

THE LEADING EDGE

Newsletter of the Northern Illinois Rocketry Association,
 NAR Section #117, Proud Winner of the 1996 Rockwell Newsletter Trophy!

Volume 20, Number 4
 July/August 1997



Bob Alway's Cobra flight takes off on two of three motors. (N. Heyen photo)



Ron Husak looks down the wrong end of his Flying Bomb. (R. Gaff photo)



(N. Heyen photo)

MRFF has really turned into a Family Affair! (R. Gaff photo)



Ah, June. Time for the Bulls to win another Championship, and time for NIRA to host another Midwest Regional Fun Fly!!!

T MINUS 1 - NIRA'S CALENDAR OF UPCOMING EVENTS

1997 CLUB LAUNCH DATES

Launches are BYOL (bring your own launcher). The location for our 1997 launches is unknown at this time. If you have questions prior to any launch, call the NIRA hotline at (630) 690-6353 and leave a message, I will call you back.

July 20 - Regular club launch. Havard Sod Farm, 12pm - 5pm.

August 9 - Eat Cheese or Fly (ECOF). Bong Recreation Area, WI. 10am-5pm.

August 17, September 21, October 19, November 16 - Regular Club Launches. Site and time to be determined.

Other Items of Interest

July 19 - HPR launch at Bong. Contact Dave Sutton (414-886-6017) for information.

August 16 & 17 - HPR launch at Bong. Contact Dave Sutton (414-886-6017) for information.

STAFF

Bob Wiersbe - Spam, Egg, Sausage and Editing
 Ric Gaff - Egg, Spam, Spam, Spam, Baked Beans,
 and all the other work.

CONTRIBUTORS

Peter Alway, Mark Bundick, Jonathan Charbonneau,
 Ric Gaff, Norm Heyen, Bob Kaplow,
 Dave Miller, Bill Thiel, Bob Wiersbe

Model of the Month Winners

I have no idea what months these photos are from, so I beg your forgiveness.

Left: Matthew Duckworth's Jayhawk took Youth, while Tom Pastrick's 8 Feet 10 1/2 Inch rocket took Adult (yes, it does fly!)

Center: A family victory! Kimber Guzik won in Adult with her Phoenix, and Michael Guzik won in Youth with a Serval.

Right: Pierre Miller with his scratch built Mercury-Atlas.

Congratulations to all the winners!

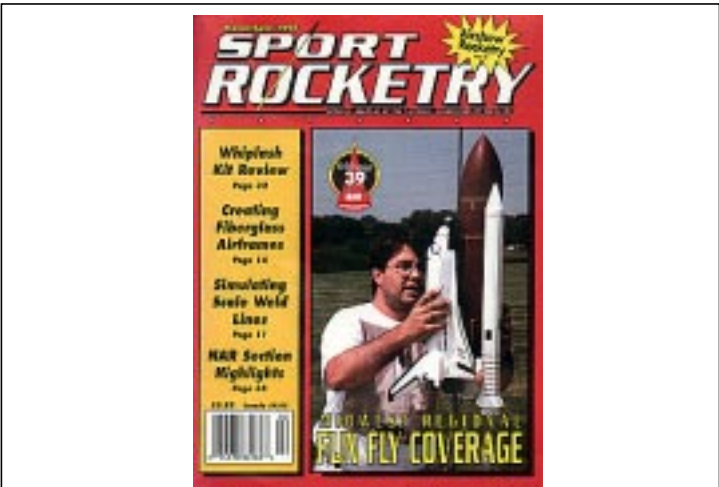
MONTHLY MEETINGS

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 (630) 690-5442 if you can help with ideas or can speak yourself.

Currently schedule meeting dates are: June 6, July 11, August 1, September 5, October 3, November 7, December 5.

Please note that the July club meeting is on the 11th!!!

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 r.e.wiersbe@lucent.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. Nothing beats a day flying rockets, well, except maybe a day when you win 20 million tax-free dollars, a slot on the next shuttle flight, and a couple of thousand acres of flat grassland that you can do anything you want with. I had a day like that once. Then I woke up in the dentist's chair.



A recent issue Sport Rocketry featured the Midwest Regional Fun, Fly - 1996, and sported a picture that Bob Wiersbe took at MRFF 1995!



SMURFF!
(It's not just an annoying blue creature anymore)
by Bob Kaplow

I've just returned from SMURFF (Summit City -Muncie Regional Fun Fly, a rip-off of NIRA's MRFF) in Muncie. What a great weekend! Saturday weather was just perfect, but Sunday got breezy as a storm front approached, and not much was flown. The range was shut down early Sunday to clear the storm.

I hear the total flight count for Saturday was three hundred eighty something, quite respectable. I imagine Sunday was significantly less. Lots of neat flights, a few prangs, catos, and re-kitting in flight, and over a hundred people flying.

NIRA had great representation with half a dozen carloads of rocketeers. Bunny, Ric Gaff, Steve Smith, Rick Kramer, John Barrett, the Guzik family, and myself flew ourselves silly. John and Rick battled it out for most flights, as Bunny politicked around the field.

I think I flew a total of 9 flights, shortened by Sunday's winds. My highlight for the weekend was a successful L2 certification flight. I finally finished a THOY Falcon that had been sitting in my basement in kit form for several years. It made a perfect flight on a J350-WM, ejecting right at apogee, and proceeding to try for a US record in J Parachute Duration. I hit a major thermal, and it just hung in the sky for several minutes, finally dropping out and descending almost a mile downrange, just short of a road and some major league trees. The Adept altimeter (no ejection this time, as I didn't have time to



A tribute to Jimi Hendrix is prepped at the HPR pad. (R. Gaff photo)

modify the Falcon for dual ejection that would have significantly shortened my walk) beeped out 4535', tops for anything I can prove I've hit.

