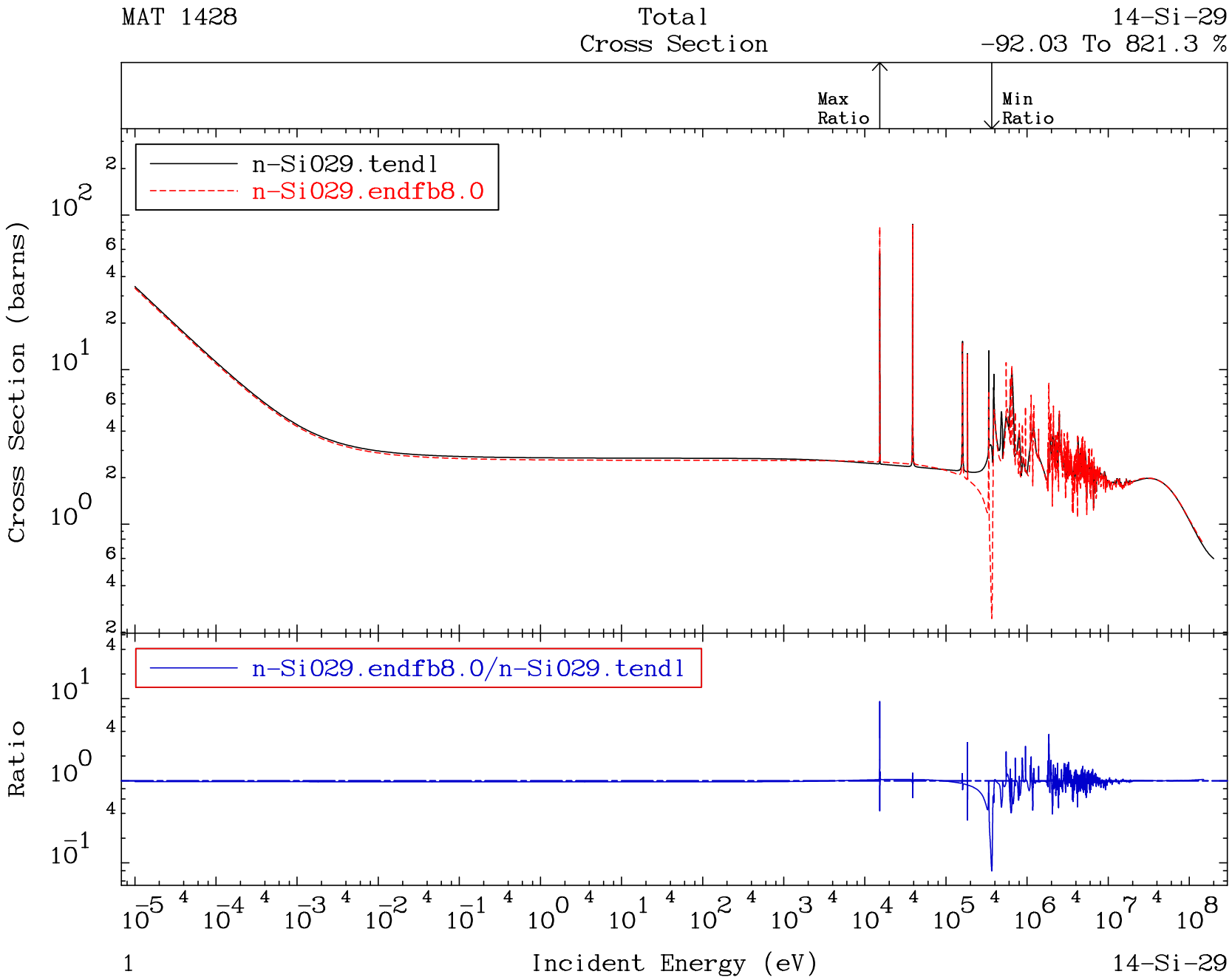
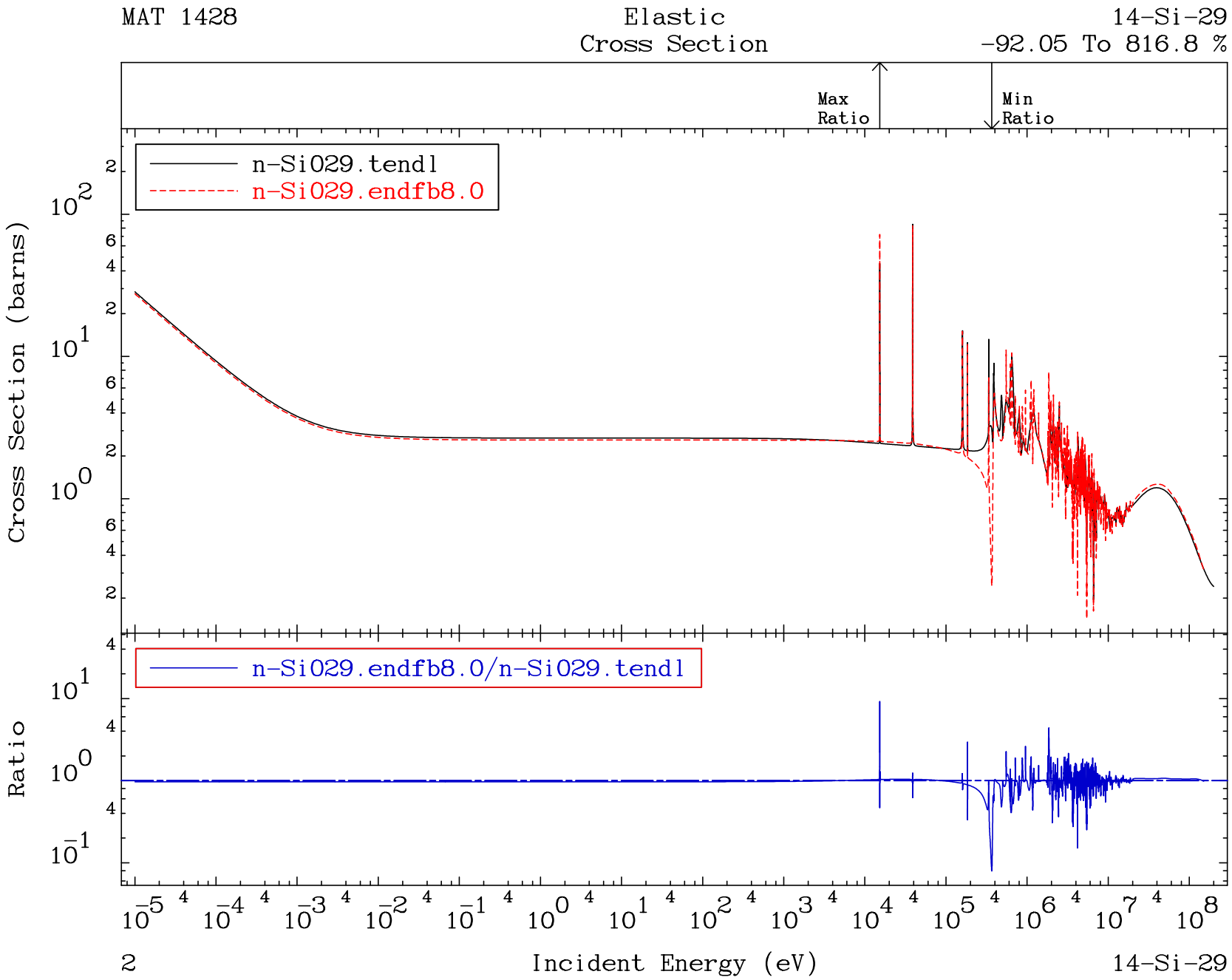
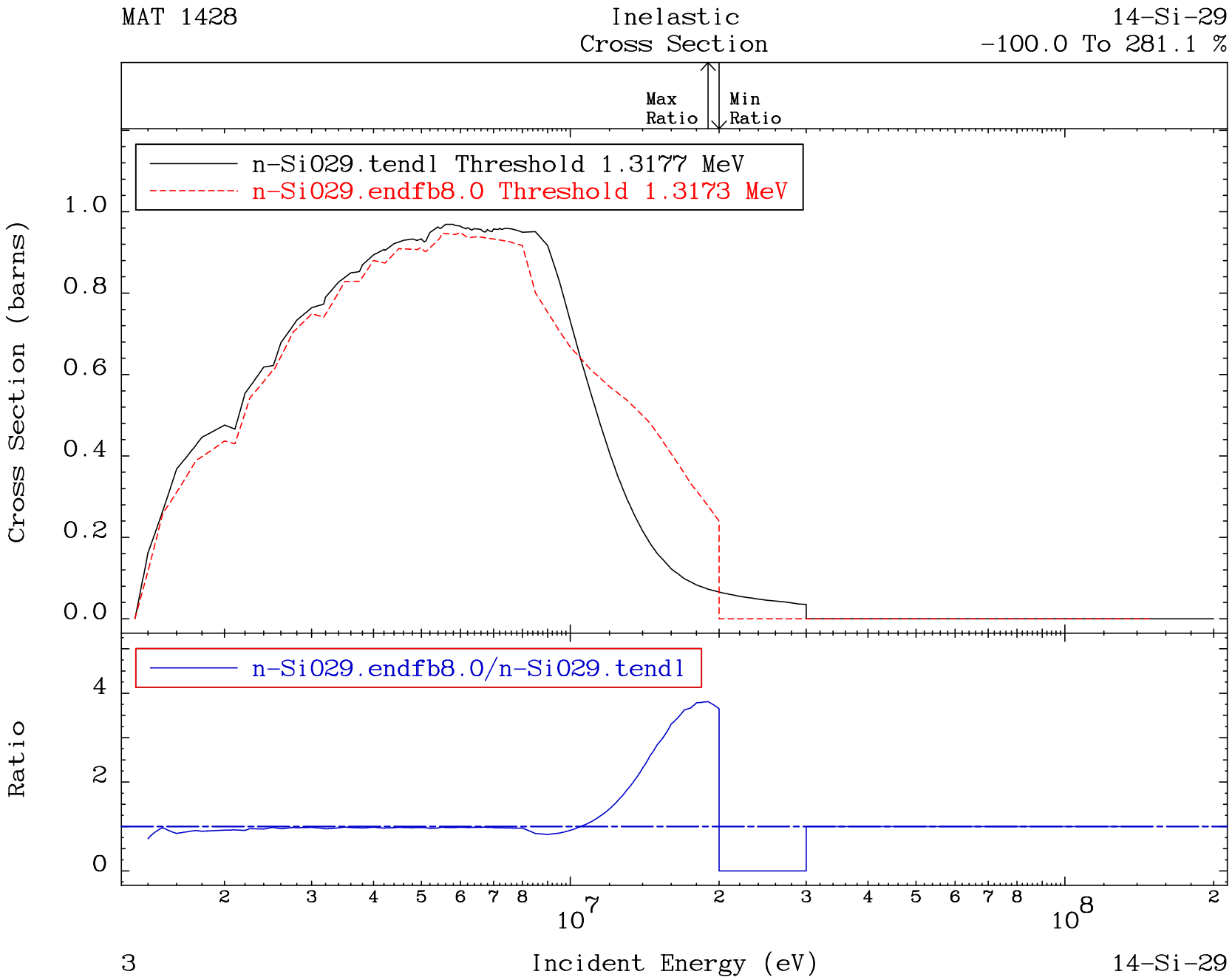
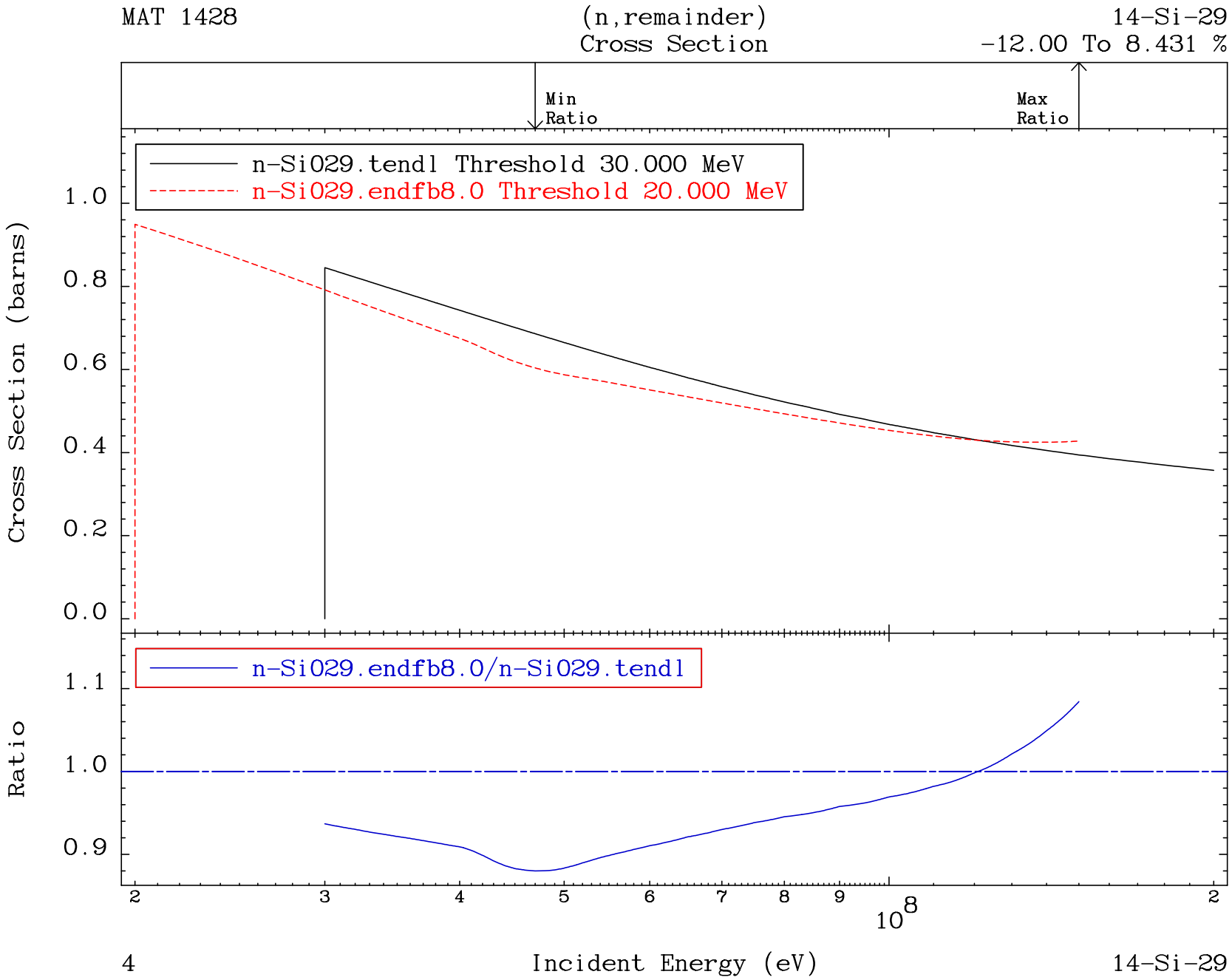
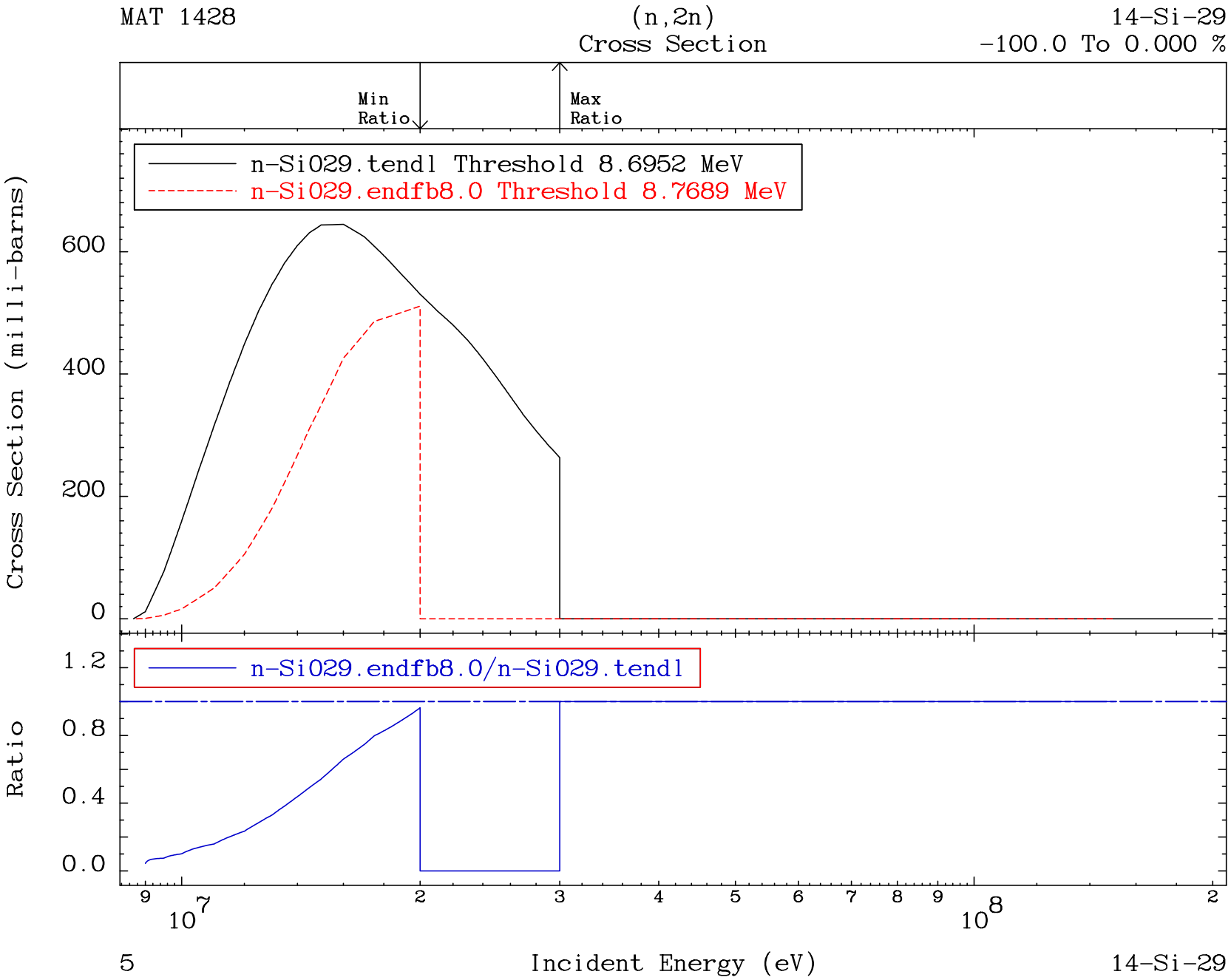
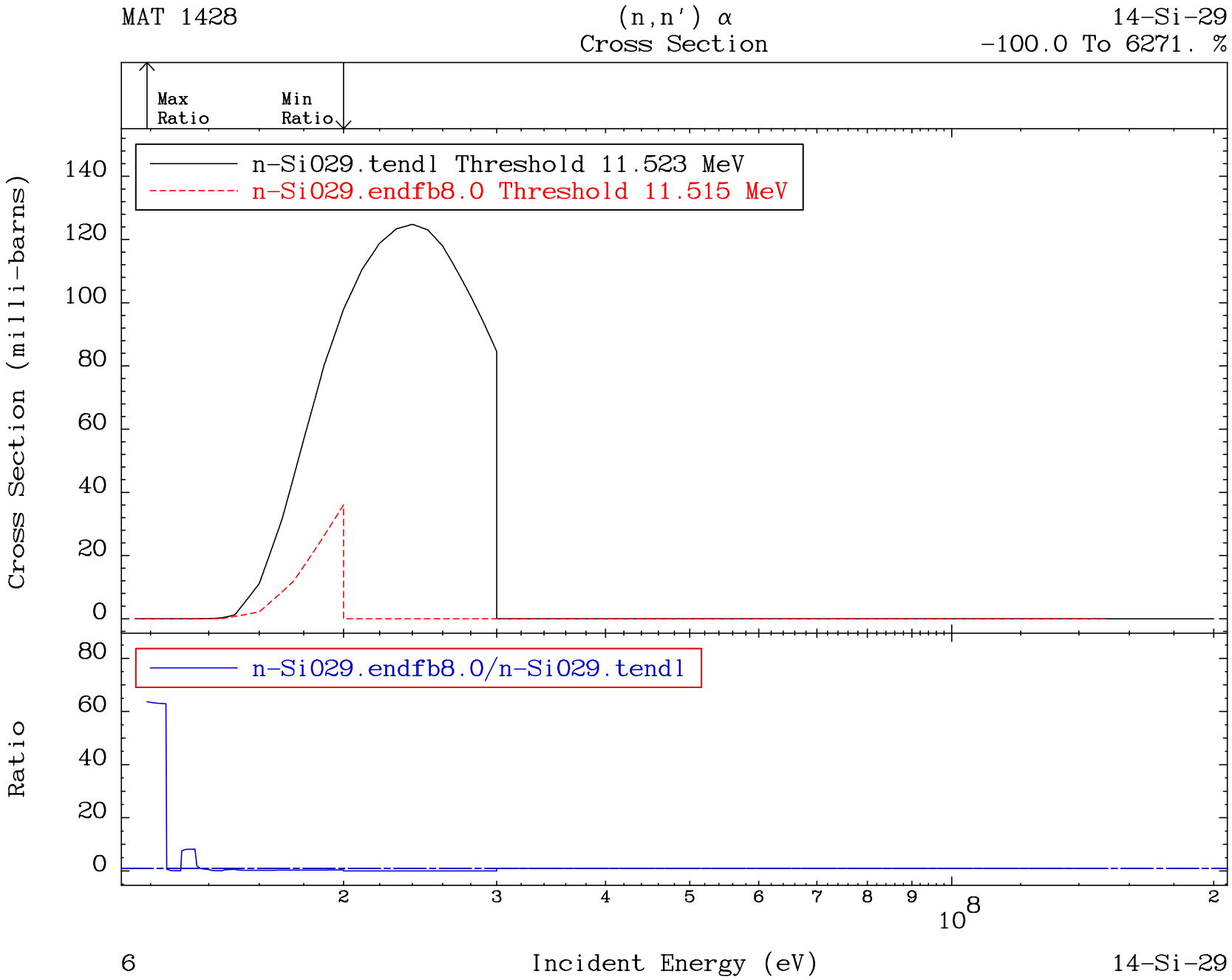

