RhizoBeta Bi-Weekly Meeting

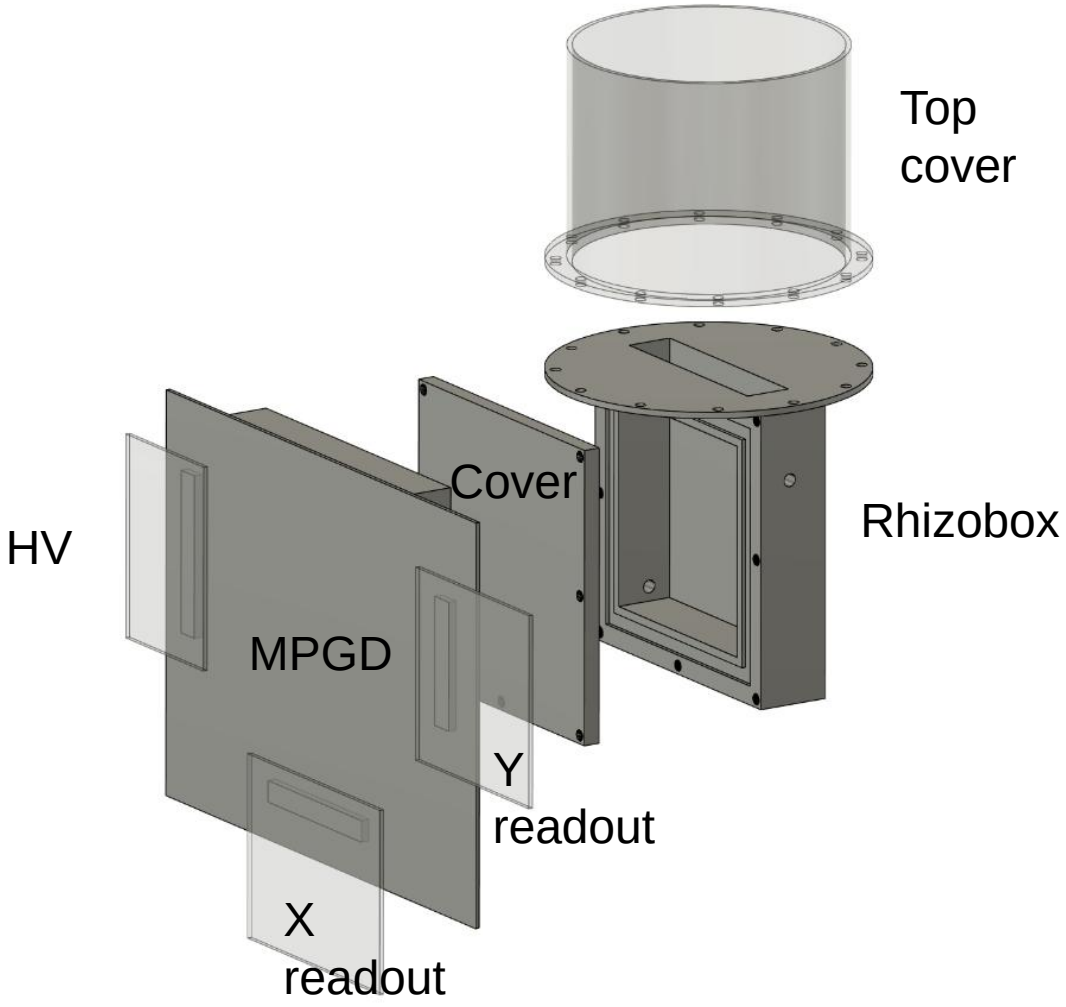
11/11/2026

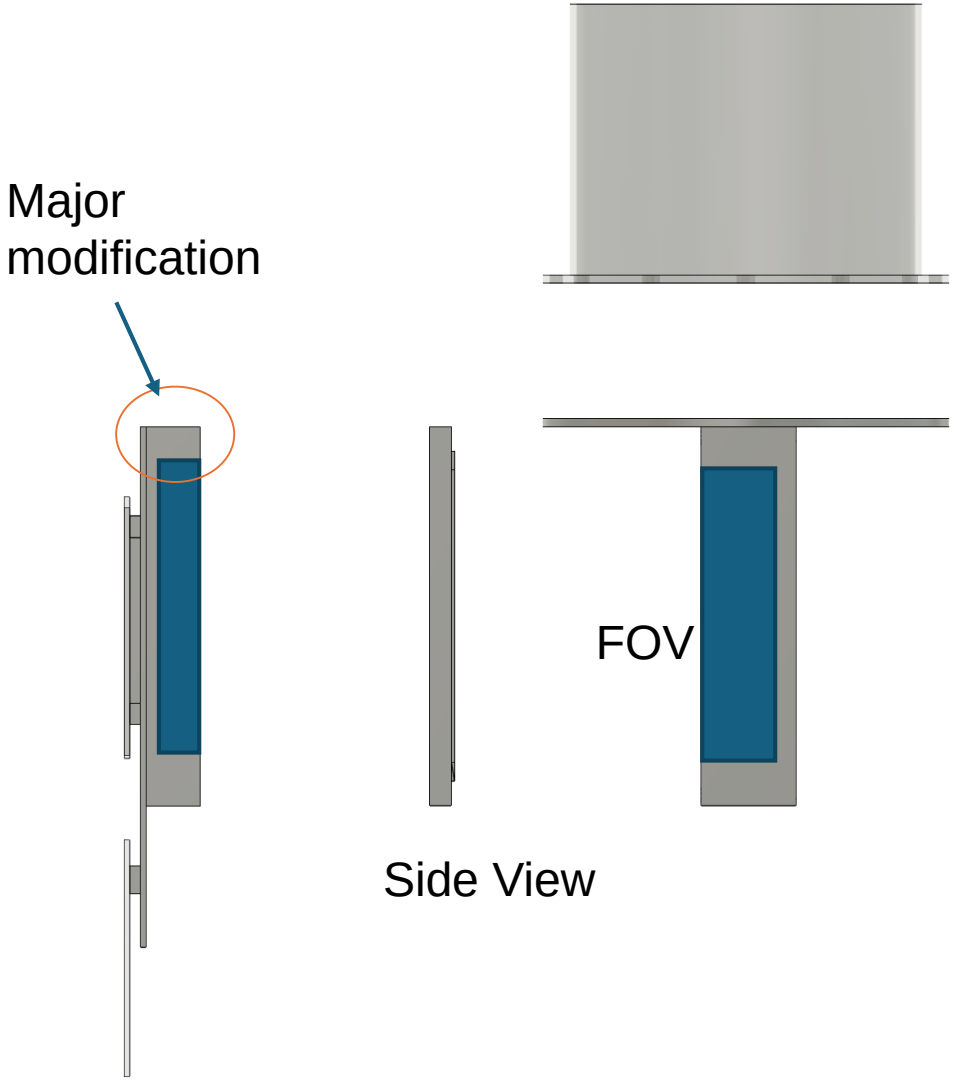
Seungjoon Lee

Update from Jlab

- Communicate with Jlab Communications Office for press release
- 4 x Beta source ordered (C14, Na22, Pm147, Tl204)
- Drew is presenting BetaRhizotron poster at IEEE (NSS-MIC @Granada)
- PostDoc Hiring (still waiting for approval)
