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Micro-fabricated Surface Ion Traps for Quantum Computation CLARK HIGHSTRETE, MATTHEW BLAIN, KEVIN FORTIER, WALTER GORDY, RAYMOND HALTLI, SHANALYN KEMME, THOMAS LINDGREN, DAVID MOEHRING, MARK E. SMITH, DANIEL STICK, CHRIS TIGGES, Sandia National Laboratories — We will present results of the design, operation, and performance of surface ion micro-traps fabricated at Sandia. Recent progress in the testing of the micro-traps will be highlighted, including successful motional control of ions and the validation of simulations with experiments. Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

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