

# Justin Bopp

#### **EDUCATION**

Physics - Bachelor of Science

California State University, Stanislaus

Turlock, CA

05/2023

**Astrophysics - Masters of Science** 

City University of New York

08/2023 - 05/2025 New York, NY

#### PROFESSIONAL EXPERIENCE

Research Intern

05/2022 - 08/2023 Turlock, CA

Dr. Brian Morsonv

- Rubin Observatory Data Preview Delegate
  - adapted a photometric redshift estimator to be used in the Rubin database
  - made program to match host galaxies to detected transients
- Fitting Observed Abundances to Metals from Supernovas (FOAMS)
  - obtained metallicity data from APOGEE survey of Milky Way stars
  - converted the abundances from normalized number abundances to the mass abundances needed to run through the FOAMS program
  - determined Core-Collapse to Type-Ia supernova ratio for large sample of Milky Way stars

# **PRESENTATIONS**

"Using Photometric Redshifts to Identify Host Galaxies in the Rubin Data Preview"

Poster Presentation at APS April Meeting 2023

04/2023

Minneapolis, MN

"Using Photometric Redshifts to Identify Host Galaxies in the Rubin Data Preview"

Poster Presentation at the 241st AAS meeting

01/2023 Seattle, Wa

"Determining PhotoZ in Rubin Science Platform dpo.2"

CSU/Rubin Data Summit 2022

07/2022 San Luis Obispo, Ca

#### **SKILLS**

#### **Data Science**

Github, Python, Pandas, Numpy, Astropy, Astroquery, ADQL, Machine Learning, Matlab, Rubin Data Platform and science pipelines

#### **Microsoft Office**

Word, Excel, Powerpoint, Outlook

## **COURSES**

# Using Python and Astropy for Astronomical Data Analysis

AAS

01/2023 Seattle, WA

• Python tools for astronomical data analysis and visualization, with the focus primarily on UV, Optical, and IR data

# Discovery Science Center Summer School for Matter at Extreme Conditions in the Laboratory and the Cosmos

Center for Mass at Atomic Pressure

- crash course in magnetohydrodynamics
- jet and particle simulations

08/2022 Rochester, NY

#### LEADERSHIP AND OUTREACH

# **Society of Physics Students** 2021 - 2023• Chapter President • Astronomy night 2022 Volunteer - Led small telescope observing session with 150+ participants 4-H 2002 - 2012• Chapter Offices held (President/VP/Treasurer/Historian) • Stanislaus County "All-Star" - 2010 • California 4-H Ambassador - 2012 - Planned, organized and ran California 4-H State Leadership Conference, 300 4-h middle/high school age kids • 4x Gold Medal -California State 4-H Public Speaking Contest • California State Dairy Cattle Judging Team - 2011 • Gold medal – State 4-H Record Book contest - 2012 **Future Farmer of America** 2008 - 2012• Chapter Vice President – 2012 • Member – Dairy Cattle Judging Team 2012 **National Holstein Association** 2006 - 2012• National Junior Dairy Jeopardy Champion – 2007 • National Junior Dairy Knowledge Bowl Champion – 2008 • National Senior Dairy Knowledge Bowl Champion – 2009 • National Intermediate Dairy Jeopardy 3rd place – 2010