

**INTERESTS** Solar physics, astrophysics, hydrodynamics

**EDUCATION** **Stony Brook University, Stony Brook NY** Aug 2016 - Present  
*B.S. Physics and Astronomy*  
Graduation May 2020

WISE (Women in Science and Engineering) Honor Society, Varsity Coxswain for Stony Brook Crew, Vice President of Outdoors Club. Member of the American Computational Society, Red Watch Band CARE Team, and American Geophysical Union.

**EXPERIENCE** **Boulder Solar Alliance Research Experience for Undergraduates (REU)** May 19 - Present  
*NorthWest Research Associates, Boulder, CO*  
Advisors: Dr. Graham Barnes, Dr. KD Leka

10 week long, NSF-funded summer program in solar physics research. Computational project calculating the energies within individual current systems of solar active regions and comparing the values to the magnitude of flares produced. Project required use of IDL and Fortran languages. Project is continuing into the academic year.

**Astrophysics Research Assistant, Flatiron Institute CCA** Jun 18 - Aug 18  
*Flatiron Institute Center for Computational Astrophysics, New York City, NY*  
Advisor: Dr. Chiara Mingarelli

Research project on gravitational waves. Estimated the probability of detection of two coalescing supermassive black holes in eccentric orbit. Attended weekly journal club at the American Museum of Natural History. Project required use of Python language.

**Research Assistant, AERTC Labs** Jan 17 - April 17  
*AERTC Labs, Stony Brook NY*

Created and analyzed catalysts in auto emissions in Stony Brook’s AERTC lab. with additional research in Fourier-transform spectroscopy and LED characterization.

SKILLS	LANGUAGES	APPLICATIONS	OPERATING SYSTEMS
	Python, IDL, C++, Fortran, LaTeX	MatLab, Microsoft Office, Adobe Products (Ps, Id, Ai), ds9, IRAF, SExtractor	Linux/UNIX, Windows, Mac

**PRESENTATIONS & PUBLICATIONS** (Upcoming) Isola, B., Barnes, G., Leka, K.D., Gilchrist, S. (2019, December) *The How and Why of Big Solar Flares*. Poster session presented at the annual American Geophysical Union (AGU) conference in San Francisco, CA.

Barnes, G., Cavins, A. S., Isola, B., Leka, K.D., Gilchrist, S. (2019, August) *Understanding the Where and the How Big of Solar Flares*. Poster session presented at the annual SHINE conference, Boulder, CO.

## HONORS & AWARDS

### Fall Meeting General Student Travel Grant

Oct. 2019

Grant sponsored by Lockheed Martin to cover expenses of travel for AGU 2019 conference, awarded by AGU.

### Conference Grant

Jul. 2019

NSF-funded travel grant for AGU 2019 awarded by Boulder Solar Alliance REU program.

### Presidential Scholarship

Aug. 16 - May 20

Awarded by Stony Brook University. 4-year scholarship given awarded to High School seniors based on academic achievement, SAT/ACT scores, co-curricular activities, and research experiences.

## OUTREACH

### Observatory Asistant

Oct 18 - Present

*Avalon Park Sky Lab, Stony Brook, NY*

Operating telescopes under professor Dave Barnett. Manual duties include setting up multiple telescopes, opening the observatory dome, and general observatory maintenance. Other duties include running outreach events to adults and children to educate them about the night sky. This includes explaining complex ideas while being accurate, engaging, and also coherent to audiences of various ages and backgrounds.