
Flight Card

Launch date: Sat Sep 23 2017
Launch site: Black Rock dry lake -- Balls 2017
Flyer's name: Noah Joraanstad
Rocket name: Stratospheric Express
Motor: N5800 to N3301
Expected alt: 100000 feet
Dual deploy: No

Comments: Good Flight!

Flight Results

Max GPS altitude: 96092 feet AGL
Max Acc altitude: 94710 feet AGL
Altitude at max vel: 22098 feet AGL

NOTE: Flight exceeded GPS velocity limit!

Max GPS velocity: 1679 feet/sec 1144.8 mph 1.734 Mach
Max Acc velocity: 2959 feet/sec 2017.5 mph 2.925 Mach

Max Acceleration: 14.0 G's 451.2 feet/sec/sec

	Booster	Sustainer
Delay time:	0.0 sec	7.2 sec
Burn time:	3.4 sec	5.9 sec
Max acceleration:	14.0 G's	13.8 G's
Ignition altitude:	0 feet	9965 feet
Burn out altitude:	2459 feet	21436 feet
Ignition velocity:	0 ft/s	890 ft/s
Burn out velocity:	1288 ft/s	2959 ft/s
Ignition velocity:	0.00 Mach	0.83 Mach
Burn out velocity:	1.16 Mach	2.87 Mach

Apogee Deployment Event
Occurred: 85.0 sec after liftoff
Fired: 4.08 sec late
Altitude: 95865 feet
Vert vel: -120 feet/sec
Horz vel: 42 feet/sec

Ground speed at apogee: 42 feet/sec 28.6 mph
Heading at apogee: 314° from true north

Distance to apogee: 3173 feet 0.60 miles
Bearing to apogee: 314° from true north

Descent rate on main: 156 feet/sec 106.4 mph
Touch down velocity: 92 feet/sec 62.7 mph

Time to max velocity: 16.4 sec
Time to apogee: 1 min 20.9 sec
Time on main: 8 min 30.0 sec
Total flight time: 9 min 50.8 sec

Lift off: 11:57:41.0 MDT 17:57:41.0 UTC
Apogee: 11:59:02.0 MDT 17:59:02.0 UTC
Touch down: 12:07:31.8 MDT 18:07:31.8 UTC

Launch pad coordinates: N 40° 53.4727' W 119° 2.5048'
Landing site coordinates: N 40° 50.6173' W 119° 3.2753'

Distance to landing site: 17739 feet 3.36 miles
Bearing to landing site: 192° from true north

