

# Searching for WIMPs in the Large Magellanic Cloud

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We present a radio search for WIMP dark matter in the Large Magellanic Cloud (LMC). We make use of a recent deep image of the LMC obtained from observations of the Australian Square Kilometre Array Pathfinder (ASKAP), and processed as part of the Evolutionary Map of the Universe (EMU) survey. LMC is an extremely promising target for WIMP searches at radio frequencies because of the large J-factor and the presence of a substantial magnetic field. We detect no evidence for emission arising from WIMP annihilations and derive stringent bounds. This work excludes the thermal cross section for masses below 480 GeV and annihilation into quarks.

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