

Lavender Elle Hanson

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Positions	Modeling PAH in Titan's atmosphere	2025–
	University of Amsterdam Advisor: Alessandra Candian	
	Ph.D., Earth and Planetary Science	2020–2025
	Stratospheric ices in Titan's south polar fall, modeling and imagery analysis	
	Johns Hopkins Univ, Baltimore, MD, USA Advisor: Darryn D. Waugh	
	Faculty Research Associate	2020–2020
	Laboratory spectroscopy of Titan cloud ices NASA Goddard Space Flight Center/University of Maryland advised by Carrie M. Anderson	
	Faculty Research Associate	2019–2019
	Martian cloud and atmospheric dynamics using Mars Reconnaissance Orbiter imagery	
	NASA Goddard Space Flight Center/University of Maryland advised by Scott Guzewich	
	M.S., Atmospheric Science & Meteorology	2013–2018
	Theoretical and experimental microphysics of water ice clouds Penn State Univ, University Park, PA, USA Advisor: Jerry Y. Harrington	
	B.A., Physics & Chemistry	2009–2013
	Luther College, Decorah, IA, USA	
Professional Society Membership	American Astronomical Society, Division of Planetary Science	2023–present
	American Geophysical Union	2018–present
Teaching	Guided Tour: The Planets, TA	Spring 2023 & 2024
	Principles of Atmospheric Measurement, co-instructor	Spring 2017
	Radiation and Climate, TA	Fall 2018
	Atmospheric Thermodynamics, TA	Fall 2014

Other Training	Various JHU teaching workshops	2020–2025
	Johns Hopkins Teaching Institute, May 29-31	Spring 2024
	“Grading and Anti-grading” (workshop series)	Spring 2024
	“Teaching Discomfort: Facilitating Challenging Discussions in the Classroom” (workshop series)	Fall 2023
Service	Newsletter Editor and Contributor, EPS	2024–2025
	Social Committee organizer, EPS	2020–2024
	Johns Hopkins Trans Awareness Task Force	2023–2024
Funding	NASA FINESST: <i>Mixed-species clouds in Titan's polar stratosphere</i> (as future investigator, PI: Darryn Waugh).	2021–2024
Publications	Lavender E Hanson , Robert French, Darryn Waugh, Erika Barth, and Carrie M. Anderson, 2025: The Descent of Titan’s South Polar Cloud, <i>Geophys Res Lett</i> , 52, e2024GL113415. doi: 10.1029/e2024GL113415	
	Lavender E Hanson , Darryn Waugh, Erika Barth, and Carrie M. Anderson, 2023: Investigation of Titan's south polar HCN cloud during southern fall using microphysical modeling, <i>Planet Sci J</i> , 4, 237. doi: 10.3847/PSJ/ad0837	
	Gwenore F Pokrifka, AM Moyle, Lavender E Hanson , and Jerry Y Harrington, 2020: Estimating Surface Attachment Kinetic and Growth Transition Influences on Vapor-Grown Ice Crystals, <i>J Atmos Sci</i> , 77, 2393. doi: 10.1175/jas-d-19-0303.1	
	Jerry Y Harrington, Alfred Moyle, Lavender E Hanson , Hugh Morrison, 2019: On Calculating Deposition Coefficients and Aspect-Ratio Evolution in Approximate Models of Ice Crystal Vapor Growth, <i>J Atmos Sci</i> , 76, 1609. doi: 10.1175/jas-d-18-0319.1	
	Alexander Harrison, Alfred M Moyle, Hanson , Jerry Y Harrington, 2016: Levitation diffusion chamber measurements of the mass growth of small ice crystals from vapor, <i>J Atmos Sci</i> , 73, 2743-2758. doi: 10.1175/JAS-D-15-0234.1	
	EM Levin, R Hanus, Hanson , WE Straszheim, K Schmidt-Rohr, 2013: Thermoelectric properties of Ag ₂ Sb ₂ Ge _{46-x} Dy _x Te ₅₀ alloys with high power factor, <i>Physica Status Solidi A</i> , 210, 2628-2637. doi: 10.1002/pssa.201330217	

- Conference presentations** Lavender E Hanson, E L Barth, C M Anderson, and D W Waugh. 2025: Benzene and HCN Ice Clouds in Titan's Polar Stratosphere. *LPSC 2025*, The Woodlands, TX, #1521.
- Lavender E Hanson, Darryn Waugh, Erika Barth, and Carrie Anderson. 2024: Observations and Modeling of Titan's Descending South Polar Cloud (poster). *AGU 2024*, Washington, DC, P43D-3038.
- Lavender E Hanson, Darryn Waugh, Carrie Anderson, and Erika Barth. 2024: The Slow Descent of Titan's South Polar Cloud (talk). *AAS/DPS 2024*, 208.02, Boise, ID.
- Lavender E Hanson, Darryn Waugh, Erika Barth, and Carrie M. Anderson. 2023: Investigating the evolution of Titan's high altitude south polar HCN cloud (talk). *AAS/DPS 2023*, 208.04, San Antonio, TX.
- Lavender E Hanson, Darryn Waugh, Erika Barth, and Carrie M. Anderson. 2023: Modeling the fall high altitude south polar HCN cloud (talk). *Titan Through Time 6*, Paris.
- Lavender E Hanson, Scott Guzewich, 2019: Orographic clouds in the Mars Arcadia province (poster). *AGU Fall Meeting 2019*, P41B-3405.
- Lavender E Hanson, Scott Guzewich, 2019: Using Machine Learning to Identify Clouds in Mars Daily Global Maps (poster), *Ninth International Conference on Mars*, Pasadena, CA.
- Hanson, Alfred Moyle, Jerry Harrington, 2016: Measurements of vapor growth and sublimation of individually levitated ice particles below -30°C (talk), *17th International Conference on Clouds & Precipitation*, Manchester, UK, S1.14.

Updated: August 21, 2025