



CMS ECAL July TB

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for the CMS ECAL Upgrade group

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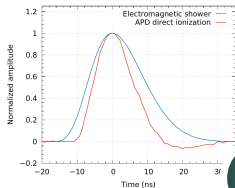
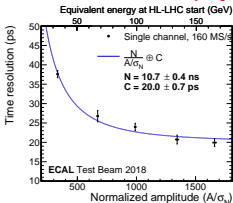
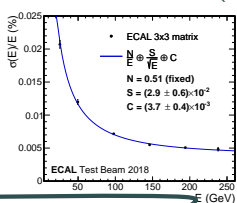
Physics program

■ Validate the CMS ECAL HL-LHC electronics:

- Measure energy and time resolution and anomalous signal detection with final ADC design (in 2018 a commercial was ones used).
- Calibrate amplifier gain (CATIA asic) → **required to finalize design before production.**
- We also plan to test the full readout chain and the front-end to back-end data streaming using IpGBT transmitters.

■ Plans for the two TB periods

- July (9d not main + 3d days main): commissioning of the new beam triggers (plastic scintillators and related readout electronics) and ECAL matrix with new HL-LHC electronics.
- October (14d): **collect the bulk of physics data.**



July Plan

- **Electrons (21st-24th):**
 - 20-250 GeV, highest purity possible ($>90\%$), $\Delta p/p \sim 0.5\%$.
 - We will perform energy scans (20,50,100,150,200,250 GeV) routinely during the TB period.
- **9 days as non-main users:**
 - Re-commissioning of our trigger system and beam monitoring (scintillators and hodoscopes close to our setup)
- We will request **HNA main crane time on the 13th** in order to remove two blocks used to commission a small crane installed in PPE-164 and move into the barrack our TB box.

