ALEXANDER SPACEK

School of Earth and Space Exploration
Arizona State University
aspacek@asu.edu

EDUCATION

2012 – Present (ongoing), Ph.D. Graduate Student, Astrophysics, School of Earth and Space Exploration. Arizona State University, Tempe, AZ.

2012, B.Sc., Physics w/ Specialization in Astrophysics, University of California, San Diego. La Jolla, CA. Minor: Music.

RESEARCH POSITIONS

2012 – Present, Research Assistant, Graduate Student, Arizona State University

- With E. Scannapieco, "Measuring and Characterizing AGN Feedback with the Sunyaev-Zel'dovich Effect."

2013, Research Assistant, Graduate Student, Arizona State University

- With J. Bowman, "Using Self-calibration to Model and Image the Virgo A Radio Source With the Low Frequency Array (LOFAR)," including 7 weeks in Germany during summer 2013 to work on LOFAR data as part of the NSF-funded International Research Experience for Students. Worked with postdoc F. de Gasperin at the University of Hamburg.

Spring 2012, Undergraduate Student, University of California, San Diego

- With K. Griest, Calculations relating to the gravitational lensing of light coming from supernovae.

POSTERS, SCIENTIFIC TALKS AND PUBLIC OUTREACH

2012 – Present, ASU's Earth and Space Open House, committee member: properties manager, public telescope viewing, general assistance.

Fall 2015, JSI 2015 Workshop, *The Physics of Supermassive Black Hole Formation and Feedback,* Annapolis, MD, poster, "Constraining AGN Feedback in Massive Ellipticals with South Pole Telescope Measurements of the Thermal Sunyaev-Zel'dovich Effect", A. Spacek, E. Scannapieco, S. Cohen, B. Joshi, P. Mauskopf.

Spring 2014, Ph.D. candidacy qualifying oral exam, Astrophysics, SESE, ASU.
Committee: E. Scannapieco, J. Bowman, C. Groppi, N. Butler, S. Malhotra. Passed.

Fall 2013, *Astronomy Coffee* talk, ASU, summary of primary research with E. Scannapieco.

Fall 2013, All-hands Astrobiology Meeting, ASU, poster, "Stellar Evolution and the Effects of Variable Composition on Habitable Systems," A. Truitt, P.A. Young, A. Spacek, L. Probst.

Summer 2013, research talk, ASU, "A Review of the Summer 2013 LOFAR Project in Germany."

Spring 2013, *Planetary Seminar* talk, ASU, "A Short Review of Exoplanets and Their Detection."

2012 – 2013, Graduate Advisor for the ASU Astronomy Club, supervision of telescope use and solar observing, general assistance.

2012 – 2013, ASU's Astronomy Public Lecture Series, organization and general assistance.

Fall 2012, Arizona Museum of Natural History astronomy outreach event, "A Night With the Stars," helped to organize activities, talked to public about astronomy.

TEACHING EXPERIENCE

2015 – Present, Educational Field Instructor, Tonto Creek Camp, Payson, AZ. Sky tour, telescopes, astronomy activities, grade school children.

Fall 2016, Teaching Assistant, ASU, "Astrophysics II." Grading.

Spring 2016, Teaching Assistant, ASU, "Astrophysics I." Grading.

Spring 2015, Teaching Assistant, ASU, "Intro to Stars, Galaxies, and Cosmology." General assistance.

Spring 2014, Teaching Assistant, ASU, "Intro to Galactic and Extragalactic Astrophysics." Office hours, grading.

Fall 2013, Teaching Assistant, ASU, online, "Intro to Solar Systems Astronomy" and "Astronomy Lab I." Answered questions on message boards, created video walk-throughs of labs.

Spring 2013, Teaching Assistant, ASU, "Intro to Galactic and Extragalactic Astrophysics." Grading.

Fall 2012, Teaching Assistant, ASU, "Earth, Solar System, & Universe Lab I." Taught in classroom twice per week with telescope observing, grading.

Winter & **Spring 2012, Teaching Assistant,** UCSD, "Electricity and Magnetism Lab." Taught in classroom once per week, grading.

AWARDS AND HONORS

2016, Graduate and Professional Student Association Individual Travel Grant, ASU.

2016, Summer PhD Student Research Award, ASU.

2012, *cum laude*, UCSD Graduation.

2008 – 2011, Robert C. Byrd Honors Scholarship.

2008, Co-Valedictorian, Oceana High School, Pacifica, CA.

PUBLICATIONS

[**1**] A Catalog Of Stellar Evolution Profiles And The Effects Of Variable Composition On Habitable Systems
A. Truitt, P. A. Young, **A. Spacek**, L. Probst, J. Dietrich. 2015. *The Astrophysical Journal*, 804, 145

[**2**] Constraining AGN Feedback in Massive Ellipticals with South Pole Telescope Measurements of the Thermal Sunyaev-Zel'dovich Effect
A. Spacek, E. Scannapieco, S. Cohen, B. Joshi, P. Mauskopf. 2016. *The Astrophysical Journal*, 819, 128

[**3**] Searching For Fossil Evidence of AGN Feedback in WISE-selected Stripe-82 Galaxies by Measuring the Thermal Sunyaev-Zel'dovich Effect with the Atacama Cosmology Telescope
A. Spacek, E. Scannapieco, S. Cohen, B. Joshi, P. Mauskopf. 2017. *The Astrophysical Journal*, 834, 102

[**4**] Arctic Ice Management
S.J. Desch, N. Smith, C. Groppi, P. Vargas, R. Jackson, A. Kalyaan, P. Nguyen, L. Probst, M.E. Rubin, H. Singleton, **A. Spacek**, A. Truitt, P.P. Zaw, H.E. Hartnett. 2017. *Earth's Future*. doi:10.1002/2016EF000410