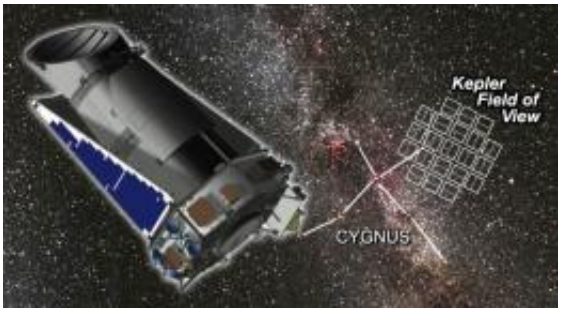
Let the Planet Hunt Begin

May 13 2009



Artist concept of Kepler in space. Image credit: NASA/JPL

(PhysOrg.com) -- NASA's Kepler spacecraft has begun its search for other Earth-like worlds. The mission, which launched from Cape Canaveral, Fla., on March 6, will spend the next three-and-a-half years staring at more than 100,000 stars for telltale signs of planets. Kepler has the unique ability to find planets as small as Earth that orbit sun-like stars at distances where temperatures are right for possible lakes and oceans.

"Now the fun begins," said William Borucki, Kepler science principal investigator at NASA's Ames Research Center, Moffett Field, Calif. "We are all really excited to start sorting through the data and discovering the planets."

Scientists and engineers have spent the last two months checking out and calibrating the Kepler spacecraft. Data have been collected to

characterize the imaging performance as well as the noise level in the measurement electronics. The scientists have constructed the list of targets for the start of the planet search, and this information has been loaded onto the spacecraft.

"If Kepler got into a staring contest, it would win," said James Fanson, Kepler project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "The spacecraft is ready to stare intently at the same stars for several years so that it can precisely measure the slightest changes in their brightness caused by planets." Kepler will hunt for planets by looking for periodic dips in the brightness of stars -- events that occur when orbiting planets cross in front of their stars and partially block the light.

The mission's first finds are expected to be large, gas planets situated close to their stars. Such discoveries could be announced as early as next year.

Kepler is a NASA Discovery mission. NASA Ames Research Center, Moffett Field, Calif., is the home organization of the science principal investigator, and is responsible for the ground system development, mission operations and science data analysis. JPL manages the Kepler mission development. Ball Aerospace & Technologies Corp. of Boulder, Colo., is responsible for developing the Kepler flight system and supporting mission operations.

Provided by Jet Propulsion Laboratory (news : web)