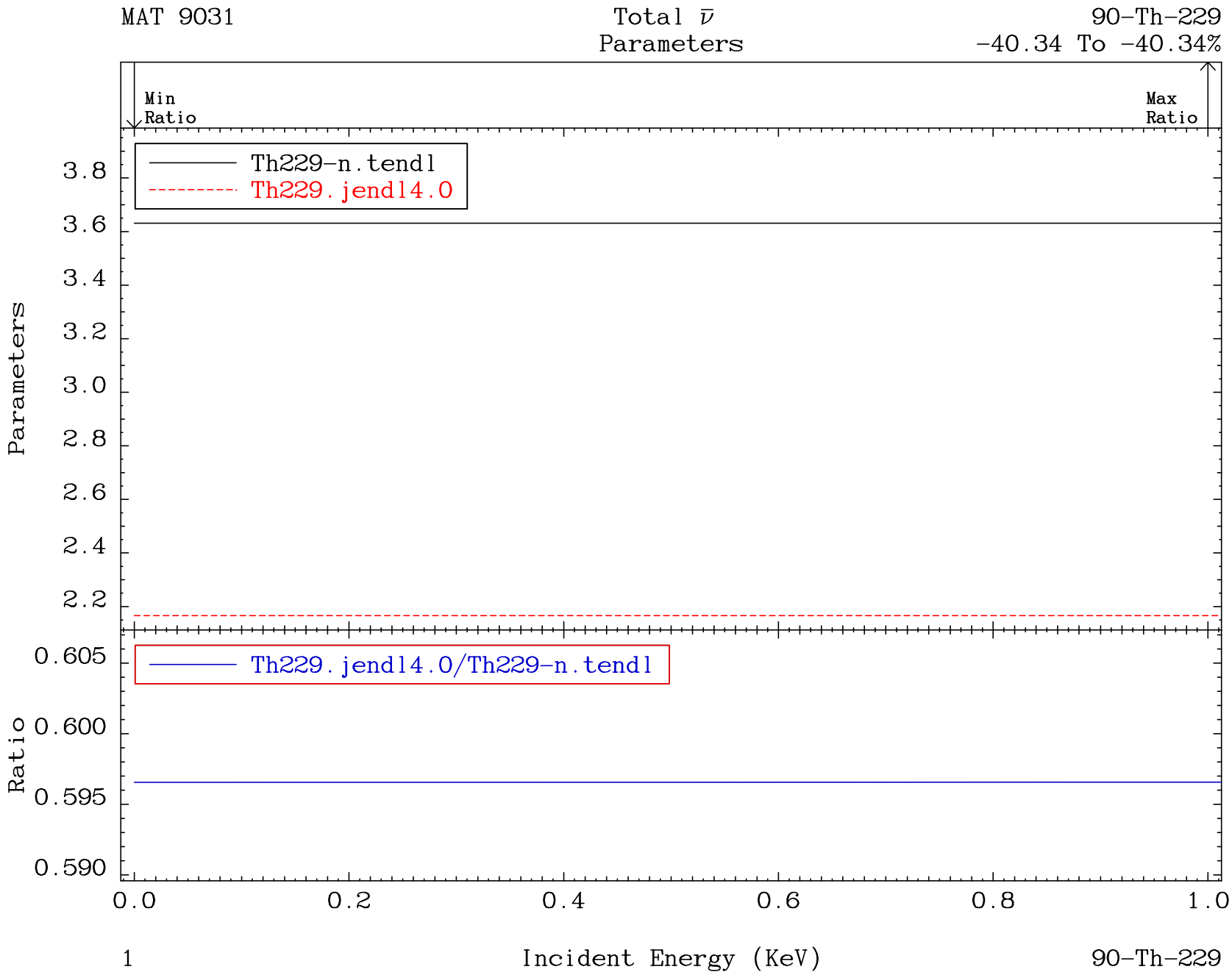
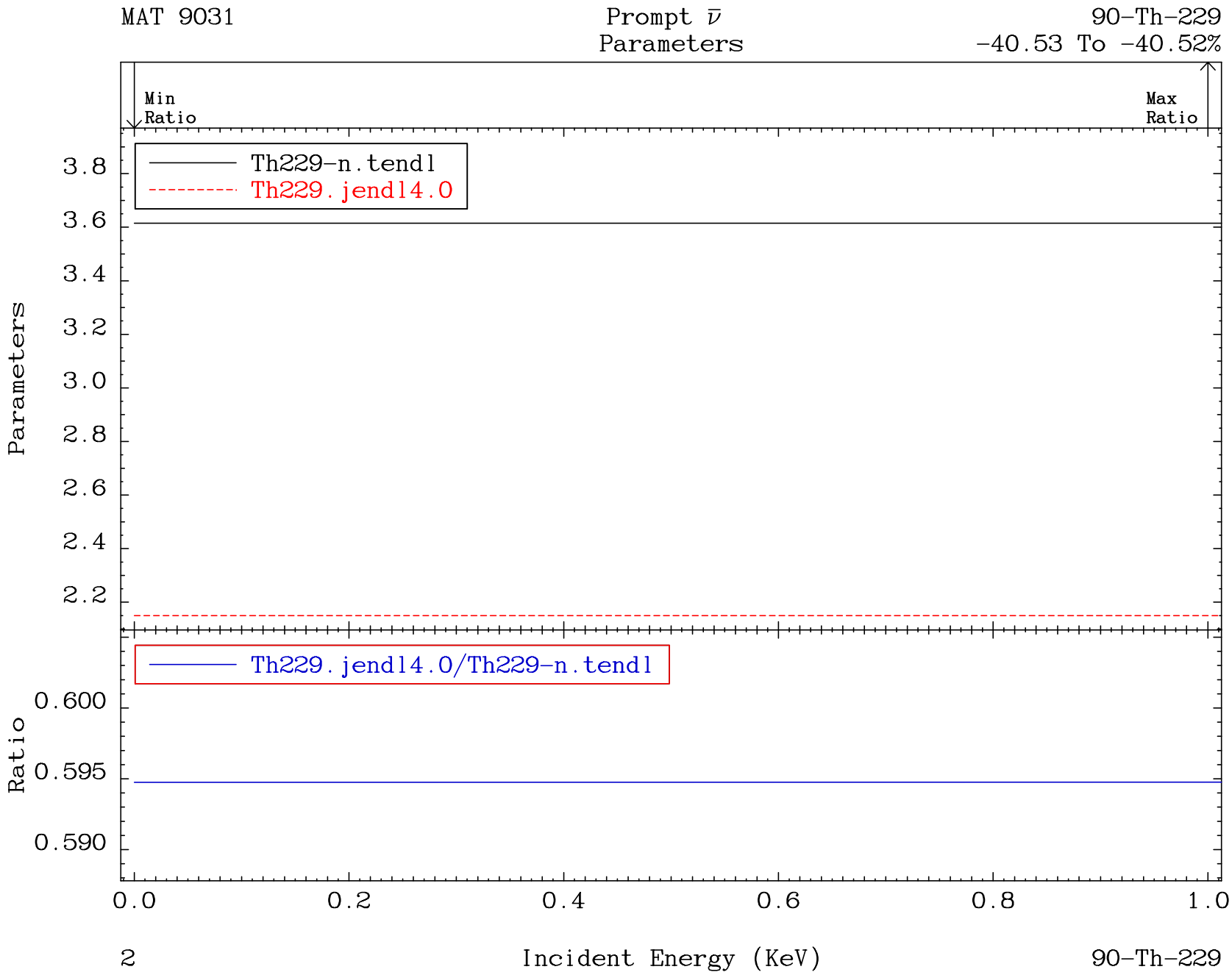
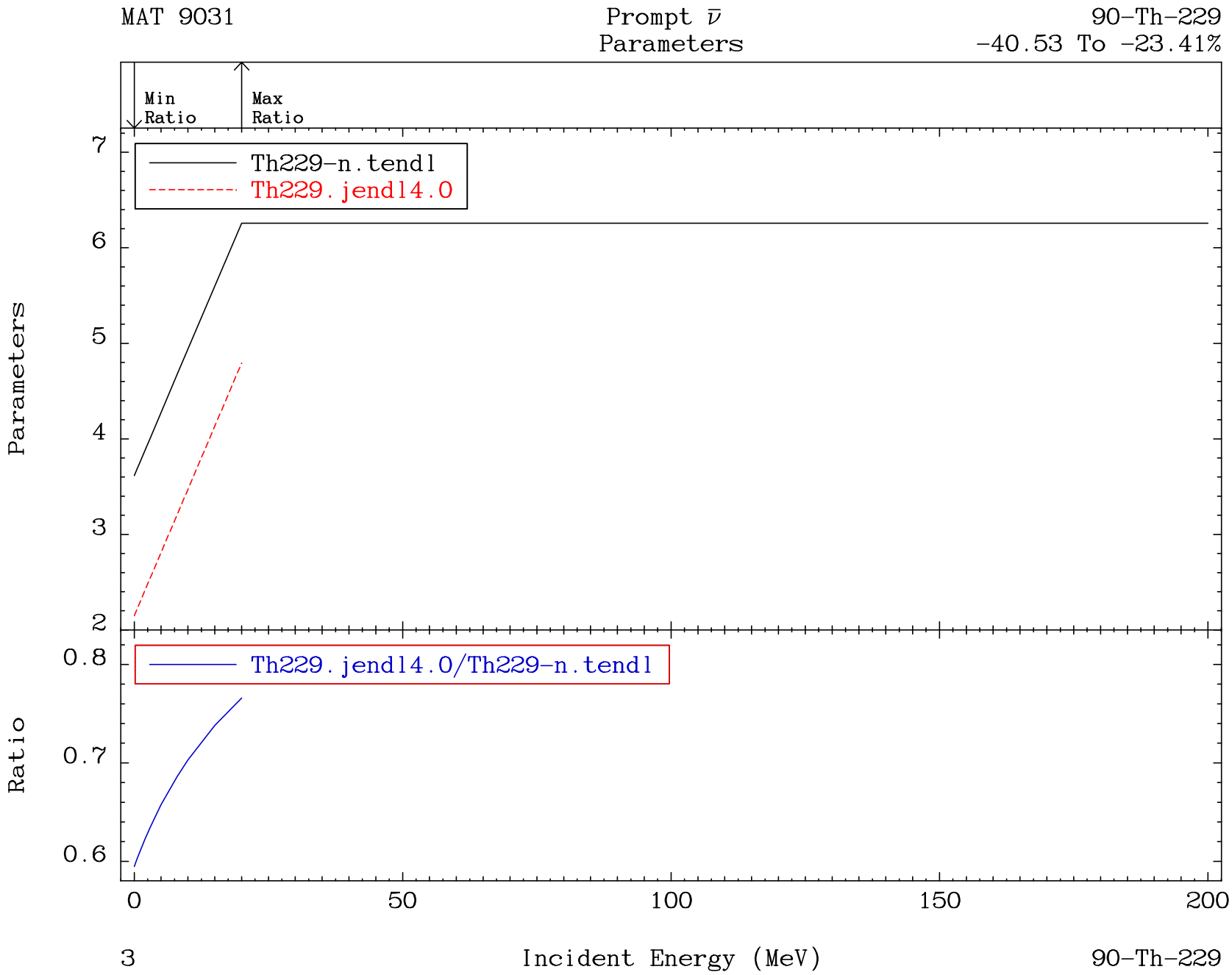
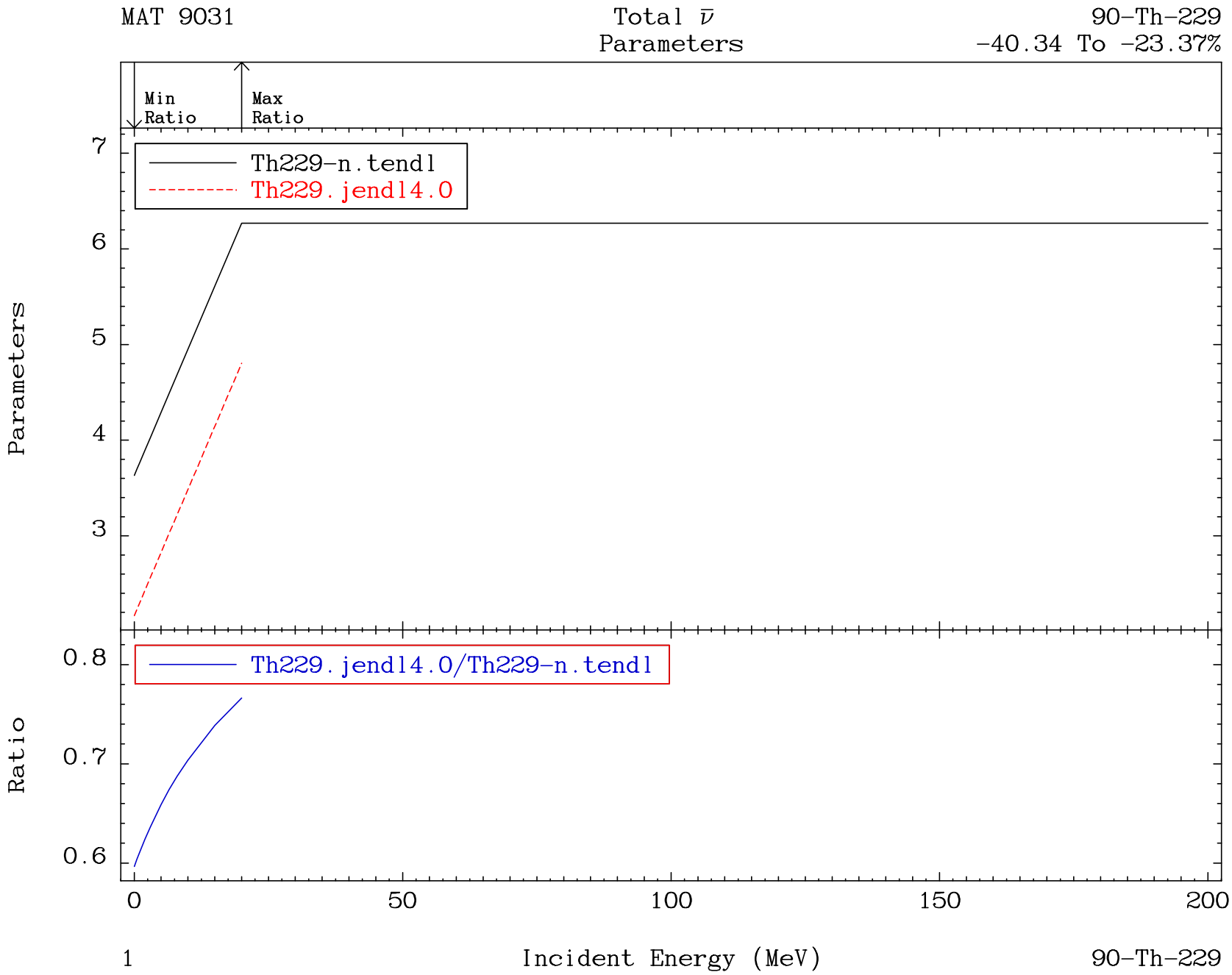
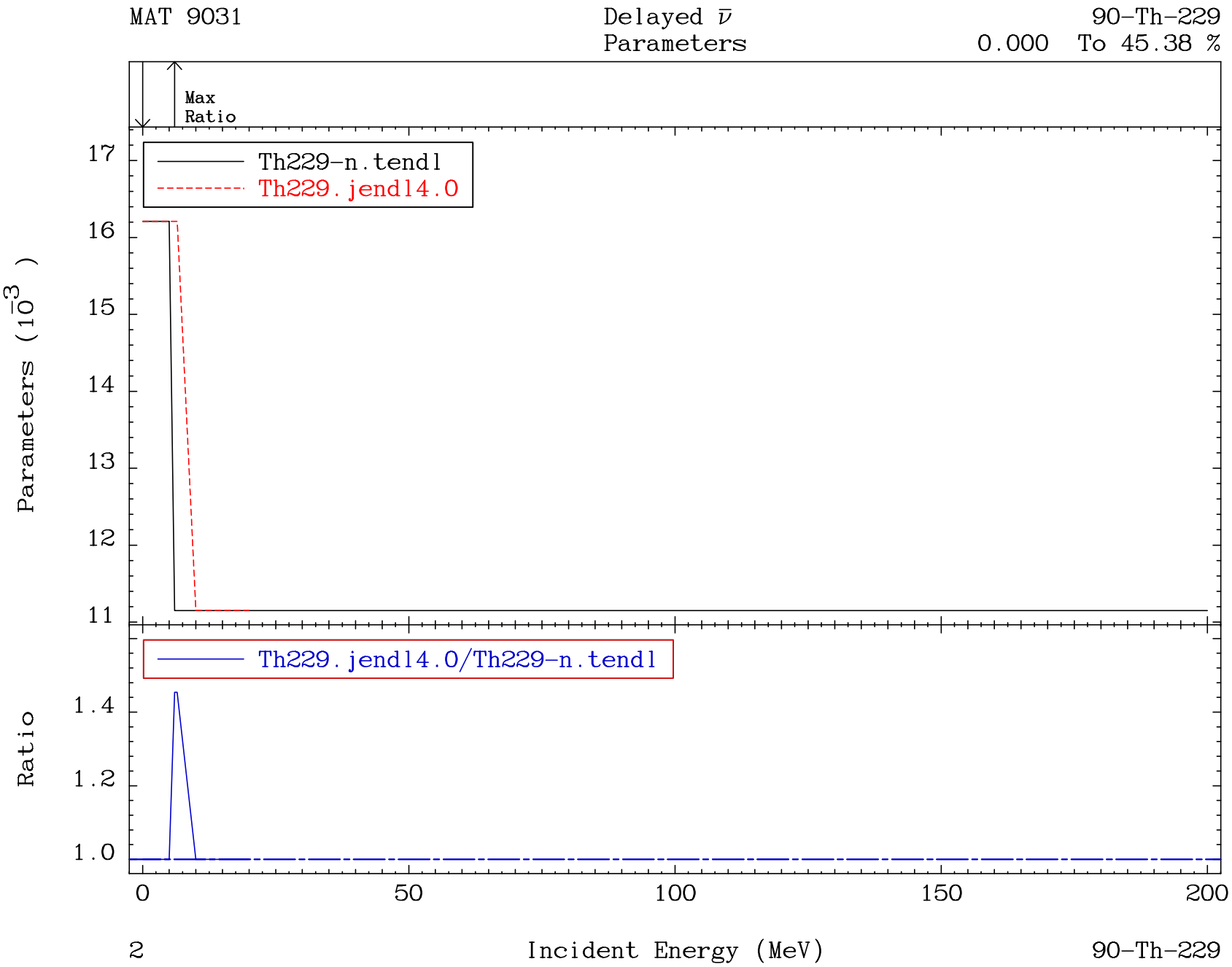
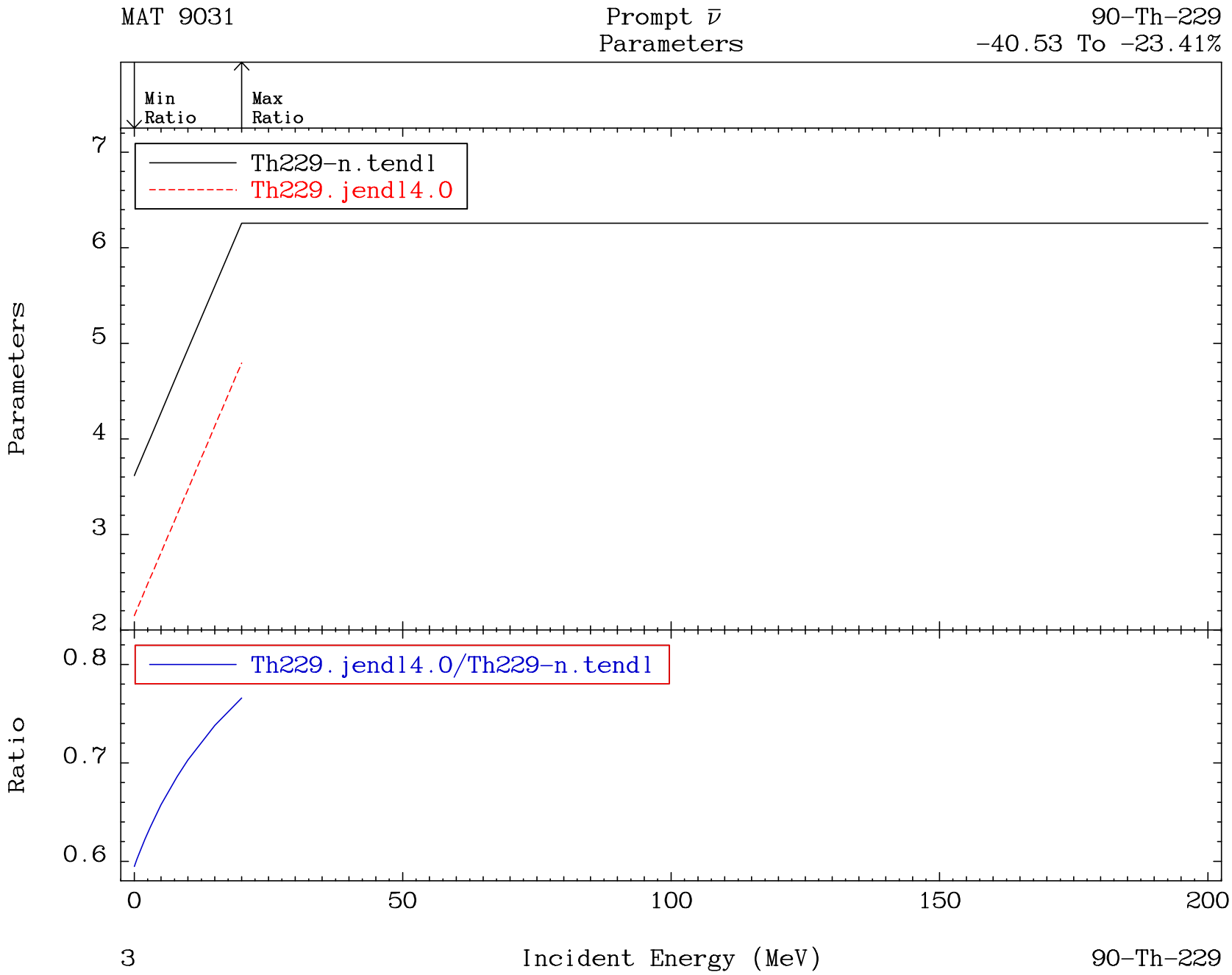

MAT 9031
Total $\bar{\nu}$
Parameters
90-Th-229
-40.34 To -40.34%
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Th229.jendl4.0/Th229-n.tendl
Parameters
Ratio
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
0.605
0.600
0.595
0.590
0.0
0.2
0.4
0.6
0.8
1.0
1
Incident Energy (KeV)
90-Th-229

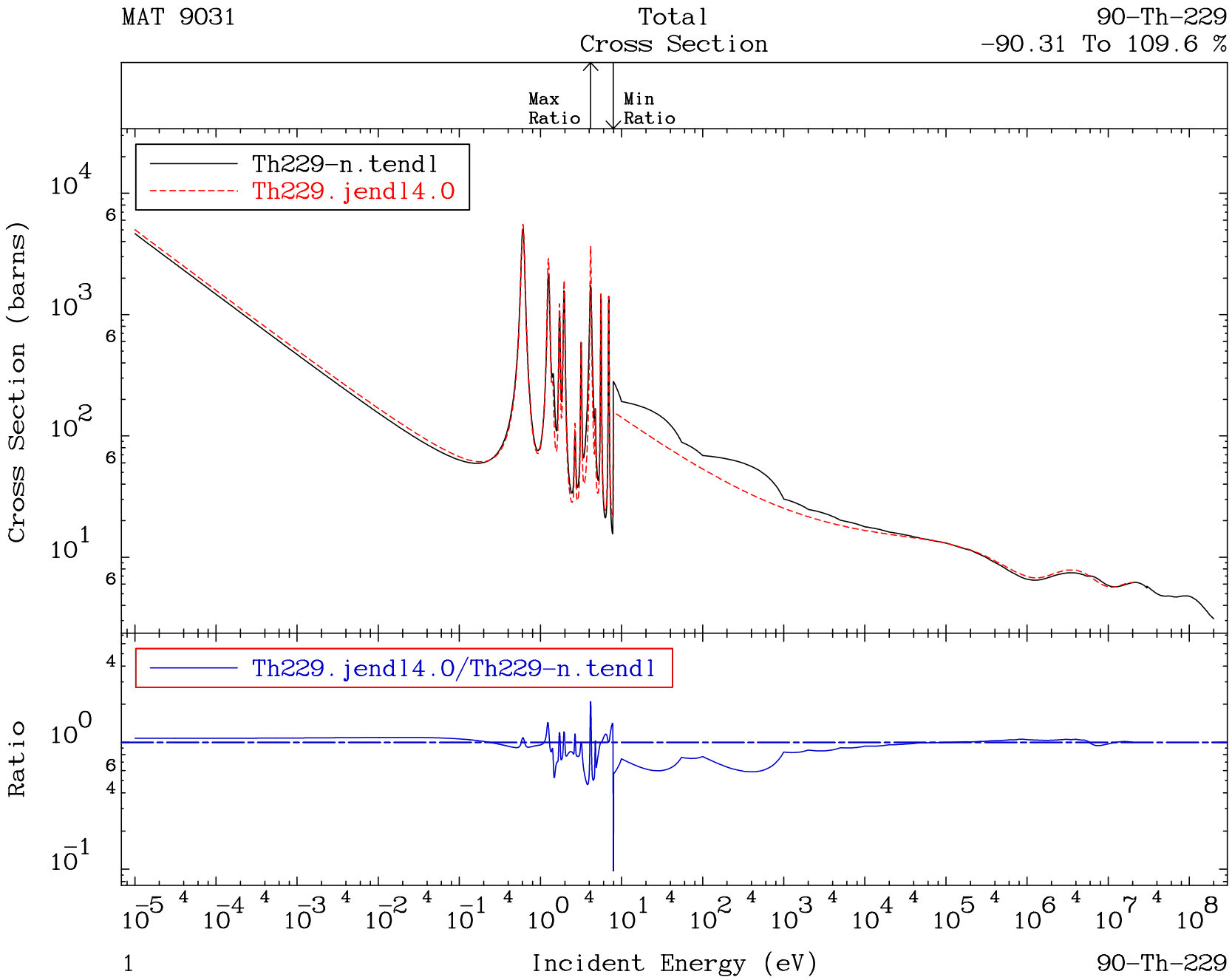

MAT 9031
Prompt $\bar{\nu}$
Parameters
90-Th-229
-40.53 To -40.52%
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jendl4.0
Parameters
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
Th229.jendl4.0/Th229-n.tendl
Ratio
0.600
0.595
0.590
0.0
0.2
0.4
0.6
0.8
1.0
2
Incident Energy (KeV)
90-Th-229

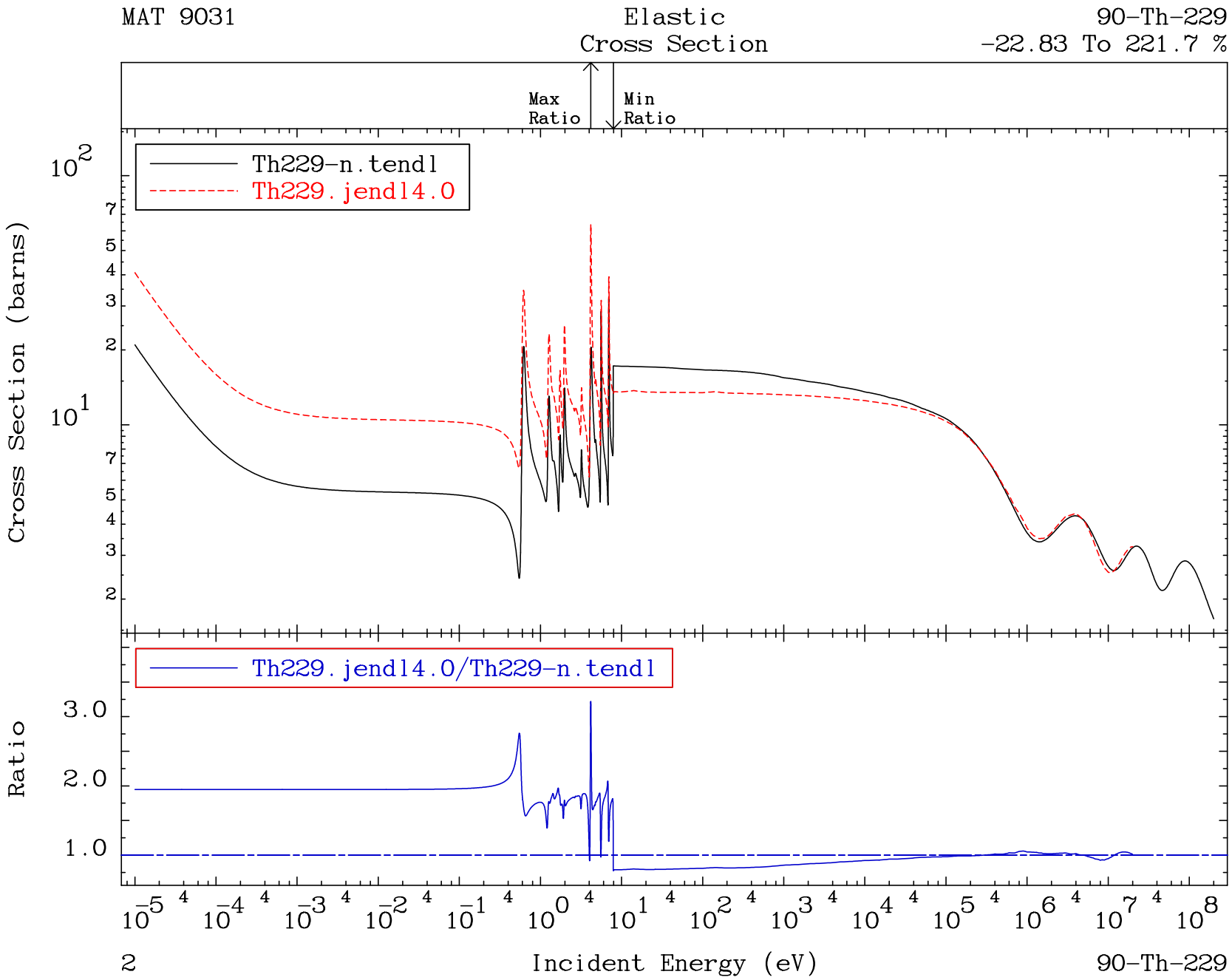

MAT 9031
Prompt $\bar{\nu}$
Parameters
90-Th-229
-40.53 To -23.41%
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jendl4.0
Parameters
7
6
5
4
3
2
Th229.jendl4.0/Th229-n.tendl
Ratio
0.8
0.7
0.6
0
50
100
150
200
3
Incident Energy (MeV)
90-Th-229

