

## Milestone Review Flysheet 2017-2018

Institution	Maharishi School				Milestone	PDR			
Vehicle Properties					Motor Properties				
Total Length (in)		92.4			Motor Brand/Designation		Aerotech K680		
Diameter (in)		6.1			Max/Average Thrust (lb.)		180 lbs		
Gross Lift Off Weigh (lb.)		22.35			Total Impulse (lbf-s)		2358		
Airframe Material(s)		Fiberglass			Mass Before/After Burn (lb.)		15.66		
Fin Material and Thickness (in)		Fiberglass, 0.118			Liftoff Thrust (lb.)		140 lbs		
Coupler Length/Shoulder Length(s) (in)		5.5			Motor Retention Method		Motor Retention Cap		
Stability Analysis					Ascent Analysis				
Center of Pressure (in from nose)		72.4 inches			Maximum Velocity (ft/s)		656		
Center of Gravity (in from nose)		60.2 inches			Maximum Mach Number		1		
Static Stability Margin (on pad)		2.01			Maximum Acceleration (ft/s^2)		180.45		
Static Stability Margin (at rail exit)		2.01			Predicted Apogee (From Sim.) (ft)		5,283		
Thrust-to-Weight Ratio		2							
Rail Size/Type and Length (in)		15			Recovery System Properties				
Rail Exit Velocity (ft/s)		40			Main Parachute				
					Manufacturer/Model		Aerotech		
Recovery System Properties					Size/Diameter (in or ft)		81.457		
Drogue Parachute					Altitude at Deployment (ft)		750		
Manufacturer/Model		Aerotech			Velocity at Deployment (ft/s)		n/a		
Size/Diameter (in or ft)		40			Terminal Velocity (ft/s)		n/a		
Altitude at Deployment (ft)		5284			Recovery Harness Material		Ripstop Nylon		
Velocity at Deployment (ft/s)		0			Recovery Harness Size/Thickness (in)		0.2		
Terminal Velocity (ft/s)		300			Recovery Harness Length (ft)		0.984		
Recovery Harness Material		Ripstop Nylon			Harness/Airframe Interfaces		n/a		
Recovery Harness Size/Thickness (in)		0.2							
Recovery Harness Length (ft)		0.984							
Harness/Airframe Interfaces		n/a			Kinetic Energy of Each Section (Ft-lbs)	Section 1	Section 2	Section 3	Section 4
						n/a	n/a	n/a	n/a



Test Plans, Status, and Results	
Ejection Charge Tests	Planned to do by Nov 30th
Sub-scale Test Flights	Planned to do 2 sub-scale flights by Dec 14th
Full-scale Test Flights	Planned two full-scale flights by March 16th
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Additional Comments	



