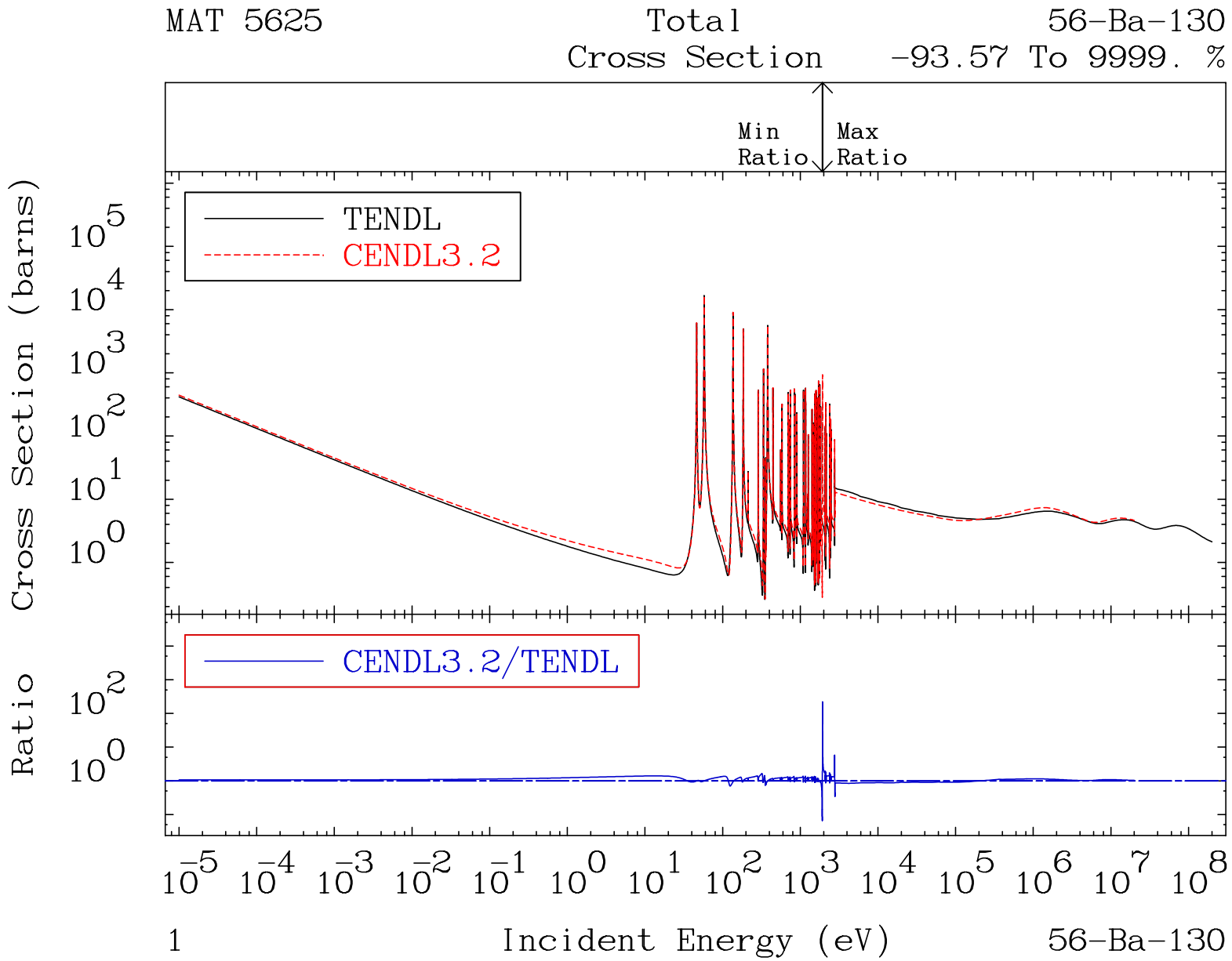
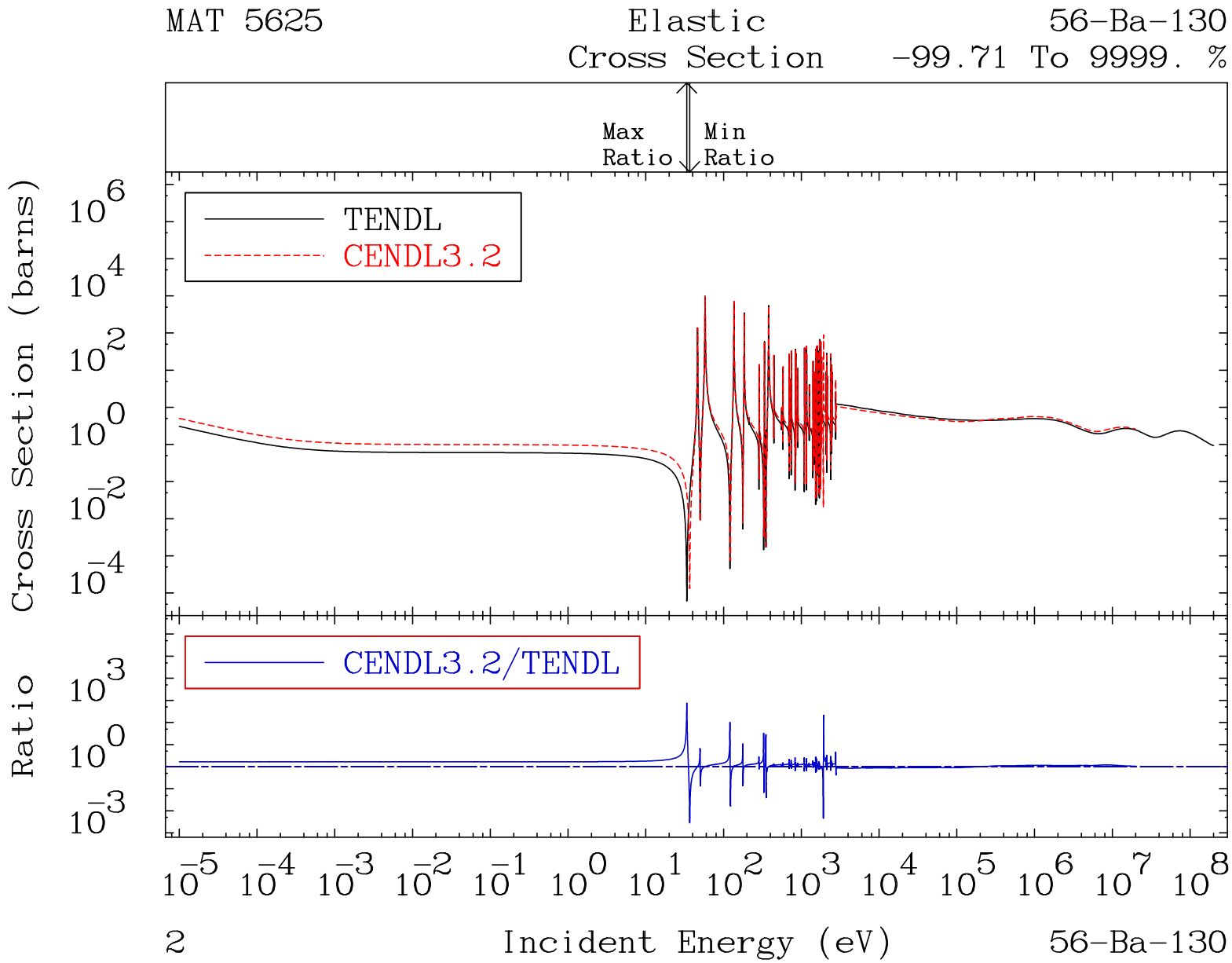
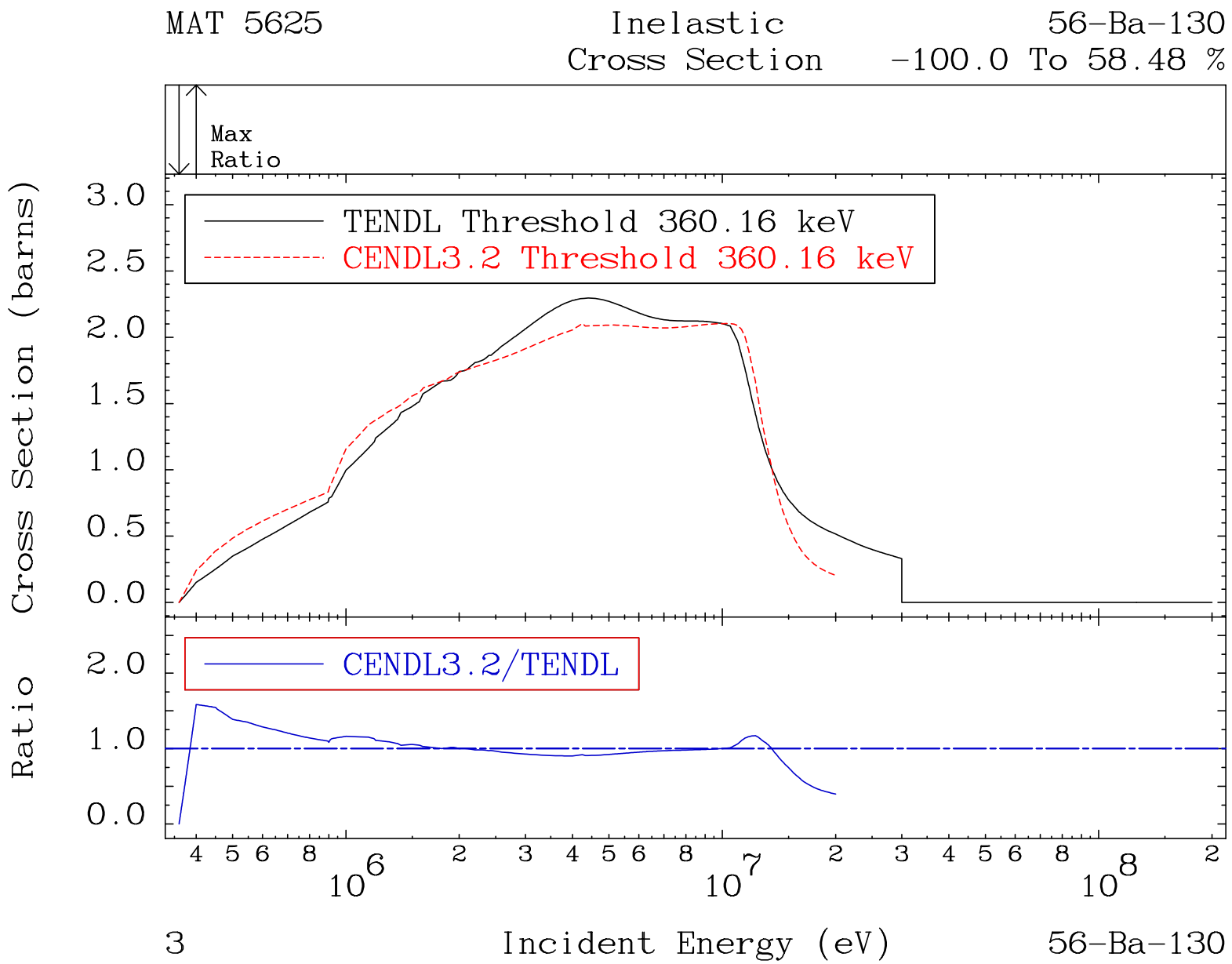
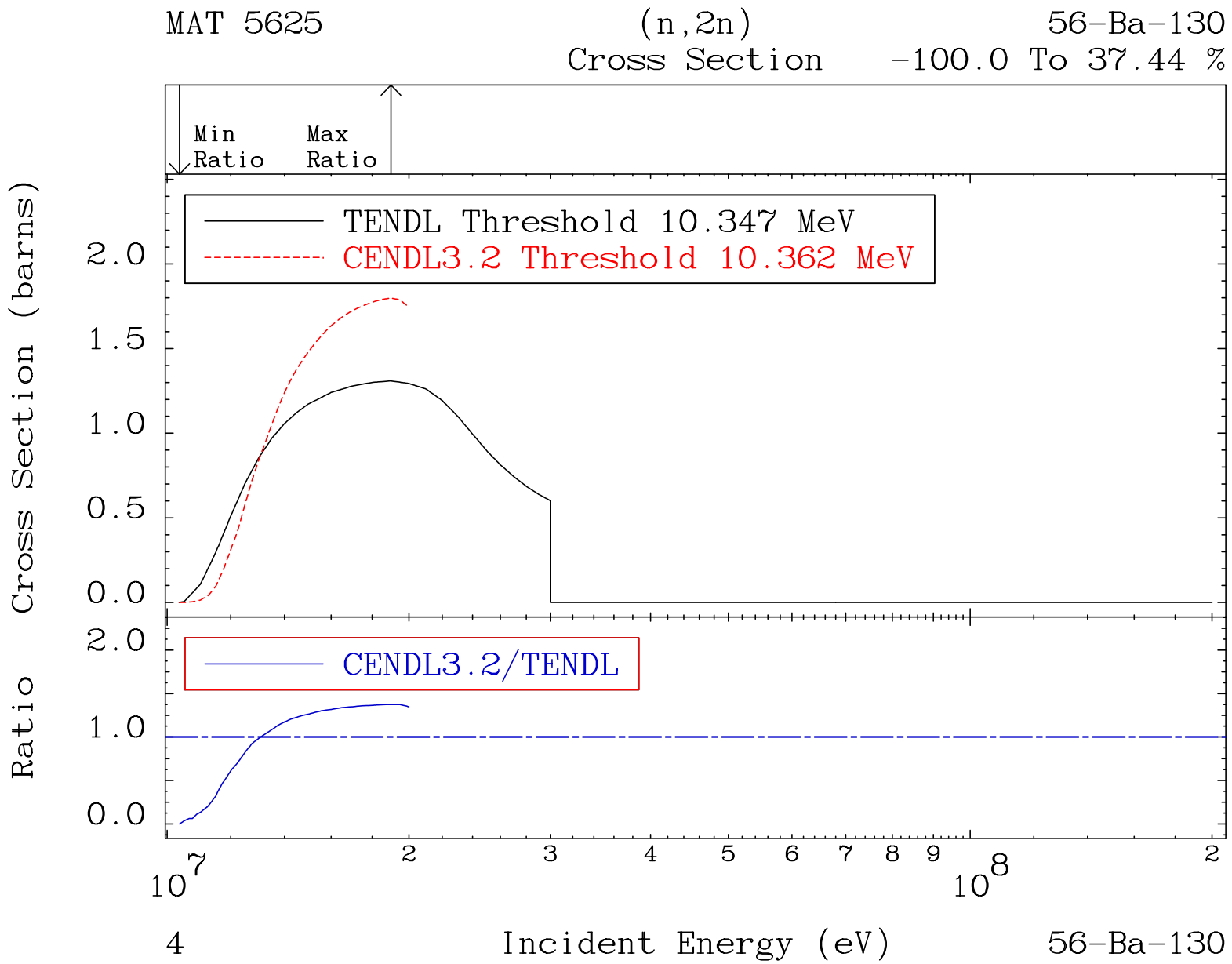
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

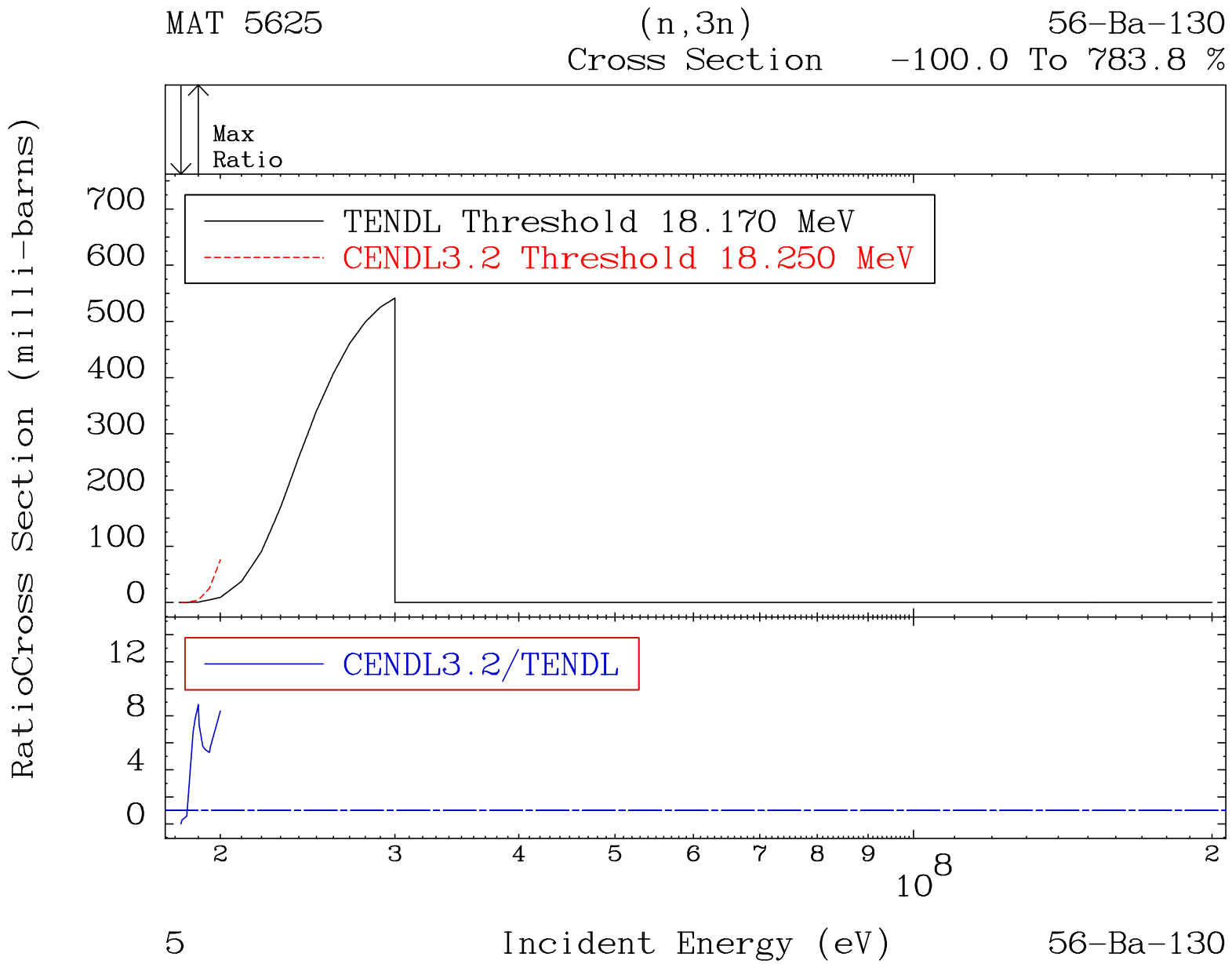
Press Mouse Button to Start

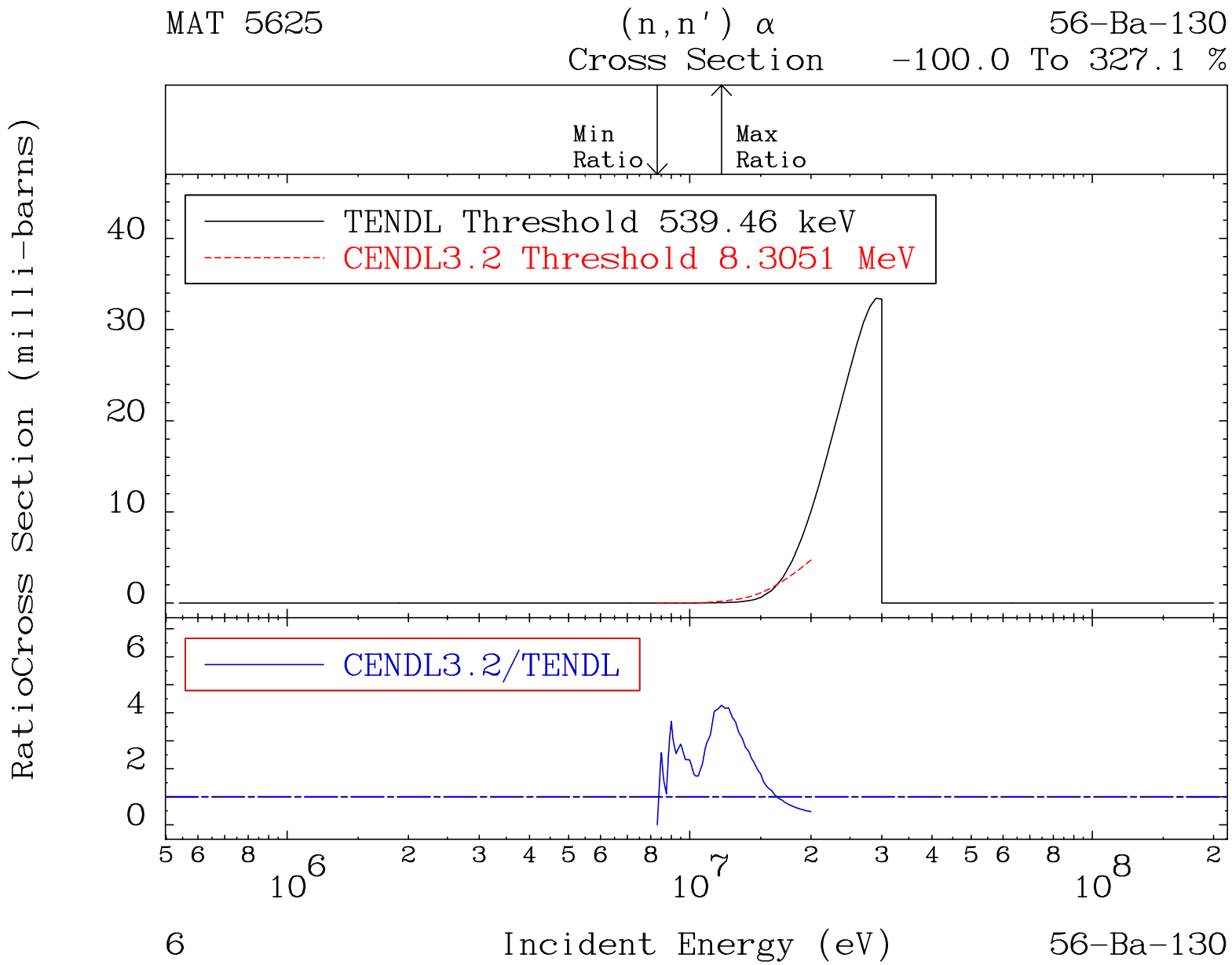

MAT 5625
Total
Cross Section
56-Ba-130
-93.57 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
1
56-Ba-130

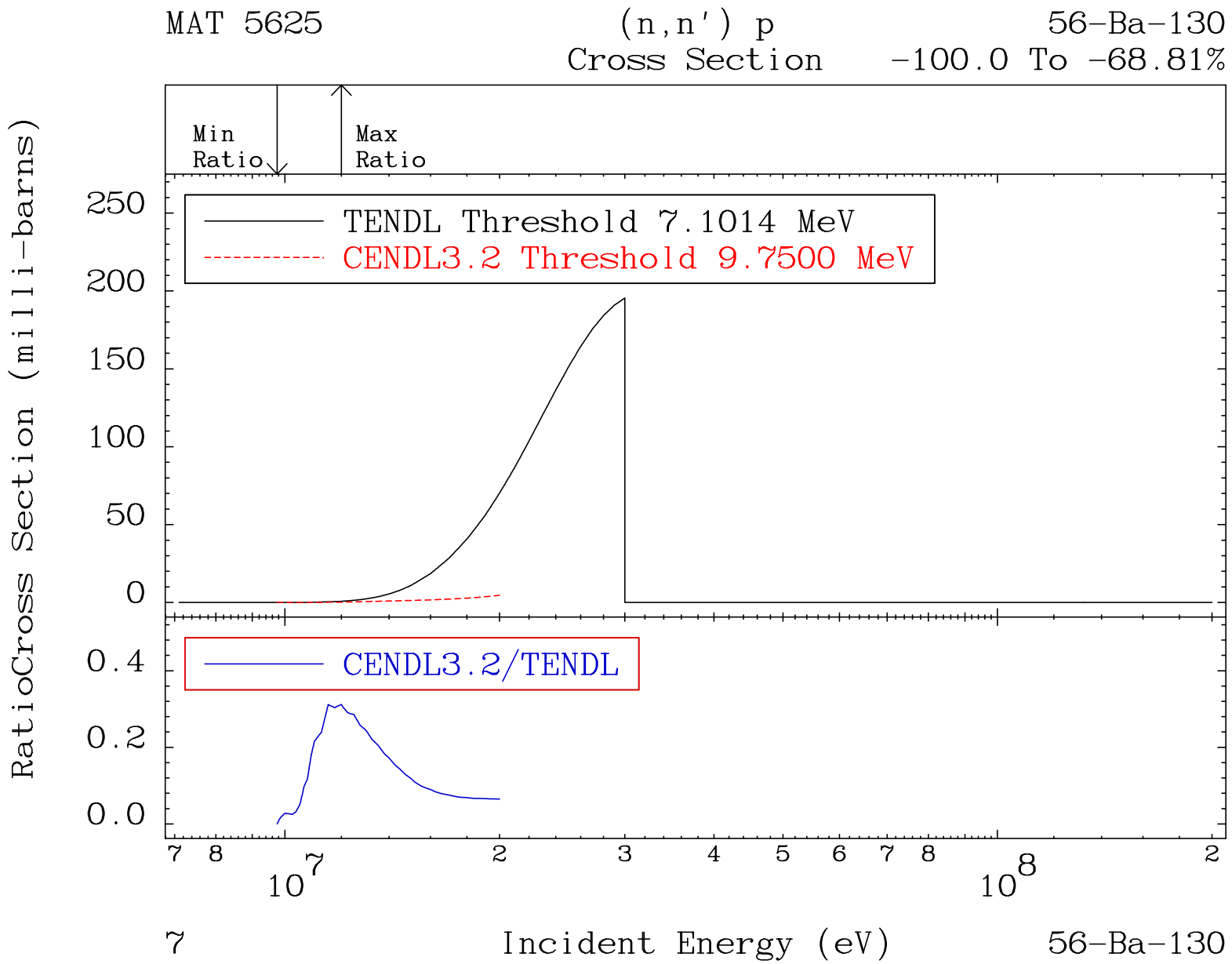

MAT 5625
Elastic
Cross Section
56-Ba-130
-99.71 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
56-Ba-130

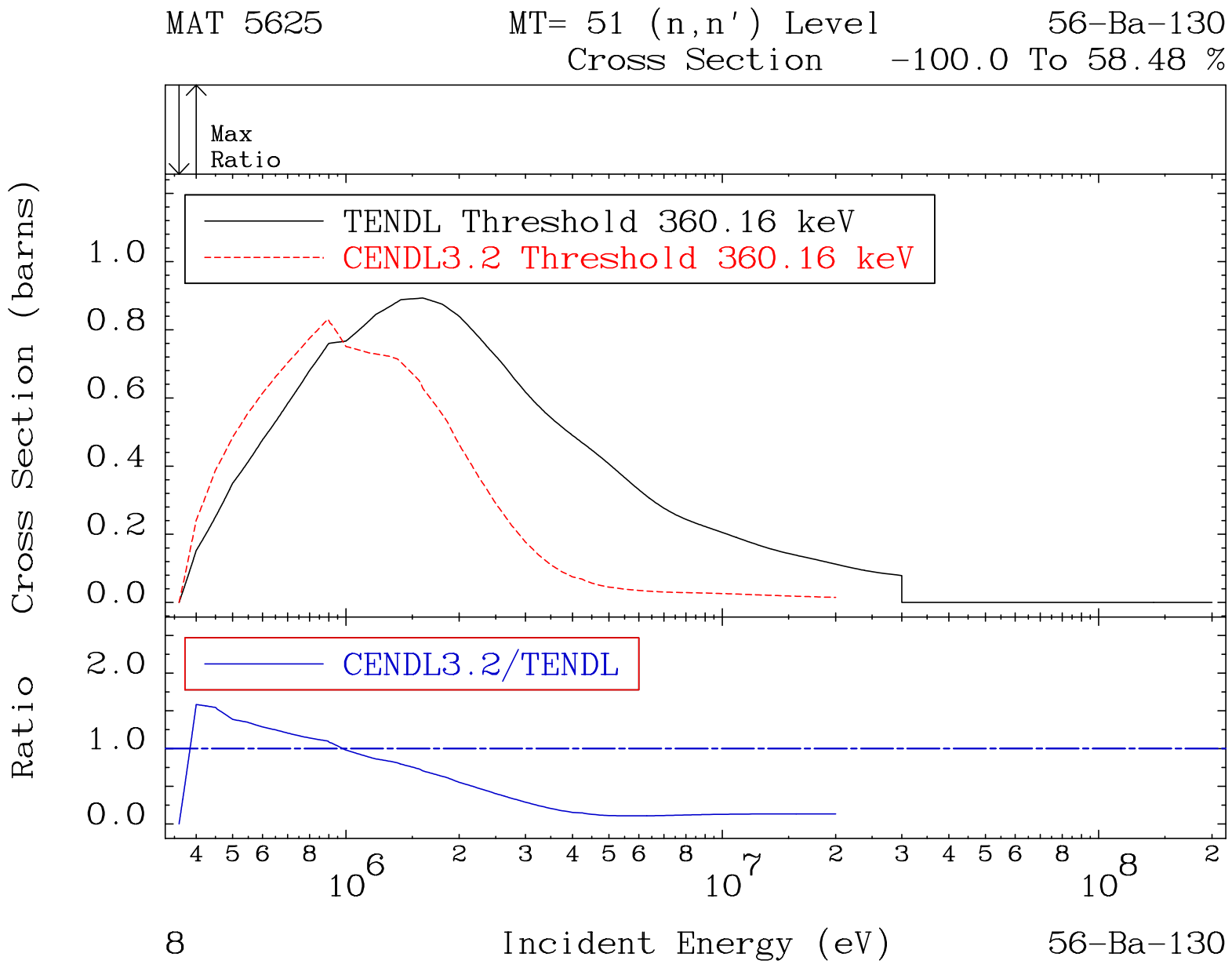

MAT 5625
Inelastic
Cross Section
56-Ba-130
-100.0 To 58.48 %
Max
Ratio
TENDL Threshold 360.16 keV
CENDL3.2 Threshold 360.16 keV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2.0
1.0
0.0
4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
3
56-Ba-130

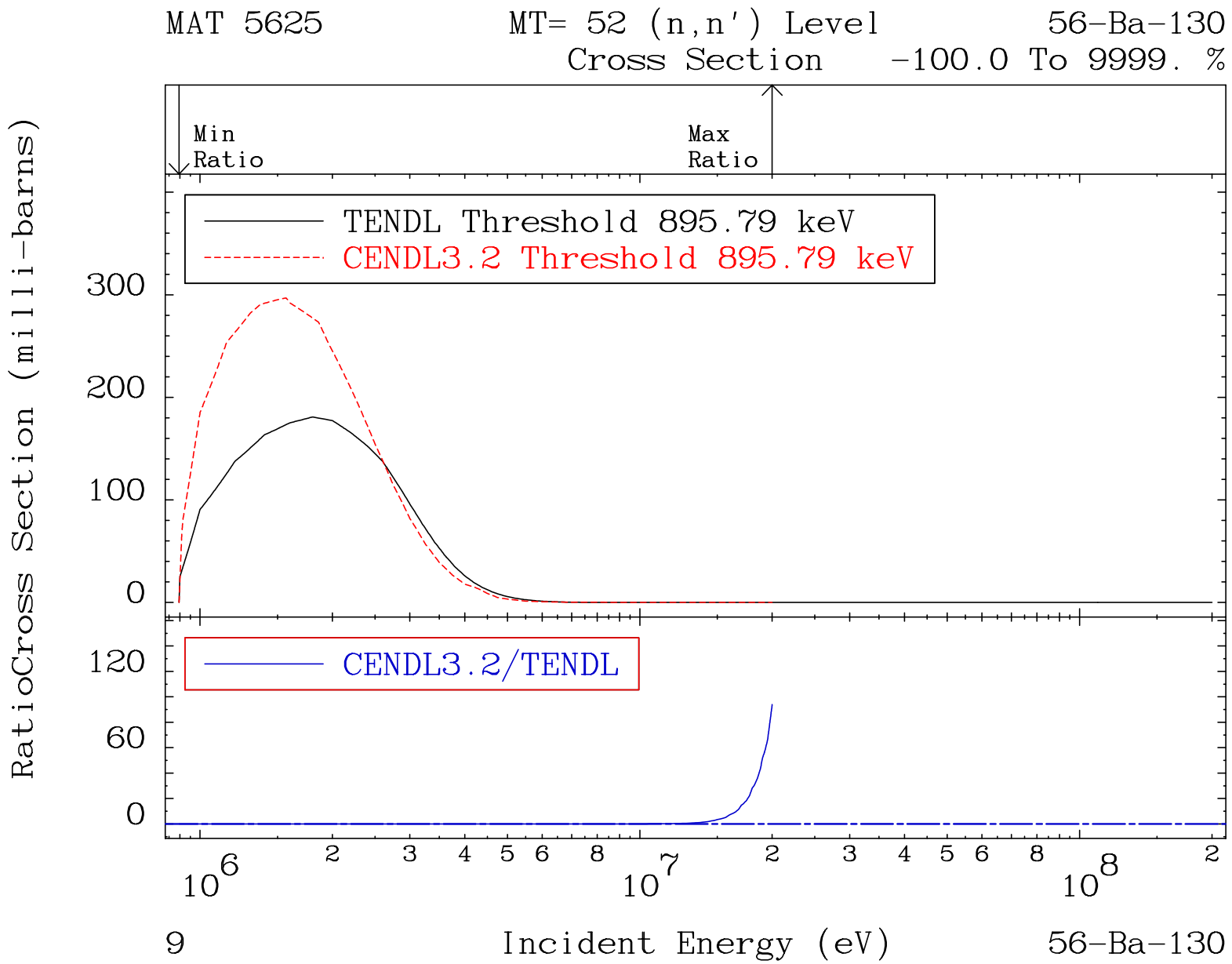

MAT 5625
(n,2n)
Cross Section
56-Ba-130
-100.0 To 37.44 %
Min Ratio
Max Ratio
TENDL Threshold 10.347 MeV
CENDL3.2 Threshold 10.362 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
2.0
1.5
1.0
0.5
0.0
2.0
1.0
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
4
Incident Energy (eV)
56-Ba-130

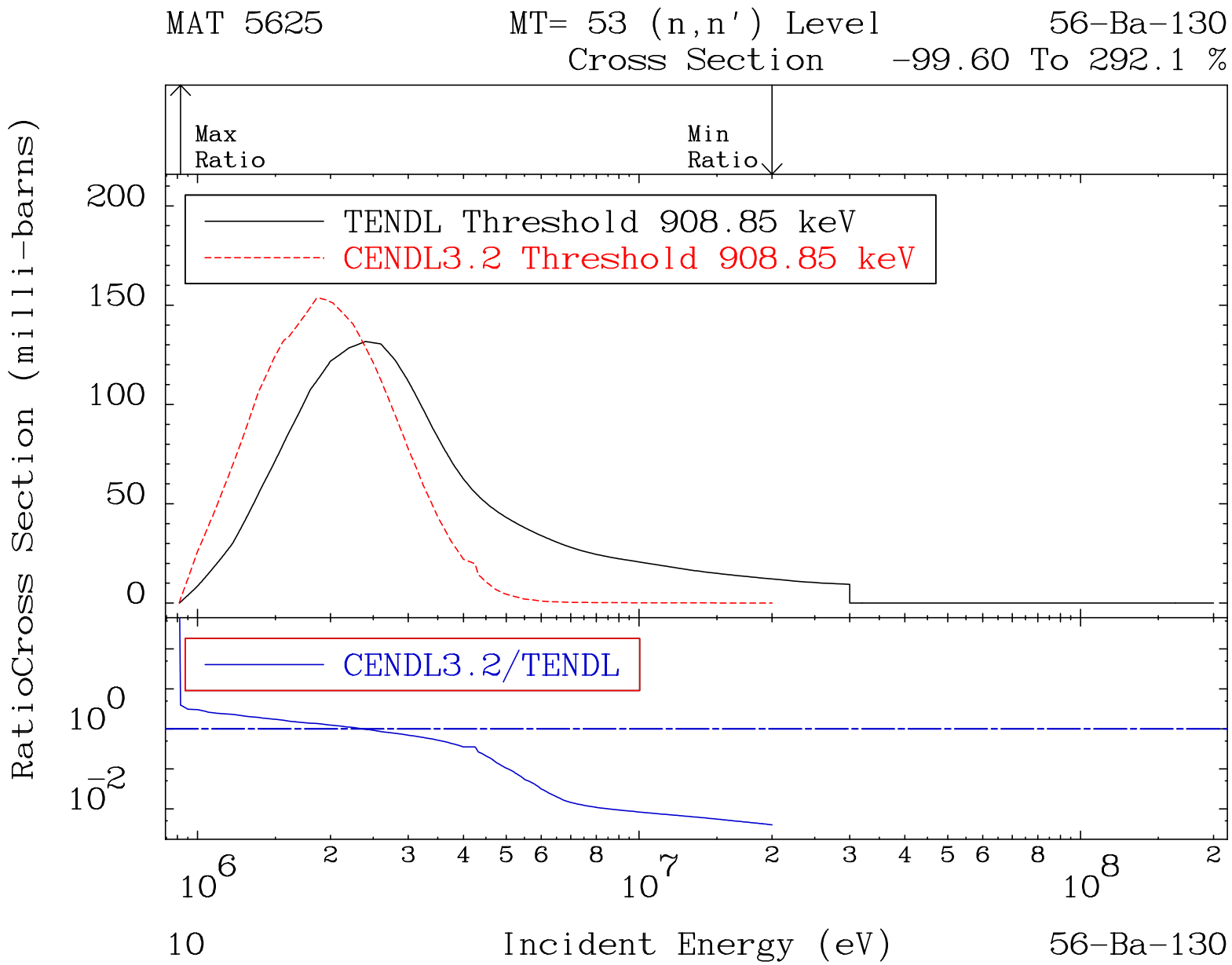

MAT 5625
(n,3n)
Cross Section
56-Ba-130
-100.0 To 783.8 %
Max
Ratio
TENDL Threshold 18.170 MeV
CENDL3.2 Threshold 18.250 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
700
600
500
400
300
200
100
0
12
8
4
0
2
3
4
5
6
7
8
9
10^8
2
5
Incident Energy (eV)
56-Ba-130

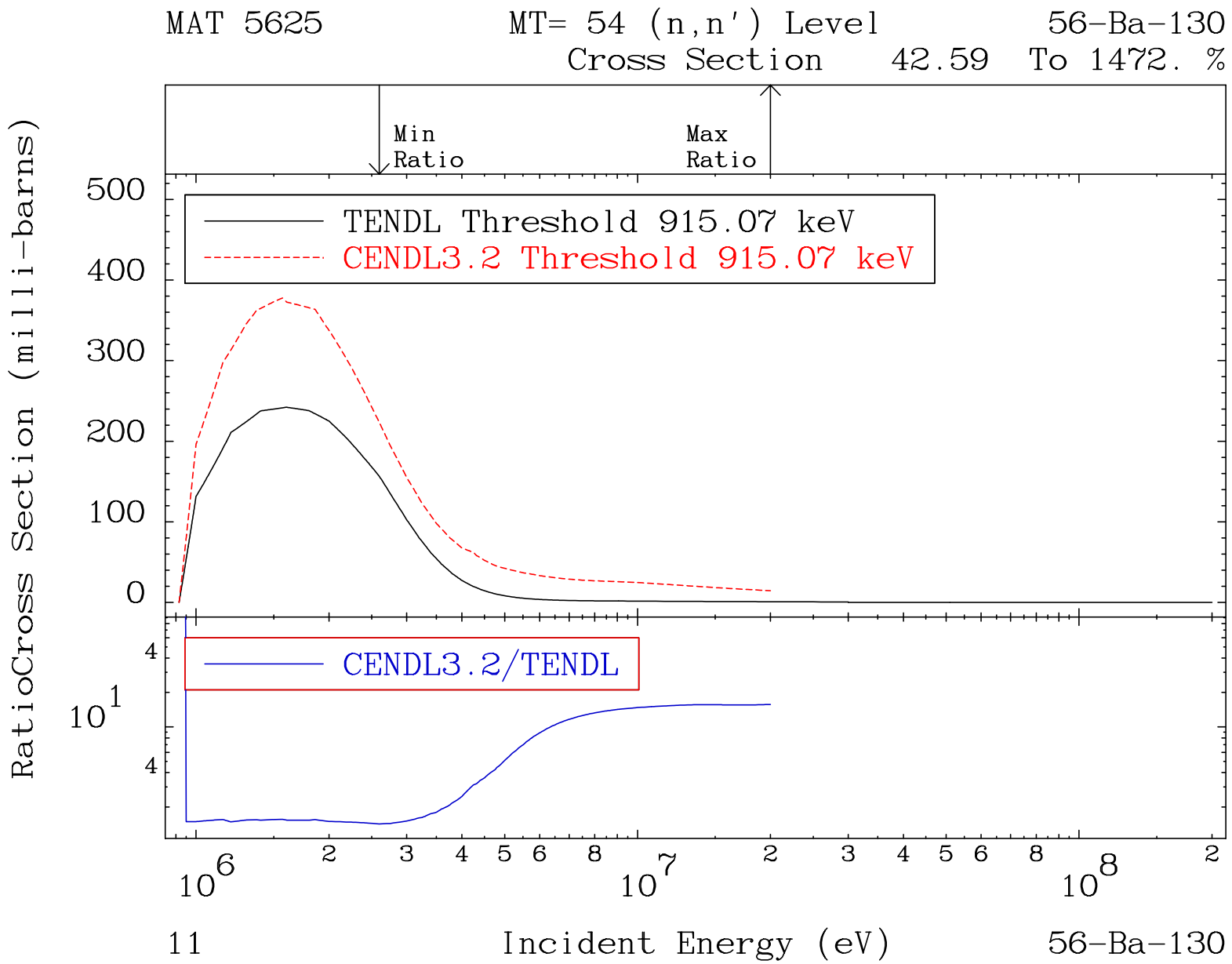

MAT 5625
(n,n') α
Cross Section
56-Ba-130
-100.0 To 327.1 %
Min Ratio
Max Ratio
TENDL Threshold 539.46 keV
CENDL3.2 Threshold 8.3051 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
6
56-Ba-130

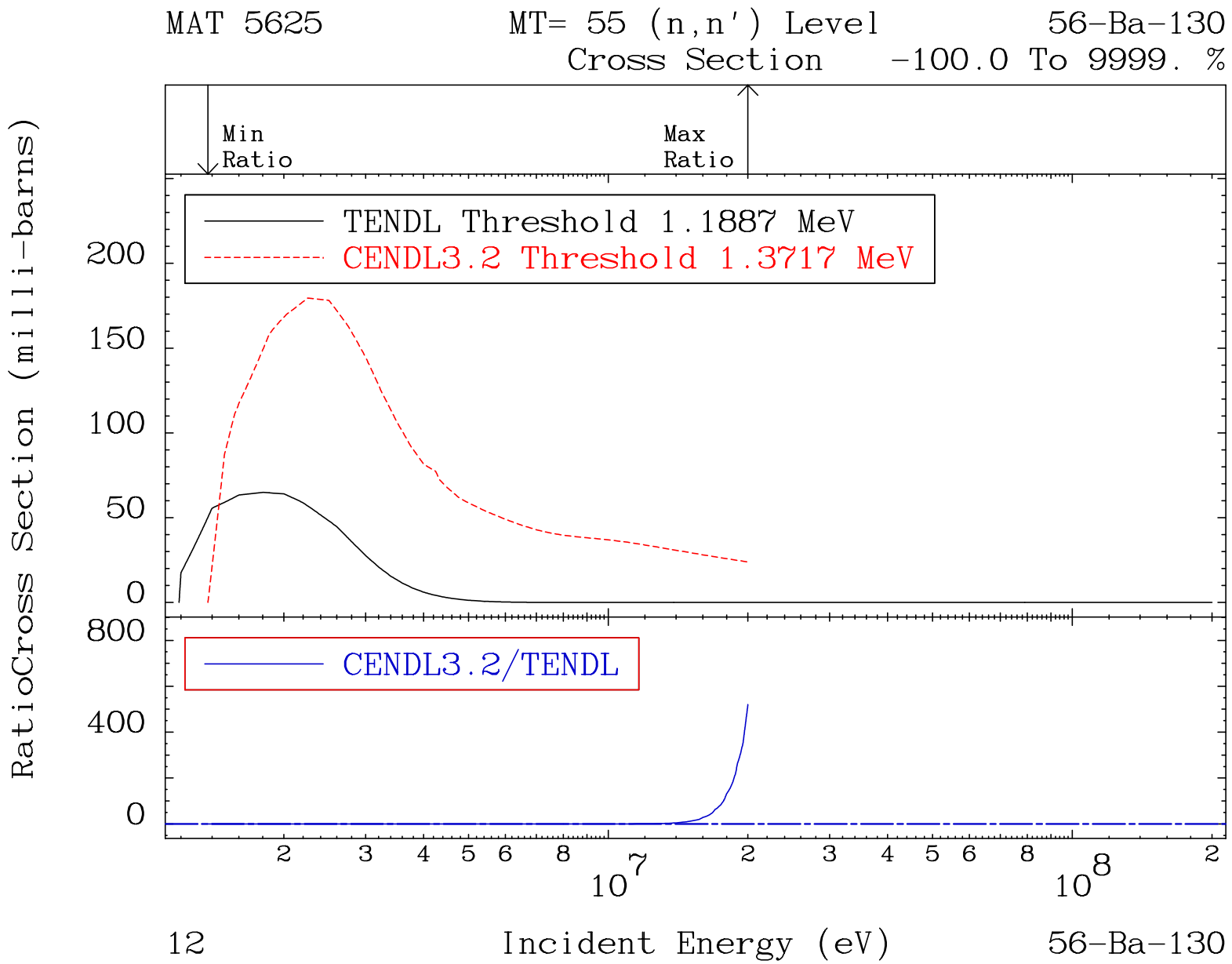

MAT 5625
(n,n') p
Cross Section
56-Ba-130
-100.0 To -68.81%
Min Ratio
Max Ratio
TENDL Threshold 7.1014 MeV
CENDL3.2 Threshold 9.7500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
0.4
0.2
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
7
Incident Energy (eV)
56-Ba-130

