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Title of abstract: The ISO Key Project Survey of Normal Galaxies

Abstract:

The ISO Key Project on the Interstellar Medium of Normal Galaxies (Helou et al. 1996) collected data on a set of sixty galaxies that explore the full range of morphology, luminosity, infrared-to-blue ratio and far-infrared color among star-forming galaxies. These sixty objects were selected to be small in their IRAS emission size compared to the 80 arcsec LWS beam and the 3 arcmin ISO-CAM field of view, so as to allow studies of their global properties. In addition, nine nearby galaxies were mapped to the extent possible, including NGC6946, NGC1313, IC10, and parts of M101. For most galaxies, maps were obtained at 7 and 15 microns with ISO-CAM, spectro-photometry was obtained with ISO-PHOT-S between 3 and 12 microns, and far-infrared fine-structure lines were targeted with ISO-LWS, attempting to measure as many as possible of the following lines: [CII], [OI], [NII], [OIII] at 88 microns, [NIII] at 57 microns, and [OIII] at 52 microns. This talk will summarize the results of this survey, and highlight some of their applications.

The main topics will be the Aromatic Features in the mid-infrared spectra; the infrared color statistics and the resulting global spectral energy distributions; and the observed trends in the fluxes of [CII] and [OI] lines, their variation with galaxy properties, and the physical interpretation of the observed behavior.