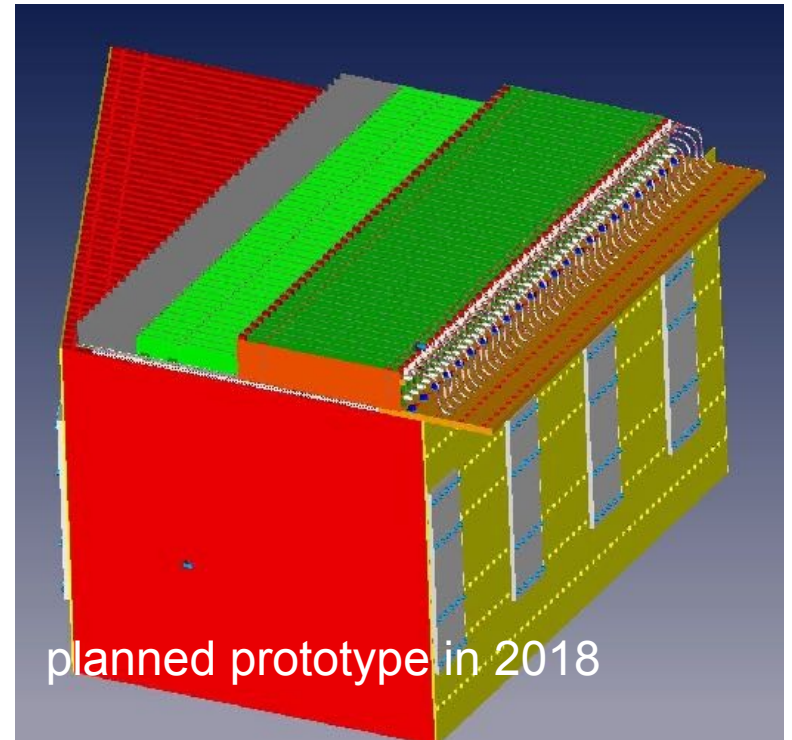


CALICE AHCAL in H2

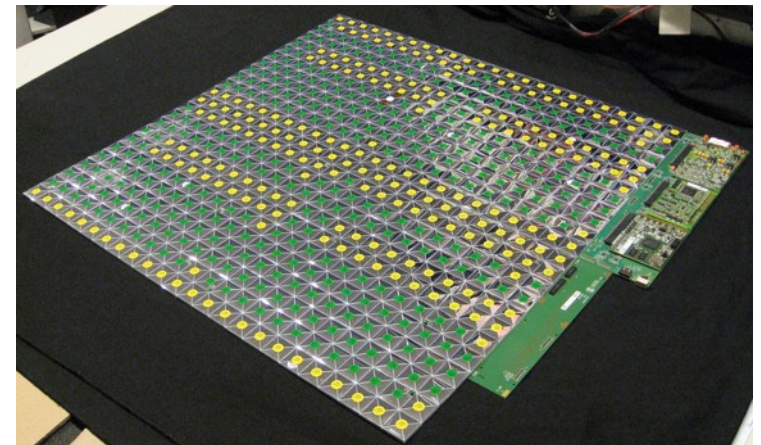
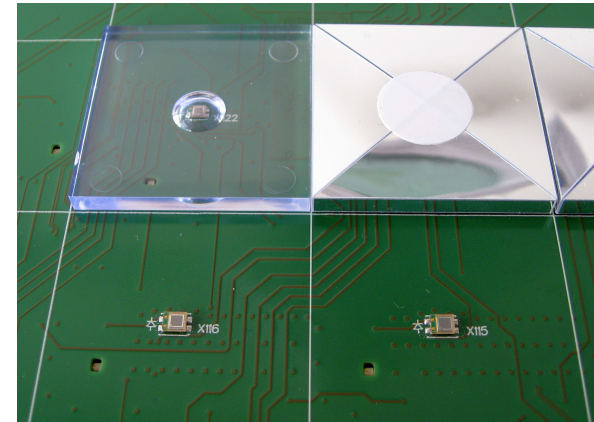
- Beam time: 9. – 23.5. + 27.6. – 4.7.
- Setup & Goals
- Beam Parameters

