

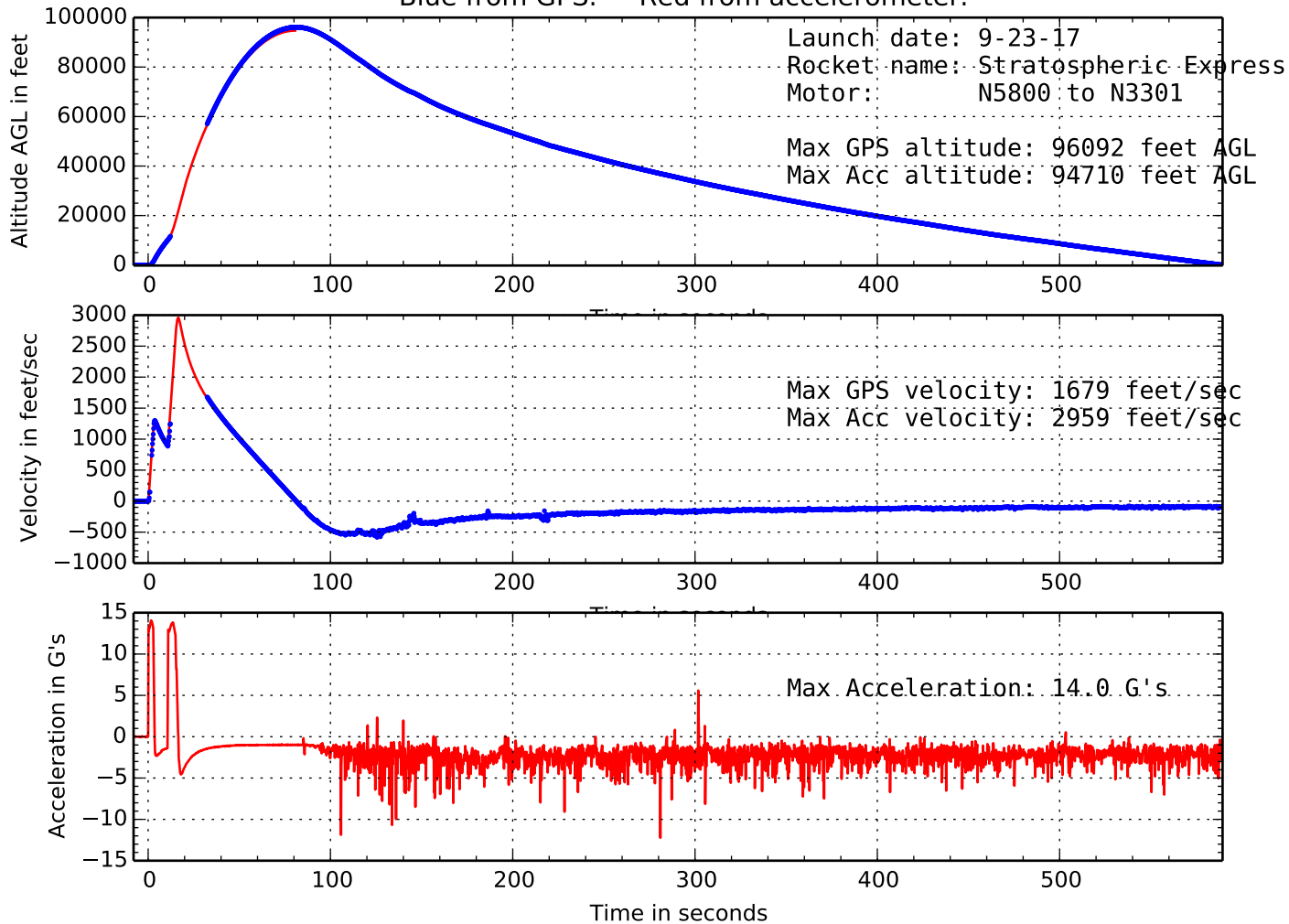
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|           Flight Card           |
-----|
Launch date:  Sat Sep 23 2017|
Launch site:  Black Rock Dry Lake -- Balls 2017|
Flyer's name:  Noah Joraanstad|
Rocket name:  Stratospheric Express|
Motor:        N5800 to N3301|
Expected alt: 100000 feet|
Dual deploy:  No|
|
Comments: Great 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 |
Tilt at ignition: 0°             1.02°|
Ignition altitude: 0 feet         9965 feet |
Burn out altitude: 2259 feet      21810 feet |
Ignition velocity: 0 ft/s         882 ft/s |
Burn out velocity: 1281 ft/s      2959 ft/s |
Ignition velocity: 0.00 Mach      0.82 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: 95903 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: 94 feet/sec  64.1 mph|
|
Time to max velocity: 16.4 sec|
Time to apogee: 1 min 21.0 sec|
Time on main: 8 min 28.4 sec|
Total flight time: 9 min 49.4 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: 12:07:30.4 MDT 18:07:30.4 UTC|
|
Launch pad coordinates: N 40° 53.4726' W 119° 2.5050'|
Landing site coordinates: N 40° 50.6174' W 119° 3.2752'|
|
Distance to landing site: 17737 feet  3.36 miles|
Bearing to landing site: 192° from true north|
|
Ground level: 3941 feet MSL|
|
                Liftoff  Apogee  Landing|
Battery: 3.87v  3.86v  3.86v|
Temperature: 78°F  79°F  79°F|
|
Transmitter: Mx110A0236 Firmware: 4.0.0.0|
Receiver: Mx120A0200 Firmware: 4.0.0.0|
|
Data came from receiver: Flight name "NOAH"|
                        Dated: Sept 23 at 10:57am|

