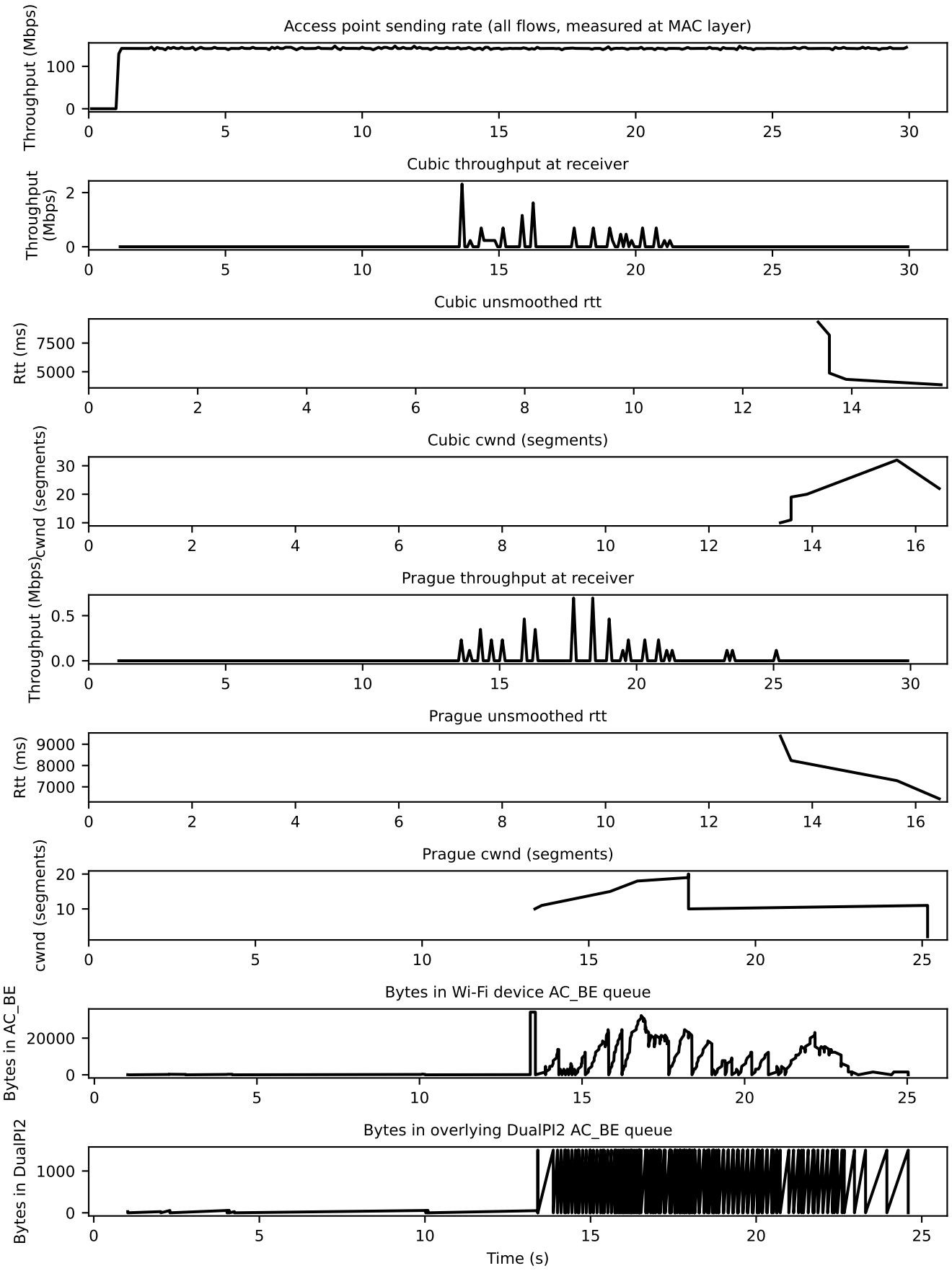Simulation ED2-MS2-AP1-LS1-TC4-TS3