

Angelfire Flight Data

Event: XPRS
 Date: Sept 15, 2007
 Location: Black Rock Desert, Nevada
 Elevation: 3,897 feet MSL
 Temp: 80F
 %RH:
 Wind: Calm

Motor: Aerotech M1939W
 LO weight: Approx 52 lbs

Liftoff: 18:21:12.0 UTC Sept 15, 2007
 Launch pad coordinates: N 40° 49.8799' W 119° 08.4883'
 Landing site coordinates: N 40° 50.4379' W 119° 08.2575' 0.67 miles away
 (3,538 feet)

Comments: Very nice vertical boost
 Very nice main chute deploy. Smooth and quick.
 No damage. Good flight!

Flight Event Timeline

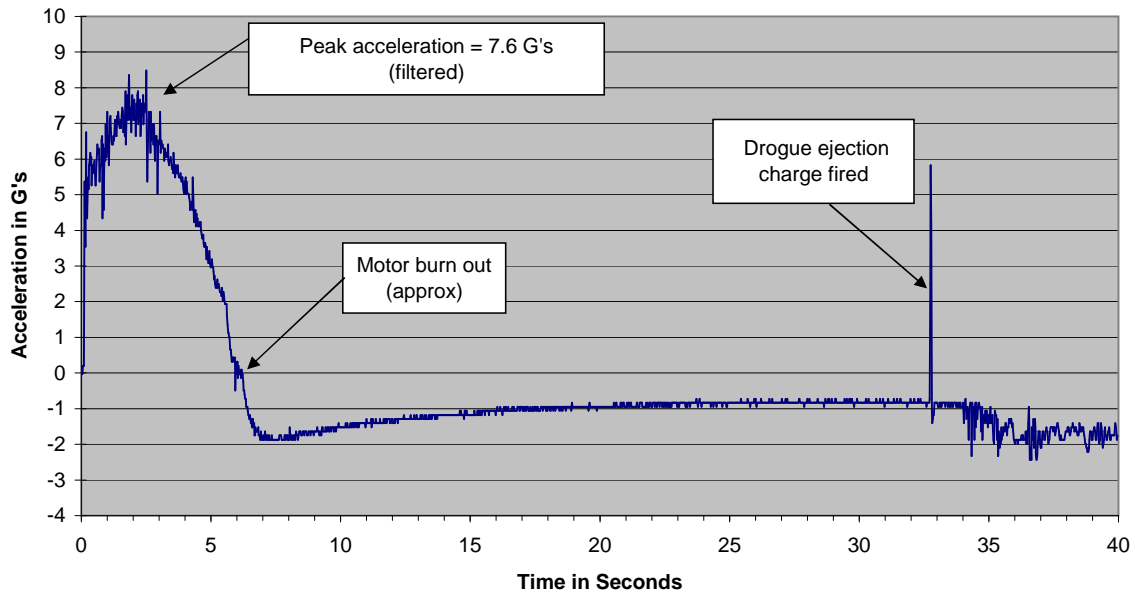
Time (Sec)	Event	Altitude	Speed
0.0	Motor Ignition	0 ft	0 ft/sec
2.5	Peak Acceleration = 7.6 G's	415 ft	511 ft/sec
3.7	Altitude = 1,000 feet	1,000 ft	746 ft/sec
6.1	Peak Velocity = 676 mph	2,932 ft	992 ft/sec
6.1	Motor burnout (Accel = 0)	2,932 ft	992 ft/sec
14.2	Altitude = 10,000 feet	10,000 ft	614 ft/sec
31.2	Barometric apogee detection	15,149 ft	115 ft/sec
32.8	Drogue chute ejection charge fires	15,003 ft	81 ft/sec
35.2	Accelerometer apogee detection	16,147 ft	0 ft/sec
165.5	Main chute ejection charge fires	1,672 ft	
168.6	Main chute starts to inflate	1,468 ft	
171.0	Main chute inflated	1,381 ft	
184.6	Back up ejection charge fires	1,036 ft	
229.9	Booster touch down	0 ft	
232.2	Body tube touch down	0 ft	
233.5	All parts at rest on ground	0 ft	