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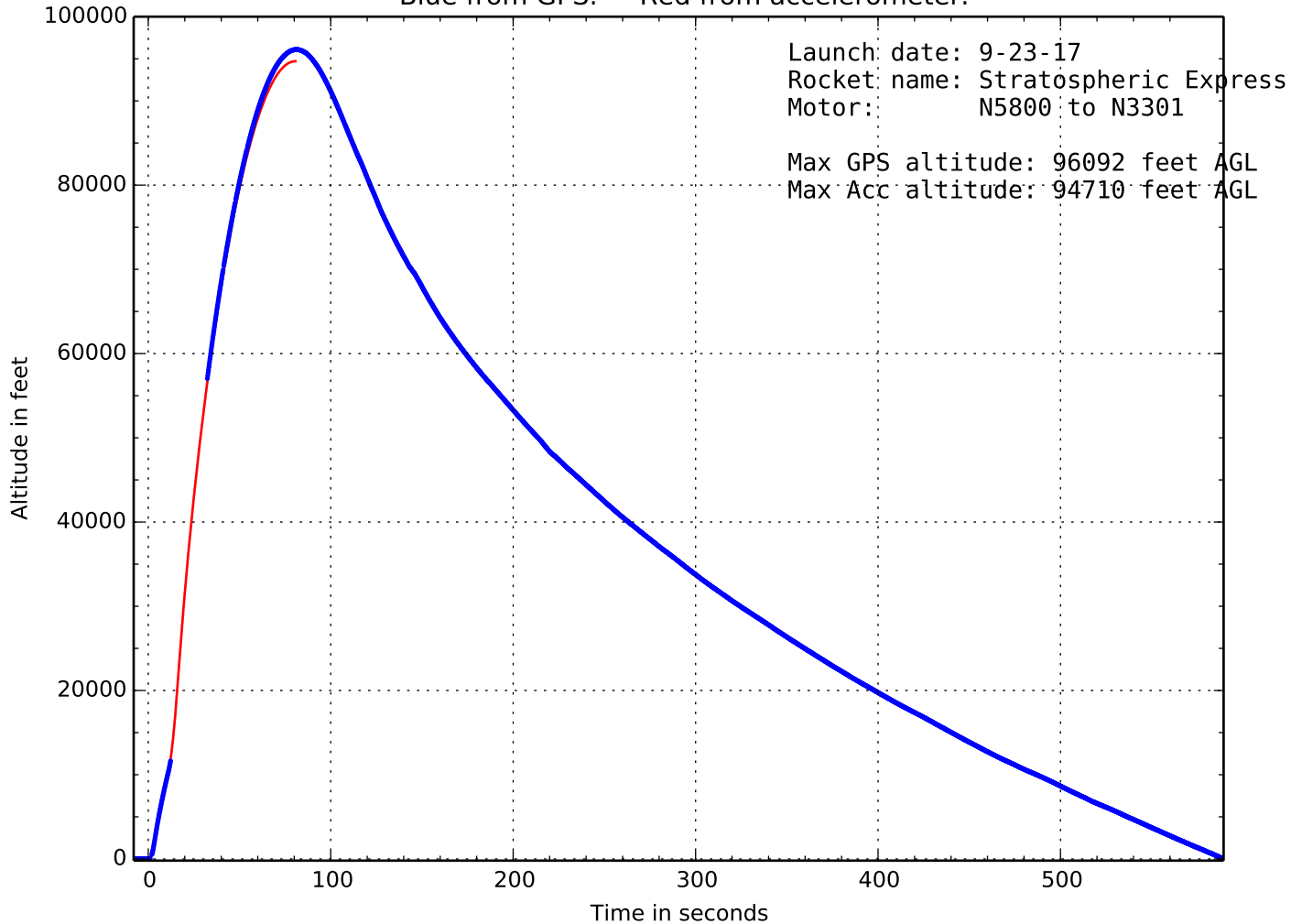
Altitude, Velocity, and Acceleration

Blue from GPS. Red from accelerometer.



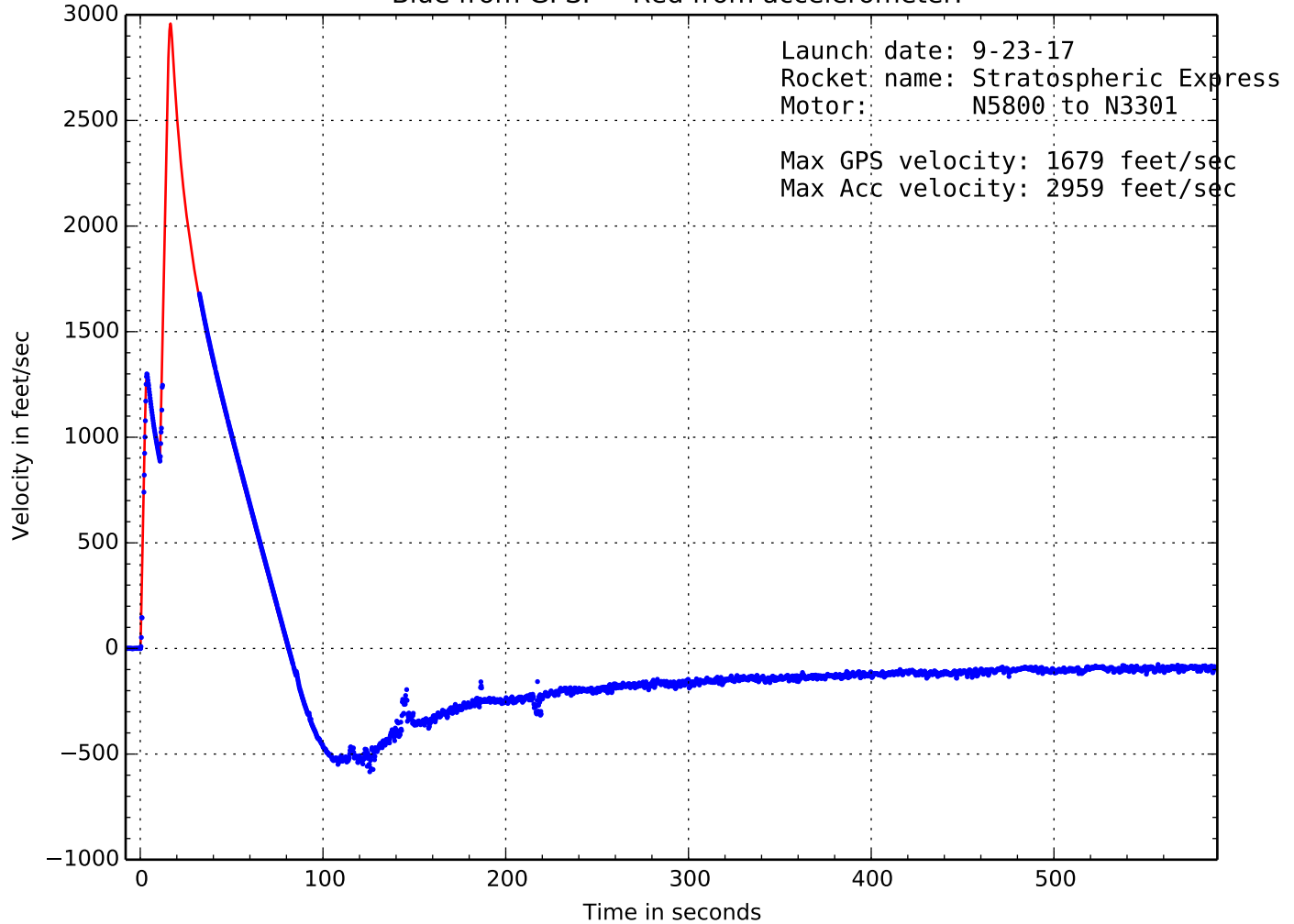
Altitude AGL

Blue from GPS. Red from accelerometer.

