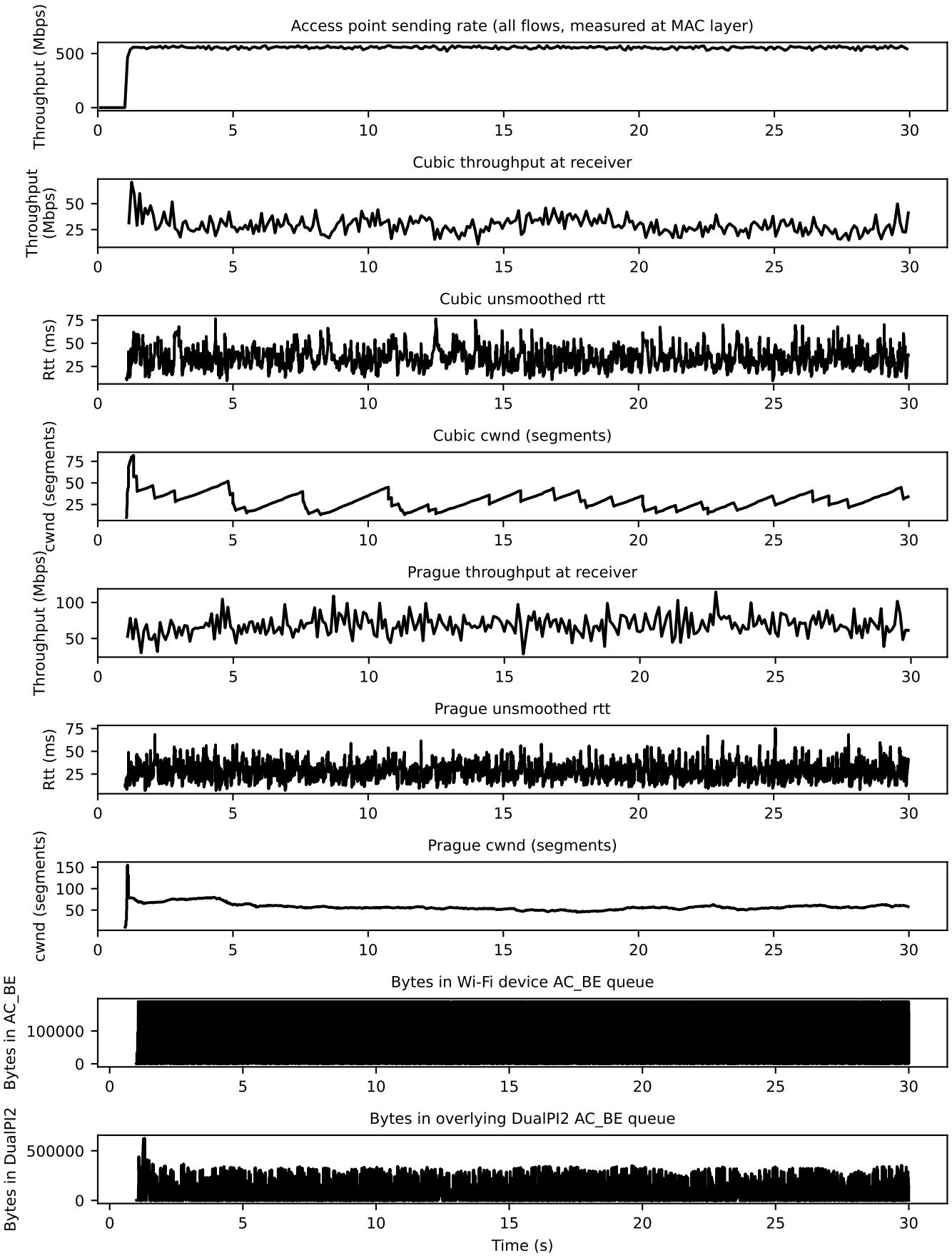Simulation ED3-MS2-AP1-LS2-TC5-TS1