

# Kevin M. Cannon

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## Positions Held

2017–present: University of Central Florida, Orlando, FL

Postdoctoral Scholar

Advisor: D. Britt

## Education

2012–2017: Brown University, Providence, RI

M.Sc., Geological Sciences, 2014

Ph.D., Geological Sciences, May 2017

Advisor: J. Mustard

2012: Queen's University, Kingston, Ontario

B.Sc., honors, Geological Sciences

Advisor: R. Peterson

## Research

### Refereed Publications

1. Cannon, K. M., S. W. Parman, and J. F. Mustard. Primordial Clays on Mars Formed Beneath a Steam or Supercritical Atmosphere. *Nature*, *in revision*.
2. Cannon, K. M., J. F. Mustard, S. W. Parman, E. C. Sklute, M. D. Dyar, and R. F. Cooper (2017), Spectral Properties of Martian and other Planetary Glasses, and their Detection in Remotely Sensed Data, *JGR Planets*, 122.
3. Cannon, K. M., and J. F. Mustard (2015), Preserved glass-rich impactites on Mars. *Geology*, 43, 635-638.
4. Cannon, K. M., J. F. Mustard, and M. R. Salvatore (2015), Alteration of immature sedimentary rocks on Earth and Mars: Recording aqueous and surface-atmosphere processes. *Earth and Planetary Science Letters*, 417, 78-86.

5. Cannon, K. M., J. F. Mustard, and C. B. Agee (2015), Evidence for a Widespread Basaltic Breccia Component in the Martian Low-Albedo Regions from the Reflectance Spectrum of Northwest Africa 7034. *Icarus*, 252, 150-153.
6. Cannon, K. M., B. Sutter, D. W. Ming, W. V. Boynton, and R. C. Quinn (2012), Perchlorate induced low temperature carbonate decomposition in the Mars Phoenix Thermal and Evolved Gas Analyzer (TEGA). *Geophysical Research Letters*, 39, L13203.

Selected Conference Presentations from 35 Total: 11 First Author Oral Presentations, 11 First Author Posters, and 13 Others

1. Cannon, K. M., S. W. Parman, and J. F. Mustard (2017), Primordial Clays on Mars Formed Beneath a Steam or Supercritical Atmosphere. *Lunar and Planetary Science Conference XLVIII*, Abstract #2400.
2. Cannon, K. M., J. F. Mustard, H. M. Sapers, A. Brown, G. R. Osinski, B. E. Ehlmann, and S. W. Parman (2017), The Case for Nili Fossae: Geologic History, Habitability, and Diversity of Returned Samples. *3rd Mars 2020 Landing Site Workshop*.
3. Jawin, E. J., Head, J. W., and K. M. Cannon (2017), Radiative Transfer Modeling of the Aristarchus Pyroclastic Deposit: Assessing Volcanic Glass Characteristics and Plateau Eruptive History. *Lunar and Planetary Science Conference XLVIII*, Abstract #1256.
4. Sapers, H. M., A. Pontefract, G. R. Osinski, K. M. Cannon, and J. F. Mustard (2016), Habitability and biosignature preservation in impact-derived materials. *Biosignature Preservation and Detection in Mars Analog Environments*, Abstract #2059.
5. Cannon, K. M., and J. F. Mustard (2015), Water and Impact Glass Interfaces on Ancient Mars. *Astrobiology Science Conference*, Abstract #7461.
6. Cannon, K. M., and J. F. Mustard (2015), Glass on Mars, *CRISM Team Meeting*.
7. Ody, A., F. Poulet, C. Quantin, K. M. Cannon, J. F. Mustard, and J-P. Bibring (2014), Candidate Source Regions for SNC Meteorites on Mars. *8th International Conference on Mars*, Abstract #1227.
8. Cannon, K. M., J. F. Mustard, and C. B. Agee (2014), What Mars is Made of: Reconciling Orbital Datasets with Clues from the Spectrum of Northwest Africa 7034. *77th Annual Meteoritical Society Meeting*, Abstract #5072.

9. Cannon, K. M., B. Sutter, D. W. Ming, W. V. Boynton, and R. C. Quinn. (2012), Possible Calcite and Magnesium Perchlorate Interaction in the Mars Phoenix Thermal and Evolved Gas Analyzer (TEGA). *Lunar and Planetary Science Conference XLIII*, Abstract #2008.

### Research and Field Experience

June 2015

Participant, Nordic-NASA Summer School on "Water, Ice and the Origin of Life in the Universe", Iceland

June–August 2011

Research Intern, Lunar and Planetary Institute Summer Internship Program  
NASA Johnson Space Center

May–August 2010

Research Assistant, NSERC Undergraduate Student Research Award  
Queen's University

### **Teaching**

#### Courses Taught

Fall 2016: GEOL 2330 Advanced Remote Sensing (Brown University)

#### Training

2015-16: Sheridan Center for Teaching and Learning Certificate IV

Year-long teaching observation and consultation program.

2013-14: Sheridan Center for Teaching and Learning Certificate I

Year-long seminar in reflective teaching.

#### Teaching Assistantships

Spring 2014: GEOL 1330 Global Environmental Remote Sensing (Brown University)

Independently ran 3 lab sections (10 students each), graded labs and final projects.

Received an overall assessment of 1.16 on a scale from 1 (best) to 5.

Fall 2010 and Fall 2011: GEOL 232 Mineralogy (Queen's University)

Independently ran weekly lab section (15-20 students), graded labs and lab exams.  
Nominated by students for a department teaching award.

## **Selected Academic Honors and Awards**

### Brown University

2017: Dwornik Award for Best Oral Presentation, Runner-up  
2017: LPI Career Development Award  
2015: Elected to Sigma Xi  
2014-17: NASA Earth and Space Science Fellowship (\$30,000/year)  
2014-17: NSERC PGS-D Postgraduate Scholarship (\$21,000/year)  
2012: Brown University First Year Fellowship  
2012: NSERC PGS-M Postgraduate Scholarship (\$17,500/year)

### Queen's University

2012: Medal for highest academic standing in Geology graduating class  
2011: Brian and Debra Heald Teaching Assistant Award  
2011: Leonard G. Berry Memorial Award  
2011: Geological Association of Canada Student Prize  
2011: ESRI Canada Student Scholarship Award  
2010: Mineralogical Association of Canada Undergraduate Student Award

## **Professional Activities**

2015: Executive Secretary, NASA Review Panel  
2015-: Reviewer for: American Mineralogist, EPSL, Icarus, JGR Planets  
2014-16: Brown Graduate Student Council, Executive board