



What's Up!

The Official Newsletter of the
Syracuse Rocket Club



Volume 5, Number 1

Summer 2005

Syracuse, New York

Big Changes with the Syracuse Rocket Club!

The Syracuse Rocket Club has seen some changes in the past few months. One is the formation of Tripoli Syracuse, Tripoli Prefecture # 053. The prefecture was voted upon after we were granted a 3000' waiver by the FAA for Mr Weigand's field. During a waived launch, we are no longer limited to 3.3 lb models and 125 grams of propellant.

One of the main reasons we decided to start a TRA prefecture was to hold Experimental launches. Tripoli has insurance for EX launches (launches where you fly your own homemade motors), and it was determined there was enough interest in the club to go ahead and start a Tripoli prefecture so we could do our own experimental launches.

Our other news item is the SRC website now has an easy to remember domain name, <http://www.syracuserocketclub.org>

More information on all these items can be found inside this issue of What's Up!

Visit our website!

<http://www.syracuserocketclub.org>



Eric Maher's scratch built X-Wing Fighter
(Photo by David Harbaugh)

Inside this issue:

- ◆ FAA Waiver, rules and regulations
- ◆ President's Message
- ◆ EX Launch rules
- ◆ SRC at NYPower 05
- ◆ M Powered Fatboy

A message from the President

Welcome back to another year of flying rockets!

First of all, I wish to express my thanks to Dave, Rich, and the others that helped in running the launches and school events this year. This has given my family and I a chance to participate in other activities. This year we became a Tripoli prefecture. Now we can certify through Tripoli and participate in the experimental program which allow Tripoli members certified level 2 or higher to fly their own built motors. Contact Rich for details.

We have also received approval for waived launches and can fly up to K impulse up to 3000'. Please submit any requests for high power flights H and above prior to the launch so we can activate the waiver. We have new members joining every month, and I hope they can all benefit from all our experience and keep the club alive for many years to come.

Last I would like to thank Mr. Weigand for letting us enjoy the use of his field and for his support. He has been more than generous and each and every one of us truly appreciate what he has done for our club.

Ronald Lioto



SRC is Tripoli Syracuse, Prefecture #053.

Our main reason for doing this is so we could hold our own experimental (EX) launches. EX launches will be conducted with Tripoli rules. The full set of rules can be found at http://www.tripoli.org/documents/ex_safety_code.pdf A copy is also kept in the Tripoli Syracuse Prefecture binder, just let Rich (rmpitzer@syr.edu) know if you would like to see it. Here is a very condensed version of the Tripoli rules which we must abide by...

1. An EX motor is defined as a motor you make yourself, or a motor someone else made, and that person is present at the launch. No commercial motors, or altered commercial motors are permitted.
2. Only Tripoli members who are L2 certified or above, are permitted to launch at an EX launch. Spectators are allowed, but cannot fly.
3. Tripoli rules state EX launches are restricted to 75% of the waiver. In our case, that means EX flights need to stay below 2250'

SRC Officers

President: Ron Lioto

Vice President: Rich Pitzeruse

Secretary: Winnie Pitzeruse

Treasurer: Dennis Friend

Editor: Rich Pitzeruse

What's Up! is published by the Syracuse Rocket Club, c/o Richard Pitzeruse, 217 E Kimberly Dr, Syracuse, NY 13219. Subscriptions to this newsletter are part of the membership dues of the Syracuse Rocket Club. Please forward articles, reviews, or any submission to the above address or rmpitzer@syr.edu. Portions of this newsletter may be reprinted in other rocketry newsletters if the editor acknowledges the author and source of the article and sends a copy to the above address.

SRC has been granted a 3000' waiver!

We are asking anyone who plans to fly any rockets over 3.3lbs, or more then 125 grams of propellant to please let Ron (rocket@twyny.rr.com) or Rich (rmpitzer.syr.edu) know before launch day, so we'll know if we need to activate the waiver or not. While the FAA has granted us 3000', the field may not support flights that high without some special consideration. Dual deployment for altitudes anywhere near the limit is strongly recommended. Very long shock cords are also a good idea, in case your rocket lands in one of the tree rows.



Theo McDonald relaxing at NYPower 11 (Rich Pitzeruse)

REMINDERS!

Meetings are held the first Wednesday of each month at Walt's Hobby.

Check the SRC website for launch updates.
<http://www.syracuserocketclub.org>

Keep your membership active to enjoy free launch fees, and a 10% discount on rocket items at Walt's Hobby.

To stay up to date on SRC events and discussions, join the SRC listserv, just send an e-mail to SyracuseRocketClub-subscribe@yahoogroups.com

Editor's Space

It's been a long time since SRC has had a newsletter. I took the reigns as editor, oh, about 2 years ago, and I thought it was about time I actually did something with this fancy title. NYPower gave us some material to put a newsletter together, you will see an article I wrote in here, as well as some photos taken by SRC members. I would love to get *What's Up!* back on regular publication schedule with at least 4 issues every year. We almost have enough content for another issue, and I will begin work on it as soon as this issue is finished.

