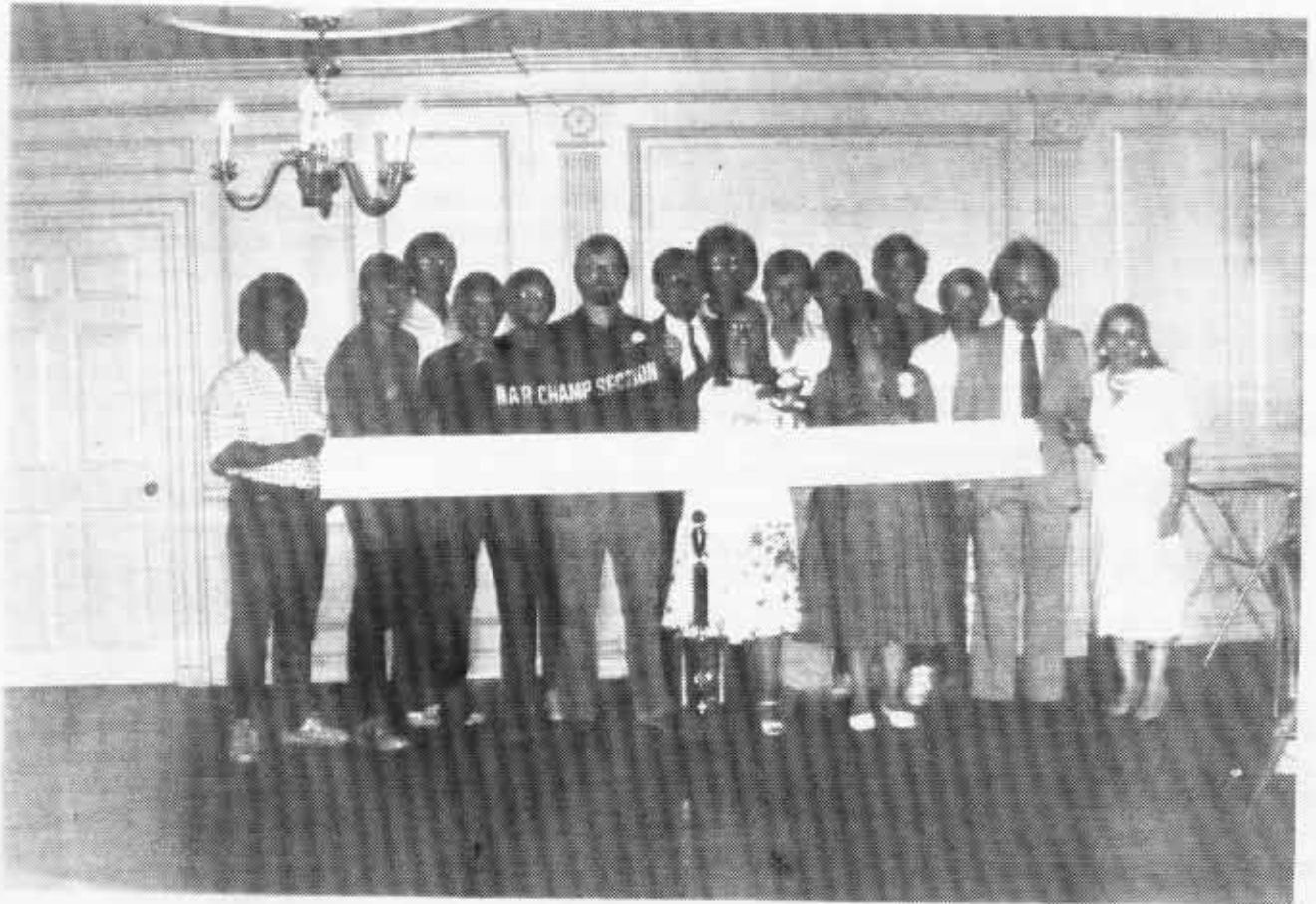


THE LEADING EDGE
IS BACK!

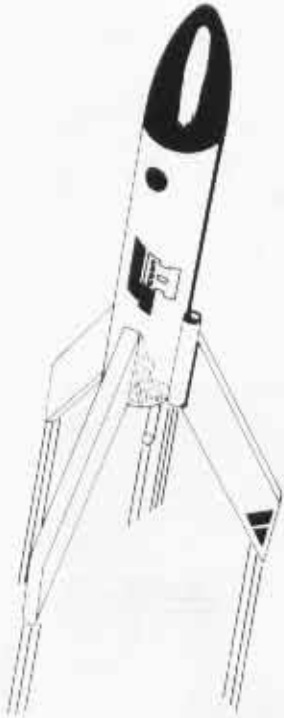
NEWSLETTER OF THE NORTHERN ILLINOIS ROCKETRY ASSOCIATION
1985 AND 1986 NAR NATIONAL SECTION CHAMPIONS

VOL. 9, NO. 6



NIRA WINS!
AGAIN

MODEL OF THE MONTH WINNERS



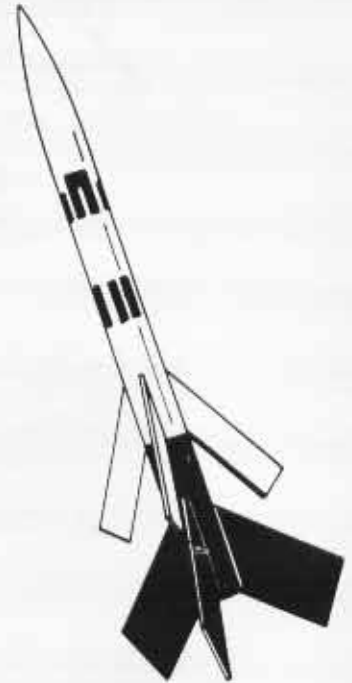
The Model of the Month Winner for March 1986 is Bunny and his Estes Patriot. Congratulations, Bunny!

