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Flight Card

Launch date: Fri Sep 19 2014
Launch site: Black Rock, Balls 23
Flyer's name: Tom Rouse
Rocket name: Anniversary Special
Motor: 3x N2400 / N2400
Expected alt: 75000 feet
Dual deploy: Yes, main parachute set at 1500 feet

Comments: Two-stages:
Three N2400 research motors in booster.
Single N2400 research motor in sustainer.

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Flight Results

Max GPS altitude: 90470 feet AGL
Max Acc altitude: 90617 feet AGL
Altitude at max vel: 22358 feet AGL

NOTE: Flight exceeded GPS velocity limit!
Max GPS velocity: 1679 feet/sec 1144.8 mph 1.734 Mach
Max Acc velocity: 3261 feet/sec 2223.4 mph 3.227 Mach
Max Acceleration: 13.4 G's 432.0 feet/sec/sec

	Booster	Sustainer
Delay time:	0.0 sec	3.2 sec
Burn time:	5.4 sec	5.5 sec
Ignition altitude:	0 feet	8974 feet
Burn out altitude:	4110 feet	20333 feet
Ignition velocity:	0 ft/s	1250 ft/s
Burn out velocity:	1550 ft/s	3261 ft/s
Ignition velocity:	0.00 Mach	1.16 Mach
Burn out velocity:	1.41 Mach	3.15 Mach

Apogee Deployment Event
Occurred: 72.5 sec after liftoff
Fired: 1.53 sec early
Altitude: 90420 feet
Vert vel: 67 feet/sec
Horz vel: 24 feet/sec

Ground speed at apogee: 25 feet/sec 17.0 mph
Heading at apogee: 36° from true north

Distance to apogee: 2394 feet 0.45 miles
Bearing to apogee: 45° from true north

Descent rate on drogue: 179 feet/sec 121.9 mph
Descent rate on main: 36 feet/sec 24.8 mph
Touch down velocity: 47 feet/sec 32.0 mph

Main Parachute Deployment Event
Deployed: 580.5 sec after liftoff
Altitude: 2443 feet AGL

Time to max velocity: 14.1 sec
Time to apogee: 1 min 14.0 sec
Time on drogue: 8 min 26.4 sec
Time on main: 1 min 10.8 sec
Total flight time: 10 min 51.3 sec

Lift off: 17:05:29.0 MDT 23:05:29.0 UTC
Apogee: 17:06:43.2 MDT 23:06:43.2 UTC
Touch down: 17:16:20.4 MDT 23:16:20.4 UTC

Launch pad coordinates: N 40° 50.4118' W 119° 8.0154'
Landing site coordinates: N 40° 50.0658' W 119° 10.7511'

Distance to landing site: 12753 feet 2.42 miles
Bearing to landing site: 260° from true north

