

SHROUDLINES

A Dallas Area Rocket Society Production



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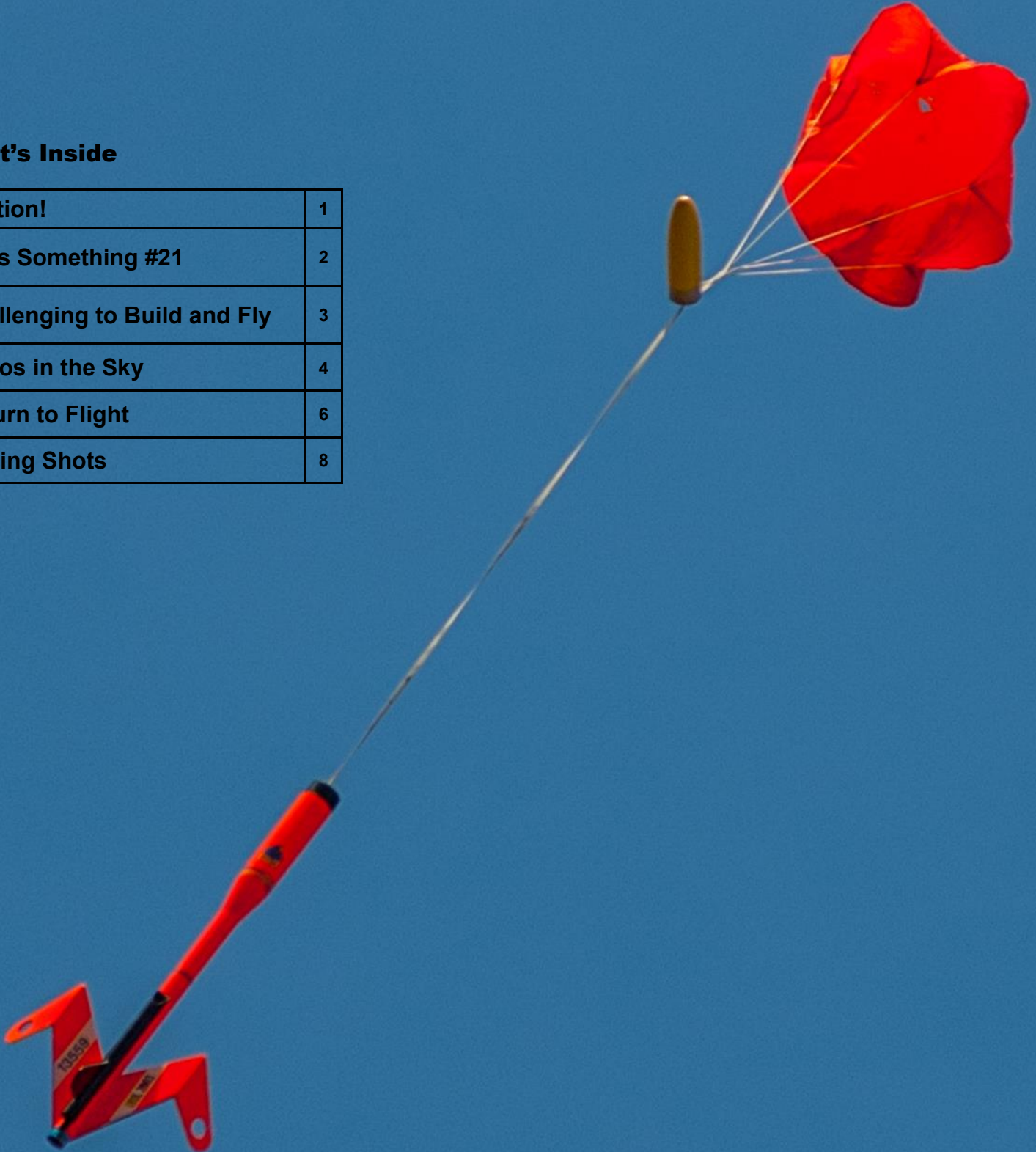
Section #308



November/December 2016
Volume 25, Issue 5

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A rocket drifts down under chute in the crystal clear skies over Gunter. Photo by Nick Viggiano.

