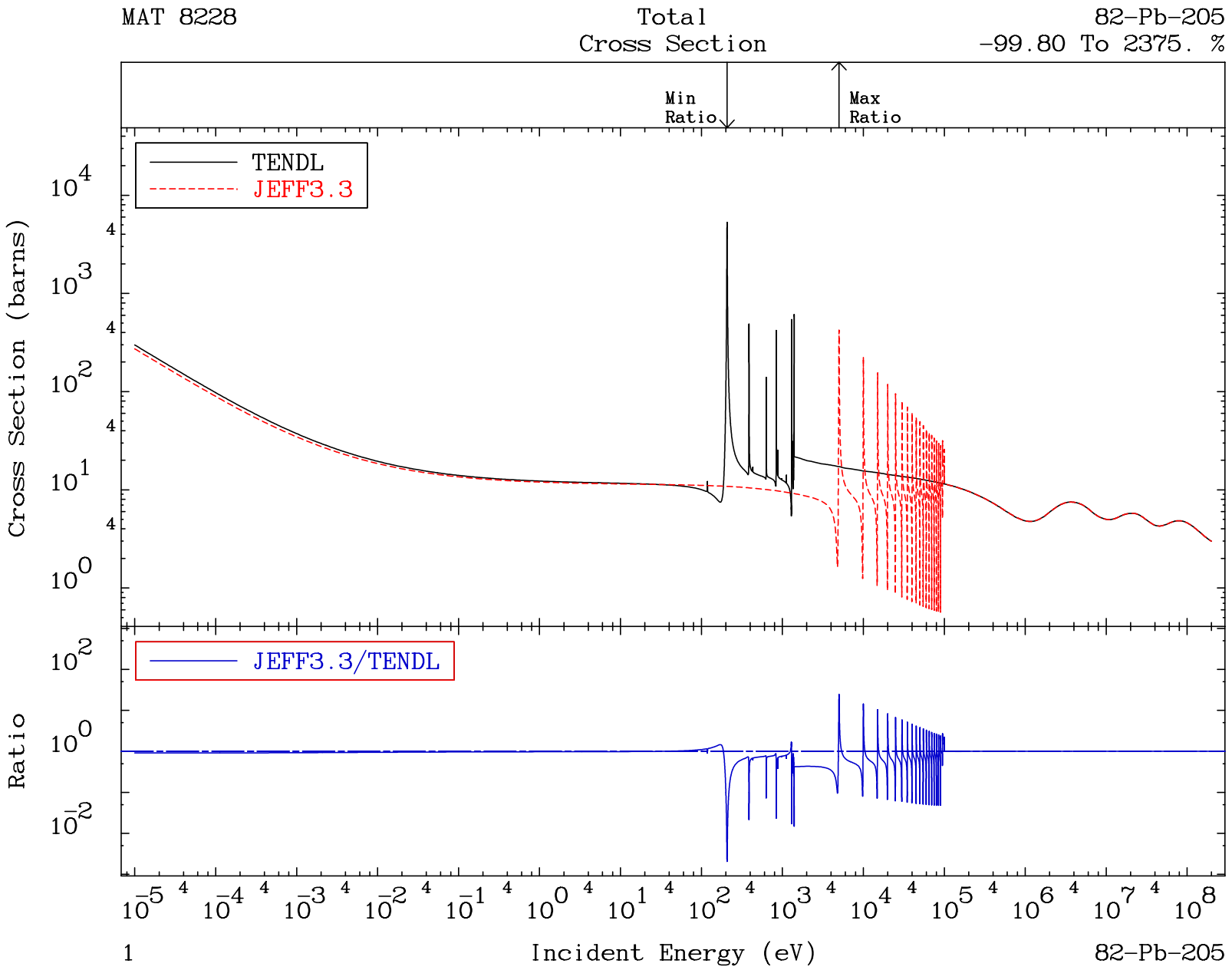
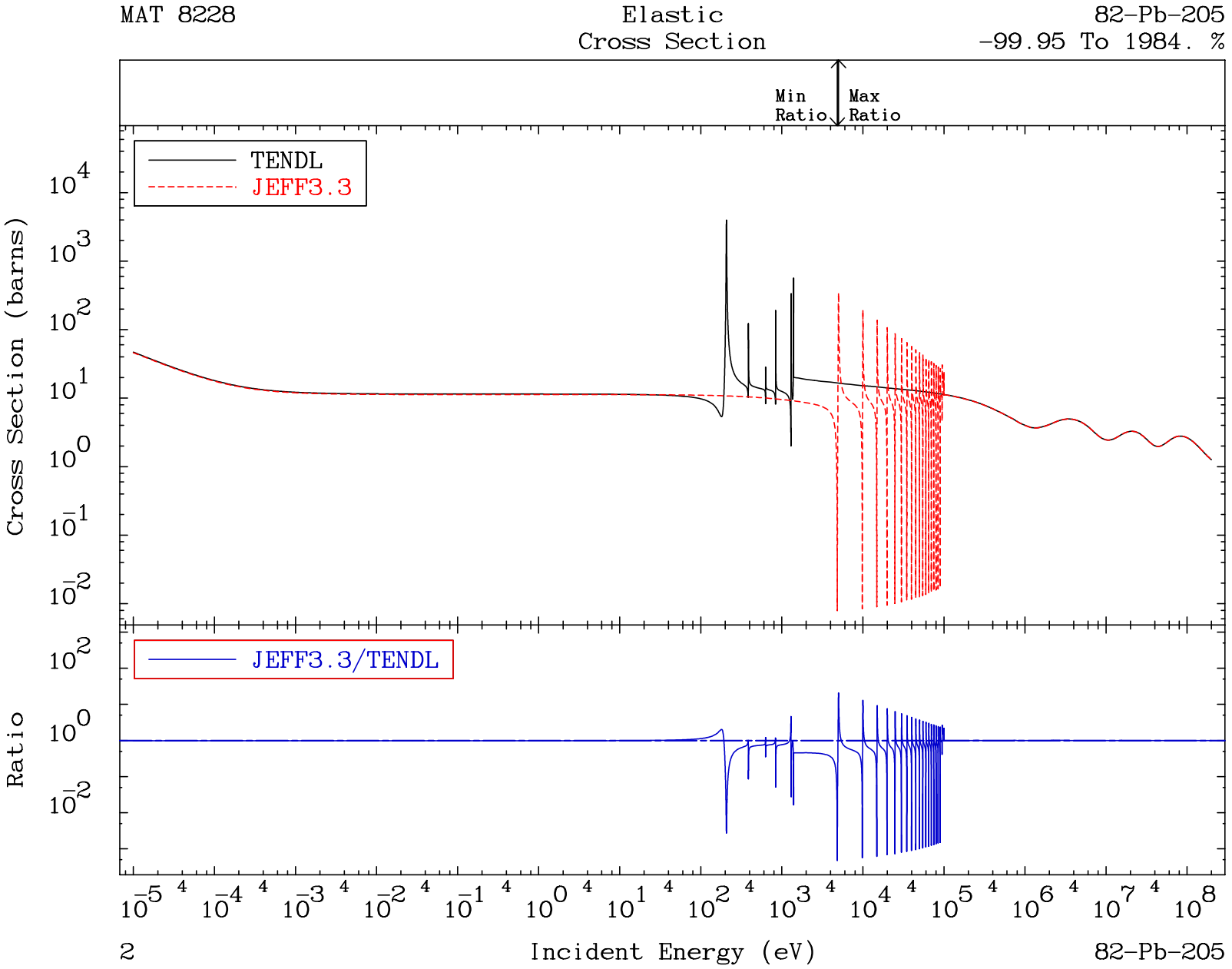
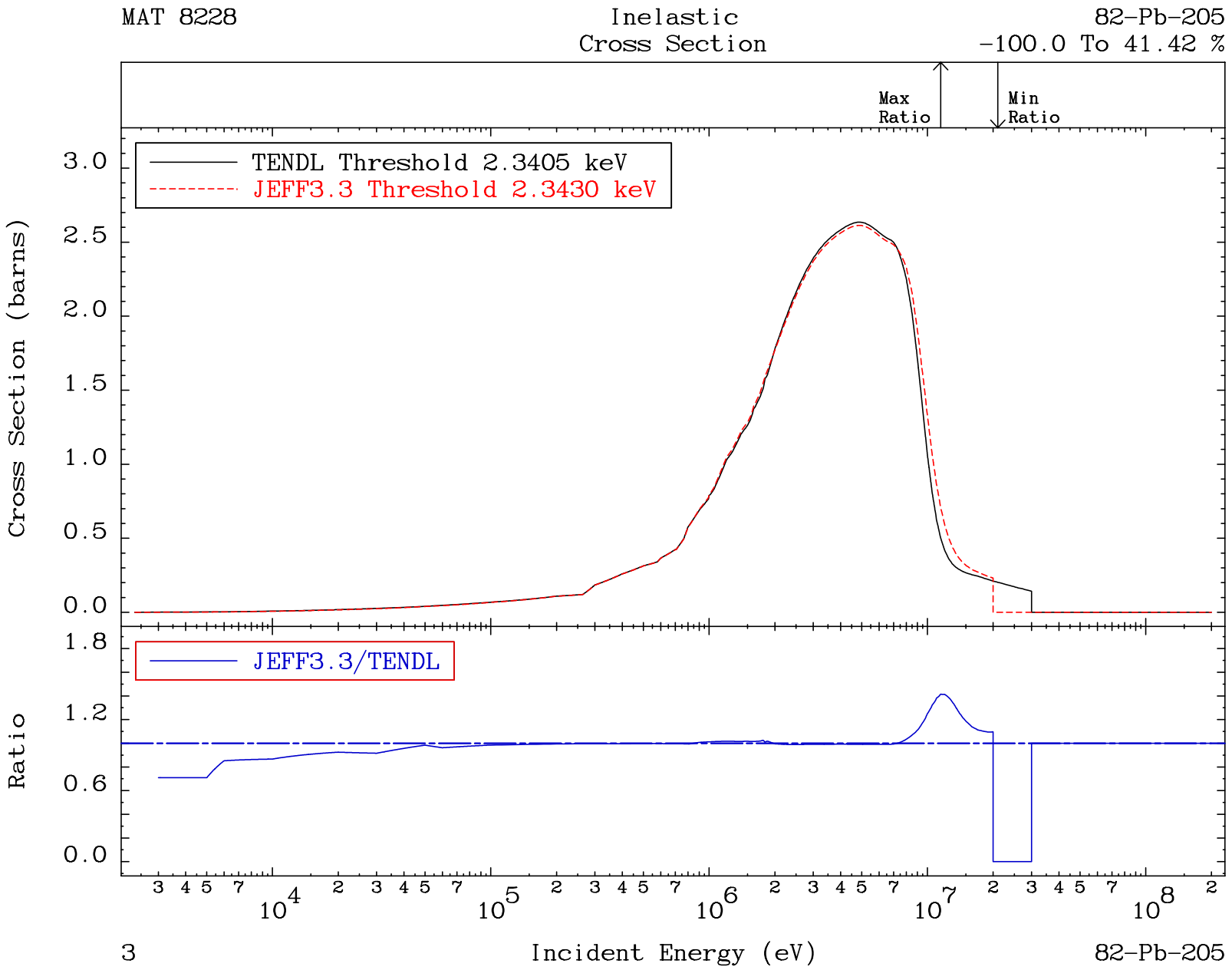
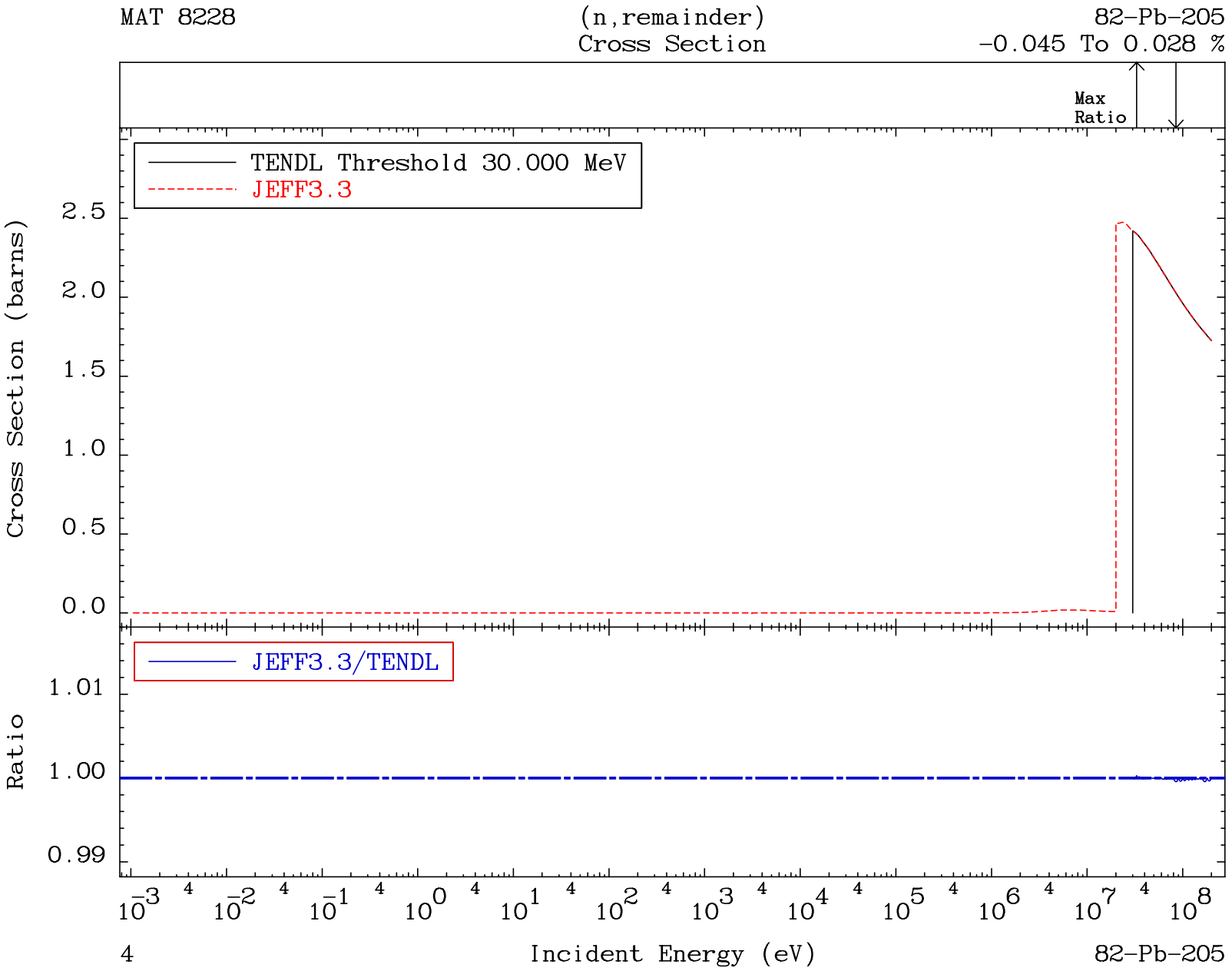
Program Complot
(Version 2018-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

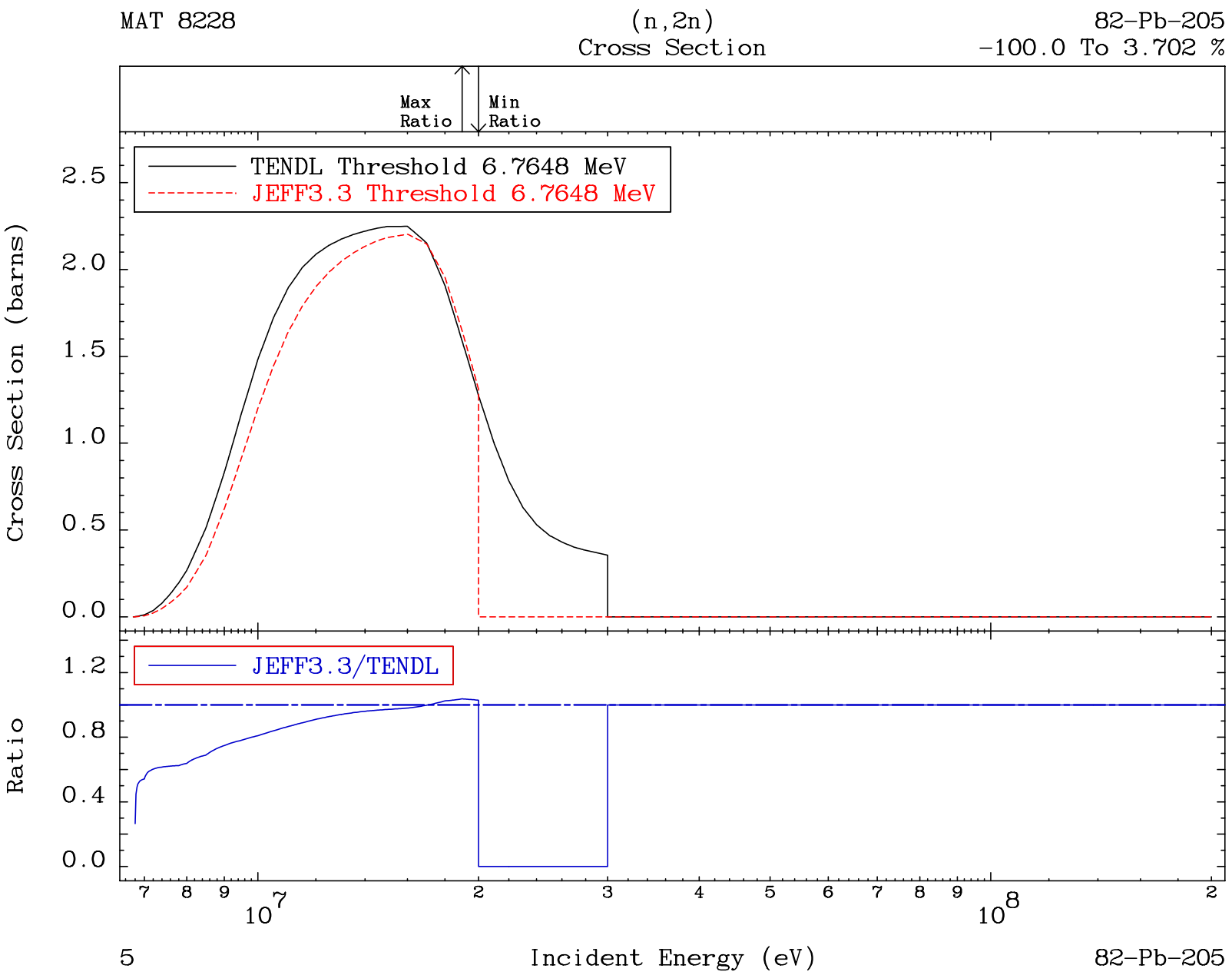
Press Mouse Button to Start

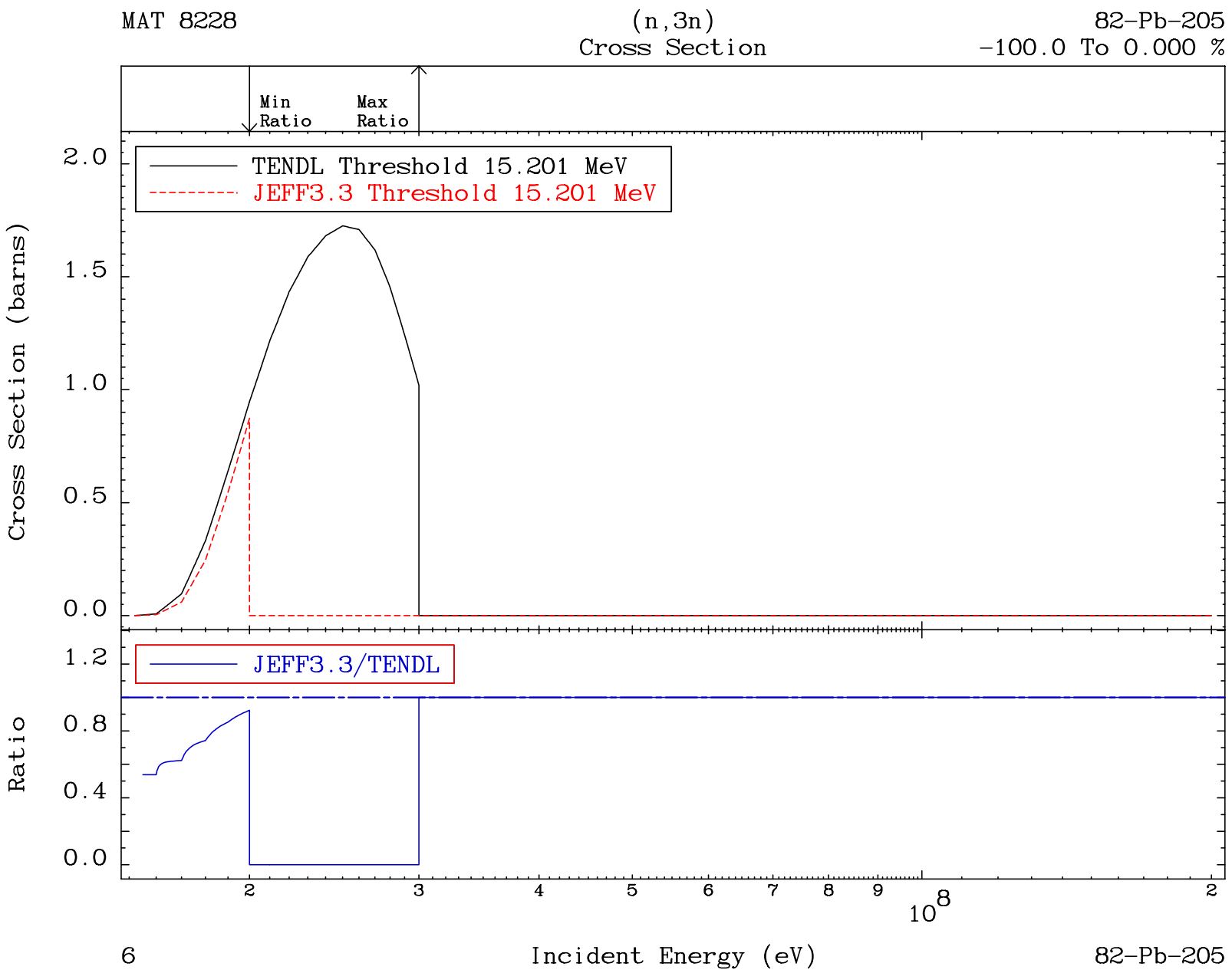

MAT 8228
Total
Cross Section
82-Pb-205
-99.80 To 2375. %
Min
Ratio
Max
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
1
82-Pb-205

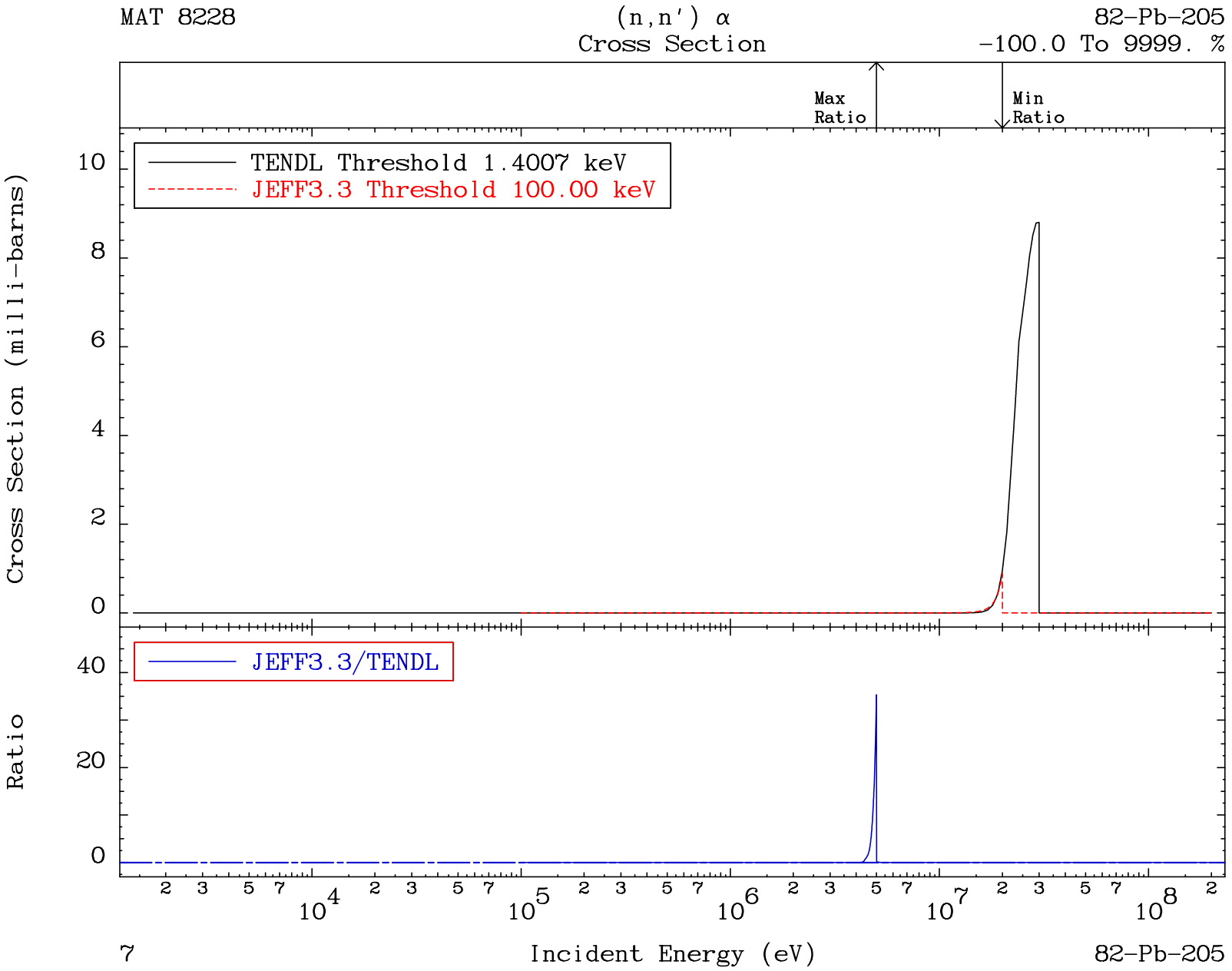

MAT 8228
Elastic
Cross Section
82-Pb-205
-99.95 To 1984. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
2
82-Pb-205

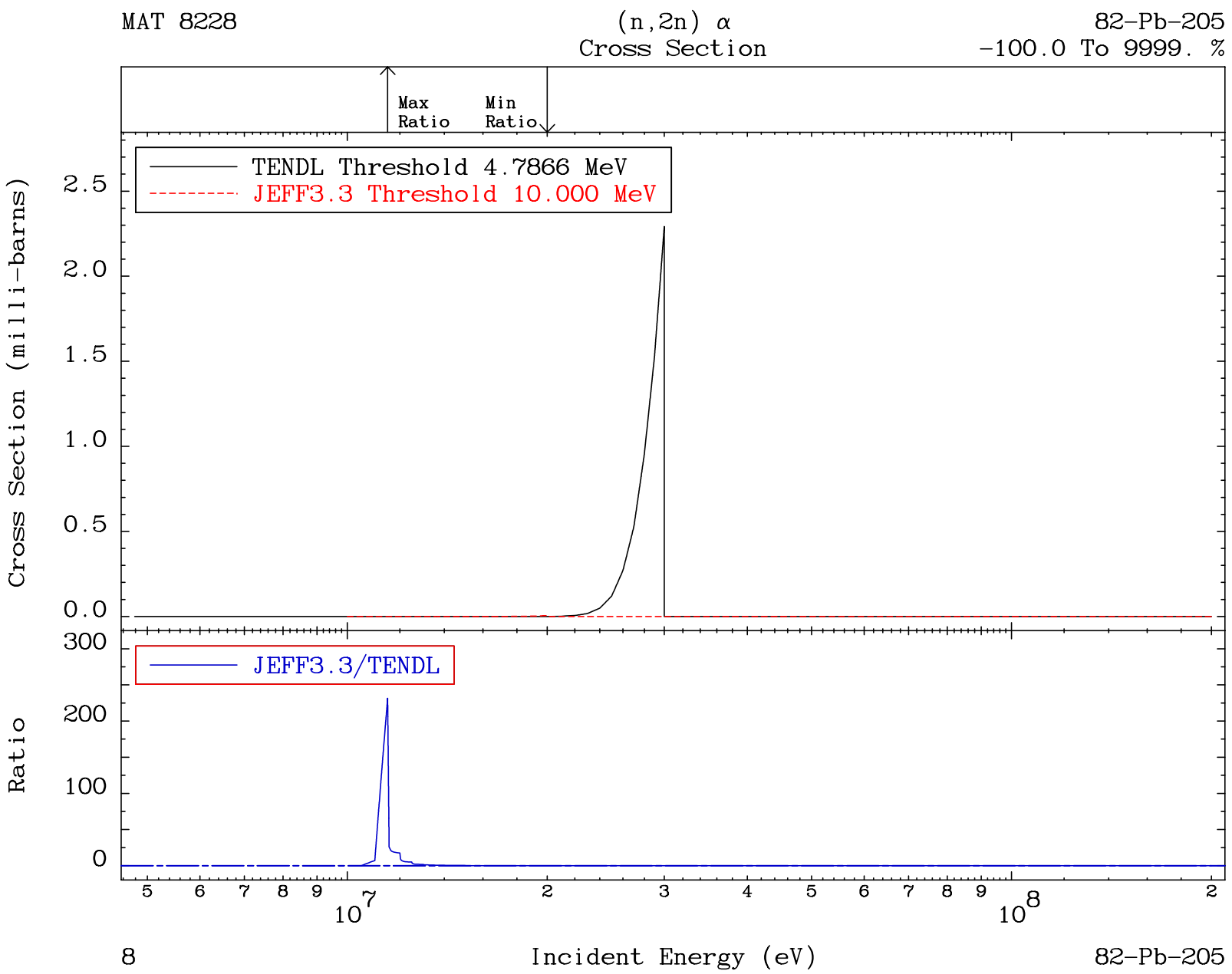

MAT 8228
Inelastic
Cross Section
82-Pb-205
-100.0 To 41.42 %
Max
Ratio
Min
Ratio
TENDL Threshold 2.3405 keV
JEFF3.3 Threshold 2.3430 keV
Cross Section (barns)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.8
1.2
0.6
0.0
3 4 5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
3
Incident Energy (eV)
82-Pb-205

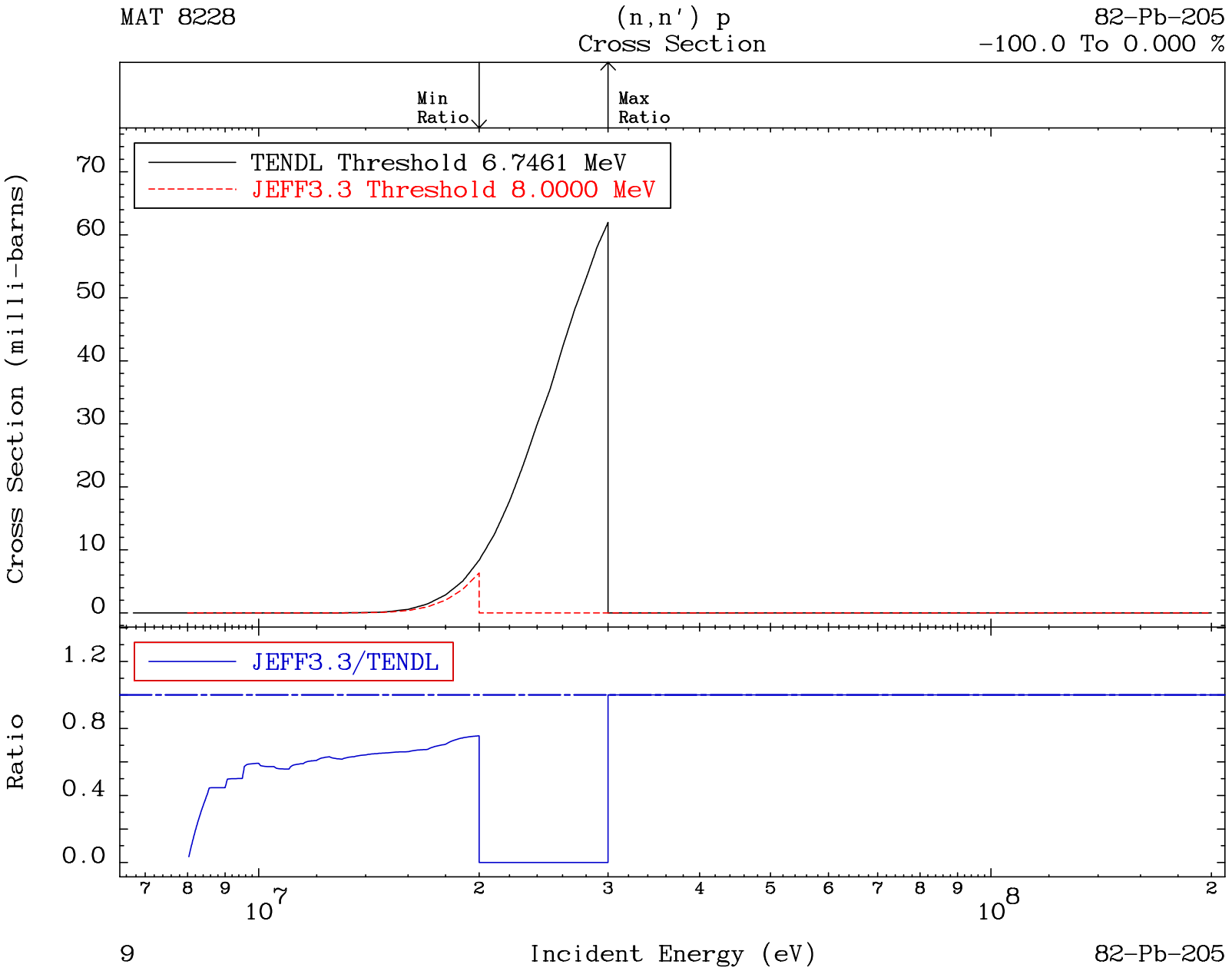

MAT 8228
(n,remainder)
Cross Section
82-Pb-205
-0.045 To 0.028 %
Max
Ratio
TENDL Threshold 30.000 MeV
JEFF3.3
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.01
1.00
0.99
10-3
10-2
10-1
100
101
102
103
104
105
106
107
108
4
Incident Energy (eV)
82-Pb-205

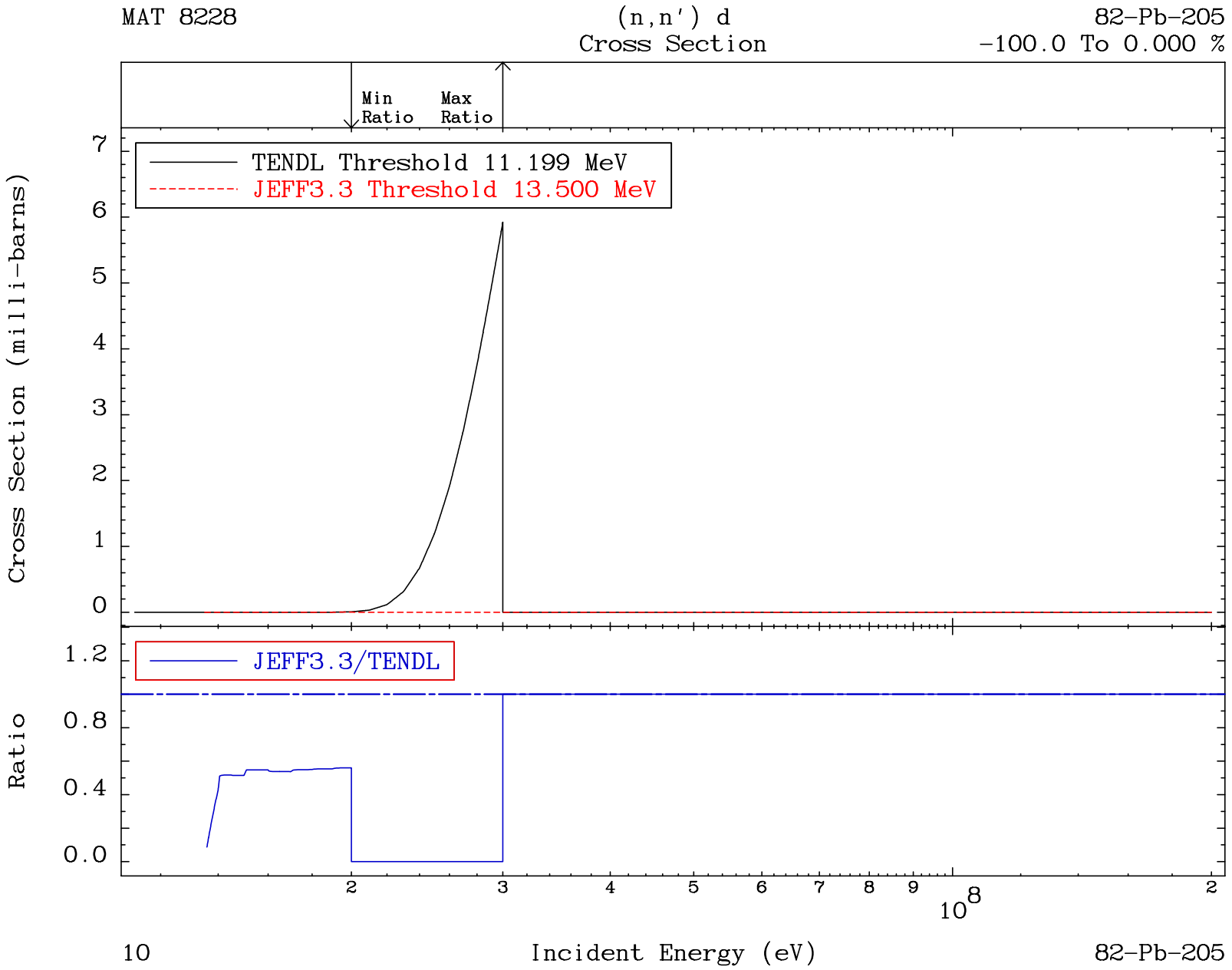

MAT 8228
(n,2n)
Cross Section
82-Pb-205
-100.0 To 3.702 %
Max Ratio
Min Ratio
TENDL Threshold 6.7648 MeV
JEFF3.3 Threshold 6.7648 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
5
Incident Energy (eV)
82-Pb-205

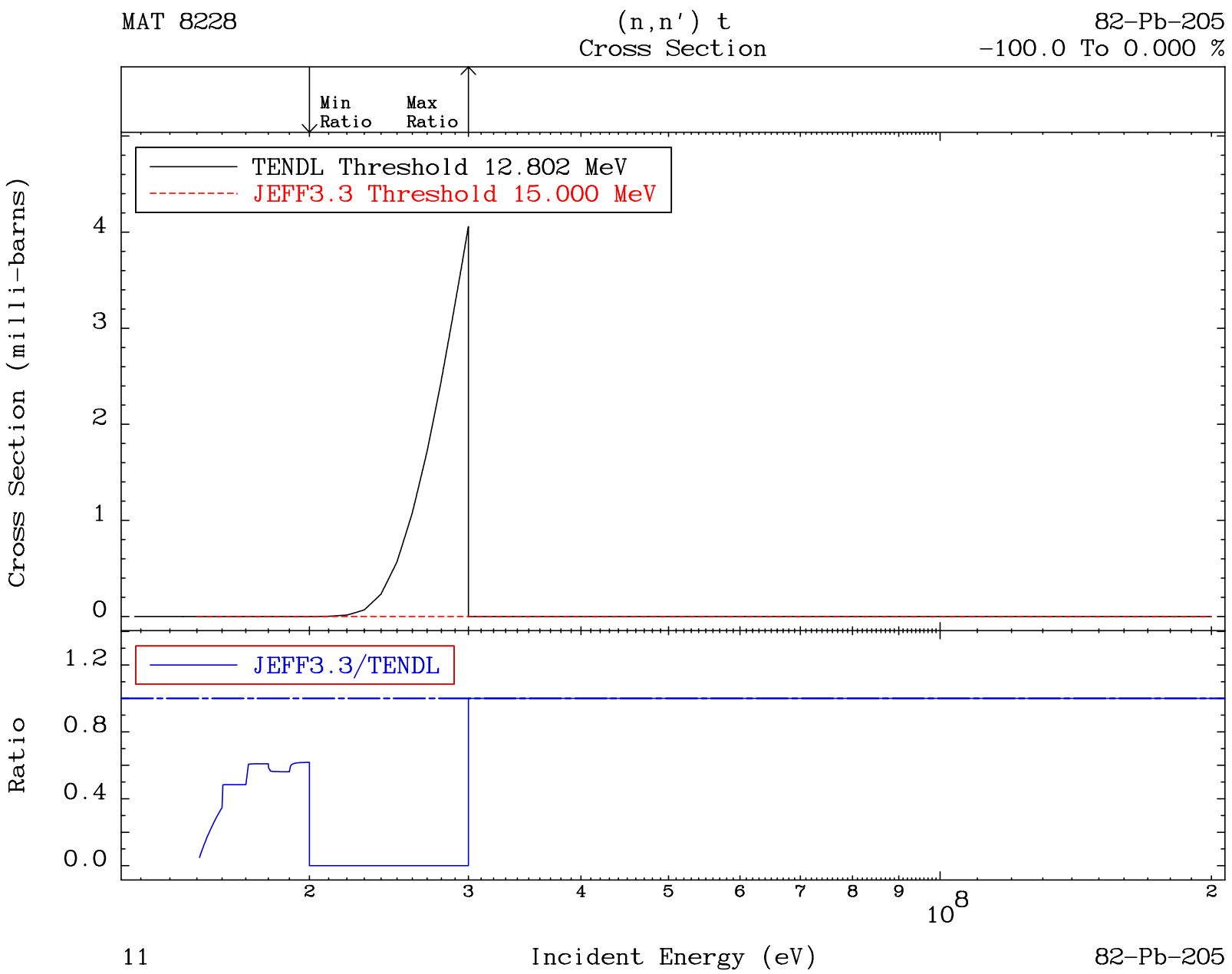

MAT 8228
(n,3n)
Cross Section
82-Pb-205
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 15.201 MeV
JEFF3.3 Threshold 15.201 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
9
10^8
2
6
Incident Energy (eV)
82-Pb-205