MAT 1428
Total
Cross Section
14-Si-29
-92.03 To 821.3 %
Max
Ratio
Min
Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
1
14-Si-29

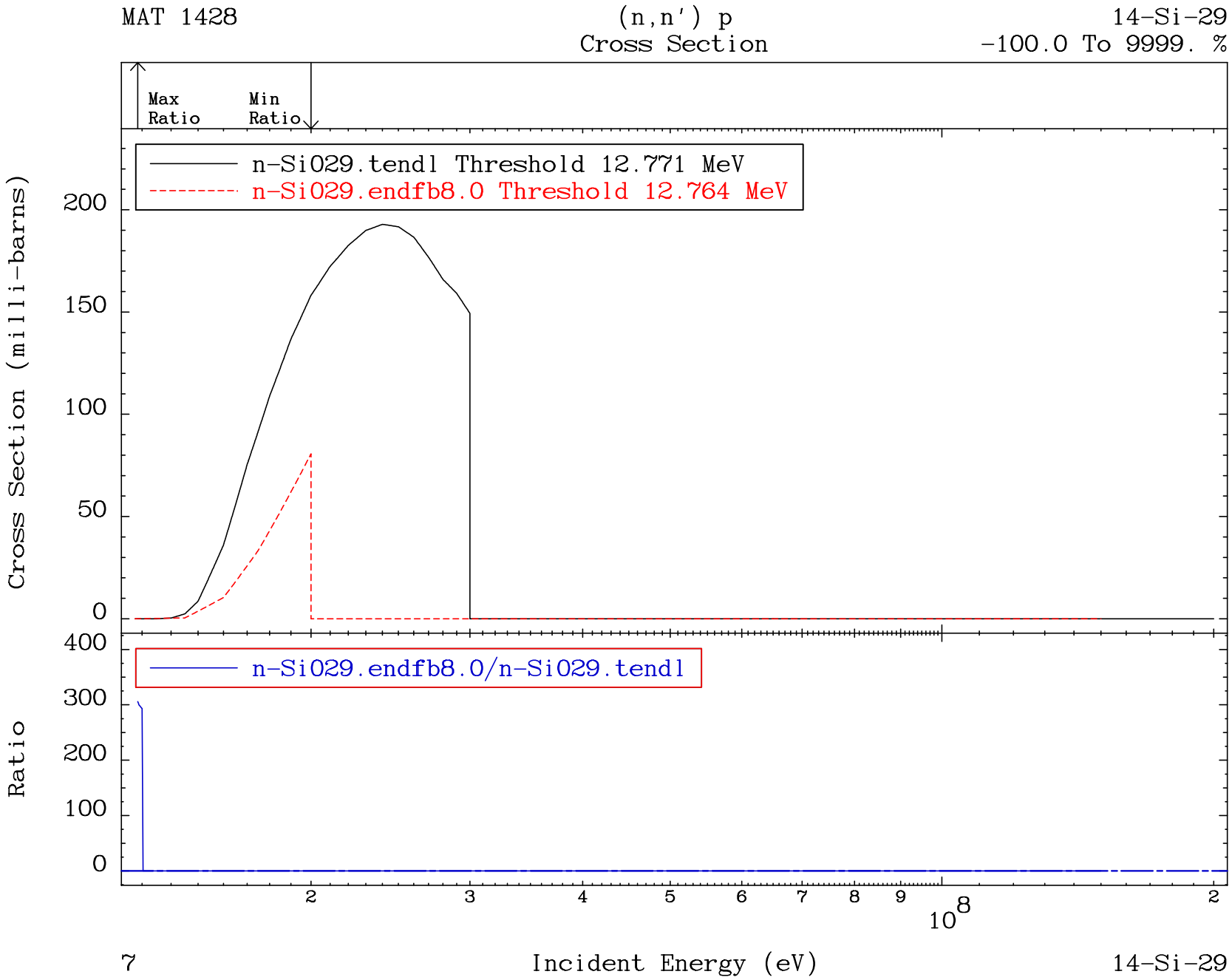

MAT 1428
Elastic
Cross Section
14-Si-29
-92.05 To 816.8 %
Max
Ratio
Min
Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
2
14-Si-29

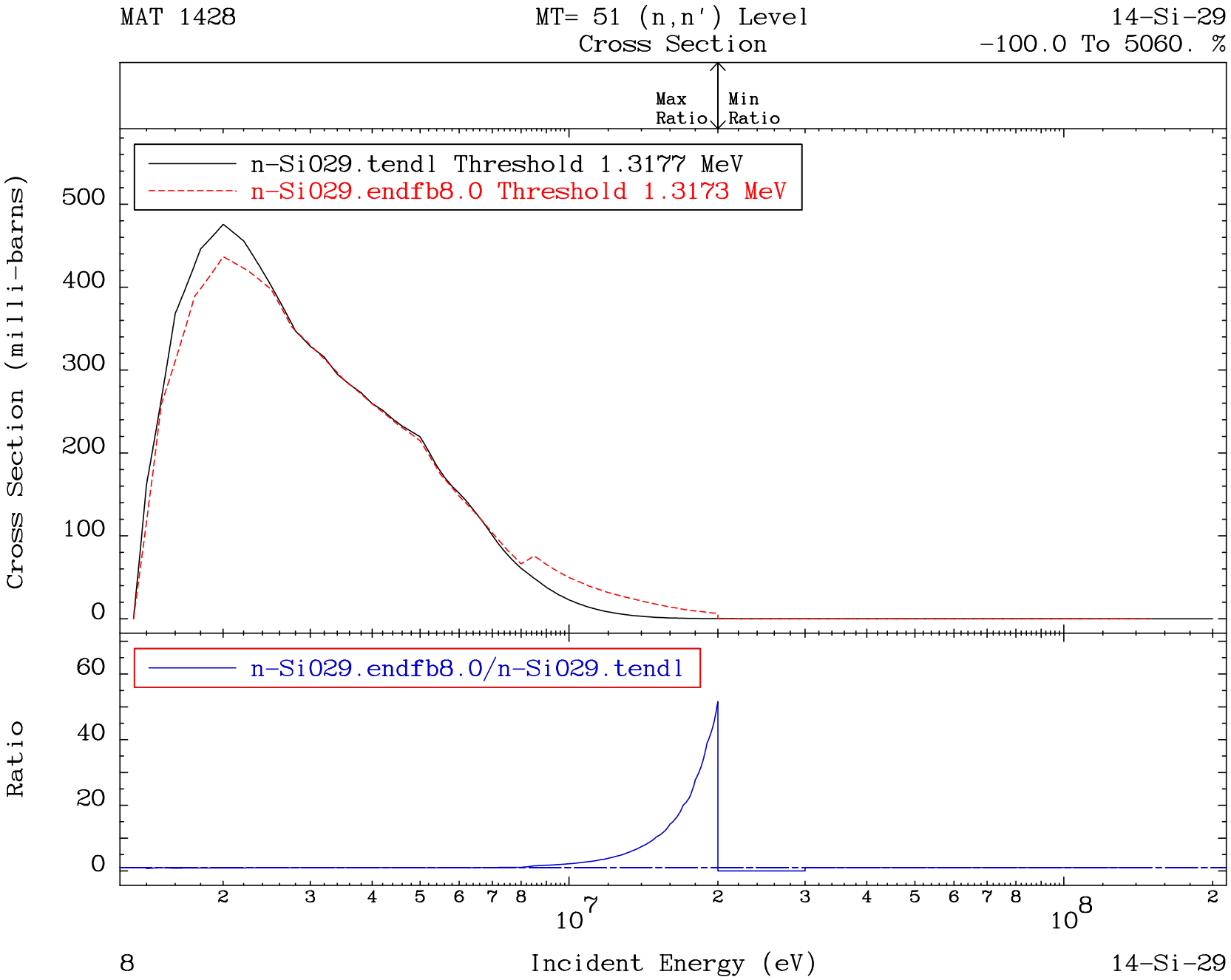

MAT 1428
Inelastic
Cross Section
14-Si-29
-100.0 To 281.1 %
Max
Ratio
Min
Ratio
n-Si029.tendl Threshold 1.3177 MeV
n-Si029.endfb8.0 Threshold 1.3173 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
4
2
0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
3
Incident Energy (eV)
14-Si-29

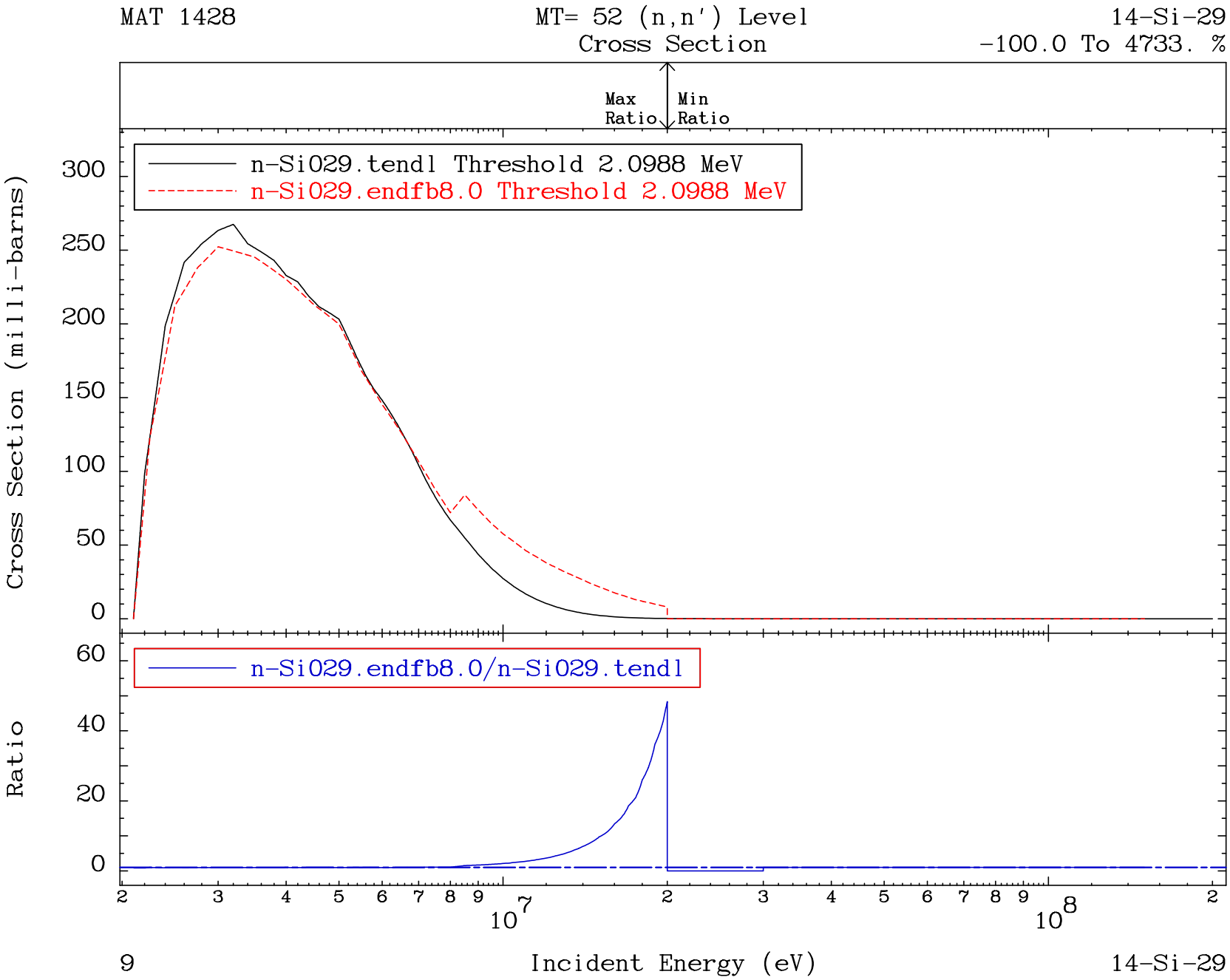

MAT 1428
(n,remainder)
Cross Section
14-Si-29
-12.00 To 8.431 %
Min
Ratio
Max
Ratio
n-Si029.tendl Threshold 30.000 MeV
n-Si029.endfb8.0 Threshold 20.000 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
1.1
1.0
0.9
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
14-Si-29

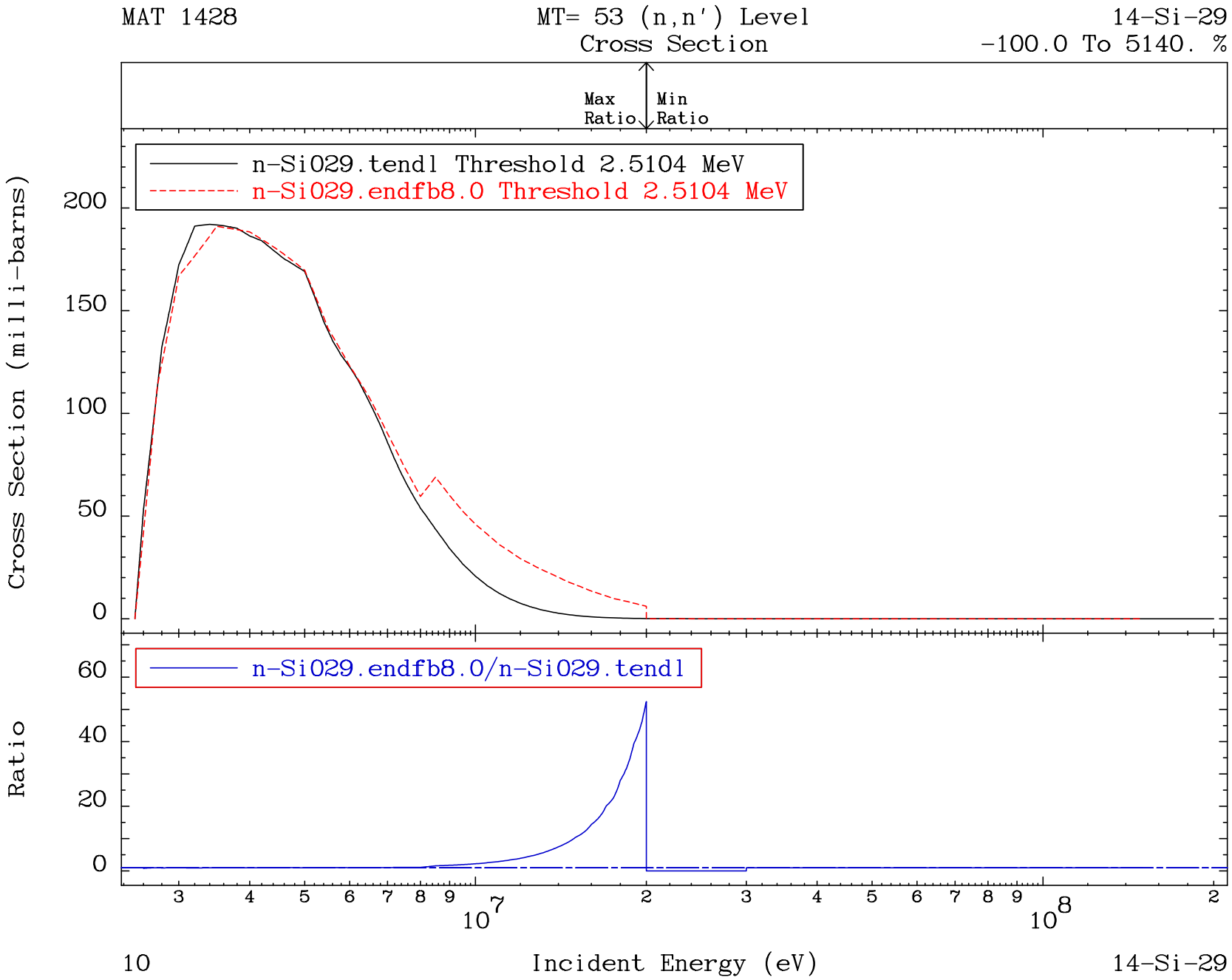

MAT 1428
(n,2n)
Cross Section
14-Si-29
-100.0 To 0.000 %
Min Ratio
Max Ratio
n-Si029.tendl Threshold 8.6952 MeV
n-Si029.endfb8.0 Threshold 8.7689 MeV
Cross Section (milli-barns)
600
400
200
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
1.2
0.8
0.4
0.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
14-Si-29

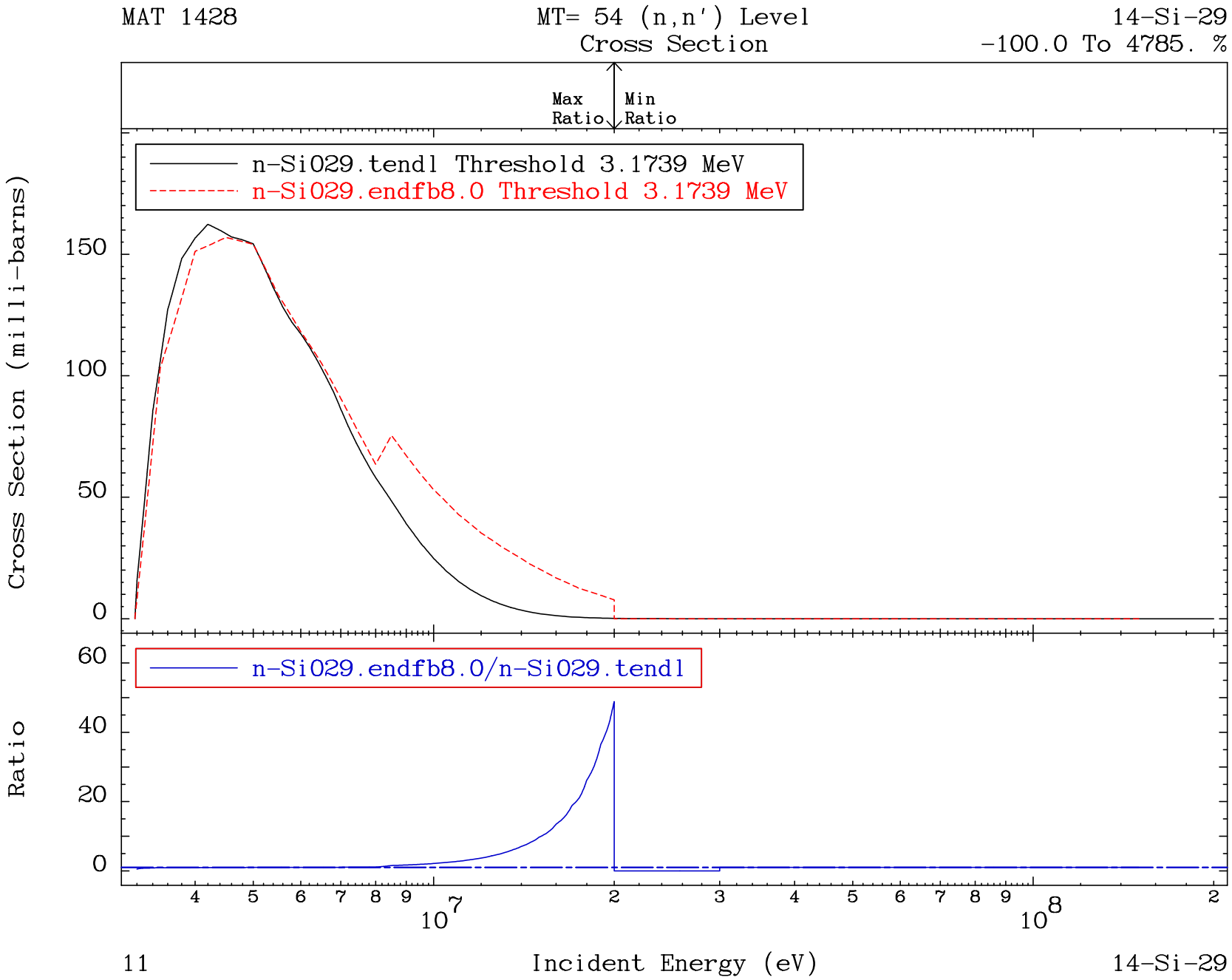

MAT 1428
(n,n') α
Cross Section
14-Si-29
-100.0 To 6271. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 11.523 MeV
n-Si029.endfb8.0 Threshold 11.515 MeV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
80
60
40
20
0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
14-Si-29

