

Rocket Data Sheet and Launch Record

Rocket Description		Recovery Information		Altimeter Two Data	
Owner:	Peter, Tyler, Chandler	Ejection Occurred		Apogee Altitude:	1533 ft
Rocket Name:	Slim Jim	• During Ascent	• At Apogee	Top Speed:	234 mph
Type:	Arcas	• After Apogee	• During Descent	Burn Time (burn):	2.25s
Length: (inches)	56 in.	• Ejection Failure		Peak Acc (Pacc):	11.2 G
Diameter: (inches)	2.75 in	Parachute Deployment		Avg Acc (Aacc):	4.8 G
Fins:	4	• Full	• Partial	Coast Apogee (C2AP):	8.6 s
Listed Mass: (g)	610g	• Did not deploy		Apogee to Eject (AP2E):	-1.0s
Date of Construction:	4/1/2016	Parachute Descent		Ejection Alt. (EALt):	1530 ft
Recommended Motors: (G only)	G64-7W	• Stable Descent	• Tangled lines	Descent Speed (dESc):	15 mph
Center Gravity(CG):	39in	• Some swaying	• Sprial descent	Flight Duration (durA):	76.7 s
Center Pressure(CP):	46.75in	Reason for Recovery Failure		Altimeter Data Analysis	
Building Notes		• Damaged Chute		The apogee of our launch happened very close to where we thought it would happen, as such, the ejection was near perfect where we thought it would happen. The data on the altimeter seems correct, and if so, we can claim a near perfect launch in near perfect conditions.	
the stickers are all on one side of the rocket		• Tight Upper Body tube			
		• Improper setup			
		• Chute Separated			
		• Motor Ejected			
Estimated Cd:	0.315	• Unplanned Separation		Prediction vs Actual Analysis	
Predicted Altitude:	1700	• Other		we predicted that our rocket would reach height of 1500 ft, which was 33 feet off from our apogee altitude. The ARCAS website predicted our rocket would reach 1800 ft, but we did not believe it would reach that height - which led us to the prediction of 1500 ft. We predicted that our rocket would fly towards the west more due to the winds, but it ended up having a relatively straight flight path, and decended towards the east-southeast	
Prediction Notes		Descent Speed			
drag from stickers might balance out the drag from the launch lugs on the other side of the rocket		• Slow	• Average speed		
		• Very fast	• Ballistic		
Launch Information		Landing			
		• Soft	• Water		
		• Tree	• Caught on Wire		
Date:	5/3/2016	• Hard	• Crash	Lessons Learned Building? Painting? Predicting? Launching? Recovery? Best to follow insturctions when constructing rocket. When painting, be sure to use quality spray-paint and not put it on too heavy. Previous launches with the same rocket and engine, as well as the arcas website are good sources to base altitude predictions for your rocket. During launch, make sure the battery is fully charged and you have a good connection between the controller, battery, and the igniter. Recovery was well and had minimal problems.	
Time of Launch:	10:40 AM	• Landed on Building			
Location:	west of burn square	Recovery			
Rocket Mass(g):	610	• Full Recovery	• Lost		
Motor:	G64-7	• Not Recoverable	• Parts lost		
Motor Mass(g):		Distance & Direction from pad: landed east-southeast from launch pad			
Altimeter Mass(g):	9.9	Recovery Notes			
Liftoff Mass(g):	619.9	recovered on the golf course near the 11th green			
Wind Direction:	west-southwest	Post Launch Information			
Wind Speed:	10mph	Flight Grade			
Igniter:	First-Fire	• Excellent			
No. of tries to ignite:	1	• Good			
Ignition		• Fair			
• Successfull	• Blow Out	• Poor			
• Caught on clips	• Motor Failure	• Rocket cannot launch again			
Trajectory		Describe any damage to the rocket:			
• Straight-Up	• Spinning	no damage to the rocket - the parachute frayed a little bit			
• Corkscrew	• Non-vertical				
• Into the wind	• Unstable				
Launch Notes		Rocket Project Suggestions			
battery issues with ignition		possibly get a new controller to power the igniter? cause the one we used was not very consistent			