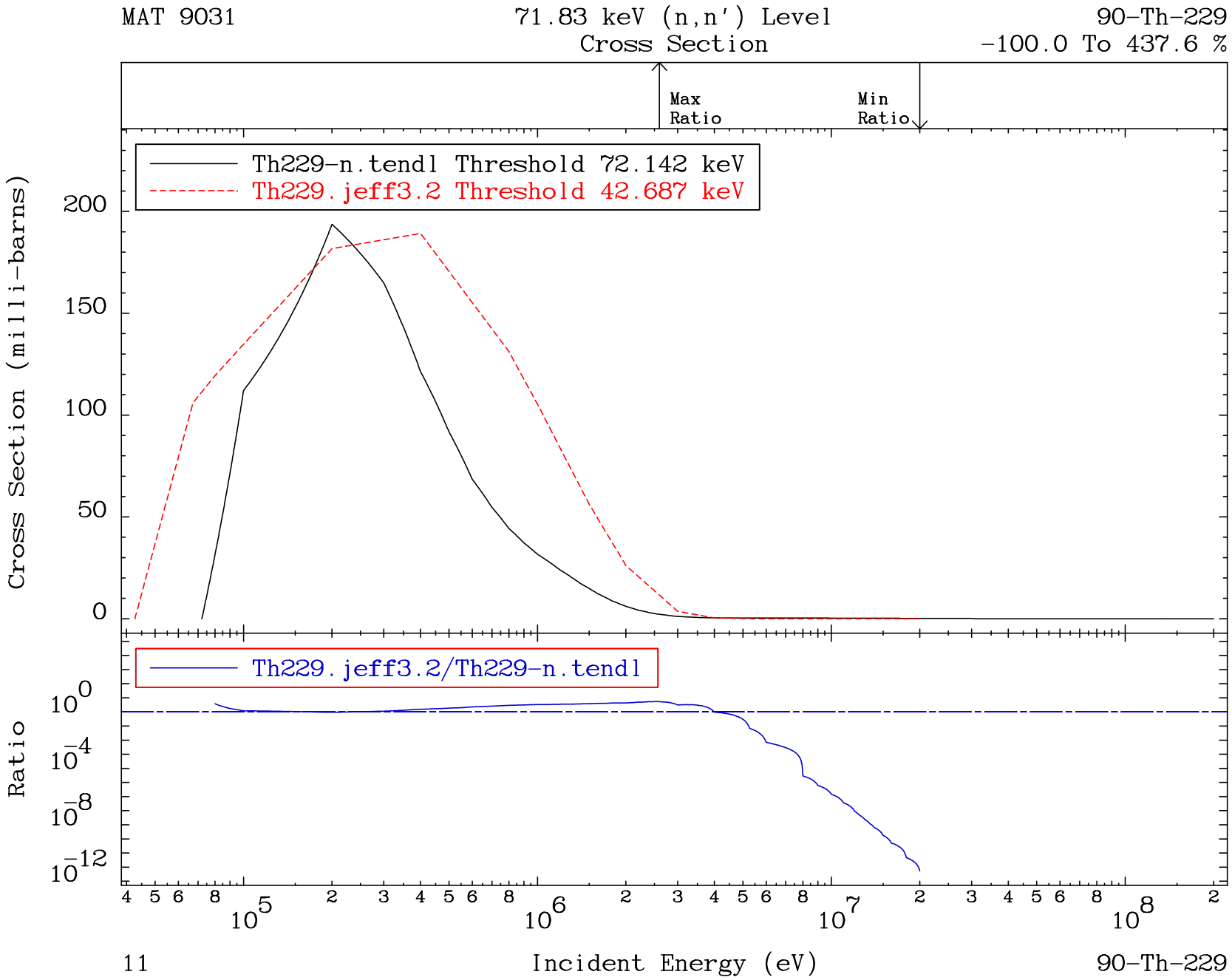

MAT 9031
Fission
Cross Section
90-Th-229
-93.41 To 623.3 %
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
6
90-Th-229

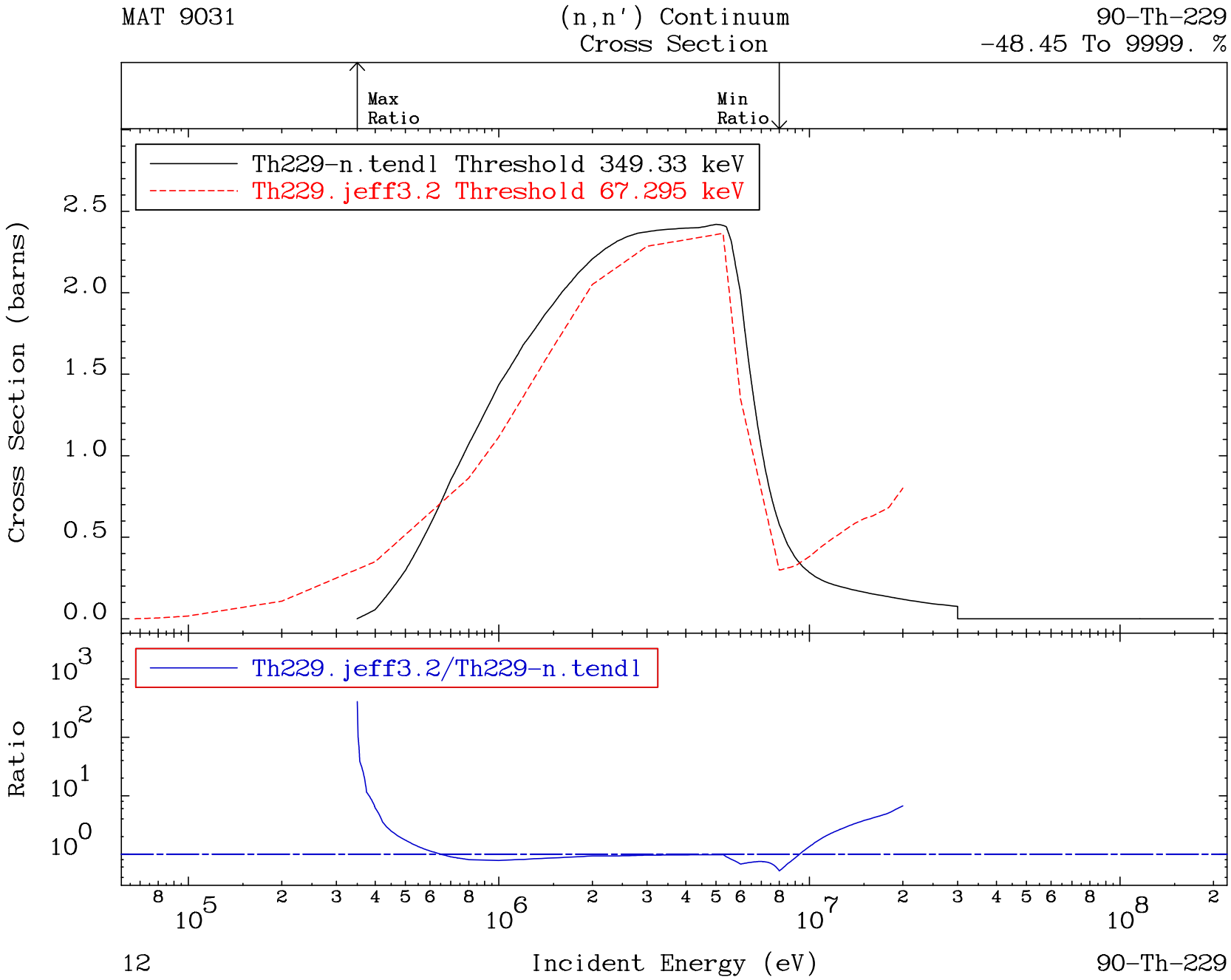

MAT 9031
(n,4n)
Cross Section
90-Th-229
-99.96 To 252.0 %
Max
Ratio
Th229-n.tendl Threshold 17.903 MeV
Th229.jeff3.2 Threshold 17.903 MeV
Cross Section (milli-barns)
600
400
200
0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
90-Th-229

