



University of Oxford

# 2018 Astor Visiting Lecture Professor Adam Leroy

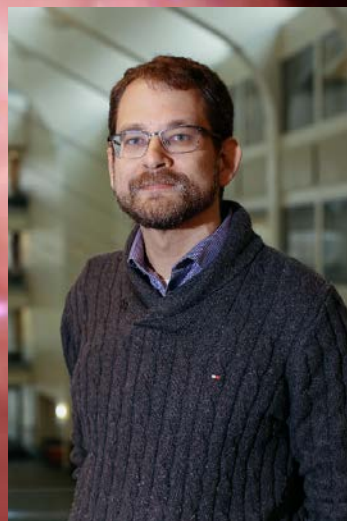
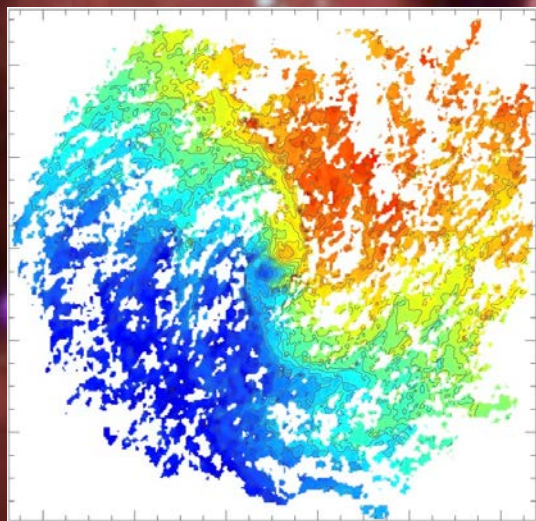
The Ohio State University

## ALMA and the Birth of Stars Across Galaxies

Wednesday 14 March 2018 at 18:00  
(to be seated by 17:50)

Martin Wood Lecture Theatre  
Clarendon Laboratory,  
Parks Road, Oxford

Followed by a reception in  
the foyer of the Martin Wood  
Lecture Theatre



**Abstract:** The Atacama Large Millimeter/sub-millimeter Array (ALMA) is the largest, most complex ground-based telescope ever built. From its perch high in the Chilean Andes, ALMA is now unveiling the birth of planets, stars, and galaxies. I will give a taste of the revolution ushered in by ALMA. This includes resolving the disks that form new Solar systems, finding the seeds of gaseous giant planets, weighing – and maybe even directly imaging – black holes, and watching galaxies form at the edge of the universe. Then, I will show how my colleagues and I are using ALMA to understand the origins of stars in galaxies. As part of ALMA's largest project to date, we are studying all of the stellar nurseries across the nearby universe. We see that the cold clouds of gas and dust that form stars appear to be shaped by violent, dynamic processes that vary from galaxy to galaxy. We also see that the birth of stars from these clouds is both inefficient and terribly destructive.