

Abstract Submitted  
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**Tunneling spectroscopic evidence of quasiparticle crystallization near  $\nu = 1$  quantum Hall ferromagnet** JOONHO JANG, BENJAMIN HUNT, RAYMOND ASHOORI, Massachusetts Inst of Tech-MIT, LOREN PFEIFFER, KEN WEST, Princeton University — We have used Time Domain Capacitance Spectroscopy to measure the density of states of 2 dimensional holes in Carbon doped GaAs at temperature of 20 mK and high magnetic fields. Filling factor dependent anomalous features, which is antisymmetric in energy and density, were observed around the quantum Hall ferromagnet  $\nu = 1$ . The analysis of the quasiparticle dynamics around  $\nu = 1$  is consistent with the picture that holes are dressed by interactions with bosonic degrees of freedom. We attribute this bosonic mode to the gapless Goldstone mode emergent due to the development of crystalline order of charged quasiparticles.

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