

June 2016

WHAT'S UP



Newsletter of the Syracuse Rocket Club / NAR section 566 / TRA Prefecture 53
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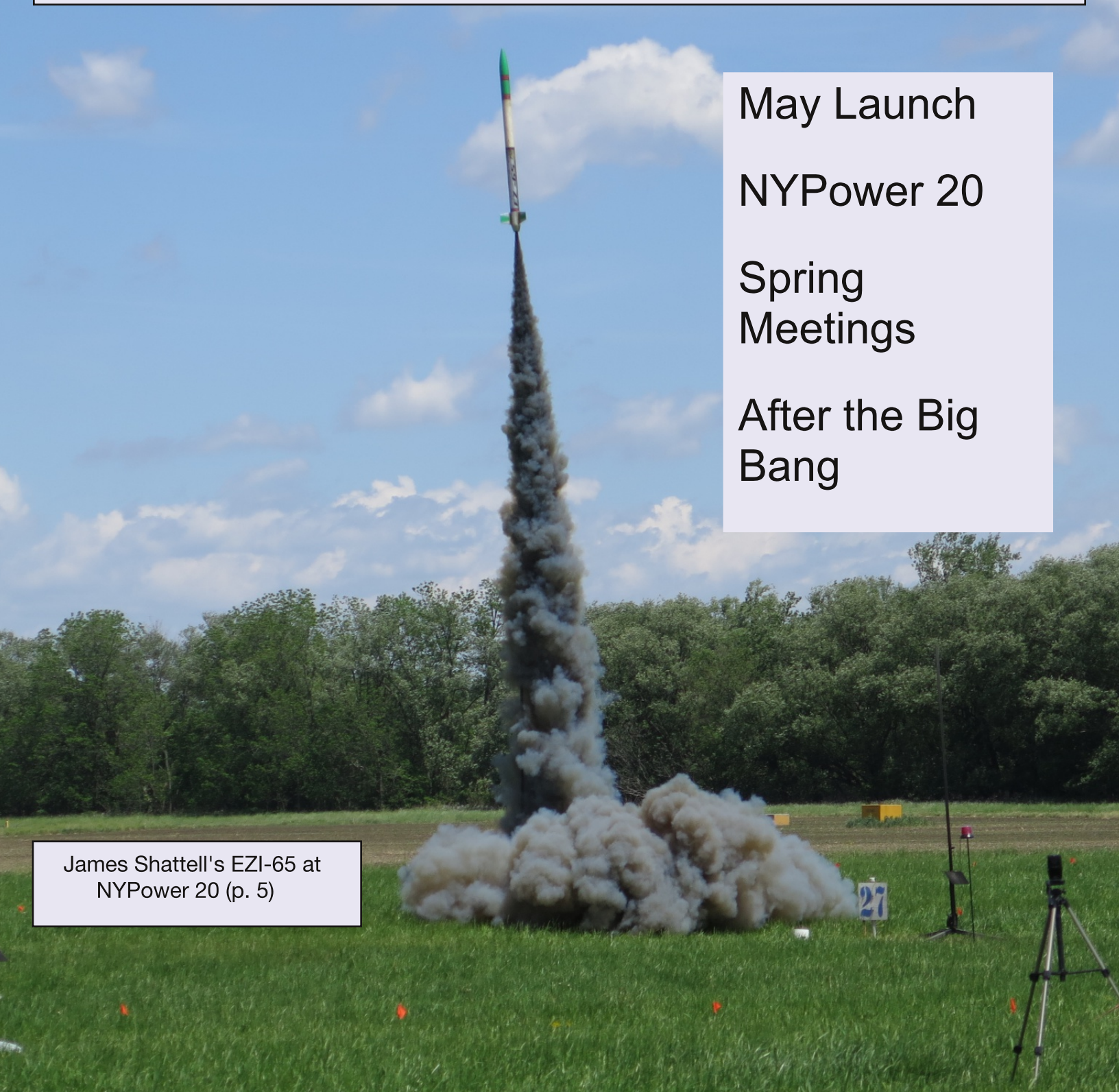
May Launch

NYPower 20

Spring
Meetings

After the Big
Bang

James Shattell's EZI-65 at
NYPower 20 (p. 5)



FLYING AGAIN

There was a good turnout for the first Syracuse Rocket Club launch of the season on May 21, including some Rocket Team Challenge contestants preparing for June 4. Skies were overcast, but the rain held off until we were about done at around 3:30. Winds were as close to dead calm as you get.