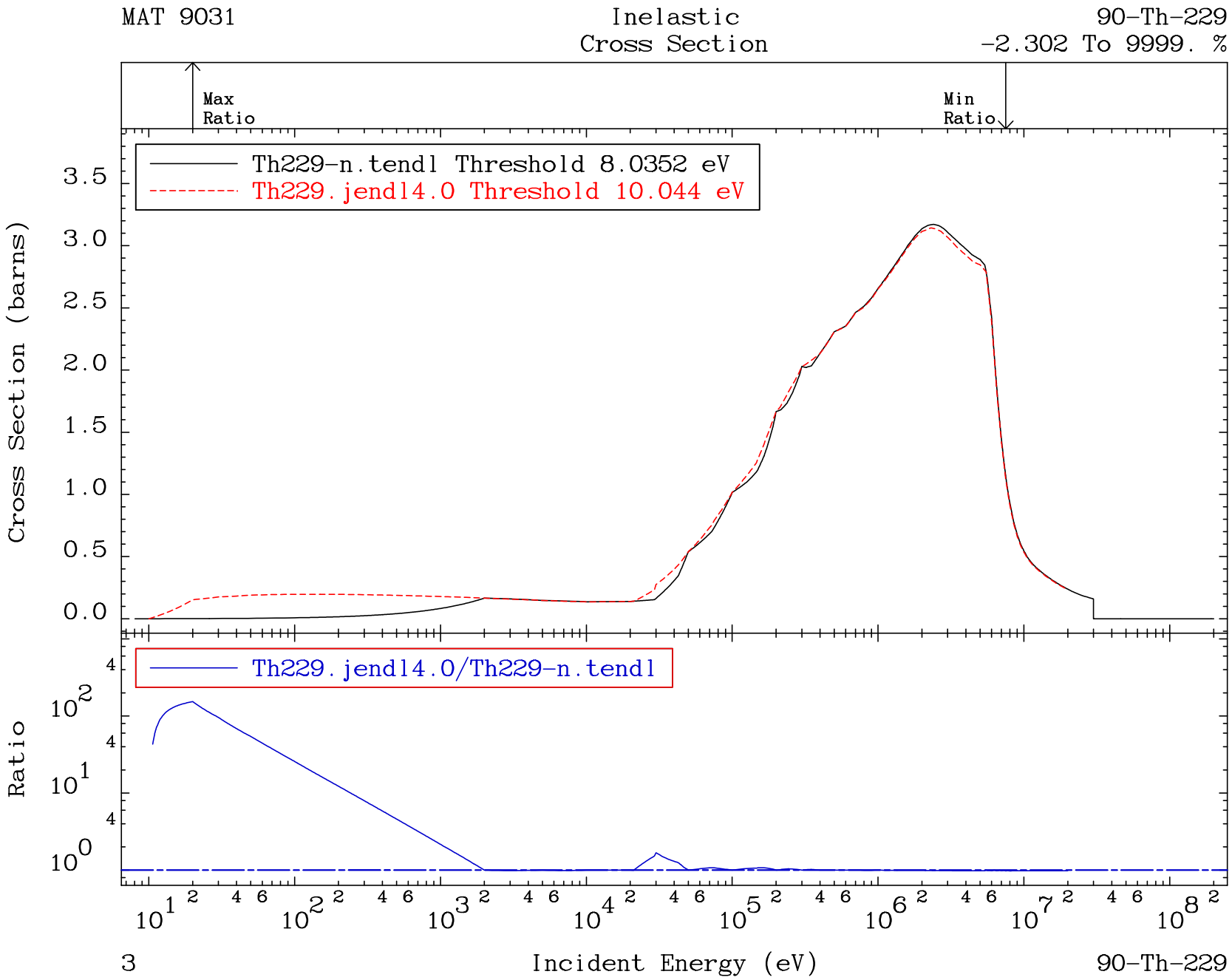

MAT 9031
Total $\bar{\nu}$
Parameters
90-Th-229
-40.34 To -23.37%
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Th229.jendl4.0/Th229-n.tendl
Parameters
Ratio
Incident Energy (MeV)
1
90-Th-229
0
50
100
150
200
3
4
5
6
7
0.6
0.7
0.8

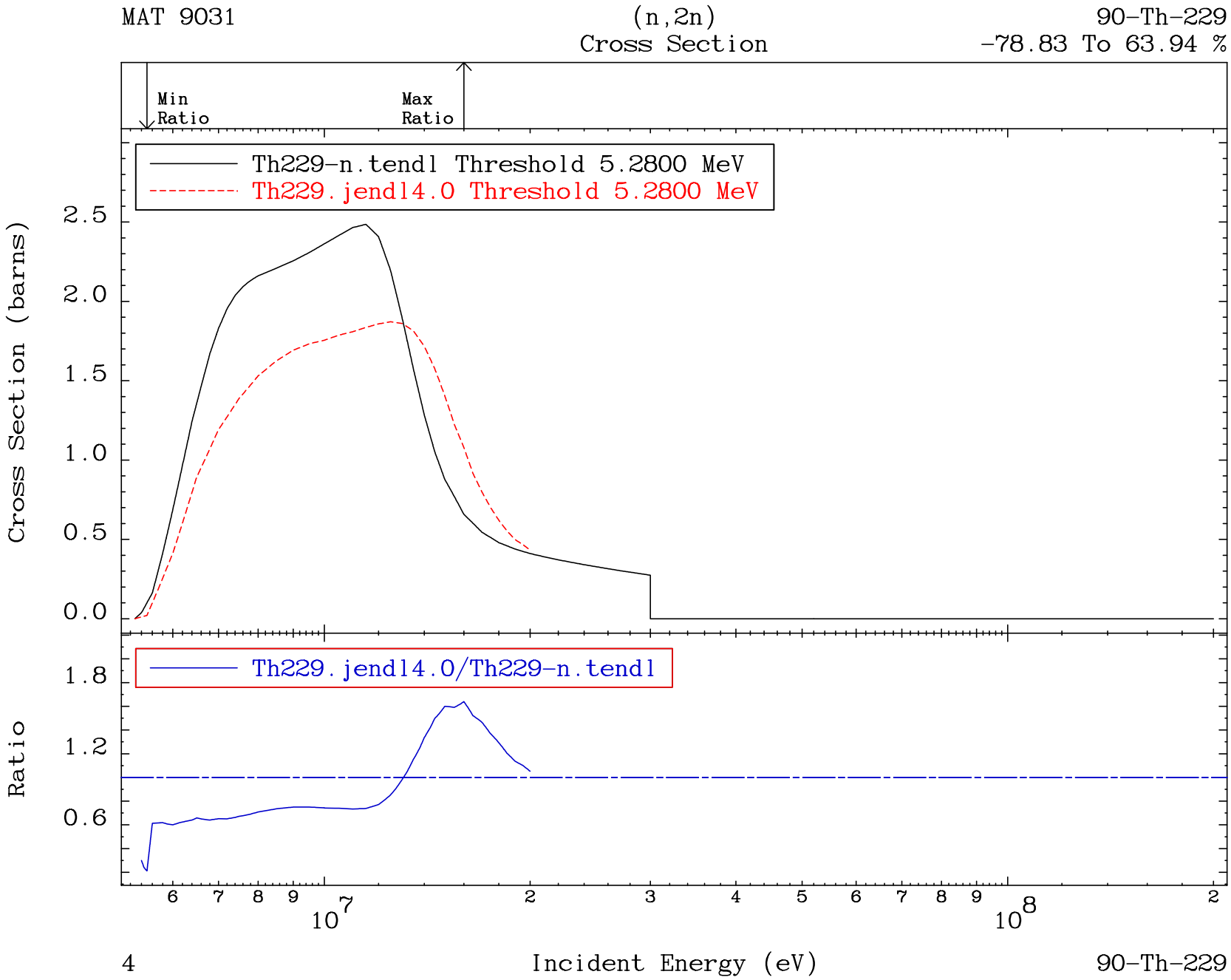

MAT 9031
Delayed $\bar{\nu}$
Parameters
90-Th-229
0.000 To 45.38 %
Max
Ratio
Th229-n.tendl
Th229.jendl4.0
Parameters (10^{-3})
17
16
15
14
13
12
11
Th229.jendl4.0/Th229-n.tendl
Ratio
1.4
1.2
1.0
0
50
100
150
200
2
Incident Energy (MeV)
90-Th-229

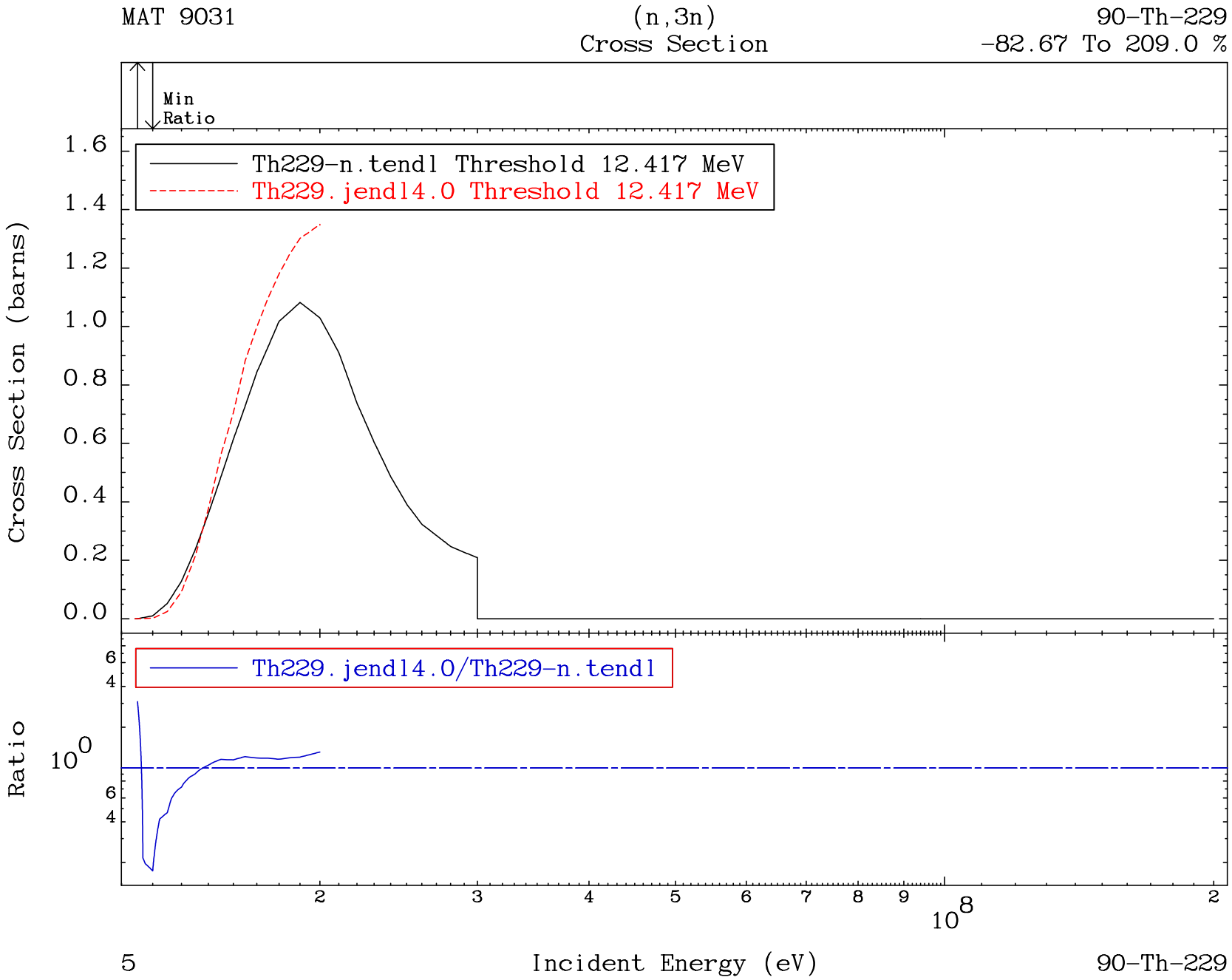

MAT 9031
Prompt $\bar{\nu}$
Parameters
90-Th-229
-40.53 To -23.41%
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jendl4.0
Parameters
7
6
5
4
3
2
Th229.jendl4.0/Th229-n.tendl
Ratio
0.8
0.7
0.6
0
50
100
150
200
3
Incident Energy (MeV)
90-Th-229

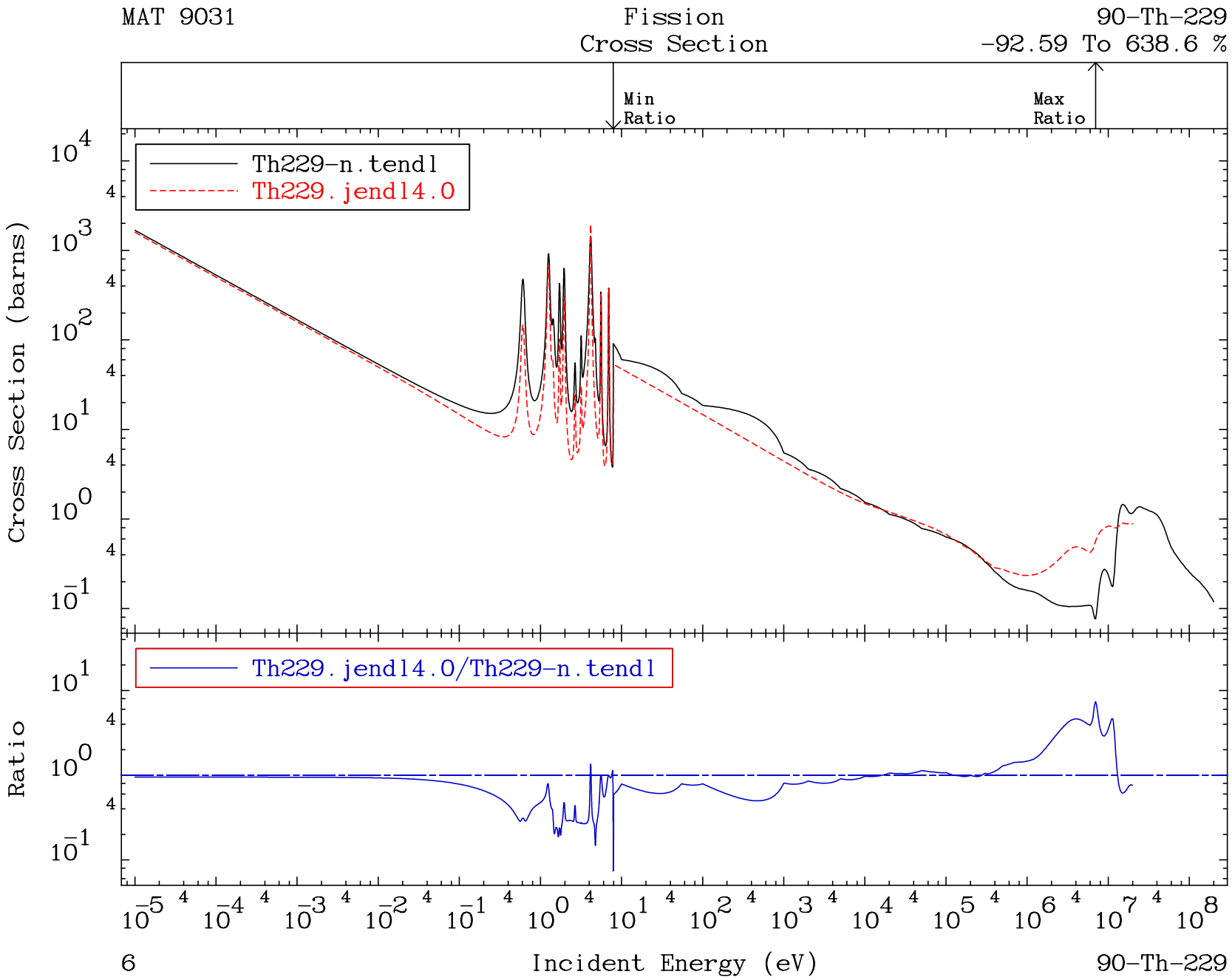

MAT 9031
Total
Cross Section
90-Th-229
-90.31 To 109.6 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
1
90-Th-229

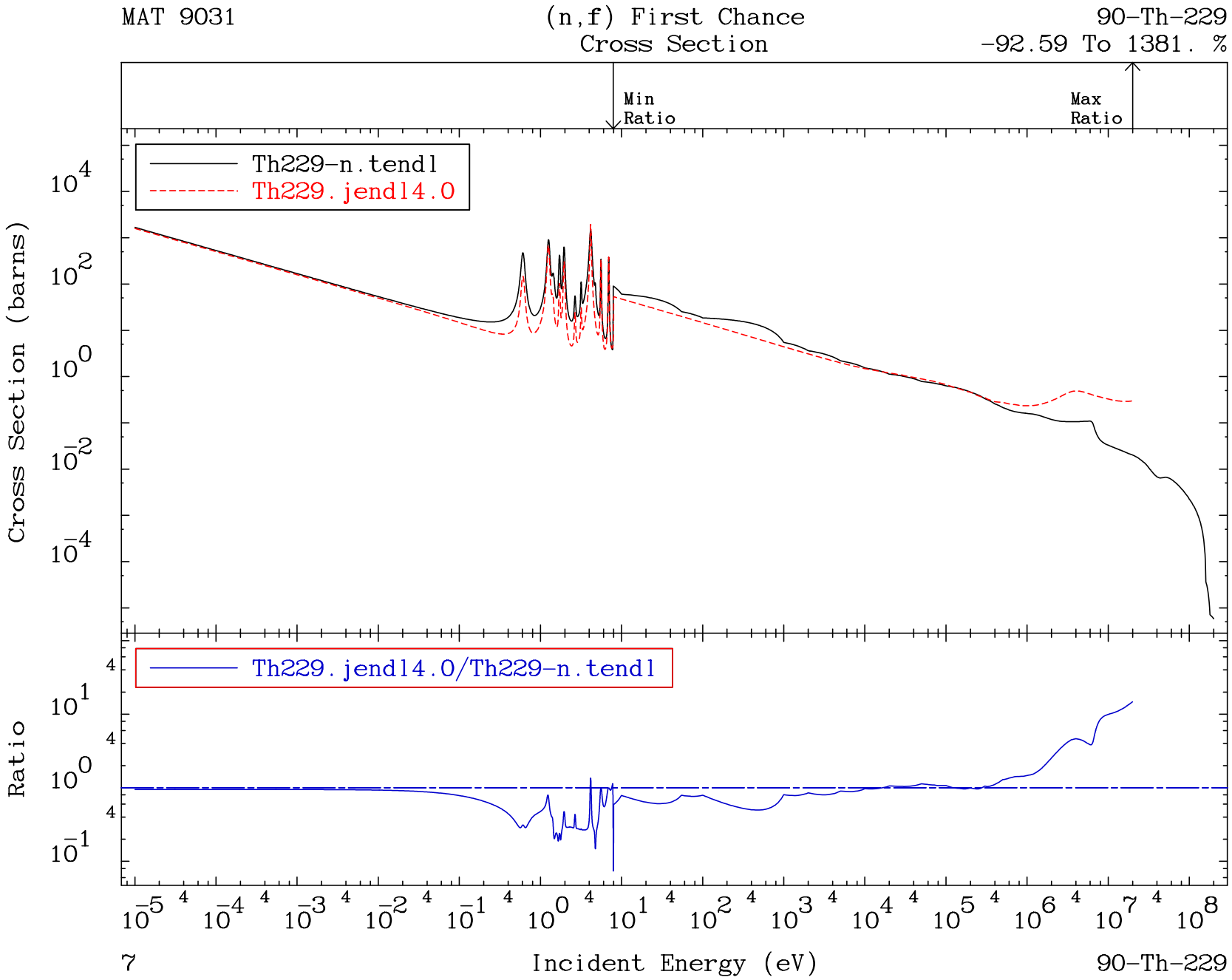

MAT 9031
Elastic
Cross Section
90-Th-229
-22.83 To 221.7 %
Max
Ratio
Min
Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
2
90-Th-229

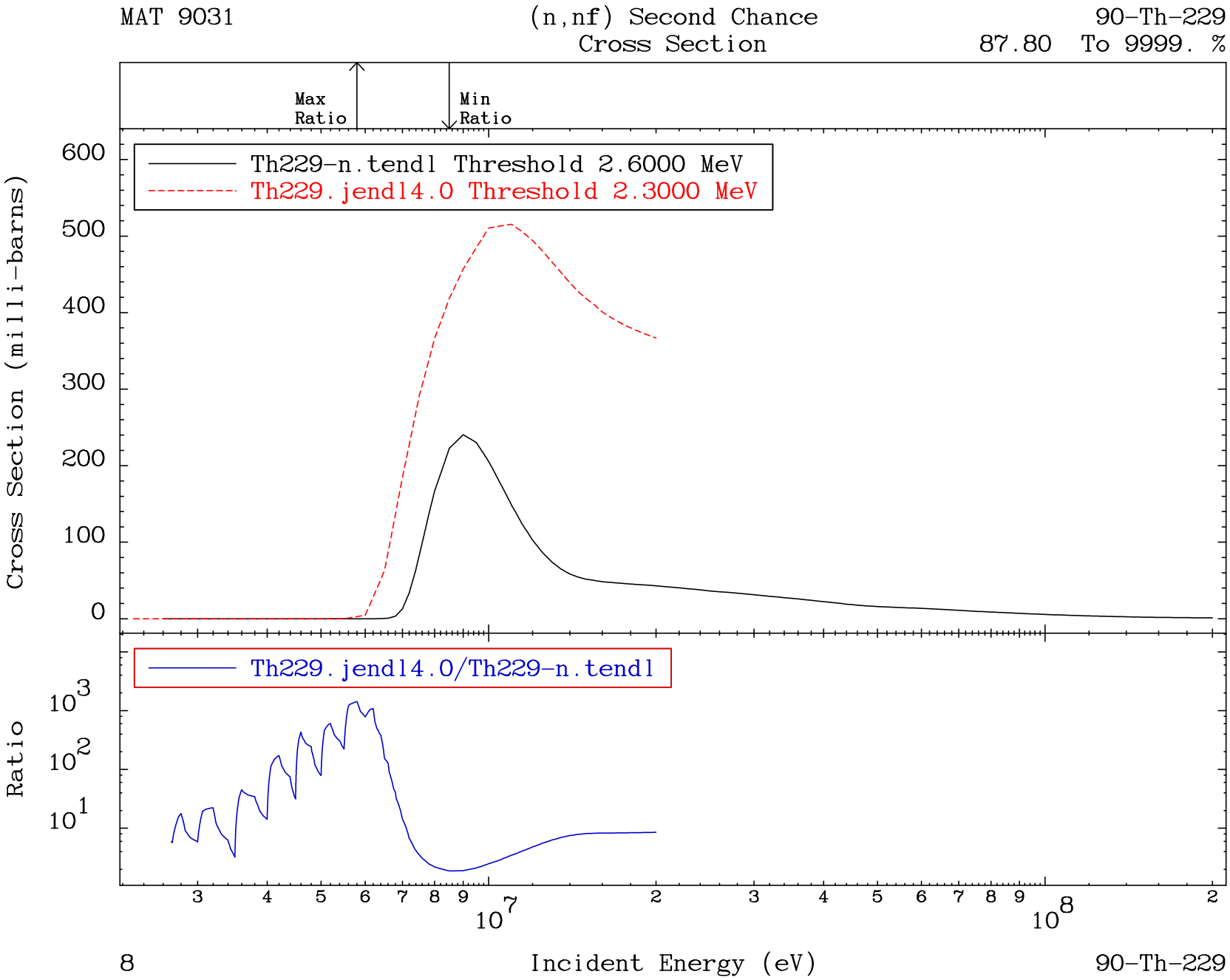

MAT 9031
Inelastic
Cross Section
90-Th-229
-2.302 To 9999. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 8.0352 eV
Th229.jendl4.0 Threshold 10.044 eV
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
3
90-Th-229

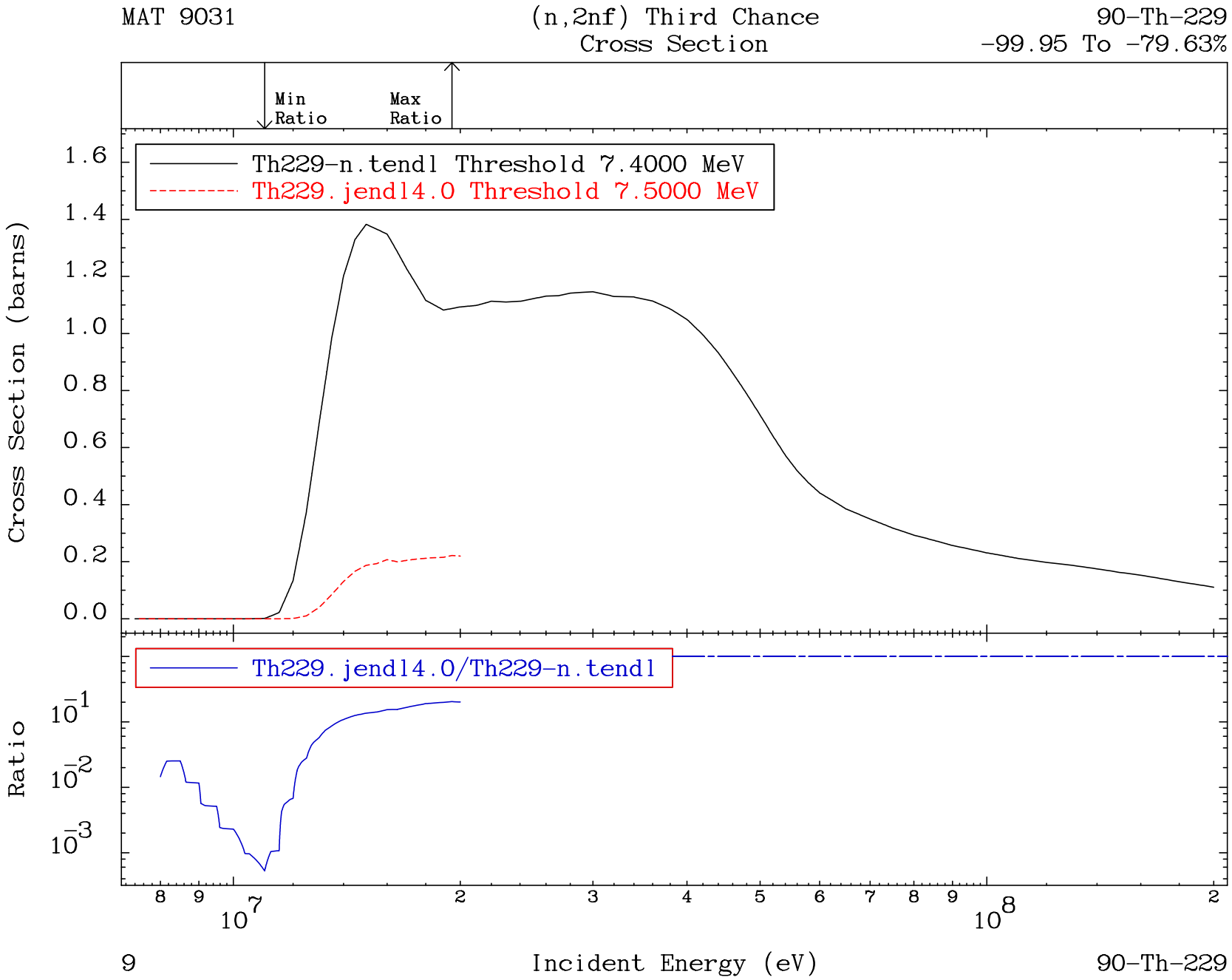

MAT 9031
(n,2n)
Cross Section
90-Th-229
-78.83 To 63.94 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 5.2800 MeV
Th229.jendl4.0 Threshold 5.2800 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
Th229.jendl4.0/Th229-n.tendl
Ratio
1.8
1.2
0.6
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
4
Incident Energy (eV)
90-Th-229

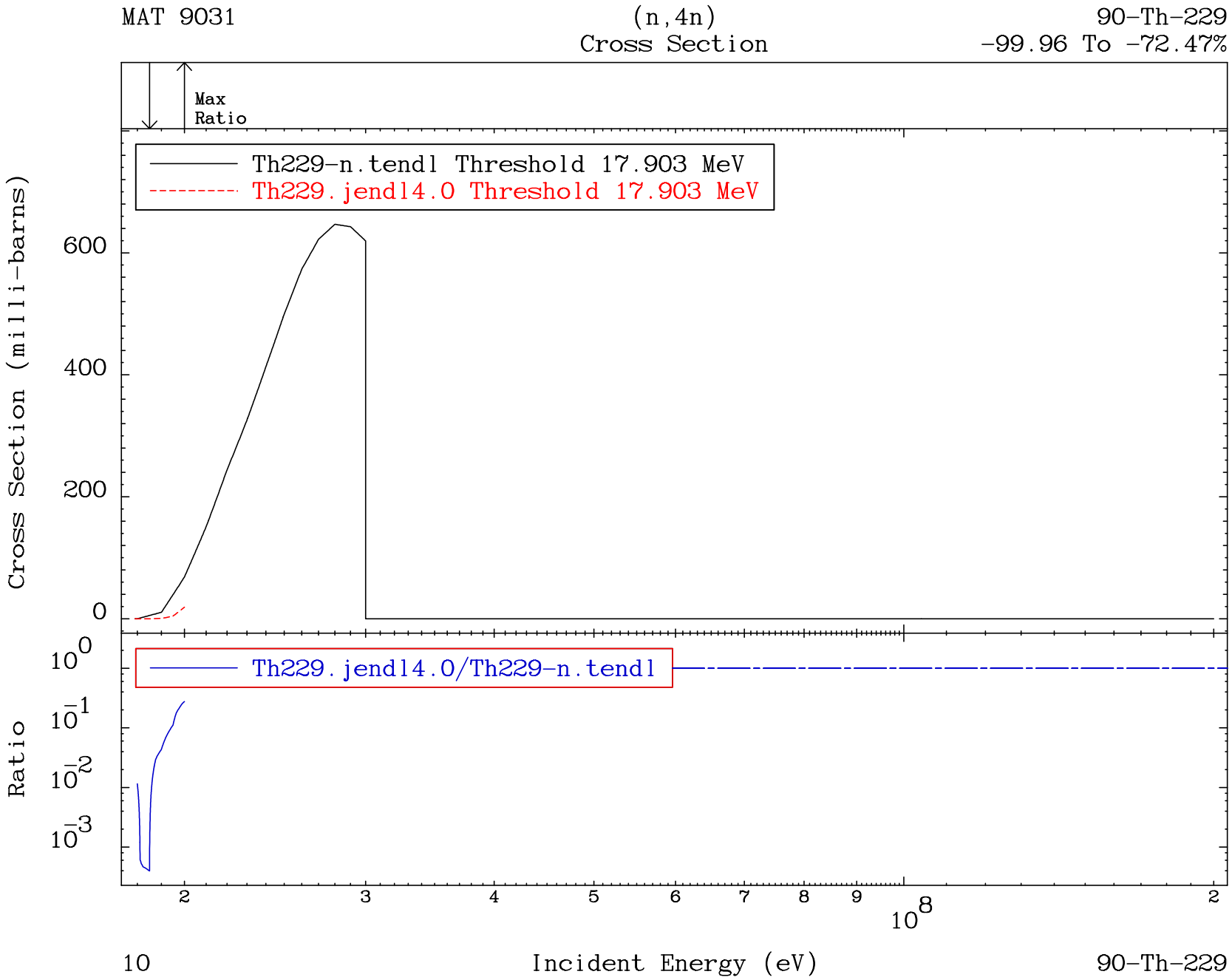

MAT 9031
(n,3n)
Cross Section
90-Th-229
-82.67 To 209.0 %
Min
Ratio
Th229-n.tendl Threshold 12.417 MeV
Th229.jendl4.0 Threshold 12.417 MeV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Th229.jendl4.0/Th229-n.tendl
Ratio
6
4
10^0
6
4
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
90-Th-229

