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Shadow Evaporated Josephson Junctions for superconducting qubits FABIO ALTOMARE, JOSÉ AUMENTADO, KEVIN OSBORN, JOSHUA STRONG, RAYMOND SIMMONDS, National Institute of Standards and Technology, 325 Broadway, Boulder CO 80305. — Superconducting circuits are a promising system for the implementation of quantum computing. At present two-level system defects in junctions create a formidable obstacle for superconducting qubits. As shown previously, juctions of reduced size have fewer defects. Making high quality utra-small Josephson junctions is crucial for futher progress. In this talk we will discuss how we define and assess the quality of our shadow evaporated Josephson junctions.

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