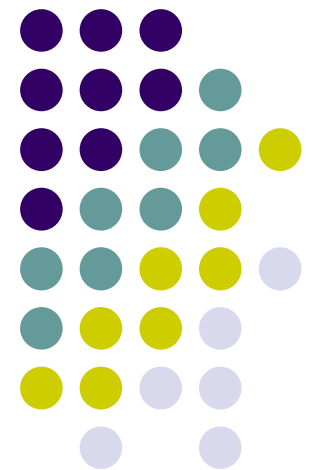
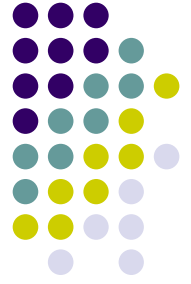


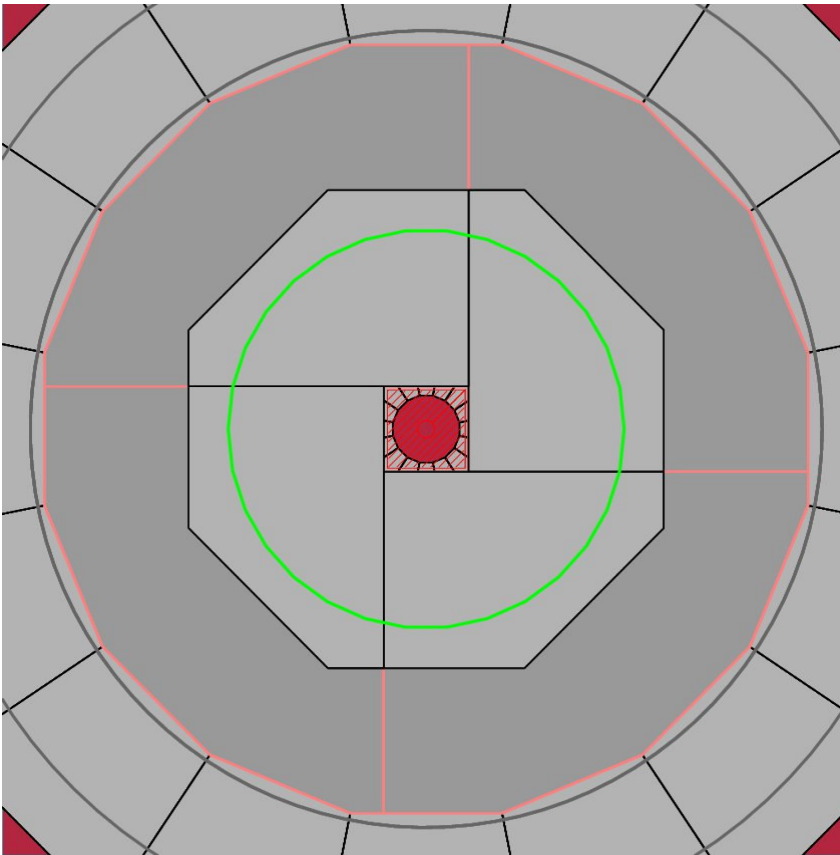
Endcap Design

Dave Bailey
University of Manchester

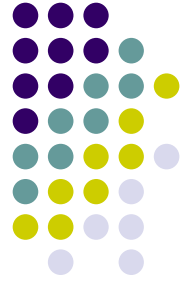




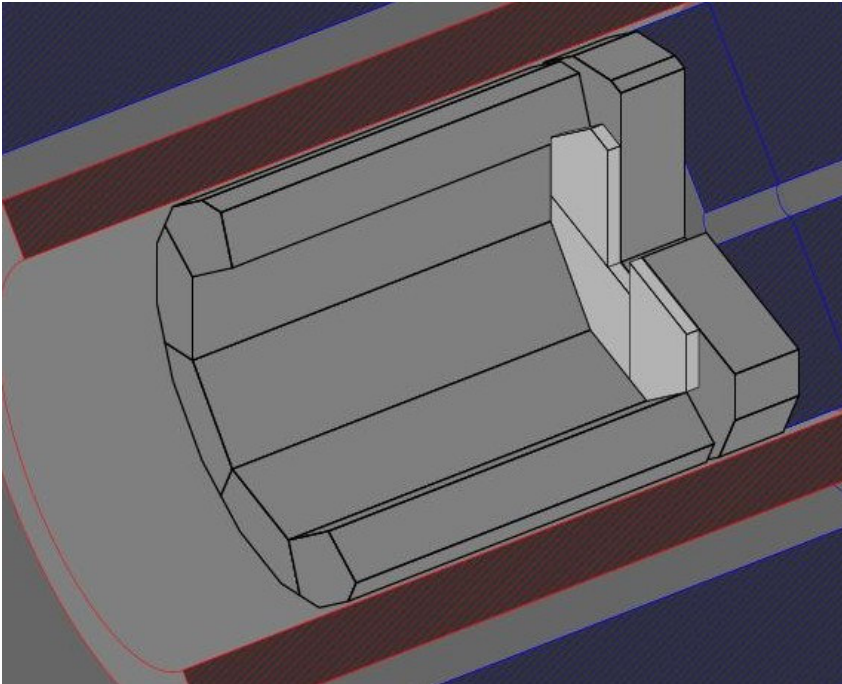
TESLA TDR Layout



- ECAL endcap
 - 4 quadrants
 - 2 quadrants bolted together to make one structural unit
 - Bolted to the HCAL front face
 - “Embedded” in the HCAL endcap
 - Each quadrant is about 5 tonnes

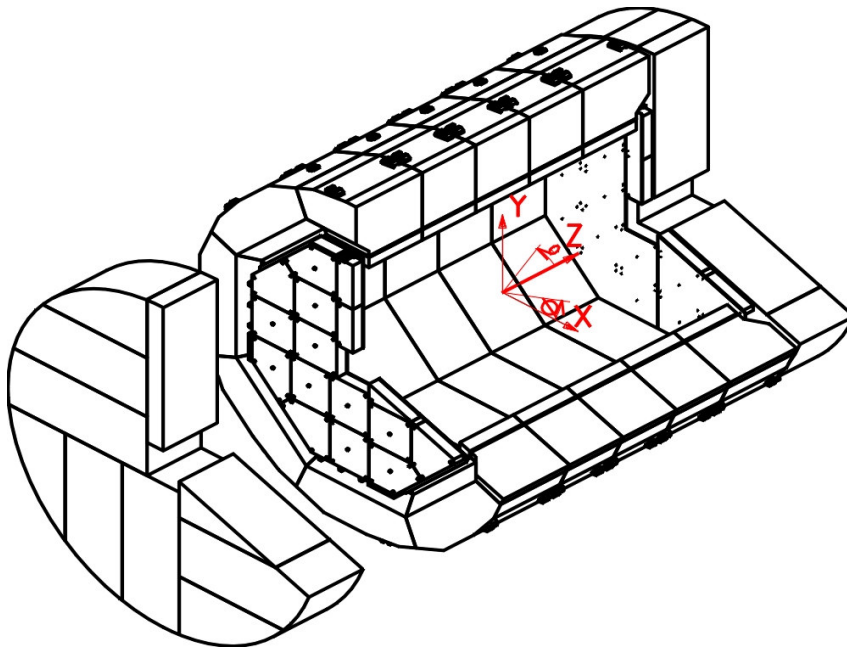


Monolithic Endcap

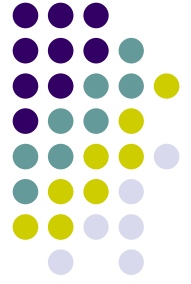


- Single quadrants
 - Could use the same ideas as the barrel to hold the slabs
 - Long slabs close to the beampipe
 - Does this impact on the DAQ due to more beam-related backgrounds?

Modular Endcap



- Should the endcap be made up from smaller units?
 - Keeps the slab size small
 - Fewer problems with signals routed over long PCBs?
 - Mechanically more robust?
 - But
 - Some “odd shapes”
 - More cracks
 - Physics Impact?



So what should we do?

- Look at both types of structure
 - What sort of modules to use
 - Start with current barrel ideas
 - Think about assembly of individual quadrants
- Need to assess impact on physics
 - Get any new designs into simulation
 - Set up local replica of Mokka database in Manchester to use with Tier 2 centre