Program Complot
(Version 2021-1)
by
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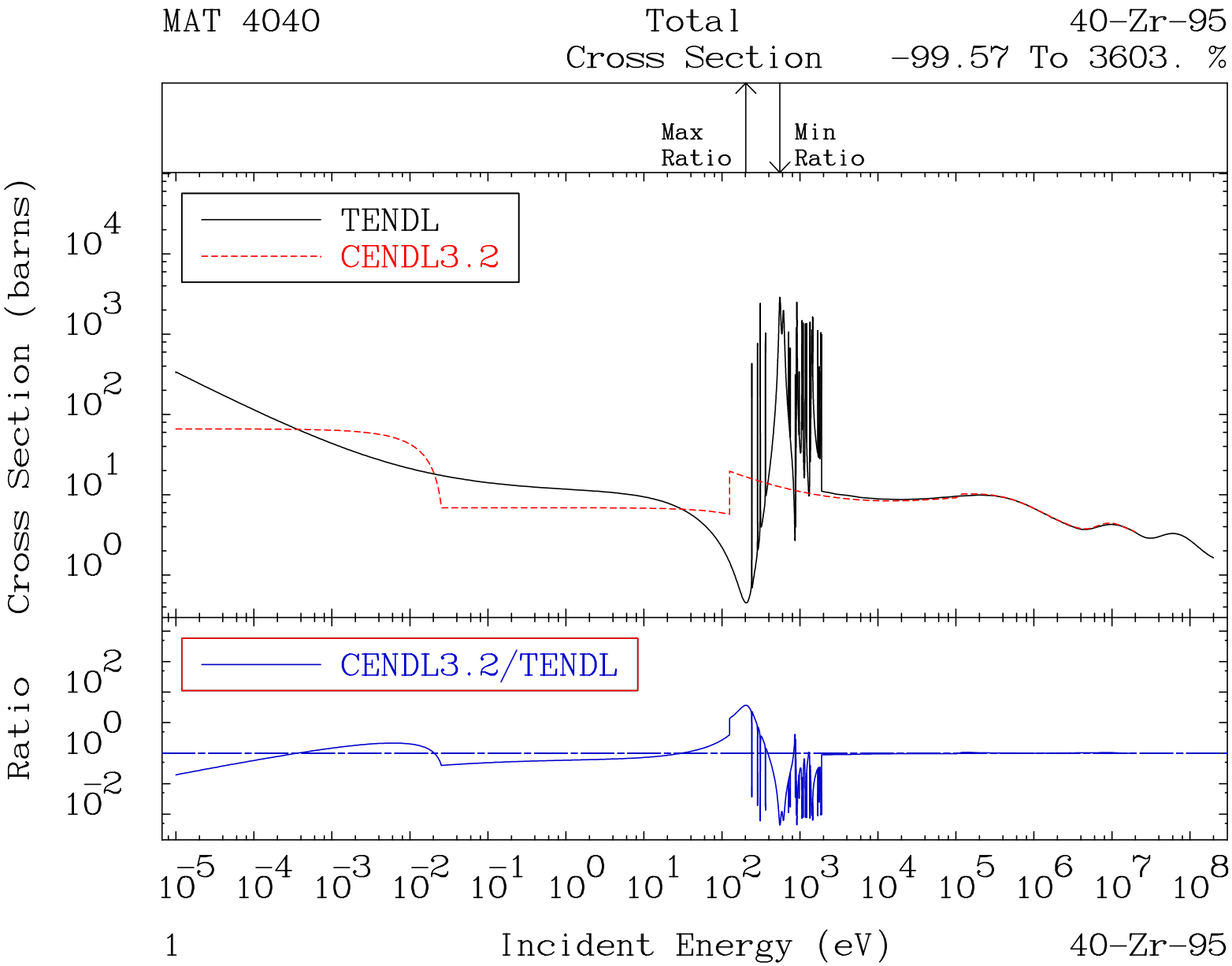
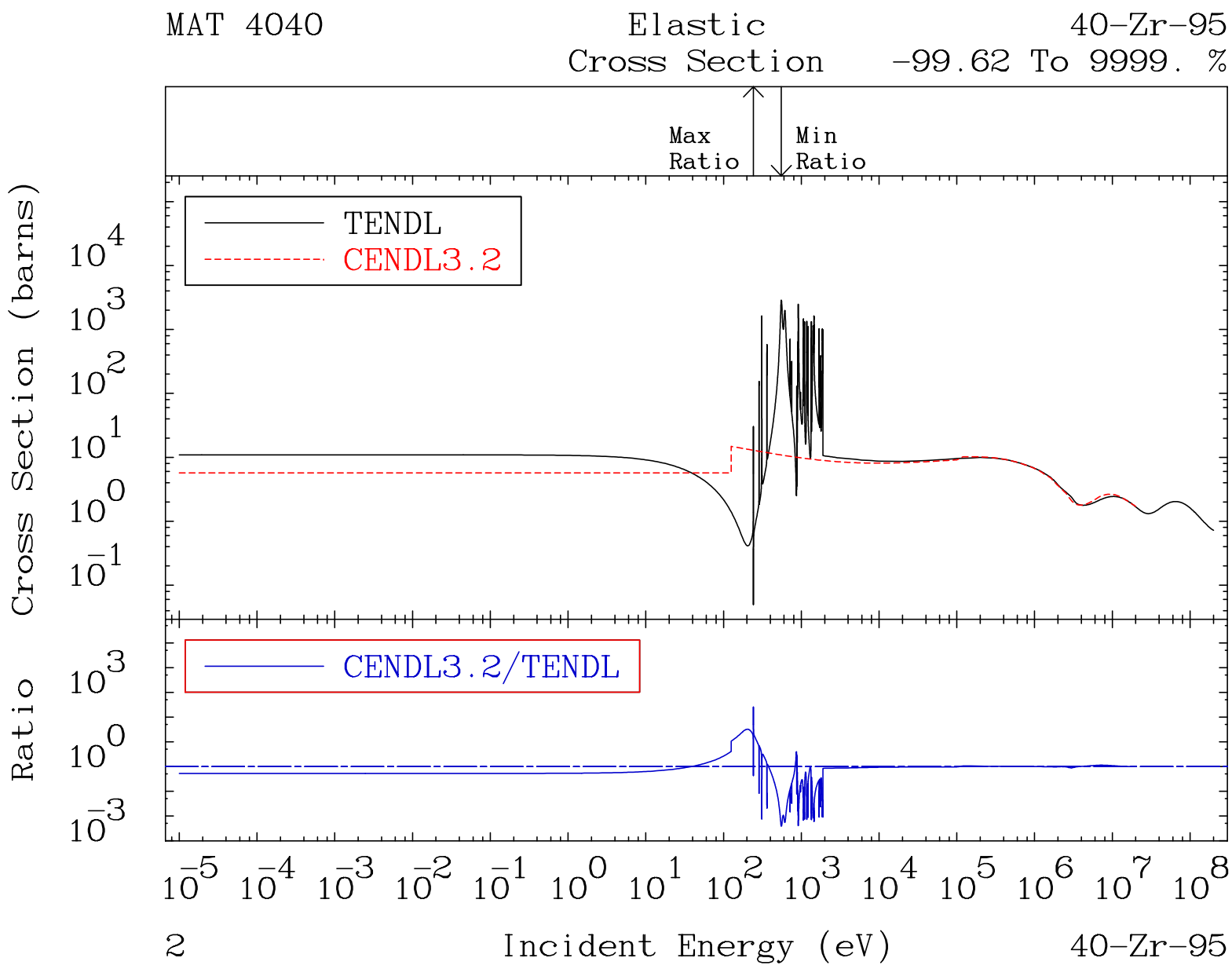
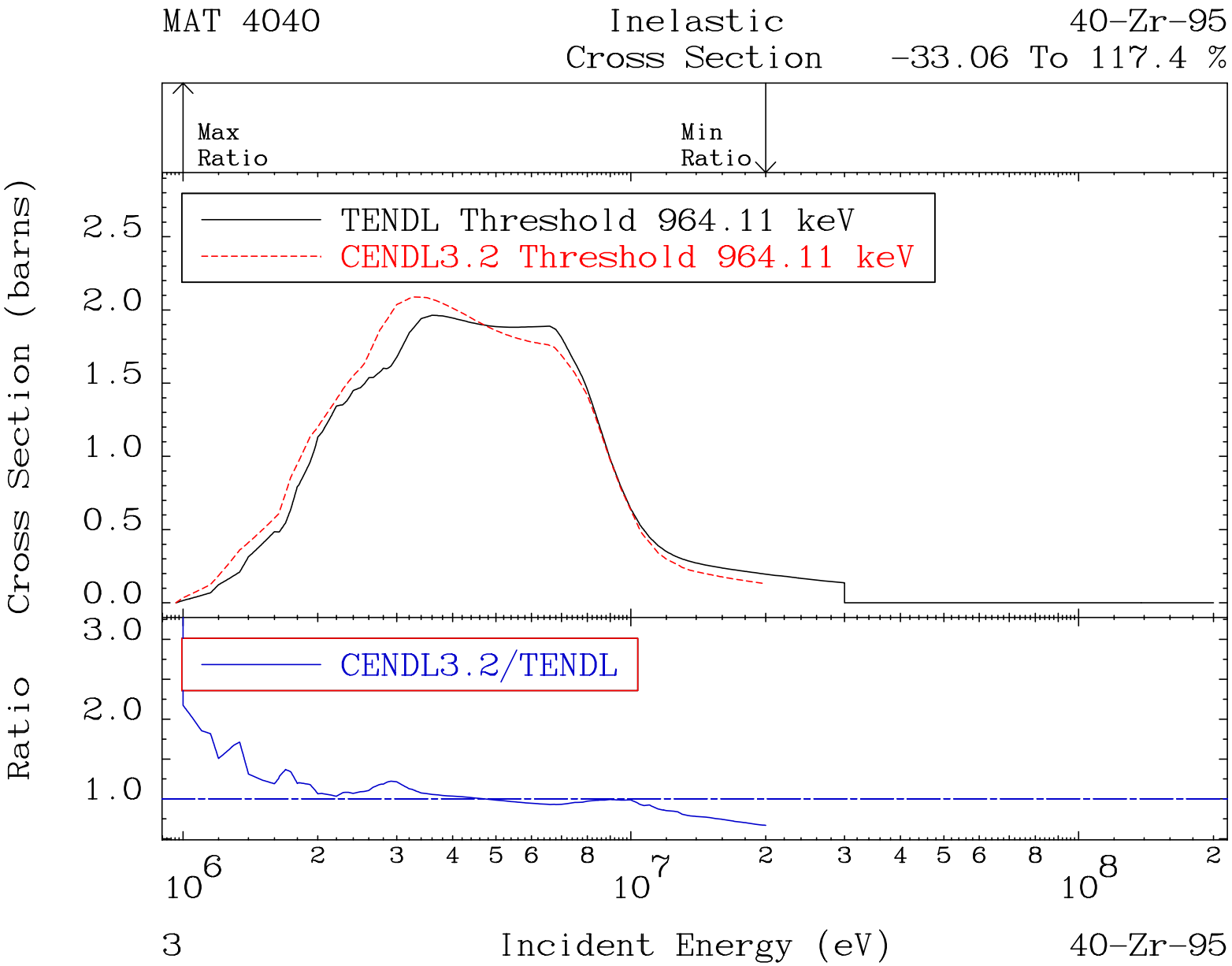
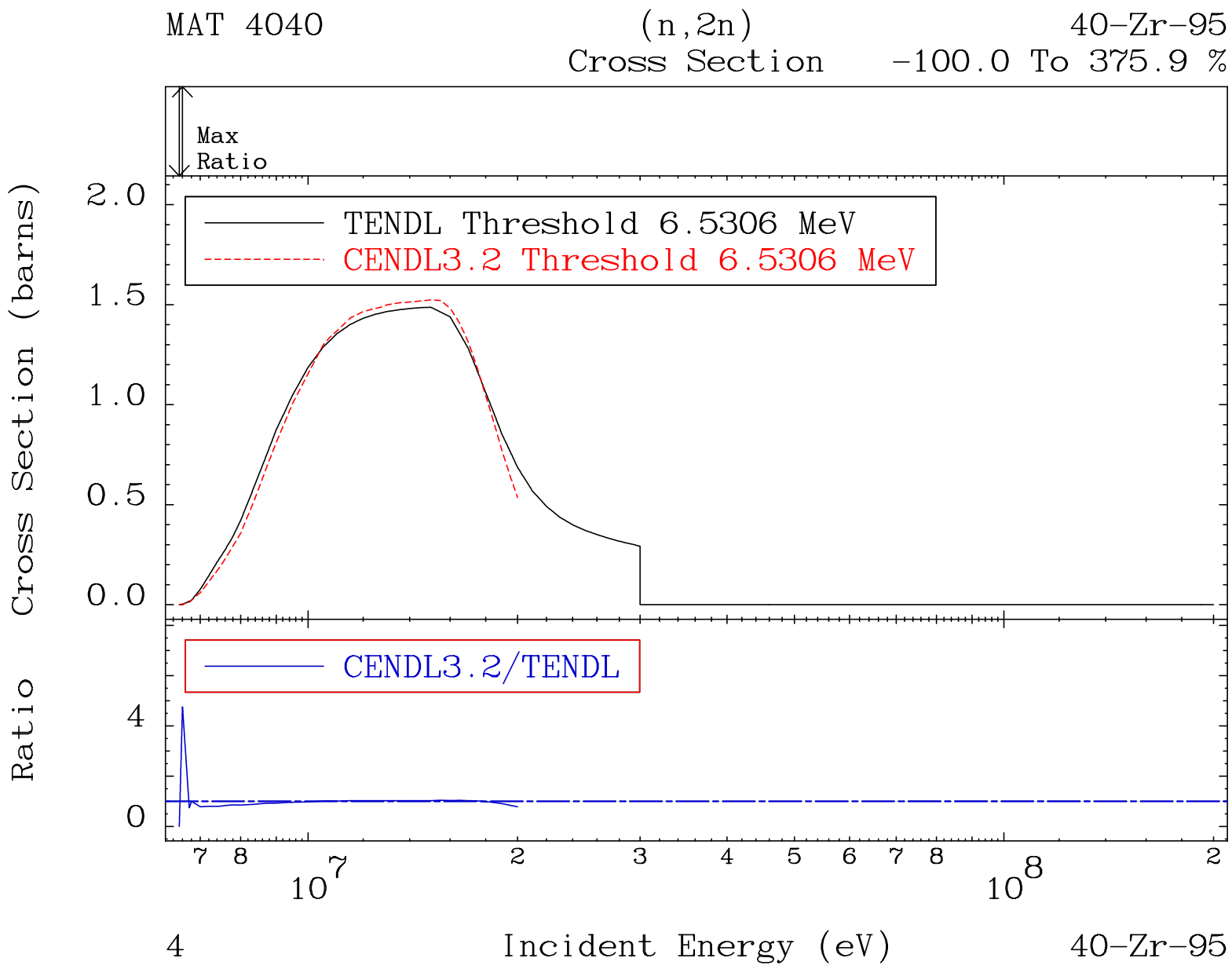
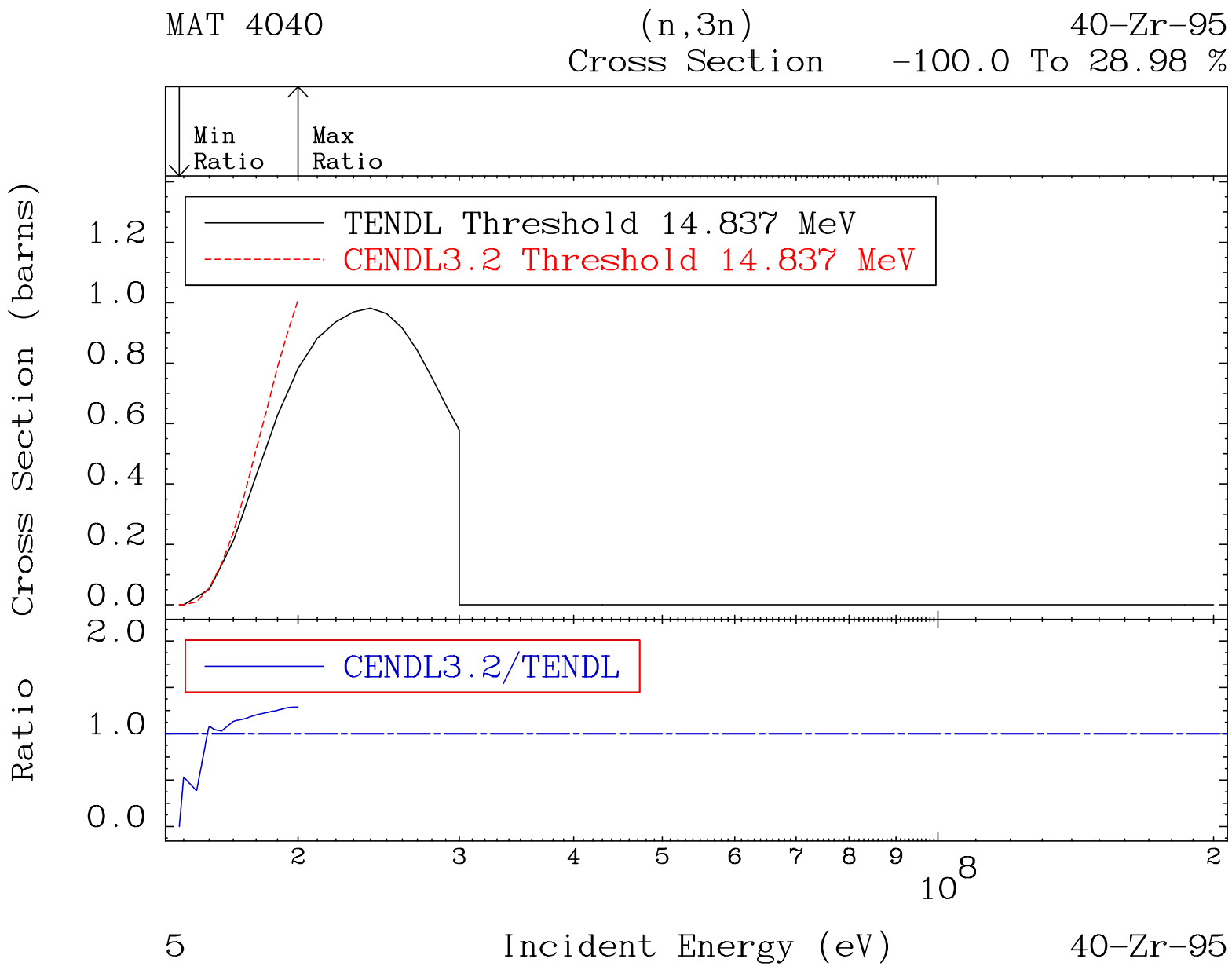
Press Mouse Button to Start

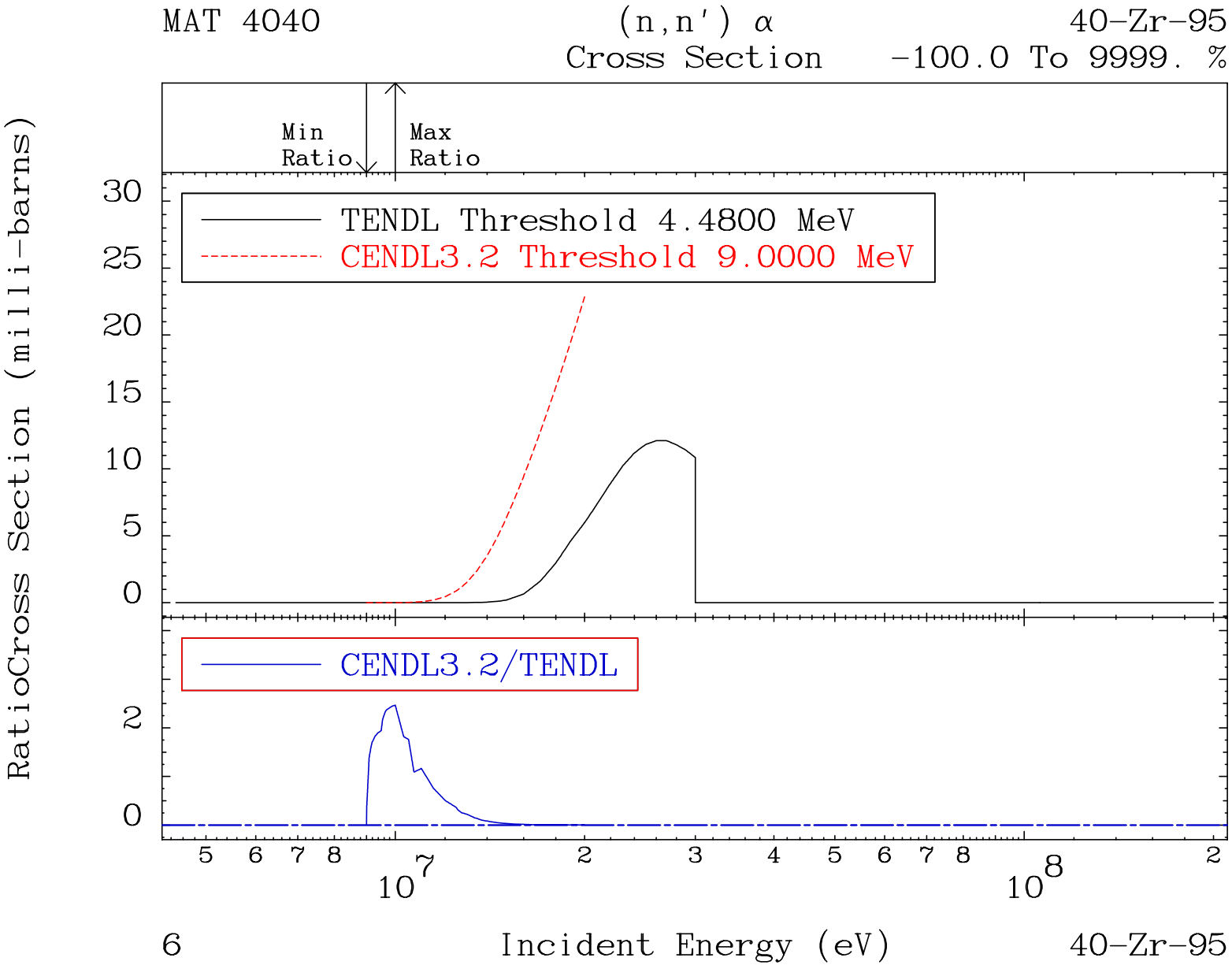

MAT 4040
Total
Cross Section
40-Zr-95
-99.57 To 3603. %
Max
Ratio
Min
Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
1
40-Zr-95

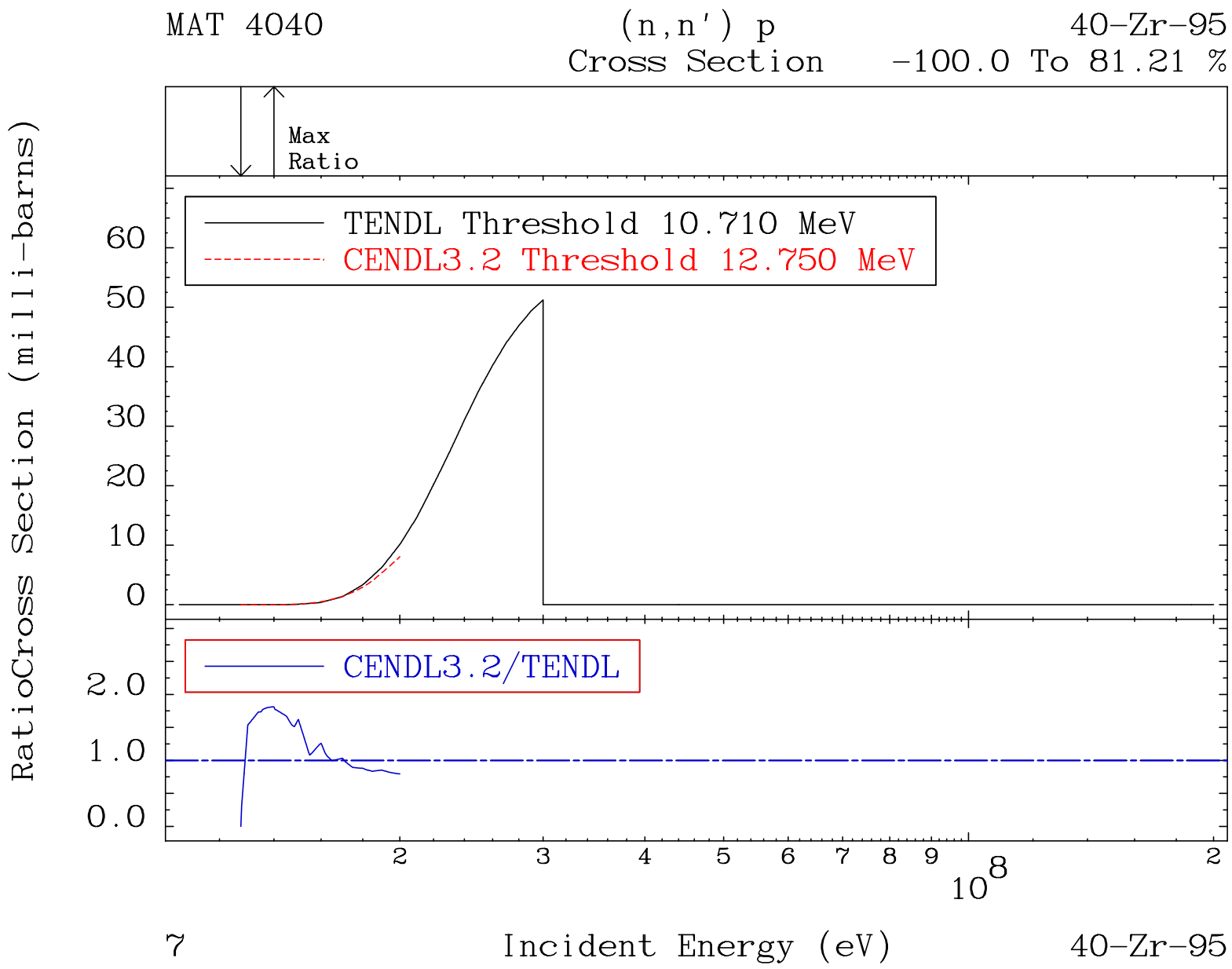

MAT 4040
Elastic
Cross Section
40-Zr-95
-99.62 To 9999. %
Max
Ratio
Min
Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
2
40-Zr-95

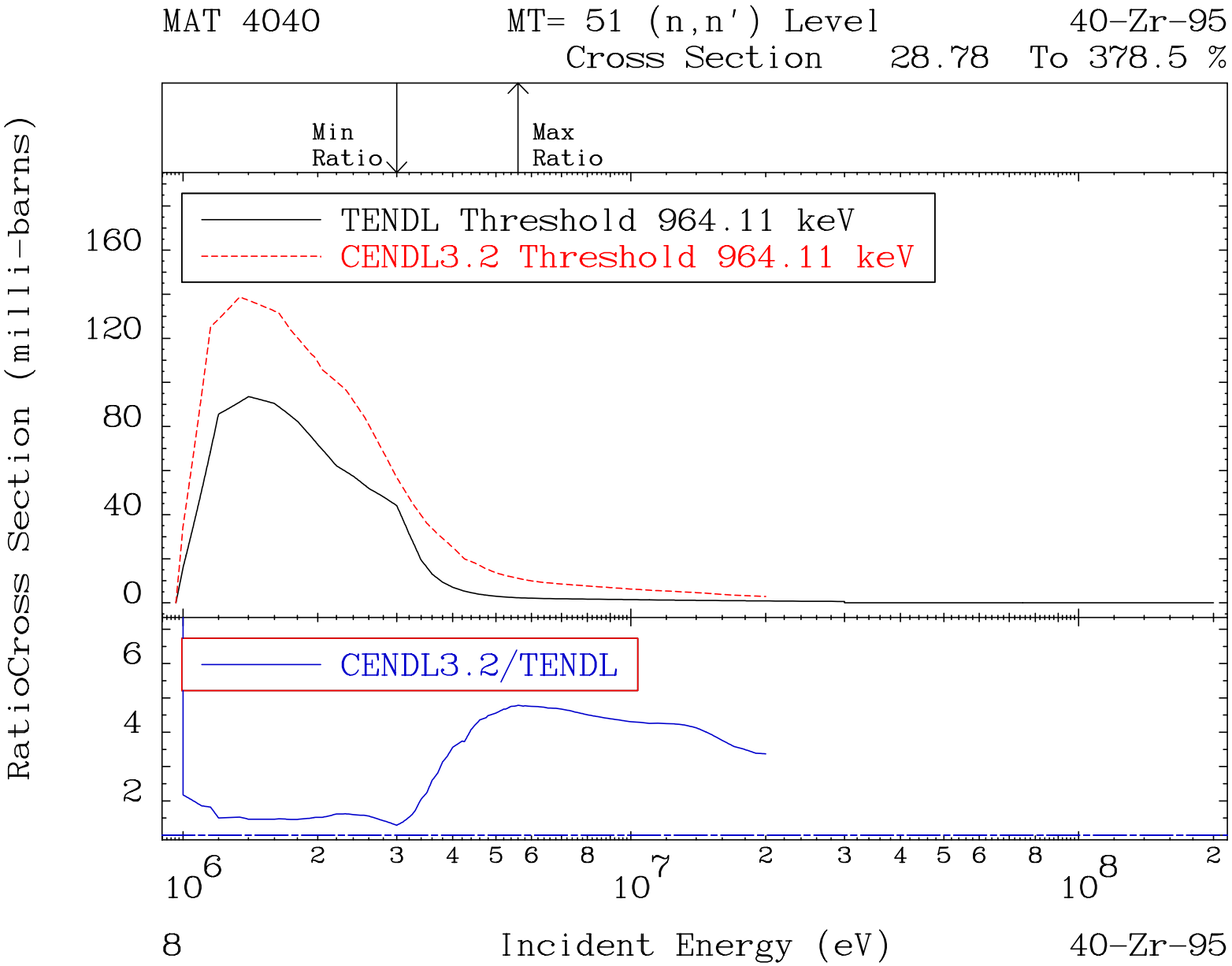

MAT 4040
Inelastic
Cross Section
40-Zr-95
-33.06 To 117.4 %
Max
Ratio
Min
Ratio
TENDL Threshold 964.11 keV
CENDL3.2 Threshold 964.11 keV
Cross Section (barns)
2.5
2.0
1.5
1.0
0.5
0.0
CENDL3.2/TENDL
Ratio
3.0
2.0
1.0
10^6
10^7
10^8
Incident Energy (eV)
3
40-Zr-95

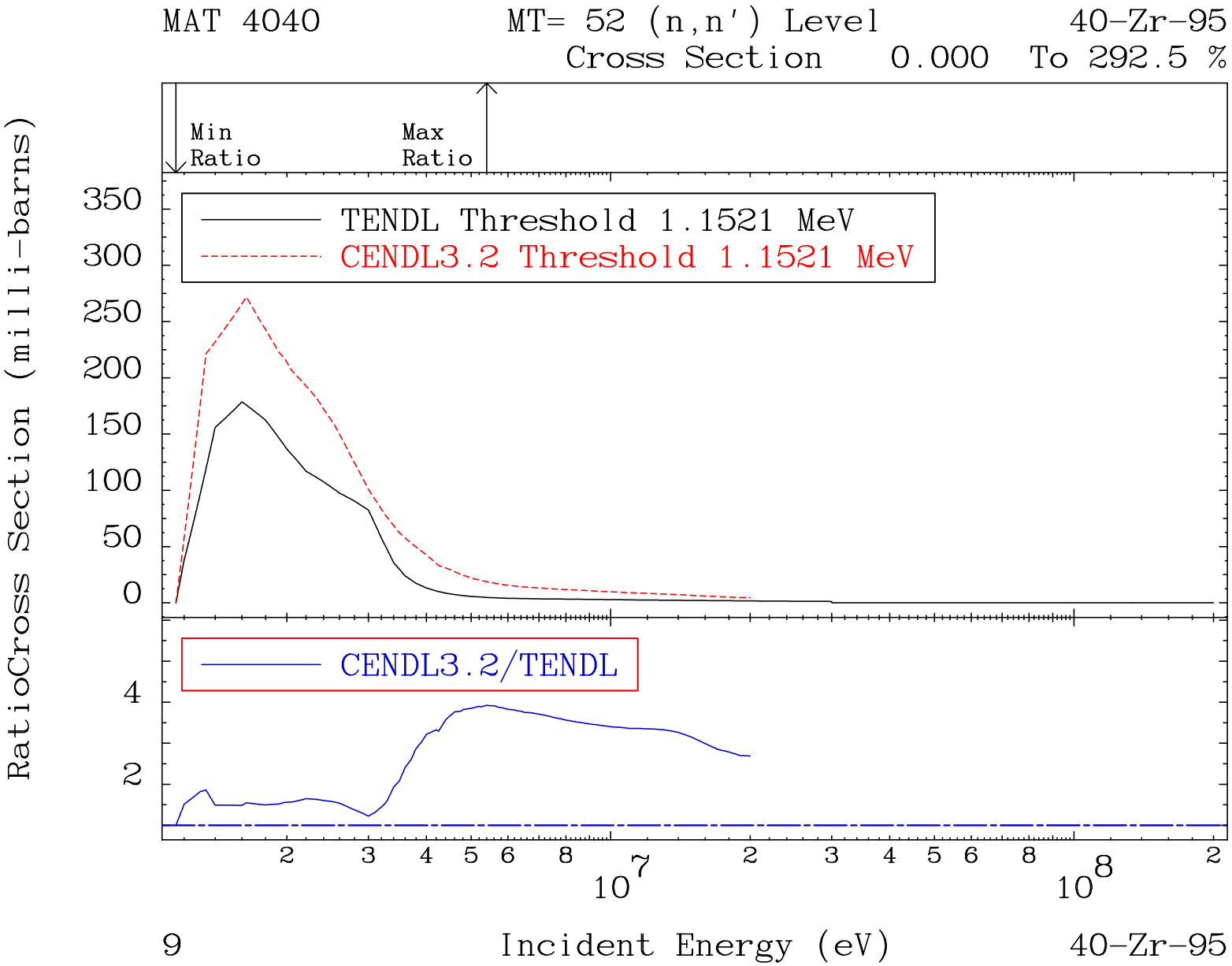

MAT 4040
(n,2n)
Cross Section
40-Zr-95
-100.0 To 375.9 %
Max
Ratio
TENDL Threshold 6.5306 MeV
CENDL3.2 Threshold 6.5306 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
CENDL3.2/TENDL
Ratio
4
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
4
Incident Energy (eV)
40-Zr-95

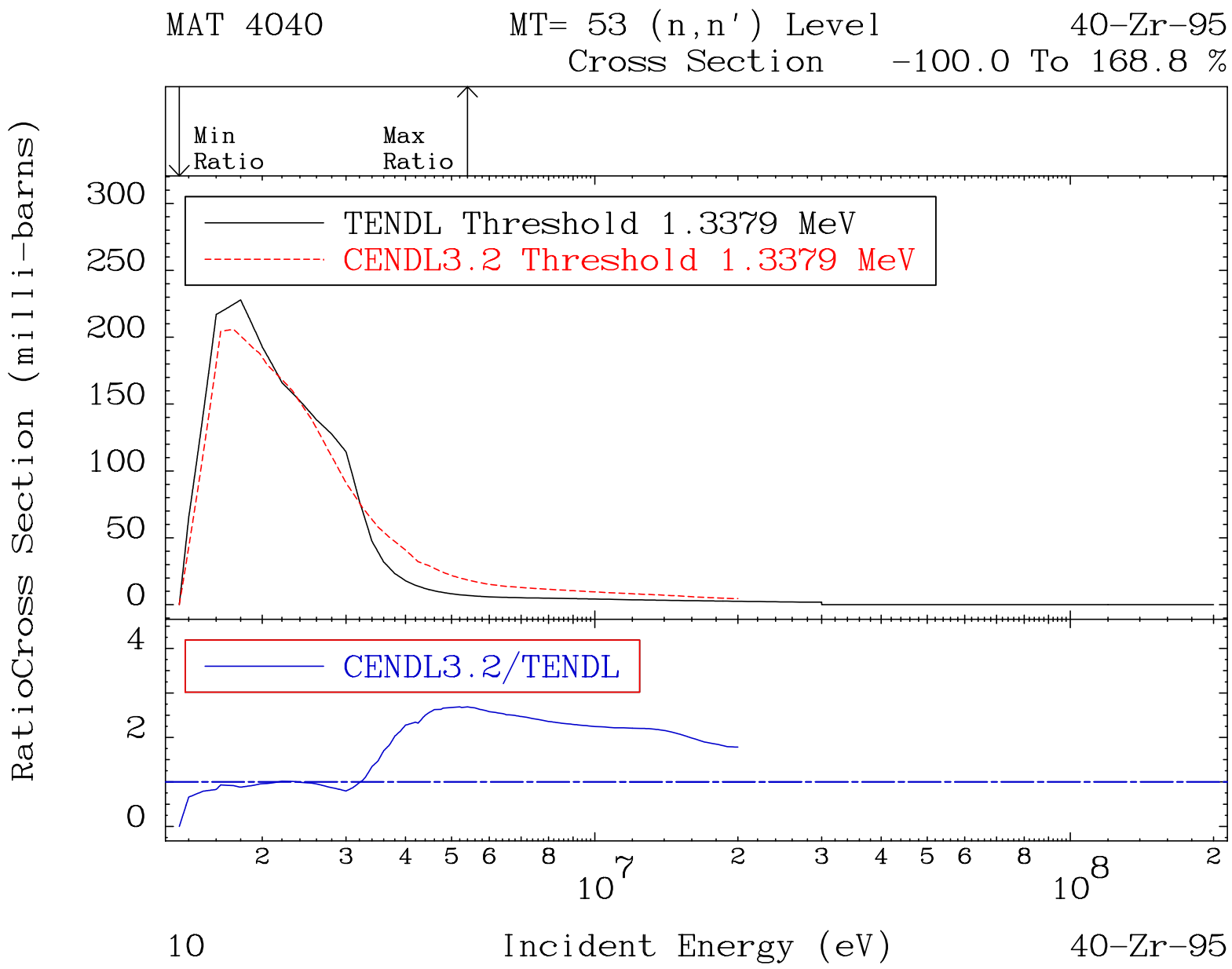

MAT 4040
(n,3n)
Cross Section
40-Zr-95
-100.0 To 28.98 %
Min Ratio
Max Ratio
TENDL Threshold 14.837 MeV
CENDL3.2 Threshold 14.837 MeV
Cross Section (barns)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.0
CENDL3.2/TENDL
Ratio
1.0
0.0
2
3
4
5
6
7
8
9
10^8
2
Incident Energy (eV)

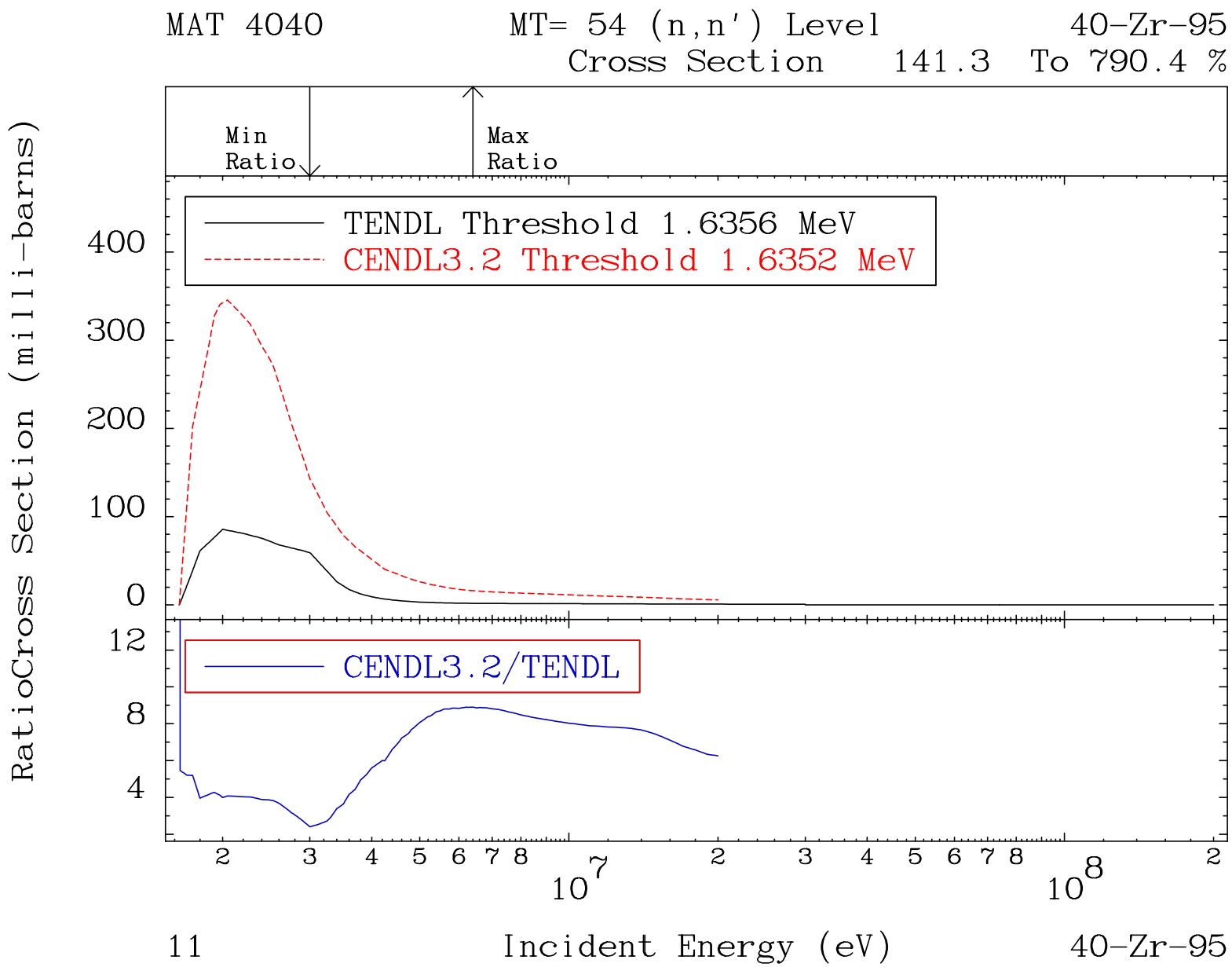

MAT 4040
(n,n') α
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 4.4800 MeV
CENDL3.2 Threshold 9.0000 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
6
40-Zr-95