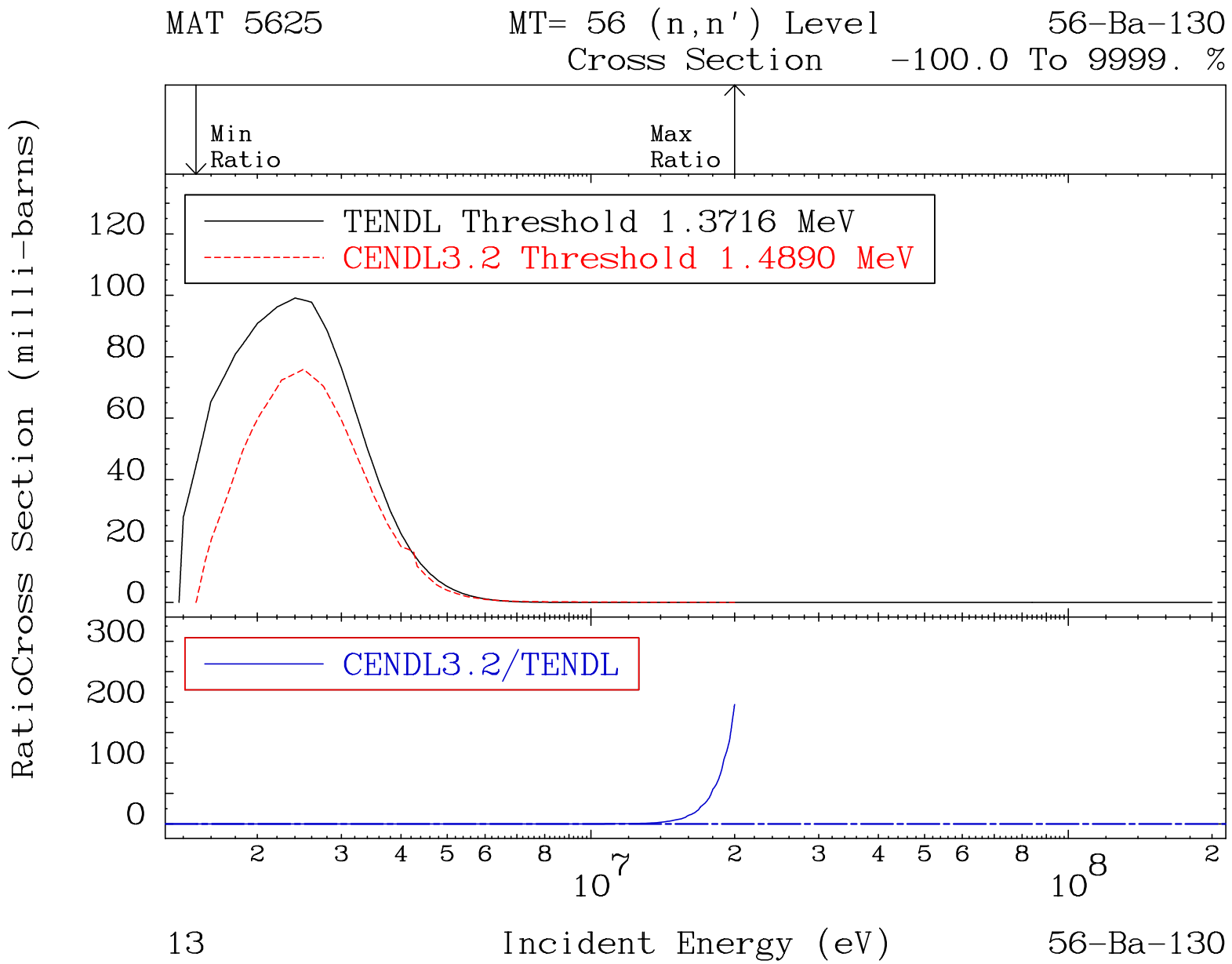

MAT 5625
MT= 51 (n,n') Level
56-Ba-130
Cross Section -100.0 To 58.48 %
Max
Ratio
TENDL Threshold 360.16 keV
CENDL3.2 Threshold 360.16 keV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
2.0
1.0
0.0
4 5 6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
8
56-Ba-130

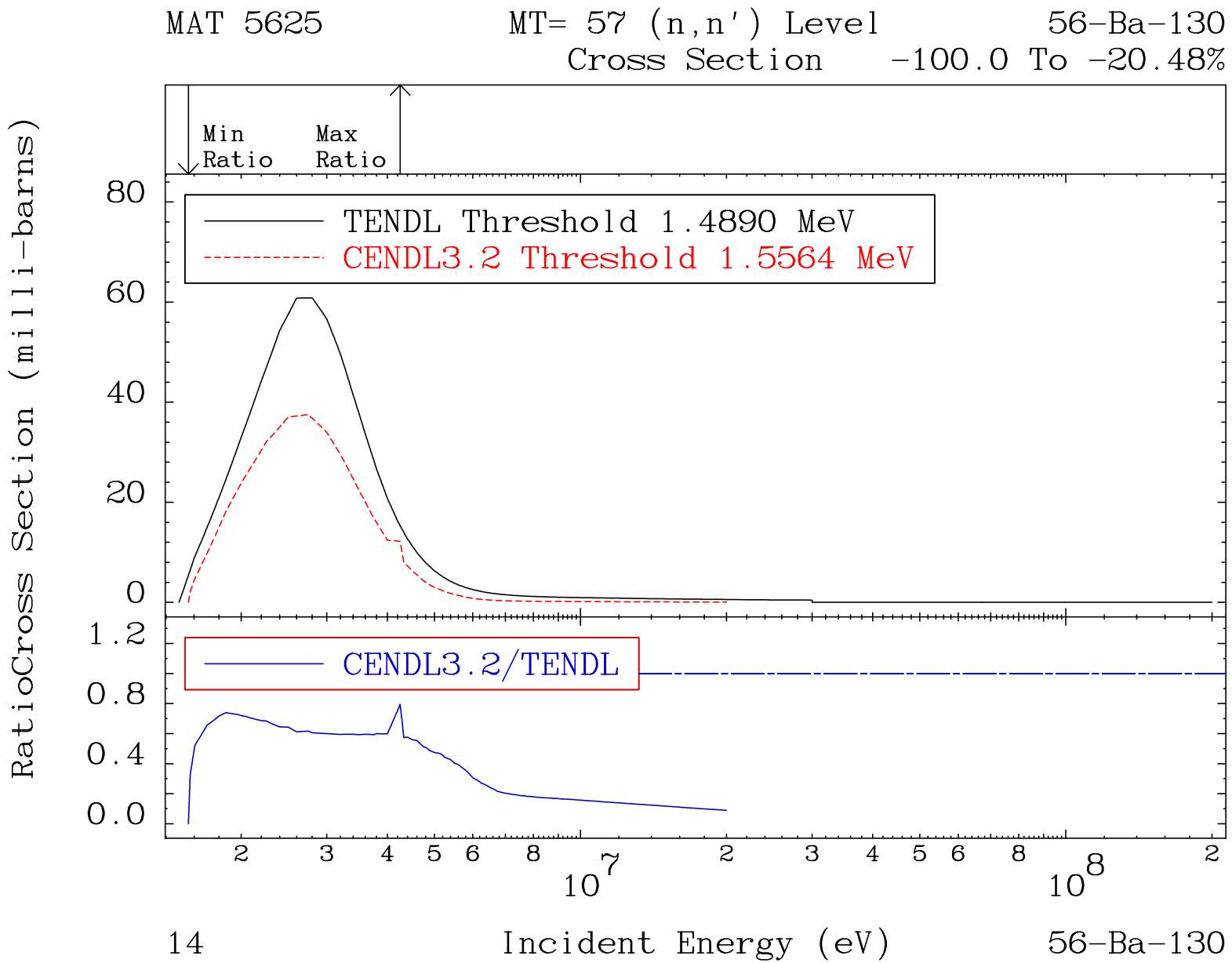

MAT 5625
MT= 52 (n,n') Level
56-Ba-130
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 895.79 keV
CENDL3.2 Threshold 895.79 keV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
300
200
100
0
120
60
0
$10^6$
$10^7$
$10^8$
2 3 4 5 6 8
Incident Energy (eV)
9
56-Ba-130

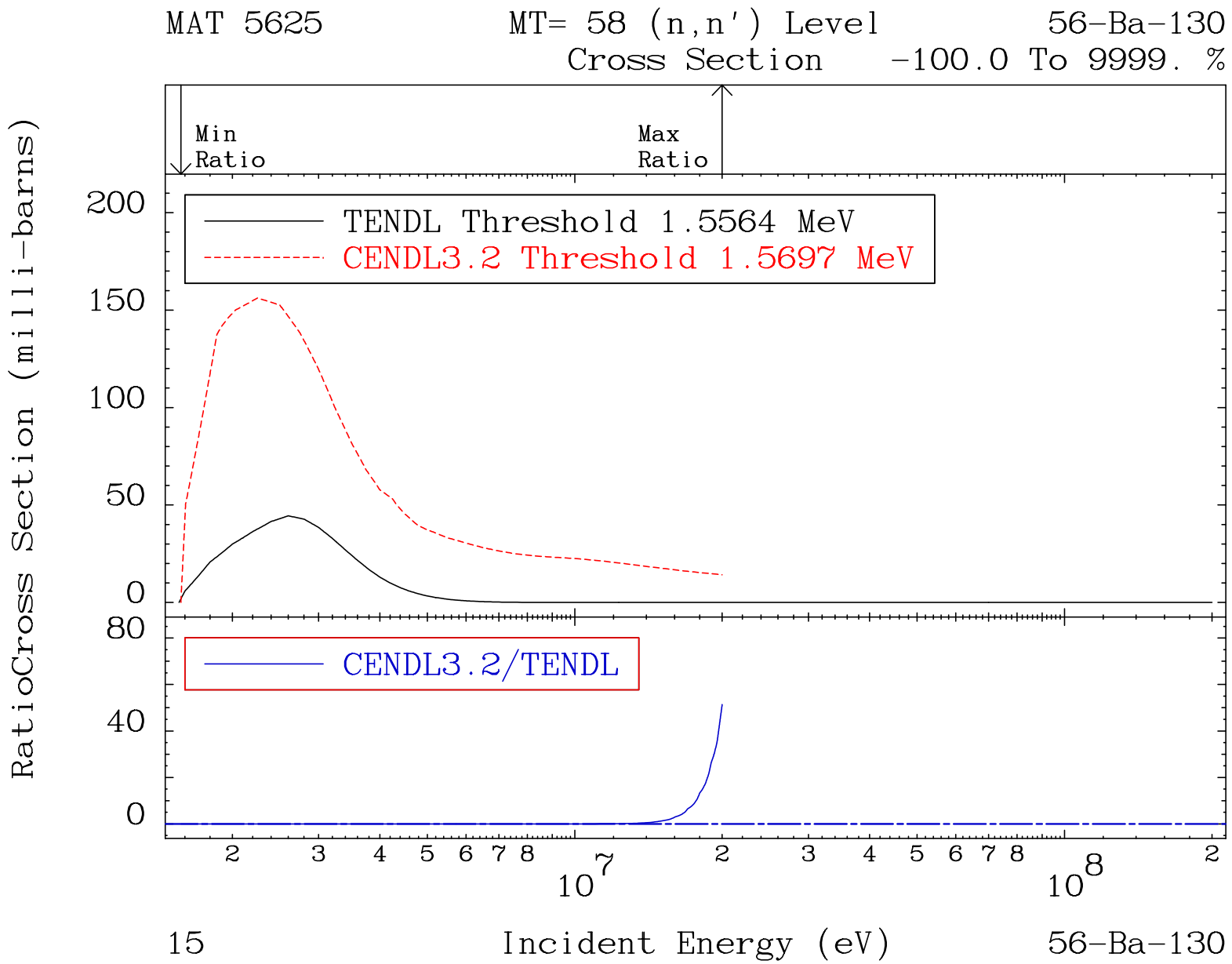

MAT 5625
MT= 53 (n,n') Level
56-Ba-130
Cross Section
-99.60 To 292.1 %
Max Ratio
Min Ratio
TENDL Threshold 908.85 keV
CENDL3.2 Threshold 908.85 keV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
$10^{0}$
$10^{-2}$
$10^{6}$
$10^{7}$
$10^{8}$
2 3 4 5 6 8
10
Incident Energy (eV)
56-Ba-130

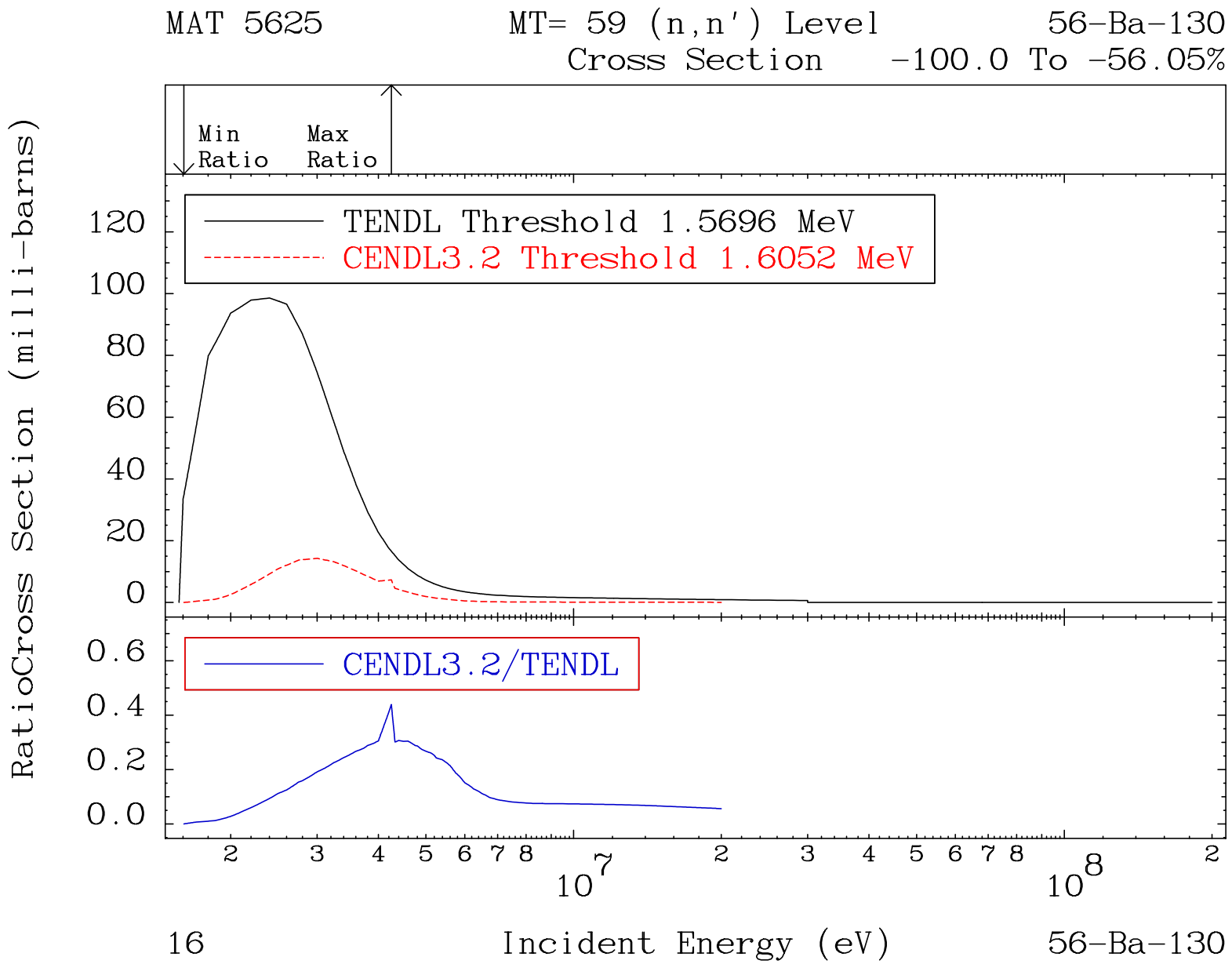

MAT 5625
MT= 54 (n,n') Level
56-Ba-130
Cross Section 42.59 To 1472. %
Min Ratio
Max Ratio
TENDL Threshold 915.07 keV
CENDL3.2 Threshold 915.07 keV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
4
$10^1$
4
$10^6$
2 3 4 5 6 8
$10^7$
2 3 4 5 6 8
$10^8$
2
11
Incident Energy (eV)
56-Ba-130

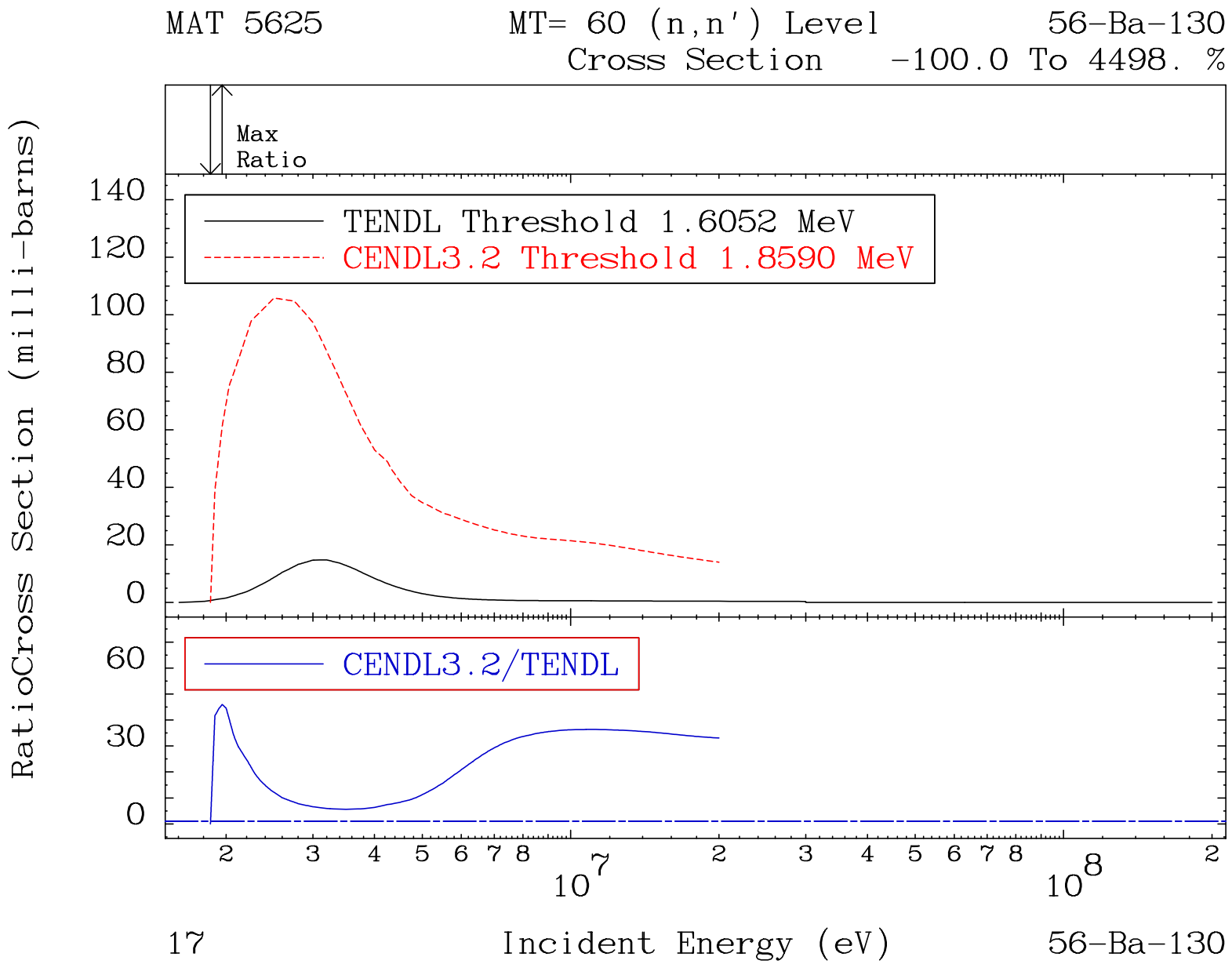

MAT 5625
MT= 55 (n,n') Level
56-Ba-130
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.1887 MeV
CENDL3.2 Threshold 1.3717 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
800
400
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
12
Incident Energy (eV)
56-Ba-130

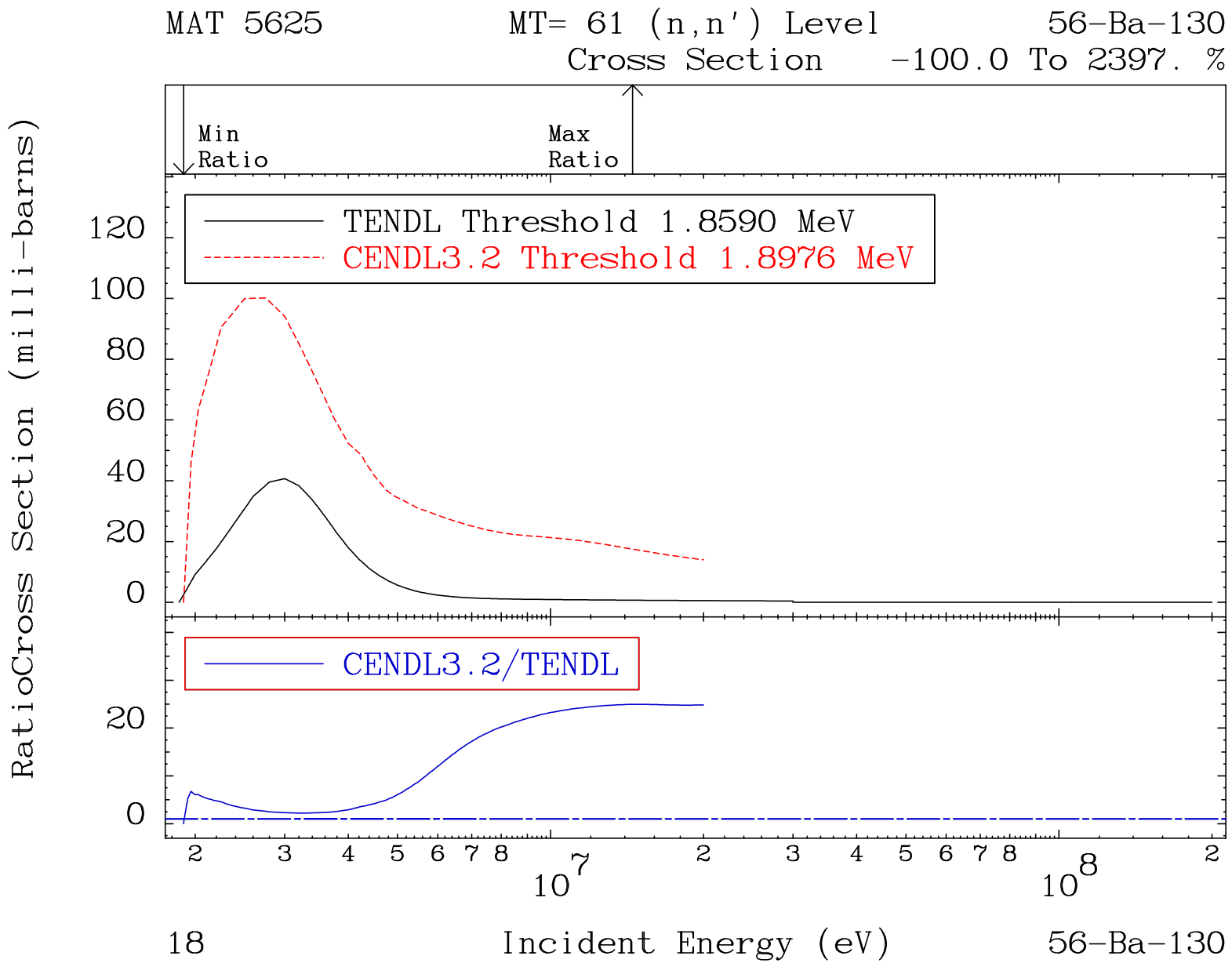

MAT 5625
MT= 56 (n,n') Level
56-Ba-130
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.3716 MeV
CENDL3.2 Threshold 1.4890 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
300
200
100
0
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
13
Incident Energy (eV)
56-Ba-130

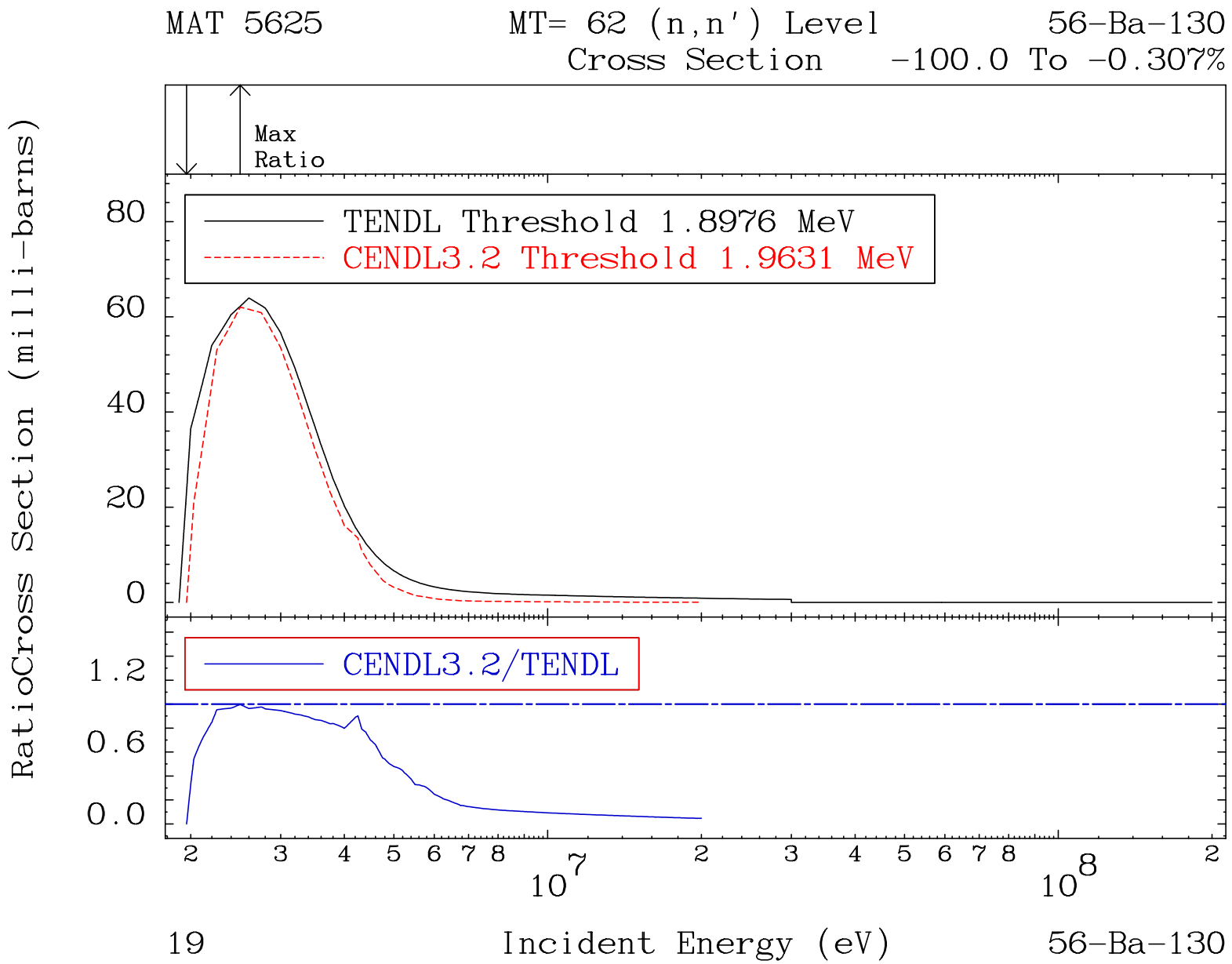

MAT 5625
MT= 57 (n,n') Level
56-Ba-130
Cross Section -100.0 To -20.48%
Min Ratio
Max Ratio
TENDL Threshold 1.4890 MeV
CENDL3.2 Threshold 1.5564 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.2
0.8
0.4
0.0
2
3
4
5
6
8
10^7
2
3
4
5
6
8
10^8
2
14
Incident Energy (eV)
56-Ba-130

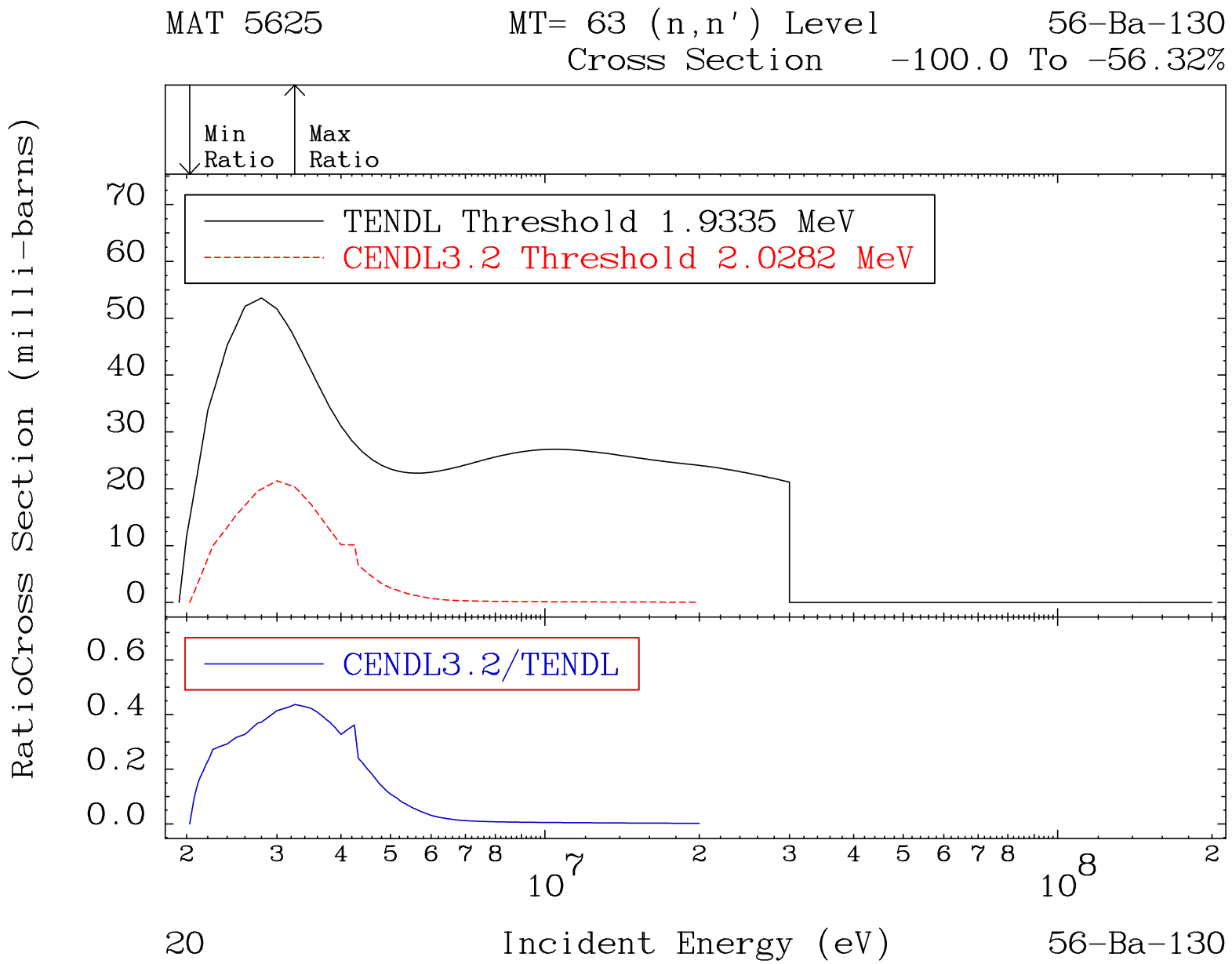

MAT 5625
MT= 58 (n,n') Level
56-Ba-130
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.5564 MeV
CENDL3.2 Threshold 1.5697 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
80
40
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
15
Incident Energy (eV)
56-Ba-130

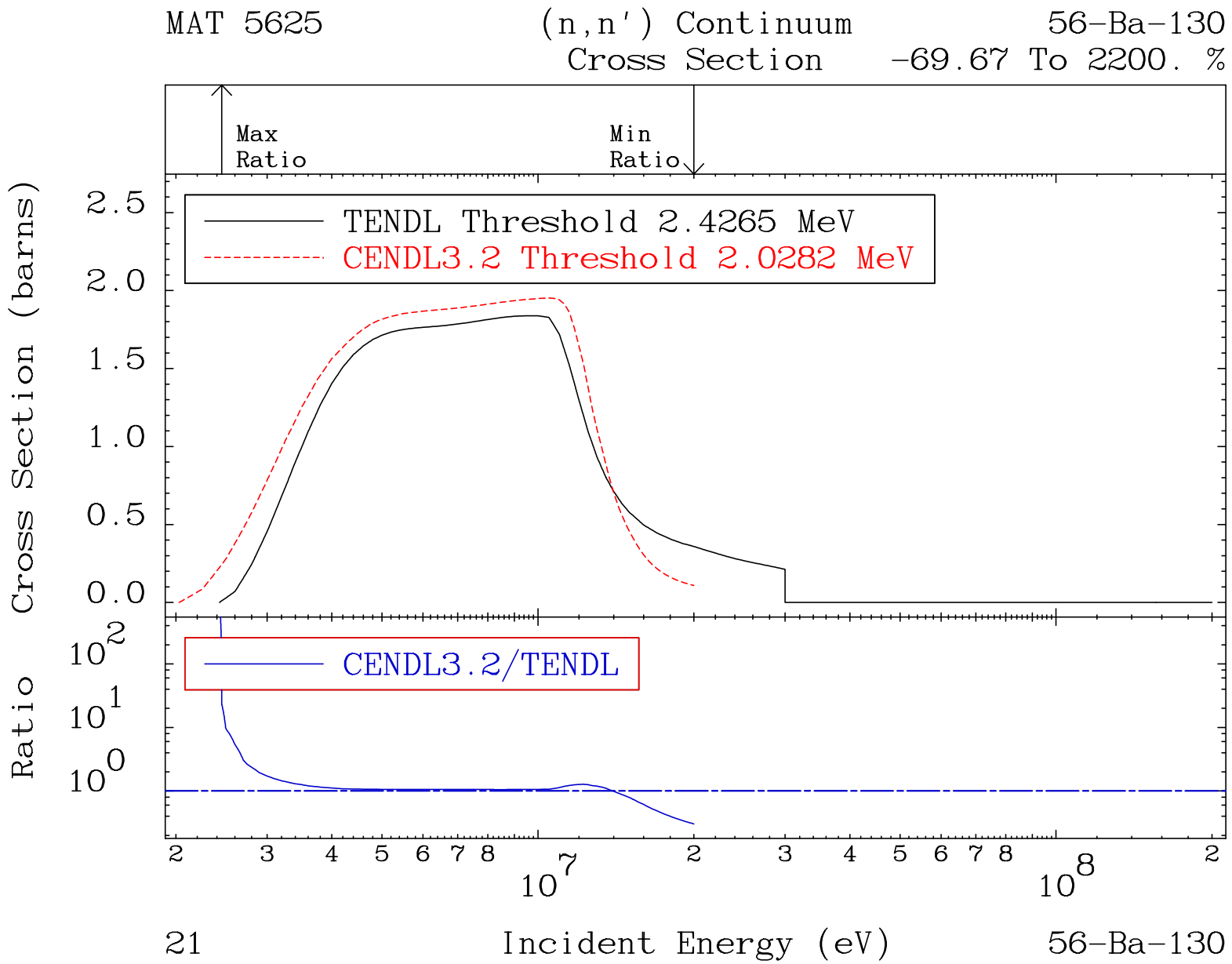

MAT 5625
MT= 59 (n,n') Level
56-Ba-130
Cross Section
-100.0 To -56.05%
Min Ratio
Max Ratio
TENDL Threshold 1.5696 MeV
CENDL3.2 Threshold 1.6052 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
0.6
0.4
0.2
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
56-Ba-130

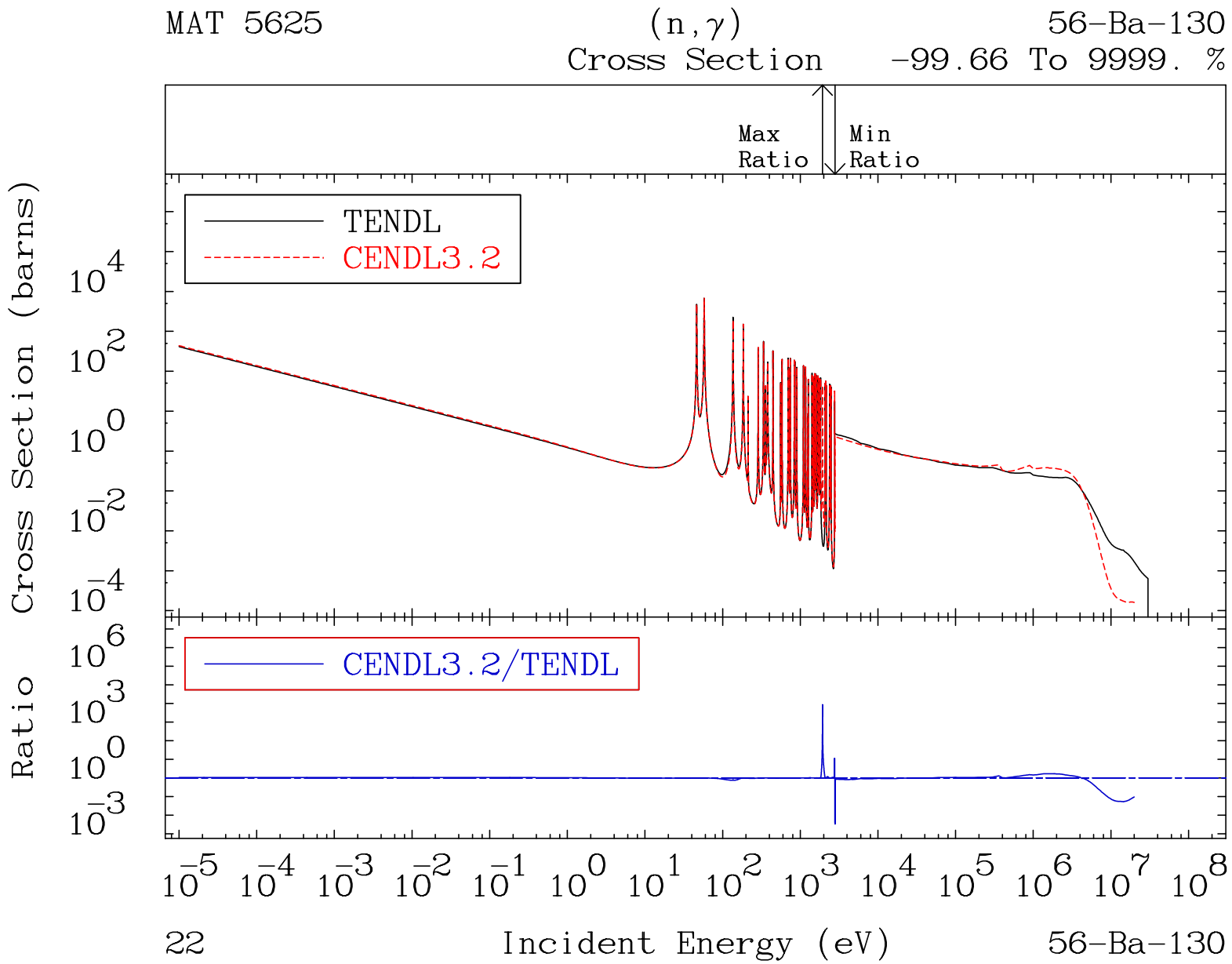

MAT 5625
MT= 60 (n,n') Level
56-Ba-130
Cross Section -100.0 To 4498. %
Max
Ratio
TENDL Threshold 1.6052 MeV
CENDL3.2 Threshold 1.8590 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
140
120
100
80
60
40
20
0
60
30
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
56-Ba-130

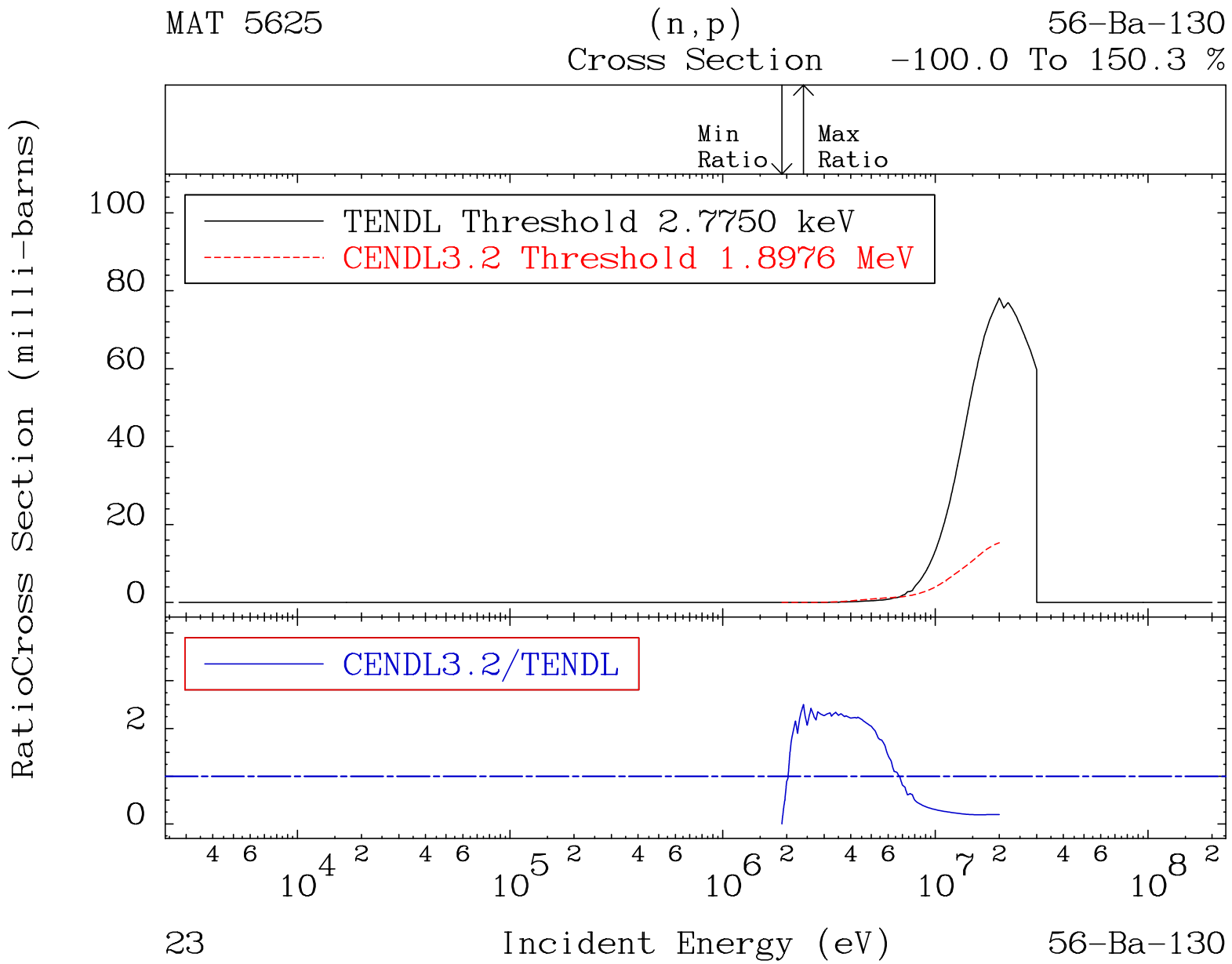

MAT 5625
MT= 61 (n,n') Level
56-Ba-130
Cross Section -100.0 To 2397. %
Min Ratio
Max Ratio
TENDL Threshold 1.8590 MeV
CENDL3.2 Threshold 1.8976 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
20
0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
18
Incident Energy (eV)
56-Ba-130

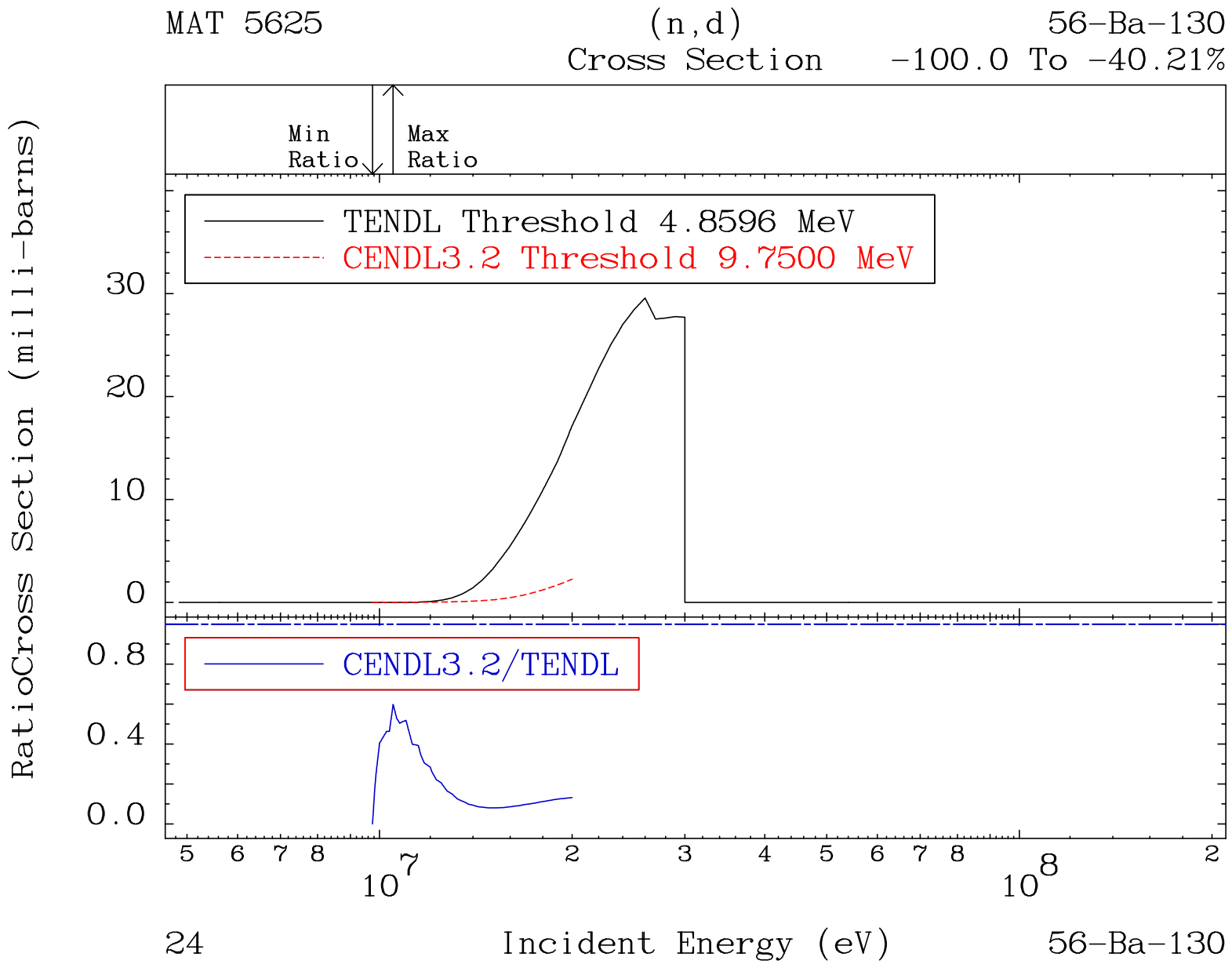

MAT 5625
MT= 62 (n,n') Level
56-Ba-130
Cross Section
-100.0 To -0.307%
Max
Ratio
TENDL Threshold 1.8976 MeV
CENDL3.2 Threshold 1.9631 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
1.2
0.6
0.0
2
3
4
5
6
7
8
10^7
10^8
19
Incident Energy (eV)
56-Ba-130

