

A Molecular Line Survey of Orion-KL from 260 to 328 GHz

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Abstract. A molecular line survey of Orion-KL from 260 to 328 GHz, a relatively unexplored region of the 1 mm atmospheric window, has been carried out at the Caltech Submillimeter Observatory atop Mauna Kea, Hawaii.

Molecular excitation, abundance and contribution to cooling are compared with the adjacent surveys (Greaves & White 1991; Schilke *et al.* 1997; Blake *et al.* 1987; Blake *et al.* 1986; Sutton *et al.* 1985). Provisionally SO and SO₂ are the dominant coolants in this band, while a large number of lines originate from species such as CH₃OCH₃, C₂H₅CN and CH₃OCHO. CH₃OH seems to play a major role on both accounts. The overall contribution of the lines to the apparent continuum is estimated to be $\gtrsim 40\%$.

Keywords. ISM: abundances — ISM: individual (Orion-KL) — ISM: molecules — line: identification — radio lines: ISM — surveys

References

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