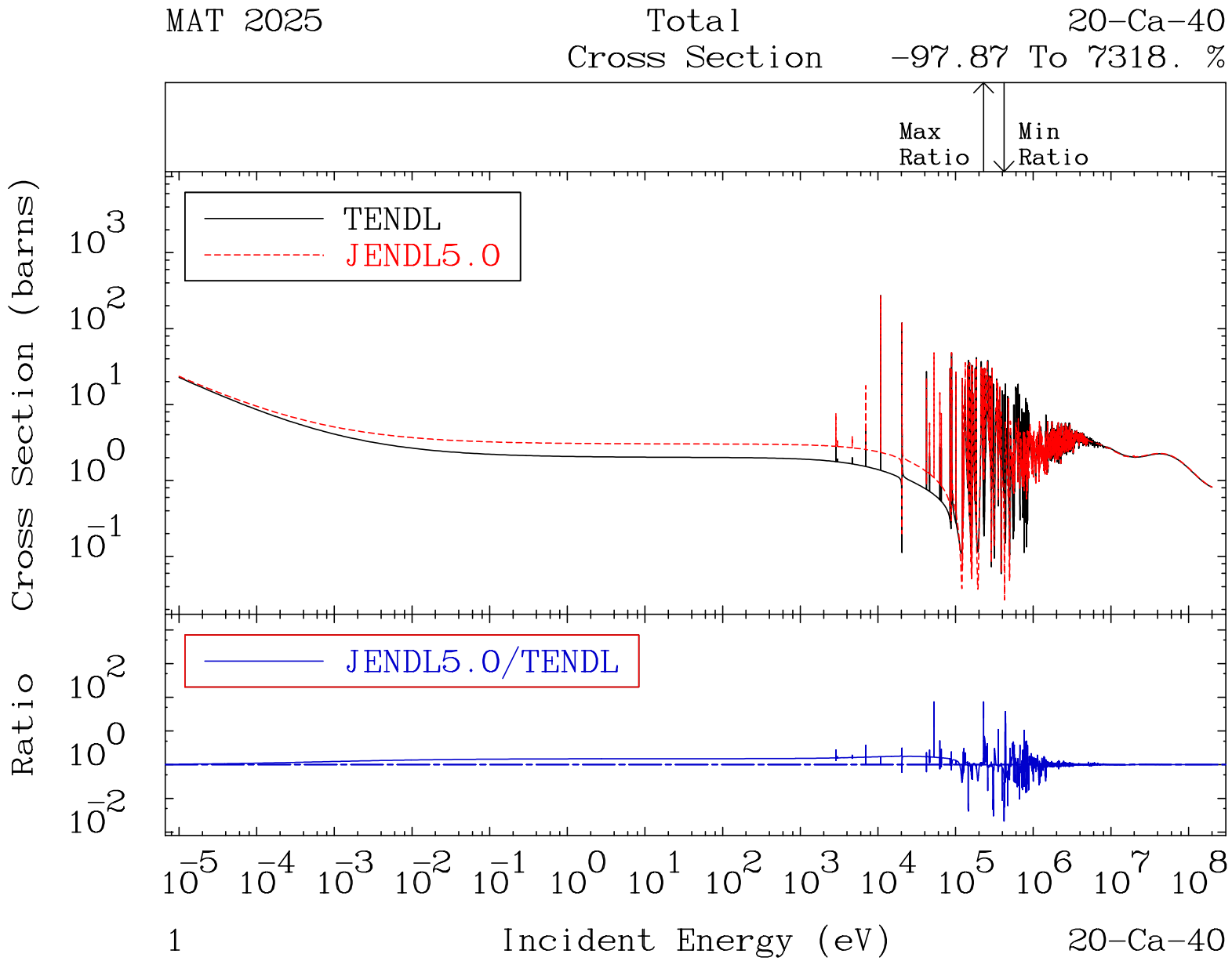
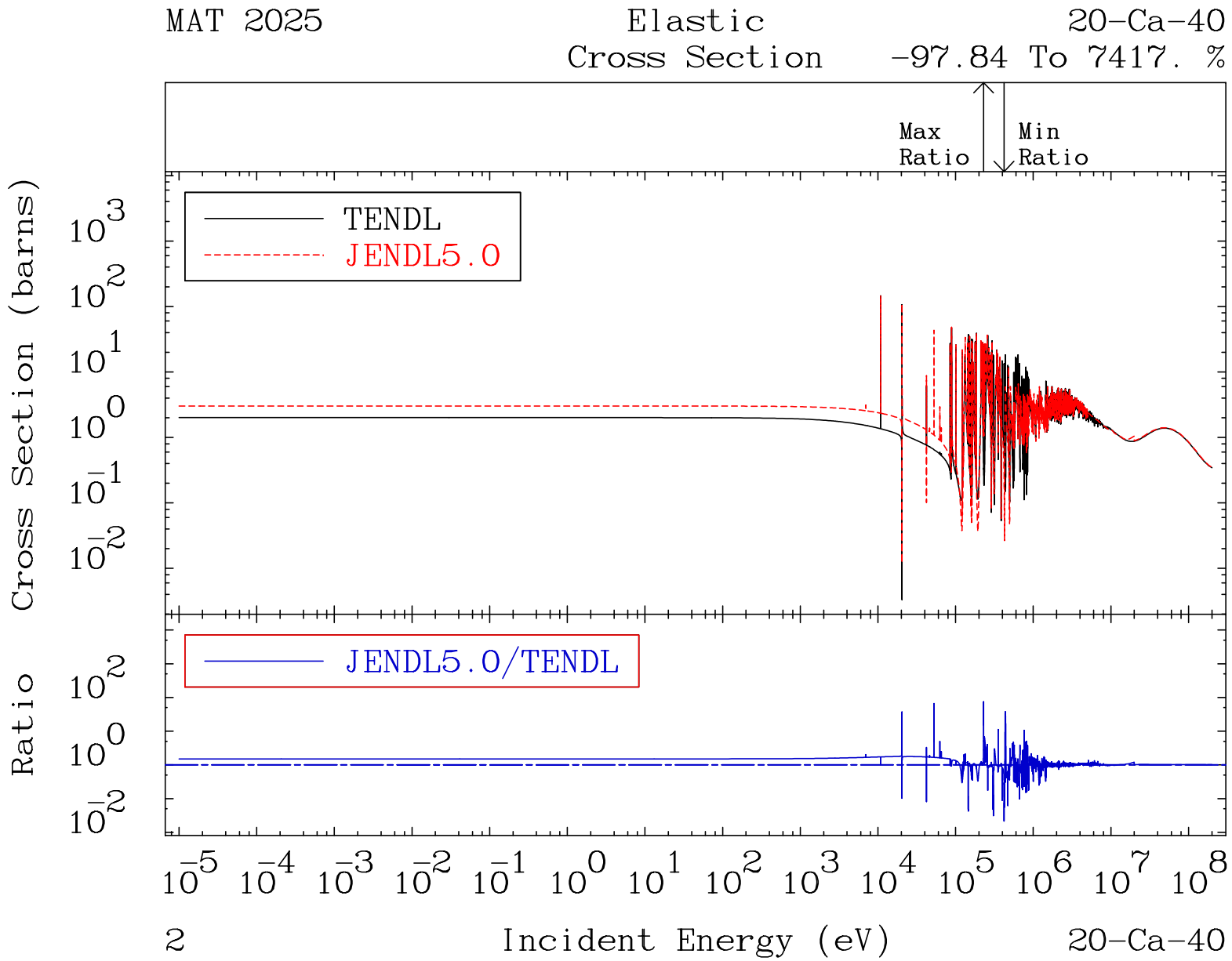
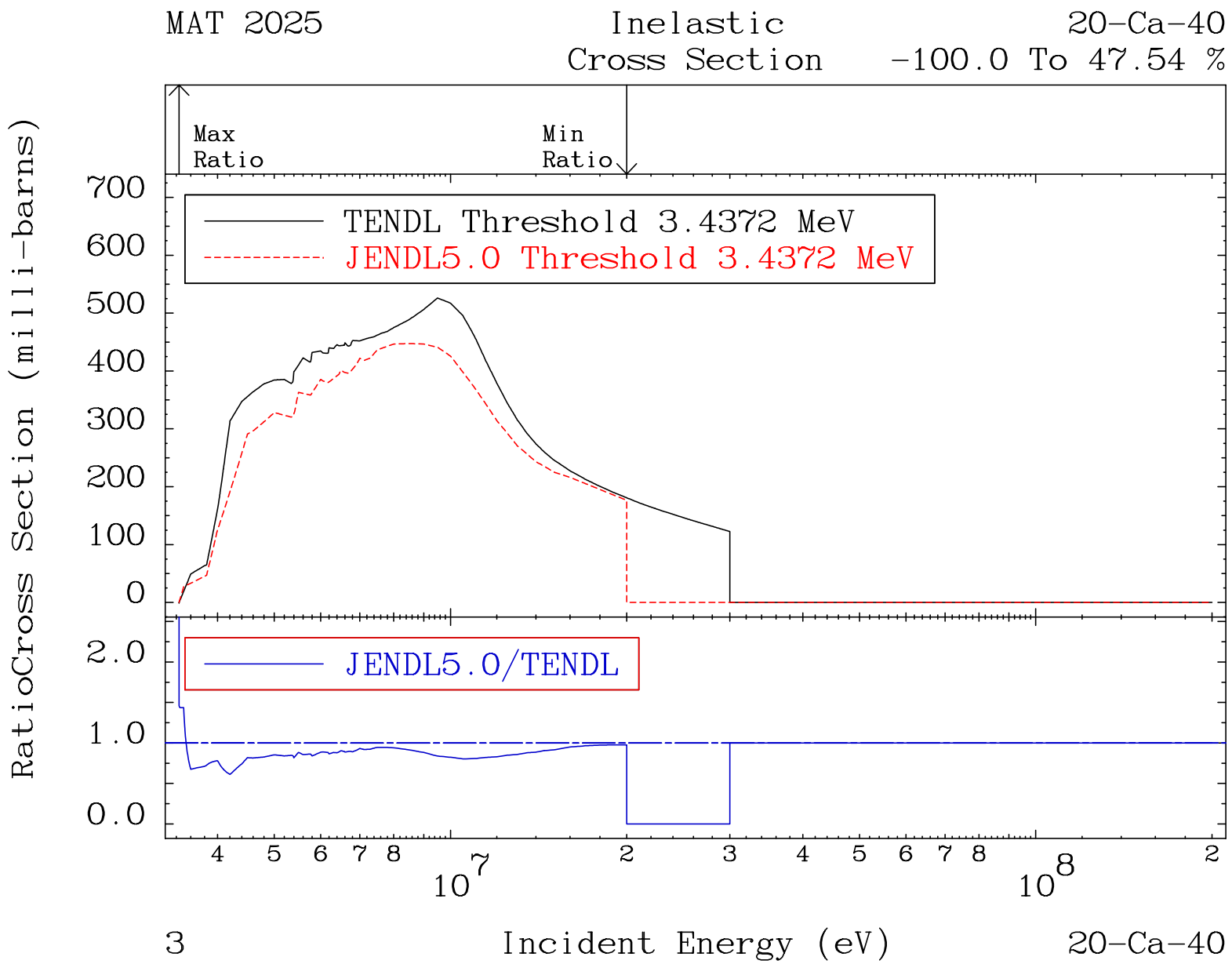
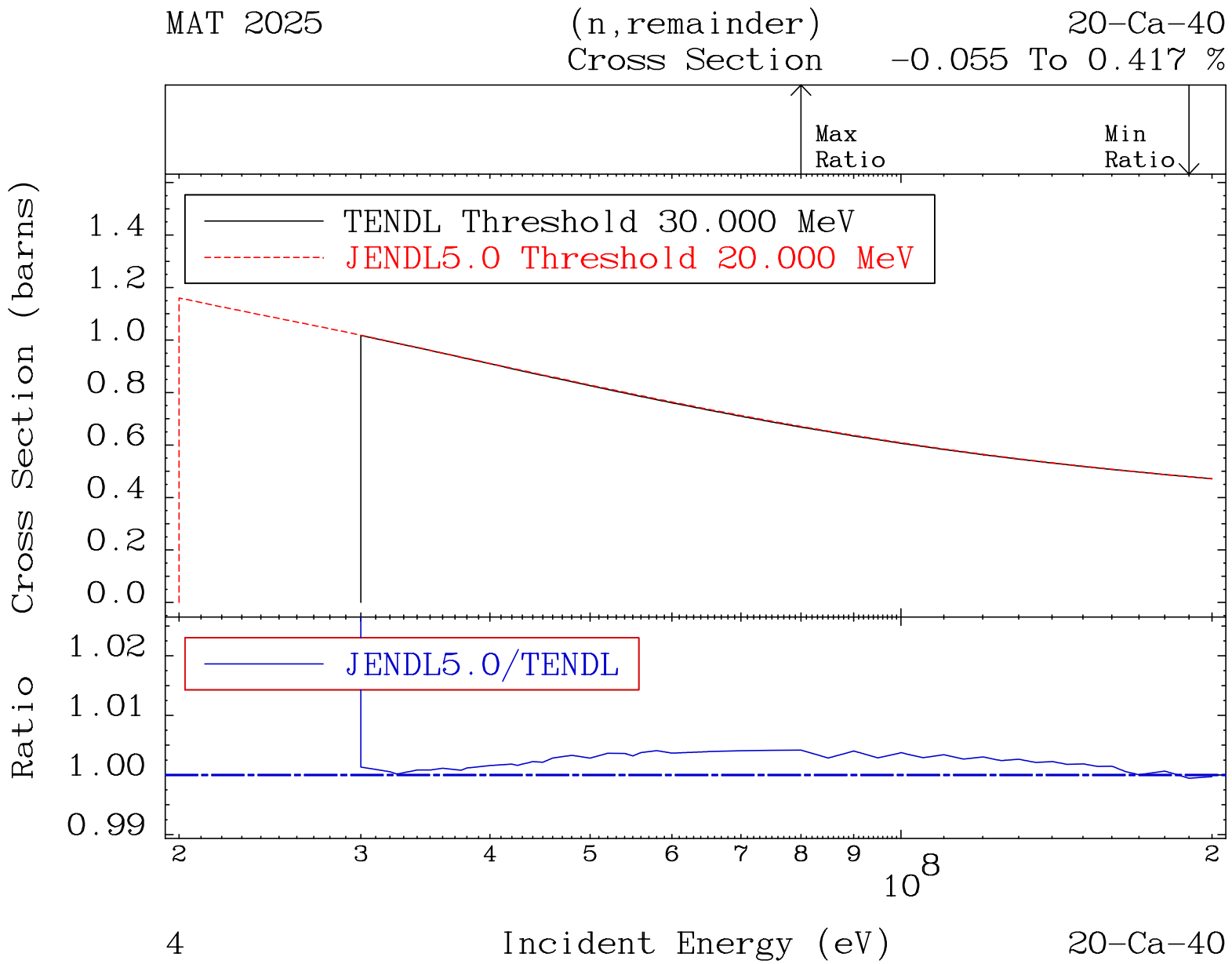
Program Complot
(Version 2021-1)
by
Dermott E. Cullen
(Present Contact Information)
Dermott E. Cullen
1466 Hudson Way
Livermore, CA 94550
U.S.A.
Tele: 925-443-1911
E.Mail:redcullen1@comcast.net
Web:redcullen1.net/HOMEPAGE.NEW

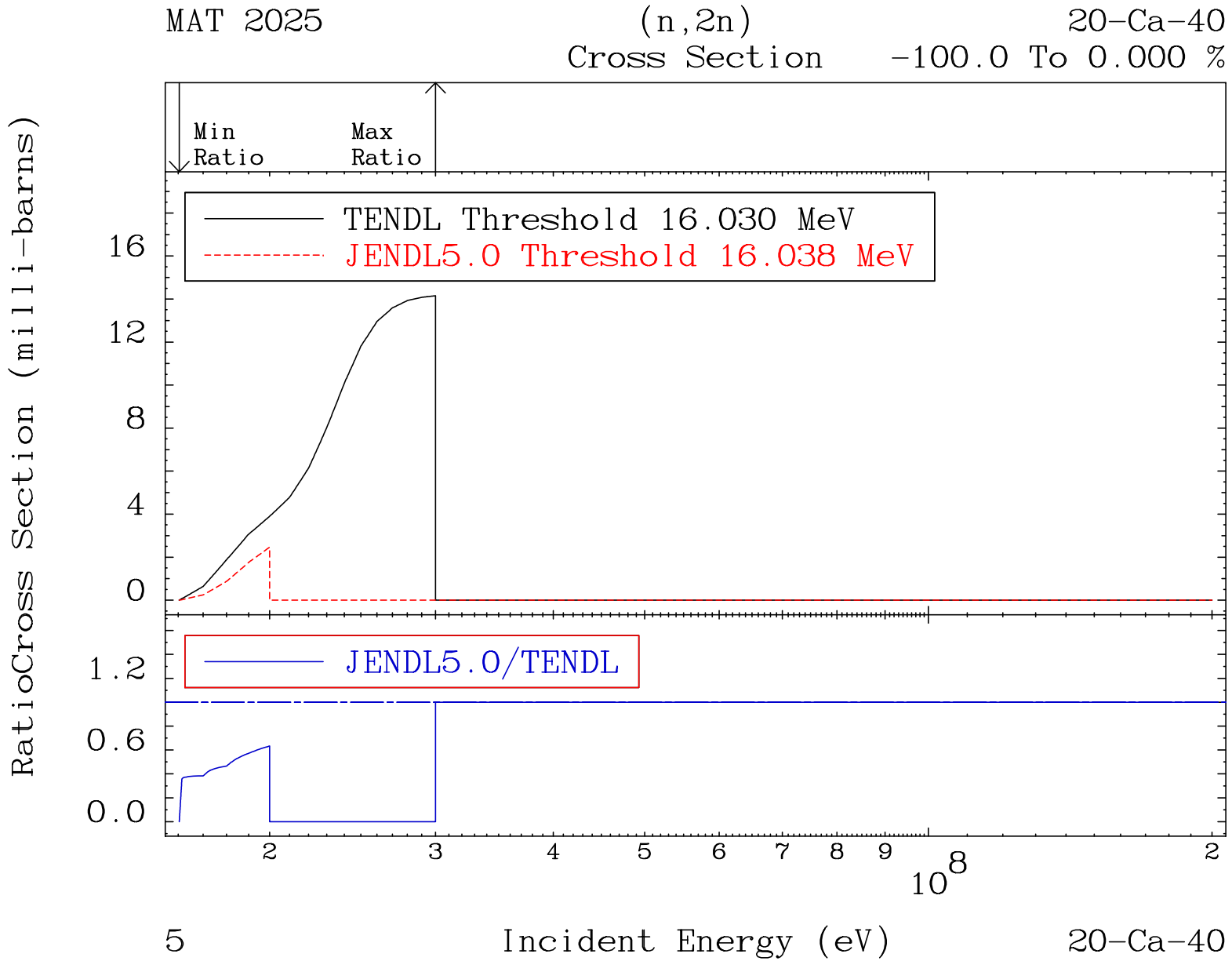
Press Mouse Button to Start

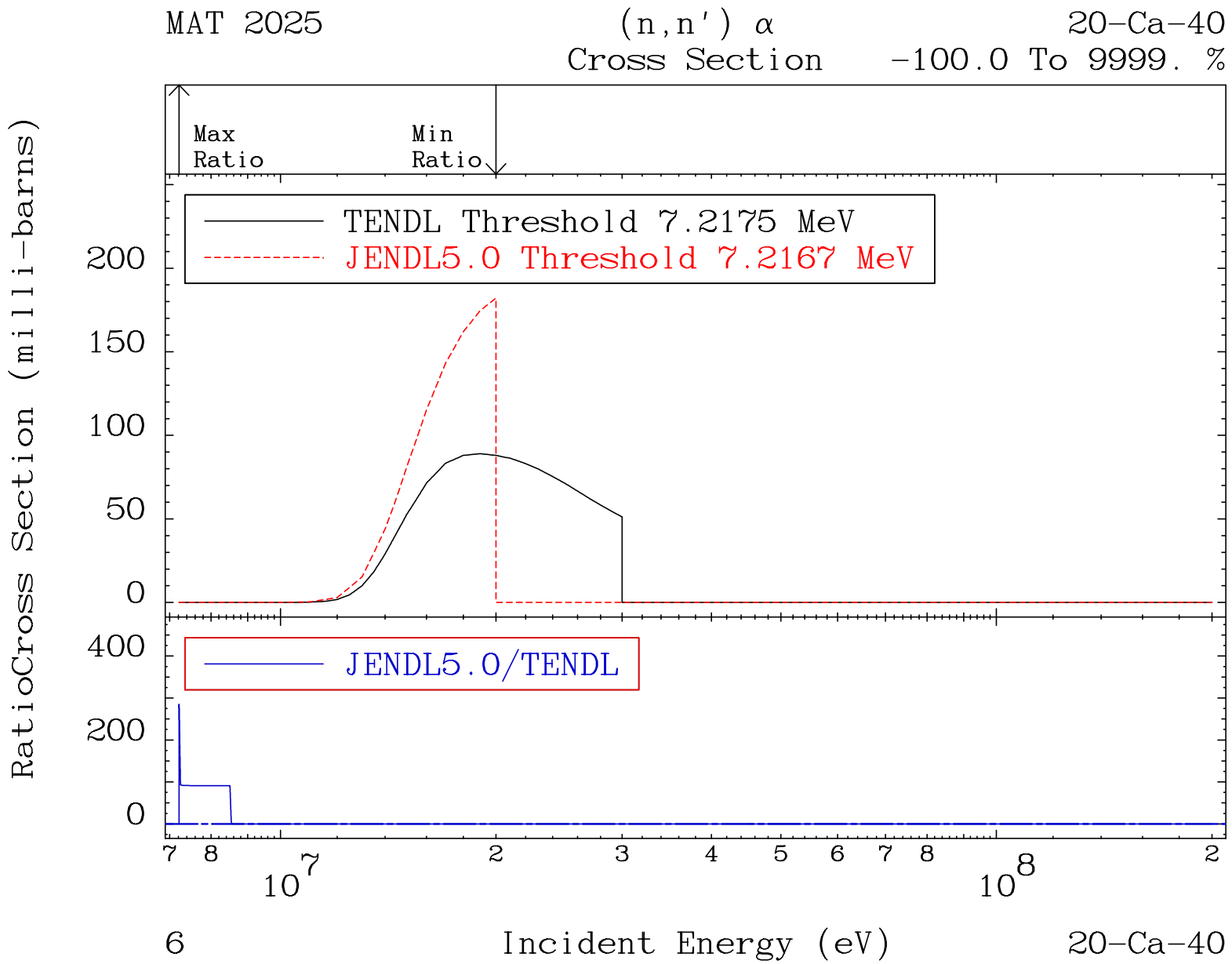

MAT 2025
Total
Cross Section
20-Ca-40
-97.87 To 7318. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
1
20-Ca-40

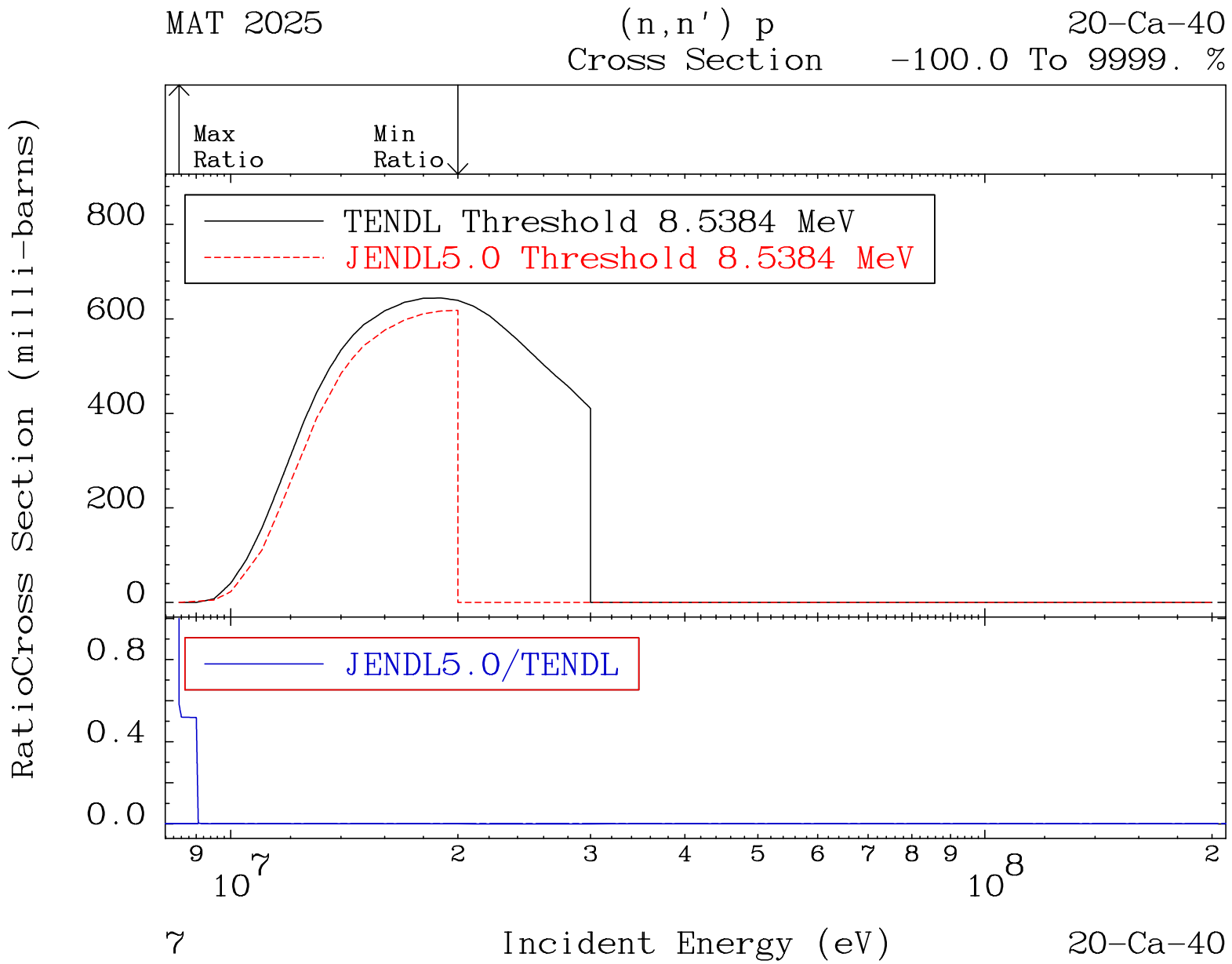

MAT 2025
Elastic
Cross Section
20-Ca-40
-97.84 To 7417. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
2
20-Ca-40

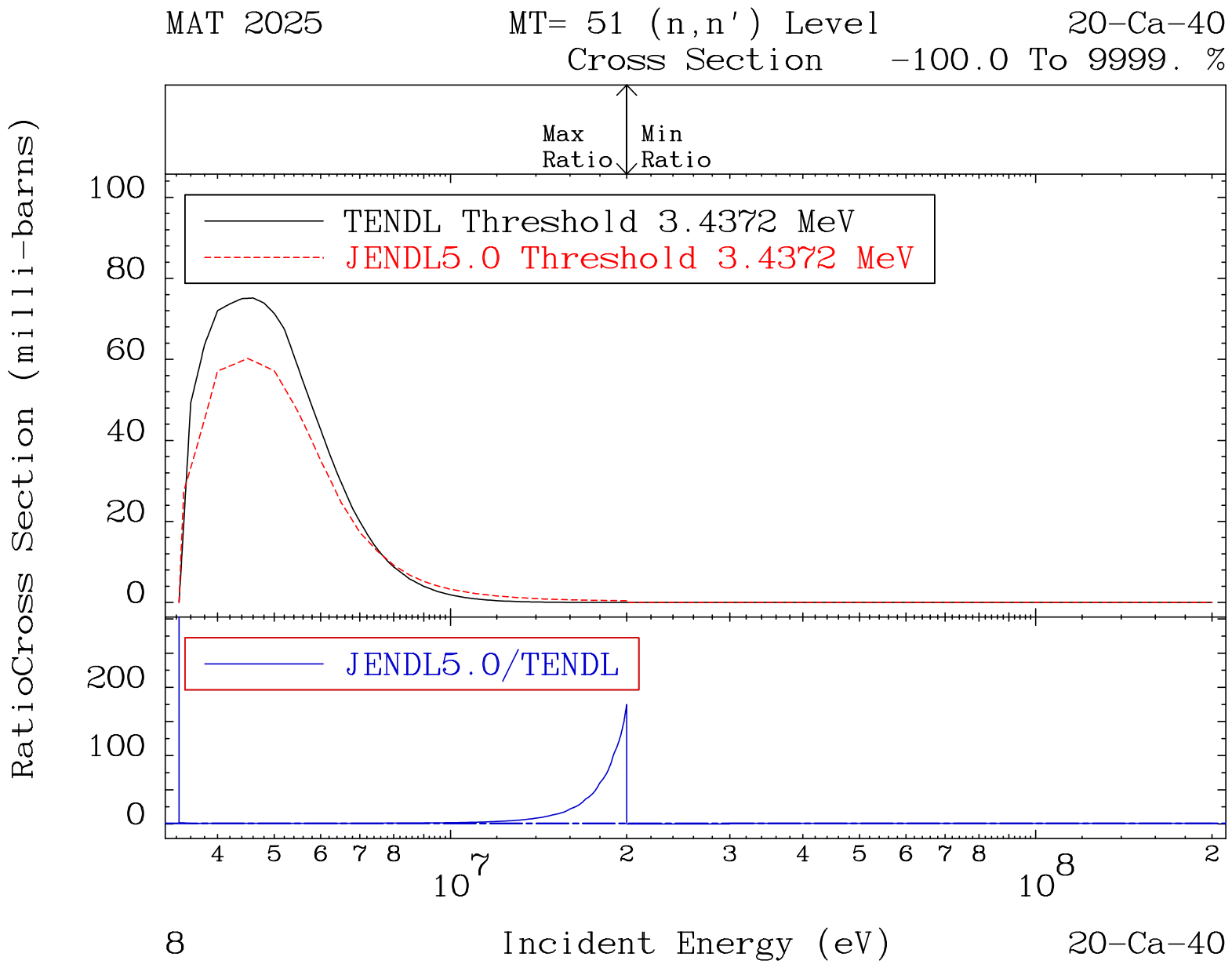

MAT 2025
Inelastic
Cross Section
20-Ca-40
-100.0 To 47.54 %
Max Ratio
Min Ratio
TENDL Threshold 3.4372 MeV
JENDL5.0 Threshold 3.4372 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
700
600
500
400
300
200
100
0
2.0
1.0
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
3
Incident Energy (eV)
20-Ca-40

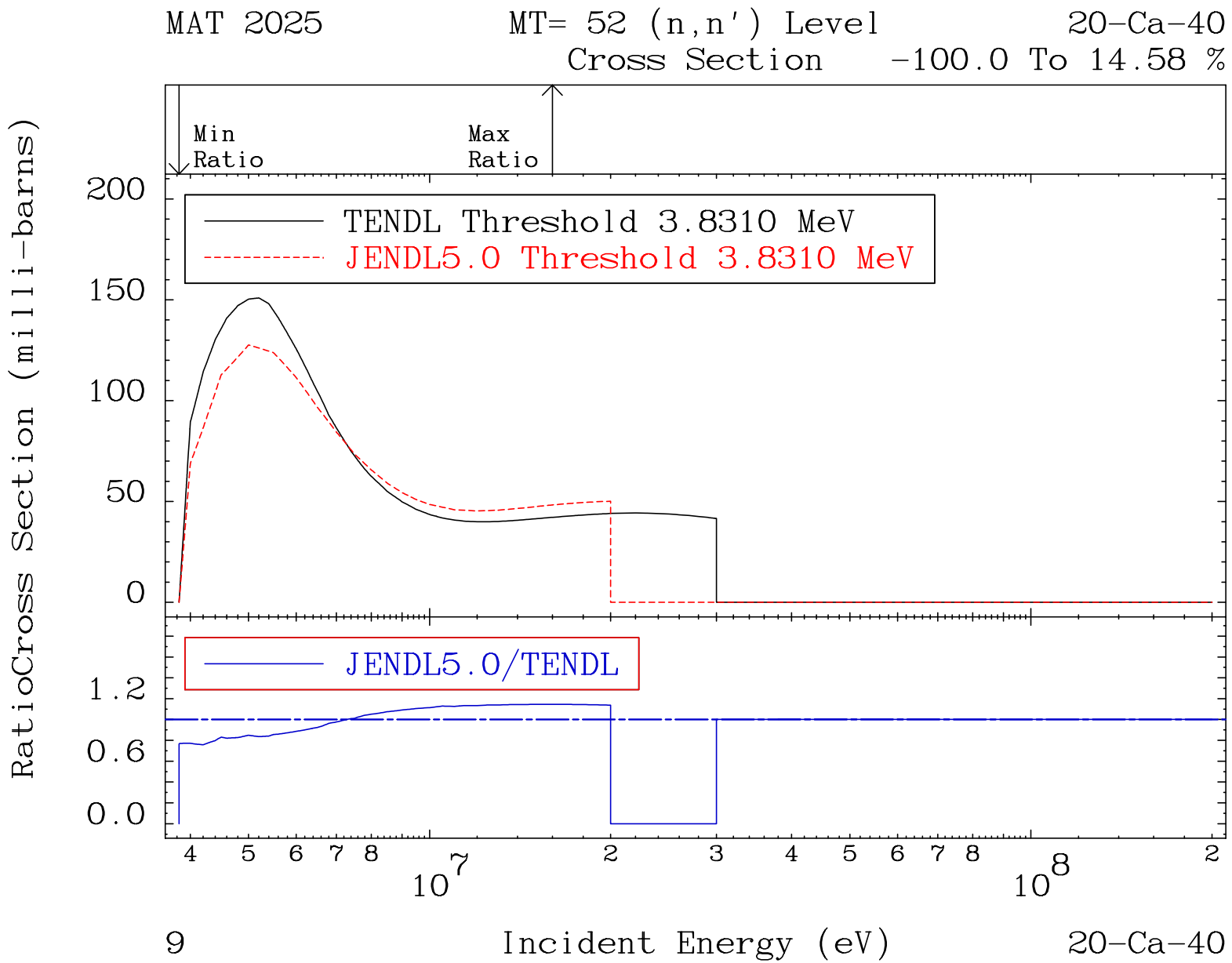

MAT 2025
(n,remainder)
Cross Section
20-Ca-40
-0.055 To 0.417 %
Max Ratio
Min Ratio
TENDL Threshold 30.000 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1.02
1.01
1.00
0.99
2
3
4
5
6
7
8
9
2
10^8
4
Incident Energy (eV)
20-Ca-40