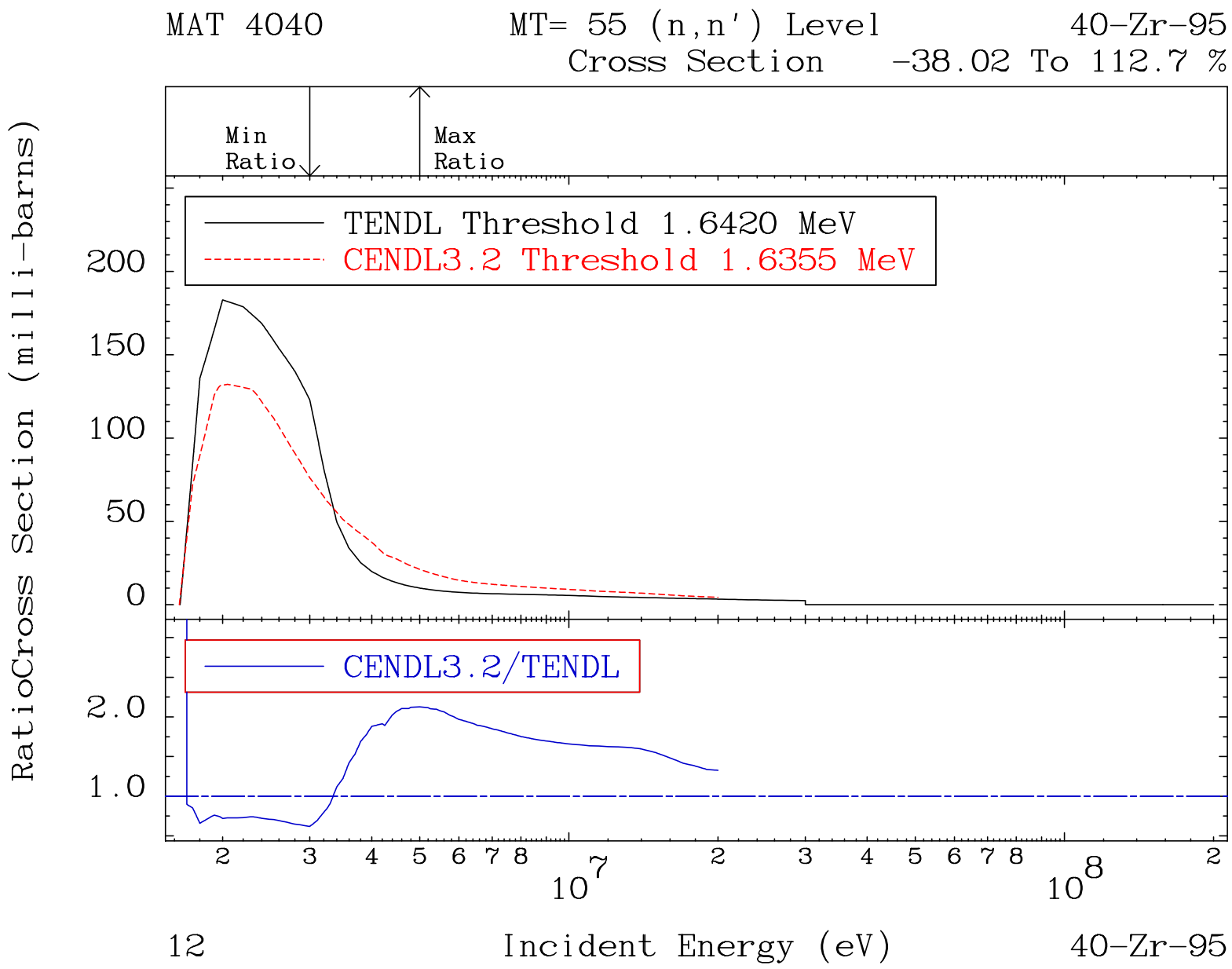

MAT 4040
(n,n') p
Cross Section
40-Zr-95
-100.0 To 81.21 %
Max
Ratio
TENDL Threshold 10.710 MeV
CENDL3.2 Threshold 12.750 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
60
50
40
30
20
10
0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
2
10^8
7
Incident Energy (eV)
40-Zr-95

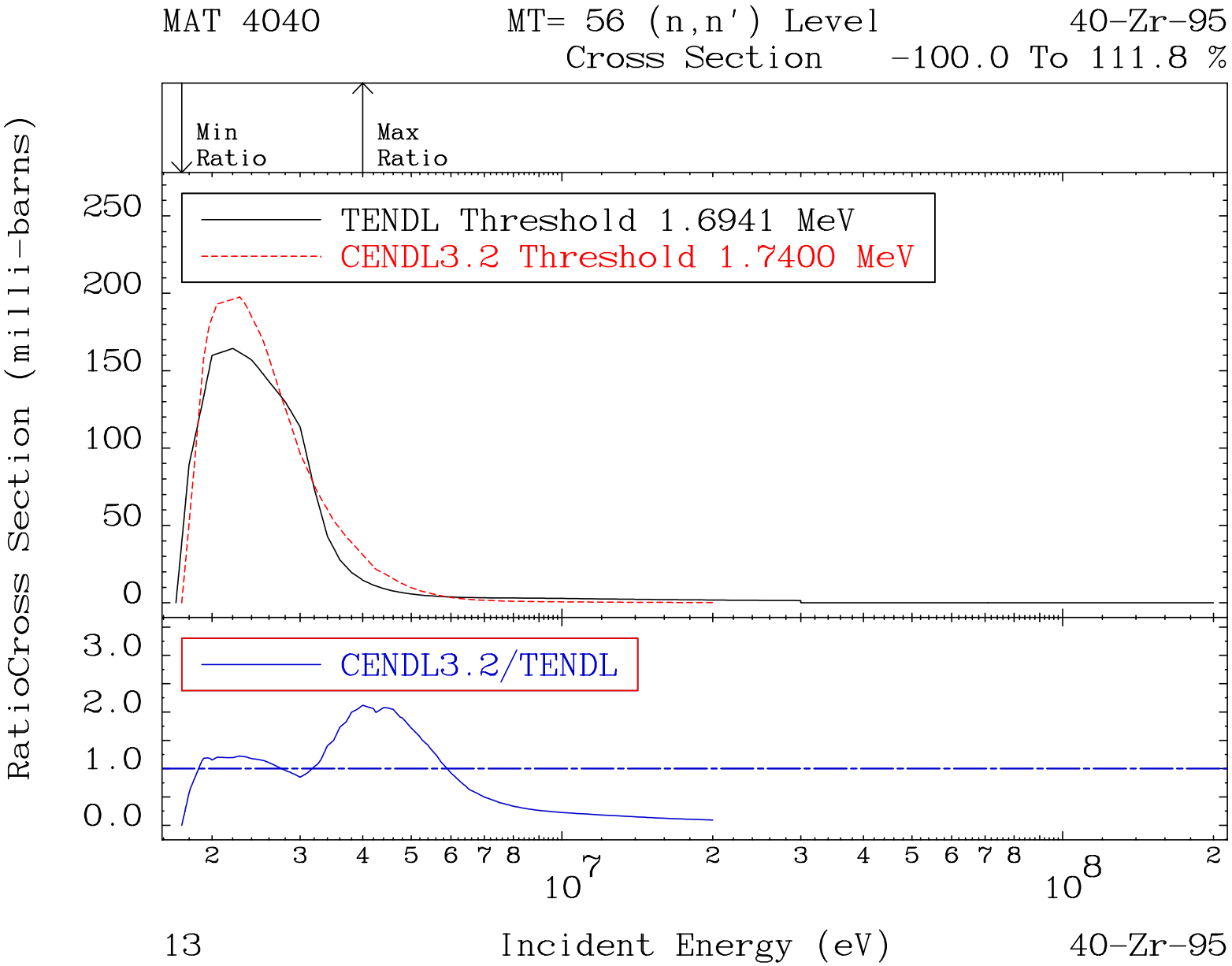

MAT 4040
MT= 51 (n,n') Level
40-Zr-95
Cross Section 28.78 To 378.5 %
Min Ratio
Max Ratio
TENDL Threshold 964.11 keV
CENDL3.2 Threshold 964.11 keV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
6
4
2
10^6
10^7
10^8
Incident Energy (eV)
8
40-Zr-95

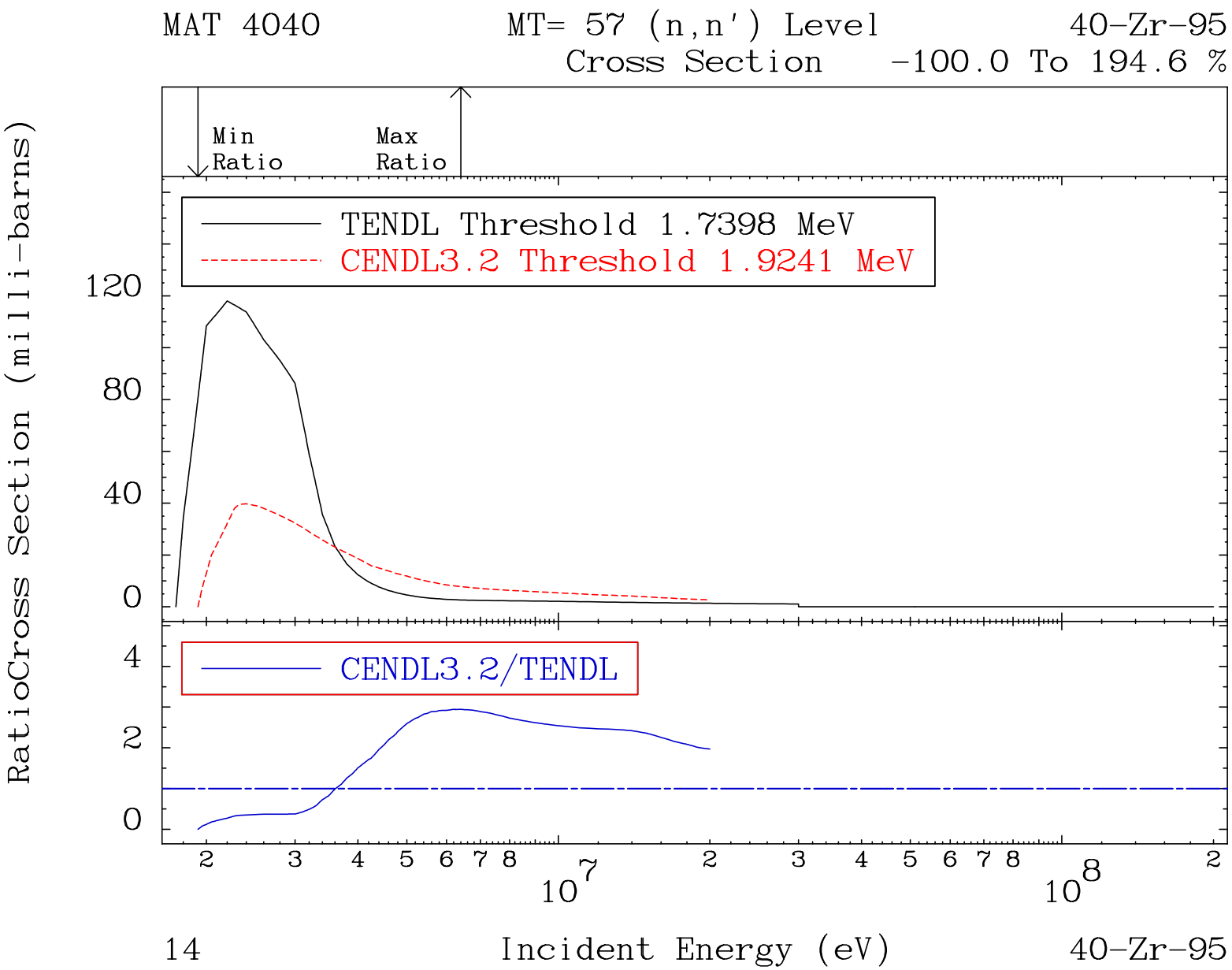

MAT 4040
MT= 52 (n,n') Level
Cross Section 0.000 To 292.5 %
40-Zr-95
Min Ratio
Max Ratio
TENDL Threshold 1.1521 MeV
CENDL3.2 Threshold 1.1521 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
4
2
2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
Incident Energy (eV)
9
40-Zr-95

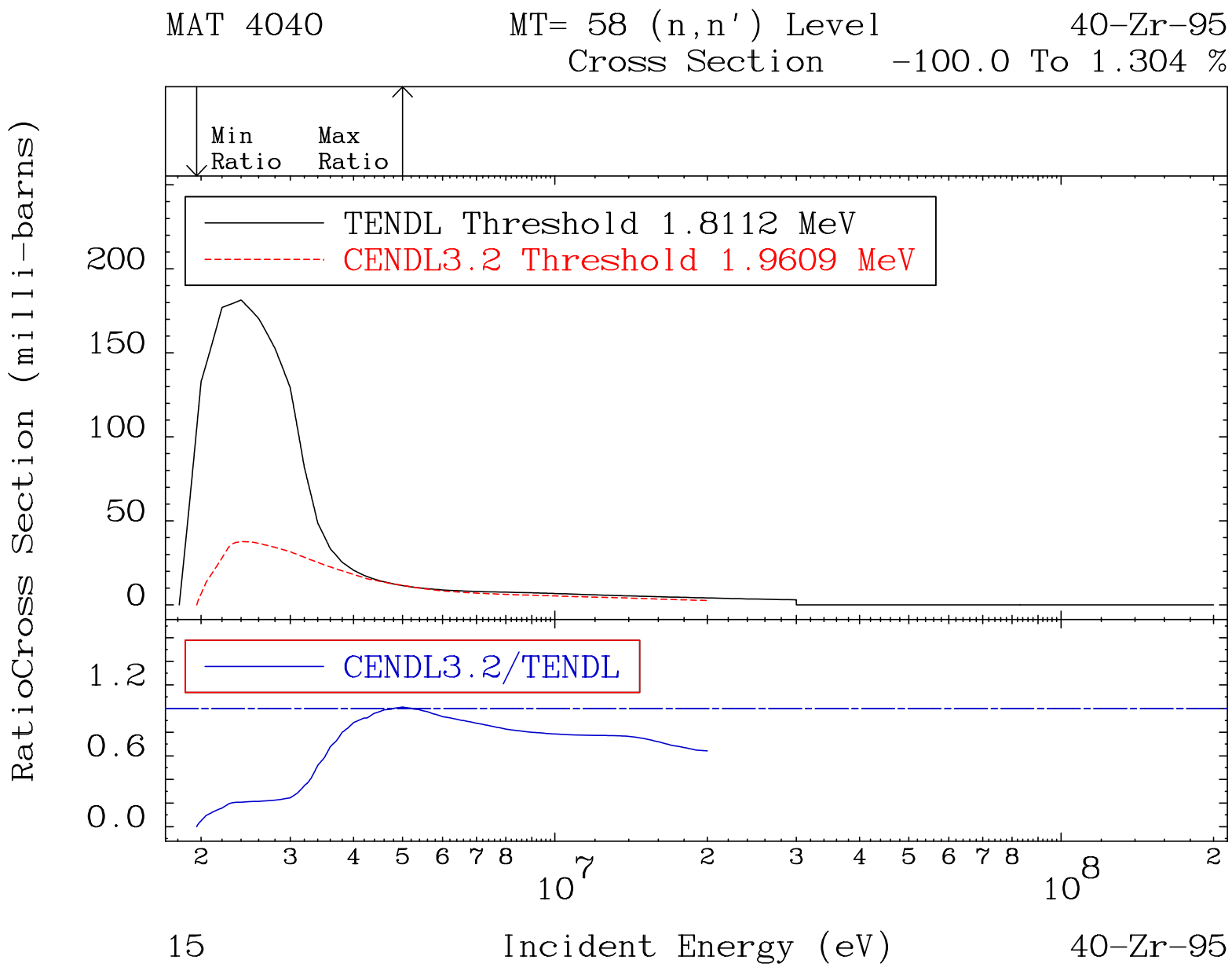

MAT 4040
MT= 53 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 168.8 %
Min Ratio
Max Ratio
TENDL Threshold 1.3379 MeV
CENDL3.2 Threshold 1.3379 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
10
40-Zr-95

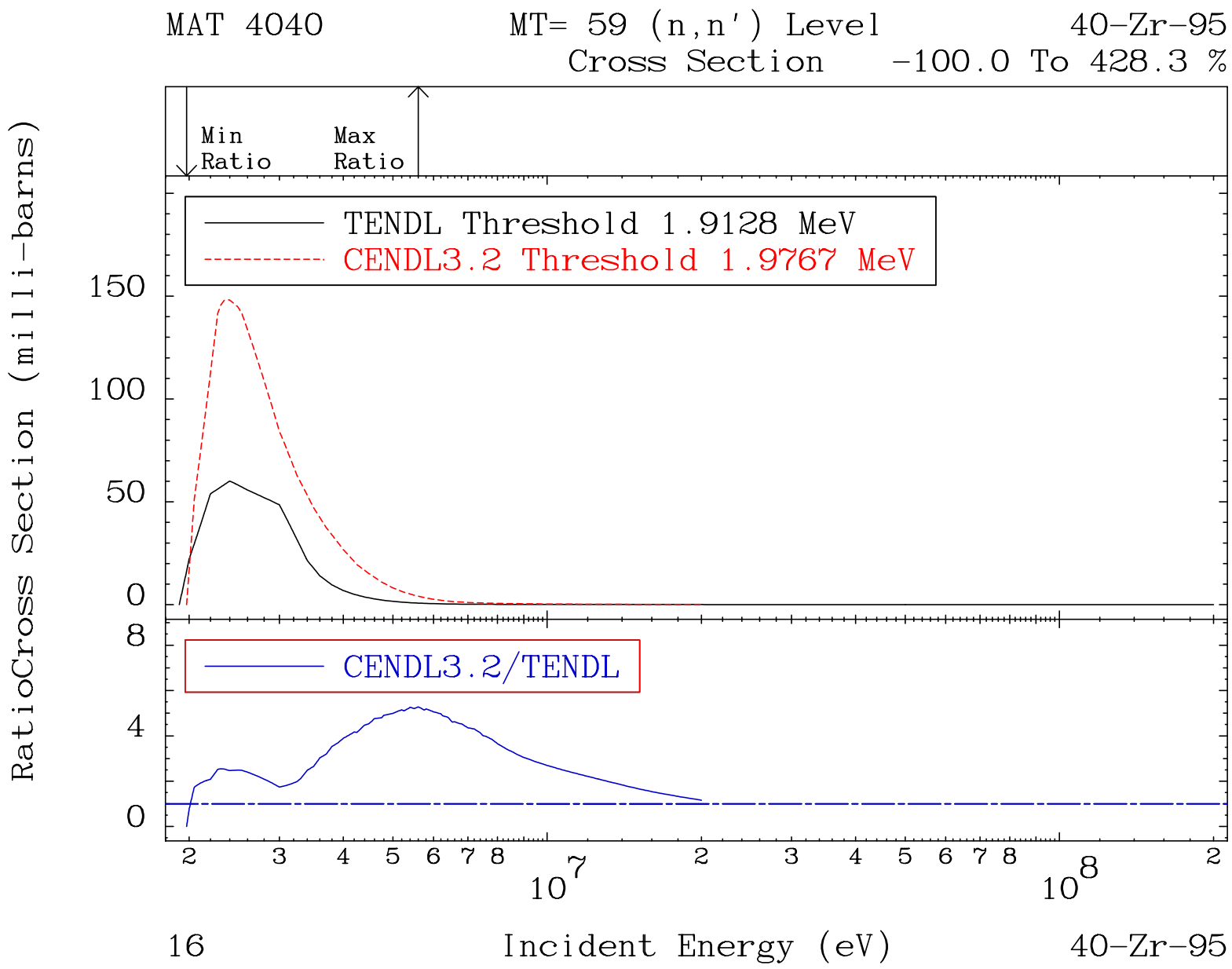

MAT 4040
MT= 54 (n,n') Level
Cross Section 141.3 To 790.4 %
40-Zr-95
Min Ratio
Max Ratio
TENDL Threshold 1.6356 MeV
CENDL3.2 Threshold 1.6352 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
400
300
200
100
0
12
8
4
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
11
Incident Energy (eV)
40-Zr-95

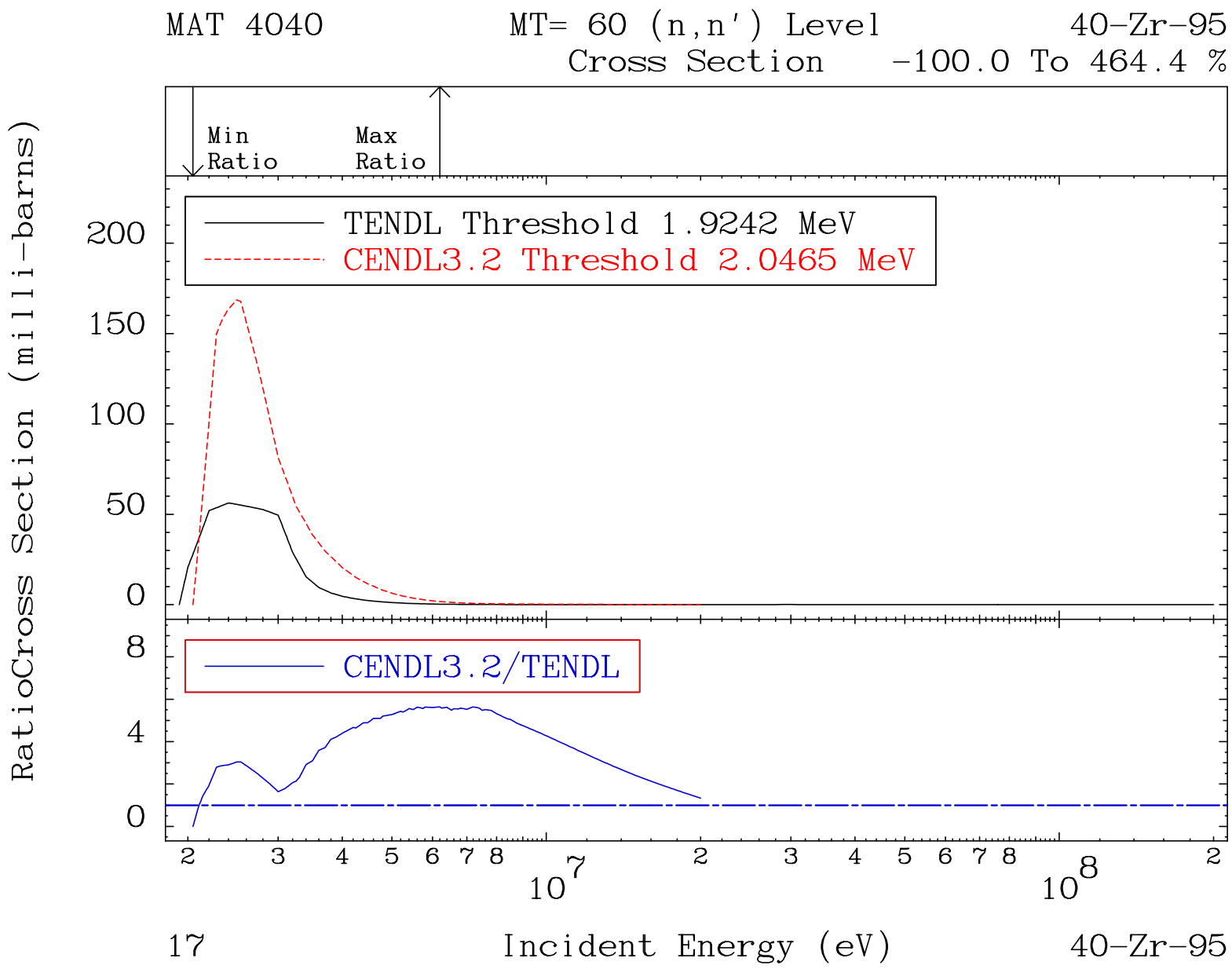

MAT 4040
MT= 55 (n,n') Level
Cross Section
40-Zr-95
-38.02 To 112.7 %
Min Ratio
Max Ratio
TENDL Threshold 1.6420 MeV
CENDL3.2 Threshold 1.6355 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
2.0
1.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
12
Incident Energy (eV)
40-Zr-95

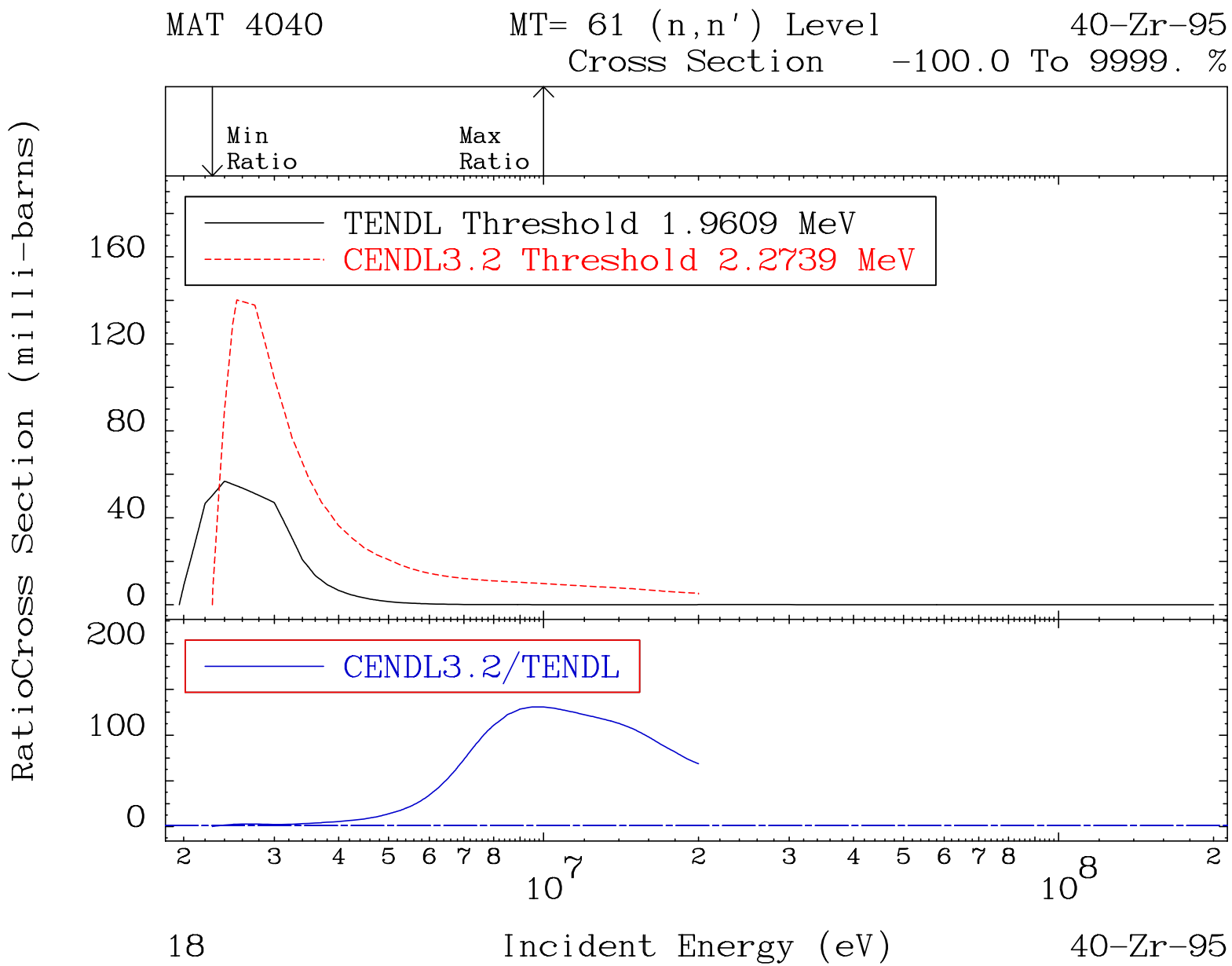

MAT 4040
MT= 56 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 111.8 %
Min Ratio
Max Ratio
TENDL Threshold 1.6941 MeV
CENDL3.2 Threshold 1.7400 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
3.0
2.0
1.0
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
40-Zr-95

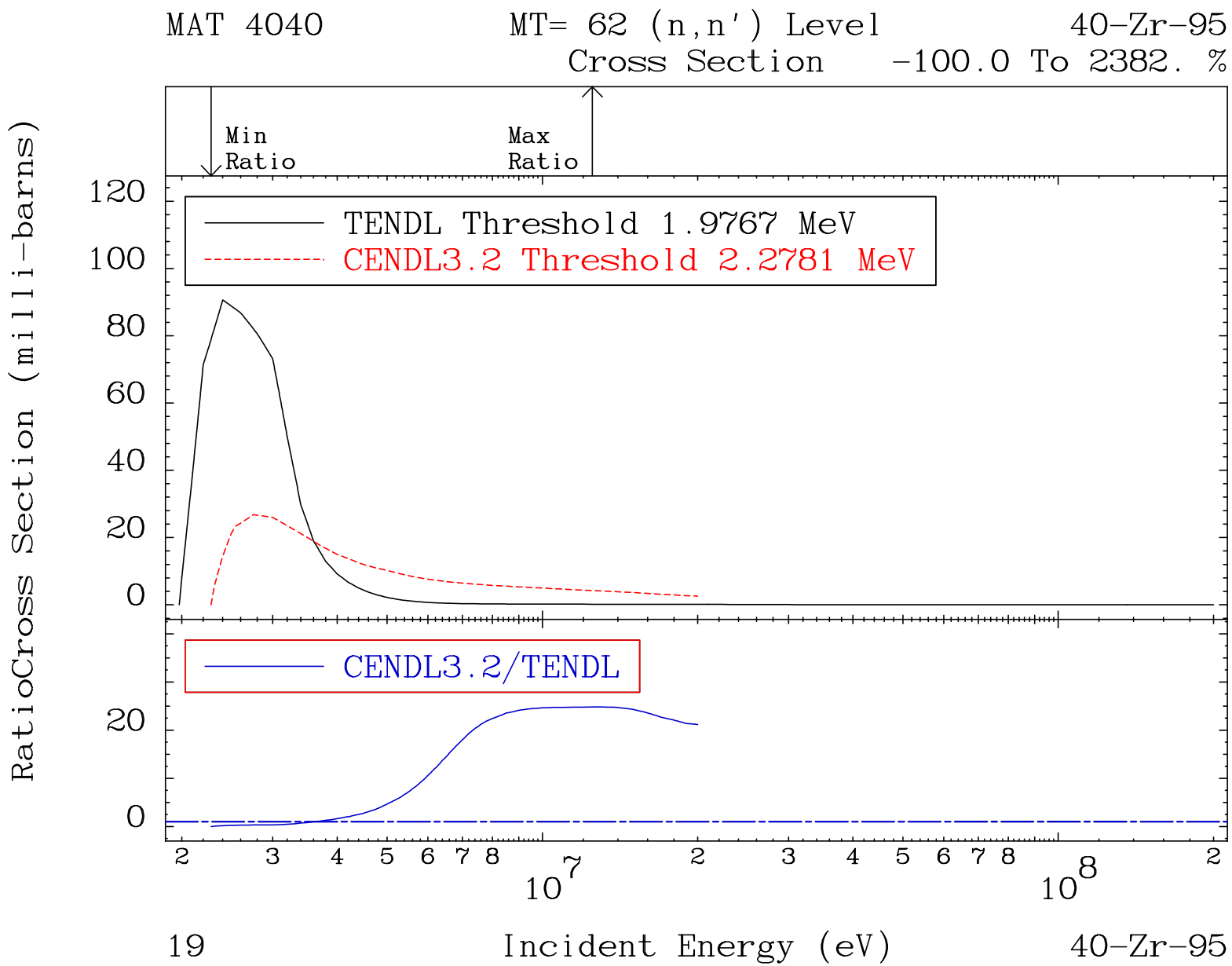

MAT 4040
MT= 57 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 194.6 %
Min Ratio
Max Ratio
TENDL Threshold 1.7398 MeV
CENDL3.2 Threshold 1.9241 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
80
40
0
4
2
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
Incident Energy (eV)
14
40-Zr-95

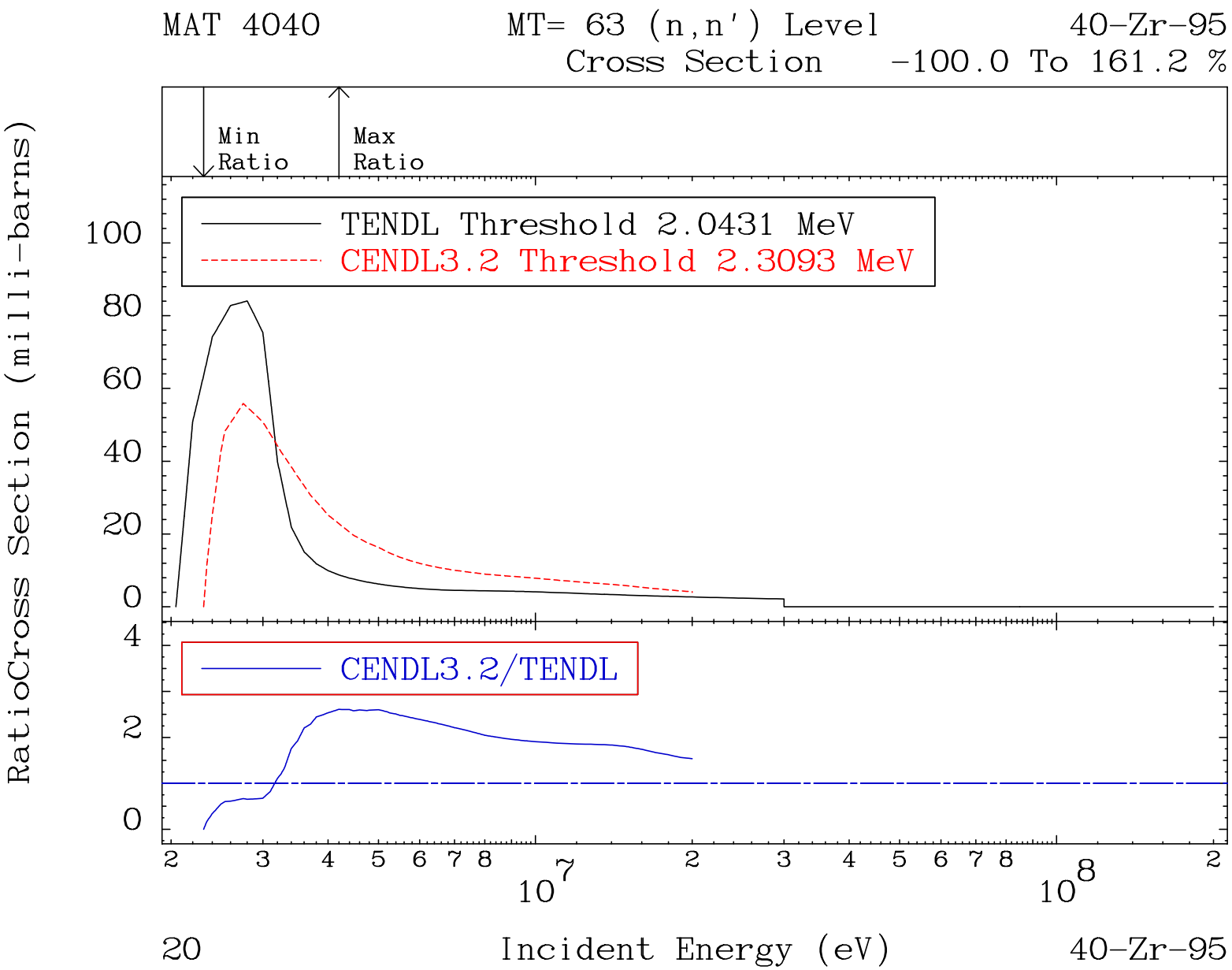

MAT 4040
MT= 58 (n,n') Level
40-Zr-95
Cross Section
-100.0 To 1.304 %
Min Ratio
Max Ratio
TENDL Threshold 1.8112 MeV
CENDL3.2 Threshold 1.9609 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
1.2
0.6
0.0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
Incident Energy (eV)
15
40-Zr-95

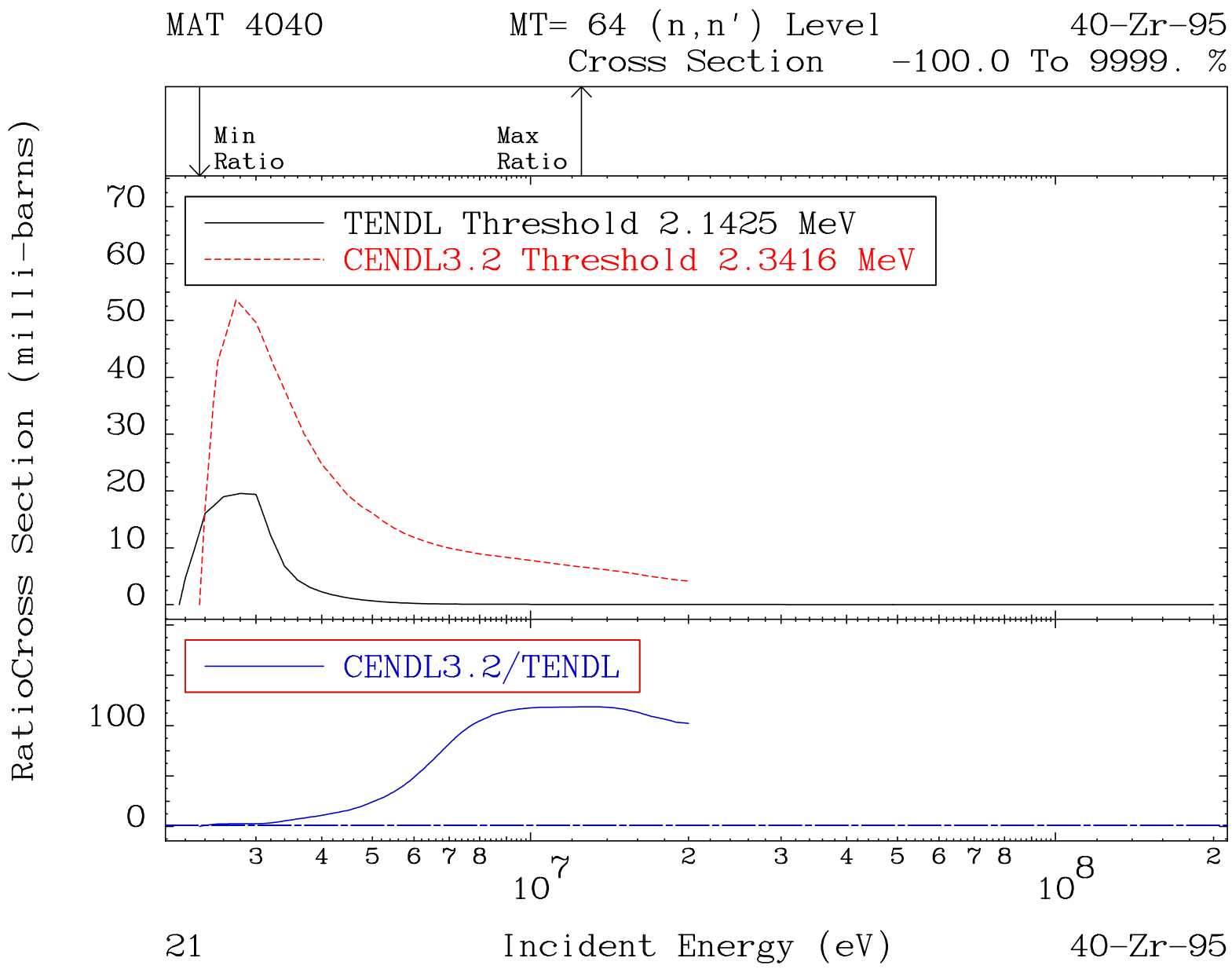

MAT 4040
MT= 59 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 428.3 %
Min Ratio
Max Ratio
TENDL Threshold 1.9128 MeV
CENDL3.2 Threshold 1.9767 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
150
100
50
0
8
4
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
16
Incident Energy (eV)
40-Zr-95

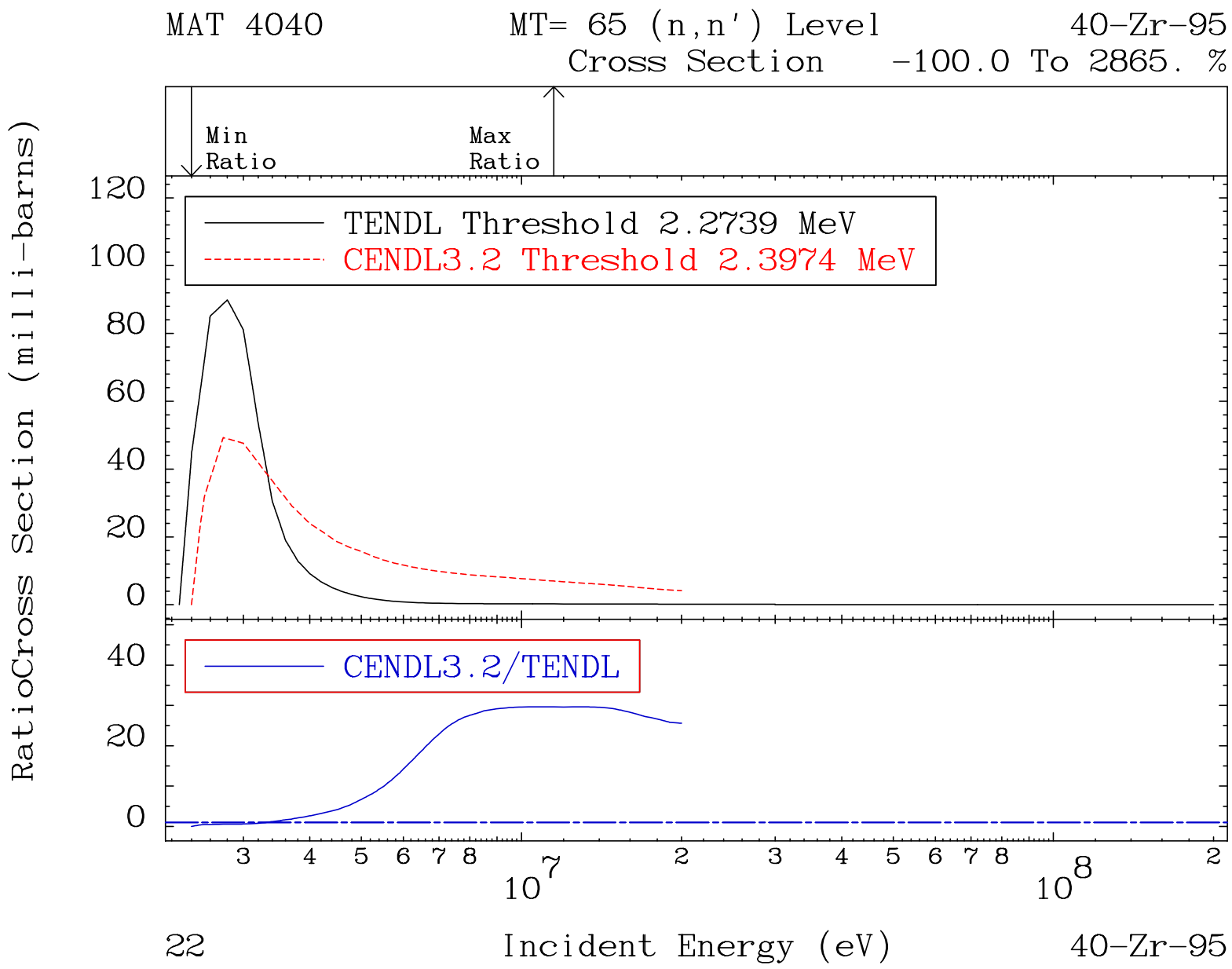

MAT 4040
MT= 60 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 464.4 %
Min Ratio
Max Ratio
TENDL Threshold 1.9242 MeV
CENDL3.2 Threshold 2.0465 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
8
4
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
17
Incident Energy (eV)
40-Zr-95

