



Alivia Eng

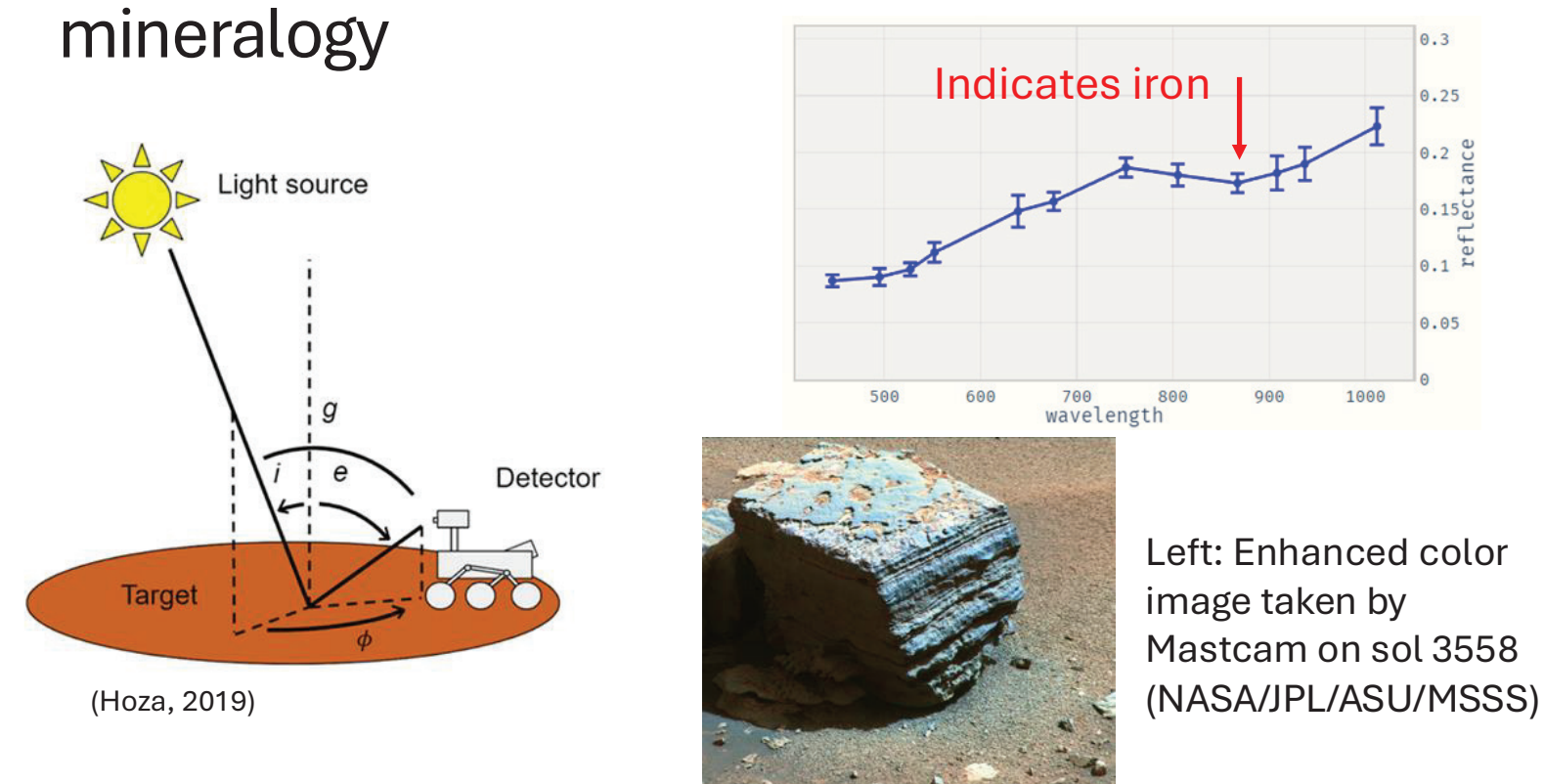
David, Helen and Marian Woodward Award
Ph.D. Candidate, Earth and Atmospheric Sciences
Second Year ARCS Scholar



