



The Upstate Rocketeer

Official Publication of MARSTM, the Monroe Astronautical Rocketry Society,
Section 136 of the NAR®



August, 1994

Rochester, NY

Volume 7, Number 4

NYSPACE '94



HERE'S TO THE CHAMP—State Champion Daniel Wolf taking time out from contest flying to launch a few sport birds. This is the maiden flight of his Laser-X scaleup. Photo by John Viggiano. ➤

Meet coverage by Bill Owens and John Viggiano

NYSPACE '94, the New York Spacemodeling Championship and Exhibition, was held the weekend of 4-5 June in Geneseo, NY. Absolutely beautiful weather prevailed, and thermals abounded. Sunscreen and cold drinks

Inside This Issue:

Opinion / Editorial	2
As the Rocketry World Turns	3
Battle Park '94: Where Pigs Eat	8
Who Am I?	9
Club News	10
Contest News	11
Rocketry Behind the Iron Curtain	12
NARAM-37 (Next Year) News.....	13
Whirl-A-While: Helicopter Plan.....	14
The Tip Locus	15

NEWS FLASH

MARS has recently been awarded the bid for next year's NARAM, to be held in Geneseo. We'll be hosting rocketeers from around the country in about a year, so you know it will be exciting. Please see the editorial, and Dan's article on Page 13. ➤

were in demand all weekend. This year was the fourth NYSPACE, and the second hosted by MARS.

An FAA waiver was in effect for sport flyers, with a 5000 foot AGL ceiling, a 5# weight limit, and I impulse class propellant limits. While these conditions are not the greatest, we expect better waivers in the future for this field.

And what a field it is! It is used every other year for the AMA Freeflight Nationals, and they need lots of room for that. At one end of the field is an airstrip and the National Warplane Museum, and between rocket flights we were treated to brief maintenance flights of various and sundry vintage aircraft, including a North American T-6 Texan. The museum's B-17G is grounded (as are all B-17s) because of an FAA order. Until they get the wing problem straightened out, no more fly-overs by this impressive bird. Flyers recovering their rockets also had a chance to take a close-up look at a WWII vintage tank parked a short distance away; despite numerous suggestions we did not use the tank as the target for Open Spot Landing!

Contest Flying

The contest portion of NYSPACE was sanctioned as an NAR Regional, as have all previous NYSPACES. In addition a state champion and state champion section are selected at NYSPACE, so although all NAR members are invited to participate in the contest, we do refer to it as "The States." Event by event, here's how it went:

1/2A Streamer

Jeff Ryan had the most consistency, with 1:08 and 1:24 flights using all-vellum (nose cone and all) rockets. Dan Wolf had two good flights for a 115 second total. Third place was a dead heat, as John DeMar and John Viggiano both had 50 second totals. Brett Templar rounded out the in-the-money finishers, with a single 47 second flight.

1/2A B/G

Many contestants flew Rocky Mountain Canary 2s built at the MARSCON convention in March, at a workshop lead by Dan Wolf. John DeMar flew the Beakers canard glid-

continued on page 4

Op / Ed

Rhymes of the Range

As I write this, NARAM 36 is yet to be held in greater Houston, yet thoughts here are on another future NARAM, the thirty-seventh in the series. That's next year's incarnation. Why the interest a year in advance? Well, if you missed the announcement on the front page, NARAM 37 is to be held in Geneseo, New York, and MARS is hosting it.

Some MARS members have never been to a NARAM. That's kind of sad, but understandable, because NARAM is primarily a forum for contest rocketry, and most of them have been far away. However, the recent emphasis on sport flying, just plain flying rockets for fun, gives non-contest flyers a double reason to celebrate NARAM's coming to town. Next year's Nats promise to be the biggest sport launch we've ever hosted!

There will be at least one sport range open during the entire week. We may have a second one, dedicated to high-impulse birds, possibly run by another club. This would be an excellent opportunity for MARS members to fly rockets of all sizes. It will allow you to see what others are doing. What kind of crazy thing will Tom Beach come up with next? What does it look like when a large radio controlled rocket glider takes off? And why do they use so shallow a launch angle?

Manufacturers will be bringing their latest wares, and not just Estes and Quest. Manufacturers of all kinds of chachkas and whizzmoes you may never have even heard of will be coming, and you'll get to see them up close and talk to the developer (often the company president, to boot) at the Manufacturer's Trade Show. Maybe you've already got a gadget that's not operating the way you'd like it to. Chances are, the manufacturer will be there, and can give you some pointers on how best to use it.

At recent national events, I've met G. Harry Stine, Vern Estes, Gary Rosenfield (of Aerotech), Ed LaCroix ("Apogee Bigwig," as he puts it), and a whole bunch of champion and world-class rocketeers from all around the country. They're all great folks, and I had a wonderful time meeting and talking with all of them. Rocketeers are great to talk to, no matter where they come from, and the ones from points distant seem to have the most interesting stories to tell!

Think about the best hobby store ("best" obviously means it has the most rockets!) you've ever been in. Now, multiply it by ten, square it, and you'll have an idea of what a NARAM Range Store is like. Sure, there'll be contest supplies a-plenty. But loads of sport kits in all sizes and shapes, plan books, back issues of the magazine, NAR Mugs, and all kinds of other neat things are typically available. On some products a special NARAM discount may be offered.

So, even if contest flying isn't your bag, there will be plenty of fun to be had all week. But if you like contest flying, this will be a contest of contests. Our slate of events has been approved by National Contest Board Chair Matt

Steele, and it's a fun set of events to fly. We've brought Boost Glide back to NARAM, and are going to try Flex Wing glider as a separate event for the second time at a Nationals. Streamer and parachute duration are on the card, so is spot landing. It will be a contest that club members won't want to miss.

I'm asking all members for two things. First of all, please, please, please mark the dates, 22-28 July, 1995, on all your calendars and plan on coming. You will think you've died and gone to Rocketeer's Heaven, or Valhalla, or wherever rocketeers go when they shuffle off the mortal coil. But, more seriously, we need all members to be involved, in some way, even if only in a limited capacity, with the preparations for this big event. Dan has made a big commitment, and he can use the help of all of us. Please don't let him down.

Have fun & fly 'em high!

John
John

>

Upstate Rocketeer is published by MARS™, Section 136 of the National Association of Rocketry, as a service to its members and rocket enthusiasts in Central and Upstate New York. Subscriptions are currently \$6 per year.

Submissions from all people are welcome. We prefer electronic form; please contact us for details. We accept photographic slides, prints, and Photo CD.

Editors of other newsletters and journals are welcome to reprint material which appears in *Upstate Rocketeer*, provided they extend to us a reciprocal privilege and they cite the source, unless the article, plan, or what-have-you indicates something to the contrary. Please contact the author if that's the case.



Editor: John Viggiano
Layout: Hermann Püterschein
Contributors: Dan Wolf, Ferenc Róka, Bill Owens, Jay King, Bob Howdyshehl, John DeMar.

MARS™ Officers:

President:	John Viggiano
Vice President:	Jeff Ryan
Secretary-Treasurer:	Ferenc Róka
Immediate Past President:	Jay King
President Emeritus:	Dan Wolf

As the Rocketry World Turns

News and rumors heard 'round the hobby, as reported by Dan Wolf and Jay King

NAR News...As was rumored earlier, several current members of the NAR Board of Trustees have decided not to seek reelection. The ballots have now been mailed out and trustees not seeking another term include Matt Steele, Chas Russell, John Pursley, Connie Pursley, and current NAR Secretary C.D. Tavares. Also, J. Pat Miller, although running for trustee, will be stepping down as President. Barring a floor nomination at the Association meeting in July with the nominee receiving a large number of votes from members in attendance (an extremely unlikely set of events), two candidates already have a seat on the board. They are Bob Sanford and Vern Estes. The reason. Each region must have at least one trustee on the board and Bob and Vern are the only ones running from their respective regions. Congratulations to Bob and Vern. Also, given the new requirement that there can be only no more than three trustees from a region, one of the four southland candidates (Tom Lyon, Stewart McNabb, Trip Barber, George Gassaway) will not be elected, even if he finishes in the top nine. If you have been a senior NAR member for more than a year, you are eligible to vote and should have received a ballot. Remember, the ballots must be received no later than July 15, 1994. Don't forget to vote. Strictly opinion on the trustee elections: Of all the trustees not seeking reelection, the one I was most disappointed in not seeing on the ballot was C.D. Tavares. The average NAR member probably doesn't realize the many things that Chris has done and the many hours of service to the NAR that he has put in. Here's one NAR member that just wants to say thanks for all your hard work Chris. *[The editor seconds this motion!]*

In local NAR News, a new NAR section has been formed in Buffalo. It is the Northside Section. Congratulations to all those NAR members in Buffalo.

Tripoli News...Tripoli elections are coming up this year as well. Profiles of the candidates appeared in the April Tripoli report. Chuck Rogers is stepping down as President but he is still running for Trustee. Tripoli ballots should be arriving in the mail soon. Tripoli members - don't forget to vote in this one.

Manufacturers News...Some more AeroTech reloads have been certified. The E6 for the new 24mm R/C casing and the 100 NS G33-5J and G33-7J loads for the 29mm "Bumble Bee" case have been certified by NAR S&T.

