Towards quantum degeneracy in ultracold neutral strontium S.B. Nagel, A.D. Saenz, Y.N. Martinez, P.G. Mickelson, Rice University, Y.C. Chen, Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan, T.C. Killian, Rice University — We report continued studies of ultracold neutral Strontium in a magneto-optical trap operating on the $^1S_0 - ^3P_1$ intercombination line at 689 nm. Our recent determination of the $^1P_1$ atomic lifetime via photoassociative spectroscopy at extremely large internuclear separation has motivated the construction of an apparatus including a new dipole trap. Adding a dipole trap will allow us to achieve higher densities in the pursuit of quantum degeneracy in Strontium.