

## Darren Dazzles Discovery Channel!

### The Ranc'O'r Project

By Darren Wright

The idea for this team project as born, no doubt, in the far reaches of Darren Wright's Ozark Propulsion Labs facility in Wilmington, Delaware. Experimental motor guru Darren, bored with 1.8 second burn "M" motors in Kosdon 3 inch casings, was chatting with Jeff Taylor of Loki Research late one night, trying to think of what kind of ignorant motor project could be next on the list. Familiar with the "Whitakers Standard" 4.5 inch motor casing size popularized by Jim Mitchell, Jeff suggested making the largest 4.5 inch motor which he could fit on his lathe, a 48 inch long monster which would develop 23,000 newton-seconds of total impulse, bringing it into the baby "O" range. By the end of the conversation, the plan had been hatched for Jeff to supply such a casing, and for Darren to make the propellant to fit it. A team project had been born. The next order of business was to find a rocket in which to fly the monstrous powerplant. After running down the list of candidates in the states of Delaware and Maryland who owned a rocket with a motor mount large

enough to fit such a monstrosity and only coming up with two suspects, Darren quickly called Neil MacGilvray of Air Fiasco. After a little arm-twisting, Neil offered to contribute the usage of his 8.5 inch diameter "Rancor" rocket to the project. What nut would turn down a free "O" motor, anyway? After quick calls to Pinnacle Aerospace to

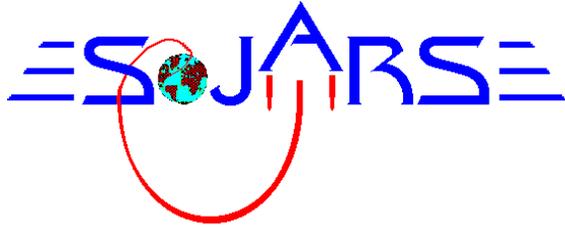
borrow a 24 foot parachute and to Dave Bullis Missiles and Space for the usage of the venerable Tower Launcher, all was a go.

The project was to proceed at full speed, and Darren quickly fired up his KitchenAid mixer and began using AP quicker than FireFox could supply it. It wasn't long until he had several large grains of propellant cast into 4-inch PML airframe tubes. The completed motor contained 29 pounds of propellant. It not only had grains of different core sizes, but had two different lengths of grains and a faster propellant at the top of the motor than at the bottom, and was topped off by a full diameter smokey delay grain. The launch date was set for the weekend of 1 and 2 December at the wide expanse of the Harper Field in Rhodesdale, Maryland. The weather



on Saturday, 1 December was beautiful, with blue skies, temperatures in the 70's, and nary a breath of wind.

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## Calendar of Events

### **SoJARS Meetings**

Unless otherwise specified, all meetings take place at the Cherry Hill Public Library, 1100 North Kings Highway, Cherry Hill, NJ. (856) 667-0300. Directions are available on our web site. For 2002, all meetings will be held on the 4th Tuesday of the month, 7:00pm - 9:00pm, in Room A.

Tuesday, January 22, 2002.  
Tuesday, February 26, 2002.  
Tuesday, March 26, 2002.  
Tuesday, April 23, 2002.

### **SoJARS Launch Dates**

Unless otherwise specified, our launch area is at the Gloucester County College. Directions are available on our web site.

Sunday, January 20 17 24, 12:00pm to 4pm.  
Raindate: January 27.  
Theme, Funtest, Vendor: TBA

Sunday, February 17, 12:00pm to 4pm.  
Raindate: February 24.  
Theme, Funtest, Vendor: TBA

### **GSSS, NAR #439**

Launches are usually held on the fourth Saturday of each month, 10am - 3pm: Jan 26, Feb 23.  
Location: North Branch Park, near Somerville, NJ  
GSSS Hotline: (908)-658-9417  
Website: <http://www.robnee.com/gsss/>

### **MARS, TRA #105**

Next Launch: TBA.  
Location: Sod Farm, Allentown, NJ.  
Website: <http://www.njtripoli.org/>

### **METRA, TRA #94**

Next Launch: May 4 & 5, June 1 & 2, 2002.  
Location: Barron Field, Wawayanda, NY.  
Web: <http://users.nac.net/jdcluster/Metra.html/>

### **Garden State Tripoli, TRA #74**

Next Launch: TBA.  
Location: Cederville, NJ.  
Website: <http://www.njtripoli.com/>

## Calendar of Events

Continued

### **PARA, NAR #520**

Next Launch: Feb 3, raindate Feb 10, 11:00a - 4:00p.  
Location: a farm 9 miles north of Doylestown, PA  
Phone: You may call Chuck Arkens (215) 855-5599  
or David Stoetzer (215) 412-4348 the night before or  
the morning of the launch for verification.  
Website: <http://users.erols.com/dstoetz/para/>

### **SPAAR, NAR # 503**

Next Launch: TBA.  
Location: Cocalico High School in Denver, PA  
Website: <http://home.earthlink.net/~sbaar503/>

### **Deleware Tripoli, TRA #106**

Next Launch: TBA.  
Location: Harper Farm, Rhodesdale, DE  
Website: <http://www.detripoli.org/>

### **Maryland Tripoli, TRA #68**

Next Launch: TBA.  
Location: Higgs Dairy Farm, Price, MD  
Website: <http://www.mdtripoli.org/>

## Altitude! Deadlines

Submissions for publication are accepted continuously by the editor. The Deadline for the March / April issue will be March 2.

