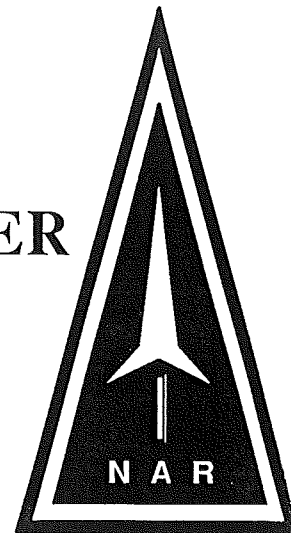


THE UPSTATE ROCKETEER

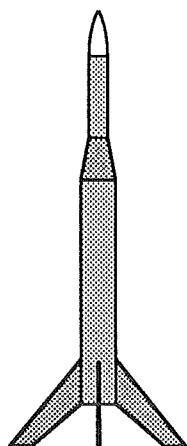
The Official Newsletter of MARS
NAR Section #136



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The Upstate Rocketeer

Volume 5, Number 5
October, 1992

The *Upstate Rocketeer* is published six times a year by the Monroe Astronautical Rocket Society as a service to its members and NAR members in Western and Central New York. Subscriptions are \$3.00/year. The *Upstate Rocketeer* is edited by Dan Wolf. Send all comments, complaints, letters, plans, subscriptions, etc. to him at the following address:

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MARS Membership - October 1992

Jay King - President	
Jeff Ryan - Vice President	
Ferenc Roka - Secretary/Treasurer	
Roy Metz - Senior Advisor	
Mike O'Brien	John DeMar
Wayne Foster	Richard Kerr
Merrell Lane	Bud Piscini
Jessica Ryan	John Viggiano
Dan Wolf	Mary Wolf
Sarah Wolf	

Blowin' In the Wind
(Editorial)

Anyone looking at the MARS membership list for the first time may not appreciate what he or she sees. While it is a pretty small list, it shows much promise for the future. Although there are only 12 adult members on it, all of those members have been to at least three club activities this summer. Several members were in attendance at all of them. I bring this up because after just returning from PARA-SHOOT 1, it was inevitable that I would start comparing the host PARA club to MARS. I say this because I was really impressed with PARA and how they ran the contest. They seemed to be well organized and their members were always willing to help out in whatever needed to be done. I like to think of MARS in the same light. Although we still have a long way to go, it was only a few years ago that we only had a few more than the required five members needed to recharter the section. Since then our membership had doubled. Things look bright for the future as we continue to see new faces at every launch. I hope that in the future, a visitor to one of our contests or sport launches will be as impressed with us as I was with PARA this past weekend.

This issue of the newsletter contains more club news than in the past. This is in large part due to the efforts of Jay. Jay took the time to write up more detailed reports of the last two meetings than I have done in the past. This is needed because as our membership has increased, so has the depth and breath of topics and discussions that have occurred at recent meetings. It is important that we have a record of what has transpired so we don't continue to rehash the same things over and over again. Jay also did a nice job of writing up the last sport launch and also contributed a few other items to this issue. Thanks Jay, it is much appreciated.

One clarification from the last issue needs to be made. The editors note in the August issue regarding Tripoli's Rocketry Legal Fund stating "It should be pointed out that this fund is specifically in support of Aerotech and its reloadable product." This was actually a statement(comment) made by NAR President Pat Miller in a message posted on Compuserve's Modelnet. I apologize for any confusion regarding this matter.

Finally, it is with some sadness to report that we have learned that the SRBs section of Syracuse has decided not to recharter due to lack of interest and too few members. This is an unfortunate development. However, in the meantime, John DeMar has decided to join MARS and we welcome him and invite the rest of the SRBs to do the same (Dave Pringle, come on back!)

Until next time,

Dan
Dan

September Meeting Report By Jay King

We had a large turnout for the September meeting including members Rich Kerr, Jay King, Wayne Foster, Bud Piscini, Roy Metz, Ferenc Roka, Jeff Ryan, John Viggiano and Dan Wolf. We were also joined by Rick Sorsa. Rick saw our literature at a hobby shop and contacted Ferenc. Welcome Rick, we hope to see you again.

It was good to see Roy again, he's working days now so we look forward to seeing lot more of him.

Wayne brought his new altimeter from Adept Rocketry . It had just arrived that afternoon and so Wayne didn't have all the "bells and whistles" figured out yet. We look forward to a full product review from Wayne in the future.

Ferenc visited the "Hobby and Toy Center" in Hamilton at "Maple Leaf Center". While there he picked up a kit from QED Rocketry, the "Custom Mark One". The kit was quite good with a very complete set of plans, looking a lot like the Estes' style instructions from the 60s. Ferenc is writing for a catalog. He also visited "Magnum Rockets" in Mechanicsburg, OH where he picked up a kit from "RPL Developments", a GIANT "Birdy". Ross Dunton is the proprietor of the shop there. He has a nice flying field out back with 200 acres which he makes available for confirmation flights. Ferenc reports it is an 8 hour drive from here. LOC and Aerotech products are carried with FSI planned. There was some discussion of planning a "road trip" and having a high power launch but we were unable to decide on a date.

Dan Wolf concluded his presentation from last month on finishing. The model he brought was done with "Elmer's Fill and Finish" which is available at Walmart. One coat does a dandy job on fins. It goes on thick, using your fingers and sands off very easily. Do not get "Carpenters Wood Filler" which comes in a similar container, it sands like concrete. Both products come in small white plastic tubs with orange lids.

