**QICK boards, Sara Sussman**

**Pre-reading:**

<https://journals.aps.org/prxquantum/abstract/10.1103/PRXQuantum.2.040202>

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**Questions that could be used for final exam**

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What is dispersive readout?

**a) Reading out a resonator which is dispersively (off-resonantly) coupled to a qubit. This coupling entangles their quantum states.**

b) Reading out a resonator which is dispersively (off-resonantly) coupled to a qubit. This coupling does not entangle their quantum states.

c) Reading out a resonator which is dispersively (resonantly) coupled to a qubit. This coupling entangles their quantum states.

d) Reading out a resonator which is dispersively (resonantly) coupled to a qubit. This coupling does not entangle their quantum states.

Which plot has the best readout fidelity?

**a) a plot with totally separated IQ blobs**

b) a plot with halfway separated IQ blobs

c) a plot with totally overlapping IQ blobs

d) a plot with almost totally separated IQ blobs

What are examples of active control in a quantum system?

**a) feedback, feedforward and active reset**

b) feedback

c) active reset

d) None of the above