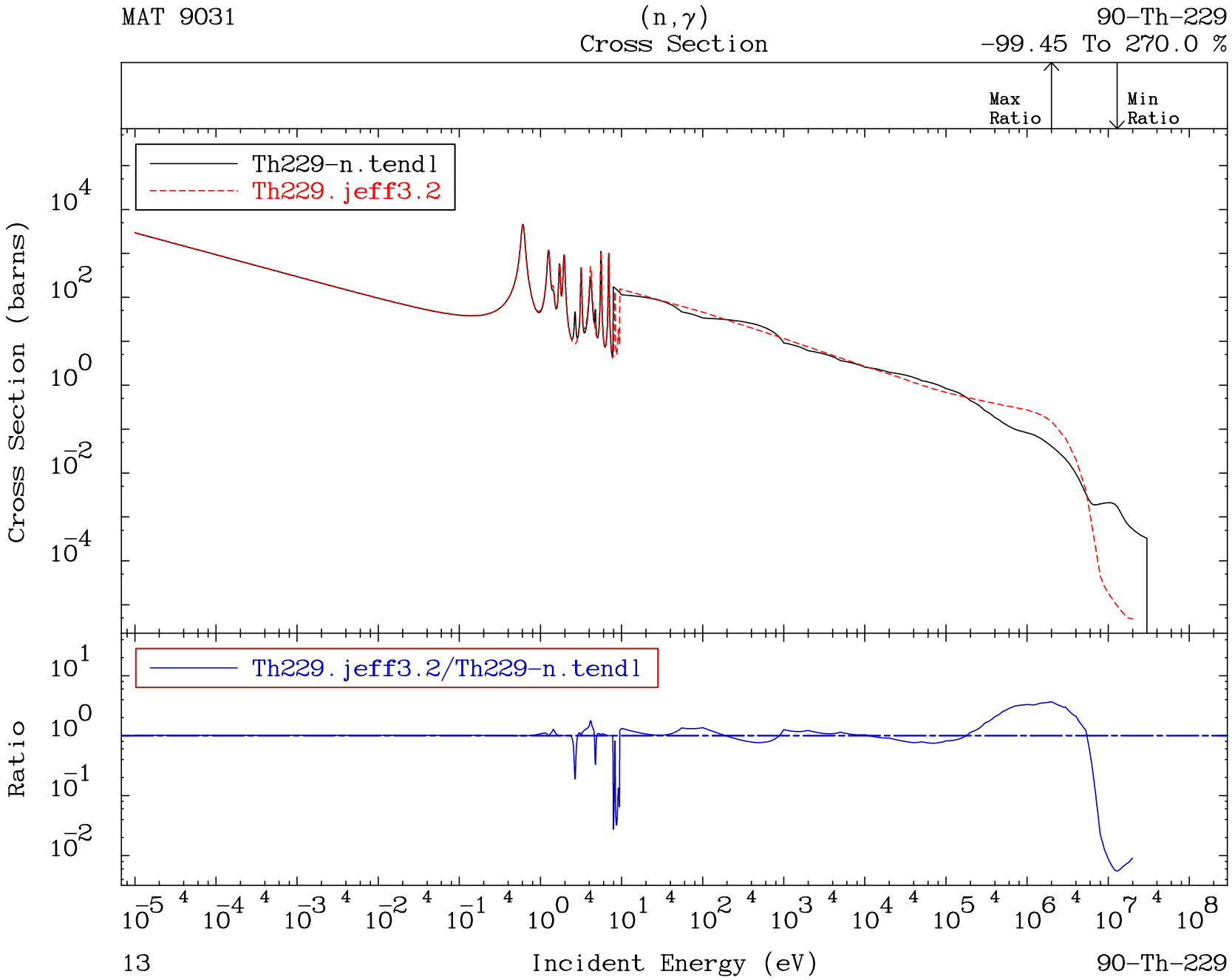

MAT 9031
0.008 keV (n,n') Level
Cross Section
90-Th-229
-94.26 To 818.4 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 8.0352 eV
Th229.jeff3.2 Threshold 100.44 eV
Cross Section (milli-barns)
500
400
300
200
100
0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^1
10^0
10^-1
10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
8
Incident Energy (eV)
90-Th-229

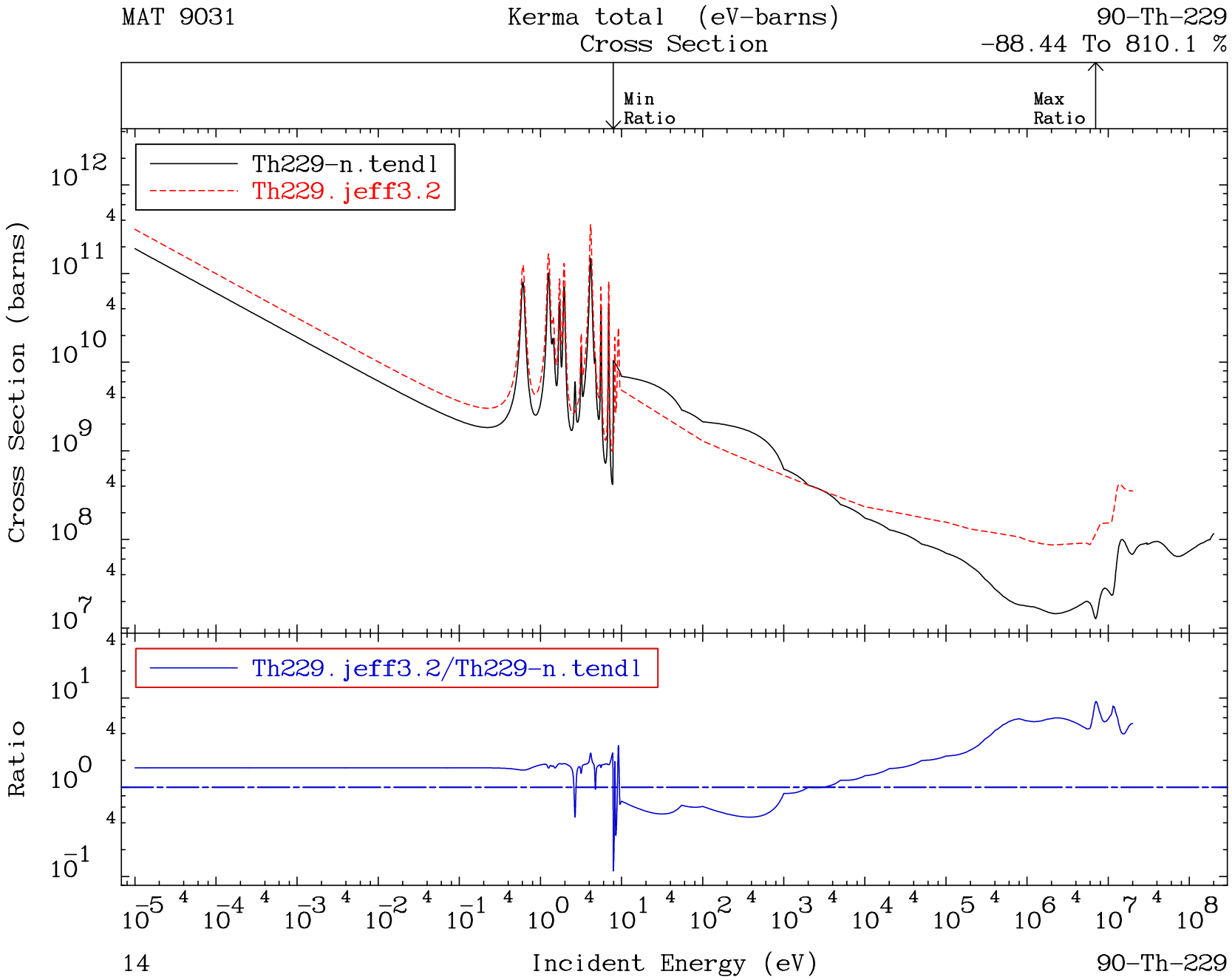

MAT 9031
29.19 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To 978.2 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 29.322 keV
Th229.jeff3.2 Threshold 20.088 keV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^0
10^-5
10^-10
10^-15
2 3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
9
Incident Energy (eV)
90-Th-229

