

## DREAM Publications list (2009-2013)

- Sarantos, M., R. M. Killen, A. S. Sharma and J. A. Slavin (2010), Sources of sodium in the lunar exosphere: Modeling using ground-based observations of sodium emission and spacecraft data of the plasma, *Icarus* 205, p. 364-374.
- Killen, R.M., A.E.Potter, D.M. Hurley, C. Plymate, S. Naidu, (2010). Observations of the LCROSS Event from the McMath\_Pierce Solar Telescope: Sodium and Dust. *NOAO/NSO Newsletter*, 101,8
- Farrell, W. M. , T. J. Stubbs, J. S. Halekas, R. M. Killen, G. T. Delory, M. R. Collier, R. R. Vondrak (2010), The anticipated electrical environment within permanently shadowed lunar crater, *J. Geophys. Res.*, 115, E03004, doi:10.1029/2009JE003464.
- Stubbs, T. J., D. A. Glenar, A. Colaprete, and D. T. Richard (2010), Optical scattering processes observed at the Moon: Predictions for the LADEE Ultraviolet Spectrometer, *Planet. Space Sci.*, 58, 830, doi:10.1016/j.pss.2010.01.002.
- Roberson, I. P., S. Sembay, T. J. Stubbs, K. D. Kuntz, M. R. Collier, T. E. Cravens, S. L. Snowden, H. K. Hills, F. S. Porter, P. Travnicek, J. A. Carter, and A. M. Read, (2009), Solar wind charge exchange observed through the lunar exosphere, *Geophys. Res.Lett.*, 36, L21102, doi:10.1029/2009GL040834.
- Killen, R.M., et al., , (2011), Observations of the impact plume from the LCROSS event, *Geophys. Res. Lett.*, 37, L23201.
- Halekas, J. S., Y. Saito, G. T. Delory, and W. M. Farrell (2011), New view of the lunar plasma environment, *Planet. Space Sci.*, 59, 1681, doi:10.1016/j.pss.2010.08.011
- Richard, D. T., D. A. Glenar, T. J. Stubbs, S. S. Davis, A. Colaprete (2011), Light scattering by complex dust grains in the lunar environment: towards a taxonomy of models for real grain scattering behavior, *Planet. Space Sci.*, 59, 1804, doi:10.1016/j.pss.2011.01.003.
- Glenar, D. A., T. J. Stubbs, J. E. McCoy, R. R. Vondrak (2011), A Reanalysis of the Apollo Light Scattering Observations, and Implications for Lunar Exospheric Dust, *Planet. Space Sci.*, 59, 1695.
- Collier, M. R., K. Hills, T. J. Stubbs, J. S. Halekas, G. T. Delory, J. Espley, W. M. Farrell, J. W. Freeman, and R. R. Vondrak (2011), Lunar Surface Electric Potential Changes Associated with Traversals of the Earth's Foreshock, *Planet. Space Sci.*, 59, 1727.
- Marshall, J. R. , D. Richard, and S. Davis (2011), Electrical stress and strain in lunar regolith, *Planet. Space Sci.*, 59, 1744 .
- Jackson, T. L., W. M. Farrell, G. T. Delory, J. S. Halekas, T. J. Stubbs, R. M. Killen (2011), The Discharging of Roving Objects in the Lunar Polar, *J. Spacecraft Rockets*, 48, 700.

- Halekas, J. S., V. Angelopoulos, D.G. Sibeck, K.K. Khurana, C.T. Russell, G.T. Delory, W.M. Farrell, J.P. McFadden, J.W. Bonnell, D. Larson, R.E. Ergun, F. Plaschke, K.H. Glassmeier (2011), First results from ARTEMIS, a new two-spacecraft lunar mission: Counter-streaming plasma populations in the lunar wake, *Space Sci. Rev.*, doi:10.1007/s11214-010-9738-8.
