

# O. Grace Telford, Ph.D.

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## EDUCATION

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### University of Washington

Ph.D. in Astronomy with Specialization in Advanced Data Science 2019

*Thesis: "Using Metals and Stars to Constrain Galaxies' Past Gaseous Inflows and Outflows"*

*Advisors: Julianne Dalcanton and Jessica Werk*

*Data science coursework: machine learning, database management, data visualization*

M.S. in Astronomy 2014

### University of Pittsburgh

B.S. in Physics and Astronomy 2013

B.S.E. in Bioengineering with Concentration in Signals & Imaging 2013

## ACADEMIC POSITIONS

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### Rutgers University

Postdoctoral Associate 2019 –

### University of Washington

NSF Graduate Research Fellow 2016 – 2019

NSF Big Data IGERT Fellow 2014 – 2016

Teaching Assistant 2013 – 2014

### University of Pittsburgh

Undergraduate Researcher in Physics & Astronomy 2010 – 2013

Undergraduate Researcher at the Simulation & Medical Technology Center 2009 – 2012

### National Solar Observatory

NSF REU Student 2010

## AWARDED GRANTS AND TELESCOPE TIME

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Momenta Foundation Mistletoe Research Fellowship, \$10k 2022

Co-I of *Hubble Space Telescope* Cycle 30 Program GO-17102 2022

PI of NASA Keck Observatory Semester 2022B Program – 1 night, \$14k 2022

PI of *Hubble Space Telescope* Mid-Cycle 29 Program GO-16920 – 14 orbits, \$109k 2022

PI of *Hubble Space Telescope* Cycle 29 Program GO-16767 – 32 orbits, \$357k 2021

PI of NASA Keck Observatory Semester 2021B Program – 1 night, \$12k 2021

PI of South African Large Telescope Semester 2021-2 Program – 4.6 hours 2021

Co-I of *JWST* Cycle 1 Program GO-1617 – 35.7 hours 2021

PI of *Hubble Space Telescope* Cycle 28 Program AR-16155 – \$158k 2020

Co-I of <i>Hubble Space Telescope</i> Cycle 28 Program AR-16144	2020
Co-I of NASA Keck Observatory Semester 2020B Program – 1 night	2020
Co-I of <i>Hubble Space Telescope</i> Cycle 27 Program GO-16048 – 13 orbits	2019

## SELECTED RECENT TALKS

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### Conference Talks:

Lorentz Center Workshop “ULLYSES Sets Sail” ( <b>Invited</b> )	November 2022
IAU GA: S370 (Stellar Winds) & FM4 (UV Insights to Massive Stars)	August 2022
A Holistic View of Feedback and Galaxy Evolution	July 2022
Splinter Meeting on Early ULLYSES Results at AAS #240 ( <b>Invited</b> )	June 2022
IAU Symposium 361: Massive Stars Near and Far	May 2022
Wolfe Symposium (Conference on the CGM; <b>Invited</b> )	March 2022
Baltimore Wind Workshop ( <b>Invited</b> )	August 2021

### Invited Seminar Talks:

University of Pennsylvania Astrophysics Seminar	November 2022
Universität Heidelberg ARI Galaxy Evolution Group Seminar	November 2022
Armagh Observatory and Planetarium Research Seminar	October 2022
Princeton University Star Formation/ISM Rendezvous	April 2022
Princeton University Galread Seminar	March 2021
UC Santa Cruz Cosmology-Galaxy-IGM Seminar	November 2020
McMaster University Astrophysics Seminar	April 2020

## TEACHING & MENTORING

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### Research Advisor to Undergraduate Students:

Arya Lakshmanan (Rutgers) – 2022 Robert L. Sells Scholarship Winner	2021 –
Avery Kiihne (Rutgers) – Chambliss Award Honorable Mention at AAS #238	2019 – 2021
Olivia Petry, Travis Mandeville (UW Pre-Major in Astronomy Program)	2017 – 2018

