

COLBY OSTBERG

University of California, Riverside
(831)917-8399 \diamond costb001@ucr.edu

EDUCATION & INTERNSHIPS

Education

PhD in Geological Sciences (Expected Graduation: Summer 2023)

Department of Earth and Planetary Science

University of California, Riverside — Riverside, CA *September 2018 - Present*

Bachelor of Science in Physics

Physics and Astronomy Department

San Francisco State University — San Francisco, CA *August 2014 - June 2018*

Internships

JPL Year-Round Internship Program

Using new lithospheric thickness values for Venus to update heat flow estimates

Advisor: Suzanne Smrekar

NASA Jet Propulsion Laboratory — Pasadena, CA *November 2019 - Present*

JPL Summer Internship Program

Constraining the thickness of Venus' elastic lithosphere

Advisor: Suzanne Smrekar

NASA Jet Propulsion Laboratory — Pasadena, CA *Summer 2019*

SCIENTIFIC INTERESTS

- **Refining the Venus Zone Boundaries:** I am currently using a 3D GCM, ROCKE-3D, to try and determine what is needed to force a planet into a runaway greenhouse. I am also working with Shannon Curry from the Space Sciences Lab to determine the timescales needed to erode the atmospheres of planets from a variety of planetary systems.
- **Creating Spectra of Venus-like Planets:** Using the outputs of climate models, as well as available data of the Venusian atmosphere from the Pioneer missions, I am creating spectra for exoplanets with Venus-like atmospheres
- **JWST Observing Simulations:** I am using a publicly available code, PandExo, to determine which of the newly discovered TESS planets in the Venus Zone are the most optimal targets for JWST.
- **Venusian Lithosphere** I am working with Suzanne Smrekar at JPL to constrain the thickness of the elastic lithosphere on Venus, which will lead into updating models of heat flow from the Venus' interior.

PUBLICATIONS

“Predicting the Yield of Potential Venus Analogs from *TESS* and their Potential for Atmospheric Characterization”

C. Ostberg, S.R. Kane, *Astronomical Journal*

FELLOWSHIPS & COMPETITIVE AWARDS

- **Outstanding Student Presentation Award**, American Geophysical Union Fall 2019 Meeting
- **Dean's Distinguished Fellowship Award**, UC Riverside (2018-2023)
- **NASA Astrobiology Institute Student Travel Stipend**, Astrobiology Science Conference 2019
- **Venus Exploration and Analysis Group (VEXAG) Travel Stipend**, 17th Meeting of VEXAG 2019
- **VEXAG Travel Stipend**, Exoplanets in our Backyard 2020

CONFERENCES AND MEETINGS

Talks

"Identifying Potential Venus Analogs from Exoplanet Discoveries"

C. Ostberg, S.R. Kane

American Geophysical Union Fall 2019 Meeting (Abstract ID: 517488), San Francisco, CA

Posters

"Identifying Potential Venus Analogs from Exoplanet Discoveries"

C. Ostberg, S.R. Kane

Extreme Solar Systems IV, Reykjavick, Iceland

"Identifying Potential Venus Analogs from Exoplanet Discoveries"

C. Ostberg, S.R. Kane

Astrobiology Science Conference 2019 (Abstract ID: 480282), Bellevue, WA

"Identifying Potential Venus Analogs from Exoplanet Discoveries"

C. Ostberg, S.R. Kane

Lunar and Planetary Science Conference 2019 (Abstract ID: 2123), The Woodlands, TX

"Understanding Venus' Interior Processes as a Control Case for the Evolution of Earth and Earth-sized Exoplanets"

S. Smrekar, V. Auerbach, **C. Ostberg**, J.G. O'Rourke, A. Davaille

American Geophysical Union Fall 2019 Meeting (Abstract ID: 589674), San Francisco, CA

Other

Session Chair at Exoplanets in our Backyard 2020

EDUCATIONAL EXPERIENCE

Graduate Teaching Assistant: I led 3 discussion sections in an undergraduate oceanography course which focused on promoting the importance of science and science literacy.

SFSU Campus Academic Outreach Program Tutor: I tutored undergraduate students to increase their skills in calculus and physics, and led short lectures which focused on areas of common weakness