

Jason B. Trump

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Coursework — Brigham Young University, Senior, Physics Education BS

Physics 228: Stellar and Extragalactic Astronomy 2020

- Implemented knowledge of stellar atmospheres, interiors, and evolution in class projects involving real data
- Advanced understanding of galactic structure and cosmology

Grade received: A

Physics 227: Solar System Astronomy 2019

- Showed understanding of planetary processes and systems, and methods for detecting exoplanets
- Contributed to class project analyzing TTVs of exoplanets (publication in prep.) with 46 other students

Grade received: A

Physics 313R: Planetarium and Telescope Operation 2017

- Exhibited ability to collimate, effectively use, and assist others using 12-in Dobsonian and other small telescopes
- Demonstrated ability to teach constellations, stars, and deep space objects to audiences using ZEISS, Digistar
- Planned, programmed, and presented 45-min educational planetarium show using Digistar software

Grade received: A

Physics 329: Observational Astronomy 2017

- Acquired knowledge of data reduction, photometric and period analysis of variable stars
- Operated 0.4-m ASKO telescope at the Orson Pratt Observatory
- Showed competency with astronomy software including IRAF, AstrolmageJ, Period04
- Completed final paper in the form of a peer reviewed publication using LaTeX, Linux

Grade received: A

Physics 127: Descriptive Astronomy 2016

- Excelled in understanding of Solar System and large-scale conceptual astrophysics
- Proved ability to identify constellations, stars, and deep space objects as projected in a planetarium
- Observed various night-sky objects using 12-in Dobsonian and CCD-attached 0.4-m ASKO telescopes

Grade received: A

Experience

Educator and Outreach Coordinator Apr 2017-Present

Royden G. Derrick Planetarium, Provo, Utah

Supervisor: Dr. M. Jeanette Lawler

- Presented 300+ educational programs to preschool, K-12, and adult audiences
- Developed age-appropriate educational and entertainment programs using Digistar and ZEISS software
- Scheduled and coordinated 2+ years of public visitors to the 120-seat Royden G. Derrick Planetarium
- Helped organize and put on BYU's annual astronomy day, Astrofest, with 1000+ attendees

Teaching Assistant Jan 2017-Present
Brigham Young University Department of Physics and Astronomy, Provo, Utah

- Taught general astronomy, constellations, telescope and planetarium operation to students
- Assisted professors with use of the planetarium and graded class assignments for 200+ students
- Utilized 5-in reflecting, 12-in and 10-in Dobsonian telescopes to help students observe night sky objects
- Maintained and repaired one 5-in reflecting, two 12-in and one 10-in Dobsonian telescopes
- Awarded Outstanding Astronomy TA award in April 2019 based on faculty evaluations of about 20 employees

Astronomy Outreach Intern Jun 2020-Aug 2020
Bryce Canyon National Park, Utah

Supervisor: Todd Cullings

- Designed and implemented engaging daytime astronomy activity for children and adults
- Interacted with public visitors and answered questions about various sciences
- Developed and presented 45-min public lecture about astronomy misconceptions
- Created and perfected nighttime astronomy programs such as full moon hikes and night sky tours
- Transformed existing procedures to keep visitors safe amid COVID-19 pandemic

Research Assistant Apr 2018-Apr 2019
Orson Pratt Observatory, Provo, Utah

Supervisor: Dr. Eric Hintz

- Analyzed data from the 0.4-m ASKO telescope at the Orson Pratt Observatory, Provo
- Constructed light curves and performed period analysis using IRAF, AstrolImageJ, Excel, Period04, Linux
- Prepared and presented results at the 233rd Meeting of the AAS using PowerPoint, LaTeX

Community Outreach Officer Apr 2019-Present
Society of Physics Students, BYU Chapter, Provo, Utah

- Planned, scheduled and presented physics demonstrations and lessons to K-12 and special needs groups
- Worked with 3 other students to brainstorm, organize, and produce engaging activities for college students

Education and Outreach Officer Nov 2019-Present
BYU Astronomical Society, Provo, Utah

- Organized and put on public star parties with 10-in and 12-in Dobsonian telescopes at remote locations
- Educated and entertained public audiences of varying ages through planetarium shows using ZEISS, Digistar
- Trained members how to use planetarium systems and how to, collimate, repair, and clean small telescopes

Observer and Analyst May 2017-Aug 2017
West Mountain Observatory, Santaquin, Utah

Supervisor: Dr. Mike Joner

- Acquired and analyzed photometric data from 0.91-m, 0.51-m, and 0.32-m telescopes
- Resided on location at the observatory weekly for two days and two nights with two other students

Publications

An Analysis of the delta Scuti Variable V402 Cephei Jan 2019
Trump, Jason B., [2 authors], AAS Meeting #233, id.360.11

KELT 21b: A Hot Jupiter Transiting the Rapidly Rotating Metal-poor Late-A Feb 2018

Primary of a Likely Hierarchical Triple System

Johnson et al., [33 authors], **Trump, Jason**, [33 authors], 2018 AJ, vol. 155, id. 100, 20 pp.

Ragozzine et al.

One of 46 minor coauthors

In Prep.