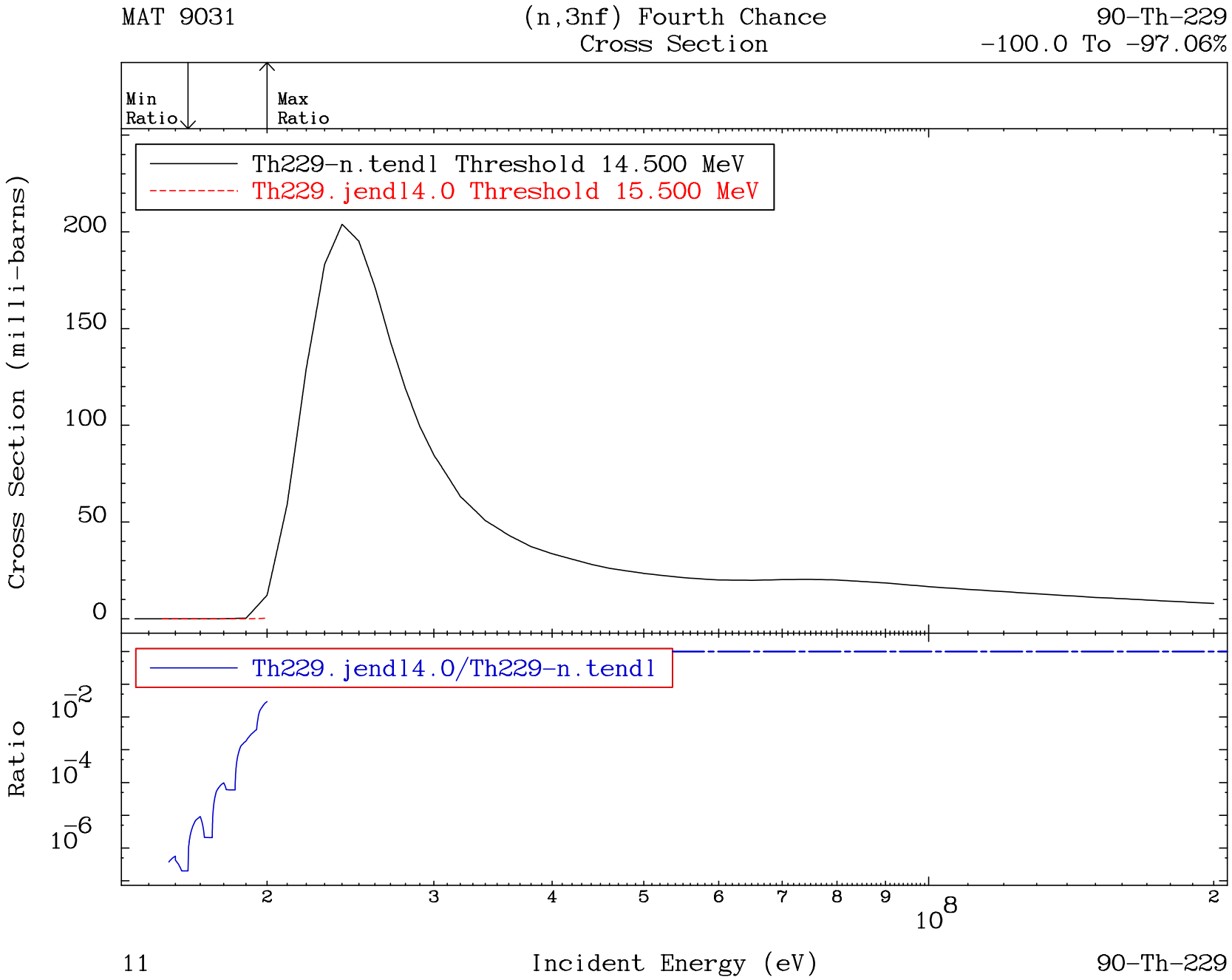

MAT 9031
Fission
Cross Section
90-Th-229
-92.59 To 638.6 %
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
6
90-Th-229

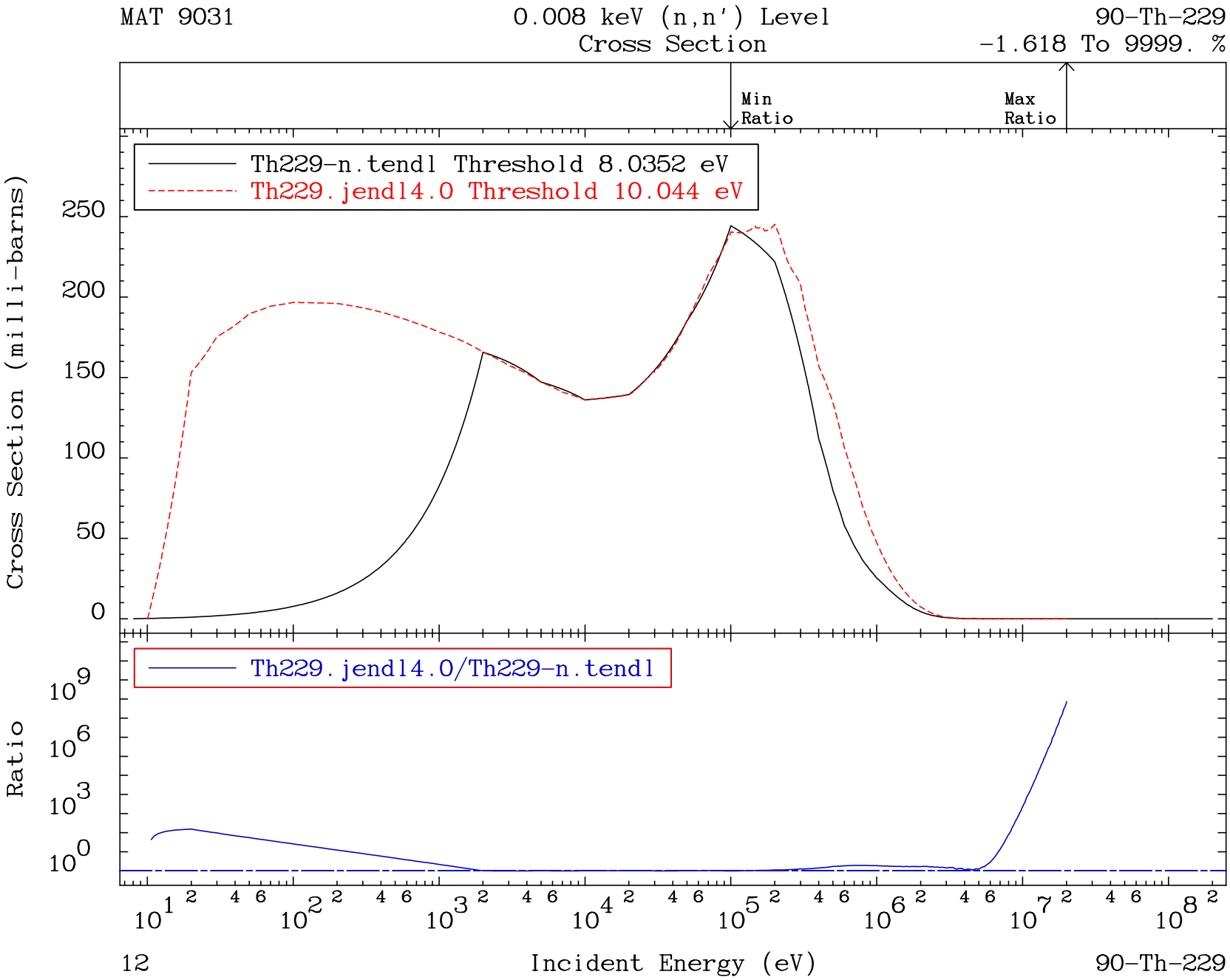

MAT 9031
(n,f) First Chance
Cross Section
90-Th-229
-92.59 To 1381. %
Min
Ratio
Max
Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
7
90-Th-229

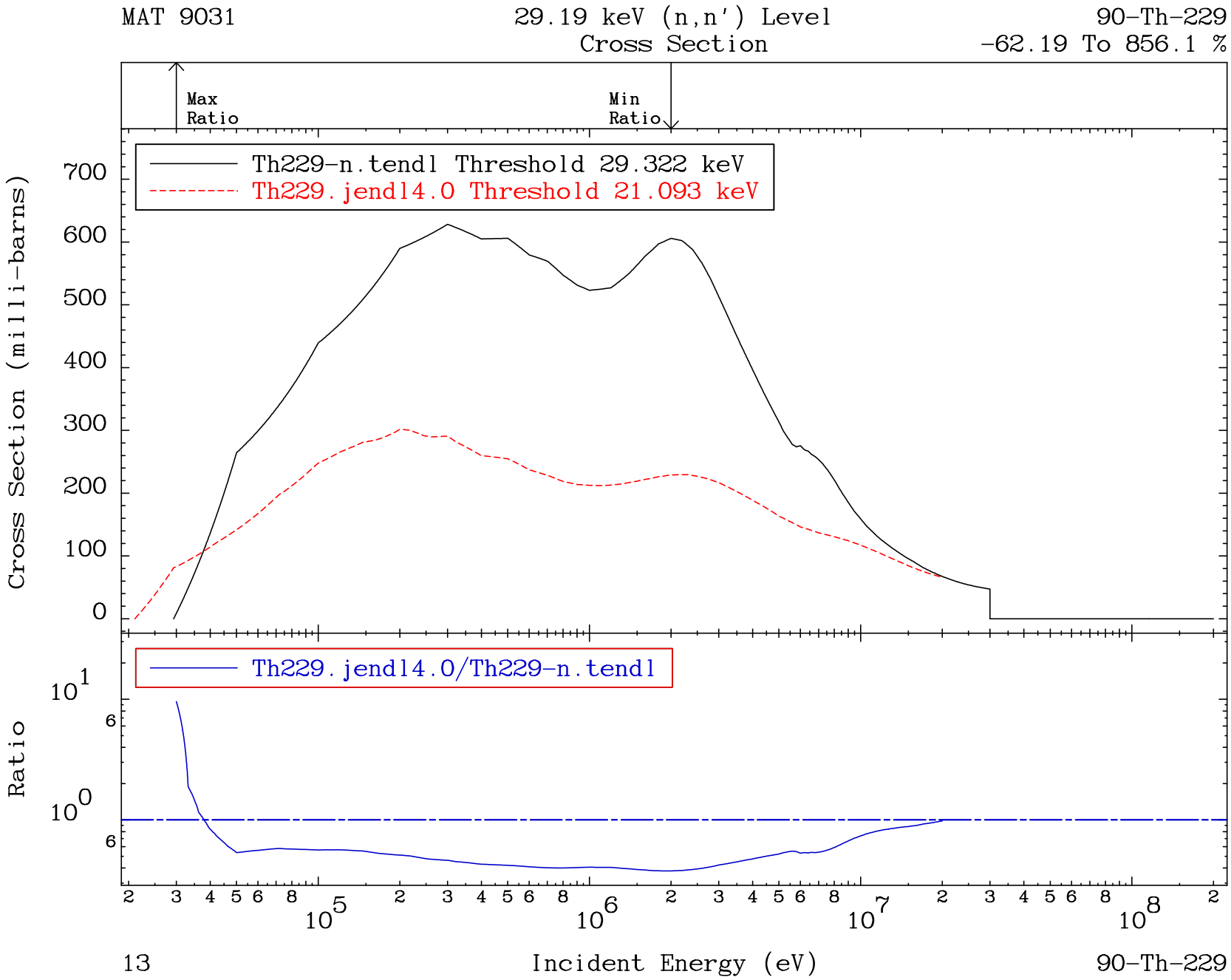

MAT 9031
(n,nf) Second Chance
Cross Section
90-Th-229
87.80 To 9999. %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 2.6000 MeV
Th229.jendl4.0 Threshold 2.3000 MeV
Cross Section (milli-barns)
600
500
400
300
200
100
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^3
10^2
10^1
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
8
Incident Energy (eV)
90-Th-229

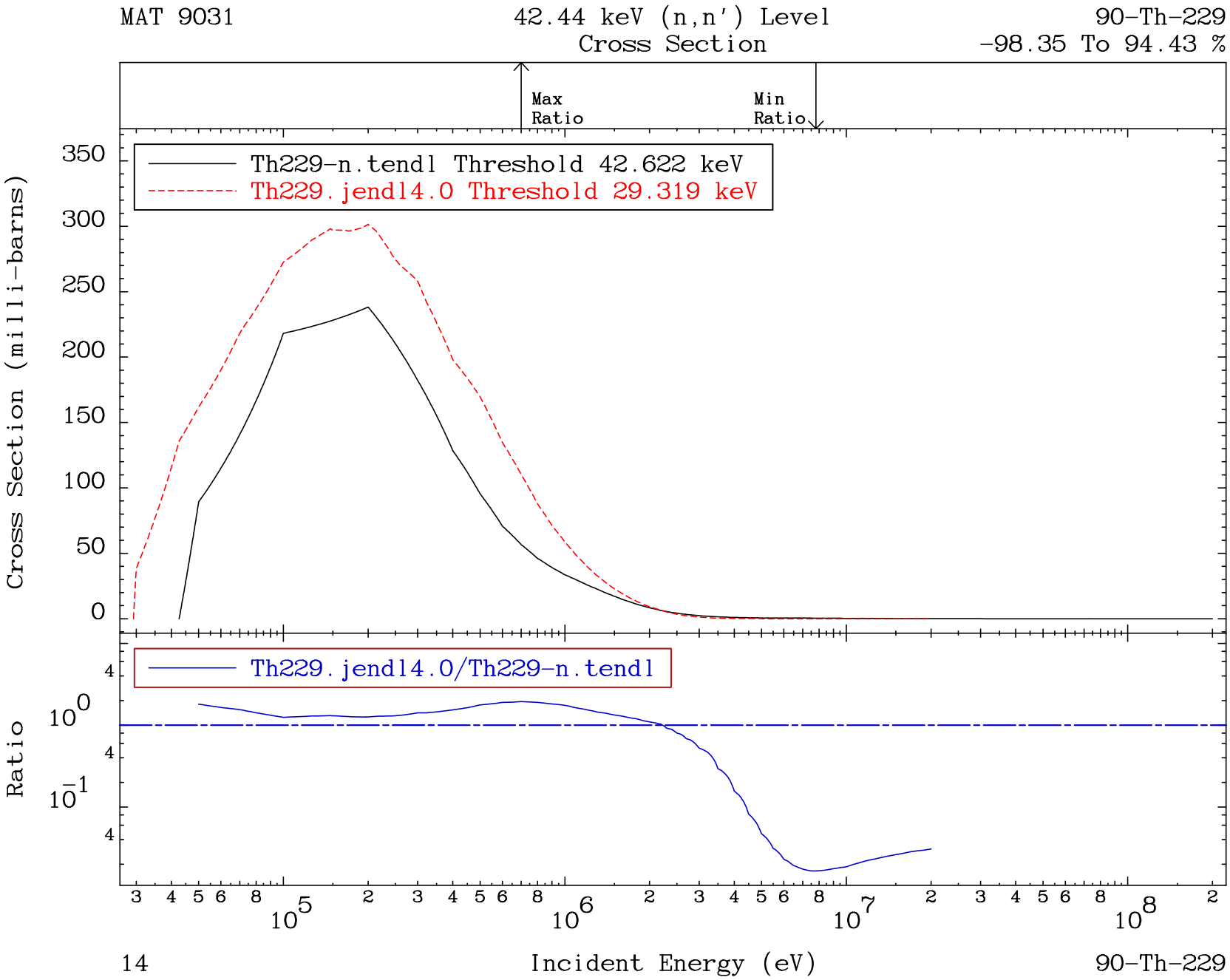

MAT 9031
(n,2nf) Third Chance
Cross Section
90-Th-229
-99.95 To -79.63%
Min Ratio
Max Ratio
Th229-n.tendl Threshold 7.4000 MeV
Th229.jendl4.0 Threshold 7.5000 MeV
Cross Section (barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Th229.jendl4.0/Th229-n.tendl
Ratio
10-1
10-2
10-3
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
9
Incident Energy (eV)
90-Th-229

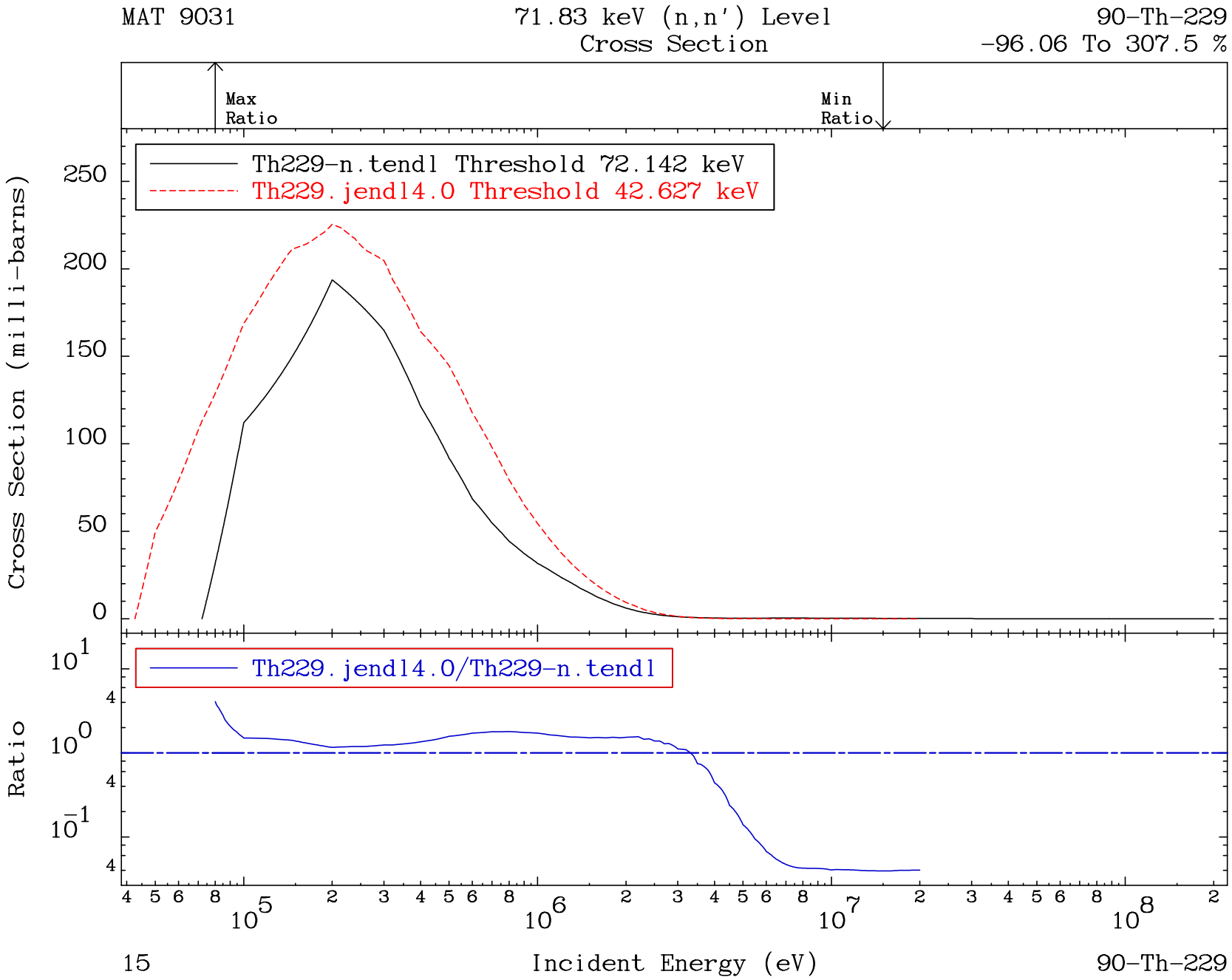

MAT 9031
(n,4n)
Cross Section
90-Th-229
-99.96 To -72.47%
Max
Ratio
Th229-n.tendl Threshold 17.903 MeV
Th229.jendl4.0 Threshold 17.903 MeV
Cross Section (milli-barns)
600
400
200
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
10^-1
10^-2
10^-3
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
90-Th-229

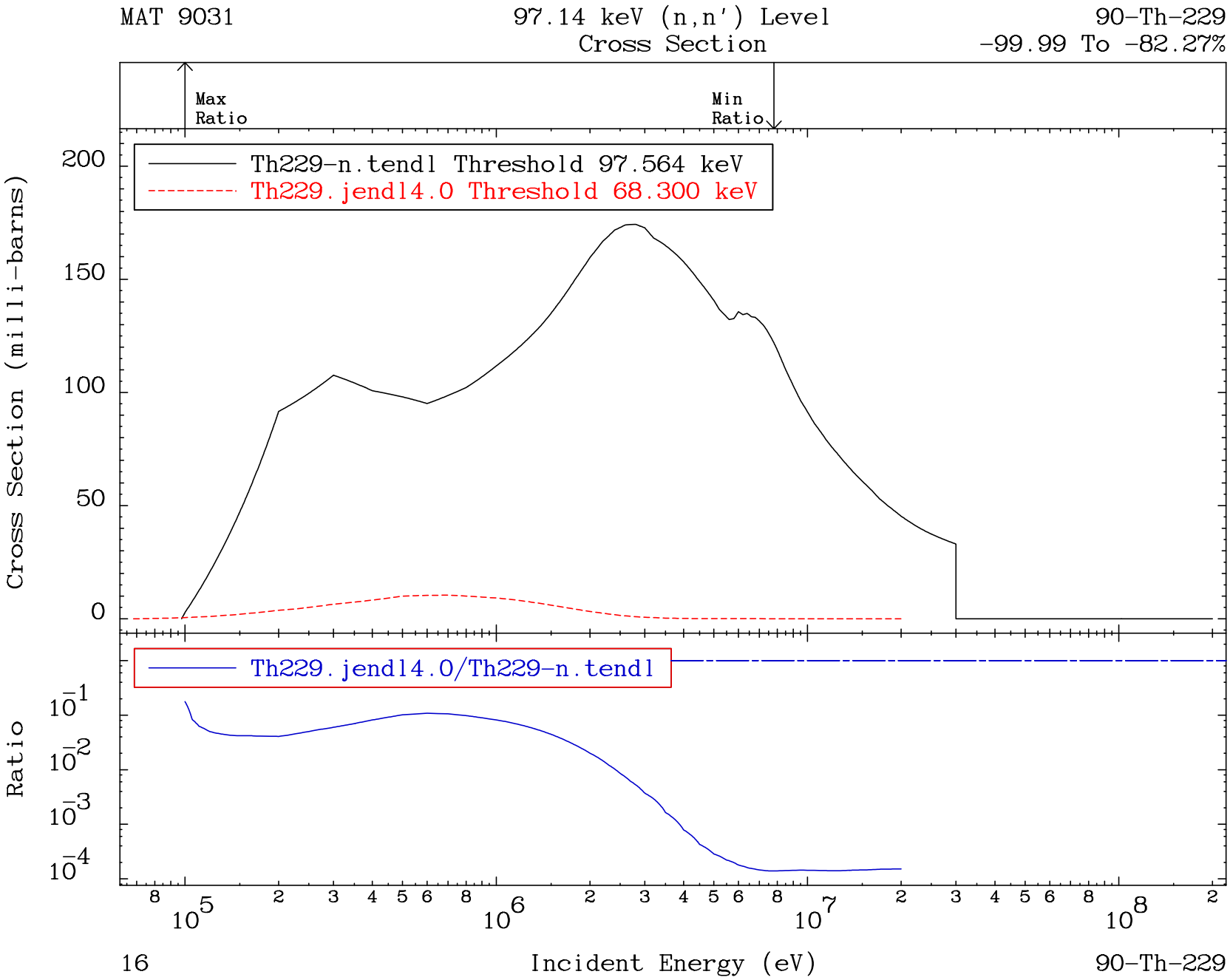

MAT 9031
(n,3nf) Fourth Chance
Cross Section
90-Th-229
-100.0 To -97.06%
Min
Ratio
Max
Ratio
Th229-n.tendl Threshold 14.500 MeV
Th229.jendl4.0 Threshold 15.500 MeV
Cross Section (milli-barns)
200
150
100
50
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10-2
10-4
10-6
2
3
4
5
6
7
8
9
2
10 8
11
Incident Energy (eV)
90-Th-229

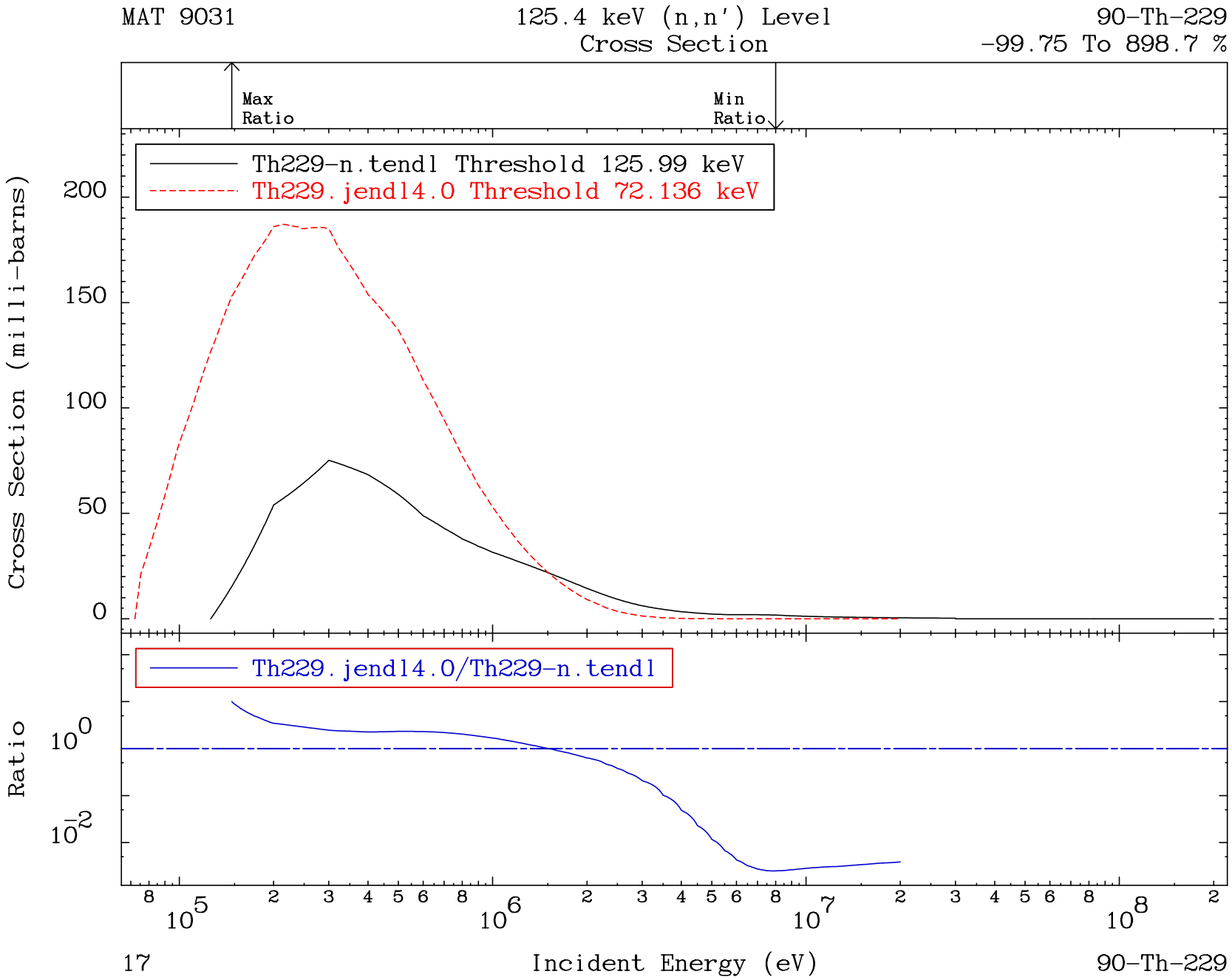

MAT 9031
0.008 keV (n,n') Level
Cross Section
90-Th-229
-1.618 To 9999. %
Min
Ratio
Max
Ratio
Th229-n.tendl Threshold 8.0352 eV
Th229.jendl4.0 Threshold 10.044 eV
Cross Section (milli-barns)
250
200
150
100
50
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^9
10^6
10^3
10^0
10^1 2 4 6 10^2 2 4 6 10^3 2 4 6 10^4 2 4 6 10^5 2 4 6 10^6 2 4 6 10^7 2 4 6 10^8 2
12
Incident Energy (eV)
90-Th-229

