

[10.19] Pre-Protostellar Core Properties from Far-IR observations

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We report the results of an analysis of pre-protostellar core properties derived from Infrared Space Observatory (ISO) observations at 100, 160 and 200 microns. We use a simple two-temperature grain model to separate the line of sight components into core and halo contributions. Where available we have combined the ISO data with ground based continuum maps at 1.3mm. In our analysis of three cores, L1498, B133 and B68, we derive the column density distribution, mass, density profile and dust temperature. The derived core properties are compared with various theoretical models of static and dynamic cores, including the effects of magnetic fields. Comparison with molecular line maps allows us to derive the degree of depletion onto grains, something we find to be quite important in these sources.

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