Time to apogee	31.2 sec	0.52 minutes
Time on drogue	139.8 sec	2.33 minutes
Time on main	62.5 sec	1.04 minutes
Total flight time	233.5 sec	3.89 minutes

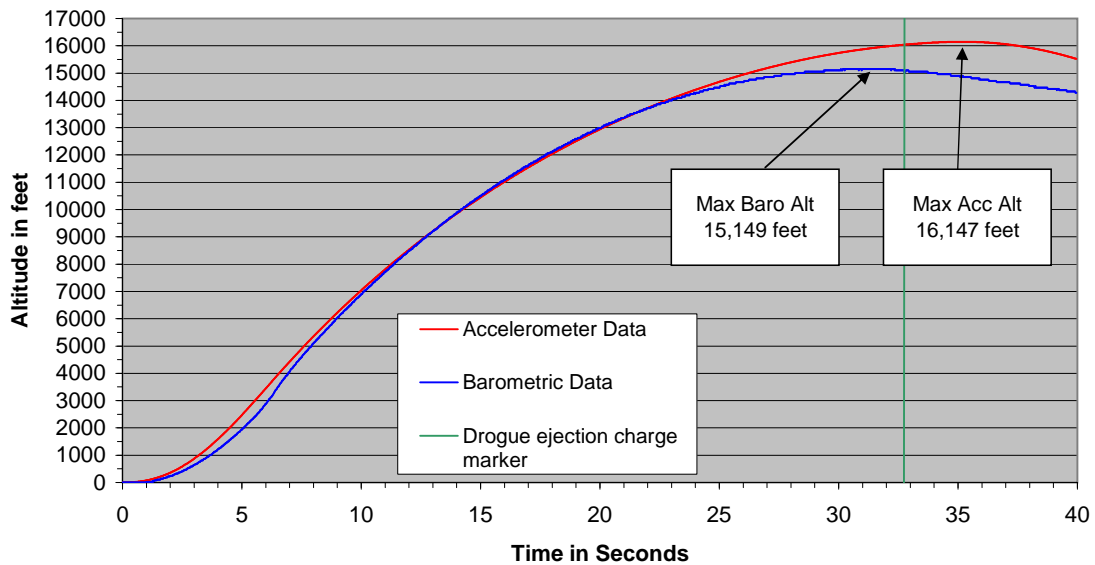
Drogue chute sink rate	99.5 ft/sec
Main chute sink rate	23.6 ft/sec

		Deviation from Average
GPS Peak Altitude:	15,214 feet	-2.73 %
ARTS Accelerometer Peak Altitude:	16,147 feet	3.24 %
ARTS Barometric Peak Altitude:	15,149 feet	-3.14 %
MissileWorks Altimeter #1:	15,540 feet	-0.64 %
MissileWorks Altimeter #2:	16,151 feet	3.27 %
Average:	15,640 feet	

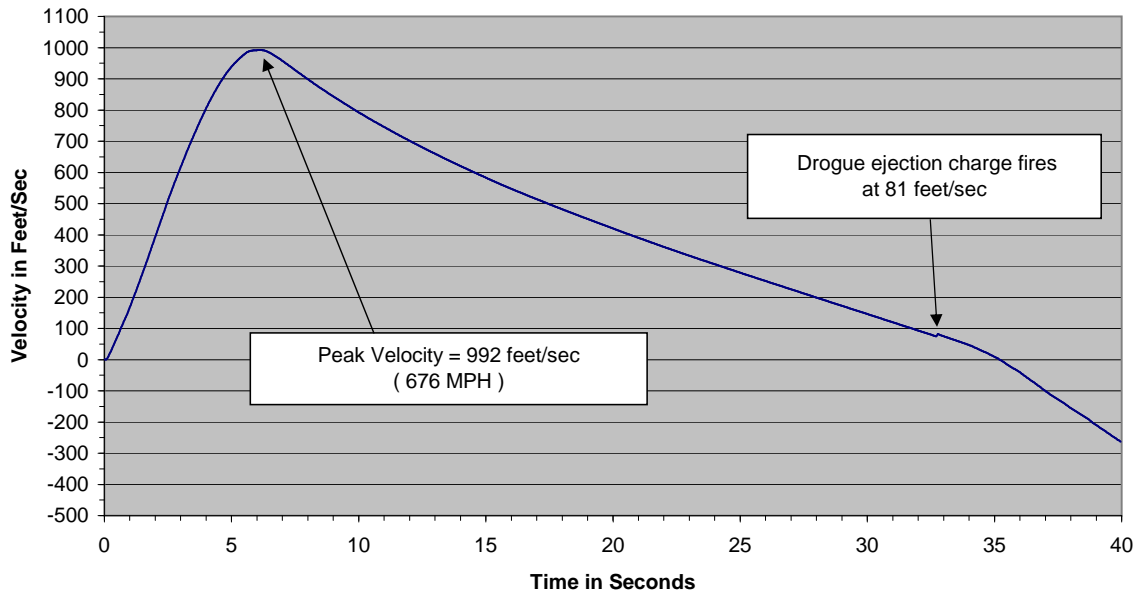
Angelfire Acceleration Sept. 15, 2007 M1939 motor