The following motors have been certified by NAR Standards & Testing as of April 10, 1994 for general use as model rocket engines. They are all certified for contest use as of July 9, 1994. All of the following are Aerotech reloadable motors, certified only with the indicated size casing and

manufacturer supplied nozzles, end closures, delays, and propellant slugs. Aerotech 24mm x 70mm RMS 24/40 Casing: F12-2J (43.2 N-Sec total impulse, 30.3 gm propellant mass). F39-3T,6T,9T (50.0 N-Sec total impulse, 22.7 gm propellant mass). The following motors will not lose contest certification on July 1, 1994 and remain certified for general use indefinitely. They were previously listed as being scheduled for contest and general use decertification in a NAR S&T news release (#6) dated March 12 as they arrived very late for triennial recertification. They now retain certification. Aerotech E25-4,7; E45-4,8,12. The Aerotech E25-10 remains scheduled for contest decertification on July 1, 1994, but certified for general use for three years. The following motors have been certified by NAR Standards & Testing as of April 17, 1994 for general use as model rocket engines. They are all certified for contest use as of July 16, 1994. All of the following are Aerotech reloadable motors, certified only with the indicated size casing and manufacturer supplied nozzle, end closures, and propellant slugs. All of the following are "RC" motors, with no delay or ejection charge. Aerotech 32mm x 107mm RC Casing: F13-RCT (63.00 N-Sec total impulse, 32.3 gm propellant mass). F16-RCJ (80.00 N-Sec total impulse, 62.5 gm propellant mass). F23-RCW-SK (70.00 N-Sec total impulse, 37.8 gm propellant mass). "SK" indicates "Skywriter" where the engine emits 20 seconds of tracking smoke following propellant burnout.

Check out the June American Science and Surplus Catalog. Page one offers the "Incredible Flying Saucer". Its a 33" diameter helium filled balloon mounted with a pair of radio controlled electric motors. Just the thing for keeping occupied while standing on line at range check in. Price \$19.95, telephone 708-982-0870.

The book *Supermarionation Classics* (ISBN 1 85283 900 7) has information on Stingray, Thunderbirds, and Captain Scarlet. It is published by: Boxtree Limited, Broadwall House, 21 Broadwall, London, SE1 9PL. For more Supermarionation products, TOYZ 4 BOYZ at 609 Hill Street, Mayfield, PA 18433 717-876-3713 has model kits and collectables. They are re-casting the 1964 MPC Fireball-XL5 Space City Playset and the the Remco Supercar. A catalog is \$4.00.

Impulse Aerospace's Quad-Pod is a heavy duty launch pad. It features a custom cast aluminum head with a jackscrew elevation adjustment and ball bearing azimuth adjustment. It accepts rods from 1/8" to 1.125" in diameter. It features a 3/16" thick 12" diameter T-304 Stainless steel blast plate. It is rated for rockets weighing up to 200lbs, has a 34" four footed foot print, and is 30" high at the blast deflector. During testing one unit was tested to destruction. It failed with a vertical weight load of 678 lbs.

Regulatory Update...The BATF has stepped up their efforts to regulate HPR as reported in the last issue of UR.

Compuserve's Modelnet Sport Rocketry Forum and Usenet's "rec.model.rockets" news group have both been busy with news and rumors dealing with a "raid" of Magnum Industries recently by the BATF. It appears that while the six month grace period for enforcement applies for consumers, the department took it differently when it comes to dealers. It has been reported that among the items the BATF had problems with Ross selling (without an explosives permit) included single use and reloadables with more than 62.5 grams of propellant, Thermalite, Copperhead igniters, and Daveyfire igniters. The BATF also is saying that walk-up sales at launches for G motors and higher is a no-no. Apparently sales can only be made out of a commercial building with "regular" business hours. Pre-ordered motors will be able to be delivered at a launch however. The above stipulations are the rules that Magnum apparently will be following for launches coming up in the near future, including LDRS. It was also reported that the "6 month grace" period will end shorter than expected, probably right after LDRS. After that a permit will be required for purchasing

the affected items out of state and/or storing them. Of course storage will require a storage facility as well. In light of the recent "raid" on Magnum, representatives from Tripoli, the NAR, and the HPRMDA (High Power Rocket Manufacturers and Dealers Association) will be meeting with representatives of the BATF in the near future to discuss this issue. In the meantime, Michael Platt, president of the HPRMDA and J. Pat Miller, NAR president, have asked people to NOT call the BATF to inquire or complain about this matter.

NASA NEWS. . . DC-X RETURNS Long on hiatus because of lack of funding, the Delta Clipper Experimental, or DC-X, returned to the air on June 20th with its fourth flight above the New Mexico desert. This test vehicle for a planned single-stage-to-orbit rocket executed a more complex trajectory that brought it to an altitude of 2,850 feet and moving horizontally about 1,000 feet before landing. The flight lasted nearly 2-1/2 minutes. With the resupply of government money that came in April, testing by McDonnell Douglas will be completed this summer. >

NYSPACE, continued from Page 1

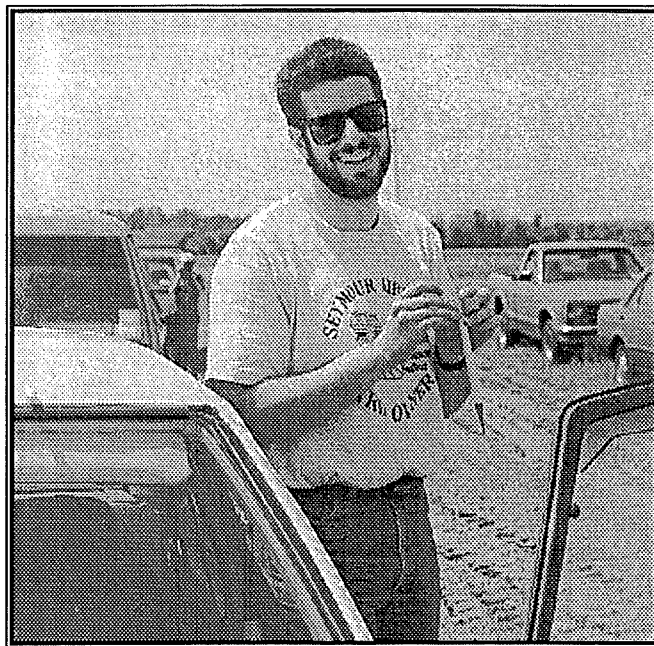
er he always beats us with in Gnat and Hornet B/G, catching a boomer on his first (4:05) flight. His 334 second total was just seven seconds ahead of Dan Wolf's total. Dan had the best single flight on his second try with an Olympia 67, clocking 4:12 before his glider disappeared, but his earlier flight did not have the lift his second had. Jeff Ryan also did quite respectively, with a 144 second total. All the other totals were below 2 minutes. Surprisingly, this was the second most popular event, behind only the much easier to enter 1/2A Streamer (11 and 10 qualified contestants, respectively).

A Super Roc

John Viggiano flew a maximum length, half PT-13 / half PT-6 bird to 128 meters for a total of 706 points. Dan Wolf flew a meter and a half of BT-5 to 100 meters, for 650 points, and Bill Owens had a 140cm long bird go 106 meters for 632 points. Finishing fourth (and beating her dad!) was Lisa DeMar. Way to go, Lisa!

D Dual Egg

The qualification rate in this event was very good, with 80 percent successful flights. John Viggiano busted some eggs (as is his custom), as did one flyer who re-flew someone else's eggs. He didn't see the "X" until after the flight. Dan Wolf placed first, with a great 239 meter flight using a D21 in an original design rocket featuring a CMR egg capsule and a home made extension. Ferenc Roka flew a D21 in a stock Estes Omloid for a second place flight of 172 meters. John did manage to qualify, nearly matching Ferenc's mark, acquiring 168 meters on a D12-5 in a long three-minute style bird using the Apogee egg cone and extension. Bill Owens did quite respectably, with flights of 143 and 123 meters on a lightly modified Estes Scrambler, the only con-

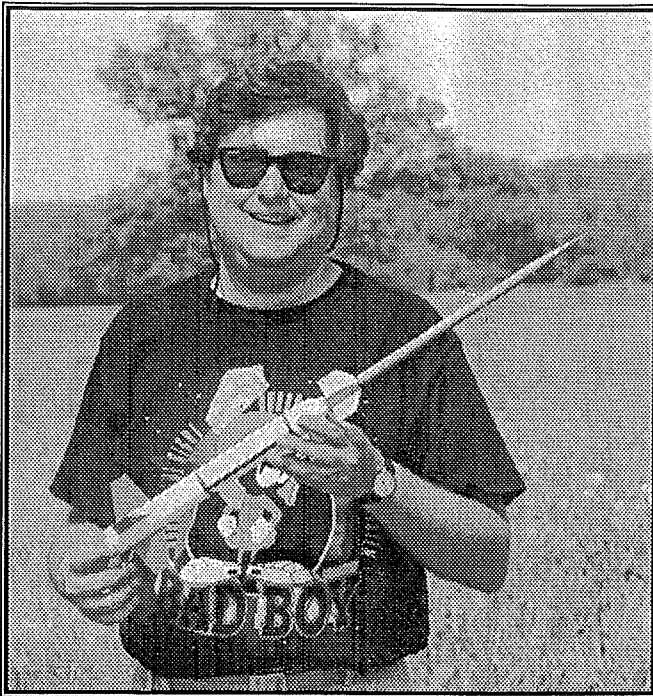


ROOKIE OF THE YEAR — NYSACE '94 was Bill Owens's first contest, and he flew very well. Here, he preps his all vellum (nose cone, too!) SD bird. Photo by Jacqui eOwens. >

testant to qualify twice (though many chose to make but a single flight).

