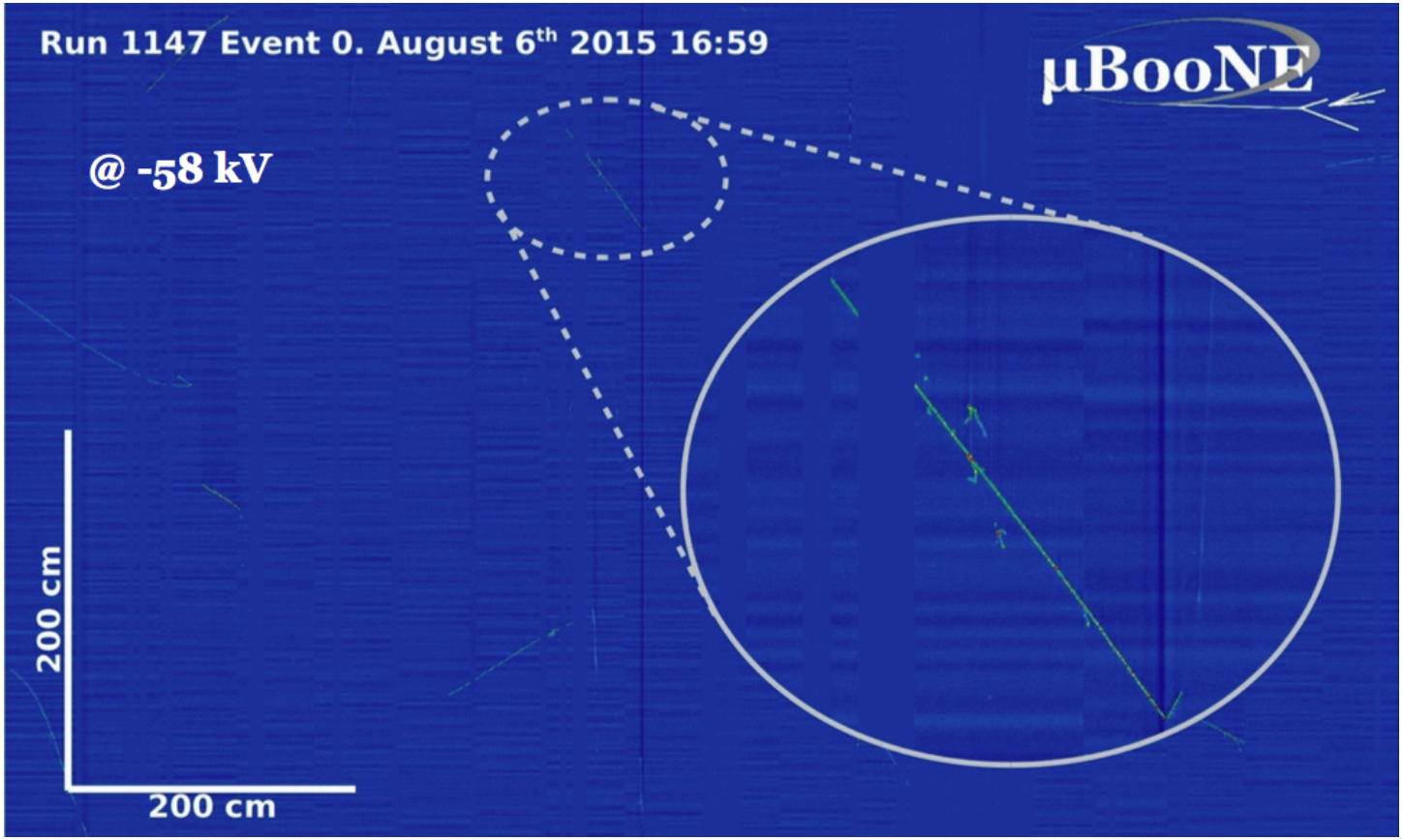
MicroBooNE Status Report

Michael Mooney
BNL

All Experimenters' Meeting
September 14th, 2015

MicroBooNE Sees First Tracks

