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# UNDERSTANDING PLANETARY EVOLUTION WITH TESS

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The success of transit and RV surveys have shifted the exoplanet field from pure discovery to a combination of discovery, demographic analysis, and detailed characterization, especially for exoplanet atmospheres. However, even with nearly 5000 exoplanets known, we are still working to understand their origins and evolutionary mechanisms. Using data from NASA's TESS and Kepler/K2 missions, we are working to find keystone planetary systems around bright stars (those well suited for atmospheric observations) that can help address specific questions about planet formation and evolution. Additionally, many of the known transiting planets to date have ephemerides that have degraded to uncertainties of many hours, making them inaccessible in the era of JWST. I will review our efforts to discover and characterize new exoplanet systems from TESS, and provide the community with updated ephemerides and system parameters for future atmospheric characterization and population studies.

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