

# THE LEADING EDGE

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

Volume 28, Number 1  
January 2005

## Club News and Notes

**Elections held** - The annual January elections for NIRA were held at the monthly meeting. The winners are:

Adam Elliott - president  
Veronica Hojeck - vice president  
Marty Schrader - secretary/treasurer  
Bob Kaplow - range safety officer

Their term will be for one year until the next election.

We would like to welcome Veronica to office and congratulate Adam on moving up from vice president. And a big thanks to Terry House who graciously returned to ordinary club life after serving as our president.

**New Section Advisor** - Ken Hutchinson has stepped down as Section Advisor. Rick Gaff has stepped up to the task. This will definitely cut into his busy schedule as his only task is liaison to the NAR. We don't know how long Ken held the post and hope he uses the time to actually build and fly rockets.

**Mini-NARCON may be held in February** - In lieu of a launch in the cold month of February, NIRA will be holding a Mini-NARCON at the Helen Plum Library, our normal business meeting place. If you have a presentation, discussion, or something you'd like to just show off, let Marty know. So far there are two presentations scheduled. You could be next! If nobody actually does have anything to present we may just sit around drinking coffee and looking at photos and films (bring those too!)

**January building session cancelled** - Things didn't work out for our building session in January. If you would like to host a winter building session let us know. The further in advance, the better.

## Hobby Show Oct. 14-17, 2004

by Tom Pastrick

This year, I asked for and got the permission of NAR HQ to have a booth at the annual hobby show at the Stevens Convention Center in Rosemont, IL. This was done at no cost to NAR or NIRA. Basically, I got a complimentary booth 10 x 10 foot with a table and a banner with the NAR spelled out. The be sure that I wouldn't be assessed by any additional costs, I took in my own chair. I also had two TARC students from last year help out. For "pay" I got them tickets to join me at the Breakfast with Astronaut Buzz Aldrin, and they also received a die-cast miniature of the Mars Rover.

"The Rocket People" had all their booths in the same aisle, right next to each other. All the other exhibitors were likewise grouped together such as the train exhibitors in one group of aisles, Car Exhibitors in their aisles, boat exhibitors with same, etc. In the NAR booth I used one of my Estes Big Bertha mono-coated rockets that had made a "sudden arrival", wrinkling the forward 1/3 of the body tube. I put it nose down in a flower pot. This drew a lot of attention, varying from a smile, to giggles, to comments like "Yeah, I did that too". This was a great way to engage parents and students into conversation that I used to lead them to explanation of the TARC program and how they could get a Team started. They also got a flyer with info to also help them get started. A few stopped at the booth and specifically asked for a NAR application form, which I also had.

This year, RCHTA, which owns the Show, moved to New Jersey and hired Gemini Productions of California to run the Show. Due to a declining number of exhibitors and also declining public attendance, the Show is moving to the Los Angeles area for 2005 and returning to Rosemont in 2006. This means that there will be no hobby show for next fall. RCHTA is not sure why the attendance is declining and are trying some different approaches in an effort to boost the show. The two public days of the show had a total attendance of 8,500, while previous shows usually had 10,000 each day. There was no model rocket Make-And-Take section due to the lack of any model rocket manufacturers exhibiting. A show rule is that only exhibitors can donate their products for a Make-And-Take.

All in all, I think the NAR booth was a success. *And we look forward to more good work from all in 2006! -ed.*





Volume 28, Number 1  
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### NIRA Officers

President – Adam Elliott  
Vice President – Veronica Hojeck  
Secretary/Treasurer – Martin Schrader  
RSO – Bob Kaplow

### This Issue's Leading Edge Staff

Editor – Adam Elliott  
Production – Take a guess

### This Issue's Contributors

Jonathan Charbonneau  
Adam Elliott  
Tom Pastrick

THE LEADING EDGE is published bimonthly by and for members of the Northern Illinois Rocketry Association (NIRA), NAR Section #117, and is dedicated to the idea that Sport Rocketry is FUN!

Articles, plans, photos, other newsletters, and news items of interest should be sent to the new editor:

Adam Elliott  
0000 Street Drive

or emailed to adamnira at yahoo dot com  
Photos will be returned, other material returned upon requested.

Any original material appearing in the Leading Edge may be reprinted by Sport Rocketry Magazine with proper credit given; all other uses require prior written permission of the author or the Northern Illinois Rocketry Association.

