

Lower Hybrid Current Drive (LHCD) induced rotation has been observed previously on Alcator C-Mod and other tokamaks. On Alcator C-Mod, it was seen that the rotation change caused by the LHCD was in the counter-current direction with a time scale on the order of the current relaxation time. Other machines, however, have observed co-current rotation driven by LHCD. Recent experiments at Alcator C-Mod have been aimed at resolving this difference in LHCD driven rotation. It is observed that the rotation in Alcator C-Mod is in the counter-current direction at high plasma currents, but, at a critical current, it reverses direction to the co-current direction. Below the critical current, the plasma rotation is co-current and scales inversely with plasma current. The critical position appears depends on magnetic configuration with the reversal occurring at ~ 550 kA in upper single null plasmas and ~ 400 kA in lower single null plasmas, at a fixed density. This reversal appears to be unrelated to the intrinsic rotation reversal observed in Alcator C-Mod and TCV plasmas with no LHCD.