

Milestone Review Flysheet

Institution		AIAA OC Section		Milestone		FRR	
Vehicle Properties				Motor Properties			
Total Length (in)	101.5			Motor Designation	Cesaroni K555		
Diameter (in)	4			Max/Average Thrust (lb)	125.1		
Gross Lift Off Weigh (lb)	21.6			Total Impulse (lbf-s)	539.7		
Airframe Material	G10 Fiberglass			Mass Before/After Burn	25.0125 lbs/21.7365 lbs		
Fin Material	G10 Fiberglass			Liftoff Thrust (lb)	130		
Coupler Length	8"			Motor Retention	AeroPack 75 mm Fiberglass Retainer		
Stability Analysis				Ascent Analysis			
Center of Pressure (in from nose)	72.8491			Maximum Velocity (ft/s)	567	ft/s	
Center of Gravity (in from nose)	66.4569			Maximum Mach Number	0.51		
Static Stability Margin	1.6			Maximum Acceleration (ft/s^2)	156.464	ft/s^2	
Static Stability Margin (off launch rail)	2.85			Target Apogee (From Simulations)	5400	ft	
Thrust-to-Weight Ratio	6:1			Stable Velocity (ft/s)	567	ft/s^2	
Rail Size and Length (in)	12"			Distance to Stable Velocity (ft)	1267	ft	
Rail Exit Velocity	57 ft/s						
Recovery System Properties				Recovery System Properties			
Drogue Parachute				Main Parachute			
Manufacturer/Model	Fruity Chutes			Manufacturer/Model	Fruity Chutes		
Size	18"			Size	84		
Altitude at Deployment (ft)	Apogee			Altitude at Deployment (ft)	500		
Velocity at Deployment (ft/s)	0			Velocity at Deployment (ft/s)	90		
Terminal Velocity (ft/s)	81			Terminal Velocity (ft/s)	10		
Recovery Harness Material	Tubular Nylon			Recovery Harness Material	Tubular Nylon		
Harness Size/Thickness (in)	1"			Harness Size/Thickness (in)	1"		
Recovery Harness Length (ft)	16			Recovery Harness Length (ft)	21		
Harness/Airframe Interfaces	Machine-closed eyebolt, U bolt, washer, nut			Harness/Airframe Interfaces	Machine-closed eyebolt, U bolt, washer, nut		

Kinetic Energy of Each Section (Ft-lbs)	Section 1	Section 2	Section 3	Section 4	Kinetic Energy of Each Section (Ft-lbs)	Section 1	Section 2	Section 3	Section 4
	299.27	806.12	1109.1			4.56	12.29	16.9	

Recovery Electronics				Recovery Electronics				
Altimeter(s)/Timer(s) (Make/Model)	Computer/RRC3 Flight Computer			Rocket Locators (Make/Model)	Whistle GPS			
Redundancy Plan	Use of primary and secondary flight computers, both different models; independent batteries			Transmitting Frequencies	None			
Pad Stay Time (Launch Configuration)	~2 hours			Black Powder Mass Drogue Chute (grams)	3.8			
				Black Powder Mass Main Chute (grams)	1.1			

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Autonomous Ground Support Equipment (MAV Teams Only)

Capture Mechanism	Overview
Container Mechanism	Overview
Launch Rail Mechanism	Overview
	Include Description of rail locking mechanism
Igniter Installation Mechanism	Overview

Payload											
Payload 1	Overview										
Payload 2	Overview										
Test Plans, Status, and Results											
Ejection Charge Tests											
Sub-scale Test Flights											
Full-scale Test Flights											
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Institution						Milestone					
Additional Comments											



