

CULLEN ABELSON



Pittsburgh, PA | cullen.abelson@pitt.edu | csabelson.github.io

SCIENTIFIC INTERESTS

- **Delay time distributions** of stellar remnants (**CC & Ia SNe**, novae), as well as **WR stars** and red supergiants, to probe **binary stellar evolution**
- Galactic SED fitting using **prospector** to recover star formation history maps

EMPLOYMENT & EDUCATION

2022-
PRESENT



PH.D. CANDIDATE

University of Pittsburgh | Department of Physics & Astronomy

2021-
2022



POSTBACC. RESEARCH ASSISTANT

Penn State University | Department of Astronomy & Astrophysics

2017-
2021



B.S. IN PHYSICS, B.S. IN ASTRONOMY

Penn State University | Schreyer Honors College

PUBLICATIONS | ORCID ID 0009-0007-2747-3691

05/2025



THE PROGENITOR SYSTEMS OF CLASSICAL NOVAE IN M31

C. S. Abelson; Carles Badenes; Laura Chomiuk; Benjamin F. Williams; Katelyn Breivik; L. Galbany; C. Jiménez-Palau

The Astrophysical Journal

DOI: 10.3847/1538-4357/adc68c

12/2024



DIAMANTE TESS AUTOREGRESSIVE PLANET SEARCH (DTARPS). III. UNDERSTANDING THE DTARPS-S CANDIDATE TRANSITING PLANET CATALOGS

Elizabeth J. Melton; Eric D. Feigelson; Marco Montalto; Gabriel A. Caceres; Andrew W. Rosenswie; Cullen S. Abelson

The Astronomical Journal

DOI: 10.3847/1538-3881/ad8355

08/2024



VIZIER ONLINE DATA CATALOG: DTARPS. II. 462 NEW TESS CANDIDATES

Melton, E. J.; Feigelson, E. D.; Montalto, M.; Caceres, G. A.; Rosenswie, A. W.; Abelson, C. S.

VizieR On-line Data Catalog

Bibcode: 2024yCat..51670203M

05/2024 ○ DIAMANTE TESS AUTOREGRESSIVE PLANET SEARCH (DTARPS).
I. ANALYSIS OF 0.9 MILLION LIGHT CURVES

Melton, Elizabeth J.; Feigelson, Eric D.; Montalto, Marco; Caceres, Gabriel A.; Rosenswie, Andrew W.;
Abelson, Cullen S.
The Astronomical Journal
DOI: 10.3847/1538-3881/ad29f0

05/2024 ○ DIAMANTE TESS AUTOREGRESSIVE PLANET SEARCH (DTARPS).
II. HUNDREDS OF NEW TESS CANDIDATE EXOPLANETS

Melton, Elizabeth J.; Feigelson, Eric D.; Montalto, Marco; Caceres, Gabriel A.; Rosenswie, Andrew W.;
Abelson, Cullen S.
The Astronomical Journal
DOI: 10.3847/1538-3881/ad29f1

10/2021 ○ THE Z 2 [O III] LUMINOSITY FUNCTION OF GRISM-SELECTED
EMISSION-LINE GALAXIES

Bowman, William P.; Ciardullo, Robin; Zeimann, Gregory R.; Gronwall, Caryl; Jeong, Donghui; Nagaraj,
Gautam; **Abelson, Cullen**; Weiss, Laurel H.; Molina, Mallory; Schneider, Donald P.
The Astrophysical Journal
DOI: 10.3847/1538-4357/ac1a0e

OUTREACH

- Teen Astro Café (grades 9-12) 02/2026
- Youth Astro Club (grades 3-5) 02/2026
- High school science fair project advisor 02/26 – present
- AstroPGH Python Boot Camp presenter 05/2024, 05/2025
- Ask an Astronomer @ Allegheny Observatory Open House 09/2025
- Astrophysicist for a Day @ Allegheny Observatory 03/2024

AWARDS

- Dietrich School of Arts and Sciences Predoctoral Summer Research Fellowship 05/2023 – 08/2023
- Thomas Lain Essay Competition Scholarship 03/2023
- Penn State Academic Excellence Scholarship 2017 – 2021
- Elsbach Honors Scholarship in Physics 2019 – 2020
- Eagle Scout 07/2017

TEACHING

- Private tutor: Introductory & intermediate physics 10/2023 – present
- Teaching assistant: Introductory astronomy for non-majors 08/2022 – 05/2023