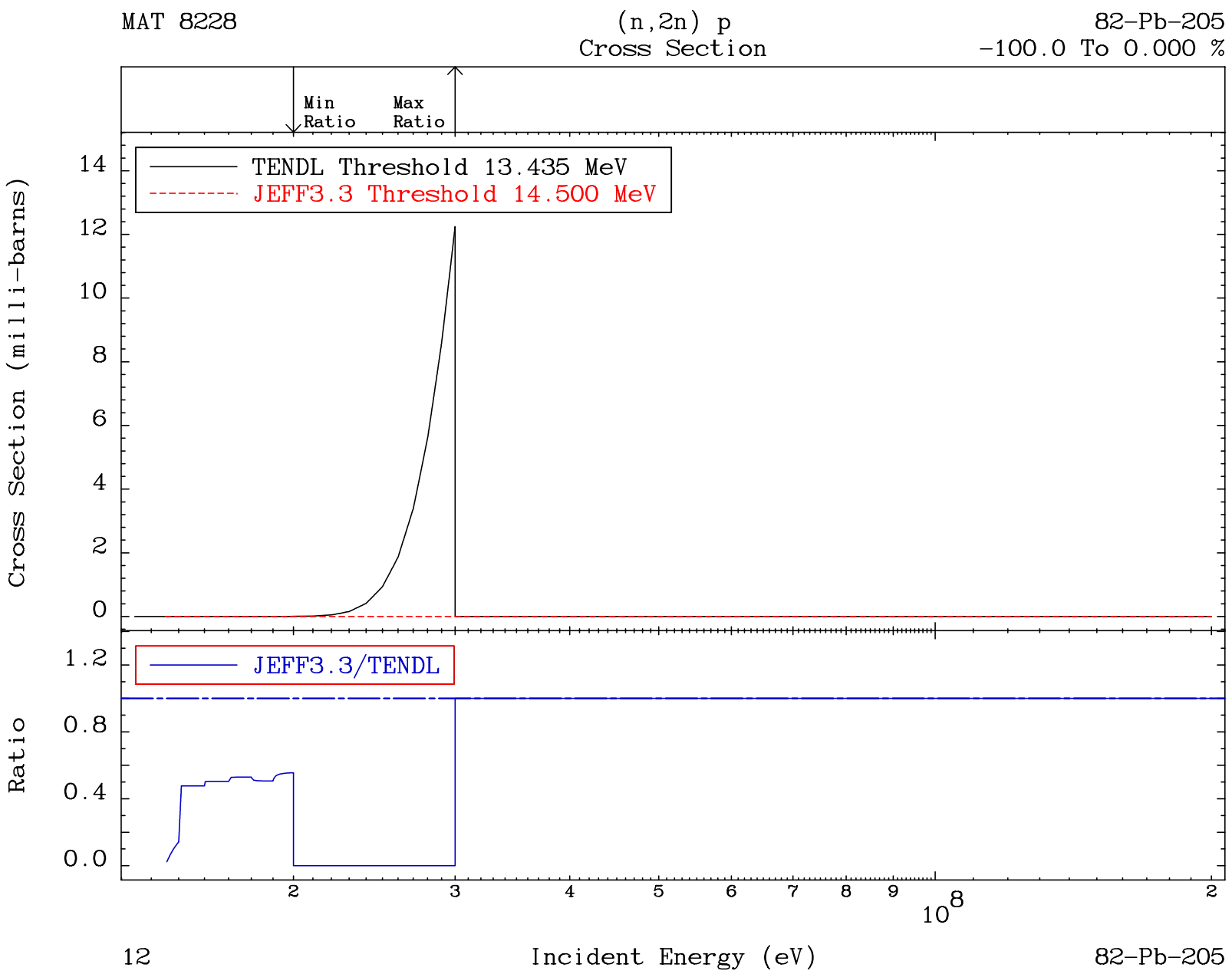

MAT 8228
(n,n') α
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 1.4007 keV
JEFF3.3 Threshold 100.00 keV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
7
82-Pb-205

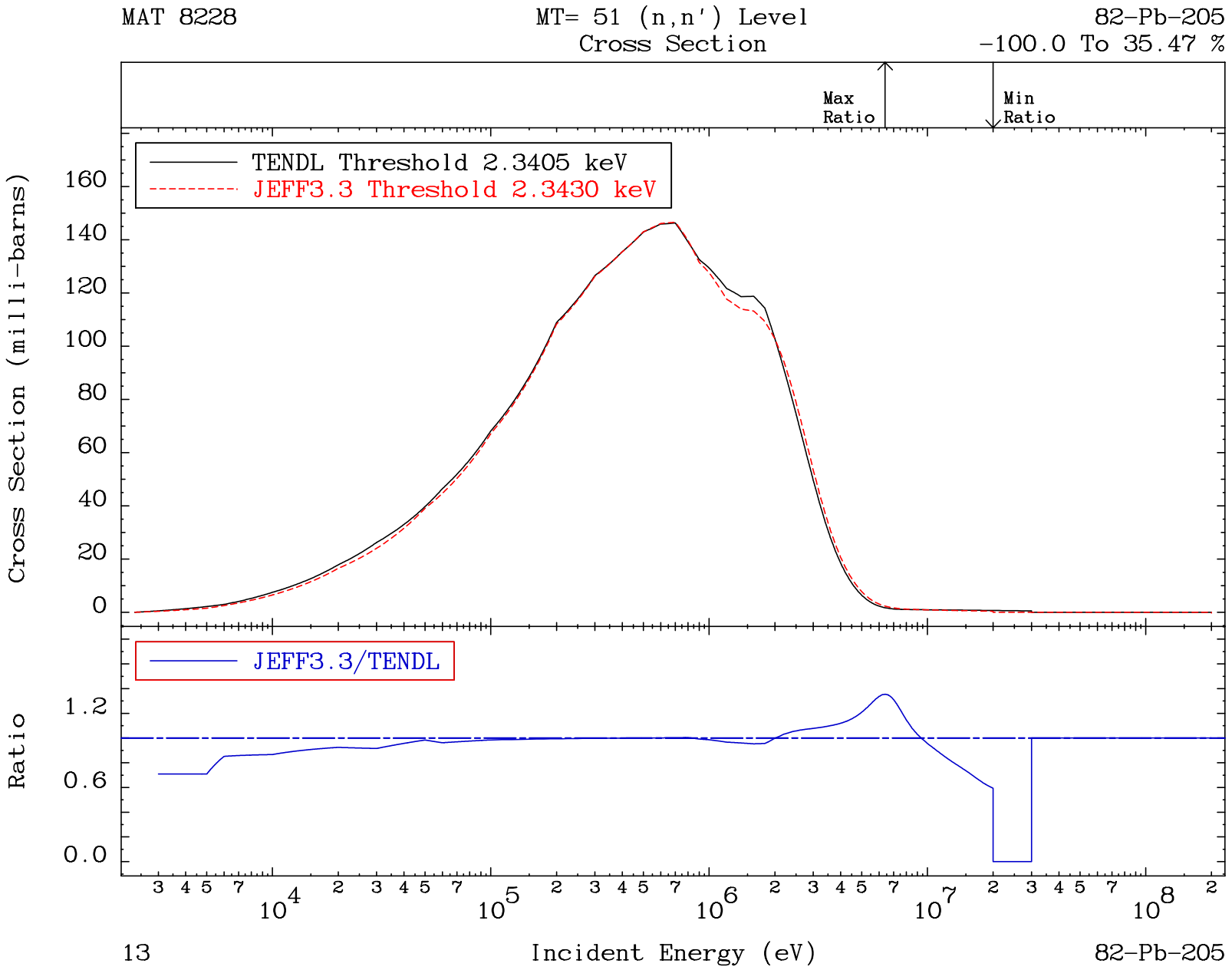

MAT 8228
(n,2n) α
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 4.7866 MeV
JEFF3.3 Threshold 10.000 MeV
Cross Section (milli-barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
300
200
100
0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
8
Incident Energy (eV)
82-Pb-205

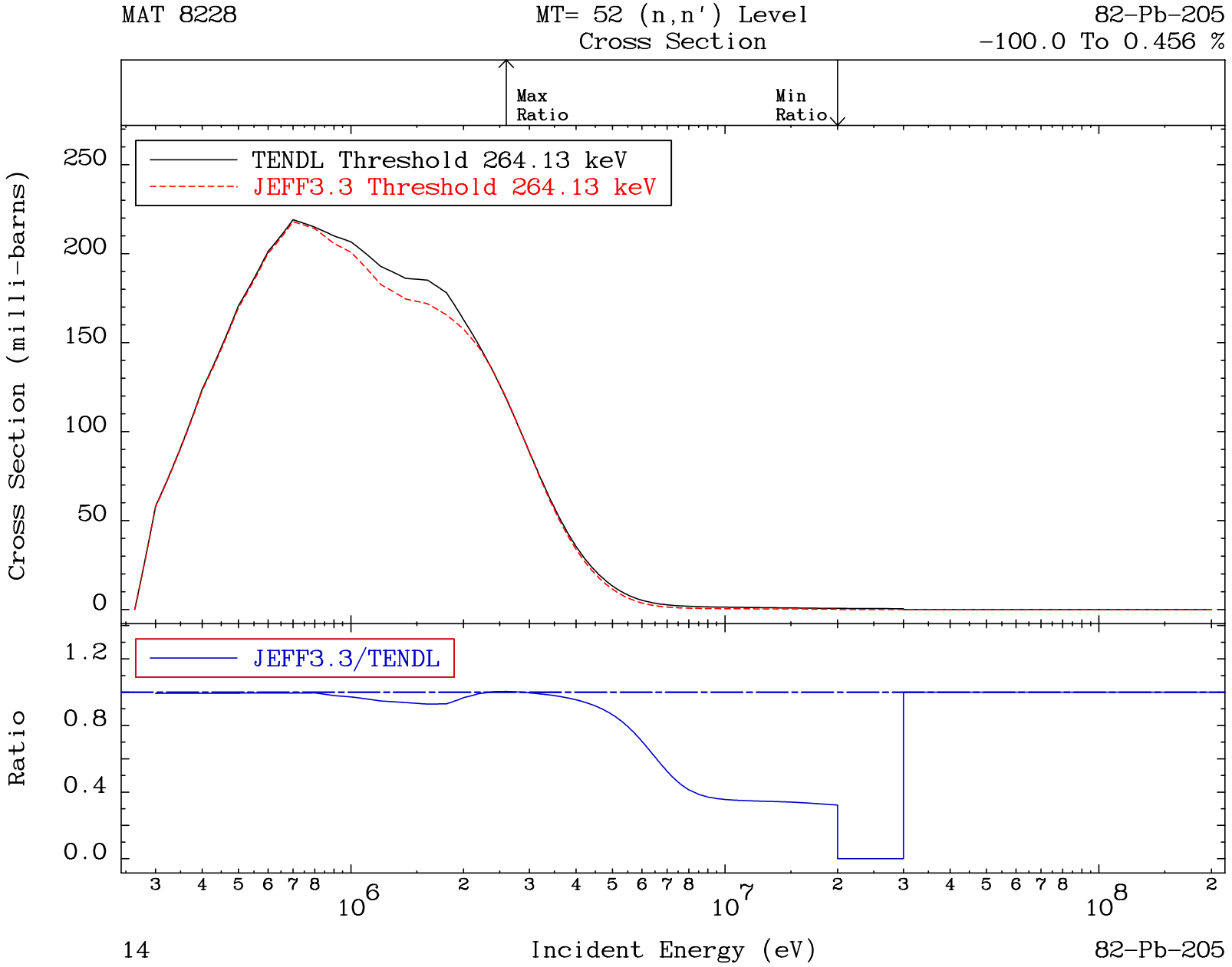

MAT 8228
(n,n') p
Cross Section
82-Pb-205
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 6.7461 MeV
JEFF3.3 Threshold 8.0000 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
9
Incident Energy (eV)
82-Pb-205

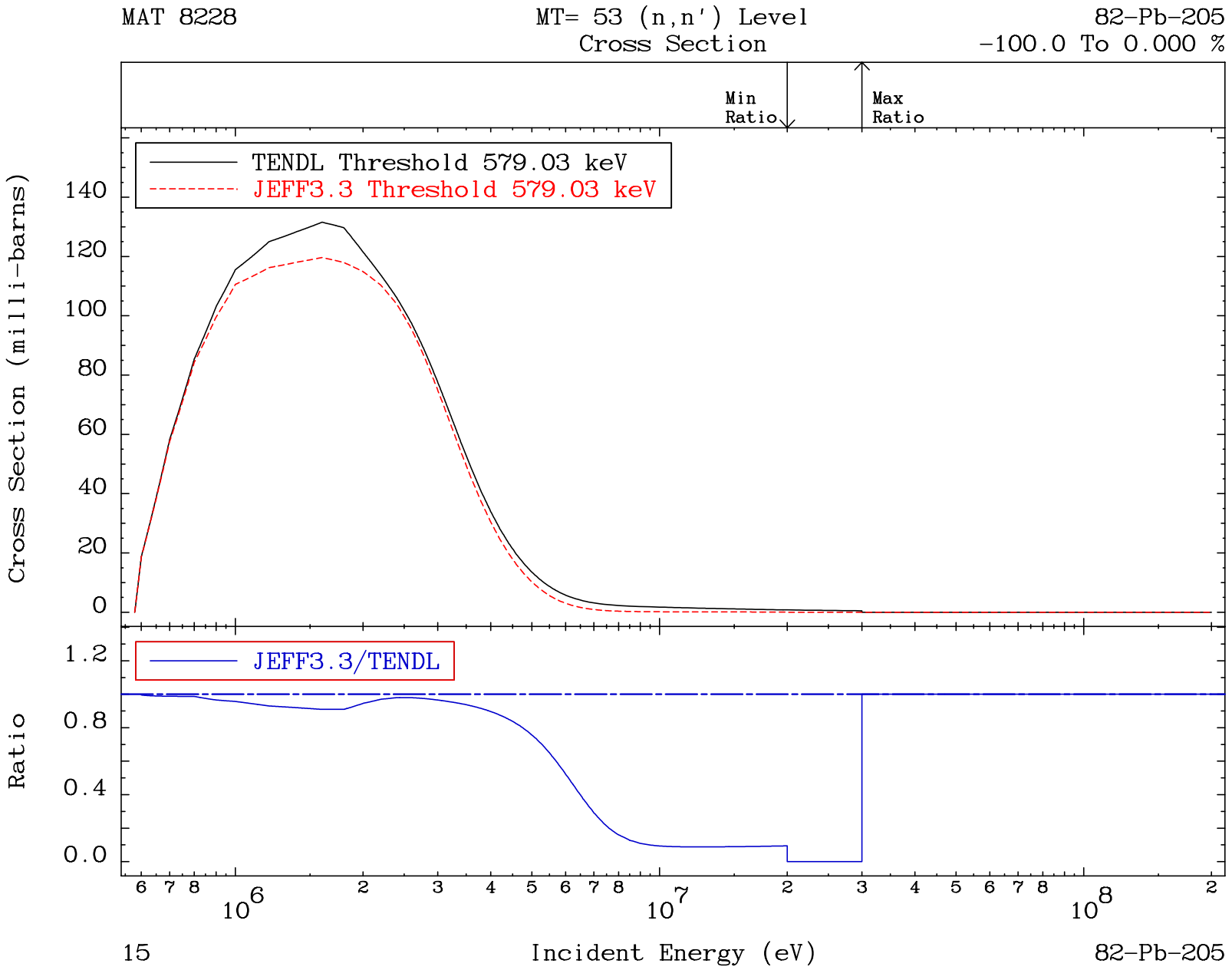

MAT 8228
(n,n') d
Cross Section
82-Pb-205
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 11.199 MeV
JEFF3.3 Threshold 13.500 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
10
82-Pb-205

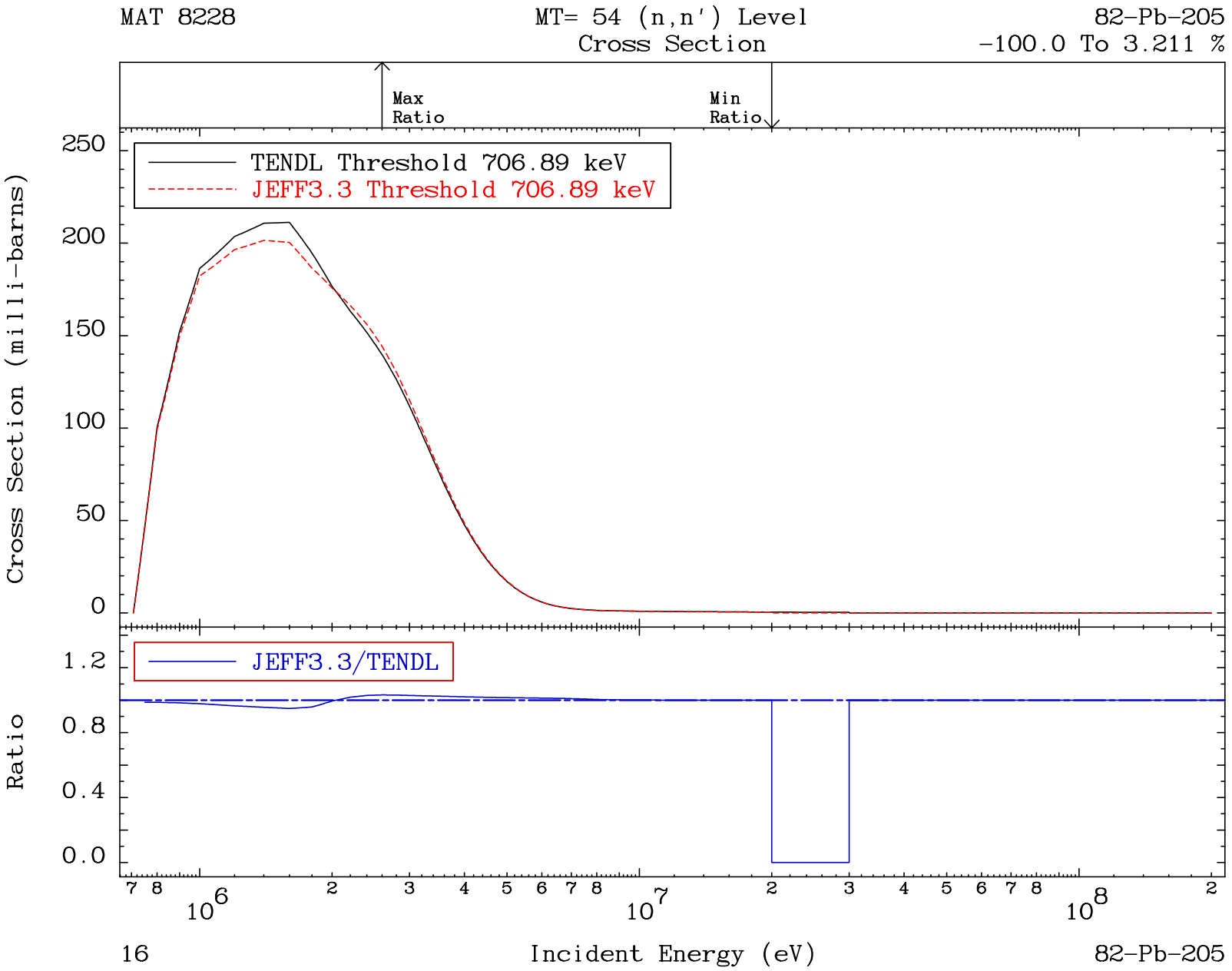

MAT 8228
(n,n') t
Cross Section
82-Pb-205
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 12.802 MeV
JEFF3.3 Threshold 15.000 MeV
Cross Section (milli-barns)
0
1
2
3
4
JEFF3.3/TENDL
Ratio
0.0
0.4
0.8
1.2
2
3
4
5
6
7
8
9
10^8
2
11
Incident Energy (eV)
82-Pb-205

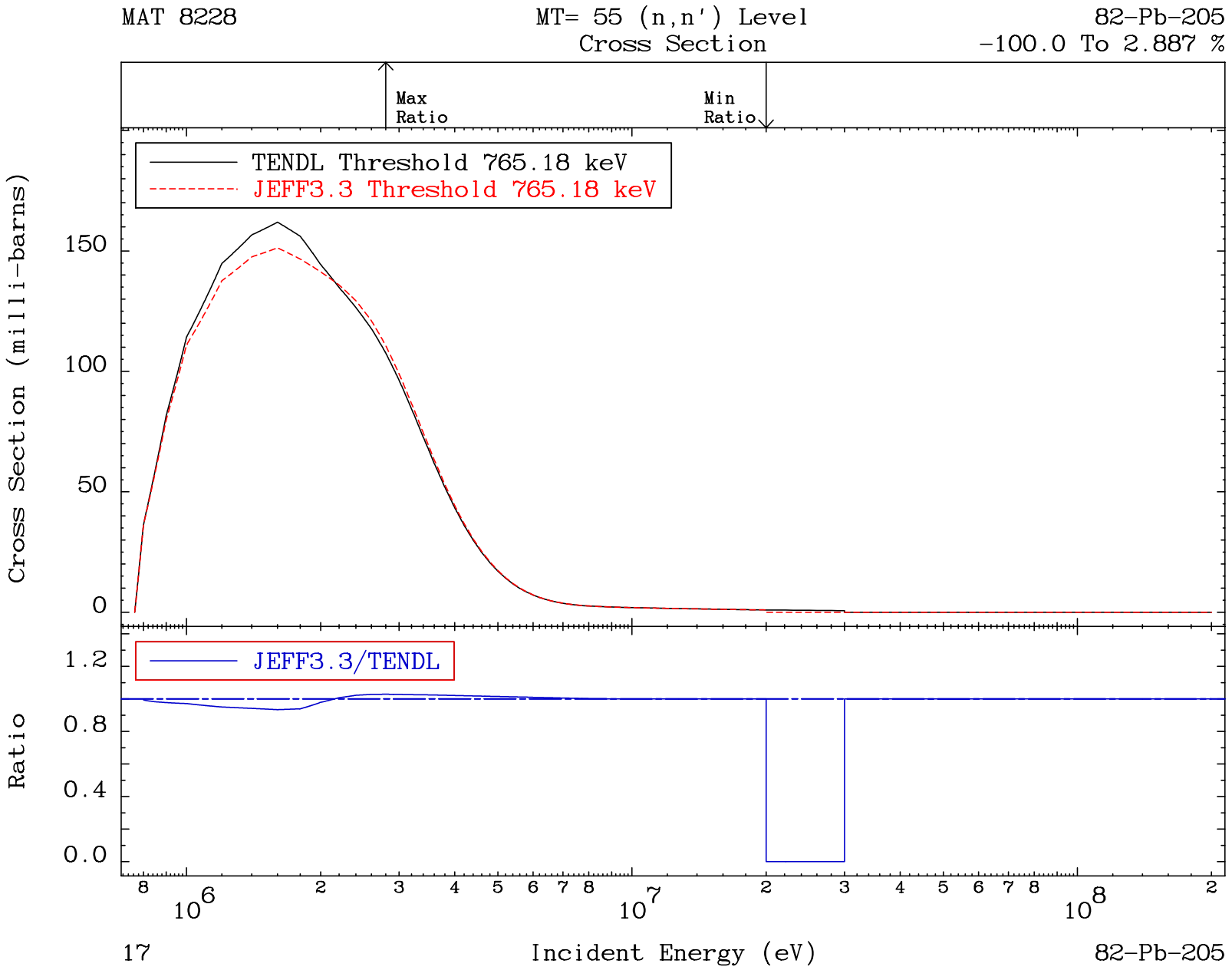

MAT 8228
(n,2n) p
Cross Section
82-Pb-205
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 13.435 MeV
JEFF3.3 Threshold 14.500 MeV
Cross Section (milli-barns)
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
9
10^8
2
12
Incident Energy (eV)
82-Pb-205

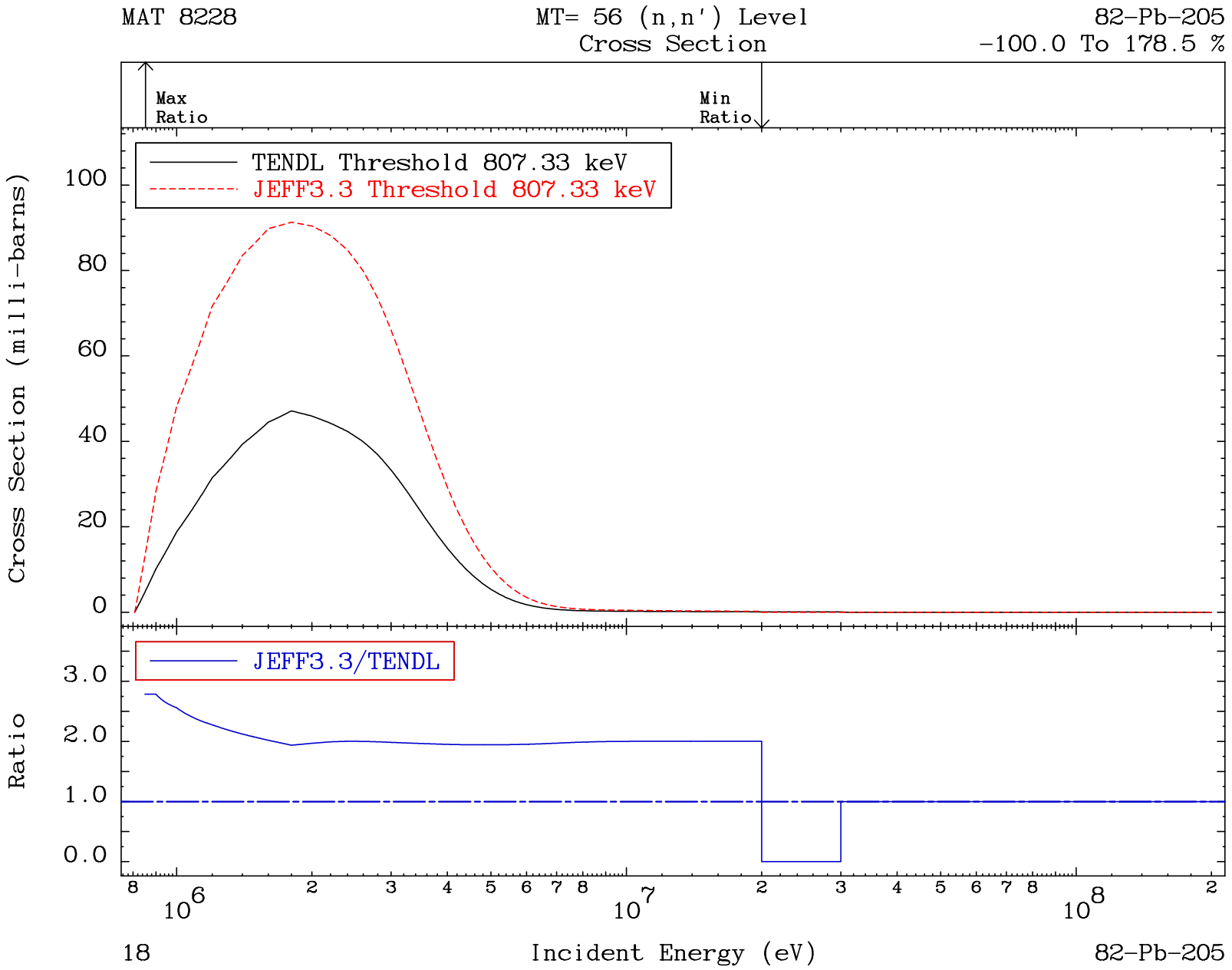

MAT 8228
MT= 51 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 35.47 %
Max
Ratio
Min
Ratio
TENDL Threshold 2.3405 keV
JEFF3.3 Threshold 2.3430 keV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.6
0.0
3 4 5 7 10^4 2 3 4 5 7 10^5 2 3 4 5 7 10^6 2 3 4 5 7 10^7 2 3 4 5 7 10^8 2
13
Incident Energy (eV)
82-Pb-205

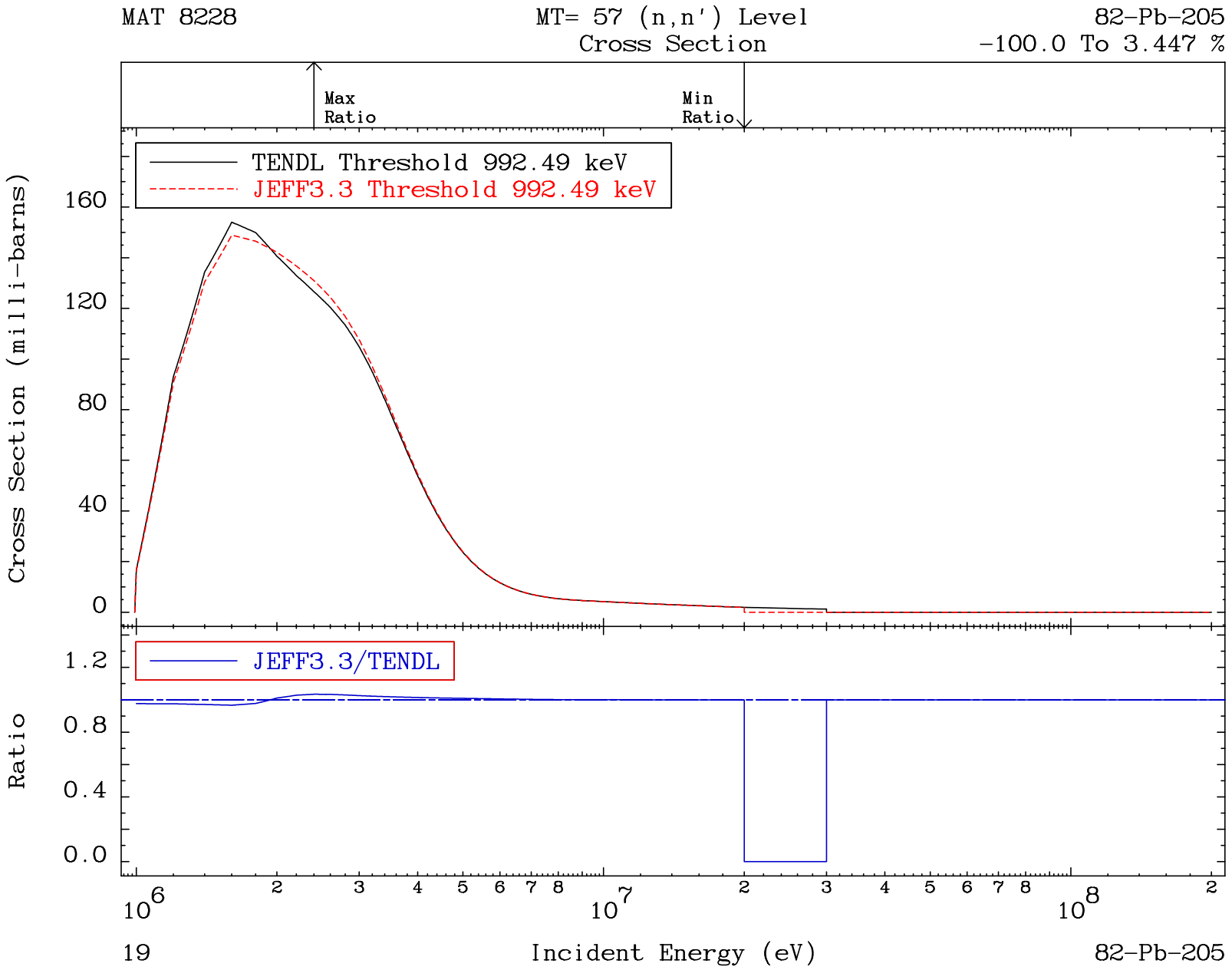

MAT 8228
MT= 52 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 0.456 %
Max
Ratio
Min
Ratio
TENDL Threshold 264.13 keV
JEFF3.3 Threshold 264.13 keV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
3 4 5 6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
14
Incident Energy (eV)
82-Pb-205

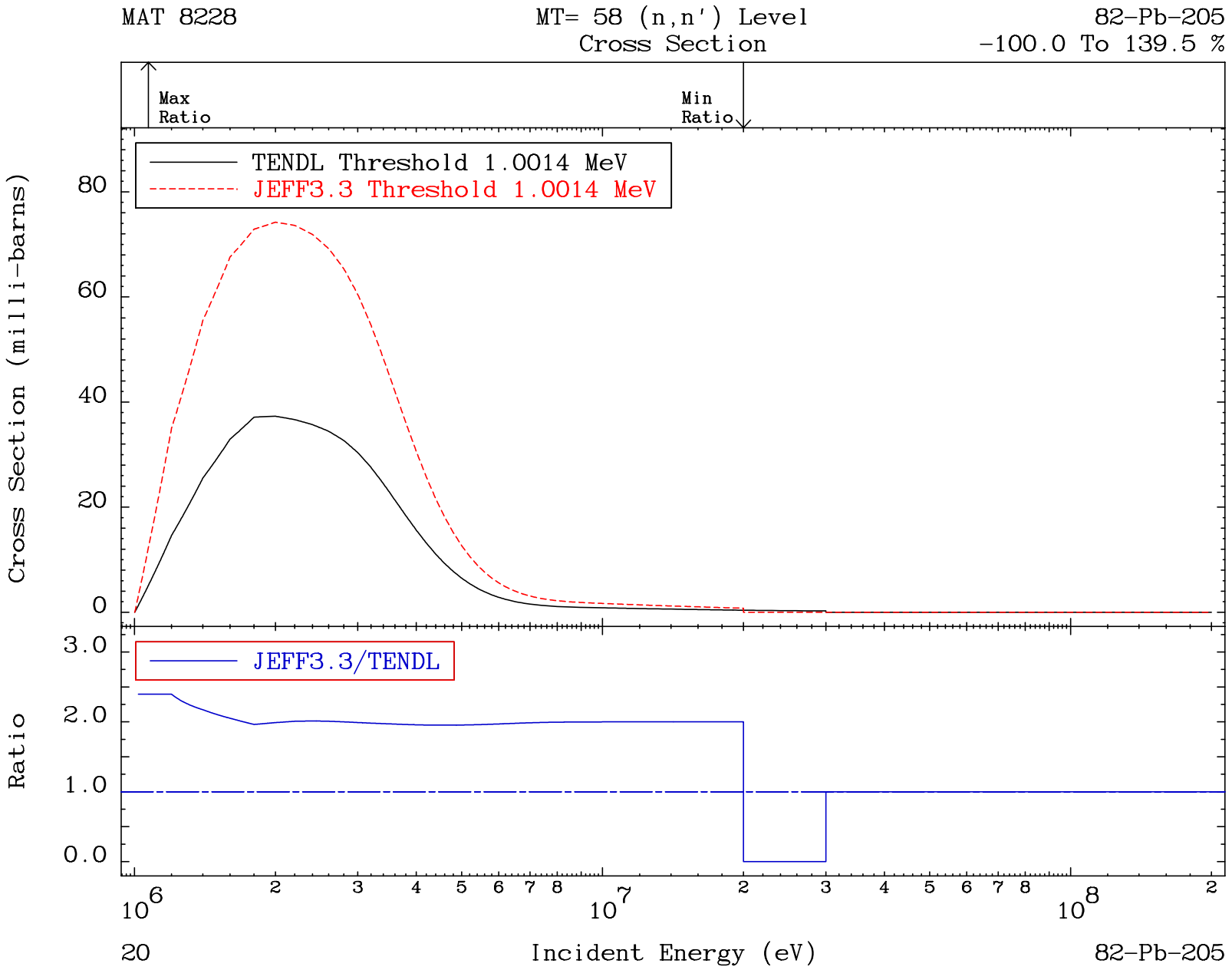

MAT 8228
MT= 53 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 579.03 keV
JEFF3.3 Threshold 579.03 keV
Cross Section (milli-barns)
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
6 7 8 10^6 2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
15
Incident Energy (eV)
82-Pb-205

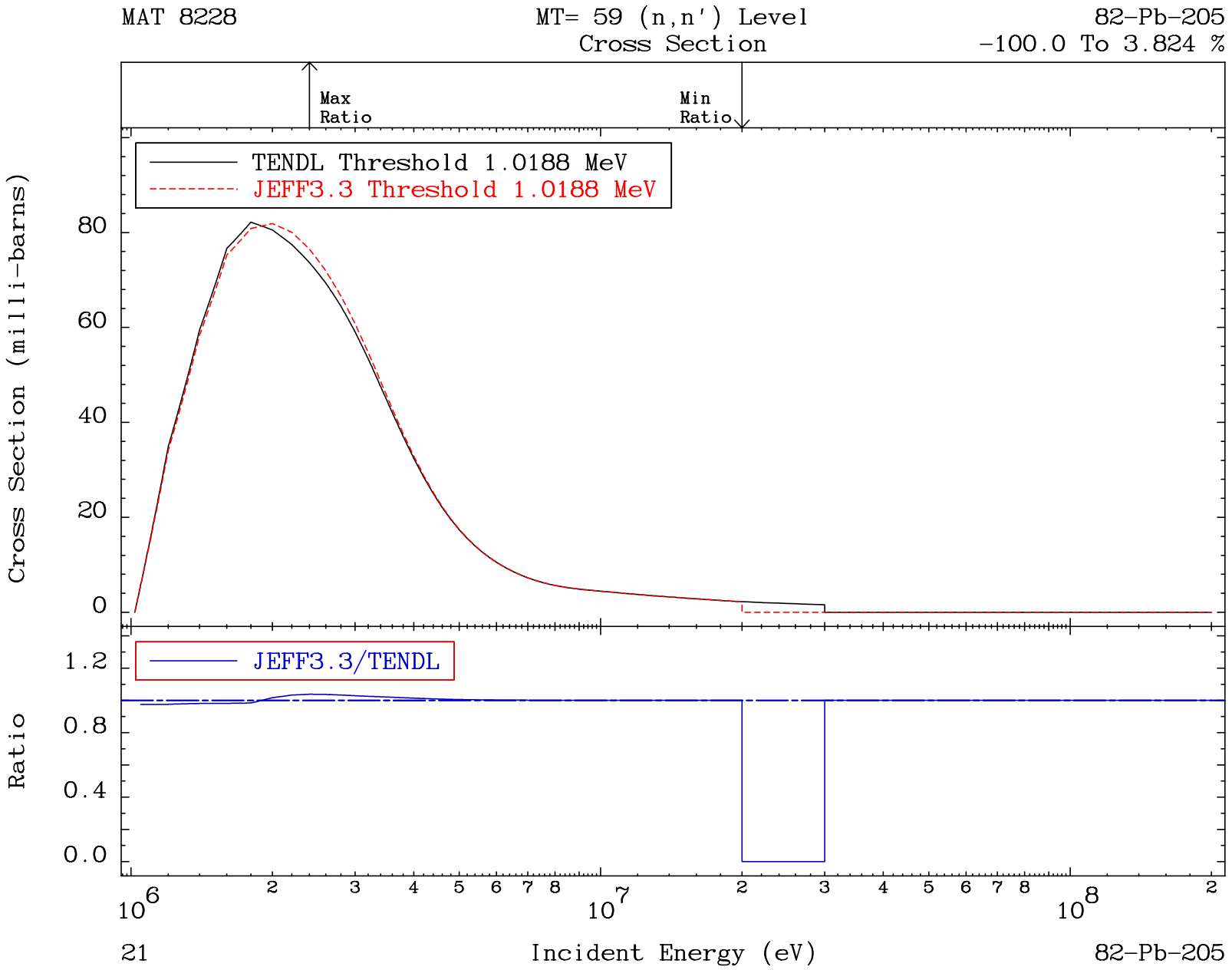

MAT 8228
MT= 54 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.211 %
Max
Ratio
Min
Ratio
TENDL Threshold 706.89 keV
JEFF3.3 Threshold 706.89 keV
Cross Section (milli-barns)
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
7 8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
16
Incident Energy (eV)
82-Pb-205

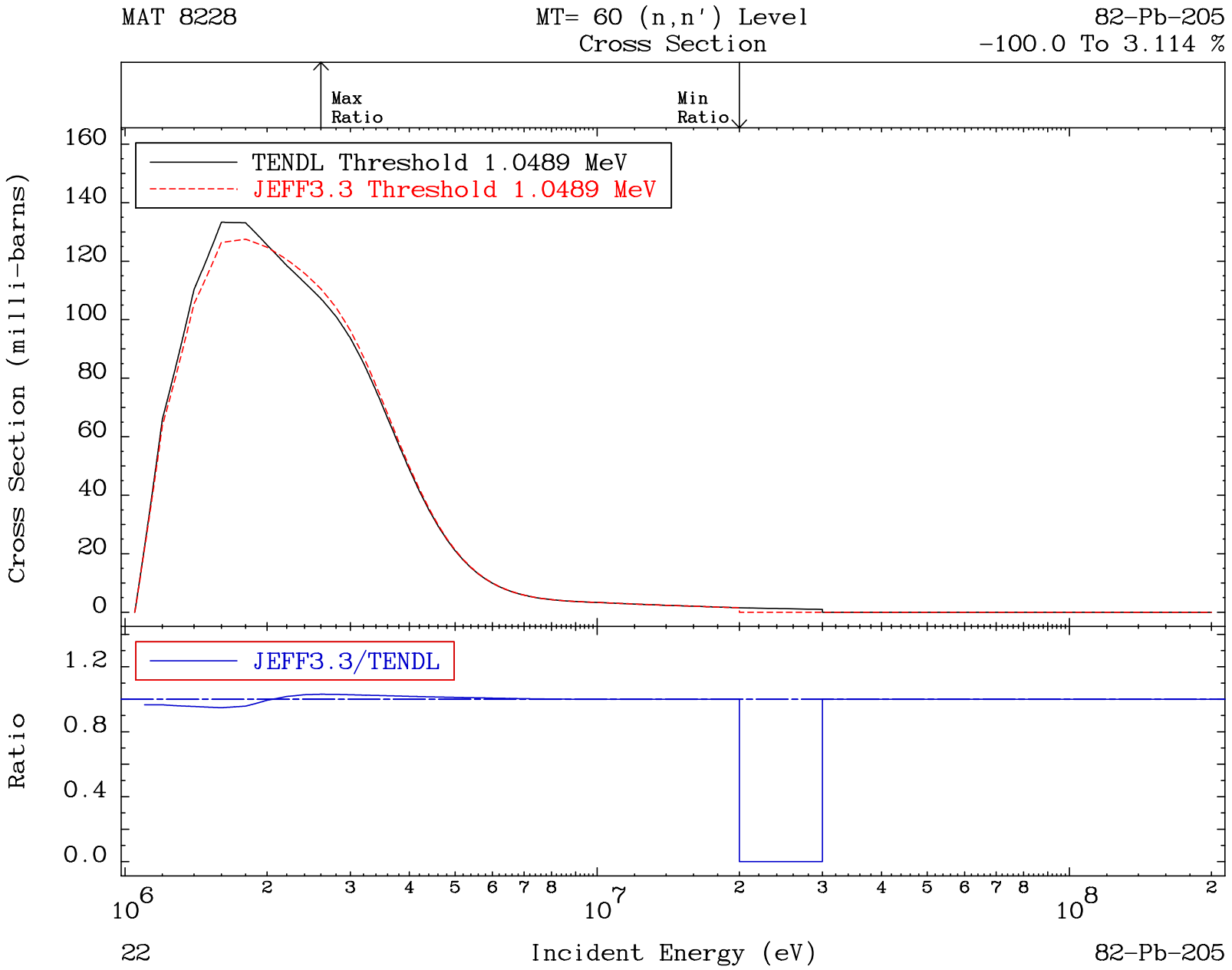

MAT 8228
MT= 55 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 2.887 %
Max
Ratio
Min
Ratio
TENDL Threshold 765.18 keV
JEFF3.3 Threshold 765.18 keV
Cross Section (milli-barns)
150
100
50
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
17
Incident Energy (eV)
82-Pb-205