The Model of the Month Winner for April 1986 is Ric Gaff, and his Centuri Point. Congratulations, Ric!

The Model of the Month Winner for May 1986 is Jasper Hawsner and his ACLM Cruise Missile. Congratulations, Jasper!

The Model of the Month Winner for July 1986 is Donny Linder and his D-Region Tomahawk. Congratulations, Donny!

The Model of the Month Winner for September 1986 is Barb Bundick and her Nymph RG. Congratulations, Barb!



THE LEADING EDGE

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COVER PHOTO: NIRA proclaims its victory! (left to right) Ben "Captain Video" Roberto, Jedi "Monster" Mark Schmitt, Don "the Elder" Linder, Jedi Tim Marcy, Jedi Don "the Younger" Linder, Tom "Beakers" Beach, Jedi Mark "Bunny" Bundick, Barb "Meet Momma" Bundick, Ric "Bad Joke" Gaff, Jedi Pat "Chadmaster" Peterson, "Jedi" George Riebesehl, Jr., Joyce "no nickname" Guzik, Jedi Larry "Beakers" London, Alan "Missouri" Jones, "Bullet" Bob Kaplow, Judy "another no nickname" Kaplow.

NIRA'S NARAM or Two for the Record

NAR CHAMP SECTION

by Bunny

Like the Chicago Bears, who gave up Super Bowl XX's first three points, NIRA went to NARAM-28 down by 631 points. And, like those other Monsters of Chicago's Midway, NIRA stormed back to claim its second National Championship by a good 6,000 point margin. The added burden of organizing, running and cleaning up after the largest nationals since '79 didn't get in the way. In fact, our guests seemed to enjoy themselves immensely.

Setting up started Friday, August 1, with Bunny and Barb lugging 153 trophies up to the second floor of the Florida Avenue Residence Halls, and reorganizing rooms assignments when some rooms were "down for maintenance". Reinforcements arrived Saturday morning with Gaffer, Bullet and Judy, Jedi George, Ben Roberto, and Pat Peterson. Judy and Barb worked with the front desk to register everyone, while the rest of the troops went to set up the range. Range set-up was quite a bit of fun, and was completed in about 4 hours. Compact with but 12 launchers, the range organization turned out to be one of the highlights of the contest. You rarely had to wait for pads, timers or trackers.

Sunday brought the bulk of the contestants, and by early afternoon, old friends and new acquaintances filled the dorm. After a highly successful demo (which brought

NARCON a few new participants, and got the NAR a TV spot of about a minute), the contestant's briefing brought a few questions about how to get past Air Force Security and field boundaries. Then it was back to the room for some "prepping", and a good night's sleep.

NIRA forces stormed the range Monday morning, and manned most of the positions for the first two shifts. Once we showed folks how the range was supposed to run, we had few problems for the rest of the week. There was little waiting, and people, much to the CD's surprise, turned up for their range assignments on time.

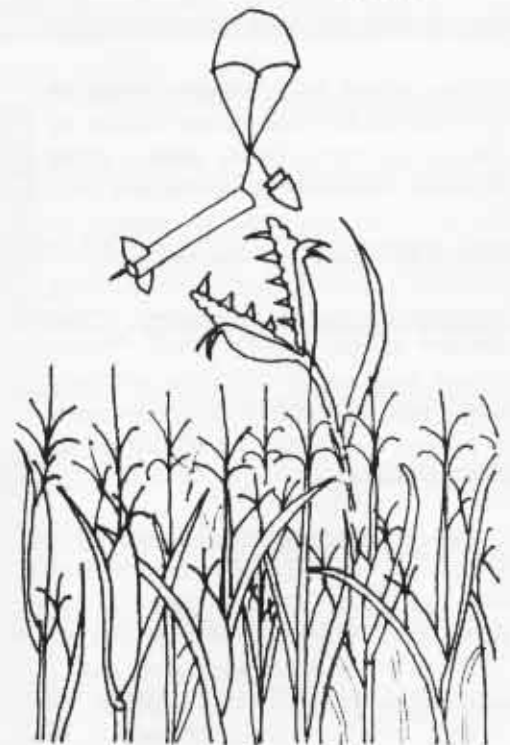
With an open schedule, it was a little hard to keep track of who did what to whom on the range. 1/2A SD and PD saw the usual number of cannon fodder rockets, towers and pistons. The field was uncooperative, and lift was present for only a short time during the late morning. That pattern repeated itself all week. At least no one started off the contest by complaining about the corn.

NIRA troops did OK in these events. Don Linder separated his first SD flight, but came back with a strong 51 second flight to finish 2nd. Adam Nowtarski ran away in B, but Tim Marcy put up two medium flights for another NIRA second. Don Linder (the Elder) crushed his C Division competitors with a first flight of almost 3 1/2 minutes. His streamer was made out of a plastic shopping bag. (Got any more of that stuff, Don?) No one

was within a minute of him, but Larry London snuck into a tie for 4th with eventual C Division National Champion Dan Domina.

NIRA's teams got beaten for top spots by the East Meets West, but won out in the end by placing twice with consistent flights. The Dual Egglofters flights were both over a minute, and with a little luck, they could have finished 2nd. The D.R.U.G. Team's waxed paper streamers didn't perform as well here at they did at MWRC.

PD brought out the mylar and
Cont.



