Observation of distinct ohmic plasma current evolution on EAST

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Evolution current profile during current ramp-up is of great importance for the plasma equilibrium control and achievement of desired operation scenario. On the EAST superconducting tokamak, discharges with different MHD behavior, are observed during current ramp-up phase with the same current ramp rate. MHD features development are as the manifestation of current profile evolution. Emission Cyclotron Emission (ECE) and ECEI (ECE-Imaging) are adopted to trace the MHD modes and provide estimation on the core plasma behaviour during the current ramp-up phase and evolution of current density profile. The direct burst of sawtooth indicates the early formation of the peak current profile. While the location of q_{min} moving from off-axis to on-axis illustrates that current is distributed from hollow to peak. The spatially and temporally resolved ECE and ECEI system measuring the local T_e perturbation and fluctuation induced by MHD activities as function of flux surface can provide the new outlook for investigating the dynamical evolution of current profile.