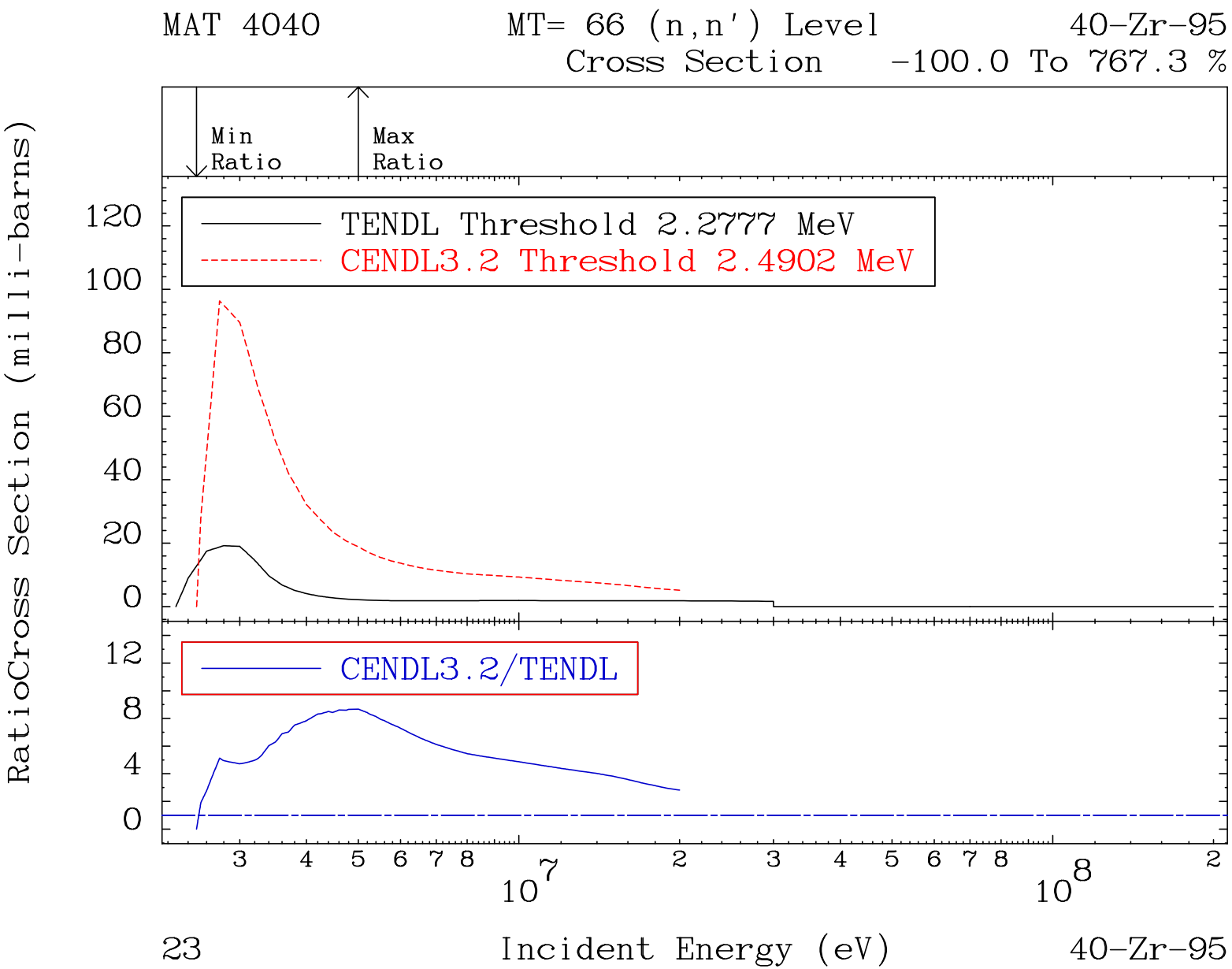

MAT 4040
MT= 61 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 1.9609 MeV
CENDL3.2 Threshold 2.2739 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
160
120
80
40
0
200
100
0
2 3 4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
18
Incident Energy (eV)
40-Zr-95

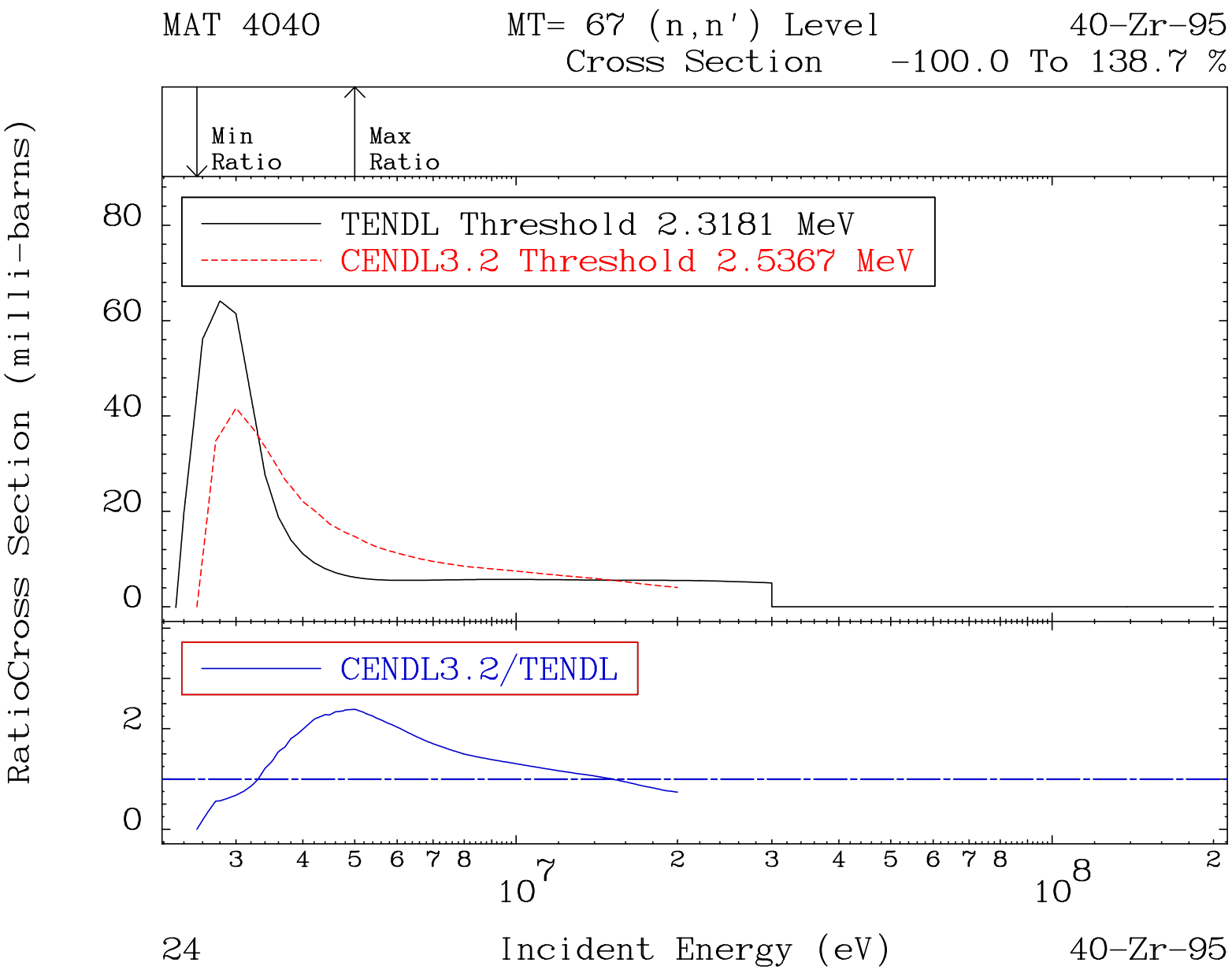

MAT 4040
MT= 62 (n,n') Level
40-Zr-95
Cross Section -100.0 To 2382. %
Min Ratio
Max Ratio
TENDL Threshold 1.9767 MeV
CENDL3.2 Threshold 2.2781 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
120
100
80
60
40
20
0
20
0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
19
Incident Energy (eV)
40-Zr-95

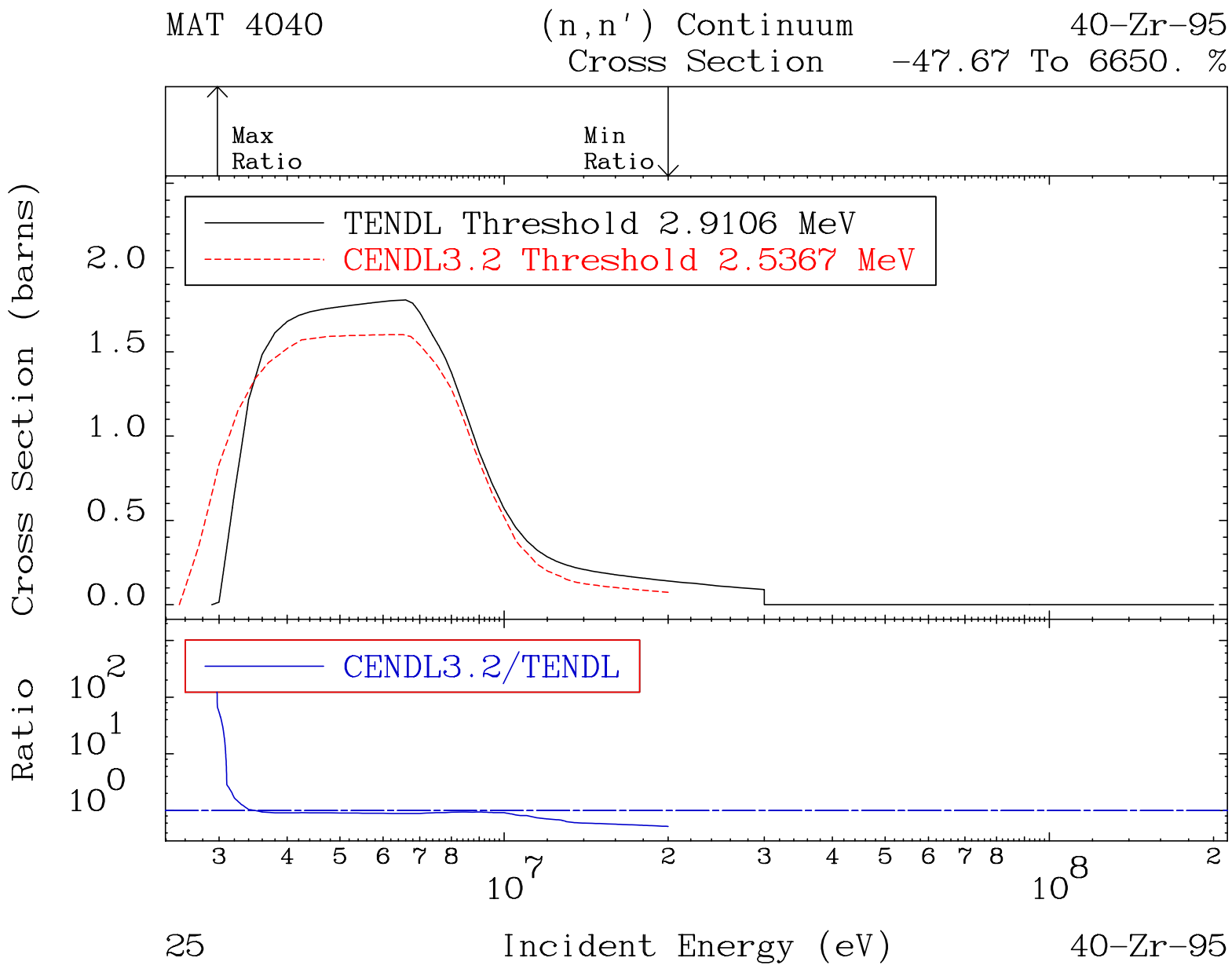

MAT 4040
MT= 63 (n,n') Level
40-Zr-95
Cross Section
-100.0 To 161.2 %
Min Ratio
Max Ratio
TENDL Threshold 2.0431 MeV
CENDL3.2 Threshold 2.3093 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
4
2
0
2 3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
20
40-Zr-95

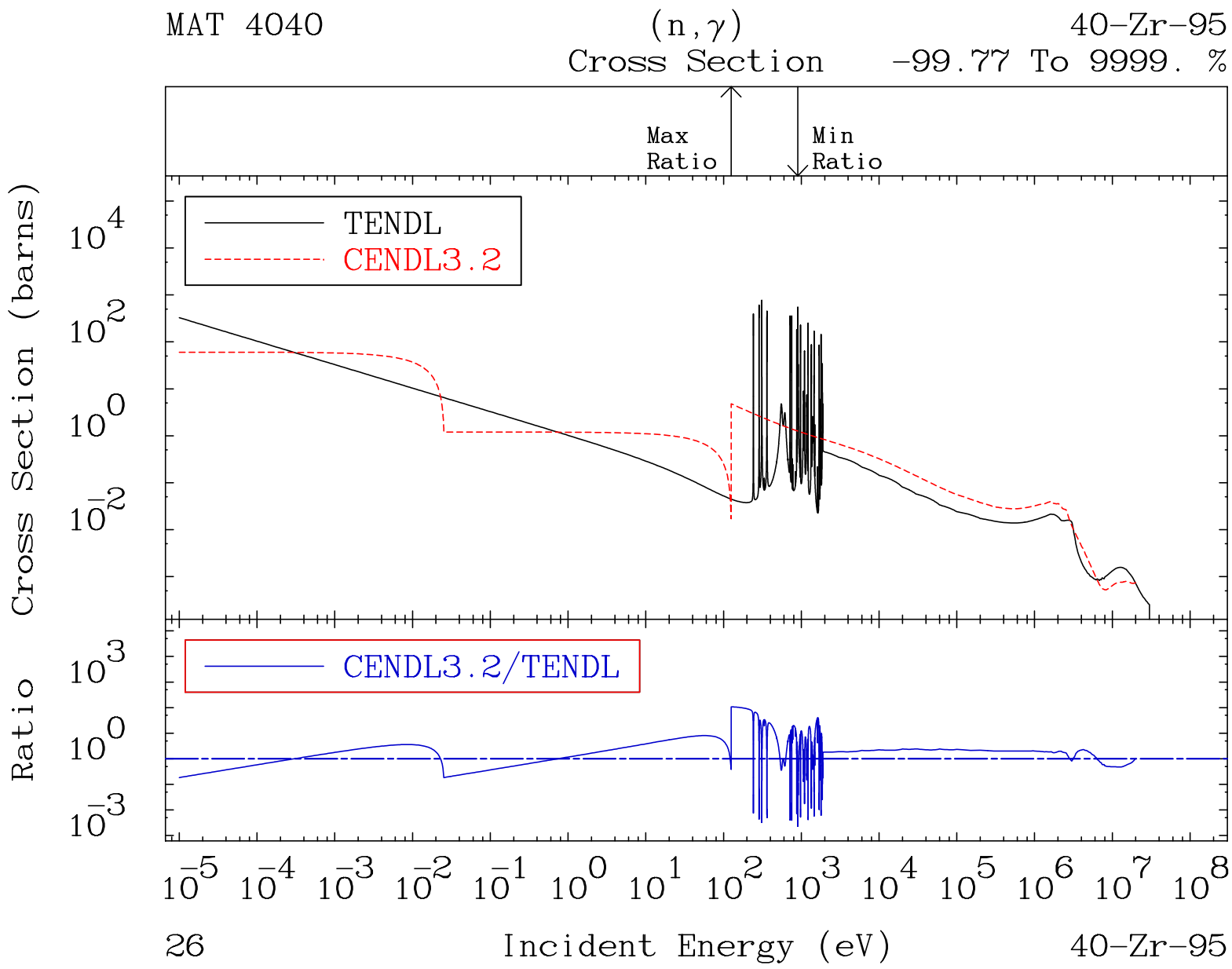

MAT 4040
MT= 64 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 2.1425 MeV
CENDL3.2 Threshold 2.3416 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
70
60
50
40
30
20
10
0
100
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
40-Zr-95

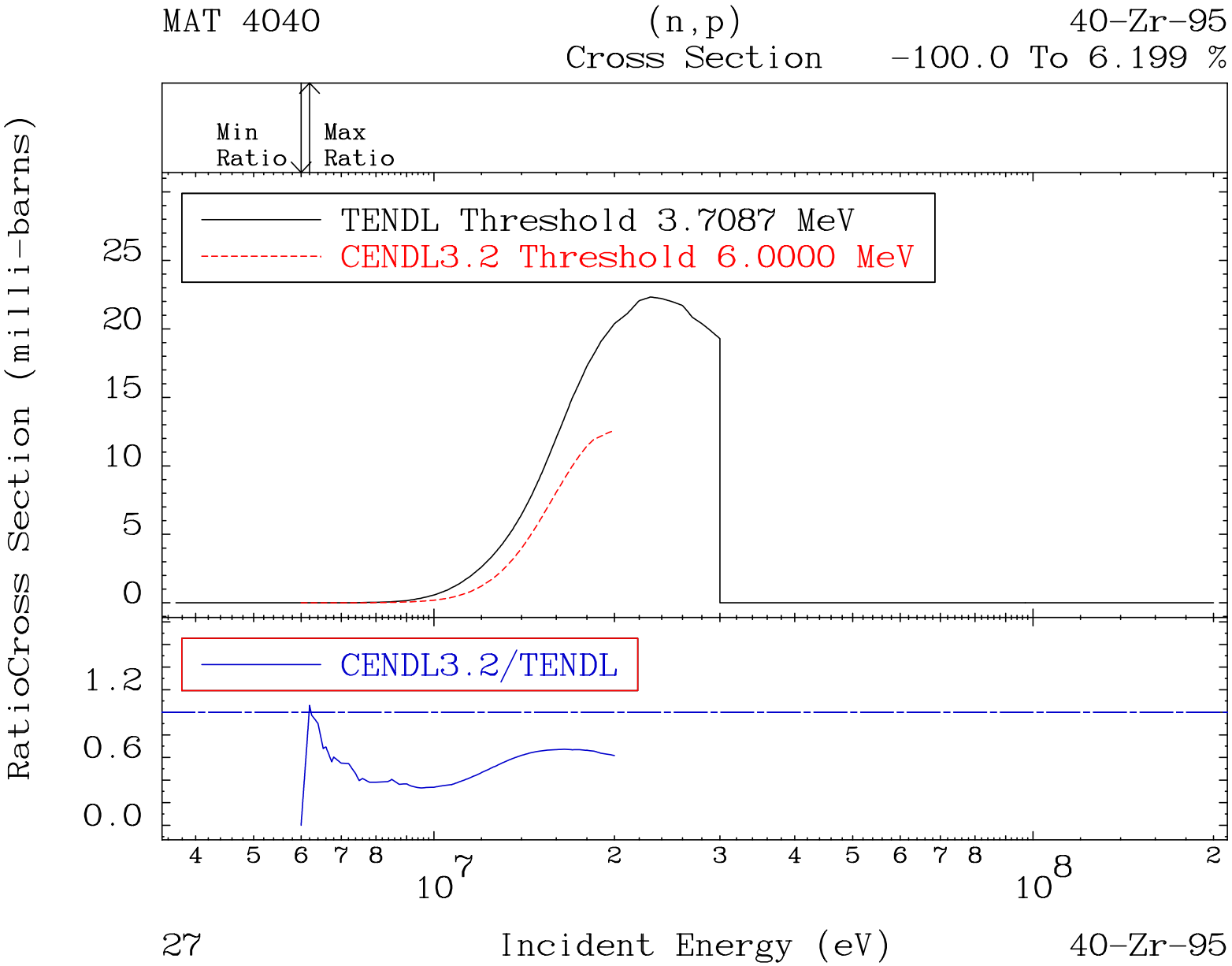

MAT 4040
MT= 65 (n,n') Level
40-Zr-95
Cross Section
-100.0 To 2865. %
Min Ratio
Max Ratio
TENDL Threshold 2.2739 MeV
CENDL3.2 Threshold 2.3974 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
22
40-Zr-95

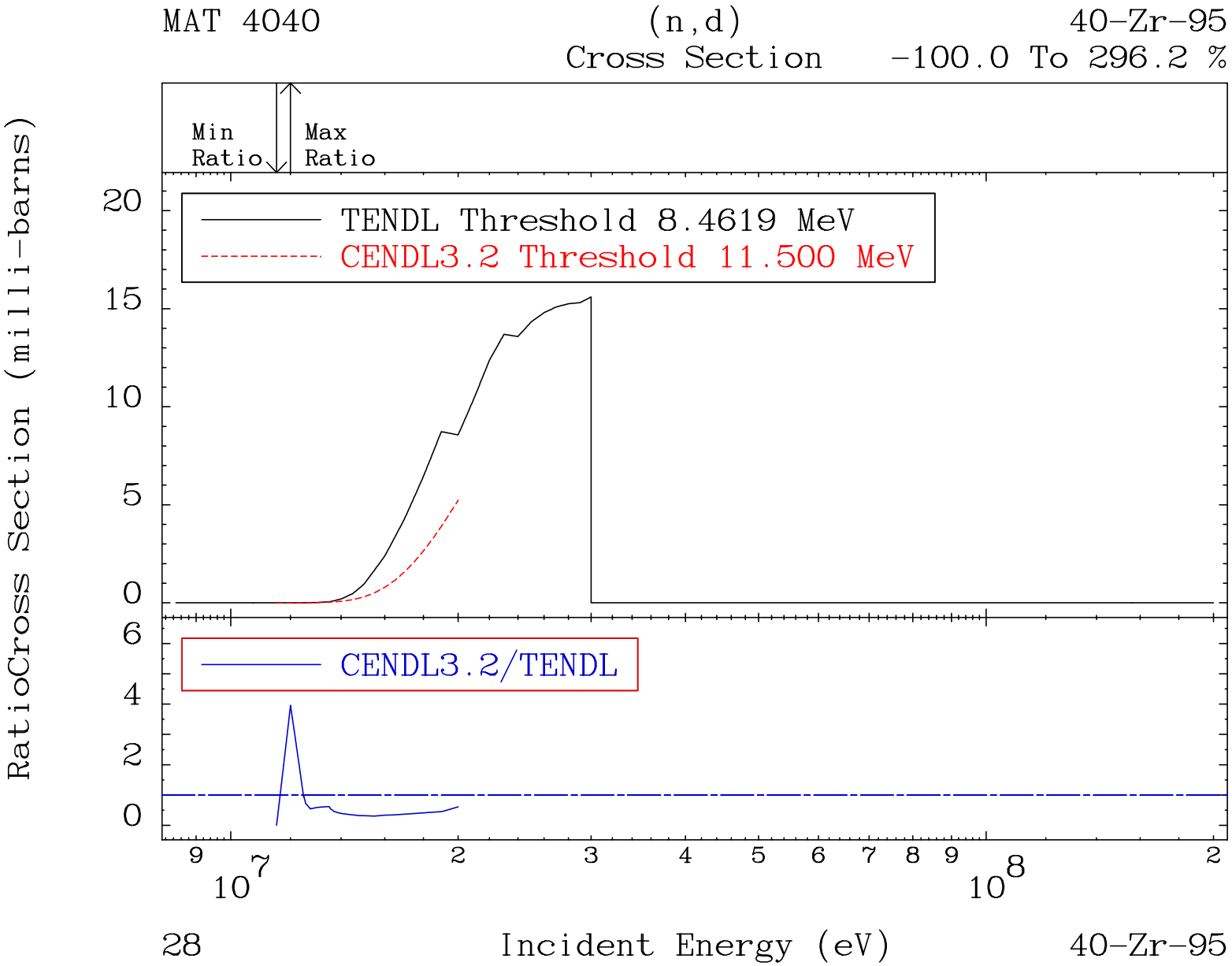

MAT 4040
MT= 66 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 767.3 %
Min Ratio
Max Ratio
TENDL Threshold 2.2777 MeV
CENDL3.2 Threshold 2.4902 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
23
40-Zr-95

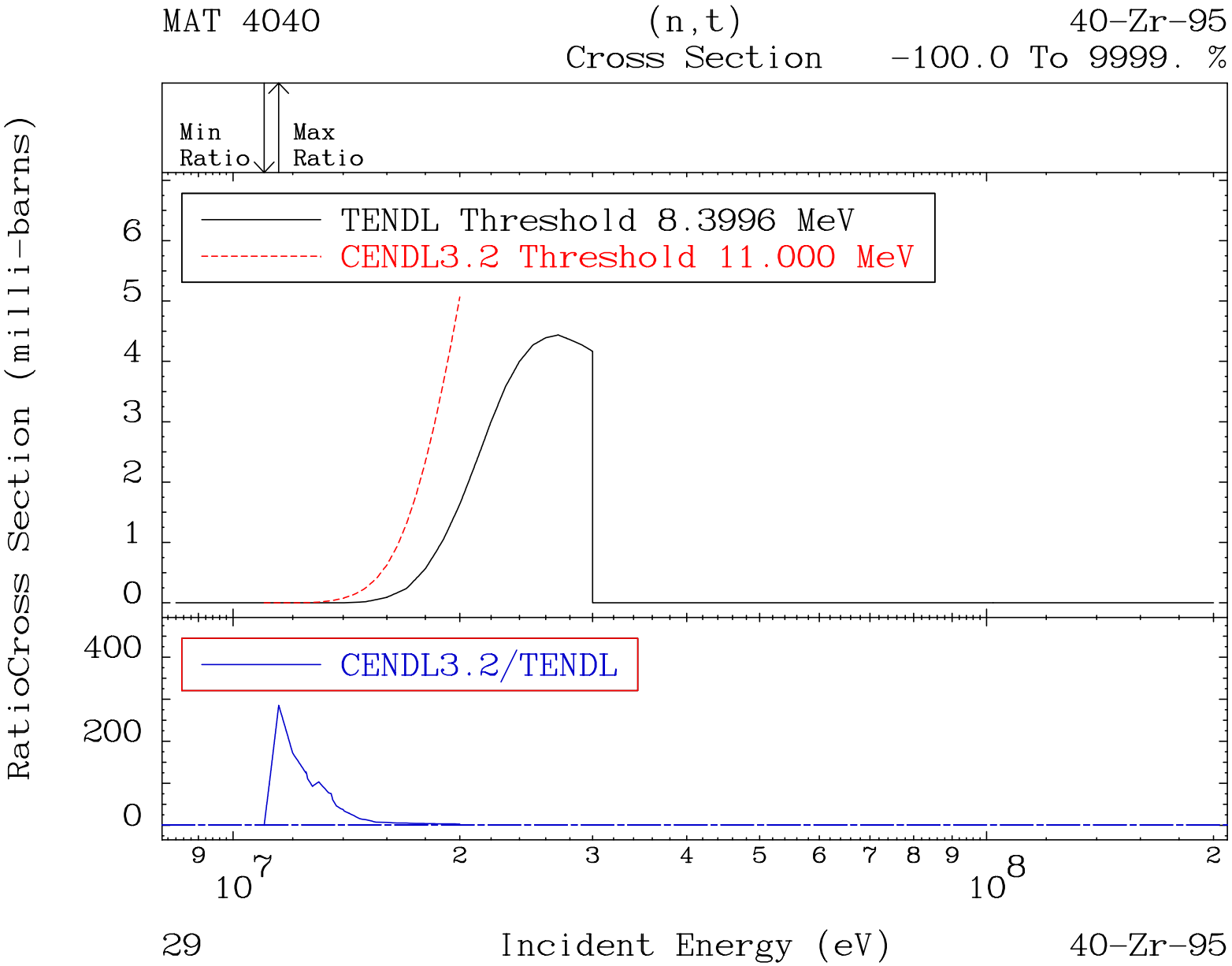

MAT 4040
MT= 67 (n,n') Level
Cross Section
40-Zr-95
-100.0 To 138.7 %
Min Ratio
Max Ratio
TENDL Threshold 2.3181 MeV
CENDL3.2 Threshold 2.5367 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
2
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
24
Incident Energy (eV)
40-Zr-95

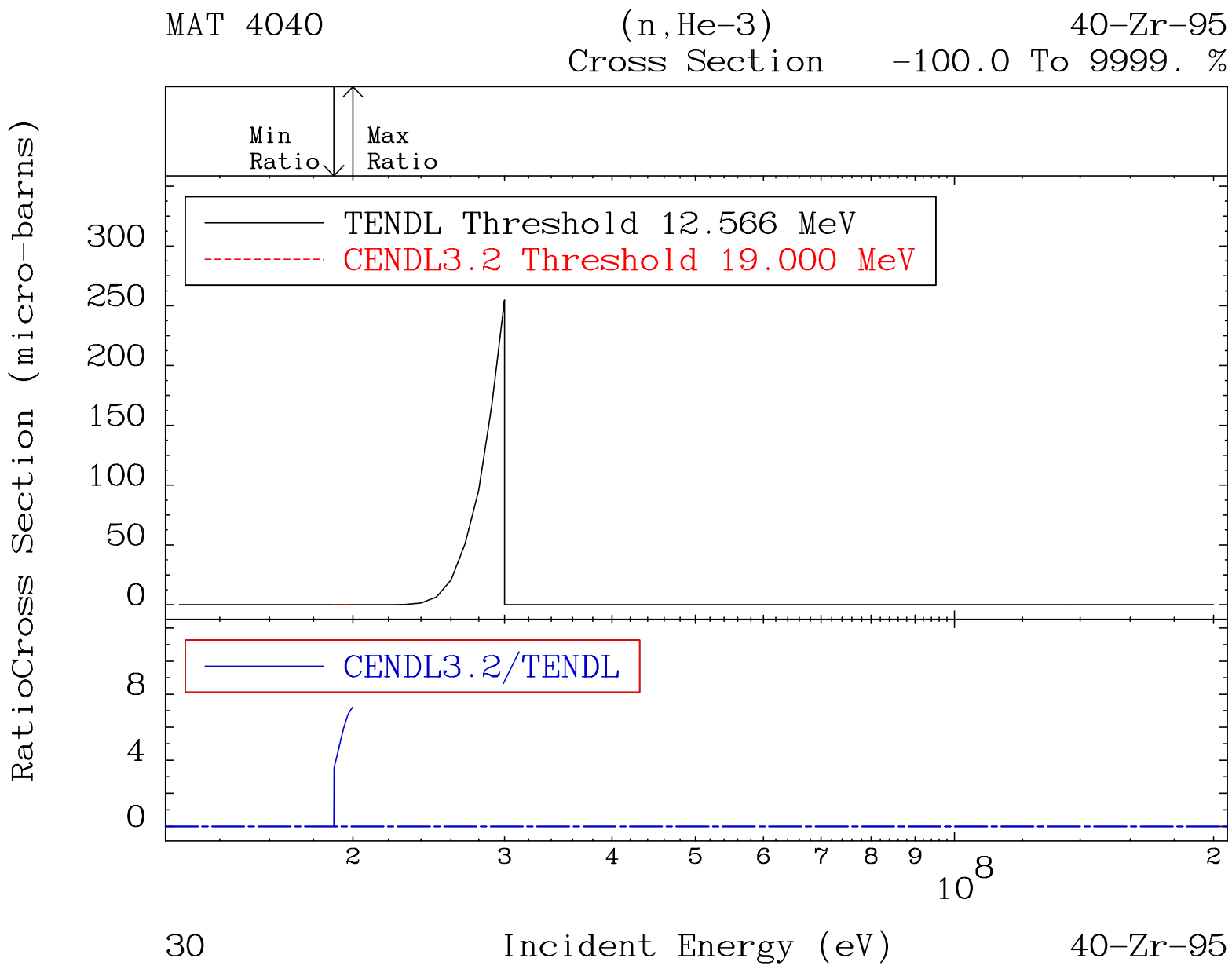

MAT 4040
(n,n') Continuum
Cross Section
40-Zr-95
-47.67 To 6650. %
Max
Ratio
Min
Ratio
TENDL Threshold 2.9106 MeV
CENDL3.2 Threshold 2.5367 MeV
Cross Section (barns)
2.0
1.5
1.0
0.5
0.0
CENDL3.2/TENDL
Ratio
10^2
10^1
10^0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)

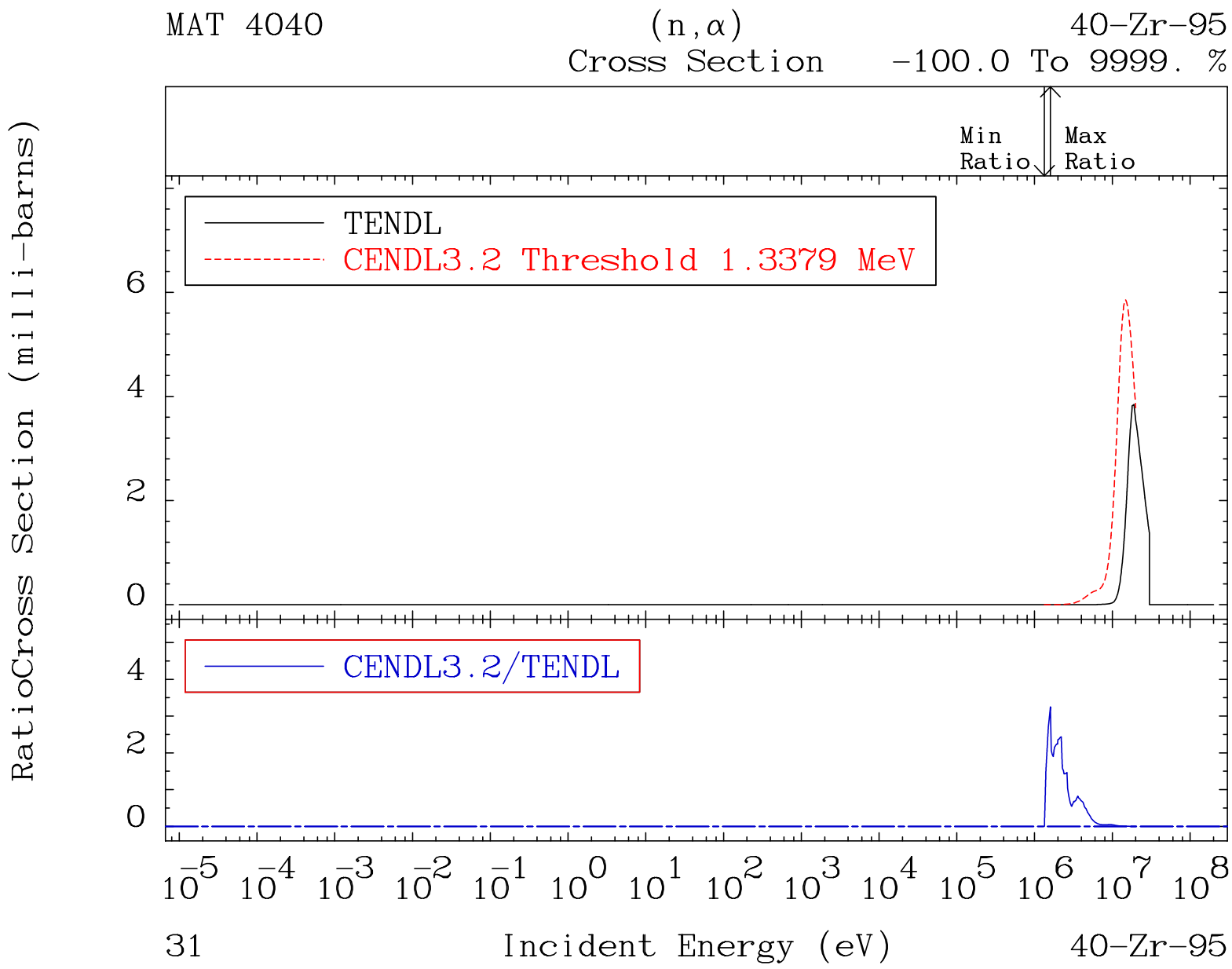

MAT 4040
(n,γ)
Cross Section
40-Zr-95
-99.77 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
26
40-Zr-95

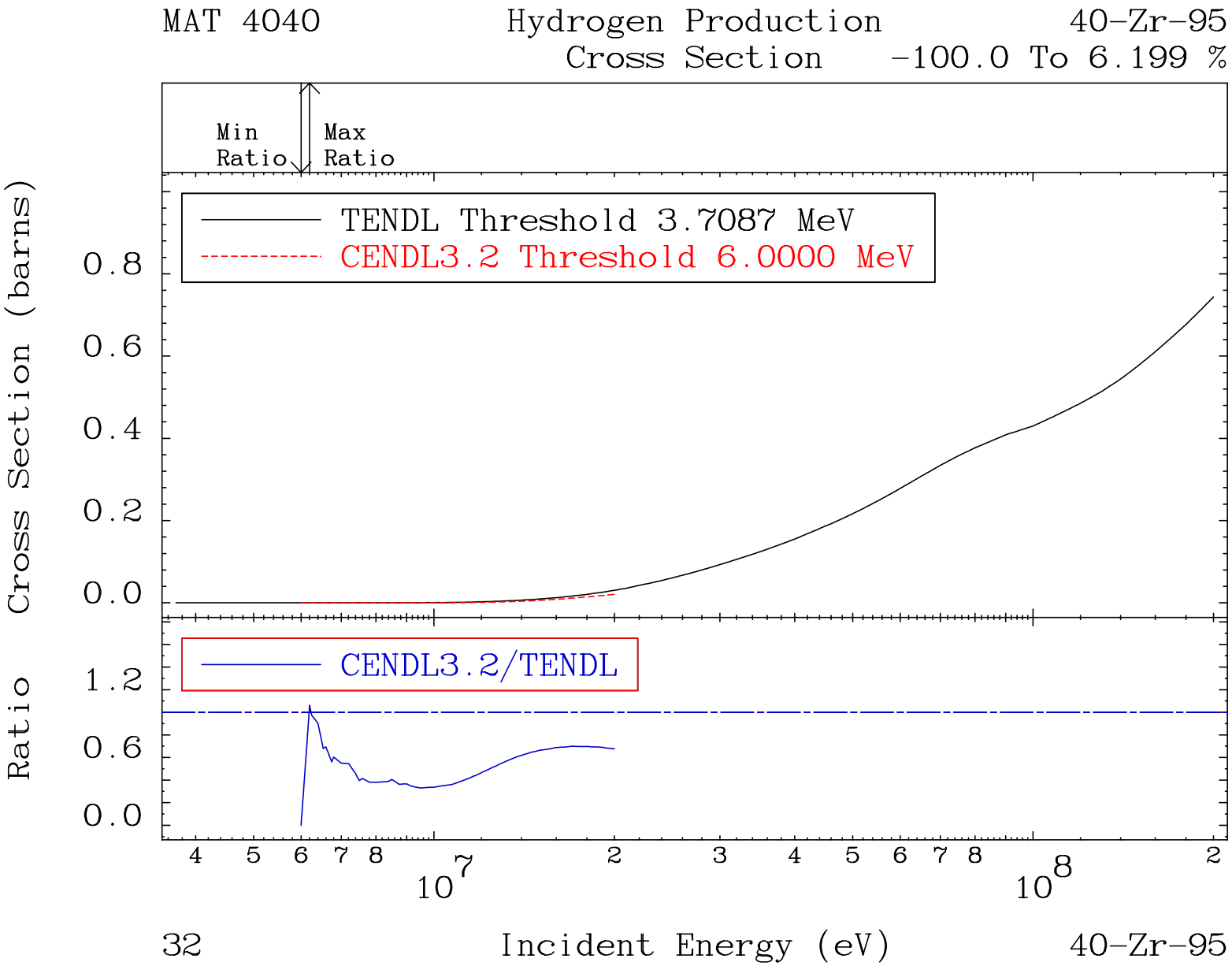

MAT 4040
(n,p)
Cross Section
40-Zr-95
-100.0 To 6.199 %
Min Ratio
Max Ratio
TENDL Threshold 3.7087 MeV
CENDL3.2 Threshold 6.0000 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
25
20
15
10
5
0
1.2
0.6
0.0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
27
Incident Energy (eV)
40-Zr-95

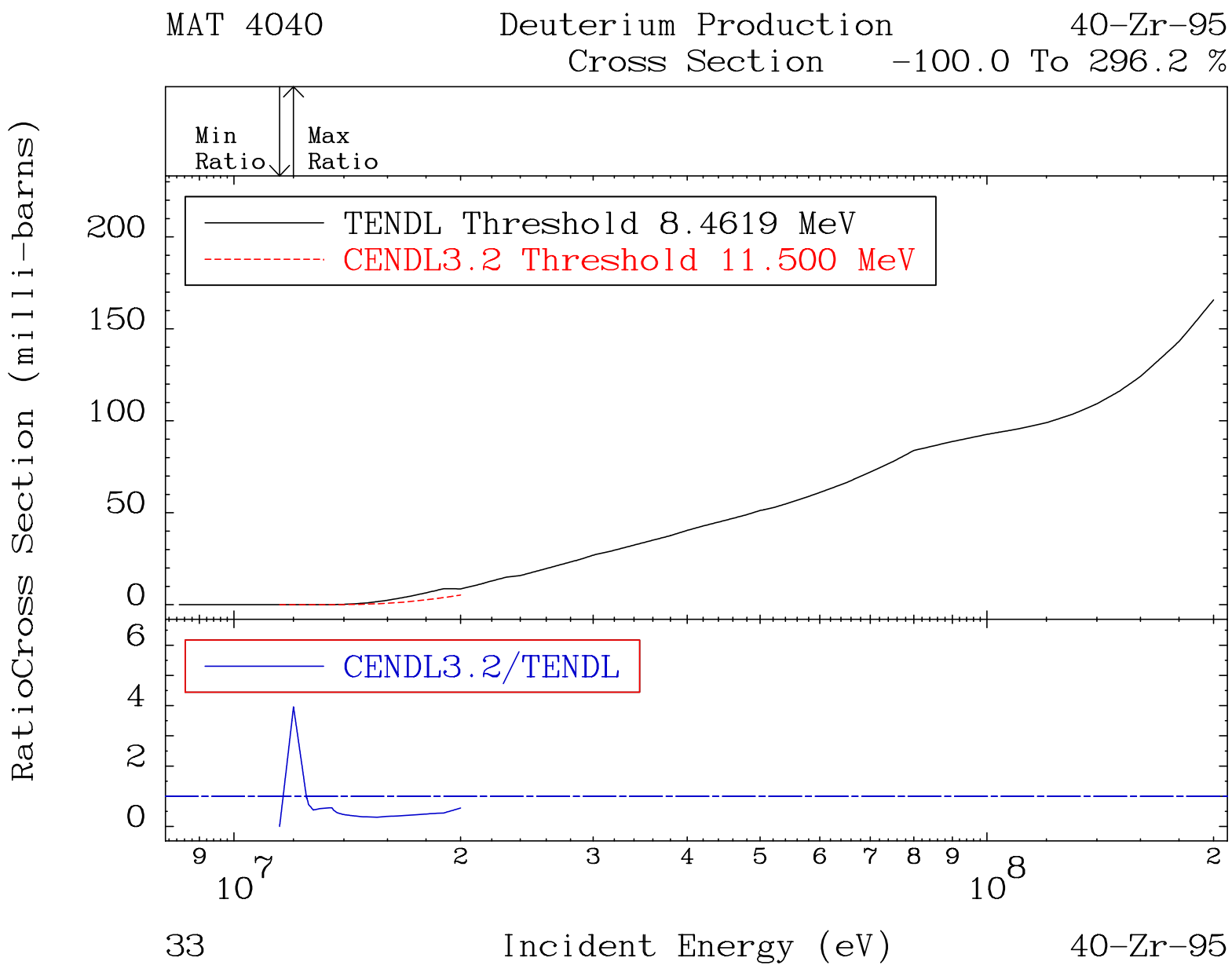

MAT 4040
(n,d)
Cross Section
40-Zr-95
-100.0 To 296.2 %
Min Ratio
Max Ratio
TENDL Threshold 8.4619 MeV
CENDL3.2 Threshold 11.500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
28
40-Zr-95