NARAM-28: Just when you thought it was safe to fly model rockets.....

cleaner bags. Don the Younger won with one good thermal flight of over 10 minutes. I never heard how the recovery was accomplished, but I bet it was interesting. "Monster" Mark Schmitt won in B, with two good flights, and Larry London just missed another 4th by 20 seconds. It was tough in C trying to beat Terry White's (DARS) 14 minute time. Sudden Impulse had flights of 498 and 371 seconds to win teams by but 59 seconds over Terry Lee's Omega-Alpha's team. I guess we had some luck in the "thermal market". The day's total point production pushed NIRA into a first place lead of 31 points.

Tuesday dawned with weather similar to Monday. Range

operations ran smoothly again. Thermals were more numerous, and some fantastic Eggloft duration flights were recorded. Many competitors got to visit parts of Chanute AFB they would have never visited otherwise.

B Division showed you how stiff competition at a NARAM could be. Only 7 seconds separated the top four places. Most B folks had only one flight count, however. The standard reasons for DQ's popped up: shredded chutes, broken eggs, and no returns.

In C, we had a reverse of B's narrow time spreads. Tom McCann ran away from his competition by a 2:1 margin. Don the Elder held up

NIRA's reputation by sneaking into 4th. Bullet Bob fulfilled a life long ambition by winning in Teams. His fully boattailed **Parsec** model really boosts well, and is worth a look if you are a serious eggloft flyer.

Helicopter Duration, despite some advances in recent years,

cont...



DATELINE: Friday, August 8, 1986
Chanute AFB, IL
LEADING EDGE REPORTER: Scott Branche

Fun turned into tragedy today on the beautiful, lush green fields of Chanute Air Force Base, when a group of model rocketeers, young and old, gathered for one week to compete in the National Association of Rocketry's twenty-eighth annual meet (NARAM). Model rocketry, long thought to be a safe hobby, today proved that no activity is entirely safe, and that death is ever-ready to strike down even the strongest of individuals.

The tragedy was discovered by a group of convention participants waiting for their models to be launched, when the Range Safety officer, a Mr. Richard Gaff, apparently ignored their pleas to launch, people became curious. It was then discovered, to the astonishment of all, that Mr. Gaff was, in fact, dead.

The cause of death was apparently neglect. It was discovered that Mr. Gaff had been left outside for the entire week of flying. Lack of food, water and shelter, and the constant exposure to Illinois' elements finally took their toll on the beaten, tortured body of Mr.

Gaff. Medical examiners said today, that Mr. Gaff may have been dead for as many as two to three days before the discovery of his death was made.

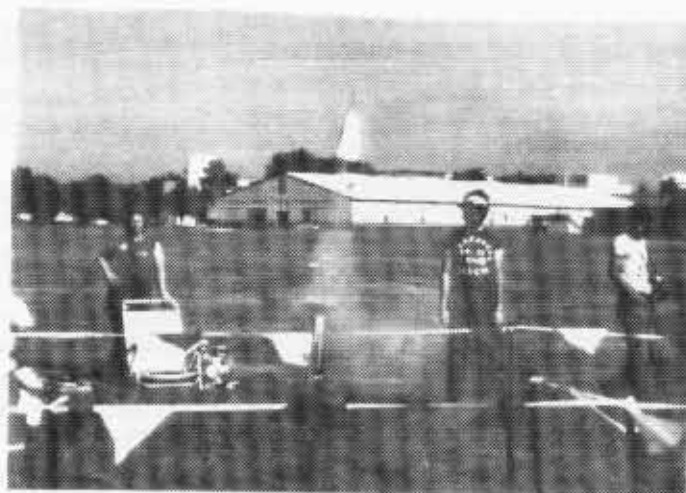
Mr. Richard Gaff, rocketeer, dead, but not forgotten.



remains a tough event for NIRA's troopers. Don the Younger DQ'ed out with Wes Gimbert (NOVAAR) taking first. Monster Mark had an excellent first flight with his modified **Rose-a-roc**, but DQ'ed on #2 to take second. Pity about that.

Don the Elder protected the club's reputation in C, again with a fourth place finish. He used his standard design, with fins attached to the rotors. Thus, he gets them out of the airflow on rotation and hopefully gets a faster rotation. Everyone else contributed "Chump Change", i.e. flight points only, including Tom Pastrick. D.R.J.G. team somehow managed a second, but the Odd Couple gave a textbook demonstration of **Rose-a-roc** flying to take first by a 68 second margin. Sudden Impulse failed to get their **Don Oriotie** to work. I don't recall any one else trying to fly them.