Ground level: 3916 feet MSL

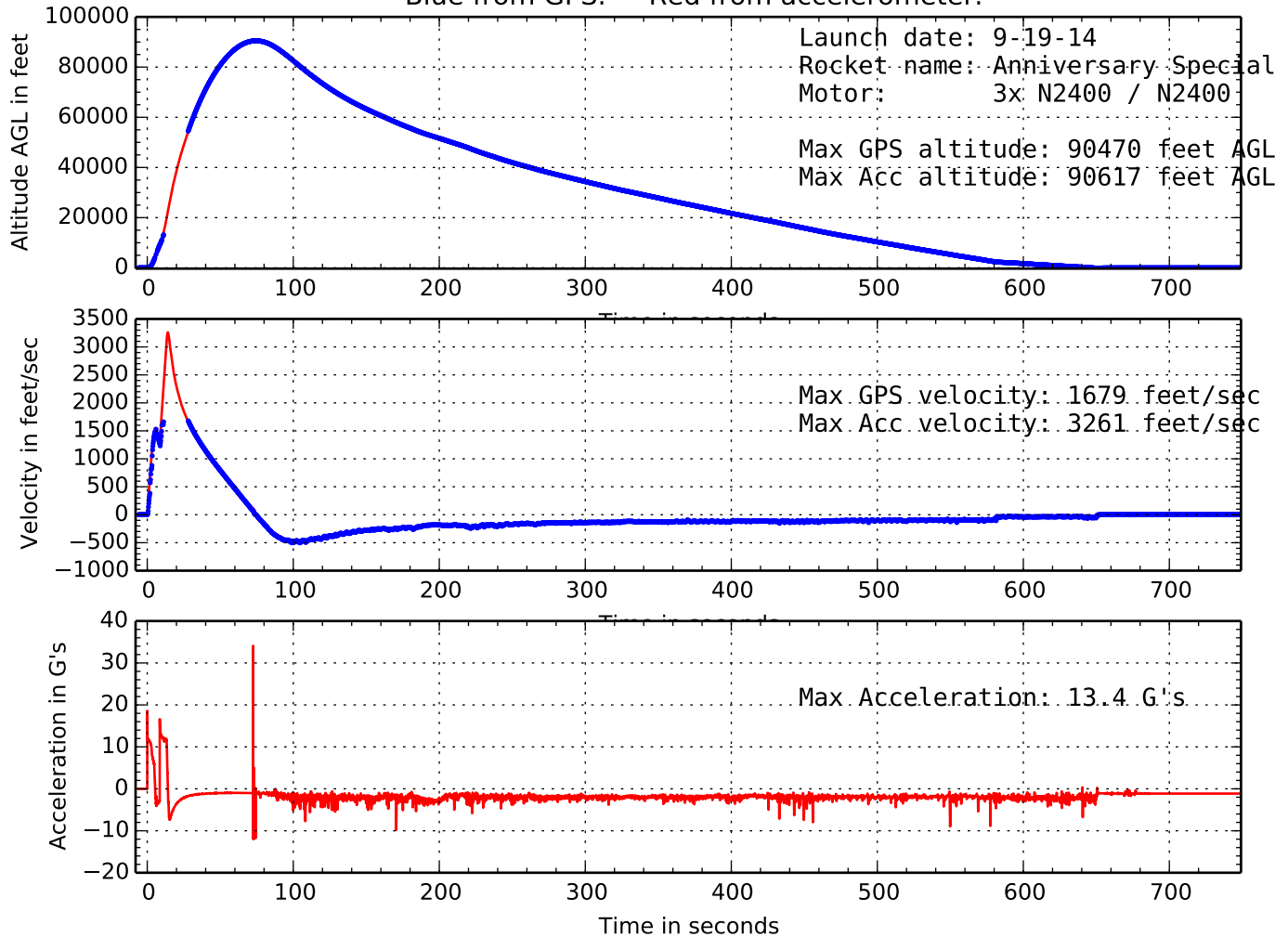
	Liftoff	Apogee	Landing
Battery:	4.02v	4.00v	3.99v
Temperature:	105°F	106°F	99°F

Transmitter: Mx110A0214 Firmware: 1.2.2.0

This data came from transmitter flash memory.