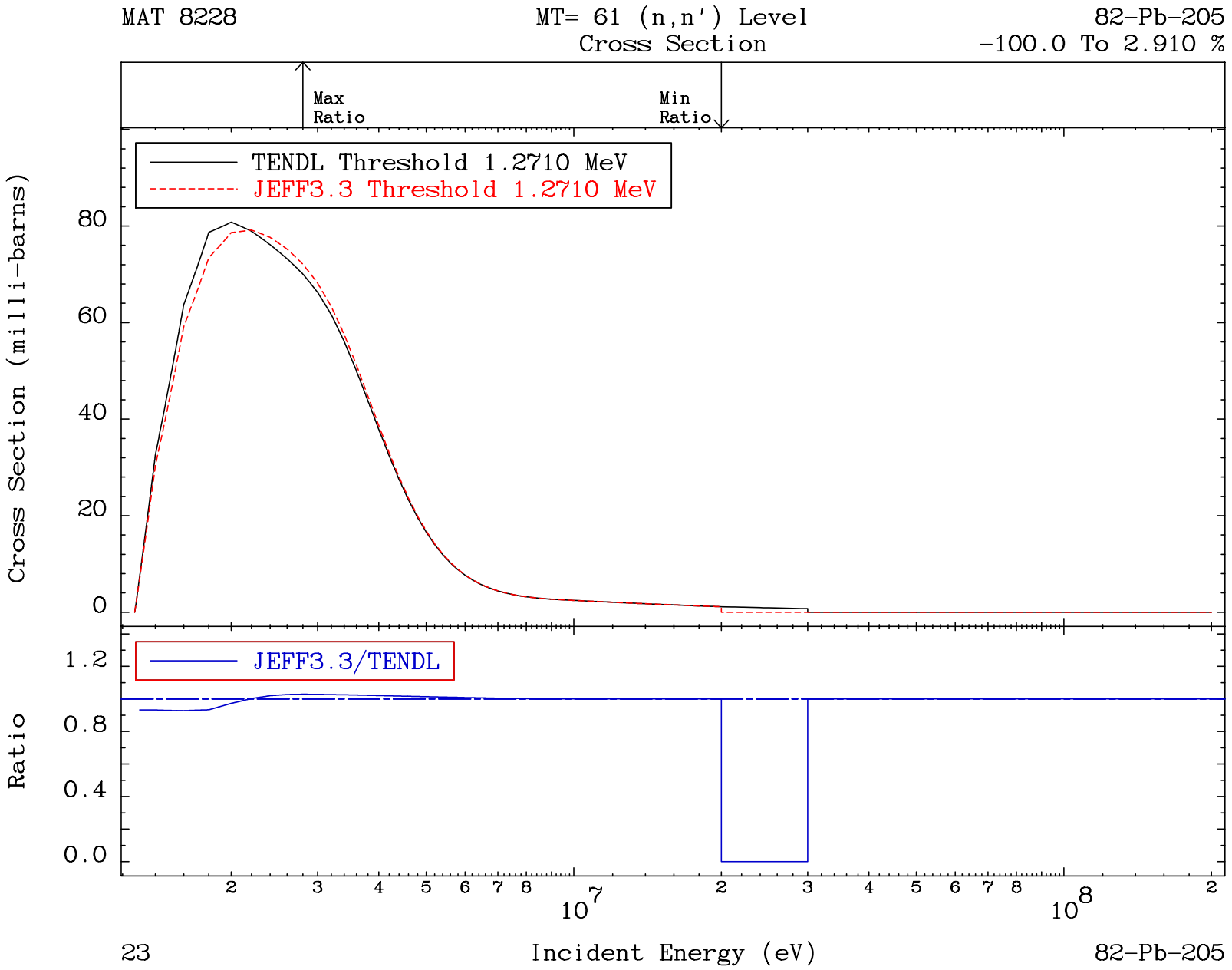

MAT 8228
MT= 56 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 178.5 %
Max
Ratio
Min
Ratio
TENDL Threshold 807.33 keV
JEFF3.3 Threshold 807.33 keV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
0.0
8
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
18
Incident Energy (eV)
82-Pb-205

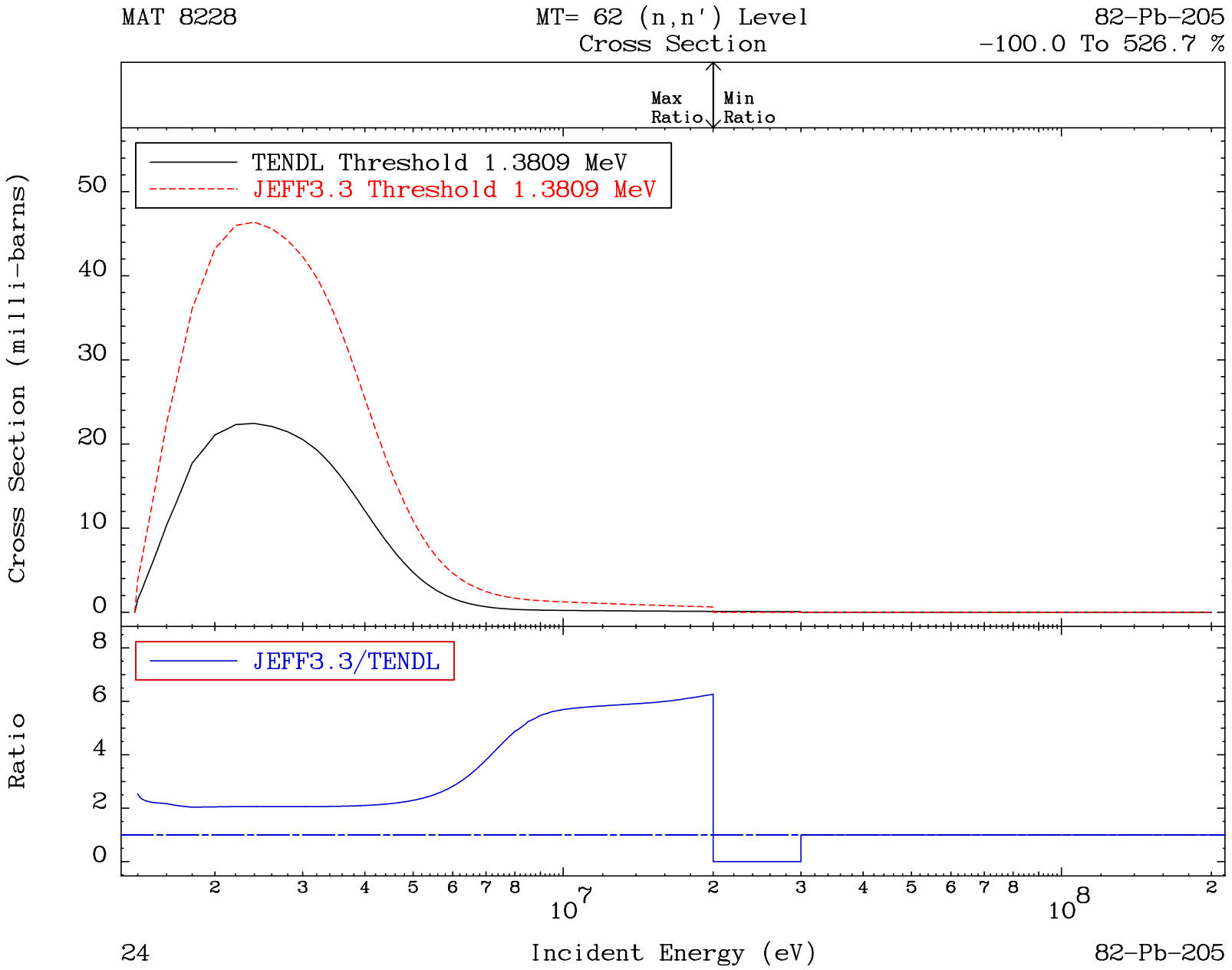

MAT 8228
MT= 57 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.447 %
Max
Ratio
Min
Ratio
TENDL Threshold 992.49 keV
JEFF3.3 Threshold 992.49 keV
Cross Section (milli-barns)
160
120
80
40
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
10^6
10^7
10^8
Incident Energy (eV)
19
82-Pb-205

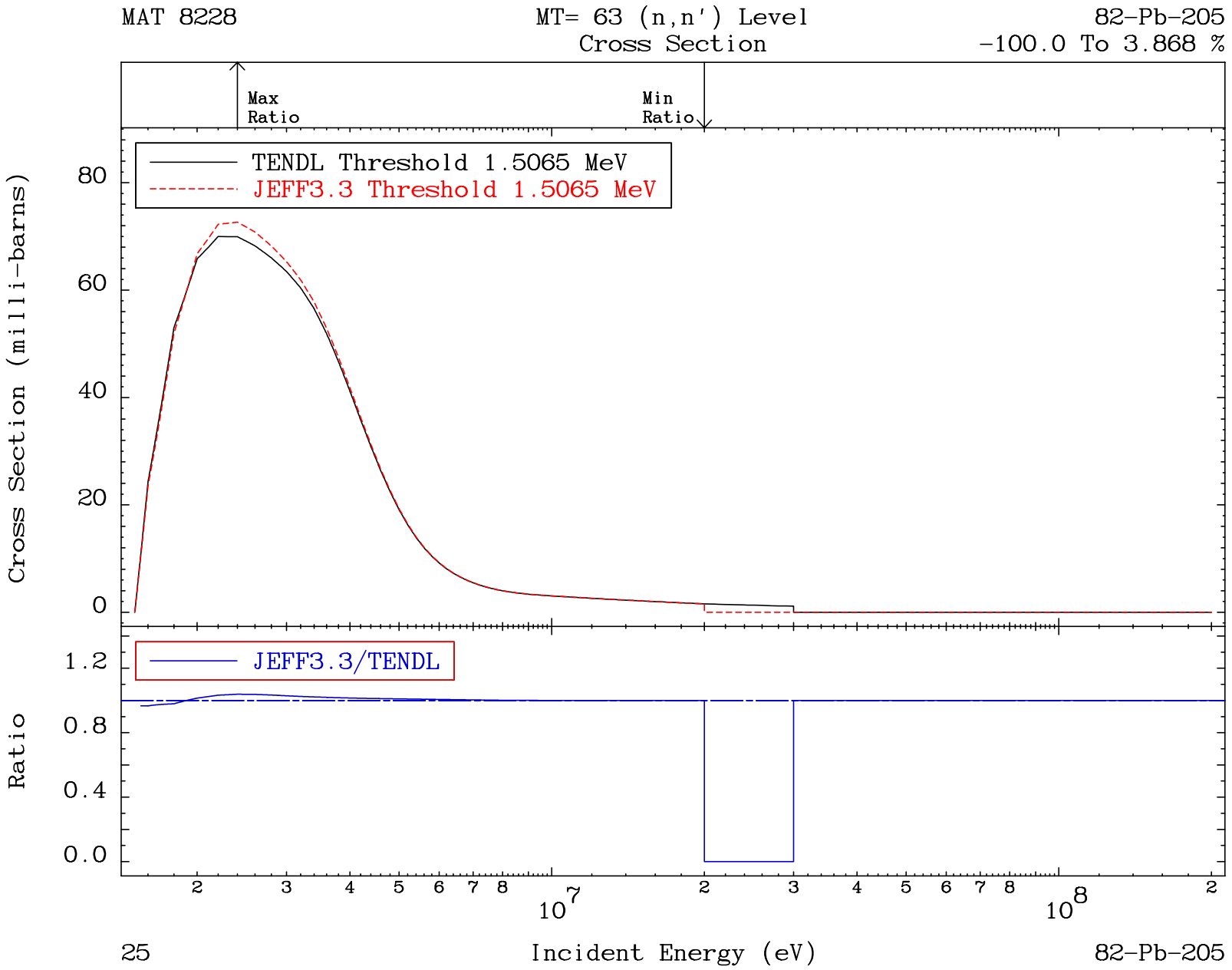

MAT 8228
MT= 58 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 139.5 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.0014 MeV
JEFF3.3 Threshold 1.0014 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
0.0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
20
Incident Energy (eV)
82-Pb-205

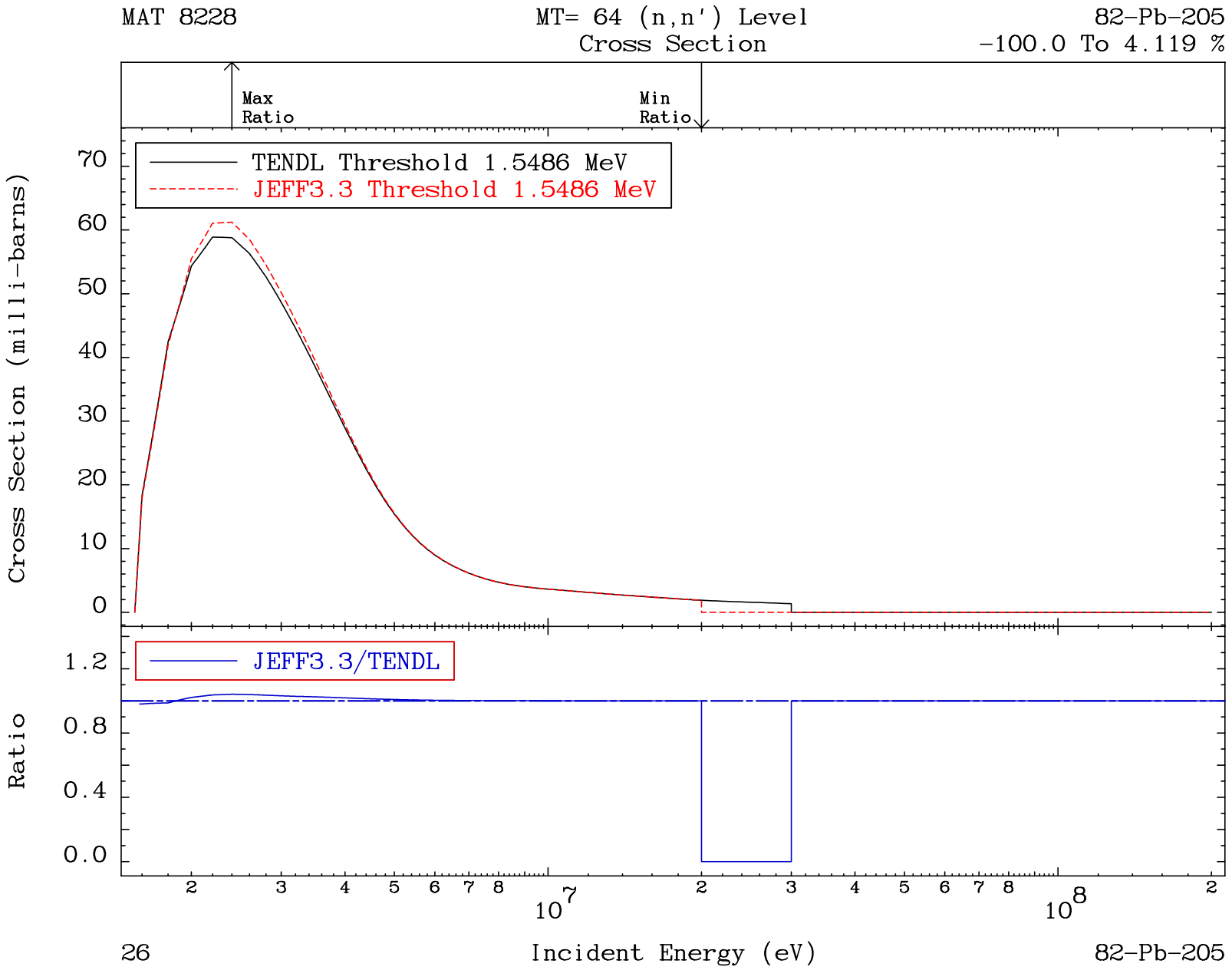

MAT 8228
MT= 59 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.824 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.0188 MeV
JEFF3.3 Threshold 1.0188 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
21
Incident Energy (eV)
82-Pb-205

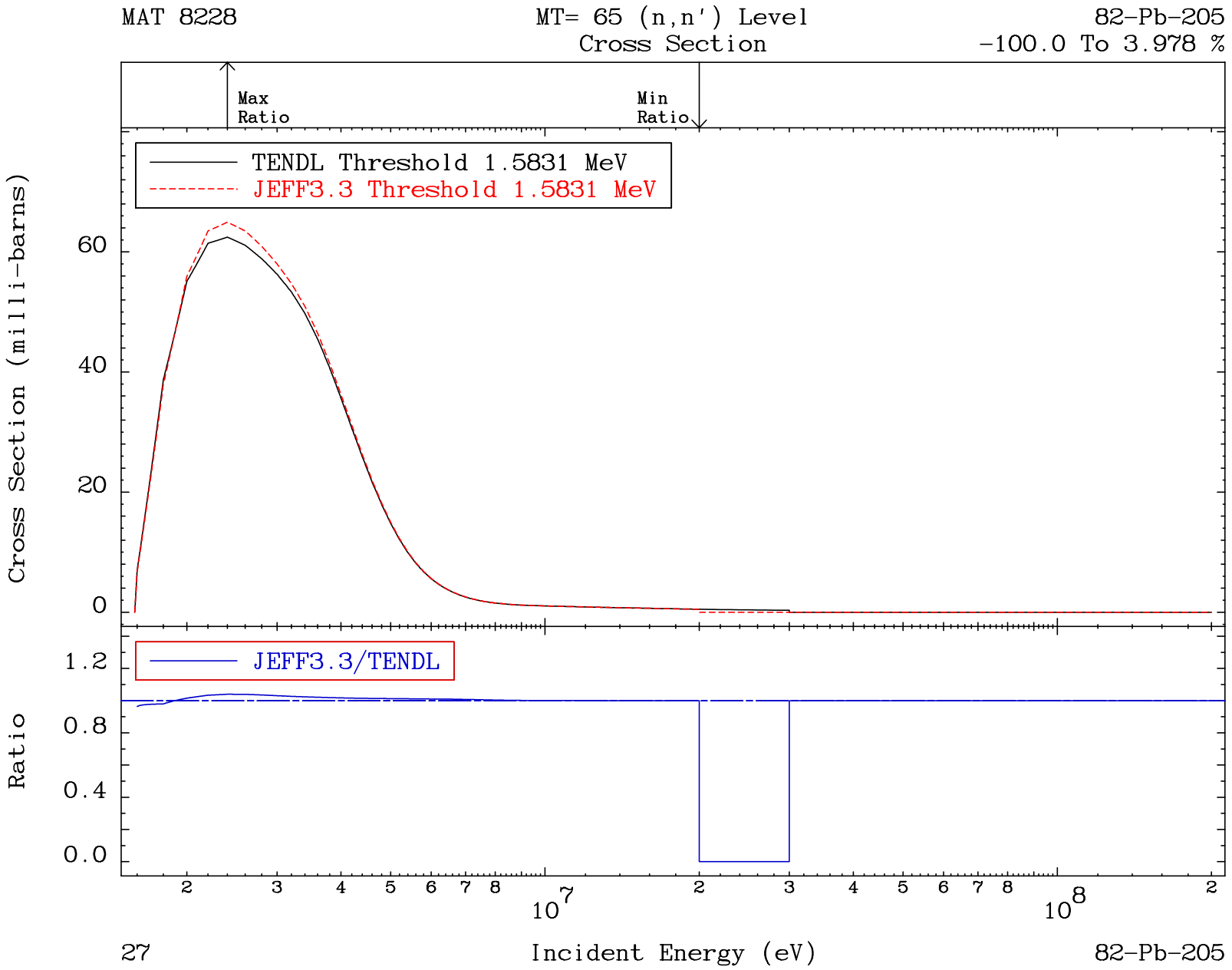

MAT 8228
MT= 60 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.114 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.0489 MeV
JEFF3.3 Threshold 1.0489 MeV
Cross Section (milli-barns)
160
140
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
10^6
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
22
Incident Energy (eV)
82-Pb-205

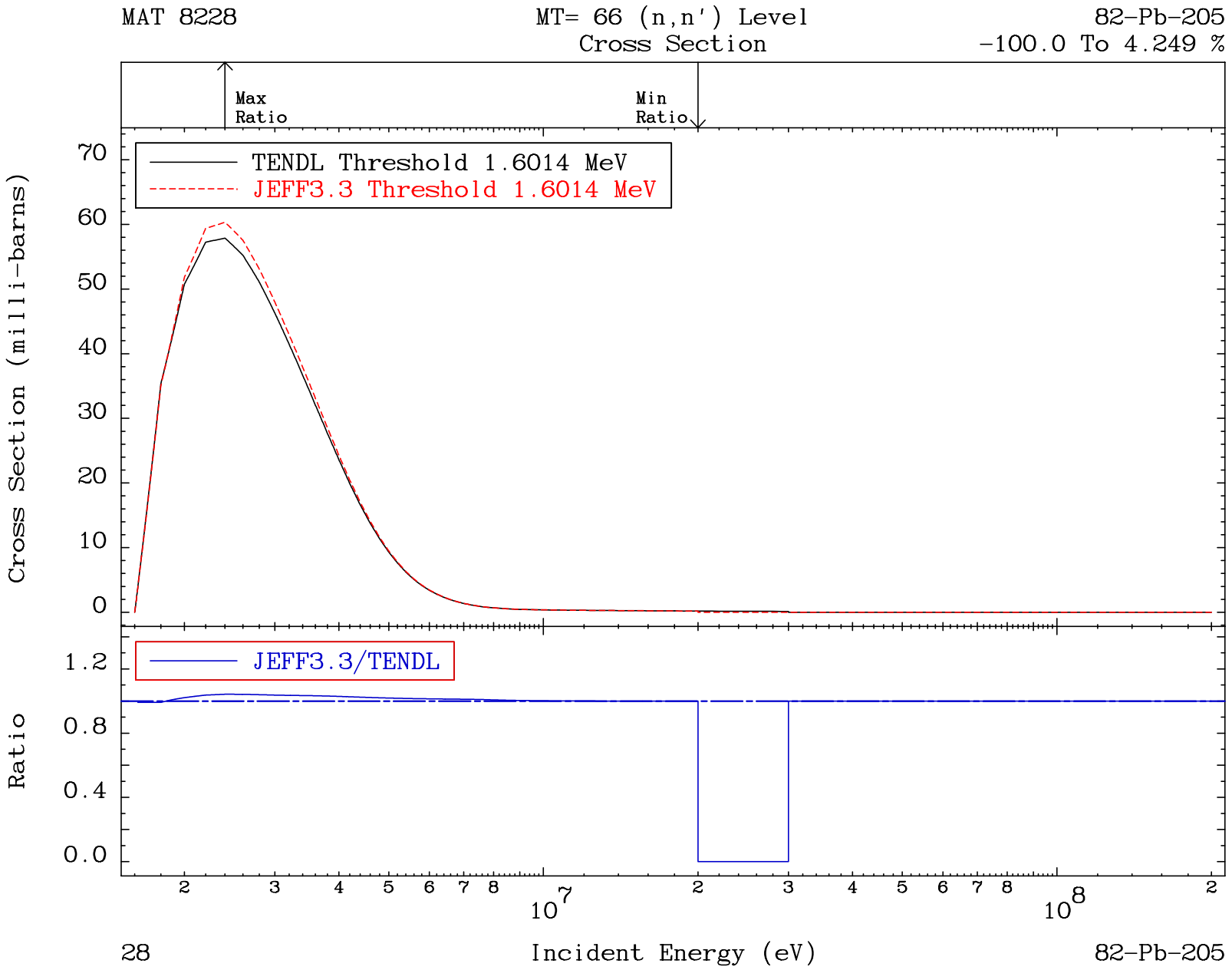

MAT 8228
MT= 61 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 2.910 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.2710 MeV
JEFF3.3 Threshold 1.2710 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
23
Incident Energy (eV)
82-Pb-205

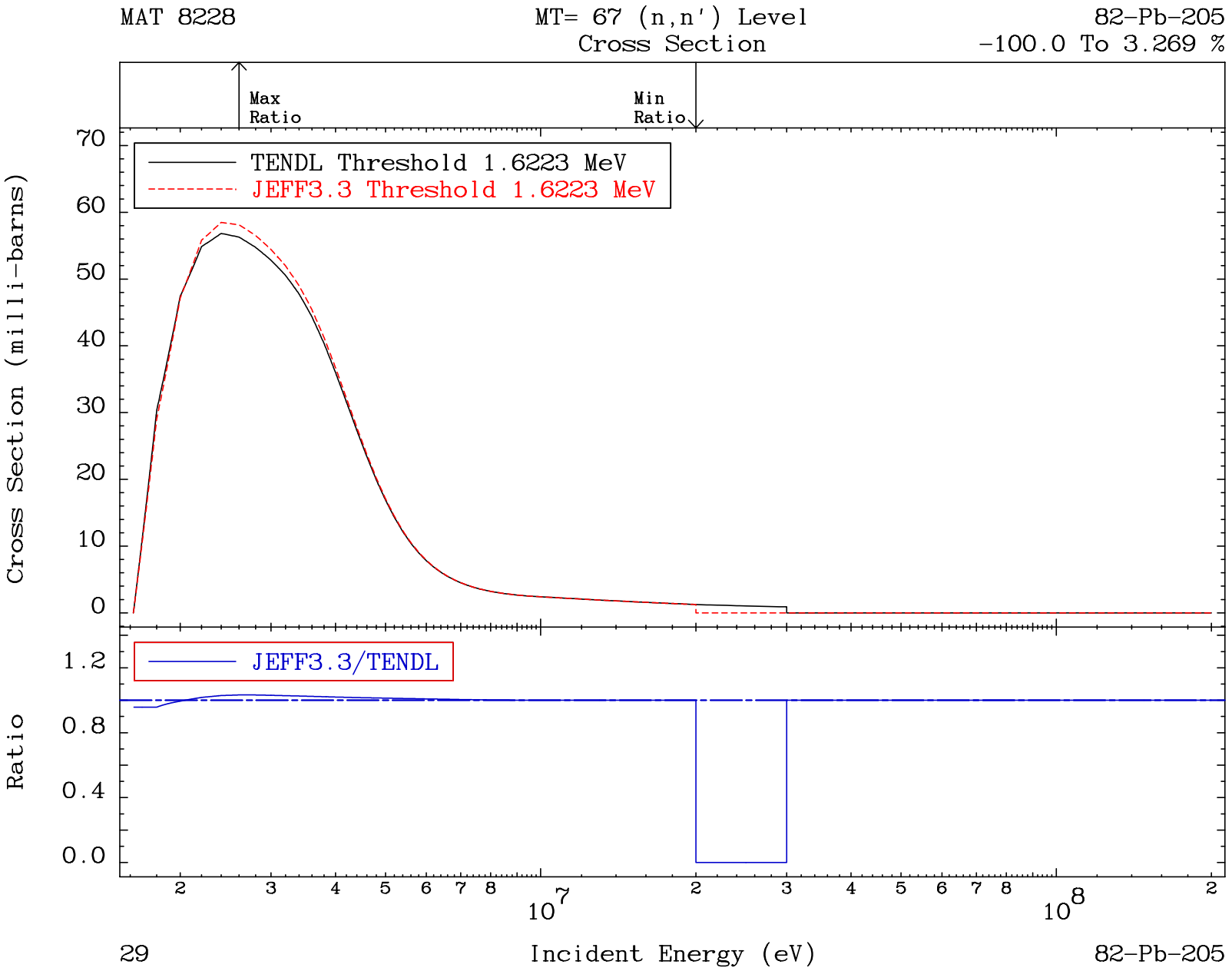

MAT 8228
MT= 62 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 526.7 %
Max Ratio
Min Ratio
TENDL Threshold 1.3809 MeV
JEFF3.3 Threshold 1.3809 MeV
Cross Section (milli-barns)
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
8
6
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
82-Pb-205

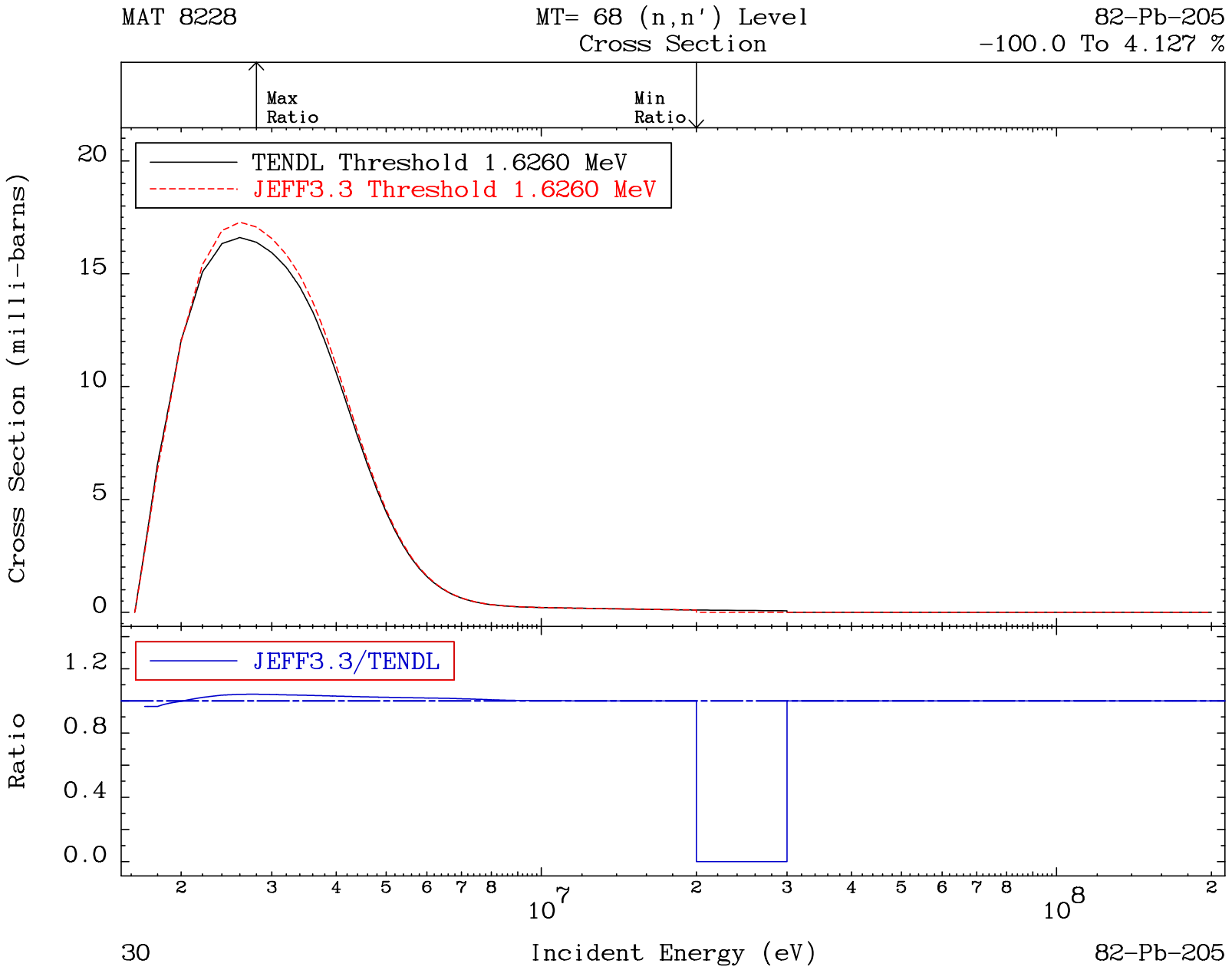

MAT 8228
MT= 63 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.868 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.5065 MeV
JEFF3.3 Threshold 1.5065 MeV
Cross Section (milli-barns)
80
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
25
Incident Energy (eV)
82-Pb-205

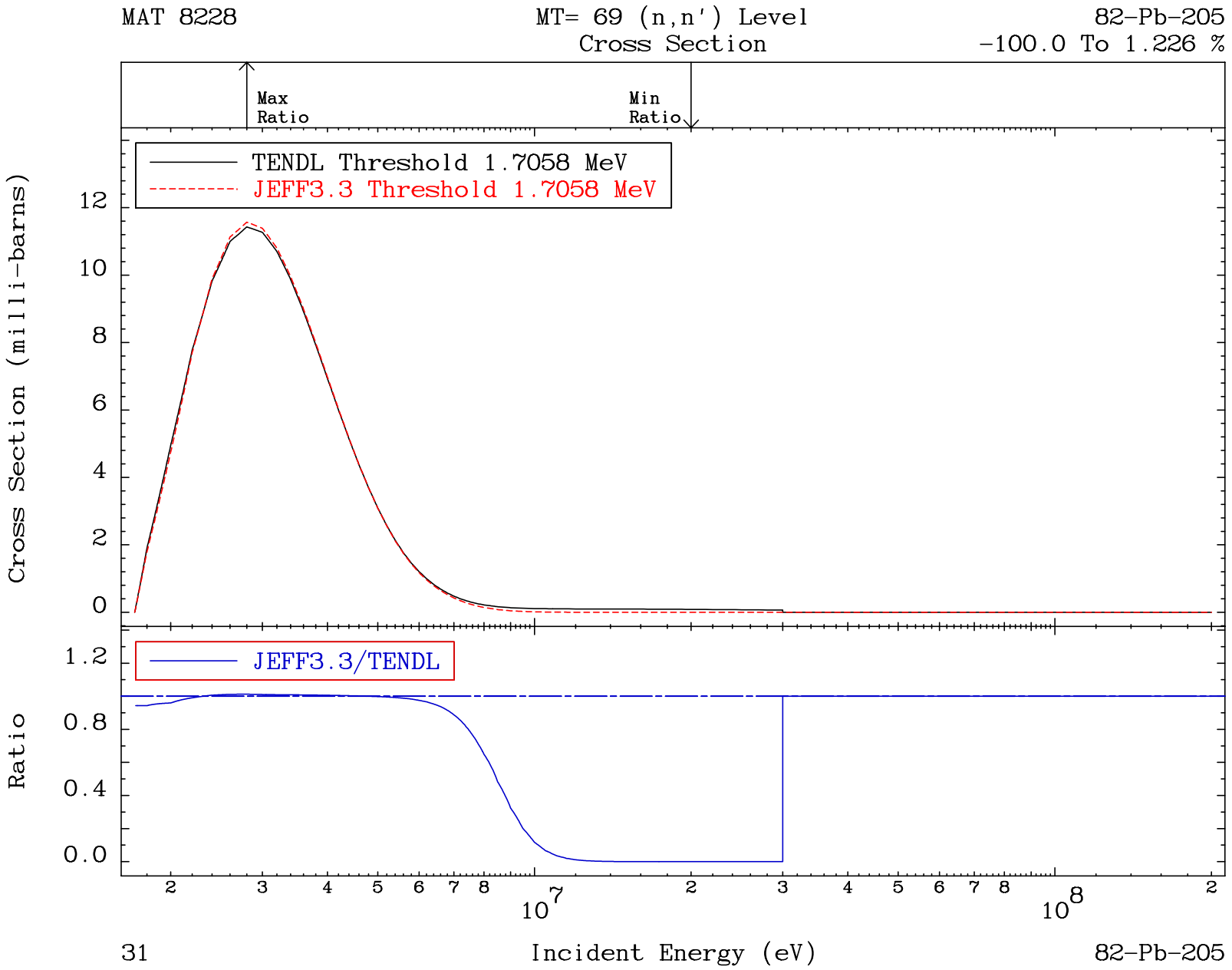

MAT 8228
MT= 64 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 4.119 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.5486 MeV
JEFF3.3 Threshold 1.5486 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
26
Incident Energy (eV)
82-Pb-205

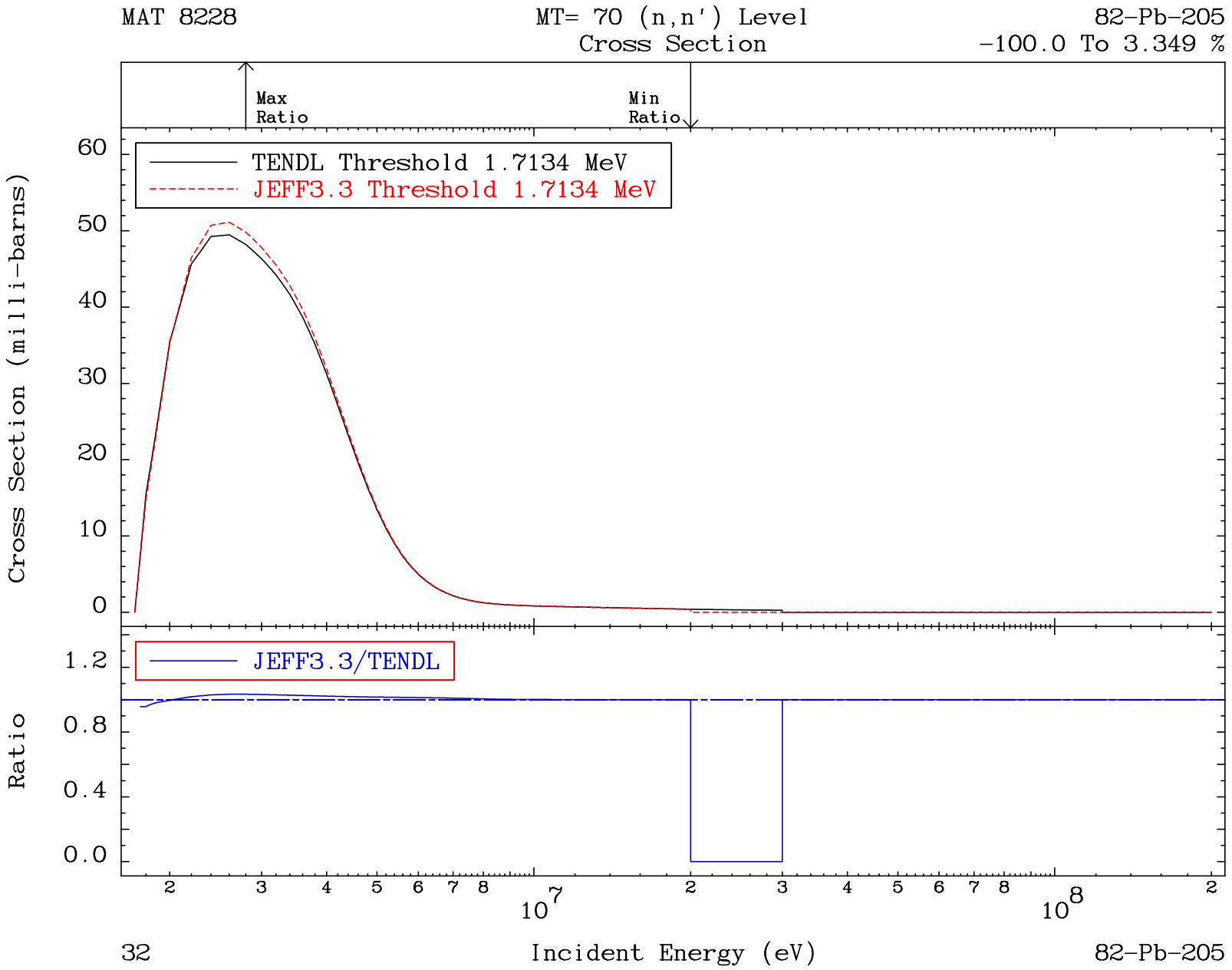

MAT 8228
MT= 65 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.978 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.5831 MeV
JEFF3.3 Threshold 1.5831 MeV
Cross Section (milli-barns)
60
40
20
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
27
Incident Energy (eV)
82-Pb-205

