Zeeve Rogoszinski

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EDUCATION

University of Maryland College Park - 2014-present
Masters in Astronomy - Awarded 2016
PhD in Astronomy - Expected in 2020

Vassar College - 2010-2014
BA in Astronomy & Physics
Study Abroad: University of Edinburgh — Spring Semester 2013

AWARDS & HONORS

Ann G. Wylie Dissertation Fellowship	Spring 2020
NASA Earth and Space Science Fellowship (28 out of 180 selected)	2016 - present
Hartmann Student Travel Grant for Division of Planetary Science meeting	2016
Vassar College Departmental Honors in Astronomy	2014
Vassar College Departmental Honors in Physics	2014
Vassar College General Honors	2014
Sigma Xi	2014
Ethel Hickox Pollard Memorial Physics Award	2013
Janet Murray '31 Memorial Scholarship	2013

RESEARCH

University of Maryland — 2015-present
Topic: The Tilts and Spins of Planets and Moons
Advisor: Dr. Douglas Hamilton
Summary: My dissertation's primary focus is on the origin of Uranus' 98° tilt within the context of ice giant formation. I used an N-body integrator (HNBody) to calculate the motions of the planets, and wrote numerical tools in C to calculate a planet's spin-state as a product of collisions or a secular spin-orbit resonance. My research has expanded to using hydrodynamic simulations (DISCO) to analyze the final spin periods of gas giants, and to explore how collisions may have shaped the orbital architectures of irregular satellite systems.

Talks:

- "Using collisions and resonances to tilting Uranus" at the 231st AAS meeting
- "Continuing the investigation to tilting Uranus with a secular spin-orbit resonance" at the 49th DPS meeting
- "Tilting Uranus without a Collision" at the 5th AstroCon DC meeting

Poster:

- "How do collisions shape the orbits of irregular satellites?" at the 50th DPS meeting
- "Why is it so difficult to tilt Uranus?" at the 50th DDA meeting
- "Tilting Uranus without a Collision" at the 48th DPS meeting

NASA GSFC Summer Internship — 2014
Topic: Constraining cosmic ray origins through spectral radio breaks in supernova remnants.
Advisor: Dr. John Hewitt
Summary: I wrote a Python code to analyze Planck and WMAP data and compile a spectrum for supernova remnants as possible sources for cosmic rays.

Poster: "Constraining Cosmic Ray Origins Through Spectral Radio Breaks In Supernova Remnants" at the 225th AAS meeting.

Senior Thesis 2013-2014
Topic: Analyzing structure and activity in Hubble Deep Field elliptical galaxies.
Advisor: Dr. Debra Elmegreen
Summary: I used IRAF to conduct unsharp masking, take radial profiles, and conduct basic photometry of multiple elliptical galaxies in order to understand their internal structures as possible indicators of their formation histories.

Keck Northeast Astronomy Consortium Summer Research Fellow 2013
Topic: Analyzing the causes of the black-drop effect observed during the 2012 Venus transit at Williams College.
Advisor: Dr. Jay M. Pasachoff
Presentation: Keck Northeast Astronomy Consortium Student Research Symposium at Vassar College.

Posters:

- "Observations of the Black-Drop Effect at the 2012 Transit of Venus" at the 223rd AAS meeting.
- "Recent KBO (Pluto/Charon and beyond, including Quaoar) Occultation Observations by the Williams College Team as part of the Williams-MIT Collaboration" at the 45th DPS meeting

Optical Science Center for Applied Research Summer Internship 2012
Topic: Reduced LIBS (Laser-induced breakdown spectroscopy) data for iron samples under Mars-like conditions in preparation for the Mars Science Laboratory.
Advisor: Dr. Noureddine Melikechi - Delaware State University
Other: Using Gaussian Optics Theory and ABCD Matrix Theory to figure out the correct focal lengths of lenses for a beam expander that will be used in future experiments.

Vassar College Observatory 2010-2012
Topic: Observing the periodicities of contact binary star systems VW Cep, OO Agr, Zeta Tauri, and Beta Lyrae using both photometry and spectroscopy methods from data taken at the Vassar College Observatory
Advisor: Dr. Fred Chromey

TEACHING

Teaching assistant at University of Maryland for Astronomy 101 2014-2016
Academic Astronomy Intern at Vassar College 2013-2014
Teaching assistant at the Williams College Planetarium 2013
Narrator of the movie "Colors and Motions of the Sun" 2013
Created by Professor Jay M. Pasachoff of Williams College
`http://www.youtube.com/watch?v=ym3WOA2GzFI`
Teaching Assistant at the Community Hebrew School in Poughkeepsie, NY 2012

RELEVANT SKILLS

Software: Jupyter, IRAF, ImageJ, DS9, Microsoft Office.
Languages: C, Python, Mathematica, LaTeX.
Telescope Maintenance: Vassar College Observatory

ACTIVITIES

Executive Secretary for NASA 2017, 2018
GRAD-MAP member and volunteer 2015-present

Society of Physics Students (SPS) member 2010-2014