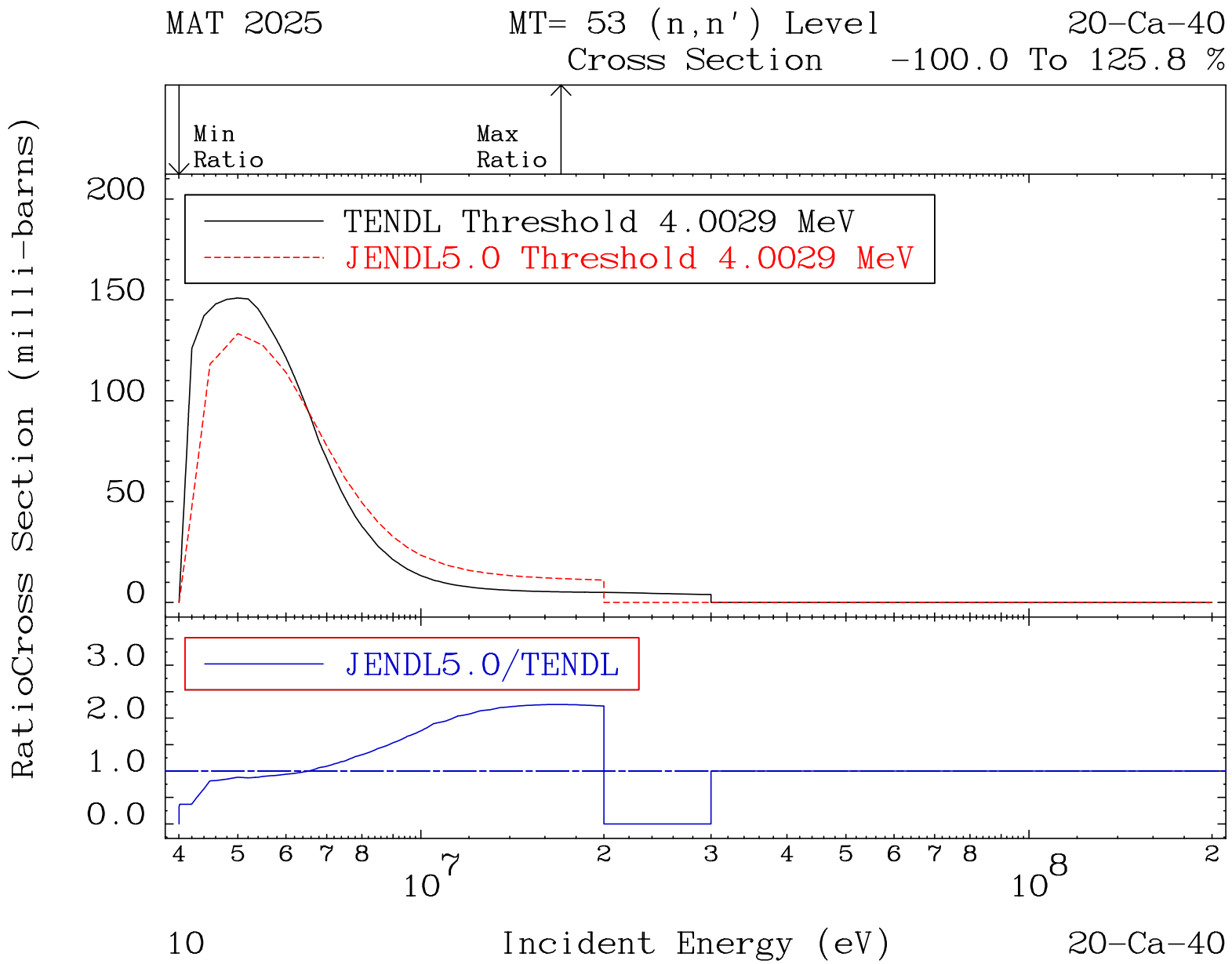

MAT 2025
(n,2n)
Cross Section
20-Ca-40
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 16.030 MeV
JENDL5.0 Threshold 16.038 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
1.2
0.6
0.0
2
3
4
5
6
7
8
9
10^8
2
Incident Energy (eV)
20-Ca-40
5

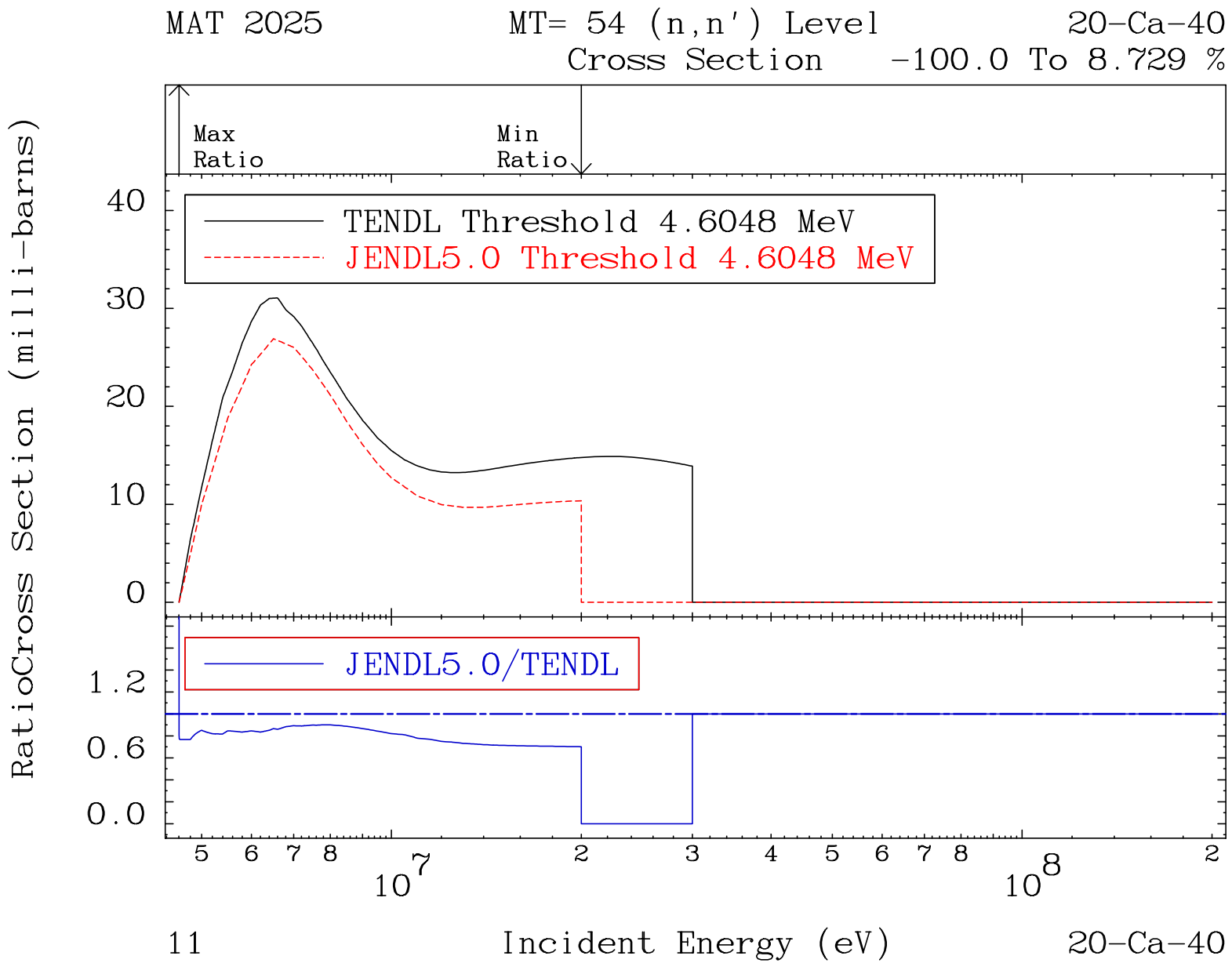

MAT 2025
(n,n') α
Cross Section
20-Ca-40
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 7.2175 MeV
JENDL5.0 Threshold 7.2167 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
400
200
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
6
20-Ca-40

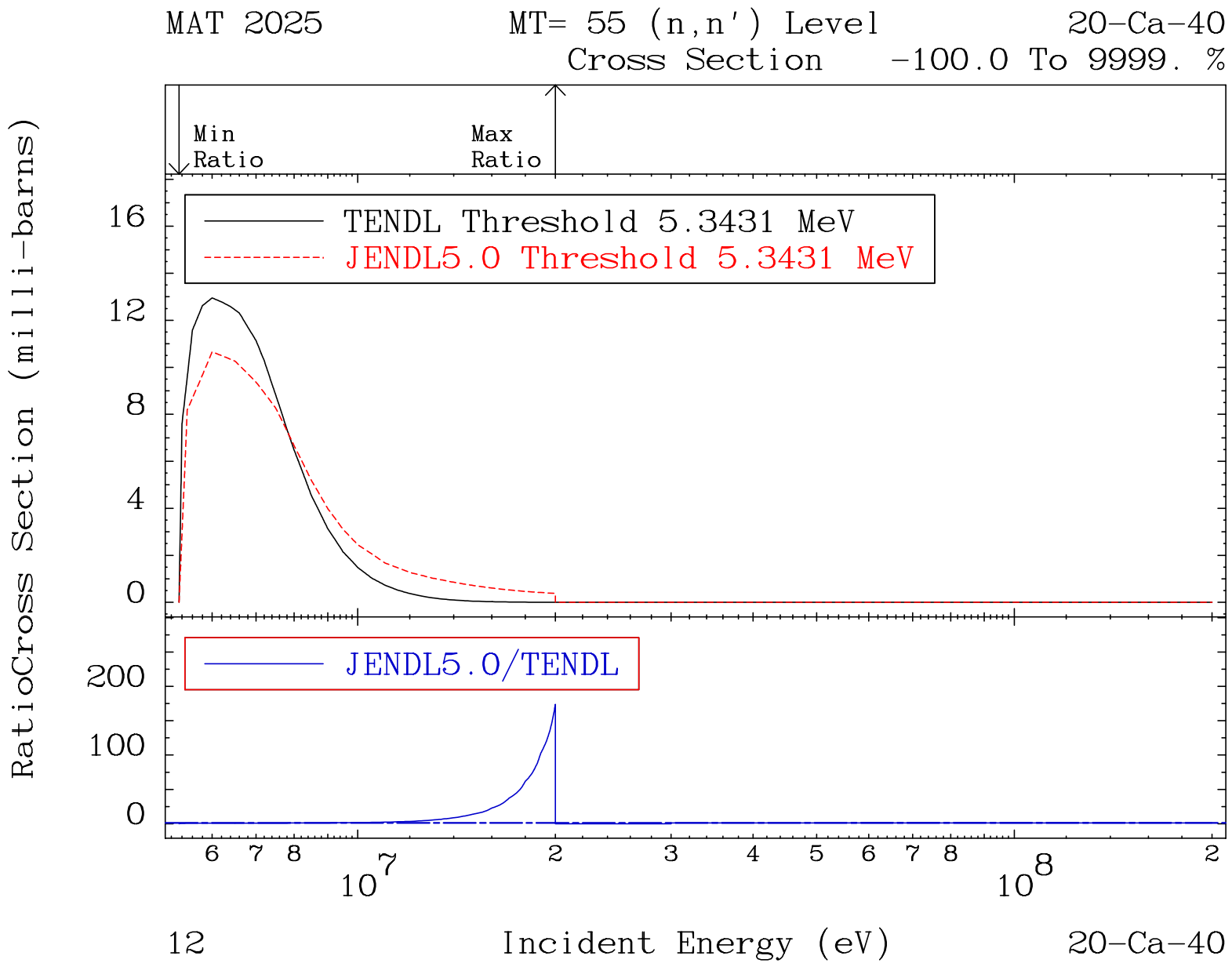

MAT 2025
(n,n') p
Cross Section
20-Ca-40
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 8.5384 MeV
JENDL5.0 Threshold 8.5384 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
800
600
400
200
0
0.8
0.4
0.0
9
10^7
2
3
4
5
6
7
8
9
10^8
2
7
Incident Energy (eV)
20-Ca-40

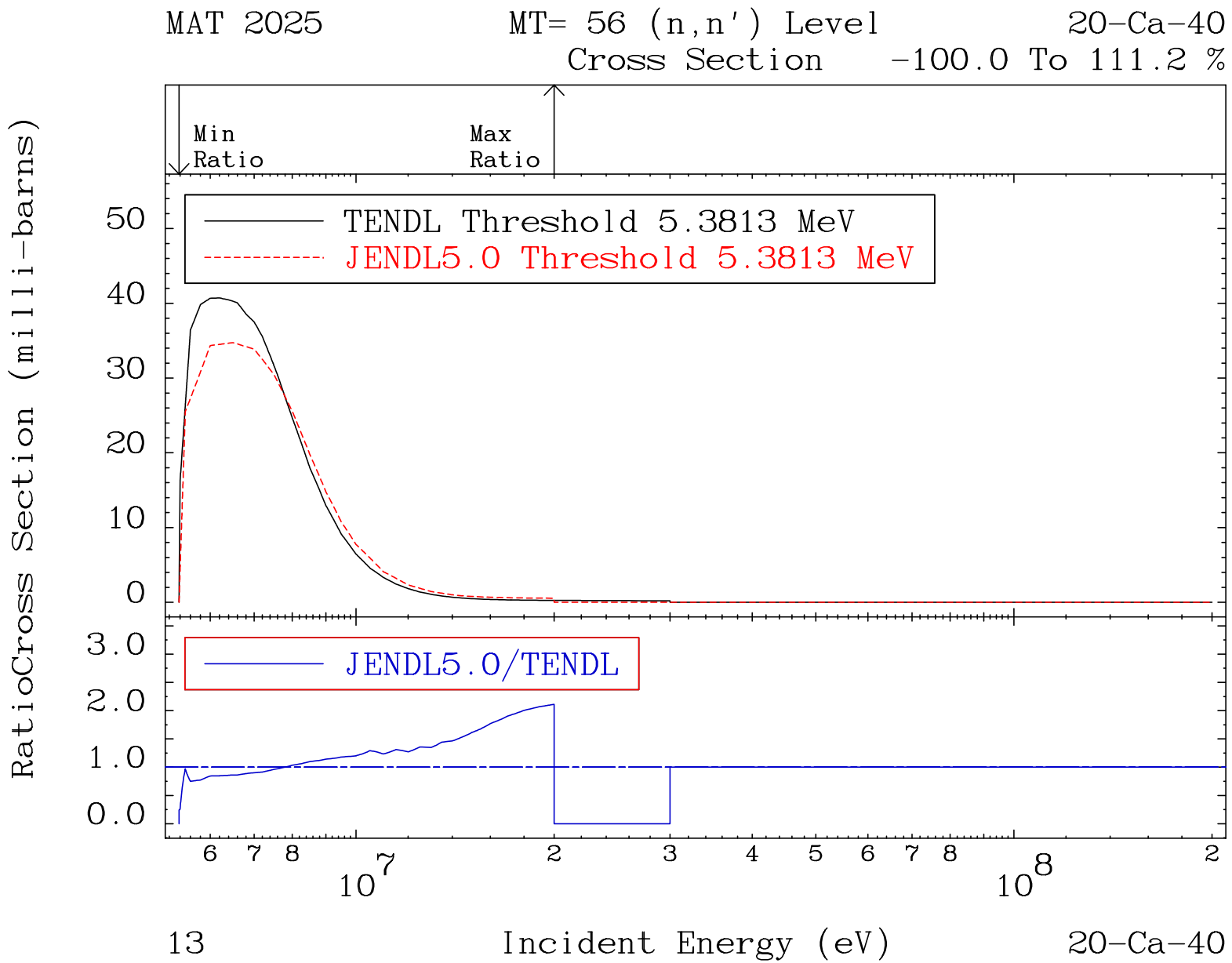

MAT 2025
MT= 51 (n,n') Level
20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4372 MeV
JENDL5.0 Threshold 3.4372 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
8
20-Ca-40

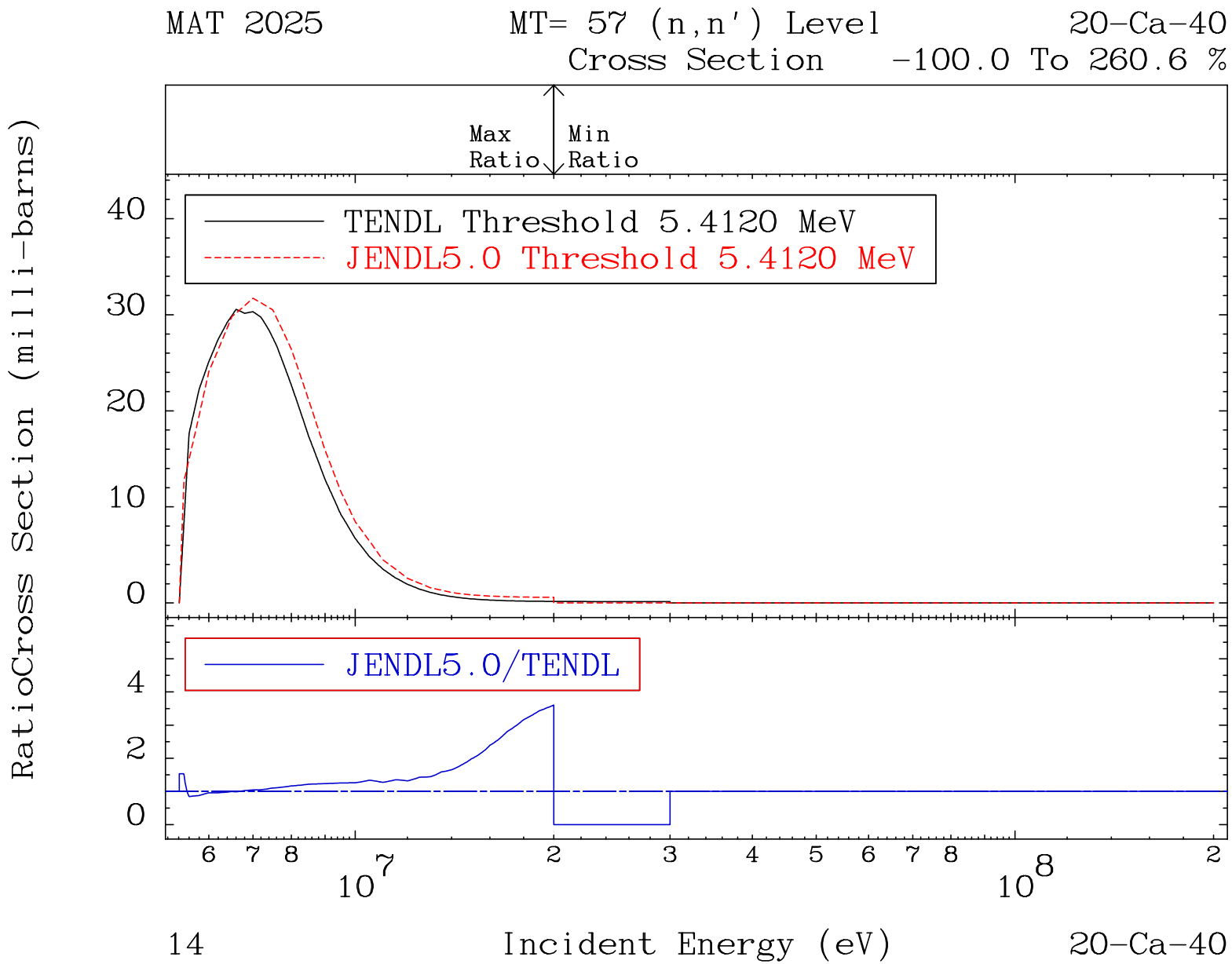

MAT 2025
MT= 52 (n,n') Level
20-Ca-40
Cross Section -100.0 To 14.58 %
Min Ratio
Max Ratio
TENDL Threshold 3.8310 MeV
JENDL5.0 Threshold 3.8310 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
1.2
0.6
0.0
4 5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
Incident Energy (eV)
9
20-Ca-40

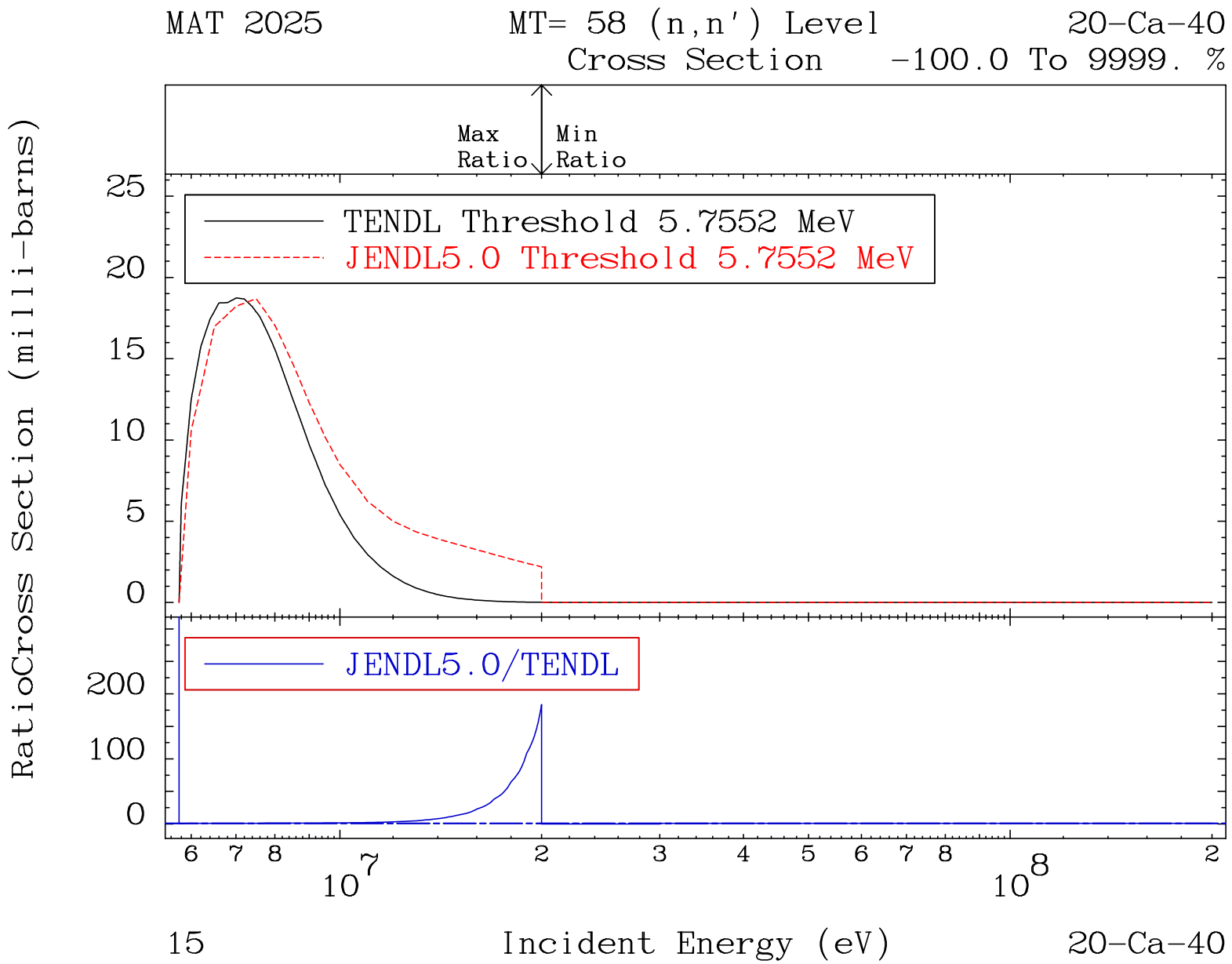

MAT 2025
MT= 53 (n,n') Level
20-Ca-40
Cross Section -100.0 To 125.8 %
Min Ratio
Max Ratio
TENDL Threshold 4.0029 MeV
JENDL5.0 Threshold 4.0029 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
200
150
100
50
0
3.0
2.0
1.0
0.0
4 5 6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
10
Incident Energy (eV)
20-Ca-40

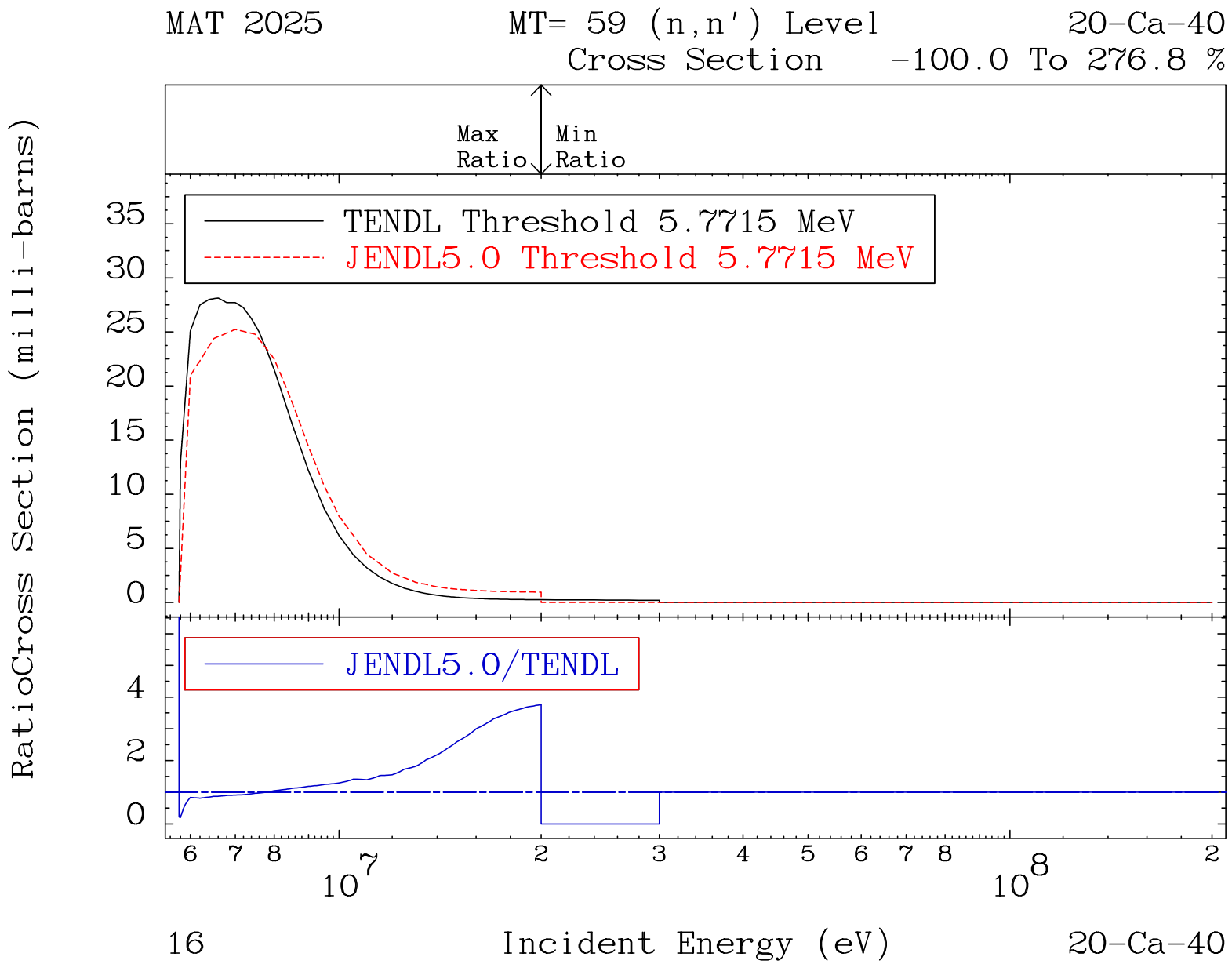

MAT 2025
MT= 54 (n,n') Level
20-Ca-40
Cross Section -100.0 To 8.729 %
Max Ratio
Min Ratio
TENDL Threshold 4.6048 MeV
JENDL5.0 Threshold 4.6048 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
1.2
0.6
0.0
5 6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
11
Incident Energy (eV)
20-Ca-40

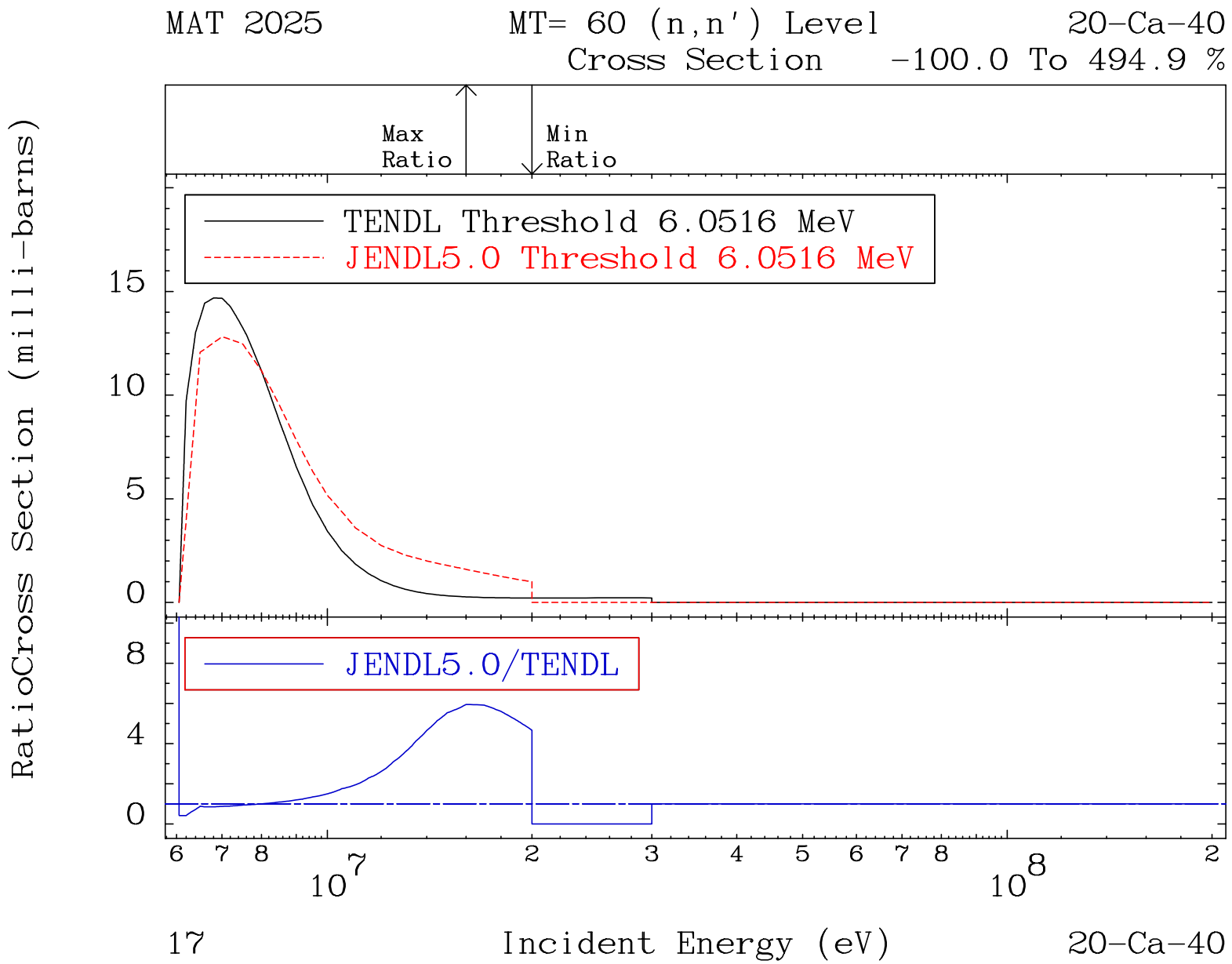

MAT 2025
MT= 55 (n,n') Level
20-Ca-40
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 5.3431 MeV
JENDL5.0 Threshold 5.3431 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
200
100
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
12
Incident Energy (eV)
20-Ca-40

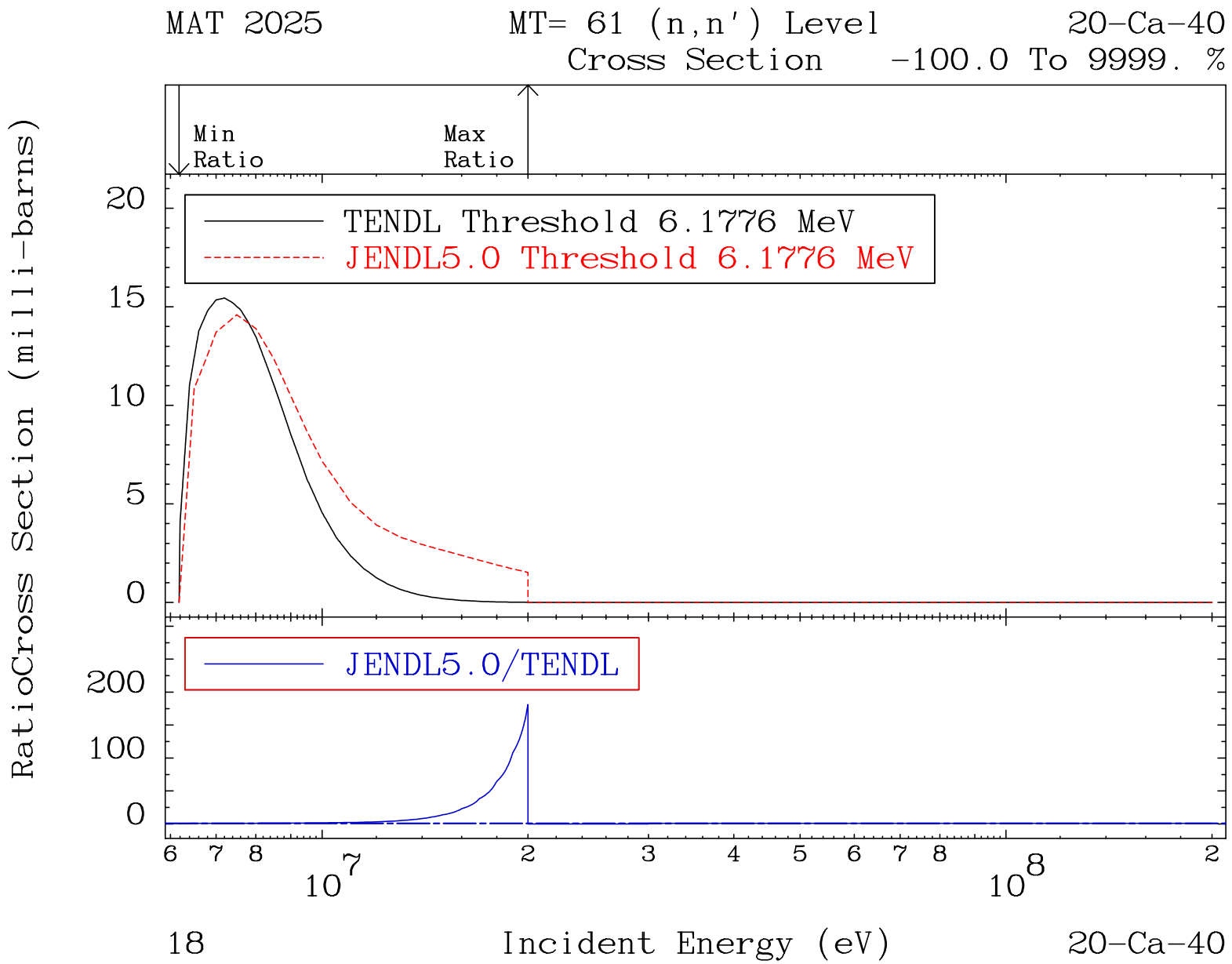

MAT 2025
MT= 56 (n,n') Level
20-Ca-40
Cross Section -100.0 To 111.2 %
Min Ratio
Max Ratio
TENDL Threshold 5.3813 MeV
JENDL5.0 Threshold 5.3813 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
50
40
30
20
10
0
3.0
2.0
1.0
0.0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
13
Incident Energy (eV)
20-Ca-40

