

# Crater Slopes: The Power of a Repeat Image

Why does HiRISE take so many repeat images of the same area? Repeat coverage actually serves a special purpose, such as detecting seasonal changes (frost deposition and sublimation) and temporal changes (dust devil tracks and avalanches.) These repeat images also give us a “sneak peek” of future pictures to determine any differences.

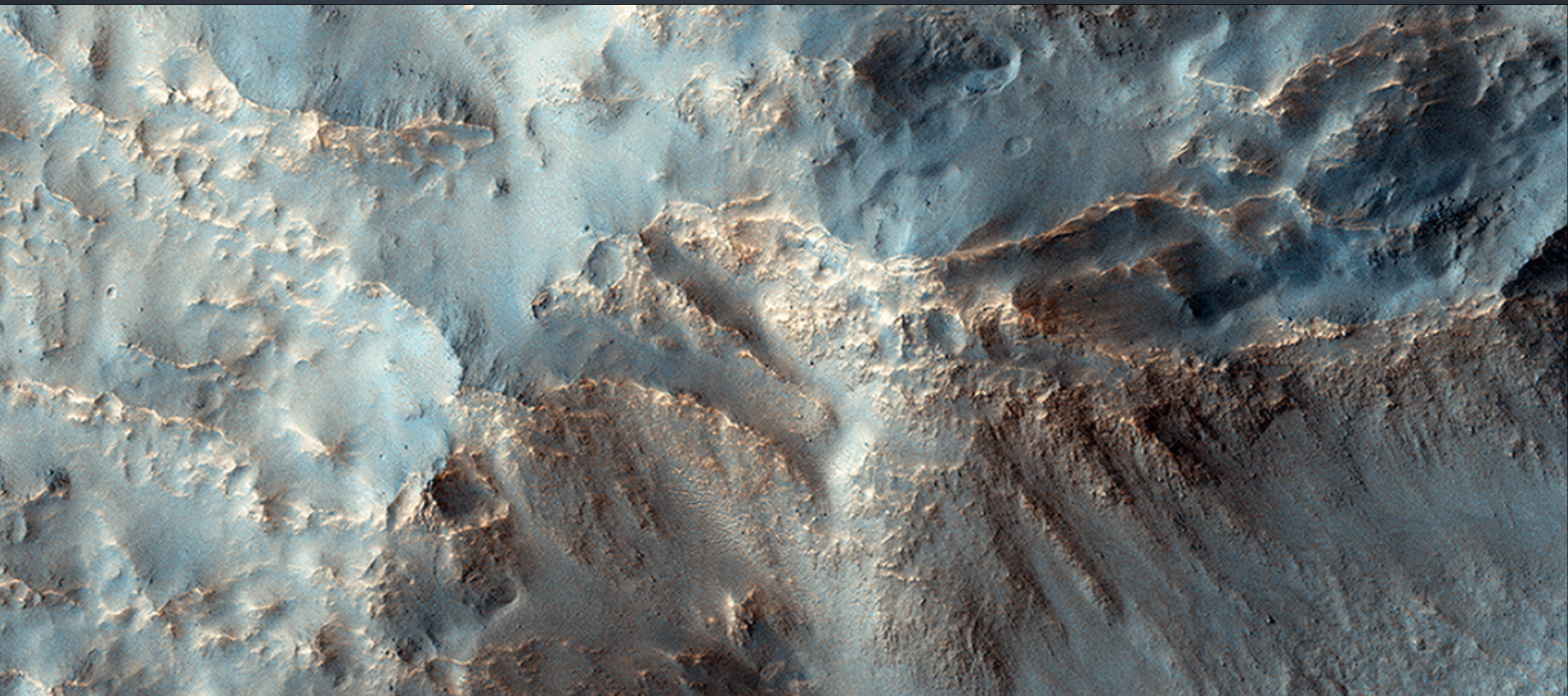




## Gullies in Liu Hsin Crater

Here, we have a group of small gullies along a rock layer on the south wall of Liu Hsin Crater. At the foot of the gullies there are “fans” of granular sediment that have been deposited downhill from the gully formation. Nearby, there are much larger gullies. By comparing the gullies that are just 20 kilometers away, we may be able to determine the factors that affect their size.