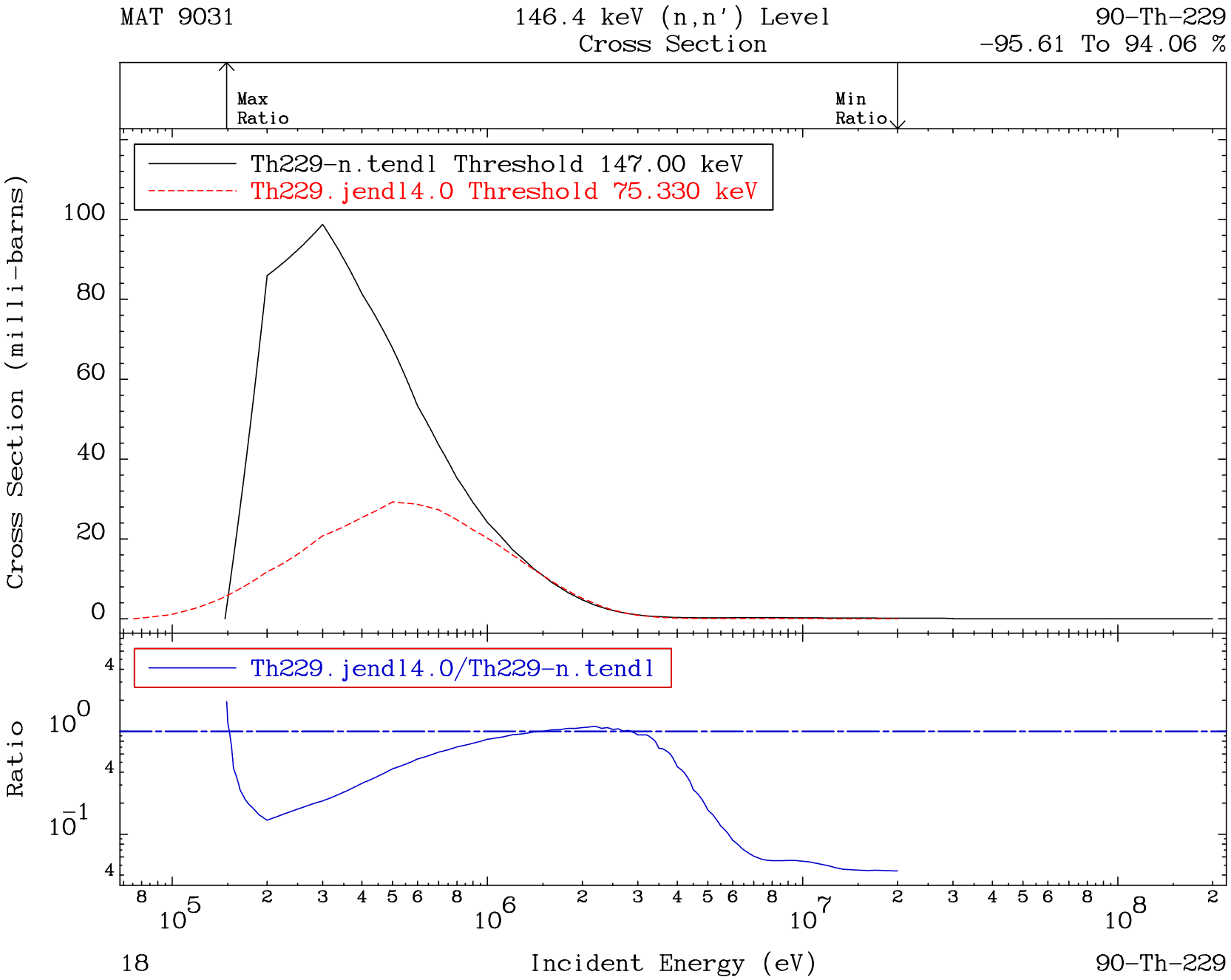

MAT 9031
29.19 keV (n,n') Level
Cross Section
90-Th-229
-62.19 To 856.1 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 29.322 keV
Th229.jendl4.0 Threshold 21.093 keV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
6
6
2 3 4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
13
Incident Energy (eV)
90-Th-229

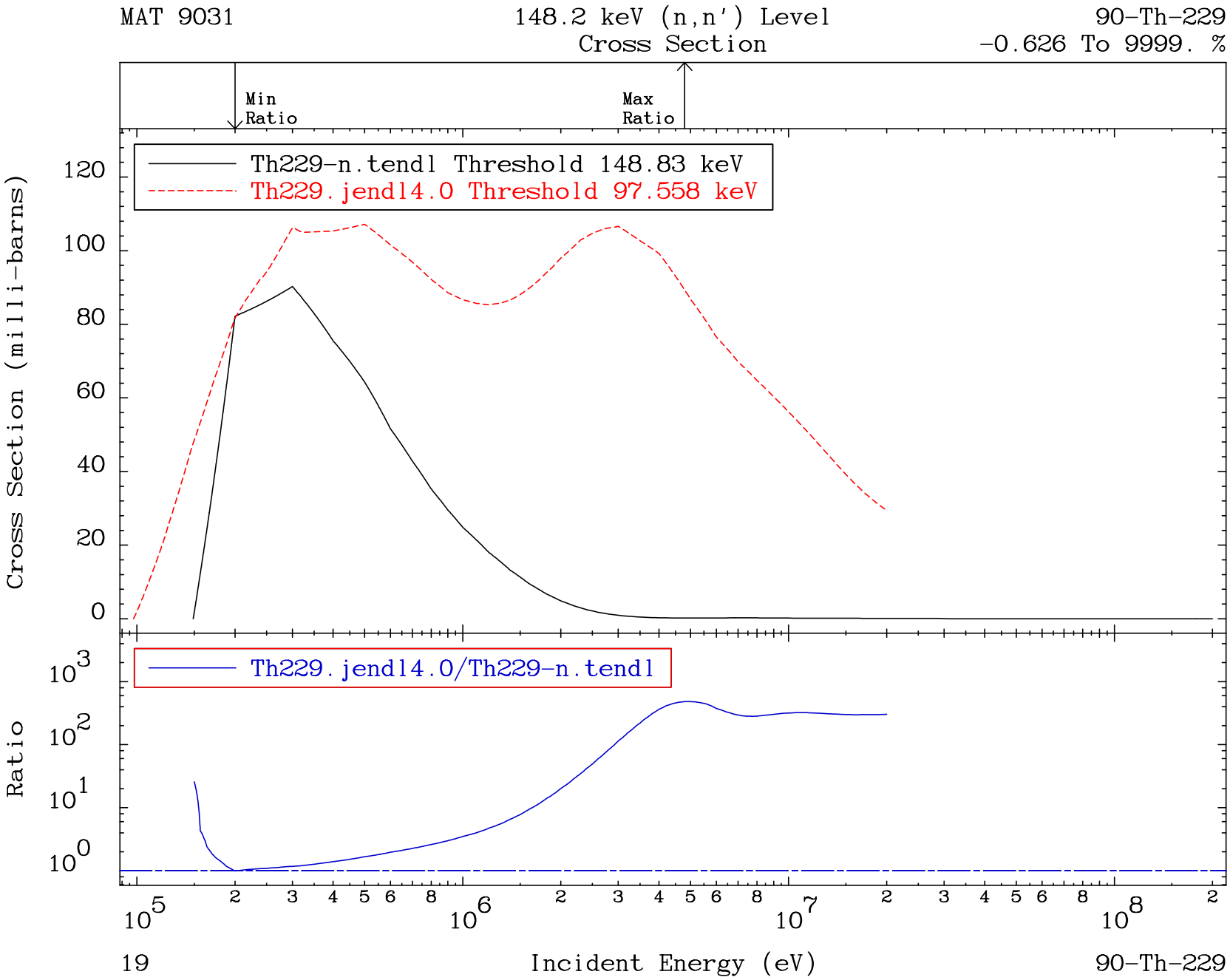

MAT 9031
42.44 keV (n,n') Level
Cross Section
90-Th-229
-98.35 To 94.43 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 42.622 keV
Th229.jendl4.0 Threshold 29.319 keV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^{0}
10^{-1}
10^{5}
10^{6}
10^{7}
10^{8}
Incident Energy (eV)
14
90-Th-229

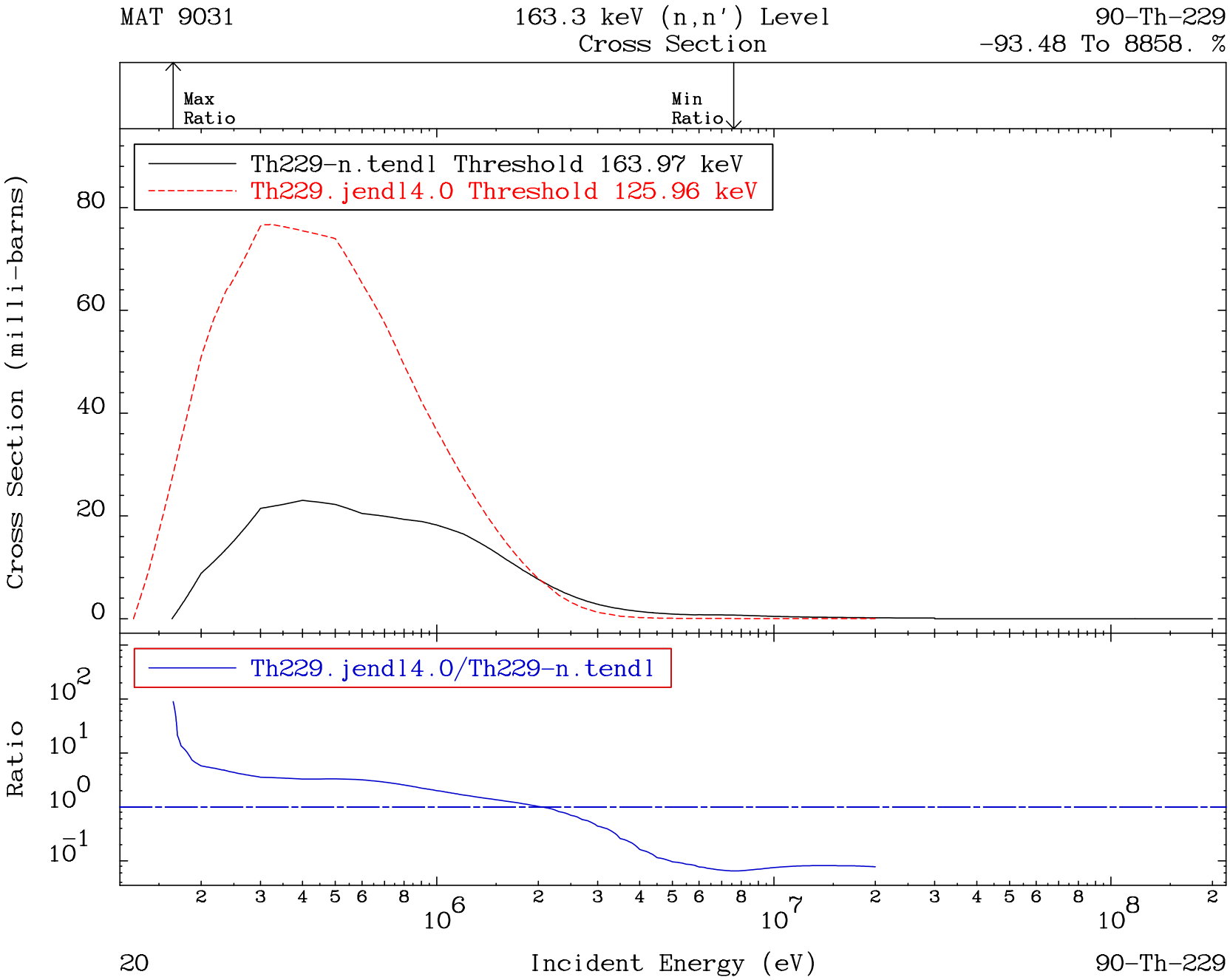

MAT 9031
71.83 keV (n,n') Level
Cross Section
90-Th-229
-96.06 To 307.5 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 72.142 keV
Th229.jendl4.0 Threshold 42.627 keV
Cross Section (milli-barns)
250
200
150
100
50
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
10^-1
4
4
4
4 5 6 8 10^5 2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
15
Incident Energy (eV)
90-Th-229

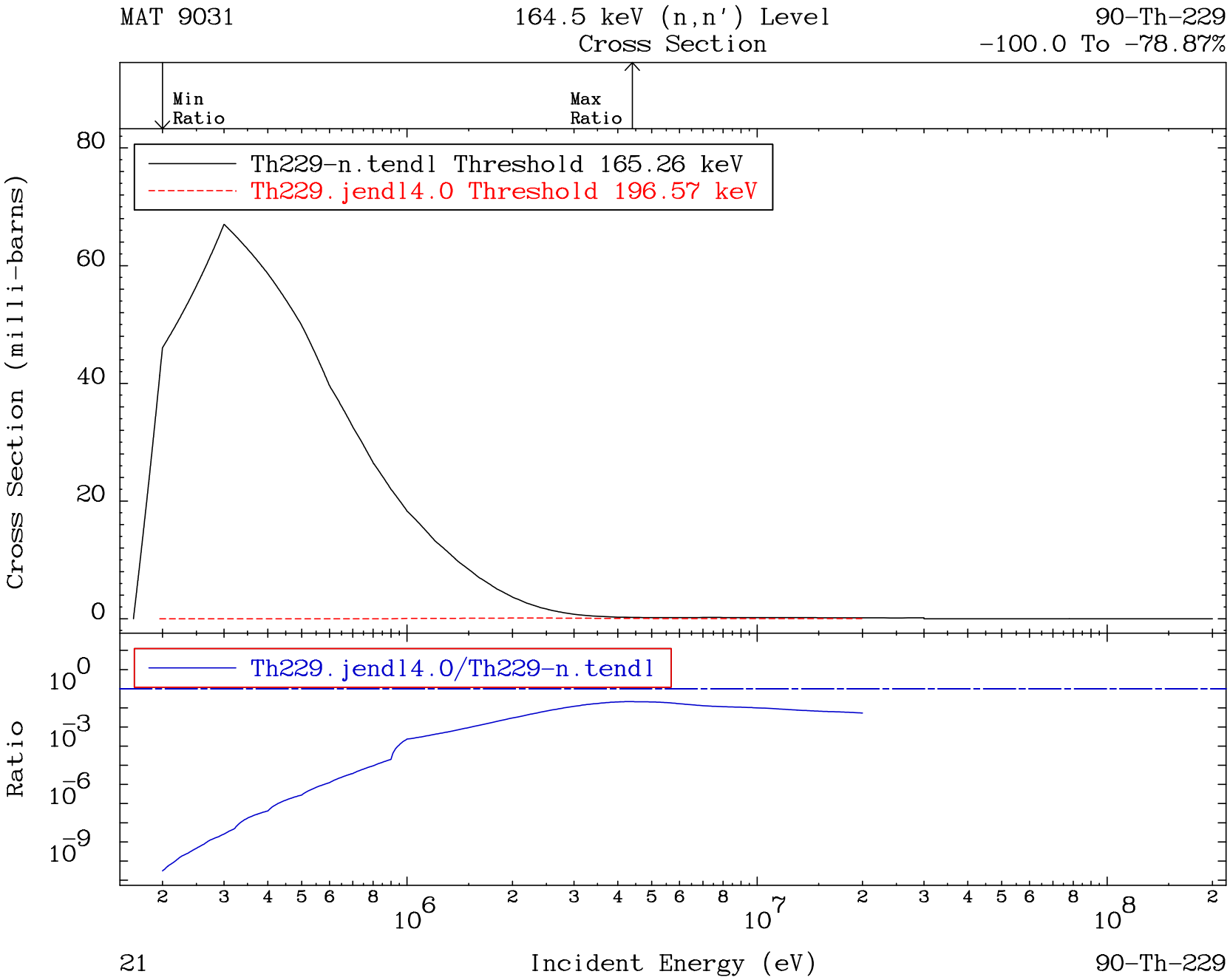

MAT 9031
97.14 keV (n,n') Level
Cross Section
90-Th-229
-99.99 To -82.27%
Max Ratio
Min Ratio
Th229-n.tendl Threshold 97.564 keV
Th229.jendl4.0 Threshold 68.300 keV
Cross Section (milli-barns)
200
150
100
50
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^{-1}
10^{-2}
10^{-3}
10^{-4}
8
10^{5}
2 3 4 5 6 8
10^{6}
2 3 4 5 6 8
10^{7}
2 3 4 5 6 8
10^{8}
2
16
Incident Energy (eV)
90-Th-229

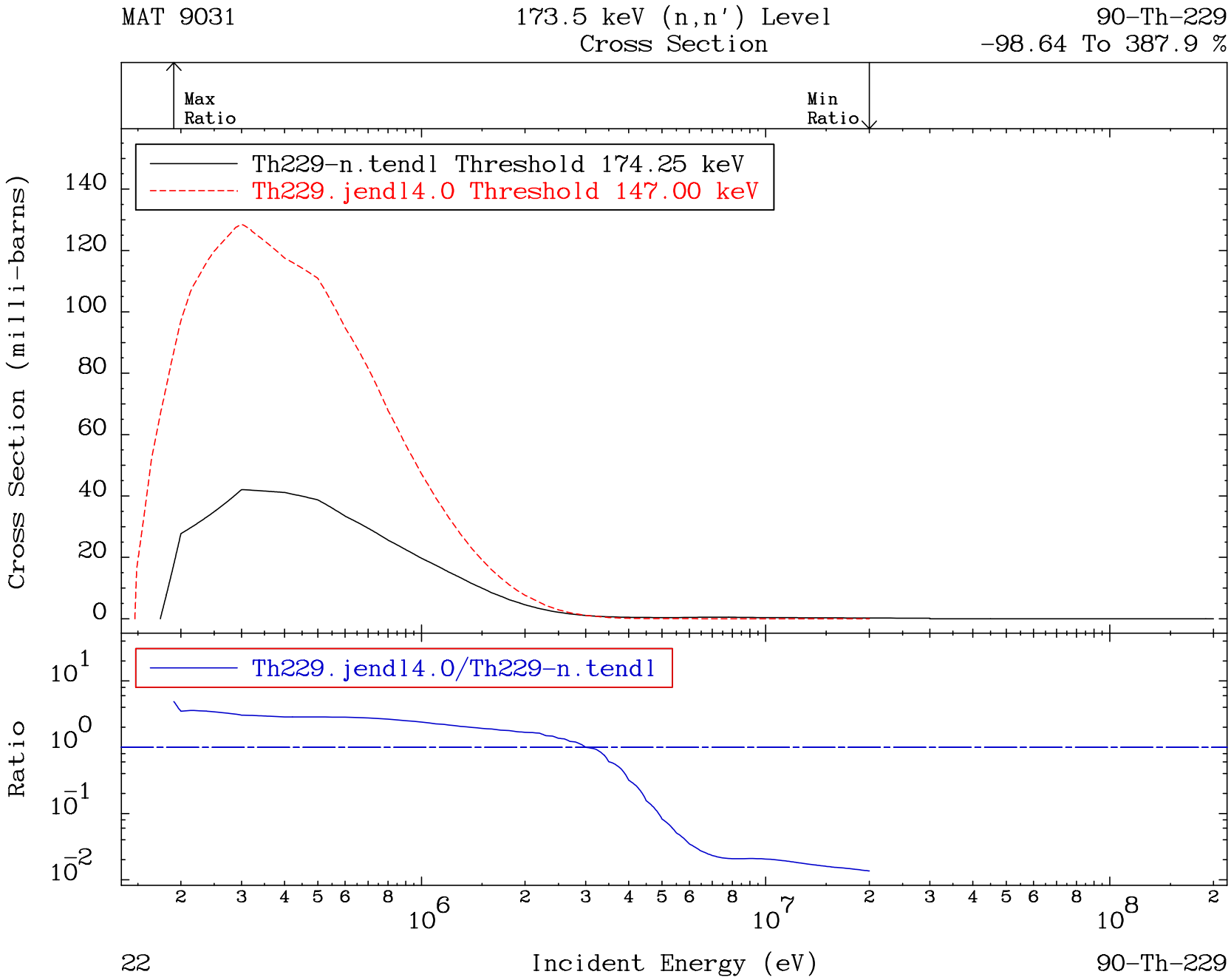

MAT 9031
125.4 keV (n,n') Level
Cross Section
90-Th-229
-99.75 To 898.7 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 125.99 keV
Th229.jendl4.0 Threshold 72.136 keV
Cross Section (milli-barns)
200
150
100
50
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
10^-2
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
17
Incident Energy (eV)
90-Th-229

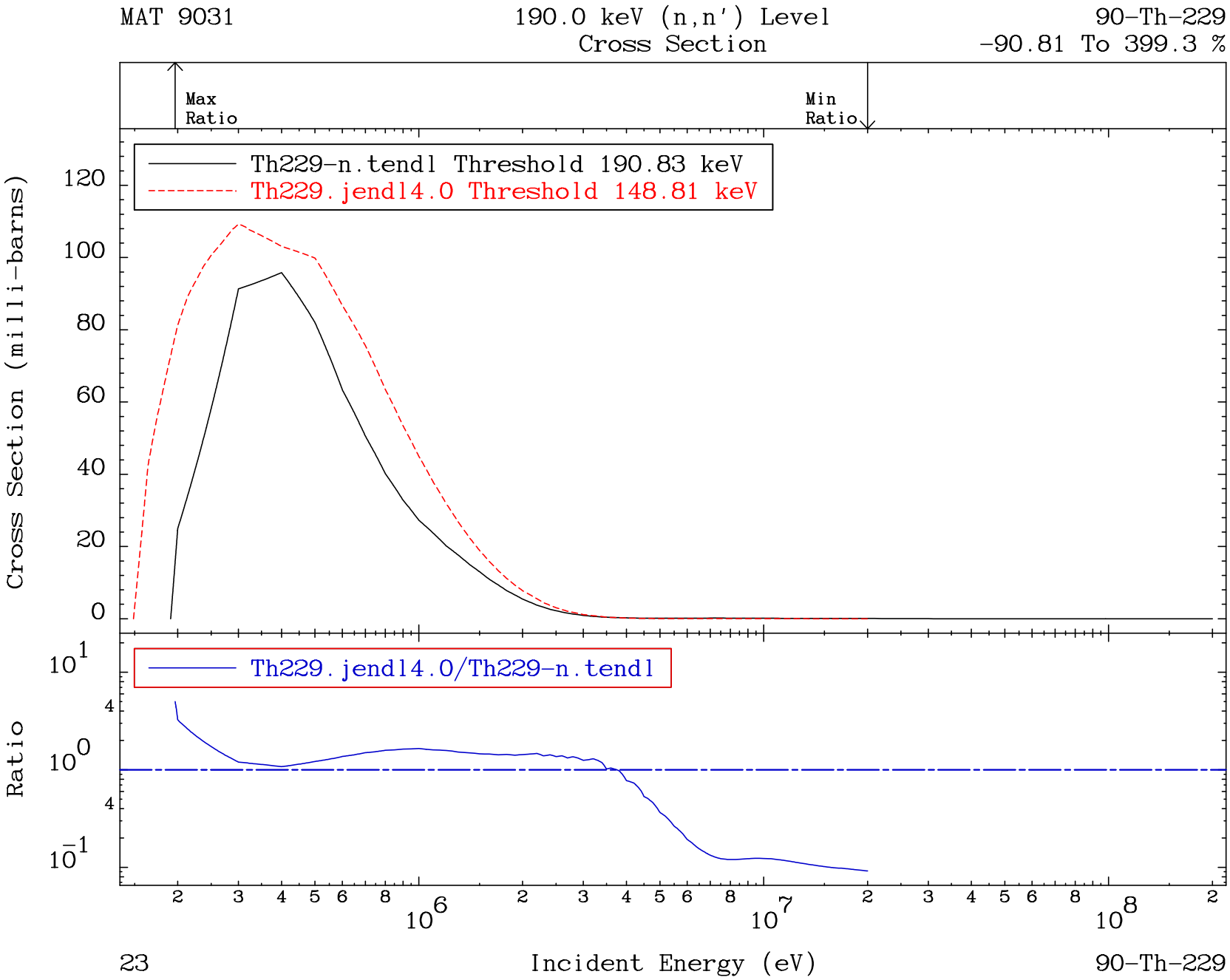

MAT 9031
146.4 keV (n,n') Level
Cross Section
90-Th-229
-95.61 To 94.06 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 147.00 keV
Th229.jendl4.0 Threshold 75.330 keV
Cross Section (milli-barns)
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
4
10^0
4
10^{-1}
4
8
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
18
Incident Energy (eV)
90-Th-229

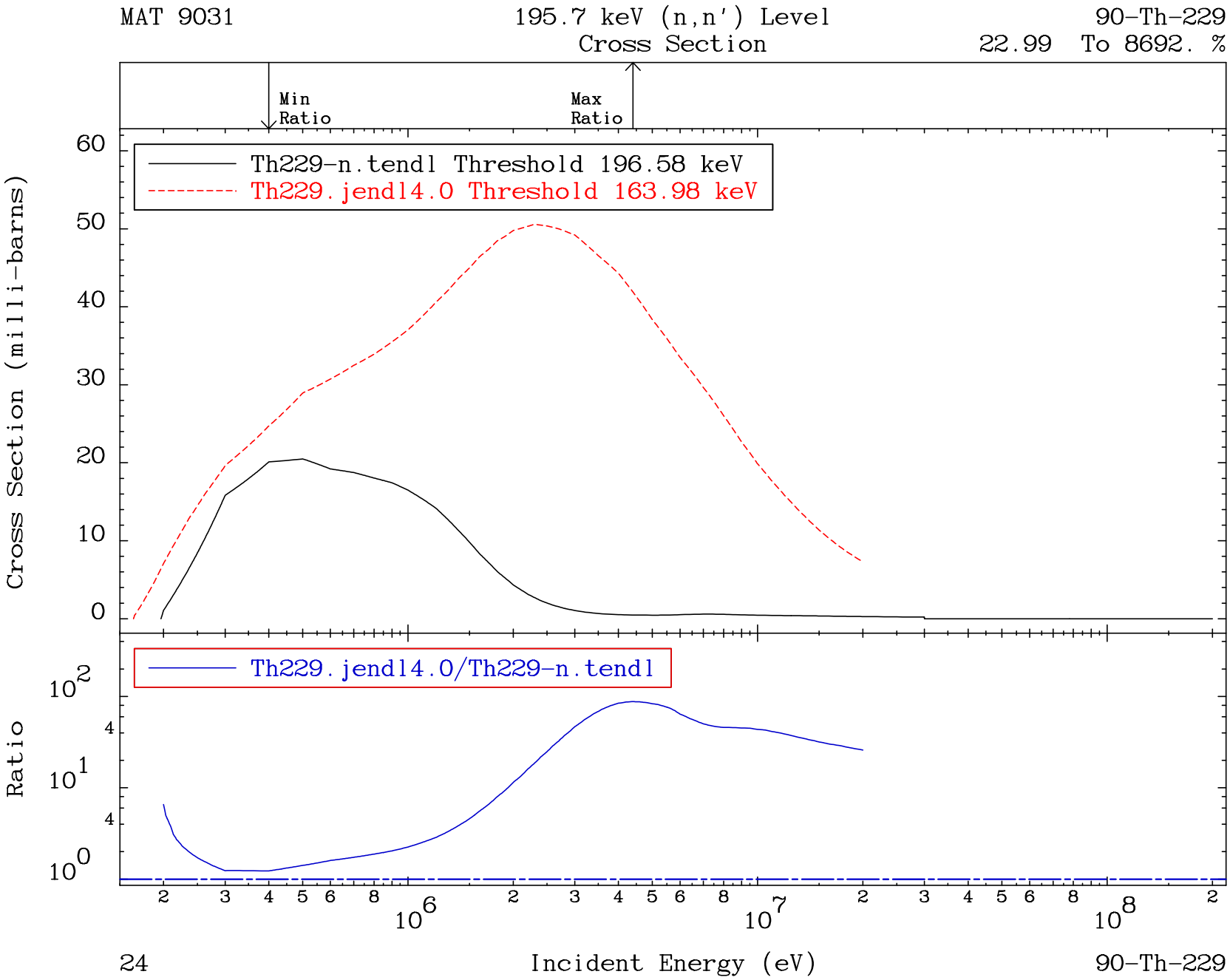

MAT 9031
148.2 keV (n,n') Level
Cross Section
90-Th-229
-0.626 To 9999. %
Min
Ratio
Max
Ratio
Th229-n.tendl Threshold 148.83 keV
Th229.jendl4.0 Threshold 97.558 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^3
10^2
10^1
10^0
10^5
2
3
4
5
6
8
10^6
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
19
Incident Energy (eV)
90-Th-229

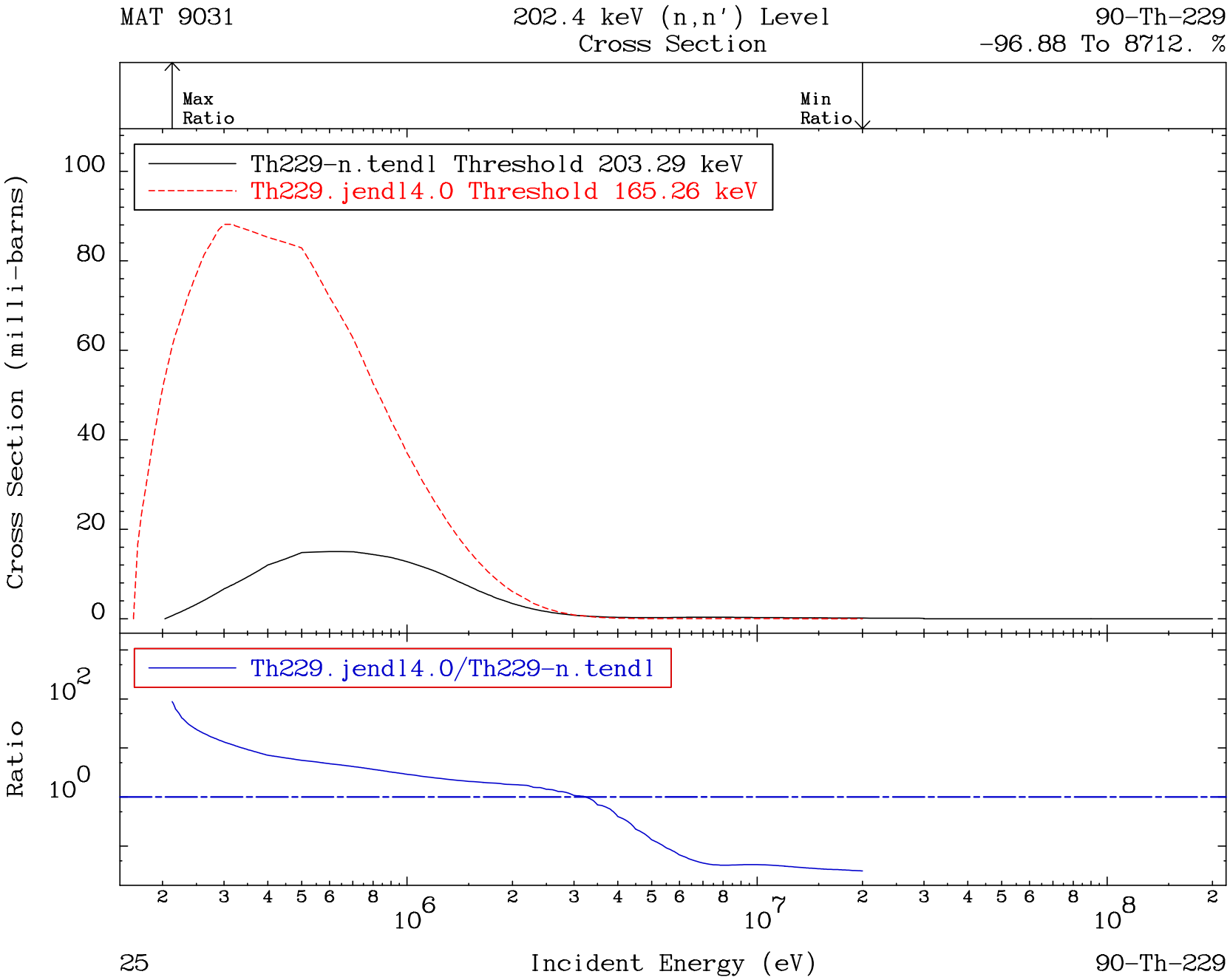

MAT 9031
163.3 keV (n,n') Level
Cross Section
90-Th-229
-93.48 To 8858. %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 163.97 keV
Th229.jendl4.0 Threshold 125.96 keV
Cross Section (milli-barns)
0
20
40
60
80
Th229.jendl4.0/Th229-n.tendl
Ratio
10^{2}
10^{1}
10^{0}
10^{-1}
2 3 4 5 6 8 10^{6} 2 3 4 5 6 8 10^{7} 2 3 4 5 6 8 10^{8} 2
20
Incident Energy (eV)
90-Th-229

