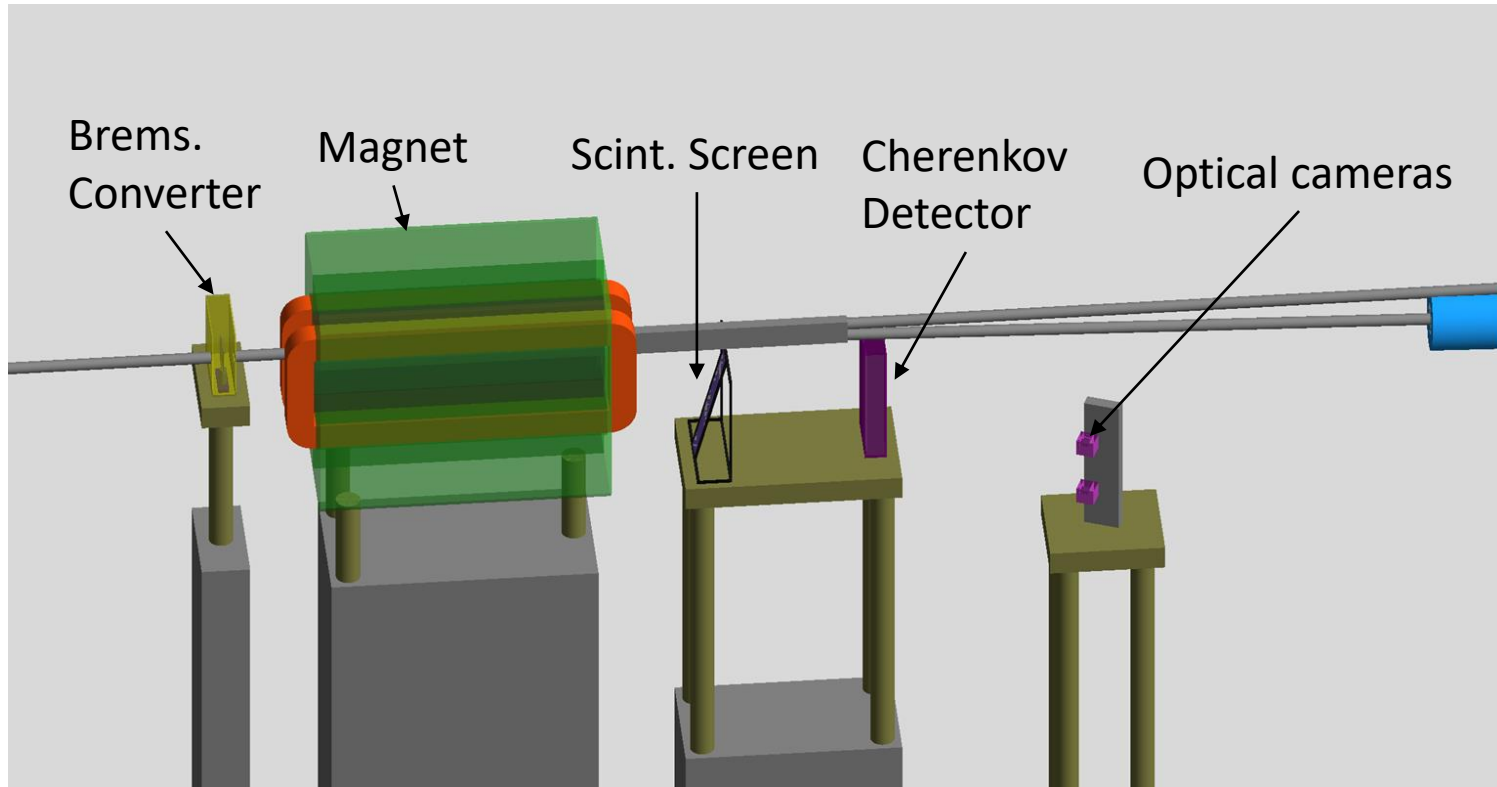


IBM Vacuum Chamber

IMPLEMENTATION OF A VACUUM CHAMBER IN THE INITIAL
BREMSSTRAHLUNG MONITOR (IBM) PART OF THE LUXE EXPERIMENT

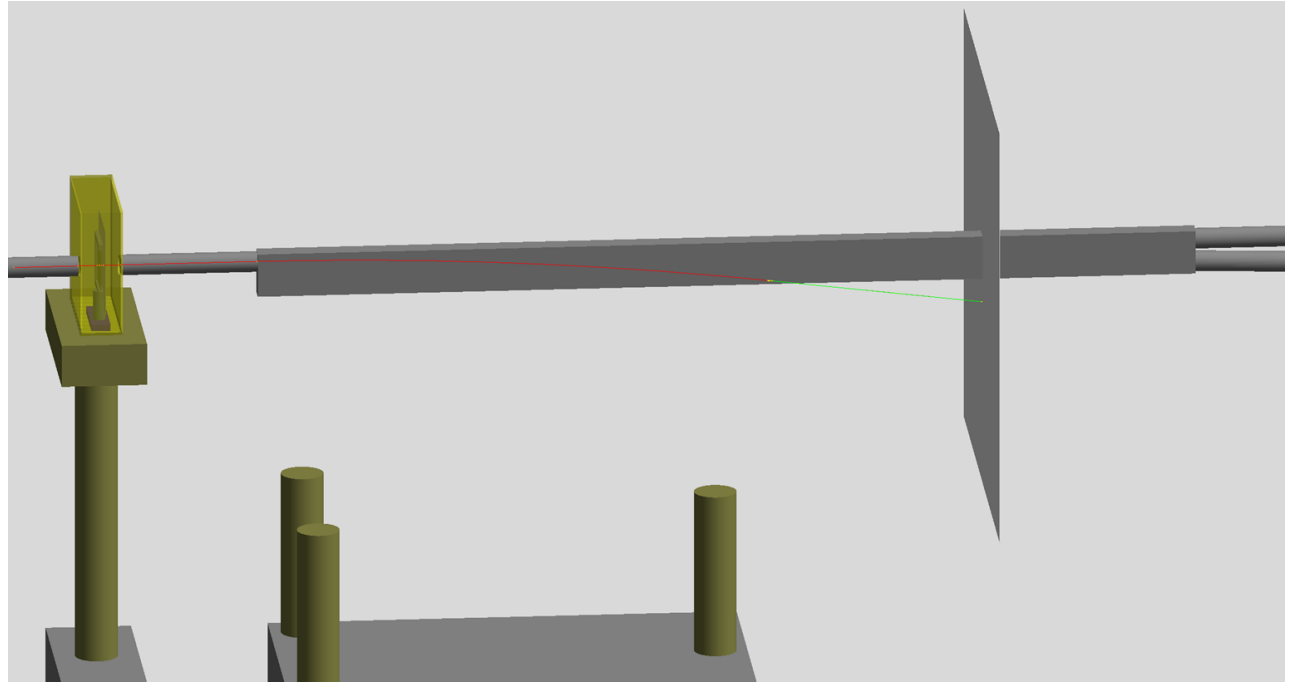
By Luke Hendriks - UCL

Current Set-up of IBM



Problem with the Beam Pipe

- Want to measure electrons created during photon production in Bremsstrahlung Converter
- In order to measure photon spectrum
- Want to do it as precisely as possible