Katja Krüger
PS/SPS Users Meeting
9. May 2018

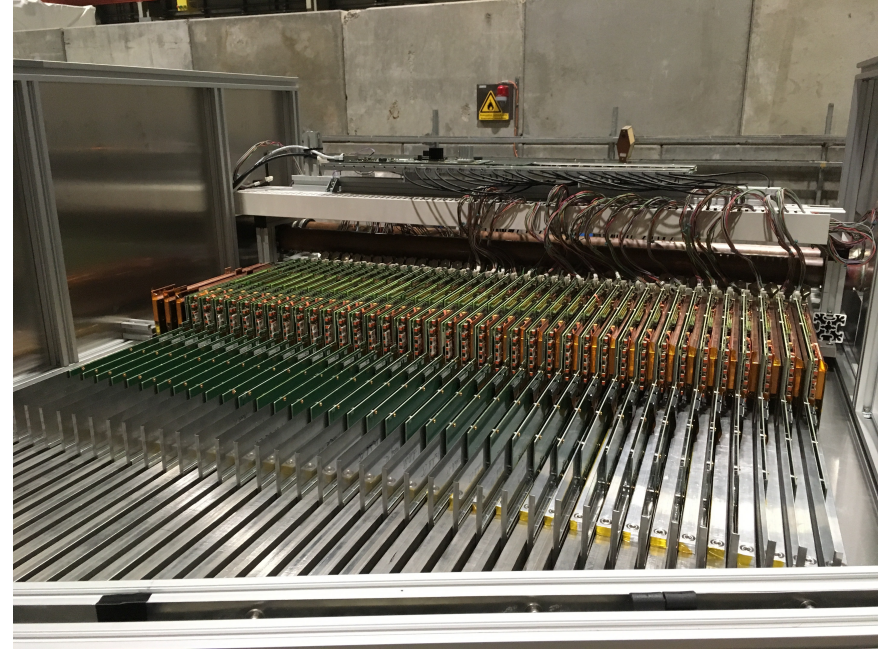


AHCAL technological prototype: testbeam setup and goals

- highly granular scintillator SiPM-on-tile hadron calorimeter
 - design optimised for mass assembly
- tested design is for linear electron-positron collider, but very similar to backing part of CMS calo endcap upgrade
- setup:
 - 38 large layers ($72 * 72 \text{ cm}^2$)
 - steel absorber stack
- goals
 - demonstrate capabilities of SiPM-on-tile calorimeter concept with scalable detector design: energy linearity and resolution for electrons and pions
 - measure shower profiles and hit time correlations for pions

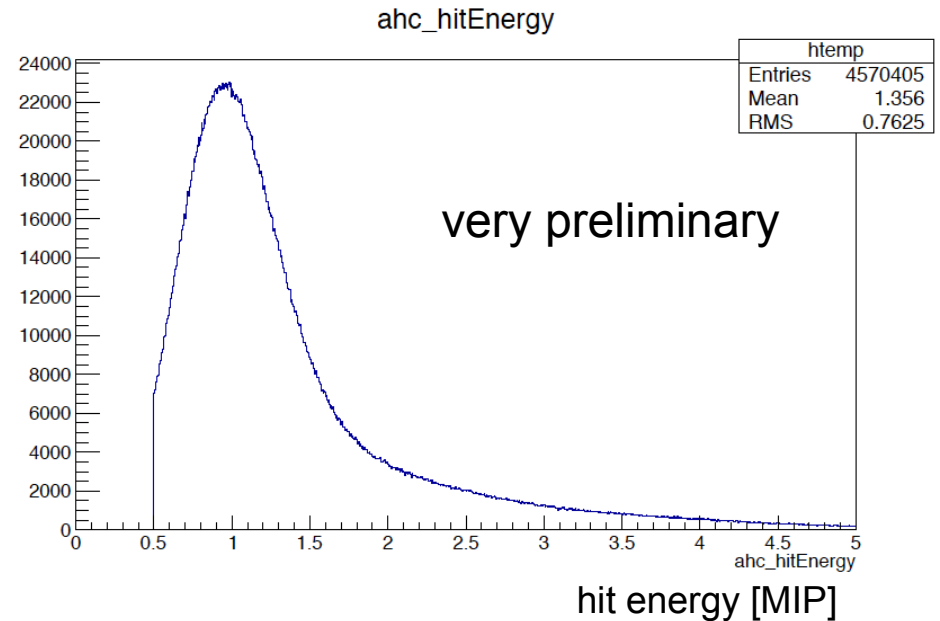
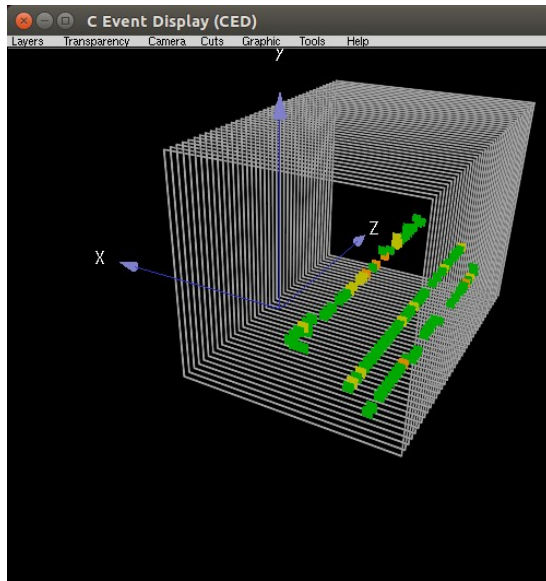


Setup in H2



- > the complete setup was mounted on the movable platform (“scissors table”) in H2
- > all 38 layers installed and working
- > tested already with first parasitic muons (thanks to NA61)
 - started timing in of trigger signals
 - very first cross check of detector calibration

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Beam parameters

- > muons for calibration
 - ~2 days in the beginning (long weekend with ascension!)
 - energy and polarity not relevant
 - intensity as high as possible, wide beam
- > electrons
 - rest of the first week
 - polarity not relevant
 - intensity: $>10^3$ to 10^4 (as high as possible)
 - energy scan: 10 – 100 GeV
- > pions
 - second week
 - negative polarity preferred
 - intensity: $>10^3$ to 10^4 (as high as possible)
 - energy scan: 10 – 100 GeV (highest stat. around 60 GeV)
- > ~1 day of muons in the end to cross-check calibration

