

## Cathode ARAPUCA calibration/monitoring

- Follow-up from yesterday's discussion:
  - may use ProtoDUNE-VD to probe cathode illumination from both top and bottom views
  - we have enough material at hand (ANL, SD) for six cryostat fibers assuming single fiber length < 25 m (jackets on order)
  - we have external fibers in PTFE jackets
  - need understand routing and design/fabricate the fiber holders (may work with SD engineering student if enough time).
  - installation along the long side of FC feasible in January/February 2023.



Fiber installed at ProtoDUNE-DP

### Top fibers

- 2 Bare fibers pointing towards the cathode X-ARAPUCAS
- 1 fiber with a diffuser pointing towards the cathode X-ARAPUCAS to test the diffuser

### Bottom fibers

- 2 Bare fibers pointing towards the cathode X-ARAPUCAS
- 1 fiber with a diffuser pointing towards the cathode X-ARAPUCAS to test the diffuser

