

A variety of effects are still visible from this recent impact in Mare Nubium (14.60°S; 10.26°W). NAC frame M111660844L, illumination is from the east, north is up, image is ~1 km wide [NASA/GSFC/Arizona State University].

The complex geologic process of impact cratering often results in a diverse medley of landforms and other surface features. The more nuanced of these are best observed in fresh craters because the subtlest attributes of impacts are those most easily removed by [space weathering](#). Lassell D crater (2 km diameter) has been described as "one of the freshest craters on the Moon" ([Muller et al., 1986](#)). In the proximal (nearby) ejecta blanket we see a hummocky, streaked surface with dune-like forms, ribbon-shaped lobes, and an eye-catching admixture of low- and high-reflectance soils. Immediately following the high-energy of impact, advancing walls of ejecta hugged the ground and moved like a dry tsunami across this region.

The crenulations are the result of mechanical interactions of the moving debris with pre-existing topography. As the wave of rock and dust is arrested by this resistance,

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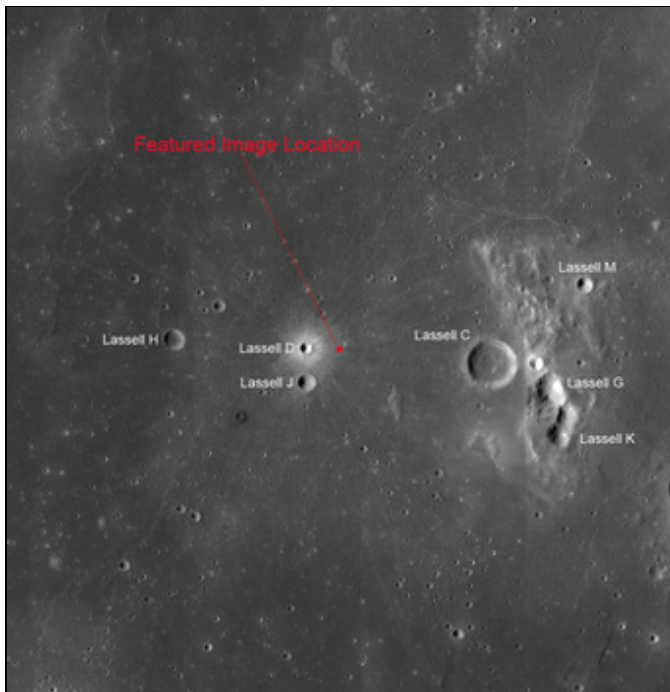
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some portions of the debris continue flowing while others slow and stop moving. The result is a wavy landform, a cross-section of which might reveal how the lobes partially rode up and over each other, hence the descriptive term "imbricated deceleration lobes."

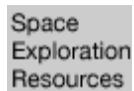
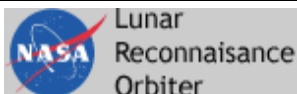


WAC mosaic image is ~118 km wide [NASA/GSFC/Arizona State University].

As regolith redevelops and matures over the tens of millions of years to come, these features will gradually diminish. Which features would disappear first and why? Examine the full NAC frame [here](#). Additional examples of fresh impact features can be found in [Kamarov](#), [Icarus](#), and [The Lavish Lobes of Necho R](#).

Posted by [James Ashley](#) in [Featured Image](#) at 10:00

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