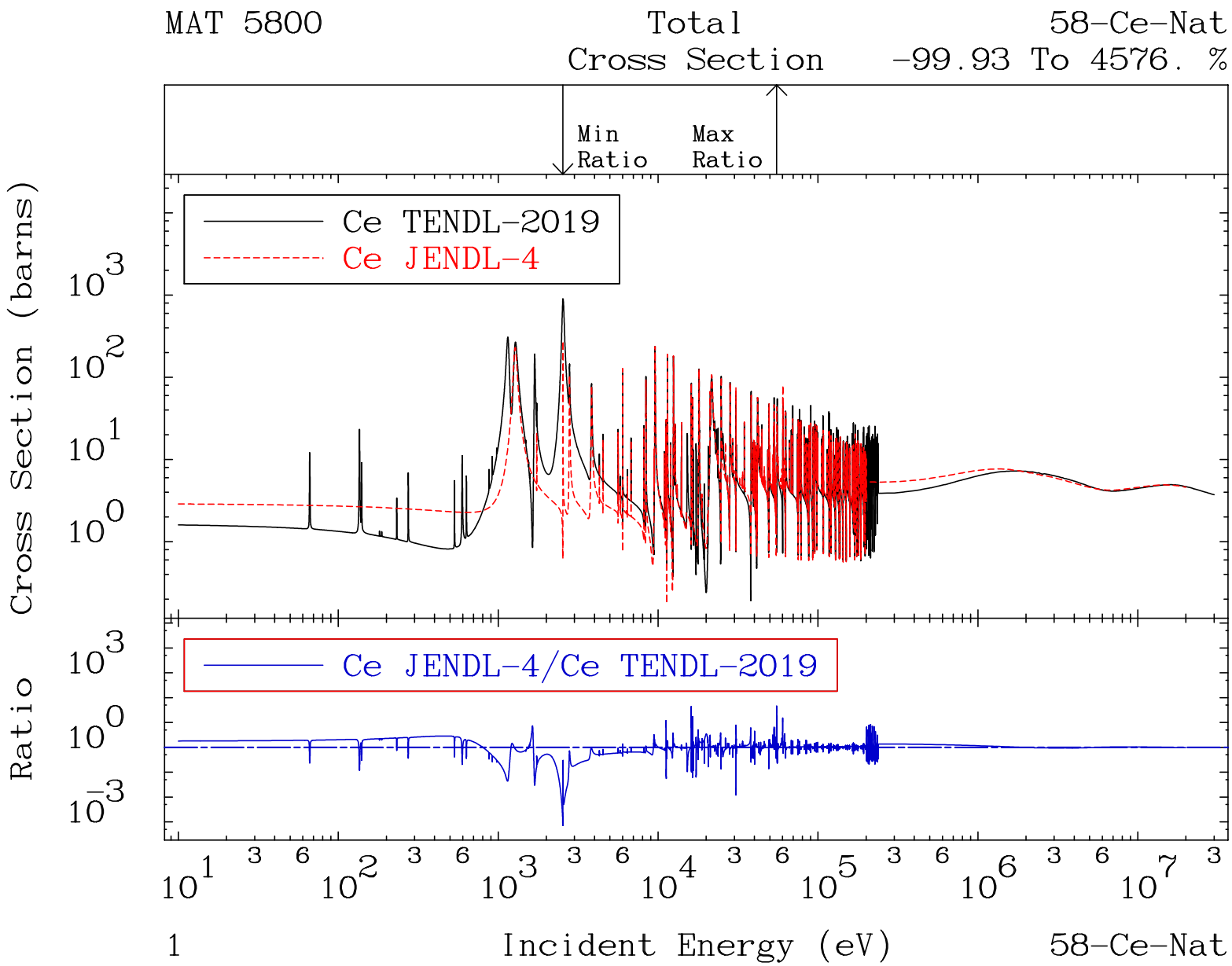
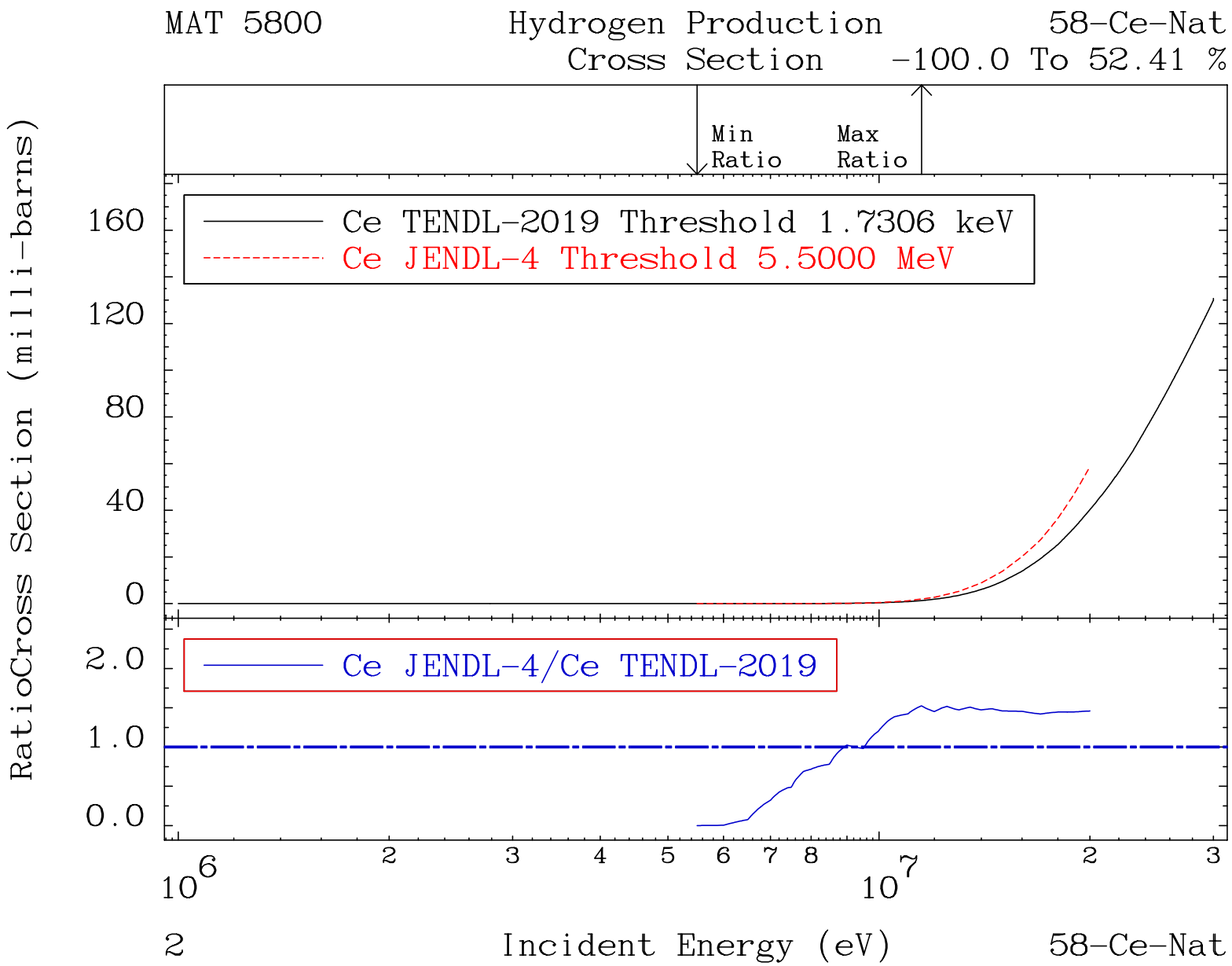
