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Quantum Quench of a p-Wave Fermi Gas across the Quantum Phase Transition SUKJIN YOON, GENTARO WATANABE, APCTP(Asia Pacific Center for Theoretical Physics), Korea — We investigate the non-equilibrium dynamics following a quantum quench across the quantum phase transition in a p-wave superfluid Fermi gas at zero temperature. This case is distinct from the s-wave case where the change from the BCS to BEC regime is just a crossover. The quench dynamics of a polar state as well as an axial state of the p-wave superfluid Fermi gas are studied. The time evolutions of the order parameter are obtained within a mean field approach and compared with the s-wave case.

Sukjin Yoon
APCTP (Asia Pacific Center for Theoretical Physics), Korea

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