

# Jason B. Trump

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## Coursework — Brigham Young University, Senior, Physics Education BS

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### 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

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### 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, AstroImageJ, Excel, Period04, Linux
- Prepared and presented results at the 233<sup>rd</sup> 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

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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  
Primary of a Likely Hierarchical Triple System

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

Feb 2018

Ragozzine et al.

One of 46 minor coauthors

In Prep.