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# INTERFACING COLD ATOMS AND SUPERCONDUCTORS

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## Résumé

In our experiments, we investigate the interface between ultracold atoms and superconducting devices. I report the realization of a trapped rubidium atomic clock on a superconducting chip at 4.2 K. We demonstrate the loading of atom clouds into a coplanar microwave cavity structure and characterize the coherence of atomic superposition states. In addition, I describe progress on cold atom trapping in a dilution refrigerator.

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