

Keck Northeast Astronomy Consortium Fall Symposium

Colgate University

27-28 September 2024

Friday, September 27th

O'Connor Campus Center (The Coop)

6:00-6:30pm Welcome and Registration

6:30-7:45pm Dinner and Discussion

8pm-til Planetarium Shows (Ho Tung Visualization Lab, Ho Science Center)
Foggy Bottom Observatory Tours (FBO)
Astro Trivia
AstroJam Session (Atrium, Ho Science Center)

Saturday, September 28th

Golden Auditorium (Little Hall)

8:25am Welcome

8:30-10am **Session I**

Caroline Kilian (Central Connecticut State University) "Modeling Gas Emission from the Debris Disk around HD 110058"

Gisele Tjan (Colgate University) "Mineralogical and morphological analyses in Mawrth Vallis to constrain ancient aqueous processes on Mars"

Masha Kilibarda (Haverford College) "Testing Ionization Correction Functions for Sulfur and Argon Using JWST Mid-Infrared Spectroscopy of Local HII Regions"

Valeria Lopez (Williams College) "Spectral Signatures and Galactic Outflows: Identifying Type I AGNs through Emission Line Analysis"

Ana Paku (Wellesley College) "Identifying Variability in Protoplanetary Disk Spectra Using Spitzer IRS and JWST MIRI-MRS"

Kahaan Gandhi (Haverford College) "Detecting Organic Molecules in Star-Forming Regions with Markov Chain Monte Carlo Inference"

Abigail Reed (Swarthmore College) "Graphics Creation for the DIMPLE Moon Experiment"

Umman Azan (Middlebury College), Param Gogia (Vassar College), & Sam Shelly (Vassar College) "Feedback Driven Magnetic Field Evolution in MW-type Simulated Circumgalactic Medium"

10-10:30am Morning Break and Poster Session

10:30-12pm **Session II**

Theo Olsen (Vassar College) "Disk-tective Work: The Link Between Inner Disk Gas and Terrestrial Planet Formation"

Mick Mayer & Tessa Pearlstein (Haverford College) "Understanding Galactic Bars using MaNGA Data"

Sayed Shafaat Mahmud (Colgate University) "Using Variational Auto Encoders for Parameter Inference of Protoplanetary Disks"

Mariah Jones (Vassar College) "Investigating the stability of Trojan and horseshoe co-orbitals in extrasolar multi-planet systems"

Tianji Zhou (Haverford College) "Influence of Data Noise on Spectral Representation of the Equation of State in the Relativistic Inverse Stellar Structure Problem"

Session II (continued)



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Ceiligh Cacho-Negrete (Wellesley College) “Cloud Chasers: Towards a data-driven approach to exoplanet cloud predictions with JWST”

Louis Cedarbaum (Wesleyan University) “Training a CNN to Recognize Star Formation Activity From Galaxy Images”

Nora Salem (Haverford College) “The Magnetic Field around the G0.00+0.15 HII Region”

12-12:15pm One-minute Poster “Sparklers”

Amanda Flores (Vassar College) “Out with the Old, In with the New: Incorporating Recent Storm Data to Improve Forecasting Intense Geomagnetic Storms”

Max Levin (Wesleyan University) “Streamlining and Visualizing Observation Systems at the Van Vleck Observatory”

Grace Nasrallah (Haverford College) “Does the HI Content of Spiral Galaxies Correlate with Their Arm Winding?”

Neil Panth (Williams College) “Modeling Protoplanetary Disk Winds”

Melanie Santiago (Haverford College) “Exploring the Formation of Low-Mass Compact Object Mergers using Type Ia SNe and Gravitational Waves”

Lauren Schweitzer & Dana Hennings (Wesleyan University) “Testing the Composite Hypothesis for Ambiguous Emission-Line Galaxies”

Sebastian Tabit (Williams College) “Examining Local Lyman Continuum-Emitting Galaxies”

Patrick Wang (Haverford College) “Comparing Cold Gas Content of Flocculent and Grand Design Spirals”

12:15-12:30pm Group Picture

12:30-1:15pm Lunch

1:15-2pm **Breakout Sessions**

Wesleyan Dark Skies Advocacy

Angelina Reddy, Carlos Ordonez, and Venus Marroquin (Wesleyan University)

Little 114

Careers and Graduate School

Kevin Flaherty (Williams College)

Golden Auditorium (Little 105)

2-2:30pm **Poster Session**

2:30-3:45pm **Session III**

Caroline Floreno (Wellesley College) “The Singing Galaxy: Investigating the Parallels between Music Theory and Galactic Dynamics”

Jared Diks (Colgate University) “The Effectiveness of Exoplanets and Brown Dwarfs as Sub-GeV Dark Matter Detectors”

Yunjing Wang (Haverford College) “Commissioning of the Xenoscope Time Projection Chamber for the DARWIN Dark Matter Observatory”

Cat Hou & Allan Cheruiyot (Wesleyan University) “Dusting Up on Debris Disks”

Alejandra Rodriguez (Wellesley College) “The Search for Ultra-diffused Galaxies”

Sofia Rinaldi (Wesleyan University) “Galactic Glow-Up: The Emergence of Coherent Rotation at High Redshift in FIRE Simulated Galaxies”

Jordanne Brazie (Williams College) “Does LyC Emission Correlate with Galaxy Morphological Properties?”