

O. Grace Telford, PhD

Postdoctoral Associate

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EDUCATION

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

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

PI of *Hubble Space Telescope* Cycle 29 Program GO-16767 2021

32 orbits; \$357k Awarded Funding

PI of NASA Keck Observatory Semester 2021B Program 2021

1 night; \$12k Data Award

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

Co-I of ALMA Cycle 8 Program (14.9 hours) 2021

Co-I of *James Webb Space Telescope* Cycle 1 Program GO-1617 (35.7 hours) 2021

PI of *Hubble Space Telescope* Cycle 28 Program AR-16155 2020

\$158k Awarded Funding

Co-I of *Hubble Space Telescope* Cycle 28 Program AR-16144 2020

Co-I of NASA Keck Observatory Semester 2020B Program (1 night)	2020
Co-I of Gemini Observatory Semester 2020B Program (13.7 hours)	2020
Co-I of <i>Hubble Space Telescope</i> Cycle 27 Program GO-16048 (13 orbits)	2019

SELECTED TALKS

Conference Talks:

Special Session on Early ULLYSES Results at AAS #240 (Invited)	June 2022
RAS Specialist Discussion: the Production and Escape of Lyman Photons	January 2022
Early Galaxy Formation Near and Far – Preparing for <i>JWST</i>	November 2021
Baltimore Wind Workshop (Invited)	August 2021
SAZERAC (Conference on the Epoch of Reionization)	June 2021
IAU Symposium 361: Massive Stars Near and Far (Virtual Preview)	May 2021
The Rise of Metals and Dust in Galaxies	October 2020

Invited Seminar Talks:

Princeton University Galread Seminar	March 2021
UC Santa Cruz Cosmology-Galaxy-IGM Seminar	November 2020
McMaster University Astrophysics Seminar	April 2020
UT Austin Extragalactic Seminar	February 2019

TEACHING & MENTORING

Research Advisor to Undergraduate Students:

Arya Lakshmanan (Rutgers)	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>James Webb Space Telescope</i> Proposal Tools Workshop (lead organizer)	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

External Reviewer for <i>Hubble Space Telescope</i>	2020 – 2022
Referee for Astronomy & Astrophysics	2016 – 2022
Rutgers APS Conference for Undergraduate Women in Physics LOC Member	2021 – 2022
Founding co-organizer of Rutgers Physics Equity & Inclusion Journal Club	2020 – 2022
Active member and presenter at UW Astronomy EquiTea discussion group	2014 – 2018
Speaker on REU applications for UW Pre-Major in Astronomy Program	2015 – 2017

REFEREED PUBLICATIONS

Summary statistics from ADS (November 2021):

9 astrophysics papers with an h-index of 6 and 2859 total citations

FIRST-AUTHOR PAPERS (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

“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

“Spatially Resolved Metal Loss from M31”

Telford, O. G., Werk, J., Dalcanton, J., and Williams, B. 2019, ApJ, 877, 120

“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 = 5 ASTROPHYSICS + 1 COMPUTER SCIENCE):

“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

“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* (NB: this computer science paper is not reflected in ADS statistics. 11 citations.)

“CANDELS Visual Classifications: Scheme, Data Release, and First Results”

Kartaltepe, J. *et al.* 2015, ApJS, 221, 11

“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.* 2015, A&A, 573, A85

“CANDELS: The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey – The Hubble Space Telescope Observations, Imaging Data Products, and Mosaics”

Koekemoer, A., *et al.* 2013, ApJS, 197, 36

“CANDELS: The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey”

Grogin, N., *et al.* 2013, ApJS, 197, 35