

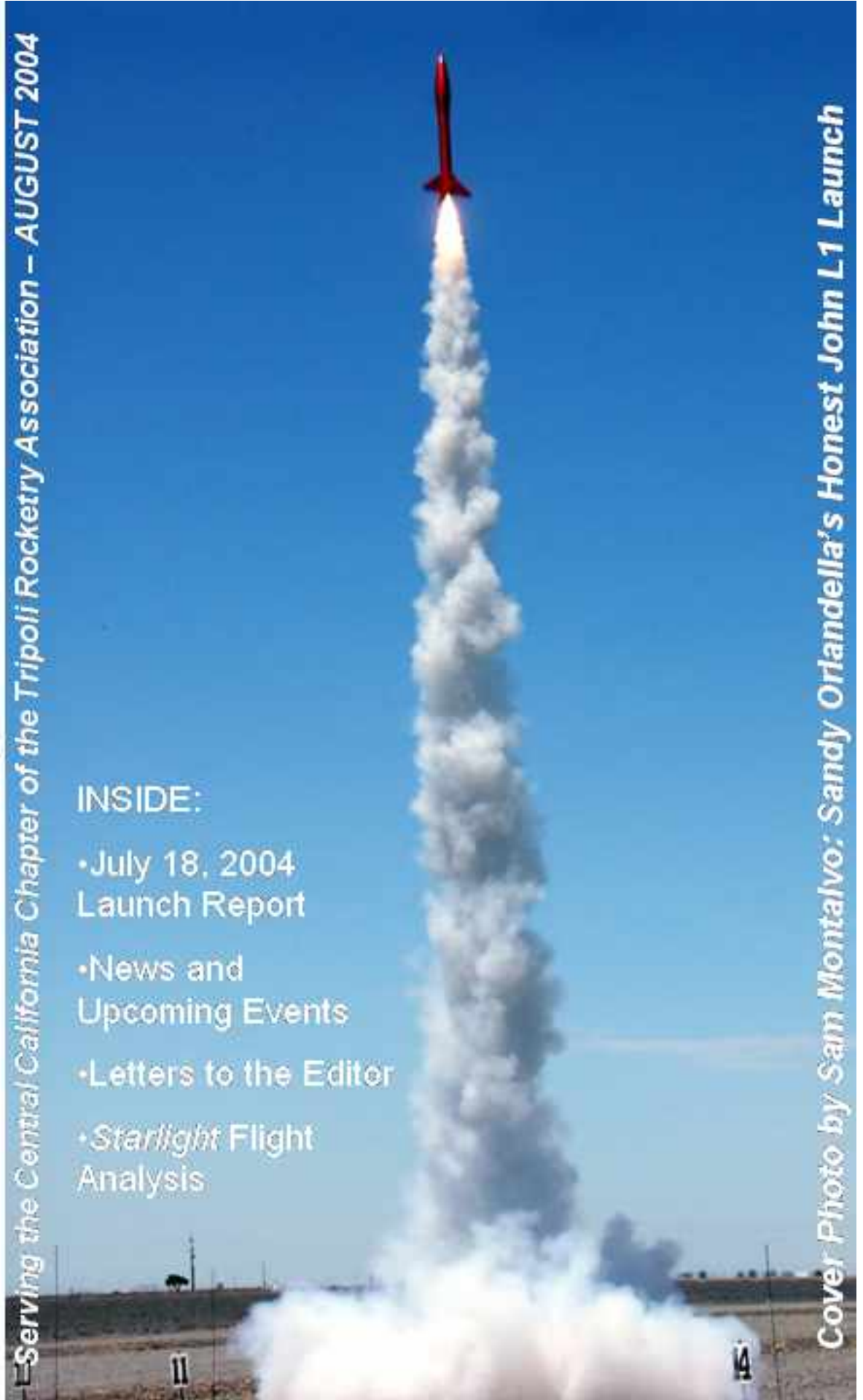
TRIPOLI CENTRAL CALIFORNIA

Central Valley Rocket News

Serving the Central California Chapter of the Tripoli Rocketry Association – AUGUST 2004

INSIDE:

- July 18, 2004 Launch Report
- News and Upcoming Events
- Letters to the Editor
- *Starlight* Flight Analysis



Cover Photo by Sam Montalvo; Sandy Orlandella's Honest John L1 Launch

NEWS & EVENTS

TCC Web Site Is Up!

