Microwave Kinetic Inductance Detectors and Cosmology: Scientific Motivation, Recent Achievements and Planned Experiments

Monday, 26 August 2013 - Tuesday, 27 August 2013

Fermilab

Scientific Programme

The workshop structure is such that we will have plenty of time for discussion. We are also planning a visit to our lab facility on site, at SiDet, for those interested in the hardware effort.

Questions and Themes:

-What would be the contributions to cosmology of an instrument capable of giving photometric information with an R of 80-100 (or an error in distance of about 10-15 Mpc) for 50% of all the galaxies in the LSST field in the magnitude range between 22 and 24.5 (or perhaps 25)?

- Status updates from various groups who have been working on MKIDs development
- Science topics/concepts for possible MKID-based instruments
- Existing data sets and recent observing campaigns: lessons learned
- Simulations: what are the goals?
- Papers that are slated to come out or studies in progress.
- What are the primary science arguments that we should make, and how will we test/prove them?
- The path forward: MKIDs collaborative and joint efforts