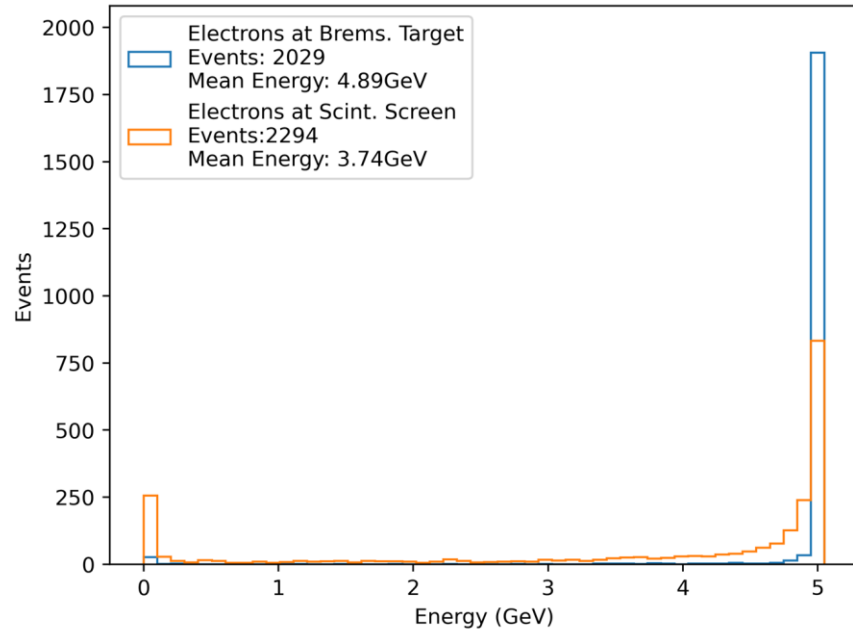


Problem with the Beam Pipe

- Beam Pipe main component of energy loss

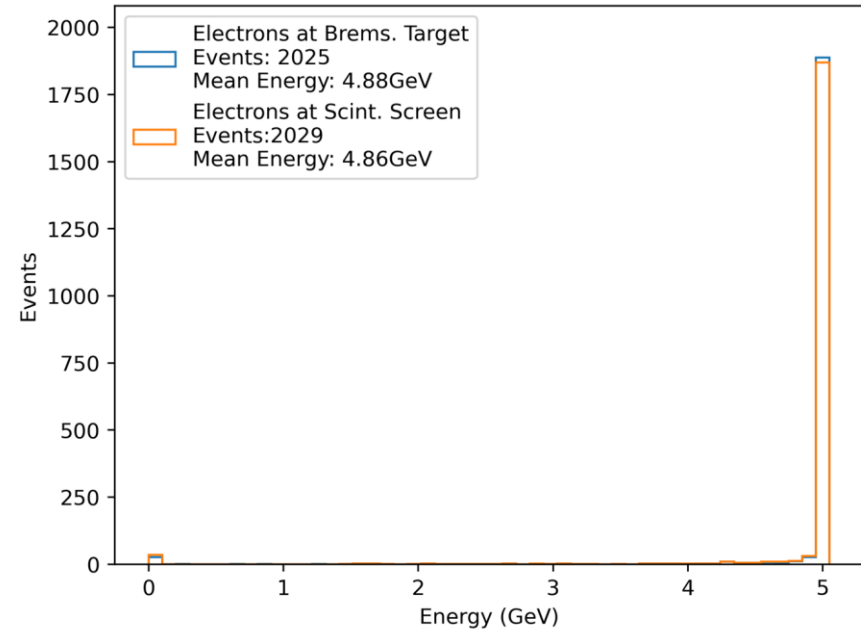
