INFRARED SPECTROSCOPIC STUDIES WITH THE STRATOSPHERIC OBSERVATORY FOR INFRARED ASTRONOMY (SOFIA)

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The joint U.S. and German Stratospheric Observatory for Infrared Astronomy (SOFIA) will be a premier facility for studying the physics and chemistry of the interstellar medium and the stellar evolution process for many decades. SOFIA's first-generation instrument complement includes broadband imagers and moderate resolution spectrographs capable of resolving spectral features due to dust and large molecules, and high resolution spectrometers suitable for kinematic studies of molecular and atomic gas lines at km/s resolution. SOFIA spectroscopic science results from the first flight sequences will be reviewed. We will present plans for future spectroscopic studies.