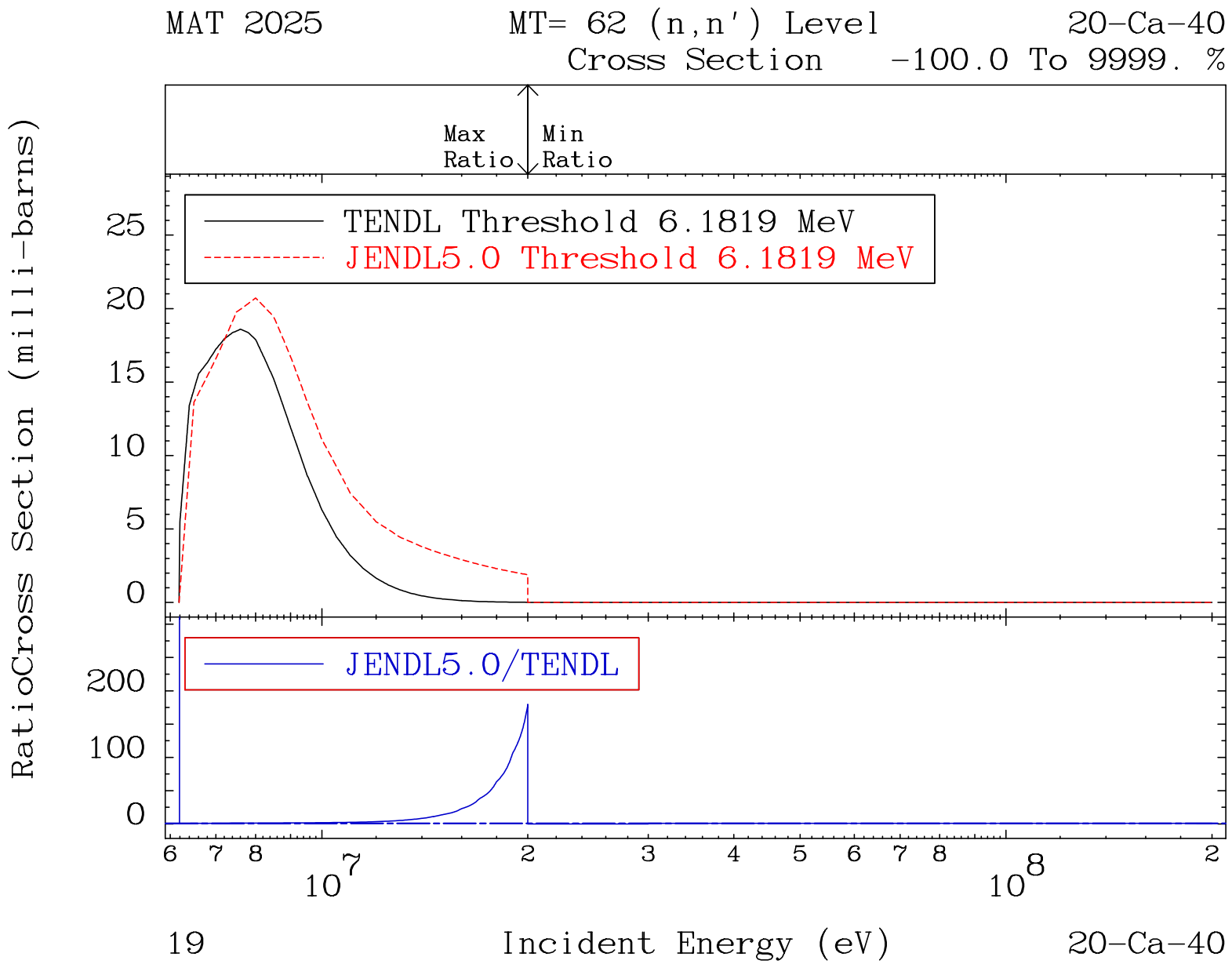

MAT 2025
MT= 57 (n,n') Level
20-Ca-40
Cross Section
-100.0 To 260.6 %
Max Ratio
Min Ratio
TENDL Threshold 5.4120 MeV
JENDL5.0 Threshold 5.4120 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
40
30
20
10
0
4
2
0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
14
Incident Energy (eV)
20-Ca-40

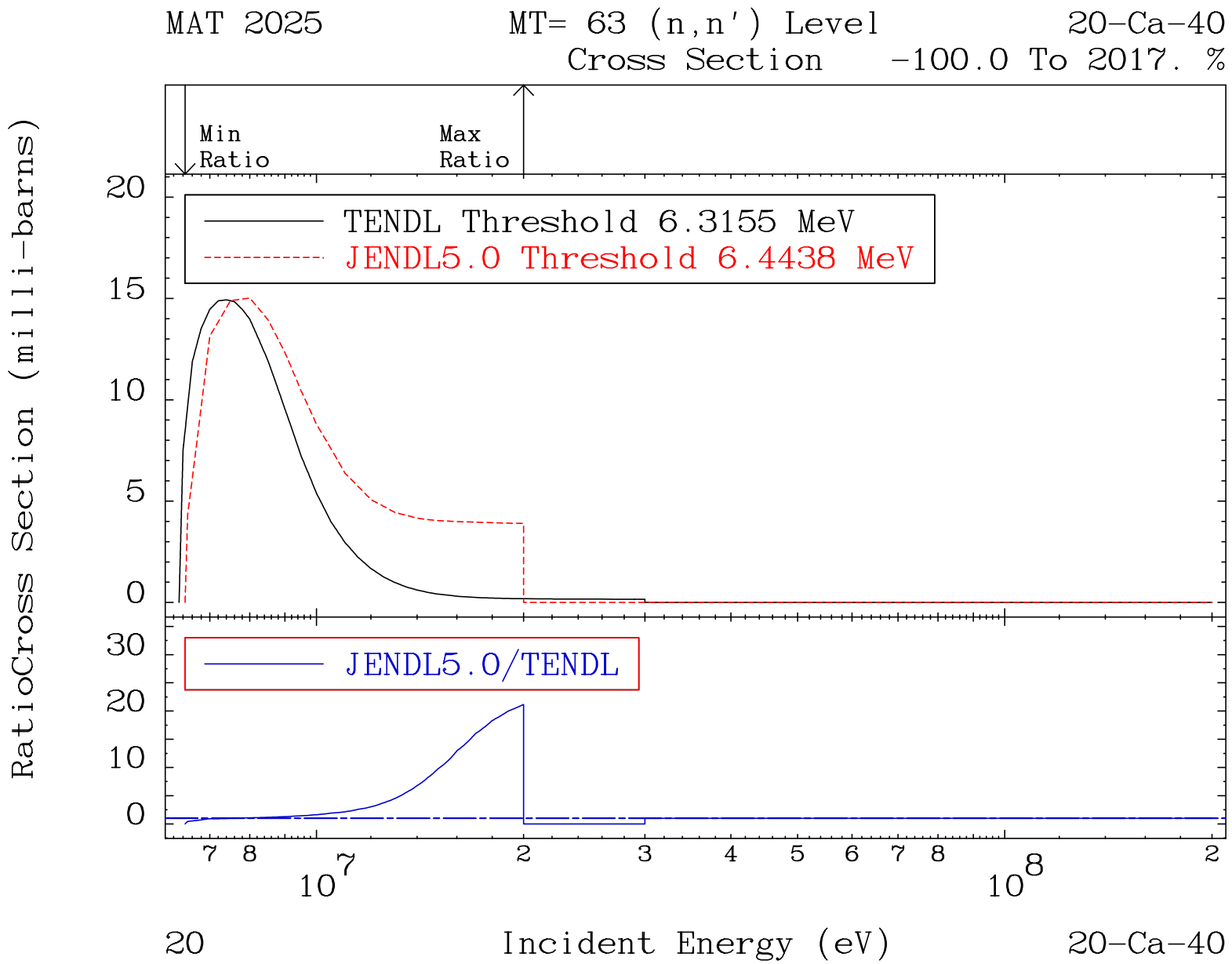

MAT 2025
MT= 58 (n,n') Level
20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 5.7552 MeV
JENDL5.0 Threshold 5.7552 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
15
20-Ca-40

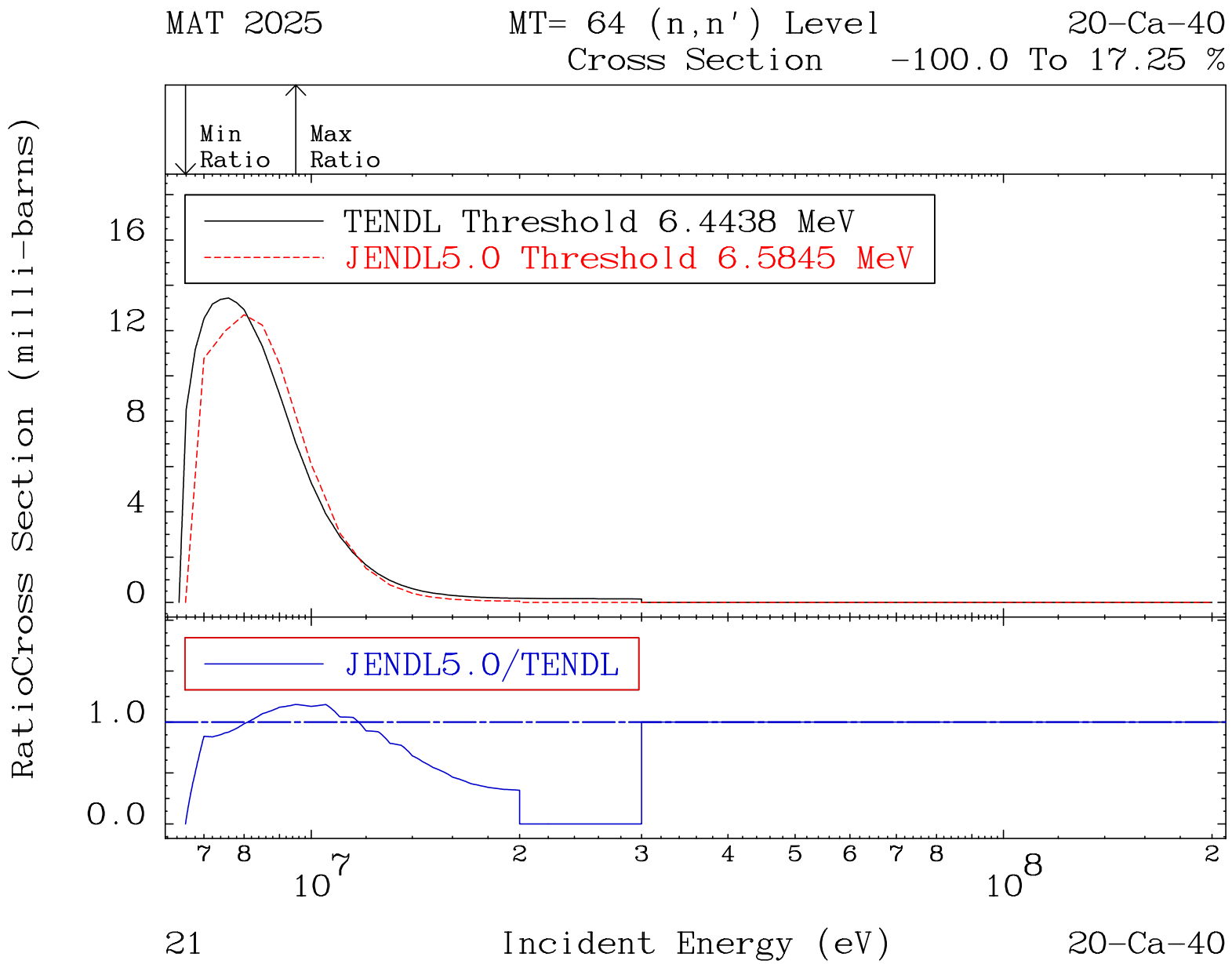

MAT 2025
MT= 59 (n,n') Level
20-Ca-40
Cross Section -100.0 To 276.8 %
Max Ratio
Min Ratio
TENDL Threshold 5.7715 MeV
JENDL5.0 Threshold 5.7715 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
16
20-Ca-40

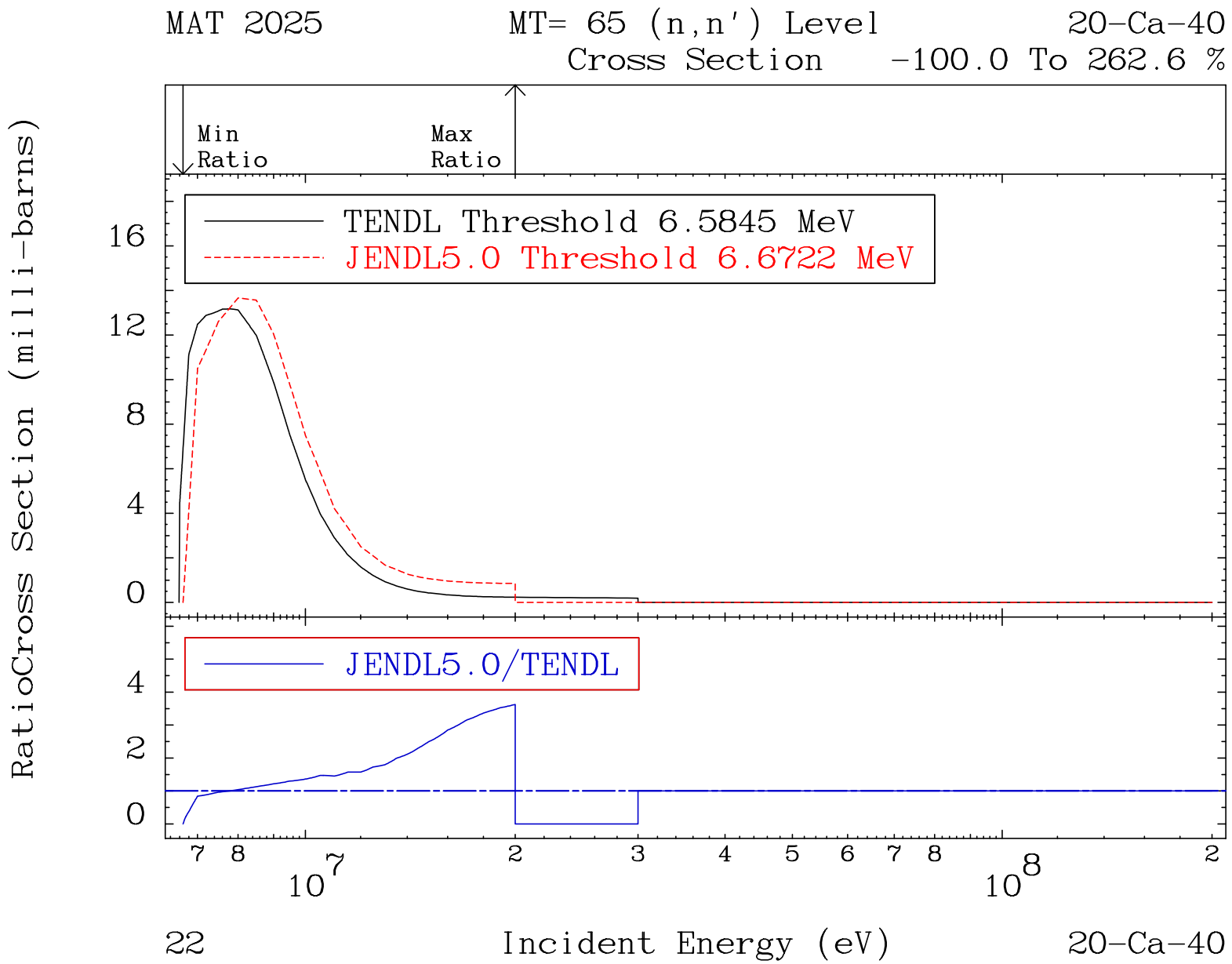

MAT 2025
MT= 60 (n,n') Level
20-Ca-40
Cross Section -100.0 To 494.9 %
Max Ratio
Min Ratio
TENDL Threshold 6.0516 MeV
JENDL5.0 Threshold 6.0516 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
15
10
5
0
8
4
0
6 7 8 10^7 2 3 4 5 6 7 8 10^8 2
17
Incident Energy (eV)
20-Ca-40

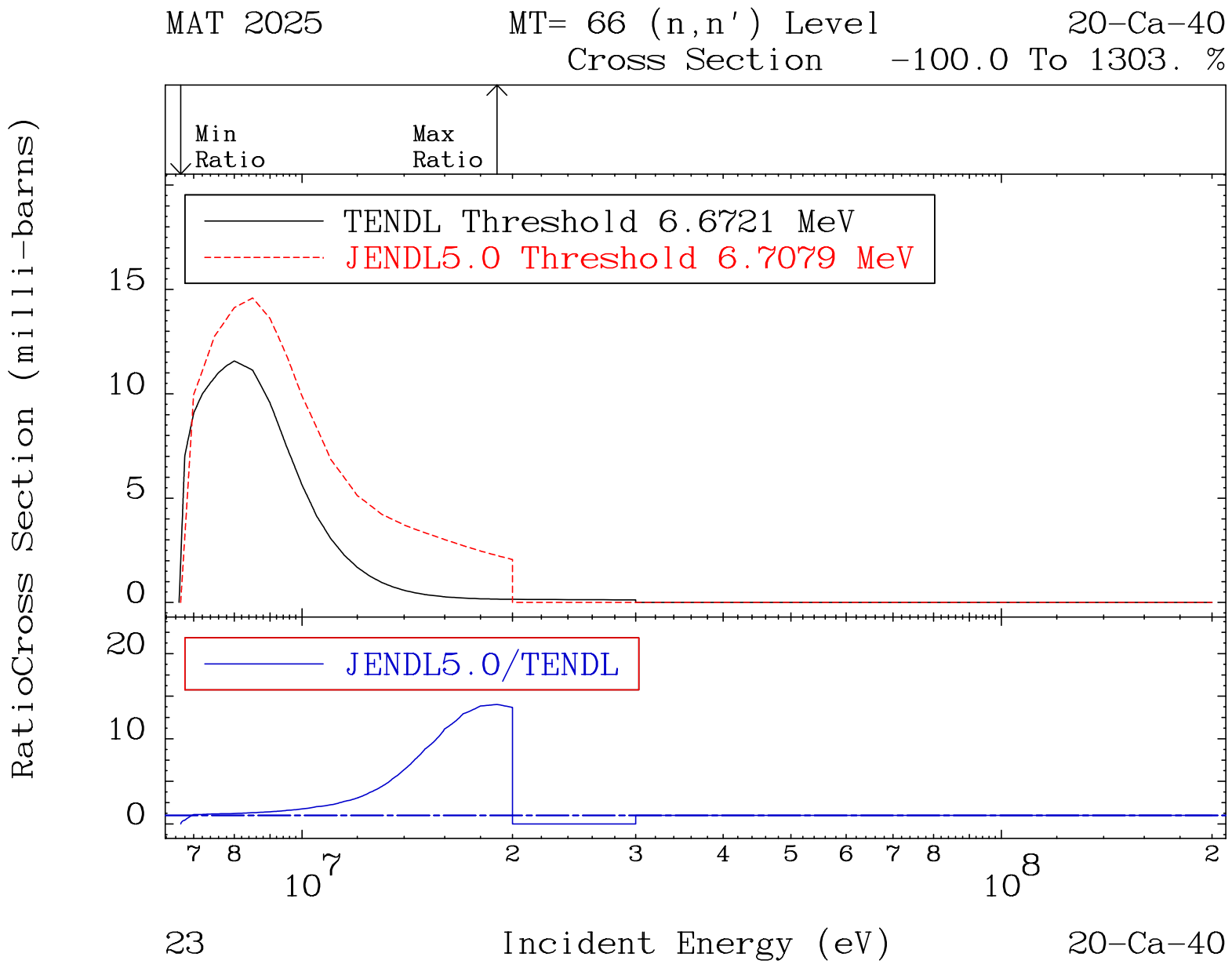

MAT 2025
MT= 61 (n,n') Level
20-Ca-40
Cross Section -100.0 To 9999. %
Min Ratio
Max Ratio
TENDL Threshold 6.1776 MeV
JENDL5.0 Threshold 6.1776 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
18
20-Ca-40

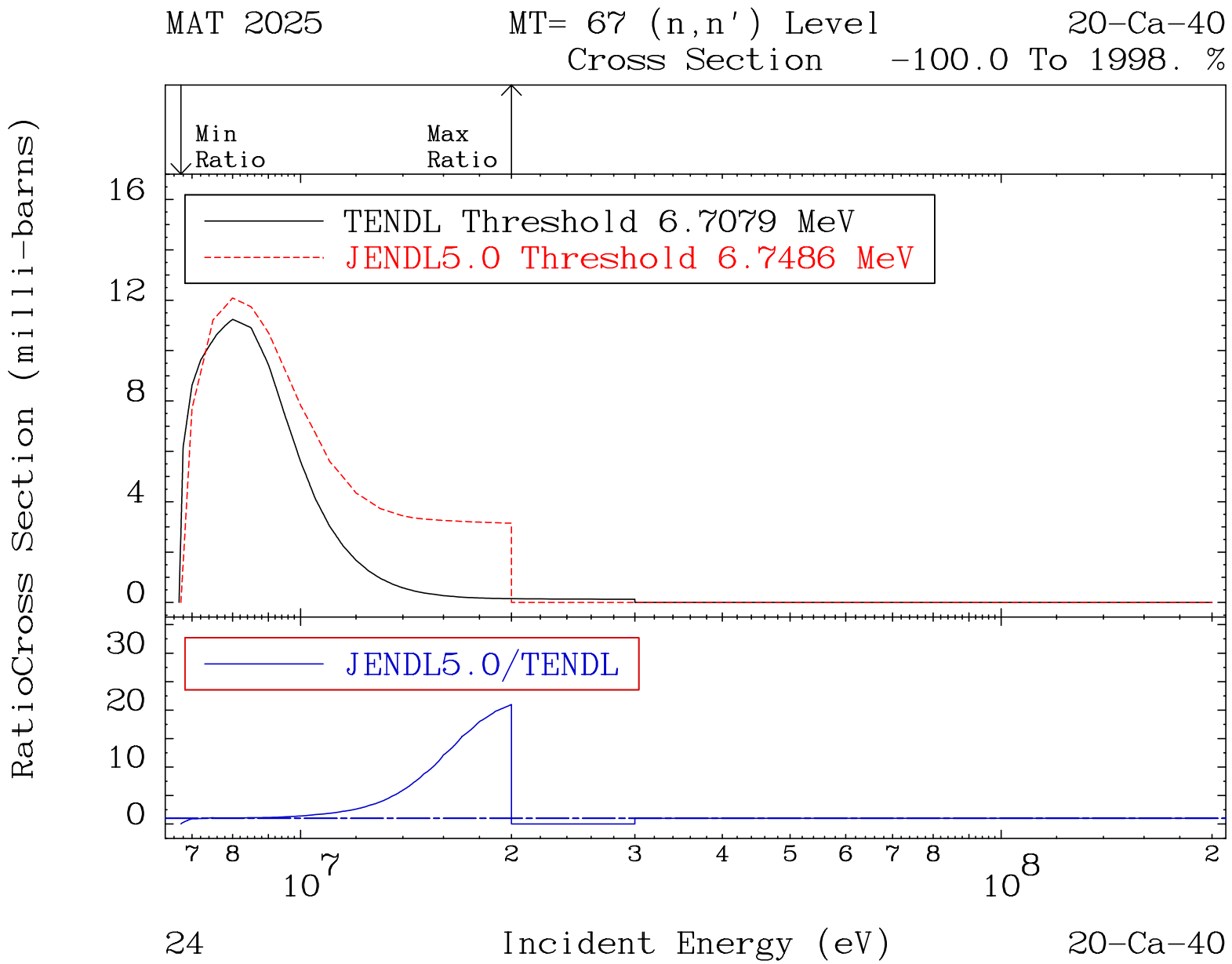

MAT 2025
MT= 62 (n,n') Level
20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 6.1819 MeV
JENDL5.0 Threshold 6.1819 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
19
20-Ca-40

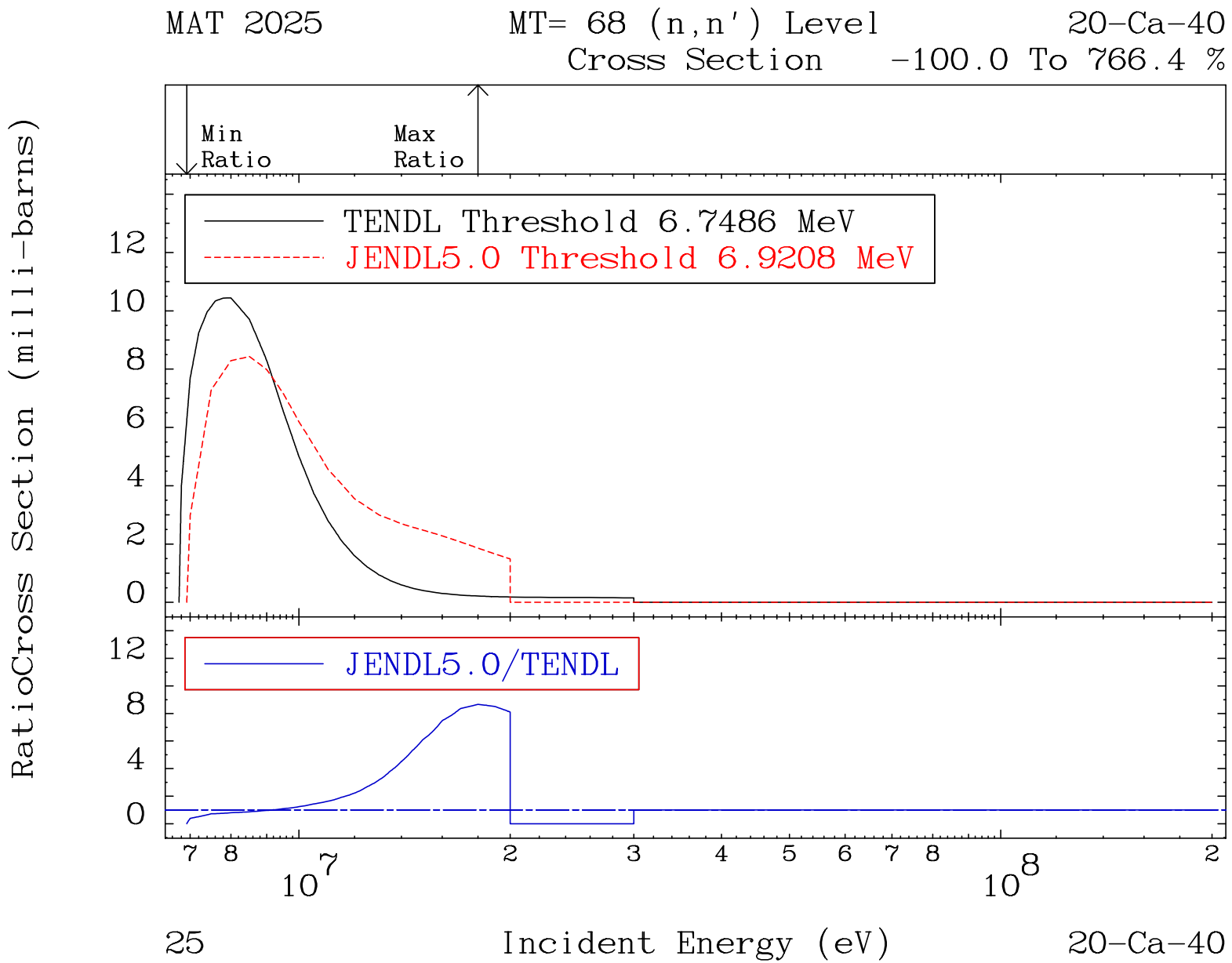

MAT 2025
MT= 63 (n,n') Level
20-Ca-40
Cross Section -100.0 To 2017. %
Min Ratio
Max Ratio
TENDL Threshold 6.3155 MeV
JENDL5.0 Threshold 6.4438 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
20
20-Ca-40

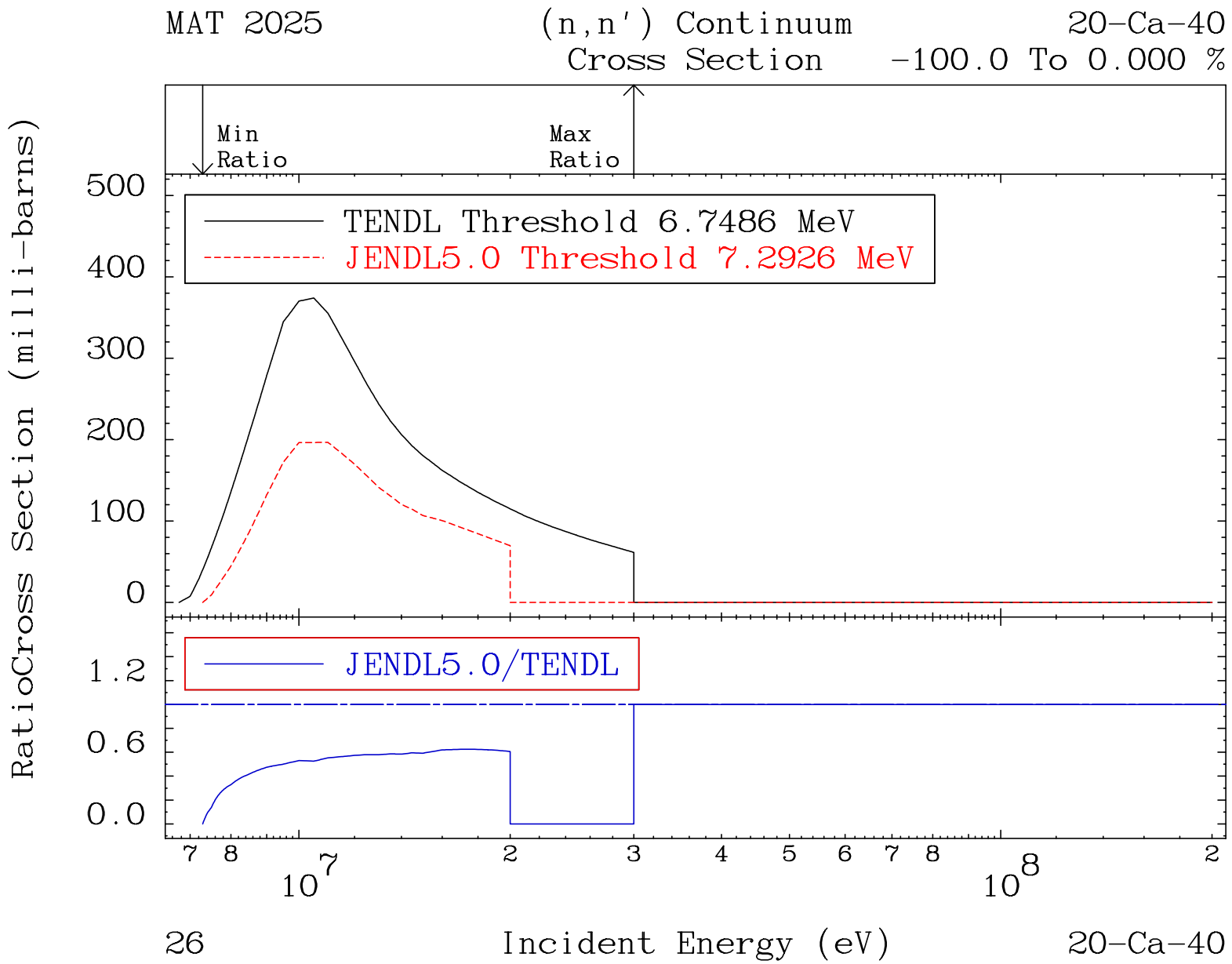

MAT 2025
MT= 64 (n,n') Level
20-Ca-40
Cross Section -100.0 To 17.25 %
Min Ratio
Max Ratio
TENDL Threshold 6.4438 MeV
JENDL5.0 Threshold 6.5845 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
1.0
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
21
Incident Energy (eV)
20-Ca-40

