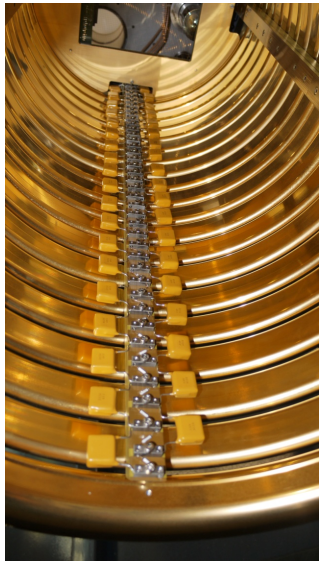


# High Voltage

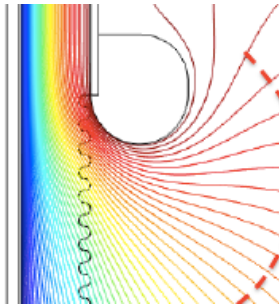
## Discussion and summary session

M. Weber, Bern

# Generating feeding high voltage

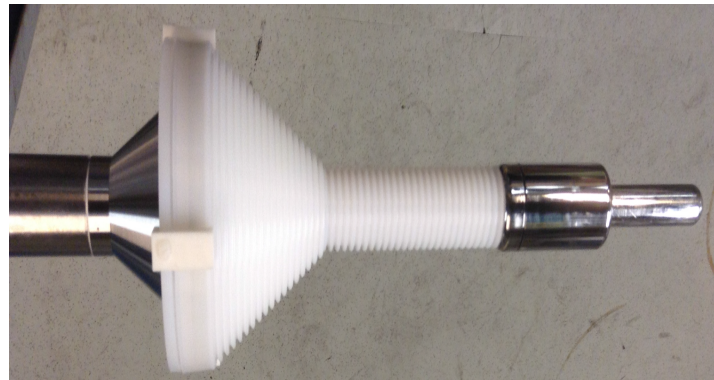


Greinacher  
in ArgonTube



See Hanguo's talk

- > Workshop in November at Fermilab
- > ~150 kV – 200 kV reached
- > Can we get to MV ?
  - Is diameter the issue ?
  - Material
  - Bottom edge of the ground tube
  - Cryogenic



