Abstract Submitted
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High fidelity gates and states in a 5 Xmon qubit Josephson quantum processor, part III: controlled-Z theory JOHN MARTINIS, R. BARENDS, J. KELLY, A. MEGRANT, UC Santa Barbara, A. VEITIA, UC Riverside, E. JEFFREY, D. SANK, T. WHITE, J. MUTUS, J. BOCHMANN, B. CAMPBELL, Y. CHEN, Z. CHEN, B. CHIARO, A. DUNSWORTH, I. HOI, C. NEILL, P. O'MALLEY, C. QUINTANA, P. ROUSHAN, A. VAINSENCHER, J. WENNER, UC Santa Barbara, A. KOROTKOV, UC Riverside, A.N. CLELAND, UC Santa Barbara — I will explain how to construct a two-qubit controlled-Z gate that is adiabatic and fast (40 ns), yet requires only moderate coupling ($g/2\pi = 30$ MHz).

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