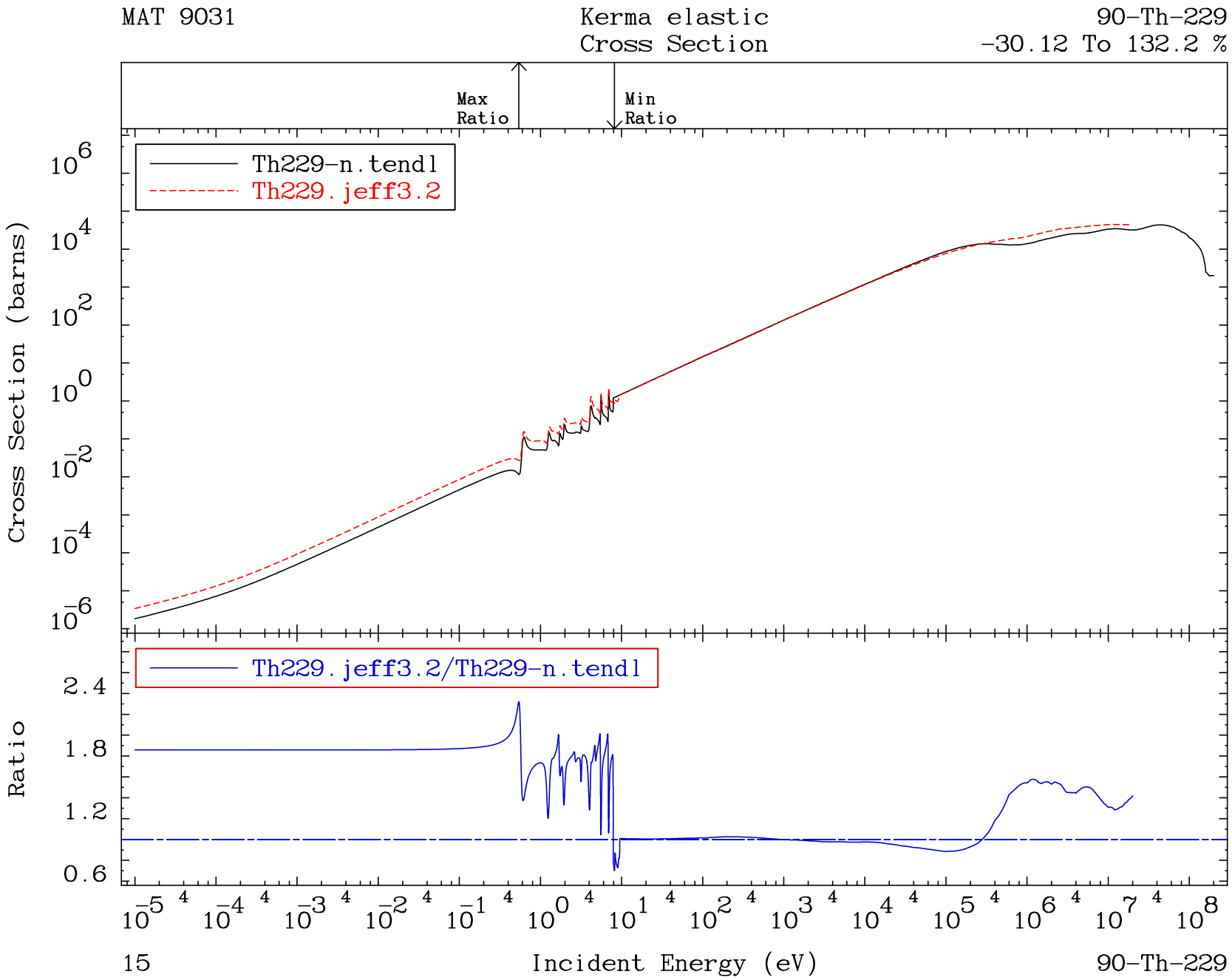

MAT 9031
42.44 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To 213.7 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 42.622 keV
Th229.jeff3.2 Threshold 29.329 keV
Cross Section (milli-barns)
250
200
150
100
50
0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^0
10^-4
10^-8
10^-12
3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
10
Incident Energy (eV)
90-Th-229

