



PHYSICS AND ASTRONOMY COLLOQUIUM

Dr. Jessie Christiansen

Caltech

**“Ten Thousand Pieces of Blue Sky:
Building towards the complete
picture of exoplanet demographics”**

Abstract

The NASA Kepler mission has provided its final planet candidate catalogue, the K2 mission has contributed another four years' worth of data, and the NASA TESS mission has just started producing planet candidates of its own. The demographics of the exoplanet systems probed by these transiting exoplanet missions are complemented by the demographics probed by other techniques, including radial velocity, microlensing, and direct imaging. I will walk through the progress of the Kepler occurrence rate calculations, including some of the outstanding issues that are being tackled. I will demonstrate how K2 and TESS are able to push the stellar parameter space in which we can explore occurrence rates beyond that examined by Kepler, and progress to that end. Finally, I will highlight some of the pieces of the larger demographics puzzle - occurrence rate results from the other techniques that probe different stellar and exoplanet regimes - and how we can start joining those pieces together.

Wednesday, October 24, 2018

3:30 p.m.

Bob Wright Centre Building

Room A104