Besides the L2 flight, I flew the usual assortment of Happy Meals, Intruders (including the D12 version), one crayon bank, the return of my 3X giant scale Sprite (broke its shock cord and lost the nose 3 years ago, finally repaired it this spring). Sunday I flew the new Biosphere (plastic dome with little cows and pigs inside), and found that last Halloween's Great Pumpkin didn't fly well at all in the wind. At that point I applied Cato's rule, and decided it was wiser to save the models for another day. I really wanted to fly my new Sudden Rush, but it will wait for



Kimber Guzik with a Stellar Dimensions kit. Another of the "Women of Rocketry" (R. Gaff photo)

a better time.

The other highlight for me was meeting old friends and making new friends. Got to meet several RMR regulars and a few lurkers too (Hi!). Some of the internats team was over the hill practicing for the next meet. Got to see some folks I haven't seen for a long time.

All in all, this was a great launch, at a great site, the AMA flying field. Thanks to the folks from SCAM for a great time. I'll be back for the fall launch. It looks like this will become a regular event, the weekends before Memorial Day and after Labor Day respectively. Mark your calendars and don't miss this next time.

Mooseheart IV - When Nature Calls
by Bob Wiersbe

On June 7th the 4th Annual Mooseheart R/C Land and Air Show was held on the grounds of Mooseheart. Ric Gaff, Leo Ringwald, Ken Goodwin, Kevin McKiou, George Riebesehl, Bob Wiersbe and Cheri Chaney were on hand to represent NIRA and put on two demos of rocketry and Radio Controlled Rocket Gliders.

The weather wasn't particularly nice, windy and a bit chilly with a threat of rain. Still, we set up our equipment where we stood the best chance of recovering our models and finished some last minute prepping of our models.

Kevin McKiou and George Riebesehl put on an excellent display of RCRG, sending up several flights, including one on an Aerotech E6 (about a 9 second burn time). The glider kept going and going and going, until George was afraid he'd lose it in the low clouds. The crowd was suitably impressed with the flight, and with George's catch of the glider when he brought it back to earth.

On the model rocket front, we set up the first rack with 6 identical rockets (Estes E2X Generic kits) with 6 different motors. The idea was to demonstrate visibly just what each engine class can do to the same rocket. First up was a 1/2A6-2, then an A8-3, B6-4, C6-7, D21-7, and finally

an E25-7. All the rockets used streamer recovery so we'd get them back for the next show. All the engines ignited, until we got to the D21 which chuffed. We skipped ahead to the E25 flight and watched it warp into the sky. Everyone lost sight of it, since the smoke trail couldn't be seen against the gray sky. Miraculously, I spotted it as it was coming down over the parking lot and we recovered it!

We then went through a demonstration of different recovery types, parachute, tumble, glider, and helicopter. Ric brought out his great assortment of odd-ball designs, like the IFO (Identified Flying Object) and The Die is Cast. We also flew some large D powered models, which the crowd always enjoys seeing.

Scott and Adam Goodwin, and Kyle and Christopher Wiersbe were our chief recovery crew, each one calling for the rocket they wanted to recover. The did an excellent job and only one rocket was lost (and that was only because I didn't want to walk in some tall weeds during a downpour - I knew where the rocket had landed). Thanks guys!

Kevin and George would put on another RCRG display while we would reload the racks. We repeated this process 3 or 4 times during our first 45 minute demonstration, then let the Radio Control Planes take over.

After taking a quick breather we decided to start prepping models for the next show. About 11:30 it started to rain steadily and we had to get all of our gear and rockets under cover. Fortunately, I remembered to bring a couple of large tarps and we were able to get things covered. Still, it was wet and messy for a while, and some rockets did get wet. The rain stopped about 12, and we started prepping again.

The RC guys stopped their demo about 12:50, and we were asked if we could do our next demo early. Since we were ready this time, we went ahead. The format was basically the same as the first demo, except Ric did the talking this time (I did the first one). About 30 minutes into the demo it started to drizzle again, then got heavier and we decided to fly the last rack and call it a day. Just as the last rocket was launched it started to rain really hard and we had to scramble to get things put away before they got soaked.

Kevin and George had to head for home, but the rest of us went to McDonald's to get dry and eat something. We had an interesting time, to say the least. It seems that when the weather is good at Mooseheart only 2-3 people show up to help. When more than that come, it rains.

There'll be a Mooseheart 5 (or is that V?) next year, so make plans to come and help out. Just be sure to pack an umbrella.

Bong Launch Report from Norman Heyen

Just a quick note about the launch at Bong Recreation Area on Saturday, May 31. I got there early, for me, about 9:30. There were about 15 cars there already. A scout troop was there, keeping the low power pads busy. And the carnage of Wizards, and Gnomes and the like on the gravel runway was a sight to behold.

It looks like I filled out the first HPR flight card, and my Initiator tested the wind on an F. Found out there was a lot of water, and a small creek, downwind of the launch site... Pretty frustrating to see your rocket laying on the ground and have to figure out how to cross a 12' wide stream. But, there was a narrow spot I found, took a running jump and mostly cleared the water hazard... Later in the day, this spot was very well worn...

The next couple of hours were spent doing some pad manager duties. Great way to meet people and see all the hardware up close and personal. We had 6 pads running almost all day. The winds kept the higher power stuff on the ground until some one got brave enough to try it, then a steady stream of J350's was racked up most of the afternoon.

After the shift, my friend Jeff arrived and we got ready for his level I cert on his PML AMRAAM4. With the wind, we picked an H242 short. Jeff built the engine, under my watchful eye. (Hey, it was my casing...) Packed the chute, prepped everything, checked it twice and headed off to the RSO table. Back we came to tighten up the motor mount and this time, on to the pads. A bit of fiddling with the launch angle (straight up, the walk will you good as my advice. :-), the required photos and time to wait... We were on pad 4, so the tension mounted. But soon enough, Jeff's name is announced, a prefect is rounded up and the



The check-in line, complete with scale models. (N. Heyen photo)

video camera starts. 5...4...3...2...1...Whoosh! The AMRAAM kicks up quickly, but close enough to see the whole flight easily. Even the AT delay works today and a chute pops out just a touch after apogee. Good chute, safe recovery and welcome to High Power Rocketry Jeff. Get your checkbook out!

