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When do interactions with Goldstone bosons lead to non-Fermi liquids HARUKI WATANABE, ASHVIN VISHWANATH, UC Berkeley — There are few general physical principles that protect the low-energy excitations of a quantum phase. Of these, Goldstone's theorem and Landau-Fermi liquid theory are the most relevant to solids. In this talk, I will present a general analysis of when non-Fermi liquid behavior can arise in electronic systems due to coupling to Goldstone modes. We unify previously known cases using a single criterion and predict a new candidate involving phonons under a magnetic field.

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