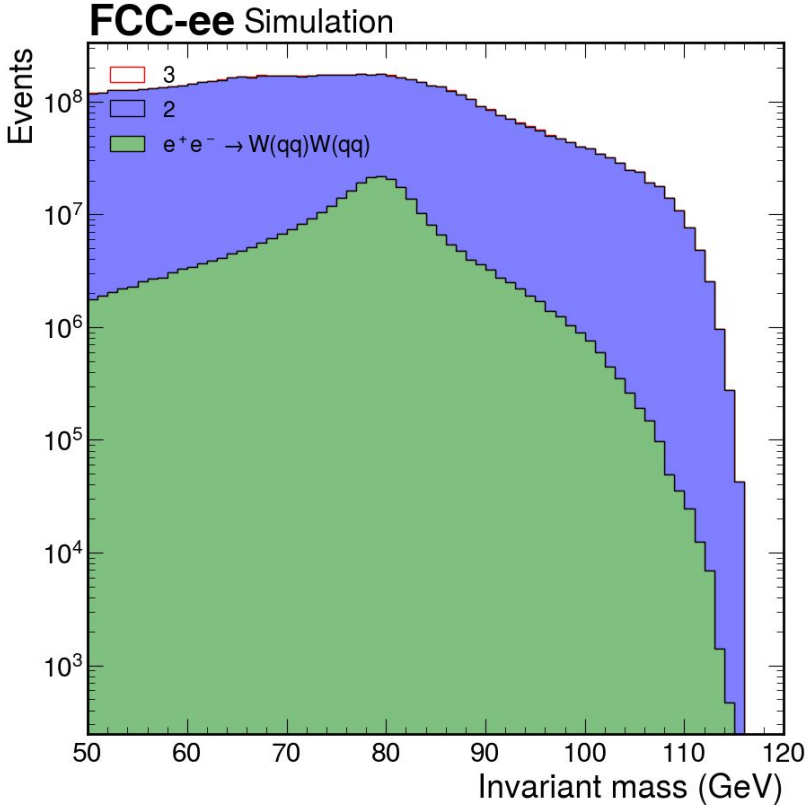
W mass

Process

- Using the e+e- -> W+W- -> W(qq)W(qq) to find the mass of the W boson
- Jet clustering to ideniify the quarks
- Use chi2 = (m(qq) - mW)**2 + (m(qq) - mW)**2 to find best pairing of jets (minmiize)
-

Plot


FCC-ee Simulation
Events
3
2
e⁺e⁻ → W(qq)W(qq)
10⁸
10⁷
10⁶
10⁵
10⁴
10³
50
60
70
80
90
100
110
120
Invariant mass (GeV)

Need to work on

- Cuts
  - Remove background events e.g (e+e- -> ZZ)
  - Lepton cuts
  -
  -