REU Student Talks

Catherine Ball, Dominik A. Riechers and Riccardo Pavesi, *Spatially Resolved Analysis of the Interstellar Medium in the Cosmic Eye, a Lensed Lyman Break Galaxy at z=3.074*

William Braverman, Bryce Cousins and Hewei Jia, *A Search for Cosmic String Loops Using GADGET-2 Cosmological N-Body Simulator*

Bryce Cousins, Hewei Jia, William Braverman and David Chernoff, *Priming the search for cosmic superstrings using GADGET2 simulations*

Elizabeth E. Finney and Martha P. Haynes, *The Baryonic Tully Fisher Relation for the ALFALFA 100 Sample*

Logan Hess, *Deriving Stellar Masses for the ALFALFA .100 Sample*

Mrceel Howard, *Using Far-Infrared Fine Structure Lines for Dating Stellar Populations and the Interstellar Medium in Nearby Galaxies*

Ali Hyder, Jonathan Lunine, and Dong Wang, *Latitudinal Variation of Germane in Jovian Atmosphere*

Nicole T. Moon, *Mapping the Habitable Zone of Exoplanets with a 2D Energy Balance Model*

Fiona Nichols-Fleming, *Tracking Seasonal Variations in Titan’s Haze Distribution with SINFONI VLT*

Diego Tapia Silva, *A Northern Sky Census for Bow Shocks.*

Stephen Thornton, Robert Wharton, James Cordes and Shami Chatterjee, *Development of Pulsar Detection Methods for a Galactic Center Search*

Kelly Waldvogel, Gordon Stacey, Thomas Nikola and Stephen Parshley, *Determining the Optimal Design for a New ADR Mechanical Support*
REU Final Presentations!

Monday, August 8
Wenrui Xu  Inclination excitation by mean motion resonance
Renato Mazzei  AGN contamination in far-infrared determined star formation rates
Matthew Abruzzo  Characterizing the region around FRB 121102
Travis Rogowski  Preparing ZEUS-2 for observing run at APEX
Patrick Dahlin  MISE: A Search for Organics on Europa
Kelly Whalen

Tuesday, August 9
David Bernal  Identifying HI-rich Ultra Diffuse Galaxies
Rikley Buckingham  Identification and Analysis of Features in Saturn’s B-Ring
Caitlin Witt  Space Velocities of Millisecond Pulsars
Junellie Gonzalez Quiles  Characterizing the Habitable Zones of Exomoons through Illumination Constraints
Carly Snell  Modeling Exoplanet Climates at Varying Obliquities

All are welcome to attend!
REU Final Presentations!

Tuesday, August 4

Clare Miller
Sheri Lopez
Brennan Langenbach
Wenrui Xu
Nicole Wallack

Caitlin Witt

Modeling H II Regions
Spatially Resolved SED Fitting for Pixel Analysis
A Detection Algorithm for Gravitational Waves from Cosmic Strings
Secular nodal-apsidal resonance: eccentricity libration and resonant trapping
The Effect of Atmospheric Hydrogen on Exoplanet Albedos and Surface Temperatures
Searching for Correlations Between Pulses of the Galactic Center Magnetar

Thursday, August 7

Christie Trimble
Joseph Mullen
Gigja Hollyday

Brent Shapiro-Albert
Ariel Donlin

Analysis and Dynamics of a New Saturnian Satellite
Advanced Altimetry Processing on Titan
Constraining the Composition of Titan’s Hydrocarbon Lakes: A Phase Diagram Approach
Determining Pulsar Trajectories: The Common Origin of B2020+28 and B2021+51
Searching for variability in the Pistol Star

All are welcome!
REU Final Presentations

**Tuesday July 29**  
Alison Farrish  
*Data Reduction and Analysis of LBW Observations*  
*1:20 in room 301*

**Thursday Jul 31**  
Amin Nikbin  
*Streamlining the Analysis of Gravitational Wave Simulations*  
*after M. Haynes talk in 622*

**Tuesday August 5**  
Laiya Ackman  
*Preparations for Observing with ZEUS-2 at APEX Telescope: Calibration System and Source Selection*

Jaclyn Bradli  
*Star Formation Properties in Gravitationally Lensed Early Universe Galaxies*

Molly Finn  
*Hunting for Pulsars in VLA Data Sets*

Daniel Krolikowski  
*Detecting Traces of Life in the Plume of Enceladus*

Ethan Arnault  
*Wisps in the Outer Edge of Saturn’s Keeler Gap*

**Thursday August 7**  
Brandon Curd  
*A Survey of Cassini’s Equinox Data: Density Waves and Vertical Structure in Saturn’s Rings*