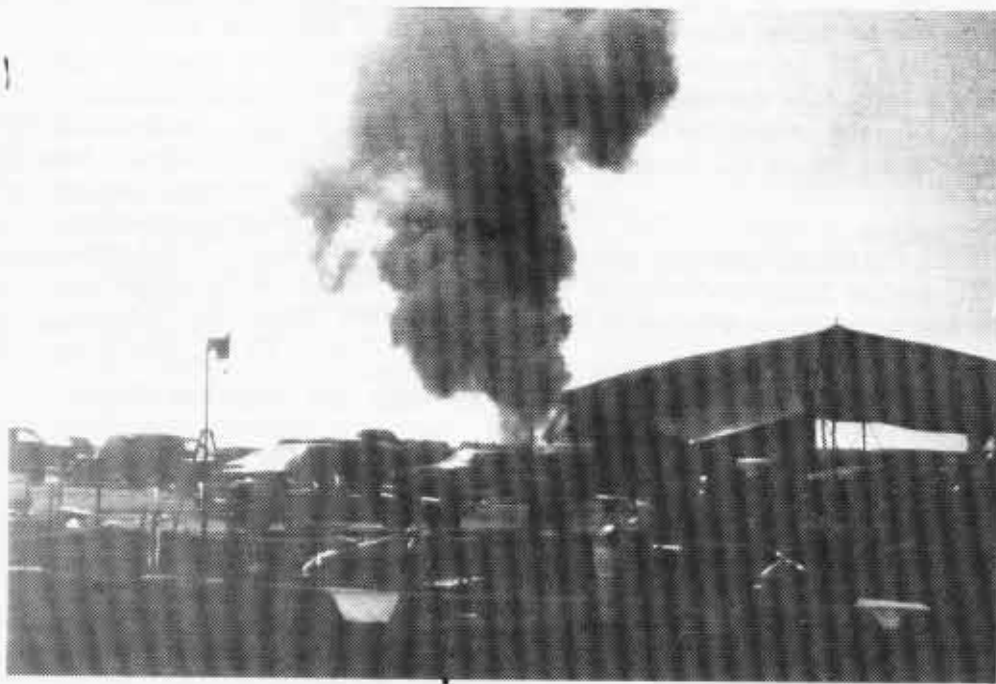
Day Two ended with some point erosion for the club; our lead was now only 27 points. Results reporting was getting to be a cinch, using Multiplan spreadsheets and the FAR's IEM. Results were usually



Another famous food container hits the skies

out, down to the last place by 8 PM. While we may have not liked what we saw, at least we didn't have to wait long to find out where we stood. Bunny's nightly rally meetings to discuss the day's happenings and the next day's strategy gave everyone a chance to let off some steam and plan ahead. The meetings turned out to have benefits on the field.

Cont. ...



Unofficial "Prang of the Meet"

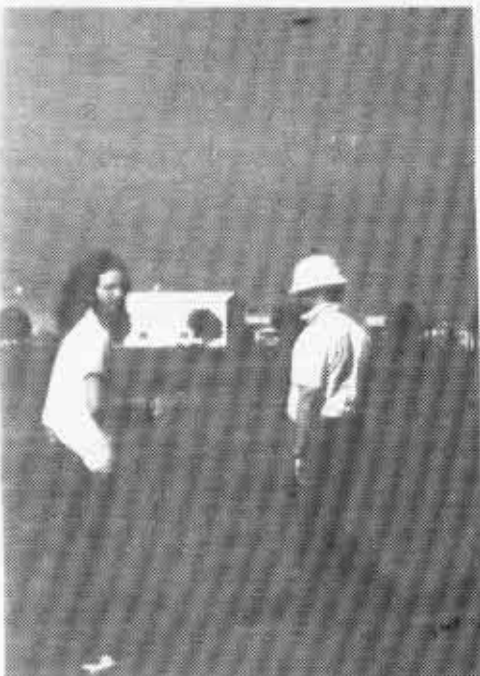
KAPLOW'S KITTY BOUTIQUE
(for all your cat's rocketry needs)
announces its
HALLOWEEN SALE



Low, low prices on Kitty cat gloves
So your cat won't get
HOT STUFF on its paws.

Wednesday would test the integrity of our range operations. Rain was coming down, and the sky was overcast. Weather reports weren't encouraging, so with a lump in his throat, the CD gathered the NIRA Troops to set up tracking.

The range opened late, about 9:30 or so, and promptly bogged down. The NATCON range also opened for the



National Champ Dan Domina in a shy moment, with slightly less shy Dan Mulholland

first time, and had to be integrated with the NARAM flights. Trying to overcome the rain, get both ranges' flights flown and get the tracking data recorded was nearly too much for the crew. In the end, Ric repaired the phone system, the trackers got going and the RSO, who turned out to be the key to keeping the range moving, got the birds up for tracking and NARCON, too.

NIRA held its own in Design Efficiency. Don the Younger won in A, and Tim Marcy took third in B. Unfortunately, the troops got crushed in C. Trip Barber and Dan Winings went 1-2, while Larry London and Don the Elder went 5-6. Sudden Impulse's 137.6 Mt/Nt-sec. was good for 2nd among teams, but would have been only 6th. in C. Models were your basic 1/2A altitude model, with pistons, towers, etc. being used for maximum efficiency. Frankly, with their small size and quick acceleration, it's a miracle any of these birds got tracked.

In C Eggloft Altitude, all designs were pretty standard; three fins, a body tube, and egg capsule. There seemed to be more Easter Egg capsules this year, but most people seem happier using the Colonel's brand. Altitudes have definitely peaked out; if you go over 200 meters, you stand a good chance of grabbing a place.

Don the Younger and Wes Gimbert switched their DE placings, but both had to "bring home the bacon" on Flight #2 due to first flight DQ's. In B, NIRA's troops finished out of the money, with Adam Nowartarski taking all the marbles.

Don the Elder took yet another 4th, making Bunny wonder aloud if he had a "lock" on 4th places for the week. Bunny's "Heartbreak of the Week" occurred in this event. His low-tech alternative to Bullet Bob's **Parsec** was an ancient **Prangroc**. (Look for plans in a future issue.). It soared 244 meters, but broke its egg on the runway when winds blew it downrange in a hurry. Bullet nearly pulled off an eggloft double, but finished 2nd to the Odd Couple's stubby piston launched model. However,

with D.R.J.G. and Sudden Impulse right behind, NIRA's teams cleaned up with 2-3-4 placings. Day Three closed on a positive note. The sky's cleared, and the club tripled its lead to a whopping 81 points.

