

Abstract Submitted
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Qubit-based optical nonreciprocity in hybrid optomechanical spinning resonators¹ IMRAN MIRZA, Macklin Quantum Information Sciences, Physics Department, Miami University, Oxford, OH 45056, WENCHAO GE, Institute for Quantum Science and Engineering, Department of Physics and Astronomy, Texas AM University, College Station, TX 77843, USA — We study the transmission of probe light in a hybrid optomechanical spinning resonator coupled with a single two-level emitter (qubit). Applying the weak atomic excitation condition, we find that the presence of a single qubit can alter the probe light transmission considerably by introducing a spinning rate-dependent reflection channel.

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