Program Complot
(Version 2018-1)
by
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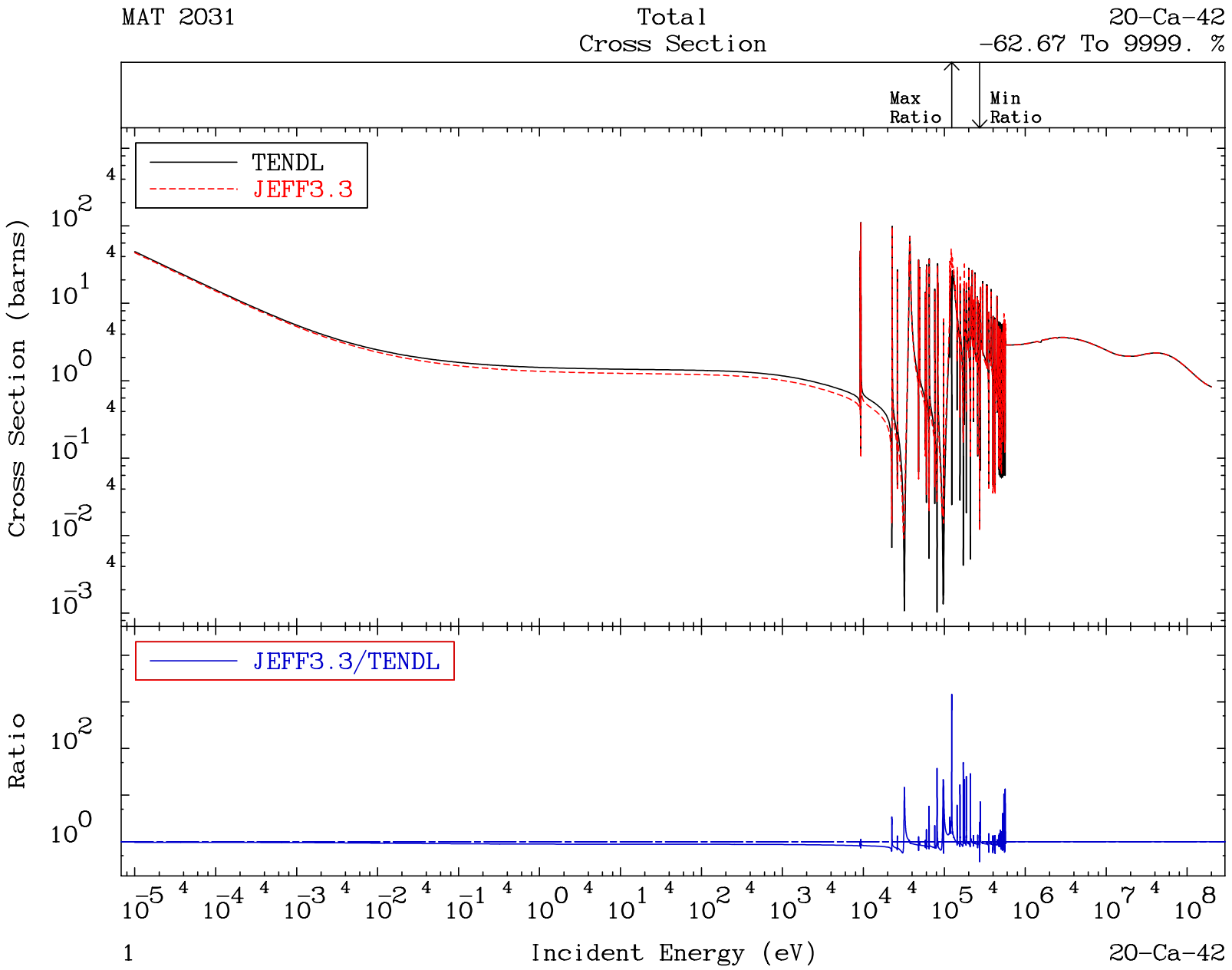
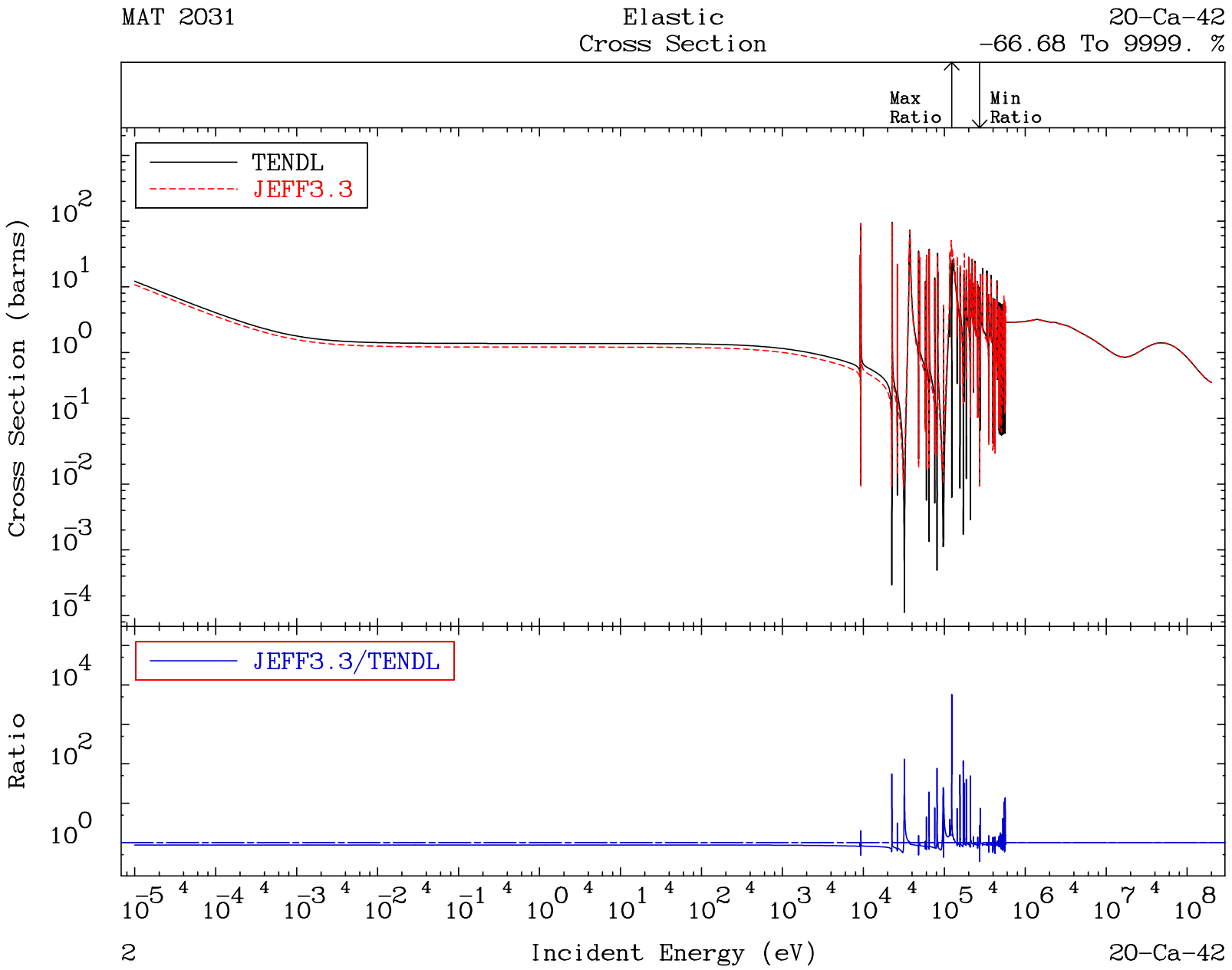
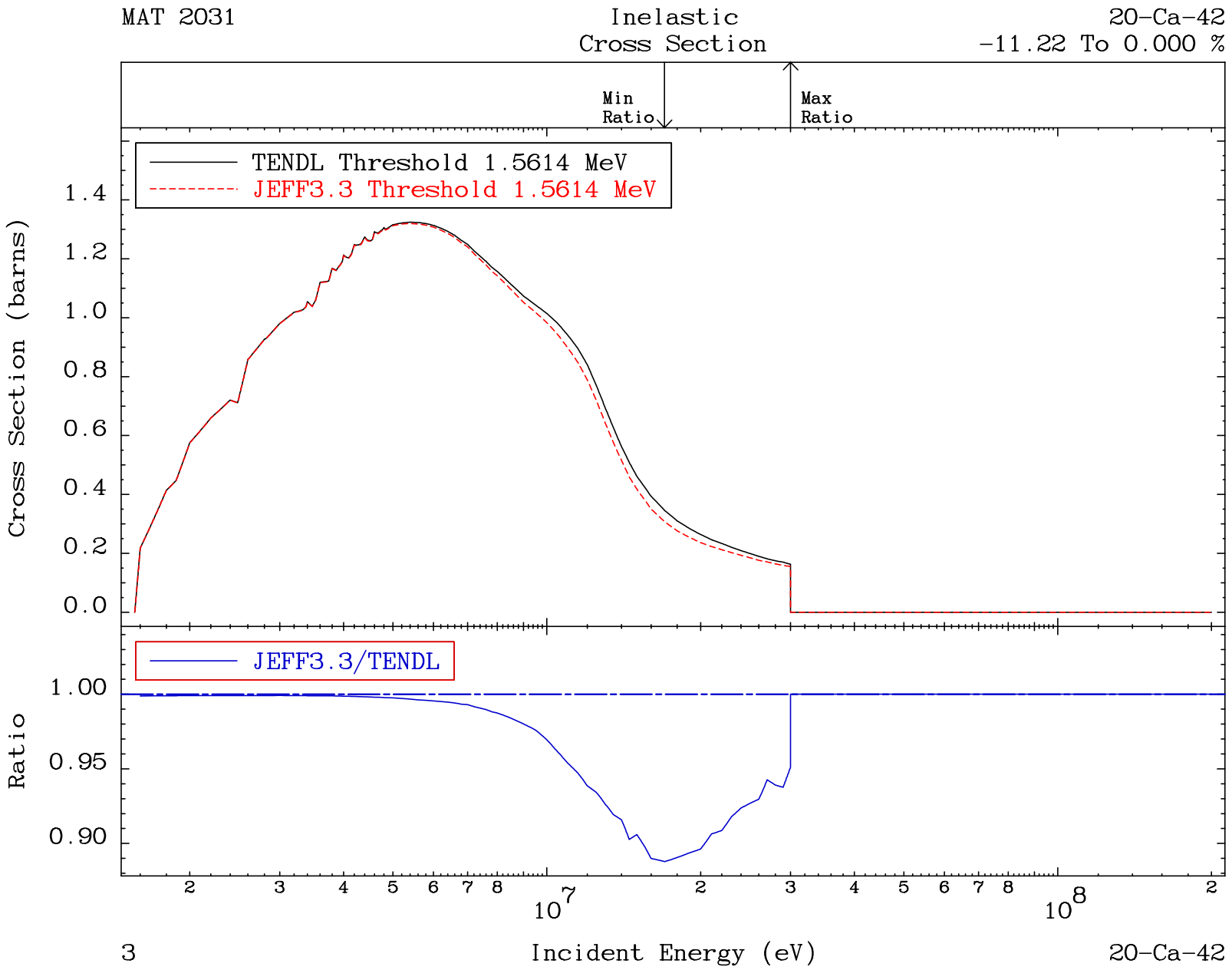
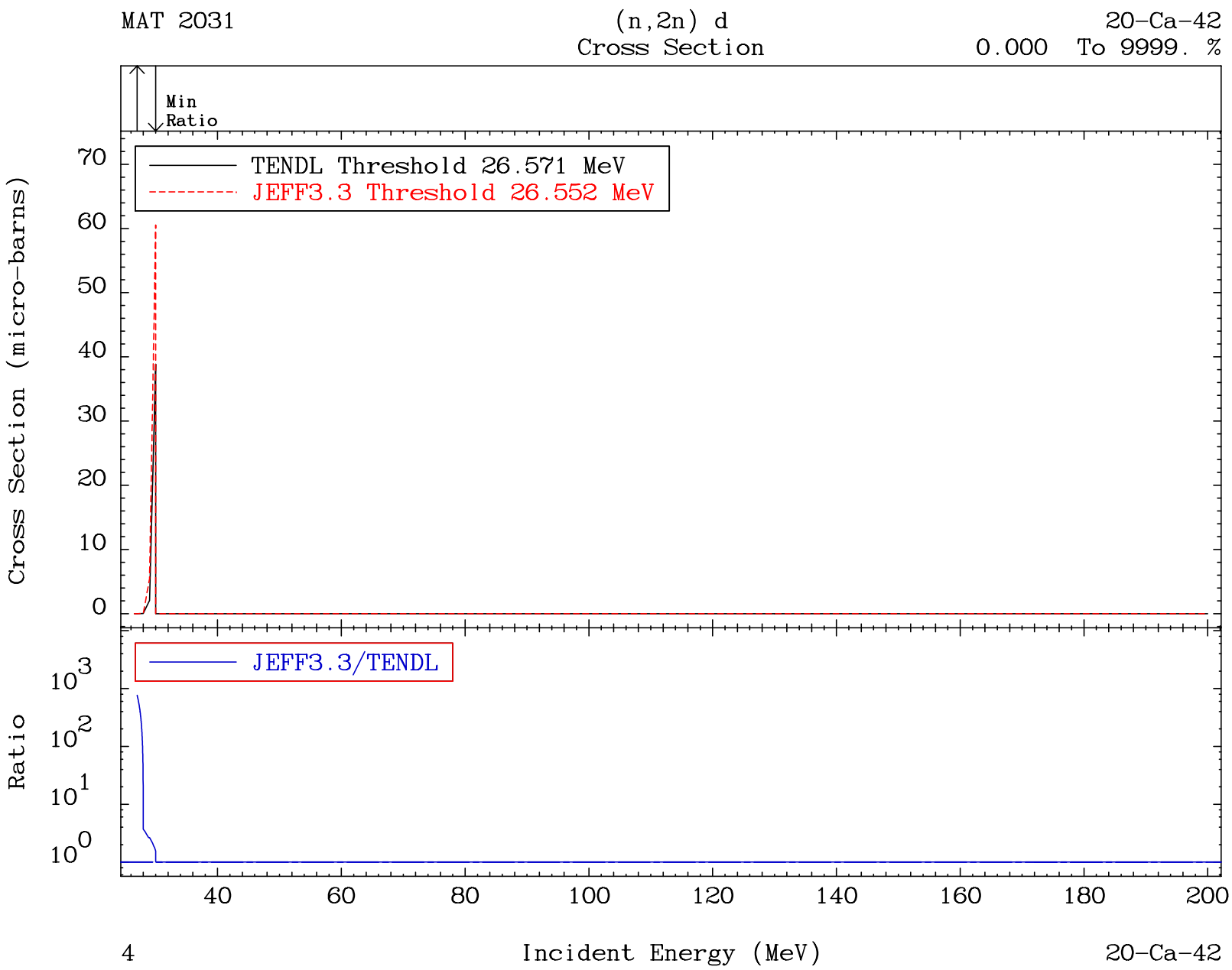
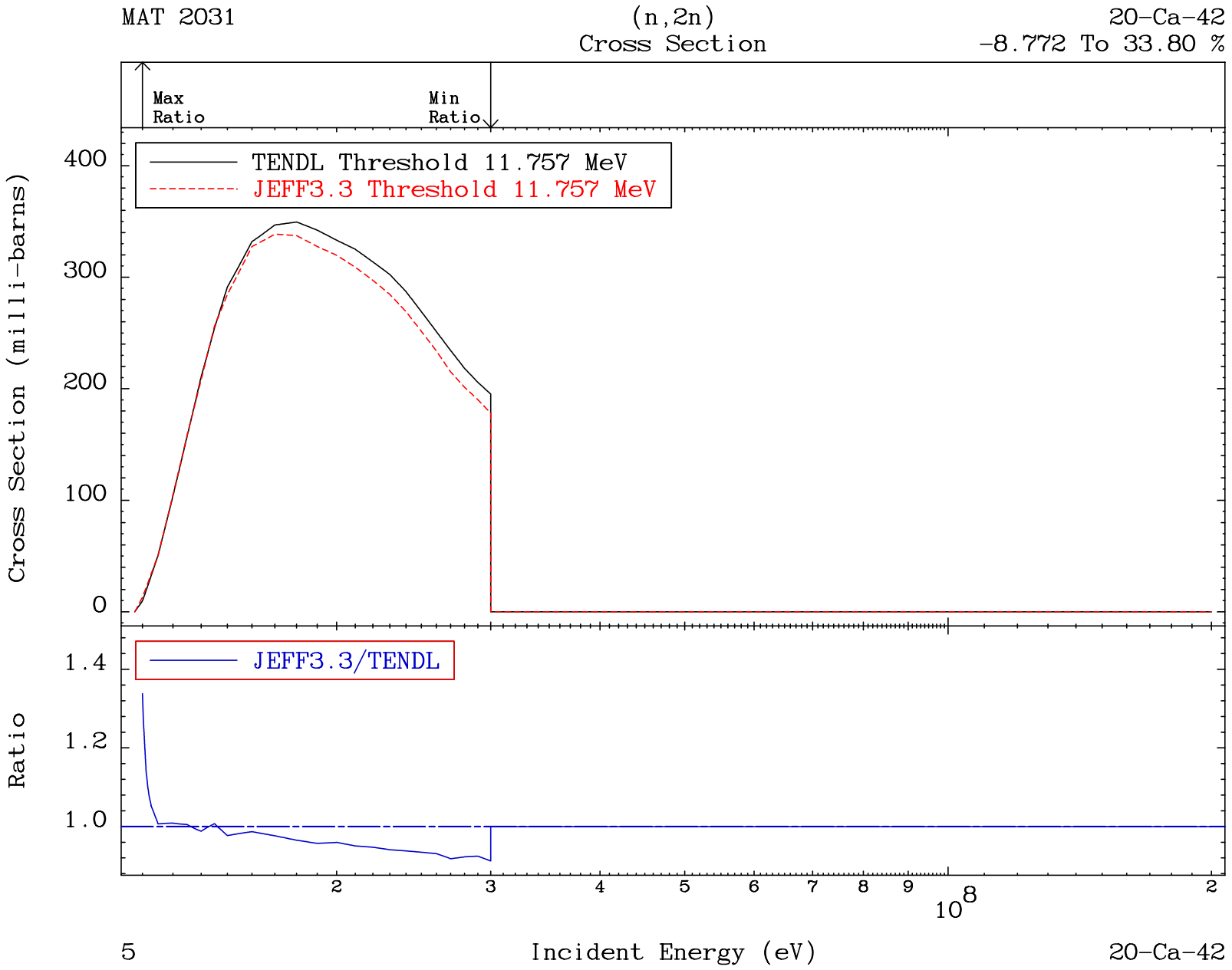
Press Mouse Button to Start

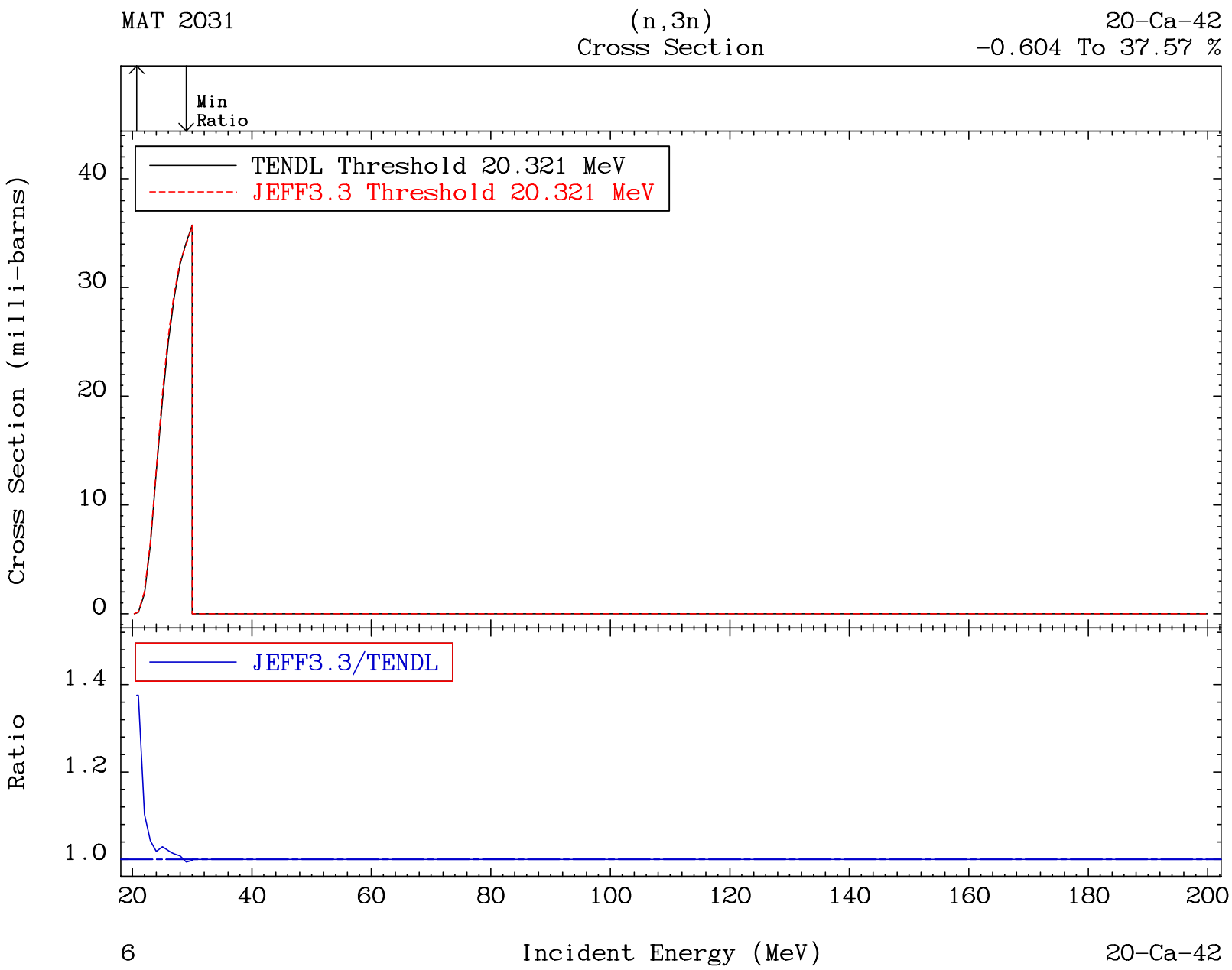

MAT 2031
Total
Cross Section
20-Ca-42
-62.67 To 9999. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
1
20-Ca-42

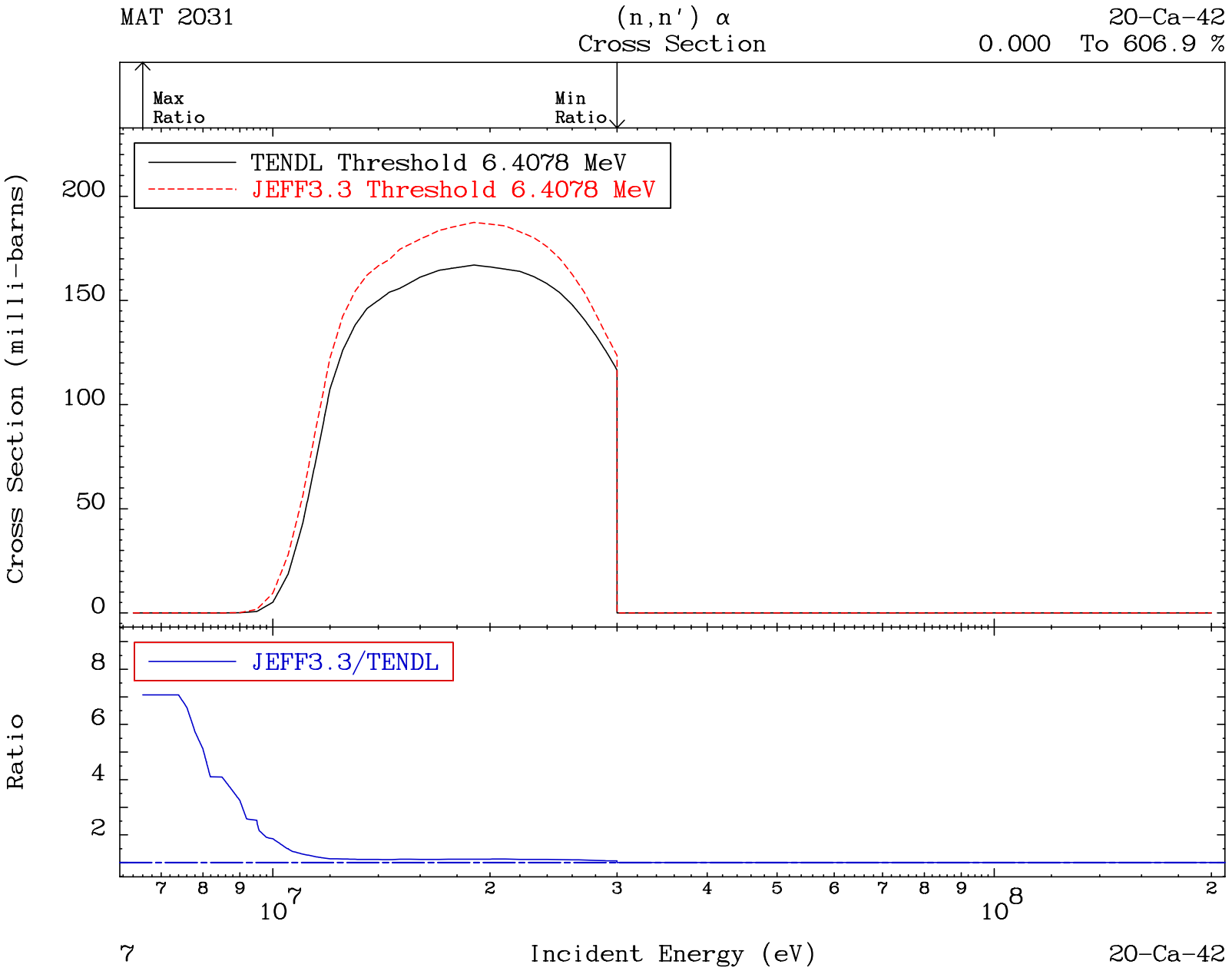

MAT 2031
Elastic
Cross Section
20-Ca-42
-66.68 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
2
20-Ca-42

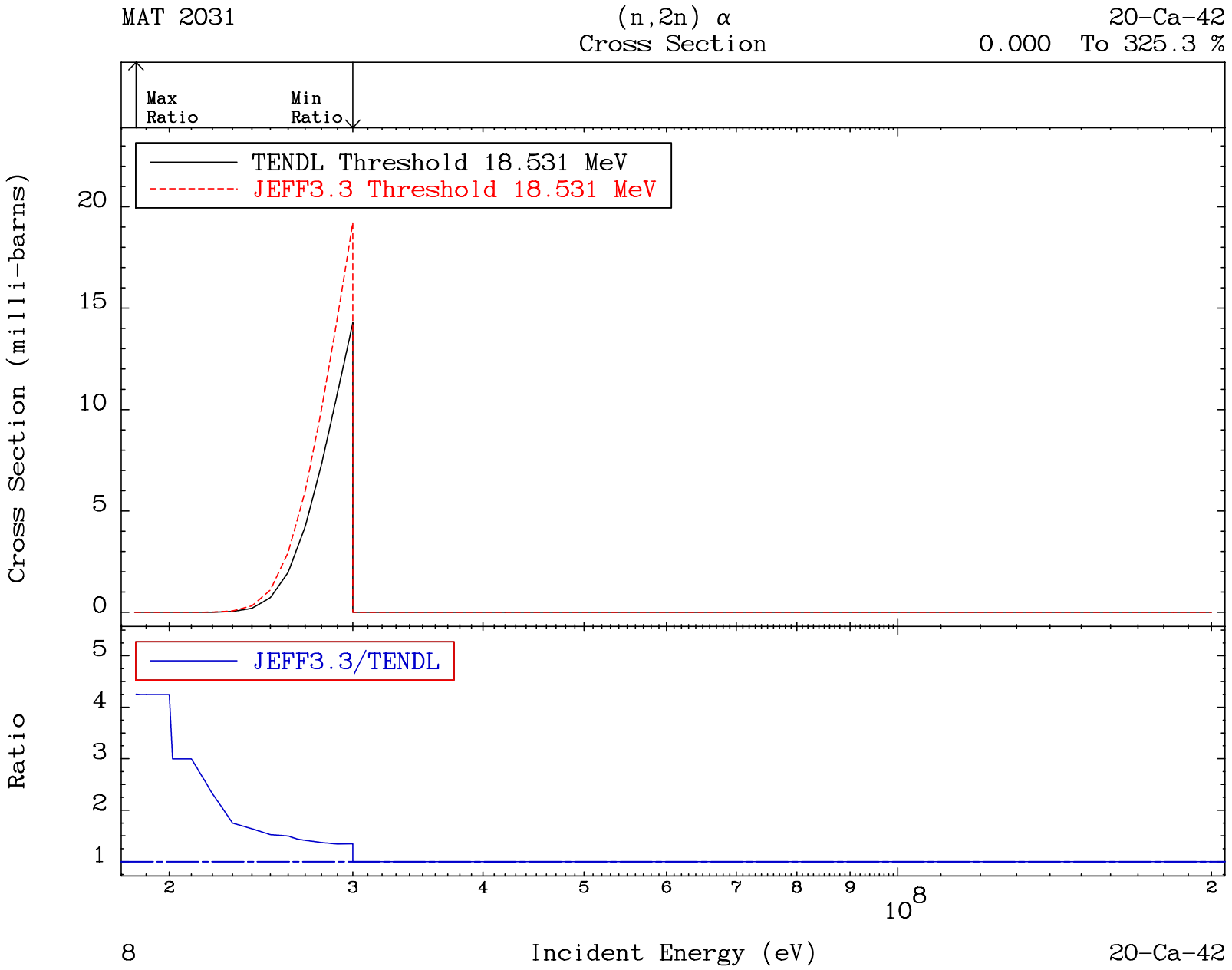

MAT 2031
Inelastic
Cross Section
20-Ca-42
-11.22 To 0.000 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.5614 MeV
JEFF3.3 Threshold 1.5614 MeV
Cross Section (barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.00
0.95
0.90
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
3
Incident Energy (eV)
20-Ca-42

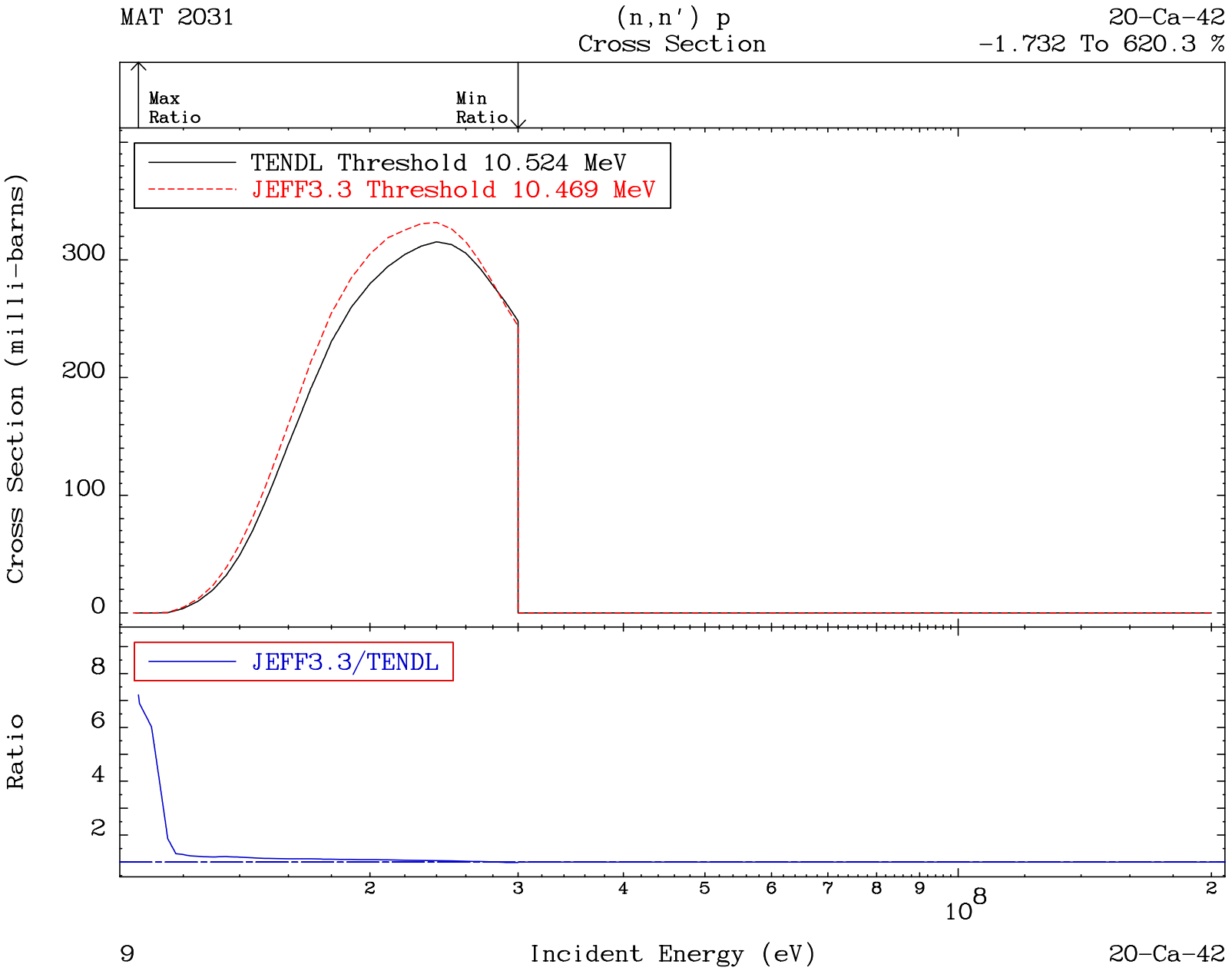

MAT 2031
(n,2n) d
Cross Section
20-Ca-42
0.000 To 9999. %
Min
Ratio
TENDL Threshold 26.571 MeV
JEFF3.3 Threshold 26.552 MeV
Cross Section (micro-barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^3
10^2
10^1
10^0
40
60
80
100
120
140
160
180
200
4
Incident Energy (MeV)
20-Ca-42

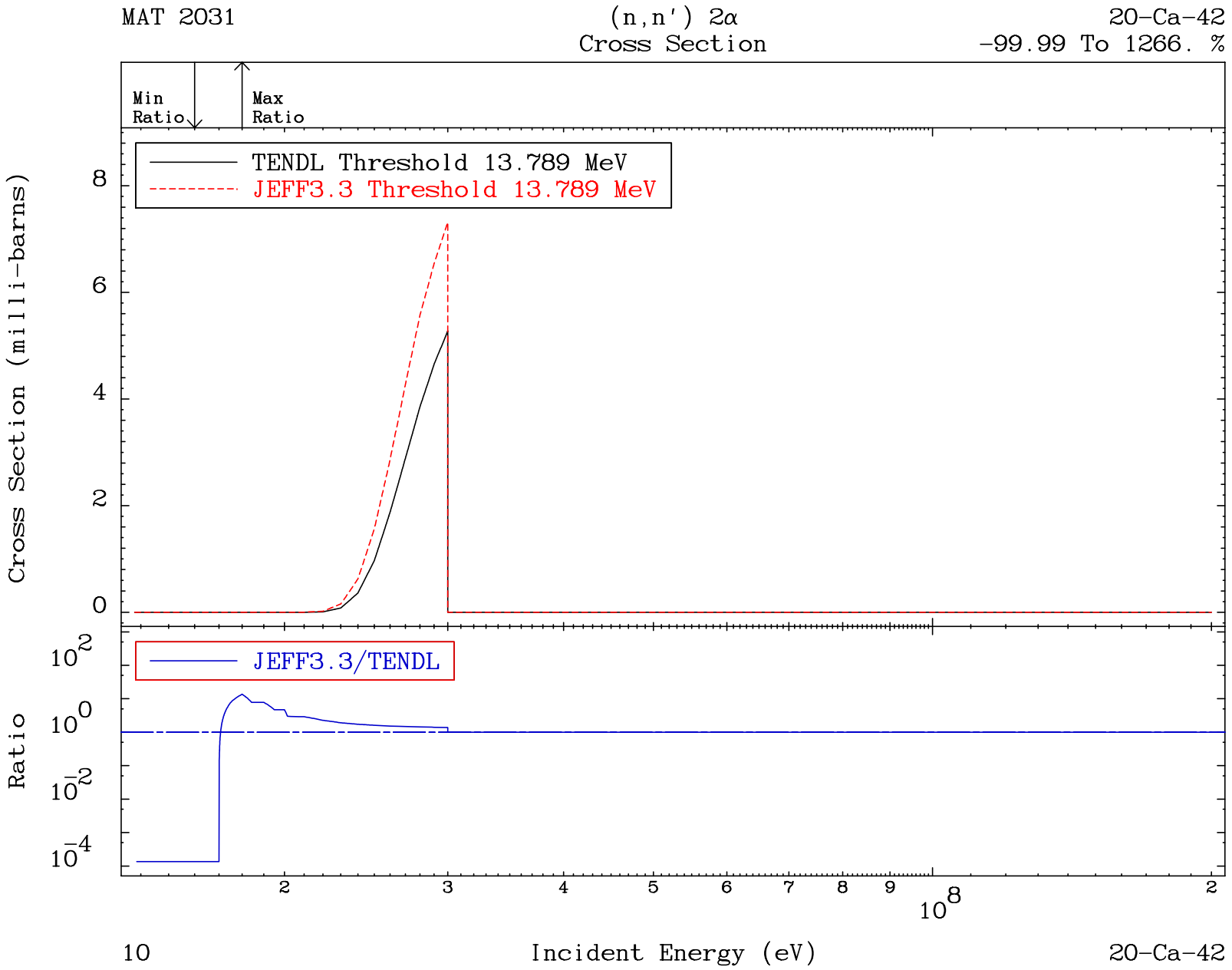

MAT 2031
(n,2n)
Cross Section
20-Ca-42
-8.772 To 33.80 %
Max Ratio
Min Ratio
TENDL Threshold 11.757 MeV
JEFF3.3 Threshold 11.757 MeV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
20-Ca-42