I think it is in the club's best interest to have a newsletter. It lets people know we are active, and it's also good to get the word out to people who may not know that we do in fact exist!

If you have anything you would like to submit, PLEASE send it to me. Articles, tech tips, photos, anything rocketry related would be greatly appreciated.

Rich Pitzeruse

2005 SRC Launches

All launches are from 10 am to 3 pm at Weigand's Hay farm

Saturday July 16 (NAR Launch)
Saturday August 20 (NAR Launch)
August 21 (Tripoli EX Launch*)
September 10 (NAR Launch)
September 11 (Tripoli EX Launch*)
October 8 (NAR Launch)
October 9 (Tripoli EX Launch*)

* Tripoli EX launch dates are tentative. Check the website for firm EX launch events.

NYPower 11, July 1-4 2005

Photo Page



David Harbaugh poses with his Magnum. (Photo by Rich Pitzeruse)



David's Magnum flies on a J420 Redline, and David is now L2 certified! (Rich Pitzeruse)



Tony and Rich Pitzeruse pose with the Fatboy loaded with an L1060 motor. (Tricia Pitzeruse)



John DeMar drove from Texas to be at NYPower 11 (Tricia Pitzeruse)



A common site at any launch. (Tricia Pitzeruse)

M Powered Fatboy

By Rich Pitzeruse

Last year I, along with former SRC member Mike Scicchitano, built 7.6" diameter up-scale Fatboys. We had decided to drag race the Fatboys on K motors at LDRS 23, held at Geneseo, NY. Both rockets are nearly identical. Both use PML tubing, fiberglass nosecones (Mike's from Performance Rocketry, mine from Scotglass), have fins made from 3/8" birch ply, and have 3" motor mounts.



During initial construction we both figured the largest motors these rockets would ever see would be 3" K motors. Construction was straightforward. I debated whether to cover the airframe with fiberglass or not. After checking my 'glass supply, I noticed I was running pretty low on fiberglass, only having some 2oz glass on hand. But, I did have some 5 oz Kevlar doing nothing but taking up shelf space. So I decided to cover the airframe with a layer of the Kevlar, and a layer of the 2 oz 'glass.

It was at this point I started wondering how big a motor I could put in this thing. I stood my 3" M case next to the rocket. Yeah, it would fit, but just barely! The top of the motor would reach well into the nosecone. I thought to myself, maybe...someday!

July 4th weekend, 2004. Mike drives up from South Carolina with his Fatboy. After some troubles trying to put an Aerotech K550 together, he decides to fly his on an Animal Motor Works K570 White Wolf. I choose an AMW K670 Green Gorilla. Both motors fit the 54-1750 case, both have about the same total impulse, but the K670 starts slower than the K570. The rockets were put on the pad, and both ignited instantly. Mike's jumped off the pad while mine lumbered off the pad. However, the



Green Gorilla kicked into gear, and it wasn't long before mine passed Mike's. Both rockets went about 3000' high. It made for a very cool drag race.

For the next year the rocket was grounded. Its next flight was planned for NYPower 11, July 4th weekend 2005 at Geneseo. I planned on flying it on a K650 (the AMW Red Rhino reload for the 54-1750 case). I also planned on testing out my new Defy Gravity Tether for the first time. The Tether is a pyro release mechanism that would let me use dual deployment in the tiny airframe. Dual deployment would be almost mandatory for a possible M flight... someday.

At NYPower 11, peer pressure took its toll. I mentioned to my friends about wanting to fly the Fatboy on an M...someday. They all heard it as Sunday! I laughed it off, and still planned on flying the rocket on a K motor. My friends Joel Rogers and Robert DeHate convinced me (without a lot of arm twisting) that an L flight would be a good test of the Tether, and a good shake down flight for a possible M flight...someday (or was that Sunday). On Saturday, with the help of my friend Tracy (Woody) Wood, I began prepping the Fatboy for a L1060 Green Gorilla flight. The L motor came almost to the top of the 24" long airframe. Woody helped me pack the dual deployment recovery system around the motor and helped me think about the best way to mount and use the Tether. A Missileworks RRC2 altimeter was used to pop the nosecone at apogee, along with a 24" drogue chute, then at 500', if all went according to plan, the Tether would release a cord holding the

drogue 'chute to the rocket, and the drogue would then pull the main 'chute out.