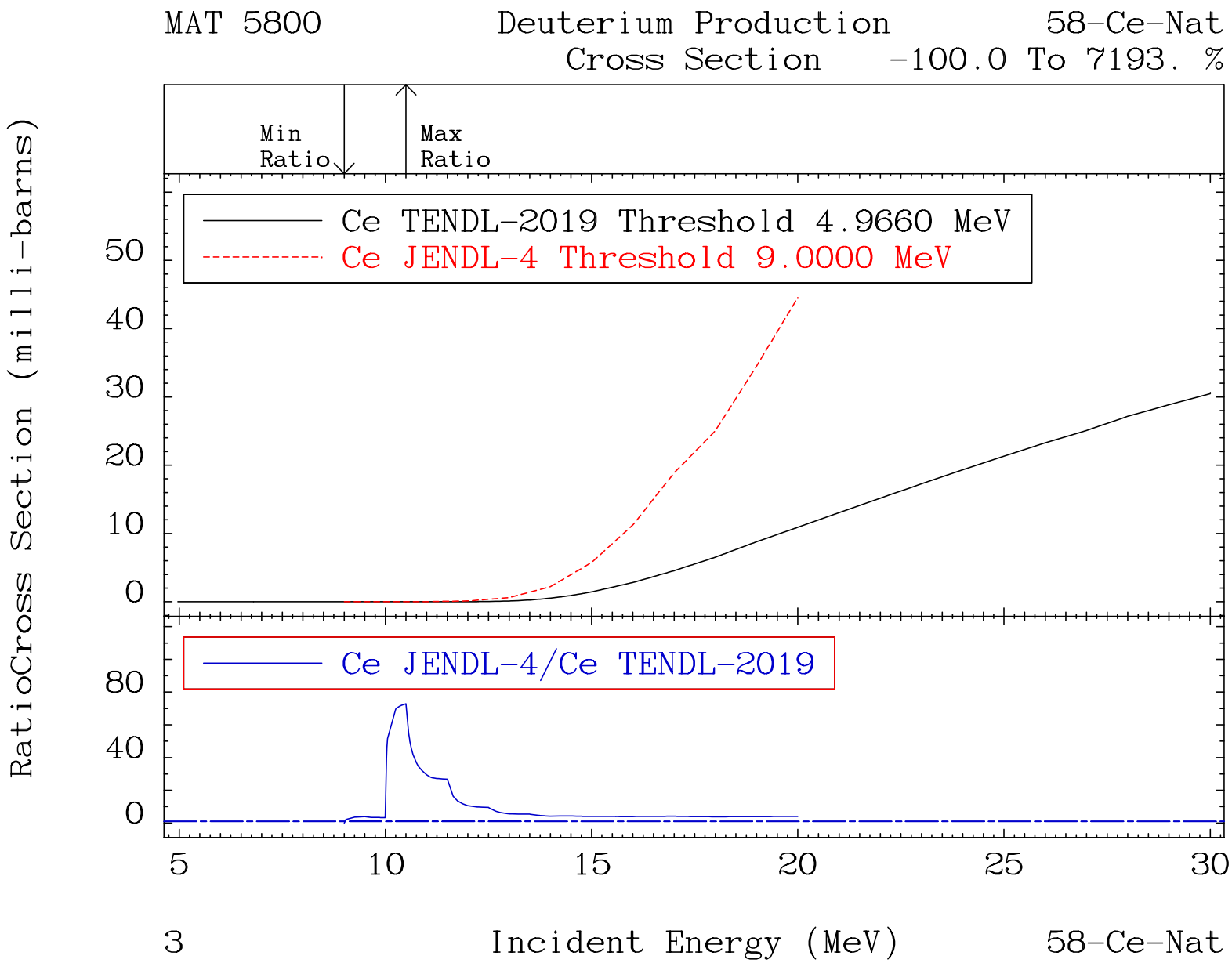
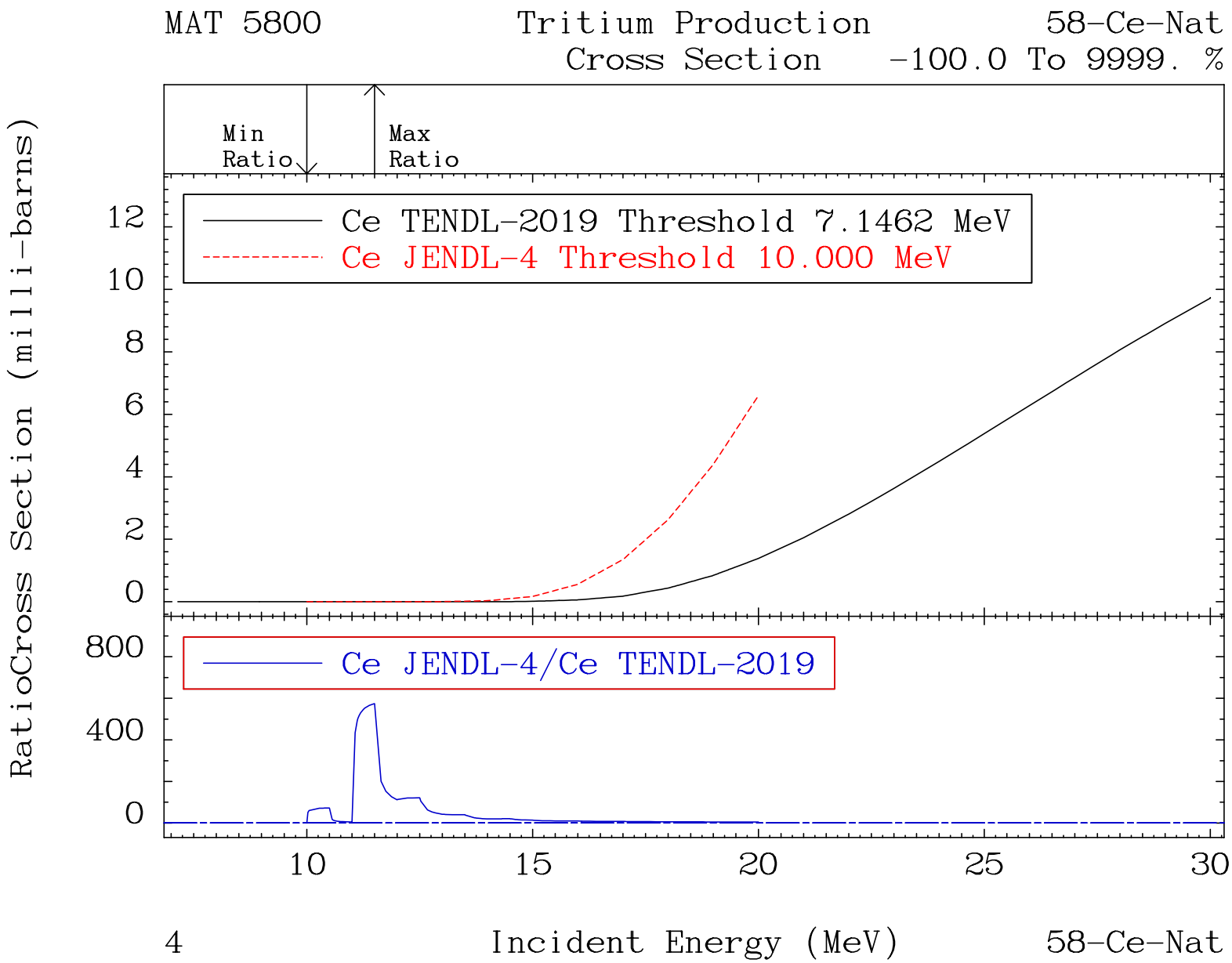
