

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**Coherences of transmon qubits embedded in superconducting whispering gallery mode resonators**<sup>1</sup> Z.K. MINEV, K. SERNAK, IOAN POP, Z. LEGHTAS, K. SLIWA, L. FRUNZIO, R. SCHOELKOPF, MICHEL DEVORET, Department of Applied Physics, Yale University — We describe the design and measurement of a planar superconducting two-resonator one-qubit device. The two resonators are realized in a hardware-efficient way by the differential modes of a superconducting whispering gallery mode resonator [APL 103, 142604]. This device forms an integrated basis for a quantum memory [New J. Phys. 16, 045014 2014].

<sup>1</sup>Work supported by: IARPA, ARO, and ONR.

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Date submitted: 13 Nov 2014

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