    freq = 10

    w0 = (2\*np.pi)\*freq; # pole frequency (rad/s)

    num = w0        # transfer function numerator coefficients

    den = [1,w0]    # transfer function denominator coefficients

    lowPass = signal.TransferFunction(num,den) # Transfer function

    dt = 1.0/SAMPLING\_FREQ

    discreteLowPass = lowPass.to\_discrete(dt,method='gbt',alpha=0.5)

    b = discreteLowPass.num

    a = -discreteLowPass.den

    # Filter the signal

    yfilt = np.zeros(len(y));

    for i in range(3,len(y)):

        yfilt[i] = a[1]\*yfilt[i-1] + b[0]\*y[i] + b[1]\*y[i-1]