

Christina Willecke Lindberg

Astronomy Post-Doctoral Researcher

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RESEARCH INTERESTS

HST ◦ JWST ◦ Local galaxies ◦ Interstellar Medium ◦ Stellar populations ◦ Data science ◦ Community leadership

APPOINTMENTS

J.C. Ryan Postdoctoral Fellow

2025 - Present

Center for Astrophysics (CfA) — Harvard & Smithsonian Astrophysical Observatory (SAO)

EDUCATION

Ph.D. Candidate in Astronomy

2019 - 2025

Johns Hopkins University (JHU)

Thesis Topic: Resolving the Multi-Scale Structure of the Interstellar Medium in Local Group Galaxies

Research Advisor: Dr. Claire Murray (STScI)

B.S. in Comprehensive Physics and Astronomy (Honors)

2015 - 2018

University of Washington (UW)

SOFTWARE

Bayesian Extinction And Stellar Tool (BEAST)

2019 - Present

Active Developer

Open-source Python package for probabilistically modeling dust-extinguished multi-band spectral energy distributions of resolved stellar populations in nearby galaxies.

AsteroGap

2018 - 2021

Lead Developer

Open-source Bayesian Python package for modeling sparse asteroid light curve profiles with Gaussian Processes and Markov Chain Monte Carlo models for Zwicky Transient Facility and Rubin Observatory data.

OBSERVING PROGRAMS AS PI

Hubble Space Telescope Cycle 31 - 15 orbits

2023 PI: Winging the SMC: 3D Structure of the Interstellar Medium in the Tidally Disrupted Wing of the SMC

James Webb Space Telescope Cycle 4 - 12 hours orbits

2023 PI: Winging the SMC: 3D Structure of the Interstellar Medium in the Tidally Disrupted Wing of the SMC

OBSERVING PROGRAMS AS CO-I

Hubble Space Telescope Cycle 33 - Archival

2025 Co-I: Unraveling the Tarantula's Web: A precise, high-resolution dust map of 30 Doradus

James Webb Space Telescope Cycle 3 - 25.8 hours

2024 Co-I: Zooming-in on the sub-grid physics of PAHs at 20% solar metallicity

Hubble Space Telescope Cycle 32 - 162 orbits

2024 Co-I: Bringing HST to the VLA: The Interaction of Stars and Gas in the Local Group

Hubble Space Telescope Cycle 30 - 12 orbits

2022 Co-I: Taming the BEAST of N66 to resolve how star formation shapes the interstellar medium at low metallicity

Hubble Space Telescope Cycle 26 - 73 orbits

2018 Co-I: QuaStar: The first unobscured view of the Milky Way's Circumgalactic Medium

FIRST-AUTHOR PUBLICATIONS

4. C. W. Lindberg, et al., "Scylla VI: Parsec-Scale Extinction Maps in the Magellanic Clouds", 2024, *in prep*
3. C. W. Lindberg, et al., "Scylla IV: Intrinsic Stellar Properties and Line-of-Sight Dust Extinction Measurements Towards 1.5 Million Stars in the SMC and LMC", 2024, *submitted to ApJ*
2. C. W. Lindberg, C. Murray, J. Dalcanton, J. Peek, K. Gordon, "Dust around massive stars is agnostic to galactic environment", 2024, *ApJ*, 963, 58

1. C. W. Lindberg, D. Huppenkothen, R. L. Jones, B. T. Bolin, M. Jurić et al., “Characterizing Sparse Asteroid Light Curves with Gaussian Processes”, 2022, *AJ*, 163, 29

OTHER PUBLICATIONS (†= significant contribution)

7. K. Gilbert et al. incl. **C. W. Lindberg**, “The Local Ultraviolet to Infrared Treasury I. Survey Overview of the Broadband Imaging”, 2024, *accepted to ApJS*
 6. R. Cohen et al. incl. **C. W. Lindberg**, “Scylla III. The Outside-In Radial Age Gradient in the Small Magellanic Cloud and the Star Formation Histories of the Main Body, Wing and Outer Regions”, 2024, *accepted to ApJ*
 5. R. Cohen et al. incl. **C. W. Lindberg**, “Scylla II. The Spatially Resolved Star Formation History of the Large Magellanic Cloud Reveals an Inverted Radial Age Gradient”, 2024, *accepted to ApJ*
 4. C. Murray, [†]**C. W. Lindberg**, et al., “Scylla I: A pure-parallel, multi-wavelength imaging survey of the ULLYSES fields in the LMC and SMC”, 2024, *accepted to ApJS*
 3. T. Wainer et al. incl. **C. W. Lindberg**, “PHATTER. VI. The High-Mass Stellar IMF in M33”, 2024, *ApJ, 168, 86*
 2. C. Murray et al. incl. **C. W. Lindberg**, “A Galactic Eclipse: The Small Magellanic Cloud is Forming Stars in Two, Superimposed Systems”, 2023, *ApJ, 962, 120*
 1. B. Williams et al. incl. **C. W. Lindberg**, “The Panchromatic Hubble Andromeda Treasury: Triangulum Extended Region (PHATTER) I. Ultraviolet to Infrared Photometry of 22 Million Stars in M33”, 2021, *ApJS, 253, 53*

ACADEMIC SERVICE

Fornax External System Readiness Review Panel 2025
STScI Spring Symposium - INTER+STELLAR Local Organizing Committee 2025

LEADERSHIP EXPERIENCE

Astronomy Graduate Congress - JHU Representative 2024 - Present
Served as JHU representative for the Astronomy Graduate Congress, which provides a common platform for graduate students to discuss issues regarding graduate education in astronomy.

