

Katherine Melbourne

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EDUCATION

Yale University; *3.72 GPA, Physics, B.S.;* New Haven, CT (Anticipated graduation: December 2019)

RESEARCH POSITIONS

Yale University; *Yale College Dean's Research Fellow;* New Haven, CT (Summer 2017)

- Compare calibration data to simulations for the Cryogenic Underground Observatory for Rare Events
- Develop codes using C/C++ through the ROOT software system designed for particle physics analysis

Universidad de Chile; *Alan S. Tetelman Fellow for International Research in Science;* (May 2016 — present)

- Explore the relationship between stellar activity and radial velocity data on exoplanets
- Used Python and associated astronomy packages to write and parallel-process codes on supercomputer
- Observe exoplanet targets through Swiss Euler 1.2m telescope at La Silla Observatory
- Self-design a program to collaborate between two astronomy departments

Boston University; *Research Internship in Science and Engineering for Astronomy;* (Summer 2014)

- Used data from Cerro Tololo Observatory to produce an HR diagram of M Dwarf stars
- Prepared and presented findings at end-of-summer poster symposium

WORK EXPERIENCE

Center for Teaching and Learning; *STEM Education Undergraduate Fellow;* New Haven, CT (2017-present)

- Manage communications for Helmsley STEM Education Program at Yale
- Coordinate professional events with leaders in STEM education research from universities nationwide

National Aeronautics and Space Administration; *Desk Officer Support Intern;* Washington, D.C. (Spring 2017)

- Draft agreements that align with the missions of NASA within the United States as well as globally
- Negotiate agreements with foreign partners by communicating with their legal teams
- Brief senior officials about upcoming meetings with foreign nationals and international trips

Quad City Tennis Club; *Front Desk Staff Member;* Moline, IL (2015-2016)

- Assisted customers in person and over the phone
- Maintained and clean facilities

Community Foundation of the Great River Bend; *Summer Office Assistant;* Bettendorf, IA (Summer 2015)

- Updated and redesigned web pages
- Wrote and edited donor stories for journals and web page

STEM OUTREACH EXPERIENCE

Yale Women in Physics; *Secretary General;* New Haven, CT (2015 — present)

- Organize events to support and unite women in physics and STEM fields
- Create opportunities for women to get more involved with research and conferences

Popular Astronomy Club; *Member of Astronomical League;* Moline, IL (2013-present)

- Give presentations and constellation reports at club meetings
- Volunteer with club at public astronomy outreach events

COMMUNITY INVOLVEMENT

Camp Kesem Yale; *Head Unit Counselor and Development Committee Member;* New Haven, CT (2015-present)

- Raise money to send kids affected by cancer in their families to summer camp for free
- Lead a cabin of young children in camp activities for a week
- Build community among fellow counselors and campers

Yale Precision Marching Band; *Class Representative and Section Leader;* New Haven, CT (2015-present)

- Organize the upper woodwind section with music, drills, and other needs during performances
- Rehearse and perform at Yale football, hockey, and basketball games

State of Iowa Youth Advisory Council; *Bill Leader and Committee Member;* Des Moines, IA (2013-2015)

- Collaborate with peers toward council's objectives including lobbying for initiatives
- Communicate with legislators in support of indoor tanning ban bill for minors
- Address council members and senate sub-committee about importance of tanning legislation

SPECIAL SKILLS

Programming experience: Python, C/C++ through ROOT, Linux and Macintosh computing environments

Language experience: Intermediate proficiency in Spanish