RF resonance of two dimensional electron systems in higher Landau levels: Effect of in-plane magnetic fields H. ZHU, Phys. Dept., Princeton; NHMFL/FSU, G. SAMBANDAMURTHY, NHMFL/FSU; EE Dept., Princeton, L. ENGEL, NHMFL/FSU, D. C. TSUI, EE Dept., Princeton, L. PFEIFFER, K. WEST, Bell Labs, Lucent Technologies — We report measurements of the RF diagonal conductivity, Re[\sigma_{xx}(f)] of ultrahigh mobility 2D electron systems with Landau level (LL) filling factor 4 < \nu < 6, in the presence of an in-plane magnetic field, B//. For nearly half integer filled higher LL’s, such samples are thought to show electron stripe phases, which can be reoriented by application of B// [1,2]. With B// = 0, and \nu \approx 9/2 and 11/2, a resonance around 100 MHz is observed when the microwave electric field E_m is along <1\bar{1}0>, nominally perpendicular to the stripes, but no resonance is seen when E_m is along <110> [3]. B// can switch the resonance on and off depending on the orientations of B// and E_m relative to the crystal. However, in the presence of B//, a simple comparison with the DC results [1,2] is not possible, since the resonance can be present even for E_m along lower DC resistivity direction, which would be thought to be parallel to the stripes. For example, around 6° tilting of the magnetic field along <1\bar{1}0>, B// \approx 0.28 T, resonances are observed with E_m along both orientations. [1] W. Pan et al., PRL 83, 820 (1999). [2] M. P. Lily et al., PRL 83, 824 (1999). [3] G. Sambandamurthy et al., this conference.