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**Properties of the Composite Fermion Wigner Crystal** ALEX ARCHER, JAINENDRA JAIN, The Pennsylvania State University — In two dimensional electron systems at small filling factor the ground state is a Wigner crystal. Wigner crystals can also be observed for systems near integer fillings, where electrons or holes in the partially filled Landau Level form a Wigner crystal. Recent experimental evidence (PRL 105, 126803 (2010)) suggests that a Wigner crystal of composite fermions forms near the filling factor of  $\nu = \frac{1}{3}$ . Motivated by these results, we calculate the shear modulus of the composite fermion Wigner crystal in the vicinity of several fillings of the form  $\nu = \frac{1}{3}, \frac{2}{5}, \frac{3}{7}$ , following the procedure of Maki-Zotos, using the effective two-body real space interactions between composite fermions calculated by Lee, Scarola, and Jain. We discuss the differences from the electron Wigner crystal, and also the experimental implications of our results.

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