The Tripoli Central California Web-Site is back up with a new format. Eric Holland has taken on the duties of Web-Master and has done a great job of updating the site. All of this year's newsletters are now online and new pictures from this year are on the way.

N-Motor Record Attempt

Richard King and Gary Vielbaum will be at the BALLS launch in Nevada's Black Rock desert the weekend of September 10-12 shooting for 40,000 feet to break the N-Motor record.

OCTOBER SKIES Is Coming Fast!

The awesome OCTOBER SKIES launch is set for October 15, 16, and 17. Friday, October 15th is a Scheduled Experimental Launch.

There are some great rockets and a great line-up of evening entertainment being prepped for OCTOBER SKIES, as you might gather from some comments in the *Letters To The Editor* section. There is even rumor of a 30' tall rocket!! Don't Miss It!

LOC "October Skies" Rocket Kit!

Barry Lynch of LOC Precision and Duane Uhl (LOC WEST) are preparing some "October Skies" Commemorative Rocket Kits to sell at the October Skies launch. The plan is to have a clinic and for the kits to have everything included (epoxy etc.) to allow folks to buy, build and launch their kits AT the launch.

What an AWESOME idea!

Tripoli Central California - July 18th Launch

Club/Flyers Meeting

The club has adopted the custom of having a short flyers/club meeting just prior to beginning the launch to discuss any pressing topics. This day's main topic was club dues and launch fees.

It was voted on, and decided, that since the club is currently in decent financial condition (we're in the "black" and have most all that we need to continue operations), TCC membership fees are currently being suspended. You no longer have to pay the yearly \$20 to be a member.

There will simply be a flat launch fee of \$5 per day for "monthly" launches and \$10 per day for *Dairy Aire* and *October Skies* launches. If you sign the waivers, pay the fees, and fly, I guess that makes you a member!

If you have any thoughts or comments on the new policies, please don't hesitate to contact one of the club officers.

It was a typical Central California summer day with temperatures in the '90's, by mid afternoon, and not a cloud in the sky. Having had 2 months to reflect on the massive Dairy Aire launch, the July 18th launch at the Maddox dairy was one of those launches where you could kind of sit back and say "Aaaahhhh!"

I arrived at the dairy just about 5minutes after 8am. The usual suspects had already arrived and located the launch-sight-de'juer on the west side of Highway 145. Jim Abrames, Nathan Montalvo (with sons Sam and Devon) and Scott Eakins were already unloading the equipment trailer and preparing to set up.



By about 9am, a number of other flyers and families had arrived to help. The set-up was complete and ready to smoke some BP and AP.

In addition to the usual set of individuals that come out to fly, this launch seemed to be punctuated with family flyers and clusters of families spending a pleasant Sunday afternoon flying rockets together.

Paul Macker of Walnut Creek attended the July launch with a number of his grand-kids and his son-in-law, Tim Randall of Clovis. Paul had 2 launches during the day, somewhere between escorting the grandkids out to the pads to set up. Paul flew a 56" un-named rocket on an I357 using motor ejection and also made a first flight with his 62" *Black Brandt X* Yank kit on an Aerotech H210, also using motor ejection.



Kayla, Brian, T.J., Paul, and Tyler - Photo by GW

Paul's son-in-law, Tim Randall, made a single flight of a 60" *AstroBee D* powered by a G80T for a nice flight.

Then there were the youngsters of the clan. T.J. Randall had 3 flights on the day, all Aerotech kits. One was an *Arcas* on a G64, a yellow *Arreaux* on an F21 and the *AstroBee D* on another G80.

Sister?, Kayla Randall, flew a red and white 40" *Arcas* on a G40 and teamed up with cousin Nick Connell of Antioch to fly an Aerotech *Tomahawk* kit on an F21. Nick also flew a Yank *Iris* on an F20.

Not to be left out of the family action, Brian Connell of Antioch made a nice flight with his 48" Yank *AstroBee D* on an F25 and Tyler Connell got 3 up in the air to close out the family participants. He flew a Yank *Iris* on an F20, an *Arreaux* on an F21 and a 36" *Tomahawk*, also on F21 power.



