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High field, low temperature 17O Knight shift in an underdoped High-Tc cuprate: La(2-x)Sr(x)CuO(4) for x =0.115, 0.15 GREG BOEBINGER, ROBERT SMITH, PHILIP KUHNS, ARNEIL REYES, National High Magnetic Field Lab, TAKASHI IMAI, McMaster University — We use high magnetic fields (>30T) to suppress the superconducting Tc in order to investigate the normal state NMR properties of La(2-x)Sr(x)CuO(4) (LSCO) at low temperatures. Recent studies have shown glassy behavior and incommensurate spin-waves in LSCO, which has been discussed as evidencing a stripe ordered picture at low temperatures in the under-doped regime. We use 17O NMR as a local probe of the electron density on the planar oxygens. 17O Knight shift and linewidth were obtained over a wide temperature range in the normal state for under-doped (x=0.115) and optimally doped (x=0.15) LSCO.

Greg Boebinger
National High Magnetic Field Lab

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