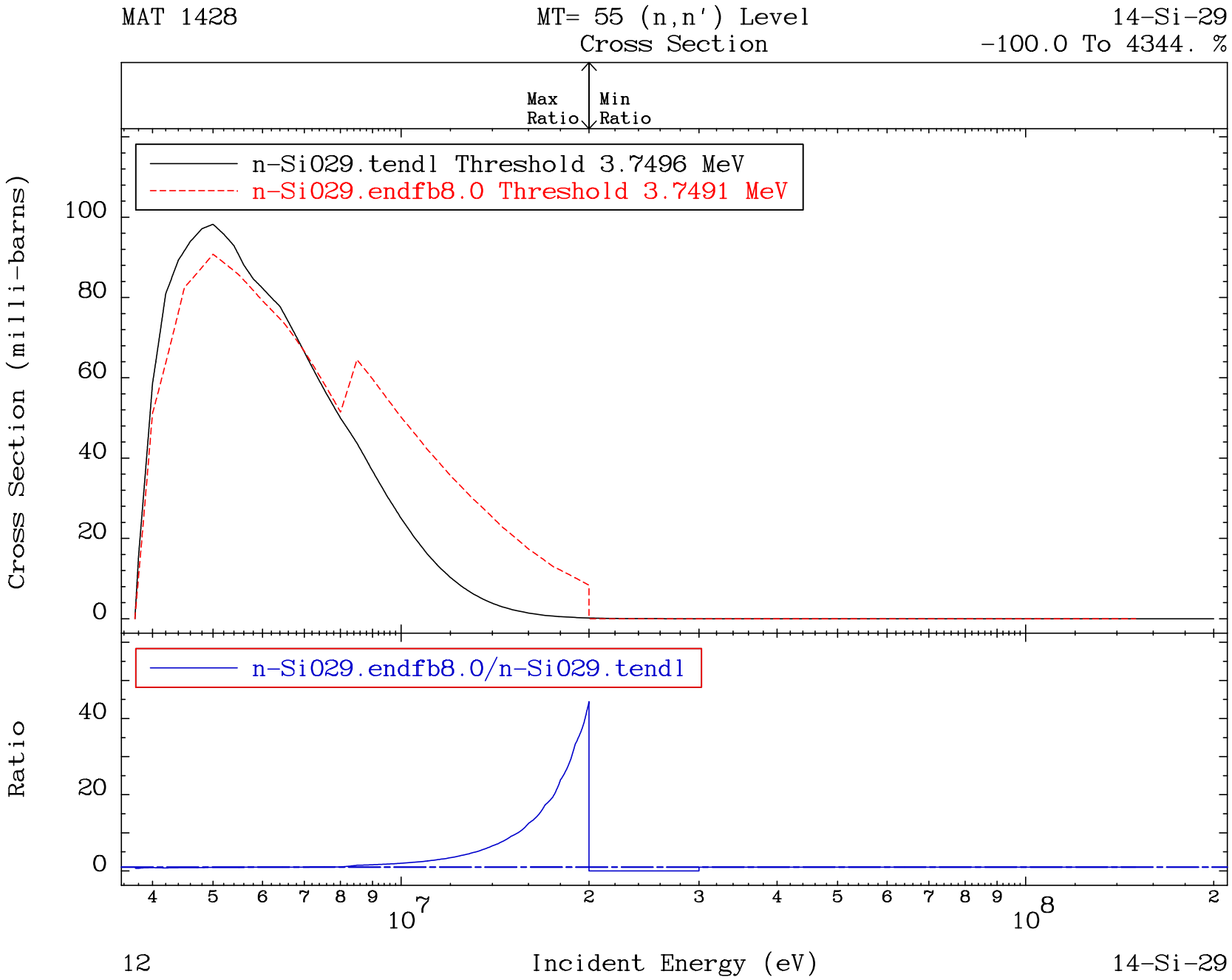

MAT 1428
(n,n') p
Cross Section
14-Si-29
-100.0 To 9999. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 12.771 MeV
n-Si029.endfb8.0 Threshold 12.764 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
400
300
200
100
0
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
14-Si-29

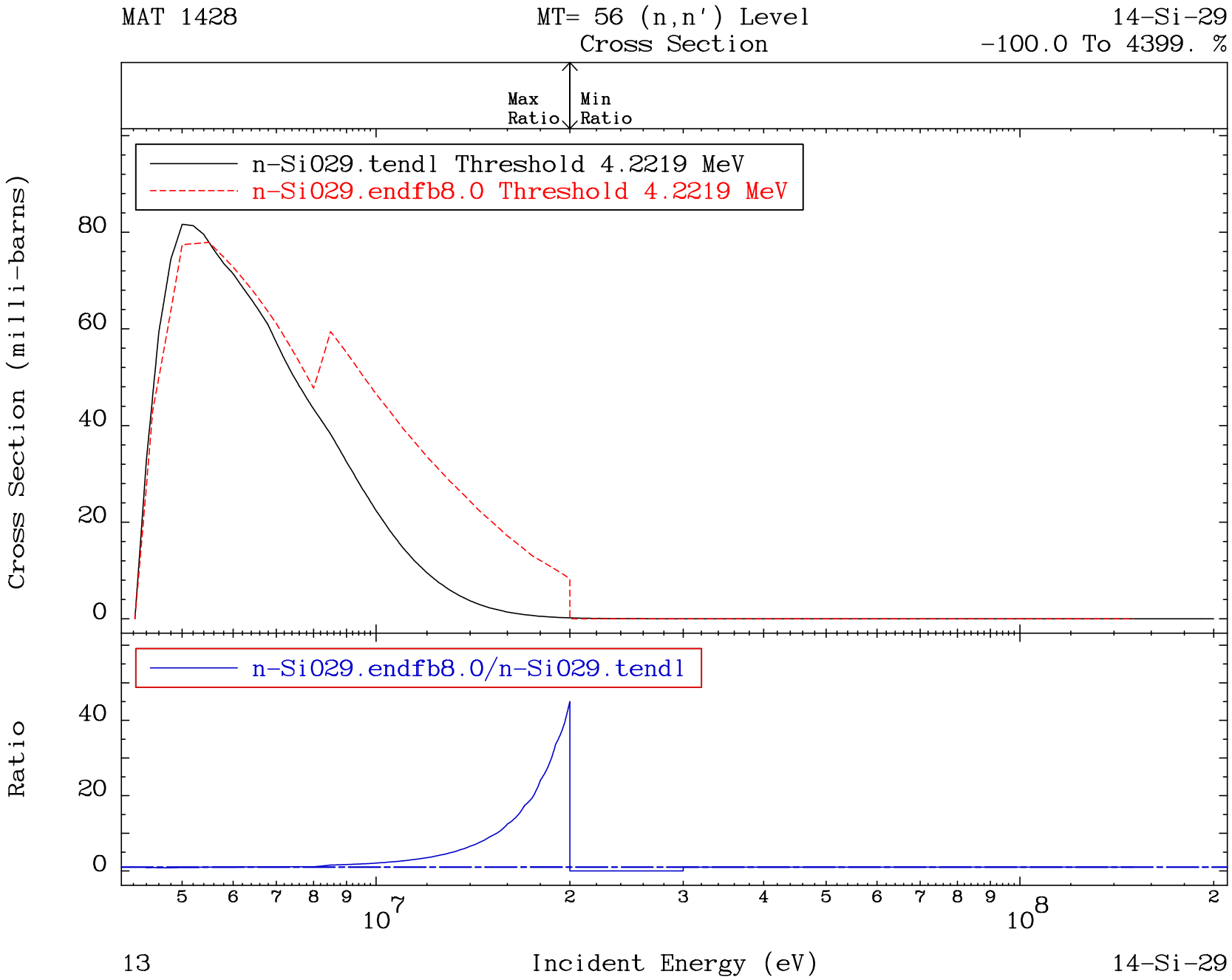

MAT 1428
MT= 51 (n,n') Level
Cross Section
14-Si-29
-100.0 To 5060. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 1.3177 MeV
n-Si029.endfb8.0 Threshold 1.3173 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
60
40
20
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
8
Incident Energy (eV)
14-Si-29

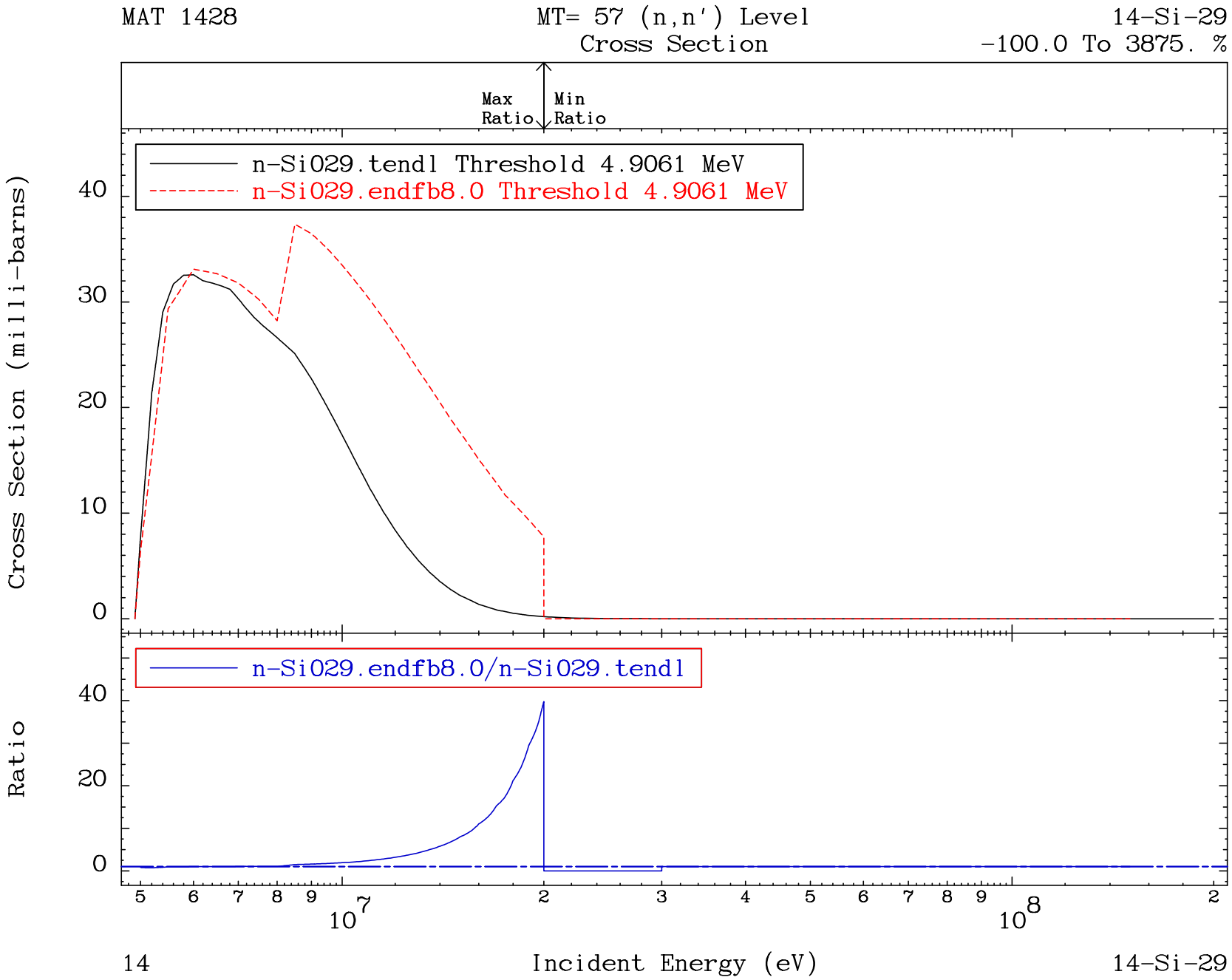

MAT 1428
MT= 52 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4733. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 2.0988 MeV
n-Si029.endfb8.0 Threshold 2.0988 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
60
40
20
0
2 3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
9
Incident Energy (eV)
14-Si-29

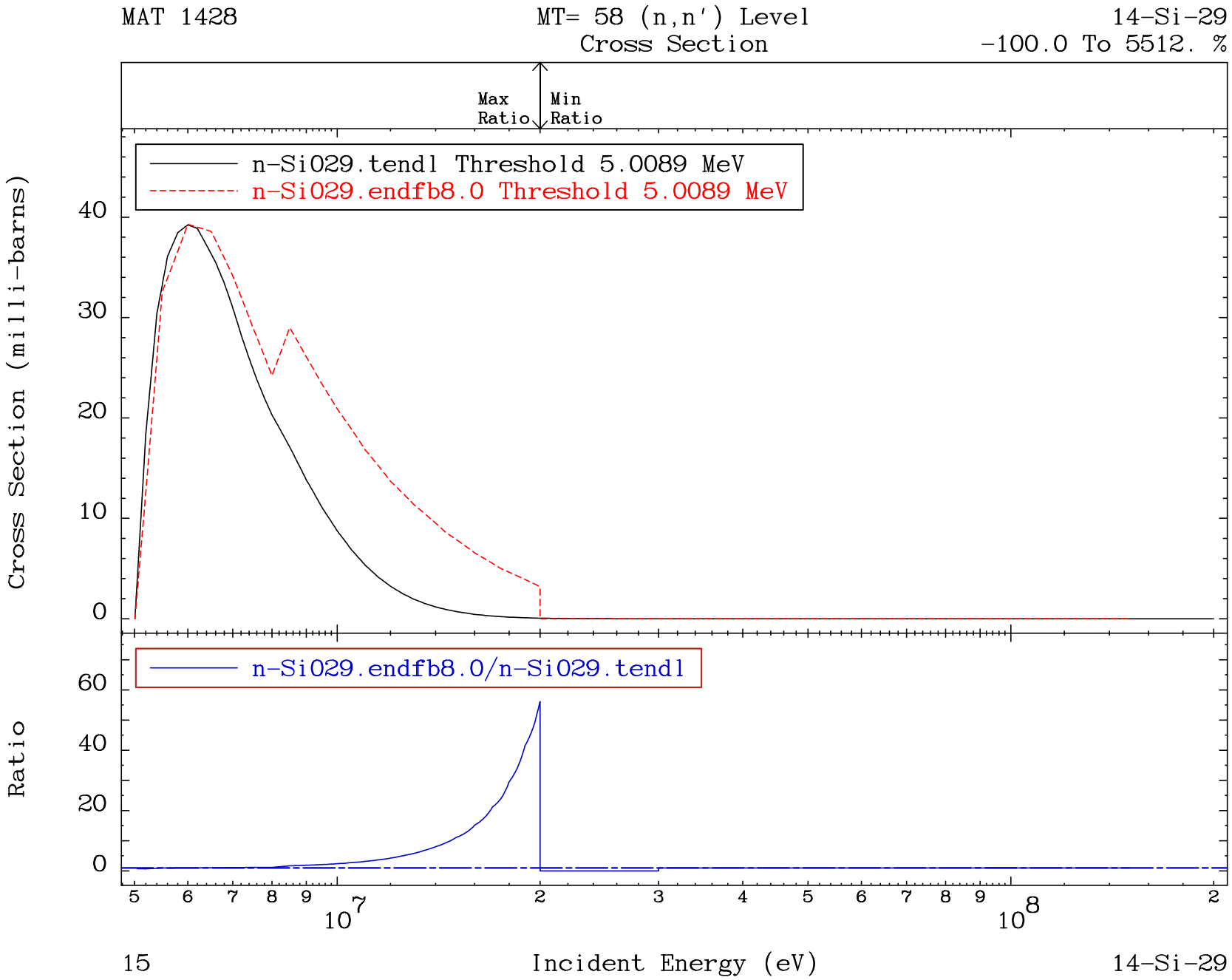

MAT 1428
MT= 53 (n,n') Level
Cross Section
14-Si-29
-100.0 To 5140. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 2.5104 MeV
n-Si029.endfb8.0 Threshold 2.5104 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
60
40
20
0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
10
Incident Energy (eV)
14-Si-29

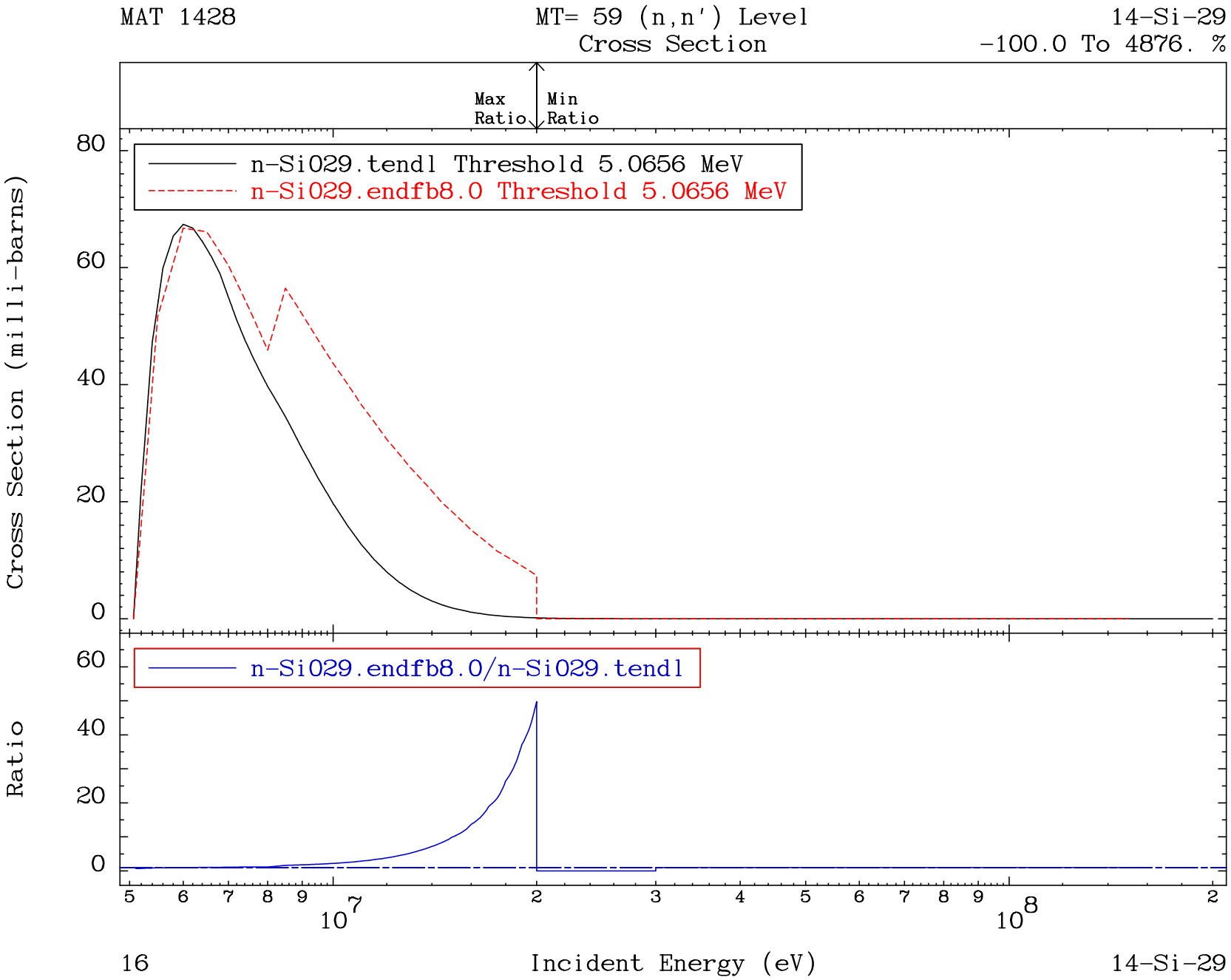

MAT 1428
MT= 54 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4785. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 3.1739 MeV
n-Si029.endfb8.0 Threshold 3.1739 MeV
Cross Section (milli-barns)
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
60
40
20
0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
11
Incident Energy (eV)
14-Si-29