- Possible PI meeting on next April (not confirmed)
- Gold cathode (3 micron Kapton) ordered.
- Custom top cover for GEM detector was ordered.

Proposed design





MPGD update

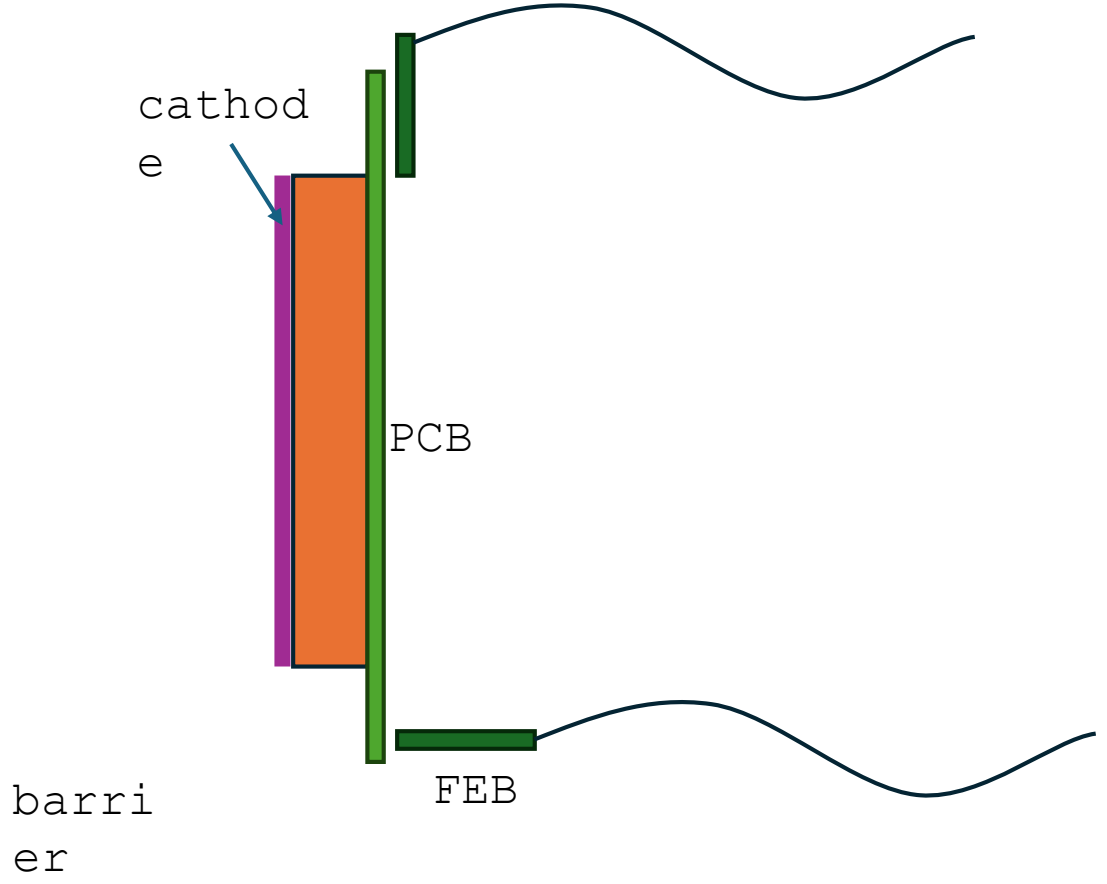
- The current DAQ is not ready for self trigger system.
- Trial of self trigger from 3rd GEM foil (bottom) signal.
- Initial trial was not successful.
- Looking for a dedicated pre-amp for amplified signal test.

