

# NDK/High-E Overview

Lisa Whitehead Koerner, Greg Pawloski, Vitaly Kudryavtsev

DUNE Physics Week

November 15, 2017

# Recent Changes

- The nucleon decay, atmospheric neutrino, and cosmogenic working groups were merged into the nucleon decay/high-energy non-accelerator working group
  - Conveners: Lisa, Greg, Vitaly

# Current Effort

- Cosmogenics
  - Lost some manpower in Vitaly's group at Sheffield, but Vitaly has a new postdoc who will spend a fraction of time on cosmogenics
- Atmosphericics
  - Hugh has three students at Tufts (2 grad, 1 undergrad) working on atmosphericics
- Nucleon decay
  - Aaron (Houston) is working on  $p \rightarrow \nu K$  analysis
- $n$ - $\bar{n}$ 
  - Georgia and Yuyang (Columbia), Josh (U Tenn)

# Main goals for the week

- New decay modes
  - Looking for new people to work on
    - $p \rightarrow e^+ \pi^0$
    - $p \rightarrow \text{lepton}^+ K^0$
    - $n \rightarrow K^+ e^-$
  - Biao Wang has volunteered to start looking at  $p \rightarrow \text{lepton}^+ K^0$
  - Other modes still need a champion – this could be **your** analysis!
- Communication with sim/reco
  - Joint session on Thursday afternoon
  - Get on same page about what tools are available and what tools are needed

# Please join us!

- This group really needs more people working in all areas!!
- If you are interested in any aspect – atmospherics, cosmogenics, nucleon decay – please let us know!