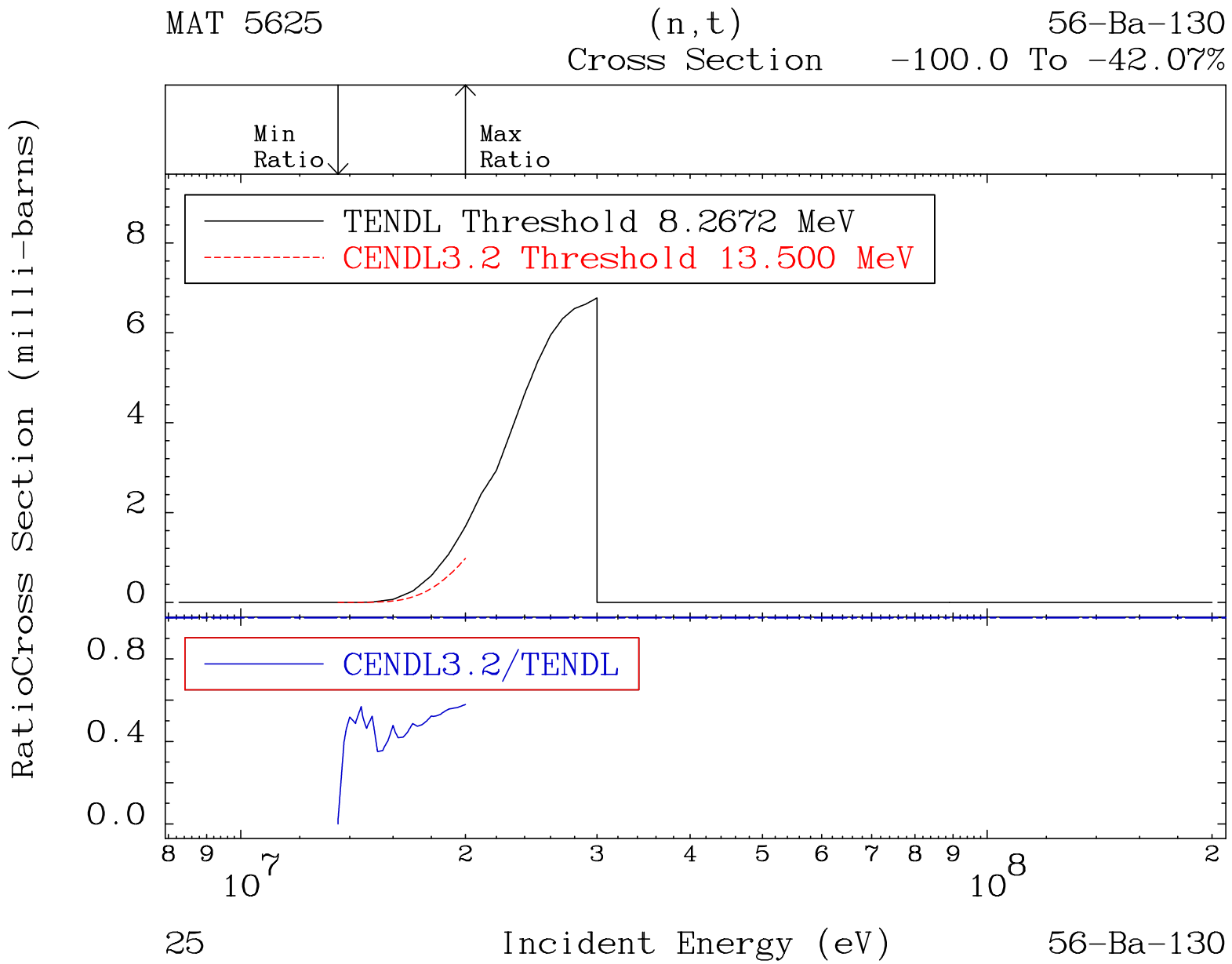

MAT 5625
MT= 63 (n,n') Level
56-Ba-130
Cross Section -100.0 To -56.32%
Min Ratio
Max Ratio
TENDL Threshold 1.9335 MeV
CENDL3.2 Threshold 2.0282 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
20
56-Ba-130

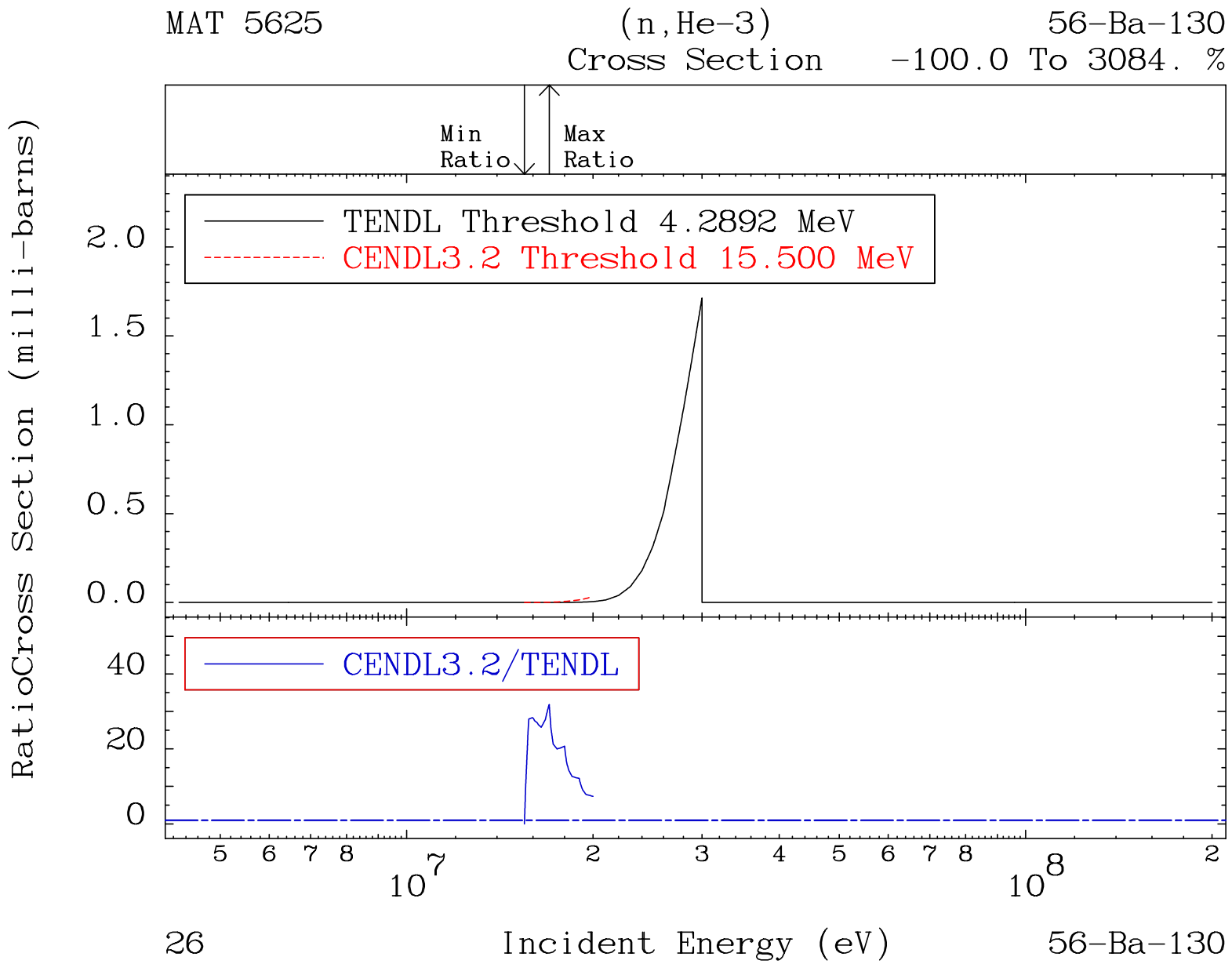

MAT 5625
(n,n') Continuum
Cross Section
56-Ba-130
-69.67 To 2200. %
Max Ratio
Min Ratio
TENDL Threshold 2.4265 MeV
CENDL3.2 Threshold 2.0282 MeV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
21
56-Ba-130

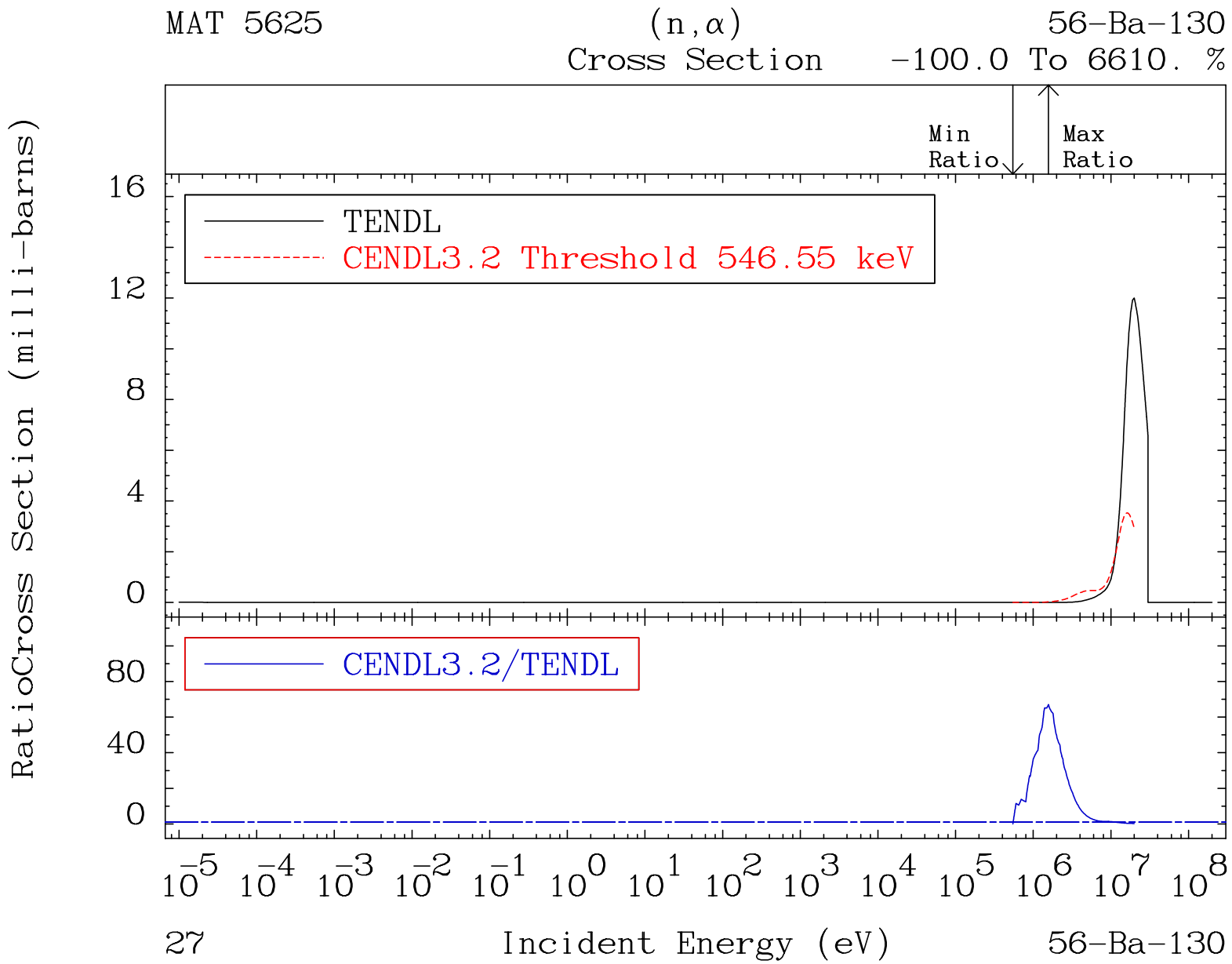

MAT 5625
(n,γ)
Cross Section
56-Ba-130
-99.66 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
22
56-Ba-130

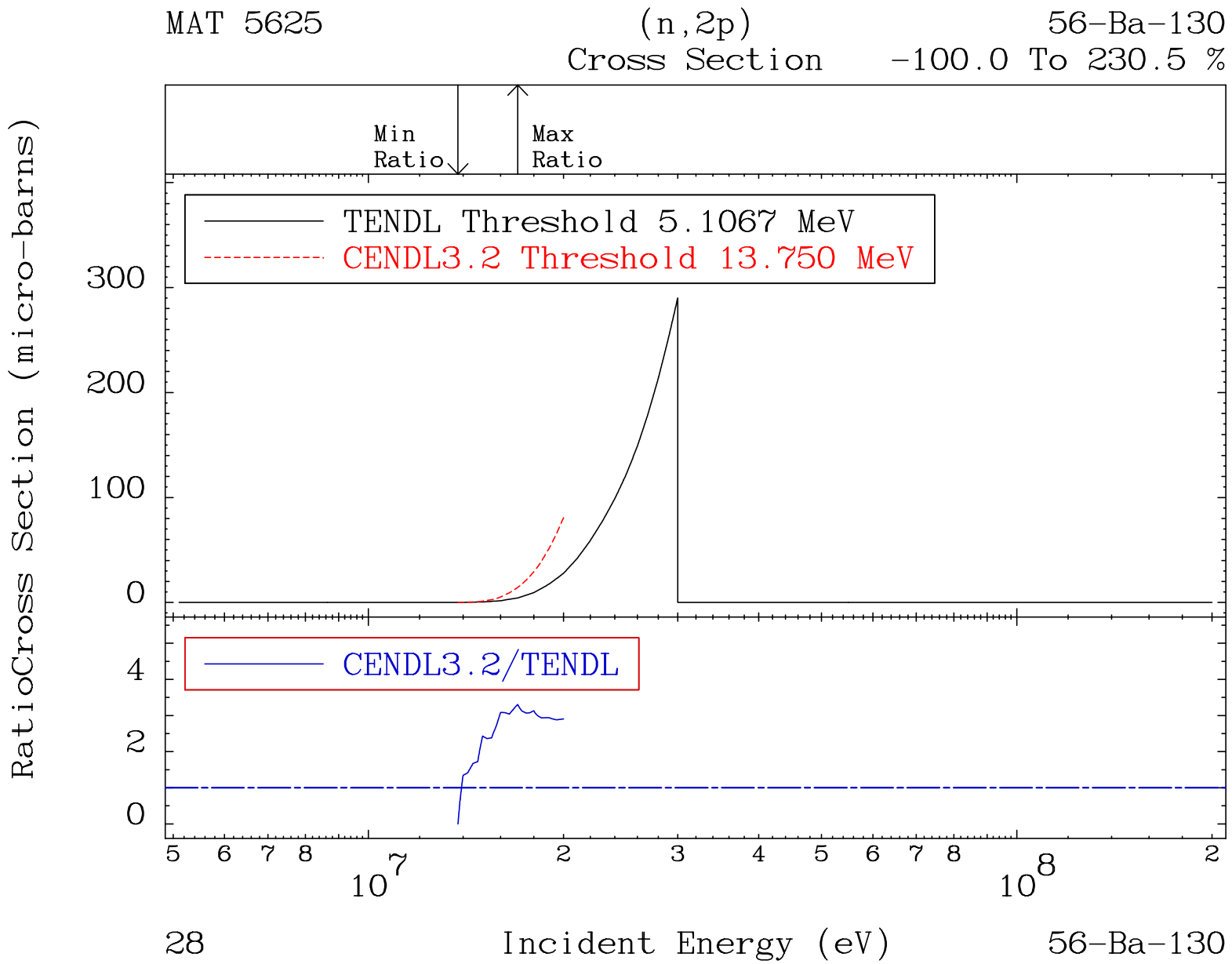

MAT 5625
(n,p)
Cross Section
56-Ba-130
-100.0 To 150.3 %
Min Ratio
Max Ratio
TENDL Threshold 2.7750 keV
CENDL3.2 Threshold 1.8976 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
2
0
$10^4$
$10^5$
$10^6$
$10^7$
$10^8$
23
Incident Energy (eV)
56-Ba-130

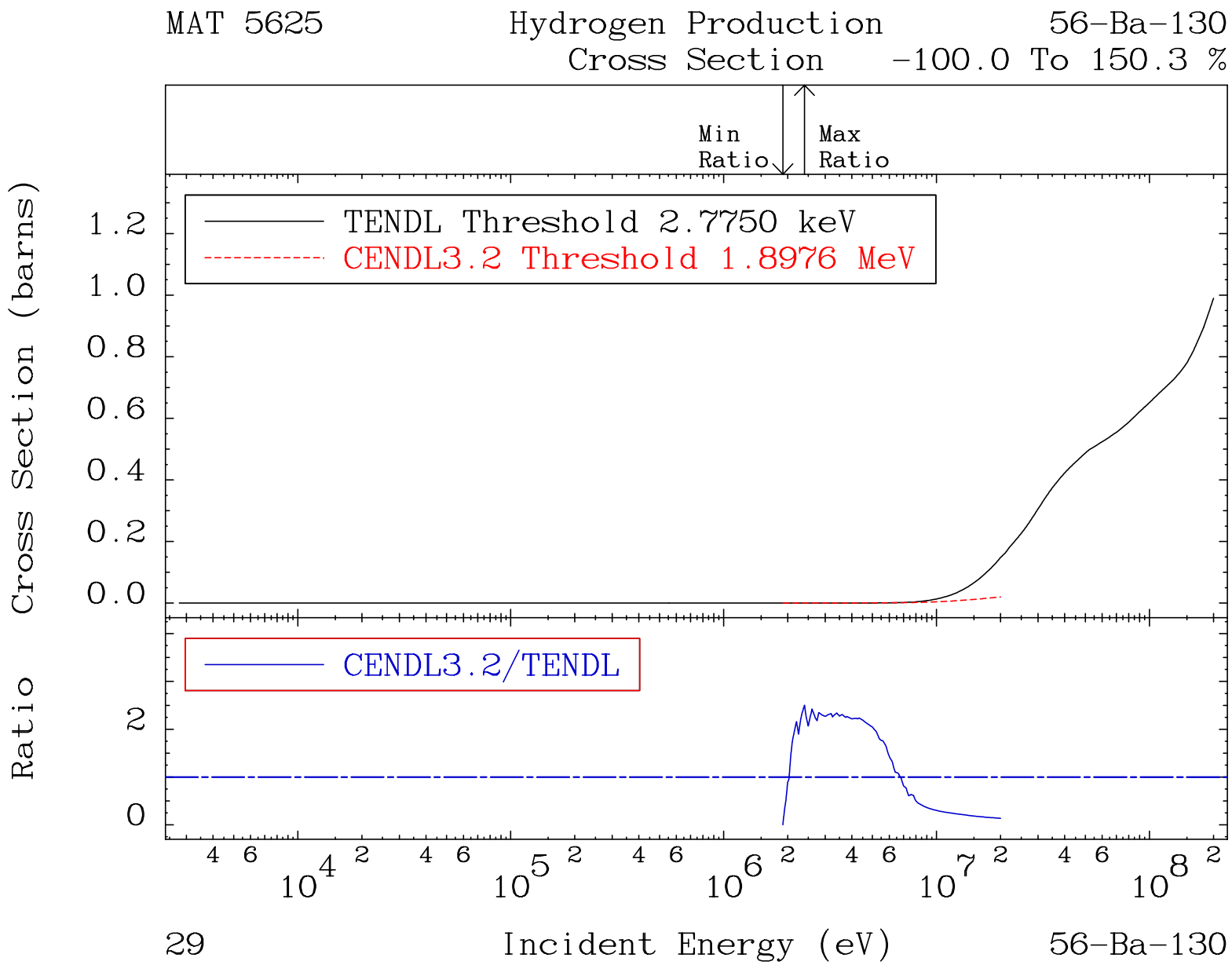

MAT 5625
(n,d)
Cross Section
56-Ba-130
-100.0 To -40.21%
Min Ratio
Max Ratio
TENDL Threshold 4.8596 MeV
CENDL3.2 Threshold 9.7500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
30
20
10
0
0.8
0.4
0.0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
24
Incident Energy (eV)
56-Ba-130

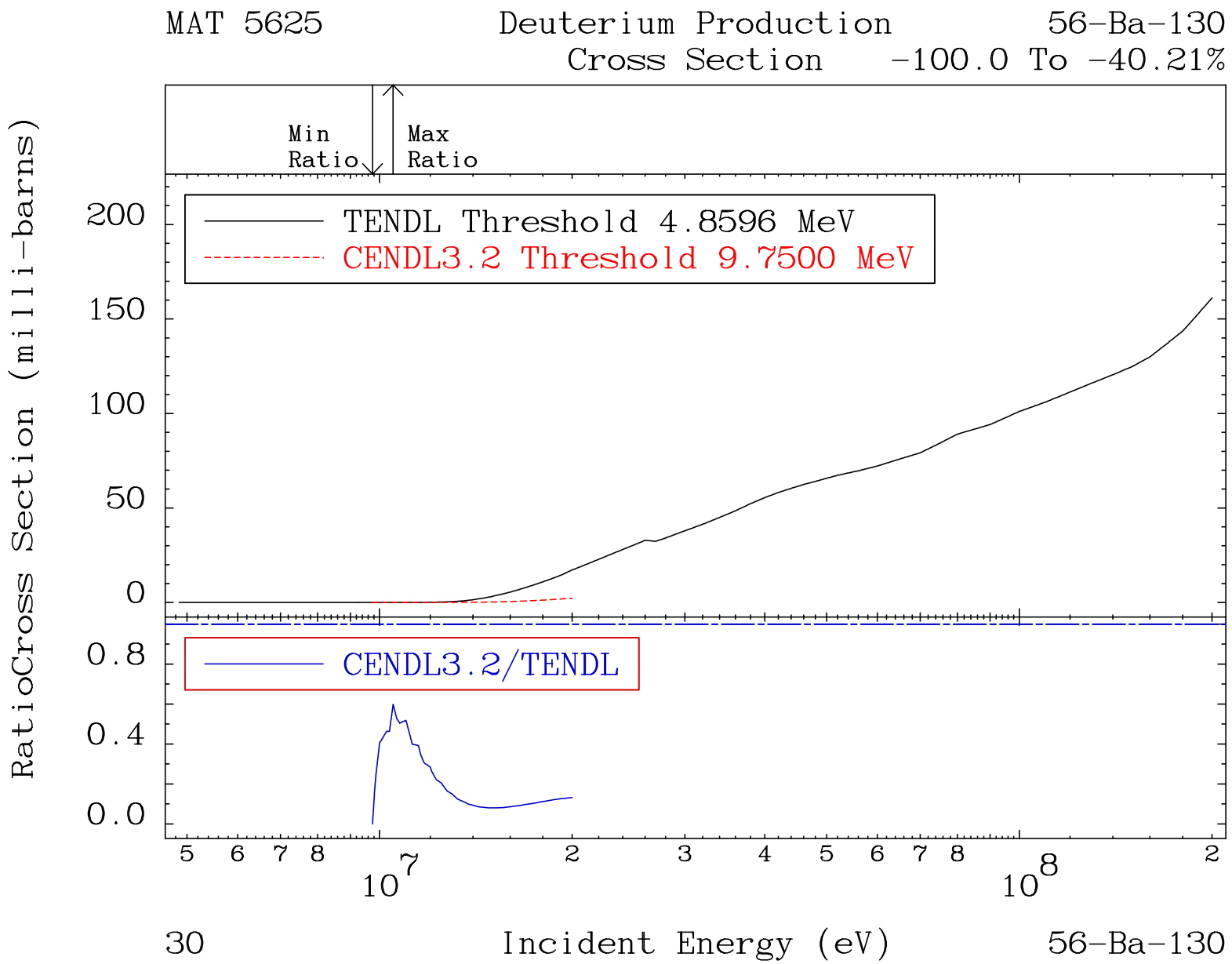

MAT 5625
(n,t)
Cross Section
56-Ba-130
-100.0 To -42.07%
Min Ratio
Max Ratio
TENDL Threshold 8.2672 MeV
CENDL3.2 Threshold 13.500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
8
6
4
2
0
0.8
0.4
0.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
25
Incident Energy (eV)
56-Ba-130

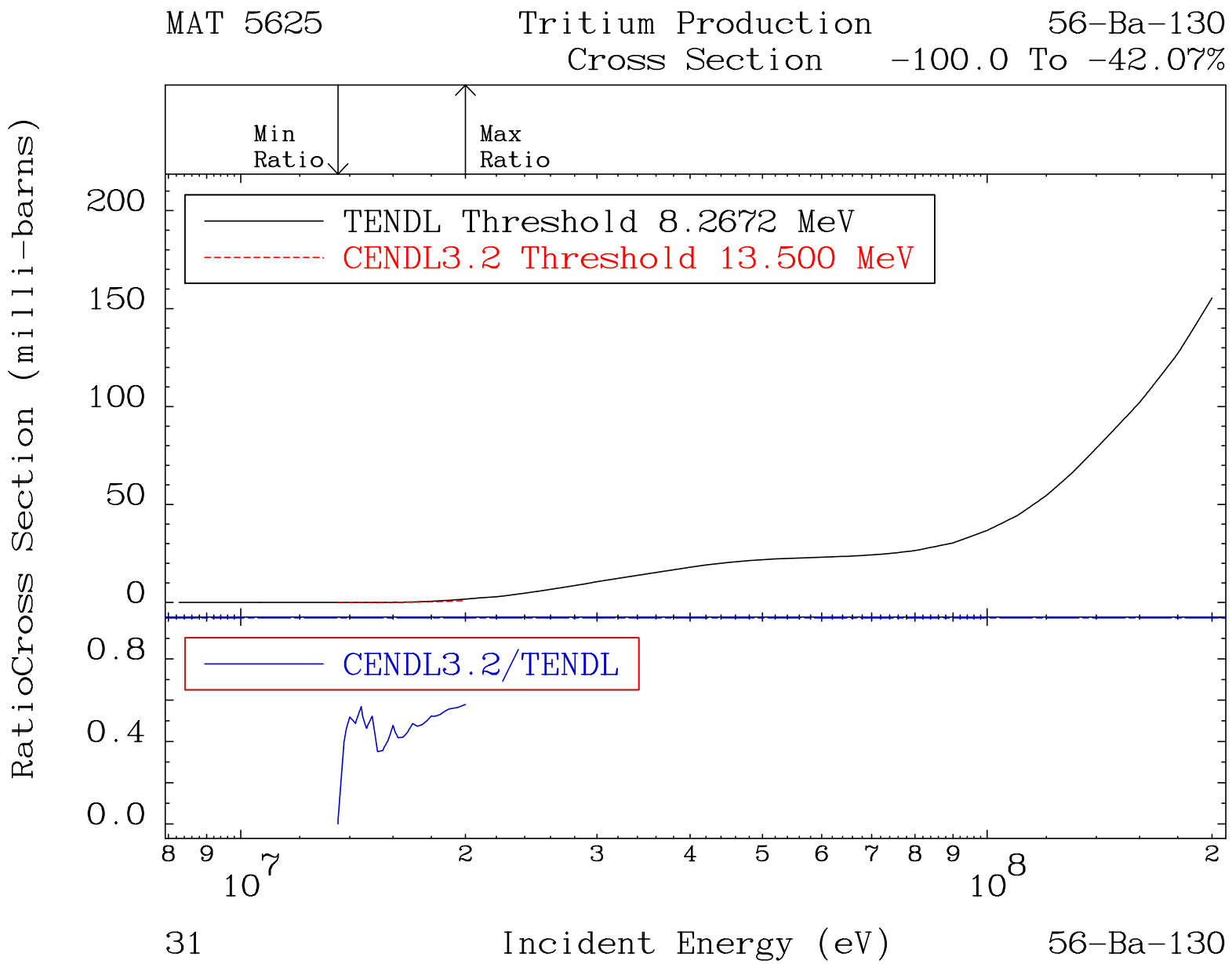

MAT 5625
(n,He-3)
56-Ba-130
Cross Section
-100.0 To 3084. %
Min Ratio
Max Ratio
TENDL Threshold 4.2892 MeV
CENDL3.2 Threshold 15.500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
2.0
1.5
1.0
0.5
0.0
40
20
0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
26
Incident Energy (eV)
56-Ba-130

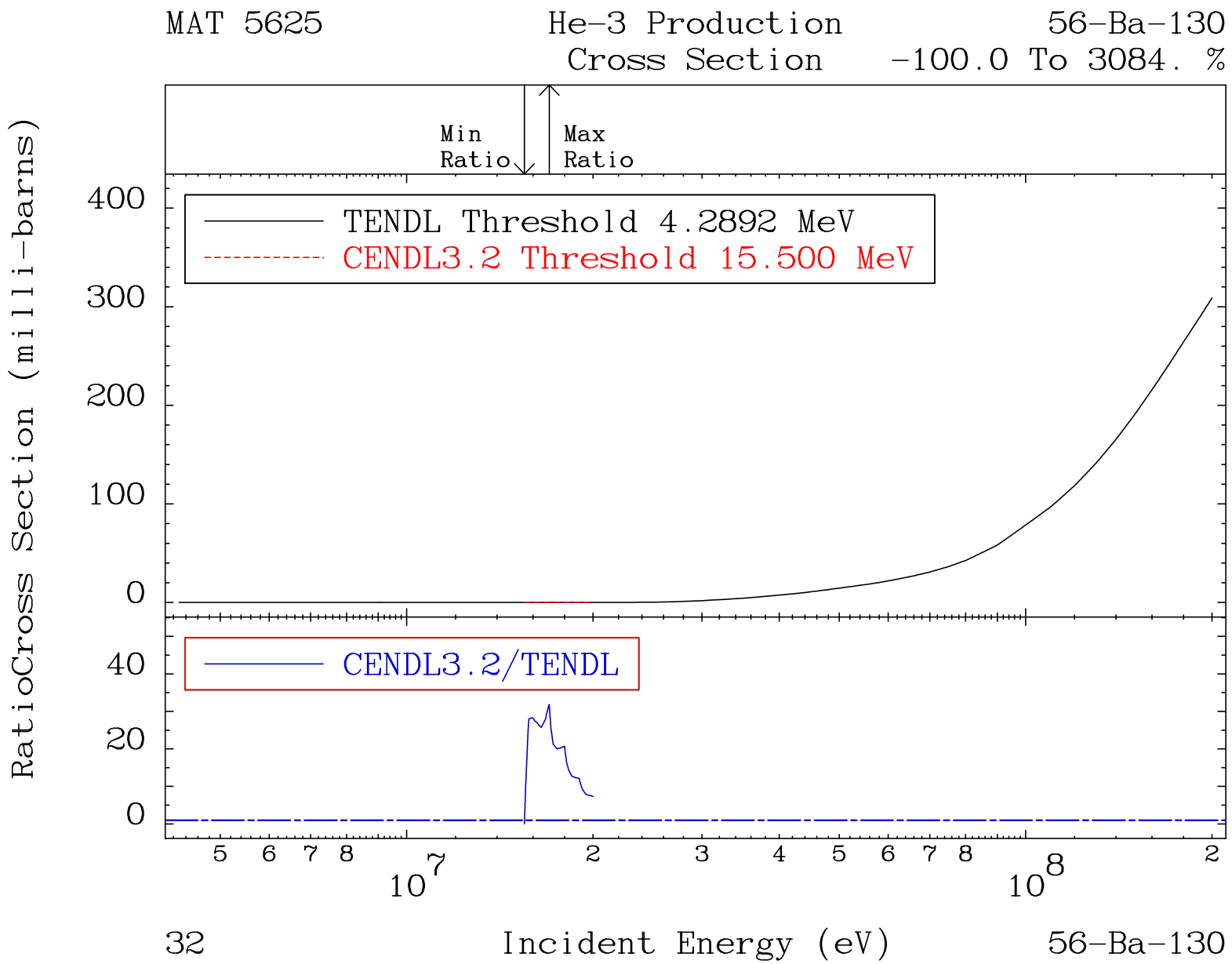

MAT 5625
(n,α)
Cross Section
56-Ba-130
-100.0 To 6610. %
Min Ratio
Max Ratio
TENDL
CENDL3.2 Threshold 546.55 keV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
80
40
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
27
Incident Energy (eV)
56-Ba-130

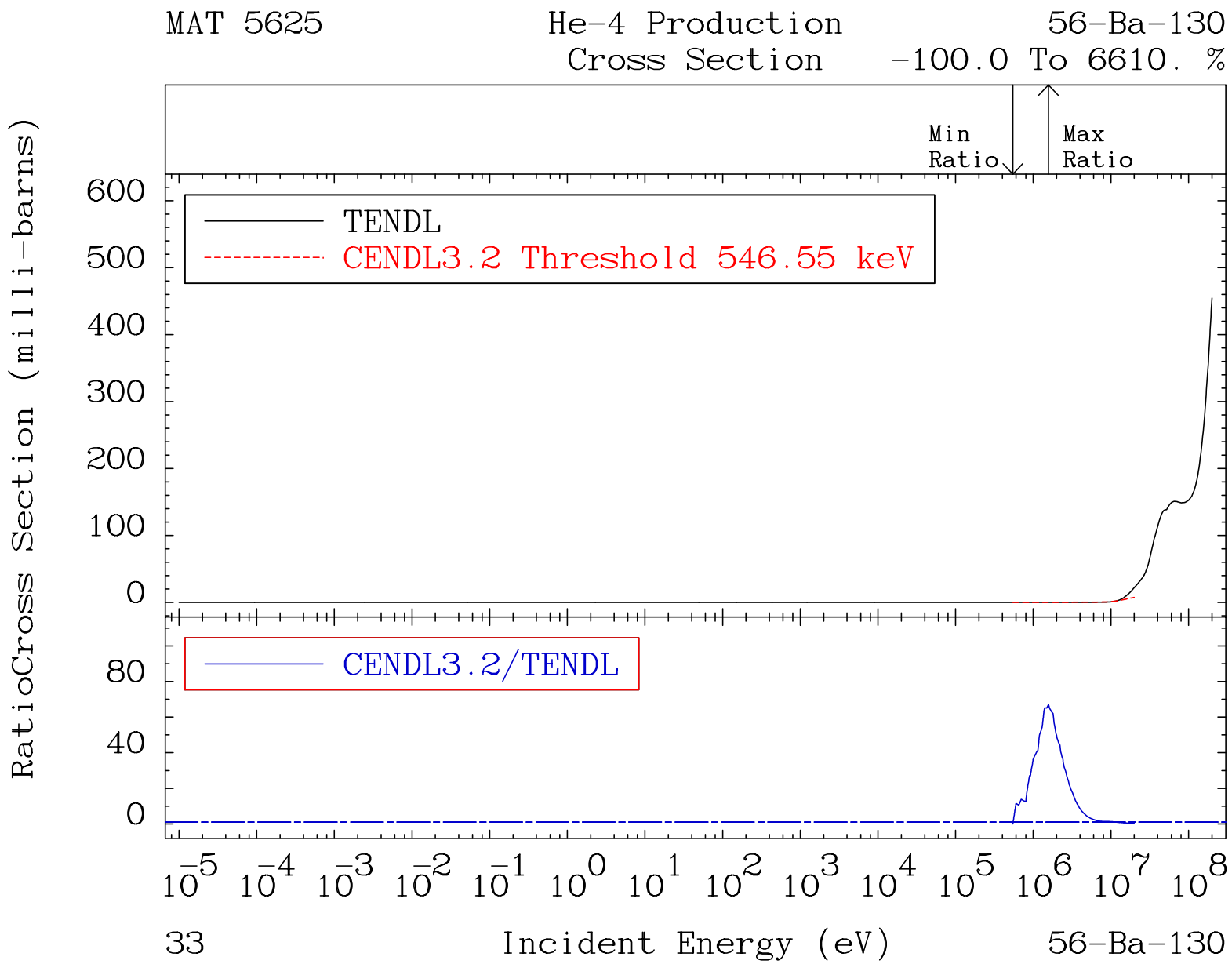

MAT 5625
(n,2p)
56-Ba-130
Cross Section
-100.0 To 230.5 %
Min Ratio
Max Ratio
TENDL Threshold 5.1067 MeV
CENDL3.2 Threshold 13.750 MeV
CENDL3.2/TENDL
RatioCross Section (micro-barns)
300
200
100
0
4
2
0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
28
Incident Energy (eV)
56-Ba-130

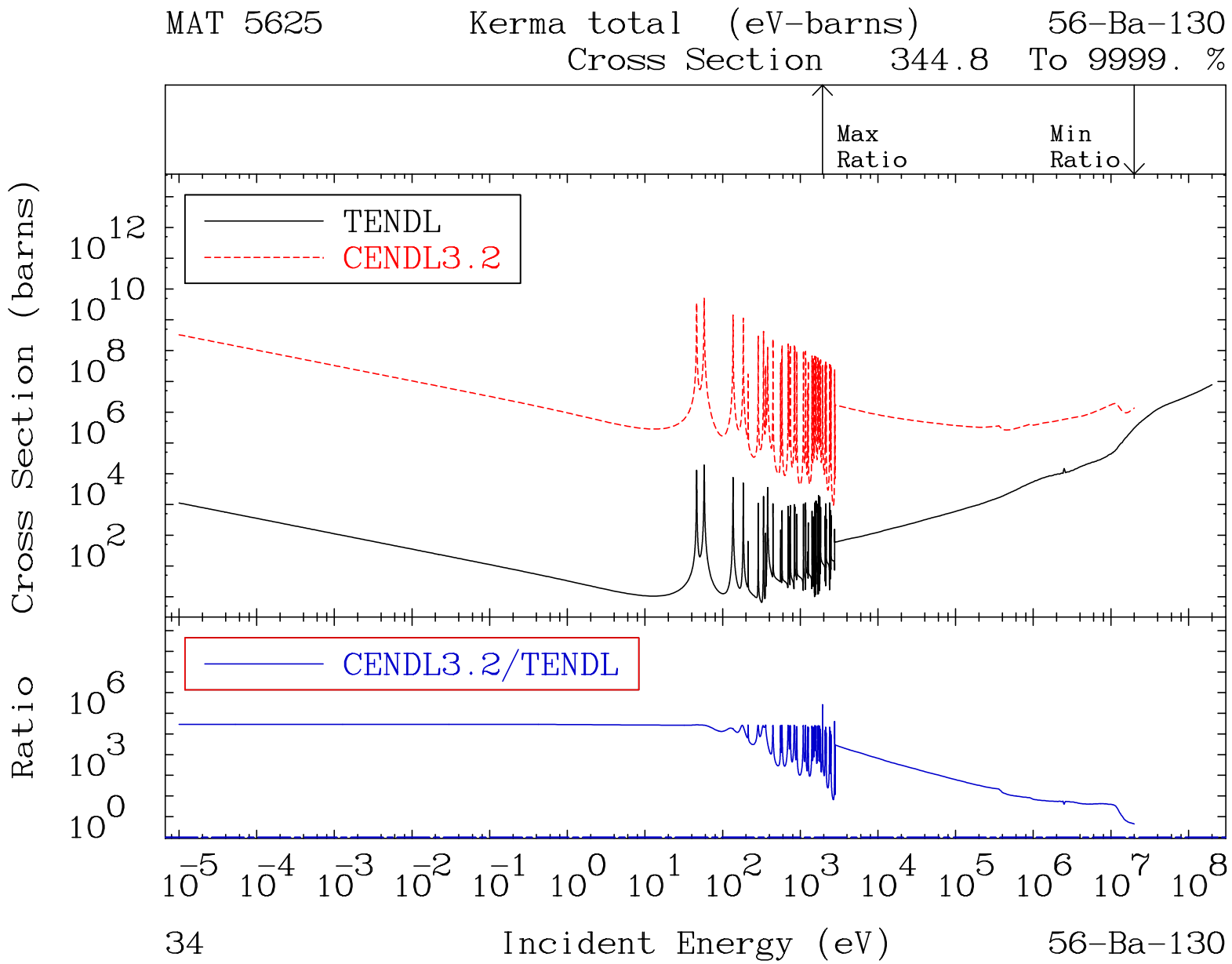

MAT 5625
Hydrogen Production
56-Ba-130
Cross Section
-100.0 To 150.3 %
Min Ratio
Max Ratio
TENDL Threshold 2.7750 keV
CENDL3.2 Threshold 1.8976 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
CENDL3.2/TENDL
Ratio
2
0
4 6 10^4 2 4 6 10^5 2 4 6 10^6 2 4 6 10^7 2 4 6 10^8 2
29
Incident Energy (eV)
56-Ba-130

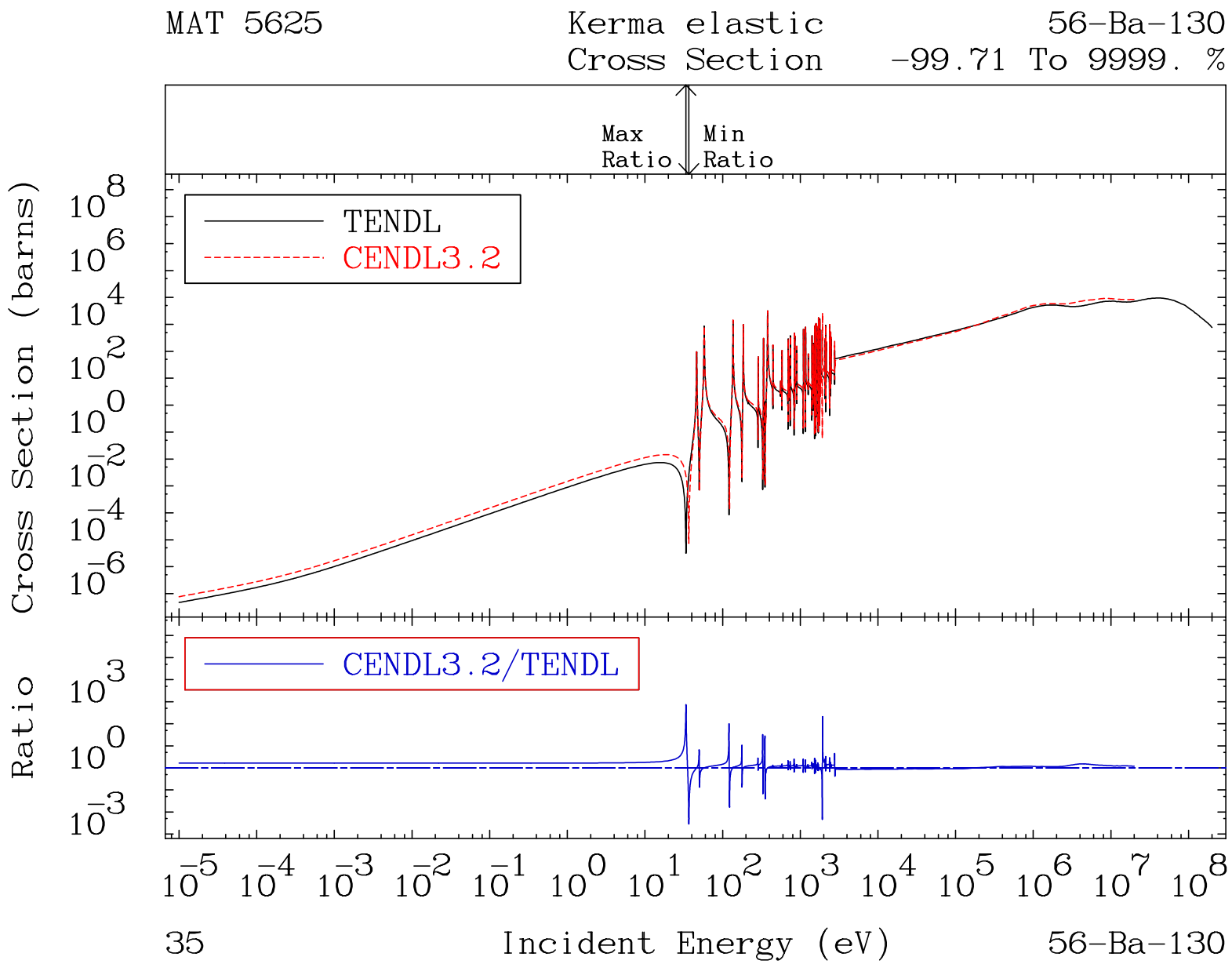

MAT 5625
Deuterium Production
56-Ba-130
Cross Section -100.0 To -40.21%
Min Ratio
Max Ratio
TENDL Threshold 4.8596 MeV
CENDL3.2 Threshold 9.7500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
0.8
0.4
0.0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
30
Incident Energy (eV)
56-Ba-130

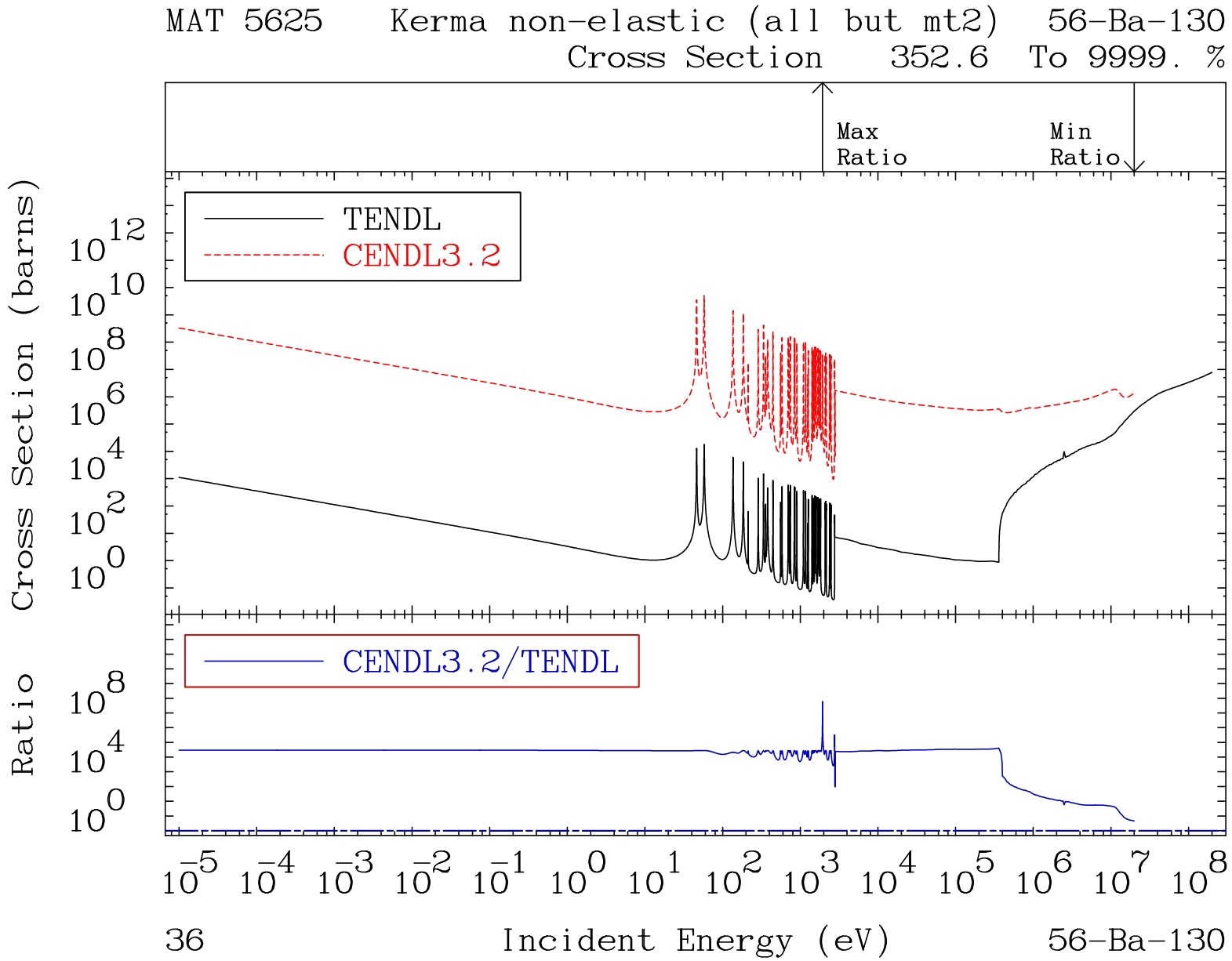

MAT 5625
Tritium Production
56-Ba-130
Cross Section
-100.0 To -42.07%
Min Ratio
Max Ratio
TENDL Threshold 8.2672 MeV
CENDL3.2 Threshold 13.500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
0.8
0.4
0.0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
31
Incident Energy (eV)
56-Ba-130

