

LBA full polarisation observations of the excited OH and methanol masers in G351.417+0.645

We will present preliminary results of the full polarisation of 6.035-GHz excited OH and 6.668-GHz methanol masers towards a star-forming region G351.417+0.645. These are the first OH and methanol observations made in full polarisation using one array and five antennas of the Long Baseline Array (LBA) of Australia, which provided the highest angular resolution measurements of magnetic field directions in milliarcsecond scale in this region. The Astronomical Image Processing System (AIPS) software was used for data reduction. For polarisation calibration, we used a linear approximation model (LPCAL task in AIPS) to solve for the D-terms for all antennas using the three calibrators, 1729-373, 1343-601 and 1921-293 observed together with the target sources and then applied the solution to the target source. The polarisation position angle (PPA) previously measured from 6.668-GHz CH₃OH masers with ATCA for this source was used for referencing the polarisation angle correction. The solution for D-terms of the LBA antennas at 6.035-GHz and 6.668-GHz and the linear polarisation map in this source from these two maser species at the milliarcsecond scale will be presented. Polarisation information of both excited OH and methanol masers will be compared and their implication for magnetic field structure will be discussed in this work.

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