After seeing that, I figure I need to launch something too. My stretched EZI takes to the air on an H112J. The short delay is about 12 seconds, even with an instant ignition. The altimeter is beeping out 1101' and the tube sports a giant sized Estes dent... But the Rocketman chute saves my bacon (and rocket) again. It can be flown without any damage. But the sudden shock did tear the big cap off the altimeter pcb. A wrap or two of electrical tape cures that for now.

Another shift of pad manager to help out. Boy, the rods and pads are really filthy by this time. Lots of blackjacks must have been launched. (Mental note: bring some rags with next launch.) Again, I like this, lots of smoozing, er,

I mean, networking. Lots of very high flights, Dave flies his Magnum (finally) on a J180. Great flight, it's about time the prefect flies something...

The winds seem to be dieing down a bit, and I've drug this VB Extreme 38 along to many a launch. Well, I chicken out and use a G80 and the adapter the VB provided with the kit. A bit of teasing with the LCO that a J350 would fit it the Extreme... But, not today. A prefect flight! Even with only a G80, it takes off quickly and coasts to an ejection just about at the limit of my vision. Thankfully, someone sees it and points me towards it. Again, across the water hazard, and my luck holds out. Here comes a couple of folks carrying my rocket! They said it came down near where they were and even pulled it out of the low tree it was in. The altimeter was beeping out 2376' (or was it 2576'?), a personal record. I wonder how high it would have gone if the ejection hadn't gone off while still going up. Sure, one time the 10sec delay is right on time instead of being too long...

Any way, at 7:00PM the waiver ran out, and we took the range down. We ran out of flight cards! There were 150 of the new ones and about 75-100 of the old ones left! Must have been about 250 flights and about 75 or more fliers. There was a great deal of pent up demand for burning AP. I got my hit for awhile. At least until June 20-21 when the next event rolls around.

See all of you there!



Pick your favorite AP - Left: Blue Thunder, Center: BlackJack, and Right: White Lightning (my personal favorite) (N. Heyen photos)

MRFF 1997
by Bob Wiersbe

The 7th Midwest Regional Fun Fly almost didn't happen this year. Our plans were to use Pratts Wayne Woods as we have every year, but in January we were shocked by the news that Pratts Wayne wouldn't be available to us any more. The reasons? First, the Forest Preserve is returning it to its natural state - swamp. I guess the beavers finally won. Second, it seems the new President of the Forest Preserve actually read the laws governing use of Forest Preserve Property and discovered that rockets are not allowed at all! Funny, we'd been there for six MRFF's and a NARAM!

In steps Mike Ugorek. He says he knows of a possible site, a Boy Scout camp in some far away country called "Yorkville". At the February club meeting Mike announces that we can use the facilities and MRFF is a go! Then he tells us about the field, only about 500 feet wide, but at least 1500 feet long, with a similar sized field on the other side of a thin line of trees. It doesn't sound too bad, especially when you consider the alternative - no MRFF.

Then came the good stuff - no fee for tents, camping on site, a concession stand (with real food and pop!), running water, real toilets, a huge grill for the BBQ, and a meeting room on site. All for one low fee! Oh yeah, and no restrictions on selling things!! Compare that to Pratts Wayne - a few picnic tables, one porta-potty, no water, fees for everything, and no sales.

Day Minus 1

Friday night Bob Kaplow, Mike and Sabrina Ugorek, and Ric Gaff went out to the site to get a head start setting up the range. You may not



Another fine lift-off shot from Norm Heyen. Rocket owner unknown.

know it, but it takes a car and several vans to haul all the equipment needed to run MRFF. Later, the Guzik clan and some folks from SMASH (an NAR section in Michigan) showed up and spent some time shooting the breeze. Then they listened to the radio as the Bulls won their 5th NBA Championship, while the rest of us watched it on TV.

Day 1

Even with the prep work on Friday night it still took us two hours to get the range up and running on Saturday morning. The first flight didn't take off until 9:45, but there weren't that many people around that it mattered. The wind was blowing across the short dimension of the field, right into a forest of trees. Some of the first few flights weren't angled properly and ended up lost in the trees. One of them was Kimber Guzik's "Dragonfly", a Launch Pad kit and the Model of the Month winner just a week



Jonathan Charbonneau's Launch Pad kit spills it's guts after a motor in the cluster fails. (N. Heyen photo)

before. It was sad to watch such a nice model drift away. A few got lucky and made it into a small clearing just before landing in the main forest, others hit the trees right at the edge.

In the early afternoon the wind died down quite a bit, and people began flying bigger rockets and motors. Even then they had to be careful because of the thermal activity across the field. Dave Miller put up one of the few High Power flights at MRFF this year, his D-Region Tomahawk on an H-242. It was the tenth time he's flown that model, and managed to land it back near the HPR pad. At least 1 HPR certification flight was made, but the rocket was lost into the woods when it headed the wrong way after lift-off.



Kevin Wickart gets one of his many Estes "K" series flights ready for liftoff. (R. Gaff photo)

Dave Miller spent most of MRFF flying his "C6-7 Elimination Vehicle". He made at least 20 flights on C6-7's, trying to use up several years worth of accumulated motors. Bob Wiersbe was declared THE KING of staged horizontal flight with his "Nike-X" (the new name is Nike-Terror). The electronically staged rocket went unstable just as it cleared the tops of the trees, doing two complete loops before the upper stage ignited and cruised over the range at about 100 feet, never to be seen again. Kevin Wickart did something never seen before at MRFF - he was flying the Estes catalog from kit number K1 on up in order. He managed to reach around K20.