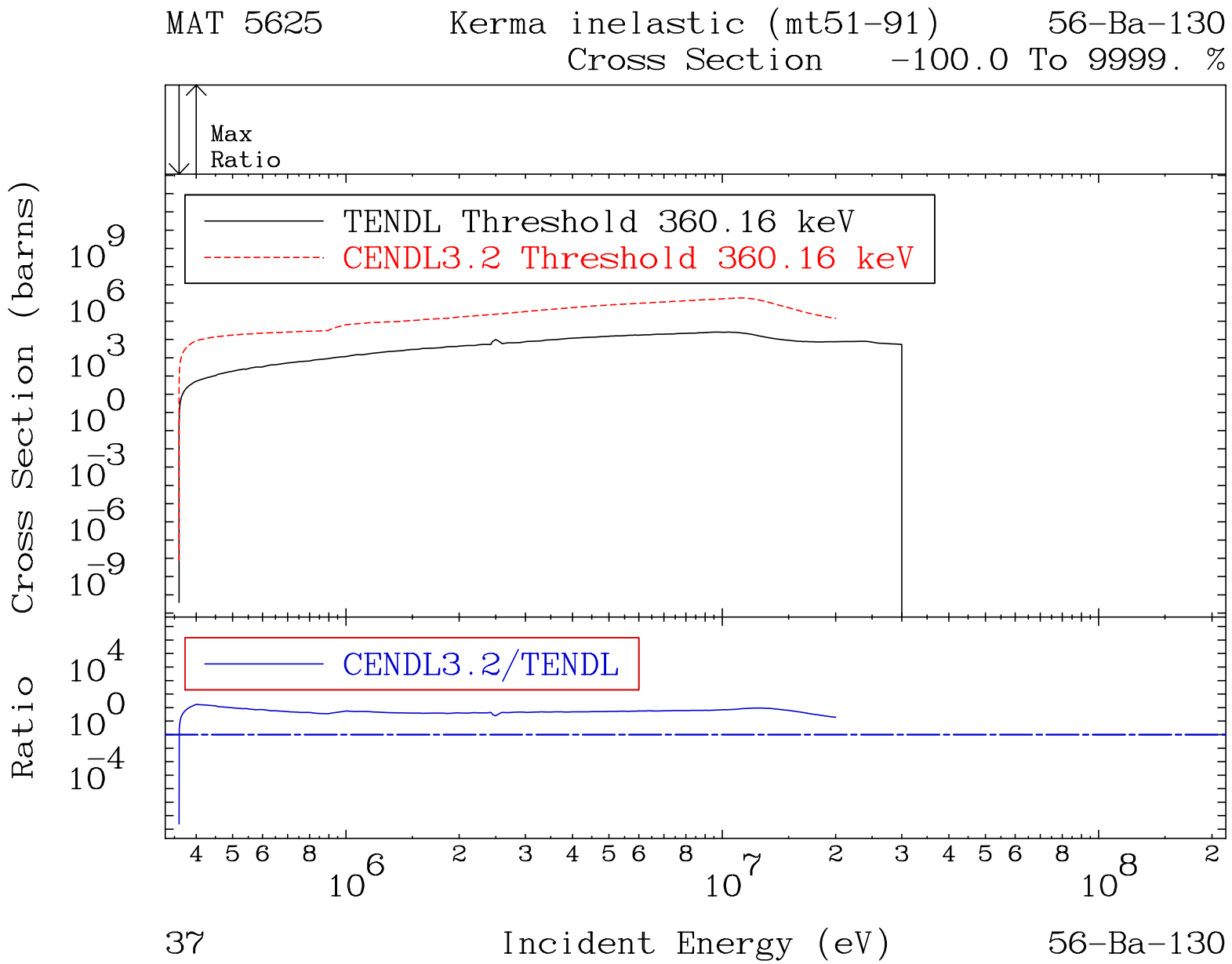

MAT 5625
He-3 Production
Cross Section
56-Ba-130
-100.0 To 3084. %
Min Ratio
Max Ratio
TENDL Threshold 4.2892 MeV
CENDL3.2 Threshold 15.500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
40
20
0
5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
32
Incident Energy (eV)
56-Ba-130

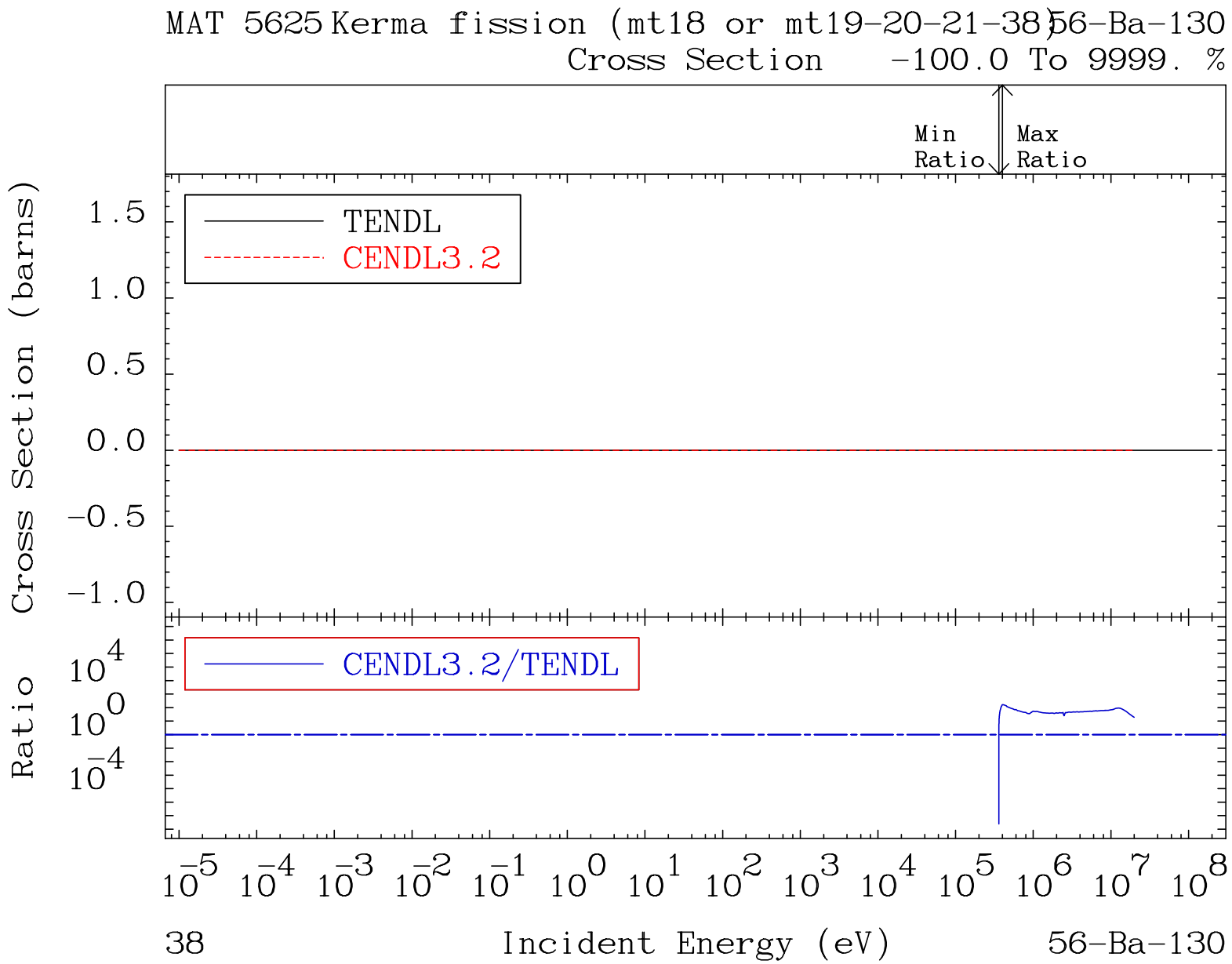

MAT 5625
He-4 Production
Cross Section
56-Ba-130
-100.0 To 6610. %
Min Ratio
Max Ratio
TENDL
CENDL3.2 Threshold 546.55 keV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
600
500
400
300
200
100
0
80
40
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
33
Incident Energy (eV)
56-Ba-130

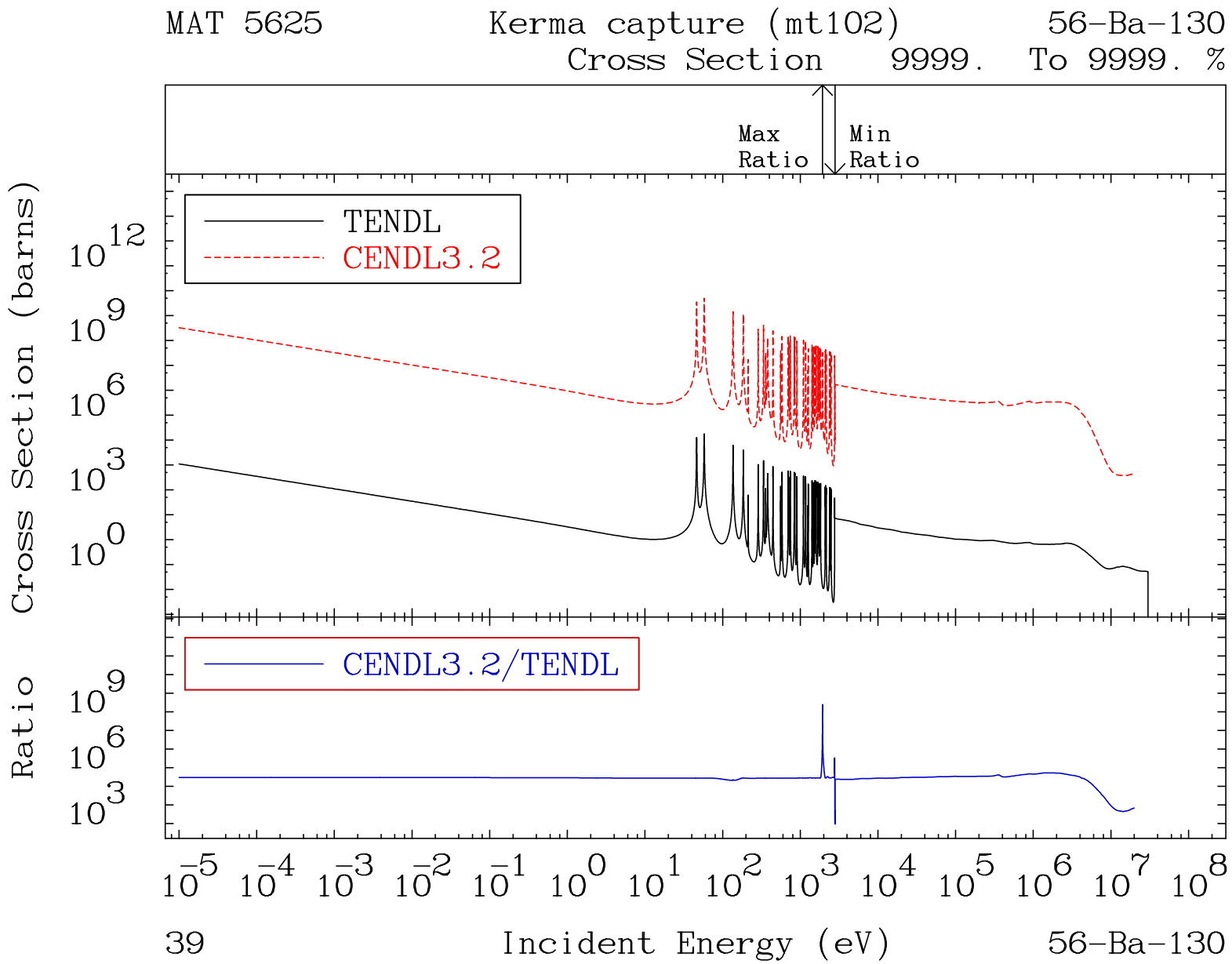

MAT 5625
Kerma total (eV-barns)
56-Ba-130
Cross Section 344.8 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
34
56-Ba-130

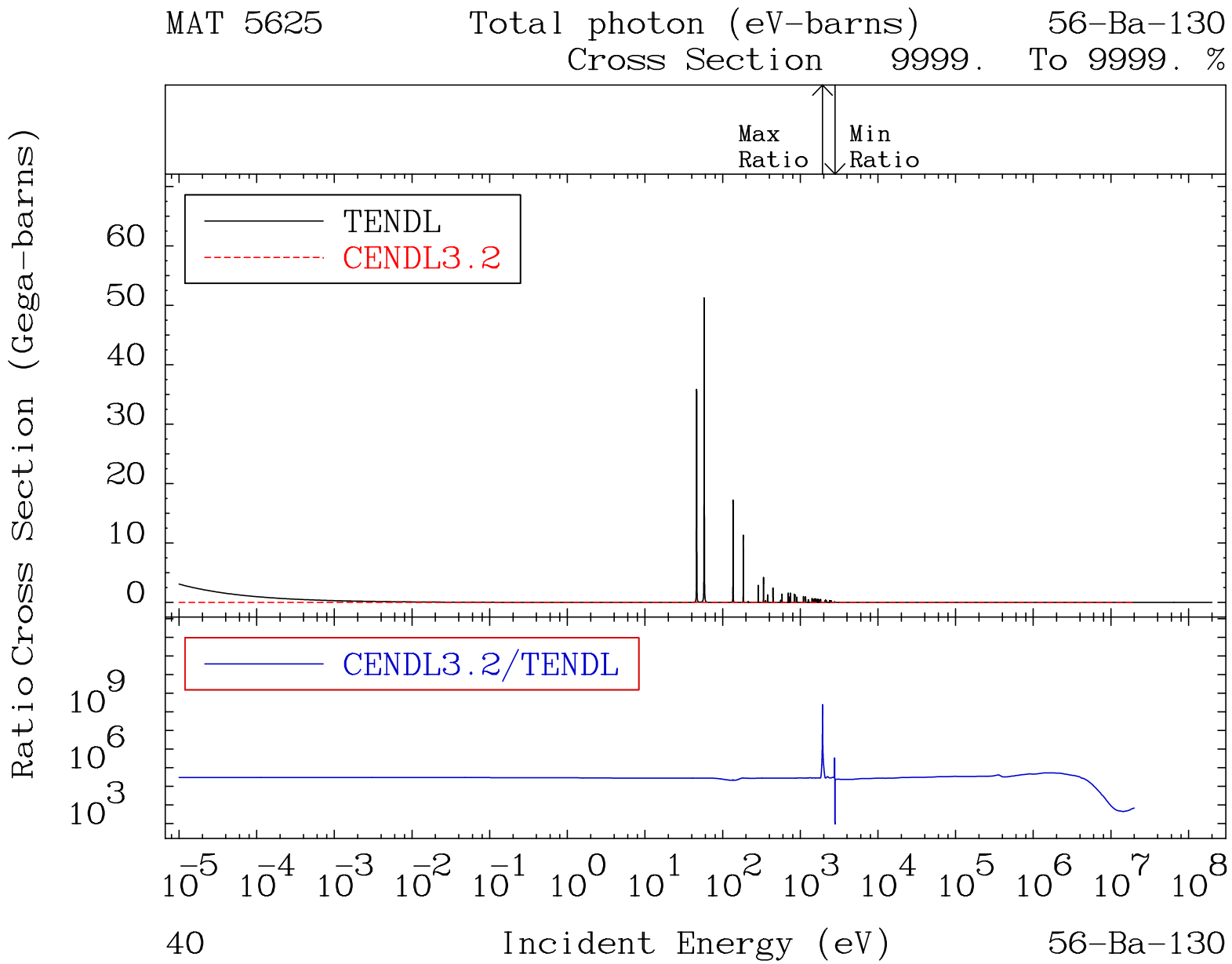

MAT 5625
Kerma elastic
Cross Section
56-Ba-130
-99.71 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
35
56-Ba-130

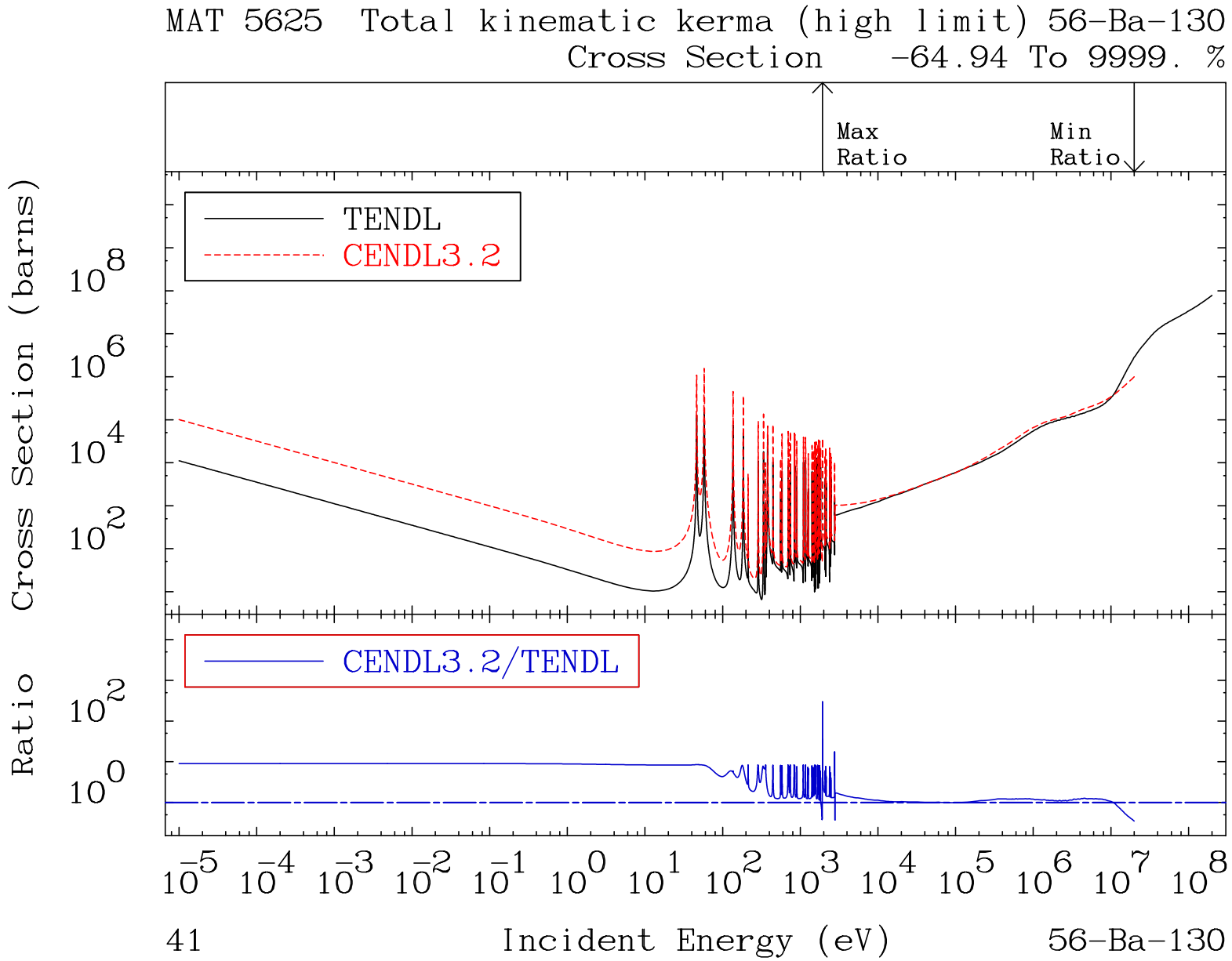

MAT 5625 Kerma non-elastic (all but mt2) 56-Ba-130
Cross Section 352.6 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
36
56-Ba-130

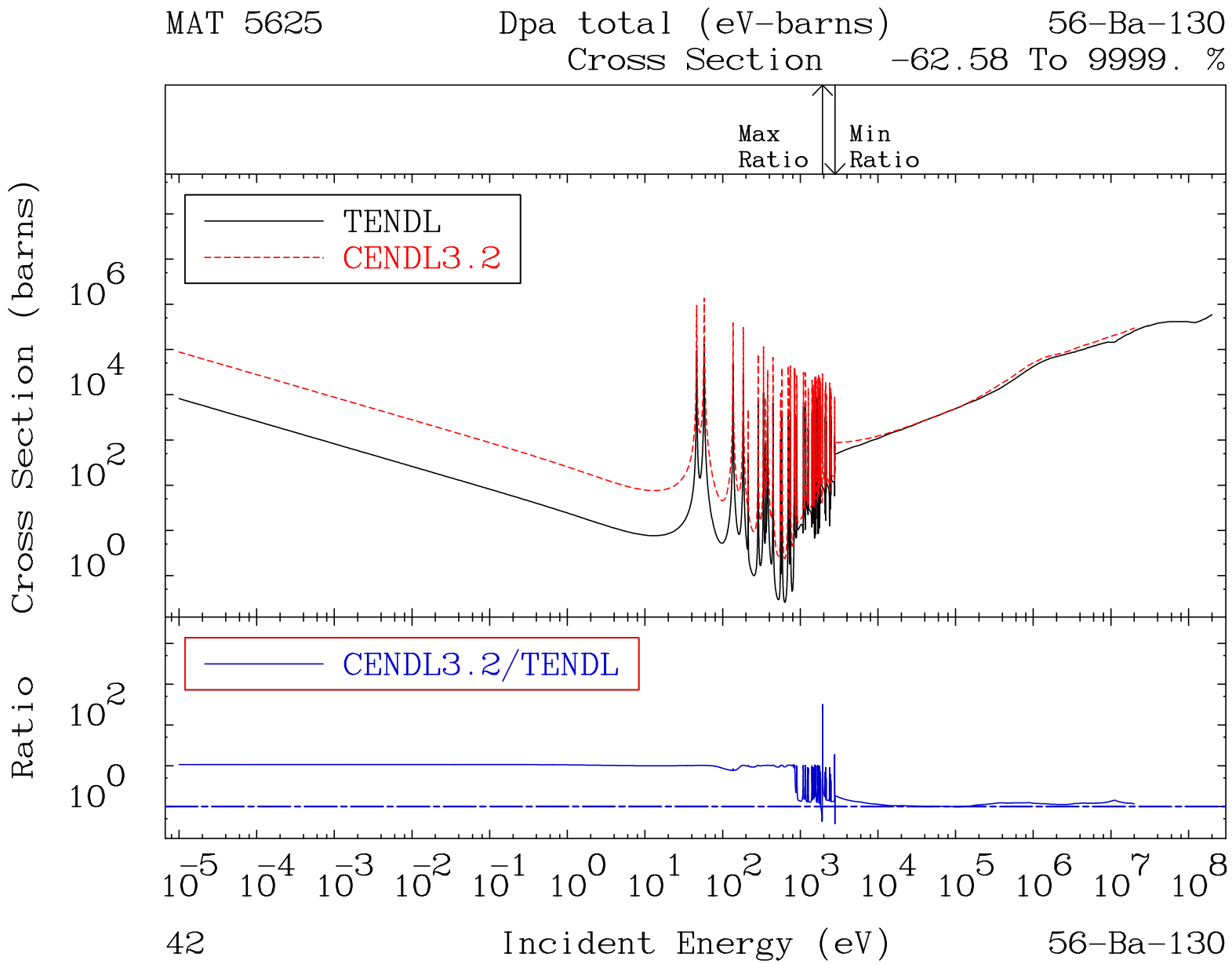

MAT 5625
Kerma inelastic (mt51-91)
56-Ba-130
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 360.16 keV
CENDL3.2 Threshold 360.16 keV
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
37
56-Ba-130

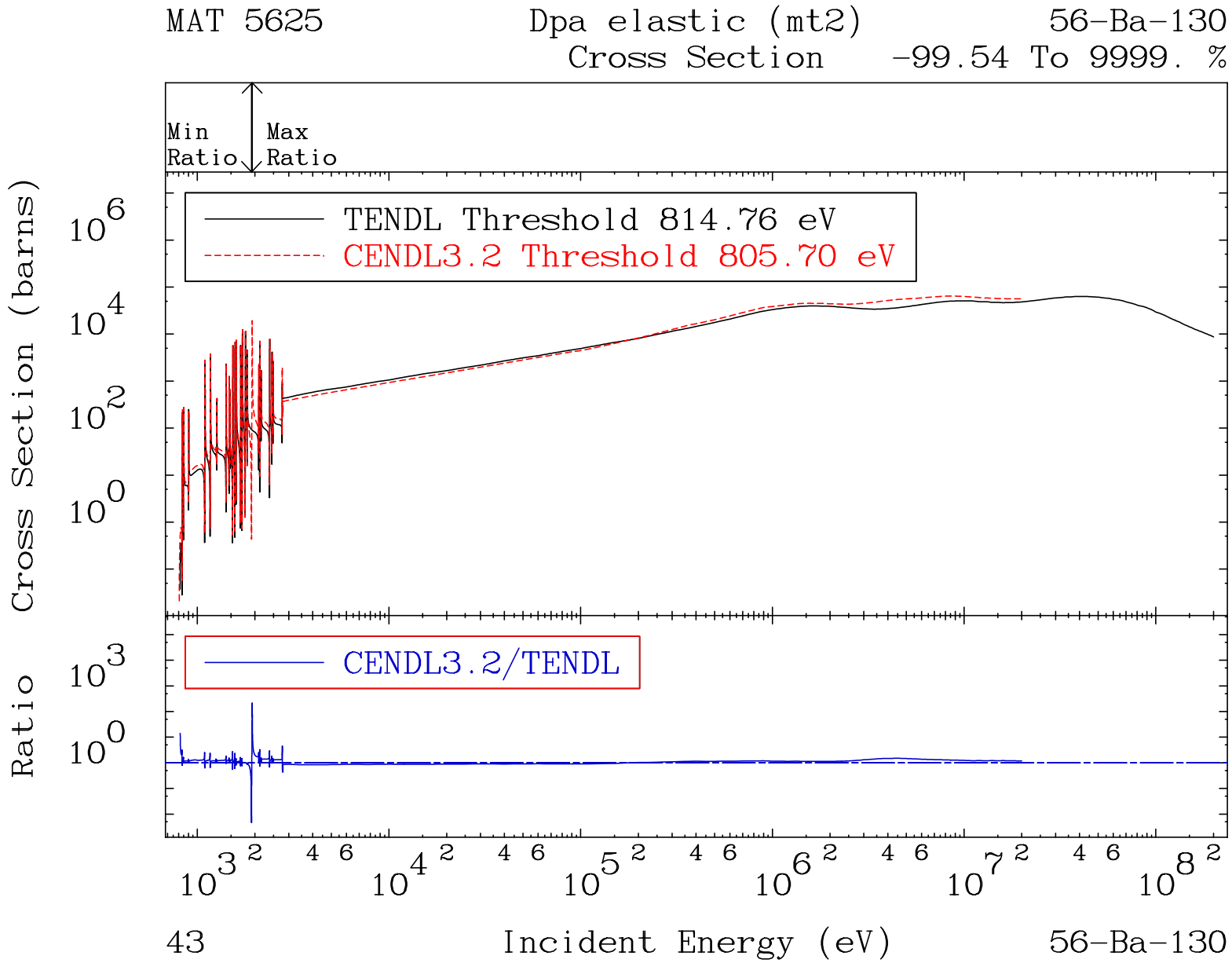

MAT 5625 Kerma fission (mt18 or mt19-20-21-38) 56-Ba-130
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
$10^{4}$
$10^{0}$
$10^{-4}$
$10^{-5}$ $10^{-4}$ $10^{-3}$ $10^{-2}$ $10^{-1}$ $10^{0}$ $10^{1}$ $10^{2}$ $10^{3}$ $10^{4}$ $10^{5}$ $10^{6}$ $10^{7}$ $10^{8}$
38
Incident Energy (eV)
56-Ba-130

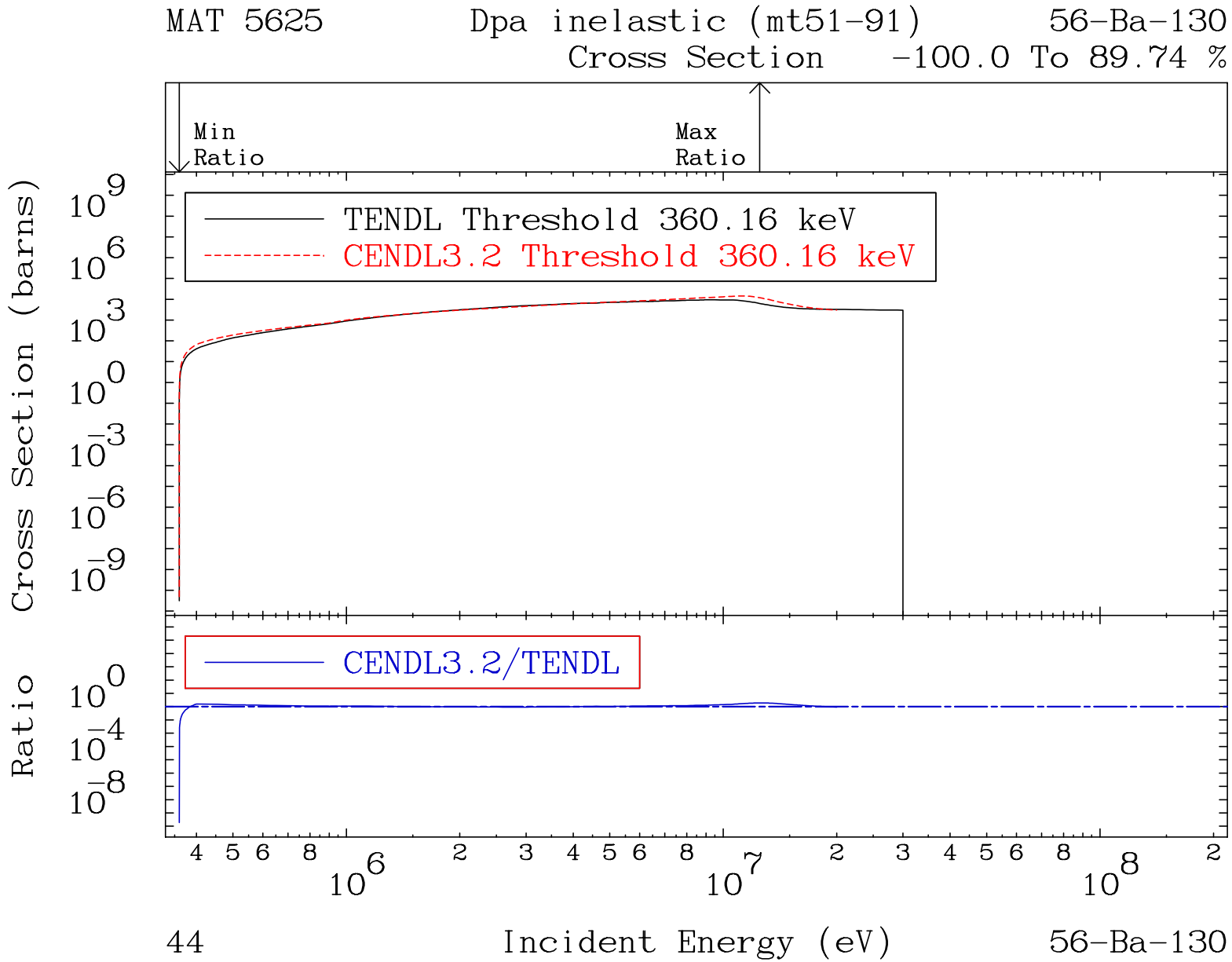

MAT 5625
Kerma capture (mt102)
56-Ba-130
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
$10^{12}$
$10^{9}$
$10^{6}$
$10^{3}$
$10^{0}$
CENDL3.2/TENDL
Ratio
$10^{9}$
$10^{6}$
$10^{3}$
$10^{-5}$ $10^{-4}$ $10^{-3}$ $10^{-2}$ $10^{-1}$ $10^{0}$ $10^{1}$ $10^{2}$ $10^{3}$ $10^{4}$ $10^{5}$ $10^{6}$ $10^{7}$ $10^{8}$
39
Incident Energy (eV)
56-Ba-130

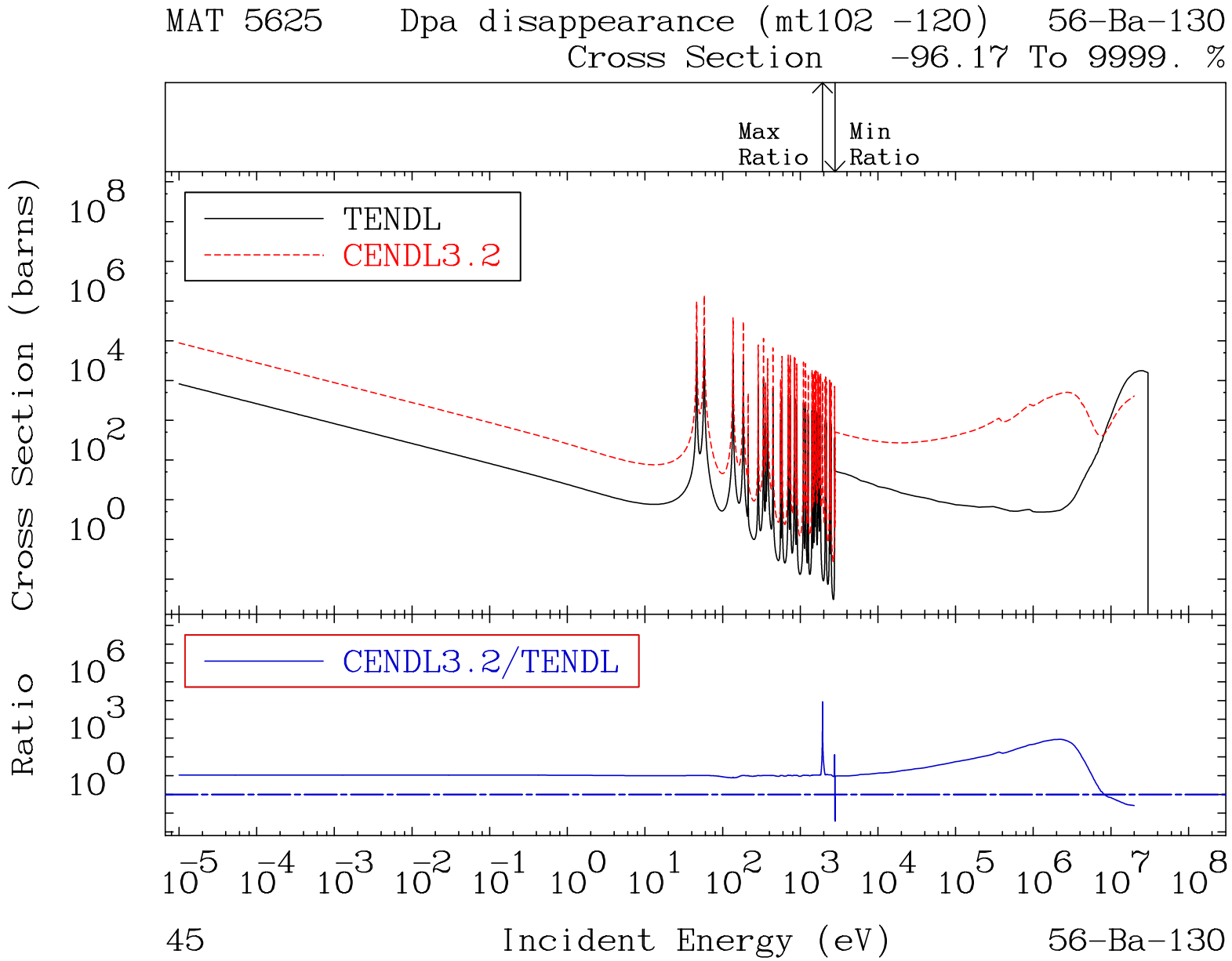

MAT 5625
Total photon (eV-barns)
56-Ba-130
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Ratio Cross Section (Giga-barns)
60
50
40
30
20
10
0
10^9
10^6
10^3
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
40
Incident Energy (eV)
56-Ba-130

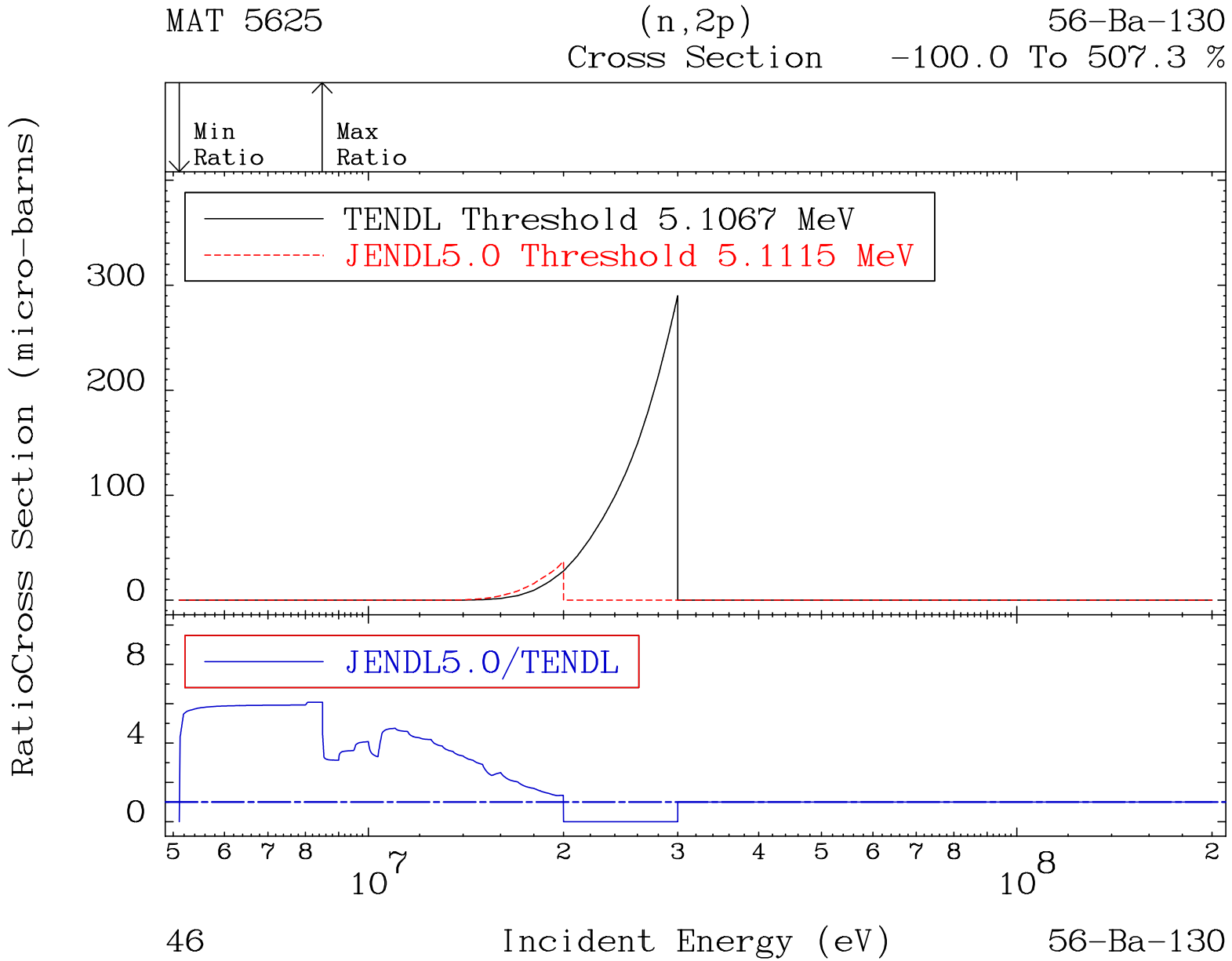

MAT 5625 Total kinematic kerma (high limit) 56-Ba-130
Cross Section -64.94 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
$10^8$
$10^6$
$10^4$
$10^2$
CENDL3.2/TENDL
Ratio
$10^2$
$10^0$
$10^{-5}$ $10^{-4}$ $10^{-3}$ $10^{-2}$ $10^{-1}$ $10^0$ $10^1$ $10^2$ $10^3$ $10^4$ $10^5$ $10^6$ $10^7$ $10^8$
41
Incident Energy (eV)
56-Ba-130

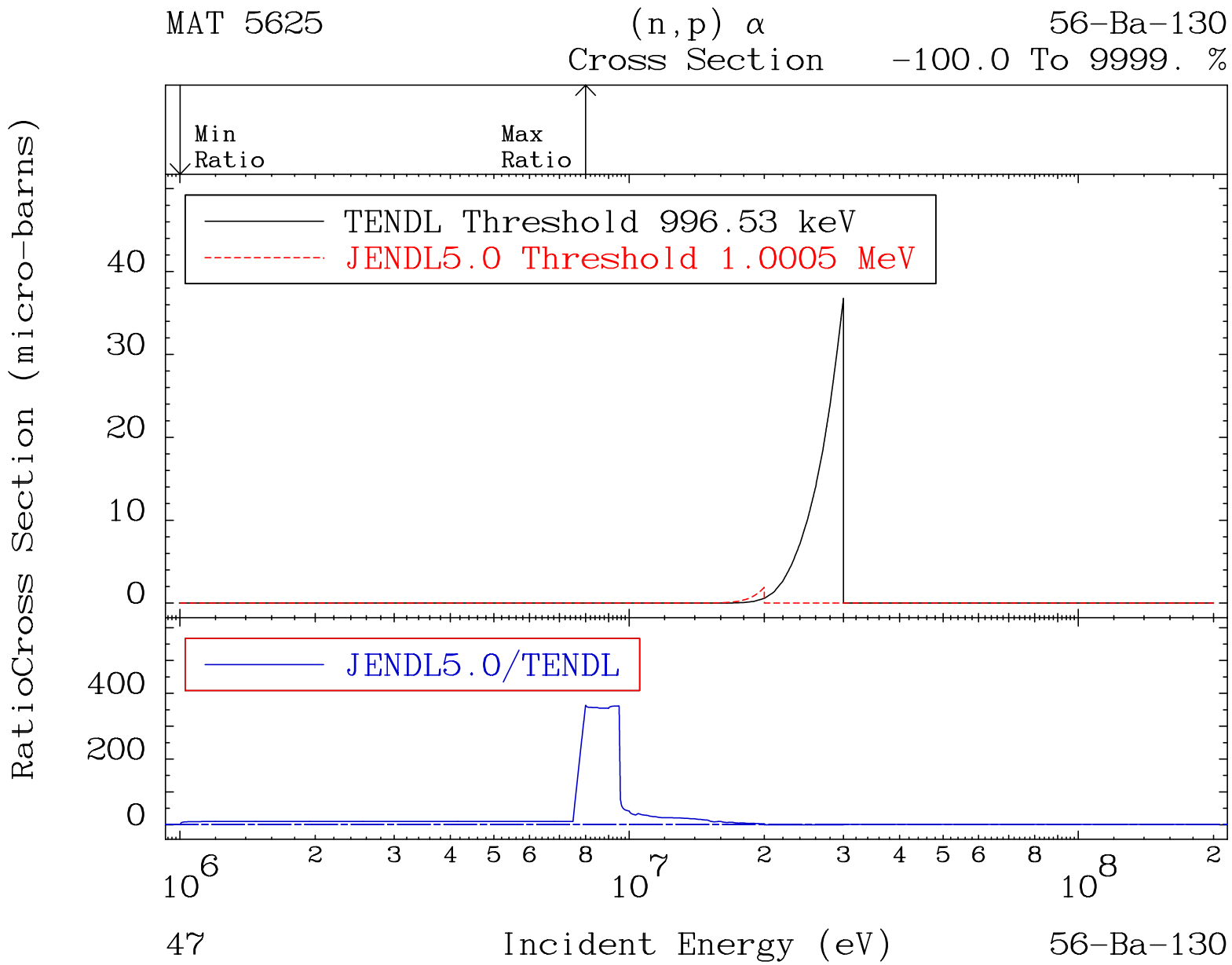

MAT 5625
Dpa total (eV-barns)
56-Ba-130
Cross Section
-62.58 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
42
56-Ba-130

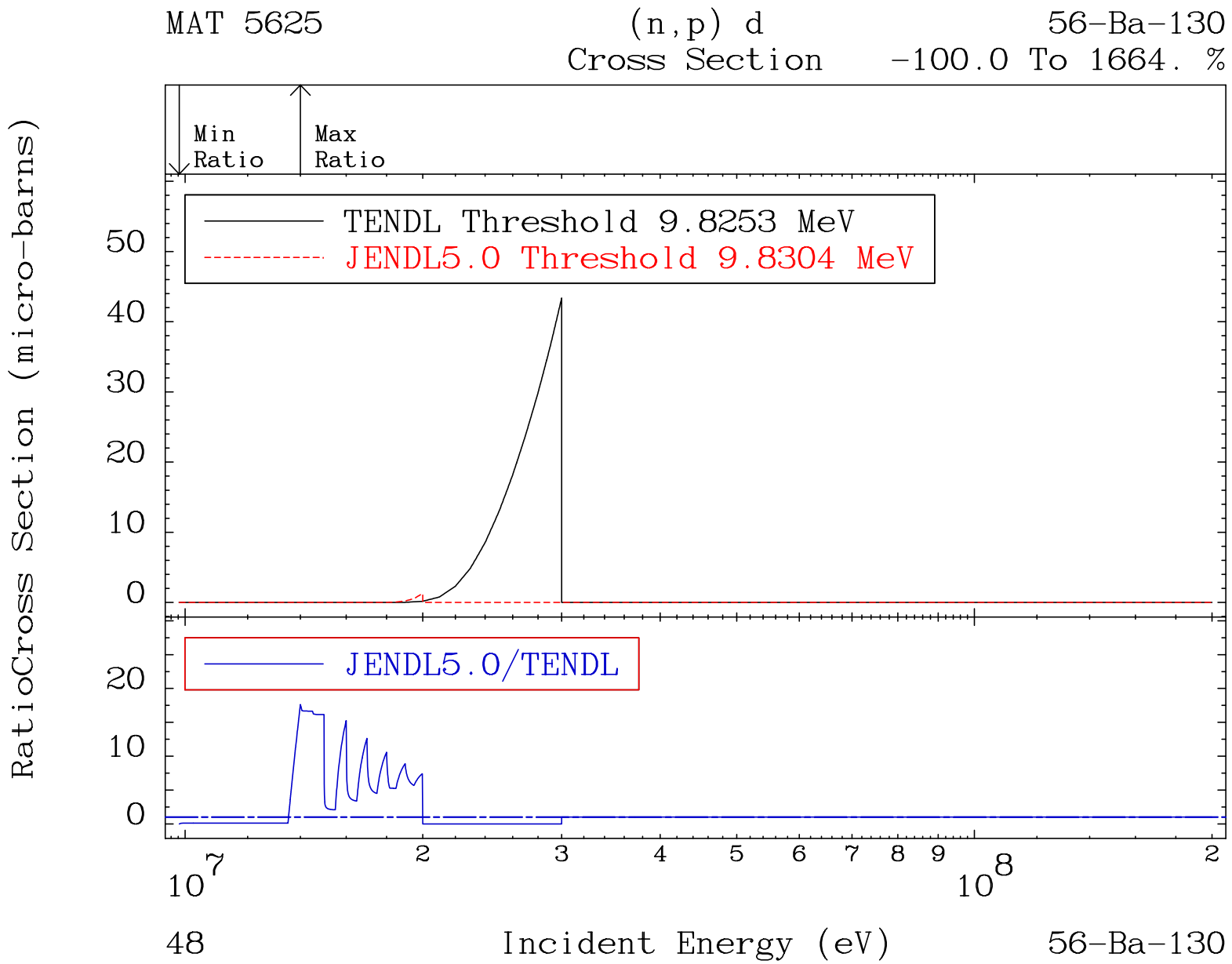

MAT 5625
Dpa elastic (mt2)
Cross Section
56-Ba-130
-99.54 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 814.76 eV
CENDL3.2 Threshold 805.70 eV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
43
56-Ba-130