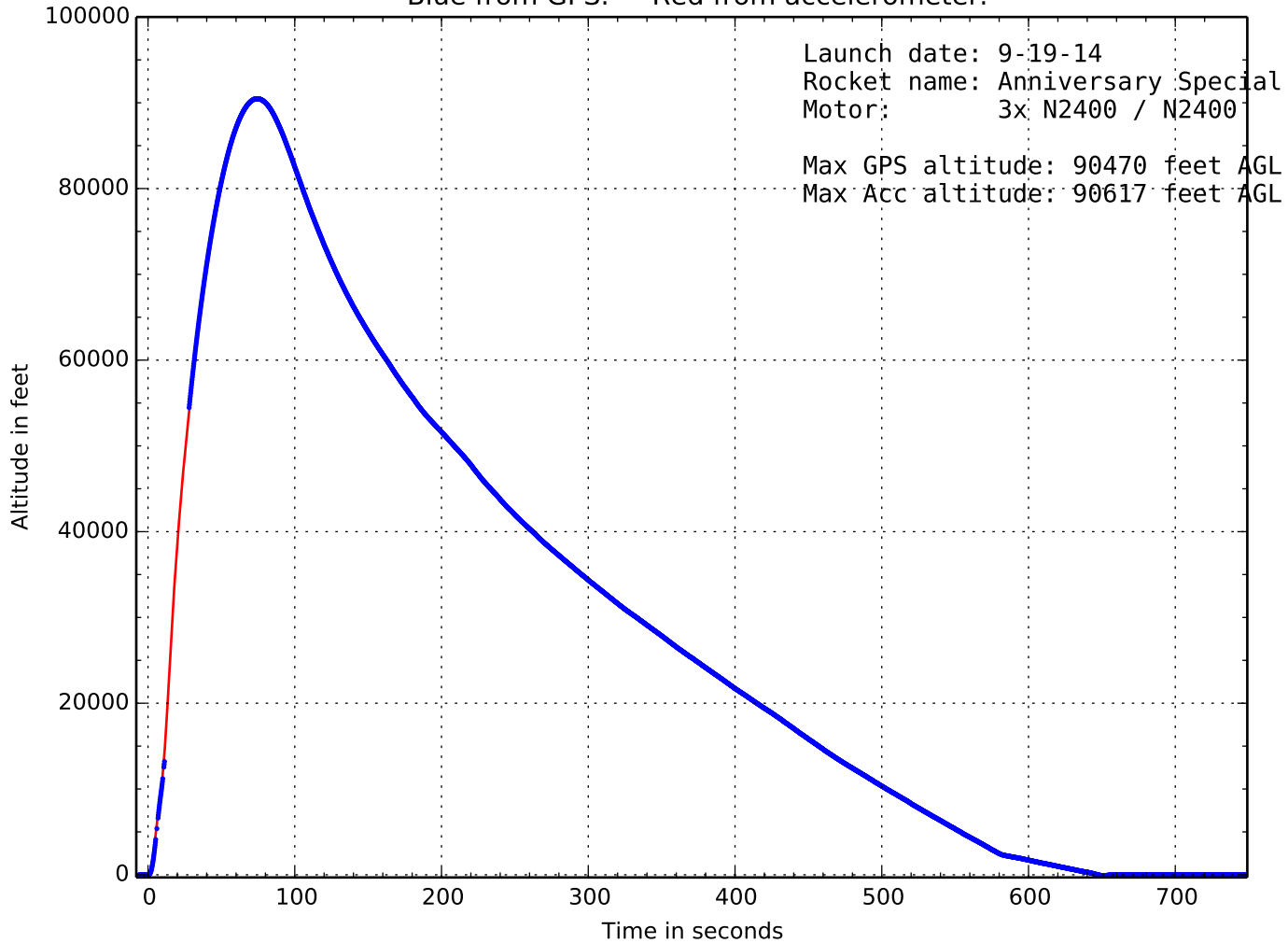
Altitude, Velocity, and Acceleration

Blue from GPS. Red from accelerometer.



