



<http://kicp-workshops.uchicago.edu/LowResCosmology2020/>

WORKSHOP PROGRAM

The Kavli Institute for Cosmological Physics at the University of Chicago is hosting a workshop "Cosmology Using Low Resolution Spectroscopy in the 2020s" on February 16-17, 2016. The goal of this workshop is to evaluate the cosmological impact of future wide field low-resolution spectroscopic surveys. All of the top surveys will be represented, and the many cosmological studies that these surveys will allow will be discussed.

Organizing Committee

Scott Dodelson
FNAL/UC

Juan Estrada
Fermilab

Daniel Scolnic
University of Chicago

Invited Speakers

Francisco Castander
ICE, IEEC-CSIC, Barcelona

Olivier Dore
Jet Propulsion Laboratory, California
Institute of Technology

Tim Eifler
JPL/Caltech

Martin Eriksen
Leiden University

Tommaso Giannantonio
University of Cambridge

Christopher Hirata
Ohio State University

Mathew Madhavacheril
Stony Brook University

Jeffrey Newman
University of Pittsburgh / PITT PACC

Marcelle Soares-Santos
Fermilab

Albert Stebbins
Fermilab

Guangtun Zhu
Johns Hopkins University

WORKSHOP PROGRAM

Tuesday - February 16, 2016

8:30 AM - 9:00 AM	Continental Breakfast
9:00 AM - 9:15 AM	Welcome (Estrada)
9:15 AM - 9:45 AM	<p>EXPERIMENTAL PARAMETERS <i>5 minute talks about different approaches for future low-res wide field spectroscopy. We ask each speaker to estimate the experimental parameters that could be achieved in a potential low resolution survey (LRS) with their technology in 2020s. These parameters are:</i> <i>$b > N_{\text{gals}}$, area, magnitude limit, spectral resolution (R), z and catastrophic failure rate in z determination, spectral coverage. This experimental parameters will be used for the developing forecasts during the workshop.</i></p> <p>Technologies:</p> <ul style="list-style-type: none"> • PAU (5') - Castander • PRIMUS (5') - Zhu • MKIDs (5') - Estrada • SPHEREX (5') - Dore • 4MOST (5') - Giannantonio • JPAS (5') - Hernandez-Monteauogo
9:45 AM - 10:30 AM	Discussion about experimental parameters for forecasts
10:30 AM - 12:00 PM	<p>FORECASTS STUDIES AND TOOLS 10:45 AM - Coffee break</p> <ul style="list-style-type: none"> • Spectroscopy needs for LSST 10' (Newman) • BAO with low resolution spectra 10' (Castander) • Gigaz forecast - Weak Lensing 10' (TBA) • Combining Spectroscopy and Photometric surveys 10' (Eriksen) • Synergies between the SPHEREx data set and DES/Euclid/LSST/WFIRST 10' (TBA) • Supernovae 10' (Scolnic) • Clusters 10' (Soares-Santos)
12:00 PM - 12:30 PM	<p>Discussion Organize groups produce the forecasts using the LRS with parameters discussed during the first morning session. The suggested groups are: (i) Supernovae, (ii) Galaxy Clusters, (iii) Weak Lensing, (iv) Large Scale Structure, (v) Photo-z Calibrations and (vi) Cross Correlations.</p>
12:30 PM - 5:00 PM	<p>Lunch/Work 3:00 PM - Coffee break</p>
5:00 PM - 6:00 PM	Get together to discuss progress
6:30 PM	<p>Banquet - Cedars Mediterranean Restaurant Transportation will be provided from the workshop location (ERC) to the restaurant (1206 E. 53rd Street).</p>

Wednesday - February 17, 2016

8:30 AM - 9:00 AM	Continental Breakfast
9:00 AM - 9:20 AM	FILLING IN THE GAP (BETWEEN HI-RES 21 CM REDSHIFTS AND LO-RES PHOTOMETRIC REDSHIFTS) <i>A.Stebbins</i>
9:20 AM - 11:00 AM	Work 10:45 AM - Coffee break
11:00 AM - 12:30 PM	Discuss writing assignments
12:30 PM - 4:00 PM	Lunch/work 3:00 PM - Coffee break
4:00 PM - 5:00 PM	SUMMARY