Dan also presented a list of items in the club and his own library including technical reports, books and newsletters.

It is illegal to fly model rockets in the Monroe county parks so finding suitable launch sites continues to be an ongoing issue. Having a decent flying field makes a section. Dan brought a list of several sites he has been scouting. We already have access to a few local fields where we can sport fly up to 20 n/s. The emphasis is on finding a field, suitable for contests and high power waivers.

Dan has a site in Victor that he will check. Ferenc offered that

friend has a farm which we may be able to use in the "off" season.

If anyone else has access to a suitable field or any ideas where we may find one please let one of the club officers know. Any field we use will be insured.

We discussed the possibility of doing a static display and flight demo at the National Warplane Museum. The emphasis would be on making the event newsworthy with a commemorative theme. By running the event in conjunction with another activity we would be better guaranteed of getting media attention.

We got some good press from the St John Science Fair last year and agreed that we would like to do it again. This is a static display only, there is no adequate flying space.

The 92/93 flying season schedule was discussed. NARAM will be quite close, somewhere in the Washington D.C. area. The events have not been selected yet but Bud is convinced that they will include eggloft! (*see NAR news in this issue for an update.*)

We will continue the tradition of having a sport launch on New Year's day.

NYSACE will probably be hosted by ASTRE this year. Perhaps we will get a list of events soon?

A detailed schedule appears elsewhere in this issue.

Jay updated the section constitution and passed out copies for comment. Our charter is due in January so it would be good to get the constitution revised and voted in prior to the January meeting when elections are held. The main issue is the proposal that officers serve through the flying season which runs from August to July. Officers elected in January take office in August for the coming flying season.

The meeting handout included a history of Saturn rockets by Peter Alway, instructions on how to trim a boost glider, plans for a "pin pod" glider and Jeff Vincent's "Mouse Loader" payload model.

Meetings are scheduled at 7:30 PM, the second Friday of each month at the RIT Research Center. Contact Jay King or Bud Piscini for directions or more information.

October Meeting Report

By Jay King

The meeting was held at RIT with Richard Kerr, Jay King, Bud Piscini, Ferenc Roka, John Viggiano attending. John Demar, Wayne Foster and Dan Wolf were on their way to Parashoot.

Bud called Peter Alway about the scale dimensions for the Goddard rocket. Peter remembered Bud's article from the UR about competing with all scale models and plans to release his new book on scale model rocketry by the middle of next year, if he doesn't get a full time job. This volume will be at least 300 pages and include the material from his previous book.

Peter will be sending the dimensions and drawings to Bud. Jay will write NASA for a photo from their archives of Goddard standing next to the rocket.

The meeting handout included, NARAM 34 results, plans for pin pod A/B and "The Flying Jenny" gliders and Astrobee 500 scale data.

Pictures from the sport launch were passed around including one of John Demar's scale X-17 burning on the pad.

One of the photos showed an egglofter leaving the tower with a significant angle of tip off. The tower looks to be less than 1 meter in length and no tail ring was used. The lesson here is to use a tail ring and a longer tower for those heavy egglofters or suffer the consequences of losing altitude to a less than vertical flight.

John Viggiano has volunteered to chair the section contest committee. He will be contacting other section members, especially those serious about competition, to join the committee. They will plan our section's contests and develop strategy for "away" meets.

A provisional list of events for NARAM 35 was received. We will try to plan them into the spring regional and NYSPACE.

The constitution changes were discussed. Open issues include how the delay of office entry until August will fit with our charter and insurance. Jay King will follow up with NAR HQ. The past president will have the option of being an ex-officio member of the board, if he so desires, to insure continuity.

Bud found, in a radio magazine, a source of heavy Kevlar line at \$12.00 per 200 ft. He will get more details. We may buy one spool for the club and share the expense.

John got a sample of Kevlar thread (for shrouds) from Amitex. He was expecting a 5 meter hand sample but received an entire spool.

Plans for the commemorative launch were discussed. The Goddard model will be centerpiece of the display but additional materials are needed.

The display needs to work as a flight demonstration and static display. It should be both informative and entertaining and should attract new members, both novices and BARs. Besides preparing the Goddard model, we will want other scale, sport and competition models. We will also need to prepare a press information pack, posters explaining basic concepts, a script for announcers who are unacquainted with the hobby and flight videos. Catalog scale and high power models will also be helpful.

This display will be a great marketing tool for attracting people to the hobby and our section.

Ferenc has been to "The Hobby Shop" on Barnett in Syracuse where he picked up a number of interesting items. Where does Ferenc find all these shops? Inquiring minds want to know! He also received the latest issue of "Liftoff", now named "Quest", with a scale article by Peter Alway on the Arcas and Nike Apache.

The meeting was adjourned at 10:00 PM. Meetings are held on the second Friday of the month. Bring your latest project.

FIRST FLIGHTS

January First Sport Launch

The theme for the January first sport launch will be "First Flights". Entries are limited to models being flown for the first time. Prizes will be awarded in the categories of craftsmanship, best flight, and guts. A small, but vocal, group has proposed an additional event, "Swimsuit Duration". Prizes will be awarded to the individuals who survive the longest, on the range, wearing only a standard swimsuit.

John Viggiano is reported to be preparing a special "Initiator" with an F in the core and a cluster of A10s to reach 80 ns.

