



Symposium

2023 Program

Public Live Stream



<https://www.youtube.com/@cxcvideo1999/live>

✦ Remote/Virtual Presentation

Monday, Sept 18

9:00 - 9:50

Breakfast (Fellows and Presenters Only)

10:00-10:45

Welcome (Session Chair: Paul Green)

Mark Clampin
Nancy Levenson
Pat Slane
NHFP Leads

10:45-11:45

Instrumentation (Session Chair: Gudmundur Stefánsson)

- 10:45 Jessica Zebrowski - *Commissioning Strategy of SPT-SLIM*
- 11:00 Emiel Por - *High-performance coronagraphs for the Habitable Worlds Observatory*
- 11:15 Pradip Gatkine - *Quest for High Resolution with Astrophotonic Spectrographs*
- 11:30 Carlos Blanco - *Developments in sub-GeV dark matter detection* ✦

11:45-12:00 Break

12:00-13:00 [Cosmology \(1\) \(Session Chair: Justin Pierel\)](#)

- 12:00 Mikhail Ivanov - *Testing Dark Matter with Galaxy Surveys*
- 12:15 Hayley Macpherson - *Cosmological weak lensing in full general relativity*
- 12:30 Andrei Cuceu - *Measuring the cosmic expansion rate at high redshift with Lyman-alpha forests*
- 12:45 Anowar Shajib - *Resolving the Hubble tension with strong-lensing time delays and the JWST*

13:00-14:00 Lunch

14:15-15:30 [Planet formation and disks \(Session Chair: Hayley MacPherson\)](#)

- 14:15 Maggie Thompson - *Simulating Young, Rocky Planets in the Laboratory* ✪
- 14:30 Feng Long - *Revealing young planets from disk substructures*
- 14:45 Charles Law - *Chemical Signatures of Ongoing Planet Formation in Protoplanetary Disks*
- 15:00 Raluca Rufu - *Origin of compact exoplanetary systems during disk infall*
- 15:15 Michael L. Wong - *A natural law of evolving systems and a novel in-situ biosignature technique*

15:30-15:45 Break

15:45-17:00 [Fellows Only Session: Mentoring/DEI \(Session Chair: Joel Ong\)](#)

Saavik Ford (ScienceBetter consulting)

Tuesday, Sept 19

9:00 - 9:50 [Breakfast \(Fellows and Presenters Only\)](#)

10:00-11:30 [Black Holes and Gravitational Waves \(Session Chair: Ekta Patel\)](#)

- 10:00 Kristen Dage - *Hunting Intermediate Mass Black Holes in Young Star Clusters* ✪
- 10:15 Matthew Liska - *How Do the Most Luminous Black Holes Accrete and Expel Gas?*

- 10:30 Sara Issaoun - *Unraveling the Mysteries of Sgr A**
10:45 Lia Medeiros - *A Sharper Look at the Black Hole in M87*
11:00 Kyle Kremer - *Gravitational-wave and electromagnetic transients in dense star clusters*
11:15 Sylvia Biscoveanu - *The gravitational-wave population of neutron star-black hole mergers*

11:30-12:00 Break

12:00-13:00 [Stars and stellar evolution \(Session Chair: Ryan MacDonald\)](#)

- 12:00 Adina Feinstein - *Flare Statistics for Stars Younger than 200 Myr observed with TESS* 🌟
12:15 Tim Cunningham - *White Dwarfs as Probes of Convective Overshoot and Evolved Exoplanetary Systems*
12:30 Joel Ong - *Asteroseismic Signatures of Post-Main-Sequence Planetary Engulfment*
12:45 Melinda Soares-Furtado - *Stellar Epitaphs: The Final Testimonies of Devoured Worlds*

13:00-14:00 Lunch

14:00-15:30 [Exoplanets \(Session Chair: Charles Law\)](#)

- 14:00 Danica Adams - *Crustal Hydration Primed Early Mars with Warm and Habitable Conditions*
14:15 Jon Zink - *Hot Jupiters. Are They Alone?*
14:30 Marc Hon - *The Great Escape of A Giant Planet from Planetary Engulfment*
14:45 Jake Turner - *The Ongoing Hunt to Detect Exoplanetary Magnetic Fields*
15:00 Gudmundur Stefansson - *A Close-in Neptune Orbiting an Ultracool Star*
15:15 Fei Dai - *Taking the Dynamical Temperature of Young Planetary Systems with KPF* 🌟

15:30-15:45 Break

15:45-17:00 [Fellows Only Session: Grants and Benefits \(Session Chair: Andy Fruchter\)](#)

15:45 Teye Sturgis (STScI)

Wednesday, Sept 20

9:00 - 9:50

Breakfast (Fellows Only)

10:00-11:30

Exoplanet Atmospheres (Session Chair: Raluca Rufu)