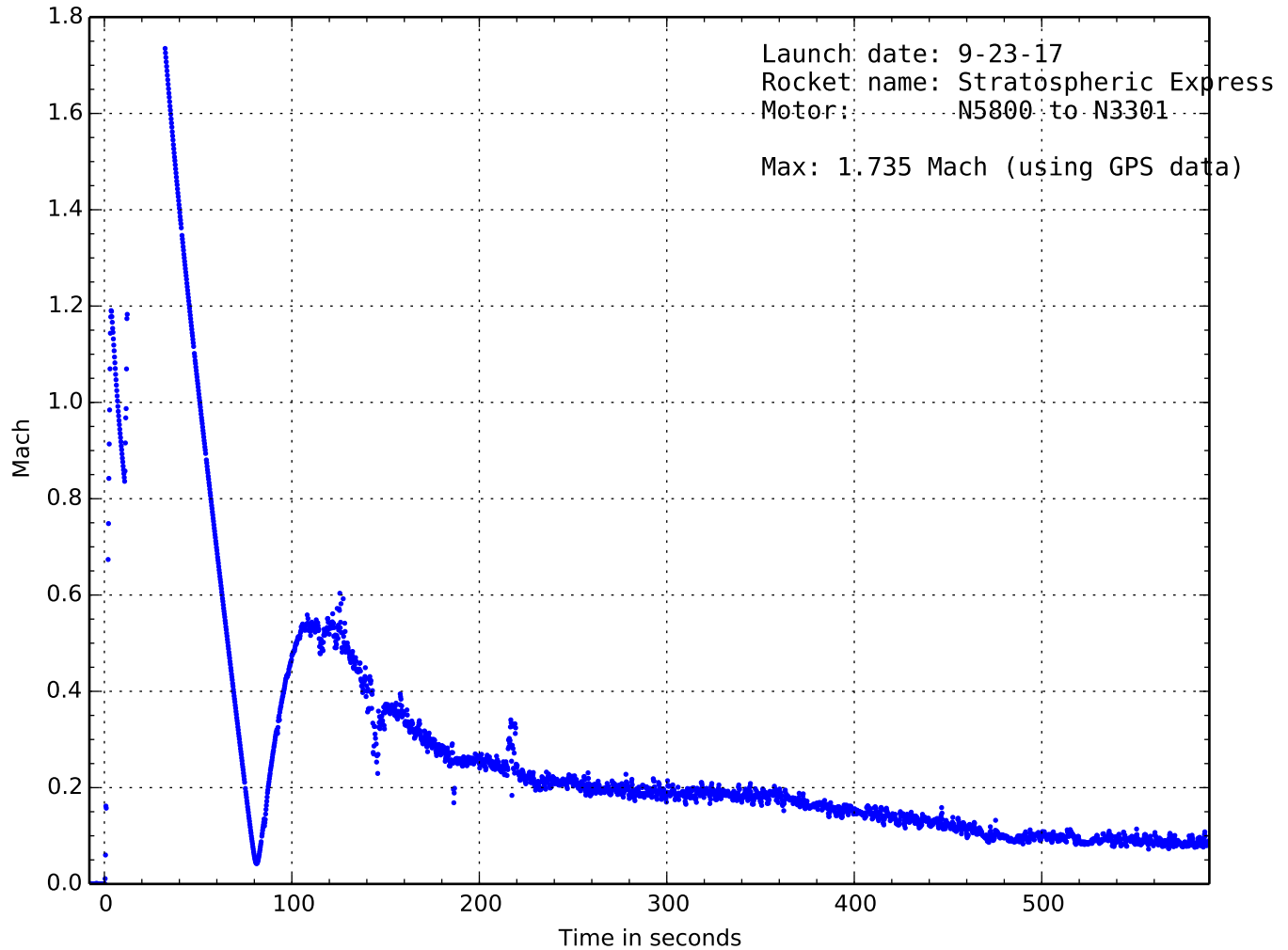


Vertical Velocity

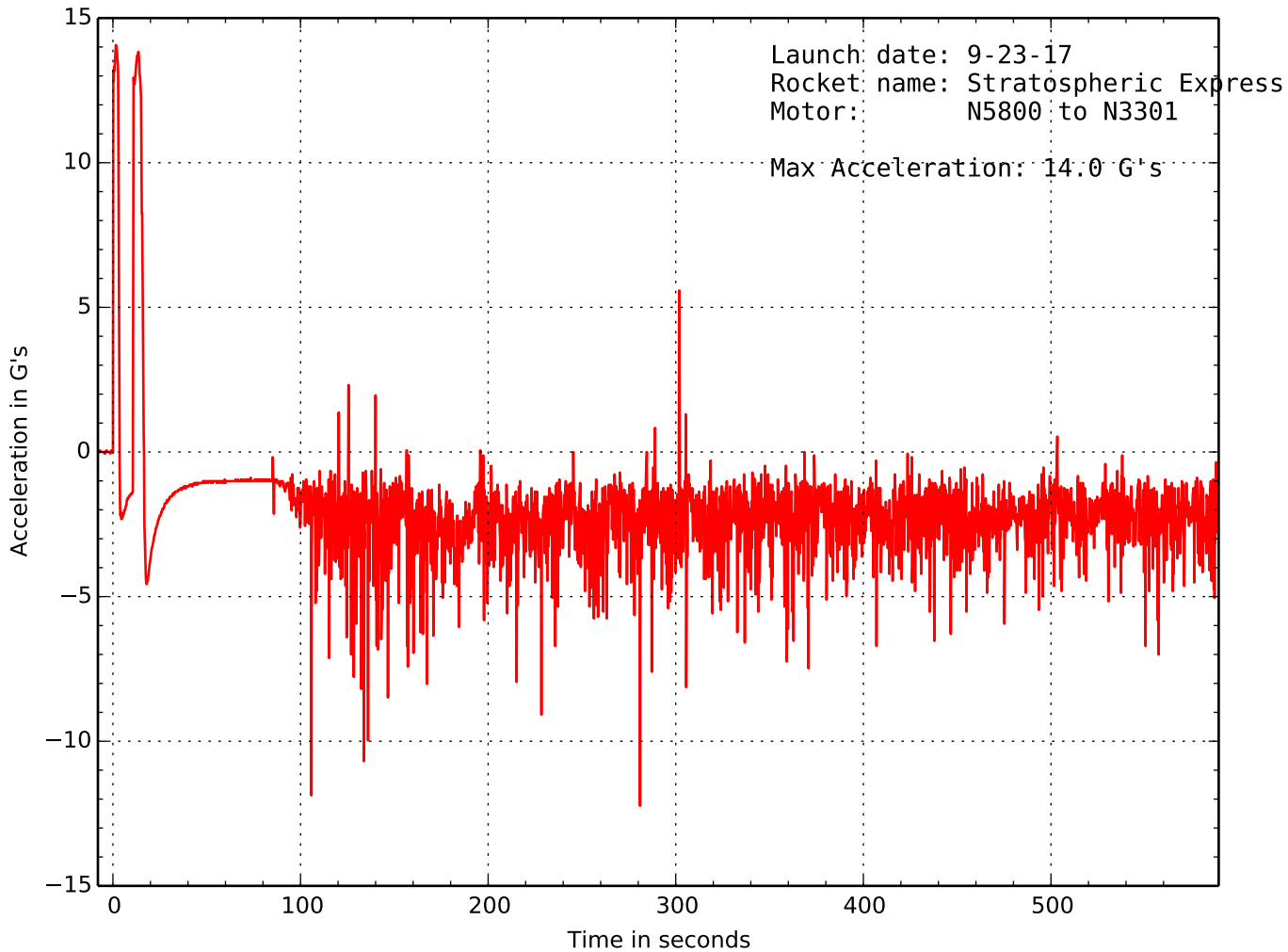
Blue from GPS. Red from accelerometer.



