

KAVLI INSTITUTE FOR THEORETICAL PHYSICS
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KITP Conference: In the Balance: Stasis and Disequilibrium in the Milky Way

(Apr 1-4, 2019)

Coordinators: Jo Bovy, James Bullock, and Heidi Newberg

Monday, Apr 01, 2019

Session Chair: Jerry Sellwood (U. Arizona)

8:50am	Lars Bildsten (KITP Director)	Welcome
9:00am	Ortwin Gerhard (MPE Garching)	Dynamics of the Milky Way bulge. A new 3D view from VIRAC and Gaia proper motions
9:45am	Wilma Trick (MPIA)	The Galactic bar in action-angle space
10:30am		Morning Break
11:00am	Christophe Pichon (IAP)	The secular evolution of galaxies
11:45am	Chervin Laporte (U Victoria)	Footprints of the Sagittarius dwarf galaxy on the Milky Way: from outer disc to the 6D Gaia volume
12:30pm		Lunch Break-KITP Courtyard

Session Chair: James Bullock (UC Irvine)

2:00pm	Andrew Wetzel (UC Davis)	Simulating the Milky Way and its Satellites
2:45pm	Ted Mackereth (U Birmingham)	Constraints on and predictions for the assembly history and evolution of the Milky Way disc using APOGEE, Gaia and the EAGLE simulations
3:30pm		Afternoon Break
4:00pm	Coral Wheeler (Caltech)	Be it therefore resolved: cosmological simulations of dwarf galaxies with extreme resolution
4:45pm	Robyn Sanderson (U of Penn)	Unlocking Gaia's potential with synthetic surveys
5:30pm		SHUTTLE TO BWSCI

Tuesday, Apr 02, 2019

Session Chair: Rosie Wyse (Johns Hopkins)

9:00am	Larry Widrow (Queen's U)	Waves, Warps, and Phase Space Spirals in the Milky Way
9:45am	Joss Bland-Hawthorn (U Sydney)	A Galaxy in crisis - complex disc dynamics in action, age and abundance space
10:30am		Morning Break
11:00am	James Binney (U Oxford)	Signatures of non-axisymmetry in velocity space
11:45am	Jason Hunt (U Toronto)	Kinematic substructure in the Galactic disc

12:30pm **Lunch Break-KITP Courtyard**

2:00pm Ralph Schoenrich (U Oxford) Wrinkles, warp, and big waves. Substructure of the Milky Way with Gaia

2:45pm Chao Liu (NAO-CAS) Ripples, spirals, rings, and flares: Do they all start from a bombardment of a dwarf?

3:30pm **Afternoon Break**

4:00pm Sukanya Chakrabarti (RIT) Galactoseismology -- deciphering the footprints of the Antlia dwarf galaxy on the Galactic disk

4:45pm Juntai Shen (SJTU) Dissecting the Phase-Space Snail in Gaia

5:30pm **RECEPTION-KITP Courtyard**

6:00pm **SPECIAL EVENTS DINNER-KITP Courtyard**

8:00pm **SHUTTLE TO BWSCI**

Wednesday, Apr 03, 2019

Session Chair: Martin Smith (SHAO)

9:00am Josh Simon (Carnegie Obs) Orbits and Tidal Stripping of the Milky Way's Satellites

9:45am Wyn Evans (IoA, Cambridge) Substructure in the Stellar Halo: Streams and Clumps

10:30am **Morning Break**

11:00am Kathryn Johnston (Columbia U) Physical Manifestations of Chaos, Resonance and Regularity Around the Milky Way

11:45am Review of Posters

12:30pm Maggie Sherriffs (KITP) Announcement: Follow on Program

12:35pm **Lunch Break-KITP Courtyard**

Session Chair: Giuliano Iorio (Cambridge)

2:00pm Ana Bonaca (Harvard ITC) A detailed look at the GD-1 stellar stream: 6D kinematics

2:45pm Adrian Price-Whelan (Princeton) A detailed look at the GD-1 stellar stream: density and stellar population

3:30pm **Afternoon Break**

4:00pm Jake Weiss (RPI) Fitting the Density of the Milky Way using Statistical Photometric Parallax

4:45pm Ting Li (Fermilab) The 6D+1 Phase Space Information of the Southern Stellar Streams

5:30pm **RECEPTION-KITP Courtyard**

6:00pm **SPECIAL EVENTS DINNER-KITP Courtyard**

8:00pm **SHUTTLE TO BWSCI**

Thursday, Apr 04, 2019**Session Chair: Zhao-Yu Li (SJTU)**

- 9:00am Ray Carlberg (U. Toronto) Halo vibration
- 9:45am Monica Valluri (U. Michigan) Do triaxial dark matter halos have figure rotation and how would we know?
- 10:30am **Morning Break**
- 11:00am Lina Necib (Caltech) The stellar local velocity distribution and its implications for dark matter
- 11:45am Tjitske Starkenburg (Flatiron) The occurrence and origin of counterrotating galaxy components
- 12:30pm **Lunch Break-KITP Courtyard**
- 2:00pm Semyeong Oh (IoA Cambridge) Comoving stars in the Gaia Era
- 2:30pm Vasily Belokurov (IoA, Cambridge) Gaia's view of the Galactic Halo
- 3:30pm **Afternoon Break**
- 4:00pm Eugene Vasiliev (IoA, Cambridge) Defying the disequilibrium: the usefulness of steady-state self-consistent models for the Galaxy
- 4:45pm Conference summary activity
- 5:30pm **CONFERENCE END SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location. (See Registration Desk BEFORE FRIDAY to sign up.)**