- Sibeck, D. G. G.T. Delory, J. Eastwood, W. Farrell, R. Grimm, J. Halekas, H. Hasegawa, P. Hellinger, K. Khurana, R. Lillis, M. Øieroset, T. Phan, J. Raeder, C. Russell, D. Schriver, J. Slavin, P. Travnicek, J. Weygand, ARTEMIS science objectives and mission phases, *Space Sci. Rev.*, doi:10.1007/s11214-011-9777-9, 2011.
- Colaprete, A., Peter Schultz, Jennifer Heldmann, Diane Wooden, Mark Shirley, Kimberly Ennico, Brendan Hermalyn, William Marshall, Antonio Ricco, Richard C. Elphic et al. (2010), Detection of water in the LCROSS ejection plume, *Science*, 330, 463.
- Poppe, A, J. S. Halekas, M. Horanyi (2010), Negative potentials above the day-side lunar surface in the terrestrial plasma sheet: evidence of non-monotonic potentials, *Geophys. Res. Lett.*, 405 38, doi:10.1029/2010GL046119.
- Gladstone, G.R., D.M. Hurley, K.D. Retherford, P.D. Feldman, W.R. Pryor, + the LAMP Team (2010), LRO-LAMP Observations of the LCROSS Impact Plume, *Science* 330, 472.
- Hodges, R. R. (2011), Resolution of the lunar hydrogen enigma, *Geophys. Res. Lett.*, 38, L06201, doi:10.1029/2011GL046688.
- Halekas, J. S., A. Poppe, G. T. Delory, W. M. Farrell, M. Horanyi (2012), Solar wind electron interaction with the dayside lunar surface and crustal magnetic fields: Evidence for precursor effects, *Earth Planets & Space*, 64, 73-82.
- Halekas, J. S., G.T. Delory, W.M. Farrell, V. Angelopoulos, J.P. McFadden, J.W. Bonnell, M.O., Fillingim, F. Plaschke (2011), First remote measurements of lunar surface charging from ARTEMIS: Evidence for non-monotonic sheath potentials above the dayside surface, *J. Geophys. Res.*, 116, A07103.
- Sarantos, M., R. M. Killen, D. A. Glenar, M. Benna, and T. J. Stubbs (2012), Metallic species, oxygen and silicon in the lunar exosphere: upper limits and prospects for LADEE measurements, *J. Geophys Res.*, 117, A03103, doi:10.1029/2011JA017044.
- Wiehle, S., F. Plaschke, U. Motschmann, K.-H. Glassmeier, H.U. Auster, V. Angelopoulos, J. Mueller, H. Kriegel, E. Georgescu, J. Halekas, D.G. Sibeck, J.P. McFadden (2011), First lunar wake passage of ARTEMIS: Discrimination of wake effects and solar wind fluctuations by 3d hybrid simulations, *Planet. Space Sci.*, 59, 661, doi: 10.1016/j.pss.2011.01.012, 2011.

- Farrell, W. M. J. S. Halekas, T. J. Stubbs, G. T. Delory, R. M. Killen, R. E. Hartle, and M. R. Collier (2011), Regarding the Possible Generation of a Lunar Nightside Exo-Ionosphere, *Icarus*, 216, 169.
- Stubbs, T. J., D. A. Glenar, W. M. Farrell, R. R. Vondrak, M. R. Collier, J. S. Halekas, and G. T. Delory (2011), On the role of dust in the lunar ionosphere, *Planetary Space Sci.*, 59, 1659.
- Schwadron, N. A., Spence, H. E., and Came, R. (2011), Does the space environment affect the ecosphere?, *EOS Transactions*, 92, 297.
- Hartle, R. E., M. Sarantos, and E. C. Sittler, Jr. (2011), Pickup ion distributions from three dimensional neutral exosphere, *J. Geophys. Res.*, 116, A10101, doi:10.1029/2011JA016859.
