

MODULATED MAGNETIC STRUCTURE
OF AN INHOMOGENEOUSLY STRESSED
SINGLE CRYSTAL FeBO₃

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With the help of low-symmetry mechanical stresses, we induced an additional spatially inhomogeneous anisotropy in the basal plane of a single crystal FeBO₃. By the magneto-optical method, we study the effect of an inhomogeneous magnetic anisotropy on the magnetic state of this easy-plane weak ferromagnetic. It is established that, at the magnetization of inhomogeneously stressed FeBO₃ in the basal plane near some separated direction, the crystal transits from the homogeneous state into a spatially modulated magnetic state. The latter can be represented in the form of a static spin wave, in which a local vector of ferromagnetism oscillates near the direction of the mean magnetization of a crystal, by remaining in the basal plane.