

#### MicroBooNE Status

Tia Miceli New Mexico State University, Post-Doc on the behalf of the MicroBooNE Collaboration

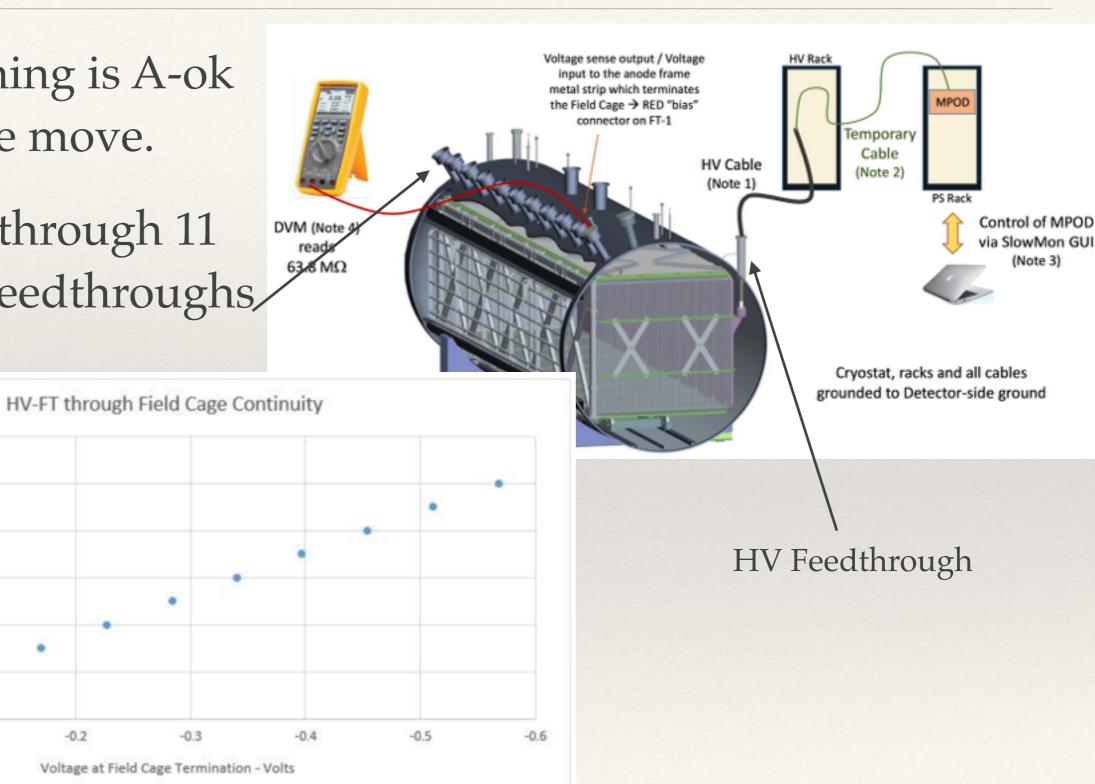
All Experimenters' Meeting 13 April 2015

## Computing Review

- \* MicroBooNE Software Review (Feb 23-24)
  - \* Scientific Computing Division helped put together a committee to evaluate our software development progress.
  - \* Recommendations were in-line with our progress.
    - Decided to support our light-weight framework.
    - Encouraged further online DAQ development.

## HV Feedthrough and Field Cage Tests

- Everything is A-ok after the move.
- \* Access through 11 signal feedthroughs,



1200

1000

800

600

200

Voltage applied to Cathode - Volts

-0.3

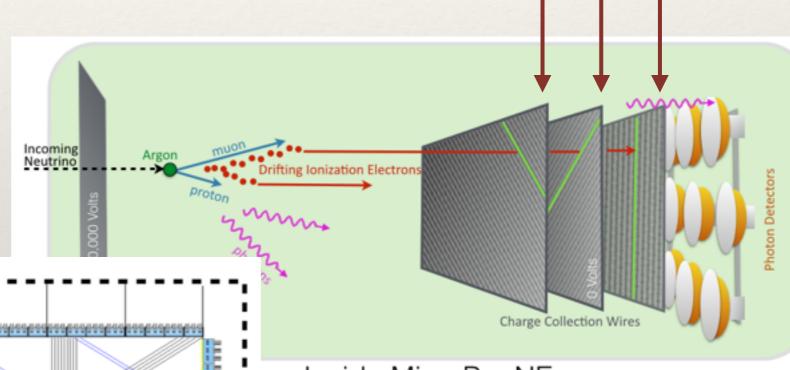
-0.2

### Wire Bias Peculiarity

\* Negative wire bias inputs for feedthroughs 7-9 draw a more current than expected (1% of channels).