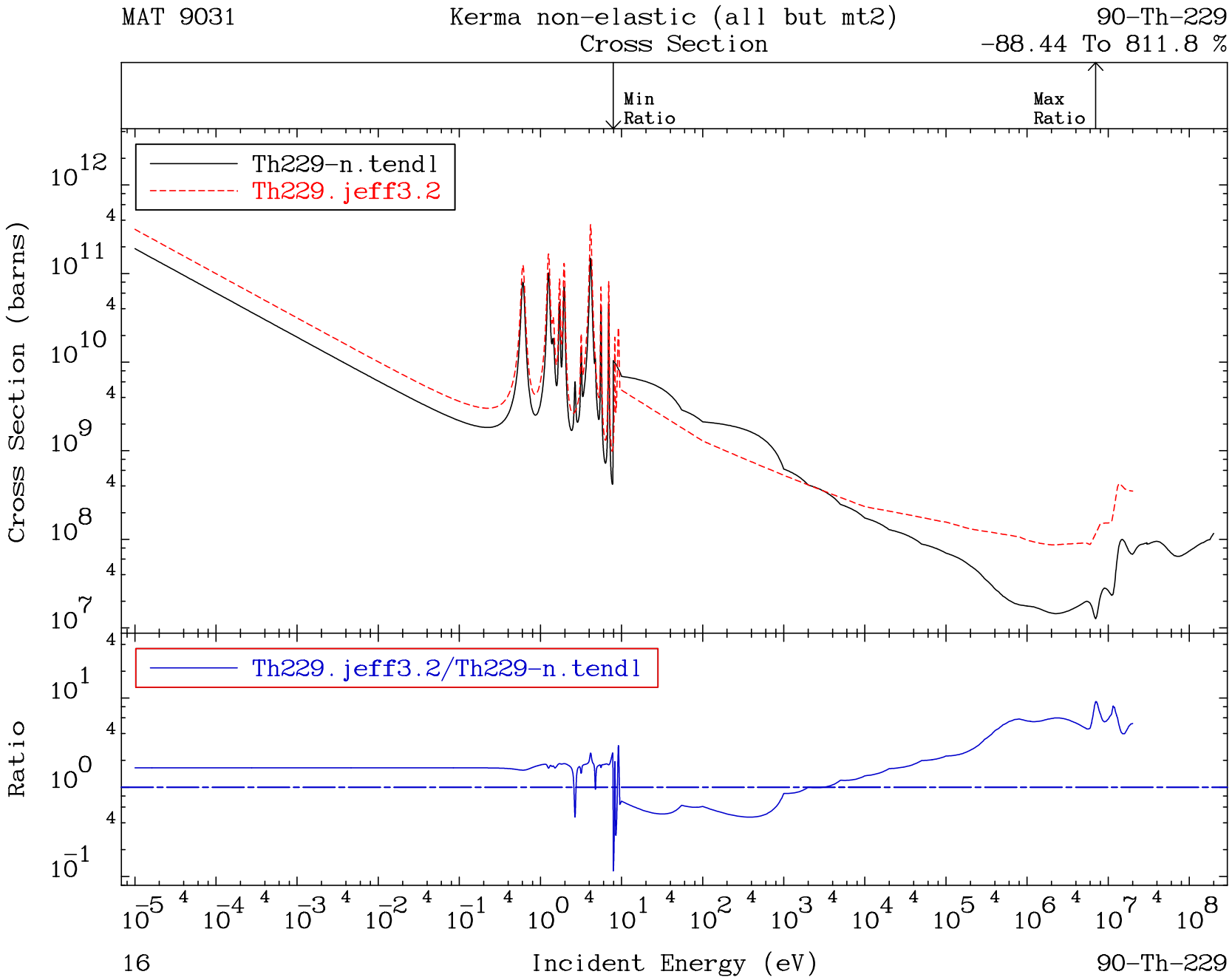

MAT 9031
71.83 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To 437.6 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 72.142 keV
Th229.jeff3.2 Threshold 42.687 keV
Cross Section (milli-barns)
200
150
100
50
0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^0
10^-4
10^-8
10^-12
4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
11
Incident Energy (eV)
90-Th-229

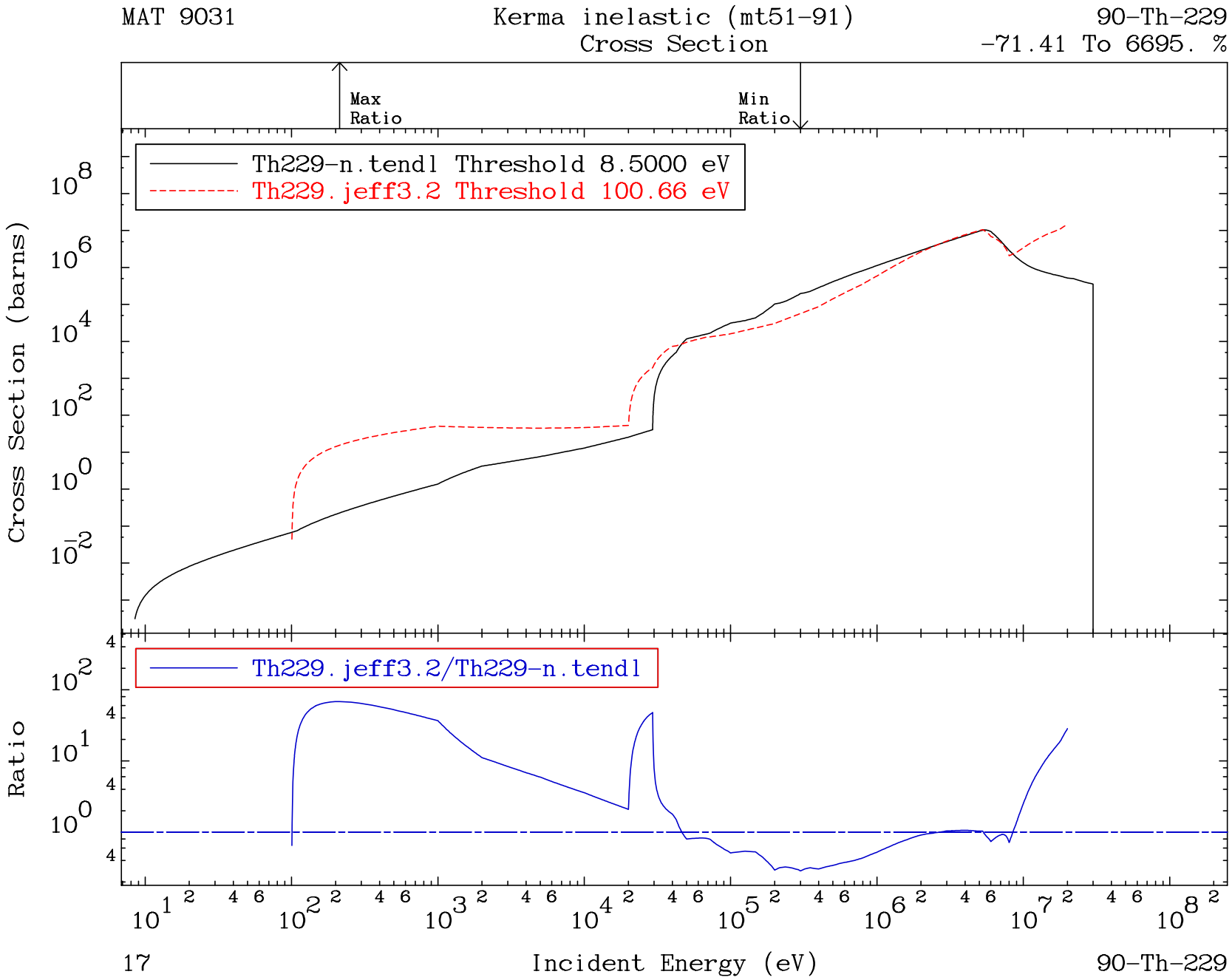

MAT 9031
(n,n') Continuum
Cross Section
90-Th-229
-48.45 To 9999. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 349.33 keV
Th229.jeff3.2 Threshold 67.295 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^3
10^2
10^1
10^0
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
12
Incident Energy (eV)
90-Th-229