Scale

Predictably, Scale had the lowest turnout, with only four entries, but they were all very nicely done. Jeff Ryan finished first with a 1/4 scale model of Goddard's L-16. Jeff's model was built around 54mm engine mount tubing. Jeff turned his own nose, and built a tail cone just like on the original. John Viggiano placed second with a 1/12 scale Nike-Apache based on Quest T-35 and Estes BT-5 tubing. John turned the



IT'S REALLY THIS BIG— Some readers thought John Viggiano's Nike-Apache model, pictured on last issue's cover, was huge. Here, John holds the very same model to better show the scale. It finished second in Scale to Jeff Ryan's Goddard L-16. Photo by Ferenc Róka. ➤

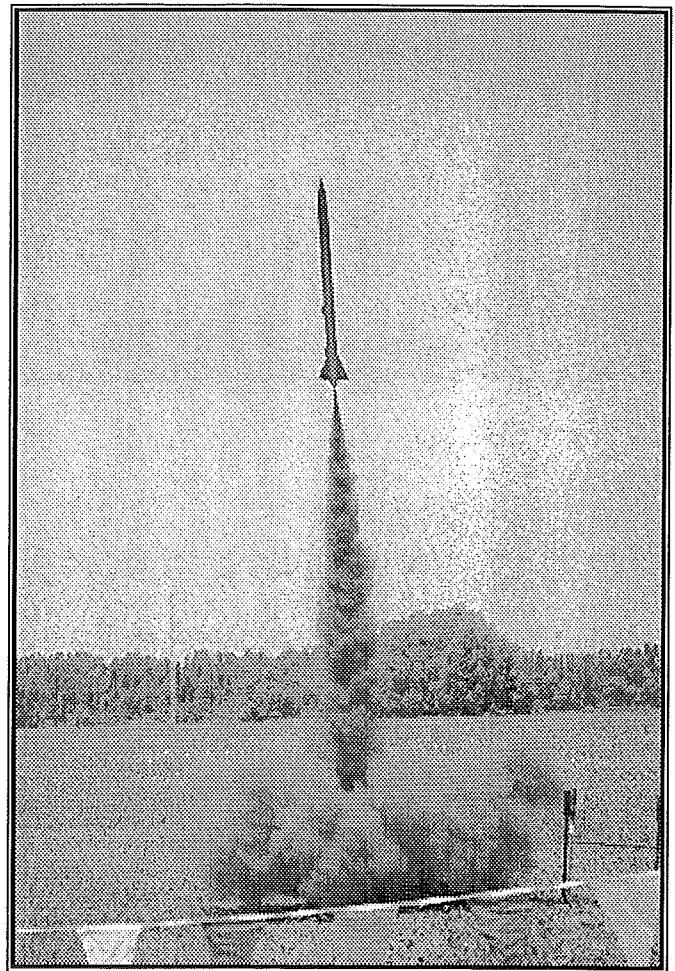
transition section and nose cone. John DeMar's 1/10 X-17 came in third, and Dan Wolf's Little Joe I finished fourth. John's X-17 was also the only contest flight under the waiver.

Open Spot Landing

The model of choice for most entrants was the MARS saucer, subject of the other building workshop at this year's MARSCON. However, Bill Owens eschewed this strategy, favoring instead a triangular cross-section original design flying on a 1/2A6-2 that reached only a few meters peak altitude but landed only 1.69 meters off the mark. MARS's spot landing specialist Ferenc Roka also used a conventional rocket and a 1/2A motor, and took second with a distance of 4.46 meters. John Viggiano flew the saucer, since it's his design, and placed third with an 8.00 meter mark, while Jeff Ryan came in fourth with a 10.46 meter distance.

Results

When the results were tabulated, Dan Wolf came out on top, having won only one individual event but coming in second in three others. John Viggiano came in second; he and Dan were the only contestants to qualify in all six events. The top four were rounded out by Jeff Ryan and John DeMar. All in all, we had fourteen contestants, several of whom were competing for the first time. Since no other sections competed at NYSPACE, MARS retains the section championship by default (though we could have beat them anyway!)



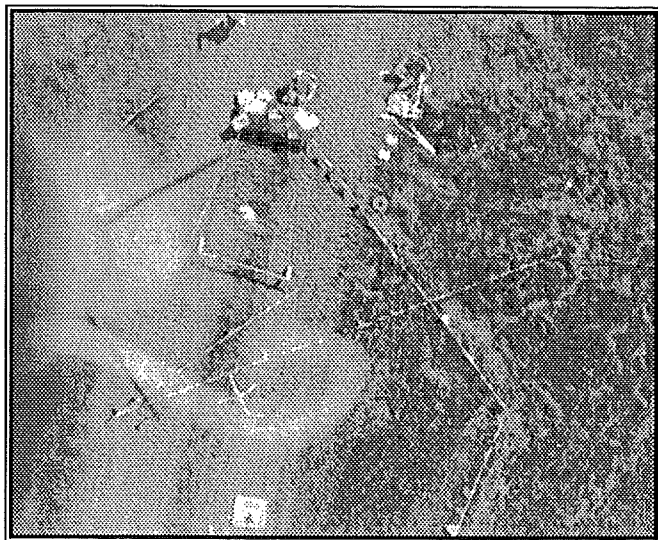
AND IT'S NOT EVEN FIBERGLASS— Ken Mizoi's LOC Caliber captured during one of several liftoffs it made Saturday. Ken drove 300+ miles and only brought this one bird, so he flew many times. Photo by Ferenc Róka. ➤

Sport Flying

Sport flying went on all weekend, split about evenly between model and high power. Most of the sport fliers came as families, as did some of the competitors, so there was a good crowd on hand both days. We had a large number of sport flights on a variety of models, including boost gliders, two and three staggers, cluster birds, and even a cluster-staged model, Andy Schecter's original Meadowlark (3 inline 18mm mounts staged to one 18mm). The Meadowlark upper stage was lost on Saturday after it staged horizontally and flew out to the far reaches of the field, but after several hours of searching by a number of enthusiastic volunteers, it was recovered and flew again beautifully on Sunday afternoon.

Andy flew his Quest Icarus several times with an Adept altimeter, taking advantage of the contest tracking system to check its calibration. He also flew his Aerotech IQSY Tomahawk on a G to qualify for the first step on the NAR certification ladder, the only certifying flight of the weekend.

Bud Piscini flew his NCR Juno-I while a recording of the actual launch was played over the PA system. Bud had two



ROCKET'S-EYE VIEW—Bill Owens acquired this great Astrocam photo of the Rangehead area using a look-down modification and a B6-2 engine. (Don't try one without the other!) Note the tank tracks running almost vertically. The white curl is the shutter release cord. Photo by Bill Owens. >

beautiful flights on this rocket, and also flew a couple of his trademark staged birds.

Dan Wolf had some scale work of his own on the high-impulse pads. His long-anticipated Laser-X scaleup was unveiled, and christened with an Aerotech F50-4. He also flew his NCR Phantom 4000 HD on a Rocketflite G160 Silver Streak for a spectacular, crowd-pleasing flight, and his "Xtra Special" on an H128-M reload.

John Viggiano flew his "Yo-Leven" with an H128-M reload and a half-complement of 5 C6 engines in the outer tubes. After burnout, observers distinctly heard what sounded like another thrusting phase, which would correspond to the air-start delay for the C6s. Unfortunately, on recovery it was discovered that only one C6 lit. Fortunately, the thrust imbalance didn't amount to much, and it was a nice flight.

Merrell Lane had his usual array of classic stuff (after all, his NAR number is in the 2000s) including a Battlestar Galactica fighter, an Estes Maxi-Honest John and a number of other nice sport scale birds. His Sidewinder had a beautiful flight, with a wind gust causing it to change direction in mid-air as if it had acquired a target!

Jim Cost, who already has nice photos of the field from aloft, flew his camera rockets sans their payloads. He also had one daring flight on an E15, which did just fine. Somewhat surprisingly, despite a large number of Estes D and a few E flights there were no CATO's all weekend.

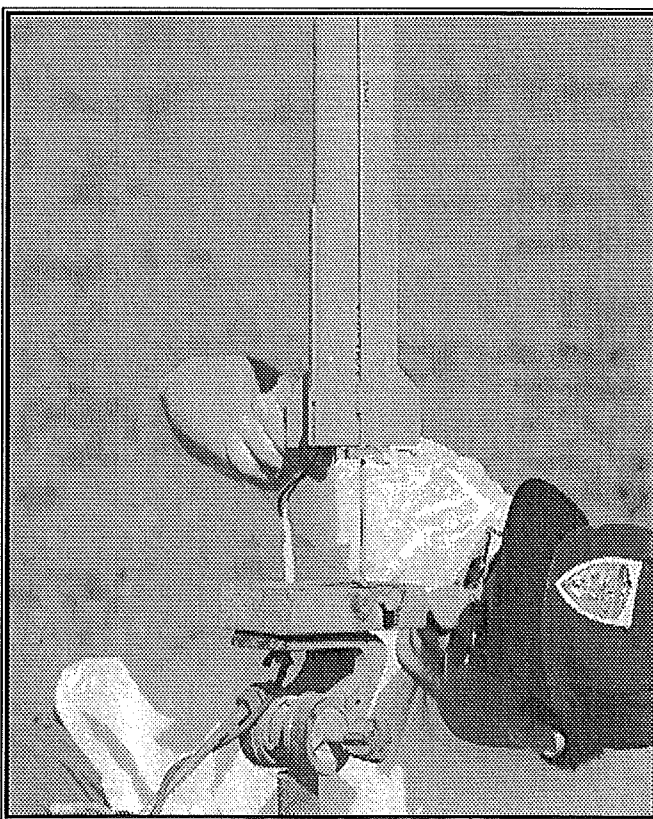
Bill Owens joined the other photographers, flying his lookdown Astrocam on two very low altitude B6-2 flights. He also flew a two-stage version of the MARSCON saucer, which one onlooker called "a complete waste of black powder."

Wayne Anthony, celebrated high-impulse rocketeer, came with Ken Mizoi to use up as many whoosh-generators having more than 62.5 grams of propellant as they could. Wayne flew his movie camera twice. Ken flew his LOC Caliber ISP several times on increasing impulse, despite having to cut the leading few inches off the tube after an early ejection zippered it. Ken also lost, then found his altimeter after it was ejected from the rocket on a I flight, and on recovery it was beeping out over 2100 feet.

