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Flight Card

Launch date: Sun Oct 02 2016  
Launch site: TIR -- Swan Falls  
Flyer's name: Rick Thome  
Rocket name: Big Red  
Motor: M685  
Expected alt: 19000 feet  
Dual deploy: Yes, main parachute set at 900 feet

Comments: Great flight!

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Flight Results

Max GPS altitude: 18490 feet AGL  
Max Acc altitude: 19101 feet AGL  
Max GPS velocity: 1076 feet/sec 733.6 mph 0.993 Mach  
Max Acc velocity: 1103 feet/sec 752.0 mph 1.018 Mach

Max Acceleration: 7.1 G's 229.7 feet/sec/sec

Motor burn time: 8.0 sec  
Burnout altitude: 5451 feet AGL  
Burnout velocity: 1102 feet/sec 1.006 Mach

Apogee Deployment Event  
Occurred: 34.6 sec after liftoff  
Fired: 0.10 sec late  
Altitude: 18505 feet  
Vert vel: 0 feet/sec  
Horz vel: 185 feet/sec

Ground speed at apogee: 185 feet/sec 126.1 mph  
Heading at apogee: 300° from true north

Distance to apogee: 6931 feet 1.31 miles  
Bearing to apogee: 295° from true north

Descent rate on drogue: 100 feet/sec 68.2 mph  
Descent rate on main: 19 feet/sec 12.7 mph  
Touch down velocity: 22 feet/sec 15.0 mph

Main Parachute Deployment Event  
Deployed: 210.0 sec after liftoff  
Altitude: 903 feet AGL  
Vert vel: -77 feet/sec

Time to max velocity: 8.0 sec  
Time to apogee: 34.6 sec  
Time on drogue: 2 min 55.4 sec  
Time on main: 47.2 sec  
Total flight time: 4 min 17.2 sec

Lift off: 14:36:52.2 MDT 20:36:52.2 UTC  
Apogee: 14:37:26.8 MDT 20:37:26.8 UTC  
Touch down: 14:41:09.4 MDT 20:41:09.4 UTC

Launch pad coordinates: N 43° 14.2588' W 116° 19.5299'  
Landing site coordinates: N 43° 15.5085' W 116° 20.7634'

Distance to landing site: 9364 feet 1.77 miles  
Bearing to landing site: 324° from true north

Ground level: 3128 feet MSL

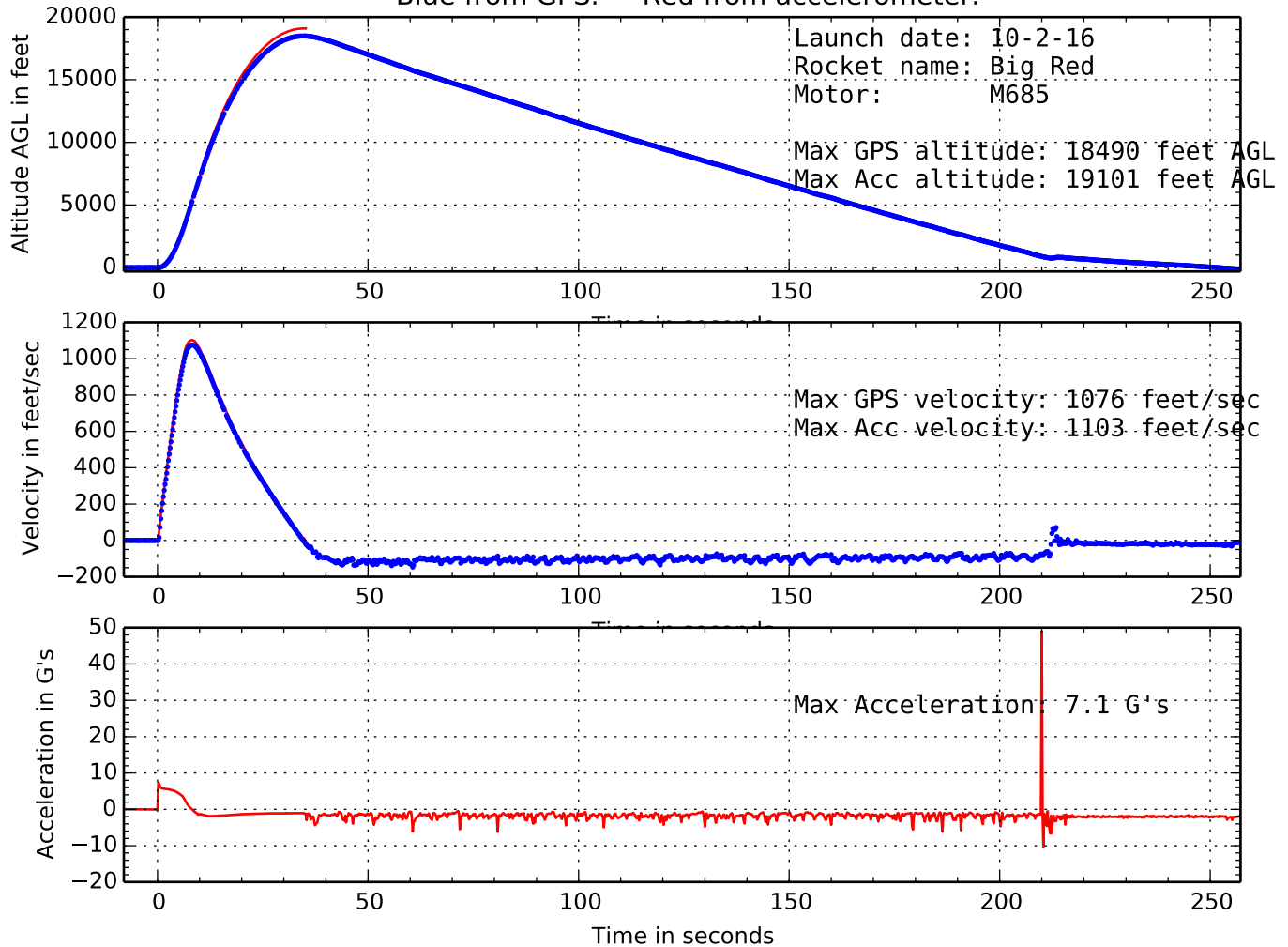
	Liftoff	Apogee	Landing
Battery:	4.01v	4.00v	3.99v
Temperature:	83°F	83°F	83°F