MARS September Sport Launch By Jay King

It was the perfect day for flying rockets. Sunny and warm with just a touch of breeze in the air. We so seldom have this kind of weather in upstate New York, it was the perfect opportunity and many took advantage.

People began arriving around 2:00 PM. The section launcher was used and the first flights started by 2:30.

Mars members attending included John, Steve, Lisa and Laura DeMar, Wayne Foster with Christian, Jay King, Mike O'Brien, John Viggiano, Ferenc Roka, Jeff and Jessica Ryan and Dan and Mary Wolf. We also had several guests including Jim Cost and Mike Duda.

Past MARS member Bob Dowd dropped by to catch up on the latest news and show us some old Estes kits he had found. We queried Bob about rejoining but he declined saying that, even though retired, he has a very busy schedule and is once again, over committed. Bob did say that he was still interested in the hobby and the section. We hope to see him again in the future.

With such excellent flying conditions, there were a number of memorable flights.

Mary Wolf's "Big Crayon" flew well on a G80-7 but failed to deploy losing a fin on impact. Dan Wolf continued the tradition with his "Boilermaker Special" on a G42-8 which again flew well but failed to deploy landing with no damage.

Bud Piscini flew his Aerotech "Barracuda" several times on F25s and F14s, successful flights all. If we could only get him interested in competition, sigh....

Wayne Foster brought out his new Aerotech "Tomahawk" and flew it on a E28 reload. The flight was perfect with the model ending up on the roof of a house at the north of the field. The owners were quite accommodating, they already had the ladder out and let Wayne climb up and get the rocket himself.

Ferenc arrived late in the day but managed to get in enough flights to hit 2500 for the year.

John Viggiano's "Initiator" so named "The Flying Hippopotamus", had a perfect flight on an F25. This is the same model that John plans to use for his high power qualification flight with an F engine and LOTS of A10 strap-ons.

John Demar brought out his scale "X-17" with an E15. The engine catoed and the model caught fire. John also had poor luck with a 3 D12 cluster in the "Potemkin" Microbrick kit with

only one engine igniting. The model landed in the short grass at the south of the launch site.

Mike O'Brien brought his usual array of exquisitely finished models featuring a Sci-Fi motif. We often ask, "Does Mike ever build a kit per the instructions or are they just components for his active imagination?". Despite all the detail Mike keeps the models light and with his usual selection of E15, E25 or E30 engines the flights were quick and snappy.

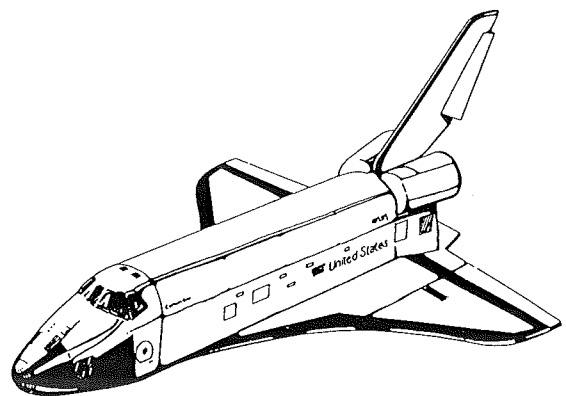
Mike Duda (not a member yet but encouraged once again) brought lots of nice models including an Estes "Bullpup" that he flew several times. He also brought out his "Mini Cobra" with all three stages (A10, A10, A3). Mike explained that he never expected to see it again but was surprised when all three stages were recovered after the perfect flight. So encouraged, Mike tried again but the second stage didn't ignite.

Jim Cost made several more flights of his camera payloads. His astrocams went ballistic and pranged into the field south of the range. The model was recovered but frames 3, 7 and 10 are still reported missing.

Jeff Ryan made several high power flights. John Viggiano did the countdown for Jeff's "Der Red Max" in German. Not to be outdone, Ferenc later launched one of his birds in Hungarian.

Jay King made a few sport (yes sport!) flights with an Estes "Scout 3". His "Patriot" sport scale model from NYSPACE made it's maiden voyage on a C6-5 and visited the lumber yard to the North.

The range was open until 6:30 PM. Sport launches are generally held the third Sunday of the month at 2:00 PM. All are welcome.



MARS Member Survey September 1992 by Jay King

To help plan future section activities, I've conducted an informal survey of the MARS membership. A total of nine members were interviewed. They were selected based on who was home the two evenings I had available to make calls. Please contact me if you take exception to any of my comments or interpretations. I want to insure that planned activities satisfy everyone.

Survey Summary

1) What do you enjoy by being member of the section?

The overwhelming answer was "interaction with other members" combined with "flying rockets"(4) and "contests"(3). Also noted were "new technology", "learning from others", and "newsletter".

2) What do you think of our meetings?

Most stated that they enjoyed the meetings but there were several that felt that the meetings were too long and not well organized. Specific comments include "get business done elsewhere" and "not much gets accomplished"

3) What is your level of interest in contest flying?

This issue was evenly split. 1/3 said their interest was "none/low", 1/3 "medium" and 1/3 "high". Specific comments include: "not personally interested but will fly to support the section" and "contests are another excuse to fly rockets".

4) How far apart should we schedule contests?

Several commented that their answers were based on a desire to fly and recognizing how much work it is to run a contest and that if all contests were to be hosted by MARS, that their number would be lower. 1 person said one contest per year, 7 said three to four and 1 said five or more.

5) What's the right number of events to try an fly on a single contest day?