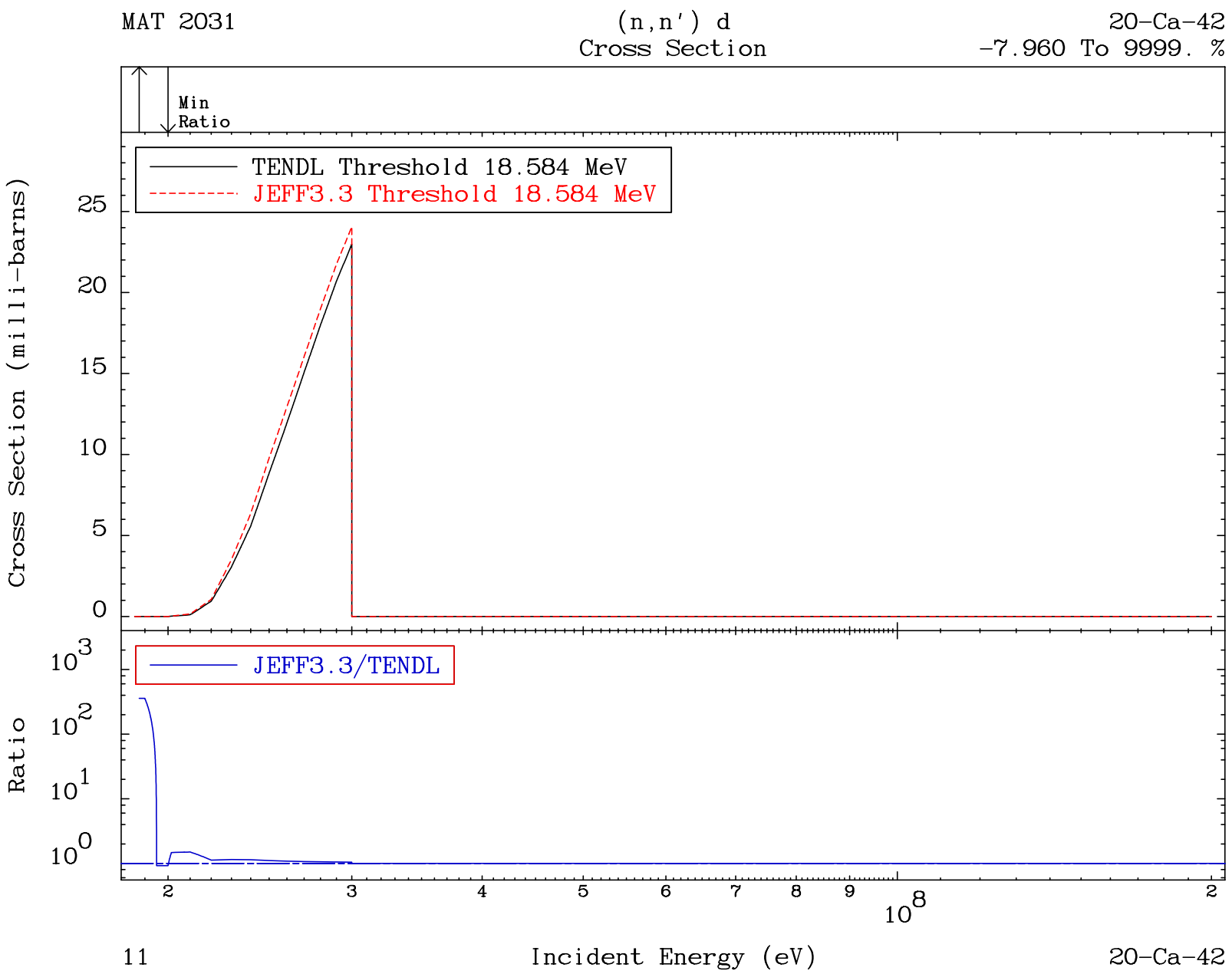

MAT 2031
(n,3n)
Cross Section
20-Ca-42
-0.604 To 37.57 %
Min
Ratio
TENDL Threshold 20.321 MeV
JEFF3.3 Threshold 20.321 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.4
1.2
1.0
20
40
60
80
100
120
140
160
180
200
6
Incident Energy (MeV)
20-Ca-42

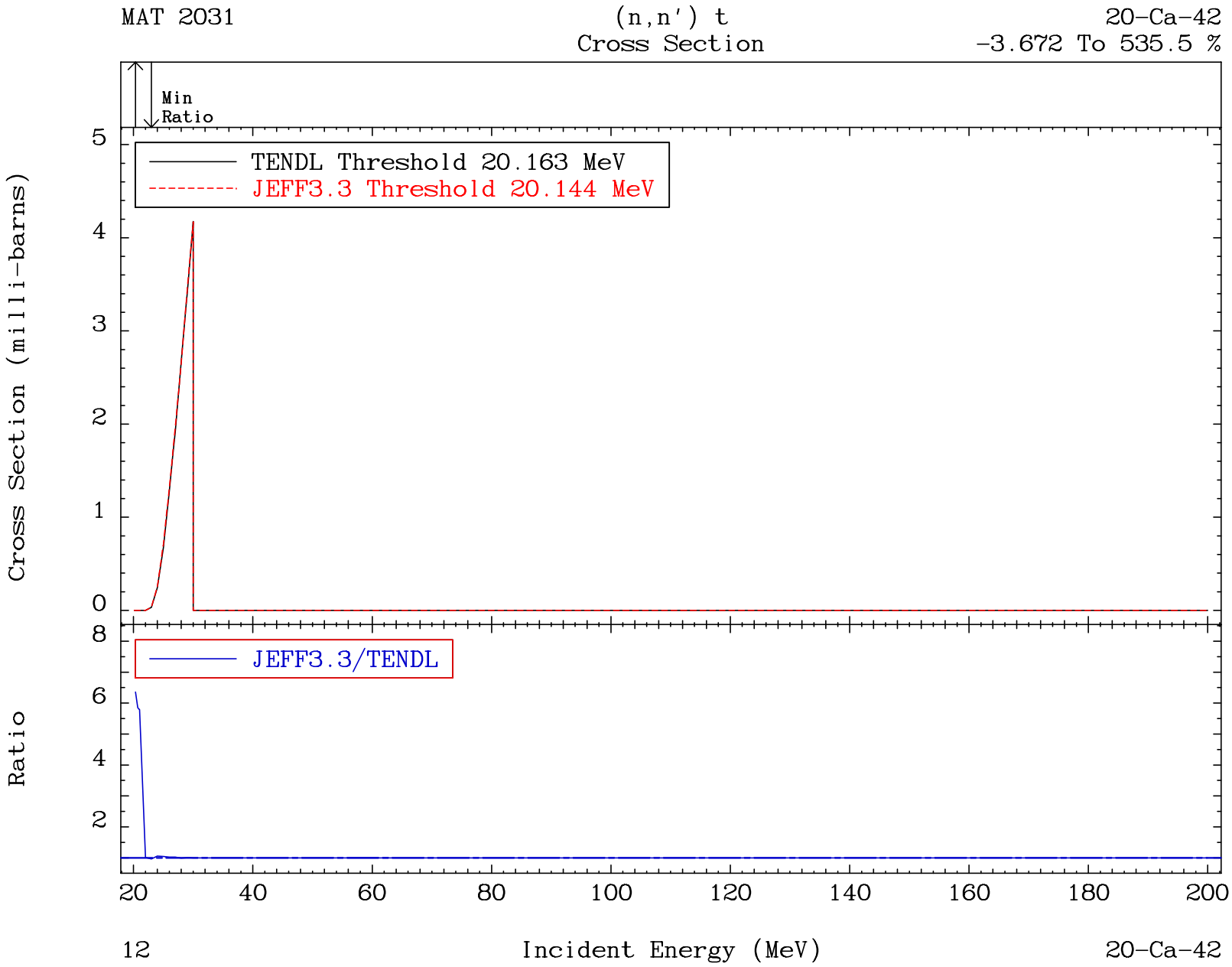

MAT 2031
(n,n') α
Cross Section
20-Ca-42
0.000 To 606.9 %
Max Ratio
Min Ratio
TENDL Threshold 6.4078 MeV
JEFF3.3 Threshold 6.4078 MeV
Cross Section (milli-barns)
200
150
100
50
0
JEFF3.3/TENDL
Ratio
8
6
4
2
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
7
Incident Energy (eV)
20-Ca-42

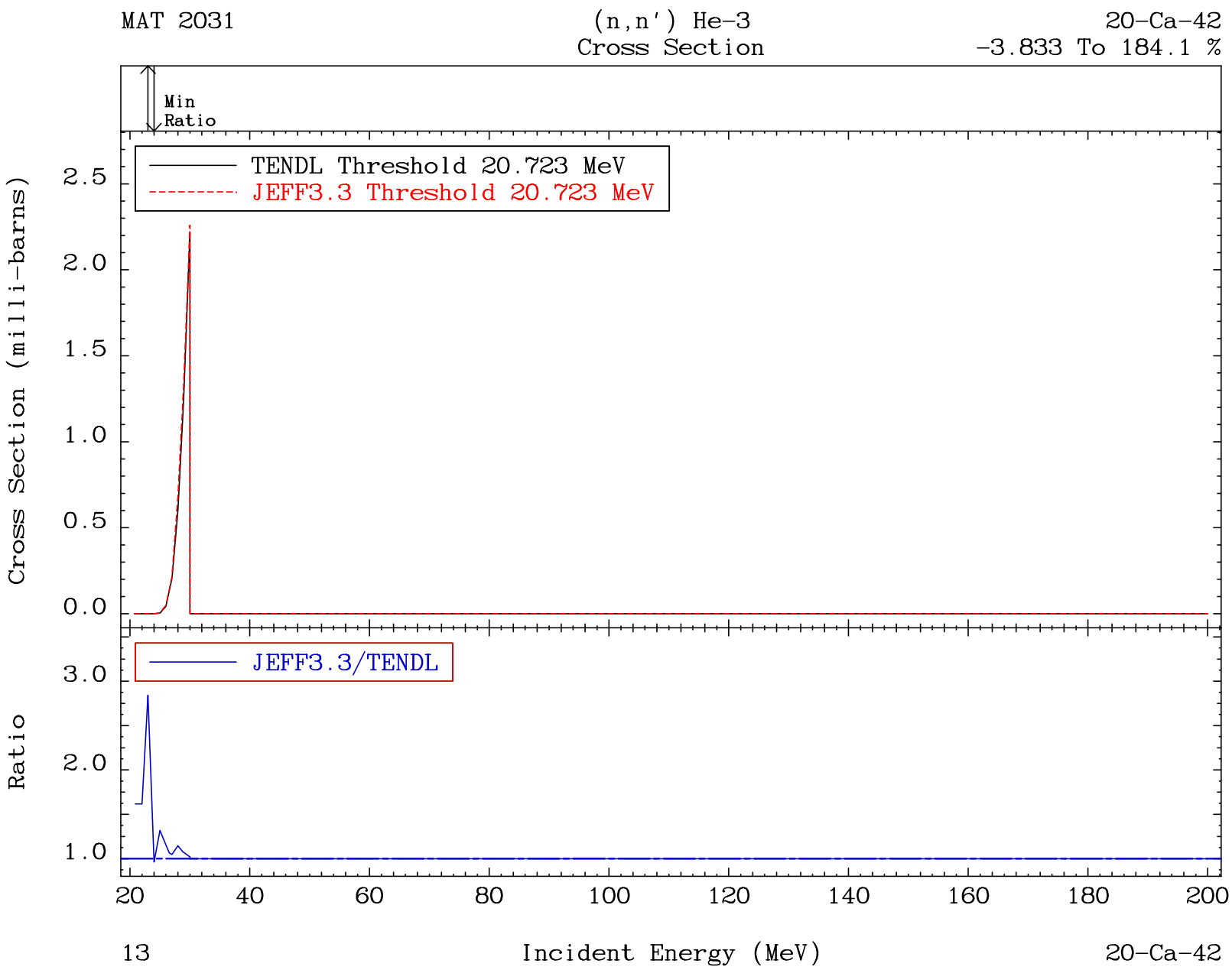

MAT 2031
(n,2n) α
Cross Section
20-Ca-42
0.000 To 325.3 %
Max Ratio
Min Ratio
TENDL Threshold 18.531 MeV
JEFF3.3 Threshold 18.531 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
5
4
3
2
1
2
3
4
5
6
7
8
9
10^8
2
8
Incident Energy (eV)
20-Ca-42

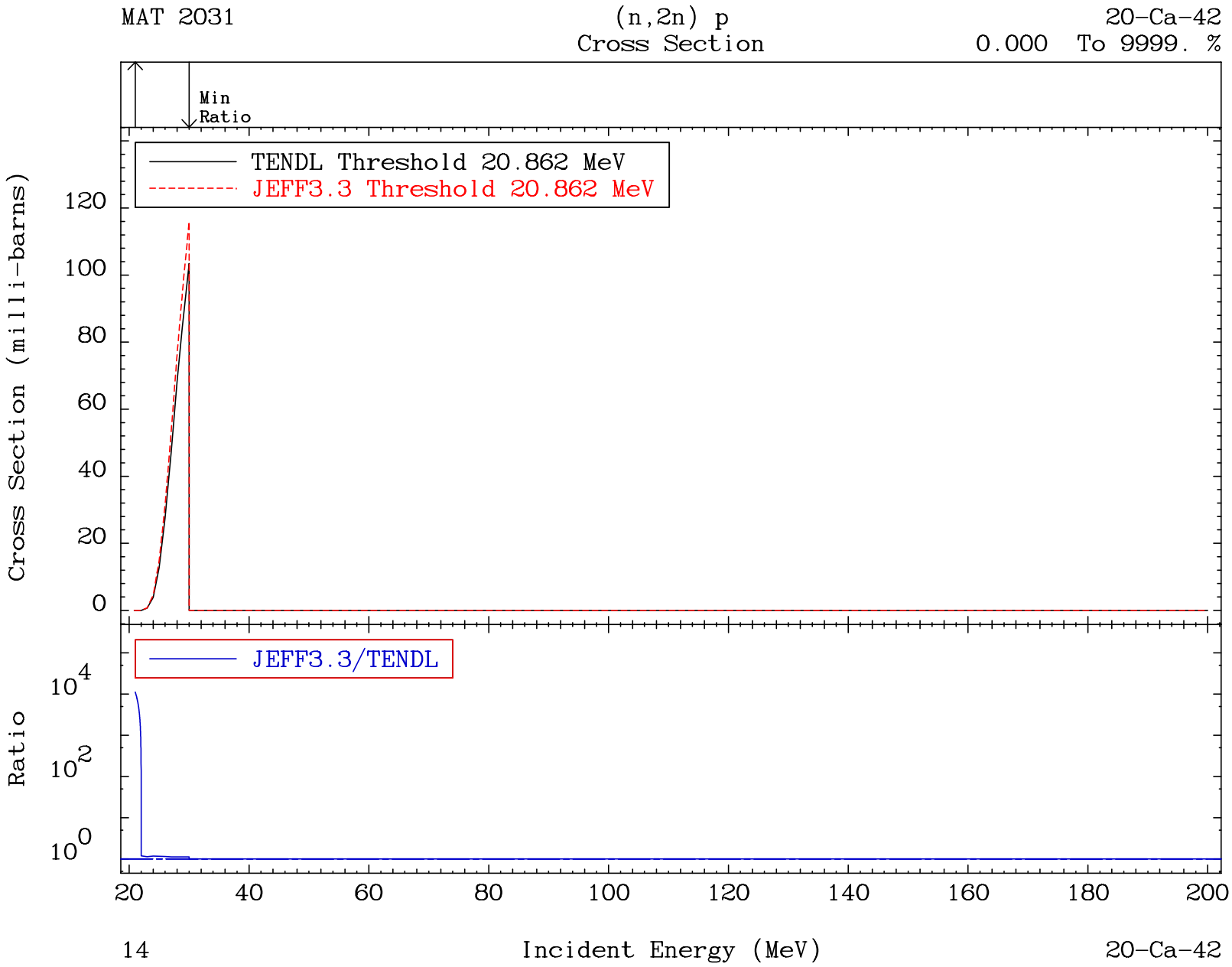

MAT 2031
(n,n') p
Cross Section
20-Ca-42
-1.732 To 620.3 %
Max Ratio
Min Ratio
TENDL Threshold 10.524 MeV
JEFF3.3 Threshold 10.469 MeV
Cross Section (milli-barns)
300
200
100
0
JEFF3.3/TENDL
Ratio
8
6
4
2
2
3
4
5
6
7
8
9
10^8
2
9
Incident Energy (eV)
20-Ca-42

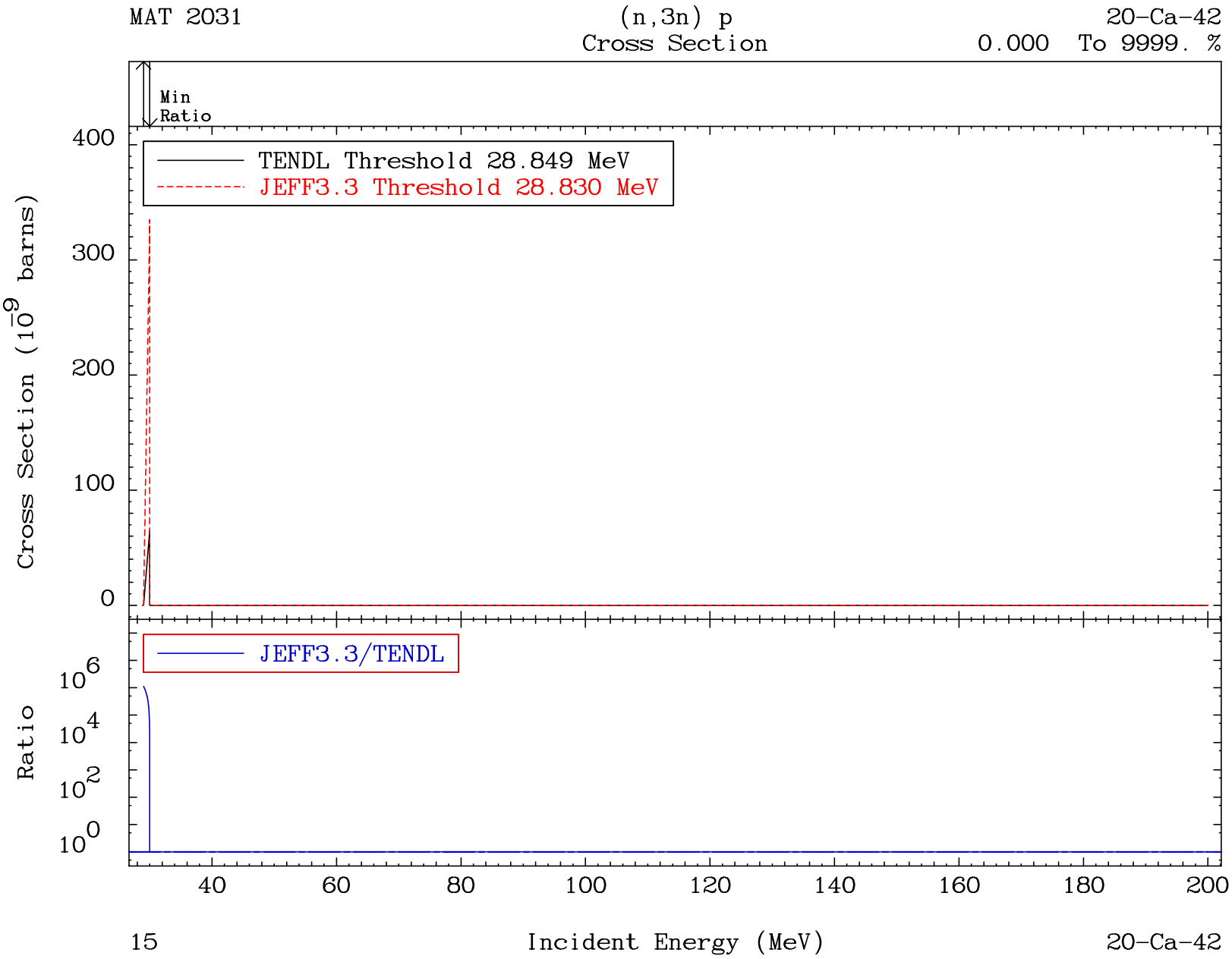

MAT 2031
(n,n') 2α
Cross Section
20-Ca-42
-99.99 To 1266. %
Min Ratio
Max Ratio
TENDL Threshold 13.789 MeV
JEFF3.3 Threshold 13.789 MeV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
10^2
10^0
10^-2
10^-4
2
3
4
5
6
7
8
9
10^8
2
10
Incident Energy (eV)
20-Ca-42

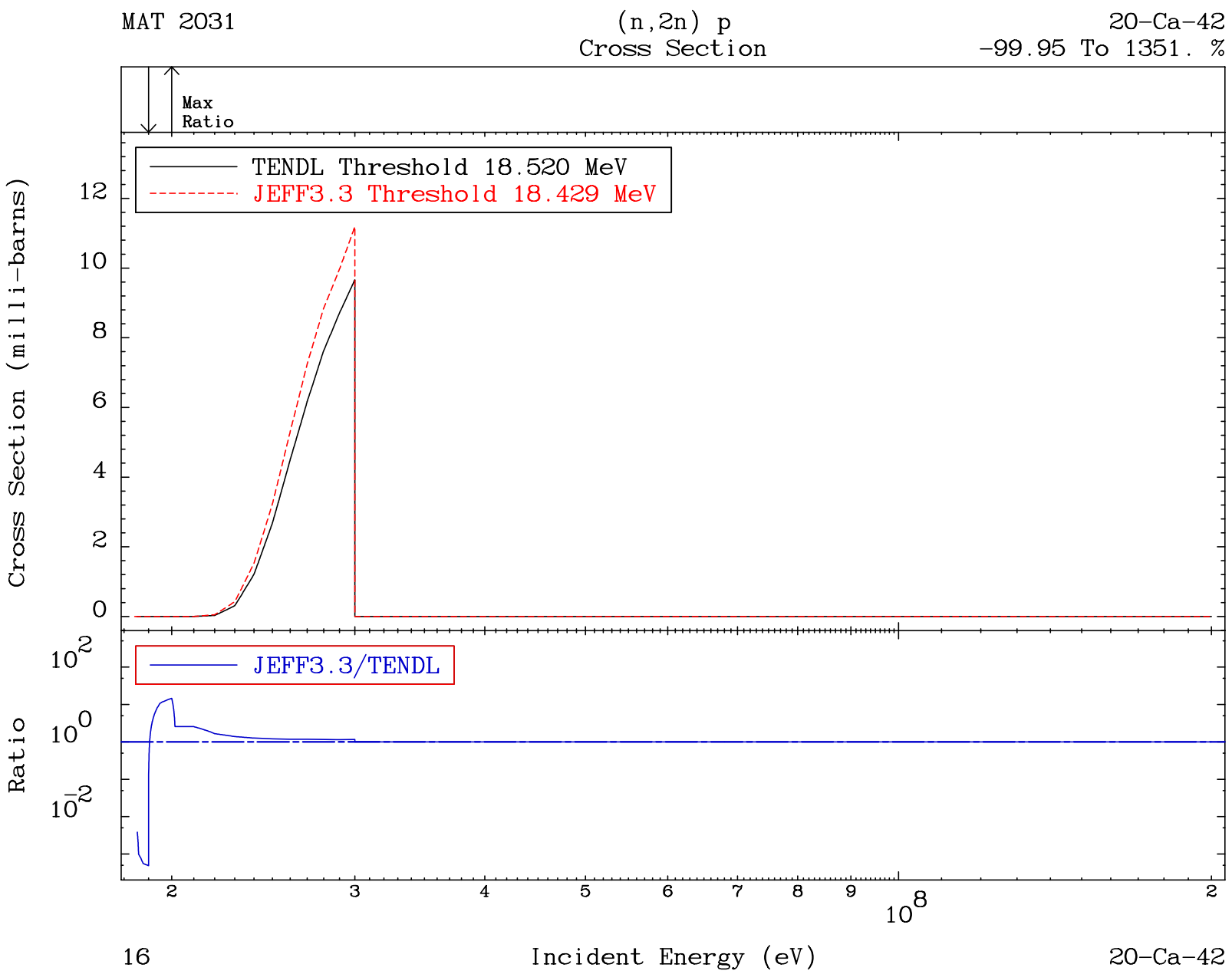

MAT 2031
(n,n') d
Cross Section
20-Ca-42
-7.960 To 9999. %
Min
Ratio
TENDL Threshold 18.584 MeV
JEFF3.3 Threshold 18.584 MeV
Cross Section (milli-barns)
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^3
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
20-Ca-42

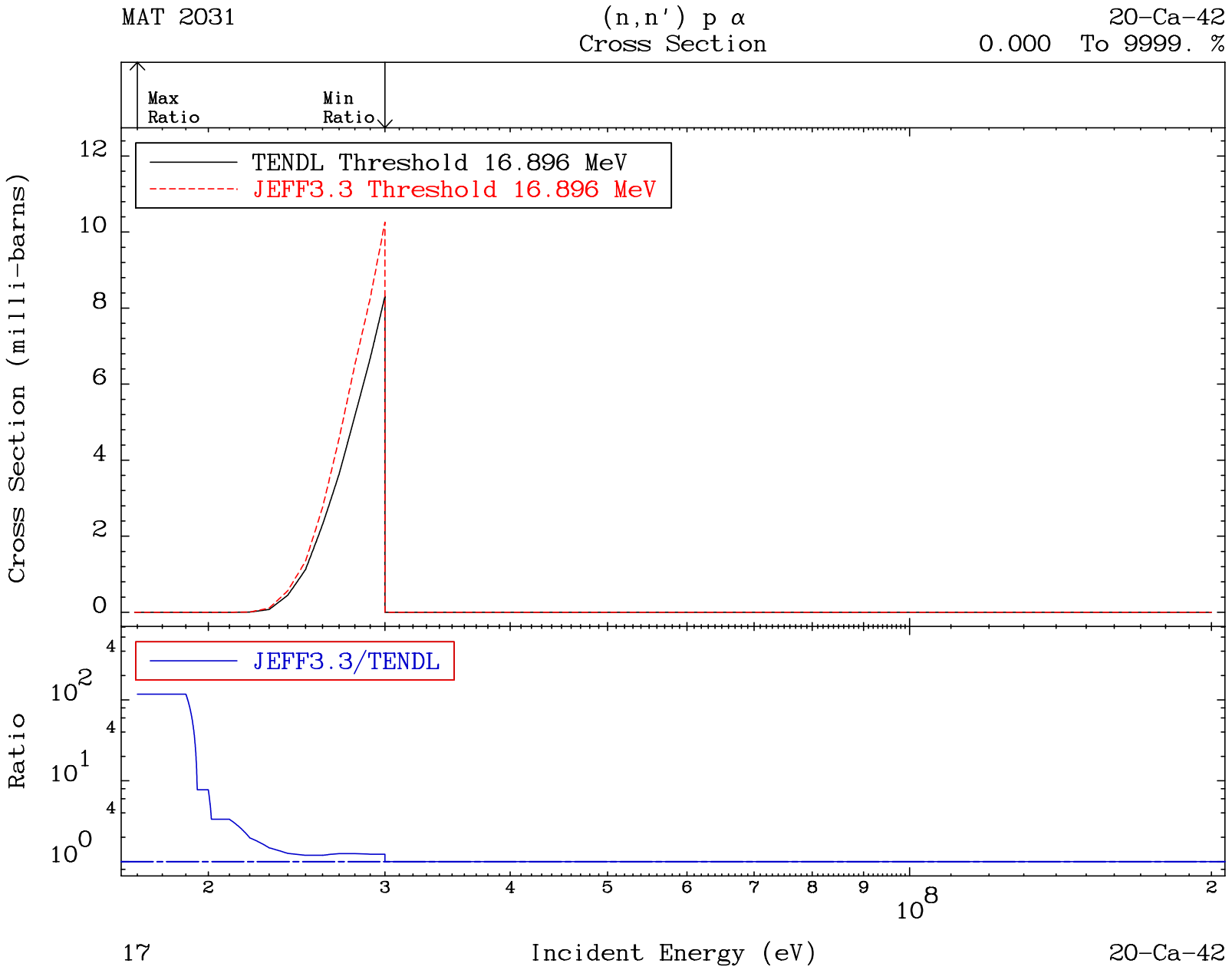

MAT 2031
(n,n') t
Cross Section
20-Ca-42
-3.672 To 535.5 %
Min
Ratio
TENDL Threshold 20.163 MeV
JEFF3.3 Threshold 20.144 MeV
JEFF3.3/TENDL
Cross Section (milli-barns)
Ratio
Incident Energy (MeV)
12
20-Ca-42

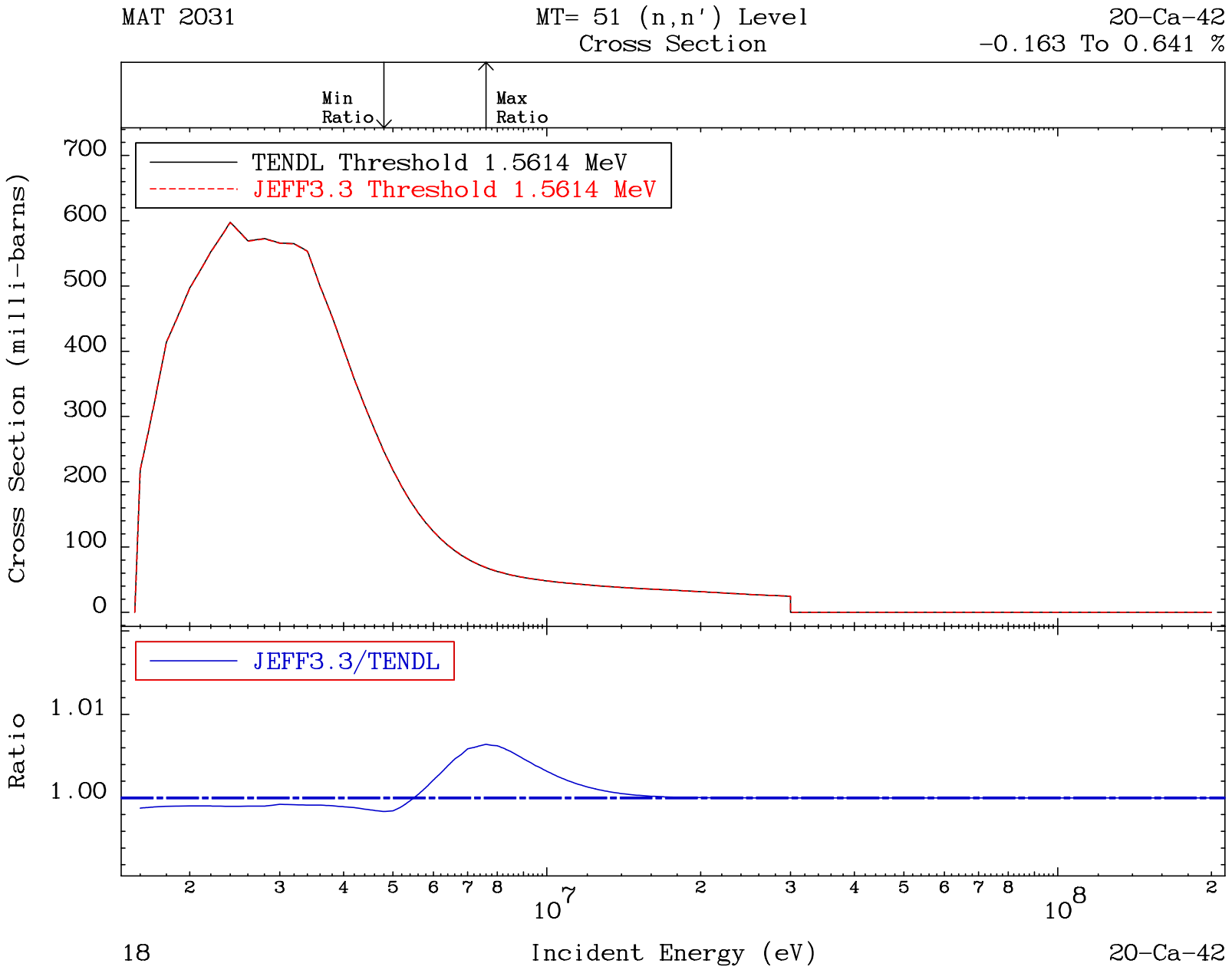

MAT 2031
(n,n') He-3
Cross Section
20-Ca-42
-3.833 To 184.1 %
Min
Ratio
TENDL Threshold 20.723 MeV
JEFF3.3 Threshold 20.723 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
20
40
60
80
100
120
140
160
180
200
13
Incident Energy (MeV)
20-Ca-42

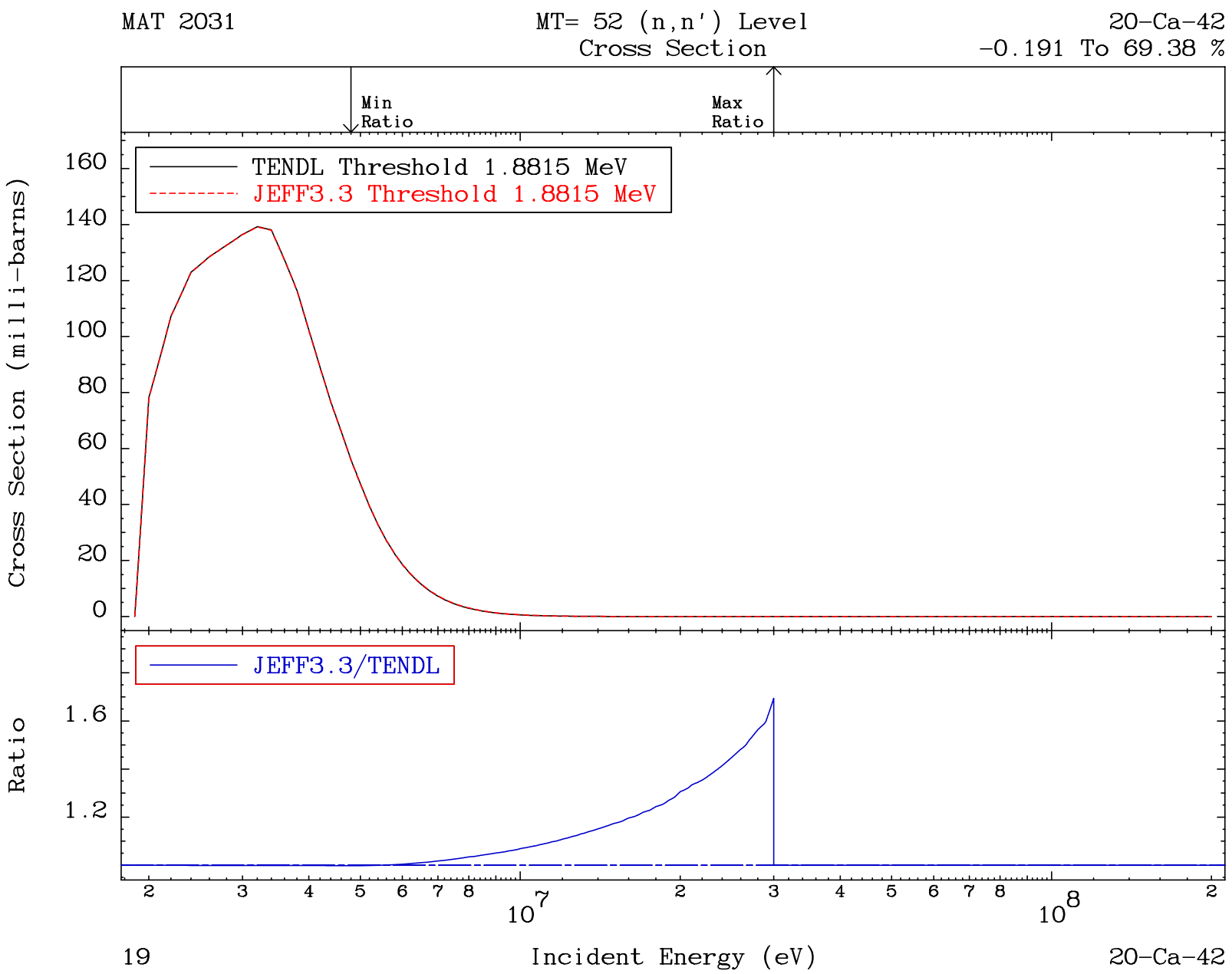

MAT 2031
(n,2n) p
Cross Section
20-Ca-42
0.000 To 9999. %
Min
Ratio
TENDL Threshold 20.862 MeV
JEFF3.3 Threshold 20.862 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^4
10^2
10^0
20
40
60
80
100
120
140
160
180
200
14
Incident Energy (MeV)
20-Ca-42

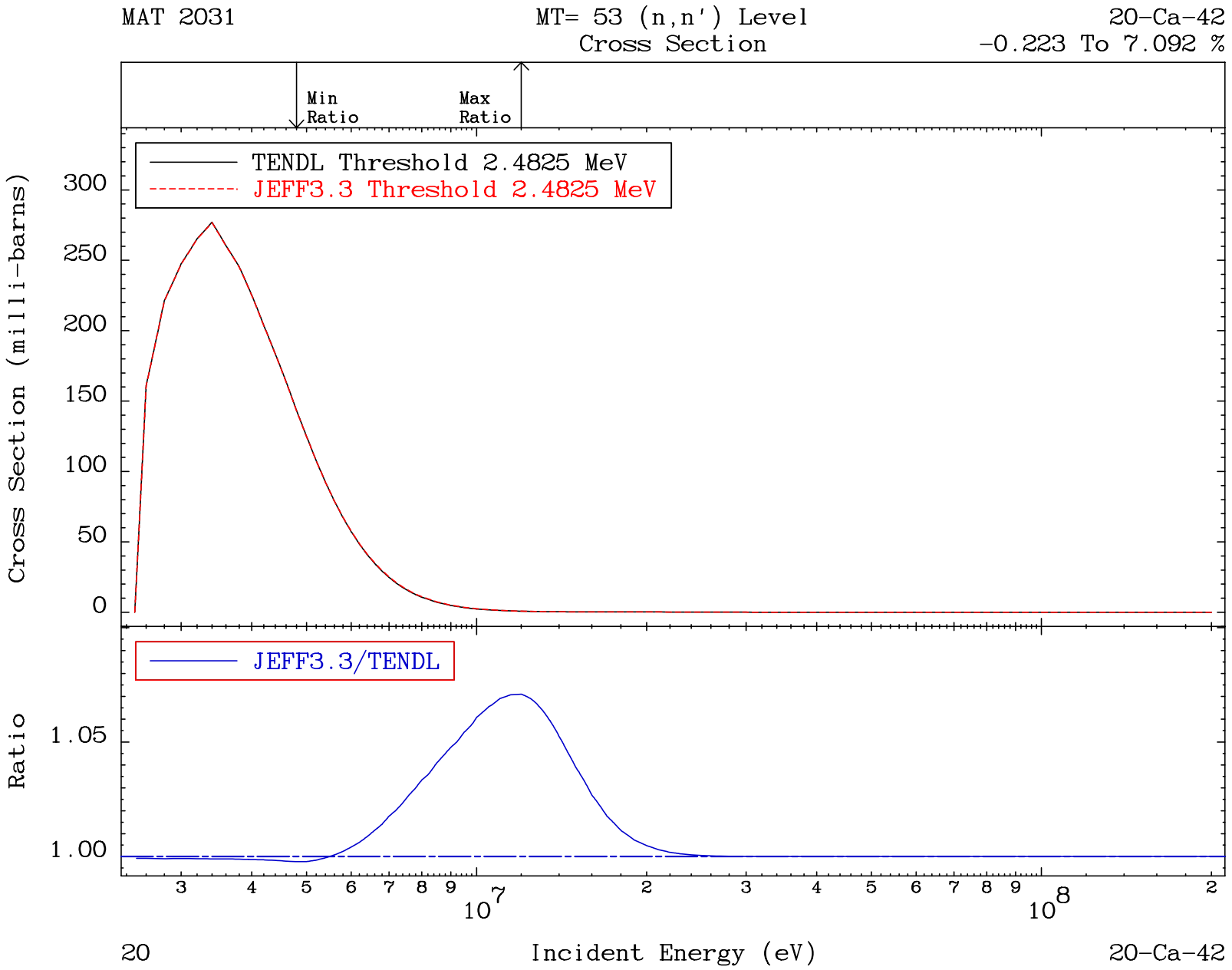

MAT 2031
(n,3n) p
Cross Section
20-Ca-42
0.000 To 9999. %
Min
Ratio
TENDL Threshold 28.849 MeV
JEFF3.3 Threshold 28.830 MeV
Cross Section (10^{-9} barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
10^{6}
10^{4}
10^{2}
10^{0}
40
60
80
100
120
140
160
180
200
15
Incident Energy (MeV)
20-Ca-42