Ground level: 3941 feet MSL

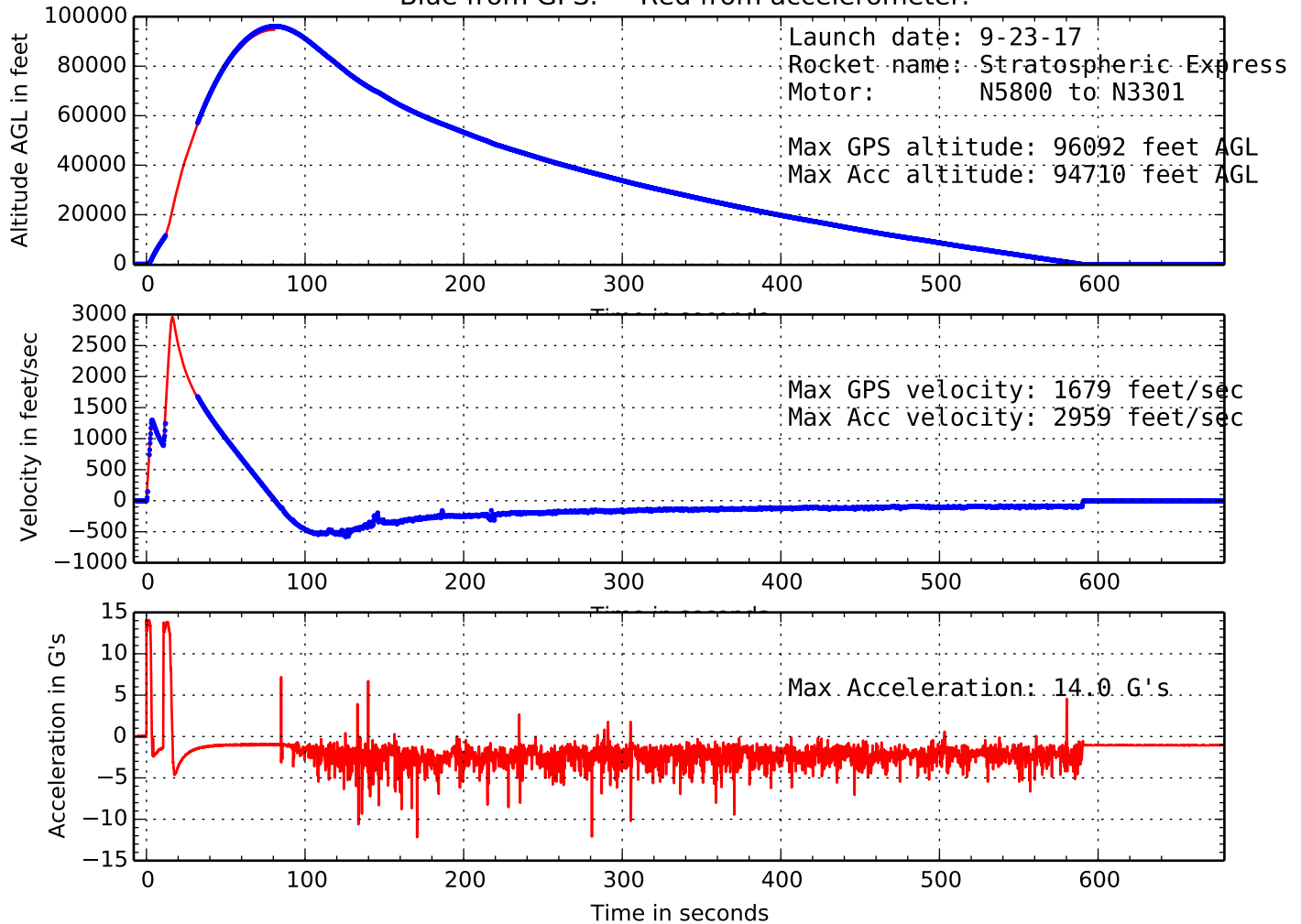
	Liftoff	Apogee	Landing
Battery:	3.88v	3.87v	3.86v
Temperature:	78°F	79°F	79°F

Transmitter: Mx110A0236 Firmware: 4.0.0.0

This data came from transmitter flash memory.

