

P151a A FIRST LOOK AT BISTRO OBSERVATIONS OF THE ρ OPH-A CORE

Jungmi Kwon (ISAS/JAXA), BISTRO-J Team and BISTRO Consortium

Stars form in dense and cool molecular clouds and it has long been considered that magnetic fields may play important roles in various stages of star formation. In order to measure the magnetic fields in dense cores, which are directly related to the star formation processes, submillimeter polarimetry of thermal emission from dust is an important tool to trace magnetic fields in star forming regions as well as near-infrared polarimetry. In this presentation, we present the deepest 850 μm imaging polarimetry data of the ρ Ophiuchi A core with the Submillimeter Common-User Bolometer Array (SCUBA-2) and its polarimeter (POL-2), as part of our ongoing survey project, BISTRO (B-fields In STar forming RegiOns). Magnetic field directions of the dense core regions, which can be indicated by (90 degree rotated) submillimeter polarization vectors, are derived; within the only 0.2 pc core region, we have identified many magnetic field components which are different with each other either in directions or degrees of polarization.