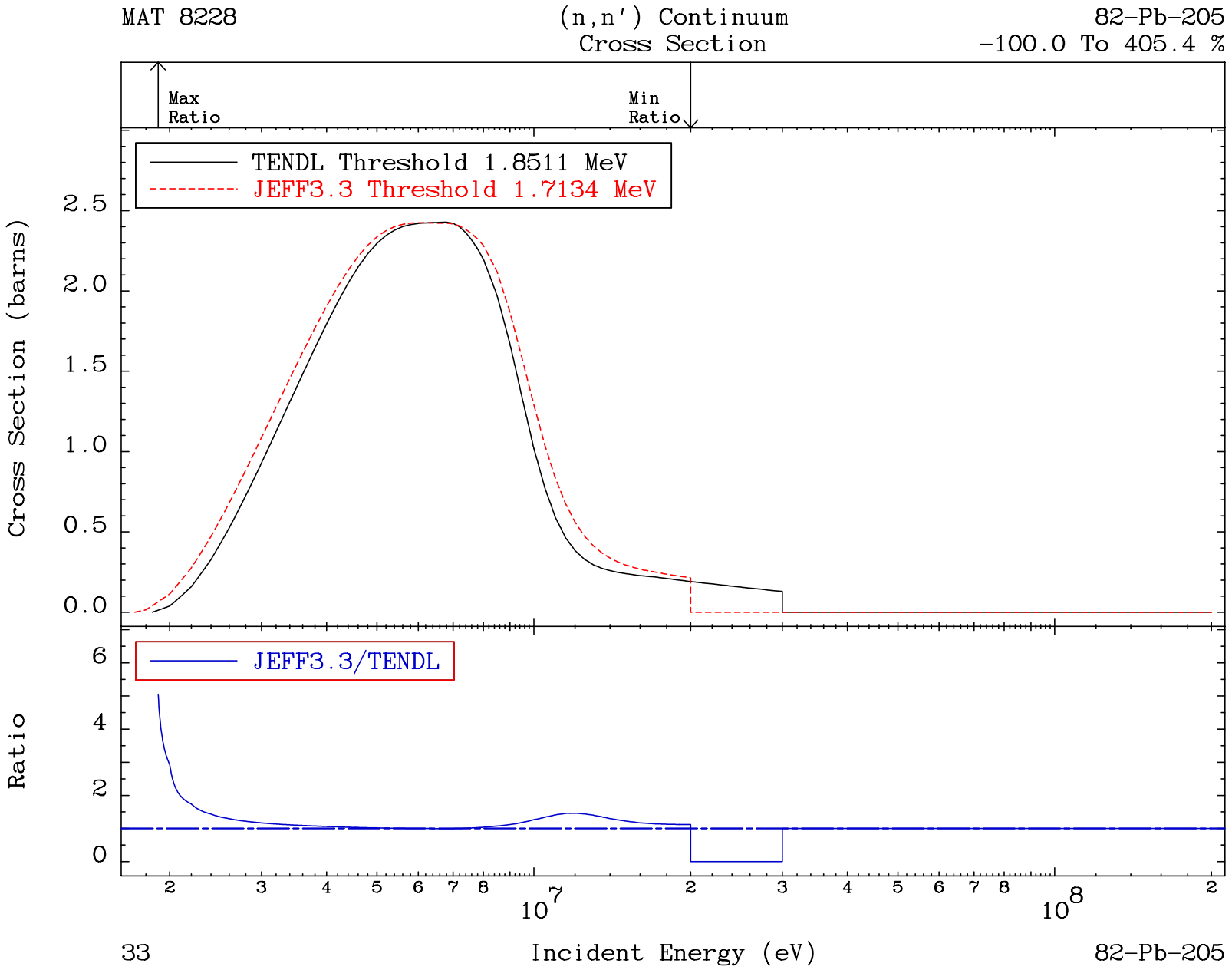

MAT 8228
MT= 66 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 4.249 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.6014 MeV
JEFF3.3 Threshold 1.6014 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
28
Incident Energy (eV)
82-Pb-205

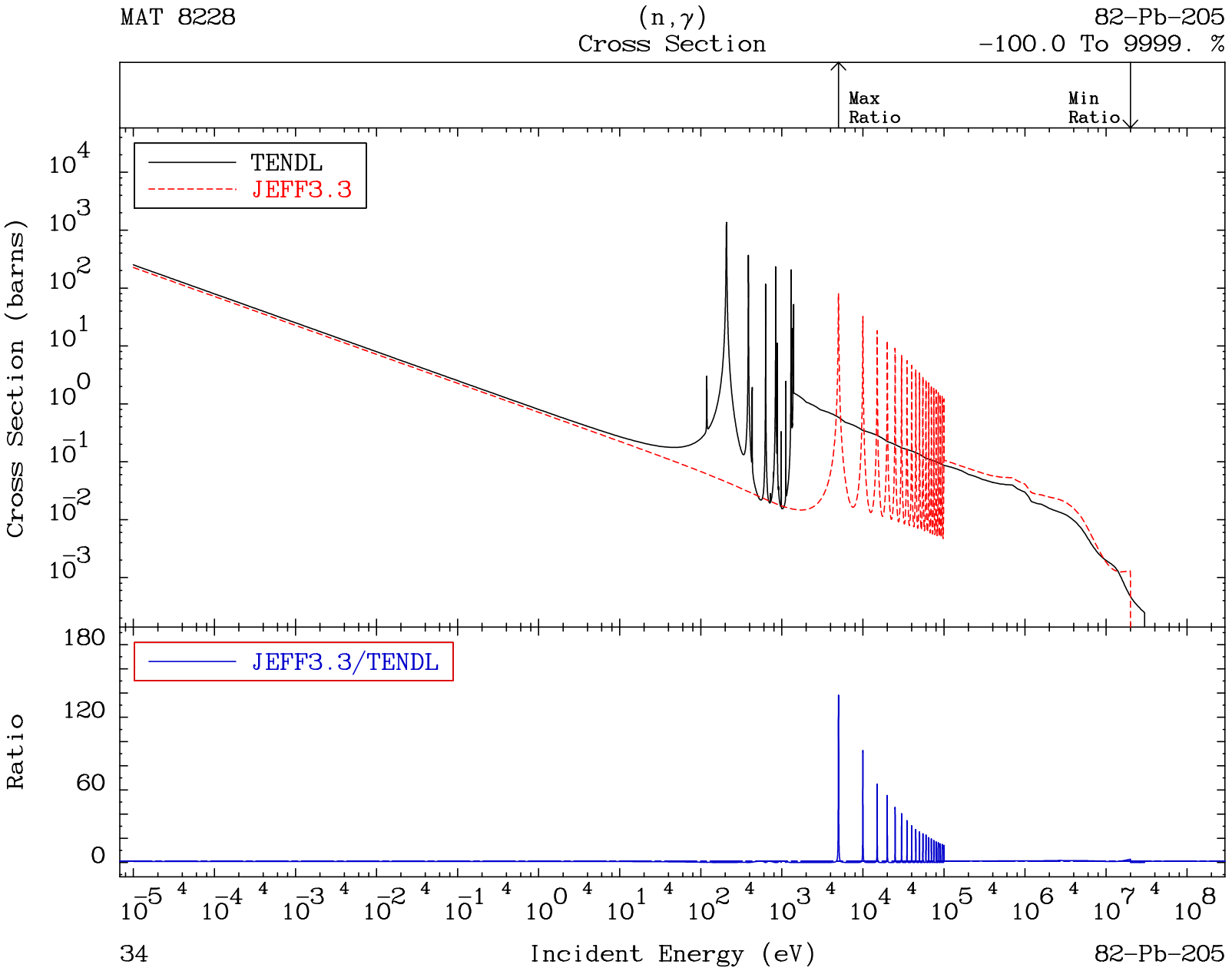

MAT 8228
MT= 67 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.269 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.6223 MeV
JEFF3.3 Threshold 1.6223 MeV
Cross Section (milli-barns)
70
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
29
Incident Energy (eV)
82-Pb-205

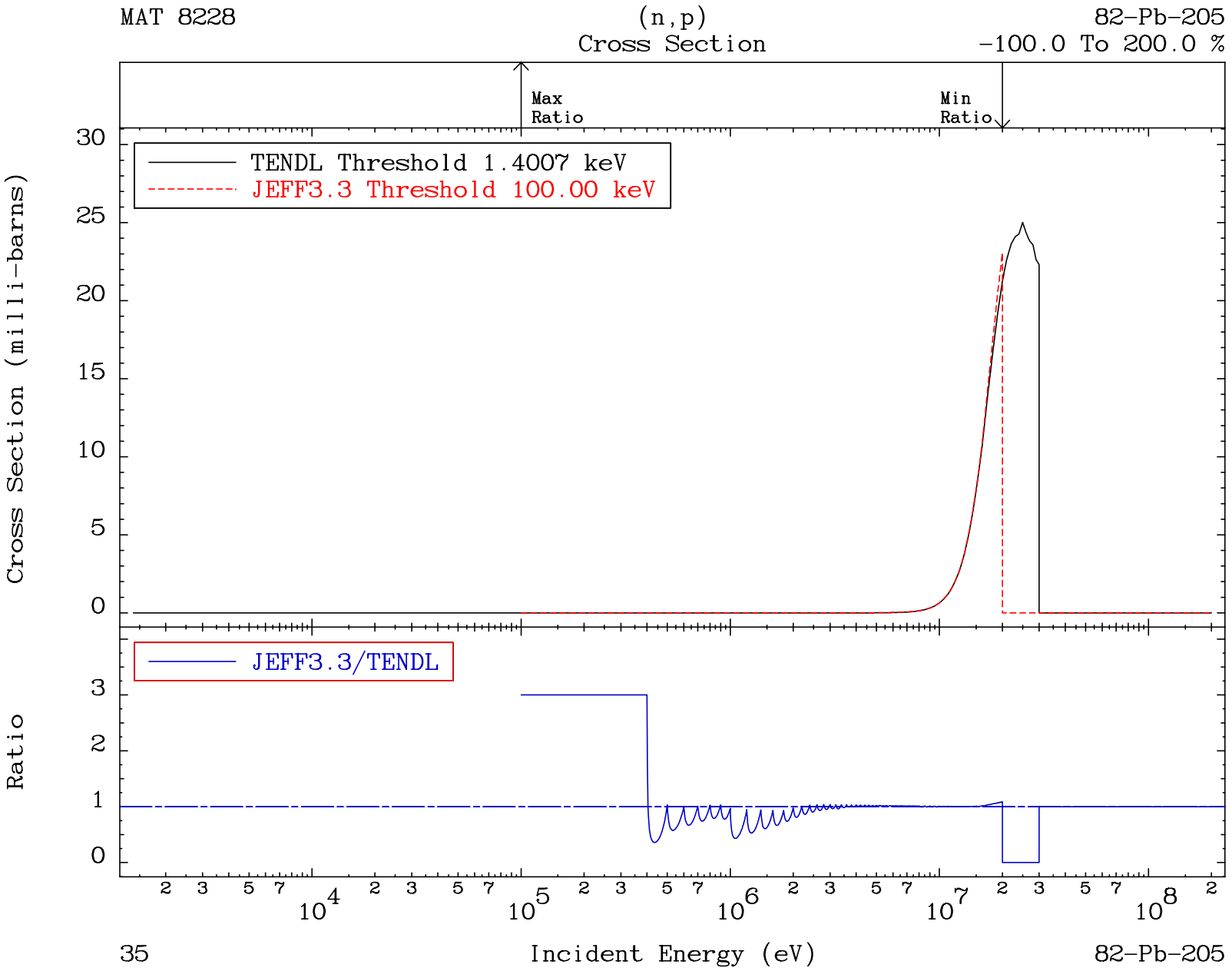

MAT 8228
MT= 68 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 4.127 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.6260 MeV
JEFF3.3 Threshold 1.6260 MeV
Cross Section (milli-barns)
20
15
10
5
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
30
Incident Energy (eV)
82-Pb-205

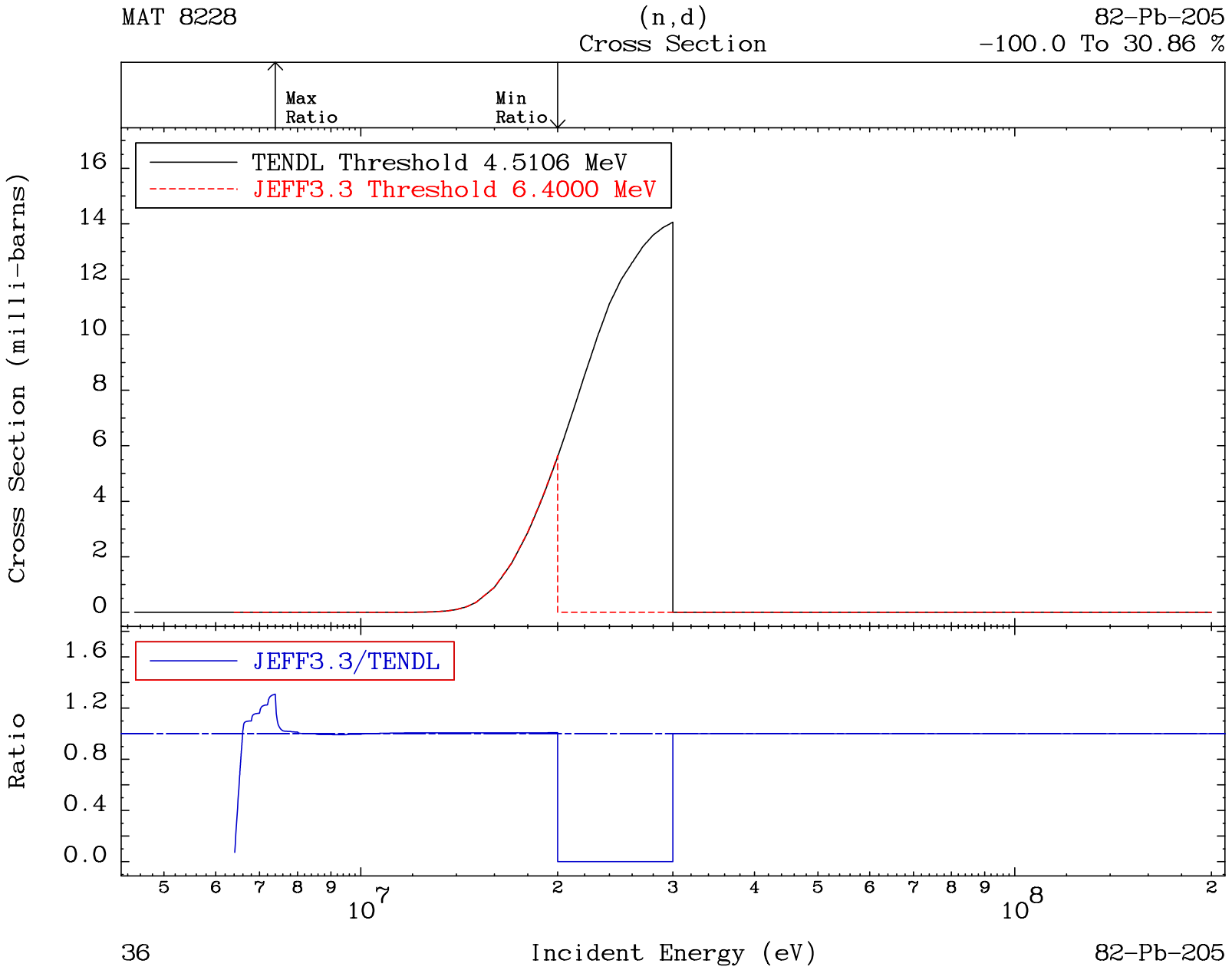

MAT 8228
MT= 69 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 1.226 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.7058 MeV
JEFF3.3 Threshold 1.7058 MeV
Cross Section (milli-barns)
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
31
Incident Energy (eV)
82-Pb-205

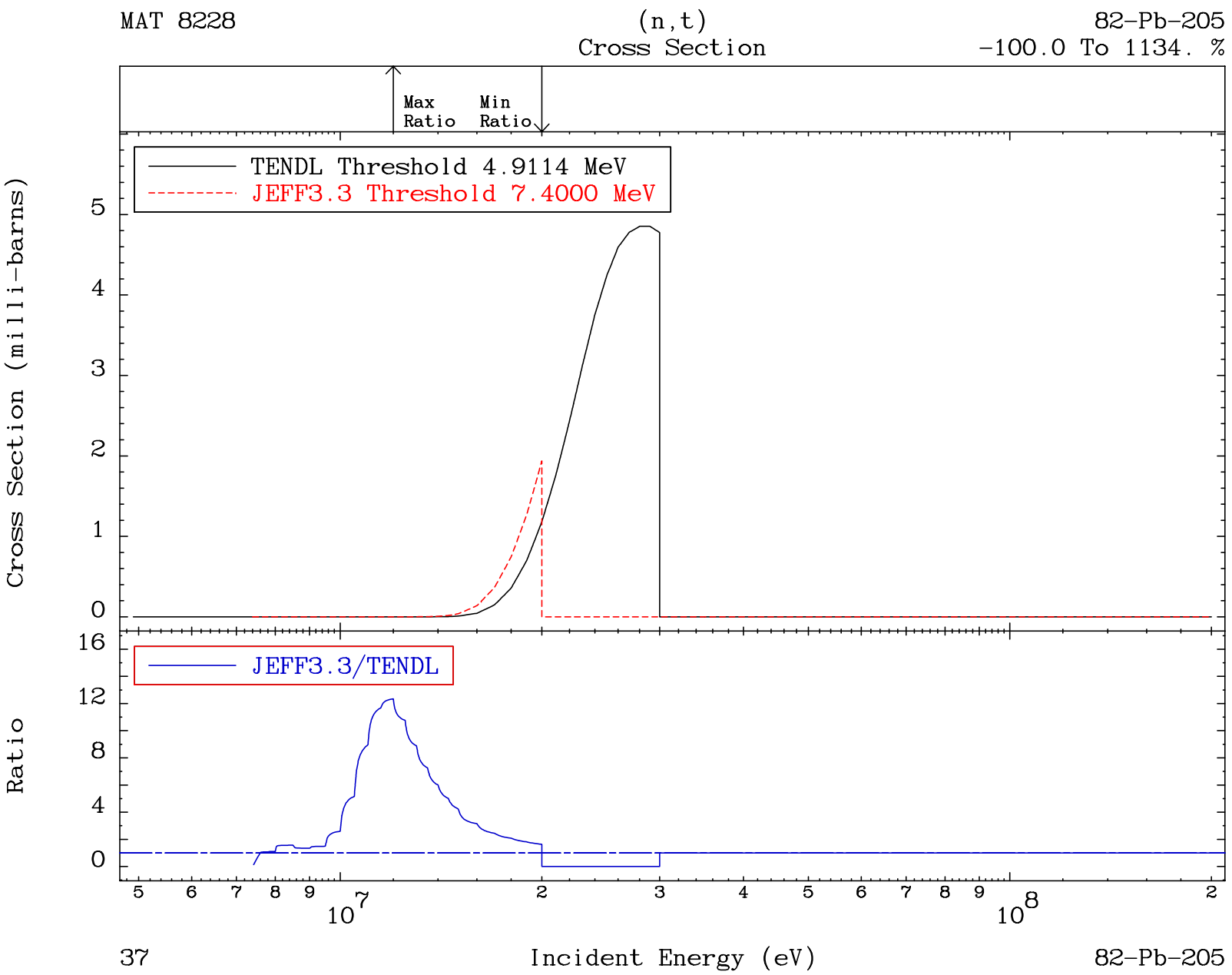

MAT 8228
MT= 70 (n,n') Level
Cross Section
82-Pb-205
-100.0 To 3.349 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.7134 MeV
JEFF3.3 Threshold 1.7134 MeV
Cross Section (milli-barns)
60
50
40
30
20
10
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
32
Incident Energy (eV)
82-Pb-205

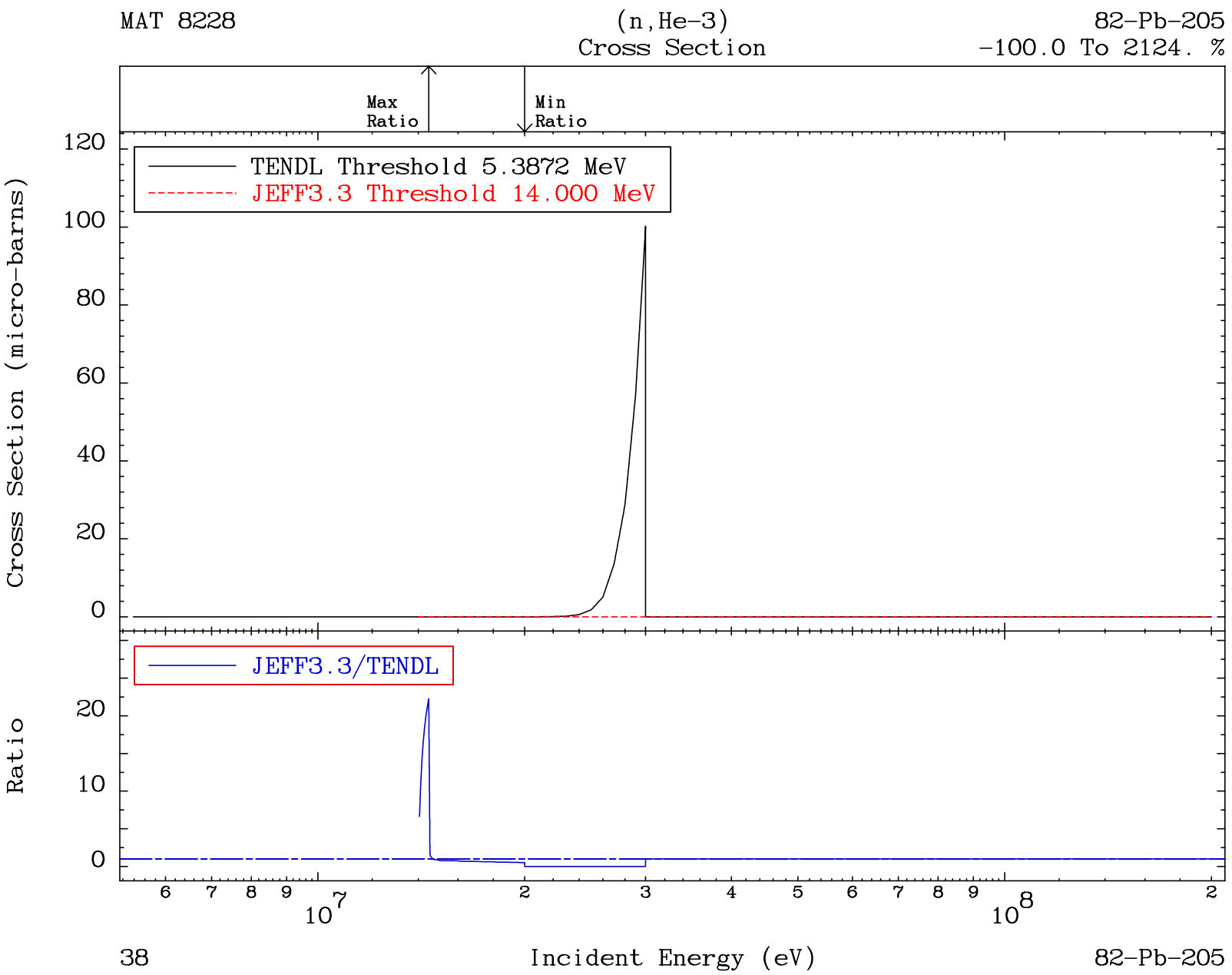

MAT 8228
(n,n') Continuum
Cross Section
82-Pb-205
-100.0 To 405.4 %
Max
Ratio
Min
Ratio
TENDL Threshold 1.8511 MeV
JEFF3.3 Threshold 1.7134 MeV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
JEFF3.3/TENDL
Ratio
6
4
2
0
2
3
4
5
6
7
8
10^7
2
3
4
5
6
7
8
10^8
2
33
Incident Energy (eV)
82-Pb-205

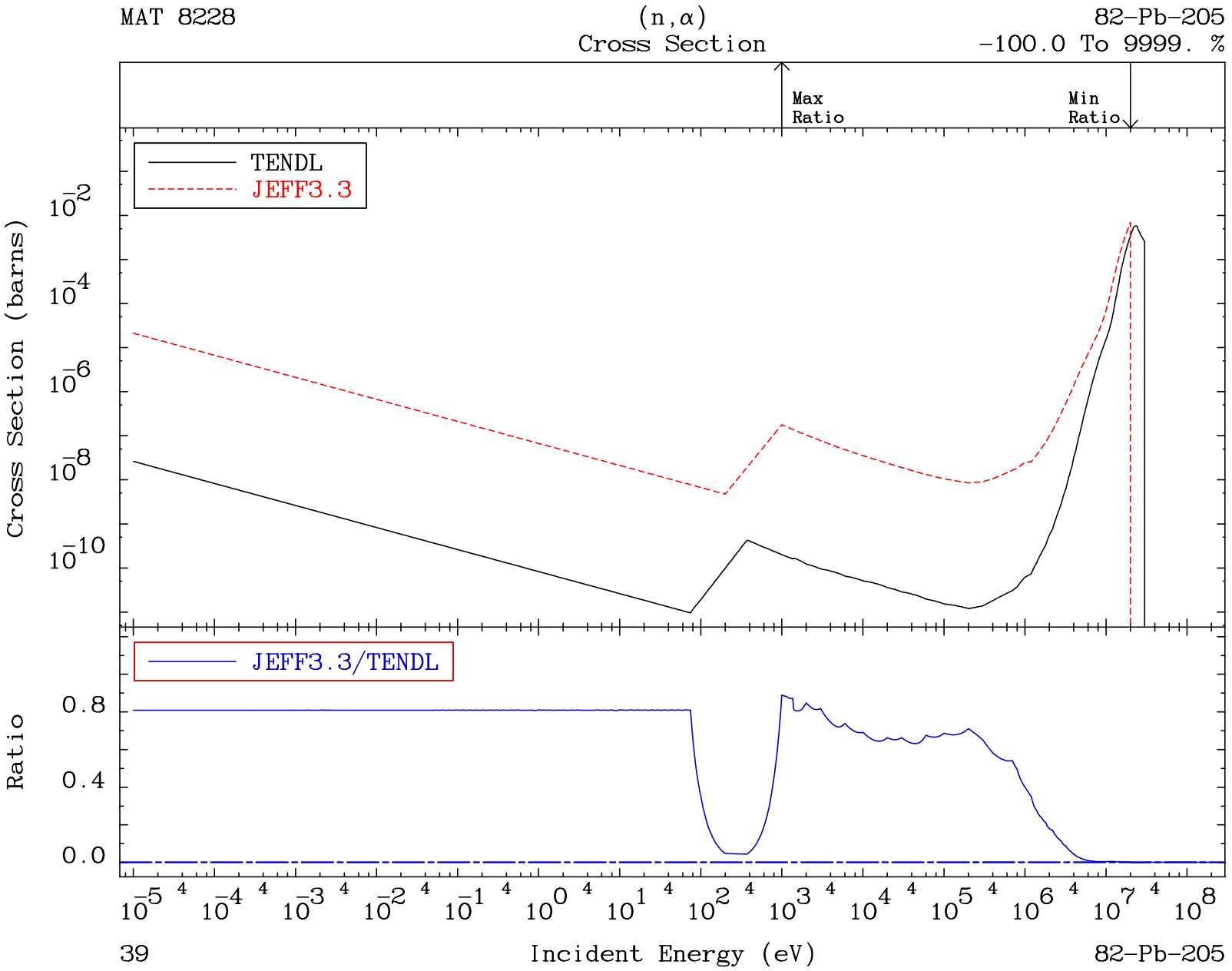

MAT 8228
(n,γ)
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
34
82-Pb-205

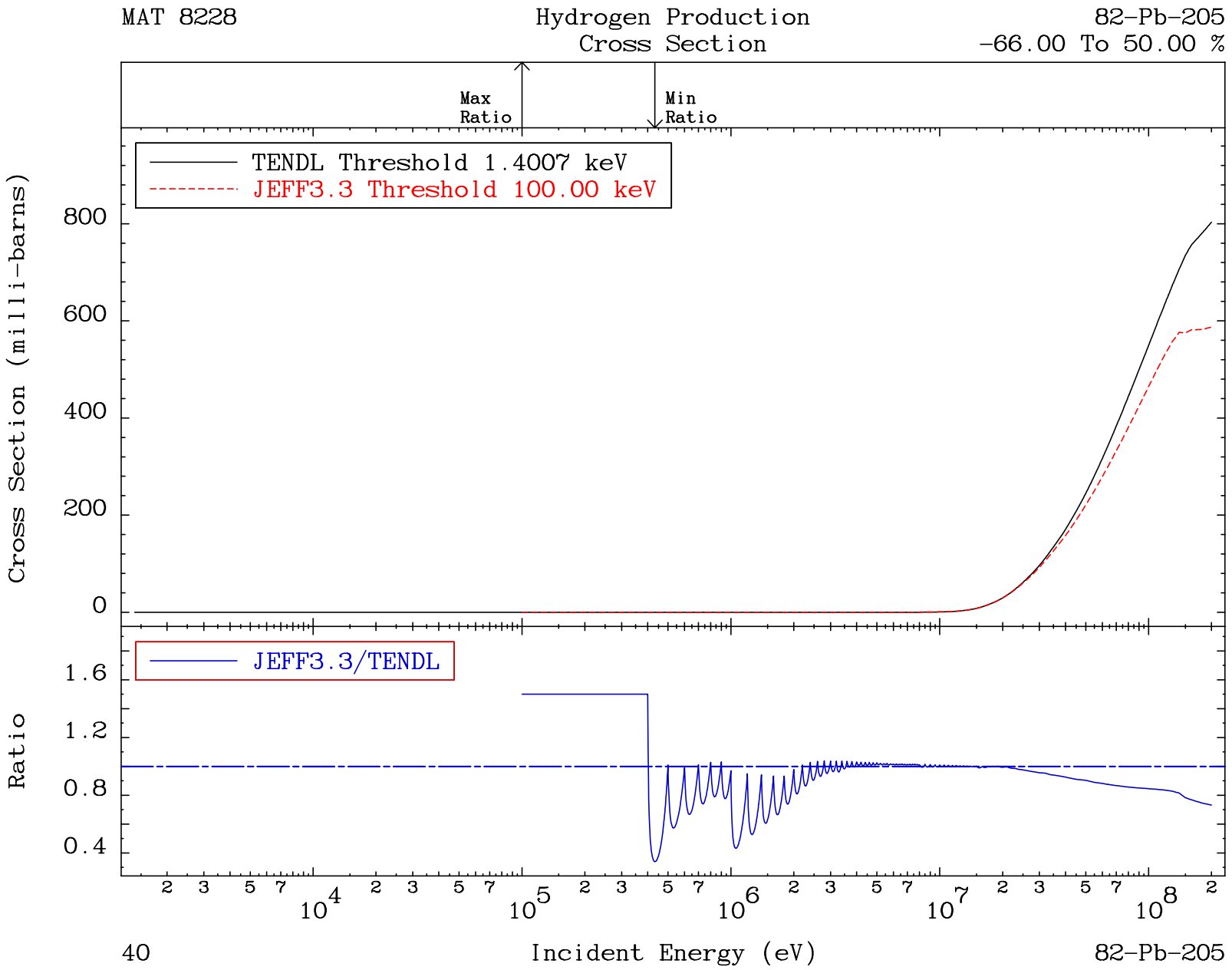

MAT 8228
(n,p)
Cross Section
82-Pb-205
-100.0 To 200.0 %
Max Ratio
Min Ratio
TENDL Threshold 1.4007 keV
JEFF3.3 Threshold 100.00 keV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
35
82-Pb-205

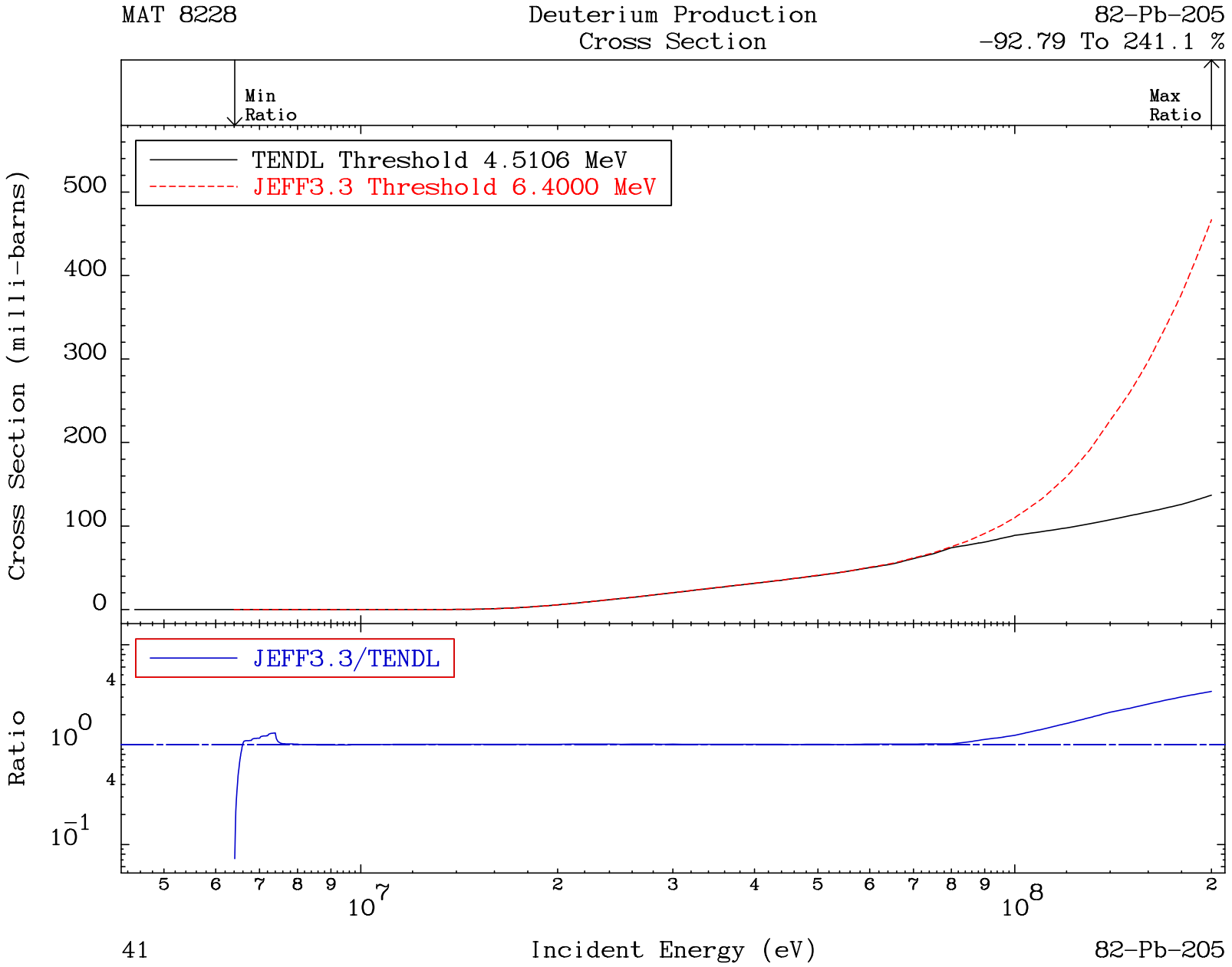

MAT 8228
(n,d)
Cross Section
82-Pb-205
-100.0 To 30.86 %
Max Ratio
Min Ratio
TENDL Threshold 4.5106 MeV
JEFF3.3 Threshold 6.4000 MeV
Cross Section (milli-barns)
16
14
12
10
8
6
4
2
0
JEFF3.3/TENDL
Ratio
1.6
1.2
0.8
0.4
0.0
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
36
Incident Energy (eV)
82-Pb-205

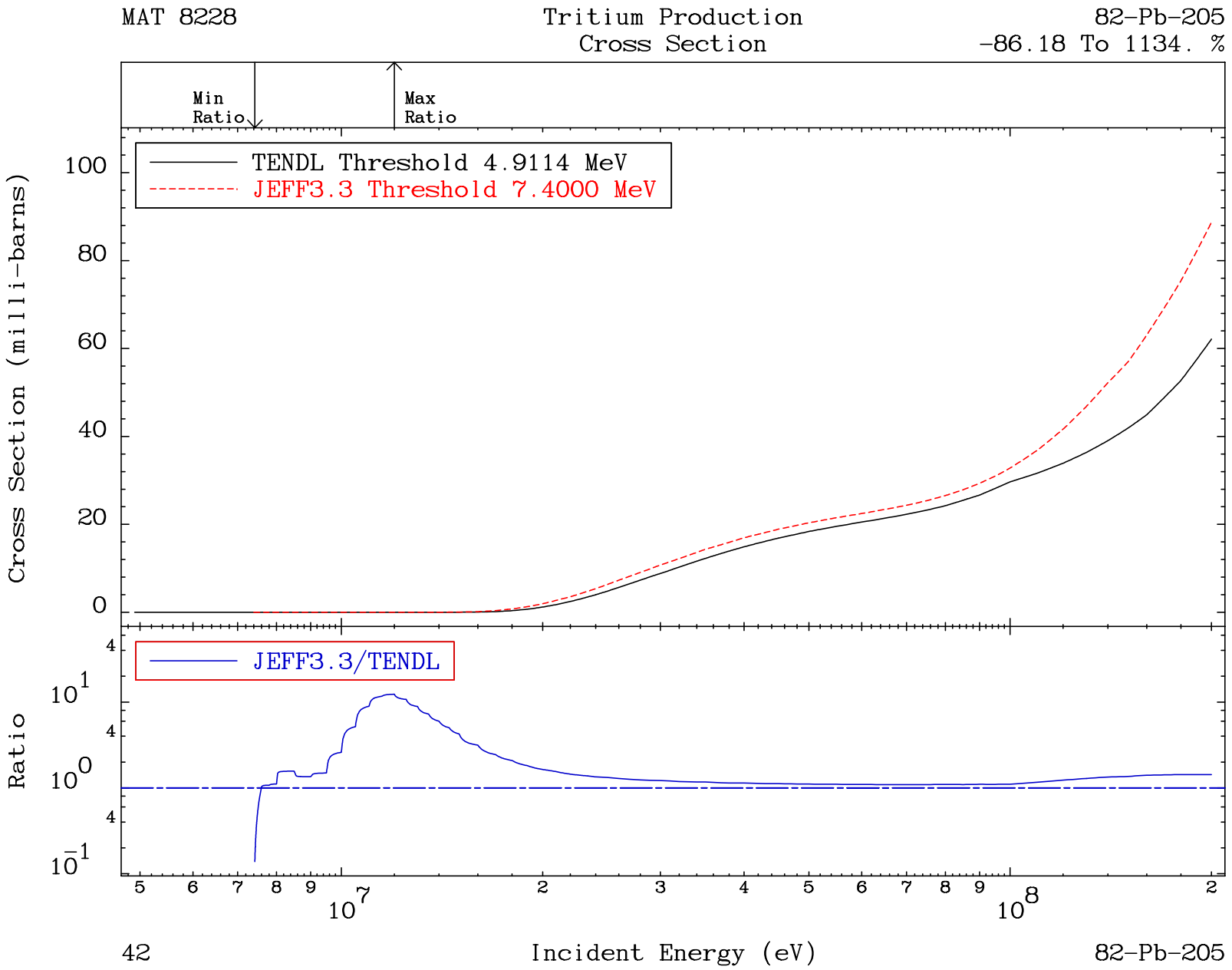

MAT 8228
(n,t)
Cross Section
82-Pb-205
-100.0 To 1134. %
Max Ratio
Min Ratio
TENDL Threshold 4.9114 MeV
JEFF3.3 Threshold 7.4000 MeV
Cross Section (milli-barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
37
82-Pb-205

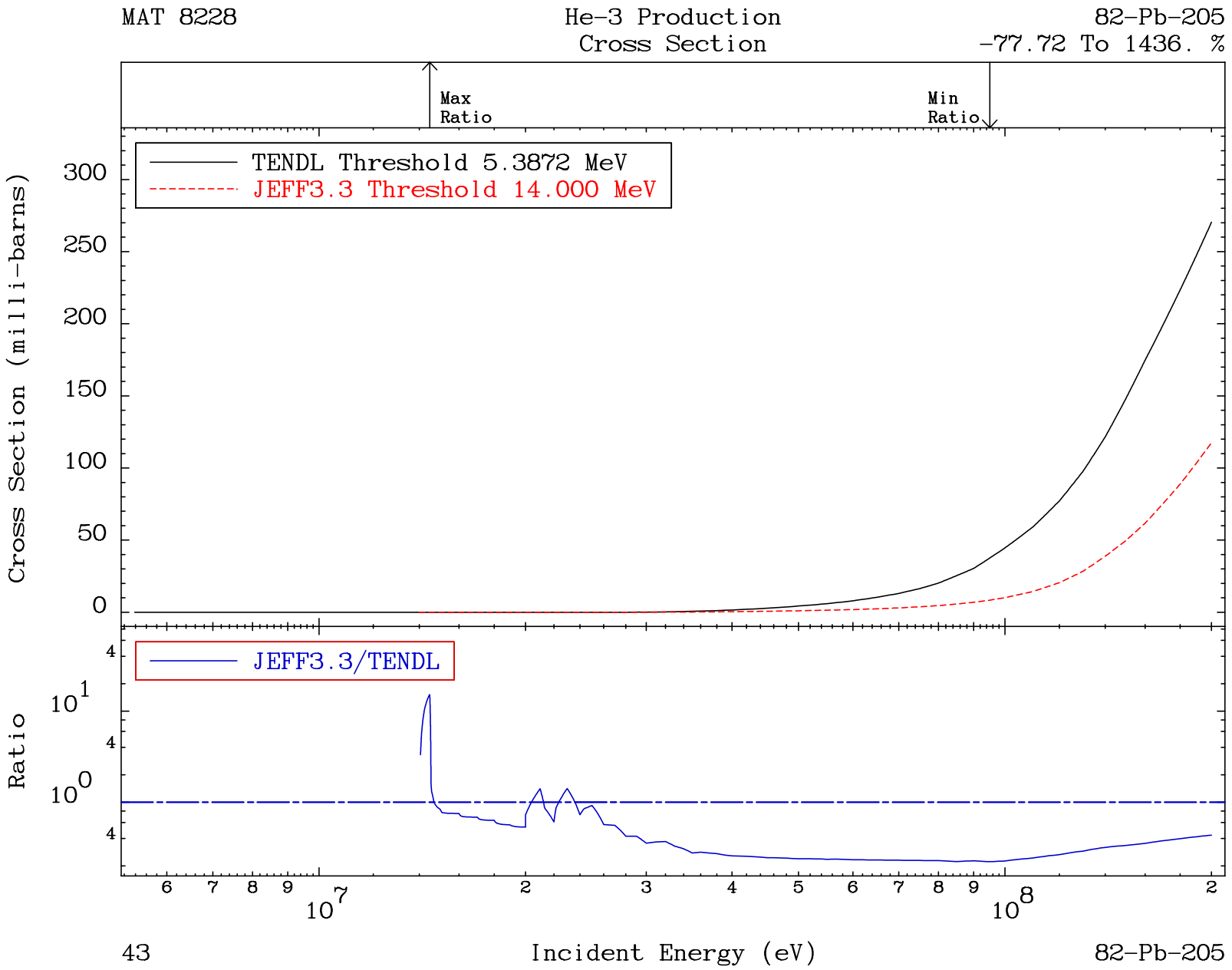

MAT 8228
(n,He-3)
Cross Section
82-Pb-205
-100.0 To 2124. %
Max Ratio
Min Ratio
TENDL Threshold 5.3872 MeV
JEFF3.3 Threshold 14.000 MeV
Cross Section (micro-barns)
120
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
20
10
0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
38
Incident Energy (eV)
82-Pb-205