Now the rest of the contestants were shaking their heads at the NIRA-NOVAAR struggle. While there were some interesting races among individuals, an 81 point difference out of almost 30,000 points wasn't a lot. Could both clubs keep up their respective paces? What about all those weighing factors coming up in the last two days? What if it all came down the spotlanding results determining the club championship? Could "Chump Change" really play a role?

The answer to those questions were answered, both for the two clubs, and the rest of NARAM-28's contestants, on Thursday. NIRA stormed the Chanute turf for a 2,000 point margin on Glider Day, and never looked back.

Weather was much better than Wednesday's rain and clouds, but thermals were hard to come by. There were few surprise designs or radical innovations. People stuck with tried and true models, but that didn't help everyone. While B BG saw nearly everyone qualify, C RG was not as lucky. A few models shreaded nicely, while others saw fit to power prang into Chanute's turf. Only 15 C Division competitors got qualified flights. As was the case in the last Midwestern NARAM, dethernalizers were nearly non-existent. There were more tissue jobs, however.

B BG wasn't really our strongest event. In A, Don the Younger got a break when Wes bombed out. Nowartarski and Mulholland went 1-2 in B, and it looked bleak. Larry

Don's ancient **Beaker** snuck into the field in C with everyone else taking Chump Change. Teams posted another win for those hi-tech Dual Egglofters. They had the second best overall time. They flew beautifully crafted, tissue, carbon fiber reinforced "Flanigan Flyers" without DT's. The carbon fiber added tremendous stiffness throughout, even to the booms made of 5 pound balsa. Of two flights, one was eaten by the cornfield.

For C RG, Don the Younger got two breaks. Not only did Wes DQ out, but he managed to recover his own flight from the monster cornfield. In B, Marcy and Schmitt went 2-3 while prangs beset the NOVAAR troops.

Trip Barber's small slide wing based on the popular "Flanigan Flyer" took second in C, and East Meets West won in Teams with a flexwing RG similar to Tom Beach's A RG winner of NARAM-27. It wasn't enough. Every other NIRA member managed to qualify while no other NOVAAR members did. The power of "Chump Change" in a 13 weighing factor event was brought home. The club walked away from Glider Day with a 2,000 point lead and it wasn't a horserace any longer.

Friday brought a win in Sport Scale for Don the Younger, and Mark Schmitt's **Nike-Tomahawk** claimed its second National Scale Championship. Tim Marcy's super sized, scratch built **Mercury-Redstone** took second. Sudden Impulse's **BP-12 Little Joe II** snuck into third and a new **Aerobee 350** by the D.R.U.G.'s Pat Peterson was fourth. Larry London, Dual Egglofters and Ric Gaff contributed the now-famous chump change.

R&D saw the club garner only a second from Tim Marcy's efforts to build a mechanical recording accelerometer. Randall Redd's second place effort making body tubes by setting the glue with a steam iron was the report that



NIRA's very own Contest Director, per Claude Greenlee.

attracted my attention, but Bullet had nice things to say about the Odd Couple's efforts on a floating head piston.

Spot Landing didn't matter, thankfully. Tim Marcy, still in a fight for the B Division National Championship, took a nice 2nd, and Bunny contributed his only non-chump change placing, a 4th. (Big difference in points, eh? - Bunny)

The Illini Union on the main Quadrangle closed NARAM-28 with the traditional Award's Banquet. There was excitement, not only for the Championships won, but for the several thousand dollars worth of door prizes. Americans will have to wait for another year, as Fritz Gnass, the only Canadian attending

the meet, won the Grand Prize, a trip to NARAM-29 in Orange County, CA.

NARAM-28 will be long remembered in the history of our section, both for a contest well run, and a second championship claimed. It was exhausting and emotional, but really a lot of fun. Thanks to all the NIRA troops who competed, and a special dose of thanks to those who worked, before, during and after NARAM week, to make NARAM-28 a success. See you in La-La Land next August!



METEOR-2H Polish Sounding Rocket

by Bunny

Well, folks, here's another scale data sheet courtesy of Rob Justis. This little monster is a bit simpler to explain than the **VERTICAL** was. But it's just as interesting since we here in the West don't get many chances to see communist sounding rockets. Its color scheme is also terribly icky!

You shouldn't have too much trouble building a Sport Scale model of the **METEOR**. It's basically a body tube, simple cone and four fins, right? Well, that's good enough for a start, but look at the drawing closer. There's a lot more going on in this rocket.

First off, the nose cone's largest diameter isn't at the base. It's 70 cm. above the top of the body. That little boattail is followed by 40 cm. of tubing! Then the "simple cone" starts. Finally, there's a spike at the nose cone tip, similar to the pitot probes on research aircraft.

The back of the body has a set-up just like the nose cone: a 70 cm. long tapered section, followed by 40 cm. long attachment section, followed by the final diameter section. I have no idea what all that tapering is about, but I've seen in on other sounding rockets. The rear section of this rocket is similar to the U.S. Nike-Smoke.

The fins are fairly simple tapers. The basic shape from a side view is repeated in many basic kits and designs.

For details, look at the rear view of the rocket. There seems to be two small cones attached at the trailing edge of the fins. Such attachments appear similar to those on the ASP for flare attachments. Flares here, too?

There are two smaller openings or plates (I can't tell which) in the rear of the vehicle, set about 20 degrees off from the two fins with the "flare mounts". The last details present in the rear view are the launch lugs. They seem to be simple rail attachments, and appear to be duplicated on both sides of the rocket.

Build one of these with details? A bit harder than the simple Sport Scale version, but in a large scale, worth the effort. You could still stick with one body diameter, and build up the rear for the wider diameter with paper, balsa or plastic wrapping. I'd use balsa. The nose cone is a bit trickier to turn on a lathe; that rear section is pretty small, so take your time.