Kevin, Wil and Dillon - Photo by GW

Wil Ladewig also had a couple of youngsters in tow. Wil had a nice single flight with his 4"x5', 5lb *Patriot* on H165 Redline. Meanwhile he

coached Kevin Rose and Dillon Presutti (both of Fresno) on the fine art of rocketry. Kevin had a successful flight with his 3"x4' red and blue *Vortex* on an H97 while Dillon stuck with a traditional red Estes *Code Red* for 2 flights on a B64 and a C6-5.

Coming off of a spectacular Level 3 certification flight at the May Dairy Aire launch, Jack Garibaldi of Stockton returned for a couple of mid-summer warm up flights. First was his 4"x66" black and white *Black Widow* on a Cesaroni Pro38 J330. Really nice. However, the rocket disappeared from what seemed a very visible landing at the edge of the field. [If anyone has found this rocket, Jack would really appreciate its return.]



Jack Garibaldi with THUMP THIS! - Photo by GW

Next Jack hauled out of his trailer a Polecat Aerospace Thumper. Weighing in at 42 lb, the 10"x 8' grey and blue *Thump This!* was a very impressive sight. Sporting 2 BlackSky ALTACC 2c's and powered by an Aerotech L952, *Thump This!* rose slowly out of a large white cloud of smoke on a bright orange and yellow flame for a nice low and slow and LOUD flight.



THUMP THIS! lifts off - Photo by David Raimondi

I mentioned that this was a warm-up flight. Jack is planning on using this rocket to participate in an October launch near Plaster City in southern California. The plan is to simultaneously launch 30 M-powered rockets! OOOHH MY! We'll keep you posted!

Also flying in the Garibaldi camp were Tony and Evelyn Accurso and Gigi Trinchera, of Stockton. Tony made a late day flight with a PML Patriot kit for his NAR Level 1 certification attempt. The 4"x56" PML kit red and black was dubbed *Get Some* and made a great flight on a Pro 38 I212. Congratulations Tony!

Not to be left out of the game, Evelyn flew a purple Quest kit named *The Evelyn Express* on A8-3, and Gigi flew her black and orange Estes Alpha kit, titled *Gigi's Special*, twice on B6-4's.

Ted and Scott Sobieralski came ready to punch some serious holes in the warm summer sky. Scott had a real fast flight with his orange custom built, 3lb, 40" fiberglassed rocket on a J420R with Missile Works electronics for main deployment only.

Ted bumped the ante up a bit with his 13lb, 3"x6' custom built *Black Brandt III* sporting a real nice red paint job. The BBIII roared off the

pad on a K550W and used Missile Works electronics to pop the mains.



Scott and Ted Sobieralski - Photo by GW



Shawn Stephens sets up his Test Rocket - Photo by GW

Shawn Stephens of Fresno provided some unexpected fireworks near the end of the launch. Always on the edge, Shawn brought a 2.5"x8.5' white *Test Rocket* weighing in at 8lb. Powered by an L1250, the forward motor closure snap-ring failed at ignition and the motor CATO'ed on the pad!!

Having a somewhat more productive day, Kwame Stephens flew his 24" Estes *SkyWriter* 4 times on C6's.

Team San Jose was headed up by David Raimondi, no stranger to the valley sky. Dave made a real nice single flight with his 4lb, 46" red and silver PML *X-Calibur* on a H242 T, and spent the remainder of the day setting up and launching with friends and family.



Dave and Chris Raimondi - Photo by GW

Laura Raimondi's very first rocket, a 24" upscale of the Estes *Starlight*, made its very 1st flight on an F21. Unfortunately, the fins shredded off the rocket at a few hundred feet off the ground. Sorry Laura!! *For a complete analysis of the flight and shred, see Dave Raimondi's article elsewhere in this issue.*

Christopher Raimondi kept busy all day with a mix of rockets. Christopher flew a 12" *Totally*

Tubular on B6-4, 1.5"x30" gold *Icarus Quest* kit on C6-5, 18" green and red *X-Ray* on B6-4 a, and in keeping with his fascination with sharks, a 26" 2-stage *Great White* on B6-0 to B6-6, and his scratch built, blue *Megalodon* on a C6-5.

Steven Raimondi also got into the swim of things with his 14" Estes *Tidal Wave* on C6-5.