IBM with Beam Pipe

$E_{e^-} = 5 \text{ GeV}$

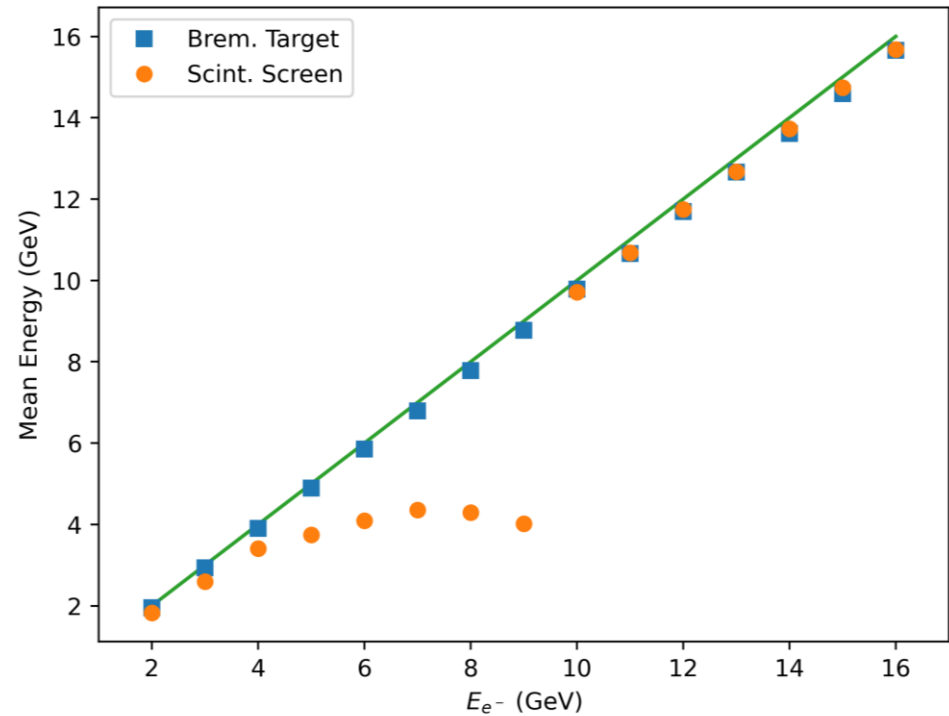
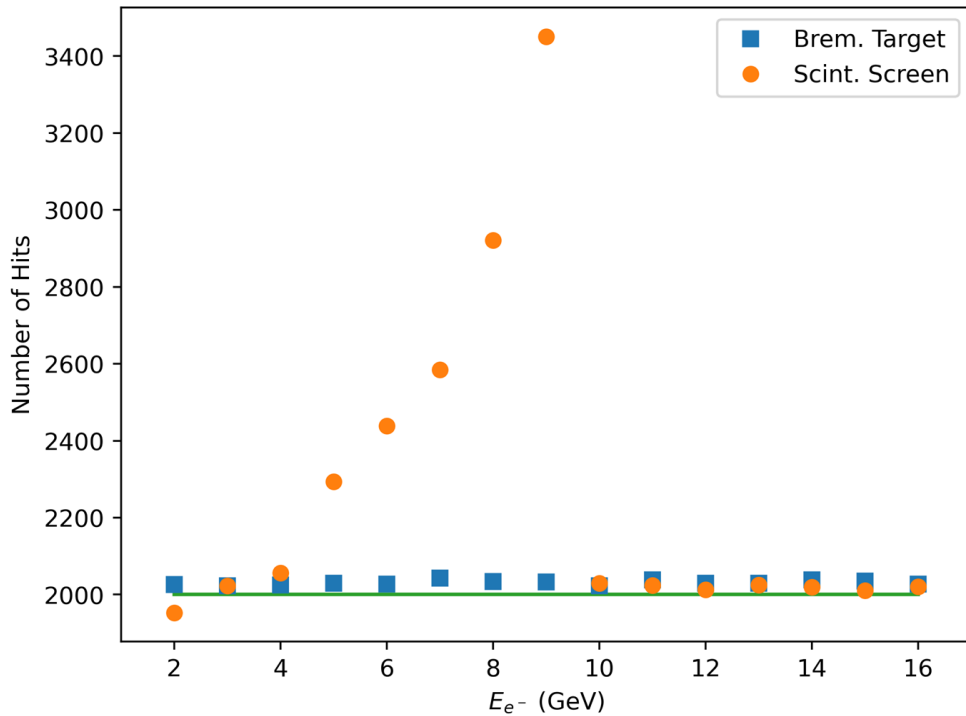