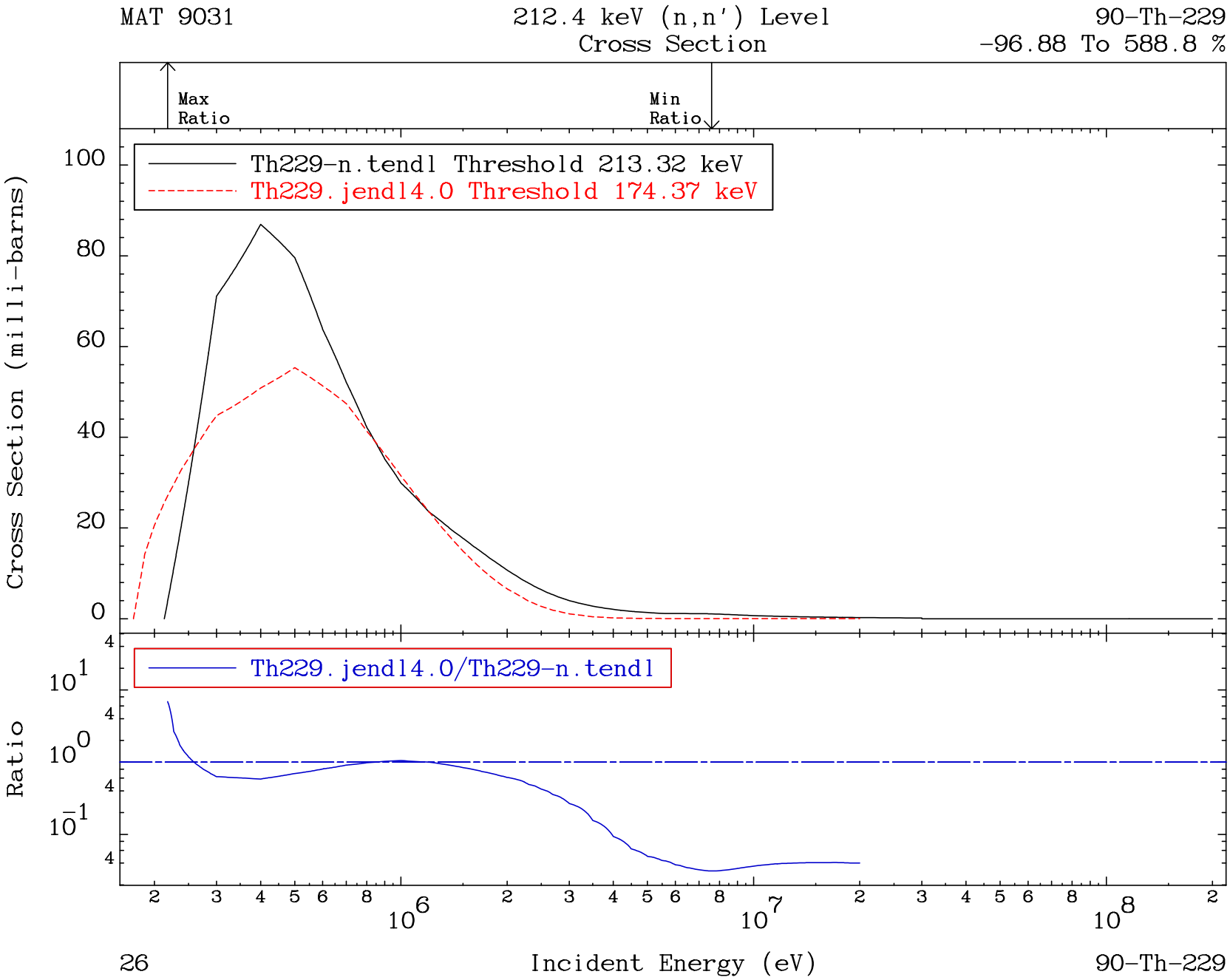

MAT 9031
164.5 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To -78.87%
Min
Ratio
Max
Ratio
Th229-n.tendl Threshold 165.26 keV
Th229.jendl4.0 Threshold 196.57 keV
Cross Section (milli-barns)
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
10^-3
10^-6
10^-9
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
21
Incident Energy (eV)
90-Th-229

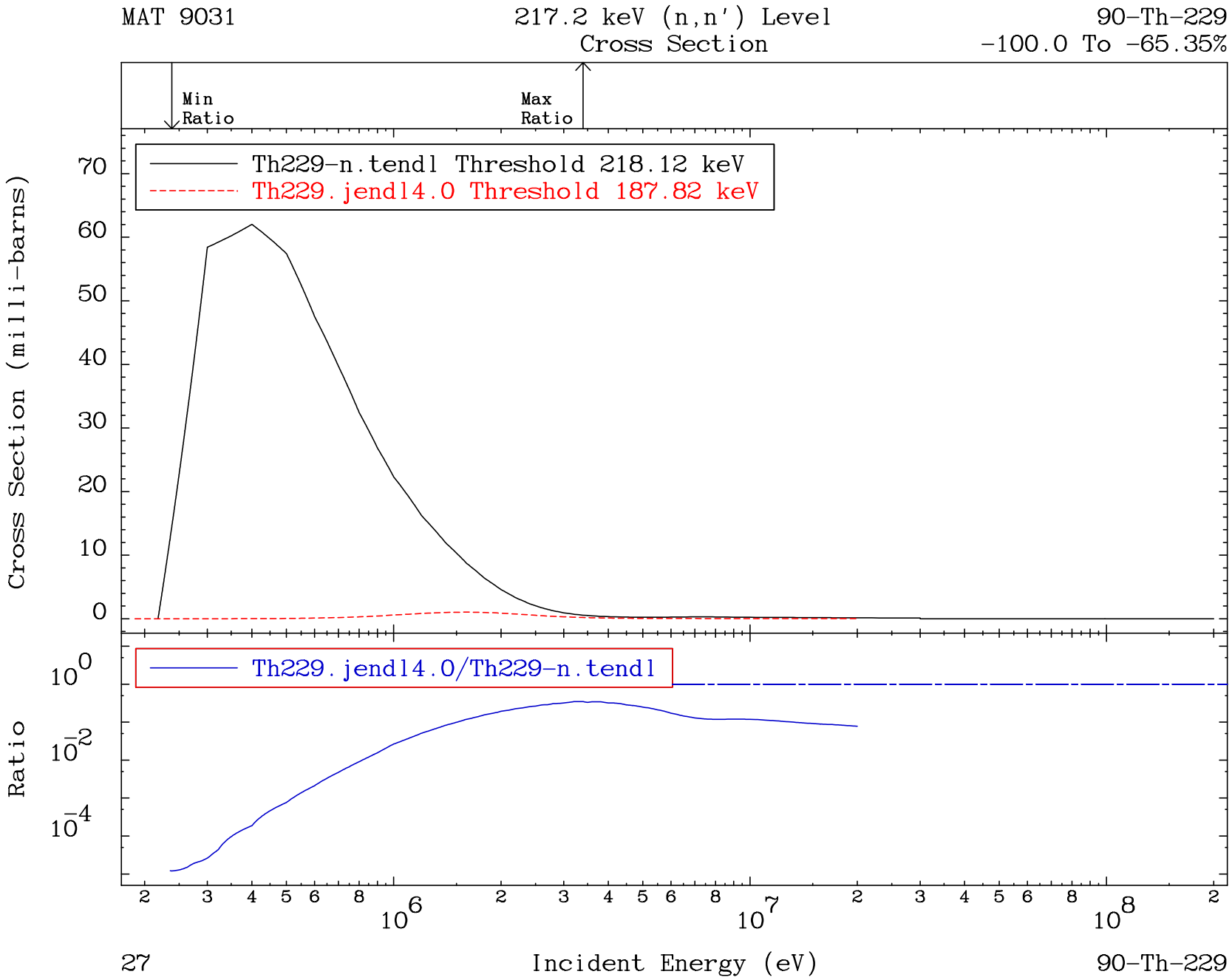

MAT 9031
173.5 keV (n,n') Level
Cross Section
90-Th-229
-98.64 To 387.9 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 174.25 keV
Th229.jendl4.0 Threshold 147.00 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
10^-1
10^-2
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
22
Incident Energy (eV)
90-Th-229

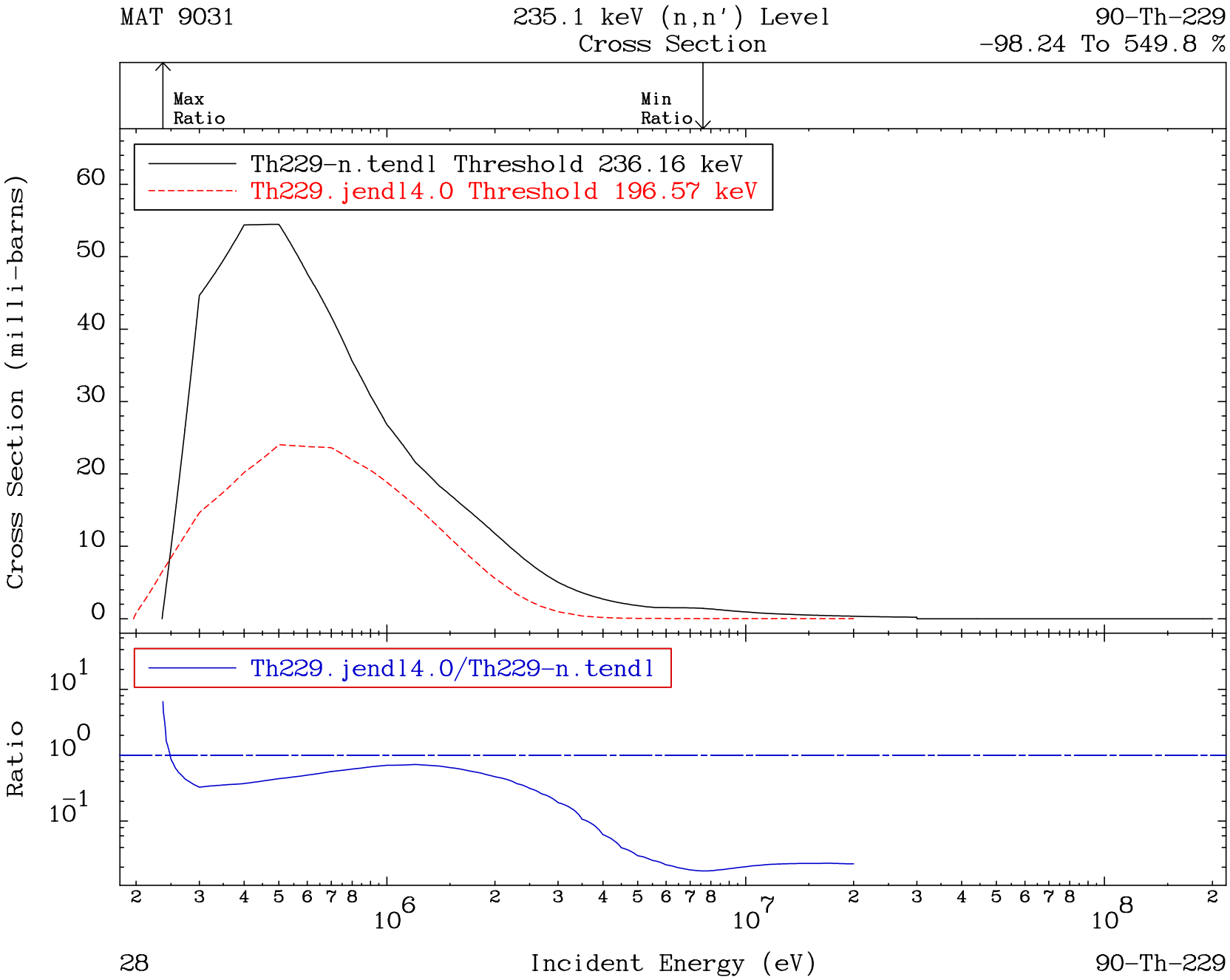

MAT 9031
190.0 keV (n,n') Level
Cross Section
90-Th-229
-90.81 To 399.3 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 190.83 keV
Th229.jendl4.0 Threshold 148.81 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
4
10^0
4
10^-1
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
23
Incident Energy (eV)
90-Th-229

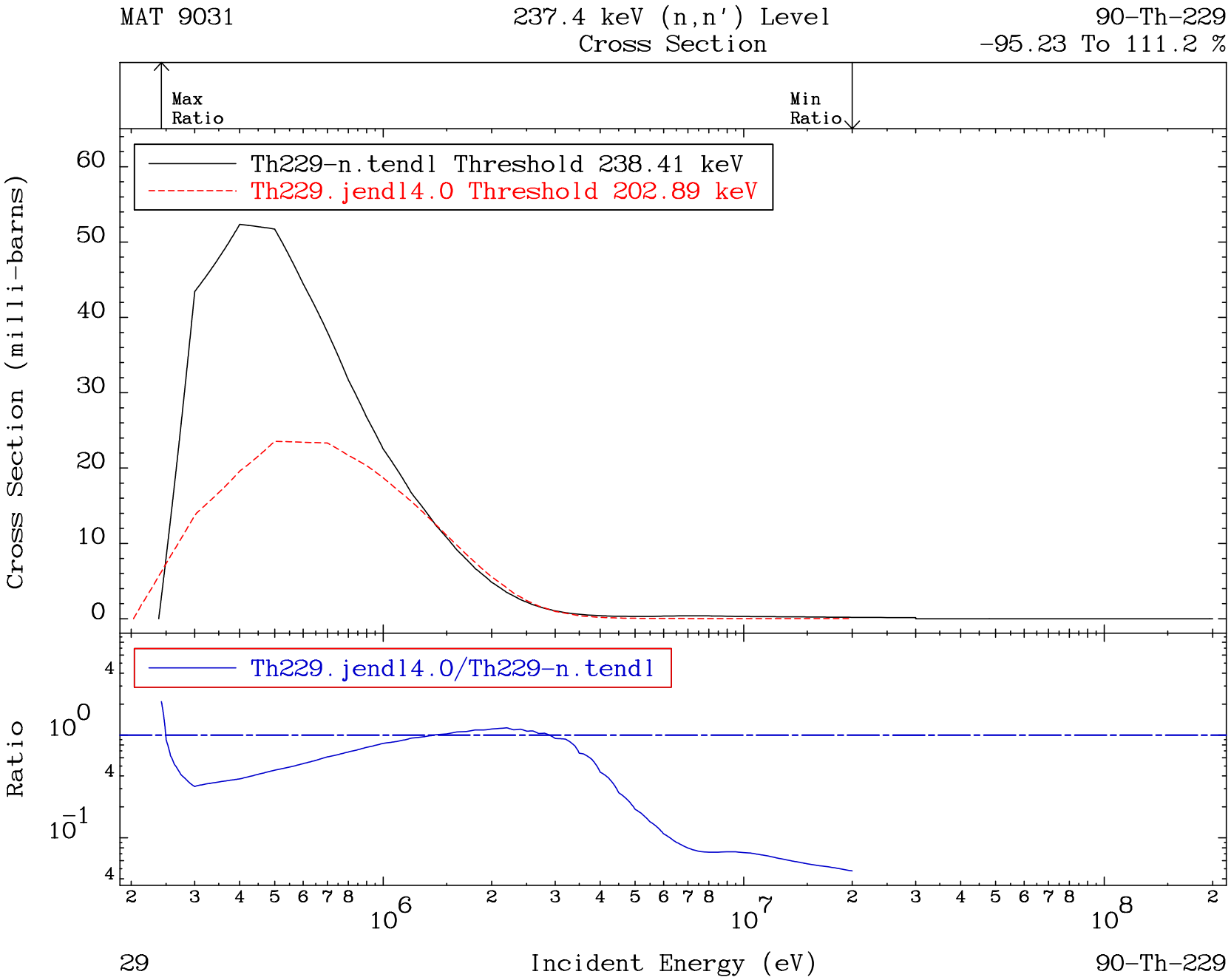

MAT 9031
195.7 keV (n,n') Level
Cross Section
90-Th-229
22.99 To 8692. %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 196.58 keV
Th229.jendl4.0 Threshold 163.98 keV
Cross Section (milli-barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
24
90-Th-229

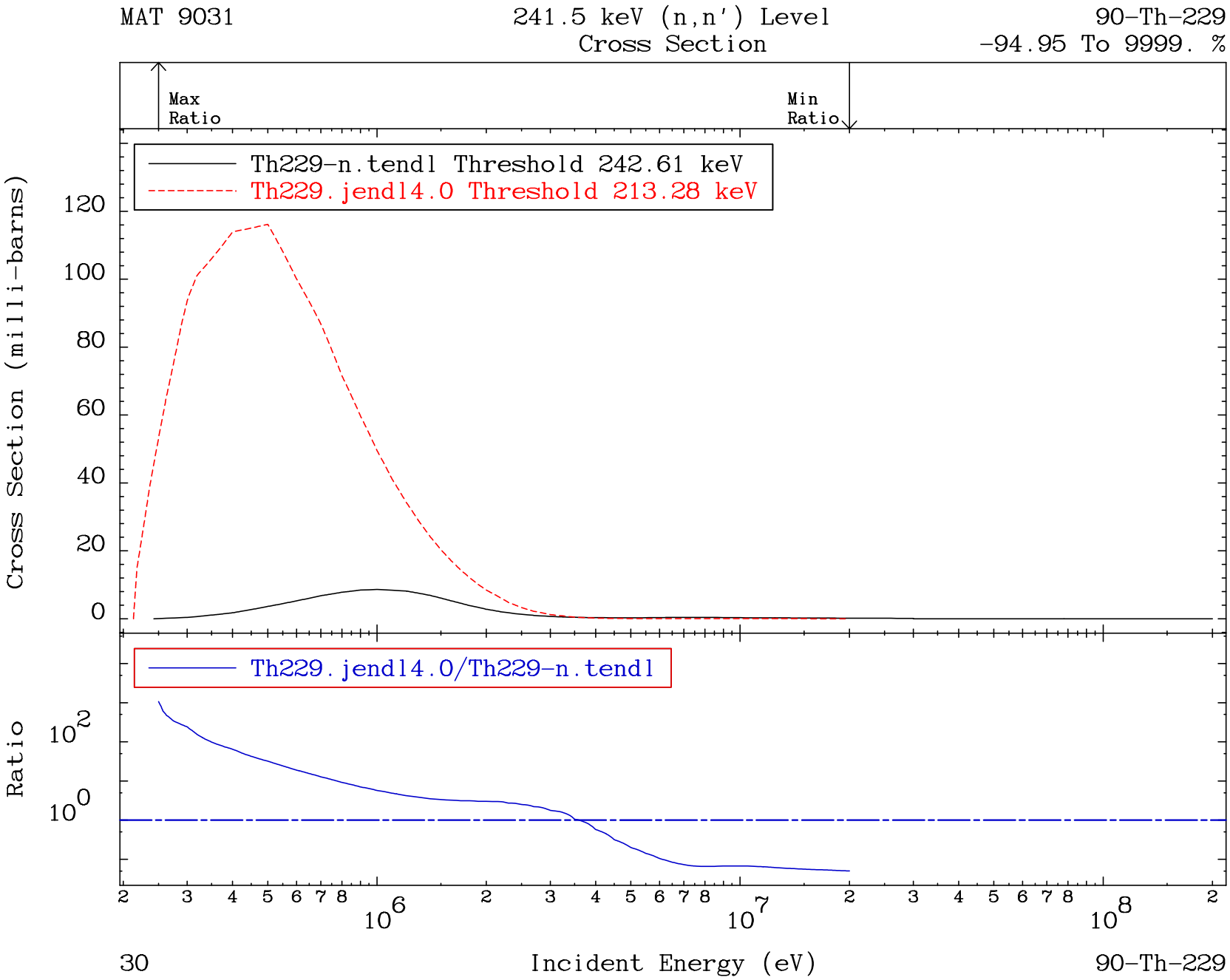

MAT 9031
202.4 keV (n,n') Level
Cross Section
90-Th-229
-96.88 To 8712. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 203.29 keV
Th229.jendl4.0 Threshold 165.26 keV
Cross Section (milli-barns)
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^2
10^0
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
25
Incident Energy (eV)
90-Th-229

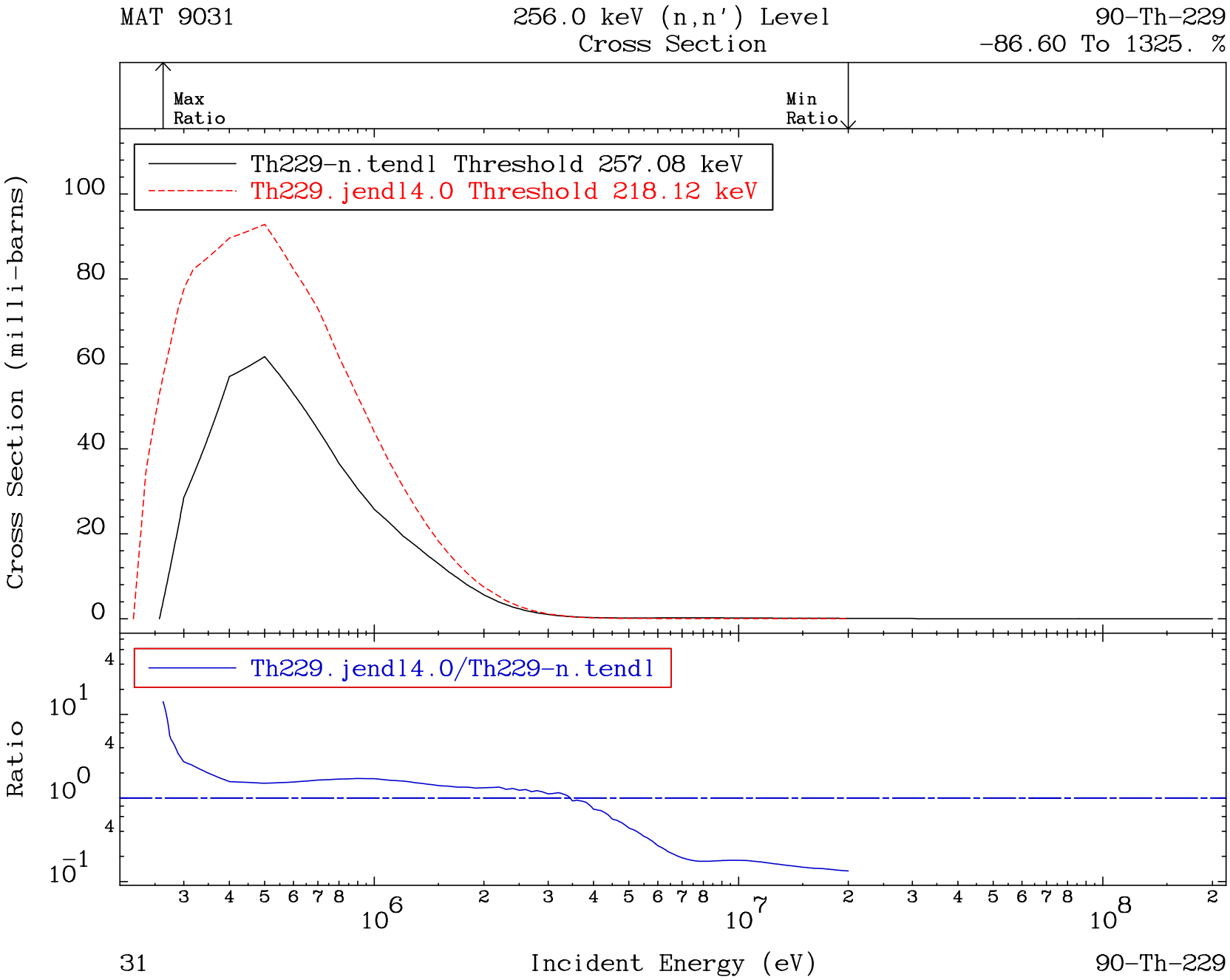

MAT 9031
212.4 keV (n,n') Level
Cross Section
90-Th-229
-96.88 To 588.8 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 213.32 keV
Th229.jendl4.0 Threshold 174.37 keV
Cross Section (milli-barns)
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
10^{-1}
10^6
10^7
10^8
Incident Energy (eV)
26
90-Th-229

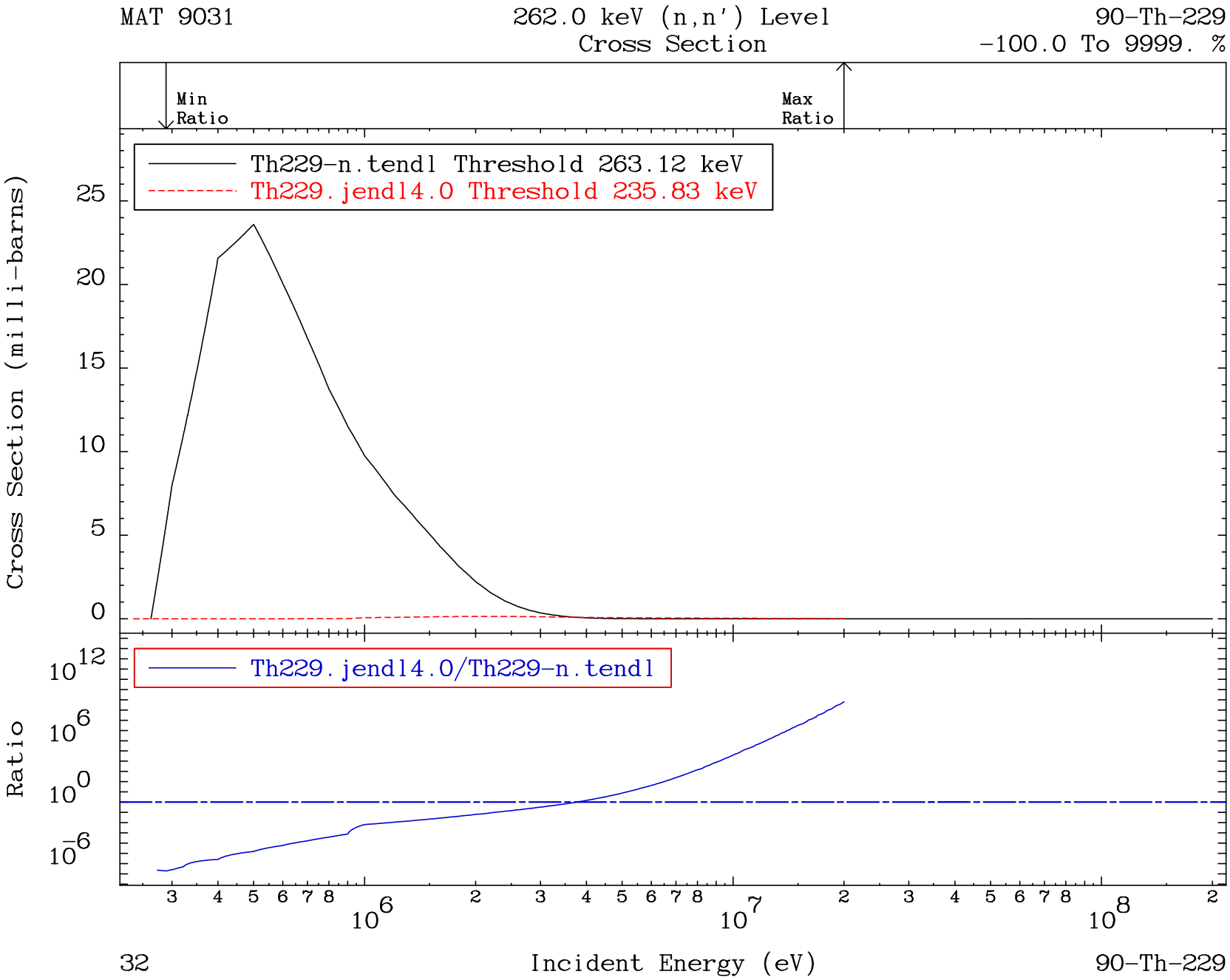

MAT 9031
217.2 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To -65.35%
Min Ratio
Max Ratio
Th229-n.tendl Threshold 218.12 keV
Th229.jendl4.0 Threshold 187.82 keV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
10^-2
10^-4
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
27
Incident Energy (eV)
90-Th-229