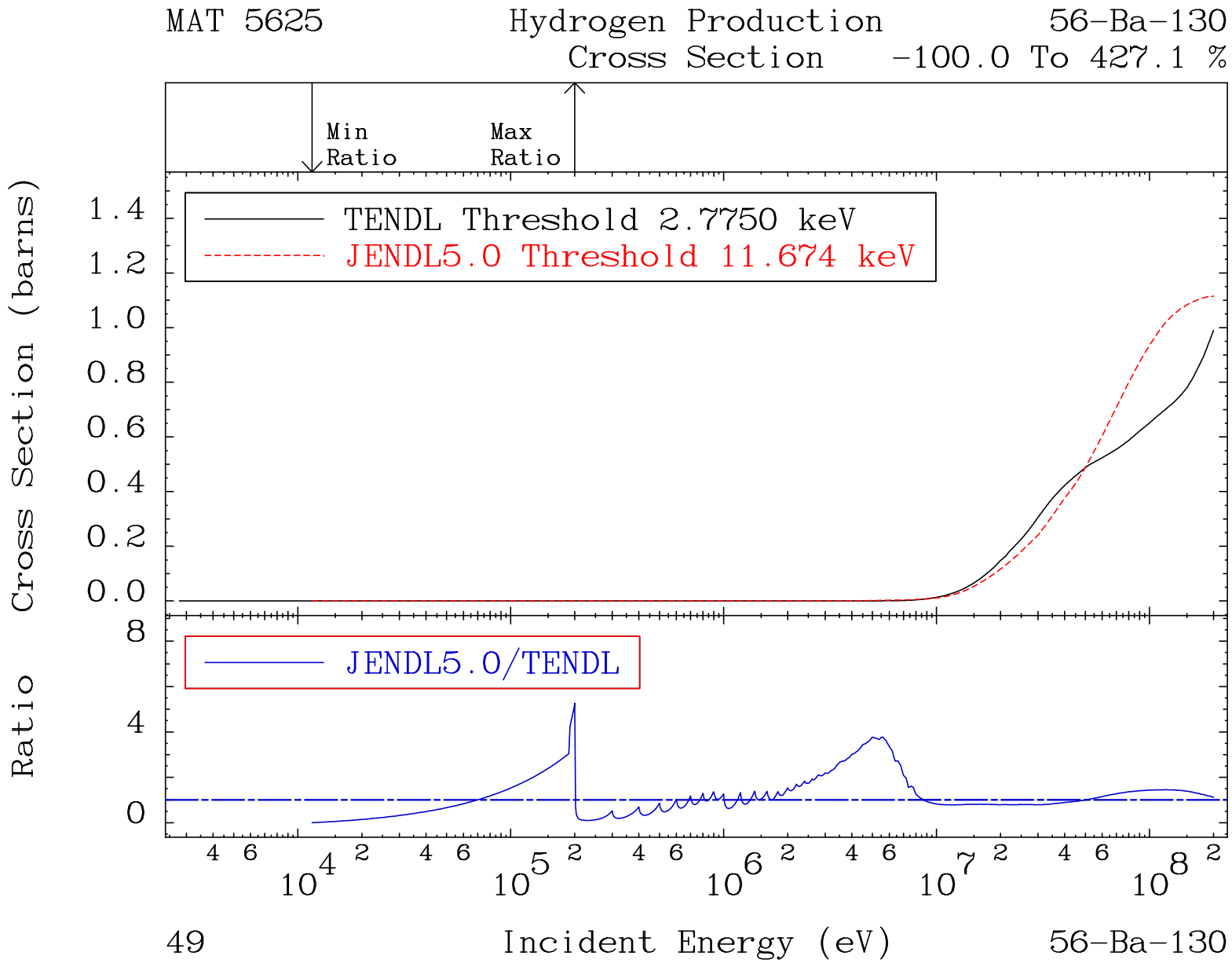

MAT 5625
Dpa inelastic (mt51-91)
56-Ba-130
Cross Section -100.0 To 89.74 %
Min Ratio
Max Ratio
TENDL Threshold 360.16 keV
CENDL3.2 Threshold 360.16 keV
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
56-Ba-130

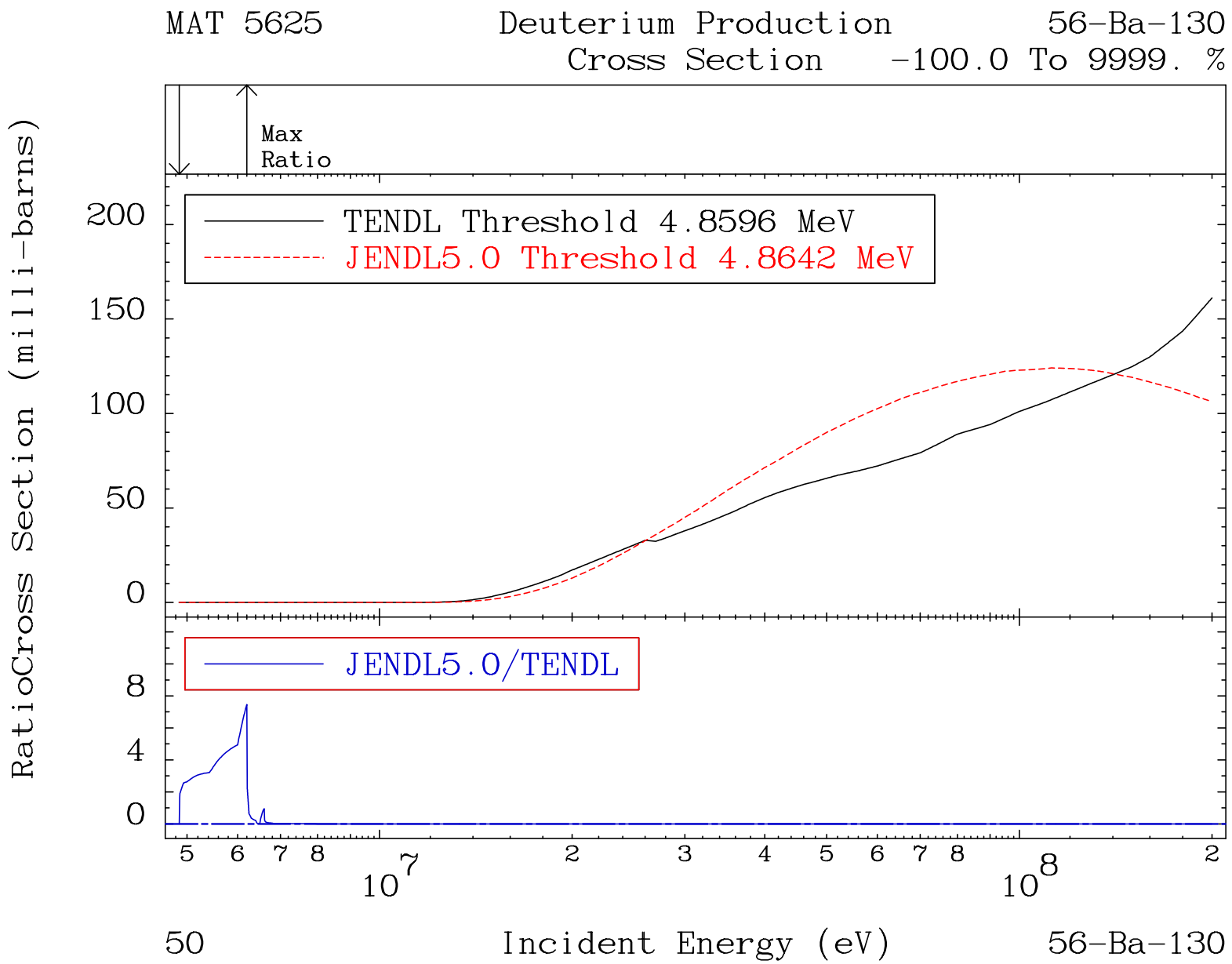

MAT 5625 Dpa disappearance (mt102 -120) 56-Ba-130
Cross Section -96.17 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
45
56-Ba-130

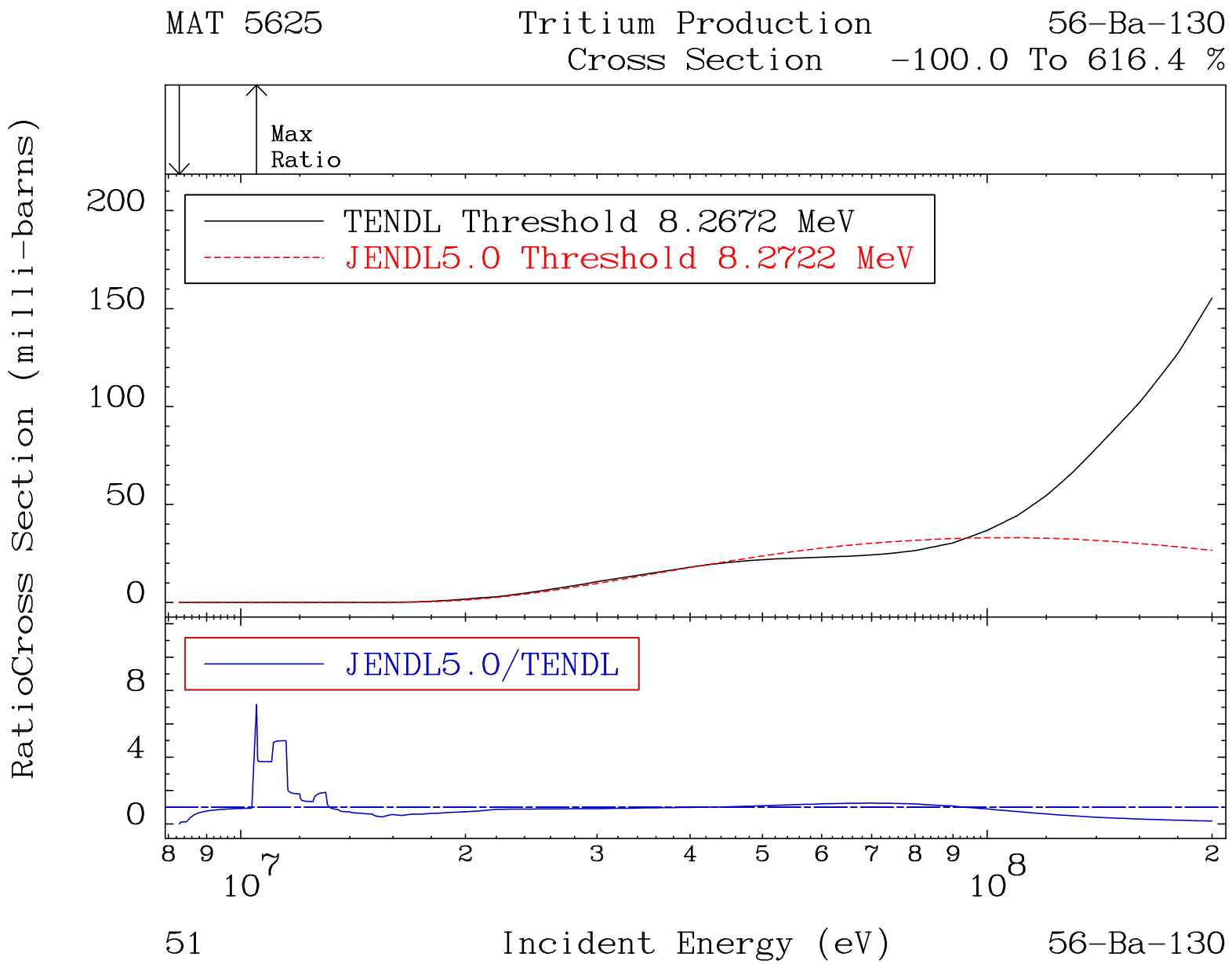

MAT 5625
(n,2p)
56-Ba-130
Cross Section
-100.0 To 507.3 %
Min Ratio
Max Ratio
TENDL Threshold 5.1067 MeV
JENDL5.0 Threshold 5.1115 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
300
200
100
0
8
4
0
5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
46
Incident Energy (eV)
56-Ba-130

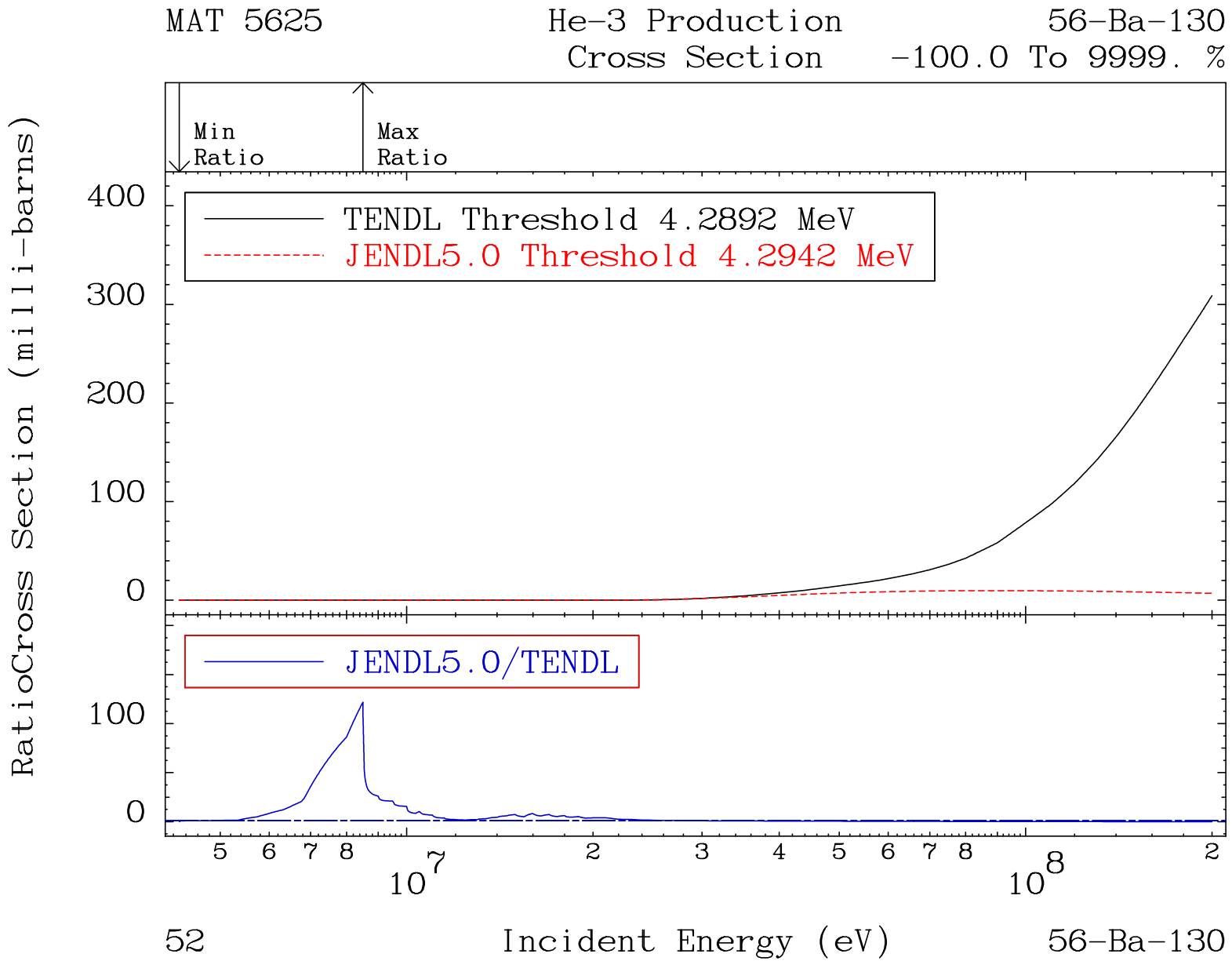

MAT 5625
(n,p) α
56-Ba-130
Cross Section
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 996.53 keV
JENDL5.0 Threshold 1.0005 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
40
30
20
10
0
400
200
0
2 3 4 5 6 8
10^6
10^7
10^8
47
Incident Energy (eV)
56-Ba-130

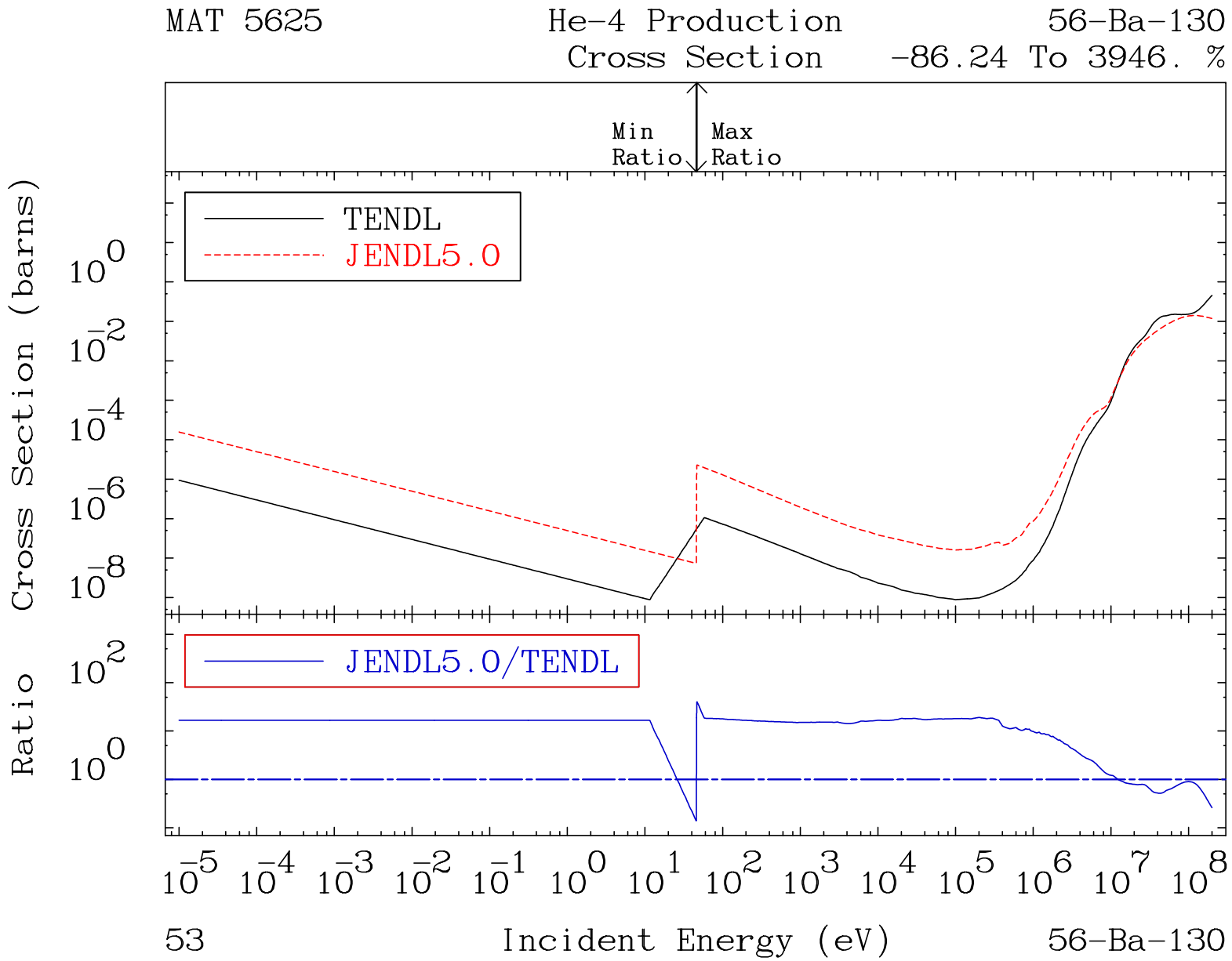

MAT 5625
(n,p) d
Cross Section
56-Ba-130
-100.0 To 1664. %
Min Ratio
Max Ratio
TENDL Threshold 9.8253 MeV
JENDL5.0 Threshold 9.8304 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
50
40
30
20
10
0
20
10
0
10^7
2
3
4
5
6
7
8
9
10^8
2
48
Incident Energy (eV)
56-Ba-130

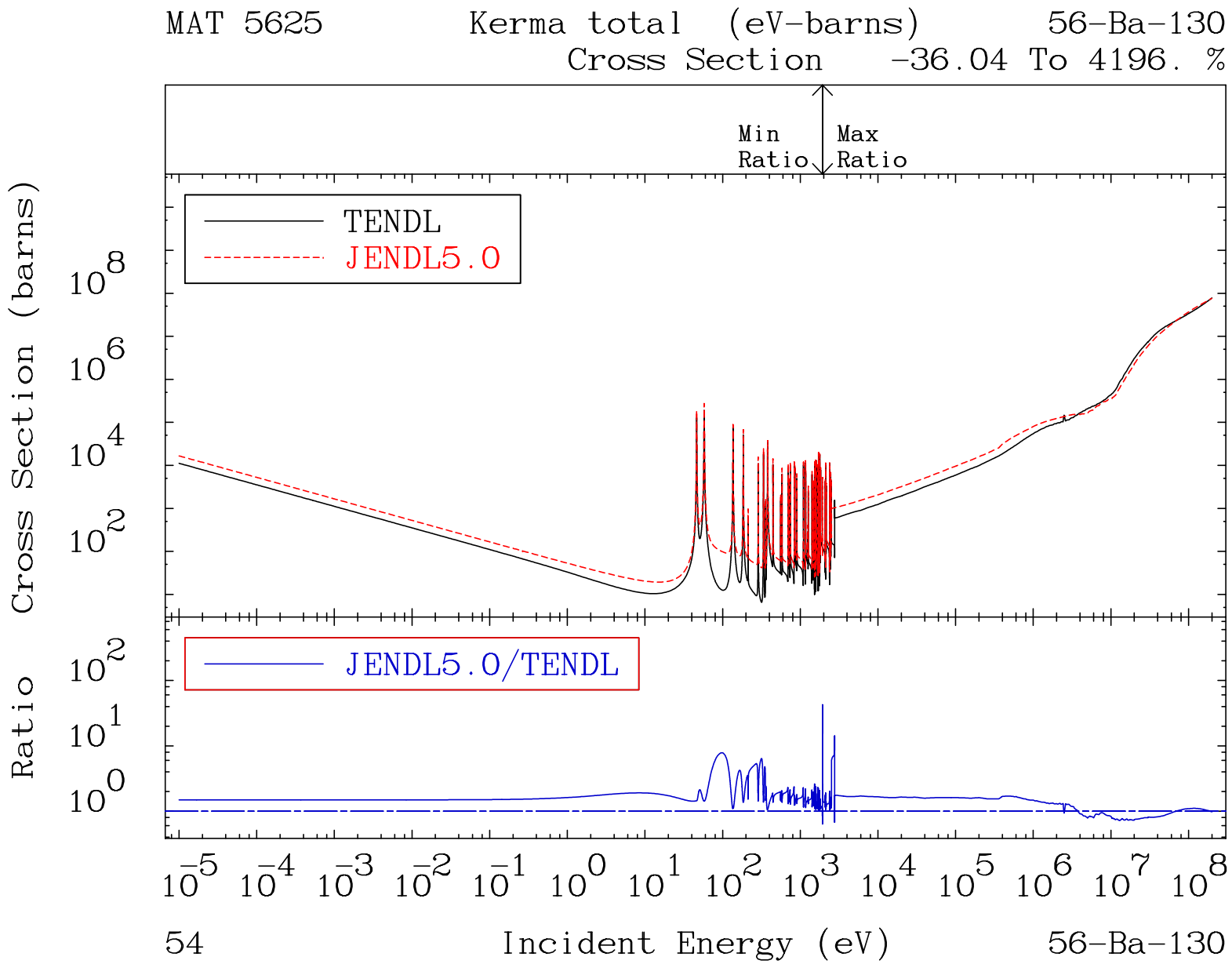

MAT 5625
Hydrogen Production
56-Ba-130
Cross Section
-100.0 To 427.1 %
Min Ratio
Max Ratio
TENDL Threshold 2.7750 keV
JENDL5.0 Threshold 11.674 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
8
4
0
$10^4$
$10^5$
$10^6$
$10^7$
$10^8$
49
Incident Energy (eV)
56-Ba-130

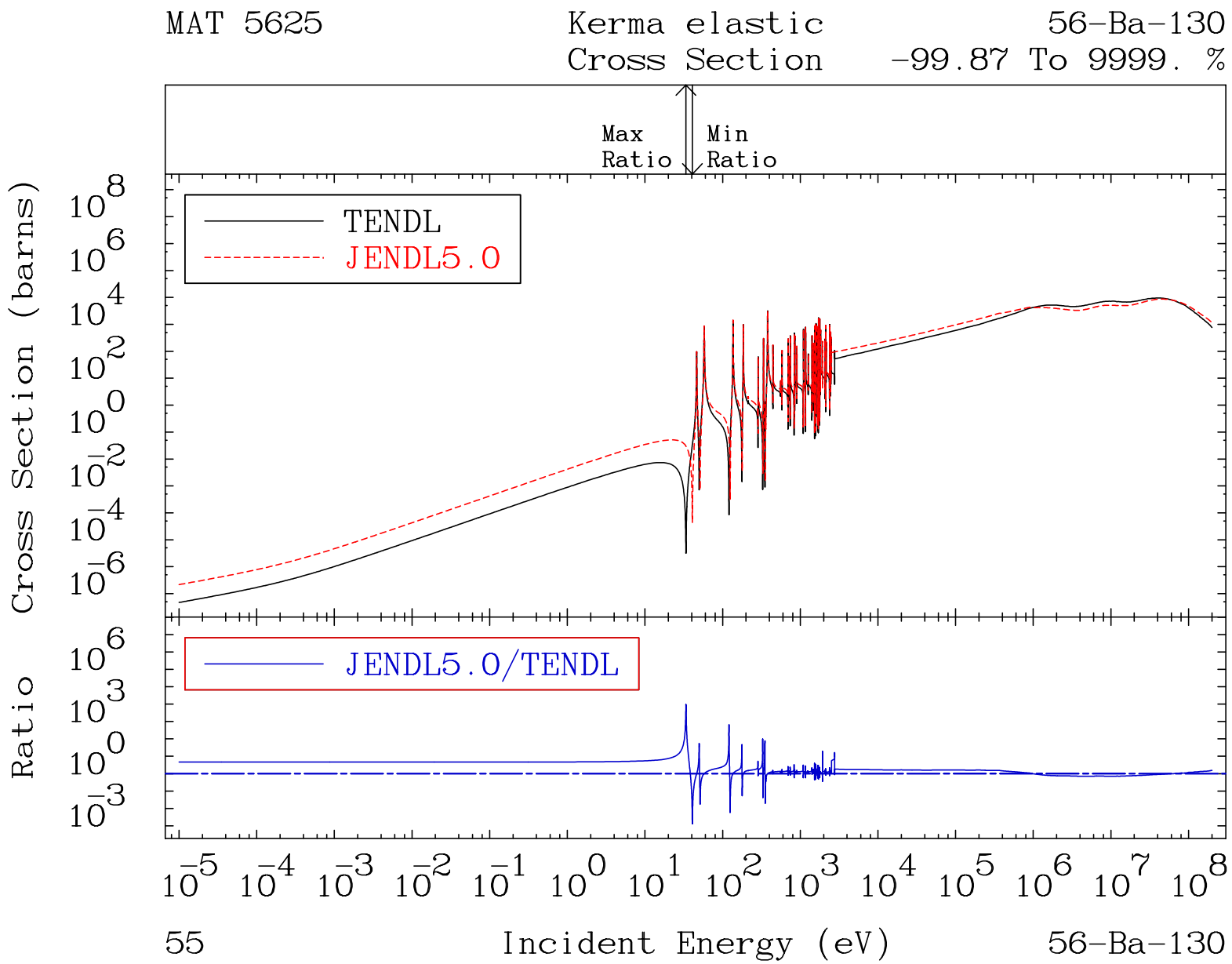

MAT 5625
Deuterium Production
56-Ba-130
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL Threshold 4.8596 MeV
JENDL5.0 Threshold 4.8642 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
8
4
0
5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
50
Incident Energy (eV)
56-Ba-130

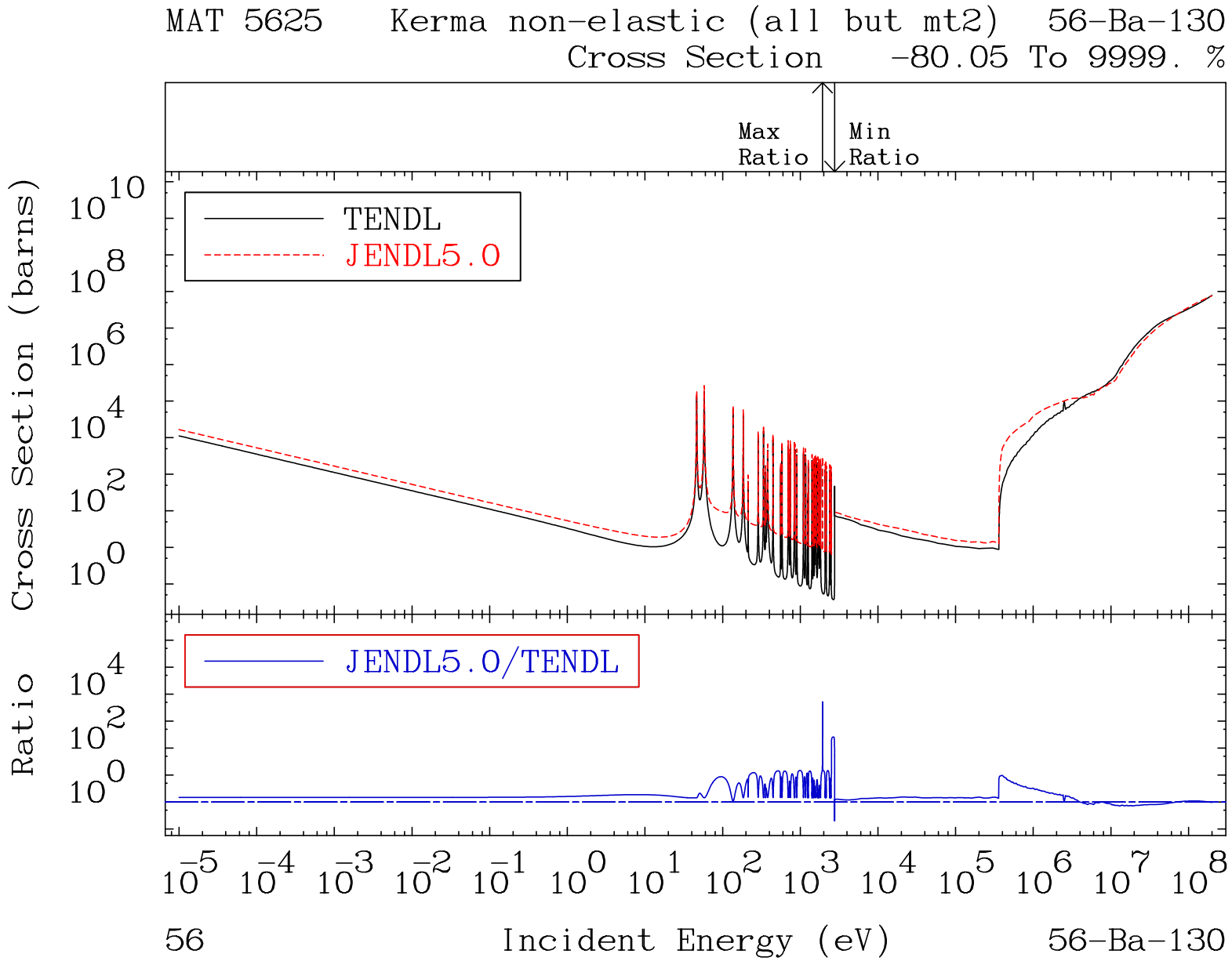

MAT 5625
Tritium Production
56-Ba-130
Cross Section
-100.0 To 616.4 %
Max
Ratio
TENDL Threshold 8.2672 MeV
JENDL5.0 Threshold 8.2722 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
8
4
0
8 9 10^7 2 3 4 5 6 7 8 9 10^8 2
51
Incident Energy (eV)
56-Ba-130

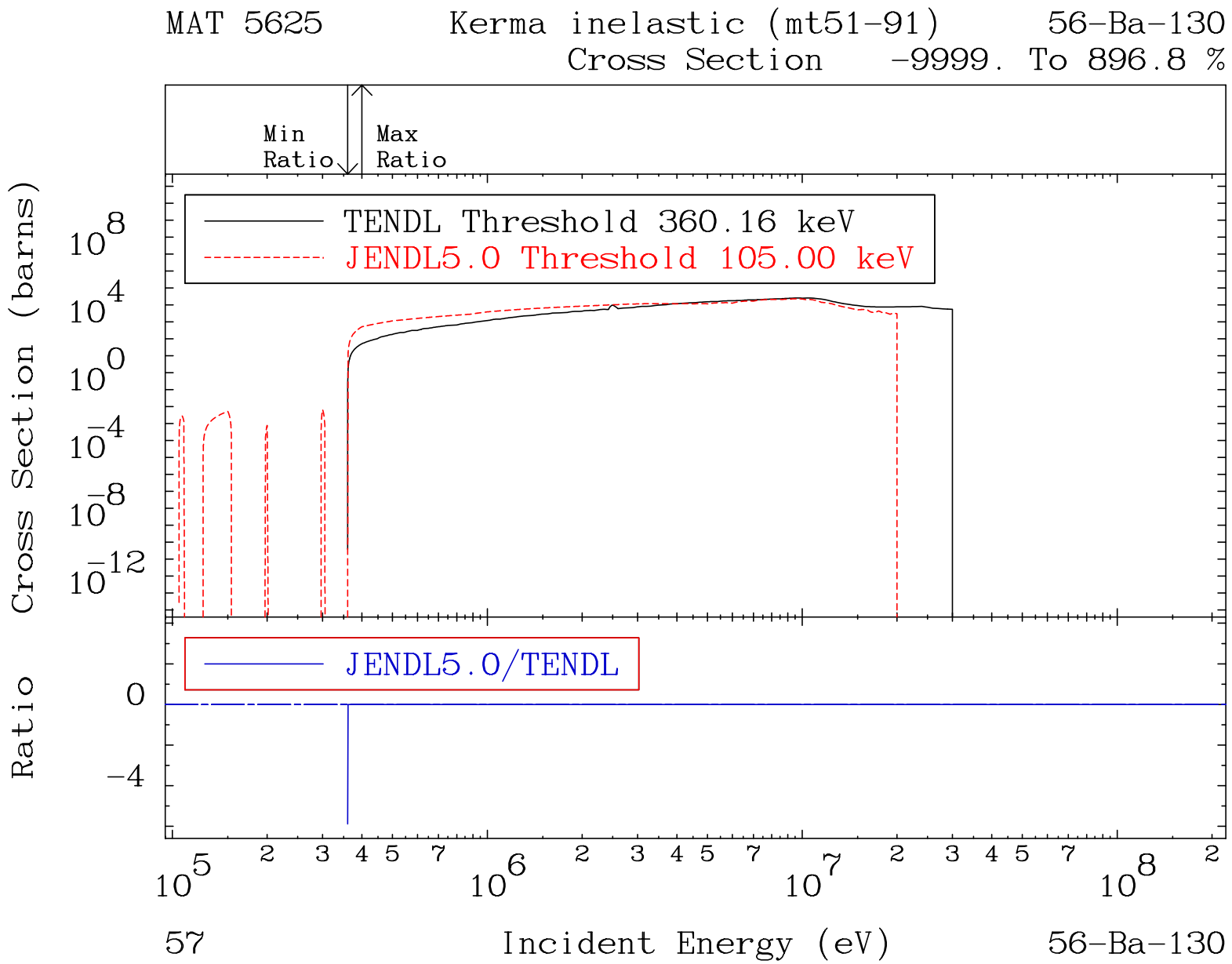

MAT 5625
He-3 Production
Cross Section
56-Ba-130
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 4.2892 MeV
JENDL5.0 Threshold 4.2942 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
100
0
5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
52
Incident Energy (eV)
56-Ba-130

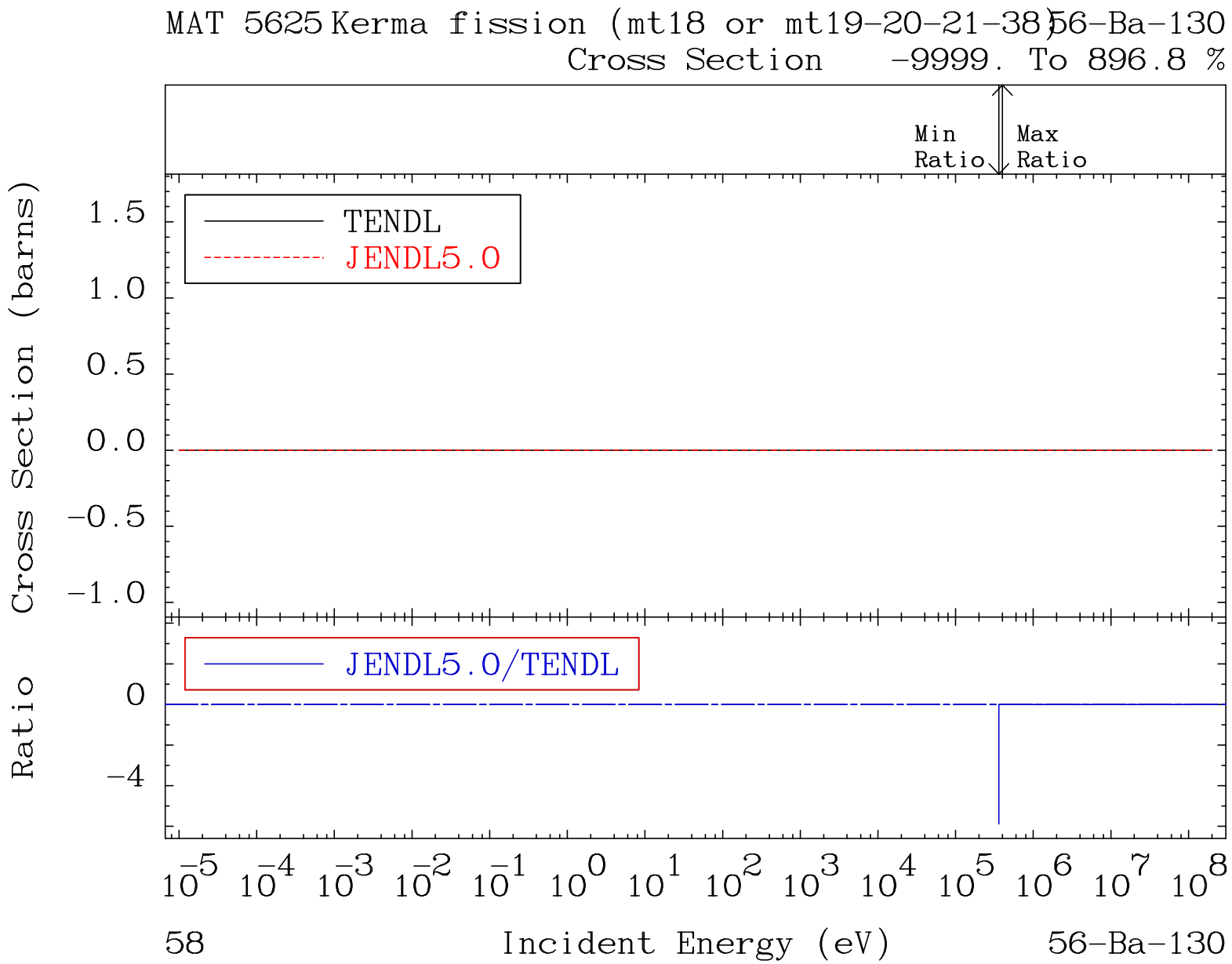

MAT 5625
He-4 Production
Cross Section
56-Ba-130
-86.24 To 3946. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
53
56-Ba-130

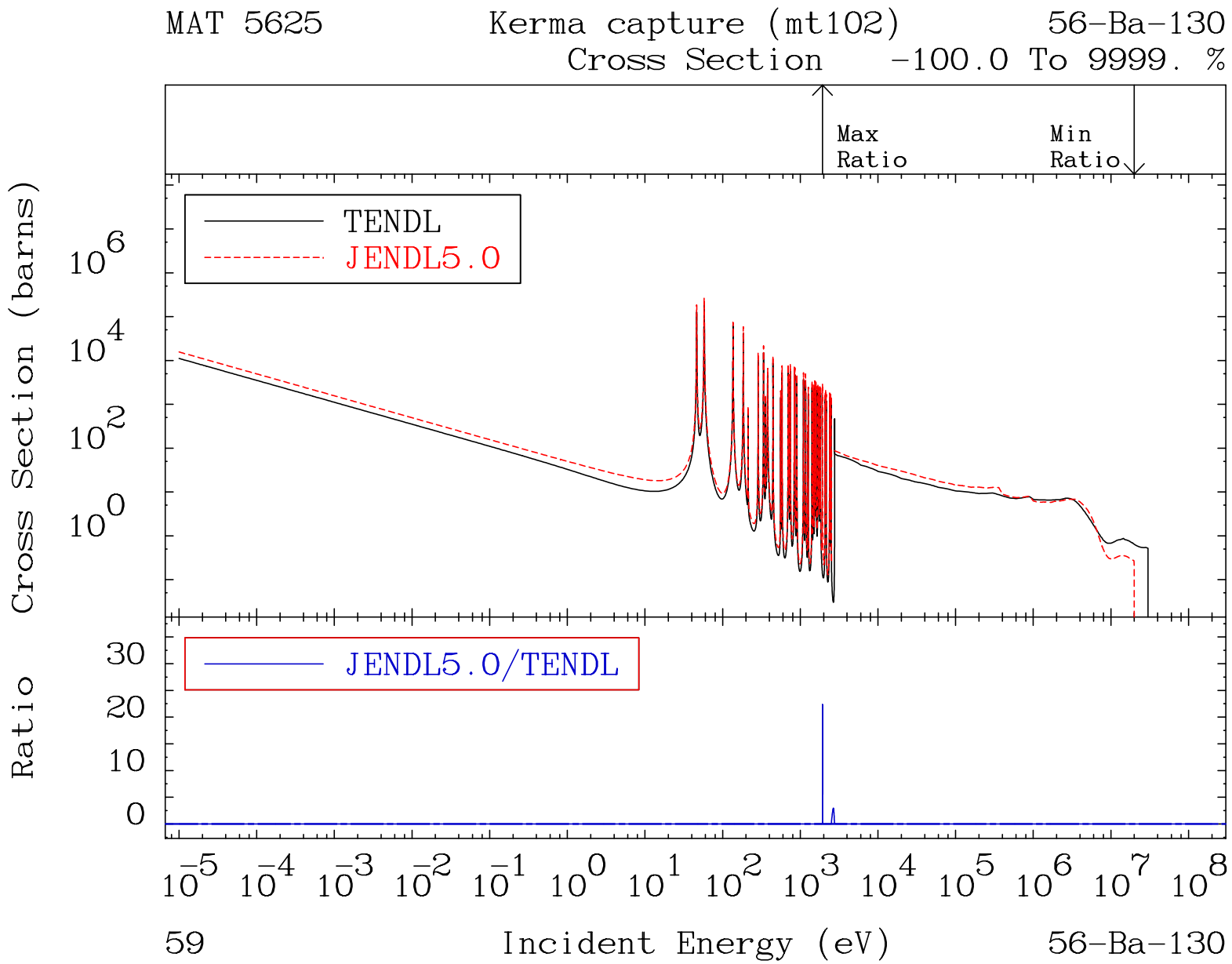

MAT 5625
Kerma total (eV-barns)
56-Ba-130
Cross Section -36.04 To 4196. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
54
56-Ba-130

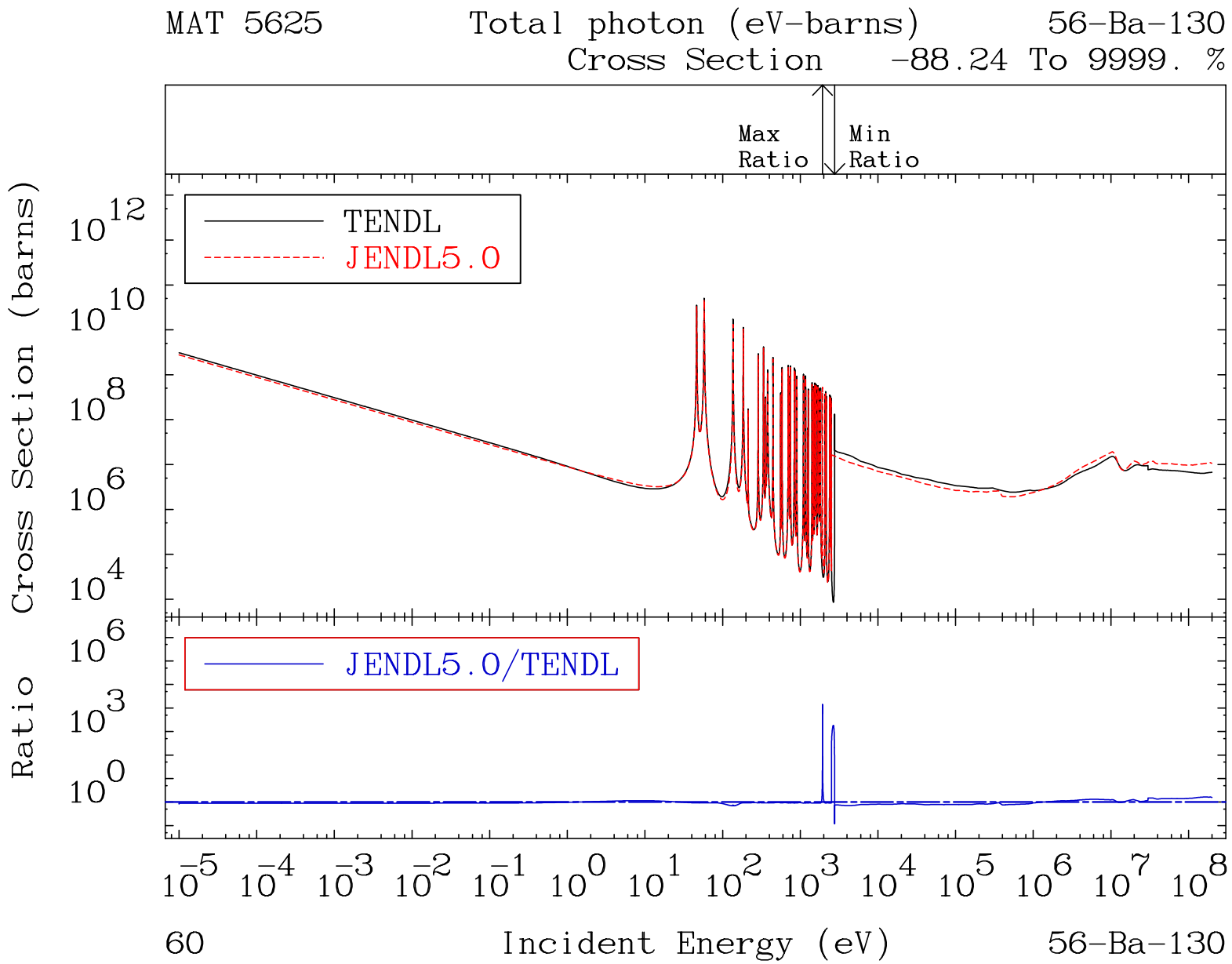

MAT 5625
Kerma elastic
Cross Section
56-Ba-130
-99.87 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
55
56-Ba-130