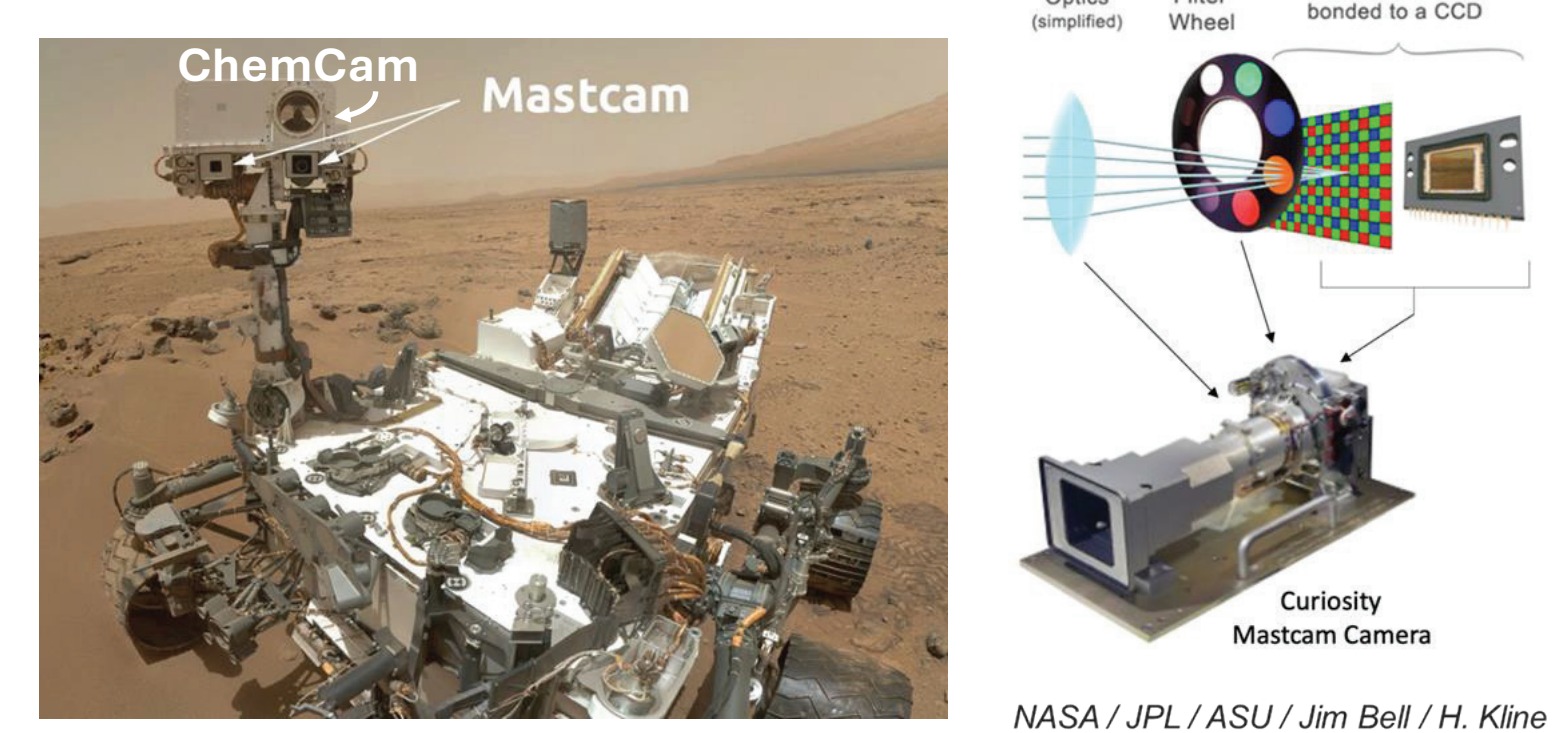
Using Spectroscopic Techniques at Different Scales to Characterize Planetary Surfaces

Spectroscopic techniques involve different measurements of how light interacts with a surface and are often utilized by planetary missions. I collect and analyze data from the lab, rovers, and orbiters to clarify our understanding of the geologic history of Mars.

