



<http://kicp-workshops.uchicago.edu/DESUC2015/>

MEETING PRESENTATIONS



<http://kicp.uchicago.edu/>



<http://www.darkenergysurvey.org/>



<http://www.uchicago.edu/>

This 1-day long Chicagoland-based DES meeting creates a common discussion platform for those who work on Dark Energy Survey (DES) at the KICP, University of Chicago, Fermilab, UIUC, NCSA, and Argonne. The ongoing Dark Energy Survey is designed to probe the origin of the accelerating universe and help uncover the nature of dark energy by measuring the 14-billion-year history of cosmic expansion with high precision. Learn more about the survey at the DES website. The objectives of this meeting are to provide updates and to discuss various science/infrastructure projects that are going on in Chicagoland and to provide a channel for interested people to join ongoing and create new projects.

Organizing Committee

Lindsey Bleem
Argonne National Laboratory

Daniel Scolnic
KICP

Vinu Vikram
Argonne National Laboratory

1. **Thomas Diehl**, Fermi National Accelerator Laboratory
Talk: Results of a Search for Strong Gravitational Lenses in SVA1 and Y1A1 using "Blue Near Anything"

September 3, 2015 (11:20 AM - 11:35 AM)

Co-authors: Kate Lindgren, Hallie Gaitsch
2. **Zoheyr Doctor**, UC
Talk: Search for Kilonovae in DES Supernovae Fields

September 3, 2015 (10:20 AM - 10:35 AM)

Co-authors: Rick Kessler, Ben Farr
3. **Samuel Flender**, ANL
Talk: Measurements of the kSZ using DES + SPT

September 3, 2015 (11:05 AM - 11:20 AM)
4. **Josh Frieman**, Chicago/Fermilab
Talk: Welcome

September 3, 2015 (9:30 AM - 9:35 AM)
5. **Josh Frieman**, Chicago/Fermilab
Talk: DES Projections

September 3, 2015 (3:30 PM - 3:45 PM)
6. **Michael Gladders**, UChicago
Talk: Thoughts on Strong Lensing from Sloan

September 3, 2015 (11:35 AM - 11:50 AM)
7. **Ravi Gupta**, ANL
Talk: DES at Adler After Dark (with Brian Nord)

September 3, 2015 (1:15 PM - 1:35 PM)
8. **Stephen M Kent**, Fermilab
Talk: Reddening Law in the DES Survey Footprint

September 3, 2015 (9:35 AM - 9:50 AM)

Co-authors: Eli Rykoff, Alex Drlica-Wagner, Doug Tucker
Two different photometric calibrations of the Y1 and Y2 data are used to study the variation in the reddening law in the DES footprint.

9. **Nan Li**, KICP & Argonne
Talk: Simulations of Cluster Scale Strong lensing

September 3, 2015 (11:50 AM - 12:05 PM)

Co-authors: Mike Gladders, Salman Habib, Katrin Heitmann, Steve Rangel, Michael Florin, Lindsey Bleem, Hillary Child, Patricia Fasel

Gravitational lensing is one of the most powerful tools for investigating the dark side of the universe. Strong gravitational lensing in particular provides a unique probe of the cores of massive dark matter halos. However, understanding this phenomena based upon observational data alone is complicated; high-fidelity simulations are required for robust cosmological interpretations. To fulfill this need, we have developed a simulation pipeline with which we can create highly-realistic strong lensing images starting from N-body simulations. This pipeline includes a low- noise and unbiased density estimator to accurately capture the lensing halo's mass distribution, routines that lens realistic source images (drawn from the Hubble Ultra Deep field) and that add galaxies along the line-of-sight, lens member galaxies, foreground stars and realistic observational noise and photon smearing. Simulations from our pipeline are currently being used to interpret observations of cluster scale strong lenses and future work is planned in preparation for LSST to improve strong-lensing identification algorithms. Aspects of this pipeline will also be applied to a number of other scientific analyses including weak lensing in galaxy clusters, cluster lensing of the cosmic microwave background, and galaxy-galaxy lensing.

10. **Carrasco Kind Matias**, NCSA
Talk: Hack Session: DES data access + Data Quality (with K. Bechtol & A. Drlica-Wagner)

September 3, 2015 (1:35 PM - 3:30 PM)

11. **Felipe Menanteau**, NCSA, University of Illinois
Talk: DES Data Access

September 3, 2015 (1:00 PM - 1:15 PM)

12. **Eric Morganson**, NCSA
Talk: Examining Outer Milky Way Structures with PS1 and DES

September 3, 2015 (9:50 AM - 10:05 AM)

13. **Brian Nord**, Fermilab
Talk: Hack Session: DES outreach

September 3, 2015 (1:35 PM - 3:00 PM)

14. **Amanda Pagul**, University of Chicago
Talk: Counts in Cells: Constraining Galaxy Statistics

September 3, 2015 (10:05 AM - 10:20 AM)

15. **Daniel Scolnic**, KICP
Talk: Hack Session: DES Calibration

September 3, 2015 (1:35 PM - 3:00 PM)