

MATLAB Data Structure: flight_data, Comma-separated text file		
Field Name	Units	Description
time	sec	Timestamp
h	m	Barometric altitude above ground (AGL)
ias	m/s	Indicated airspeed
Ps	KPa	Static pressure
Pd	KPa	Differential pressure
Pd_aoa	KPa	Differential pressure for alpha
Pd_aos	KPa	Differential pressure for beta
Pt_a1	KPa	Total pressure, alpha 1 port, 5-hole probe
Pt_a2	KPa	Total pressure, alpha 2 port, 5-hole probe
Pt_b1	KPa	Total pressure, beta 1 port, 5-hole probe
Pt_b2	KPa	Total pressure, beta 2 port, 5-hole probe
Pt	KPa	Total pressure, center port, 5-hole probe
Ps_2	KPa	Static pressure, 5-hole probe, 5-hole probe
aoa	rad	Angle of attack
aos	rad	Angle of sideslip
p	rad/s	X-axis angular rate (roll)
q	rad/s	Y-axis angular rate (pitch)
r	rad/s	Z-axis angular rate (yaw)
hx	Gauss	X-axis magnetic field
hy	Gauss	Y-axis magnetic field
hz	Gauss	Z-axis magnetic field
ax	m/s ²	X-axis acceleration
ay	m/s ²	Y-axis acceleration
az	m/s ²	Z-axis acceleration
psi	rad	Euler roll angle
the	rad	Euler pitch angle
phi	rad	Euler yaw angle
pitch_ref	rad	Commanded pitch angle
roll_ref	rad	Commanded roll angle
lat	deg	GPS latitude
lon	deg	GPS longitude
alt	m	GPS altitude (WGS84)
vn	m/s	GPS north velocity
ve	m/s	GPS east velocity
vd	m/s	GPS down velocity
satVisible	[nd]	Number of satellites used in the GPS solution
navValid,	[nd]	Bitfield from GPS NAV message, 0 = GPS lock
GPS_TOW	[sec]	Time Of Week from GPS
de	rad	Elevator command
da_l	rad	Left aileron command
da_r	rad	Right aileron command
df_l	rad	Left flap command
df_r	rad	Right flap command
dr	rad	Rudder command
dthr	nd	Throttle command
imu_status	nd	IMU status word
gps_status	nd	GPS status word
mode	nd	Autopilot mode
navlat	deg	NAV latitude
navlon	deg	NAV longitude
navalt	m	NAV altitude (WGS84)
navvn	m/s	NAV north velocity
navve	m/s	NAV east velocity

navvd	m/s	NAV down velocity
p_bias	rad/s	Gyro bias, X-axis (roll)
q_bias	rad/s	Gyro bias, Y-axis (pitch)
r_bias	rad/s	Gyro bias, Z-axis (yaw)
ax_bias	rad/s	Accelerometer bias, X-axis
ay_bias	rad/s	Accelerometer bias, Y-axis
az_bias	rad/s	Accelerometer bias, Z-axis
threadJitter0	nsec	Thread 0 jitter
threadJitter1	nsec	Thread 1 jitter
threadJitter2	nsec	Thread 2 jitter
threadJitter3	nsec	Thread 3 jitter
threadJitter4	nsec	Thread 4 jitter
threadJitter5	nsec	Thread 5 jitter
cpuload	%	CPU load over the last 100msec
motor_time	sec	Computed timestamp of motor data
motor_throttle	nd	Throttle command at ESC, 0-1
motor_voltage	V	Battery voltage at ESC
motor_current	Amps	Current at ESC
motor_RPM	rev/min	Motor speed at ESC

MATLAB Data Structure: flight_info		
Field Name	Units	Description
date	nd	Date of flight test
aircraft	nd	Name of aircraft
flight_num	nd	Flight number
notes	nd	Notes from file name