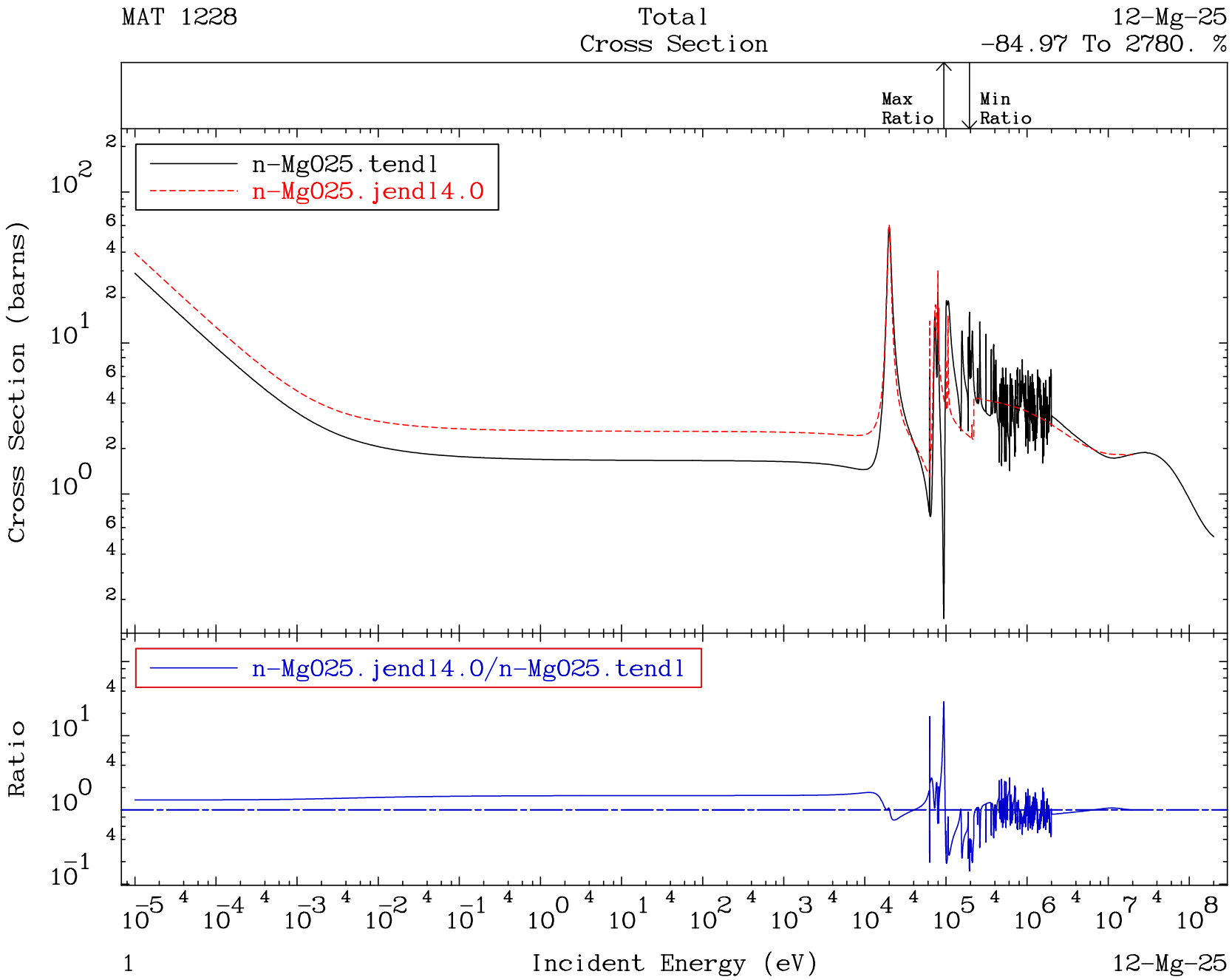
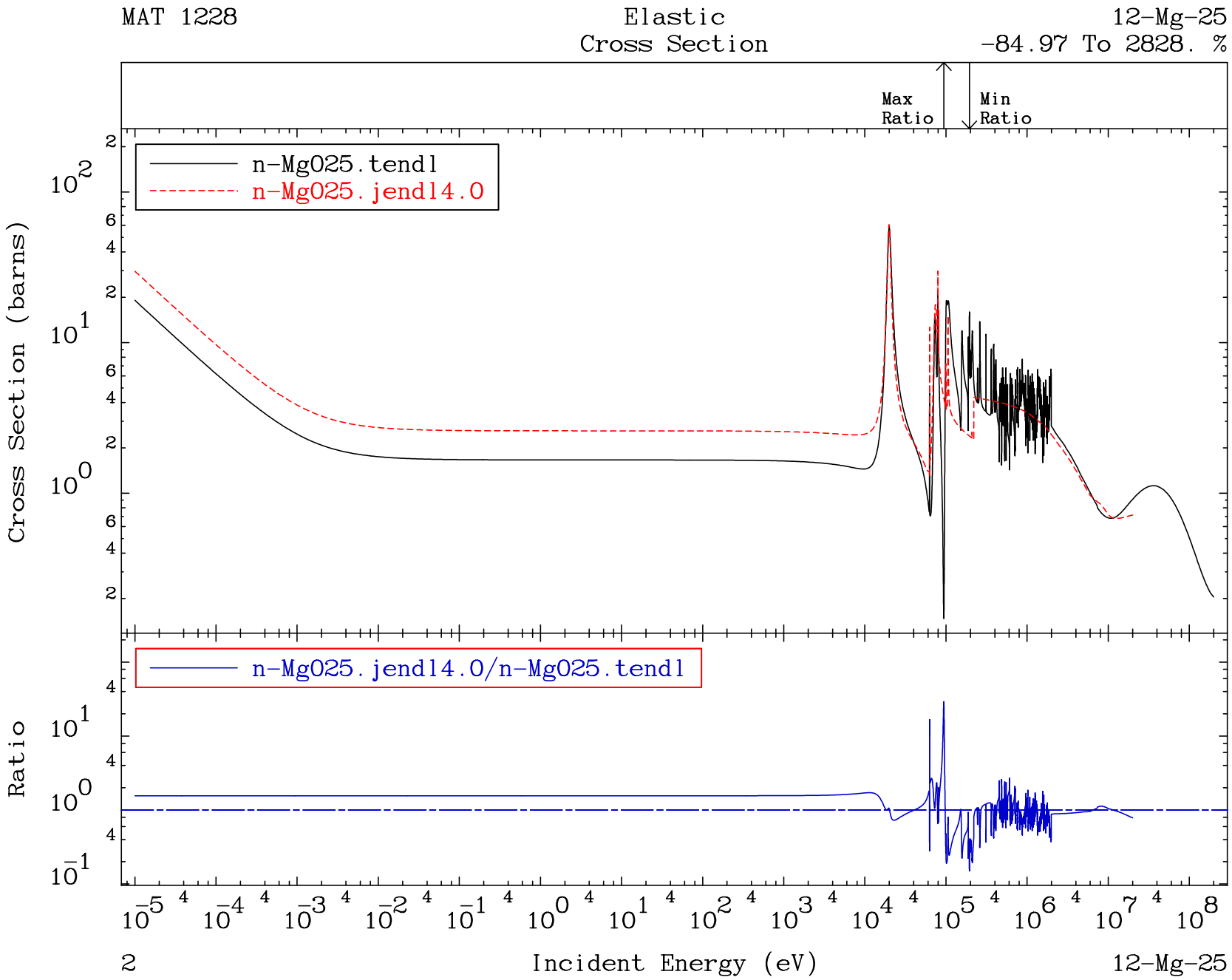
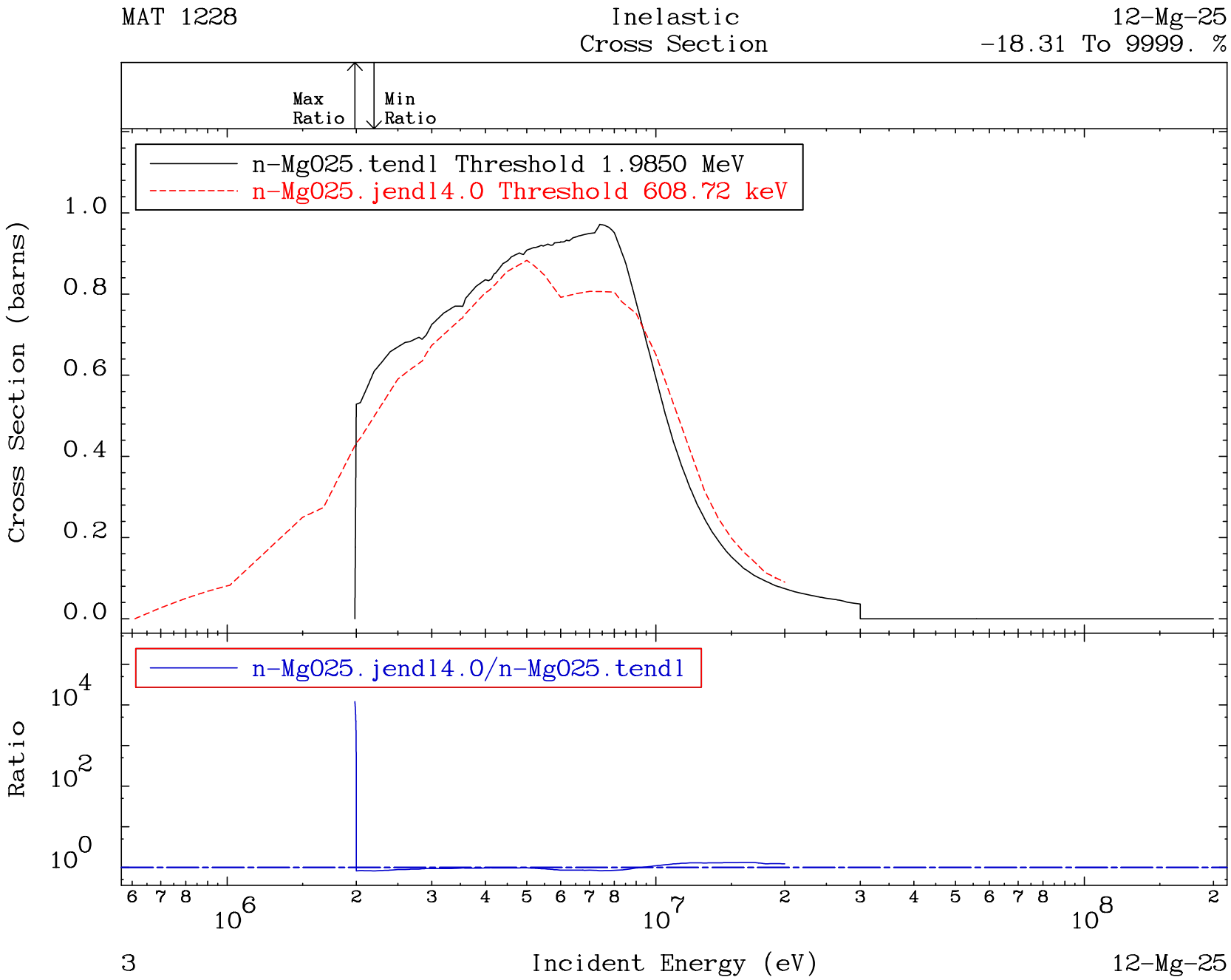
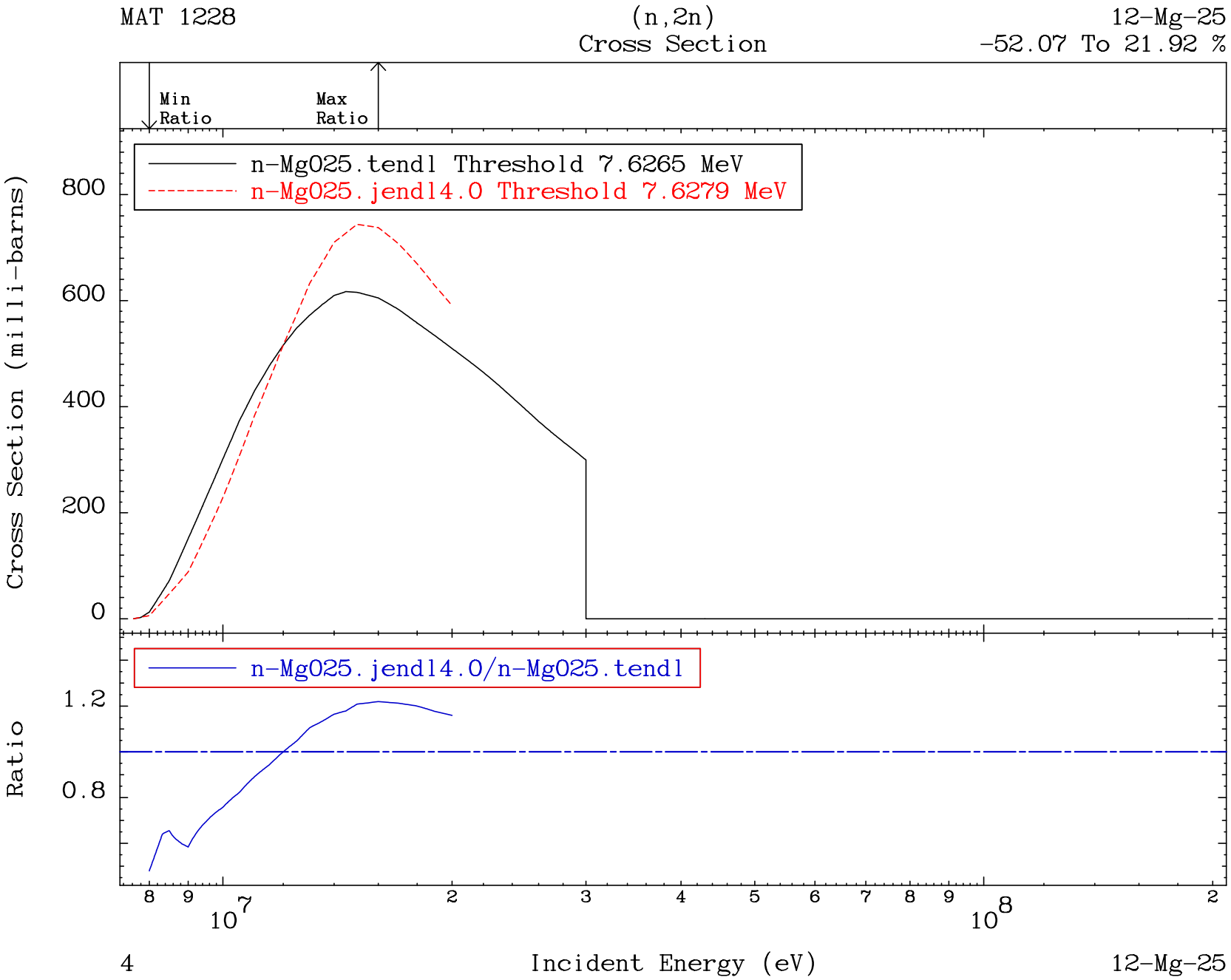
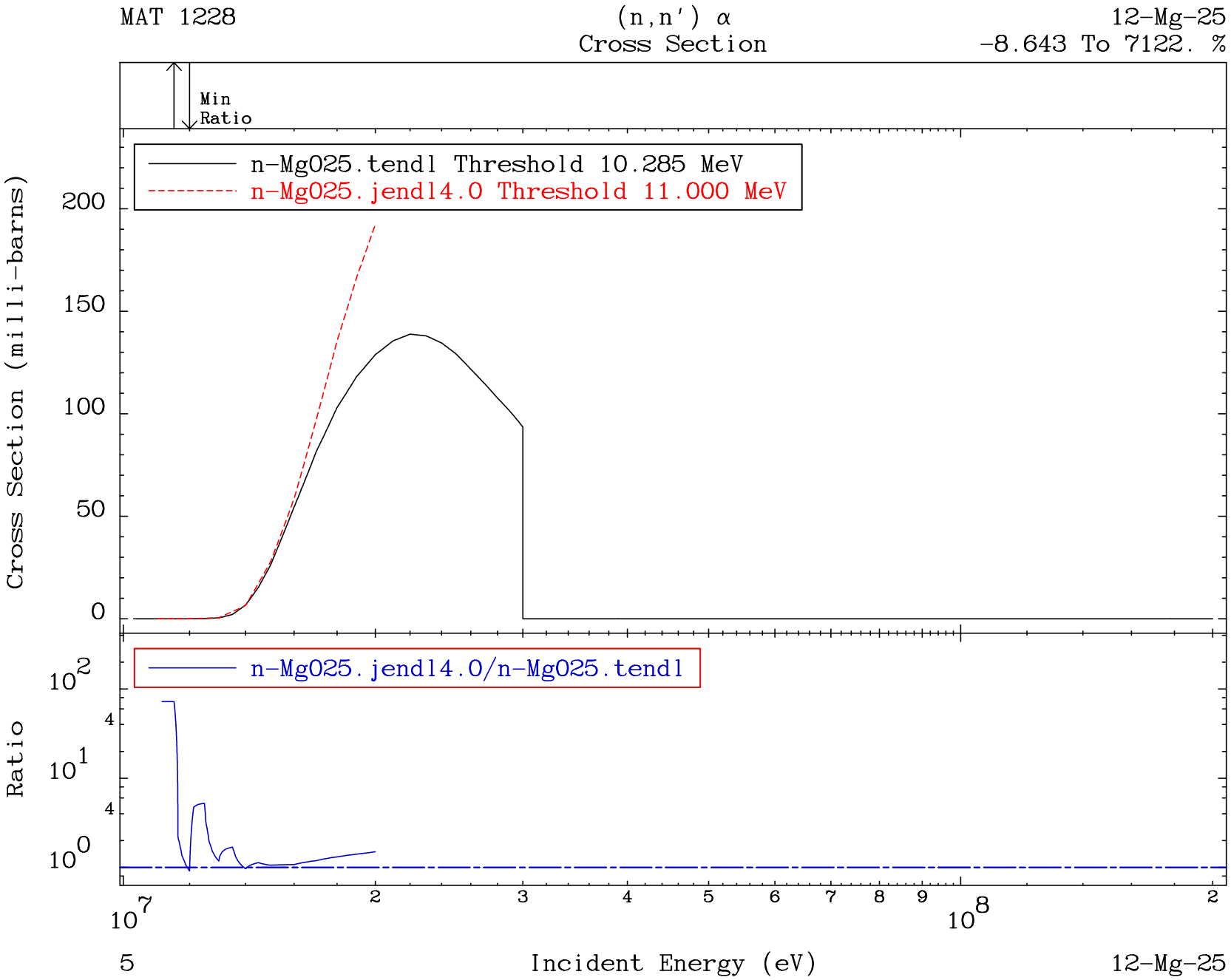
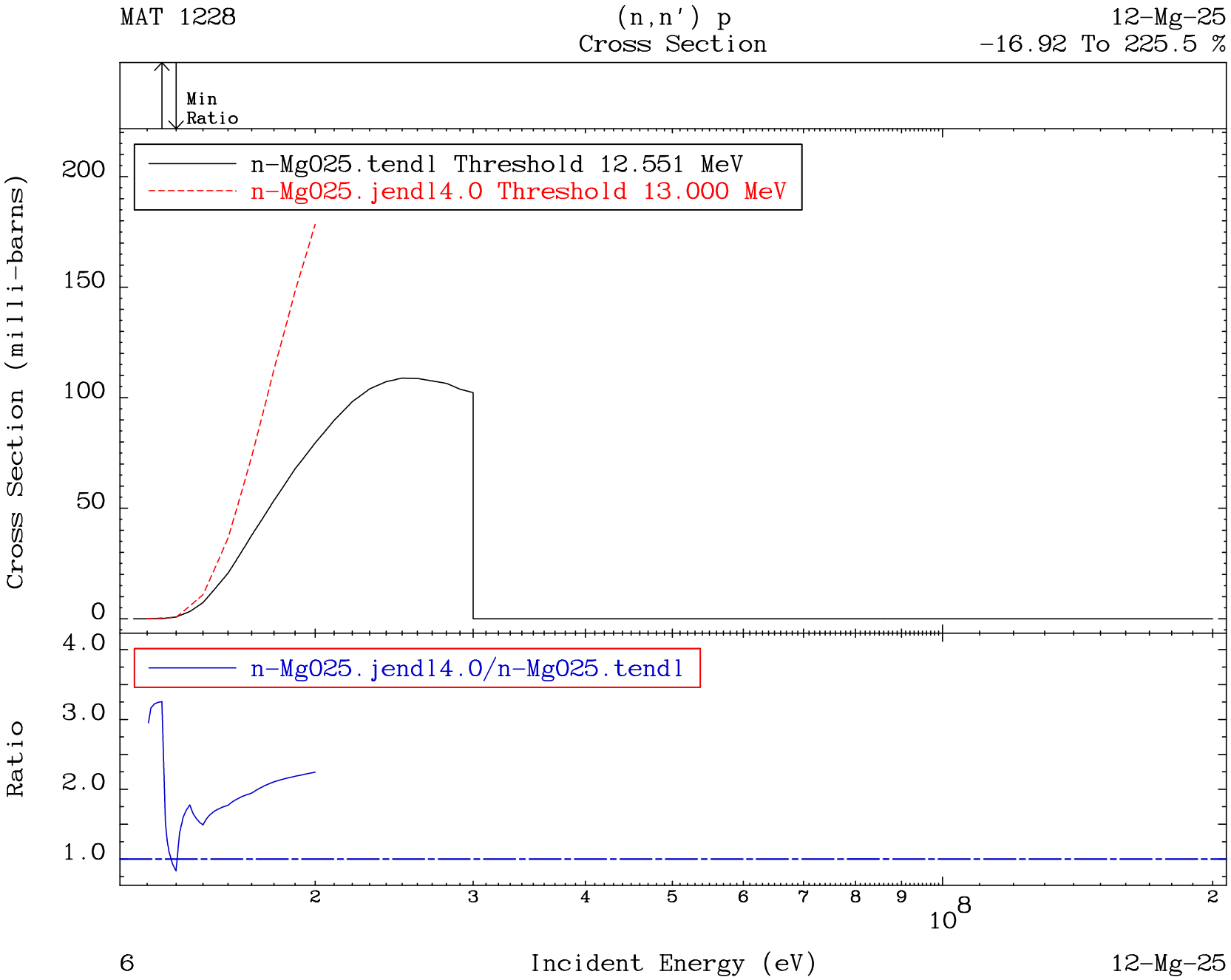