Transmitter: Mx110A0235 Firmware: 3.1.0.0  
Receiver: Mx120A0200 Firmware: 3.1.0.0

Data came from receiver: Flight name "BIG RED"  
Dated: Oct 2 at 2:36pm

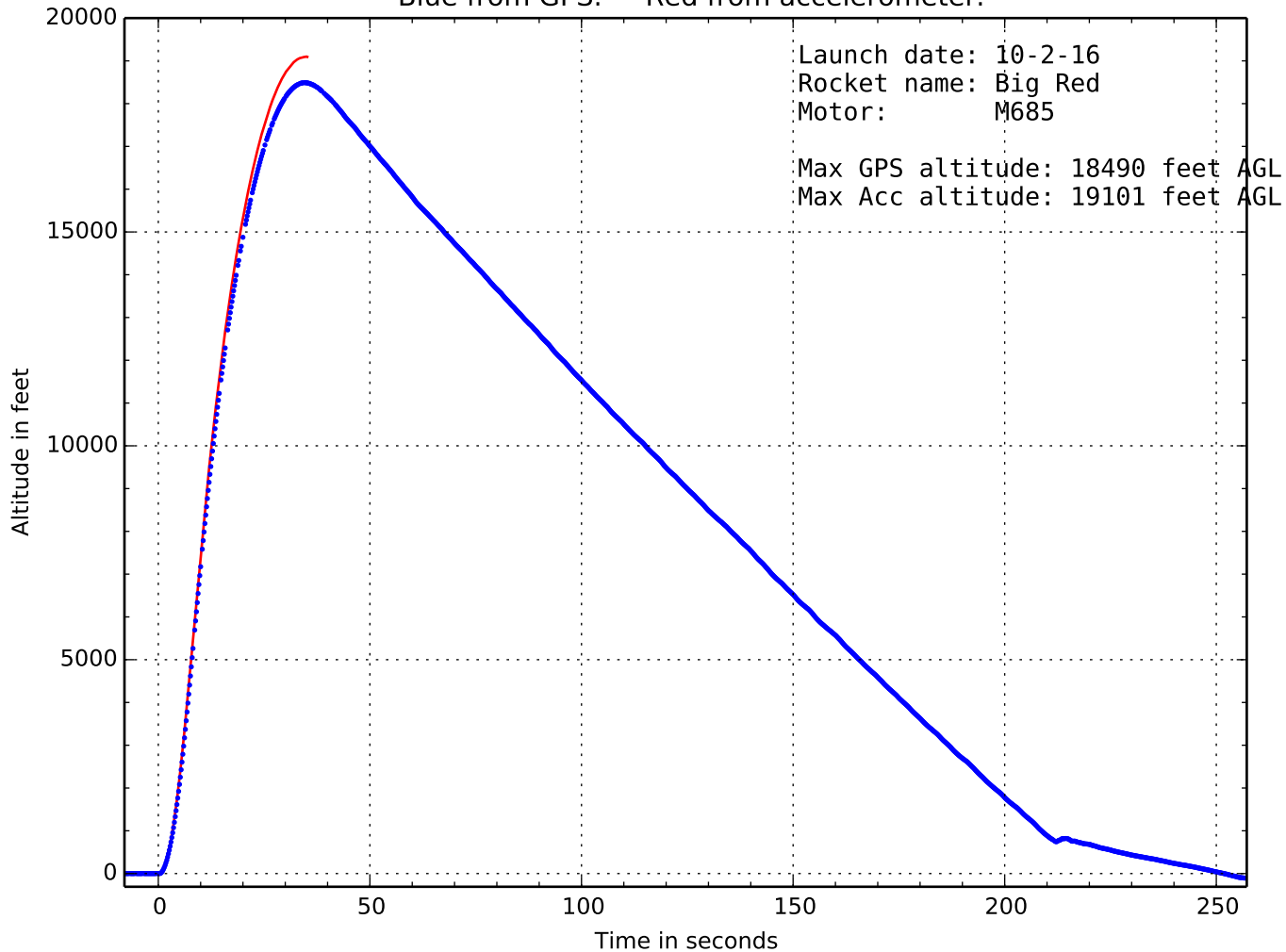
# Altitude, Velocity, and Acceleration

Blue from GPS. Red from accelerometer.