- **8/6/2015:** Ramped cathode to **-58 kV**



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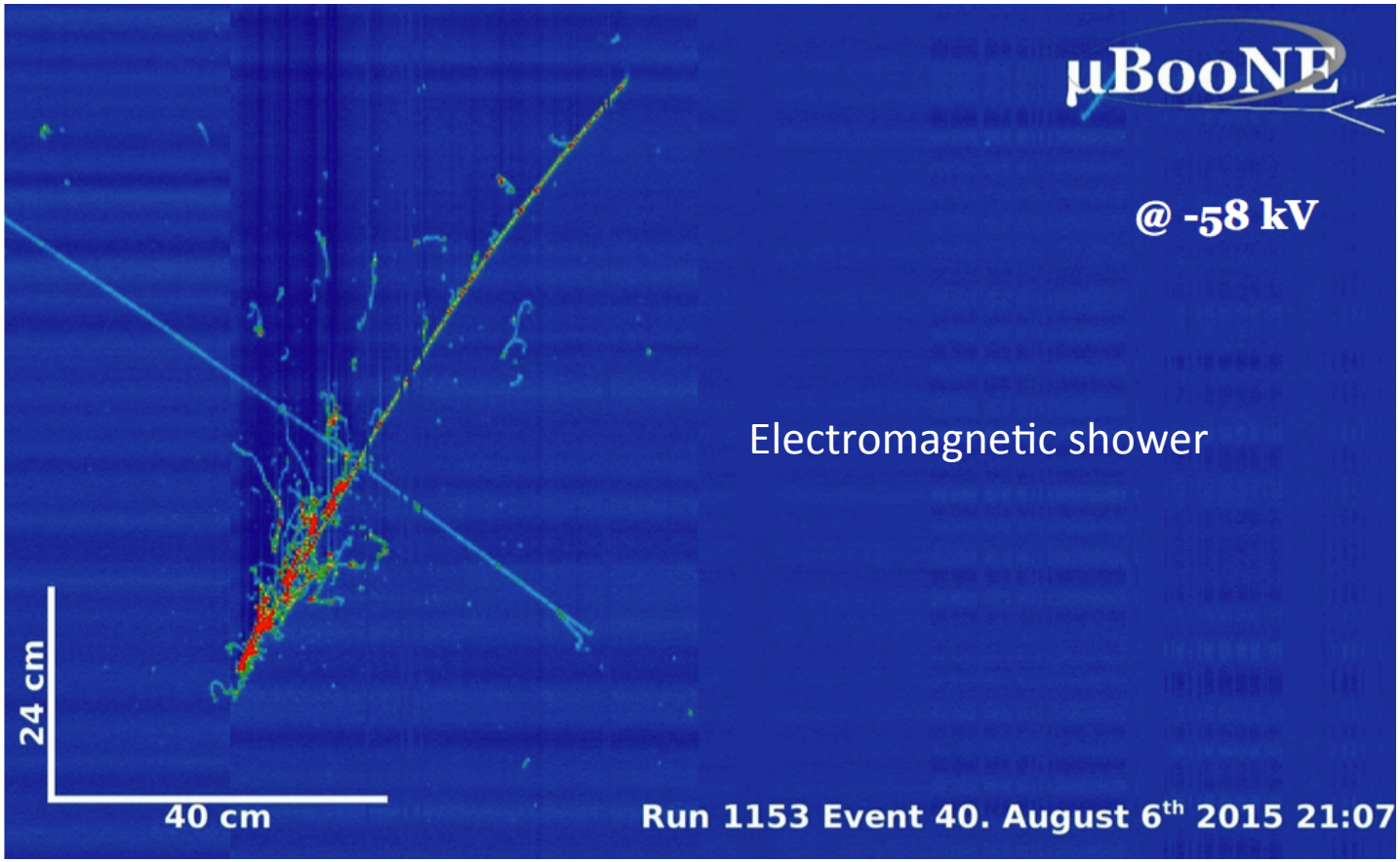

