
Definitions and Caveats of the Habitable Zone

Stephen Kane*¹

¹San Francisco State University (SFSU) – United States

Abstract

The field of exoplanets has rapidly expanded from the exclusivity of exoplanet detection to include exoplanet characterization. A key step towards this characterization is the determination of which planets occupy the Habitable Zone (HZ) of their host stars. As the Kepler data continues to be processed, the orbital period sensitivity is increasing and there are now numerous exoplanets known to occupy the HZ of their host stars. In this talk I will describe the properties of the HZ, the dependence on stellar and planetary parameters, and the current state of exoplanet detections in the HZ. Along the way I will describe some common misconceptions regarding the Habitable Zone and detail caveats to the model. I will conclude with a pathway for testing the Habitable Zone model and answering the question: What is the purpose of the Habitable Zone?

*Speaker