Send membership applications (dues: \$6 per youth, \$8 per adult, \$12 per family, including a six issue subscription to the Leading Edge), non-member subscriptions (\$10 per six issues), and change of address notifications to:

Martin Schrader  
0000 Street Drive

Web site: <http://www.NIRA-rocketry.org>

Email list: see website

InfoLine: volunteer today!



## CLUB MEETING DATES

All meetings start at 7:30 pm. Bring a model for "Model of the Month." We always need volunteers for pre-meeting lectures, contact Adam Elliott if you want to schedule a date. The location is usually the Helen Plum Memorial Library, 110 Maple St, Lombard, IL

**February 4**

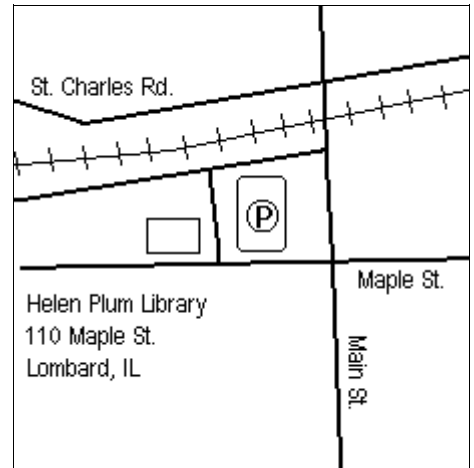
**March 4**

**April 1**

**May 6**

**June 3**

**July 1**



## CLUB LAUNCH DATES AND OTHER ACTIVITIES

Launches are BYOL (bring your own launcher). Call the NIRA infoline for pre-launch information: there is no infoline. Volunteer today!

As the map shows, our new launch field is the East Branch Forest Preserve but the arrangement may not be permanent! **Please** call/check the infoline/website before coming!

**March 27**

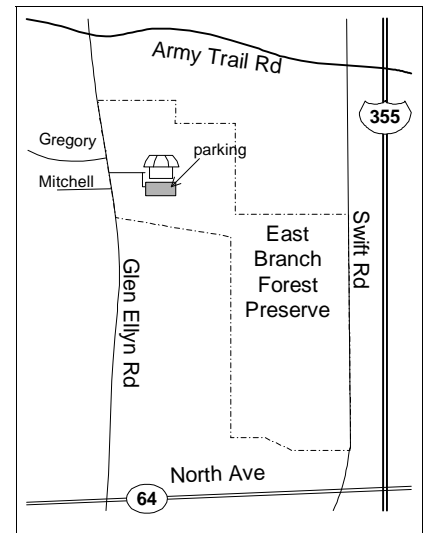
**Apr 17**

**May 15**

**Jun 18-19 - MRFF! Bong St. Park, WI**

**Jul 17**

**Aug 21**



### Model of the Month Winners

**December:** Marty Schrader won with his homebrew Pipsqueek, a pop-pod foamboard glider.

**January:** Marty again with his Sky Grabber, a scratch build with carbon fiber and carefully shaped and sealed balsa parts. *But will it win? =)*

### Featured Site of the Month

<http://www.narcon2005.org>

## Confused Stages - Stage 36

by Jonathan Charbonneau

"That's a Phoenix Bird," Tom quips, looking at the silhouette of a rocket. "I say it's a Maniac!" shouts Daniel. "Prove it!", screams all at each other at the same time. Tom tries to prove it by describing the shape and size of the rocket. Joe raises the fact that the Challenger II fits that description too. Daniel retorts likewise for the Maniac. Syed enters the room, exclaiming, "That rocket is the Eliminator!" and having seen the rocket itself, is certain of his statement.

Tom claims to have a Javelin. "Which one?" Daniel asks.

"Identity Crisis?" you ask? graph the dispute between Challenger II, the Maniac, and size. The difference in structure. The Phoenix Bird uses 18mm engines. The gines. It uses an 18 inch and E15-8 engines by Es-

This is just the tip of the asteroid(1) This stage is about identity issues. In the first para- that the Phoenix Bird, the Tom, Joe, and Daniel is due to the fact and Eliminator are all the same shape these rockets are their decor and internal con- is a Centuri Kwik-Kit and has a payload section. It Challenger II hasn't any payload section and uses 24mm en- parachute. The Maniac was designed to use the now defunct E15-6 tes. The Eliminator is designed for the Estes E9 engines.