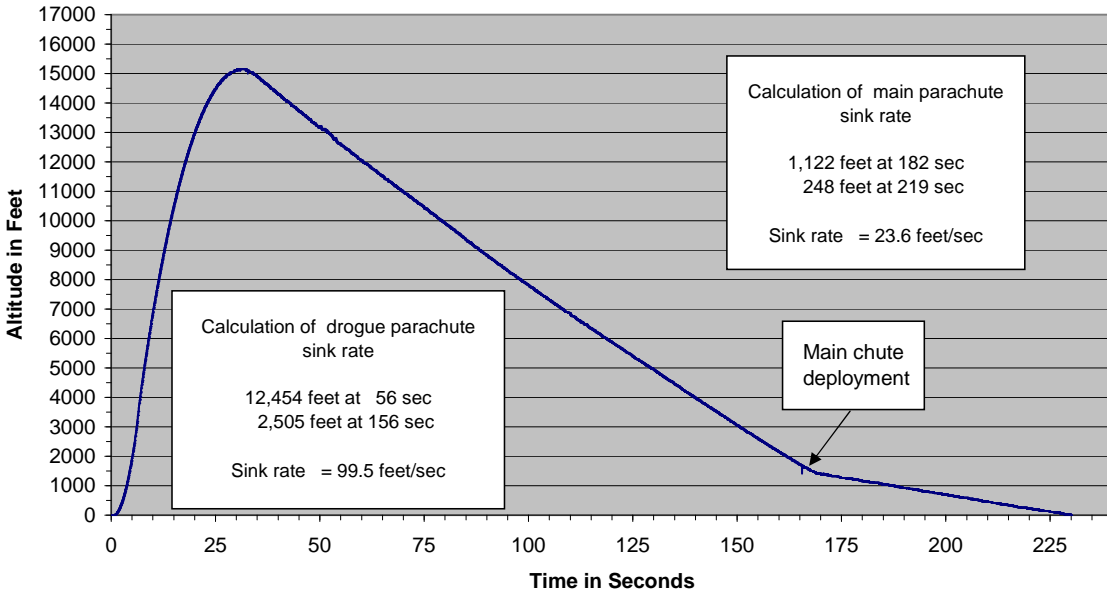
Angelfire Altitude Sept. 15, 2007 M1939 motor



