

STRUCTURE OF VORTEX LIQUID IN IRRADIATED BISCO CRYSTALS

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Abstract

Dependence of the c -axis resistivity and Josephson plasma resonance on the magnetic field component parallel to the layers B_{\parallel} at fixed perpendicular component B_{\perp} provides information on phase difference correlation function and density correlation function of pancake vortices in Josephson coupled superconductors. In crystals with columnar defects these data show that correlation length in the ab plane as function of B_{\perp} exhibits maximum near $0.3B_{\Phi}$ indicating formation of pieces of lines inside columnar defects. Origin of this effect is discussed.