IBM without Beam Pipe

$E_{e^-} = 5 \text{ GeV}$

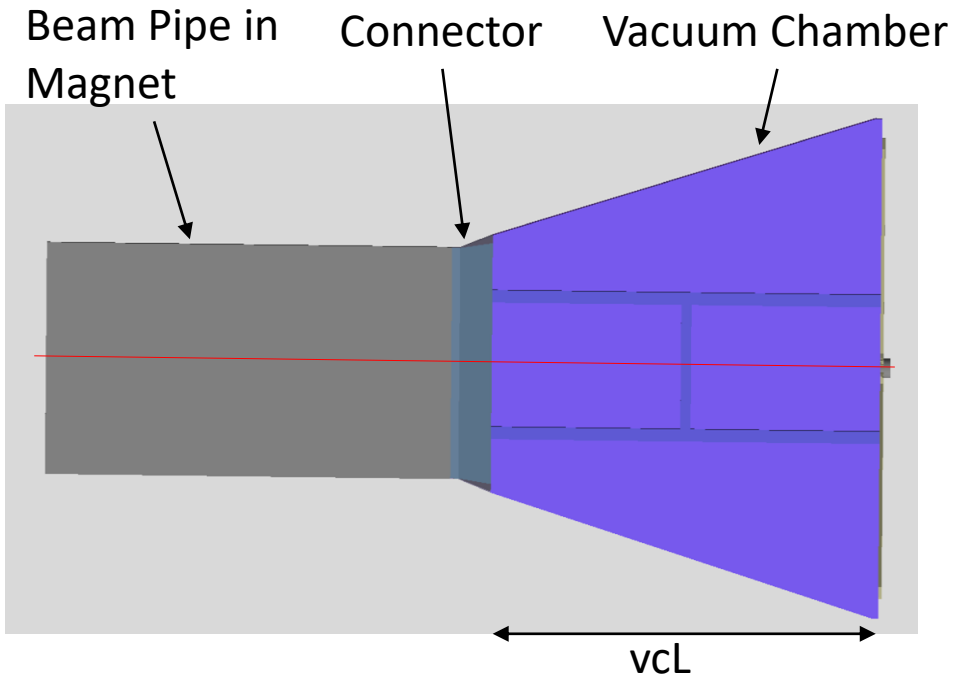


Problem with the Beam Pipe