Ignition!

By Gary Briggs

Nothing lasts forever...well maybe somethings do but who can really tell? This has been a crazy year as Bill will point out in the next column, with many high profile deaths, a contentious election, loss of flying fields, and other calamities. I guess the way my brain works, I quickly move beyond those things to what endures ,and continues through the test of time.

DARS, as an entity, is pretty old. As our logo proudly displays, the club has been around since 1972, and I believe John Dyer and others can tell you about the entities that preceded that, which minus the name, were really the beginning's of DARS as well. The fact that I can associate a current club member and the beginning of the club, over a timeframe of 40+ years is truly extraordinary. This is a hobby organization after all and is a hobby club run by volunteers. There are corporations, professional organizations, and governments, that don't last that long. And John is not the only member with those deep roots. Stuart Powley can get pretty close, as can Jack and Suzy Sprague and others. I don't know the stats, but the number of long time members, and I am talking decades here, I suspect, is really pretty long, again for a hobby organization...

As I creep up on almost 20 years with the club, I think about what has changed and what remains the same. In that time, I have seen at least 5 different administrations. Buzz McDermott was the president when I made my return to flight and he was followed by Rags Fehrenbach, Don Magness, Royce Frankum, and Jack. Each leader leaves their mark on the organization, but as we know with politics, they come and go and what really endures is the people. We have seen numerous flying fields and feared the loss of each and the impact it would have on the club. In the end, new fields were found, the flyers adapted, and the club moved on. We have seen threats to the hobby when manufacturers and distributors were impacted by fires, went out of business, and even died. Still the club endured. We even had government regulations trying to eliminate access to propellant and igniters, but they really never had a chance when pitted against intelligent and creative people who adapt and find ways to continue their activities in spite of new regulations.

I believe that the core of DARS is strong and will endure for a very long time. It has a great mix of history, experience, innovation, and fresh enthusiasm to keep it alive for years to come. What will be your role in that strong history?

On a less upbeat note, we lost Al Yunker recently. I met Al through my work originally, and the first time I met him he was sanding rocket fins in his driveway! He was looking forward to flying with grand kids and just getting introduced to DARS. He had to be almost 70 at that point, but his enthusiasm was that of a child. He frequented many launches and thoroughly enjoyed the hobby. I spoke with one of his neighbors after his passing and he noted the loss to their neighborhood as Al was always there to help out with whatever anyone needed. He will be greatly missed.

As noted last month, I am looking to pass this job on to someone who is currently an active flyer and member of the club. I hope to be more active this year and there are even rumors of the return of the Fall Classic, but at this point, I think I have done what I can for the magazine and it is time for someone else to take charge of the editorial desk. The job doesn't pay very well, but if you are lucky, you get to meet some great people and you give yourself another outlet for your rocketry love. Contact me or Jack if you would like to take on the role. I will train as needed.

This month Bill starts us off with Something #22 covering the year that was 2016. Then George Sprague regales us with his build discussion on a couple of classics designs in modern form. Nick Viggiano caught some great shots of what I believe is Chuck Crabb's fated Bob rocket and the whole sequence appears here. Sam Barone takes us in the Way-Back Machine to his first BAR flight. As usual we wrap with some pictures, this time provided by Nick Viggiano.

Bill's Something #22 - Good Riddance, 2016

By Bill Gee

Several weeks ago, I heard a report that Buzz Aldrin had been evacuated from Antarctica due to a medical emergency. Uh, oh, I thought. This cannot be good. Luckily, he has since recovered.

A few days after that came a report that John Glenn was in the hospital. Unfortunately, he did not survive.

