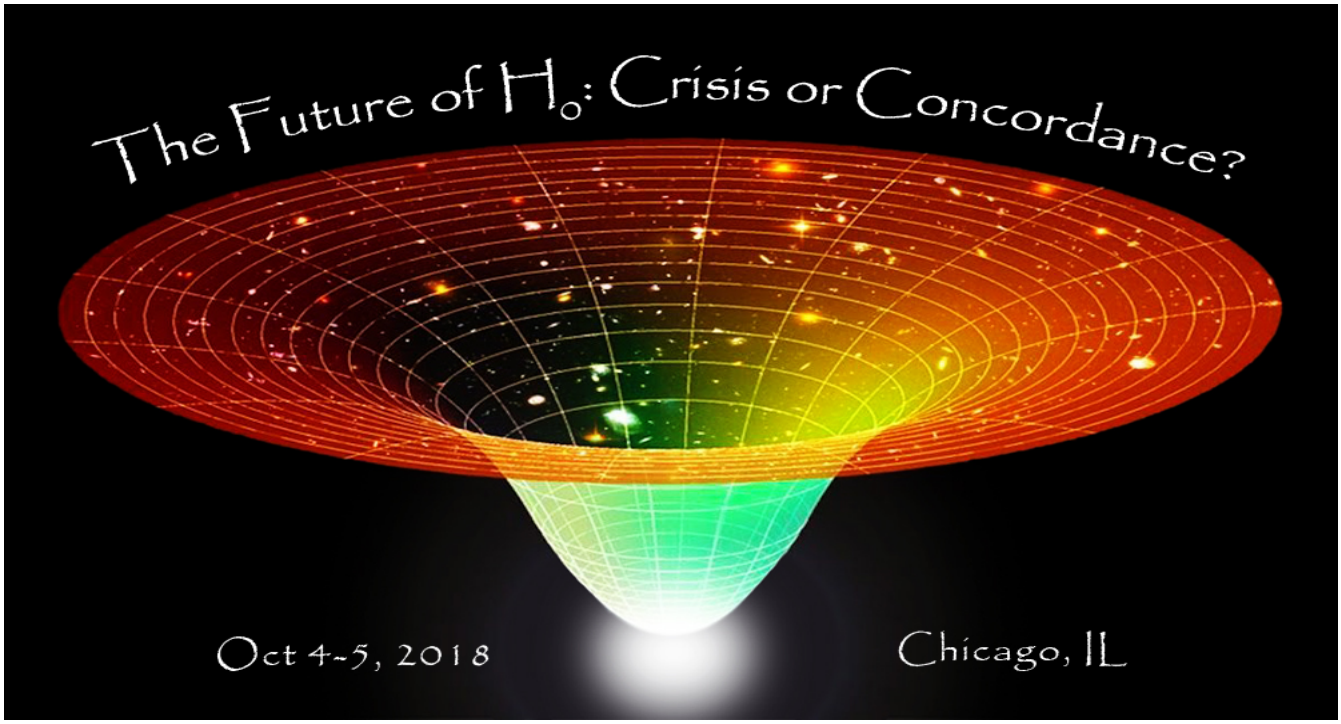

http://kicp-workshops.uchicago.edu/2018-LCDM/

WORKSHOP PROGRAM

Just in the last two years, we have seen the final Planck data release, measurements of the local value of the Hubble constant nearing two percent, the first standard siren measurement, and new strong lens time delay cosmological measurements. Even with a number of re-analyses and systematic checks on these various analyses, tension of the local H0 measurements and the CMB inferred H0 value remains, and excitement continues to increase amongst cosmologists regarding the source of tension. In this workshop, we are asking what's next for all these experiments and analyses. This workshop will be focused on analyses coming out in the next year or two, looking at what we can expect before the next generation of experiments come online. We want to hear about new ideas to push down at systematic uncertainties in current analyses, what lingering issues remain unresolved and what can be done to solve them. This workshop will be a unique chance for scientists who work on different probes to think together about what can be done to better understand what is driving the tension and how the next round of analyses can address various concerns.

