On the shoulders of giants



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Interacting temperate transiting planets from ASTEP

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With its location from ASTEP (Antarctic Search for Transiting Exoplanets) has been contributing to the discovery of many interacting planetary systems on long periods (tens to hundreds of days). The chopping signal from the planet-planet interactions can yield significant TTVs that can be measured with no ambiguity, allowing constraints on the planetary mass. The extremely small densities of some of these planets raise important questions about the formation of these systems. Future follow-up combining ASTEP, ExTrA and Cryoscope as part of the EXTRASTEP program will be extremely important to further characterize these systems. PLATO should also discover key systems with transiting planets on very long orbits. I will review the discoveries and proposed theories to explain the formation of these mysterious systems.

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