

# Rocket Data Sheet and Launch Record

| Rocket Description   |                       | Recovery Information  |                  | Altimeter Two Data  |         |
|--|-----------------------|---|------------------|---|---------|
| Owner:   | Zena, Brittany, Paige | <b>Ejection Occurred</b>  |                  | Apogee Altitude:  | 1866 Ft |
| Rocket Name:   | Foxy                  | “ During Ascent   | “ At Apogee      | Top Speed:  | 324 mph |
| Type:  | Arcas                 | “ After Apogee  | “ During Descent | Burn Time (burn):   | 3.1 s   |
| Length: (inches)   | 56”                   | “ Ejection Failure  |                  | Peak Acc (Pacc):  | 12.9 s  |
| Diameter: (inches)   | 2.6”                  | <b>Parachute Deployment</b>   |                  | Avg Acc (Aacc):   | 4.9 s   |
| Fins:  | 4                     | “ Full  | “ Partial        | Coast Apogee (C2AP):  | 7.4 s   |
| Listed Mass: (g)   | 620g                  | “ Did not deploy  |                  | Apogee to Eject (AP2E):   | -.8 s   |
| Date of Construction:  | Feb 2014              | <b>Parachute Descent</b>  |                  | Ejection Alt. (EALt):   | 1849 Ft |
| Recommended Motors: (G only)   |                       | “ Stable Descent  | “ Tangled lines  | Descent Speed (dESc):   | 7 mph   |
| G64-7W, G80-10T, G77-7R, G76-7G, G53-5FJ   |                       | “ Some swaying  | “ Sprial descent | Flight Duration (durA):   | 171.4 s |
| Center Gravity(CG):  | 39.25 in              | <b>Reason for Recovery Failure</b>  |                  | <b>Altimeter Data Analysis</b>  |         |
| Center Pressure(CP):   | 46.75 in              | “ Damaged Chute   |                  | Went pretty high and everything seems accurate but the apogee to eject time seems off. It was after apogee and not before. The duration was very long and 7 mph decibes the deccent well. I recomend the use off the new altimeter two. |         |
| Estimated Cd:  | 0.7                   | “ Tight Upper Body tube   |                  |   |         |
| Predicted Altitude:  | 1456 Ft               | “ Improper setup  |                  |   |         |
| <b>Prediction Notes</b>  |                       | “ Chute Separated   |                  |   |         |
| We are the first Arcas to have the G75 engine so we have very little to compare but with same rockets with different engines. Our predictions may not be as acurate as some because of this. We went with the average bewteen what we saw and found these. |                       | “ Motor Ejected   |                  |   |         |
|  |                       | “ Unplanned Separation  |                  |   |         |
|  |                       | “ Other _____   |                  |   |         |
|  |                       | <b>Descent Speed</b>  |                  |   |         |
| <b>Launch Information</b>  |                       | “ Slow  | “ Average speed  |   |         |
|  |                       | “ Very fast   | “ Ballistic      |   |         |
|  |                       | <b>Landing</b>  |                  |   |         |
| Date:  | 4/22/2014             | “ Soft  | “ Water          |   |         |
| Time of Launch:  | 10:50:00              | “ Tree  | “ Caught on Wire |   |         |
| Location:  | CHS                   | “ Hard  | “ Crash          |   |         |
| Rocket Mass:   | 654 g                 | “ Landed on Building  |                  | <b>Post Launch Information</b>  |         |
| Motor:   | G75-7M                | <b>Recovery</b>   |                  | <b>Rocket Damage</b>  |         |
| Motor Mass:  | 131 g                 | “ Full Recovery   | “ Lost           | “ No Damage   |         |
| Altimeter Mass:  | 6.7g                  | “ Not Recoverable   | “ Parts lost     | “ Scuffed Paint   |         |
| Liftoff Mass:  | 791.7 g               | Distance & Direction from pad:  |                  | “ Launch Lugs   |         |
| Wind Direction:  | NorthEast             | very far away to the south west- landed half way up Mount Moses   |                  | “ Engine Stuck  |         |
| Wind Speed:  | 8 mph                 | <b>Recovery Notes</b>   |                  | “ Fins Damaged  |         |
| Igniter:   | First Fire            | Very far into the field as it took a slow deccend almost halfway up Mt Mosses.  |                  | Describe any damage to the rocket:  |         |
| No. of tries to ignite:  | 1                     |   |                  | Tiny bits of paint scuffed off.   |         |
| <b>Ignition</b>  |                       |   |                  |   |         |
| “ Successfull  | “ Blow Out            |   |                  |   |         |
| “ Caught on clips  | “ Motor Failure       |   |                  |   |         |
| <b>Trajectory</b>  |                       |   |                  | <b>Flight Grade</b>   |         |
| “ Straight-Up  | “ Spinning            |   |                  | “ Excellent   |         |
| “ Corkscrew  | “ Non-vertical        |   |                  | “ Good  |         |
| “ Into the wind  | “ Unstable            |   |                  | “ Poor  |         |
| <b>Launch Notes</b>  |                       | <b>Lessons Learned</b>  |                  | <b>Rocket Project Suggestions</b>   |         |
| The preformance was very sparkly. I took one try to get it to launch and when it launched went straight up. The rocket popped after apogee and slowly blew away. It landed halfway up Mt. Mosses.  |                       | Make sure the body tube is loose enough to allow it to pop. Also too much vacline could be a bad thing with the engine and delay charge (via the Tetris). |                  | Twitter Master, more licurish,  |         |
|  |                       |   |                  |   |         |