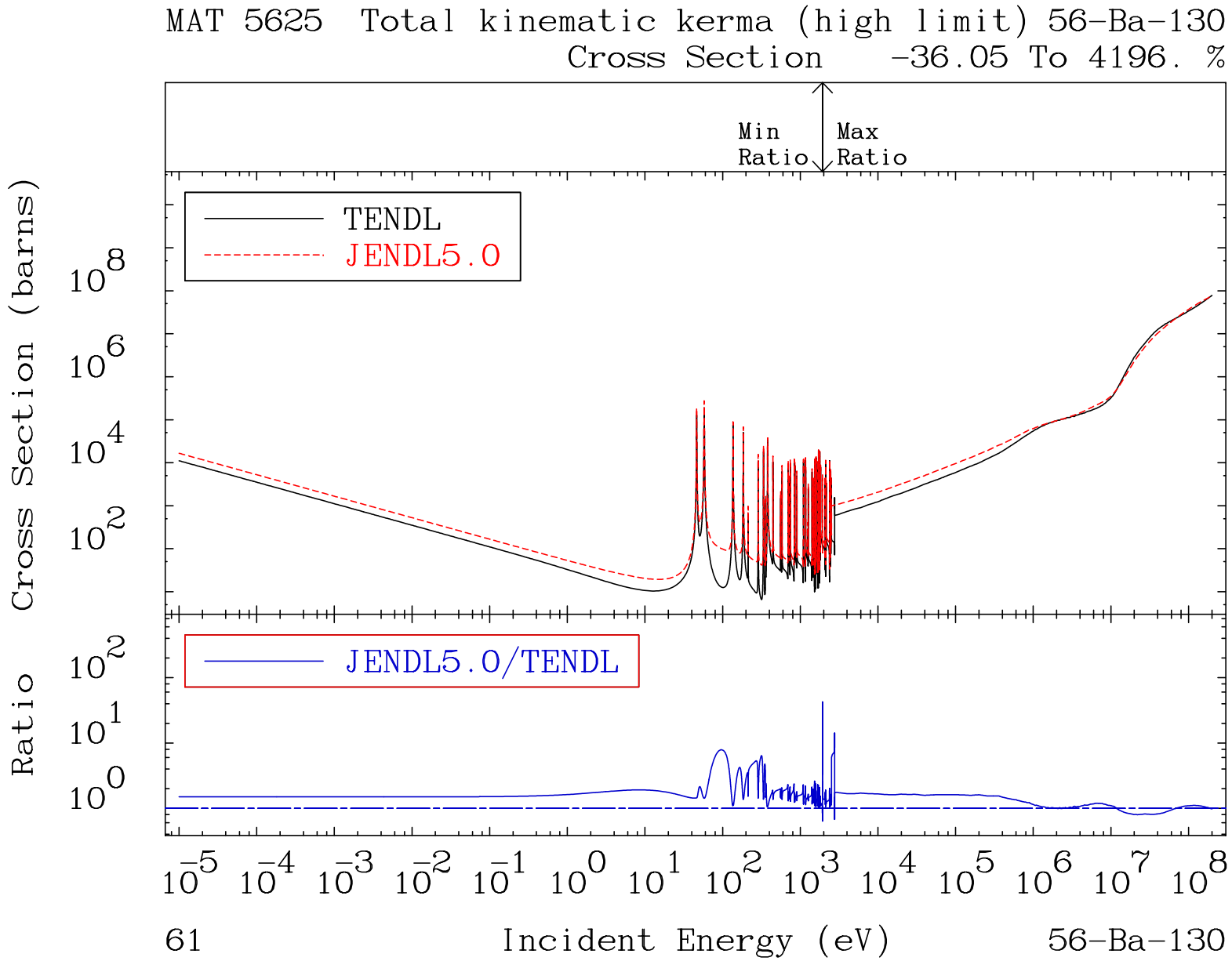

MAT 5625 Kerma non-elastic (all but mt2) 56-Ba-130
Cross Section -80.05 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
56
56-Ba-130

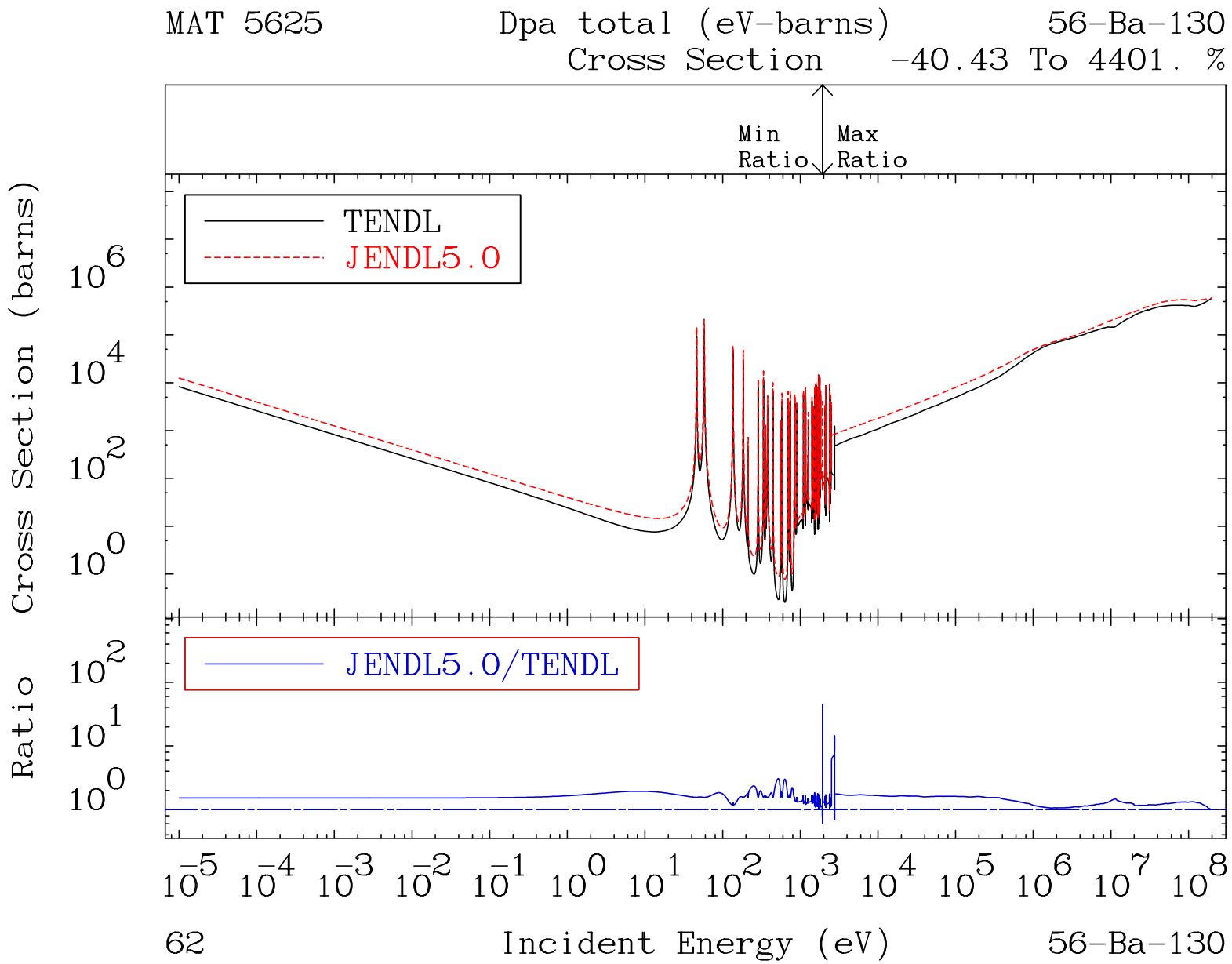

MAT 5625
Kerma inelastic (mt51-91)
56-Ba-130
Cross Section -9999. To 896.8 %
Min Ratio
Max Ratio
TENDL Threshold 360.16 keV
JENDL5.0 Threshold 105.00 keV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
57
56-Ba-130

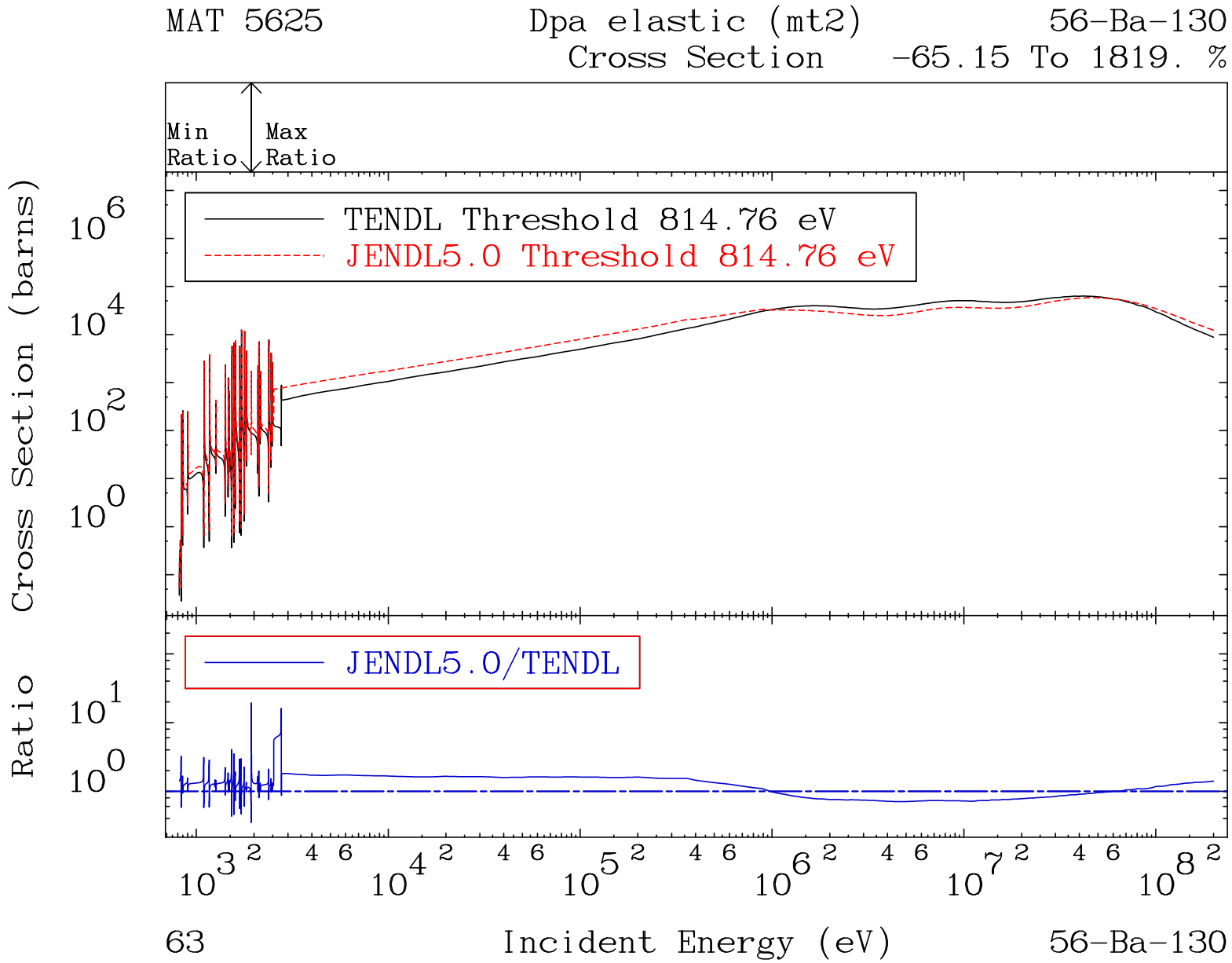

MAT 5625 Kerma fission (mt18 or mt19-20-21-38) 56-Ba-130
Cross Section -9999. To 896.8 %
Min Ratio
Max Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
0
-4
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
58
Incident Energy (eV)
56-Ba-130

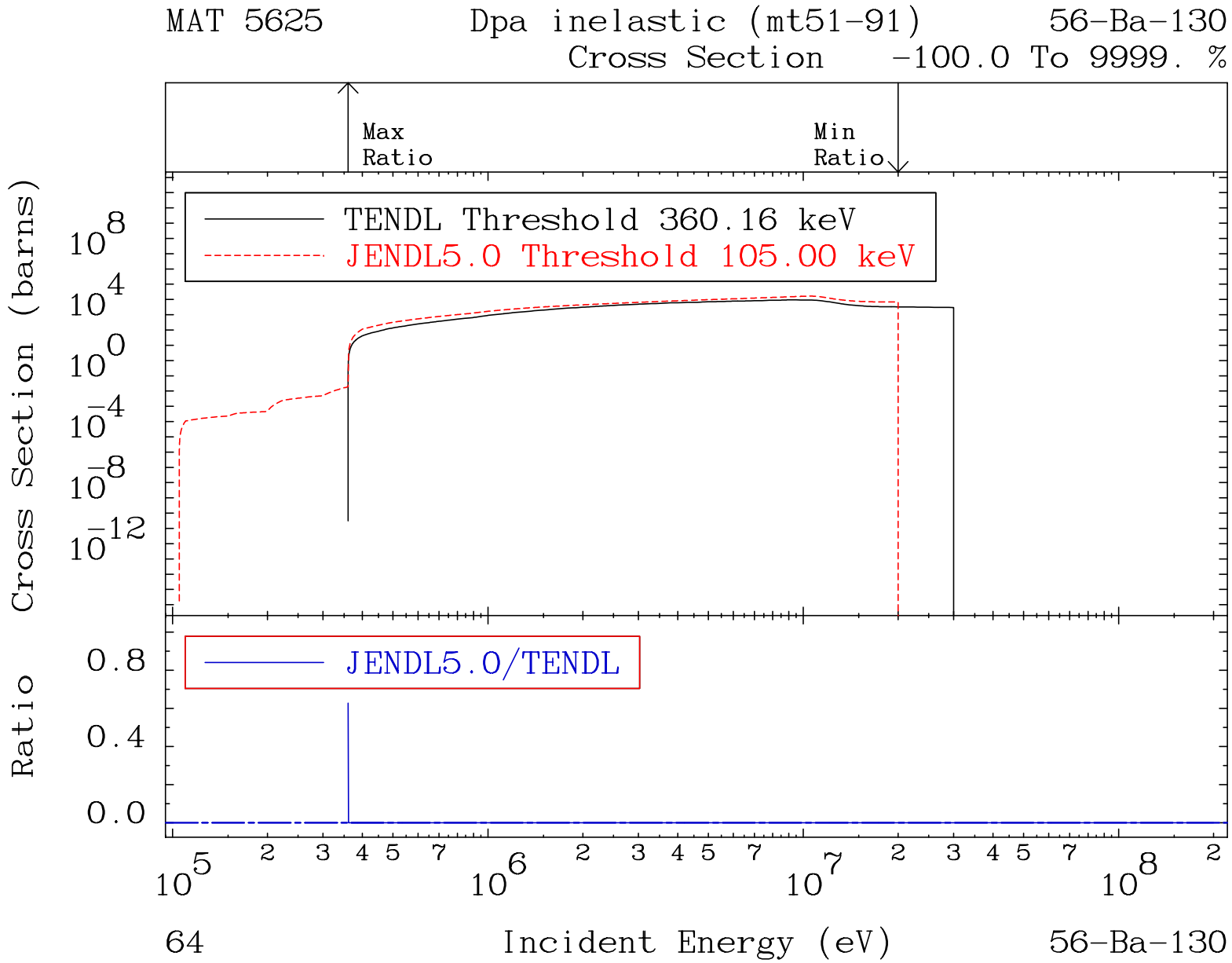

MAT 5625
Kerma capture (mt102)
56-Ba-130
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
59
56-Ba-130

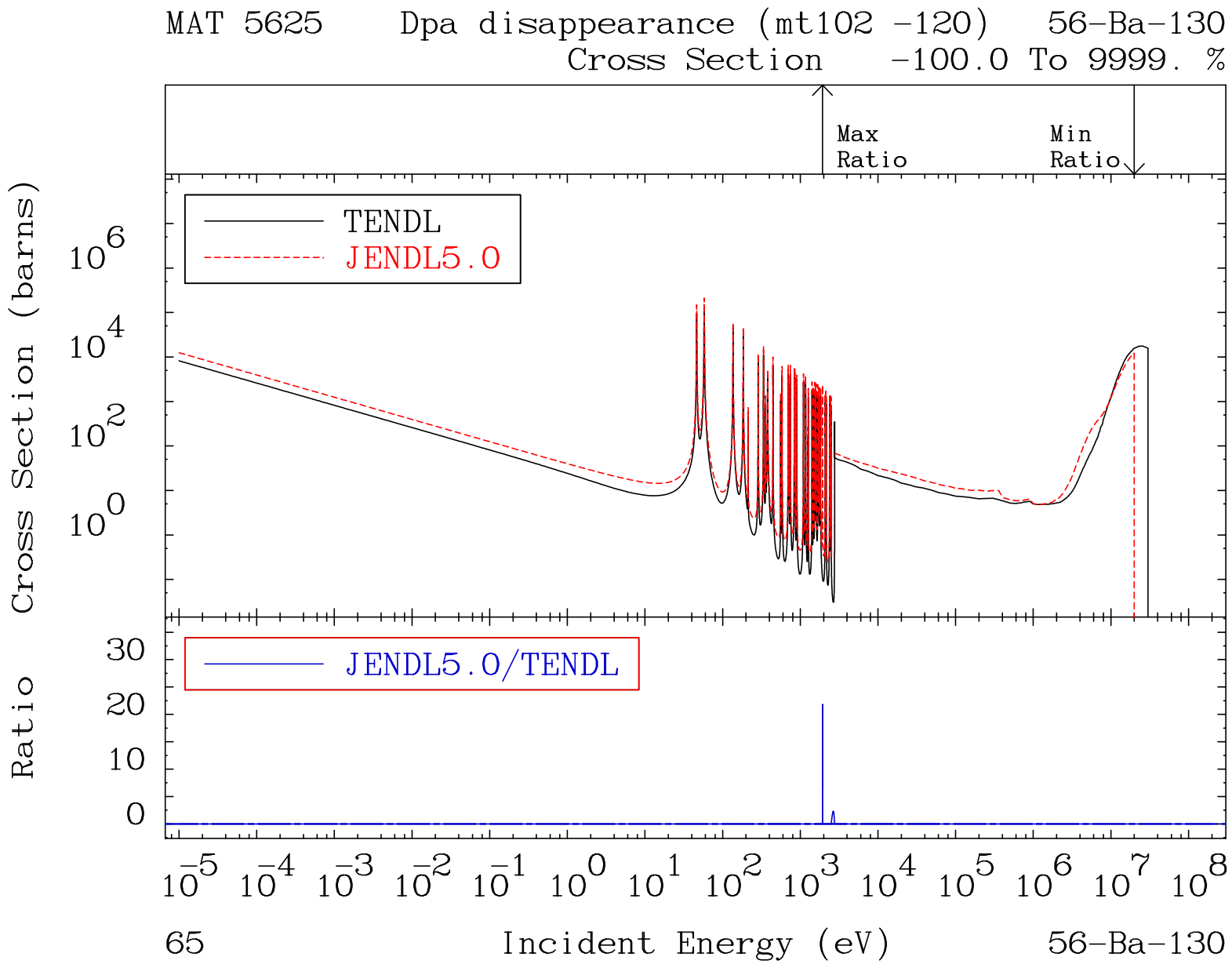

MAT 5625
Total photon (eV-barns)
56-Ba-130
Cross Section -88.24 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
60
56-Ba-130

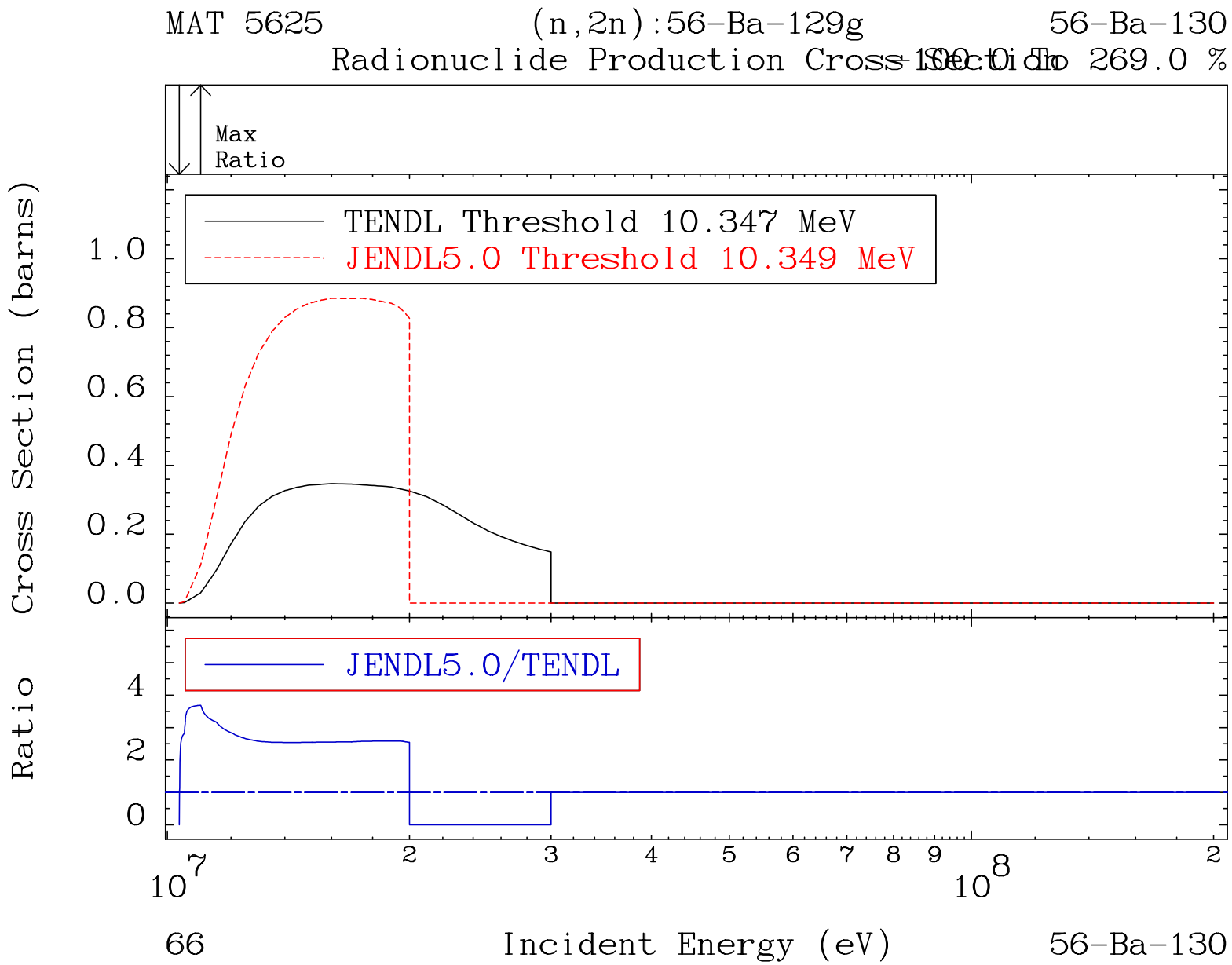

MAT 5625 Total kinematic kerma (high limit) 56-Ba-130
Cross Section -36.05 To 4196. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
61
56-Ba-130

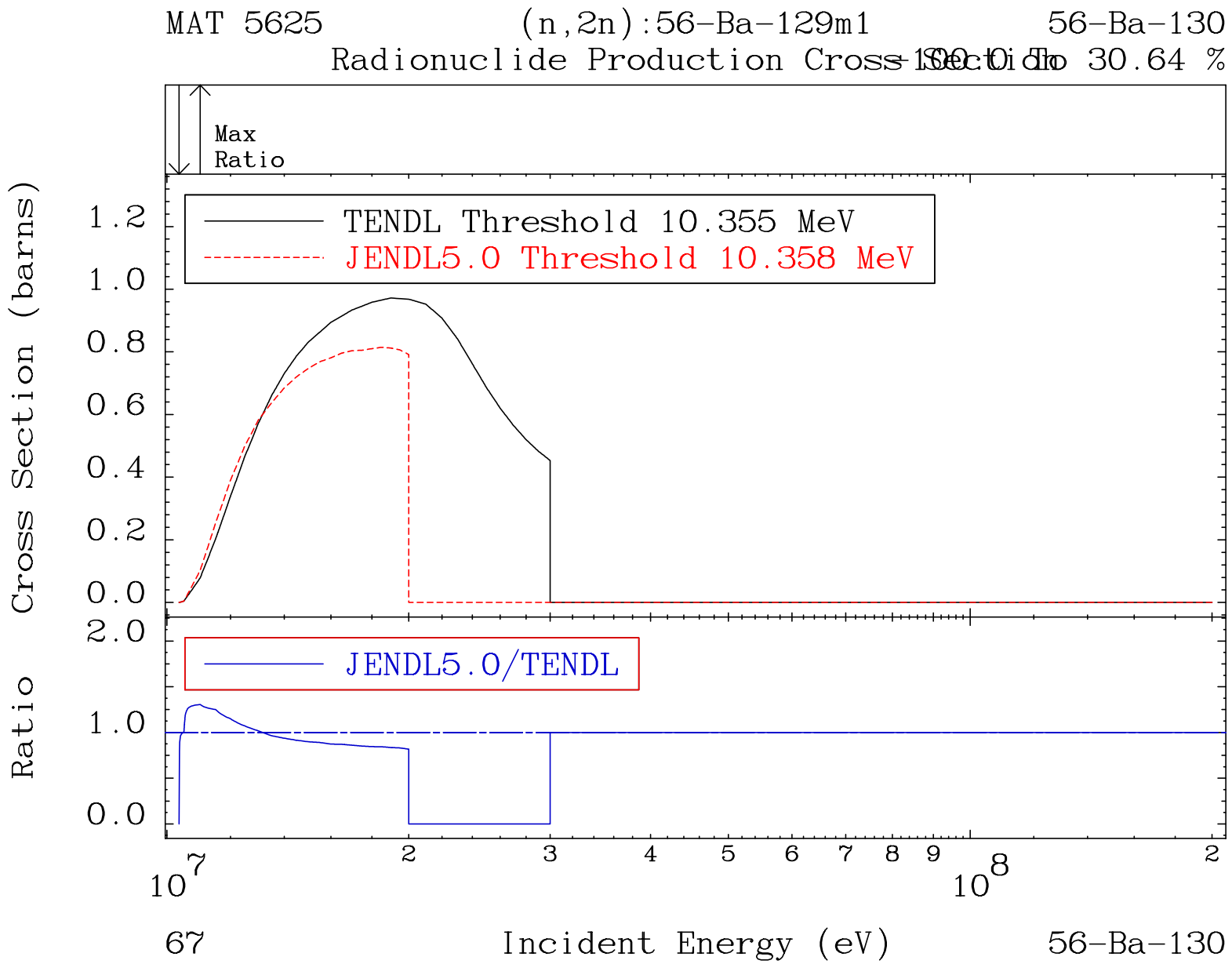

MAT 5625
Dpa total (eV-barns)
56-Ba-130
Cross Section
-40.43 To 4401. %
Min Ratio
Max Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
62
56-Ba-130

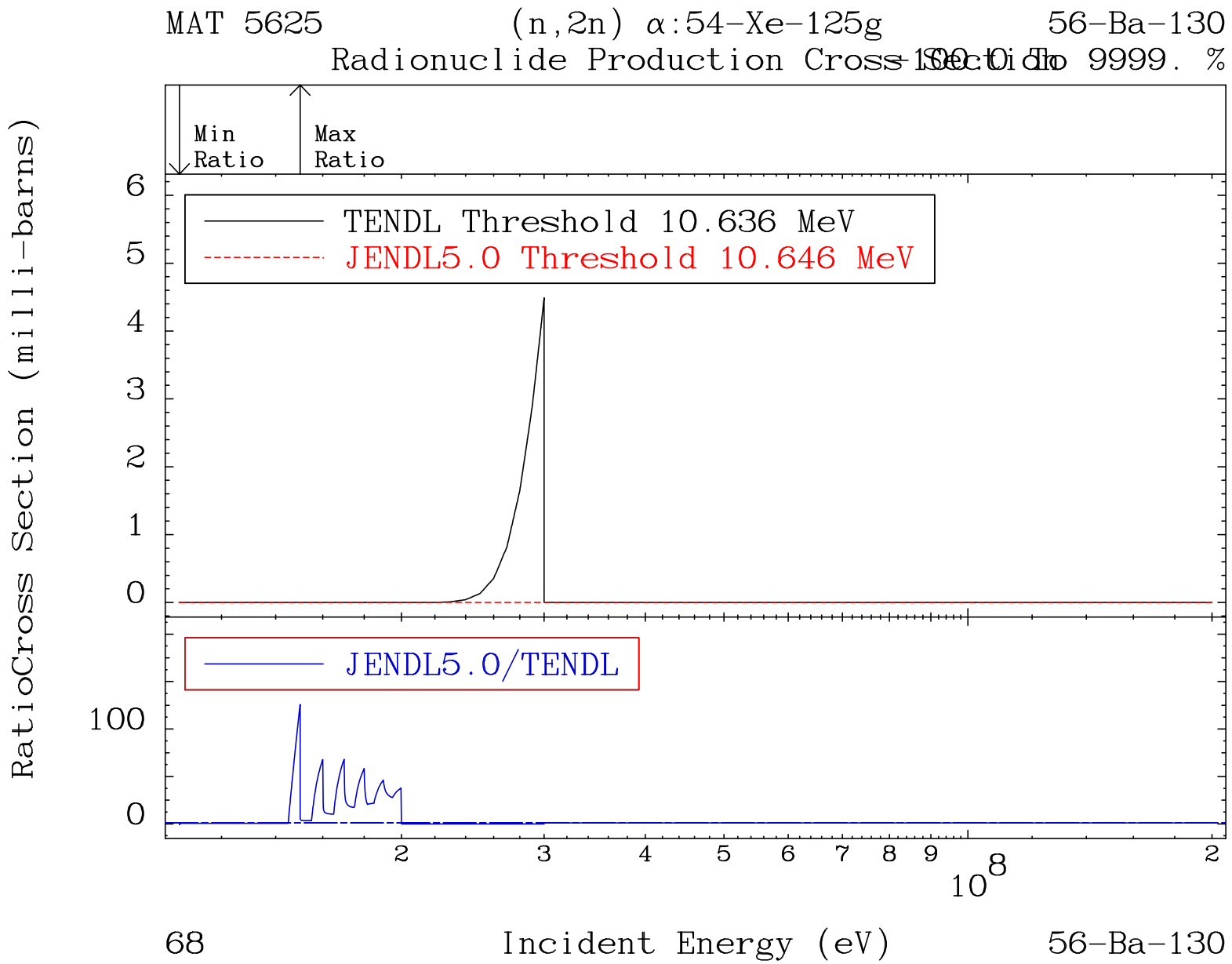

MAT 5625
Dpa elastic (mt2)
Cross Section
56-Ba-130
-65.15 To 1819. %
Min Ratio
Max Ratio
TENDL Threshold 814.76 eV
JENDL5.0 Threshold 814.76 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
63
56-Ba-130

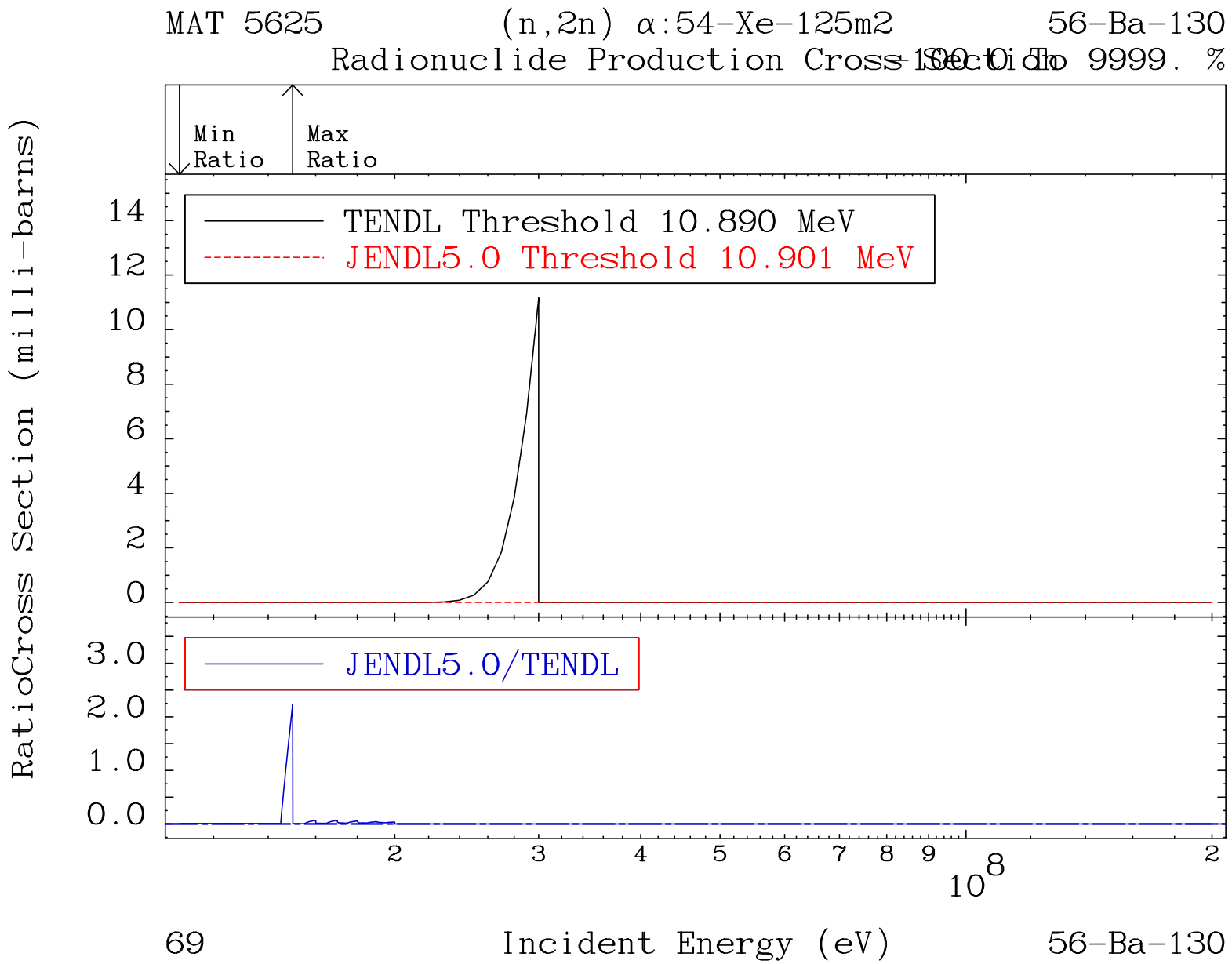

MAT 5625
Dpa inelastic (mt51-91)
56-Ba-130
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 360.16 keV
JENDL5.0 Threshold 105.00 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
64
56-Ba-130

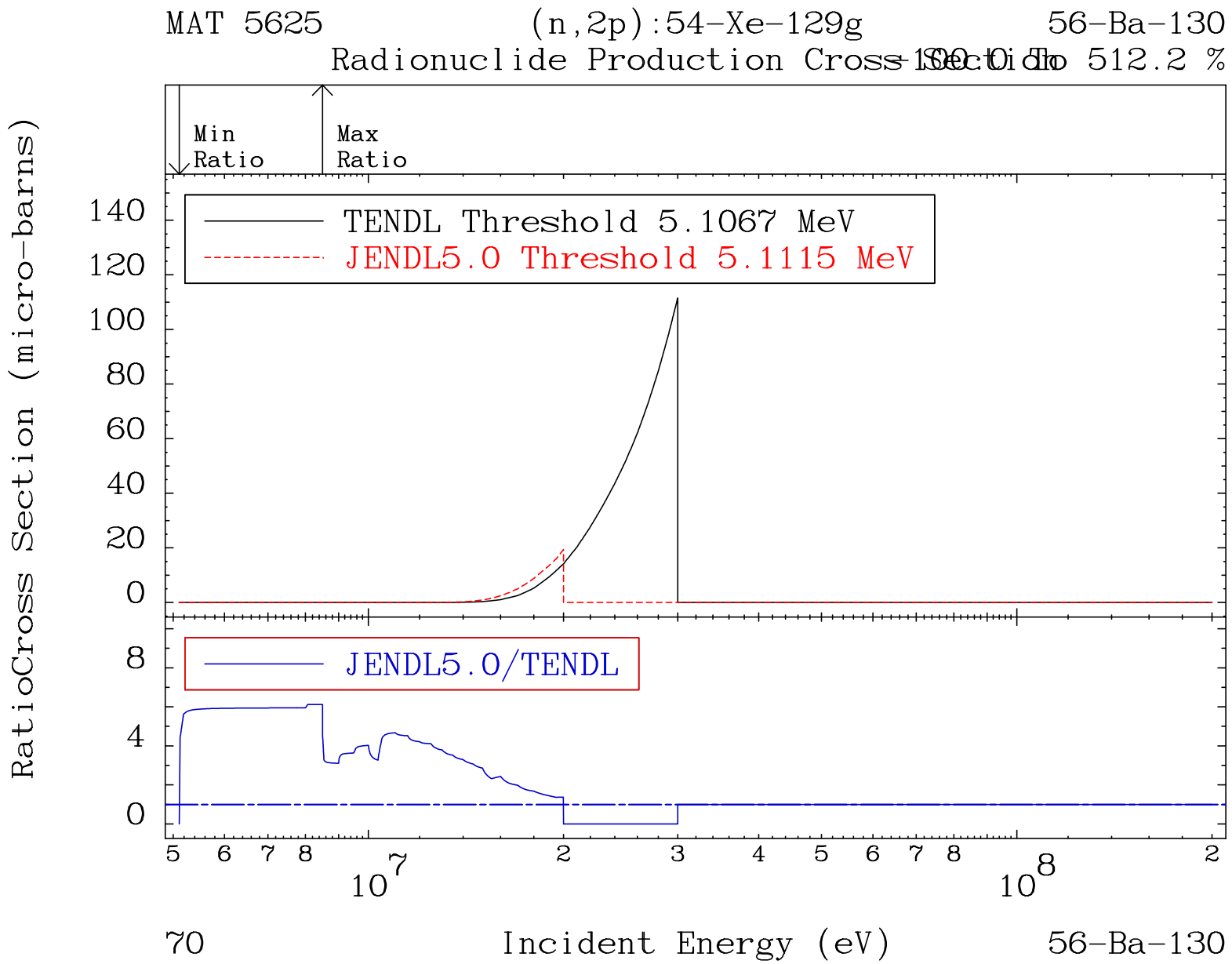

MAT 5625 Dpa disappearance (mt102 -120) 56-Ba-130
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
65
56-Ba-130

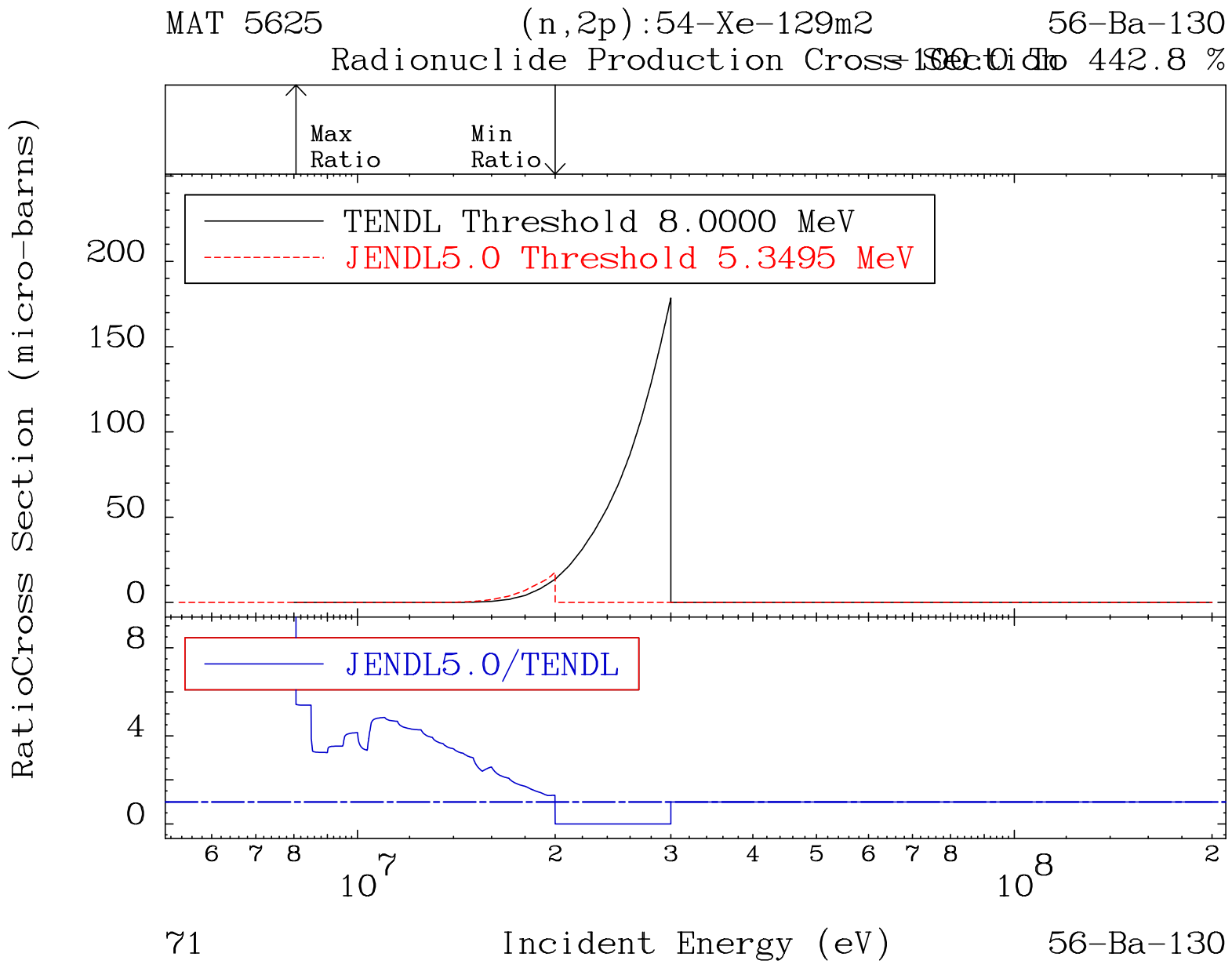

MAT 5625
(n,2n):56-Ba-129g
56-Ba-130
Radionuclide Production Cross Section To 269.0 %
Max
Ratio
TENDL Threshold 10.347 MeV
JENDL5.0 Threshold 10.349 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.0
0.8
0.6
0.4
0.2
0.0
4
2
0
10^7
2
3
4
5
6
7
8
9
10^8
2
66
Incident Energy (eV)
56-Ba-130

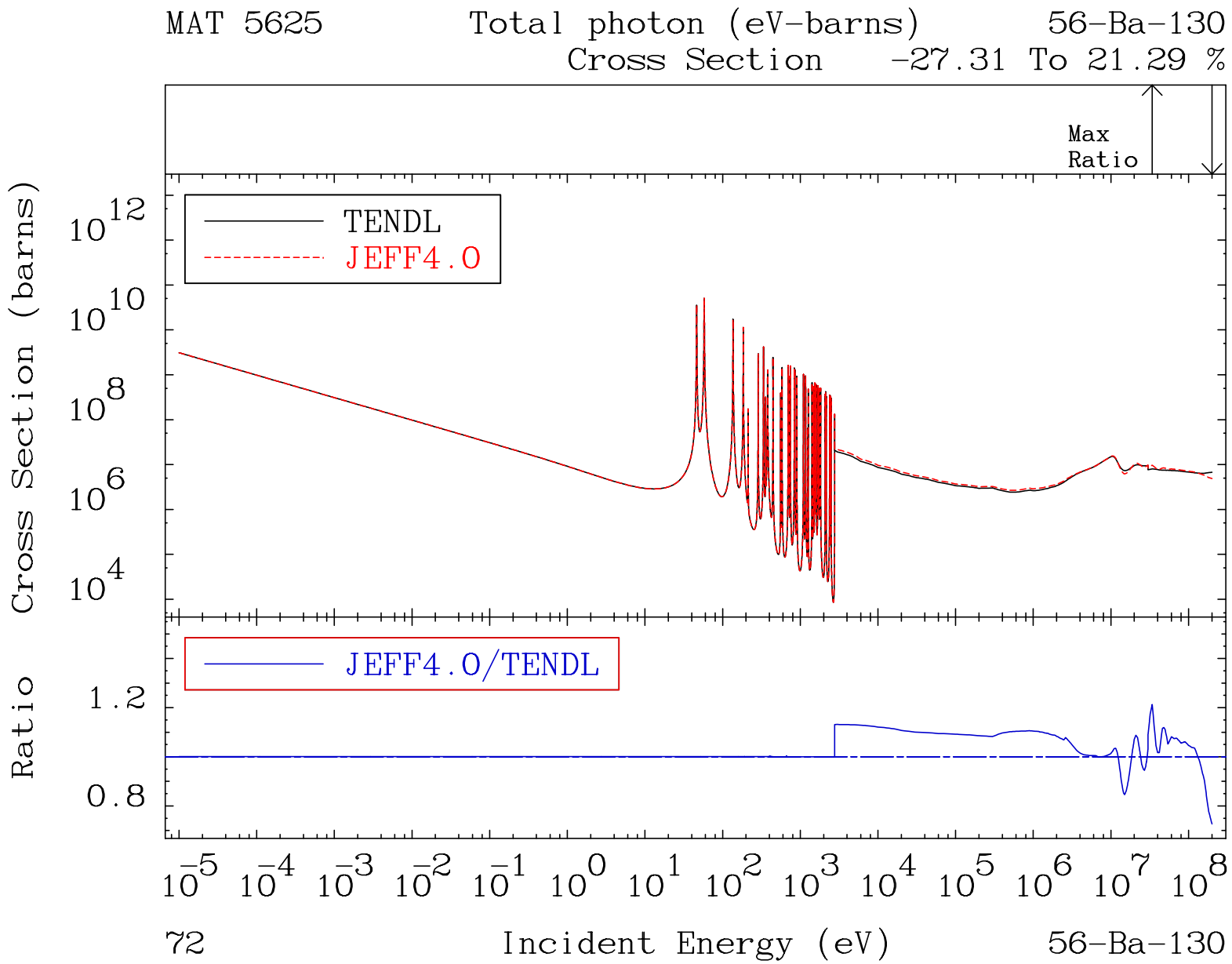

MAT 5625
(n,2n):56-Ba-129m1
56-Ba-130
Radionuclide Production Cross Section
Max
Ratio
TENDL Threshold 10.355 MeV
JENDL5.0 Threshold 10.358 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.0
1.0
0.0
10^7
2
3
4
5
6
7
8
9
10^8
2
67
Incident Energy (eV)
56-Ba-130

