



PHYSICS AND ASTRONOMY COLLOQUIUM

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"Gas and Star Formation in Nearby Galaxies: New Results From the Herschel Space Observatory"

Abstract

The availability of new instruments and telescopes is making it possible to study large, well-selected samples of nearby galaxies at millimeter and submillimeter wavelengths. These observations trace the cold, dense gas and dust which is the fuel for star formation. I will discuss new results from the Herschel Space Observatory from the Very Nearby Galaxies Survey, which aims to observe the closest example of each major class of galaxy with all the photometric and spectroscopic modes that Herschel has available. Our results include evidence for the primary heating source of much of the dust emission in normal galaxies, an increase in the gas to dust ratio in the vicinity of the central engine in Centaurus A, and a component of very hot molecular gas seen via high frequency CO emission lines that dominates the CO luminosity of starburst and merging galaxies.

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3:30 p.m.

Bob Wright Centre

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