## The Ranc'O'r Project

Continued from Front Page

The project participants converged on the town of Rhodesdale, bringing their individual pieces of the project together for final assembly at the field. As Neil worked with Ozark Aerospace's Erik Hall on the avionics, Jeff Taylor unveiled the shiny 21 pound aluminum motor casing, and Darren and Jeff got to work epoxying the propellant grains into the liner and assembling the motor. Neil MacGilvray had used his media connections to bring a film crew from the Discovery Channel out to film the launch. The television crew was scheduled to arrive on Sunday. Somehow, the launch crew withstood the temptation to take advantage of the beautiful weather and decided to wait until Sunday and the TV crew.

Sunday's weather was not as nice as Saturday's, dawning with a chilly breeze and high clouds. But this did not deter the intrepid rocketeers, who began final assembly of the components despite the less

than perfect weather conditions. First, the motor was installed in the rocket, followed by the recovery systems. With the 24-foot parachute installed, the nose cone stubbornly refused to fit on the rocket, so the large chute was removed and replaced by a 15 foot LUU-2 flare parachute. The completed rocket weighed in at 149 pounds. Right on time, Dave Bullis showed up with the launch tower, and by mid afternoon, the time had come to set up the massive rocket at a remote launch site far from the crowd lines. Around 2:30pm, the rocket was standing upright on the launch tower, and all was soon to be ready. A blue hole in the cloud deck moved toward the launch area, and the Rancor crew was prepared to launch the rocket into the clear spot. Neil climbed up the ladder to arm the electronics, but then the unthinkable happened. There was a large BOOM and the payload section separated from the rocket, sending Neil flying off the ladder and to the ground. Apparently, electrical interference had caused one of the Transolve altimeters to fire its charges. There were several more booms as the rest of the ejection charges also fired, scattering the nosecone and payload section across the field and billowing smoke up around the away cell launcher.

Just when it looked like the day's flight attempt was doomed, word came over the radio that the crew would replace the spent ejection charges and try again later in the day. In a superhuman effort, the flight crew feverishly worked to have the rocket ready once again by 4pm. The Transolve units were replaced by AltAcc's, and this time the electronics arming was uneventful. The moment of truth had finally arrived. With the Discovery Channel in position several hundred feet from the launcher, Joe May commenced the countdown.

Motor maker Darren could not contain his nervousness, muttering "Oh my God" as the countdown proceeded from ten seconds to zero. As the "Ignition" command was given, smoke belched from the motor for about a second. Then, with a thunderous eruption of smoke and flame, the O-5800 came to life. The Rancor jumped into the air atop a 20-foot long column of orange-white flame, pitching slightly to the west as it cleared the tower. With a low pitched roar, the 13-foot long rocket accelerated quickly to a maximum speed of 620 miles per hour. There were several bangs as the staggered core grains burned out at different times. 3.2 seconds after liftoff, the propellant had been exhausted and the thunder subsided, leaving only a small point of light disappearing higher into the sky as the full diameter delay continued to burn. A look at the Ozark Aerospace downlinked telemetry showed the rapidly increasing altitude begin to level off as the rocket reached an apogee of 8,500 feet.



On a call of "Apogee" over the radios, Neil remotely fired an ejection charge by remote control, separating the rocket into two connected pieces. The Rancor free-fell toward earth at a terrifying speed, and at 900 feet, the ejection charge was fired for main parachute deployment. Unfortunately, the stresses of the heavy rocket and fast descent were too much for the 15-foot parachute canopy, which failed and streamered behind the rocket for several seconds until impact. Luckily, Neil's rockets are built like tanks, and the impact in the soft soil only did minor damage to the vehicle. It should be ready for another attempt in early 2002. Darren is already busily at work mixing up another 29 pounds of propellant for the next flight. Not one for being satisfied with the status quo, Darren will have another trick up his sleeve for the next flight. Look for a fuchsia colored flame under the Rancor the next time.