Special thanks are due to Ferenc Roka, head Scale Judge, and Bill Owens, who did the measuring. We could not have run Scale without their help. Expert calligrapher Jacquie Owens, Bill's wife, added a personal touch to certificates for the participants which is much appreciated.

We also would like to extend our sincere appreciation to the prize donors: Hobbico/Quest, Estes Industries, and Bausch and Lomb. Naturally, we appreciate the support of Mr. Austin Wadsworth and the National Warplane Museum.

Future events are planned for the Geneseo NY field, including a waived sport launch on 27-28 August. It's a great field, and we hope you can join us! >



SCALE CHAMP—New York State Scale Champion Jeffrey Ryan hooks up one of his scale birds, this one of a Navy air-breathing missile. Jeff's Goddard L-16 took first place in the state championships. Photo by John Viggiano. >

NYSACE '94 Event and Point Summary

1/2 A Streamer Duration

WF = 8

Name	Fl. 1	Fl. 2	Sum	Points
1. Jeff Ryan	1:08	1:24	152	240
2. Dan Wolf	1:14	:41	115	144
3. John DeMar	:50	Sep	50	96
3. John Viggiano	:24	:26	50	96
4. Brett Templar	:47	DNF	47	48
5. William Owens	:44	Sep	44	24
6. Ferenc Róka	:30	DNF	30	24
7. Bud Piscini	:11	:11	22	24
8. Dan Garrett	:10	:11	21	24
9. Ed Norris	EJ	:13	13	24
9. Ray Lewis	EJ	:13	13	24
10. Ed Reilly	ND	SEP	DQ	0

1/2 A Boost Glide

WF = 17

Name	Fl. 1	Fl. 2	Sum	Points
1. John DeMar	4:05	1:29	334	510
2. Dan Wolf	1:15	4:12	327	306
3. Jeff Ryan	1:52	:32	144	204
4. John Viggiano	1:08	:08	76	102
5. Bud Piscini	:24	:27	51	51
6. Ed Reilly	:13	:37	50	51
7. William Owens	EJ	:39	39	51
8. Dan Garrett	:35	DNF	35	51
9. Andy Schecter	:13	RB	13	51
10. Ferenc Róka	:09	DNF	9	51
11. Brett Templar	NG	DNF	DQ	0

A Super Roc

WF = 14

Name	Fl. 1	Fl. 2	Best	Points
1. John Viggiano	150/128/706	DNF	706	420
2. Dan Wolf	150/100/650	DNF	650	252
3. William Owens	Saf	140/106/632	632	168
4. Lisa DeMar	118/118/590	DNF	590	84
5. John DeMar	100/130/560	DNF	560	42
6. Ferenc Róka	150/49/548	DNF	548	42
7. Bud Piscini	75/145/515	DNF	515	42
8. Jeff Ryan	Saf	DNF	DQ	0

D Dual Egg

WF = 29

Name	Fl. 1	Fl. 2	Best	Points
1. Dan Wolf	239	DNF	239	870
2. Ferenc Róka	172	DNF	172	552
3. John Viggiano	168	Saf	168	348
4. William Owens	143	123	143	174
5. Jeff Ryan	128	TL	128	87
6. John DeMar	TL	Egg	TL	87

Scale

WF = 32

Name	Prototype	Score	Points
1. Jeff Ryan	Goddard L-16	920	960
2. John Viggiano	Nike-Apache	905	576
3. John DeMar	Lockheed X-17	835	384
4. Dan Wolf	Little Joe I	805	192

Open Spot Landing

WF = 4

Name	Distance	Points
1. William Owens	1.69 m	120
2. Ferenc Róka	4.46 m	72
3. John Viggiano	8.00 m	48
4. Jeff Ryan	10.46 m	24
5. Bud Piscini	12.57 m	12
6. Dan Wolf	13.55 m	12

NYSACE '94 Totals:

Name	Section	Points
1. Dan Wolf	MARS™	1776
2. John Viggiano	MARS™	1590
3. Jeff Ryan	MARS™	1515
4. John DeMar	MARS™	1119
5. Ferenc Róka	MARS™	711
6. William Owens	MARS™	537
7. Bud Piscini	MARS™	129
8. Lisa DeMar	IND	84
9. Dan Garrett	IND	75
10. Ed Reilly	IND	51
10. Andy Schecter	MARS™	51
11. Brett Templar	IND	48
12. Ray Lewis	IND	24
12. Edwin Norris	IND	24

Sections:

1. MARS™	136	7428
----------	-----	------

Abbreviations:

DNF:	Did Not Fly
DQ:	Disqualification
Egg:	Broken Egg
EJ:	Ejected Engine
ND:	No Deployment
NG:	No Glide
RB:	Red Baron
Saf:	Safety DQ
Sep:	Separation
TL:	Track Lost

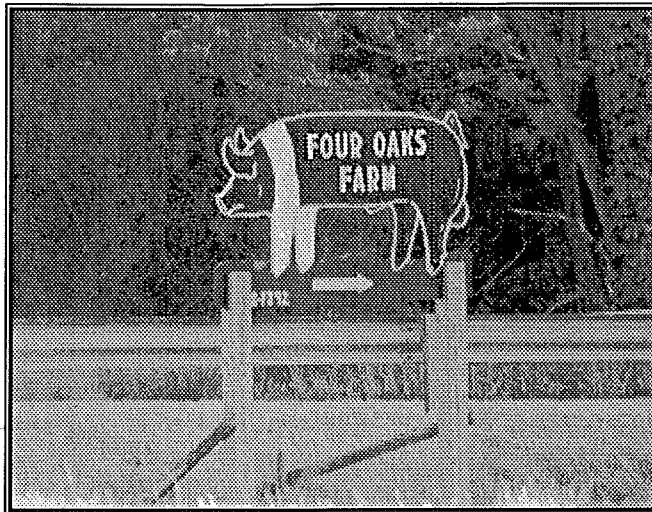
Culpeper, Virginia: Where Pigs Fly Eat!

Editor's Note: National Sport Launch 1994, held this past February in Dallas, featured an event called "Piglofting." The object of this event was to fly a rocket containing a replica of a porcine mammal, and recover it in one of several designated "pig pens." Cute idea; we (in the Editorial sense) think it's a welcome departure from the idiotic trend of turning sport launches into forums for flight testing provisional events. But, while attending the Battle Park Tripoli launch in Culpeper, Virginia, on 21-22 May, we discovered something far better to do with hogs, viz & to wit, consume them!

Just south of town is the fabled "Pig & Steak," a veritable Mecca of pig eating. (Oops! Come to think of it, they don't eat pigs in Mecca!) We went there for supper on Saturday. Several familiar faces were there when we arrived, and more showed up while we were wrapping ourselves around our meal. (You've heard of "Pigging out?" You could call this "Pigging in.") Yes, the consensus definitely was that the thing to do after a busy day of flying rockets was to chow down on some *Sus scrofa*, roasted, with barbecue sauce. I'm convinced they're onto something here.

Rocket-wise, it was a great trip. Dan's Electric City made its *debut* on a G160 Silver Streak in the first round. I was to fly my Thunderbore (modified LOC IV) on an I161 right after him, but the LCO decided my bird should have been launched from the pads out in the boon-docks. So, off shuffles I to the far away pads, to wait for the batch out there to be flown. So it's not until the afternoon that it gets off. It was a great flight, though!

Ferenc flew his LOC Forté on a Vulcan H100 Smoky Sam, which was quite impressive. That Forté is what sailors call "yar," it flies so nice! Both Dan and I tried to get a line on it, and wanted to be able to help Ferenc locate it. But he had it pegged; his Forté landed just at the edge of the



PIGLOFTER'S DELIGHT—Here is the giant hog sign John spotted last year, finally immortalized on celluloid. Yep, it's a Hampshire, all right, just north of Gettysburg. Frankly, we'd rather eat pigs than fly 'em! Photo by Ferenc Róka. >

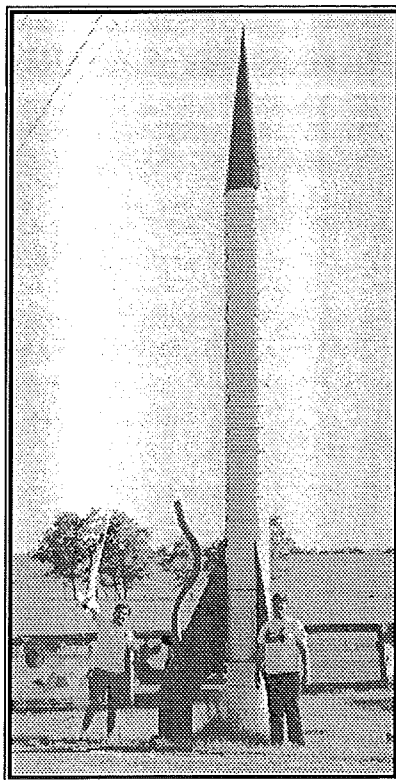
Ferenc made his first flight on a reloadable engine, an 18mm job with a B-sized load. The delay segment was longer than the propellant grain! It flew nicely, and Ferenc didn't have to worry about losing his hardware on that huge field!

Dan had his Phantom 4000 ready to go, and I had the Yo-Leven ready for a reflight, but no dice (excuse the pun) — Dan's Magnalite ignitor failed (the first time many people have seen this happen), while I was stranded near the head of the check-in line as the range closed. We were promised priority the next day.