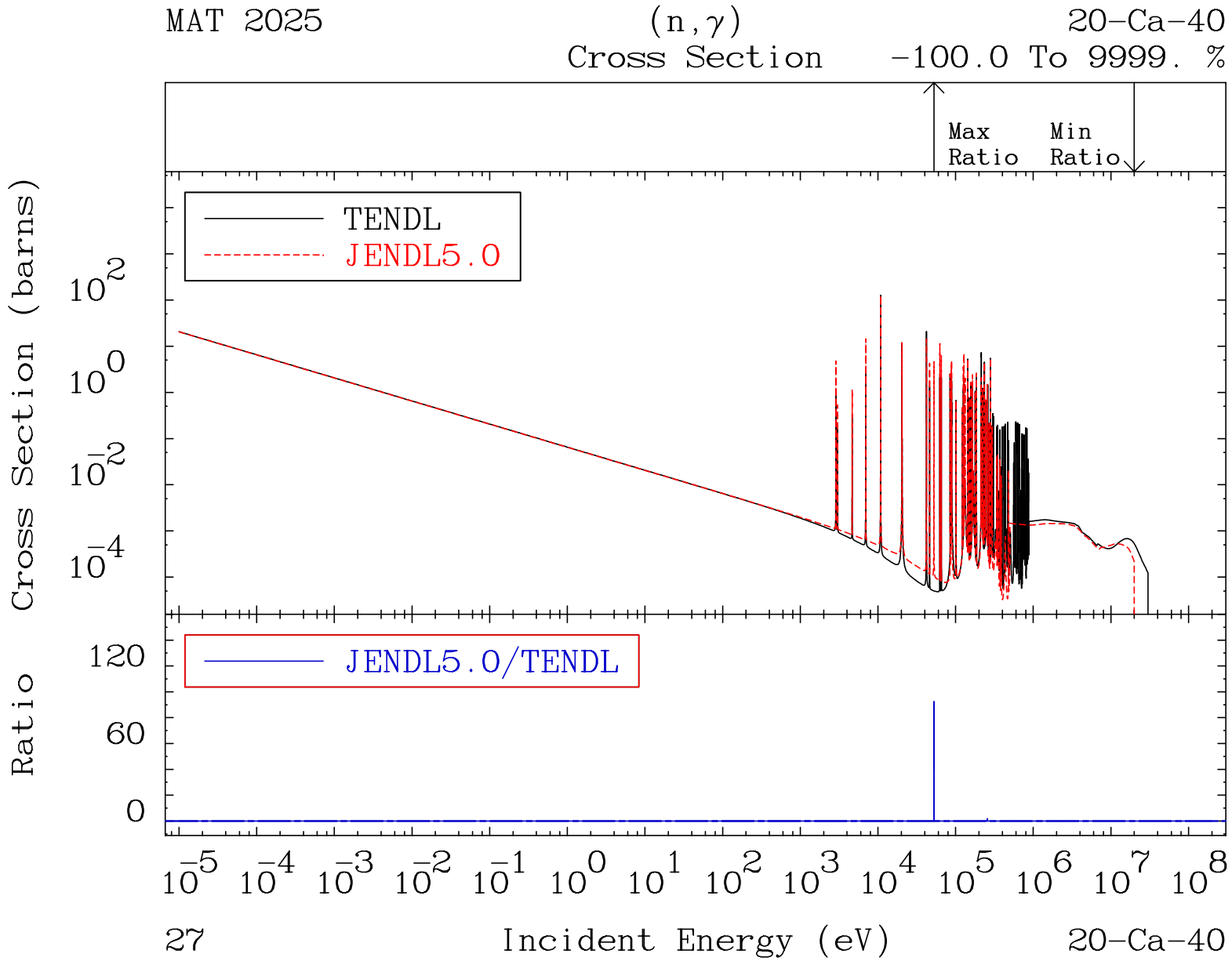

MAT 2025
MT= 65 (n,n') Level
20-Ca-40
Cross Section -100.0 To 262.6 %
Min Ratio
Max Ratio
TENDL Threshold 6.5845 MeV
JENDL5.0 Threshold 6.6722 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
4
2
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
22
Incident Energy (eV)
20-Ca-40

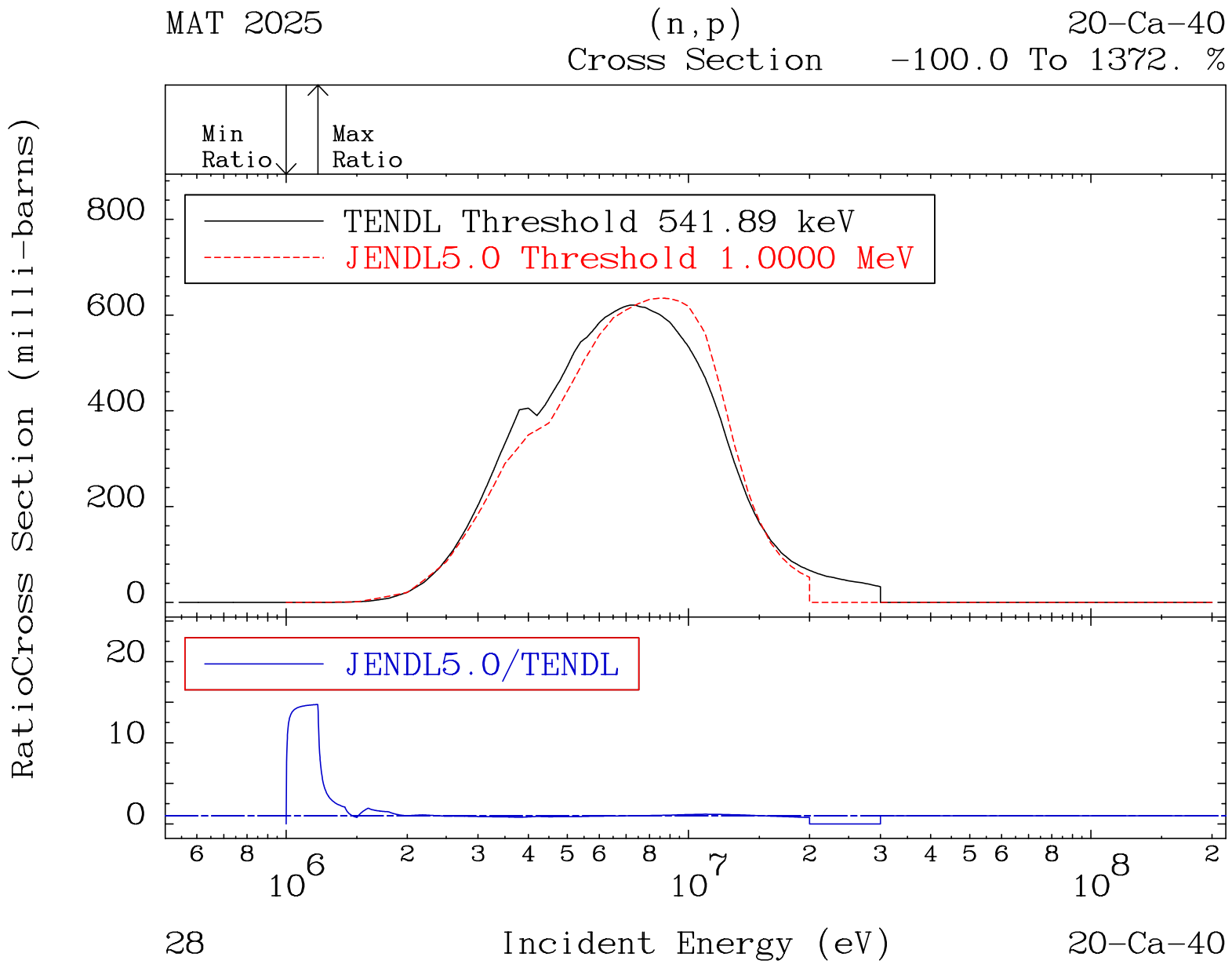

MAT 2025
MT= 66 (n,n') Level
20-Ca-40
Cross Section -100.0 To 1303. %
Min Ratio
Max Ratio
TENDL Threshold 6.6721 MeV
JENDL5.0 Threshold 6.7079 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
23
20-Ca-40

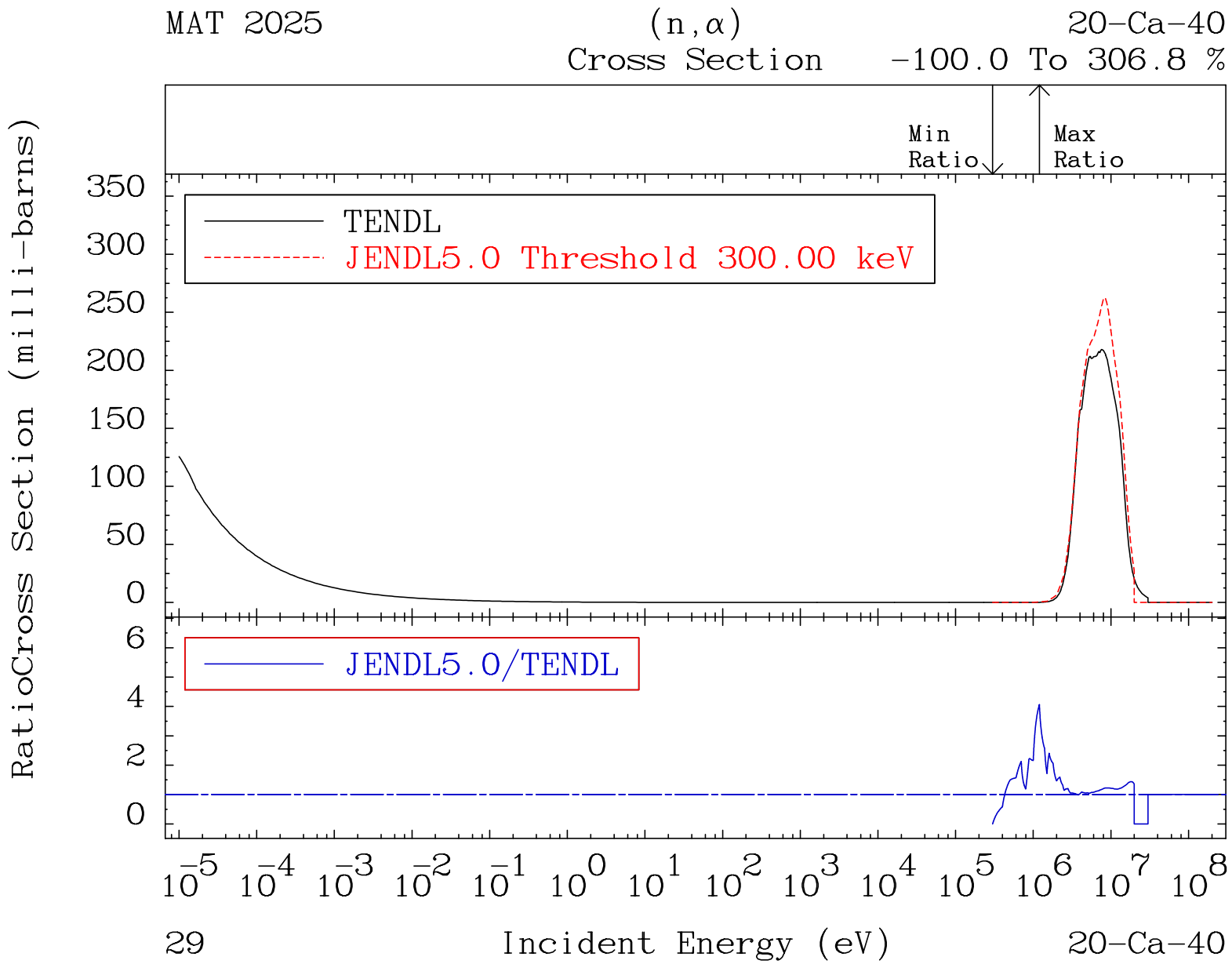

MAT 2025
MT= 67 (n,n') Level
20-Ca-40
Cross Section -100.0 To 1998. %
Min Ratio
Max Ratio
TENDL Threshold 6.7079 MeV
JENDL5.0 Threshold 6.7486 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
24
20-Ca-40

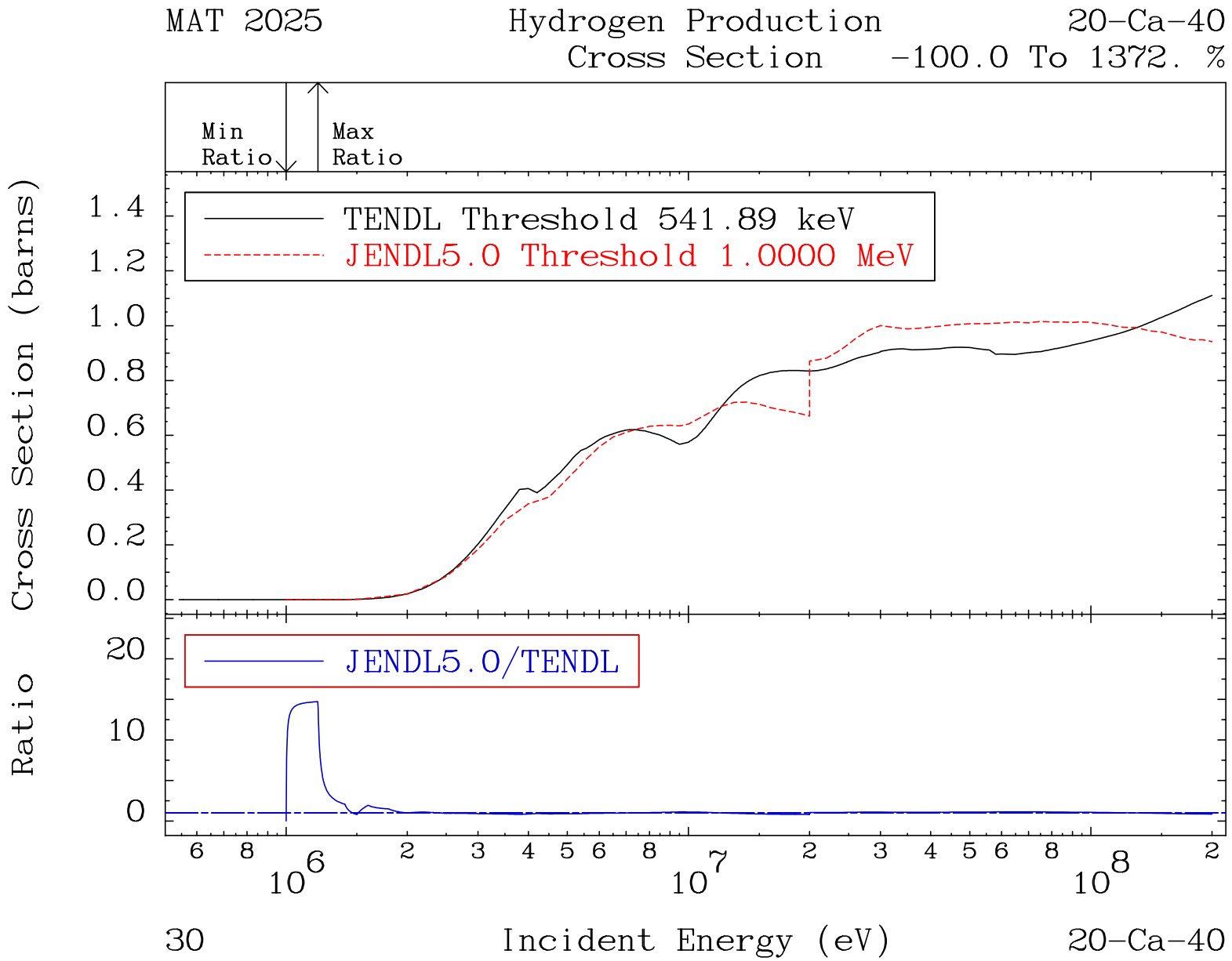

MAT 2025
MT= 68 (n,n') Level
20-Ca-40
Cross Section -100.0 To 766.4 %
Min Ratio
Max Ratio
TENDL Threshold 6.7486 MeV
JENDL5.0 Threshold 6.9208 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
12
10
8
6
4
2
0
12
8
4
0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
25
Incident Energy (eV)
20-Ca-40

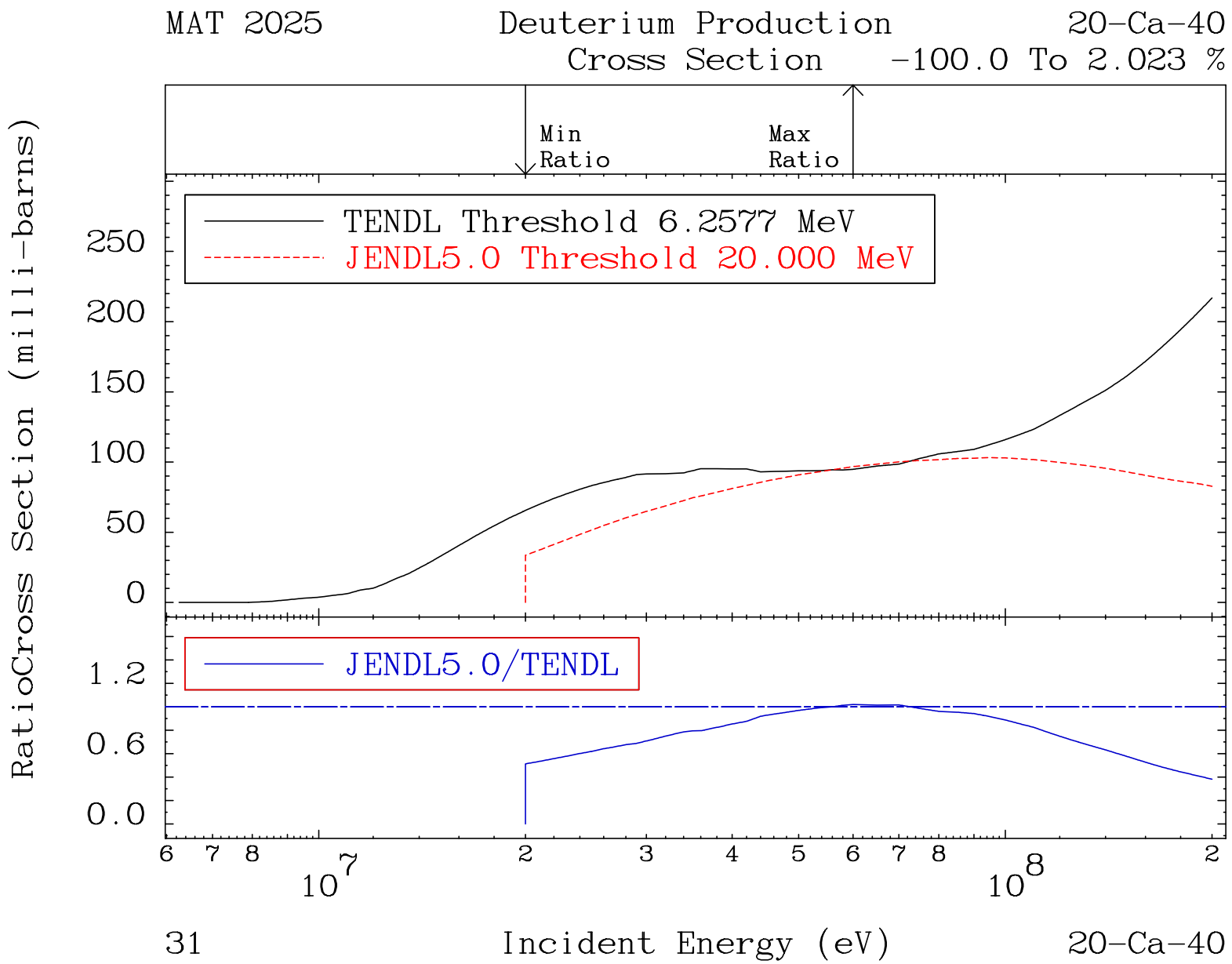

MAT 2025
(n,n') Continuum
Cross Section
20-Ca-40
-100.0 To 0.000 %
Min Ratio
Max Ratio
TENDL Threshold 6.7486 MeV
JENDL5.0 Threshold 7.2926 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
500
400
300
200
100
0
1.2
0.6
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
26
Incident Energy (eV)
20-Ca-40

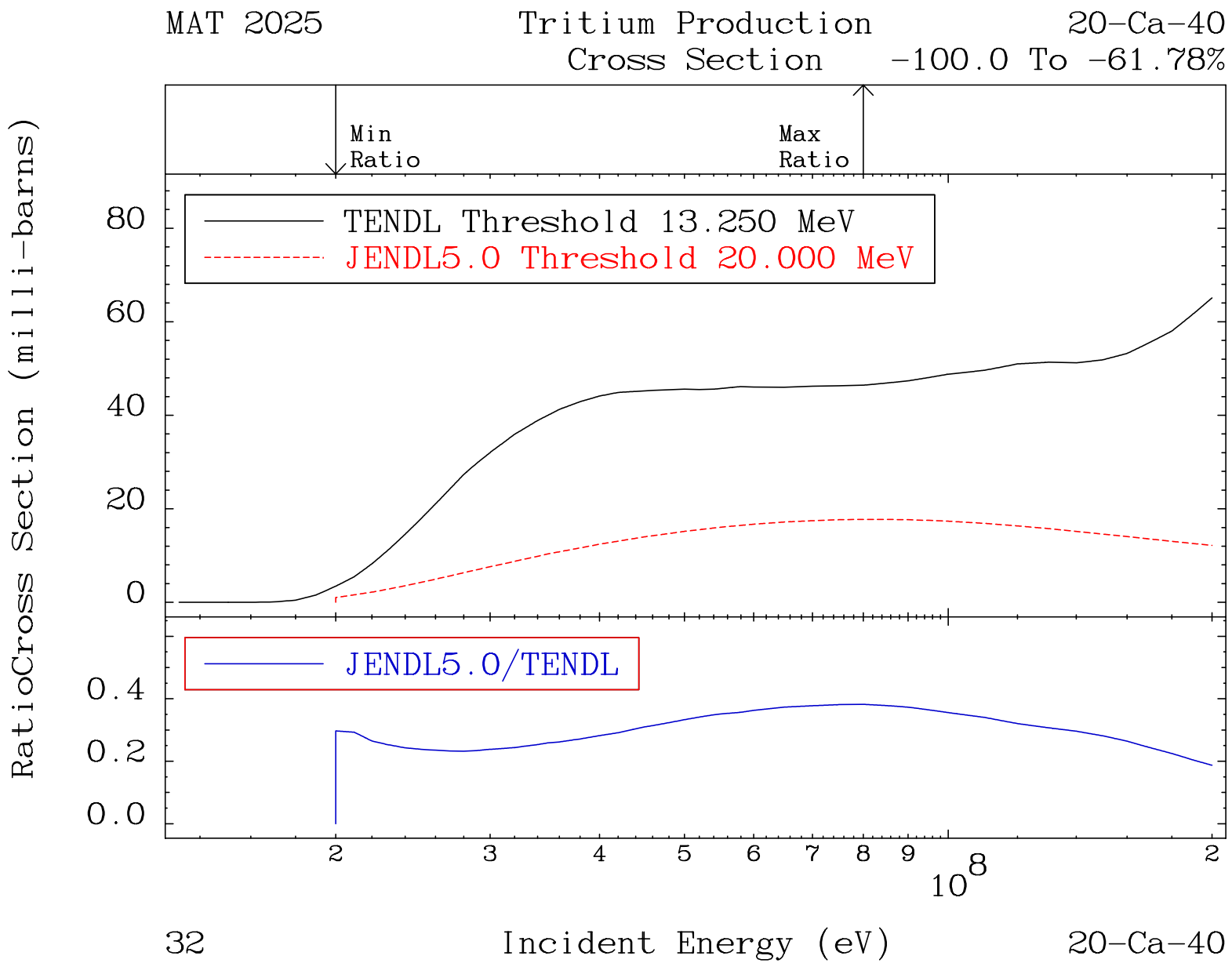

MAT 2025
(n,γ)
Cross Section
20-Ca-40
-100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
10^2
10^0
10^-2
10^-4
JENDL5.0/TENDL
Ratio
120
60
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
27
Incident Energy (eV)
20-Ca-40

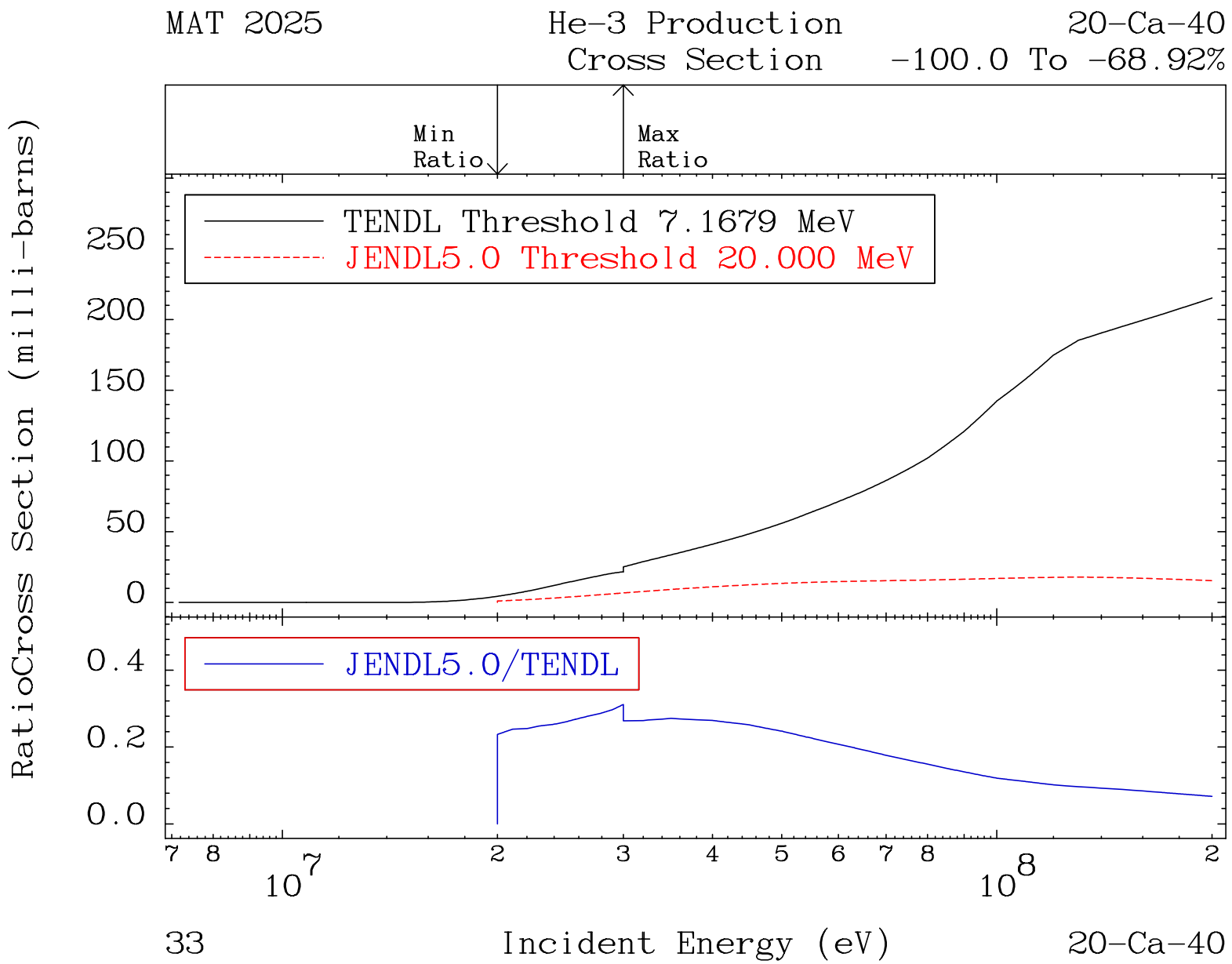

MAT 2025
(n,p)
20-Ca-40
Cross Section
-100.0 To 1372. %
Min Ratio
Max Ratio
TENDL Threshold 541.89 keV
JENDL5.0 Threshold 1.0000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
800
600
400
200
0
20
10
0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
28
Incident Energy (eV)
20-Ca-40

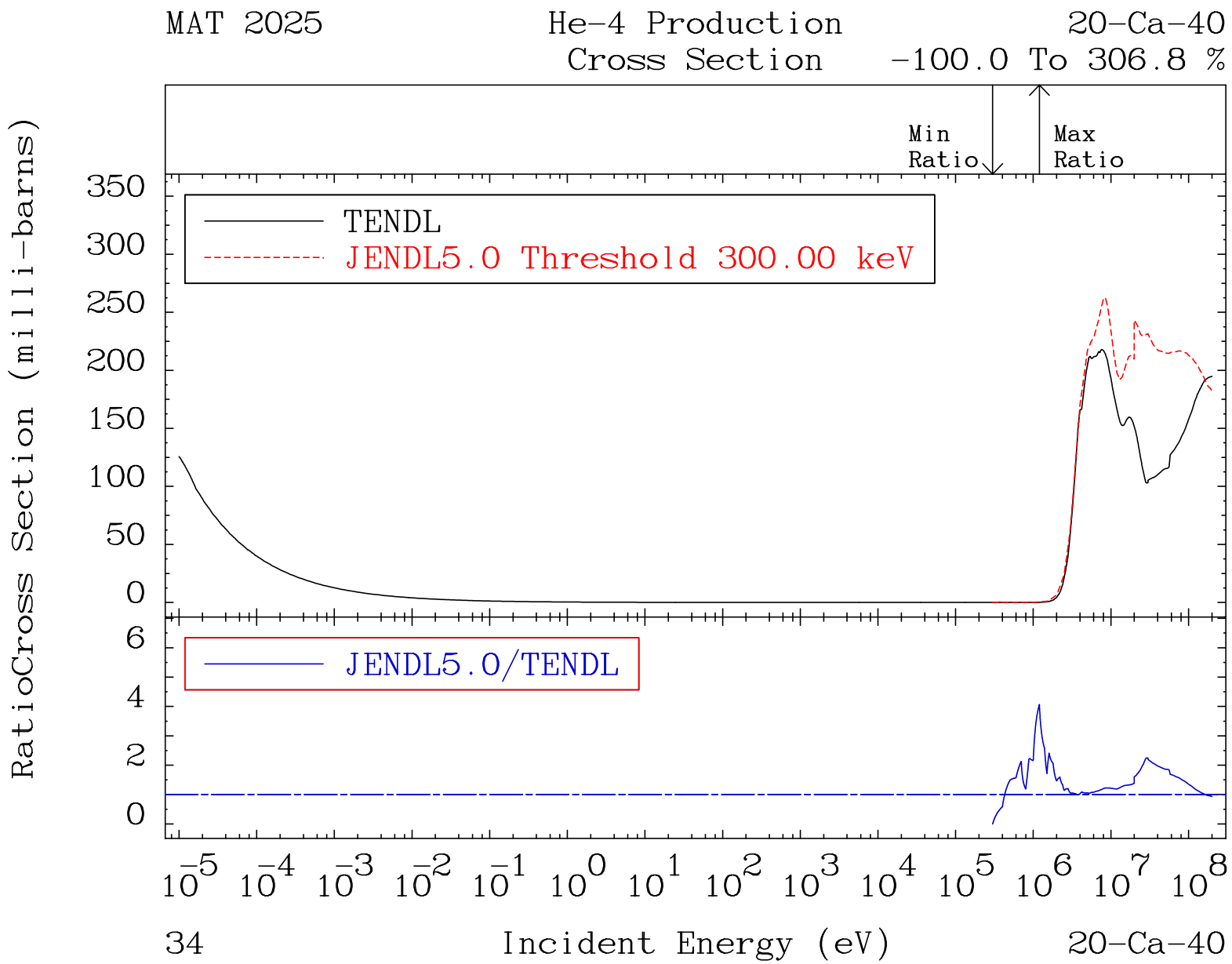

MAT 2025
(n,α)
Cross Section
20-Ca-40
-100.0 To 306.8 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 300.00 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
6
4
2
0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
29
Incident Energy (eV)
20-Ca-40

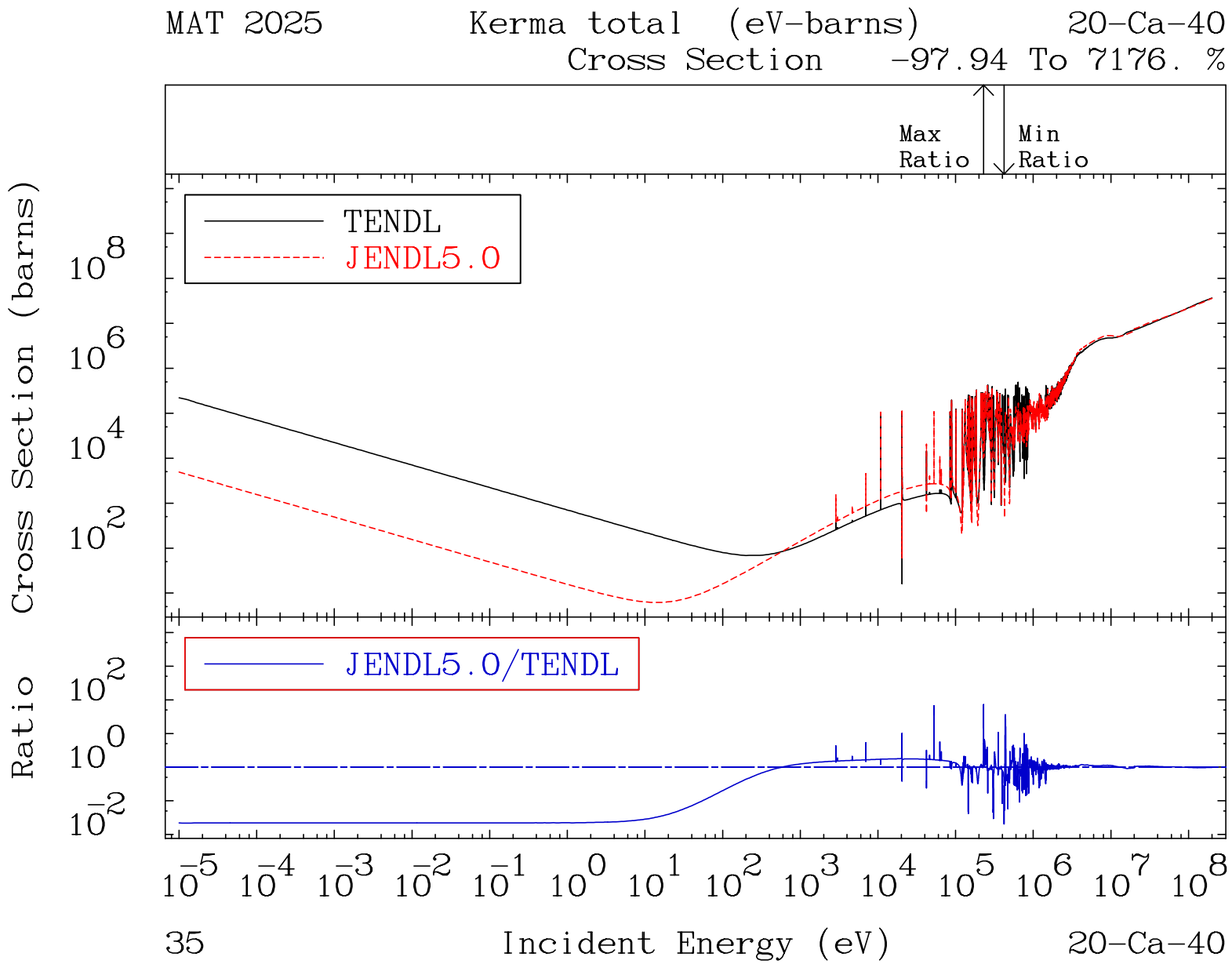

MAT 2025
Hydrogen Production
20-Ca-40
Cross Section -100.0 To 1372. %
Min Ratio
Max Ratio
TENDL Threshold 541.89 keV
JENDL5.0 Threshold 1.0000 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
30
20-Ca-40

