

A Study for Unveiling Planetary Evolution with Young Transiting Exoplanets

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Exoplanets, which orbit stars beyond our solar system, are now known to number over 5,800. However, the typical age of the known planet host stars is over one billion years (1 Gyr); the number of exoplanets around “young” stars (less than 1 Gyr-old) remains low. During their first billion years, planets undergo significant evolution in mass, radius, orbit, and atmosphere. Observing young planets provides crucial insights with which to improve our understanding of these processes. By establishing a new observational network in the southern hemisphere, we will increase the discovery and characterization of young transiting planets significantly. Observations from this network will provide critical data to test theories of planetary formation and evolution, illuminating the diversity of planets and planetary systems in the Universe.

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