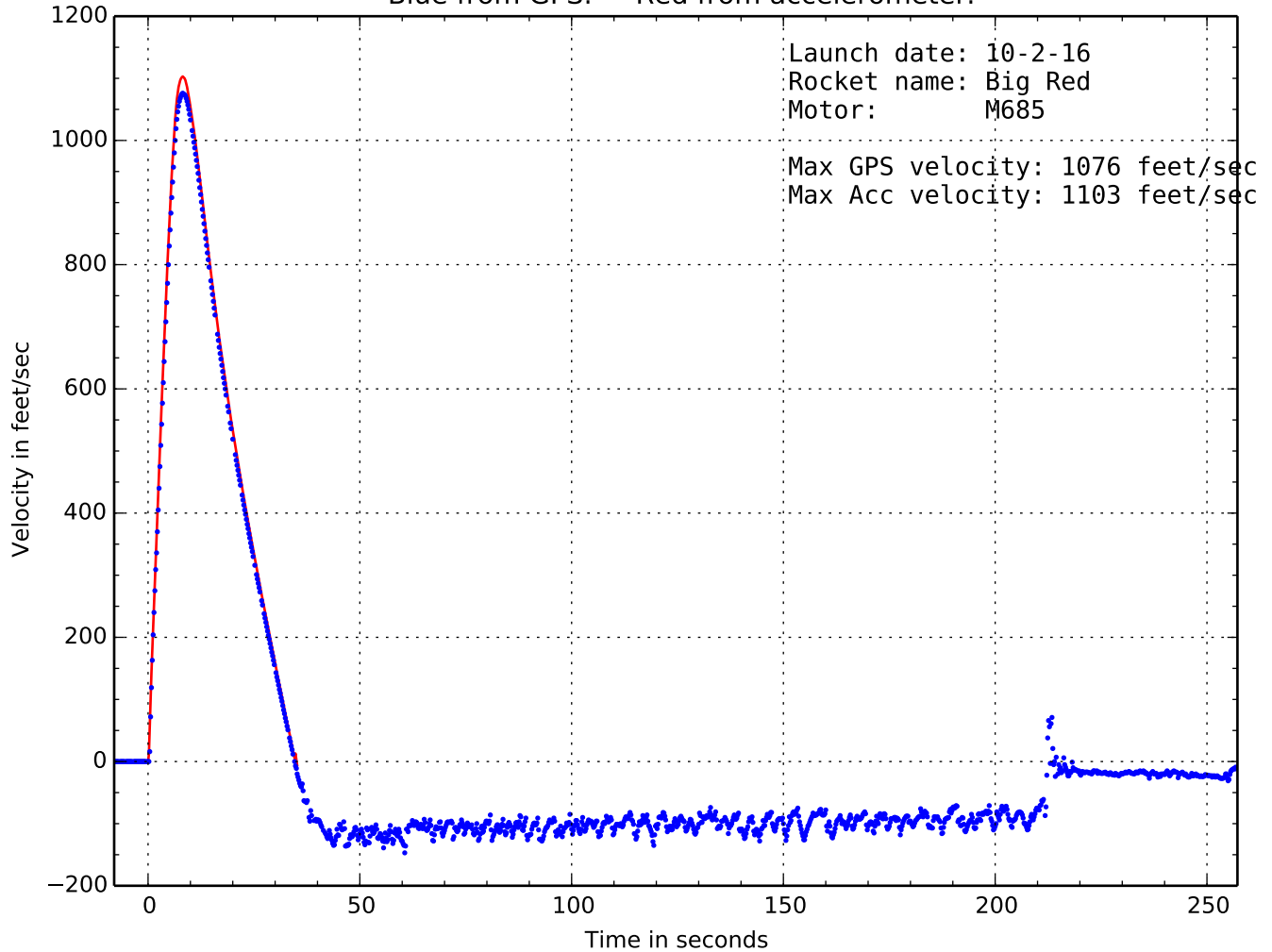
# Altitude AGL

Blue from GPS. Red from accelerometer.