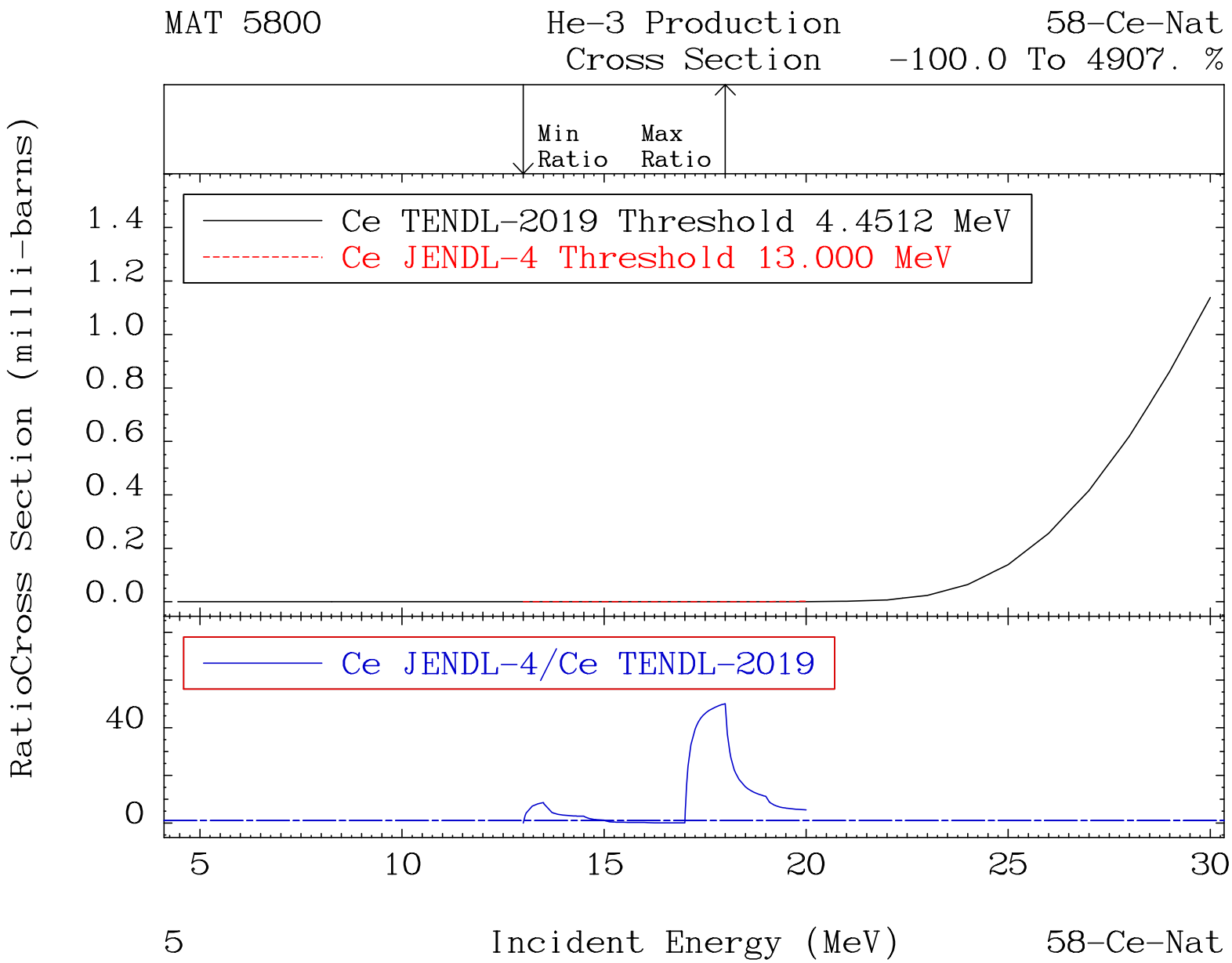
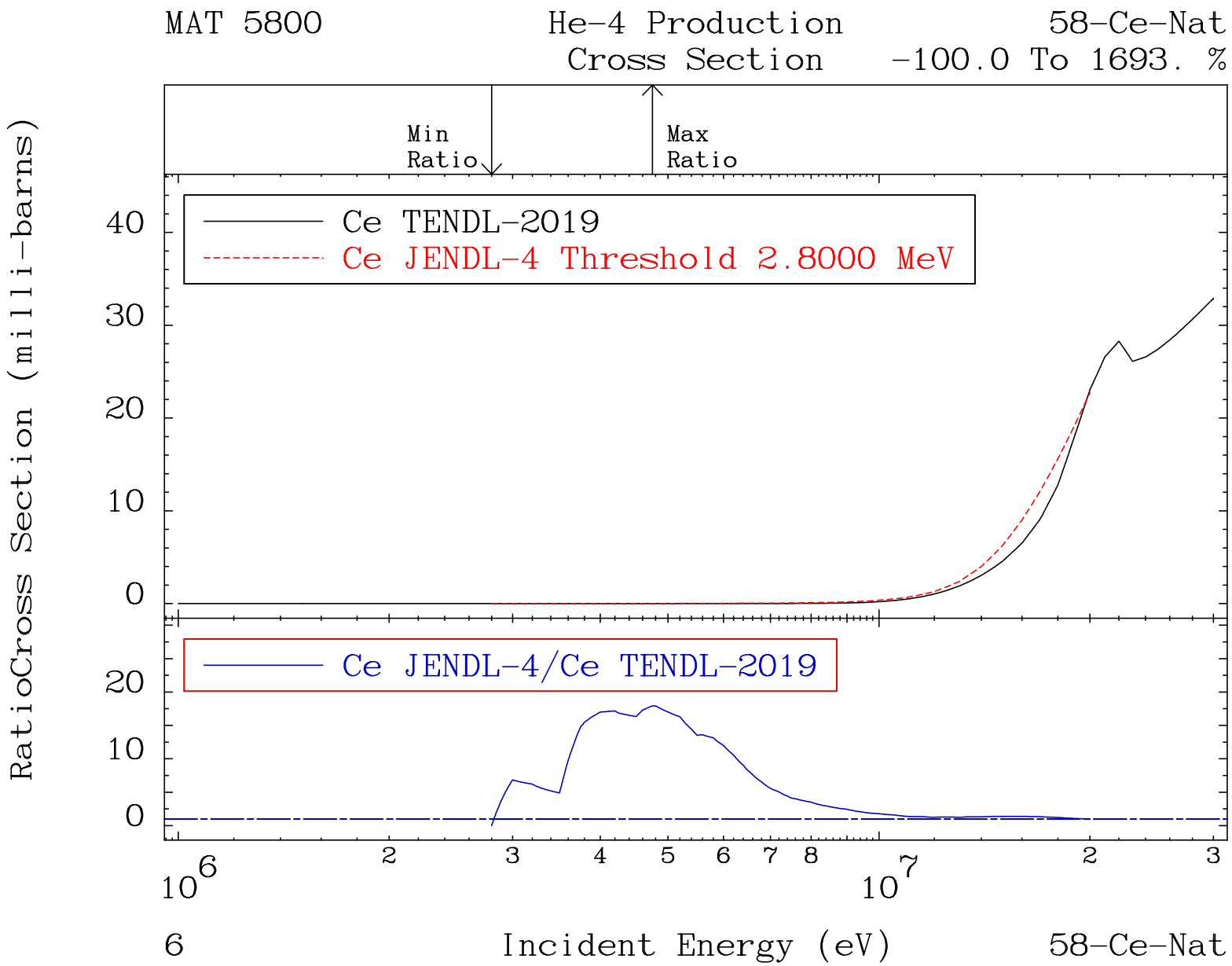

