

Milestone Review Flysheet

Milestone: FRR

Vehicle Properties

Diameter (mm) 102.6

Length (mm) 1778

Gross Liftoff Weight (g) ?

Launch Rail button Size fits a 10/10 rail

Motor Retention Aluminum motor retainer

Motor Properties

Motor Manufacturer cesaroni

Motor Designation K650

Max/Average Thrust (N/N) 728.7/656

Total Impulse (N-sec) 1749.5

Mass pre/post Burn (g) 8884/8175

Stability Analysis

Center of Pressure (mm) 1997.31

Center of Gravity (mm) 1459.03

Static Stability Margin 5.3

Thrust-to-Weight Ratio ??

Ascent Analysis

Rail Exit Velocity (ft/s) ?

Max Velocity (m/s) 174.9

Max Mach Number 0.53

Max Acceleration (ft/s²) 280

Max Altitude (ft) 4224

Recovery System Properties

Drogue Parachute

Manufacturer/Model PML/24"

Size 24" diameter

Altitude at Deployment (ft) 4219

Velocity at Deployment (m/s) 1.28

Terminal Velocity (ft/s) ??

Recovery Harness Material kevlar

Harness Size/Thickness (in) 5/16

Recovery Harness Length (ft) 25ft

Harness/Airframe Interfaces ??

Kinetic Energy During Descent (ft-lb) ??

Main Parachute

Manufacturer/Model spherachute/96"

Size 96" diameter

Altitude at Deployment (ft) 900

Velocity at Deployment (ft/s) ??

Landing Velocity (m/s) 20.5

Recovery Harness Material Kevlar

Harness Size/Thickness (in) 5/16

Recovery Harness Length (ft) 25

Harness/Airframe Interfaces ??

Kinetic energy upon landing (ft-lb)

Altimeter(s) Make/Model stratologger/perfectflite

Pad Stay Time (Launch Configuration) 1 hour

Electronics/Ejection

Rocket Locators: ??

Transmitting Frequencies 70cm bank (in 125 hz steps)

Black Power Mass Drogue Parachute 2g per charge

Black Power Mass Main Parachute 2g per charge