

The Next Generation Transit Survey (NGTS)

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Abstract

The Next Generation Transit Survey (NGTS) is a new ground-based sky survey designed to find transiting Neptunes and super-Earths. By covering at least sixteen times the sky area of Kepler we will find small planets around stars that are sufficiently bright for atmospheric characterization with facilities such as JWST and the E-ELT. The bright host stars will also allow radial velocity confirmation and mass determination, providing the first statistical sample of sub-Neptune densities and bulk compositions. This sample will place key constraints on models of small planet formation and evolution. The construction of the NGTS facility in Paranal is underway, and we expect to be conducting science observations by the end of the year. I will discuss the progress of the project, and hopefully present our first on sky data. Using the instruments measured noise characteristics I will present quantitative simulations of our predicted yield of small planet detections.