Shannon M. MacKenzie

Post Doctoral Fellow

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EDUCATION

Ph.D. Physics	University of Idaho	December 2017
M.Sc. Physics	University of Idaho	August 2015
B.S. Physics	University of Louisville	May 2012

PUBLICATIONS

J.W. Barnes et al. including **S. M. MacKenzie** *'Spherical Radiative Transfer in C++ (SRTC++): A Parallel Monte-Carlo Radiative Transfer Model for Titan"*, under review by The Astrophysical Journal

S.P.D. Birch et al. including **S.M. MacKenzie** *"Morphological Evidence that Titan's Southern Hemisphere Basins are Paleoseas"*, 2018, Icarus

S.M. MacKenzie and nineteen coauthors, *"THEO Concept Mission: Testing the Habitability of Enceladus's Ocean"*, 2016, Advances in Space Research, doi:10.1016/j.asr.2016.05.037

S.M. MacKenzie, J.W. Barnes, *"Compositional similarities and distinctions between Titan's Evaporitic Terrains"*, 2016, The Astrophysical Journal, 821, 17

D. Cordier et al. including **S.M. MacKenzie**, *"Structure of Titan's evaporites"*, 2016, Icarus 270, 41-56

C.D. Neish et al. including **S.M. MacKenzie**, *"Spectral properties of Titan's impact craters imply chemical weathering of its surface"*, 2015, Icarus, 42, 3746-3754

G. Vixie et al. including **S.M. MacKenzie**, *"Possible temperate lakes on Titan"*, 2015, Icarus, 257, 313-323

S.M. MacKenzie, J.W. Barnes, R.H. Brown, C. Sotin, S. Le Mouélic, S. Rodriguez, B. Buratti, R. Clark, K. H. Baines, P.D. Nicholson, *"Evidence of Titan's Climate History from Evaporite Distribution"*, 2014, Icarus 243, 191-207

RELEVANT EXPERIENCE

Dr. MacKenzie has worked with *Cassini* RADAR, the Visual and Infrared Mapping Spectrometer, and Imaging Science Subsystem data since 2012, collaborating closely with members of the VIMS team. She has investigated the composition and geology of Titan's sediments and co-created a fully spherical Monte Carlo radiative transfer model to facilitate better interpretation of the VIMS data. As principal investigator at the 2015 Jet Propulsion Laboratory Planetary Science Summer School, she led a mission concept study for an Enceladus orbiter and dissemination of the results to the community. In 2016 she helped craft the Oceanus and Dragonfly New Frontiers mission proposals; her efforts earned her role as a Co-I on Dragonfly. Dr. MacKenzie also participated on the Roadmap to Ocean Worlds Committee, helping write recommendations for the next missions to the outer solar system.