



SOUTH DAKOTA



SCHOOL OF MINES  
& TECHNOLOGY

# MicroBooNE Startup Plan

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# Current status

- MicroBooNE is in “safe mode” since March 21st. TPC and PMT high voltage, TPC wires bias, DAQ and CRT system are all turned down
- MicroBooNE is not taking data but cryogenics system still remain on
- ND cryogenics team is monitoring cryogenics system at LArTF as normal
- Shift station at Wilson Hall (ROC-W) is not in use but shifts continue from home via PCs/laptops
- Shifter fills “safe mode” checklist once every 8 hours and system experts remain on-call to trouble shoot any issues, as needed
- Collaboration has been very responsive in filling shifts

# MicroBooNE R&D plan

- R&D plan is being reviewed and finalized by the MicroBooNE Technical Board
- Plan to start with least destructive studies to the potentially most destructive

Detector safe studies	Potentially more destructive studies
UV laser calibration	Increase TPC drift HV
PMT SPE rate vs TPC drift HV	Xenon doping
Measuring switching frequency of power supplies	Reversing cathode polarity
	Lowering SiPMs to investigate SPE rate

# Proposed startup plan

- MicroBooNE is entering an R&D phase and is not requesting 24/7 neutrino beam starting in November
- However, if beam is running for other experiments, we can make good use of it in our studies
- We will continue to need support from ND cryogenics team for the LArTF cryogenics system, as they have been providing since the start of MicroBooNE operations

# Proposed startup plan - shifts

- Shifts will continue as checklist shifts due to uncertainty in the availability of on/off-site shift stations
  - Data collection will not be monitored 24/7
  - It may take additional time to respond to DAQ or detector problems
  - We will likely have some data collection inefficiency as a result
- We feel that this level of monitoring is both realistic and appropriate for this upcoming R&D phase
- Working out the details with ND in terms of bringing staff back on site