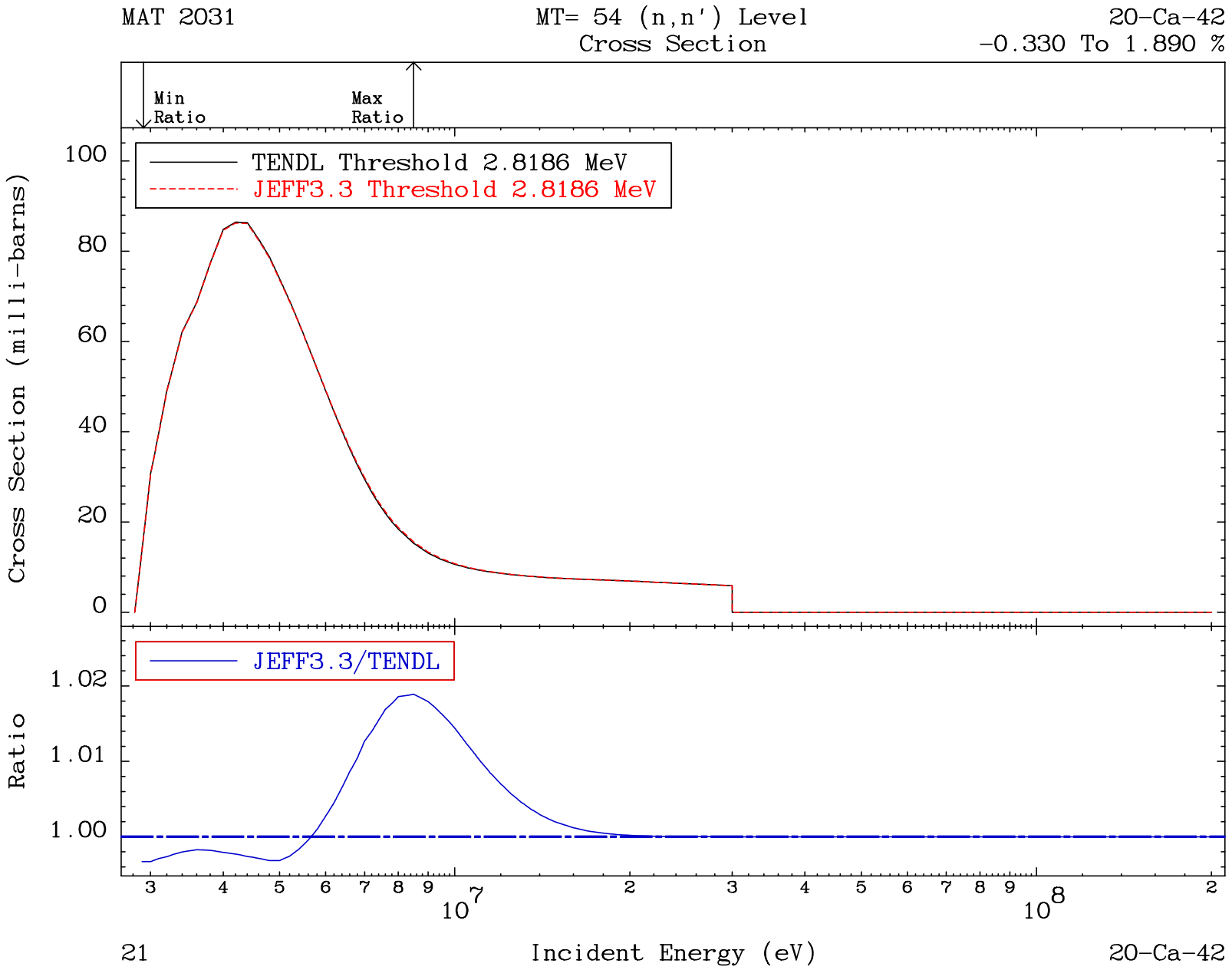

MAT 2031
(n,2n) p
Cross Section
20-Ca-42
-99.95 To 1351. %
Max
Ratio
TENDL Threshold 18.520 MeV
JEFF3.3 Threshold 18.429 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
JEFF3.3/TENDL
Ratio
10^{2}
10^{0}
10^{-2}
2
3
4
5
6
7
8
9
10^{8}
2
16
Incident Energy (eV)
20-Ca-42

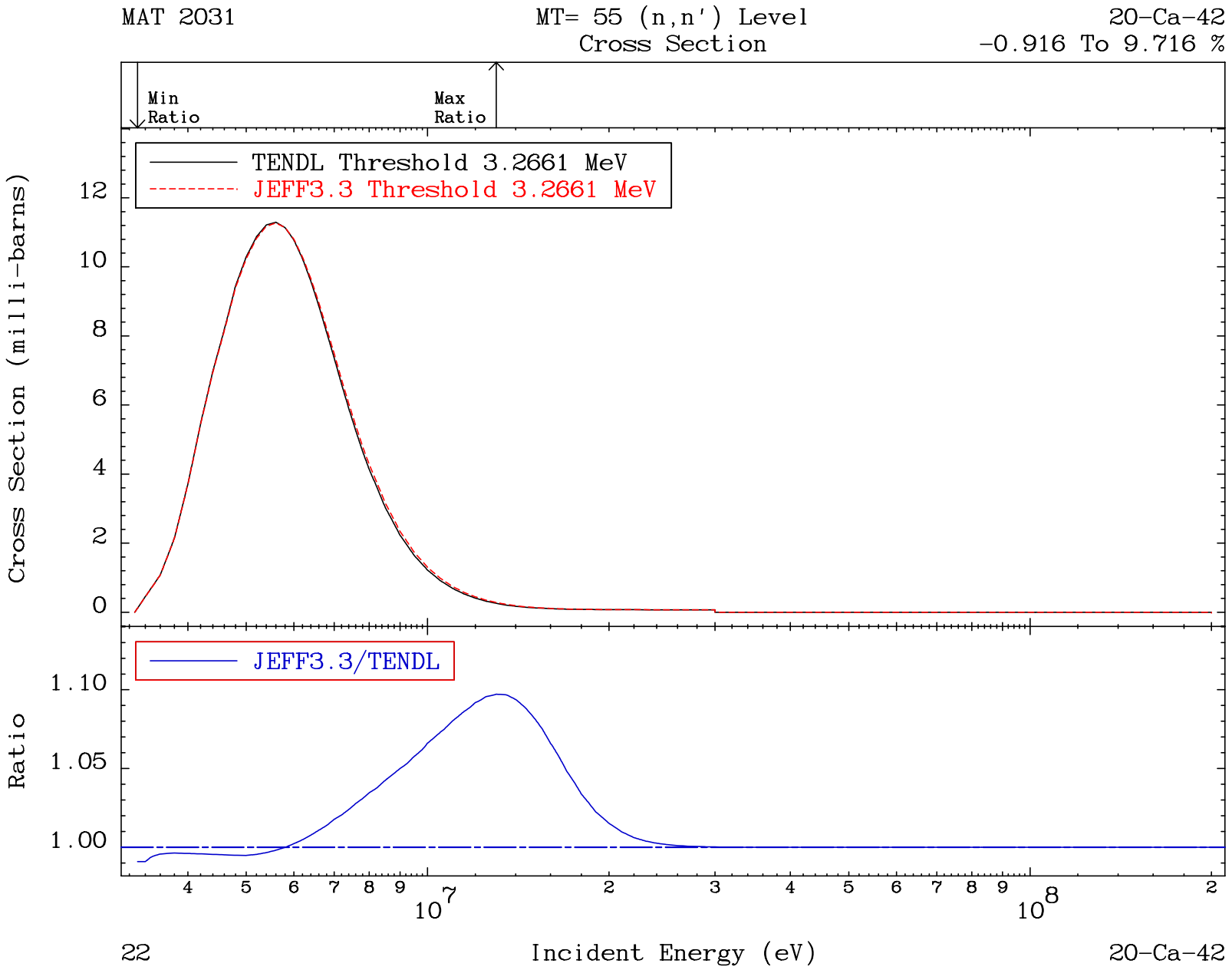

MAT 2031
(n,n') p α
Cross Section
20-Ca-42
0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 16.896 MeV
JEFF3.3 Threshold 16.896 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
17
20-Ca-42

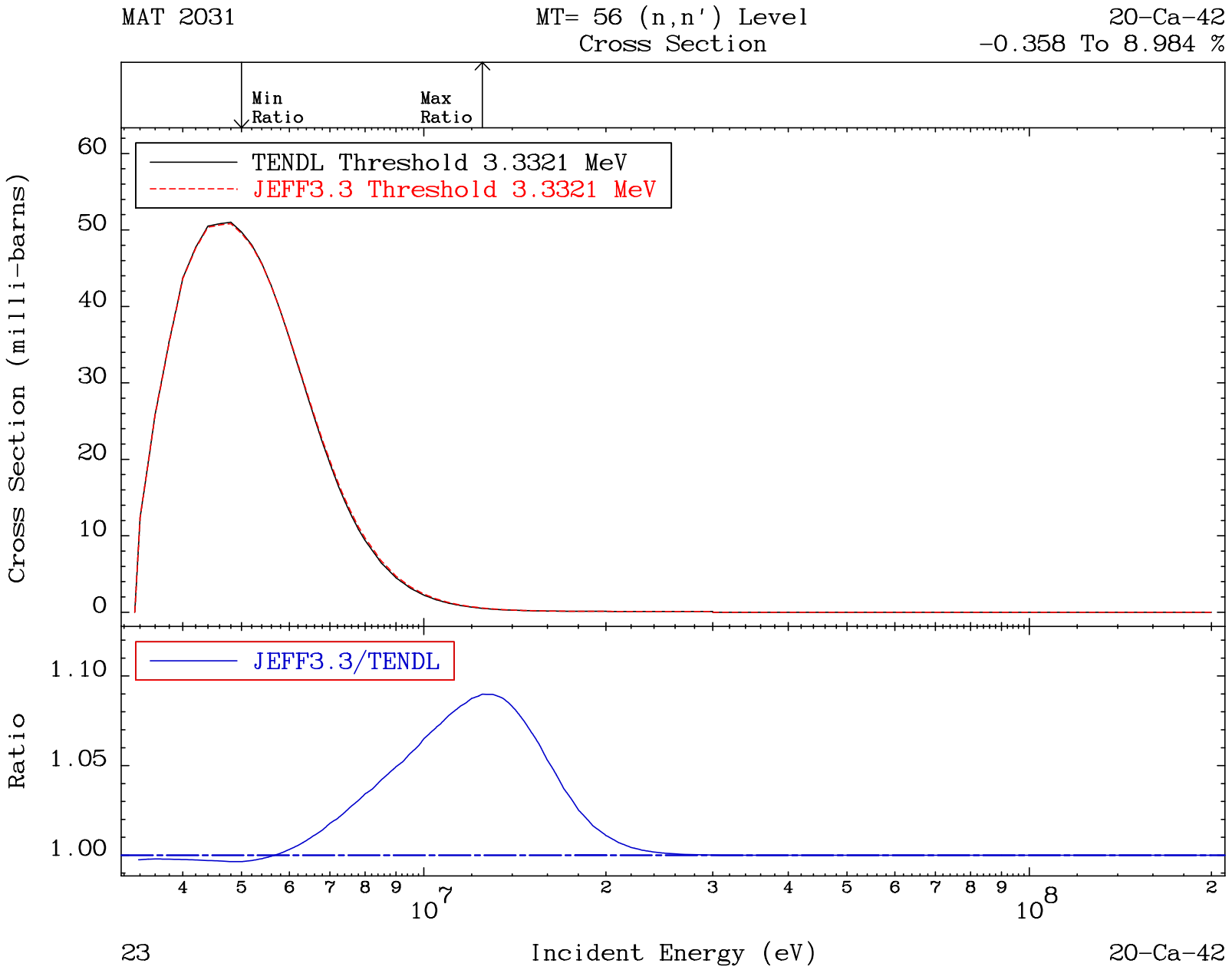

MAT 2031
MT= 51 (n,n') Level
Cross Section
20-Ca-42
-0.163 To 0.641 %
Min Ratio
Max Ratio
TENDL Threshold 1.5614 MeV
JEFF3.3 Threshold 1.5614 MeV
Cross Section (milli-barns)
700
600
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
1.01
1.00
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
18
Incident Energy (eV)
20-Ca-42

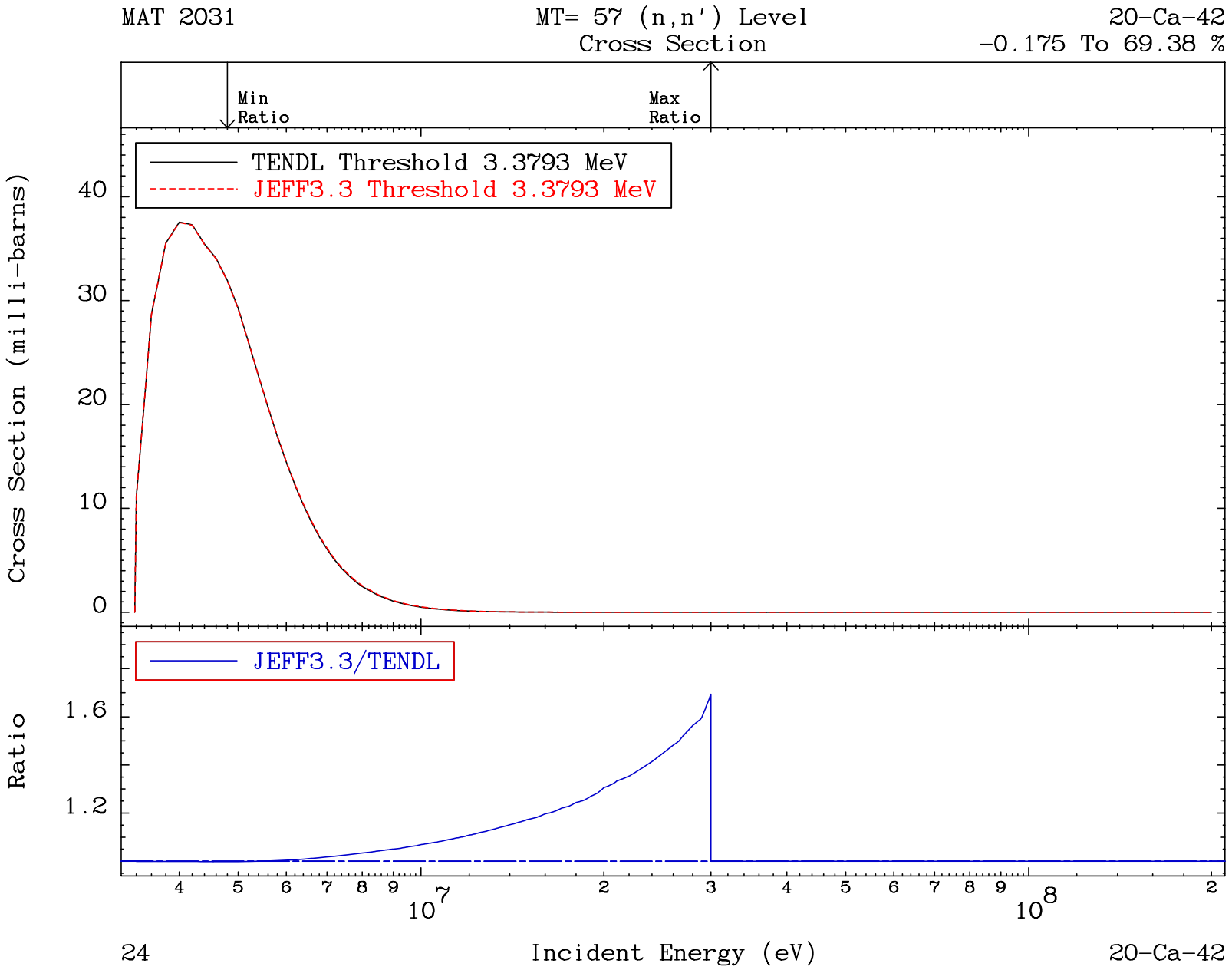

MAT 2031
MT= 52 (n,n') Level
Cross Section
20-Ca-42
-0.191 To 69.38 %
Min
Ratio
Max
Ratio
TENDL Threshold 1.8815 MeV
JEFF3.3 Threshold 1.8815 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.6
1.2
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
19
Incident Energy (eV)
20-Ca-42

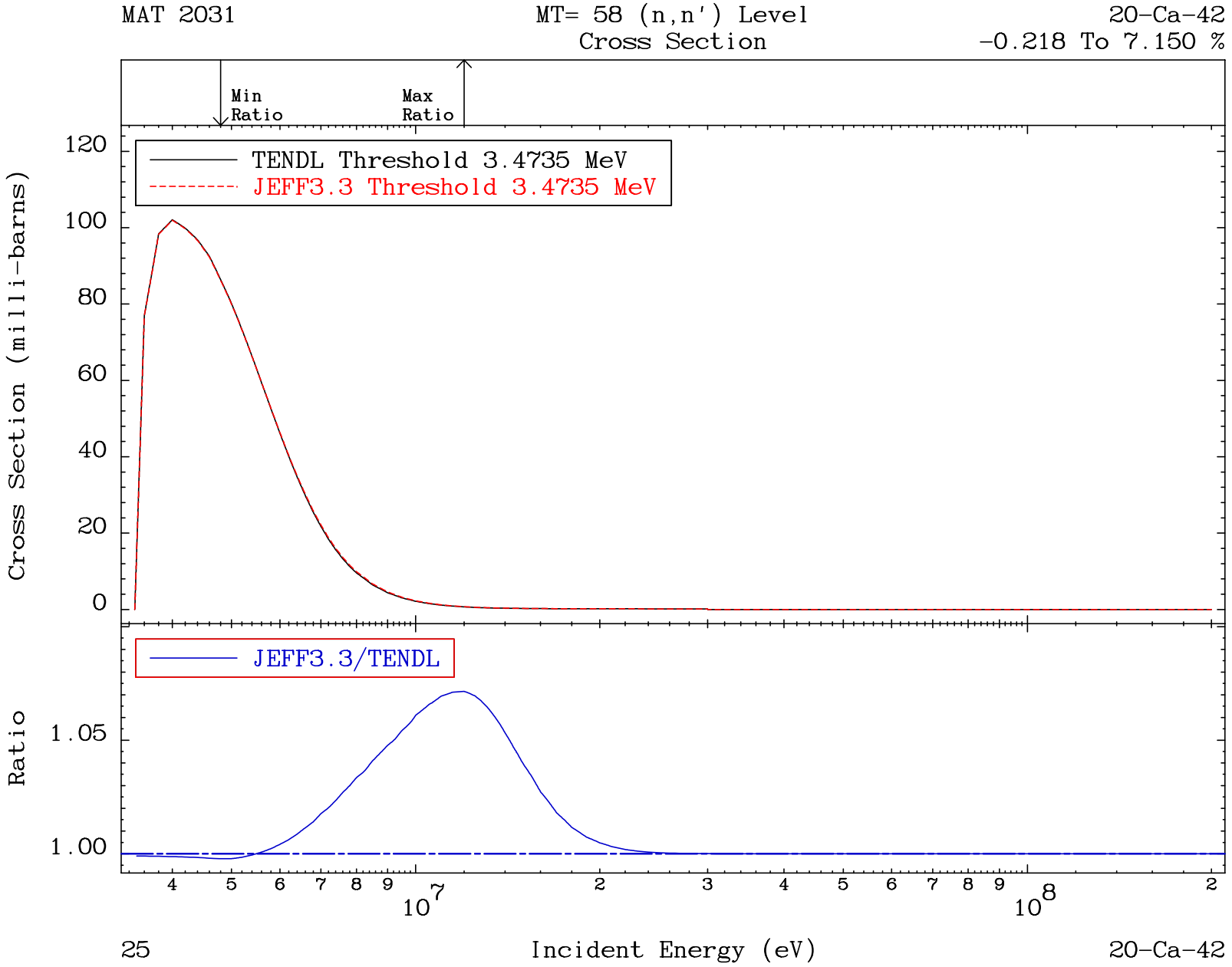

MAT 2031
MT= 53 (n,n') Level
Cross Section
20-Ca-42
-0.223 To 7.092 %
Min Ratio
Max Ratio
TENDL Threshold 2.4825 MeV
JEFF3.3 Threshold 2.4825 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.05
1.00
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
20
Incident Energy (eV)
20-Ca-42

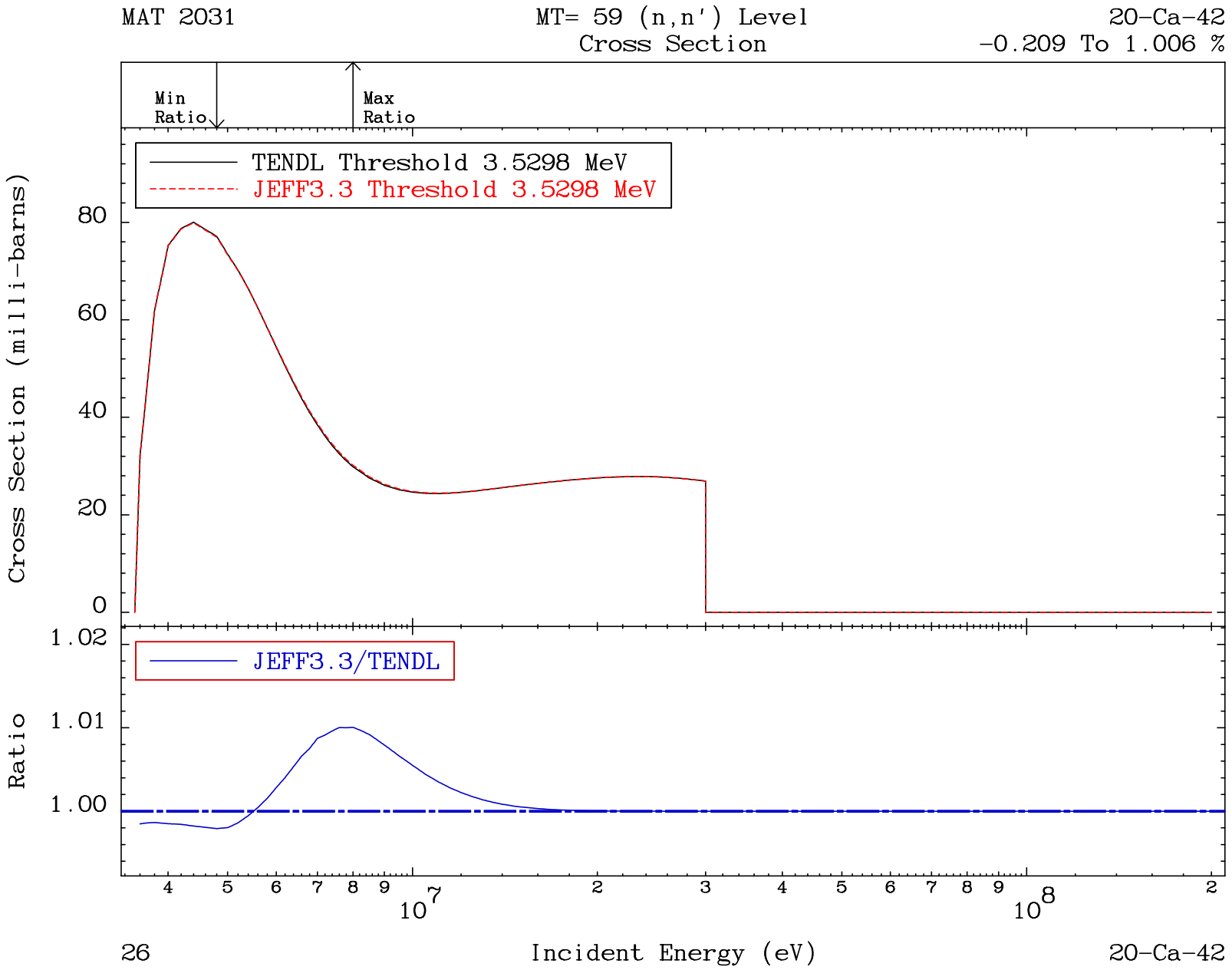

MAT 2031
MT= 54 (n,n') Level
Cross Section
20-Ca-42
-0.330 To 1.890 %
Min Ratio
Max Ratio
TENDL Threshold 2.8186 MeV
JEFF3.3 Threshold 2.8186 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.02
1.01
1.00
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
21
Incident Energy (eV)
20-Ca-42

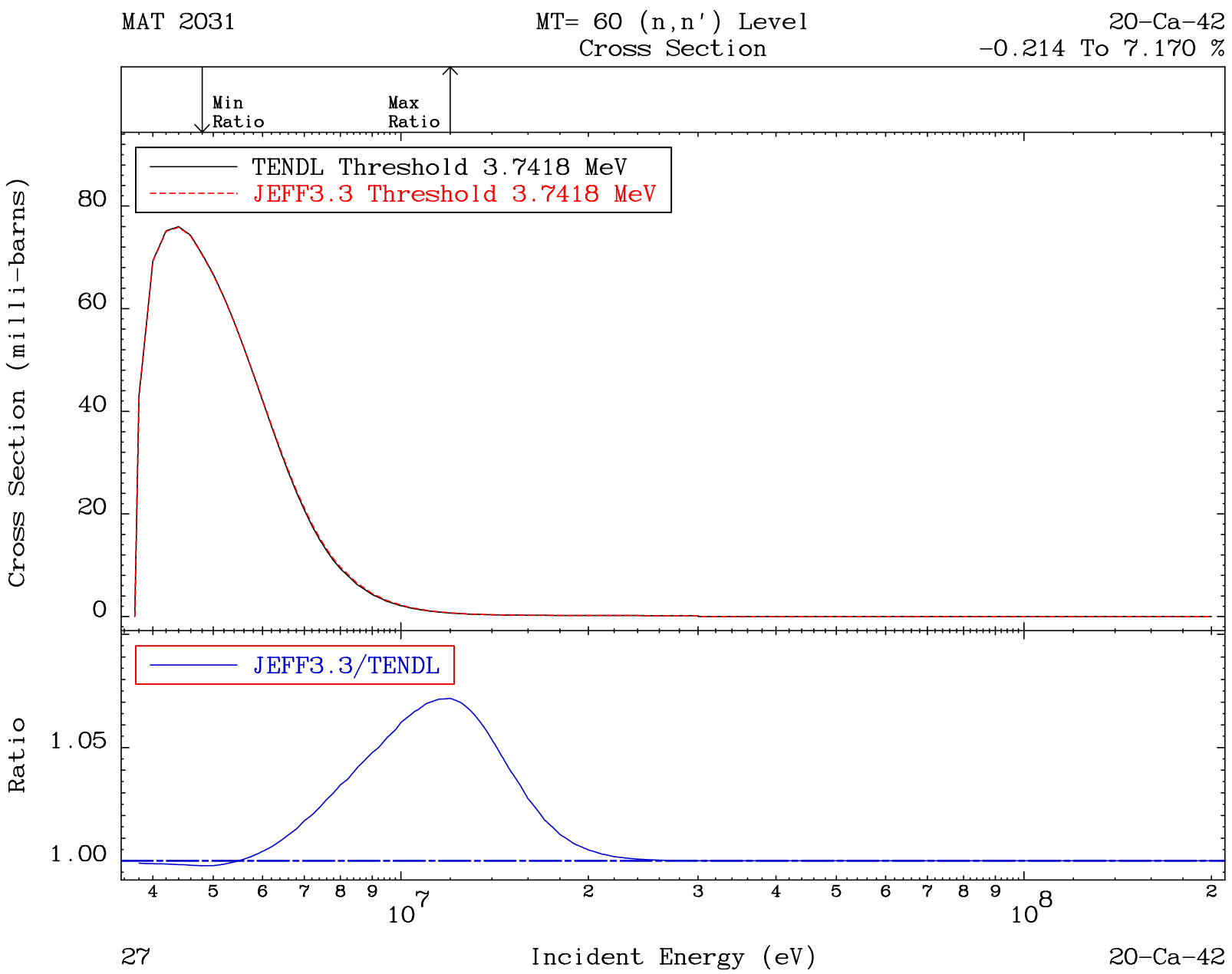

MAT 2031
MT= 55 (n,n') Level
Cross Section
20-Ca-42
-0.916 To 9.716 %
Min
Ratio
Max
Ratio
TENDL Threshold 3.2661 MeV
JEFF3.3 Threshold 3.2661 MeV
Cross Section (milli-barns)
0
2
4
6
8
10
12
JEFF3.3/TENDL
Ratio
1.00
1.05
1.10
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
22
Incident Energy (eV)
20-Ca-42

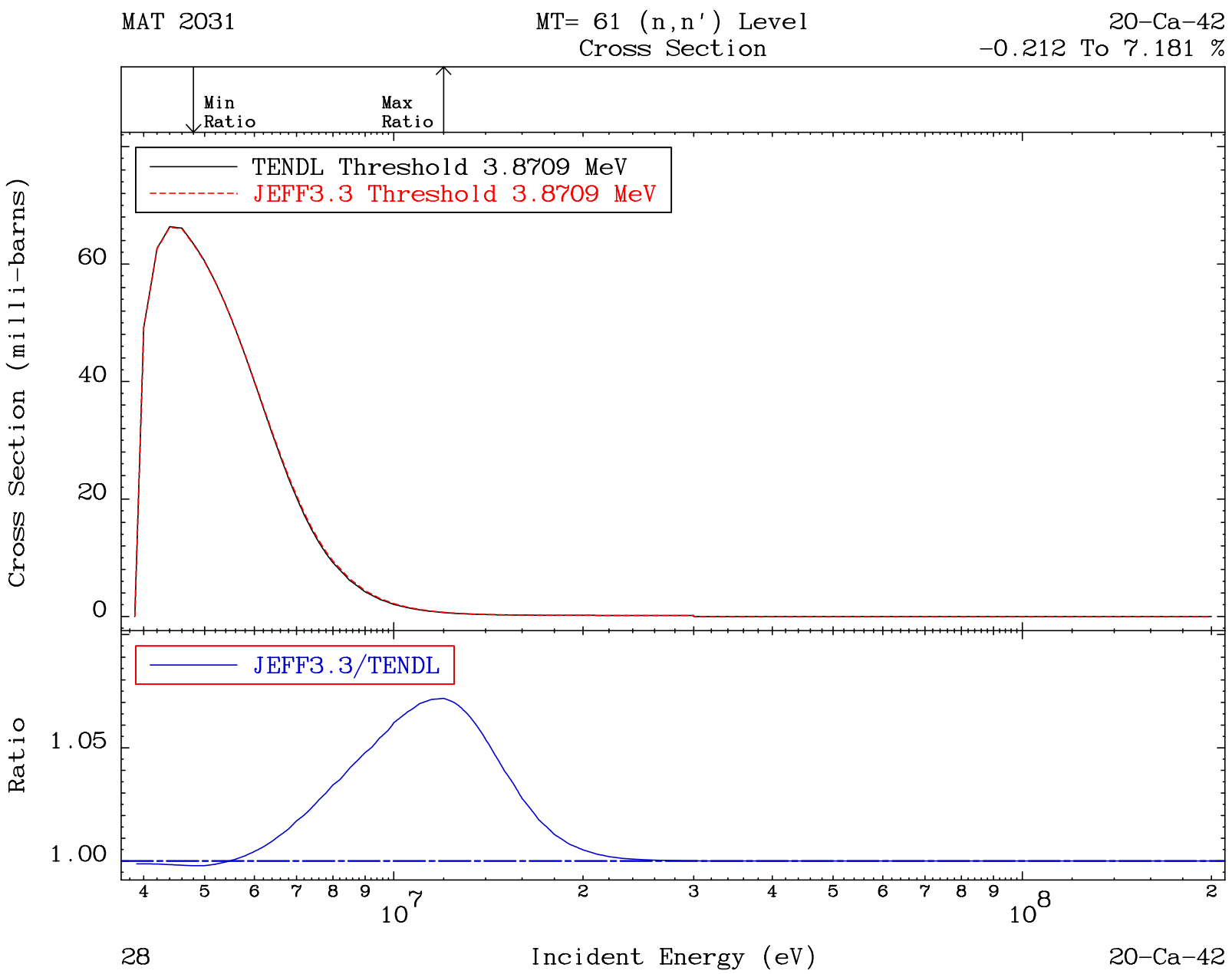

MAT 2031
MT= 56 (n,n') Level
Cross Section
20-Ca-42
-0.358 To 8.984 %
Min Ratio
Max Ratio
TENDL Threshold 3.3321 MeV
JEFF3.3 Threshold 3.3321 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
23
Incident Energy (eV)
20-Ca-42

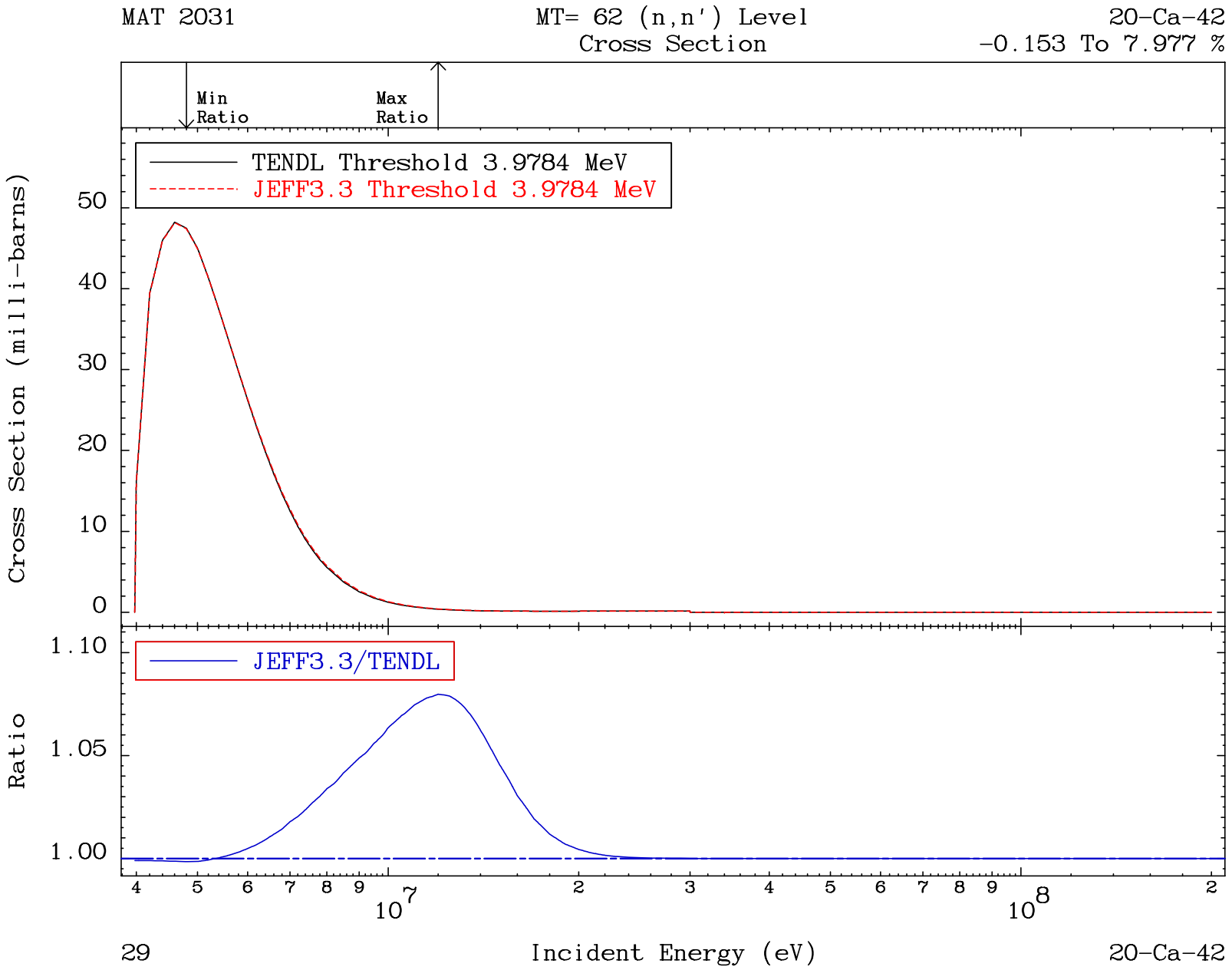

MAT 2031
MT= 57 (n,n') Level
Cross Section
20-Ca-42
-0.175 To 69.38 %
Min
Ratio
Max
Ratio
TENDL Threshold 3.3793 MeV
JEFF3.3 Threshold 3.3793 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.6
1.2
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
24
Incident Energy (eV)
20-Ca-42

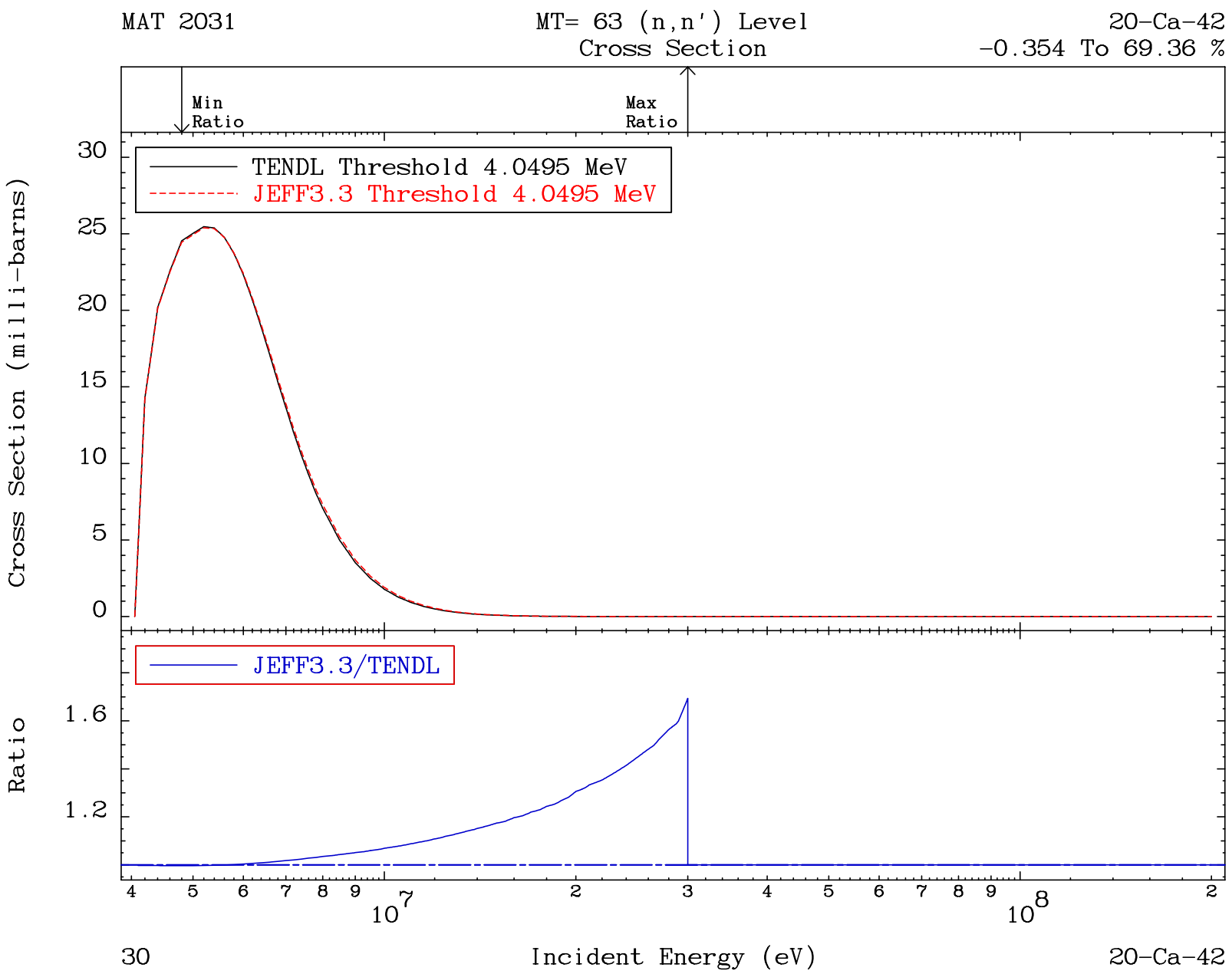

MAT 2031
MT= 58 (n,n') Level
Cross Section
20-Ca-42
-0.218 To 7.150 %
Min Ratio
Max Ratio
TENDL Threshold 3.4735 MeV
JEFF3.3 Threshold 3.4735 MeV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.05
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
20-Ca-42

