

Abstract Submitted
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Silicon superconducting quantum interference device ANAS FRANCHETEAU, JEAN-EUDES DUVAUCHELLE, CHRISTOPHE MARCE-NAT, CEA Grenoble, FRANCESCA CHIODI, DOMINIQUE DBARRE, IEF Orsay, KLAUS HASSELBACH, Institut Nel CNRS Grenoble, J.R. KIRTLEY, Stanford University California, FRANOIS LEFLOCH, CEA Grenoble — We have studied a Superconducting Quantum Interference SQUID device made from a single layer thin film of superconducting silicon. The superconducting layer is obtained by heavily doping a silicon wafer with boron atoms using the Gas Immersion Laser Doping (GILD) technique. The SQUID device is composed of two nano-bridges (Dayem bridges) in a loop and shows magnetic flux modulation at low temperature and low magnetic field. The overall behavior shows very good agreement with numerical simulations based on the Ginzburg-Landau equations.

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