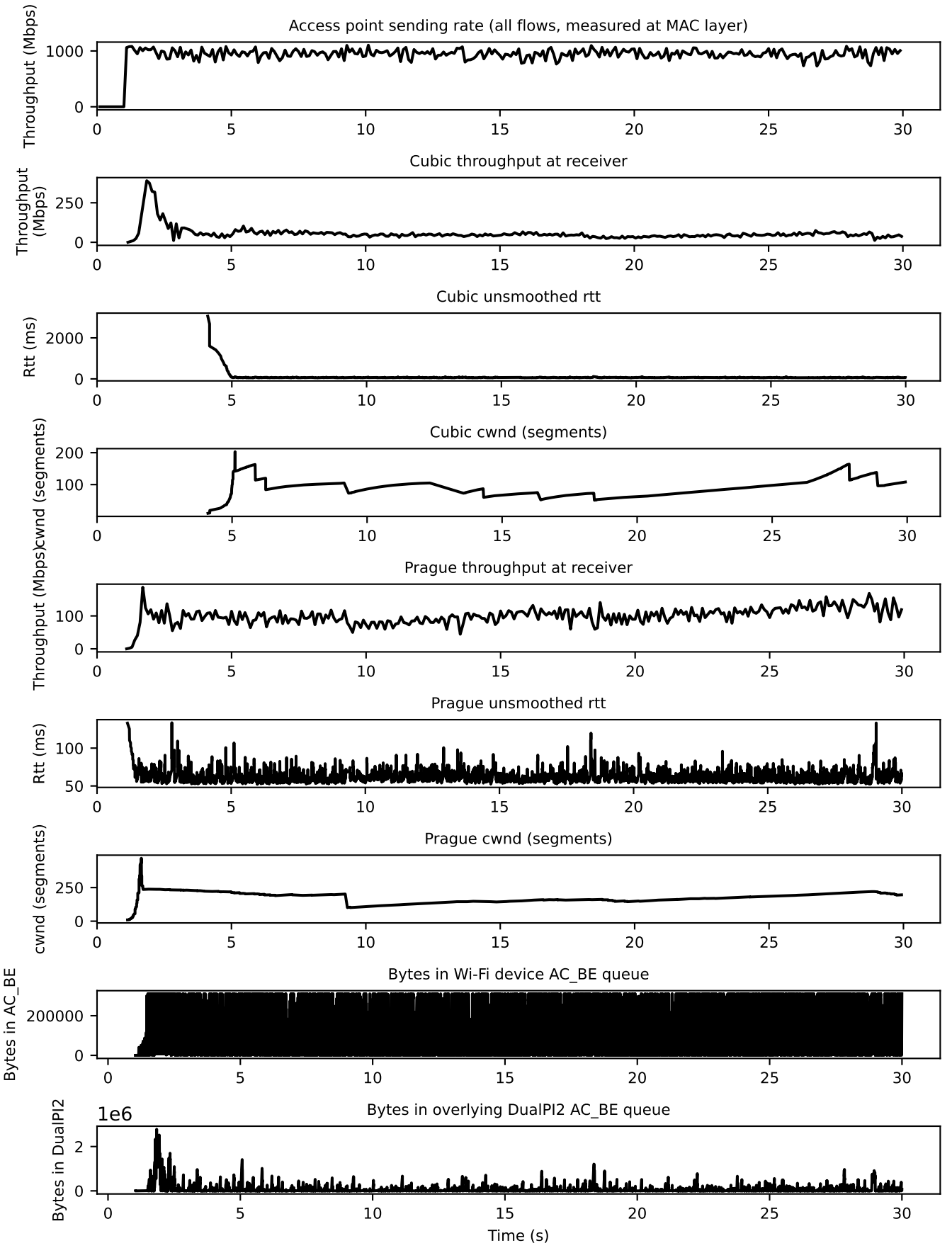Simulation ED2-MS1-AP1-LS3-TC5-TS3