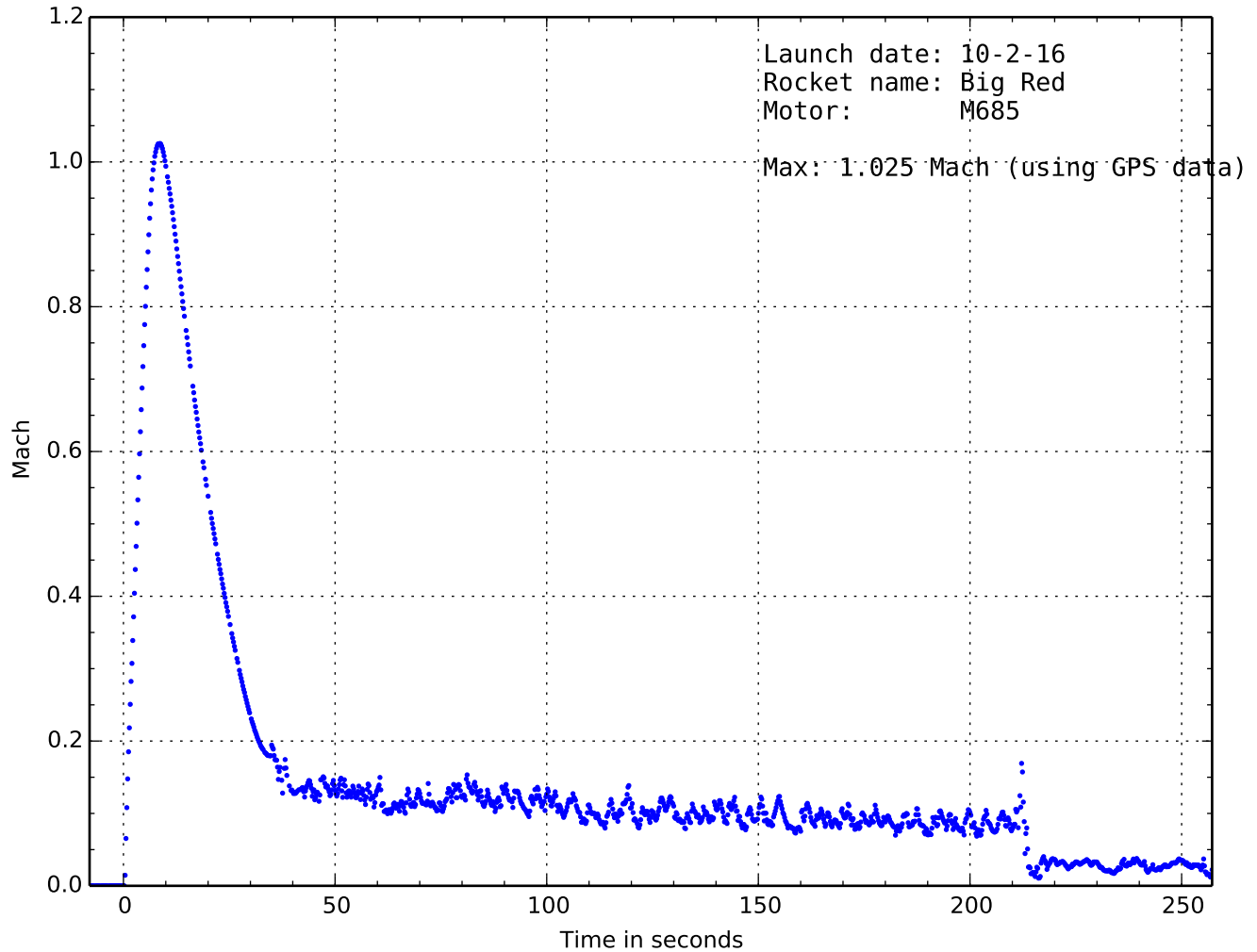


# Vertical Velocity

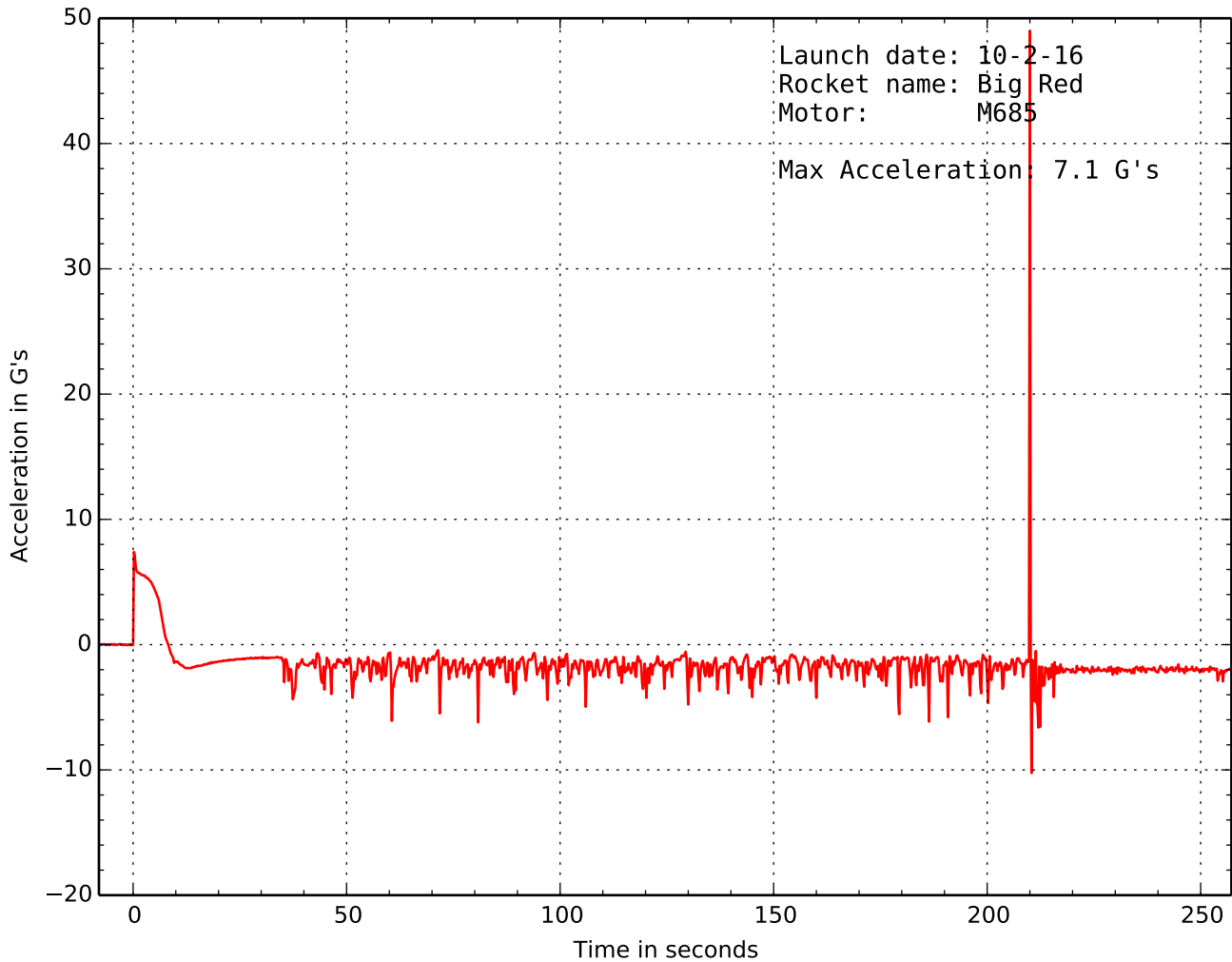
Blue from GPS. Red from accelerometer.