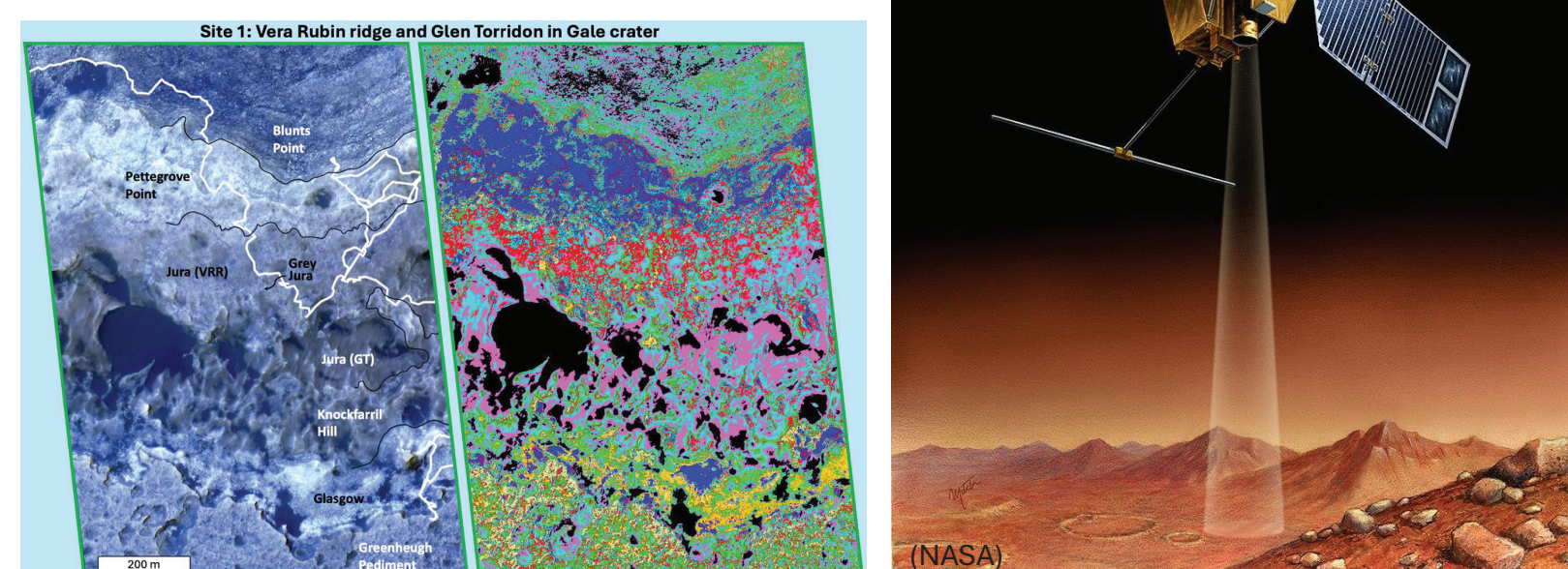
Light reflects off of planetary surfaces, cluing into mineralogy



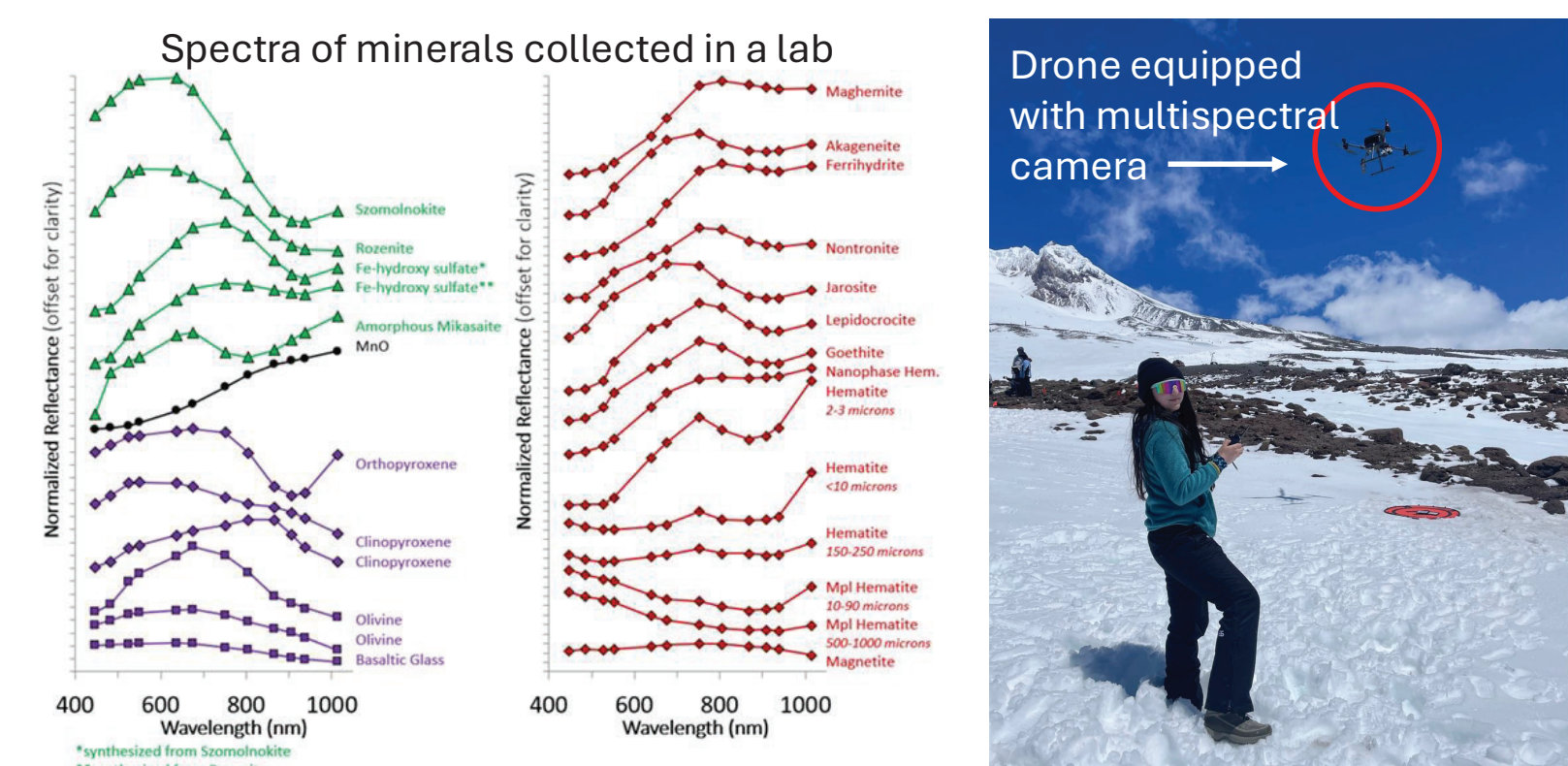
Two instruments on the Curiosity rover collect reflectance data (spectra)