Fins should be a snap; I'd make them built-up with a central spar. Plastic would be my choice of material. No filling in grain, you know.

If you've been waiting for paint instructions, here goes. "Biaty" is white; "czerwony" is red; "stalowy" is steel and (are you ready for this?) "granatowy" is violet or purple! What horrid colors! Can you imagine the looks you'll get with this little baby at the next contest? I can't wait to see someone actually paint this rocket.

I think a BT-70 version, about 1:15 scale, with a D12, would be a good rip snorting Sport Scale model. If you stick to the simple version without tapering everything, even a beginner with a couple of kits under his belt can fly Sport Scale at the next contest.

Keep your eye open for even more scale data in future issues. A hearty NIRA thanks to Rob Justis and the Polish rocket engineering folks!

T MINUS 1

T MINUS ONE

NIRA's Scheduled Events

NIRA'S REGULAR SPORT LAUNCHES

All dates shown are Sunday, and launches begin at 2 PM. Launches are held at Ackerman Park, at the intersection of St. Charles and Swift Roads in Glen Ellyn. Bring your own launcher and a good lawn chair. Look for everyone around the brick building in the far corner.

If you're doubtful about a launch due to weather, conflicting contest, etc. Contact Bunny (475-5048) or Ric Gaff (724-2975) before heading to the field.

November 9

November 23

MONTHLY MEETING - November 7, 1986
Glen Ellyn Civic Center, 7:30 PM

Review plans for our rocket classes and fundraising projects.

Don't forget your "Model of the Month"!

UPCOMING CLUB MONTHLY MEETINGS -

December 5

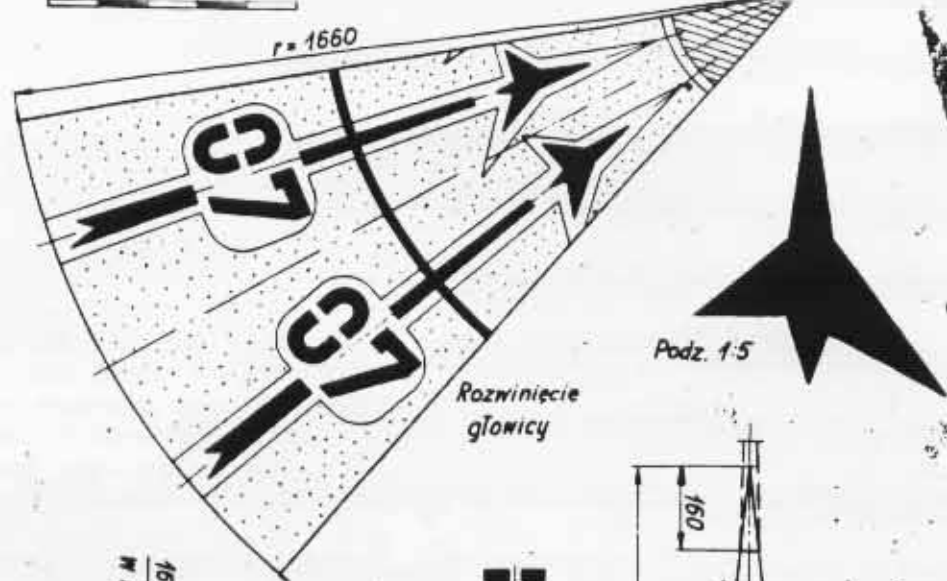
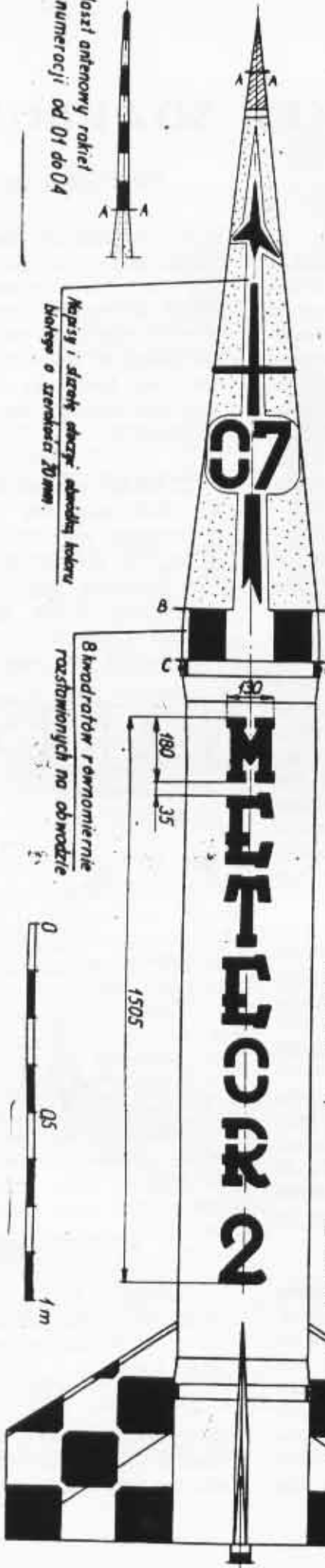
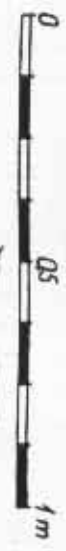
January 2

Wszystkie anteny rakiet
numeracji od 01 do 04



Najwyższy i szerszy obrotowy kolator
bokoje o szerokości 20 mm.