Angelfire Velocity Sept. 15, 2007 M1939 motor



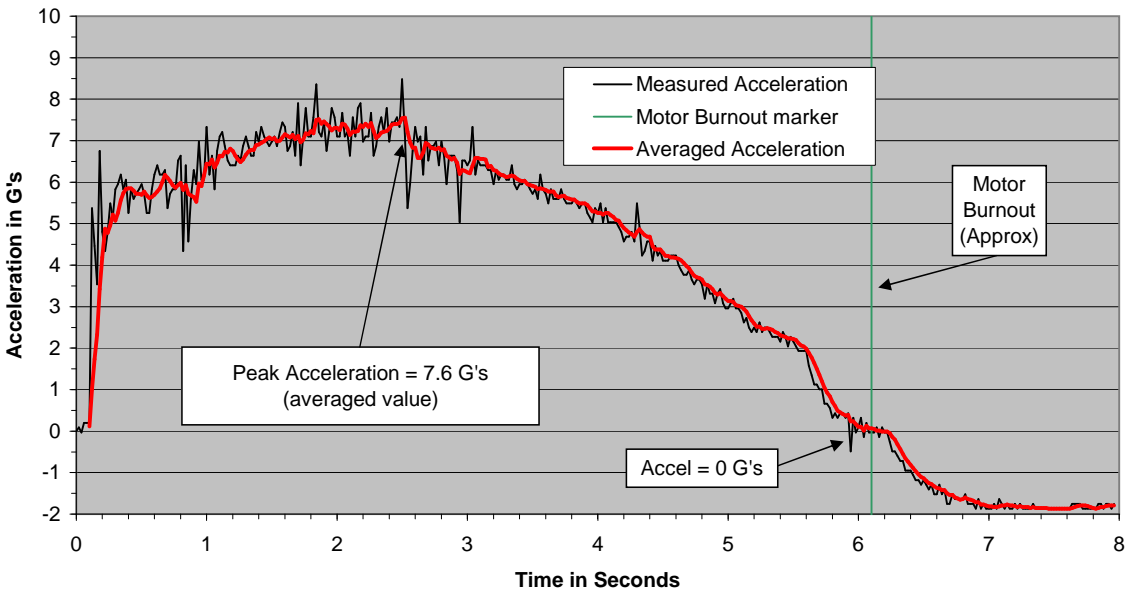
Angelfire Altitude Sept. 15, 2007 M1939 motor



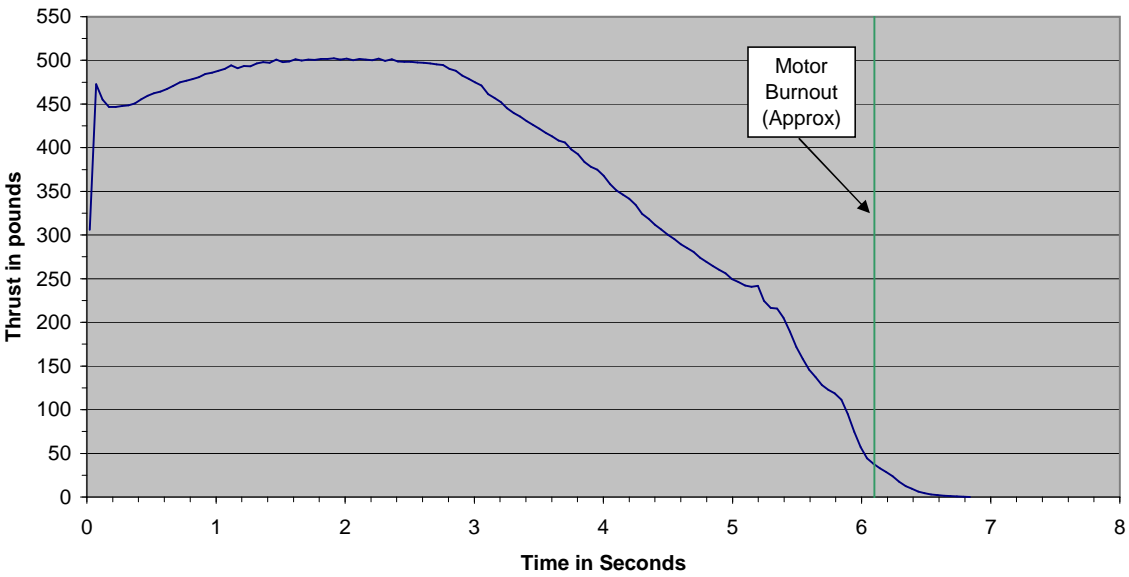
Angelfire Main Chute Deployment Sept. 15, 2007 M1939 motor



Angelfire Acceleration Sept. 15, 2007 M1939 motor



AeroTech M1939 Nominal Thrust Curve



Angelfire Acceleration Sept. 15, 2007 M1939 motor