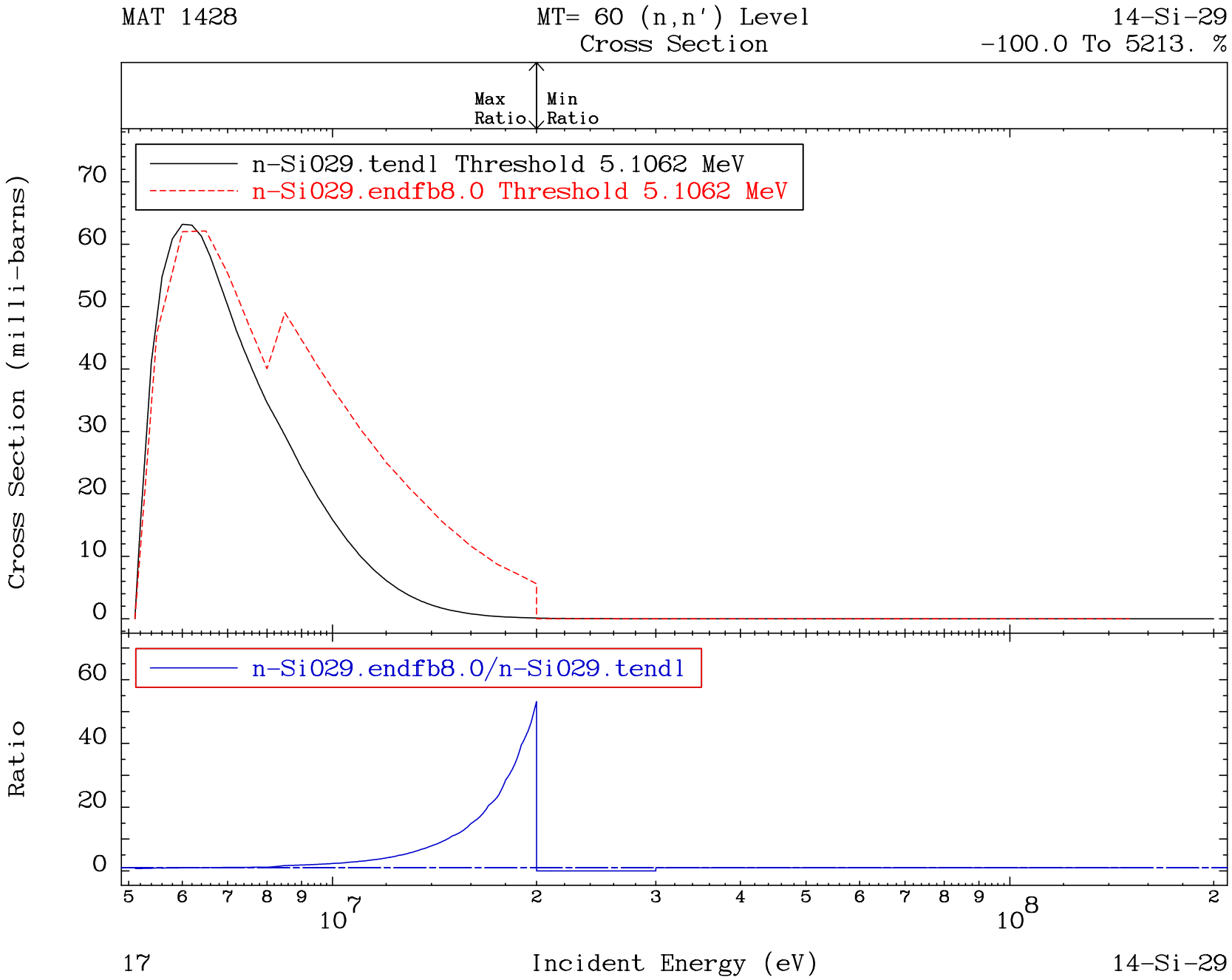

MAT 1428
MT= 55 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4344. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 3.7496 MeV
n-Si029.endfb8.0 Threshold 3.7491 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
12
Incident Energy (eV)
14-Si-29

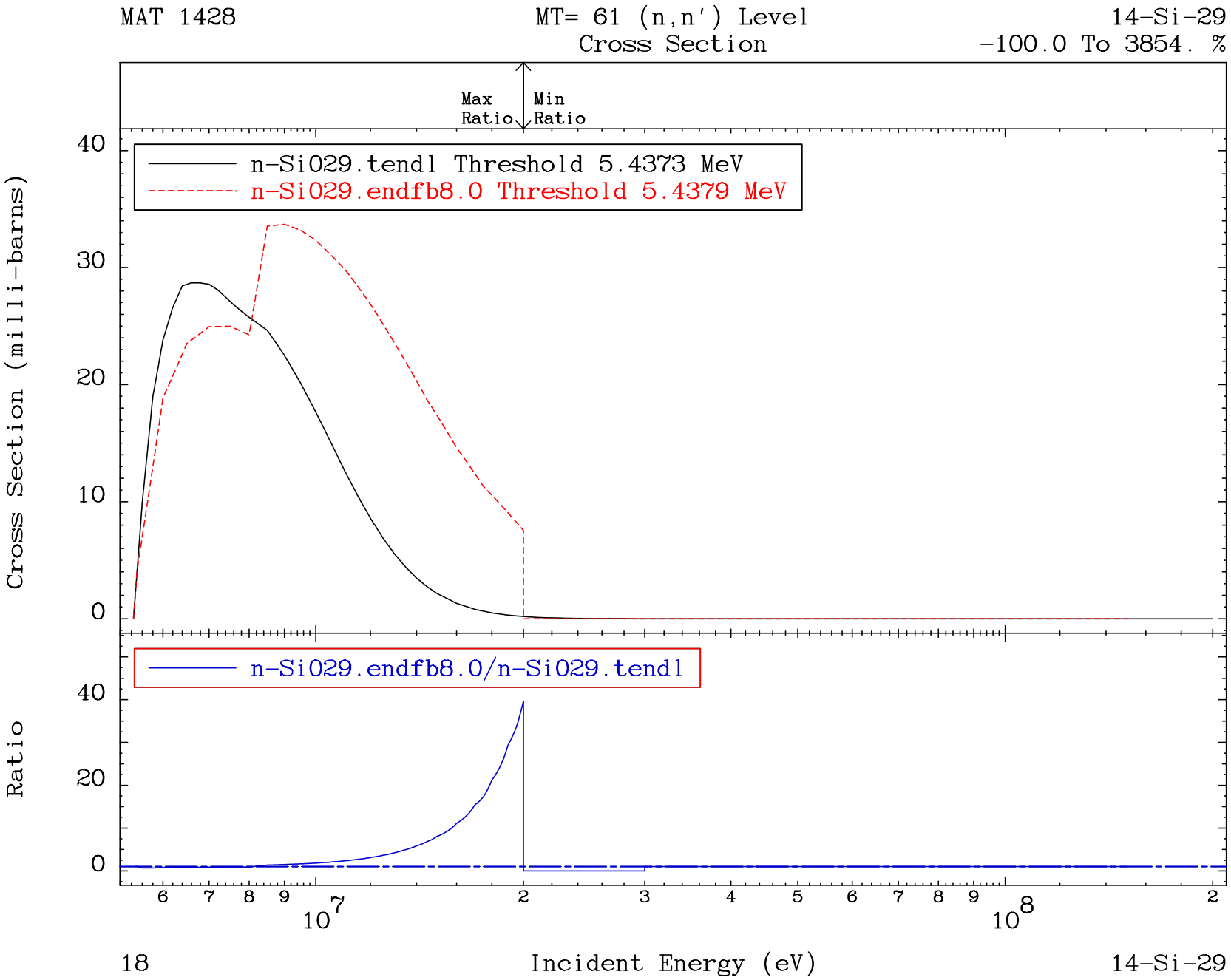

MAT 1428
MT= 56 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4399. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 4.2219 MeV
n-Si029.endfb8.0 Threshold 4.2219 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
13
Incident Energy (eV)
14-Si-29

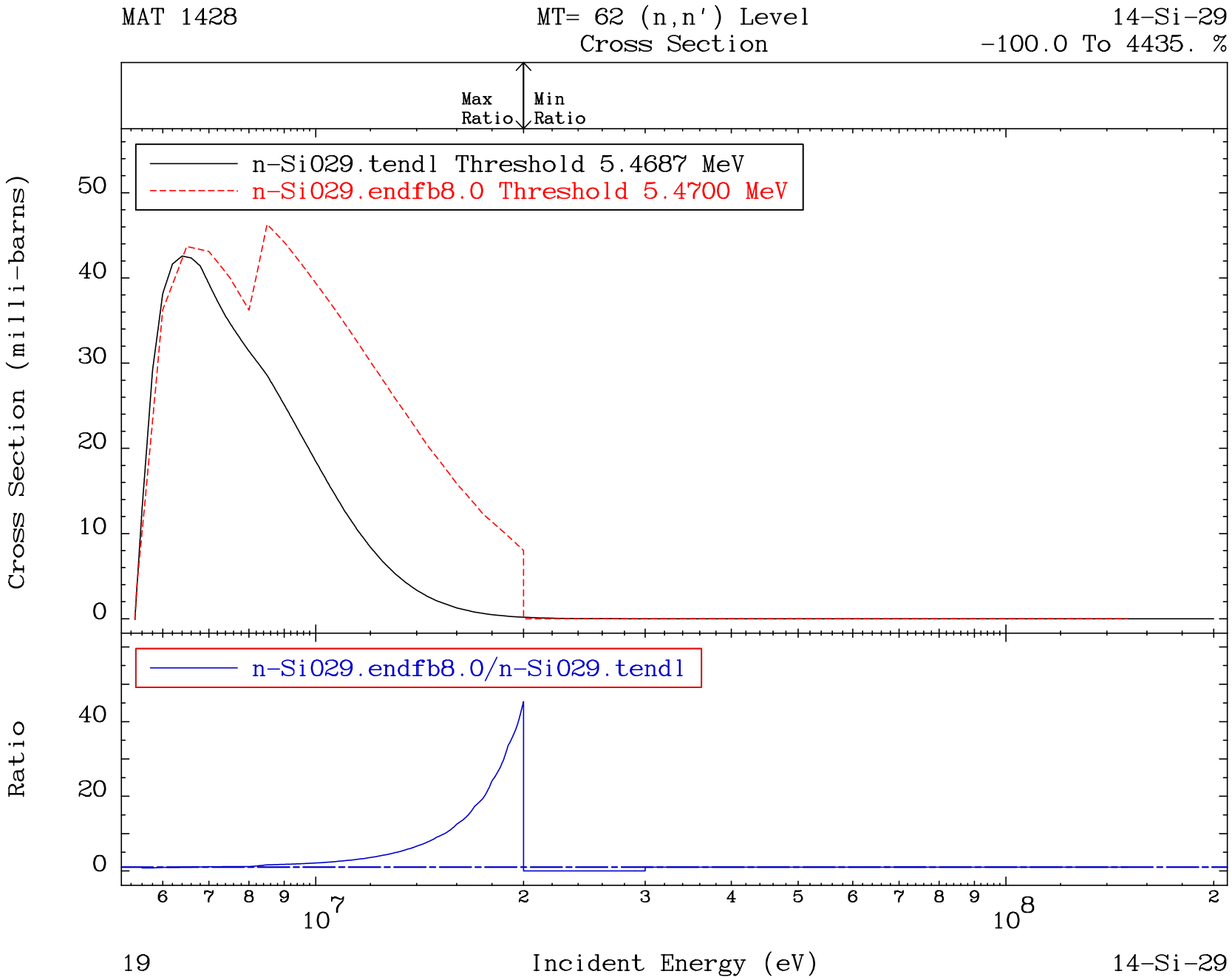

MAT 1428
MT= 57 (n,n') Level
Cross Section
14-Si-29
-100.0 To 3875. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 4.9061 MeV
n-Si029.endfb8.0 Threshold 4.9061 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
14
Incident Energy (eV)
14-Si-29

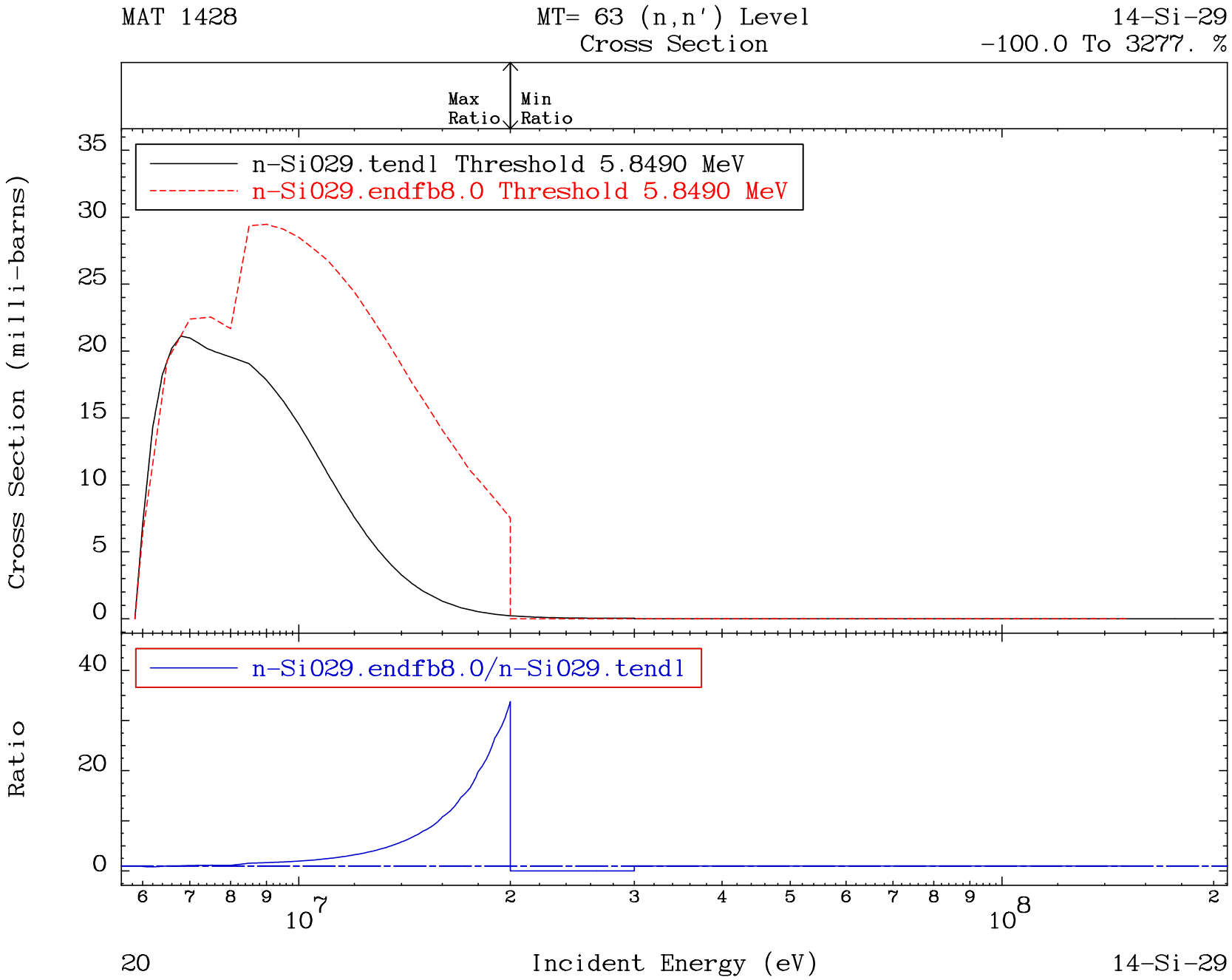

MAT 1428
MT= 58 (n,n') Level
Cross Section
14-Si-29
-100.0 To 5512. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 5.0089 MeV
n-Si029.endfb8.0 Threshold 5.0089 MeV
Cross Section (milli-barns)
0
10
20
30
40
n-Si029.endfb8.0/n-Si029.tendl
Ratio
0
20
40
60
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
15
14-Si-29

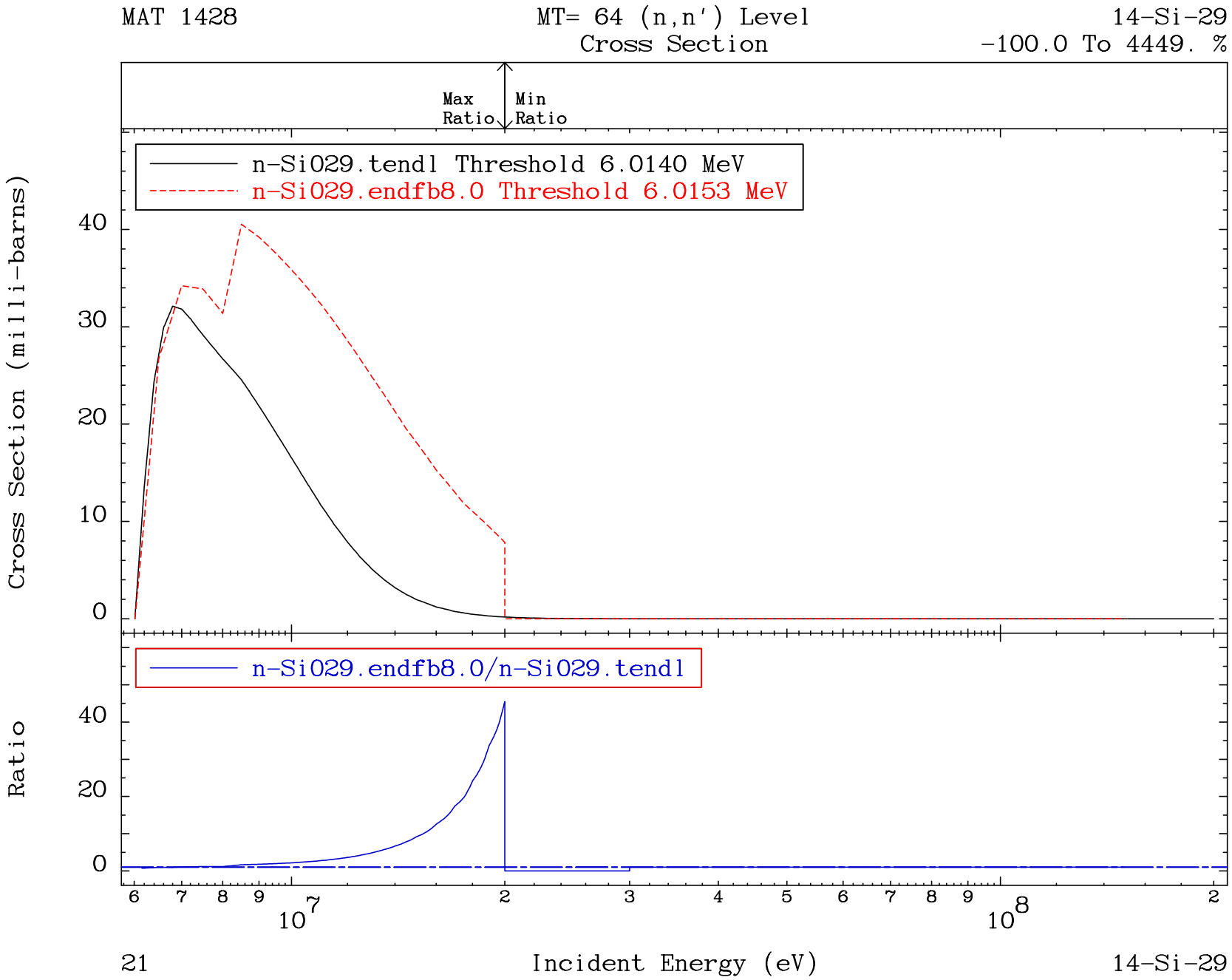

MAT 1428
MT= 59 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4876. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 5.0656 MeV
n-Si029.endfb8.0 Threshold 5.0656 MeV
Cross Section (milli-barns)
80
60
40
20
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
60
40
20
0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
16
Incident Energy (eV)
14-Si-29