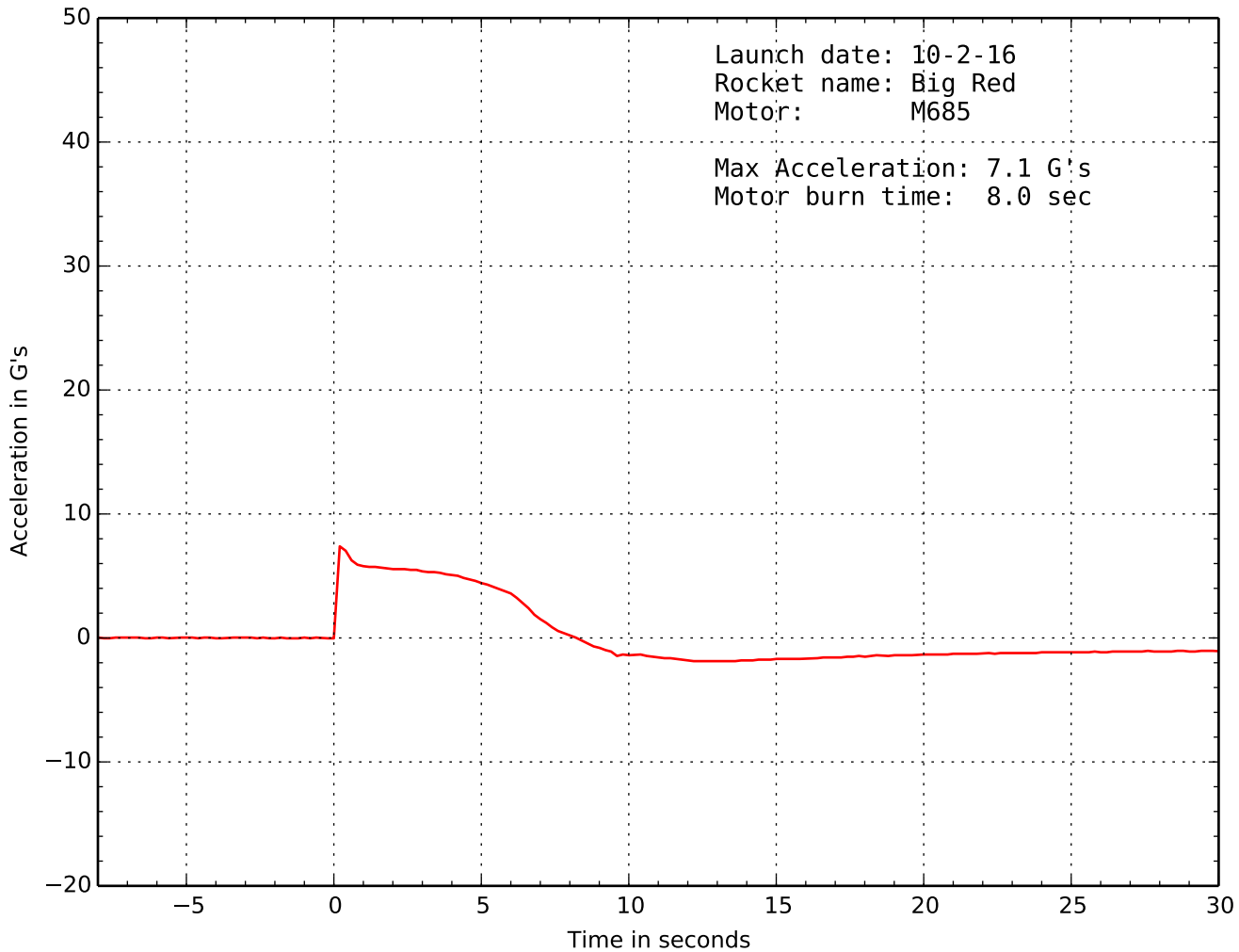
# 3D Velocity in Mach



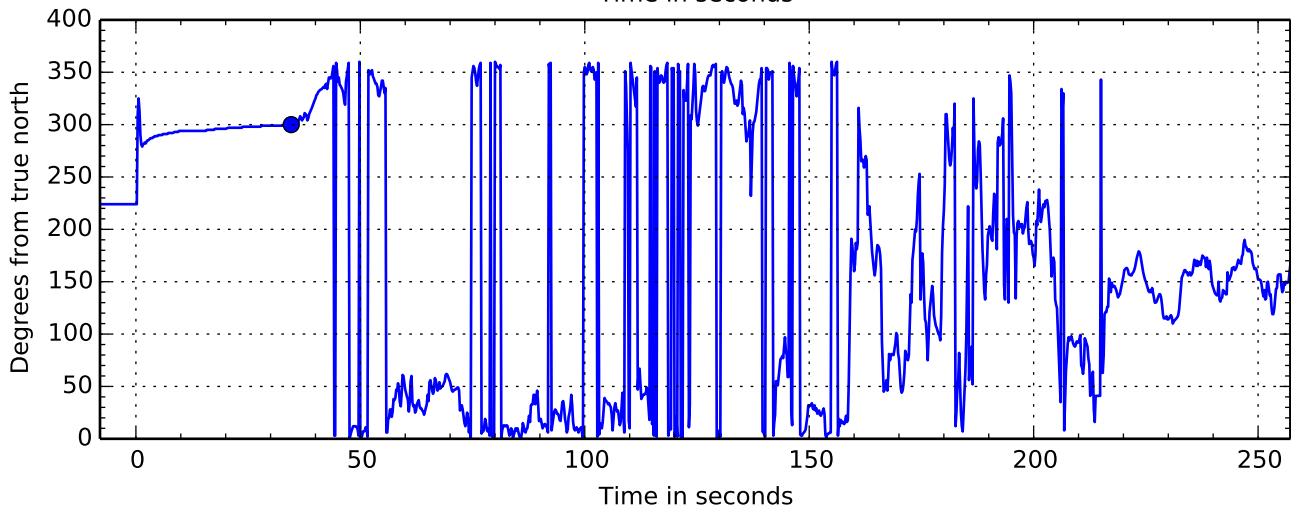