The check-in line was sometimes 6 people deep, but the wait usually wasn't very long. We did have one major glitch when 6 pads suddenly stopped working, and the repair crew of Gaff, Hutchinson, and Kaplow had to do some quick debugging. After isolating a bad relay and putting in some jumpers the range was back up, with only about a 15 minute down time.

Nordic Rocketry (Howard and Melissa Olson) was on hand to sell kits and parachutes, they quickly sold out of the kits and were taking orders for shipping the next week (with no shipping charge!). They also donated epoxy and CA to be given to the owner of every 100th rocket launched. Balsa Machining Service (Bill Saindon) was selling nose cones, and donated some nose cone assortments for the raffle. Saturn Press (Peter Alway) was out selling books and posters, and flying itty-bitty scale rockets. Next year we hope to have more vendors on site, assuming we use the same place. It really was nice to be able to buy and sell on the field, and we really could have used someone who could sell motors.

In the afternoon the Le Mans Eat contest was run, and it was done so well that it didn't interfere with normal range operations. It was fun to watch people chasing their rockets and eating marshmallows, some of which were pretty messed up from their flight. It was the first time I'd ever heard of someone using CA to attach



Peter Alway hooks up a two stage kitbash kit. (R. Gaff photo)

the marshmallow to a rocket, and then eat it. Ick.

The range was kept open until after 6pm, and the waiver was extended up to 6pm. This worked out well, considering our late start, plus the fact that the wind died down, and the grill for the cook out wouldn't start. When the range finally shut down we had made 606 flights!! Makes you wonder how many rockets we could have flown if there was less wind (or it was going the right direction) and we had started at 9am.

People eventually wandered over to the picnic area where the camp staff was busy trying to get the propane grill to work. They eventually gave up and used charcoal, but this delayed dinner even more while we waited for the coals to get hot. 75 hungry people were all waiting for burgers, brats, Italian sausage, hot dogs, or chicken to come off the grill. Eventually everyone got fed, and no one left hungry. The Bundick's did a marvelous job, as always (Mark's brownies were a big hit).

No one seemed to be in a hurry to get the evening activities started, they were just enjoying a nice quiet evening talking with old and new friends. Eventually, someone noticed that



Ty Thompson from Michigan with his Silver Comet. This flight crashed, but the model flew again. (R. Gaff photo)

it was getting pretty late and the gang headed over to the meeting room for the raffle, People's Choice, and Kitbash. It was really, really nice to have the meeting room on site so we didn't have to pack up and drive to another city.

Day 2

Sunday was a repeat of Saturday, sunny, hot, and windy. The only difference was that the wind was blowing the length of the field and it never stopped. Rockets that were launched well upwind were still drifting across the line of trees that separated the two fields and landing in the tall clover on the other side. I lost two rockets to the clover, but found two of Ken Goodwin's. It would have helped to have a spotter on the other side. I'd like to thank all the people who found someone else's rocket and brought it back to the range. I know I recovered my Mustang this way, and I'm grateful.



Dave Miller and one of the Classic Kits of Model Rocketry - the Mars Lander. It takes a lot of nerve to fly this kit! (R. Gaff photo)

When I got to the field at 2pm we were only on flight number 800, and out of state folks were beginning to leave. The winds got so strong later in the afternoon that they blew the range tent down on top of Robin Miller and Cheri Chaney (bending the aluminum poles!). There was a call for last flights, and a few diehards kept on flying (myself included). I managed to get flight #900, after several rockets misfired before mine flew. We finally called it quits with flight number 919. We still haven't reached that 1000 flight mark at a MRFF yet, but we'll do it someday when the weather cooperates a little more.

After spending an hour taking down the range and loading the equipment into our vehicles a bunch of us headed to Sugar Grove for dinner,



Carl Van Camp hooks up his R2D2 unit while daughter Mackenzie mugs for the camera. (R. Gaff photo)

and a chance to hang out one more time. We talked a lot about the site, and the general feeling that while it wasn't ideal for rockets (especially high power), all the amenities make it a good place to hold MRFF.

Thank You's go to everyone who lent a hand at MRFF this year, especially Mike Ugorek for organizing the event, Ric Gaff for assisting him, and Bob Kaplow for handling the waiver and organizing all the equipment. Thank You also to the following people:

LCO's: Cheri Chaney, Robin Miller, Adam Elliott, Rick Kramer

RSO's: Dave Miller, Bob Kaplow, Bob Wiersbe

Check-In: Rick Kramer, Ken Hutchinson, Greg Roman, Bob Wiersbe, Joe Nowak

Everyone who helped set up/take down the range.

Bill Thiel for running the Fun Contests.

Mark and Barb Bundick for doing a great cook-out.

And anyone else who helped out that I forgot to mention.

MRFF '97 Sponsors

MRFF would not be the same without these companies who support us year after year. If you received a prize, take the time to send them a note thanking them. This year's sponsors were:

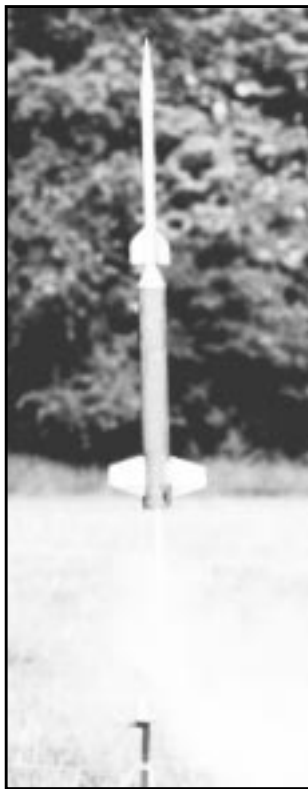
Aerospace Composite Products, Aerospace Specialty Products, Balsa Machining Service, Balsa USA, Belleville Wholesale Hobby, Countdown Hobbies, Custom Rockets, Estes, Futaba, The Hobby Works, The Launch Pad, LOC/Precision, NARTS, Nordic Rocketry, Public Enemy Rockets, Red Arrow Hobbies, Saturn Press, Seattle Rocket Works, Thrust Aerospace, Tower Hobbies, and Vaughn Brothers Rocketry.