### Instructor for Courses and Workshops:

Rutgers <i>JWST</i> Proposal Tools Workshop ( <b>lead organizer</b> )	2020
Software Carpentry Workshops (taught Python, Linux, Git, and GitHub)	2017 – 2018
TA for undergraduate courses: Introduction to Astronomy, The Planets	2013 – 2014

## PROFESSIONAL SERVICE & INCLUSION WORK

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Referee for Astronomy & Astrophysics	2016 – 2022
Proposal Reviewer for <i>Hubble Space Telescope</i>	2020 – 2022
Founding co-organizer of Rutgers Physics Equity & Inclusion Journal Club	2020 – 2021

## PUBLICATIONS

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Summary statistics from the Astrophysics Data System (November 2022):  
[11 astrophysics papers](#) with an h-index of 6 and 3247 total citations

### First-Author Papers (5):

5. “The Ionizing Spectra of Extremely Metal-Poor O Stars: Constraints from the Only H II Region in Leo P”  
**Telford, O. G.**, McQuinn, K., Chisholm, J., and Berg, D. 2022, submitted to ApJ, arXiv: [2210.17535](#)
4. “Far-Ultraviolet Spectra of Main-Sequence O Stars at Extremely Low Metallicity”  
**Telford, O. G.**, Chisholm, J., McQuinn, K., and Berg, D. 2021, ApJ, 922, 191
3. “Mass-to-Light Ratios of Spatially Resolved Stellar Populations in M31”  
**Telford, O. G.**, Dalcanton, J., Williams, B., Bell, E., Dolphin, A., Durbin, M., and Choi, Y. 2020, ApJ, 891, 32
2. “Spatially Resolved Metal Loss from M31”  
**Telford, O. G.**, Werk, J., Dalcanton, J., and Williams, B. 2019, ApJ, 877, 120
1. “Exploring Systematic Effects in the Relation between Stellar Mass, Gas Phase Metallicity, and Star Formation Rate”  
**Telford, O. G.**, Dalcanton, J., Skillman, E., and Conroy, C. 2016, ApJ, 827, 35

### Contributing-Author Papers (6):

6. “The Panchromatic Hubble Andromeda Treasury: Triangulum Extended Region (PHATTER) II. The Spatially Resolved Recent Star Formation History of M33”  
Lazzarini, M., et al. (including **Telford, O. G.**) 2022, ApJ, 934, 76
5. “Star Formation Histories from Spectral Energy Distributions and Color-Magnitude Diagrams Agree: Evidence for Synchronized Star Formation in Local Volume Dwarf Galaxies over the Past 3 Gyr”  
Olsen, C., Gawiser, E., Iyer, K., McQuinn, K., Johnson, B., **Telford, O. G.**, Wright, A., Broussard, A., and Kurczynski, P. 2021, ApJ, 913, 45
4. “CANDELS Visual Classifications: Scheme, Data Release, and First Results”  
Kartaltepe, J., et al. (including **Telford, O. G.**) 2015, ApJS, 221, 11
3. “The host galaxies of X-ray selected active galactic nuclei to  $z = 2.5$ : Structure, star formation, and their relationships from CANDELS and Herschel/PACS”  
Rosario, D., et al. (including **Telford, O. G.**) 2015, A&A, 573, A85
2. “CANDELS: The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey – The Hubble Space Telescope Observations, Imaging Data Products, and Mosaics”  
Koekemoer, A., et al. (including **Telford, O. G.**) 2011, ApJS, 197, 36

1. “CANDELS: The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey”  
Grogin, N., et al. (including **Telford, O. G.**) 2011, ApJS, 197, 35

**Computer Science Paper (1):** [NB: not reflected in ADS statistics; 11 citations]

1. “Gaussian Mixture Models Use-Case: In-Memory Analysis with Myria”  
Maas, R., Hyrkas, J., **Telford, O. G.**, Balazinska, M., Connolly, A., and Howe, B. 2015  
*Proceedings of the 3rd Very Large Databases Workshop on In-Memory Data Management*