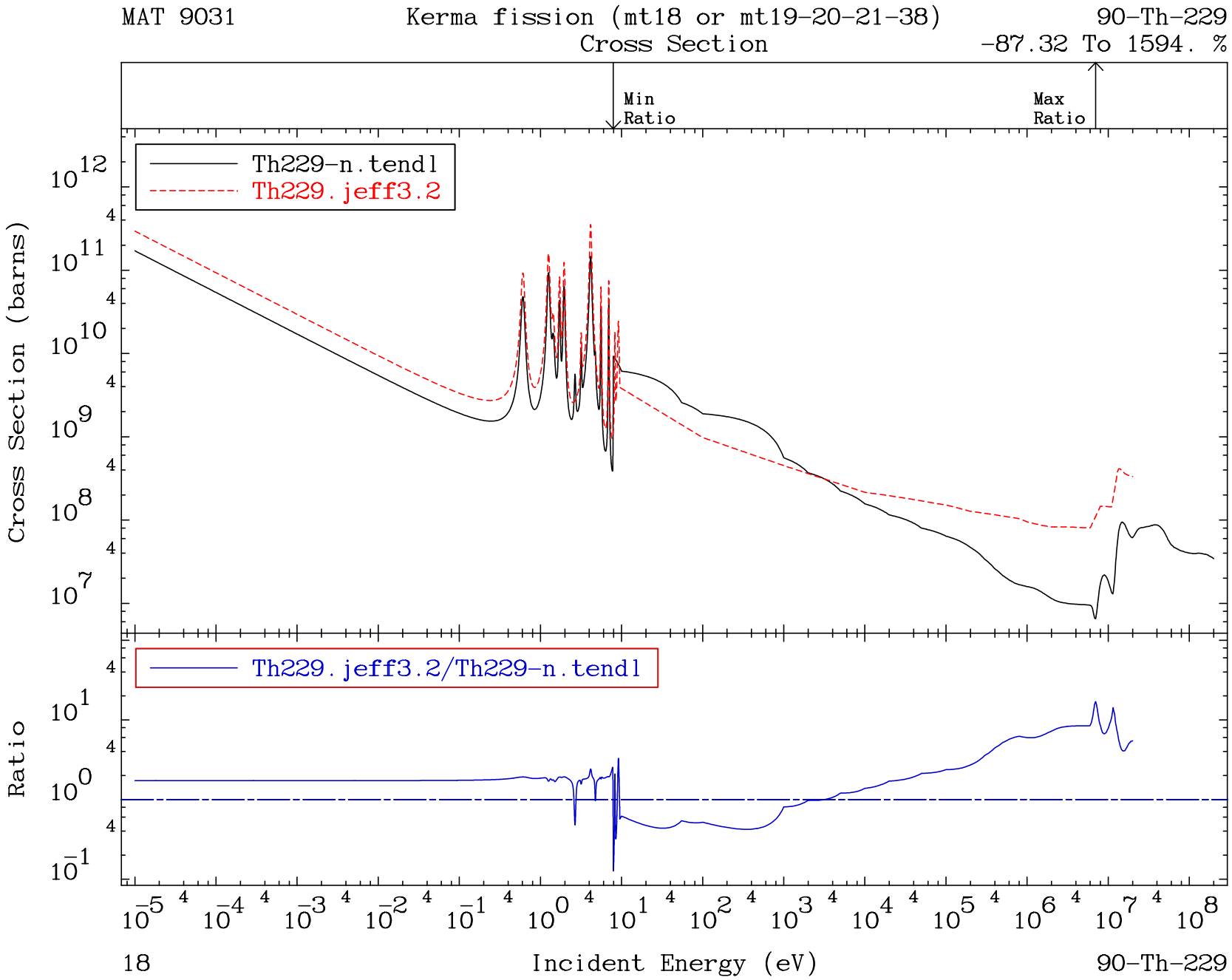

MAT 9031
(n,γ)
Cross Section
90-Th-229
-99.45 To 270.0 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
13
90-Th-229

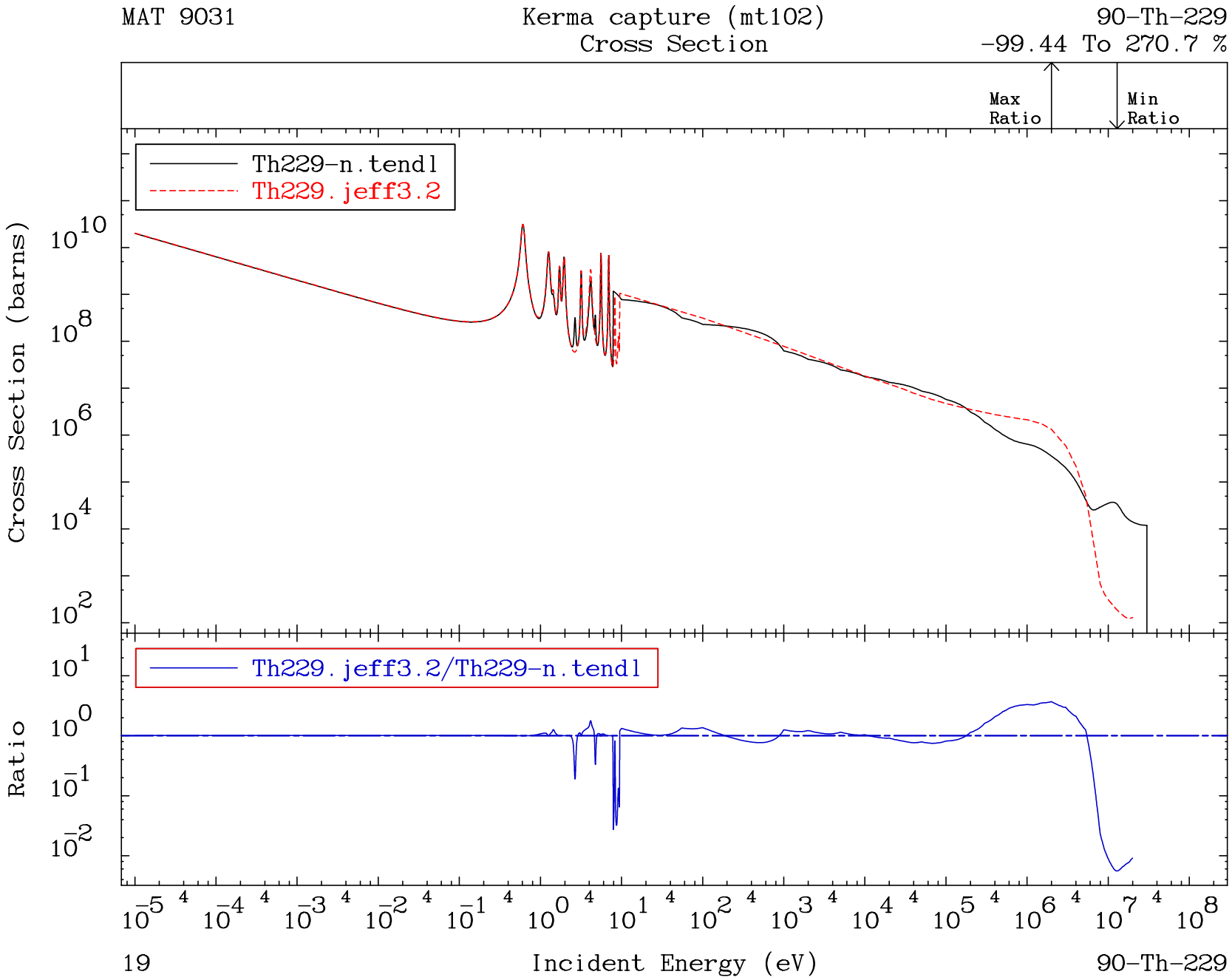

MAT 9031
Kerma total (eV-barns)
Cross Section
90-Th-229
-88.44 To 810.1 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
14
90-Th-229