Answers were clustered in the four to six range. 1 said three to four, 6 said five, 2 said six.

6) Do you need/want to get in all 12 NAR contest factors in a flying season?

7 said no, 2 said yes.

7) What is your interest in "High Power Rocketry"?

Only 2 were "not interested" others ranged from "getting there" to "highly interested". While many are not interested in going past G/H class motors all are interested in the technology and enjoy watching the flights.

8) What is your interest in NARAM, NARCON, NSL and NYSPACE?

Most are interested in the "big three" if they are within an 8 to 10 hour drive. Most support NYSPACE including many who are not otherwise interested in contesting.

9) Are you interested in doing R&D? If so would it have to be part of a competition or would you do it for "fun"?

1 said "no", 4 "yes, for a contest" and 4 "yes for a contest, or for fun".

10) What kind of section projects would you find interesting?

This was a very open ended question and it got the expected open ended responses including: "high impulse", "payloads", "large scale rockets", "telemetry", "combine rockets and model aircraft (for an educational program)", "demonstrations", "air shows", "advanced technology", "improve altitude trackers with wireless communications" and "commemorative displays".

11) What features do you like in our newsletter?

All began by saying that the newsletter is excellent. Favorite features include: "how to articles", "scale data", "contest coverage", "news from manufacturers" and "plans". Several commented that they'd like to see more members of the section make submissions.

Survey Conclusions and Recommendations:

A) The members enjoy what the section is doing now. The section is largely driven by social ties, we all like each other!

B) Meetings are not well organized and tend to run late. I propose that the officers and committee chairpersons get together 15 minutes prior to the general meeting and conduct any necessary business, leaving the general meeting free for program and activities. We also need to "tighten up" the meeting schedule. The program committee currently prepares an agenda for each meeting. It would be best if members contact the committee, at least a few hours prior to the meeting, and advise them of any presentations they would like to make. This way the agenda can be structured logically and we can insure that all items get the time they deserve. Meetings should have a set end time (9:00 PM is suggested) after which those who would still like to socialize can retire elsewhere. John Viggiano has some locations in mind.

C) We are holding the right number of contests with an acceptable number of events. As contest flying appeals mainly to a select group, I propose that we form a "contest committee". The committee would be responsible for planning, scheduling and running our contests. With limited meeting time, contests will need to be planned by the committee and event schedules presented at the meetings for comment and approval.

d) High power rocketry topics will be added to the meetings and more investigation made into acceptable flying fields.

e) There is a lot of interest in technology and R&D. Members are encouraged to communicate their interests to the rest of the section either at meetings or through the newsletter. This is a tremendously talented and resourceful group of individuals. A large, complex, project is within our means if we can identify solid goals and objectives.

As the ModRoc World Turns...

(news and rumors heard round the hobby)

Manufacturers News... This month's manufacturers news comes from comments made by Bob Sanford of Aerotech during the October 16th Sport Rocketry Conference on Compuserve's Modelnet. Bob offered some speculation on what the various manufacturers would show at the upcoming RCHTA show in Chicago. "Estes: Several new kits and starter sets. There will be four completely new starter sets. These sets are in the E2X series. Most are old kits with new paint schemes and names. One is a pseudo PATRIOT which is made from an already released E2X kit (Whoever heard of a 3 fin PATRIOT!??). The AMERICA and ALPHA III have new paint schemes. I'm sure they'll be showing off the Maxi-Honest John and the Magnum Jayhawk kit they showed at NARAM. Whether they will show composite motors and products, I dunno. As an aside, I picked up a CATO at my local Toy R Us the other day. Two interesting modifications to parts they have had for years. The motor hook now has a release tab ala Quest and AeroTech and it is to become standard in all kits the use the hooks. The parachute tape discs now have a hole in the center which you put the shroud lines through for added strength. BTW, the CATO is heavy. The box says it weighs 4.4 ounces. The Big Bertha will be shown with the new paint scheme displayed at NARAM (I think). The Transroc II, Command Control Launch Controller and Pad are still not yet released (Of course, I may be wrong about this by the time of the show). QUEST will have four new kits at least and maybe more. One is a Sandia Tomahawk scale model. Hmm...I wonder if a Nike-Tomahawk can be too far behind? Custom Rockets: 18 new kits to be released my sources tell me."

(Editors note: Thanks for the info Bob, but what will Aerotech be showing?)

NAR News... It is now official! NARAM 35 will be held in Middletown, MD from August 1-7, 1993. The Host Section is NARHAMS. The final events list is as follows (note: slight changes from early lists):

- 1/2A PD (MR)
- 1/2A SD (MR)
- 1/2A Cluster Altitude
- A Payload
- B Helicopter
- B Rocket/Glide
- C Super-Roc Altitude
- D Dual Eggloft Duration
- Sport Scale
- Research & Development

