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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, $\mathrm{Re}[\sigma_{xx}(f)]$, 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^o 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.

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