James Shattell was our launch director.

Kenny Holmes sent up his Ascender on a black powder F15-6 for another lovely slow launch. Rich Holmes flew a LOC Precision Fantom Mini that was one of Mark Riffle's donations to the club last year, partly because Mark was there visiting from Massachusetts. Rich's Big Daddy flew for the first time on a D12-3.

As for Mark, he put in a high power flight. Dennis Friend's Defender missile was one of several great rockets he flew. Roger Forell's Mark Iroc shook things up.

One of the aforementioned RTC teams sent up their rocket — the team or the rocket or possibly both was called Last Chance Phoenix — with two passengers, both snails. They lived to tell their children.

A highlight was Dave Grimes's Stretch Leviathan, flown on an H128 Aerotech motor for his Level 1 certification. All went smoothly; congratulations, Dave!

This year's launches are featuring not one but two

RTC teams and
SRC members
prepare to fly





Dave Grimes, Level 1

contests: a B Streamer Spot Landing every month, plus another one differing every month. For May the latter was 2-stage Spot Landing, dovetailing with the launch's Staging theme. Rich's B3S2 B streamer entry started with a bang when its B4-2 motor catoed at the end of the launch rod. Not only was the B3S2 crippled but it knocked a neighboring rocket off its launch lugs. Do you get two DQs for that?

Rich stayed in the game by re-flying the Phantom Mini on a B4-4, but Roger took first place with his spur of the moment entry, the sustainer from the rocket he used for the 2-stage Spot Landing contest. Rich won that one with his Loadstar II on a B6-0/B6-6, with Tim Catterson in third place.

Roger's Mark Iroc





Clockwise from top left: Last Chance Phoenix; Roger's 2 Stage Spot Landing entry; low power rack ready; Rich's Big Daddy; Dave's Stretch Leviathan comes back.

NYPOWER 20

The Syracuse Rocket Club was well represented Memorial Day weekend in Geneseo, NY at the Monroe Astronautical Rocket Society's NYPower 20 launch.

The site once again was the Geneseo Airport. There were 15 low power pads, 16 high power, and one BFR tower. Vendors on the field included AMW, Performance Hobbies, Onebadhawk, Mac Performance Rocketry, CATO-Chutes, Rockets Magazine, and Marsa Systems. Food vendor was the 3 Legged Pig from Lakeville.

The big SRC tent was up literally front and center, across from registration, serving as a hospitality tent as well as SRC headquarters. It did that job even better than expected Sunday evening...

Kristof Bajorski, Tim Catterson, Kenny Holmes, Rich Holmes, Scott Sellers, and James Shattell all were there on Saturday. It felt more like mid summer. Temperature got into the low to mid 80s but it seemed hotter than that. The 80% humidity may have had something to do with it.

Kenny was first to get a rocket prepped: his Estes Ascender ("Ascender-X", he calls it) again, this time with a booster, flying on an F15-0/F15-6 combination. It was the first and biggest 2-stage of the weekend, and Kenny's first 2-stage ever. It came down pretty far off in a field, but fortunately this year there were no high crops to lose things in. He later flew his "Red Alert" and "Blazing Falcon" (an Estes Code Red and Firehawk, respectively).

Kristof sent up his Acme Spitfire which unfortunately lost its nose cone; Rich and Kenny loaned him a Cherokee-D and an Eliminator to keep flying. (The Cherokee-D used to belong to Mark Riffle. One wonders if it has abandonment issues.)

