Abstract Submitted
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Large, Individually-addressable, Multispecies Quantum Information Processor : Performance[1] MARKO CETINA, MICHAEL GOLDMAN, LAIRD EGAN, ANDREW RISINGER, KEVIN LANDSMAN, CHRISTOPHER MONROE, Joint Quantum Institute, University of Maryland Department of Physics, College Park 20742 — Under the IARPA LogiQ program, in a collaboration between universities and industrial partners, we have constructed a complex ion-based quantum processor with the goal of realizing a logical quantum bit. I will report on the performance of our first-generation integrated system, including fidelities of single-qubit and two-qubit gates, crosstalk, operation with long ion chains, syndrome readout and multi-species operation.

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