GILLIAN DORA BELTZ-MOHRMANN

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EDUCATION

Ph.D., Astrophysics, Vanderbilt University — in progress
Advisor: Andreas Berlind

M.A., Astrophysics, Vanderbilt University — 2018

B.A., Astrophysics, German, *cum laude*, Wellesley College — 2016
Advisors: Kim McLeod, James Battat

RESEARCH POSITIONS

Graduate Research Assistant, Vanderbilt University — 2016–

LIGO Summer Undergraduate Research Fellow, Caltech — 2015
Advisors: Alan Weinstein, Jonah Kanner

NSF REU, University of Wyoming — 2014
Advisor: Daniel Dale

Keck Northeast Astronomy Consortium Summer Research Fellow, Williams College — 2013
Advisor: Steven Souza

Undergraduate Research Assistant, Wellesley College — 2013–2016

PUBLICATIONS

4. **Beltz-Mohrmann, G. D.**, Berlind, A. A., 2021, "The impact of baryonic physics on the abundance, clustering, and concentration of halos", submitted to The Astrophysical Journal.

3. **Beltz-Mohrmann, G. D.**, Berlind, A. A., Szewciw, A. O., 2020, "Testing the Accuracy of Halo Occupation Distribution Modelling using Hydrodynamical Simulations", Monthly Notices of the Royal Astronomical Society, 491, 5771.

2. Dale, D. A., **Beltz-Mohrmann, G. D.**, Egan, A. A., Hatlestad, A. J., Herzog, L. J., Leung, A. S., McLane, J. N., Phenicie, C., Roberts, J. S., Barnes, K. L., Boquien, M., Calzetti, D., Cook, D. O., Kobulnicky, H. A., Staudaher, S. M., van Zee, L., 2016, "Radial Star Formation Histories in Fifteen Nearby Galaxies", The Astronomical Journal, 151, 4.

1. Souza, S. P., **Beltz-Mohrmann, G.**, Sami, M., 2014, "The Light Curve and Period of MT696", The Journal of the American Association of Variable Star Observers, 42, 154.

RECENT TALKS

Johns Hopkins Galaxies and AGN Journal Club — 2021
The impact of baryonic physics on the abundance, clustering, and concentration of halos

Yale Galaxy Lunch — 2021
The impact of baryonic physics on the abundance, clustering, and concentration of halos

KITP Conference: The Galaxy-Halo Connection Across Cosmic Time — 2020
HMF Discrepancies between Hydro and DMO Simulations

Mock Innsbruck: the connection between galaxies and dark matter haloes — 2020
Taking Halo Modeling to the Next Level

Astronomy Journal Club, Vanderbilt — 2019
Testing the Accuracy of HOD Modeling using Hydro Simulations

Meet the Astronomer Night, Dyer Observatory — 2018
Large Scale Structure in the Universe

Public Astronomy Night, Whitin Observatory 2016
LIGO and the Search for Gravitational Waves

RECENT POSTERS

The First Shanghai Assembly on Cosmology and Galaxy Formation 2019
Taking HOD Modeling to the Next Level: Results from SDSS & Hydrodynamic Simulations
Santa Cruz Galaxy Workshop 2019
Can We Ignore Baryons in Halo Modeling?
227$^{\text{th}}$ American Astronomical Society Meeting 2016
Tracking Spectral Noise Lines in Advanced LIGO Data

HONORS & AWARDS

Vanderbilt Physics & Astronomy Dept. - Most Outstanding Student Publication Award 2020
Vanderbilt Physics & Astronomy Dept. - Spring McMinn Award 2020
Vanderbilt Data Science Symposium - Graduate Student Poster Competition (1st place) 2019
Vanderbilt Physics & Astronomy Dept. - Summer McMinn Award 2019
Vanderbilt Akunuri V. Ramayya Award for Outstanding Teaching Assistant 2018
Vanderbilt College of Arts and Sciences - Graduate Summer Research Award 2018
Vanderbilt Provost Graduate Fellowship 2016 - 2021
Undergraduate Chambliss Astronomy Achievement Award (Honorable Mention) 2016
Wellesley College Sarah Frances Whiting Medal for Achievement in Astronomy 2014

SKILLS & EXPERIENCE

Computational Skills
Languages: PYTHON, C, MATLAB, BASH, GIT, LaTeX
Parallel Computing: MPI, OPENMP

Supercomputing Time
Co-Investigator & Allocation Manager: Texas Advanced Computing Center 2017–
118k node hours on Stampede2 - GADGET-2 & GADGET-4 cosmological simulations, ROCKSTAR halo finder, 2LPTIC, CAMB

Telescope Time
Wyoming Infrared Observatory 2.3 meter telescope: 80 hours 2014
Wellesley College 0.6 meter telescope: 200 hours 2013–2016
Williams College 0.6 meter telescope: 80 hours 2013

TEACHING & OUTREACH

Graduate Teaching Assistant, *Intro Astronomy Lab*, Vanderbilt University 2016–2019
Co-mentored high school student Caleigh Dennis 2017–2019
Two-time 1st place winner at Middle Tennessee Science & Engineering Fair
Physics Tutor, Wellesley College 2013–2016
Whitin Observatory Volunteer, Wellesley College 2012–2016

MEMBERSHIP

N-Body Shop Collaboration 2021 -
Sigma Xi: The Scientific Research Honor Society 2016 -
American Astronomical Society 2015 -