

# Grace Telford

Postdoctoral Researcher

Rutgers University, Department of Physics and Astronomy  
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## EDUCATION

Ph.D. in Astronomy: Advanced Data Science, University of Washington 2019  
*Thesis: “Using Metals and Stars to Constrain Galaxies’ Past Gaseous Inflows and Outflows”*  
*Advisors: Julianne Dalcanton and Jessica Werk*  
M.S. in Astronomy, University of Washington 2014  
B.S. in Physics and Astronomy, University of Pittsburgh 2013  
B.S.E. in Bioengineering, University of Pittsburgh 2013

## POSITIONS

Postdoctoral Researcher, Rutgers University 2019 – Present  
NSF Graduate Research Fellow, University of Washington 2016 – 2019  
NSF Big Data IGERT Fellow, University of Washington 2014 – 2016  
Teaching Assistant, University of Washington 2013 – 2014  
Undergraduate Researcher, University of Pittsburgh 2010 – 2013  
NSF REU Student, National Solar Observatory (Sunspot, NM) 2010  
Undergraduate Researcher, Simulation & Medical Technology R&D Center 2009 – 2012  
Tutor in Math & French, University of Pittsburgh 2009 – 2010

## PUBLICATIONS

### FIRST AUTHOR PAPERS (3):

“Mass-to-Light Ratios of Spatially Resolved Stellar Populations in M31”  
**Telford, O. G.**, Dalcanton, J., Williams, B., Bell, E., *et al.* 2020, ApJ, *accepted*  
“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

### OTHER PAPERS (5):

“Gaussian Mixture Models Use-Case: In-Memory Analysis with Myria”  
Maas, R., Hyrkas, J., **Telford, O. G.**, *et al.* 2015  
*In Proceedings of the 3rd VLDB Workshop on In-Memory Data Mangement and Analytics*

“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

## PRESENTATIONS

### TALKS:

“Using Metals to Constrain the History of Gas Flows in Galaxies”

American Astronomical Society # 233

January 2019

Seattle, WA

“The Spatially Resolved Metal Production and Ejection History in M31”

Astrophysical Frontiers in the Next Decade and Beyond

June 2018

Portland, OR

### POSTERS:

“Constraining Metal Mixing and Feedback in M31”

IAU FM7: Radial Metallicity Gradients

August 2018

Vienna, Austria

“Systematic Effects in the Relation between Stellar Mass, Metallicity, and SFR”

Local and Global Processes in Galaxies

April 2016

Cozumel, Mexico

“Reassessing the Relation Between Stellar Mass, Metallicity, and SFR”

American Astronomical Society # 225

January 2015

Seattle, WA

“The DEEP2 Survey: Spectral Indices for 20,000 Galaxies at  $z \sim 1$ ”

American Astronomical Society # 221

January 2013

Long Beach, CA

“Tracked Motions of G-Band Bright Points”

American Astronomical Society # 217

January 2011

Seattle, WA

## OUTREACH AND MENTORING

Astronomy on Tap Speaker

2017 – 2019

Pre-Major in Astronomy Program Research Mentor

2014 – 2017

UW Planetarium & Mobile Planetarium Presenter

2014 – 2017

## PROFESSIONAL SERVICE

<i>JWST</i> Proposal Tools Master Class Graduate and Local Workshop Lead	2019 – 2020
Software Carpentry Instructor and Helper (Python/Linux/GitHub)	2017 – 2018
Astronomy & Astrophysics Referee	2016 – 2017
UW Prospective Graduate Student Visit Organizer	2015 – 2016
Pre-Major in Astronomy Program Lab Tour Organizer	2014 – 2017

## GRADUATE FELLOWSHIPS

NSF Graduate Research Fellowship	2015
NSF Integrative Graduate Education and Research Traineeship	2014
Achievement Rewards for College Scientists Fellowship	2013