Another example of rockets rocket, Pegasus, Kadet, only touch these rockets will

with the same silhouette is the following: Challenger I, Star Trek(2) beginners Athena, America, and Star Wars(3) Proton Torpedo. A blindfolded person allowed to not be able to tell which is which since they differ only in their decor.

The Super Big Bertha vs. tes Vampire, only purple shape and size. The Centuri Scorpion is different from the Estes Scorpion just mentioned above, which is an example of the other identity issue as in the second paragraph of this stage. There are three Javelins: a minimum diameter rocket for 18mm engines made by Centuri; an Estes Mini-Brute minimum diameter rocket for 13mm engines and was sold with the Super Flea as a combo kit; and an Estes minimum diameter rocket for 18mm engines.

the Broadsword is another case. The Estes Jinx is literally the same rocket as the Es- instead of black. the Mongoose is just like the Scorpion, both are two stages, same the Centuri Scorpion is different from the Estes Scorpion just mentioned above, which is an example of the other identity issue as in the second paragraph of this stage. There are three Javelins: a minimum diameter rocket for 18mm engines made by Centuri; an Estes Mini-Brute minimum diameter rocket for 13mm engines and was sold with the Super Flea as a combo kit; and an Estes minimum diameter rocket for 18mm engines.

Similarly, there are two Nomads, one by Centuri and one by Estes. The Centuri version is like a Standard ARM with only 3 fins and 3 strakes instead of 4. The Estes version is just a stretched Saros.

Sizzler can be any 3 upper stage, smaller Initia-

of three rockets; a shorter version of the Comanche- a more or less scaled down Initiator with rear ejection, or a still tor of minimum diameter for 18mm engines.

It has become more frequent these days to see one rocket in multiple guises e.g.. Maniac and Eliminator, and two or more different rockets having the same name. This has cons and pros.

### CONS:

Without additional information, it may be difficult to correctly identify a particular the name of a rocket, get the correct mental picture of it.

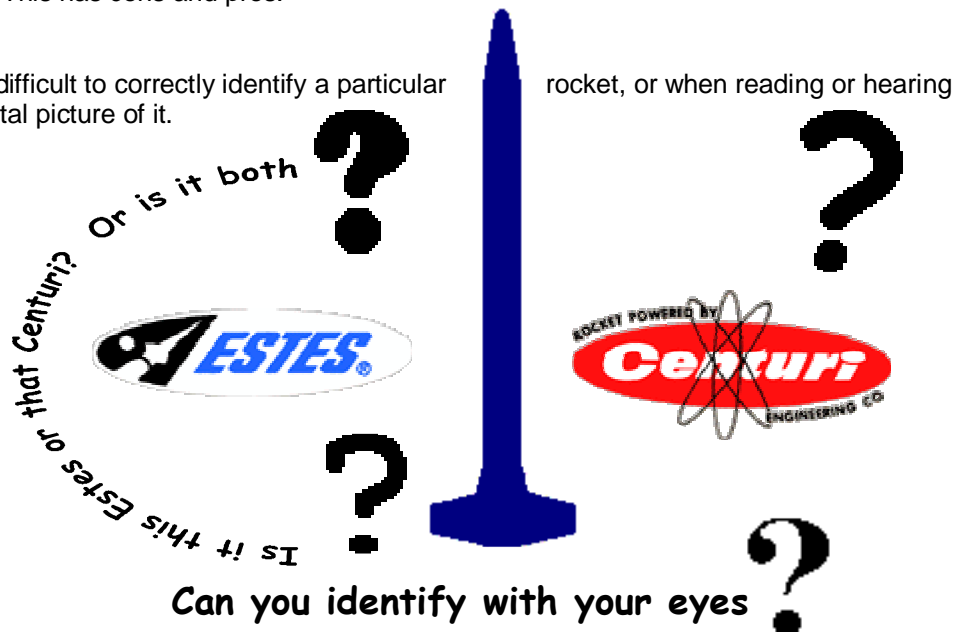
rocket, or when reading or hearing

### PROS:

Try playing "Name That Rocket"(4)

### Notes:

1. Rip-off of "...just the tip of the iceberg."
2. Trademark of Paramount Pictures
3. Trademark of Lucasfilm, Ltd.
4. Rip-off of TV game show "Name That Tune", circa mid 1970's - 1980's



## Noble Street School TARC Launch

December 11, 2004

By Tom Pastrick

The TARC launch for Noble Street Charter School went on despite the 34 degree weather. The 2 sub-Teams designed and build 2 separate rockets. The Seniors had built a rather typical design the was to use a rear ejecting parachute for the booster and a back-up of large fins for tumbling in case the chute failed to open. The Juniors Teams opted for large fins on the upper stage, in fact, they were about 3 times the size of the booster fins. Both designs were proved out on RockSim.