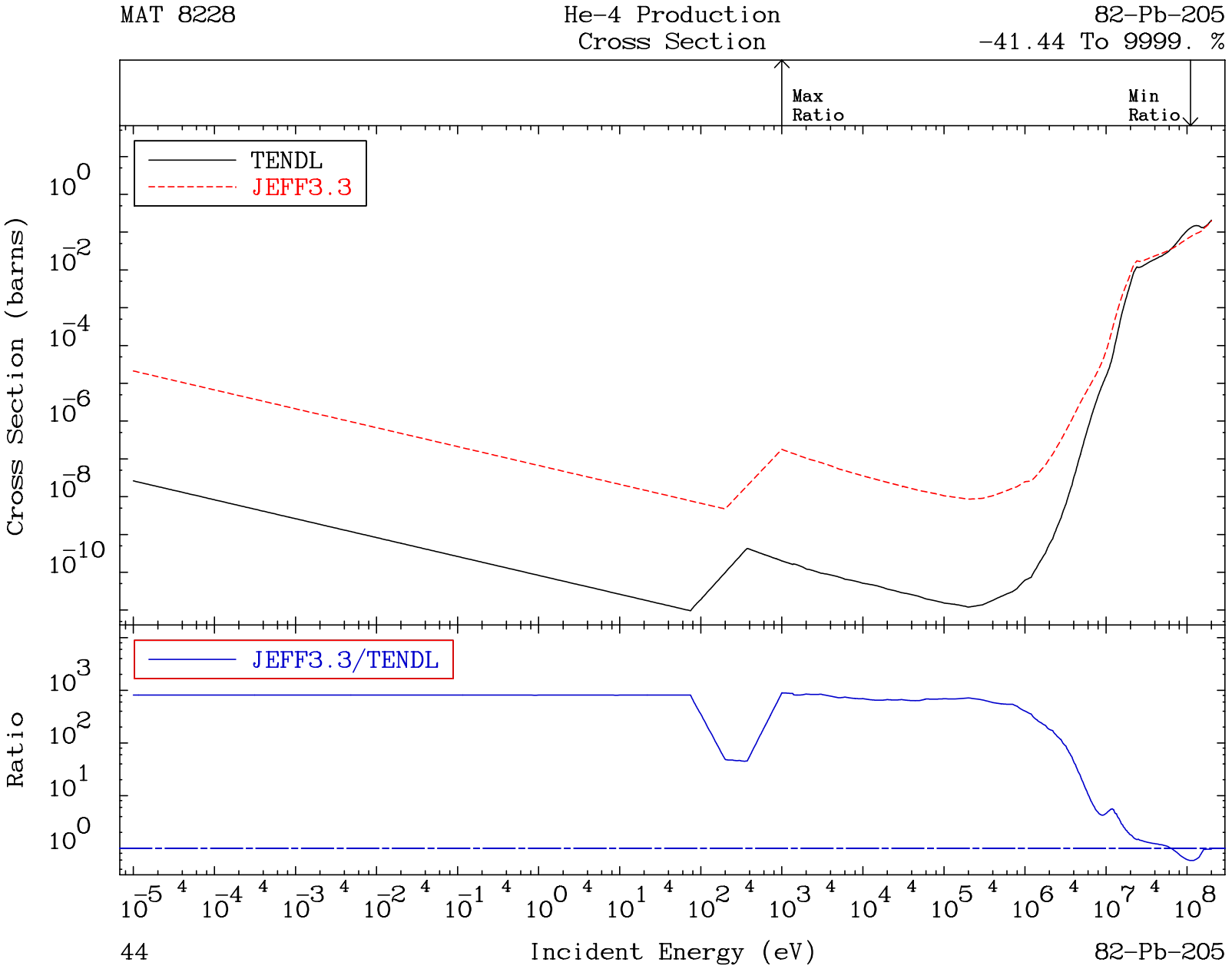

MAT 8228
(n,α)
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
10-2
10-4
10-6
10-8
10-10
JEFF3.3/TENDL
Ratio
0.8
0.4
0.0
10-5 10-4 10-3 10-2 10-1 100 101 102 103 104 105 106 107 108
39
Incident Energy (eV)
82-Pb-205

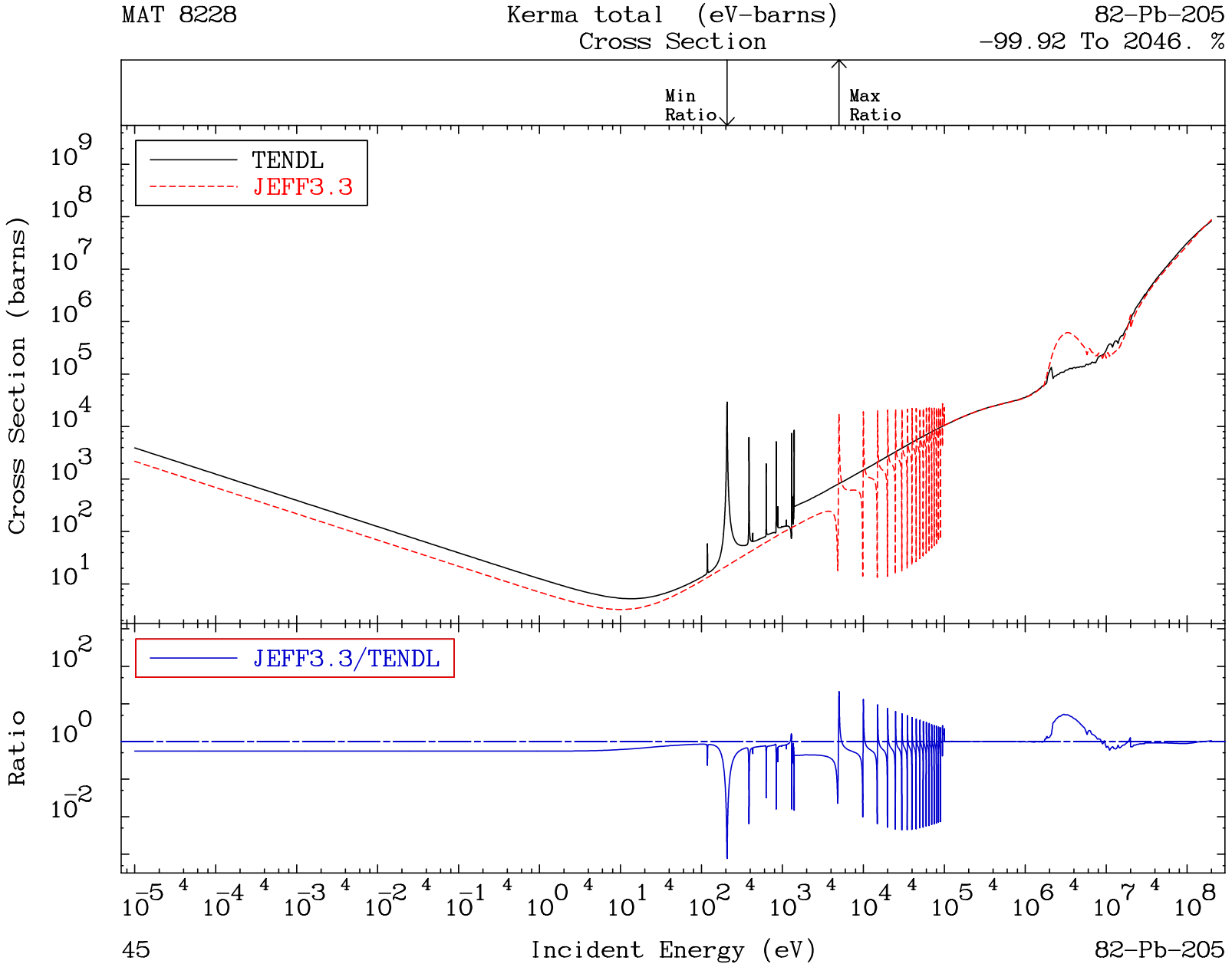

MAT 8228
Hydrogen Production
Cross Section
82-Pb-205
-66.00 To 50.00 %
Max Ratio
Min Ratio
TENDL Threshold 1.4007 keV
JEFF3.3 Threshold 100.00 keV
Cross Section (milli-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
1.6
1.2
0.8
0.4
2 3 5 7 10^4 2 3 5 7 10^5 2 3 5 7 10^6 2 3 5 7 10^7 2 3 5 7 10^8 2
40
Incident Energy (eV)
82-Pb-205

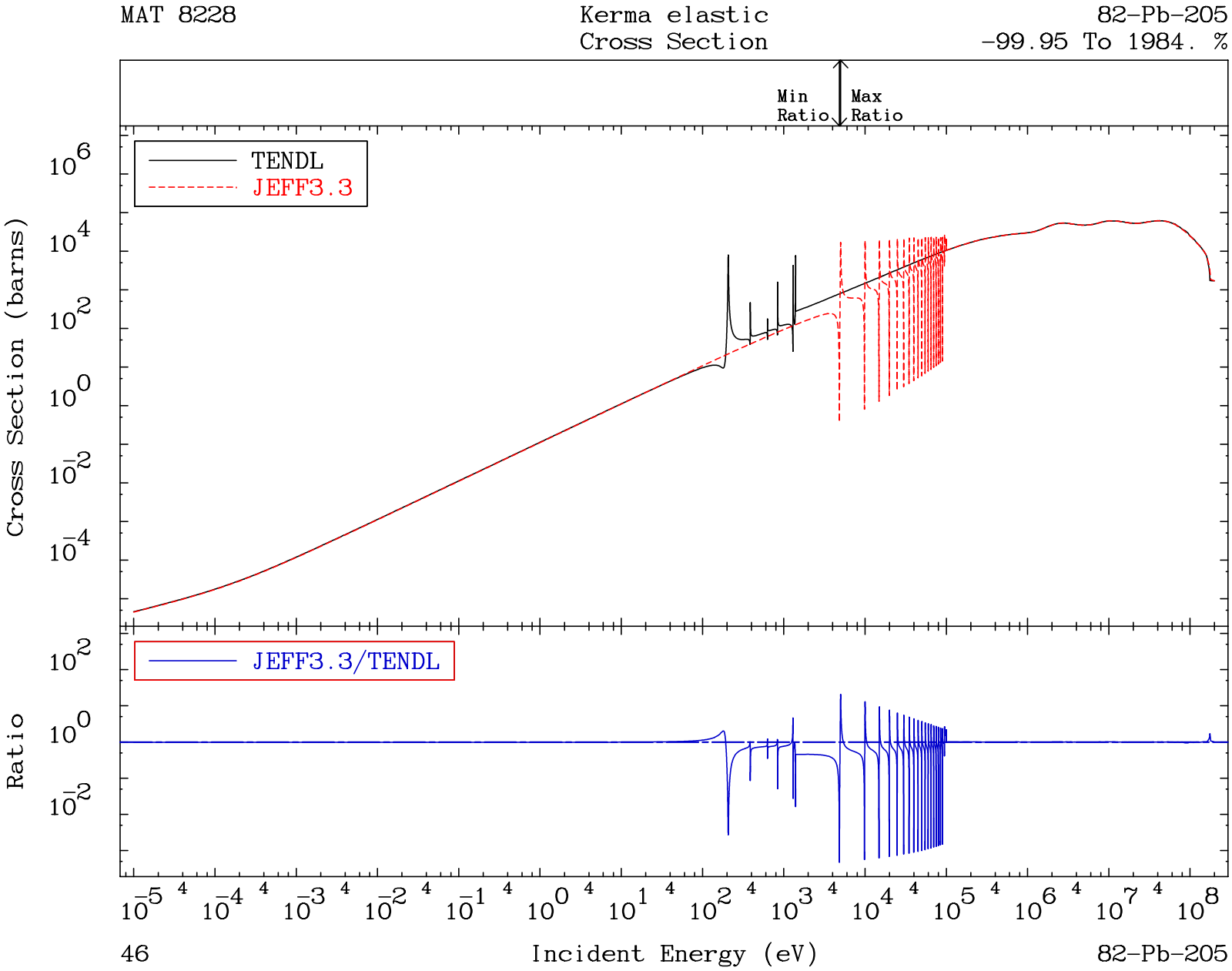

MAT 8228
Deuterium Production
Cross Section
82-Pb-205
-92.79 To 241.1 %
Min
Ratio
Max
Ratio
TENDL Threshold 4.5106 MeV
JEFF3.3 Threshold 6.4000 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
JEFF3.3/TENDL
Ratio
4
10^{0}
4
10^{-1}
5 6 7 8 9
10^{7}
2 3 4 5 6 7 8 9
10^{8}
2
41
Incident Energy (eV)
82-Pb-205

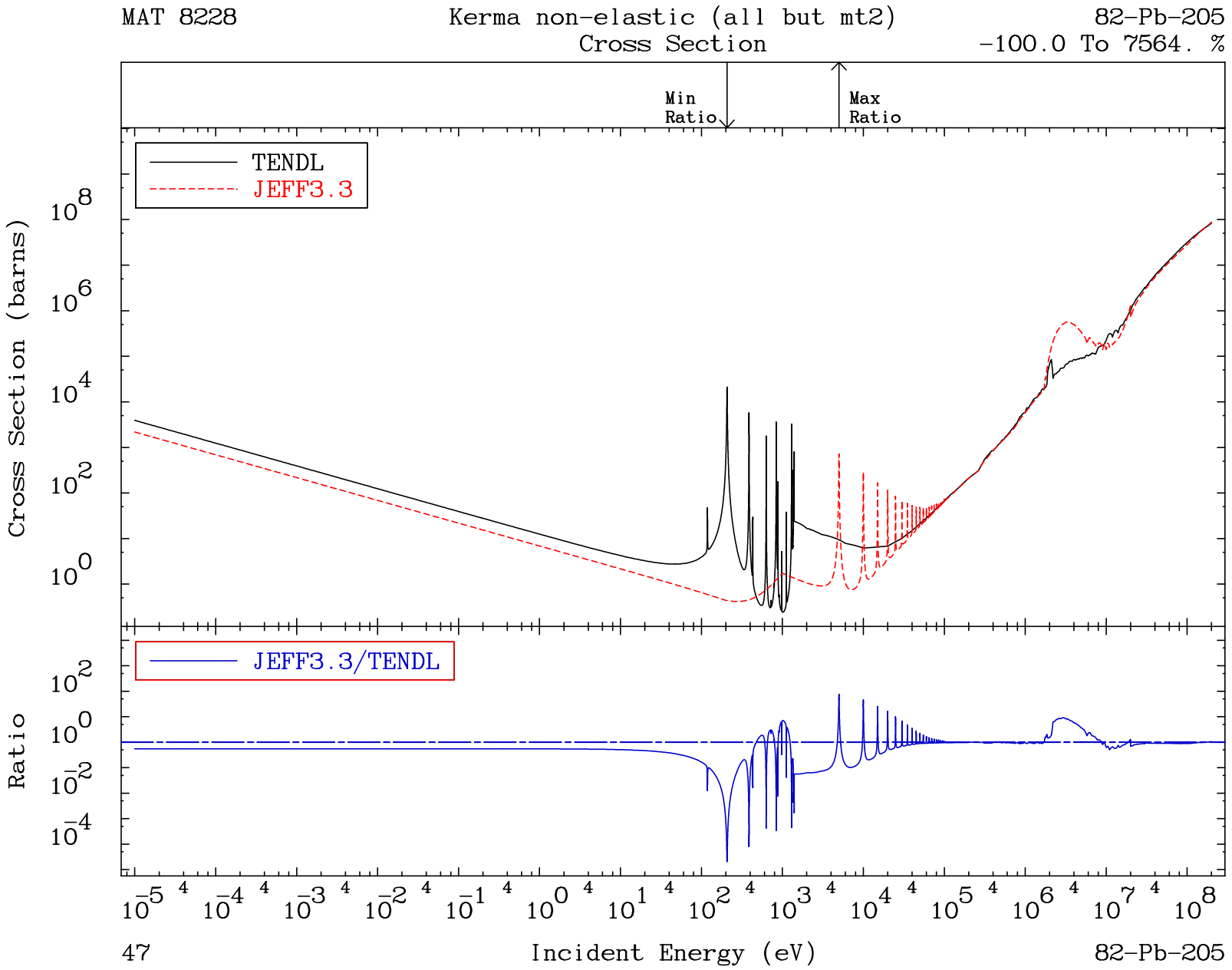

MAT 8228
Tritium Production
Cross Section
82-Pb-205
-86.18 To 1134. %
Min Ratio
Max Ratio
TENDL Threshold 4.9114 MeV
JEFF3.3 Threshold 7.4000 MeV
Cross Section (milli-barns)
100
80
60
40
20
0
JEFF3.3/TENDL
Ratio
10^1
10^0
10^-1
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
42
Incident Energy (eV)
82-Pb-205

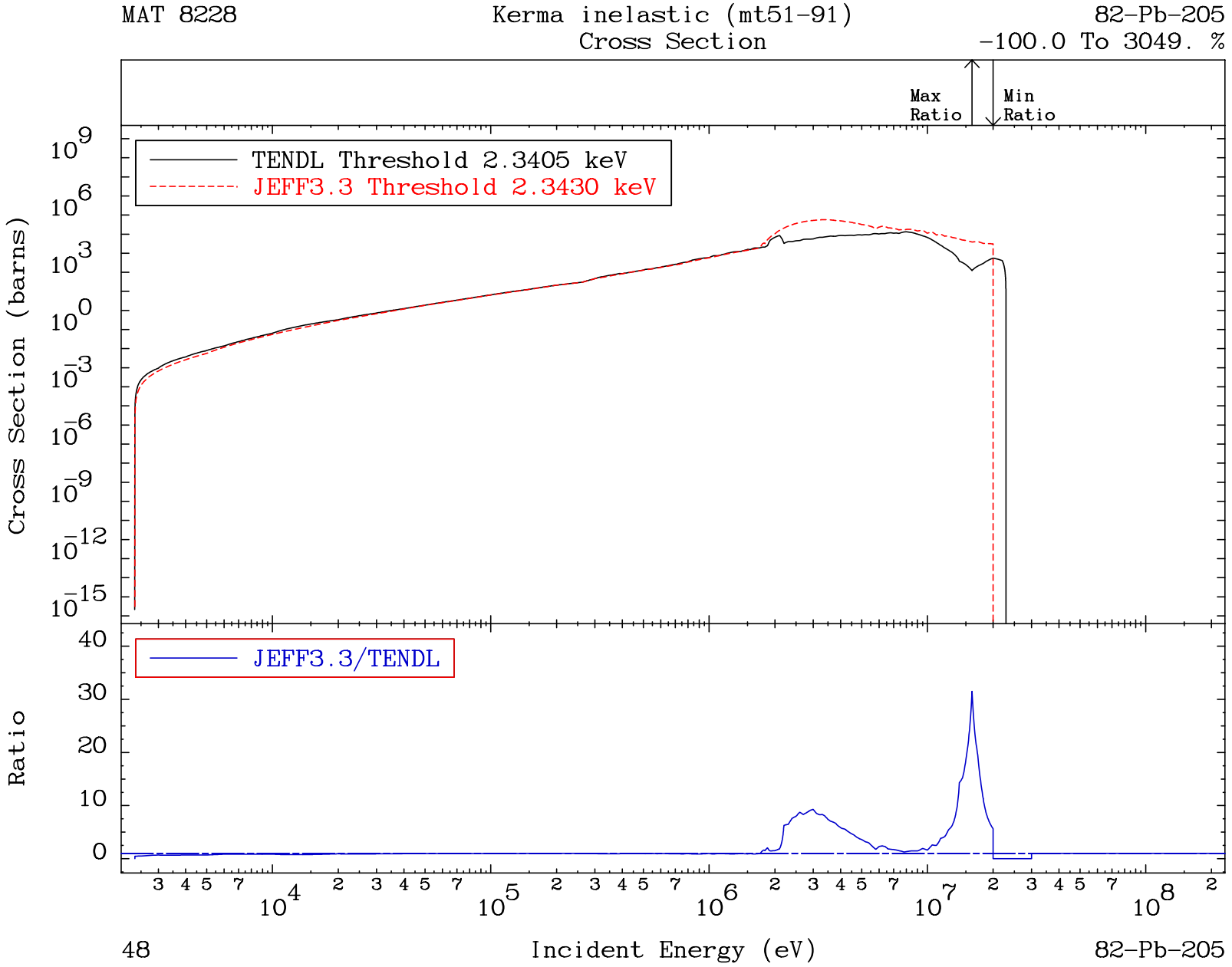

MAT 8228
He-3 Production
Cross Section
82-Pb-205
-77.72 To 1436. %
Max
Ratio
Min
Ratio
TENDL Threshold 5.3872 MeV
JEFF3.3 Threshold 14.000 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
JEFF3.3/TENDL
Ratio
10^1
10^0
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
43
Incident Energy (eV)
82-Pb-205

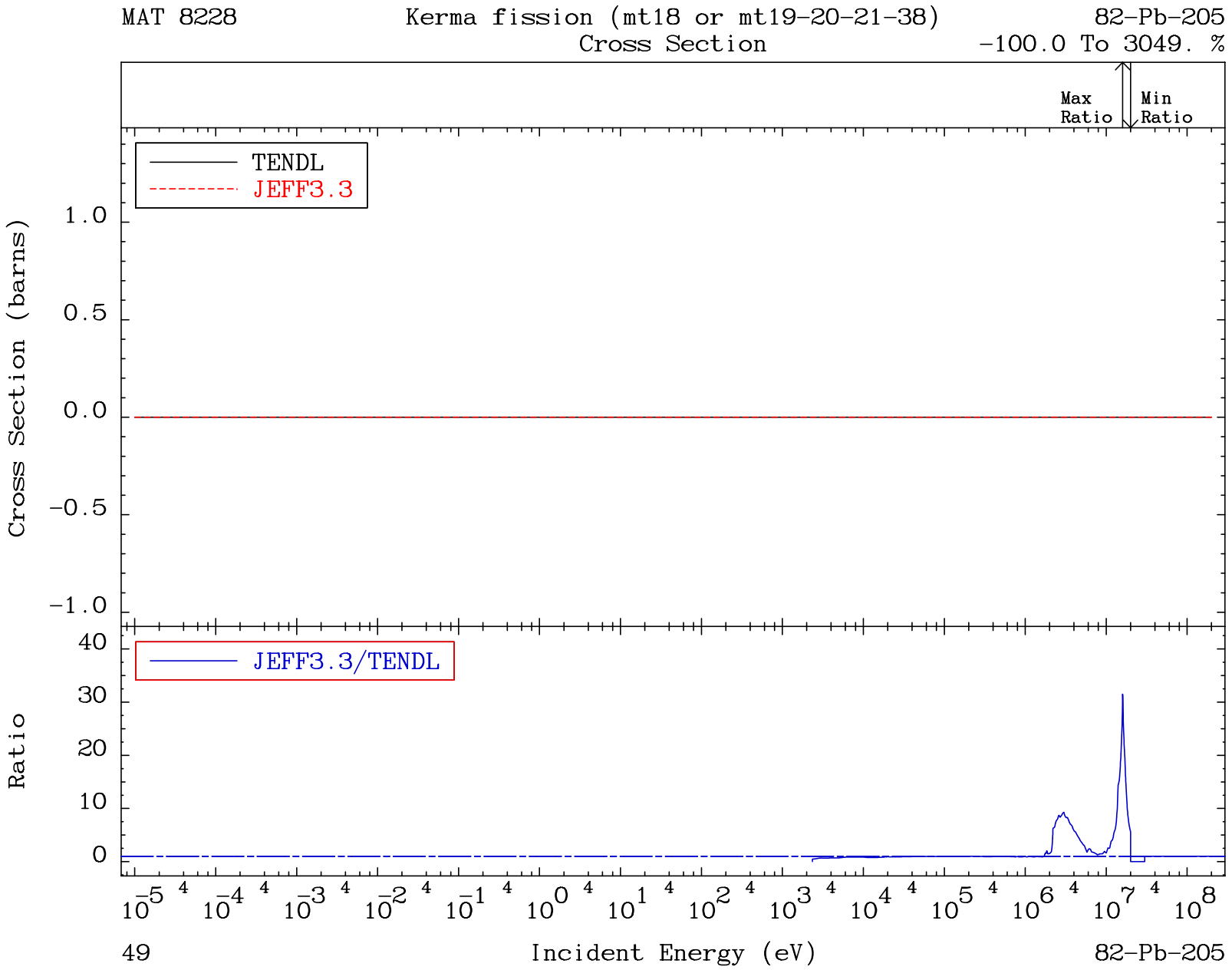

MAT 8228
He-4 Production
Cross Section
82-Pb-205
-41.44 To 9999. %
Max
Ratio
Min
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
44
82-Pb-205

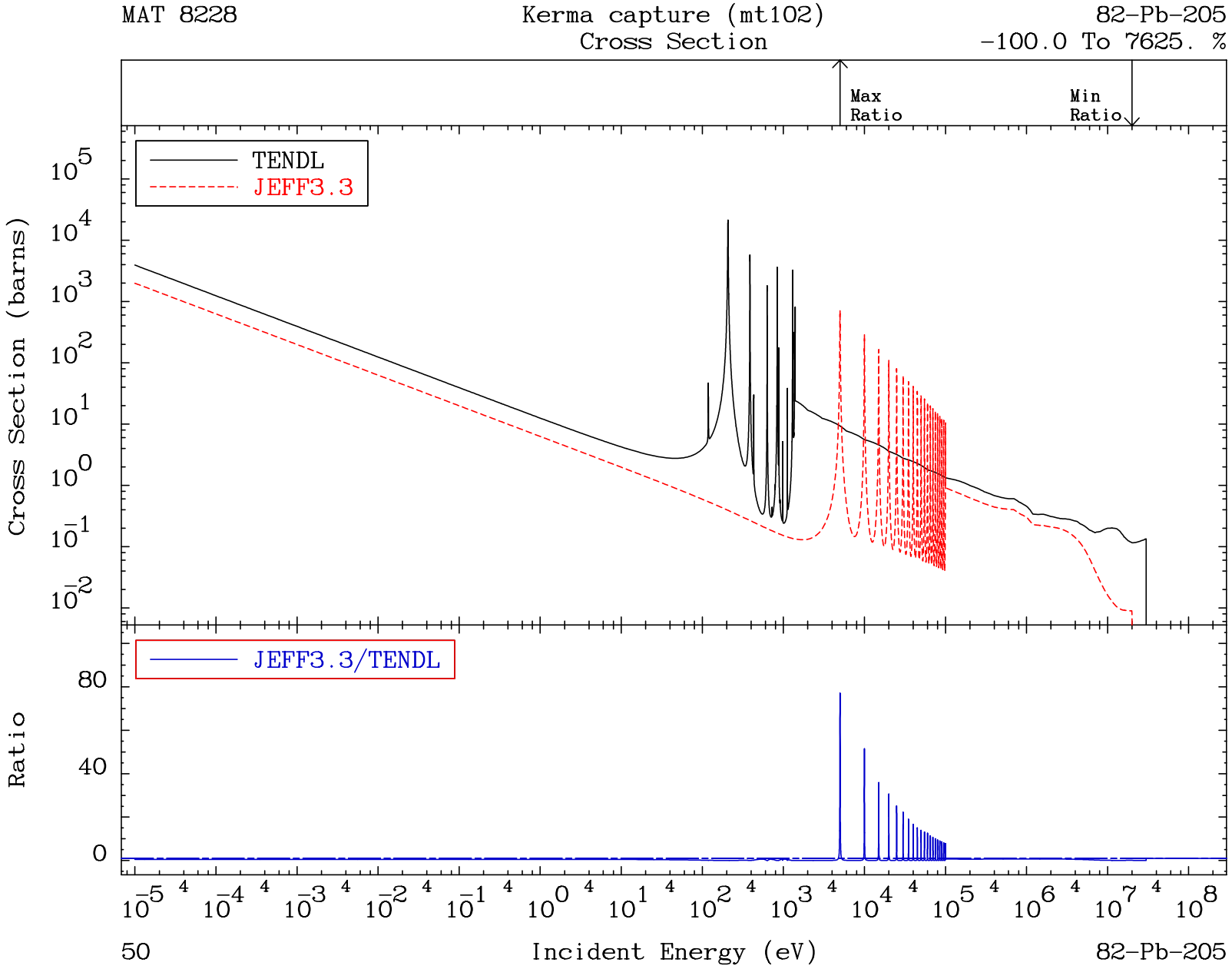

MAT 8228
Kerma total (eV-barns)
Cross Section
82-Pb-205
-99.92 To 2046. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
45
82-Pb-205

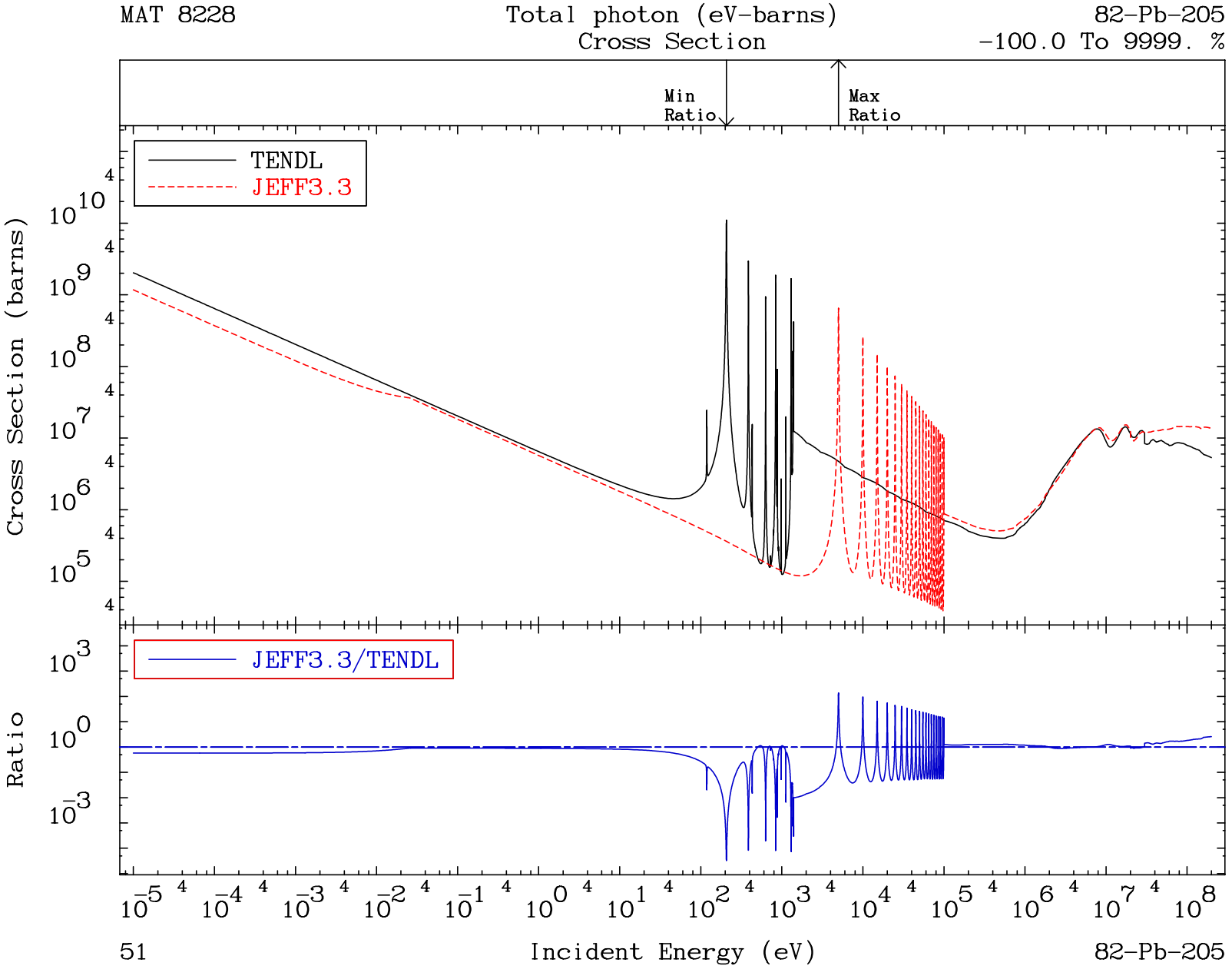

MAT 8228
Kerma elastic
Cross Section
82-Pb-205
-99.95 To 1984. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
46
82-Pb-205

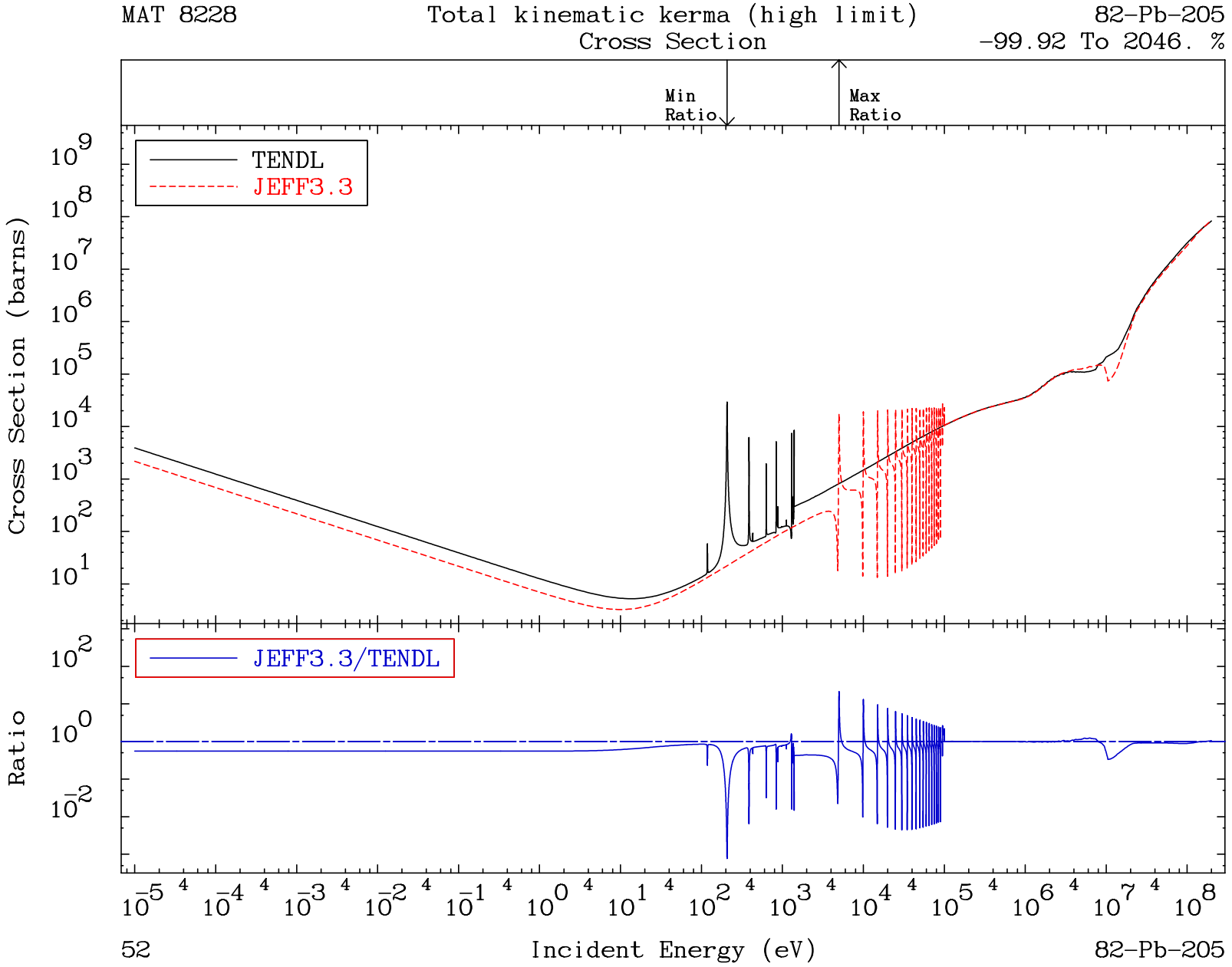

MAT 8228
Kerma non-elastic (all but mt2)
Cross Section
82-Pb-205
-100.0 To 7564. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
47
82-Pb-205

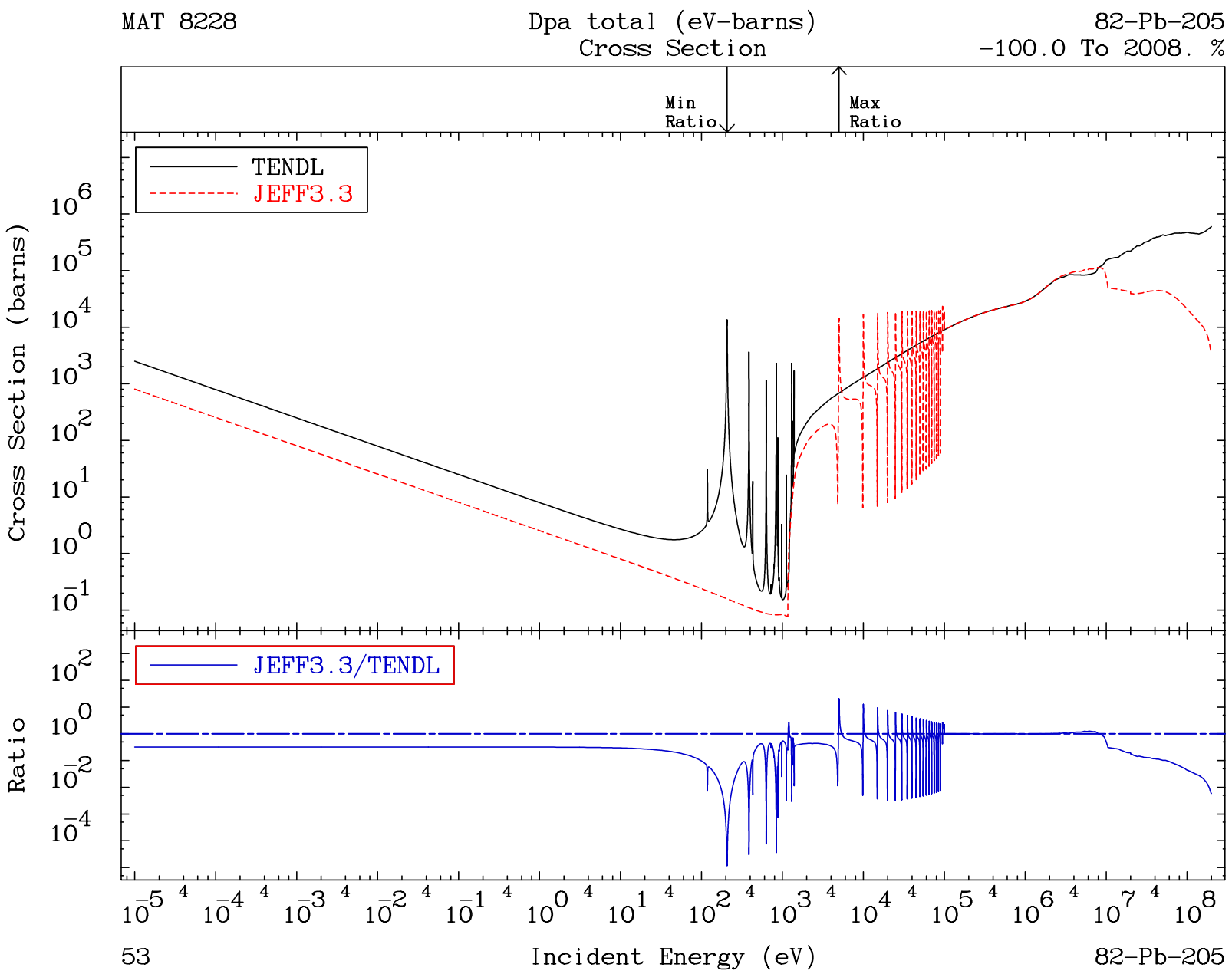

MAT 8228
Kerma inelastic (mt51-91)
Cross Section
82-Pb-205
-100.0 To 3049. %
Max Ratio
Min Ratio
TENDL Threshold 2.3405 keV
JEFF3.3 Threshold 2.3430 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
48
82-Pb-205

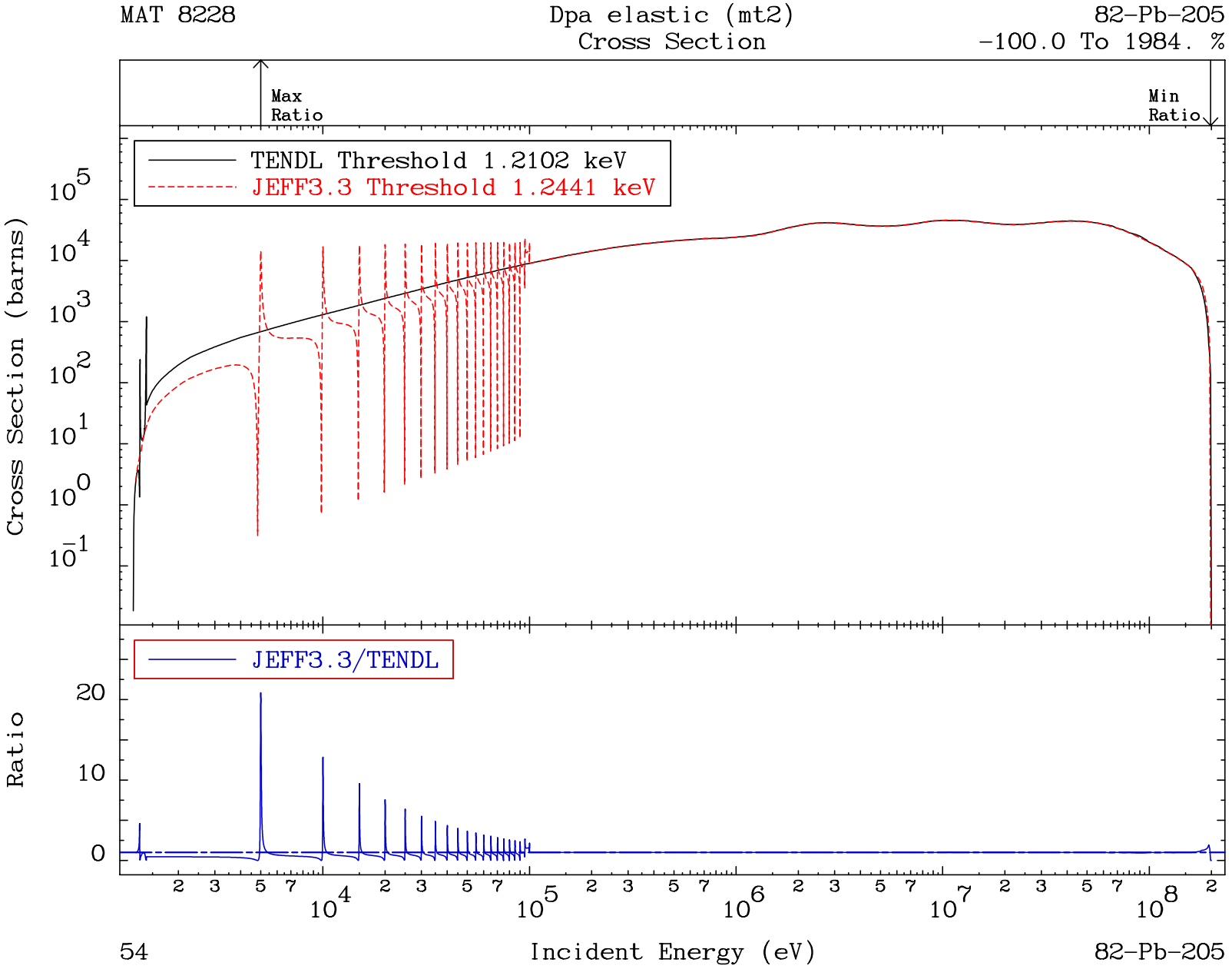

MAT 8228
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
82-Pb-205
-100.0 To 3049. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
JEFF3.3/TENDL
Ratio
40
30
20
10
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
49
Incident Energy (eV)
82-Pb-205

