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**Near-Room Temperature Studies of the Pseudogap Phase of Underdoped Bi-2212** LING FU, AARON KRAFT, Clark University, GENDA GU, Brookhaven National Laboratory, MICHAEL BOYER, Clark University — Most scanning tunneling microscopy (STM) studies on significantly underdoped samples of the high-temperature superconductor Bi-2212 have been conducted at low temperatures where the pseudogap state coexists with superconductivity. The pseudogap phase transition for these materials occurs at relatively high temperatures,  $T^* > 300\text{ K}$ , a region of the phase diagram which is largely unexplored by STM. Here we present our temperature-dependent STM measurements of the pseudogap state of underdoped Bi-2212 in the vicinity of  $T^*$ .

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