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Neutron scattering on the Topological Kondo insulator SmB6¹ WESLEY T. FUHRMAN, Institute for Quantum Matter and Department of Physics and Astronomy, The Johns Hopkins University, J. LEINER, Quantum Condensed Matter Division, Oak Ridge National Laboratory, P. NIKOLIC, Institute for Quantum Matter and Department of Physics and Astronomy, The Johns Hopkins University, G. E. GRANROTH, Neutron Data Analysis and Visualization Division, Oak Ridge National Laboratory, M. B. STONE, M. D. LUMSDEN, Quantum Condensed Matter Division, Oak Ridge National Laboratory, L. DEBEER-SCHMITT, Instrument Source Division, Oak Ridge National Laboratory, P. A. ALEKSEEV, National Research Centre Kurchatov Institute, , J.-M. MIGNOT, Laboratoire Lon Brillouin, CEA-CNRS, S. M. KOOHPAYEH, P. COTTINGHAM, W. ADAM PHE-LAN, L. SCHOOP, J. CHAMORRO, Institute for Quantum Matter and Department of Physics and Astronomy, The Johns Hopkins University, YANG ZHAO, NIST Center for Neutron Research, THOMAS KELLER, Max Plank Institute, JEFF LYNN, NIST Center for Neutron Research, T.M. MCQUEEN, COLLIN BROHOLM, Institute for Quantum Matter and Department of Physics and Astronomy, The Johns Hopkins University — We present recent neutron scattering experiments on SmB6 involving the 14meV spin-exciton with emphasis on it's relation to the low-energy DOS, which has had renewed interest in light of anomalous quantum oscillations. The exciton is evidence of strong correlations driving the novel insulating state in SmB6 and can be described by a perturbative slave boson treatment of a hybridized 2 species (d/f) band structure within the Anderson model.

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