

Dr. Adrienne Dove

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Professional Preparation

B.S. May 2006, University of Missouri, Columbia, Dept. of Physics and Astronomy, magna cum laude, with general and departmental honors, Minors in Mathematics and Anthropology.

M.S. May 2009, University of Colorado at Boulder, Dept. of Astrophysical and Planetary Sciences.

Ph.D. May 2012, University of Colorado at Boulder, Dept. of Astrophysical and Planetary Sciences.

Appointments

Associate Professor: Dept. of Physics, University of Central Florida (08/2021 – present)

Assistant Professor: Dept. of Physics, University of Central Florida (08/2015 – 8/2021)

Postdoctoral Research Associate: Dept. of Physics, University of Central Florida (2012 – 2015)

Research Assistant: Laboratory for Atmospheric and Space Physics, University of Colorado at Boulder (08/2007 – 05/2012)

Products /Publications

L.H. Yeo, X. Wang, A. Dove, and M. Horányi (2023) Laboratory investigations of triboelectric charging of dust by rover wheels, *Advances in Space Research*, in press, <https://doi.org/10.1016/j.asr.2023.05.002>

K. Jardine, A. Dove, and L. Tetard (2022) AFM force measurements to explore grain contacts with relevance for planetary materials, *Planetary Science Journal*, 3, 273, <https://doi.org/10.3847/PSJ/aca3aa>

H. Wang, J. Phillips, A. Dove, and T. Elgohary (2022) Investigating particle-particle electrostatic effects on charged lunar dust transport via Discrete Element Modeling, *Adv. Space Res.*, 70, 3231, <https://doi.org/10.1016/j.asr.2022.08.080>

J. Brisset, C. Cox, J. Metzger, T. Miletich, N. Mohammed, A. Rascon, L. Forczyk, A. Dove, and J. Colwell (2022) Low-speed impacts into ice-dust granular mixtures, *Planetary Science Journal*, 3, 176, <https://doi.org/10.3847/PSJ/ac779a>

J. Featherstone, R. Bullard, T. Emm, A. Jackson, R. Reid, S. Shefferman, A. Dove, J. Colwell, J. E. Kollmer, K. Daniels (2021) Stick-slip dynamics in penetration experiments on simulated regolith, *Planetary Science Journal*, 2, 243, <https://doi.org/10.3847/PSJ/ac3de2>

S. Jarmak, J. Colwell, A. Dove, J. Brisset (2021) The adhesive response of regolith to low-energy disturbances in microgravity, *Gravitational and Space Research*, 9, 1-12, <https://doi.org/10.2478/gsr-2021-0001>

W. Chambers, A. Dove, C. Cox, and P. Metzger (2020) Plume-surface interaction phenomena observed in a scaled vacuum microgravity environment. *Proceedings, ASCE Earth and Space 2020: Engineering for Extreme Environments.*

J. Brisset, T. Miletich, J. Metzger, A. Rascon, A. Dove, J. Colwell (2019) Multi-particle collisions in microgravity: Coefficient of restitution and sticking threshold for

systems of mm-sized particles. *Astronomy & Astrophysics*, 631, A35,
doi:10.1051/0004-6361/201936228

Y. Li, A Dove, J. Curtis, and J. Colwell, 3D DEM simulations and experiments exploring low-velocity projectile impacts into a granular bed, *J. Powder Tech*, doi: 10.1016/j.powtec.2015.11.022 (2015)

A. Dove, M. Horányi, X. Wang, M. Piquette, A. R. Poppe, and S. Robertson. (2012) Experimental study of a photoelectron sheath, *Physics of Plasmas*, 19, 043502.

Graduate Teaching Experience

- AST 6112: Origins of Planetary Systems (Spring 2023)
- AST 6156: Graduate Seminar (Spring 2021, 2023)
- PHZ 5505: Plasma Physics (Spring 2019)

Graduate students mentored

As chair of thesis/dissertation committees

Kayla Schang, *TBD*, Fall 2021-present

Joseph Faudel, *TBD*, Fall 2021-present

James Phillips, III, *Electrostatic charging interactions*, Fall 2017-present

Keanna Jardine, *Grain adhesion studies with Atomic Force Microscopy*, 2018-present

Wesley Chambers, *Regolith plume impingement modeling and experiments*, (co-advising with Metzger, Britt), 2015-2020

Member of thesis/dissertation committees

Kathleen McIntyre (Ph.D., Planetary) (2016-present)

Perla Latorre (Masters, Aerospace Engineering) (2021-2023)

Olga Harrington (Ph.D, Physics) (2020-2023)

Ryan Galinkin (Masters, Planetary) (2019-2022)

Hao Wang (Ph.D., Aerospace) (2019-2022)

Other Synergistic Activities related to Graduate Education

1. Deputy-PI, Lunar-VISE mission – selected through the NASA PRISM program in 2022, expected launch/mission in 2026; involves research, education, and outreach components

2. Conference leadership: Chair, Conference for Undergraduate Women in Physics (CUWiP) 2023 – Southeastern Region Meeting

3. K-12: Hosting K-12 teachers for a Research Experience for Teachers (RET) program in association with ongoing NASA-funded science and technology research projects. Teachers learn about the research and develop classroom activities, and the research team (PI, Co-Is, students) participate in presentations & activities for numerous K-12 groups about ongoing research activities.

4. Co-host, Walkabout the Galaxy Podcast – an informal and entertaining discussion of recent astronomical discoveries, space news, nerd news, and occasionally featuring guest speakers.

5. Advisor for on-campus undergraduate student groups, including Women in Physics, Society of Physics students, and other space-focused groups, each with goals of broadening participation in Physics and space-related projects, especially to under-represented groups on campus.