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The JCMT BISTRO Survey: Magnetic Fields Associated with a Network of Filaments in the Massive Star-forming Region Onsala 2

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We investigate the magnetic field properties in the massive star-forming region Onsala 2 (ON2) in Cygnus using 850 μm polarization observations from the B-Fields in Star-Forming Region Observations (BISTRO) survey, which is a Large Program of the James Clerk Maxwell Telescope (JCMT). Our data cover the entire ON2 complex at a resolution of 0.12 pc, allowing us to spatially resolve polarized emission from filamentary structures. Within ON2, we estimate the magnetic field strength in identified clumps using the Davis–Chandrasekhar–Fermi method and analyze the energy budgets of the magnetic field, turbulence, and gravity. We further investigate local magnetic field morphologies, gravitational field vectors, and filamentary skeletons to explore the interaction between filaments and magnetic fields across the ON2 complex.

Section

Star Formation

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