

Abstract Submitted
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Towards Tunable Transitions in 2-D Transmons Z.K. KEANE, Laboratory for Physical Sciences, College Park, MD, B. SURI, S. NOVIKOV, Laboratory for Physical Sciences, College Park, MD; Department of Physics, University of Maryland, J.E. ROBINSON, Laboratory for Physical Sciences, College Park, MD, F.C. WELLSTOOD, Department of Physics, University of Maryland, B.S. PALMER, Laboratory for Physical Sciences, College Park, MD — We have developed a design for a tunable transmon qubit with an on-chip flux bias. The transmon is fabricated with two sub-micron Al/AIO_x/Al tunnel junctions and coupled to a superconducting planar lumped-element resonator. A coplanar transmission line provides flux coupling and tuning of the qubit's transition energies. We will discuss the design and fabrication strategy and present preliminary measurements of coherence and tunability in these devices.

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