If you thought that an extraordinarily large number of famous or influential people died in 2016, you would be right. And the hits just kept on coming. It has been said that celebrity deaths come in threes; in 2016, they came in bunches.

Here is a selection of a few of the departed which may be known by those who follow rockets and space:

Edgar Mitchell, Apollo astronaut. His crew had been assigned to Apollo 13, but was reassigned to Apollo 14 so that mission commander Alan Shepard could have more training time. Phew!

Donald Williams and Piers Sellers, both Space Shuttle astronauts.

Astronomer Klim Churyumov who co-discovered the comet 67P/Churyumov-Gerasimenko which was visited by the European space probe Rosetta.

Simon Ramo, known as the father of the intercontinental ballistic missile, led the development of the Atlas launch vehicle which boosted John Glenn into orbit. He was also instrumental in the Falcon air-to-air missile program.

Andrew Grove, best known as one of the founders of Intel, worked at Fairchild Semiconductor pioneering the creation of integrated circuits. Fairchild parts were used in the Apollo Guidance Computer.

Carrie Fisher, best known for playing Princess Leia in Star Wars, suffered a heart attack on a flight home to Los Angeles and succumbed after days in the hospital. We also lost her castmate Kenny Baker who played R2-D2.



Many of us have sung "Ground Control to Major Tom" while listening to David Bowie in Space Oddity.

Anton Yelchin, one of the promising new faces in the Star Trek reboot series, died in a freak auto

accident in his own driveway.

The year also saw the death of polite political discourse and trust in the traditional news media.

This was also the year DARS lost Frisco and HOTROC lost Asa. May both clubs soon find better flying fields.

And may 2017 be a better year for everyone in every way...

If you would like to discuss this further, post your comments to the DARS-General Yahoo group at <http://groups.yahoo.com/group/DARS-General> where I like to hang around.

Challenging to Build and Fly!

By George "The Other" Sprague

Want a challenging model rocket to build – and fly? Well how about TWO! The Madcow Rocketry 1.6 inch diameter Bomarc and Estes Little Joe II are great examples of rockets that will task your building abilities and flying expertise.



Let's start with the Bomarc. I previously built the Madcow 2.6 inch diameter Bomarc and discovered the nose cone requires much added weight for the rocket to fly straight up. In this case, my nose cone weighs almost 14 oz. Took

some experimenting to figure this out. As for the smaller version, Madcow provides a starting point for how much weight is needed in the nose – on the 1.6 inch diameter model it needs to be 4.5 oz. In my case, it weighs 4.7 oz. And they provide the center of gravity (CG) which is 13.5 inches from the tip of the nose cone, so you can determine how much weight is needed. But see this procedure explained below for the Little Joe II.

The suggested motors are Estes D12-3 and E9-4. Not for me. I flew this model at Sam Barone's 2016 Turkey Day Extravaganza on an Aerotech E15-4. The flight was spectacular, and it all came back in one piece.

As to the Little Joe II..... The instructions for this model are, well, lacking. If someone builds this rocket per the instructions, they highly increase the probability of an unstable flight and fins possibly taking off on their own. A case of the instructions being the manufacturer's opinion of how the rocket should be built.

The fins are supposed to be glued on the surface of the plastic body wrap. With a suggested Aerotech E30-4 motor for the flight.....nope. Some create fin tabs to go through the body tube and glue into the motor tube. I used plastic rods to create pegs that go through the body tube. This meant I only glued the forward centering ring on the motor tube, then that assembly glued into the rocket. This gives access to the inside of the tube where you can see and reinforce the pegs. The aft centering ring is glued on after all the internal filets are done.

I used epoxy on the pegs and thick CA on the fins, then filets using thin CA. I flew this rocket on an Aerotech E15-4 – nice flight, little wiggle on the rear, and 'chute brought everything down in one piece, with no cracks or damage to the fins or escape tower.