Mike Ugorek takes a break from organizing MRFF to fly some rockets. (R. Gaff photo)



One of the few HPR launches at MRFF this year. This one got lost in the woods. (N. Heyen photo)



Ric Gaff's scratch-built Nike-Cajun takes off on a D12. (N. Heyen photo)



Chris Wiersbe at his first MRFF, flying a Centuri Phoenix Bird that he prepped all by himself (while dad was out looking for a lost rocket). (R. Gaff photo)



Bill Thiel with his Texas Mosquito. (N. Heyen photo)



Howard and Melissa Olson of Nordic Rocketry Fame (R. Gaff photo)



The MRFF crew finishes what the wind started - taking down the range. (D. Miller photo)

LE MANS EAT

By Bill Thiel

The first fun events of MRFF 1997 was the single marshmallow launch and eat contest, commonly known in NIRA as Le Mans Eat. This brought out 15 people to try for the honors of being the fastest to fly a rocket with a marshmallow attached to it, recover the marshmallow, eat it, and then show the timer an empty mouth. Timing begins when the rocket was launched off the pad.

The times ranged from the longest of 2:51.46 to the winning time of 0:08.69 seconds. The participants were as follows (not in any order): Craig Fahy (2:51.46, :12.53), Mike Swikowski (1:00.89, :20.92), Bob Alway (:23.90), Matt Duckworth (0:17.34, :14.06), Mike Guzik (:11.50), Adam Elliott (:15.42, :09.55), Mark Soppet (:22.62, :19.52), Arron Lyle (:19.19, :14.80), Rick Kramer (:25.18), William Wickart (:20.71), Mary Wolf (:18.61), Bob Kaplow (:19.60, :13.79), Sara Wolf (:30.00), Sabrina Ugorek (:16.37).

The winner was Ed Thiel with the winning time of 0:08.69! He tried to better his time with a second flight but this one was slower at 0:09.5 sec. The launch rods had to be cleaned off due to some of the marshmallow rubbing off onto the rods. This event got the taste buds going for the B-B-Q later that afternoon.



Sabrina Ugorek readies her Le Mans Eat entry. Nothing beats the taste of blackpowder and ejection charge on a marshmallow! (R. Gaff photo)

DUAL LE MANS EAT

By Bill Thiel

Sunday, and its time to wake up the taste buds again just before lunch. Lets have a go at dual marshmallow launching this time! The field of contestants was smaller than yesterday. We had 5 hungry rocket scientists sign up for the dual launch, they were Adam Elliott, William Wickart, Ed Thiel, Craig Fahy and Mike Guzik.

Adam had the first flight today and set the time to beat as :10.32 sec. William followed with his only flight with a time of :28.63 sec. Then Ed

came up with a Time of :12.28 that put him in second place to which he said I'LL BE BACK. Craig sent his flight for the day and recorded a time of :17.79 sec. Mike launched his first flight and recorded a time of :14.31 sec. Then Ed was back at the pad to try and regain his crown, and this time he was timed at :08.66. That put Adam in to second place. while Adam was prepping his Rediroc Mike tried to get in the race with a better time. Mike's time got longer instead of shorter :40.94 sec. Adam was up to bat again this time the marshmallows came off the rocket at the launch pad and he was timed out at :07.95 sec.

It was up to Ed to try one more time so he got creative with his RediRoc and put streamers on it and taped the marshmallows to them. All was well till the launch when the streamers with the marshmallows flew into the blast from the rocket engine and toasted them, in the race to eat them they did not stay in the mouth that long to taste the sugar just the burnt part. Ed's time was :07.85 sec. he won the first place again and received a rocket kit, Adam won a Large bag of marshmallows as a second place prize.

Team Kitbash

by Bill Thiel

It's time to round up the participants for the team kitbash. This year we had 25 people put up hands to join the bash. After all participants picked numbers from the hat the teams were placed at different tables. At this time we found that two of the teams by chance had all young people making up the team, so the judges moved some of the adults to even up the teams.

The next step was to draw the themes from the hat, all of the themes this year were names of rooms in a house. The names of the rooms picked were as follows, MUD ROOM, BED ROOM, CLOSET and BALL ROOM. The teams had three rockets to use all the parts from to build their kitbashed rocket from. The rockets were a Bullpup, Alpha and Super Cobra. The teams were given one hour to name the team, name the rocket and build it.

Team 1's theme was the Mud Room, they called themselves the Mud Puppies and named the rocket Mud Room - Long Mudder. This one was the tallest of the rockets. The members of the team were Mike Ugorek, Adam Elliott, Greg Roman, Mike Swikowski, Michael Guzik, Andrew Christensen and Erik Christensen.

Team 2's pick was the Bed Room, the team name was the Fly-By-Nighters, and they called

the rocket Bedknobs W/O Broomsticks. This rocket was made in the shape of a four poster bed, complete with a passenger on cloud nine who went along for the ride the next day after a good nights sleep. For bonus points the team said the rocket will spin. This team was made up of Wally Wilkins, Sabrina Ugorek, Mark Soppet, William Wickart, Kevin Wickart and Mike Kenia.

The Closet was picked as the theme by Team 3. Their team name was The Closet Monsters and they named the rocket Fibber McGoddard's Closet. The rocket was also in the shape of a monolith (one of Adam Elliotts' specialties). The Closet was filled with a Mop, Books, a ripped up Report Card, a Rocket (of course) and the obligatory Skeleton. The people who came to open the door and fill the Closet were Scott Goodwin, Kevin Wickart, Peter Alway, Craig Fahy and Nathan Carpenter.