## **Officer Candidate Statements**

### **Candidacy Statement for President**

Dear Sojarians,

I'd like your consideration for re-election as President of Sojars. I have served as President since the formation of our club and I'm proud of our accomplishments. Since we formed in the spring of 1999 all of us have created a terrific club. At a launch I look around and see families, individuals, and kids who would otherwise be doing something else. Instead we are all outside having a good time flying rockets together! We've had a launch and meeting almost every month since we began. Membership has continued to grow, approaching 80 this year (we were in the mid-50's last winter). At the same time we've added new members, we've retained most of our existing members. Financially, we continue to run responsibly, keeping dues and fees down while ensuring we have a cushion in case we

need to make purchases. I'm particularly proud that we've been able to keep the fees for junior and leader members very low, as they are the future of our hobby. As far as purchases, this year we finished obtaining pretty much all the equipment we need. Finally I would not be complete if I didn't mention our award winning newsletter and our first sanctioned NAR contest. I cannot take credit for them, but I can share in the pride that we all should feel about them.

As I've said above, I am quite proud of the accomplishments we've made with our group. It has taken a lot of hard work to accomplish all we have done, yet there is still much more to do. I'd like for us to continue to grow - both our club and the hobby in our area. I'd like for us to find a larger field to fly mid and high power rockets. I'd like for us to continue to develop competition in the group. I'd like to continue to have the fun, family friendly launches we have. I'd like us to be the best NAR section we can be. Yes, I know this sounds corny, but I've grown to care a lot about our club because it is a good thing. Serving as President the past couple years has become, for me, almost as much of a hobby as rocketry is. I enjoy putting in the time and effort it takes to do it right. I'd like to continue to serve as your President this coming year.

Sincerely,  
Art Treiman

### **Candidacy Statement for Co-President**

My fellow rocketeers,

I am writing to announce my candidacy for co-president of Sojars. I am proud to announce this, as it is a first for our group. The Sojars bylaws state that if a club member under the age of 18 wishes to run for office he or she may do so and hold that position along with the adult member elected. Now this doesn't mean that I would be the president, but it means that I would share in the duties of the president. Since I am only 16 years old and would like to become more involved in the workings of our group, I have decided to run for this position. Hopefully some other young members will choose to become more involved as well. I have been a member of this club just short of two years now and over this time I have experienced many things that have made me extremely glad that I chose to join. A few examples would be the immense amount of knowledge I have gained from the meetings, the awesome launches where we always have loads of fun, and of course, just talking and being friends with all of you! It is these very reasons and more that I would like to be co-president. Like I said, I want to be more involved and I wish to help Sojars take on

new challenges and expand in any way that I can. I thank you for taking the time to read this and please consider me for Co-President of the South Jersey Area Rocketry Society, the greatest group I have had the privilege of being a part of.

Sincerely,  
Randy S. DePasquale

### **Candidacy Statement for Vice-President**

SoJARS has shown incredible growth over the past 3 years. Our membership is now in the 70's. Our monthly meetings are well-attended, and our monthly launches average 100-plus flights. We have finally reached the point where we really NEED John's name tags to identify some of the many new members at our launches. This is a good thing. When a group such as ours stops growing, it starts dying. I believe one of the responsibilities of club officers is to continue to promote our group's growth. I want to be able to continue this growth in upcoming years.

Another of the responsibilities shared by all of the club officers is to promote SoJARS in our communities as much as possible. Most importantly, to represent ourselves in the "public eye" as serious and responsible people practicing a safe and very enjoyable hobby. This became an issue recently, and I can say proudly that your officers handled a touchy situation with intelligence and good sense. When it was over not only was SoJARS vindicated, but we also took steps to prevent another such misunderstanding from occurring in the future. Therefore we need to continue to elect officers who are effective communicators and who will represent our club the way we would like it to be seen by others.

I have considerable experience in public speaking, as I frequently do lectures and other talks. Since becoming a member, I continued to actively promote SoJARS. I make visits to Cub Scouts and other groups, speaking about our club and our hobby. Last year, I took part in the SoJARS display at the East Coast Hobby Show, and I look forward to attending again this year. A SoJARS poster, featuring photos of myself and other SoJARIANS at launches and meetings, is prominently displayed on my office wall. SoJARS flyers and copies of ALTITUDE! are also available in my office's magazine rack (along with the usual old magazines!). My patients ask my staff for an appointment with "the Rocket Doc", and many of them have attended our launches. Some of them are now SoJARS members themselves. I am also a regular contributor to our newsletter, ALTITUDE!, which won the LAC

award as "Best New Newsletter" last year, and won "Honorable Mention" this year.

I would like to continue to help SoJARS grow and prosper. I hope you will re-elect me as SoJARS Vice President.

Sincerely,  
Barry Berman

### **Candidacy Statement for Treasurer**

I'd like to take just a moment of your time to formally announce my intent to run for re-election as the treasurer of SoJARS.

I've enjoyed working with the group since its inception, and know that I would like to continue to serve the group by continuing in my current position as treasurer. As club members, you have trusted me to watch over our money and use it in the best interests of the club. I appreciate that trust, want to thank you for your help and support in the past, and would like to ask for your continued support as we head into this new year.

