O. Grace Telford, PhD

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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

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 ALMA Cycle 8 Program – 14.9 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 *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 *Hubble Space Telescope* Cycle 27 Program GO-16048 – 13 orbits 2019

Selected Recent Talks

Conference Talks:

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 (**Invited**) June 2022
IAU Symposium 361: Massive Stars Near and Far May 2022
Wolfe Symposium (Conference on the CGM; **Invited**) March 2022
RAS Specialist Discussion: the Production and Escape of Lyman Photons January 2022
Early Galaxy Formation Near and Far – Preparing for *JWST* November 2021
Baltimore Wind Workshop (**Invited**) August 2021

Invited Seminar Talks:

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

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 *JWST* 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

Judge for Chambliss Poster Competition at AAS Meeting #240 2022
Referee for Astronomy & Astrophysics 2016 – 2022
Proposal Reviewer for *Hubble Space Telescope* 2020 – 2022
Founding co-organizer of Rutgers Physics Equity & Inclusion Journal Club 2020 – 2021

Refereed Publications

Summary statistics from the Astrophysics Data System (June 2022):
10 astrophysics papers with an h-index of 6 and 3051 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
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. "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, in press at ApJ, arXiv: 2206.11393
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.**) 2013, ApJS, 197, 36
1. "CANDELS: The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey"
   Grogin, N., et al. (including **Telford, O. G.**) 2013, ApJS, 197, 35

Computer Science Papers:

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
   [NB: this paper is not reflected in ADS statistics. 11 citations.]