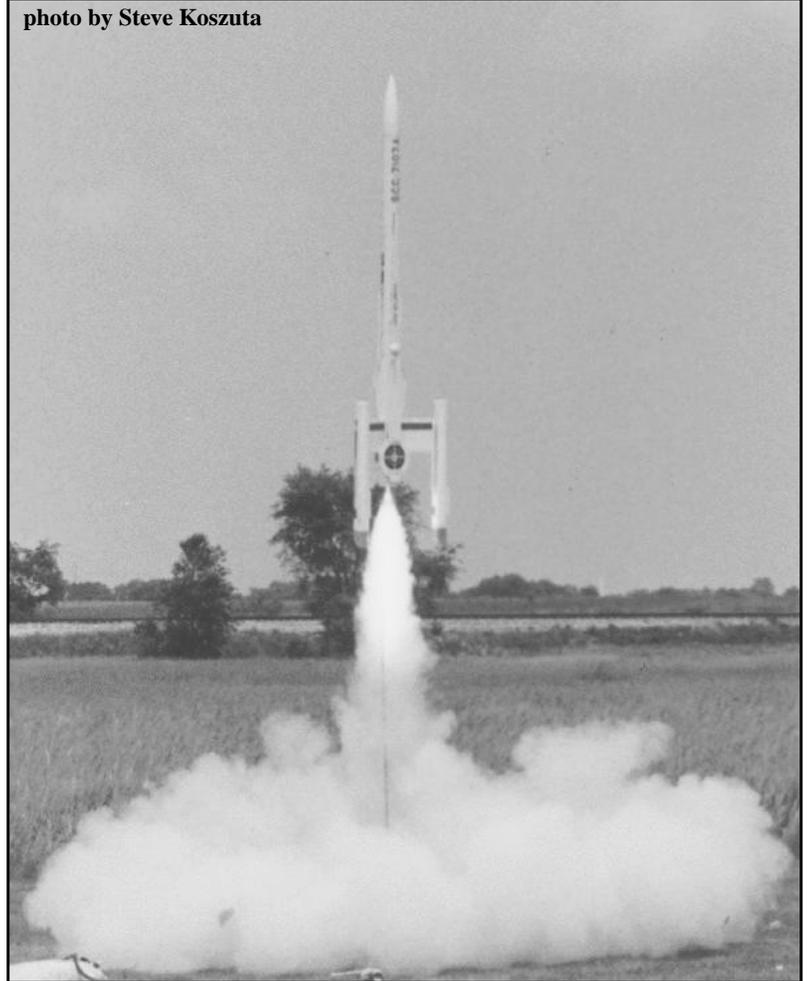




Newsletter of the Northern Illinois Rocketry Association,  
NAR Section #117, TRA #36

Volume 18, Number 4  
July/August 1995

## In This Issue: Expanded MRFF Coverage Caption Contest Entries Lightning Jack Plans



Dave Miller's 4:1 upscaled version of the Estes U.S.S. Atlantis was just one of the many outstanding flights at MRFF this year. It took Dave the better part of Sunday to get it prepped, but it was worth it! Dave used an RC system to eject the drogue and main chutes, and it worked flawlessly! (rumor has it that Dave is going to fly the rocket at the August 12th HPR launch at Bong)

# T MINUS 1 - NIRA'S CALENDAR OF UPCOMING EVENTS

## MONTHLY MEETINGS

All meetings start at 7:30 PM, and include refreshments, entertainment and a brief business meeting. Don't forget a model for "Model of the Month" voting. We need volunteer speakers to entertain the troops after the business meeting, so call Bob Wiersbe at (708) 690-5442 if you can help with ideas or can speak yourself.

- August 4: Regular Monthly Meeting.
- September 1: Regular Monthly Meeting.
- October 6: Regular Monthly Meeting. RCHTA Planning.
- October 28,29: RCHTA Show.

## OTHER ITEMS OF INTEREST

August 26, September 23 - HPR launch, Rantoul Aviation Center, Rantoul, IL, 10am. Contact Greg Smith (217) 352-9655 for more information.

August 5, September 2, October 7 - HPR launch, Bong Recreational Area, WI. Waiver to 6000', \$5 range fee. Noon to 4pm. Contact Dave Sutton at (414) 886-6017 or Paul Olsen at (608) 424-3505 for more information.

October 1, 1pm - James Lovell, spacecraft commander of Apollo 13, talks about that mission and his other accomplishments in Joliet at the Rialto Square Theatre, 102 N. Chicago St. Joliet. Tickets are \$12.50 and \$15.50, children under 12 \$7.50.

October 28-29 - Fall 1995 Danville Launch The field is approx 5 miles from the Red Roof Inn at Lynch Road & 174. Maps available at the hotel front desk. 10,000' waiver secured. For more information call Dennis Wacker (708) 888-8587 7-10PM CDT.

## 1995 CLUB LAUNCH DATES

All launches or other activities start at 2:00 PM. BYOL (bring your own launcher). Location for our 1995 launches is Community Park in Lisle. Get off Route 53 at Short St. and head west. If you have questions prior to any launch, call either Bob Wiersbe at 708-690-5442, or Mike Jungclas at 708-910-1267.

**August 12 (Saturday): High Power Launch** at Bong Recreation Area, Burlington Wisconsin. 9am-5pm, waiver to 7200' AGL. Contact Steve Koszuta (414 481-6341) for more information.

- August 20: Regular Club Launch.
- September 17: Regular Club Launch.
- October 15: Regular Club Launch.

November 5: Club Launch, we will be launching the kits from RCHTA at this launch. PLEASE NOTE THE DATE CHANGE FOR THIS LAUNCH! There will not be a launch on the 3rd Sunday of November.

### STAFF

Bob Wiersbe - Wrong Way Staging  
 Ric Gaff - High Die Roller

### CONTRIBUTORS

Bob Alway, Lawrence Bercini, Mark Bundick,  
 Adam Elliott, Ric Gaff, Bob Kaplow, Steve Koszuta,  
 Rick Kramer, Mike Oswald, Tom Pastrick, Bob Wiersbe

**THE LEADING EDGE**, published bimonthly by and for members of the Northern Illinois Rocketry Association, NIRA, NAR Section #117, is dedicated to the idea that Sport Rocketry is FUN! Articles, plans, photos, other newsletters, and news items of interest should be sent to Bob Wiersbe, 1835 Shetland Drive, Wheaton, IL 60187 (or electronically via Internet to [hrbob@ixstar.ih.att.com](mailto:hrbob@ixstar.ih.att.com).) Photos will be returned, other material returned if requested. Send membership applications (dues: \$3/year, including a six issue subscription to the Leading Edge) and nonmember subscriptions (\$5 per six issues) to Ken Hutchinson, 84 Jefferson Lane, Cary, IL 60013. Any item appearing in the Leading Edge may be reprinted by Sport Rocketry with proper credit given; all other uses require written permission of the Northern Illinois Rocketry Association. If Sport Rocketry can miss an entire issue, then The Leading Edge can wait until the production manager gets back from NARAM.

## Chicagoland Hobby Shops that support NIRA

Trains Plus Hobbies  
 59 Danada Square East  
 Wheaton, IL 60187  
 708 690-5542  
 Estes, Aerotech, THOY, Custom, Quest  
 (discount with NIRA membership card)

Berwyn's Toy Trains & Models  
 2827 S. Harlem Ave.  
 Berwyn, IL 60402  
 708 484-4384  
 Estes, older kits (discount with NIRA  
 membership card)

Pilot Paint & Varnish Hobby Shop  
 5450 W. Belmont  
 Chicago, IL 60641  
 (312) 736-0451  
 Estes, Cox, Quest (already discounted)

### Miscellaneous Business

Got an E-mail address? If you do, send a quick message to [hrbob@ixstar.ih.att.com](mailto:hrbob@ixstar.ih.att.com) and you'll be added to the growing NIRA email list. This will let us be able to get in contact with you with all types of time-sensitive information.

The deadline for submitting articles for the September/October issue will be September 15, and the deadline for November/December is November 17.

Your address label contains an item of vital information, your NIRA membership expiration date! Please check your expiration date and renew your NIRA membership before it expires. You will not receive any more newsletters after your expiration date has passed!

Abbreviations used in this issue: HPR - High Power Rocket, NAR - National Association of Rocketry, NARAM - National Association of Rocketry Annual Meet, RSO - Range Safety Officer, MRFF - Midwest Regional Fun Fly, CIA - Central Illinois Aerospace.

## A Letter From The Editor

A few newsletter issues ago I printed up a survey. The purpose of the survey was to find out what people were interested in so that we (NIRA) could improve the content of the newsletter. As of the printing of this newsletter I've received 5 back. That's pretty bad.

However, I was able to get a hint at some topics people are interested in, and got some good comments. I particularly liked the ones about cutting the editors pay in half, and including a \$20 bill in each issue. One comment regarding how to improve the newsletter was "less on world meets, museums, personal glories, accomplishments; more into teaching, recruiting younger kids, and outreach".

I think there might be a misconception about the content of the newsletter, but I don't have a drawer full of articles that I can pick and choose from for each issue. I can only put in the articles and photos that I receive, so what you see is what I got. Quite often I end up writing a lot of the articles myself, because no one else has. If there's something you think should be in the newsletter, write it up and submit it! If you want to know more about a particular topic, let me know and I'll find someone to write about it.

As far as outreach, teaching, and recruiting goes, we do a lot of it that you don't hear about. Many people in the club help out in their communities with rocketry related classes and launches. I recently asked some members what they do outside of the club, and got back a long list of things they help out with. In June Kevin McKiou did a demo launch at a grade school for 200 kids, and each one got an Estes catalog and NIRA information. I recently received this message from NIRA member Dave Auer:

The Blackberry Rangers 4H Rocket group (Leader - Dave Auer) completed their respective projects, all in the "advanced" category this year and flew for judges at the Kane County Fair grounds 7/13. Peter Gibson flew and Estes AIM on an "E" which was a REAL crowd pleaser. With the high winds we were forced to employ hordes of "runners" screaming "there it is, there it is" as well as the electric company to retrieve lost rockets from rooftops. There were approximately 30 kids from all over the area competing for ribbons. Judges evaluated general appearance, alignment, finish, etc. In order to complete the judging each child must first pass inspection, prep the rocket, launch and recover (you get two chances.) It was a lot of fun for all.