The tiny rocket was loaded onto a pad at the away cell. A 5 count

was followed by a huge green flame out the back of my tiny little Fatboy. The rocket climbed to 5600', the nosecone popped at apogee, and the drogue popped out. Just like we planned, at 500' the tether let go of the drogue, and the main deployed for a



nice, soft landing. Everyone started chanting...SUNDAY SUNDAY SUNDAY!

Sunday morning arrived. I was pretty much convinced already that someday had arrived, and I planned on putting an AMW M1350 WW motor in the Fatboy. But I



needed to convince the BFR Manager, Mike Dutch, as well as myself, that the rocket wouldn't break the 8000' waiver. I knew it would be close. I ran

some sims, and tweaked them based on the L flight, and came up with 7500'. It was going to be close! Mike gave me the OK, so prep began on the rocket. The nose weight that was used in the K and L flights was not needed with the M flight. Not only was it not needed, but I couldn't fit the M case in there with the weight installed, so it was taken out. Once again, Woody helped me pack the parachute around the motor. The rocket was sealed up, and brought out to the away cell.

I was a little nervous flying this thing. The rocket weighed just about the same as the motor. The sims showed it nearly reaching Mach 1. And it was going to go higher than I had ever flown anything before. If the Tether failed to work properly, and deployed the main at apogee, I would be in trouble. After a countdown, the motor was lit. The Fatboy took off like a bullet, with a

white flame more than two times longer than the rocket itself. It flew straight as an arrow. At apogee, the nosecone popped, and the drogue came out. I could breathe again, the rocket held together and the main



did not pop early! It fell pretty quickly and as it neared the ground we were waiting for the Tether to release the main, but it never happened. The rocket hit the ground under drogue, much faster than I would have preferred. But, it landed on the field, and we had a good line of site as to where it landed.

David Harbaugh took off to recover the rocket, while I took some photos of other rockets. I then went to join David and by the time I caught up with him, he already had found the rocket, and was gathering up the recovery system and heading back. I couldn't wait to get close enough to find out if the rocket was ok, and find out how high

the thing went. As I got closer I could see all three fins looked intact, and David shouted out that it was fine. When I listened to the altimeter, I found out the rocket came within 200' of the Geneseo waiver. So it was close, too close. But, it didn't break the waiver. The Pico accelerometer showed the rocket pulled 16.9 gees at maximum acceleration, and a top speed very close to Mach 1.

There wasn't so much as a scratch on the rocket. Luckily it landed in a freshly plowed, crop field. The fins were dirty from landing in the soft ground, and that was all. Why hadn't the Tether released the main? I made a dumb mistake. There is a small cable on the device you attach to something on the rocket so that you won't lose it when it pops apart. I had attached it to the wrong side of my eyebolt, so it jammed, and couldn't release. A dumb mis-



take that (I hope!) I won't make again.

What's next for the Fatboy? Believe it or not, I plan to fly it on an I motor at our field. After that, I want to fly it on an EX M motor, but I'll have to find another place to fly it. I don't want to get that close to the Geneseo waiver again.

(Photos by Mark Canepa, Steve Gerber, David Harbaugh, and Rich Pitzeruse)

2005 SRC Launches

All launches are from 10 am
to 3 pm at Weigand's Hayfarm

July 16

August 20

August 21 (EX Launch)

September 10

September 11 (EX Launch)

October 8

October 9 (EX Launch)

Dates subject to change due to
weather and field cutting.

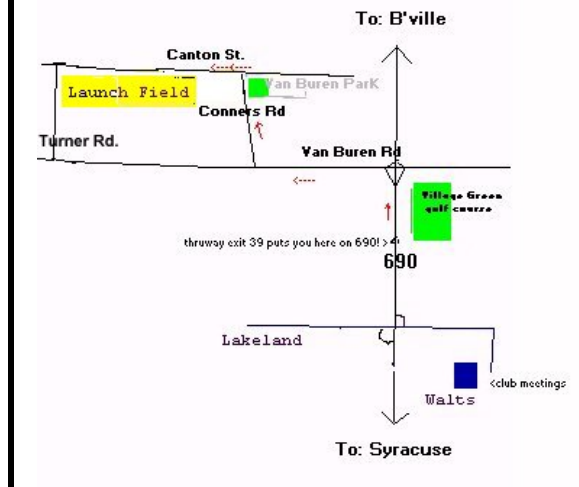
Please check the website

<http://www.syracuserocketclub.org>

The morning of the launch to
Confirm the launch will be held.

Syracuse Rocket Club
c/o Richard Pitzeruse
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Syracuse, NY 13219

Weigand's Hayfarm



From 690- take Van Buren Rd. Exit, turn left on Van Buren Rd. About 1/4 mile turn right on Conners Rd. Continue up Conners, Van Buren Park will be on your right, turn left on Canton St. Look for sign showing where to park. We launch either right across from the white farm house on Canton Street, or around the Corner on Turner. Follow signs.