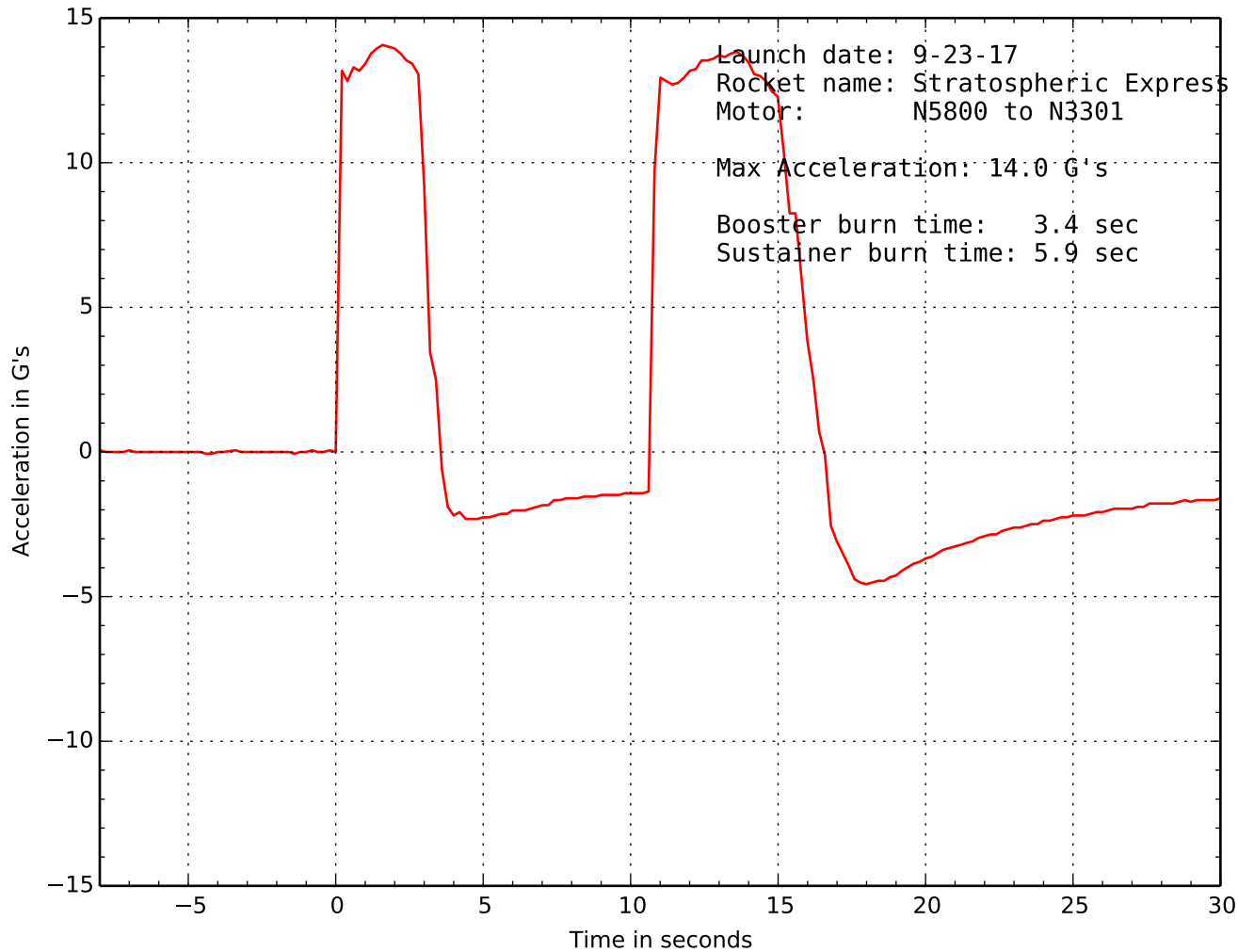
3D Velocity in Mach



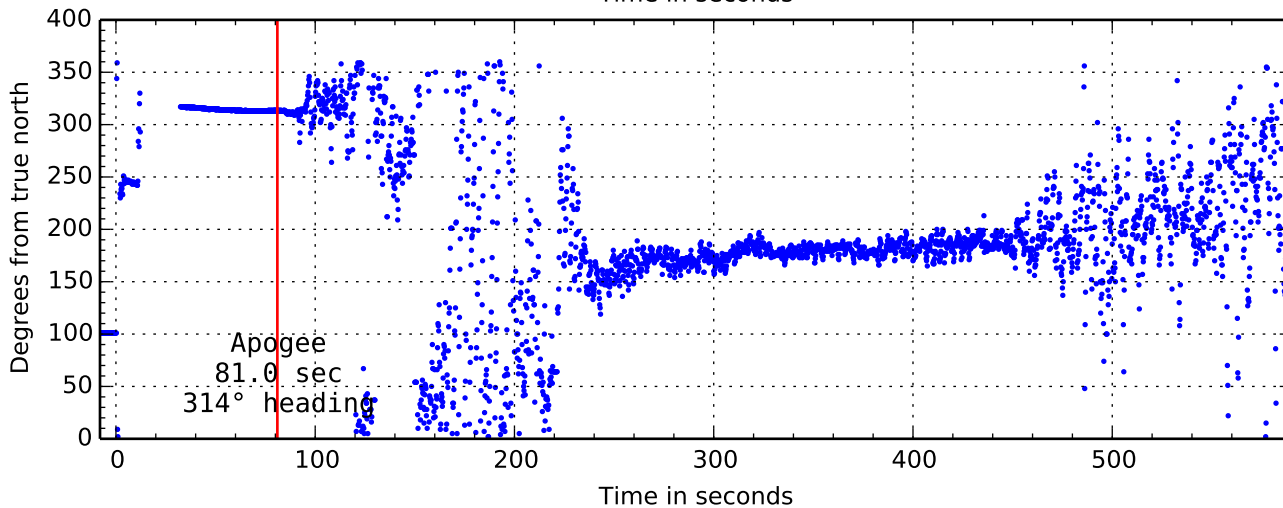
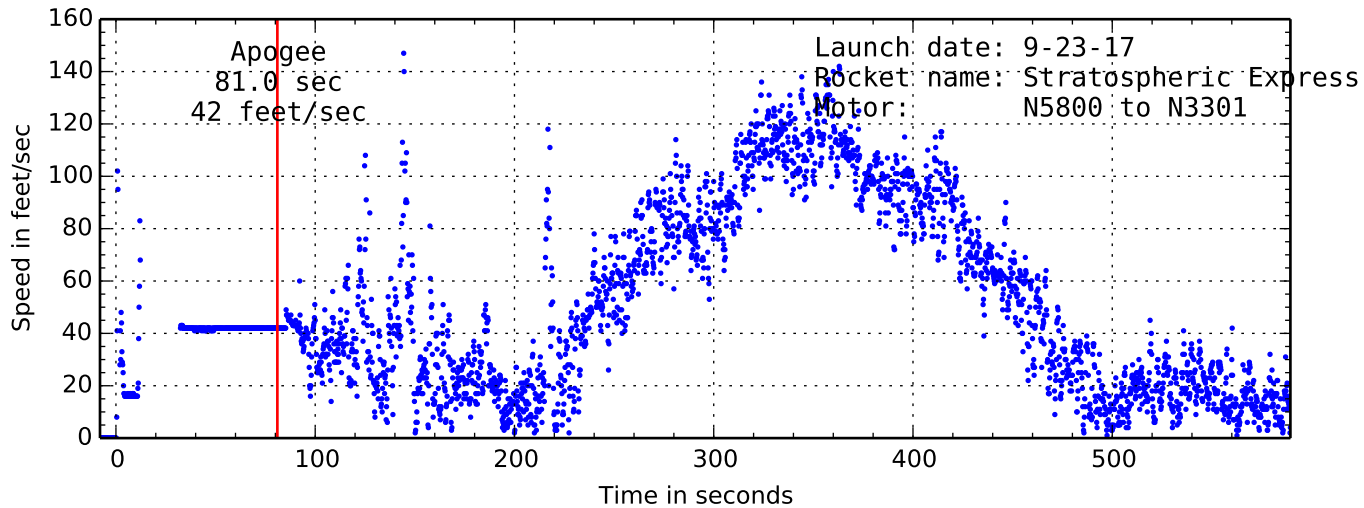
Acceleration -- Full Flight