Backup/previous

RZBETA setup

- Barrier: Kapton with coating
- Inside: bio-compatible, ceramic coating for protection?
- Outside: moisture barrier, aluminized, graphene,…



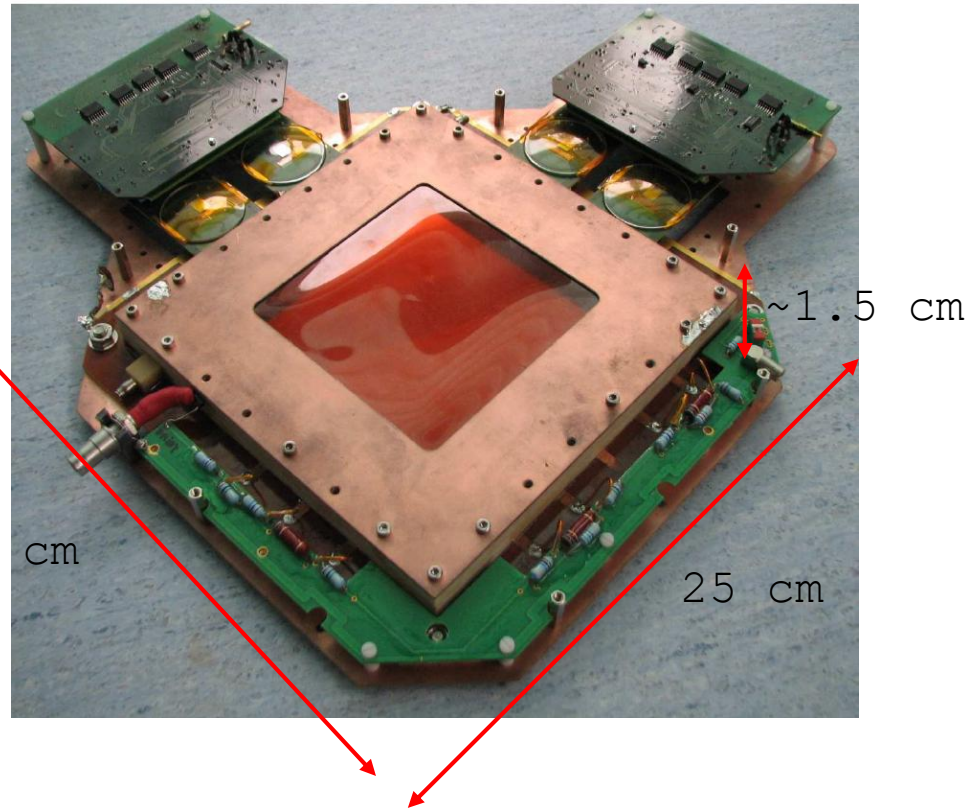


Update from Jlab

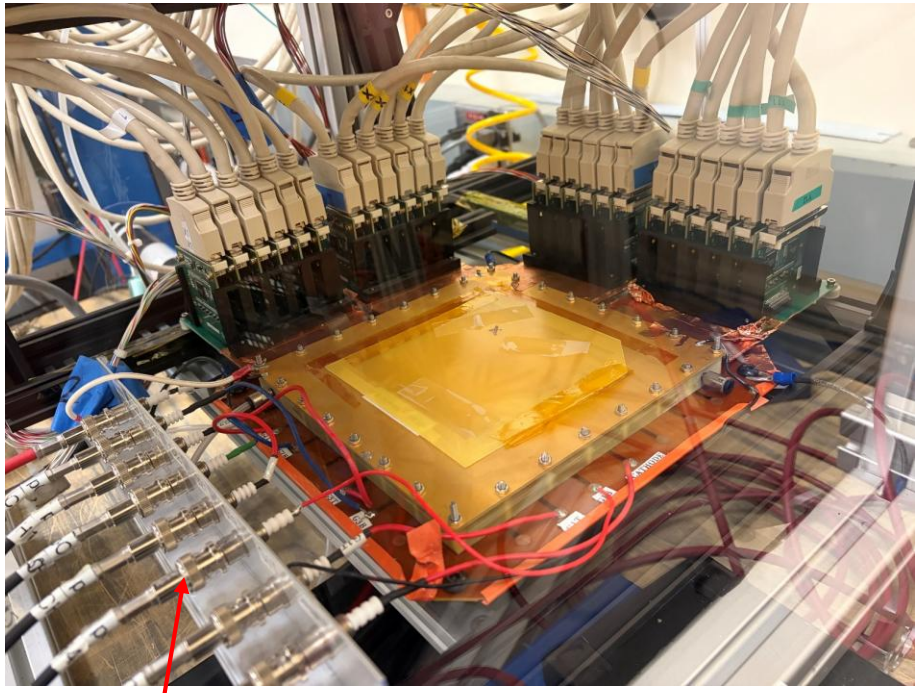
- Subcontract UCSC/MSU
- In progress for hiring postdoc.
- Ready to purchase beta sources
  - C-14 (156_{max} – 50_{ave} keV)
  - Pm-147 (225_{max} – 62_{ave} keV)
  - Na-22 (545_{max} – 215_{ave} keV)
  - Tl-204 (763_{max} – 237_{ave} keV)
- Ready to purchase Gold cathode (3 micron Kapton)
