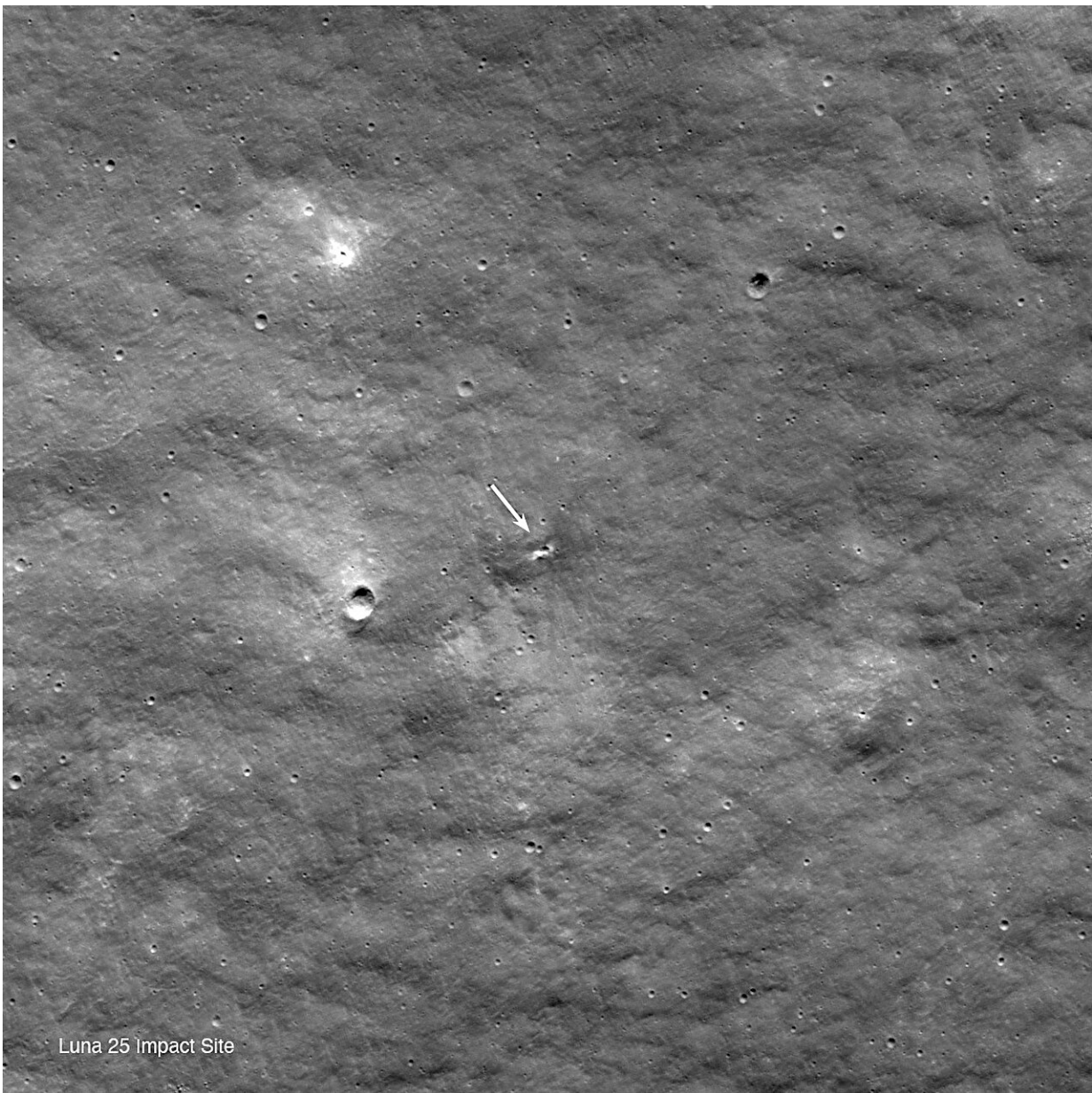


NASA's LRO observes crater likely from Luna 25 impact

August 31 2023



During the descent to the surface, the Russian spacecraft Luna 25 experienced an anomaly that caused it to impact into the southwest rim of Pontécoulant G crater on Aug. 19, 2023, at 7:58 a.m. EDT (11:58 a.m. UTC). This image is 1,100 meters wide, and lunar north is up. (LROC NAC frame No. M1447547309R). Credit: NASA's Goddard Space Flight Center/Arizona State University

NASA's LRO—the Lunar Reconnaissance Orbiter—spacecraft has imaged a new crater on the moon's surface that is likely the impact site of Russia's Luna 25 mission.

During its descent, Luna 25 experienced an anomaly that caused it to impact the surface of the moon on Aug. 19.

Roscosmos, Russia's space agency, published an estimate of the impact point on Aug. 21. The LROC (short for LRO Camera) team and the LRO Mission Operations team were able to design and send commands to the LRO spacecraft on Aug. 22 to capture images of the site.



LROC NAC image enlarged four times centered on the likely Luna 25 crater. Image width is 275 meters; north is up. (Frame No. M1447547309R). Credit: NASA's Goddard Space Flight Center/Arizona State University

The sequence began on Aug. 24 at 2:15 p.m. EDT (18:15 UTC) and was completed about four hours later, at 6:12 p.m. EDT (22:12 UTC). The

LROC team compared images taken prior to the impact time and the sequence taken after and found a small new crater.

LRO's most recent "before" image of the area was captured in June 2022 (frame No. M1410024427R); thus, the crater formed sometime after that date. Since this new crater is close to the Luna 25 estimated impact point, the LRO team concludes it is likely to be from that mission, rather than a natural impactor.

The new crater is about 10 meters in diameter and is located at 57.865 degrees south latitude and 61.360 degrees east longitude at an elevation of about minus 360 meters. The impact point was on the steep (greater than 20-degree grade) inner rim of Pontécoulant G [crater](#), about 400 kilometers short of Luna 25's intended landing point at 69.545 degrees south, 43.544 degrees east.

Provided by NASA's Goddard Space Flight Center

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