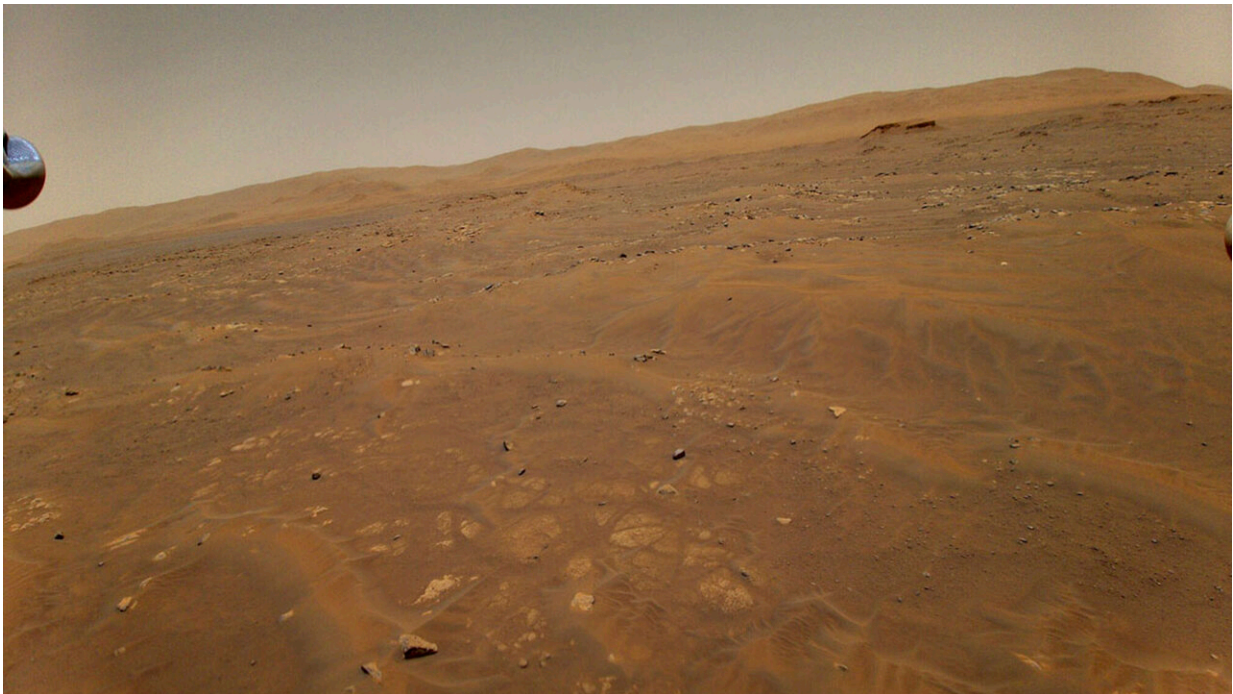


# Navigation error sends NASA's Mars helicopter on wild ride

May 28 2021, by Marcia Dunn

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This May 22, 2021 photo made available by NASA shows the surface of Mars from a height of 33 feet (10 meters), captured by the Ingenuity Mars helicopter during its sixth flight. Credit: NASA/JPL-Caltech via AP

A navigation timing error sent NASA's little Mars helicopter on a wild, lurching ride, its first major problem since it took to the Martian skies last month.

The experimental helicopter, named Ingenuity, managed to land safely, officials at the Jet Propulsion Laboratory reported Thursday.

The trouble cropped up about a minute into the helicopter's sixth test flight last Saturday at an altitude of 33 feet (10 meters). One of the numerous pictures taken by an on-board camera did not register in the [navigation system](#), throwing the entire timing sequence off and confusing the craft about its location.

Ingenuity began tilting back and forth as much as 20 degrees and suffered power consumption spikes, according to Havard Grip, the helicopter's chief pilot.

A built-in system to provide extra margin for stability "came to the rescue," he wrote in an online status update. The helicopter landed within 16 feet (5 meters) of its intended touchdown site.

Ingenuity became the first aircraft to make a powered flight on another planet in April, two months after landing on Mars with NASA's rover Perseverance.

The 4-pound (1.8-kilogram) helicopter aced its first five flights, each one more challenging than before. NASA was so impressed by the \$85 million tech demo that it extended its mission by at least a month.



This May 22, 2021 photo made available by NASA shows the shadow of the Ingenuity Mars Helicopter captured by the aircraft's navigation camera during the last 29 seconds of its sixth flight. Credit: NASA/JPL-Caltech via AP

Saturday's troubled [flight](#) was the first for this bonus period. Engineers have spent the past several days addressing the problem.

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