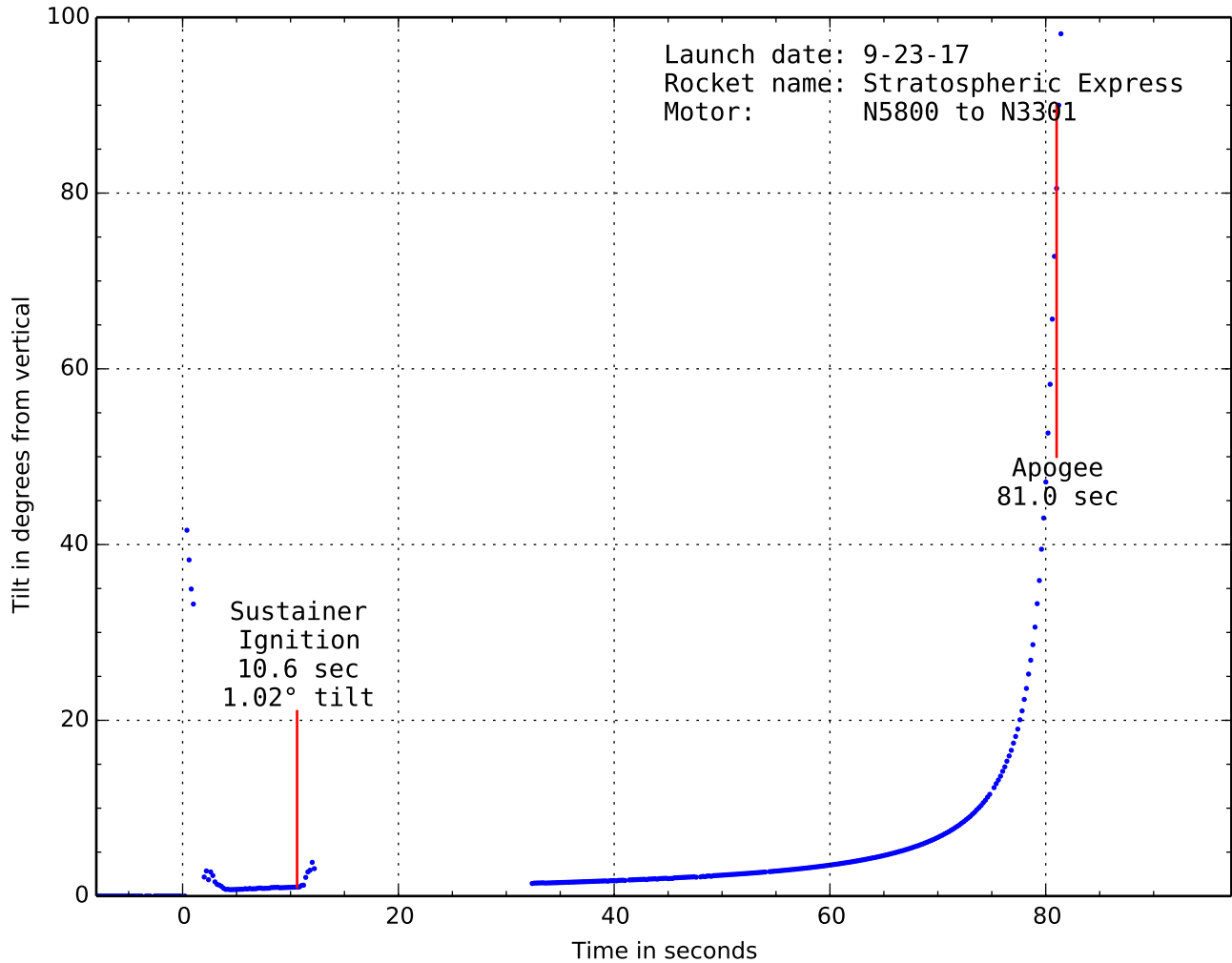
Acceleration -- Boost Phase



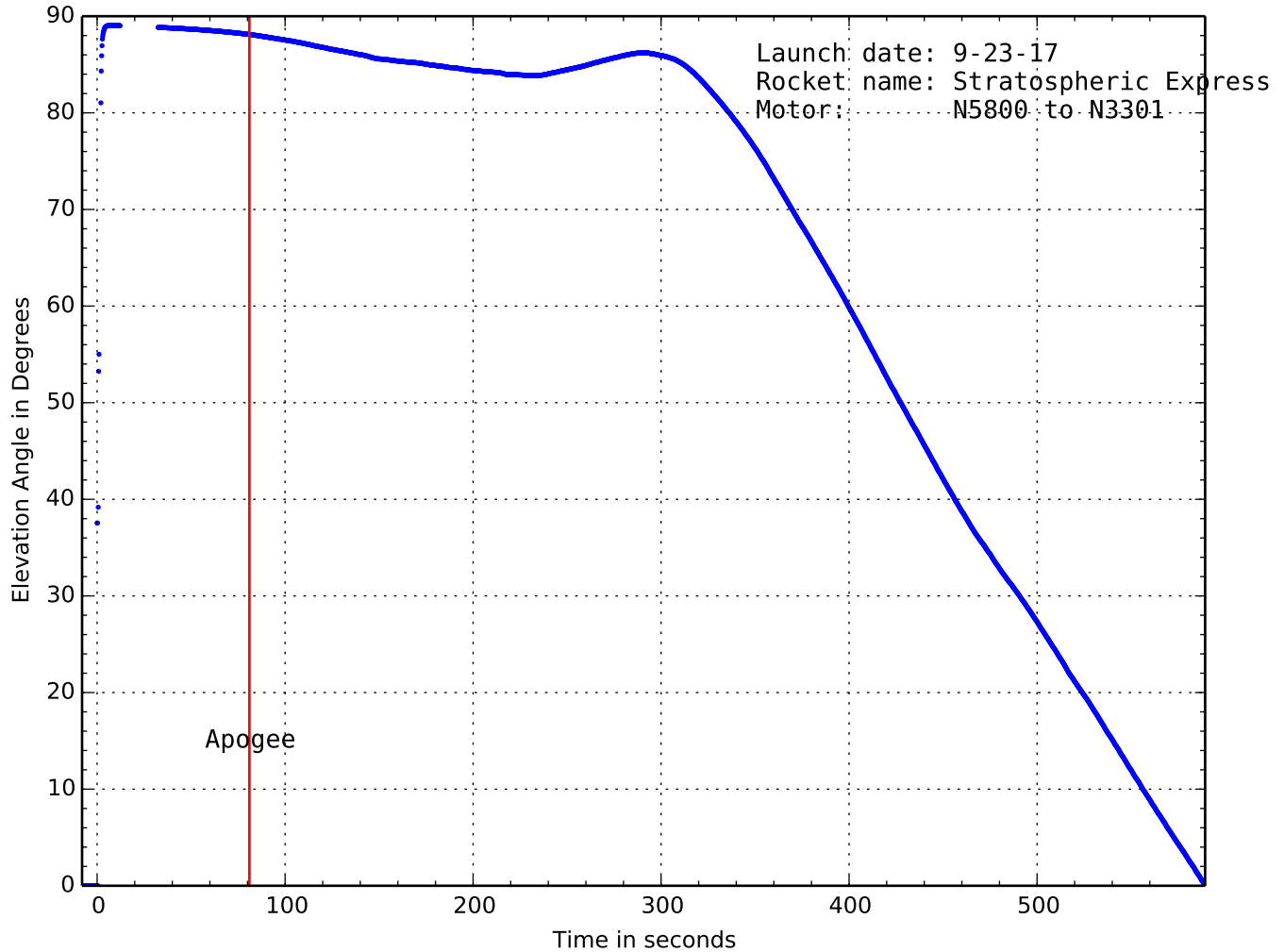
