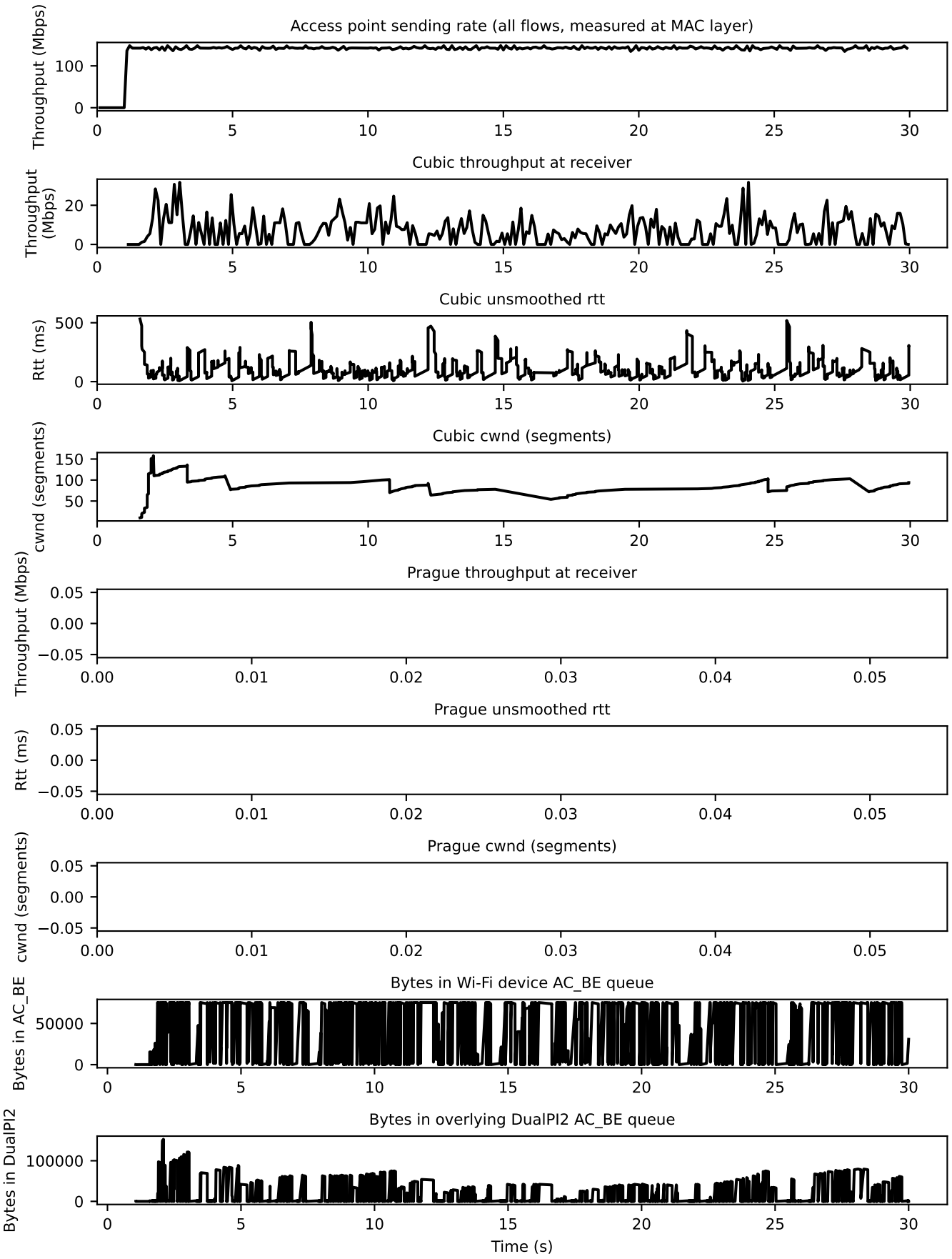Simulation ED1-MS1-AP1-LS1-TC1-TS1