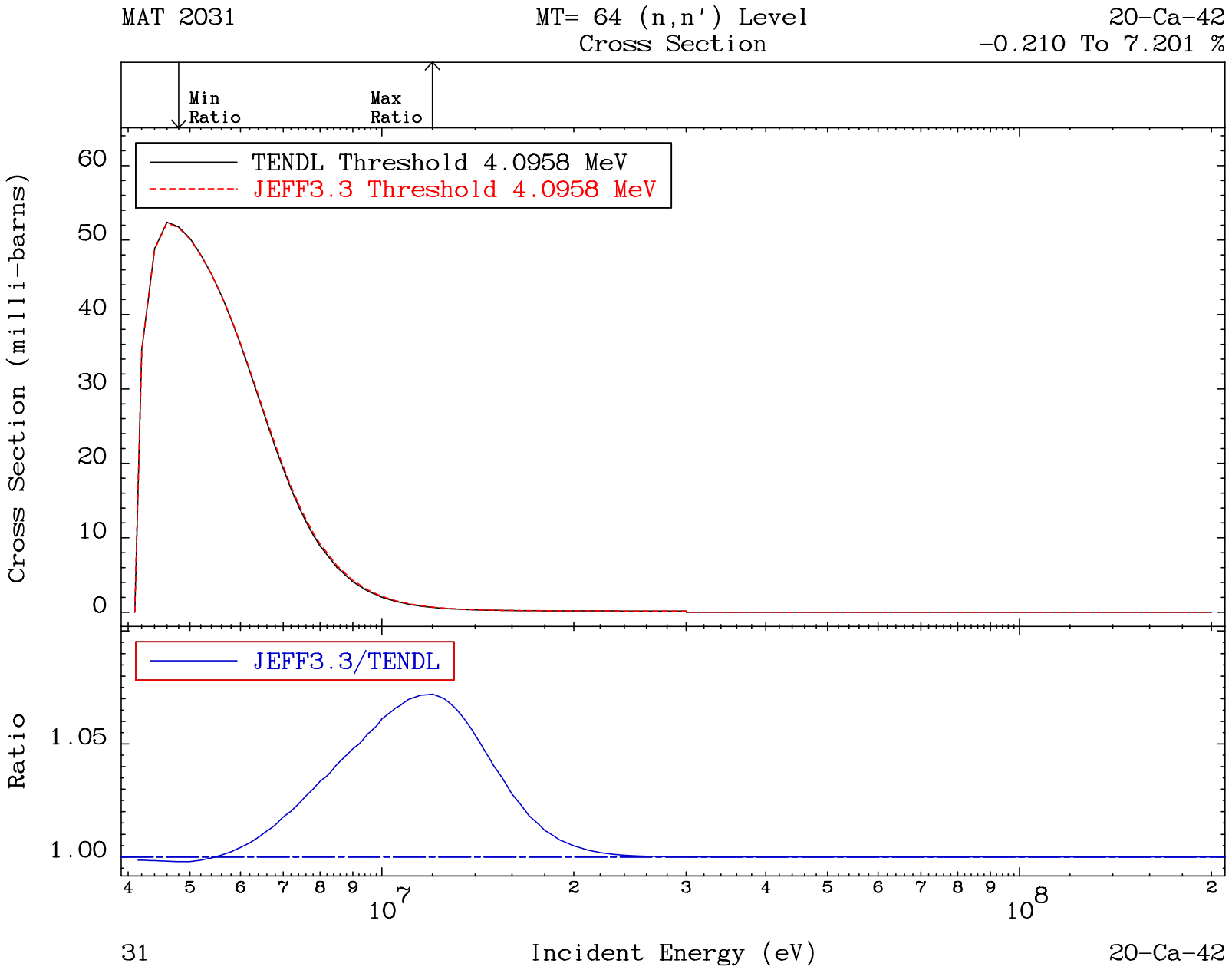

MAT 2031
MT= 59 (n,n') Level
Cross Section
20-Ca-42
-0.209 To 1.006 %
Min Ratio
Max Ratio
TENDL Threshold 3.5298 MeV
JEFF3.3 Threshold 3.5298 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.02
1.01
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
Incident Energy (eV)
26
20-Ca-42

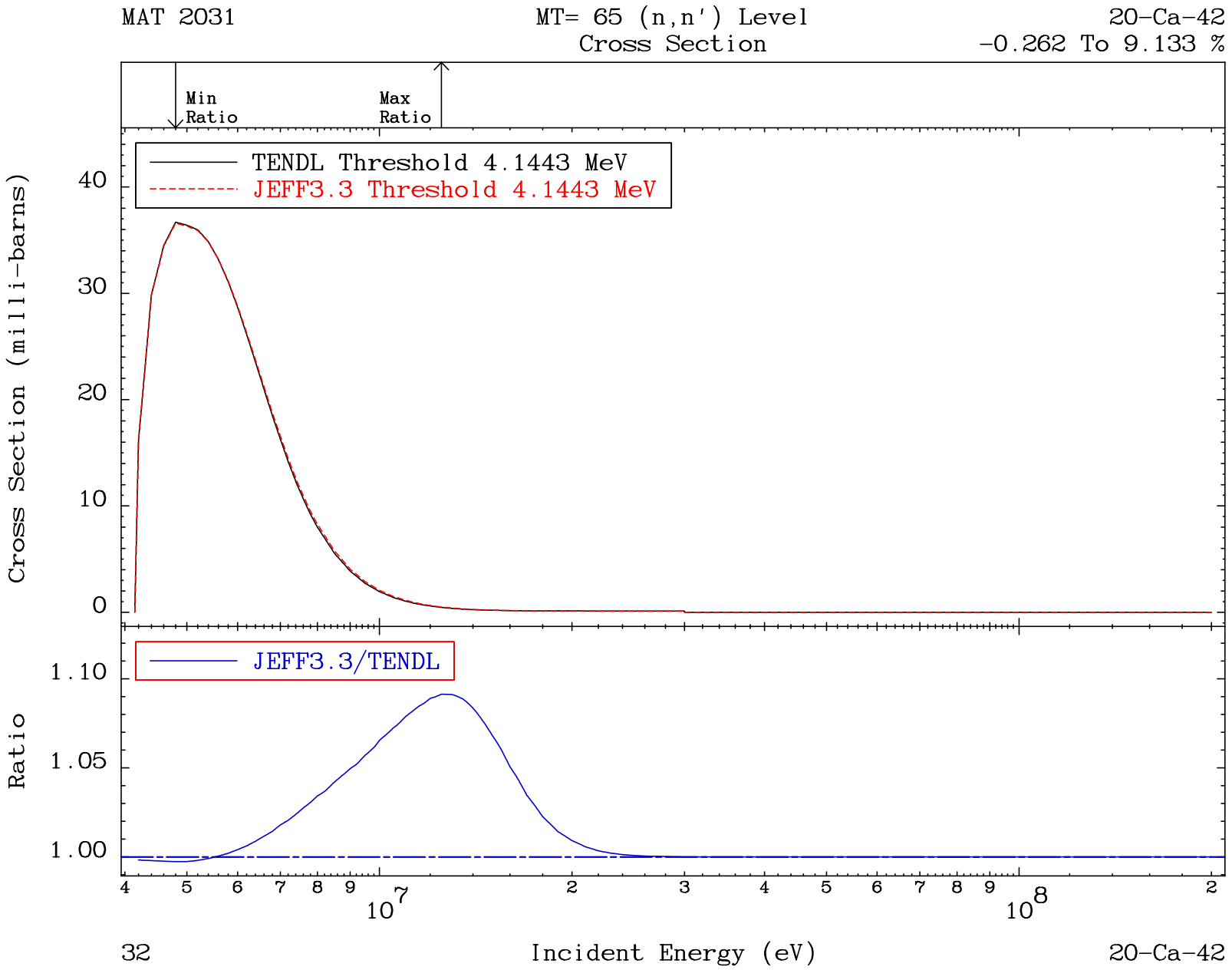

MAT 2031
MT= 60 (n,n') Level
Cross Section
20-Ca-42
-0.214 To 7.170 %
Min Ratio
Max Ratio
TENDL Threshold 3.7418 MeV
JEFF3.3 Threshold 3.7418 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.05
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
27
Incident Energy (eV)
20-Ca-42

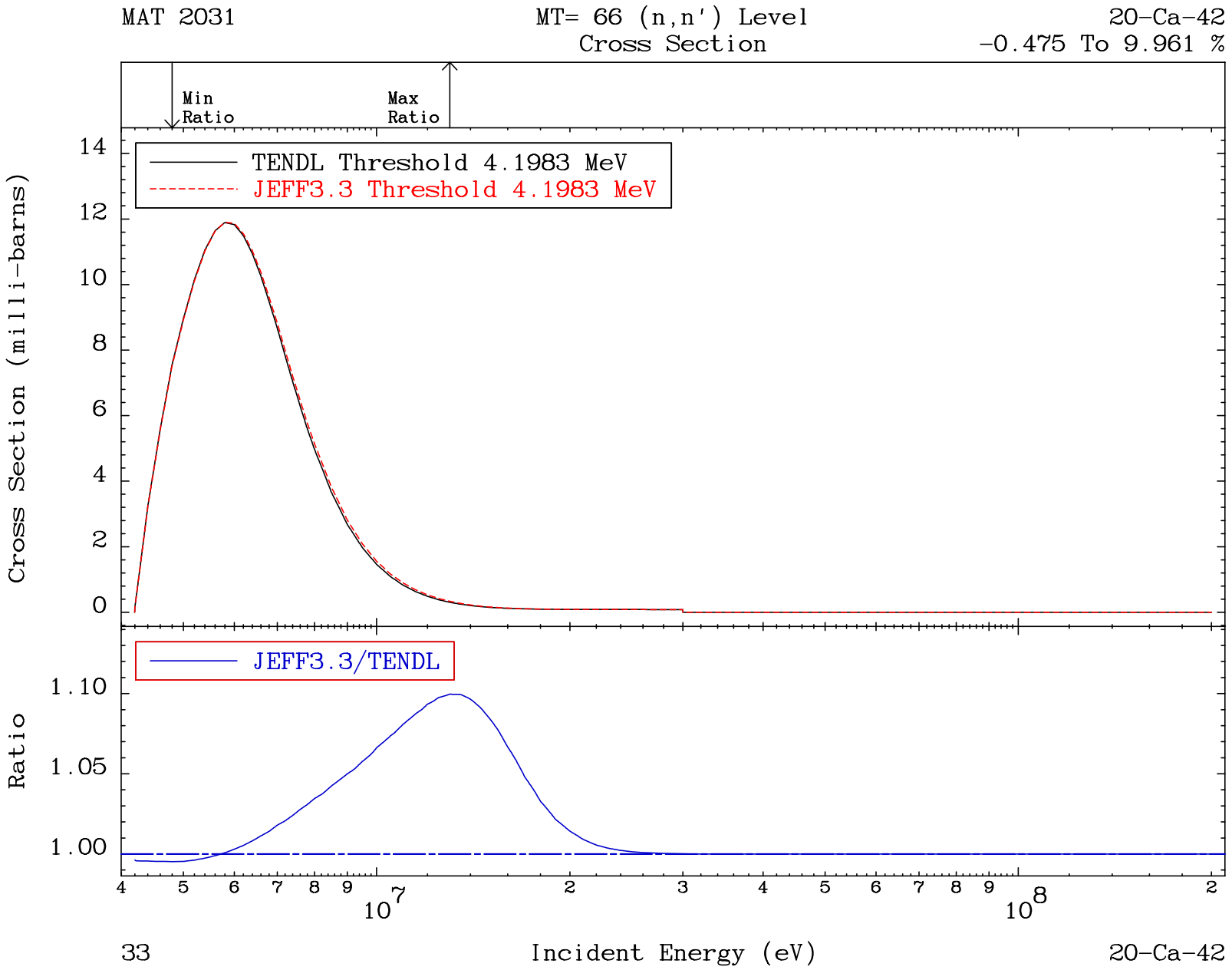

MAT 2031
MT= 61 (n,n') Level
Cross Section
20-Ca-42
-0.212 To 7.181 %
Min
Ratio
Max
Ratio
TENDL Threshold 3.8709 MeV
JEFF3.3 Threshold 3.8709 MeV
Cross Section (milli-barns)
60
40
20
0
JEFF3.3/TENDL
Ratio
1.05
1.00
4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
28
Incident Energy (eV)
20-Ca-42

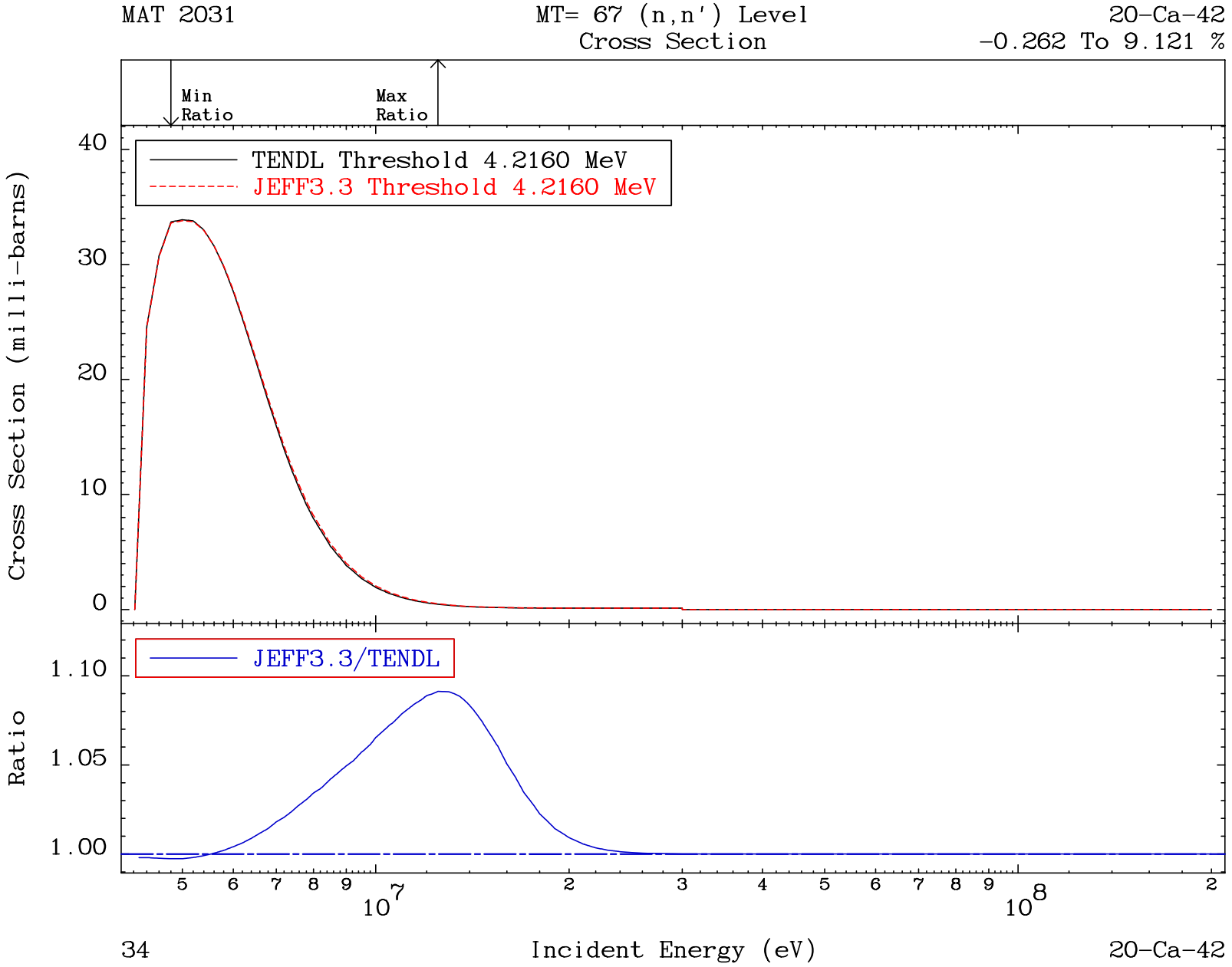

MAT 2031
MT= 62 (n,n') Level
Cross Section
20-Ca-42
-0.153 To 7.977 %
Min
Ratio
Max
Ratio
TENDL Threshold 3.9784 MeV
JEFF3.3 Threshold 3.9784 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
29
Incident Energy (eV)
20-Ca-42

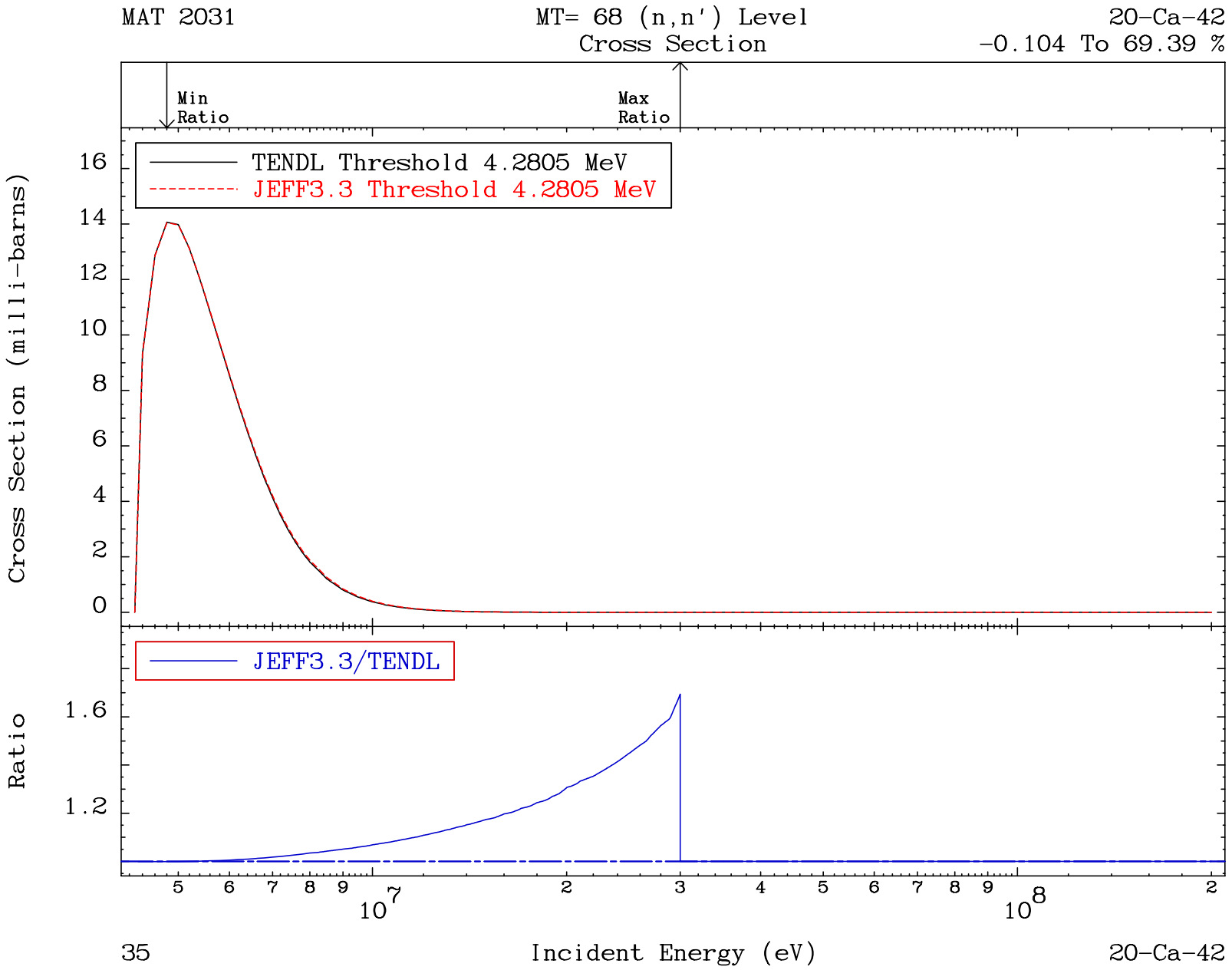

MAT 2031
MT= 63 (n,n') Level
Cross Section
20-Ca-42
-0.354 To 69.36 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.0495 MeV
JEFF3.3 Threshold 4.0495 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
30
20-Ca-42

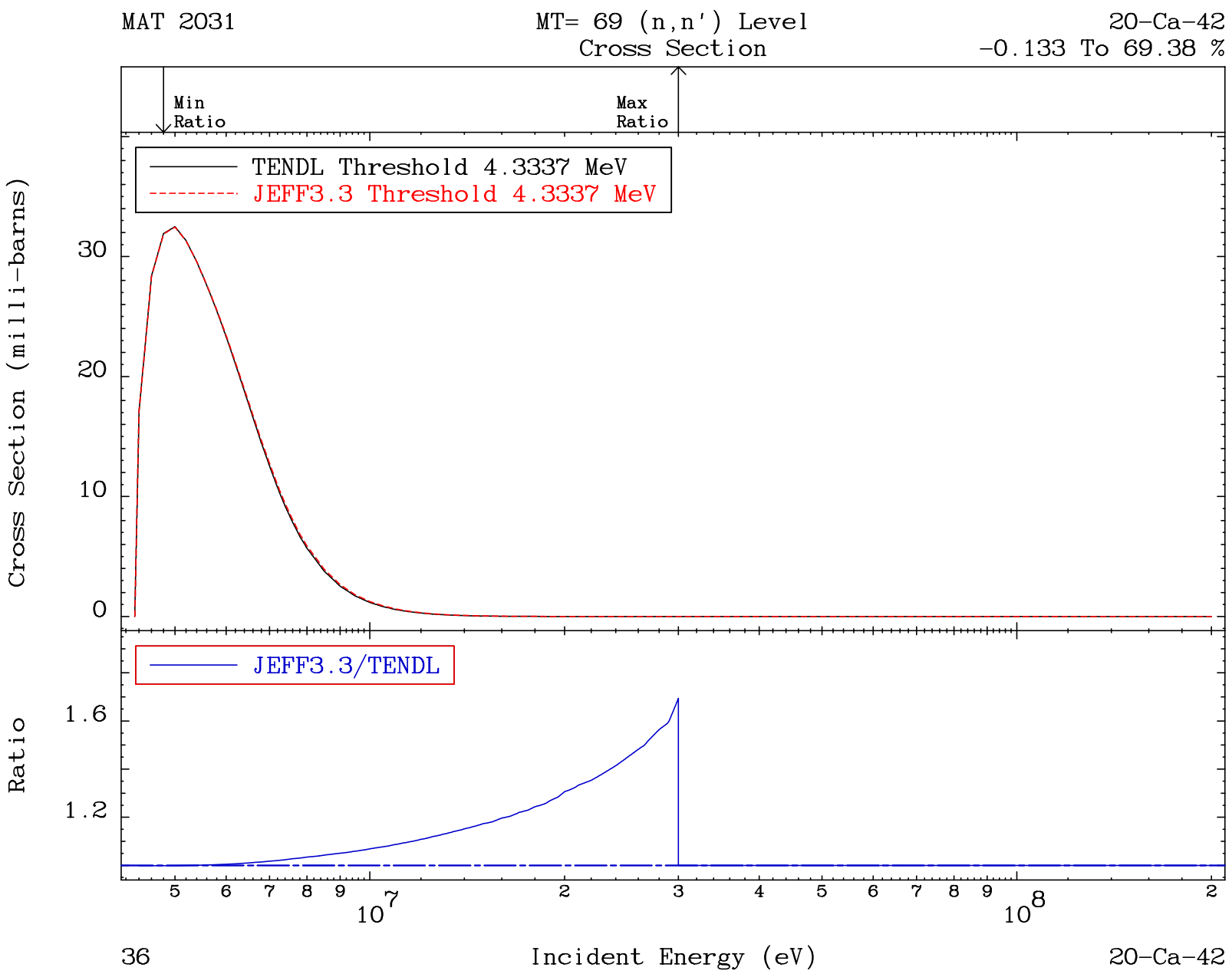

MAT 2031
MT= 64 (n,n') Level
Cross Section
20-Ca-42
-0.210 To 7.201 %
Min Ratio
Max Ratio
TENDL Threshold 4.0958 MeV
JEFF3.3 Threshold 4.0958 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.05
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
31
Incident Energy (eV)
20-Ca-42

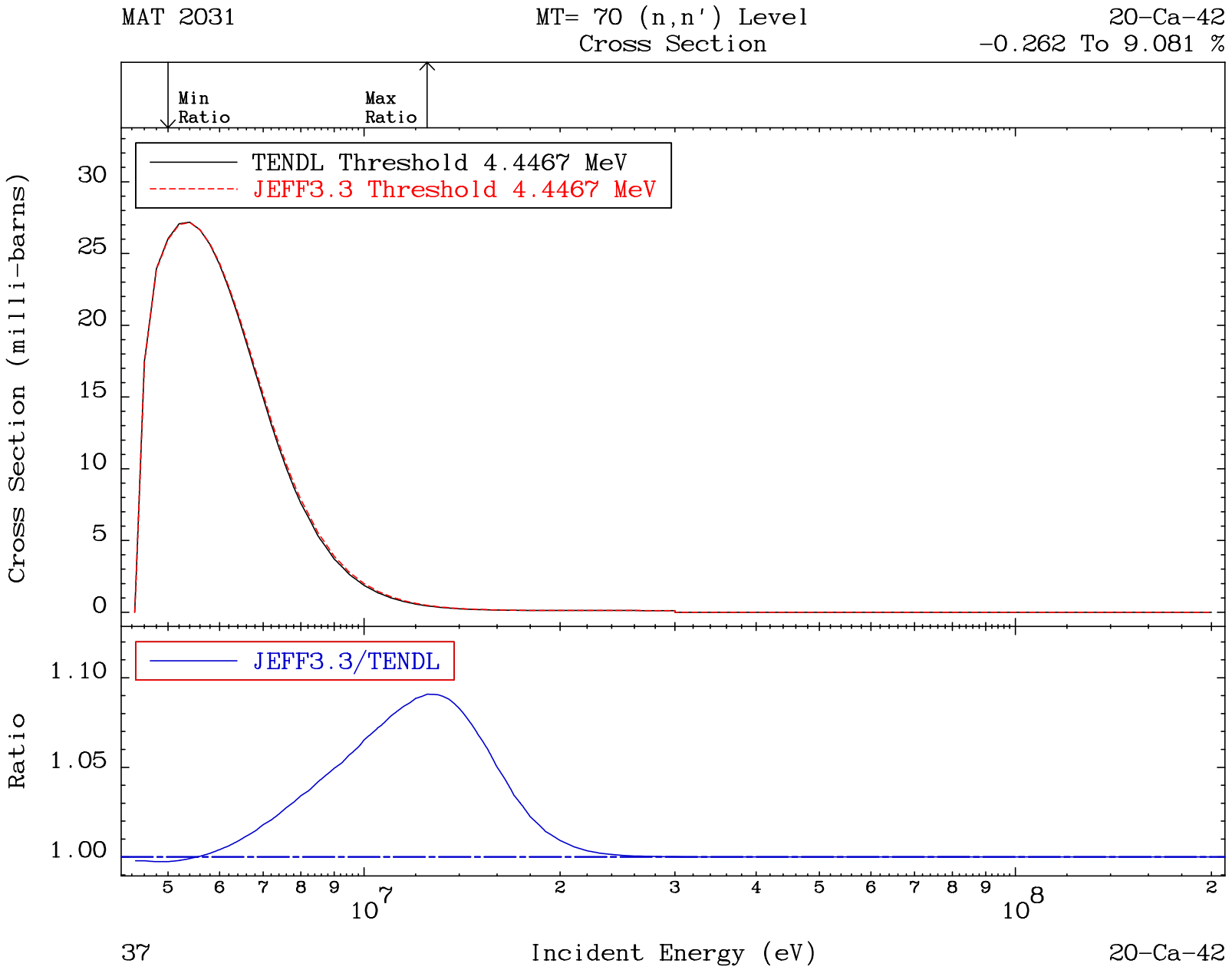

MAT 2031
MT= 65 (n,n') Level
Cross Section
20-Ca-42
-0.262 To 9.133 %
Min Ratio
Max Ratio
TENDL Threshold 4.1443 MeV
JEFF3.3 Threshold 4.1443 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
32
Incident Energy (eV)
20-Ca-42

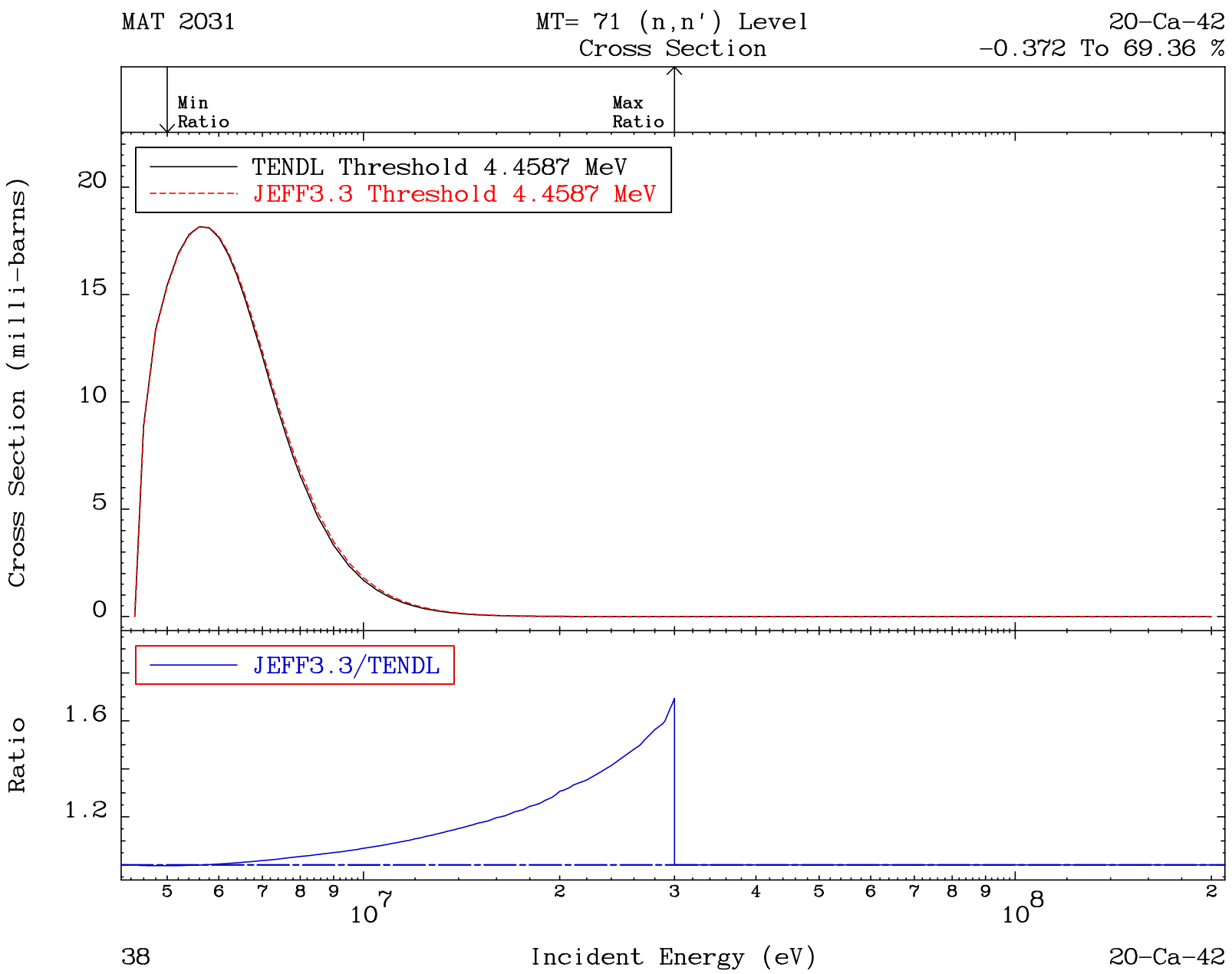

MAT 2031
MT= 66 (n,n') Level
Cross Section
20-Ca-42
-0.475 To 9.961 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.1983 MeV
JEFF3.3 Threshold 4.1983 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
33
20-Ca-42

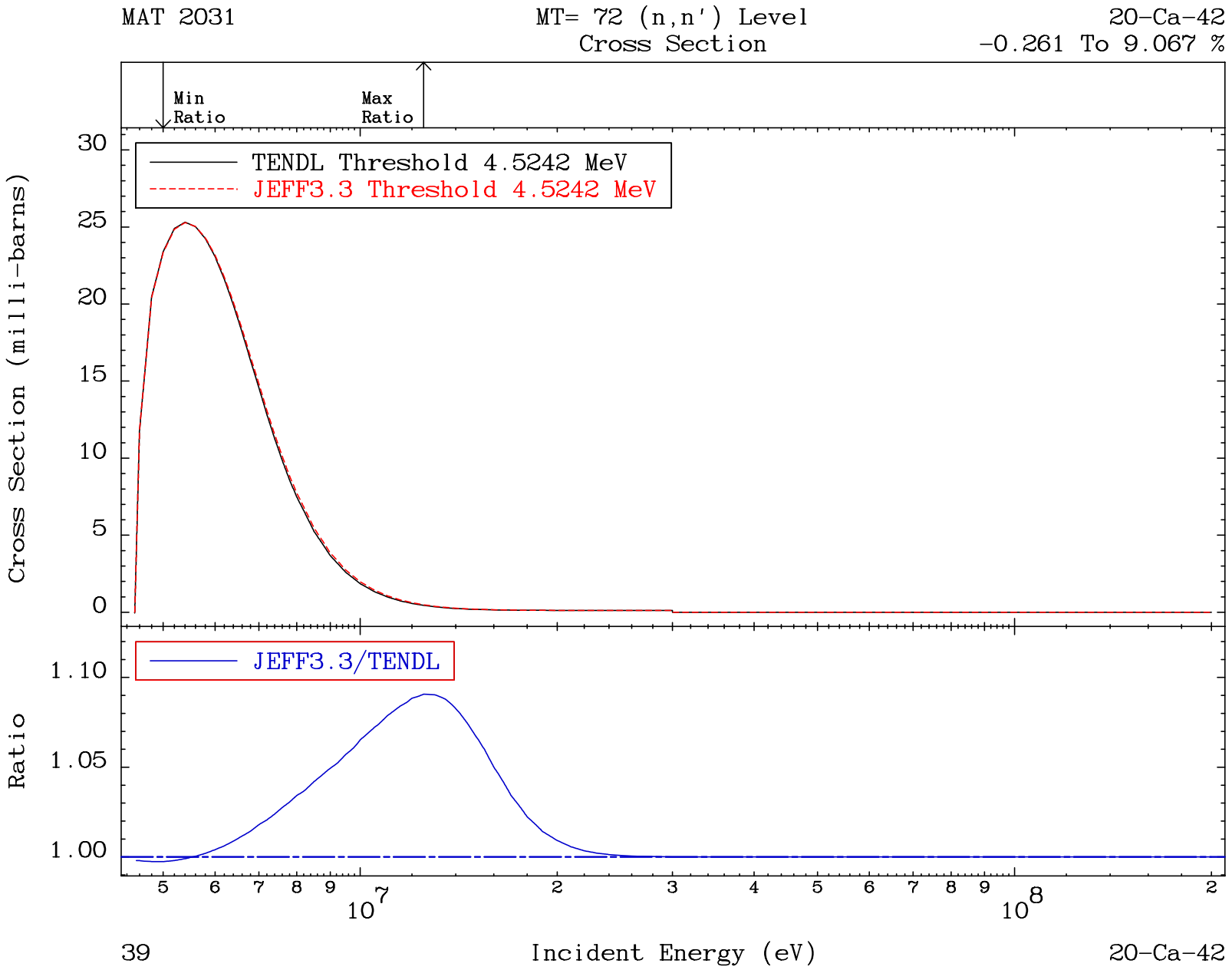

MAT 2031
MT= 67 (n,n') Level
Cross Section
20-Ca-42
-0.262 To 9.121 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.2160 MeV
JEFF3.3 Threshold 4.2160 MeV
Cross Section (milli-barns)
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
34
Incident Energy (eV)
20-Ca-42

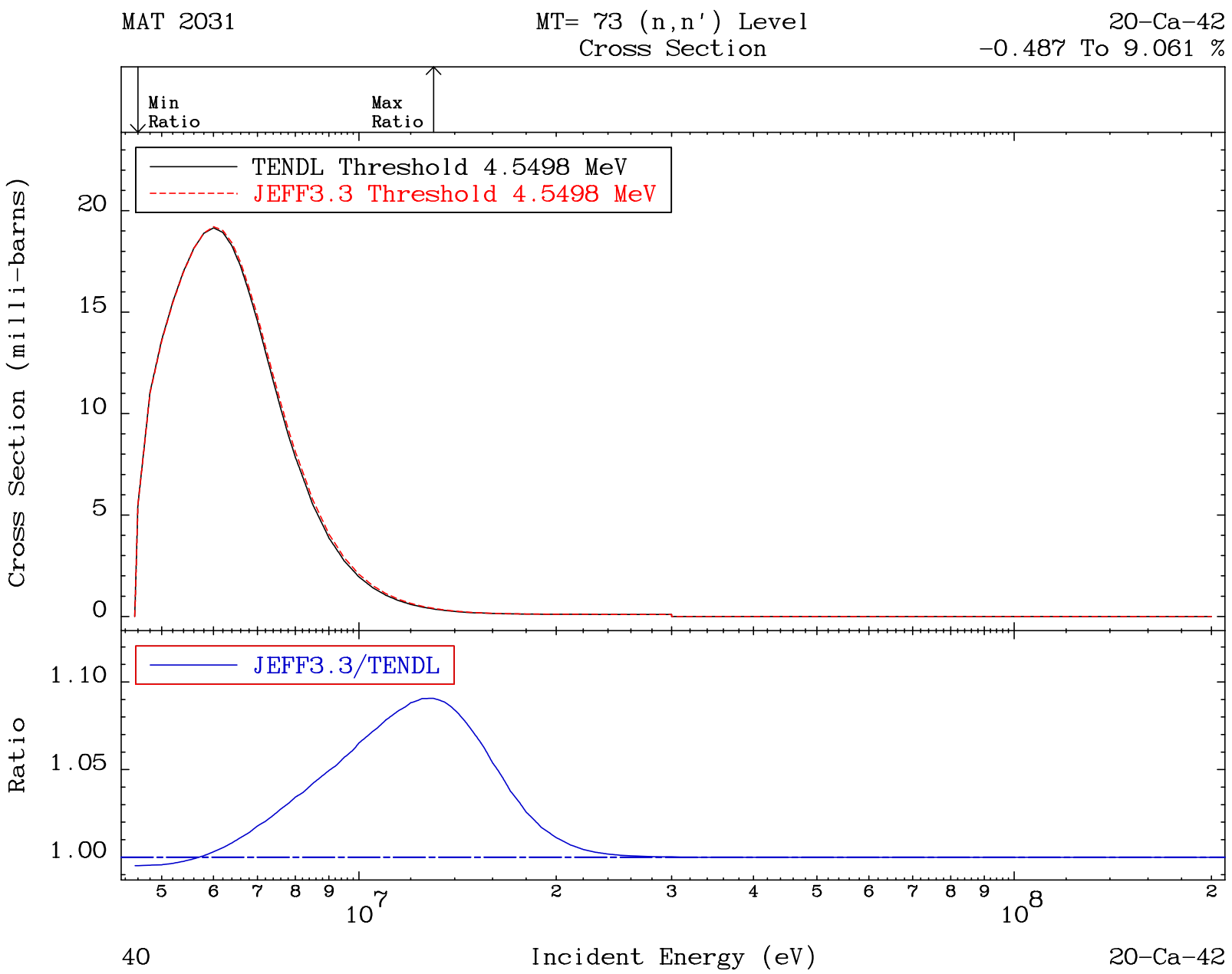

MAT 2031
MT= 68 (n,n') Level
Cross Section
20-Ca-42
-0.104 To 69.39 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.2805 MeV
JEFF3.3 Threshold 4.2805 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.6
1.2
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
35
Incident Energy (eV)
20-Ca-42