Ground Speed and Heading



Tilt Angle

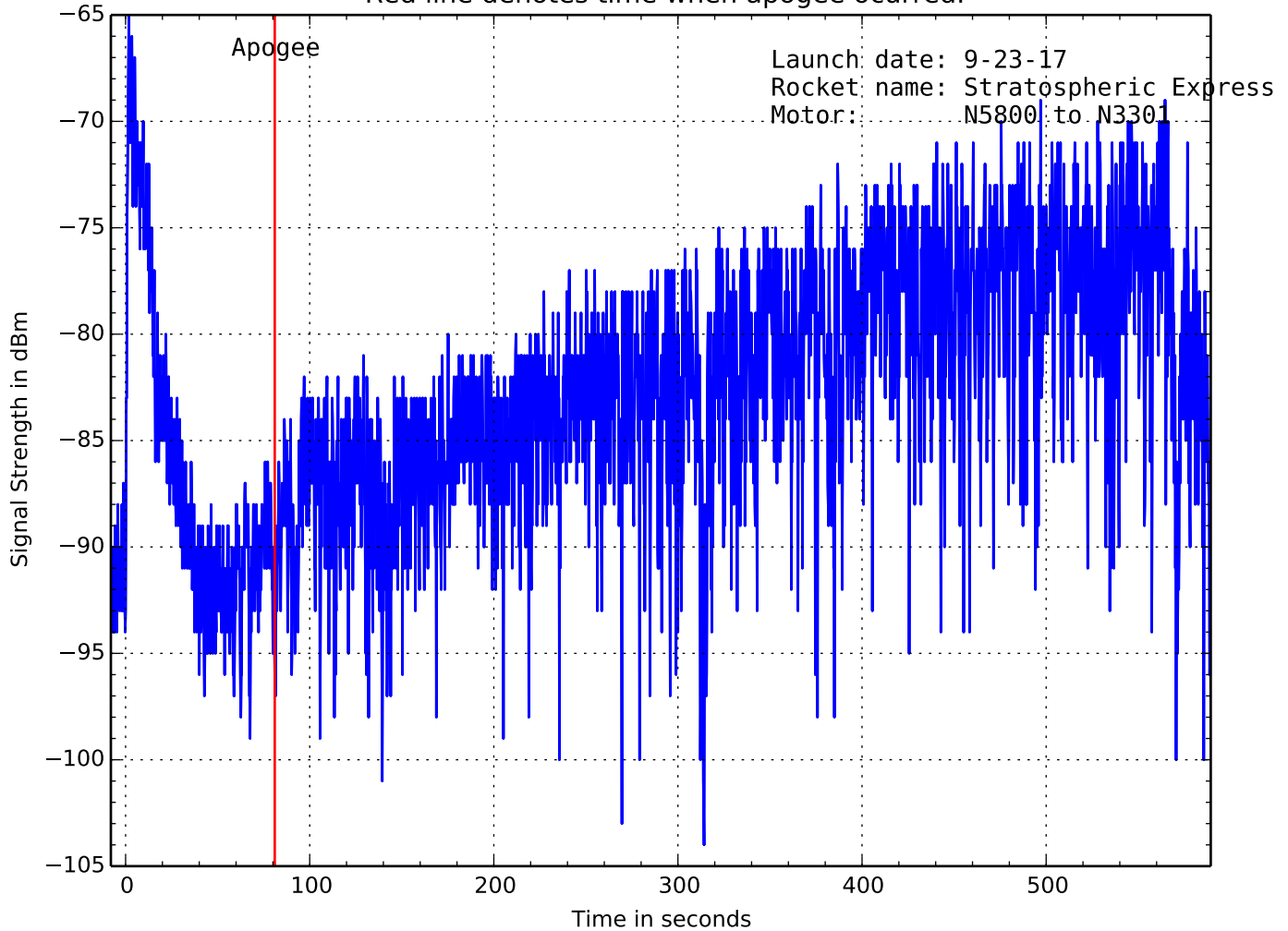


Elevation Angle from launch pad