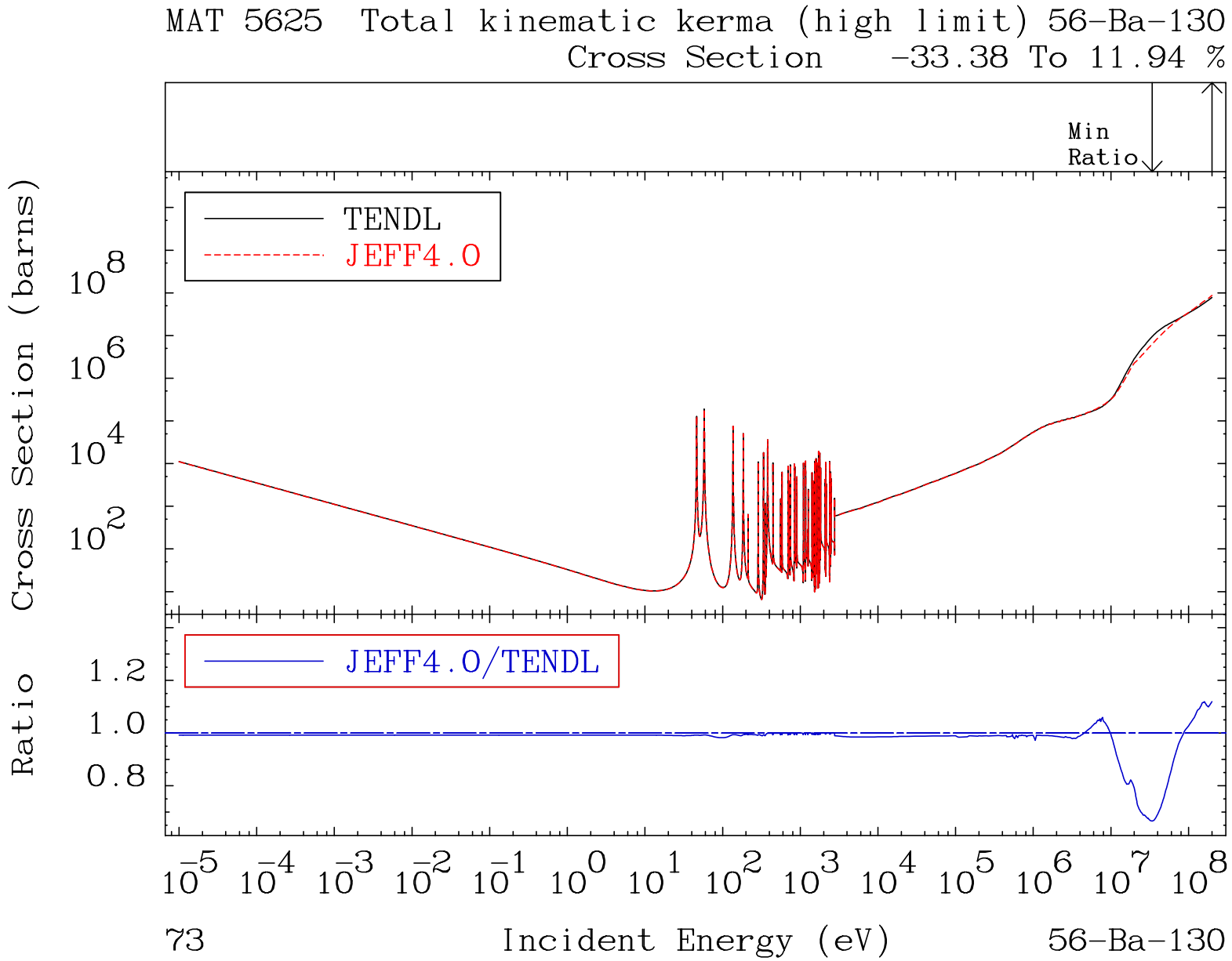

MAT 5625
(n,2n) α:54-Xe-125g
56-Ba-130
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 10.636 MeV
JENDL5.0 Threshold 10.646 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
68
56-Ba-130

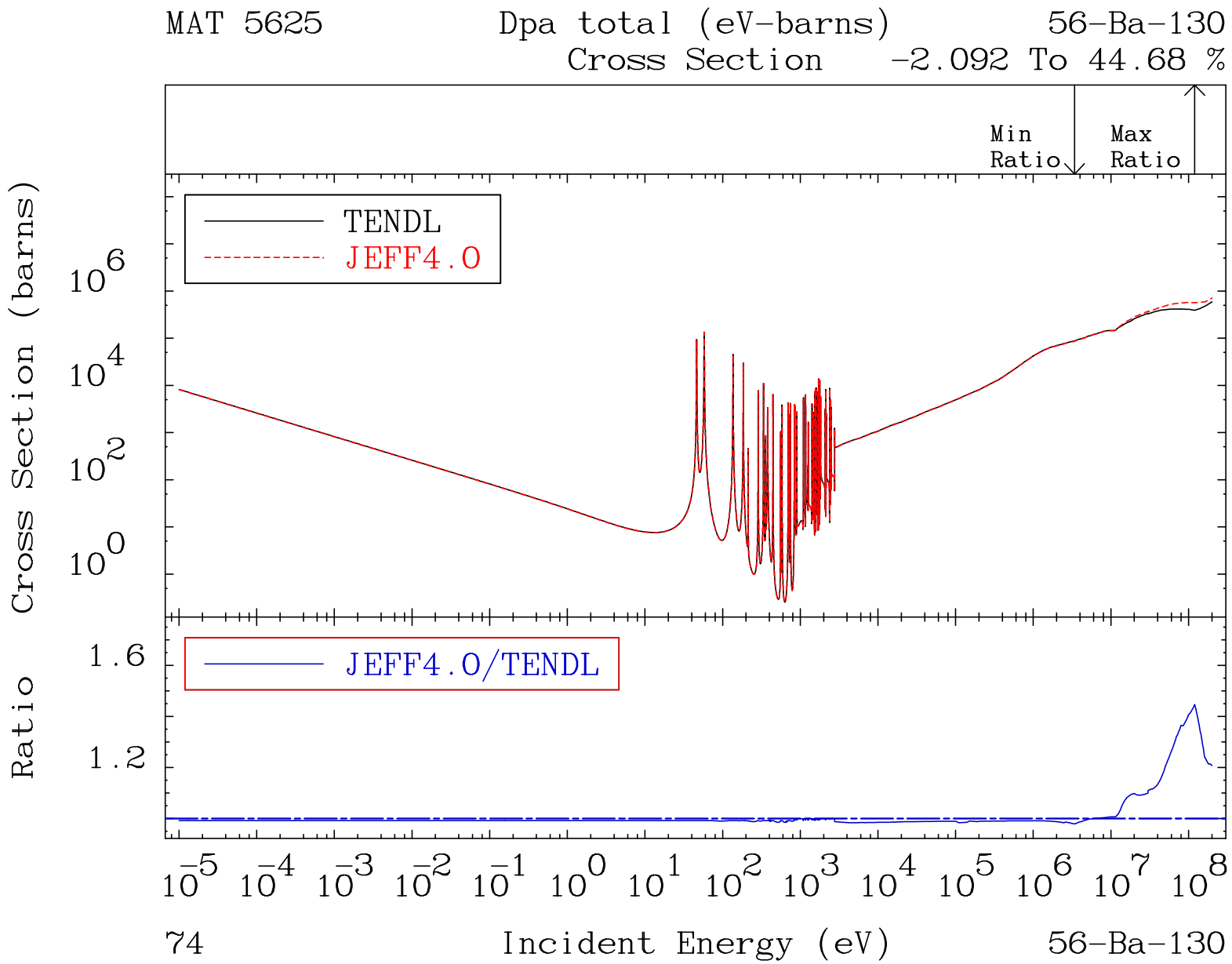

MAT 5625
(n,2n) α:54-Xe-125m2
56-Ba-130
Radionuclide Production Cross Section To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 10.890 MeV
JENDL5.0 Threshold 10.901 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
14
12
10
8
6
4
2
0
3.0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
10^8
2
69
Incident Energy (eV)
56-Ba-130

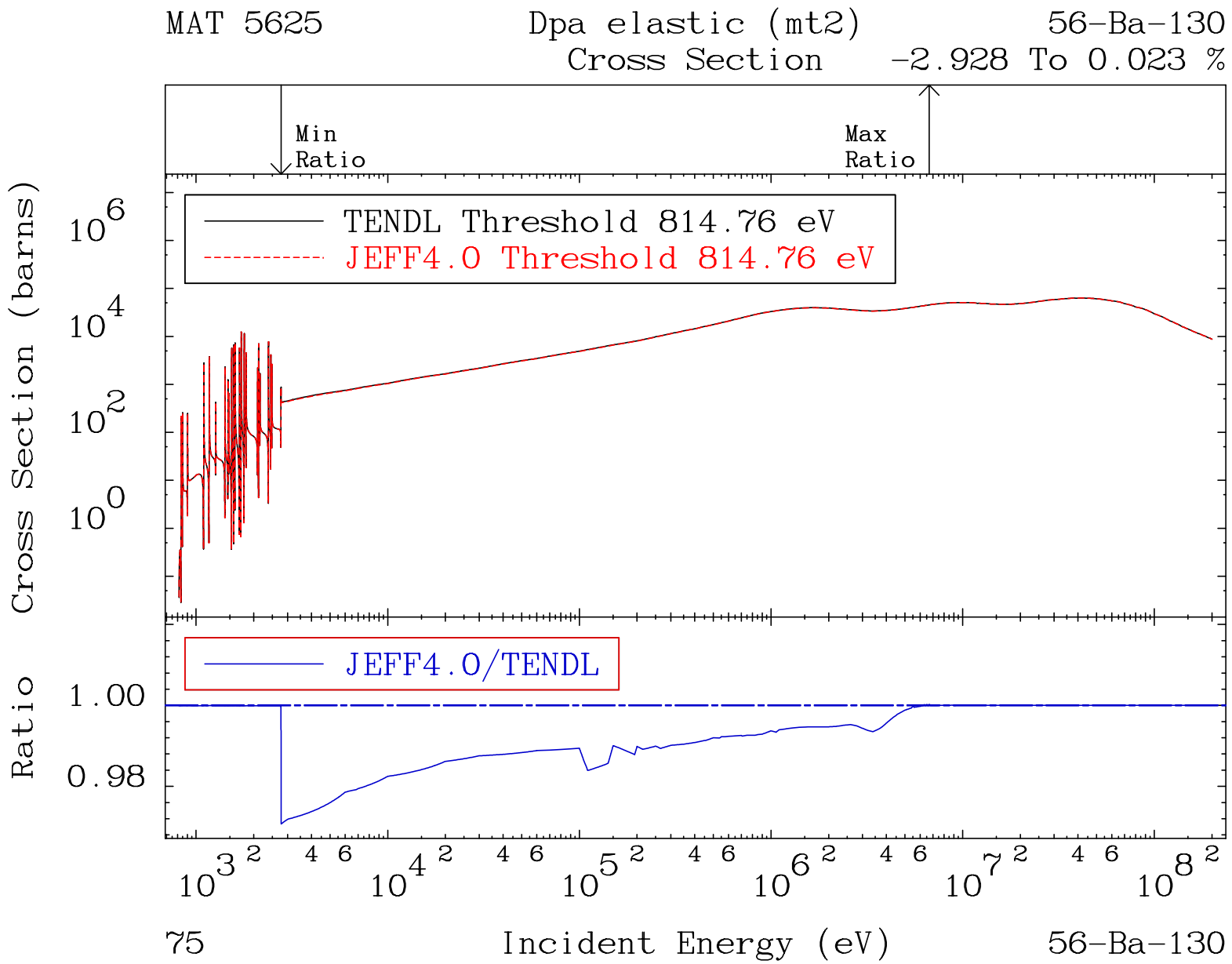

MAT 5625
(n,2p):54-Xe-129g
56-Ba-130
Radionuclide Production Cross Section To 512.2 %
Min Ratio
Max Ratio
TENDL Threshold 5.1067 MeV
JENDL5.0 Threshold 5.1115 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
70
56-Ba-130

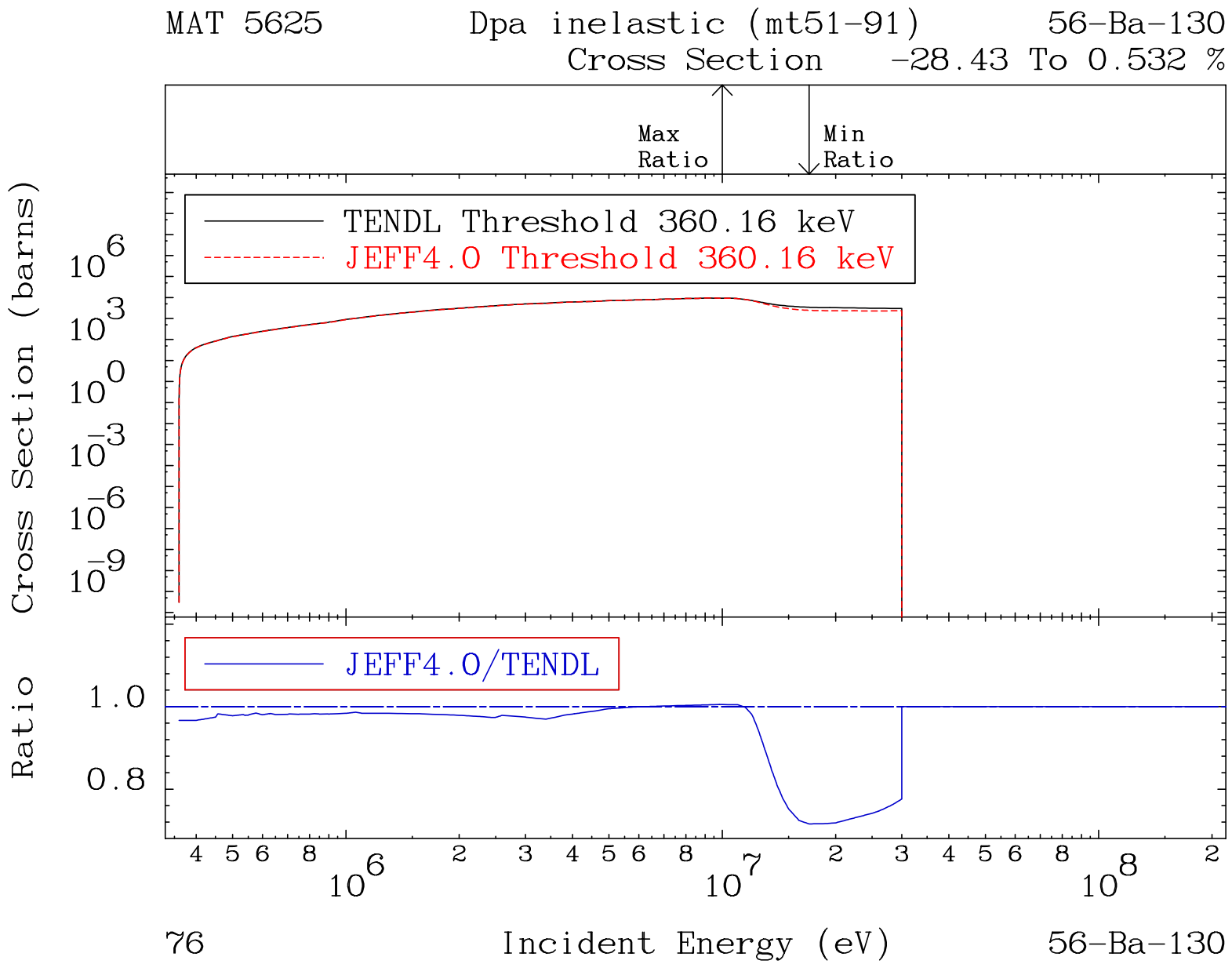

MAT 5625
(n,2p):54-Xe-129m2
56-Ba-130
Radionuclide Production Cross Section To 442.8 %
Max Ratio
Min Ratio
TENDL Threshold 8.0000 MeV
JENDL5.0 Threshold 5.3495 MeV
JENDL5.0/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
8
4
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
71
Incident Energy (eV)
56-Ba-130

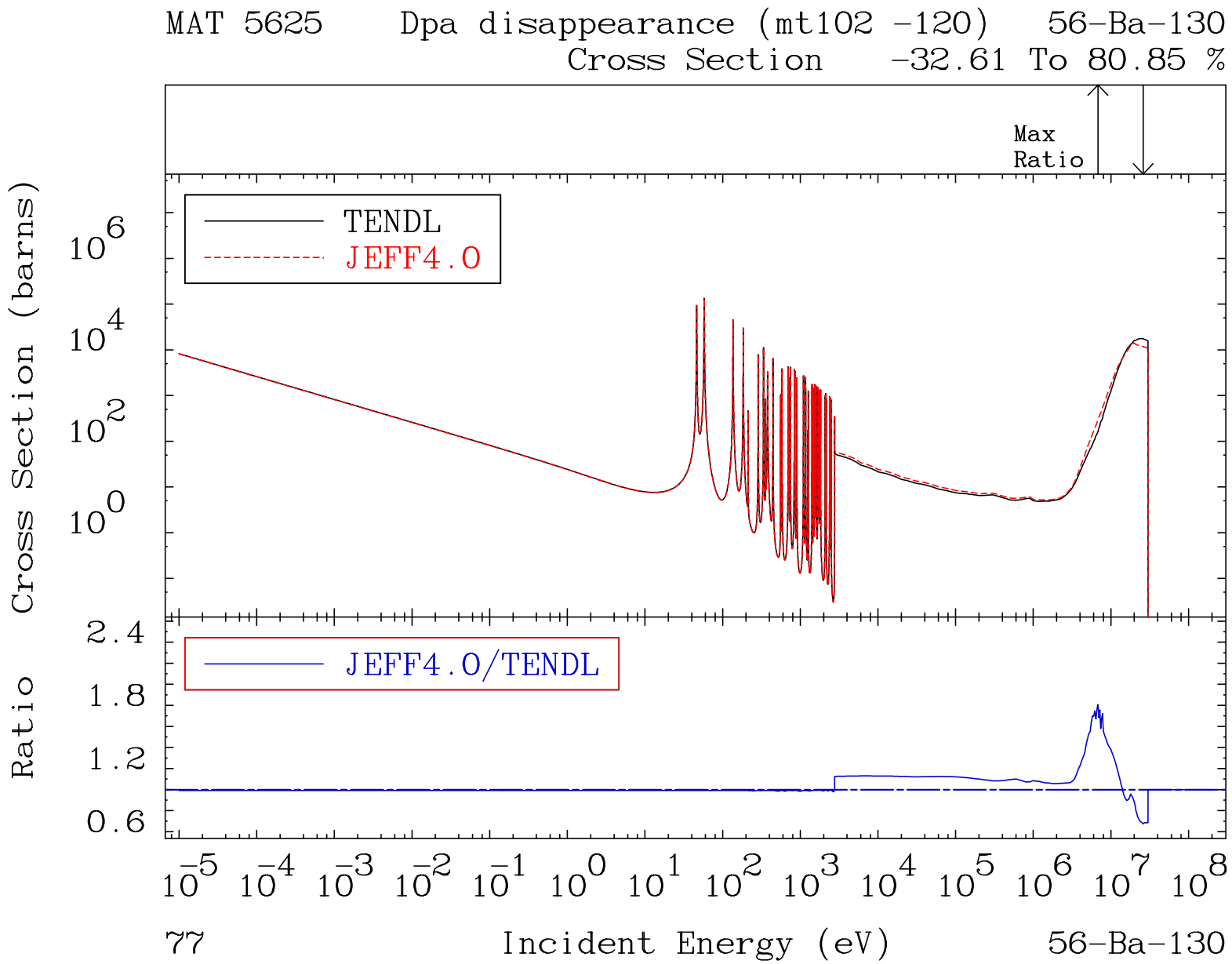

MAT 5625
Total photon (eV-barns)
56-Ba-130
Cross Section -27.31 To 21.29 %
Max
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
72
56-Ba-130

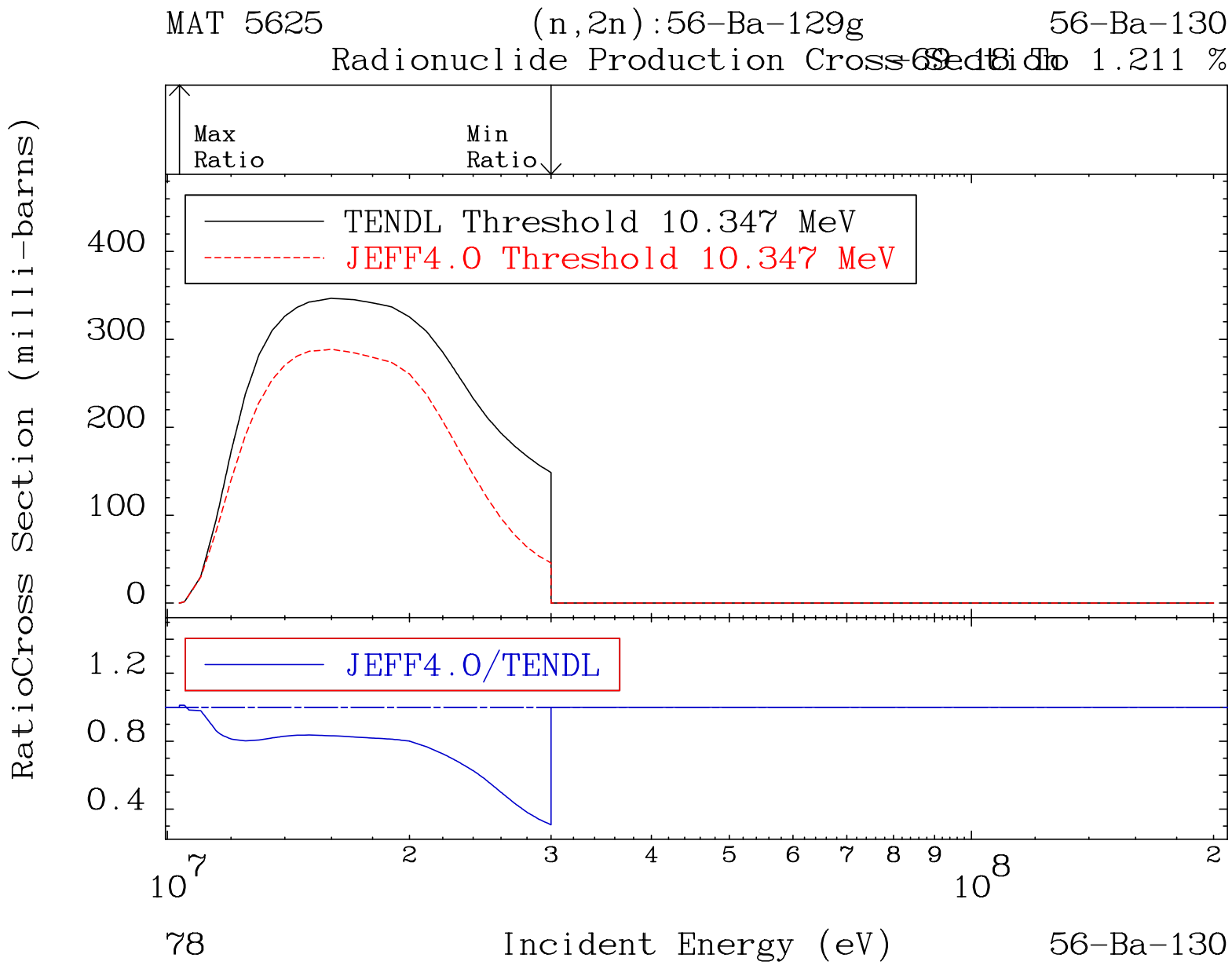

MAT 5625 Total kinematic kerma (high limit) 56-Ba-130
Cross Section -33.38 To 11.94 %
Min
Ratio
TENDL
JEFF4.0
Cross Section (barns)
$10^8$
$10^6$
$10^4$
$10^2$
JEFF4.0/TENDL
Ratio
1.2
1.0
0.8
$10^{-5}$ $10^{-4}$ $10^{-3}$ $10^{-2}$ $10^{-1}$ $10^0$ $10^1$ $10^2$ $10^3$ $10^4$ $10^5$ $10^6$ $10^7$ $10^8$
73
Incident Energy (eV)
56-Ba-130

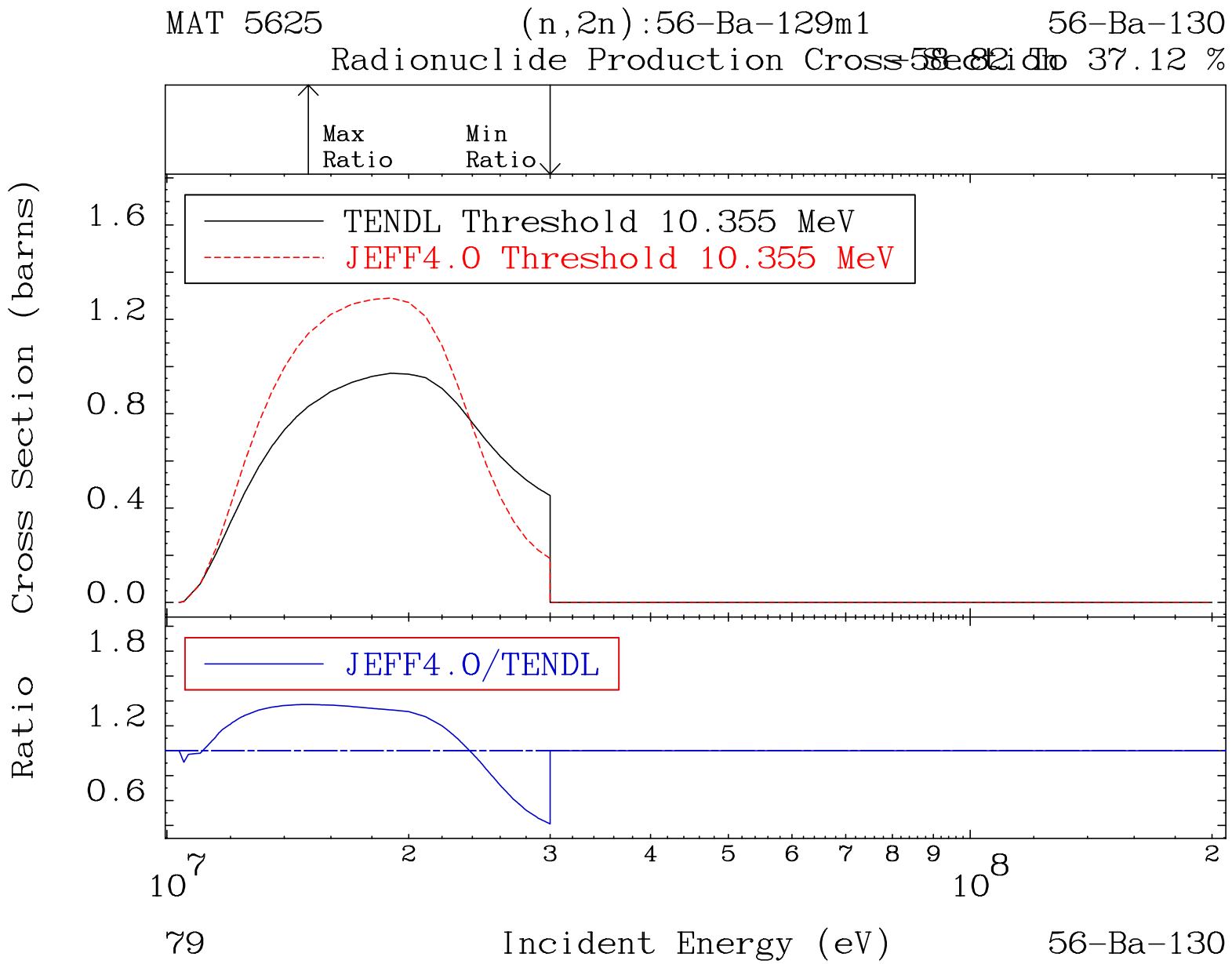

MAT 5625
Dpa total (eV-barns)
56-Ba-130
Cross Section
-2.092 To 44.68 %
Min Ratio
Max Ratio
TENDL
JEFF4.0
Cross Section (barns)
10^6
10^4
10^2
10^0
JEFF4.0/TENDL
Ratio
1.6
1.2
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
74
Incident Energy (eV)
56-Ba-130

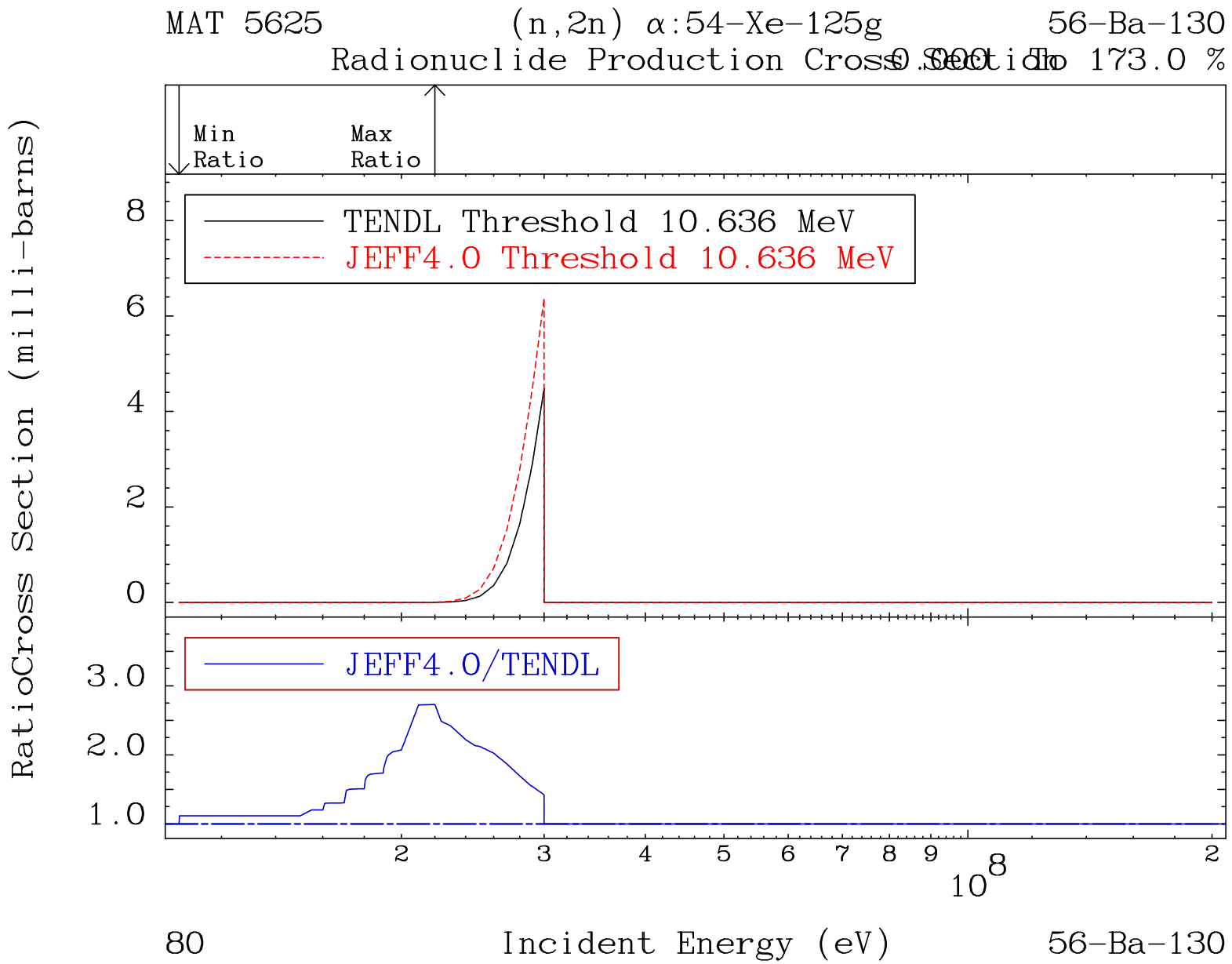

MAT 5625
Dpa elastic (mt2)
Cross Section
56-Ba-130
-2.928 To 0.023 %
Min Ratio
Max Ratio
TENDL Threshold 814.76 eV
JEFF4.0 Threshold 814.76 eV
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
75
56-Ba-130

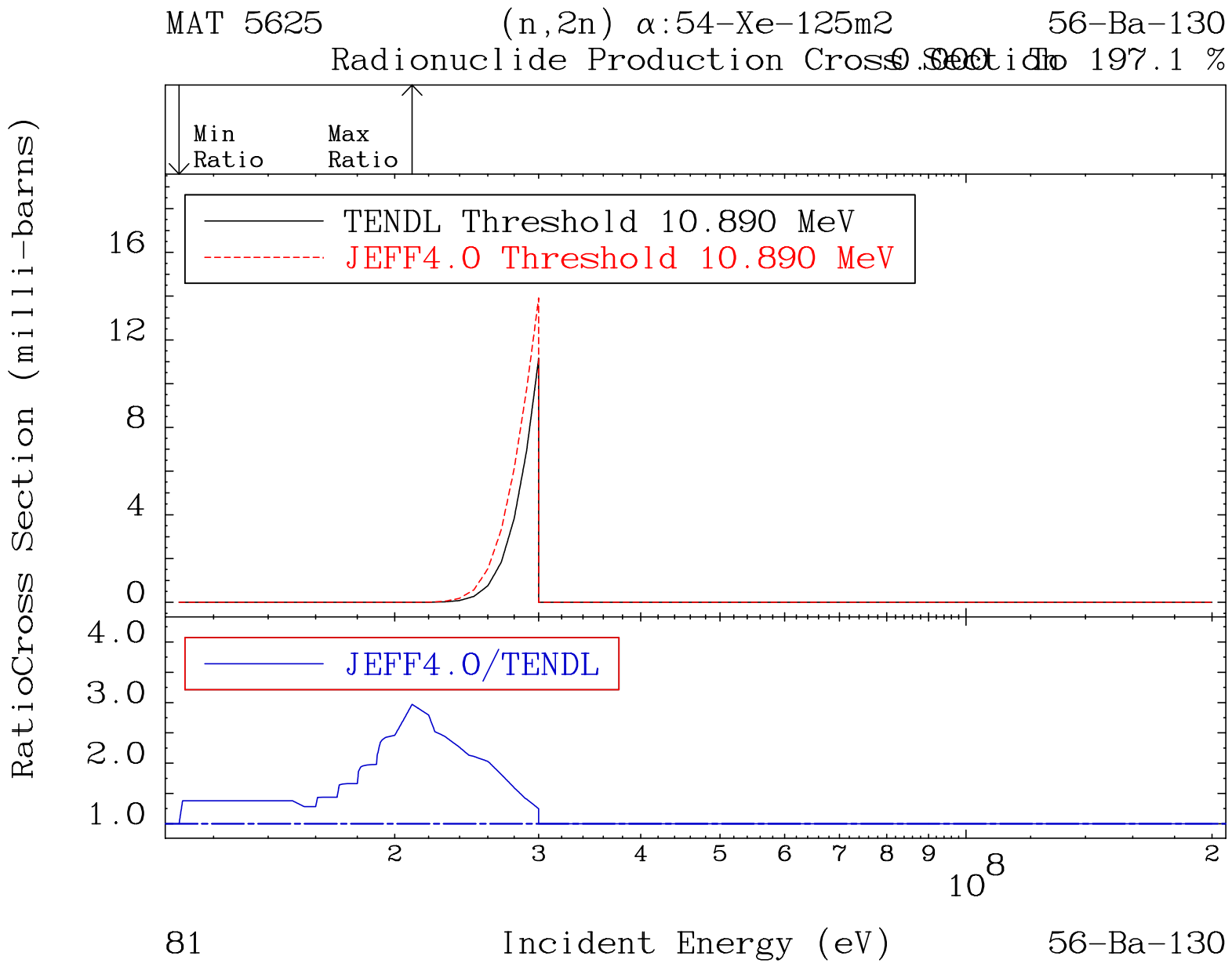

MAT 5625
Dpa inelastic (mt51-91)
56-Ba-130
Cross Section
-28.43 To 0.532 %
Max Ratio
Min Ratio
TENDL Threshold 360.16 keV
JEFF4.0 Threshold 360.16 keV
Cross Section (barns)
JEFF4.0/TENDL
Ratio
Incident Energy (eV)
76
56-Ba-130

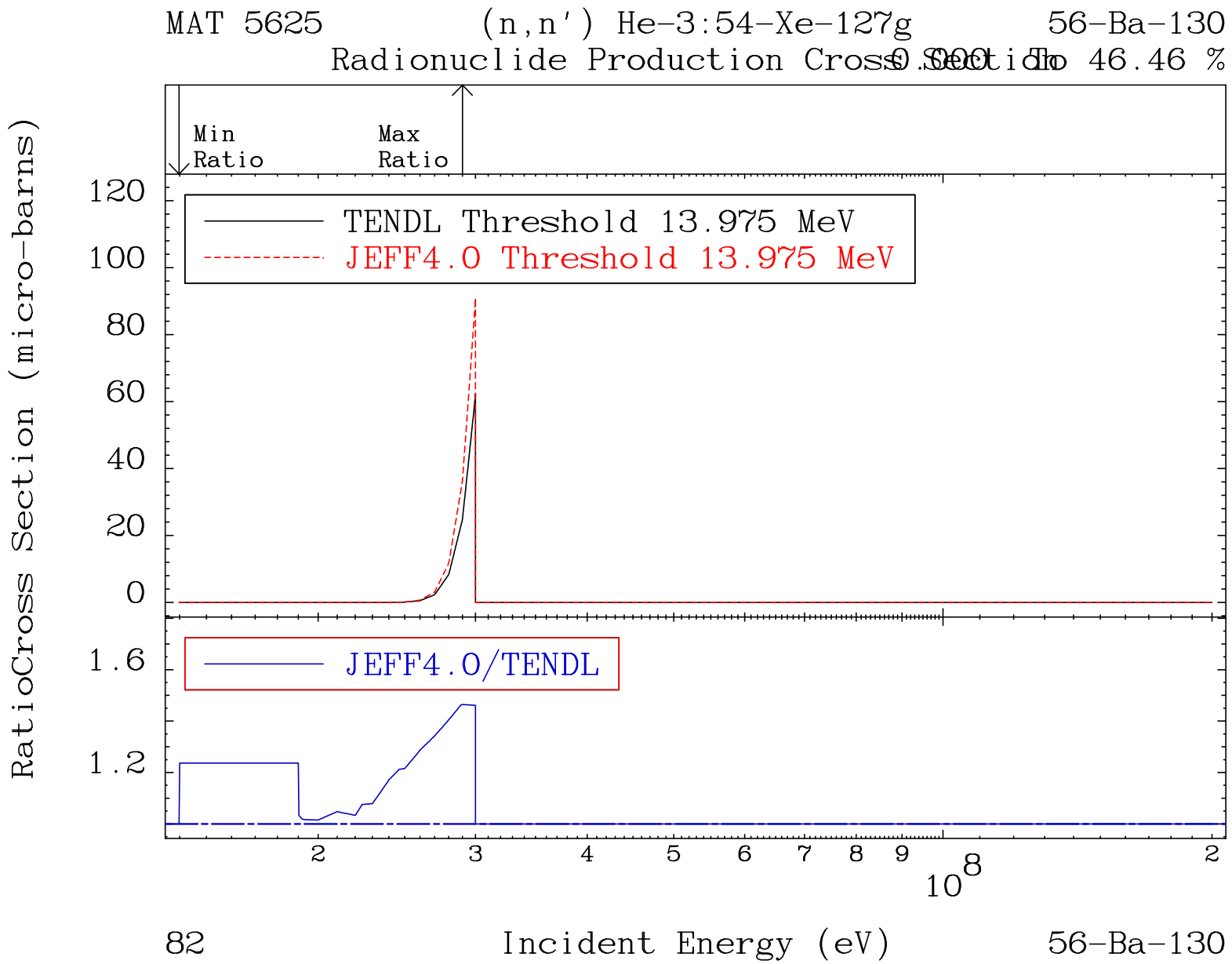

MAT 5625 Dpa disappearance (mt102 -120) 56-Ba-130
Cross Section -32.61 To 80.85 %
Max
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
77
56-Ba-130

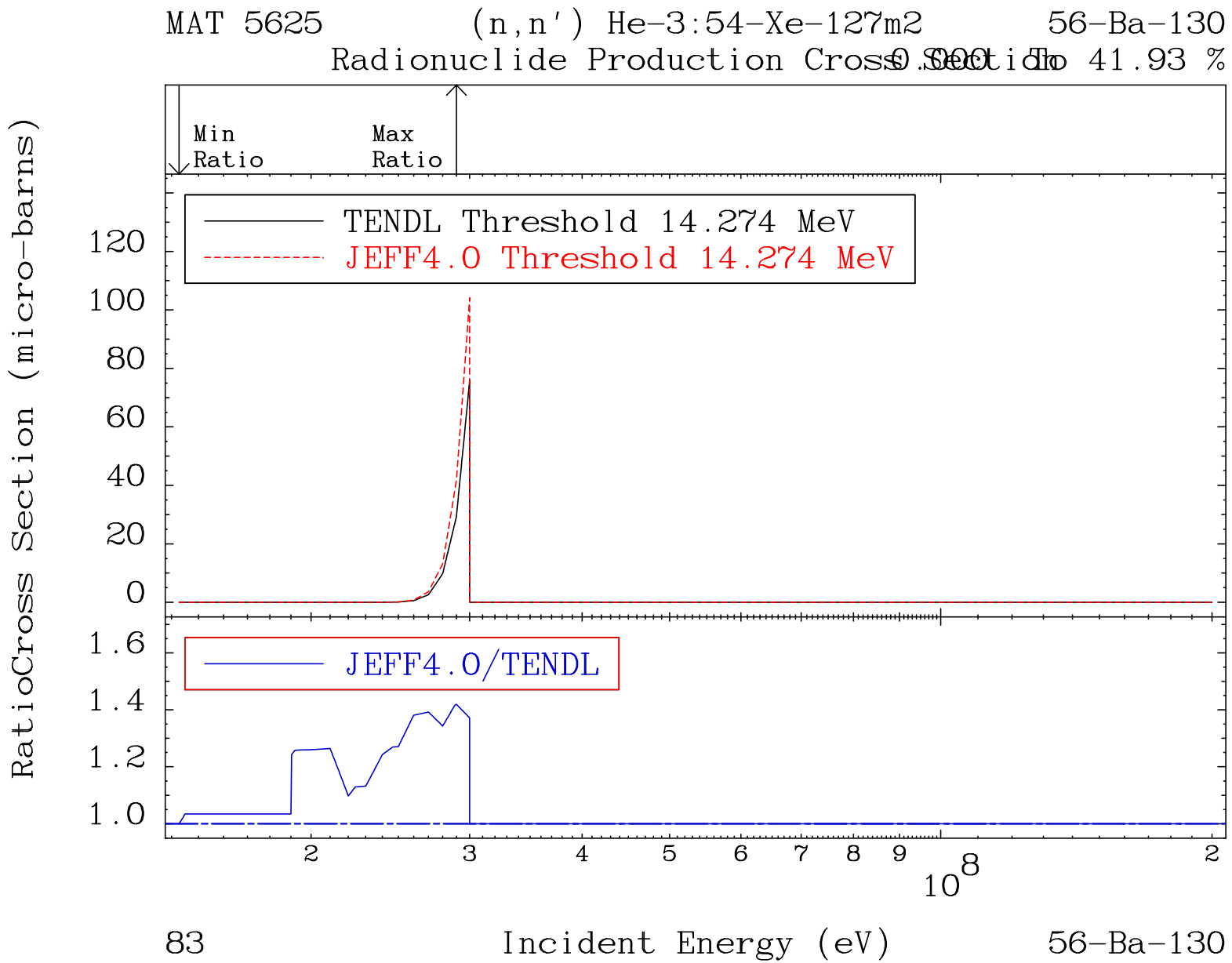

MAT 5625
(n,2n):56-Ba-129g
56-Ba-130
Radionuclide Production Cross Section To 1.211 %
Max Ratio
Min Ratio
TENDL Threshold 10.347 MeV
JEFF4.0 Threshold 10.347 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
1.2
0.8
0.4
10^7
2
3
4
5
6
7
8
9
10^8
2
78
Incident Energy (eV)
56-Ba-130