I will admit that this year promises a fair bit work-related of travel for me, such that I might miss a few meetings and/or launches. I promise to do everything in my power to prevent any such absences from affecting the club or its finances.

Thank you again,  
John Coles

### **Candidacy Statement for Director of Safety and Range Ops.**

By now, most of you know who I am, and have seen me at the LCO table, more often than not. You have probably read a couple of blurbs that I wrote for ALTITUDE.

I have watched SoJARS grow under our competent officers, and seen our outstanding news letter recognized NATIONALLY. I have also seen that we really do have a good group of people who, *without exception*, fly safely, and do heed the RSO's decisions. This is truly a positive statement on our organization, and the caliber of its members of all ages. I am proud to have served, and would like to serve again, as your Director of Safety and Range Operations.

I will continue to promote Safety, and will always present SoJARS in a positive manner to all who ask, and who seek out our Section of the NAR. I hope that you will re-elect me for this position.

Thank You.  
Jack Komorowski

## **President's Report**

Dear Sojarians,

This will be a fairly brief report from me as January in New Jersey tends to be building season rather than flying season for most of us. We ended 2001 with the Open Skies Meet, which by all accounts was a success. I want to again thank everyone from both our group as well as the folks who trekked from GSSS country to fly.

As always, keep eyes and ears open for any alternative field possibilities. GCC serves us pretty well, but we are again approaching baseball season so we'll be squeezed when it comes to guaranteed launch dates and rain dates in the spring. We also desperately need a high power capable field.

On the rocket news front, I feel I should again comment on the apparent change in Estes marketing. It is worth noting that they continue to bring more high quality kits back to the market. The latest soon-to-be released classic will be the Orbital Transport.

I hope everyone had a good holiday season and as always, feel free to contact me with any comments, questions, or kudos. If you have any complaints, I'll take them too.

Art Treiman

## **Editorial**

As I'm sure you've figured by now, elections are upon us. Hopefully this issue is getting to you before the January meeting that is! But even if you don't receive your issue until after the elections, at least you'll get a better idea of what our officer candidates are thinking. I feel compelled to point out and praise Randy, one of our leader members, for "stepping up to the plate" to run for Co-President. This is a sign of his personal initiative and leadership potential, as well as hope for the long term future of our club.

On a different note, I was a little nervous about my selection for Front Page Honors this issue, but I guess it can't hurt to put a little extreme rocketry activity up front. Besides, Darren is a true SoJARian at heart (if part mad scientist, too) and he is NOT reckless. His story is beyond what most of us do, but also endorses the fun yet scientifically valuable and educational aspects of our hobby with an emphasis on safety. Darren and his colleagues studied, planned, and coordinated their project like professionals. I know Darren built gradually larger and larger projects, learning from each experience, until he accumulated the knowledge and experience by diligent study and practice, combined with equally

knowlegable and experienced partners, to make such a project work well and safely.

As for the rest of the issue, we have an update on AeroTech, taken from the ROL Newswire, we have a little humor from Jack, and Bob Ross has returned with another excellent tip.

Finally, while we have no formal write-up for the December Launch and Contest, on the last page you will find the final Contest Scores from the SoJARS / GSSS Open Skies 2001 Meet, SoJARS's first NAR-Sanctioned Meet.

## **Launch Reports**

**14 October 2001**

By Barry Berman

After the tragic events of September 11th, 2001, SoJARS and GCC made a joint decision to suspend flight operations, at least for the month. Since then, as most Americans have agreed that resuming our usual lives and activities is the best way to personally combat the terrorists' intent, we at SoJARS decided to do so by resuming our regular schedule of monthly launches. We did so, BIG TIME, on October 14<sup>th</sup>!

We began our afternoon with two very notable changes. First, we prominently displayed our flag, whereas we may have been a little too casual about it before. Second, we played the Star Spangled Banner at the start of the days activities. The day was a little breezy, but using Bob Jonas' weather station we were able to fly "between the gusts" all day.

Art Treiman flew a Corkscrew, an Estes Star Wars X-Wing fighter, and his patriotically finished Stars And Stripes. Daughter Sydney flew her Flash to a nice flight on an A8-3.

Bill Baker flew his Skywinder on a C6-5 and his homemade Hawk on C6-3.

From the "House of Bastow": Dad Steve flew a Corkscrew, a Gemini DC, and a Fat Boy, while son Steven flew an Estes Astrocams (How come we never see any pictures from all these Astrocams????), and Custom Venture, and Steve's Nephew C.J. Ennis flew a Big Bertha on a C6-3.

The Berman's were represented by Katie flying her Alpha on an A8-3, and her Big Bertha on a B6-4. Little brother Mark flew a Fat Boy on an A8-3, and Barry flew his Mean Machine on a D12-5. Barry also had two guests fly a few rockets for him: 3 year old Alexander flew a Maxi Mosquito on an A8-3 and Karl Herrmann flew a Big Daddy on a D12-5.