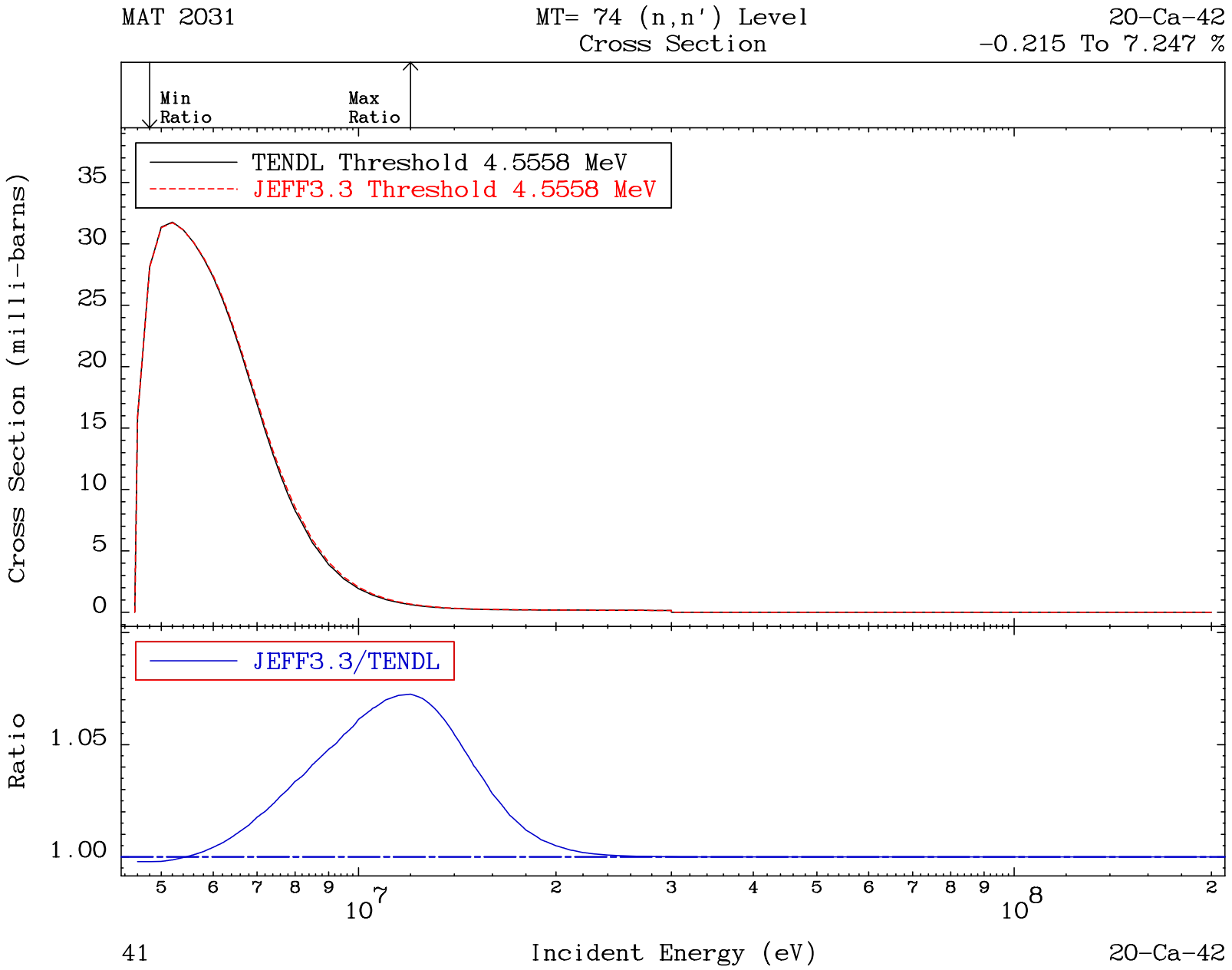

MAT 2031
MT= 69 (n,n') Level
Cross Section
20-Ca-42
-0.133 To 69.38 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.3337 MeV
JEFF3.3 Threshold 4.3337 MeV
Cross Section (milli-barns)
30
20
10
0
JEFF3.3/TENDL
Ratio
1.6
1.2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
36
Incident Energy (eV)
20-Ca-42

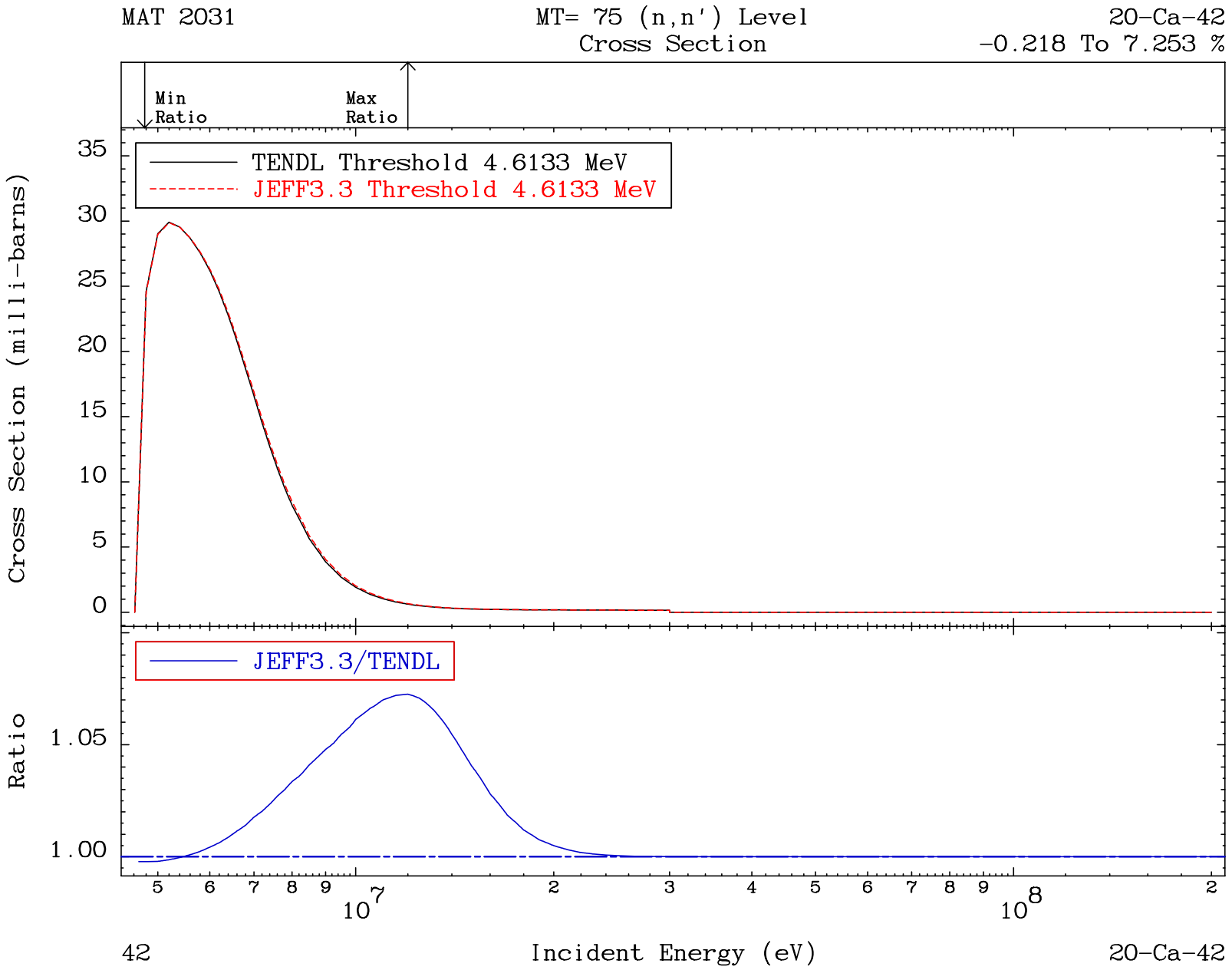

MAT 2031
MT= 70 (n,n') Level
Cross Section
20-Ca-42
-0.262 To 9.081 %
Min Ratio
Max Ratio
TENDL Threshold 4.4467 MeV
JEFF3.3 Threshold 4.4467 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
37
Incident Energy (eV)
20-Ca-42

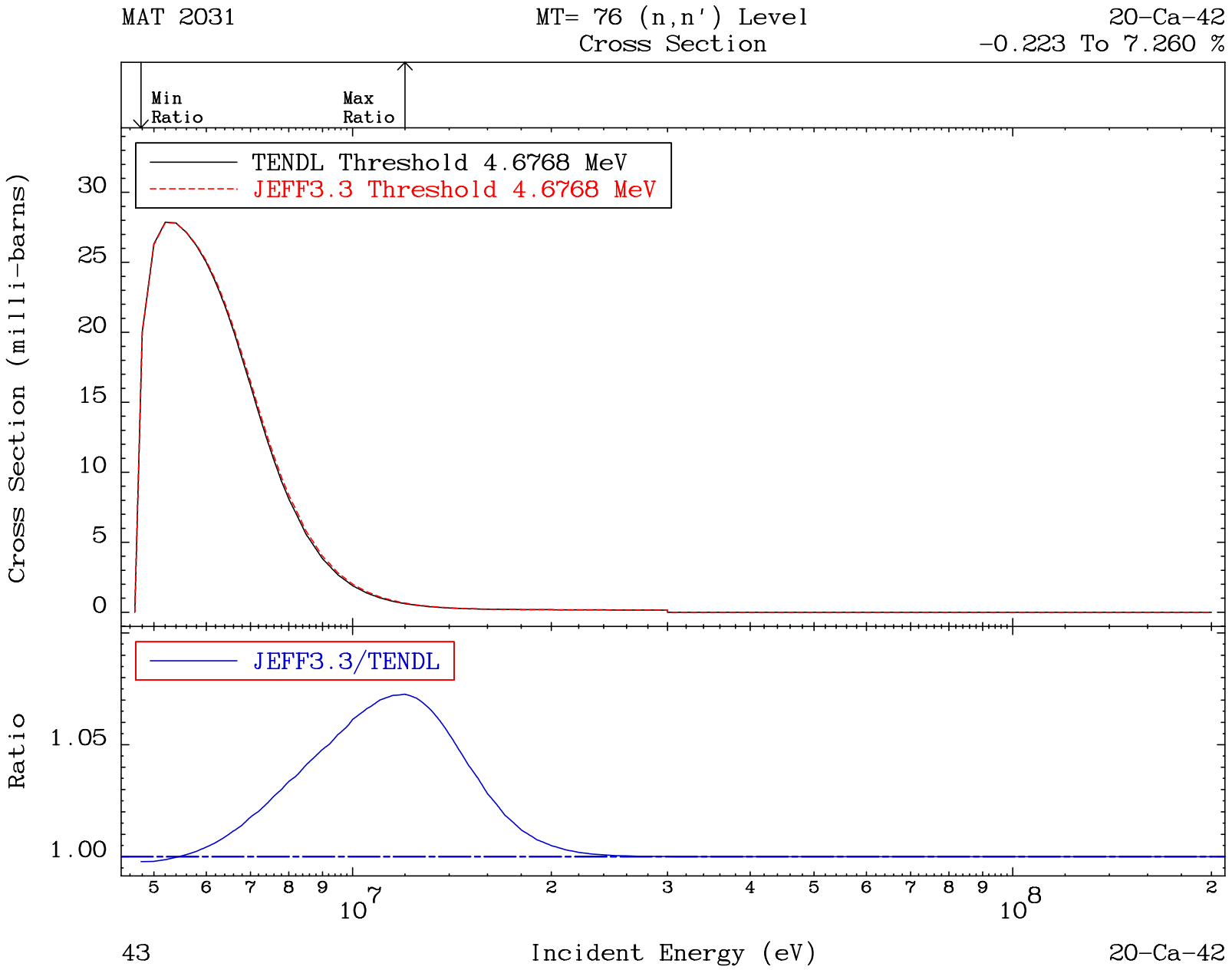

MAT 2031
MT= 71 (n,n') Level
Cross Section
20-Ca-42
-0.372 To 69.36 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.4587 MeV
JEFF3.3 Threshold 4.4587 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.6
1.2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
38
Incident Energy (eV)
20-Ca-42

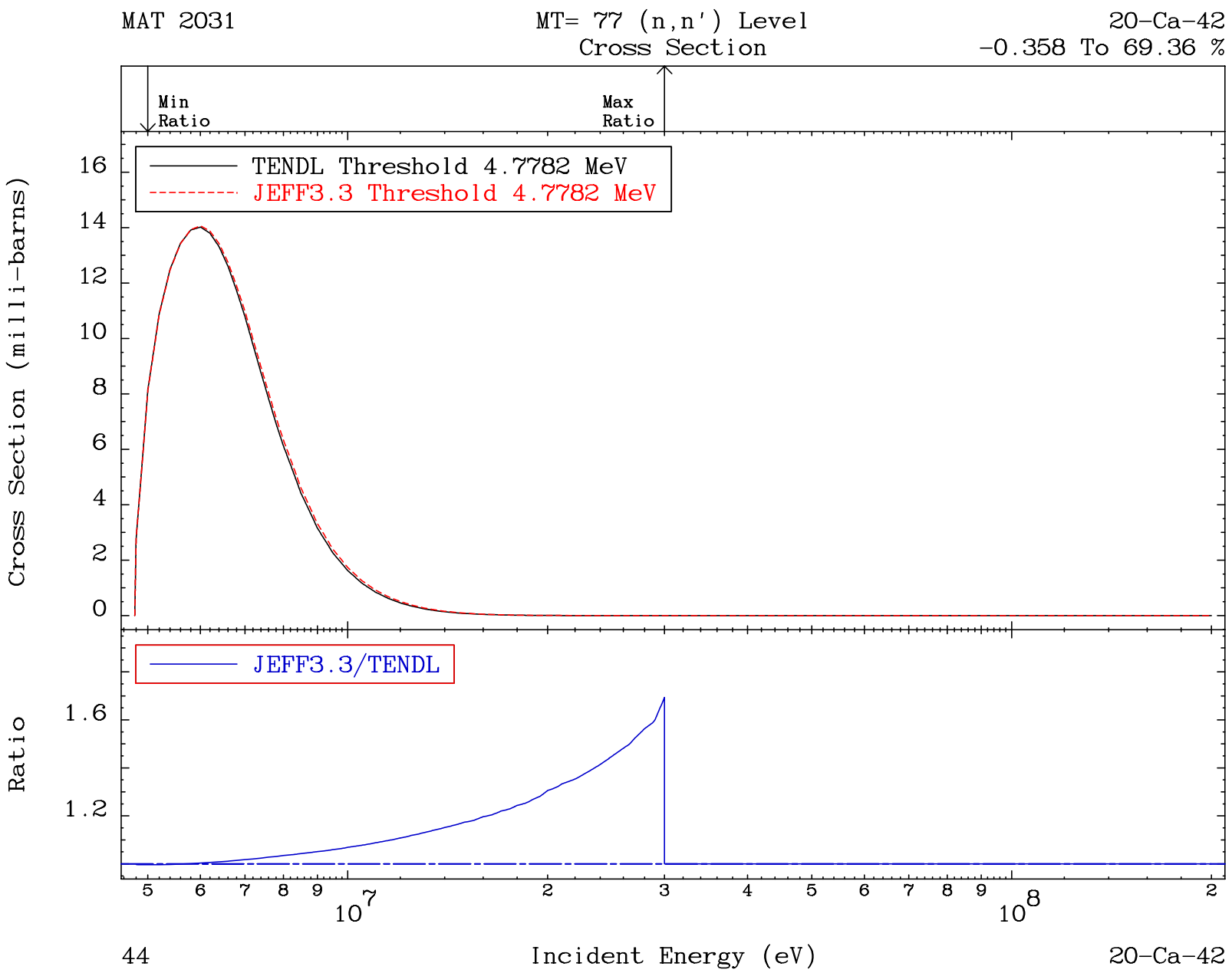

MAT 2031
MT= 72 (n,n') Level
Cross Section
20-Ca-42
-0.261 To 9.067 %
Min Ratio
Max Ratio
TENDL Threshold 4.5242 MeV
JEFF3.3 Threshold 4.5242 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
39
Incident Energy (eV)
20-Ca-42

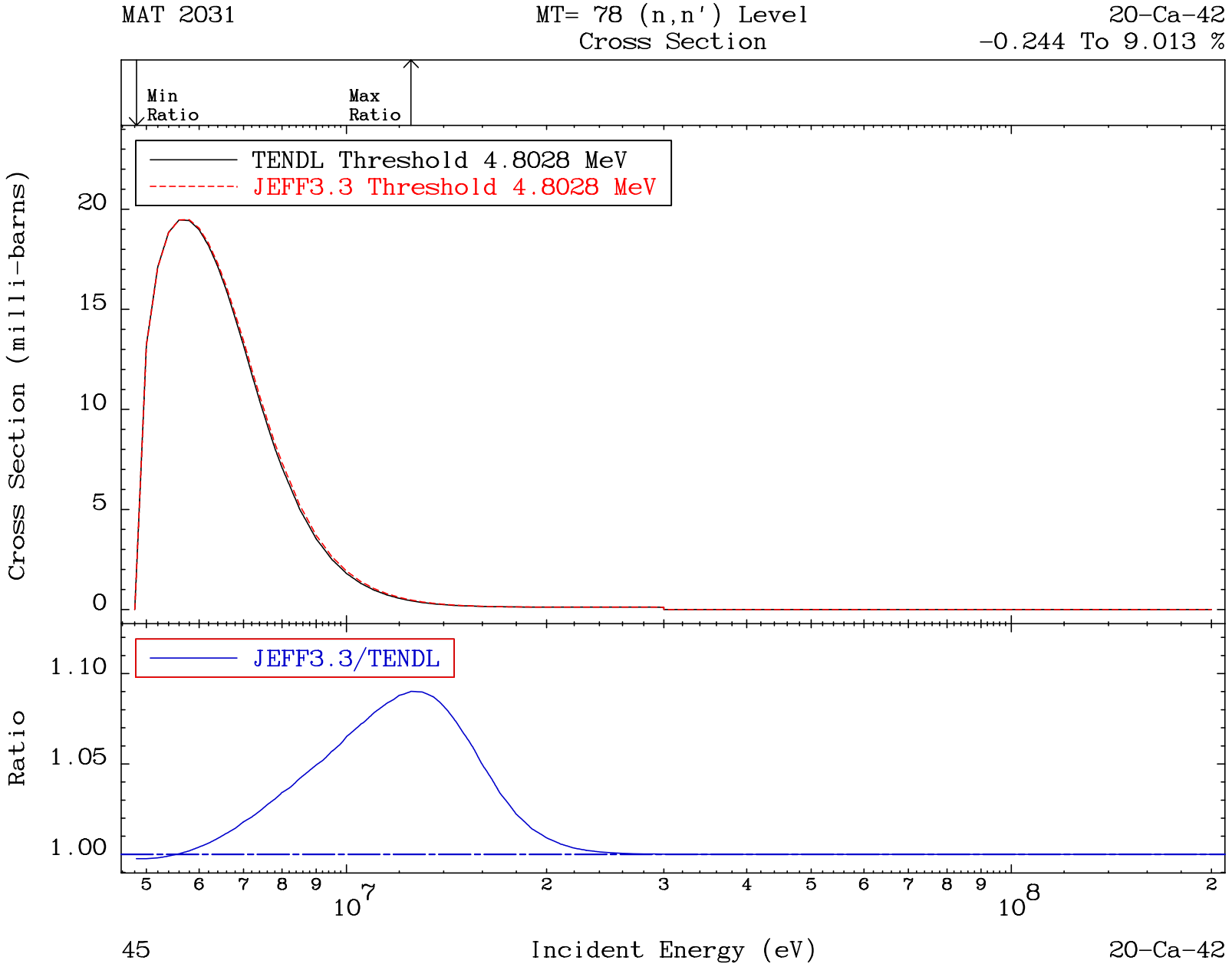

MAT 2031
MT= 73 (n,n') Level
Cross Section
20-Ca-42
-0.487 To 9.061 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.5498 MeV
JEFF3.3 Threshold 4.5498 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
40
Incident Energy (eV)
20-Ca-42

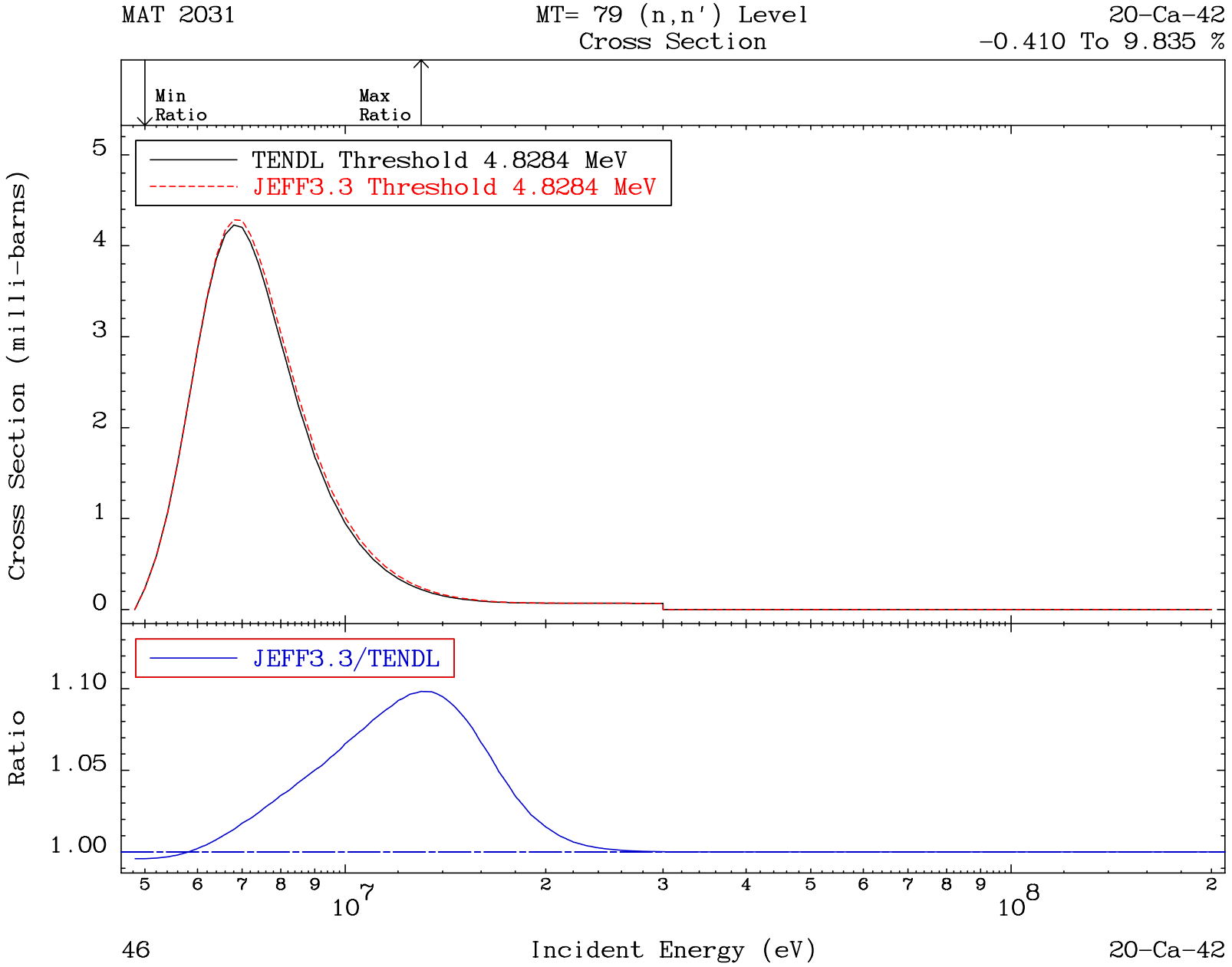

MAT 2031
MT= 74 (n,n') Level
Cross Section
20-Ca-42
-0.215 To 7.247 %
Min Ratio
Max Ratio
TENDL Threshold 4.5558 MeV
JEFF3.3 Threshold 4.5558 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.05
1.00
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
41
Incident Energy (eV)
20-Ca-42

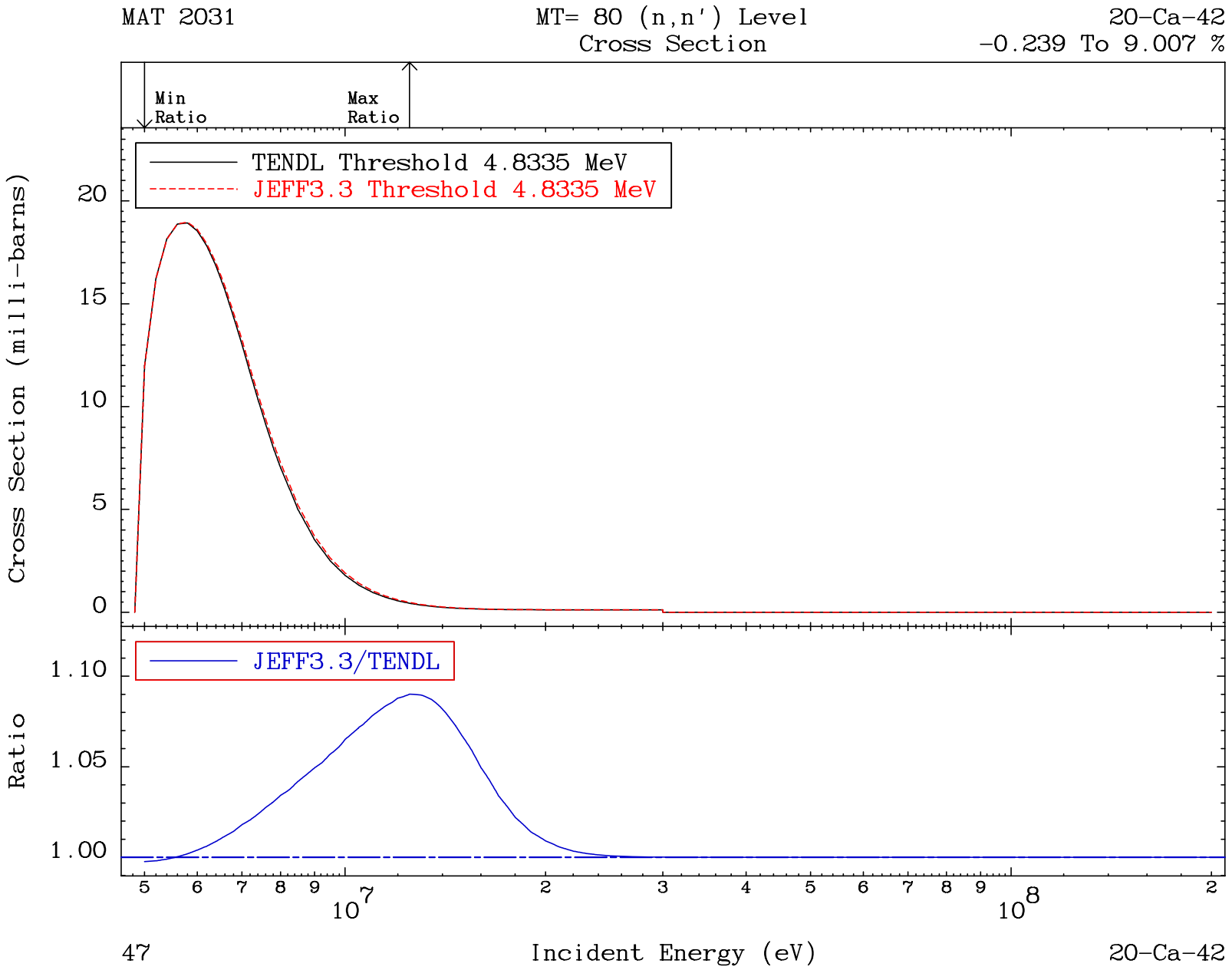

MAT 2031
MT= 75 (n,n') Level
Cross Section
20-Ca-42
-0.218 To 7.253 %
Min Ratio
Max Ratio
TENDL Threshold 4.6133 MeV
JEFF3.3 Threshold 4.6133 MeV
Cross Section (milli-barns)
35
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.05
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
42
Incident Energy (eV)
20-Ca-42

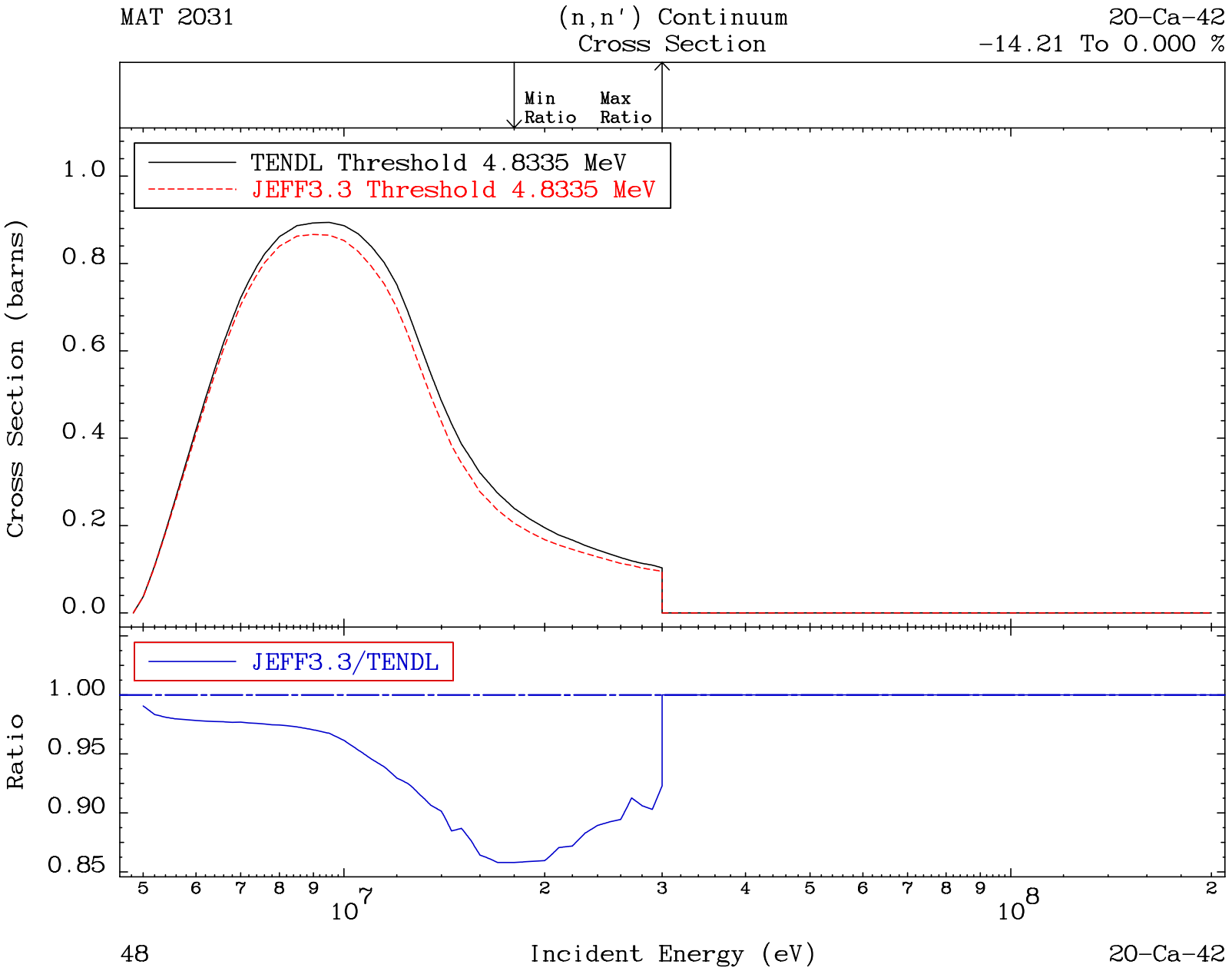

MAT 2031
MT= 76 (n,n') Level
Cross Section
20-Ca-42
-0.223 To 7.260 %
Min Ratio
Max Ratio
TENDL Threshold 4.6768 MeV
JEFF3.3 Threshold 4.6768 MeV
Cross Section (milli-barns)
30
25
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.05
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
20-Ca-42

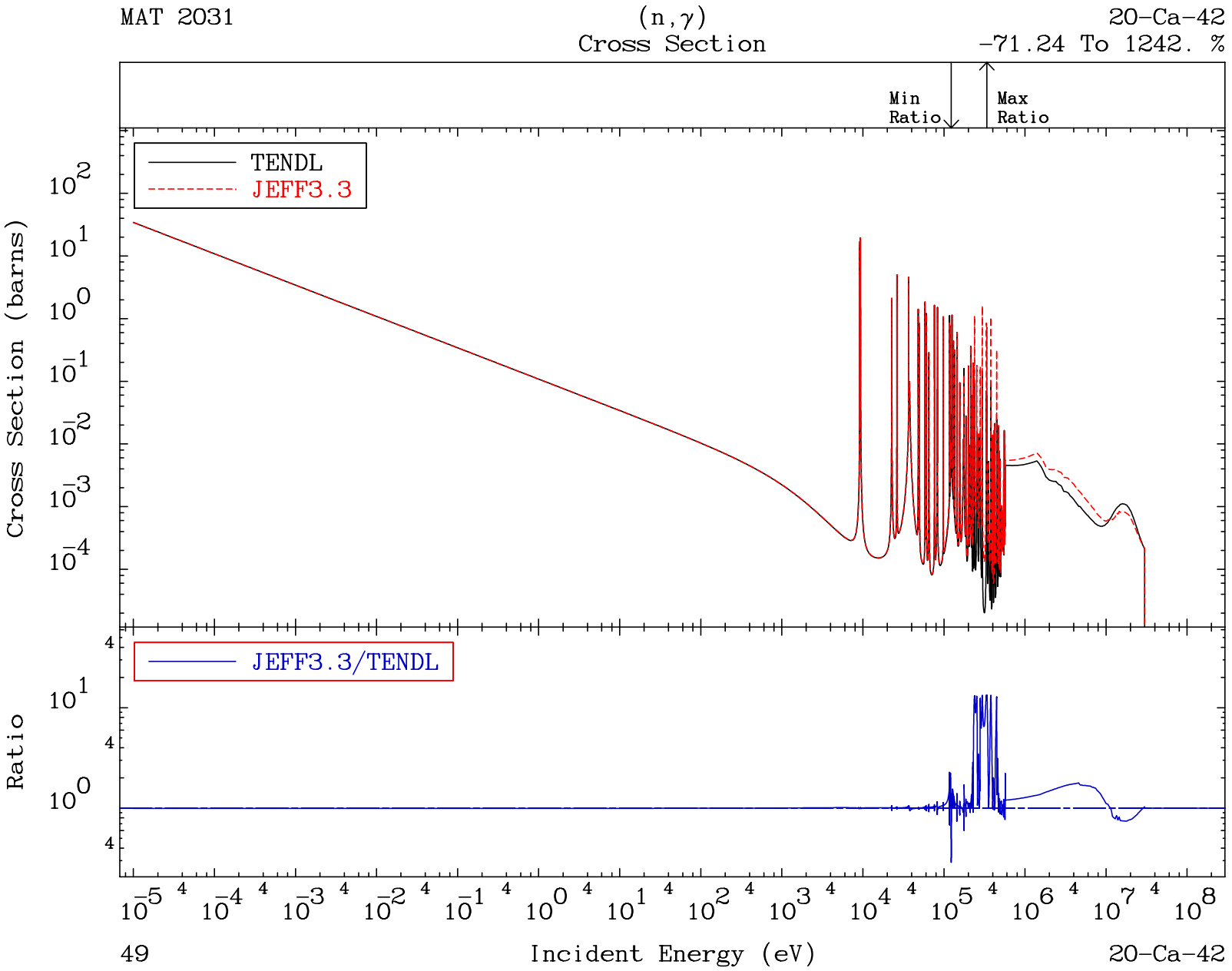

MAT 2031
MT= 77 (n,n') Level
Cross Section
20-Ca-42
-0.358 To 69.36 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.7782 MeV
JEFF3.3 Threshold 4.7782 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.6
1.2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
44
Incident Energy (eV)
20-Ca-42

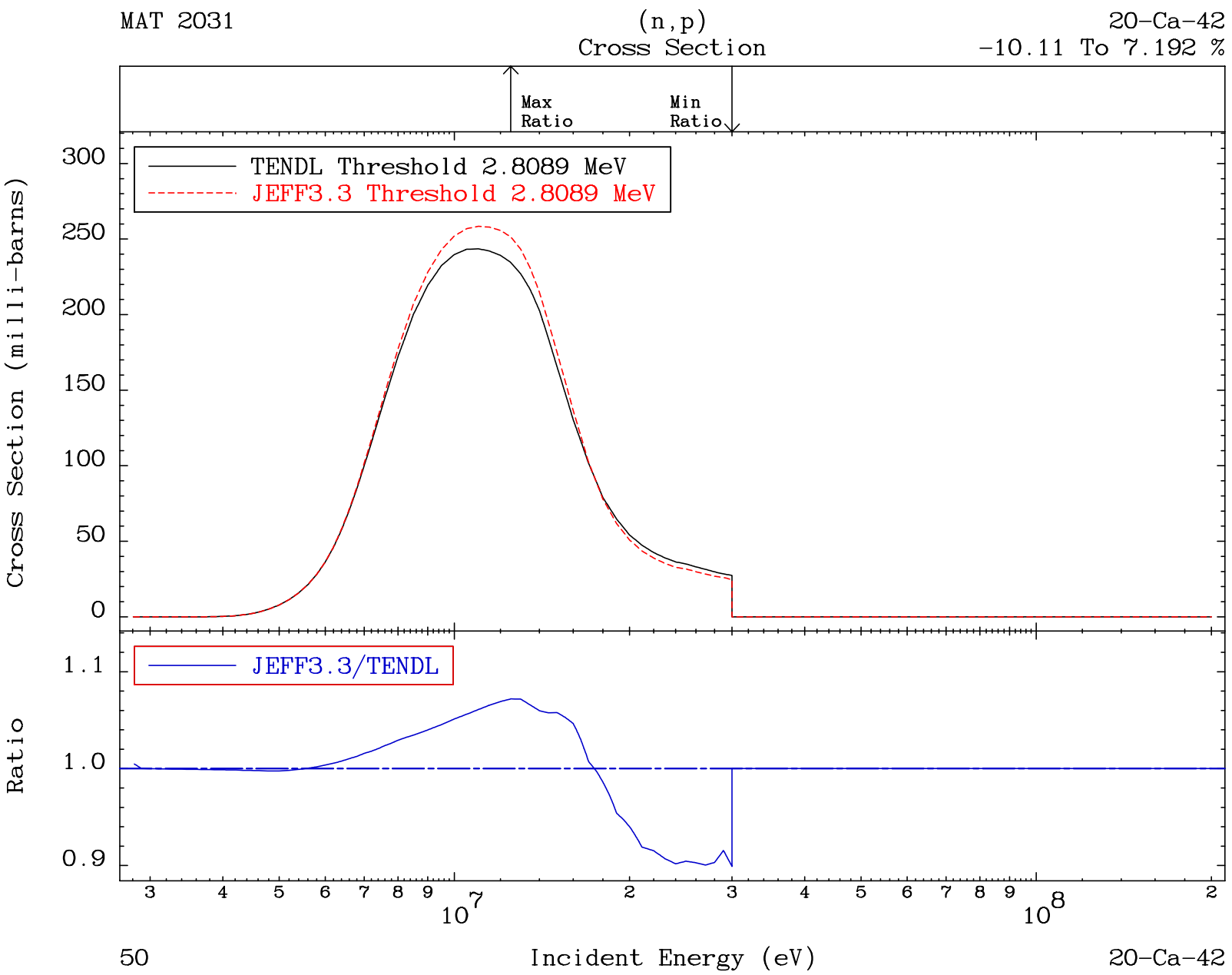

MAT 2031
MT= 78 (n,n') Level
Cross Section
20-Ca-42
-0.244 To 9.013 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.8028 MeV
JEFF3.3 Threshold 4.8028 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
45
Incident Energy (eV)
20-Ca-42

