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Ian Clark
NASA's Jet Propulsion Laboratory
818-354-0535

Technology Demonstration Missions

LDSD Status

NASA's Low Density Supersonic Decelerator (LDSD) Technology Demonstration Mission will conduct full-scale, stratospheric tests of breakthrough technologies high above Earth to prove their value for future missions to Mars. The test will take place at the U.S. Navy's Pacific Missile Range Facility in Kauai, Hawaii. The first launch opportunity is the morning of June 3. LDSD was built at NASA's Jet Propulsion Laboratory in Pasadena, California, and shipped to Kauai for final assembly and preparations.

As the first launch opportunity approaches, we will post regular status updates [here](#).

Countdown Clock

14 50 45

HOURS MIN SEC

LDSD Countdown to 1st Potential Launch Attempt

Tweets

Follow @NASA Technology

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Watch the LDSD press conference - ustream.tv/nasajpl2 and tune in to nasa.gov/technology all summer for the latest news - [#321techoff](#)

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Technologies like LDSD will give us new opportunities to deliver heavier payloads to Mars - Mike Gazarik, STMD Assoc. Admin. [#asknasa](#) [#ldsd](#)

Expand

Low-Density Supersonic Decelerator (LDSD) Latest News



NASA Sets Media Coverage for Saucer-Shaped Test Vehicle Flight in Hawaii

NASA's Low-Density Supersonic Decelerator (LDSD) project will fly a rocket-powered, saucer-shaped test vehicle into near-space next week from the

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Low-Density Supersonic Decelerator (LDSD)

"The future comes slowly."

-- Johann Friedrich von Schiller, 18th century German historian and poet

As NASA plans ambitious new robotic missions to Mars, laying the groundwork for even more complex human science expeditions to come, the spacecraft needed to land safely on the red planet's surface necessarily becomes increasingly massive, hauling larger payloads to accommodate extended stays on the Martian surface. Current technology for decelerating from the high speed of atmospheric entry to the final stages of landing on Mars dates back to NASA's [Viking Program](#), which put two landers on Mars in 1976. The basic Viking parachute design has been used ever since -- and was successfully used again in 2012 to deliver the [Curiosity rover](#) to

Video Gallery

LDSD: We Brake for Mars (Part 1)



NASA EDGE: Technology Demonstration Missions Part 2

[More Videos](#)

Related Links

- [Press Kit \(PDF, 270 Kb\)](#)
- [Fact Sheet \(PDF, 800 Kb\)](#)

Mars.

NASA seeks to use atmospheric drag as a solution, saving rocket engines and fuel for final maneuvers and landing procedures. The heavier planetary landers of tomorrow, however, will require much larger drag devices than any now in use to slow them down -- and those next-generation drag devices will need to be deployed at higher supersonic speeds to safely land vehicle, crew and cargo. NASA's Low Density Supersonic Decelerator (LDSD) Technology Demonstration Mission, led by NASA's [Jet Propulsion Laboratory](#) in Pasadena, Calif., will conduct full-scale, stratospheric tests of these breakthrough technologies high above Earth to prove their value for future missions to Mars.

- [› Read All](#)
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Image Gallery



Unloading LDSD Test Device in Hawaii

05.29.14 - The saucer-shaped test

vehicle for NASA's Low-Density Supersonic Decelerator (LDSD) project, packaged in the box shown here, was shipped via plane to the Navy's Pacific ...

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