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**Density Fluctuations in Ultracold Gases** CHRISTIAN SANNER, RALF GOMMERS, WUJIE HUANG, AVIV KESHET, EDWARD SU, WOLF-GANG KETTERLE, MIT — Many interesting quantum phases like the Mott insulator are characterized by their incompressibility and suppression of density fluctuations. Directly measuring these fluctuations around the average can provide important information about the quantum phase. We report on experiments that directly measure the density fluctuations in an ultracold Fermi gas.

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