Every year we staff the Make and Take booth for Estes at the RCHTA show, and expose over 500 people to rocketry. History shows that less than 10% of those people will come out to a NIRA launch (even with free motors), and maybe 20% of those will join the club. That's only 2% of the

people we help at the show. The Labor Day launch was NIRA's main recruiting tool, but we would only get about three or four new members from it. My point is that putting out a big effort (like RCHTA or Labor Day) doesn't bring in lots of new members.

Quite honestly, I think our best recruiting is done by members who make contacts with local hobby shops, and talking to people they see flying rockets. Case in point: a couple of years ago I went over to the park by my house because I heard someone launching rockets. I introduced myself and told them about NIRA, and eventually one of the guys, Bill Larry, joined the club. Since then, Bill has been instrumental in helping out with several demo launches. He probably wouldn't have joined NIRA if we hadn't met.

So, what can you do to help? First, send me articles! If you want to see an article on a particular topic, but don't know anything about it, let me know! I'll find someone to write the article (I'm always looking for ideas!). We need people to learn how to "run the range" and help with a one hour shift at club launches. We need plans! Most of you design your own rockets, so why not share a plan with the rest of us? If you know of a hobby shop that sells rockets but doesn't have NIRA flyers, PLEASE let me know! I'll make sure that they get some. We get many new members this way, and it helps bring new people out to the launches.

On another topic, it has been brought to my attention that we use a lot of abbreviations in the newsletter, and not everyone knows what they mean. For example, RCHTA stands for Radio Control Hobby Trade Association. You'd better know what NIRA stands for! Anyway, we have this really nice glossary available for FREE that explains most, if not all, of the abbreviations we use. I'll try to put in footnotes for abbreviations that are used from now on.

## On the Outside Looking In An Editorial - By Lawrence Bercini

As we all know, winters around here can be long and hard. So to combat the cabin fever, I started another pastime which kept me active and social: Country dancing. Ok, ok, you can stop laughing now. I won't go into all the reasons why I enjoy it, but suffice it to know that this is an activity which is greatly improved when done with a group.

So after many lessons and practice, I packed up my courage for the big Spring social dance. So there I was sitting in a crowd of experienced dancers - and they were amazing! They glided through the waltz, swing and two-step; twisting and spinning. It was great to watch, but dancing is not a spectator sport!

Eventually the evening ended and my dance card was practically empty. I was discouraged and a

little bit angry. It was evident that these experienced dancers were not interested in the beginner-level steps. So what if I'm a "beginner", don't I count too? How will I ever become more experienced if I'm basically ignored? I'm new around here, why is it MY responsibility to introduce myself to everybody, strike up the conversations, "push" myself in? I found myself on the outside looking in, and it was intimidating!

Now it's summer. Every third Sunday of the month our thoughts turn to reloads, servos, capacitor ignition, total impulse, and scale factors. We sit with our fellow NIRA friends, reveling in the joys of our shared past, speaking a language of experience. But now, my portfolio of experiences includes a recent encounter of "being on the outside looking in". I look around me and see a stranger struggling with a Bandit or Alpha. Are they thinking:

"So what if I'm a "beginner", don't I count too? How will I ever become more experienced if I'm basically ignored? I'm new around here, why is it MY responsibility to introduce myself to everybody, strike up the conversations, "push" myself in?"

I have a renewed desire to keep that from happening. Will you?

## PRESS RELEASE ESTES ACQUIRES RIGHTS TO NORTH COAST ROCKETRY PRODUCT LINE

PENROSE, CO - Estes Industries announced today that it has acquired the rights to manufacture and market the North Coast Rocketry line of high power kits and motors.

The move further establishes Estes as the world's premier model rocket company, and adds a market segment to compliment Estes' existing products.

"This offers rocketeers everywhere an unparalleled opportunity for new and exciting products in the field of high power rocketry" said Matt Steele, President of North Coast Rocketry. "We will be able to use Estes' resources to improve the quality, sophistication, and distribution of our products to reach an even greater audience. The entire hobby of model rocketry will benefit from this move."

Matt Steele will continue as President of North Coast Rocketry, but will also assume responsibilities for marketing Estes' rocket products. Dan Kafun, Vice President of North Coast Rocketry, will also join Estes as a senior R&D engineer.

As a result of this move, North Coast Rocketry will go into a production hiatus as their products are integrated into the Estes production center. Numerous product improvements are planned for the kits and motors, which will debut in late October at the Chicago Model and Hobby Show.

**Doubting Apollo  
A View From The Other Side  
by Adam Elliott**

Recently I had an interesting experience. I made a new friend with my neighbor two doors down. This guy, John, spends all his free time working on cars. Inside, outside, often in several places at once. And he prefers no help. That kind of guy. After chewing the fat for awhile, I learned that he claims to have an I.Q. of 165. It was nice talking to him, because he was an intelligent person and seemed to know what he was talking about.

Eventually, we got on to the glorious topic of model rocketry. He was pretty much indifferent about it, but thought it was cool. I mentioned that it was things like the stuff we do that got us to the moon. Then it came, "The Look". That kind of look people give you when they think you have no idea what you are talking about or are from another planet. "We didn't go to the moon," he replied.

Perplexed, I asked "What do you mean we didn't go to the moon?" "You think men went to the moon?" John returned the question. "No, I KNOW we sent men to the moon. What on Earth makes you say that we didn't?"

John went on to explain that it would be cheaper to just SAY we went to the moon. "But people actually walked on the surface, twelve of them," I was trying to explain.

"Nope," he remarked, "they just made a film set in some studio and paid a guy to walk around like this (zombie style) and use equipment to send garbled messages like 'Okay Earth, we're have a great time up here!!'" This was easier and far less dangerous, John said. It was all a Hollywood get-up.

This was completely new to me. Never before had I considered the (remote) possibility that our government would fake such a massive project, let alone do such a good job of it.

"But hundreds of people witnessed this," I tried again. "Paid off. Every one of them." he said, licking his thumb.

I've read the book on Apollo and know who was involved and how many. There were thousands. There is no way this could have been kept a secret for over thirty years. I explained this and he shrugged and said "anything's possible."

"You mean, like going to the moon?" Then came the look again.

The next day, dumbfounded by my neighbor's disbeliefs, I told the story to Larry at work. Larry, who is somewhat eccentric, has been working in the grocery store since before the first Apollo mission.

"We didn't go to the moon," were the first words out of his mouth. He even had his own version of "The Look". "It was all done in Hollywood," I was hearing, again, as he went on, "They paid

some guys, blah, blah, blah," he continued saying the same stuff as John the previous day. Finally, Larry came to the point: "Cold War Propaganda".

There it was, the whole underlying foundation for John and Larry's doubting dispositions. I explained again that there were too many people involved, etc., and he came back with another twist: "It's not possible."

"Anything's possible," I reminded him. "Then how come we haven't sent more people there? How come every time the shuttle goes up we don't send supplies there?" Larry asked. These are good questions, but I explained that the price tag is out of the public's favor. Most of the public's favor anyway.

For over two decades I have been on this Earth and never had I heard that anyone doubted the accomplishments of NASA (at least at that time), and here I was, finding two guys in a row who doubted the pinnacle of manned space-flight. There must be more of them out there, but don't let them discourage you, true believers. For us, people like Frank Borman, William Anders, Jim Lovell, Gene Cernan, John Young, Neil Armstrong, Buzz Aldrin, Michael Collins, Pete Conrad, Al Bean, and Alan Shepard will always be heroes.

**1995 National Sport Launch  
by Mark Bundick**

A few, admittedly late, Wabbit notes on the 1995 NAR National Sport Launch. Congrats to Chris Tavares and the entire CMASS crew for an excellent launch.

The hayfield that "housed" the event was spacious and grassy, and CMASS's launch system worked well throughout the launch. A distinct family atmosphere prevailed as moms and dads flew alongside kids for the duration. CMASS also fattened their treasury on hotdog, snack and soda sales, a nice service other clubs could easily emulate (hint, hint).

Some highlights: A 4" dia. scale up of the Estes Sprint model flown on a J275. It roared uprange, but still was probably the highest flight of the launch, and recovered beautifully right on the field. Sunday, someone flew a PML 1/5 scale Nike-Apache, beautifully detailed with electronic staging. It looked just like the shots out of Wallops. An Estes Saturn V flew on G power to the highest altitude I've ever seen that kit fly. Kudos also to the NAR Vice President who sacrificed a F SD bird to an F7-4 to demonstrate that well known flight principle, The Gravity Turn.

A few notable prangs included Ken Mizoi's I powered shot that failed to eject, totalling the well finished bird. This one mystified all who assisted since the full electronic ejection system has been pre-flight tested. There was also a H powered Phoenix that tipped off and crashed

into a van, leaving it undented, but depositing some of its paint on the hood. Your president also power pranged his XV-4 canard glider, this despite two previous flight successes. My apologies for telling safety check dude Bill Spadafora the bird was foolproof.

My personal flying was confined to what would fit in the old model box and thus survive United's handling: two flights on the trusty SPEV, a Bruce Carey designed sport bird I got at a 1970's auction I finally finished painting, my "Bunny-roc" converted from a Nestle's Quick bottle, and a Juno II from plans in the "Art of Scale Model Rocketry".

Despite my best attempts, I couldn't get enough NAR members together for an Association meeting quorum; I really didn't have any business to conduct, so I guess it didn't matter. I did get some good suggestions and comments from members during the evenings and at the range.

It was really a great launch, a good opportunity to see old friends (including a surprise visit by old time NAR member and fellow BG fanatic Bernard Biales), and some time spent seeing parts of Boston I wasn't familiar with; thanks to Trip Barber for the personalized tour of MIT (including a visit to the site where the first engine test cell was) and the "enlightening" trip to Harvard Square on Sunday (grin). Monday's time was reserved for my family; we got to see Barb's old Boston University haunts and toured the USS Constitution.

