

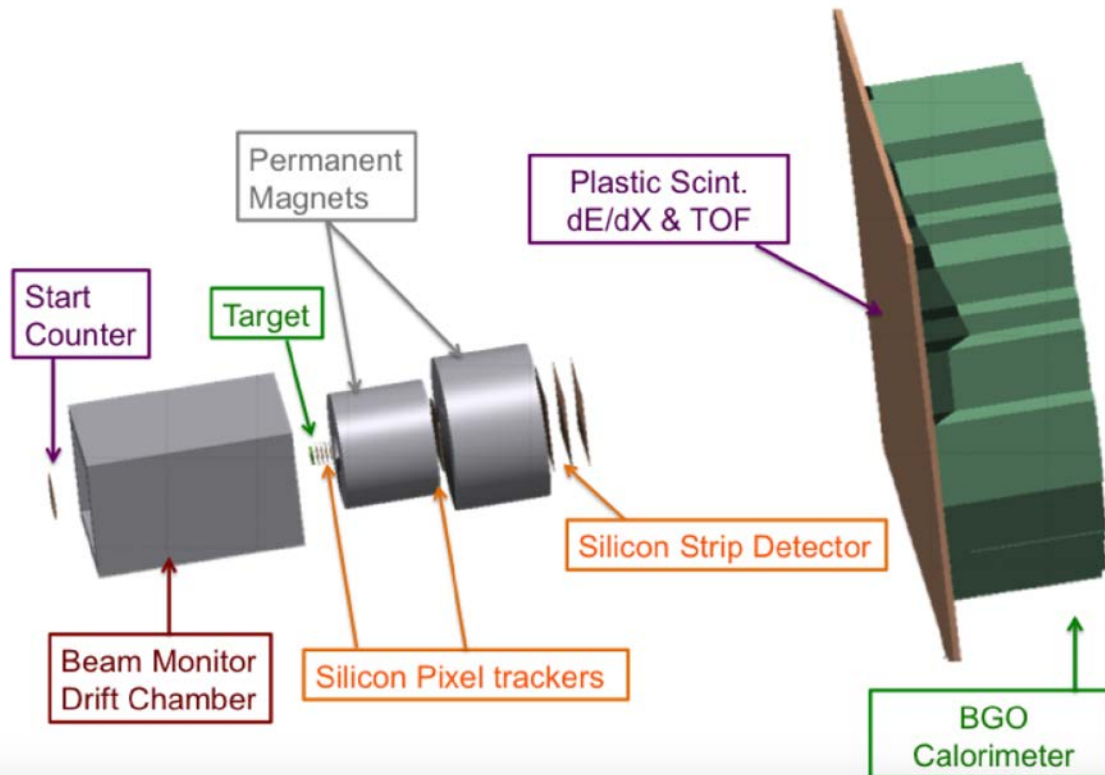


# the FOOT calorimeter

## Status report

- Status
- plans

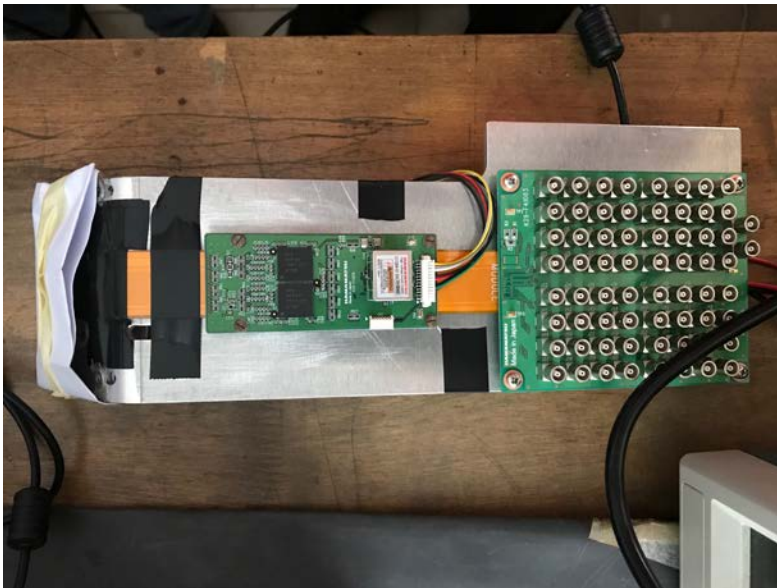
FOOT mechanics meeting  
Pisa, May 3<sup>rd</sup>, 2018  
P. Cerello / G. Giraudo  
INFN - Torino





