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Experimental Progress towards dual quantum degeneracy of a Li6 - Cs133 mixture JACOB JOHANSEN, KARINA JIMENEZ-GARCIA, COLIN PARKER, SHIH-KUANG TUNG, CHENG CHIN, The University of Chicago — Li-Cs mixtures provide unique research opportunities due to their large mass ratio and distinct optical excitation frequencies. To study many-body physics models, it is essential to prepare such systems at ultralow temperatures. As a first step toward this goal we demonstrated a translatable dipole trap setup in which we successfully trapped both species. Here we report the progress of cooling this atomic mixture to dual quantum degeneracy by sympathetically cooling Li atoms with evaporatively cooled Cs atoms.

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