

## 2019 Keck Observatory Visiting Scholars



**Olivier Beltramo-Martin** is from ONERA (Office National D'Etudes Et De Recherches Aeronautiques - The French Aerospace Lab) / LAM (Laboratoire d'Astrophysique de Marseille) in Marseille, France. He has worked on multi-object adaptive optics at the William Herschel Telescope (WHT) for his Ph.D. thesis which he received in 2014 from Observatoire de Paris.

At Keck Observatory Olivier worked with Senior Adaptive Optics Systems Scientist Sam Ragland on the Point Spread Function (PSF) determination and implemented an alternate hybrid PSF reconstruction algorithm, PRIME, and associated pipeline tools for the Keck Observatory Near-Infrared Camera (NIRC2) Instrument designed for the Keck Adaptive Optics system.



**Thomas Bohn** is a graduate student at University of California at Riverside working with Professor Gabriella Canalizo.

At Keck Observatory, Thomas worked with Science Operations Manager and Astronomer Randy Campbell and with Staff Astronomers Percy Gomez and Luca Rizzi on data reduction pipelines for the Keck Observatory Near Infrared Echelle Spectrometer (NIRC2) Instrument. He compared two different algorithms for sky subtraction, studying and characterizing EMCEE -- a maximum likelihood estimator dealing with NIRC2 data reduction object finding issues, and revisions to the NIRC2 flexure correction. In addition to his NIRC2 instrument work, he performed research on coronal line detection in outflow galaxies.



**Wilfred Gee** is a PhD. student at Macquarie University in Sydney, Australia. Wilfred received an undergraduate degree in astronomy from University of Hawaii at Hilo. There he worked on the Panoptic Astronomical Networked Observatories for a Public Transiting Exoplanets Survey (PANOPTES), a citizen science project which aims to build a worldwide network of small robotic observatories to detect transiting exoplanets. By making these small observatories inexpensive, school groups and amateur scientists are able to join the project and participate in the entire scientific process from observations, to data reductions, and analysis. Wilfred is an experienced programmer and has been the primary author of the PANOPTES observatory control software.

At Keck Observatory, Wilfred worked with Staff Astronomer Josh Walawender on evaluating the PANOPTES data analysis algorithm and designing the survey strategy.



**Taylor Hutchinson** is a fourth year graduate student at Texas A&M University (TAMU) working with Professor Casey Papovich. Taylor's research focus is on near infrared spectroscopy of high redshift galaxies. She strives to understand their spectral properties. By pairing observational data to photoionization modeling, she can infer galaxy properties.

At Keck Observatory, Taylor worked with Staff Astronomer Josh Walawender to update the flexure models for the Keck Observatory Multi-Object Spectrometer For Infra-Red Exploration (MOSFIRE) Instrument.



**Erin Redwing** is a Ph.D. student at University of California, Berkeley, working with Professor Imke de Pater. She has a Bachelor of Geosciences from Penn State University. She has worked as an undergraduate research assistant at the Penn State Astrobiology Research Center, National Aeronautics and Space Administration Goddard Space Flight Center, and National Aeronautics and Space Administration Jet Propulsion Laboratory. She has expertise on Near Earth Objects and is currently working on radio observations of Jupiter's Moon, Io.

At Keck Observatory, Erin worked with Staff Astronomer Carlos Alvarez on expanding our Solar System Twilight Observing program to the Keck Observatory OH-Suppressing Infra-Red Imaging Spectrograph (OSIRIS) Instrument.



**Amy Steele** is in the 5<sup>th</sup> year of her Ph.D. program at the University of Maryland, working with Dr. John Debes at Space Telescope Science Institute and Dr. Drake Deming at University of Maryland. She received a Master's Degree at Wesleyan University, working with SMA and ALMA data on debris disks around main sequence stars, and a Bachelor of Arts Degree at Williams College. She focuses on understanding the abundances of the circumstellar medium around polluted white dwarfs.

Amy managed a Keck proposal to obtain High Resolution Echelle Spectrometer (HIRES) Instrument data on polluted white dwarfs. At Keck Observatory Amy worked with Staff Astronomer Sherry Yeh on running numerical simulations using the Cloudy code, to model chemical abundances in the circumstellar medium around polluted white dwarfs.