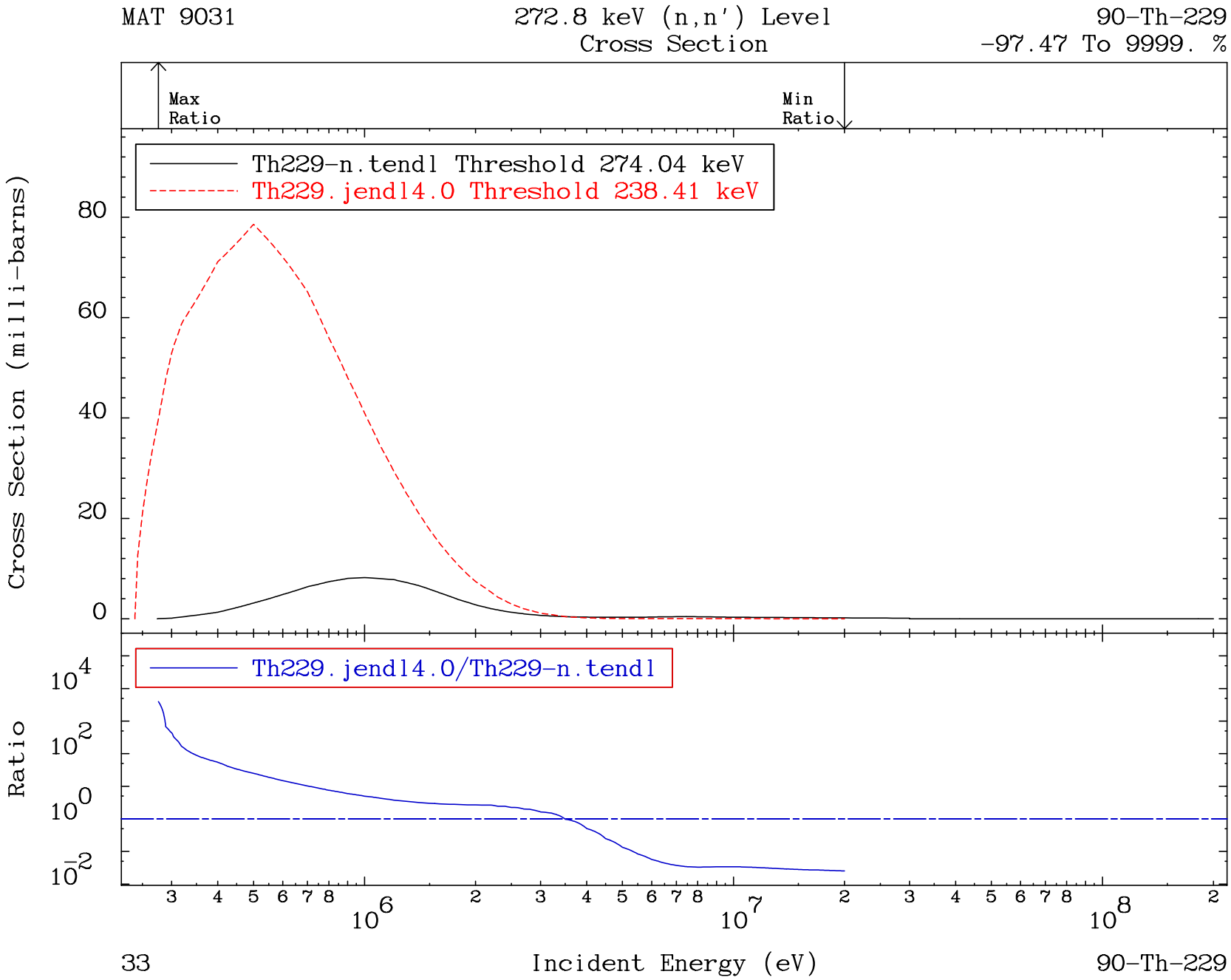

MAT 9031
235.1 keV (n,n') Level
Cross Section
90-Th-229
-98.24 To 549.8 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 236.16 keV
Th229.jendl4.0 Threshold 196.57 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
10^-1
2 3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
90-Th-229

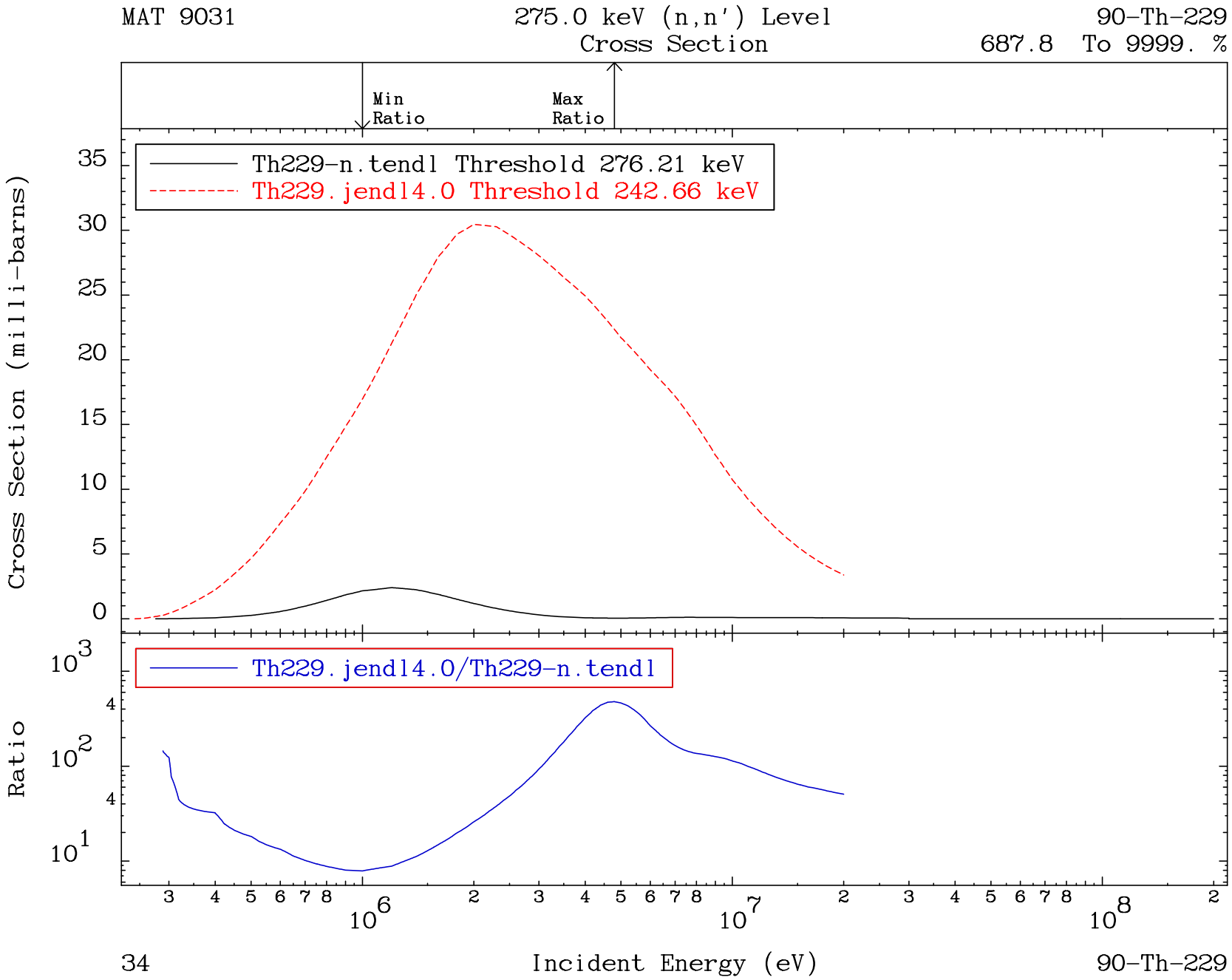

MAT 9031
237.4 keV (n,n') Level
Cross Section
90-Th-229
-95.23 To 111.2 %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 238.41 keV
Th229.jendl4.0 Threshold 202.89 keV
Cross Section (milli-barns)
60
50
40
30
20
10
0
Th229.jendl4.0/Th229-n.tendl
Ratio
4
10^{0}
4
10^{-1}
4
2 3 4 5 6 7 8 10^{6} 2 3 4 5 6 7 8 10^{7} 2 3 4 5 6 7 8 10^{8} 2
29
Incident Energy (eV)
90-Th-229

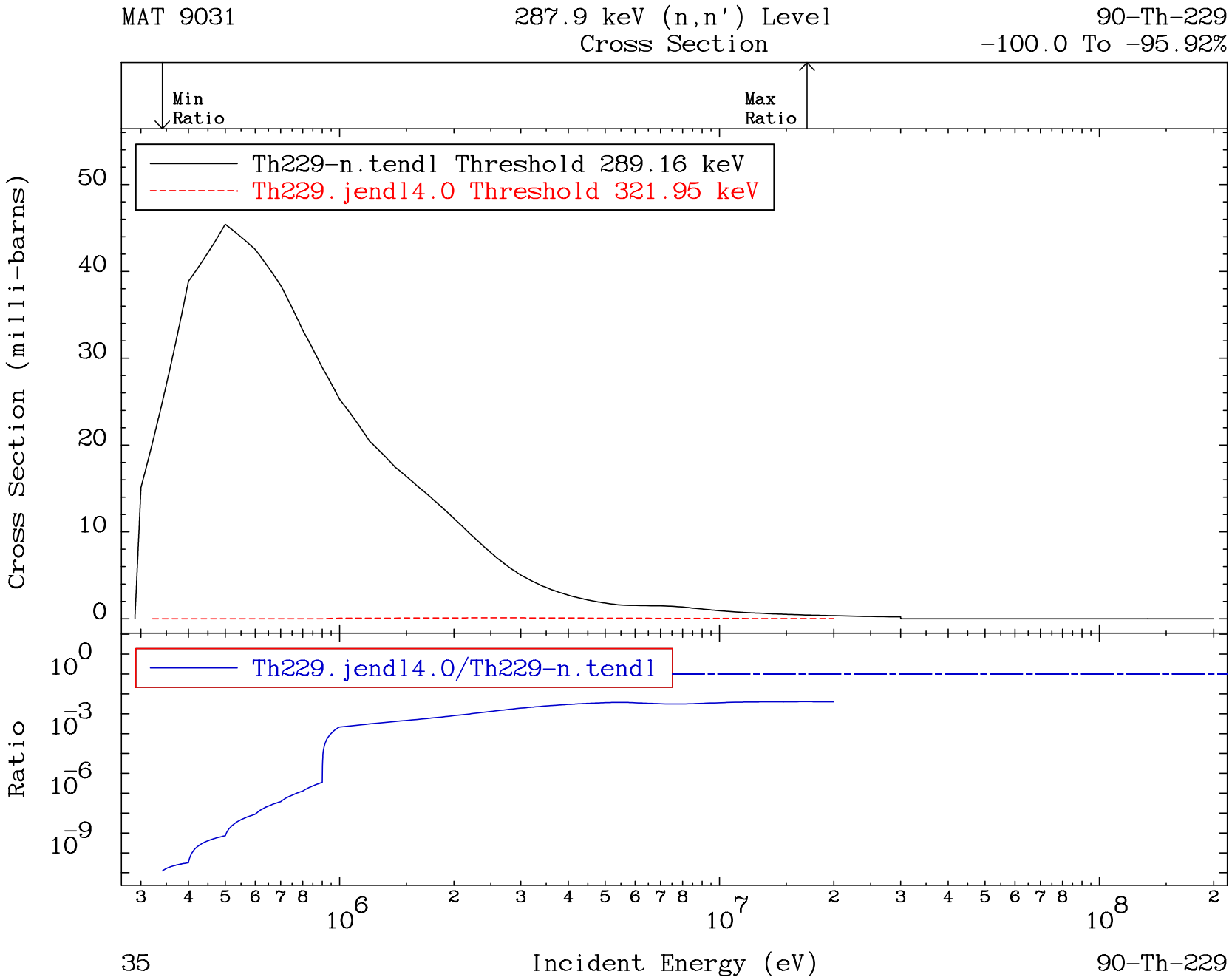

MAT 9031
241.5 keV (n,n') Level
Cross Section
90-Th-229
-94.95 To 9999. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 242.61 keV
Th229.jendl4.0 Threshold 213.28 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^2
10^0
2 3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
90-Th-229

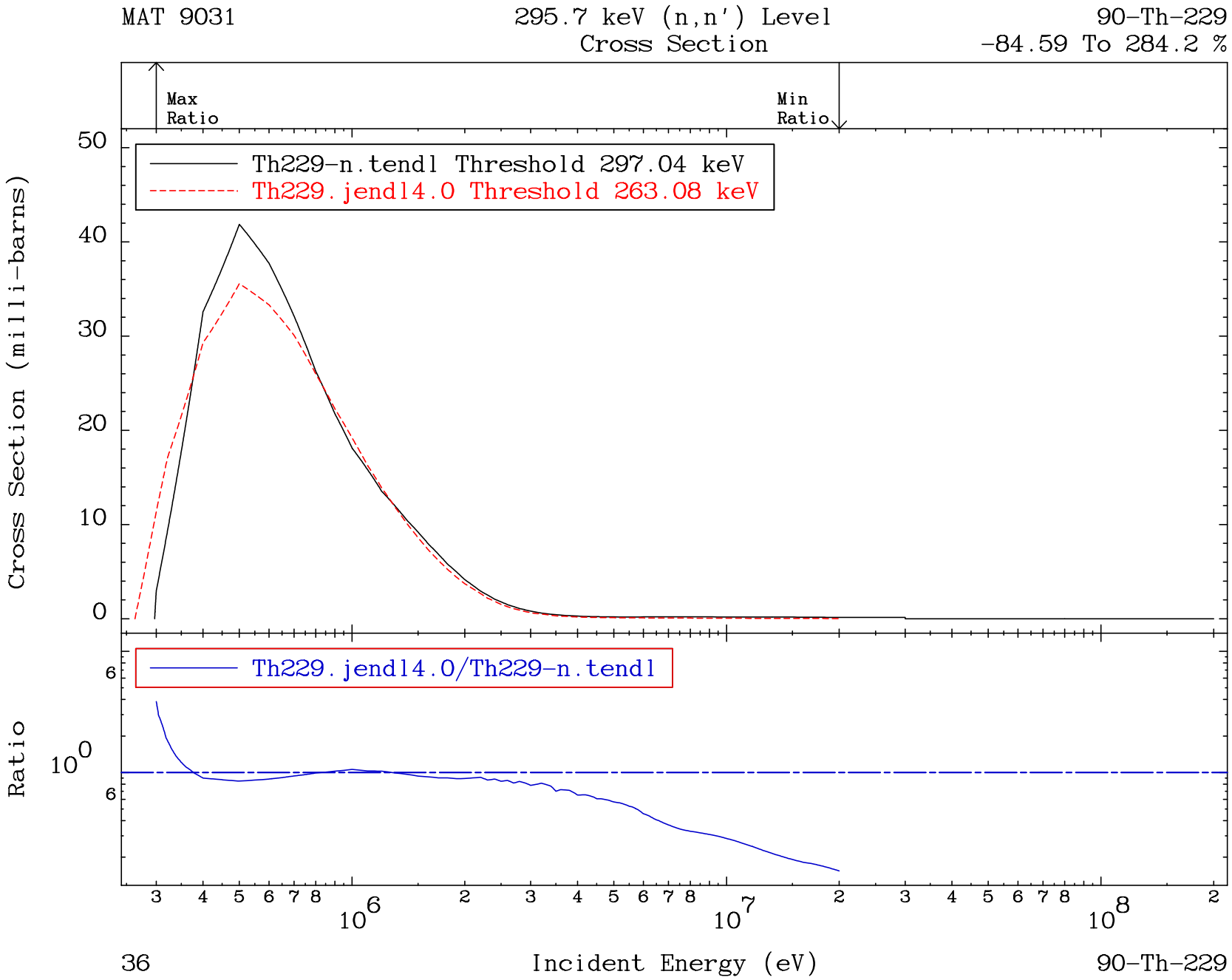

MAT 9031
256.0 keV (n,n') Level
Cross Section
90-Th-229
-86.60 To 1325. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 257.08 keV
Th229.jendl4.0 Threshold 218.12 keV
Cross Section (milli-barns)
100
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
10^-1
10^6
10^7
10^8
31
Incident Energy (eV)
90-Th-229

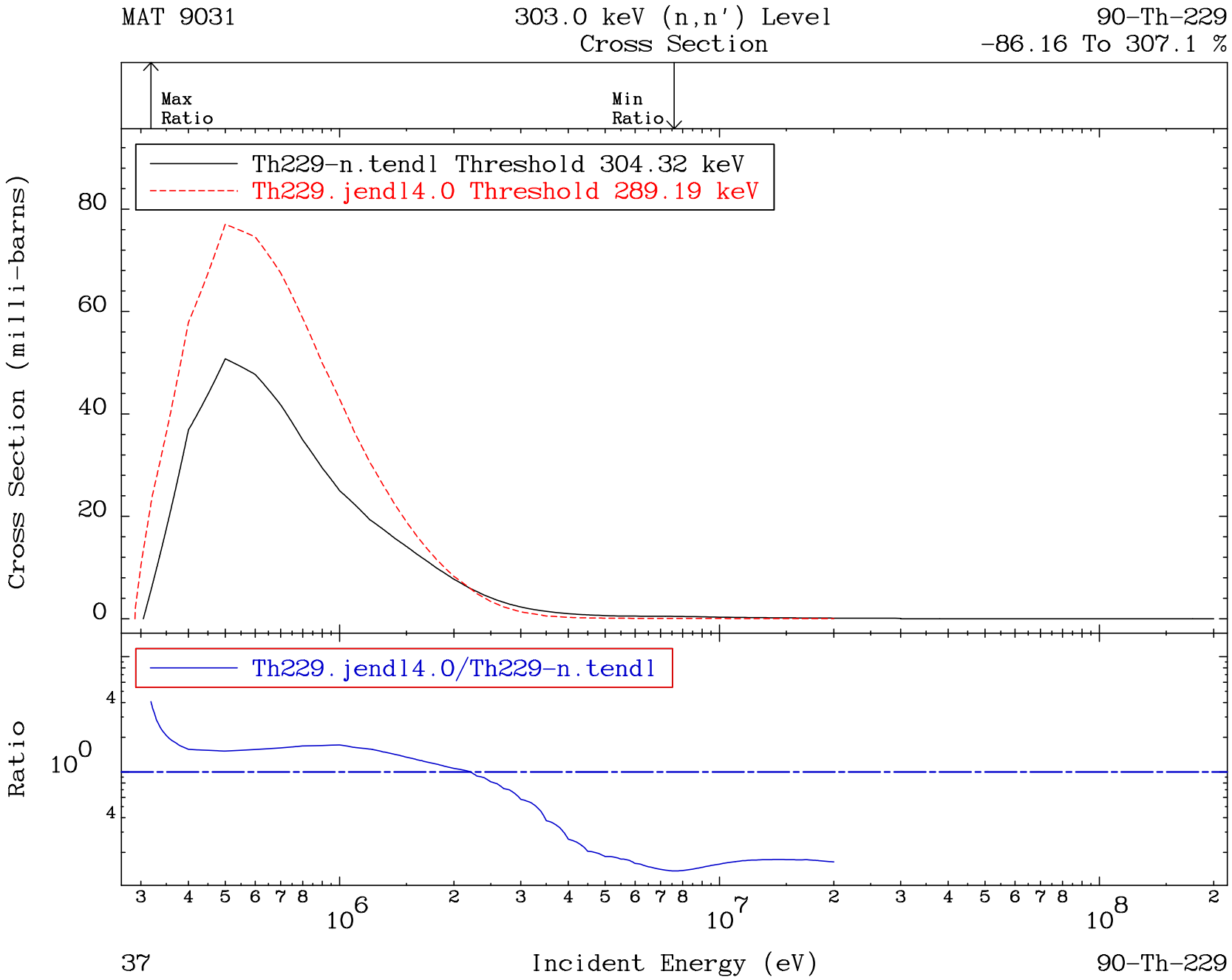

MAT 9031
262.0 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To 9999. %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 263.12 keV
Th229.jendl4.0 Threshold 235.83 keV
Cross Section (milli-barns)
25
20
15
10
5
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^12
10^6
10^0
10^-6
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
32
Incident Energy (eV)
90-Th-229

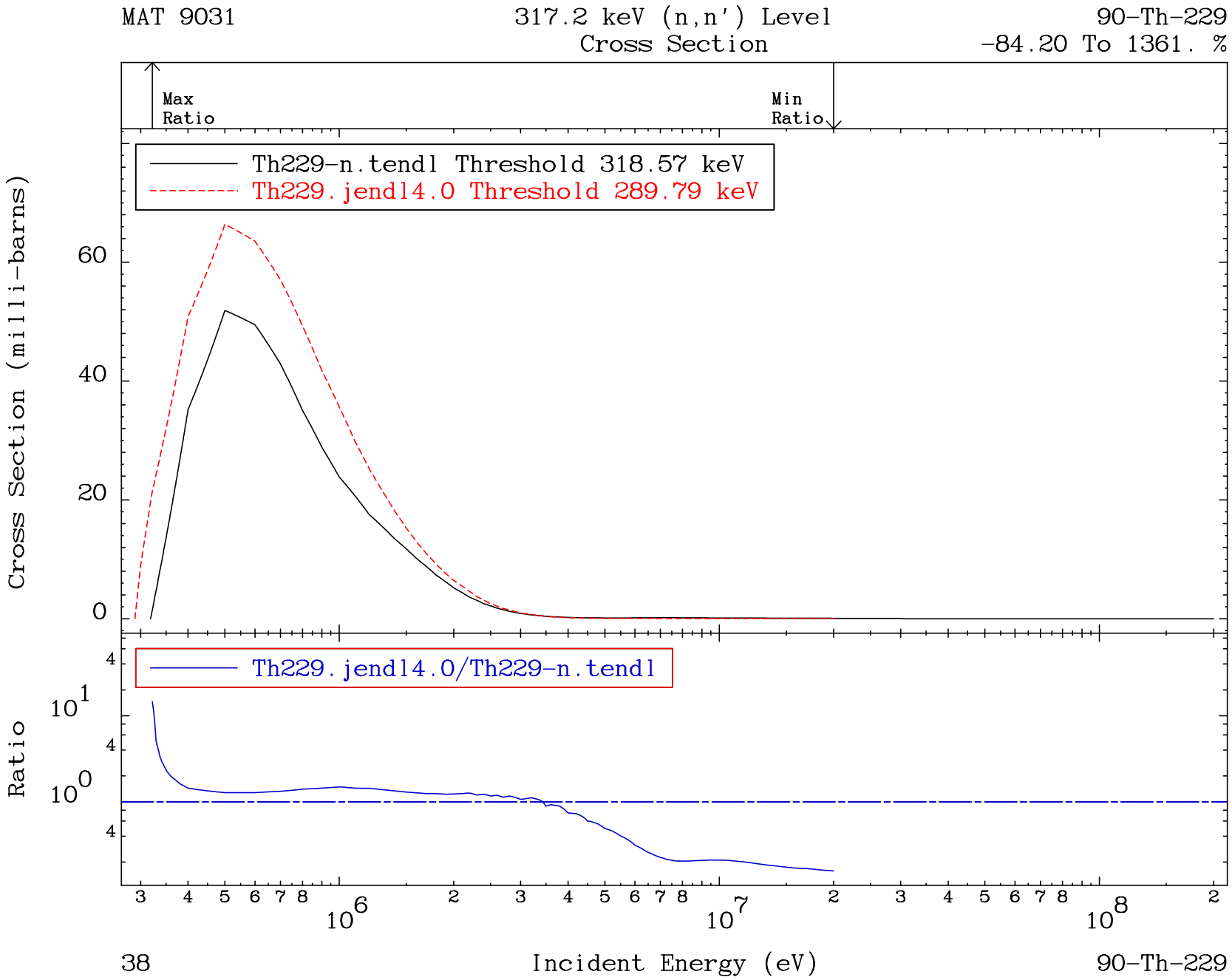

MAT 9031
272.8 keV (n,n') Level
Cross Section
90-Th-229
-97.47 To 9999. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 274.04 keV
Th229.jendl4.0 Threshold 238.41 keV
Cross Section (milli-barns)
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^4
10^2
10^0
10^-2
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
33
Incident Energy (eV)
90-Th-229

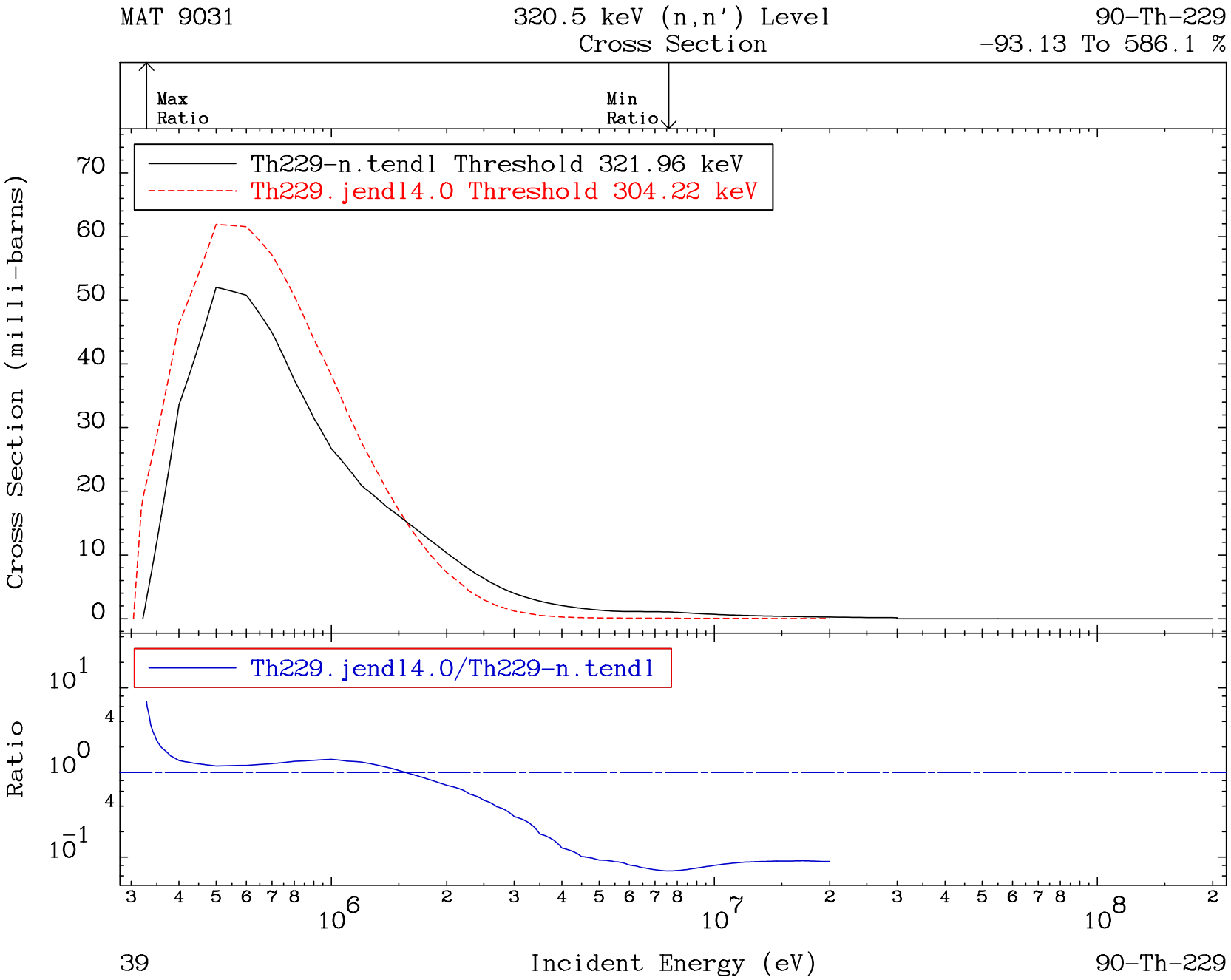

MAT 9031
275.0 keV (n,n') Level
Cross Section
90-Th-229
687.8 To 9999. %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 276.21 keV
Th229.jendl4.0 Threshold 242.66 keV
Cross Section (milli-barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
34
90-Th-229

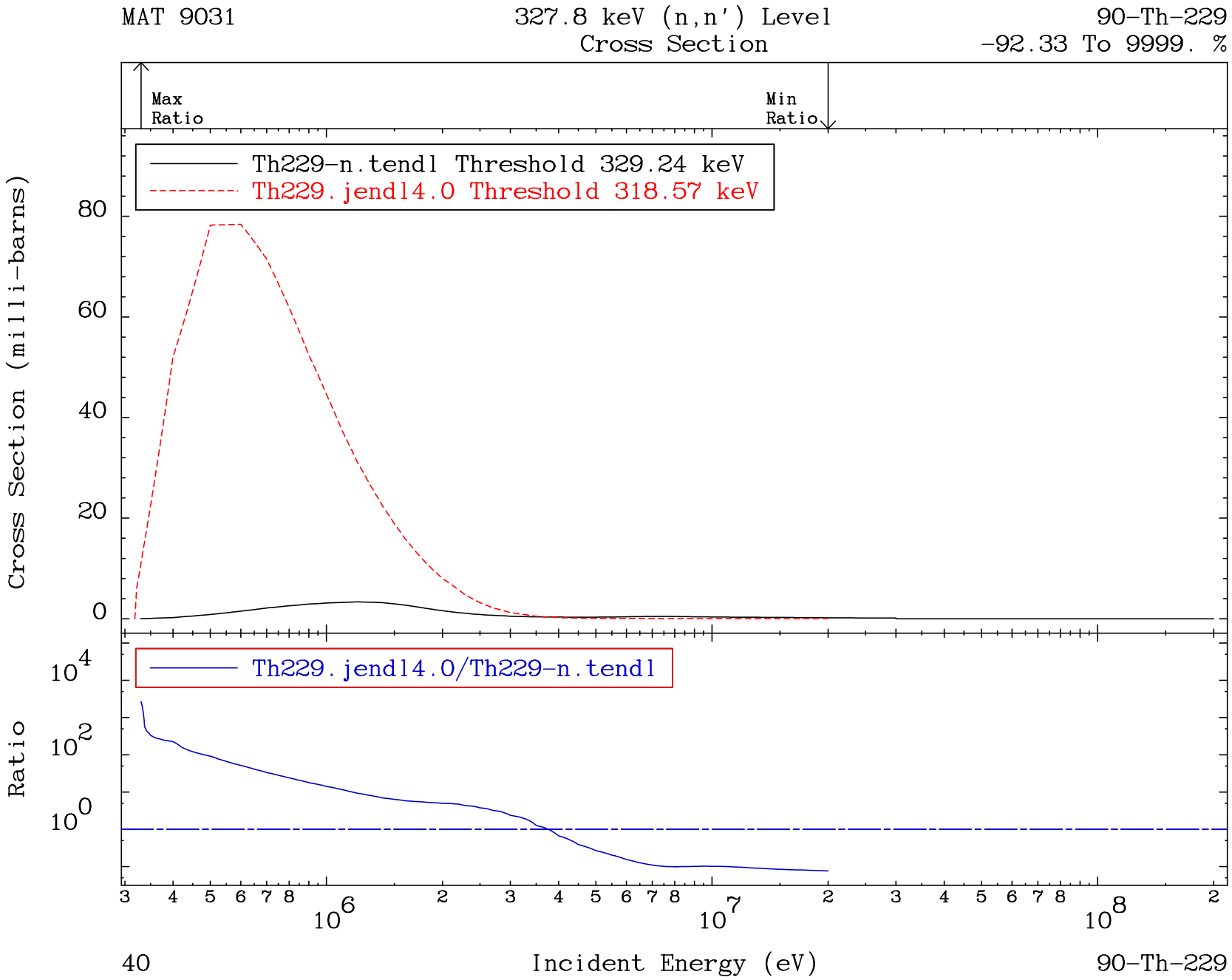

MAT 9031
287.9 keV (n,n') Level
Cross Section
90-Th-229
-100.0 To -95.92%
Min
Ratio
Max
Ratio
Th229-n.tendl Threshold 289.16 keV
Th229.jendl4.0 Threshold 321.95 keV
Cross Section (milli-barns)
50
40
30
20
10
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
10^-3
10^-6
10^-9
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
35
Incident Energy (eV)
90-Th-229