Tim flew his Starship Vega and Rock It. Rich's Fat Boy and Xarconian Cruiser had their first flights, on C11 motors; his 3-D Rocketry Lunar Eclipse Jr., wounded back in 2014 with an E9-6 cato, went up on another E9-6, this time without exploding.

James's EZI-65 flew on a CTI K445 to an altitude of 6212'. Scott wasn't flying, but he did put in a couple hours on LCO duty.

Of course there were many, many other flights that day, one of the nicest of which was Neil Brown's Nike Smoke Extreme on an Aerotech M1939 to an expected altitude of about 6.500 ft.

After a break for dinner — the on field food vendor, the 3 Legged Pig, had chicken or ribs with two sides for \$10 that evening — there was an auction of some vintage kits. A double rainbow showed up. Not that there was rain to speak of at the field, but the weather was looking interesting toward the northwest.

Following the auction was a night launch in which Rich flew his Big Blinka on a C6-5.

On Sunday Rich flew his Binder Design Excel on a CTI H152. With a motor deploy chute at apogee there was a bit of walking out into the crop fields to recover it, but it flew well and came back in good shape.

Among other rockets flown that day was one under

Tim, Scott, and James at the SRC tent



the name of "Syracuse Outhouse Rocket", put together using parts that had been donated to SRC (see April meeting notes) and sold to raise funds for our porta potty purchase.

The day's highlight was undoubtedly Robert DeHate's full scale replica Patriot missile flying on a CTI M6400. Beautiful flight. M6400 is a Vmax motor but on a 200+ pound rocket, "vmax" is a relative term. The motor roared for an instant, the rocket rose majestically and kept going to about 1200 feet, it separated at apogee and both parts came down under chute for a perfect flight.

After that Rich couldn't resist flying his Patrioony (Goony Patriot) on a C6-5.

Soon after that the wind picked up and flights were suspended for the better part of an hour or so. About ten minutes after they resumed, a little past 4:00, it started raining, and ten minutes after that it was deluging, with very high winds, and flying was done for the day. The SRC tent stayed up, sheltering some people whose tents were not so fortunate.

Monday morning it was back to great weather again, cooler and less humid, and Rich flew his Shrockets Sea Sting on an Aerotech 18 mm D10-5 single use motor. James decided to fly the EZI-65 again with a CTI K530, a little lower impulse, for the Mile High contest. Its 4766' altitude was lower than expected and its deciduous recovery was a few feet higher than expected, but James was able to get it down.

It was a great weekend. I don't have attendance figures but it looked to me like there were significantly more flyers this year than last. MARS did a fine job and I look forward to NYPower 21.

Left: Kenny waits to fly
Right: Tim's Starship Vega





Top left: James's EZI-65 tree recovery
Center left: Hoisting the Patriot
Bottom left: Things get soggy
Right: Launch of the Patriot

SPRING 2016 MEETINGS

April meeting

There was discussion of the CNY Rocket Team Challenge and TARC. CNYRTC distribution set for the following week.

Equipment: Traditionally the next launch director takes the equipment home from the previous launch (requiring vehicle and residence space). Could we put up a small shed at the field near the porta potty? First step would be to check with landlord. It could have a combination lock with the combination given to members. Should we look for used shed for sale? It wouldn't need to be large, 8'x8' would be fine.

We unloaded and unpacked the launch equipment and went through it. Rich Holmes will refresh the first aid kit and check altimeter batteries. James Shattell will get more velcro for straps and for affixing pad numbers. Brian Morse and Dennis Friend will look into boxes etc. — we now have too much stuff to fit well into the two tubs.

Brian brought his Estes Little Joe II in progress. James brought some rockets in need of repair to be given away to kids at launches. There also were some high power rockets and parts donated by a former SRC member available for purchase.

May meeting

Some of the giveaway rockets from the last meeting came back in flying condition thanks to the efforts of SRC members.

This was the last meeting before the CNYRTC. Volunteers needed.

First launch on May 21 coming up. Numerous school launches in June.

