**Series Study of Superconducting Correlations in the 2D t-J Model**
W. O. PUTIKKA, Physics Dept., Ohio State University — By calculating 12th order high temperature series for all spin singlet pairing correlation functions (s-wave, $d_{x^2-y^2}$ and $d_{xy}$), I investigate the possiblity of superconductivity in the 2D t-J model. In generating the series I allow the pairs to be any size that contributes to the 12th order series. Summing up all contributions, I find a strong $R = 0$ response for $d_{x^2-y^2}$ symmetry, but with $R > 0$ the correlation function is very small. The $R = 0$ response can be shown to be primarily a sum of two point correlators and is thus not indicative of long range superconducting order. By holding the internal degrees of freedom of the pairs fixed I further investigate the $R > 0$ correlations. I will discuss the results of these calculations for all symmetries mentioned above.

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