Getting 3 flights in for the day was David Cummings, another member of Team S.J. He made a couple of Estes flights, one with his black and yellow Estes *Alien Invader* on a B6-4 and another with his white Estes *A.R.V. Condor* on a B6-4. Dave topped it off with a smooth flight of his white *Vulcanite* on a H123W.



David Cummings - Photo by GW

John Vantuno, also of San Jose, had a nice variety of rockets. On the high power side, John flew a 3" blue and yellow PML *Ariel* on an I200W. He also flew a scale Estes *Saturn V* on F21-6W.

But I thought John's most interesting rocket was his custom built 28" red white and blue *Spirit 2*. This cool little rocket lifted off on a cluster of one C6-0 and 2 A10-3T's. It then staged to a C6-5 with G-WIZ LC 800 electronics on board to boot! Great show John!



John Vantuno with *Spirit 2* - Photo by GW

Rounding out the San Jose group was Steven Martin. He came down to make an attempt at his NAR Level 1 certification, which he did easily. Flying a very visible 4"x4' Day-Glo Orange PML *Ariel* kit dubbed *SVRC-2* on an H112J, Steven's flight went picture perfect. Congratulations Steven!



Steven Martin prior to L1 flight - Photo by Dave Raimondi

Two young men in attendance from Visalia seemed to be trading tips with their respective flights. Sean Draper made a couple of flights, both using tumble recovery. One was his black and yellow Estes *Twister* on C6-5 and the other was an Estes *Shorty* on a C6-0. Meanwhile, Jacob Rico made 2 flights with his 42" white *Arcas* on a G40 and a G80 respectively. Great job guys!

One of the younger high power rocket builders of the day was Devon Montalvo. With dad, Nathan, in tow Devon set up his 10lb, 3"x6' unpainted *Naked Rush* on the pad and armed the Missile Works electronics in preparation for its maiden voyage on a J275. Great flight Devon!



Devon Montalvo with his NAKED RUSH - Photo by GW

Another young flyer, Kyley Heggen came ready to fly as she typically does with a stable of rockets. My personal favorite is Kyley's brightly painted, pink and green Estes *Fat Boy*, which she flew on a C6-3. Also ready to go was her 39" white *Iris* on an F25, Estes *Baby Bertha* on a C6-5, a 30" camo-colored Estes *D47* on D12-5, and her

yellow and orange 2-stage Estes *Sam-X*. Nice flights Kyley.

Kyley's dad, Merle Heggen, spent the morning prepping his yellow and black 5.6"x4.6' *J-Cat* for a real smoky flight on an I284. I just love those motors!



Merle & Kyley Heggen - Photo by GW

James Marino of Tracy got in 2 flights this day. His 36" PML *BullPuppy* went up on an H128 and his custom built 6lb, 4"x5' *Archer* made a quick jump off the pad on an I366 and utilizing motor ejection.

Chalking up 5 flights with 5 different rockets was Ross Ohmen from Union City. Ross flew a 11lb 30" black and yellow *Wasp* on an E15-7 with Perfect Flight electronics, his 24" orange and black *GlowWorm* on a C11-5 with Pico electronics, and a 2"x3' Green PML *Io* on aG35-7, a 3lb 3"x5' green PML *Ariel* on a I211W.

Finally, Ross' rebuilt 3lb, 5.5' 38mm minimum diameter, red *WAHOO* launched on an I218R with Perfect Flight electronics for dual deployment. Unfortunately, Ross failed to arm the electronics and the *WAHOO* disappeared after reaching apogee. I feel a bit responsible for this happening as I talked with Ross at some length at the pad while he was setting up. Sorry for the distraction Ross!



Ross Ohmen with *WAHOO* before it was lost - Photo by GW

Returning from his Sierra Nevada home was Auberry's Vito Orlandella with his 4"x9' 10 lb, *Black Brandt X* for a super flight on a J800T.

Before that flight though, Vito did a bit of pre-flight coaching for Sandy Orlandella. Sandy was making her Level1 certification flight with a beautifully built and painted (sparkling red flake) 5.5"x7.5' Honest John called *Get-R-Done*. Sandy Got-R-Done in style as the G-R-D rose

majestically on a huge plume of white smoke provided by an I284 and drifted gently back to land just behind the flight line. Congratulation Sandy!!