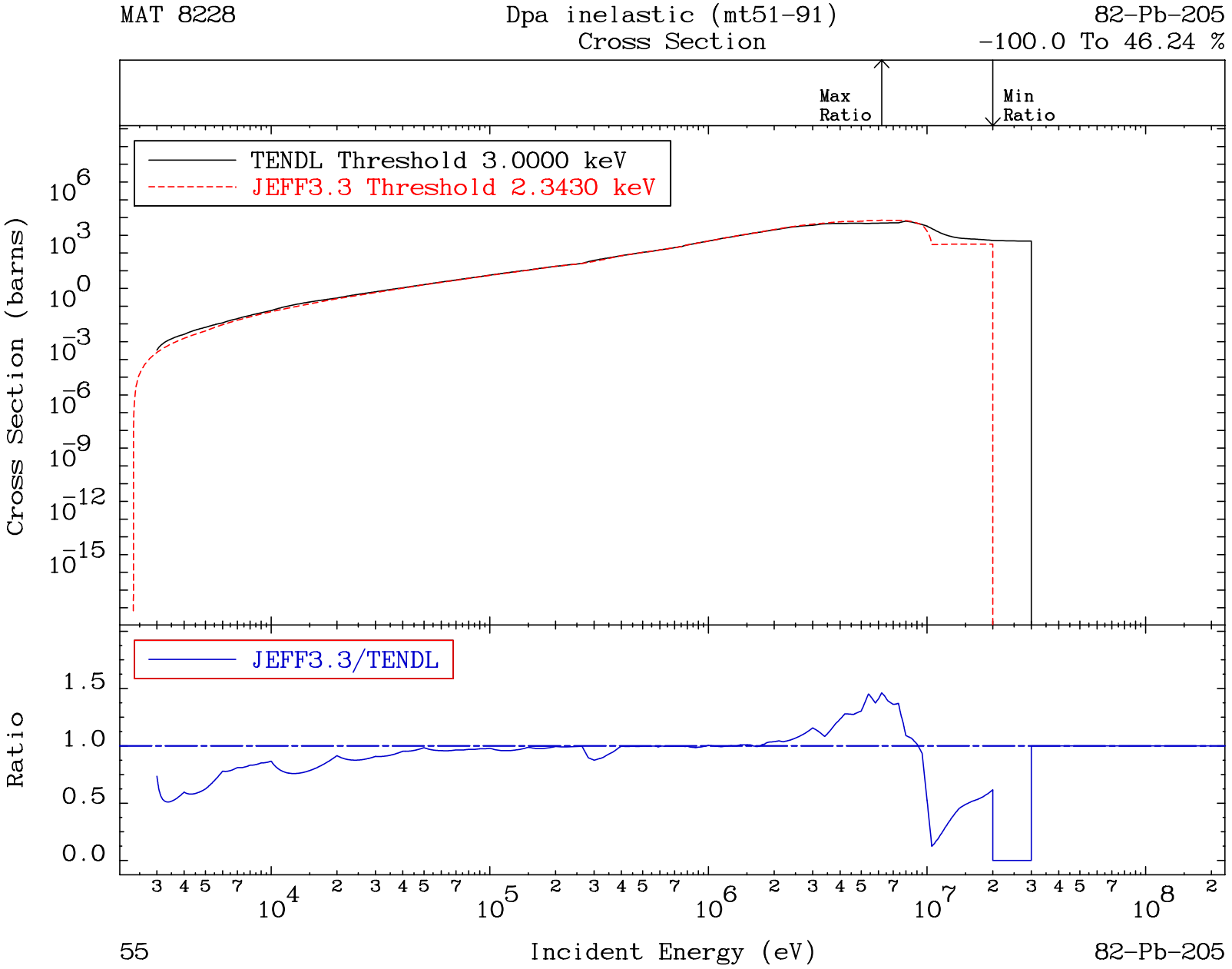

MAT 8228
Kerma capture (mt102)
Cross Section
82-Pb-205
-100.0 To 7625. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
50
82-Pb-205

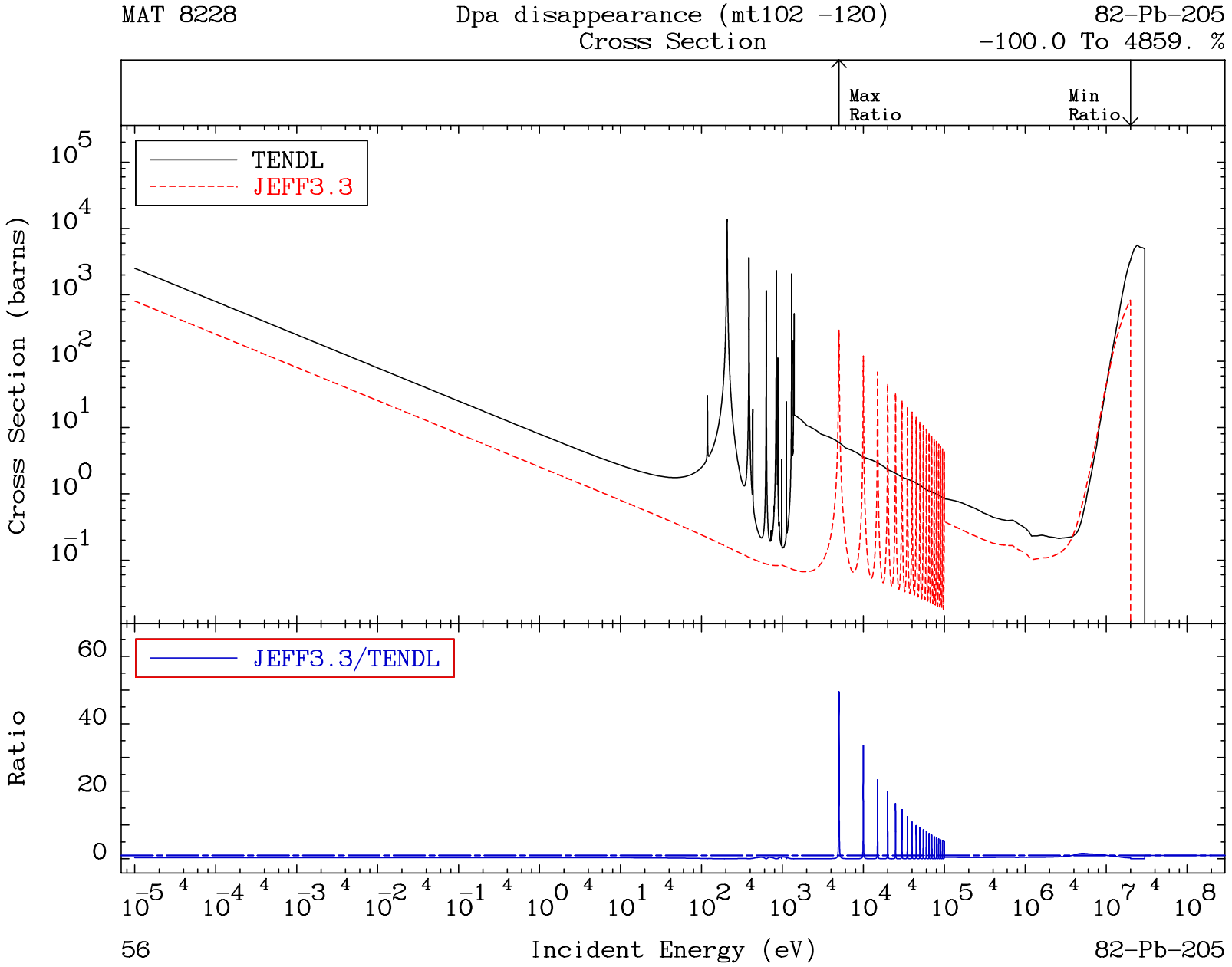

MAT 8228
Total photon (eV-barns)
Cross Section
82-Pb-205
-100.0 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
51
82-Pb-205

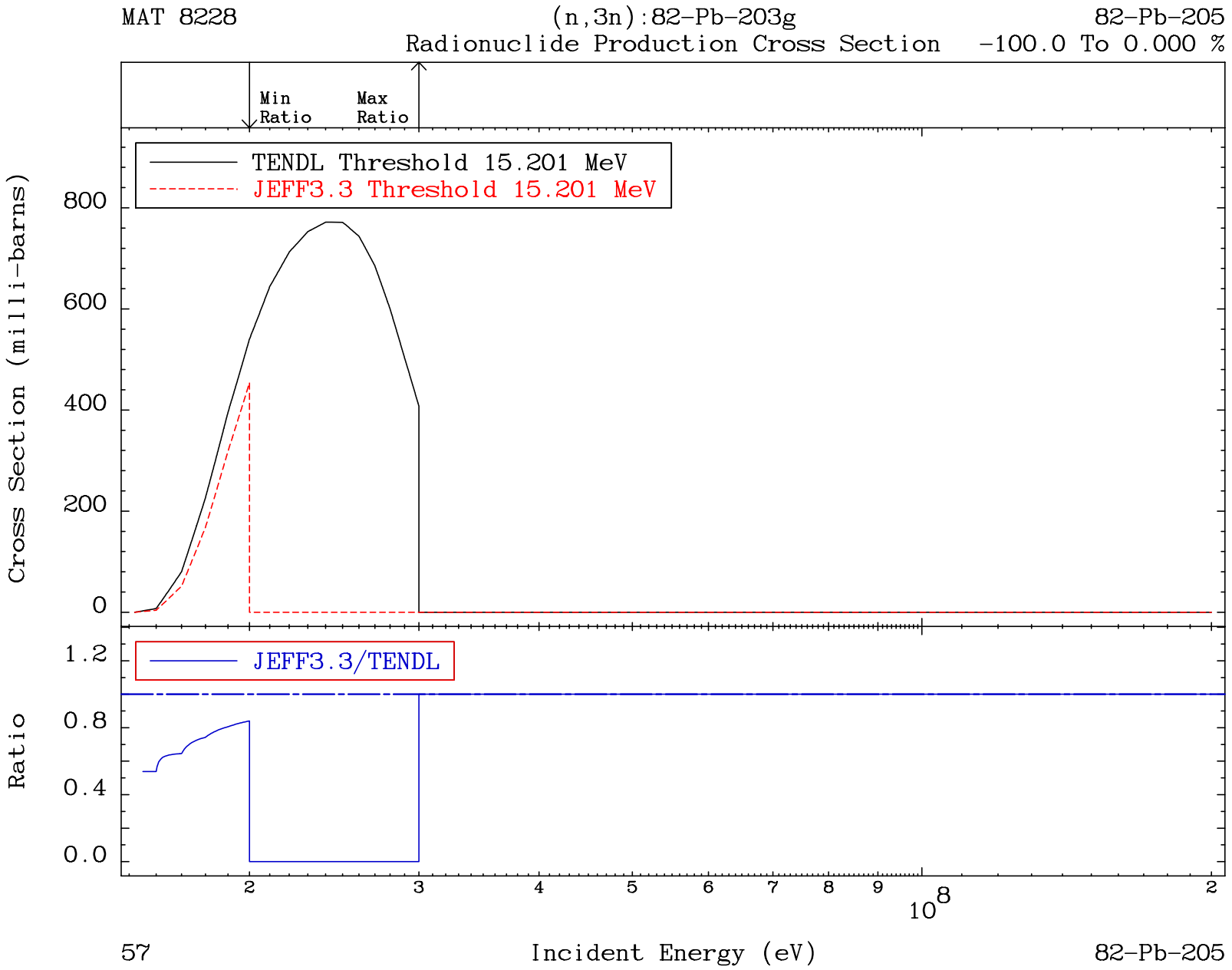

MAT 8228
Total kinematic kerma (high limit)
Cross Section
82-Pb-205
-99.92 To 2046. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
52
82-Pb-205

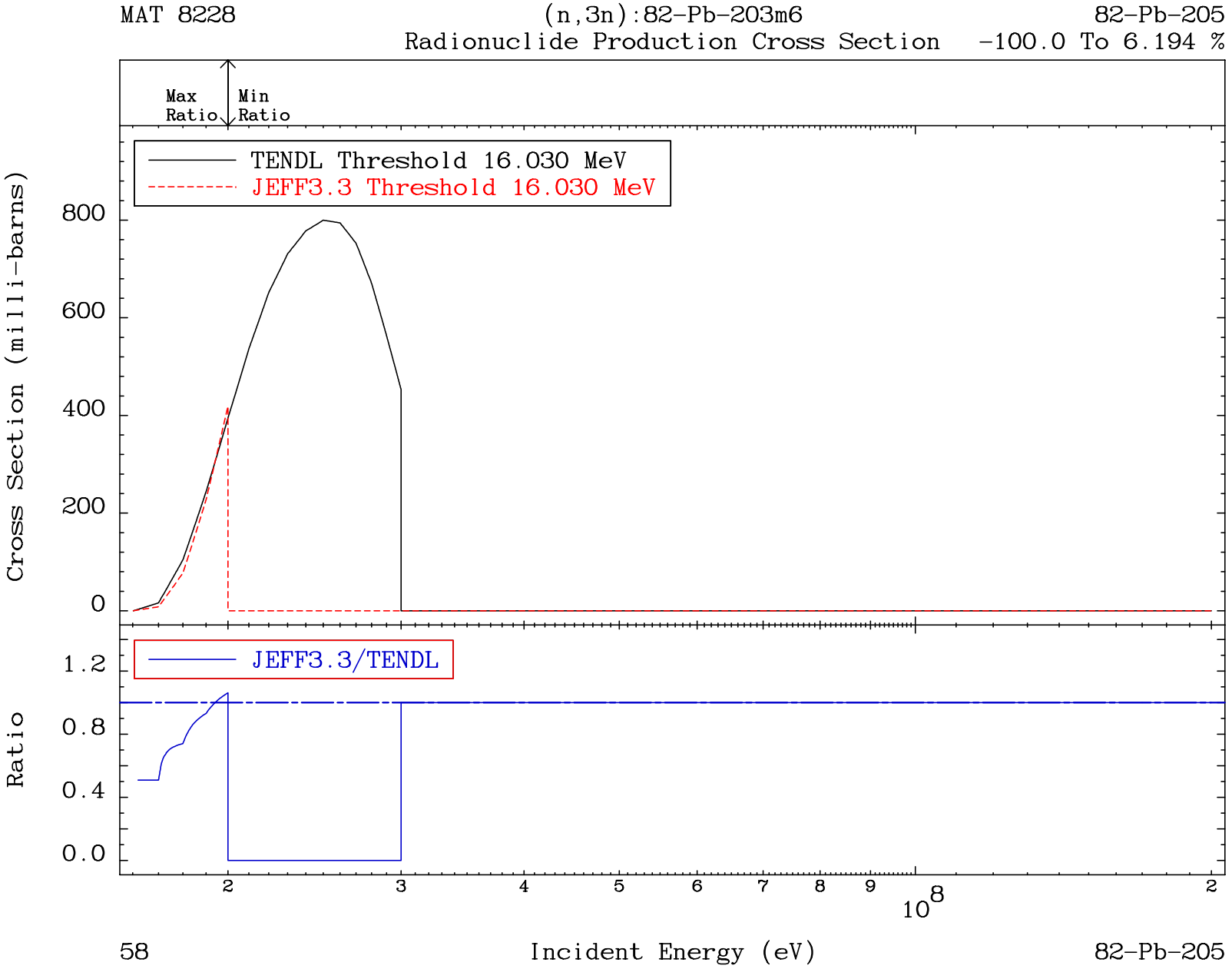

MAT 8228
Dpa total (eV-barns)
Cross Section
82-Pb-205
-100.0 To 2008. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
53
82-Pb-205

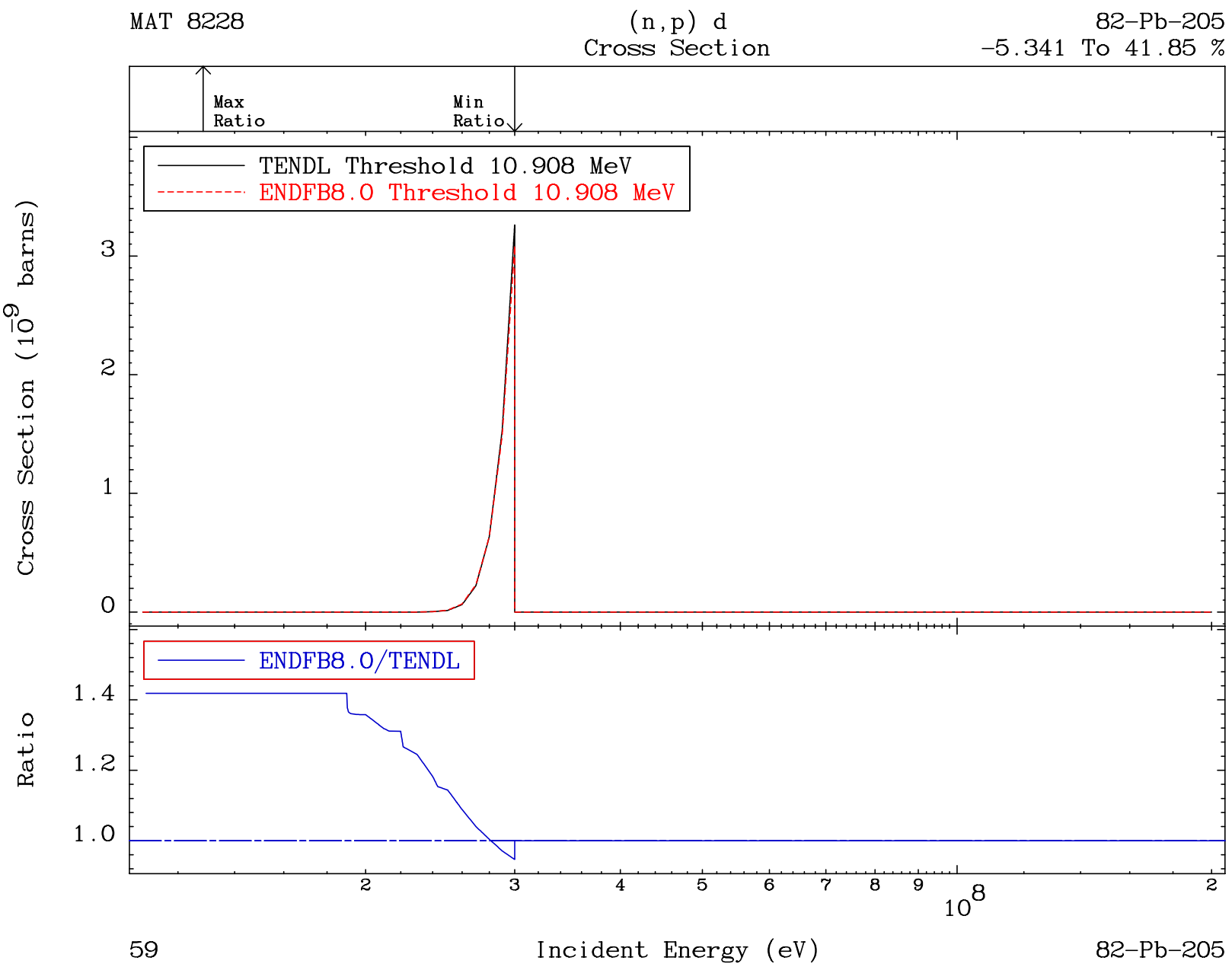

MAT 8228
Dpa elastic (mt2)
Cross Section
82-Pb-205
-100.0 To 1984. %
Max Ratio
Min Ratio
TENDL Threshold 1.2102 keV
JEFF3.3 Threshold 1.2441 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
54
82-Pb-205

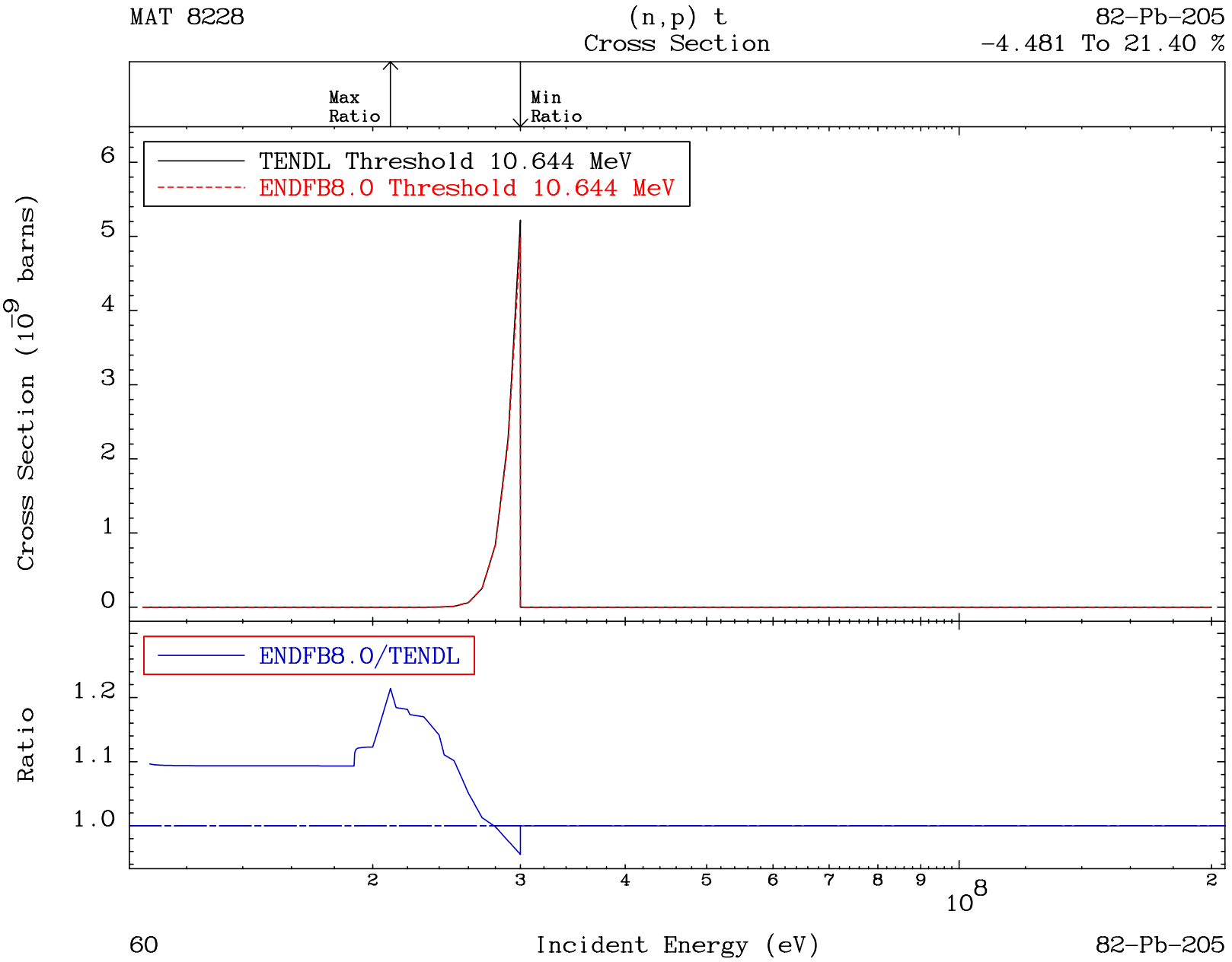

MAT 8228
Dpa inelastic (mt51-91)
Cross Section
82-Pb-205
-100.0 To 46.24 %
Max Ratio
Min Ratio
TENDL Threshold 3.0000 keV
JEFF3.3 Threshold 2.3430 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
55
82-Pb-205

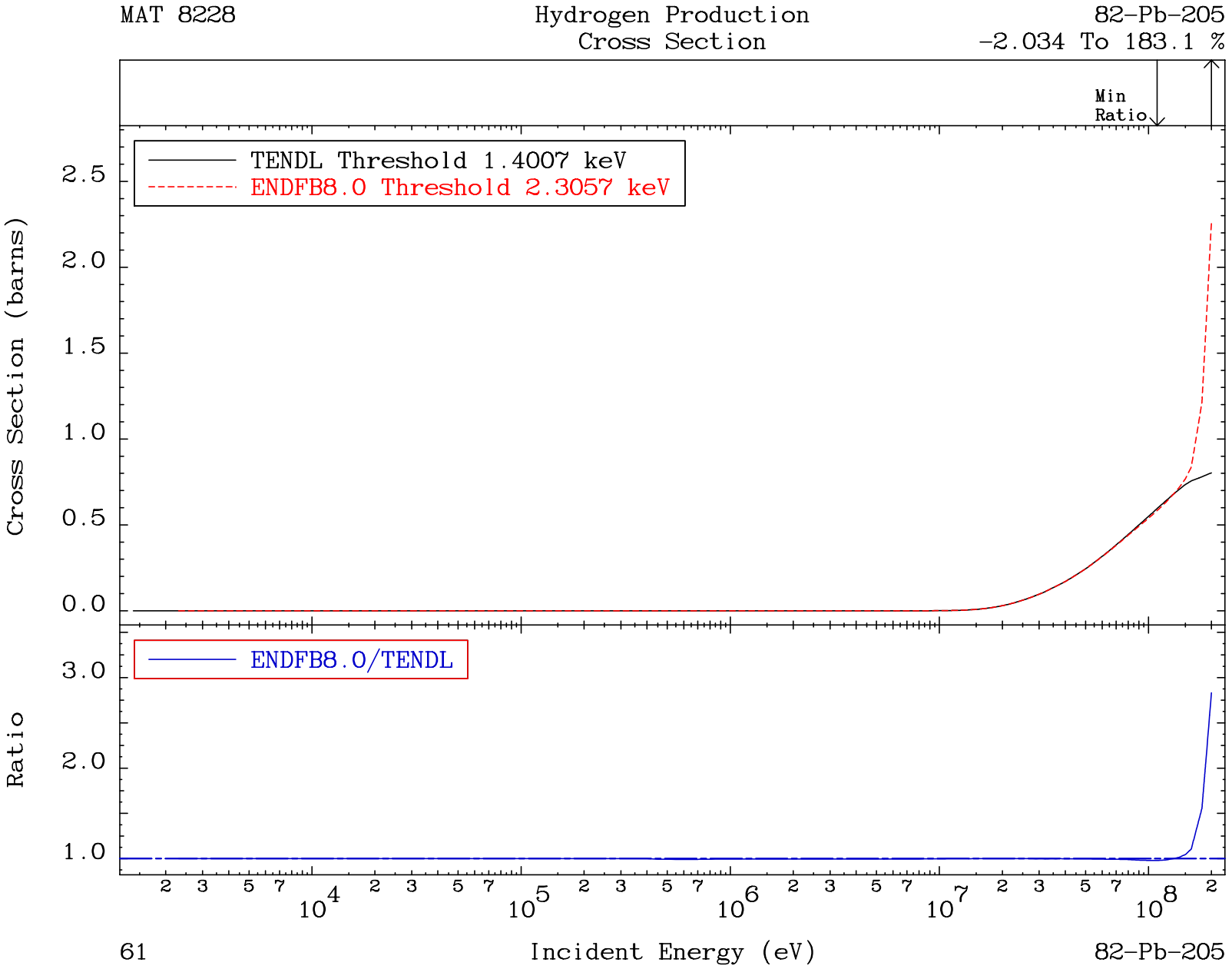

MAT 8228
Dpa disappearance (mt102 -120)
Cross Section
82-Pb-205
-100.0 To 4859. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
56
82-Pb-205

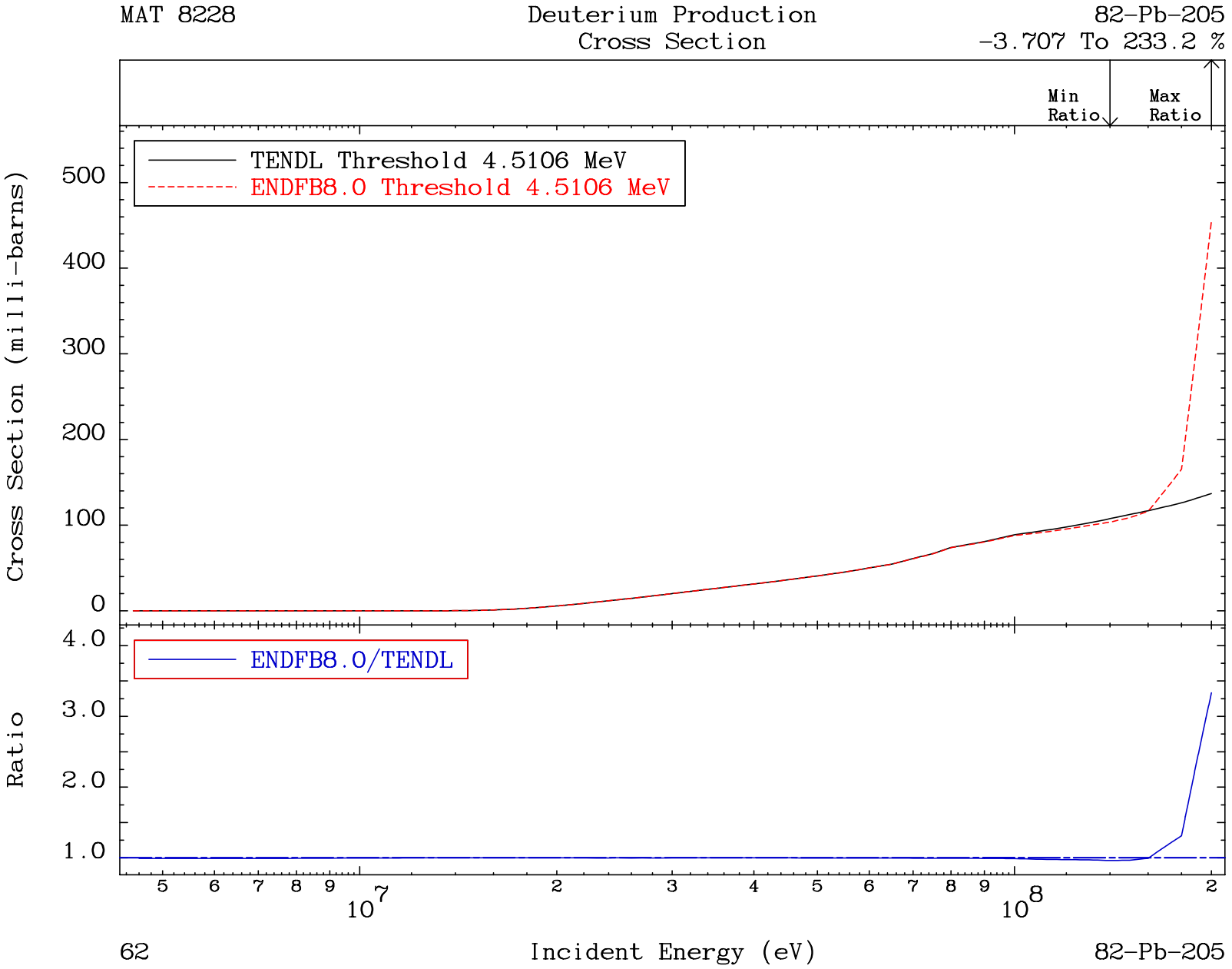

MAT 8228
(n,3n):82-Pb-203g
82-Pb-205
Radionuclide Production Cross Section -100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 15.201 MeV
JEFF3.3 Threshold 15.201 MeV
Cross Section (milli-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
9
10^8
2
57
Incident Energy (eV)
82-Pb-205

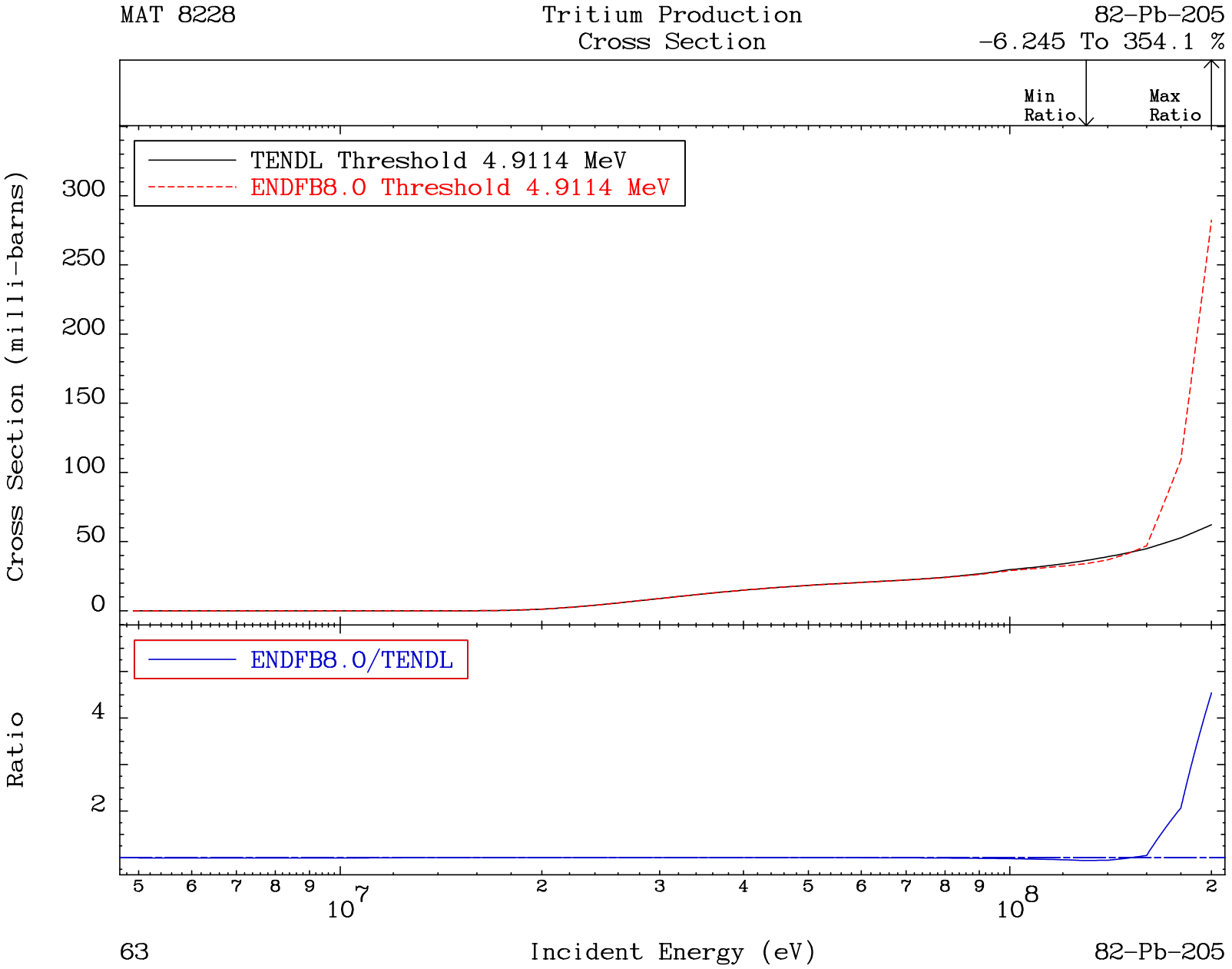

MAT 8228
(n,3n):82-Pb-203m6
82-Pb-205
Radionuclide Production Cross Section -100.0 To 6.194 %
Max Ratio
Min Ratio
TENDL Threshold 16.030 MeV
JEFF3.3 Threshold 16.030 MeV
Cross Section (milli-barns)
800
600
400
200
0
JEFF3.3/TENDL
Ratio
1.2
0.8
0.4
0.0
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
82-Pb-205

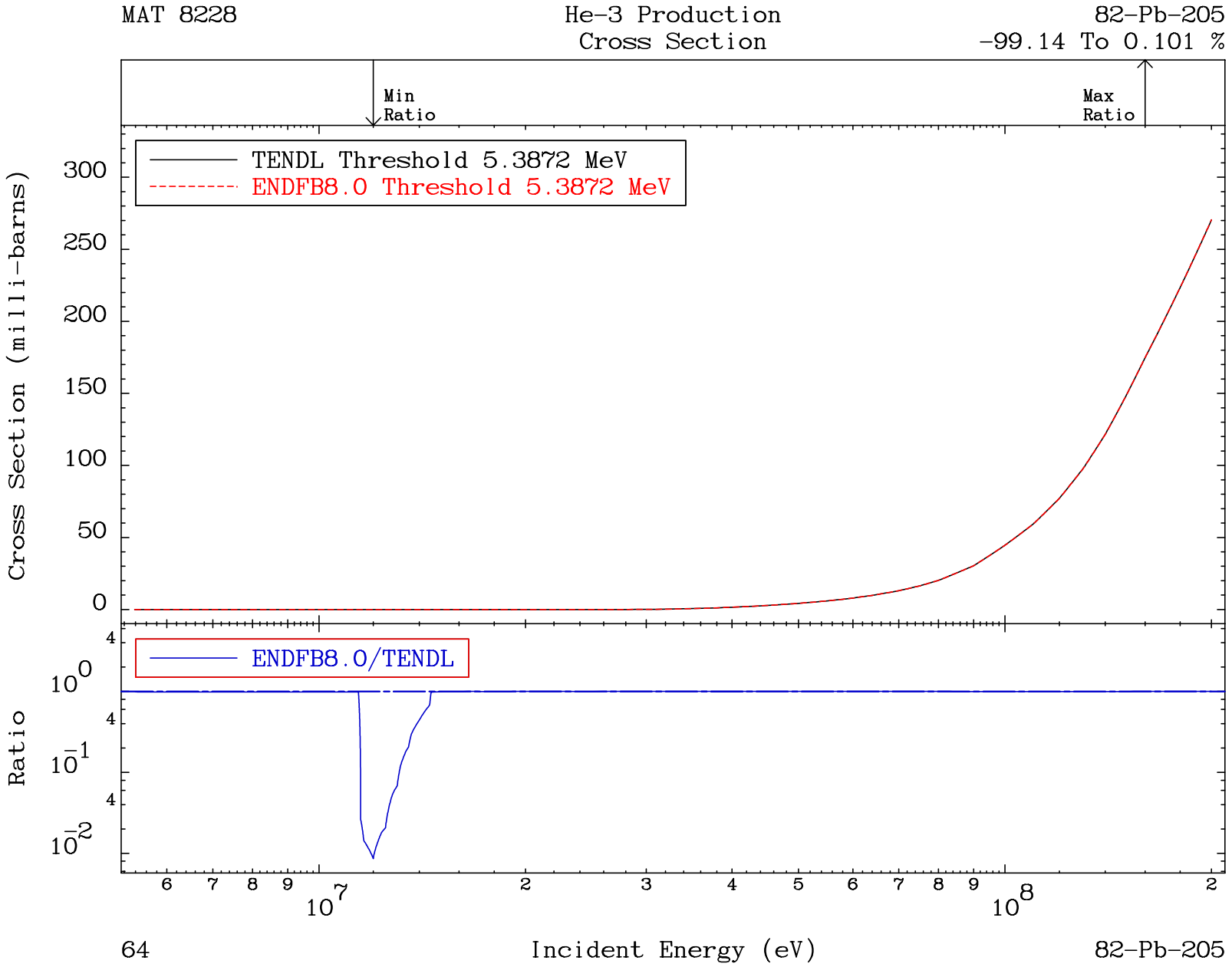

MAT 8228
(n,p) d
Cross Section
82-Pb-205
-5.341 To 41.85 %
Max Ratio
Min Ratio
TENDL Threshold 10.908 MeV
ENDFB8.0 Threshold 10.908 MeV
Cross Section (10^{-9} barns)
0
1
2
3
ENDFB8.0/TENDL
Ratio
1.0
1.2
1.4
2
3
4
5
6
7
8
9
10^{8}
2
59
Incident Energy (eV)
82-Pb-205