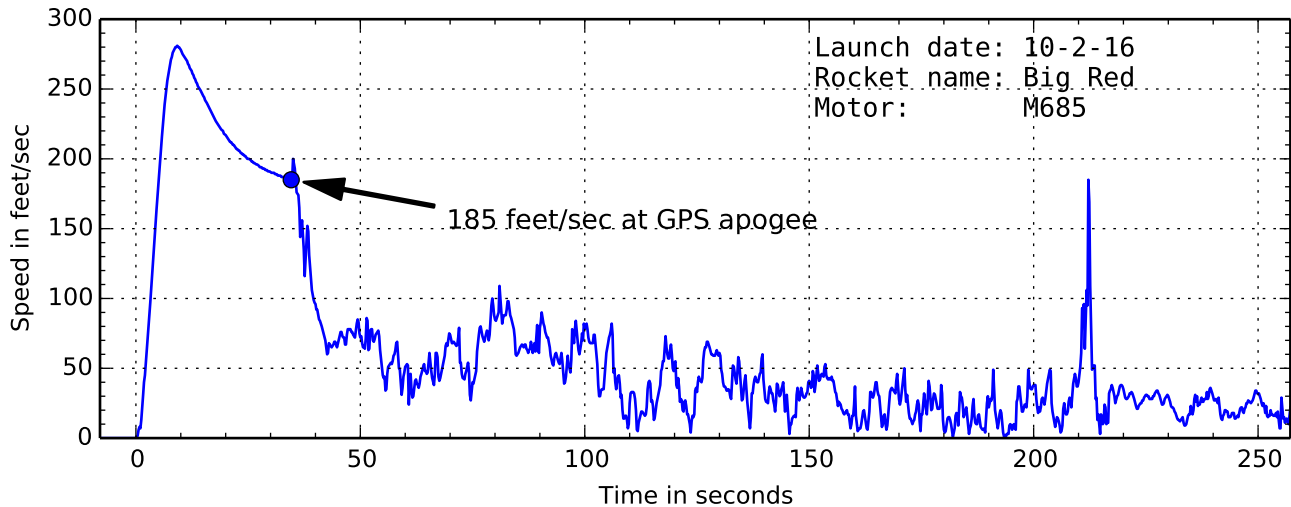
# Acceleration -- Full Flight