Gender Minorities and Women in Physics (GWIP) JHU Chapter - LOC Member 2023 - Present
Helped organize +100 person annual GWIP Summit aimed at fostering connections among women and gender minorities in physics across all career stages and institutions in the DMV region.

MENTORING

JHU PHA Mentorship Program

Sasha Levina - First-year graduate student (Fall 2023 - Spring 2024)

Qiushi (Chris) Tian - Post-bac student (Fall 2024 - Spring 2025)

Alexia Knight - First-year undergraduate student (Fall 2024 - Spring 2025)

TEACHING

Johns Hopkins University

AS 173.111/112 <i>General Physics Lab I & II</i>	2019-2020
AS.171.108 <i>General Physics: Electromagnetism (Active Learning)</i>	2020
AS 171.101 <i>General Physics: Physical Science</i>	2019

University of Washington

ASTR 150 *The Planets* 2018 - 2019
ASTR 101 *Introductory Astronomy* 2018 - 2019
PHYS 122 *Electromagnetism* 2018

GRANTS & AWARDS

APS Women in Physics Group Grant (Co-author: \$1,000)	2025
James Webb Space Telescope Cycle 4 (PI: \$220,709)	2024
Hubble Space Telescope Cycle 31 (PI: \$134,040)	2024
AAS FAMOUS Travel Grant (\$1,000)	2022
UW Mary Gates Research Scholarship	2018

SELECTED PRESENTATIONS

Institute for Advanced Science Astrocoffee	2024
<i>Talk: Dust around massive stars is agnostic to galactic environment: New insights from PHAT & BEAST</i>	
Princeton Thunch	2024
<i>Seminar: Reading Between the Stars: Resolving the Multi-Scale Interstellar Medium in Local Group Galaxies</i>	
UC San Diego A&A Journal Club	2024
<i>Talk: Scylla IV: Intrinsic Stellar Properties and Line-of-Sight Dust Extinction Measurements Towards 1.5 Million Stars in the SMC and LMC</i>	
Harvard-Smithsonian CfA ITC Luncheon	2024
<i>Seminar (Invited): Reading Between the Stars: Resolving the Multi-Scale Interstellar Medium in Local Group Galaxies</i>	
Columbia Astronomy	2024
<i>Seminar: Reading Between the Stars: Resolving the Multi-Scale Interstellar Medium in Local Group Galaxies</i>	
Rutgers Astrocoffee	2024
<i>Talk: Dust around massive stars is agnostic to galactic environment: New insights from PHAT & BEAST</i>	
Astronomy on Tap - Baltimore	2024
<i>Talk: Massive Stars and Where to Find Them</i>	
HotSci@JHU/STScI	2024
<i>Talk: The Future of HST - Tracing the Multi-Phase ISM via Dust Extinction in Nearby Galaxies with UV Photometry</i>	
STScI Spring Symposium: Recipes to Regulate Star Formation at All Scales	2024
<i>Poster: Dust around massive stars is agnostic to galactic environment: New insights from PHAT & BEAST</i>	
Flatiron Institute CCA: XMC Workshop	2024
<i>Talk: Constraining the 3D Structure of the ISM in 30 Doradus with Scylla</i>	
Resolving Galaxy Ecosystems Across All Scales	2023
<i>Plenary Talk: Dust Around Massive Stars is Agnostic to Galactic Environment</i>	
237rd Meeting of the American Astronomical Society	2021
<i>Poster & Talk: Investigating Massive Stars in M31</i>	
236rd Meeting of the American Astronomical Society	2020
<i>Poster: Studying Nearby Low-Metallicity Environments with Scylla</i>	
233rd Meeting of the American Astronomical Society	2019
<i>Talk: A Bayesian-Based Method for Inferring Asteroid Properties from Sparse Light Curve</i>	
50th Meeting of the Division of Planetary Sciences	2018
<i>Talk: A Bayesian-Based Method for Inferring Asteroid Properties from Sparse Light Curve</i>	
Mary Gates 21st Annual Undergraduate Research Symposium	2018
<i>Talk: Werk SQuAD: The Quest to Better Understand Galaxies and Their Surrounding Medium</i>	
231rd Meeting of the American Astronomical Society	2018
<i>Poster: Classifying Variable Sources in SDSS Stripe 82</i>	