Christian Klein  
*Instrument Design for Remote Sensing of Europa and Titan*

Taylor Morris  
*Searching for cosmic superstrings via microlensing*

Margot Paez  
*Finding Cosmic Superstrings and Collecting a Nobel Prize*

Loren Matilisky  
*Exploring the Effects of Rossby Waves in Thin Keplerian Disks*

Allegra Moran  
*Tracking Propellers in Saturn’s A Ring*

*All are welcome!*
REU Final Presentations

Tuesday August 6
Rachel Salmon  Features of Saturn’s B Ring
Paul Zivick   Uranian Satellite Spectral Extraction or: How I Learned to Stop Worrying and Love the PSF
Cansu Culha  Double Ridges on Europa Accommodate Some of the Missing Surface Contraction
Robert McGehee Numerical Methods for Isometric Embeddings

Thursday August 8
Victoria Calafut Simulating a Non-Gaussian CMB Sky
Jeff Gerber Mass Transfer and Tidal Dynamics in White Dwarf Binaries
Alber Douglawi Instrumentation for Submillimeter Astronomy
Zac Pontrantolfi The Deceptive D Ring: The Strange Dynamics of a Couple Backwater Ringlets
Sam Moore  Single-Pulse Analysis to Improve Pulsar Precision Timing for Gravitational Wave Detections
REU Student Presentations

**August 2**

Katie Gosmeyer - Erupting Enceladus  
Andrew Weis - A Study of Spitzer IR Spectra of Carbon-Rich Targets  
Abhimat Krishna Gautam - B2224+65 and the Guitar Nebula  
Alex Streicher - Visualizing Black Holes and Neutron Stars from Supercomputer Simulations

**August 9**

Denise Schmitz - Angular Momentum of Binary Galaxies  
Clara Thomann - Cold Case: RADAR Investigation for Ammonium Sulfate Cryovolcanism on Titan  
Matt Hankins - SOFIA Science: Studying Massive Stars Near The Galactic Center Region  
Brent Harris - Wavelet Analysis of Density Waves in Saturn’s Rings  
Ani Chiti - Searching for Radio Transients in the Galactic Center with the VLA

All are welcome to attend!
2011 Summer Student Presentations

Tuesday, August 2
Andy Bass  
Searching for VLA Transient Sources

Thursday, August 4
Andrew Quick  
Mapping Comets: Tempel 1 and Hartley 2
Julia Stone  
The Modulation Index: A New Method in Narrowing the Search for Fast Radio Transients
Scott Suriano  
The Effect of Cluster Environments on Galaxy Properties

All are welcome to attend!
REU Student Presentations

July 29 (Space Sciences 622)
Coralie Jackman - Improved Shape Measurement of Irregularly Shaped Solar System Bodies

August 5 (Space Sciences 622)
Tyler Pauly - Modeling Ice Formation in Molecular Clouds
Keri Hoadley - Flying High! Early Science Planning for FORCAST/SOFIA

August 10 (Space Sciences 105)
Wenli Mo - ZEUS-II: The God of Submillimeter Instruments-II
Dominic Ludovici - Exciting Infrared Spectra of Boring Stars
Chris Faesi - Near- and Mid-Infrared Variability of Young Stellar Objects in Rho Ophiuchus

August 12 (Space Sciences 105)
Bryant Garcia - Simulating Extreme Spacetimes: Black Holes Ain’t So Black
Morgan Rehnberg - The Shapes of the Saturnian Satellites Pallene, Methone, and Anthe
Annabelle Batista - A Tale of Two Landing Sites: Possible Hydrovolcanism at Gusev Crater and a Survey of Meridiani Impact Crater Planforms

All are welcome to attend!
REU Final Presentations

**July 30**
- Wavefront Sensing for Sparse Aperture Telescopes – Breann Sitarski
- Violet and Extrasolar Atmospheres – Katie Hamren
- Selection Effects and Distances to Dusty Stars – A. J. Riggs

**August 4**
- Characterization of the Equatorial Zone of Jupiter – Jenny Kulow
- Cloud Height and Cloud Formation on Jupiter – Greg Tierney
- Isolation of stellar signals in a binary star: Occultation of Saturn’s rings – Bill Freeman
- Polarization and Albedo Reconnaissance of Saturn’s Moons: Rhea, Dione, Iapetus, etc. – Kaylan Burleigh

**August 6**
- Electrons! Tracers of the Galaxy – Jean McKeever
- ZEUS and the Investigation of Submillimeter Galaxies – Ryan Lau
- Large Scale Structure in the ALFALFA Sky – Tess Senty

*Please join us. All are welcome to attend!*