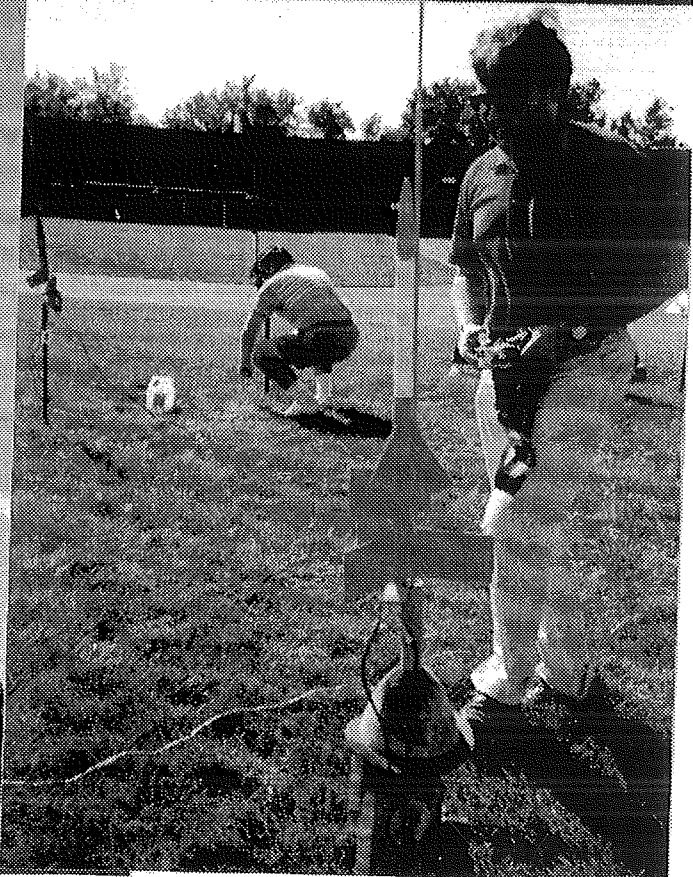
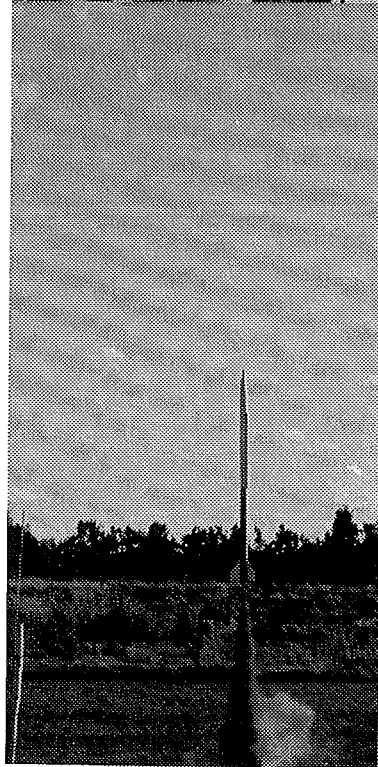
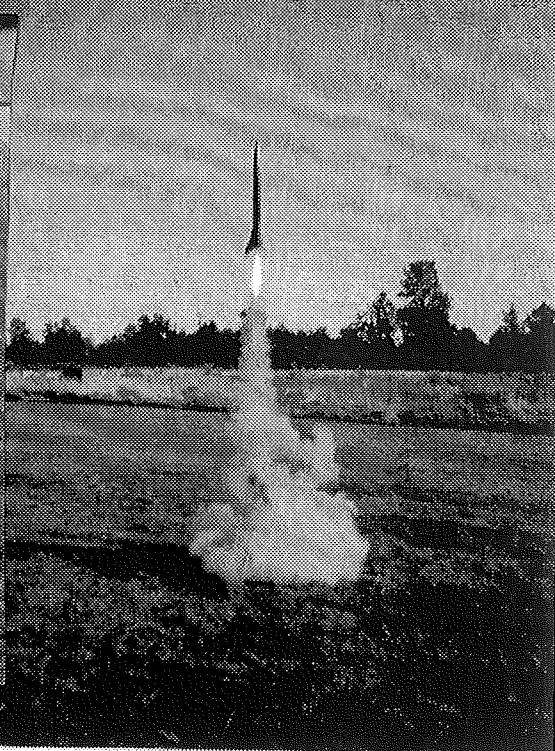
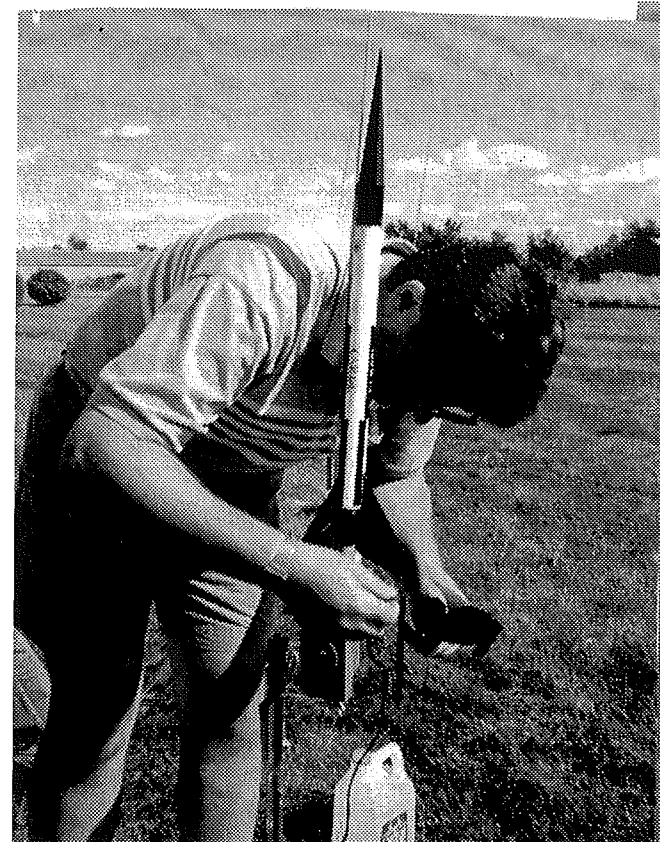
Note: 1/2A Cluster Altitude and D Dual Eggloft Duration are provisional events and are not in the Pink Book. The rules can be found in the July/August 1991 issue of *American Spacemodeling*.

