Clarissa Rizzo C Do Ó

Goleta, CA, 93117

📱 +1 (805) 837-9706 ● ✉ clarissa.rizzo98@gmail.com ● Citizenship Status: US Citizen

Research Interests: Astrophysics, Astronomy, Physics, Physical Science, Computing, Computer Science, Optics, Engineering, Instrumentation

Education

University of California, San Diego — **San Diego, CA**
Ph.D., Physics, Astrophysics Emphasis — *Expected*

University of California, San Diego — **San Diego, CA**
M.S., Physics, Astrophysics Emphasis — *Expected*

University of California, Santa Barbara — **Santa Barbara, CA**
B.S., Physics., Minor, Astronomy and Planetary Science (Honors) — *June 2020*
Advisor: Ben Mazin
GPA: 3.59

Research Experience

Lockheed Martin — **Santa Barbara, CA**
Test Engineering Intern — *January 2020 - Present*

- Wrote MATLAB scripts to automate the testing process of infrared focal plane arrays (FPAs) and used these scripts to test parts.
- Automated and documented MATLAB scripts for analyzing telegraph noise on infrared focal plane arrays.
- Analyzed telegraph noise data on infrared FPAs.

NASA Jet Propulsion Laboratory — **Pasadena, CA**
Intern — *June - August 2019*

- Worked on PARVI (Palomar Radial Velocity Instrument) under the guidance of Drs. Gautam Vasisht and Christopher Matthews.
- Wrote Python programs to predict the instrument's photon throughput, and performed photometry and spectrophotometry on data to compare my projections to the actual throughput.
- Performed simulations to analyze how the single-mode fiber coupling efficiency changes as we introduce optical aberrations into the system.

Mazin Lab at UC Santa Barbara — **Santa Barbara, CA**
Research Assistant/Web Developer — *June 2018 - Present*

- Built a database for the Mazin Lab, an astrophysics laboratory that uses Microwave Kinetic Inductance Technology to directly image extrasolar planets. The database is a website built using Python Flask, HTML/CSS and JavaScript and is currently available on the laboratory's server, facilitating access to the calibration and filter data for each targeted star.
- Developed Python code that corrected cosmic ray incidents for the new device developed by the lab (MEC - MKID Exoplanet Camera), as well as the angular differential imaging and spectral differential imaging programs.
- Performed post-processing (ADI) and contrast curves on MEC data with Python.

Selected Honors and Awards

National Science Foundation Graduate Research Fellow (NSF GRF) — **San Diego, CA**
Fellow — *April 2020*

San Diego Fellowship — **San Diego, CA**
Fellow — *February 2020*

Caltech SURF (Summer Undergraduate Research Fellowship) at Jet Propulsion Laboratory — **Pasadena, CA**
Fellow — *June - August 2019*

Edison GRE Scholarship — **Santa Barbara, CA**
Student — *April- June 2019*

Edison Summer Research Program Scholarship — **Santa Barbara, CA**
Research Scholar — *June-August 2018*

Papers and Presentations

An Analysis of Palomar Radial Velocity Instrument's Performance After Commissioning — **Pasadena, CA**
Do Ó, Clarissa. Vasisht, Gautam, Available Online: Research Paper — *August 2019*

A Database For the Stars Observed By the Mazin Lab Using Microwave Kinetic Inductance Technology — **Santa Barbara, CA**
Do Ó, Clarissa, Available Online: Poster Presentation — *August 2018*

A Measurement of the Rate of Cosmic Rays as a Function of Altitude up to 18 km — **Santa Barbara, CA**
Do Ó, Clarissa. Newsom, David. Tedeschi, Adam, Available Online: Research Paper — *June 2018*

Research Presentations

Summer Student Talks at JPL — **Pasadena, CA**
Research Talk — *August 2019*

APS Conference for Undergraduate Women in Physics (CUWiP) — **Santa Barbara, CA**
Poster Presentation — *January 2019*

UCSB Undergraduate Research Colloquium — **Santa Barbara, CA**
Poster Presentation — *August 2018*

Professional Memberships

- **BRASA - Brazilian Student Association** — **Santa Barbara, CA**
  President — *June 2018 - Present*

- **American Physical Society** — **Santa Barbara, CA**
  Student Member — *August 2018 - Present*