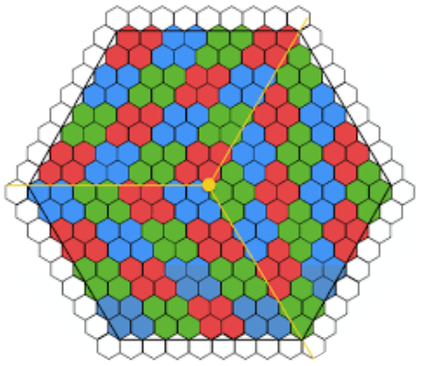
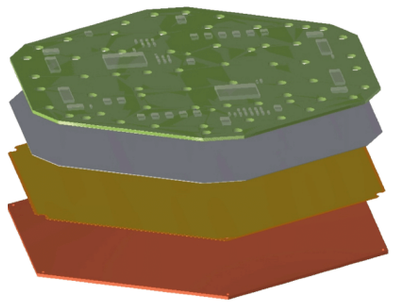
Mini-Stage PHY584

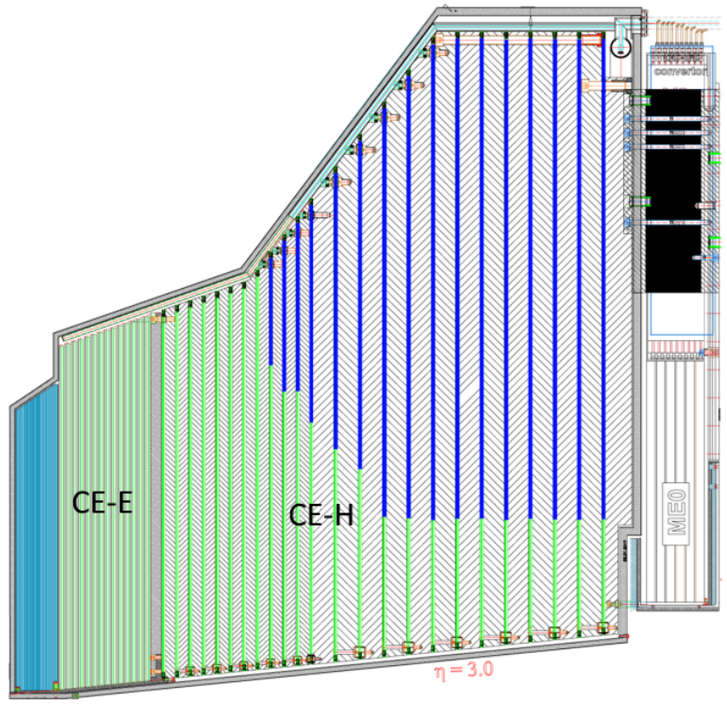
Characterisation of EM showers in CMS High-Granularity Calorimeter with beam test data

The current endcaps calorimeters of CMS detector at the LHC will be replaced by the High-Granularity Calorimeters (**HGCAL**):

- Geometry based on **hexagonal** modules to allow maximum coverage
- **Silicon based** calorimeter to sustain the severe radiation conditions
- **5D calorimeter**: space (*x, y, z*) ,energy (*E*), time (*t*)
- **High resolution** images for a powerful separation between electromagnetic and hadronic showers







You will have the chance to work on **real beam test data**, taken with the first large scale prototype of HGCAL, to:

- *Reconstruct* and *characterise* EM showers
- *Compare* them with theory
- Measure *electrons performance* in HGCAL