

2017-2018 Astrophysics Seminar Series

Rise of Dust: The Cosmic History of Dust-obscured Star Formation

Observations at submillimeter/millimeter wavelengths ($\sim 0.25\text{-}1.4$ mm) provide a unique view of galaxy formation, revealing hidden star formation in the early Universe (a few Gyr after the Big Bang) that cannot be seen at optical wavelengths due to extreme dust obscuration. These dusty galaxies pose a challenge to our models of galaxy evolution. Previous surveys from single-dish telescopes were sensitive to only the most extreme galaxies forming stars >100 times the rate of the Milky Way, while the more typical galaxies that dominate the total energy budget at these wavelengths remain elusive. I will discuss recent observations of dusty galaxies with the next generation of (sub)millimeter wavelength telescopes – including the Large Millimeter Telescope (LMT) and the Atacama Large Millimeter Array (ALMA) – to push studies of dust-obscured activity down to the more typical galaxies that dominate the cosmic star formation history. I will discuss how these new facilities can trace the rise of dust (and thus metals) in galaxies over cosmic time.

Monday, March 12 at 3:30PM
725 Commonwealth Avenue
Room 502



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