Could have been a loose/ broken wire.

\* Made a mock-up to study wire qualities.



Inside MicroBooNE

**Approximate location of wires** 

in the mock-up

-210 Volts O Volts +440 Volts

### D0 Mock-up

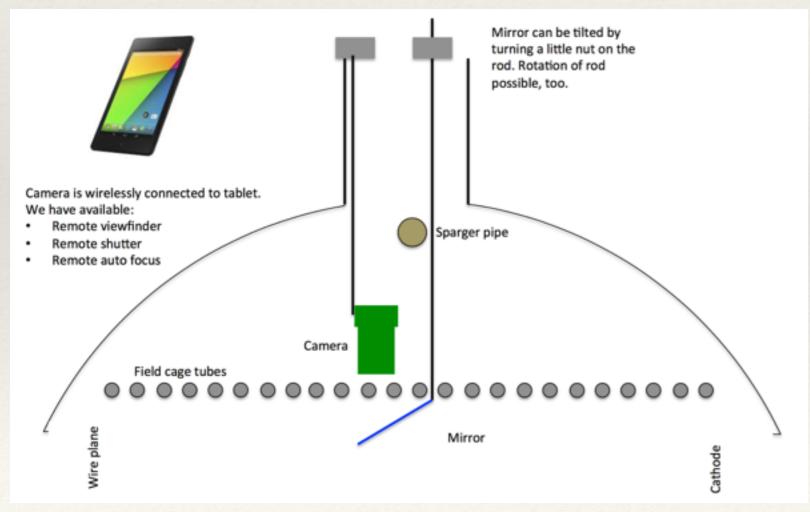
- \* MicroBooNE is CLOSED, so we needed a way to do tests outside of MicroBooNE first.
- \* Wire behavior qualities were evaluated using a mock wire setup at D0.
- \* Study camera and lighting capabilities.





# Seeing Inside the Cryostat

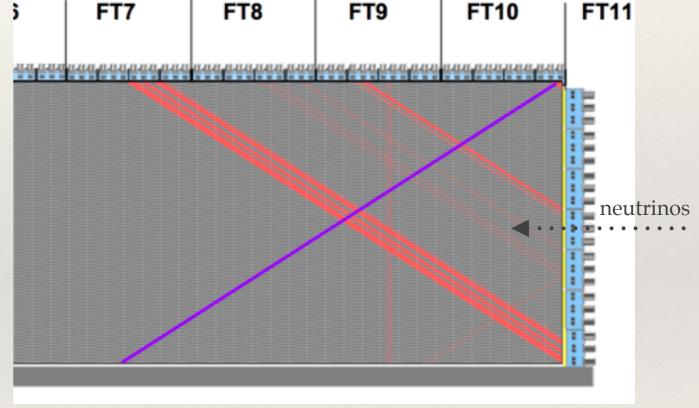
- \* Camera and mirror apparatus developed to image inside a dark closed space from a long distance.
- \* 100+ collection of photos scanning over the wire planes show no evidence of a broken wire.





# Using the DAQ

- \* Our DAQ system is being used to run tests and evaluate the nature of the noisy channels (1%).
  - \* We see different types of noise on different channels.
- \* We have a visual mapping from the DAQ output to the event display.
  - \* Visualize geometric patterns.



### Next Steps

- \* There are no broken wires found.
- \* Today and tomorrow perform more wire bias tests.
- \* Remove the bias and purge the cryostat with gaseous argon.
- \* Continue with the cool down of the detector and keep an eye on the noisy channels.
- \* If the noise is stable, continue the cool down and fill with liquid argon.

#### Thanks!