MAT 1228
Total
Cross Section
12-Mg-25
-84.97 To 2780. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
1
12-Mg-25

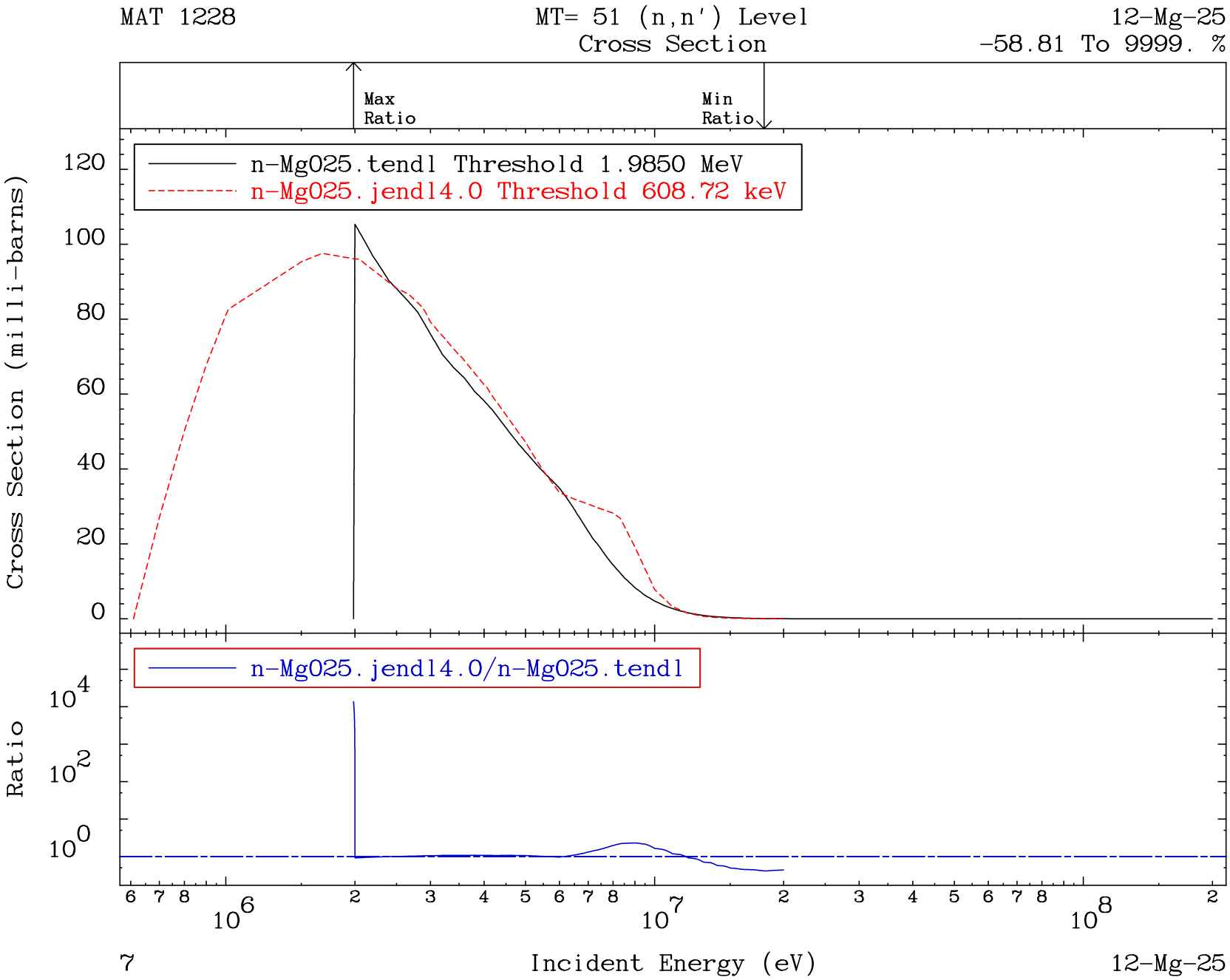

MAT 1228
Elastic
Cross Section
12-Mg-25
-84.97 To 2828. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
2
12-Mg-25

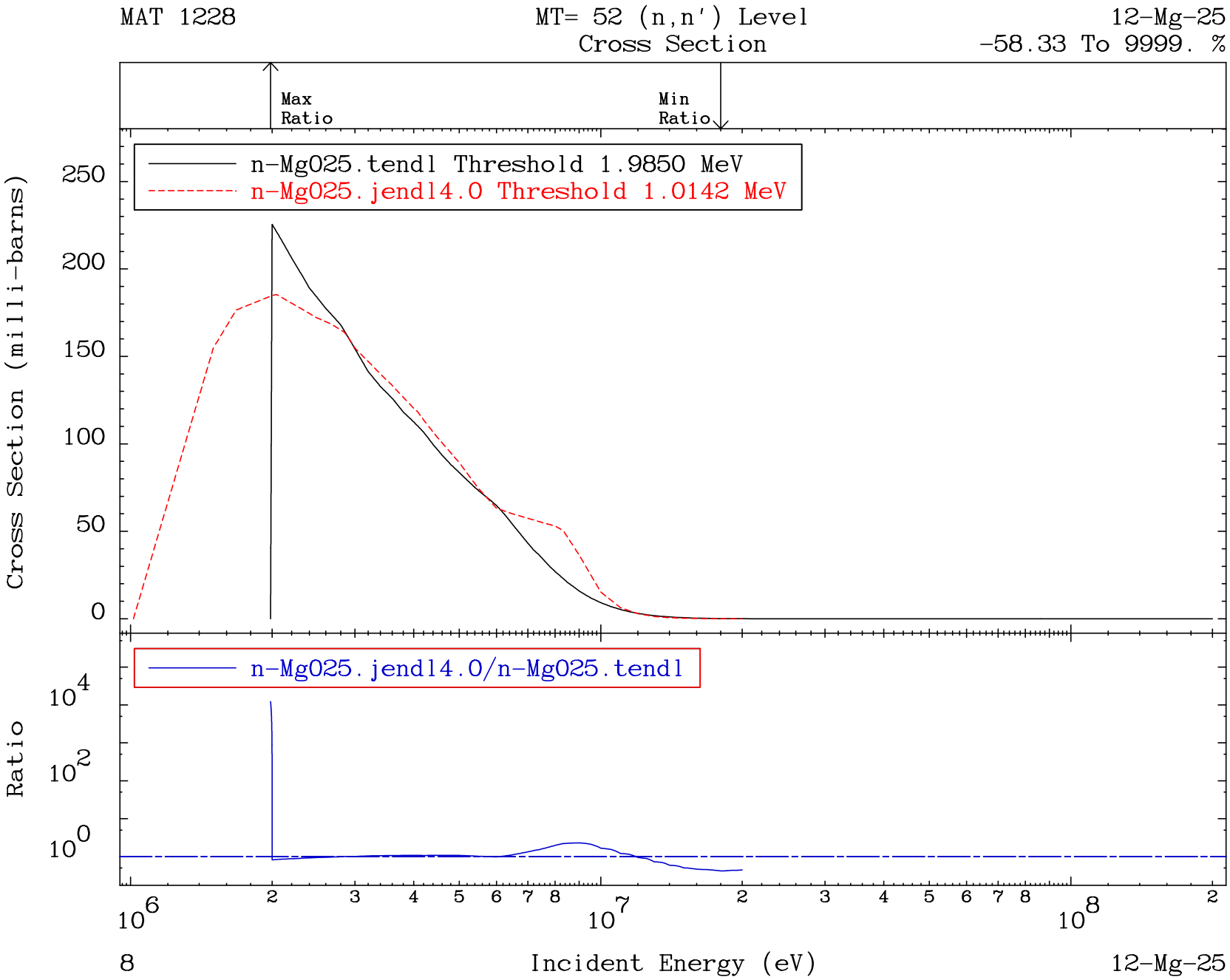

MAT 1228
Inelastic
Cross Section
12-Mg-25
-18.31 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 1.9850 MeV
n-Mg025.jendl4.0 Threshold 608.72 keV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^4
10^2
10^0
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
3
Incident Energy (eV)
12-Mg-25

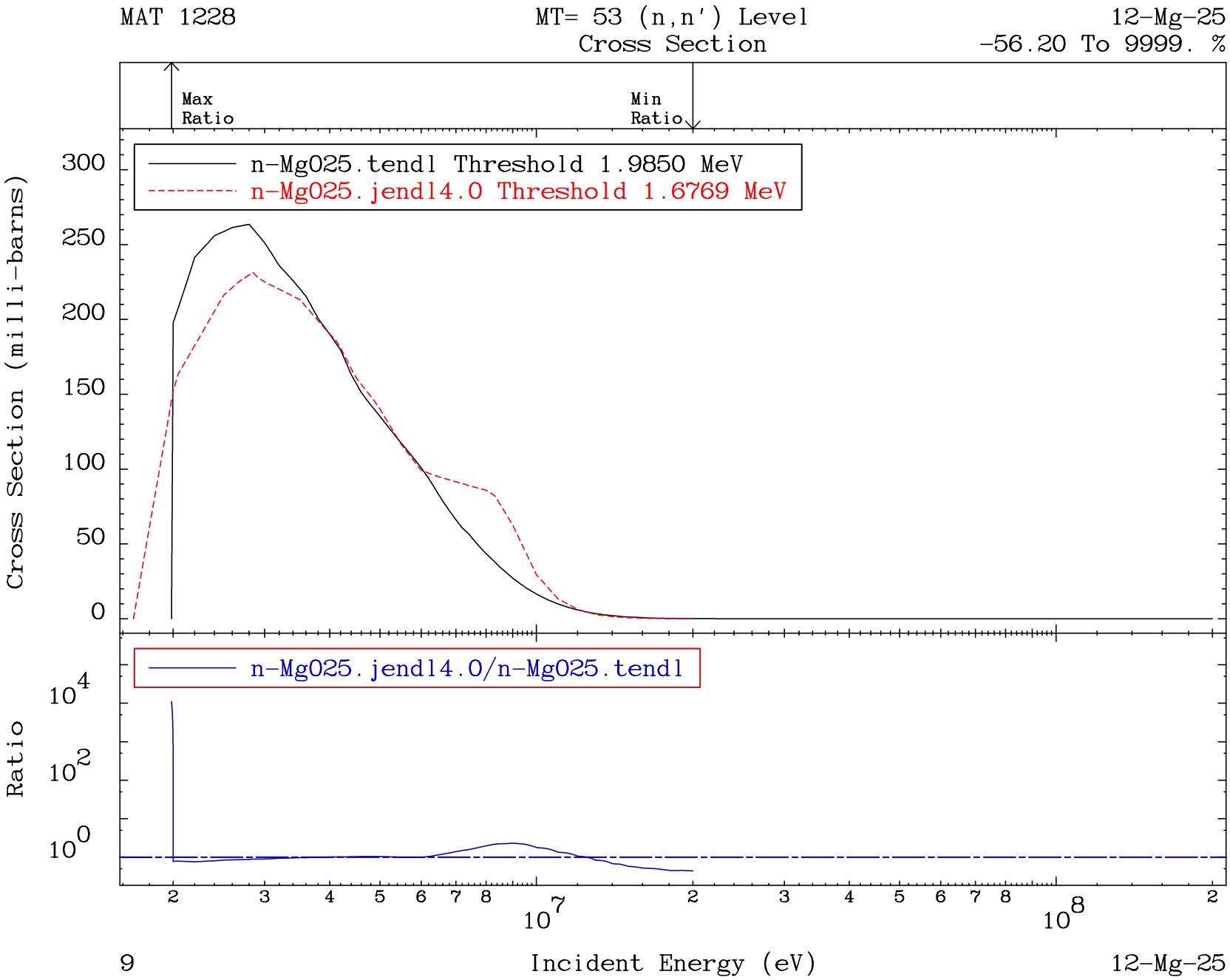

MAT 1228
(n,2n)
Cross Section
12-Mg-25
-52.07 To 21.92 %
Min Ratio
Max Ratio
n-Mg025.tendl Threshold 7.6265 MeV
n-Mg025.jendl4.0 Threshold 7.6279 MeV
Cross Section (milli-barns)
800
600
400
200
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
1.2
0.8
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
4
Incident Energy (eV)
12-Mg-25

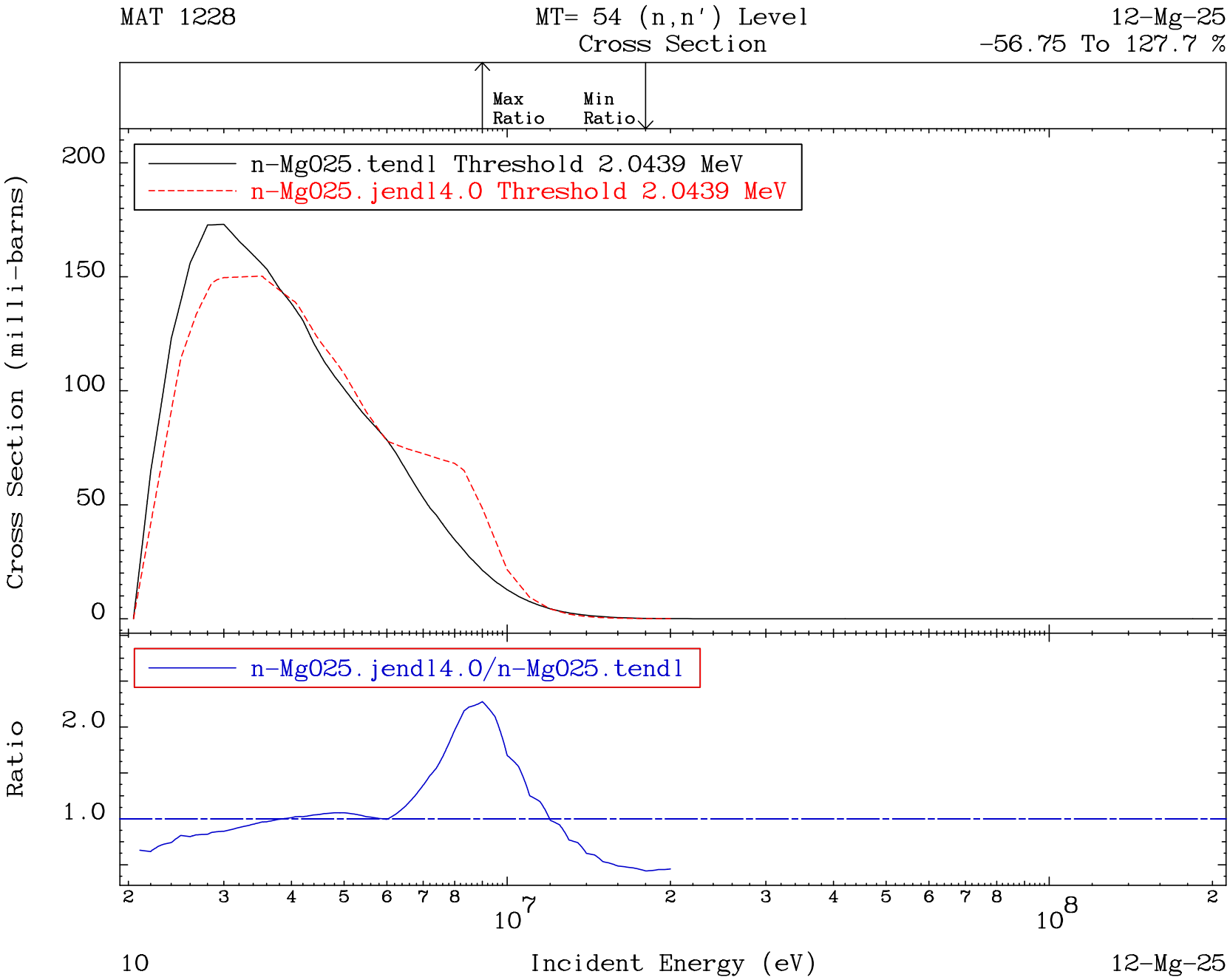

MAT 1228
(n,n') α
Cross Section
12-Mg-25
-8.643 To 7122. %
Min
Ratio
n-Mg025.tendl Threshold 10.285 MeV
n-Mg025.jendl4.0 Threshold 11.000 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^2
10^1
10^0
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
12-Mg-25

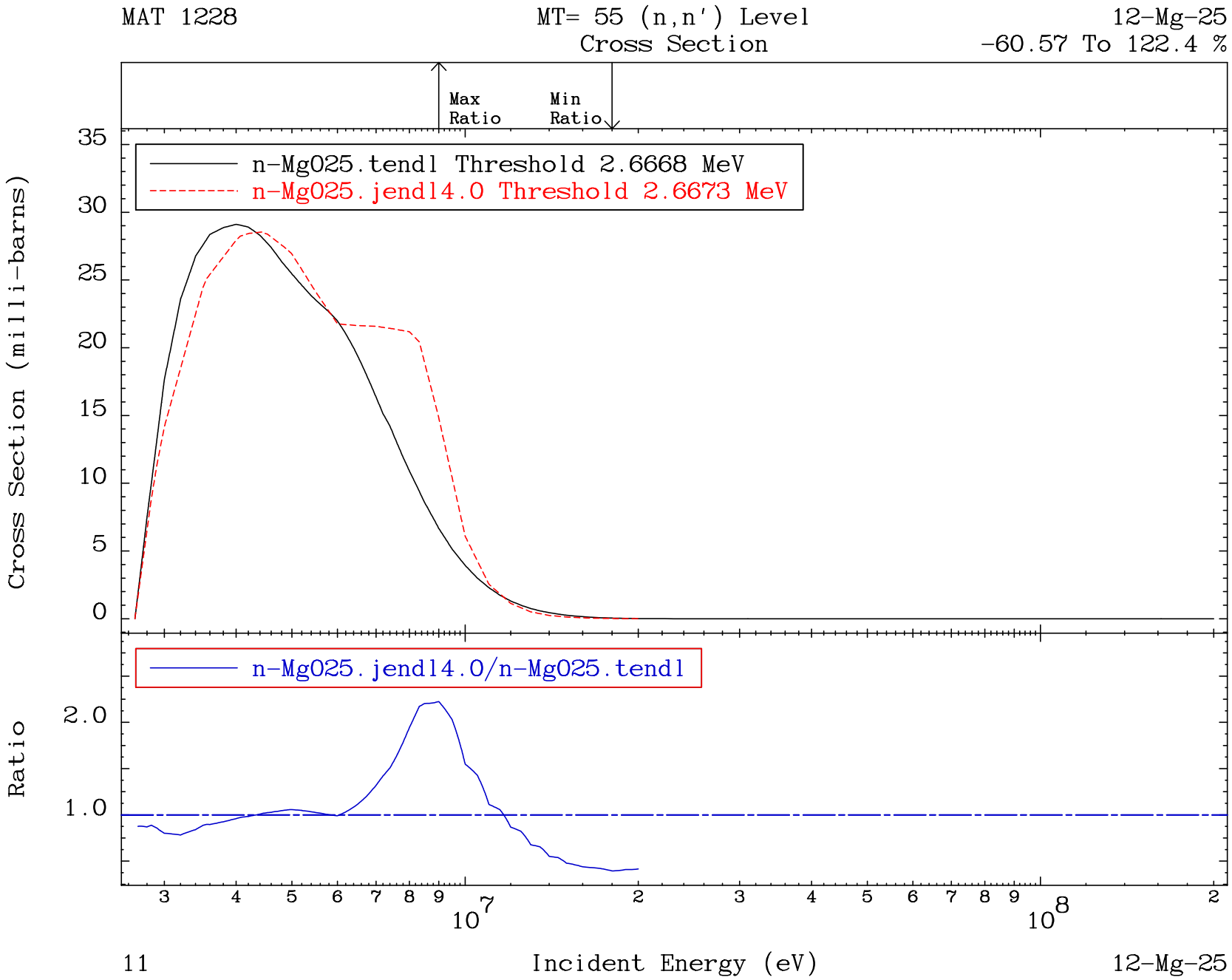

MAT 1228
(n,n') p
Cross Section
12-Mg-25
-16.92 To 225.5 %
Min
Ratio
n-Mg025.tendl Threshold 12.551 MeV
n-Mg025.jendl4.0 Threshold 13.000 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
12-Mg-25