I did not use the shock cord attachment included in the kit – supposed to glue it on a tab inside the capsule. Rather, I reinforced the tab with fiberglass, then drilled a hole and attached two

loops of 300 lb strength Kevlar cord – one loop to attach the parachute, the other for the shock strap. The strap is 40 inches long, allowing the body of the rocket to find the ground first and the capsule floats down a few seconds later, under full parachute – the escape tower intact!



Now to the balance point – Estes provides clay and sort of shows where it goes. What needs to be known is the balance point of the rocket has to be 6 ¼ inches from the back in order for it to fly straight. So before you glue the body of the escape tower to the bottom, place as much clay into the body (I even added a few slivers of lead) then remaining clay to the inside top of the capsule, load everything for flight (motor, parachute, chute protection) and hang the rocket from a loop of string. If the balance point is not 6 ¼ inches from the back, add or remove weight until the balance is achieved. Then proceed to glue everything that needs to.

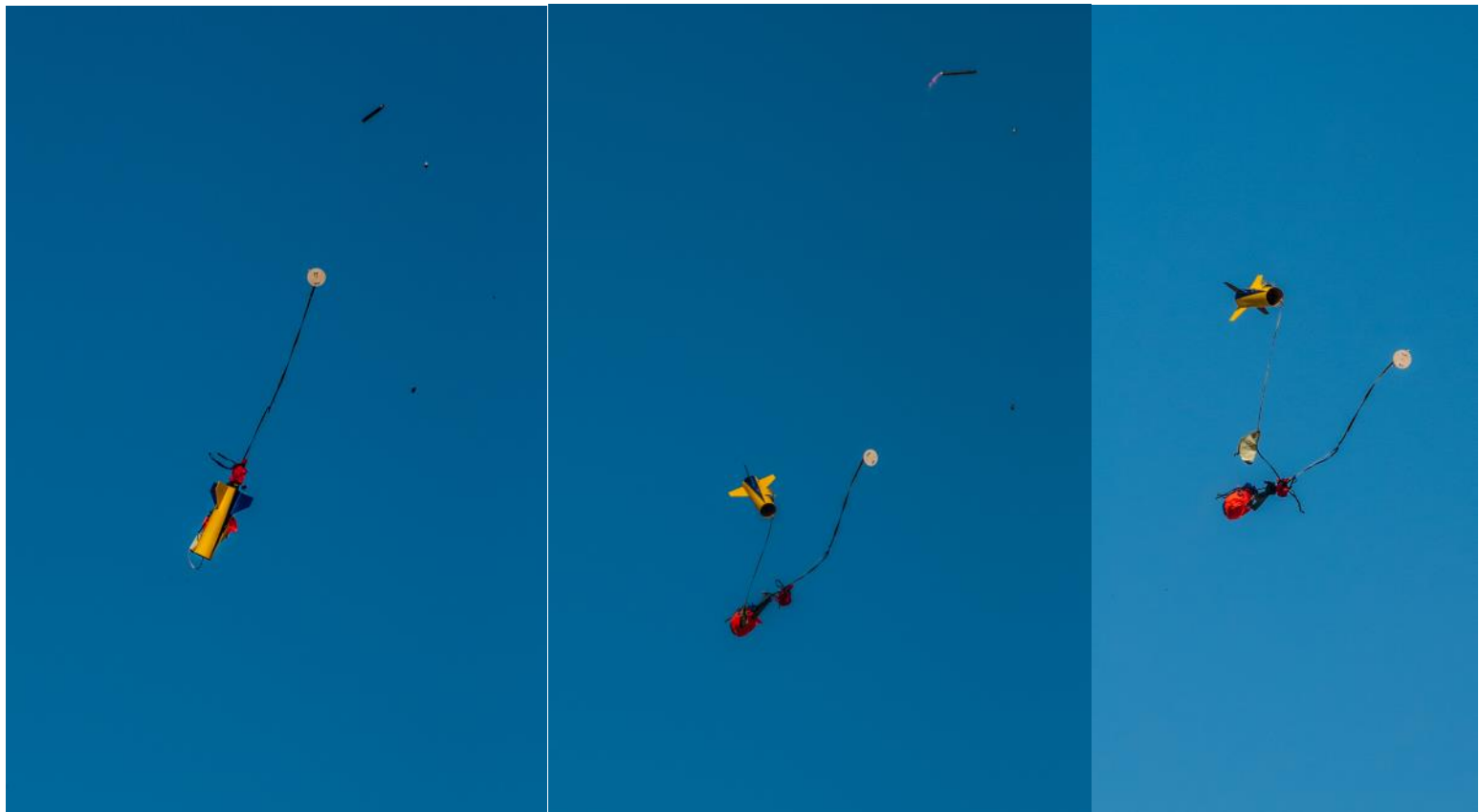
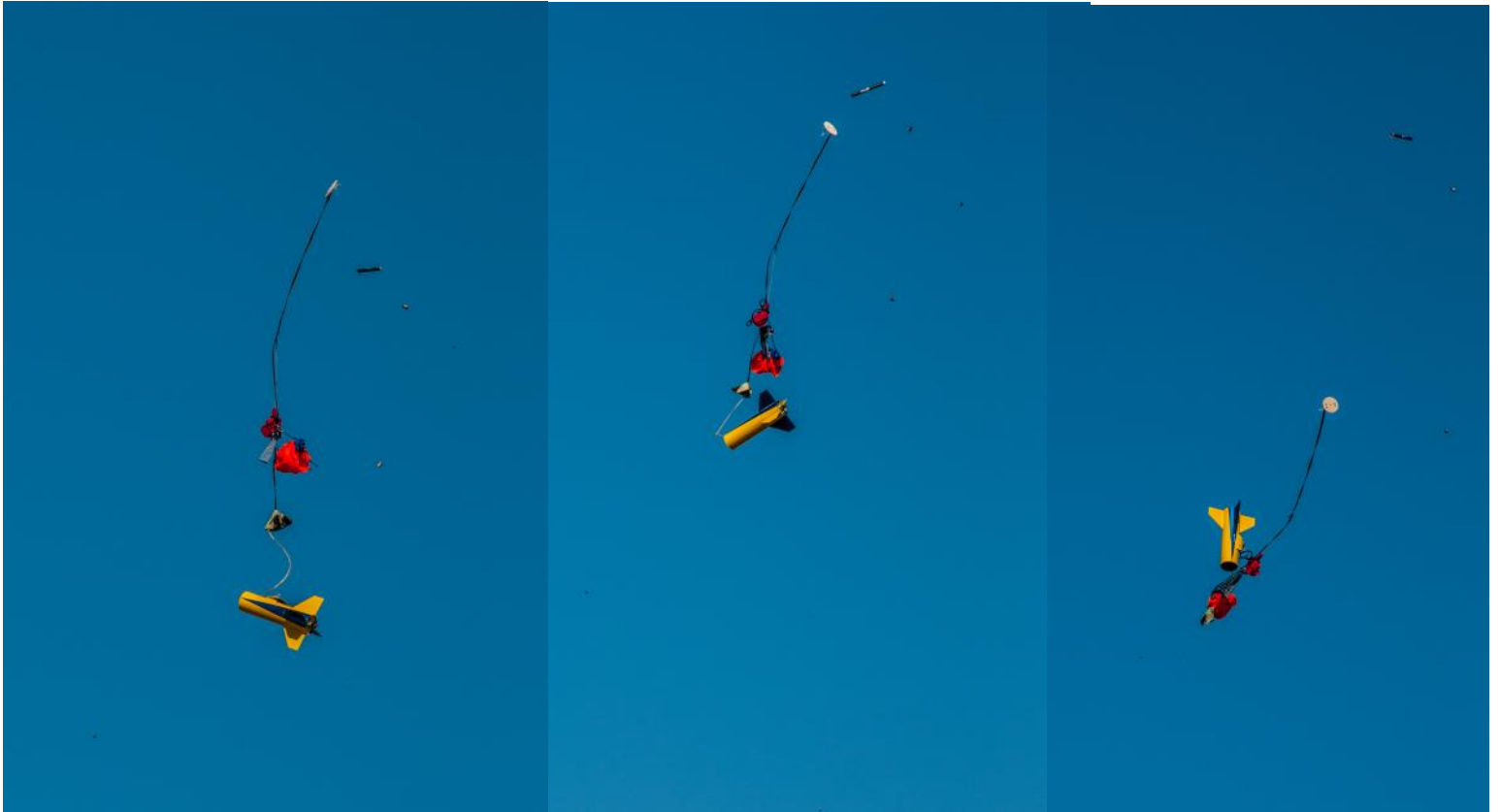
Both of these rockets are a lot of fun to build, and fly. And if you are careful to make sure everything is balanced properly, your rockets will reach for the sky – and not decide to go loopy on you!