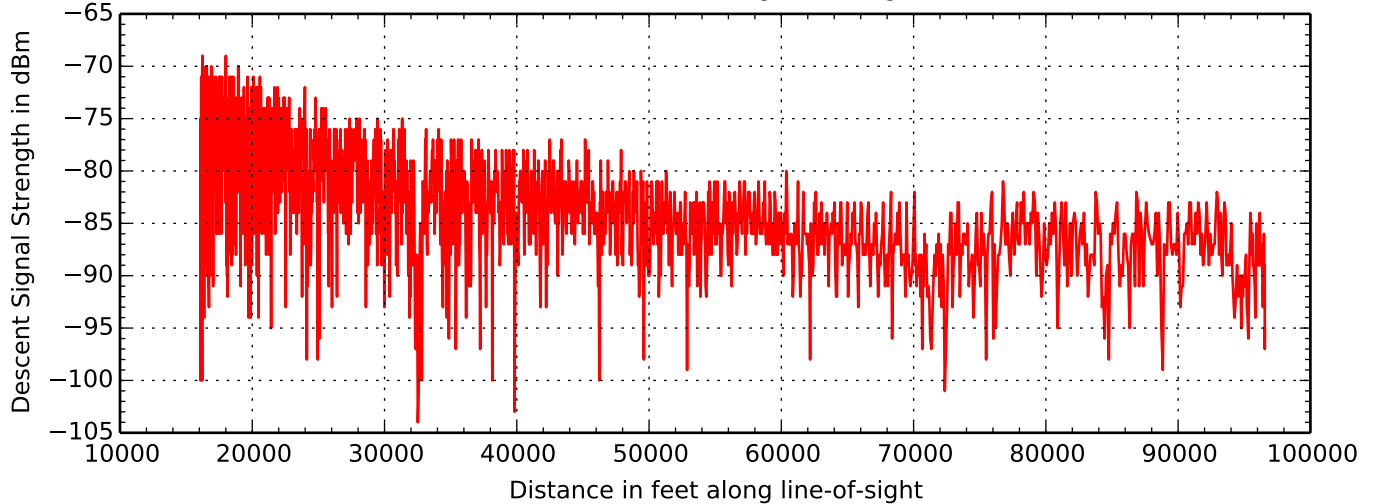
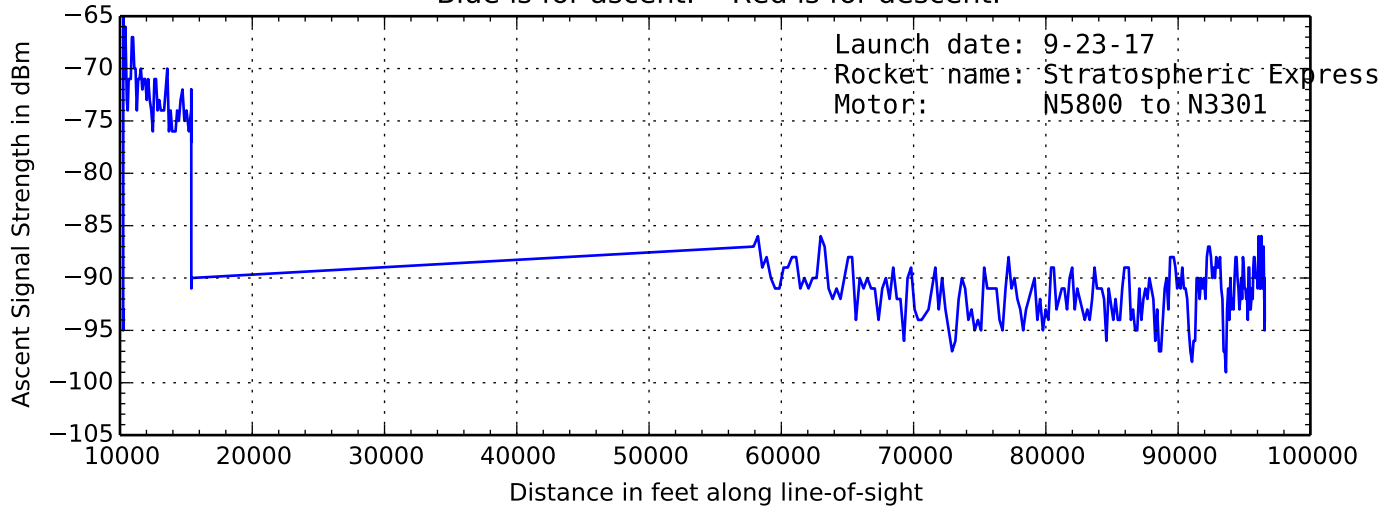
Downlink Signal Strength