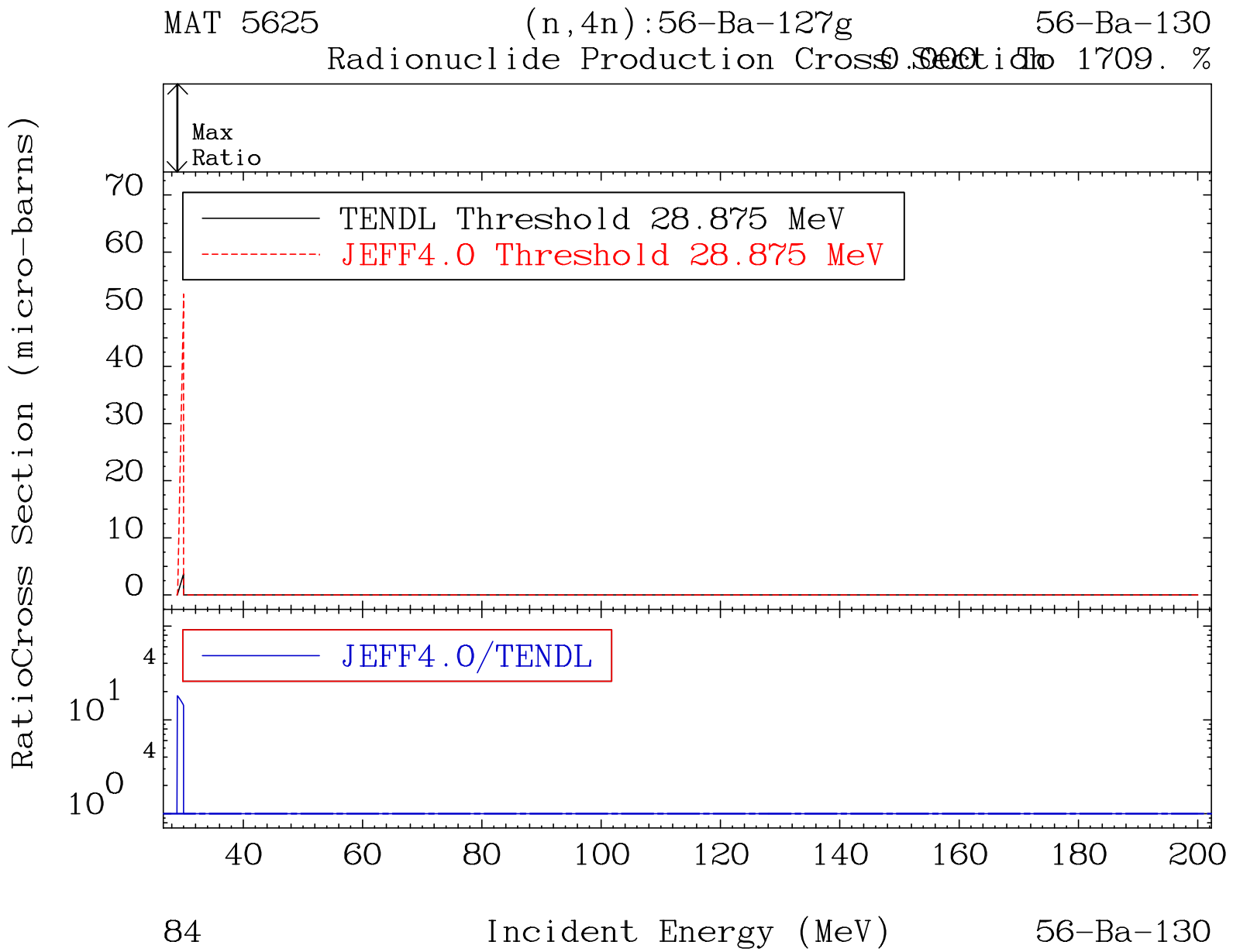

MAT 5625
(n,2n):56-Ba-129m1
56-Ba-130
Radionuclide Production Cross Section
Max Ratio
Min Ratio
TENDL Threshold 10.355 MeV
JEFF4.0 Threshold 10.355 MeV
JEFF4.0/TENDL
Cross Section (barns)
Ratio
1.6
1.2
0.8
0.4
0.0
1.8
1.2
0.6
10^7
2
3
4
5
6
7
8
9
10^8
2
79
Incident Energy (eV)
56-Ba-130

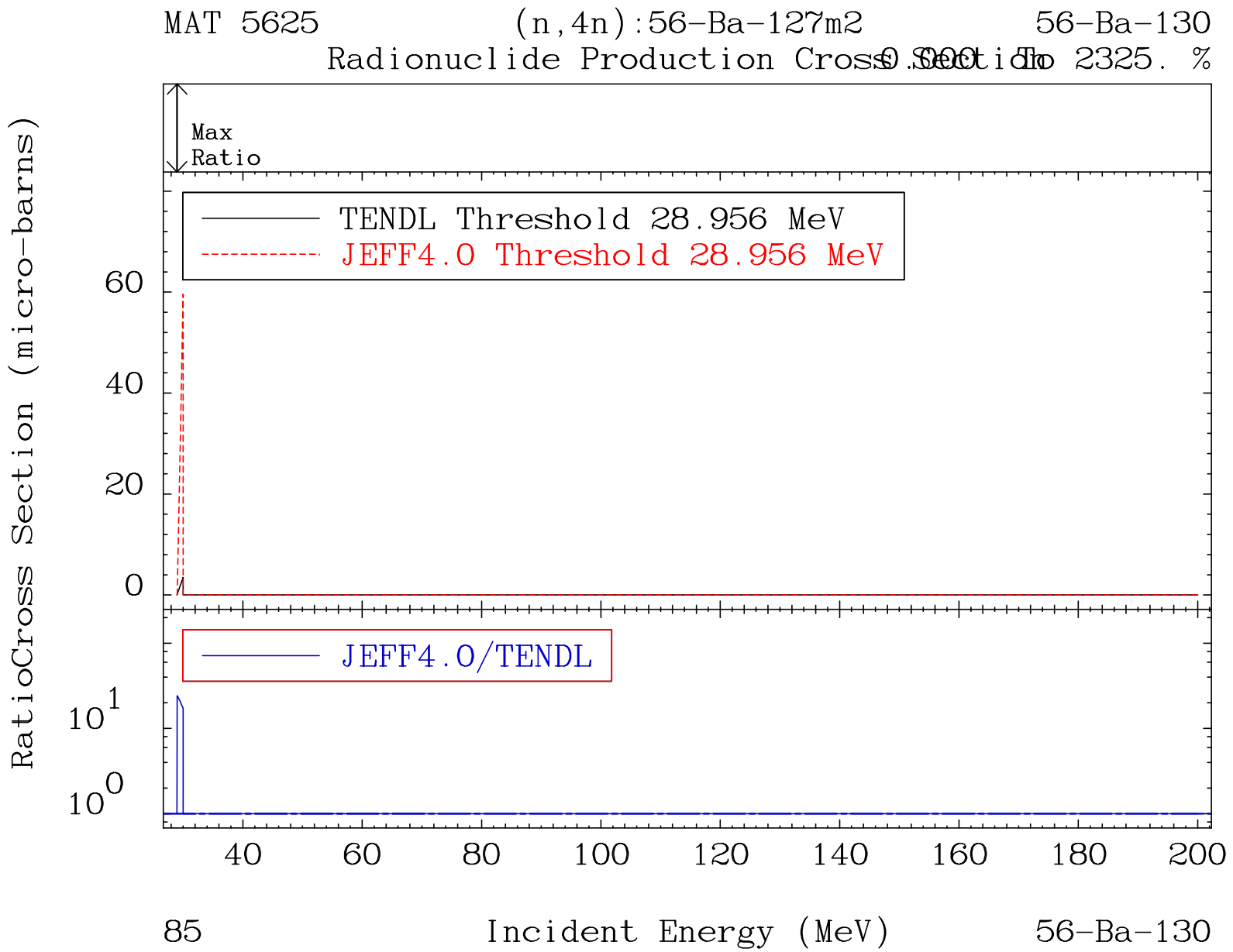

MAT 5625
(n,2n) α:54-Xe-125g
56-Ba-130
Radionuclide Production Cross Section
0.000 To 173.0 %
Min Ratio
Max Ratio
TENDL Threshold 10.636 MeV
JEFF4.0 Threshold 10.636 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
8
6
4
2
0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
56-Ba-130

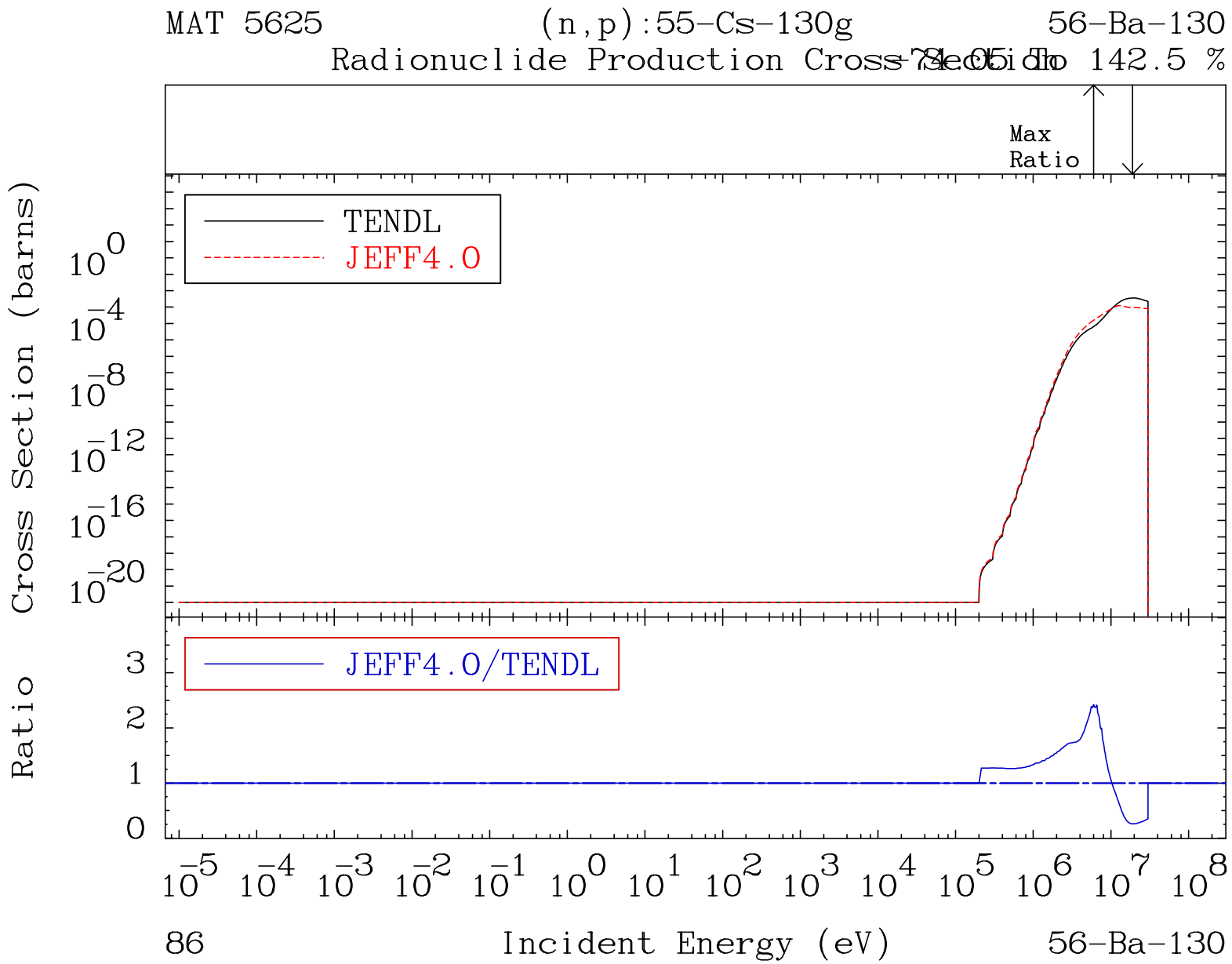

MAT 5625
(n,2n) α:54-Xe-125m2
56-Ba-130
Radionuclide Production Cross Section
0.000 To 197.1 %
Min Ratio
Max Ratio
TENDL Threshold 10.890 MeV
JEFF4.0 Threshold 10.890 MeV
JEFF4.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
4.0
3.0
2.0
1.0
2
3
4
5
6
7
8
9
10^8
2
81
Incident Energy (eV)
56-Ba-130

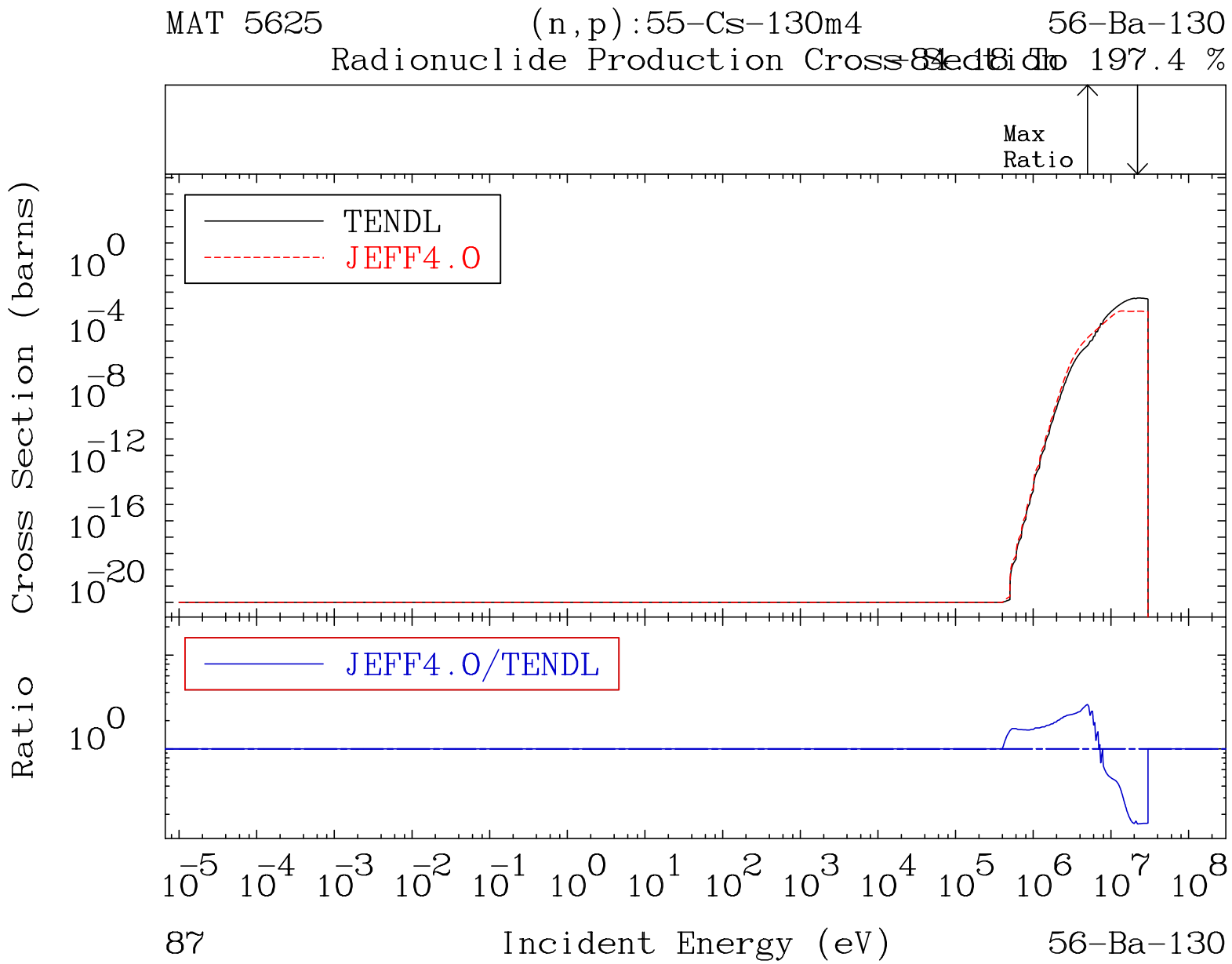

MAT 5625
(n,n') He-3:54-Xe-127g
56-Ba-130
Radionuclide Production Cross Section
0.000 To 46.46 %
Min Ratio
Max Ratio
TENDL Threshold 13.975 MeV
JEFF4.0 Threshold 13.975 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
120
100
80
60
40
20
0
1.6
1.2
2
3
4
5
6
7
8
9
10^8
2
82
Incident Energy (eV)
56-Ba-130

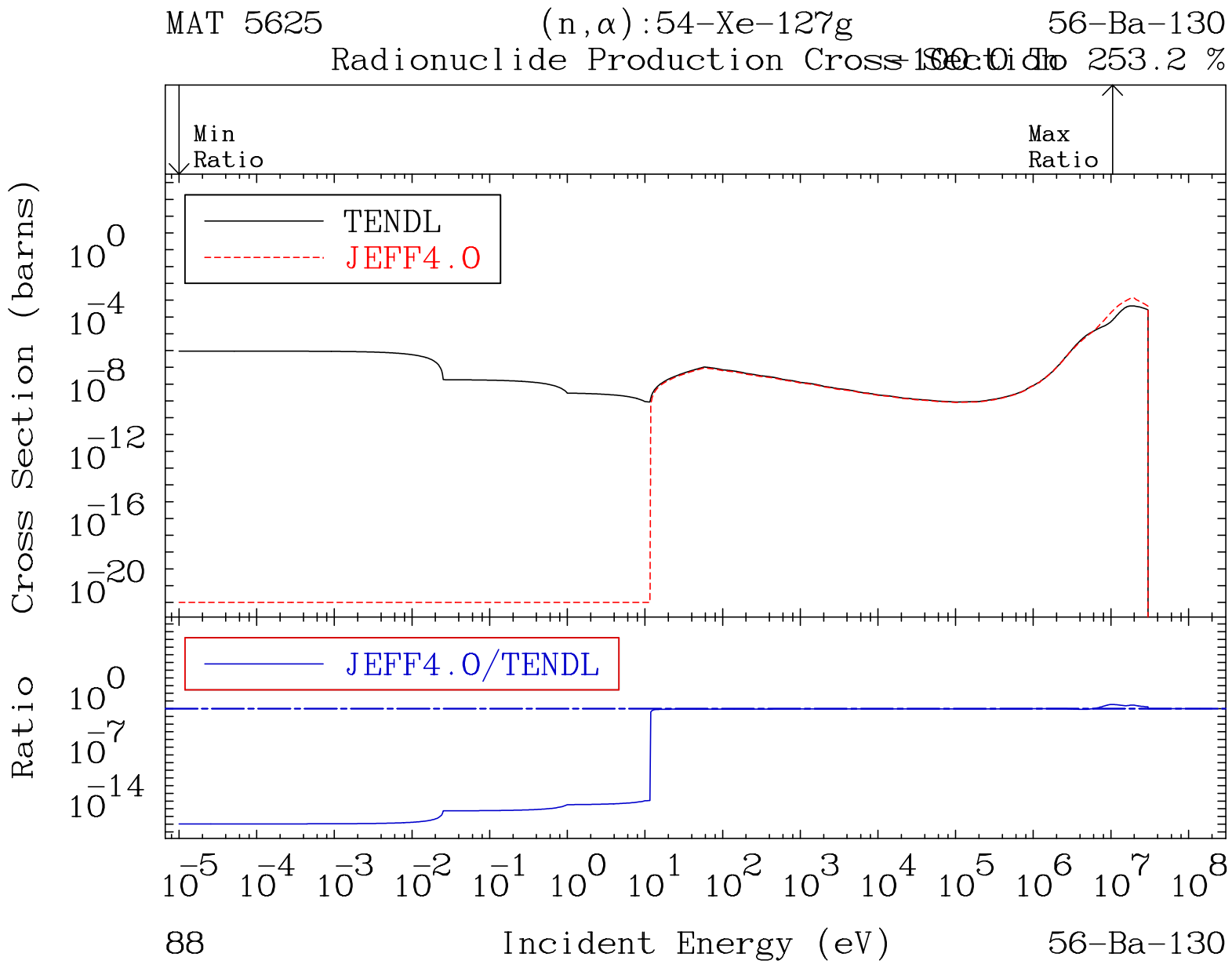

MAT 5625
(n,n') He-3:54-Xe-127m2
56-Ba-130
Radionuclide Production Cross Section
0.000 To 41.93 %
Min Ratio
Max Ratio
TENDL Threshold 14.274 MeV
JEFF4.0 Threshold 14.274 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
120
100
80
60
40
20
0
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
83
Incident Energy (eV)
56-Ba-130

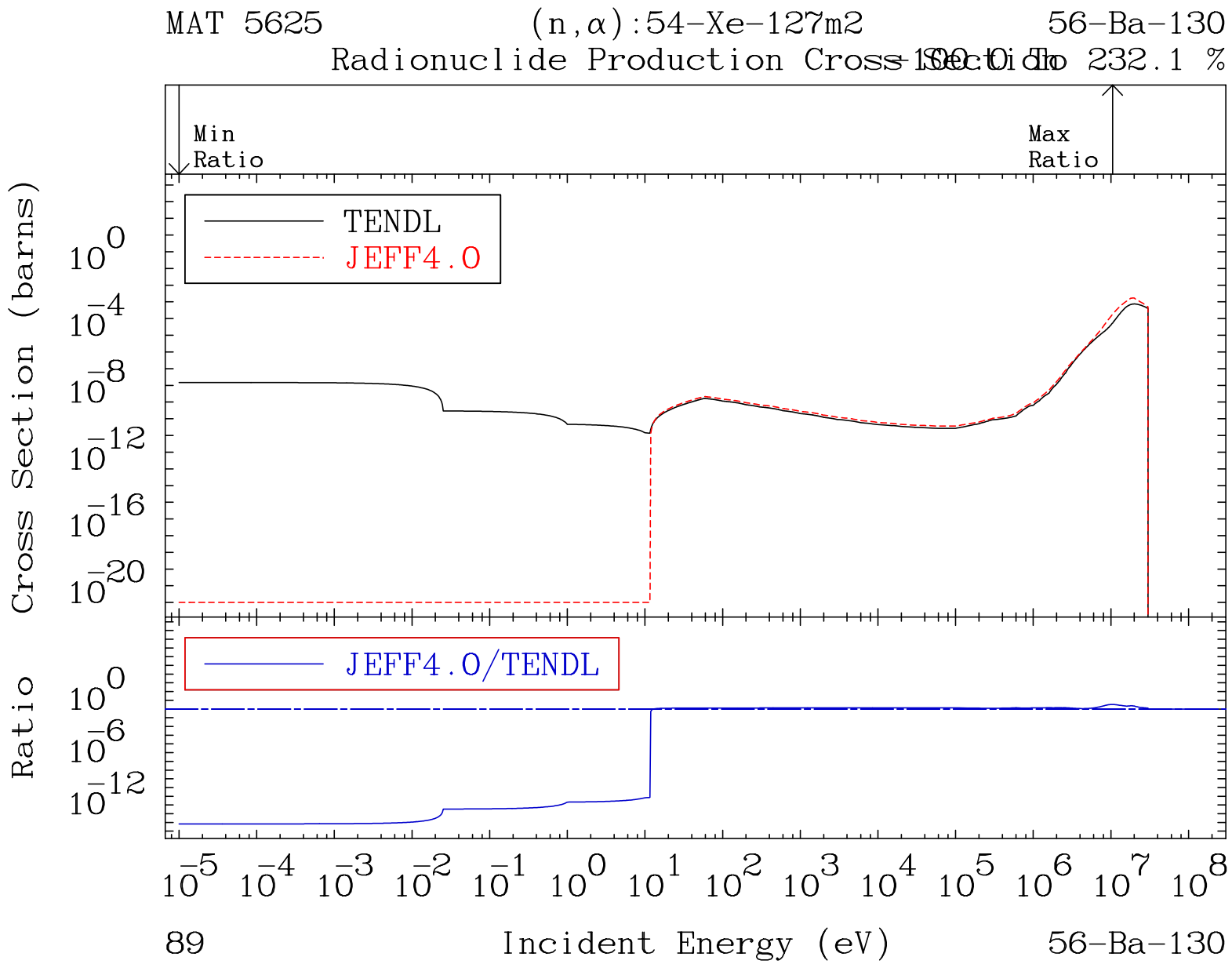

MAT 5625
(n,4n):56-Ba-127g
56-Ba-130
Radionuclide Production Cross Section
0.000 To 1709. %
Max
Ratio
TENDL Threshold 28.875 MeV
JEFF4.0 Threshold 28.875 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (MeV)
84
56-Ba-130

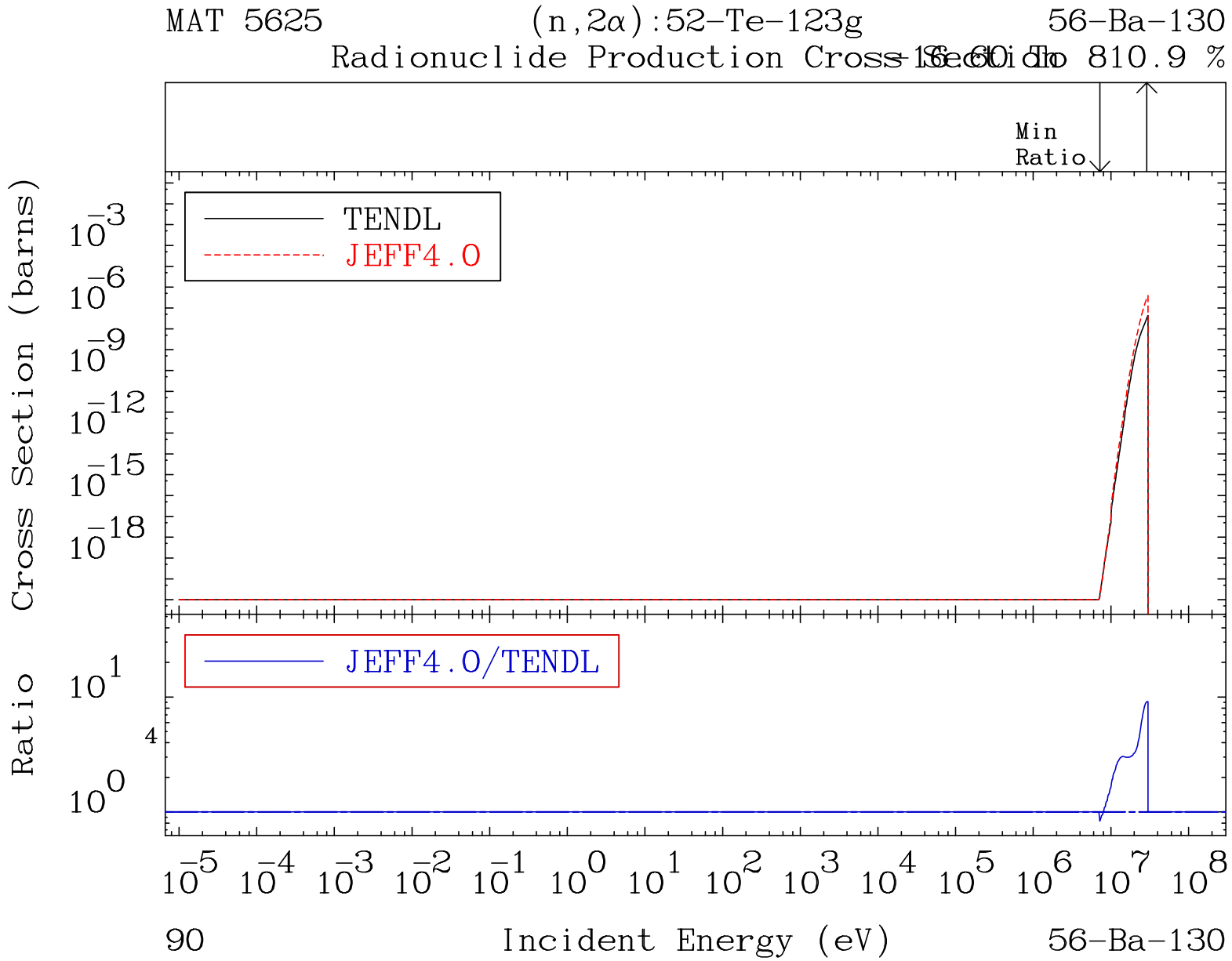

MAT 5625
(n,4n):56-Ba-127m2
56-Ba-130
Radionuclide Production Cross Section
0.000 To 2325. %
Max
Ratio
TENDL Threshold 28.956 MeV
JEFF4.0 Threshold 28.956 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
60
40
20
0
10^1
10^0
40
60
80
100
120
140
160
180
200
85
Incident Energy (MeV)
56-Ba-130

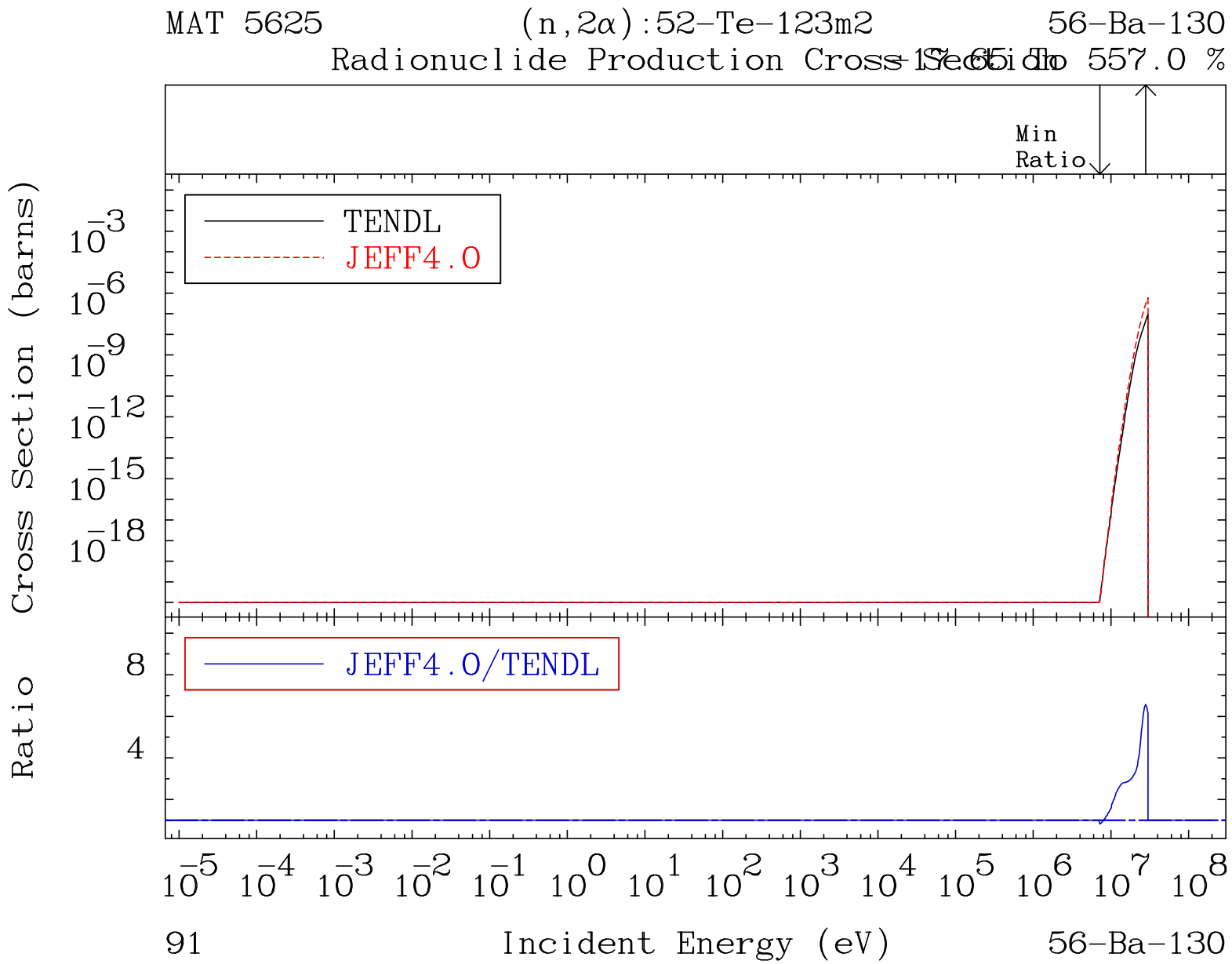

MAT 5625
(n,p):55-Cs-130g
56-Ba-130
Radionuclide Production Cross Section
Max Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
86
56-Ba-130

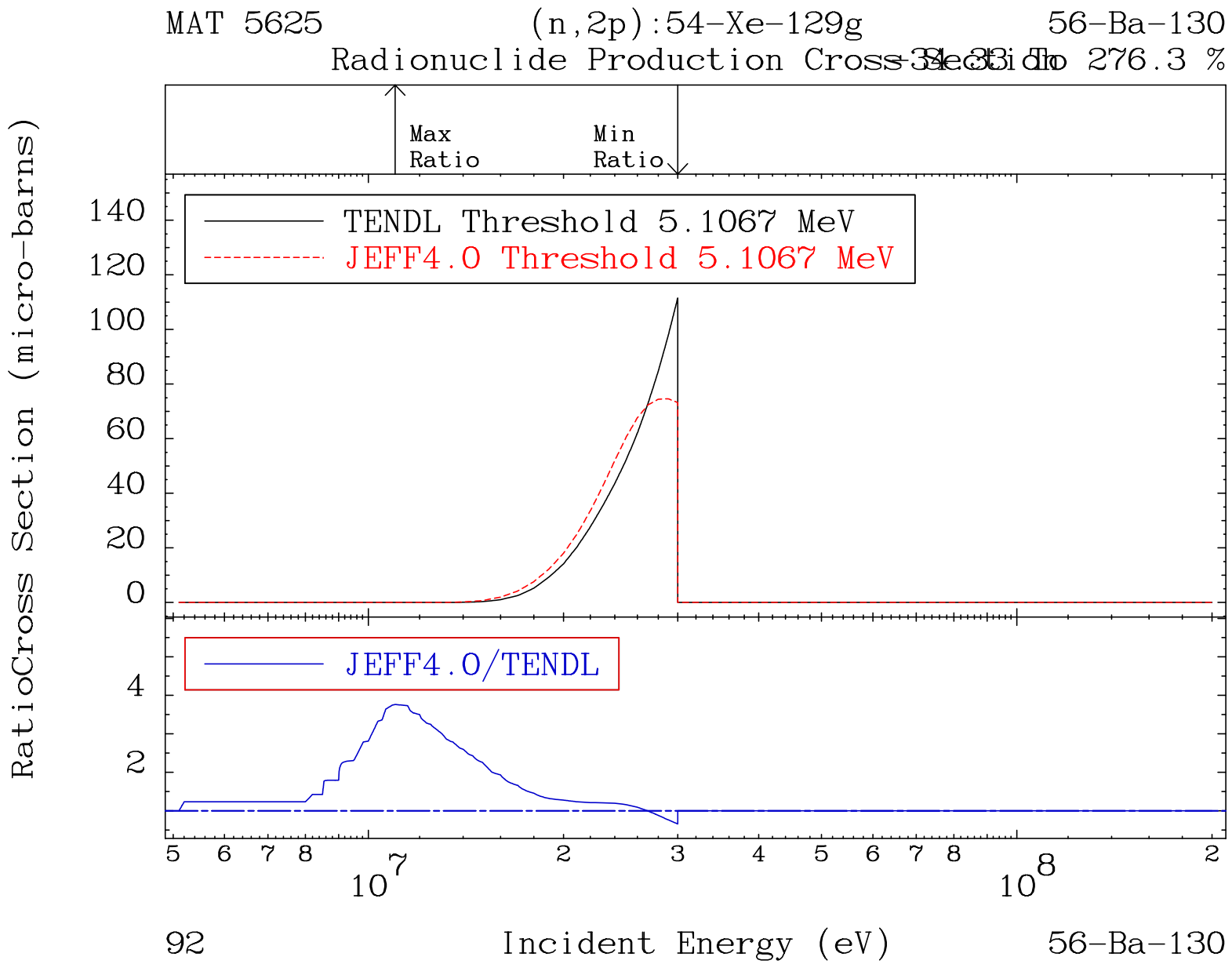

MAT 5625
(n,p):55-Cs-130m4
56-Ba-130
Radionuclide Production Cross Section To 197.4 %
Max
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
87
56-Ba-130

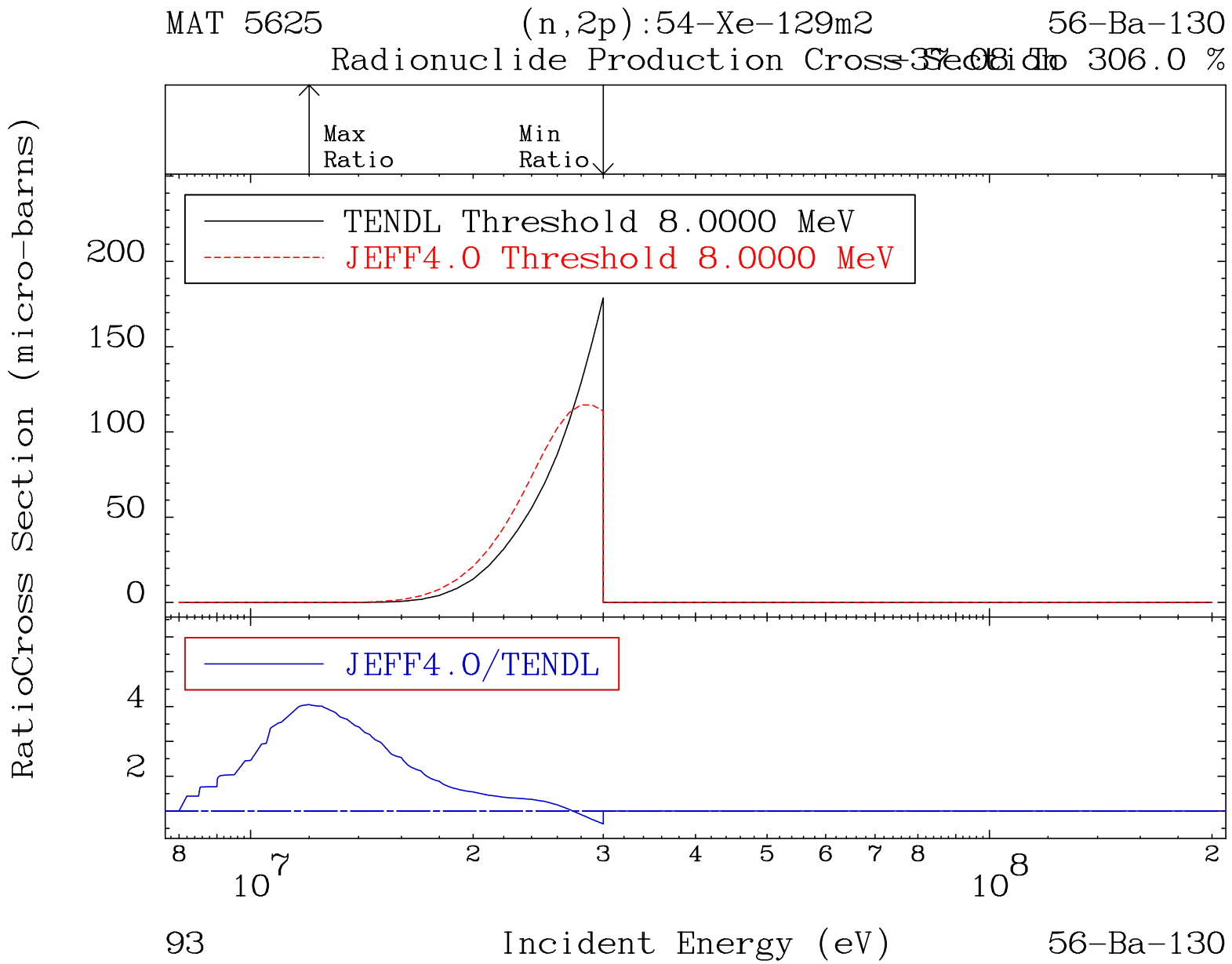

MAT 5625
(n,α):54-Xe-127g
56-Ba-130
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
88
56-Ba-130

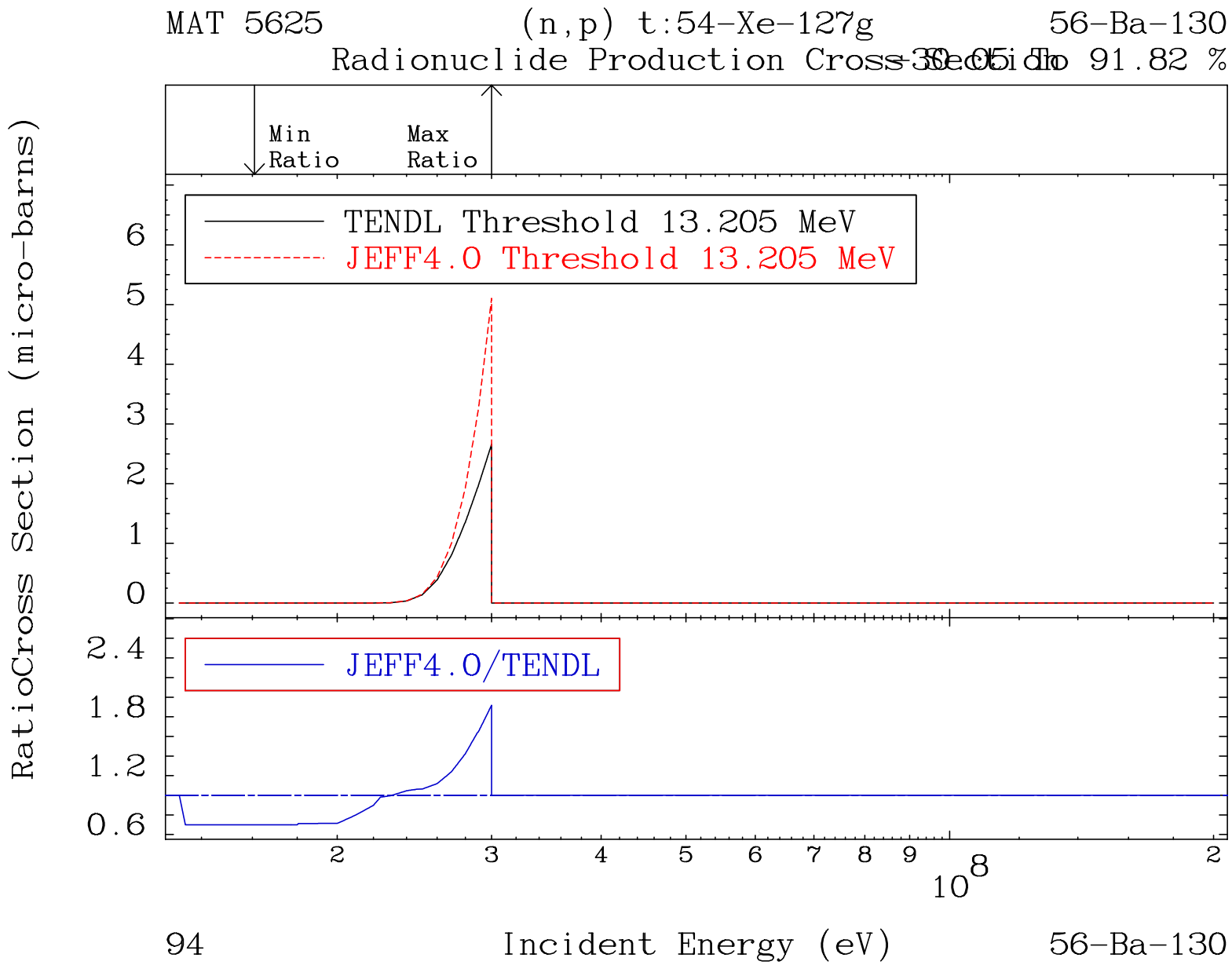

MAT 5625
(n,α):54-Xe-127m2
56-Ba-130
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
89
56-Ba-130

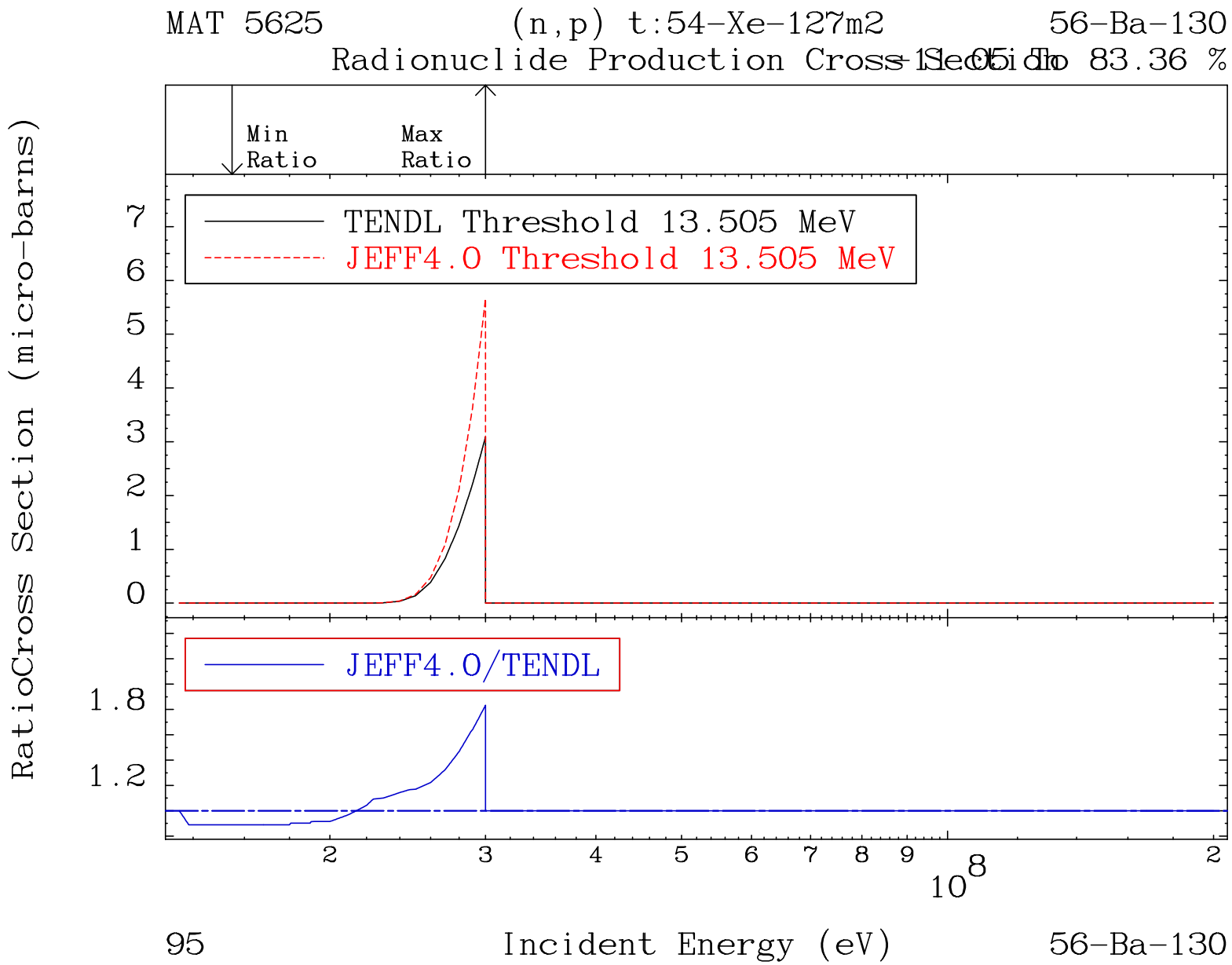

MAT 5625
(n,2α):52-Te-123g
56-Ba-130
Radionuclide Production Cross Section To 810.9 %
Min
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
90
56-Ba-130


MAT 5625
(n,2α):52-Te-123m2
56-Ba-130
Radionuclide Production Cross Section
1.565 to 557.0 %
Min
Ratio
TENDL
JEFF4.0
JEFF4.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
91
56-Ba-130


MAT 5625
(n,2p):54-Xe-129g
56-Ba-130
Radionuclide Production Cross Section To 276.3 %
Max Ratio
Min Ratio
TENDL Threshold 5.1067 MeV
JEFF4.0 Threshold 5.1067 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
92
56-Ba-130


MAT 5625
(n,2p):54-Xe-129m2
56-Ba-130
Radionuclide Production Cross Section To 306.0 %
Max Ratio
Min Ratio
TENDL Threshold 8.0000 MeV
JEFF4.0 Threshold 8.0000 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
200
150
100
50
0
4
2
8
10^7
2
3
4
5
6
7
8
10^8
2
93
Incident Energy (eV)
56-Ba-130


MAT 5625
(n,p) t:54-Xe-127g
56-Ba-130
Radionuclide Production Cross-Section To 91.82 %
Min Ratio
Max Ratio
TENDL Threshold 13.205 MeV
JEFF4.0 Threshold 13.205 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
94
56-Ba-130


MAT 5625
(n,p) t:54-Xe-127m2
56-Ba-130
Radionuclide Production Cross Section To 83.36 %
Min Ratio
Max Ratio
TENDL Threshold 13.505 MeV
JEFF4.0 Threshold 13.505 MeV
JEFF4.0/TENDL
RatioCross Section (micro-barns)
Incident Energy (eV)
95
56-Ba-130