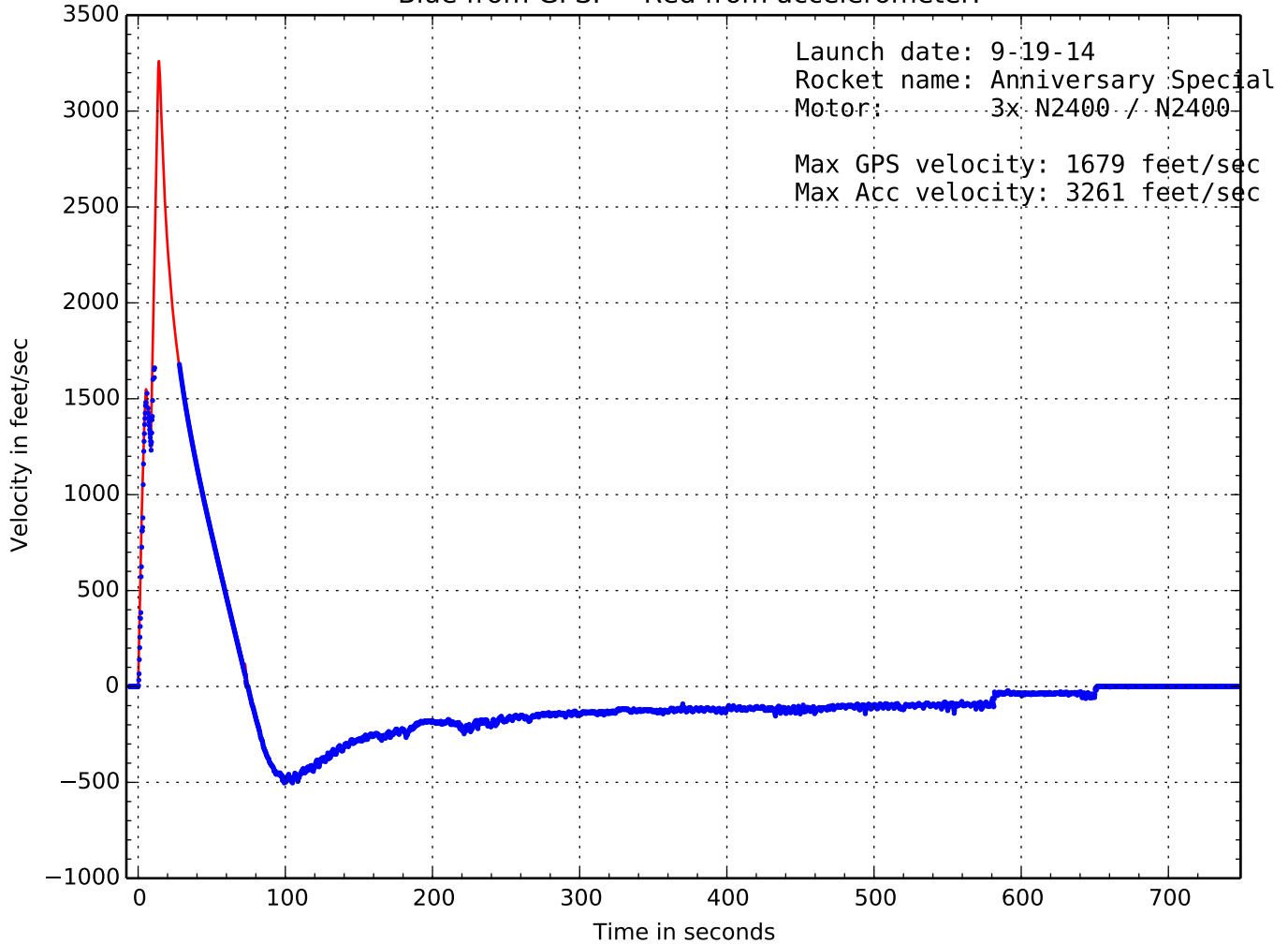
Altitude AGL

Blue from GPS. Red from accelerometer.

