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Low-energy spin dynamics in $\mathbf{La_{1.95}Sr_{0.05}CuO_4}$[1] WEI BAO, Los Alamos National Lab., YING GASPAROVIC, NIST, KASU YAMADA, Tohoku Univ., Japan, EMILIO LORENZO, CNRS, Grenoble, France, J-H. CHUNG, NIST
— The low energy part of spin fluctuation spectra $S(\mathbf{q}, E)$ of $La_{1.95}Sr_{0.05}CuO_4$ were measured using the cold neutron triple-axis spectrometer SPINS from 1.5 to 80 K. The incommensurate doublets of magnetic peaks show a tendency to move towards the commensurate (pi,pi) point with increasing energy, like the incommensurate quartets in $(La,Ba)_2CuO_4$ and other related cuprates. There is an energy-resolution limited "central peak" at $E = 0$ below 20K in the spectra $S(\mathbf{q}, E)$, likely due to the spin-glass transition [1]. The inelastic component has a different temperature dependence from the "central peak" and a detailed quantitative description of the data becomes available. The *local* spectra $S(E)$ behave in a manner closely resembling those of Li-doped La_2CuO_4 [2].
[1] Y. Chen et al., Phys. Rev. B **72**, 184401 (2005).
[2] W. Bao et al., Phys. Rev. Lett. **91**, 127005 (2003); Y. Chen et al., cond-mat/0408547.

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Wei Bao
Los Alamos National Lab.

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