

## Steven F. Sholes

### Curriculum Vitae

#### Contact Information

email: [sfsholes@uw.edu](mailto:sfsholes@uw.edu)  
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#### Education

University of Washington, *Seattle, WA* Summer 2018 (expected)  
Dual-title Ph.D. in Earth and Space Sciences and Astrobiology  
Cornell University, *Ithaca, NY* May 2013  
Bachelor of Arts in Astronomy; Minor in Mathematics, graduated cum laude

#### Publications

**Sholes, S.F.**, M.L. Smith, M.W. Claire, K.J. Zahnle, and D.C. Catling. 2016 “Anoxic atmospheres on early Mars driven by volcanism: Implications for the early environment and life.” *Icarus*. (in review).  
Misra, A., J. Krissansen-Totton, M.C. Koehler, and **S. Sholes**. 2015. “Detecting Volcanism on Exoplanets using Transient Sulfate Aerosols.” *Astrobiology* 15(6): 462-477.  
[doi:10.1089/ast.2014.1204](https://doi.org/10.1089/ast.2014.1204)  
Thomas, P.C., W. Calvin, P. Gierasch, R. Haberle, P.B. James, and **S. Sholes**. 2013. “Time Scales of Erosion and Deposition Recorded in the Residual South Polar Cap of Mars.” *Icarus* 225(2): 923-932. [doi:10.1016/j.icarus.2012.08.038](https://doi.org/10.1016/j.icarus.2012.08.038)

#### Selected Conference Abstracts

**Sholes, S.F.\***, M.L. Smith, M.W. Claire, K.J. Zahnle, and D.C. Catling. “An Anoxic Atmosphere on Early, Volcanically Active Mars and its Implications for Life.” *Astrobiology Science Conference 2015*, Abstract #7455, 15 Jun 2015. (**oral pres**).  
[www.hou.usra.edu/meetings/abscicon2015/pdf/7455.pdf](http://www.hou.usra.edu/meetings/abscicon2015/pdf/7455.pdf)  
**Sholes, S.F.**, D.C. Catling, R. Pretlow, and D.R. Montgomery. “High-Resolution Examination of the Geomorphology of Proposed Ocean Shorelines on Mars.” *8<sup>th</sup> International Conference on Mars*, Abstract #1014, 14 Jul 2014. (poster). [abs:2014LPICo1791.1014S](https://abs:2014LPICo1791.1014S)  
**Sholes, S.F.**, V.F. Chevrier, and J.A. Tullis. “Object Based Image Analysis for Remote Sensing of Planetary Surfaces.” *44<sup>th</sup> Lunar and Planetary Science Conference*, Abstract #1527, 17 Mar 2013. (poster). [abs:2013LPI...44.1527S](https://abs:2013LPI...44.1527S)

#### Teaching and Professional Experience

Teaching Assistant, University of Washington, *Seattle, WA*

ASTBIO 115 - Introduction to Astrobiology, <i>Roger Buick</i>	Autumn 2016
ESS 213 – Evolution of the Earth, <i>Roger Buick</i>	Spring 2016
ESS 455 – Stratigraphy, <i>Ethan Hyland, Charlotte Schrieber</i>	Winter 2016
ESS 101 – Introduction to Geology, <i>Terry Swanson</i>	Spring 2015

Research Assistant, University of Washington, <i>Seattle, WA</i> PI: David Catling	Jul. 2013 - Present
REU Intern, University of Arkansas, <i>Fayetteville, AR</i> PI: Vincent Chevrier and Jason Tullis	Summer 2012
Undergraduate Research Assistant, Cornell University, <i>Ithaca, NY</i> PI: Peter Thomas	Sep. 2011 – Dec. 2012
Collections Assistant, Paleontological Research Institute, <i>Ithaca, NY</i> PI: Judith Nagel-Myers and Greg Dietl	Sep. 2010 - Aug. 2012
K-12 Substitute Teacher & Tutor, Hannibal CSD, <i>Hannibal, NY</i>	Sep. 2009 - Jun. 2011

Workshops Attended

Science Communication Fellowship, <i>Pacific Science Center, Seattle, WA</i>	Autumn 2015
Nordic Astrobiology Summer School, <i>Reykjavik, Iceland</i> <i>Water, Ice, and the Origin of Life in the Universe</i>	Summer 2015
University of Washington Astrobiology Workshops Pacific Ocean Research Cruise (Oceanography/Microbiology)	Autumn 2014
Yellowstone National Park (Geology/Microbiology)	Autumn 2015

Selected Honors

2016 – Goodspeed Geology Fellowship and the Kenneth C. Robbins Fellowship (1 quarter RA)  
 2015 – Best Space/Planetary Oral Presentation, ESS Research Gala (\$150)  
 2015 – Robert M. and Jennifer J. Wingless Graduate Student Support Fund (CO-I, \$800)  
 2014 – Mars Student Travel Grant, 8<sup>th</sup> International Conference on Mars (\$1,000)

Professional Service

2016 – Present : Science Advisor, UW’s University Rover Challenge  
 2015 – Present : Science Communications Fellow, Pacific Science Center  
 2014 – Present : Head of the Prelim Examination Feedback Committee, UW ESS Department  
 2015 : Integration Team Member, Human Exploration on Mars, 8<sup>th</sup> Intern. Conf. on Mars

Education and Public Outreach (EPO)

\*Full list available at [sfsholes.xyz](http://sfsholes.xyz)

Class Lectures

“Planetary Stratigraphy,” ESS 455: Stratigraphy	May. 2016
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Field Trips Led

Eastern Washington (Frenchman Coulee), <i>CWU Mars Week</i>	Aug. 2016
Eastern Washington (Evolution of the Cascades), <i>ESS 213</i>	May. 2016
Kitsap Peninsula (Turbidites and Stratigraphy), <i>ESS 213</i>	Apr. 2016
Mt. St. Helens (Blast Zone), <i>ESS 101</i>	May. 2015