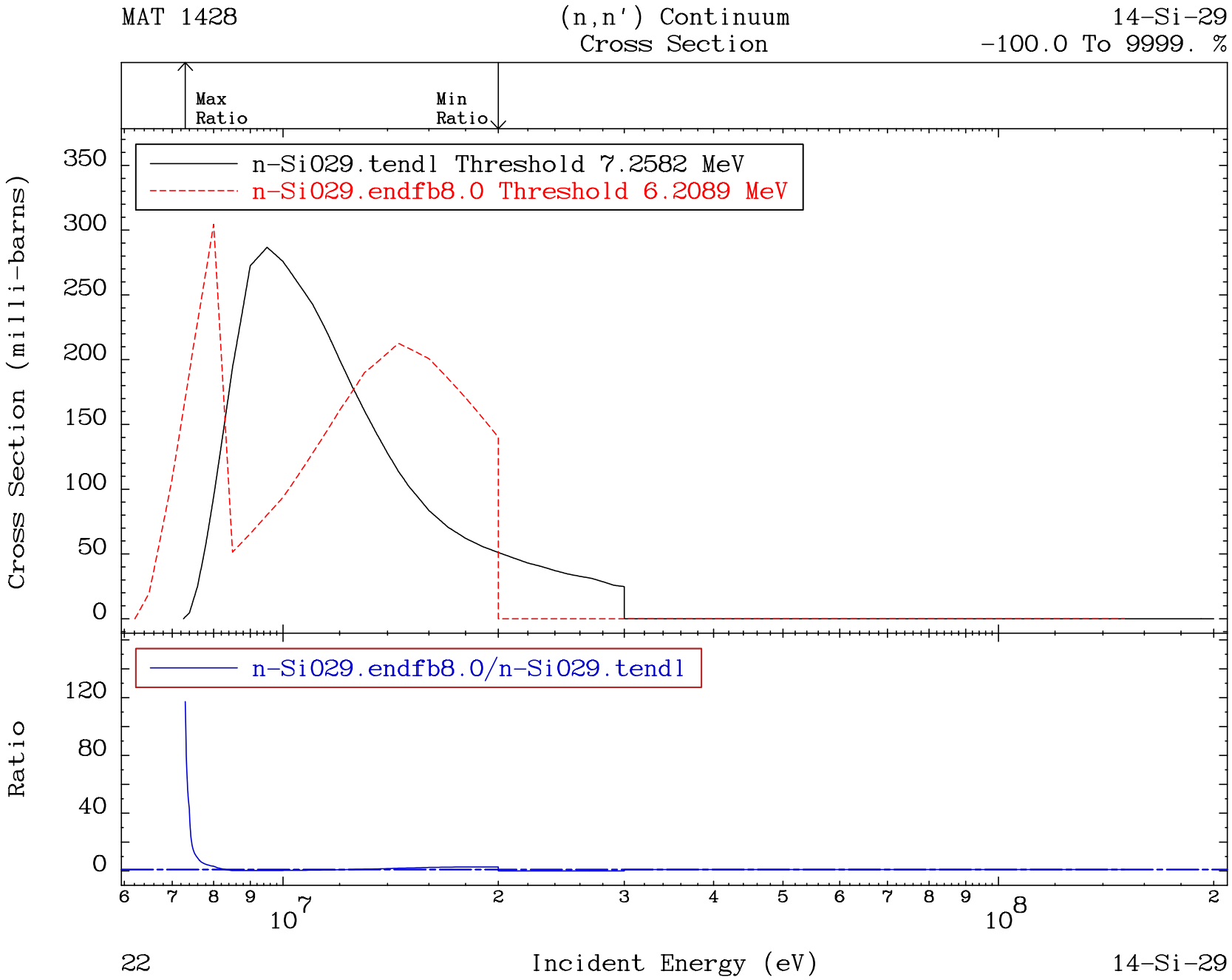

MAT 1428
MT= 60 (n,n') Level
Cross Section
14-Si-29
-100.0 To 5213. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 5.1062 MeV
n-Si029.endfb8.0 Threshold 5.1062 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
60
40
20
0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
17
Incident Energy (eV)
14-Si-29

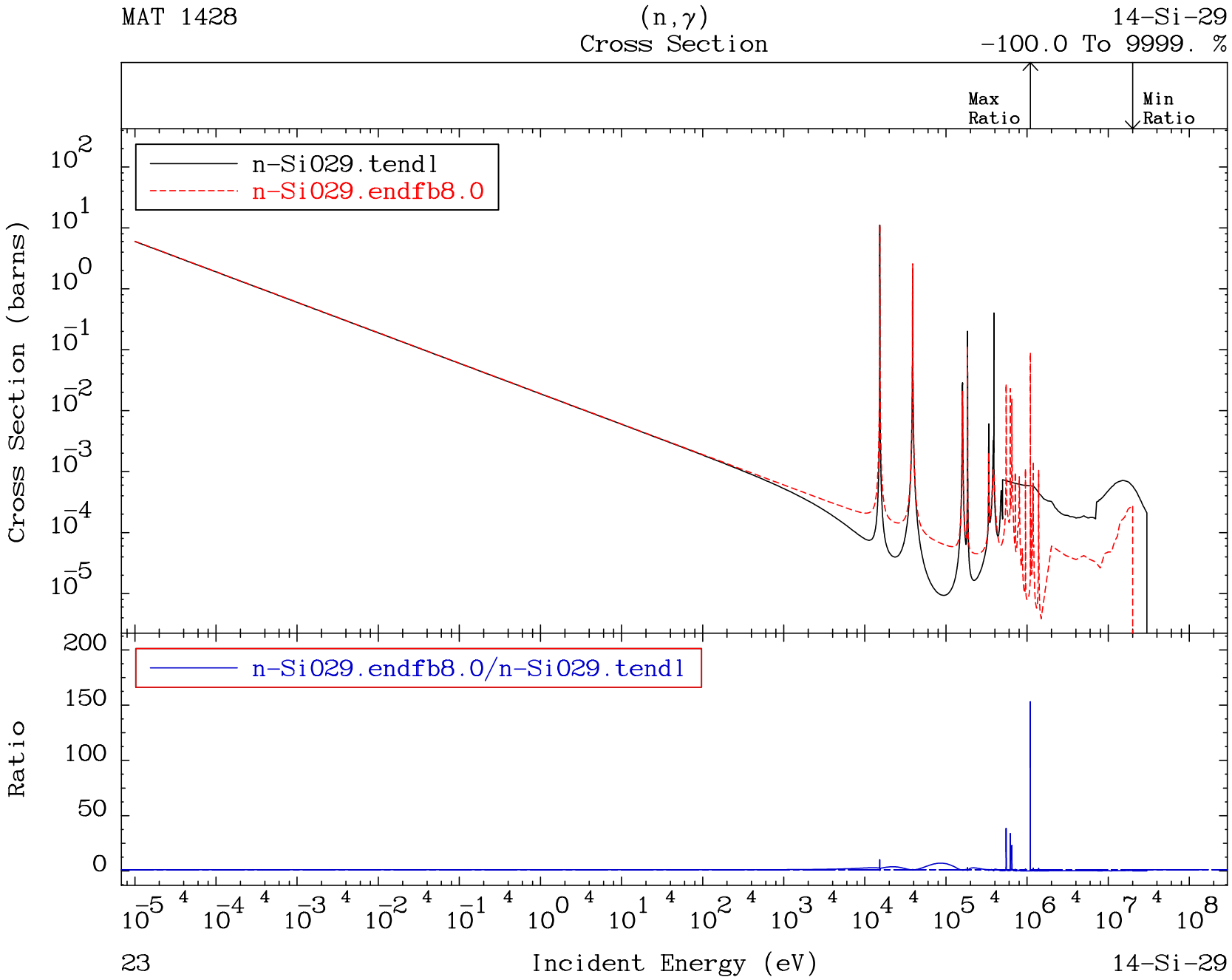

MAT 1428
MT= 61 (n,n') Level
Cross Section
14-Si-29
-100.0 To 3854. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 5.4373 MeV
n-Si029.endfb8.0 Threshold 5.4379 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
18
Incident Energy (eV)
14-Si-29

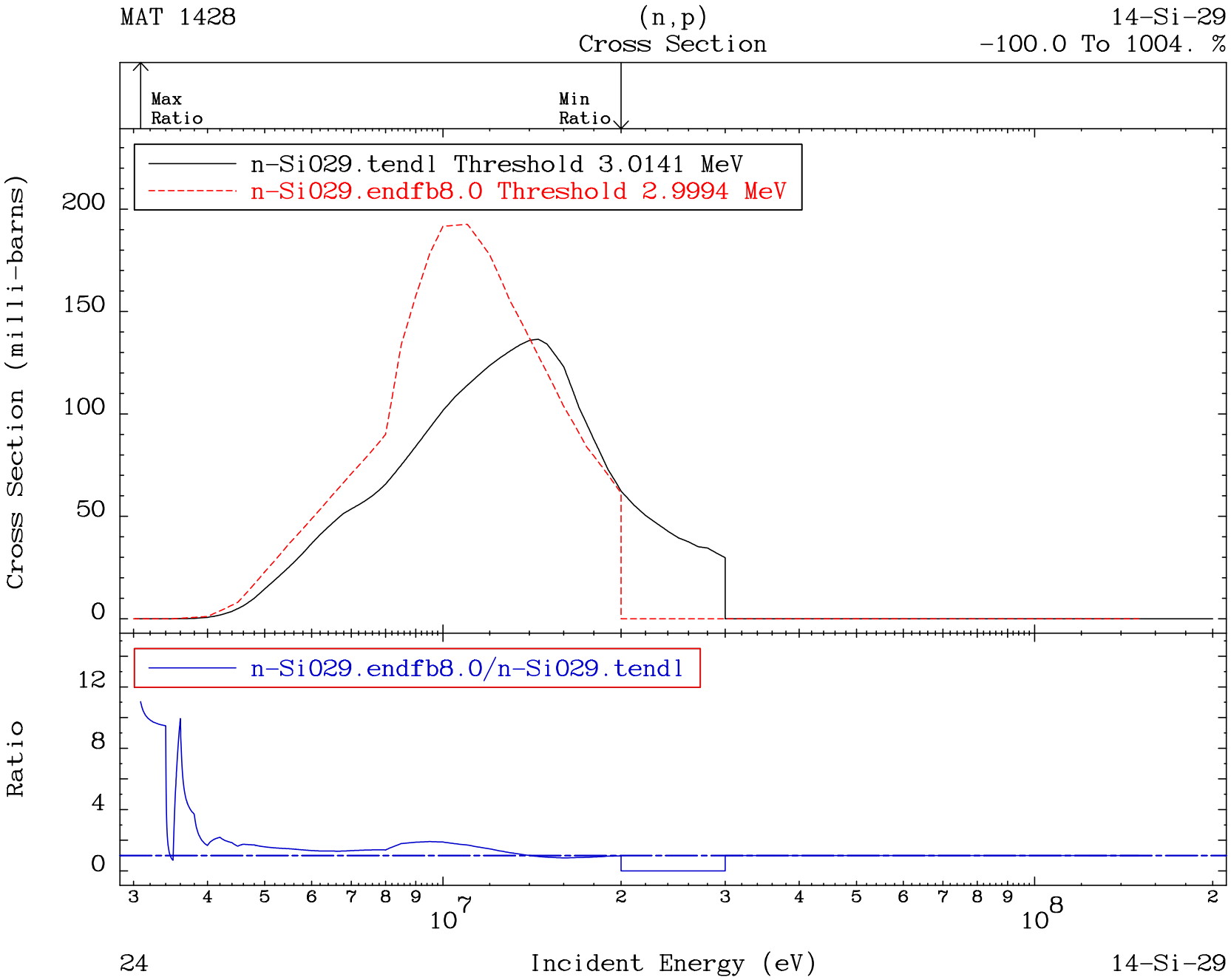

MAT 1428
MT= 62 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4435. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 5.4687 MeV
n-Si029.endfb8.0 Threshold 5.4700 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
19
Incident Energy (eV)
14-Si-29

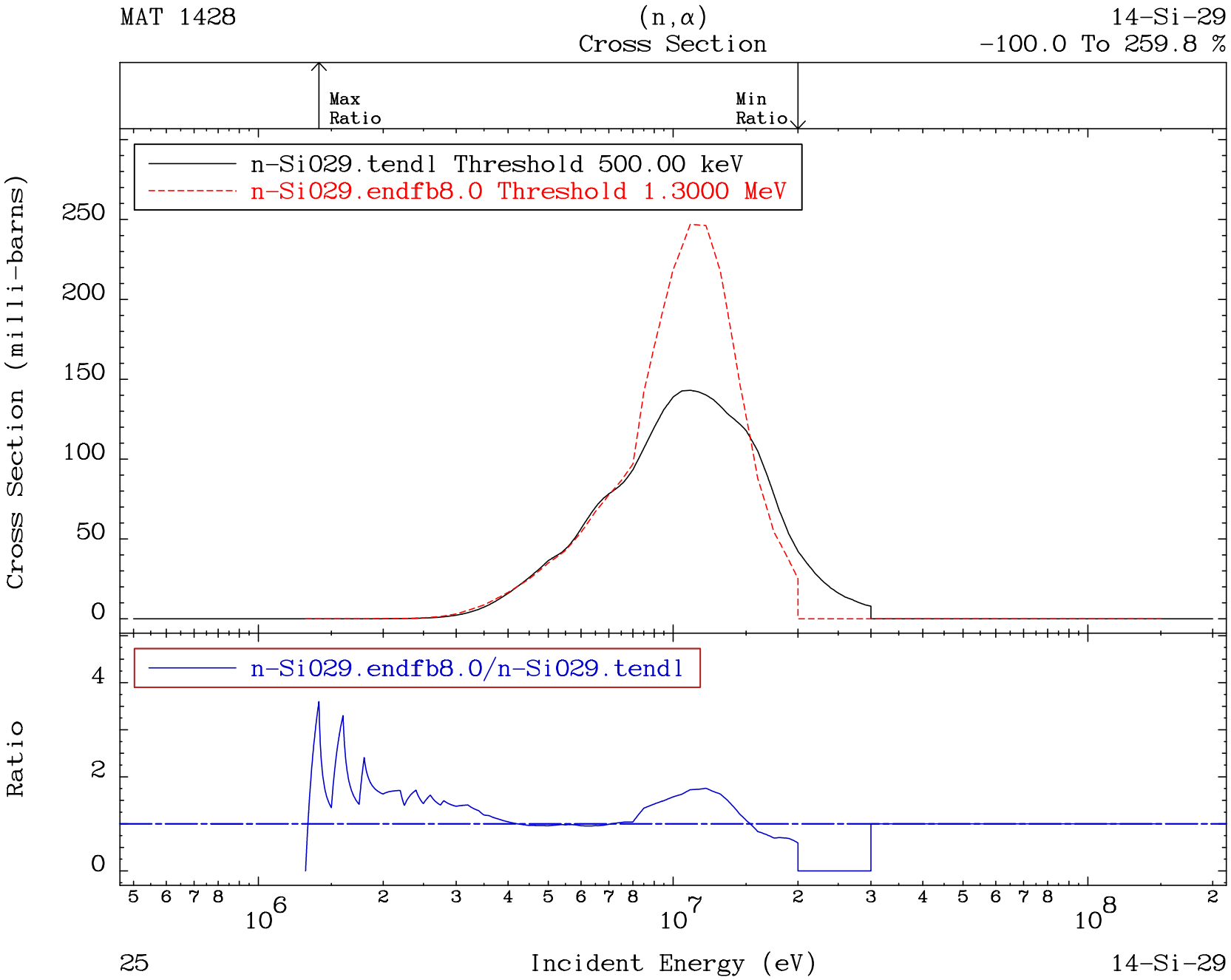

MAT 1428
MT= 63 (n,n') Level
Cross Section
14-Si-29
-100.0 To 3277. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 5.8490 MeV
n-Si029.endfb8.0 Threshold 5.8490 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
14-Si-29

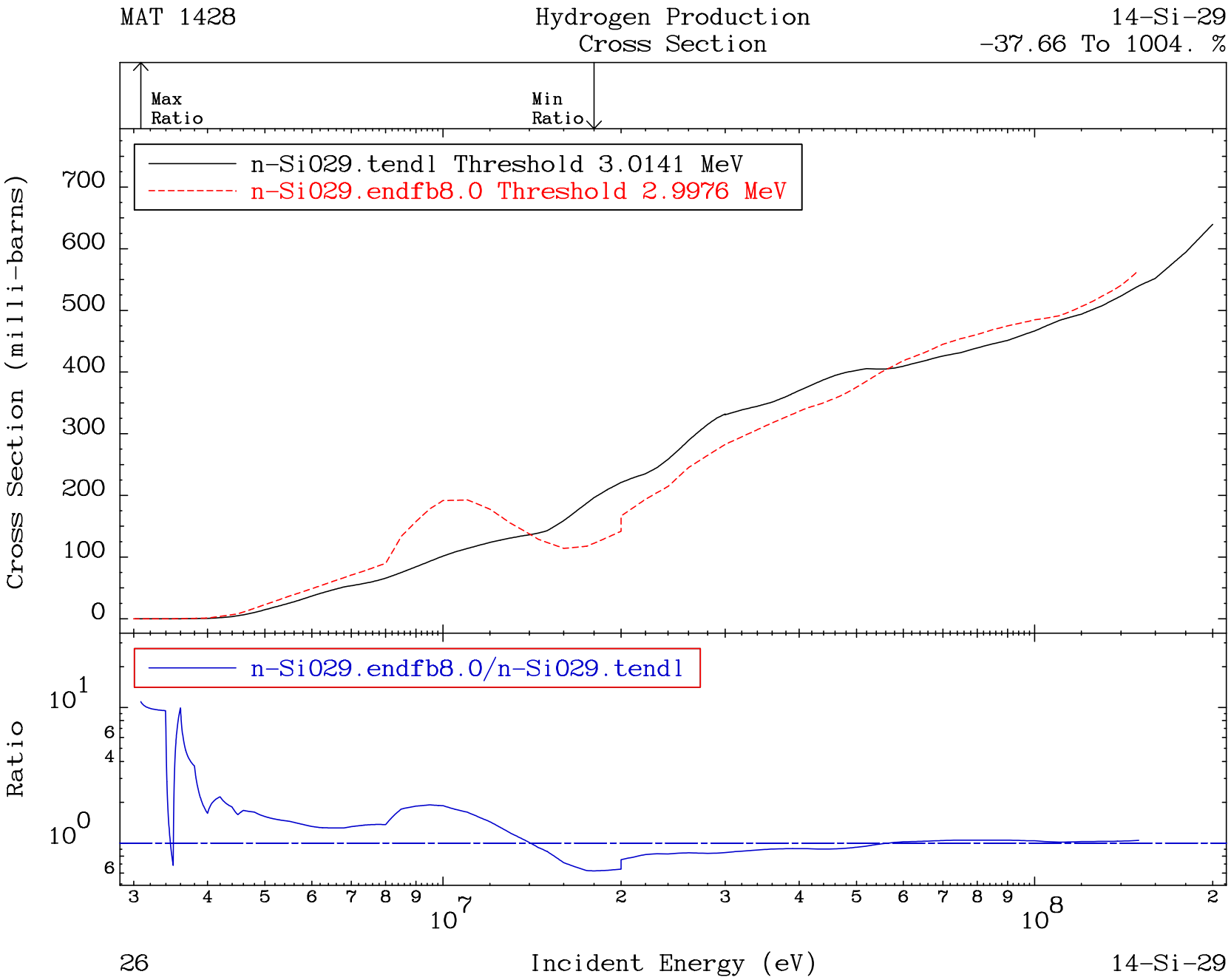

MAT 1428
MT= 64 (n,n') Level
Cross Section
14-Si-29
-100.0 To 4449. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 6.0140 MeV
n-Si029.endfb8.0 Threshold 6.0153 MeV
Cross Section (milli-barns)
40
30
20
10
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
40
20
0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
21
Incident Energy (eV)
14-Si-29