All in all, a top notch launch. If you weren't there, you missed a great one folks.

**Prang Prevention  
by Bob Kaplow**

This new column is intended to instruct anyone who flies rockets how to avoid pranging them. A prang is defined in the rec.models.rockets Glossary of Rocketry Terms as:

Prang: Term describing a failure mode whereby a rocket comes down aerodynamically stable, in other words, 'streamlines in'. This is almost always caused by some sort of recovery system failure, usually the result of a too-tight nose cone, too-tightly packed parachute or a too-loose motor that ejects out the back. Multi stage models with upper stage ignition failures also result in a prang.

The results of a prang range from no damage at all (other than a few grass stains) on lightweight sport models to the total destruction of the rocket (usually a payload with a VERY expensive payload on board :-).

A prang that occurs while the motor is still burning (e.g. a marginally unstable rocket that performs one large half loop) is called a 'Power Prang'.

So, if you've had a prang lately, send the details

similar to what I've written below to Bob Wiersbe (addresses on inside cover). He'll forward them to me for analysis and how to prevent them in the future. The first installment of this column is taken from my own personal experience.

Date: 23-April-1995

Owner: Bob Kaplow

Model: Skywriter-24

Motor: E11-4J (24x70 reload casing)

The Flight: Upon launch, the model staggered into the air under the still building thrust of the BlackJack motor, arced into the wind severely, went less than half its normal altitude, and smacked the ground just before ejecting. It barely missed a group of kids playing soccer. Due to its heavy construction, it was undamaged, just a bit dirty from impact.

Analysis: The model weighs about 530 grams (about 1 lb 3 oz), and is just under 4" in diameter. This model is much too big and heavy for most Blackjack motors. In the past it's flown fine using Blue THunder motors (E30-4 expendables and E28-4 reloads). After pranging my Skywriter-29 on an F14J at Labor Day a year and a half ago, I should have known better. From now on I'll stick to Blue Thunder reloads in this model.

RSO comments: Most BlackJack model rocket motors have a very low average thrust, and a very slow ignition buildup. This includes the F14 expendable motor, as well as the E11, F12, and F22 reloads. I've not yet seen the G33s flown, but am concerned about them as well. I suspect that we are exceeding the maximum recommended liftoff weight for these motors.

Here is a table of the Manufacturer Recommended Lift Off Weight (MRLow) for various Aerotech BlackJack motors:

E11-3J 16oz

E11-5J 12

F12-3J 18oz

F12-5J 15

F14-4J 18

F14-6J 15

F22-5J 18

F22-7J 14

G33-5J 22oz

G33-7J 16

In models greater than 2.6" diameter, these numbers should be significantly reduced.

We've seen too many incidents like this one just in our first 3 launches of 1995, all connected with large and/or heavy models and BlackJack motors. In the future we will be VERY strict on the use of BlackJack motors. They will not be allowed in large, heavy rockets. This means any rocket that requires FAA notification at a minimum. I suggest we add "BlackJack motor" to our complex rocket list.

The E11 and the rest of the BlackJack motors are probably quite suitable for models like the Mean Machine, Maniac, Shadow, and Broadsword, and PERHAPS a Saturn-V if there is no wind and a very long launch rod.

The old ISP (now relabeled Aerotech) BlackJack reloads have much higher average thrust, and don't exhibit this problem as much. They include the G75, H73, H97, I112, and I154.

**May NIRA Launch**

**-or-**

**"Move it or Lose it"**

**by Lawrence Bercini**

In general, the May launch was pretty frustrating. First of all, we could not get the test of the NARAM launch system off the ground. There were long waits between flights and some cases of wrong pads firing. Eventually, we scrapped the use of the NARAM system only to be evicted from our spot by the neighboring baseball game. After most folks packed up and moved across the road, we were told we could not fly there because another game was getting set up. So we moved further back into the park, next to a pond and practically no downrange recovery area. Emotions were high. With the kvetching out of the way, let's concentrate on the good stuff: the launches...

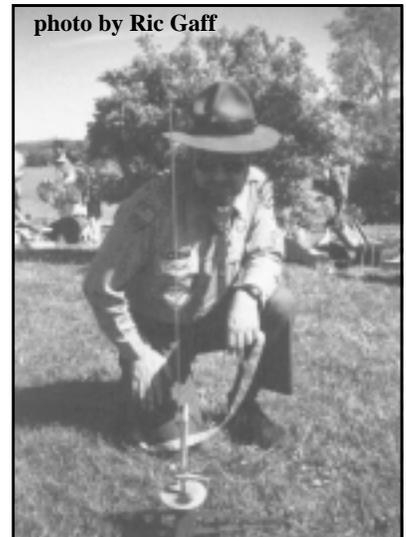
Perhaps the most interesting collection of mod-

els were flown by Pete Juengst. Pete had this neat-looking launch pad which complemented the Phoenix and Sentinel models. He also had this collection of experimental designs like some Nike/Terrier-clones which "need work", and interesting 4-engine cluster bird. Pete will be best remembered for the flight later in the day from the edge of the pond. His Quest bird pulled the textbook Greg Louganis dive, perfect entry, straight in, no splash. The bystanders loved it!

Jonathan was evidently saving his bigger stuff for MRFF, so concentrated on burning A motors in skill level one birds like the America and the classic Alpha III. In contrast, some people chose to keep trying favorite birds over and over. Chris Pucinski was having fun with a new Phoenix missile, while Leo Ringwald sent up his Skywinder multiple times during the day.

Yours truly came to the launch with a bunch of old models which had not seen the light of day in years. The general objective was to lose every model that day. Among the list of doomed models were a few old competition models - bad models which never performed (which is

photo by Ric Gaff



Mike Ugorek snuck off behind the bushes to fly this itty-bitty rocket, but ace rocket snooper Ric Gaff caught him in the act.



Kleve Slouber sums up the May launch with this rather appropriate display. (photo by Lawrence Bercini.)



photo by Ric Gaff

Bob Kaplow wets his appetite by flying his aging Happy Meal.

why I still had them). I did manage send the Design Efficiency bird to never-never land, and the 2-staged B altitude model, which never went straight up when I needed it to, performed like a champ. A streamer duration bird appeared to be a goner but Dave Price found it later (thanks Dave - I think...). The best loss of the day was the flight of the Engine Elimination Vehicle boosted by an old Canaroc D motor. That puppy was gone!

Cheri Chaney and Bob Kaplow spent an extraordinary amount of time helping many youngsters do "Manta Mania". Congratulations to Sara Studzinski, Amanda Dennler, Ashley Kelley, Brianna Francis, Alyssa Bolin, Grace Dwyer, Ashley Nystrom, and Kristen McHugh!

Those of you who missed the maiden flight of Mother missed one of the funniest scenes from any NIRA launch. Bob Wiersbe had primed us earlier by boosting a Patriot with an E15. So when he set up the impressive black 3-Fins-Nose-Cone High Power bird, we were prepared for another fine flight. On the count of zero, there was a short pause, and with a startling belch the nose cone sprang off the model. Then, like a flash, while wadding spewed from its insides, a tiny black rocket leapt free from the middle. It was a wonderfully executed hoax. The crowd roared its approval. Great show Bob!

Other flights of note include Ed Thiel's clustered Super Big Bertha, Ken Hutchinson's D21 Space Clipper, and Don Swikowski's E18 Initiator.

In spite of all the day's troubles, we still sent up 97 flights. Not bad!



photo by Ric Gaff  
Pete Juengst and his scratch built clustered rocket. It made a perfect flight.

**MRFF 1995**  
**By Lawrence Bercini**  
**(with help from Kevin Smith, Bob Kaplow and Bob Wiersbe)**

**THE FLIGHTS**

Every year around Father's Day, The Northern Illinois Rocketry Association hosts the Midwest Regional Fun Fly (MRFF). Now in its fifth year, MRFF keeps growing and growing! It used to be this writer was able to follow everything that was going on. Now there are so many people and flights, it becomes a blur! My apologies in advance if my report lacks anything, there is just too much going on to keep track of! As has always been the case at MRFF, the participants came from all over the midwest and represented a diverse demographic and range of skill levels.

MRFF continues to be attract families who love to fly rockets together. Jerome Mrozak came from downstate IL with his two oldest sons to fly their rockets. After one flight each they announce they are finished. Jerome, not to be discouraged, set up for the maiden flight of his Gemini. The chute fails and cracks the fin/motor holder assembly. He begged/borrowed/stole another assembly and the next flight of Gemini ended up nose first in the ground due to a defective motor! Says Jerome, "At this rate my three packets of engines will last all year!"

Like Jerome, Bryan Chesi is another one of those folks who let a first flight failure deter him. His maiden flight of a Commanche 3 actually didn't fail, rather, it went too well, and he recovered only one booster stage. He borrowed another booster, and BUILT another upper stage right on the field. The now reborn Commanche "Revenge" took to the skies, and guess what? Bryan retrieved only one booster stage. Deja vu.

MRFF was the first organized launch (with his own rockets) for Greg Seul. Greg was responsible for the D21-powered Alpha III. Says Greg, "I didn't think it would go that high! I thought at least we'd see it come down". Welcome to the world of 18mm composite D motors Greg! The Alpha III is now in synchronous orbit over Aurora IL.

Another highlight was the long-burn F14 flight of Greg's Warthog (also its maiden voyage), which landed in the swamp. Greg did wade out and retrieve it with help of someone on the other side of the swamp by the parking lot. Kevin Smith waded in also, with visions of a Star Wars-like garbage disposal snake-creature wrapping around his legs. Greg said he didn't think about it. (Didn't want to, is more accurate). Anyway, the swamp excursion ended with Greg being hosed down by the Indian Pump brigade and the Warthog no worse for the wear.