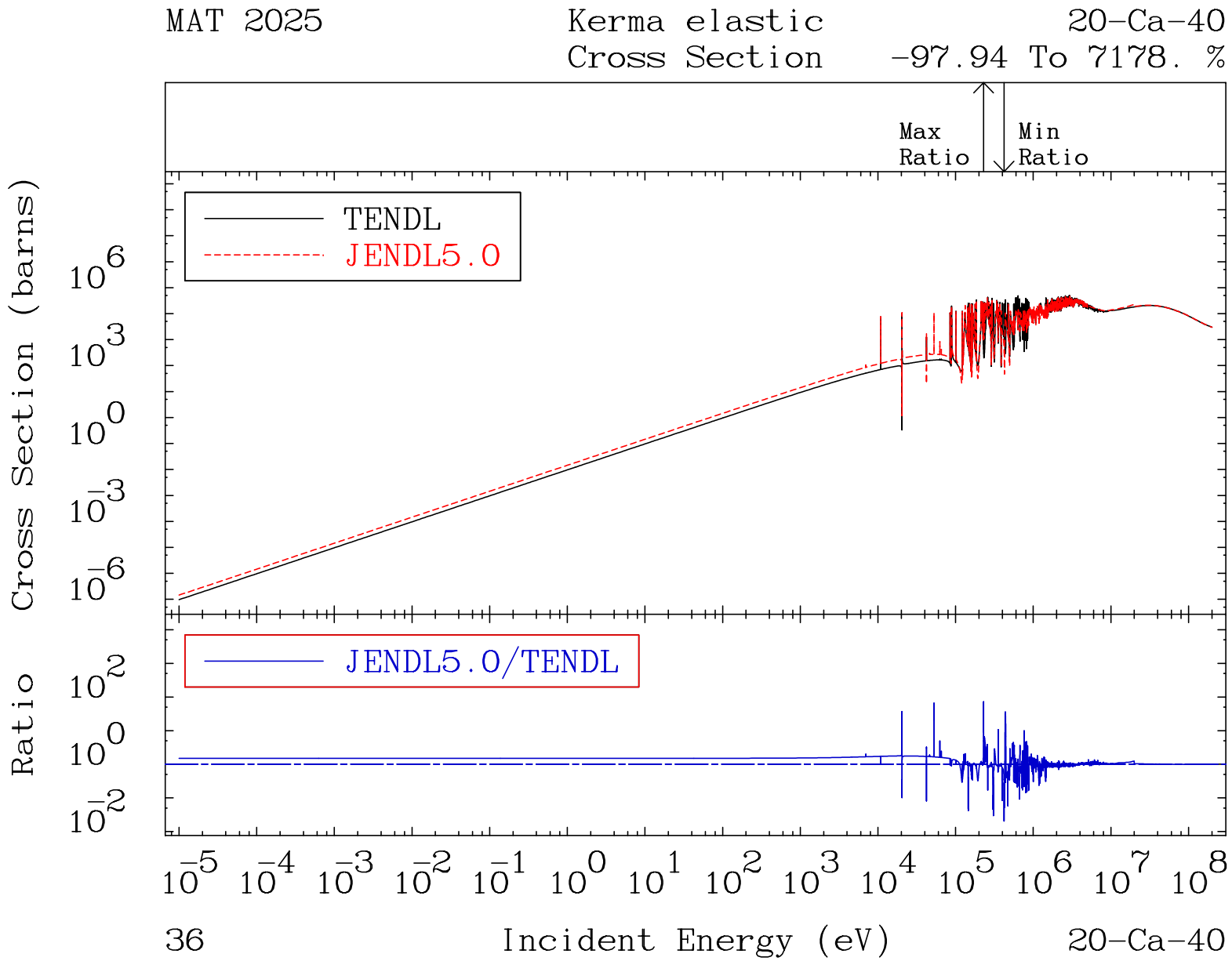

MAT 2025
Deuterium Production
20-Ca-40
Cross Section
-100.0 To 2.023 %
Min Ratio
Max Ratio
TENDL Threshold 6.2577 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
1.2
0.6
0.0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
31
Incident Energy (eV)
20-Ca-40

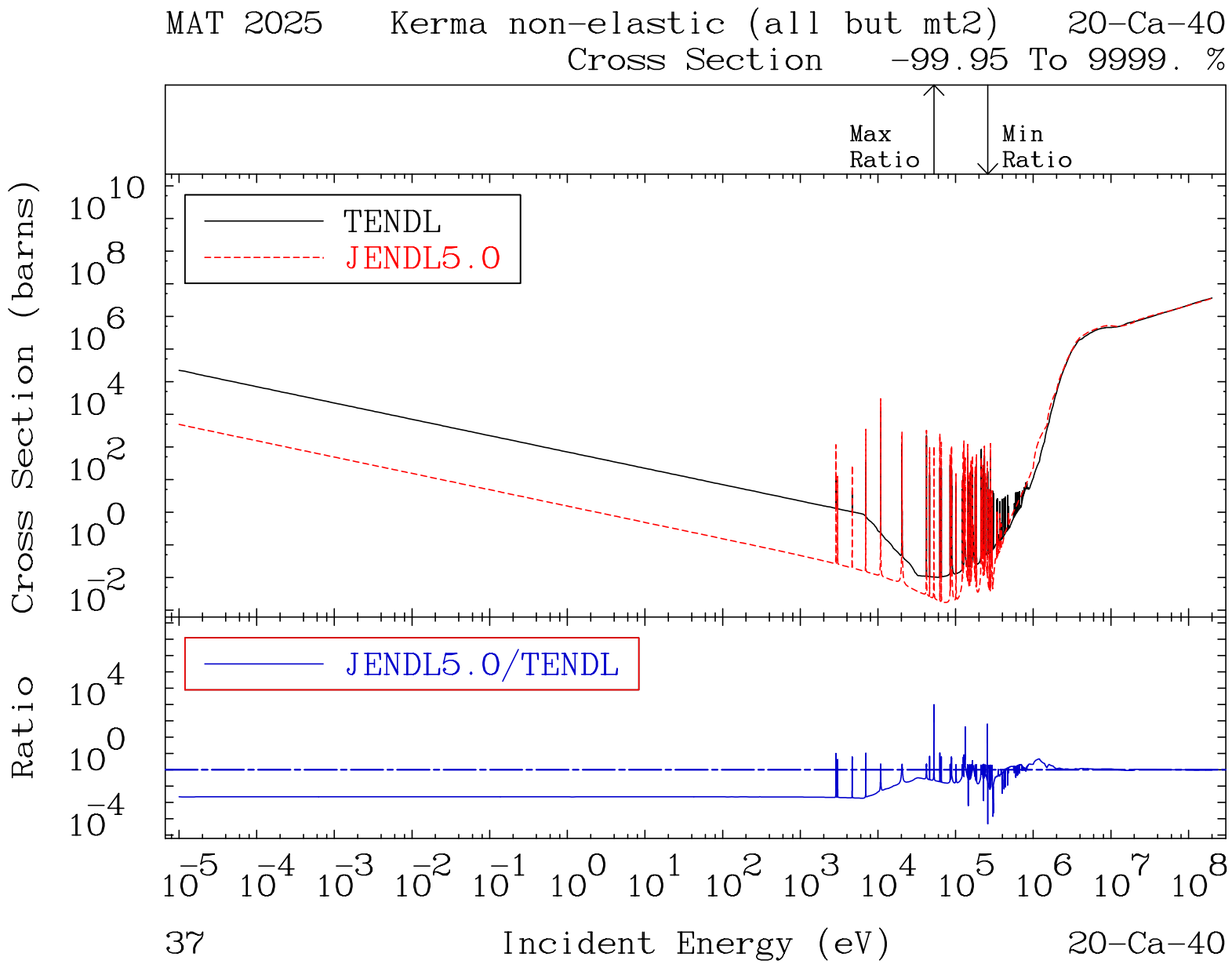

MAT 2025
Tritium Production
Cross Section
20-Ca-40
-100.0 To -61.78%
Min Ratio
Max Ratio
TENDL Threshold 13.250 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
80
60
40
20
0
0.4
0.2
0.0
2
3
4
5
6
7
8
9
10^8
2
32
Incident Energy (eV)
20-Ca-40

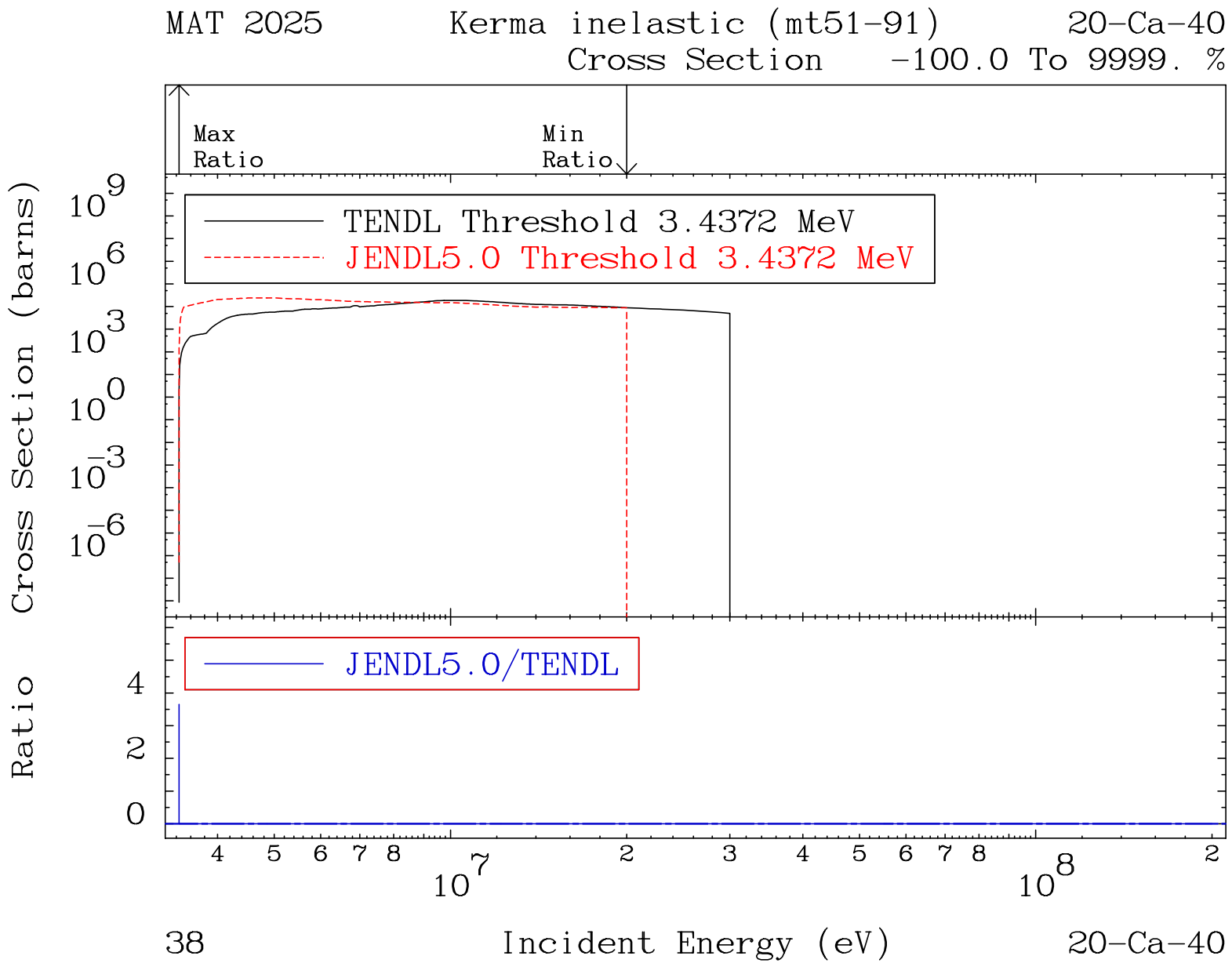

MAT 2025
He-3 Production
Cross Section
20-Ca-40
-100.0 To -68.92%
Min Ratio
Max Ratio
TENDL Threshold 7.1679 MeV
JENDL5.0 Threshold 20.000 MeV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
0.4
0.2
0.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
33
Incident Energy (eV)
20-Ca-40

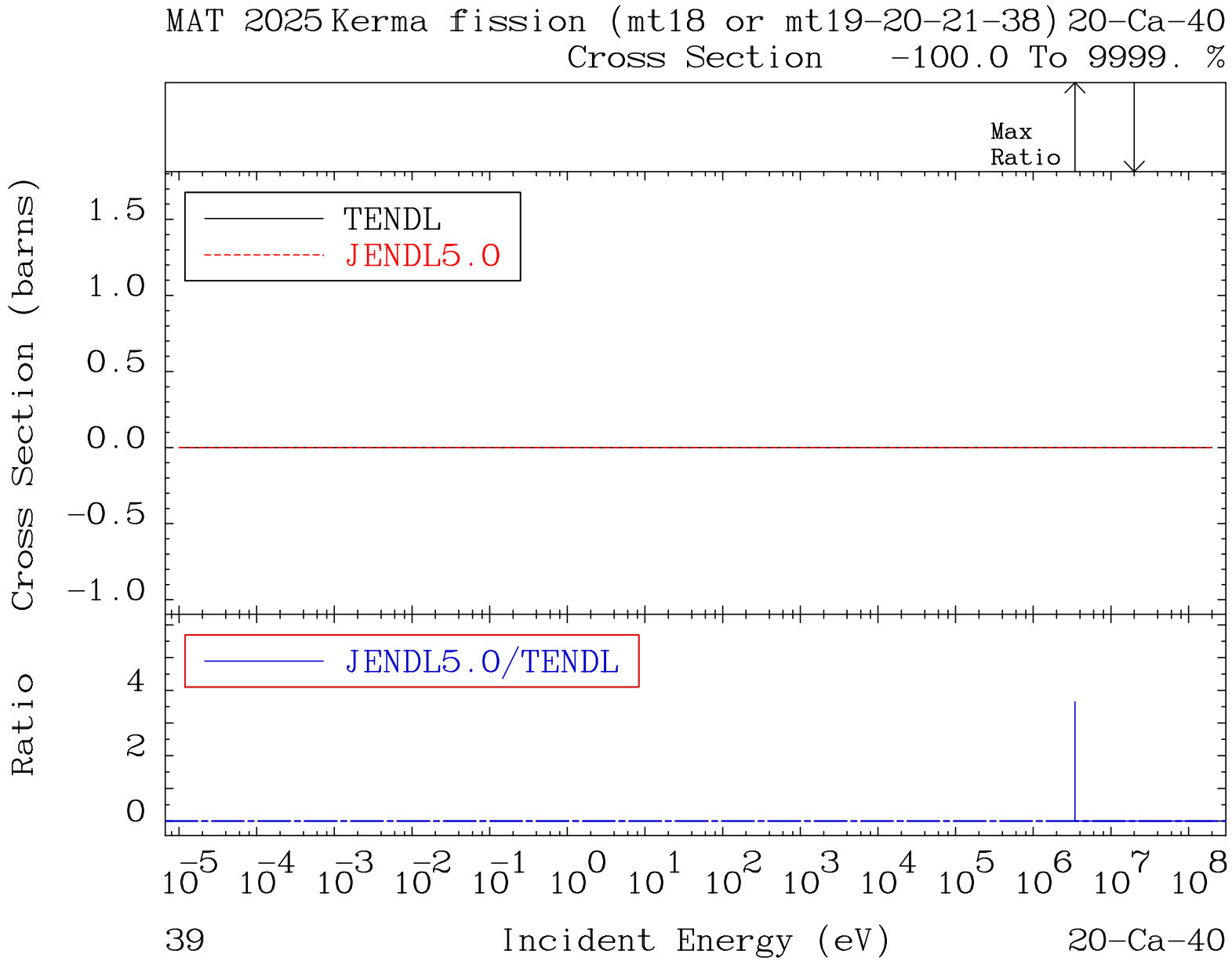

MAT 2025
He-4 Production
Cross Section
20-Ca-40
-100.0 To 306.8 %
Min Ratio
Max Ratio
TENDL
JENDL5.0 Threshold 300.00 keV
JENDL5.0/TENDL
RatioCross Section (milli-barns)
350
300
250
200
150
100
50
0
6
4
2
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
34
Incident Energy (eV)
20-Ca-40

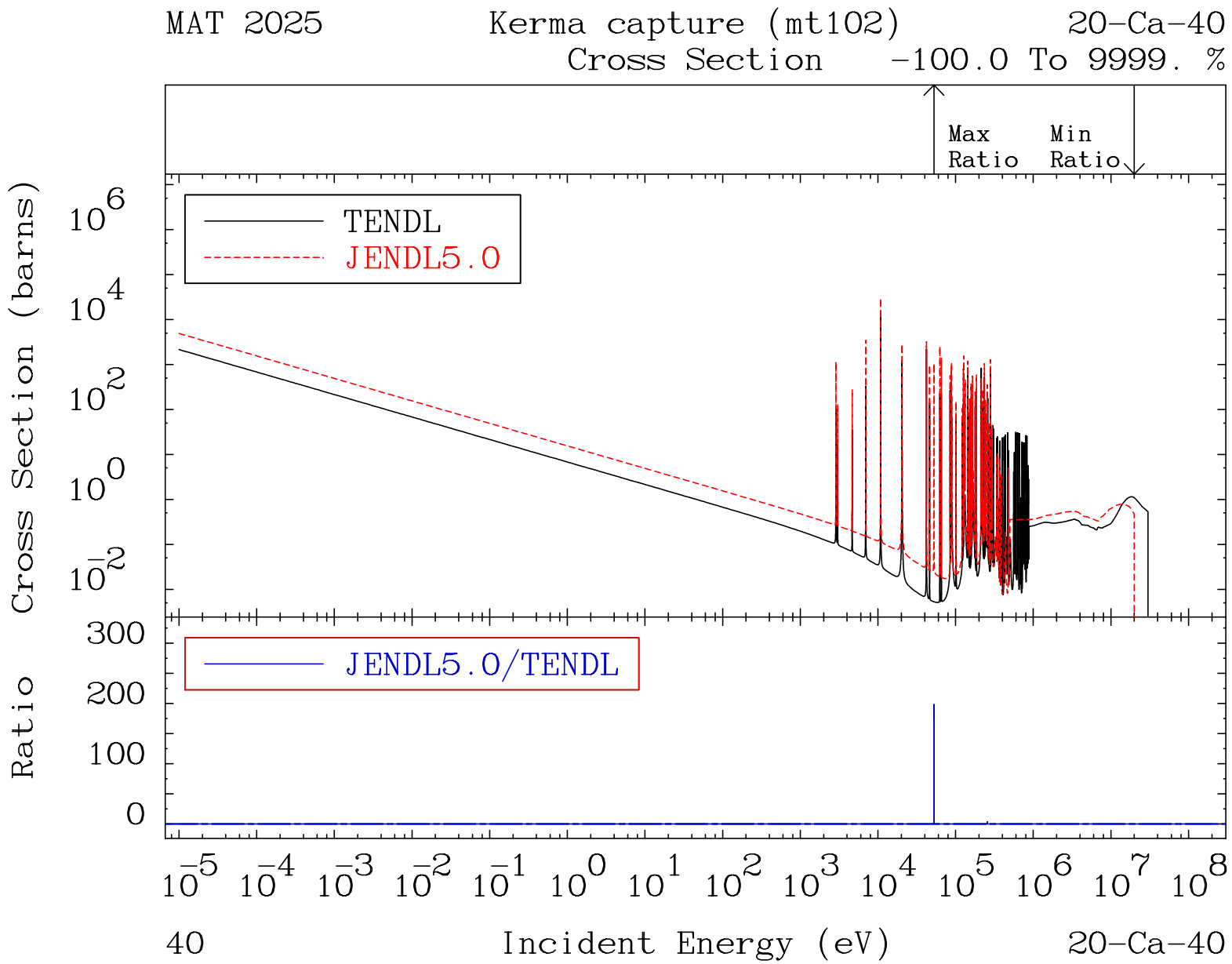

MAT 2025
Kerma total (eV-barns)
20-Ca-40
Cross Section -97.94 To 7176. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
35
20-Ca-40

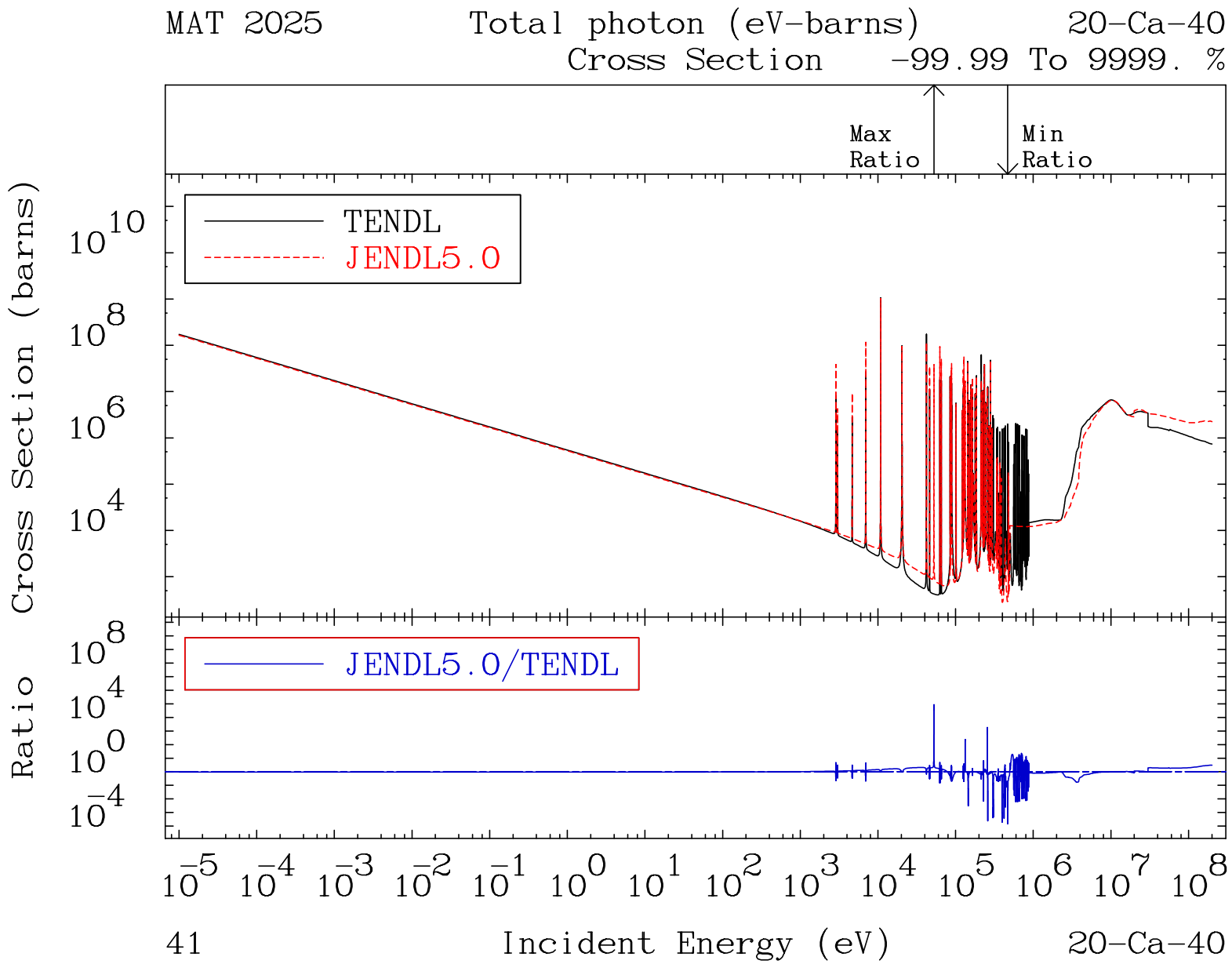

MAT 2025
Kerma elastic
Cross Section
20-Ca-40
-97.94 To 7178. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
36
20-Ca-40

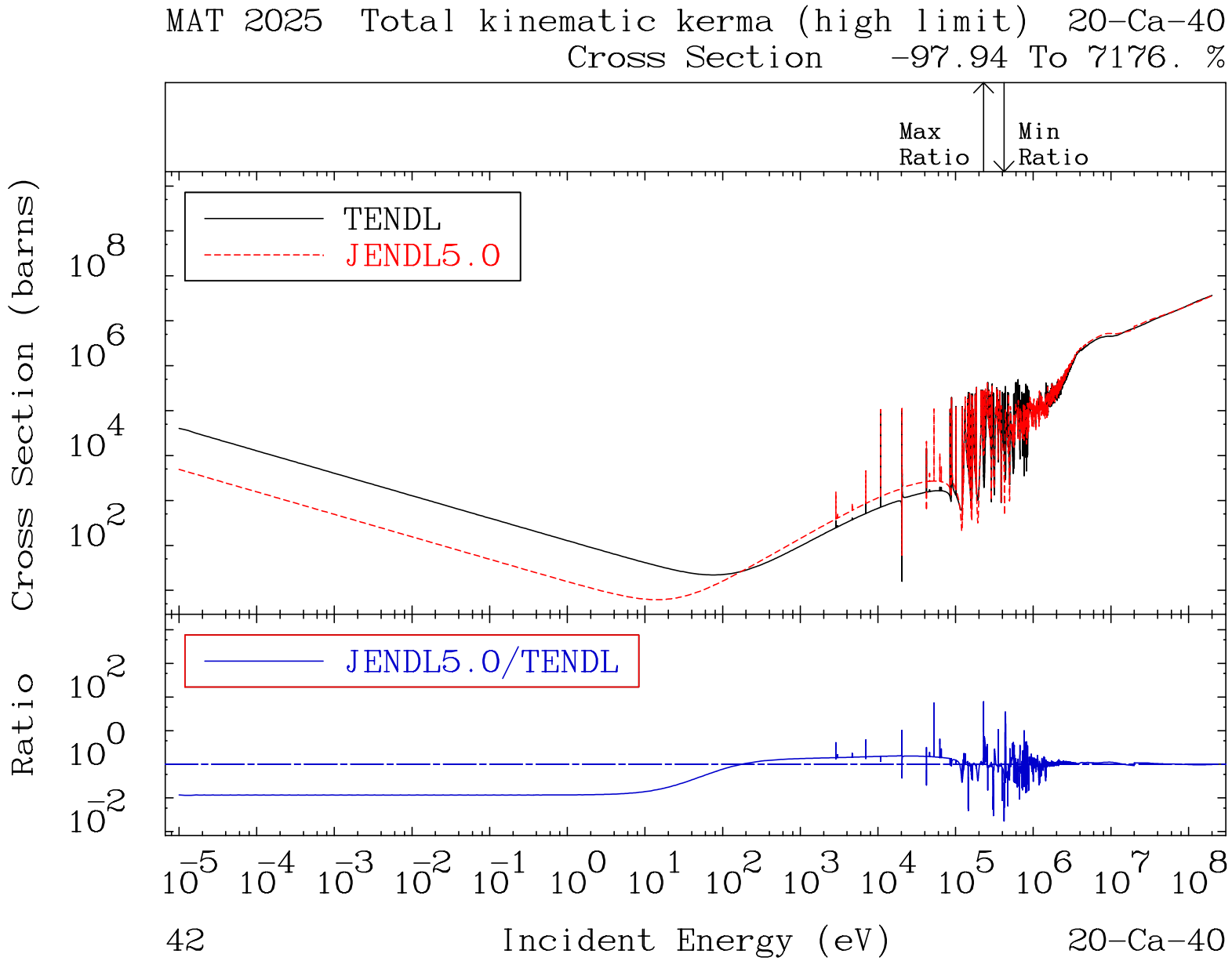

MAT 2025 Kerma non-elastic (all but mt2) 20-Ca-40
Cross Section -99.95 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
37
20-Ca-40

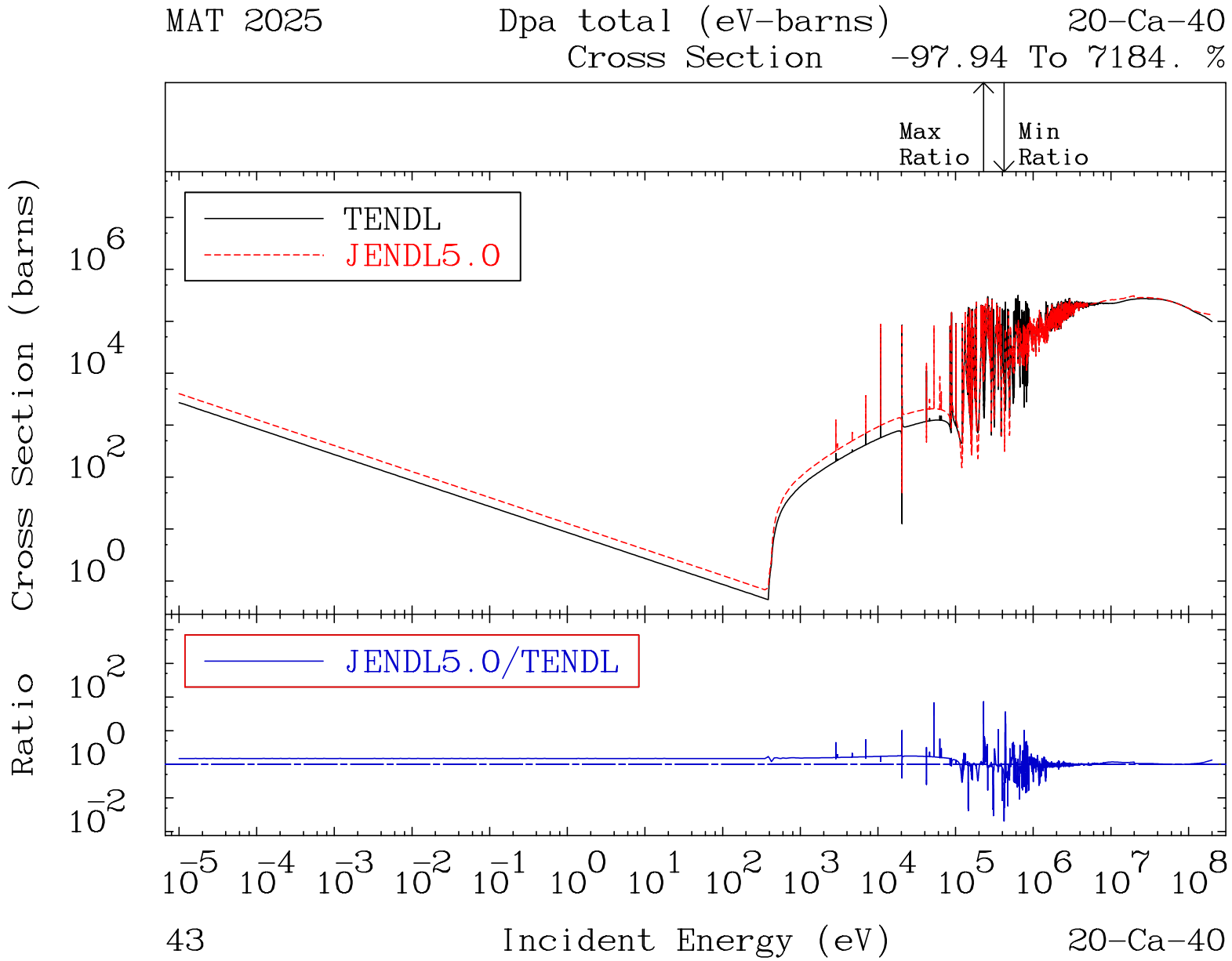

MAT 2025
Kerma inelastic (mt51-91)
20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4372 MeV
JENDL5.0 Threshold 3.4372 MeV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
38
20-Ca-40