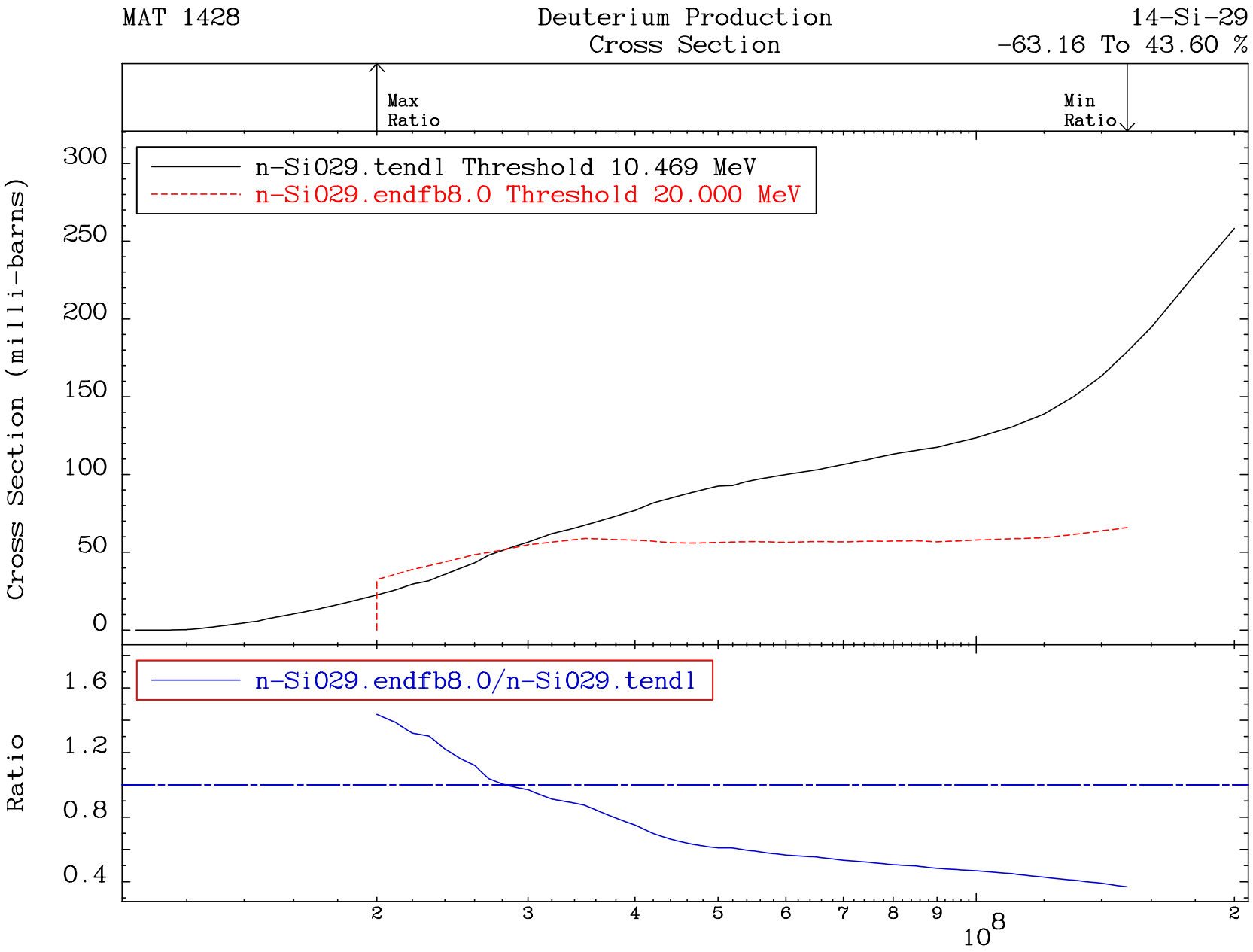

MAT 1428
(n,n') Continuum
Cross Section
14-Si-29
-100.0 To 9999. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 7.2582 MeV
n-Si029.endfb8.0 Threshold 6.2089 MeV
Cross Section (milli-barns)
350
300
250
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
120
80
40
0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
14-Si-29

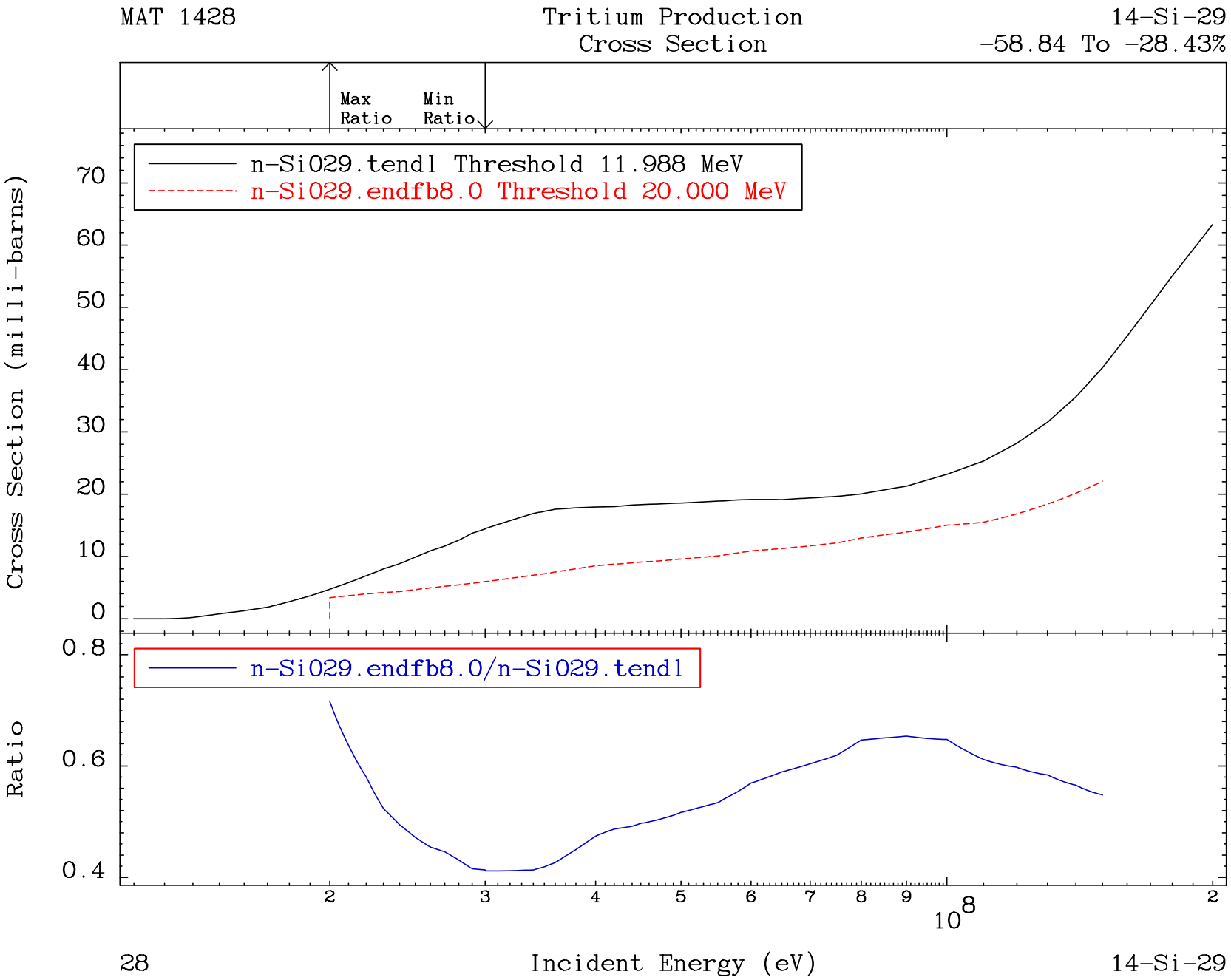

MAT 1428
(n,γ)
Cross Section
14-Si-29
-100.0 To 9999. %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
23
14-Si-29

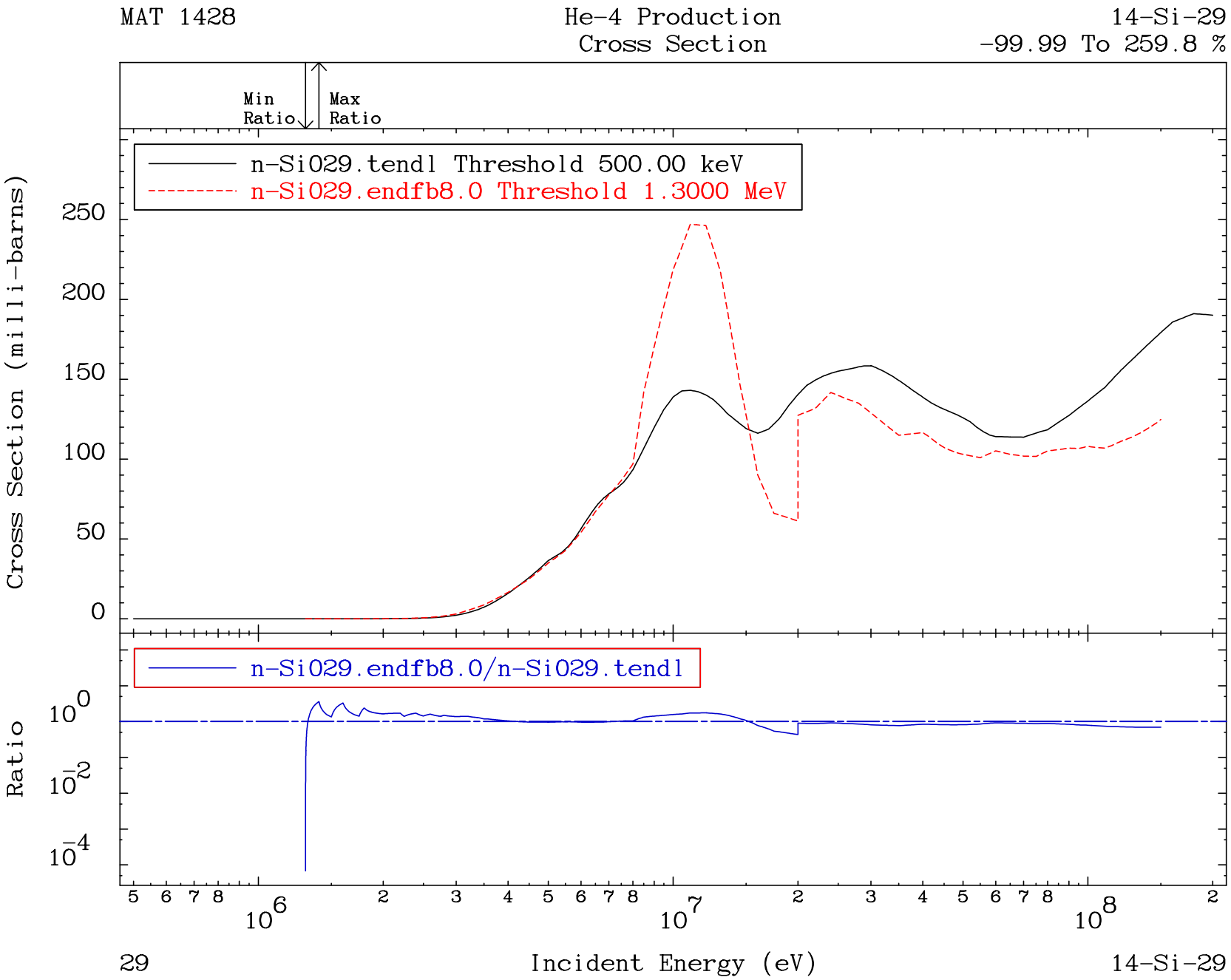

MAT 1428
(n,p)
Cross Section
14-Si-29
-100.0 To 1004. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 3.0141 MeV
n-Si029.endfb8.0 Threshold 2.9994 MeV
Cross Section (milli-barns)
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
12
8
4
0
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
24
Incident Energy (eV)
14-Si-29

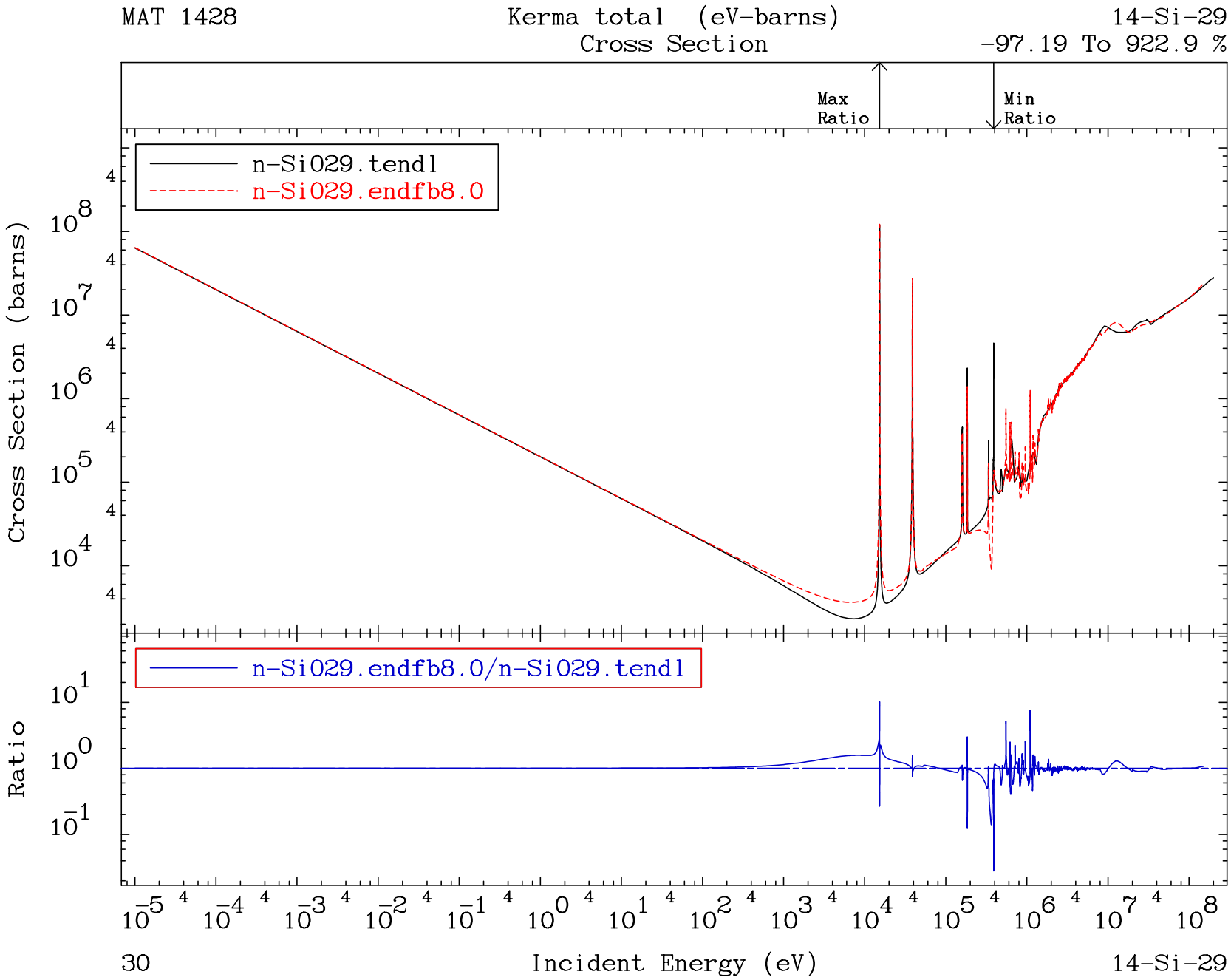

MAT 1428
(n,α)
Cross Section
14-Si-29
-100.0 To 259.8 %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 500.00 keV
n-Si029.endfb8.0 Threshold 1.3000 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
4
2
0
5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
25
Incident Energy (eV)
14-Si-29

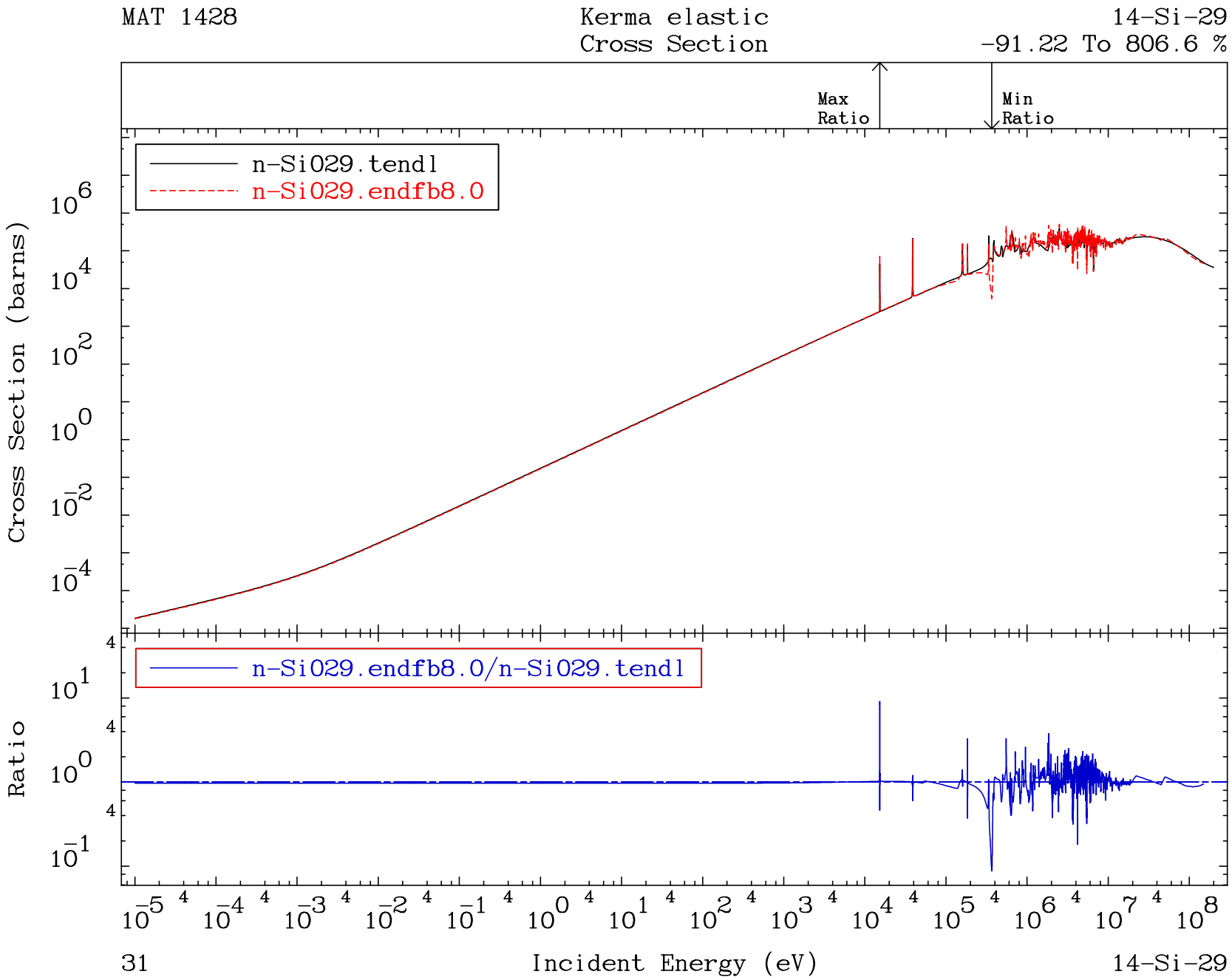

MAT 1428
Hydrogen Production
Cross Section
14-Si-29
-37.66 To 1004. %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 3.0141 MeV
n-Si029.endfb8.0 Threshold 2.9976 MeV
Cross Section (milli-barns)
0
100
200
300
400
500
600
700
n-Si029.endfb8.0/n-Si029.tendl
Ratio
10^1
10^0
6
4
6
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
26
Incident Energy (eV)
14-Si-29

