lution of the cloud has been controlled to a considerable extent by a magnetic field in L204 to be ∿ 50 μm.

THE MAGNETIC FIELD STRUCTURE OF THE CMa R1 STAR FORMATION REGION

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The CMa R1 association is embedded in a curved region of dark and reflection nebulosity which is part of a larger-scale ring structure of emission nebulosity thought to be a relatively old supernova remnant (Herbst and Assousa 1977, 1978). These investigators and Herbst, Racine, and Warner (1978) have argued that recent star formation in CMa R1 was induced by the supernova. Indeed, data for the emission ring, an associated expanding H I shell, and a nearby runaway star infer an age for the supernova remnant of 3×10^5 years; consistent with the age of most of the CMa R1 stars.

Baierlein, Schwing, and Herbst (1981) and Baierlein (1983) have pointed out that a shock wave expanding from the supernova will amplify the interstellar magnetic field by compression. The resulting Parker-type hydromagnetic instability will produce gas clumps with linear extent 1-2 pc and spacing between clumps of several parsecs. The CMa R1 stars are distributed among several stellar subgroups along the curved dust cloud in just this fashion, providing further evidence for supernova-induced star formation.

If this scenario is correct, one would expect to find the compressed magnetic field at the leading edge of the shock front to be predominantly parallel to the shock front. In order to test this, we have carried out an extensive linear polarization survey of the CMa R1 region using the VATPOL polarimeter at the 61-inch and 90-inch telescopes of the University of Arizona and the 40-inch telescope of the U.S. Naval Observatory. Observations were obtained for 116 stars which appeared to sample the CMa R1 dark nebulosity and for 26 of the stars found to be associated with bright nebulosity by Herbst *et al.* (1982). We find that there is a clear tendency for stars on the western periphery of the association to have large polarizations which, in general, lie along the arc described by the dark dust lane in the south and emission nebulosity in the north. Stars more to the east, which are projected inside the ring, tend to have smaller polarizations primarily in directions nearly parallel with the galactic plane.

https://doi.org/10.1017/S0074180900095048 Published online by Cambridge University Press

While we cannot disentangle the full three-dimensional magnetic field structure of the cloud, we can account for these features and several others with a simple model of field geometry which arises not from these data but from the supernova-induced star formation proposal made by Herbst and Assousa (1977). The observed general alignment of vectors with the arced dust cloud in CMa R1 supports a model of this nature as opposed to one in which the cloud formed by gravitational collapse of material along the field lines. The latter would result in a cloud whose long axis is perpendicular to the field lines, not parallel to them. Our results provide significant new evidence that star formation in CMa R1 was triggered by cloud collapse due to an external source of compression (most likely a nearby supernova) rather than quiescent collapse along magnetic field lines. Whether the subgroup structure among the newly formed stars, as discussed by Baierlein *et al.* (1981), really arose as a result of the instability suggested by them cannot be answered by our data, although that scenario certainly remains plausible.

We wish to thank Dr. G.V. Coyne and the staff of the Vatican Observatory for the use of the VATPOL polarimeter and the University of Arizona for the granting of telescope time.

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COMPARISON OF CO AND IR EMISSION OF IRAS UNIDENTIFIED SOURCES

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IR observations with the IRAS satellite have revealed in the galaxy a lot of point-like unidentified sources: they have no optical or radiocontinuum counterpart, and cannot be known stars, nor H II regions. We have undertaken mm-wave observations of a sample of ∿ 100 of these sources with the Bordeaux telescope (beamsize = 4.4' ∿ IRAS resolution). These sources seem to be associated with protostars or young stars still embedded in molecular clouds. Some of the sources present high-velocity wings, suggesting a bipolar gaseous ejection from the protostar.

https://doi.org/10.1017/S0074180900095048 Published online by Cambridge University Press