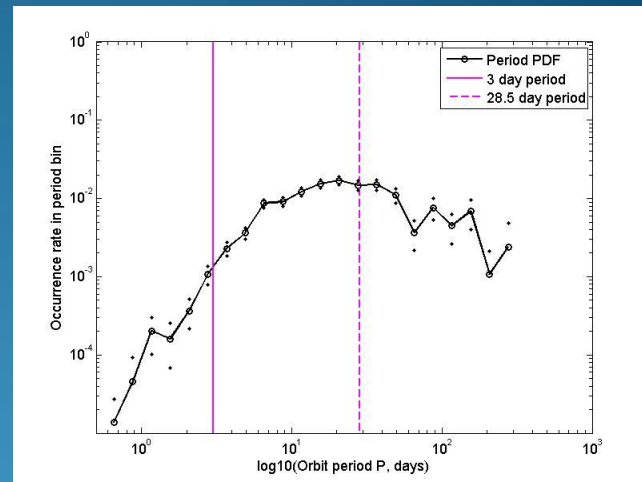
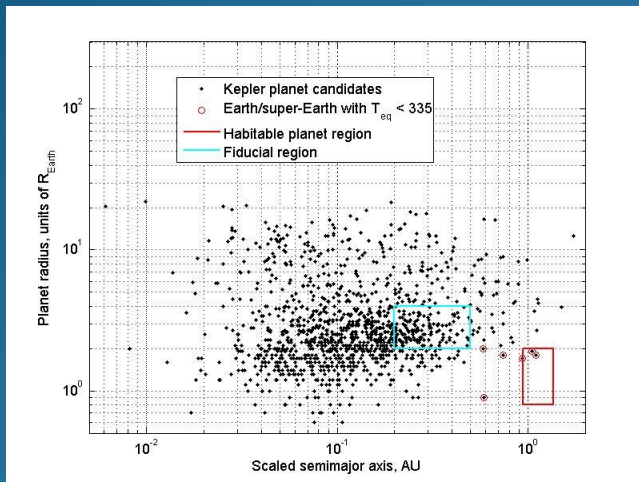


Occurrence rate of Earth analog planets orbiting sunlike stars

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A new database of Kepler planet candidates was released in February 2011.



We estimate that 1% to 3% of Sun-like stars have Earth-like planets.

□ Count planets detected in a 'fiducial' region of phase space that is complete.

□ Fit power laws to planet radius and 'scaled semimajor axis' $s = \frac{a}{\sqrt{L}}$

□ Extrapolate from the 'fiducial region' (cyan box) to the 'Earth analog region' (red box), based on the fitted power laws.

We find that the period PDF of Kepler super-Earth/Neptune candidates has three regimes.

□ $P < 3$ days: PDF increases sharply with increasing P

□ $3 \text{ days} < P < 30$ days: PDF rises more gradually with increasing P

□ $30 \text{ days} < P < 132$ days: density drops gradually with increasing period.