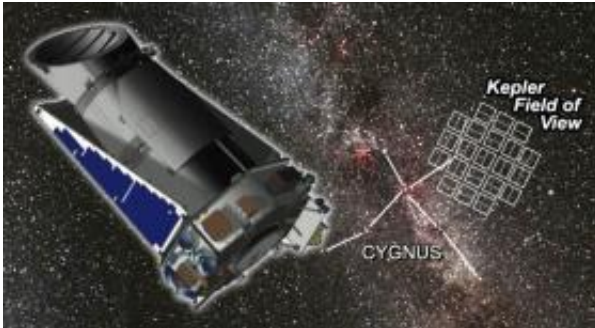


Kepler Mission Update

September 23 2009



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

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About every 90 days, the team needs to roll the spacecraft about its line-of-sight, to realign the [solar panels](#) to the sun for the next season. Unlike the Earth, Kepler does not spin about its axis, so if we do not roll it

occasionally, it would show a different side to the sun as it completes its orbit. We perform this maneuver four times a year, hence it is referred to as a quarterly roll.

Last week's operation was the second quarterly roll for Kepler since start of mission. The process began with the pausing of science data collection. The team then then turned the spacecraft so the main antenna pointed toward the Earth. After locking up on the Kepler high-gain antenna with the NASA Deep Space Network, the team downloaded all the data acquired over the previous month. After completion of the science data download, the team uploaded a few parameters and commands, and then turned the spacecraft back to the monitored star-field, but this time with the whole spacecraft rotated 90 degrees from where it was at the start.

After some calibration, data was taken and science observations began again for the next month's set of data. This whole process took only 41 hours, part of which is spent checking on pointing alignment and ensuring the spacecraft is thermally stable after these maneuvers. This data download was about 93 gigabits in size.

The science data are now in the hands of the Kepler Science Operations Center at NASA's Ames Research Center, Moffett Field, Calif., where scientists and engineers are engaged in detailed analysis. The next scheduled science data download is October 17-18.

The first set of Kepler information is now available to the public at The Multimission Archive at STScI (MAST) and may be viewed at: archive.stsci.edu/kepler/

Provided by JPL/NASA ([news](#) : [web](#))

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