

Abstract Submitted
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Flux dynamics across MoGe bridges in the parallel field orientation¹ MILIND KUNCHUR, MANLAI LIANG, University of South Carolina, ALEXANDER GUREVICH, Florida State University — We have investigated flux motion in amorphous molybdenum-germanium (MoGe) film bridges with the magnetic field B parallel to the film plane but perpendicular to the current direction. In a temperature range close to the transition temperature T_c we observe an exponential dependence of the Ohmic resistance R on B at low values of the current I , and a nonlinear $R(I)$ at higher currents. In this regime, the diameter of the vortex is approximately equal to the film thickness and the applied magnetic field is comparable to the lower critical field for the parallel field orientation. Dissipation presumably occurs by thermally activated flux jumps over the thickness of the film involving nucleation and expansion of vortex kinks.

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