Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Low energy spectroscopic mapping study on $(Ca,Na)_2CuO_2Cl_2$
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— Spatial variations of the low energy (<50 meV) local density of states (LDOS) spectra of $(Ca,Na)_2CuO_2Cl_2$ ($T_c \sim 25$ K) have been studied using scanning tunneling microscopy/spectroscopy (STM/STS) in the temperature range between 0.4 K and 20 K. Previous STM/STS studies revealed the checkerboard-like glassy electronic order which is associated with a V-shaped pseudogap $\sim$ 150 mV. [1] We have found another small gap ($\sim$ 10 mV) with LDOS peaks at the gap edges. The gap-edge peak is spatially inhomogeneous and tends to disappear at elevated temperatures, suggesting that the small gap is related to superconductivity. [1] T. Hanaguri *et al.*, Nature **430**, 1001 (2004).

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Date submitted: 30 Nov 2005 Electronic form version 1.4