Błyszczący czerwony
rozstawionych na obwodzie



Podz. 1-5

16 kwadratów
w każdym rzędzie

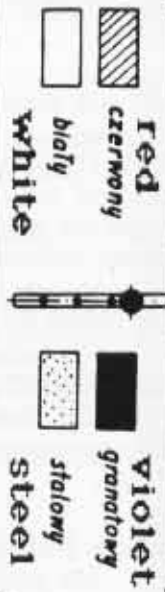


Szczegół B-B, C-C,
napis oraz
statecznik dla rakiet
o numeracji od 01 do 04.

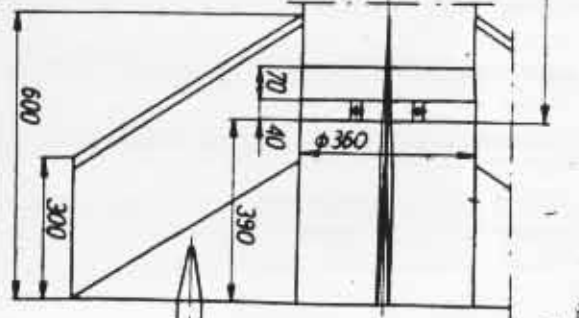
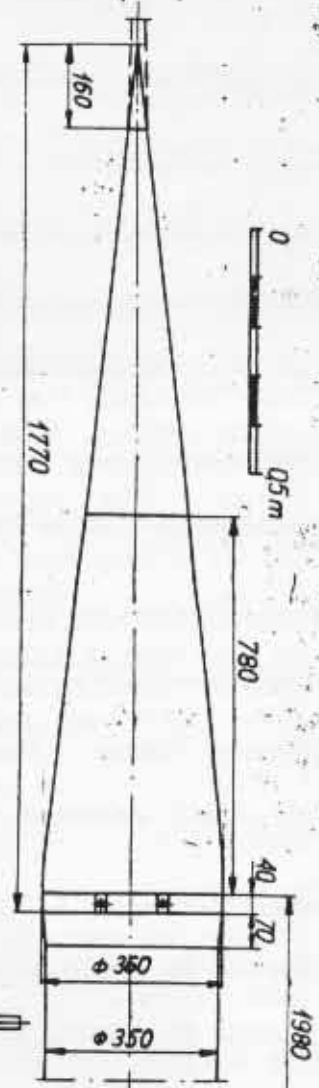
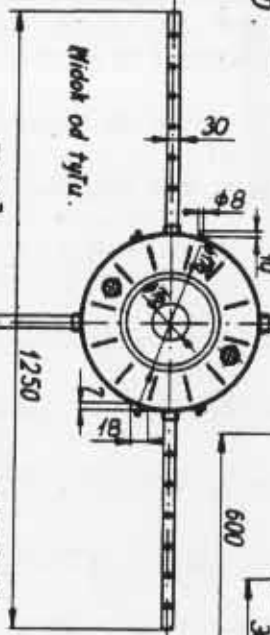


METEOR 2

Litery 0 identycznie
jak cyfra 0.



Miódki od tyłu.



Podz. rzeczywista ~ 1:15A

9

Polska rakietka badawcza Meteor-2H

Podziałka 1:15A	Opracował:	Łlicz ark. 1
Data. 1 XII 1970r.	Kreślił: Rukuszewicz	Nr.ark. 1

LOUDLY FROM A BROKEN SOAPBOX

By Bob Kaplow

The members of the National Association of Rocketry have been made the victims of unfair competition practices.

At NARAM-27, NIRA protested the East Meets West team's competing for NOVAAR. None of the members of that team, Ken Mizoi, Ross Hironaka or Kevin Kuczek, were bona fide members of NOVAAR as required by the Pink Book. The team had flown for PULSAR in previous years, and had not flown any meets for NOVAAR during the regular contest year. This protest was denied when NOVAAR claimed that these individuals "had just joined" before NARAM. None of their membership cards indicated this change. The renewal charter subsequently filed by NOVAAR did not list any of these "new" members.

Prior to NARAM-28, another team did the same thing at WUBBA-9. Charlie Sykos and Daryll Bachman formed the Jankov Pavlov team, and decided to fly for NOVAAR. Both of these individuals were, in fact, members of PULSAR according to all NAR records on file at the time.

When informed of this, NIRA contacted NAR headquarters to check the official section affiliations of these individuals and on the members of East Meets West, which by then had again signed up to fly for NOVAAR at NARAM. No member of either team was listed on NOVAAR's charter. Sykos, Bachman and Mizoi were listed as members of PULSAR. Based on this information, NIRA requested that the contest board deduct those points credited to NOVAAR at WUBBA-9, and not allow either of these teams to compete for NOVAAR at NARAM-28.

At NARAM-28, representatives of NIRA and NOVAAR met with Contest Board Chairman Terry Lee to attempt

a resolution of this situation. At that time, one of the NOVAAR representatives stated that NOVAAR had a special non-dues paying "Associate Membership" category which applied to these members. Based on that, NIRA's protest was again denied. The NOVAAR By-Laws has no such "Associate Membership" class. Article 3 of their By-Laws requires that all members be dues paying.

During NARAM-28, a "new" section membership list was received by NAR HQ. It was not signed or dated. Again, there was no indication of associate members. Only two of the three members of the East Meets West team were listed, and one of them was listed with an incorrect first name and only a last initial. No NAR numbers were listed for either person, even though neither could possibly be considered a pending member. The NAR membership of the third team member had expired by NARAM-28!

