

## **Elena Sophia Amador**

Department of Earth and Space Sciences & Astrobiology Program  
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### Education

University of Washington, Seattle, WA, *September 2010 – expected graduation: June 2015*

Dual-title Ph.D. in Earth and Space Sciences and Astrobiology

University of California at Santa Cruz, Santa Cruz, CA, *June 2010*

Bachelor of Science: Earth and planetary sciences, concentration in planetary sciences,  
Minor: Astrophysics

### Publications

**Amador, E.S.**, Cable, M., Chaudry, N., Cullen, T., Gentry, D., Jacobsen, M., Murukesan, G., Schwieterman, E., Stevens, A., Stockton, A., Yin, C., Cullen, D., and W. Geppert. In-Field Application of Multiple Cycles of Synchronous Life Detection Analyses on Icelandic Lava Field to Inform Planetary Exploration Missions, *Life*, in preparation.

**Amador, E.S.**, Bandfield, J.L., Kelley, D.S., and W. Brazelton. The Lost City Hydrothermal Field as a spectroscopic and astrobiological Analog for Nili Fossae, Mars, *Astrobiology*, in preparation.

**Amador, E.S.** and J.L. Bandfield. Elevated Bulk Silica Compositions Associated with Olivine- rich Basalts in Nili Fossae, Mars, *Journal of Geophysical Research*, in preparation.

Bandfield, J.L., **Amador, E.S.**, and N. Thomas. Extensive Hydrated Silica Materials in western Hellas Basin, Mars, *Icarus*, 10.1016/j.icarus.2013.08.005, 2013.

McKeown N., Bishop J., Cuadros J., Hillier S., **Amador E. S.**, Makarewicz H., Parente M., and E. Silver. Interpretation of Reflectance Spectra of Clay Minerals- Silica Mixtures: Implications for Martian Clay mineralogy at Mawrth Vallis, *Clay and Clay Minerals*, 2011.

### Selection of Conference Abstracts and Presentations

**Amador, E.S.**, Thomas, N.H., Bandfield, J.L., (2014) *Alteration of Olivine-rich Basalts on Mars: A THEMIS/CRISM Joint Investigation*. LPSC XLV, Abstract #1521. **(oral presentation)**

**Amador, E.S.**, Bandfield, J.L., Kelley, D.S., Brazelton, W., (2013) *The Lost City Hydrothermal Field: A Spectroscopic and Astrobiological Analog for Nili Fossae, Mars*. LPSC XLIV, Abstract #2742. **(oral presentation)**

**Amador, E.S.**, and Bandfield, J.L., (2012) *Elevated Bulk Silica Deposits in Nili Fossae, Mars: Implications for Habitability*. Astrobiology Science Conference, 2012. **(oral presentation)**

**Amador, E.S.**, and Bandfield, J.L., (2012) *Elevated Bulk Silica Compositions Associated with Olivine-rich Basalts in Nili Fossae, Mars*. LPSC XLIII, Abstract #2508. (poster presentation)

**Amador, E.S.**, and J.L. Bandfield, (2011) *Mars Aqueous Mineralogy: A Comparison of Thermal Infrared and Visible/Near-infrared Spectral Data*. European Space Agencies: Exploring Mars Habitability, Lisbon, Portugal. (poster presentation)

**Amador, E.S.**, C.C. Allen, and D.Z. Oehler, (2010) *Regional Mapping and Spectral Analysis of Mounds in Acidalia Planitia, Mars*. LPSC XLI, Abstract #1037. (poster presentation)

**Amador, E.S.**, Bishop, J.L., McKeown, N.K., Parente, M., Clark, J.T. (2009) *Detection of Kaolinite at Mawrth Vallis, Mars: Analysis of Laboratory mixtures and development of Remote Sensing Parameters*. LPSC XL, Abstract# 218. (poster presentation)

### Honors and Awards

2014 - Lunar and Planetary Institute's Career Development Award, \$1,000.

2013 - Lewis and Clark Field Scholar in Astrobiology grant awardee presented by the American

Philosophical Society and NASA Astrobiology Institute, \$5,000.  
2013 - Stephen E. Dwornik Award for “Best Graduate Oral Presentation” presented by the Planetary Geology Division of the Geological Society of America at LPSC XLIV, \$500.  
2013 - Geochemical Society Student Travel Grant to 2013 Goldschmidt Conference, Florence, Italy, \$1,400.  
2013 - Best Overall Oral Presentation presented by the UW Earth and Space Sciences Dept. Research Gala, \$200.  
2012 - *Coombs Fellowship* presented by UW Earth and Space Sciences Department, 1 quarter RA funding.  
2012 - Chevron Graduate Field Support Award  
2012 - NSF Graduate Research Fellowship, *Honorable Mention*  
2011 - NSF Graduate Research Fellowship, *Honorable Mention*  
2011 - *Best Research Poster in Climate, Planets and Space* presented by the UW Earth and Space Sciences Department, \$100.  
2010/2011 - NSF IGERT *Astrobiology Research Fellow*, 1 year RA funding.

#### Invited Talks

2013 - UW Forestry Department's Water, Soils, and Watersheds Seminar, “Water and Weathering Profiles on Mars: Implications for Ancient Habitability”

#### Teaching and Professional Experience

Graduate Research Assistant

University of Washington, PI: Josh Bandfield *August 2010-present*

Teaching Assistant, Introduction to Remote Sensing ESS 421

University of Washington *Spring 2012*

Lunar and Planetary Institute Intern

NASA Johnson Space Center, Advisors: Carl Allen and Dorothy Oehler *Summer 2009*

Undergraduate Research Assistant

SETI Institute, PI: Janice Bishop *Jan. 2008– Dec. 2009*

#### Workshops Attended

Nordic-NASA Summer School “*Water, Ice and the Origin of Life in the Universe*”, 2-15 July 2012.

NAI and Centro de Astrobiologia, Madrid, Spain Astrobiology Summer School

“*Mars Exploration: Unveiling a Habitable Planet*”, 27 June – 1 July, 2011.

#### Service

Science Communications Fellow

Pacific Science Center, Seattle, WA *Jan. 2011 – present*

Last updated: April 2, 2014