Chaos in the Sky!

Pictures by Nick Viggiano

Editors Note: Rarely, does everything align to get a great set of pictures when something goes wrong as it happens so fast. Nick was on the spot to capture this great set of pictures of this really interesting failure





Return to Flight - A BAR Story

By Sam Barone

I can't let 2016 end with commemorating the 10th anniversary of my return to flight

June 10, 2006 It was a dark and stormy night. Ummm... it was a hot and sunny day...

The day actually started for me at 0:dark:30 with a call from work. Not good. I managed to put the fire out and, brand new Big Daddy and video camera in hand, made my way down to Mountain View college in south Dallas at around noon. First black powder burn in about 30 years for me and I was jazzed.



pad. Camera rolling, Terri Magness started the countdown and at "LAUNCH" the chaos ensued.

The motor lit, the Big Daddy got maybe a foot up the rod then took the whole rod out of the launch head. As I recall it managed a respectable height, 20 feet or so, before it dove for the flight line.

After the smoke cleared I had a rocket with a broken shock cord and one cracked fin and my ego in tatters. Then things started looking up. John Dyer volunteered some 5 minute epoxy to fix the fin. I tied a new shock cord and loaded up another D12. Don and Terri actually let me try again!

The rocket rose up and out over Illinois Avenue but the recovery system held and the wind brought it back to the field. The 2nd time was the charm and I felt the thrill of my successful BAR flight.



Screen cap of the moment things went south. The full video is available on the DARS Shutterfly page and at the youtube link below.

<https://www.youtube.com/watch?v=IC-KDD2FHMg&feature=youtu.be>

The launch was pretty well attended as I recall. When it came to my turn at bat I loaded a D12-5 in the Daddy and got it on the

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10% Discount on all rocketry related items. The Dallas store carries Estes, Quest, Aero-tech, and PML kits with a great selection of Estes and Aerotech motors.



10% Discount on all rocketry related items. Lots of kits and motors from Estes and Aerotech



Additional 5% discount on regularly stocked motors. Enter DARS in the coupon field at check out. Huge inventory of Aerotech motors.



20% Discount on all rocketry related items. Great selection of saucers, odd rocs, and launch equipment.



Plano @ Parker and 75

10% Discount on all rocketry related items. Estes kits and motors. Great selection of plywood and balsa.