Yours truly also had an experience with the parking lot swamp. My Launch Pad Sea Wolf did this curious pitch over during flight and

ended up burying itself in the black goo. Thomas Price arrived at MRFF just in time witness the impact. He braved the black waters and both he and the Sea Wolf were unscathed by the adventure (Thanks Thomas!). Not content with that creative landing, I also managed to dump my Alien Space Probe into the tall grass, right on top of an unsuspecting crow. It scared the bejambers out of the crow, but he was otherwise unharmed.

Speaking of scaring, Ken Hutchinson flew this Magnum on an I284. In spite of the countdown, the roar of the motor scared people half to death. In fact, Bob Wiersbe reports he heard the echo come back twice!

The "King of the Big Birds" at MRFF is probably Bill Larry. He provided the OX pad which supported the bulk of HPR flights. (Thanks Bill!). My favorite of his creations is his 7-ft tall "Sorta" Sandhawk, a "sorta" scale sounding rocket.



photo by Bob Wiersbe

Bill Larry's Albatross lifts off on an I357, airstarting 2 G64's a few moments later.

Bob Alway had this Sequence Camera Booster which he flew with a G80. I'm not certain what kind of camera it was, but he sent back the photos from it, and they came out great! Too cool!

And while we're on the topic of cameras, I should mention the most popular rocket at MRFF was the Astrocams. (in second place came the Estes Skywinder). Lots of people took advantage of calm sunny weather to boost camera flights, 17 in fact. Did any of you get photos of the range head?

As usual, John Barrett was our most prolific flyer. He had this large collection of HPR-lite birds which he kept flying and flying. That man is an exhaust junkie! His total for the weekend: 44 flights! His family, well aware of his "addiction", gave him a bundle of motors for Fathers Day. John "reluctantly" used them up.



photo by Bob Alway



photo by Bob Kaplow

Bob Kaplow's camera rocket took this picture of the subdivision just east of Pratts Wayne Woods. The road running left to right is Route 59.



photo by Ric Gaff

Bob Alway with his camera rocket, and one of the pictures the camera took of the MRFF launch site (top).



photo by Bob Wiersbe

The Sheik of Aerobee poses with the latest in desert weaponry, somewhat similar to an Aerobee-Hi.

Under the category of "Rocketry Redux", Steve Koszuta, who cato'd his Loc Roc 4 most eloquently last year, brought it back for not just one, but two fine cluster flights. Likewise, I neither cato'd, crashed, nor burned my Maxi Strato Cruiser and Maxi Starlight (like previous MRFF's). Carl Reese brought back his People's choice winner from 1994, the Romulan Warbird. This is a really fascinating scratch-built design. This year he showed us that it flies great too!

Speaking of clusters, the folks went cluster crazy at MRFF '95. There were 47 different cluster flights. The leader of the pack, is, of course, Ron Husak. Most of his fleet is cluster birds with names like Cluster Phobia and Pyromania (more about Pyromania later). Flashbulbs are for wimps as far as Ron is concerned. Ron gets consistent performance from his cluster birds the old-fashioned way, by twisting the ends of the solar ignitors together!

We were glad to have newcomer Mark Kotolski join us from Wisconsin. Mark had this herd of nostalgic rocketry collectibles such as the Centuri Groove Tube, and MX-774. Personally, I

was plotting to relieve him of the Estes Cherokee-D.

Dave Bassett, from Kalamazoo MI is a regular at MRFF. He always shows up with intriguing scratch-built designs with esoteric paint schemes. This year he showed off his neat staged creations such as 2-bular Dude and Gladiator. Another fine designer is Mark Smeiska. He created this "Mars Lander clone" called the Mars Explorer. I think the Mars Explorer had the distinction of being the first cato at MRFF. My favorite was his colorful, lethal-looking Hawk. On Sunday, a couple of spectators arrived just before Mark flew. They laid out a blanket to sit on, and, before they could sit, the Hawk parachuted into the middle of it. Mark is proud of his paint schemes and demands his rockets not land unprotected on the ground...

A brand new NIRA member, and rocketry novice, Chris Holmes celebrated a milestone at MRFF: His first rocket flight, ever! At first, Chris had to depend upon the more experienced folks to learn how to do things like pack chutes and adjust for the wind. Before long, he was "having a blast" with his new hobby. By the end of the day, Chris was consistently dropping his

Skywinder back right into his prep area.

Jonathan "Mr. Reload" Charbonneau put up flight after flight with an assortment of Aerotech reloads, until his Initiator on a G64 went way downrange. He spent the better part of Saturday afternoon looking for it, without any success. He did manage to find and recover five or six rockets that others had lost, and returned them to the range head. He was pretty down about losing the reload, and several people encourage him not to worry, someone was bound to find it the next day. Sure enough, Ken Hutchinson found it while he was out looking for one of his rockets. Jonathan received a special award for recovering so many rockets while looking for his. Thanks Jonathan!

#### THE FACTS

96 people registered for MRFF this year, and made at least one flight. This is the best turn out we've had at MRFF to date! In general, C impulse was the most popular motor flown at MRFF 1995. But the distribution of impulse continues to skew to the higher end. Contrast the single I flight of last year to the 10 H's and 8 I's from this year. There were 37 staged models flown, along with the 47 cluster models ranging from two A8-3's to an I357-10 with two G64-10's! Here's the breakdown by impulse:

1/2A - 23, A - 103, B - 142, C - 170, D - 149, E - 36, F - 52, G - 31, H - 10, I - 8

That's a total of 724 flights over the two days!

#### THE "FAVES"

Each year there are a number of flights which stand out as favorites. Among them was Ric Gaff's FSI F7 flight. Its carrier, the Steam

Machine was predicted to end up pulling a “worm burner”. Instead it chugged on, and on and on and on, right out of sight, while people whooped and roared “Rocket! Rocket!”

Three flights stand out for their mission performance. Perhaps foremost when it comes to launch effects would be Bill Larry’s Nighthawk with a central H180 and air-started F50 Silver Streaks, and his Albatross with an I357 and two G64-10’s. Both were just way cool! John Kallend is a consummate R/C flyer. He guided delta-winged Ladyhawk 3 way, way up under F24 power. Then, in a show of supreme skill, ignited via R/C control an E6 and performed powered aerial acrobatics!

The launch of Kevin Smith’s Falcon on an “T” was great, the recovery wasn’t. It landed way, way out in the Land of the Killer Thistles. And, in spite of the heat, Kevin was happy it didn’t go in the swamp!.

Of course the primo flight of the weekend belonged to Dave Miller. Dave scaled up an old Estes kit, the U.S.S Atlantis, a sort of Star-Trek-like kit. This beautiful bird was awesome under I284 power. Dave had rigged it up to recover most of the way via drogue chute. Once it got close enough to the ground, he used R/C to deploy the main chute. We can’t wait to see what he comes up with next year.

Unfortunately, I’m lacking any of the documentation from the Team Kitbash competition - a perennial MRFF favorite. I can tell you we used the themes again this year. Each team was given one hour to turn a Surveyor and a Solar Warrior kit into unique designs based on randomly chosen themes. Having chosen the theme “aquatic” the Fish Heads team created Squirmy the Starfish (it looked more like a squid to me). As I recall, Squirmy was not too stable, in spite of the cluster of nose cone spikes at its base.

Under the category of “ugly” came the Not Ugly Enuff team. Their Psychotic Nightmare creation was truly, truly ugly. It flew quite well and did



Mark (left) and Kurt Smeiska load their kitbash model onto the pad.

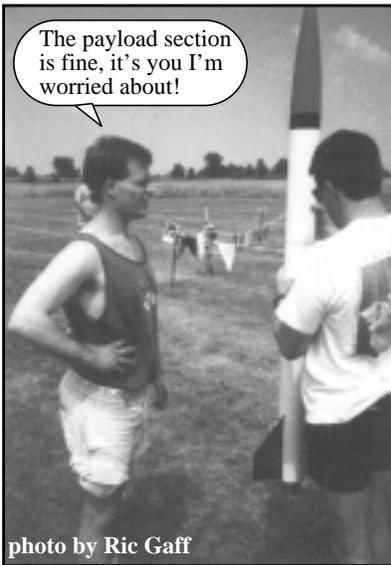


photo by Ric Gaff

not even damage the atrocities decorating its exterior. Another fine flight came from the entry by the Solar Seekers. Their Solar Surveyor was a pretty example of a fantasy design inspired by their theme “celestial”.

The winning Kitbash entry belonged to the Jet Set team. They chose the theme “home”. The resulting Rocketeer Dream House looked like your typical suburban home, complete with bicycle, picket fence, mail box (with mail in it!), utility pole and fire plug. The one exception to this norm would be the Down Right Ignorant poking through the roof. It flew fine and sustained only minor damage to the utility pole. After the flight the team members “drew straws” to see who could take the model home. Dave Miller won the draw. (Let’s just hope he doesn’t try to scale this one up for next year...)

### THE FAILURES

No sport launch would be the same without a few memorable failures. Among them would have to be John Kallend’s SR-X Aurora which pulled the “six million dollar man” maneuver: swoosh, splat. Another goodie would be G40-7 Archer. Whereas some men concern themselves with washboard abs, John is a washboard nose guy. Not a pretty sight...

Bob Wiersbe flew his staged Saturn V twice, and pranged it twice, so that was cool. His staged version is a conversion of the Estes kit using “Hidden Wonder” type pop-out fins and powered by an F50, D12 and a C6. I’m not sure how he managed it, but Bob power-pranged not just 1 but 2 stages! Well, at least the pop-out fins on the second stage deployed AND the stack was stable. I think the 3rd staged worked as well, but it was going too fast (straight down) to tell.

I happen to have the (mis)fortune of being at one of the pads when Conrad Helland’s flew his Icon with an FSI E6. I heard the characteristic “swish swish” of a rocket going unstable. I’m looking frantically in the sky for the bird gone awry. In the meantime folks at the range head were

laughing at my panic since the Icon was just thrashing around on the ground.