Both at NARAM-27 and NARAM-28, officials have ruled against NIRA on this matter. Both times, these decisions were based on incorrect or misleading information supplied by members or alleged members of NOVAAR. In neither case was this unfair advantage sufficient to help NOVAAR beat NIRA for the national championship, but at NARAM-27, it did unfairly award the Reserve National Section Championship to NOVAAR over the Vikings.

NIRA does not believe that there is any conspiracy on the part of NOVAAR as a section to beat NIRA at any cost. We have found a few individuals, most not legitimate NOVAAR members, who do seem to have unfairness as their goal. In spite of the bitter taste this matter left for all NIRA members at the

start of NARAM-28, we found most NOVAAR members to be nice, friendly and fair competitors. We urge NOVAAR to consider the detrimental effects that these few individuals are having on their section's image and clean their own house, so that this same argument does not come up at NARAM-29.

If NOVAAR does not see a need to act, NIRA asks that the NAR Board of Trustees and the Contest Board do so, to prevent this situation from happening again, and to take appropriate action against those members manipulating the 1985 and 1986 contest year results.

NEXT ISSUE



SHOOTING STAR 11

NARAM-29 EVENTS!!!

1/2A FD C HD A SD
B EL DUR D RG D EL ALT
A BG (NO flexies)
Sport Scale (A) Scale (B/C)
R&D Plastic Model

Dates are August 2-7, 1987 in Orange County, CA. Visit Disneyland and win the Nats all in one trip!

OCTOBER 26 LAUNCH REPORT

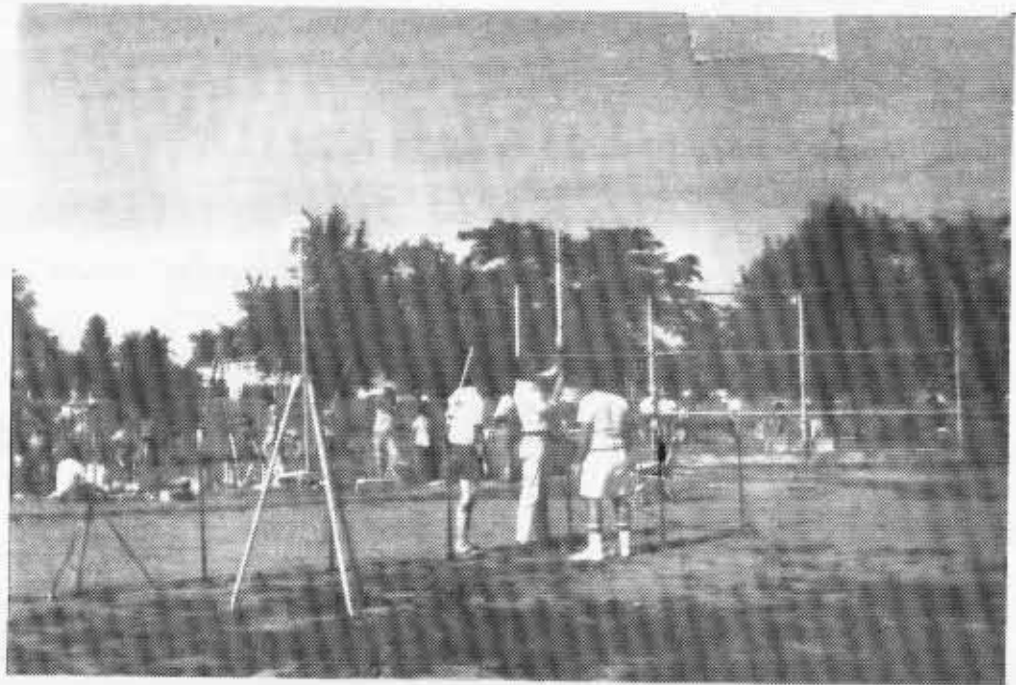
Only three intrepid NIRA-ites braved the overcast and drizzly skies of Glen Ellyn for our latest launch. But, there were rockets flown, in between Bunny and Gaff transacting some NARAM-28 paperwork business.

Gaffer flew his ever present **Pyramid**, super sized model. The D12 worked as advertised, and the flight was perfect.

Tom Pastrick, encouraged, stepped forward with more model and more power. His **Tapeworm** Condor BG went off with an old Composite Dynamics F40-6. The infamous "Lovelace" effect stripped of his nose cone early, but otherwise the flight was a success. He did have to sacrifice a stripped parachute to the trees. The calm weather allowed the weight of the lines alone to blossom the chute to its doom.

Bunny did most of the flying. His refurbished **SPEW** made its Glen Ellyn debut, and did its standard trick, wasting a C6-3. He also flew his **Millenium Falcon** in red, white and blue tissue scheme. Unfortunately, it snagged a clip on the way up, damaging the stab. Everything worked, however, except for a steep 40 sec. glide on a A3-4t. His last flight was of the **Bunny Rocket** presented to him by Randall Redd at NARAM. The non-furry rocket went straight for a hundred feet, then turned parallel to terra firma. All came to a good end, however, as the ejection charge fired and chute deployed safely. Not even the little eyes fell off at landing.

Will November see more troops at Ackerman? Will there be any decent weather between now and April? Tune in at Ackerman in November to find out!



Next year!



HOWDY PARDNERS!

John Pigsley here, purveyor of fine fashions for model rocket recovery. You saw the latest in women's rocket wear on the September cover of *American Space Soldiering*. For the men, I recommend this All-American flame thrower, bandolier and gold-sequined bikini briefs. Rescue those MIA rockets my way!

While you're at it, buy your rockets and all your rocket supplies from **THE GLEN ELLYN TOY AND CARD SHOP** — a great American institution.

AND DON'T EAT QUICHE!