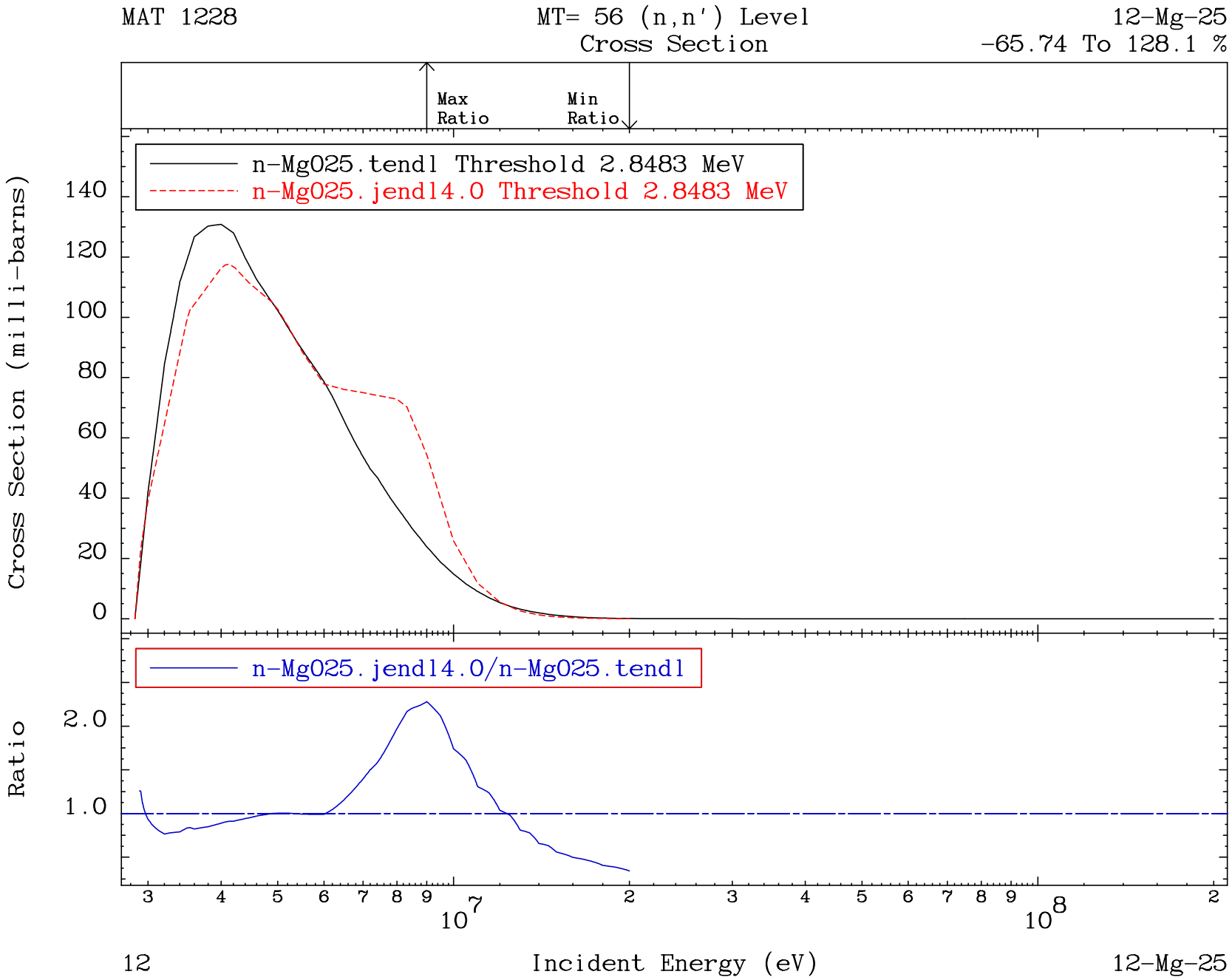

MAT 1228
MT= 51 (n,n') Level
Cross Section
12-Mg-25
-58.81 To 9999. %
Max
Ratio
Min
Ratio
n-Mg025.tendl Threshold 1.9850 MeV
n-Mg025.jendl4.0 Threshold 608.72 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^4
10^2
10^0
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
7
Incident Energy (eV)
12-Mg-25

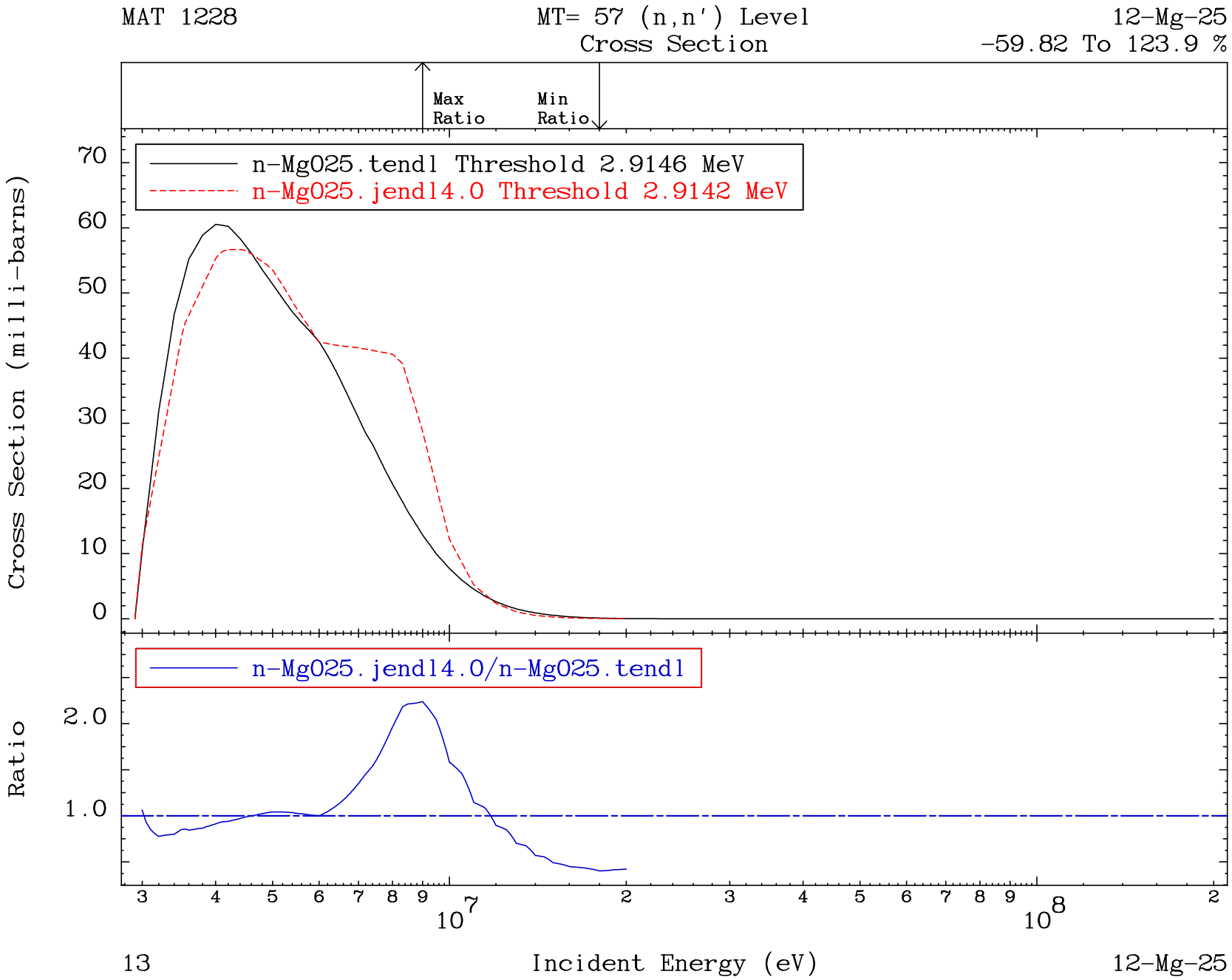

MAT 1228
MT= 52 (n,n') Level
Cross Section
12-Mg-25
-58.33 To 9999. %
Max
Ratio
Min
Ratio
n-Mg025.tendl Threshold 1.9850 MeV
n-Mg025.jendl4.0 Threshold 1.0142 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^4
10^2
10^0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
8
Incident Energy (eV)
12-Mg-25

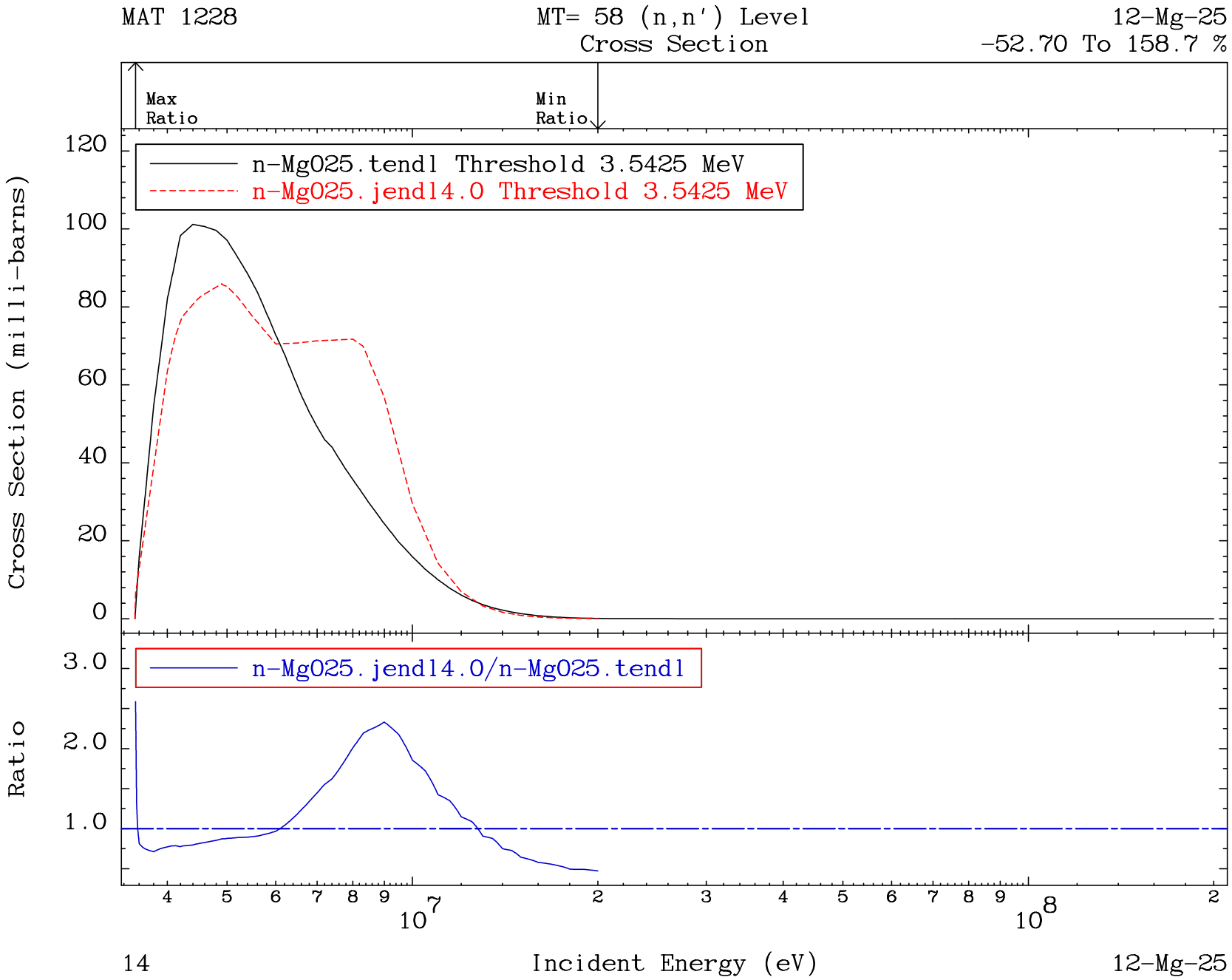

MAT 1228
MT= 53 (n,n') Level
Cross Section
12-Mg-25
-56.20 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 1.9850 MeV
n-Mg025.jendl4.0 Threshold 1.6769 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^4
10^2
10^0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
9
Incident Energy (eV)
12-Mg-25

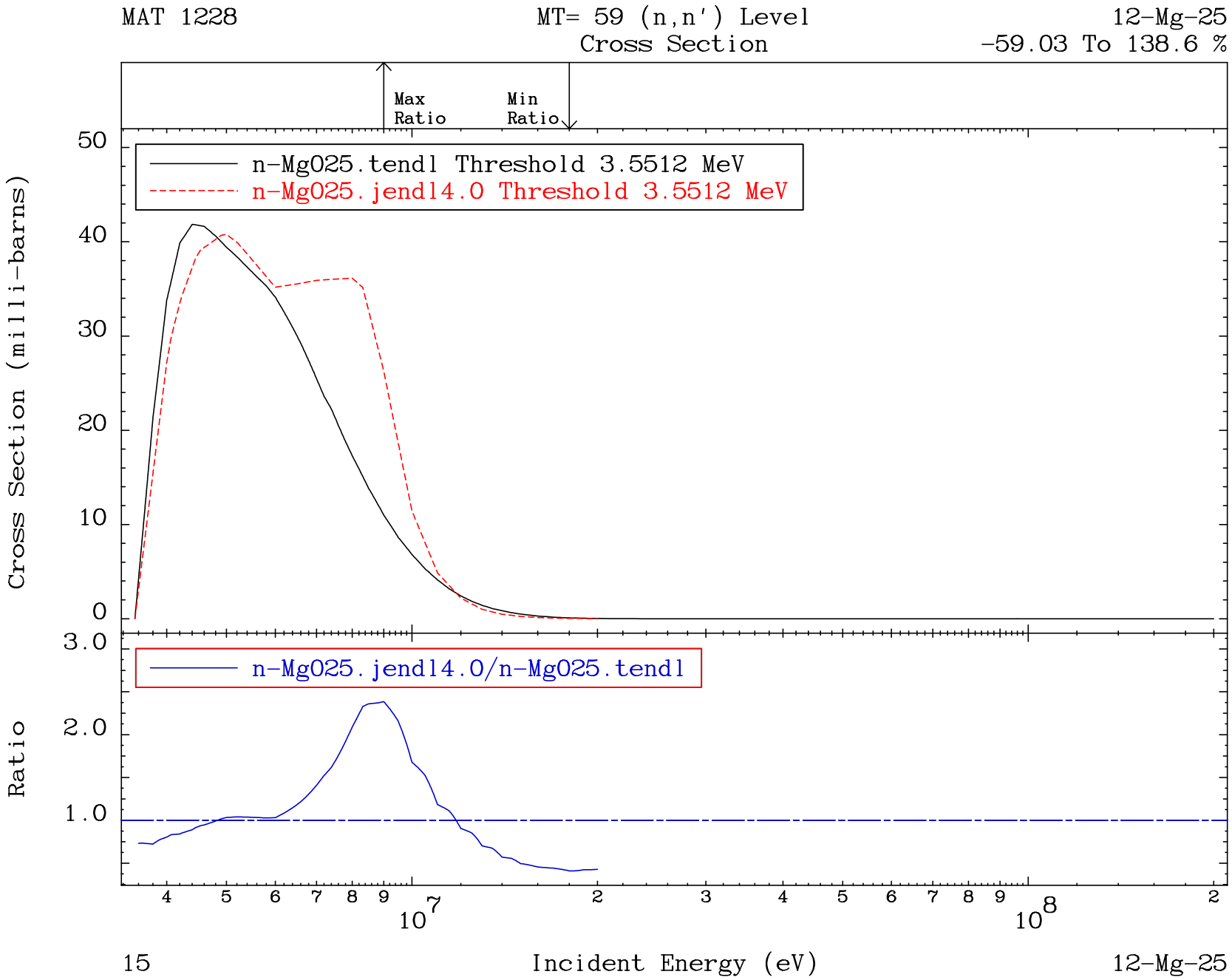

MAT 1228
MT= 54 (n,n') Level
Cross Section
12-Mg-25
-56.75 To 127.7 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 2.0439 MeV
n-Mg025.jendl4.0 Threshold 2.0439 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
10
Incident Energy (eV)
12-Mg-25

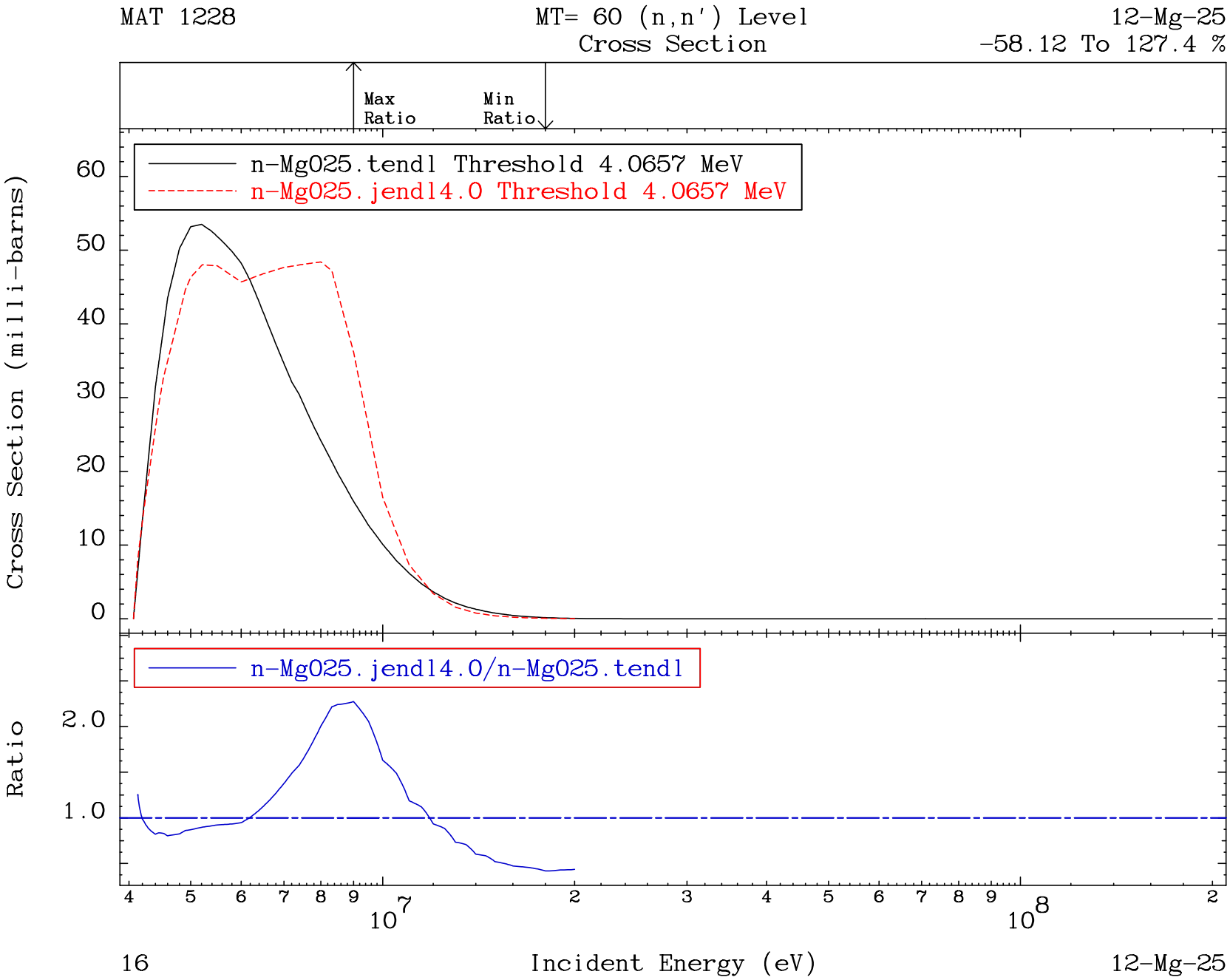

MAT 1228
MT= 55 (n,n') Level
Cross Section
12-Mg-25
-60.57 To 122.4 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 2.6668 MeV
n-Mg025.jendl4.0 Threshold 2.6673 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
11
Incident Energy (eV)
12-Mg-25