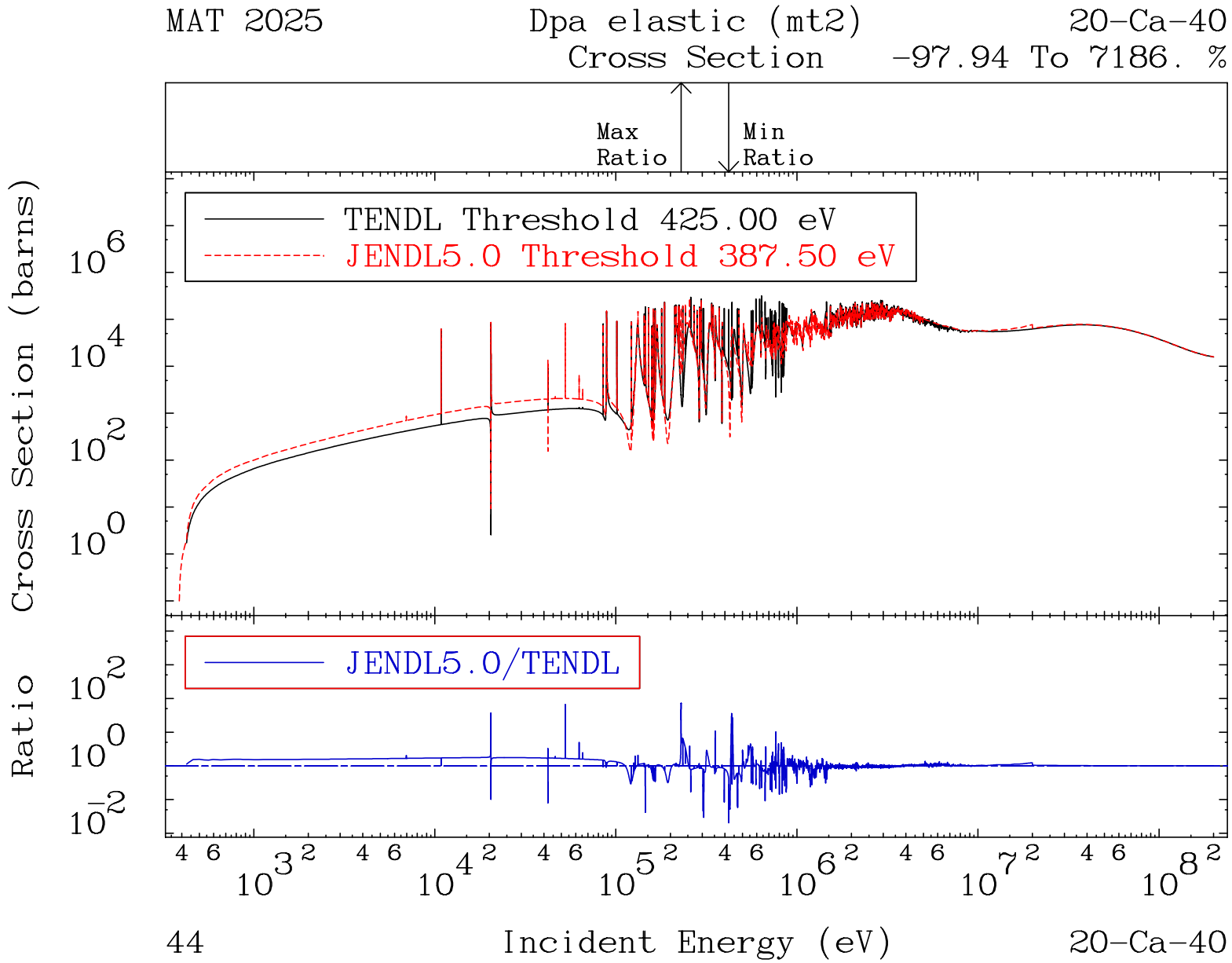

MAT 2025 Kerma fission (mt18 or mt19-20-21-38) 20-Ca-40
Cross Section -100.0 To 9999. %
Max
Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
4
2
0
10^{-5} 10^{-4} 10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4} 10^{5} 10^{6} 10^{7} 10^{8}
39
Incident Energy (eV)
20-Ca-40

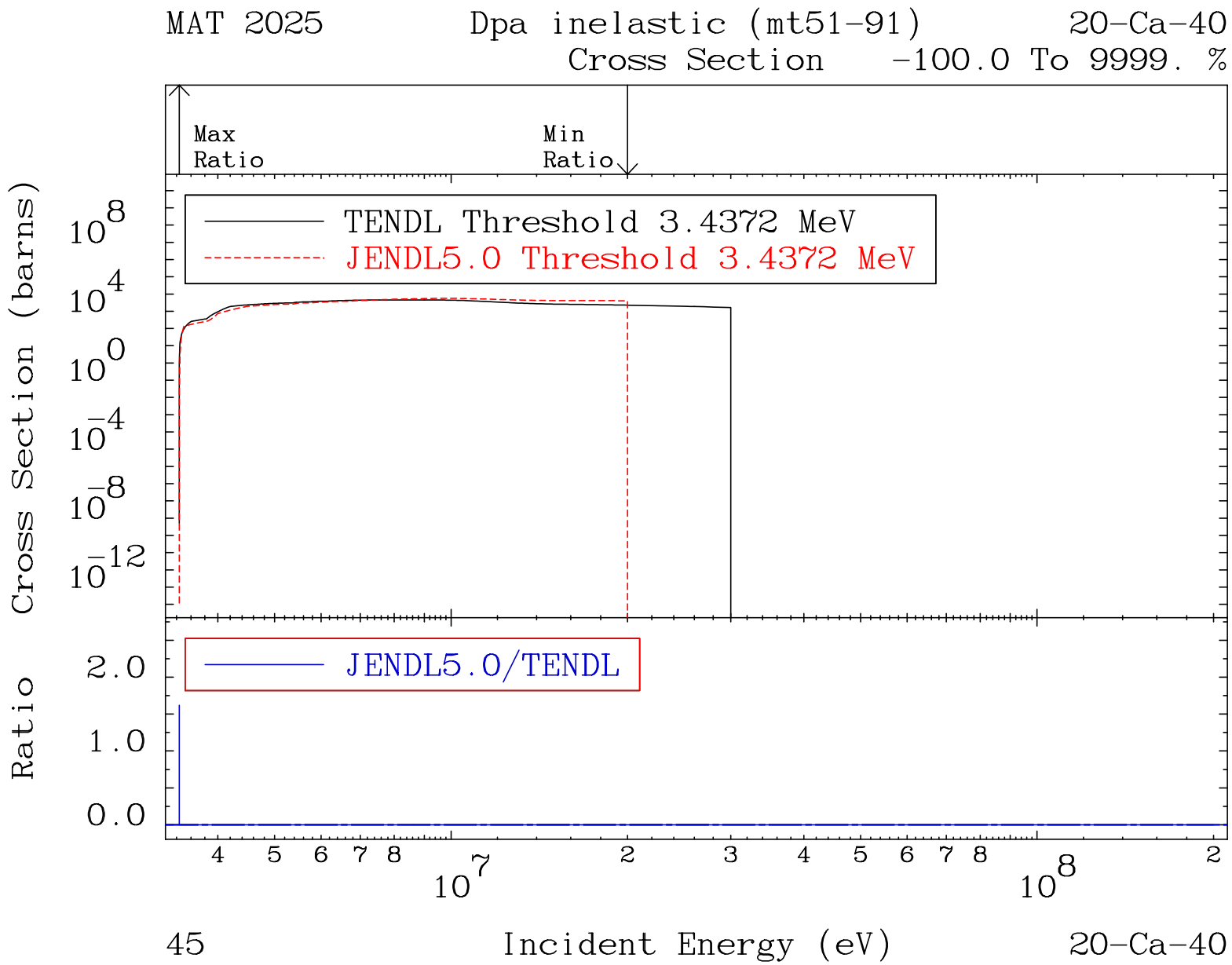

MAT 2025
Kerma capture (mt102)
20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
40
20-Ca-40

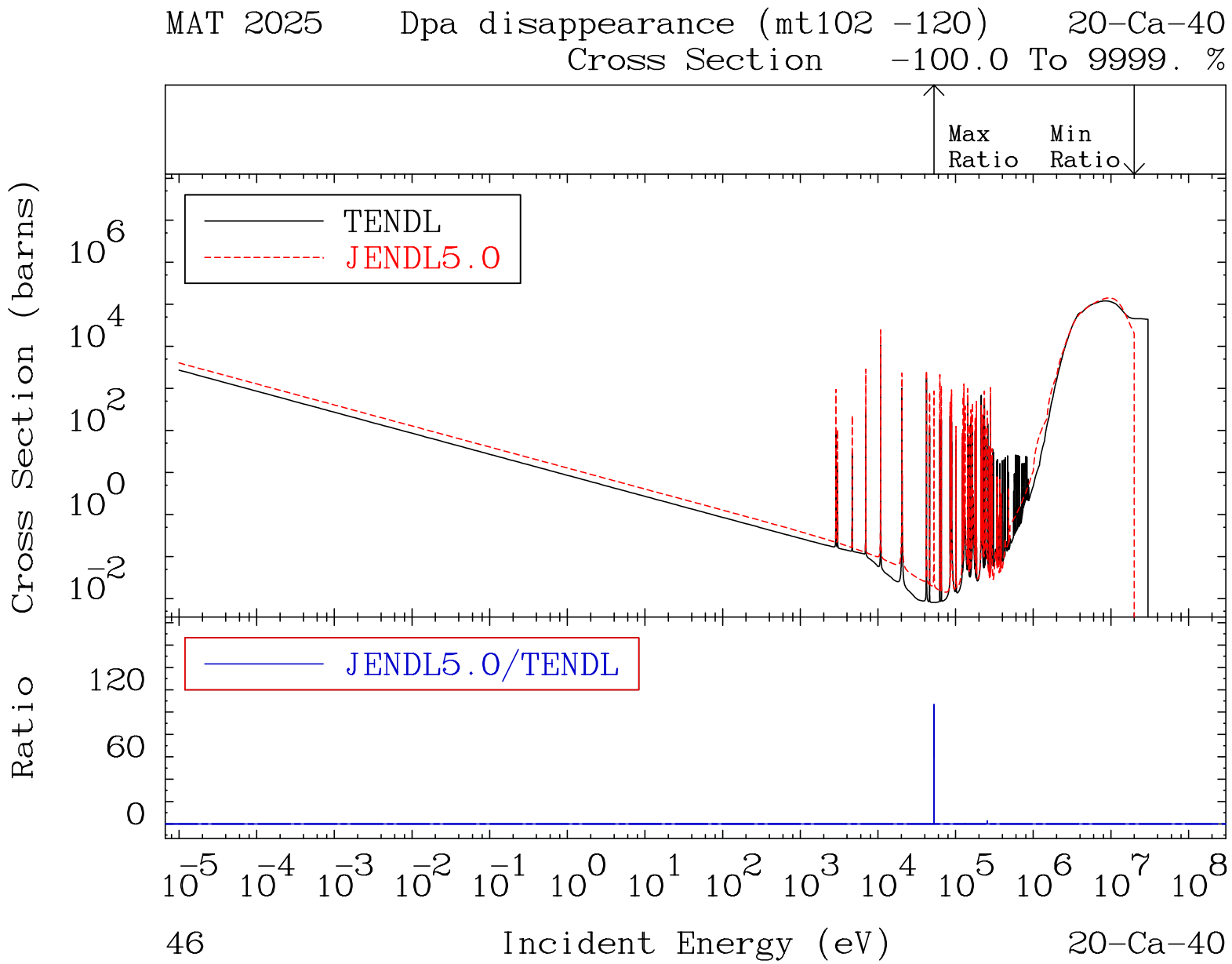

MAT 2025
Total photon (eV-barns)
20-Ca-40
Cross Section -99.99 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
41
20-Ca-40

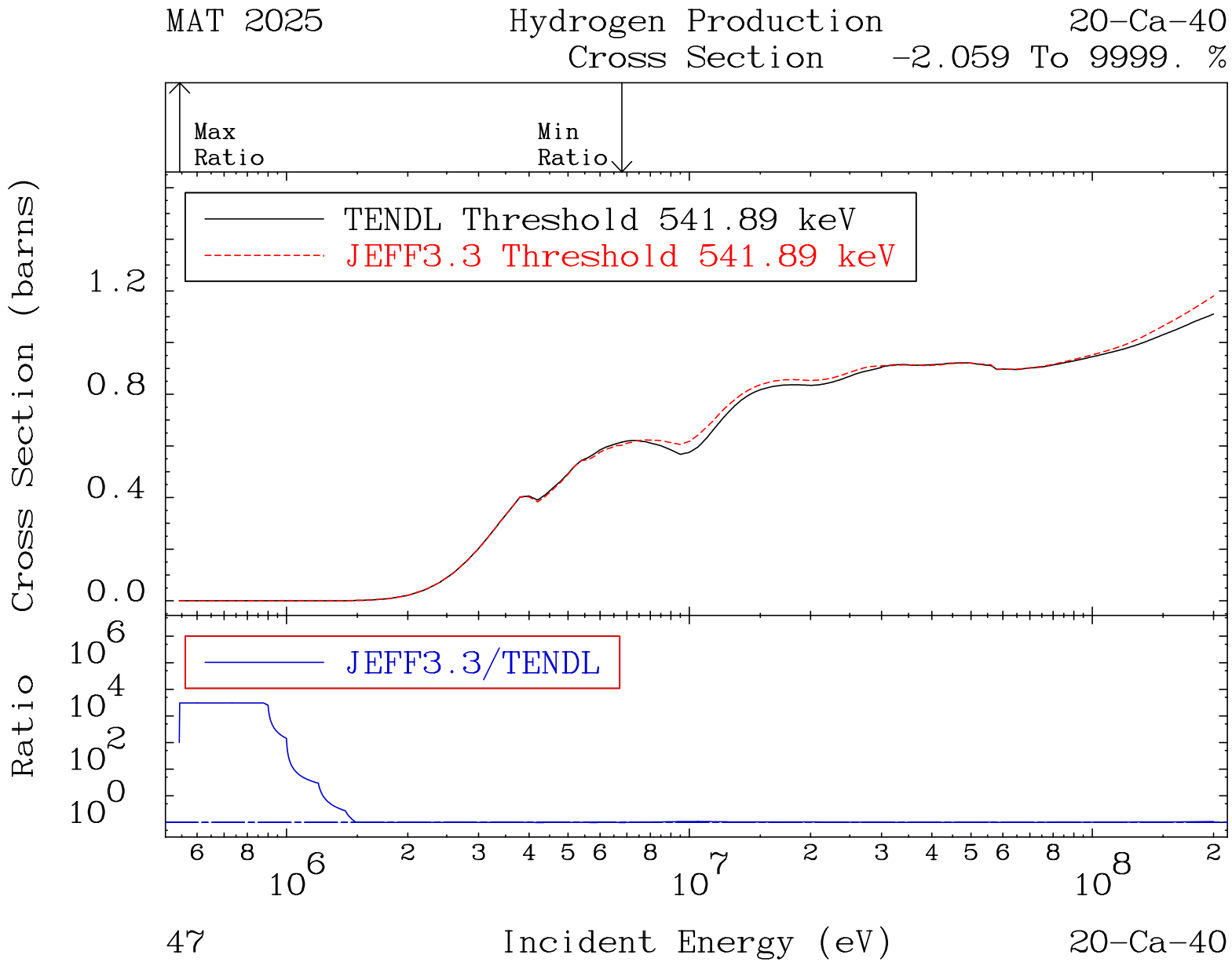

MAT 2025 Total kinematic kerma (high limit) 20-Ca-40
Cross Section -97.94 To 7176. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
42
20-Ca-40

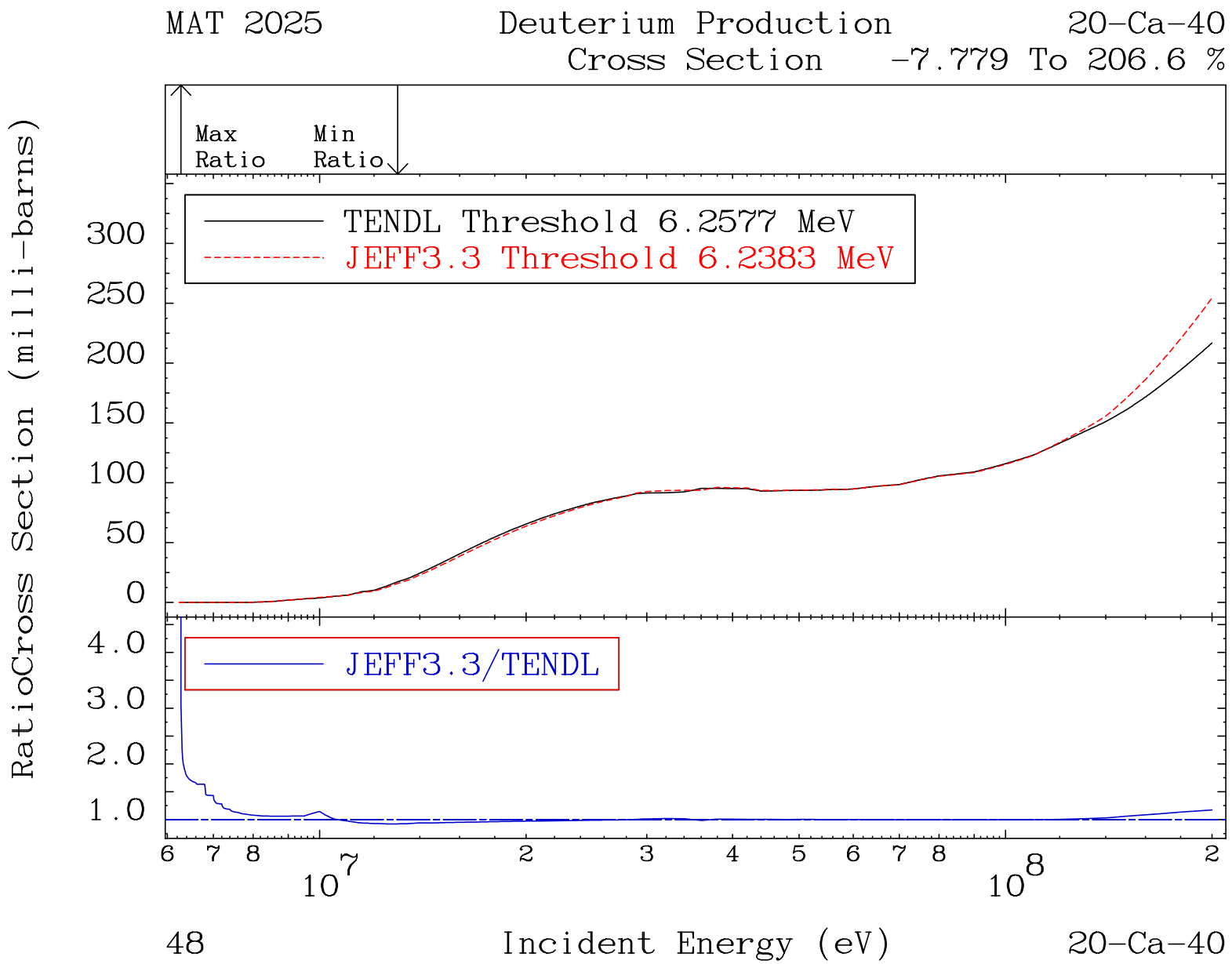

MAT 2025
Dpa total (eV-barns)
20-Ca-40
Cross Section -97.94 To 7184. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
43
Incident Energy (eV)
20-Ca-40

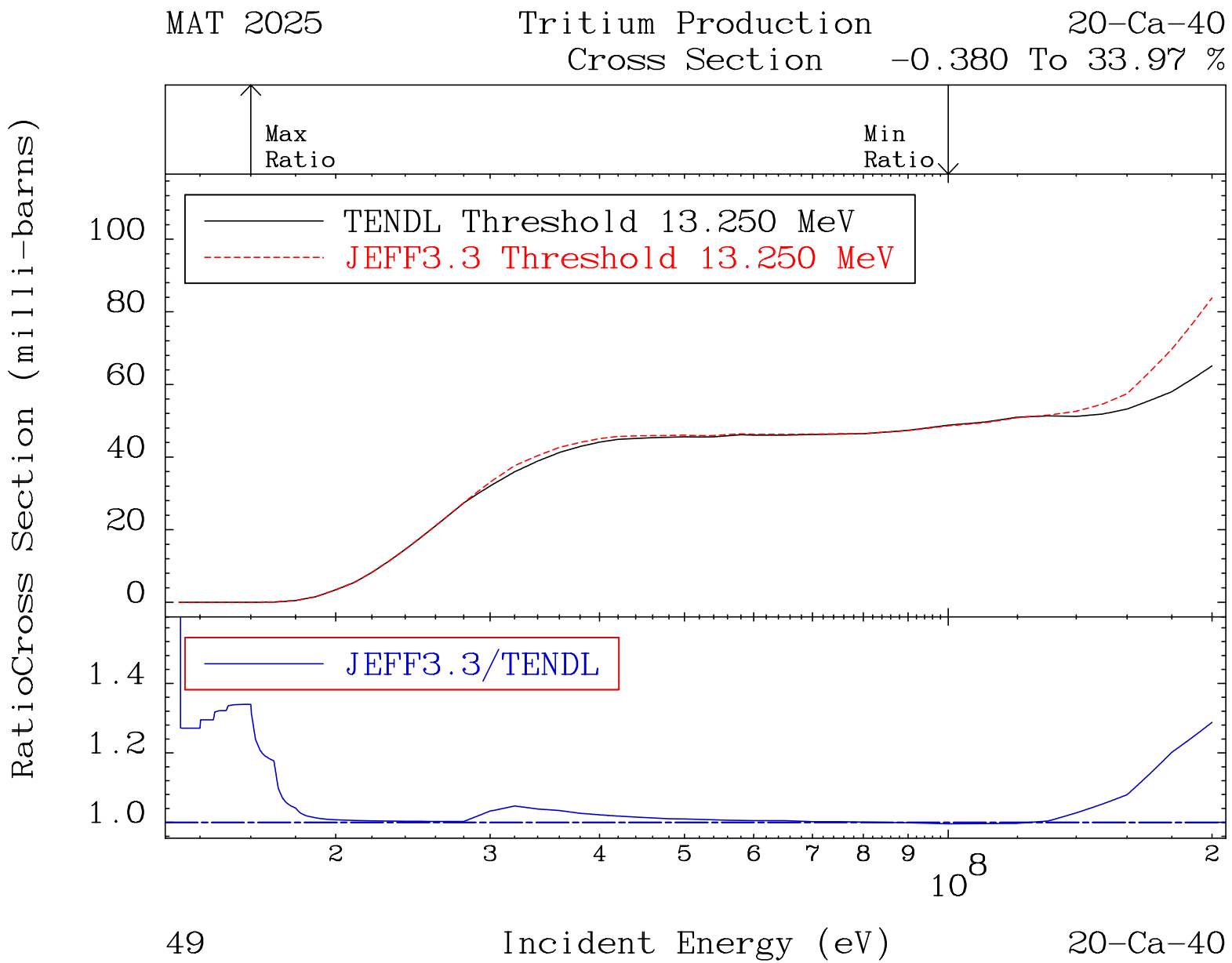

MAT 2025
Dpa elastic (mt2)
Cross Section
20-Ca-40
-97.94 To 7186. %
Max Ratio
Min Ratio
TENDL Threshold 425.00 eV
JENDL5.0 Threshold 387.50 eV
JENDL5.0/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
44
20-Ca-40

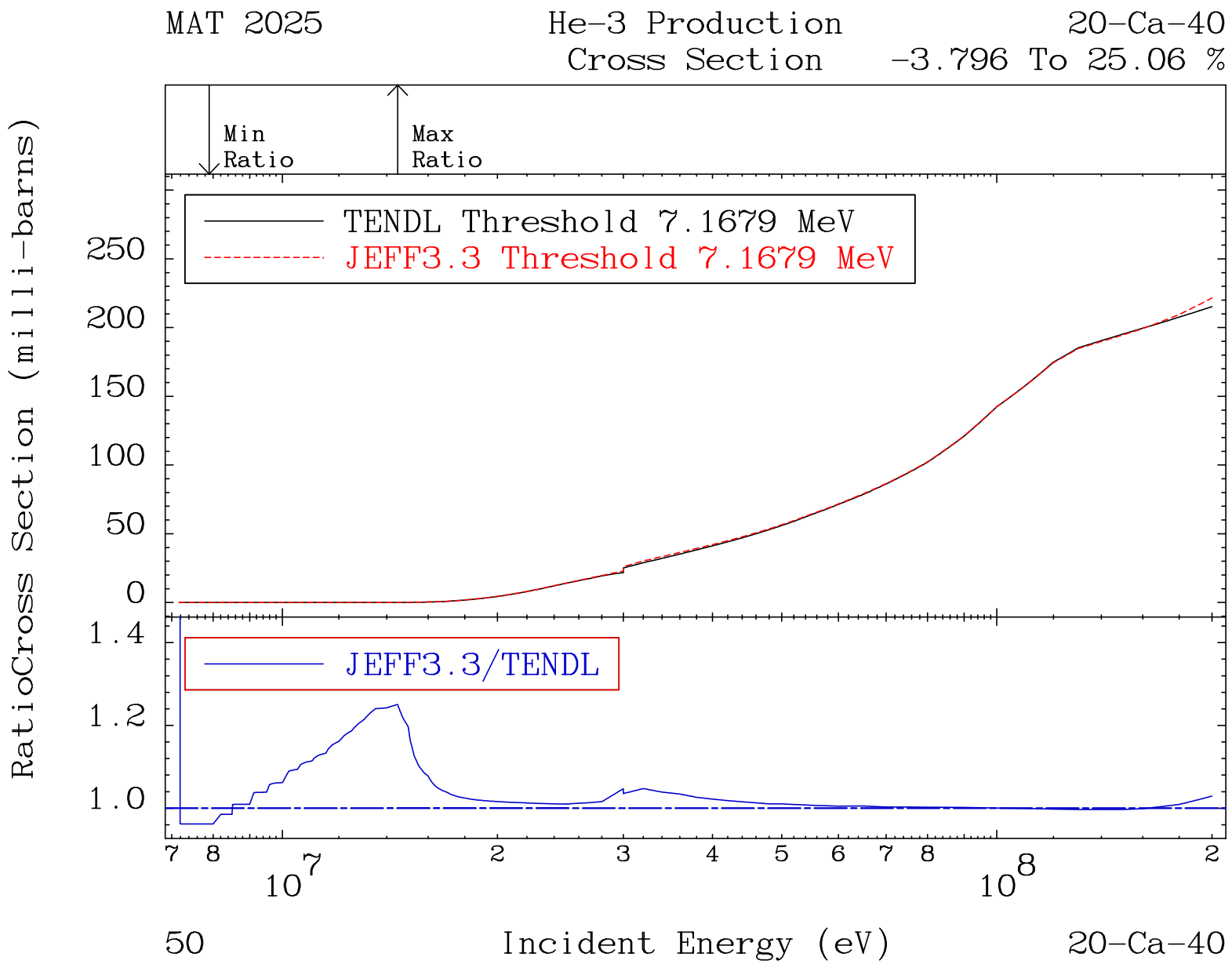

MAT 2025
Dpa inelastic (mt51-91)
20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 3.4372 MeV
JENDL5.0 Threshold 3.4372 MeV
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
45
20-Ca-40

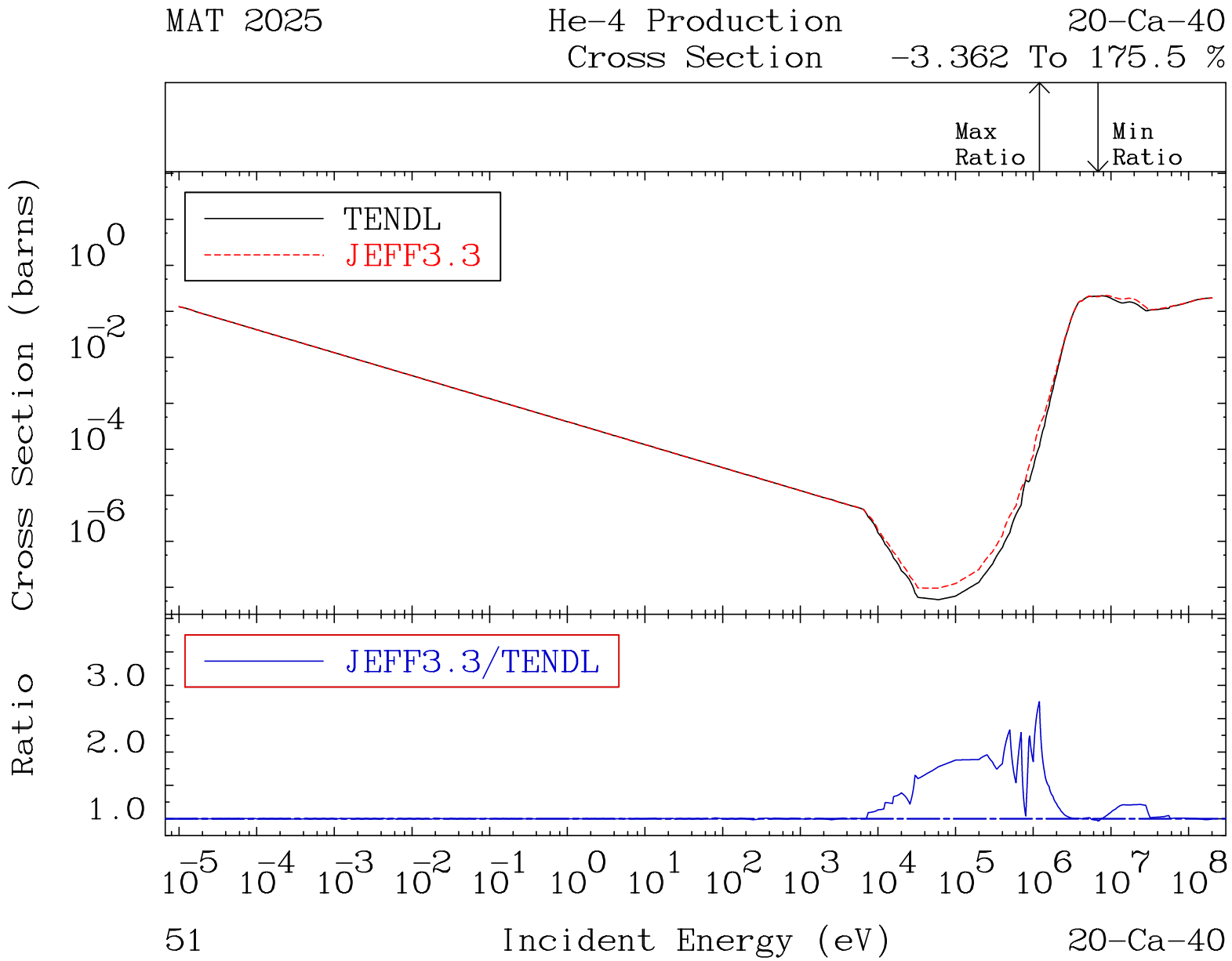

MAT 2025 Dpa disappearance (mt102 -120) 20-Ca-40
Cross Section -100.0 To 9999. %
Max Ratio
Min Ratio
TENDL
JENDL5.0
Cross Section (barns)
JENDL5.0/TENDL
Ratio
Incident Energy (eV)
46
20-Ca-40

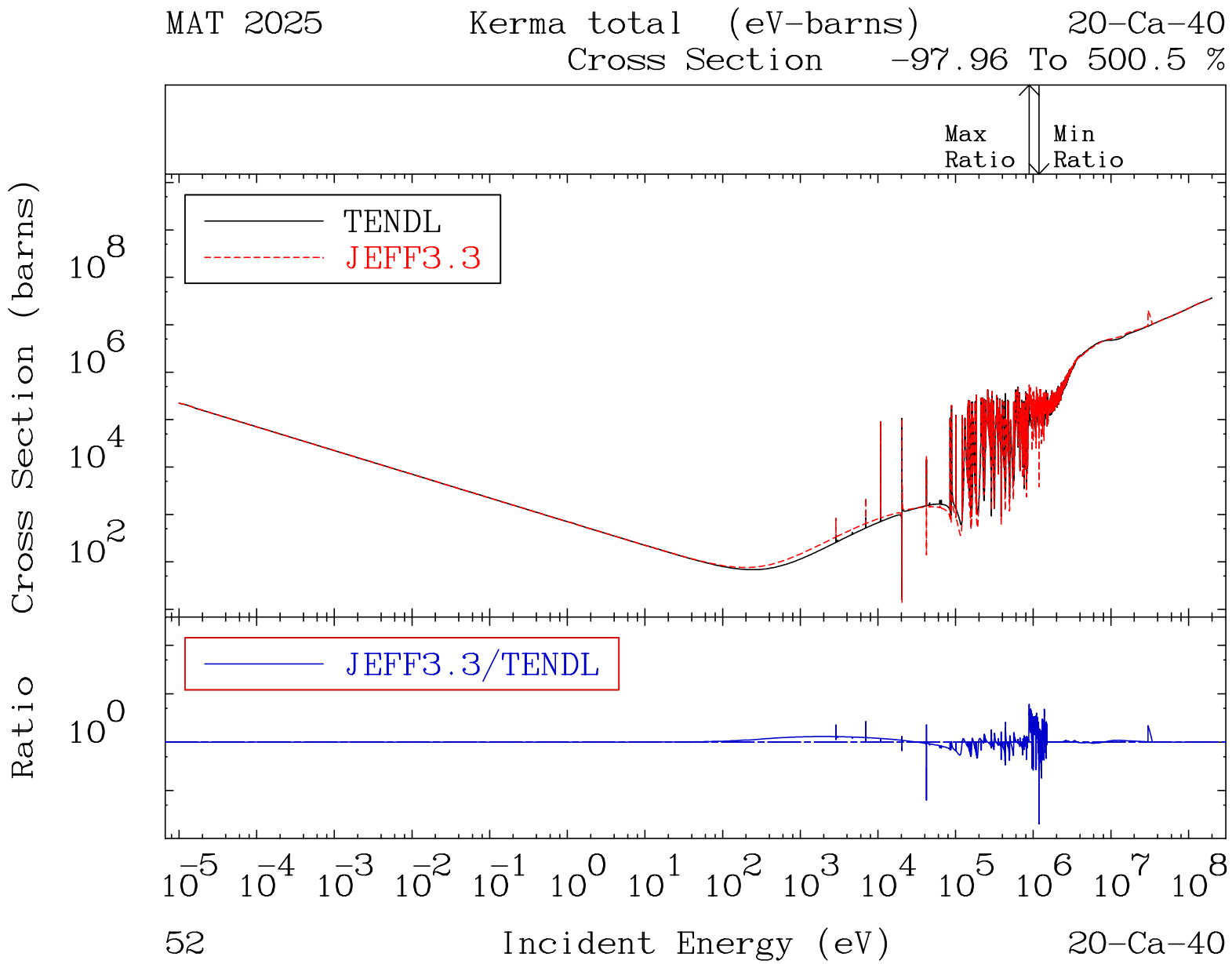

MAT 2025
Hydrogen Production
20-Ca-40
Cross Section
-2.059 To 9999. %
Max Ratio
Min Ratio
TENDL Threshold 541.89 keV
JEFF3.3 Threshold 541.89 keV
Cross Section (barns)
1.2
0.8
0.4
0.0
JEFF3.3/TENDL
Ratio
10^6
10^4
10^2
10^0
6 8 10^6 2 3 4 5 6 8 10^7 2 3 4 5 6 8 10^8 2
47
Incident Energy (eV)
20-Ca-40