- In progress to get quote for MPGD PCB from CERN
- In progress to design prototype from existing MPGD
- DAQ system update from Eric

General MPGD setup

Frontend boards

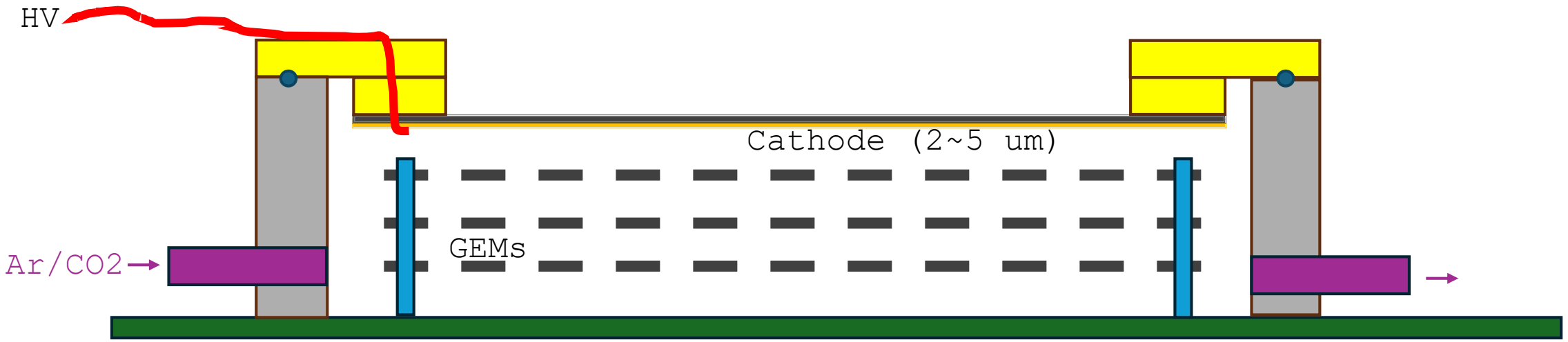


Cables for DAQ



Muti-channel HV (or single channel with

Design of MPGD with gold cathode



- Custom top cover (yellow) with gold cathode layer
- HV from the top
- Cannot adjust drift gap -> Custom gas frame (grey)
- Hard be coupled with rhizotron -> New design for rhizotron
- This will be baseline test to optimize/charactierize detector for each beta energy