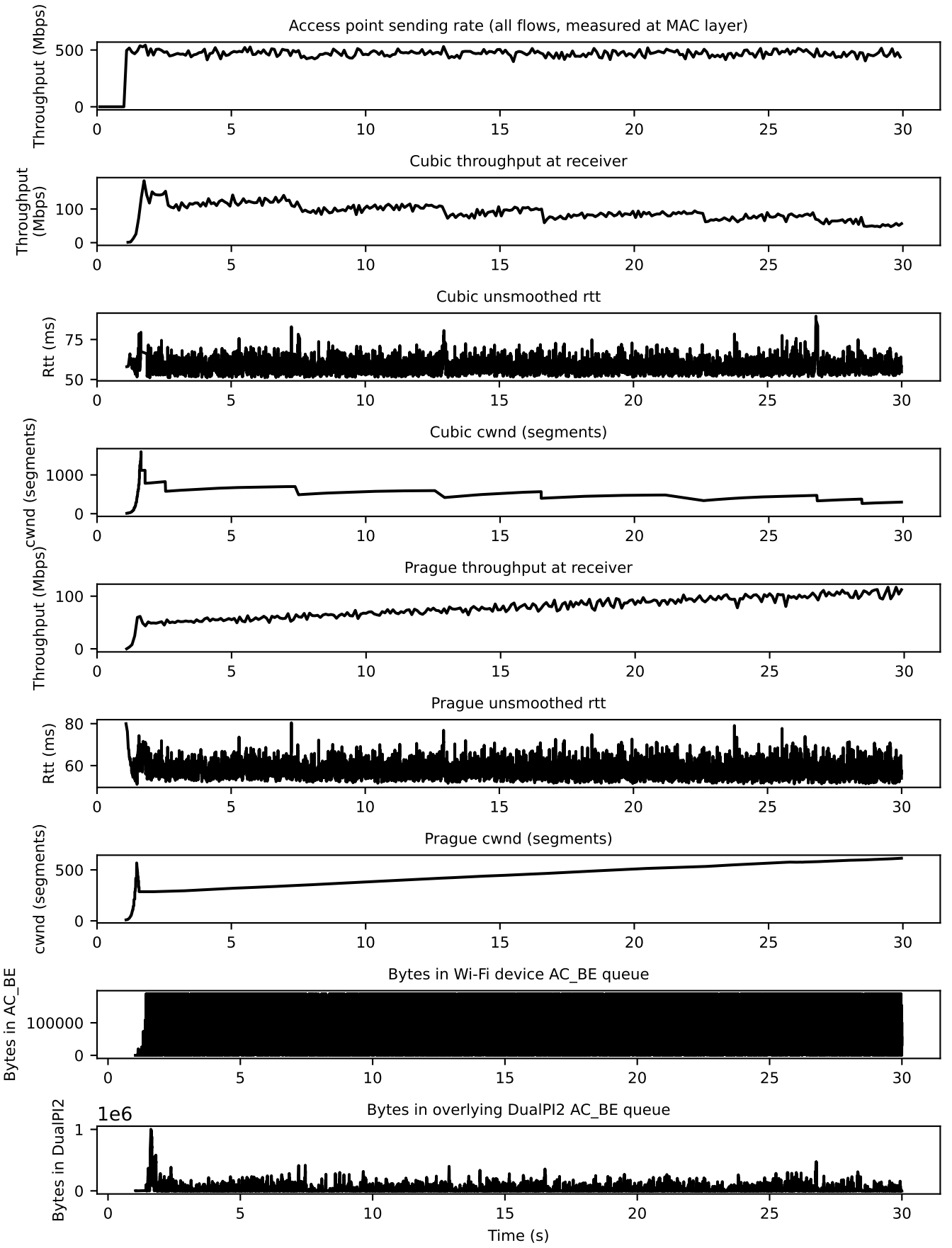Simulation ED3-MS1-AP1-LS2-TC3-TS3