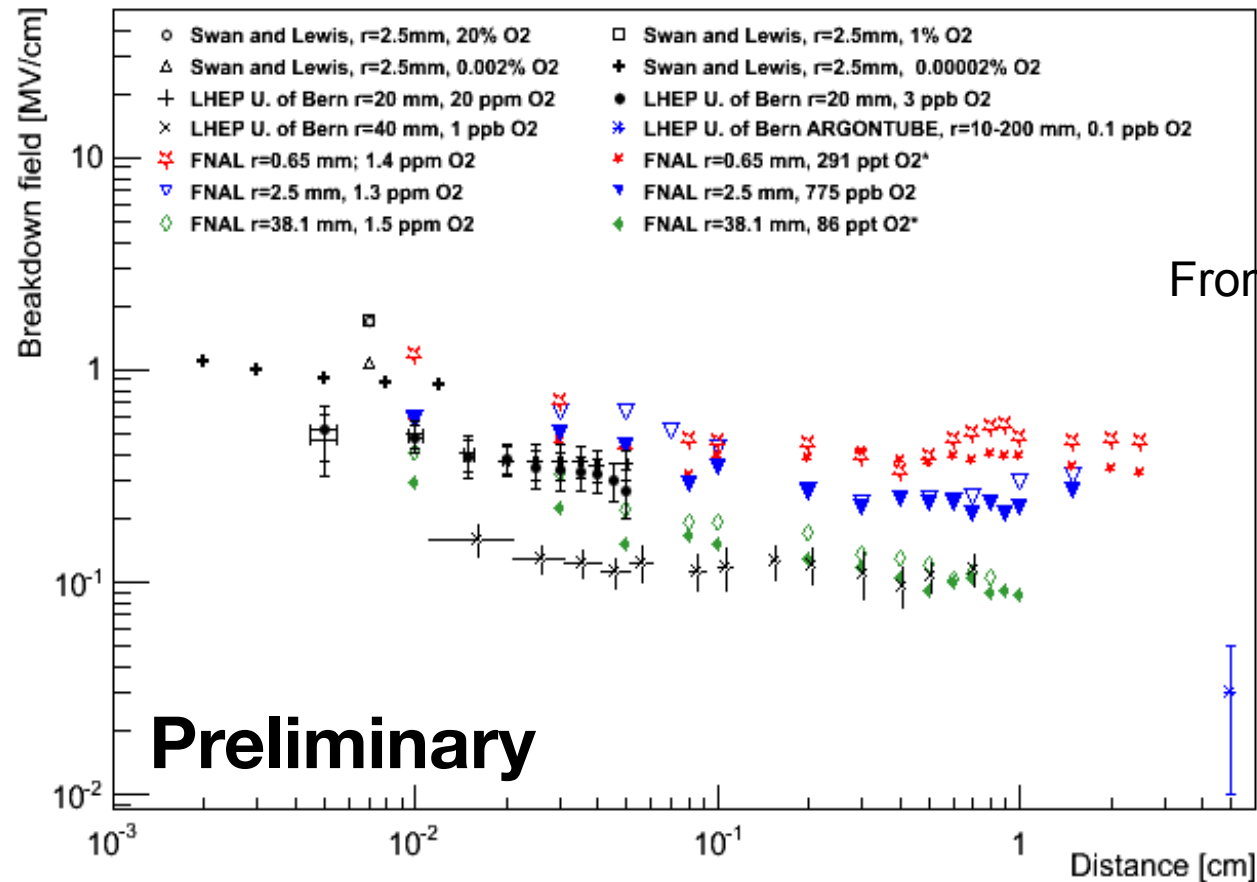
LBNE FT tip



CENTER  
AL PHYSICS

MicroBooNE FT

# Electric strength



From Sarah's talk

# There is physics in the discharges

- > Mechanism of creating a situation where a discharge happens
- > Evolution of a discharge
- > Materials and surfaces
- > Thermodynamics of Argon
- > Geometries
- > Stressed area