- 10:00 Zhoujian Zhang - *Probing the formation of gas-giant exoplanets via atmospheric composition*
- 10:15 Luis Welbanks - *Swimming Through New Chemical Species in Exoplanetary Atmospheres with JWST*
- 10:30 Megan Mansfield - *The first spectroscopic eclipse map of an exoplanet*
- 10:45 Ward Howard - *Constraining Exoplanet Atmospheres with Multi-wavelength Flare Campaigns*
- 11:00 Jessica Spake - *Tails of escaping exoplanet atmospheres*
- 11:15 Ryan MacDonald - *A JWST Spectrum of a White Dwarf Exoplanet*

11:30-12:00

Break

12:00-13:00

Transients and FRBs (Session Chair: Riccardo Arcodia)

- 12:00 Tarraneh Eftekhari - *Unveiling the Transient Sky at Radio and Millimeter Wavelengths*
- 12:15 Kishalay De - *The transient mid-infrared sky seen with WISE*
- 12:30 Calvin Leung - *Fast radio bursts with CHIME/FRB Outriggers*
- 12:45 Justin Pierel - *Discovery of a Triply-imaged Type Ia Supernova at $z = 1.78$*

13:00

Free Time all Afternoon

14:00

Fellows Only: Optional Harvard Great Refractor Tour, Plate Stacks Exhibition with artist Aura Satz

Thursday, Sept 21

9:00 - 9:50

Breakfast (Fellows and Presenters Only)

10:00-11:15

Galaxy Evolution/Galactic Archaeology (Session Chair: Rohan Naidu)

- 10:00 Cassi Lochhaas - *Simulated Galactic Accretion through the Circumgalactic Medium*
- 10:15 Arianna Long - *NIRCam Selected Quiescent Galaxies at $3 < z < 5$ in CEERS, COSMOS, and PRIMER*
- 10:30 Ekta Patel - *Effects of the Large Magellanic Cloud on Orbits of Milky Way Satellite Galaxies*
- 10:45 Emily Cunningham - *Chemical Cartography of the Sagittarius Stream with Gaia*
- 11:00 Iryna Butsky - *What in the Galaxy is Scattering Cosmic Rays? ☼*

11:15-11:45 Break

11:45-13:00 *Cosmology (2) (Session Chair: Anowar Shajib)*

- 11:45 Maria Vincenzi - *SN Cosmology from the Dark Energy Survey*
- 12:00 Thales Gutcke - *Cosmological cluster formation and accretion in early-forming dwarf galaxies*
- 12:15 Seiji Fujimoto - *First ALMA Looks at the JWST High-z Sources at $z=8-17$*
- 12:30 Nicholas Kern - *New Insights on Cosmic Dawn Astrophysics from 21 cm Radio Telescopes*
- 12:45 Sultan Hassan - *Implication of JWST constraints on UV luminosity density at Cosmic Dawn for 21cm*

13:00-14:15 Lunch

14:15-14:45 *Star Formation (Session Chair: Elias Aydi)*

- 14:15 Mike Grudic - *Why are Stars?*
- 14:30 Kartheik Iyer - *Towards a self-consistent physical model for star formation in galaxies*

14:45-15:30 Break

15:30-17:00 *Fellows Only Session: Career Panel (Session Chair: Calvin Leung)*

- 15:30 Kim McLeod (Wellesley College), Francesca D'Arcangelo (MIT Lincoln Laboratory), Monica Young (Sky & Tel)

18:00-21:00 *Fellows and Panelists Only: Dinner at Gustazo Restaurant, Cambridge*

Friday, Sept 22

9:00-9:50

Breakfast (Fellows and Presenters Only)

10:15-11:30

High Energy Phenomena (Session Chair: Sara Issaoun)

- 10:15 Ariadna Murguia Berthier - *Accretion onto Neutron stars: simulations of oblique rotators* ✪
- 10:30 Riccardo Arcodia - *X-ray bursts from galactic nuclei*
- 10:45 Lea Marcotulli - *The most powerful persistent jets through cosmic time*
- 11:00 Elias Aydi - *Exploring the formation and characteristics of shocks in novae*
- 11:15 David Vartanyan - *Supernovae: From Bounce to Breakout*

11:30-12:00

Break

12:00-13:00

High-redshift Galaxies & Galactic Evolution (Session Chair: Joel Ong)

- 12:00 Rohan Naidu - *Revealing the Protagonists of Cosmic Reionization with JWST*
- 12:15 Wren Suess - *A JWST view of massive quiescent galaxies at cosmic noon*
- 12:30 Viraj Pandya - *Galaxies Going Bananas: Inferring the 3D Shapes of High-Redshift Galaxies with JWST-CEERS*
- 12:45 Sinclair Manning - *SCUBA-Diving for JWST-Faint Dusty Galaxies in the First COSMOS-Web Release*

13:00-14:00

Lunch

14:00-16:00

Fellows Only Session: Open Mic - Music, stories, poetry, art, outreach, dance, whatever! (Session Chair: Dawn Gelino)