Adam Sutherland

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EDUCATION

University of Arizona, Tucson, AZ
Expected degree: Ph.D. Astronomy and Astrophysics — Expected May 2021
Master's Astronomy and Astrophysics — Dec 2018

University of Chicago, Chicago, IL — October 2012 - June 2016
Bachelor of Arts, Physics with Honors with Specialization in Astrophysics
Bachelor of Arts, Geophysical Sciences

EMPLOYMENT & RESEARCH POSITIONS

Graduate Research Assistant — Kaitlin Kratter
August 2016 - Present — University of Arizona
Studying the dynamics of resonant systems as it pertains to Pluto-Charon and circumbinary planets.

Senior Honors Thesis — Jacob Bean
Sept 2015 - June 2016 — University of Chicago
Continued summer work about optical fibers for the Senior Honors Research Thesis Project. Developed a method of measuring scrambling gain over a number of parameters for different shapes of fibers.

Summer Instrumentation Position — Jacob Bean
June 2015 - Sept 2015 — University of Chicago
Investigated the properties of optical fibers for MAROON-X instrument development with Bean exoplanet group.

Unstable Circumbinary Planets — Dan Fabrycky
June 2014 - May 2015 — University of Chicago
Researched the fate of unstable circumbinary planets using N-body simulator MERCURY and published work in ApJ.

Spin-orbit Alignment of Hot Jupiters — Dan Fabrycky
Oct 2013 - June 2014 — University of Chicago
Investigated Kozai Cycles in Shrinking Binary and Planetary Orbits by Kozai Cycles with Tidal Friction.

OUTREACH

Ryerson Astronomical Society: 2013-14, 2014-15, Outreach Officer and Chief Engineer for the astronomy club. Organized stargazing events and trips to Yerkes Observatory, telescope upkeep and managed accessories. Weekly meetings with undergraduate presenters and weekly observations open to the public.

GeoUnion: 2015-2016, President of geoscience undergraduate club. Organized weekly talks by faculty and graduate students as well as field trips.

AWARDS

Dean's List: First, Second Year, Third, and Fourth Year
B.A. with Honors in Physics
General Honors with Bachelor's Degree

PROGRAMMING

Python: pandas, Mathematica, LaTeX, FORTRAN, C, IDL

PUBLICATIONS & PROCEEDINGS

1. **Sutherland, Adam P.**; Kratter, Kaitlin M., "Instabilities in Multi-planet Circumbinary Systems," MNRAS Volume 487, Issue 3, August 2019, Pages 32883304
2. **Sutherland, Adam P.**; Stürmer, Julian; Miller, Katrina R.; Seifahrt, Andreas; Bean, Jacob L., "Characterizing octagonal and rectangular fibers for MAROON-

X," Proc. SPIE 9912, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation II, 99125C

3. Stürmer, Julian; Schwab, Christian; Grimm, Stephan; Kalide, Andre; **Sutherland, Adam P.**; Seifahrt, Andreas; Schuster, Kay; Bean, Jacob L.; Quirrenbach, Andreas, "Optimal non-circular fiber geometries for image scrambling in high-resolution spectrographs," Proc. SPIE 9912, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation II, 99121T
4. **Sutherland, Adam P.**; Fabrycky, Daniel C., "On the Fate of Circumbinary Planets: Tatooines Close Encounters with a Death Star," The Astrophysics Journal, Volume 818, Issue 1, article id. 6, 7 pp.

CONFERENCES

Extreme Solar Systems IV: Reykjavk, Iceland, Aug, 2019
Poster: Instabilities in Multi-planet Circumbinary Systems
Lake Michigan Exoplanet Meeting: Evanston, IL, Dec, 2018
Talk: Instabilities in Multi-planet Circumbinary Systems
Star and Planet Formation in the Southwest 2: Arizona, March, 2018
Poster: Mean Motion Resonances in Migrating Circumbinary Systems
Exoplanets I: Davos, Switzerland, July, 2016
Poster: Characterization of Optical Fibers for the Use in Precision Radial Velocity Spectrographs