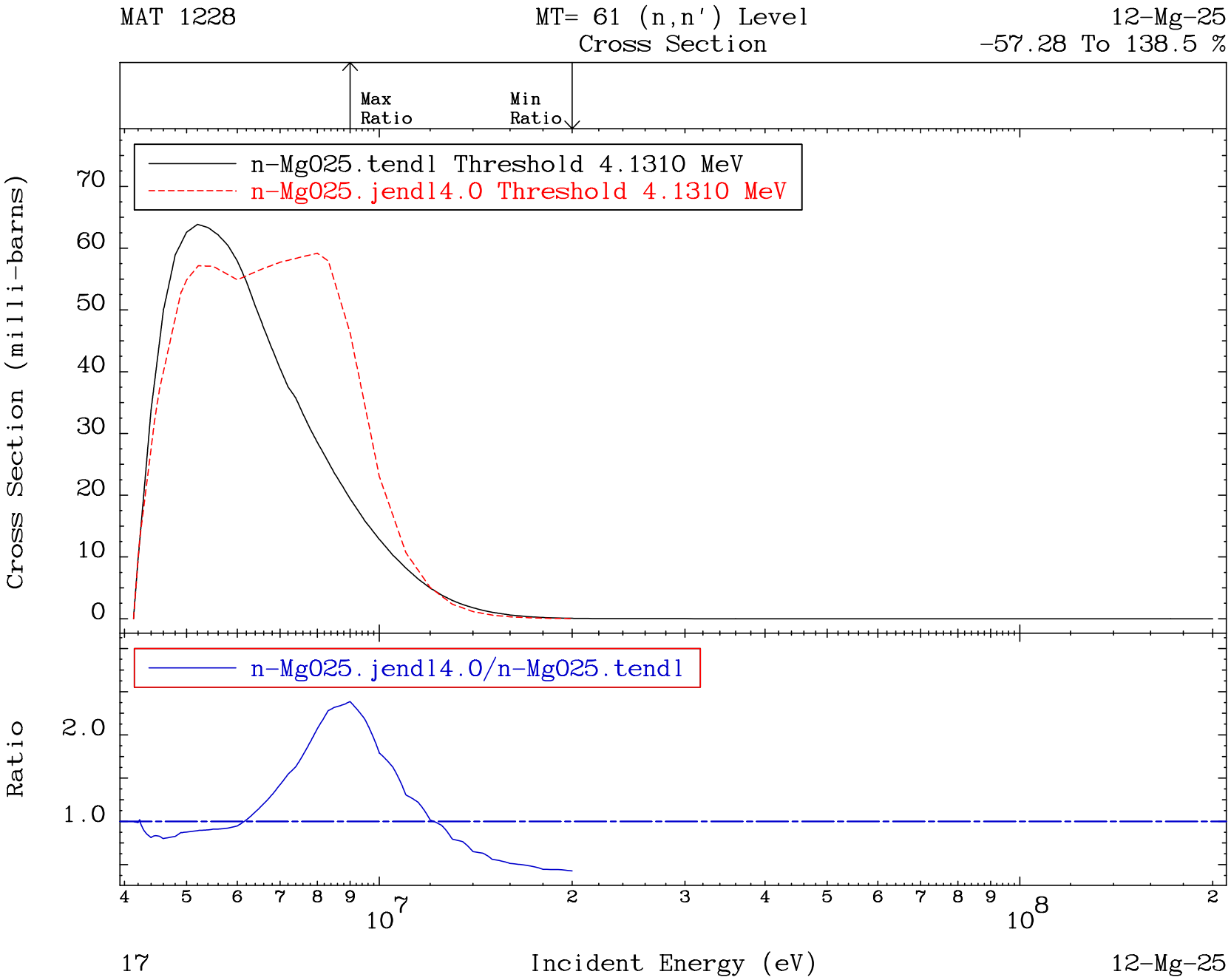

MAT 1228
MT= 56 (n,n') Level
Cross Section
12-Mg-25
-65.74 To 128.1 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 2.8483 MeV
n-Mg025.jendl4.0 Threshold 2.8483 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
12
Incident Energy (eV)
12-Mg-25

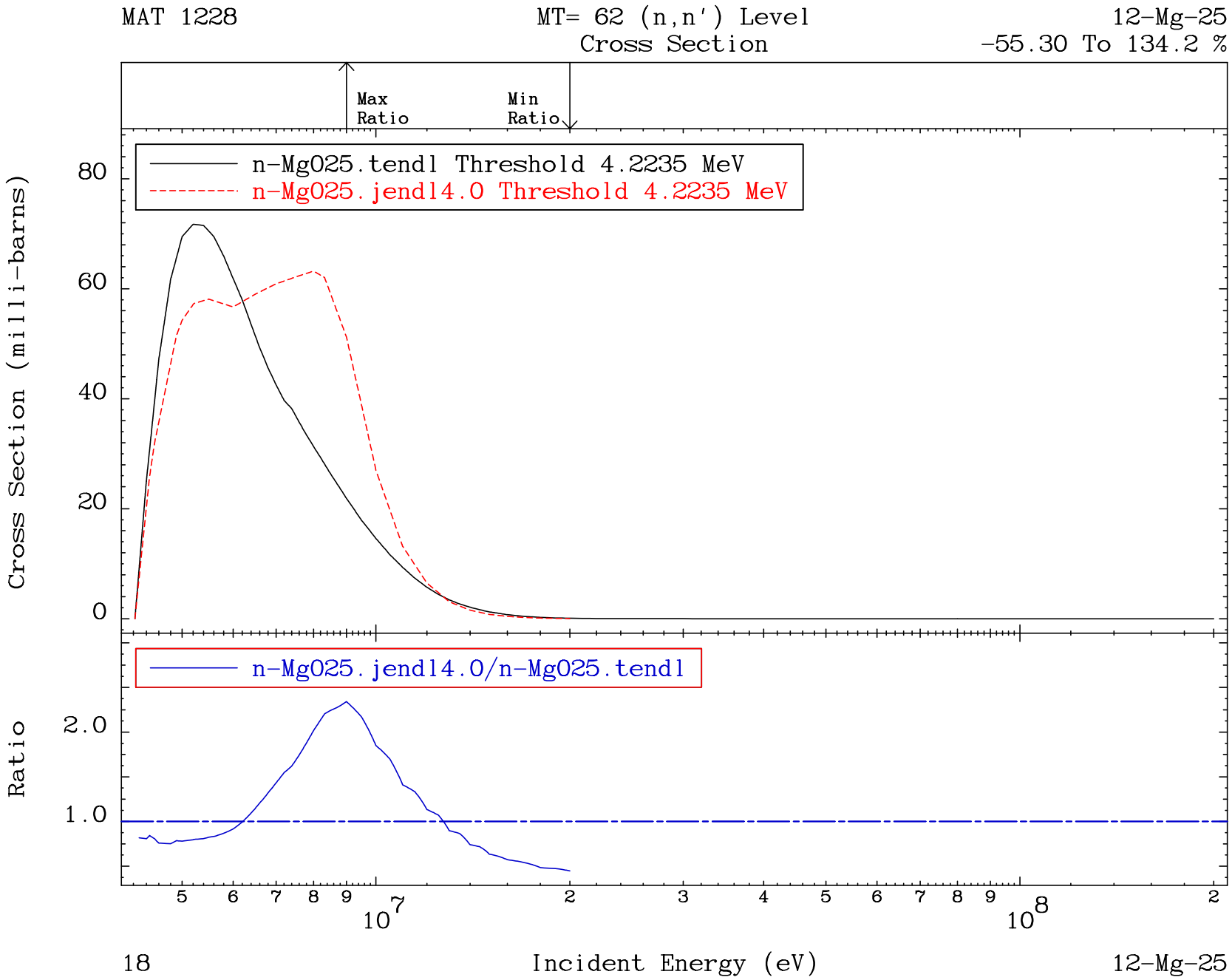

MAT 1228
MT= 57 (n,n') Level
Cross Section
12-Mg-25
-59.82 To 123.9 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 2.9146 MeV
n-Mg025.jendl4.0 Threshold 2.9142 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
13
Incident Energy (eV)
12-Mg-25

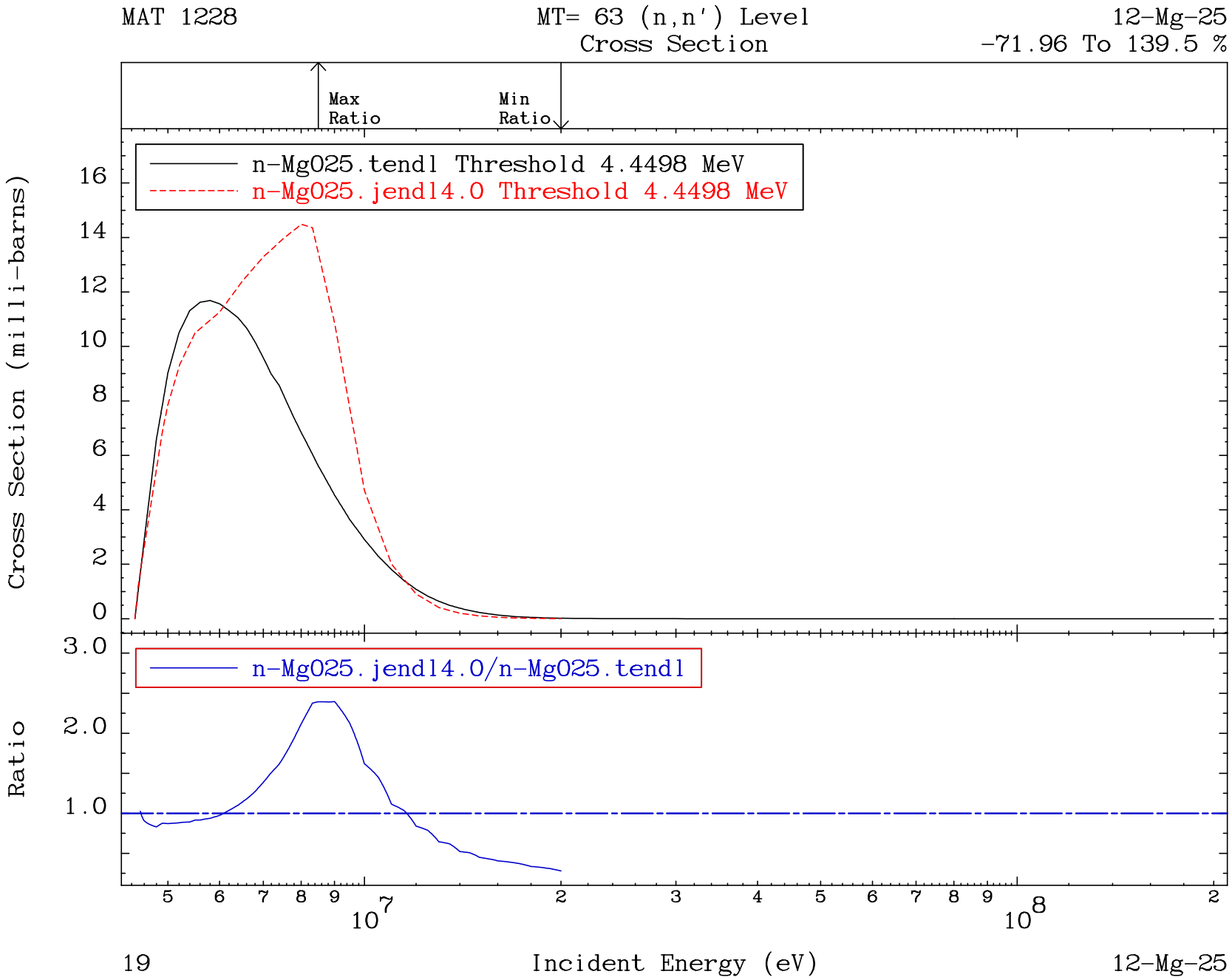

MAT 1228
MT= 58 (n,n') Level
Cross Section
12-Mg-25
-52.70 To 158.7 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 3.5425 MeV
n-Mg025.jendl4.0 Threshold 3.5425 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
3.0
2.0
1.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
14
Incident Energy (eV)
12-Mg-25

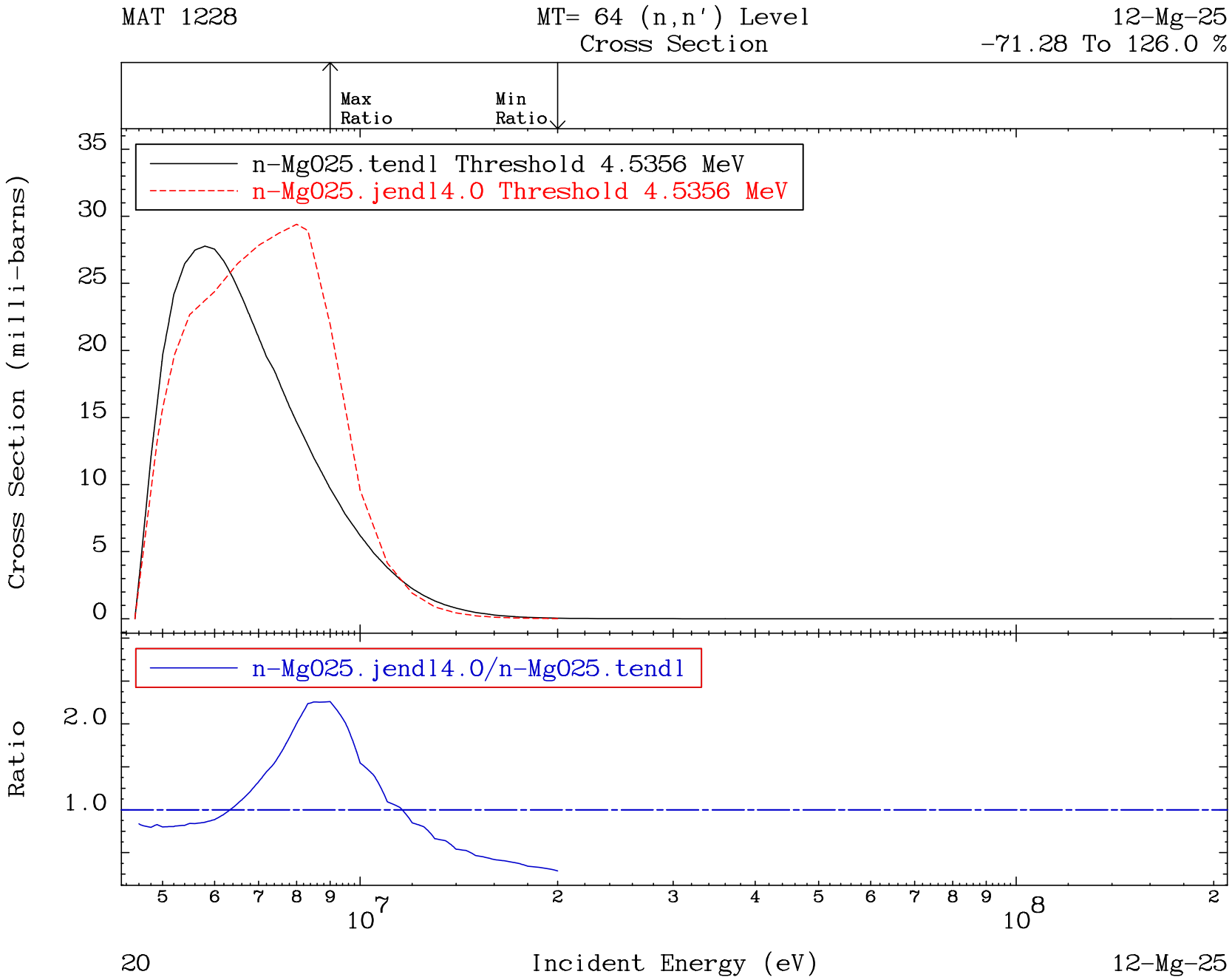

MAT 1228
MT= 59 (n,n') Level
Cross Section
12-Mg-25
-59.03 To 138.6 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 3.5512 MeV
n-Mg025.jendl4.0 Threshold 3.5512 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
3.0
2.0
1.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
15
Incident Energy (eV)
12-Mg-25

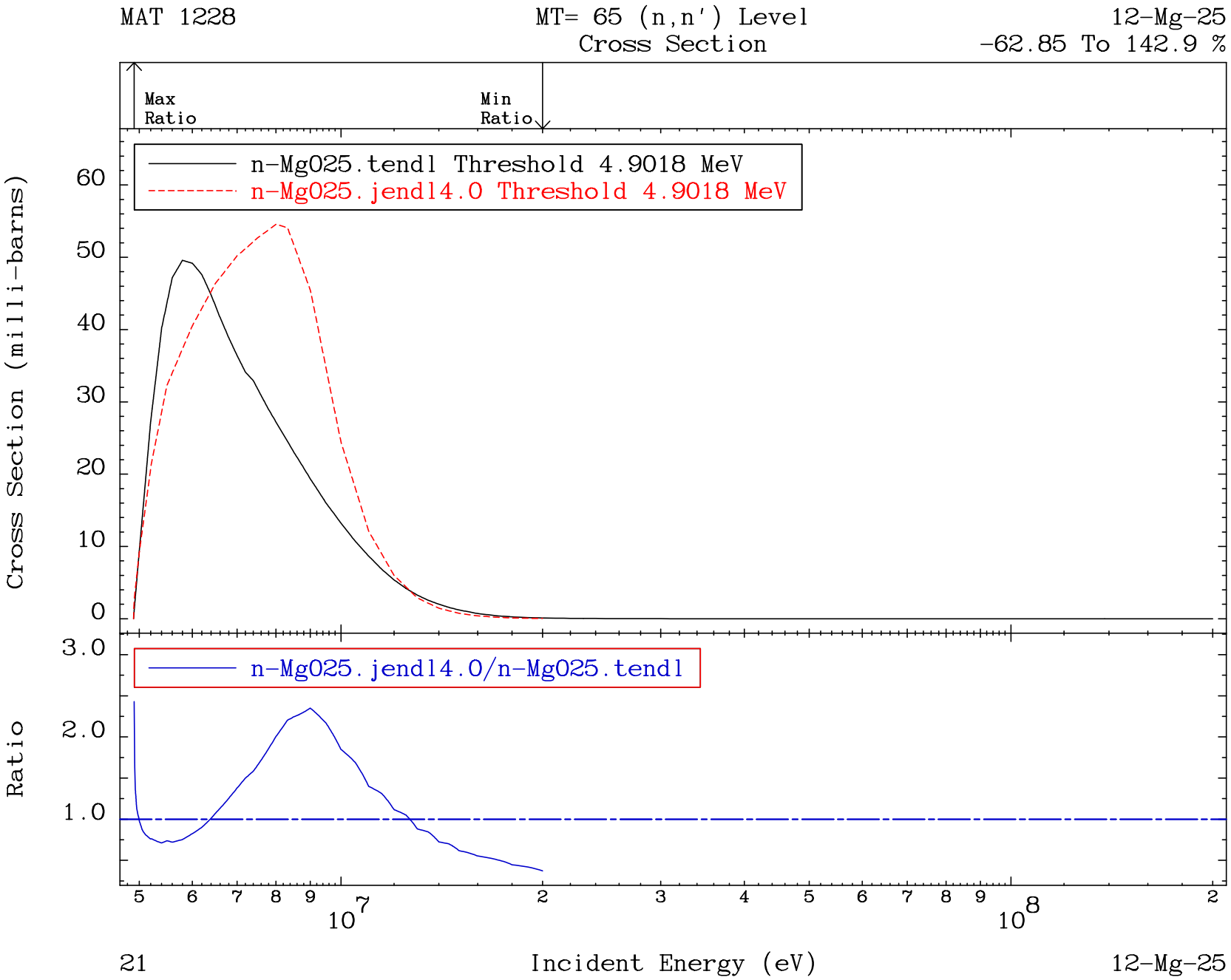

MAT 1228
MT= 60 (n,n') Level
Cross Section
12-Mg-25
-58.12 To 127.4 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.0657 MeV
n-Mg025.jendl4.0 Threshold 4.0657 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
16
Incident Energy (eV)
12-Mg-25