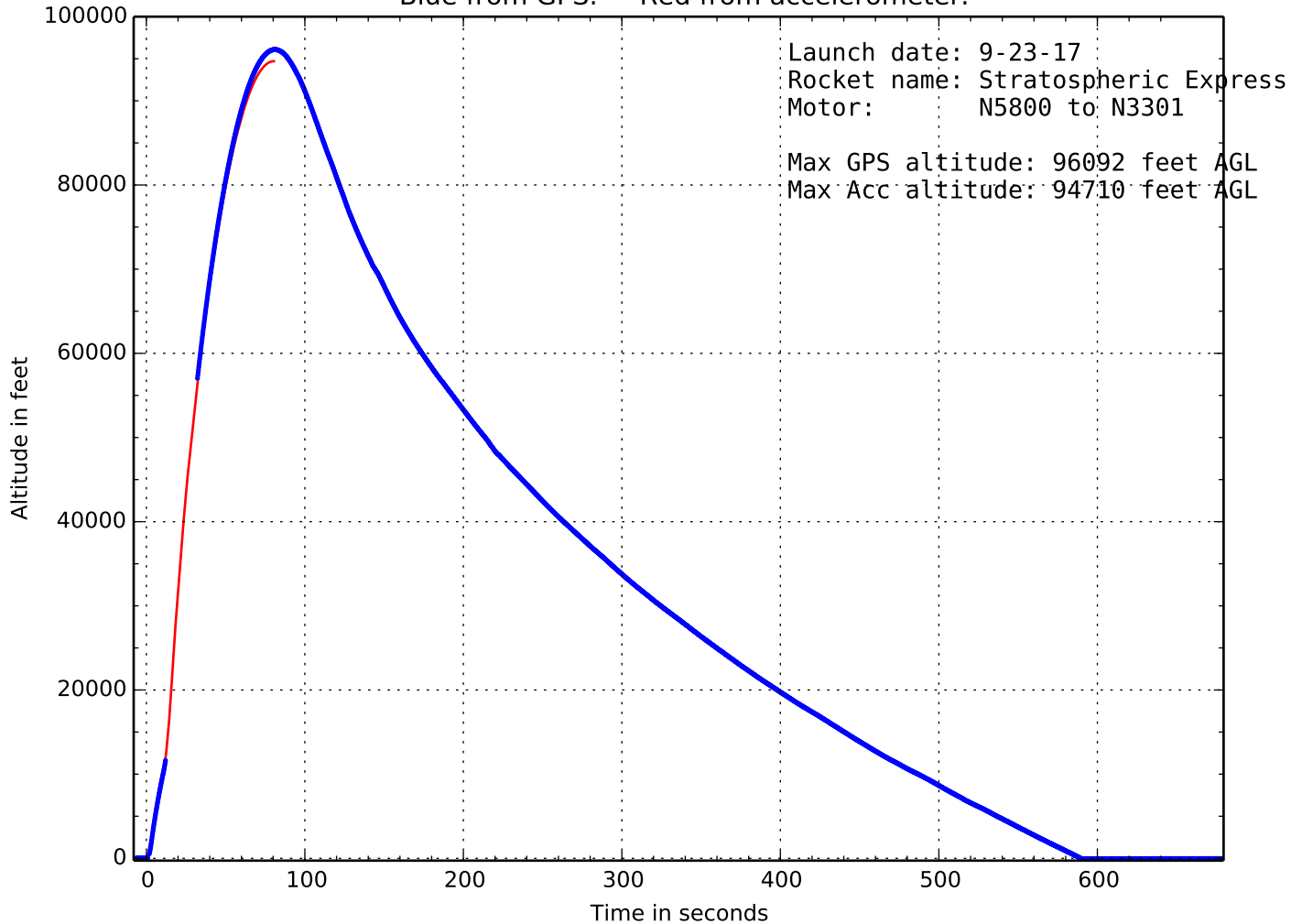
Altitude, Velocity, and Acceleration

Blue from GPS. Red from accelerometer.