MAT 5800
Total
Cross Section
58-Ce-Nat
-99.93 To 4576. %
Min
Ratio
Max
Ratio
Ce TENDL-2019
Ce JENDL-4
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
1
58-Ce-Nat

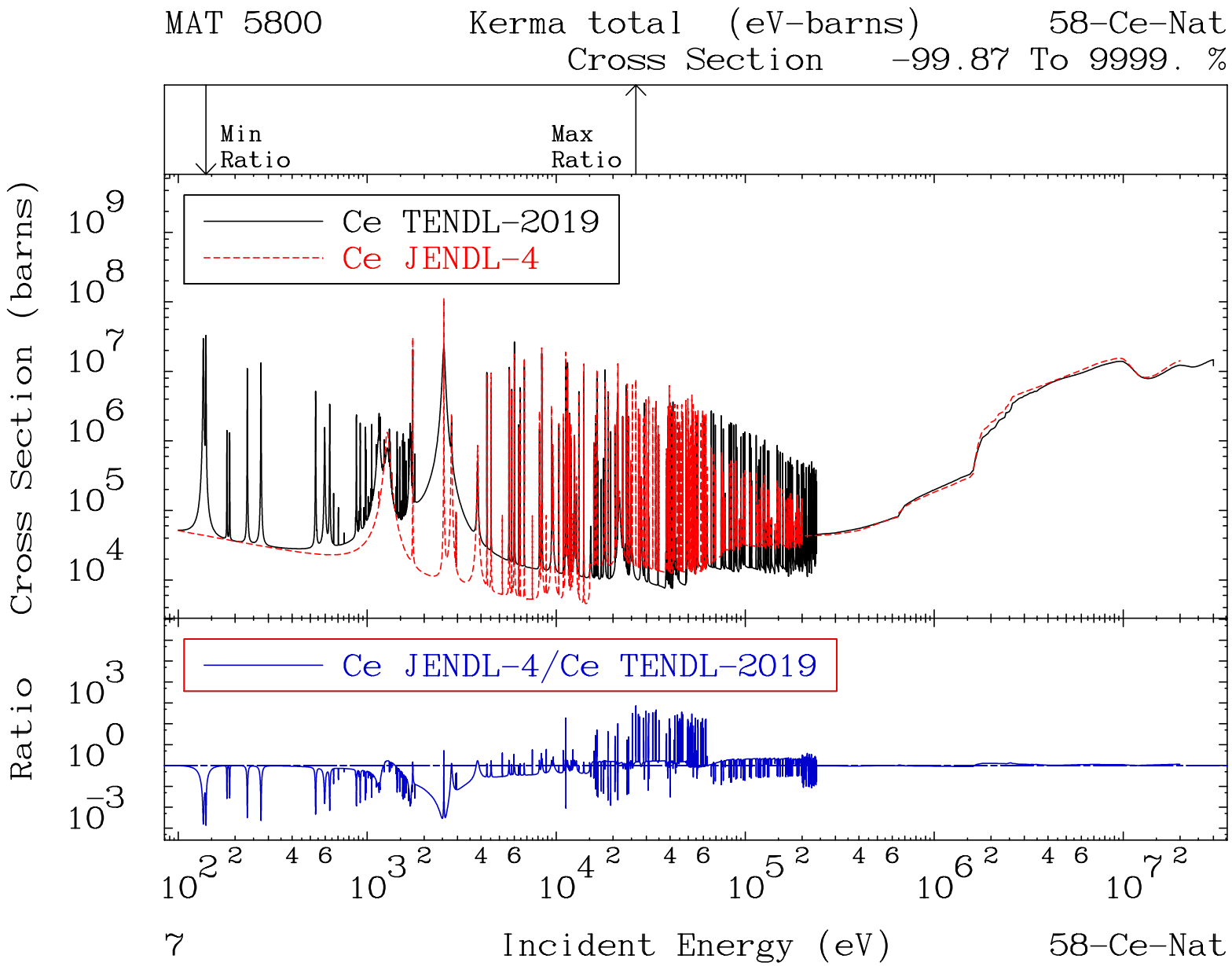

MAT 5800
Hydrogen Production
Cross Section
58-Ce-Nat
-100.0 To 52.41 %
Min Ratio
Max Ratio
Ce TENDL-2019 Threshold 1.7306 keV
Ce JENDL-4 Threshold 5.5000 MeV
Ce JENDL-4/Ce TENDL-2019
RatioCross Section (milli-barns)
160
120
80
40
0
2.0
1.0
0.0
10^6
2
3
4
5
6
7
8
10^7
2
3
Incident Energy (eV)
58-Ce-Nat