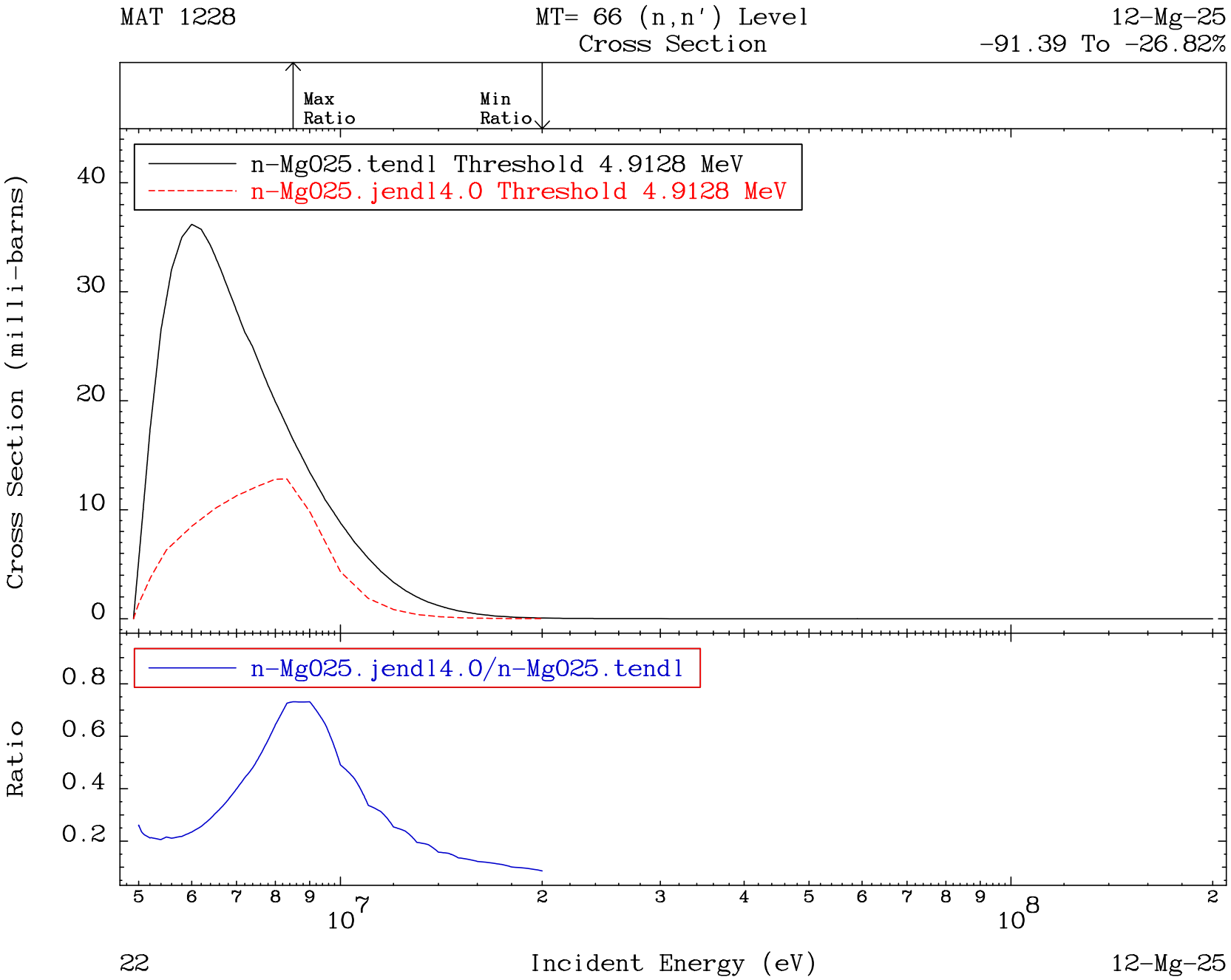

MAT 1228
MT= 61 (n,n') Level
Cross Section
12-Mg-25
-57.28 To 138.5 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.1310 MeV
n-Mg025.jendl4.0 Threshold 4.1310 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
17
Incident Energy (eV)
12-Mg-25

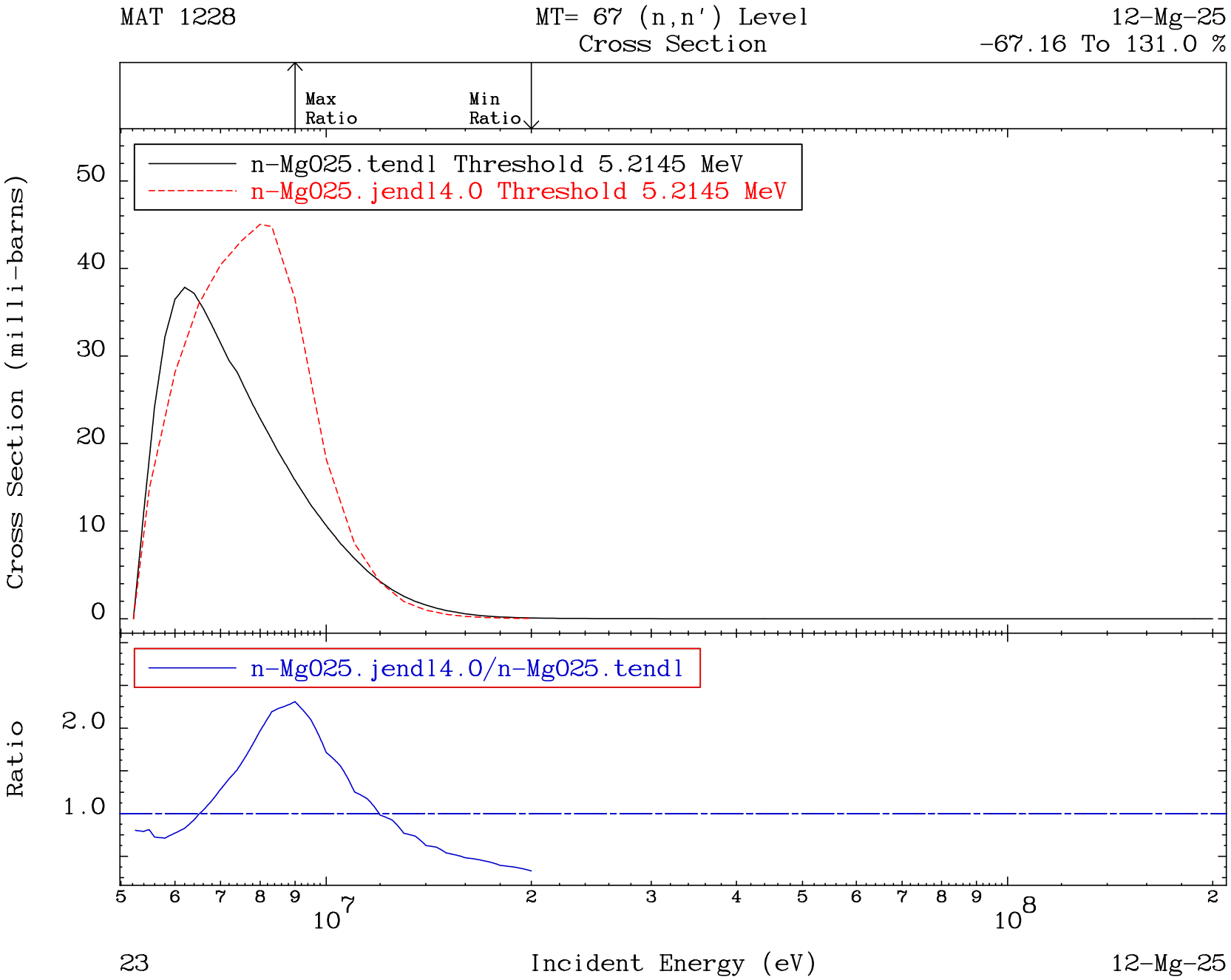

MAT 1228
MT= 62 (n,n') Level
Cross Section
12-Mg-25
-55.30 To 134.2 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.2235 MeV
n-Mg025.jendl4.0 Threshold 4.2235 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
18
Incident Energy (eV)
12-Mg-25

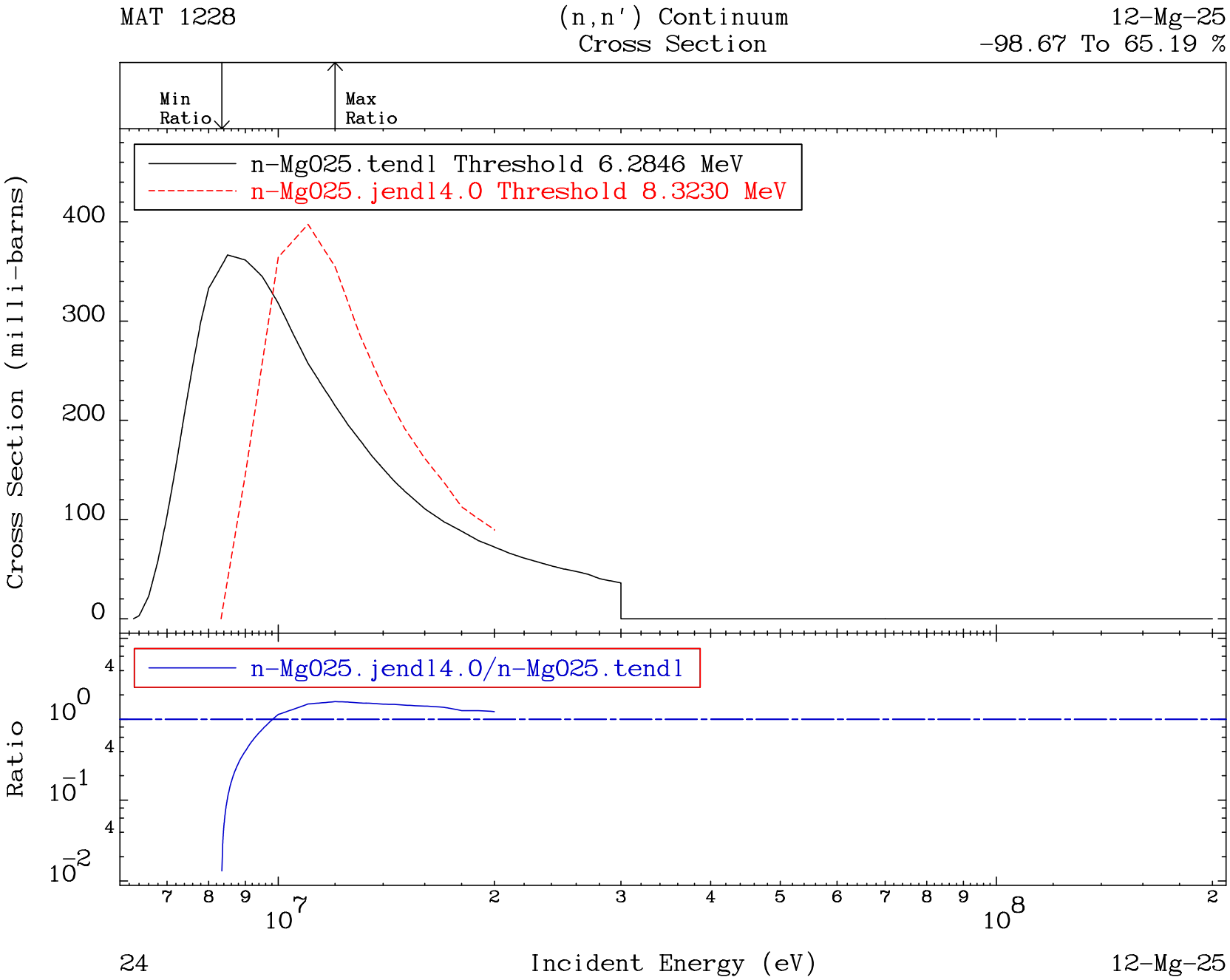

MAT 1228
MT= 63 (n,n') Level
Cross Section
12-Mg-25
-71.96 To 139.5 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.4498 MeV
n-Mg025.jendl4.0 Threshold 4.4498 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
3.0
2.0
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
19
Incident Energy (eV)
12-Mg-25

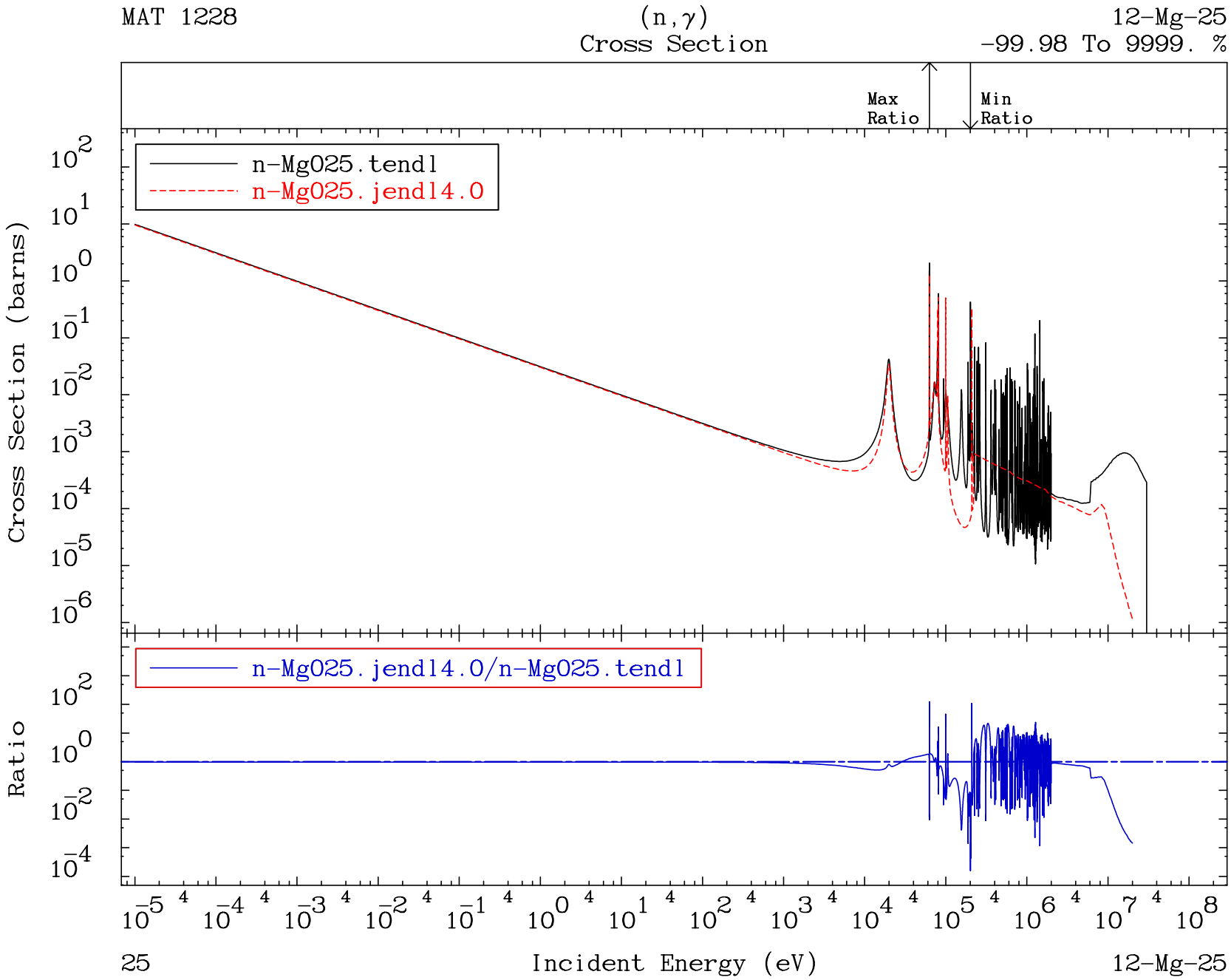

MAT 1228
MT= 64 (n,n') Level
Cross Section
12-Mg-25
-71.28 To 126.0 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.5356 MeV
n-Mg025.jendl4.0 Threshold 4.5356 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
12-Mg-25

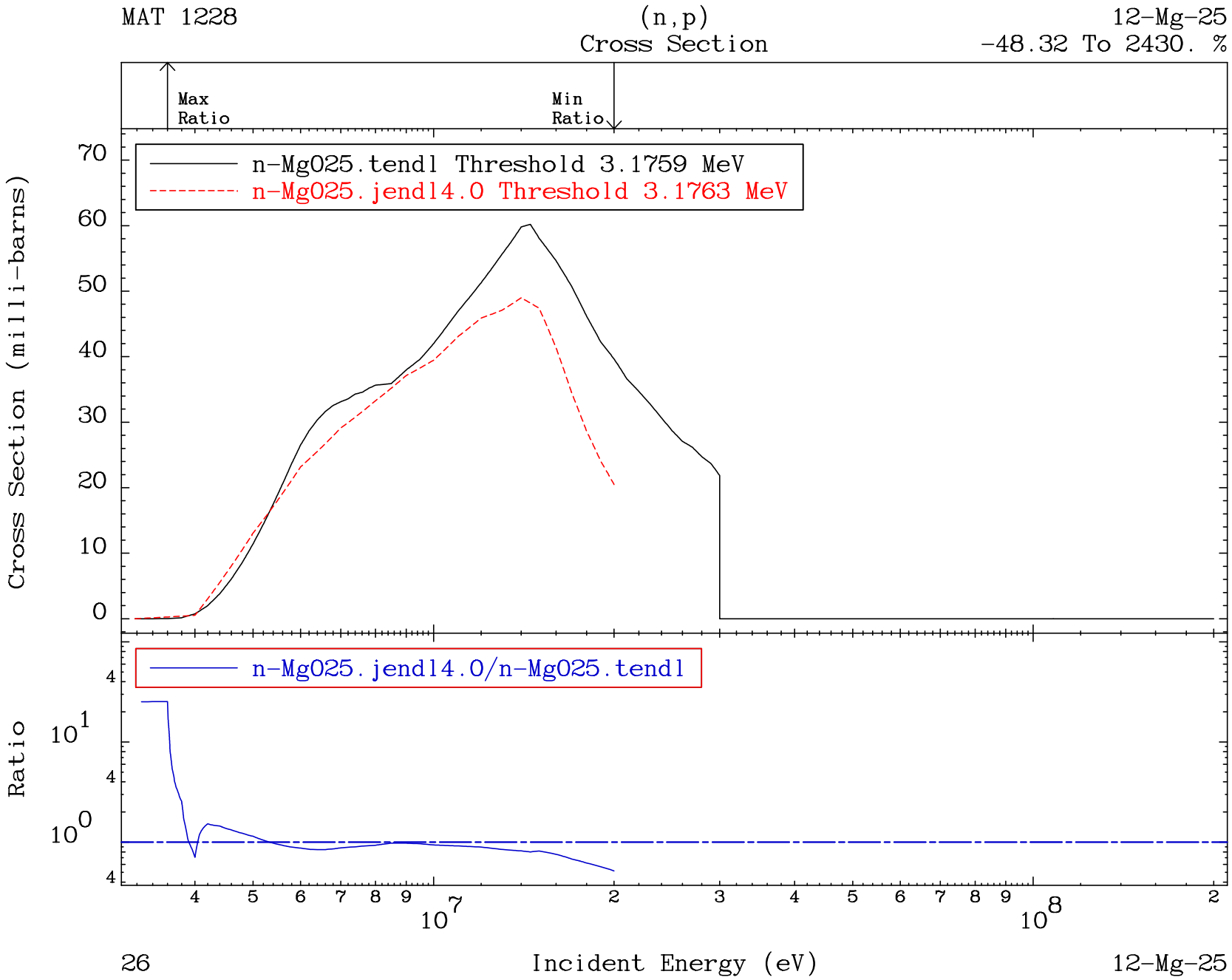

MAT 1228
MT= 65 (n,n') Level
Cross Section
12-Mg-25
-62.85 To 142.9 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.9018 MeV
n-Mg025.jendl4.0 Threshold 4.9018 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
3.0
2.0
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
21
Incident Energy (eV)
12-Mg-25