The last of the teams picked the Ball Room as their theme, the team name was The Wall Flowers, and their rocket was called Ball Room Blast. The rocket had a round dance floor complete with a drums and a drum-

mer, dance couples and chandelier. The Wall Flowers were Brett Carpenter, Superman



The winning Kitbash team - The Wall Flowers: Brett Carpenter, Superman A.K.A. Jonathan Charbonneau, Ken DiGiulio, Ken Goodwin, Ron Husak, Joe Duckworth and Matthew Duckworth.

A.K.A. Jonathan Charbonneau, Ken DiGiulio, Ken Goodwin, Ron Husak, Joe Duckworth and Matthew Duckworth.

All the kitbash rockets were kept by the judges overnight to be scored on all the static points. The Fly-By-Nighters came in first with 775 points, then we had a tie for second by The Closet Monsters and The Wall Flowers, and that left the Mud Puppies in the back of the pack.

At about 11:00 A.M. Sunday the teams were called to the Range Head to get their rockets and prep them for the flight portion of the scoring.

The Mud Puppies had the first flight, and did not put a big enough motor in the rocket. The rocket lifted off the pad and arched over and landed before the ejection charge blew the nose cone off for its recovery phase of flight. It received no damage on landing, and no broken parts. This made their total points for the event 750.

The Fly-By-Nighters came to the pad next. They said the rocket would spin, and it did, all over the place. It was the most unstable of all the rockets flown in the kitbash contest. The rocket only lost a bed post on landing. The flight added 200 points to the score to give them a score of 975.

The Closet Monsters were now up to the pad for their flight, the rocket lifted off, but was under powered due to all the weight of the stuff that the monsters put in to the closet. The rocket landed before the ejection charge blew the contents of the closet out to be recovered by any of the following recovery means, parachute, streamer, glider, tumble and helicopter. The rocket lost two fins on landing. This flight also added 200 points to their score to bring the total for the Closet Monsters to 950.

The last Team to come to the pad was The Wall Flowers. The rocket flight was the most stable of all the rockets, but they were also just a little under powered. The ejection charge went off just before it landed, and the rocket received no damage to it. The flight gave the team 275 points to make their total 1025 giving them the first place in the Team Kitbash for MRFF 1997.

Confused Stages; Stage 2 by Jonathan Charbonneau

In my previous article, I described each of the eight fundamental rocket configurations, how many stages each has, and how to determine the number of stages in any configuration under NAR contest rules. In this article I will describe the attributes of each configuration.

The main attribute of the single stager is its simplicity. Since it has just one engine, it is the

least expensive to fly at any given impulse. It is also the most reliable as it has fewer things that can go wrong. Its main drawback is its blandness. It doesn't do anything fancy on its way up.

The series stager's main attribute is its ability to reach extreme altitudes. It is also spectacular to see the staging happen during flight. Series staging can our perform a single stager if it is used wisely. It isn't always the best. The drawbacks of series staging are the increased complexity from having to airstart the second engine (and third engine if there is one), and the fit between the stages must be just right if it is to work properly.

On to the cluster. This configuration has the most thrust for any impulse level. It's useful for lofting heavy payloads and for flying large rockets in small flying fields. The drawbacks of clustering is increased complexity from having to ignite two or more engines at the same time and increased drag and weight. If used wisely, a cluster can outperform a single stager and in some cases, a series stager.

The parallel stager combines the thrust of a cluster with the weight shedding of staging. It also allows for the main rocket vehicle (central core) to be streamlined like a single stager. The parallel stager is a real crowd pleaser too. Its drawbacks are complexity from igniting three or more engines at the same time, and getting the fit between the boosters and core rocket just right for proper function.

The complex cluster provides the longest powered flight. It can give a draggy rocket a higher altitude than possible otherwise. Used wisely, it can allow a rocketeer to have the FX of Blue Thunder propellant and the performance of White Lightning propellant on the same flight. Drawbacks include complexity of air-starting the second sub-cluster and problems in deploying the recovery system at the right time.

The complex parallel stager provides a more gradual transition from the high thrust of a cluster to the sustaining thrust of one engine than does the parallel stager. Drawbacks are the same as with the parallel stager, but with the added problems of having to air-start the secondary boosters and making sure they don't fall off too early nor too late.

The salvo stager is good for R&D experiments. It allows for a nose shape; fin airfoil/planform; boattail, etc. and a control design to be flown at the same time, same initial speed, and same initial direction, reducing experimental errors from changes in weather that may occur between flights. Drawbacks are having to airstart two or more engines at the same time and complexity from having two or more sustainers atop the same booster.

Now for the last configuration, the boosted dart. Its main advantage is that the upper section or dart as it is called, is sub-minimum diameter

and separates from the booster at burnout. This allows for a higher altitude than possible with even a minimum diameter single stager. Drawbacks are difficulty in tracking the dart after separation, especially since MRC's FX engine is no longer being made, and complexity in having to deploy the dart's recovery device without an engine [remember: the dart is engineless and unpowered].

As you can see, no one configuration has a monopoly at being best. Each one has its attributes. Which one is best depends on the mission to be accomplished. And don't forget! All of them are fun!

Happy Flying and always follow the NAR Safety Code.

Midwest Regional Fun Fly by Peter Alway (Preview of T Minus 5 article)

The Northern Illinois Association of Rocketry (NIRA) hosted this year's Midwest Regional Fun Fly on Saturday June 14 and Sunday, June 15 at a Boy Scout camp Yorkville, southwest of Chicago. I had been to the event a few years ago, but the weather was so hot and humid that I nearly collapsed just lugging my "bookstore" out to the field. I hadn't bothered to make the trip since, but with scheduling conflicts cutting into my contest flying, I thought it would be nice to have one more chance to fly with friends, acquaintances, and people who would be acquaintances if filling Saturn Press orders hadn't completely obliterated what little ability I have to remember names. The fact that I could split travel expenses with my brother was also a big plus.