Rich reported the first aid kit has been restocked and the altimeters and batteries checked out. There were 13 altimeters and 13 good batteries — a lot more than there is demand for. We decided to offer 8 or 9 of them for sale to members at \$10 per altimeter plus battery. Eight were sold immediately.

James said we were about ready to buy a porta potty.

Our landlord, Milton Weigand, was present and gave tentative approval to having a shed or a trailer on site for our equipment. Paul Gagnon thought he could come up with a trailer we could work with.

Dan Fritz said he was interested in getting his level 2 certification this summer.

Paul gave an informal presentation on fuel mixing.



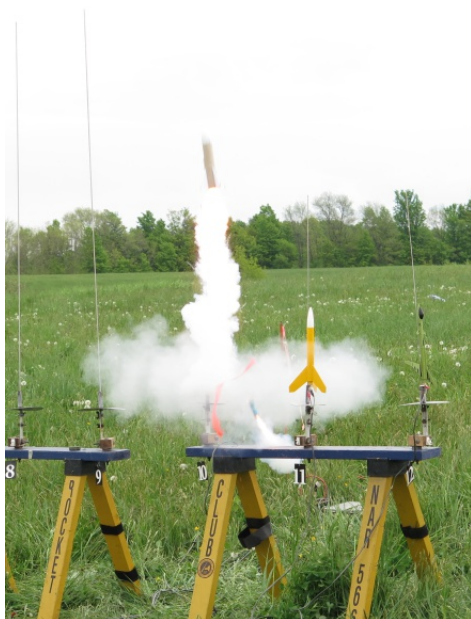
Found

Mark Riffle found the May and June 2015 flight cards while unpacking from his move! That seems to account for all of them. By next issue we should have them tabulated and summarized, and award winners announced.

AFTER THE BIG BANG

by Rich Holmes

Specifically for this year's recurring B Streamer Spot Landing contests, I built a rocket I call "B3S2" — from "Baby Bertha B Streamer Spot", because it was modified from a Baby Bertha kit. It started the season rather un auspiciously. Just as it cleared the launch rod there was a loud pop, the rear eject motor pod came out with the motor still spewing flame, and the rocket tumbled to the ground. As if that weren't bad enough, before hitting the ground the rocket banged into another rocket on another launch rod and tore it off its launch lugs.



This was not the plan.

Cato is not just a town in Cayuga County; it's also short for "catastrophe" and is used usually to refer to a disastrous motor malfunction. ("Catastrophe At Take Off" appears to be a backronym postdating the original use of the word.) This was the second cato I've had, the first being an E9-6 motor that crippled my 3D Rocketry Lunar Eclipse Jr. at URRF 2 in 2014.

E motors have a reputation for being cato prone, but people disagree as to how true that is. The motor in the B3S2 was, obviously, a B, specifically a B4-2. Catos can happen with composite motors too, sometimes spectacularly so with high impulse classes.

So let's say your motor just exploded. Now what?

First, collect the pieces and assess the destruction. Postlaunch examination of the B3S2 showed serious damage to the nose, the bulkhead, and the motor pod. The motor itself looked like any other spent motor. Sometimes a nozzle will get ejected or will show signs of defects or damage, or the casing will split; not in this case.

Note the date code. It's printed on the sides of Estes motors. For composites it may be on the packaging. Interestingly, though probably coincidentally, both the E9-6 that catoed in 2014 and the B4-2 that failed this year had the same date code (090412).

When you have a chance, go to <http://www.motorcato.org/>, home of the Malfunctioning Engine Statistical Survey (MESS). This is a joint program of the certifying organizations to track motor reliability and look for failure trends. If there's a systematic problem with a particular lot or type of motor, this is how the certifying organizations will find out. Fill out the form found there and submit it. The form asks for information such as: Motor manufacturer, type, and date code; failure date, location, and temperature; and description of the failure mode. (Note that inaccurate delay counts as a reportable failure, by the way.)

