

FWS16-2016-000025

ET

Abstract for an Invited Paper
for the FWS16 Meeting of
the American Physical Society

Observing the birth of planets around nearby stars

JONATHAN WILLIAMS, University of Hawaii

One of the most amazing astronomical results of the past decade is the recognition that planetary systems around other stars are ubiquitous. Planet formation is an inevitable consequence of stellar birth. We can learn about how this happens by studying the disks around young stars. The recently completed Atacama Large Millimeter Array (ALMA) in Chile has revolutionized our understanding of the physical processes in protoplanetary disks. I will present some of the latest results from ALMA and discuss the theoretical ideas of how sub-micron sized dust grains grow to super-Earths in just a few million years. Our goal, not yet achieved but within reach, is to place our Solar System in context with other systems and to determine whether the disk properties from which it formed are common or not.