A cold front blowing through on Friday night made our stay in a nameless fleabag motel bearable in spite of a completely dead air conditioner. It also made the weather at the field quite pleasant, especially for the swarms of gnats inhabiting the field. We all know the human brain has billions of interconnecting brain cells, but the gnat, a thousand times smaller in each of three dimensions, only has room in its head for a thousandth of a thousandth of a thousandth--which is a billionth as many, or "several" brain cells. At least this explains why so many were flying into our mouths as we set to chatting about rockets, nose cones, high power, Internet characters, space history, and the number of brain cells a gnat has. Registration was in the parking lot a quarter mile away, and when I reached the desk (OK, picnic table), I realized that I had no cash on hand. I quickly set up my bookstore and once I had made enough for registration and the barbecue, I returned to the flight line. I guess the first whiff of rocket exhaust had scared the gnats away, because what followed were eight

gnat-free hours of festive, rapid-fire rocket flying.

I couldn't follow everything that happened over the weekend--one of the Millers from Wisconsin (there are too many Millers from Wisconsin for me to figure out which one) launched his Sputnik C6-7 Elimination Vehicle a couple dozen times until foam ball wore down into a hemisphere; Kevin Wickart carried out Part 1 of his plan to fly every K-numbered Estes kit, starting with the Scout, the Mark, and the Space Plane, getting at least through the Delta; Bob Kaplow flew Estes kit scale-ups; one gentleman's launched a collection of tube-finned models; Tom Pastrick crashed and flew swing-wing boost-gliders; and a hundred or so participants tickled their fancies with low- and high-powered rockets.

I pulled out a few of my own models, including an Apogee micro-powered Dauphin which teleported into the sky and fell as two tiny specks connected by a Kevlar cord. I think it was the smallest rocket at the event. I got a half-dozen other models off, including a maiden flight or two, as well as a couple old-time scale models from Retro Rockets. I also taunted the group with a launch of an old Astron Streak on a C6-7. It disappeared from the world at ejection, and I offered a book to anyone who recovered it. Nobody took home a free book.

My brother Bob's high point was launching his Astron Cobra clone on 3 A's with an official Wisconsin Cheese-Head eraser in the payload section.

As the day wore on, the fun contest started-marshmallow lofting. Contestants had to launch a marshmallow, recover it, eat it, and show an empty mouth the contest director in as little time as possible. Underpowered payload models seemed the obvious strategy, but the winning strategy was to stick the confection to the outside of the model--preferably something with Flying Saucer-type recovery. One kid completed the task in under 10 seconds.

The camp had indoor dining an restroom facilities available for lunch all day long. This was a great setup, as rocketeers could get out of the sun and off their feet with fellow hobbyists. Saturday night's Barbecue gave us all a chance to hang out some more as NAR President Bunny barbecued beast bits for the voracious crowd. Unfortunately Bunny skipped all the fun stuff, and just did the cooking. Let's hope he doesn't burn out from NAR work-he's been doing too good a job.

Team Kitbash followed--our group produced a remarkably pathetic model on the theme "closet." It was a box that kicked junk out at ejection. We spent about a third of our time debonding a kid who superglued himself to the model, a convenient excuse for a rather uninspired rocket (I suspect heat-adled brains were the real culprits). I suppose watching an inside-out Bullpup box cartwheel around on a B4-2 was moderately amusing, though.

Flying finished up Sunday--another good day, but we were all slowing down--after 606 flights the first day, the total had barely reached 700 as Bob and I packed up for the long drive home. NIRA had ordered a special T-shirt for the person flying the 1000th rocket at MRFF '97.

Even if they never reached the 1000 mark, MRFF was a success. I certainly recommend next year's MRFF to anyone in this region of the midwest who wants to have fun flying rockets. Just check the weather first.

Forest Preserve Meeting Report from Mark Bundick

Cheri, Bob, Ric and I met with the FPD on July 2nd to do our presentation. Thanks to Cheri for making the arrangements and to Cheri, Bullet and Gaffer for working up the presentation.

Overall, it went pretty well, in fact, typical of the presentations I've done in that vein. We got expected questions about "how high do they go", and "how far do

they drift", and some unexpected questions about handicapped access (the FPD has to comply with the Americans with Disabilities Act, or ADA), insurance and training.

At this stage, the committee has to chew on the material we've presented and then decide where they're going. It might be that they'd just approve the usage, subject to changing the ordinance, or they might have more bureaucratic hoops to jump thru. We left the door open to attending other meetings, providing more written material, and even doing a launch demo.

Cheri will follow up with Mike, the operations staff person at FPD, next week if we don't hear any more.

My guess would be that if all the cards fall our way, we might get a launch or two in at Green Valley this year. If the cards don't come, then we'll probably not get on the site until 1998, but I think the trend toward us using the field on a special use basis is pretty good.



Adam Elliott is the proud owner of a trashed Optima (or Shadow, or whatever). (R. Gaff photo)



John Barrett stands beside the smoking remains of his Jayhawk. John seems to be having a lot of catos lately. (R. Gaff photo)

14AL97 RESULTS SUMMARY

We had 9 contestants from 2 NAR sections participate in the meet. Not bad for our first time out. I apologize for how late things ran. An hour late start is tough to make up in a one day open meet. I thank everyone for their patience and help. The field condition was not what we wanted and in retrospect, I'm pleased with the results, given that. We were able to fly meet in a little over 8 hours. Considering the meet included timing, altitude, and a craftsmanship event, we did okay for our first WOOSH meet. Again thanks to everyone for helping to set things up, and tear them down. With the launch system, pads, trackers, PA system, etc. it was a lot, but thanks to those who pitched in, it went fairly smoothly.

