Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Spin Dynamics in the f-electron non Fermi Liquid alloy Sc1-xUxPd3 STEPHEN WILSON, University of Tennessee, PENGCHENG DAI, University of Tennessee/ Oak Ridge National Lab, D. ADROJA, ISIS Rutherford Appleton Laboratory , Y. QIU, NIST Center for Neutron Research, N.P. BUTCH, M.B. MAPLE, University of California, San Diego — We will discuss our recent inelastic neutron scattering experiments probing the spin dynamics in the non Fermi-liquid alloy, $Sc_{1-x}U_xPd_3$. The increased homogeneity of U- sites in this system allows for an investigation of magnetism without the disordering effects of U-site clustering observed in isostructural $Y_{1-x}U_xPd_3$. Spin dynamics indicative of the influence of a spin glass (SG) quantum critical point (QCP) in $Sc_{1-x}U_xPd_3$ have been observed previously. Our current study probes spin fluctuations now doped away from this SG QCP and into the antiferromagnetic (AF) ordered phase of the system. The evolution of the spin excitations as the system is tuned across its phase diagram away from the SG QCP will be discussed, with particular emphasis given to the evolution of the localized spin fluctuations attributed to the QCP in this system.

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Date submitted: 04 Jan 2007 Electronic form version 1.4