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Architectures of Kepler's Multi-Transiting Planetary Systems

More than one-third of the 4700 planet candidates found by NASA's Kepler spacecraft are associated with target stars that have more than one planet candidate, and such "multis" account for the vast majority of candidates that have been verified as true planets. The large number of multis tells us that flat multi-planet systems like our Solar System are common. Virtually all of the candidate planetary systems are stable, as tested by numerical integrations that assume a physically motivated mass-radius relationship. Statistical studies performed on these candidate systems reveal a great deal about the architecture and dynamics of planetary systems, including the typical spacing of orbits and flatness.

The characteristics of several of the most interesting confirmed Kepler, K2 & TESS multi-planet systems will also be discussed.