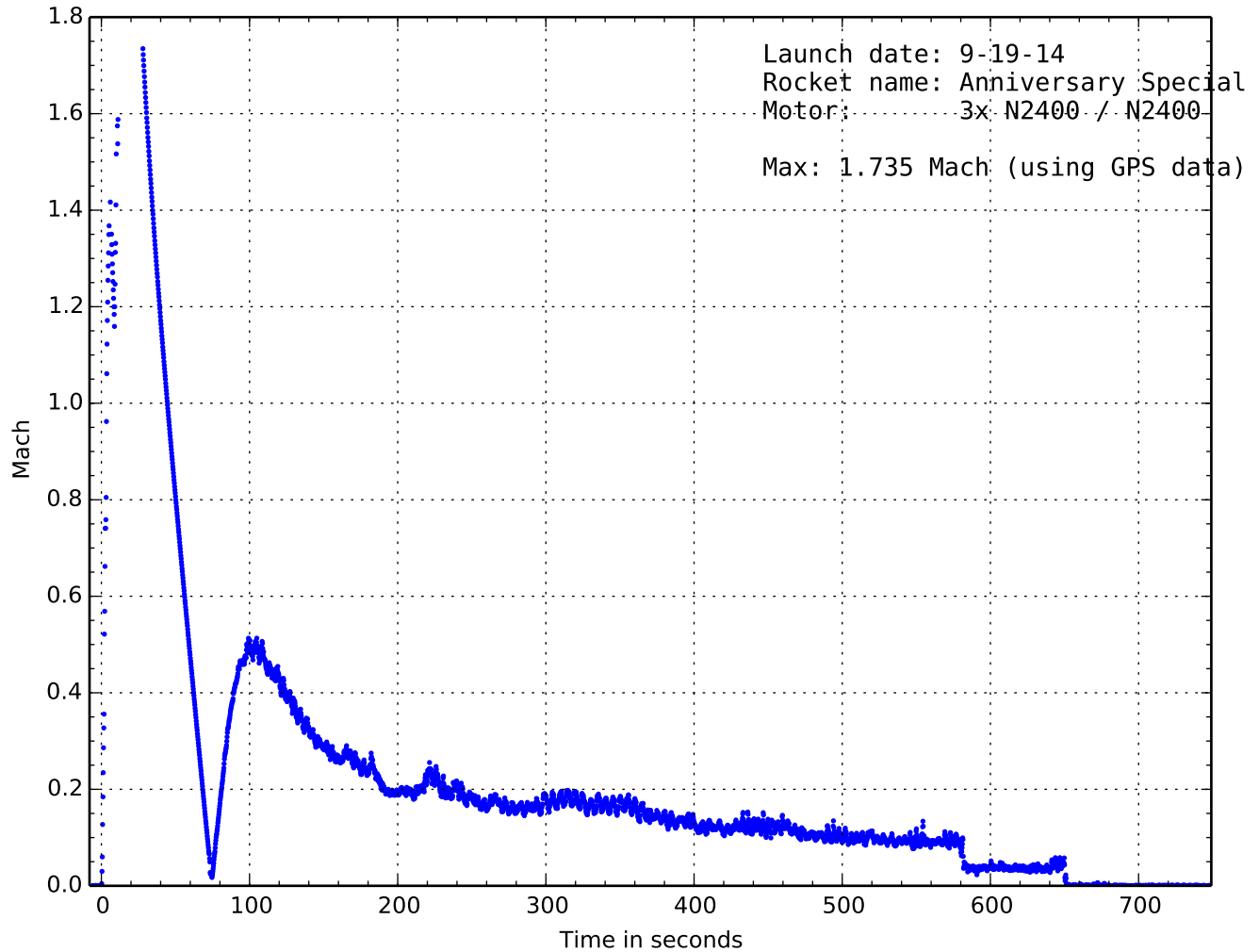


Vertical Velocity