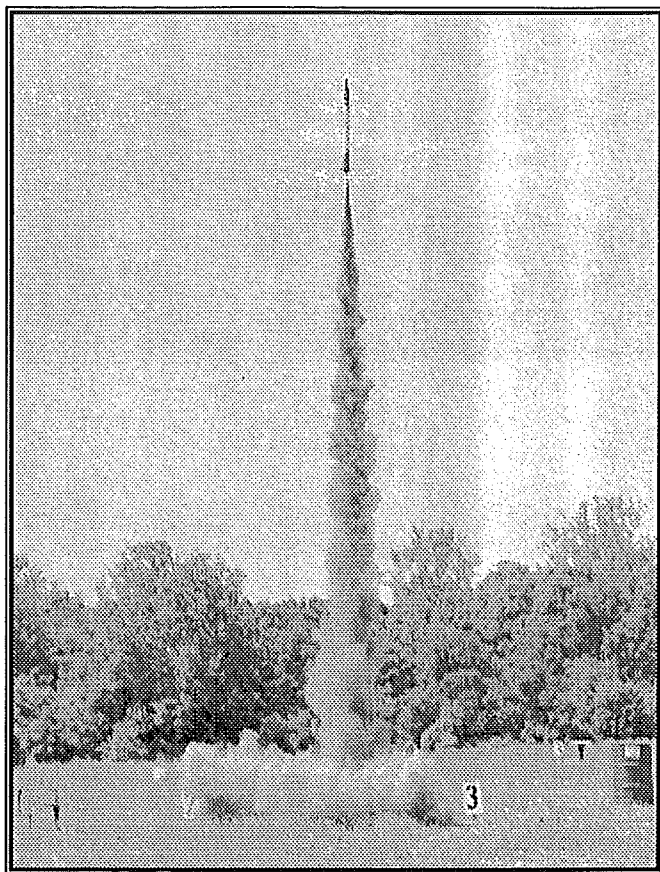
A trip to this launch would not have been complete without a visit to Ross Dunton's truck, which was loaded with engines, reloads, and other sundry goodies. In the early afternoon a representative from the BATF reiterated the BATF's position, and held a question and answer session. I was not able to attend this, but I was told by several people that the BATF may have a few misconceptions about the amount of material we store and what we do with it.

Mike Showalter, Launch Director of all the big Culpeper launches we've attended, announced that this will be the last big launch he will be running for a while. We hope another group, such as the new Maryland prefecture, will consider sponsoring launches on that field.

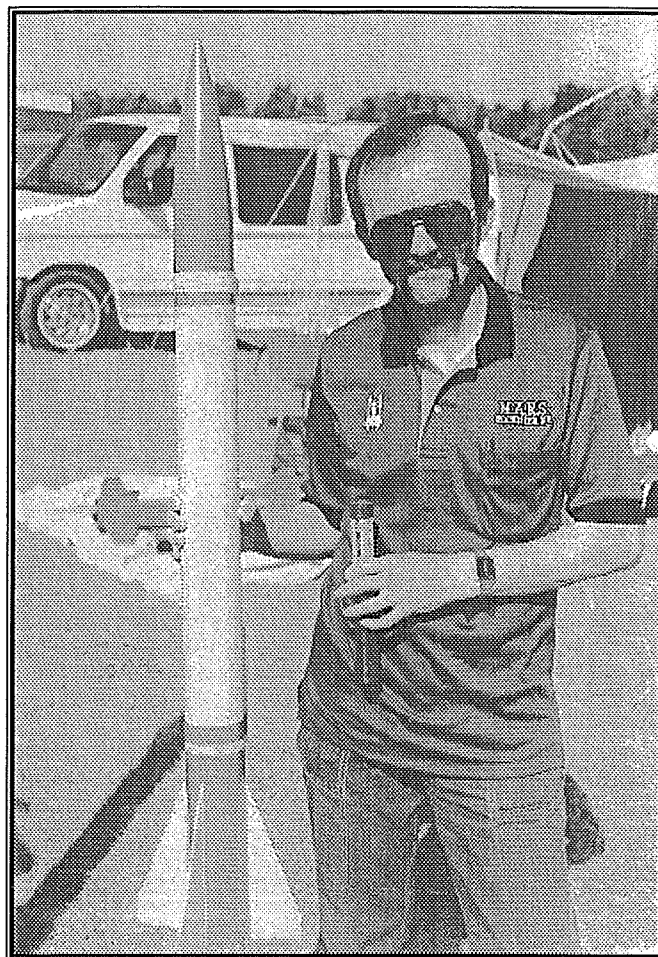
We had a great time at Battle Park '94, and would like to return someday!



HOW ARE WE GONNA FIT THIS INTO DAN'S VAN?— Dan and John pose beside a really big rocket just across the Potomac, there to advertise "Class C" devices of another type. Photo by Ferenc Róka. >



FERENC'S FORTÉ— Ferenc Róka's LOC Forté at liftoff. Vulcan's H100 Smoky Sam engine gave this bird a beautiful ride. It was just a tiny dot at apogee, but landed on the field. This combination gets an enthusiastic "thumbs up" from all MARS members in attendance! Photo by Ferenc Roka. ➤



MOST HAPPY FELLA— Ferenc and his Forté pose for a post-flight photo. Note the cool MARS shirt he's wearing, spent engine casing in left hand. Photo by John Viggiano. ➤

Who Am I?

Last issue's "Who Am I" was John "I Ain't Flying No Helicopters" Viggiano. None of you got it, so there. :-P Crimminy, if the Helicopter answer didn't give it away, I don't know what would!

This issue's "Who Am I:"

My first rocket was an Estes Alpha, which I flew in August, 1968.

My favorite kit of all time is the BT-70 based Estes Gemini Titan II. My favorite current kit is the Saturn V. My favorite Scale model kit is the Estes Mercury Redstone.

My favorite engine of all time is the Rocketdyne F-1, and of those currently available, the Thiokol TE-M-416, on which the Tomahawk is based, tops my list.

Of all the contest events, I like Scale Altitude the best, and Streamer Duration (two words that don't belong together) the least.

My favorite rocketry related book is Space Flight, by Carsbie C. Adams, from 1958. Being able to combine science, history, and comraderie is what I enjoy most about rocketry, and my 26 years in the hobby is my proudest achievement (but the best is yet to come). My biggest peeves about the hobby are how it gets treated as toys, and low regard for safety. If I could change anything about the hobby, I would turn back the clock to times when attitudes were different, like the 20's or the 50's.

Who Am I?

The first member to notify John by phone or letter of just who the wise-guy is who provided this issue's profile wins a great prize. If nobody guesses correctly before the next issue, our "Who Am I" member gets the prize.

If you still haven't turned in your questionnaire, you may call John at 359-3869. ➤

Club News, by Bill Owens

June Meeting

The June meeting was attended by MARS members John Viggiano, Dan Wolf, Merrell Lane, Jeff Ryan, Andy Shecter and Bill Owens and guests Ray Lewis and his son Daniel. Ray didn't stay a guest for long, though, becoming our latest member. We let Daniel choose one of the kits from the prize table, with the proviso that he fly it with us once it was built; he wisely chose the Quest Space Clipper. His dad will be lending some construction assistance.

The major topic of discussion, predictably, was the club's NARAM-37 bid. Dan passed out his draft bid for comments, and the consensus was that it looked very good. Dan also filled out his list of volunteers, and we talked extensively about the facilities available at Geneseo State. The group also chose a provisional list of events, to be finalized at the July meeting. If the bid succeeds, the events will be announced at NARAM-36 in Houston. Finally, it was decided that the NARAM committee will begin meeting at the end of September.

After much suspense, Andy showed off two very different new scratchbuilt models. The first was his new altimeter rocket, built out of BT-55 with TTW plywood fins and a 24mm mount. The regular ejection will deploy a streamer, with the altimeter firing a separate ejection charge for main chute deployment. His other rocket was quite distinctive, consisting of a plumber's force cup for a base and a section of BT-20 sheeted in light balsa as the handle. We're looking forward to seeing both fly!

The final agenda item of the night was the results for NYSPACE, which John tabulated and passed around at the beginning of the meeting. John handed out ribbons for the top four finishers in each event. Dan and Jeff won prizes for New York State Champion and Scale Champion, respectively, and a round of applause for their achievements. Andy was awarded the prize for best technical achievements for his cluster-staged Meadowlark and his altimeter flights, and Bill was given a prize for best results for a contest novice.

The meeting adjourned rather late, at 11:30, so pizza was postponed until next month.

June Sport Launch

The MARS monthly launch for June was the third at our new site in Parma and the best attended to date, no doubt since it was the first to have good weather. With the wind variable but mostly from the northeast, we set up four pads near the center of the park.

The first launch was Dan Wolf's daughter Sarah, flying her Estes Rampage on a B4-4. She also launched her Pink Rocket on a B; both flew very well. Mary Wolf flew her Estes Omloid egglofter, but lacking an egg the payload was an unused D12-3. The rocket flew well on a C6-3, and the D12 was recovered safely. Dan followed with his EOS on an E60

for a noisy and spectacular flight. Dan also flew his Elf, built in 1976 and winner of 2nd place in the Demented Design contest at Pittcon. The crowd which was steadily gathering loved it. Dan flew mostly higher powered rockets, including an Initiator on an F40 reload, his Thunderbolt on an F15 blackjack and finally a Viper III on three D12-5's. One of the D12's decided to go boom, but the rocket was mostly undamaged.

Meanwhile, John Viggiano was struggling with launch pads, trying to set up his newly built Custom Equinox. After much fiddling with the Plumber's Delight tilt head, another pad was chosen and the rocket flew very well on a D12-5, recovering spectacularly on twin mylar chutes. Unfortunately, on the rocket's second flight of the day, another D12-5 turned out to be a boom generator, badly damaging the base of the rocket and blowing the launch rod right out of the pad! John also stress tested his 1/2 scale Mini-Viper IV with four A10-3T's, roughly equivalent to a 1/4 E40, and it proved to be up to the task with a fast liftoff and a clean recovery.

Bill Owens flew two new scratchbuilt rockets, the first a cluster bird with four 13mm mounts; only three of the 1/2A3-2T's lit, but the rocket flew well and recovered safely. His egglofter, built with a plastic easter egg on a paper shroud, flew on a B6-4 carrying some small stones in the capsule. Again, the payload was unharmed. Someday, one of these egglofters may actually carry an egg! Jacquie Owens flew her new Maniac on a D12-5, her first 'big' rocket and only the second one she's built to date.