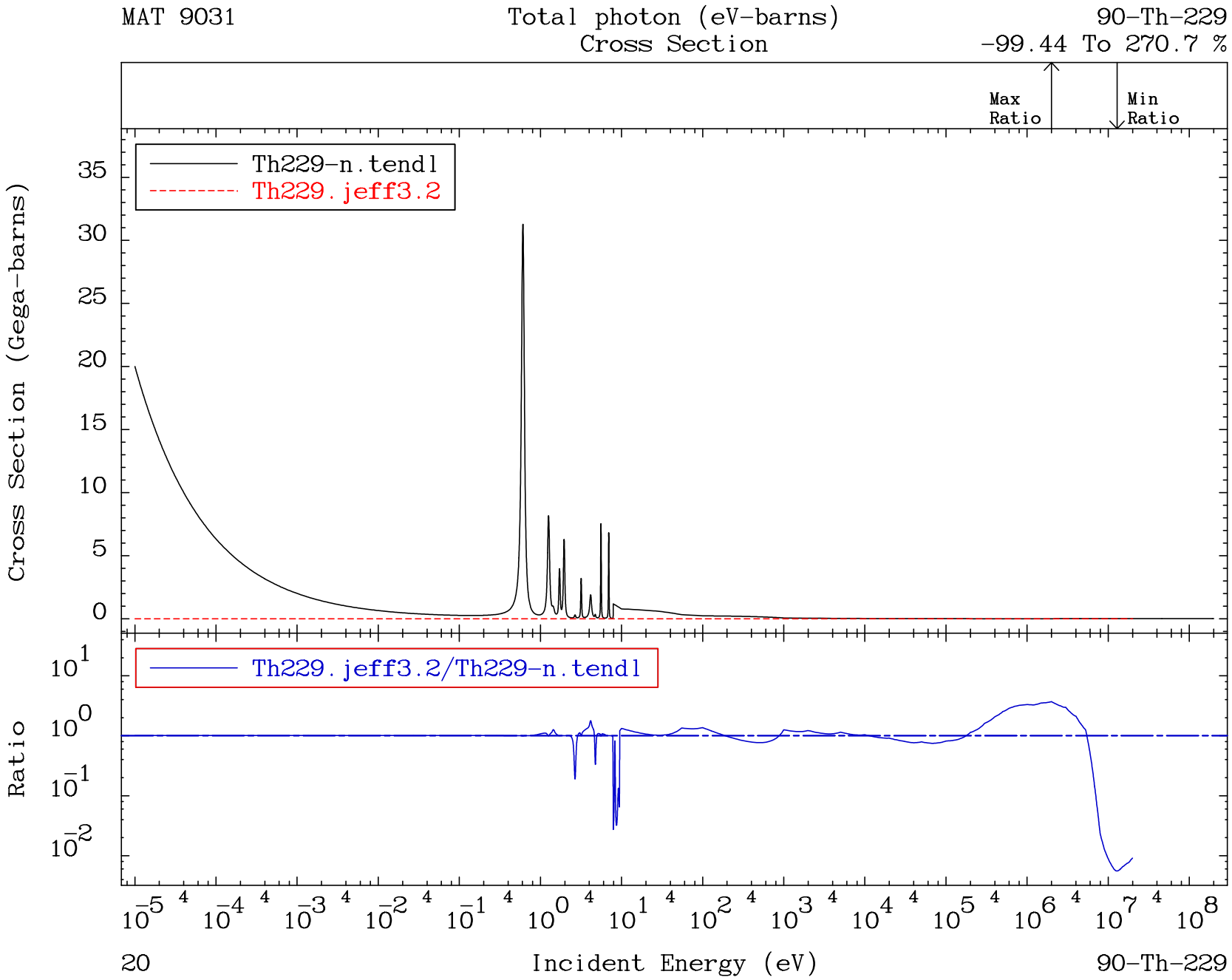

MAT 9031
Kerma elastic
Cross Section
90-Th-229
-30.12 To 132.2 %
Max
Ratio
Min
Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
15
90-Th-229

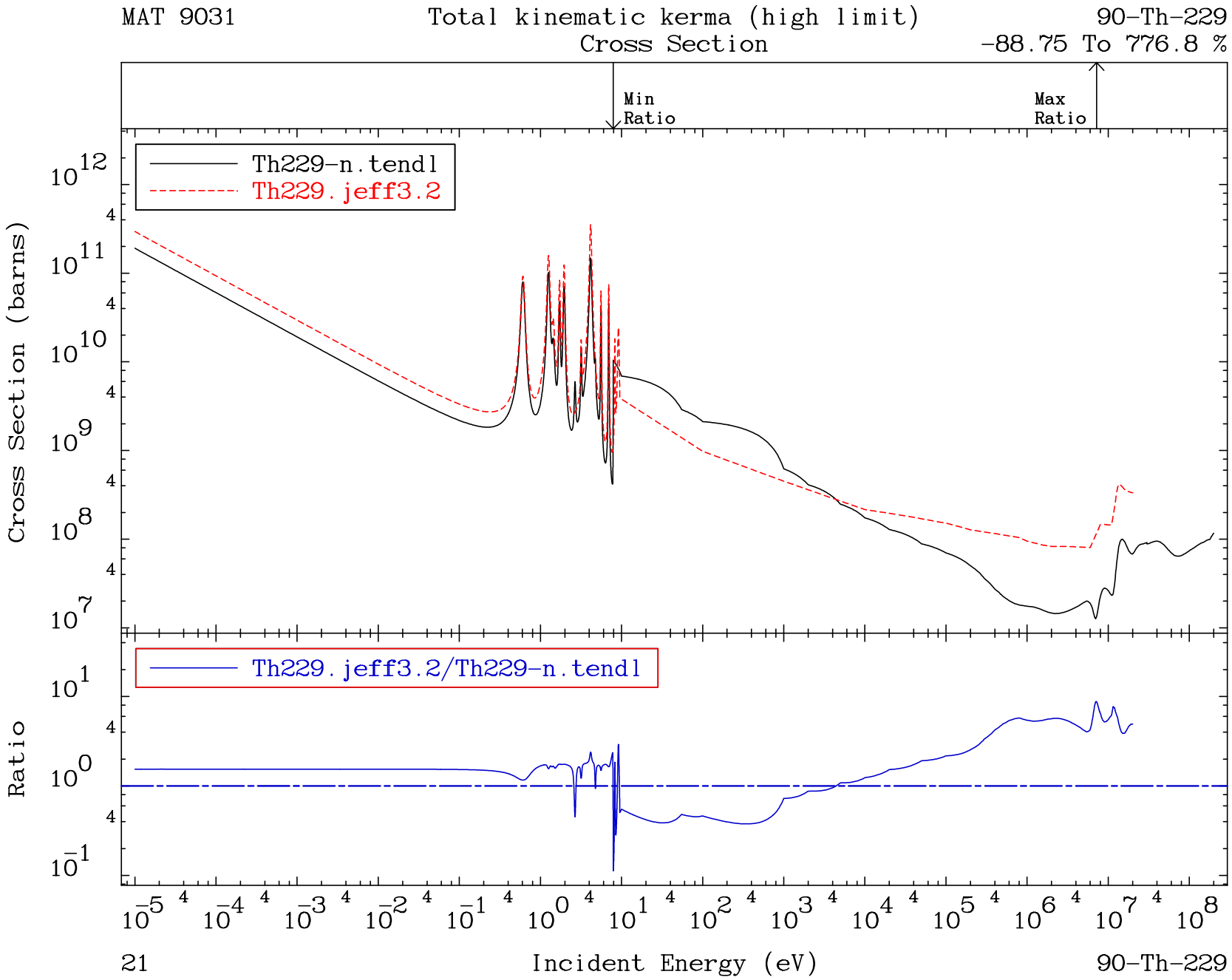

MAT 9031
Kerma non-elastic (all but mt2)
Cross Section
90-Th-229
-88.44 To 811.8 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
16
90-Th-229

