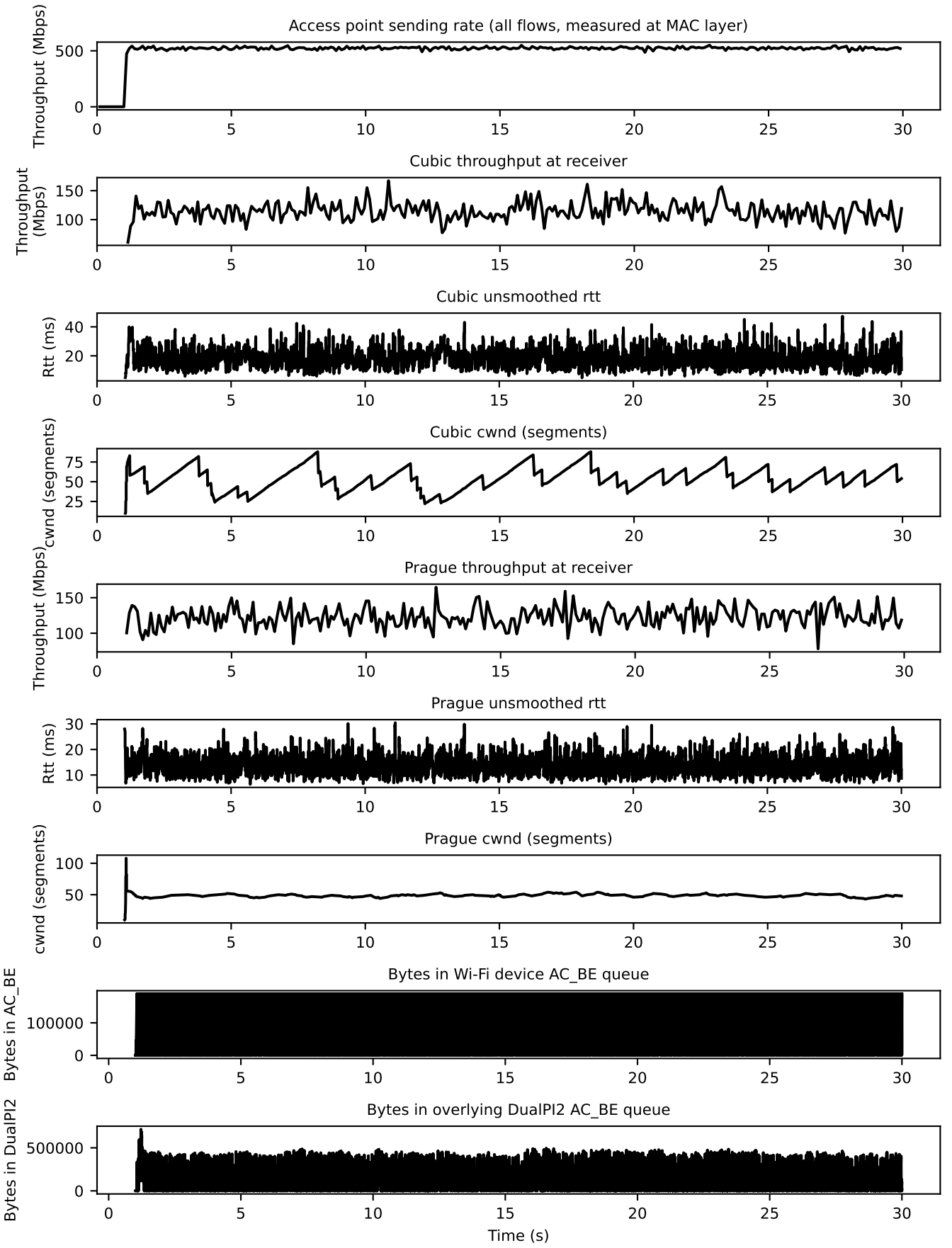Simulation ED3-MS1-AP1-LS2-TC5-TS1