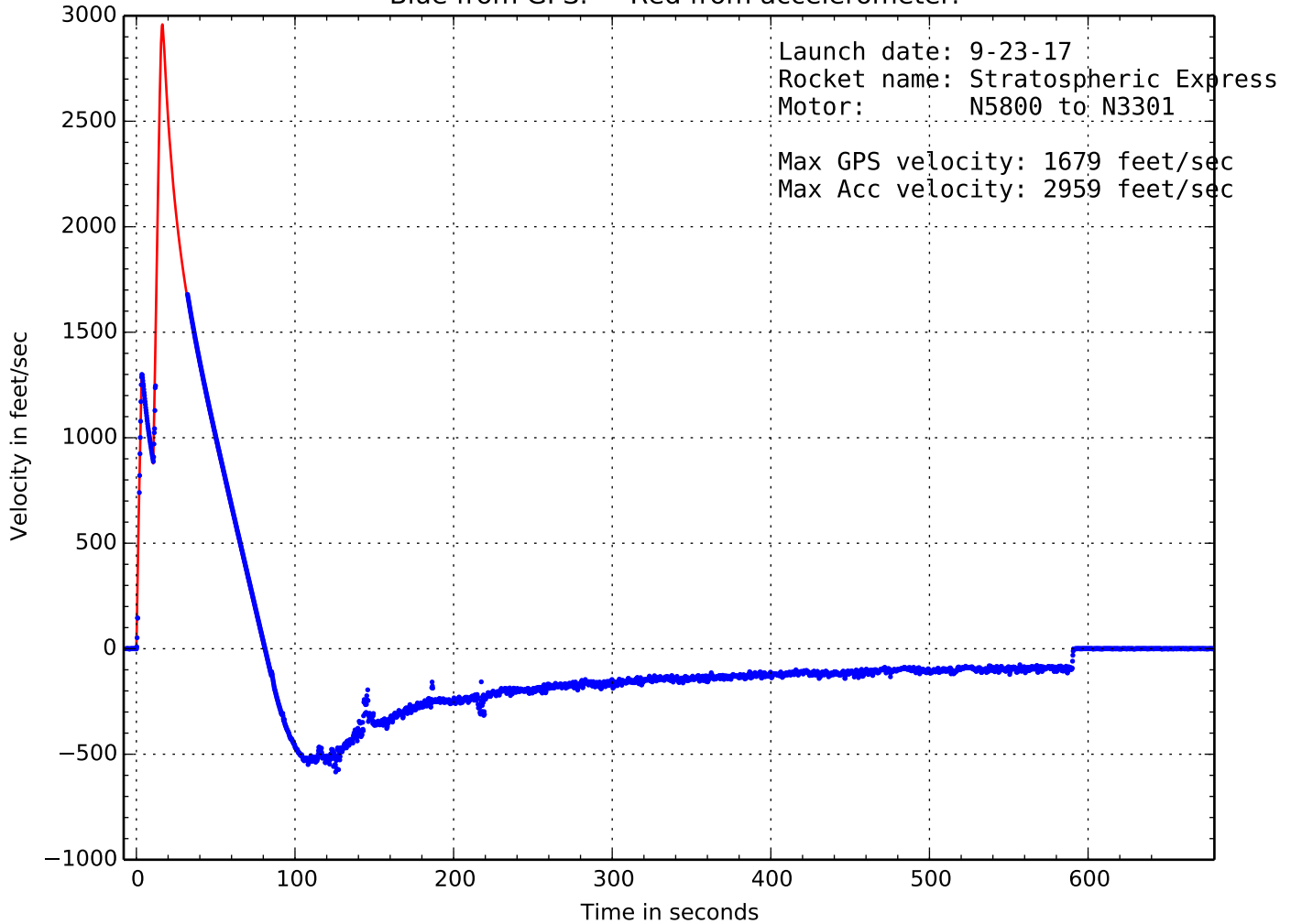
Altitude AGL

Blue from GPS. Red from accelerometer.

