Introduction

The commissioning of a polarizer on the SCUBA instrument at the JCMT has finally made possible polarization imaging of sources with fluxes above 1 Jy. This is a vast improvement over the previous single bolometer limit of 5 Jy. In fact, each SCUBA map contains more polarization vectors than the total measured with the previous UKT14 bolometer at the JCMT! We have used the SCUBA polarimeter to map the OMC3 region in Orion A, which is known to contain one IRAS source (IRAS 05329-0505) and several reported outflows (Reipurth, Bally & Devine 1998; Chini *et al.* 1997). An age gradient has been suggested in OMC3, with the sources becoming progressively younger further to the north (Chini *et al.* 1997). Thus, the northernmost sources in the filament are good candidates for starless cores.

Observations of polarized emission in the far-IR and submillimetre regimes is the only direct method of determining the magnetic field direction in the plane of the sky (Hildebrand 1998; Hildebrand *et al.* 1995). In the submillimetre, linear polarization is detected from cool, elongated dust grains, and the projected field direction is relatively easy to interpret (compared to near-IR or optical polarization measurements) since scattering and absorption are considered negligible compared to the dichroic emission. Therefore, to first order, the aligning vector is perpendicular to the polarization vector (Holland *et al.* 1996).