

KAVLI INSTITUTE FOR THEORETICAL PHYSICS
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KITP Conference: Inflationary Reheating Meets Particle Physics Frontier

(Feb 3-6, 2020)

Coordinators: Peter Adshead, Raphael Flauger, Mark Trodden, and Scott Watson

Monday, Feb 03, 2020

Session Chair: Mark Trodden (UPenn)

8:50am	Lisa Stewart (KITP CAO)	Welcome
9:00am	Andrei Frolov (Simon Fraser)	Intermittent non-Gaussianity Generated by Preheating
9:45am	Brandon Melcher (Syracuse)	Co-decaying Dark Matter and Early Universe Signatures
10:30am		Morning Break
11:00am	Pearl Sandick (U of Utah)	Dark Stars
11:45am	Zach Weiner (U of Illinois)	Constraining Axion Inflation with Gravitational Waves Across 29 Decades in Frequency
12:30pm		Lunch Break

Session Chair: Raphael Flauger (UCSD)

2:00pm	Gary Shiu (U of Wisconsin)	Chaos and Complementarity in Cosmological Spacetimes
2:45pm	Andrew Long (Rice U)	Gravitational Production of Dark Matter at the end of Inflation
3:30pm		Afternoon Break
4:00pm	Evangelos I. Sfakianakis{sfakianakis} (Nikhef, Amsterdam & Leiden)	Field-space Effects in Preheating
4:45pm	Alex Kusenko (UCLA)	Primordial Black Holes
5:30pm		SHUTTLE TO BWSCI

Tuesday, Feb 04, 2020

Session Chair: Peter Adshead (U of Illinois)

9:00am	Jonathan Heckman (UPenn)	String Motivated Extra Sectors and Strong Coupling
9:45am	Tommi Tenkanen (JHU)	Probing the Early Universe with Isocurvature Perturbations
10:30am		Morning Break
11:00am	Jorinde Van De Vis (DESY)	Reheating after Higgs Inflation

11:45am Jeff Dror (UC Berkeley) Macroscopic Remnants of the Early Universe - Production and Detection

12:30pm **Lunch Break**

Session Chair: Yanou Cui (UC Riverside)

2:00pm Rachel Rosen (Columbia U) Scalars, Shift Symmetries and de Sitter

2:45pm Stefano Profumo (UCSC) The Primordial Black Holes Variations

3:30pm **Afternoon Break**

4:00pm David Morrissey (TRIUMF) Looking (far) Back in Time with Gravitational Waves from Cosmic Strings

4:45pm Mustafa Amin (Rice U) Nonperturbative Dynamics During and After Inflation

5:30pm **RECEPTION**

6:00pm **SPECIAL EVENTS DINNER**

8:00pm **SHUTTLE TO BWSCI**

Wednesday, Feb 05, 2020

Session Chair: Peter Adshead (U of Illinois)

9:00am TBA{axions} TBA

9:45am Dani Figueroa (U Valencia) Problems of an Inflationary Sector Coupled only (minimally) to Gravity?

10:30am **Morning Break**

11:00am Jessie Shelton (U of Illinois) Hidden Thermal Histories

11:45am Ema Dimastrogiovanni (New South Wales U) TBA

12:30pm **Lunch Break**

Session Chair: Scott Watson (Syracuse)

2:00pm Jay Hubisz (Syracuse) Brane Cosmology From Symmetry Principles

2:45pm Tom Giblin (Kenyon College) The Role of Gravity during Preheating

3:30pm **Afternoon Break**

4:00pm Adrienne Erickcek (UNC) The Early Universe's Imprint on Dark Matter

4:45pm Kathryn Zurek (Caltech) Spacetime Fluctuations in Ads/CFT

5:30pm **RECEPTION**

6:00pm **SPECIAL EVENTS DINNER**

8:00pm **SHUTTLE TO BWSCI**

Thursday, Feb 06, 2020

Session Chair: Raphael Flauger (UCSD)

9:00am Hai-bo Yu (UC Riverside)	Self-Interacting Dark Matter
9:45am Lauren Pearce (Penn State New Kensington)	Phenomenology of Fermion Production During Axion Inflation
10:30am	Morning Break
11:00am Sarah Shandera (Penn State)	Dark Black Holes
11:45am Adam Solomon (CMU)	Superfluids and the Cosmological Constant Problem
12:30pm	Lunch Break

Session Chair: Yanou Cui (UC Riverside)

2:00pm Daniel Green (UCSD)	Signatures of Light Relics in the CMB and LSS
2:45pm Dick Bond (CITA)	TBA
2:45pm Jonathan Braden (CITA)	TBA
3:45pm	Afternoon Break
4:00pm Graham White (TRIUMF)	The See Saw Mechanism: Using Cosmology to Reach Across a Desert
4:45pm Richard Easther (Auckland)	Lighting the Dark: Nonlinear Dynamics and the Primordial Dark Age
5:30pm	CONFERENCE END SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location. (See Registration Desk BEFORE THURSDAY to sign up.)