Jeff Ryan brought his daughter Jessica to fly some of her rockets, including an Estes America and an Alpha III on a C6-3. Jeff flew his scratchbuilt Pencil Rocket, igniting the three D12's with flashbulbs, but the chute failed to deploy and the rocket clipped the roof of one of the storage buildings. As expected, everyone had to joke about Jeff needing to sharpen it...

Andy Shecter pushed the level of technology on his rockets a little farther, flying the scratchbuilt bird he was showing off at the last meeting with his Adept altimeter, but this time the altimeter not only recorded the maximum altitude (721 feet on a D12), it was also set to trigger a secondary ejection charge. The D12 deployed a streamer at apogee, and the altimeter popped a chute at about 250' for a beautiful recovery. He then flew his Plunger on an Aerotech E45; it made some interesting maneuvers during flight but recovered nicely on its special shock absorbing base. Andy also flew his Meadowlark 3 to 1 staged rocket on four B's; the first stage was slightly damaged on recovery but the flight was nearly perfect.

July Meeting

The MARS meeting for July was held as usual in the meeting room on High Power Road, and appropriately Dan

Wolf brought along his latest HPR scaleup, a big version of the old Centuri Stiletto 2-stage model. This one is built out of HP plotter paper core tubing, with ply fins and a LOC nose cone. The other rocket available for show and tell was Merrell Lane's new boilerplate Skybolt model, a very sleek looking standoff nuclear missile which was flown several times by the Air Force but never went into production. John Viggiano brought along two of Revell's reissue models, the X-15 and the Mercury/Atlas *Friendship-7*, which comes complete with pad and support equipment.

After everyone had a look at these goodies, the meeting was called to order at 1915. It was mentioned that NAR trustee ballots are due July 15, and hopefully all the NAR members who are eligible have voted. The first item of discussion was the August sport launch, aka NYPOWER, which will be held August 27 and 28 at Geneseo. Unfortunately, this schedule conflicts with the Mid-Atlantic Regional Shoot which may prevent some MARS members from attending. John will be applying for a waiver, this time based on impulse rather than propellant mass. He will also be contacting some other clubs who have an easier time getting waivers to see if things can be made more convenient for us.

Dan then presented the good news that our NARAM-37 bid has been approved pending final approval of the budget proposal. Dan is working closely with the NAR to get the budget in line, and we expect to be able to announce formally at this year's NARAM. See the NARAM article for details. Dan also visited the field in Geneseo for the AMA Freeflight Nats in early July and reported that they were not particularly organized, perhaps because they have fewer safety concerns. Overall, he was underwhelmed with their setup.

The other issue of old business was the club launch equipment; Jeff Ryan has volunteered to become caretaker.

The discussion of new business began with the '94-'95 contest year. The club will, of course, be hosting NARAM-37, but we will also be running three other contests. The first will be the Finger Lakes Fall Classic IV, an Open meet, in September. John Viggiano and Bill Owens are working on schedule, location, and events list. The next contest will be a spring Regional, possibly NYSPACE '95 if no other section wants to hold it. The last contest before NARAM will be another Dumb Xtra Local in the late spring. Events for all the contests will likely be chosen from or similar to the NARAM-37 events.

John brought up that it would be nice to have a section flag to fly at contests, particularly NARAM-37. Merrell volunteered that he has some catalogs from custom flag makers, and it was also suggested that Bill Fenzel of North Side Hobbies in Buffalo may have some contacts. John will be working on this.

John has also discovered that he doesn't have the time necessary to edit the *Upstate Rocketeer* all by himself, and asked for a volunteer to collect the regular features each month (As the Rocketry World Turns, Club News, the events listing, etc.). Andy Schecter volunteered for the task.

The final issue of new business was a brief discussion of having a club social event of some sort, either together with a launch (since our monthly launches are at a big picnic ground) or separately, like a Red Wings' game. The summer schedule is looking a bit hectic at this point, but discussion will continue.

The meeting was adjourned at 2052, early for once, and several members made the usual pilgrimage to Oregano's (where discussion continued 'til the wee hours of the morning).

➤

Contest News

NYSPACE Results . . .

. . . appear at the end of the NYSPACE article. MARS won the trophy (must be some curse the home-team must endure) in spite of fierce competition (ahem!).

'94-'95 Contest Schedule

At the recent club meeting, the following set of events were approved: Finger Lakes Fall Classic IV, Open Meet, 17-18 September; NYSPACE '95, Regional Meet, 20-21 May; Dumb Xtra Local, 11 June. We had already approved NARAM 37, National Meet, 22-28 July. There are plans to attend a couple of Regional contests nearby, including ECRM XXII, which will probably be held the end of April.

MARS Point Standings

These point standings are apparently final for the 1993-1994 contest year, unless someone did something that I don't know about. . . Congratulations, warriors!

Hats off especially to John DeMar for high point total for the section. This makes two years in a row for John.

Name	NAR	WF	Pts
1. John DeMar	52094	8	3056
2. Dan Wolf	24516	6	2772
3. John Viggiano	25615	8	2497
4. Ferenc Róka	11077	8	1794
5. Jeff Ryan	46148	3	1515
6. Jay King	19799	2	852
7. Bud Piscini	54692	5	397
8. Bill Owens	61063	3	537
9. Andy Schecter	6679	3	51

Rocketry Behind the Iron (Silicon?) Curtain

A Visit to the People's Republic of Kalifornia, by "Secret Agent 52094"

[Note: the story you are about to read is true. Date: June 5-12, 1994. Agent: 52094]

Undercover as a computer consultant, I easily slipped through the uniformed guards at the John Wayne Orange County Airport (obviously named to make you feel like you're in America). The next step was to locate an inconspicuous vehicle for the stakeout, something red, sporty, and American-made: "National" Car Rental seemed like a safe choice.

Traveling northward through the war-torn landscape, I maneuvered over twisted freeways. The latest propaganda: the damage was done by Earthquakes and not by peasant unrest. I noted that the roads were filled with vehicles on a late Sunday evening and assumed they were commandeered by Party officials to give the appearance of prosperity during my visit.

I passed a well-lit sprawling compound near Anaheim. Most certainly this is their government headquarters and the large castle must be where the Politburo meets. Conveniently located nearby is something they refer to as "Magic Mountain", rumored to be the source of State revenue.

Finally, I arrived at my pre-assigned hotel room across from the "Ripley's Believe it or Not" museum (this seems more appropriate after some reflection). The "good view" from my window captured the essence of freeway and filling station. This must be why they call the area "Buena Vista".

As planned for the mission, I spent the week at a southern Kalifornia computer company investigating a technology transfer with an entity in the Eastern Bloc. There were no indications of leaks in the cover (as a matter of fact, I might even get paid).

Saturday was left open for general information gathering. The plan was to drive erratically around the area, lose any KGB surveillance, and appear unannounced at various locations. It worked. (For those who are new to this, KGB stands for Kalifornia Government Bureaucrats.)

A local informant directed me to Mile Square Park, formally a military base but now a recreational area. Nevertheless, it was still well-guarded and required a fee to enter (unguarded entrances were protected by spiked barriers built into the pavement, allowing exit only). I proceeded to the area designated for model aircraft hobbyists.

Although my training was primarily in rocketry, I was delighted to see the sky filled with R/C planes of all types. Separate spacious areas were set aside for control line aircraft and gliders as well. And, on the far side, I noticed a small group setting up launch equipment. I kept my distance, keeping an eye out for the first signs of a telltale smoke trail.

Ahah! It appeared to be an Estes mini-motor, probably a 1/2A3-2T, so I headed for the car to drive over and blend in with the other spectators. Before I reached the designated model rocket area, four other small models had been launched. I parked and waited for a good time to introduce myself.

After a few minutes, I sensed something was different. In most Free States, an enthusiastic group of rocketeers would be filling the sky with swooshes and pops. I waited. Nothing. Still watching from the car, I noticed two officials talking with the small crowd. A man, dressed in the uniform of the local fire chief, must belong to the Red patrol wagon; the other, a woman in a park ranger uniform, must have driven the green truck with the official markings. The Red Army and the Green Police were more than just monitoring the event, they seemed to be the center of attention.

Meanwhile, on the other side of the field, gallons of flammable liquid with wings kept buzzing their meat slicers overhead. Their owners stood nearby with their controllers and containers of fuel. The KGB officials did not seem concerned.

Not feeling comfortable intruding on this special moment, I waited several minutes more until the rocket people began to disperse. As they passed by, I casually inquired if there would be further launches. The answer: "No, we only had special permission to demonstrate five rockets for the local authorities". It was true, things are different behind the Iron Curtain. The Cold War of Rocketry is not over.

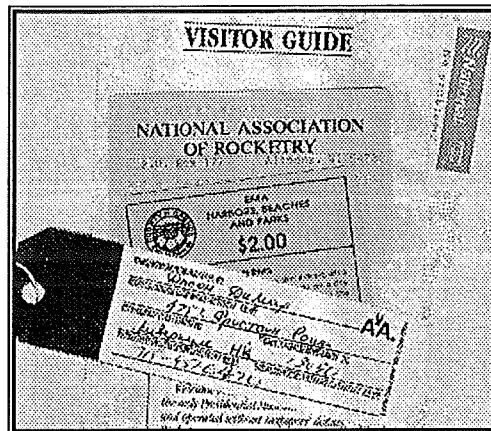
Reality was too much for me. I decided to search for higher ground and headed for Yorba Linda. There, I visited a small hobby shop called "Ground To Air Hobbies". The owner had just returned from a meeting with town Party Chiefs with some good news. A grassroots effort by the new rocket club

had received preliminary permission to use a town park for launches.