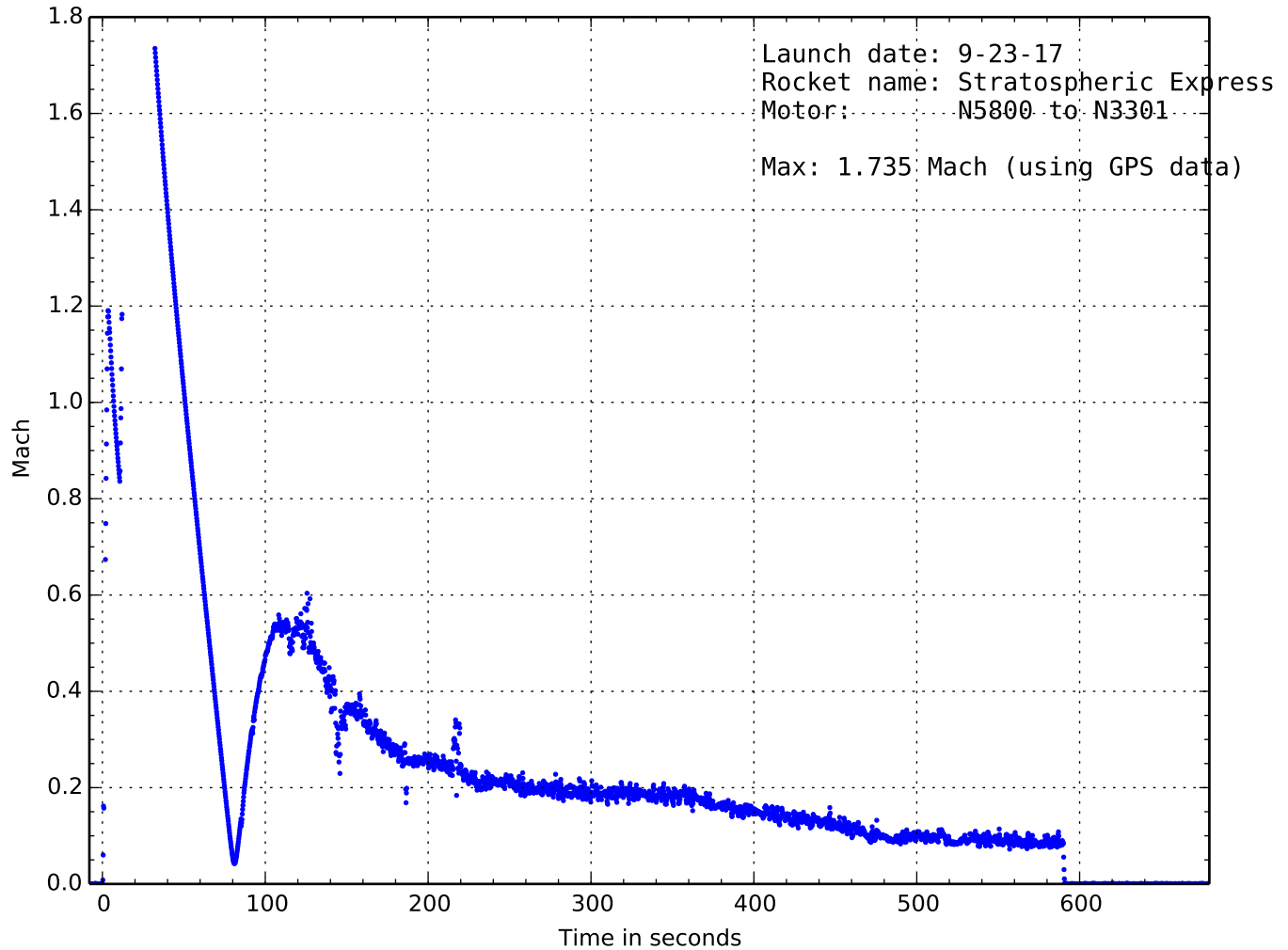


Vertical Velocity