At the field, an unexpected problem occurred, their Aerotech launch system failed to ignite the clusters at all. The igniters were tested and showed a continuous circuit. After several more tries, still nothing happened. I took the Controller back to one of the vans and opened it up. Everything looked fine. As had done a recharge on the school's gel cell the day before and checked out the voltage, it was a puzzle as to what was wrong. Finally, we checked the battery clamps and found they were soldered with a cold joint, and some of the solder came off in my hand. Of course we had no soldering equipment with us.

The solution was that the Teacher had to buy another one and quickly. A cell phone to A2Z Hobbies only got us a recording that they were closed on Saturdays. Another call to AI's Hobbies got us the reply that the only one that had was a part of a starter set, listing out at \$199.99. As the teacher has a budget from the school, she bought it. The receipt was carefully examined and showed 20% off discount and no State Tax. Back to the field and a frantic assembling, exactly according to the instructions. After testing it out, the students went back to the pad.

The Juniors were the first to try again. Everyone was moved back according to Paragraph 5 of the Safety Code. Last year, there were some safety officers that didn't know how to do this. The ignition and lift-off looked normal, but at staging, a problem was seen in that one of the booster motors hadn't ignited. The booster began its descent with the motor burning from the wrong end. It sort of looked like Luke Skywalker's light saber slicing thin air. The reverse burn ended just as the tumbling booster landed. The area was immediately checked for fire and there was none.

The upper stage ignited properly and continued to apogee at which it ejected its parachute. Another problem was seen in that the chute hadn't opened. It continued to fall until about 20 feet above the ground when it opened with a snap. The onboard altimeter indicated an altitude of 612 feet. This was less than expected. The assumption was that one of the booster motors not lighting was the cause of the low altitude. One egg was cracked. Better egg packing will be needed for future flights.

Now it was the Seniors turn (one member from last year's TARC), with a better looking rocket. Well, they proved that looks aren't everything. At ignition, something was immediately wrong as it veered for a much lower apogee. At staging, the Luke Skywalker thing was like with 2 light sabers. The reverse motor burning ended right after it landing. The grass was still damp from the previous 2 days of rain. No fire was started. The end of the booster forward of the motors was extremely burned away. About all that they could salvage was the fins. The two motors that didn't light were side by side thereby directing thrust off the center of gravity. I suspect that if the two motors were opposite each other, the flight would have continued vertical, but with a fairly low apogee.

The upper stage impacted a good distance away and the ejection charge went off right at landing. The students ran over there to check for any fire as well as to retrieve their rocket. The battery was ejected out of the altimeter and no altitude was obtained. Both eggs were scrambled. Much of the forward end was not salvageable.

The following Wednesday, the Team met to evaluate their flights and begin to repair and/or rebuild. The flight data sheet that they designed was found to be inadequate for the flights. The sheets were revised to be more complete. After the Holidays, the teams will get some more info, so that they can have a better chance of getting all engines lit.

The 2 Teams were not discouraged by their first flights, but seem to be enthusiastic enough to want to launch again in January. They learned a few things even though everything didn't go right. This is TARC as it should be, that is, it a learning process with sometimes many attempts before achieving the goal, learning all the way.

## More TARC News

This is an official press release from the Aeronautical Industries Association, one of the sponsors of Team America Rocketry Challenge.

CONTACT: Matt Grimison FOR IMMEDIATE RELEASE

(703)358-1076 office Jan. 28, 2005

(571)000-0000 cell

[matt.grimison@aia-aerospace.org](mailto:matt.grimison@aia-aerospace.org)

Team America Rocketry Contest Interest Surges

Arlington, Va. – Skies across the country are about to fill with the whoosh of model rockets as student teams vie for a coveted spot in the finals of the Team America Rocketry Contest.