# Acceleration -- Boost Phase

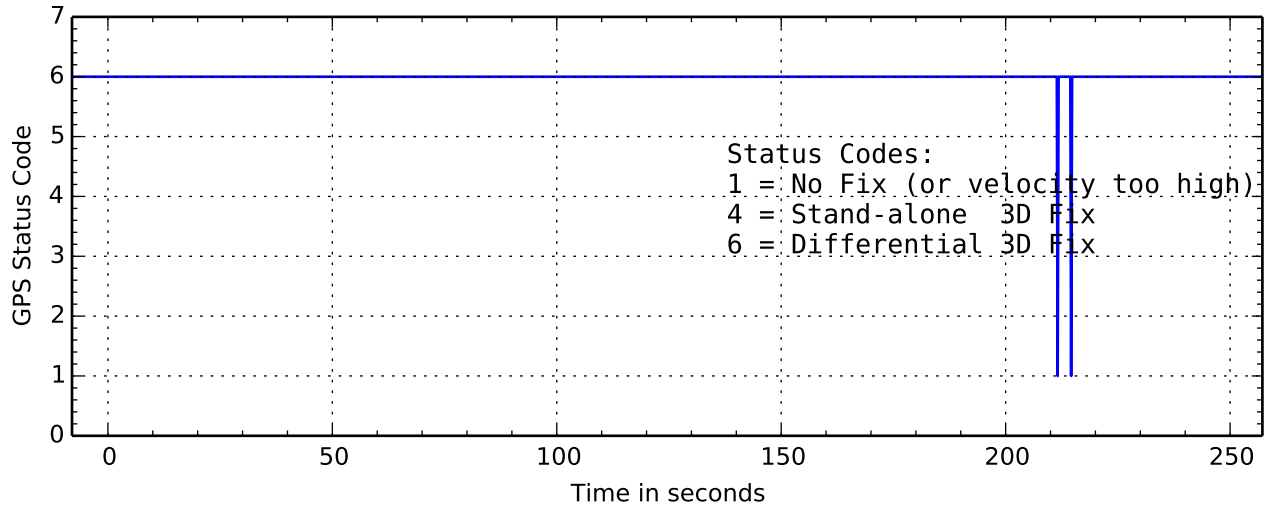
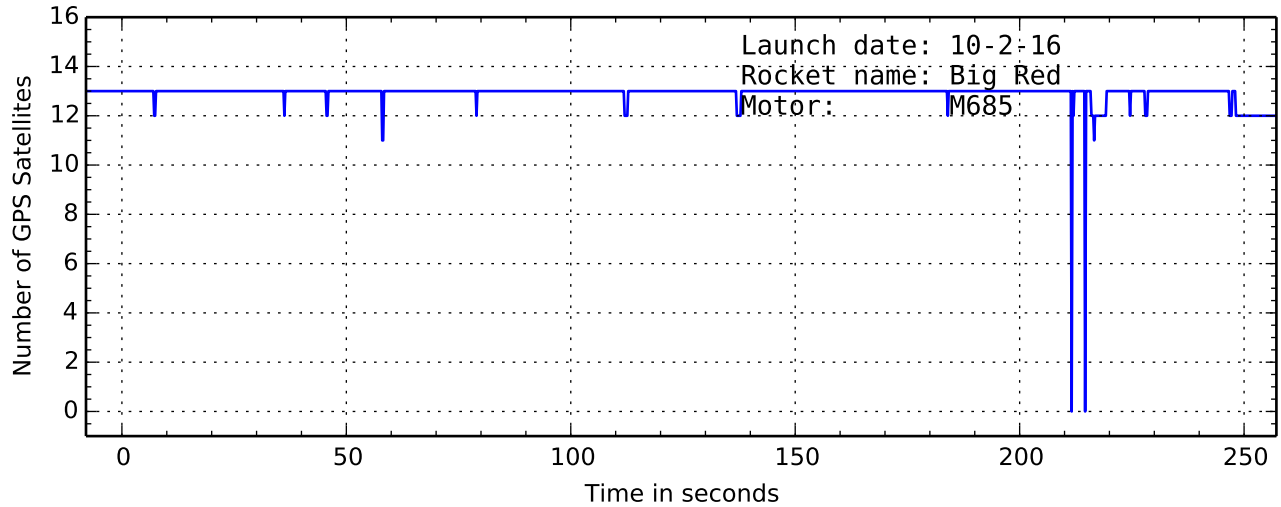