The emperor of Ariela (AKA Ken Hutchinson) received quite a surprise Sunday while preparing to launch the imperial yacht from pad one. A space shuttle (we won’t say whose it was, but his initials rhyme with Terry Kosel) departing from pad twelve went into an erratic flight path upon separation from its external fuel tank. As his highness watched the craft dance around the sky, he suddenly realized that it no longer appeared to be moving, just growing larger.

Remembering the old admonition of his geometry tutor, the Duke of Moreland, that ‘constant bearing means collision’, the emperor and his party removed themselves somewhat to the north. They turned and watched the shuttle crash precisely into the spot where the emperor had recently been standing. Unfortunately, the pilot escaped before Arielan soldiers could be called to the scene.

Cluster Man, Ron Husak brought back last year’s Peoples Choice winner, Pyromania. Boosted by 5 D12’s and 6 C6’s, Pyromania became “gravitationally challenged”. The result wreck, I kid you not, looked exactly like the “FAR SIDE” cartoon where the men announce ‘we aren’t rocket scientists’. For this glorious effort, Ron received the MRFF 1995 Prang Award.

### THE FOLLIES

There’s an old Monty Python bit where a policeman interrupts the comedy sketches because they are “too silly”. That never happens at MRFF, nothing is too silly.

The crown prince of silly, Ric Gaff, had a whole fleet of silly stuff: “The Die is Cast” flying die, Pie in the Sky, mini Down Right Ignorant, a giant pyramid, dual mice loft. (they were rubber mice, but we appreciated the joke)



There once was a fellow named Ric  
Whose model creations were sick  
Here’s Pie in the Sky  
It really did fly  
It gave all of us a big kick  
(photo and limerick by Lawrence Bercini)

Back by popular demand came Bob Wiersbe's "Mother". This seemingly HPR bird looks impressive on the pad. But at the end of the countdown only the nose takes off, and this time, Bob had two mini Patriots streak out of the tube. Fun stuff!

Other strange creations included Dave Price's water rocket, pink hair curlers rocket, and a flying megaphone. Perhaps less successful would be Bill Thiel's Pringle Roc, a sort of Infinite Loop made out of, you guessed it, Pringle cans. The Pringle Roc does this sort of lob-flop flight pattern. Similarly, Bill's flight-converted Nerf Glider, was only a glider in the academic sense.

Bob Kaplow would probably contest it, but I think his Super Gyroc qualifies as "silly". Especially since it didn't just autogyro, it performed this listing aerial ballet. While we're talking about silly flights, let's not leave out Dave Miller's Sputnik. The dowel stabilizers vibrated so violently during flight it sounded like a "buzz bomb".

A special award for silly should be given to the local FAA office. Toward the end of MRFF they paged Bob Kaplow to call the DuPage tower. Seems that the notification number they put on the waiver is an office answering machine that no one checks on the weekends. They had found his notification messages Sunday at 1:00pm, after we had flown for 12 hours!

**THE FUN!**

**First Strike Spotlanding**

(or as Ken called it, First Strike Safety Violation - because the pad placement was too close)

Four countries, on the brink of war. Survival depends on getting as many of their missiles to hit the opposing country in the shortest amount of time.

MRFF's version of World War III pitted the fictitious countries of Ariela (Emperor, Ken Hutchinson), Elbonia (Czar, Dave Bassett), Fredonia (Dictator, Bob Kaplow) and Phenwyck (Duchess, Robin Miller). By random draw, Ariela was attacking Fredonia, Fredonia was against Elbonia, Elbonia challenged Phenwyck, and Phenwyck attacked Ariela.

The citizenship of each country was randomly

chosen just prior to the event. That way, people had a chance to meet with, and consequently go off to war with new friends. Citizens of each country had to try to land their models as close as possible to the flag of the opposing country. It was a timed event, so points were being awarded for how quickly the flights occurred. That means the citizens would have to run out to where their rocket landed, mark the nose location with small flag and get out of the way of the next flight.

You have never seen such wonder chaos! There were rockets arching all over the place and people running around like crazy. All it would have taken would have been a few fires and some screaming and it would have looked like Clark and Division after the Bulls won the championship!

When the smoke cleared and the rubble settled, Elbonia was a charred ruin. Fredonia, flying under the banner of "soup du canard" had decimated that country where people wear tall hats. On the other hand, Phenwyck was at calm, because Elbonia couldn't hit the broadside of a Phenwyck no matter how they tried!

Congratulations Fredonians: Bob Wiersbe, Kevin Wickart, Marshall Goldsmith, Anthony Cekay, Adam Elliot, Bob Kaplow, and Ed Thiel! The Fredonians were awarded a couple of Estes Blast Off packs as a reward for their skills at war.

**People's Choice  
By Bob Wiersbe**

As expected, the entries for People's Choice were awesome, even though there were some repeats from last year (you know who you are!). This year we broke things into two groups, youth and adult, throwing Ed Thiel and Ron Husak into the adult category instead of letting them compete head to head.

There were 16 entries in adult, and 5 in the youth category. Once the kits were tagged properly, ballots were handed out and the voting began. Unlike Chicago elections, each person was allowed only 1 vote in each category, but all 44 people in the room got to cast a vote whether they entered a model or not.

The entries in youth were Mark Soppet's SR-71,



photo by Bob Wiersbe  
Terry Kosel preps his beautifully done NCR Space Shuttle for liftoff. The flight was awesome, with the Orbiter nearly taking out the Emperor of Ariela.

Matthew Duckworth's Greyhawk, Kori Smeiska's Halley's Tail, Wesley Reese's Jafar, and Anthony Cekay's Sparrow Hawk. Most of these kits you'll probably recognize, except Jafar. Jafar is exactly what you might have thought it was, a rocket that looks like the Jafar character from Aladdin! The voting was very close, with Wesley's Jafar getting 18 votes, and Mark's SR-71 15 votes. Matthew's Greyhawk finished third with 7 votes. Wesley received an E2X Airwalker starter set, Mark received an old Estes Colossus Kit, and I think Matthew got an old Estes Black Brant III.

The adult entries varied from the simple but beautifully finished, to the large, complex and beautifully finished. Adam Elliot's "Monolith" had people acting like monkeys and looking for bones to hit each other with. Mark Kotolski's entered his nicely finished Phoenix AIM-S4C, Dave Bassett returned with his Zenith, Terry Kosel's NCR Shuttle was hidden in a corner until we dug out a chair for it (can't keep a good scale model hidden!). Dave Miller brought in his



photo by Lawrence Bercini

MRFF's First Strike Safety Code Violation Potentates. War has never been so silly!



photo by Bob Wiersbe

Tempers flare on the MRFF range when John Barrett and Lawrence Bercini attempt to load identical models on the same pad.

U.S.S. Atlantis, upscaled from the old Estes kit, prompting calls of "Unfair!" and "Ringer!" You had to see this model to understand why people were ribbing him, I knew he'd win the moment I saw it!

Bob Kaplow tried to use his Skywriter-38 to fill in some extra votes, but couldn't find a crayon sharpener big enough to fit it. Ron Husak was back with his winning Pyromania from last year, and while he didn't win People's Choice again he did win the Prang Award with it. Carl Reese entered his Buck Rogers Draconian Marauder, and Tom Stump entered his "Estech" Scud-buster, apparently a Patriot missile made from Estes and Aerotech components.

Ed Thiel modified a Broadsword by clustering it, and renaming it the Broad Sword Plus. Joe Chiabai displayed his Recruiter, Dave Price made an NAR political statement with his Bunny Roc, and Jonathan Charbonneau brought in the man of steel and his launch vehicle - Superman/Supermania.

Mark Smeiska had this really cool Mars Lander look-alike called the Mars Explorer, Bob Wiersbe entered his 3 stage Saturn V (before power pranging the second and third stages), and Bill Thiel rounded out the entries with his cool marble finished MarbleRoc.

To give you an idea of the quality of all the entries and how varied the voting was, the winning model only received 9 out of 44 votes, second place received 5, third place 4, and there were six models tied with 3 votes each!

As I expected, Dave Miller's U.S.S. Atlantis was the winner, Bob Wiersbe's (hey, that's me!) staged Saturn V came in second, and Bill Thiel's MarbleRoc came in a close third. Dave won a really cool Launch Pad kit, Bob won an Estes Designer Special (too bad it doesn't have the right size tubes so I can repair my Saturn V), and Bill won an Estes Space Shuttle.

Congratulations to all of the winners, and many thanks to those who donated the prizes that were handed out!



photo by Ric Gaff



photo by Ric Gaff

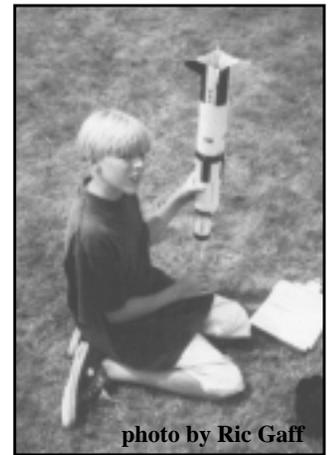


photo by Ric Gaff

"Are you sure this is the way it's supposed to go?"

Ron Husak's "Pyromania" (left) was the winner of the coveted Prang Award. Notice any similarity to Mike Alterio's T-shirt?



photo by Bob Kaplow

Ed "Desert Storm" Thiel prepares to prang his Patriot Missile.



photo by Ric Gaff

Tom Stumpe puts the clips to his "SCAM".



photo by Rick Kramer

You want to see rockets? Here's the collection that John Barrett (above) brought out. John made 44 flights at MRFF, 17 more than anyone else.



photo by Lawrence Bercini

Hi Ho! Hi Ho! It's off to prang I go!

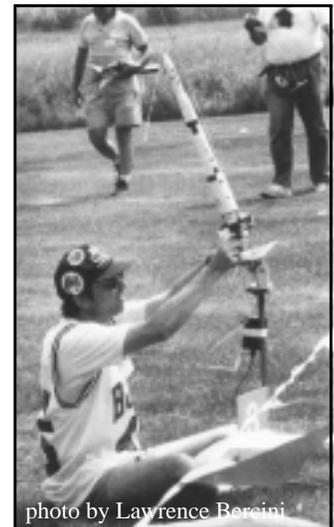


photo by Lawrence Bercini

Yes, the President of the NAR does fly rockets. Unfortunately, it's always the same one. Bunny, SPEV. SPEV, Bunny. Bunny, SPEV. AAAARRGGH!

