

THE MOPRA SOUTHERN GALACTIC PLANE CO SURVEY

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We will present new results from the Mopra Galactic Plane CO survey, which is an improved survey of the CO $J = 1-0$ line at 3 mm along the 4th quadrant of the Galaxy. This survey achieves an order of magnitude better spatial and spectral resolution (i.e. 0.6 and 0.1 km/s) than the Dame et al. (2001) survey that is publically available of the Southern Galactic plane. Driven by the need for high resolution Galactic gas density data to complement the next generation gamma-ray experiment, the Cherenkov Telescope Array (CTA), the Mopra CO survey includes the four principal isotopologues of the CO molecule (i.e. ^{12}CO , ^{13}CO , C^{18}O and C^{17}O) and allows new conclusions to be drawn about the morphology, shocks, distances and energetics of cosmic-ray target material in the interstellar medium.

The survey is still being carried out; it presently ranges from $l = 265$ -- 10° , $-0.5 < b < +0.5^\circ$, in addition to several regions of extended latitude covering the CMZ, the Carina Nebula, HESSJ1731-347 and other sources of interest. The Mopra CO data are being made publically available as they are published; for the latest release see the project website at www.phys.unsw.edu.au/mopraco.