Sandy Orlandella - Photo by GW

Also part of the Auberry camp, Amanda Kaestner had a nice flight with her Estes *Big Daddy* on a D12.

A regular father-son team here at the dairy is Mike Smith and son Mikey of Fresno. Mikey had a successful flight of his scratch built, 78" tall *Sancha* on an I366R. However, Mike's 96", scratch built *Sancha II* zippered due to a too-short delay. The chute ejected a bit too early after making a real aggressive ascent on a J570W.

Another father and son team was Matt and Joshua Tipton. Matt made a single flight with his 2' white Estes kit on a C6. But, Joshua made numerous trips to the LCO table with his 18"

green *Flying Tortus* (an Estes Big Bertha I think?) at least 5 times on B4-4's.



Mike and Mikey Smith - Photo by GW

Fresh off a busy weekend at the Dairy Aire launch, David Tew took it easy with a single flight of his 3lb, 3"x36" blue PML Small Endeavor dubbed *Versus Gravity* on an H128.

A real fixture here at the dairy launches, Stockton's Mark Anderson was back to again fly his 59" Vaughn Bros., orange *Javelin* on an H238. He also flew a 48" yellow and blue PML *Explorer* on an H180 and a 22.5" LOC *Aura* on an F10.

Another launch regular, Brian Dalby was able to make only one flight for the day. His red 3"x2' *Mad Max* landed nose-first (no chute deployment) after a good flight up on a G80. Darn!



Brian Dalby with Mad Maxx - Photo by GW

Fresno's Jerry Cole, accompanied by Kevin Walsh, made 3 trips out to the pads with his 3"x30" *Black Drum*, each flight on an F40.

Richard Davis, also of Fresno, also made a single flight with his Estes *Code Red* on a C6.

Brett and Crystal Wilkins were back again with Crystal selling those yummy snacks and smoothies (Mmmmm!). Brett flew his yellow 39" (shortened) PML *Explorer* on an H180.

Brandon Walker of Merced, my sidekick for the day, flew once. He flew an 18" white *Falcon*, given to him by Mark Bosca, on a C6-5. Between downing 5 or 6 snow cones, Brandon hijacked one of my extra cameras and did some photography of his own during the day. You can see his picture page at the end of this issue.



Brett & Crystal Wilkins - Photo by GW

Finally, for the statistics...

84 total flights

46 different flyers.

89 motors expended... 3 A's, 14 B's, 19 C's,
2 D's, 1 E, 14 F's, 8 G's, 11 H's, 9 I's,
5 J's 1 K, and 2 L's.

So, all in all, it was a great mid-summer launch. Most launches were successful, and flyers had a nice leisurely pace for the day to converse and spend time with family and friends.

Our next launch is scheduled for Sunday, September 19th at the Maddox Dairy. I hope to see you all there!

Gary Walker



Tripoli Central California

Tripoli Central California is a chapter of the Tripoli Rocketry Association, an international organization dedicated to high-power rocketry and governed by safety rules promulgated by state and federal agencies. Founded in the mid-1990's, Tripoli Central California welcomes new members. Annual dues are currently suspended. For more information, call one of our officers, check out our club hotline at 559-447-5888, or see our web-site at ...

www.tripolicentralcalifornia.com

(Yes, it's now current!)

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Bob Dahlquist (1996-1999).

David Raimondi, Nathan Montalvo, Sam Montalvo, Brandon Walker, and Gary Walker contributing stories and photos.

Letters to the Editor

[Editors Note: I have received some very flattering and warm comments with regard to the Dairy Aire Newsletter. I want to thank you all for your great words of encouragement. It is deeply appreciated. ~GW]

WOW!!!! What an AWSOME issue. I tip my hat to you Gary for all the Great work that went into putting this together. It's so cool to see the flyer profile's you've included here. The credit you give to all who've contributed photos and or commentary to this issue will be greatly appreciated by all. What a great idea to have a "Letters to the Editor" section!! I think you'll probably see more letters from the members now J

