SDHCAL TB

- 38 chambers were prepared (gas tightness, HV and electronics readout)

- New version of readout system successfully installed and tested

- SDHCAL transportation is foreseen on Monday the 12th of (high cost of 3400 euros)

- Today and tomorrow we will prepare the different components (gas, electronics..) racks and cables for transportation

- EDH to both discharge the lorry (12th) and to place the prototype on Nikhef table are made and validated

- Gas bottles (TFE and SF6) were ordered and are ready (requests made during august to the gas group).

The TB will take place on H2 (PPT172)

You can have access to the control room

887/1-B81

What is missing is ISIEK

Main goals:

❑ Apply a new calibration scheme (based on equalizing the response by applying different threshold value/ASIC)
   in order to improve on the SDHCAL response homogeneity.

❑ Study the difference of hadronic showers produced by protons, pions and kaons
   in order to exploit their differences in developing new PID techniques.

Beam requirements:

- Muons
- Pions, kaons, protons, from 10 to 90 GeV
  (pure hadrons)
- Low intensity beam (< 1000 particle/cm2/spill)
- Polarity: positive

Homogeneity

➢ Laurent developed a tool allowing to select the best first threshold for each ASIC based on the Scurve made with pedestals
  We will use the database configuration with the found thresholds as the basic configuration

➢ We will then expose the prototype to muons and assess the homogeneity
➢ We will then apply the recipe of threshold scans with muons using the code developed by Guillaume to find the set of thresholds (1, 2 and 3) best homogeneity
➢ We will then start taking hadrons

Cernekov:

We will use two Cerenkov detectors
1) Discriminate pions against others (He based one)
2) Try to discriminate between kaons and protons (difficult)