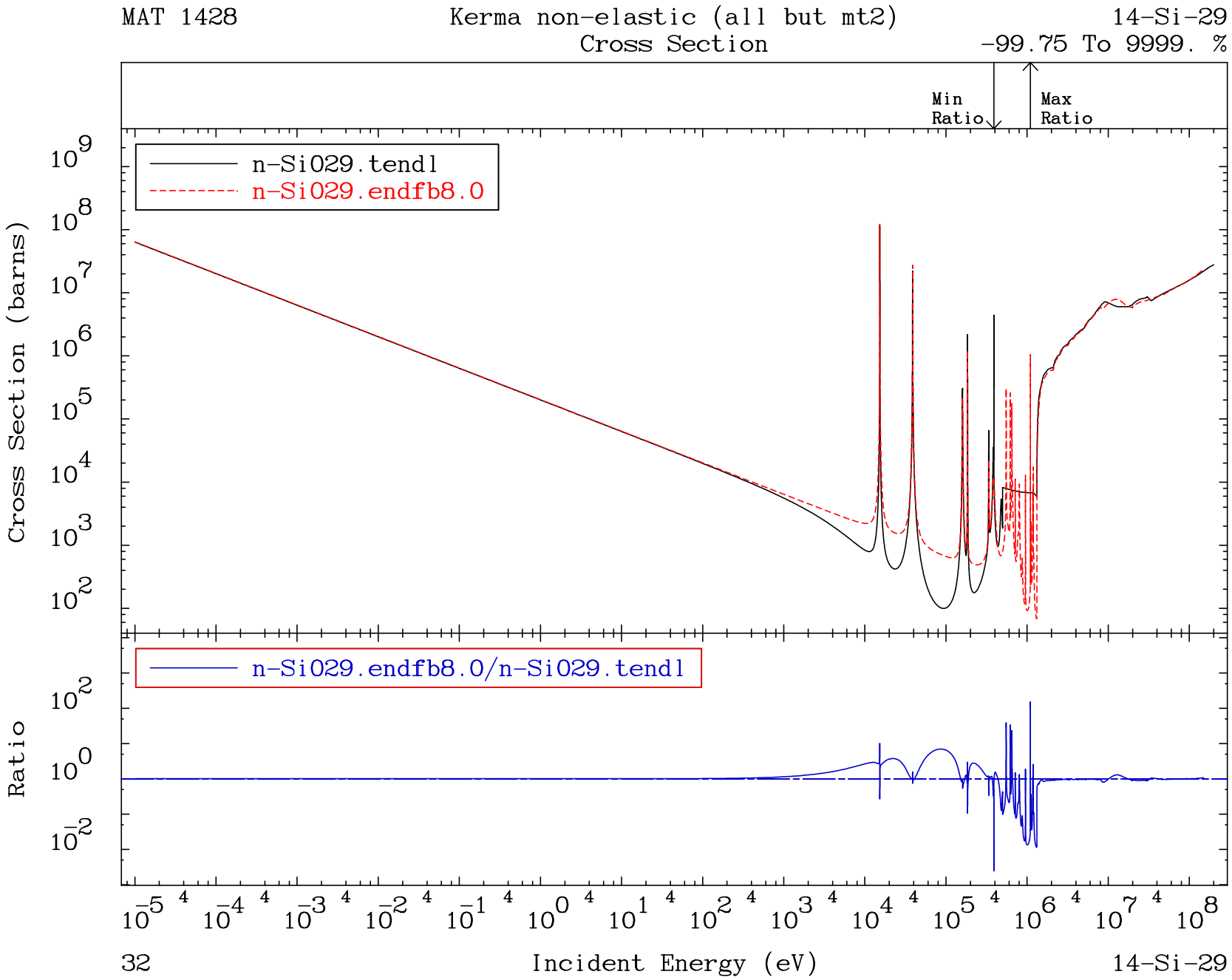

MAT 1428
Deuterium Production
Cross Section
14-Si-29
-63.16 To 43.60 %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 10.469 MeV
n-Si029.endfb8.0 Threshold 20.000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
1.6
1.2
0.8
0.4
2
3
4
5
6
7
8
9
10^8
2
27
Incident Energy (eV)
14-Si-29

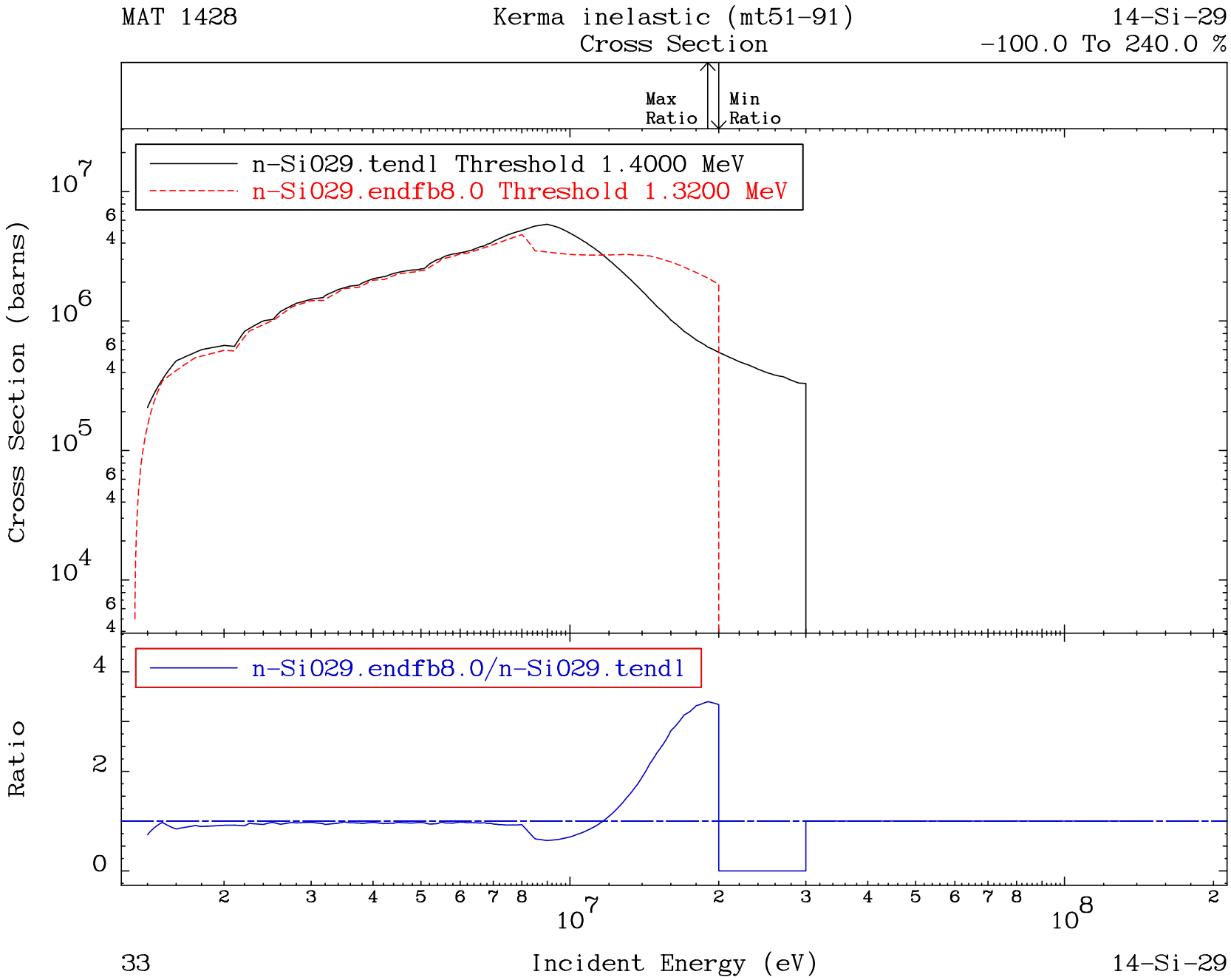

MAT 1428
Tritium Production
Cross Section
14-Si-29
-58.84 To -28.43%
Max Ratio
Min Ratio
n-Si029.tendl Threshold 11.988 MeV
n-Si029.endfb8.0 Threshold 20.000 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
0.8
0.6
0.4
2
3
4
5
6
7
8
9
10^8
2
28
Incident Energy (eV)
14-Si-29

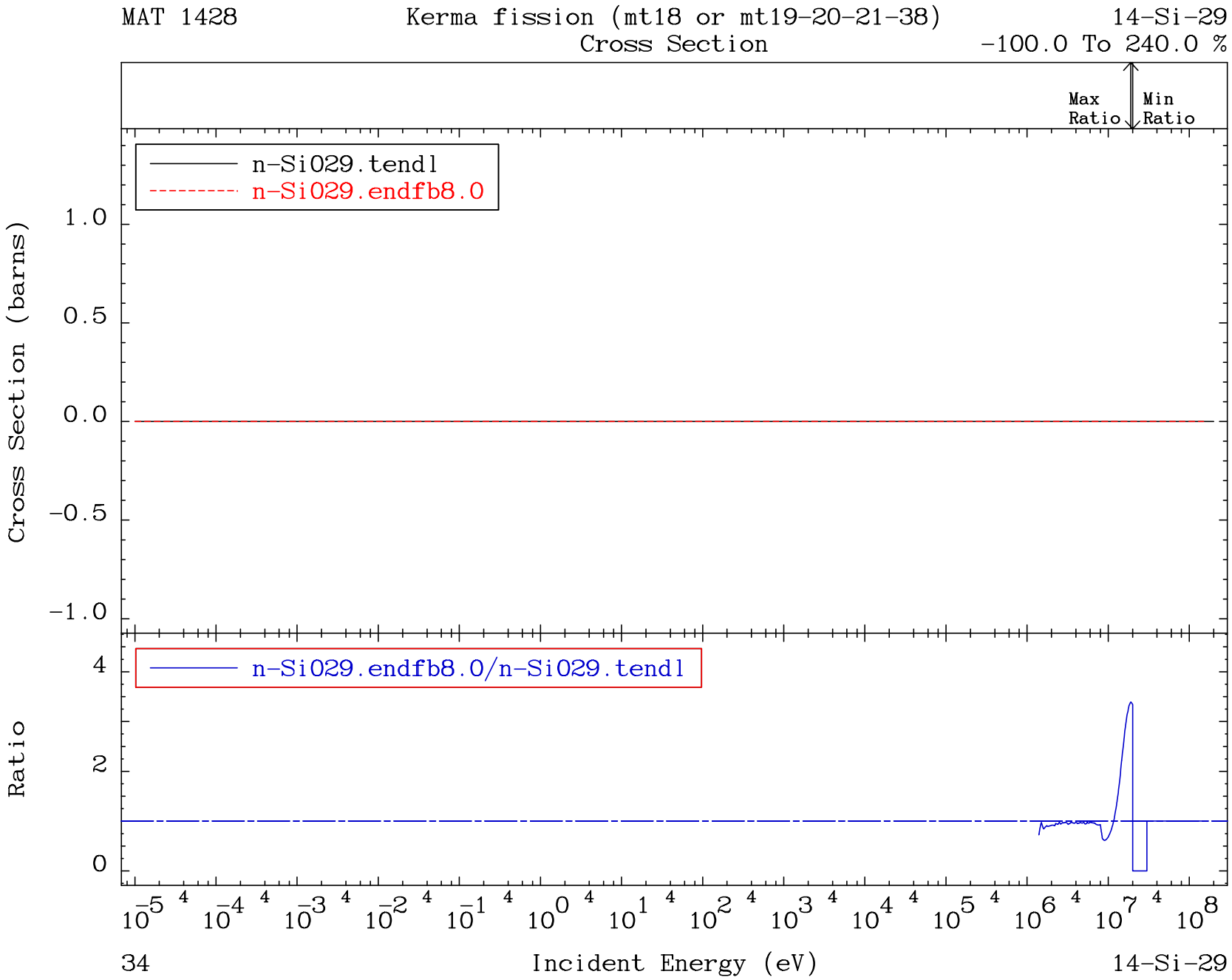

MAT 1428
He-4 Production
Cross Section
14-Si-29
-99.99 To 259.8 %
Min Ratio
Max Ratio
n-Si029.tendl Threshold 500.00 keV
n-Si029.endfb8.0 Threshold 1.3000 MeV
Cross Section (milli-barns)
0
50
100
150
200
250
n-Si029.endfb8.0/n-Si029.tendl
Ratio
10^0
10^-2
10^-4
5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
29
Incident Energy (eV)
14-Si-29

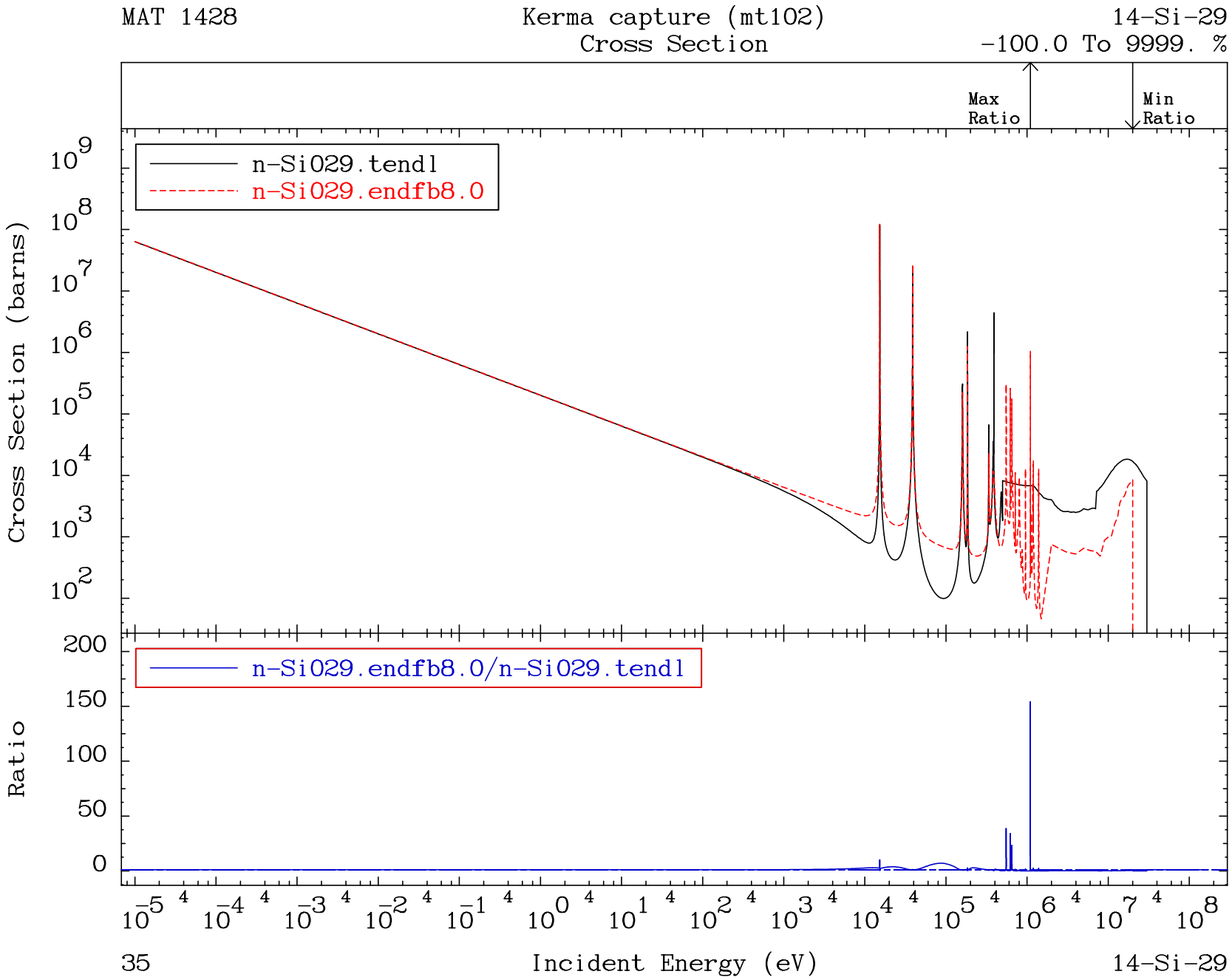

MAT 1428
Kerma total (eV-barns)
Cross Section
14-Si-29
-97.19 To 922.9 %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
30
14-Si-29

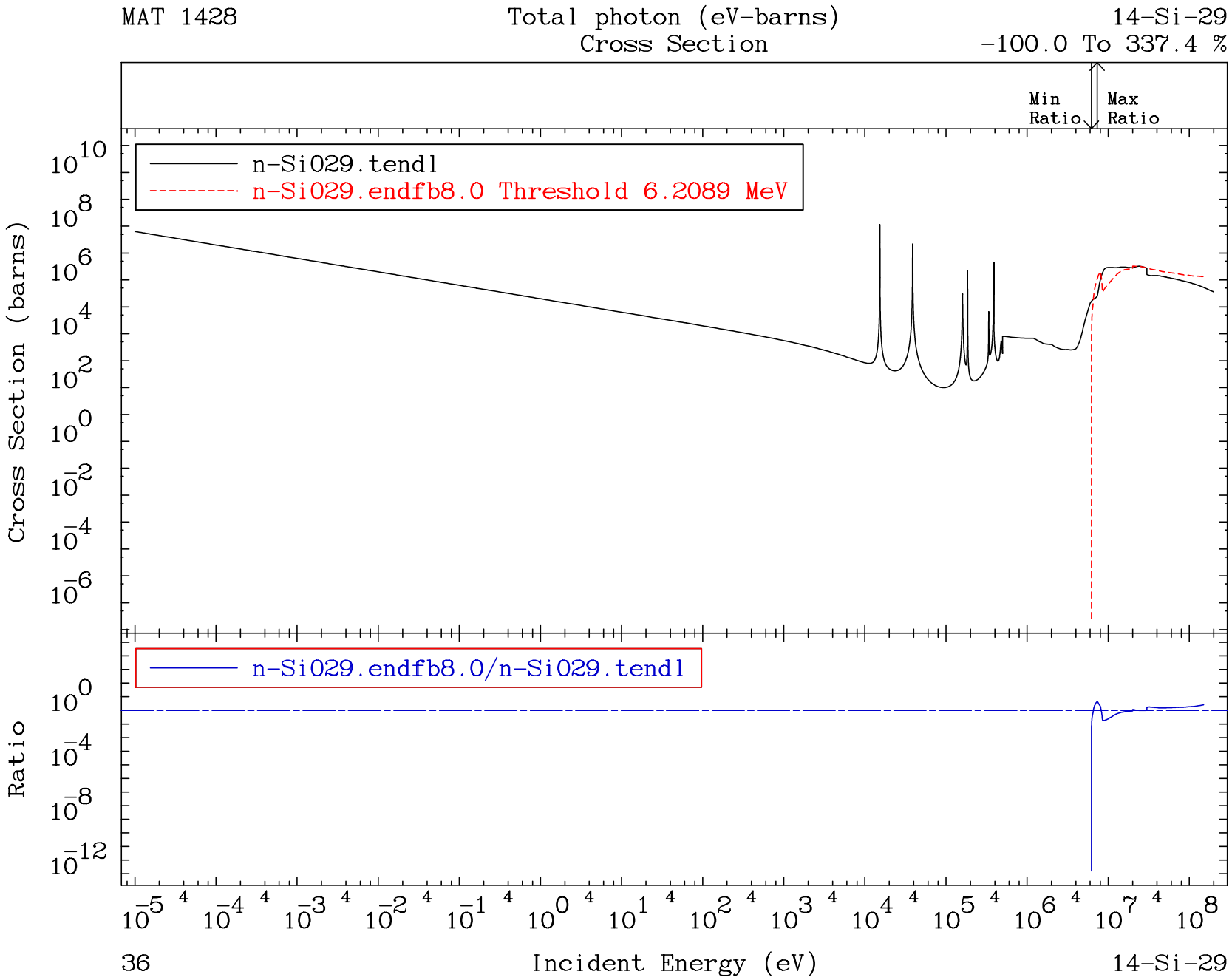

MAT 1428
Kerma elastic
Cross Section
14-Si-29
-91.22 To 806.6 %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
31
14-Si-29

