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def post_flight_data():
    import numpy as np

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""" Open Post Flight Data Sheet csv file """
f = open("postflightdata.csv","r")
lines = f.readlines()
f.close()

""" Create an array with all the data """
datalist = lines
data = []
for i in range(84):
    dataline = datalist[i]
    dataline = dataline.split(';')
    dataline = list(dataline)
    data.append(dataline)

""" Remove the \n from the array """
for j in range(84):
    for k in range(13):
        if '\n' in data[j][k]:
            data[j][k] = data[j][k][:-2]
        else:
            data[j][k] = data[j][k]
data = np.array(data)

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""" Stationary measurements CL-CD series 1 """

# Pressure altitude (ft)
hp = []
hp1 = data[:,3]
for i in range(27,33):
    hp.append(float(hp1[i]))

# Indicated airspeed (kts)
IAS = []
IAS1 = data[:,4]
for i in range(27,33):
    IAS.append(float(IAS1[i]))

# Angle of attack (deg)
alpha = []
alpha1 = data[:,5]
for i in range(27,33):
    alpha.append(float(alpha1[i]))

# Fuel flow left (lbs/hr)
FFl = []
FFl1 = data[:,6]
for i in range(27,33):
    FFl.append(float(FFl1[i]))

# Fuel flow right (lbs/hr)
FFr = []
FFr1 = data[:,7]
for i in range(27,33):
    FFr.append(float(FFr1[i]))

# Fuel used (lbs)
F_used = []
F_used1 = data[:,8]
for i in range(27,33):
    F_used.append(float(F_used1[i]))

# True air temperature (C)
TAT = []
TAT1 = data[:,9]
for i in range(27,33):
    TAT.append(float(TAT1[i]))

#-----

""" Variables """
rho_0 = 1.225 # kg/m^3 (air density at sea Level)
g = 9.80665 # m/s^2 (gravitational constant)

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""" Masses """
BEM = 13600. # lbs (basic empty mass)
BFuel = float(data[17][3]) # lbs (block fuel)
# Payload (kg)
Payl = []
Payl1 = data[:,7]
for i in range(7,16):
    Payl.append(float(Payl1[i]))
Payload = sum(Payl)

""" Unit conversions """
BEM = BEM * 0.453592 # kg (basic empty mass)
BFuel = BFuel * 0.453592 # kg (block fuel)
# Fuel used (kg)
for i in range(len(F_used)):
    F_used[i] = F_used[i] * 0.453592

""" Ramp mass """
M_r = BEM + BFuel + Payload # kg (ramp mass)

""" Total mass at point in time """
# kg (total mass)
M_t = []
for i in range(len(F_used)):
    M_t1 = M_r - F_used[i]
    M_t.append(M_t1)

""" Total weight at point in time """
# N (total weight)
W_t = []
for i in range(len(M_t)):
    W_t1 = M_t[i] * g
    W_t.append(W_t1)

return hp, IAS, alpha, FF1, FFr, F_used, TAT, Payl, Payload, BEM, BFuel, M_r, M_t, W_t

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