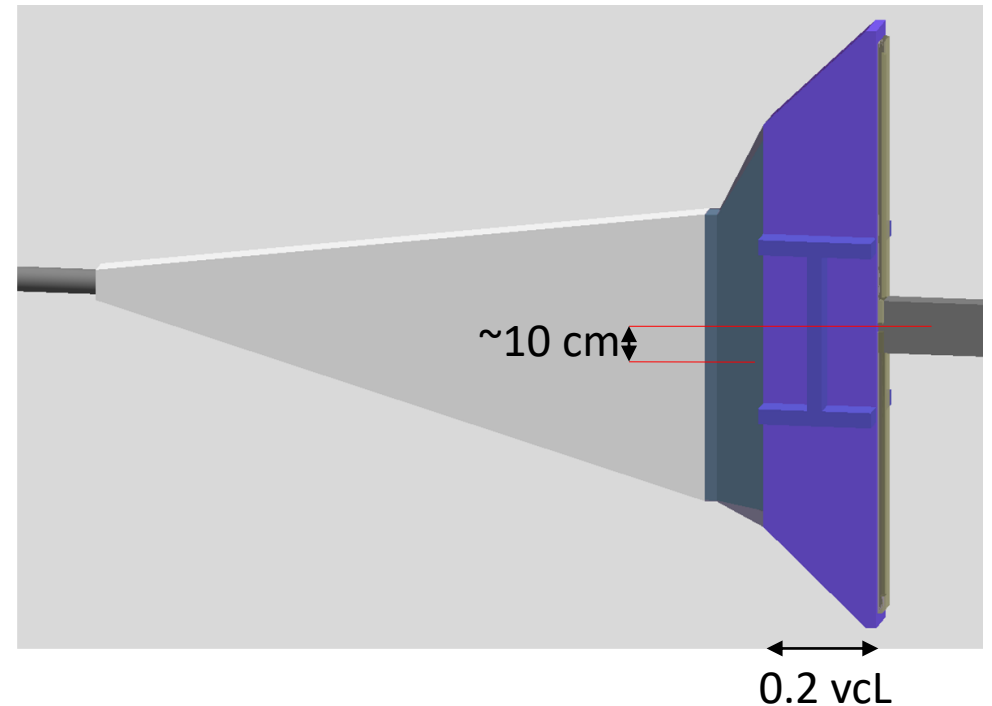


Creating the Vacuum Chamber

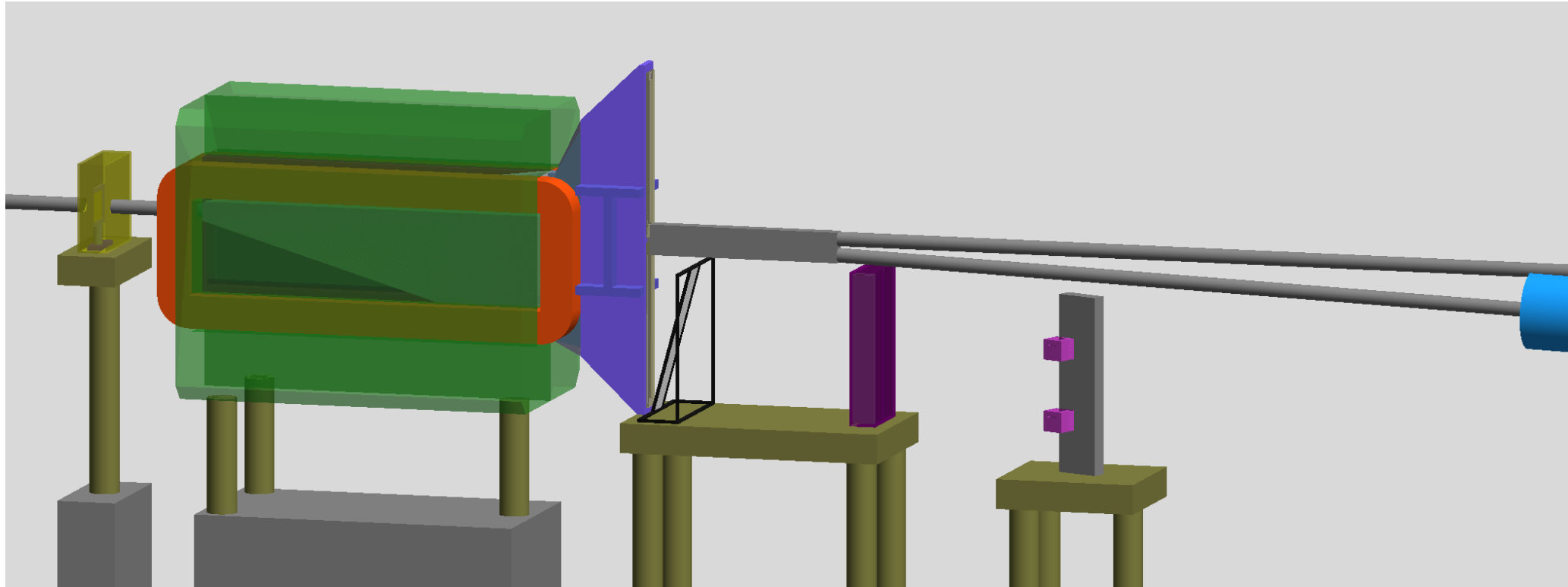