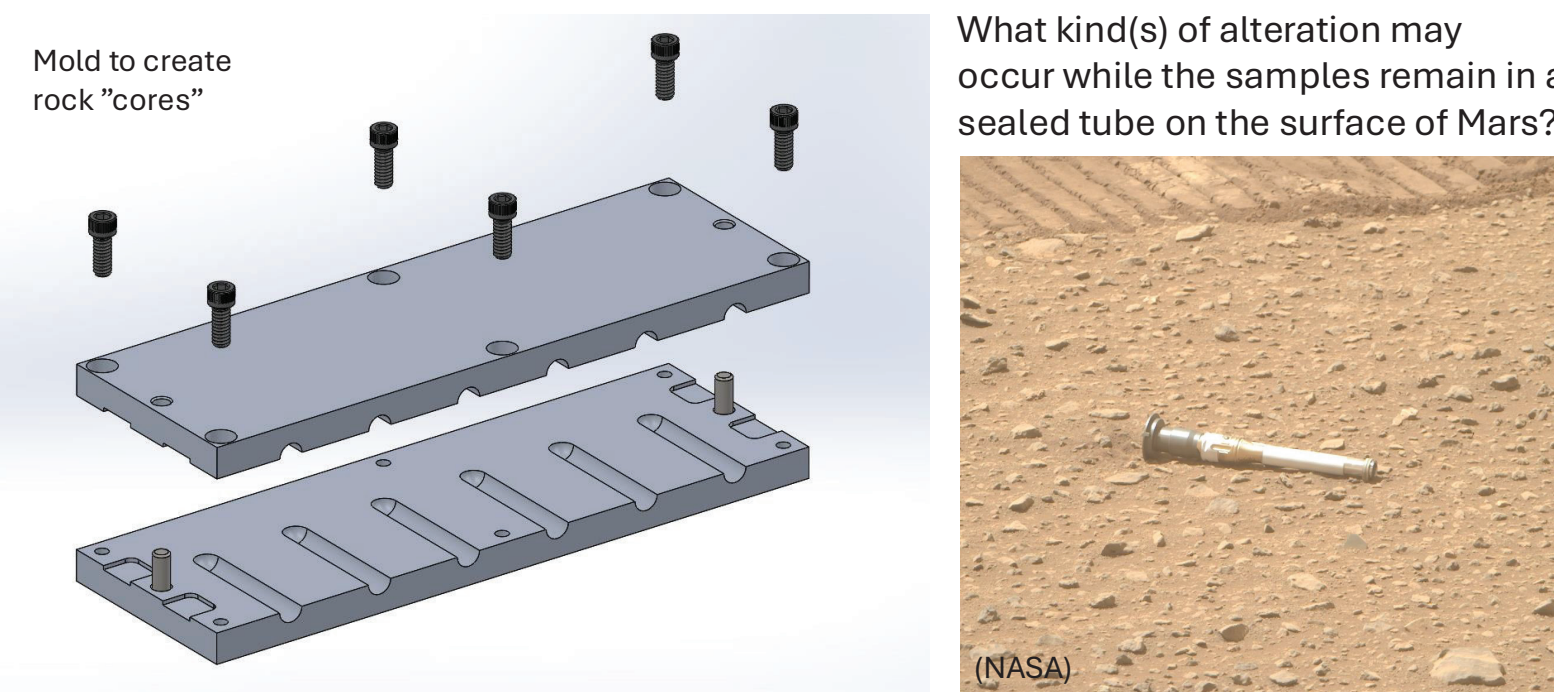
Extrapolating rover data using orbiter data will help constrain the extent of rock-water interactions