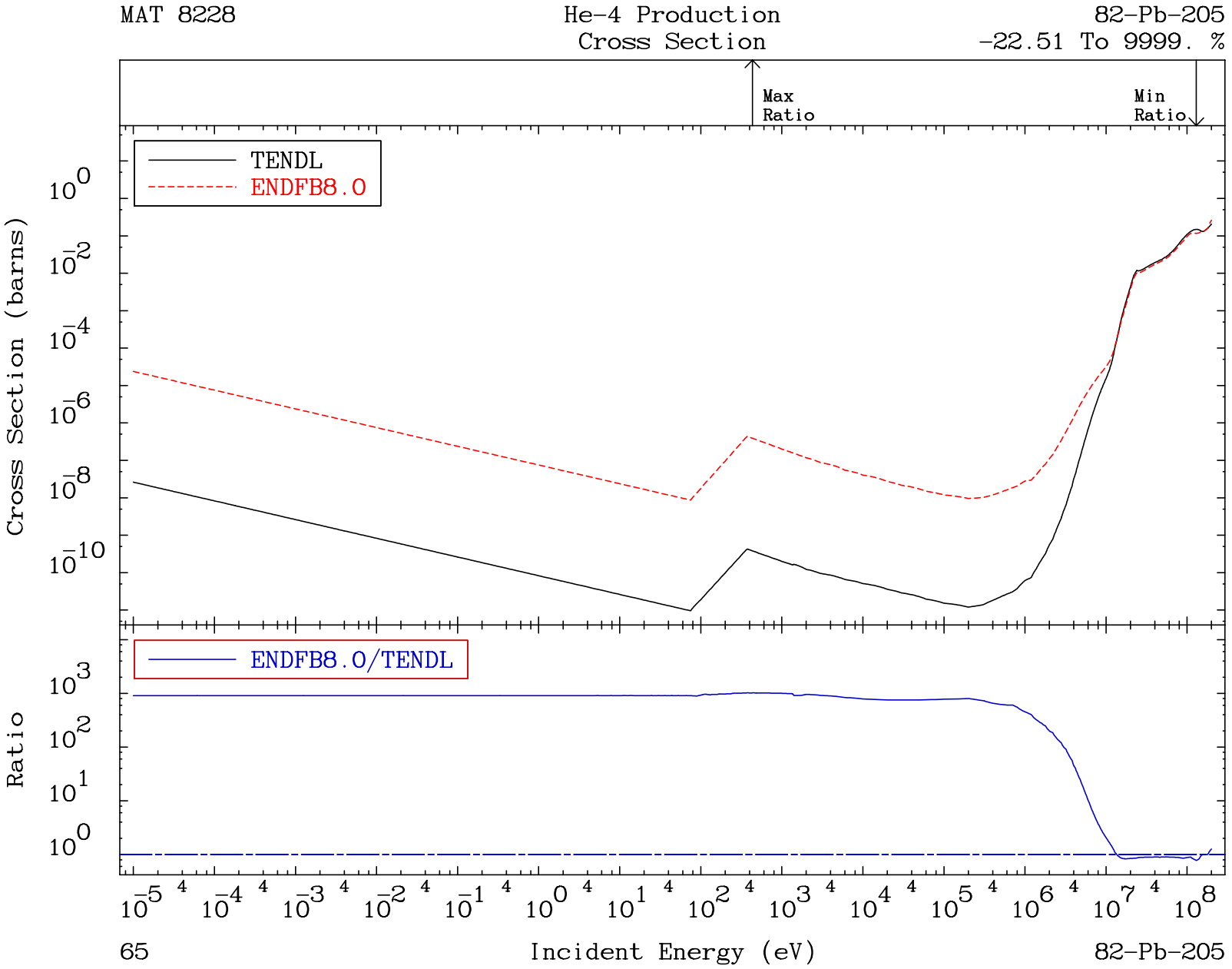

MAT 8228
(n,p) t
Cross Section
82-Pb-205
-4.481 To 21.40 %
Max Ratio
Min Ratio
TENDL Threshold 10.644 MeV
ENDFB8.0 Threshold 10.644 MeV
Cross Section (10^{-9} barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
60
82-Pb-205

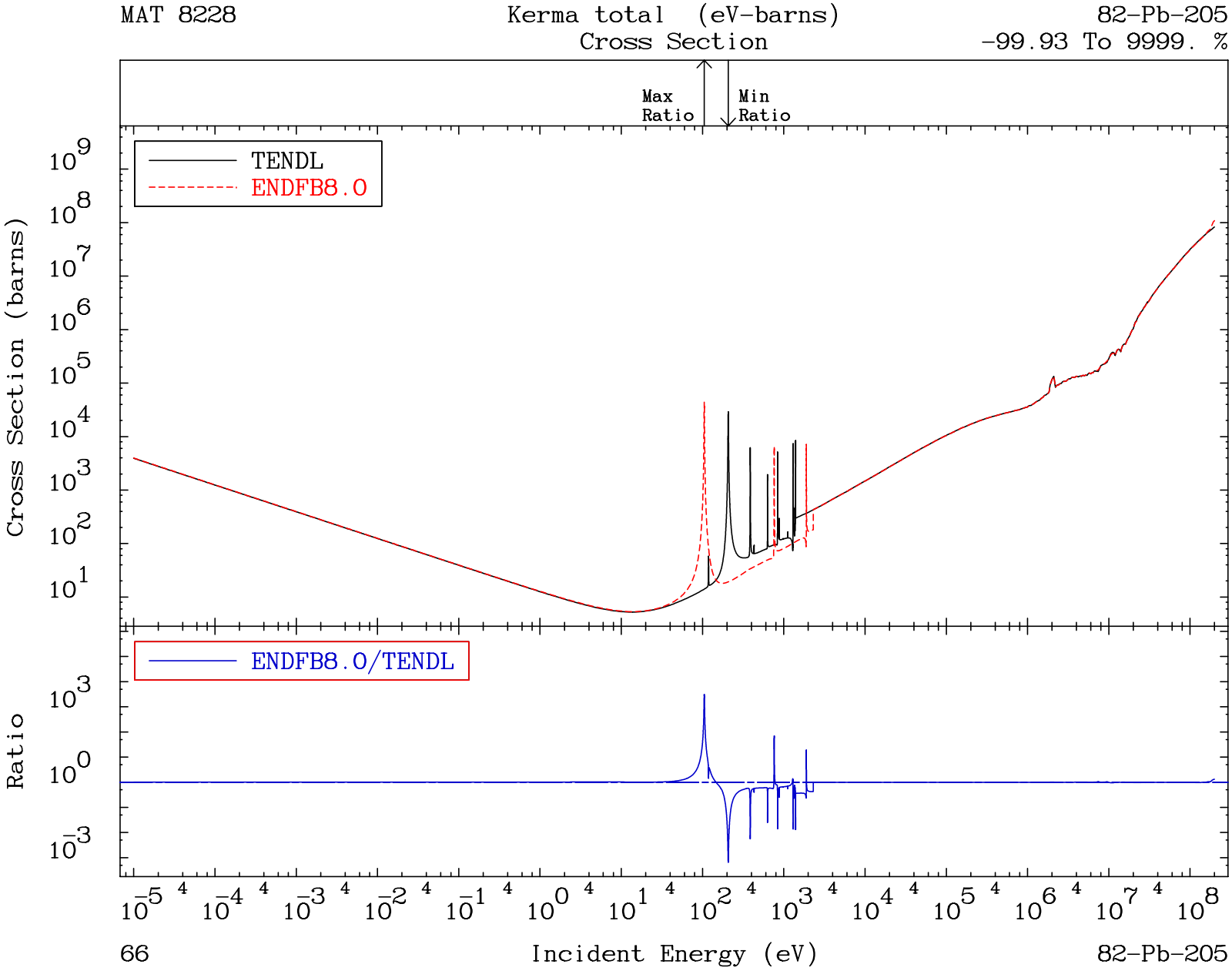

MAT 8228
Hydrogen Production
Cross Section
82-Pb-205
-2.034 To 183.1 %
Min
Ratio
TENDL Threshold 1.4007 keV
ENDFB8.0 Threshold 2.3057 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
3.0
2.0
1.0
2 3 5 7 10^4 2 3 5 7 10^5 2 3 5 7 10^6 2 3 5 7 10^7 2 3 5 7 10^8 2
61
Incident Energy (eV)
82-Pb-205

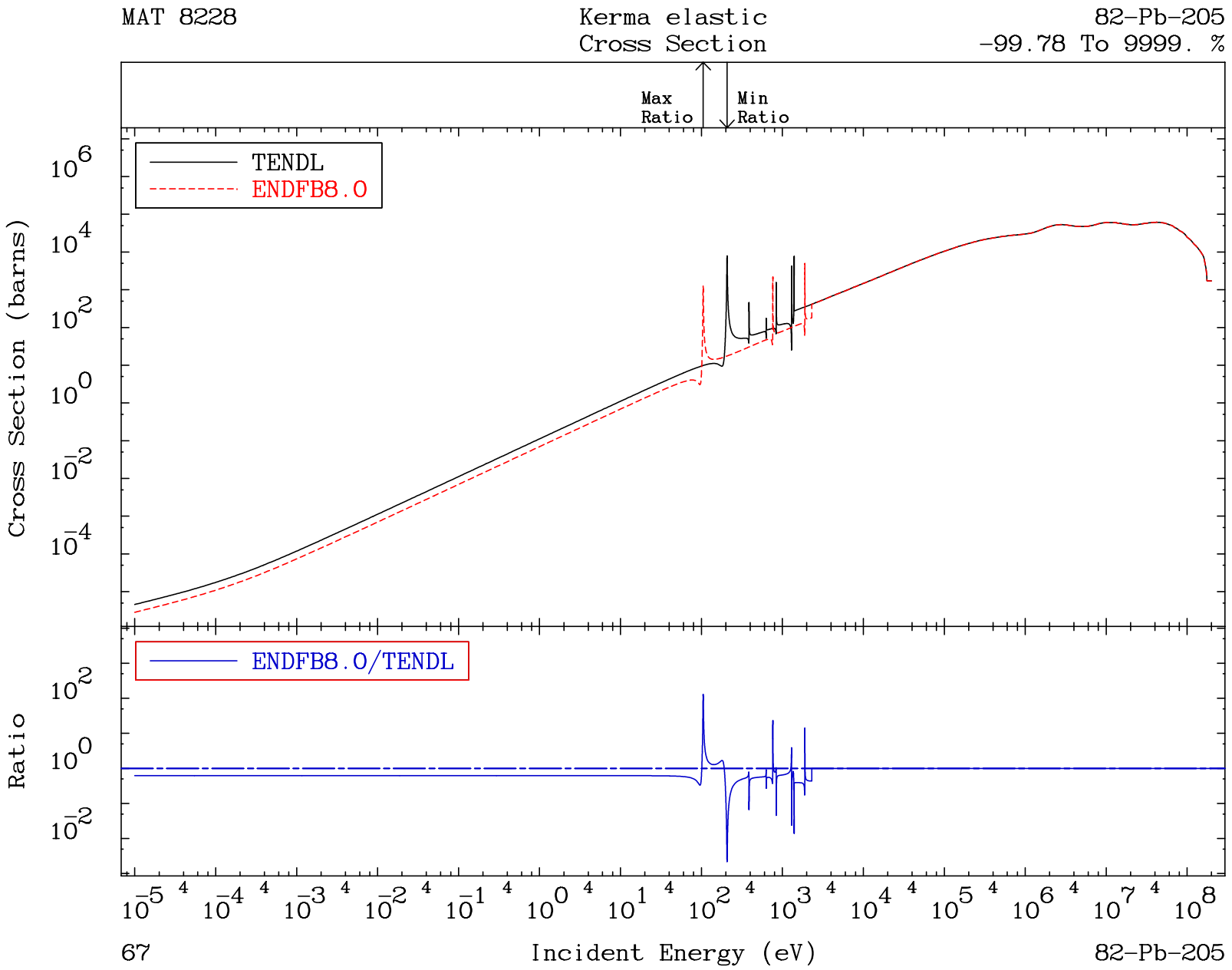

MAT 8228
Deuterium Production
Cross Section
82-Pb-205
-3.707 To 233.2 %
Min Ratio
Max Ratio
TENDL Threshold 4.5106 MeV
ENDFB8.0 Threshold 4.5106 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
4.0
3.0
2.0
1.0
5 6 7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
62
Incident Energy (eV)
82-Pb-205

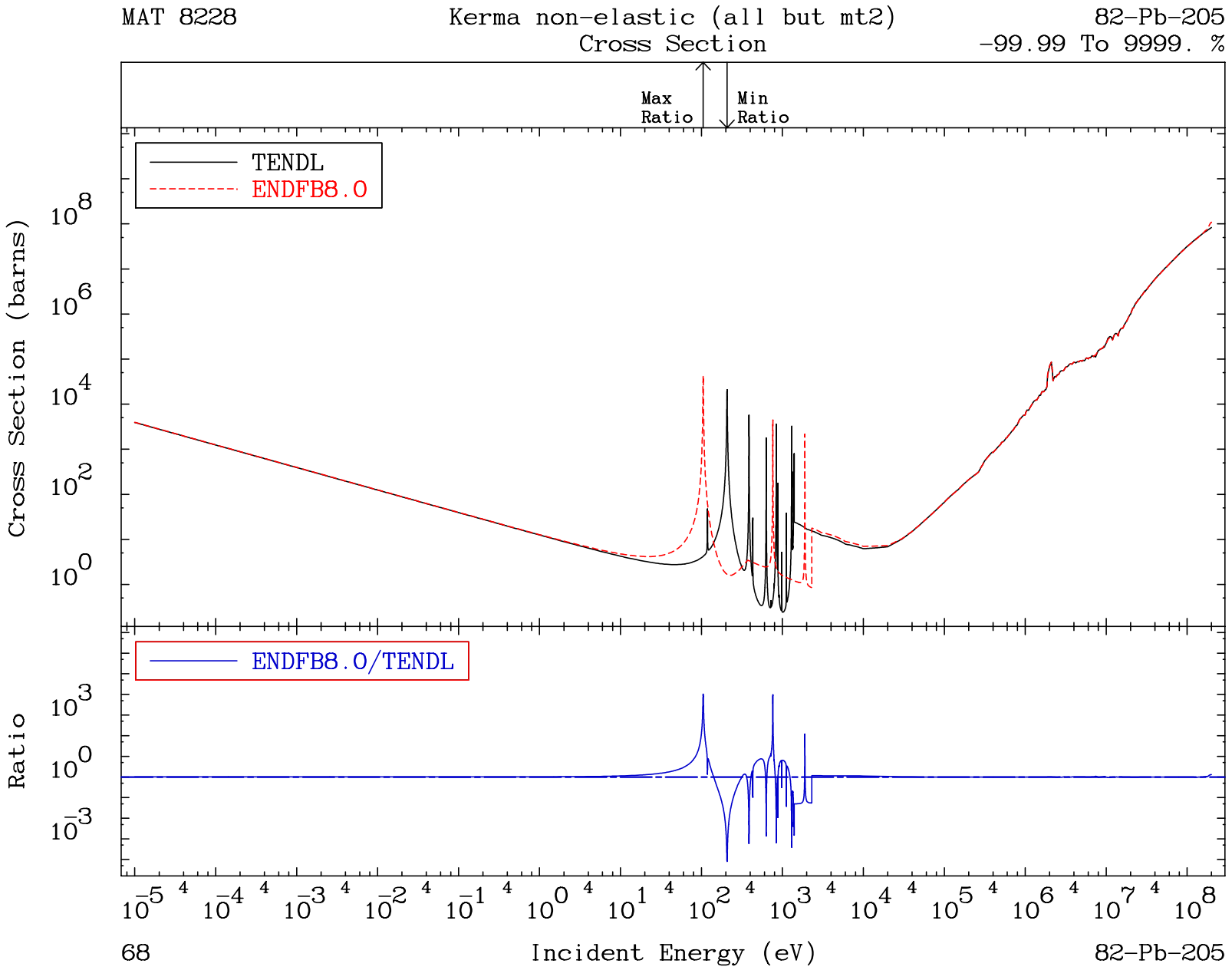

MAT 8228
Tritium Production
Cross Section
82-Pb-205
-6.245 To 354.1 %
Min Ratio
Max Ratio
TENDL Threshold 4.9114 MeV
ENDFB8.0 Threshold 4.9114 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
4
2
5 6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
63
Incident Energy (eV)
82-Pb-205

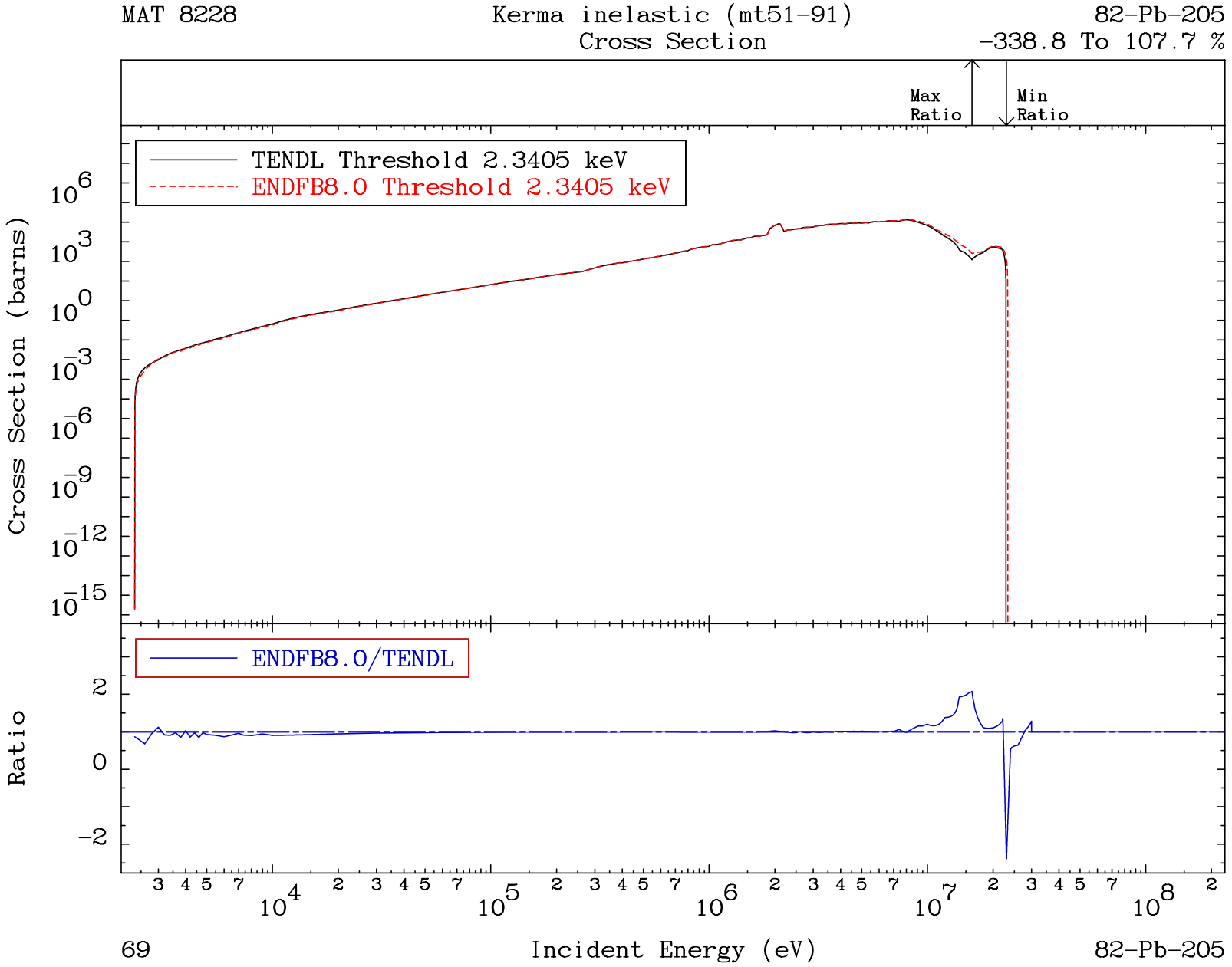

MAT 8228
He-3 Production
Cross Section
82-Pb-205
-99.14 To 0.101 %
Min
Ratio
Max
Ratio
TENDL Threshold 5.3872 MeV
ENDFB8.0 Threshold 5.3872 MeV
Cross Section (milli-barns)
300
250
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
10^0
10^-1
10^-2
6 7 8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
64
Incident Energy (eV)
82-Pb-205

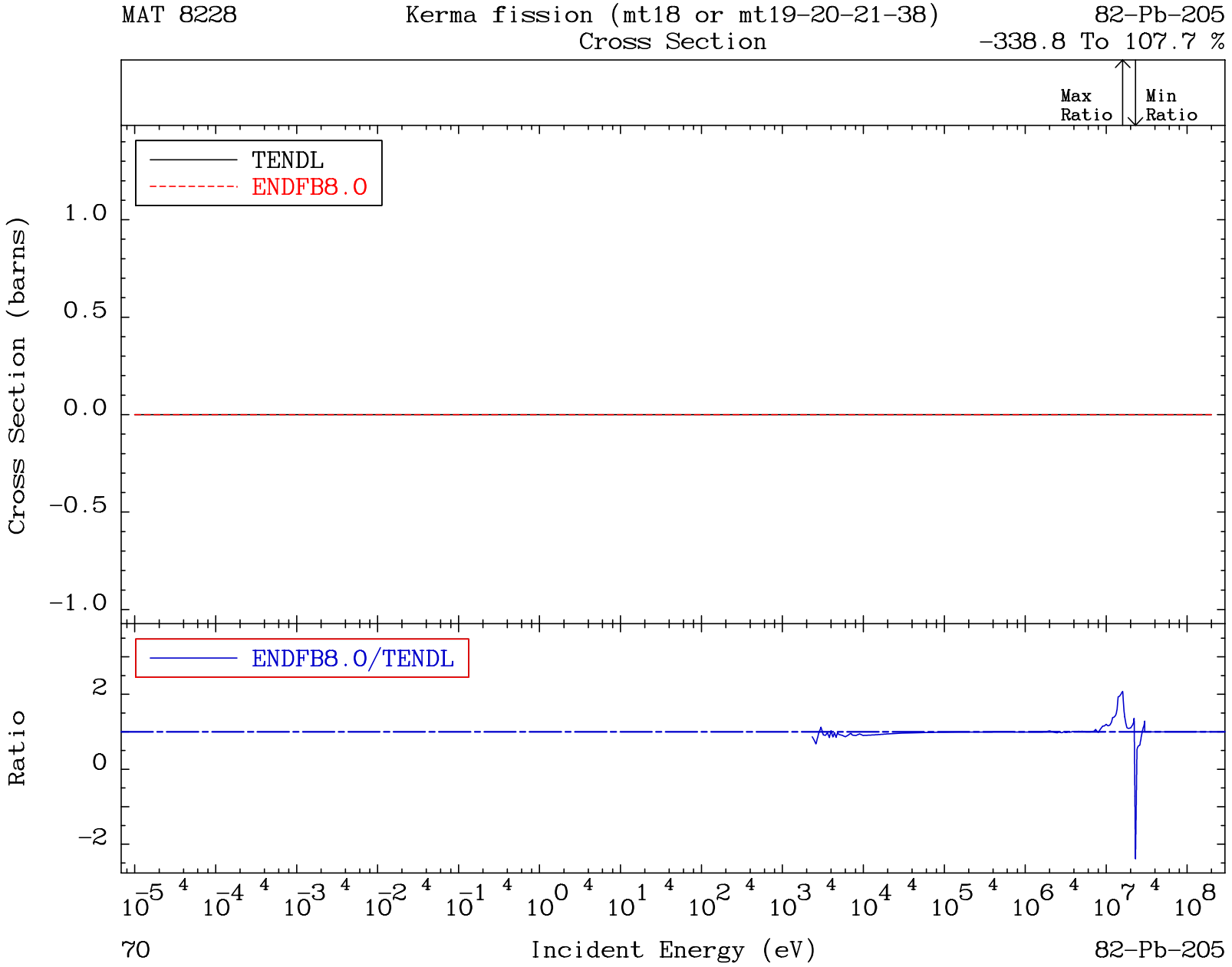

MAT 8228
He-4 Production
Cross Section
82-Pb-205
-22.51 To 9999. %
Max
Ratio
Min
Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
65
82-Pb-205

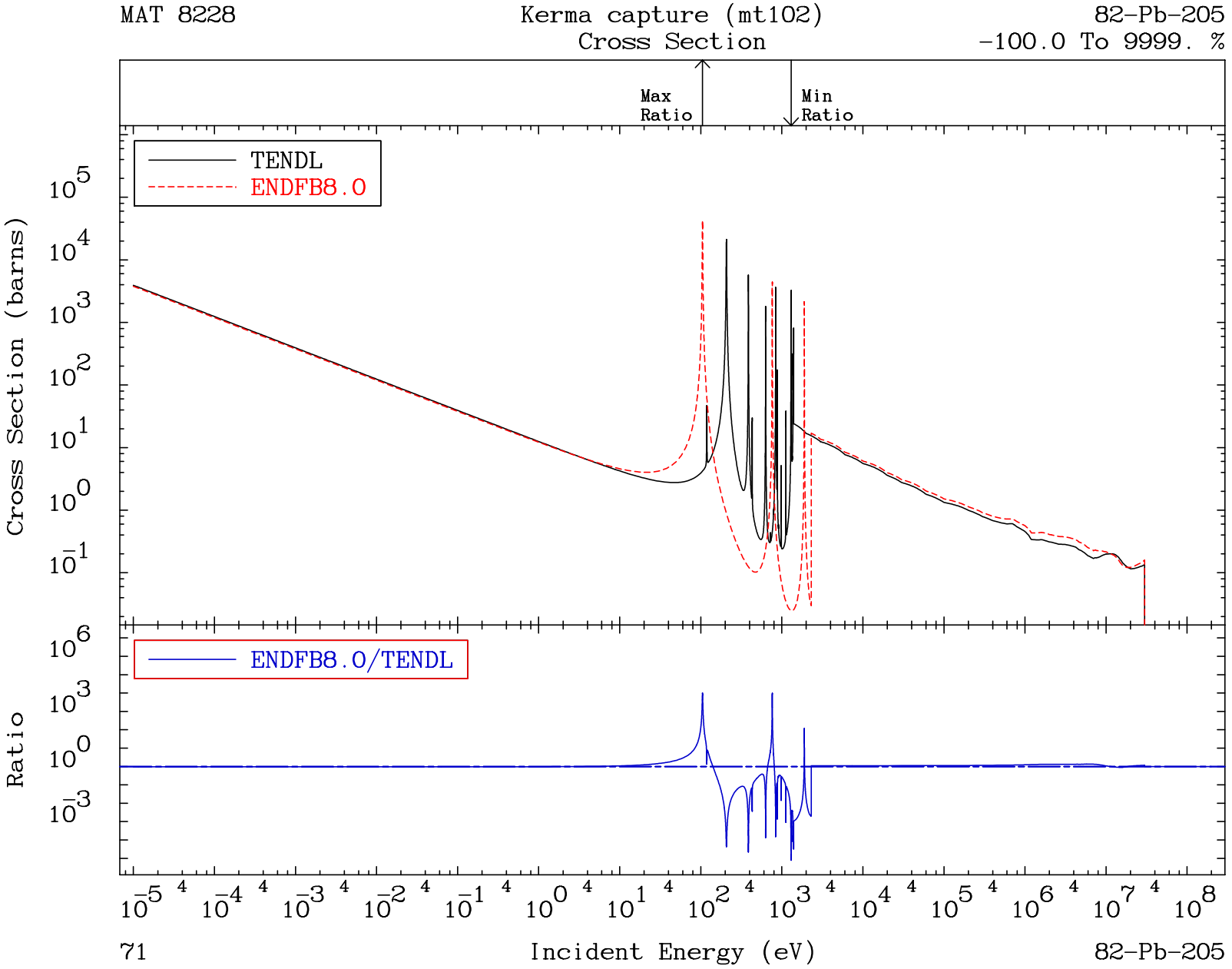

MAT 8228
Kerma total (eV-barns)
Cross Section
82-Pb-205
-99.93 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
66
82-Pb-205

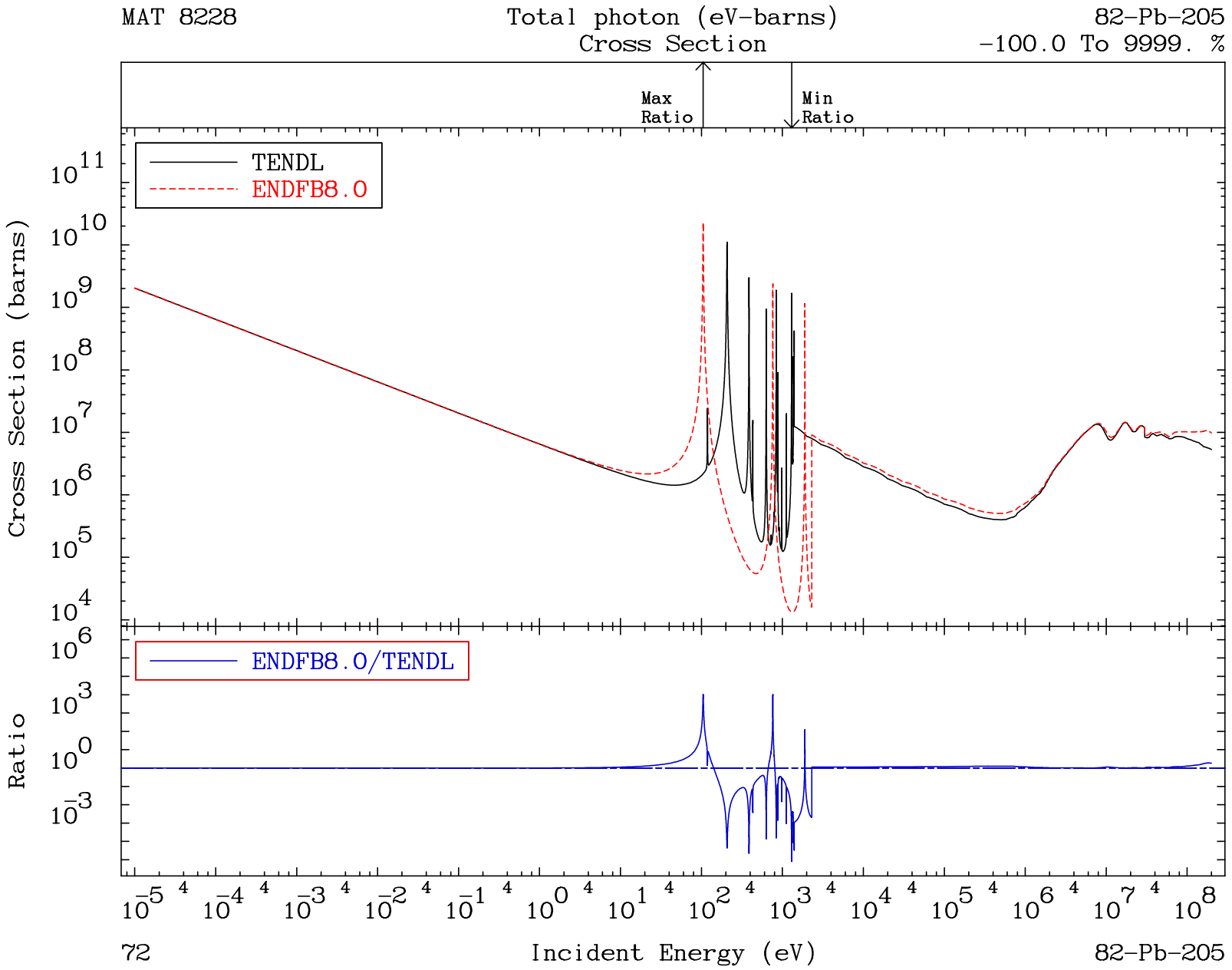

MAT 8228
Kerma elastic
Cross Section
82-Pb-205
-99.78 To 9999. %
Max
Ratio
Min
Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
67
82-Pb-205

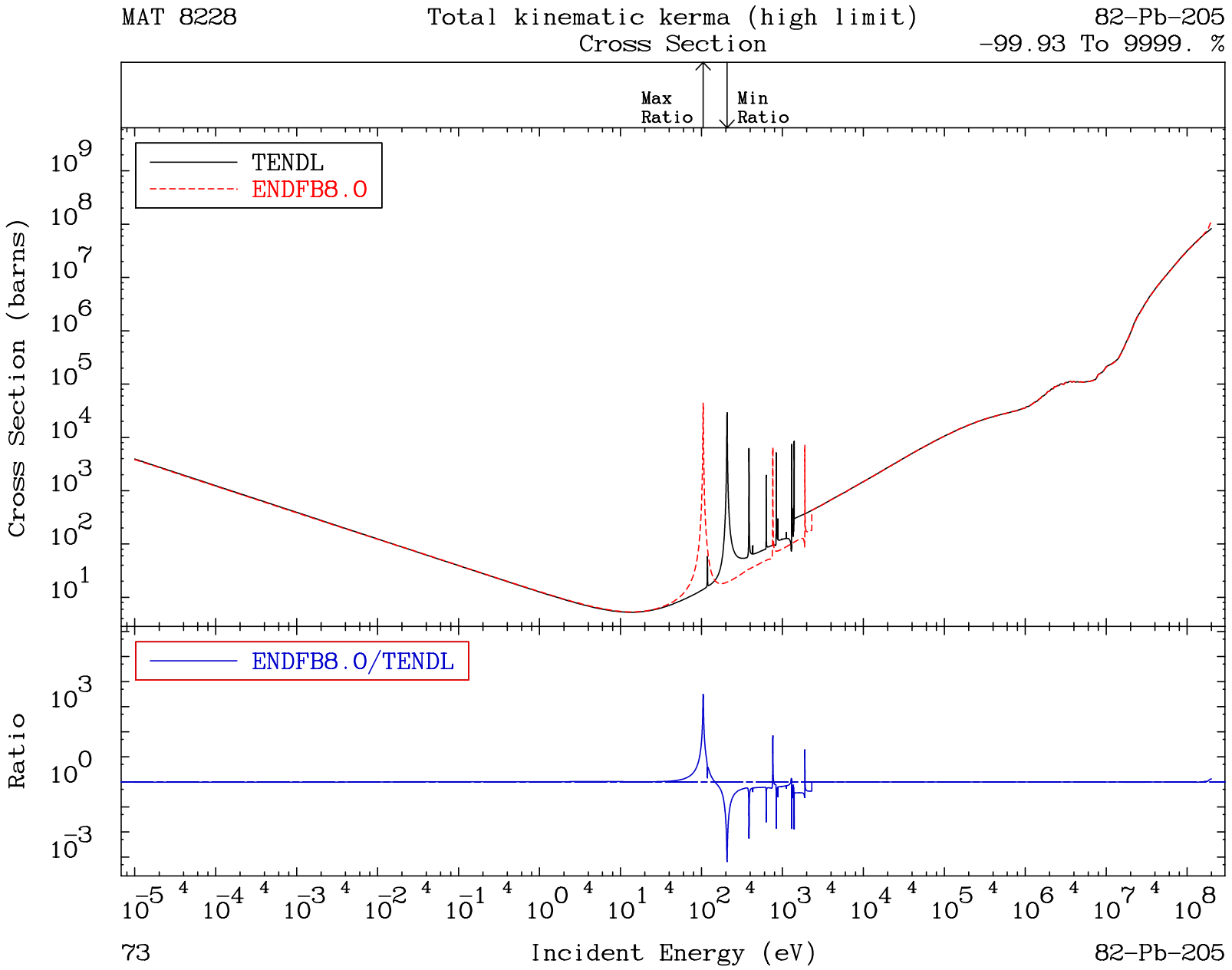

MAT 8228
Kerma non-elastic (all but mt2)
Cross Section
82-Pb-205
-99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
68
82-Pb-205

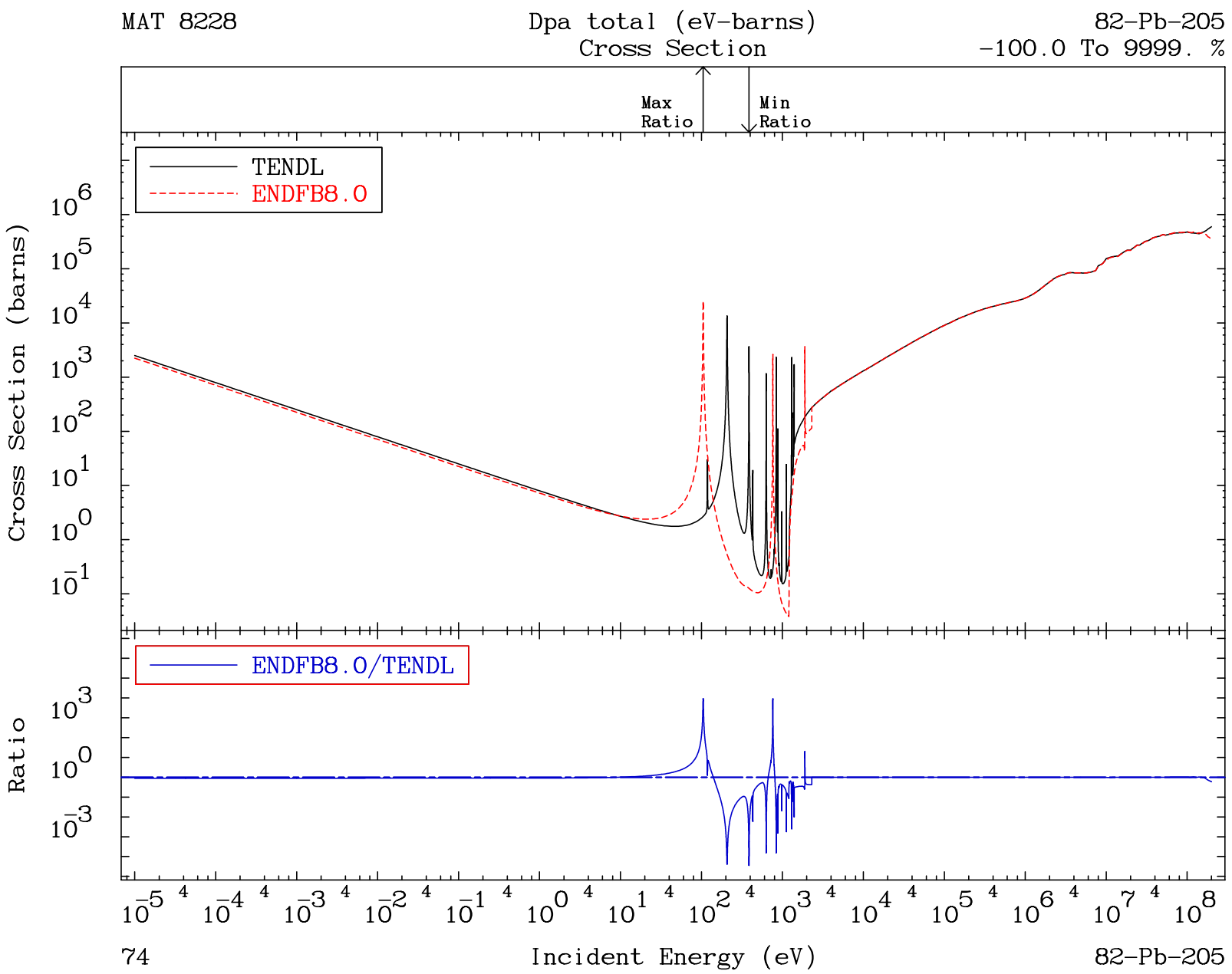

MAT 8228
Kerma inelastic (mt51-91)
Cross Section
82-Pb-205
-338.8 To 107.7 %
Max Ratio
Min Ratio
TENDL Threshold 2.3405 keV
ENDFB8.0 Threshold 2.3405 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
69
82-Pb-205

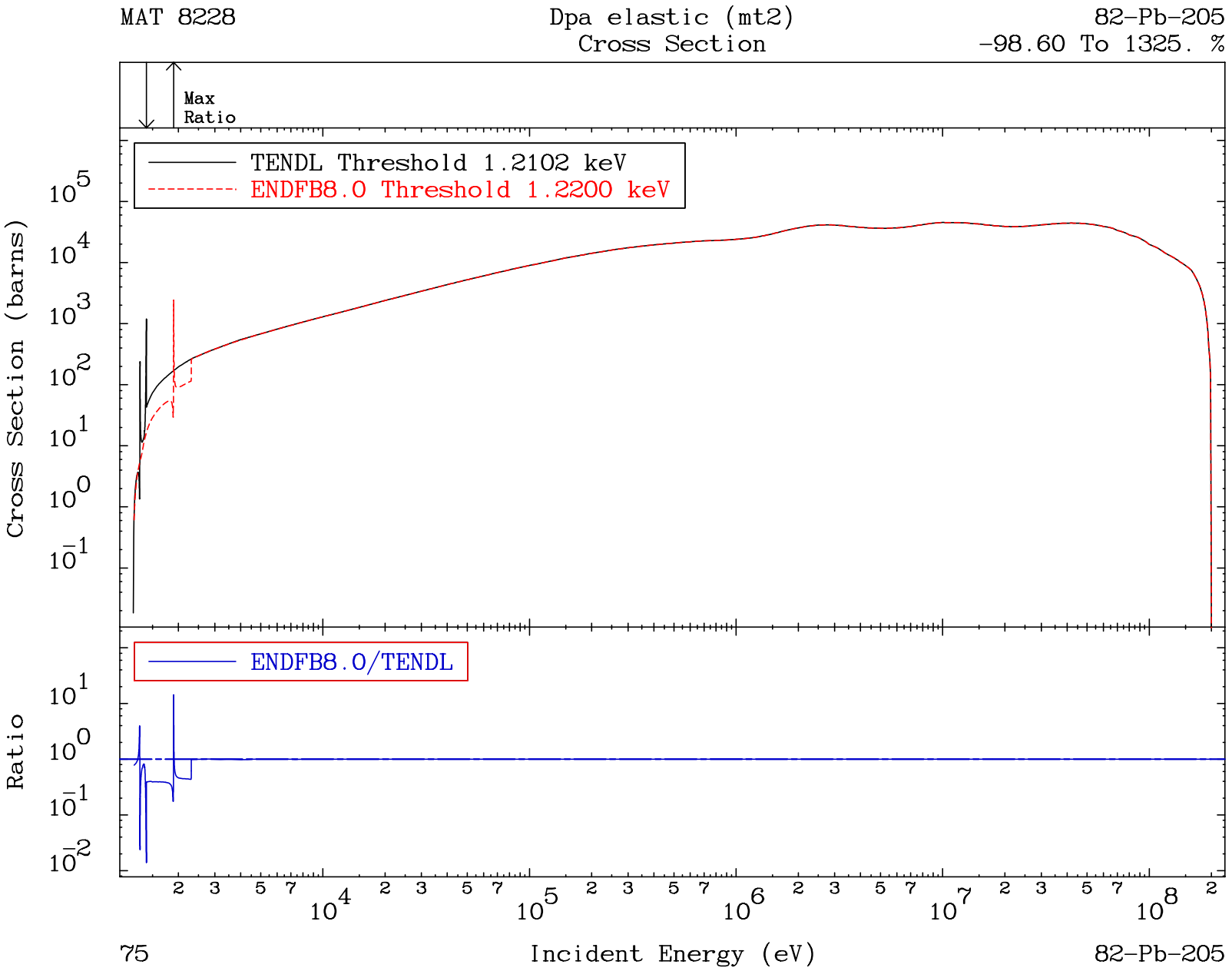

MAT 8228
Kerma fission (mt18 or mt19-20-21-38)
Cross Section
82-Pb-205
-338.8 To 107.7 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
1.0
0.5
0.0
-0.5
-1.0
ENDFB8.0/TENDL
Ratio
2
0
-2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
70
Incident Energy (eV)
82-Pb-205