As I look through the pages, reading the words, looking at the photos, I remember the day I first came upon the club launch site, never in my wildest dreams did I ever imagine that my kids and I would become involved in the way that we have. We were just looking for a place to launch a little Estes "C" motor rocket kit. What has transpired since then has been a Great journey filled with new friends, a few old friends from high school and an association with a top notch organization! I remember that I was always very eager to see the new launch report and check out any photos or commentary that might have been mentioned about my kids or myself.... in other words Gary, what I'm trying to say is this: Thanks SO much, to you for stepping up to the plate, for all you're hard work and dedication. The launch report is such a key part of the club. It is a documented testament to the events, both Fun and Scientific, that continue to live beyond the launch date. It is what extends the experience everyone had while at the launch. Once again, Thanks Gary J

I would also like to echo Mark's thanks to Bruce Rohn. Bruce called me a couple weeks prior to the launch to let me know that he was available for whatever launch duties were available. Bruce stepped up to the plate in spite of the fact that he didn't have a particular rocket to launch that weekend. Thank you so much for all your help Bruce, it is greatly appreciated!

Big Thanks to Rod and Alice Lovley for all their efforts and contribution, T-shirts, Sweatshirts and help at the registration table. Wouldn't be the same without you guys J
Nathan Montalvo

Dear Editor:
As my printer was out of whack until recently I could only read the DairyAire 2004 newsletter as a pdf on my computer when it came out. This was fine and the newsletter looked great, but when I had the printer problem resolved in late July and then printed out the whole thing--it was amazing! The 2004 DairyAire issue was one of the best ever! The story was fantastic and the coverage of the launch was second to none. I really enjoyed the flyer profiles, too. It's nice to read in depth articles on different members in the club and about the people who launch at Riverdale. Gary, you've done a great job--there isn't a newsletter like this in the country!
Sincerely,
Mark Canepa

Hi Gary
I just wanted to say thanks for the news letter and you did a great job at putting that together. Hope to see you next week at the launch.
Jack Garibaldi

Gary,
Great, great job! Really liked the profile section.
Scott Eakins

Thanks a trillion, Gary! Jordan, Erica and Ryan were thrilled beyond words to see their pictures in the "updated" version I gave them! :-)
I really appreciate your sending us the missing page, and I give a HUGE second to Nathan's THANK YOU! This was truly an outstanding newsletter and it is as big a part of the club as the launches.
Jeff Raice

Hi Gary,
WOW! Great job on the news letter!!!
For October Skies I'll have a 10ft projection screen and a very (Hi-end) sound system. Barry Lynch of LOC will also be in attendance. And if you know Barry, it's really going to be a party! I've also purchased some great concert DVD's. And of course we'll be showing the movie October Skies!! We'll also be introducing a few new kits!
Thanks for the News Letter and most of all...All your time and effort.
Duane Uhl
LOC/PRECISION West

Oh Man what can I say at this point. What an awesome issue, you have done one hellava job. I wish I could add something to make it better, not possible at this time I think. I wish I could take more photos of what is going on there. Guess I need to talk my wife into the digital age, (ha ha, as soon as she gets her bicycle with suspension. I will see you on Sunday.
Keep up the good work.
Ben Sandoval

Gary!
Just read the latest newsletter and must say it was (to borrow a term from "you know who") outstanding!
October Skies is closer than I thought and prompts me to get back into the shop and come up with something for this launch. Should have the newest version of "Got M?" ready by then as well as a new nose cone for Big Daddy.
Thanks again for such a great effort.
Richard King

Hey Everyone! Check out the great article written by Mark Canepa in the August issue (#38) of EXTREME ROCKETRY. "Three Saturdays, Three States and Three Thousand Miles."
Editor

LOST ROCKET

I had [a] rocket that didn't come home with me on Sunday, and I could use your (and the club's) help getting [it] back. [It's] my 38mm min diameter ~5 1/2 foot red rocket, made of fiberglass, with an Acme fin can. I launched this without turning on the electronics, and it went a long way north. It's got my name and contact on a fin. Please contact me, at 510-429-7235. I'll be happy to help get [it] shipped to me. Thanks

Ross Ohmen
Tripoli #9788

Starlight launch failure analysis; Tripoli Central California (TCC) 040718 *By David Raimondi, San Jose, CA*

Background:

The Starlight was built by Laura Raimondi, with some help from her husband David. The rocket was a 1.357x upscale of the Estes Starlight and was designed to be flown on D's, E's and F's. Construction materials used in the project: BT55 18" body tube and plastic nose cone with 1 oz. of weight added to the nose. The fins were constructed from 3/16 balsa strengthened with white glue, and finished with sanding sealer and paint. The motor mount was constructed from an over-sized body tube that was reduced to fit a 24mm motor. The engine block was made from an old motor casing. The rings that give the Starlight it's distinctive look were hand rolled from print stock paper. The shock cord was 24" x 1/4" flat elastic, and an 18" parachute for recovery. Titebond and epoxy glue were used during construction. The rocket was finished with blue/purple fins and body and lime green rings around the "radiator" fins, one located 7.5" from the front of the body tube and the other one flush with the aft end of the rocket.