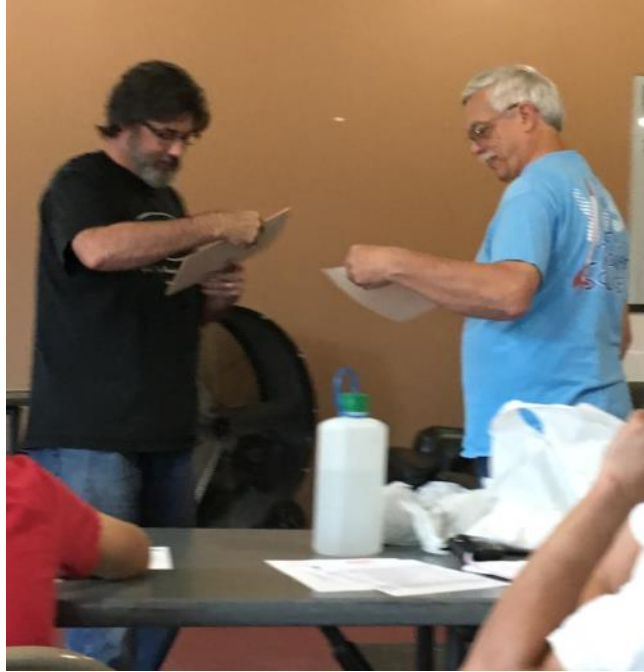
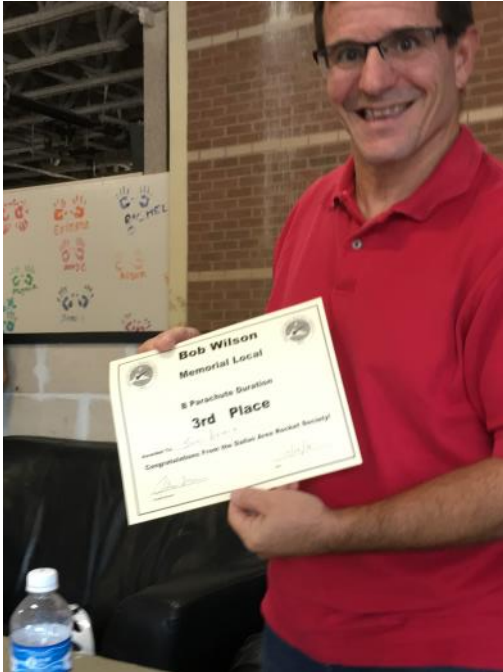
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Guillotine Fin Jigs
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Parting Shots
All photos by various artists



Top 2 pictures are of contest winners from the Bob Wilson Memorial, by Briggs. All other pictures by Viggiano



Bottom left: Al Yunker and Ted Macklin watch from the mid power pad as a model takes off . Rest in peace Al.



How to Contribute to Shroudlines



We all share a love for the rocketry hobby and all have different experiences and expertise to share. You don't have to be a Pulitzer Prize winner to write for this publication. Anyone can do it!

Submissions can be in the form of plain text files, emails, or MS Word documents. Pictures can be of most any format, but .jpg files are generally the norm. Keep the content family friendly and free of political discussion; just rocketry.

We publish every 2 months so we need your content submitted by the 15th of an even numbered month (.i.e. February 15, April 15, June 15, etc.). You can submit via the contacts page on dars.org or direct to the editor at garyb2643@att.net.

DARS Officers

President	Jack Sprague
Vice President	Sam Barone
Treasurer	Suzie Sprague
Secretary	Bill Gee
NAR Senior Advisor	Chuck Crabb

Your 2016 officers are also your 2017 officers

Upcoming Events

1/14	Outreach– YMCA at LV Lake
1/21	Sport Launch and TARC @ Gunter
1/28	High Power Launch TBD

The Dallas Area Rocket Society is a non-profit chartered section of the National Association of Rocketry ("NAR"). Its purpose is to promote the hobby of consumer rocketry in the Dallas/Ft. Worth metropolitan area.

Membership in DARS is open to all interested persons. Membership in NAR is encouraged, but not required. Annual dues are \$10.00 for individuals and \$15.00 for families. The entire family, including children, are welcomed to the meetings. Go to the website, fill out and send in an [application](#), to join or renew your membership.

The club normally meets on the first Saturday of each month at 1:00 p.m. and the current meeting location is in Coppell, just off the Sam Rayburn toll way and Denton Tap Road.

Visit the DARS website for the meeting location: www.dars.org