

Meredith J. DURBIN

ASTRONOMY GRADUATE STUDENT

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🎓 EDUCATION

- Expected 2022 *Ph.D. Astronomy, University of Washington, Seattle, WA*
2018 *M.S. Astronomy, University of Washington, Seattle, WA*
2014 *B.A. Physics, Pomona College, Claremont, CA*
2010 *A.S. Natural Sciences, Santa Rosa Junior College, Santa Rosa, CA*

🏔️ RESEARCH EXPERIENCE

- 2016 — present *Graduate research assistant, University of Washington*
➤ Re-reducing archival *HST* optical+NIR data to evaluate the empirical color-luminosity relation of the tip of the red giant branch in the NIR
➤ Data reduction & photometry lead for HST GO-14610, “A Legacy Imaging Survey of M33”
➤ Simulated WFIRST/WFI observations of stellar halos to optimize observing & analysis strategies for halo population studies
- 2014 — 2016 *Research and Instrument Analyst, Space Telescope Science Institute*
➤ Conducted several studies of photometric effects of *HST*/WFC3+IR detector anomalies
➤ Performed completeness testing & photometric redshift error estimation for CANDELS
- 2013 — 2014 *Research assistant, Carnegie Observatories*
➤ Analyzed the mid-IR RR Lyrae period-luminosity-metallicity relation with *Spitzer*/IRAC [3.6] & [4.5] μm data of ω Centauri
- 2012 *Research assistant, Pomona College*
➤ Performed *gri* blazar polarimetry to characterize the Savart plate polarimeter on the JPL/TMO 1m telescope

📄 PUBLICATIONS

- Lazzarini, M., Hornschemeier, A. E., Williams, B. F., et al. 2018, “Young Accreting Compact Objects in M31: The Combined Power of NuSTAR, Chandra, and Hubble”, *ApJ*, 862, 28
- Bourque, M., Bajaj, V., Bowers, A., et al. 2017, “The HST/WFC3 Quicklook Project: A User Interface to Hubble Space Telescope Wide Field Camera 3 Data”, in *IAU Symposium*, Vol. 325, *Astroinformatics*, 397–400
- Lotz, J. M., Koekemoer, A., Coe, D., et al. 2017, “The Frontier Fields: Survey Design and Initial Results”, *ApJ*, 837, 97
- Nayyeri, H., Hemmati, S., Mobasher, B., et al. 2017, “CANDELS Multi-wavelength Catalogs: Source Identification and Photometry in the CANDELS COSMOS Survey Field”, *ApJS*, 228, 7
- Beaton, R. L., Freedman, W. L., Madore, B. F., et al. 2016, “The Carnegie-Chicago Hubble Program. I. An Independent Approach to the Extragalactic Distance Scale Using Only Population II Distance Indicators”, *ApJ*, 832, 210
- Durbin, M. J., & McCullough, P. R. 2015, “The Impact of Blobs on WFC3/IR Stellar Photometry”, *Instrument Science Report WFC3 2015-06*, 16 pages, Space Telescope Science Institute, Tech. rep.
- Durbin, M. J., Bourque, M., & Baggett, S. 2015, “IR “Snowballs”: Long-Term Characterization”, *Instrument Science Report WFC3 2015-01*, 15 pages, Space Telescope Science Institute, Tech. rep.

SKILLS

Programming	<i>Fluent:</i> Python (incl. Astropy, Pandas, SciPy, & Vaex ecosystems), HTML+CSS <i>Familiar:</i> JavaScript, IDL, \LaTeX , Mathematica, SQL, R
Sci. software	BEAST, Cloudy, DAOPhot, DOLPHOT, Drizzlepac, FSPS, MATCH, Montage, Source Extractor
Other	Amazon Web Services, Drupal, Wordpress

TEACHING

2016 — present	<i>Graduate teaching assistant, University of Washington</i> <ul style="list-style-type: none">➤ ASTR 480, “Introduction To Astronomical Data Analysis”, Spring 2019➤ ASTR 150, “The Planets”, Spring 2017➤ ASTR 101, “Introduction to Astronomy”, Fall 2016 & Winter 2017
2015 — 2016	<i>Training supervisor, Space Telescope Science Institute</i> Oversaw Python training for new Research and Instrument Analyst hires
2012 — 2014	<i>Teaching assistant, Pomona College</i> <ul style="list-style-type: none">➤ ASTR 051, “Advanced Introductory Astronomy”, Spring 2014➤ PHYS 042, “General Physics with Laboratory”, Fall 2013➤ ASTR 009, “Cosmic Origins”, Spring 2013➤ ASTR 003, “Life in the Universe”, Spring 2012

PRESENTATIONS

- Durbin, M., Dalcanton, J., & Williams, B. 2019, “Resolving Triangulum: A Panchromatic HST Mosaic of M33”, AAS #233 Hyperwall Talk
- Durbin, M., Williams, B., & the WINGS SIT Team. 2017, “Recovering Ages and Metallicities of Stellar Halos with WFIRST”, Astronomy in the 2020s: Synergies with WFIRST Poster
- Durbin, M., Brammer, G., Long, K. S., et al. 2016, “HST WFC3/IR Calibration Updates”, AAS #227 Poster 147.09
- Durbin, M., Scowcroft, V., Freedman, W. L., et al. 2014, “The RR Lyrae Period-Luminosity Relation in IRAC Channels 1 and 2”, AAS #224 Poster 421.03

GRANTS AND AWARDS

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| 2017 | HST Proposal AR-15016 , \$96,020 |
| 2014 | The Frank Parkhurst Brackett, Jr., and Davida Wark Brackett Prize |

OUTREACH AND VOLUNTEERING

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| 2018-present | UAW Local 4121 Union Steward, University of Washington |
| 2017-present | Graduate and Professional Student Senator, University of Washington |
| 2015-2016 | HST Time Allocation Committee Support Staff, Space Telescope Science Institute |
| 2015-2016 | #popscope volunteer, Baltimore chapter, 2015-2016 |
| 2014 | Co-founder, ALPhA (“Awesome Ladies in Physics and Astronomy”), Pomona College |