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Competing Pairing Symmetries in a Generalized Two-Orbital Model for the Pnictides A. NICHOLSON, W. GE, X. ZHANG, University of Tennessee and ORNL, J. RIERA, Universidad Nacional de Rosario, M. DAGHOFER, IFW Dresden, A. OLES, Max-Plank Institut fur Festkorperforchung, Heienberstrasse, G. MARTINS, Oakland University, A. MOREO, E. DAGOTTO, University of Tennessee and ORNL — An extended "t-U-J" two-orbital model [1] for the pnictides will be introduced that includes Heisenberg terms deduced from the strong coupling expansion of the Hubbard model. This extension allows us to enhance the strength of the $(\pi, 0)$-$(0, \pi)$ spin order and favors the presence of tightly bound pairing states even in the small clusters that are exactly diagonalized. The A_{1g} and B_{2g} pairing symmetries are found to compete in the realistic spin-ordered and metallic regime. The dynamical pairing susceptibility additionally unveils low-lying B_{1g} states, suggesting that small changes in parameters may render any of the three channels stable. These results contribute to understanding the puzzling results in pnictides where both nodeless and nodal states have been reported.

[1] A. Moreo *et. al.*, Phys. Rev. **B** 79, 134502 (2009)
[2] A. Nicholson *et. al.*, preprint

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