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The stripe-like collective excitation in cuprates: A variational Monte-Carlo study CHUNG-PIN CHOU, TING-KUO LEE, Institute of Physics, Academia Sinica — In this study we report variational Monte-Carlo calculations of collective excitations for the extended $t - J$ model. We found a particular collective excitation involving modulation of charge, spin and pair field have a fairly small stiffness constant. These very easily excitable excitations are the same as the stripe-like states observed in our previous results for the $t - J$ model. This anomalous low rigidity from these low-lying collective excitations may provide a better understanding of the ubiquitous nature of the stripe states in cuprates.

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