

Abstract Submitted  
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**Dynamics and quasiparticle relaxation in BEC quantum antiferromagnets**<sup>1</sup> SASHA CHERNYSHEV, SUHAS GANGADHARAIHAH, University of California, Irvine — We discuss the relaxation rate of bosonic excitations near the BEC quantum-critical point in 3D at finite temperature, pertinent to a number of spin-gap quantum antiferromagnets in magnetic field. We demonstrate that the bosonic self-energy has a non-trivial frequency behavior that can be observed in spectroscopic experiments. It is shown that the boson-boson scattering channel is essential for a proper understanding of the thermal transport anomalies in these systems.

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