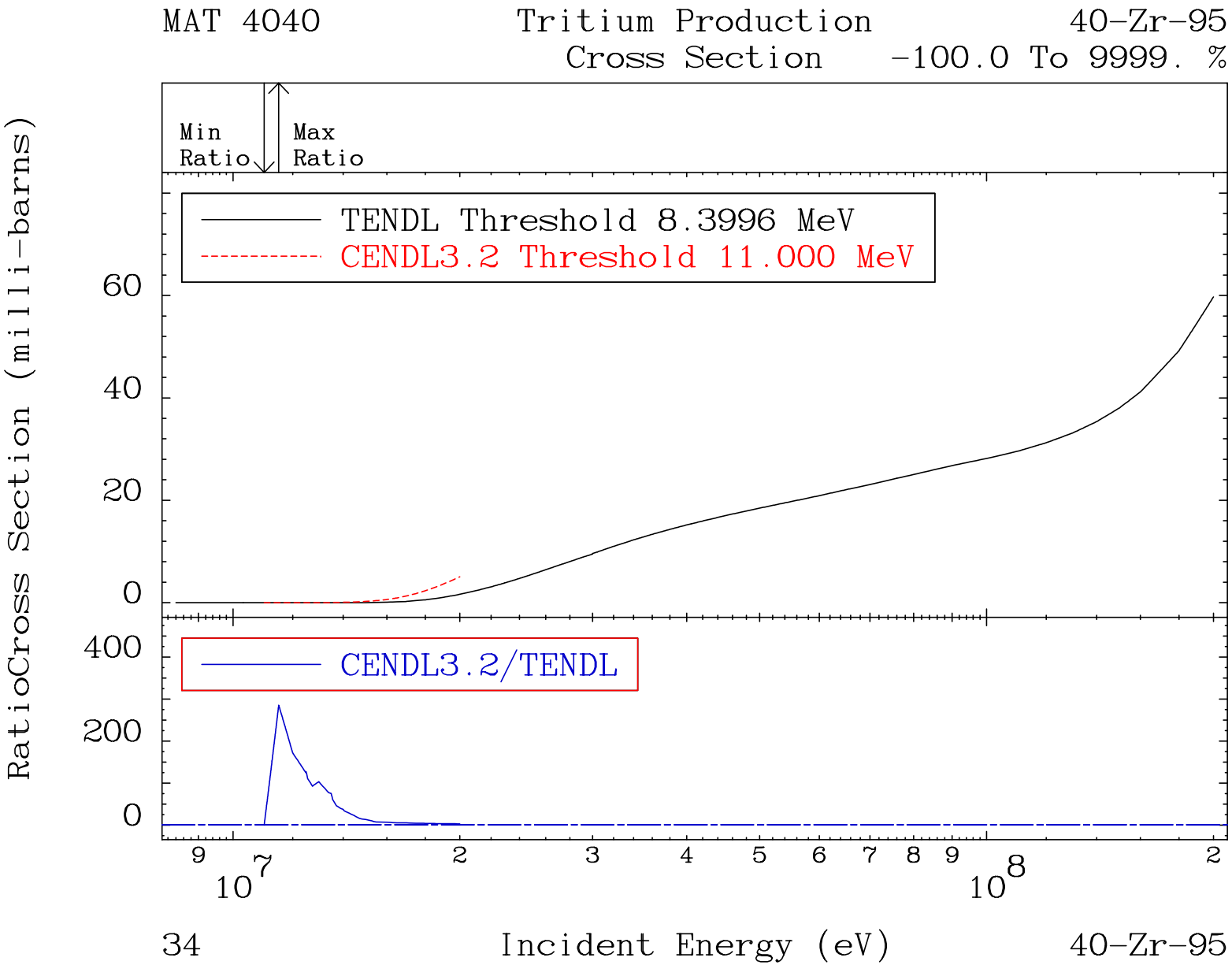

MAT 4040
(n,t)
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 8.3996 MeV
CENDL3.2 Threshold 11.000 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
29
40-Zr-95

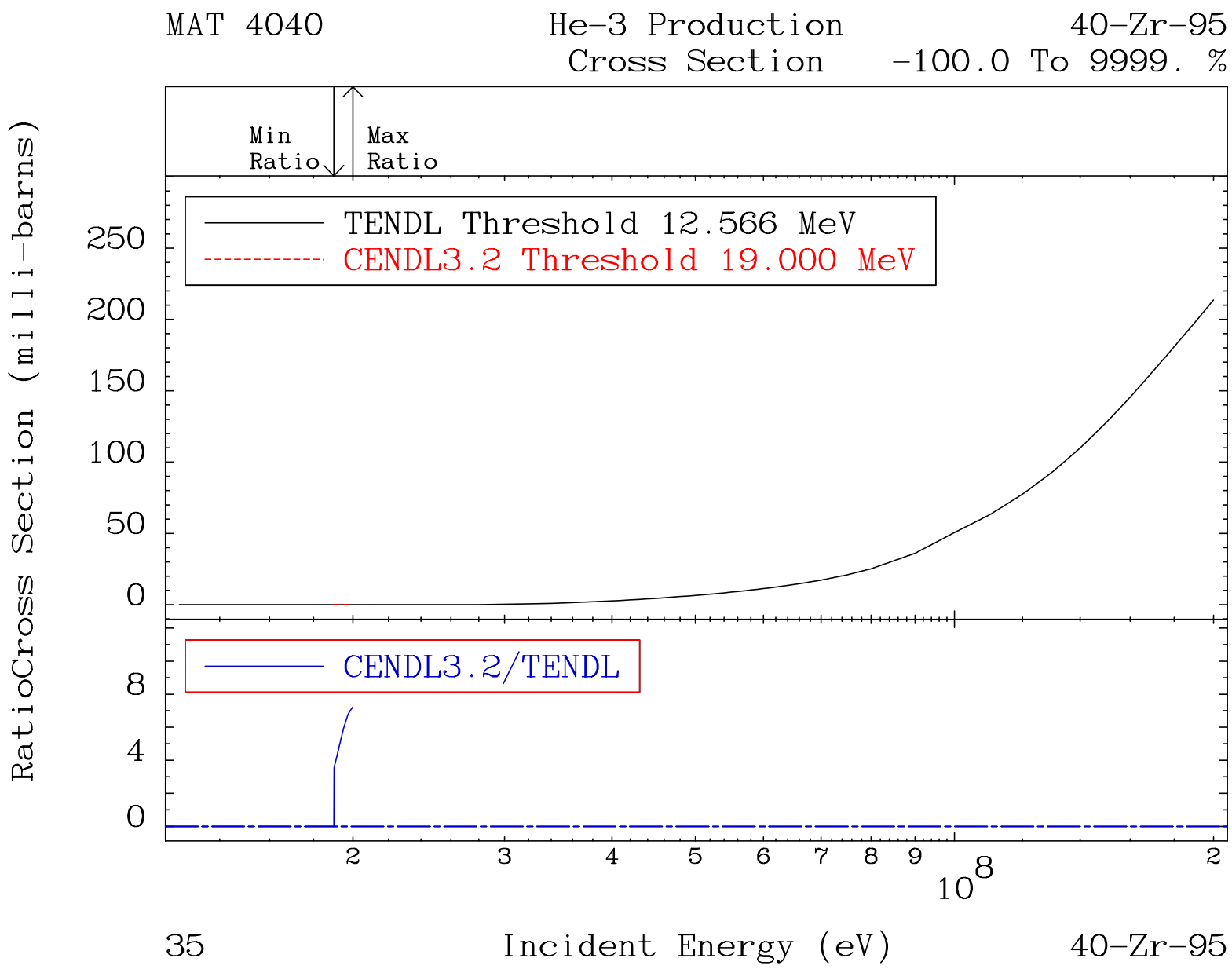

MAT 4040
(n,He-3)
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 12.566 MeV
CENDL3.2 Threshold 19.000 MeV
CENDL3.2/TENDL
RatioCross Section (micro-barns)
300
250
200
150
100
50
0
8
4
0
2
3
4
5
6
7
8
9
10^8
2
Incident Energy (eV)
30
40-Zr-95

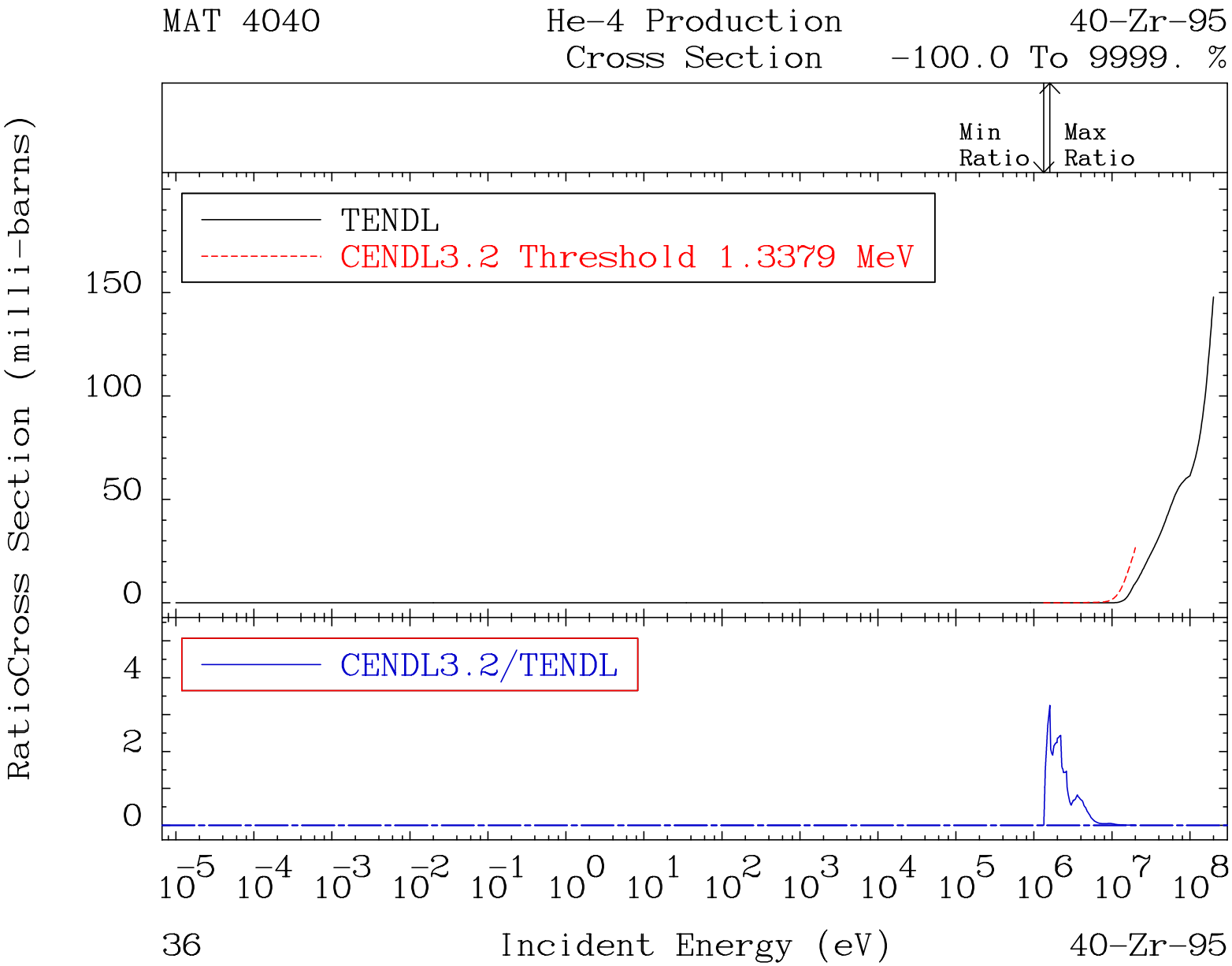

MAT 4040
(n,α)
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2 Threshold 1.3379 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
31
40-Zr-95

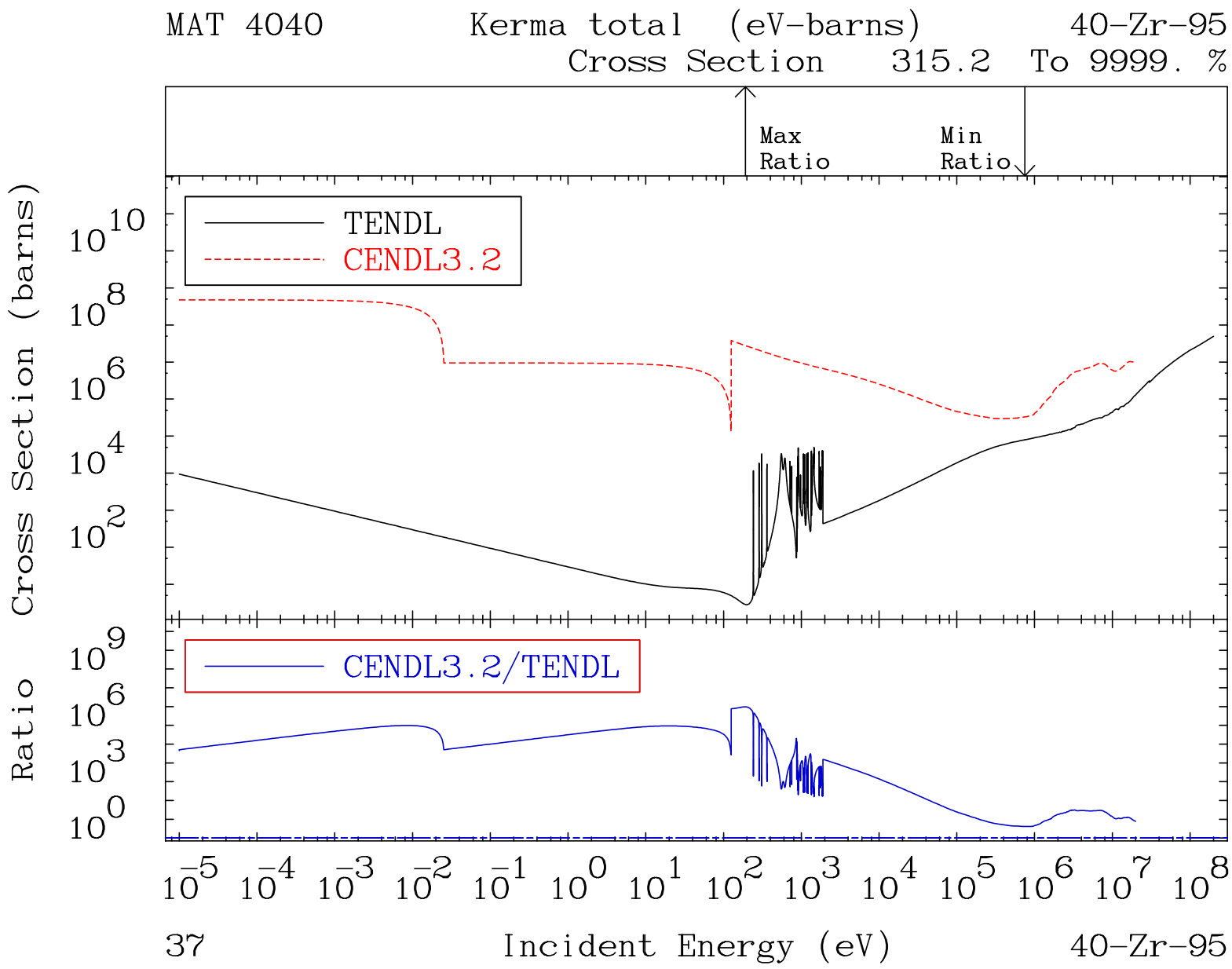

MAT 4040
Hydrogen Production
Cross Section
-100.0 To 6.199 %
40-Zr-95
Min Ratio
Max Ratio
TENDL Threshold 3.7087 MeV
CENDL3.2 Threshold 6.0000 MeV
Cross Section (barns)
0.0
0.2
0.4
0.6
0.8
CENDL3.2/TENDL
Ratio
0.0
0.6
1.2
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
32
40-Zr-95

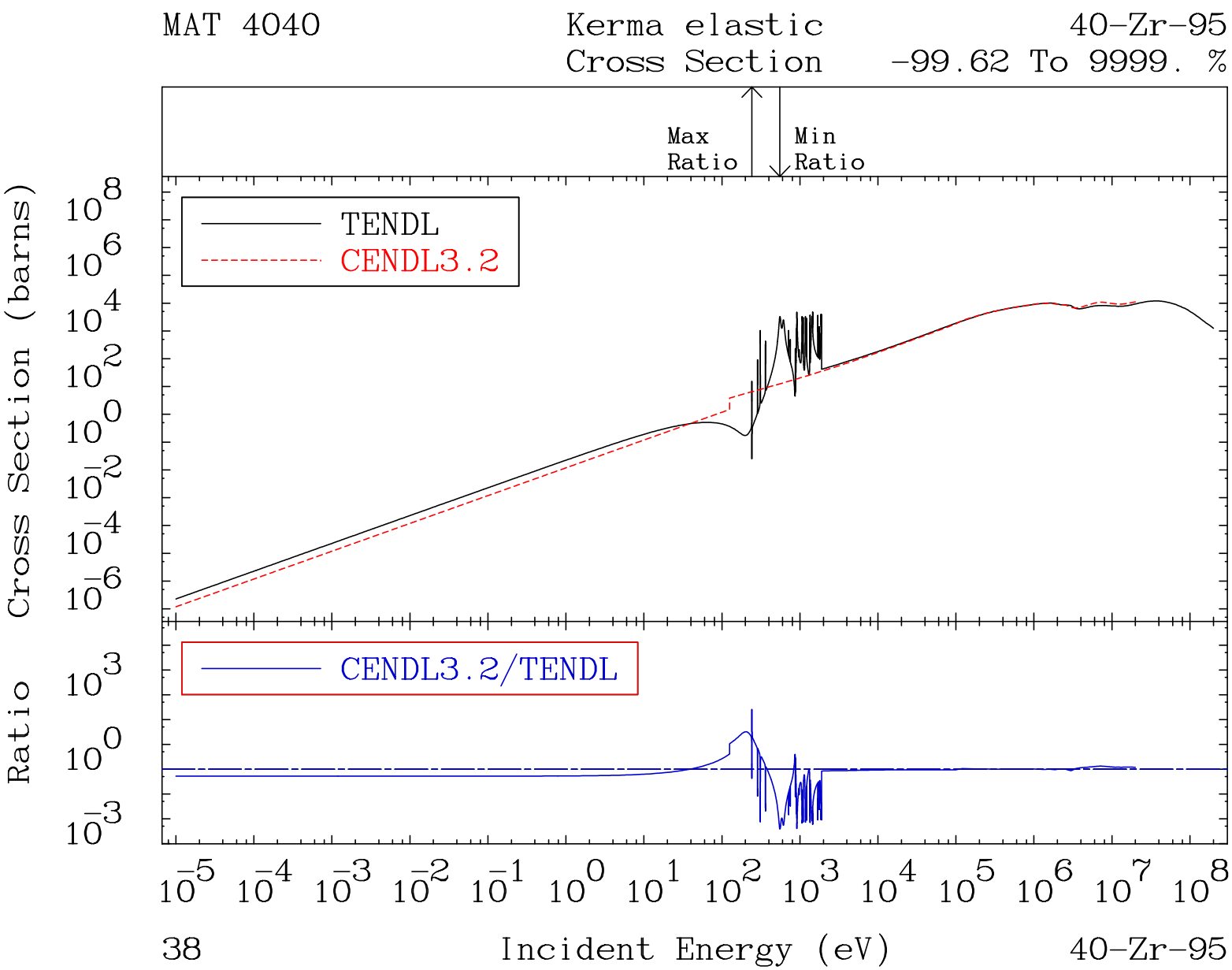

MAT 4040
Deuterium Production
Cross Section
40-Zr-95
-100.0 To 296.2 %
Min Ratio
Max Ratio
TENDL Threshold 8.4619 MeV
CENDL3.2 Threshold 11.500 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
33
40-Zr-95

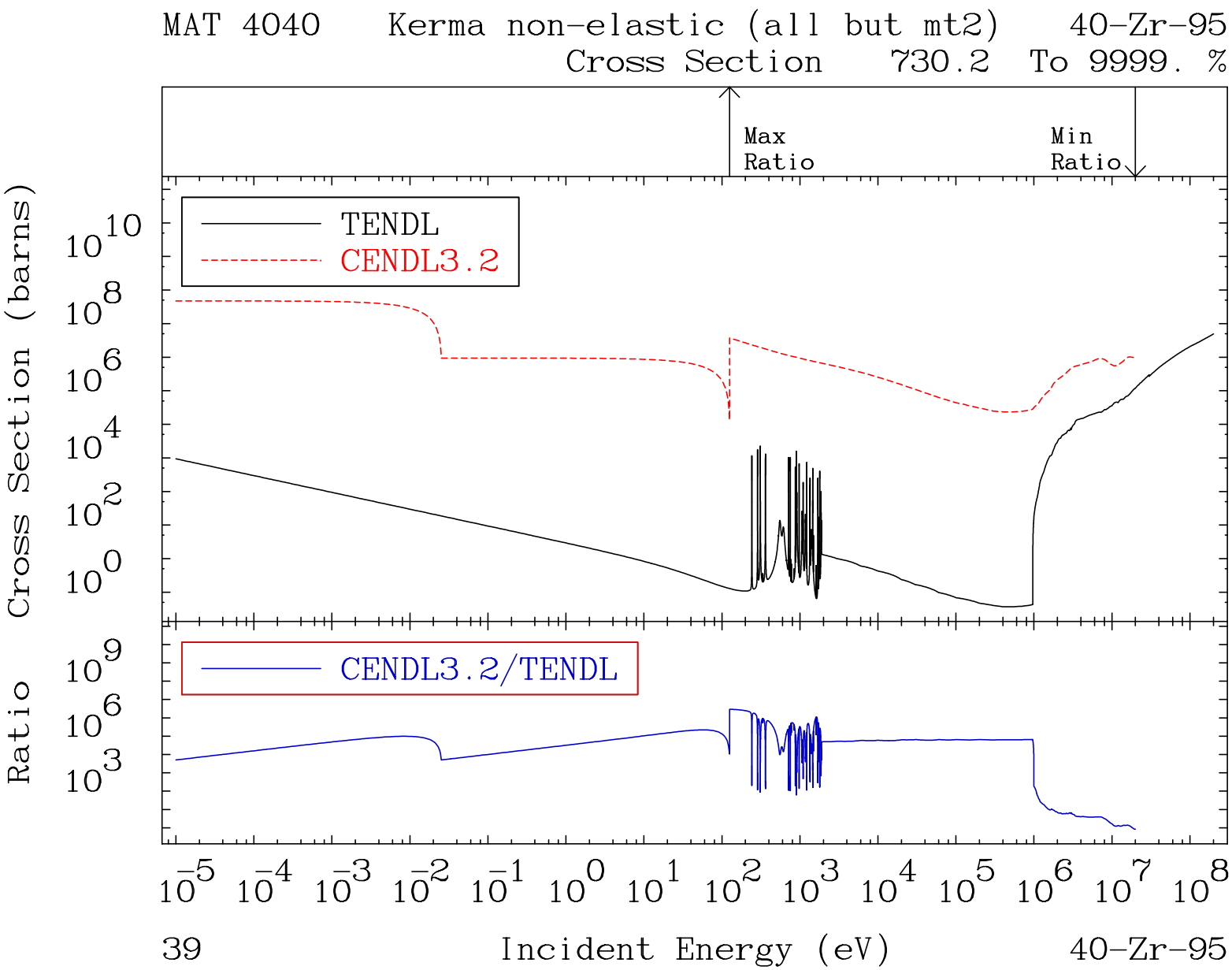

MAT 4040
Tritium Production
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 8.3996 MeV
CENDL3.2 Threshold 11.000 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
60
40
20
0
400
200
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
34
Incident Energy (eV)
40-Zr-95

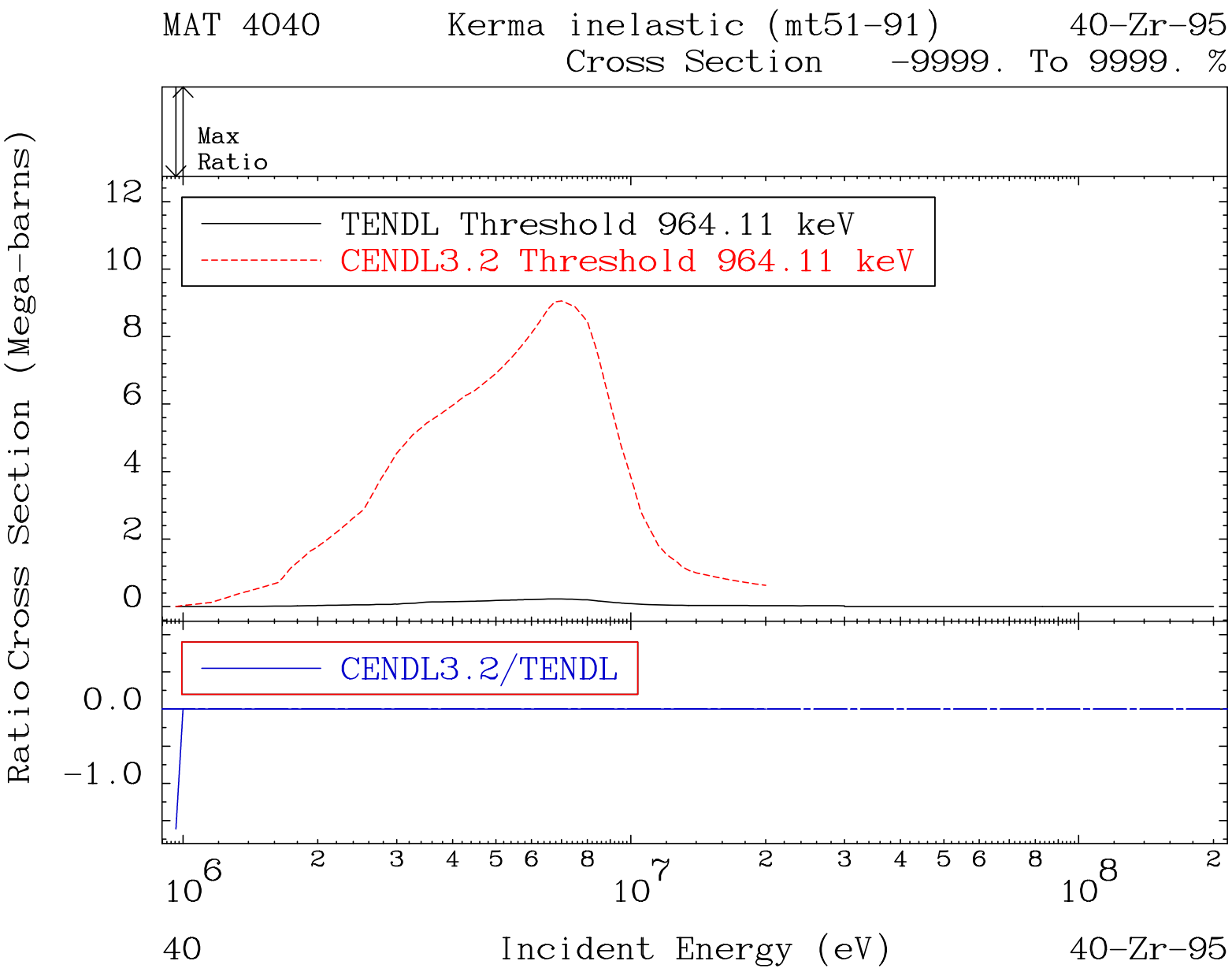

MAT 4040
He-3 Production
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 12.566 MeV
CENDL3.2 Threshold 19.000 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
8
4
0
2
3
4
5
6
7
8
9
10^8
2
35
Incident Energy (eV)
40-Zr-95

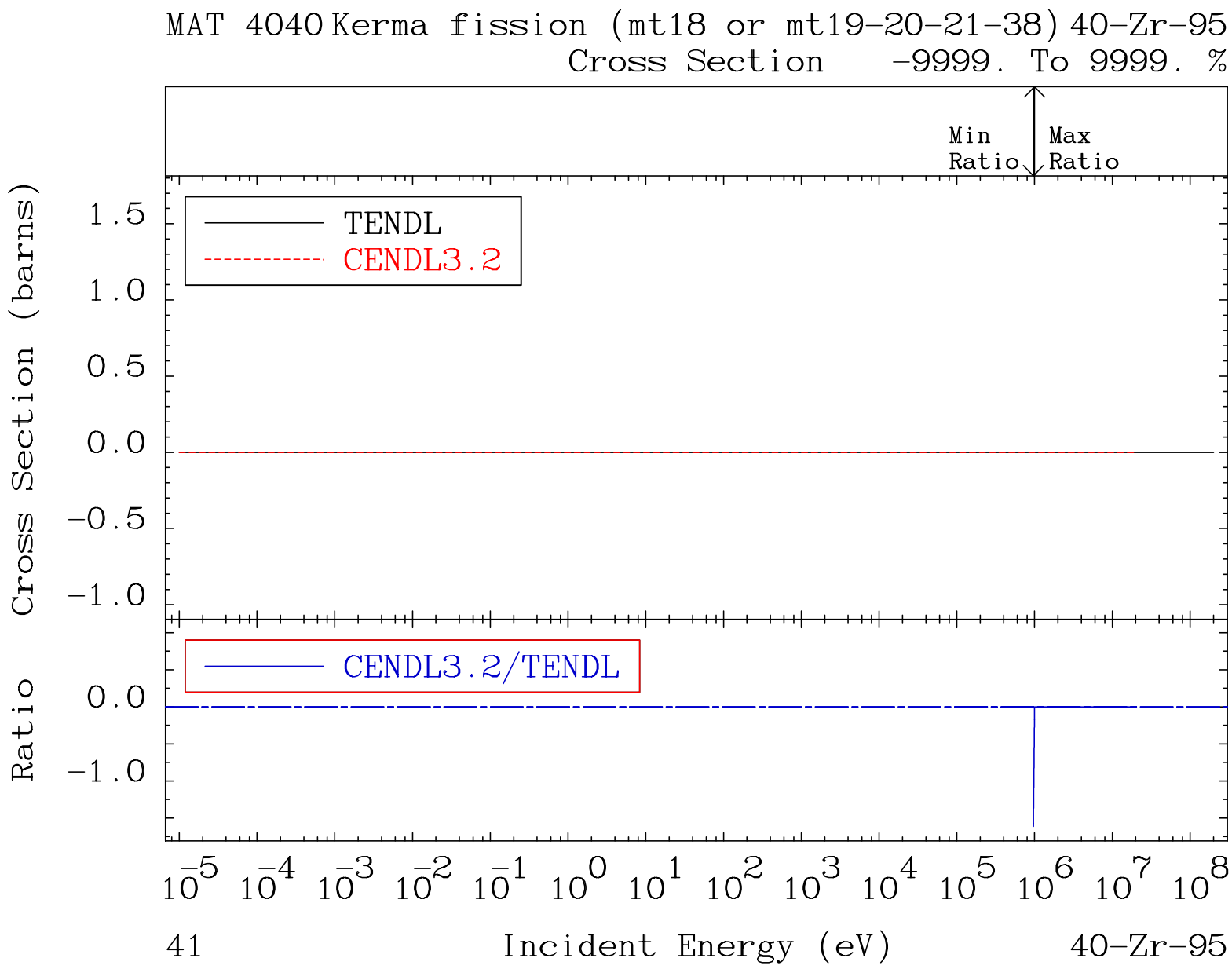

MAT 4040
He-4 Production
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2 Threshold 1.3379 MeV
CENDL3.2/TENDL
RatioCross Section (milli-barns)
150
100
50
0
4
2
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
36
Incident Energy (eV)
40-Zr-95

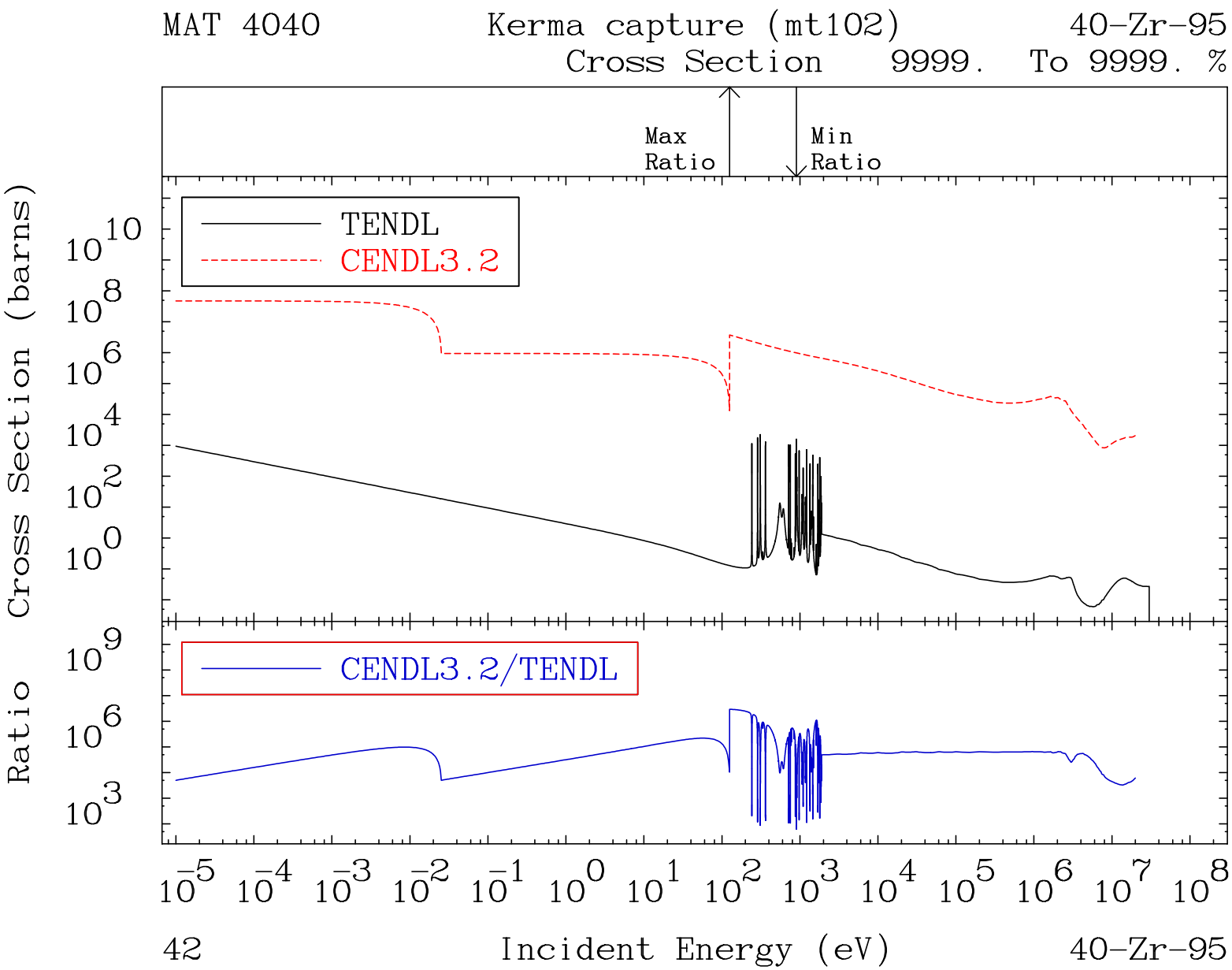

MAT 4040
Kerma total (eV-barns)
40-Zr-95
Cross Section 315.2 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
37
40-Zr-95

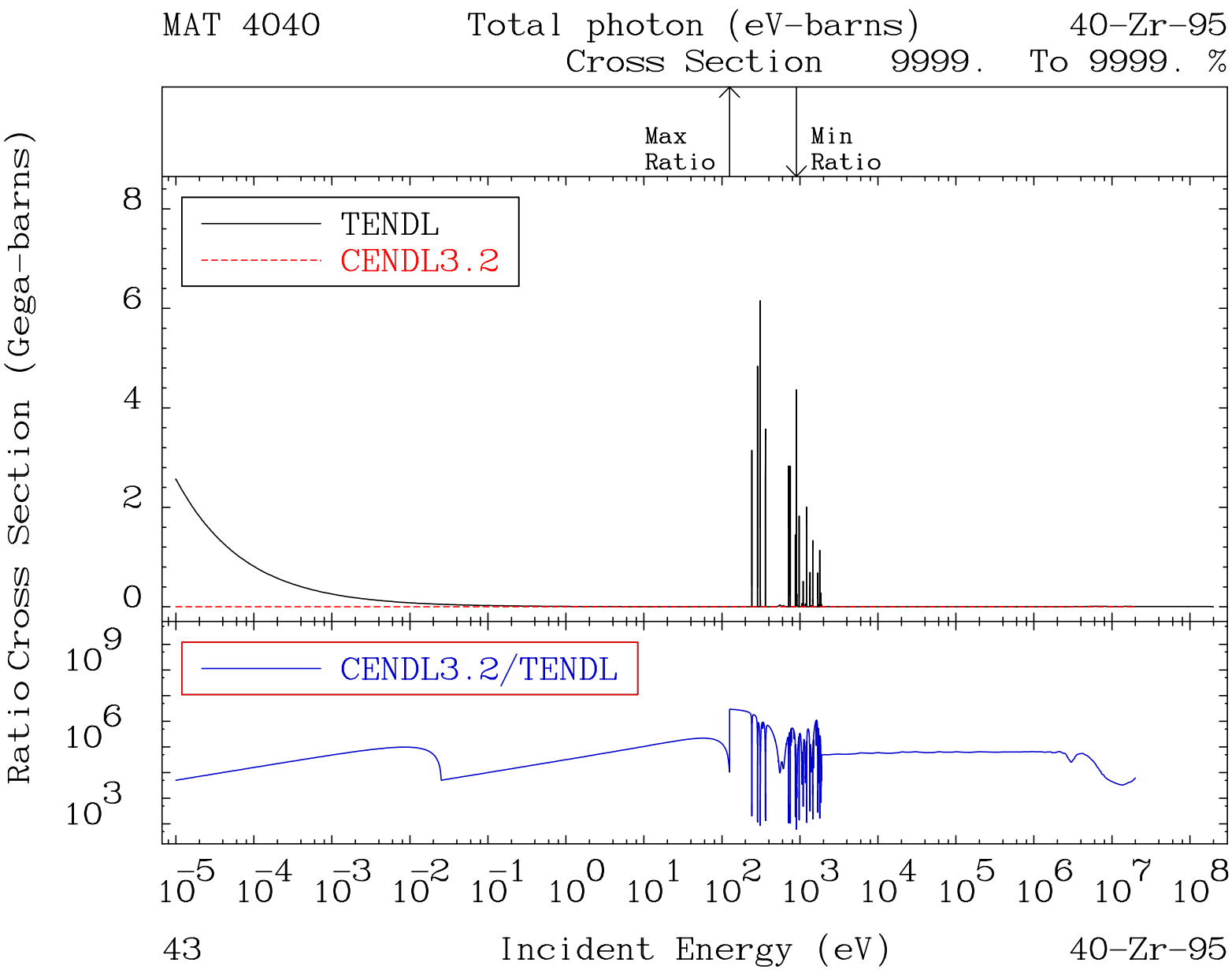

MAT 4040
Kerma elastic
Cross Section
40-Zr-95
-99.62 To 9999. %
Max
Ratio
Min
Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
38
40-Zr-95

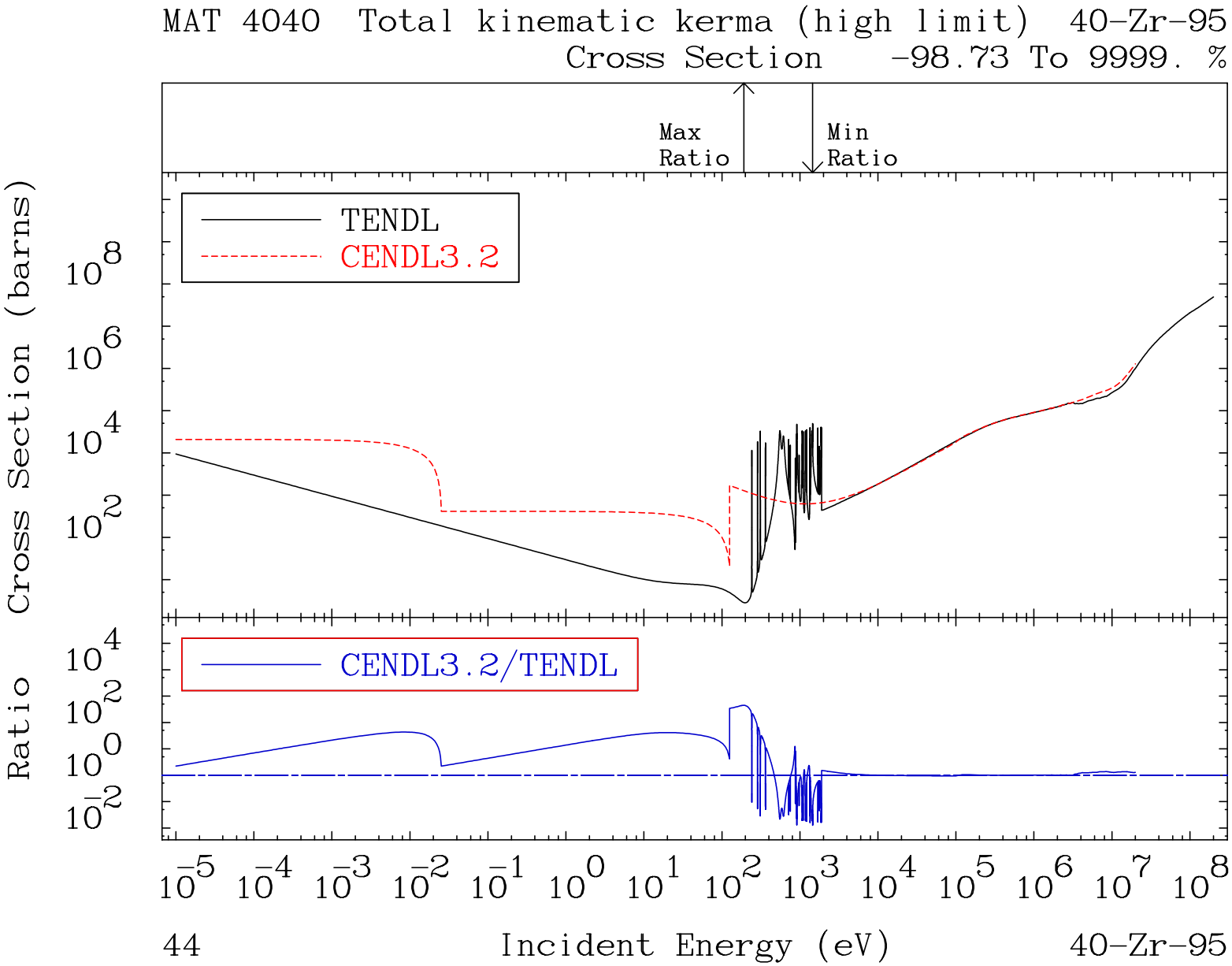

MAT 4040 Kerma non-elastic (all but mt2) 40-Zr-95
Cross Section 730.2 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
39
40-Zr-95