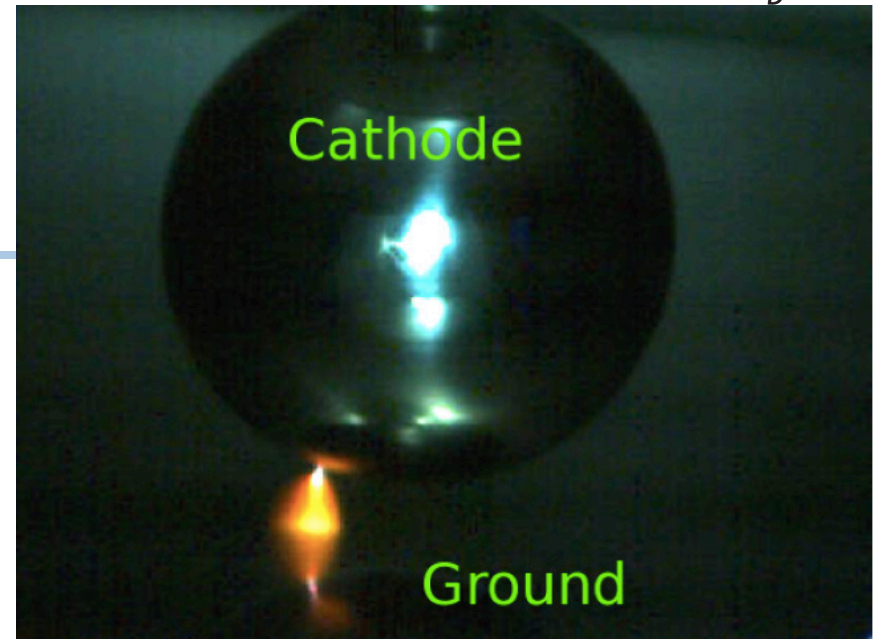


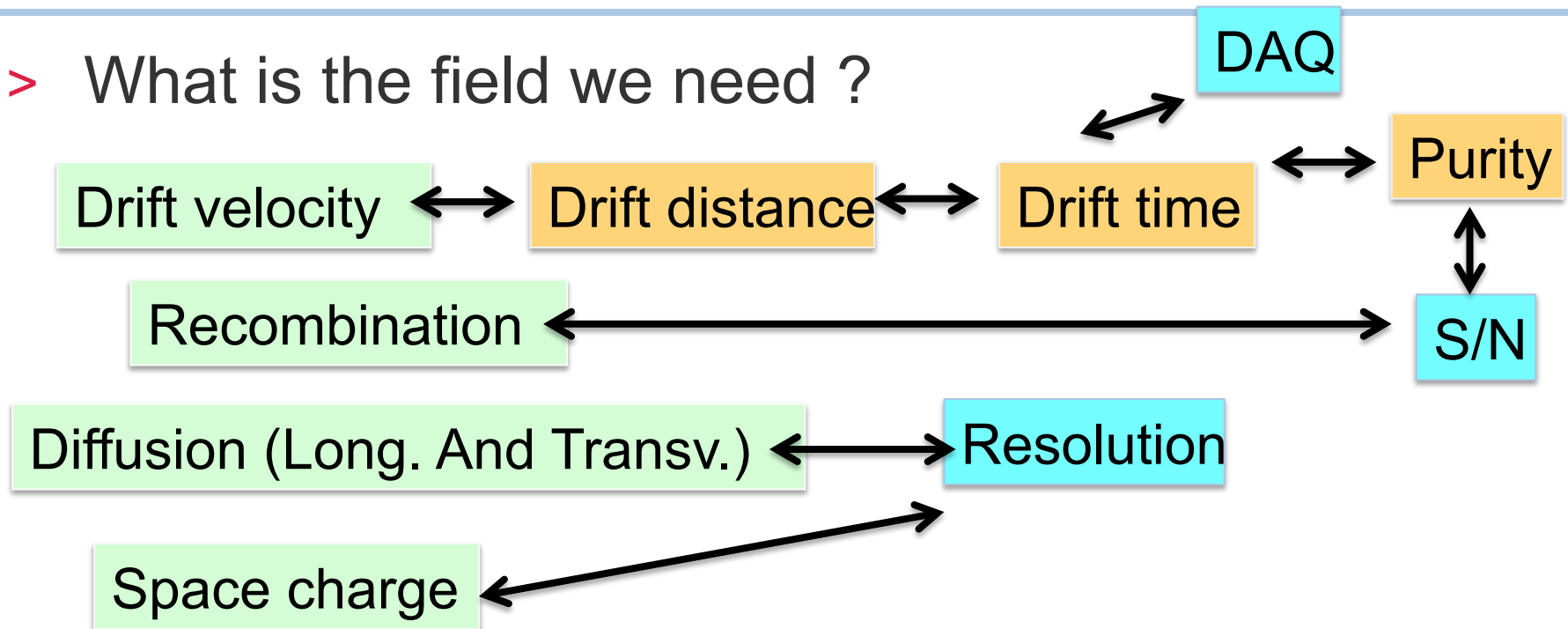
Image taken by high speed camera before a discharge