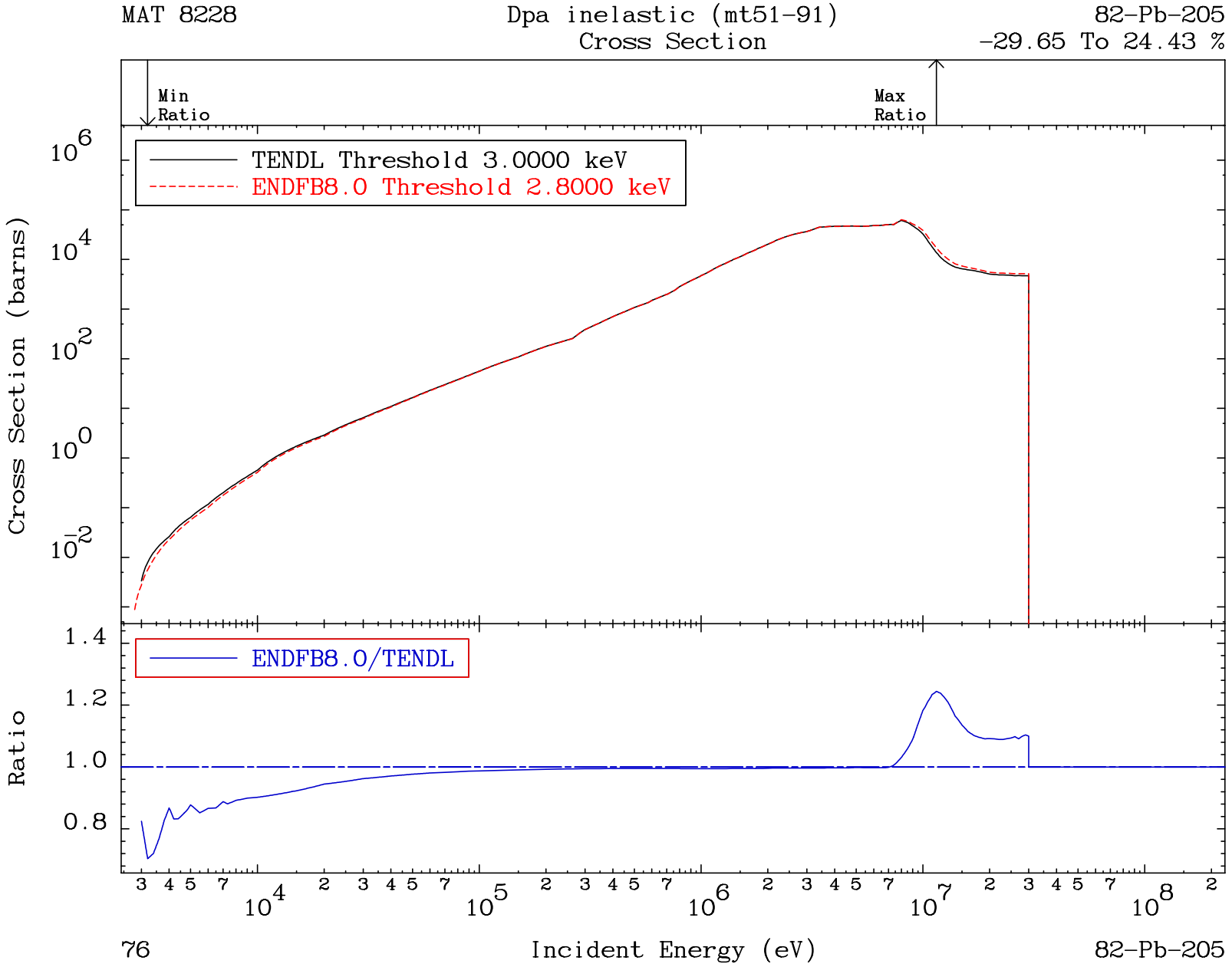

MAT 8228
Kerma capture (mt102)
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
71
82-Pb-205

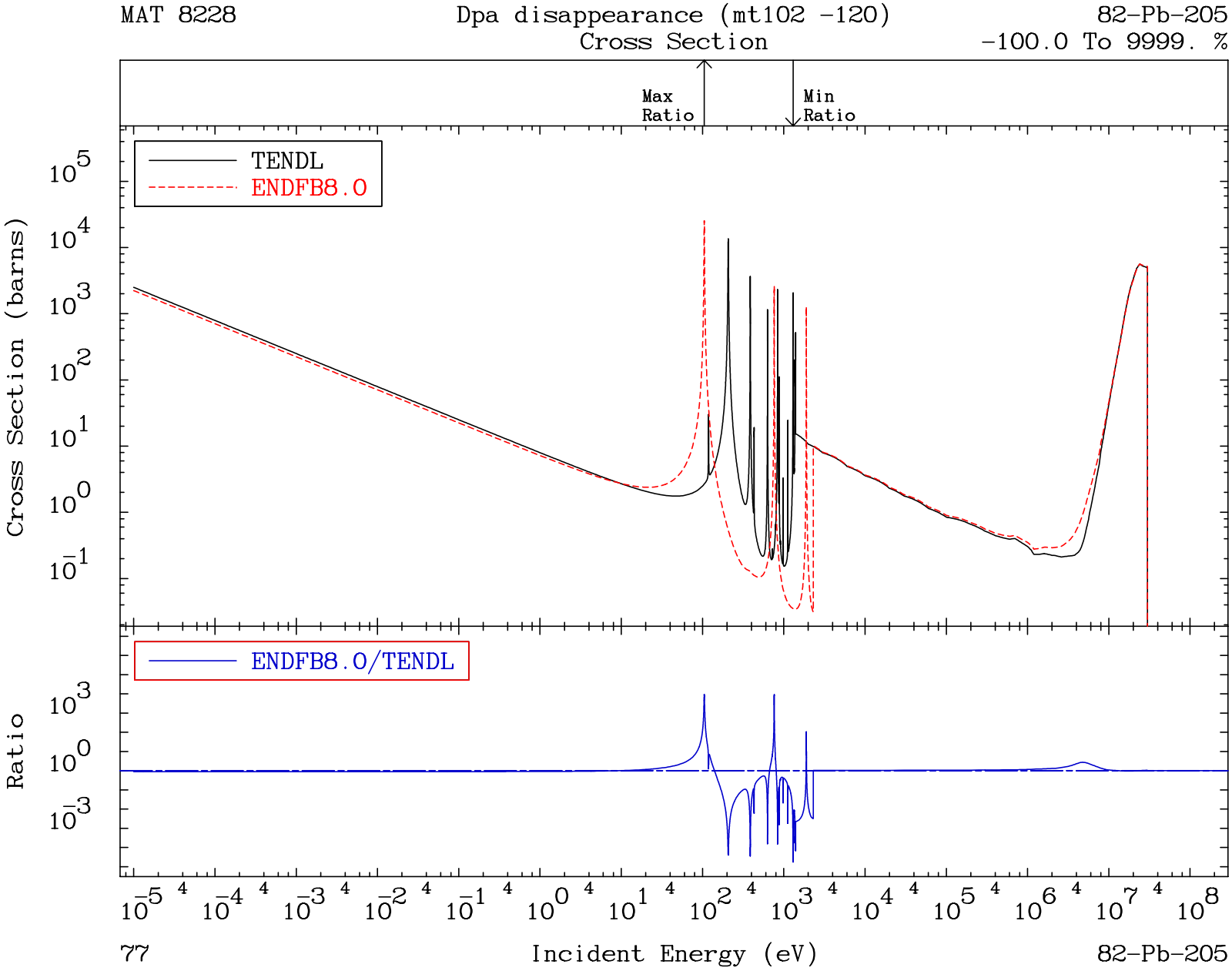

MAT 8228
Total photon (eV-barns)
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
72
82-Pb-205

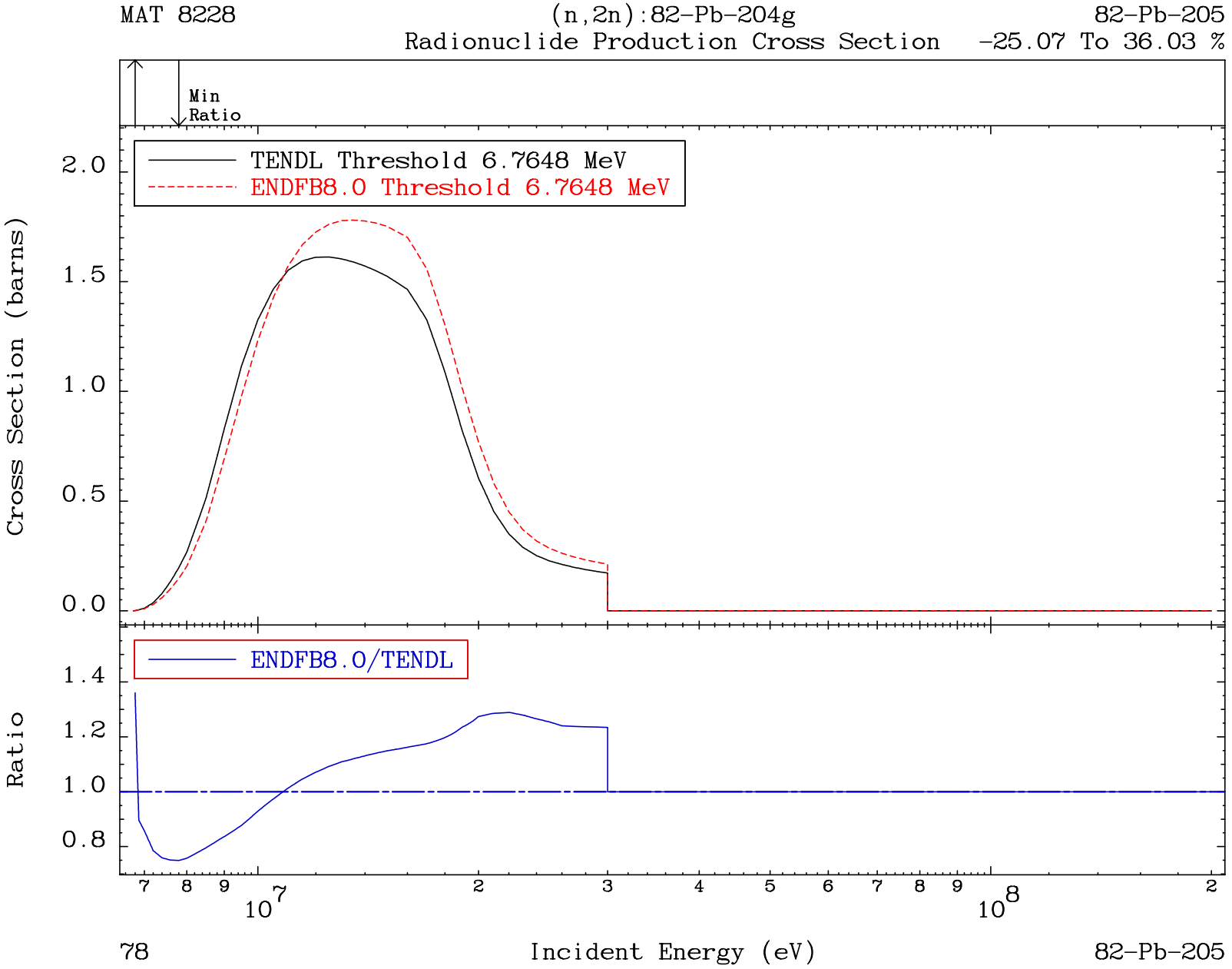

MAT 8228
Total kinematic kerma (high limit)
Cross Section
82-Pb-205
-99.93 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
73
82-Pb-205

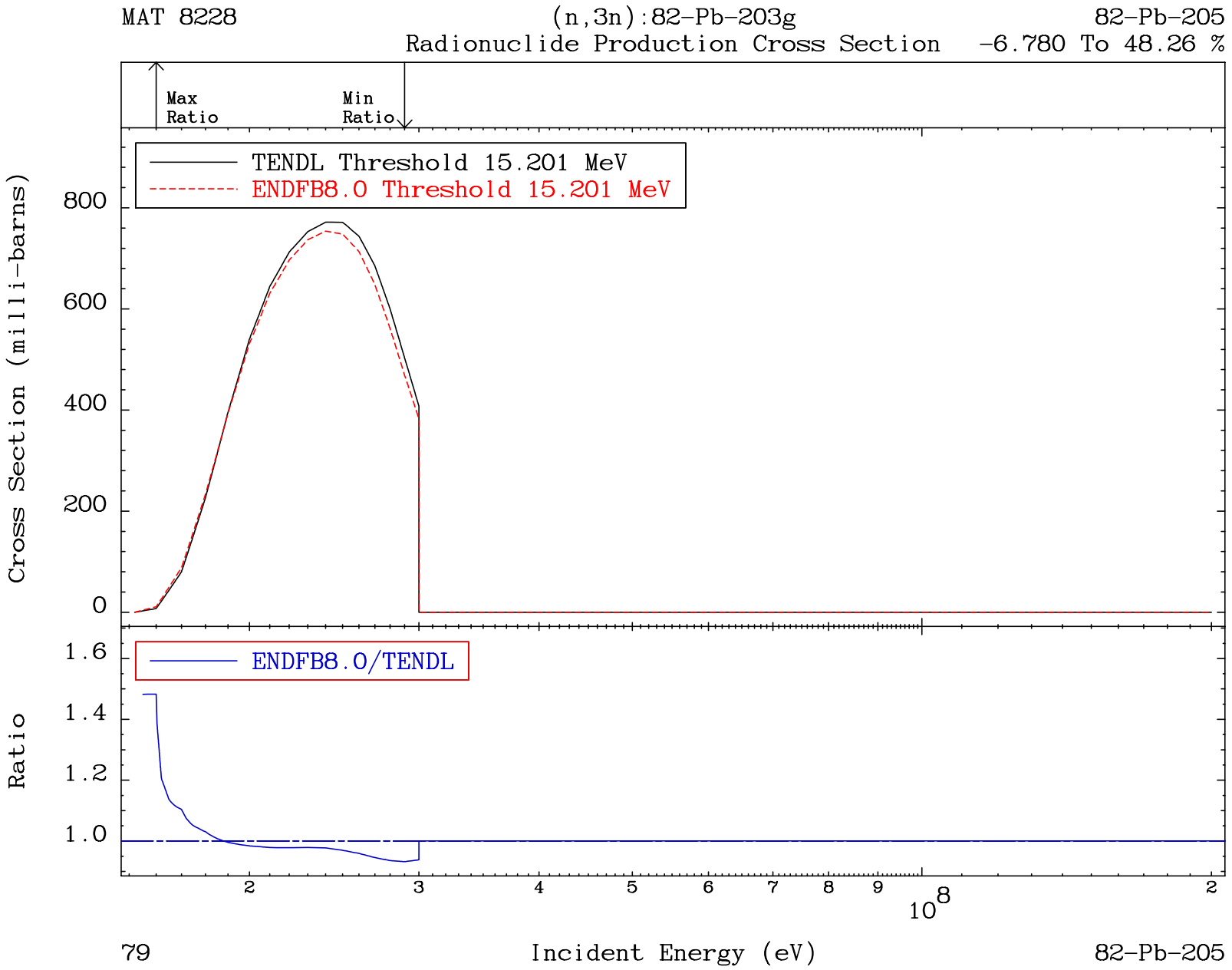

MAT 8228
Dpa total (eV-barns)
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
74
Incident Energy (eV)
82-Pb-205

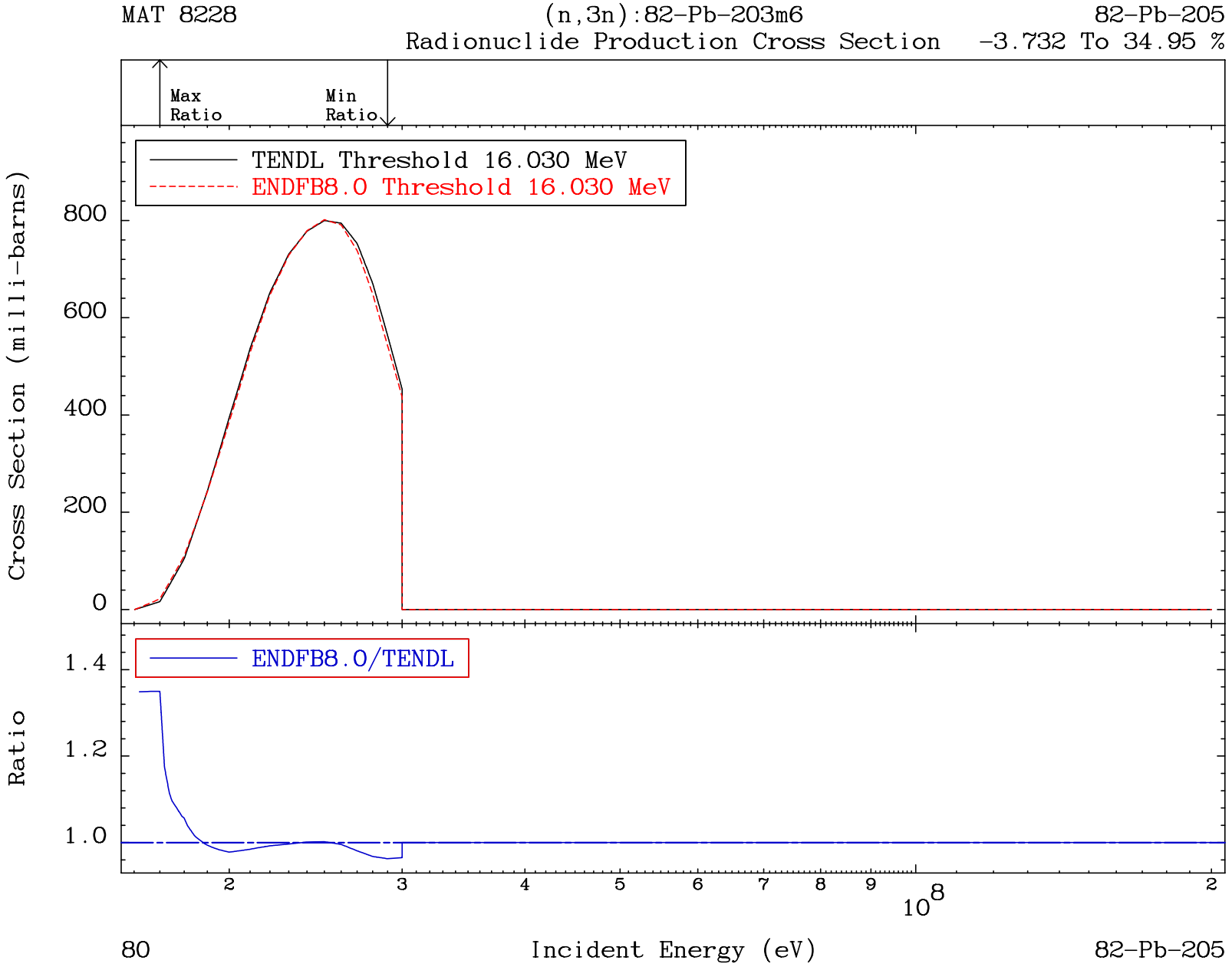

MAT 8228
Dpa elastic (mt2)
Cross Section
82-Pb-205
-98.60 To 1325. %
Max
Ratio
TENDL Threshold 1.2102 keV
ENDFB8.0 Threshold 1.2200 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
75
82-Pb-205

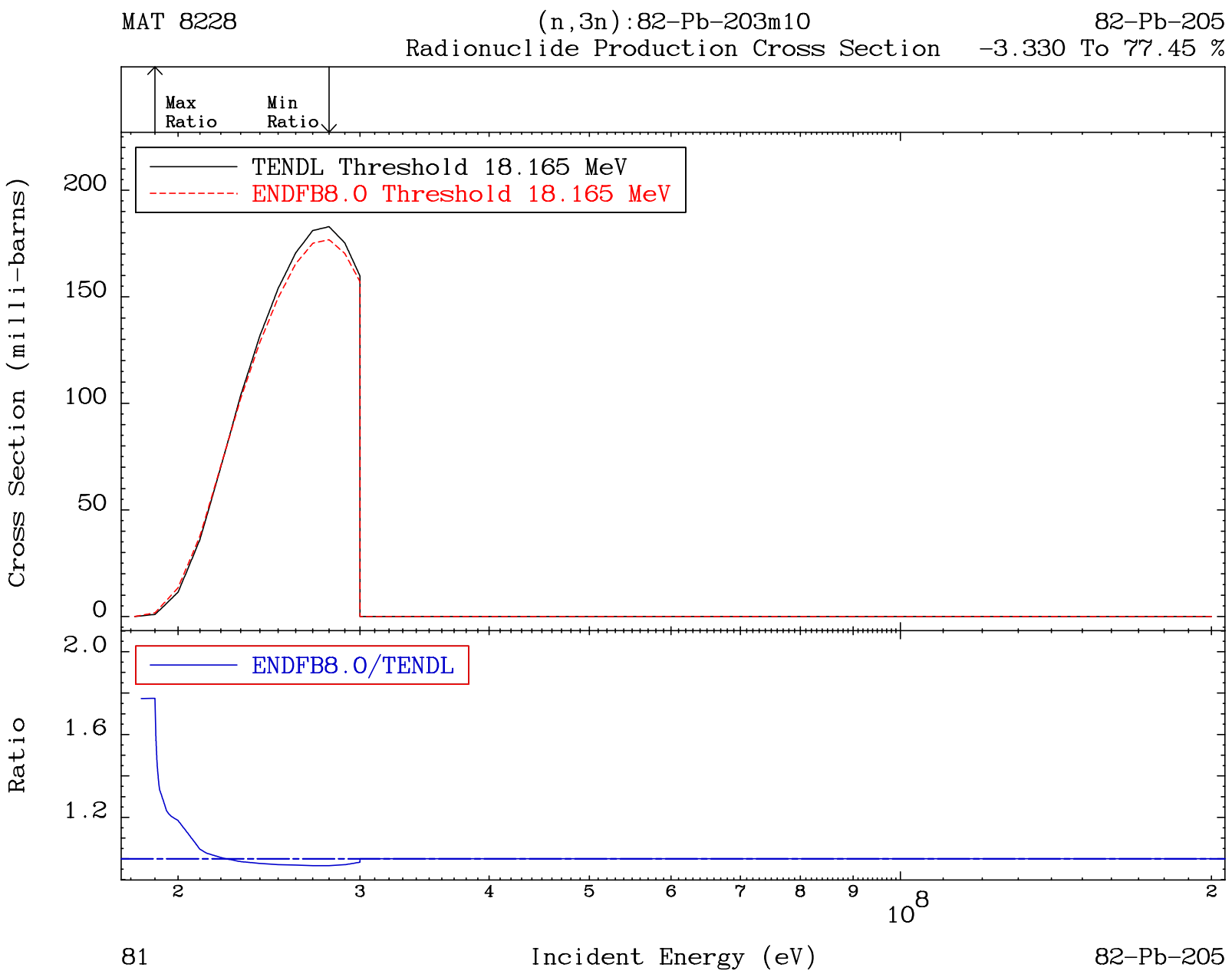

MAT 8228
Dpa inelastic (mt51-91)
Cross Section
82-Pb-205
-29.65 To 24.43 %
Min Ratio
Max Ratio
TENDL Threshold 3.0000 keV
ENDFB8.0 Threshold 2.8000 keV
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
76
82-Pb-205

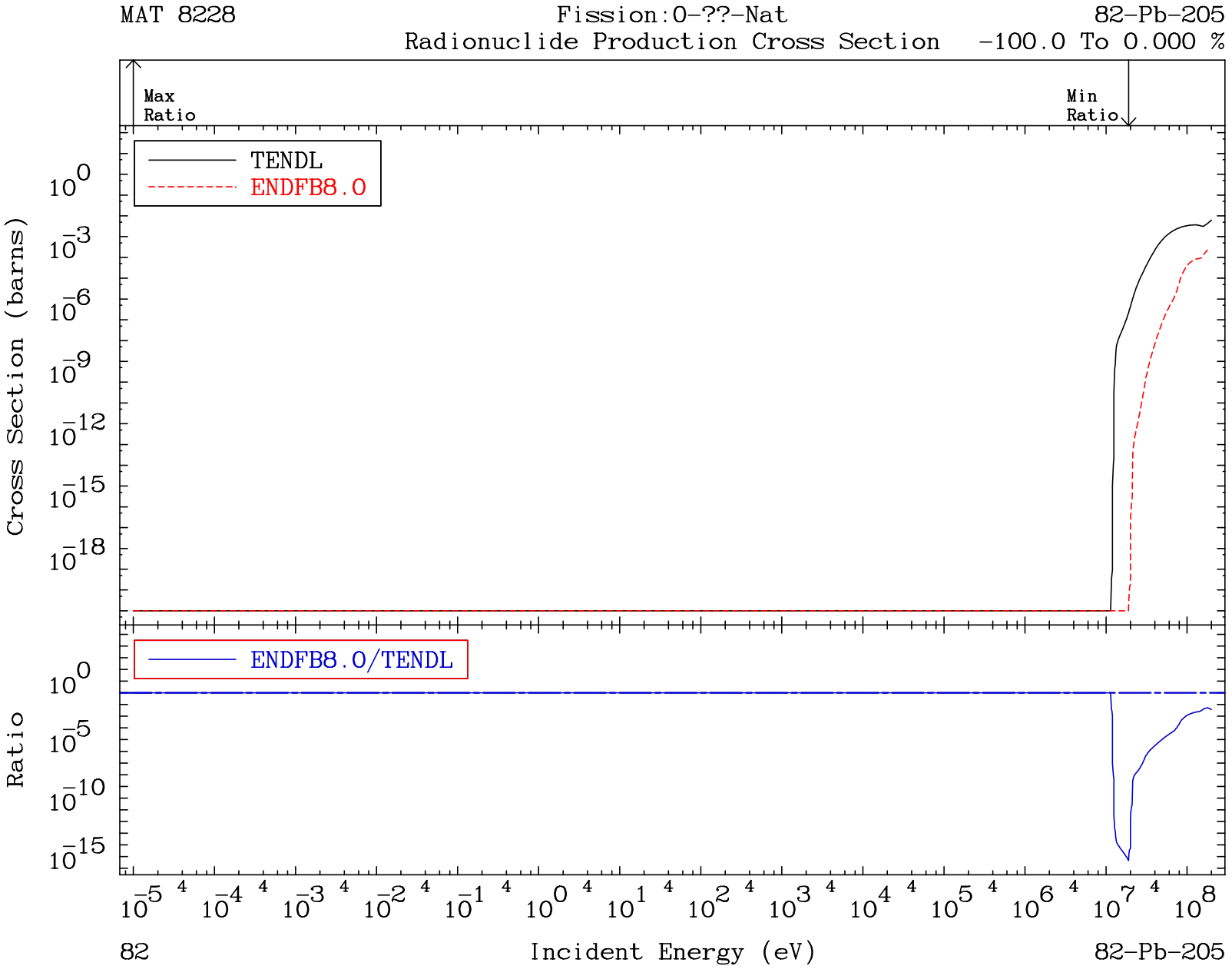

MAT 8228
Dpa disappearance (mt102 -120)
Cross Section
82-Pb-205
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
77
82-Pb-205

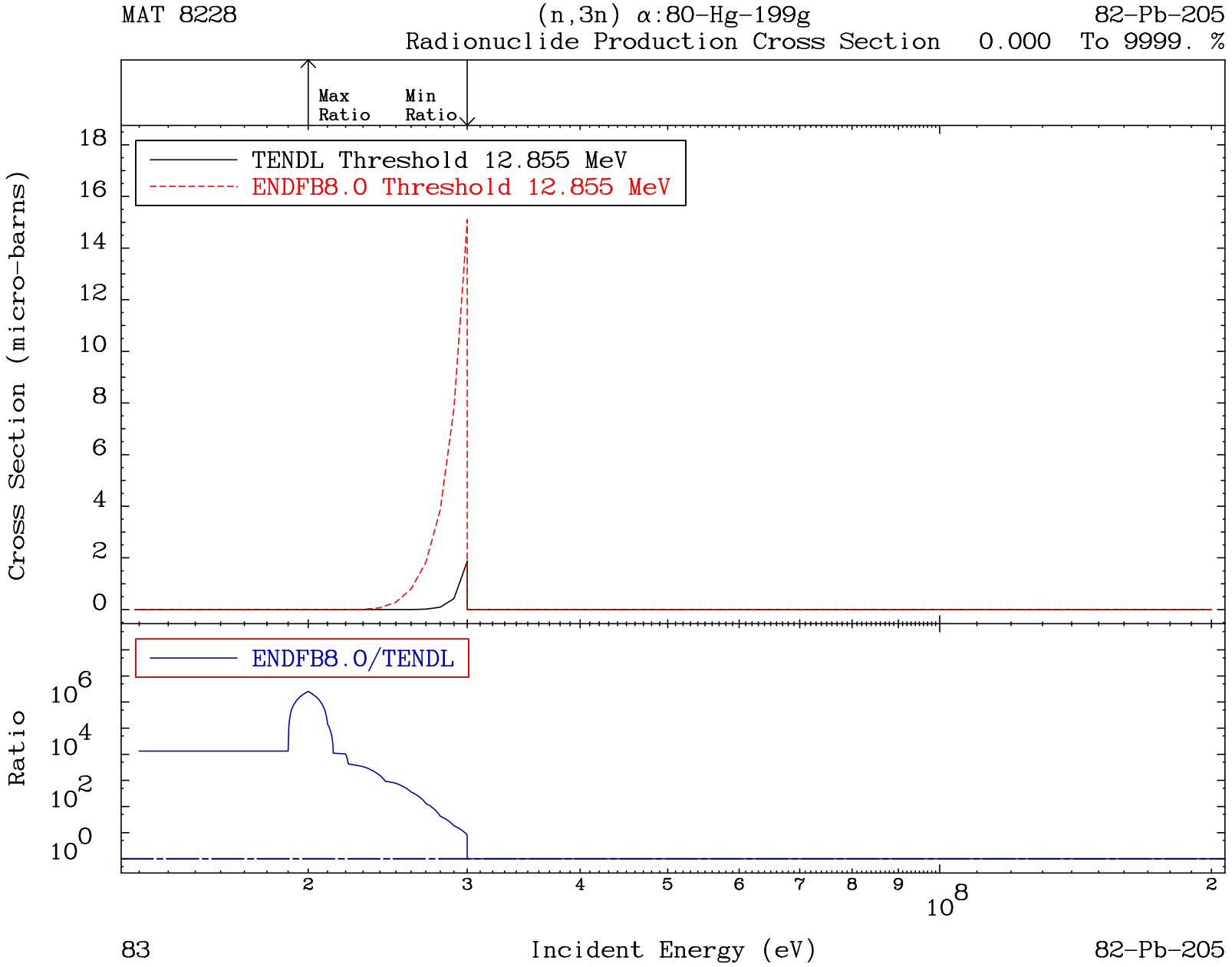

MAT 8228
(n,2n):82-Pb-204g
82-Pb-205
Radionuclide Production Cross Section
-25.07 To 36.03 %
Min
Ratio
TENDL Threshold 6.7648 MeV
ENDFB8.0 Threshold 6.7648 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
ENDFB8.0/TENDL
Ratio
1.4
1.2
1.0
0.8
7 8 9
10^7
2 3 4 5 6 7 8 9
10^8
2
78
Incident Energy (eV)
82-Pb-205

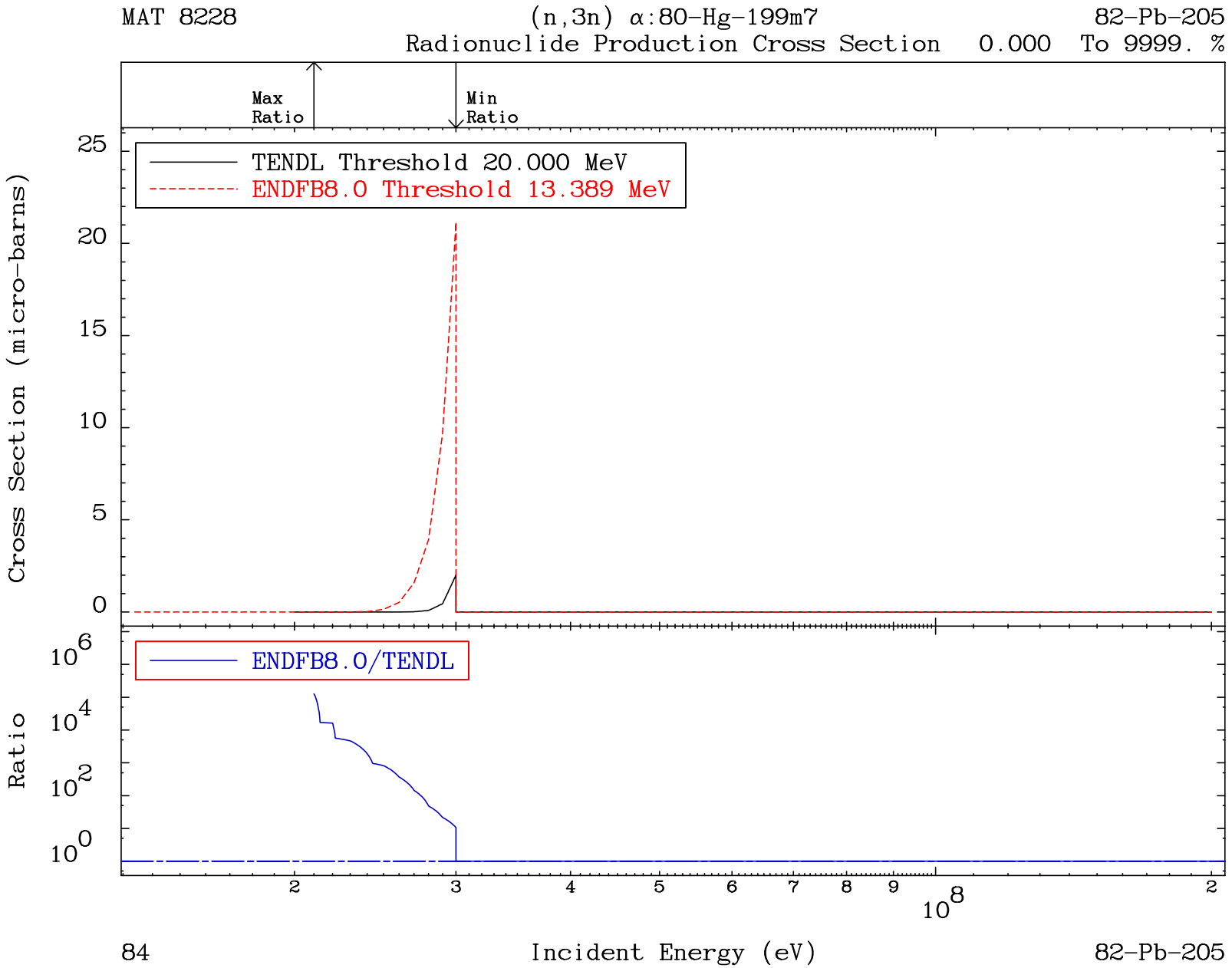

MAT 8228
(n,3n):82-Pb-203g
82-Pb-205
Radionuclide Production Cross Section
-6.780 To 48.26 %
Max Ratio
Min Ratio
TENDL Threshold 15.201 MeV
ENDFB8.0 Threshold 15.201 MeV
Cross Section (milli-barns)
800
600
400
200
0
ENDFB8.0/TENDL
Ratio
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
79
Incident Energy (eV)
82-Pb-205

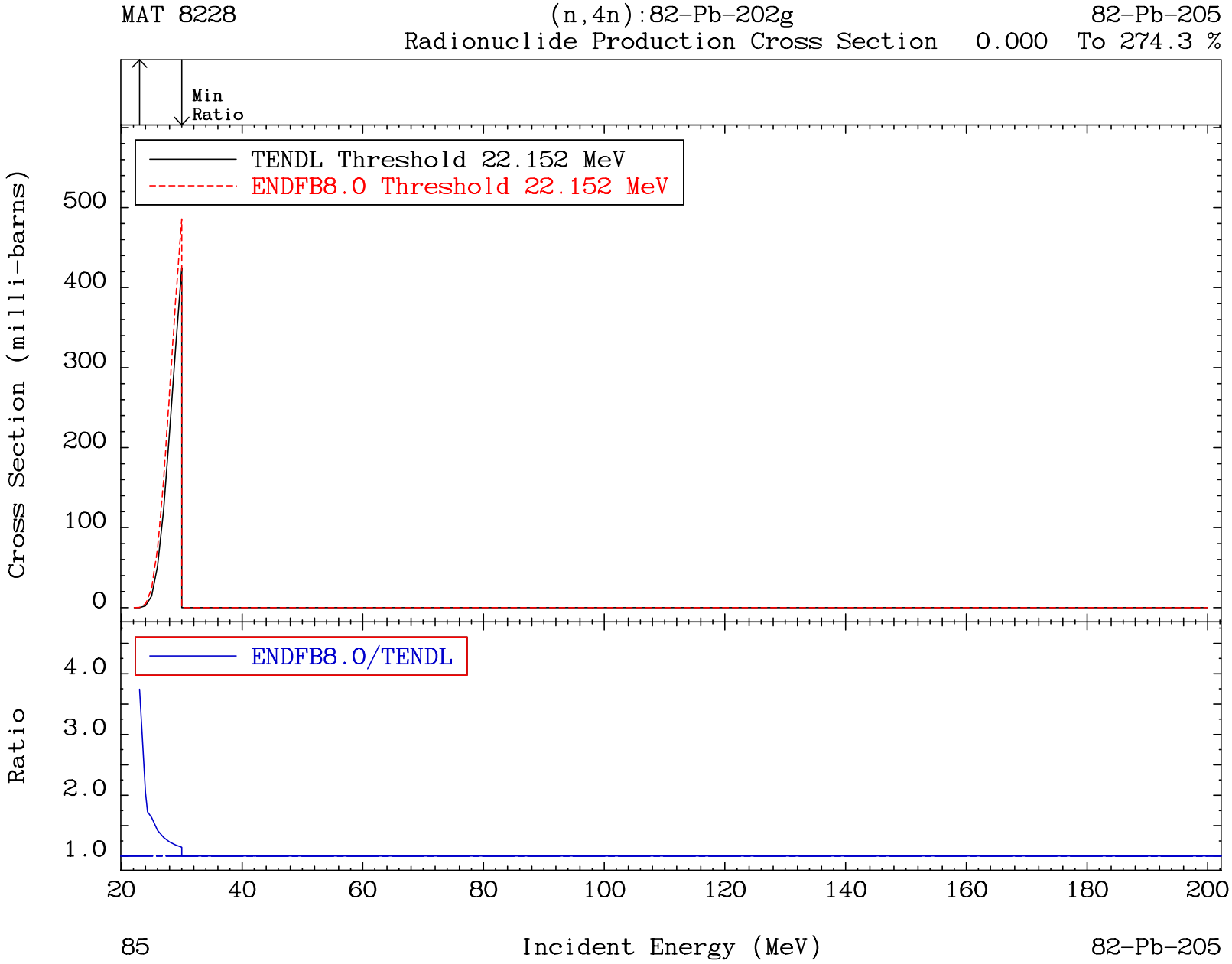

MAT 8228
(n,3n):82-Pb-203m6
82-Pb-205
Radionuclide Production Cross Section
-3.732 To 34.95 %
Max Ratio
Min Ratio
TENDL Threshold 16.030 MeV
ENDFB8.0 Threshold 16.030 MeV
Cross Section (milli-barns)
800
600
400
200
0
ENDFB8.0/TENDL
Ratio
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
82-Pb-205


MAT 8228
(n,3n):82-Pb-203m10
82-Pb-205
Radionuclide Production Cross Section
-3.330 To 77.45 %
Max Ratio
Min Ratio
TENDL Threshold 18.165 MeV
ENDFB8.0 Threshold 18.165 MeV
Cross Section (milli-barns)
200
150
100
50
0
ENDFB8.0/TENDL
Ratio
2.0
1.6
1.2
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
82-Pb-205


MAT 8228
Fission:0-??-Nat
82-Pb-205
Radionuclide Production Cross Section
-100.0 To 0.000 %
Max Ratio
Min Ratio
TENDL
ENDFB8.0
Cross Section (barns)
ENDFB8.0/TENDL
Ratio
Incident Energy (eV)
82
82-Pb-205


MAT 8228
(n,3n) α:80-Hg-199g
82-Pb-205
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 12.855 MeV
ENDFB8.0 Threshold 12.855 MeV
Cross Section (micro-barns)
18
16
14
12
10
8
6
4
2
0
ENDFB8.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
83
Incident Energy (eV)
82-Pb-205


MAT 8228
(n,3n) α:80-Hg-199m7
82-Pb-205
Radionuclide Production Cross Section 0.000 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 20.000 MeV
ENDFB8.0 Threshold 13.389 MeV
Cross Section (micro-barns)
25
20
15
10
5
0
ENDFB8.0/TENDL
Ratio
10^6
10^4
10^2
10^0
2
3
4
5
6
7
8
9
10^8
2
84
Incident Energy (eV)
82-Pb-205


MAT 8228
(n,4n):82-Pb-202g
82-Pb-205
Radionuclide Production Cross Section 0.000 To 274.3 %
Min
Ratio
TENDL Threshold 22.152 MeV
ENDFB8.0 Threshold 22.152 MeV
Cross Section (milli-barns)
500
400
300
200
100
0
ENDFB8.0/TENDL
Ratio
4.0
3.0
2.0
1.0
20
40
60
80
100
120
140
160
180
200
85
Incident Energy (MeV)
82-Pb-205