

CURRICULUM VITAE – KRISTIN N. BAKER

CONTACT INFORMATION	Kristin N. Baker Indiana University 727 East Third Street Bloomington, IN 47405-7105	knb1@iu.edu
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EDUCATION	Ph.D. in Astronomy , Indiana University	Anticipated July. 2026
	Advisor : Dr. John Salzer	
	M.A. in Astronomy , Indiana University	Feb. 2025
	Advisor : Dr. John Salzer	
	B.S. in Physics , Georgia State University	Dec. 2020
	<i>Summa Cum Laude</i>	

RESEARCH INTERESTS Extragalactic astronomy : emission-line galaxies, chemical abundances, star formation, starburst galaxies, Green Pea galaxies

AWARDS	Goethe Link Prize for Outreach and Public Education in Astronomy (2024)	\$500
	Goethe Link Prize for Outreach and Public Education in Astronomy (2023)	\$200
	Provost's Travel Award for Women in Science (2023)	\$700
	Indiana University College of Art and Science Travel Award (2023)	\$200
	Zell Miller Scholarship (2017 – 2020)	
	Georgia State University Admission Foundation Scholarship (2017 – 2018)	

RESEARCH EXPERIENCE	<p>Chemical Abundances of Green Pea Galaxies , <i>Indiana University</i> Jan. 2024 - Present</p> <p>Advisor : Dr. John Salzer</p> <p>Study of the properties of Green Pea galaxies in the Star Formation Across Cosmic Time (SFACT) survey and their chemical abundances.</p>
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Star Formation Across Cosmic Time (SFACT), *Indiana University* Jan. 2022 - Present
 Advisor : Dr. John Salzer
 Narrow-band survey utilizing the WIYN 3.5m telescope at Kitt Peak Observatory to detect emission line galaxies out to a r magnitude of $r = 25.0$.

Study of Outflowing Material in NGC 3783, Georgia State University Jul. 2019 - Jul. 2021
 Advisor : Dr. Jay Dunn
 Investigation of the variability of CIV and NV absorption features associated with outflowing material in the Active Galactic Nucleus of NGC 3783 over time and analysis of trough blending due to multiple kinematic components.

Rotational Periods of 782 Montefiore, *Georgia State University* Jan. 2020 - May 2020
 Advisor : Dr. Misty Bentz
 Study of the rotational period of Asteroid 782 Montefiore utilizing V-band photometry taken with the 24in telescope at Hard Labor Creek Observatory.

TEACHING EXPERIENCE	<p>Instructor of Record, <i>Indiana University</i></p> <p>A105 : Stars and Galaxies</p> <p>A 3-credit online introductory astronomy course for non-science majors with a class size of 30 students. Responsibilities included creating homework assignments and discussion prompts, grading assignments, and holding office hours.</p>	Summer 2023, 2024
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Associate Instructor, Indiana University

Fall 2021 - Present

A452 : Extragalactic Astronomy

A 3-credit upper-level astronomy course for astronomy majors with a class size of 15 students. Responsibilities included grading weekly assignments and holding office hours.

A222 : Stars and Galaxies

A 3-credit introductory astronomy course for science and astronomy majors with a class size of 20-70 (instructor of record dependent) students. Responsibilities included grading weekly assignments, holding office hours, and proctoring exams.

A221 : Stars and Galaxies

A 3-credit introductory astronomy course for science and astronomy majors with a class size of 30 students. Responsibilities included grading weekly assignments and holding office hours.

A107 : The Art of Astronomy

A 3-credit online introductory astronomy course for non-science majors with a class size of 150 students. Responsibilities included grading weekly assignments and holding office hours.

**OUTREACH
EXPERIENCE****PyIU Organizing Committee, Indiana University**

Oct. 2022 - Present

Organizing Committee Member of the PyIU, a python crash course and workshop series for undergraduate students hosted by IU graduate students. Responsibilities include leading logistics of hosting the events and collaborating with other organizing members to write new content for the events. <https://github.com/BrandonRadzom/pyiu>.

Eclipse Coordinator, Indiana University

Jul. 2023 - May 2024

Coordination of outreach and education efforts regarding the 2023 Partial Eclipse and 2024 Total Eclipse. Responsibilities include giving public talks and guest lectures, coordinating events leading up to and on the day of the total eclipse, serving on committees distributing financial aid to rural Indiana communities planning eclipse events.

BVI Outreach Intern, Geneva Lake Astrophysics and STEAM

Mar. 2021 - Aug. 2021

Developed a 3D-printed tactile card game designed to teach students with visual impairments about galaxy shape and associated spectra with Sloan Digital Sky Survey data.

PRESENTATIONS**Invited Talks**

Green Peas Across Cosmic Time : Selecting Green Pea Galaxies in the SFACT Survey, IU Astronomy Seminar, March 2025

Galaxy Dominoes : A New Tactile Tool for Teaching Astronomy, IU Astronomy Seminar, October 2021

Posters

The Many Faces of the Tactile Galaxy Cards. Presented at : 241th American Astronomical Society Conference ; January 2023 ; Seattle, WA

Continuing Evolution of Outflows in NGC 3783. Presented at : American Physical Society Conference for Undergraduate Women in Physics ; January 2020 ; Norman, OK

Continuing Evolution of Outflows in NGC 3783. Presented at : Georgia Regional Astronomy Meeting ; October 2019 ; Atlanta, GA

Public Talks

Pea Haw : Green Pea and the Epoch of Reionization, Astronomy on Tap, Nov 2024

Preparing for a Solar Eclipse, Astronomy on Tap, April 2024

Preparing for a Solar Eclipse, Bloomington IN., February 2024

PUBLICATIONS

Refereed Publications :

Bentz, M., **Baker, K.**, Coumarbatch, K. et al., "V-Band Photometric Monitoring of 782 Montefiore," Minor Planet Bulletin, Vol 49, No. 4

Non-refereed Publications :

Meridith, K., **Baker, K.**, Corbett, K., Smithmier, O., "Tactile Galaxy Cards : A New Accessible Hands-on Tool for Teaching," AAS Education Committee Blog, 2022

SKILLS

Programming Languages

Python, LaTeX, IDL, Java

Softwares

IRAF, TOPCAT, Blender