University of Wisconsin-Milwaukee

Dept. of Physics
COLLOQUIUM

Dusty Star-Forming Galaxies at High Redshift

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<u>Lapham Hall – Room 160</u>

Interstellar dust grains can collectively scatter, redden, and attenuate the light from a galaxy's stars-- in some cases, so effectively that a galaxy can become nearly undetectable at rest-frame ultraviolet and optical wavelengths. Starting in the late 1990s, astronomers have come to understand that luminous but optically obscured systems are much more prevalent at high redshifts (i.e., earlier times) than in the local universe, and that they make important contributions to the overall history of cosmic star formation. Progress in understanding the demographics and internal properties of these "dusty star-forming galaxies" (DSFGs) has been impeded by their high obscuration, but radio telescopes are capable of seeing through the dust and probing the reservoirs of cold interstellar gas that power DSFGs' star formation.

I will discuss recent observational results on the redshift distributions, evolutionary states, and detailed internal properties of DSFGs, along with what we can learn from gravitationally lensed DSFGs about intervening mass distributions along the line of sight.

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