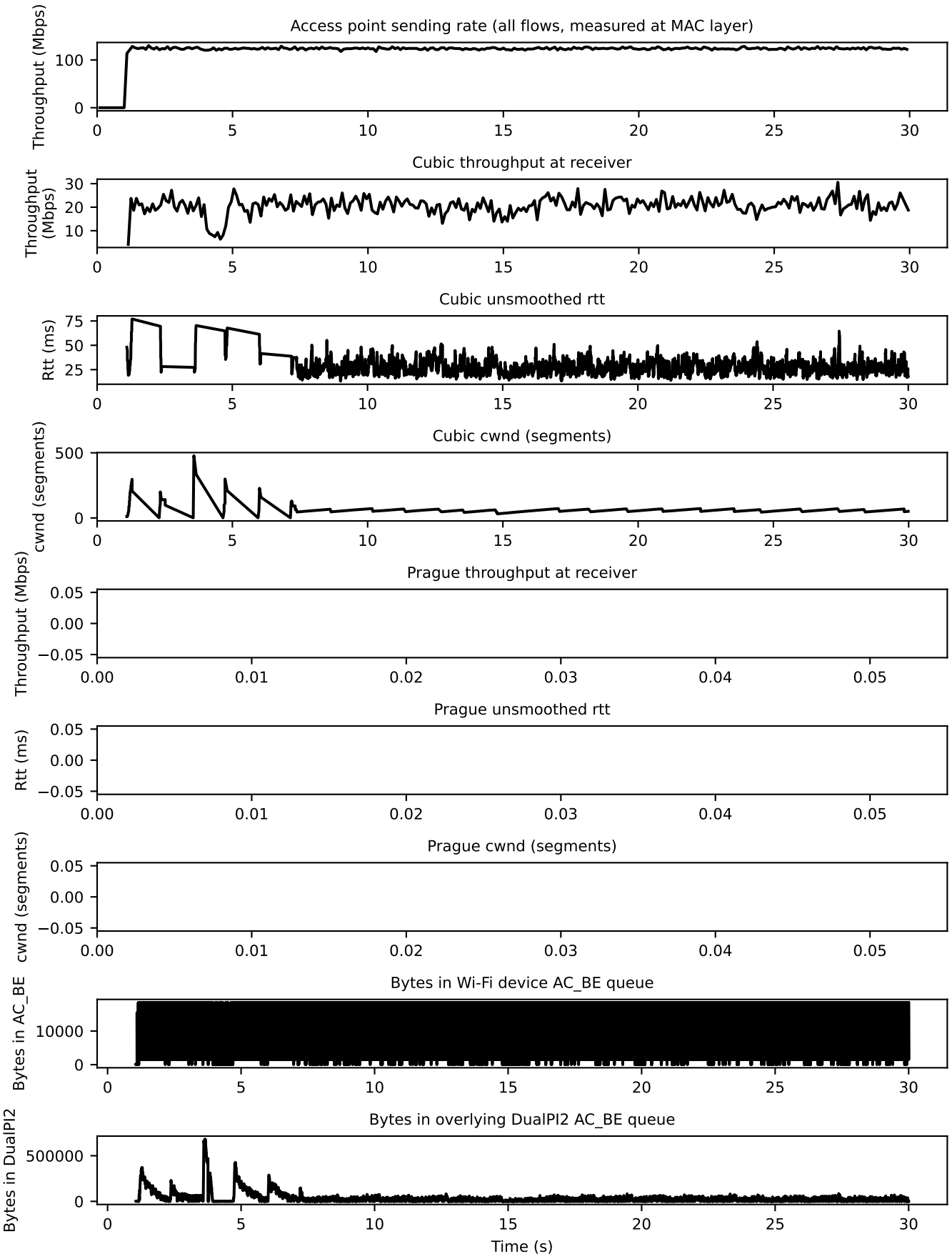Simulation ED4-MS2-AP1-LS1-TC1-TS2