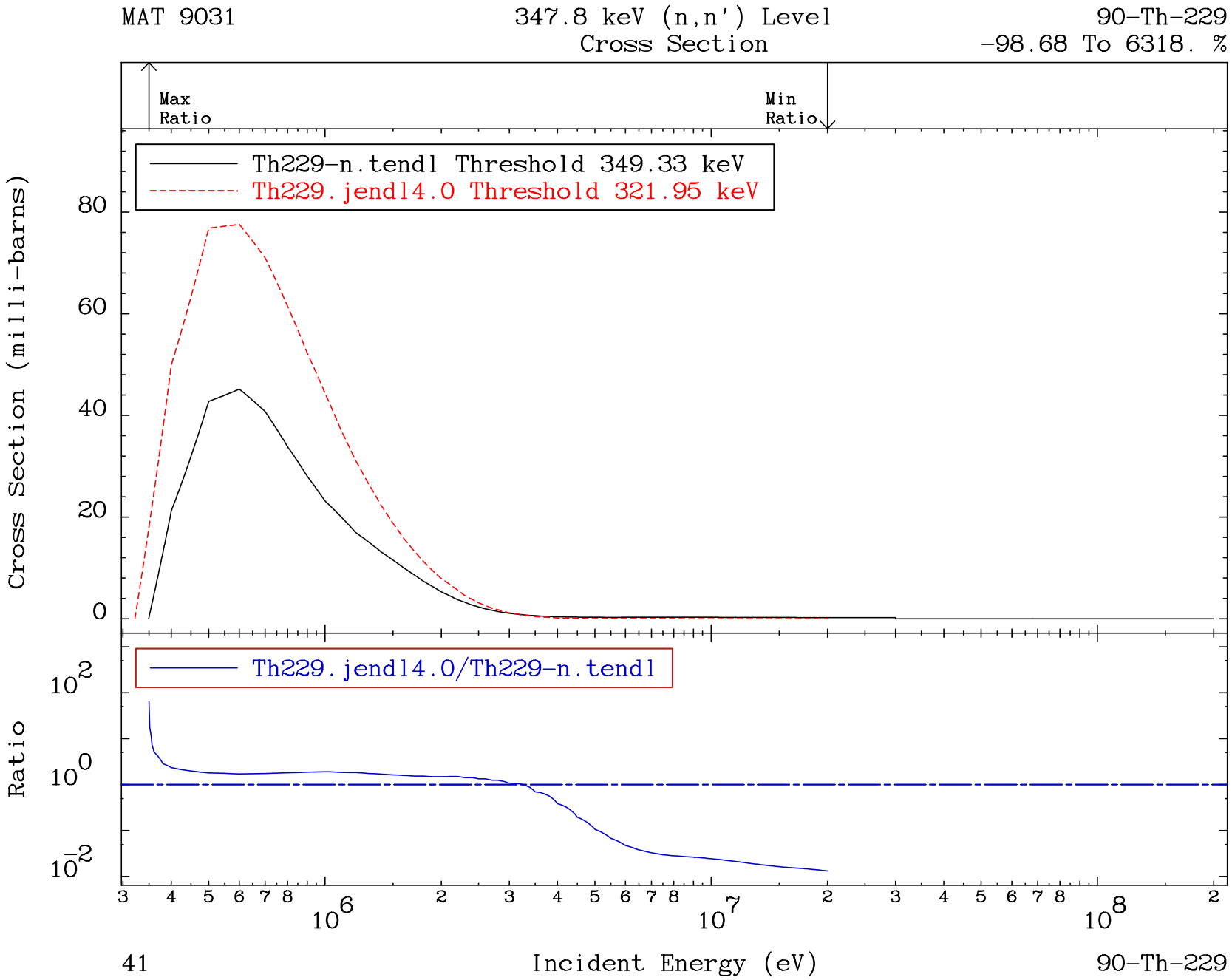

MAT 9031
295.7 keV (n,n') Level
Cross Section
90-Th-229
-84.59 To 284.2 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 297.04 keV
Th229.jendl4.0 Threshold 263.08 keV
Cross Section (milli-barns)
50
40
30
20
10
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
6
6
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
36
Incident Energy (eV)
90-Th-229

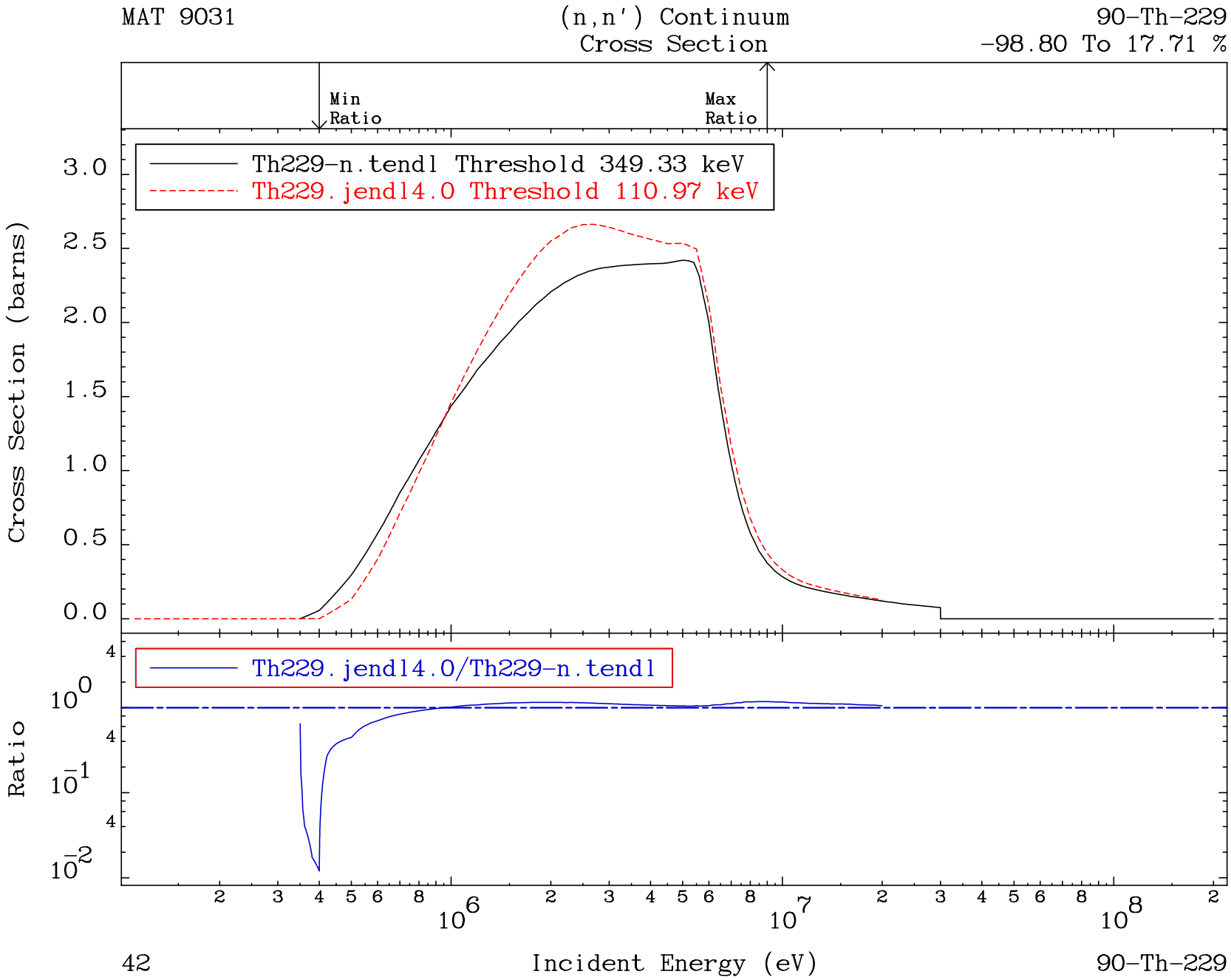

MAT 9031
303.0 keV (n,n') Level
Cross Section
90-Th-229
-86.16 To 307.1 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 304.32 keV
Th229.jendl4.0 Threshold 289.19 keV
Cross Section (milli-barns)
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
4
10^0
4
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
37
Incident Energy (eV)
90-Th-229

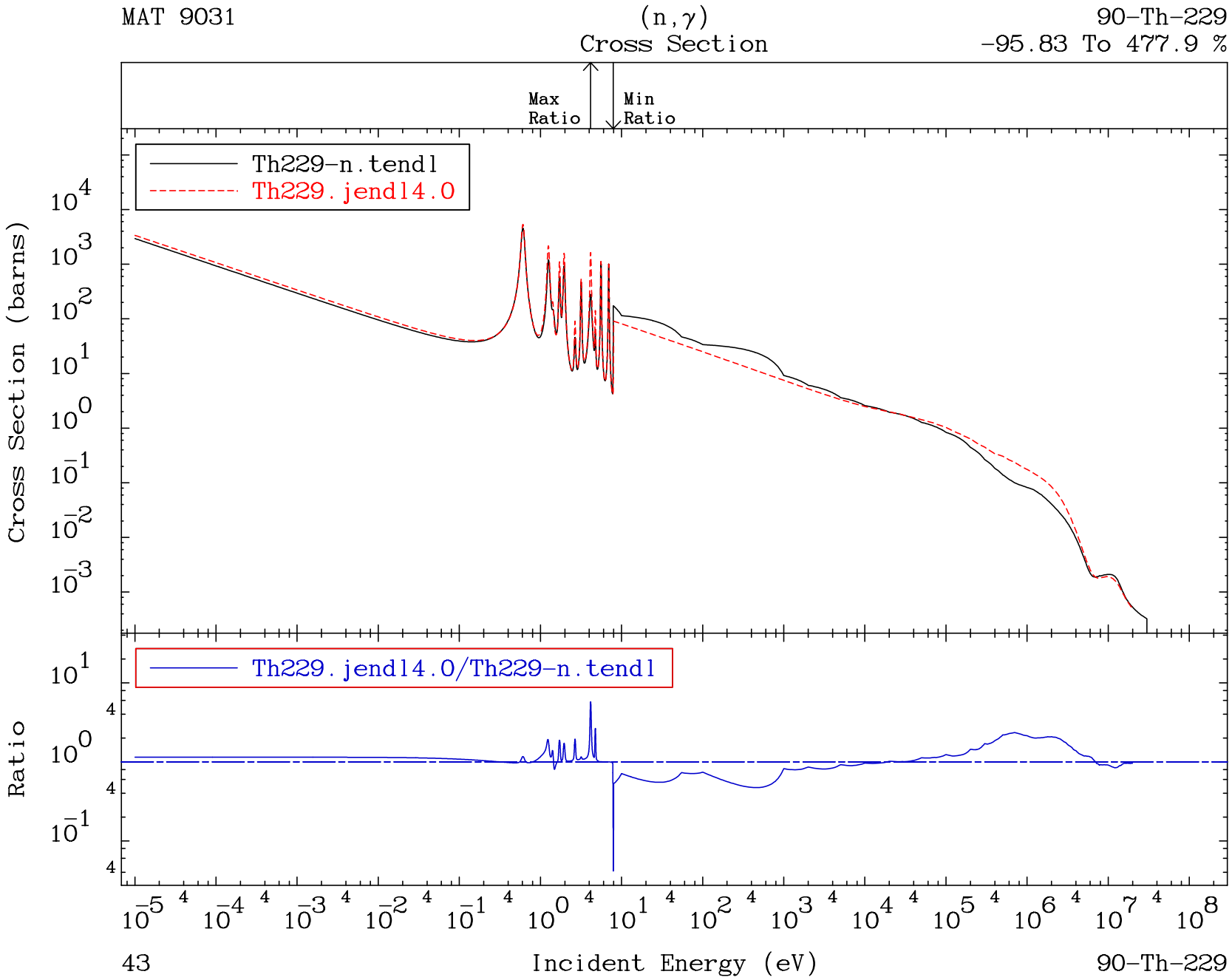

MAT 9031
317.2 keV (n,n') Level
Cross Section
90-Th-229
-84.20 To 1361. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 318.57 keV
Th229.jendl4.0 Threshold 289.79 keV
Cross Section (milli-barns)
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^1
10^0
4
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
38
Incident Energy (eV)
90-Th-229

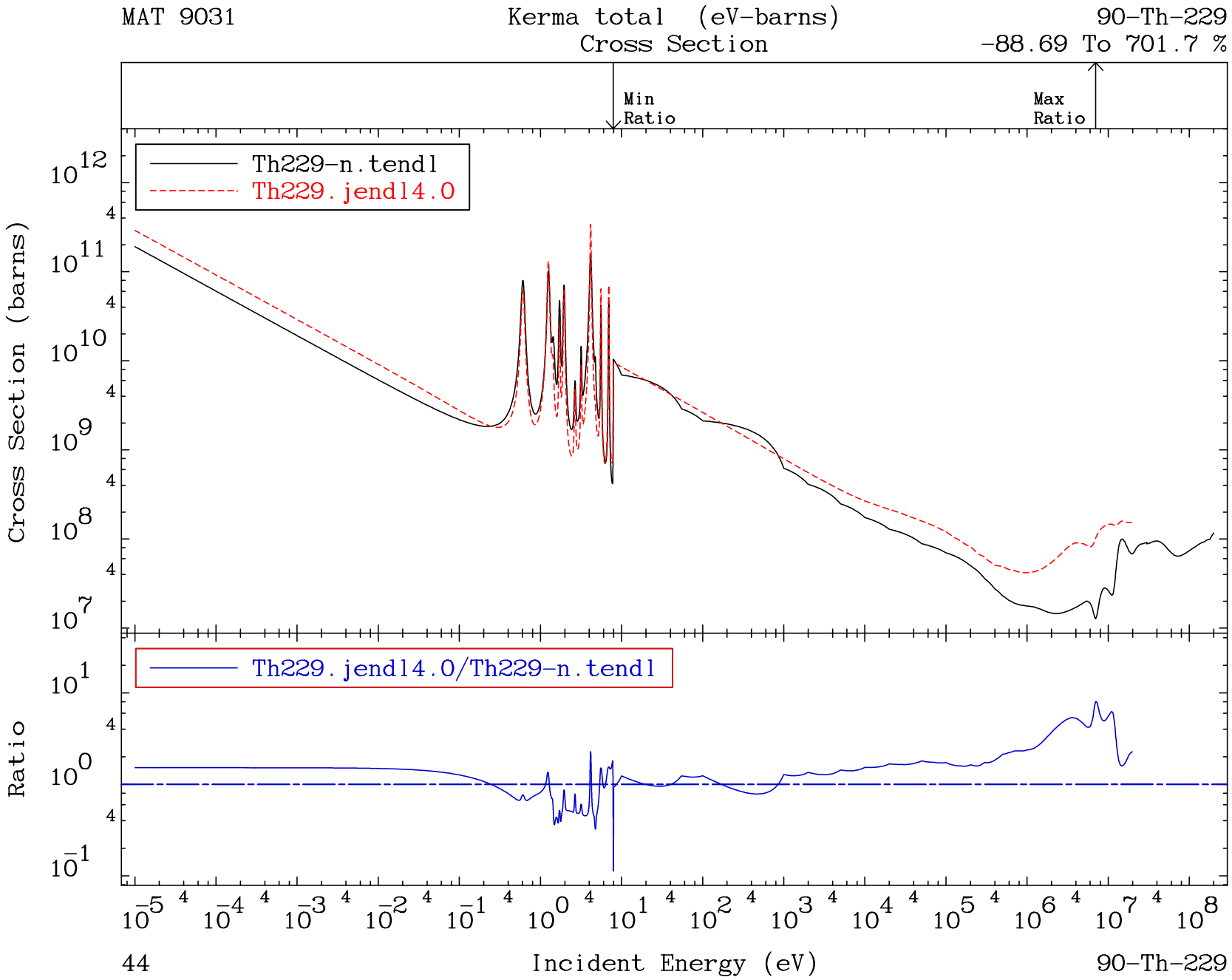

MAT 9031
320.5 keV (n,n') Level
Cross Section
90-Th-229
-93.13 To 586.1 %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 321.96 keV
Th229.jendl4.0 Threshold 304.22 keV
Cross Section (milli-barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
39
90-Th-229

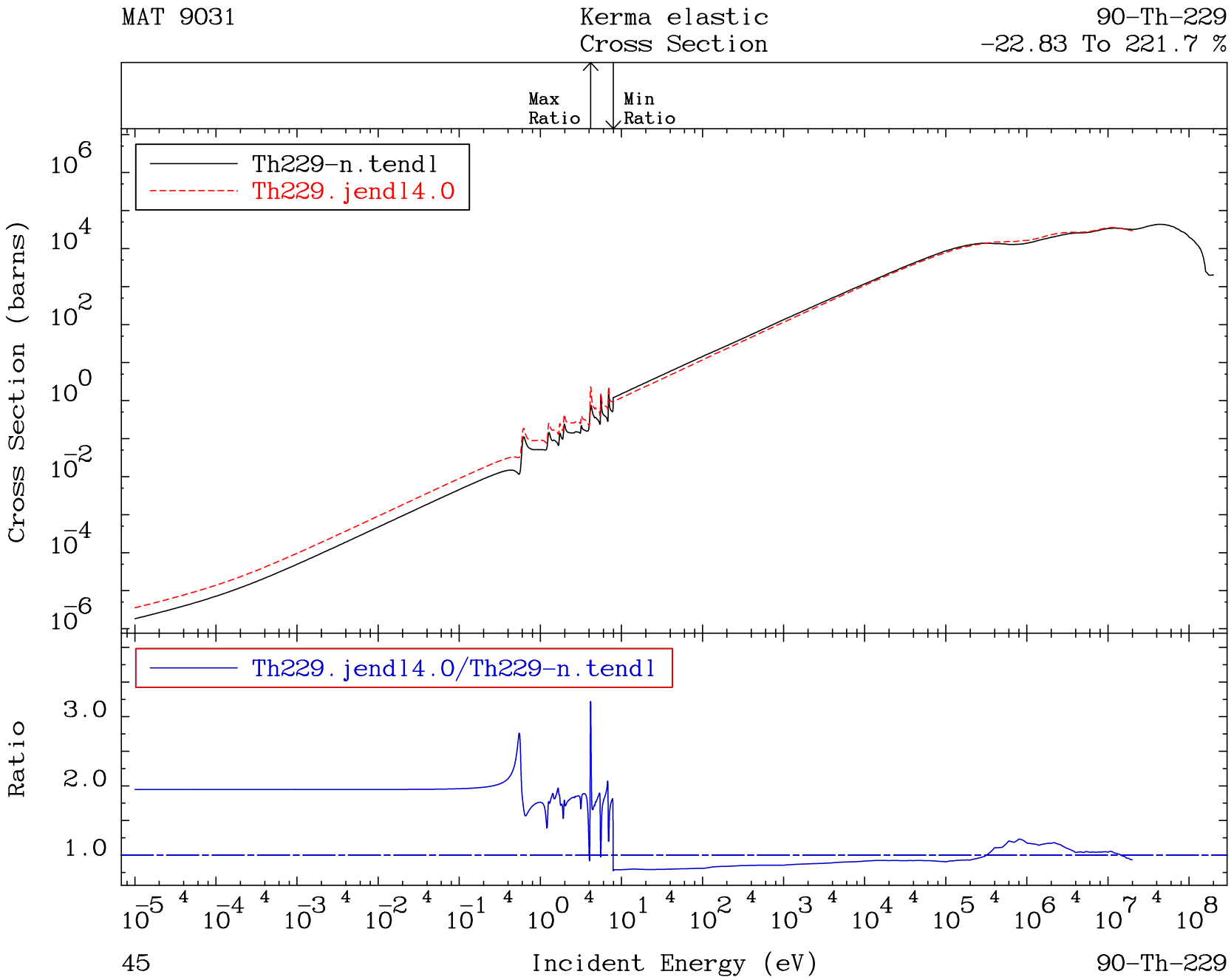

MAT 9031
327.8 keV (n,n') Level
Cross Section
90-Th-229
-92.33 To 9999. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 329.24 keV
Th229.jendl4.0 Threshold 318.57 keV
Cross Section (milli-barns)
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^4
10^2
10^0
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
40
Incident Energy (eV)
90-Th-229

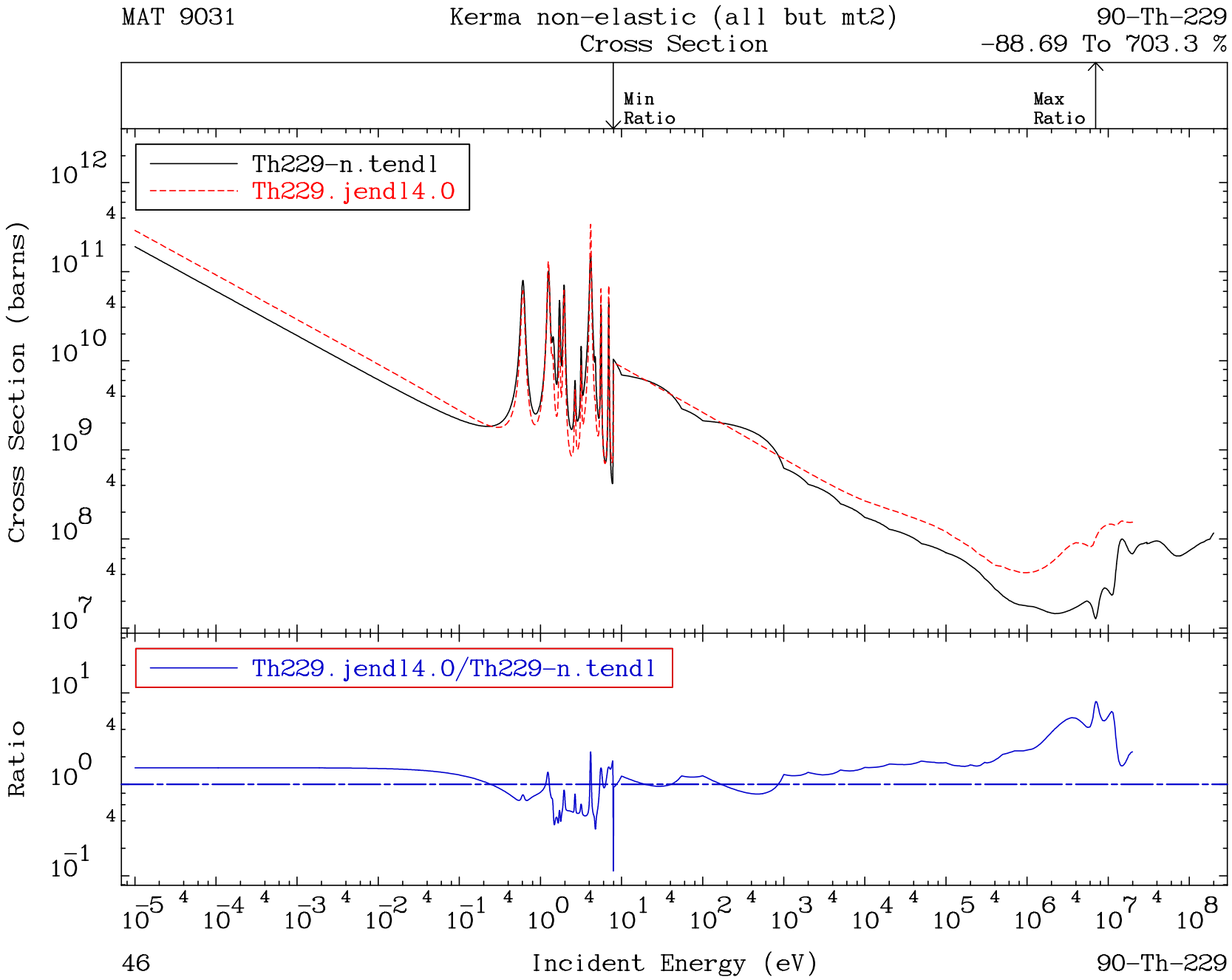

MAT 9031
347.8 keV (n,n') Level
Cross Section
90-Th-229
-98.68 To 6318. %
Max
Ratio
Min
Ratio
Th229-n.tendl Threshold 349.33 keV
Th229.jendl4.0 Threshold 321.95 keV
Cross Section (milli-barns)
80
60
40
20
0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^2
10^0
10^-2
3 4 5 6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
41
Incident Energy (eV)
90-Th-229

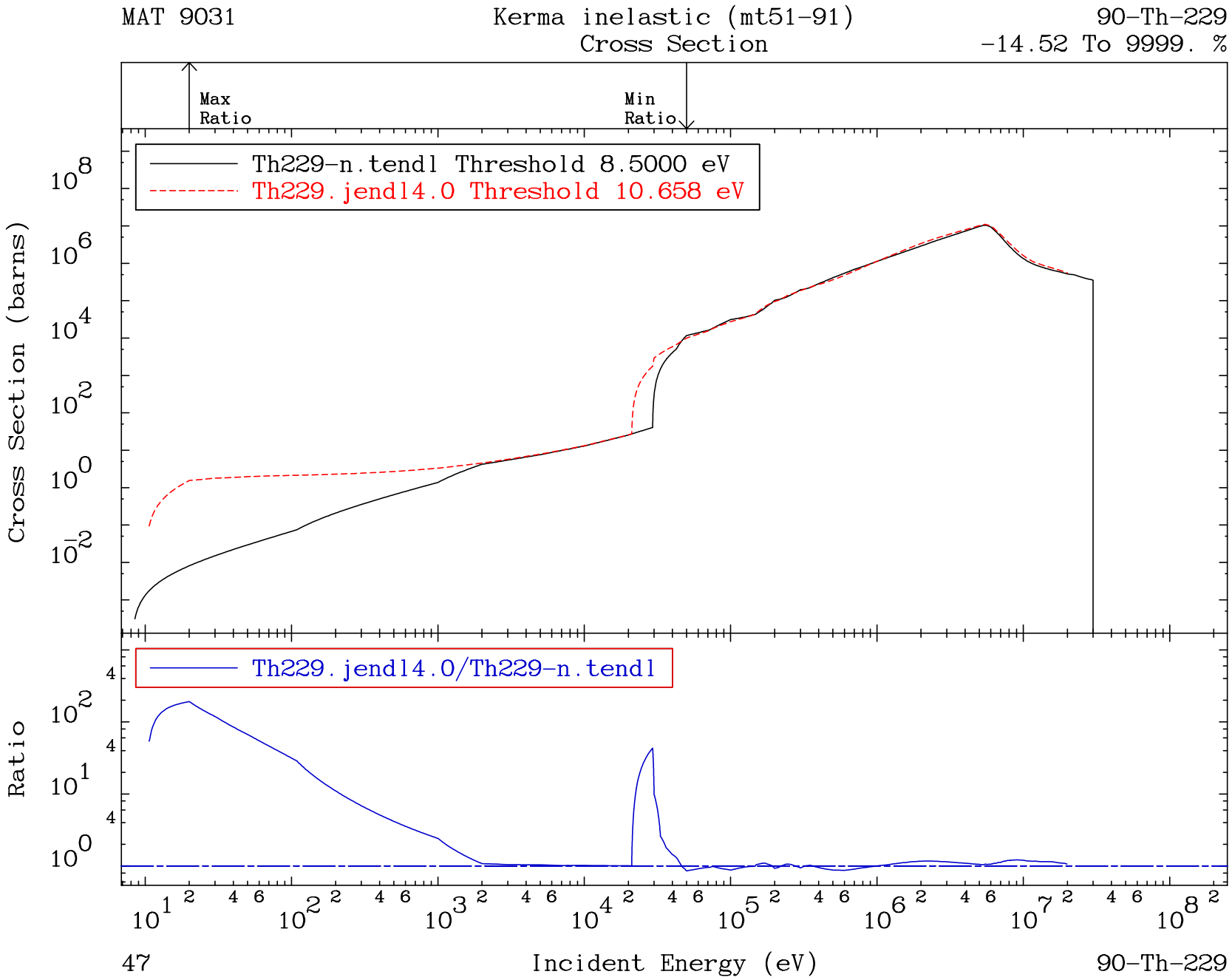

MAT 9031
(n,n') Continuum
Cross Section
90-Th-229
-98.80 To 17.71 %
Min
Ratio
Max
Ratio
Th229-n.tendl Threshold 349.33 keV
Th229.jendl4.0 Threshold 110.97 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Th229.jendl4.0/Th229-n.tendl
Ratio
10^0
10^-1
10^-2
2 3 4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
42
Incident Energy (eV)
90-Th-229