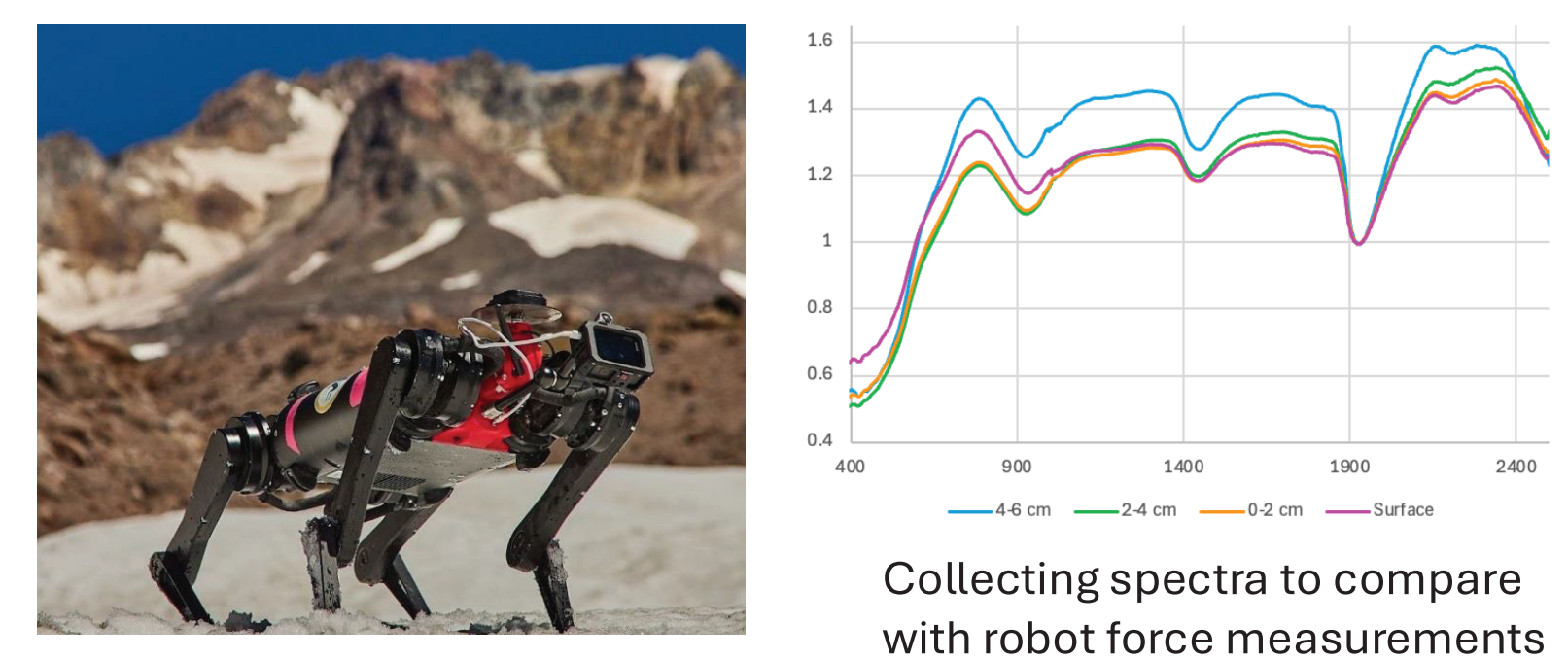
Simulating methodologies on Earth



Simulating sample caching by the Perseverance rover



Providing scientific insight to support the development of LASSIE



Scholar Awards Celebration
November 12, 2025



Igniting
Innovation
in Georgia