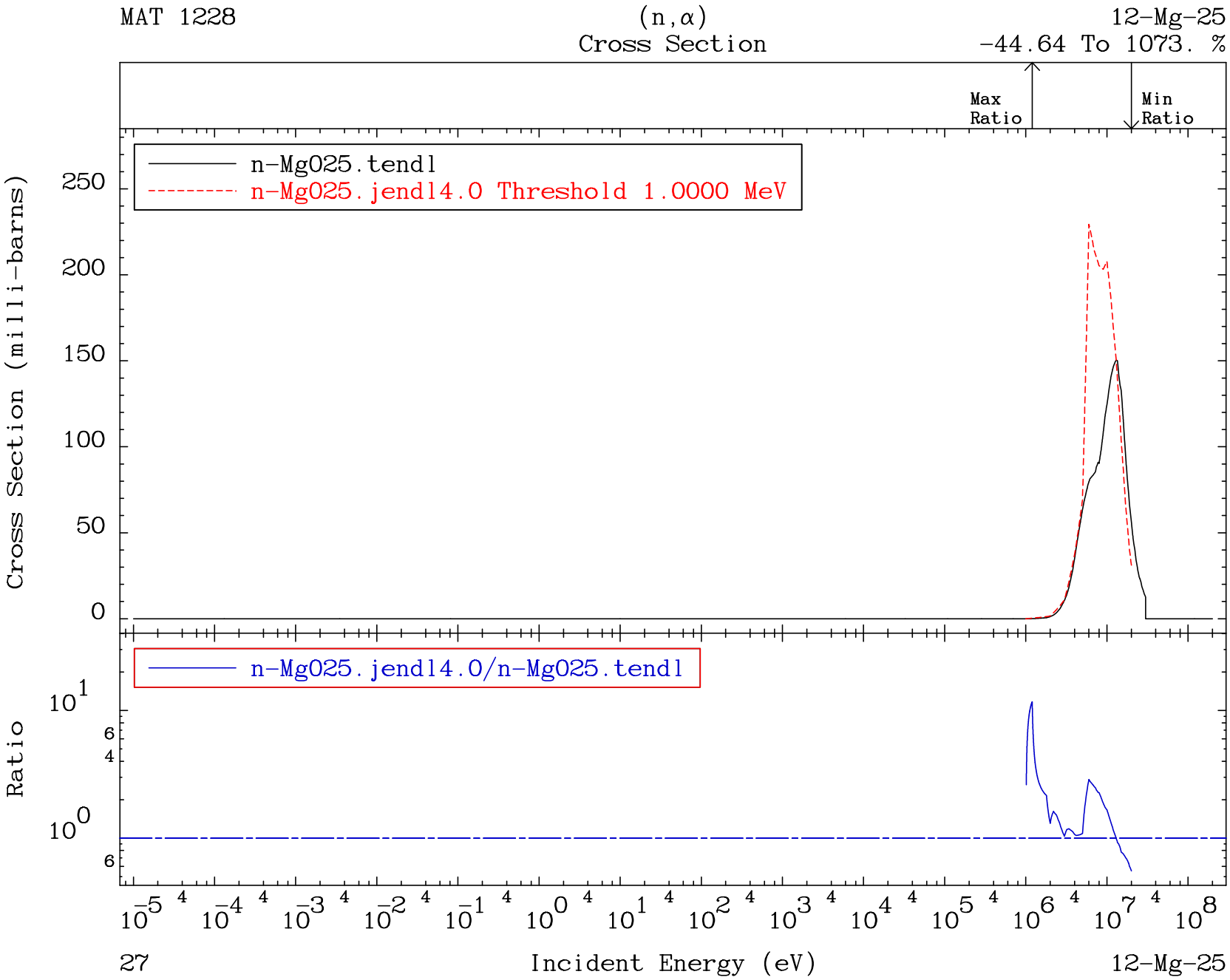

MAT 1228
MT= 66 (n,n') Level
Cross Section
12-Mg-25
-91.39 To -26.82%
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 4.9128 MeV
n-Mg025.jendl4.0 Threshold 4.9128 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
0.8
0.6
0.4
0.2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
12-Mg-25

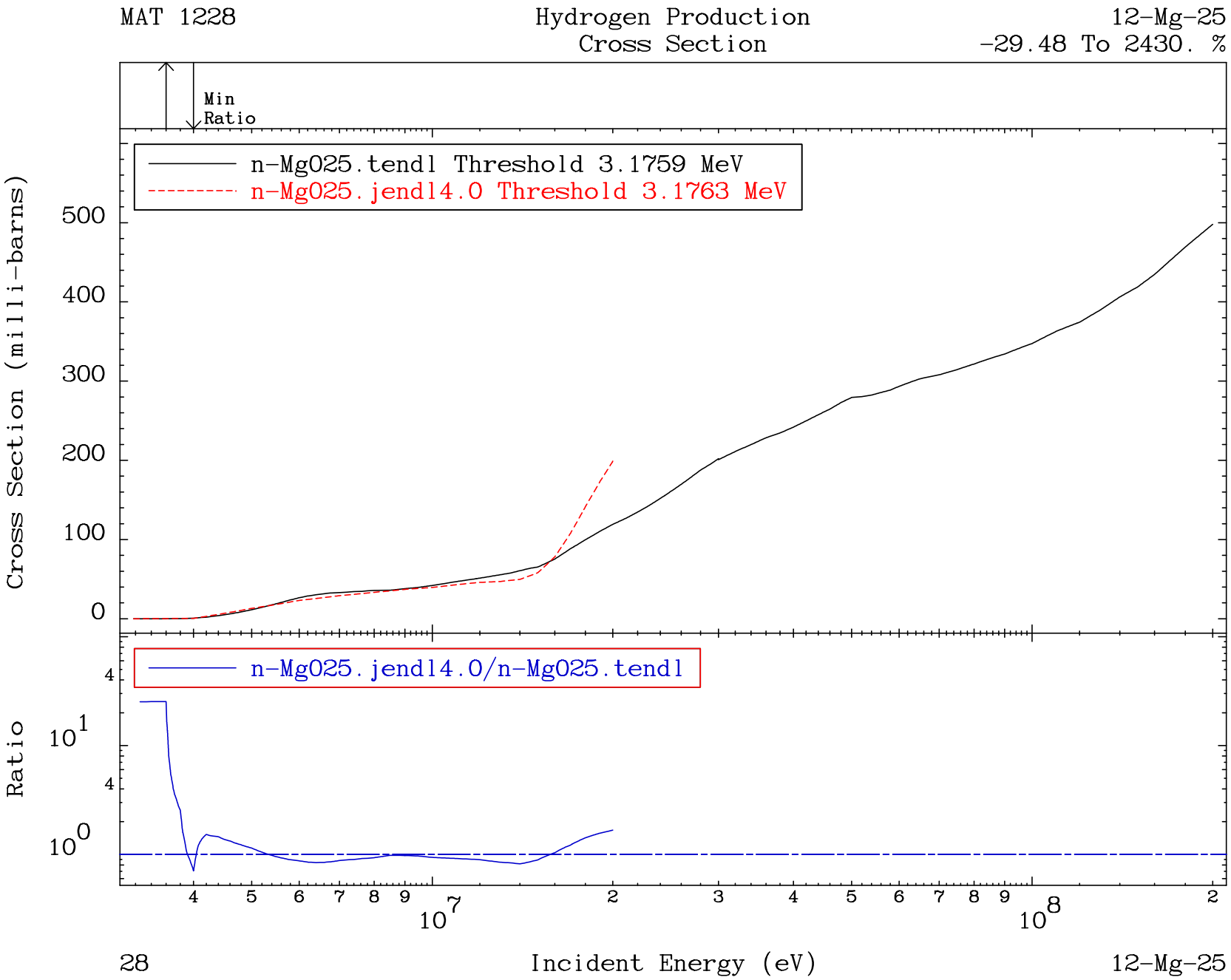

MAT 1228
MT= 67 (n,n') Level
Cross Section
12-Mg-25
-67.16 To 131.0 %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 5.2145 MeV
n-Mg025.jendl4.0 Threshold 5.2145 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
2.0
1.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
23
Incident Energy (eV)
12-Mg-25

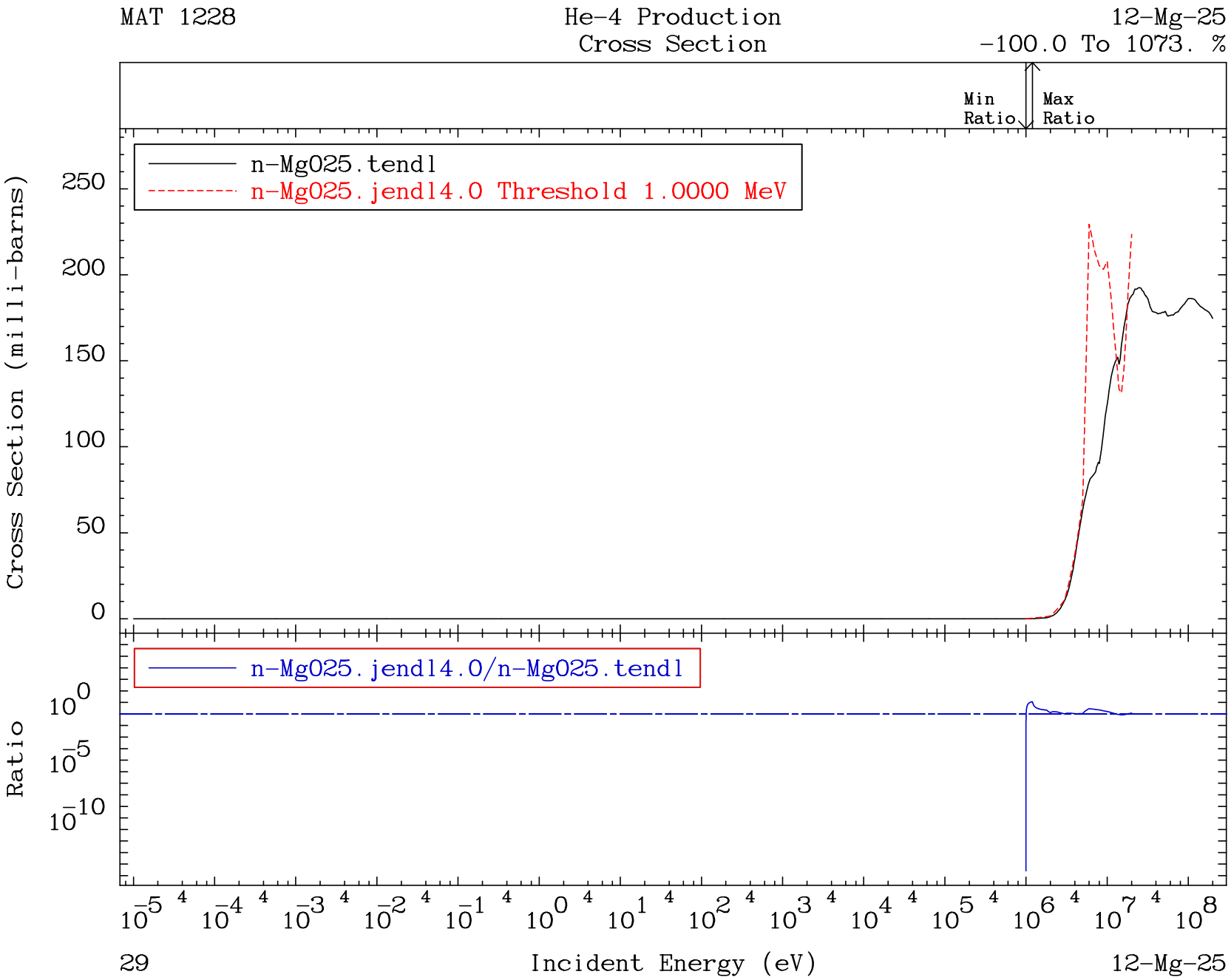

MAT 1228
(n,n') Continuum
Cross Section
12-Mg-25
-98.67 To 65.19 %
Min Ratio
Max Ratio
n-Mg025.tendl Threshold 6.2846 MeV
n-Mg025.jendl4.0 Threshold 8.3230 MeV
Cross Section (milli-barns)
400
300
200
100
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^0
10^-1
10^-2
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
12-Mg-25

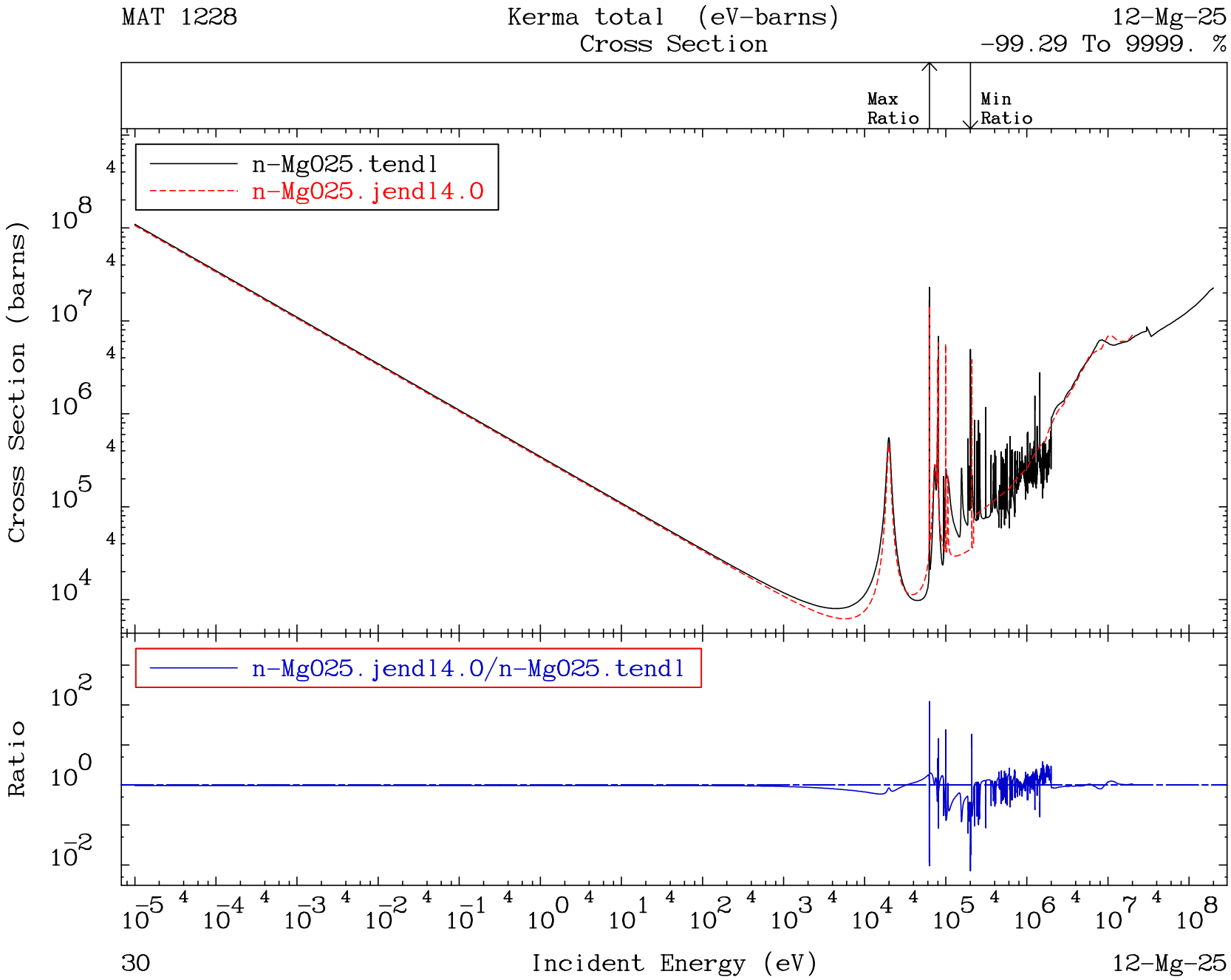

MAT 1228
(n,γ)
Cross Section
12-Mg-25
-99.98 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
25
12-Mg-25

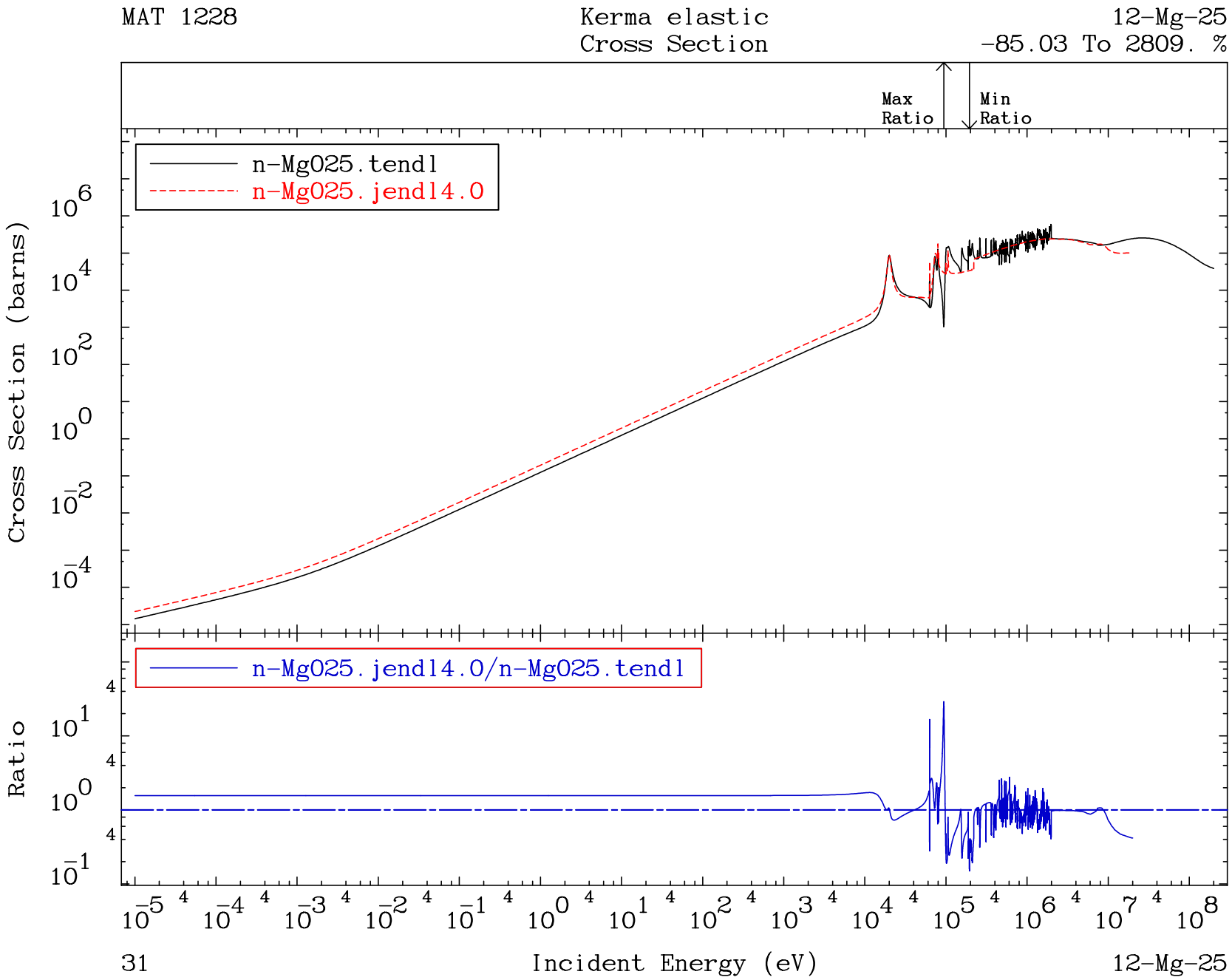

MAT 1228
(n,p)
Cross Section
12-Mg-25
-48.32 To 2430. %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 3.1759 MeV
n-Mg025.jendl4.0 Threshold 3.1763 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^1
10^0
4
4
4
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
12-Mg-25