Around the corner, I stopped by the birthplace (and now burial place) of Yorba Linda's most famous statesman. He was a man who understood the Cold War and the use of détente to bring about its end. For two hours I walked through the museum, drifting back to a time when Kalifornia was California.

Ah, to be home again! Upstate New York, USA. Where rocketry is free (well, not very expensive) and the sky's the limit (well, up to 1200 feet or under a pound).

[Editor's note: The author has asked to be identified only as "Secret Agent 52094," but you ought to be able to figure out who he or she is, especially after checking the Contest Results elsewhere in this issue. According to the word on the street, the excessive restrictions on rocketry in Mile Square Park were prompted by an accident. Nevertheless, California stands nearly alone (with just Rhode Island) as having crippling restrictions on what we know to be a safe, worthwhile activity.]



NARAM 37 Committee Report

by Dan Wolf

Background

Ever since MARS hosted NYSPACE '92 in Geneseo at the National Warplane Museum, the idea of holding a NARAM there has been "kicking around." Last fall I contacted NAR Vice President Mark "Bunny" Bundick about our interest in hosting a future NARAM, possibly NARAM 37. Bunny heads up the NARAM committee and he sent me the "NARAM Proposal Outline Document." Early this year Bunny contacted John Viggiano to see if we still had any interest in hosting the "Nationals." The topic was discussed at a couple of club meetings this past winter/spring where it was generally agreed upon by the membership to continue to pursue the matter.

A meeting was held on Saturday, June 4th at "Mama Mia's" Pizzeria in "the village" in Geneseo. This was the Saturday night of NYSPACE and the purpose of the meeting was to gauge the interest level and general support from the area "rocketry community" for holding NARAM in Geneseo. Everyone present, including NAR members from the Buffalo area, the NARCONN section in Connecticut, and of course MARS, unanimously agreed that MARS should host NARAM 37 at Geneseo in the summer of 1995.

Preparations Begin

Two key items that we wanted to have in place prior to submitting our bid were the use of the field and housing. A letter was sent to the Warplane Museum requesting use of the field for NYSPACE '94. On June 8th we received permission from Mr. Austin Wadsworth, the land owner, for use of the field for NARAM 37.

Our contact with the college was equally successful. Janet Lurz, director of conferences at Geneseo State, sent us a package with pricing for rooms, meals, and meeting facilities in late May. The preliminary pricing based on a minimum of 100 people works out to about \$160 per person for someone staying from Sunday afternoon through Saturday morning. This includes breakfast and supper each day. John Viggiano and I made a trip down to the campus on June 17th. Ms. Lurz gave us a tour of the campus, showing us one of the dorms, one of the cafeterias, the ballroom where the banquet will be held and a couple of locations for night meetings. Assuming that we can stay in the dorms adjacent to the parking lot, the entire setup looks very good. Driving distance from the dorm parking lot to the field is about a mile and a half. Depending upon which dormitory and cafeteria we end up with, the walking distances between the dorm, cafeteria, and meeting rooms will be no more than a 3 minute walk and possibly less. The only down side is the availability of the facility. The week of July 29th through

August 4th is not available but the week of July 22nd through July 28th is available. This week has been approved by the NAR's NARAM Committee, and the National Contest Board.

Proposal Status

I wrote a first draft of the proposal after the initial contact with Geneseo State. It was reviewed by John Viggiano and Ferenc Roka on the way to Culpeper, VA in May. After some revisions, the draft version was E-mailed to Bunny on June 14th. Bunny offered some suggestions and the proposal was rewritten to incorporate them. Bunny also indicated that it looked very promising for us to receive the NARAM 37 bid. The final proposal was sent to the site selection committee members on June 22nd. Club members interested in obtaining a copy of the proposal can do so by contacting me.

The committee approved our bid one week later, pending approval of the budget.

NARAM Committee Meeting - June 14th

The NARAM bid was a major topic of discussion at the June MARS club meeting. Key NARAM range operation positions were assigned so that the final proposal could be completed. Also, responsible persons for various NARAM preparation tasks were established. These people form the core of the NARAM 37 committee. It was decided that the NARAM 37 committee would hold meetings separately from the regular MARS club meetings. NARAM 37 committee meetings will be held monthly starting in September. The meetings will be held on the fourth Tuesday of the month in odd numbered months and on the fourth Friday of the month in even numbered months. This was done to maximize the level of participation on the NARAM committee. Keep reading the newsletter to find out when the meetings are. The next meeting will be on Tuesday, September 27th.

The NARAM contest events were agreed to at the June meeting. This list has been sent to Matt Steele for approval by the contest board.

Merrell Lane attended NARAM 36 in Houston, TX during the week of July 24th, and handed out a preliminary "information sheet" at the awards ceremony. Several people in attendance have heard of the Geneseo field, and there was considerable excitement generated by the announcement.

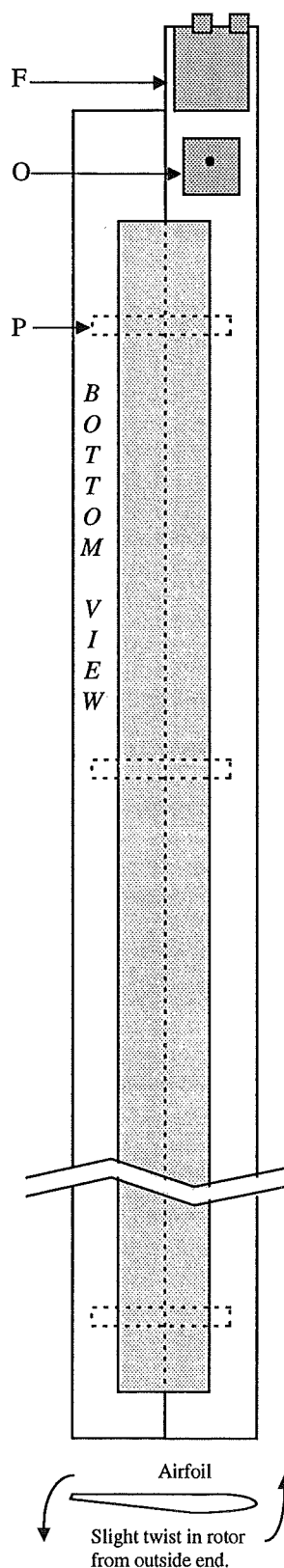
Sorry this NARAM 37 committee report was so long, but I wanted to fill everyone in on how we got to this point. So far things look pretty good (but then NARAM 37 is almost a year away)! We have lots to do between now and then. If you think you might want to join us on the NARAM committee, please do! We can always use more people to assist us in the preparations.



Whirl-A-While

1/2A and A Helicopter Duration Plans

John DeMar, NAR 52094



MAIN ASSEMBLY

- A1,A2 1/8" launch lugs glued over shaft. 1/4" long.
- B BT-5 nose cone drilled out or Apogee reducer.
- C Apogee 1/4" diameter airframe coupler, 2" long glued inside cone (fits loosely on shaft!). Leave 1/32" gap between end of coupler and part A1 (top lug).
- D BT-5 3/4" long glued to shoulder of nose cone.
- E (3) pieces of 1/16" ply glued to BT-5. Trim to stop rotor at desired angle.
- F (3) small (0.4") plastic hinges (RC plane type). Epoxy upper half of each hinge into BT-5, forming a triangle when viewed from end. Careful not to get glue into hinge area!
- G 1/8" spruce dowel or rigid composite shaft. 12" long for 1/2A model, 16" long for A model.
- H BT-5 balsa cone drilled out for shaft. Glue shaft in.
- I Ejection charge vent ports cut through.
- J BT-5 tube coupler to reinforce vented area.
- K BT-5 2 1/4" long.
- L Fins cut from 1/32" ply or 1/16" balsa.
- M 6 common pins bent as hooks to hold rubberbands.
- N 3 small strong rubber bands for top hinges.
- O 3 small squares of 1/32" ply to reinforce head of pin.
- P Wide rubber bands cut in 3/4" lengths (9 pieces).

ROTORS (three)

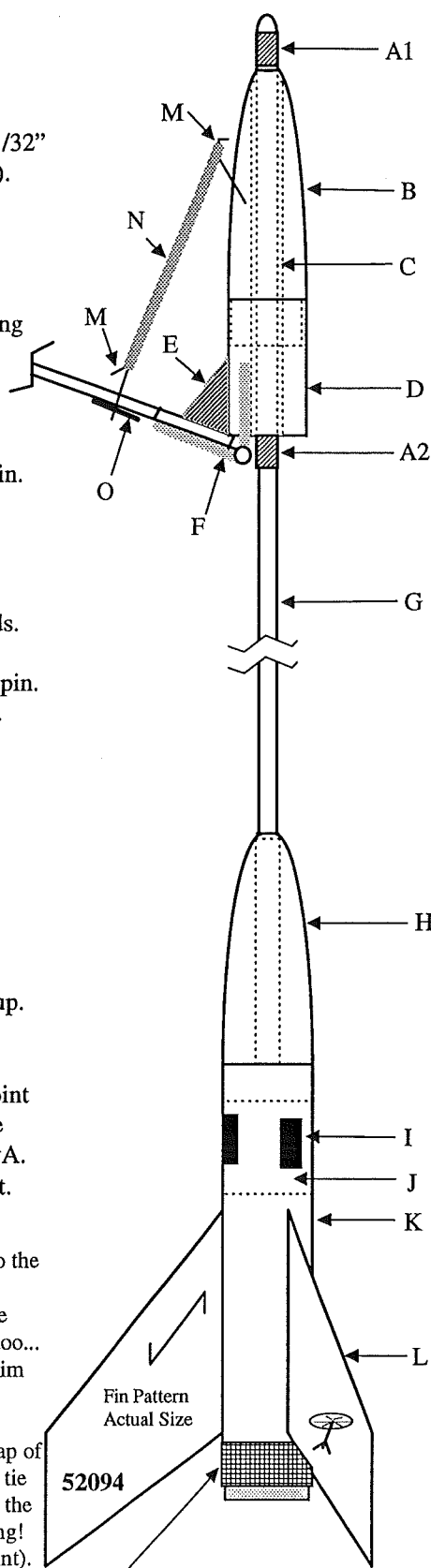
- 1" wide x 8" long 1/16" balsa. Sand to airfoil shape. (1 1/2" wide x 12" long for A model).
- Seal and tissue, or apply thin coat of cyanoacrylate and sand to smooth finish.
- Cut lengthwise in center and tape bottom side with mylar tape to act as a hinge.
- Glue three pieces of rubber band to top surface approximately as shown. These pull the halves back up.
- Glue half of hinge to BOTTOM side of rotor and reinforce with a coat of epoxy.
- Attach common pin through bottom of rotor at the point where a small piece of 1/32" ply is glued. Bend in the shape of hook and trim with wire cutters. Set with CyA.
- Give rotors a slight twist as shown. Redo before flight.

