



DRIFTING MORE THAN 1,161,000KM FROM EARTH AND COMMUNICATING WITH A ROUND-TRIP LIGHT TIME OF 29.7 SECONDS, THE KEPLER SPACE TELESCOPE IS TURNED ON: IT RECEIVES A 100 DEGREE FIELD OF VIEW CONTAINING 14 MILLION STARS, 100,000 OF WHICH ARE CONSIDERED "IDEAL CANDIDATES" FOR EARTH-SIZED PLANET-SEARCHING

Kepler's large viewing range is facilitated by an array of 42 charge coupled devices (CCDs) arranged in pairs. Each CCD has a pixel dimension of 2200×1024 , adding up to 95 megapixels total - the highest resolution instrument ever sent to space. The images are intentionally blurred to prevent over-saturation (when light from the brightest stars in the frame overloads the individual pixels in the detectors). The thick black lines separating pairs of CCDs are designed to block out the brightest stars in Kepler's view, allowing it to detect periodic flickers in the light of "candidate" stars, a suggestion of a planet passing by in orbit.

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