World Spacemodeling Championships... The word from the World Championships (held the second week of September in central Florida) is that Jeff Vincent of ASTRE took first in S1A (B engine class) altitude. MARS sends out a hearty congratulations to Jeff, who had certainly worked long and hard for that moment. Way to go Jeff! Also, Bob Biedran took first place in Scale with an Ariane 10. The model was a three stage affair with a multi-engine cluster in the first stage. The upper stages were ignited by R/C. WOW! Thanks to nice flights by George Gassaway and Jay Marsh, the US managed a team silver in the event too. The US team took the gold in R/C Rocket Glide, with "Jedi" George Riebesehl taking an individual silver. The US team had strong finishes in several other events as well. USA! USA! USA!

Regulatory Update... The following information on the G engine and reloadable motors was provided by Bob Sanford during the October 16th conference on Modelnet. Bob says "The situation on 'G' motors and reload products remains as it has been, on hold. Gary and Paul Hans were in Washington D.C. for the NFPA meeting last week but had time to meet with CPSC and DOT. Very positive meetings. Nothing to announce yet but AeroTech is confident that 'G' motors and not long afterwards reloads will be available again. It has been a long many months but AeroTech is working with good people within these organizations and also elsewhere (We've even been in touch with the White House about it). I hope that all this will be resolved in the near future. Stay tuned for further details!" *(Ed. note: Thanks for the update Bob!)*

Meanwhile, on the FAA front. The FAA has finally published the Notice for Proposed Rulemaking to FAR 101 in the Federal Register. This proposed rule change is the long awaited change to allow rockets up to 3.3 lbs to be flown without a waiver. The NAR and the HIA originally made this request back in 1985. The proposal is slightly different than the NAR's request in that it defines a new class of rocket, a large model rocket that covers rockets above the old definition up to the 125 gm propellant, 1500 gm weight limit. To fly these large rockets would require that you notify the nearest FAA ATC 24 to 48 hours before the launch. No waiver is required, only notification. The NAR is preparing a formal response and is asking NAR members to hold off on public comment until then. The comment period ends on December 9th, 1992. See Dan Wolf for a copy of the NPRM.

High Power Virginia Launch... The long awaited Culpeper, Virginia high power launch will be held the weekend of November 13th-14th with a waiver to 15000 feet. See Dan Wolf for more info.

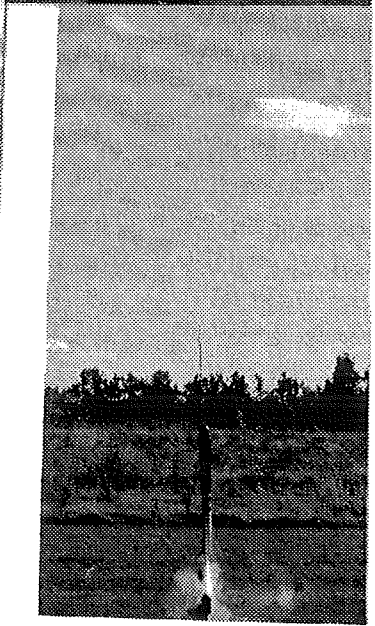
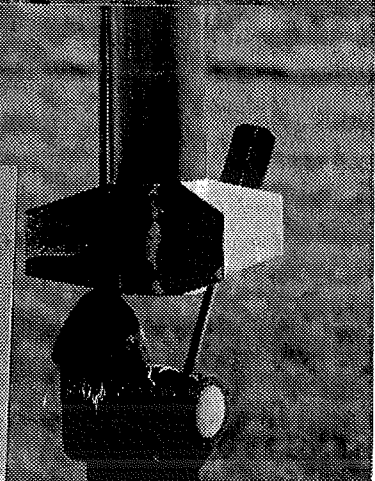
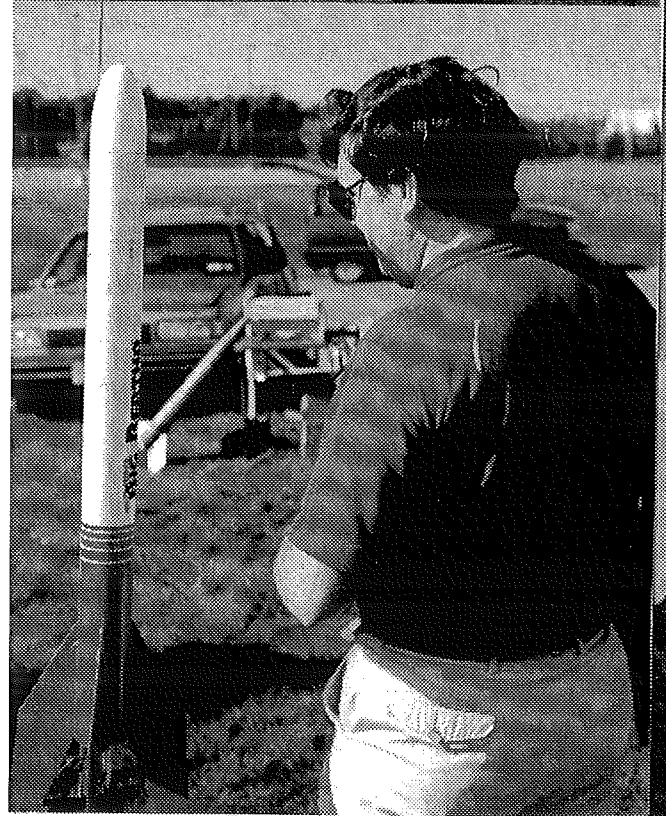
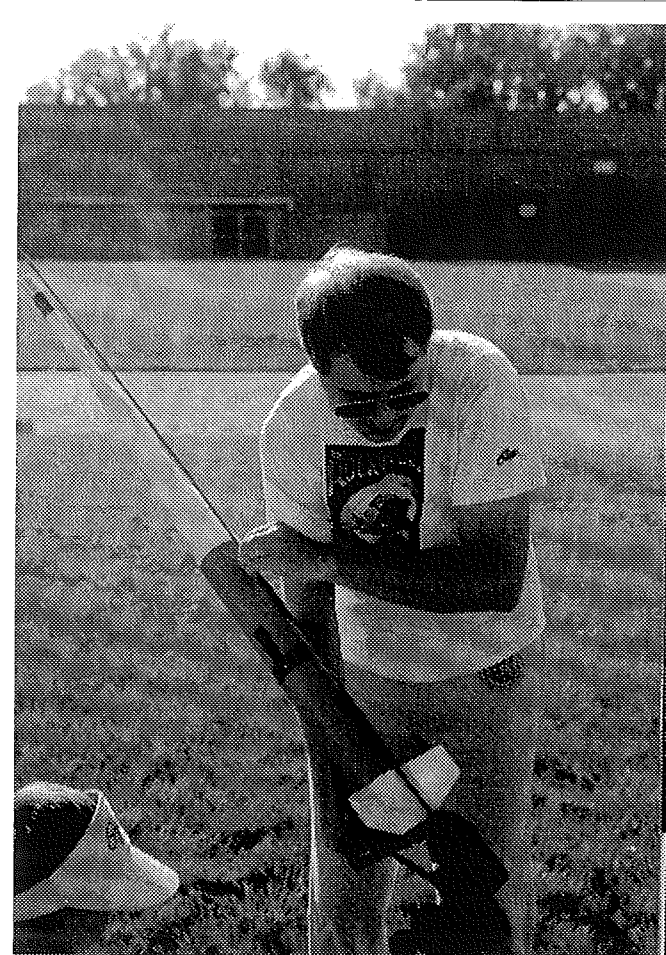