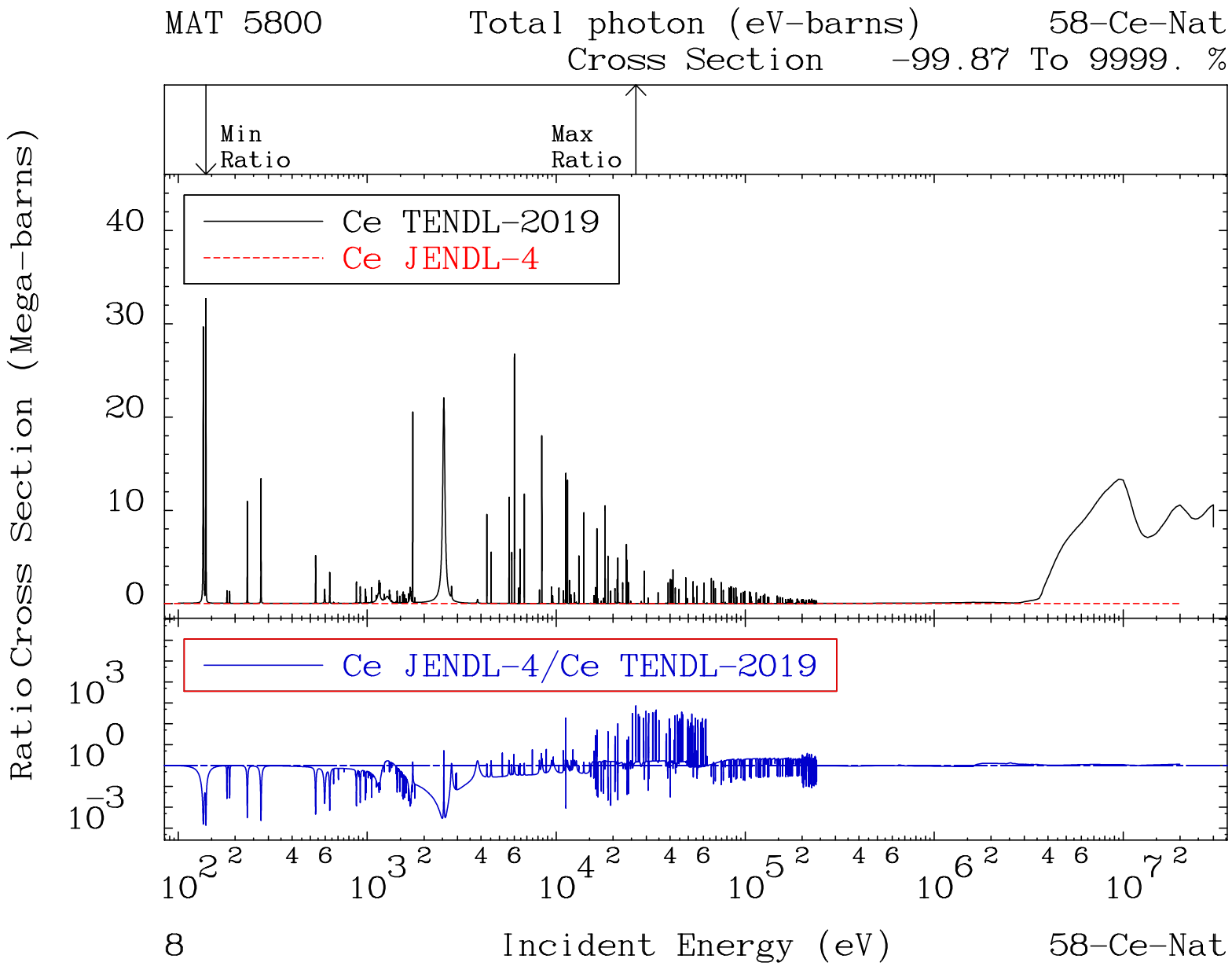

MAT 5800
Deuterium Production
58-Ce-Nat
Cross Section
-100.0 To 7193. %
Min Ratio
Max Ratio
Ce TENDL-2019 Threshold 4.9660 MeV
Ce JENDL-4 Threshold 9.0000 MeV
Ce JENDL-4/Ce TENDL-2019
RatioCross Section (milli-barns)
0
10
20
30
40
50
0
40
80
5
10
15
20
25
30
3
Incident Energy (MeV)
58-Ce-Nat