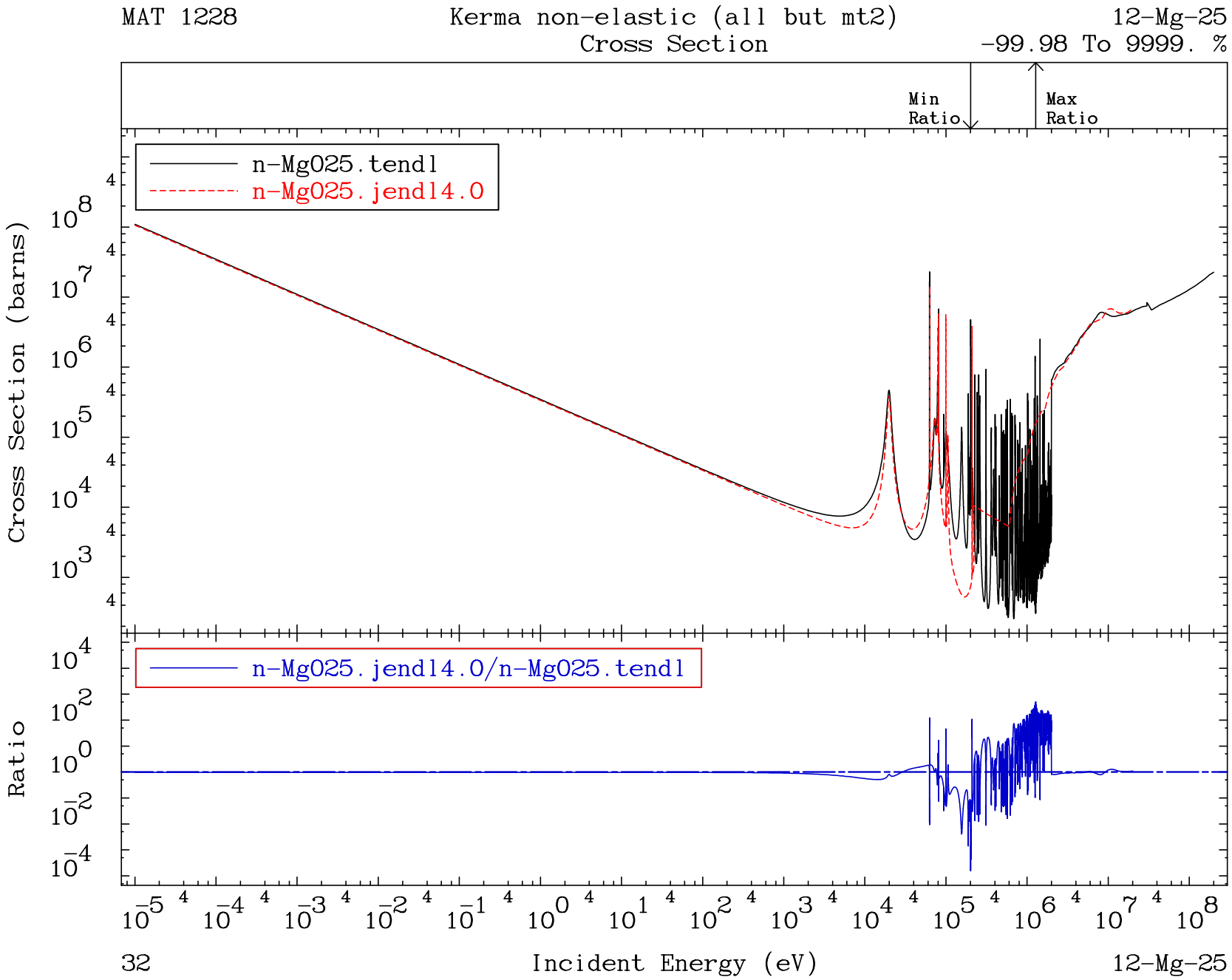

MAT 1228
(n,α)
Cross Section
12-Mg-25
-44.64 To 1073. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0 Threshold 1.0000 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^1
10^0
6
4
6
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
27
Incident Energy (eV)
12-Mg-25

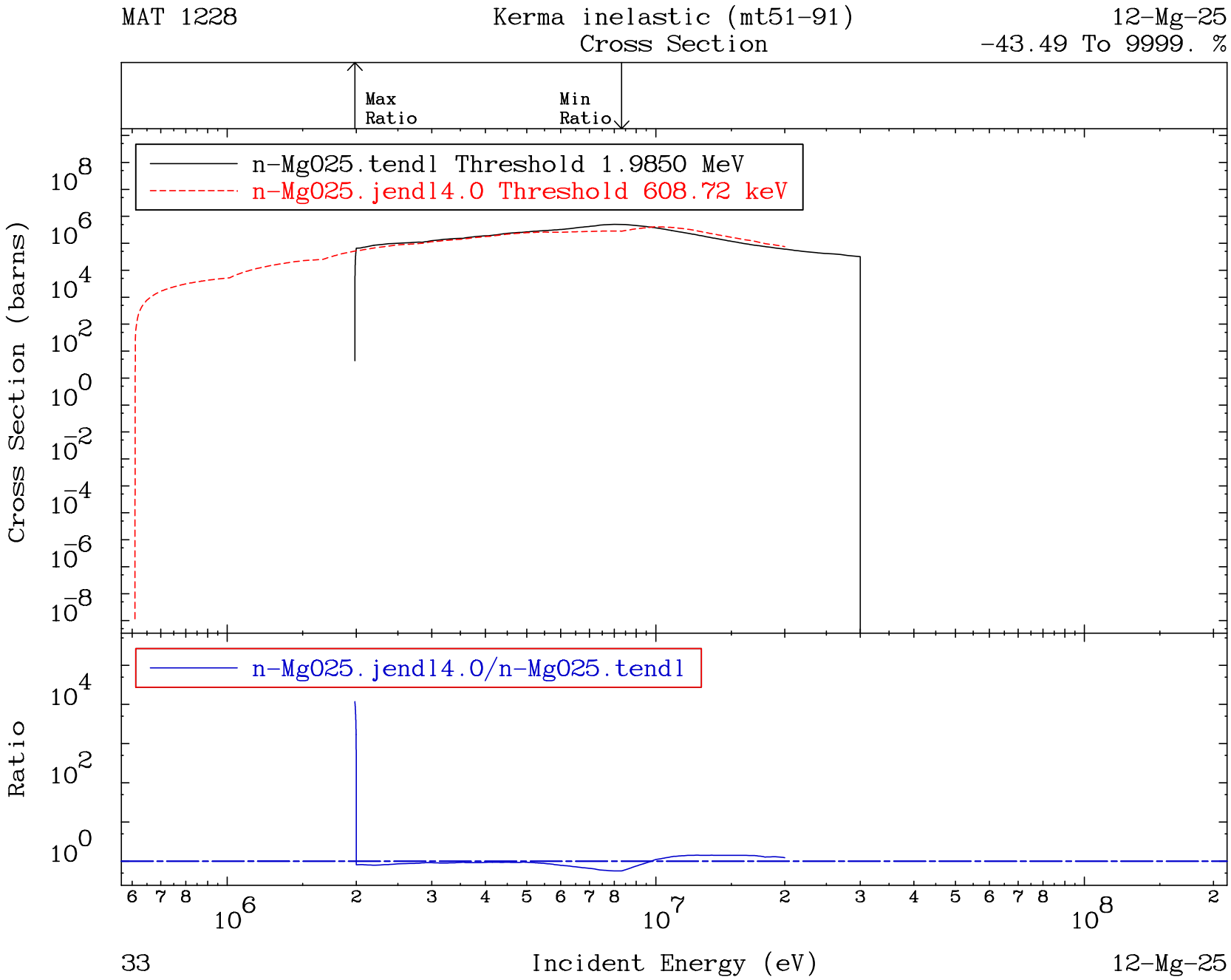

MAT 1228
Hydrogen Production
Cross Section
12-Mg-25
-29.48 To 2430. %
Min
Ratio
n-Mg025.tendl Threshold 3.1759 MeV
n-Mg025.jendl4.0 Threshold 3.1763 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
4
10^1
4
10^0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
28
Incident Energy (eV)
12-Mg-25

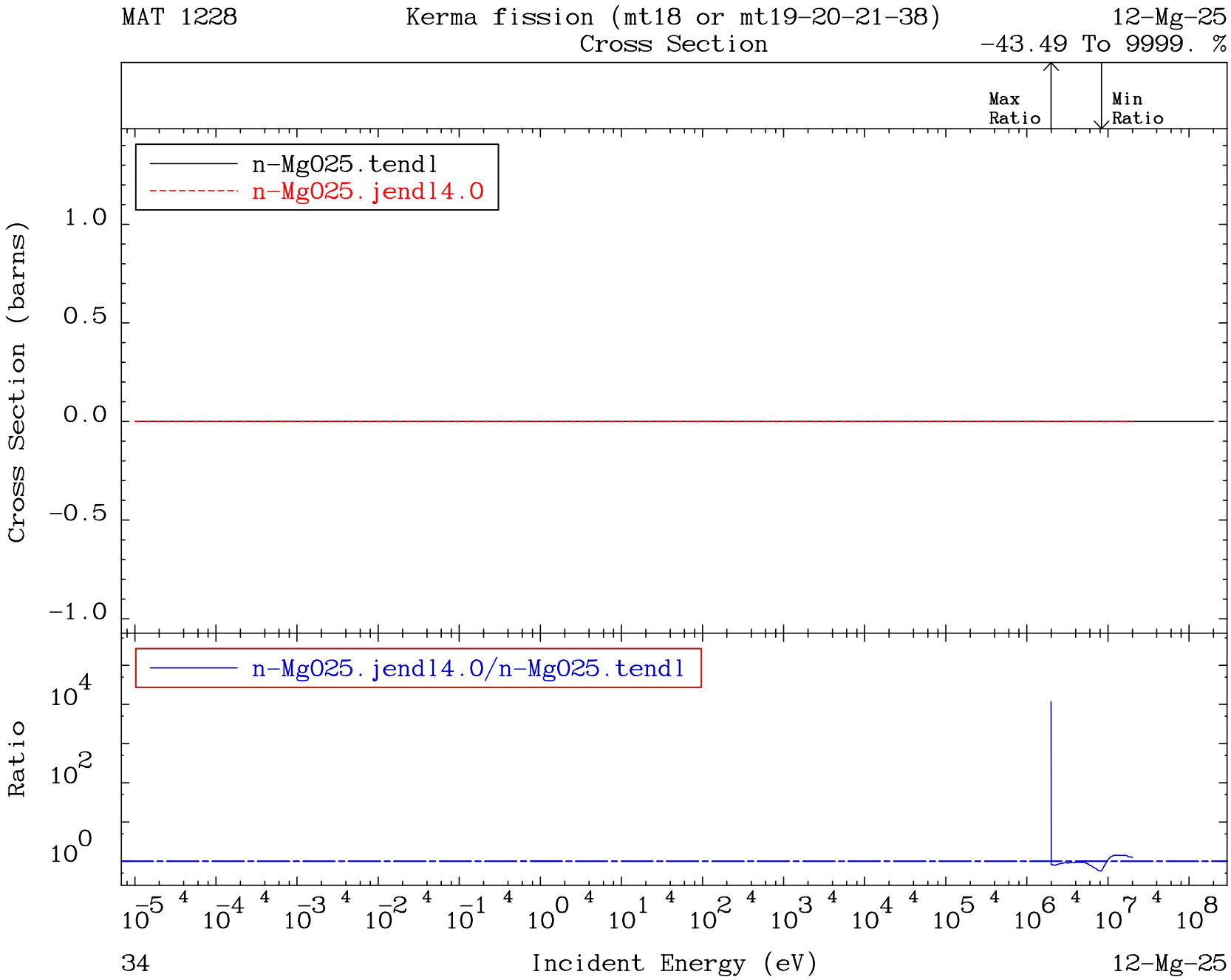

MAT 1228
He-4 Production
Cross Section
12-Mg-25
-100.0 To 1073. %
Min Ratio
Max Ratio
n-Mg025.tendl
n-Mg025.jendl4.0 Threshold 1.0000 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^0
10^-5
10^-10
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
12-Mg-25

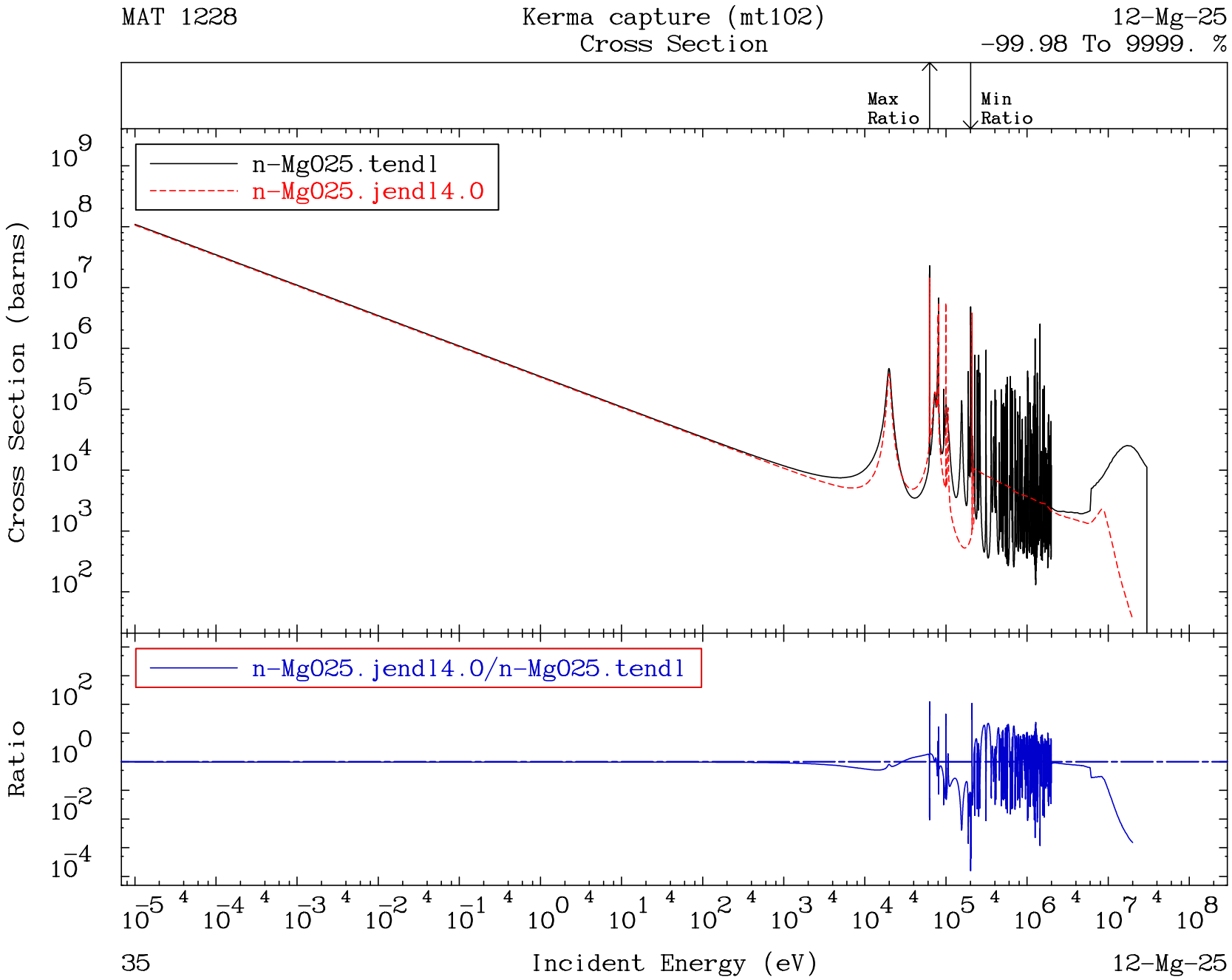

MAT 1228
Kerma total (eV-barns)
Cross Section
12-Mg-25
-99.29 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
30
12-Mg-25

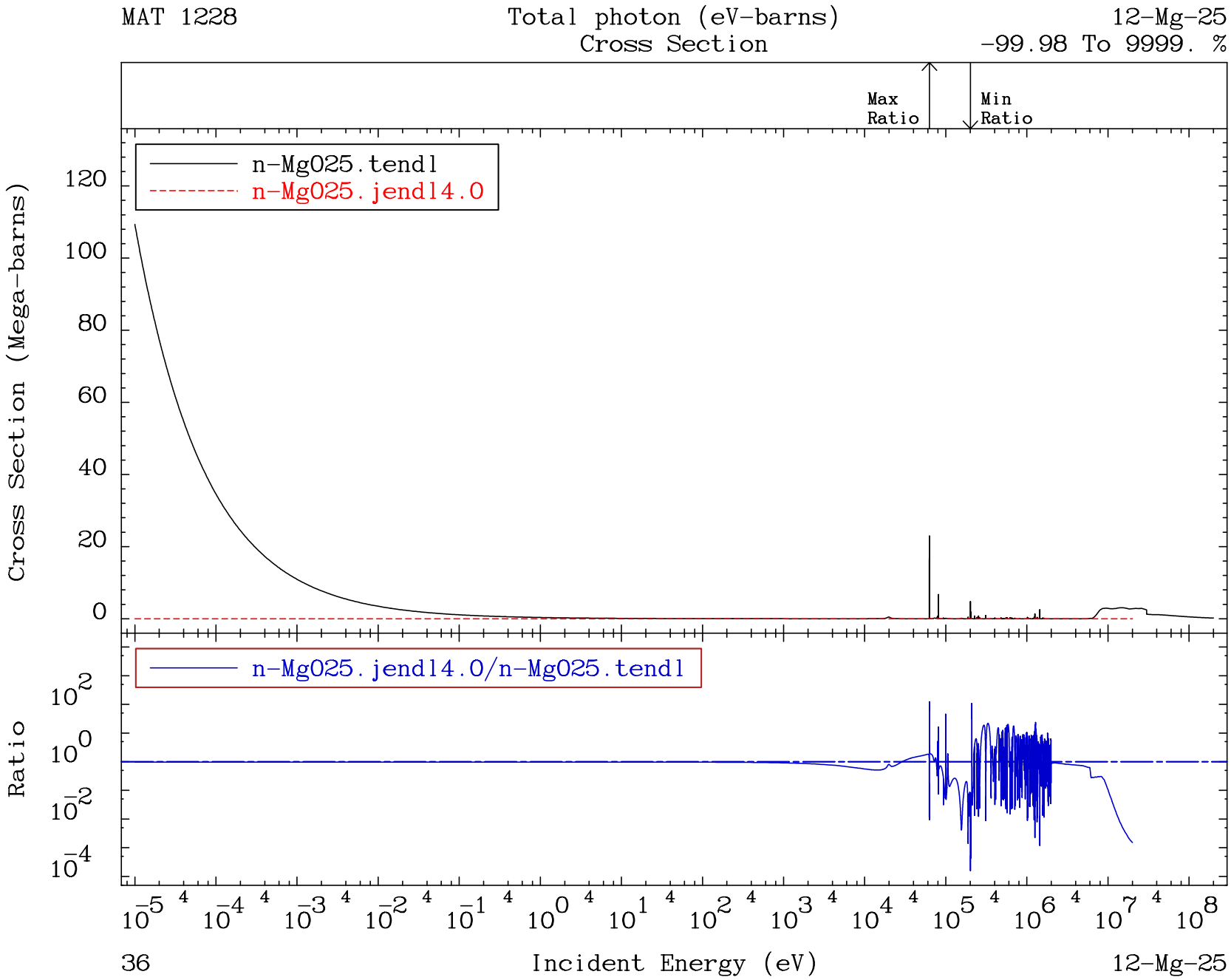

MAT 1228
Kerma elastic
Cross Section
12-Mg-25
-85.03 To 2809. %
Max
Ratio
Min
Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
31
12-Mg-25

