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Magnetic structure of BiFeO₃ V. KIRYUKHIN, M. RAMAZANOGLU, S. LEE, S-W. CHEONG, Rutgers University, W. RATCLIFF, M. LAVER, NIST, J.G. PARK, Seoul Natl. Univ. — Neutron scattering studies of the magnetic structure of single-crystalline BiFeO₃ are presented. Temperature dependence of the magnetic order parameter, the anharmonicity of the magnetic cycloid, and the small tilt of the spins out of the cycloid plane (local weak ferromagnetism) are discussed. Inelastic neutron scattering measurements of the microscopic magnetic coupling constants are also presented.

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