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D-Wave Systems

The D-Wave 2000Q Processor

We have developed a series of tunable processors that run the quantum annealing algorithm on networks of coupled superconducting flux qubits. We discuss the most recent generation of processor with 2000 qubits and expanded control over the annealing process. In particular, we describe the per-qubit in situ tunable annealing offset control and the more flexible control over global annealing trajectories. This expanded capability allows for more sophisticated examination of the behaviour of the quantum annealing algorithm running on a practical processor.