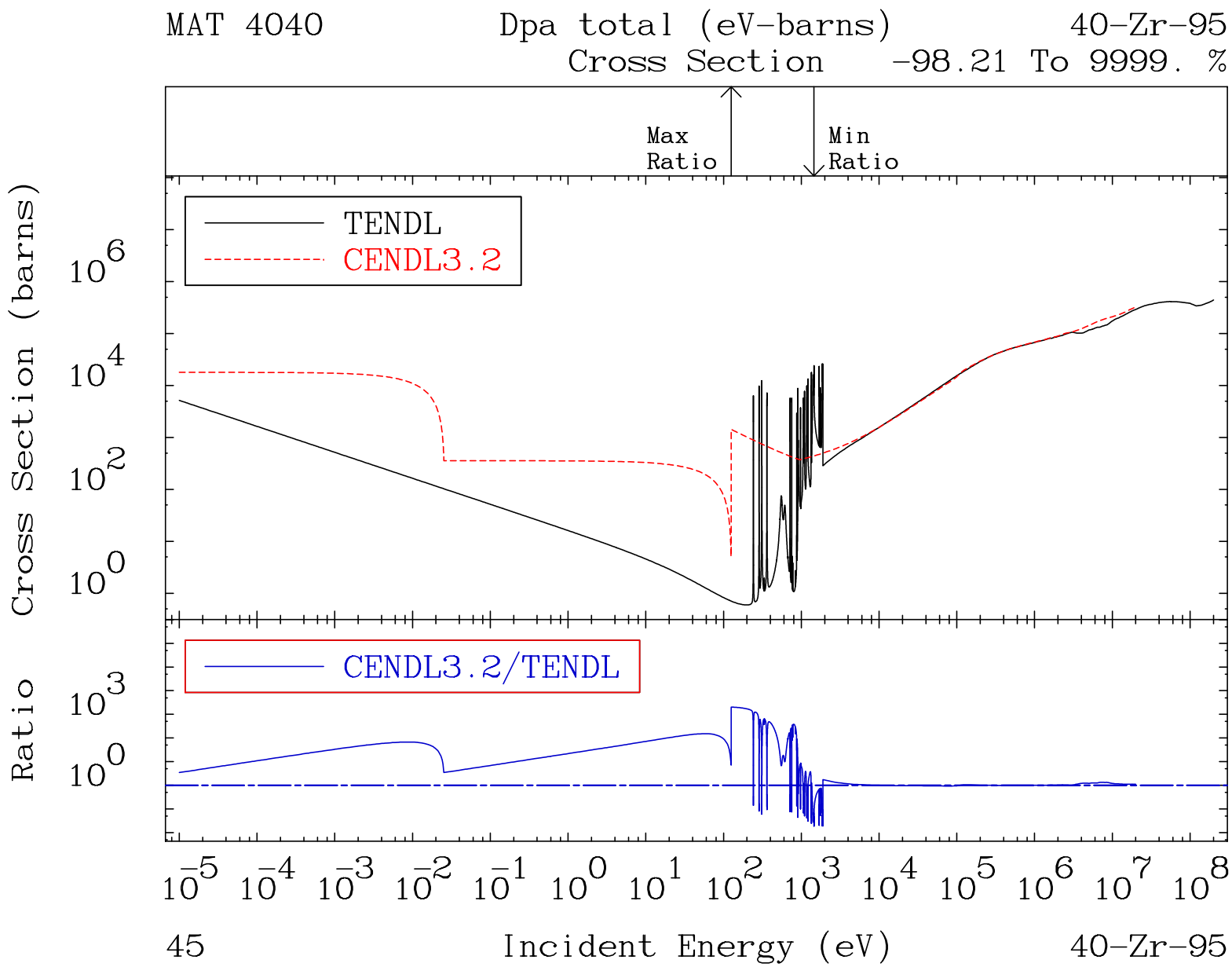

MAT 4040
Kerma inelastic (mt51-91)
40-Zr-95
Cross Section -9999. To 9999. %
Max
Ratio
TENDL Threshold 964.11 keV
CENDL3.2 Threshold 964.11 keV
CENDL3.2/TENDL
Ratio Cross Section (Mega-barns)
12
10
8
6
4
2
0
0.0
-1.0
10^6
10^7
10^8
Incident Energy (eV)
40
40-Zr-95

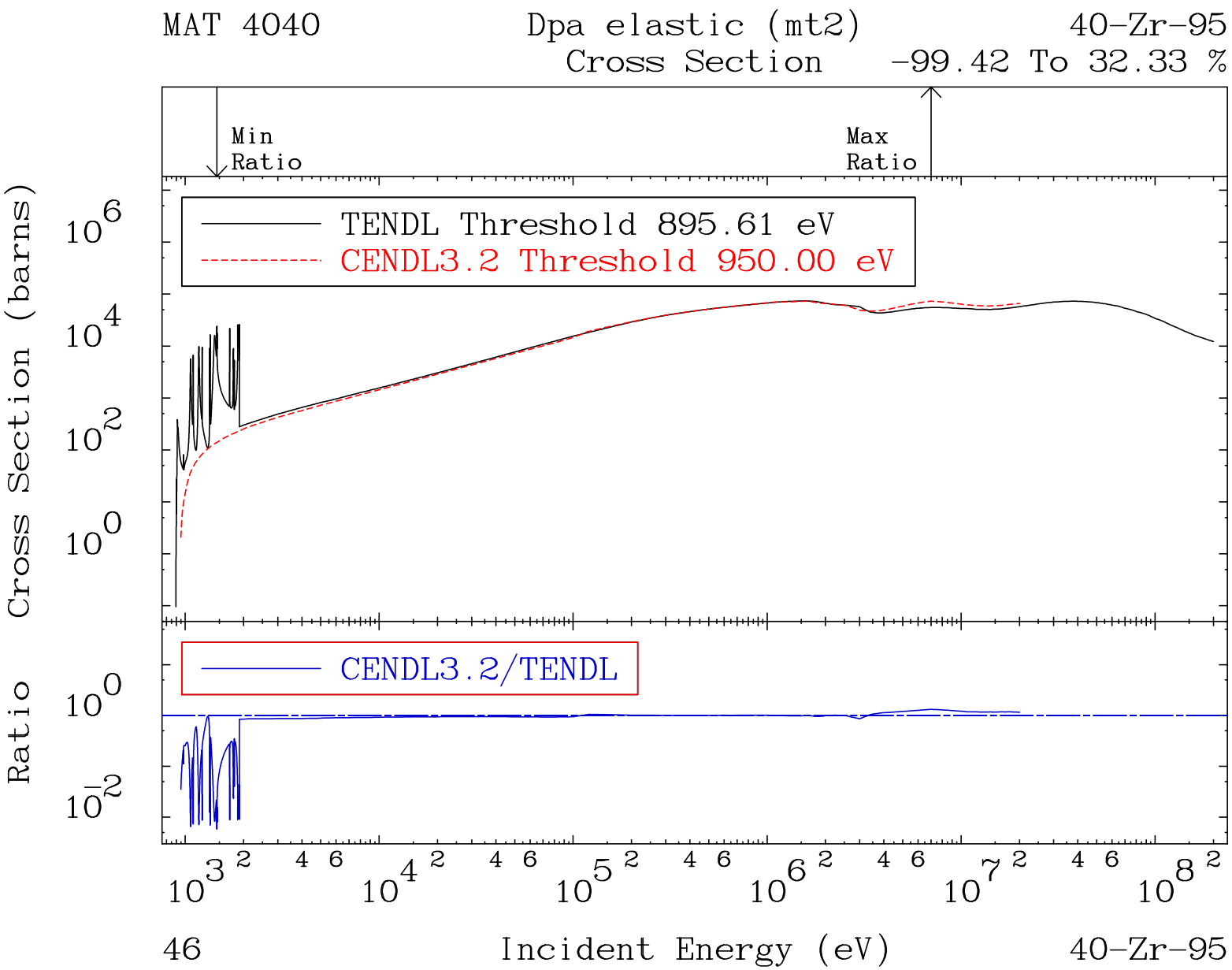

MAT 4040 Kerma fission (mt18 or mt19-20-21-38) 40-Zr-95
Cross Section -9999. To 9999. %
Min Ratio
Max Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
0.0
-1.0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
Incident Energy (eV)

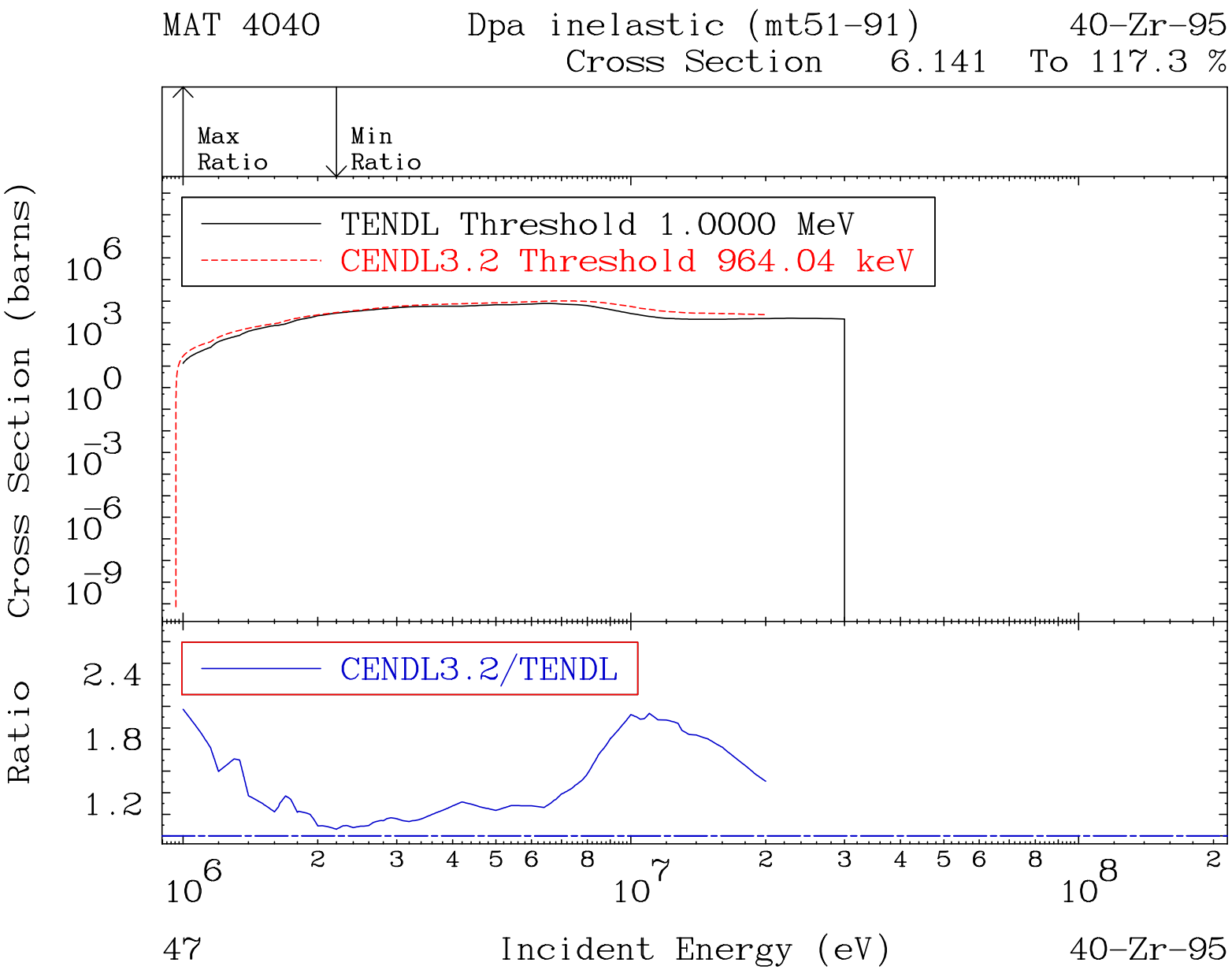

MAT 4040
Kerma capture (mt102)
40-Zr-95
Cross Section 9999. To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
42
40-Zr-95

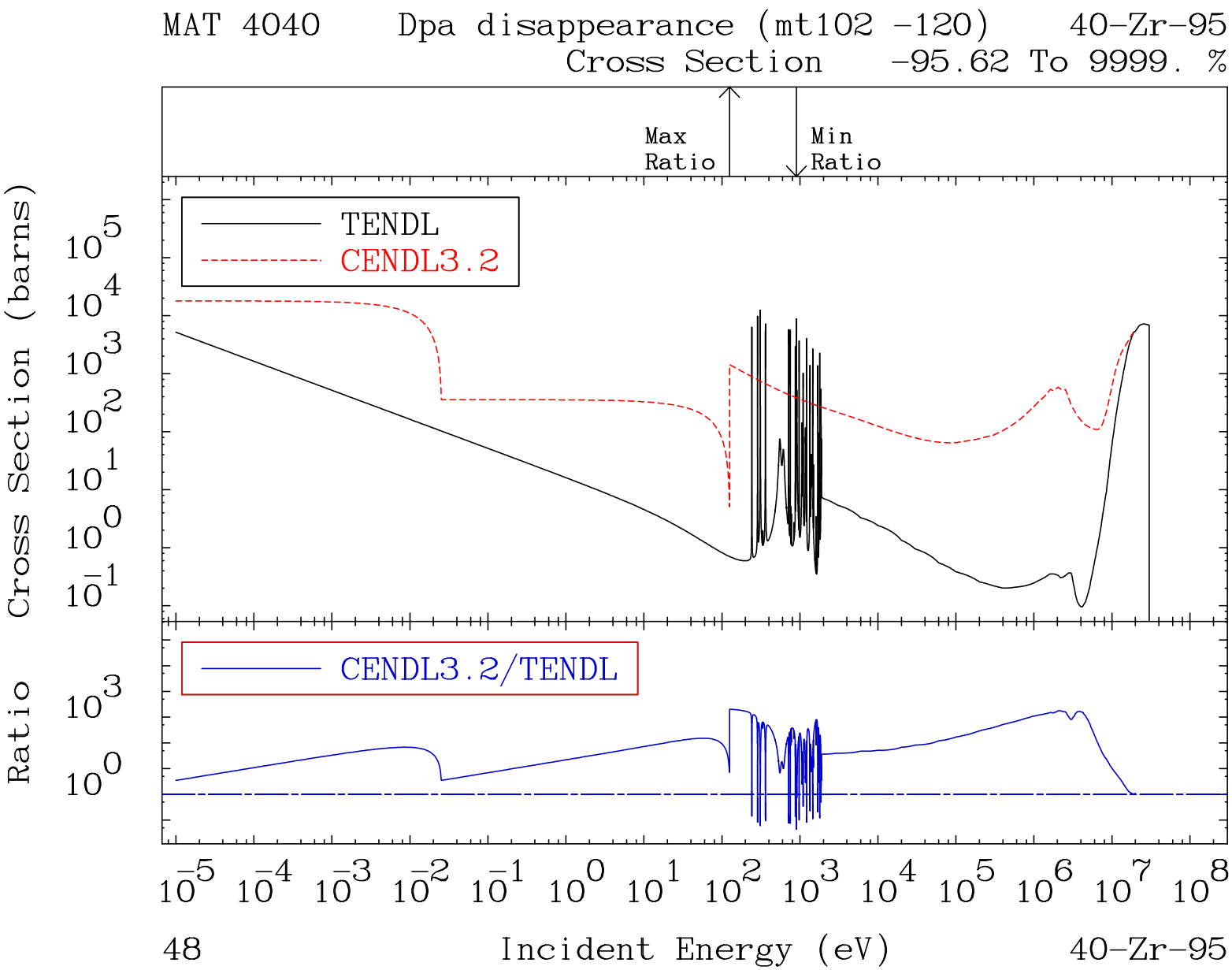

MAT 4040
Total photon (eV-barns)
Cross Section
9999. To 9999. %
40-Zr-95
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Ratio Cross Section (Gega-barns)
Incident Energy (eV)
43
40-Zr-95

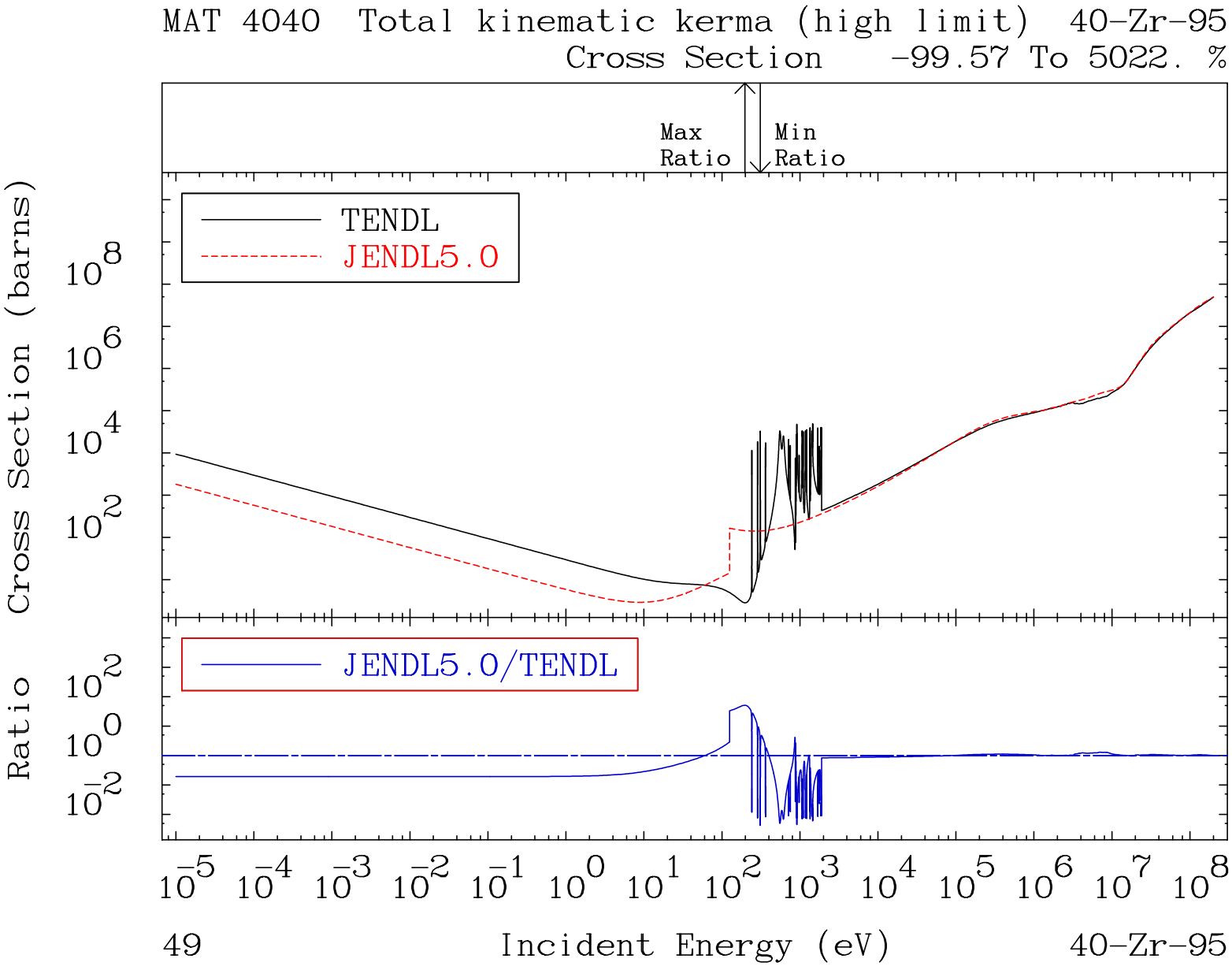

MAT 4040 Total kinematic kerma (high limit) 40-Zr-95
Cross Section -98.73 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
44
40-Zr-95

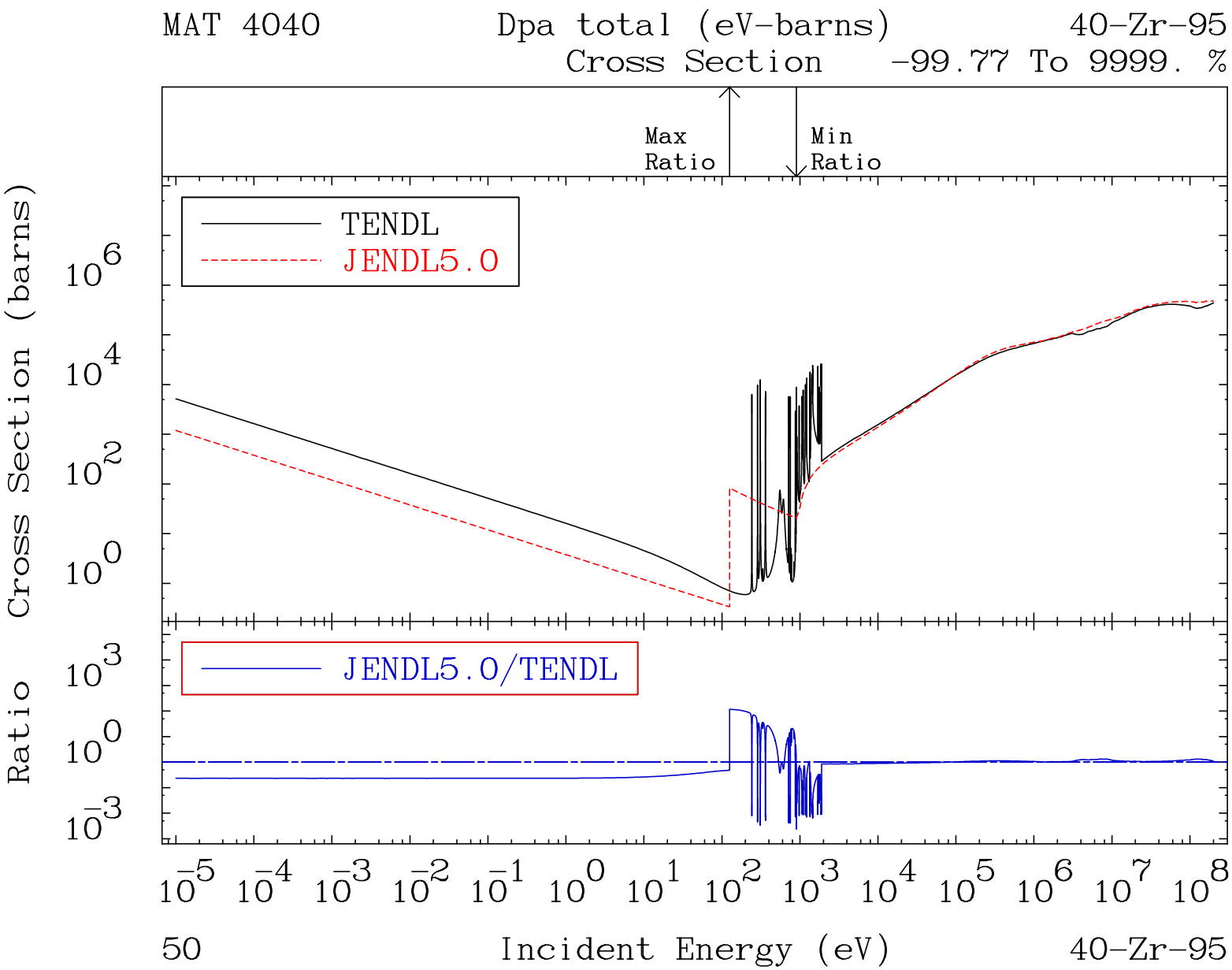

MAT 4040
Dpa total (eV-barns)
40-Zr-95
Cross Section
-98.21 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
45
40-Zr-95

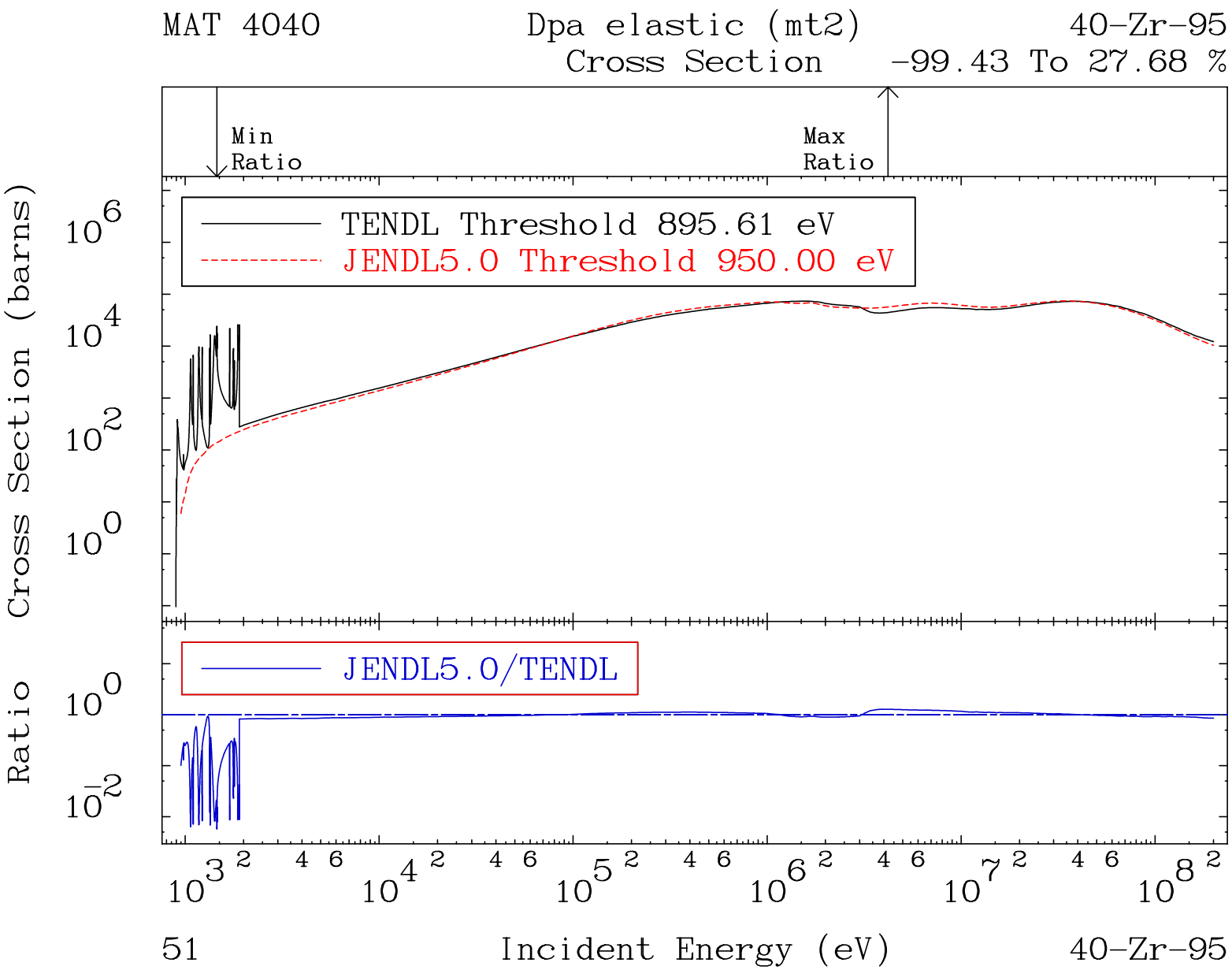

MAT 4040
Dpa elastic (mt2)
Cross Section
40-Zr-95
-99.42 To 32.33 %
Min Ratio
Max Ratio
TENDL Threshold 895.61 eV
CENDL3.2 Threshold 950.00 eV
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
46
40-Zr-95

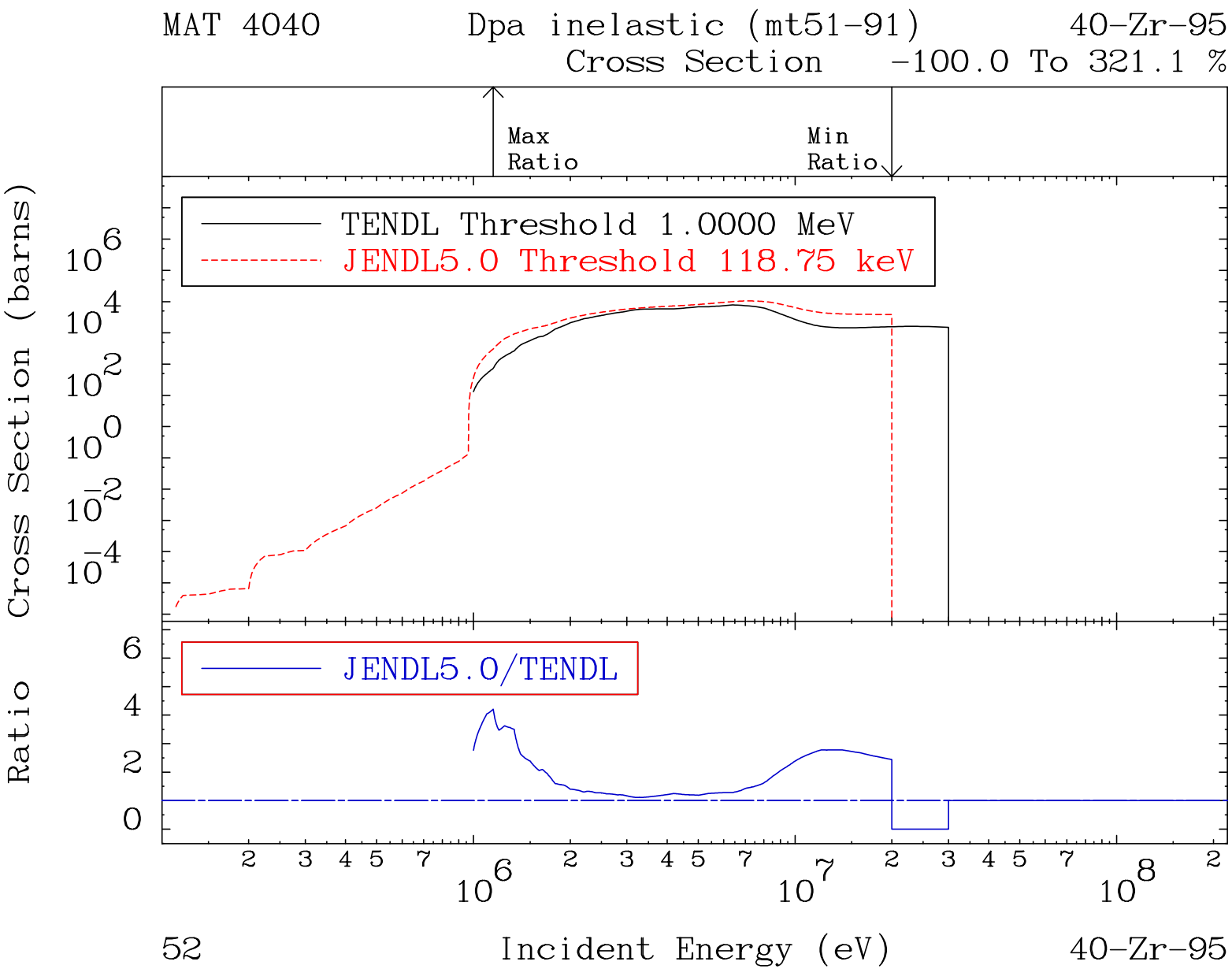

MAT 4040
Dpa inelastic (mt51-91)
40-Zr-95
Cross Section 6.141 To 117.3 %
Max Ratio
Min Ratio
TENDL Threshold 1.0000 MeV
CENDL3.2 Threshold 964.04 keV
Cross Section (barns)
CENDL3.2/TENDL
Ratio
Incident Energy (eV)
47
40-Zr-95

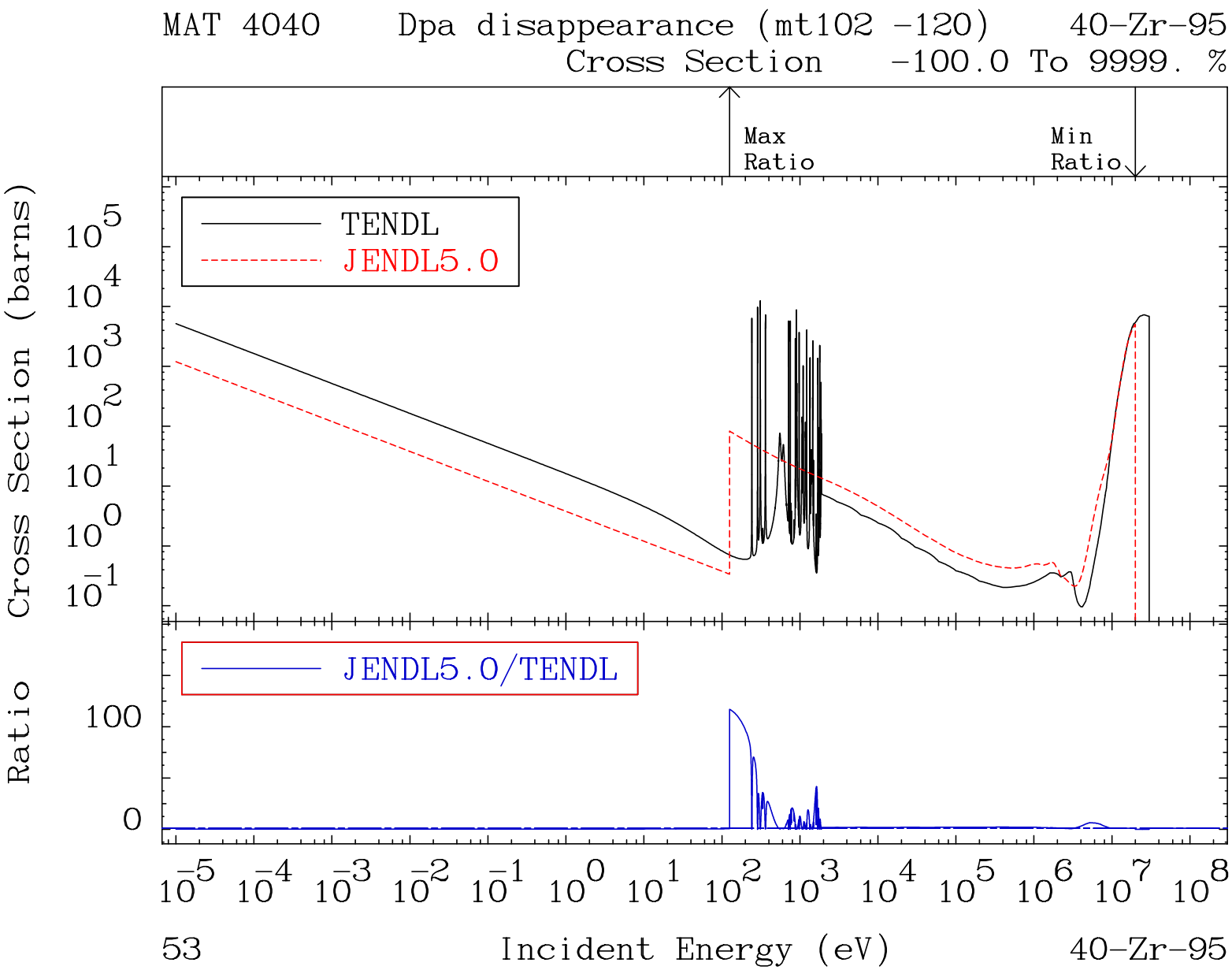

MAT 4040 Dpa disappearance (mt102 -120) 40-Zr-95
Cross Section -95.62 To 9999. %
Max Ratio
Min Ratio
TENDL
CENDL3.2
CENDL3.2/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
48
40-Zr-95

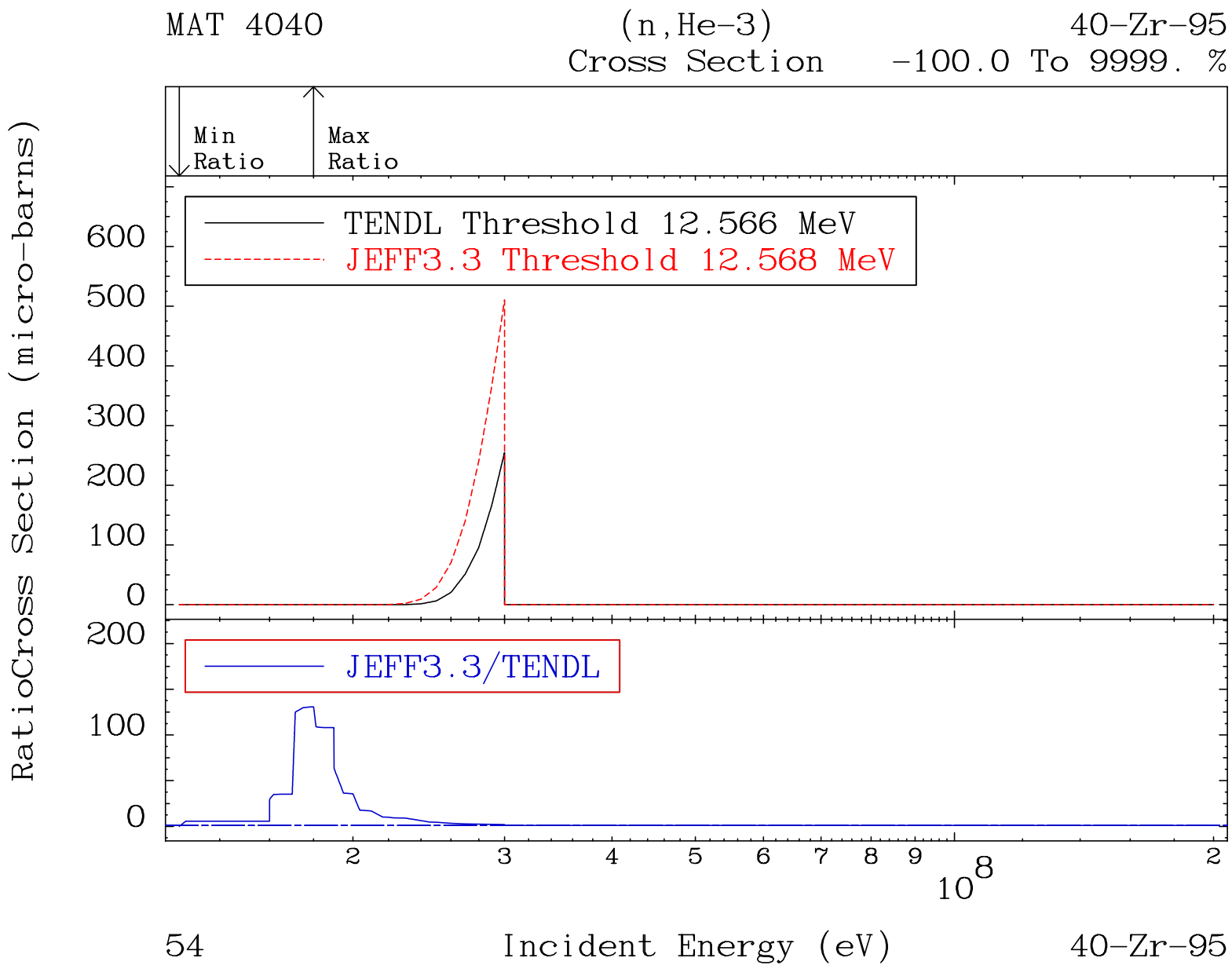

MAT 4040 Total kinematic kerma (high limit) 40-Zr-95
Cross Section -99.57 To 5022. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
49
40-Zr-95

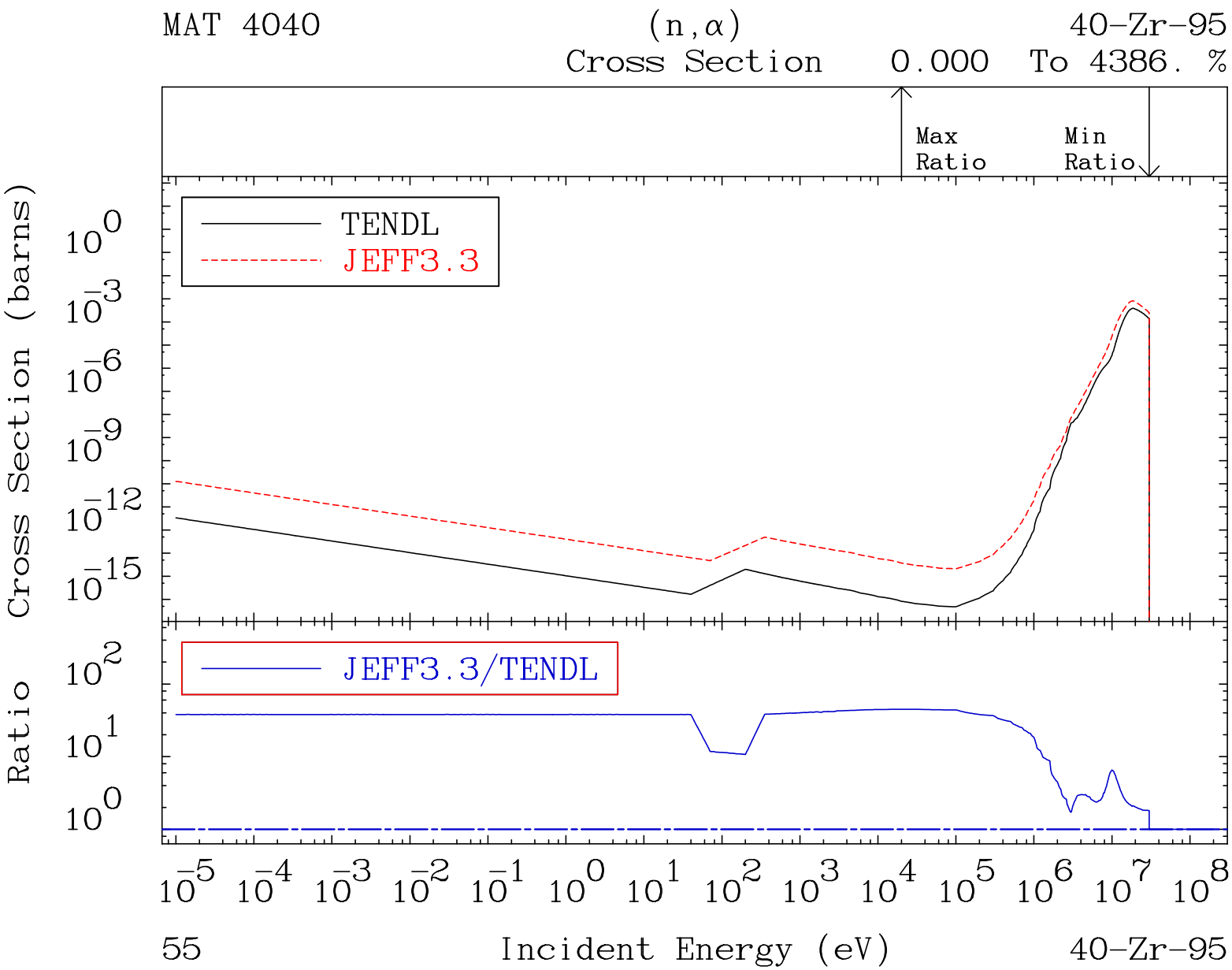

MAT 4040
Dpa total (eV-barns)
40-Zr-95
Cross Section
-99.77 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
50
40-Zr-95