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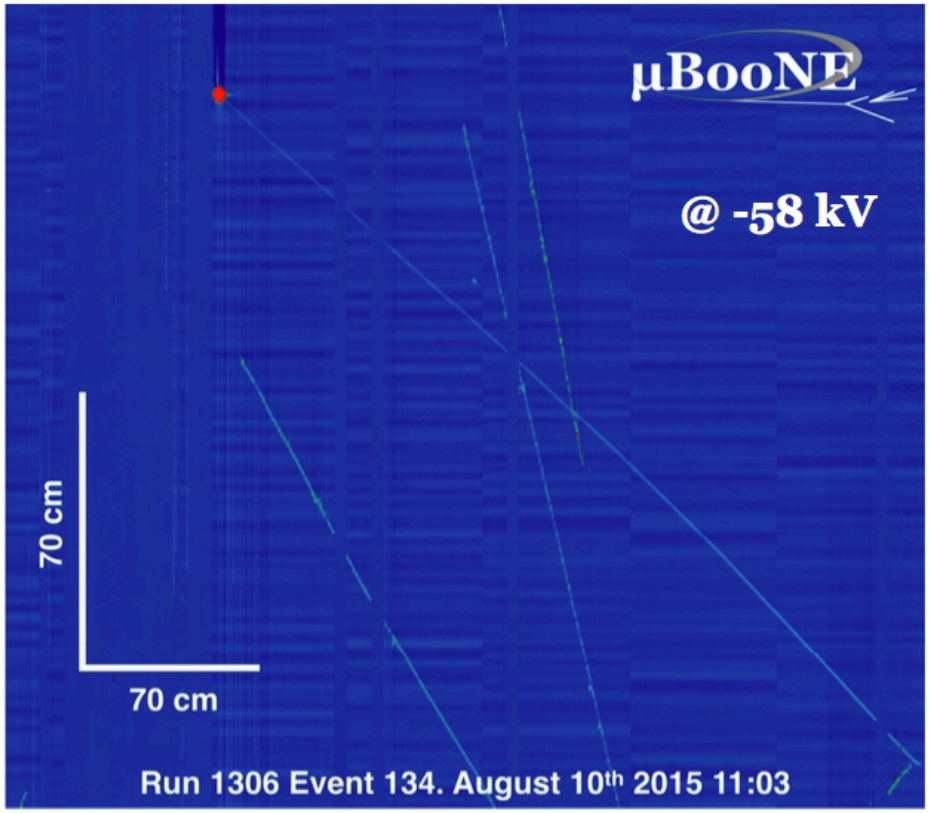
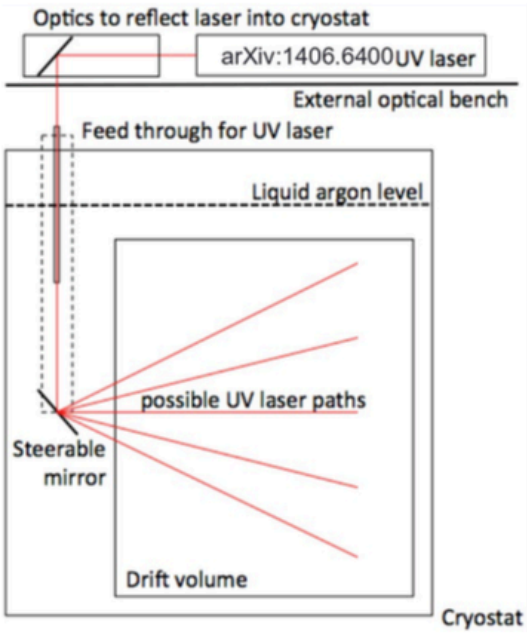
♦ Commissioned two UV lasers positioned at both ends of TPC





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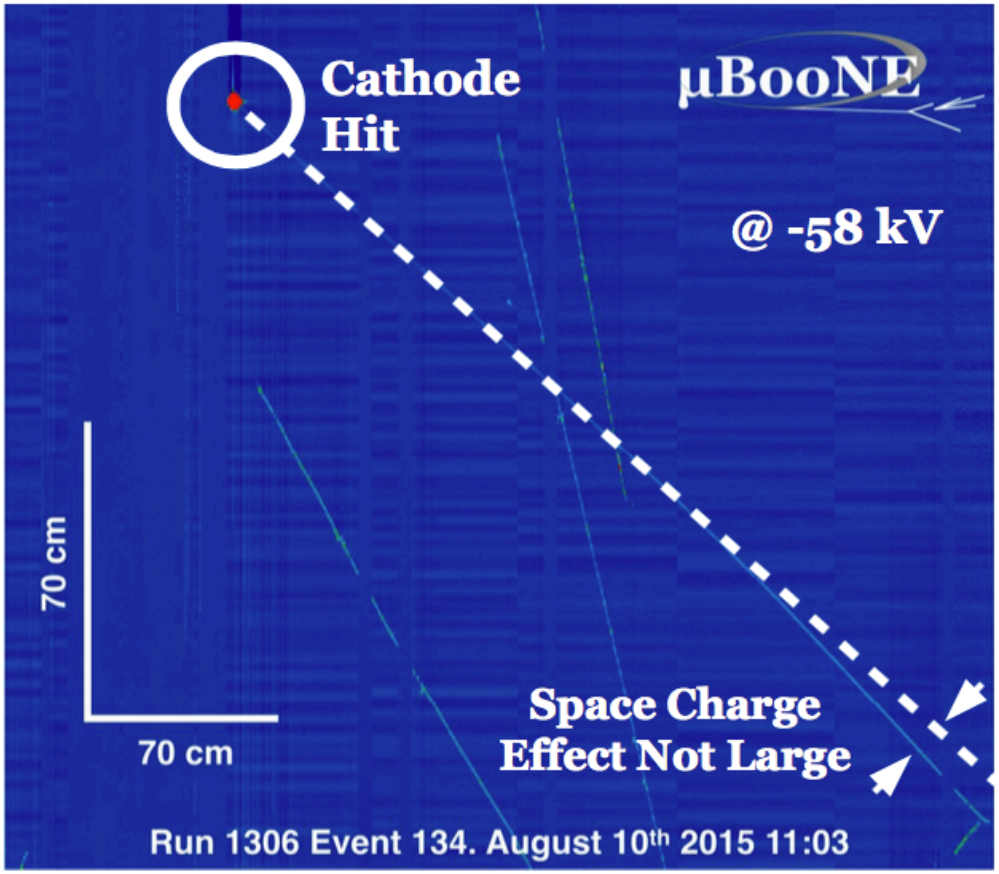
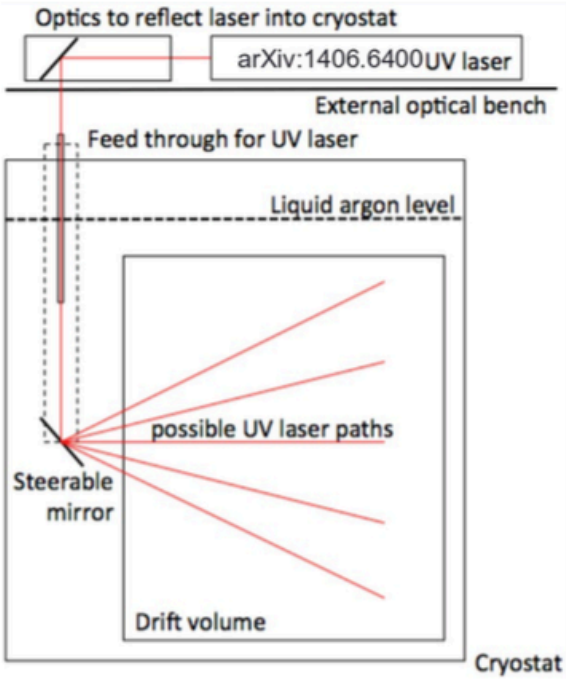


