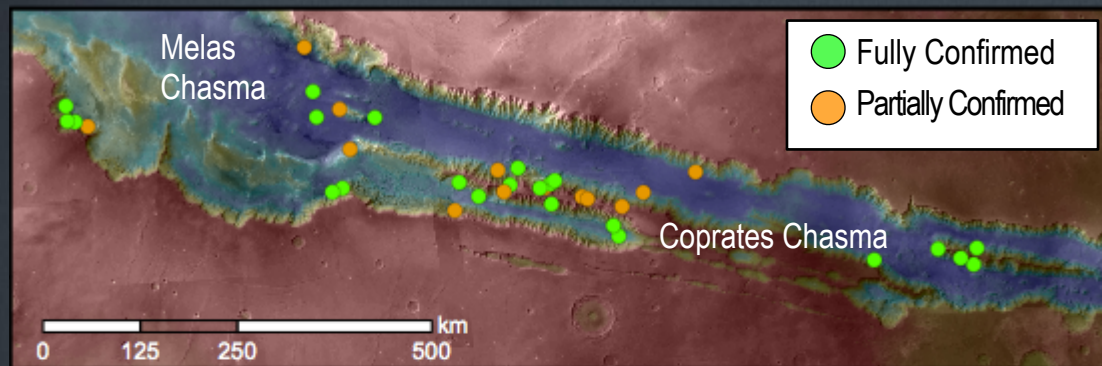
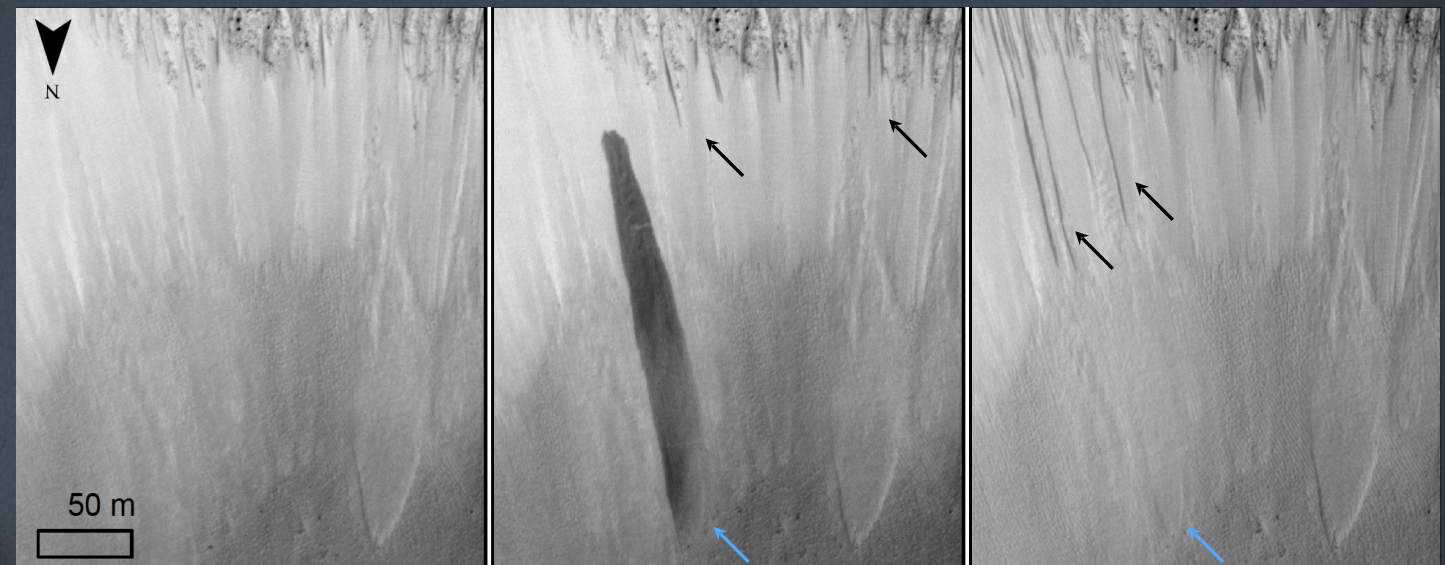
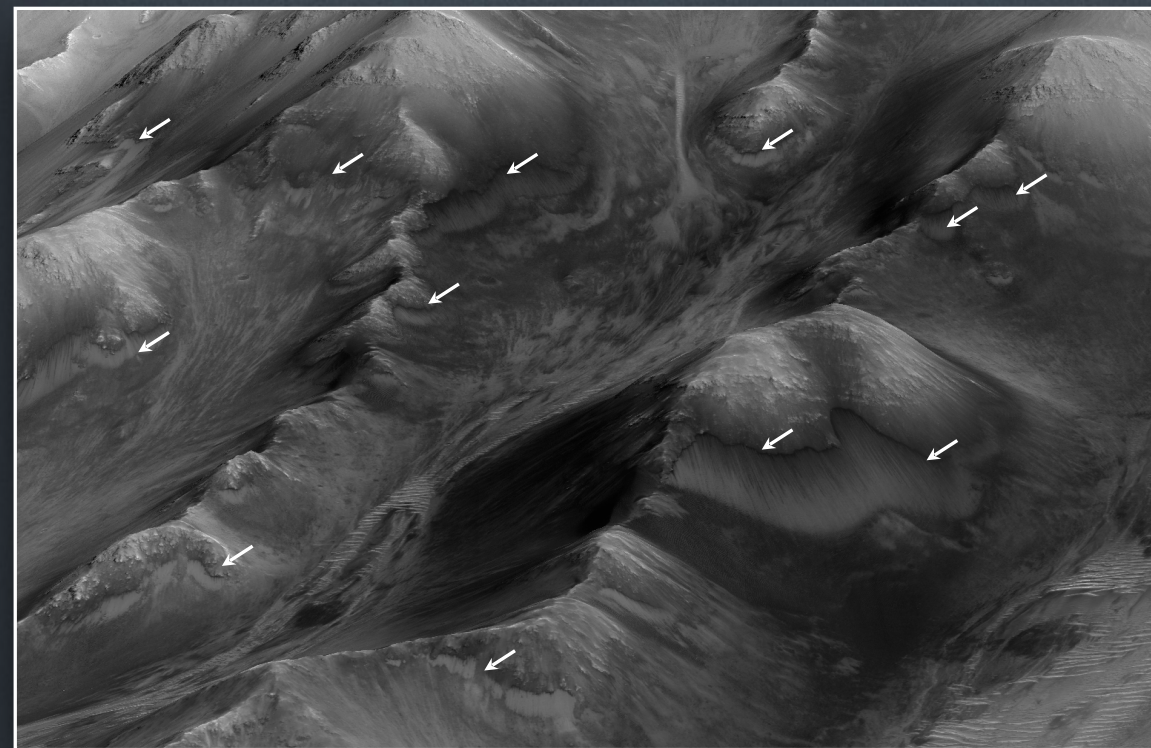