- Zimmerman, M. I., W. M. Farrell, T. J. Stubbs, J. S. Halekas, and T. L. Jackson (2011), Solar wind access to lunar polar craters: Feedback between surface charging and plasma expansion, *Geophys. Res. Lett.*, 38, L19202, doi:10.1029/2011GL048880.
- Stubbs, T. J., and Y. Wang (2012), Illumination conditions at the Asteroid 4 Vesta: Implications for the presence of water ice, *Icarus*, 217, 272-276.
- Halekas, J. S. , A. R. Poppe, W. M. Farrell, G. T. Delory, et al., (2012) Lunar precursor effects in the solar wind and terrestrial magnetosphere, *J. Geophys. Res.*, 117, A05101, doi:10.1029/2011JA017289.
- Poppe, A. R., J. S. Halekas, G. T. Delory, W. M. Farrell, V. Angelopoulos, J. P. McFadden, J. W. Bonnell, and R. E. Ergun, (2012), A comparison of ARTEMIS observations and particle-in-cell modeling of the lunar photoelectron sheath in the terrestrial magnetotail, *Geophys. Res. Lett.*, 39, L01102, doi:10.1029/2011GL050321.
- Collier, M. R., W. M. Farrell, and T. J. Stubbs (2012), The lunar dust pendulum, *Adv. Space Res.*, in press.
- Killen, R. M., D. M. Hurley, W. M. Farrell (2012), The effect on the Lunar Exosphere of a Coronal Mass Ejection Passage, *J. Geophys. Res.*, 117, E00K02, doi:10.1029/2011JE004011
- Sprague, A. L., M. Sarantos, D. M. Hunten, R. E. Hill, and R.W.H. Kozlowski (2012), The Lunar Sodium Atmosphere: April - May 1998, *Can. J. of Phys.*, 90, 725-732, doi:10.1139/p2012-072.
- Domingue, D., R. M. Killen, T. Zurbuchen, J. Gilbert, M. Benna, J. Slavin, T. Orlando, D. Schriver, A. Sprague, D. Blewett, J.J. Gillis-Davis, D.J. Lawrence, G. Ho, C. Chapman, F. Vilas, C. Pieters, M. Burger, N. Mouawad, W. McClintock, J. Helbert (2011), Mercury's Weather-beaten Surface: Understanding Mercury in Context with Lunar and Asteroid Space Weathering Studies. *Revs. Geophys.* Submitted.

- Hurley, D. M. and W. M. Farrell (2012), Solar Wind Contribution to the Hydroxyl and Water Features on the Lunar Surface. Submitted to JGR, Planets, 2012JE004093.
- Farrell, W. M., J. S. Halekas, R. M. Killen, G. T. Delory, N. Gross, L. V. Bleacher, D. Krauss-Varben, P. Travnicek, D. Hurley, T. J. Stubbs, M. I. Zimmerman, and T. L. Jackson (2012), Solar-Storm/Lunar Atmosphere Model (SSLAM): An Overview of the Effort and Description of the Driving Storm Environment, *Journal Geophys. Res.*, 117, E00K04, doi:10.1029/2012JE004070.
- Farrell, W. M., A. R. Poppe, M. I. Zimmerman, J. S. Halekas, G. T. Delory, and R. M. Killen, The lunar photoelectron sheath: A change in trapping efficiency during a solar storm, *J. Geophys. Res.*, submitted, 2012JE004277.
- Halekas, J. S., A. Poppe, G. T. Delory, M. Sarantos, W. M. Farrell, V. Angelopoulos, and J. P. McFadden (2012), Lunar pickup ions observed by ARTEMIS: Spatial and Temporal distribution and constraints on species and source locations, *J. Geophys. Res.*, 117, E06006, doi:10.1029/2012JE004107.
- Zimmerman, M. I., T. L. Jackson, W. M. Farrell, and T. J. Stubbs (2012), Plasma wake simulations and object charging in a shadowed lunar crater during a solar storm, *J. Geophys. Res.*, 117, E00K03, doi:10.1029/2012JE004094.