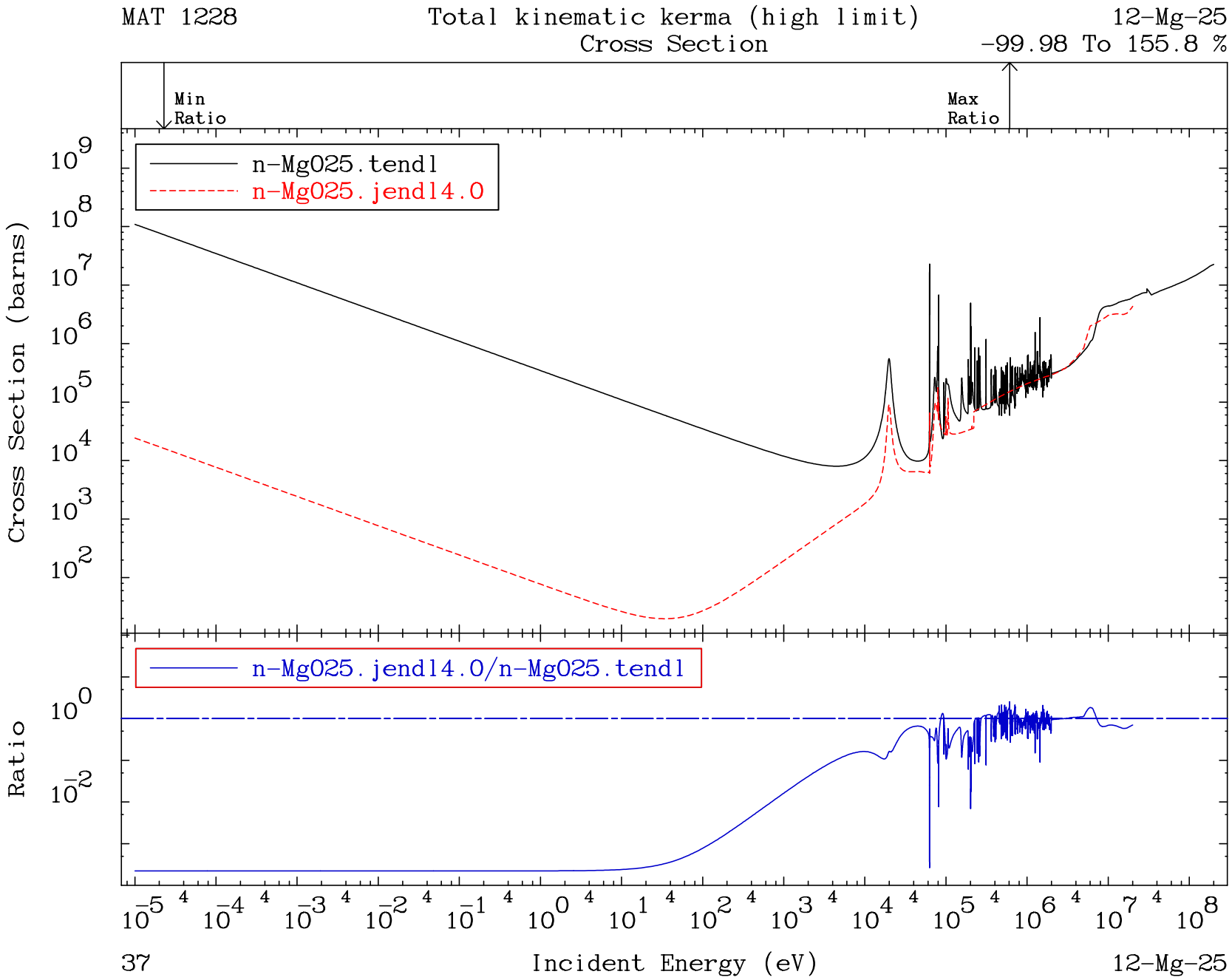

MAT 1228
Kerma non-elastic (all but mt2)
Cross Section
12-Mg-25
-99.98 To 9999. %
Min Ratio
Max Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
32
Incident Energy (eV)
12-Mg-25

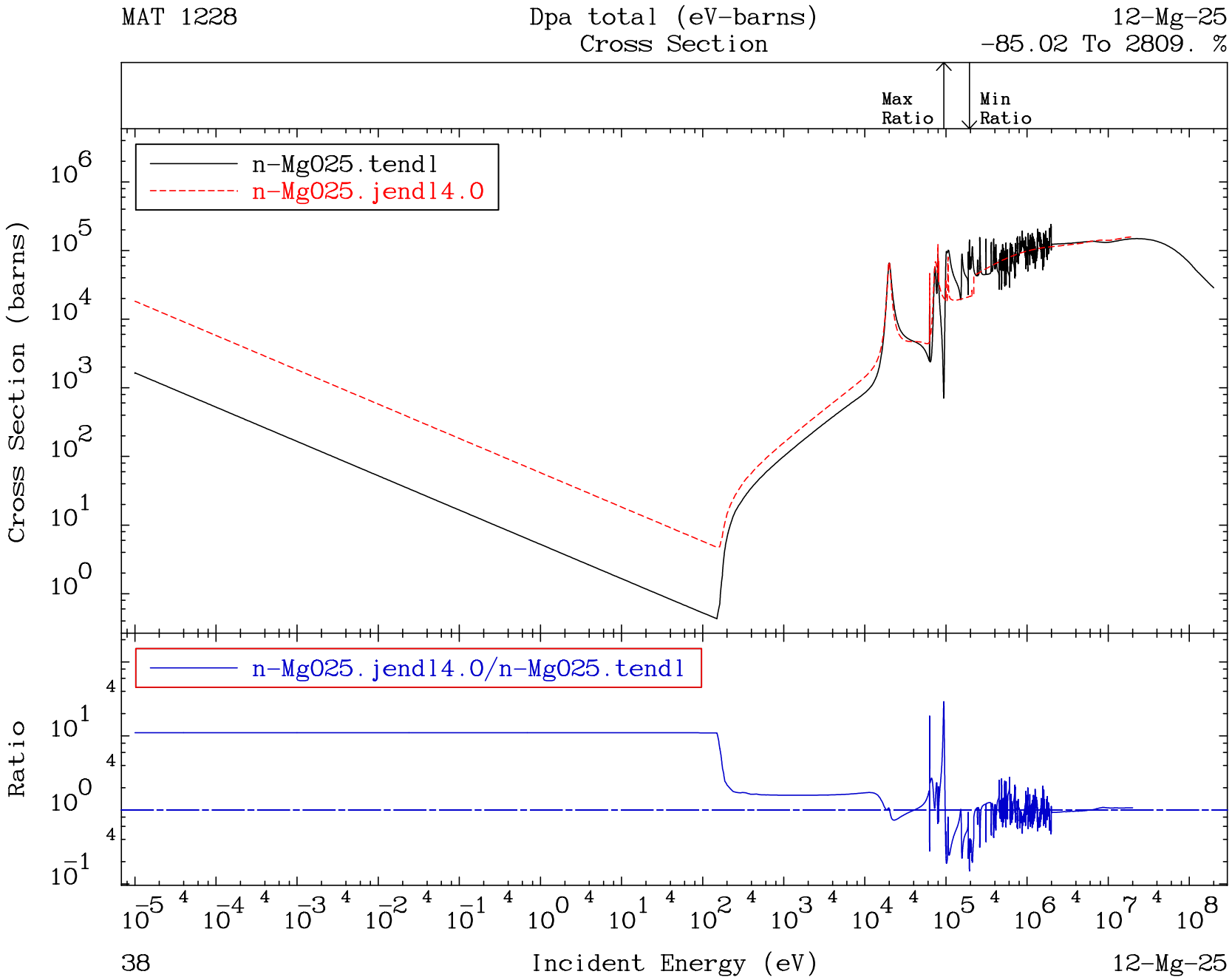

MAT 1228
Kerma inelastic (mt51-91)
Cross Section
12-Mg-25
-43.49 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 1.9850 MeV
n-Mg025.jendl4.0 Threshold 608.72 keV
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
33
12-Mg-25

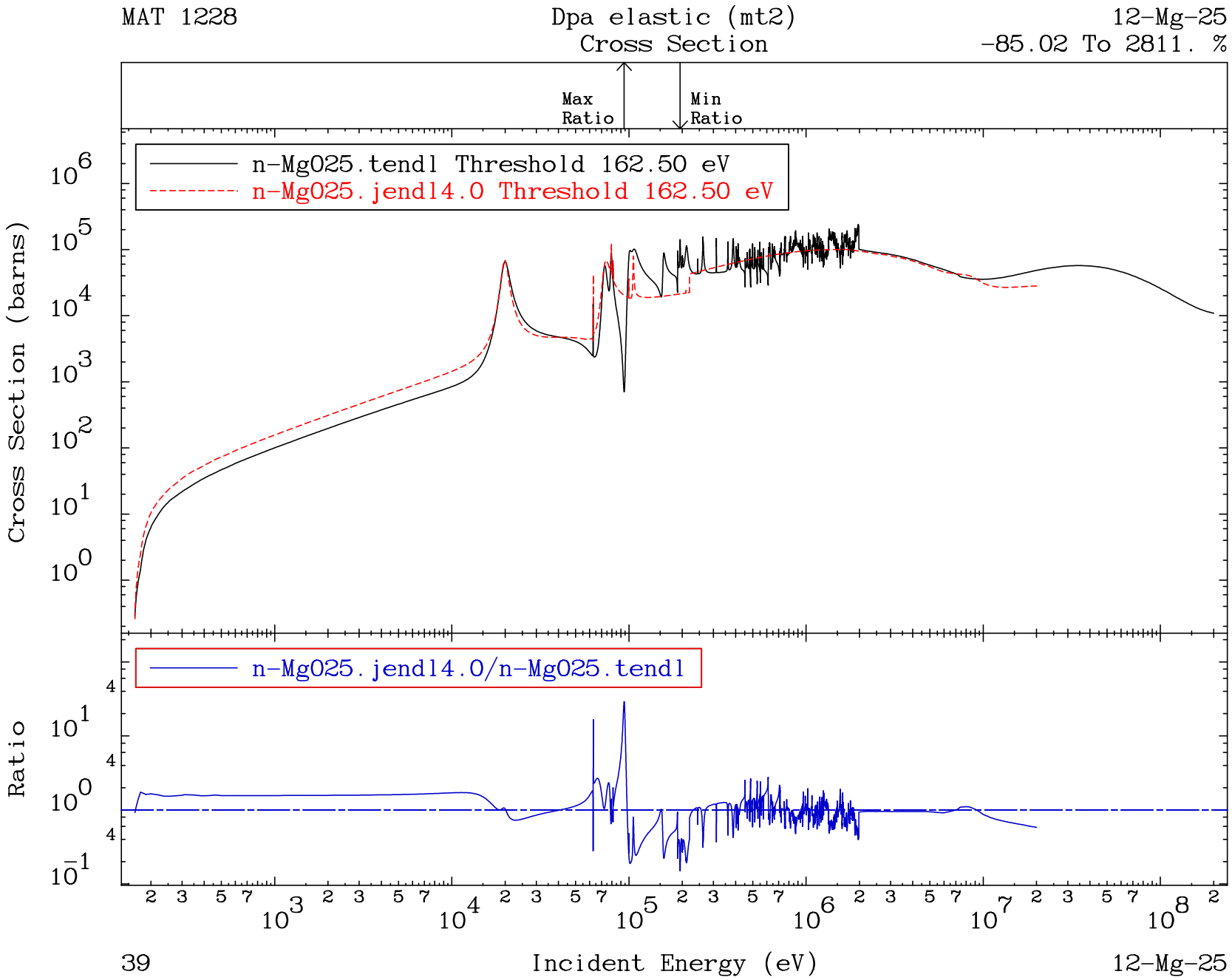

MAT 1228
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
12-Mg-25
-43.49 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^4
10^2
10^0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
34
Incident Energy (eV)
12-Mg-25

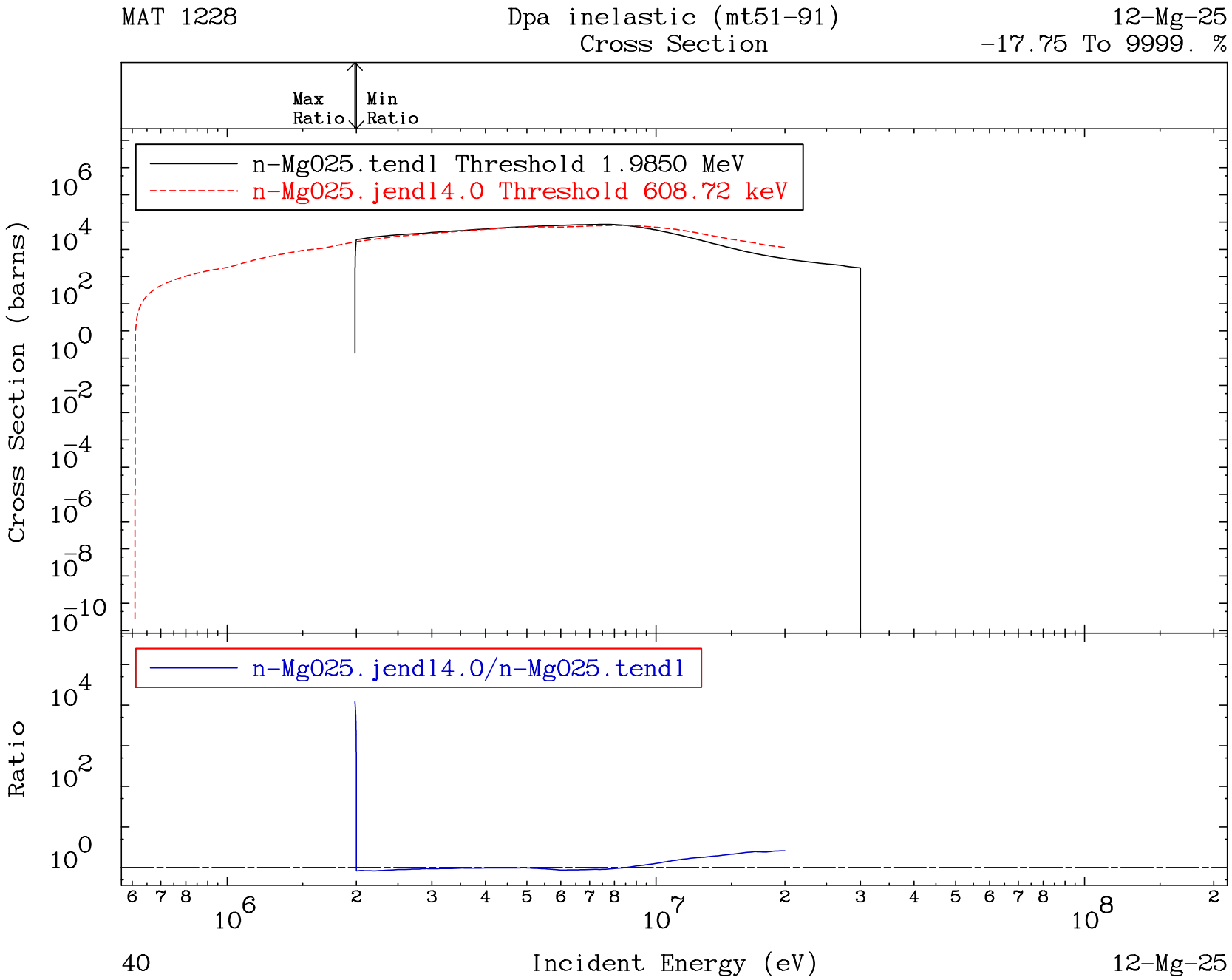

MAT 1228
Kerma capture (mt102)
Cross Section
12-Mg-25
-99.98 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
35
Incident Energy (eV)
12-Mg-25

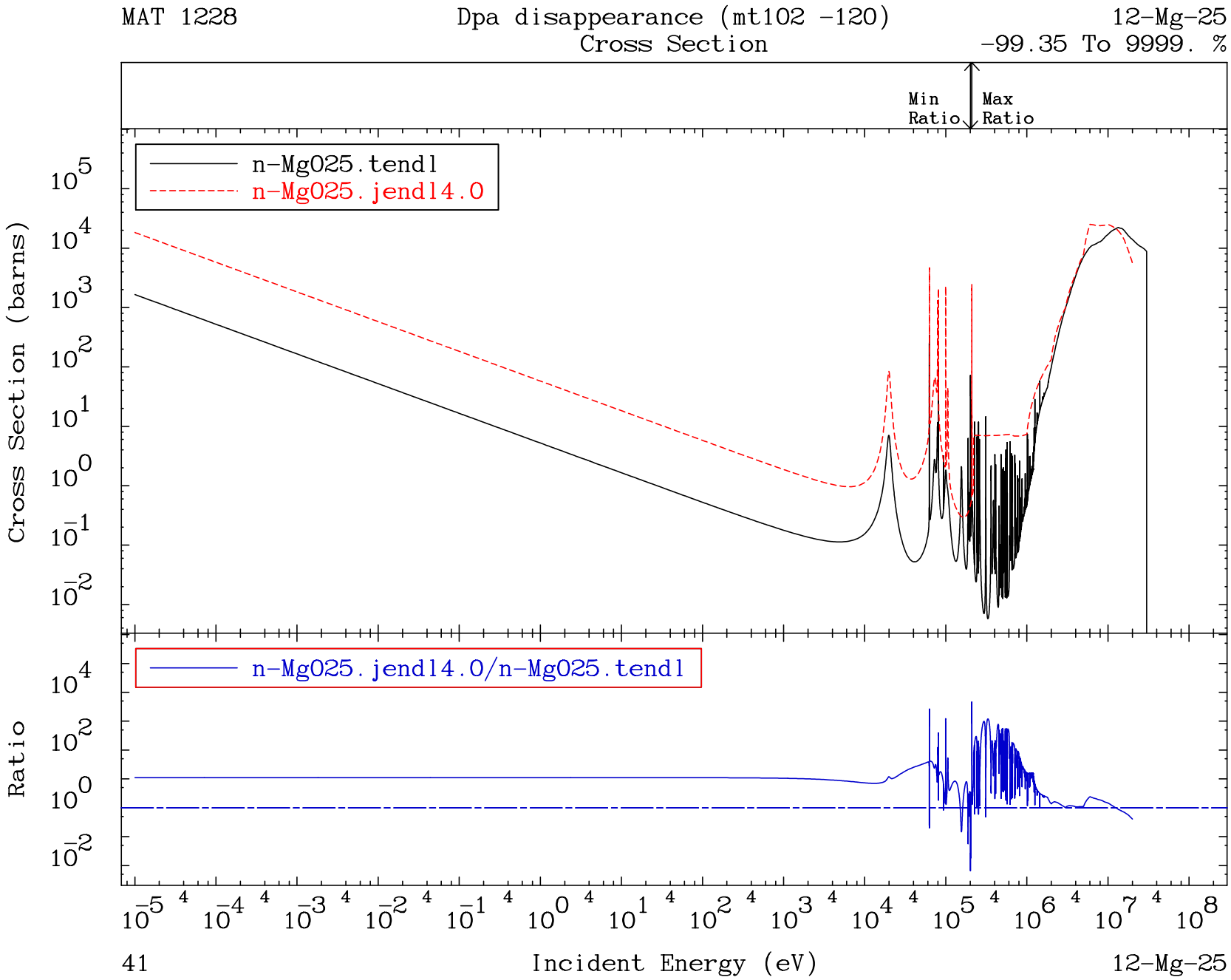

MAT 1228
Total photon (eV-barns)
Cross Section
12-Mg-25
-99.98 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (Mega-barns)
120
100
80
60
40
20
0
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
10^{2}
10^{0}
10^{-2}
10^{-4}
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
36
Incident Energy (eV)
12-Mg-25


MAT 1228
Total kinematic kerma (high limit)
Cross Section
12-Mg-25
-99.98 To 155.8 %
Min Ratio
Max Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
37
12-Mg-25


MAT 1228
Dpa total (eV-barns)
Cross Section
12-Mg-25
-85.02 To 2809. %
Max Ratio
Min Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
38
12-Mg-25


MAT 1228
Dpa elastic (mt2)
Cross Section
12-Mg-25
-85.02 To 2811. %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 162.50 eV
n-Mg025.jendl4.0 Threshold 162.50 eV
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
39
12-Mg-25


MAT 1228
Dpa inelastic (mt51-91)
Cross Section
12-Mg-25
-17.75 To 9999. %
Max Ratio
Min Ratio
n-Mg025.tendl Threshold 1.9850 MeV
n-Mg025.jendl4.0 Threshold 608.72 keV
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
Incident Energy (eV)
40
12-Mg-25


MAT 1228
Dpa disappearance (mt102 -120)
Cross Section
12-Mg-25
-99.35 To 9999. %
Min Ratio
Max Ratio
n-Mg025.tendl
n-Mg025.jendl4.0
Cross Section (barns)
n-Mg025.jendl4.0/n-Mg025.tendl
Ratio
41
Incident Energy (eV)
12-Mg-25