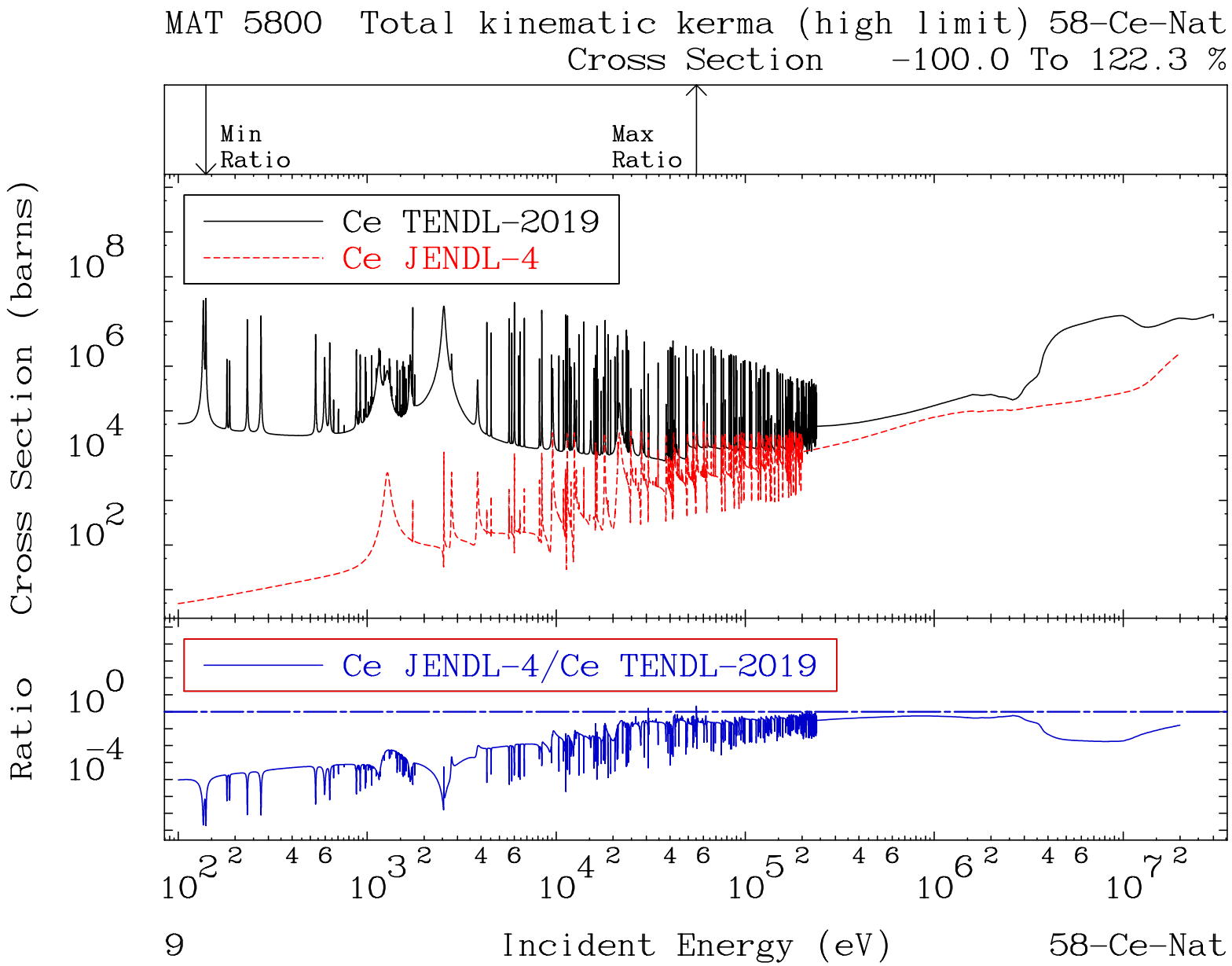

MAT 5800
Tritium Production
Cross Section
58-Ce-Nat
-100.0 To 9999. %
Min Ratio
Max Ratio
Ce TENDL-2019 Threshold 7.1462 MeV
Ce JENDL-4 Threshold 10.000 MeV
Ce JENDL-4/Ce TENDL-2019
RatioCross Section (milli-barns)
0
2
4
6
8
10
12
0
400
800
10
15
20
25
30
4
Incident Energy (MeV)
58-Ce-Nat

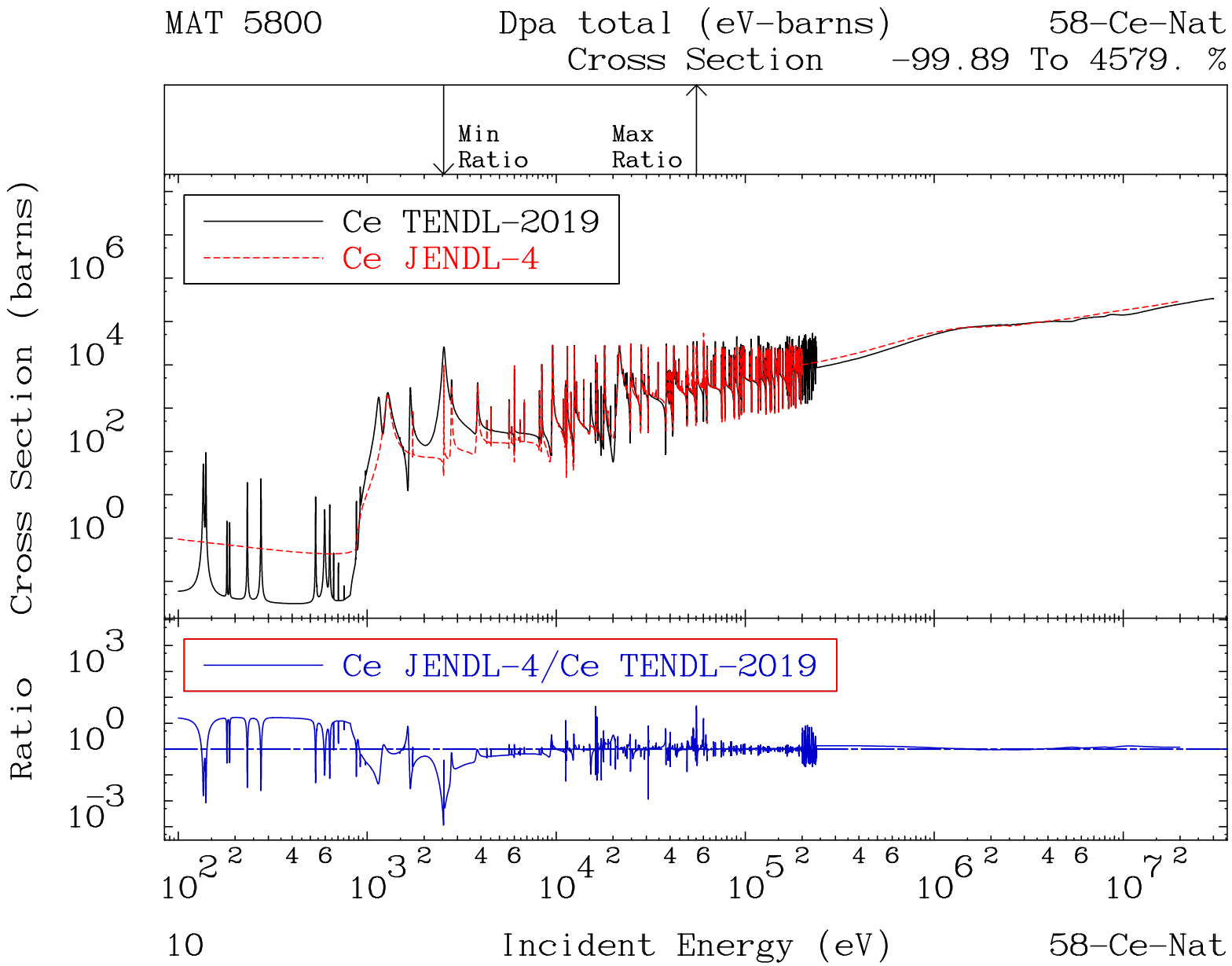

MAT 5800
He-3 Production
Cross Section
58-Ce-Nat
-100.0 To 4907. %
Min
Ratio
Max
Ratio
Ce TENDL-2019 Threshold 4.4512 MeV
Ce JENDL-4 Threshold 13.000 MeV
Ce JENDL-4/Ce TENDL-2019
RatioCross Section (milli-barns)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
40
0
5
10
15
20
25
30
5
Incident Energy (MeV)
58-Ce-Nat

