Star and Planet Formation with BIFROST at VLTI

Tyler Gardner*[1]

[1]University of Exeter – United Kingdom

Abstract

BIFROST is an upcoming short wavelength, high spectral resolution combiner for the VLTI as part of the ASGARD suite of instruments. BIFROST will study a range of important topics from stellar to planetary science. I will discuss how this instrument will probe the architecture of binary and planet systems by measuring spin-orbit alignments. This is a crucial diagnostic in the study of star and planet formation channels in discs. BIFROST will also increase our knowledge of the inner regions of YSOs, by extending the methods of current VLTI instruments to shorter wavelengths. The Y/H/J bands and high spectral resolution will provide a richer spectrum for studying accretion and ejection processes in discs. With an off-axis mode, BIFROST can also search for differential phase signals from protoplanets to study accretion in circumplanetary discs.

*Speaker