A total of 712 teams from 49 states and the District of Columbia – and even an American middle school in Germany -- are taking part in the competition, the largest model rocket showcase on the planet.



Teams of middle and high school students registered for the contest in November and have until April 11 to prove they have qualified for the final. That's a task much easier said than done – they must design and build the rocket and boost it and its payload aloft for exactly 60 seconds before safely returning to earth.

That payload – one or two raw eggs.

The public is invited to view the finals of the competition, scheduled for May 21 at the Great Meadow in The Plains, Virginia. The top 100 teams based on qualifying score compete live against one another during the final. They will learn whether they made it April 14.

AIA is sponsoring the contest along with the National Rocketry Association partnered with NASA and AIA member companies. For more information on the contest visit the Internet side at [www.rocketcontest.org](http://www.rocketcontest.org).

-AIA-

P.A. Rel. 6

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**WE HAVE MRFF!  
June 18-19**

Absent for at least two years now the Midwest Regional Fun Fly is back on the schedule. To be held June 18 and 19 at Bong State Recreational Area, near Burlington, WI, MRFF is NIRA's honkin' huge annual event. Not only is this the place to launch and show off your rockets of all sizes and classes, it is also the best place to meet and talk with rocketeers of all ages.

There is no schedule as of yet, but we hope to have vendors, fun events, a contest or two, and a barbeque.

More information to come as it develops.

**Website undergoing major overhaul**

Website undergoing major overhaul.

The website has taken on a new webmaster and is currently operating under the familiar term "under construction".

Marty Schrader explains again and again that when done, the new website will be cleaner and sleeker...and up to date.

Good luck to Marty on this project.

**November Launch Report**

21 Nov 04 launch report  
Single stage

1/2 A - 3  
A - 50  
B - 91  
C - 32  
D - 16  
E - 10  
F - 9  
G - 6  
Unknown - 12

Staged

B to A - 1  
B to B - 2

Cluster

B(3) - 1  
D(2) - 1

Total launches: 234



Below is the official release about NARCON '05 from WOOSH:

WOOSH will once again be hosting NARCON. This years event will be hosted at University of Wisconsin - Parkside in Kenosha, WI, March 11-13. We have some great keynote speakers this year. To start the weekend off Ky Michaelson will give the keynote address on Friday night. On Saturday night we will have Vern & Gleda Estes speaking. We have alot of great content this year and more is on the way. The vendors have been great in helping support the event too. Registration is open and more information can be found at [www.narcon2005.org](http://www.narcon2005.org). If you have any questions please contact me directly at [director@narcon2005.org](mailto:director@narcon2005.org). Alot more information will be coming soon. Hope to see you all there in March.

Gabe Kolesari NAR 82009 L2  
Event Director NARCON 2005

NARCON is a huge event with seminars, workshops, vendors, people, discussion panels, forums and other special events.

There are currently 15 seminars, 9 workshops, half a dozen forums, discussions, and special events, as well as the NAR town meeting. All of this covers materials selection, production, and manipulation; designing and flying rockets and gliders; history, people, and much much more. There will be a raffle again this year. NARCON is so big, one person can't see it all.

Vern and Gleda Estes (yes, THAT Estes) will be there. So will Ky Michaelson of Rocketman. NAR President Mark Bundick is also scheduled to attend.

Attending vendors so far:

Fliskits  
Sirius Rocketry  
Rocket Head Rockets  
Balsa Machining Service  
Advanced Rocketry Group  
Al's Hobbies  
Wildman Rocketry  
Quest Aerospace

Additional supporting vendors so far:

The Squirrel Works  
Public Missiles Limited  
Art Applewhite Rockets  
D.B.M. Rocketry  
Sunward Aerospace Group  
Aerospace Speciality Products  
Hangar 11  
Totally Tubular  
Xavien  
Excelsior Rocketry  
QModeling

This is a big event and really close this year. Okay, it was close last year too, but since it's not every year it's so close you can't afford to miss it!



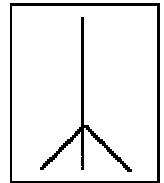


Marty Schrader recoils in horror as Conrad Helland's pink F-powered rocket roars to the sky.

KNOW YOUR ROCKETS! GET EDUCATED ON PAGE 3.



Adam Elliott, Editor  
54321 Rocket Way  
Eidolon Peak



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