Geologic Context of Recurring Slope Lineae (RSL) in Melas and Coprates Chasmata, Mars



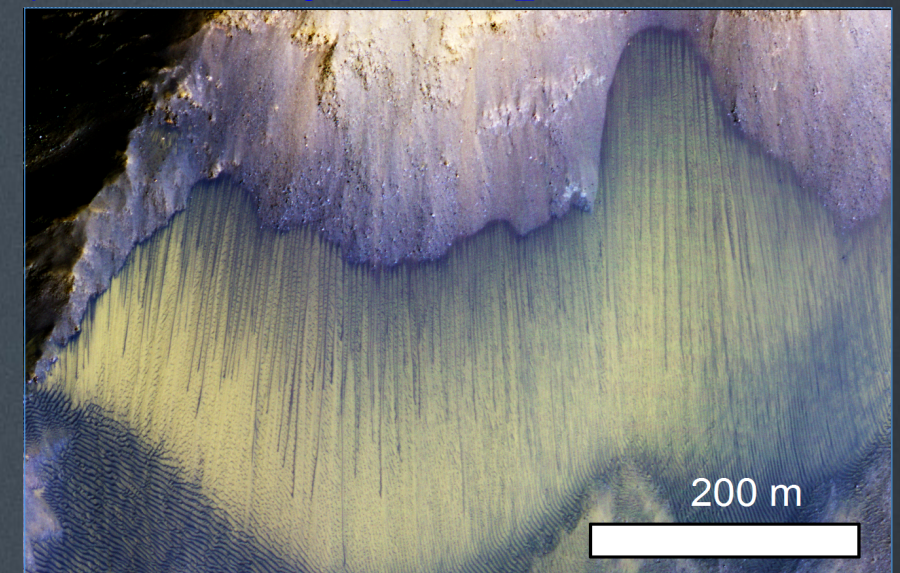
Map of Melas and Coprates Chasmata, Valles Marineris with 35 RSL HiRISE-monitored sites. The color of the symbol represents RSL site status and level of confidence. Map colors represent elevation where red is high and blue low.



Topographic changes in Garni crater where RSL (black arrows) are found associated with a large slump (blue arrows). Also see: http://www.uahirise.org/ESP_035028_1685

Coprates Montes

(left) A HiRISE perspective view of Coprates Montes where numerous RSL are found. View is approximately ~2.5-km-wide and derived from a HiRISE digital terrain model. See more at: <http://www.uahirise.org/sim/>



A HiRISE color view of large RSL forming below bedrock spurs.

- RSL are dark, narrow flows that emerge from steep, rocky exposures, and incrementally grow, fade on a seasonal basis
- Their strong temperature dependence and morphology suggests that liquid water occurs on or near the surface of Mars today
- Widespread RSL sites are detected among diverse geologic landforms across Coprates and Melas Chasma
- RSL are shown to be associated with and possibly cause minor topographic changes
- Water budget estimates suggest a significant amount of near-surface water might be present
- RSL are best monitored in images from the High Resolution Imaging Science Experiment (HiRISE) camera onboard NASA's Mars Reconnaissance Orbiter (MRO).