

# NASA's Kepler Spacecraft Baked and Ready for More Tests

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NASA's Kepler spacecraft in a clean room at Ball Aerospace & Technologies Corp. in Boulder, Colo. Image credit: Ball Aerospace

(PhysOrg.com) -- NASA's planet-hunting Kepler mission, scheduled to launch in 2009, has survived an extreme temperature test.

The thermal vacuum test is part of a series of environmental tests the spacecraft will undergo before it blasts into space aboard a Delta II

rocket from the Cape Canaveral Air Force Station, Fla.

"Kepler functioned extremely well at the intense temperatures it will encounter in space," said James Fanson, Kepler project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif.

The test, which was performed at Ball Aerospace & Technologies Corp. in Boulder, Colo., simulates the vacuum of space, and the extreme temperatures Kepler will face once launched. The spacecraft is tucked into a vacuum chamber and surrounded by a cold shroud to mimic the deep chill of space. One side of the spacecraft -- the side with solar panels -- is then baked as if it were being heated by the sun.

The goal is to make sure that the spacecraft and its detectors operate properly in the space-like environment. An electromagnetic compatibility test, to ensure Kepler's electronics are sound, will begin soon.

Kepler will monitor 100,000 stars, searching for signs of planets -- including ones as small as or smaller than Earth. To date, no Earth-sized planet has been discovered.

"The results of these tests are now being used to prepare for the science operations that will start after the spacecraft launches and undergoes in-orbit checkout," said Bill Borucki of NASA Ames Research Center, Moffett Field, Calif., the science principal investigator for the Kepler Mission.

Kepler is a NASA Discovery mission. In addition to being the home organization of the science principal investigator, NASA Ames Research Center is responsible for the ground system development, mission operations and science data analysis. Kepler mission development is managed by JPL. Ball Aerospace & Technologies Corp. is responsible

for developing the Kepler flight system and supporting mission operations.

Provided by NASA

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