

Abstract Submitted
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Characterizing measurement back-action in the superconducting cQED architecture ANTONIO D CRCOLES, CHRIS J WOOD, JOSE CHAVEZ-GARCIA, SCOTT LEKUCH, KEN INOUE, NICHOLAS T BRONN, BALEEGH ABDO, MARKUS BRINK, JERRY M CHOW, JAY M GAMBETTA, IBM T J Watson Res Ctr — As superconducting qubits become increasingly reliable and scalable, more complex sequences of operations arise as part of interesting algorithms and demonstrations. Although measurements in superconducting qubits in the cQED architecture have been a standard component of quantum information processing with these devices for many years, little has been explored about the effect of a measurement operator on subsequent qubit gates. Here we present new insights on the effect of measurement on these systems and how to incorporate this learning into larger scale efforts.

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