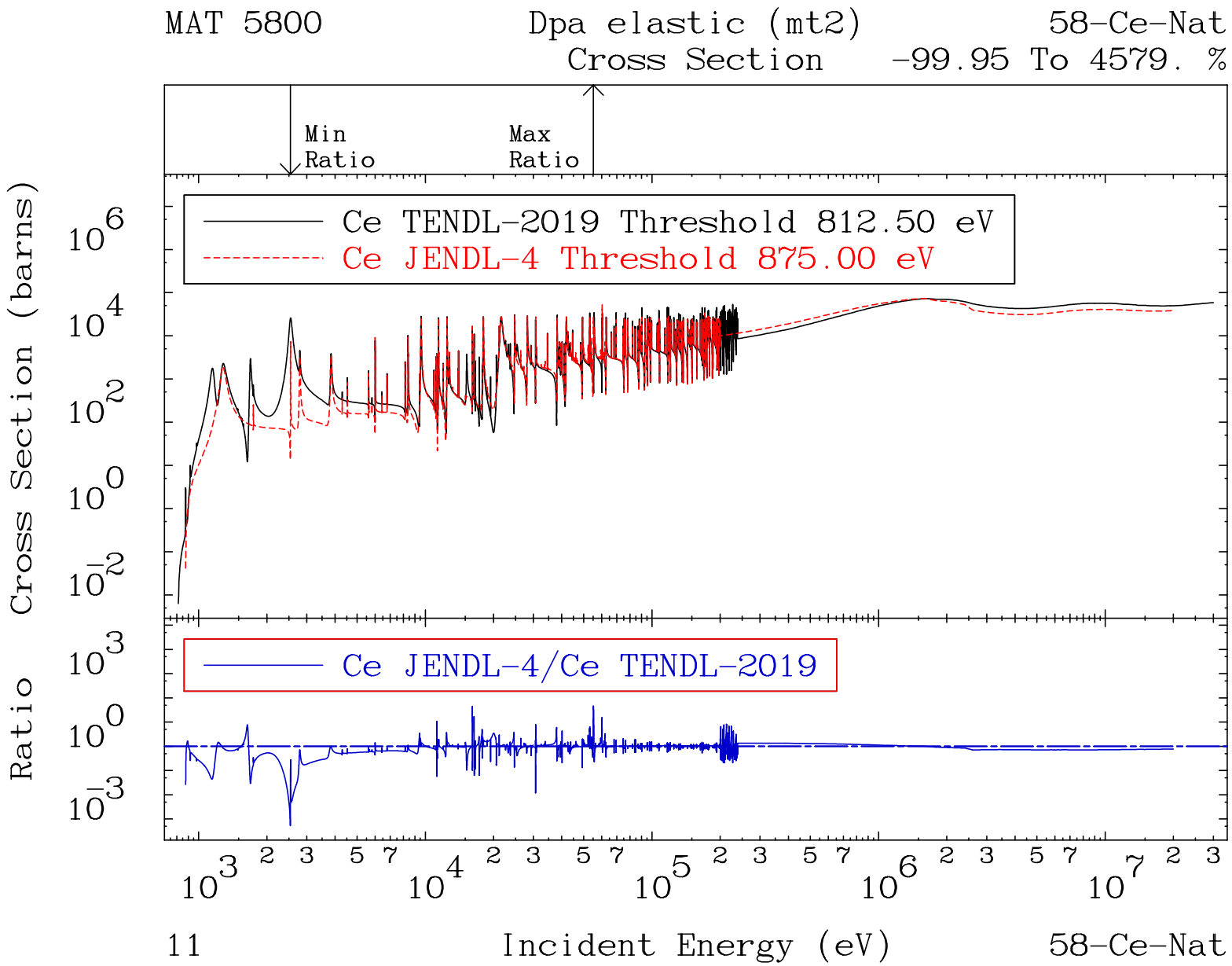

MAT 5800
He-4 Production
Cross Section
58-Ce-Nat
-100.0 To 1693. %
Min
Ratio
Max
Ratio
Ce TENDL-2019
Ce JENDL-4 Threshold 2.8000 MeV
Ce JENDL-4/Ce TENDL-2019
RatioCross Section (milli-barns)
Incident Energy (eV)
6
58-Ce-Nat

