Module 1 - week1

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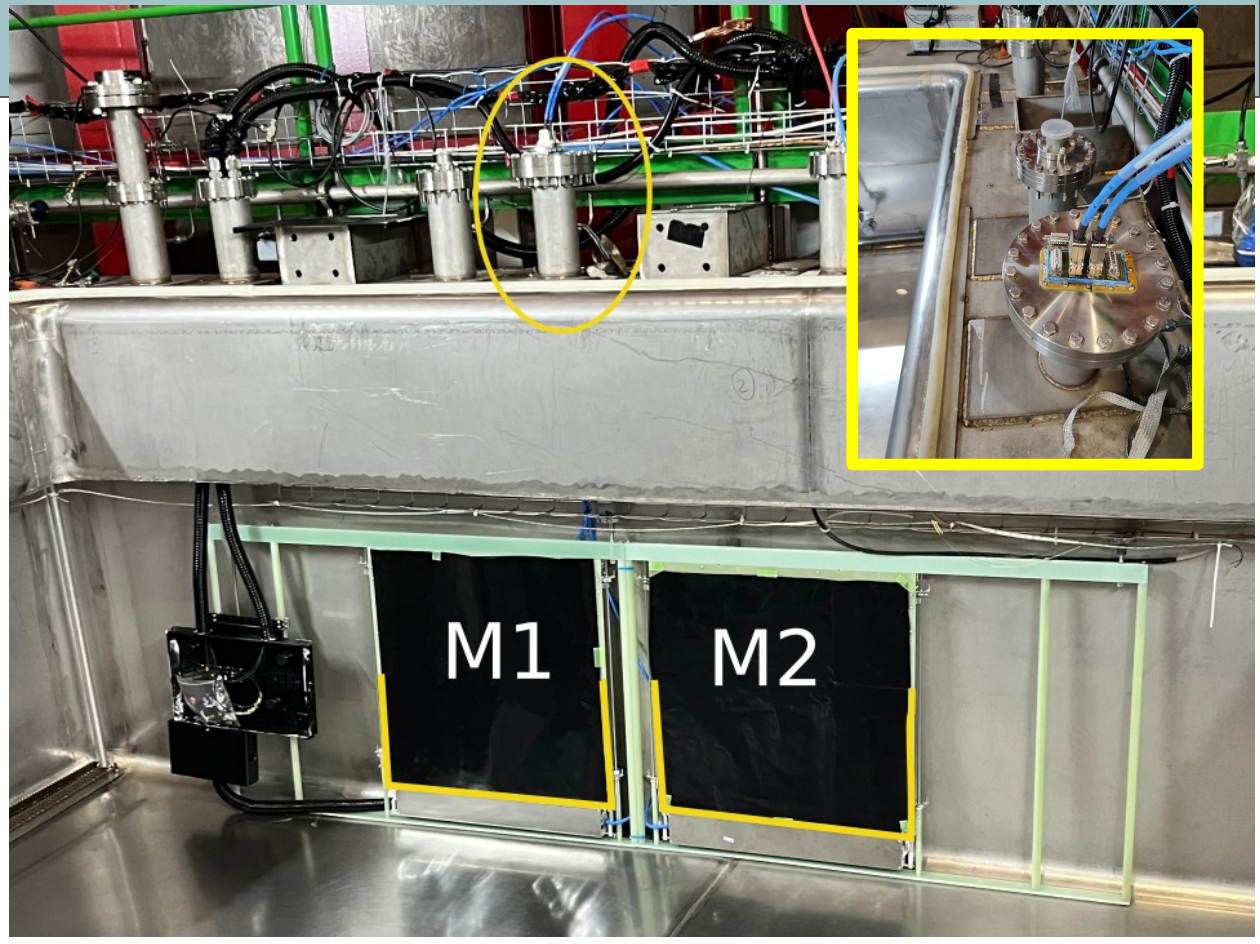
APC - 10/01/2024

The wall modules

- Flange has 4 D15 connectors
- “half” xArapucas (both NIU):
  - M1=DVDM/VD-style readout
  - M2=DMEM/HD-style readout
  - Data taking:
    - First with CAEN/scope
    - DAPHNE later
  - 4 FBK flexes each

