

There is an existing rapidity gap between the barrel and the backward endcap in current design

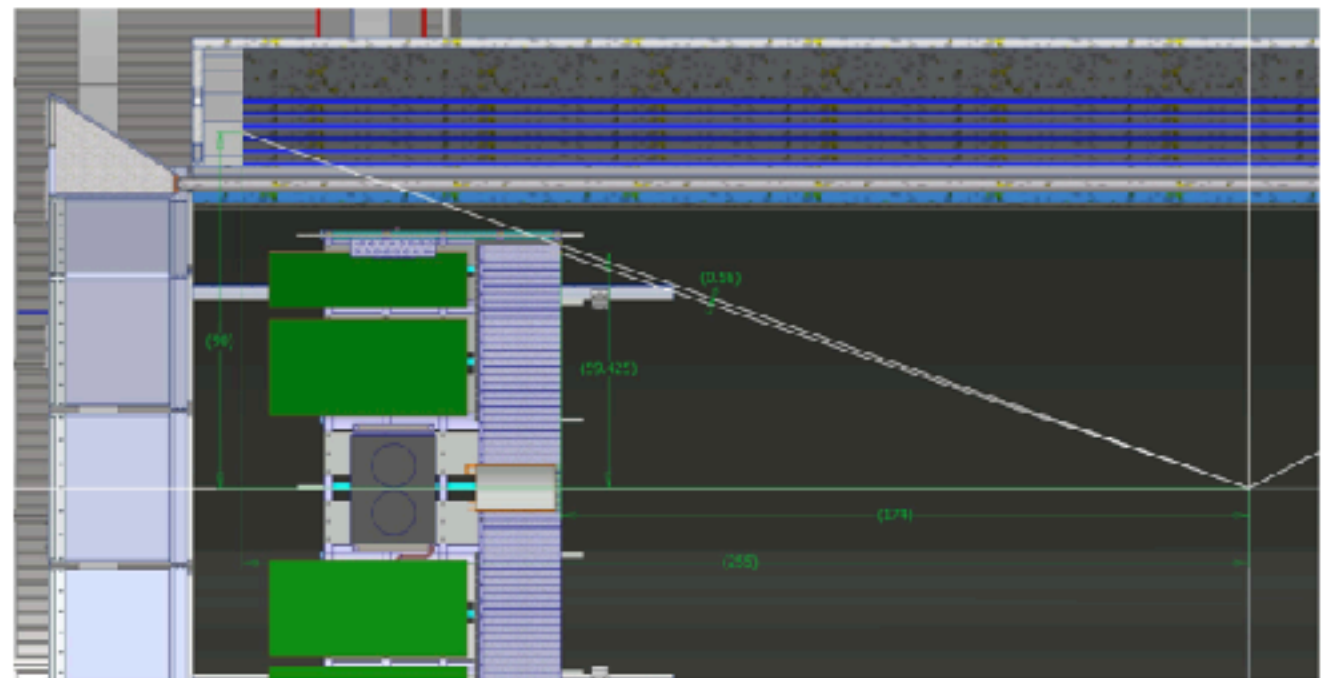
Dimitry's presentation at <https://indico.bnl.gov/event/22476/> (direct to Dimitry's talk [https://indico.bnl.gov/event/22476/contributions/87751/attachments/52811/90338/calorimeter\\_meeting\\_gap\\_study.pdf](https://indico.bnl.gov/event/22476/contributions/87751/attachments/52811/90338/calorimeter_meeting_gap_study.pdf))

We need to check impact of loss of hermiticity on exclusive physics

Geometry in CAD

### Backward Direction

- 0.58-degree gap between Barrel EMCAL and EEMCAL
- For the EEMCAL the 1<sup>st</sup> layer of blocks was ignored, so the top of the second layer was used (174cm in Z, 59.4cm in Y)
- For the Barrel EMCAL the mid point of all the imaging layers was used (255cm in Z, 90cm in Y)



Drawing a straight line indicates an apparent gap. Is it any worse for electrons?



From Dimitry's slides

- » Looks like there is a significant gap in acceptance between negative and barrel ecal
- » At lower momentum  $|\vec{p}|$ , the effect of the gap is reduced
- » For the electron-going side, the minor gap in  $Q^2$  could be filled using data at different collision energies. There may, however, be a larger concern for exclusive physics