TOP ROW

1. Bud hooks up the clips in his Black Brant II.
2. Mary and Sarah Wolf mug for the camera with Sarah's "Flying Crayon".
3. John Viggiano's Initiator lifts off.

BOTTOM ROW

- 1 & 2. A tale of two engines. Liftoff shots of Bud's Barracuda. The flight on the left is powered by an F14 Blackjack while the one on the right is powered by an F25 White Lightning.
3. John eyes Mike Duda's mini-engine powered 3 stage model moments before a successful launch.



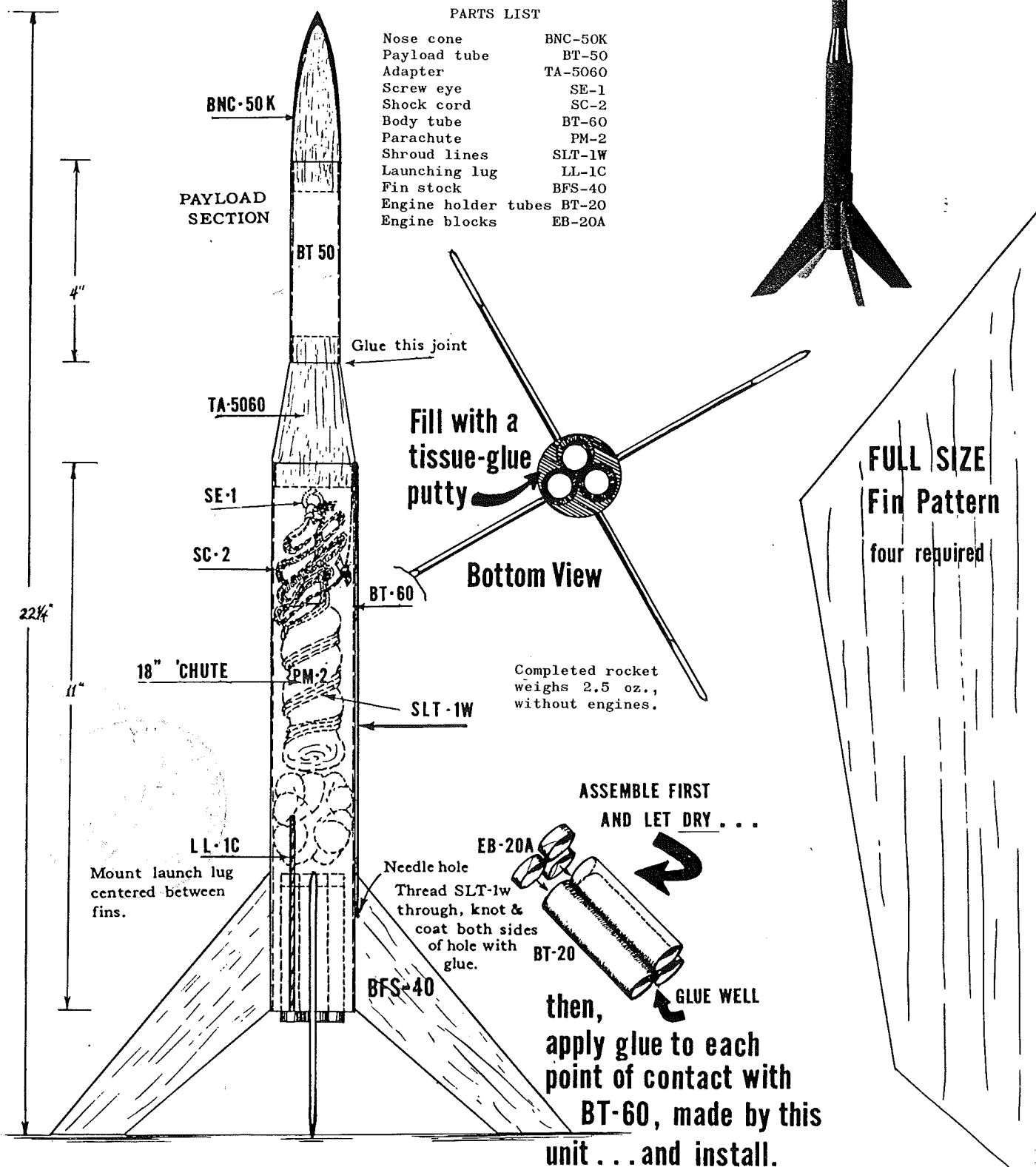
TOP ROW (left to right)

