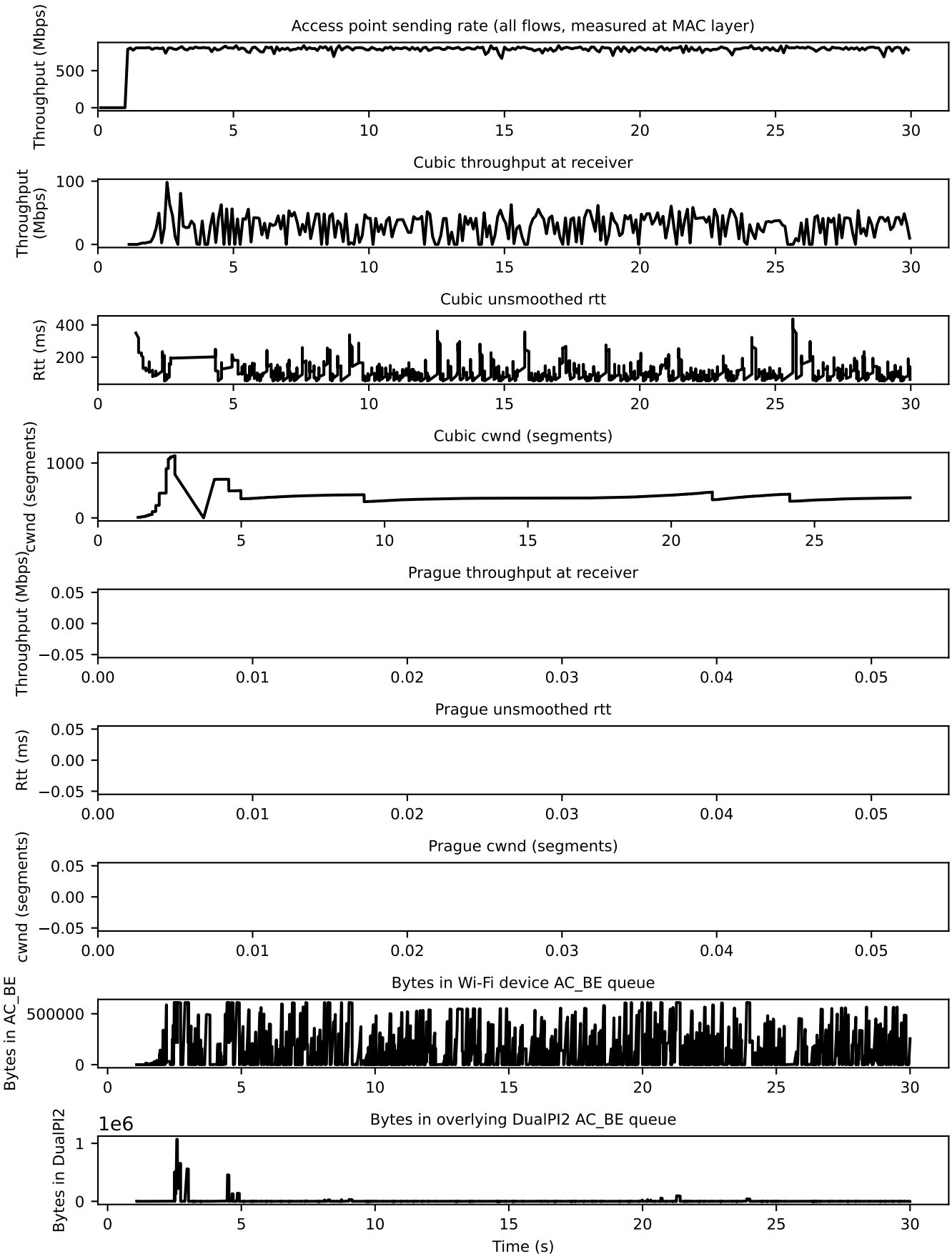Simulation ED1-MS1-AP1-LS3-TC1-TS3