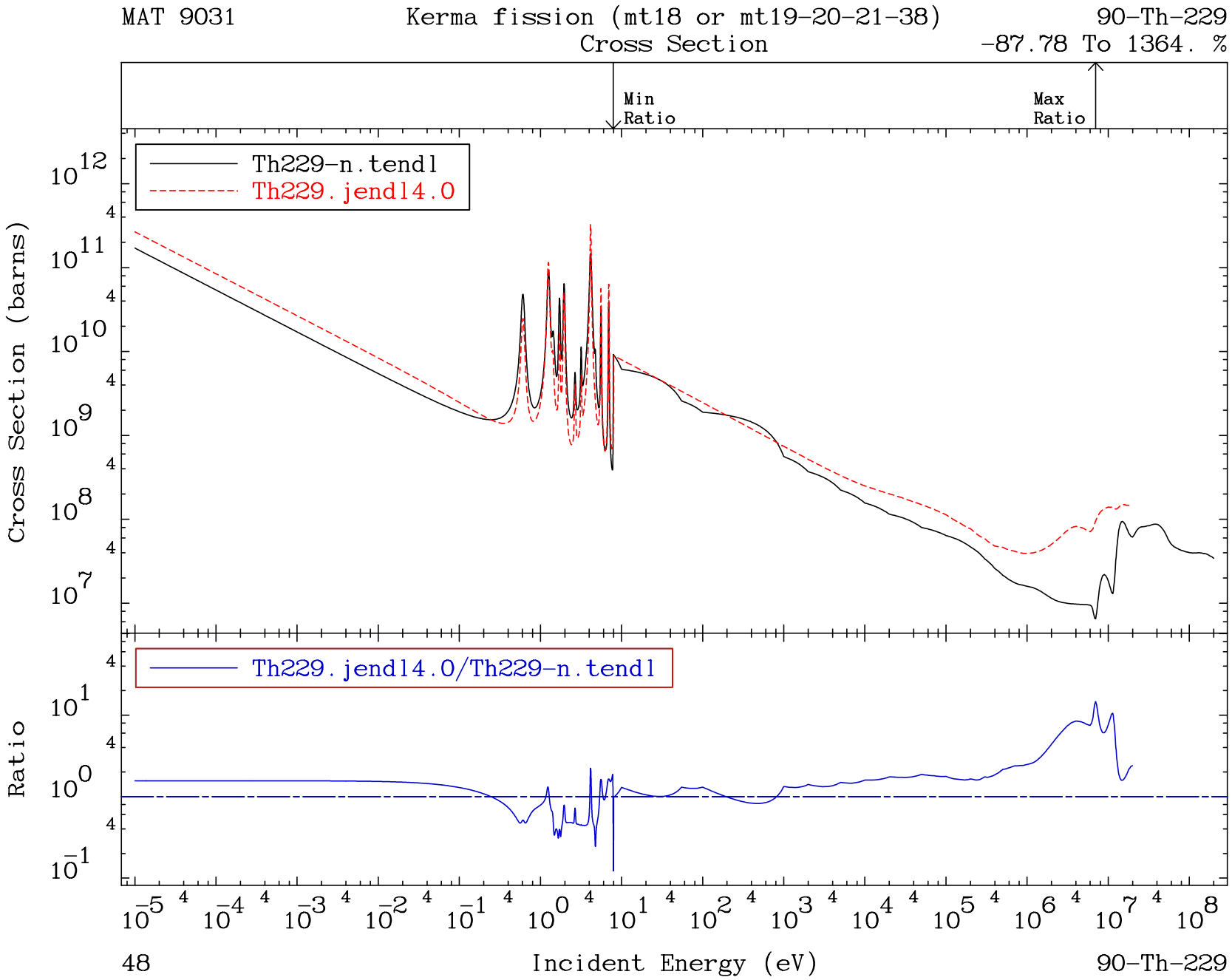

MAT 9031
(n,γ)
Cross Section
90-Th-229
-95.83 To 477.9 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
43
90-Th-229

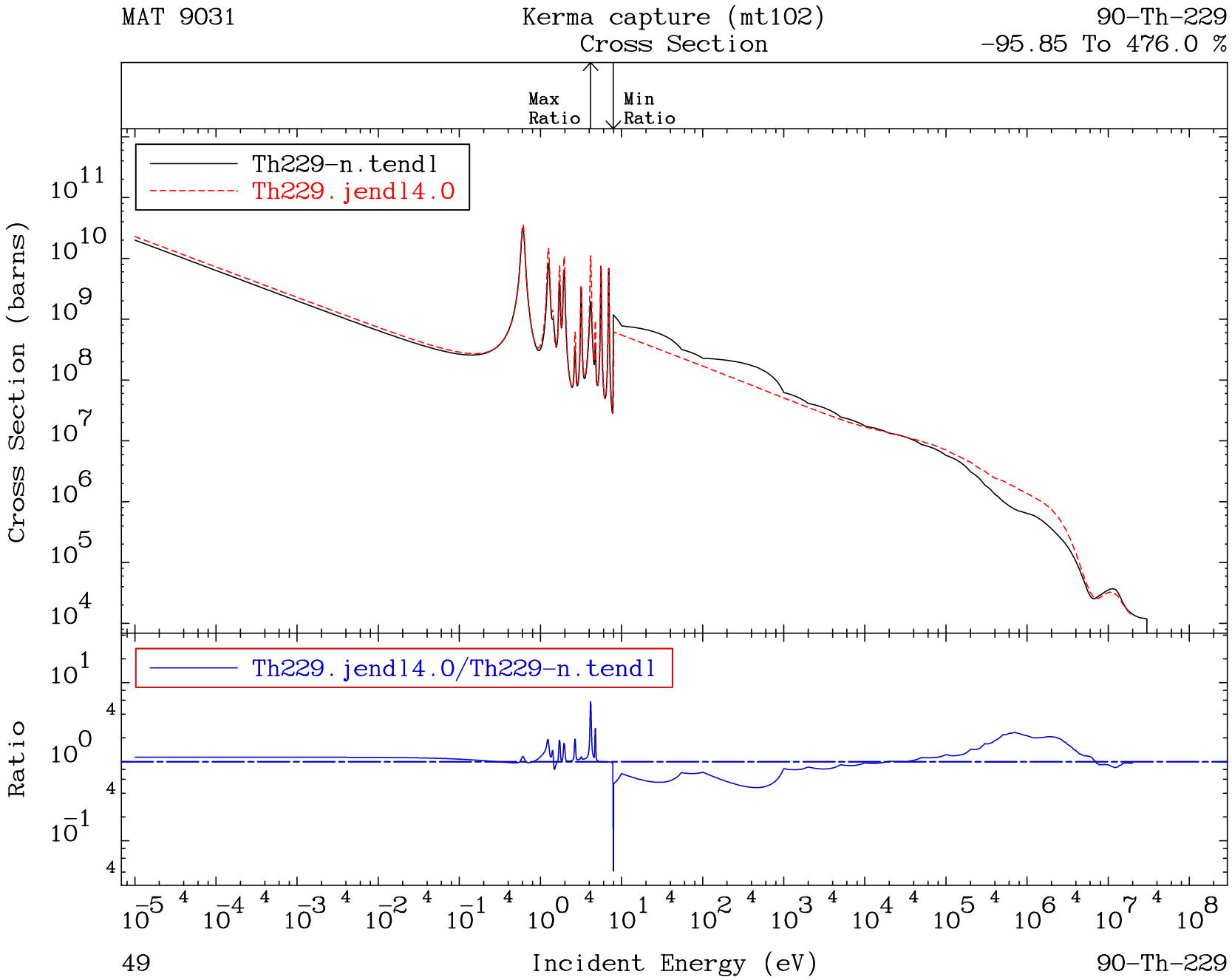

MAT 9031
Kerma total (eV-barns)
Cross Section
90-Th-229
-88.69 To 701.7 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
44
90-Th-229

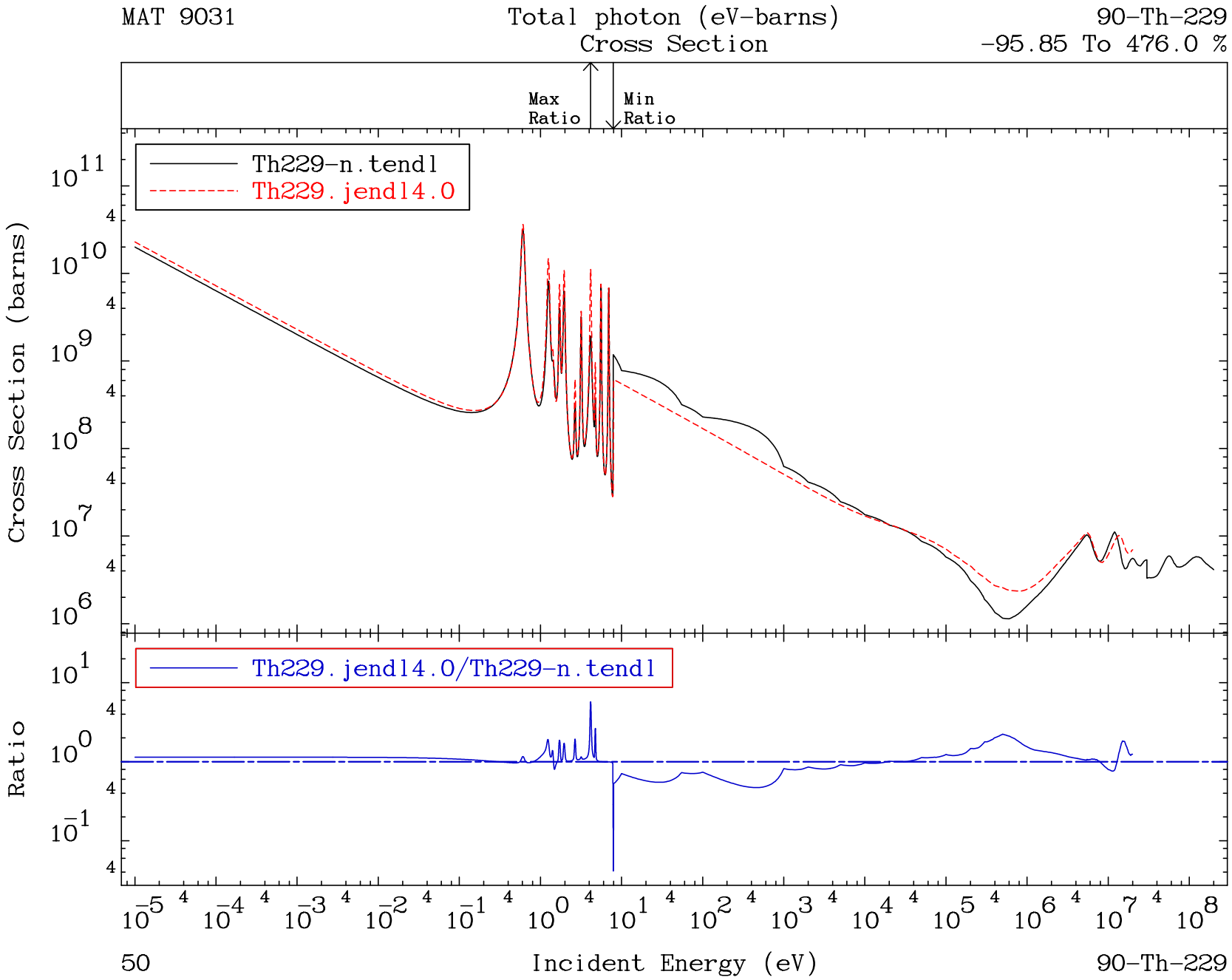

MAT 9031
Kerma elastic
Cross Section
90-Th-229
-22.83 To 221.7 %
Max
Ratio
Min
Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
45
90-Th-229

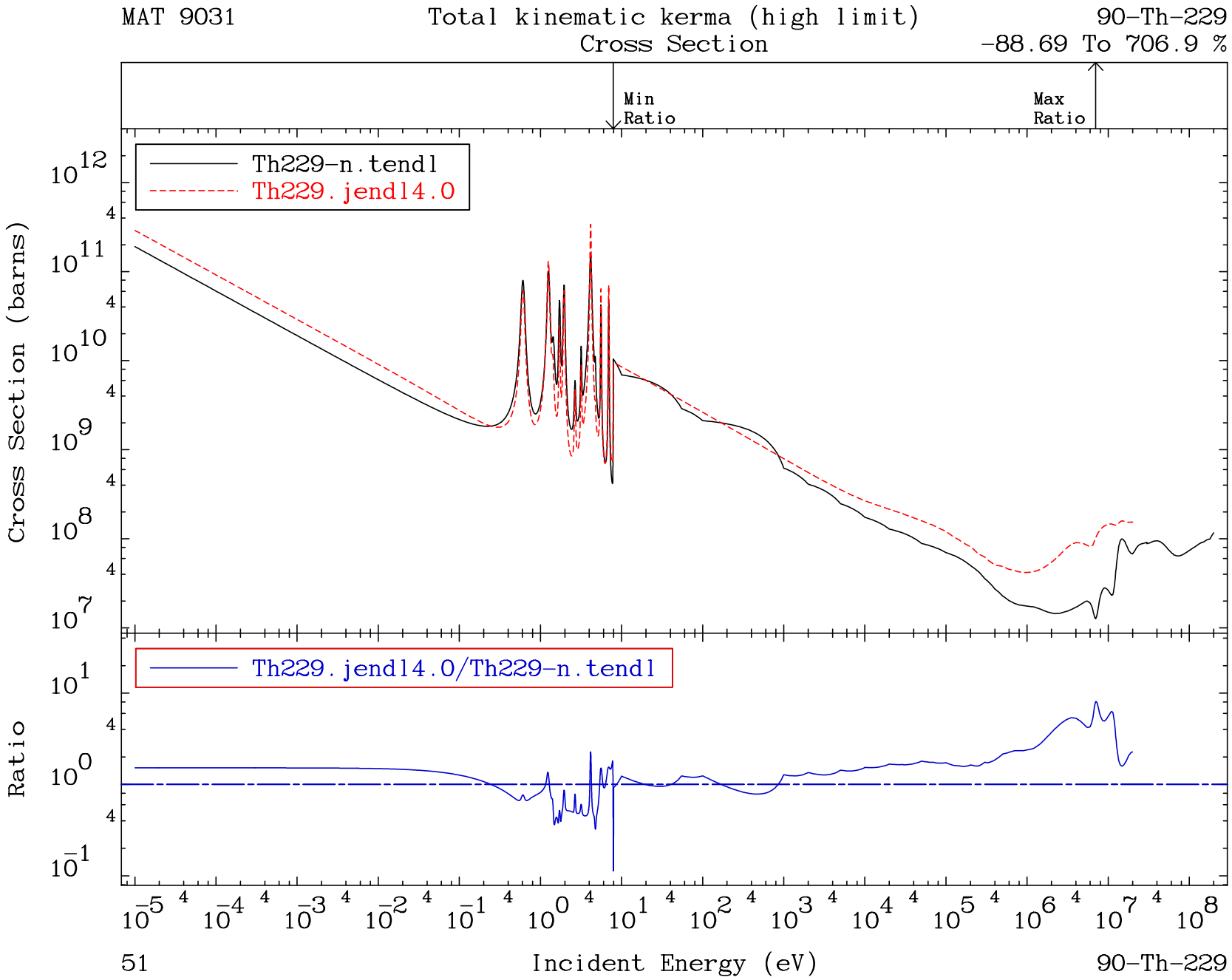

MAT 9031
Kerma non-elastic (all but mt2)
Cross Section
90-Th-229
-88.69 To 703.3 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
46
90-Th-229

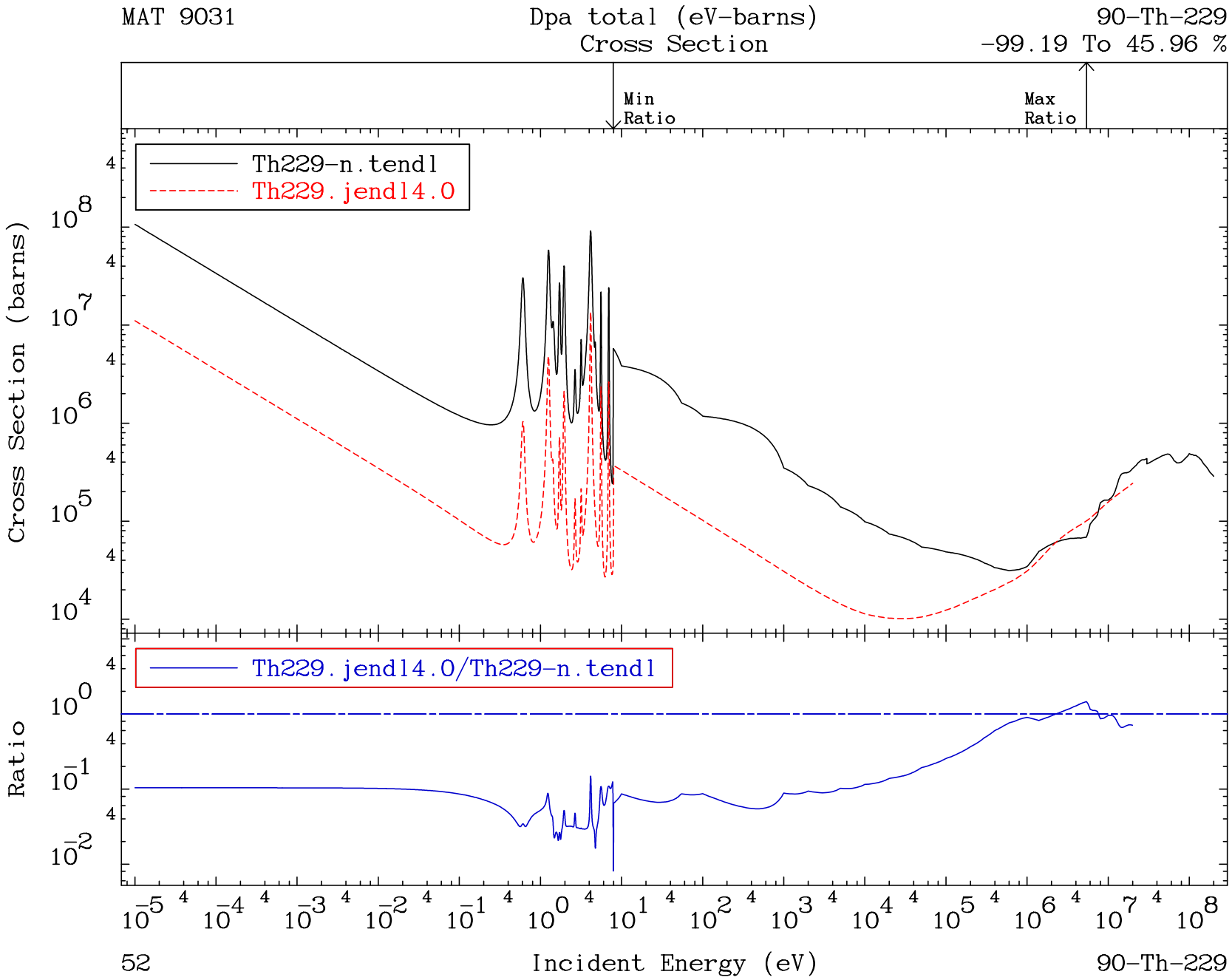

MAT 9031
Kerma inelastic (mt51-91)
Cross Section
90-Th-229
-14.52 To 9999. %
Max Ratio
Min Ratio
Th229-n.tendl Threshold 8.5000 eV
Th229.jendl4.0 Threshold 10.658 eV
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
47
90-Th-229

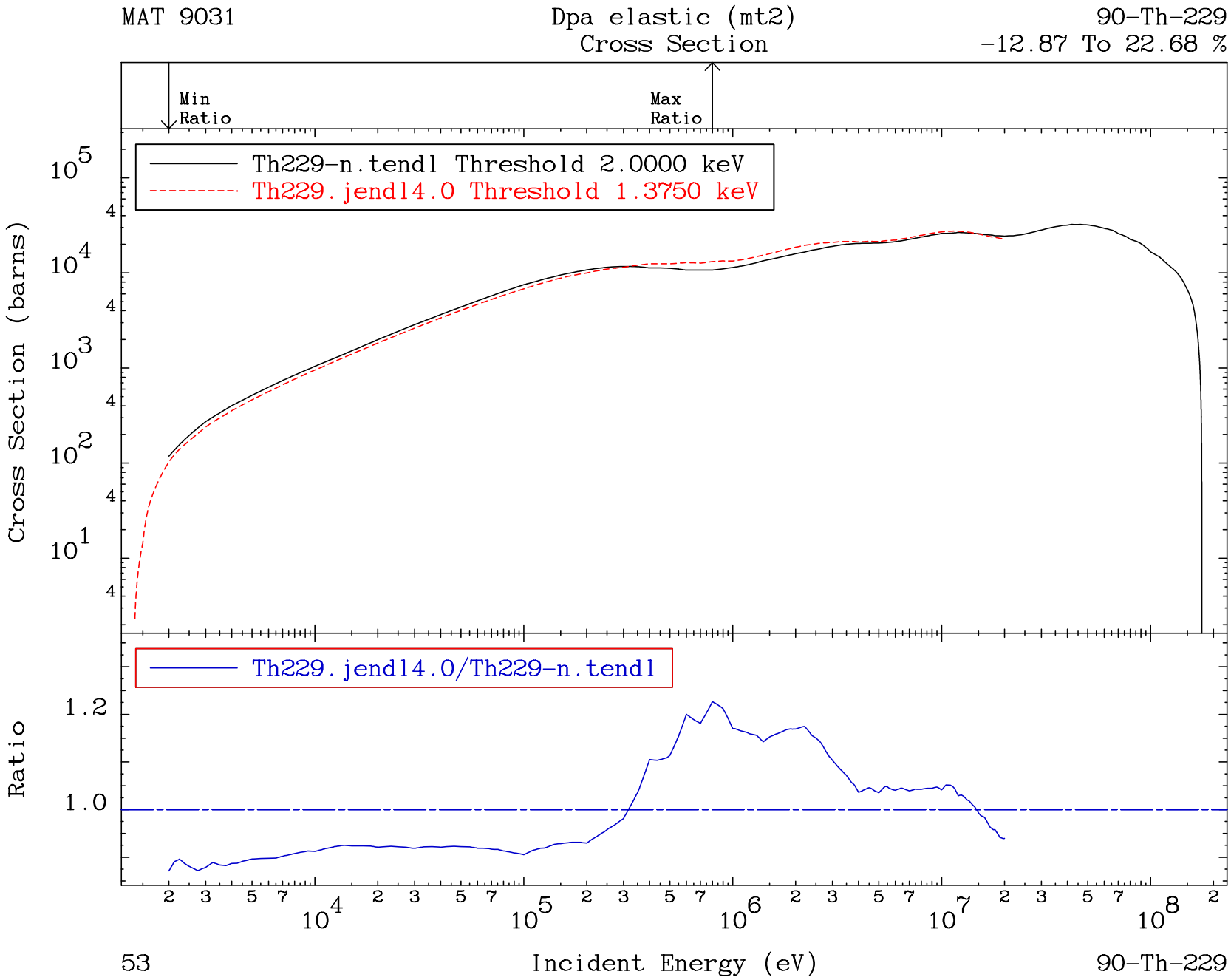

MAT 9031
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
90-Th-229
-87.78 To 1364. %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
48
90-Th-229

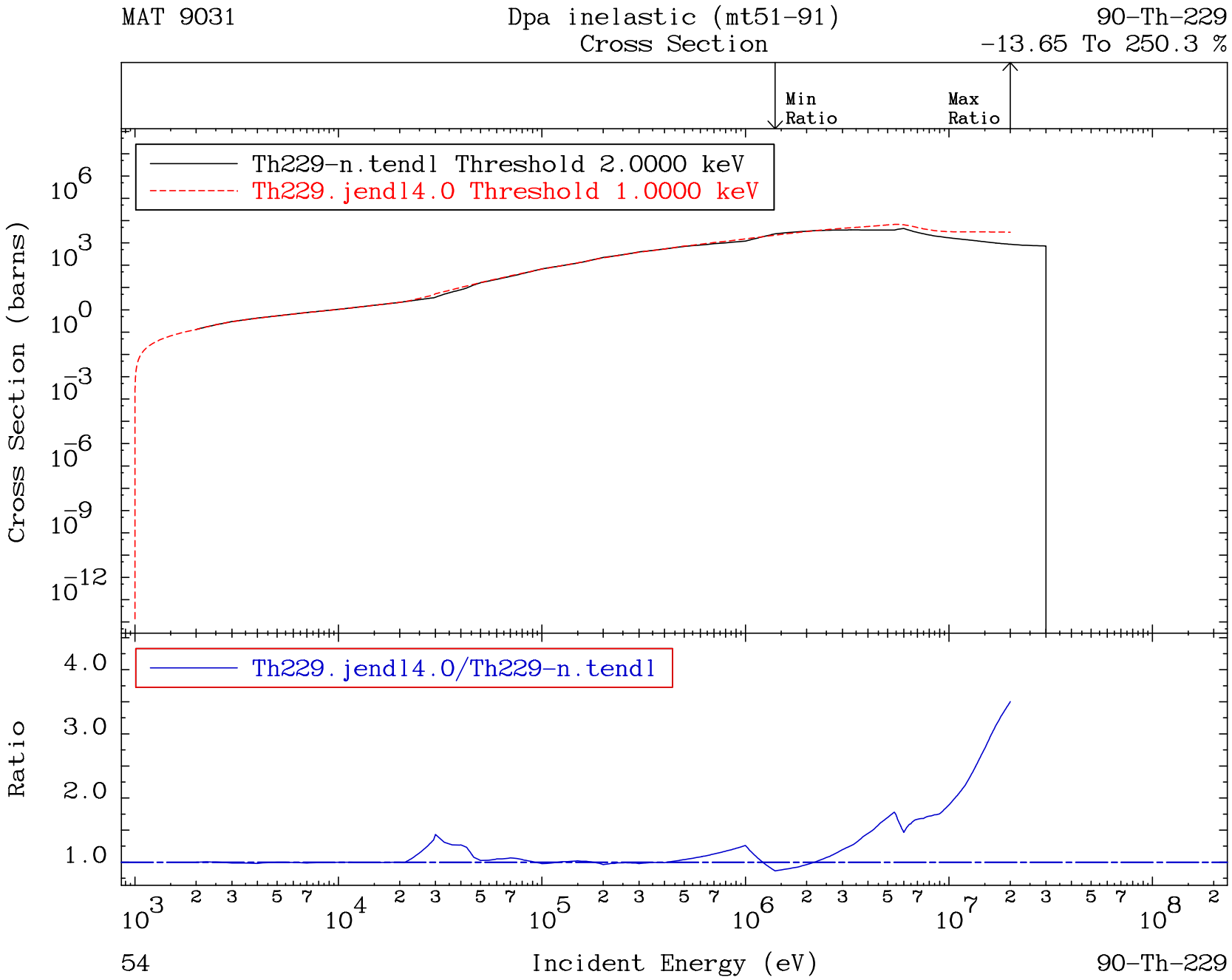

MAT 9031
Kerma capture (mt102)
Cross Section
90-Th-229
-95.85 To 476.0 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
49
90-Th-229

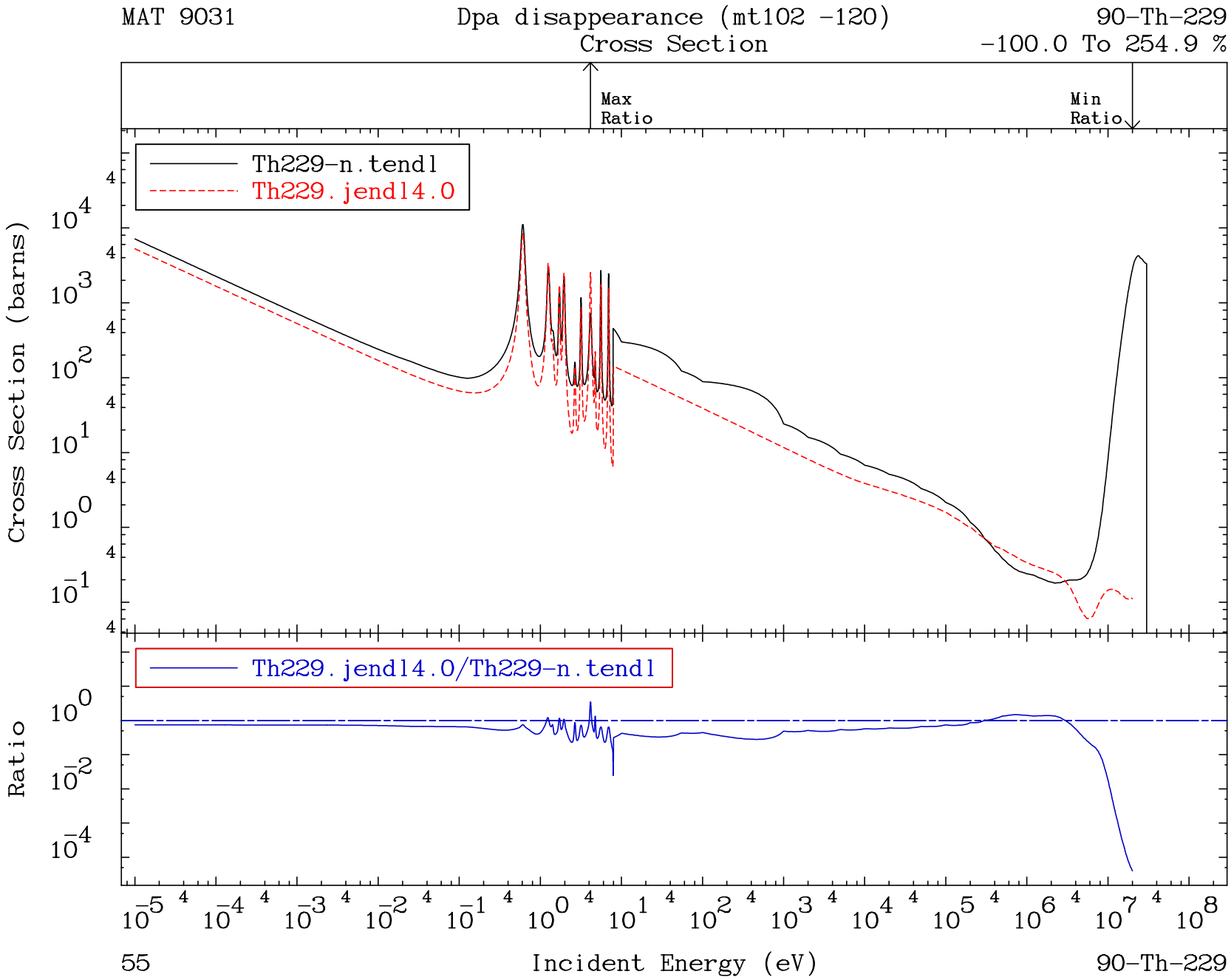

MAT 9031
Total photon (eV-barns)
Cross Section
90-Th-229
-95.85 To 476.0 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
50
90-Th-229


MAT 9031
Total kinematic kerma (high limit)
Cross Section
90-Th-229
-88.69 To 706.9 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
51
90-Th-229


MAT 9031
Dpa total (eV-barns)
Cross Section
90-Th-229
-99.19 To 45.96 %
Min Ratio
Max Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
52
90-Th-229


MAT 9031
Dpa elastic (mt2)
Cross Section
90-Th-229
-12.87 To 22.68 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 2.0000 keV
Th229.jendl4.0 Threshold 1.3750 keV
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
53
90-Th-229


MAT 9031
Dpa inelastic (mt51-91)
Cross Section
90-Th-229
-13.65 To 250.3 %
Min Ratio
Max Ratio
Th229-n.tendl Threshold 2.0000 keV
Th229.jendl4.0 Threshold 1.0000 keV
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
54
90-Th-229


MAT 9031
Dpa disappearance (mt102 -120)
Cross Section
90-Th-229
-100.0 To 254.9 %
Max Ratio
Min Ratio
Th229-n.tendl
Th229.jendl4.0
Cross Section (barns)
Th229.jendl4.0/Th229-n.tendl
Ratio
Incident Energy (eV)
55
90-Th-229