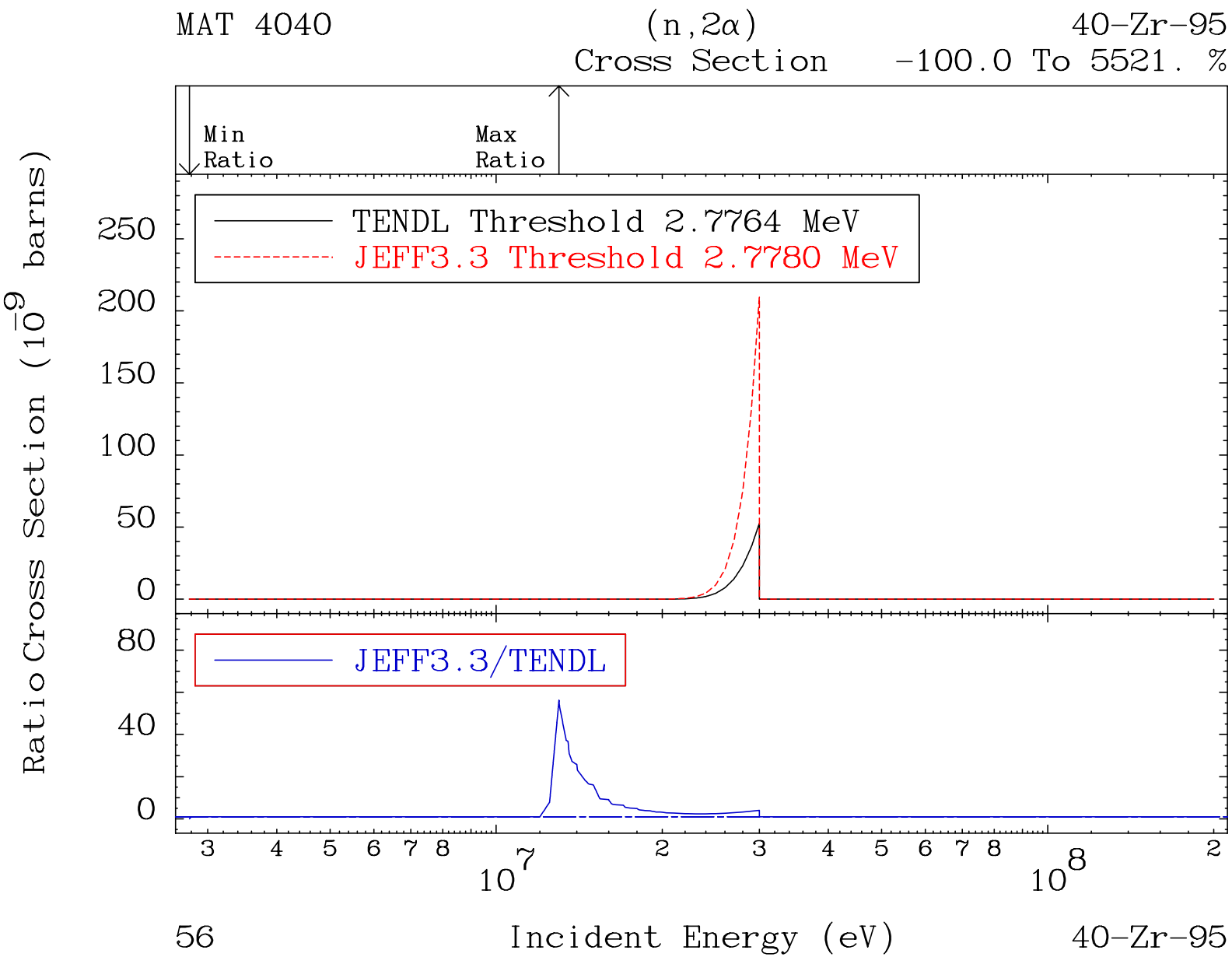

MAT 4040
Dpa elastic (mt2)
Cross Section
40-Zr-95
-99.43 To 27.68 %
Min Ratio
Max Ratio
TENDL Threshold 895.61 eV
JENDL5.0 Threshold 950.00 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
51
40-Zr-95

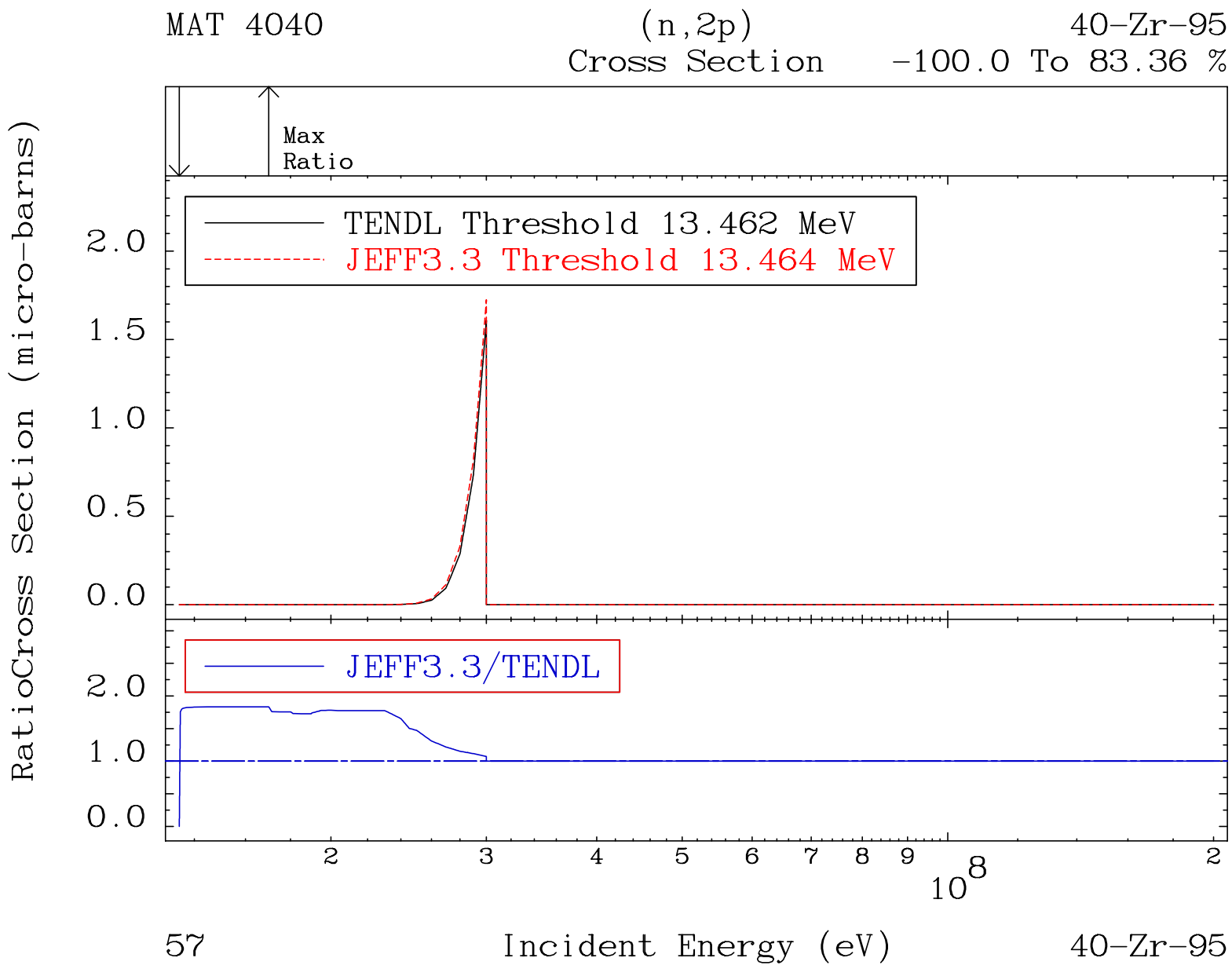

MAT 4040
Dpa inelastic (mt51-91)
Cross Section
-100.0 To 321.1 %
40-Zr-95
Max Ratio
Min Ratio
TENDL Threshold 1.0000 MeV
JENDL5.0 Threshold 118.75 keV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
52
40-Zr-95

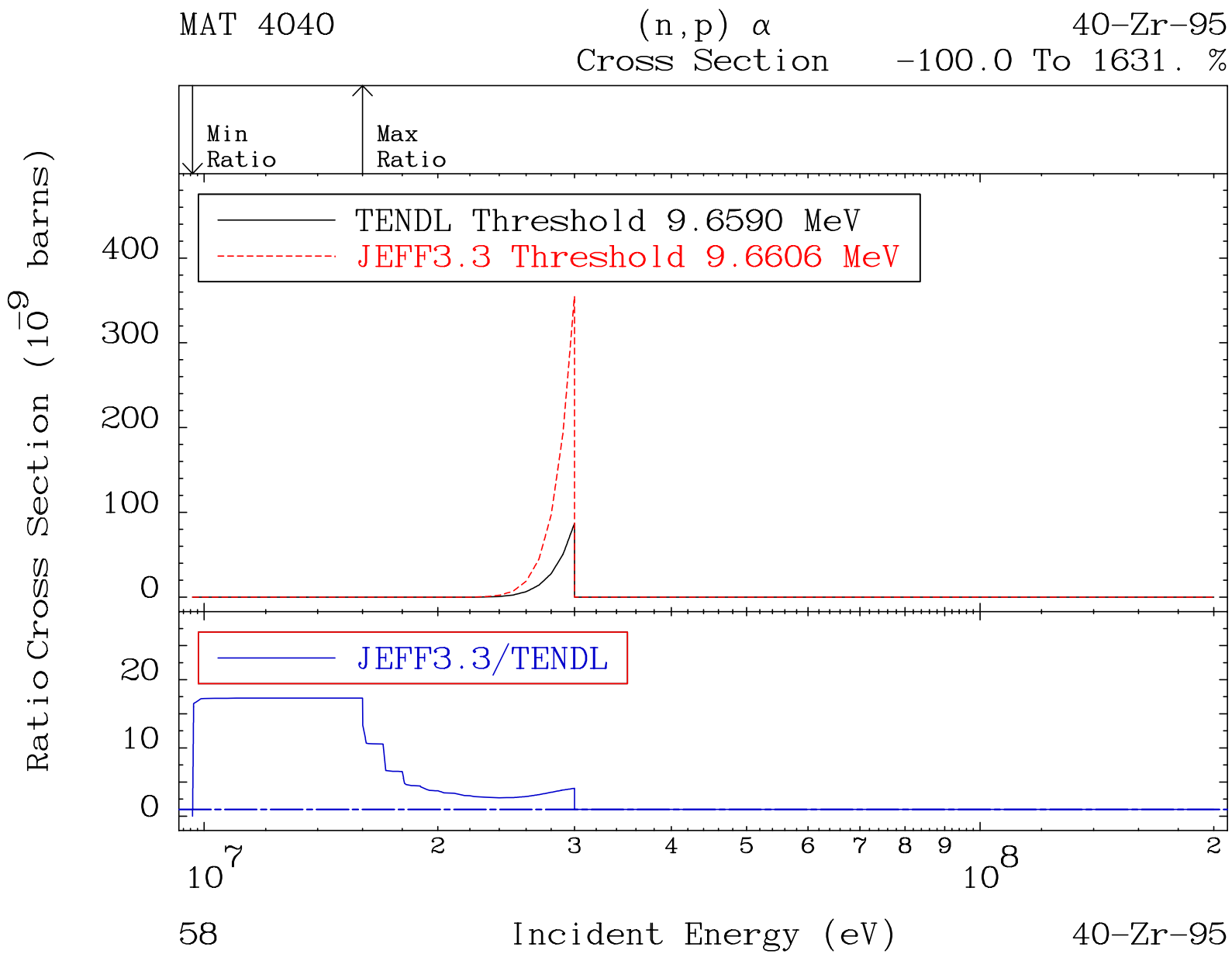

MAT 4040 Dpa disappearance (mt102 -120) 40-Zr-95
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
53
40-Zr-95

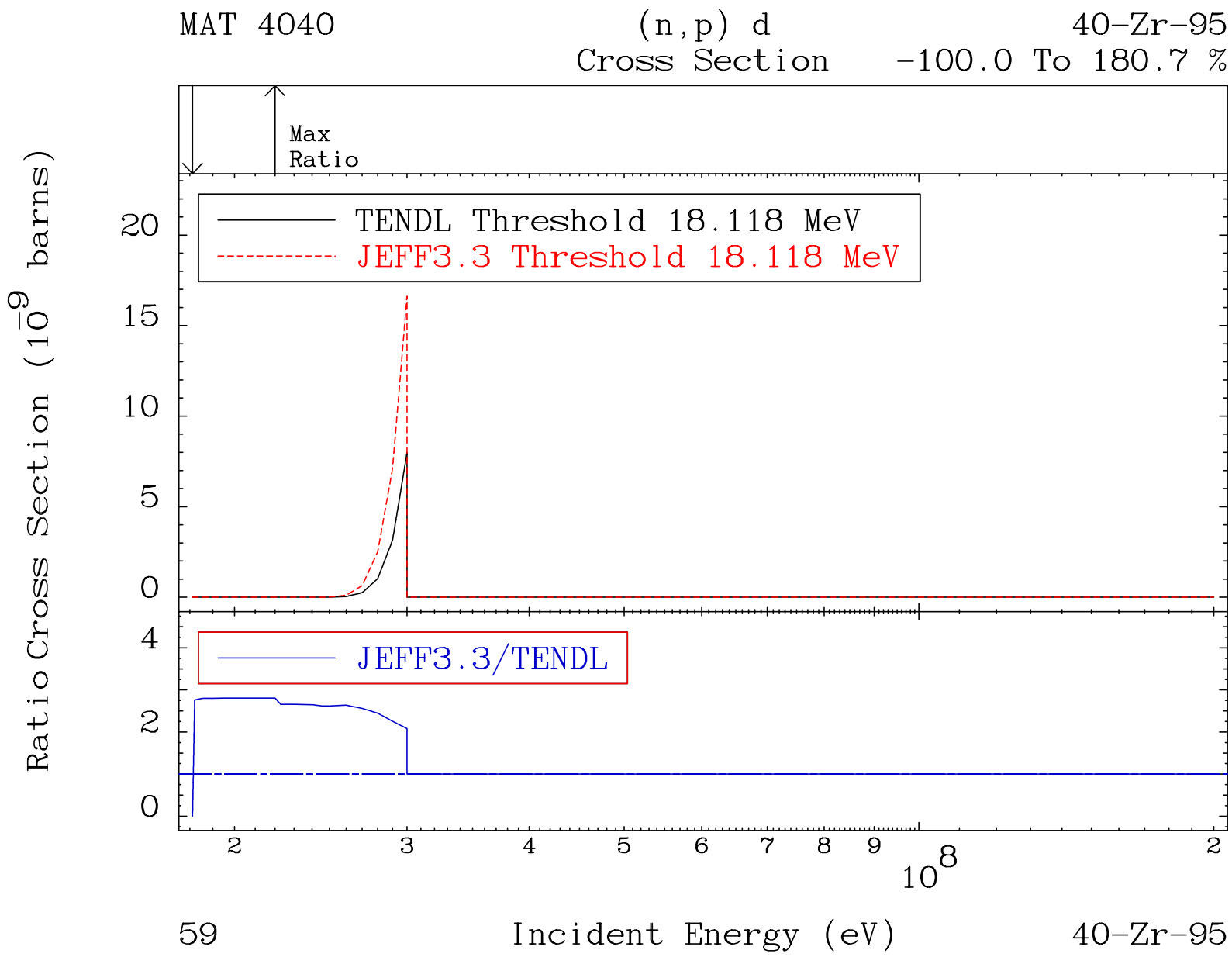

MAT 4040
(n,He-3)
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 12.566 MeV
JEFF3.3 Threshold 12.568 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
600
500
400
300
200
100
0
200
100
0
2
3
4
5
6
7
8
9
10^8
2
54
Incident Energy (eV)
40-Zr-95

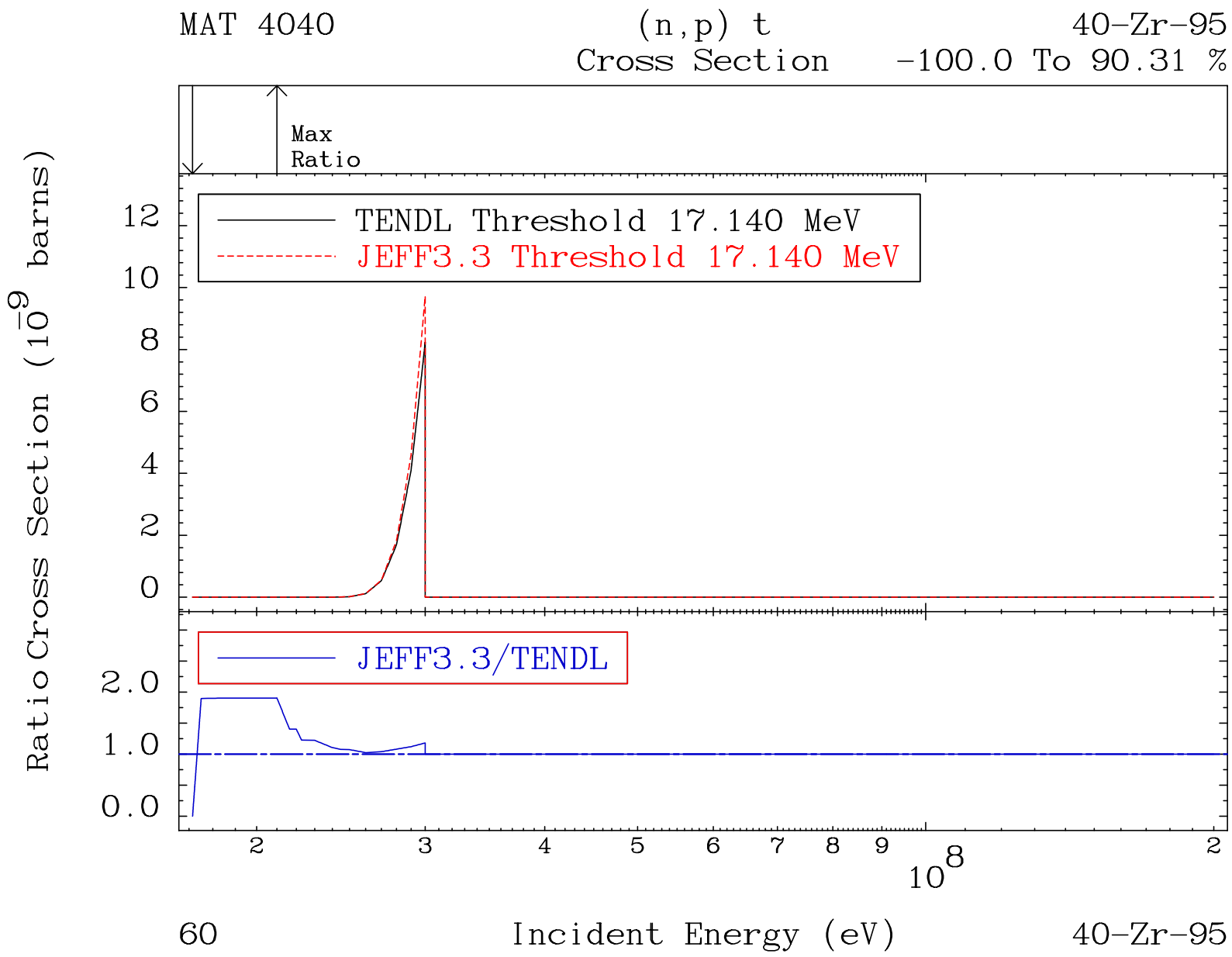

MAT 4040
(n,α)
40-Zr-95
Cross Section 0.000 To 4386. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
55
40-Zr-95

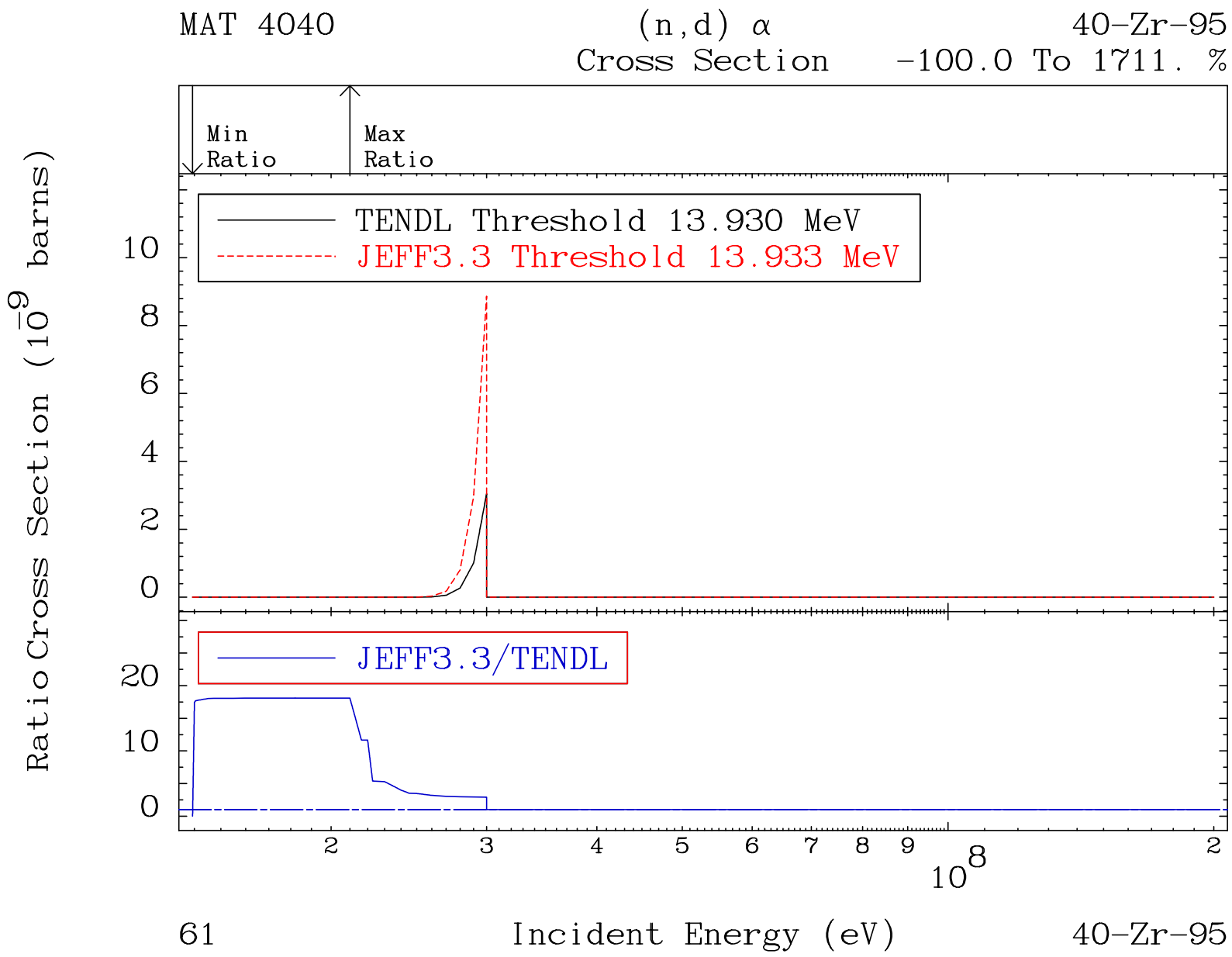

MAT 4040
(n,2α)
40-Zr-95
Cross Section
-100.0 To 5521. %
Min Ratio
Max Ratio
TENDL Threshold 2.7764 MeV
JEFF3.3 Threshold 2.7780 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
250
200
150
100
50
0
80
40
0
3 4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
56
Incident Energy (eV)
40-Zr-95

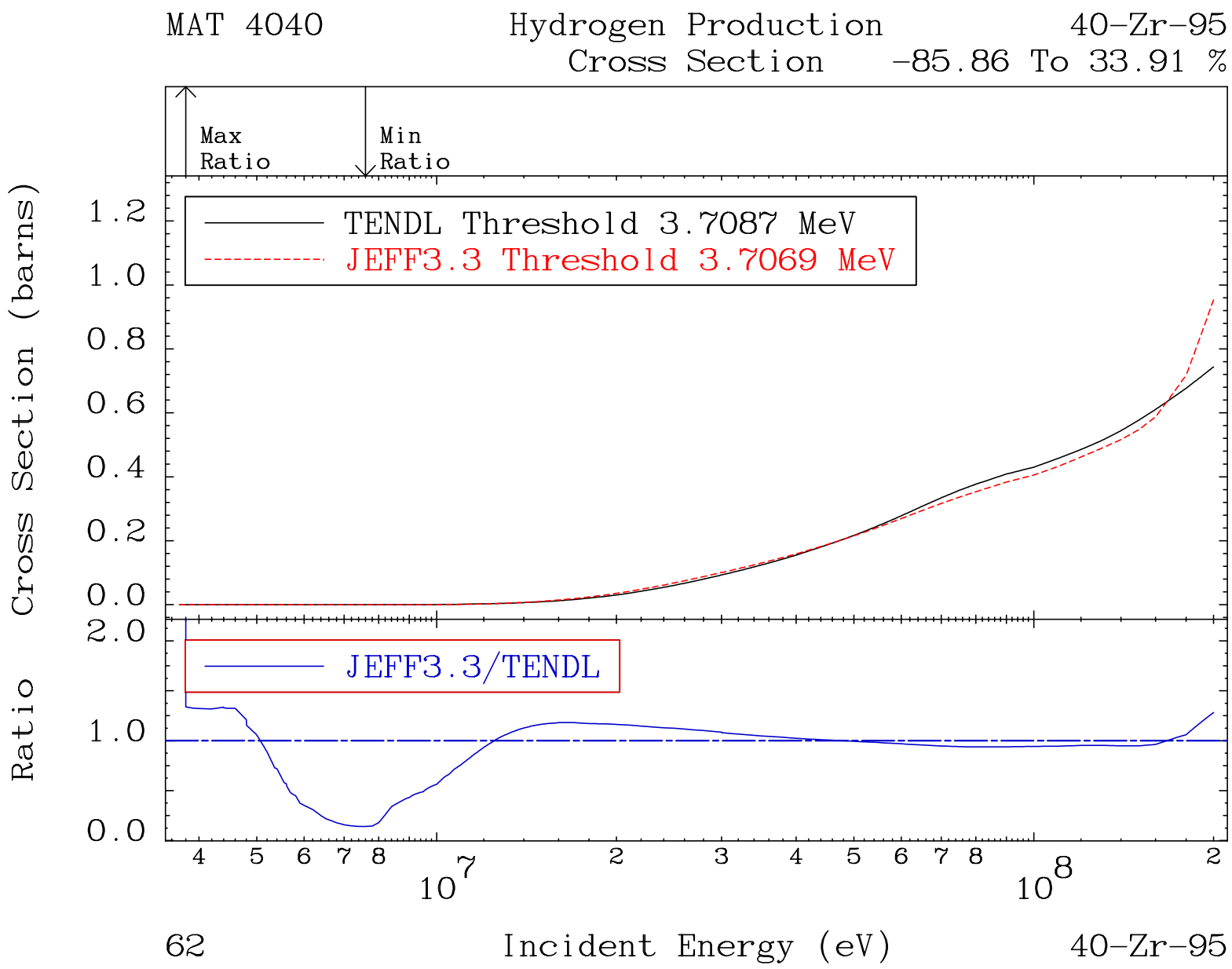

MAT 4040
(n,2p)
Cross Section
40-Zr-95
-100.0 To 83.36 %
Max
Ratio
TENDL Threshold 13.462 MeV
JEFF3.3 Threshold 13.464 MeV
JEFF3.3/TENDL
RatioCross Section (micro-barns)
2.0
1.5
1.0
0.5
0.0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
10^8
2
57
Incident Energy (eV)
40-Zr-95

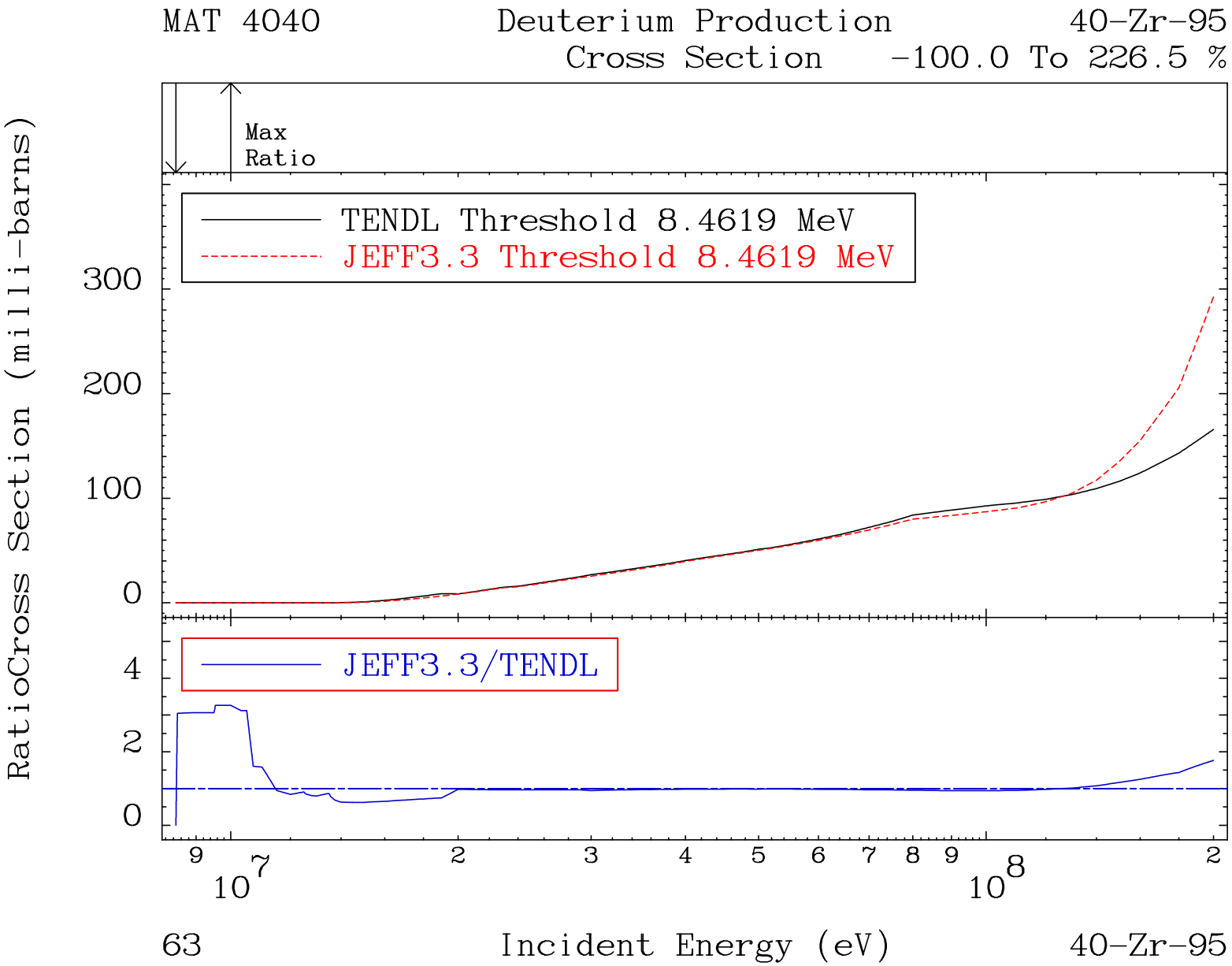

MAT 4040
(n,p) α
40-Zr-95
Cross Section
-100.0 To 1631. %
Min Ratio
Max Ratio
TENDL Threshold 9.6590 MeV
JEFF3.3 Threshold 9.6606 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
400
300
200
100
0
20
10
0
10^7
2
3
4
5
6
7
8
9
10^8
2
58
Incident Energy (eV)
40-Zr-95

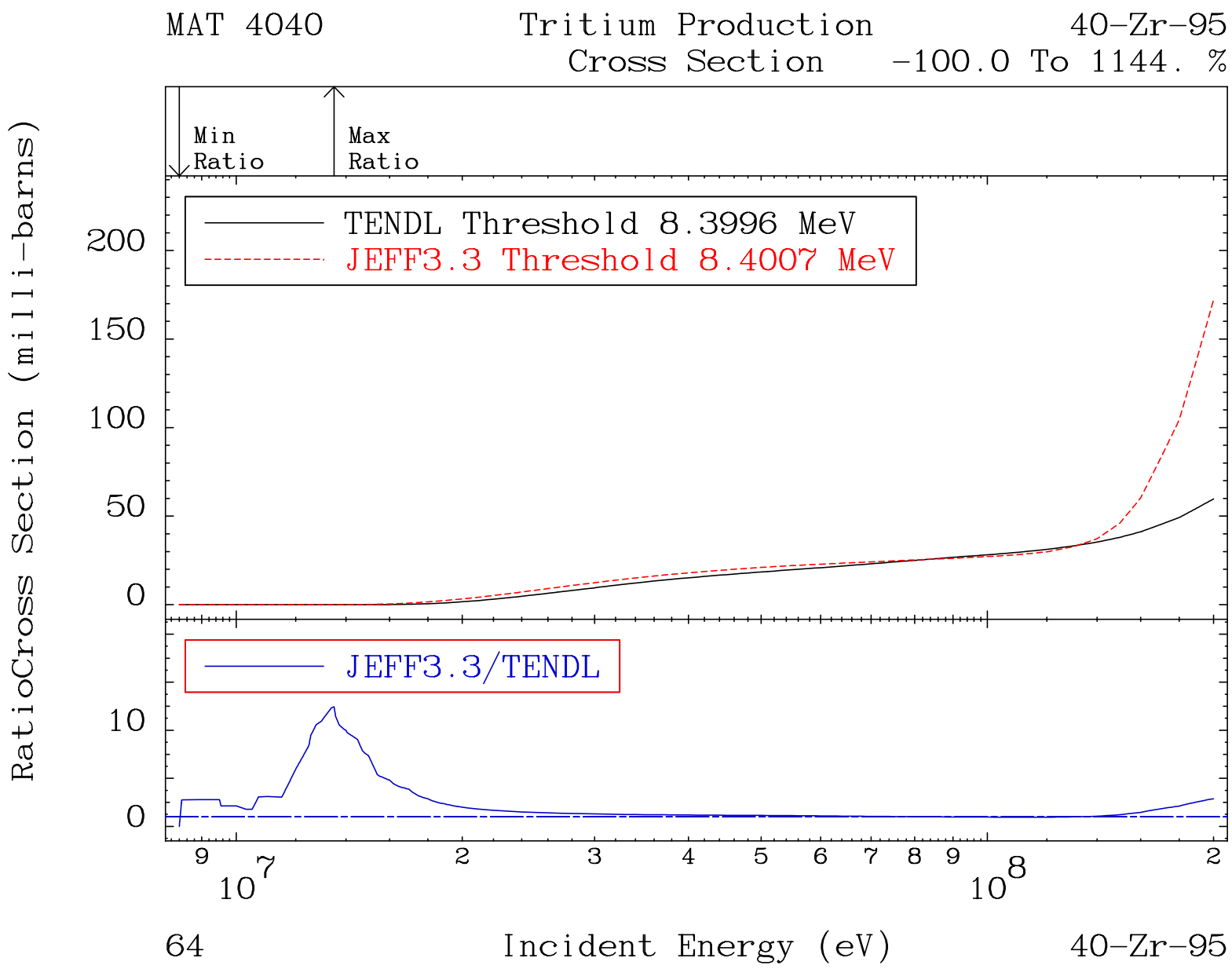

MAT 4040
(n,p) d
Cross Section
40-Zr-95
-100.0 To 180.7 %
Max
Ratio
TENDL Threshold 18.118 MeV
JEFF3.3 Threshold 18.118 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
20
15
10
5
0
4
2
0
2
3
4
5
6
7
8
9
10^8
2
59
Incident Energy (eV)
40-Zr-95

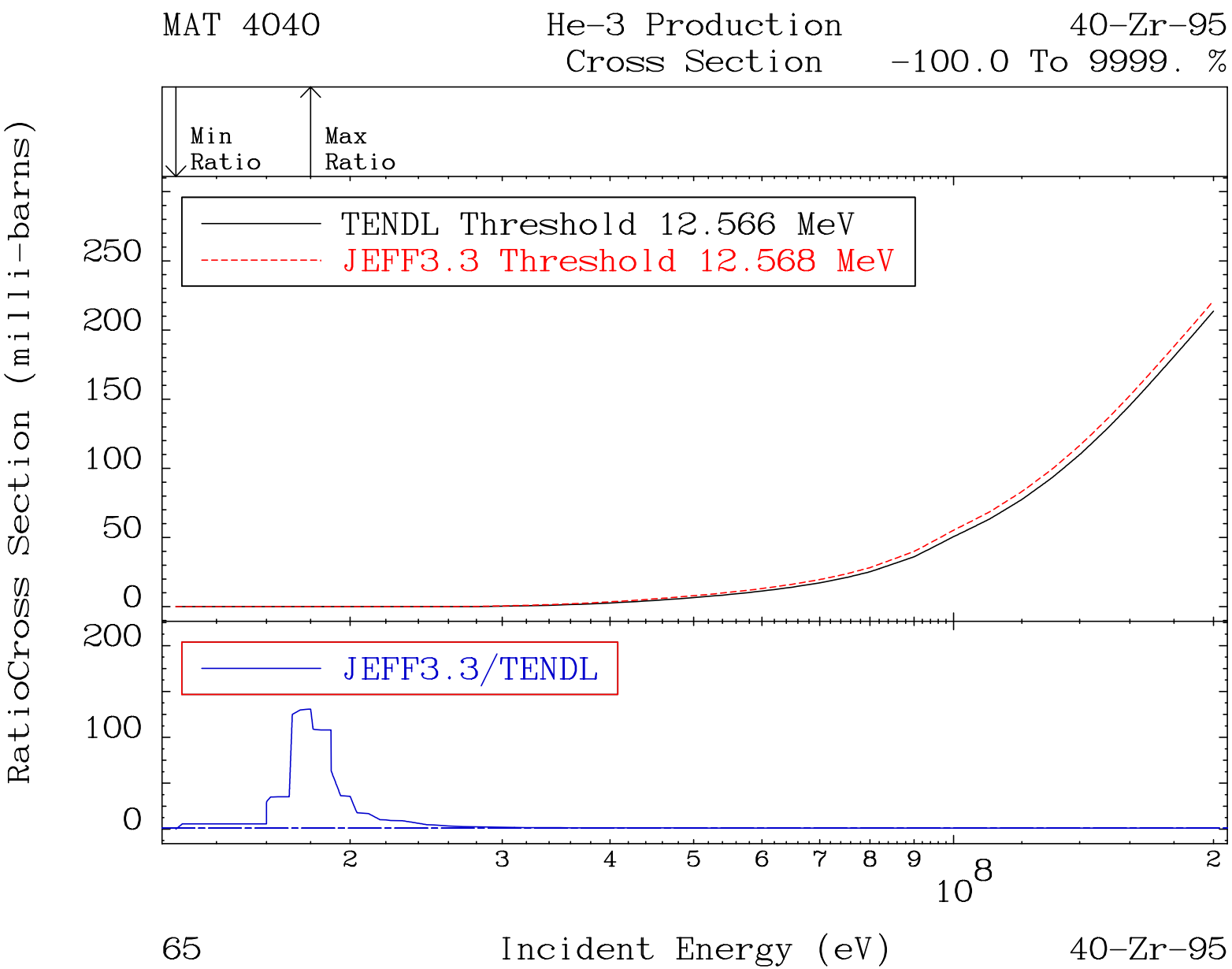

MAT 4040
(n,p) t
Cross Section
40-Zr-95
-100.0 To 90.31 %
Max
Ratio
TENDL Threshold 17.140 MeV
JEFF3.3 Threshold 17.140 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
12
10
8
6
4
2
0
2.0
1.0
0.0
2
3
4
5
6
7
8
9
10^8
2
60
Incident Energy (eV)
40-Zr-95

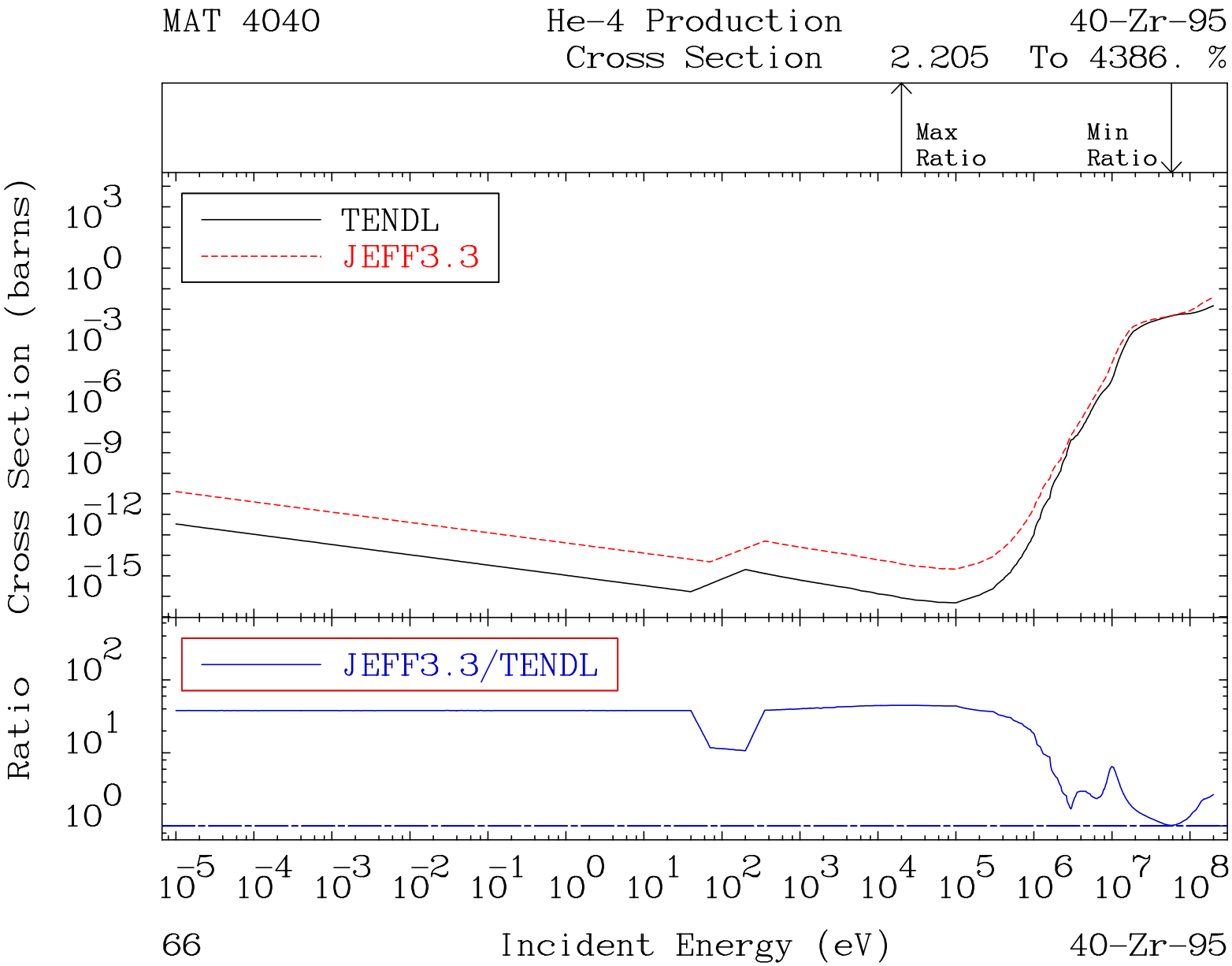

MAT 4040
(n,d) α
Cross Section
40-Zr-95
-100.0 To 1711. %
Min Ratio
Max Ratio
TENDL Threshold 13.930 MeV
JEFF3.3 Threshold 13.933 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
Incident Energy (eV)
10^8
61
40-Zr-95

