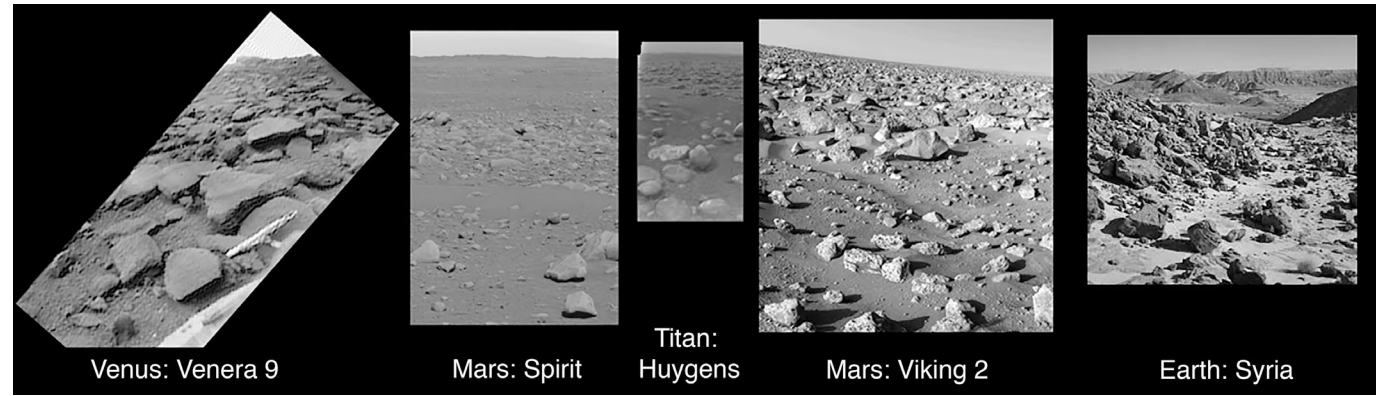


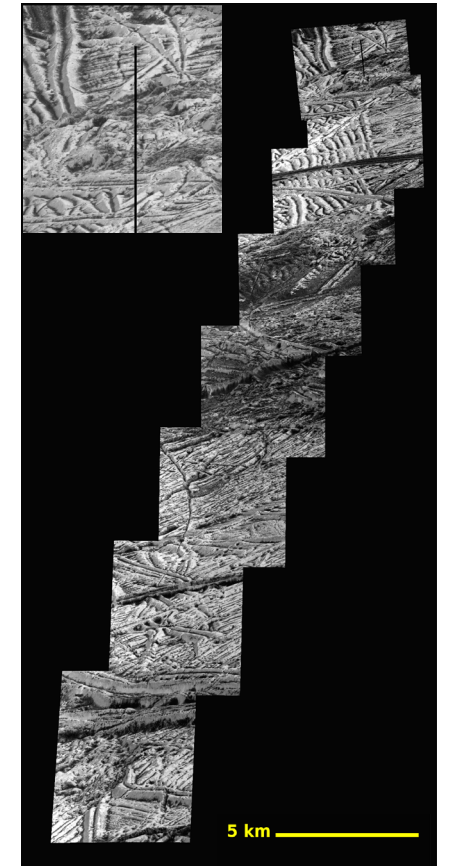
# Landed Missions: An Essential Link between Remote Sensing and In Situ Processes for Icy World Surface Exploration

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- Remote sensing observations are our primary method of studying planetary surfaces, and in the inner solar system, in situ exploration quickly provided ground truth to these remote sensing observations.
- Our view of the surface appearance of worlds like the Moon, Mars, and even Venus has grown in tandem with our understanding of the large-scale structure from remote sensing.
- However, our knowledge of the icy worlds of the outer solar system is based solely on decades of remote sensing observations without any in situ surface data to help understand how geological processes are manifest on these worlds.



- **A landed mission to an icy world like Europa will provide ground truth for decades of remote sensing data.**
- **It will reveal fundamentally novel geologic surface processes, and may revolutionize our understanding of how such worlds work.**
- **Such a mission is a necessary next step in the exploration of our solar system.**



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