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Electron Paramagnetic Resonance of Cr^{3+} Ions in Single Crystals of Yttrium Aluminum Borate $\text{YAl}_3(\text{BO}_3)_4$ *

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Single crystal of yttrium aluminum borate $\text{YAl}_3(\text{BO}_3)_4$ doped with chromium ions (1 at.%) was studied using electron paramagnetic resonance spectroscopy. It is shown that chromium ions introduced into the sample occupy yttrium ion sites in the crystal structure. The parameters of the spin Hamiltonian of Cr^{3+} ions in the $\text{YAl}_3(\text{BO}_3)_4$ matrix are determined at different temperatures. The sign of the fine structure parameter D allows the conclusion that the chromium ions in $\text{YAl}_3(\text{BO}_3)_4$ single crystals have an easy-plane anisotropy.

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