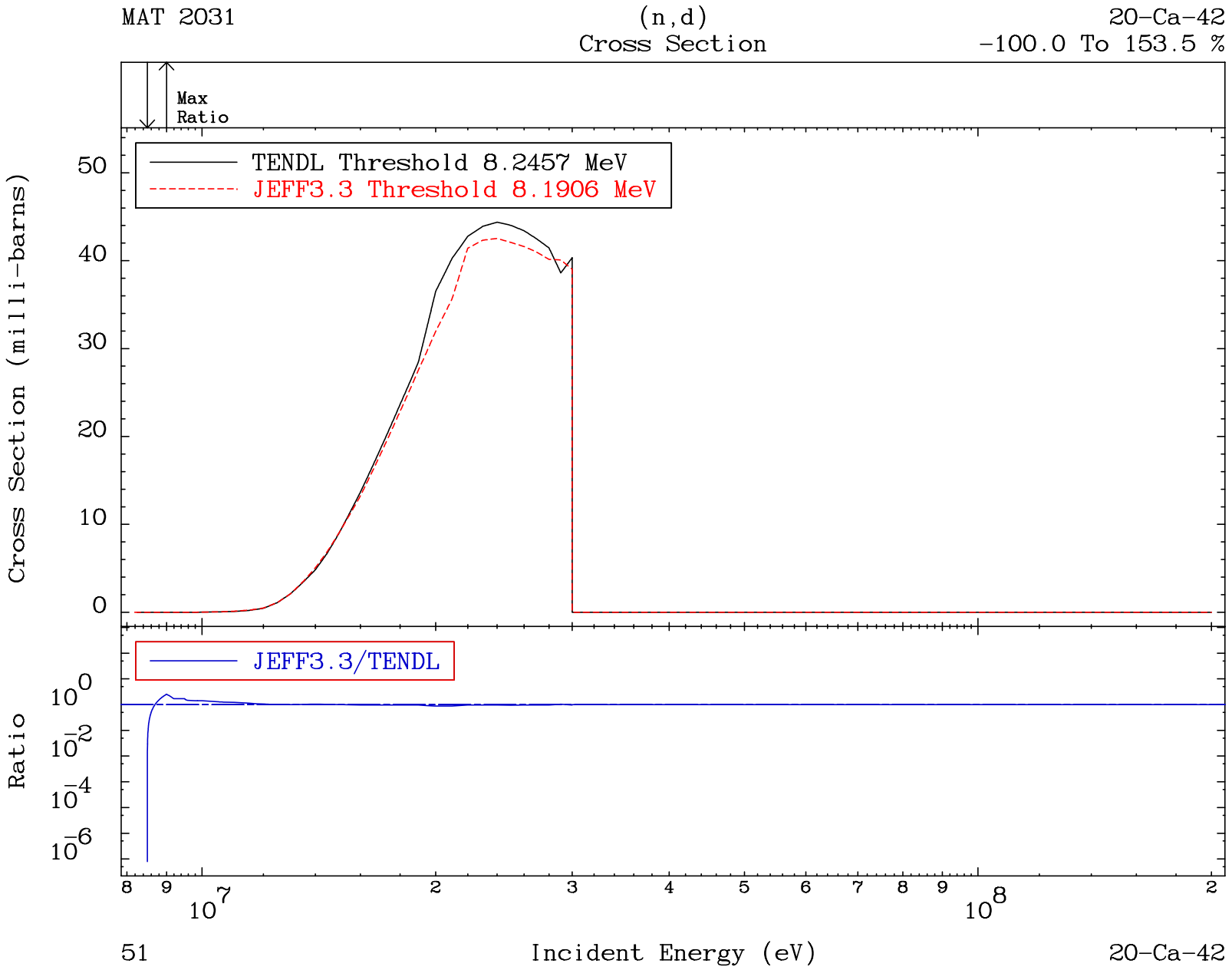

MAT 2031
MT= 79 (n,n') Level
Cross Section
20-Ca-42
-0.410 To 9.835 %
Min Ratio
Max Ratio
TENDL Threshold 4.8284 MeV
JEFF3.3 Threshold 4.8284 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
46
20-Ca-42

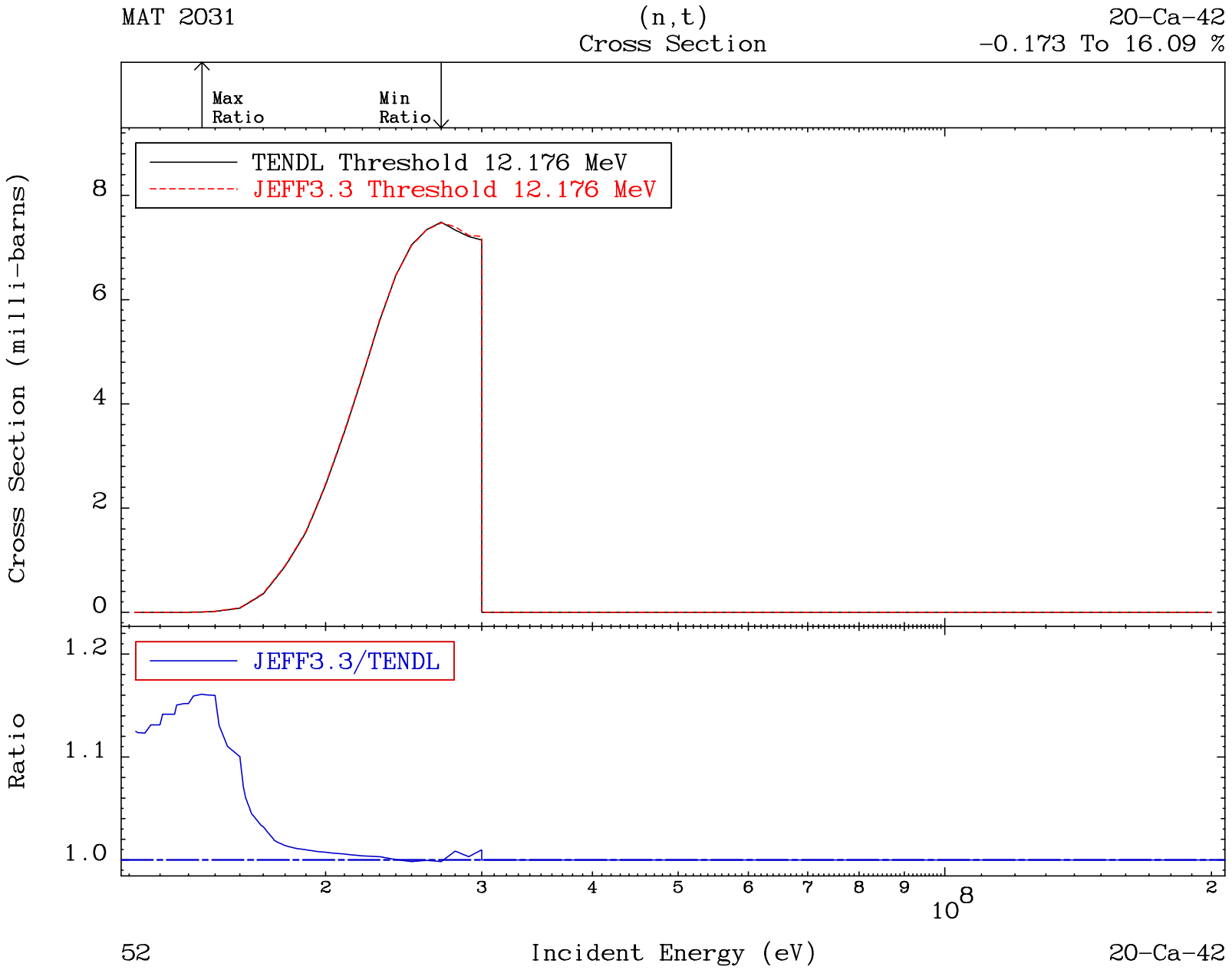

MAT 2031
MT= 80 (n,n') Level
Cross Section
20-Ca-42
-0.239 To 9.007 %
Min Ratio
Max Ratio
TENDL Threshold 4.8335 MeV
JEFF3.3 Threshold 4.8335 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
47
Incident Energy (eV)
20-Ca-42

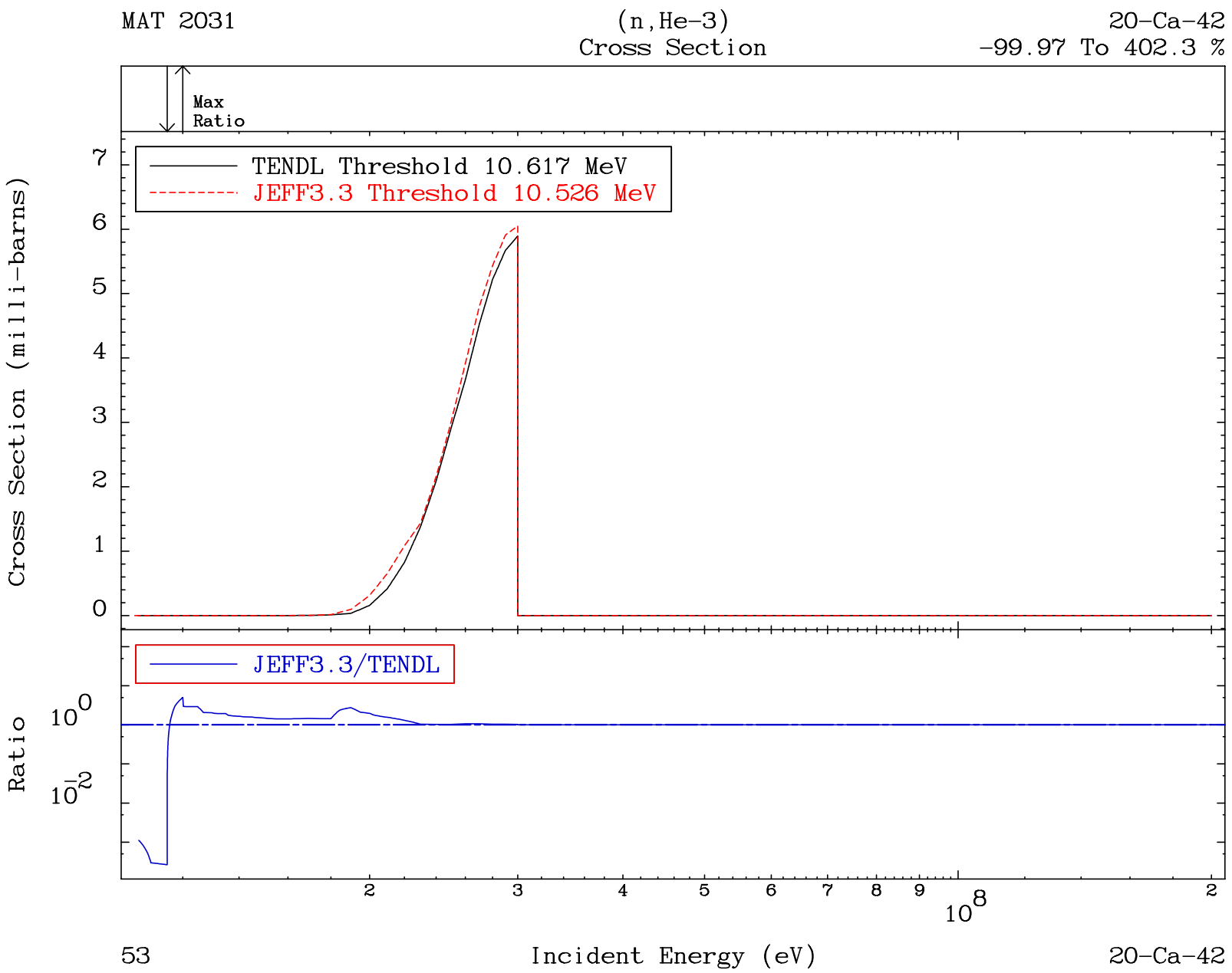

MAT 2031
(n,n') Continuum
Cross Section
20-Ca-42
-14.21 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 4.8335 MeV
JEFF3.3 Threshold 4.8335 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.00
0.95
0.90
0.85
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
48
Incident Energy (eV)
20-Ca-42

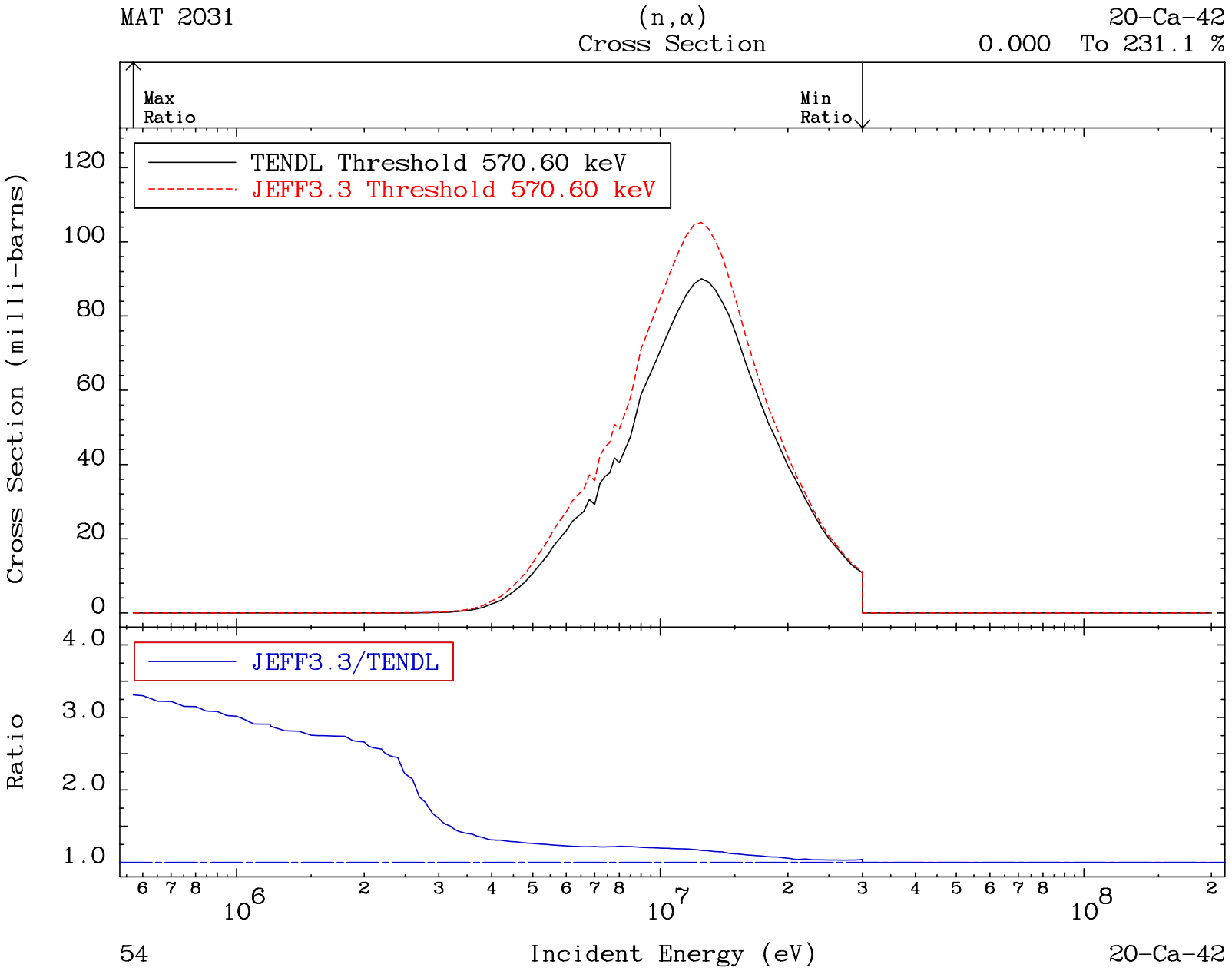

MAT 2031
(n,γ)
Cross Section
20-Ca-42
-71.24 To 1242. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
49
20-Ca-42

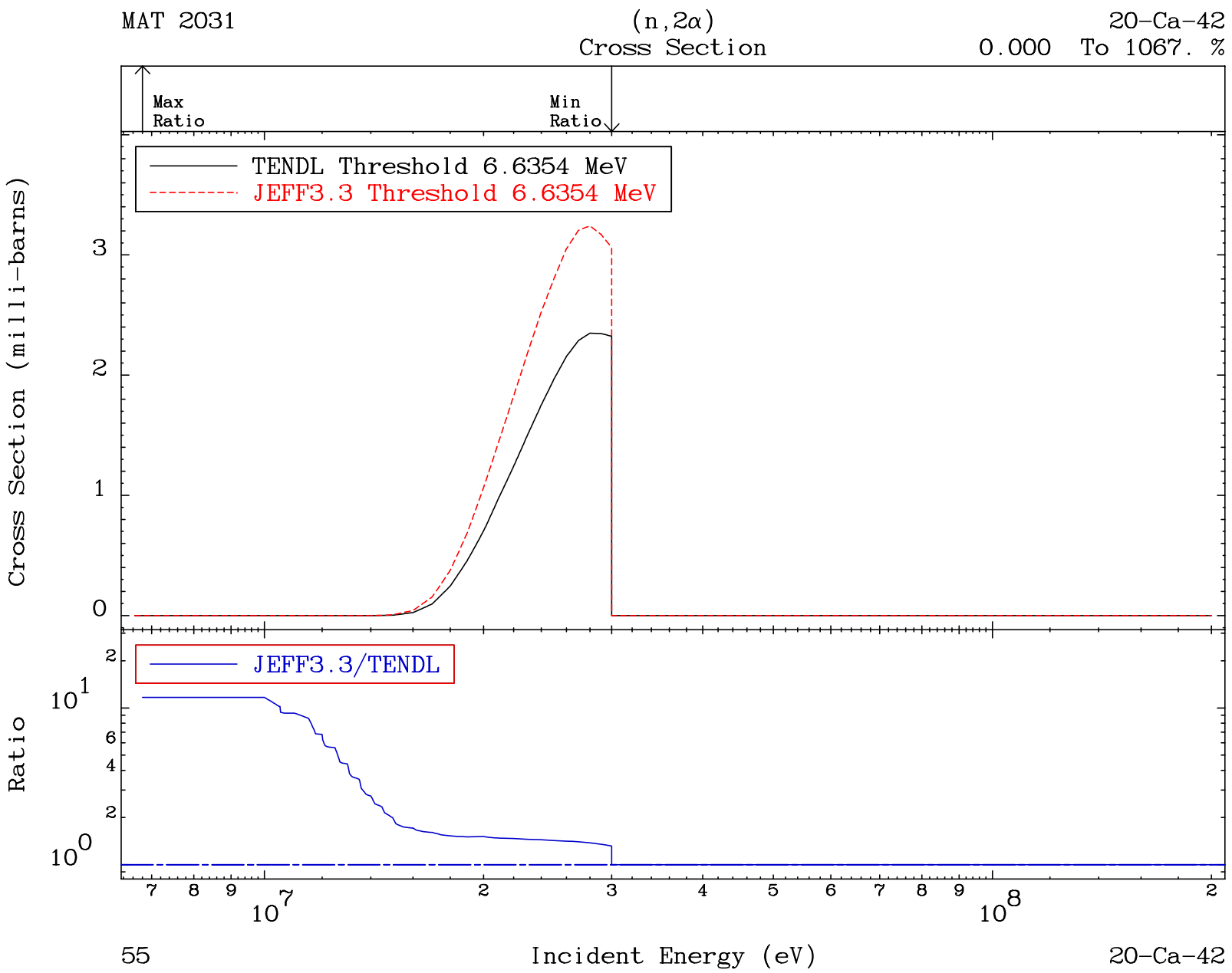

MAT 2031
(n,p)
Cross Section
20-Ca-42
-10.11 To 7.192 %
Max Ratio
Min Ratio
TENDL Threshold 2.8089 MeV
JEFF3.3 Threshold 2.8089 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.1
1.0
0.9
3 4 5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
50
Incident Energy (eV)
20-Ca-42

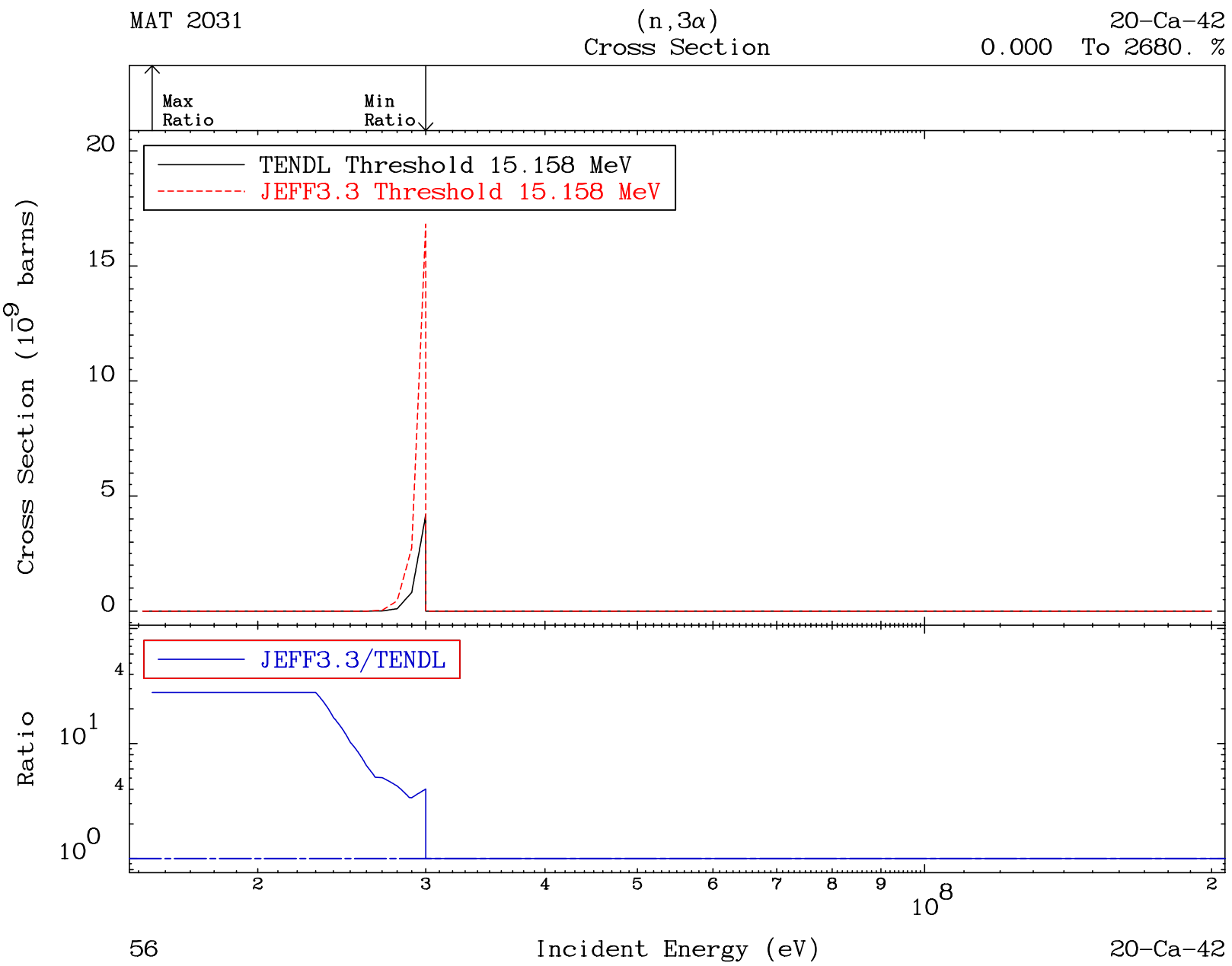

MAT 2031
(n,d)
Cross Section
20-Ca-42
-100.0 To 153.5 %
Max
Ratio
TENDL Threshold 8.2457 MeV
JEFF3.3 Threshold 8.1906 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
10^0
10^-2
10^-4
10^-6
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
51
Incident Energy (eV)
20-Ca-42

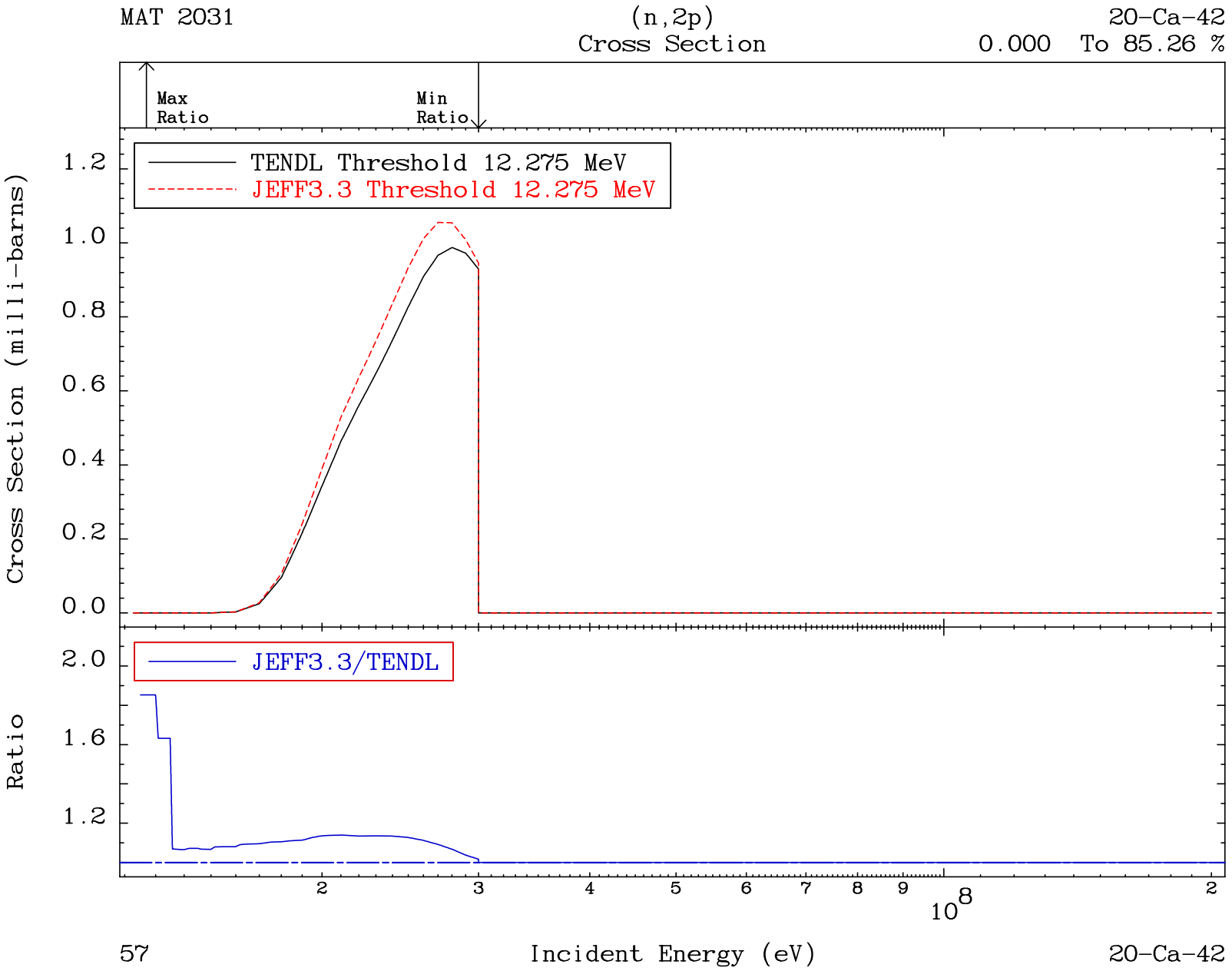

MAT 2031
(n,t)
Cross Section
20-Ca-42
-0.173 To 16.09 %
Max Ratio
Min Ratio
TENDL Threshold 12.176 MeV
JEFF3.3 Threshold 12.176 MeV
Cross Section (milli-barns)
0
2
4
6
8
JEFF3.3/TENDL
Ratio
1.0
1.1
1.2
2
3
4
5
6
7
8
9
2
10^8
52
Incident Energy (eV)
20-Ca-42

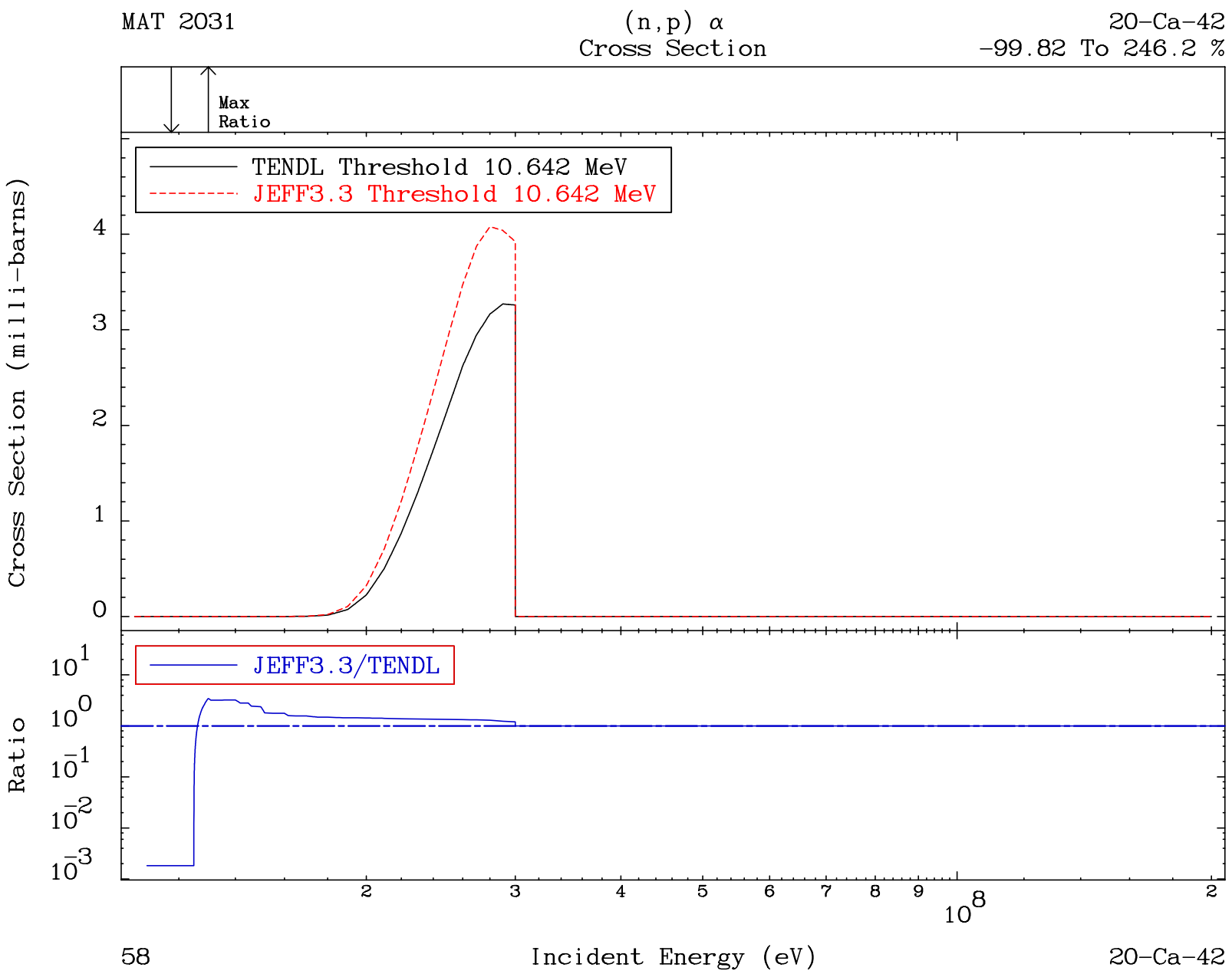

MAT 2031
(n,He-3)
Cross Section
20-Ca-42
-99.97 To 402.3 %
Max
Ratio
TENDL Threshold 10.617 MeV
JEFF3.3 Threshold 10.526 MeV
Cross Section (milli-barns)
0
1
2
3
4
5
6
7
JEFF3.3/TENDL
Ratio
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
53
Incident Energy (eV)
20-Ca-42

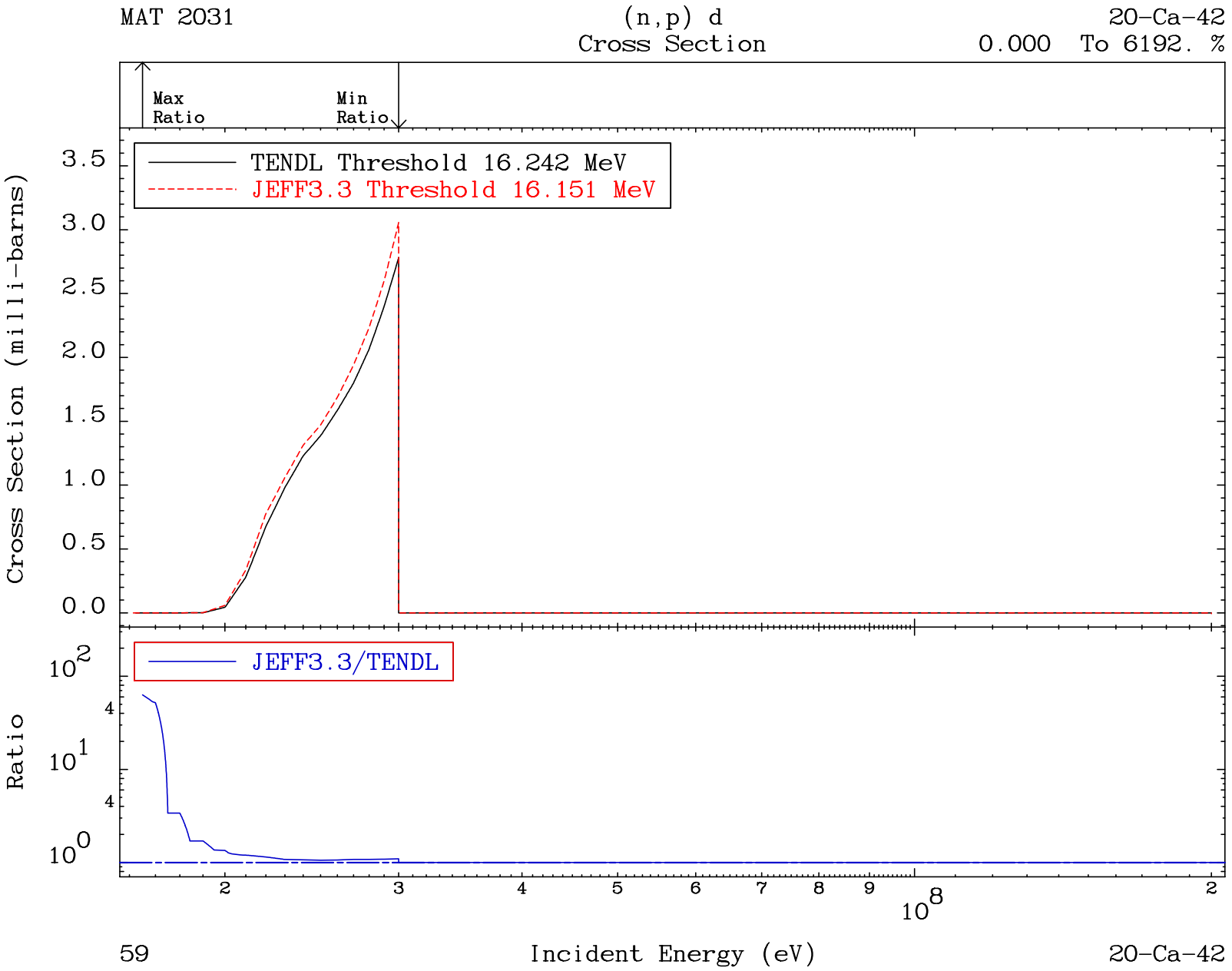

MAT 2031
(n,α)
Cross Section
20-Ca-42
0.000 To 231.1 %
Max Ratio
Min Ratio
TENDL Threshold 570.60 keV
JEFF3.3 Threshold 570.60 keV
Cross Section (milli-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
4.0
3.0
2.0
1.0
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
54
Incident Energy (eV)
20-Ca-42

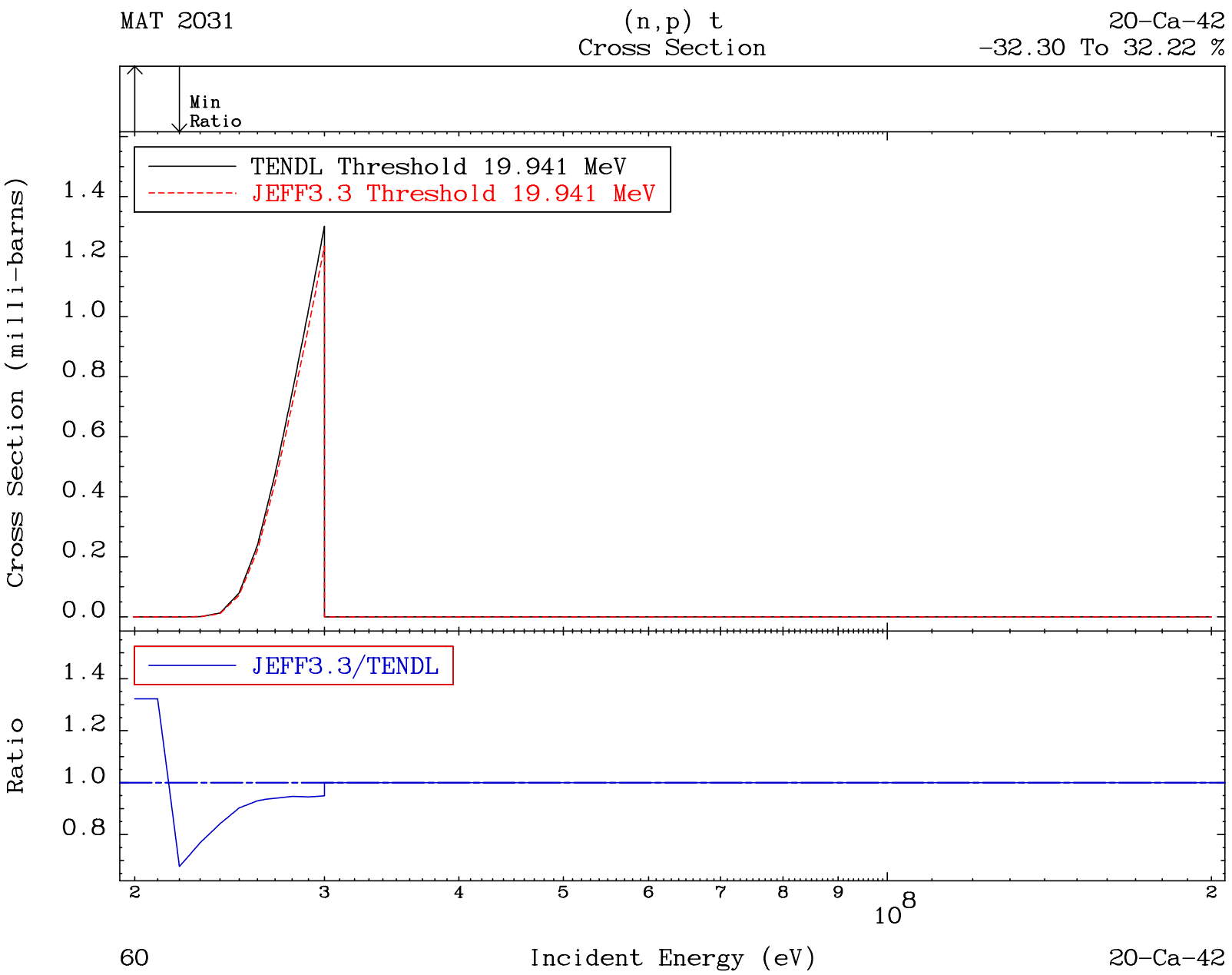

MAT 2031
(n,2α)
Cross Section
20-Ca-42
0.000 To 1067. %
Max Ratio
Min Ratio
TENDL Threshold 6.6354 MeV
JEFF3.3 Threshold 6.6354 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
55
20-Ca-42

