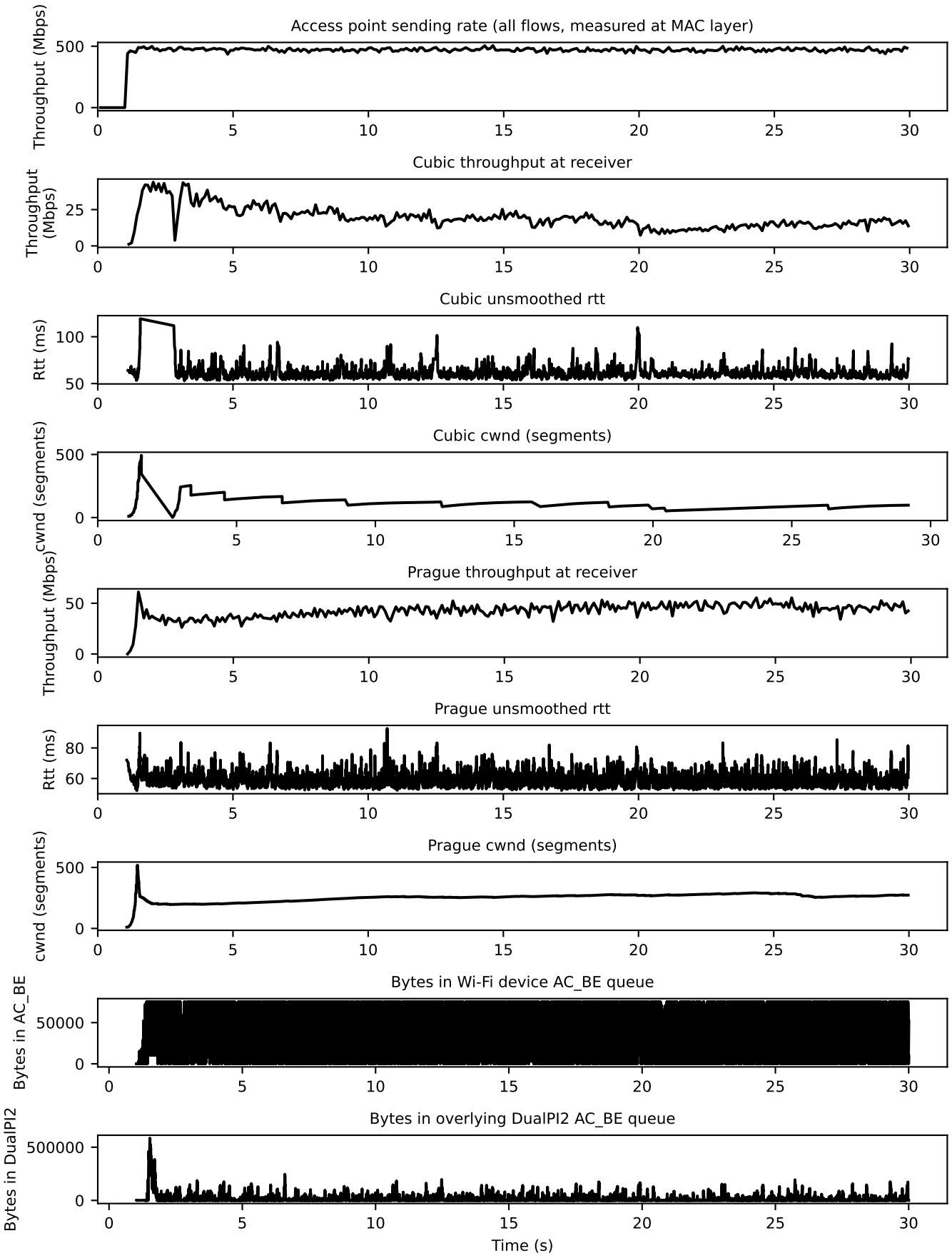Simulation ED4-MS2-AP1-LS2-TC3-TS3