Vacuum Chamber in EDS



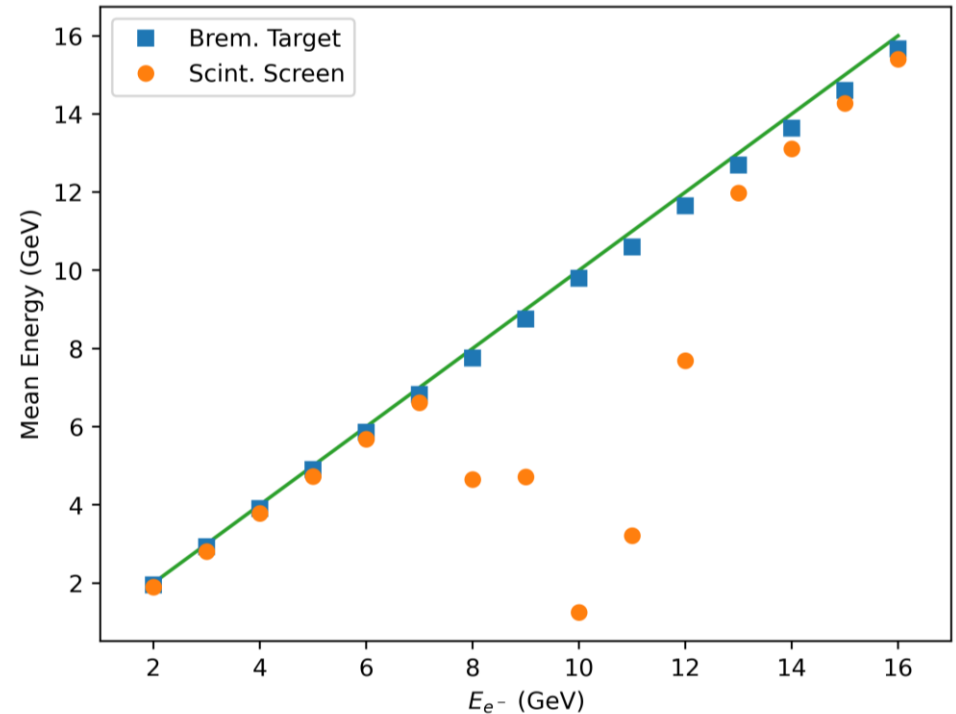
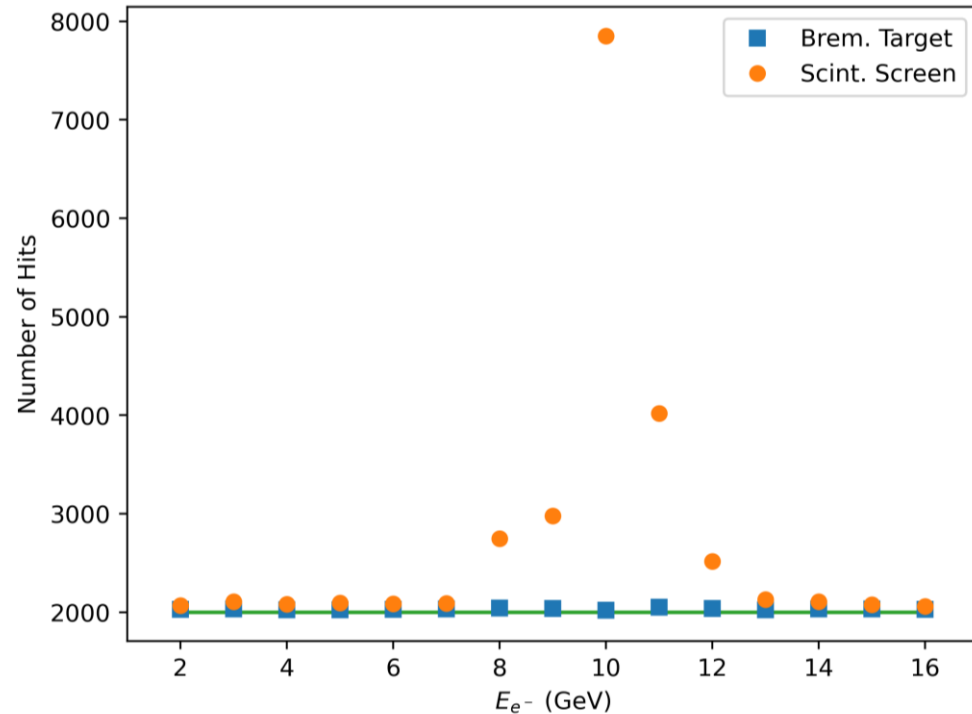
Adapted version for IBM