# Ground Speed and Heading

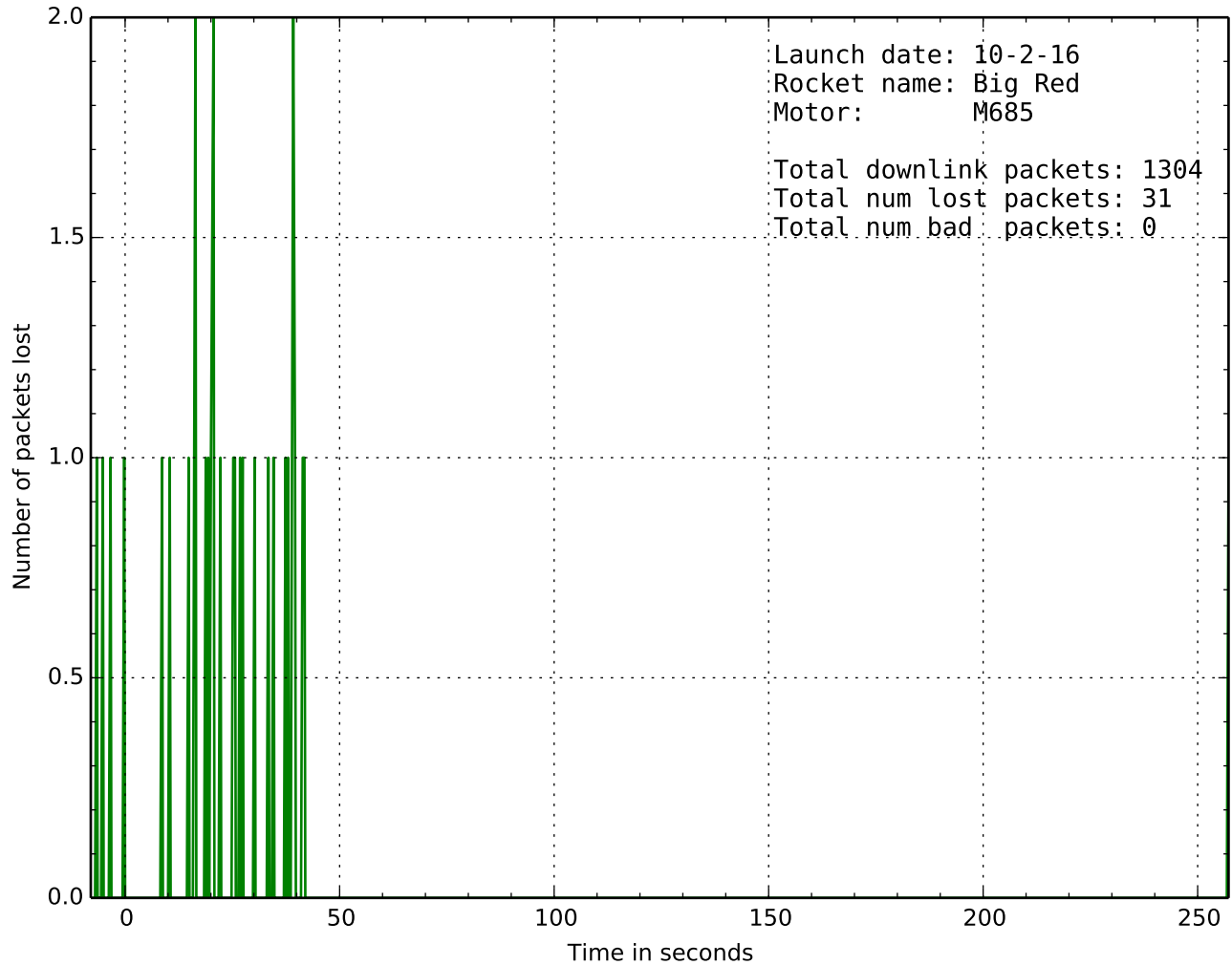




# Number of Satellites and GPS Status

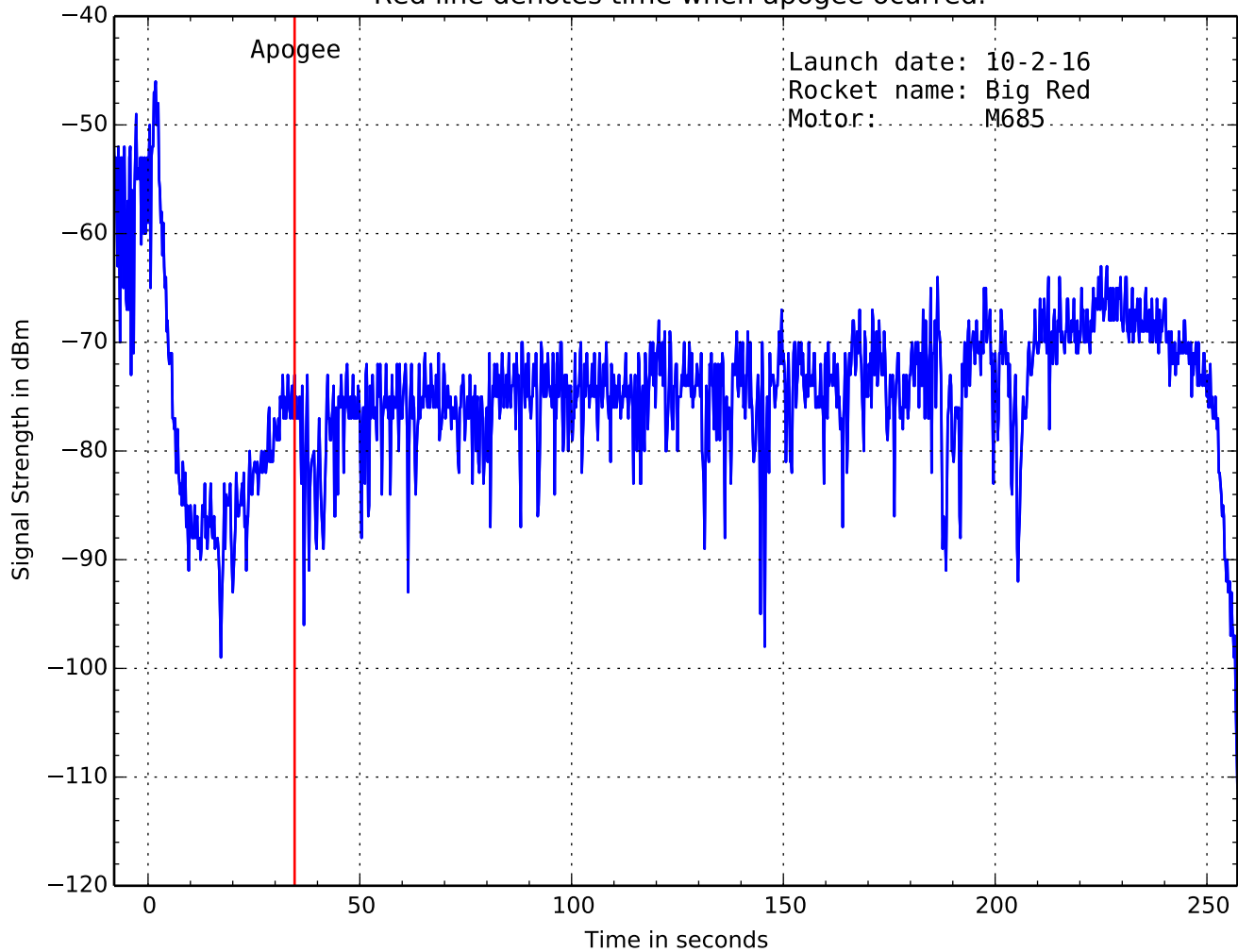


# Lost Downlink Packets



# Downlink Signal Strength

Red line denotes time when apogee occurred.



# Downlink Signal Strength

Blue is for ascent. Red is for descent.

