Gas-phase molecular spectroscopy of young stellar objects

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Abstract

We present new results from our ISO-SWS spectroscopy program to search for gas-phase molecular absorption lines along the line of sight to massive protostars. Species detected include H2O, CO2, CH4, C2H2 and HCN (see also Lahuis et al., this workshop). We discuss the construction of model spectra and comment on the availability of basic molecular data. The resulting abundances will be compared with a variety of chemical models (time-dependent gas-phase chemistry, gas-grain chemistry, hot core chemistry).