1. John DeMar loads his scale X-17 onto the pad.
2. The X-17 burns and smokes as the result of an E-15 calt.
3. The Fire brigade puts out the fire.
4. The damaged fin and body tube of the X-17.

BOTTOM ROW

1. As John Viggiano looks at Jeff Ryan's Super Big Bertha, a preying mantis hops on John's shoulder to get away from the fire and smoke.
2. Mark Wolf's Flying Crayon on R20 power.
3. Jim Cost's Initiator, with home made custom bulge nose cone designed to house a 35mm camera, lifts off for a test flight.

the COBRA



Ed. notes: Many of the popular high power kits available today are clusters. In spite of the fact that one can now purchase motors in sizes "J", "K", and larger, clustering remains a popular activity. Clusters are often used for special effects and to make for a more impressive show. Most high power manufacturers offer 3 or 4 engine cluster kits that bridge the gap between low power black powder and composite motors. LOC's VIPER III & IV models, NCR's Mini-Spoil Sport, and Microbrick's Potemkin are examples of this. Perhaps all of them can trace their roots back to early Estes kits, where clustering was the only way to lift heavy payloads or loft larger models. The first kits of this type were the Cobra, shown above, and the original Ranger kit. Both of these kits used the classic 3 engine triangle configuration. Getting all three of those engines to ignite back then was not an easy, as bare nichrome wire was the only igniter available. Even today, getting all three engines of a cluster to fire is not trivial. This plan is thus offered as both an historical reference and as a "trainer" for those of you planning to try high power cluster models in the future. Also, with 1/2A cluster altitude coming up as a NARAM

Events Calendar

Model Rocketry related events in the Upstate New York area, or of interest to rocketeers of this area, are listed below. If you have an upcoming model rocket event planned, send info to the editor.

November 13th, MARS Club Meeting, 7:30 PM.

Regularly scheduled MARS club meeting.

Location: RIT Research Center.

Contact: Jay King 288-5945.

November ~~14th~~⁷⁻⁸, High Power Launch, Culpeper, VA.

Waiver to 15000 feet. This is the one that we've been waiting for. Contact Mike Showalter @ 703/547-2539, evenings. Or contact Dan Wolf @ 458-3848 for info about the Western New York contingent that may be traveling down.

November 15, MARS Sport Launch.

Club fun fly. Everybody is welcome.

Location: Site will either be farmers field on east side of Monroe County or the Videk field.

Contact: Jay King 288-5945 or Dan Wolf.

December 11th, MARS Club Meeting, 7:30 PM.

Regularly scheduled MARS club meeting.

Location: RIT Research Center.

Contact: Jay King 288-5945.

MARS Meetings - Usually the 2nd Friday of the month @ 7:30

MARS Sport Launches - Usually the 3rd Sunday of the month @ 2:00 PM

January 1st, MARS Club Sport Launch, 2:00 PM

First Flights Launch.

Location: TBD.

Contact: Jay King 288-5945 or Dan Wolf 458-3848.

March 6-7, Open Meet & Mini Convention

Events: R&D, Sport Scale, B Helicopter Duration.

Tentative Schedule: Saturday - Mini Convention, R&D Presentation, Sport Scale & R&D Judging. Sunday - Duration Flying, Sport Scale Flying. Details to follow.

Contact: John Viggiano 359-3869 or Jay King 288-5945

August 1-7, NARAM-35, National Association of Rocketry Annual Meet.

Location: Middletown, MD

Events: 1/2A PD(MR), 1/2A SD(MR), 1/2A Cluster Altitude, A Payload, B Helicopter, B Rocket/Glide, C Super-Roc Altitude, D Dual Eggloft Altitude, Sport Scale, Research & Development.

Contact: Tom Lyons, PO Box 1746, Prince Frederick, MD 20678

THE UPSTATE ROCKETEER

c/o Dan Wolf

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