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Coherence factor effects in the antisymmetrized LDOS correlators[1] MARIANNA MALTSEVA, Dept of Physics and Astronomy, Rutgers University, P. COLEMAN, Dept Physics and Astronomy, Rutgers University — Recent scanning tunneling experiments on underdoped cuprates by Hanaguri et al [1] show the appearance of coherence factor effects. Unlike conventional observables, we show that the tunneling density of states in a superconductor does not have a well defined coherence factor. However, by extracting the component that is either even, or odd in the bias voltage, we show that these separate components have well-defined coherence factors. These results are used to understand the appearance of coherence factor effects in the antisymmetrized local density of states correlators in recent scanning tunneling experiments.

[1] T. Hanaguri, Y. Kohsaka, M. Ono, M. Maltseva, P. Coleman, I. Yamada, M. Azuma, M. Takano, K. Ohishi and H. Takagi, to be published (2009).

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