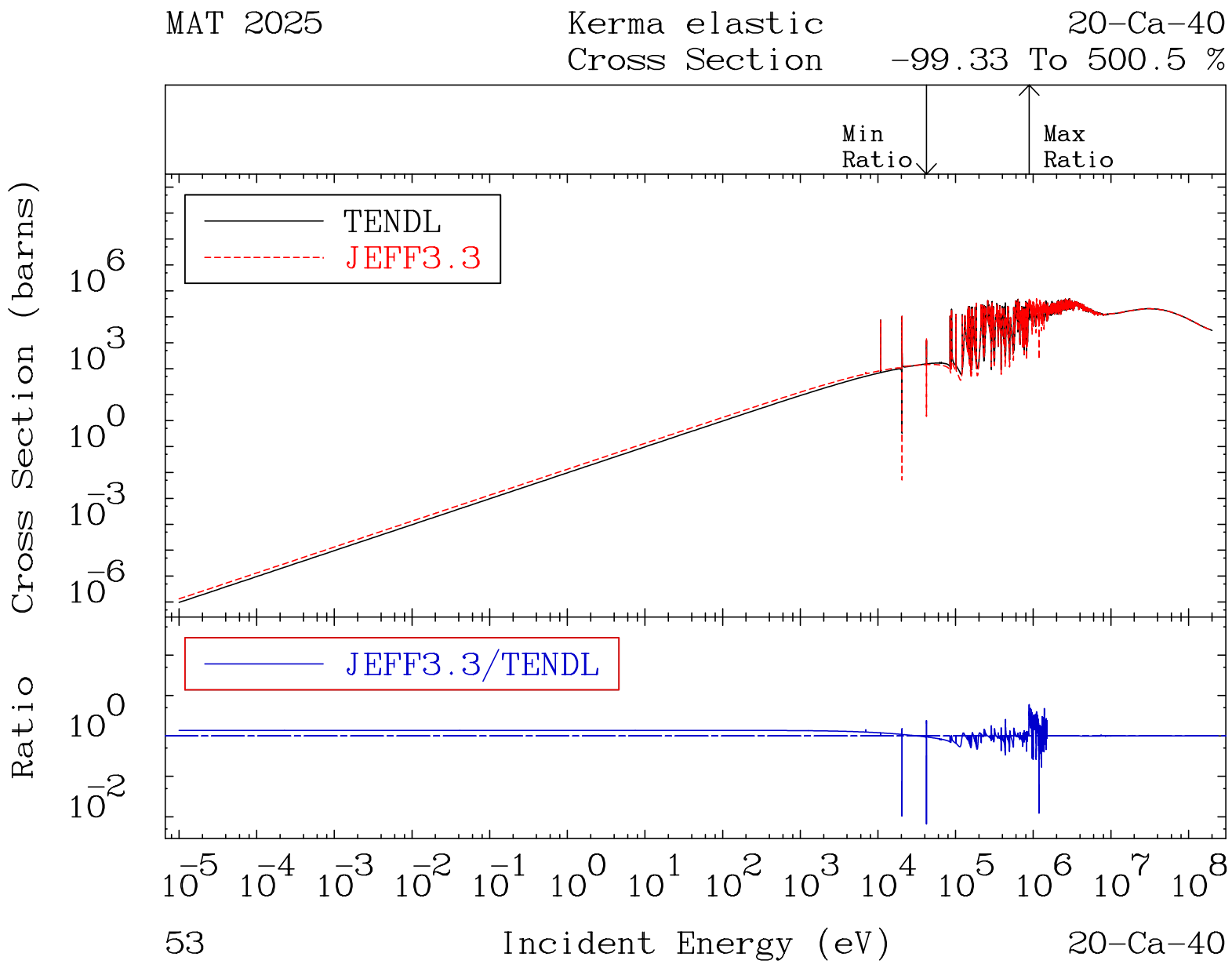

MAT 2025
Deuterium Production
20-Ca-40
Cross Section
-7.779 To 206.6 %
Max Ratio
Min Ratio
TENDL Threshold 6.2577 MeV
JEFF3.3 Threshold 6.2383 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
300
250
200
150
100
50
0
4.0
3.0
2.0
1.0
6 7 8
10^7
2 3 4 5 6 7 8
10^8
2
48
Incident Energy (eV)
20-Ca-40

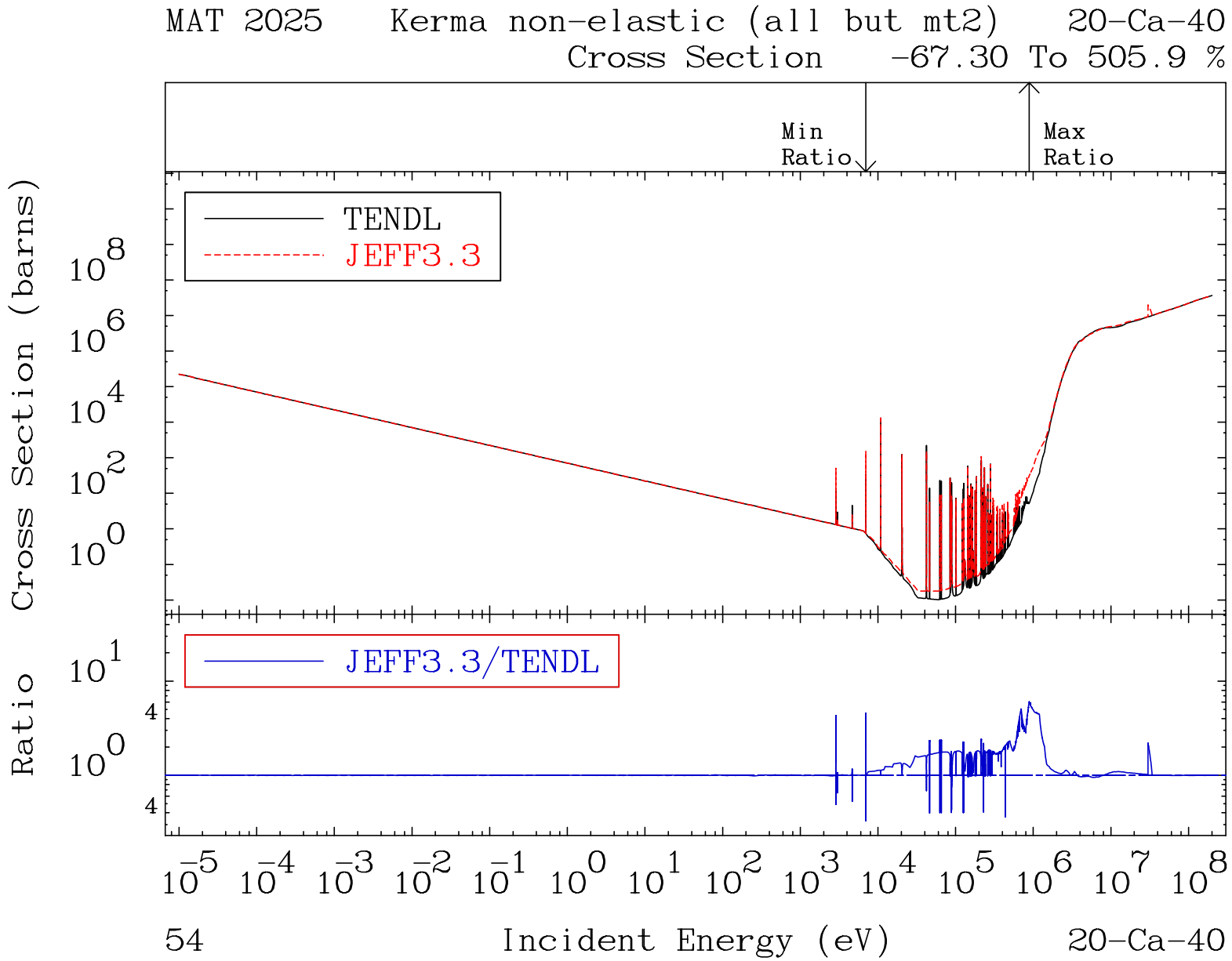

MAT 2025
Tritium Production
Cross Section
20-Ca-40
-0.380 To 33.97 %
Max Ratio
Min Ratio
TENDL Threshold 13.250 MeV
JEFF3.3 Threshold 13.250 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
100
80
60
40
20
0
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
49
Incident Energy (eV)
20-Ca-40

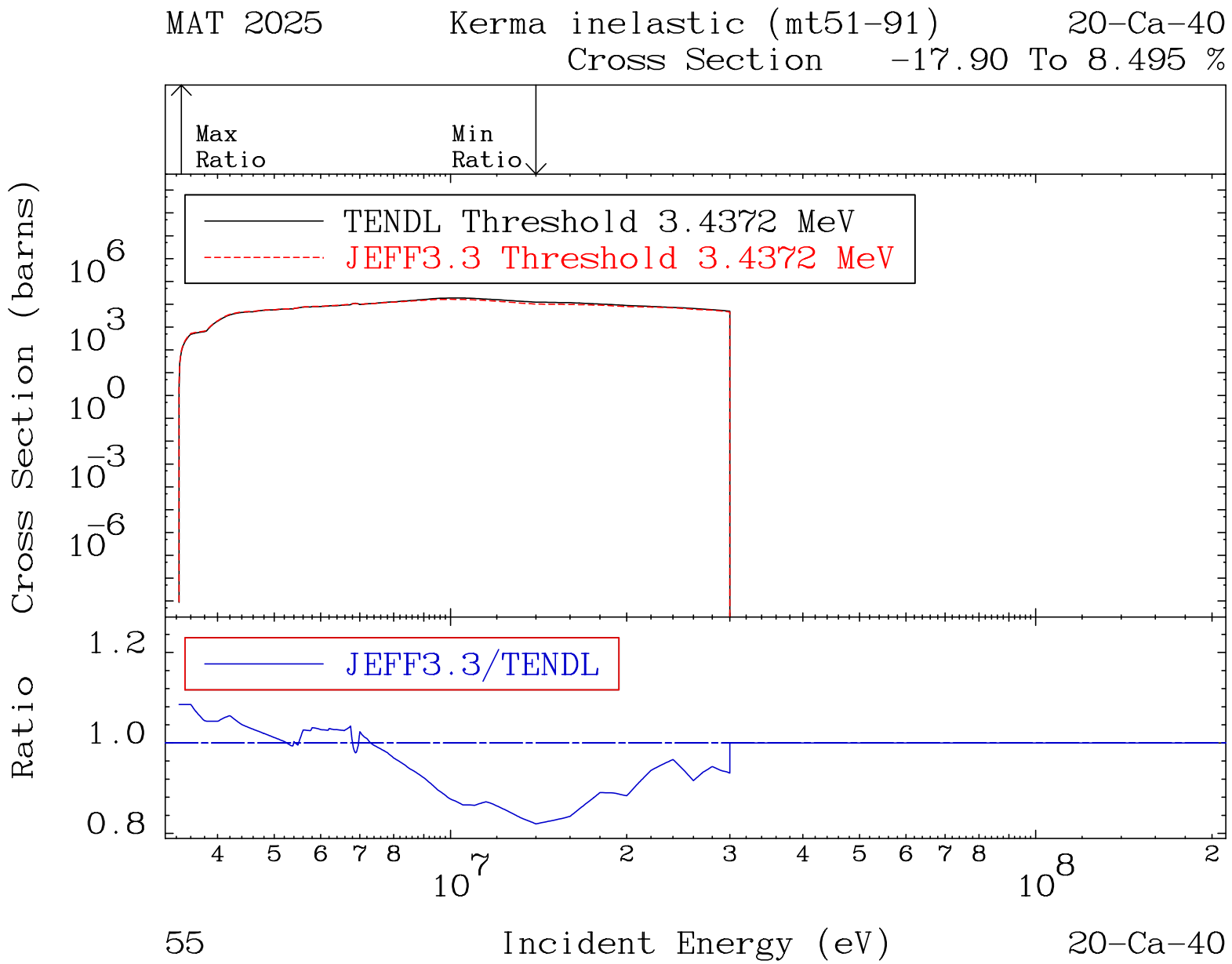

MAT 2025
He-3 Production
Cross Section
20-Ca-40
-3.796 To 25.06 %
Min Ratio
Max Ratio
TENDL Threshold 7.1679 MeV
JEFF3.3 Threshold 7.1679 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
250
200
150
100
50
0
1.4
1.2
1.0
7 8 10^7 2 3 4 5 6 7 8 10^8 2
50
Incident Energy (eV)
20-Ca-40

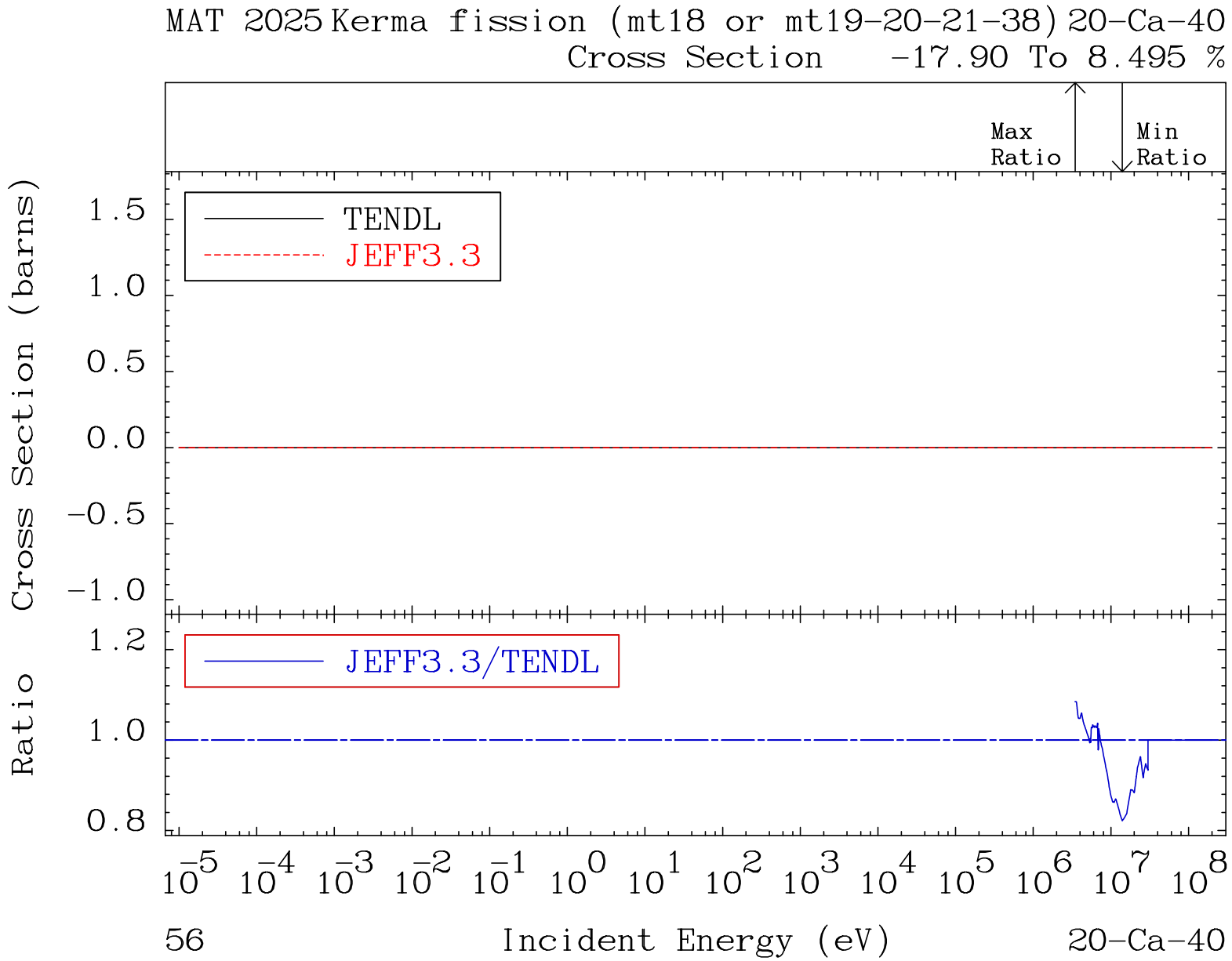

MAT 2025
He-4 Production
Cross Section
20-Ca-40
-3.362 To 175.5 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
Cross Section (barns)
10^0
10^-2
10^-4
10^-6
JEFF3.3/TENDL
Ratio
3.0
2.0
1.0
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
51
Incident Energy (eV)
20-Ca-40

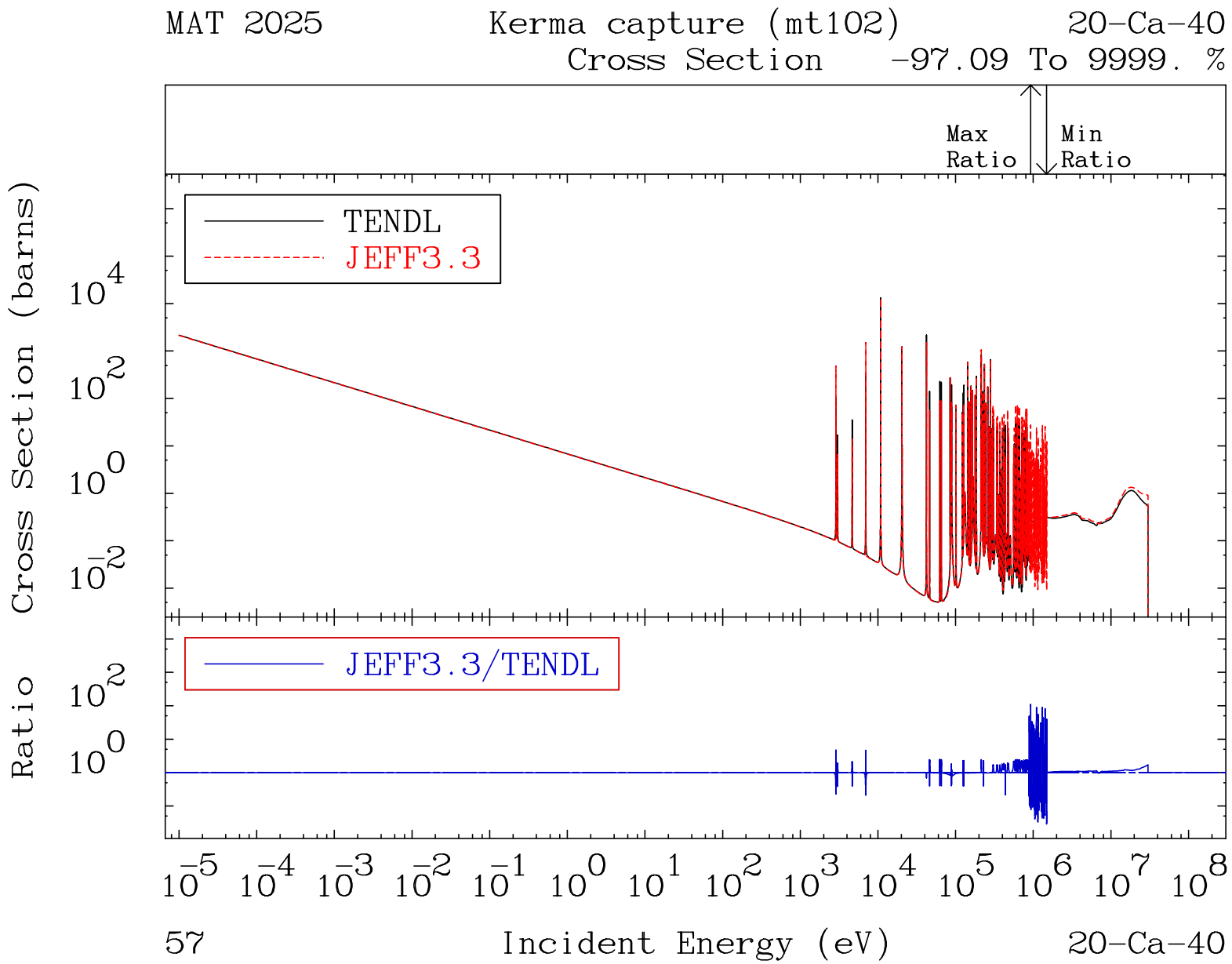

MAT 2025
Kerma total (eV-barns)
20-Ca-40
Cross Section -97.96 To 500.5 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
52
20-Ca-40

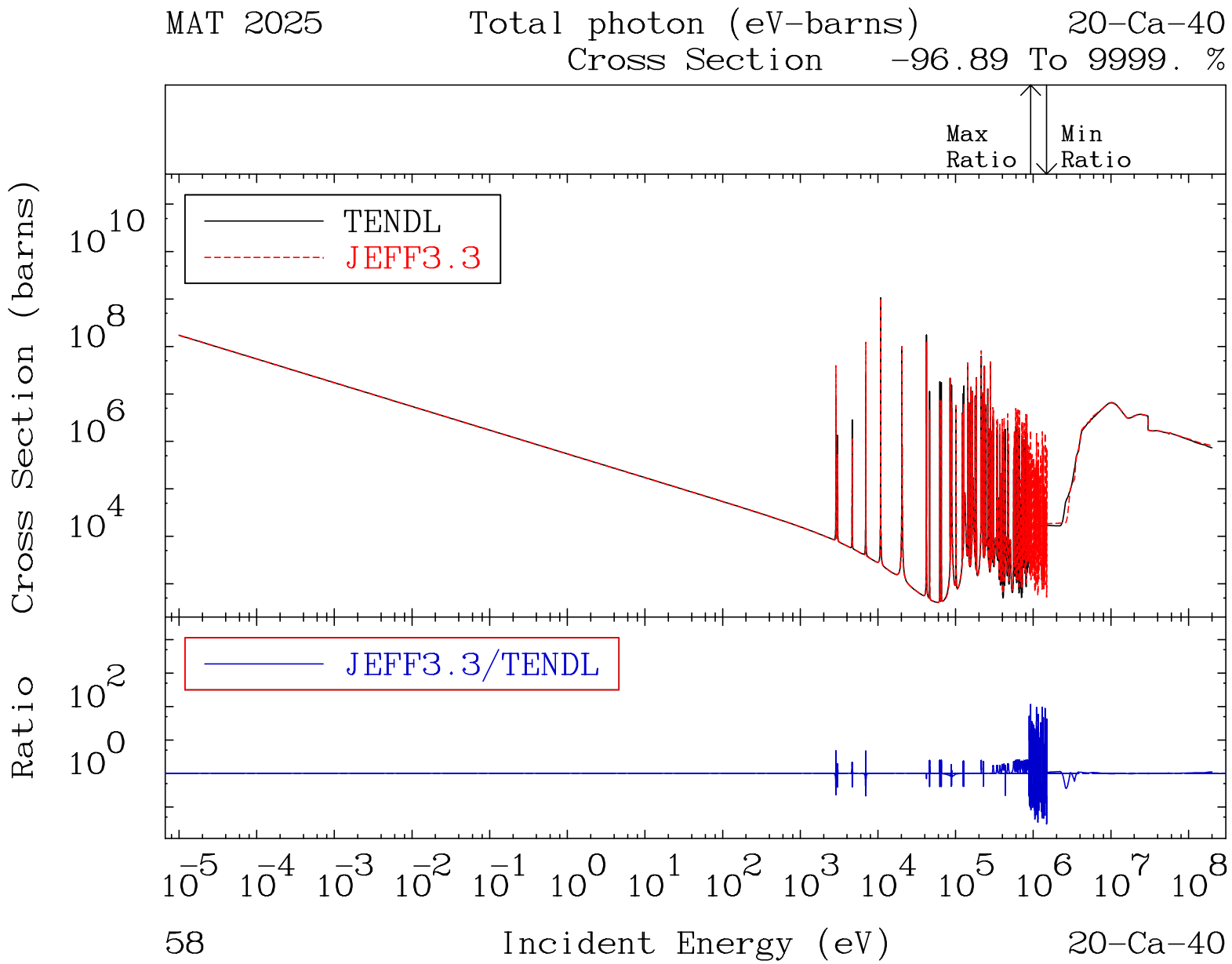

MAT 2025
Kerma elastic
Cross Section
20-Ca-40
-99.33 To 500.5 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
53
20-Ca-40

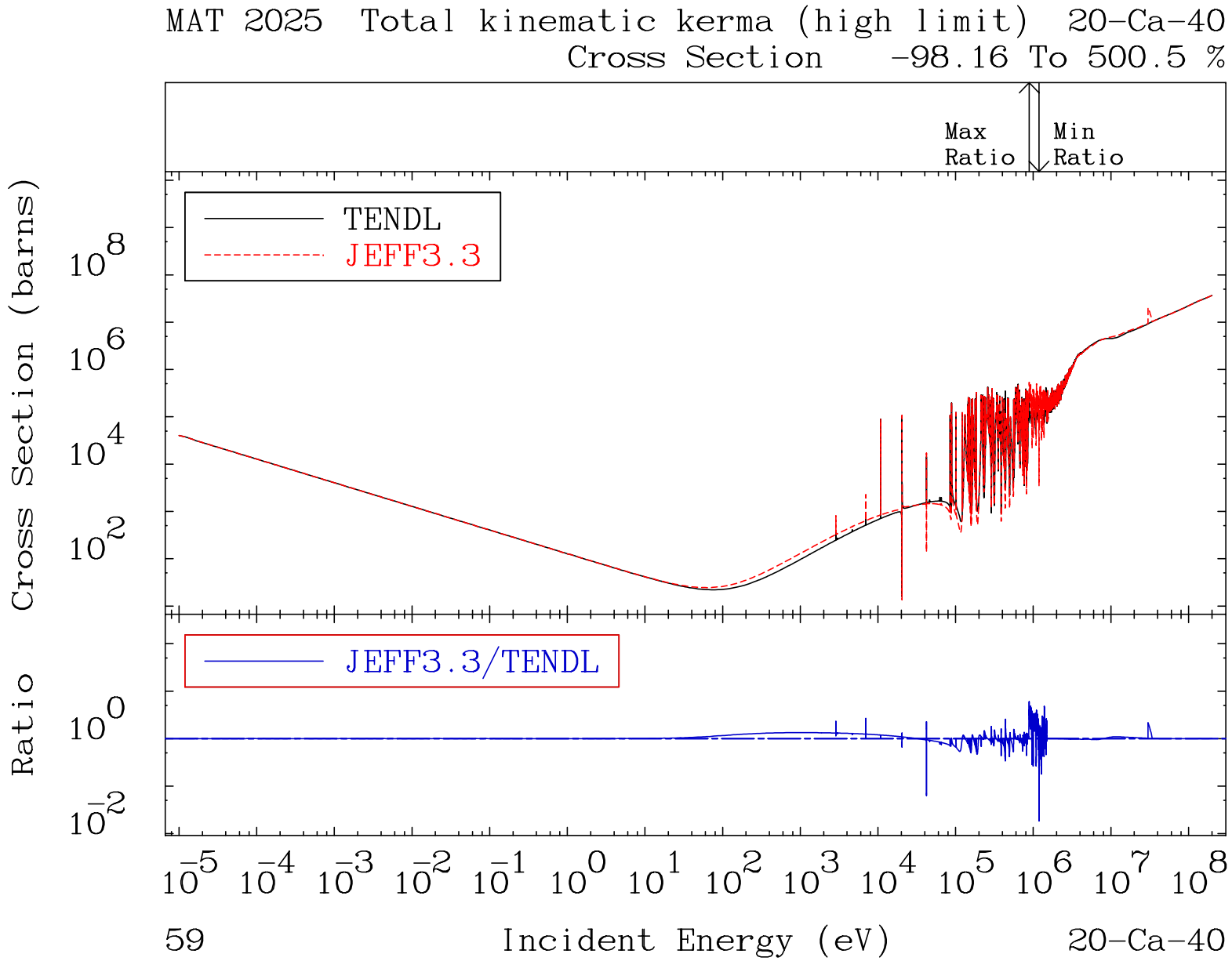

MAT 2025 Kerma non-elastic (all but mt2) 20-Ca-40
Cross Section -67.30 To 505.9 %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
54
20-Ca-40

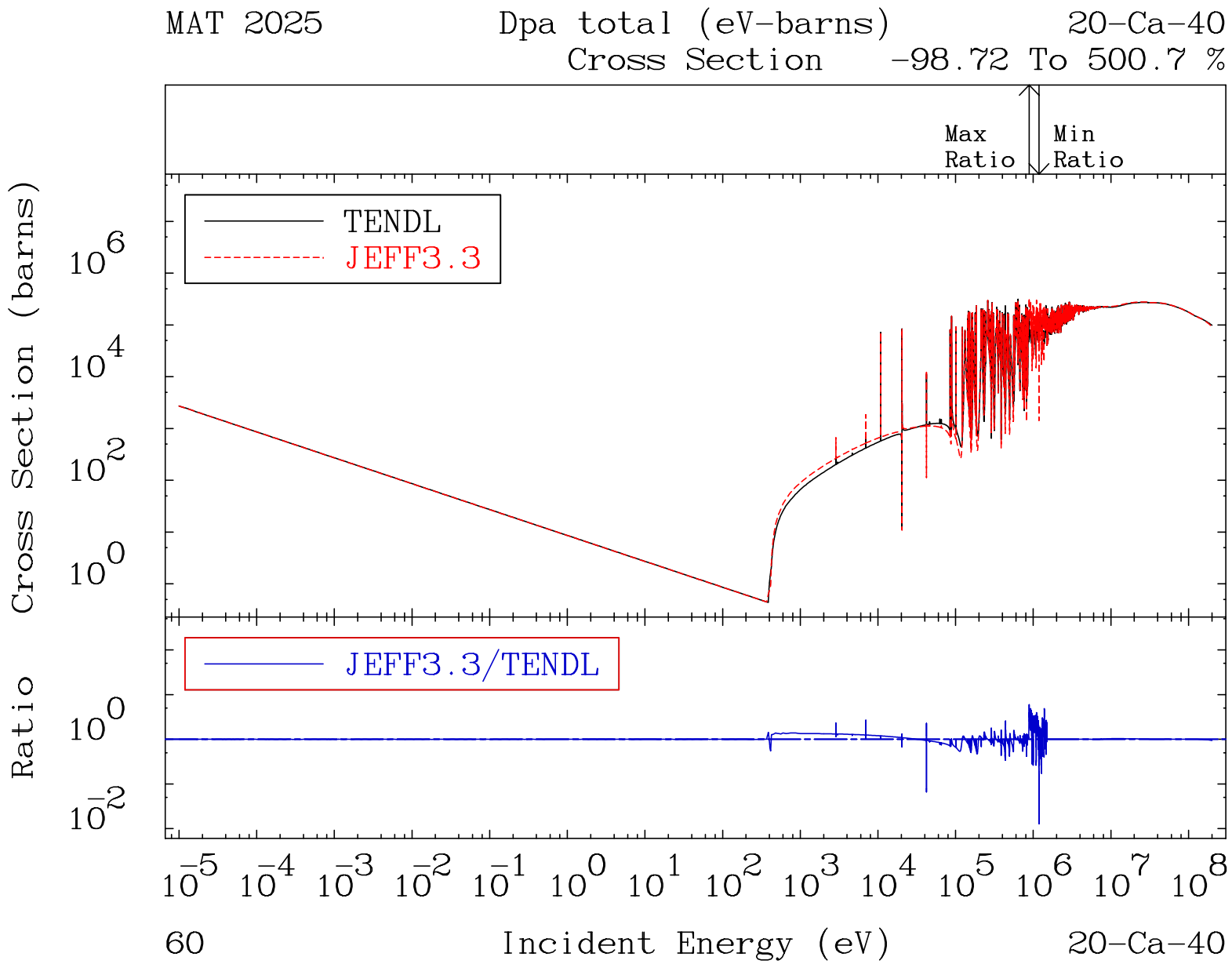

MAT 2025
Kerma inelastic (mt51-91)
20-Ca-40
Cross Section
-17.90 To 8.495 %
Max Ratio
Min Ratio
TENDL Threshold 3.4372 MeV
JEFF3.3 Threshold 3.4372 MeV
Cross Section (barns)
JEFF3.3/TENDL
Ratio
Incident Energy (eV)
55
20-Ca-40

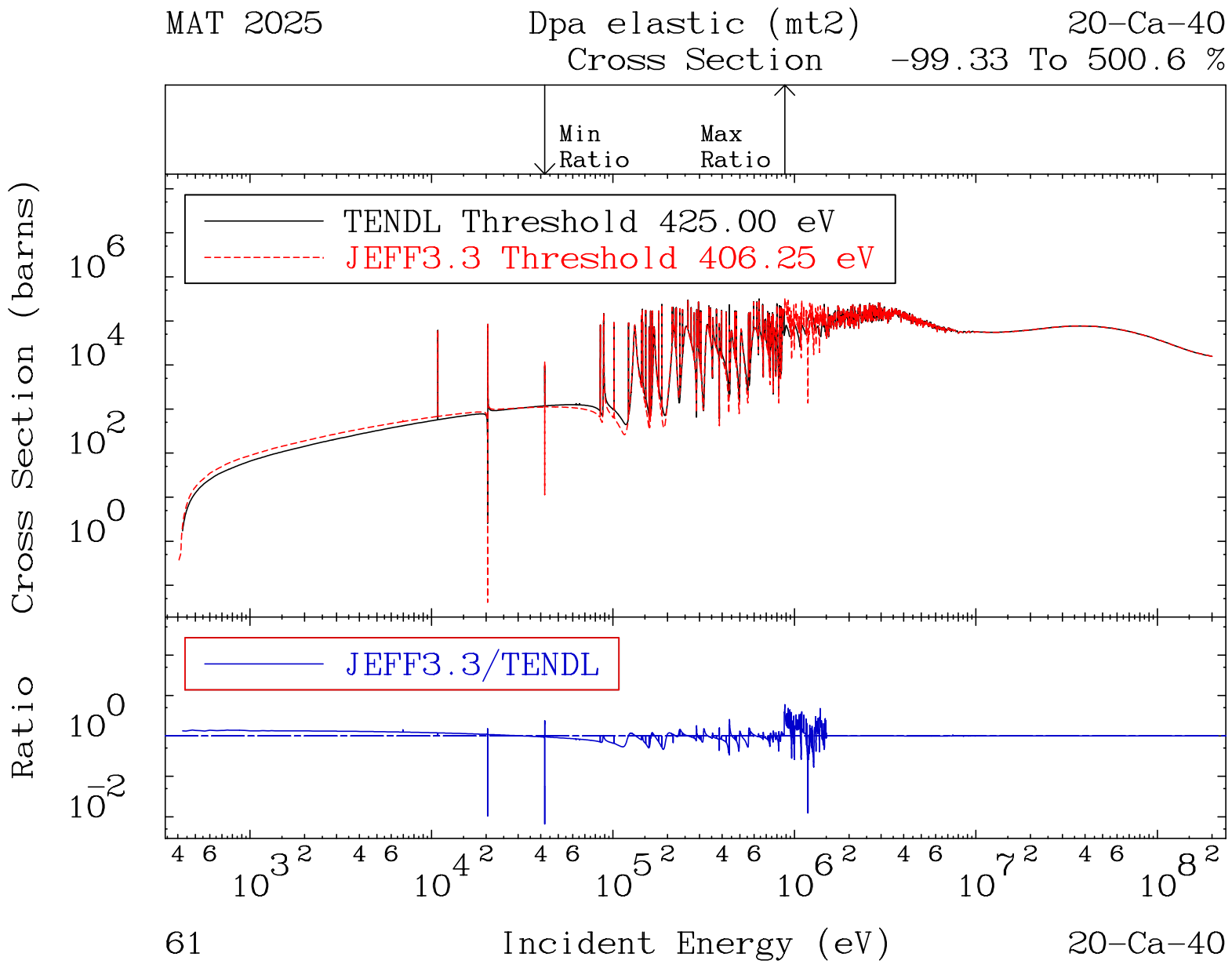

MAT 2025 Kerma fission (mt18 or mt19-20-21-38) 20-Ca-40
Cross Section -17.90 To 8.495 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
1.5
1.0
0.5
0.0
-0.5
-1.0
1.2
1.0
0.8
10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8
Incident Energy (eV)
56
20-Ca-40