## THE FINISH

Thanks to everyone who helped make MRFF a success, especially my compatriot and co-chair Bob Wiersbe. Special thanks to the Thiel's and Bill Koch for providing much needed shade, Robin Miller for the T-Shirts, chef "Bunny" Bundick, Ken Hutchinson's work with the sponsors, Ric Gaff's ground support, Cheri Chaney for lots of behind the scenes tasks, and everyone who helped out on the range.

### (Un)Quotable Quotes:

Bob Wiersbe to Bill Thiel as he was "futzing" with a launch rod: "What's wrong with it?" Bill: "It's bent!" Lawrence Bercini: "Like most NIRA members."

Robin Miller as LCO: "On pad 1 you can see what my husband spent all his time with this winter, and it wasn't me."

"Smokin'!" (some unnamed youngster comments on a HPR flight using his best imitation of Jim Carrey)

Ric Gaff: "You should be." (when Bob Wiersbe mentioned he was scared to fly his staged Saturn V)

Robin Miller: "Lawrence, wipe your nose!" (upon seeing the mud smeared Sea Wolf return from the swamp)

"I can't print that in 'The Leading Edge'!" (Bob Wiersbe commenting on an unmentionable quote)

### MRFF 1995 Official Sponsors:

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Thrust Aerospace  
Top Flight Recovery  
Tower Hobbies  
Wicks Aircraft Supply  
Bill Koch  
Lawrence Bercini  
Rick Gaff  
Bob Wiersbe

## Bunny's NARAM-37 Notes by Mark Bundick

I've managed to return to Chicago intact after a week's family vacation and NARAM. Those of you who missed the show this year are gonna kick yourself after you hear the stories. My sincere and huge thanks to Dan Wolf and the "Men/Women of MARS" for a truly outstanding week of rocketry, friends and fun! Thanks also to Bill Spadafora, C. D. Tavares and the rest of the CMASS crew for another capable sport range operation.

The SUNY Geneseo dorm worked out perfect, as each quad of rooms was clustered around central lounges. These were quickly commandeered as "prepping" areas and social centers. I was amazed to see the Gormley clan settle in, almost as if they were returning to their usual haunts at Princeton; they'd brought along their regular dorm refrigerator. The cafeteria also did a good job on the food service, though getting up for the one hour breakfast window was, by week's end, "challenging" for some.

My early memories of NARAM are a bit hazy, as my time was consumed running NAR Board meetings, and finishing my Sport Scale bird. More on the Board meeting in a separate posting, but the meeting went well with a LOT of good action taken by the Board. Also, a scale bird tip for the future; don't try painting when the humidity is high, assuming you want a decent finish :-(-.

Rain shut down the sport range around noon on Saturday as the CMASS system was soaked. The weather relented sufficient for Ed LaCroix to demo a hybrid for the NAR Board; the flight was textbook straight with an Adept altimeter deployment of the main chute. This flight also allowed me to take advantage of my "reserved" presidential parking spot. (Hint for Bruce Kelly: Demand one of these for LDRS (g).)

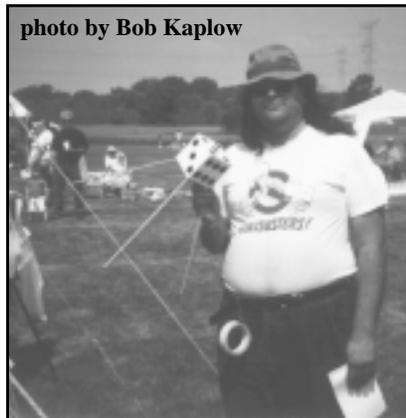
Monday brought 1/2A PD and C SD. Good SD flights were NOT easy to track as boost were quite high. Some contestants used tracking powder to help the timers spot the bird at ejection. The field, an immense grass covered beast, was the best I've personally flown on. The thermal gods claimed some models, but you couldn't really blame the field size for those losses. Apogee C's were popular in SD.

Monday night brought the NAR Town Hall and Association Meetings. I reviewed the NAR Board meeting results, and the election for Trustees and By-Laws amendments was conducted. The newly elected Trustees were Mark Johnson, George Gassaway and Marc McReynolds. My thanks to Bob Alway, who leaves the Board and who probably gets back to more camera flying. The By-Laws amendment opening NAR membership to foreigners passed; the "no manufacturer" amendment got a majority of votes, but not the required 2/3rds and failed.



photo by Bob Wiersbe

Mike Alterio hangs his rockets out to dry.



Andrew "Dice" Gaff with The Die is Cast, or Cubix, or whatever he's calling it this week.



photo by Bob Wiersbe

The travelling minstrel group "See no Evil, Hear no Evil, Speak no Evil" stopped by MRFF for some food, but were chased away after singing choruses of "Catos We Have Heard on High" and "Bunny the Long Eared Rabbit".

With a rain induced shutdown Monday, Tuesday brought a double dose of flying to clean up Monday's flights and start the day's events. Flexwing duration had two folks max out; NAR VP Trip Barber's first flexie, built to Ken Brown's tips; and the perennial Southern Neutron team of George Gassaway, Jay Marsh, Wayne Hendricks and Ed LaCroix went the full three maxes. Those of you without flexie experience and wanting a quick leg up should contact QCR for their booklet containing those tips.

I spent part of the day at the Sport Range and was the victim of an assassination attempt. An Imperial Assassin Droid disguised as an Estes R2-D2 unit with a D13 reload dug a divot about 4 feet away from me. Keep your eyes open at LDRS, Bruce. It's dangerous out there....

Tuesday night let the manufacturers strut their stuff at the Manufacturers Forum. Aerotech went over hybrids, the Launch Pad introduced a bunch of new kits of military missiles, Pete Alway pushed a new revision to Rockets of the World; Rob Edmonds of Edmonds Aerospace talked about the philosophy behind his company; Ken Brown of QCR announced some new "for fun" kits including a flying umbrella recovered bird, and Apogee announced the introduction of 10 mm black powder motors from 1/4A thru B size, all at 2 Nt. average thrust. Oh boy! We can fly Gnat, uh excuse me, 1/4A BG again :-).

Wednesday brought out tracking in 1/2A altitude and C Eggloft. Apogee again dominated the highest altitudes; Southern Neutron had a 400+ meter flight DQ'ed for broken egg, but won anyway with a 350+ meter effort on Flight #2. Tracking ran smoothly, and well over 90% of the tracks were closed, with very few lost tracks. Thanks to Bill Owens of MARS for the company at Tracking East, and to Trip Barber and Bobby Gormley for great teamwork at Tracking West during our shift. I got a chance to see Dan Wolf's automated tracking scope in operation for the first time; the automatic one button zeroing feature was worth its weight in rocket motors!

Wednesday night saw everyone troop off to Leitchworth State Park for a picnic. Good eats and socializing was followed by a quick trip to the falls at the head of the "Grand Canyon" of the East. The sight was well worth the huffing and puffing to climb down and then back up from the bottom. We all then gather for the NAR Benefit Auction.

Over \$1,100 was raised for the new Teacher Award Fund honoring Bob Cannon, the long time Education Manager at Estes. I restrained myself and came home only with a couple of discontinued Estes scale kits. Bob Kaplow walked off with the night's bargain; a range box full of old, out of production motors for only \$50, but Roger Wilfong's "Bag-o-Nose-Cones" full of BMS rejects for \$37 was a close second.

Highest bid went for the original, all parts still in the box, Mars Lander; yours for \$80, Tom Lyon.

Thursday was a half day of flying and another Apogee windfall for D3's in D Superroc Altitude. Southern Neutron again led the way with their maximum length, 300 CM bird going perfectly straight up for 659 meters with 0% closure error. Someone also proved that if you started as soon as you got off the launch rod, you can get one of these models to do three loops before the engine burns out. People who hadn't flown D3's in 3 meter tall models clearly forgot Superrocs, to fly straight, must be stiff as well as long....

Thursday night saw all 11 R&D folks take stage for presentations and questions. Affairs of state kept me away; the only report I got a close look at was Bobby Gormley's tracking report of error distributions and tracking angle corrections; the Contest Board is probably going to see more of this report in an effort to improve tracking closures in the future.

Friday ended NARAM with Sport Scale and Open Spot Landing. An A Division entry in the latter landed only 45 CM from the spot, and no one placing in C Division was farther away than about 5 meters.

While A flew Peanut scale, the rest of the world went Giant, and there were a lot of outstanding models. I spent the better part of a hour during viewing looking things over. An SA-2 Guideline anti-aircraft missile had some interesting weld lines; I wasn't able to find out how they were done. Mark Johnson had a nice Polish RP-3 sounding rocket, cleanly done. Southern Neutron had a new capsule for their perennial Little Joe II, another top notch effort. Pete Alway, by means unknown to this reporter, managed to get his NAR number on a Black Brant IX flown from Alaska, and had modeled it in the typical nicely done Alway style around BT-55.

NAR Membership Chairman Jon Rains had a nice Sidewinder with great details. Glen Feveryer had a really nice Black Brant II with cast fins and a super finish. A scale newcomer from Ohio, Tom Hamilton took top static score. His Little Joe II was scratch built, using mainly wood and paper, much to my amazement. He made extensive use of CAD to draw up patterns he needed for spacing elements on the bird and construction. I tried talking him into plastic parts, but Pete kept saying "wood is good". Yours truly had an Atlas 1, a Navy comm satellite flight shot, but painting in the rain in NY did the bird's craftsmanship in.