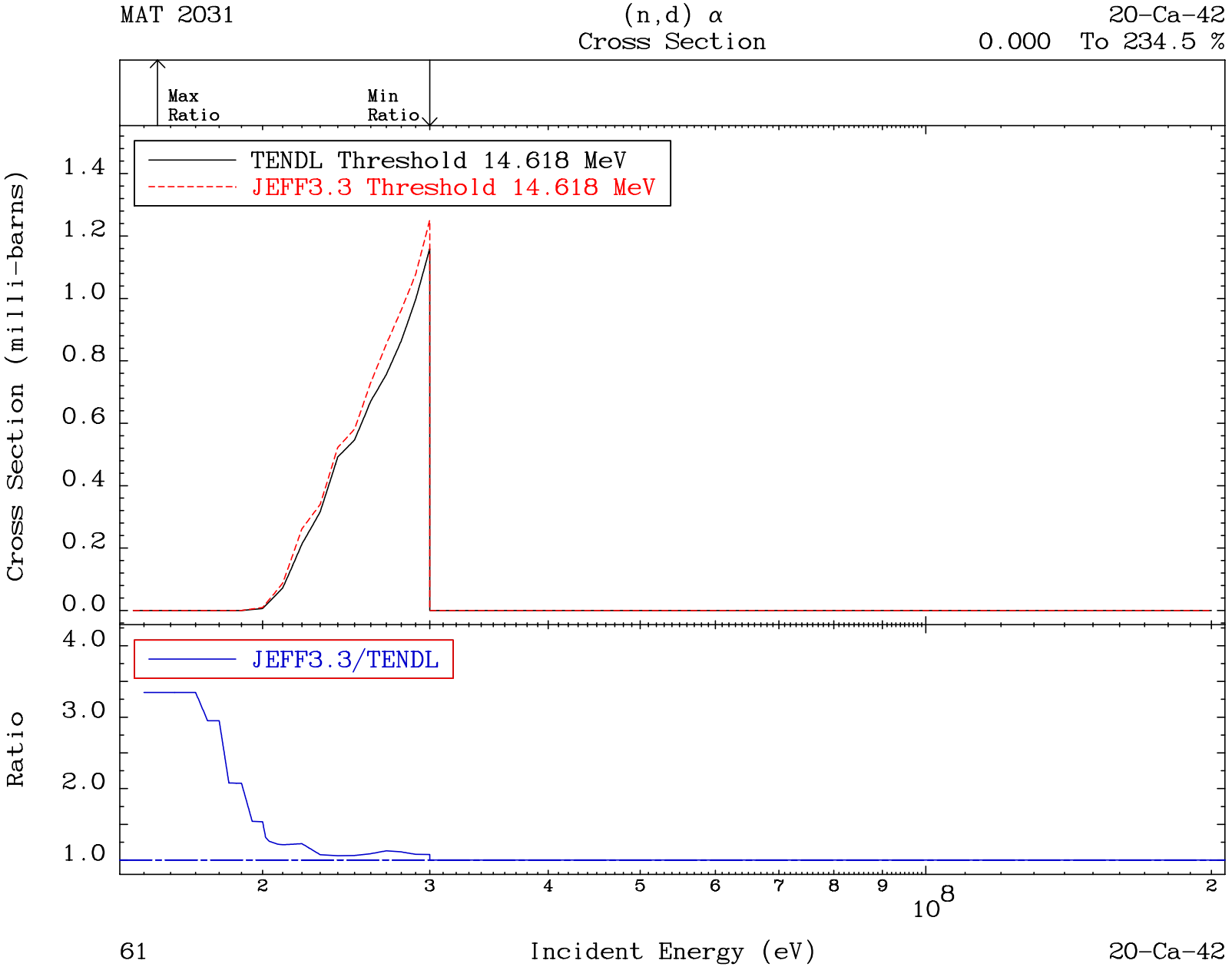

MAT 2031
(n,3α)
Cross Section
20-Ca-42
0.000 To 2680. %
Max Ratio
Min Ratio
TENDL Threshold 15.158 MeV
JEFF3.3 Threshold 15.158 MeV
Cross Section (10^{-9} barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
10^{1}
10^{0}
4
4
2
3
4
5
6
7
8
9
10^{8}
2
56
Incident Energy (eV)
20-Ca-42

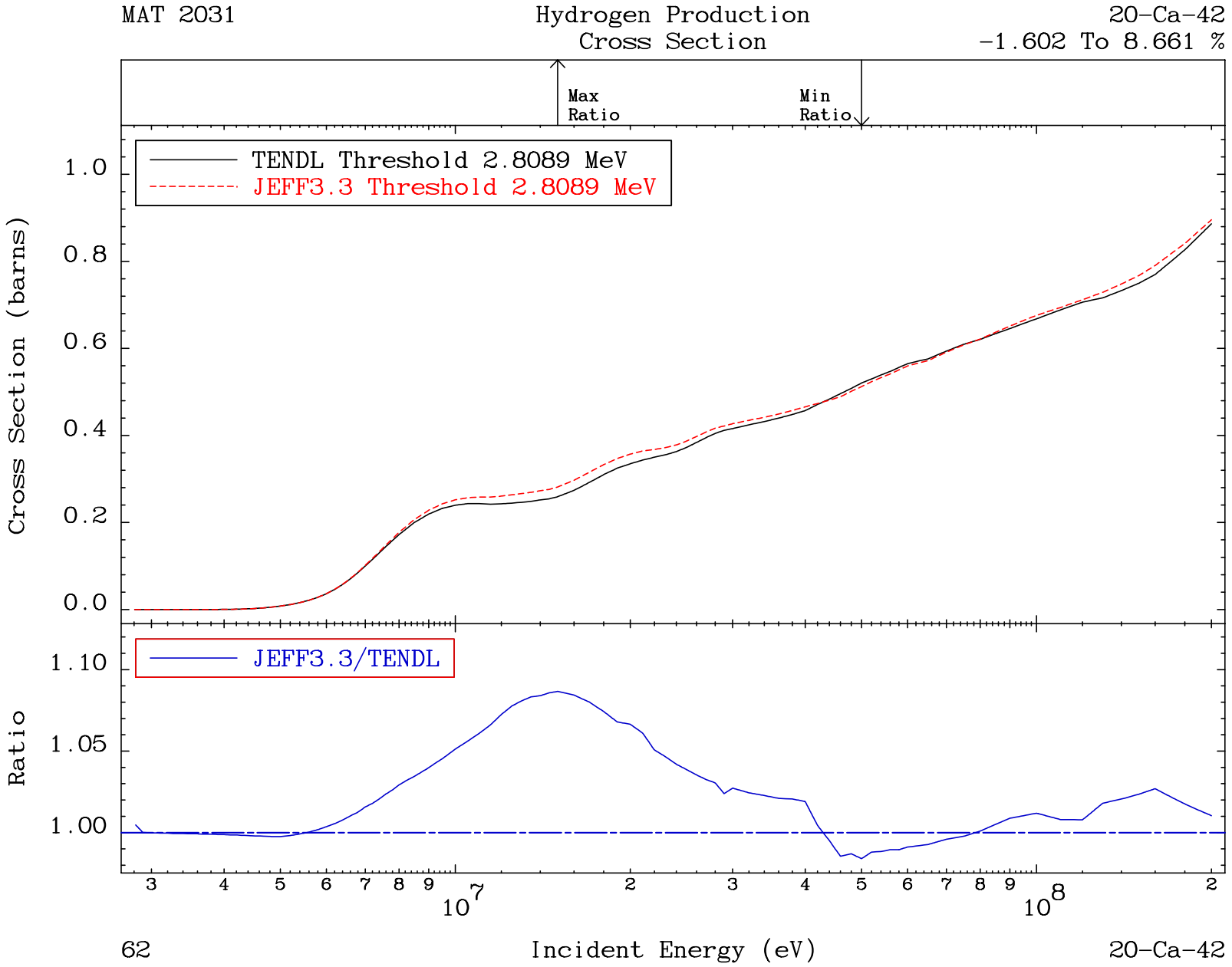

MAT 2031
(n,2p)
Cross Section
20-Ca-42
0.000 To 85.26 %
Max Ratio
Min Ratio
TENDL Threshold 12.275 MeV
JEFF3.3 Threshold 12.275 MeV
Cross Section (milli-barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
2.0
1.6
1.2
2
3
4
5
6
7
8
9
10^8
2
57
Incident Energy (eV)
20-Ca-42

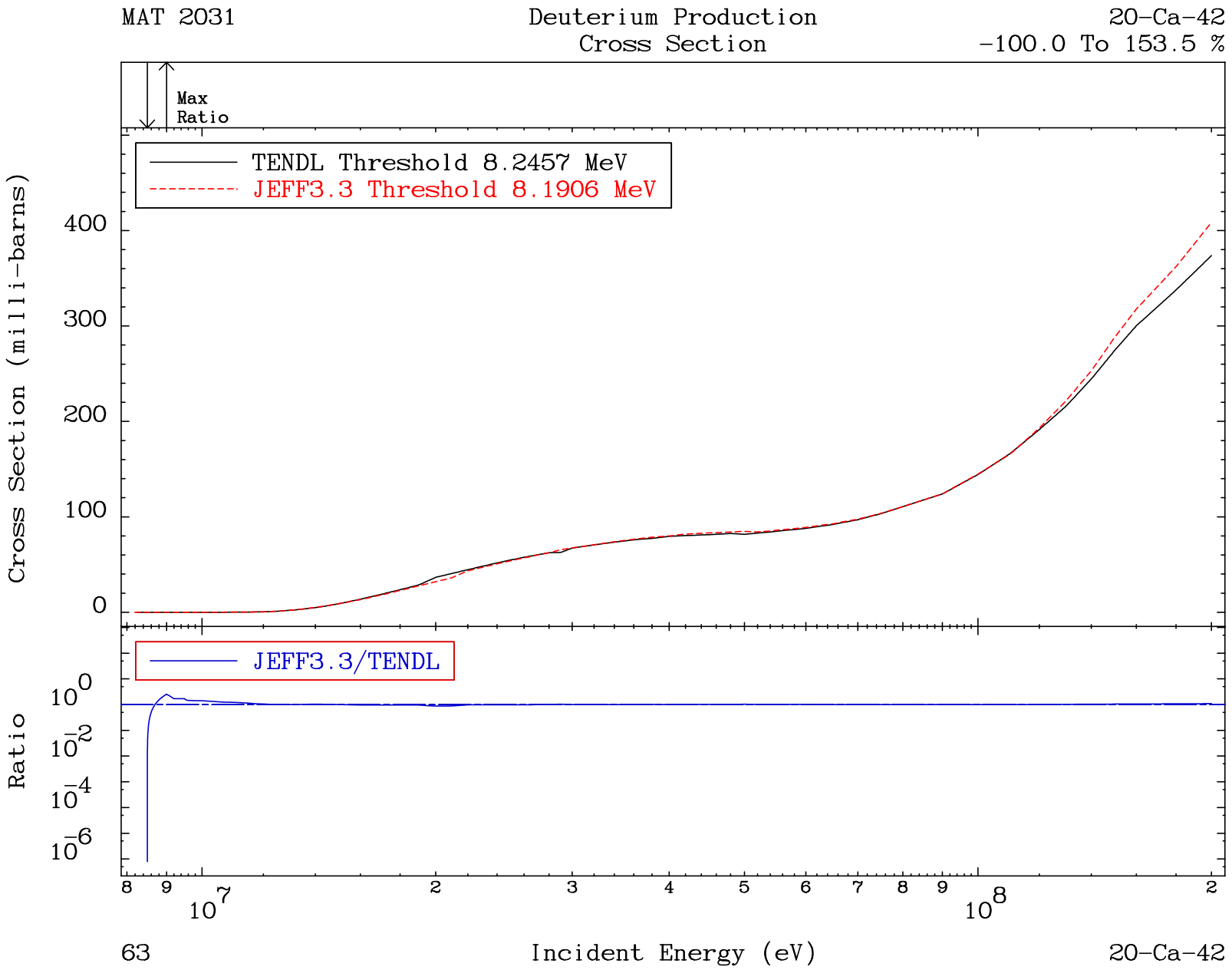

MAT 2031
(n,p) α
Cross Section
20-Ca-42
-99.82 To 246.2 %
Max
Ratio
TENDL Threshold 10.642 MeV
JEFF3.3 Threshold 10.642 MeV
Cross Section (milli-barns)
0
1
2
3
4
JEFF3.3/TENDL
Ratio
10^1
10^0
10^-1
10^-2
10^-3
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
20-Ca-42

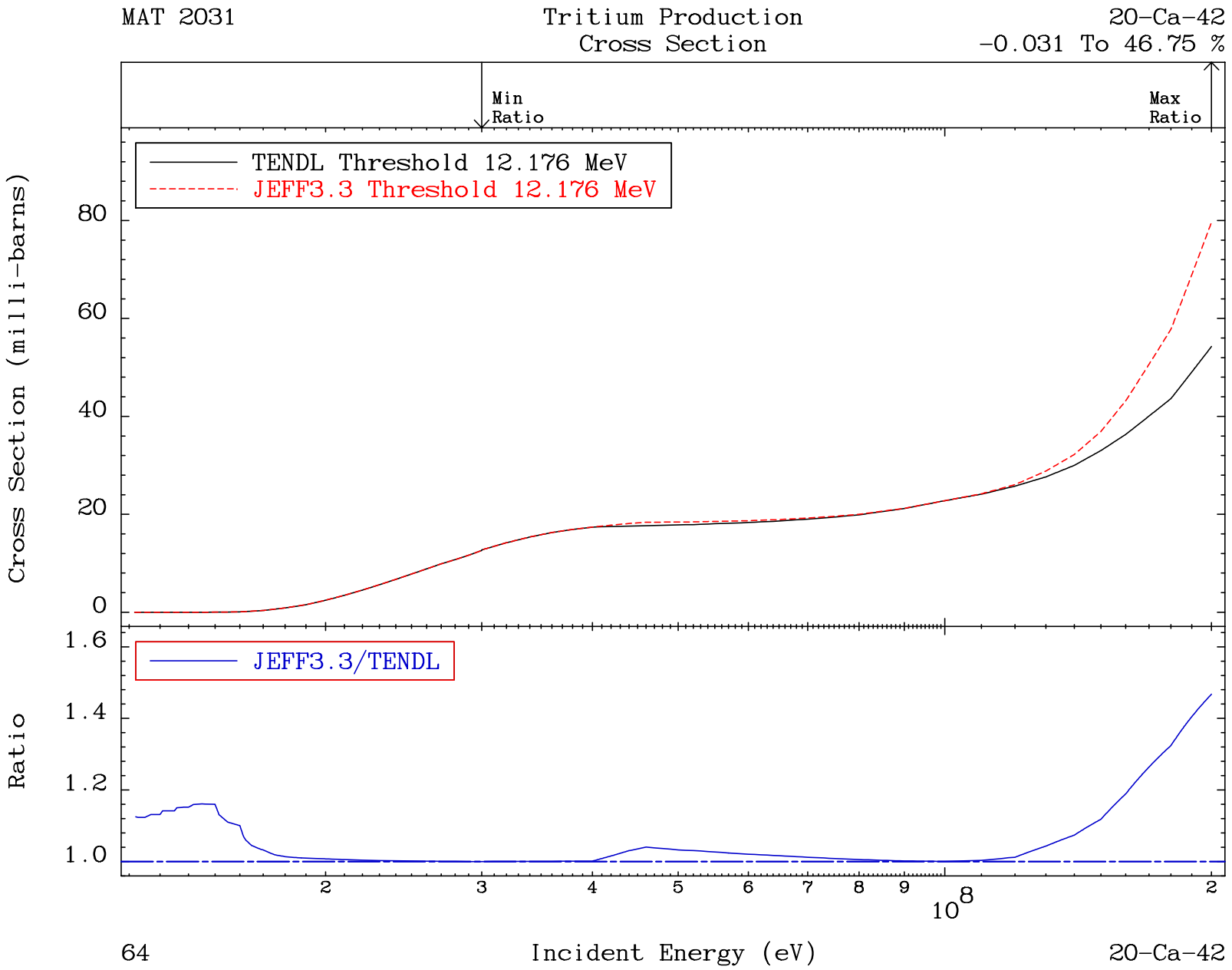

MAT 2031
(n,p) d
Cross Section
20-Ca-42
0.000 To 6192. %
Max Ratio
Min Ratio
TENDL Threshold 16.242 MeV
JEFF3.3 Threshold 16.151 MeV
Cross Section (milli-barns)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^2
10^1
10^0
2
3
4
5
6
7
8
9
10^8
2
59
Incident Energy (eV)
20-Ca-42

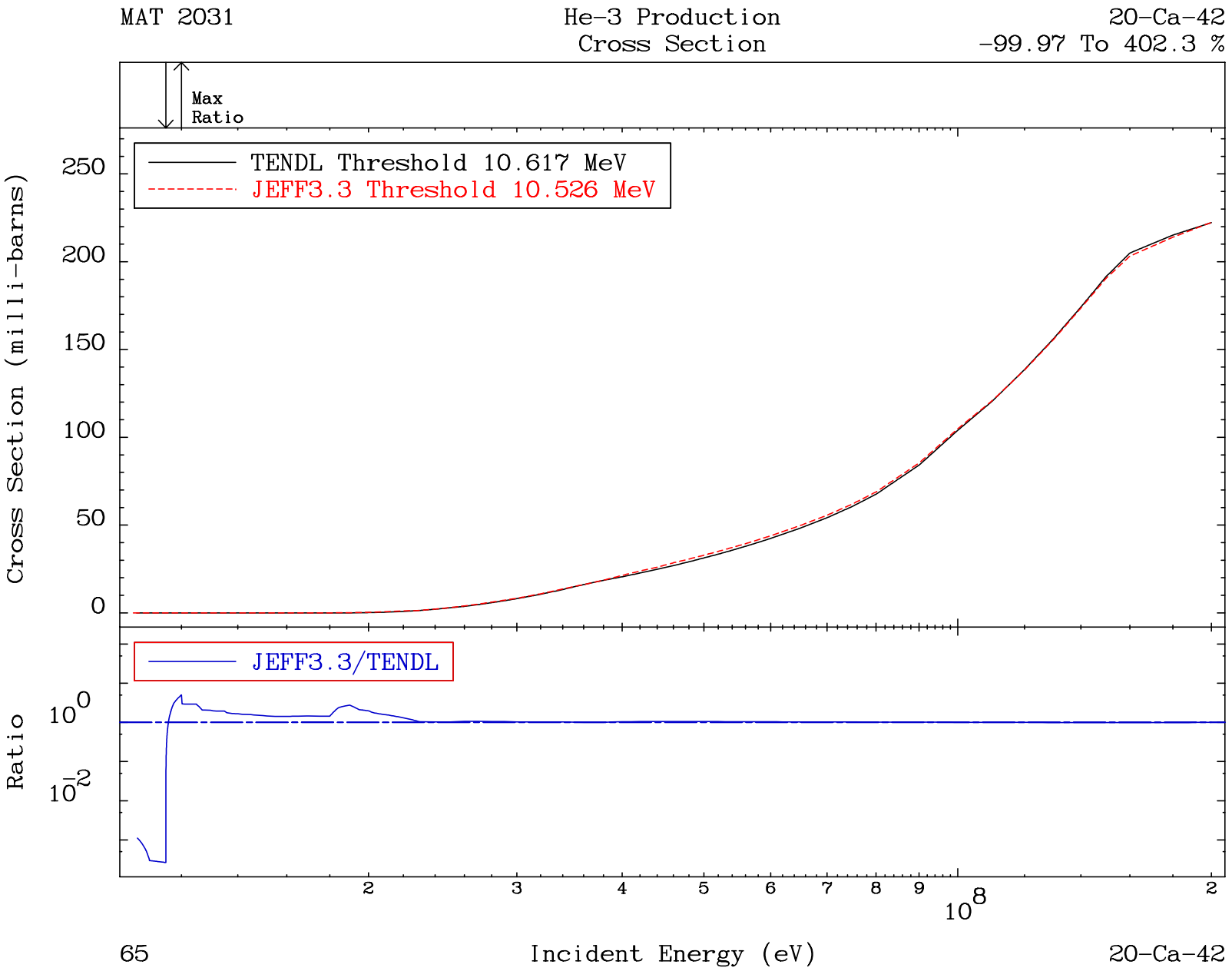

MAT 2031
(n,p) t
Cross Section
20-Ca-42
-32.30 To 32.22 %
Min
Ratio
TENDL Threshold 19.941 MeV
JEFF3.3 Threshold 19.941 MeV
Cross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.4
1.2
1.0
0.8
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
20-Ca-42

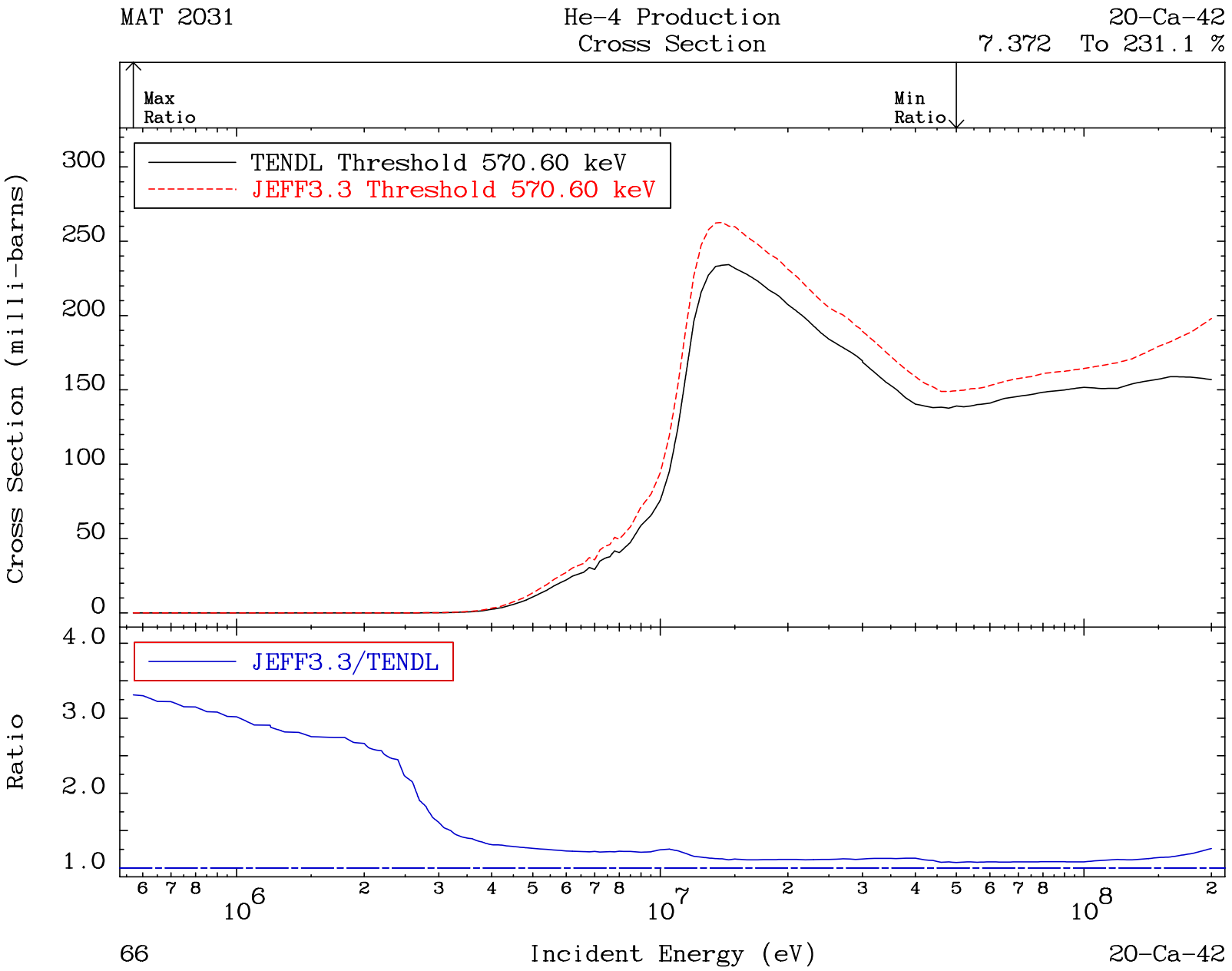

MAT 2031
(n,d) α
Cross Section
20-Ca-42
0.000 To 234.5 %
Max Ratio
Min Ratio
TENDL Threshold 14.618 MeV
JEFF3.3 Threshold 14.618 MeV
Cross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
61
Incident Energy (eV)
20-Ca-42

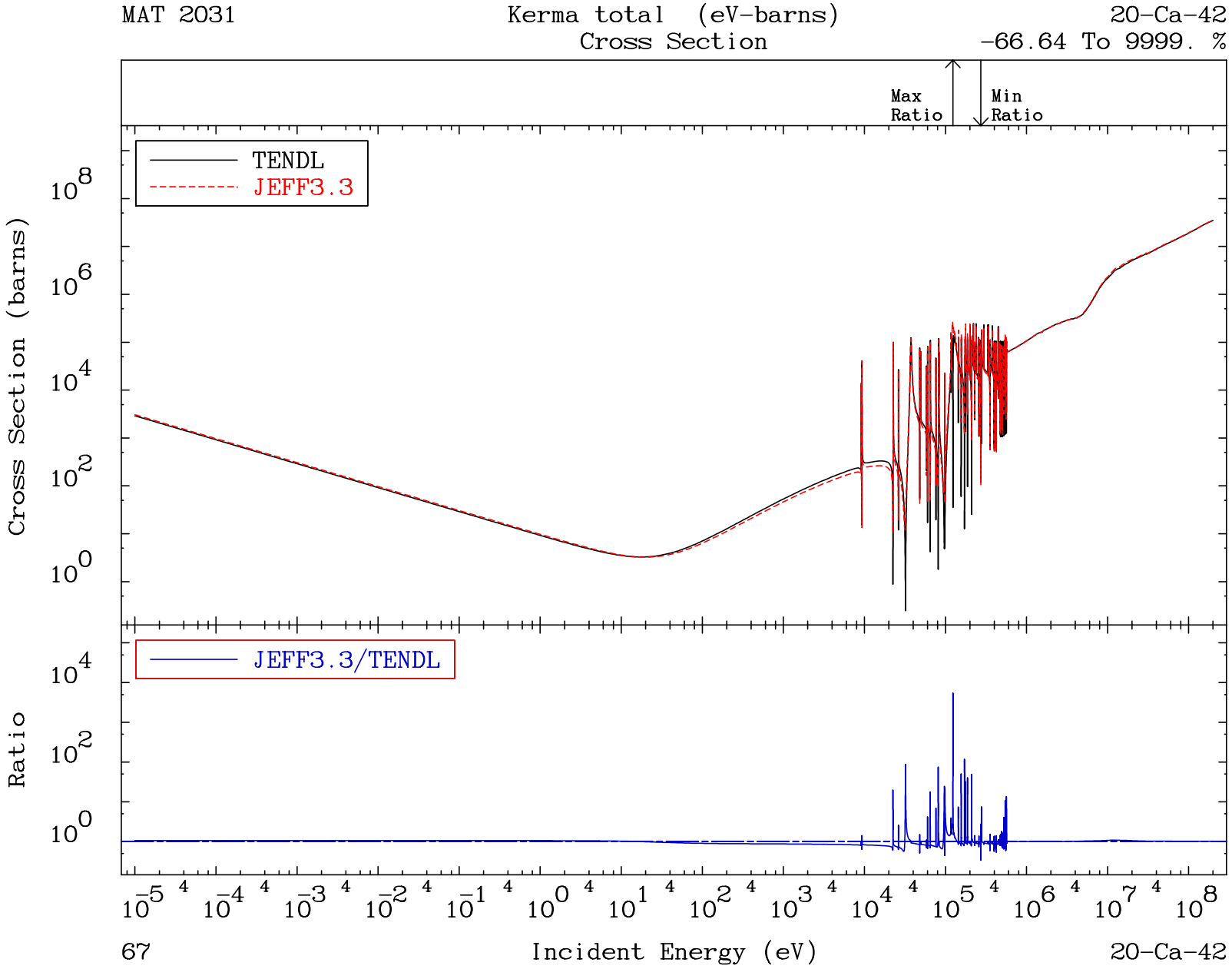

MAT 2031
Hydrogen Production
Cross Section
20-Ca-42
-1.602 To 8.661 %
Max
Ratio
Min
Ratio
TENDL Threshold 2.8089 MeV
JEFF3.3 Threshold 2.8089 MeV
Cross Section (barns)
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
1.10
1.05
1.00
3 4 5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
62
Incident Energy (eV)
20-Ca-42

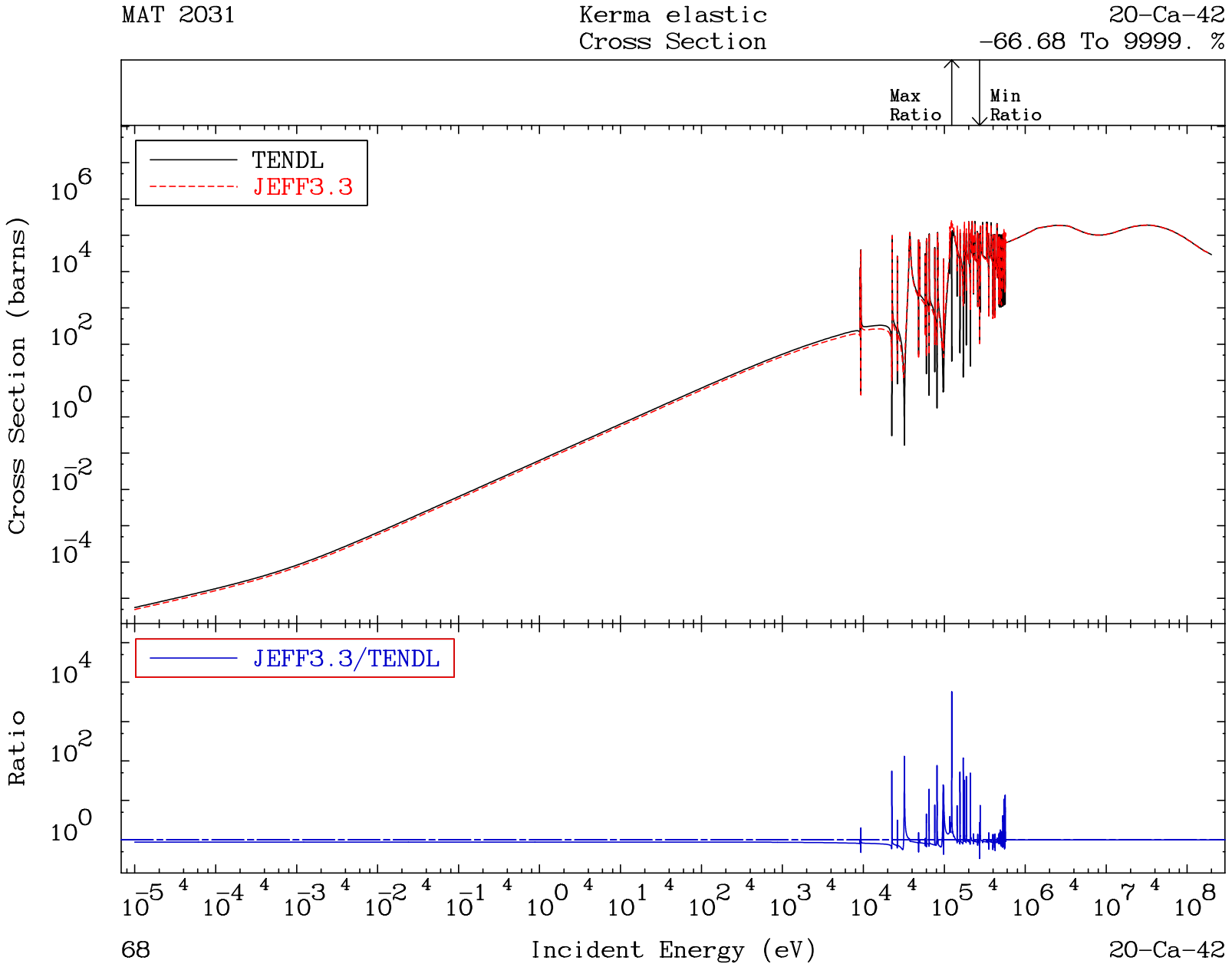

MAT 2031
Deuterium Production
Cross Section
20-Ca-42
-100.0 To 153.5 %
Max
Ratio
TENDL Threshold 8.2457 MeV
JEFF3.3 Threshold 8.1906 MeV
Cross Section (milli-barns)
400
300
200
100
0
JEFF3.3/TENDL
Ratio
10^0
10^-2
10^-4
10^-6
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
63
Incident Energy (eV)
20-Ca-42

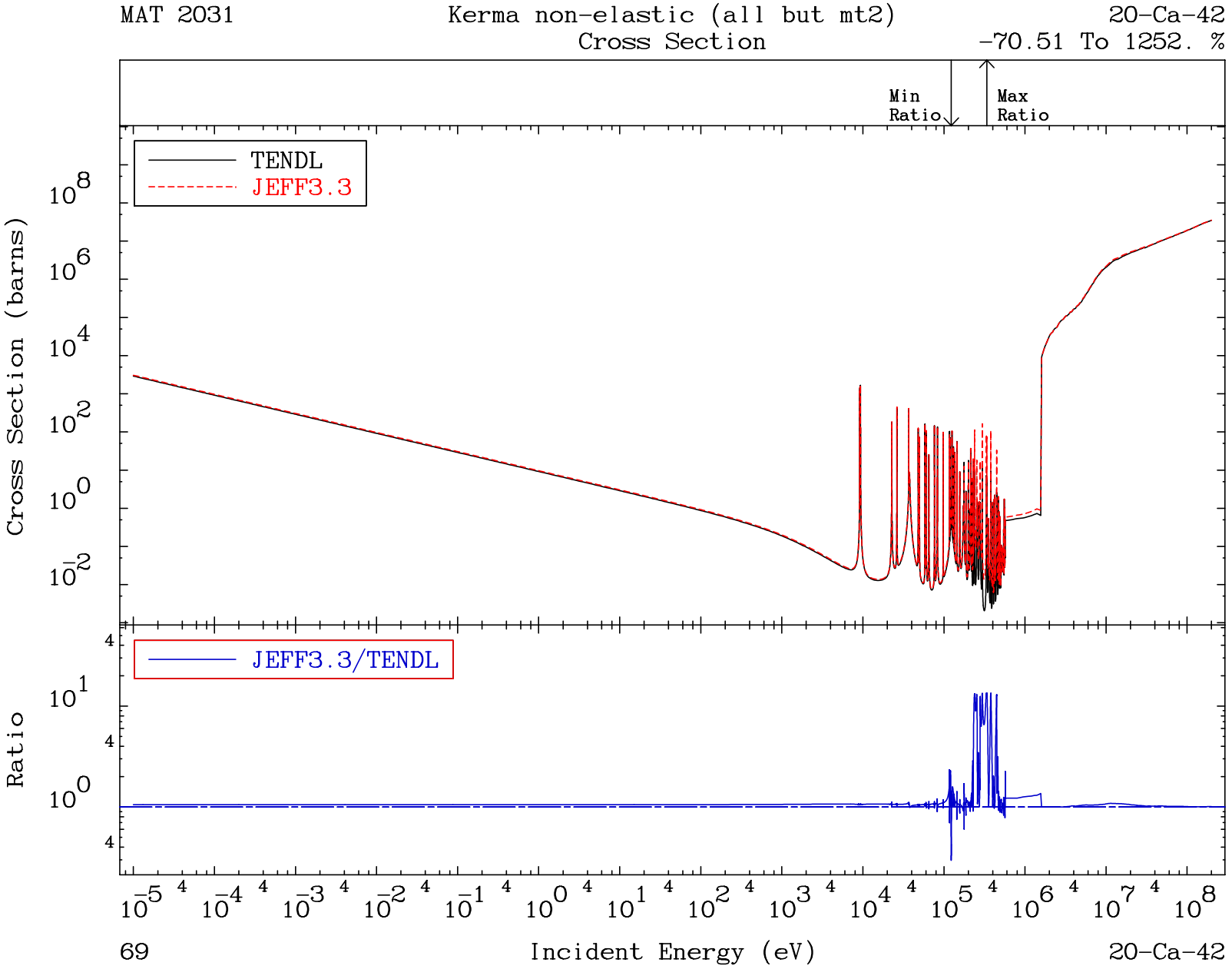

MAT 2031
Tritium Production
Cross Section
20-Ca-42
-0.031 To 46.75 %
Min
Ratio
Max
Ratio
TENDL Threshold 12.176 MeV
JEFF3.3 Threshold 12.176 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
20-Ca-42

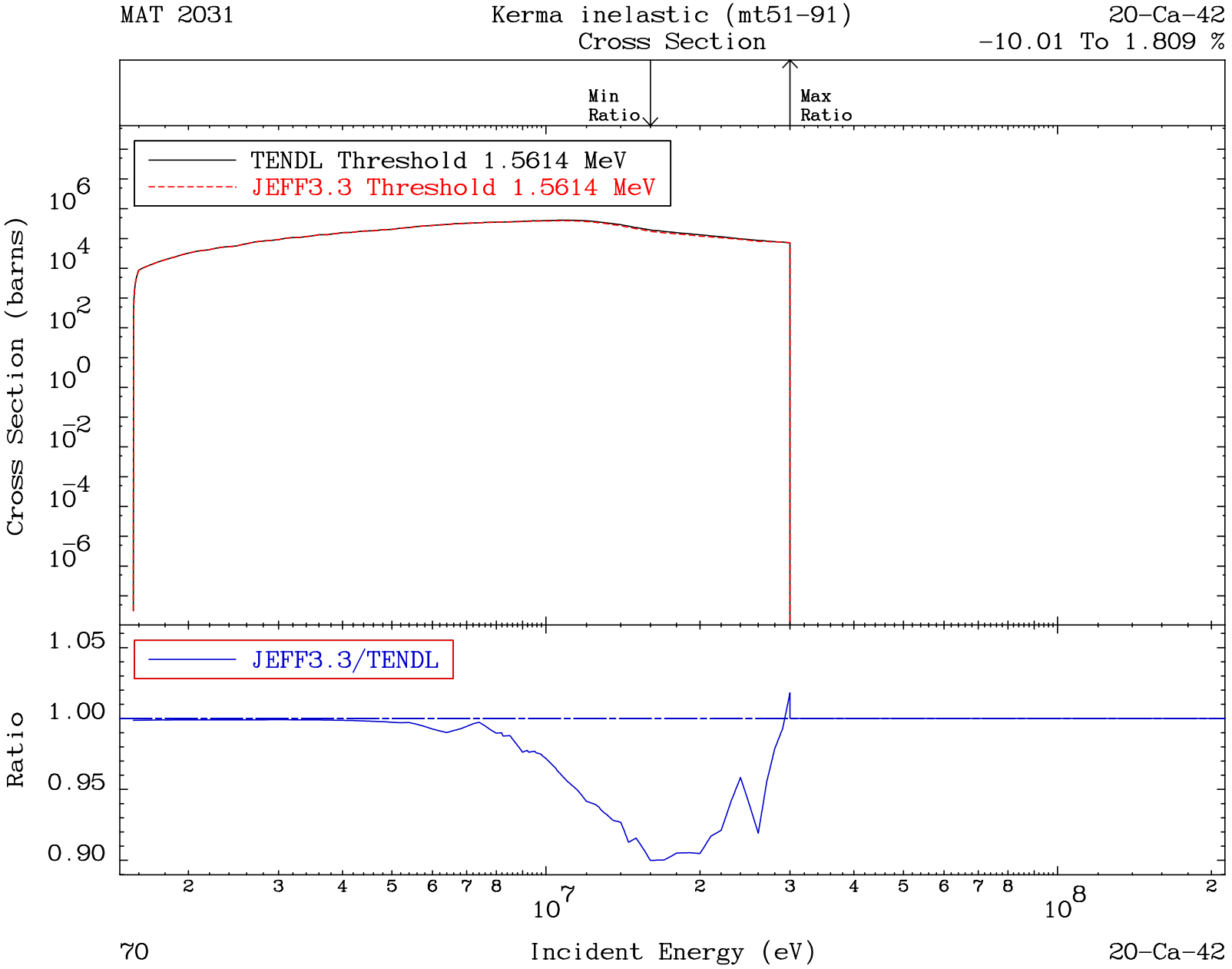

MAT 2031
He-3 Production
Cross Section
20-Ca-42
-99.97 To 402.3 %
Max
Ratio
TENDL Threshold 10.617 MeV
JEFF3.3 Threshold 10.526 MeV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^0
10^-2
2
3
4
5
6
7
8
9
10^8
2
65
Incident Energy (eV)
20-Ca-42