Special thanks to Rick Gaff and Pierre Miller from NIRA for coming up and helping to make it a legitimate open meet, and more importantly, judging sport scale.

Although it was time consuming, the tracking went about as good as I could have imagined. Ten flights were made and all of them closed. Even with the extra work required, I hope we continue to fly an altitude event or two at future contests.

Anyway, here are the results. Congratulations to Mary Wolf, Steve Koszuta, and the Good, Bad, & Ugly team for taking top honors in A, C and Teams Divisions respectively.

OPEN SPOT LANDING (A and C Division Combined)

Place	Contestant
1	Dan Wolf
2	Mary Wolf
3	Kurt Schachner
4	Mark Smeiska
FP	Dave Lyle
FP	Steve Koszuta

Teams Division

Place	Contestant
1	All the Pres. Men
2	Good Bad & Ugly

SPORT SCALE

A and C Division Combined	
Place	Contestant
1	Kurt Schachner
2	Pierre Miller
3	Mark Smeiska
4	Dan Wolf

Teams Division

Place	Contestant
1	Good, Bad, & Ugly
2	All the Pres. Men

C EGGLOFT ALTITUDE

A Division

Place	Contestant
1	Mary Wolf
DQ	Pierre Miller

C and Teams Divisions Combined

Place	Contestant
1	Steve Koszuta
2	Mark Smeiska
3	Good, Bad, & Ugly
4	Kurt Schachner
DQ	Dan Wolf

1/2A STREAMER DURATION

A and C Div. Combined

Place	Contestant
1	Dan Wolf
2	Steve Koszuta
3	Pierre Miller
4	Kurt Schachner
DQ	Dave Lyle
DQ	Mark Smeiska

Teams Division

Place	Contestant
1	Good, Bad & Ugly
2	All the Pres. Men

RANDOM DURATION (target Time 45 seconds)

A Division

Place	Contestant
1	Mary Wolf

2	Pierre Miller
---	---------------

C Division

Place	Contestant
1	Dan Wolf
2	Steve Koszuta
3	Mark Smeiska
DQ	Dave Lyle
DQ	Kurt Schachner

Teams Division

Place	Team
1	Good, Bad & Ugly
2	All the Pres. Men

TOTAL POINTS

A Division

Place	Contestant
1	Mary Wolf
2	Pierre Miller

C Division

Place	Contestant
1	Steve Koszuta
2	Kurt Schachner
3	Dan Wolf
4	Mark Smeiska
5	Dave Lyle

Teams Division

Place	Contestant
1	Good, Bad & Ugly
2	All the Presidents Men

Sections

- 1 WOOSH
- 2 NIRA
- 3 Independents

ABBREVIATIONS

DNF	Did Not Fly
EGG	Broken Egg
NDP	No Deployment
SEP	Separation

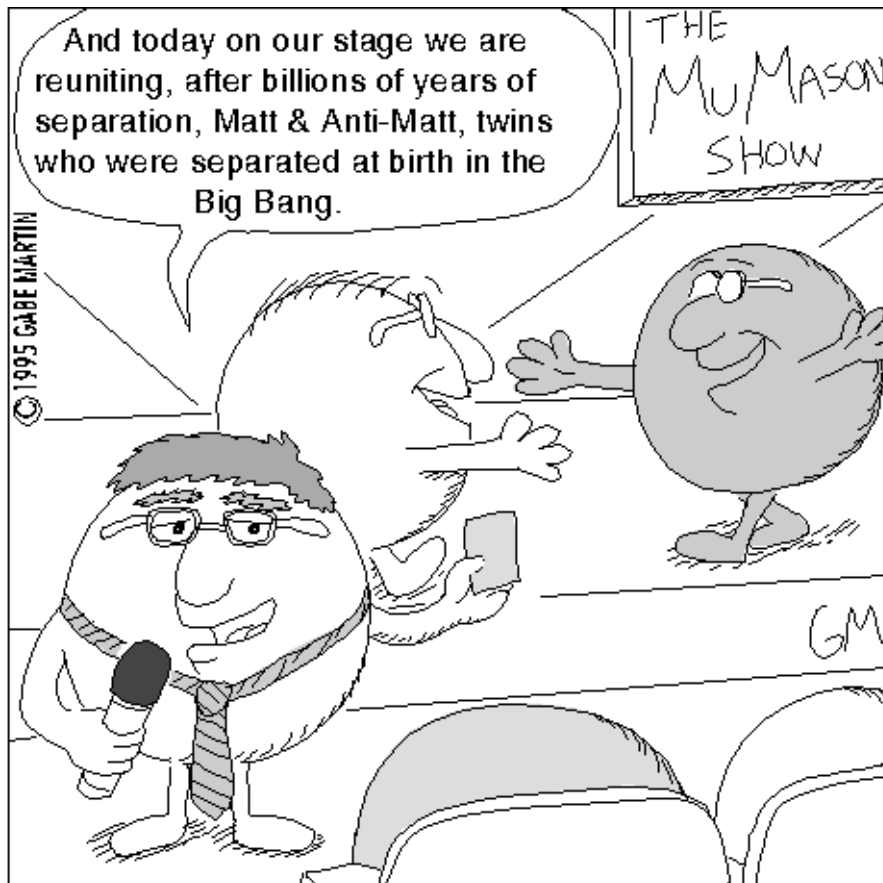


Left: Dan Wolf performs a mind-meld with an egglofter during 14AL97.

Right: Pierre Miller hooks up the igniter on his Mercury Altas. He won 2nd place with this model!
(R. Gaff photos)



I don't know who this is, but he's hooking up an Omega, one of my favorite old Estes kits. (R. Gaff photo)



And today on our stage we are reuniting, after billions of years of separation, Matt & Anti-Matt, twins who were separated at birth in the Big Bang.

THE MUMASON SHOW

© 1995 GABE MARTIN

GM

Sub-Atomic Talk-Show Disasters