Danielle DePasquale flew a Pipsqueak on a B6-4 and Randy DePasquale flew a Corkscrew and a Fat Boy. With all these Corkscrews we should drag race!

John Gramick flew a Big Daddy on a D12-5, and a Fat Boy on a C6-3. He also flew an Estes V2 on an Estes E9-4, but it came off the pad too slowly and nosed in.

Our weatherman, Bob Jonas, flew an Estes Tornado (appropriate name!), an Astrosat, and two flights of his Phoenix.

Al Krier flew Der Big Red Max on an A8-3, a Sidewinder on a C6-3, an Estes V2 on a D12-5, and an Aerotech Initiator on an E15-4W. A.J. Krier flew an Estes Skywinder on a C6-3 and an Estes Big Dawg on an A8-3.

Joe Libby tied for the Lavoisier Award as the expender of the most combustible material of the day, with six flights. Two flights of his Quest Courier - an egg-less (today) egg-lofter on two chutes, an LSX with two "satellites", two flights of his Quest Totally Tubular, and an Estes Big Bertha.

Brian Owen flew his Estes Alpha on a C6-5 and two flights of his Estes Ionizer. First on a B and then on a C.

Matt Payor and Anthony Pinchon flew their Astrocam twice on C6-7's (Where's the pics?)

Ed Romani was the other Lavoisier Award Winner, also with six flights: A Custom Equinox on a D12-5, two flights of the Estes Firebird - one on B6-4 and the other on C6-5. Next, a Kappa-9M on a D12-5, and then two flights of the Estes Mercury Redstone on C5-3.

Alphabetically rounding out the day was Joel Taboada with four flights: An Estes Eliminator on a D12-7, two flights of his Big Rage using B4-2 and C6-3, and his Executioner on an E9-8.

## **4 November 2001**

By Barry Berman

Sunday, November 4th was a big SoJARS flying day. Lots of folks flying lots of rockets. One-hundred twenty-four, to be exact! Lots of fun. The pride of the U.S. Navy, our own Pat Flanagan, was on-hand to say hello before shipping out to parts unknown (at least to us). Here are the day's flights in alphabetical order.

Bruce Barkoff flew a Martel AS-37 (from Launch Pad) on an E30-4T. Dave Barkoff flew his extended Mean Machine on a D12-3. Drew Barkoff flew his Big Dawg on a B6-4, a Corkscrew on a C6-3, a Flash on a C6-3, and a Quark on an A3-4T.

Steve Bastow flew a Corkscrew on a C6-5, a Big Bertha on a C6-3, a Silver Comet on a D12-3, a Skywinder on a C6-5, the Dude on D12-3, and an Omloid on a C6-5.

My daughter, Katie Berman flew her Alpha on a B6-6, while I flew a Big Daddy on a D12-5, a Mean

Machine on a D12-5, a Maxi-Mosquito on a C6-5, a Silver Comet on a D12-5, and Dinoroc-1 - a model designed by my then 6-year-old son, Zak and me - on a D12-5.

Anthony Buonacarti was the Lavoisier Award winner of the day with 13 flights! Two flights of his Alpha on B6-4's, a Fat Boy on a D12-5, two flights of his scratch built Lil' Banana and two of his "Scratch-Built" (same rocket?) each on both C6-3 and C6-5, two flights of the Python on D12-5, R2D2 on C6-3, Sidewinder on C6-3, Wizard on A8-3, and Yankee on A8-3. Whew!

The Coles family was represented by Alex flying a Skywinder on a C6-5, and dad's Carrot rocket on A10-3T. Harrison also flew the Carrot on A10-3T, and Skywinder on C6-5. He also flew an Estes Snitch on B6-0 (I gotta find mine!), and three of dad's Centuri clones: The Point on a B4-2, Vulcan on an A8-3, and a Flying Saucer on a B6-0. Dad, John, flew an Edmonds Acee on an A3-4T, a Deltie on 1/2A3-2T, The Dude on D12-3, Silver Comet on D12-5, an underpowered Trident (Estes clone) on an A8-3, and the last flight of a SoJARS favorite: his scratch-built Broken Arrow on 1/2A2-4. Unfortunately, this is the last flight due to the discontinuation of Apogee micro motors.

John Gramick flew an Aerotech Cheetah on an E30-7, a Loc Precision Lil' Nuke on an E30-7, two models from Shrox Aerospace: Space Alpha One on a D12-5, and SHX-15 on a C6-3. Lastly, two flights of his Estes V2 on D12-5's.