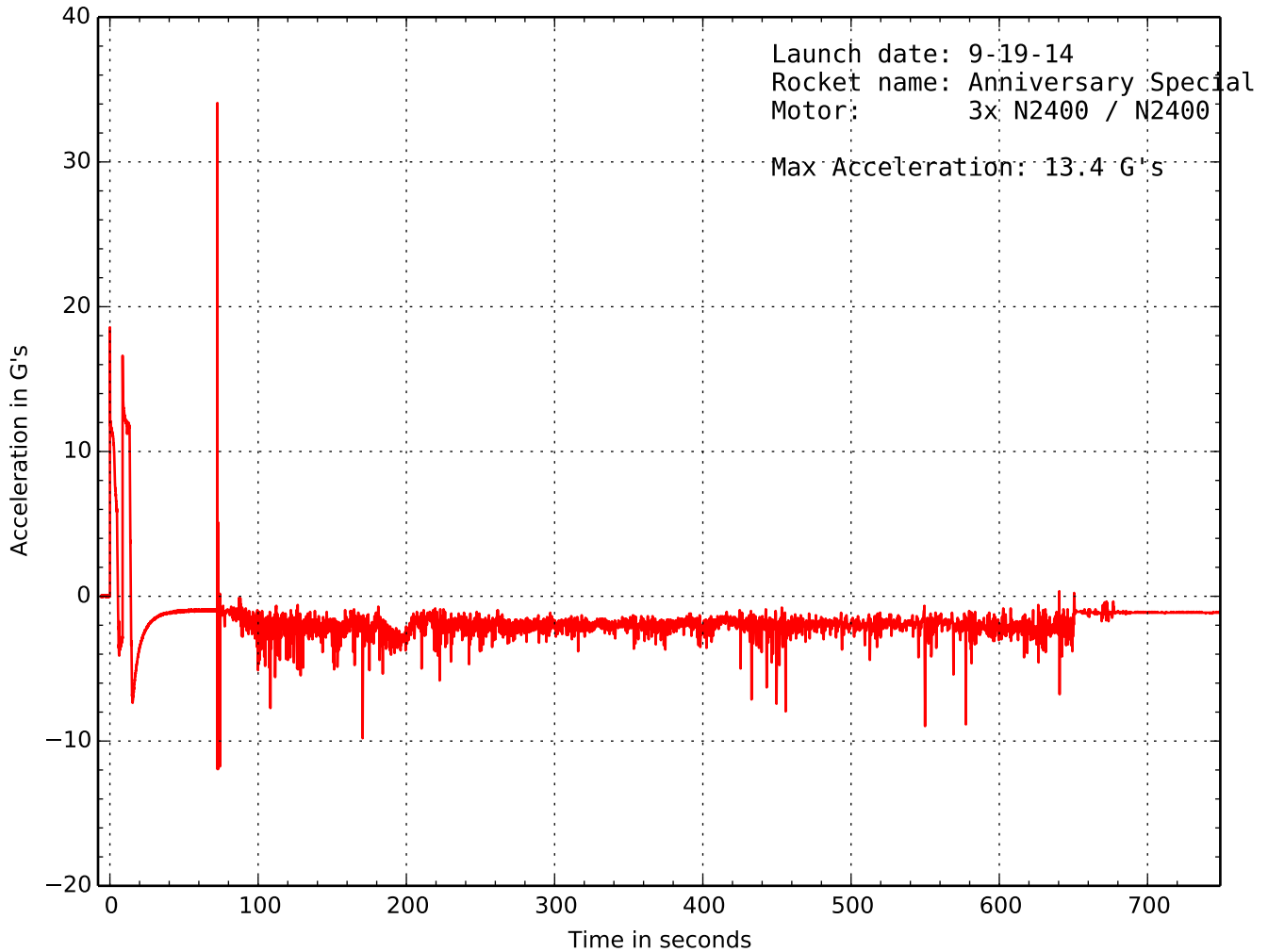
Blue from GPS. Red from accelerometer.