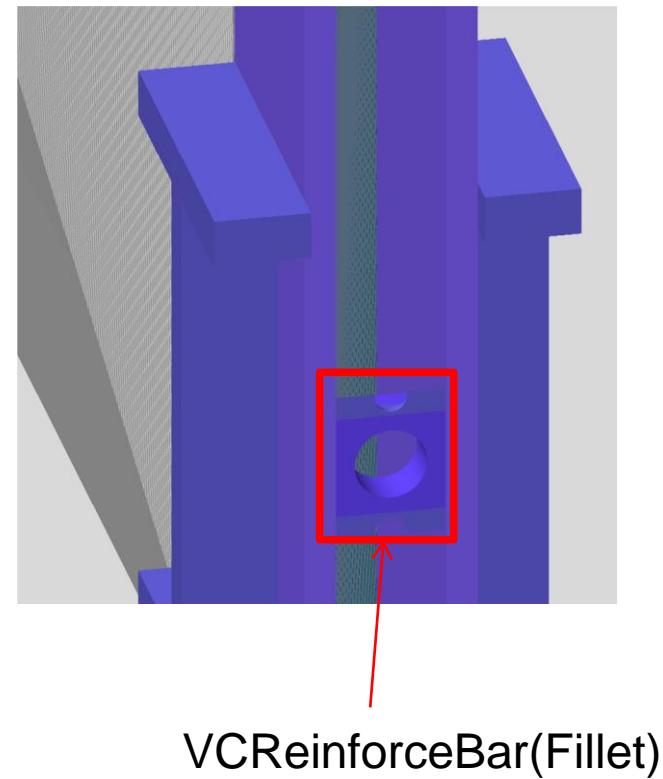
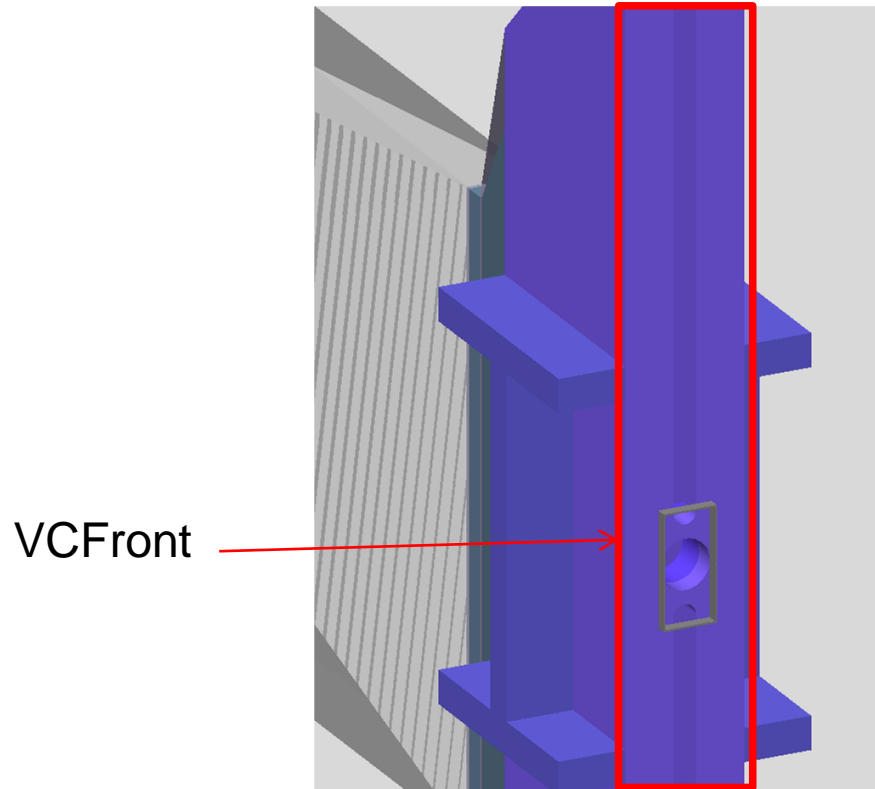
Creating the Vacuum Chamber



Results after implementing Vacuum Chamber



Downside of the Vacuum Chamber



Scintillator screen data