The entire rocket was entered into Rocksim and simulations run for stability and performance. Please see last page.

Preparation for launch:

A F21-4 Aerotech Econoline motor was selected for the first flight. The rocket was prepared for flight and inspected. There were no defects found during preparation or during the preflight safety inspection by the RSO.

Flight:

The flight started with a nominal ignition of the F21 motor. The rocket proceeded on a straight trajectory through approximately 600 feet, where the rocket radically left the flight path in a spectacular shred losing all but one of the radiator fins. The rocket appeared to still be under thrust at the time of the shred with the main body performing a tight loop before the thrust decayed. The ejection charge went off before the rocket body impacted the ground in a flat spin. The body tube was recovered post flight and the nose cone, parachute and shock cord were recovered later in the day. There were no other fins or rings recovered post flight.

Post mortem:

The remains of the fins on the body tube looked as if they were cut off of the rocket. The cuts started about 8" from the start of the body tube and went in an arc getting closer to the tube the entire length of the body until only nubs remained at the aft end. Upon closer inspection of the

only remain uncut radiator fin, it appears that the glue point for the upper ring gave away and the ring then collapsed from the air pressure, slicing off the four main fins and 3 radiator fins.

The stress on the rocket was obviously extreme at the time of the shred, which also tore the shock cord completely from the rocket. The nose cone, parachute and cord were recovered later in the day. The motor mount remained firmly attached inside the rocket with the motor still in the mount.

Epilog:

David had built this kit back in 1972, and also lost the rocket when it pranged on the first flight completely destroying the rocket. The only remaining question at this point is, do we try one more time to build and fly this unique rocket?

Rocksim screen dump:

The screenshot shows the Rocksim software interface for a file named 'rocksim - oop_estes_starlight_Laura.rkt'. The 'Flight simulations' tab is active, displaying a table of simulation results for two runs. Below the table is a 3D model of the rocket, and at the bottom, there is a static margin analysis table.

Sim #	Results	Engines loaded	Max. Altitude	Max. Velocity	Max. Acceleration	Time to apogee	Velocity at deployment	Altitude at deployment
			Feet	Feet / Sec	Feet/sec/sec	Seconds	Feet / Sec	Feet
0		[D12-5]	644.82	262.26	500.20	5.93	20.29	638.73
1		[F24-4]	1368.95	509.26	741.08	6.74	33.11	1362.71

Astron Starlight [as built by Laura] Scale: 1/4
 Rocket length: 24.528 In. , diameter: 1.325 In. , span diameter: 10.825 In.
 Rocket mass 3.662 oz. , Selected stage mass 3.662 oz.
 Shown w/o Engines.

Method	CG In.	CP In.	CNa	Static margin	Analysis
RockSim	13.242	19.373	86.551	4.63	The rocket is over stable.



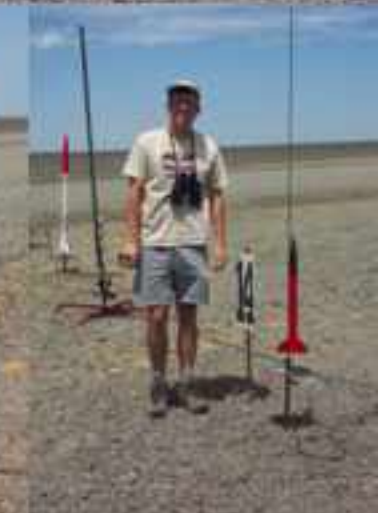
**Photos by
← Dave
Raimondi**





Photos by
Sam →
Montalvo





Photos by Gary Walker



Photos by Gary Walker





Photos by Brandon Walker



