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# Evidence for a collinear easy-plane magnetic structure of multiferroic $\text{EuFe}_3(\text{BO}_3)_4$ : Spectroscopic and theoretical studies

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## Abstract

© 2016 American Physical Society. We performed high-resolution polarized optical transmission spectroscopy and theoretical studies of multiferroic  $\text{EuFe}_3(\text{BO}_3)_4$  single crystals in the three phases: paramagnetic  $R32$  ( $T > T_s = 84\text{K}$ ) and  $P3121$  ( $T_s > T > T_N = 34\text{K}$ ), and antiferromagnetic ( $T$