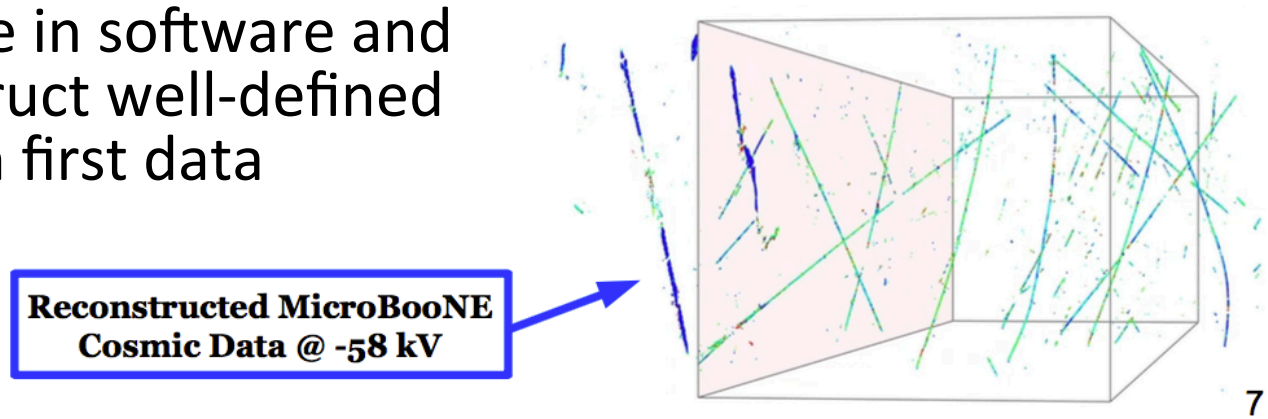


Drift HV Ramps

- Drift HV has remained off since Sept. 1 power outage
  - Performed LAr recirculation pump maintenance
  - Ongoing detector noise studies
  - Enhanced HV monitoring
- Plan to ramp to -70 kV this week and run at this drift voltage for start of neutrino beam data
  - Have already run stably at -70 kV for ~1 week
    - Charge corrections due to electron lifetime are small because of high purities achieved
    - Space charge distortions are not large
- Decision to ramp above -70 kV will be based on physics impact and risk to detector
  - Saw drift HV current draw instabilities above -70 kV that require further investigation

Studies of Detector Noise

- Largely able to account for noise in software and reconstruct well-defined tracks in first data



- However, still trying to eliminate source of noise as much as possible at the hardware level
  - Marvin Johnson, Linda Bagby, and Hucheng Chen leading studies of power supply ripple and grounding schemes

Summary and Outlook

- MicroBooNE sees first tracks!
- Plan to ramp to -70 kV for first neutrino data
- Continuing to study detector noise despite compensating for them quite well already in reconstruction
- Carrying out internal commissioning review on September 24th and 25th