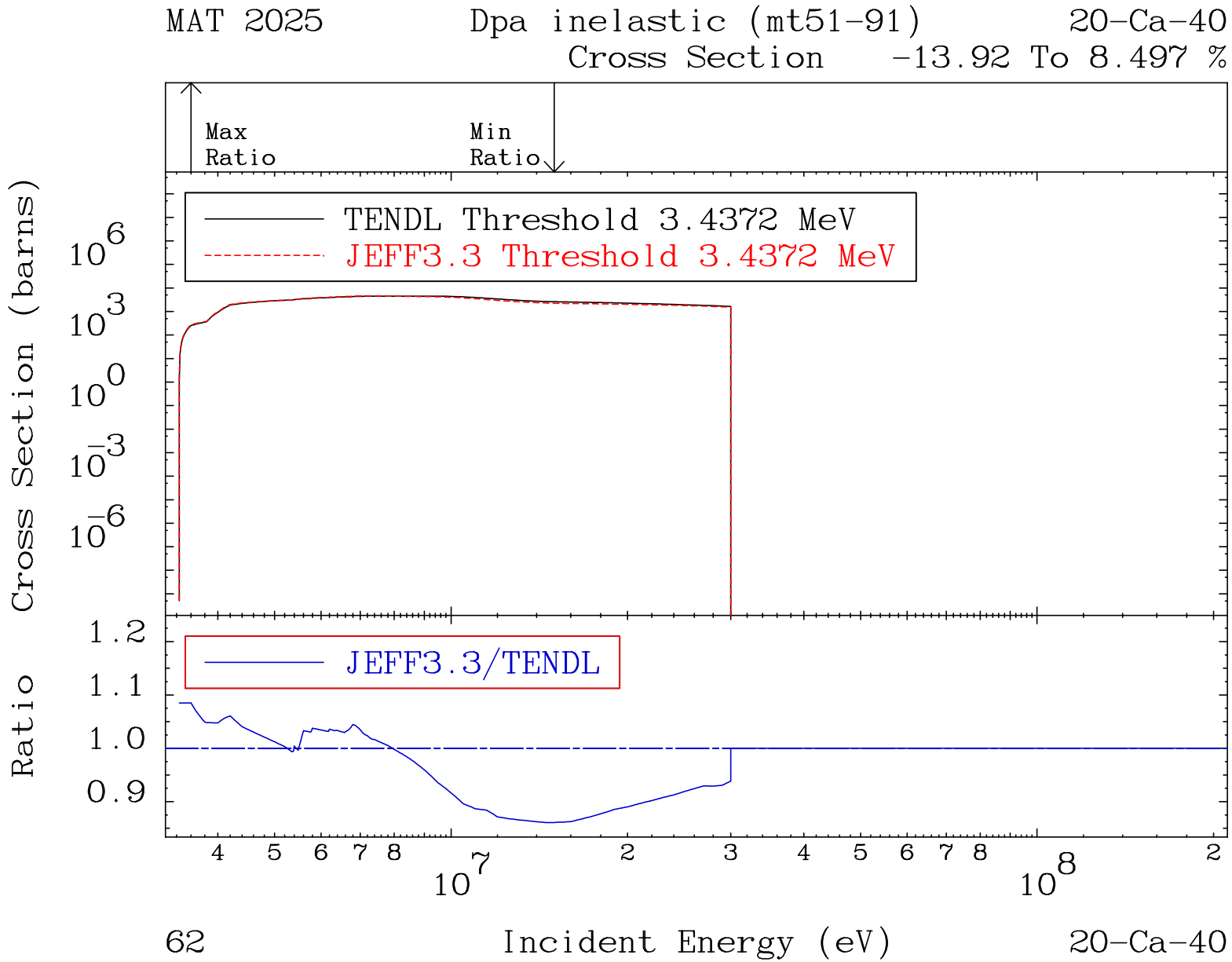

MAT 2025
Kerma capture (mt102)
20-Ca-40
Cross Section -97.09 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
57
20-Ca-40

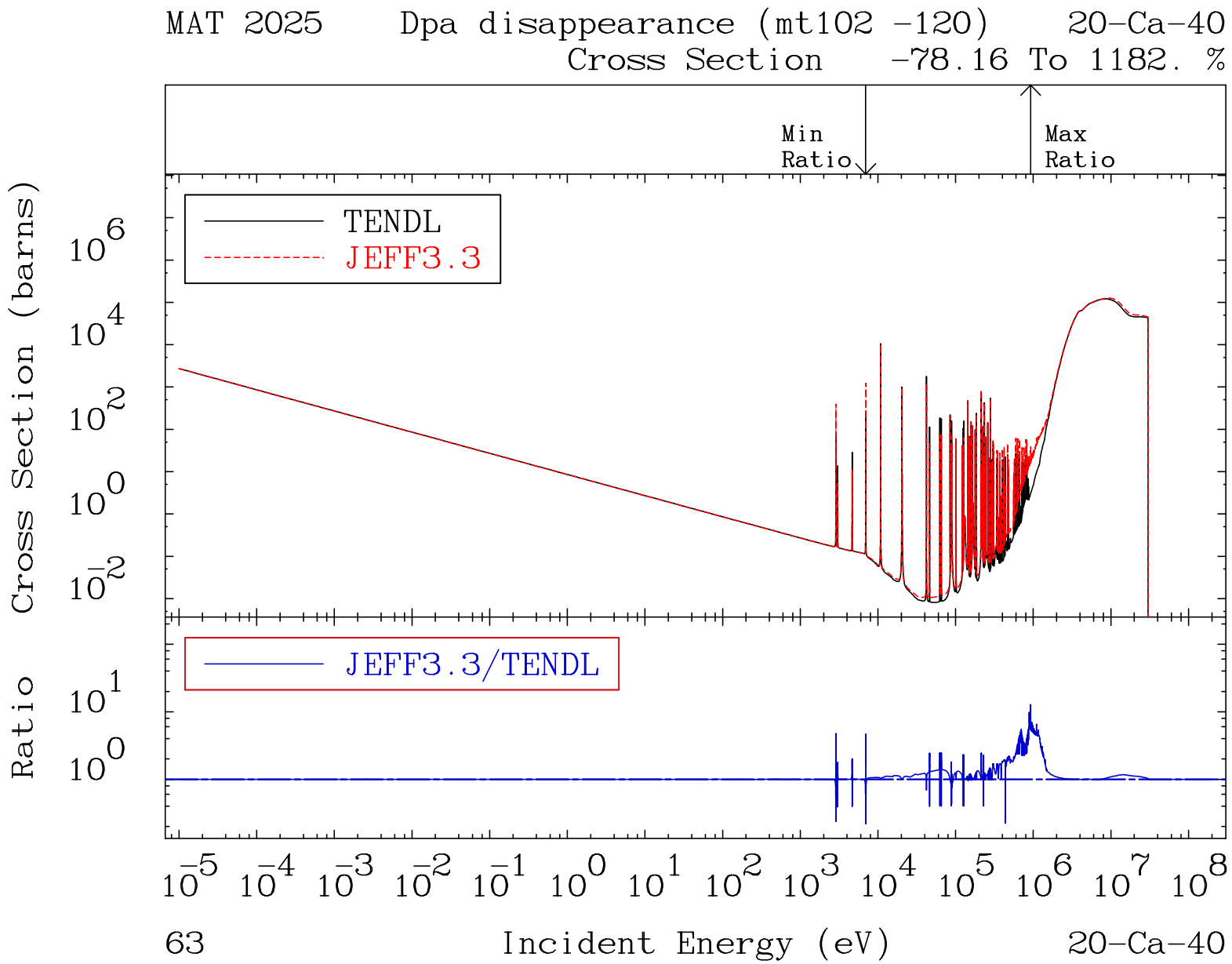

MAT 2025
Total photon (eV-barns)
20-Ca-40
Cross Section -96.89 To 9999. %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
58
20-Ca-40

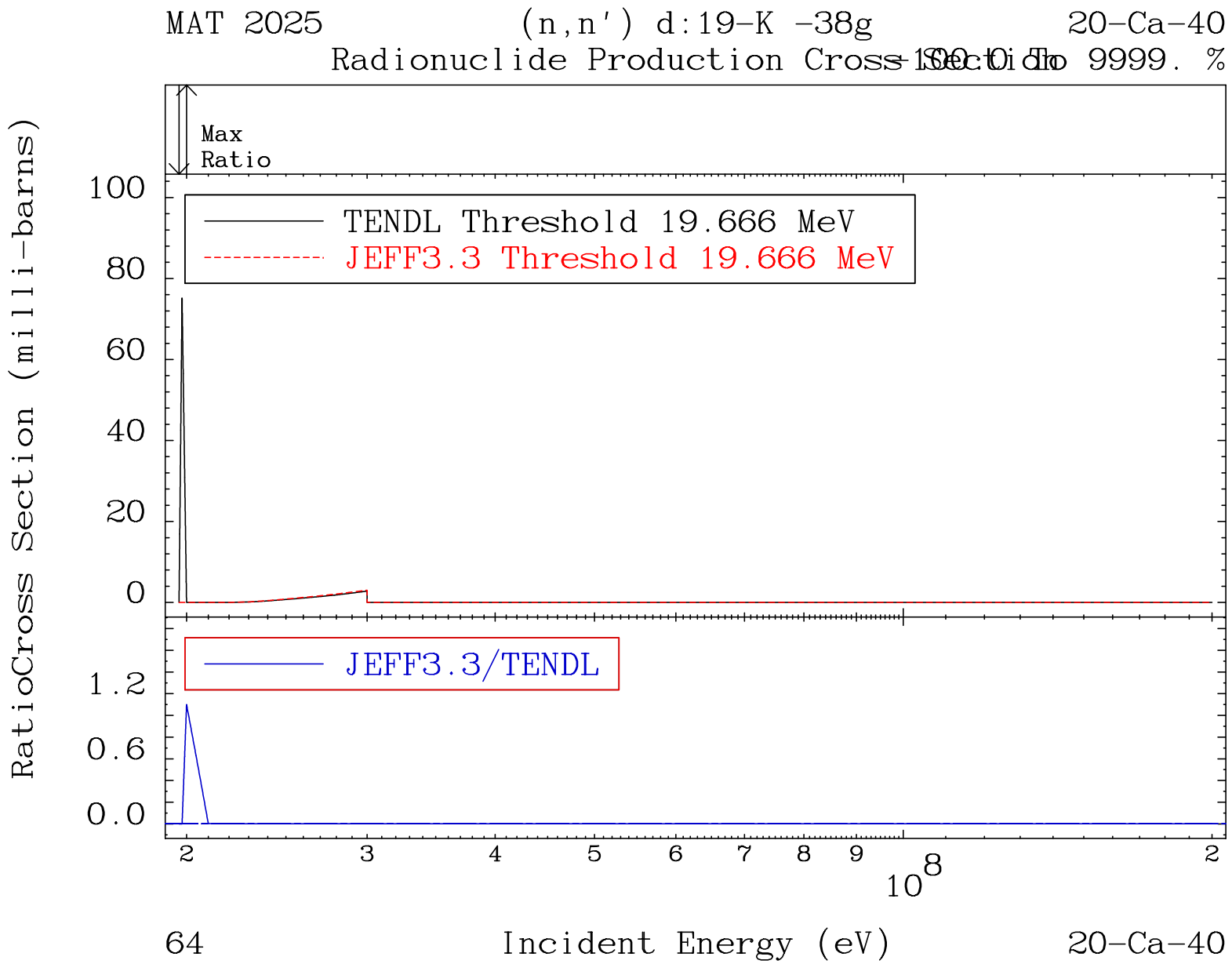

MAT 2025 Total kinematic kerma (high limit) 20-Ca-40
Cross Section -98.16 To 500.5 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
59
20-Ca-40

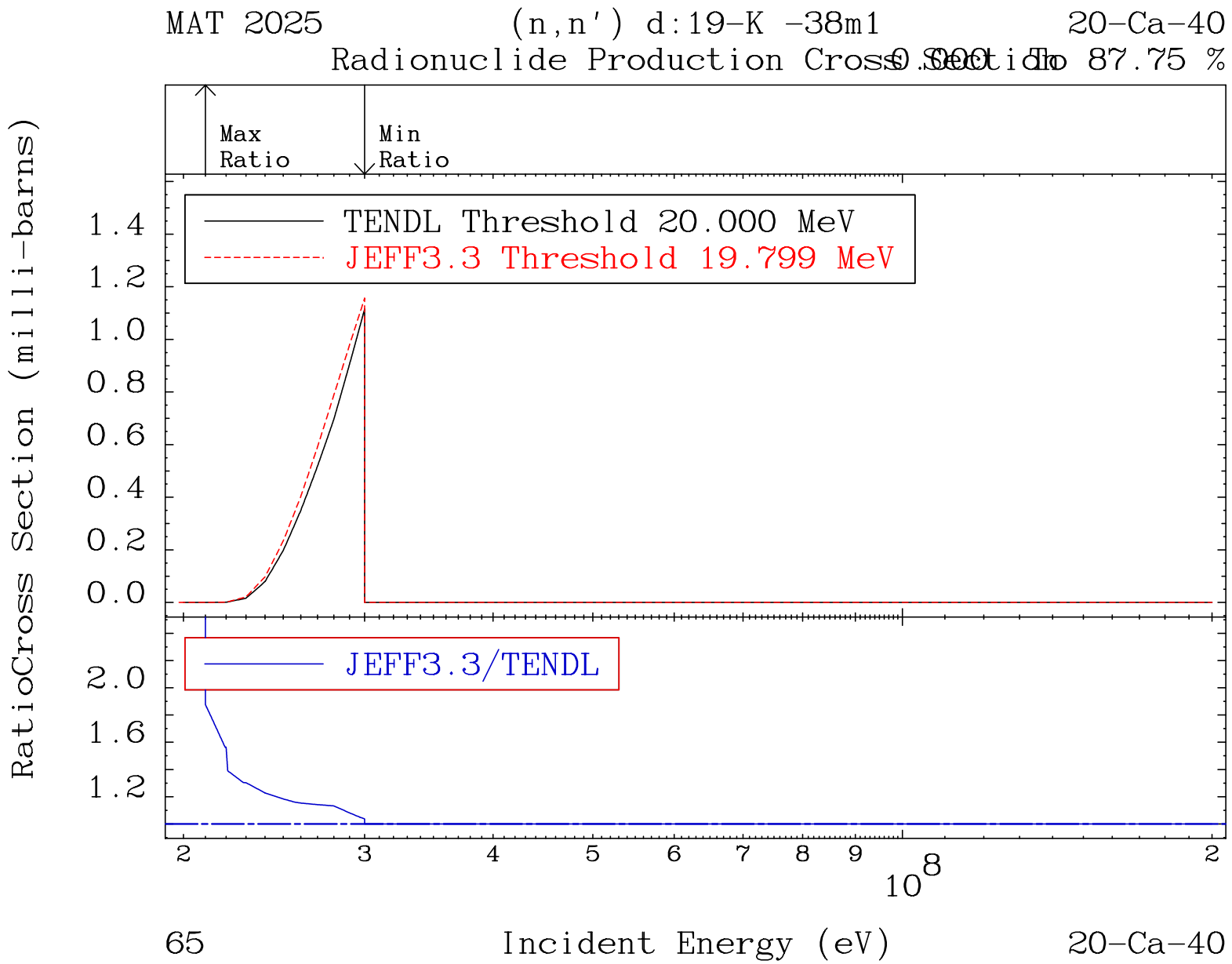

MAT 2025
Dpa total (eV-barns)
20-Ca-40
Cross Section -98.72 To 500.7 %
Max Ratio
Min Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
60
20-Ca-40

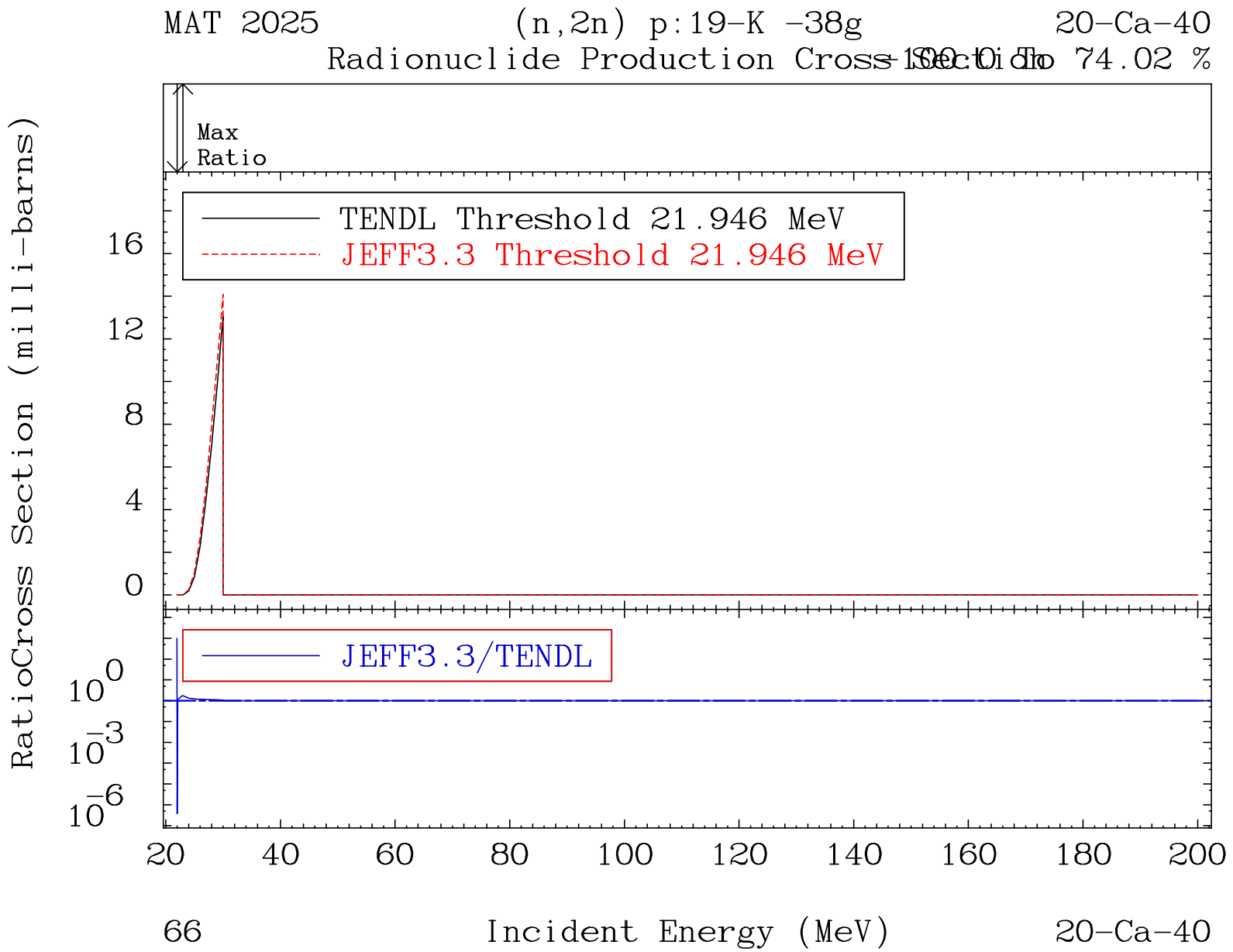

MAT 2025
Dpa elastic (mt2)
Cross Section
20-Ca-40
-99.33 To 500.6 %
Min Ratio
Max Ratio
TENDL Threshold 425.00 eV
JEFF3.3 Threshold 406.25 eV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
61
20-Ca-40

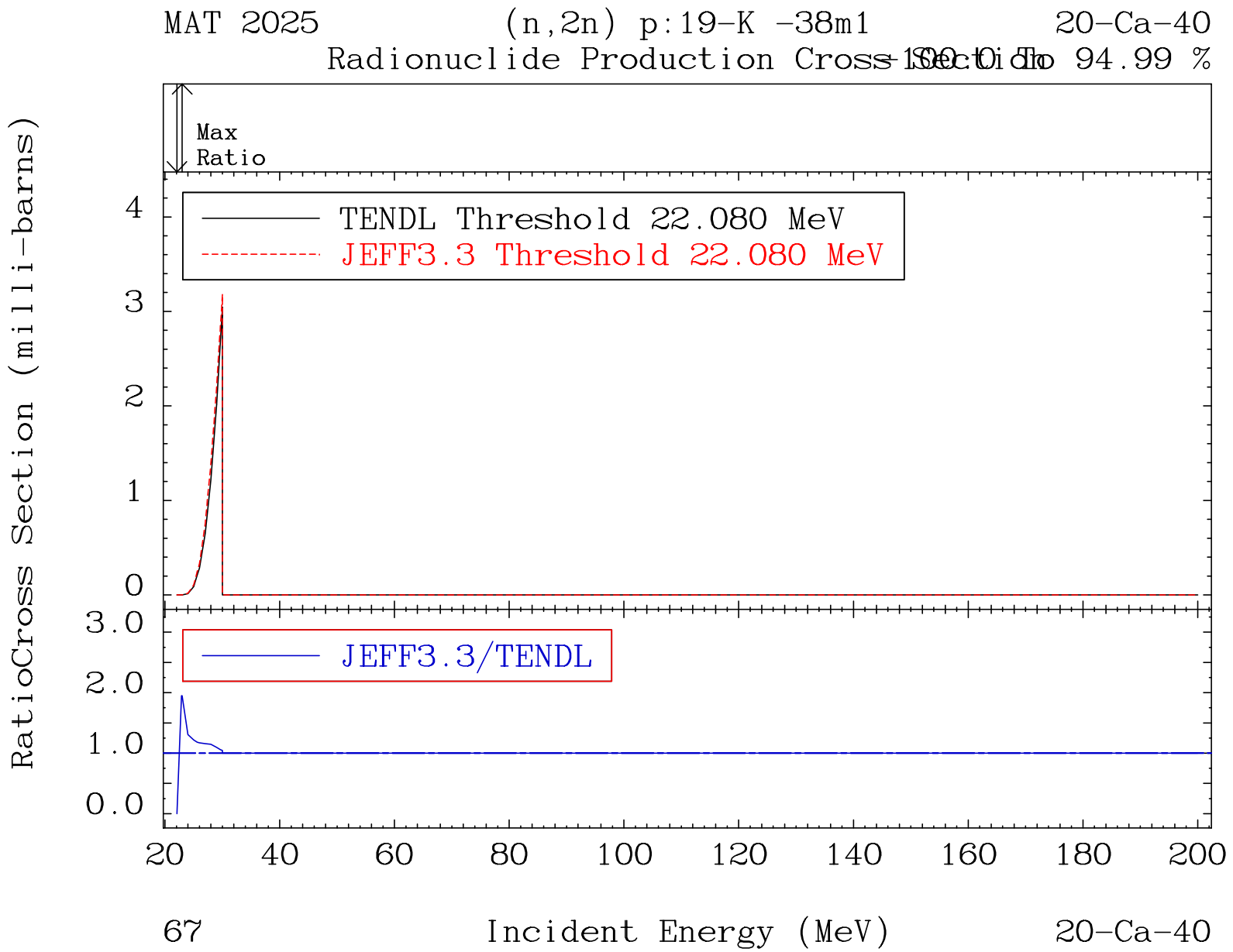

MAT 2025
Dpa inelastic (mt51-91)
20-Ca-40
Cross Section -13.92 To 8.497 %
Max Ratio
Min Ratio
TENDL Threshold 3.4372 MeV
JEFF3.3 Threshold 3.4372 MeV
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
62
20-Ca-40

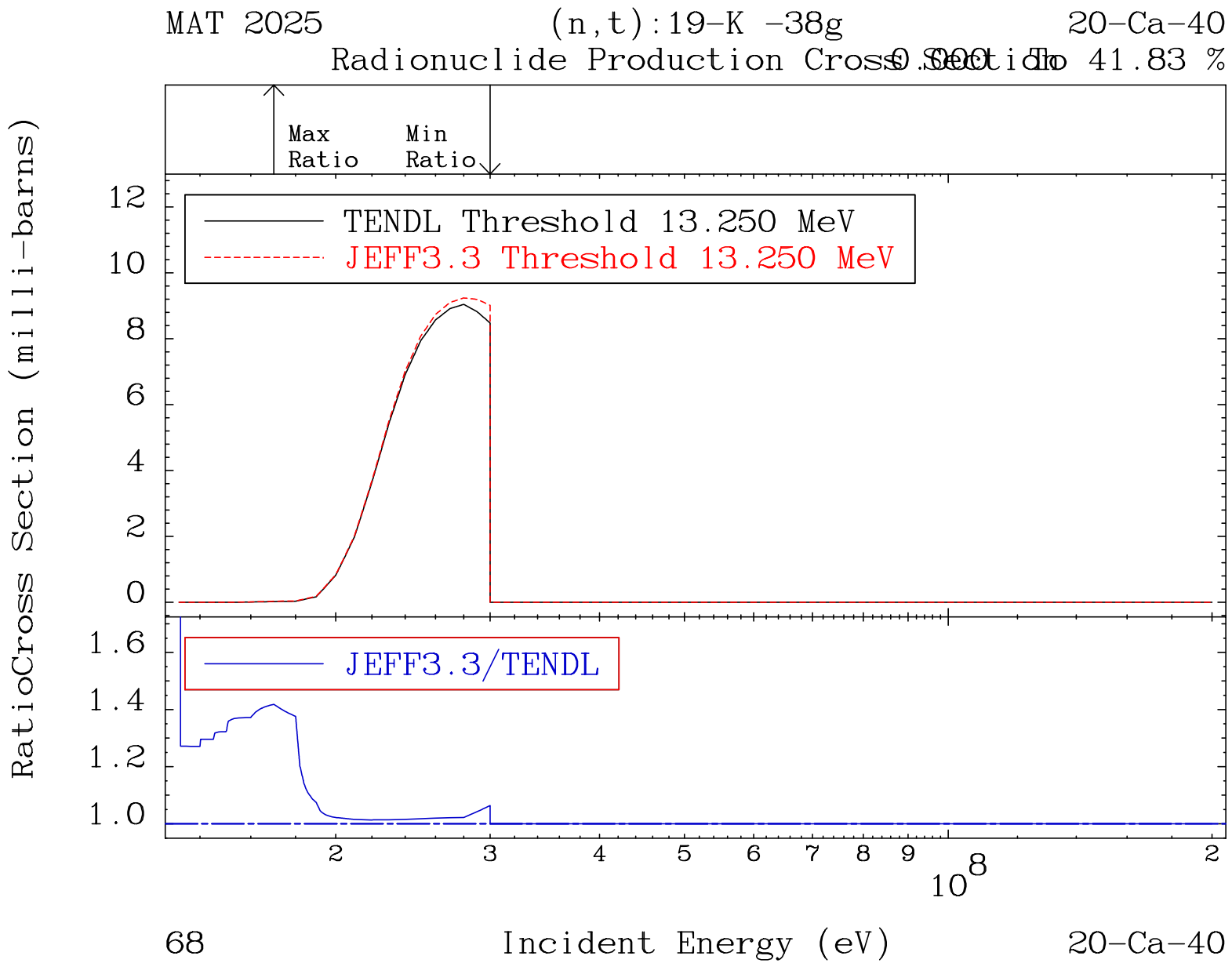

MAT 2025 Dpa disappearance (mt102 -120) 20-Ca-40
Cross Section -78.16 To 1182. %
Min Ratio
Max Ratio
TENDL
JEFF3.3
JEFF3.3/TENDL
Cross Section (barns)
Ratio
Incident Energy (eV)
63
20-Ca-40

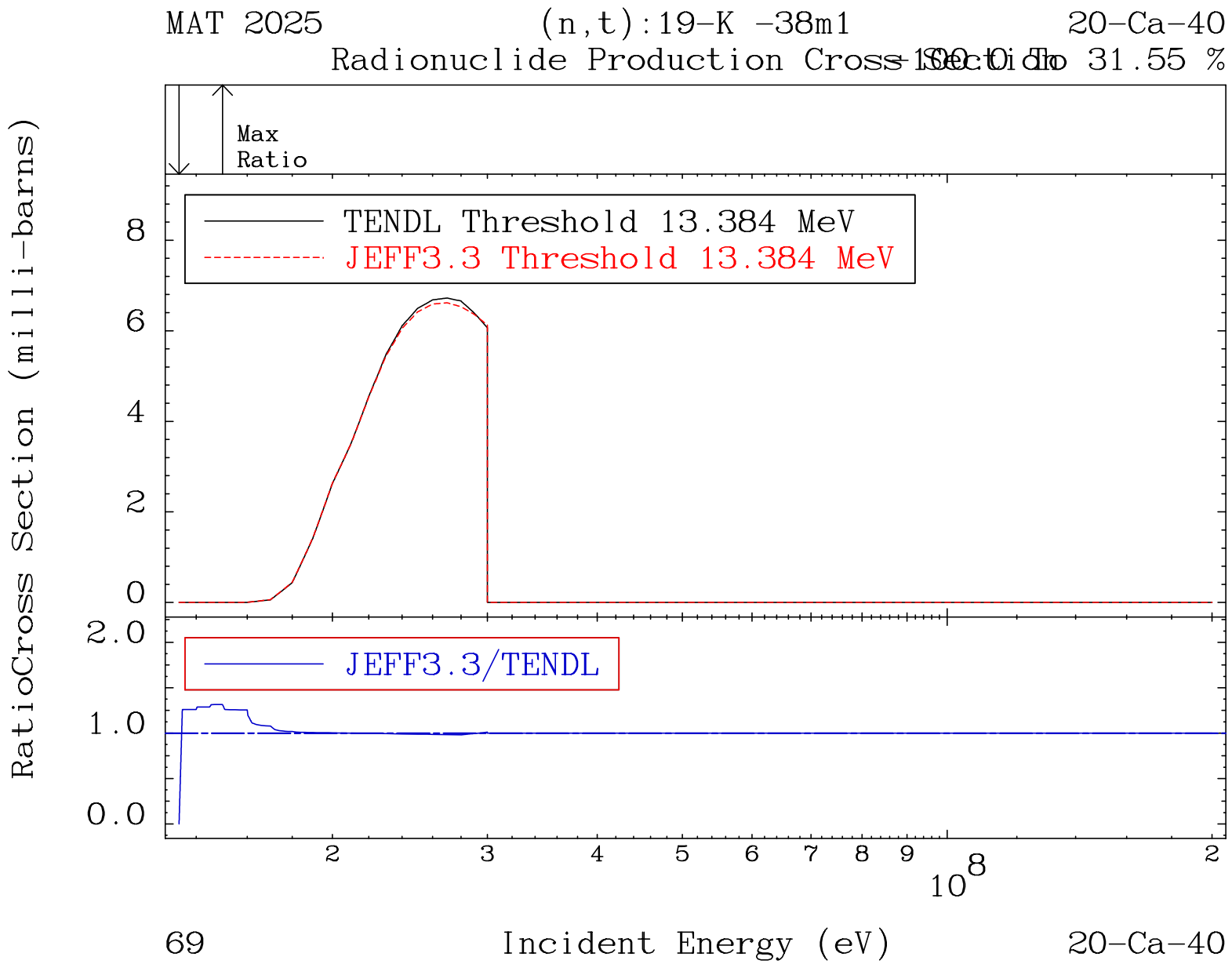

MAT 2025
(n,n') d:19-K -38g
20-Ca-40
Radionuclide Production Cross Section To 9999. %
Max
Ratio
100
80
60
40
20
0
TENDL Threshold 19.666 MeV
JEFF3.3 Threshold 19.666 MeV
1.2
0.6
0.0
JEFF3.3/TENDL
2
3
4
5
6
7
8
9
10^8
2
RatioCross Section (milli-barns)
64
Incident Energy (eV)
20-Ca-40


MAT 2025
(n,n') d:19-K -38m1
20-Ca-40
Radionuclide Production Cross Section
0.000 To 87.75 %
Max Ratio
Min Ratio
TENDL Threshold 20.000 MeV
JEFF3.3 Threshold 19.799 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
2.0
1.6
1.2
2
3
4
5
6
7
8
9
10^8
2
65
Incident Energy (eV)
20-Ca-40


MAT 2025
(n,2n) p:19-K -38g
20-Ca-40
Radionuclide Production Cross Section To 74.02 %
Max
Ratio
TENDL Threshold 21.946 MeV
JEFF3.3 Threshold 21.946 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
16
12
8
4
0
10^0
10^-3
10^-6
20
40
60
80
100
120
140
160
180
200
66
Incident Energy (MeV)
20-Ca-40


MAT 2025
(n,2n) p:19-K -38m1
20-Ca-40
Radionuclide Production Cross Section To 94.99 %
Max
Ratio
TENDL Threshold 22.080 MeV
JEFF3.3 Threshold 22.080 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (MeV)
67
20-Ca-40


MAT 2025
(n,t):19-K -38g
20-Ca-40
Radionuclide Production Cross Section
0.000 To 41.83 %
Max Ratio
Min Ratio
TENDL Threshold 13.250 MeV
JEFF3.3 Threshold 13.250 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
12
10
8
6
4
2
0
1.6
1.4
1.2
1.0
2
3
4
5
6
7
8
9
10^8
2
68
Incident Energy (eV)
20-Ca-40


MAT 2025
(n,t):19-K -38m1
20-Ca-40
Radionuclide Production Cross Section To
Max
Ratio
TENDL Threshold 13.384 MeV
JEFF3.3 Threshold 13.384 MeV
JEFF3.3/TENDL
RatioCross Section (milli-barns)
Incident Energy (eV)
69
20-Ca-40