Red line denotes time when apogee occurred.

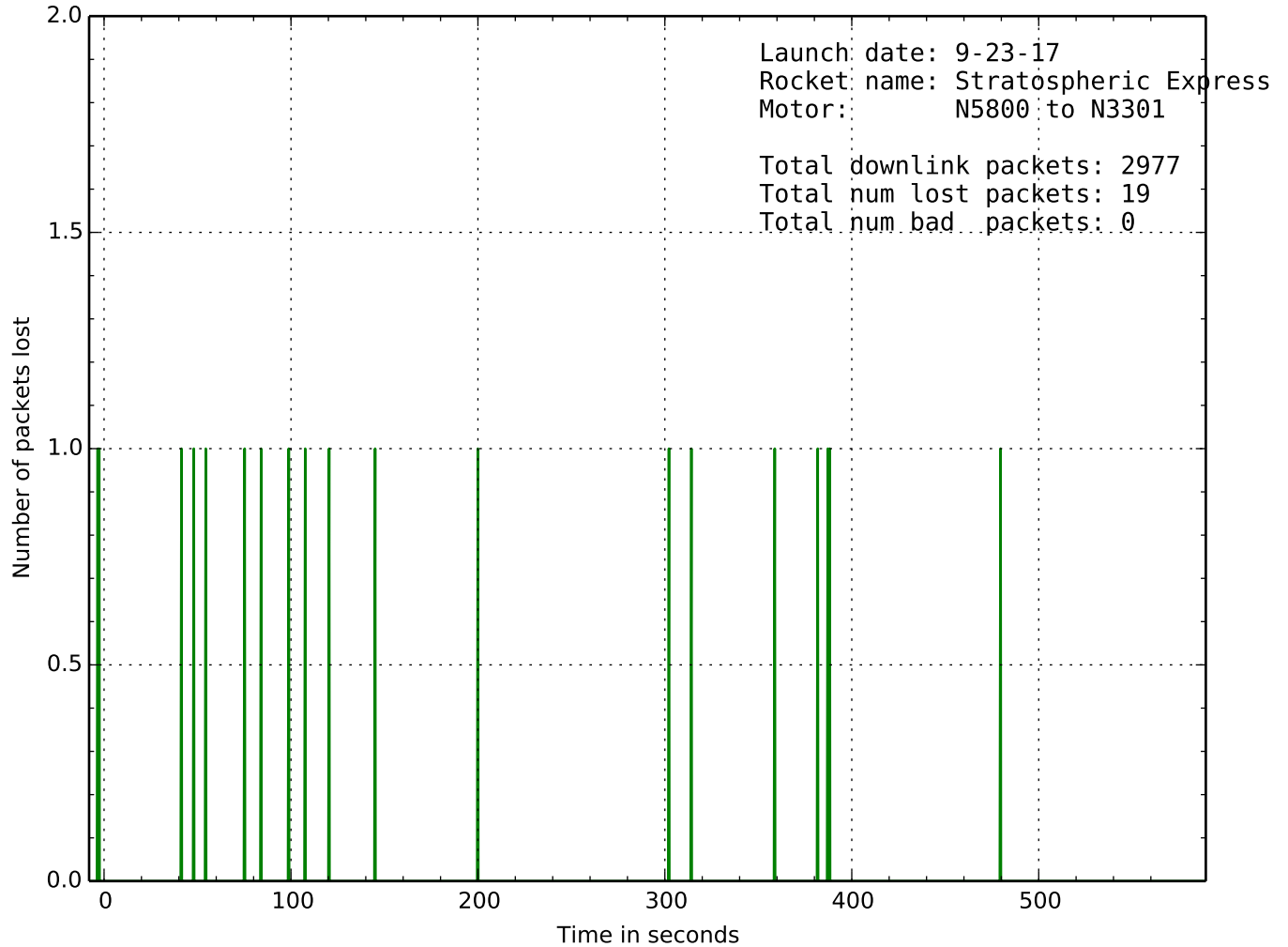


Downlink Signal Strength

Blue is for ascent. Red is for descent.



Lost Downlink Packets



Number of Satellites and GPS Status

