

Jacob Buffo



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Education

Georgia Institute of Technology

2014-Current

Ph.D. Program: Planetary Science
Atlanta, Georgia, United States

University of Iowa

2013

B.S. Double Major: Physics and Astronomy
Iowa City, Iowa, United States
Mathematics Minor

Experience

Georgia Institute of Technology Department of Earth and Atmospheric Sciences

Research Assistant-Ph.D. oriented individual research

August 2014-Current

Teaching Assistant-Laboratory/Lecture TA

January 2015-Current

University of Iowa Physics and Astronomy Department

Research Assistant-Radio Astronomy/Plasma Physics: Heliophysics using VLA data

February 2012-December 2013

Research Assistant-MARSIS mission

May 2011-August 2011

Research Assistant-Particle Physics: CERN's CMS group at the University of Iowa

May 2010-August 2010

University of Iowa Hospitals and Clinics

Research Assistant-Radiology Department: COPD Research

May 2009-December 2011

Fellowships and Grants

Presidential Fellowship (2014/15) \$5500
Van Allen Grant (2010) \$1500

Publications

In Refereed Journals:

[1] – “Measurements of Coronal Faraday Rotation at 4.6 Solar Radii,” by J. E. Kooi, P. D. Fischer, **J. J. Buffo**, and S. R. Spangler, *The Astrophysical Journal* #784.1, (2014)

Presentations and Abstracts:

[1] – “Measurements of Coronal Faraday Rotation at 4.6 Solar Radii,” by J. E. Kooi, P. D. Fischer, **J. J. Buffo**, and S. R. Spangler, *American Astronomical Society, Solar Physics Division meeting #44, #300.02*, (2013)

[2] – “Probing Coronal Mass Ejections with Faraday Rotation,” by S.R. Spangler, P.D. Fischer, J.E. Kooi, and **J.J. Buffo**, *American Astronomical Society, Solar Physics Division meeting #44, #100.15*, (2013)

[3] – “The Dissipation Range of Interstellar Turbulence,” by S.R. Spangler and **J. J. Buffo**, *American Astronomical Society Meeting #222, #216.06*, (2013)

[4] – “Altitude-Dependence of Titan's Methane Transmission Windows: Informing Future Missions,” by G.D. McDonald, P. Corlies, J.J. Wray, S.M. Hörst, J.D. Hofgartner, L.R. Liuzzo, **J. J. Buffo**, A.G. Hayes, *Lunar and Planetary Science Conference #2307*, (2015)

[5] – “VLA Measurements of Faraday Rotation through a Coronal Mass Ejection,” by J. E. Kooi, P. D. Fischer, **J. J. Buffo**, and S. R. Spangler, *American Astronomical Society/American Geophysical Union Triennial Earth-Sun Summit #1, #114.01* (2015)

[6] – “The Mushy Layer: Ice Water Interfaces as Ecological Niches,” by **J. J. Buffo**, and B. E. Schmidt, *Astrobiology Science Conference #7351* (2015)



- [7] – “Icefin: A New Small Modular AUV for Polar and Planetary Exploration,” by B. E. Schmidt, M. E. West, M. Meister, A. Spears, C. C. Walker, and **J. J. Buffo**, *Astrobiology Science Conference #7691* (2015)
- [8] – “Sub-Ice Marine and Planetary Ecosystems: First Results from Below the McMurdo Ice Shelf,” by B. E. Schmidt, S. Kim, C. C. Walker, M. E. West, M. M. Meister, A. Spears, **J. J. Buffo**, J. S. Greenbaum, M. Skidmore, L. Barker, J. Burnett, M. Hynes, G. Echeverry, K. M. Soderlund, E. VanTil, D. D. Blankenship, N. Bramall, P. Doran, A. Johnson, F. Rack, V. Siegel, W. C. Stone, and D. A. Young, *Astrobiology Science Conference #7511* (2015)
- [9] – “The Ice-Ocean Interface; A Dynamic Boundary (The Effects of Treating Ice as a Porous Medium),” by **J. J. Buffo**, C. C. Walker, and B. E. Schmidt, *International Symposium on Contemporary Ice-Sheet Dynamics #73A.1943* (2015)
- [10] – “Icefin: A New Small Modular AUV for Polar Under-Ice Exploration,” by B. E. Schmidt, M. Meister, A. Spears, C. C. Walker, M. E. West, and **J. J. Buffo**, *International Symposium on Contemporary Ice-Sheet Dynamics #73A.1958* (2015)
- [11] – “Astronomical Ice: The Effects of Treating Ice as a Porous Media on the Dynamics and Evolution of Extraterrestrial Ice-Ocean Environments,” by **J. J. Buffo**, and B. E. Schmidt, *American Geophysical Union Conference #80902* (2015)
- [12] – “Transmission Windows in Titan’s Lower Troposphere: Implications for IR Spectrometers Aboard Future Aerial and Surface Missions,” by G. D. McDonald, P. Corlies, J. J. Wray, J. D. Hofgartner, S. M. Horst, A. G. Hayes, L. R. Liuzzo, and **J. J. Buffo**, *47th American Astronomical Society Division for Planetary Sciences Meeting #236.5159* (2015)

Acknowledged In:

- [1] – “Plasma Diagnostics of the Interstellar Medium with Radio Astronomy,” by M. Haverkorn, and S. R. Spangler, *Microphysics of Cosmic Plasmas pp. 407-435* (2014)