The flying produced less carnage than last year, but there were notable exceptions. Chad Ring, next year's NARAM CD put his two stage Black Brant X into one of the few targets on the field an old tank, and was immediately declared Best Midwest Qualified Flight winner. Tom Hamilton's Little Joe II went unstable as he had cut his noseweight a bit light. Repaired with urging and

assistance from Jay Marsh and George Gassaway, it went on to a qualified flight and first place in C. My Atlas didn't open the bottom chute and crunched to a DQ on flight one, then snuck in on #2, when the body descended horizontally. I snuck into a 4th place in Teams. A lot folks flew ISQY Tomahawks on Aerotech motors, so for once, the contest range looked nearly like the sport range.

The banquet was well run by the college, and the mood quite upbeat and festive. As I assisted in the distribution of awards, my recollection of winners will be from memory and thus might be in error, but here's what I recall:

A Division: Mike Fuller, Maryland

B Division: Shawn Smith, ??? (not sure about this one, folks)

C Division: Chad Ring, Indiana

Teams: Thrust You Can Trust; Al De La Glazia and Buzz Nau of Michigan

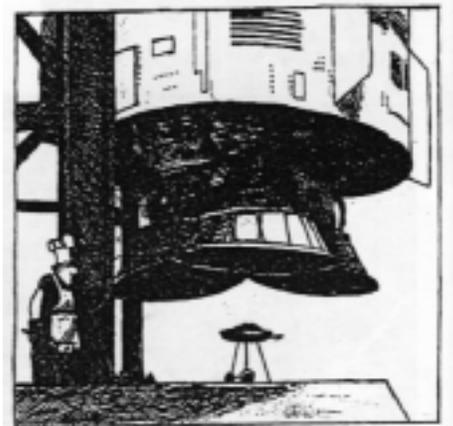
Section: Launch Crue; with NOVAAR about 500 points behind.

NAR President's Award: NAR Comptroller Stu McNabb, for his work organizing NAR financials matters

Howard Galloway Award: Michael Platt of HPMDA, for his work with BATF

Dan Wolf got a HUGE standing ovation for his work as NARAM-37 manager and a NARAM CD patch you have to earn and cannot buy. His long-suffering wife Chris was presented with a bouquet of flowers for her support during the past year.

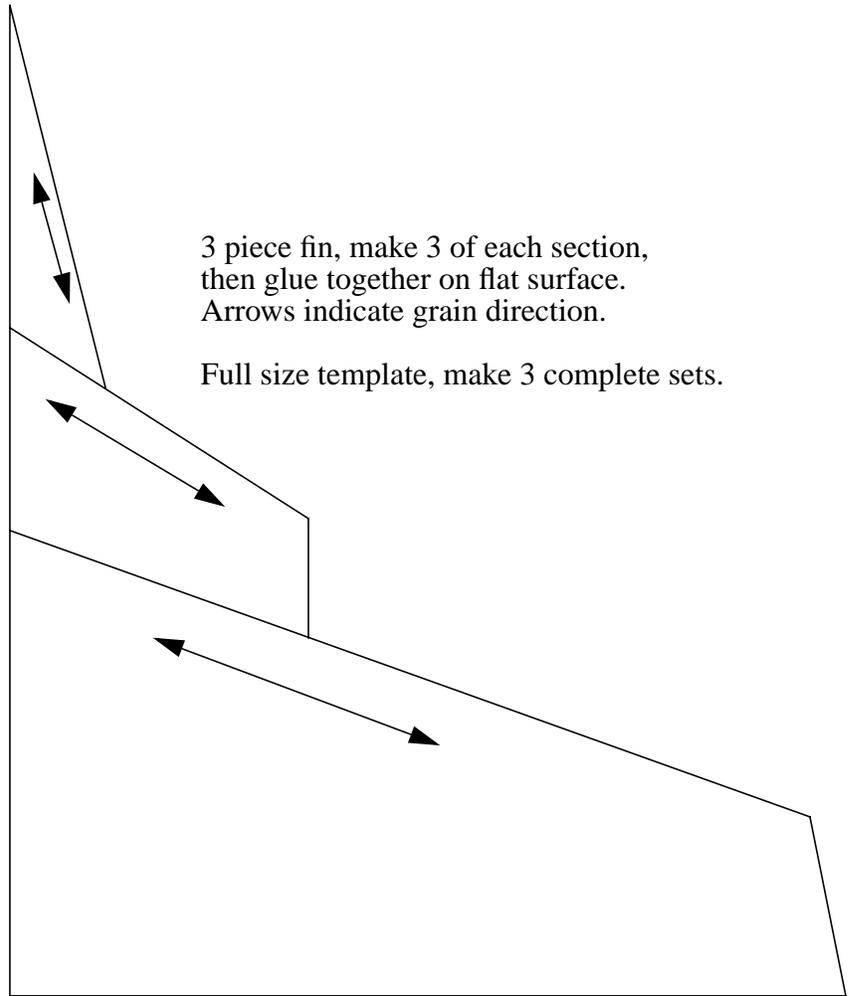
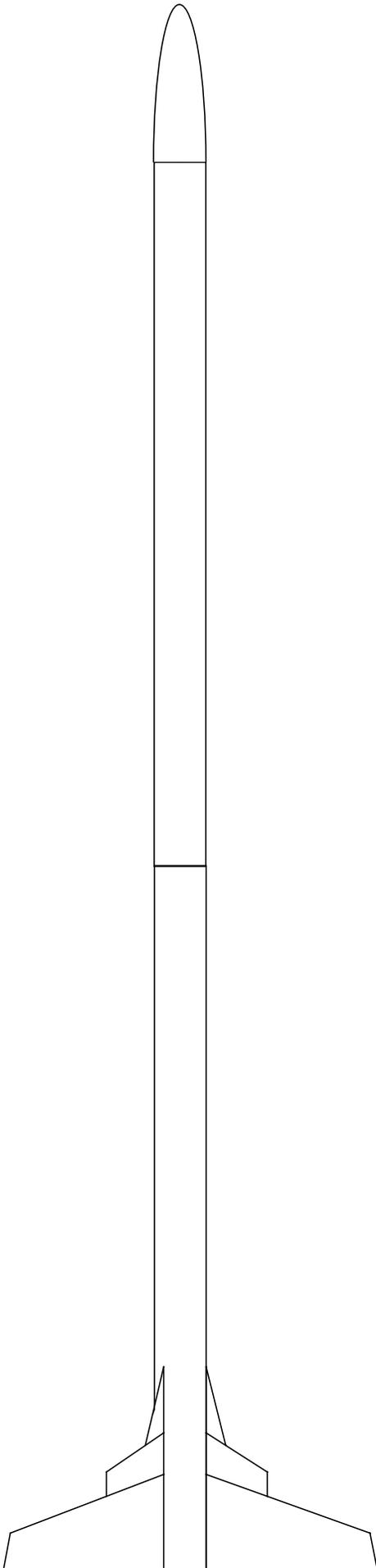
Chad Ring and Launch Crue now start the planning for next year, the first week in August, in Evansville, IN. I hope you'll all try to attend, as a good contest and sport launch is shaping up there.



Chef Bundick finds a new way to start the charcoal for the MRFF barbecue.

# Lightning Jack

by Mike Oswald



3 piece fin, make 3 of each section,  
then glue together on flat surface.  
Arrows indicate grain direction.

Full size template, make 3 complete sets.

## Parts List

- 1 - PNC-55AC
- 2 - BT55
- 1 - JT-55C
- 1 - PK - 18
- 1 - EH2055
- 1 - 4' shock cord
- 2 - 1" pieces of 1/8" launch lug
- 1 - Sheet of 1/8" balsa (or basswood)

Glue launch lugs at base of rocket and top of first BT-55 tube, centered between 2 fins.

3 fins, 120 degrees apart, at base of rocket.

Fly with B and C motors.

## Heard On The Street

Rumors and such, with apologies to the Wall Street Journal

**Welcome to the club** - Vic Caricato, Ray Chesi, Joseph Chiabai, Jeff Coleman, Philip Coleman, Frank Hammonds, Bill & Nicholas Koch, Rick Kramer, Amanda Mansfield, Leo Ringwald, Greg Seul, Jack Smith, Edward Svaldi, Donald Swikowski, and Ronald Swikowski have joined NIRA in recent weeks, welcome!

**I goofed** - The following errors have occurred in recent issues:

Adam Elliott's name was misspelled several times as Elliot.

Someone was identified as being Mike Ugorek's son, when in fact he belongs to someone else. The person is as yet unidentified.

No photo credits were given in the last issue. Adam Elliott, Ric Gaff, Bob Wiersbe, and Bob Kaplow provided photos.

The word "umbrage" did not occur in any article.

I apologize for any inconvenience, aggravation, insomnia, mental anguish, or irritation this might have caused.

**Recommended Reading** - A Man on the Moon, by Andrew Chaikin. I thought this was a great book, a glimpse into the inner workings of the men who flew to the moon, walked on the surface, and those who backed them up from the earth. I discovered I didn't know as much about Apollo as I thought, even though I followed each flight, read books, and watched hours of video. If you want to relive the wonder of Apollo, read this book. If you weren't around during Apollo, read this book. One of the best I've read!

**With High Honors** - John Kallend received the "Best Flight" award at the CIA "GARLO" event in Champaign on 2 July, for a flight of his AT Phoenix with an F23 SkyWriter motor. Congratulations!

**In for a Rough Landing** - Mars Pathfinder, a NASA Discovery program mission designed to deliver a lander, camera and instrument-laden rover to the Martian surface on July 4, 1997, has successfully completed an initial series of engineering tests intended to validate the spacecraft's unique atmospheric entry, descent and landing techniques. Mars Pathfinder will employ a new and unconventional approach to placing a lander on the surface of Mars, using a combination of parachutes, solid rockets and inflatable air bags to perform a safe, relatively hard landing of about 56 kilometers per hour (35 miles per hour).

**Major Merger** - Lockheed Martin, Khronichev Enterprises and NPO Energia announced the formation of a new company to market commercial Atlas and Proton launch services world-

wide. ILS-International Launch Services-will ensure that customers receive full advantage of both products, from contract signing through on-orbit delivery.