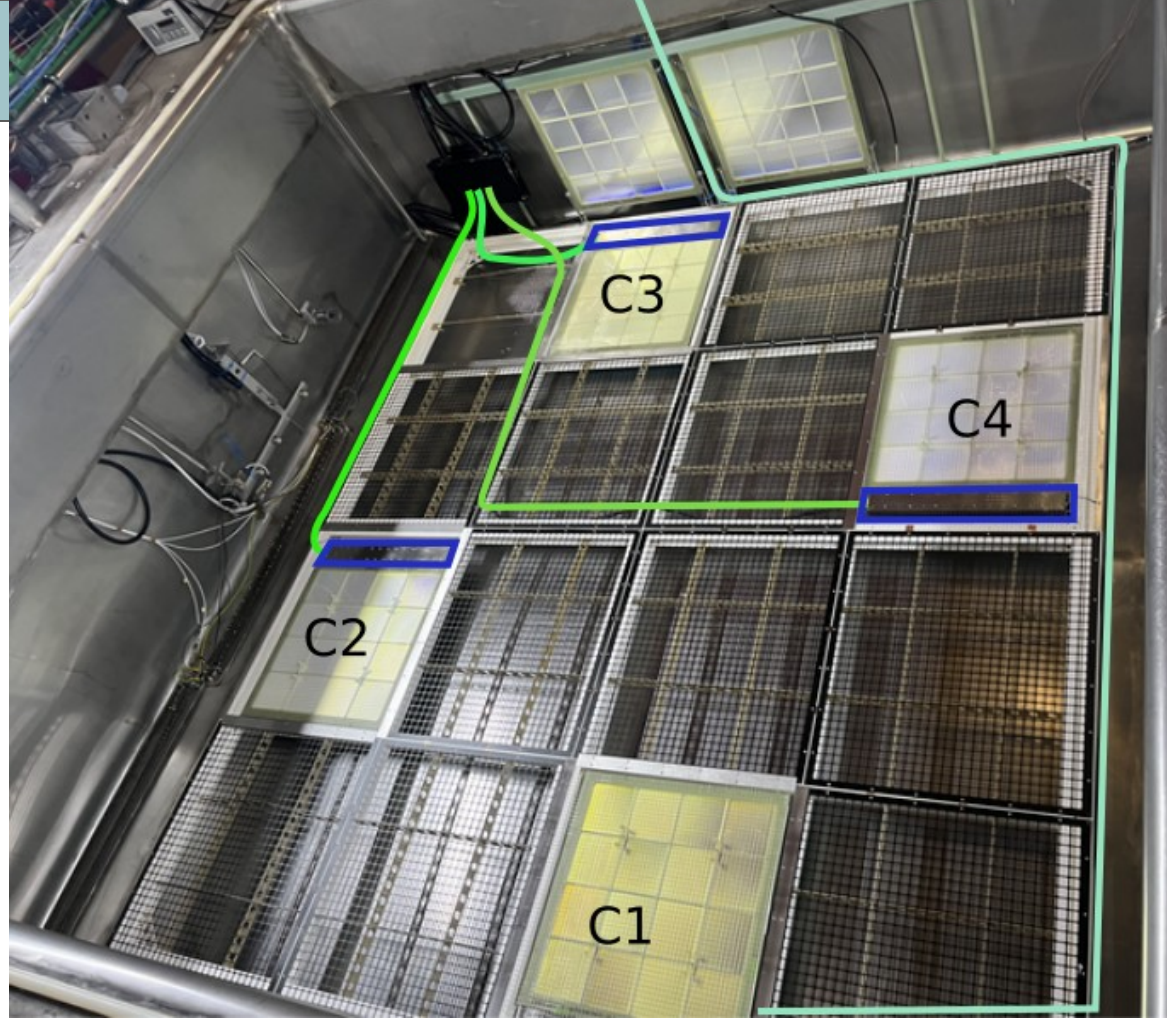
    (32V bias in cold)
- Support structure in G10 designed by Jay
  - No contact between modules and coldbox
  - Same fixations as in M0
  - Can support additional hardware (fiber FCFC connector boxes)



Installation was done in November

Cathode modules

- Cathode was refitted with resistive/transparent mesh according to new module positions
- Electronic boxes were sealed for light leakage
- SoF electronics are the same in all modules
- 2 OPCs per board
- Differences in configurations:
  - Bikuiti on backplane
  - WLS type
  - SiPMs
  - Fiber feedthrough



Notes

- Now on-going: characterization of performance taking data with CAEN digitizer for all modules
  - All modules are “alive” although some investigations are required for C3 (fiber issue?)
- Next: data taking with DAPHNE
  - Receivers shipped today to Prevessin
  - Hacked DAPHNE V2A from Milano arriving on Monday w/ Eleonora
  - Wall modules → with separate DAPHNE V2B (from NP04 or coming with Anselmo)

    → Both DAPHNEs need to be registered in the CERN network for a fixed IP
- Duration of the run → Allowed end of January, possibly +1 week.
  - Desired? a)Long enough to do all our measurements. b)long duration demonstration
  - → try to run till beg feb
- Plan for Collab Meeting week?
- People present after Collab meeting? (Renan, Manuel, Jacob, Dante, Tyler, Ajib, Peter)
- CRP7 run end of February? PNS (delivery after end of January)

List of measurements/targets

- SNR
- Dynamic range w/ LED and with cosmics (LED can be non linear)
- Check SPE / signal characteristics / SNR over time during the run
- Tuning of SoF emitter/receiver compatibility
- Test HV ON/OFF
- Test CRP ON/OFF
- PDS + CRP data
- PDS + CRP + CRT data
- SoF: baseline characteristics (offset, noise rms) over time
- Light leakage from PoF/from outside CB