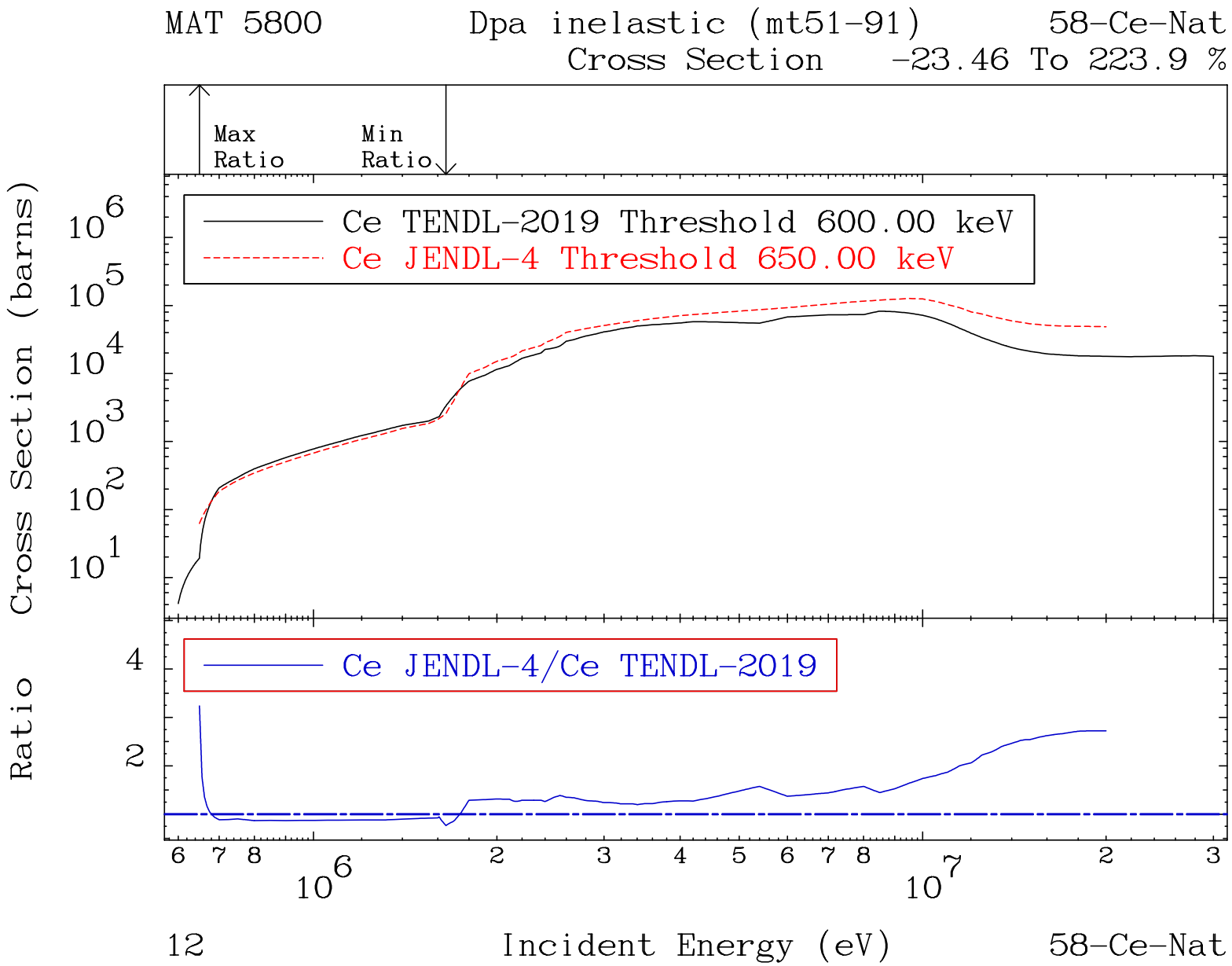

MAT 5800
Kerma total (eV-barns)
58-Ce-Nat
Cross Section -99.87 To 9999. %
Min Ratio
Max Ratio
Ce TENDL-2019
Ce JENDL-4
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
7
58-Ce-Nat

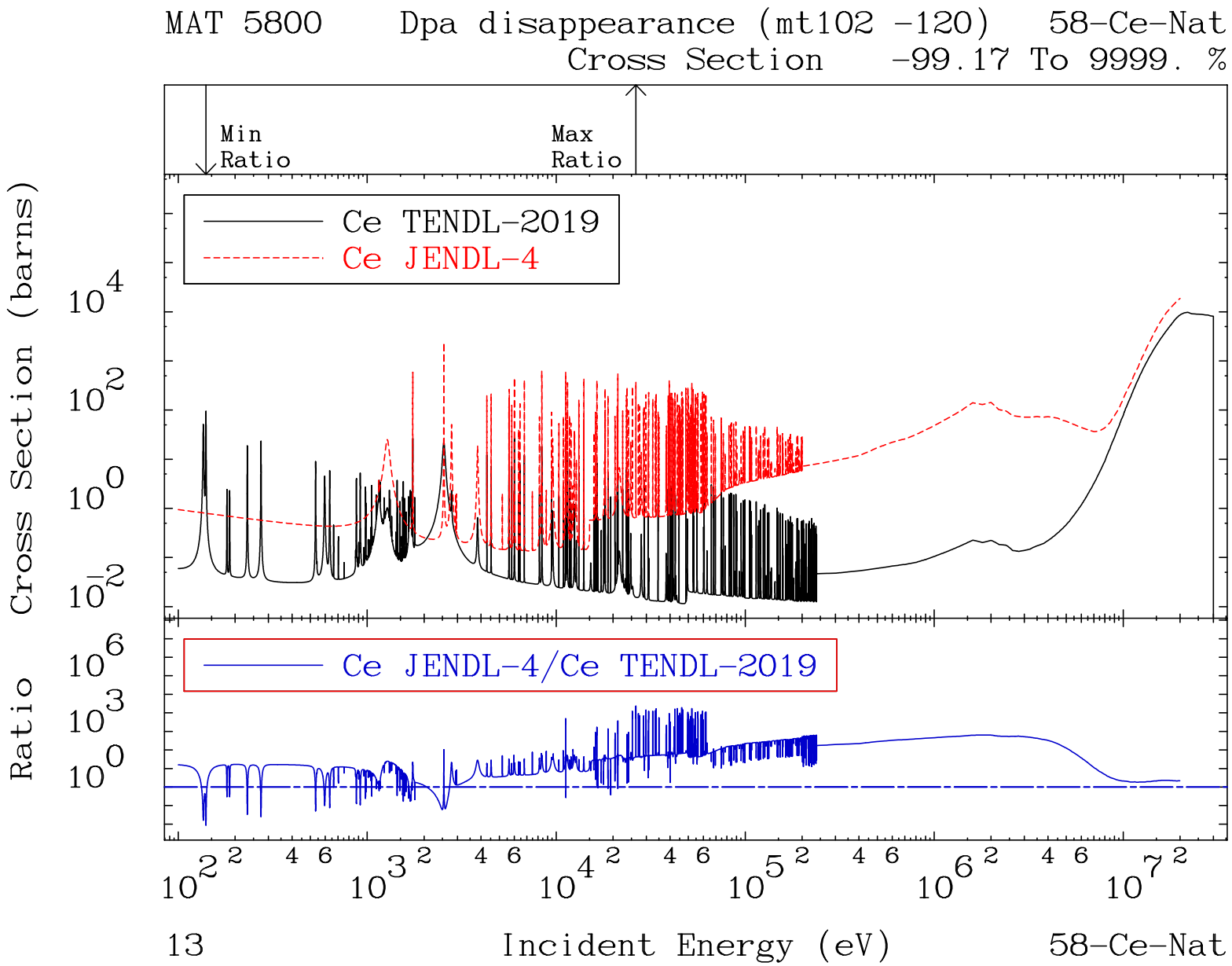

MAT 5800
Total photon (eV-barns)
58-Ce-Nat
Cross Section
-99.87 To 9999. %
Min Ratio
Max Ratio
Ce TENDL-2019
Ce JENDL-4
Ce JENDL-4/Ce TENDL-2019
Ratio Cross Section (Mega-barns)
Incident Energy (eV)
8
58-Ce-Nat


MAT 5800 Total kinematic kerma (high limit) 58-Ce-Nat
Cross Section -100.0 To 122.3 %
Min Ratio
Max Ratio
Ce TENDL-2019
Ce JENDL-4
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
9
58-Ce-Nat


MAT 5800
Dpa total (eV-barns)
58-Ce-Nat
Cross Section
-99.89 To 4579. %
Min Ratio
Max Ratio
Ce TENDL-2019
Ce JENDL-4
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
58-Ce-Nat


MAT 5800
Dpa elastic (mt2)
Cross Section
58-Ce-Nat
-99.95 To 4579. %
Min Ratio
Max Ratio
Ce TENDL-2019 Threshold 812.50 eV
Ce JENDL-4 Threshold 875.00 eV
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
11
58-Ce-Nat


MAT 5800
Dpa inelastic (mt51-91)
58-Ce-Nat
Cross Section
-23.46 To 223.9 %
Max Ratio
Min Ratio
Ce TENDL-2019 Threshold 600.00 keV
Ce JENDL-4 Threshold 650.00 keV
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
12
58-Ce-Nat


MAT 5800 Dpa disappearance (mt102 -120) 58-Ce-Nat
Cross Section -99.17 To 9999. %
Min Ratio
Max Ratio
Ce TENDL-2019
Ce JENDL-4
Cross Section (barns)
Ce JENDL-4/Ce TENDL-2019
Ratio
Incident Energy (eV)
13
58-Ce-Nat