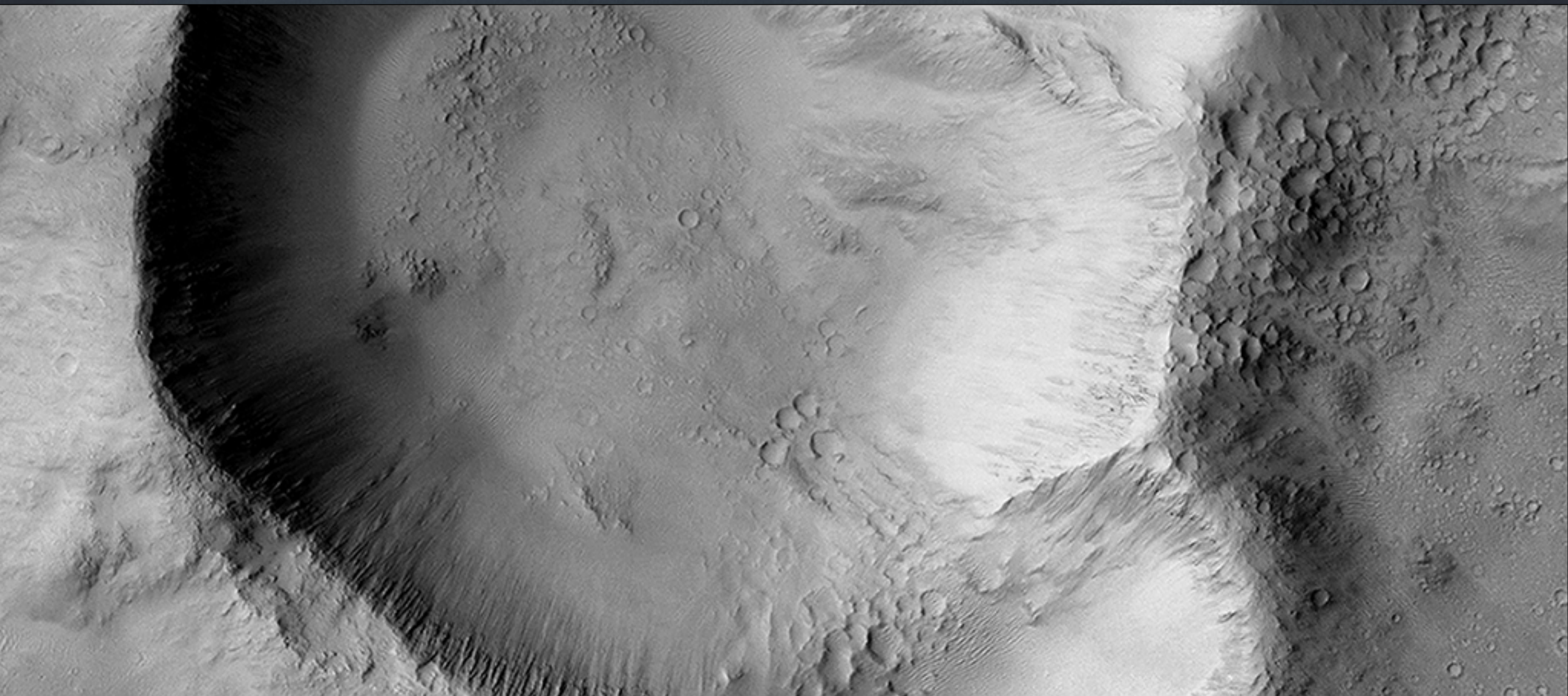




## Southeast Rim of Hale Crater

In the search for potential areas with recurring slope lineae (RSL), which are probably caused by briny water, the central peak of Hale Crater is a common target. But we have no images of the southeast rim of the crater. Hale Crater is about 150 kilometers (90 miles) in diameter and located in the mid-southern latitudes just north of the massive Argyre basin.





## Triple-Crater in Elysium Planitia

This image shows a triple impact crater in Elysium Planitia near Tartarus Montes, which probably formed when a binary – or even triple – asteroid struck the surface. (Binary asteroids orbit each other, while also orbiting the Sun). The two larger craters must have been produced by asteroids of approximately the same size, on the order of a few hundred meters across.