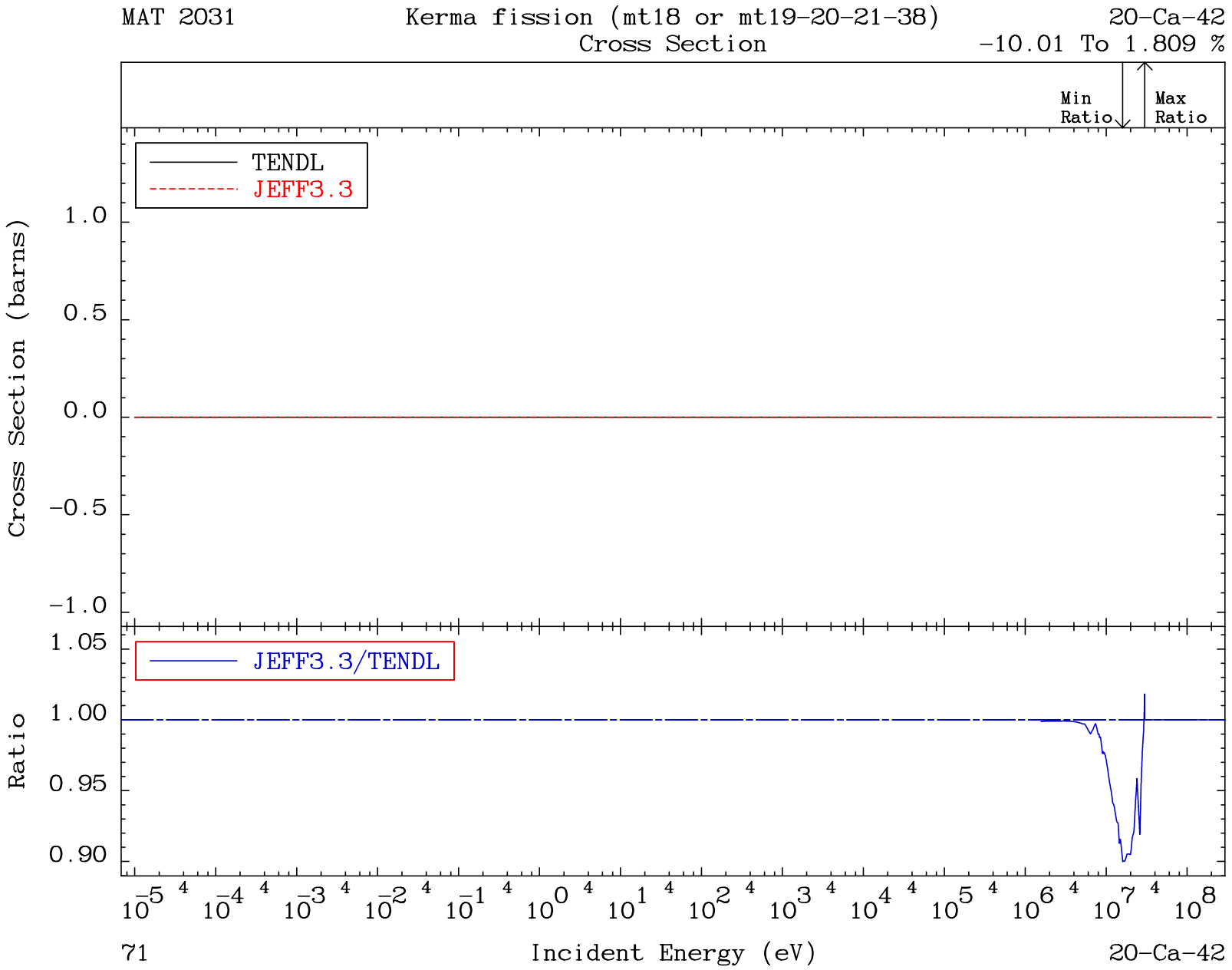

MAT 2031
He-4 Production
Cross Section
20-Ca-42
7.372 To 231.1 %
Max Ratio
Min Ratio
TENDL Threshold 570.60 keV
JEFF3.3 Threshold 570.60 keV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
4.0
3.0
2.0
1.0
6 7 8
10^6
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
66
Incident Energy (eV)
20-Ca-42

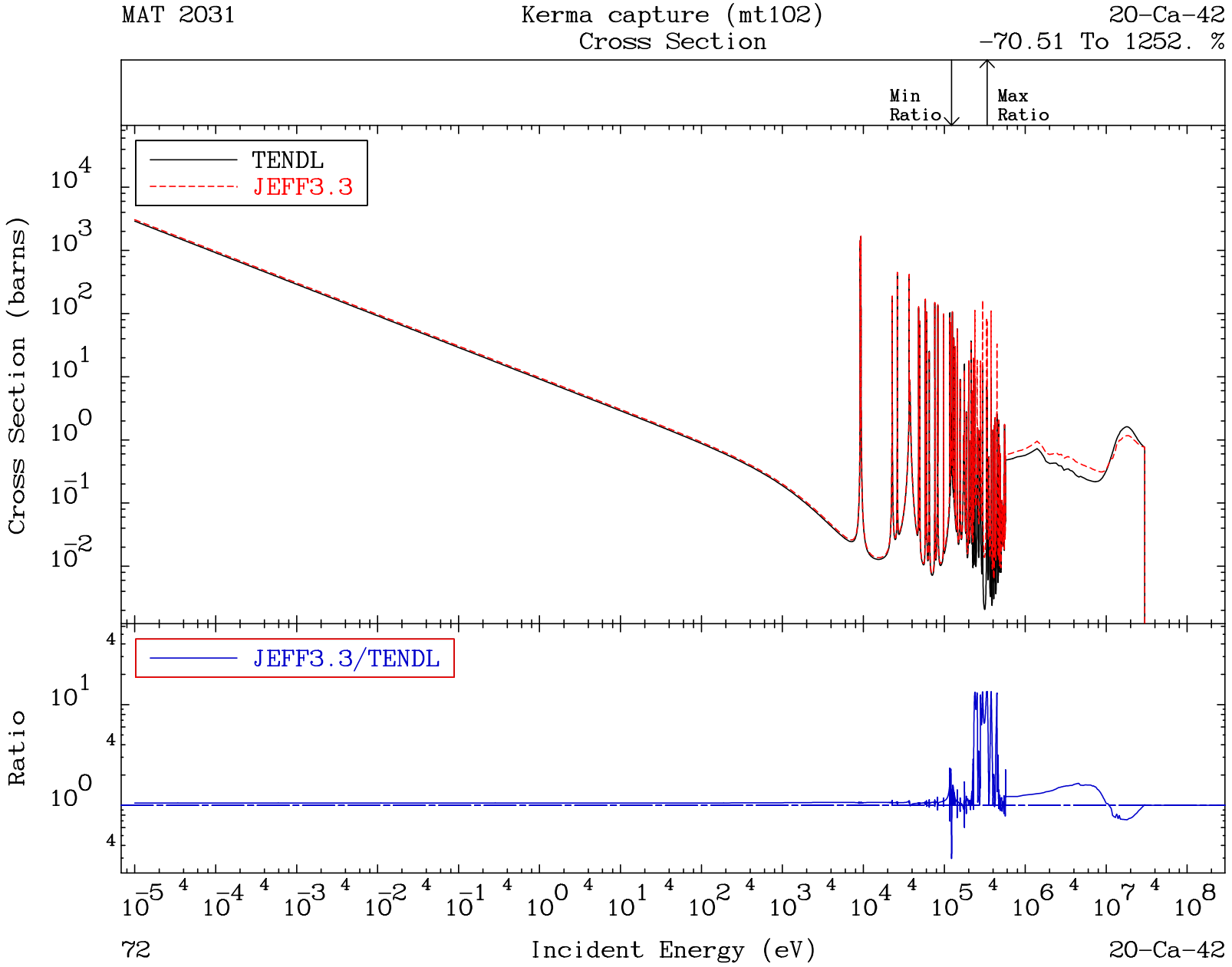

MAT 2031
Kerma total (eV-barns)
Cross Section
20-Ca-42
-66.64 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
67
20-Ca-42

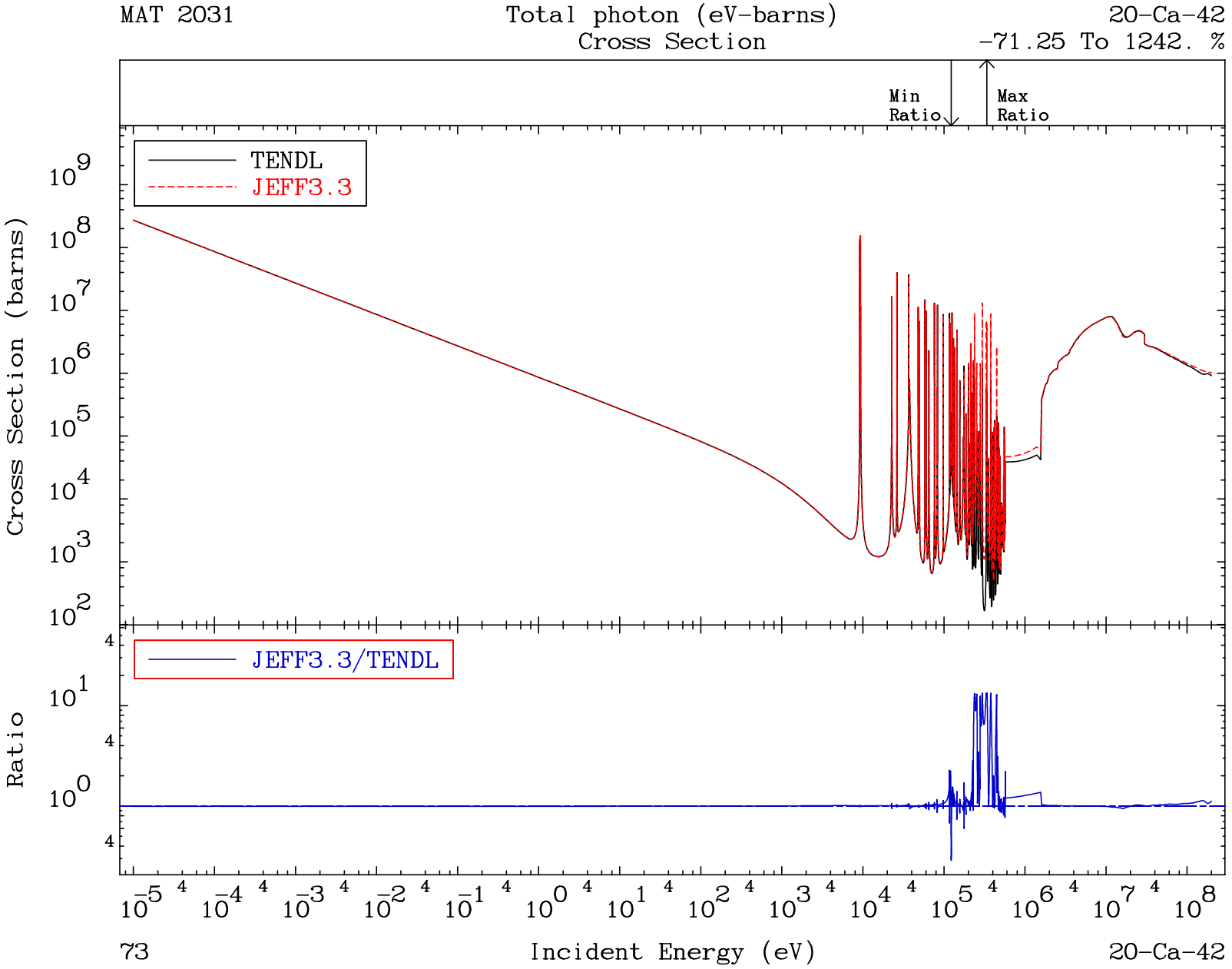

MAT 2031
Kerma elastic
Cross Section
20-Ca-42
-66.68 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
20-Ca-42

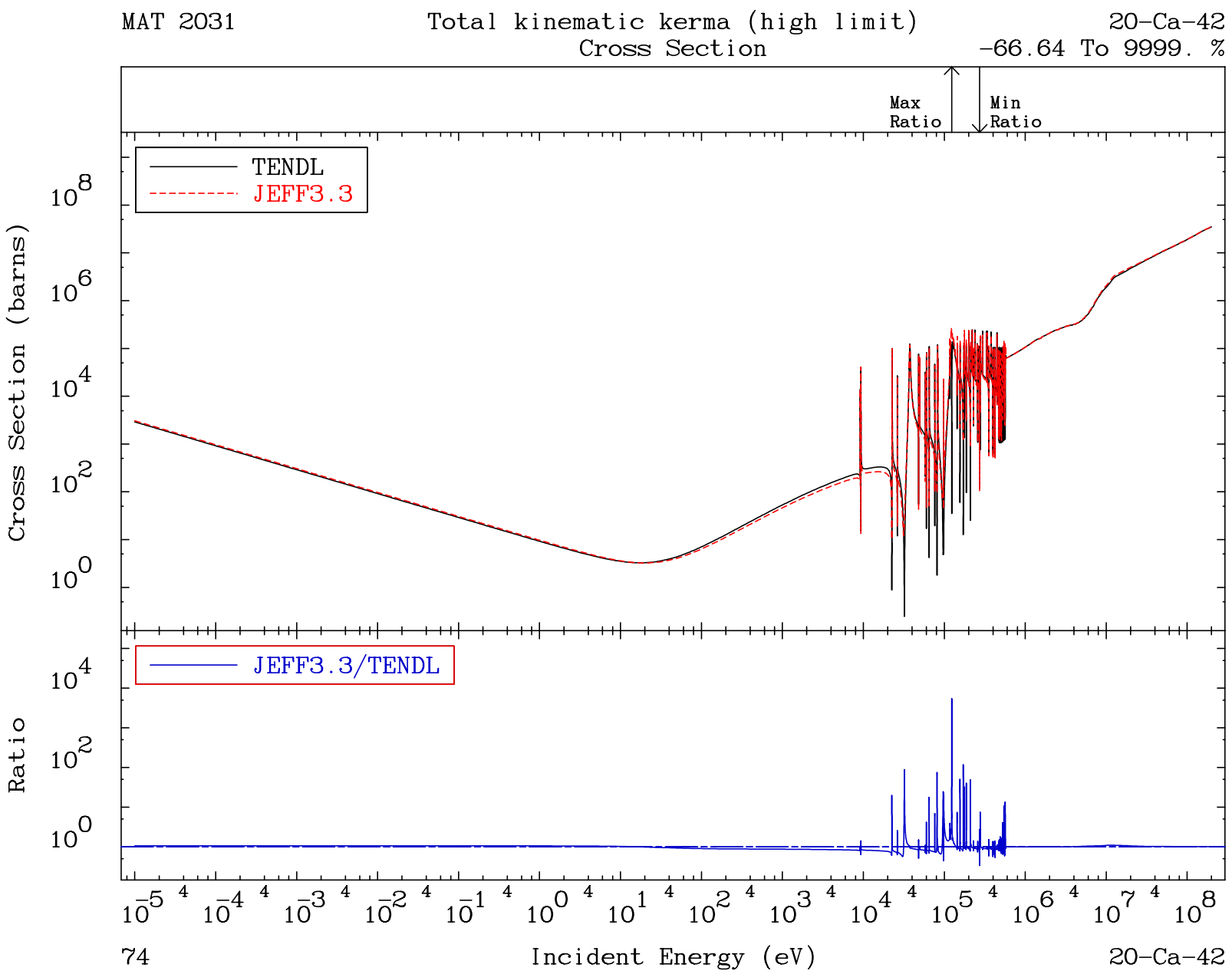

MAT 2031
Kerma non-elastic (all but mt2)
Cross Section
20-Ca-42
-70.51 To 1252. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
69
20-Ca-42

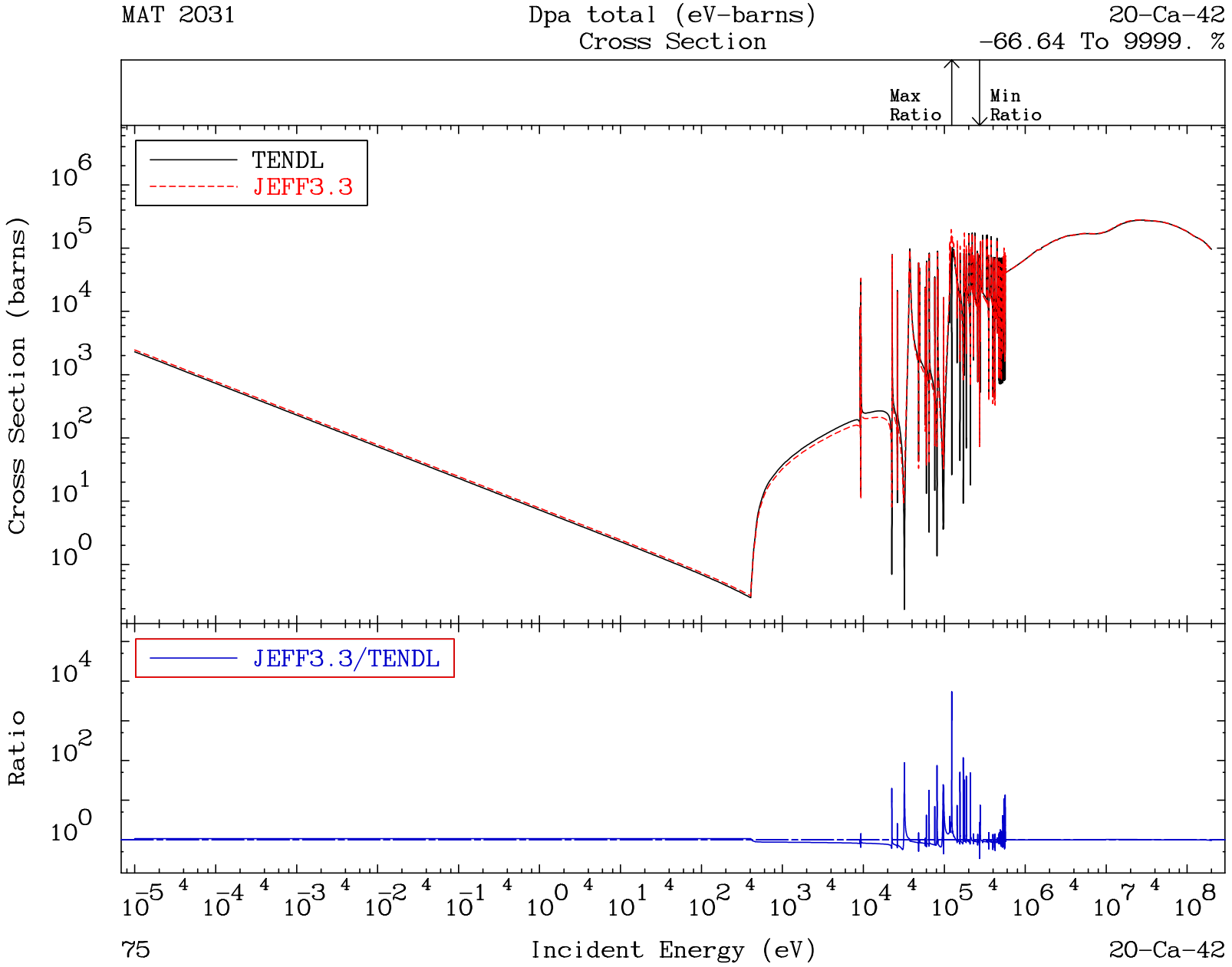

MAT 2031
Kerma inelastic (mt51-91)
Cross Section
20-Ca-42
-10.01 To 1.809 %
Min Ratio
Max Ratio
TENDL Threshold 1.5614 MeV
JEFF3.3 Threshold 1.5614 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
70
20-Ca-42

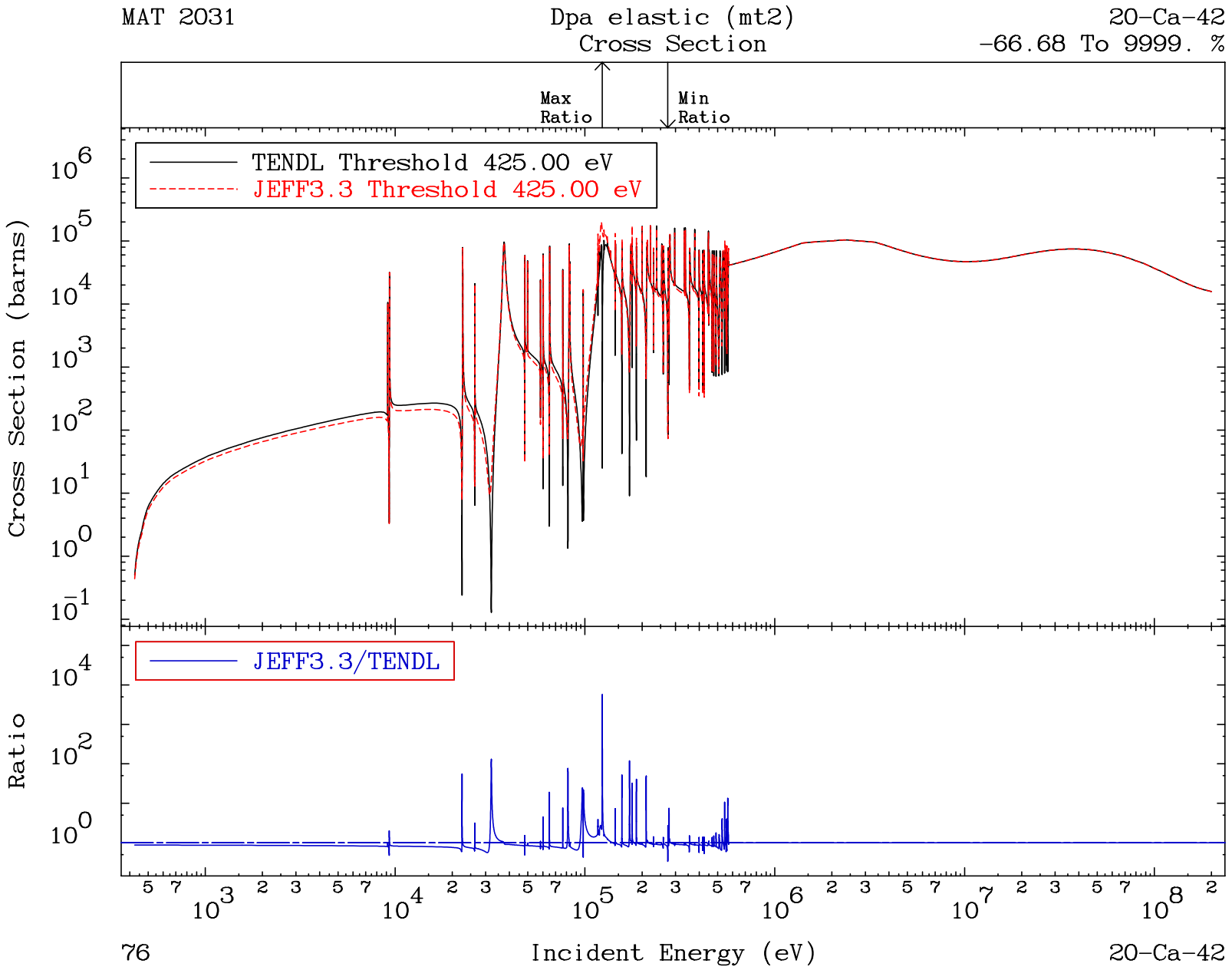

MAT 2031
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
20-Ca-42
-10.01 To 1.809 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JEFF3.3/TENDL
Ratio
1.05
1.00
0.95
0.90
10-5 4 10-4 4 10-3 4 10-2 4 10-1 4 100 4 101 4 102 4 103 4 104 4 105 4 106 4 107 4 108
71
Incident Energy (eV)
20-Ca-42

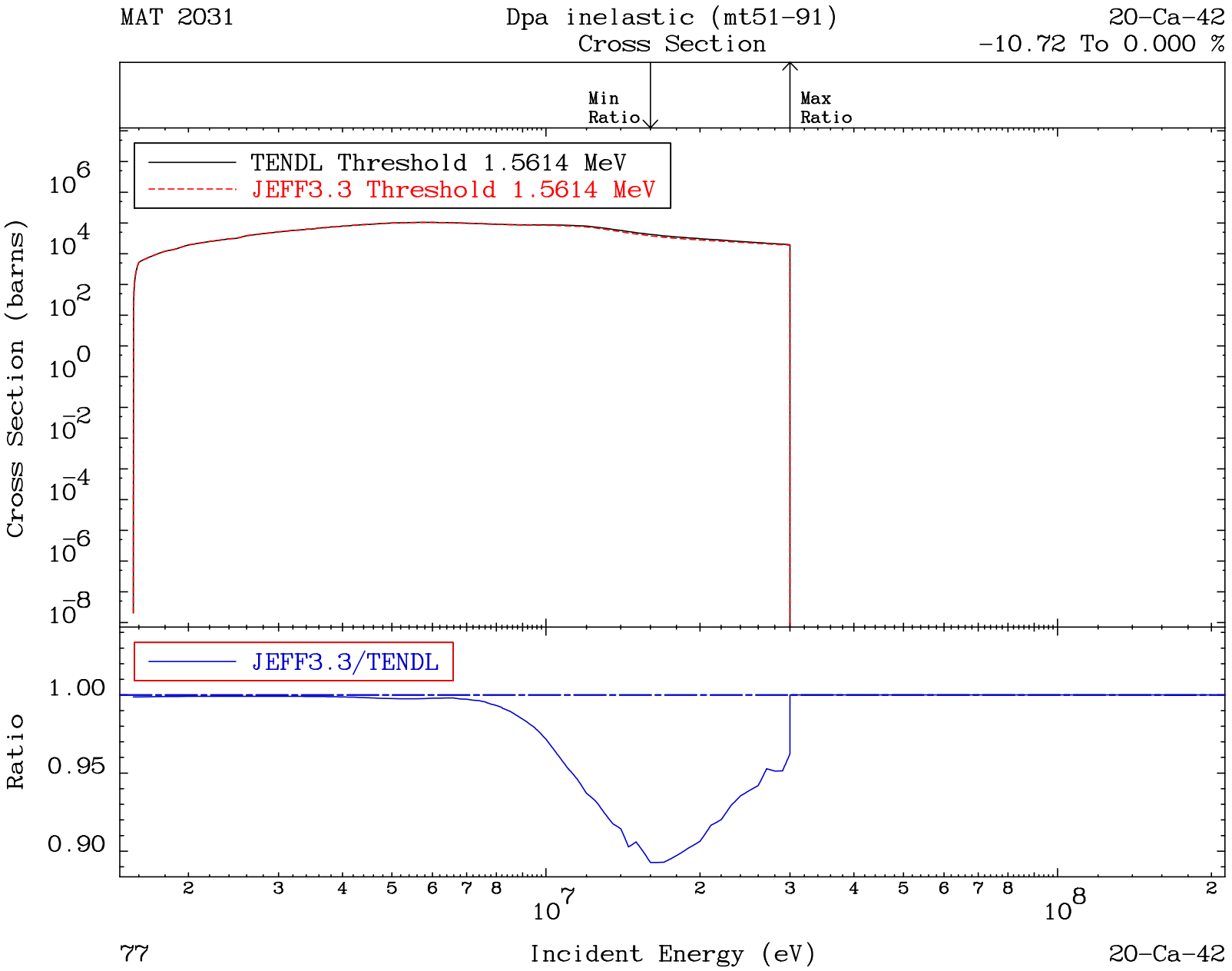

MAT 2031
Kerma capture (mt102)
Cross Section
20-Ca-42
-70.51 To 1252. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
72
20-Ca-42

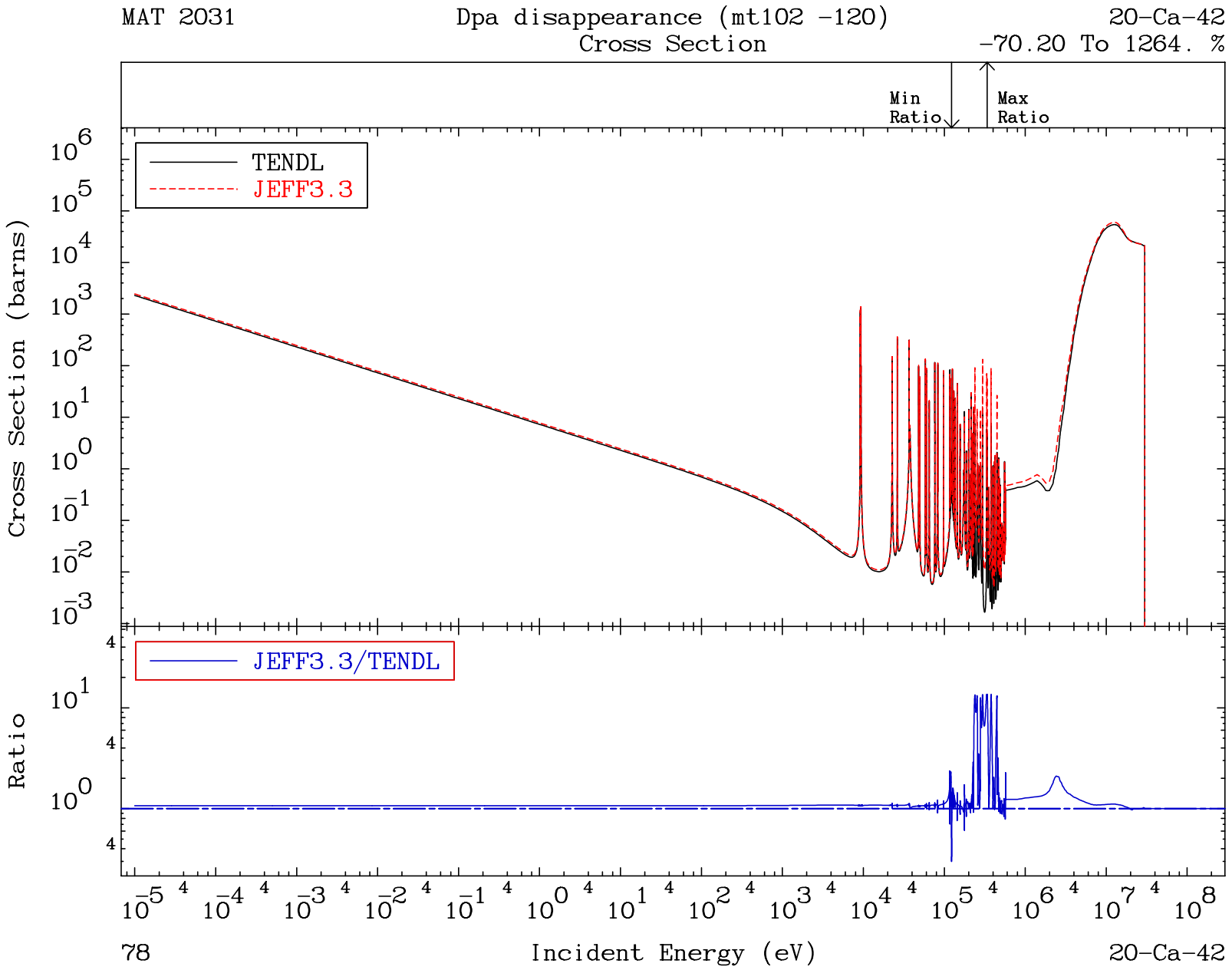

MAT 2031
Total photon (eV-barns)
Cross Section
20-Ca-42
-71.25 To 1242. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
73
20-Ca-42

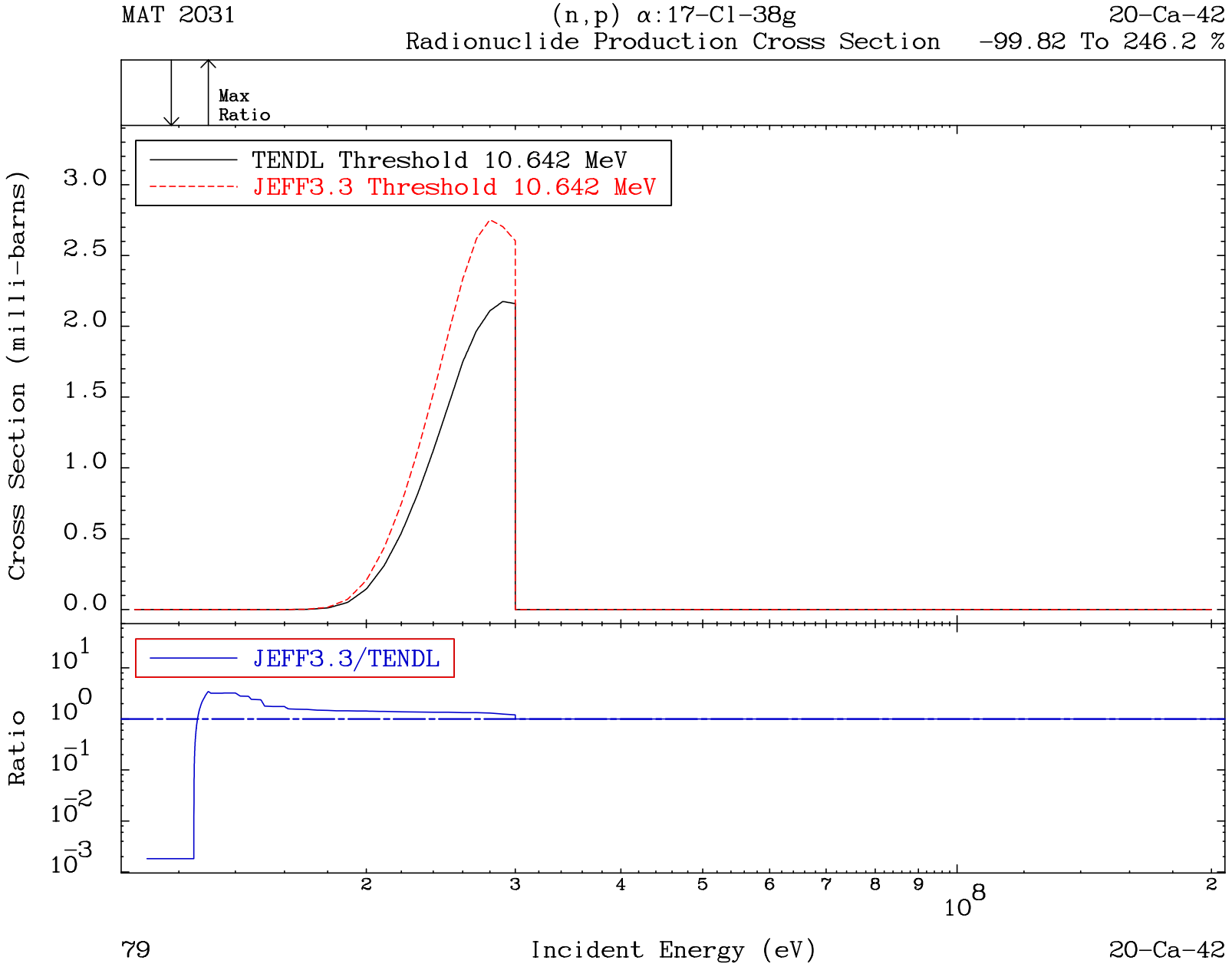

MAT 2031
Total kinematic kerma (high limit)
Cross Section
20-Ca-42
-66.64 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
74
20-Ca-42

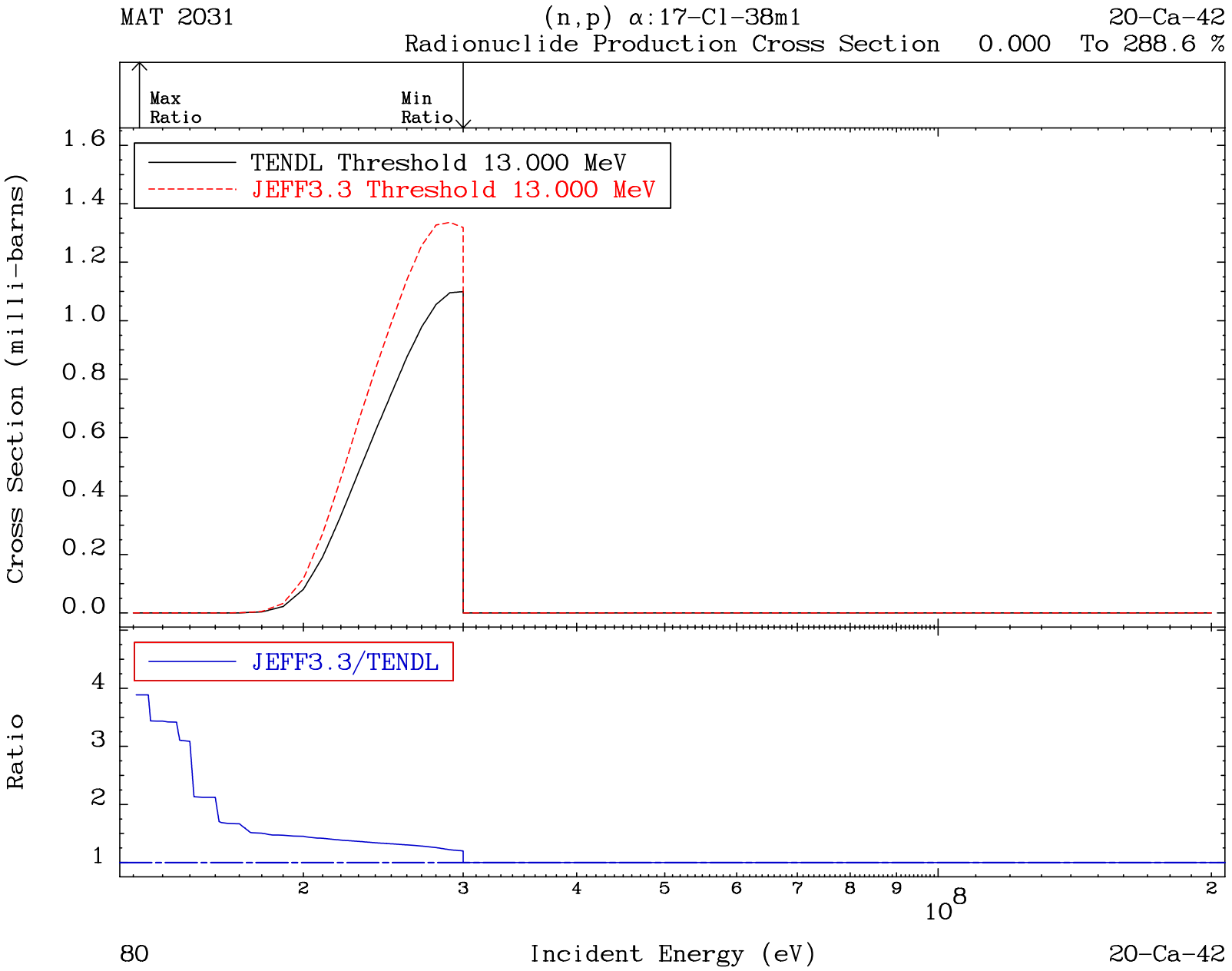

MAT 2031
Dpa total (eV-barns)
Cross Section
20-Ca-42
-66.64 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
75
20-Ca-42


MAT 2031
Dpa elastic (mt2)
Cross Section
20-Ca-42
-66.68 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 425.00 eV
JEFF3.3 Threshold 425.00 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
20-Ca-42


MAT 2031
Dpa inelastic (mt51-91)
Cross Section
20-Ca-42
-10.72 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 1.5614 MeV
JEFF3.3 Threshold 1.5614 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
77
20-Ca-42


MAT 2031
Dpa disappearance (mt102 -120)
Cross Section
20-Ca-42
-70.20 To 1264. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
78
20-Ca-42


MAT 2031
(n,p) α:17-Cl-38g
20-Ca-42
Radionuclide Production Cross Section
-99.82 To 246.2 %
Max
Ratio
TENDL Threshold 10.642 MeV
JEFF3.3 Threshold 10.642 MeV
Cross Section (milli-barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
10^1
10^0
10^-1
10^-2
10^-3
2
3
4
5
6
7
8
9
10^8
2
79
Incident Energy (eV)
20-Ca-42


MAT 2031
(n,p) α:17-Cl-38m1
20-Ca-42
Radionuclide Production Cross Section 0.000 To 288.6 %
Max Ratio
Min Ratio
TENDL Threshold 13.000 MeV
JEFF3.3 Threshold 13.000 MeV
Cross Section (milli-barns)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
JEFF3.3/TENDL
Ratio
4
3
2
1
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
20-Ca-42