

Rocket Data Sheet and Launch Record

| Rocket Description | | Recovery Information | | Altimeter Two Data | |
|---|-----------------|---|------------------|---|-----|
| Owner: | Alex and Colton | Ejection Occurred | | Apogee Altitude: | N/A |
| Rocket Name: | Beast Mode | “ During Ascent | “ At Apogee | Top Speed: | N/A |
| Type: | Astrobee | “ After Apogee | “ During Descent | Burn Time (burn): | N/A |
| Length: (inches) | 68.5 inches | “ Ejection Failure | | Peak Acc (Pacc): | N/A |
| Diameter: (inches) | 2.6 inches | Parachute Deployment | | Avg Acc (Aacc): | N/A |
| Fins: | 4 fins | “ Full | “ Partial | Coast Apogee (C2AP): | N/A |
| Listed Mass: (g) | 790 grams | “ Did not deploy | | Apogee to Eject (AP2E): | N/A |
| Date of Construction: | Feb 2014 | Parachute Descent N/A | | Ejection Alt. (EALt): | N/A |
| Recommended Motors: (G only) | | “ Stable Descent | “ Tangled lines | Descent Speed (dESc): | N/A |
| G 64-W, G76-G, G77-R, G80-T | | “ Some swaying | “ Sprial descent | Flight Duration (durA): | N/A |
| Center Gravity(CG): | 48.25 | Reason for Recovery Failure | | Altimeter Data Analysis | |
| Center Pressure(CP): | 58.75 | “ Damaged Chute | | No data was recoverable because of the landing | |
| Estimated Cd: | 0.741 | “ Tight Upper Body tube | | | |
| Predicted Altitude: | 1234 | “ Improper setup | | | |
| Prediction Notes | | “ Chute Separated | | | |
| We made our prediction based on the design of the rocket. The paint job was very similar to the "Warrior" rocket, so we based our prediction on that. We couldn't use their prediction data, as they changed engines, but we used the Cd. | | “ Motor Ejected | | | |
| | | “ Unplanned Separation | | | |
| | | “ Other Parachute failed to deploy | | | |
| | | Descent Speed | | | |
| Launch Information | | “ Slow | “ Average speed | | |
| Date: | 4/22/2014 | “ Very fast | “ Ballistic | | |
| Time of Launch: | 11:00:00 | Landing | | | |
| Location: | CHS | “ Soft | “ Water | | |
| Rocket Mass: | 826 grams | “ Tree | “ Caught on Wire | | |
| Motor: | G75-7M | “ Hard | “ Crash | | |
| Motor Mass: | 131 grams | “ Landed on Building | | Post Launch Information | |
| Altimeter Mass: | 6.7g | Recovery | | Rocket Damage | |
| Liftoff Mass: | 957 grams | “ Full Recovery | “ Lost | “ No Damage | |
| Wind Direction: | NNE | “ Not Recoverable | “ Parts lost | “ Scuffed Paint | |
| Wind Speed: | 8 mph | Distance & Direction from pad: | | “ Launch Lugs | |
| Igniter: | first fire | 225 North West | | “ Engine Stuck | |
| No. of tries to ignite: | 1 | Recovery Notes | | “ Fins Damaged | |
| Ignition | | Not recoverable. Nose cone was imbedded about 8 inches into ground. Separation point was pushed in together. Rocket separated at the engine block. Upper Body tube ripped into shreds. Parachutes were with each other. | | Describe any damage to the rocket: | |
| “ Successful | “ Blow Out | | | The rocket was destroyed. | |
| “ Caught on clips | “ Motor Failure | | | | |
| Trajectory | | | | | |
| “ Straight-Up | “ Spinning | Lessons Learned | | Flight Grade | |
| “ Corkscrew | “ Non-vertical | The lessons we learned was to somehow make sure that the rocket would deploy I don't know how exactly we could do that | | “ Excellent | |
| “ Into the wind | “ Unstable | | | “ Good going up | |
| Launch Notes | | | | “ Poor going down | |
| cross-pack the parachute | | Rocket Project Suggestions | | To find a way to make sure that the rocket would deploy | |
| | | | | | |