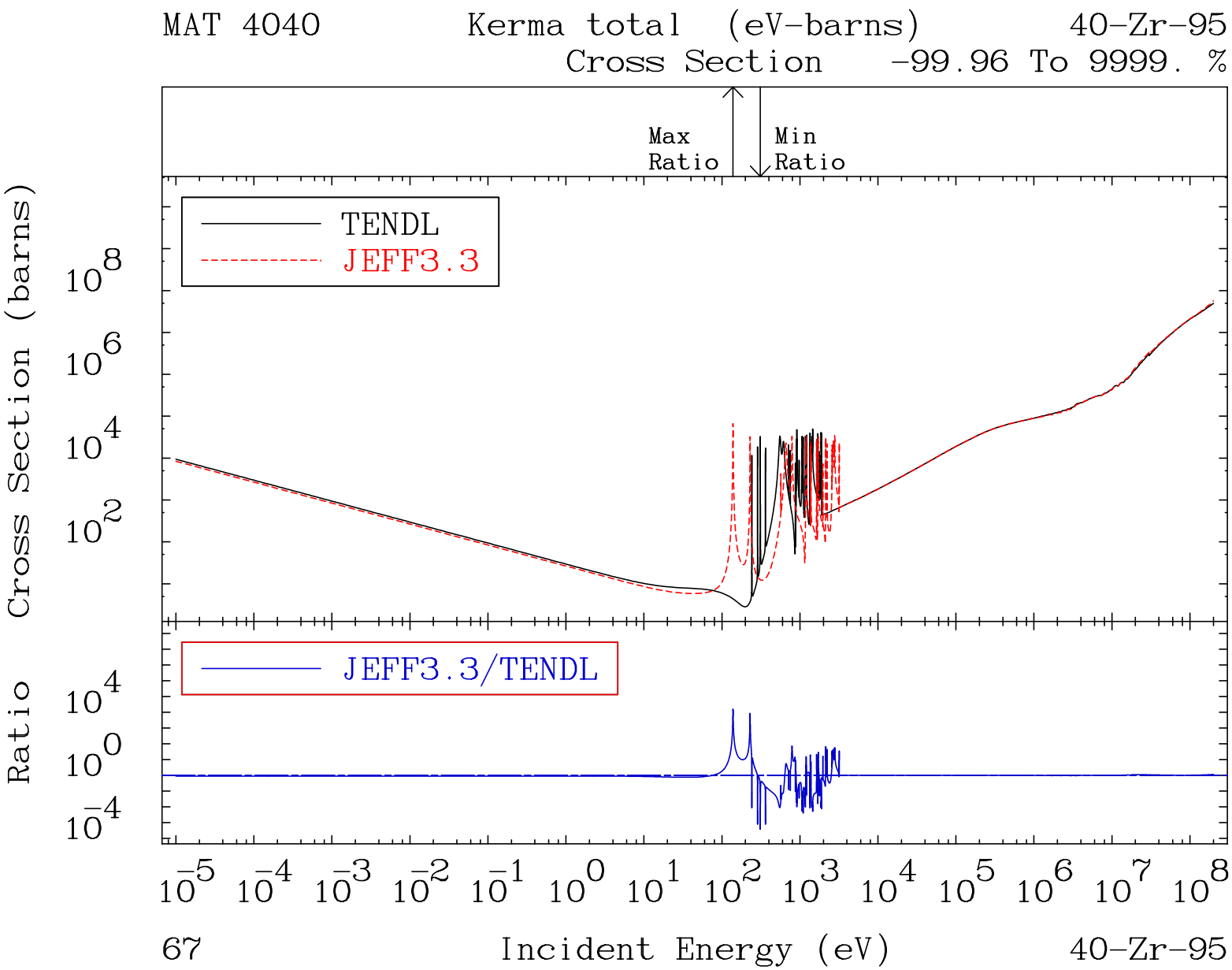

MAT 4040
Hydrogen Production
Cross Section
-85.86 To 33.91 %
40-Zr-95
Max Ratio
Min Ratio
TENDL Threshold 3.7087 MeV
JEFF3.3 Threshold 3.7069 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
62
40-Zr-95

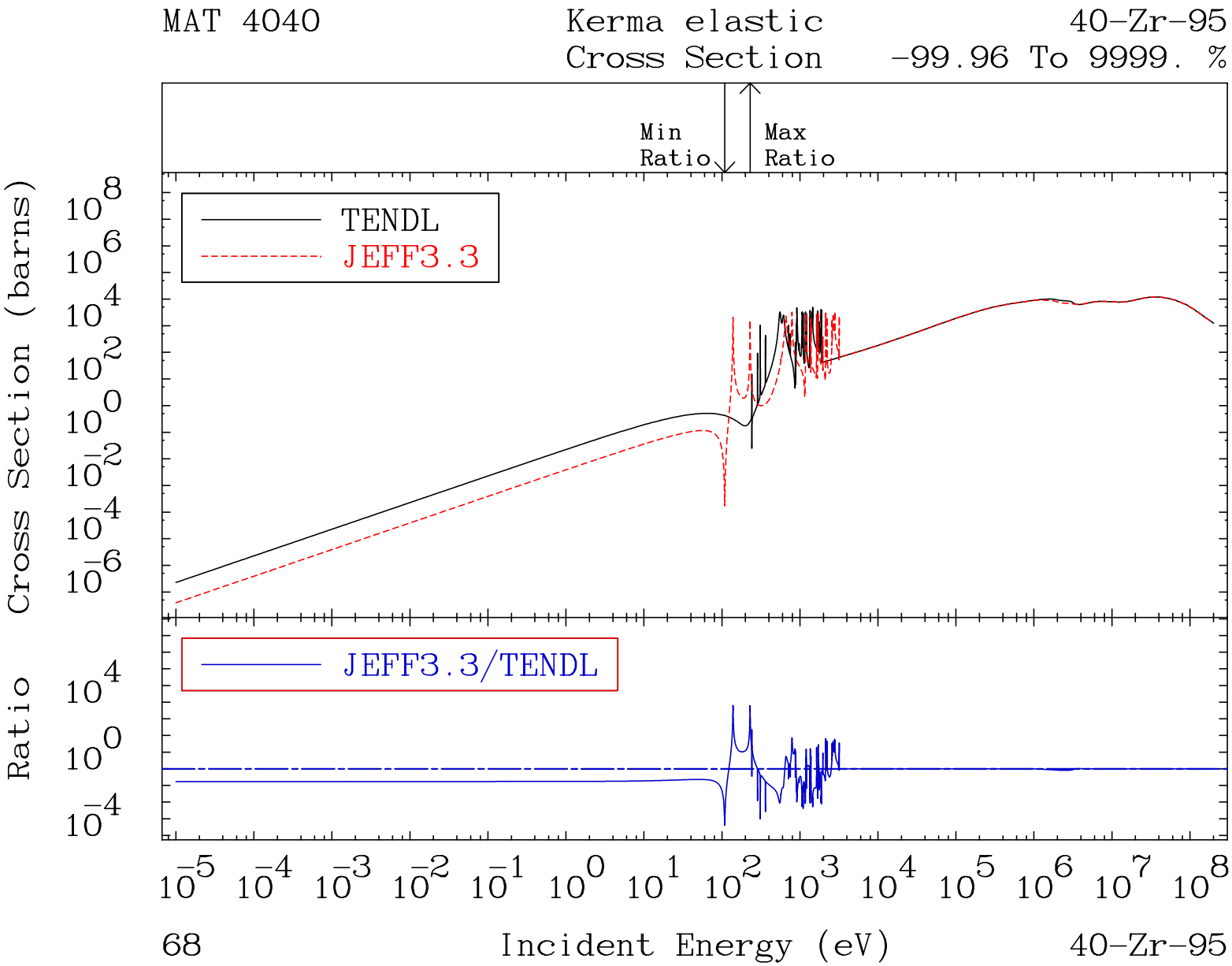

MAT 4040
Deuterium Production
Cross Section
-100.0 To 226.5 %
40-Zr-95
Max
Ratio
TENDL Threshold 8.4619 MeV
JEFF3.3 Threshold 8.4619 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
200
100
0
4
2
0
9
2
3
4
5
6
7
8
9
2
10^7
10^8
63
Incident Energy (eV)
40-Zr-95

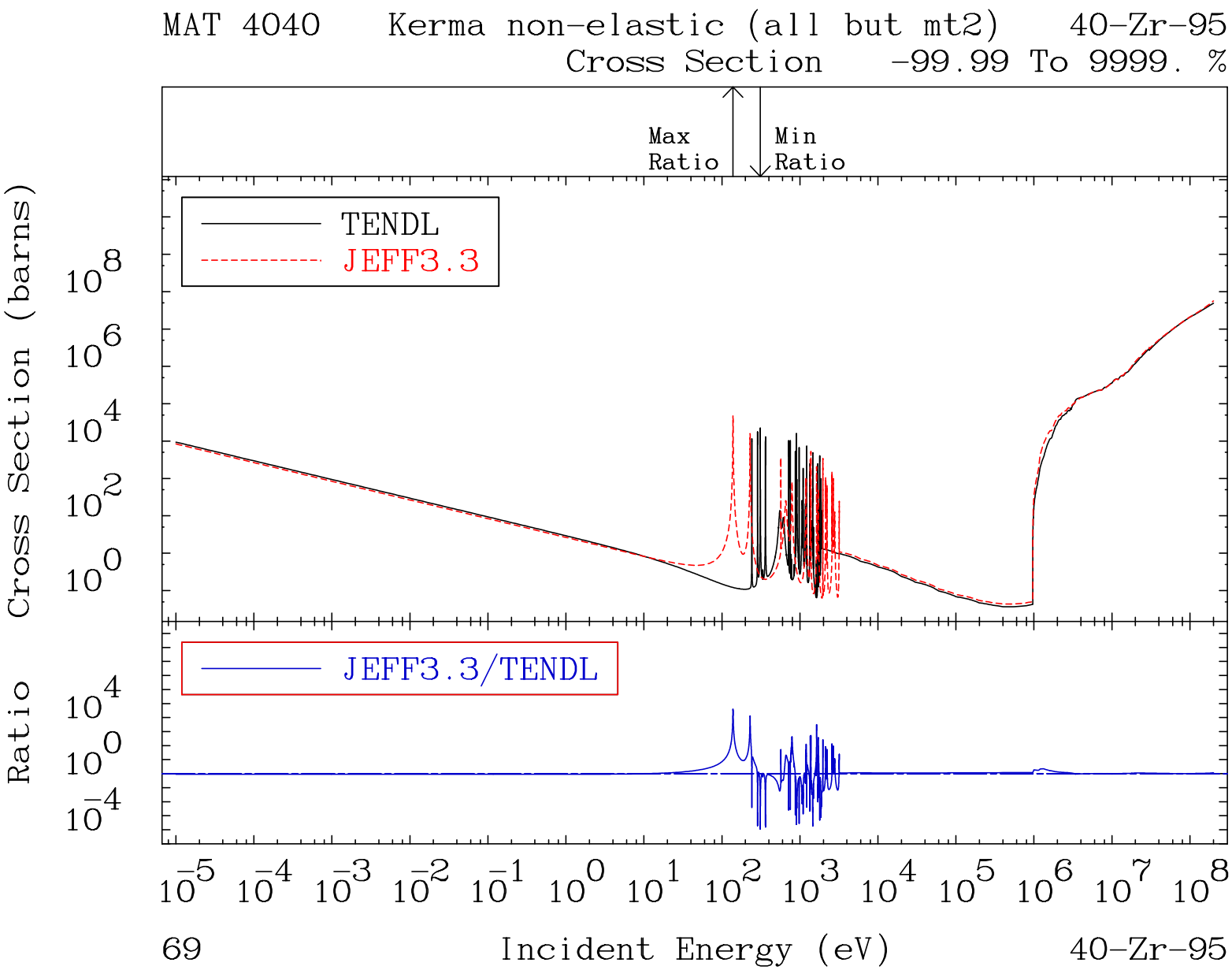

MAT 4040
Tritium Production
Cross Section
40-Zr-95
-100.0 To 1144. %
Min Ratio
Max Ratio
TENDL Threshold 8.3996 MeV
JEFF3.3 Threshold 8.4007 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
10
0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
64
Incident Energy (eV)
40-Zr-95

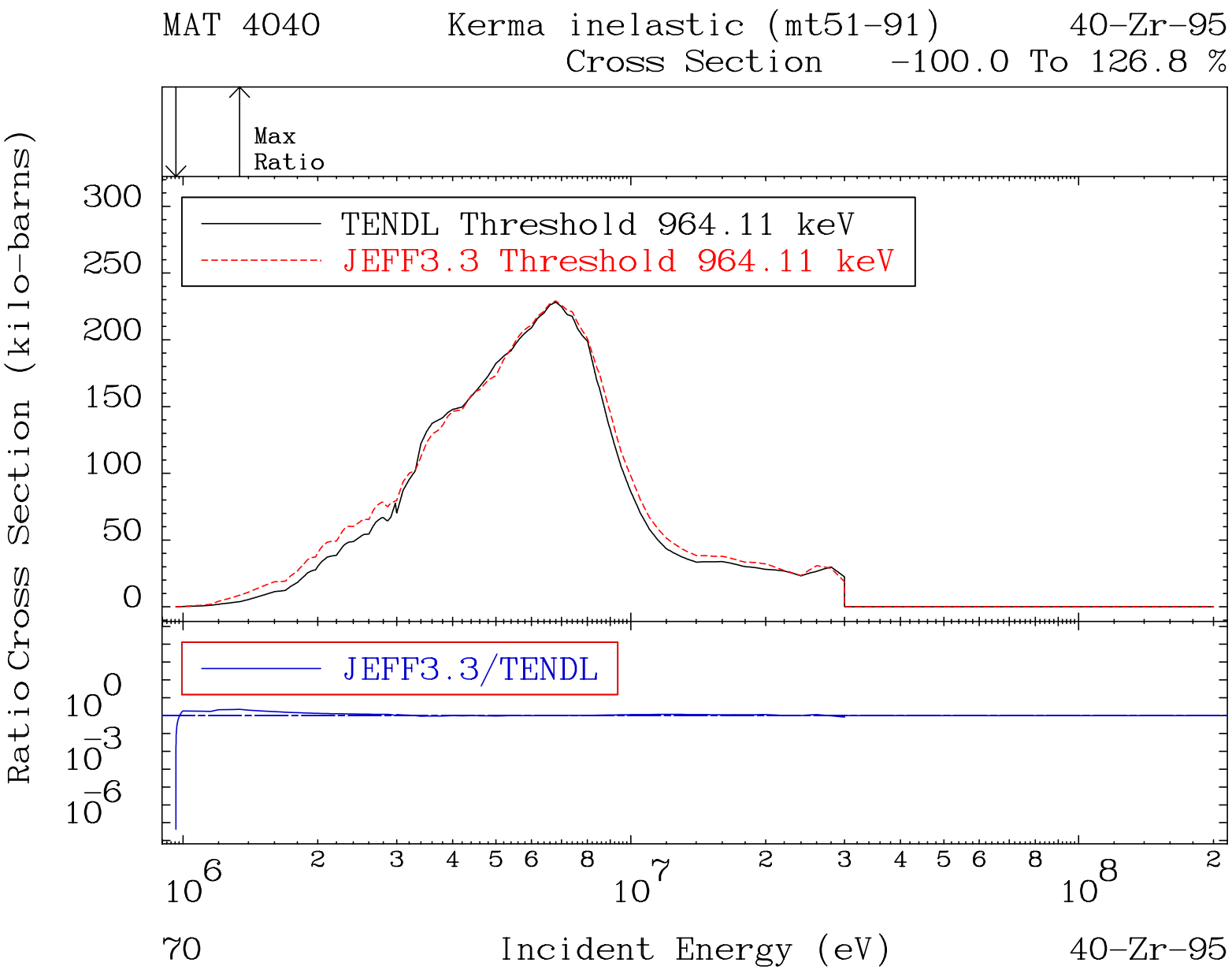

MAT 4040
He-3 Production
Cross Section
40-Zr-95
-100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 12.566 MeV
JEFF3.3 Threshold 12.568 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
200
100
0
2
3
4
5
6
7
8
9
10^8
2
Incident Energy (eV)
65
40-Zr-95

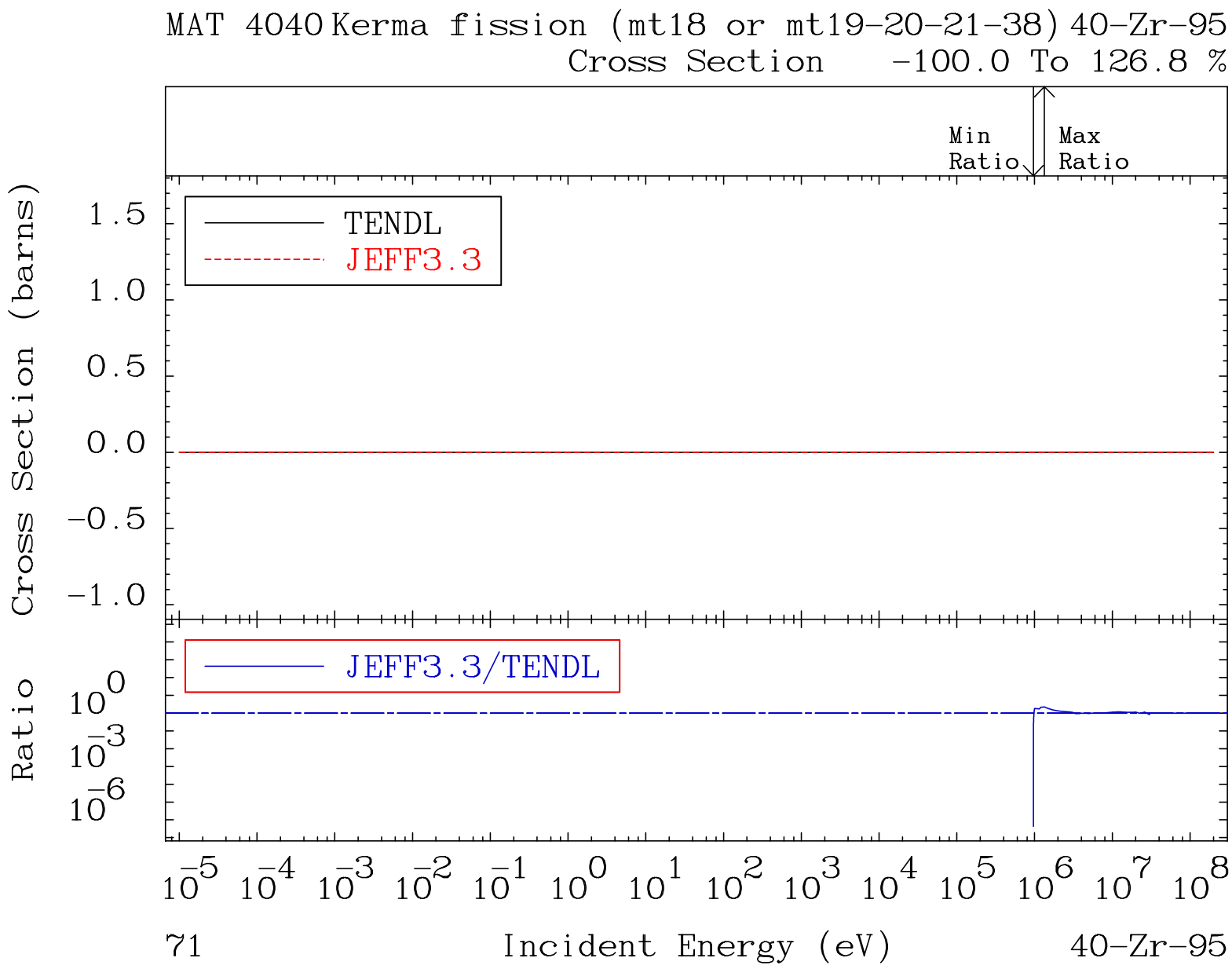

MAT 4040
He-4 Production
Cross Section
40-Zr-95
2.205 To 4386. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
66
40-Zr-95

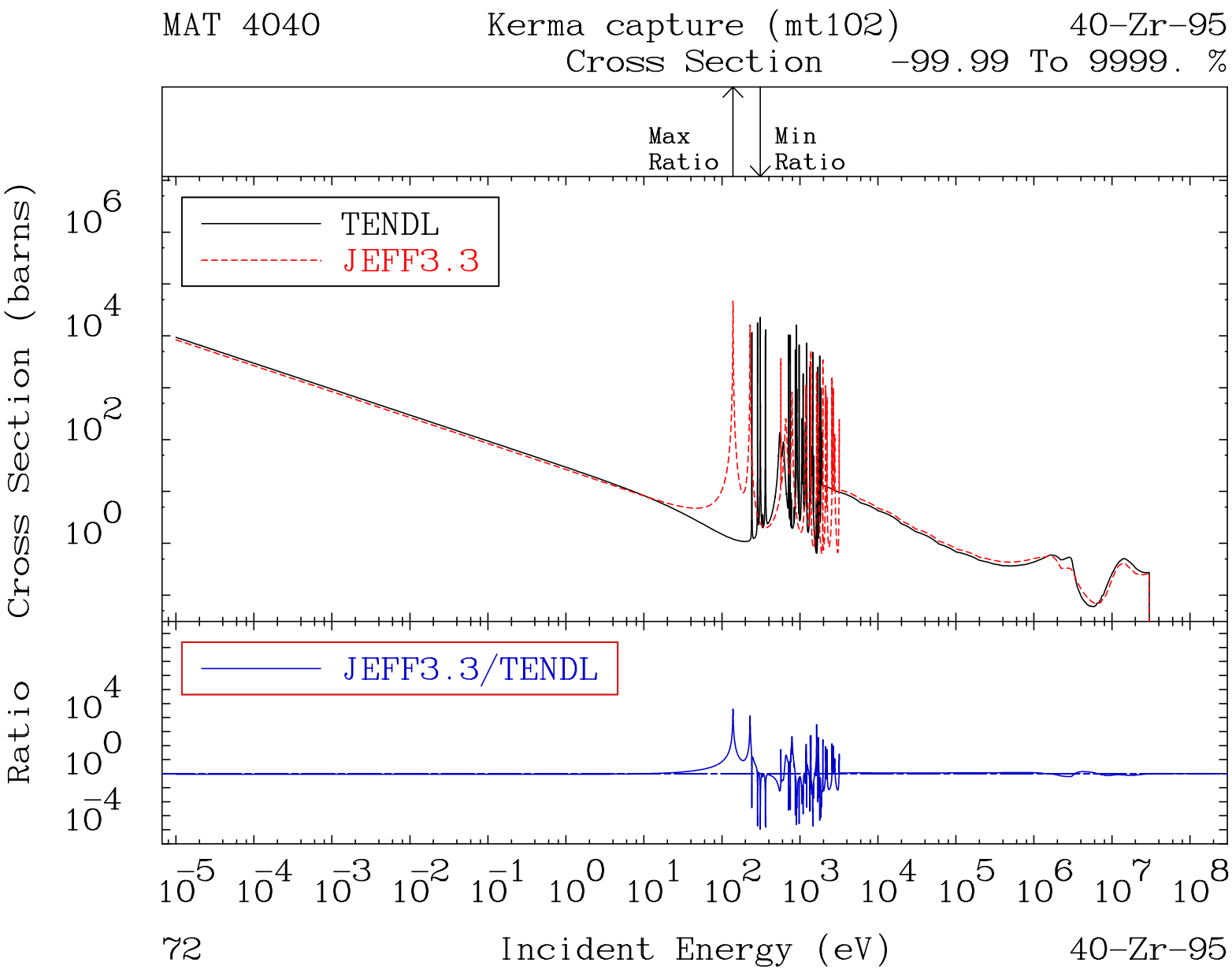

MAT 4040
Kerma total (eV-barns)
40-Zr-95
Cross Section -99.96 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
67
40-Zr-95

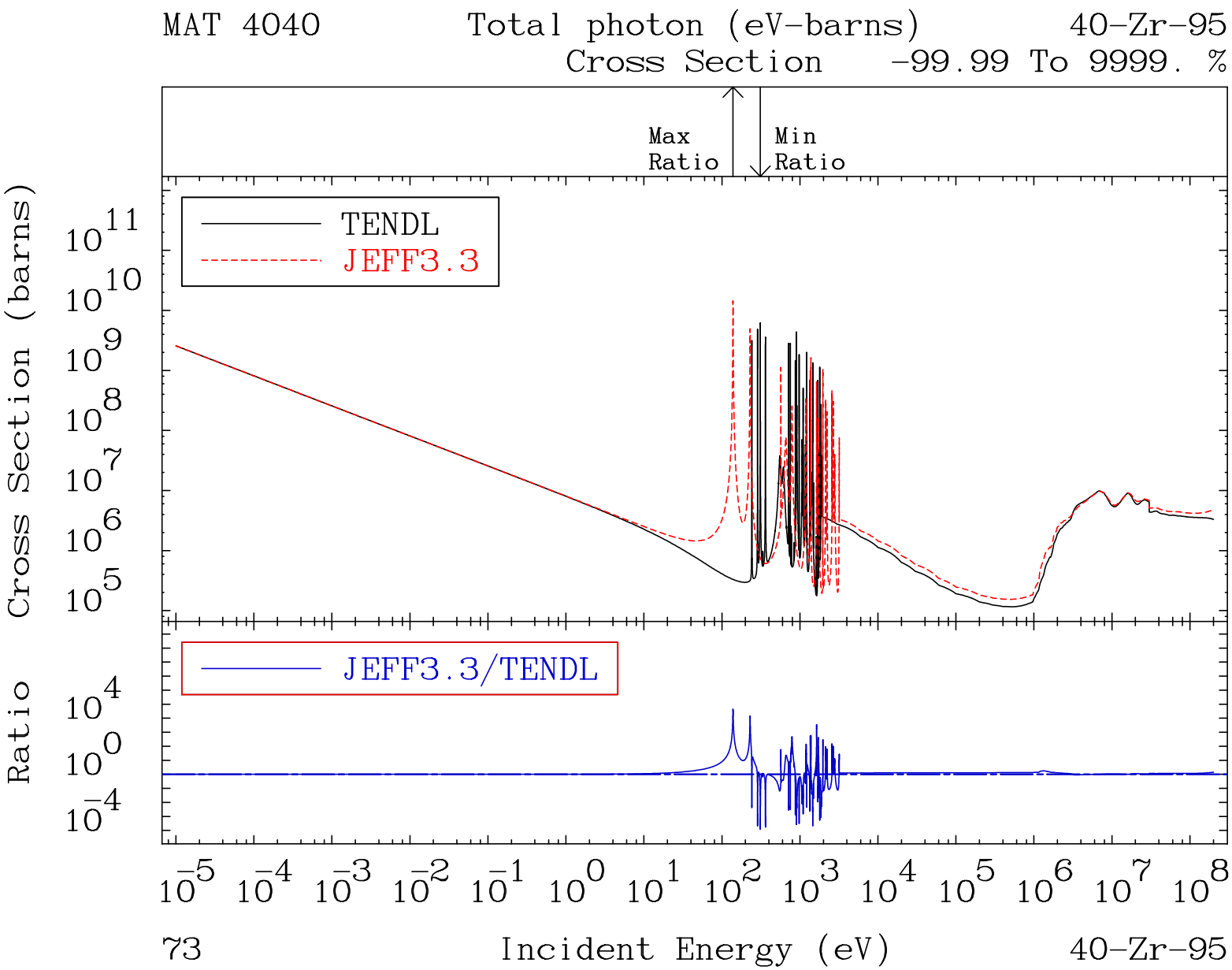

MAT 4040
Kerma elastic
Cross Section
40-Zr-95
-99.96 To 9999. %
Min
Ratio
Max
Ratio
TENDL
JEFF3.3
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
68
40-Zr-95

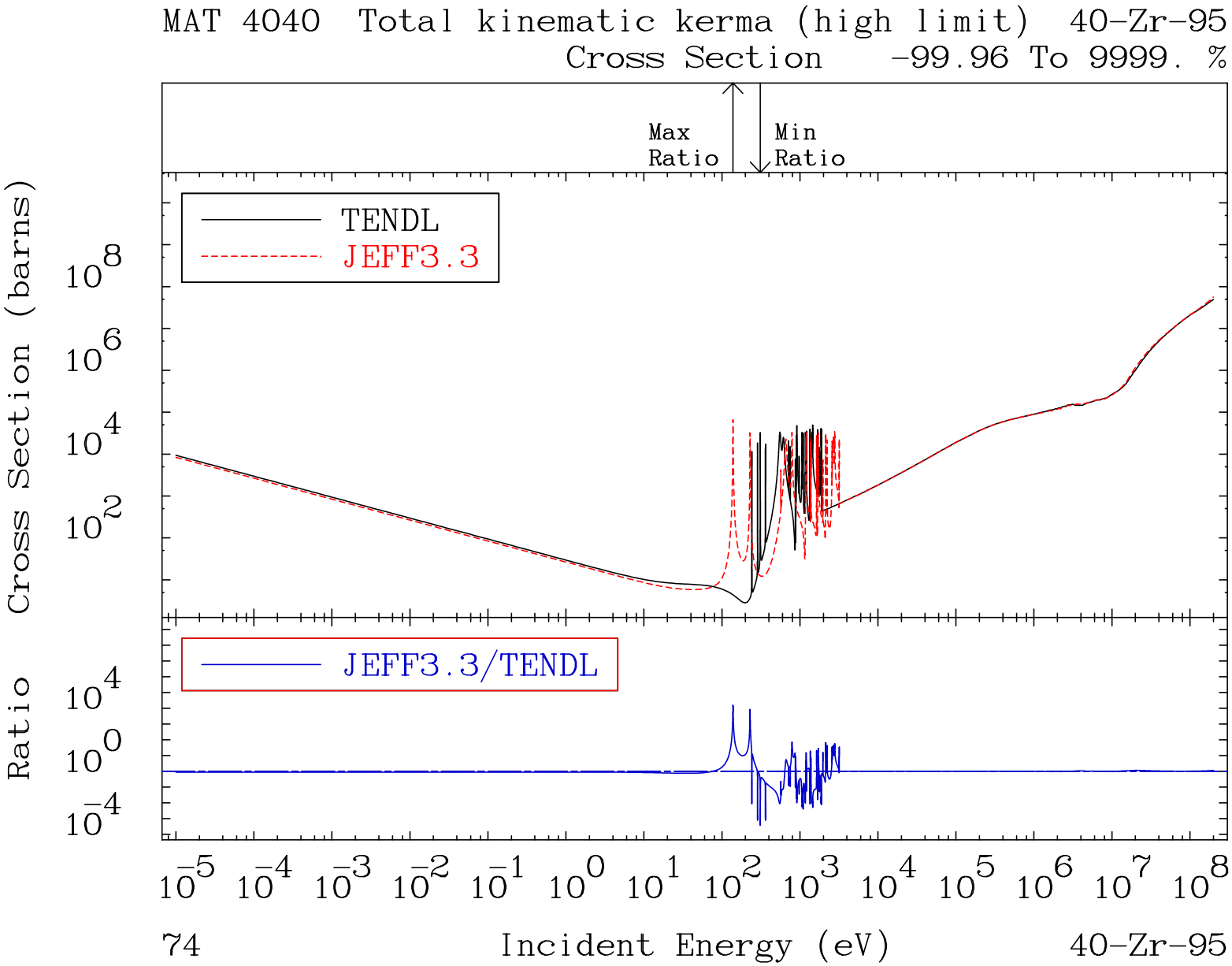

MAT 4040 Kerma non-elastic (all but mt2) 40-Zr-95
Cross Section -99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
69
40-Zr-95

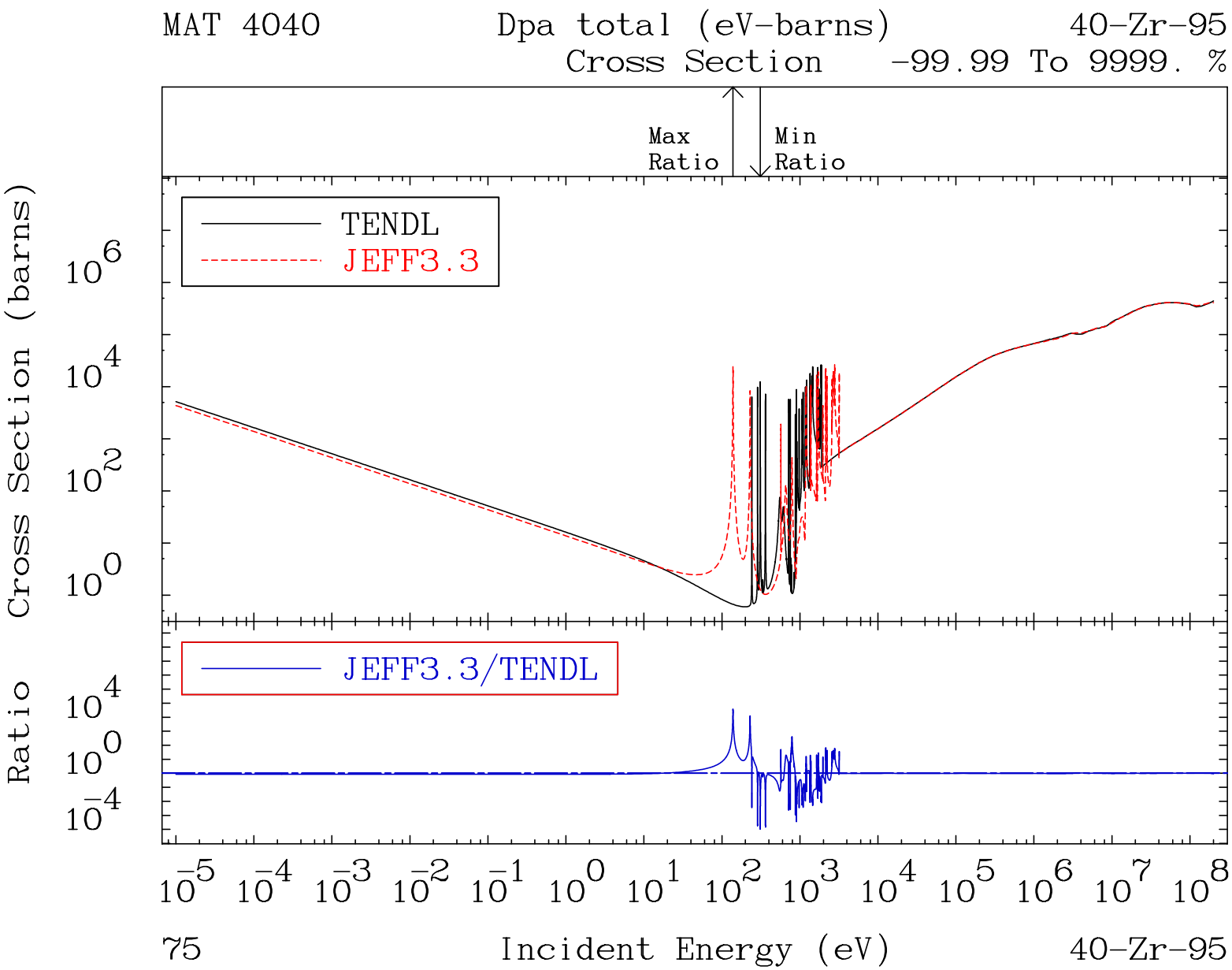

MAT 4040
Kerma inelastic (mt51-91)
40-Zr-95
Cross Section
-100.0 To 126.8 %
Max
Ratio
TENDL Threshold 964.11 keV
JEFF3.3 Threshold 964.11 keV
JEFF3.3/TENDL
Ratio Cross Section (kilo-barns)
300
250
200
150
100
50
0
10^0
10^{-3}
10^{-6}
10^6
10^7
10^8
Incident Energy (eV)
70
40-Zr-95

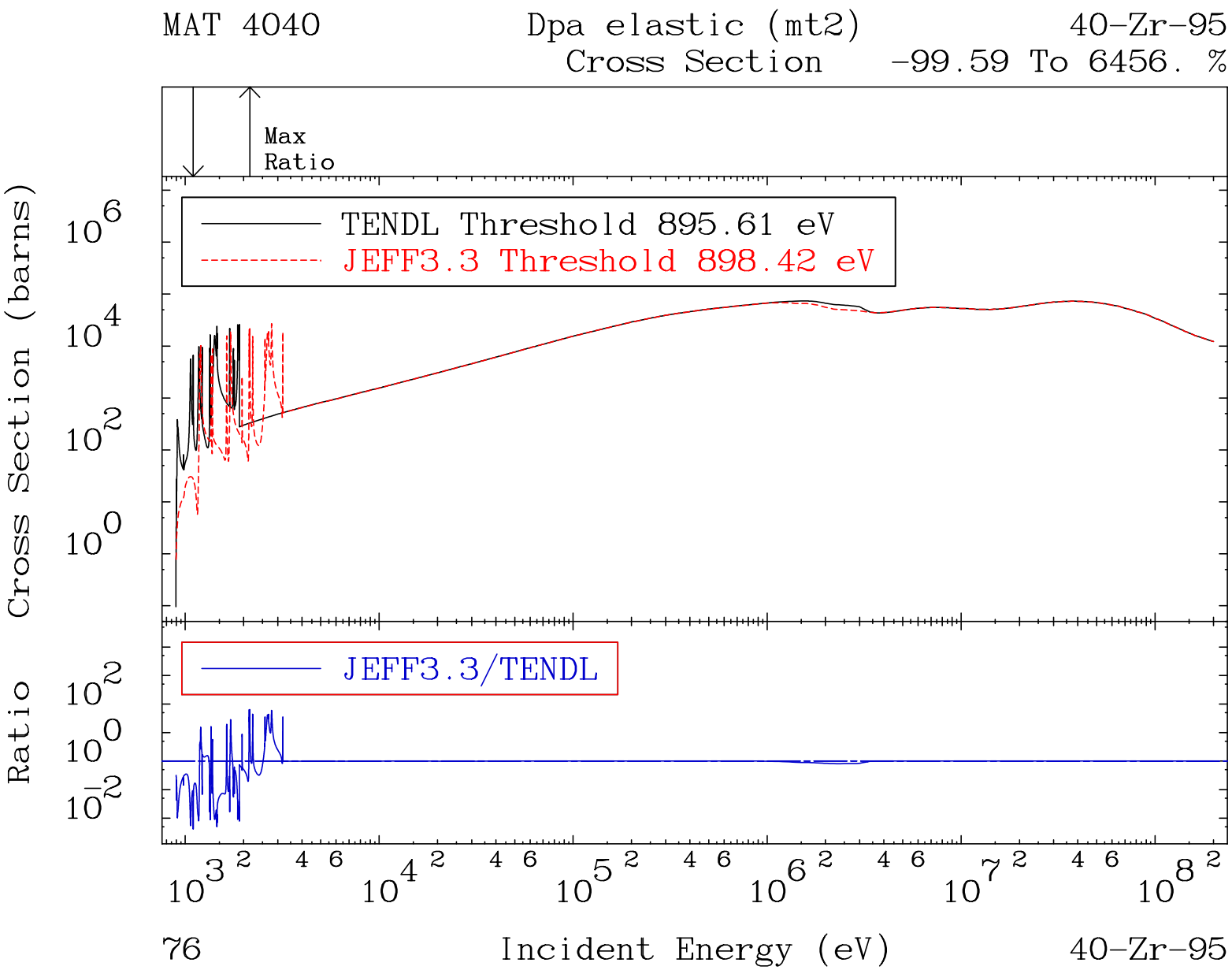

MAT 4040 Kerma fission (mt18 or mt19-20-21-38) 40-Zr-95
Cross Section -100.0 To 126.8 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
71
40-Zr-95

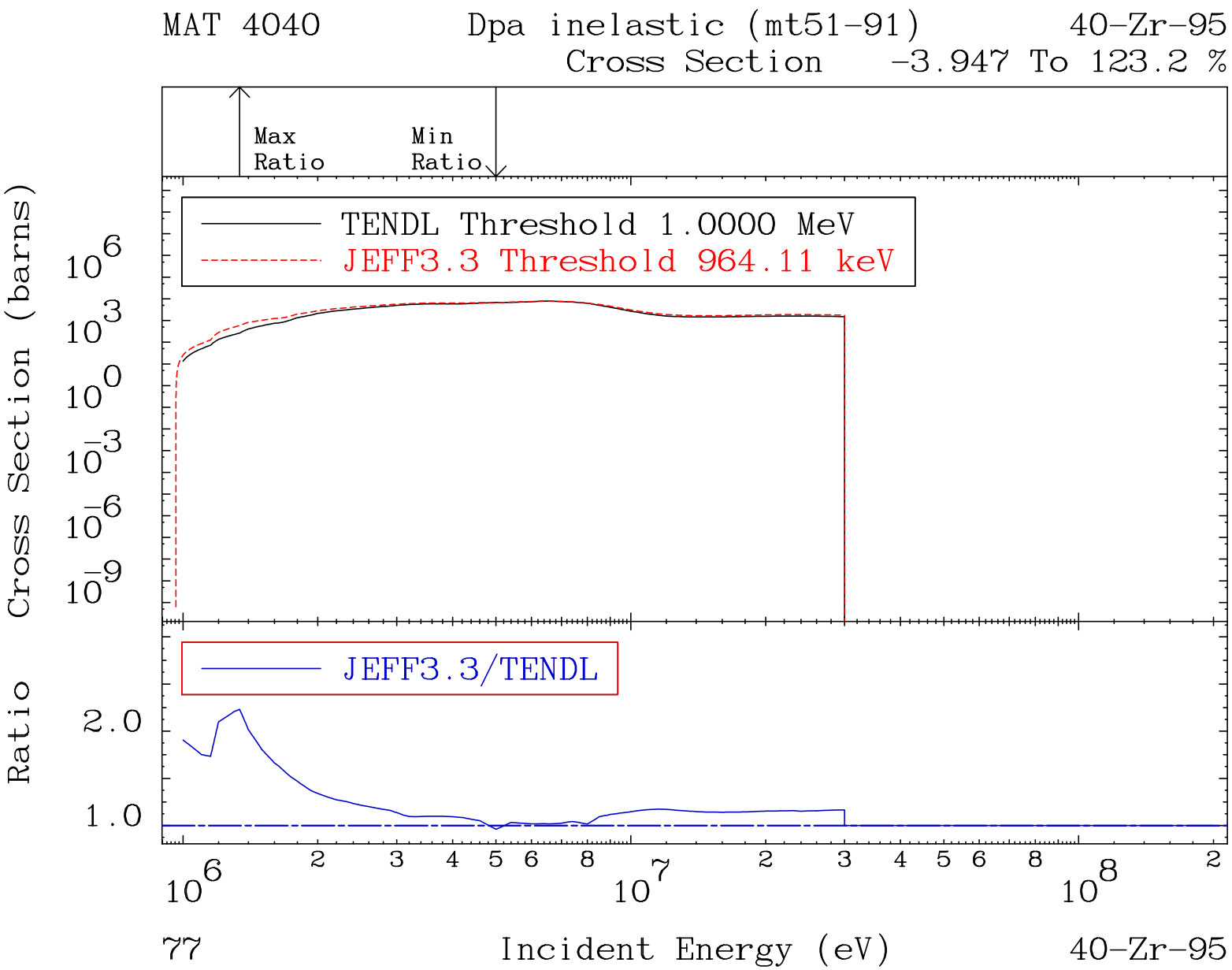

MAT 4040
Kerma capture (mt102)
40-Zr-95
Cross Section
-99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
72
40-Zr-95

