Observation of Feshbach resonances in the collisions of ultracold lithium-6 and cesium-133 atoms SHIH-KUANG TUNG, JACOB JOHANSEN, KARINA JIMENEZ-GARCIA, COLIN PARKER, CHENG CHIN, The University of Chicago — Heteronuclear mixtures provide new degrees of freedom for ultracold atom experiments. Among them, a fermionic $^6$Li - bosonic $^{133}$Cs mixture is an excellent candidate to explore new quantum phases, perform independent optical manipulations of the two species, and study universal few-body physics. Here we report the experimental and theoretical study of two-body interaction in this mixture. We identify five s-wave interspecies Feshbach resonances with a magnetic field below 1000G [1]. Finally, we report experimental progress toward dual quantum degeneracy of Li and Cs atoms.