3D Velocity in Mach

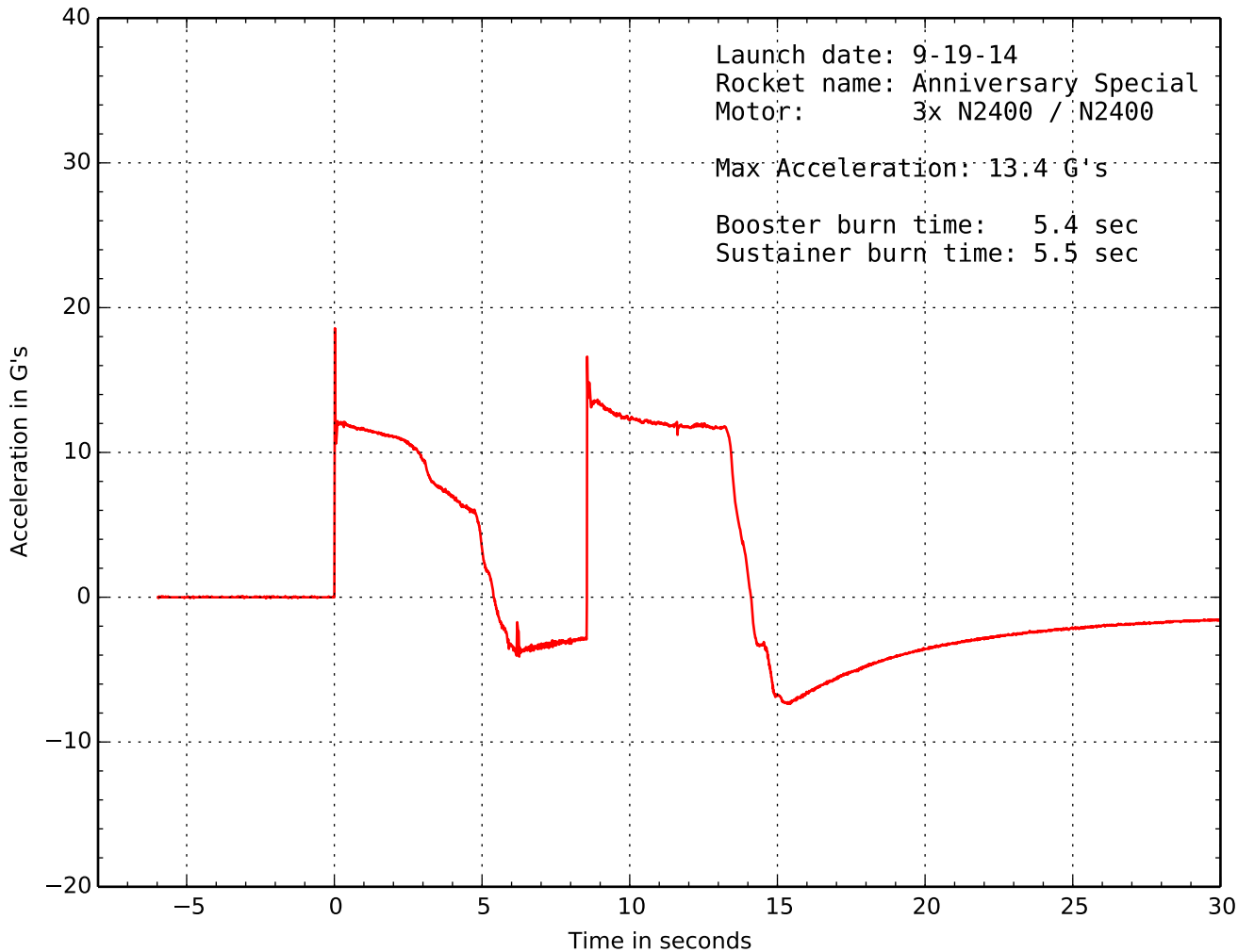


Acceleration -- Full Flight

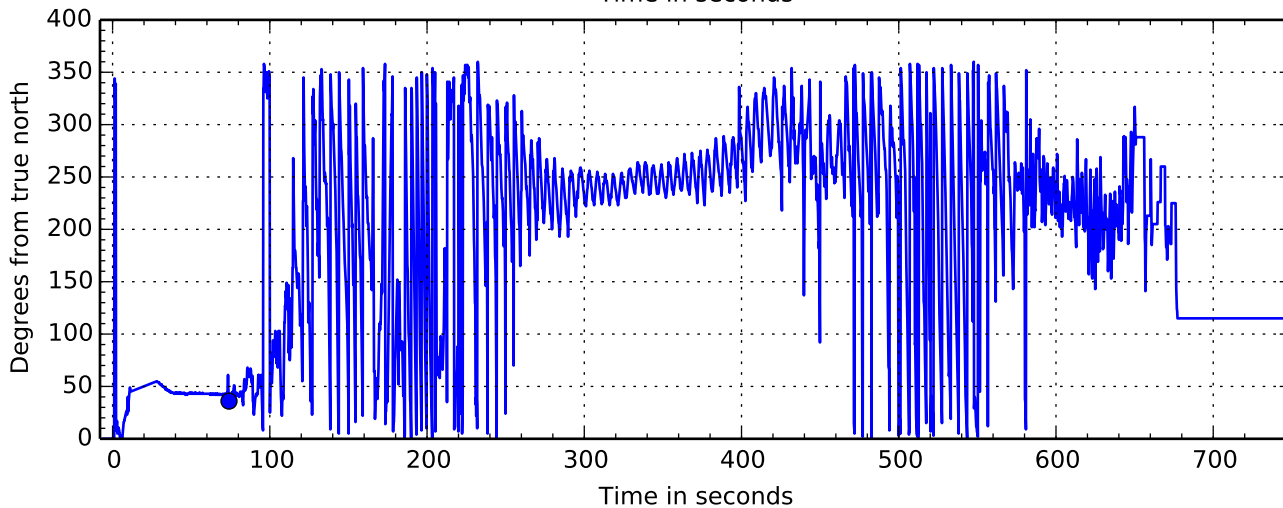
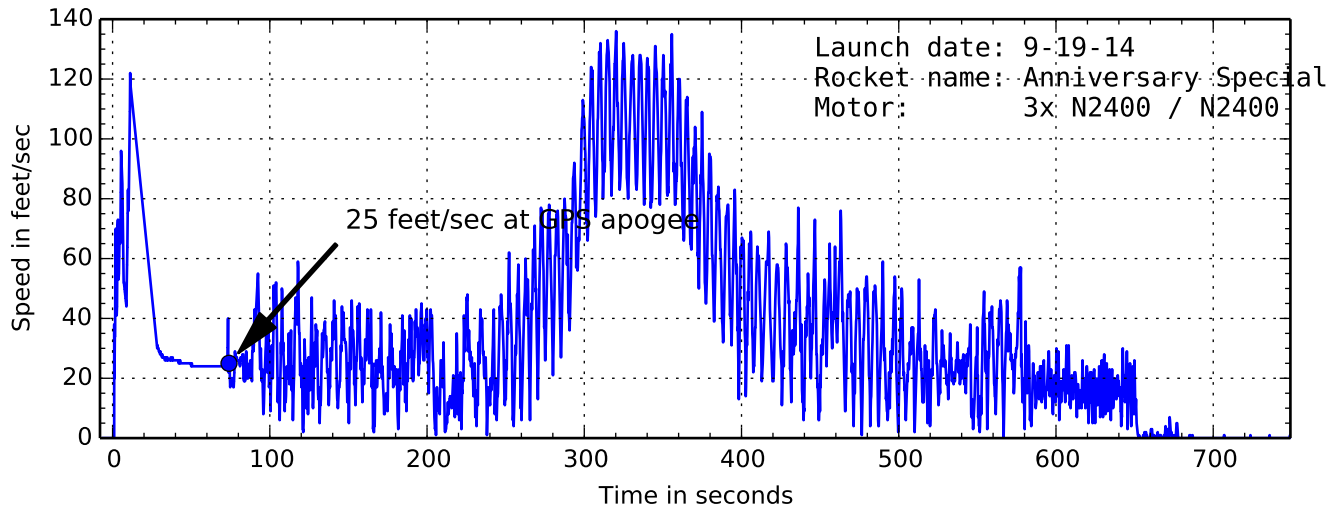


Acceleration -- Boost Phase

Launch date: 9-19-14
Rocket name: Anniversary Special
Motor: 3x N2400 / N2400
Max Acceleration: 13.4 G's
Booster burn time: 5.4 sec
Sustainer burn time: 5.5 sec



Ground Speed and Heading



Number of Satellites and GPS Status