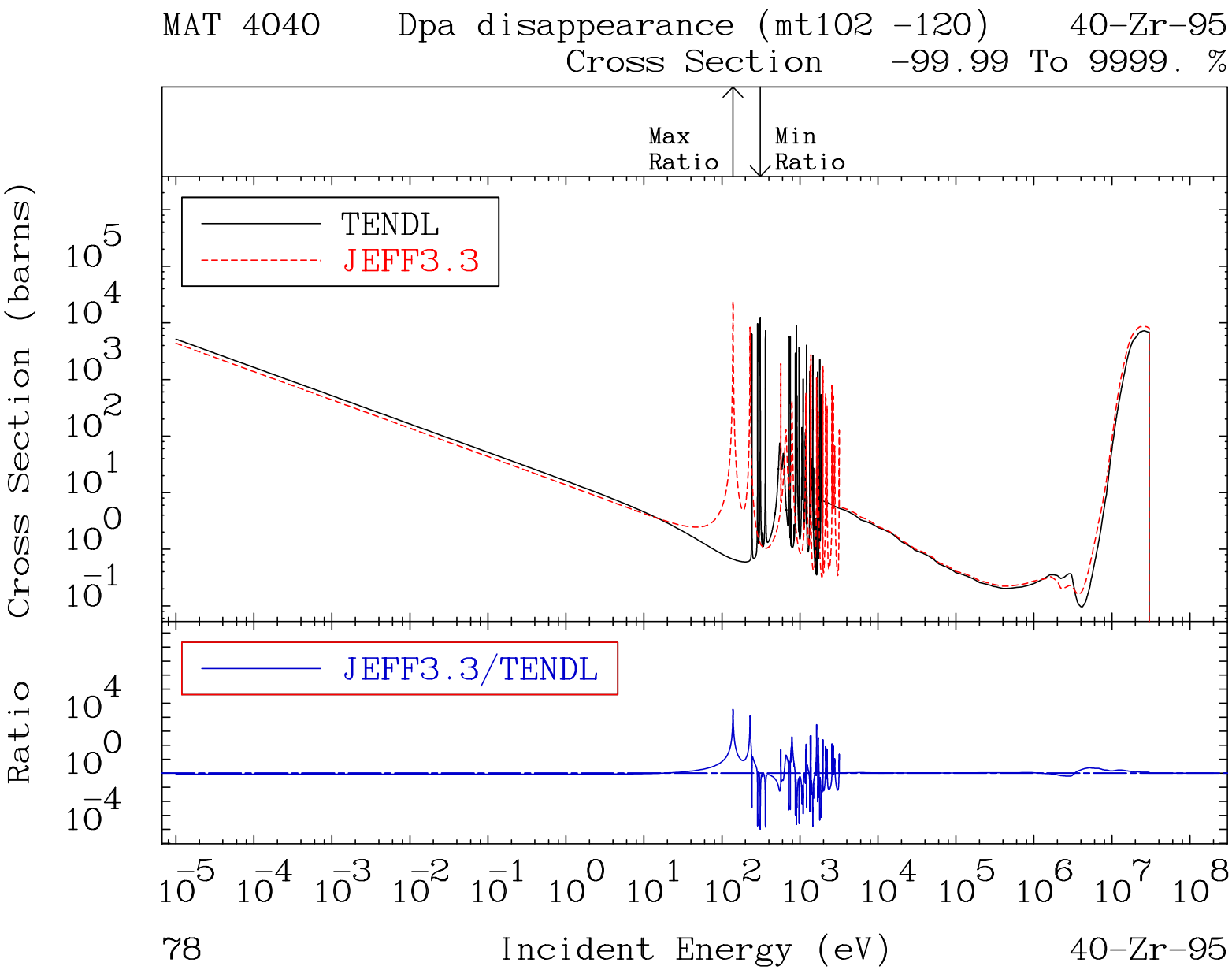

MAT 4040
Total photon (eV-barns)
Cross Section
40-Zr-95
-99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
73
40-Zr-95

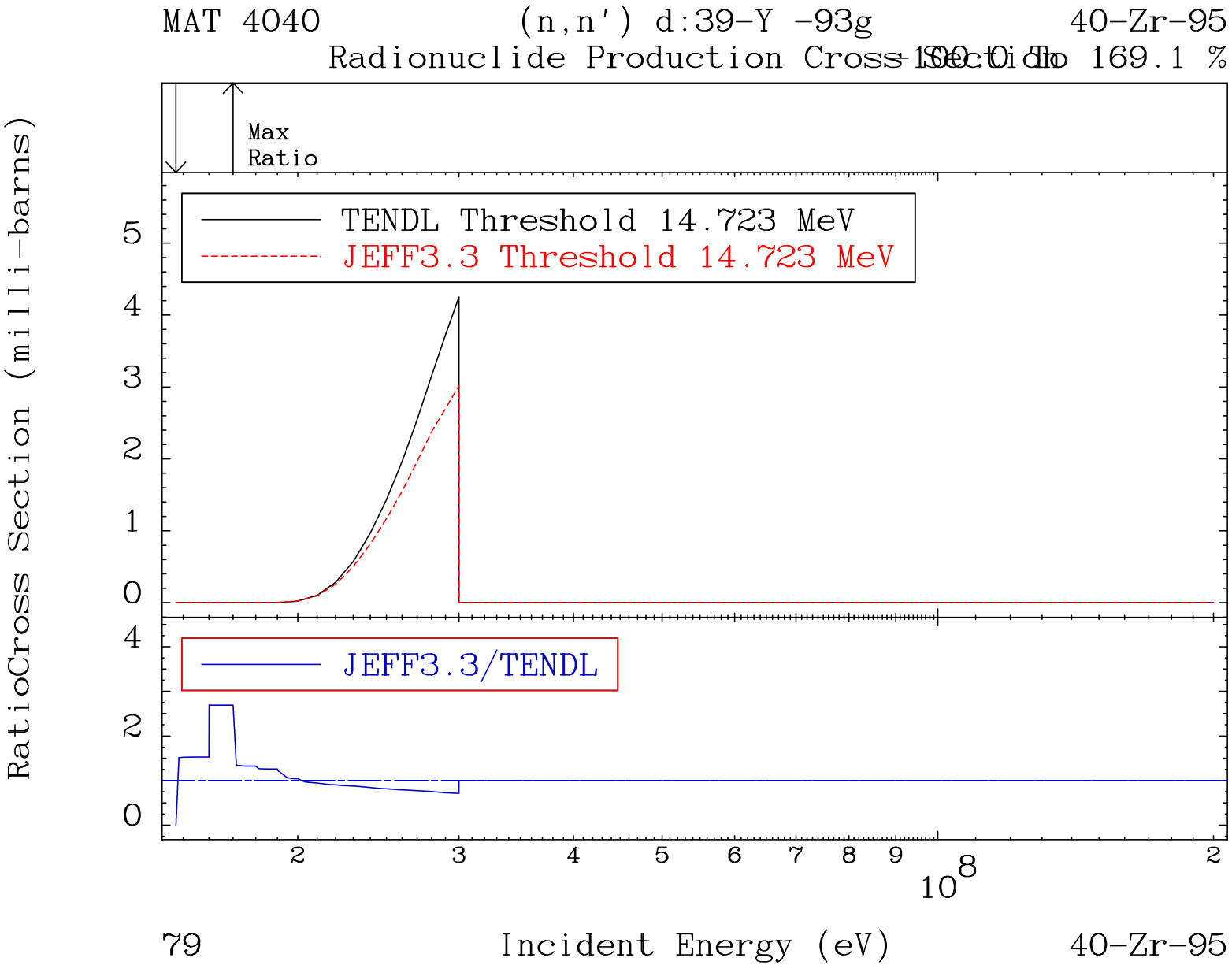

MAT 4040 Total kinematic kerma (high limit) 40-Zr-95
Cross Section -99.96 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
74
40-Zr-95

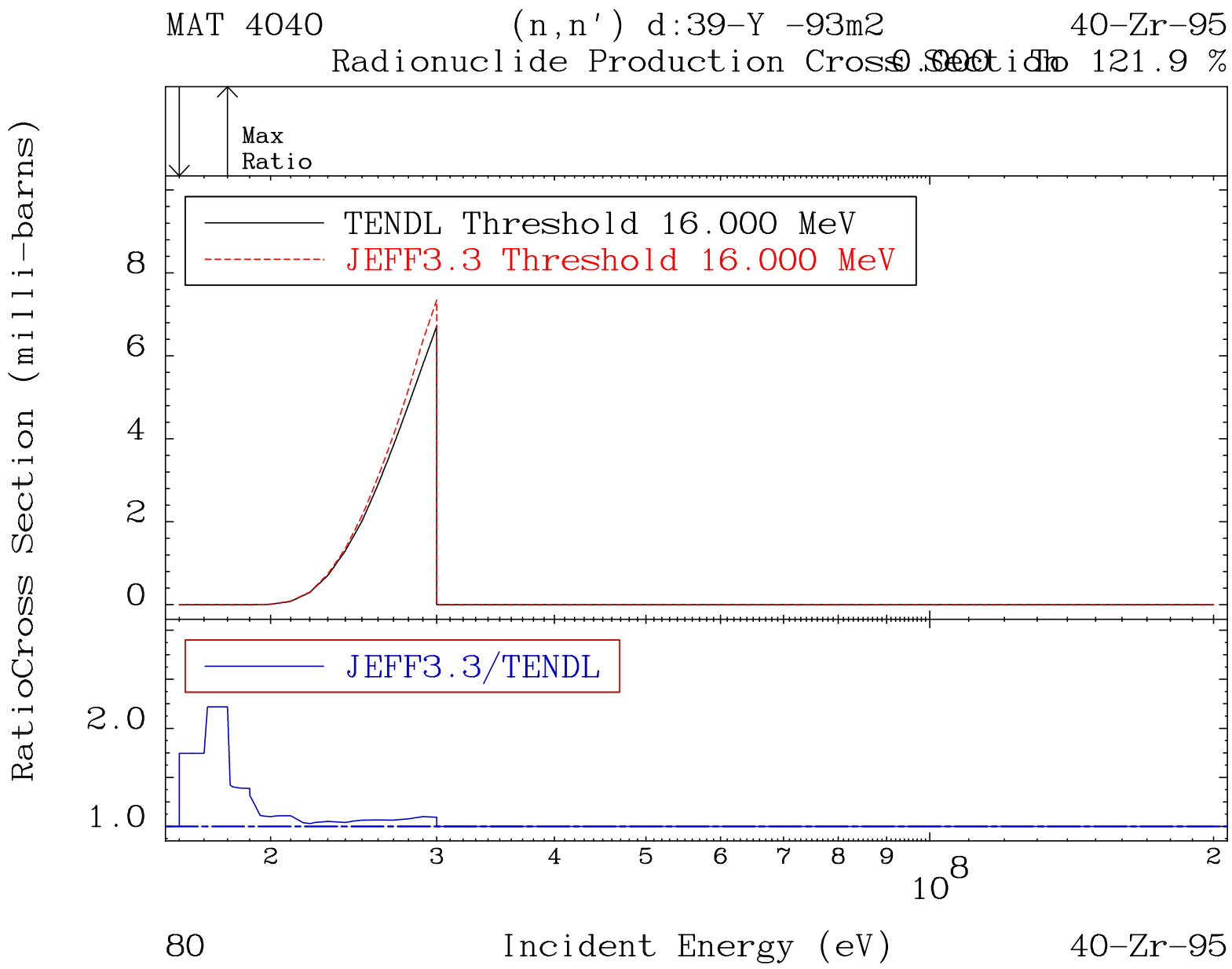

MAT 4040
Dpa total (eV-barns)
Cross Section
40-Zr-95
-99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
75
40-Zr-95

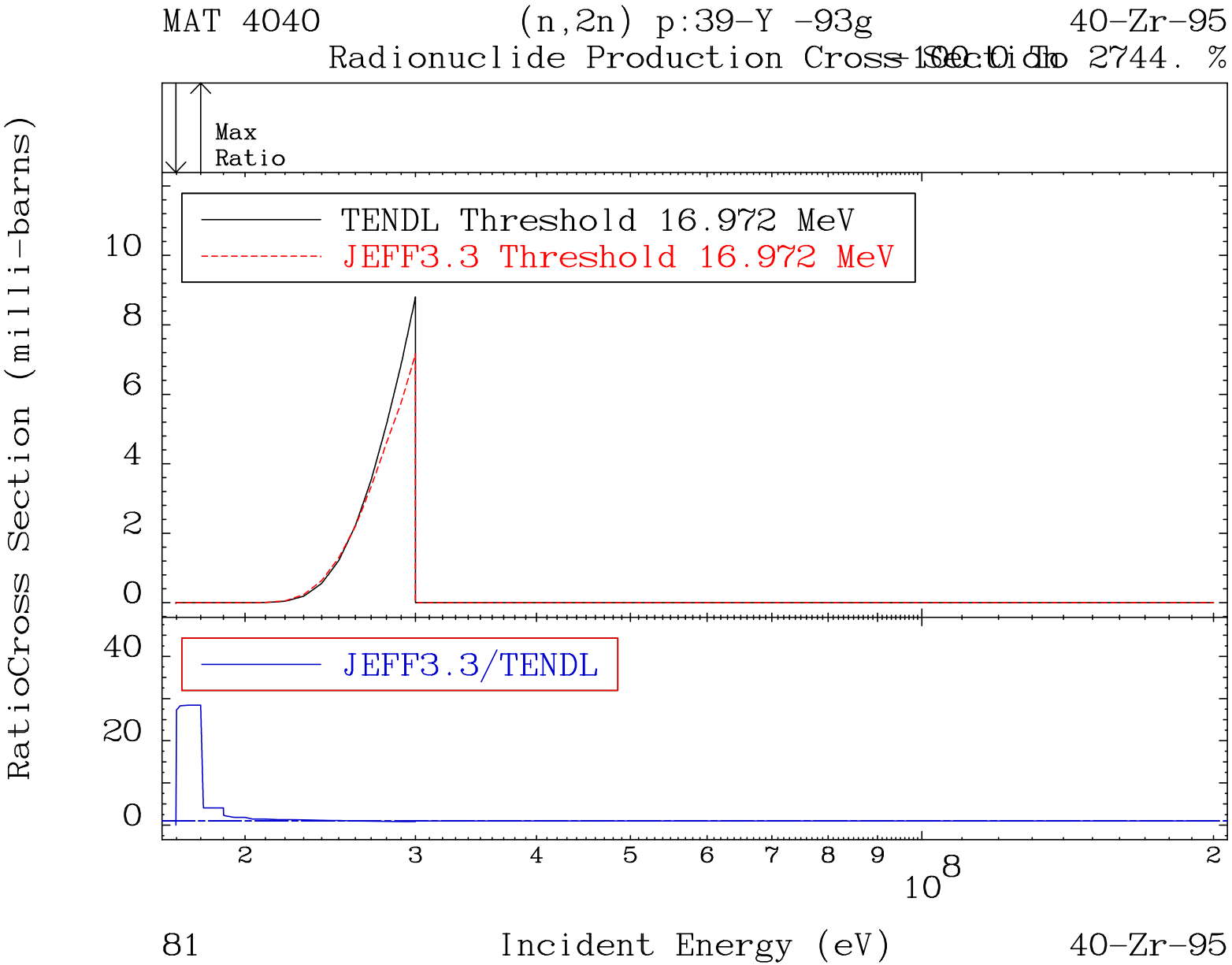

MAT 4040
Dpa elastic (mt2)
Cross Section
40-Zr-95
-99.59 To 6456. %
Max
Ratio
TENDL Threshold 895.61 eV
JEFF3.3 Threshold 898.42 eV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
76
40-Zr-95

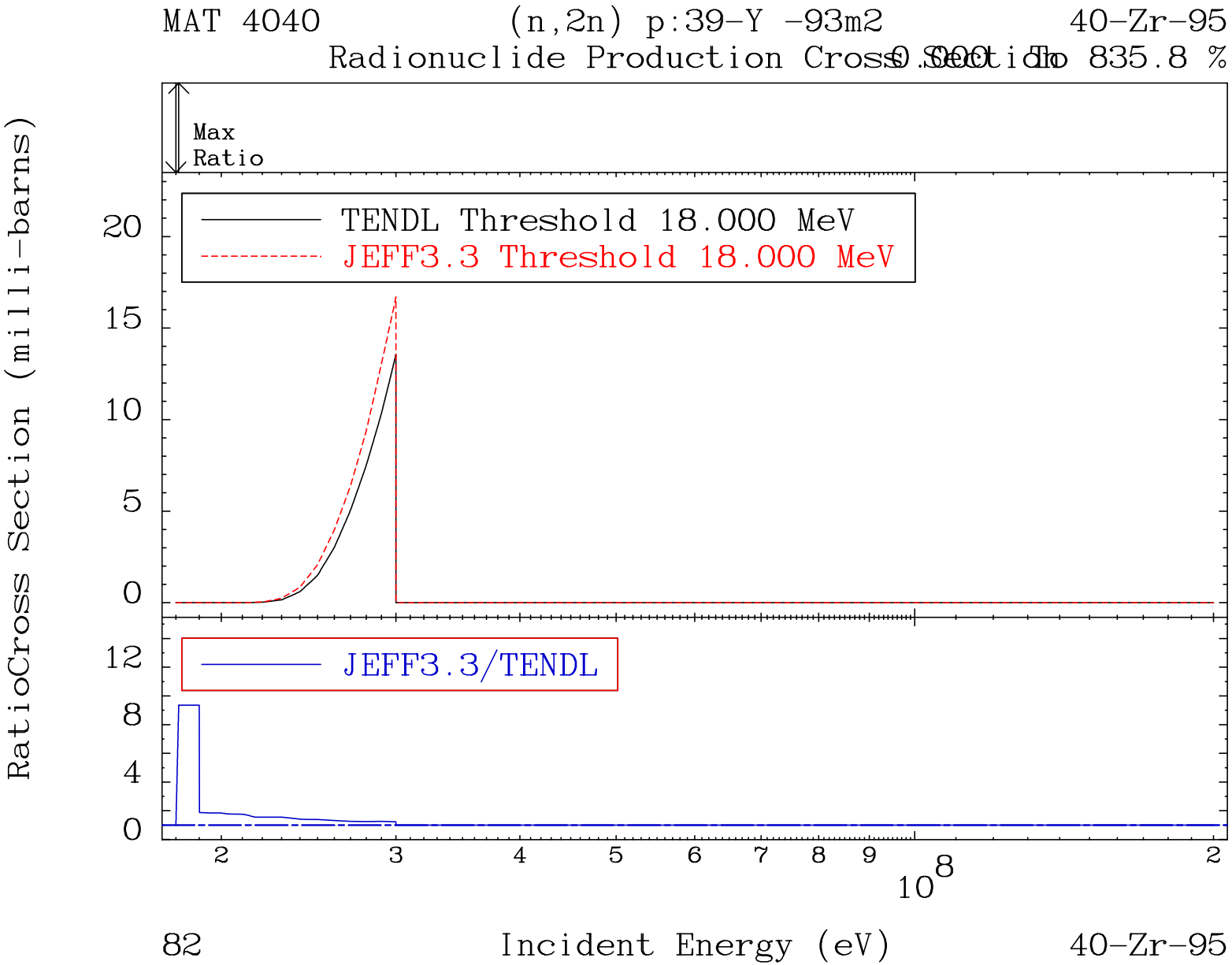

MAT 4040
Dpa inelastic (mt51-91)
40-Zr-95
Cross Section
-3.947 To 123.2 %
Max Ratio
Min Ratio
TENDL Threshold 1.0000 MeV
JEFF3.3 Threshold 964.11 keV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
77
40-Zr-95

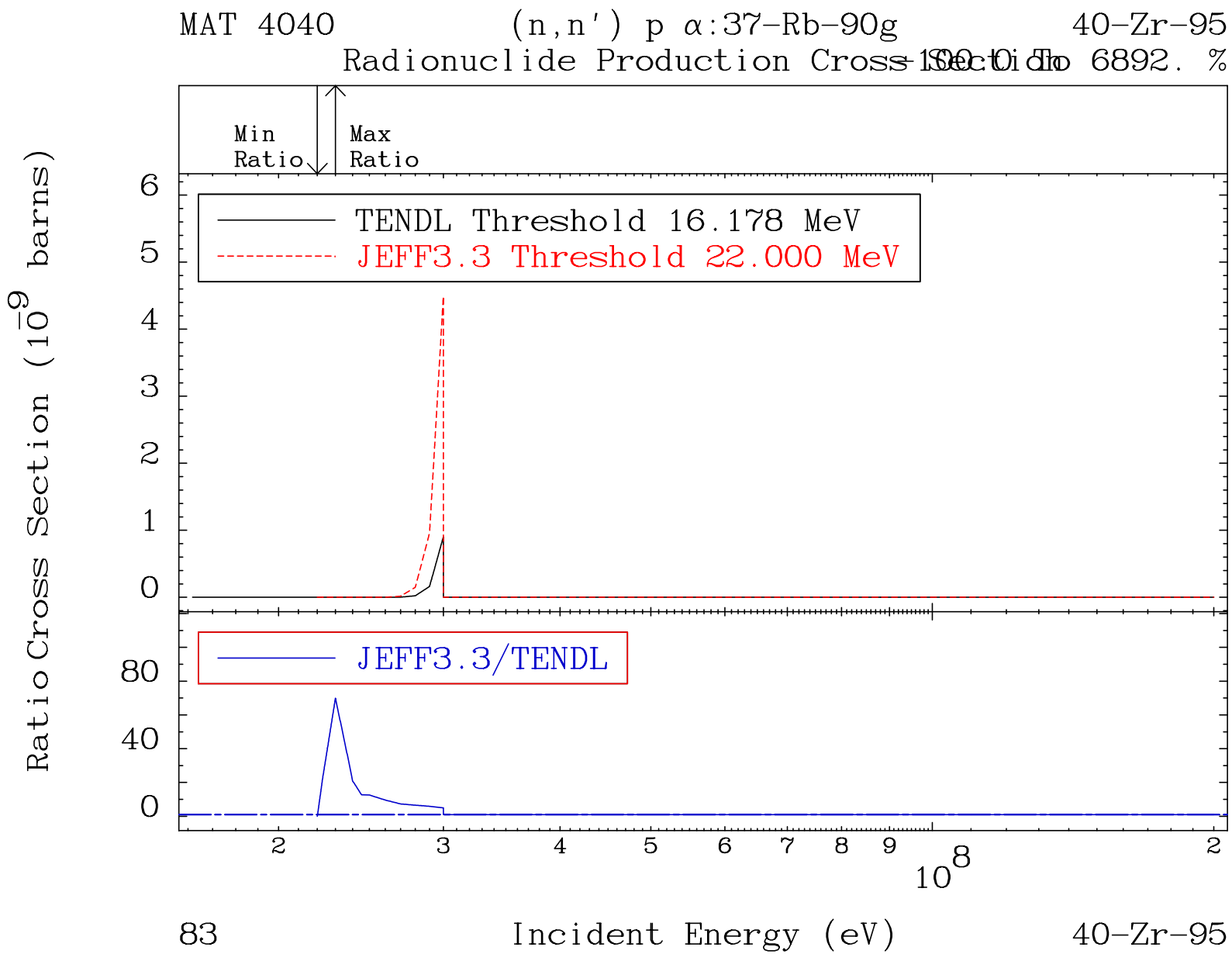

MAT 4040 Dpa disappearance (mt102 -120) 40-Zr-95
Cross Section -99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
78
40-Zr-95

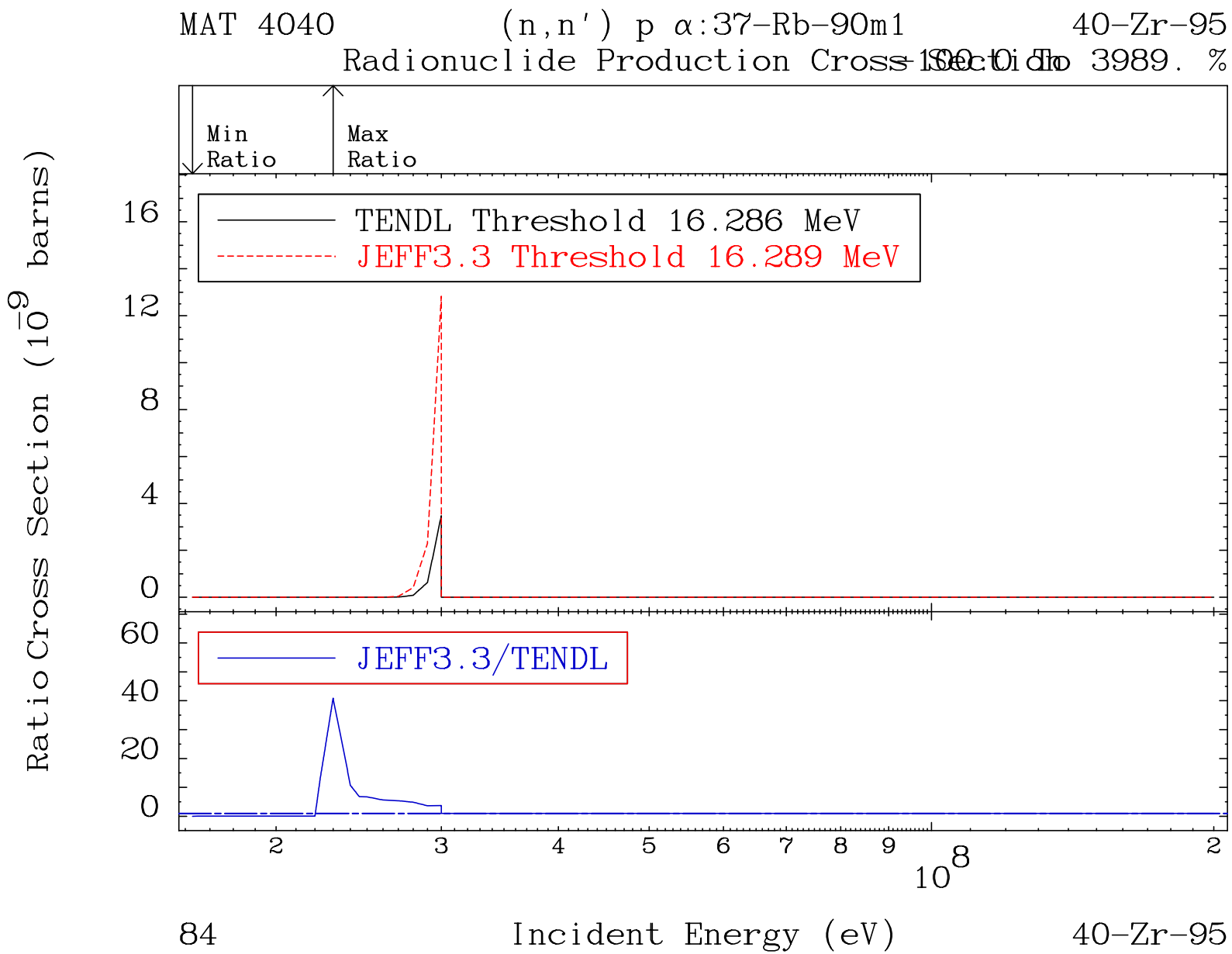

MAT 4040
(n,n') d:39-Y -93g
40-Zr-95
Radionuclide Production Cross Section
Max
Ratio
TENDL Threshold 14.723 MeV
JEFF3.3 Threshold 14.723 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
79
40-Zr-95

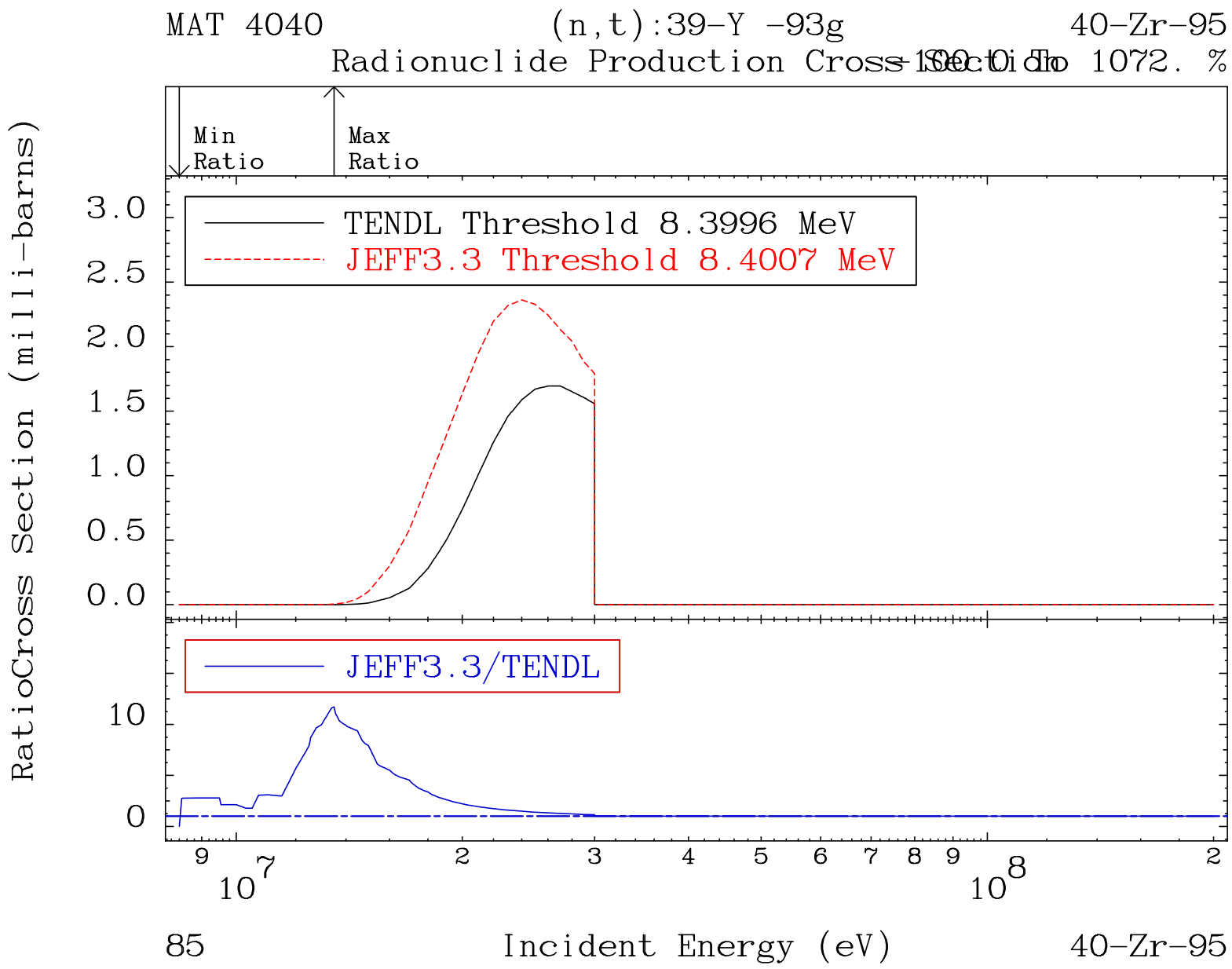

MAT 4040
(n,n') d:39-Y -93m2
40-Zr-95
Radionuclide Production Cross Section
0.000 To 121.9 %
Max
Ratio
TENDL Threshold 16.000 MeV
JEFF3.3 Threshold 16.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
0
2
4
6
8
1.0
2.0
2
3
4
5
6
7
8
9
10^8
2
80
Incident Energy (eV)
40-Zr-95

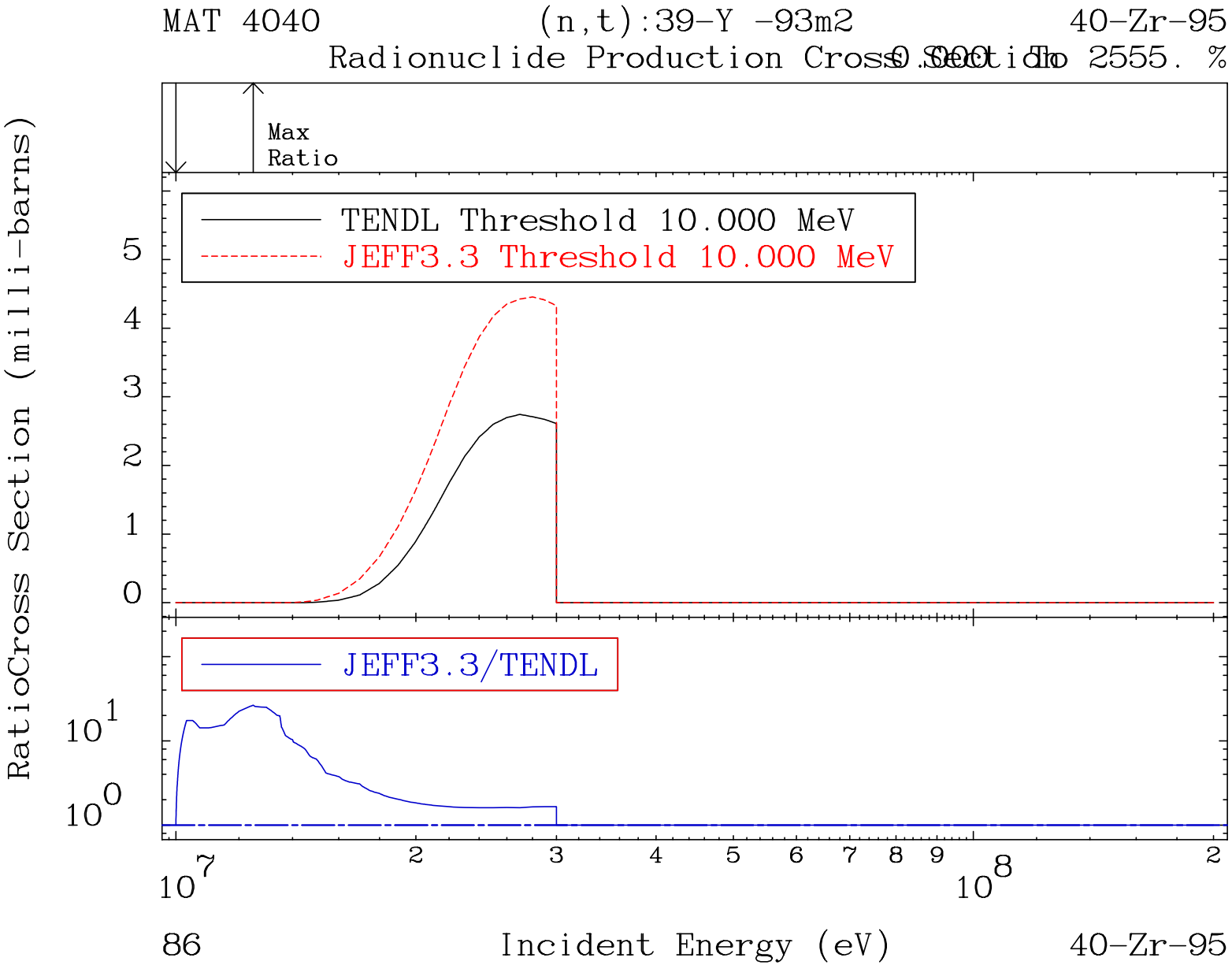

MAT 4040
(n,2n) p:39-Y -93g
40-Zr-95
Radionuclide Production Cross Section
Max
Ratio
TENDL Threshold 16.972 MeV
JEFF3.3 Threshold 16.972 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
81
40-Zr-95

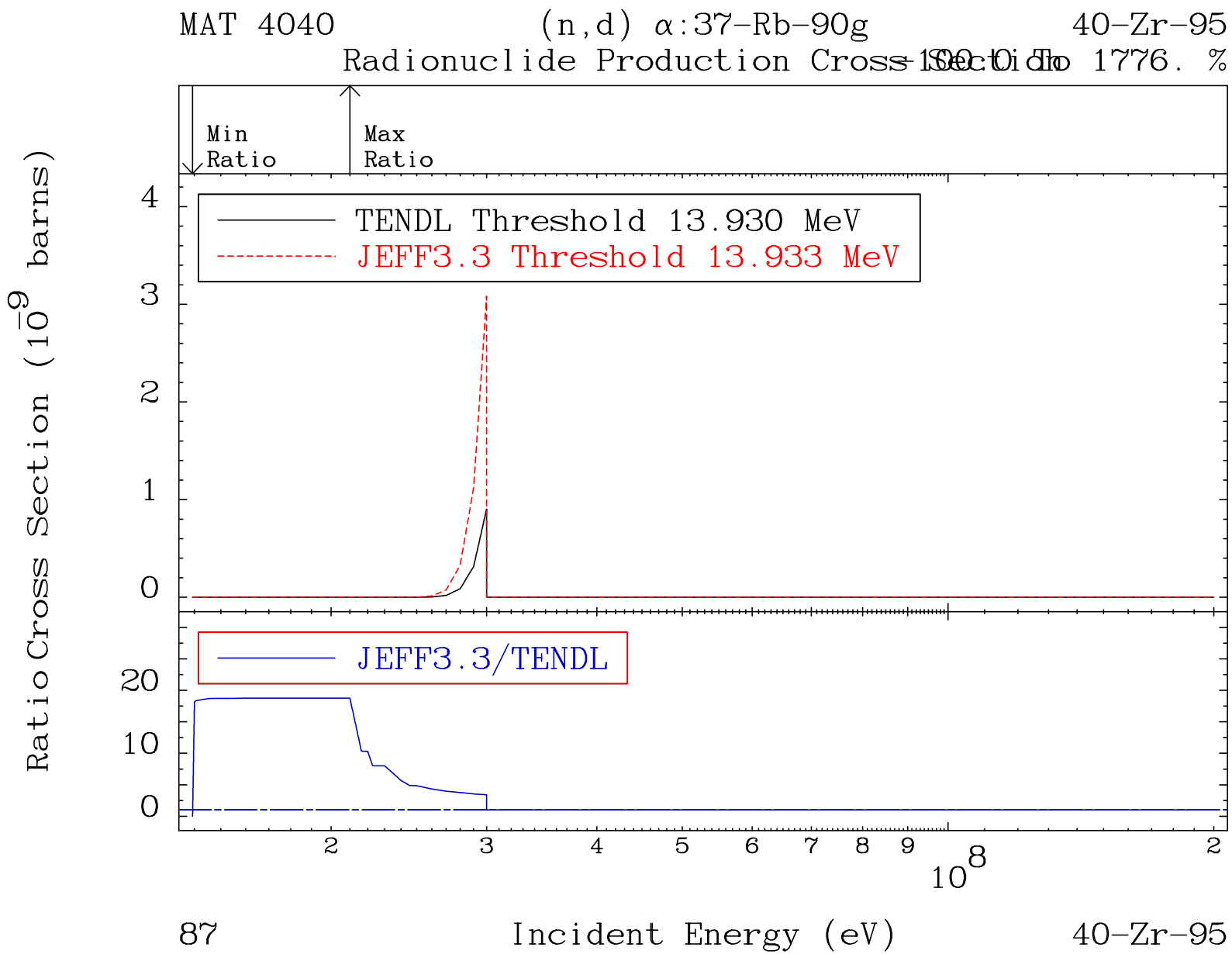

MAT 4040
(n,2n) p:39-Y -93m2
40-Zr-95
Radionuclide Production Cross Section
0.000 To 835.8 %
Max
Ratio
TENDL Threshold 18.000 MeV
JEFF3.3 Threshold 18.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
20
15
10
5
0
12
8
4
0
2
3
4
5
6
7
8
9
10^8
2
82
Incident Energy (eV)
40-Zr-95

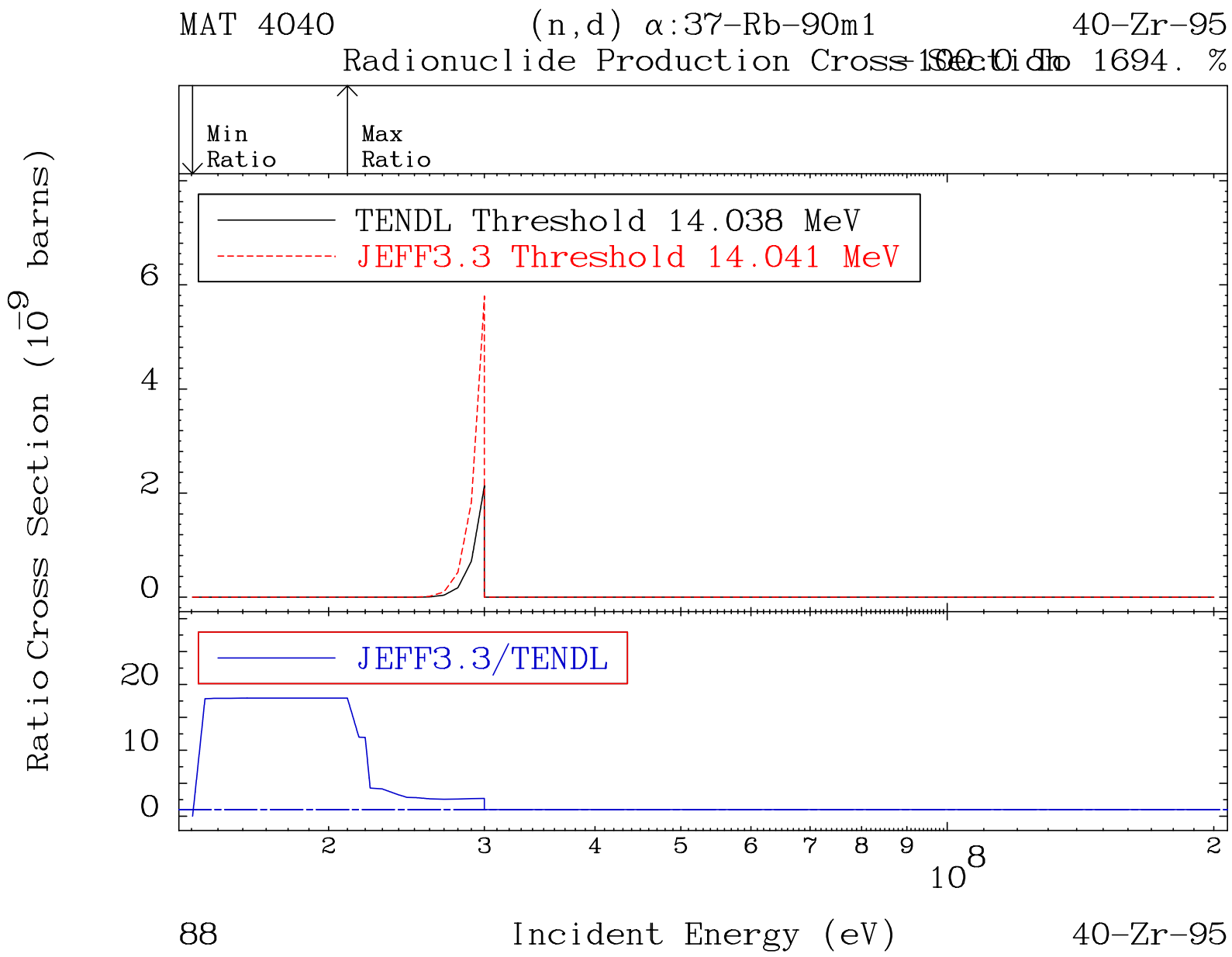

MAT 4040
(n,n') p α:37-Rb-90g
40-Zr-95
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL Threshold 16.178 MeV
JEFF3.3 Threshold 22.000 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
Incident Energy (eV)
83
40-Zr-95


MAT 4040
(n,n') p α:37-Rb-90m1
40-Zr-95
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL Threshold 16.286 MeV
JEFF3.3 Threshold 16.289 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
Incident Energy (eV)
84
40-Zr-95


MAT 4040
(n,t):39-Y -93g
40-Zr-95
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL Threshold 8.3996 MeV
JEFF3.3 Threshold 8.4007 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
85
40-Zr-95


MAT 4040
(n,t):39-Y -93m2
40-Zr-95
Radionuclide Production Cross Section
0.000 To 2555. %
Max
Ratio
TENDL Threshold 10.000 MeV
JEFF3.3 Threshold 10.000 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
86
40-Zr-95


MAT 4040
(n,d) α:37-Rb-90g
40-Zr-95
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL Threshold 13.930 MeV
JEFF3.3 Threshold 13.933 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^{-9} barns)
Incident Energy (eV)
87
40-Zr-95


MAT 4040
(n,d) α:37-Rb-90m1
40-Zr-95
Radionuclide Production Cross Section
Min Ratio
Max Ratio
TENDL Threshold 14.038 MeV
JEFF3.3 Threshold 14.041 MeV
JEFF3.3/TENDL
Ratio Cross Section (10^-9 barns)
Incident Energy (eV)
88
40-Zr-95