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Measurement of Vortex Bragg Glass Structure Factor in Nb using Neutron Reflectometry HELEN HANSON, XI WANG, XINSHENG LING, Brown University, BRIAN MARANVILLE, NIST — One of the key predictions in the Bragg Glass model of weakly pinned vortex lattices is a power-law structure factor similar to that of a 2D solid. Previous attempts using SANS in Nb and HTSC have provided results that are consistent with the Bragg Glass model. Here we report the first experiment using neutron reflectometry to resolve S(Q) in a Nb single crystal. This work was supported by a grant from DOE-BES. The experiments were carried out at NG-1- Advanced Neutron Diffractometer facility at NIST NCNR.

Xinsheng Ling
Brown University

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