A.J. Krier flew an Estes Skywinder on a C6-5, a Holverson Design Zoomie on a 1/2A3-3T, and a two-stage Estes Echostar on C6-0 to A8-3. Al Krier, no doubt thinking "bigger is better", flew Der Big Red Max on a B6-4, a Big Bertha on a C6-5, and Big Daddy on a D12-5. He also flew a Sidewinder on a C6-5, an Estes V2 on D12-5, a Silver Comet on D12-5, and an ARV Condor on A8-3.

Joe Libby won the Persistence Award (yes, I made it up) with five flights of his scratch-built, contest-entry Candy Striper - testing the model itself, motor selection and tower launch system to be used in the December competition, Open Skies, 2001. Motors used: A8-3, A6-4 (Quest), B6-4, B6-6, and B4-4. Joe also flew the Silver Comet on a D12-5, and his famous Crest Patrol (made from a Crest toothpaste dispenser) on two C6-5's.

Adrian Liggins flew his Quark on an A10-3T, and two flights of his Quest Navaho: A less-than-successful one and a much better one, both on the same motors: B6-0 to B6-4. He also flew two of my personal favorites: A Mercury Redstone on C6-5 and the beautiful, scratch-built, Sergei Pavlovich Korolev-designed, R-7 "Semyorka" booster in

Vostok mode on a C6-5. Spasebaw, Adrian. That's "thanks" for you "nyecultoorny's".

The Martin family: Pat, Petey and Ben, flew an Estes Star-Shooter on a C6-5.

Tom Mitchell continued the rocketry nostalgia with his Gemini-Titan on a B6-4, a scratch-built Saturn-IV (not, V) on a B6-4, and a Titan-IIIE on a D12-5. He also flew an Estes-clone Mark-II (too many Roman numerals in this paragraph!) on an A8-3 and a scratch-built Archeopteryx on a 1/2A3-2T.

Russ Mozier flew his Estes Big Dawg on an A8-3 and two flights of his Exorcet on B6-4's.

Nick Mustaro flew an Estes(?) Customized Glider on an A8-3, The Nickster (renamed Estes model?) on C6-0 C6-5, and Estes Flash on C6-5.

New member Matt Payor flew an Estes Astrocam on a C6-7, and an Estes Fury on A10-3T. Welcome to SoJARS, Matt!!!!

Robyn Paullin flew her Quest Flash, and Quest Lightning, both on B6-4. Lisa Paullin flew her V2 on D12-3, a Totally Tubular on a B6-4, and one of my favorites, an Estes Fat Boy modified to look like a Prozac capsule, on a B6-4. Take two of these and see you next month!

Bob Ross took honorable mention in the Lavoisier voting with 11 flights on the day. A Bull Pup on B6-4, a Serval on C6-5, a Phoenix on D12-5, a Silver Comet on D12-3, an F22 (glide recovery) on C6-3, a Tubular on E9-4, a Fat Boy on D12-3, and a Maniac on D12-3. He also contributed to the rocketry nostalgia with Atlas-109 (John Glenn's Mercury-Atlas launch) on a D12-3, and a Mercury-Redstone, as Al Shepard's Freedom-7 on a C5-3. Rounding it out was two different V2's: An Atlantic V2 painted in authentic German test-flight pattern, and an Estes version in camo, both on D12-3's.

Joel Taboada flew his Estes Eliminator on a D12-7, his Big Rage on a C6-3, his Executioner on an E9-8, the U.S.Army on a B6-4, a Thunder on a C6-3, a Hyper on a C6-3, and a Skydive on a B4-2.

Sharing the Persistence Award was Dan Toomey with five flights of his Yellow Rose, all on C6-5's. He also launched and lost his Blue Bomber on C6-0 to C6-5. Is it better to have "launched and lost" then never to have launched at all?

Ahem. Moving on...

The Treiman family was represented by Sydney flying her "Sparkly" on a B6-4. I love the names she comes up with! I'm sure this started life as an Estes something-or-other, I'm not sure what. Dad, Art, flew a Deltie on 1/2A3-2T, an Estes Trade Federation Battleship on a C6-3, a Silver Comet on a D12-3, a Falcon on an A10-3T, a Tomahawk on a C5-3, and finally a "bonus" Fat Boy, carrying as a passenger "Space Marine, Flanagan" - a small action figure - on a B6-2.

The Silver Comet Drag Race participants were: Steve Bastow, Barry Berman, John Coles, Al Krier, Joe Libby, Bob Ross, and Art Treiman. Mine was definitely the loser due to ignition failure, although it flew well later. As usual, the winner was undetermined. That must be why we keep doing it.

Hope to see everyone at the next SoJARS launch!

## Members' Forum

### **Bob's Modeling Tips – 2002**

By Bob Ross

NAR 75320

Tripoli 7904

Although I wasn't able to keep up with every issue of the Altitude last year, I will attempt to do better in 2002. My work schedule often takes precedence and my available free time is not always in sync with meetings, launches, and Altitude deadlines. I also am going to try some shorter tips as opposed to the more lengthy ones previously – maybe that will help.