FLIGHT

Attach rotors using the hinge pins and connect rubber bands to the hooks. Test spin the rotors by holding the model by the shaft sideways while spinning yourself around like an idiot. Check the twist if the rotors don't easily autorotate. Check the "dihedral" too... tips of rotors should be about even with the top of the model. Trim the stops or add shims to set angle.

The three rotors fold in half inward and hinge down parallel against the shaft. Hold the rotors in place temporarily with a wrap of masking tape. Use light thread through a pair of vent holes then tie tightly around the rotors one turn. The ejection charge will burn the thread to deploy the rotors. Remove the wrap of tape before flying!

A launch tower is recommended (or add a launch lug at fin joint). Use 1/2A3-2T or A3-4T. Tape engine with mylar tape to hold it in.



The Tip Locus

An (Environmentally-Friendly) Epoxy Mixer, by Ferenc Róka

My recent entry into high power rocketry has forced me to look beyond the various carpenter's glues and learn about Epoxy adhesives. A problem quickly presented itself: Where/how do you mix the stuff?

I've got lots of Kodak film cans, but it's hard to tell how much "Part A" you've put in, so it's hard to tell the proper amount of "Part B" to use. A scrap piece of balsa solves that problem, but then it slobbers off around the edges while you're mixing it — onto guess who's carpet!

The local hobby shop does sell epoxy mixing cups. But, if you're like me you're loath (too cheap!) to spend money on those one-time-use condiment containers. Do you also want to be environmentally (and politically) correct?

The answer is in your rangebox. It's in the way Estes packages their engines. Like me, you probably rip open the blister pack,

and when you remove the last engine, the package goes in the garbage.

Stop doing that!

Cut out the plastic "blister" that was holding the engines on the card, flip it over, and voila! An epoxy mixing cup!

You may need to clean a little residue out of it, but usually not.

You can see exactly how much of each part you've put in.

Need to mix a small amount? Use the igniter plug blister.

A win-win solution: No money diverted from the engine-buying budget, and the local landfill can continue to accept grass clippings and disposable diapers for another day!

After filing this account, Ferenc mentioned that the blisters formerly used to package Aerotech F and G engines could be used for even larger projects. But caution is advised when using these vessels, as the edges are beveled. Happy mixing! >

Coming Clean with The Sarge, by Robert L. Howdysshell, USMC

After a busy day painting rockets, even a Leatherneck likes to get clean. Many of the paints, fillers, and other materials we use are tough to get off. That's where these products come in. By the way, any of them may be used to remove fallout on your fatigues if the stain is fresh enough.

Products with abrasives in them are usually better at getting out dried paint than ones that don't. All the ones listed here will clean wet paint off your hands.

Lava Soap— A bar soap; don't get this mixed up with your lady friend's beauty bar or you'll catch hell. It's made with real volcanic pumice, and is good on dried-up stuff. Not as convenient to use as some of the others.

Lemon GoJo Creme [sic] Hand Cleaner— A water-in-oil emulsion, can clean without added water. In fact, cream-type emulsion cleaners work best if you start without wetting your hands. Then, when all the dirty stuff has been picked up by the cleanser (don't forget under the fingernails, Galovitch!), add a little water, bit by bit, working it in like a good Marine. Rinse it off well and dry.

Here are some tips for working with creamy emulsion cleansers like GoJo, Goop, etc. Do your hands feel all sticky when you're done? Some residual oil is left behind to keep your skin soft and from drying out. Your dukes will feel less sticky if you wash 'em again with regular soap.

Does your cleanser get all soupy and runny after you've had it open a couple of months? It's because the water has evaporated. Although the cleanser will usually continue to work fine, some of the fainter-hearted among you may object to dunking your biscuit-hooks into such a slimy mess. Just replace the evaporated water, a tablespoon at a time, stirring until you have once again that gelatinous mass you know and love. These emulsions are most easily formed at normal room temperature or slightly above, so allow your cleanser to warm a little if you try this during the less-than-torrid Rochester winters. If you get foam on the top, you're either putting in too much water or putting it in too quickly.

GoJo is also available with Pumice. It's probably the most convenient way to remove stuff that's had a chance to dry out a

little.

Pep Boys Heavy Duty Hand Cleaner— Last time I bought some, it was only 79¢ at Manny, Moe, and Jack's establishment. (The one with the cigar looks just like an old Captain of mine.) It's a cream-type emulsion, just like GoJo, and it seems to work just as well. Recommended for quality and value.

Greasolvent— Dates back to the invention of the internal-combustion engine, I think. Comes in a Yellow tin. It's basically soap and sand, and needs water to get going. Takes the grease off basically by brute-force, and perhaps a layer of epidermis, too. Fair-to-good on dried crud. Recommended by my late Great Grand Aunt Louise, it's probably all they had the last time her hands got dirty. It smells nice, too.

Boraxo— Better at automotive grease, grime, and oil than it is on dope and lacquer. Didn't your high school shop use this? It's coarse, hard soap, and doesn't work without first wetting your hands.

Microbrush— No, it's not from Microbrick, but from a company in Dallas. Instead of sand or pumice, this stuff contains plastic particles in a soap matrix. These particles are gentler on non-Marine hands than sand or pumice, and the stuff cleans like the dickens. Comes in Army Green and needs water. (Maybe they should have made it Navy Blue?)

In a Pinch— Recommended by an old teacher of mine is oil and sugar. With sugar prices being what they are these days, you may opt for salt, instead. (Unless you're not a Marine and have a cut. I've been told non-Marines have a thing about avoiding salt in cuts.) This combination makes Lava soap feel like cold cream. You can also use a sprinkle of sugar, salt, or sand with a cream-type emulsion cleanser to help it get out dried junk.

Conclusions

The cream-type emulsion products are the most convenient to use, and at least one "store brand" is a great value. Unless they include (or you add) an abrasive like pumice or sand, they tend to be poor at cleaning up dried paint. We've discussed how to clean off the residual oil these cleansers leave behind, and what to do when they become soupy after having been open for a while.

Until next time,

The Sarge >

Upstate Rocketry Calendar of Events

Rocketry related events in the Upstate New York area, or of interest to rocket enthusiasts of this area, are listed below.

13 September, MARS Club Meeting, 7:00PM

Regular Club Meeting. Presentation: "Online Rocketry," by Bill Owens.

17-18 September, Finger Lakes Fall Classic IV, 12:00 PM
National Warplane Museum, Geneseo, NY. Events: 1/2A B/G, 1/2A Flexi MR, C Streamer, C Eggloft, PMC. Sport flying encouraged, FAA Waiver: 4 pounds, 8 oz propellant, 5200 feet AGL.

27 September, NARAM Committee Meeting, 7:00PM

Those who wish to be involved with NARAM-37 are invited to attend.

11 October, MARS Club Meeting, 7:00PM

Regular Club Meeting.

16 October, Sport Launch, 2:00 PM

Parma Corners Park, Route 259, Parma.

28 October, NARAM Committee Meeting, 7:00PM

Those who wish to be involved with NARAM-37 are invited to attend.

8 November, MARS Club Meeting, 7:00PM

Regular Club Meeting.

20 November, Sport Launch, 2:00 PM

Parma Corners Park, Route 259, Parma.

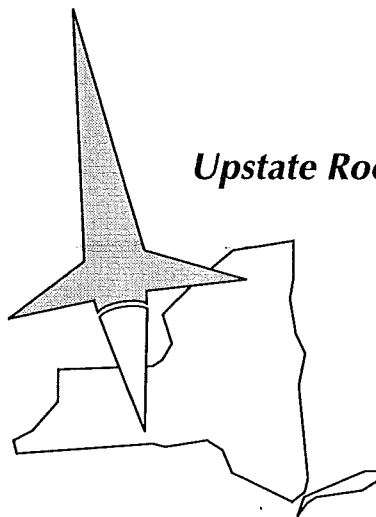
22 - 28 July 1995, NARAM 36, Geneseo, NY, The Nats.

Events: 1/2 A Altitude, 1/2 A PD, A BG, A Flexi MR, C Streamer, C Eggloft, D Super Roc, Giant Sport Scale (Div. B, C, T), Peanut Sport Scale (Div. A), OSL, R&D. There will be a separate range just for sport flying. Join us for a week of rocket flying fun!

MARS Meetings are normally held the 2nd Tuesday of the month at 7:00 PM at the RIT Research Corporation, 75 Highpower Road, Henrietta. MARS Sport Launches are normally on the 3rd Sunday of the month at 2:00 PM at Parma Corners Park, Route 259, Parma. Contact John Viggiano at 359 - 3869 for more information on these club functions.

Please Note New Address:

Upstate Rocketeer
c/o John Viggiano
35 Mickens Bend
West Henrietta, NY 14586



Upstate Rocketeer

