# Update on Kim's work

Kimberly Palladino
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# LZ System test status

- Last week Eric Dahl from Northwestern and engineer John Belle from FNAL visited to discuss the LXe tower operation of the system test to prepare for their work designing the LZ one

- Completed some HV testing of the extraction grids, and now ramping the cathode grid higher

- Will do single photon calibration and detector leveling tomorrow, and end run 4 with recovery on Thursday and Friday

# Other efforts

- MiniCLEAN
    - Trying to get a schedule out of the MiniCLEAN guys to purchase tickets for Nathan
    - Nathan getting started on Berkeley cluster for simulations
- Ricochet
    - Working on installing RAT software on Madison cluster for Rachel to work on
- Other
    - Moving planning!
    - Postdoc search resuming this week

# Slides from 5/24

# Ricochet

- Coherent elastic neutrino nucleus scattering project
- Focus is on new detector development, not aiming to be first to make the measurement
    - Use cryogenic crystal bolometers (looking for an increase in temperature) to look at low thresholds ~50 eV scatters
- Prototyped at MIT (Joe Formaggio and Tali Figueroa-Feliciano had the original idea)
    - Test with neutron calibration sources, then run at the MIT test reactor to see neutrino interactions

# Rachel's Work

- Simulations of the detectors
    - 1: Neutron backgrounds from the reactor, which were measured with a He3 counter from SNO: sims a factor of 50 different from data in sims done at MIT
        - use the RAT package to look at He3 counter
    - 2: Simulations of the Ricochet detectors studying neutron and gamma backgrounds and shielding needs

# MiniCLEAN

- Single Phase Liquid Argon detector at SNOLab
  - Focus is on technology demonstration of single phase liquid argon handling beta decay backgrounds from atmospheric Ar with Ar39
- Should be cooling and filling this summer, to prep to take background data and then an Ar-39 injection

# Nathan's Work

- Physically going to Sudbury to work on MiniCLEAn during filling and cooling
    - He's renewing his passport today
    - Awaiting scheduling from the collaboration for final dates
- Simulations and analysis
    - Use RAT package to prepare analysis tools with simulations of external calibration sources