### **Straight Pins for Detail and Strength**

This past summer I constructed the Estes Silver Comet. Seeing the monthly drag race at the GCCC field was too good to miss and I wanted to have something to launch with the rest of the club. During the course of building the model, I decided to axe the decal rivets supplied with the kit and use straight pins for both additional detail and strength. I had done this on a previous Bullpup missile and was very pleased with the results of the simulated rivets.

The pins are added to the model after all the preparation is done to the body and nosecone. This includes filling the fin grain and body tube spirals, sanding, and all but the last primer coat. The reason for this is that once the pins are inserted it is too difficult to do any sanding in that area. In essence, add the pins just prior to the last primer paint and finishing coat.

Figuring out where to put the pins is a matter of choice and/or the scale accuracy desired for the model. One thing you cannot do is put pins where the parachute cavity is located. No matter how much of the pin body you cut off, it will still stick through the relatively thin body tube wall and could catch the chute. On the Silver Comet there are three groups of rivets. The bottom group is right above the fins and since this is below the parachute cavity they can be located as is. The next group is supposed to be at the

top of the body tube, but I relocated these to the bottom of the nosecone – close enough. The last group is around the windshield. I basically followed the spacing pattern that was on the decals; however, if you want to freelance the body rivets, wrap a 1” strip of paper around the body and mark where it meets. Lay it flat, measure the distance from the end to the mark, and divide by one less than the number of rivets desired. Mark this distance along the paper and you now have a “ruler” for locating the pinholes.

The pins I use are Prym-Dritz Size No. 16, which have a shank diameter of .021”. This is equivalent to a #75 drill, but I use a #73 for a slightly larger hole tolerance. Drill all the holes using a hand pin vise. A Dremel could be used, but you have far greater control with the hand tool. Also, don’t forget to poke starter holes in the body tube and nosecone at each rivet location using a larger pin. These help to guide the drill bit and prevent it from slipping on the curved surface.

Once the holes are all drilled, insert the pins and glue with a dab of ACC. I typically insert the pin about 2/3 of the way, put a touch of ACC under the pin head, and then shove the pin into place. When all is dry, spray the last coat of primer (non-sandable) to make the pins the same color as the body. The final coat can be applied as normal.

The pinheads probably create a small bit of drag, but the added detail is worth it providing you are not going for maximum altitude. They also can add a bit of mechanical strength if needed. The bottom set of Silver Comet rivets are located where the cardboard body tube fits over the plastic tailcone. Although both are glued together, the pins act as a miniature fastener to insure these two parts will never come apart.

That’s about it for this issue. If you have any comments, questions, or suggestions, don’t hesitate to contact me via e-mail, at the meetings, or at the launches. Have fun building !!

## **Daffynitions of a Lawndart**

Compiled by Jack Komorowski

We all know what a lawndart is, (been there, done that). And we know what a power prang is too (why, I was the best in my class, yep, yep). Well here are some *refined* daffynitions for you that I have unabashedly found on the internet, somewhere, (there goes that memory thing), that whoever came up with these, THANX. I'm gonna use 'em too. Ready for a few chuckles?

When a rocket comes in ballistic, and hits the ground, we call it...

Airframe shortner  
Condensed airframe  
Fins up landing  
Ballistic recovery system  
Experienced bonus delay episode (sounds like a John Coles bonus to me)  
Delay exceeded coast time (ask John C about bonus delays, hee, hee)  
Crabgrass teminator (I've killed some too. Got notches on my fins to prove it)  
(Had a) Collision with the home planet  
Detectable seismic event  
Dirt payload (Barbie is gonna be insulted, Barry)  
Came down early (my favorite, except I never see them after I launch them on those D3's)  
Express return (hey Joe, didn't you have that with your "Junk Mail"?)  
Failed to destabilize  
Fair catch, no return  
Ah, a finned tentpole  
A free gravity show  
High deceleration paint remover  
A new survey marker  
Dial molechaser.com (I heard they like LOC nose cones)  
Post mature ejection (don't even go there)  
Total surrender to gravity  
Interesting stalactite (or is that a stalagmite?)  
Shovel recovery  
Retrodirt for recovery  
Upper lithospheric probe

If it splatters...

Bird poop impression  
Disassembled recovery  
Rapid disassembly  
Re-kitting your rocket (I think John Gramick knows about this)

There you have it, folks. Be the first in your club to use these handy descriptions of a truly memorable event: that of having your, or someone elses, rocket planted into Terra-very-Firma. Of course, if there is a repeat by the same person, you can always use that tried and true statement that it was a “Victory of gravity over ingenuity.”

