% Second Order All Pass Filter

f0 = 6220; %Hz

j = sqrt(-1);

Q = 3;

K = 1;

f\_start = 100; f\_stop = 100000;

step = (f\_stop - f\_start)/4096;

freq = f\_start:step:f\_stop;

Tf = K.\*(((j.\*freq./f0).^2 - (1./Q).\*(j.\*freq./f0)+ 1)./((j.\*freq./f0).^2.+(1./Q).\*(j.\*freq./f0)+1))

Ms = 20\*log10(abs(Tf));

Ps = (180/pi)\*angle(Tf);

semilogx(freq,Ms),grid, axis([100 100000 -30 10])

figure

semilogx(freq,Ps),grid

