A Bridge for a Pathway: Reconnaissance Missions and Instruments to Connect Explanet Discovery to Characterization

Eric Gaidos (U. Hawaii) gaidos@hawaii.edu

The Kepler mission demonstrated that many if not most main sequence stars host planets, and the TESS and PLATO misssions are expected to discover many such planets around nearer, brighter stars that are more readily studied by space- and ground-based spectroscopic observatories such as JWST, TMT, and ELT. However, the number of systems expected to be discovered (thousands) will dwarf the number that can be studied in detail for atmospheres and potential biosignatures by spectroscopy on very large (space) telescopes (dozens). There will be an urgent need for reconnaissance data on hundreds of systems of interest to select the most promising for follow-up and avoid the waste of precious time on the most powerful facilities. Preparations for such campaigns must be started now to be timely in light of the launch of the TESS and JWST missions in 3 years. This satellite meeting will discuss: (i) which observables, e.g. of atmospheres, might be used to select promising planets (ii) current and future missions, telescopes, and instruments that can carry out such a reconnaissance on a large scale.