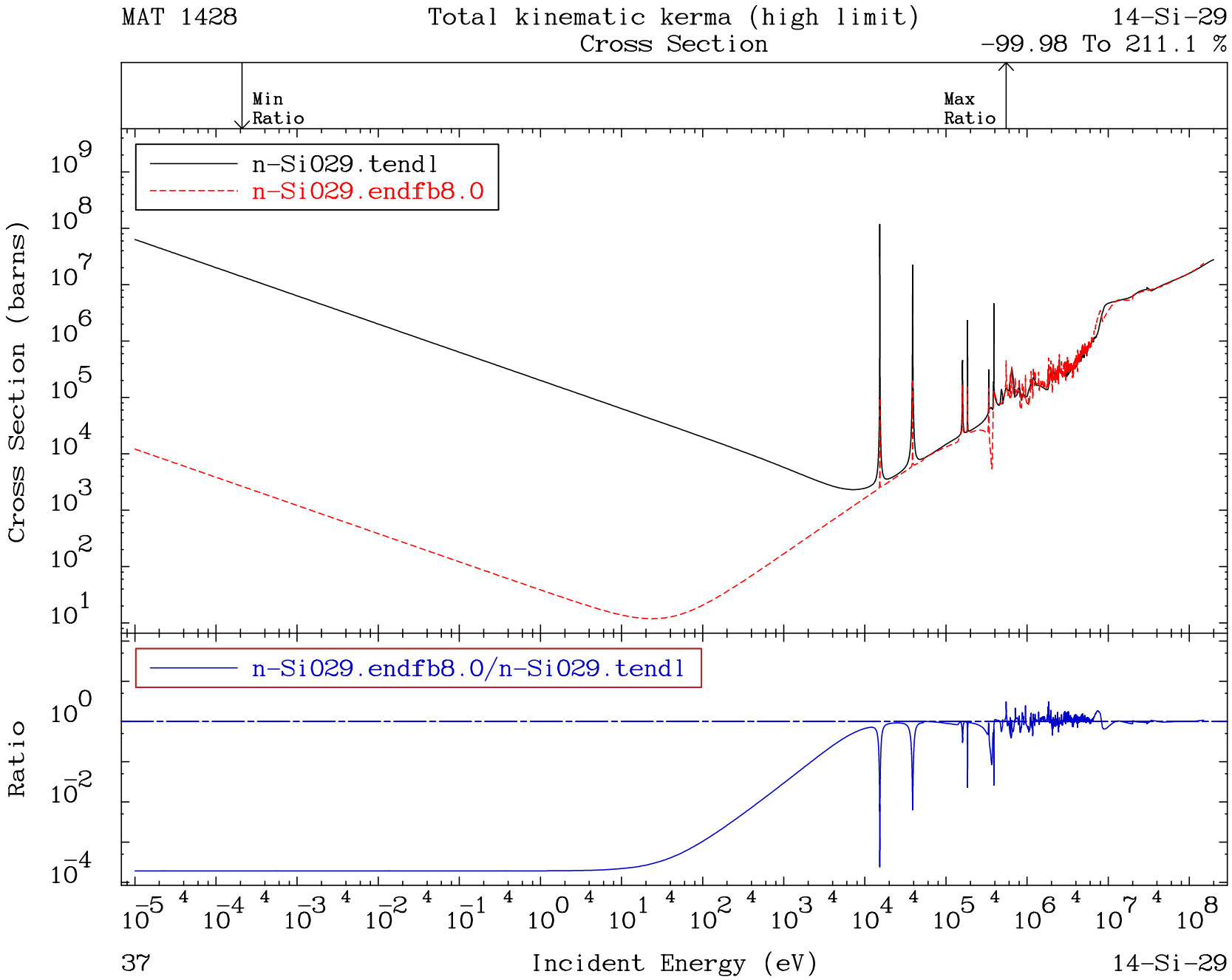

MAT 1428
Kerma non-elastic (all but mt2)
Cross Section
14-Si-29
-99.75 To 9999. %
Min Ratio
Max Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
32
14-Si-29

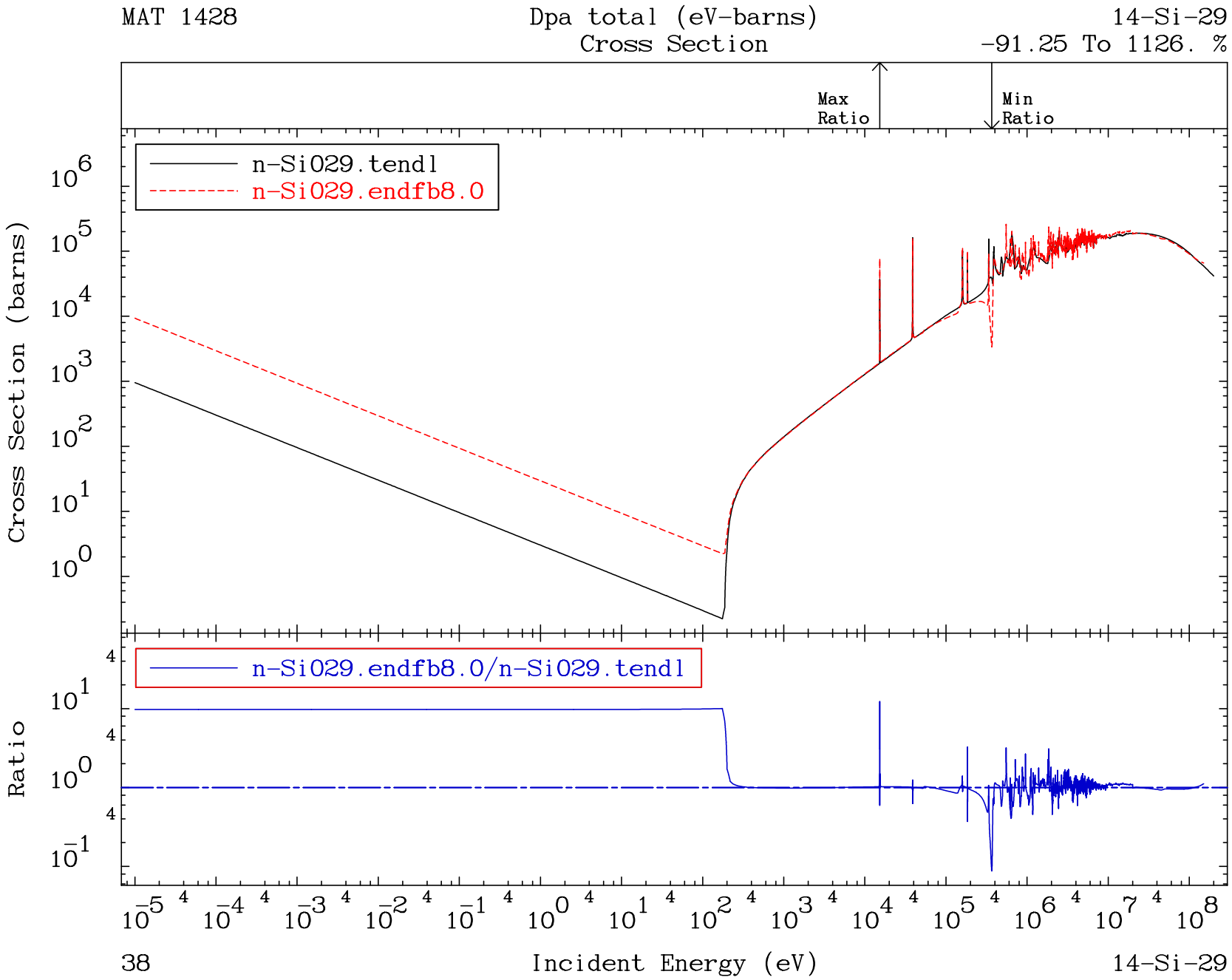

MAT 1428
Kerma inelastic (mt51-91)
Cross Section
14-Si-29
-100.0 To 240.0 %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 1.4000 MeV
n-Si029.endfb8.0 Threshold 1.3200 MeV
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
33
14-Si-29

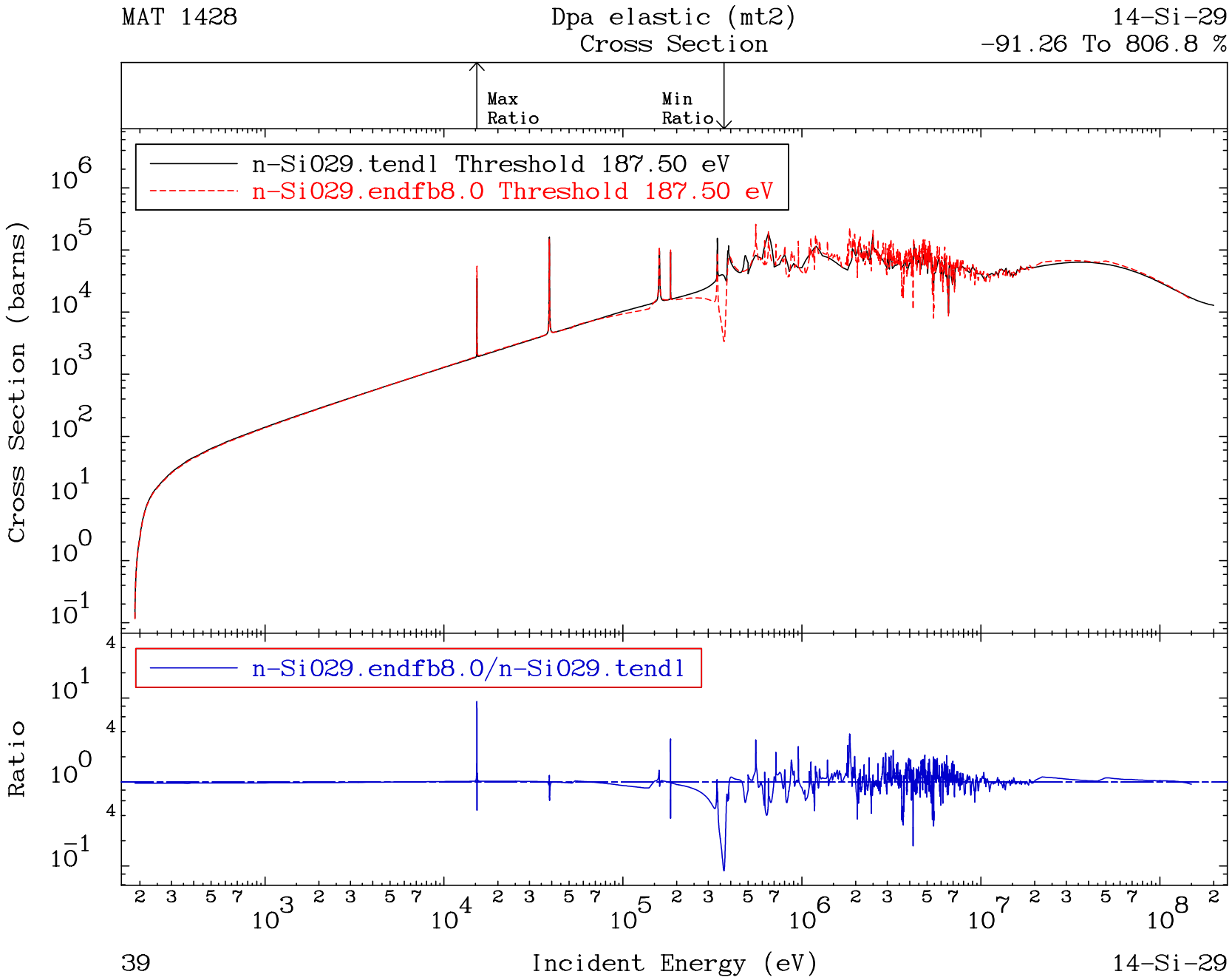

MAT 1428
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
14-Si-29
-100.0 To 240.0 %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
n-Si029.endfb8.0/n-Si029.tendl
Ratio
4
2
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
34
Incident Energy (eV)
14-Si-29

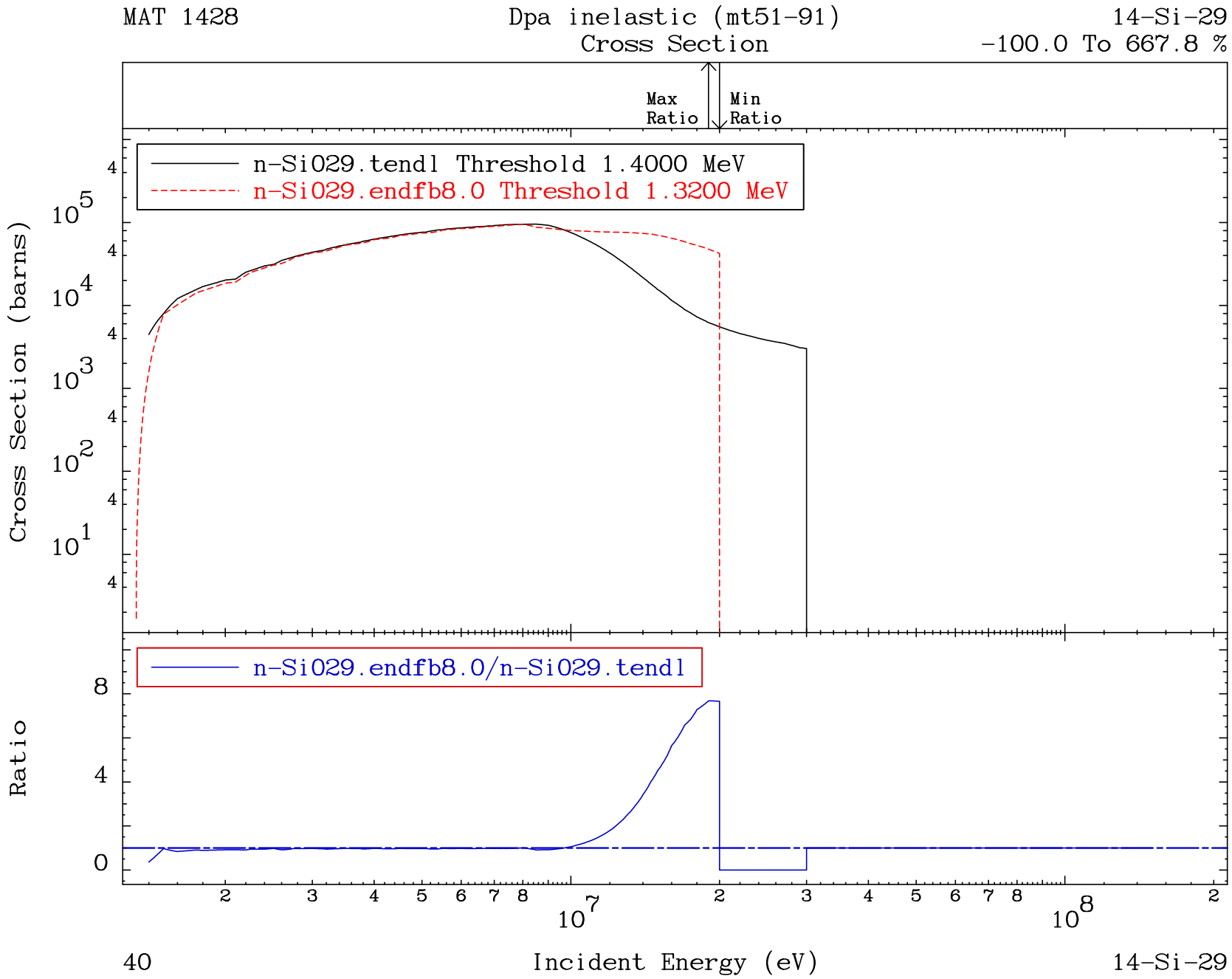

MAT 1428
Kerma capture (mt102)
Cross Section
14-Si-29
-100.0 To 9999. %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
35
14-Si-29

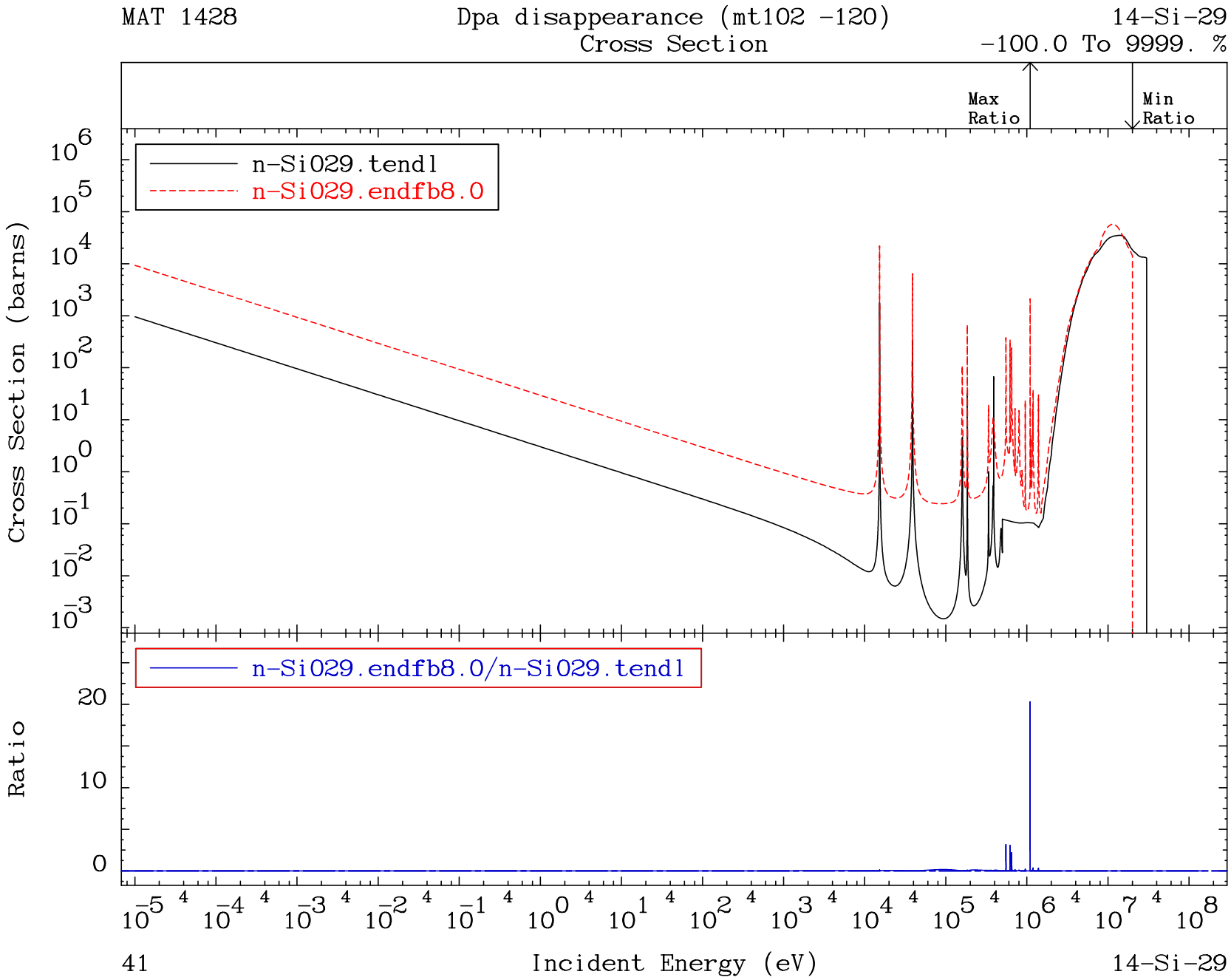

MAT 1428
Total photon (eV-barns)
Cross Section
14-Si-29
-100.0 To 337.4 %
Min Ratio
Max Ratio
n-Si029.tendl
n-Si029.endfb8.0 Threshold 6.2089 MeV
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
36
14-Si-29


MAT 1428
Total kinematic kerma (high limit)
Cross Section
14-Si-29
-99.98 To 211.1 %
Min Ratio
Max Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
37
14-Si-29


MAT 1428
Dpa total (eV-barns)
Cross Section
14-Si-29
-91.25 To 1126. %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
38
Incident Energy (eV)
14-Si-29


MAT 1428
Dpa elastic (mt2)
Cross Section
14-Si-29
-91.26 To 806.8 %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 187.50 eV
n-Si029.endfb8.0 Threshold 187.50 eV
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
39
14-Si-29


MAT 1428
Dpa inelastic (mt51-91)
Cross Section
14-Si-29
-100.0 To 667.8 %
Max Ratio
Min Ratio
n-Si029.tendl Threshold 1.4000 MeV
n-Si029.endfb8.0 Threshold 1.3200 MeV
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
40
14-Si-29


MAT 1428
Dpa disappearance (mt102 -120)
Cross Section
14-Si-29
-100.0 To 9999. %
Max Ratio
Min Ratio
n-Si029.tendl
n-Si029.endfb8.0
Cross Section (barns)
n-Si029.endfb8.0/n-Si029.tendl
Ratio
Incident Energy (eV)
41
14-Si-29