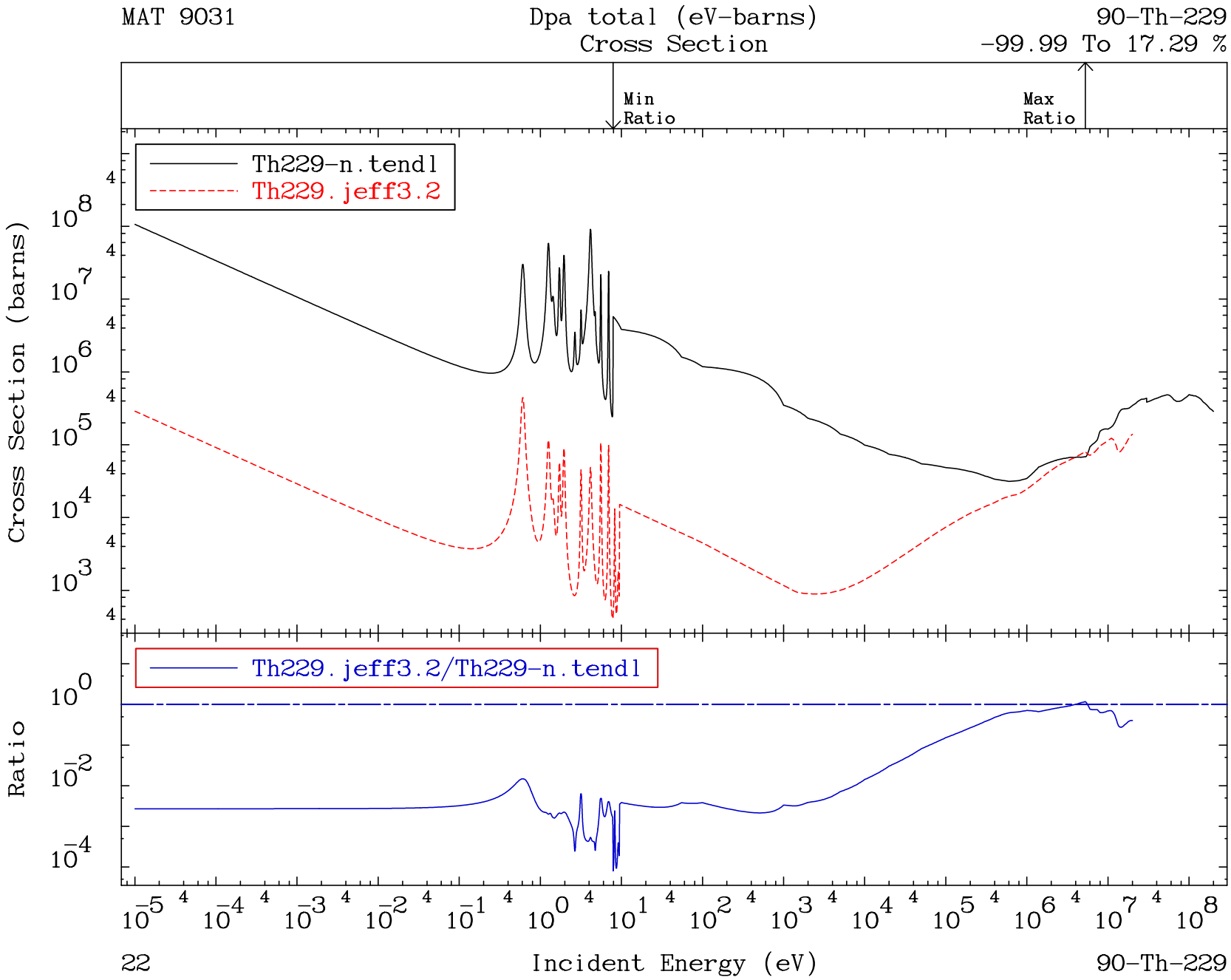

MAT 9031
Kerma inelastic (mt51-91)
Cross Section
90-Th-229
-71.41 To 6695. %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 8.5000 eV
Th229.jeff3.2 Threshold 100.66 eV
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
17
90-Th-229

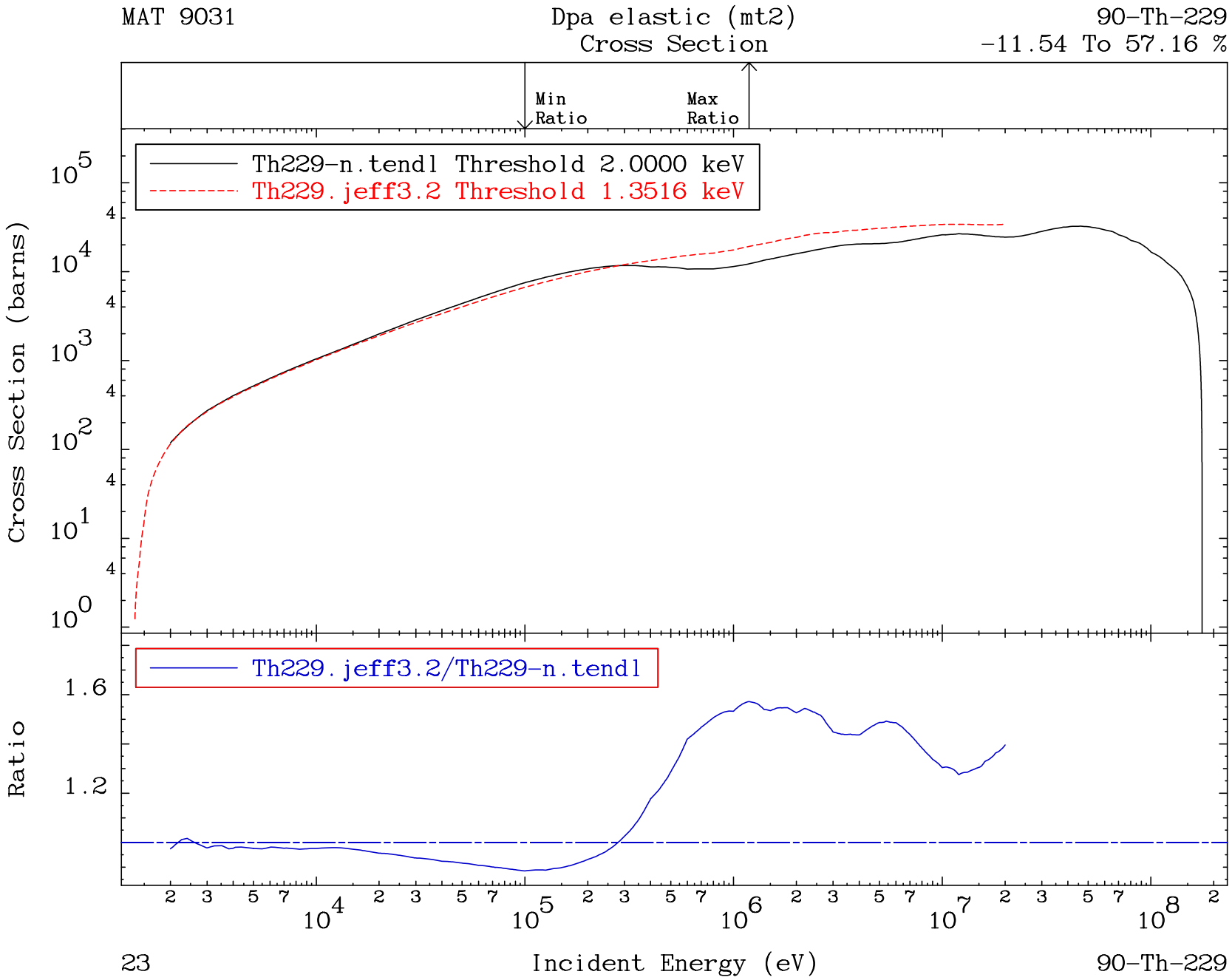

MAT 9031
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
90-Th-229
-87.32 To 1594. %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
18
Incident Energy (eV)
90-Th-229