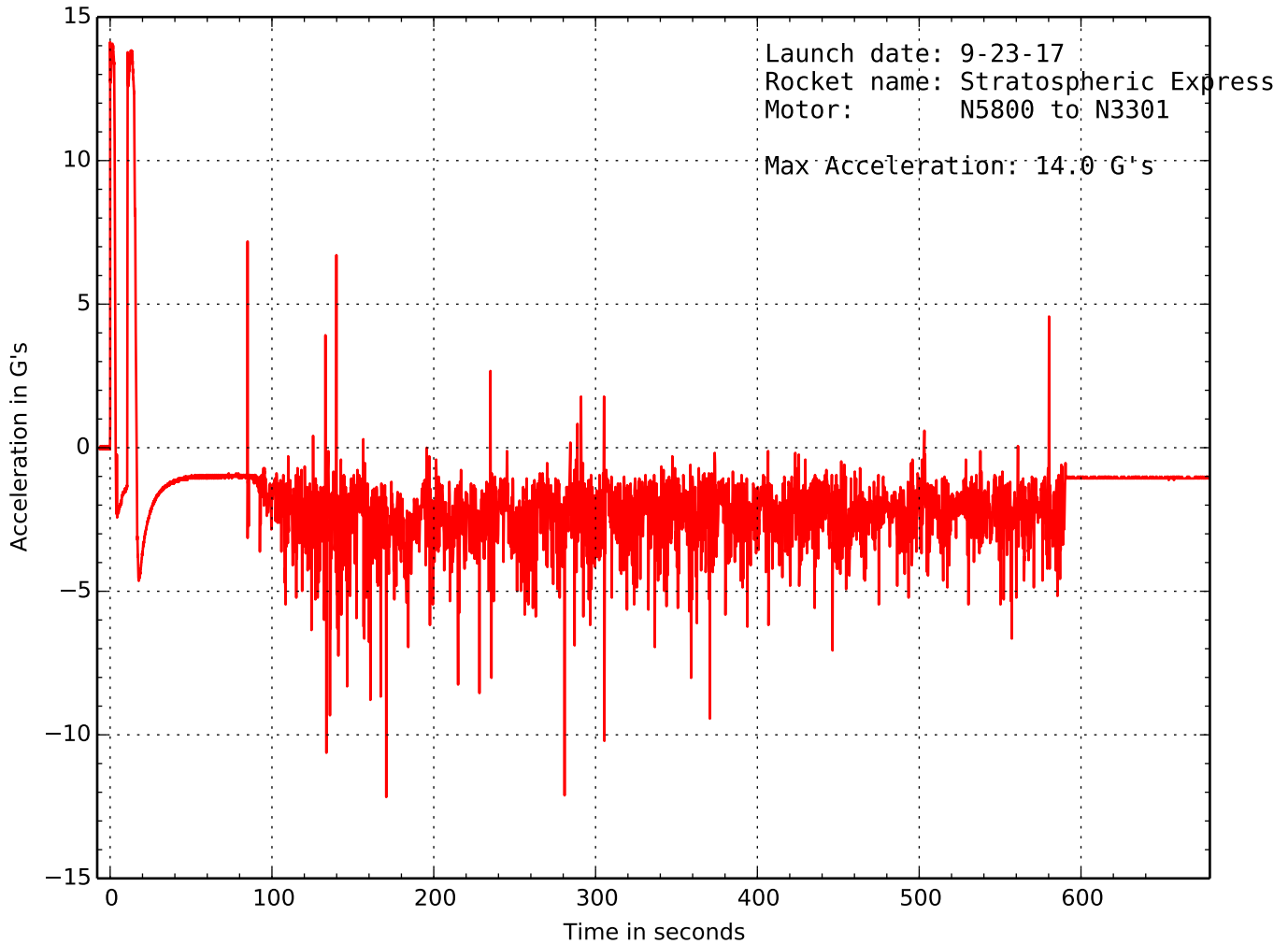
Blue from GPS. Red from accelerometer.



