**SPC 409 Autopilot project**

* **Team Members:**

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* **Airplane:**

FOXTROT - A twin-engined, jet fighter/bomber aircraft

* **Flight Conditions**

OC\_ch==1

Uo=70; %m/s

alphao=11.7; %deg

gammao=0; %deg

%----------A/C Characteristics------

Ix=32100; Iy=16000; Iz=181400; Ixz=2100; %kg.m^2

%----------Stability Derivatives-------

Xu=-0.042; Xw=0.14; Xde=1.83; XdT=0.00007;

Zu=-0.177; Zw=-0.452; Zwd=0; Zq=-0.76; Zde=-2.03; ZdT=-0.0006;

Mu=0.0024; Mw=-0.006; Mwd=-0.002; Mq=-0.317; Mde=-1.46; MdT=-0.00005;

Yv=-21.1/Uo; Yp=0; Yr=0; Lbetad=-10.4; Lpd=-1.43; Lrd=0.929; Nbetad=1.44; Npd=-0.026; Nrd=-0.215;

Ydast=-0.004; Ydrst=0.0053; Ldad=2.74; Ldrd=0.7; Ndad=0.42; Ndrd=0.67;

* **Autopilot/ Control**

Altitude control (Processor in the loop)