

DARPA releases video of HTV-2 hypersonic glider flight

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An unmanned glider streaks over the Pacific Ocean at 20 times the speed of sound in a video released Thursday by a U.S. defense research agency experimenting with technology that could give the military the ability to strike any part of the globe within an hour.

The Aug. 11 test ended early when a problem caused the craft's [safety](#)

[system](#) to force it down into the ocean but the [Defense Advanced Research Projects Agency](#) said valuable data was collected in the nearly three minutes of free flight at the [hypersonic speed](#) of Mach 20 - about 13,000 mph.

The Falcon Hypersonic Test Vehicle-2 was launched from Vandenberg Air Force Base, Calif., atop a Minotaur 4 rocket that carried it to the edge of space, performed what [DARPA](#) described as a series of aggressive banks and turns, and then released the glider.

The video taken by a crewmember on a tracking ship shows the rocket and vehicle together as a fast-moving contrail and then the HTV-2 as a faint dot zipping away on its own.

"It gives us a visceral feel for what it means to fly at Mach 20," DARPA Director Regina Dugan said in a statement.

Hypersonic is the term for speeds greater than Mach 5. Various hypersonic programs have typically produced brief flights - measured in seconds or minutes.

This month's test was the second of two missions in DARPA's HTV-2 program, which is aimed at learning how to fly at such speeds and advancing the technologies needed for long-duration hypersonic flight.

The HTV-2's dimensions are among details kept secret by the agency, which seeks to provide technology breakthroughs for the Defense Department.

The first HTV-2 was launched on April 22, 2010. It returned nine minutes of data, including 139 seconds of aerodynamic data at speeds between 17 and 22 times the [speed of sound](#), DARPA said. That craft detected an anomaly, aborted its flight and plunged into the ocean, the

agency said.

DARPA said preliminary analysis of this month's flight showed that the Minotaur rocket placed the HTV-2 at the planned release point and at the proper velocity and orientation, and the separation from the booster was clean.

In a statement, Air Force Maj. Chris Schulz, the HTV-2 program manager, likened the rocket's performance to making "a three-point shot from the California coastline into a basket between California and Hawaii."

The test also returned more than nine minutes of data. Dugan said that included approximately three minutes of "stable aerodynamically controlled Mach 20 hypersonic flight."

When the problem occurred, the HTV-2's flight safety system autonomously guided it in a controlled descent to splashdown along the planned trajectory, DARPA said.

After the first flight, changes were made to the second HTV-2 and its [flight](#) problem was not believed to be related to the previous one, DARPA said.

More information: Online: <http://www.darpa.mil/>

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