**Final Flight** - Georgiy Timofeevich Beregovoy died on 1995 Jun 30 at the age of 74. Beregovoy trained on a backup crew for the cancelled Voskhod-3 mission, and in 1968 flew into space to test-fly the Soyuz spaceship after the fatal 1967 accident which resulted in the death of Komarov. Beregovoy left flight status in 1969 but remained attached to the cosmonaut training team until his retirement in 1987.

**Blue Light Special** - LockMart has selected July 18, 1995, for the demonstration flight of the first company-developed Lockheed Launch Vehicle from Space Launch Complex-6 at Vandenberg Air Force Base. LLV-1 will place a 300-pound GEMStar communications satellite into a 360-nautical-mile, near-polar orbit.

## NIRA REPRINT SERIES

The NIRA Reprint series, which has been available for months at NIRA meetings, is now available by mail. The reprint series is an effort to get interesting useful information out of the collections of "Old-Timers" and into the hands of people who don't have access to the original material.

Sources for the reprint series include back issues of Model Rocketeer/American Spacemodeling/Sport Rocketry, Model Rocketry Mag., main stream magazines, and the Internet's Usenet rocket group Rec.Models.Rockets (R.M.R.) just to name a few.

There are currently 13 booklets available.

- 1) Sport Plans of the Model Rocketeer. A collection of 10 easy to build single page plans. 16 pages
- 2) Sport Plans of the Model Rocketeer #2. A collection of 12 single page plans with the emphasis on ODD. 16 pages
- 3) Glider How-to articles from the Model Rocketeer. How to build, trim, and fly a rocket powered glider. In addition to the how to articles are several more technical articles. 20 pages
- 4) Boost/Glider plans from the Model Rocketeer. Collection of 7 interesting 1 and 2 page plans. 20 pages
- 5) Ideas. A collection of 10 articles about... well...IDEAS! Some things you may not have thought of such as launching from under water! or kitbashing. 16 pages
- 6) Reusable Rocket Ships. Set of 3 articles about the Delta Clipper (DC-X) from Popular Science, Air & Space and Sky & Telescope. 20 pages
- 7) Rec.Model.Rockets Glossary of Rocket Terms.

8) The NIRA Big Book-o-tips! 22 pages of tips, hints, suggestions and ideas that will help you with everything from building to flying!

9) **NEW!** Glider Plans from the Leading Edge. Mark "Bunny" Bundick's 4 part series on Boost/Gliders for beginners. Five glider plans by NIRA's best glider builders including an "F" powered glider. 20 pages

10) **NEW!** LIFTOFF - For Beginners Only (not). A collection of articles on beginning rocketry by Lawrence "Mr. Strato" Bercini and Mark "Bunny" Bundick that were published in Sport Rocketry. 20 pages

11) **NEW!** The Lawrence Bercini collection of rocket plans Vol. 1. A collection of plans originally published in other club newsletters. Plans range from simple to complex and generally tend to be unusual. 12 plans

12) **NEW!** The Lawrence Bercini collection of rocket plans Vol. 2. More of Lawrence "Mr. Strato" Bercini's favorite plans from other club newsletters. 11 plans

13) **NEW!** Single Stage to Orbit, The Delta Clipper DC-X Spacecraft. One article from American Spacemodeling and five articles from the Internet.

Reprint booklets are FREE to members at club functions. If you want them by mail simply send 32 cents in stamps or cash for EACH booklet you order. Or (best of all) a large 9x12 Self addressed stamped envelope (the SASE can be used for several at once, be sure to include postage for EACH booklet) to:

Richard Gaff  
3175 Norwood Ct.  
Streamwood, IL 60107

## Hot Off the Press

A new book, "Model Rocket Design and Construction" is now available from Tim Van Milligan. The 120 page, large format book contains over 240 illustrations and 40 photos. Chapters cover topics like stability, construction methods, altitude performance tips, master modeler hints, HPR techniques, repairs, recovery system design, gliders, helicopter birds, staging and clustering.

If you place an order thru Tim prior to September 15, 1995, you'll also get a sheet of 17 fin templates, 12 paper canopy patterns to use on futuristic models, 5 paper shroud templates and three tube marking guides. Cost is \$17.95 plus \$2.50 for shipping.

Tim Van Milligan 708 Piedra Drive, Suite C  
Canon City, CO 81212

## NEWS RELEASE

### GENE LINKED TO FREQUENT MISFIRES

East Evanston, IL - Scientists say they've found the approximate location of a gene responsible for frequent misfires. "It's the first study to show the problem can be caused by a single gene", said researcher George H. Steine.

About 8 percent of all A divisioners have this problem at club launches without ever having control of the problem. This is the pattern scientists studied in A divisioners for the past decade.

The gene might be responsible for about half to three-quarters of all misfires in a given family of rocketeers, said Dr. Steine, a well-noted research scientist at the prestigious Native Illini Research Academy.

Misfiring disappears in about 15 percent of affected A divisioners each year, and diminishes further in adulthood. There is no current treatment for this problem.

Finding the misfire gene might enable scientists to devise a treatment in the future, possibly an injection of the correct DNA, Steine said. He and his colleagues reported their findings in the July issue of Natural Rocketry.

Dr. Willy Lay, chief of orthorocketics said the new work is the first of which he is familiar that tried to link the problem directly to a gene.

T. Pastrick, reporting

## Eat Cheese or Fly - Part II

NIRA will be running a High Power Launch on Saturday, August 12 at Bong Recreation Area in Wisconsin! The range will be open from 9am to 5pm, with a waiver to ~7200 AGL. There will be a \$4 range fee, plus you need a Wisconsin park permit to get in (\$6 for the day, \$24 for the year if you're not a resident of Wisconsin).

Only NAR or Tripoli certified motors will be permitted. All types of rockets and motors are welcome! There is a huge recovery area, so plan to fly 'em high! Beepers are strongly recommended, as the weeds are five feet high in spots.

Bong is located on Highway 142, 9 miles west of I-94. For more information, contact Steve Koszuta (414) 481-6341.



John Barrett looks a little sheepish after a D12 blew up in his Impulse. The rocket still managed to finish the flight on the other motor, even though it was missing a fin! (photo by Steve Koszuta)

### Caption Contest Entries

"Wait Bob! That's not a cat!" - Barb Bundick

"The kid is still looking for the shock cord" - Jerome Mrozak

"Loading Bailout (Sorry, action figure not included)" - Rick Kramer

"Diaper Recovery - A Full Load" - Barb Bundick, Lawrence Bercini

"Anything for a few moments of silence!" - Darlene Skinner, Blastoff Rocket Club

"But I'm too young to leave home yet, Daddy!" - Karen Wiersbe

"Growing tired of D Eggloft, Bullet Bob seeks new rocketry thrills." - Michael Guslick

"Other parents measure their kids in pounds. Bullet does it by body tube diameters..." - Michael Guslick

"What's a 'Live Biological Payload'?" - Michael Guslick

"Think an L motor will do?" - Michael Guslick

"After thoroughly inspecting a suspicious looking bird, RSO Bullet Bob finds a glaring safety violation." - Michael Guslick

"Bunny said that if this worked, he'd fly his two daughters!" - Michael Guslick

"Desperate to fly before the waiver ends, Bullet Bob installs a new noseweight." - Michael Guslick

"I promised my wife that I'd use a separate parachute for the payload section." - Michael Guslick

"Now I just have to add another payload bay for Belker!" - Michael Guslick

"In response to high priced airline tickets, the United States Postal Service has just introduced the Kiddie Mailing Tube. For only \$24.95 (insurance and fat children are extra), parents may now mail their children overnight (except weekends and ALL holidays) to Grandma and Grandpa anywhere in the continental United States. A postal worker demonstrates how the child fits snugly in the crush proof tube. If undamaged, the tube may be used to mail the child back to the parents. The Postmaster General stated, "...the new tube was strictly MY idea, and should generate an additional fourteen million dollars annually..." - Trent Tidmore

"Jay Apt didn't make his first flight till his forties" - Bob Kaplow

"WHAT ARE YOU DOING WITH MY DAUGHTER?!" - Judy Kaplow

"Bob, confused after too many hours building, thinks Rachel is a cat." - Rick Gaff

"Bob Kaplow and daughter Rachel 'Sally, but please wait until I'm older Ride' Kaplow" - Rick Gaff

"Only a child could have such touching faith in her father's sanity" - Rick Gaff

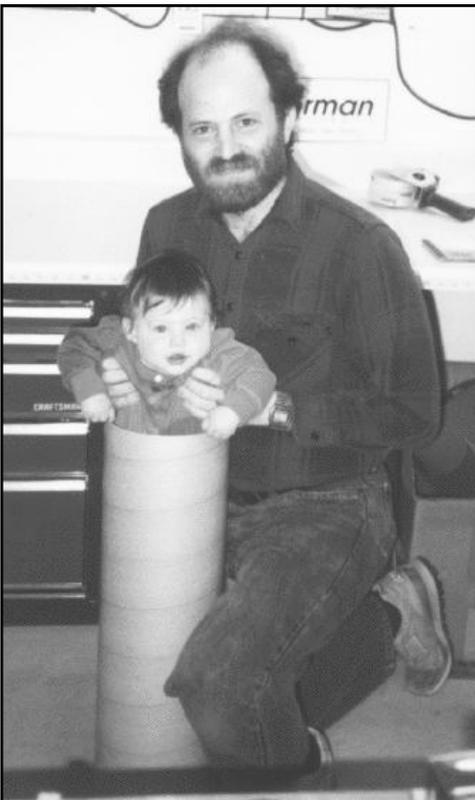
"In space no one can hear them spit up" - Rick Gaff

"Honey, are you using diapers for recovery wadding again?" - John Kallend

"You don't see many children of this caliber any more" - John Kallend

"Just hold it still with your toe until the epoxy sets" - John Kallend

Well, I'm glad that there wasn't a prize for this contest, since I can't pick a winner. But this was just for fun anyway. Enjoy! (It's amazing! Try to find out what people want to see in the newsletter, and get you 5 responses. But ask people to make fun of a fellow member, and look what you get!)





*The Future of Rocketry is NOT solid*