- Poppe, A. R., J. S. Halekas, G. T. Delory, and W. M. Farrell (2012), Particle-in-cell simulations of the solar wind interaction with lunar crustal magnetic anomalies: Magnetic cusp regions, *J. Geophys. Res.*, 117, A09105, doi:10.1029/2012JA017844.
- Poppe, A. R., M. Piquette, A. Likhanskii, M. Horanyi (2012), The effect of surface topography on the lunar photoelectron sheath and electrostatic dust transport, *Icarus*, 221, 135-146.
- Sarantos, M., R. E. Hartle, R.M. Killen, Y. Saito, D. Sibeck, J.A. Slavin, and A. Gloer (2012), Flux estimates of ions from the lunar exosphere, *Geophys. Res. Lett.*, 39, L13101.
- Hurley, D. M., D. J. Lawrence, D. B. J. Bussey, R. R. Vondrak, R. C. Elphic, and G. R. Gladstone (2012), Two-Dimensional distribution of volatiles in the lunar regolith from space weathering simulations, *Geophys. Res. Lett.*, doi:10.1029/2012GL051105, in press.
- Poppe, A. R., R. Samad, J. S. Halekas, M. Sarantos, G. T. Delory, W. M. Farrell, V. Angelopoulos, and J. P. McFadden (2012), ARTEMIS observations of lunar pick-up ions in the terrestrial magnetotail lobes, *Geophys. Res. Lett.*, 39, L17104, doi:10.1029/2012GL052909.
- Farrell, W. M., D. M. Hurley, R. R. Hodges, R. M. Killen, J. S. Halekas, M. I. Zimmerman, and G. T. Delory (2012), Redistribution of lunar polar water to mid-latitudes and its role in forming an OH veneer, *Planet. Space Sci.*, submitted.
- Halekas, J. S., A.R. Poppe, G.T. Delory, M. Sarantos, J.P. McFadden (2012), Utilizing ARTEMIS pickup ion observations to place constraints on the lunar atmosphere, *J. Geophys. Res.*, in press.

- Poppe, A. R., J. S. Halekas, R. Samad, M. Sarantos, and G. T. Delory (2013), Model-based constraints on the lunar exosphere derived from ARTEMIS pick-up ion observations in the terrestrial magnetotail, *J. Geophys. Res.*, submitted
- Dove, A., M. Horanyi, X. Wang, M. Piquette, A. R. Poppe and S. Robertson (2012), Experimental study of a photoelectron sheath, *Phys. Plasma*, 19, 043502
- Schwadron, N. A., T. Baker, B. Blake, A. W. Case, J. F. Cooper, M. Golightly, A. Jordan, C. Joyce, J. Kasper, K. Kozarev, J. Mislinski, J. Mazur, A. Posner, O. Rother, S. Smith, H. E. Spence, L. W. Townsend, J. Wilson, and C. Zeitlin (2012), Lunar Radiation Environment and Space Weathering from the Cosmic Ray Telescope for the Effects of Radiation (CRaTER), *Journal of Geophysical Research (Planets)*, 117, E00H13, doi:10.1029/2011JE003978
- Jordan, A. P., T. J. Stubbs, C. J. Joyce, N. A. Schwadron, H. E. Spence, J. K. Wilson (2013), The formation of molecular hydrogen from water ice in the lunar regolith by energetic particles, *J. Geophys. Res.*, submitted.
- Zimmerman, M. I. W. M. Farrell, and T. J. Stubbs (2013), Recursive plasma wave formation on the Moon and its affect on polar volatiles, *Icarus*, submitted.
- Davis, S, Marshall, J. Richard, D, Adler, D. Adler, B. (2013). Scattering properties of lunar dust analogs. *Planet. & Space Sci.* Submitted.