Finally, report the incident to the motor manufacturer. For my two Estes motor catos I emailed webcs@centurims.com. Typically Estes will not only send out a replacement pack of motors but will give you a new kit; same as the rocket that was damaged if it was a still-available Estes model, otherwise something with a similar price. (The Big Daddy I flew the same day as the B3S2 was compensation for the Lunar Eclipse Jr., even though the latter was repairable and has flown again.)



About the Syracuse Rocket Club

The Syracuse Rocket Club (SRC), serving hobby rocketry in central New York, is section 566 of the National Association of Rocketry (NAR) and Prefecture 53 of the Tripoli Rocketry Association (TRA) and was founded in 1997.

SRC holds a monthly sport launch in Van Buren once a month, May through October, typically on the third Saturday (weather permitting); see our calendar elsewhere in this newsletter for specifics. Launches are open to the public, with a \$5 launch fee for non SRC members who wish to fly rockets.

SRC welcomes all prospective new members to our monthly meetings. They are held on the first Monday of the month (second Monday if the first is a holiday) from 7:00 to 8:30 PM at Walt's Hobby Town on Dwight Park Drive, near the State Fair Boulevard exit of I-690.

For more information see our website: <http://syracuserocketclub.org>. We also are on Facebook at <https://www.facebook.com/SyracuseRocketClub>.

SRC officers are:

President:	Scott Sellers
Vice President/Treasurer:	James Shattell
Secretary/Editor:	Rich Holmes
Web Master:	Scott Sellers
Prefect:	Roger Forell

About *What's Up*

What's Up is the official newsletter of the Syracuse Rocket Club.

What's Up is published five times a year and is distributed electronically on the SRC website; latest and back issues may be downloaded at <http://syracuserocketclub.org/newsletters.html>.

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Next issue target publication date is August 2016.

UPCOMING SRC EVENTS

(Abbreviated; for details and full year see <http://syracuserocketclub.org/calendar.html>)

Date	Time	Location	Event
Jun Sat 4	9:00 am–2:00 pm	Skytop	CNY Rocket Team Challenge
Mon 6	7:00–8:00 pm	Walt's HobbyTown	Club meeting. Topic: Composite Motor Cluster Ignition
Sat 18	10:00 am–3:00 pm	Weigand's Field	Club launch. Theme: Cluster Power. Contests: C Egg Loft Duration, B Streamer Spot Landing
Jul Mon 11	7:00–8:00 pm	Walt's HobbyTown	Club meetin. Topic: R/C Rocket Boost Gliders
Sat 16	10:00 am–3:00 pm	Weigand's Field	Club launch. Theme: Gliders. Contests: 1/2A Glider Duration, B-Streamer Spot Landing
Aug Mon 1	7:00–8:00 pm	Walt's HobbyTown	Club meeting
Sat 20	10:00 am–8:30 pm	Weigand's Field	Club family picnic launch
Sep Sun. 11	10:00 am–3:00 pm	Weigand's Field	Club launch. Note unusual date!
Mon. 12	7:00–8:00 pm	Walt's HobbyTown	Club meeting
Oct Mon. 3	7:00–8:00 pm	Walt's HobbyTown	Club meeting
Sat. 15	10:00 am–3:00 pm	Weigand's Field	Club launch

Please check web site (<http://syracuserocketclub.org>) for changes, cancellations, and last minute events! Go/no go status of each launch will be posted on the web the evening before.

Directions to Walt's HobbyTown: From I-690, take Exit 5 (State Fair Blvd./Lakeland). Turn right onto Van Vleck Rd. Take the first right onto Dwight Park Dr. Walt's is immediately on your right.

Directions to Weigand's Field: From I-690, take Exit 2 (Jones Rd.). Turn left onto Jones Rd. Take the first right onto Van Buren Rd. After 1.6 miles turn left onto Connors Rd. After 1.0 miles turn left onto Canton Street Rd. Launch site is about 0.4 miles on your left; look for sign. Park in designated area. Please do not drive onto field without launch director's permission.