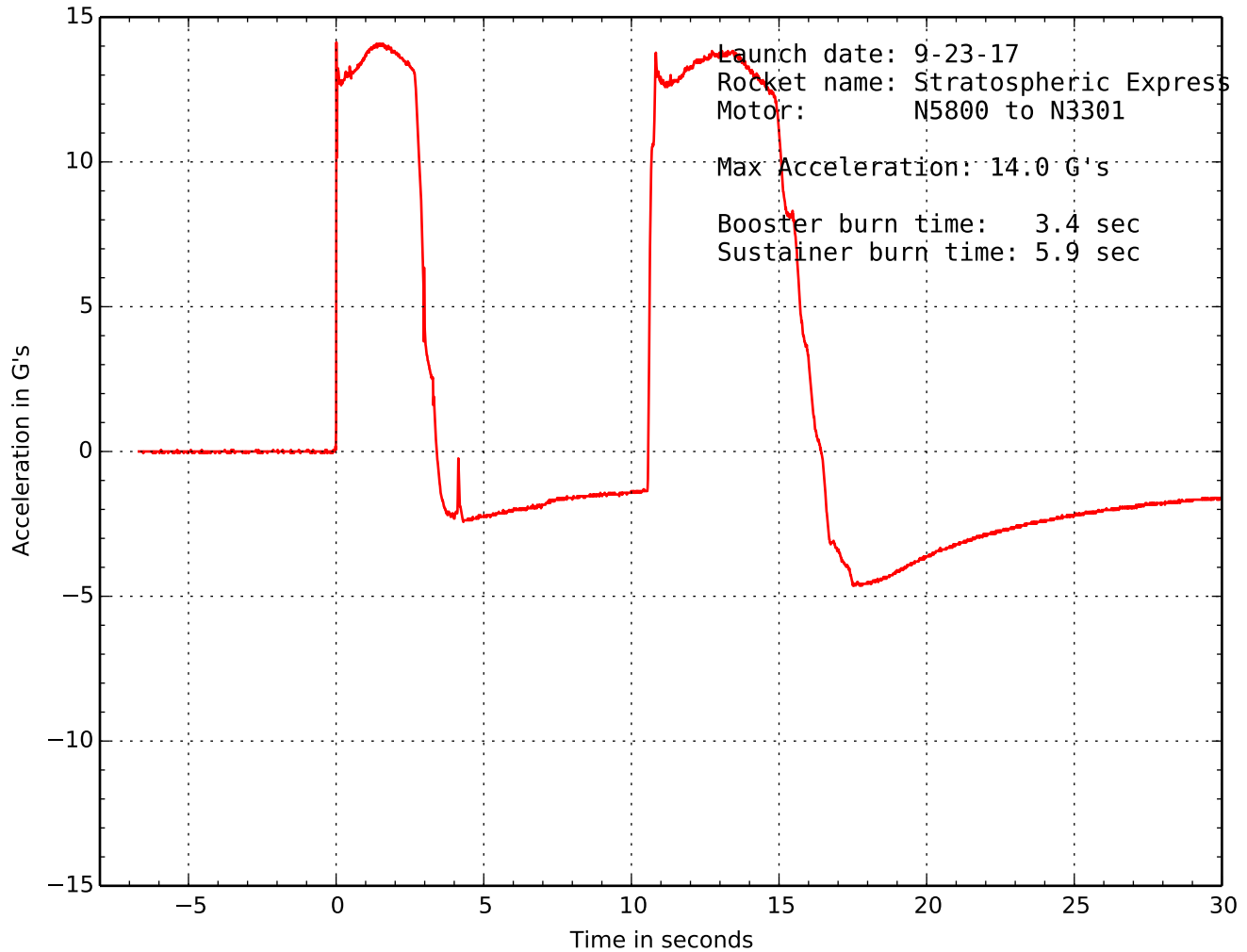
3D Velocity in Mach



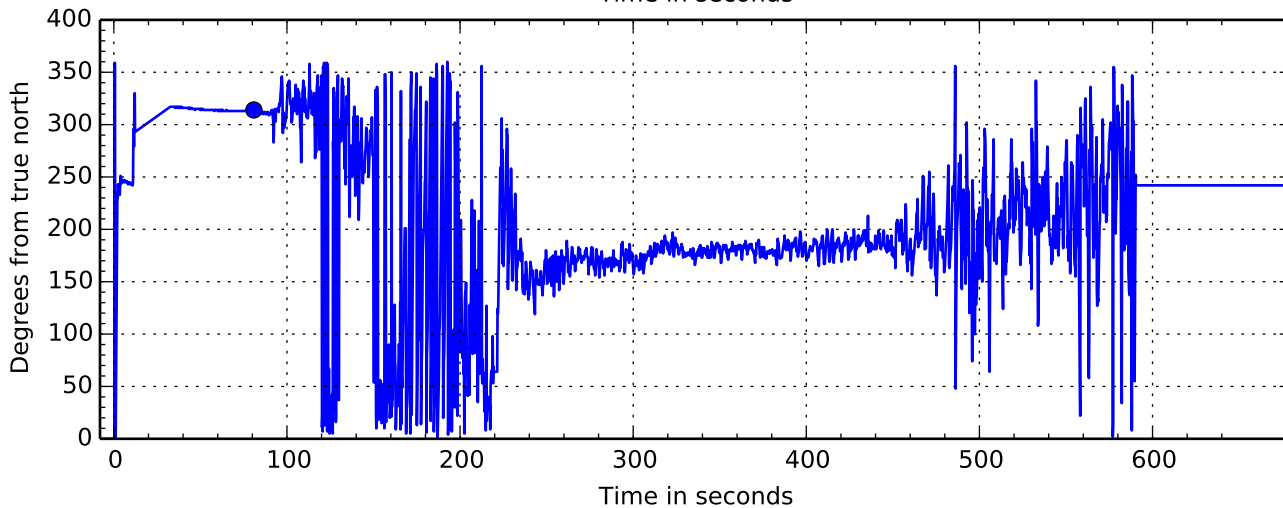
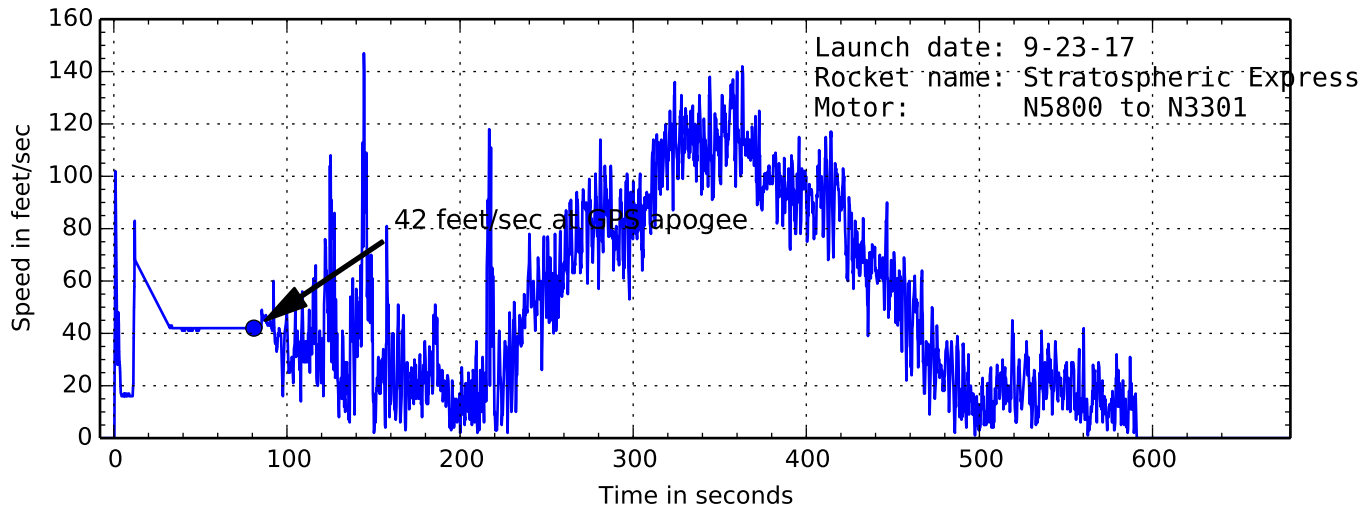
Acceleration -- Full Flight



Acceleration -- Boost Phase



Ground Speed and Heading



Number of Satellites and GPS Status

