

# Video: The diversity of habitable zones and the planets

24 July 2014

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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 Dr. Kane will describe the properties of the HZ, the dependence on the spectral type properties, and the current state of exoplanet detections in the HZ. Along the way Dr. Kane will attempt to dispel some common misconceptions regarding the Habitable Zone. Dr. Kane will relate HZ results to the calculation of  $\eta_{\text{Earth}}$  and  $\eta_{\text{Venus}}$ . Finally, Dr. Kane will present several case studies of HZ Kepler [planets](#), including circumbinary planets for which the HZ is a time-dependent function.

Provided by SETI Institute

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