4.b.)

zeta\_V = 1.0;

W\_V = 40;

omega\_n\_V = omega\_n\_theta/W\_V;

P.airspeed\_throttle\_kp = (2\*zeta\_V\*omega\_n\_V - models.a\_V1) / models.a\_V2;

P.airspeed\_throttle\_ki = omega\_n\_V\*omega\_n\_V/models.a\_V2;

P.airspeed\_throttle\_kd = 0.0;

4.c.)

kp =

0.1469

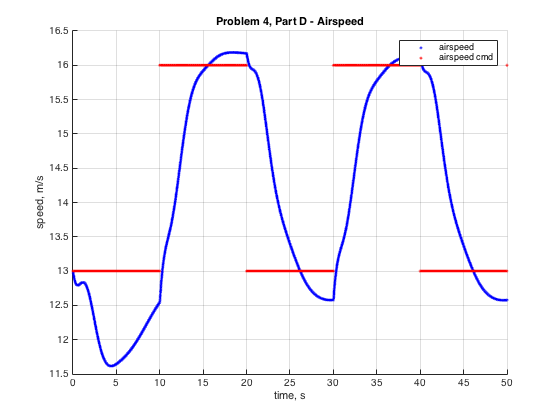
ki =

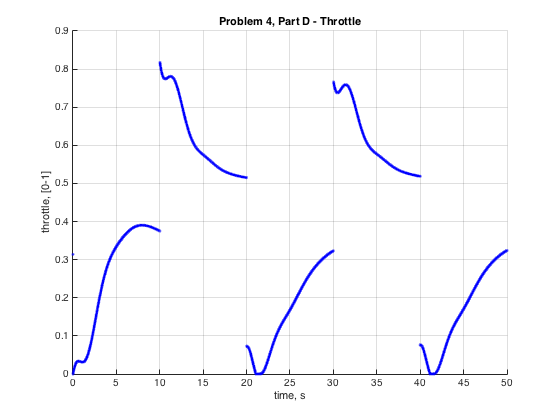
0.0361

kd =

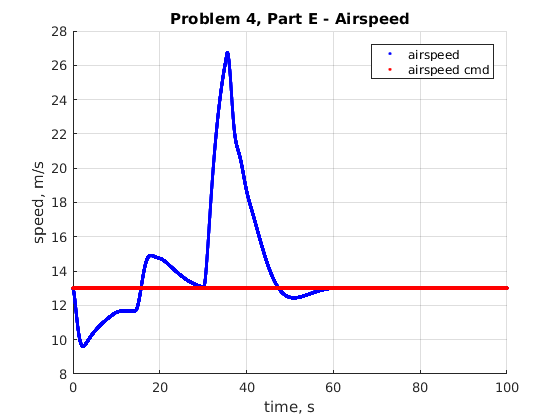
0

4.d.)

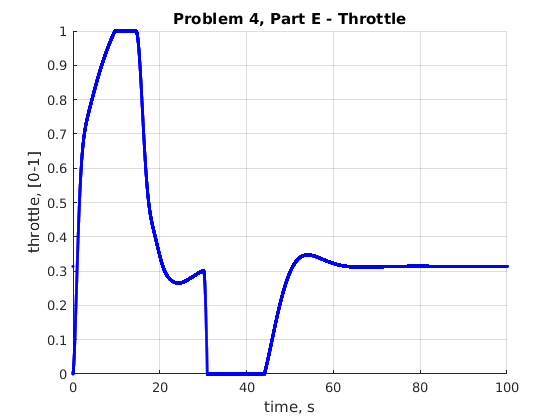


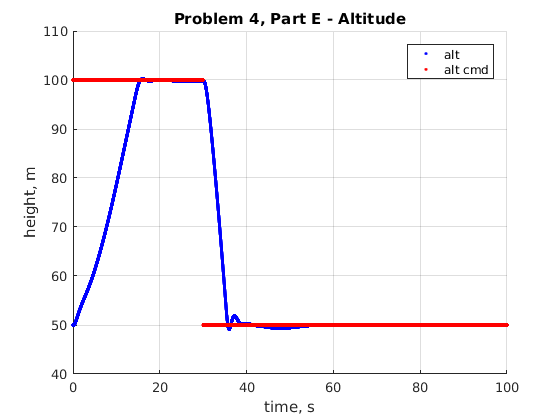


4.e.)



The airspeed here is a little high, especially gains were calculated assuming an airspeed of 13 m/s.





This seems like a steep dive. Maybe it would be better to come down more slowly and avoid that undershoot.