John Albert Faulhaber

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Education

University of Colorado at Boulder, *Boulder, CO* August 2016 – May 2020

B.A. Astrophysics; Minor in Classical Studies, Cumulative GPA: 3.9/4.0

Honors/Awards: Summa Cum Laude *with distinction* – Awarded April 27th, 2020, Phi Beta Kappa (ΦBK) – Inducted December 7th, 2019, Ranked 4/63 in the Astrophysical and Planetary Sciences department upon graduation, Featured undergraduate classics minor recipient (here), Dean's List x7

Relevant Coursework: Stellar/Interstellar & Galactic/Extragalactic Astrophysics, Scientific Data Analysis & Computing, Quantum Mechanics, Vector Calculus, Electro & Magnetodynamics

Cornell University (Summer College), *Ithaca, NY* June 2015 - August 2015

Emphasis: Astrophysics, General Engineering, Cumulative GPA: 3.35/4.0
Earned recognition for achieving "*the highest level of distinction in the design and construction of an engineering structure*" (ENGRG 1060)

Technical Skills

- Coding Language: Python 2.7, 3.0
- Data reduction: SAOImage DS9, IRAF
- Scientific/Technical Writing
- Model Fitting, Error Analysis, Image Analysis
- Data Analysis, Data Visualization
- Microsoft Office proficiency: Excel, Word, PowerPoint
- Proficiency with a variety of video conferencing and collaborative whiteboard applications
- Familiarity with GitHub

Research

Thesis: On the Nebular Motions of Sharpless 2-106 and its Evolutionary Phase
(https://scholar.colorado.edu/concern/undergraduate_honors_theses/fx719n336)
- Wrote code in Python to extract relevant data, performed analysis, and created interactive data visualization models that automated the ability to draw meaningful conclusions about the data

Primary Research Paper (Acknowledgment): Bally, John, et al. "A Highly Collimated Jet from the Red Square Nebula, MWC 922", Published by MNRAS on 1/23/2019. (https://doi.org/10.1093/mnras/stz257)
- Performed data reduction and produced enhanced images

Primary Research Paper (Co-Author, In progress): Bally, John, et al. "Supersonic Expansion of the Bipolar HII Region Sh2-106", for the center for Astrophysics and Space Astronomy

Work Experience

University of Colorado, Boulder – Grader Fall 2019
- Graded the complex physics and astronomy solutions and work of the 72 students enrolled in Astrophysics 1 – Stellar and Interstellar, and provided feedback to the professor on areas requiring further emphasis during future lectures

Amazon – Seasonal Employee, Fulfillment center Summer 2019
- Assisted in managing and organizing incoming and outgoing inventory, resulting in improved workflow efficiency
- Surpassed the job quota for each day, resulting in the option to work extra hours

The Princeton University Store – Sales Associate, Retail Summers 2017, 2018, 2019
- Performed key store customer service duties and assisted with inventory management, helped train new employees, and assisted in the fulfillment of web sales
- Led the Sales Associates Team in acquiring new customer memberships

Leadership

The Phi Beta Kappa Society – Young Professional Advisor, Delaware Valley Dec. 2020 - Current
- Assist in determining offered programs and program content for the Phi Beta Kappa Delaware Valley Association
- Serve as a moderator/catalyst in breakout rooms during virtual events
- Designed social responsibility scholarship for local high school students championing academic excellence
- Designed and delivered a TedTalk-like presentation to public audience on star formation and virtual particles (6/17/2021)