## **FYI**

**AeroTech Rebuilding in Utah**  
Minimally Edited from ROL Newswire

AeroTech, Inc. has announced site selection for their new propellant manufacturing facility. This will

allow for resumption of motor availability in time for the spring flying season and in support of the many Level 1, 2, and 3 projects that are currently in progress. Located in Cedar City, Utah, the 5,000 sq. ft. building will house propellant manufacturing, packaging, and shipping for the full line of AeroTech advanced solid fuel composite rocket motors and reload kits. AeroTech was initially drawn to this location by its proximity to the main ammonium perchlorate supplier and was very pleased with the support shown by local governmental entities. This support was instrumental in making the final decision. The project has been given official approval by Cedar City officials. Engineering and construction plans for this larger, more advanced facility are being completed. Move-in is expected to occur in late February with production to begin shortly afterwards. Motor production is planned to begin in March with 28 of the most popular Hobby and Easy Access motors in 29mm and 38mm sizes. The new F21 (fits 24mm "E" kits) is also planned in the initial production run. Delivery of Restricted Access motors is scheduled to begin in early April. The sequence of specific motor releases will be provided before the end of January. Corporate headquarters and rocket kit manufacturing will remain in Las Vegas. AeroTech thanks all of its customers for their support over the last three months and is looking forward to meeting their rocketry needs in 2002 and beyond.

## Meeting Minutes

**27 November 2001**

By Art Treiman

### Present

A. Treiman, A. Liggins, J. Powell, R. Mozier, B. Canino, P. DeCraene, R. DePasquale, J. Libby, E. Romani, J. Coles.

The meeting was opened at 7:00pm.

### Orders of Business

Last Month's minutes were approved.

### Treasury Report

J. Coles reported our balance as of 11/1 in Bank: \$183, and Cash to deposit, \$362

### Future Launch Dates

December 2 with tentative rain date December 9.

### Launch and Failure debriefing

Another nice launch. Nothing significant to report

### Newsletter

Joe Libby, Congratulations on Honorable Mention in the NAR Annual Newsletter contest. As news travels slowly, it was reported in the latest issue of Sport Rocketry that Altitude! Was one of three newsletters that received honorable mention for the annual award of newsletter of the year. This puts us in some fine company and we should all be proud. Joe deserves special recognition for all the hard work and skill he brings to the project. Keep those contributions coming!

### Design of the Month Contest

Adrian Liggins beautifully hand-crafted, scratch-built, "dead-on" scale model Russian Inter-Cosmos.



### Website update

Paul DeCrane has assumed webmaster duties and is doing a fine job!

### Social Event Plans

Tabled till ?

Rocket News: Aerotech explosion

There was an explosion and fire at the Aerotech plant. It is unknown when motor production will resume.

Md/Del Launch Weekend

Darren Wright flying 2 pm.

Update on field search

No Update

Contest specifics for the Open Skies Meet

Events	WF
Streamer Spot Landing	4
1/2A B/G	17
A Streamer Dur	8
B Streamer Dur	9
B Helicopter Dur	21
-----Total WF	59

Adjourned at 9 pm.

**December 2001**

No Meeting.

**Photo Finish**

Below is a collage of Darren's Rancor Baby "O" Project taking to the skies of Rhodesdale, Maryland, on Sunday, 2 December 2001. Beautiful!



SoJARS / GSSS Open Skies 2001 Meet  
2 December 2001

		Events																
Overall		Str.Spot	1/2A B/G		A Str.Dur.	B Str.Dur.	B HD				NAR							
Place	Contestant	Meters	Place	Sec. Place	Sec. Place	Sec. Place	Sec. Place	Sec. Place	Sec. Place	Sec. Place	Pts							
A Division																		
1st	G Daniel Flynn		DQ	A 23	1st AB			DQ	AB		340							
2nd	G David Whitman	28.50	1st	A							80							
	S Billy Commander		DQ	A							0							
B Division																		
1st	G Alex Bruccoleri	47.90	2nd	B 7	2nd AB	132	1st	All	237	1st	AB 12	2nd	All	844				
2nd	S Peter CommanderJr	13.99	1st	B										80				
C + Team Division																		
1st	S Ed Romani			34	2nd	CT		DQ	All	47	2nd	CT	31	1st	All	732		
2nd	S Art Treiman	17.37	1st	CT	39	1st	CT		DQ	All	47	2nd	CT		DQ	All	528	
3rd	S Joe Libby	30.34	3rd	CT				70	2nd	All	124	1st	CT				244	
4th	G Hyperspace Team	25.30	2nd	CT				42	3rd	All			DQ	CT		DQ	All	112
5th	S Barry Berman			DQ	CT			21	FP	All	34	3rd	CT					88
6th	S Tom Mitchell	50+		FP	CT			27	4th	All								40
7th	G Theresa Flynn	34.04	4th	CT														16
	S Peter Commander			DQ	CT													0

Section Standings

SoJARS (S): 1st 1472 Points  
GSSS (G): 2nd 1392 Points

Some Events were flown in combined divisions: CT = C division + T division  
AB = A division + B division  
All = All divisions combined