Potential Topics:
* Cosmic Microwave Background
* Local Distance Ladder
* Standard Sirens
* Tension Analysis
* Strong Lensing
* Baryon Acoustic Oscillations
* Hubble bubble
* Peculiar Velocities
* GAIA
* Theory

Organizing Committee

Bradford Benson
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John Carlstrom
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Wendy Freedman
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Silvia Galli
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Daniel Holz
Kavli Institute for Cosmological Physics

Daniel Scolnic
Kavli Institute for Cosmological Physics

Kimmy Wu
Kavli Institute for Cosmological Physics

Thursday - October 4, 2018

8:00 AM - 9:00 AM	Breakfast
9:00 AM - 9:20 AM	**Stephen Feeney**, Flatiron Institute ***The Hubble Constant tension: a status update***
	LOCAL DISTANCE LADDER
9:20 AM - 9:50 AM	**Adam Riess**, JHU/STScI ***The Local Determination of H-naught, Hints of New Physics?***
9:50 AM - 10:10 AM	**Stefano Casertano**, Space Telescope Science Institute ***Gaia DR2 and beyond: contributions to the local distance scale***
10:10 AM - 10:25 AM	Coffee break
10:25 AM - 10:45 AM	**Barry F Madore**, Carnegie Observatories ***Everything You Ever Wanted to Know about Stellar Distance Indicators* (*But were fraid to Ask)***
10:45 AM - 11:05 AM	**Wendy Freedman**, Kavli Institute for Cosmological Physics ***A Future Independent TRGB Calibration of SNe Ia***
11:05 AM - 11:25 AM	**Chris Burns**, Carnegie Observatories ***The Carnegie Supernova Project II: Pushing the NIR Hubble Diagram out to z ~ 0.1***
11:25 AM - 12:05 PM	Discussion
12:30 PM - 2:00 PM	Lunch + Foosball
	CMB
2:00 PM - 2:25 PM	**Lloyd E Knox**, UC Davis ***Overview***
2:25 PM - 2:45 PM	**Silvia Galli**, IAP ***Curiosities in Planck***
2:45 PM - 3:05 PM	**Eric Hivon**, Institut d'Astrophysique de Paris ***The robustness of beams as a key ingredient of the Planck analysis***
3:05 PM - 3:25 PM	Discussion *Moderator: Tom Crawford*
3:25 PM - 3:45 PM	Coffee Break
3:45 PM - 4:10 PM	**Jason W Henning**, Argonne ***SPT Constraints on H0 from Intermediate and Small-Scale CMB Measurements***
4:10 PM - 4:25 PM	**Kimmy Wu**, Kavli Institute for Cosmological Physics ***Next Steps on H0 from South Pole CMB experiments***
4:25 PM - 5:00 PM	**Eduardo Rozo**, University of Arizona ***DES H0, Is there really a tension?***
5:00 PM - 5:20 PM	Discussion *Moderator: Brad Benson*
6:30 PM	Dinner *Nella*

Friday - October 5, 2018

8:00 AM - 9:00 AM	Breakfast
	OTHER MEASUREMENTS
9:00 AM - 9:15 AM	**Daniel Scolnic**, Kavli Institute for Cosmological Physics ***Next results with Type Ia Supernovae***
9:15 AM - 9:35 AM	**Simon Birrer**, UCLA ***Strong lensing: An update from the H0LiCOW collaboration***
9:35 AM - 9:55 AM	**Daniel Holz**, Kavli Institute for Cosmological Physics ***Using Standard Sirens to Measure The Hubble Constant***
9:55 AM - 10:10 AM	**Kirit Karkare**, KICP ***Expansion History Measurements with Line Intensity Mapping***
10:20 AM - 10:40 AM	Discussion
10:40 AM - 11:00 AM	Coffee Break
	UNDERSTANDING THE MEASUREMENTS/QUANTIFYING THE TENSION
11:00 AM - 11:20 AM	**Marco Raveri**, KICP ***Concordance and Discordance in Cosmology***
11:20 AM - 11:40 AM	**Dragan Huterer**, University of Michigan ***Sample variance in local measurements of H0***
	THEORY SOLUTIONS TO THE PROBLEM
11:50 AM - 12:10 PM	**Meng-Xiang Lin**, KICP ***Modified Gravity On Reducing the H_0 tension***
12:10 PM - 12:30 PM	**Lloyd E Knox**, UC Davis ***Sounds Discordant: Classical Distance Ladder & LCDM Determinations of the Cosmological Sound Horizon***
12:30 PM - 2:00 PM	Lunch with Final discussion *Dan Holz/Josh Frieman* Where do we go from here? Is it real? What other probes are there?
3:00 PM	End