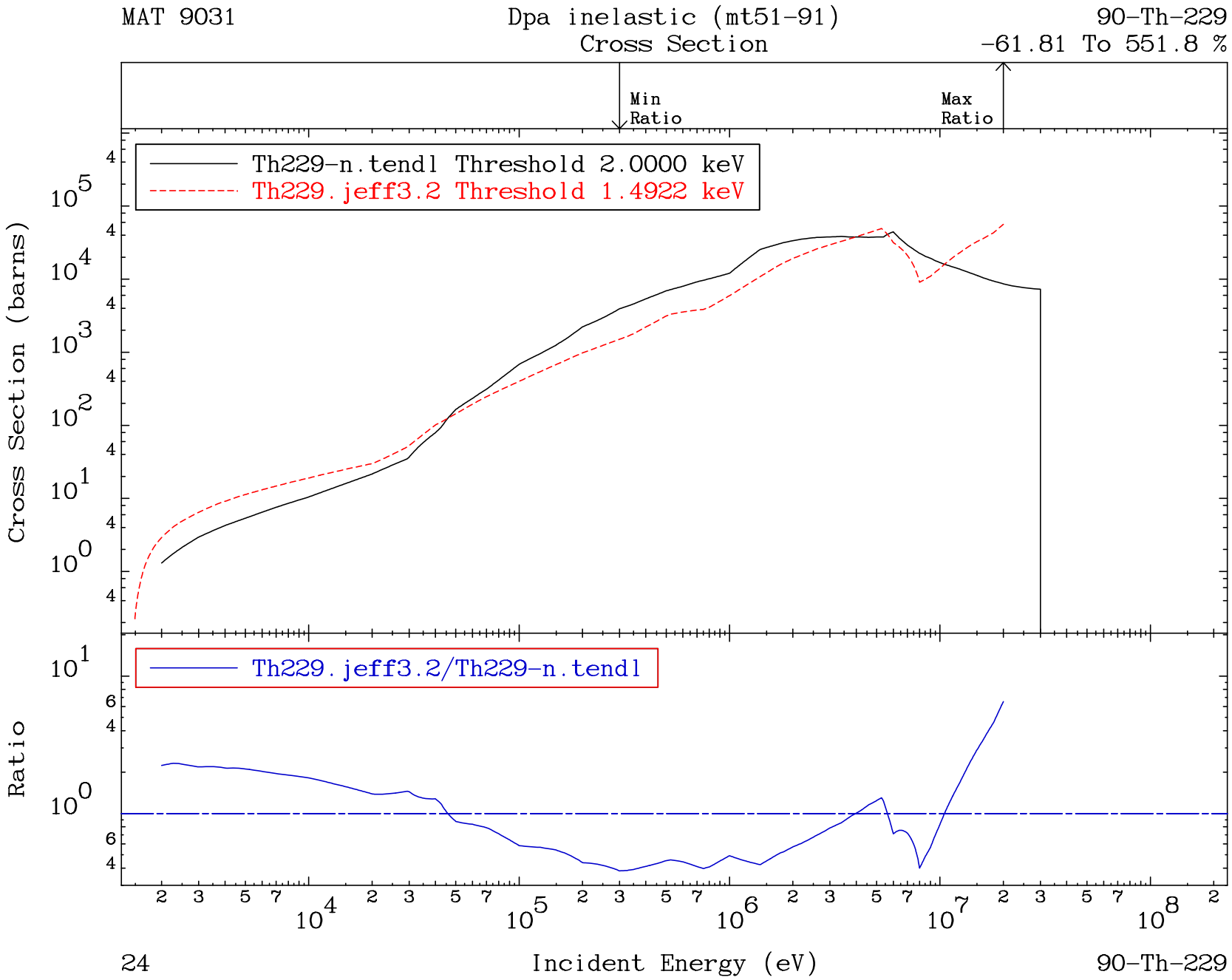

MAT 9031
Kerma capture (mt102)
Cross Section
90-Th-229
-99.44 To 270.7 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
19
90-Th-229

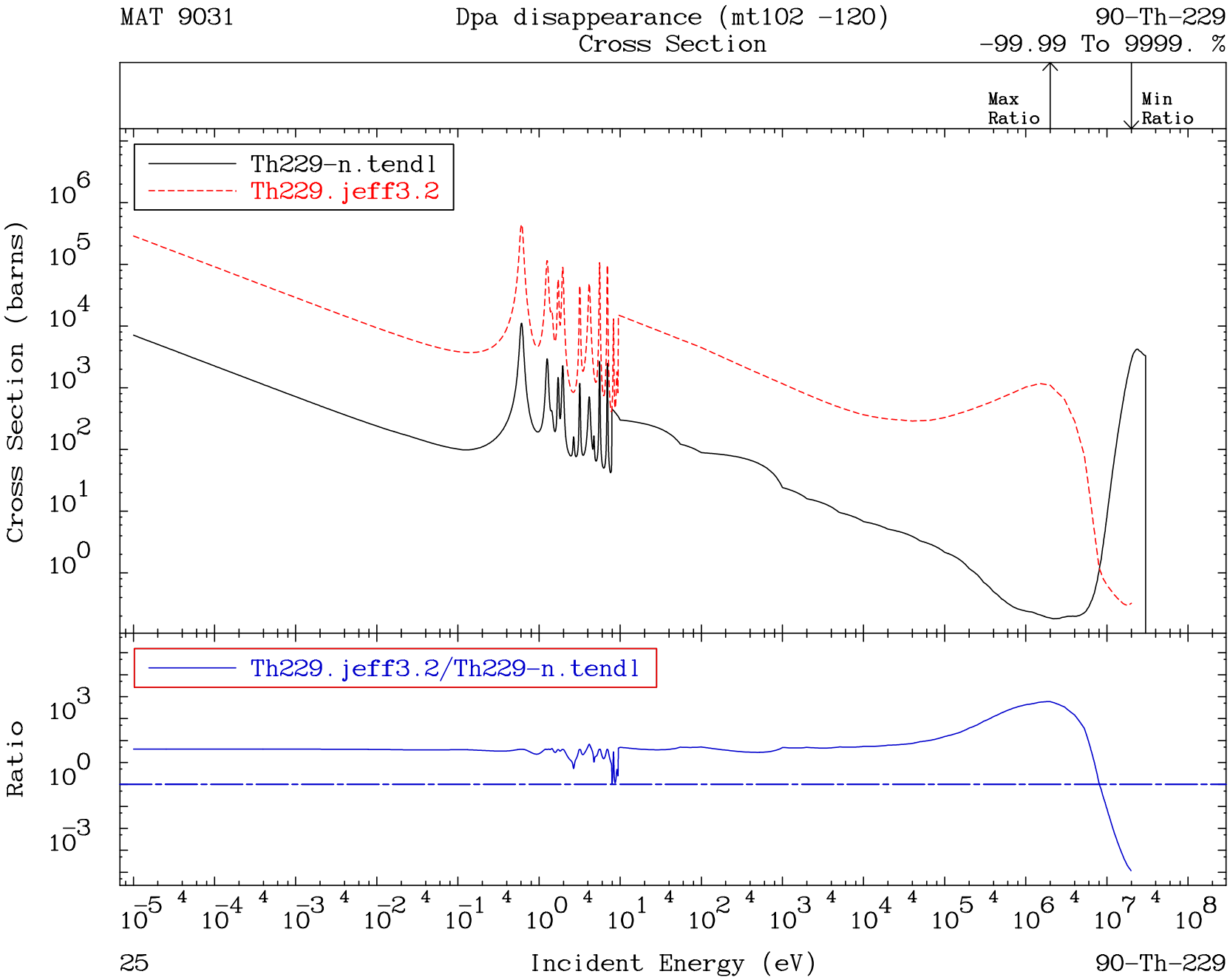

MAT 9031
Total photon (eV-barns)
Cross Section
90-Th-229
-99.44 To 270.7 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (Giga-barns)
35
30
25
20
15
10
5
0
Th229.jeff3.2/Th229-n.tendl
Ratio
10^1
10^0
10^-1
10^-2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
20
Incident Energy (eV)
90-Th-229


MAT 9031
Total kinematic kerma (high limit)
Cross Section
90-Th-229
-88.75 To 776.8 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
21
90-Th-229


MAT 9031
Dpa total (eV-barns)
Cross Section
90-Th-229
-99.99 To 17.29 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
22
Incident Energy (eV)
90-Th-229


MAT 9031
Dpa elastic (mt2)
Cross Section
90-Th-229
-11.54 To 57.16 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 2.0000 keV
Th229.jeff3.2 Threshold 1.3516 keV
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
23
90-Th-229


MAT 9031
Dpa inelastic (mt51-91)
Cross Section
90-Th-229
-61.81 To 551.8 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 2.0000 keV
Th229.jeff3.2 Threshold 1.4922 keV
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
24
90-Th-229


MAT 9031
Dpa disappearance (mt102 -120)
Cross Section
90-Th-229
-99.99 To 9999. %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jeff3.2
Cross Section (barns)
Th229.jeff3.2/Th229-n.tendl
Ratio
Incident Energy (eV)
25
90-Th-229