# the FOOT calorimeter

3/4 BGO crystals (21/7 cm long) are available  
- borrowed from PADME



Test layout available  
(MPPC board +  
Digitizer)  
- borrowed from CMS



# the FOOT calorimeter

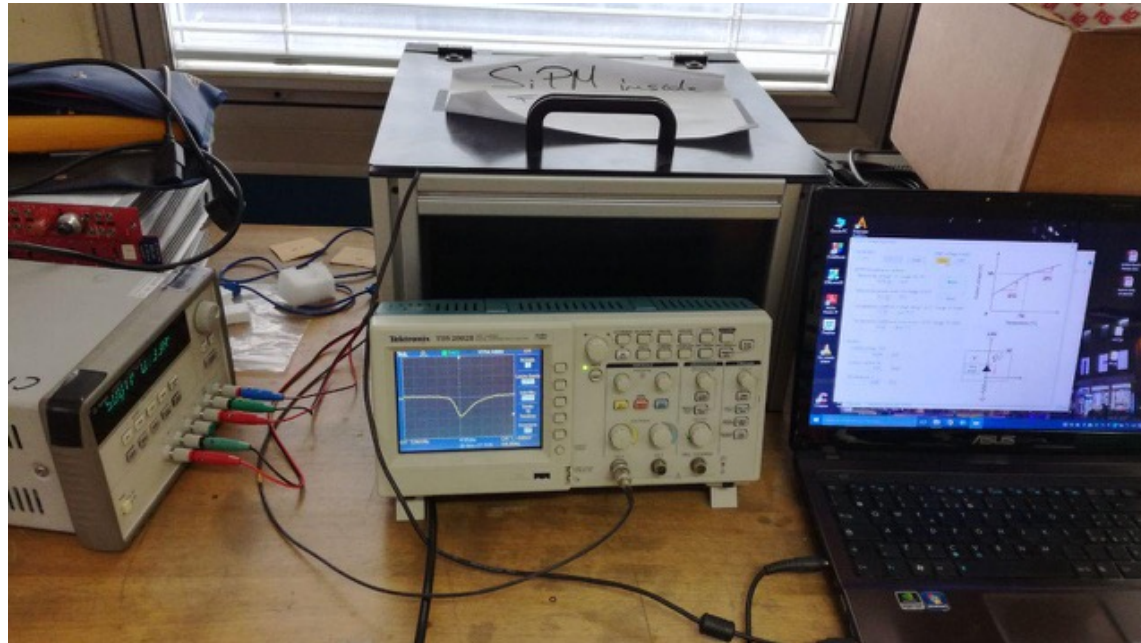


SiPM tiles received from FBK at the beginning of November

PCB adapter (FBK SiPM output to MPPC board input) designed by R. Arteche Diaz (CEADEN, Habana)



# the FOOT calorimeter



CMS test layout working  
in Torino

It will be used with the  
FBK SiPMs and the  
FOOT PCB soon



# the FOOT calorimeter

- 2018

- Up to 800 L3 crystals being recovered (by end of May hopefully)

- Transparency measurements @ CERN
- It is not necessary to cut them. Is it useful?

- Beam test with SiPMs @ CNAO

- Test end of february with 50 um pitch SiPM tile
- No signal saturation up to 120 MeV/A carbon ions
- Very likely (but to be verified asap) that 15 um pitch SiPM will not saturate over the full energy range
- Signal is uniform on the readout surface (so no need to read channels separately)



# the FOOT calorimeter

- 2018
  - Likely configuration
    - SiPM photodetectors
    - 1 tile / crystal
    - 1 channel / crystal
    - 320 channels divided in 4 modules (80 channels / each)
    - If we won't cut them
      - Forward surface: 2.2x2.2 cm<sup>2</sup>
      - Backward surface: 3x3 cm<sup>2</sup>
      - **Length: 24 cm**
      - Weight: 1184 g / crystal
    - Test cut @ 15 cm will be measured @ CNAO asap