Dedicated physics studies needed besides finding optimal operational parameters



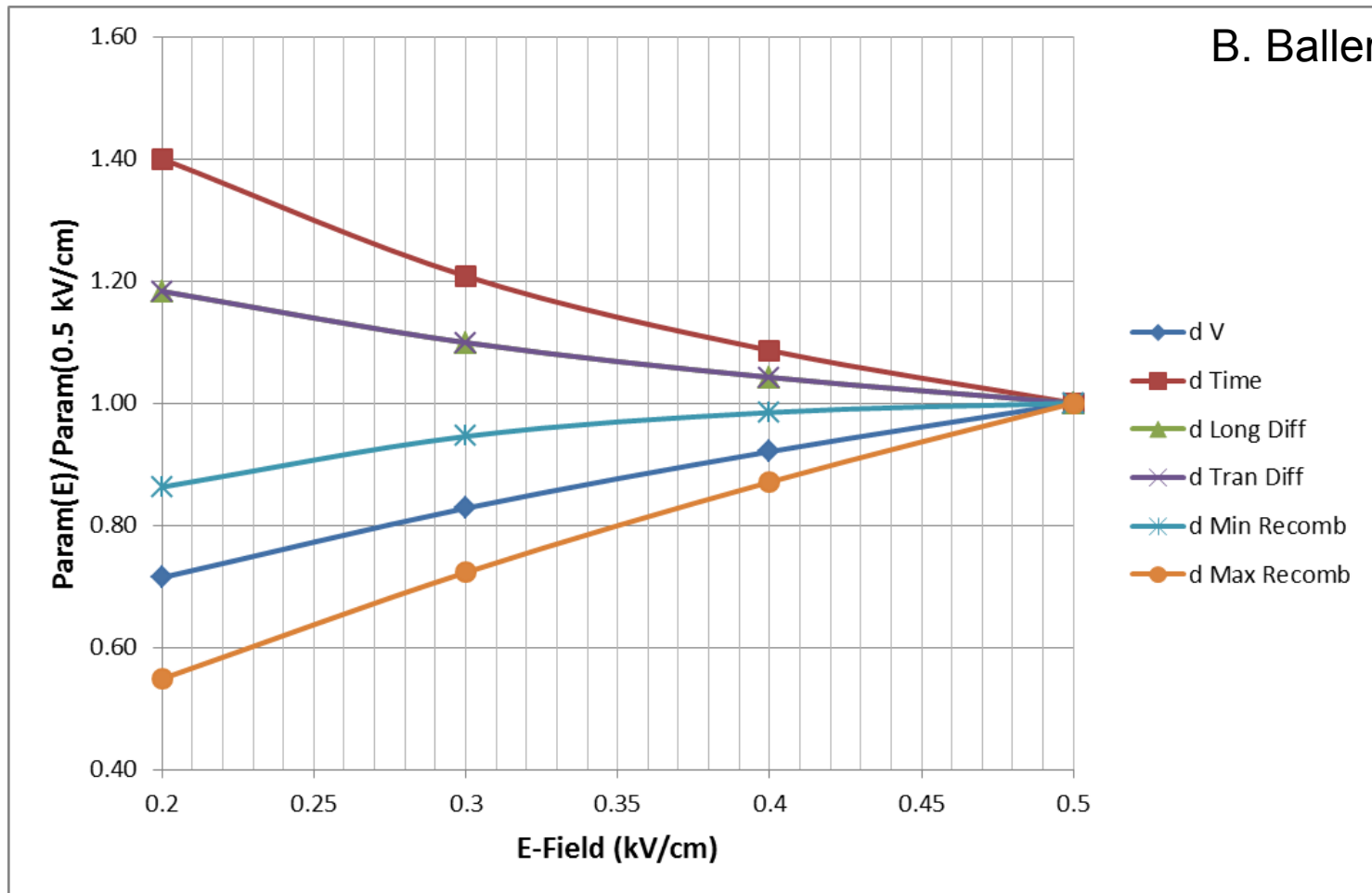
# The electric field counts

> What is the field we need ?



1 kV/cm is the “baseline” (0.5 kV/cm OK ? 0.1 kV is low)

# Drift parameters vs. field



- 
- > HV generation and feeding
  - > Electric strength of Argon
  - > Operational aspects of electric field
    - Can we afford sparks/discharges ?
  
  - > Do we need to push the drift distance (field ?)