LOOK OUT NAR!

HERE COMES

TEAM PITTSBURGH

SEPT., 1986

NATIONAL ASSOCIATION OF ROCKETRY

NEWSLETTER OF THE PITTSBURGH SPACE COMMAND SECTION VOL. 1 NO. 2

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AUGUST 10 ZELIENOPLE MEETING AND LAUNCH

Because of intermittent showers and a very wet field at 1:00 P.M., the August 10 launch was cancelled at the launch site. Members in attendance were Mike Kalmar, Jim Galasso, Tom Blazanin, Stan Klepacz, Mort Binstock and Art Nestor.

After short deliberation, the six members retreated to Burger King for some excellent discussion on computer programs, launch systems, aerial photography and rocketry in general. It was decided that the Deggloft and B glider duration events be postponed until September since several members were prepared that day. We also discussed and agreed upon the "no-mixing rule" found elsewhere in this issue. The damp weather was made bearable by the good discussions and closeness of the group.

After a time, the clouds did clear and we hit the launch field again. After a partial setup we got rained out again. Mort flew the only flight of the day, an unnamed rocket plane by the Zepplin Works. Unfortunately, the flight resembled the weather. Mort had been prepared to demonstrate and launch his new disc camera rocket but didn't get a chance. Jim revealed an Estes Phoenix converted to Egglofting with an audio device for locating. Mike had a unique home built egglofter. Well, better luck next month!

Neither rain nor sleet . . . . . will prevent a NAR section meeting. When monthly Zelienople launches get rained out, we will meet at Burger King. We will be there till at least 2:00 P.M. Should you miss completely a section launch or meeting and wish to know the latest information, feel free to call me at 452-8310 up until 10:00 P.M. any evening.

The next launch will be September 14 at the Zelienople Launch Site.

Thanks! Art

********** TAKE NOTICE **********

Due to the fact that many Pittsburgh Section members are also members of the Tripoli Rocketry Association, an advanced rocketry group, we are establishing the following "no - mixing rule": During any official Pittsburgh NAR section launch, there will be no flights exceeding current NAR limits in weight or total engine impulse. Any advanced rocket flights can not be made until the NAR Range Safety Officer has declared the NAR launch officially over. We have had no problems to date, but the general section feeling is that the above rule is needed to prevent *possible future* misunderstandings and will benefit both NAR and Tripoli.

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Let's welcome these new members to our section:

#11 Jim Galasso
4006 Linda Lane
Aliquippa, PA 15001

#12 Stan Klepacz
805 O'Brien Street
Pittsburgh, PA 15209

PITTSBURGH PROFILES

MORT BINSTOCK

I've been fasinated with models that fly since as far back as I can remember. I first read about model rockets being developed and about to be marketed in the "Wall Street Journal" in the late 50's. One of the key features in the article was the ability to deploy a recovery parachute. As a result of this article, I purchased my first rocket shortly afterwards from Bill and Walts Hobby Shop. It was an Aerobee Hi (the only choice available) made by Model Missles complete with launcher and Rock-a-Chute engines. The rocket was similar to current models except that it had for safety a soft rubber nose cone plus used "light with a match and then run" ignition using Jetex wick. I still have this model and its cradle. I've been hooked on model rockets ever since and suspect I've built and flown hundreds by now.

I am an engineer by training and profession: with hobbies encompassing model rockets, electronic "gadets", computers, boats and cars.

JEDEDIAH A. BLAZANIN, NAR# 38368, age 6, single with no children! Interested in fantasy type rockets.

Built first rocket, Estes Kadet, at the age of 4, with help of his father. Favorite rocket was a Mini-Javalin built completely by himself. Best project was a Zarconian Destroyer with a pilot that returned under it's own parachute, all built by himself.

ROCKET SIMULATION

by Mort Binstock

I am fortunate to own a computer; a highly enchanced Sinclair ZX-81. This computer is versatile plus uses inexpensive components. I plan to capitalize on this low cost to shortly build another system, a trans-portable complete with printer. One of its uses will be to take to our meets to assist and upgrade our rocket skills; adding proffessionalism.

This computer, plus a postal scale to weigh the rockets, will allow predictive flight simulations using software that I have. I have two initial uses plus hope to receive additional ones from you.

The first is to quantify our rocket's behavior. This would allow us to collectively improve our contest skills. For example, I used these programs to prepare for our first contest at Herr's Island. My results a First and Second place; placing two out of two. Not bad for a first try!

My second thought is to offer a 600 MPH challang; membership in an exclusive club. The computer would be used to verify the speed, a parameter not easily measured.

The parameters needed by the computer to do this are the weight from the postal scale, diameter and engine type. The results from the computer are speed and height at burn out, height and time at apogee, and optimum engine time delay. Optionally, a table listing height, speed and G's in 0.1 second increments is also available.

Until I have the transportable, I'm willing to run any simulations at home. So this offer doesn't get out of control, please eith give me the information at our meets or send a SASE.

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EXCLUSIVE 600 MPH CLUB by Mort Binstock

I wish to extend a challenge to all members of the "Pittsburgh Space Command" to join an exclusive club; owning an intact rocket that has flown 600 miles per hour. The prize, a computer printout certifying your accomplishment; providing the rocket's speed and G's. Membership sounds easier than it is, simply build, launch and retrieve intact a NAR approved rocket that exceeds 600 miles per hour. That's all!

I've made several attempts myself only to have the G's shred the fins or the sudden de-acceleration at burn out suck off the nose cone, shred the recovery device and snap the shock cord.

To avoid a diccicult measurement of the rocket's actual speed, the final judge of the speed will be a computerized program. Successful recovery will be, of course, determined by the judges.

Enclosed are some trial runs of rocket parameters which will excedd 600 MPH. You can design to these or I will perform custom computer simulation. So I don't bite off more than I can handle, I suggest you give me the data either at the next meeting or send me a SASE.

I need to know the weight, diameter and of course the engine.

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PROGRAM ROCKET 1
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ROCKET NAME: BT55 TUBE DESIGN
LAUNCH SITE ALTITUDE (FT): 977
LAUNCH SITE TEMP. (DEG F): 75
ENGINE TYPE: AEROTECH F41
THRUST DURATION (SEC): 1.8
TOTAL IMPULSE (NEWTON-SEC): 79.6
INITIAL MASS (OUNCES): 7.5
PROPELLANT MASS (GRAMS): 37.8
FRONTAL DIAMETER (IN): 1.325
DRAG COEFFICIENT : 0.7
BURNOUT ALTITUDE (FT)= 971
BURNOUT VEL. (MI/HR)= 630
COAST TIME(SEC)= 9.35
TOTAL FLT. TIME (SEC)= 11.15
MAX. ALTITUDE (FT)= 3270
OPTIMUM DELAY TIME: 9
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MORE NEXT ISSUE

THANKS, MORT

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PROGRAM ROCKET 1
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ROCKET NAME: BT55 TUBE DESIGN
LAUNCH SITE ALTITUDE (FT): 977
LAUNCH SITE TEMP. (DEG F): 75
ENGINE TYPE: FSI F100
THRUST DURATION (SEC): 0.5
TOTAL IMPULSE (NEWTON-SEC): 50
INITIAL MASS (OUNCES): 6
PROPELLANT MASS (GRAMS): 50
FRONTAL DIAMETER (IN): 1.325
DRAG COEFFICIENT : 0.7
BURNOUT ALTITUDE (FT)= 261
BURNOUT VEL. (MI/HR)= 672
COAST TIME(SEC)= 8.06
TOTAL FLT. TIME (SEC)= 8.56
MAX. ALTITUDE (FT)= 2104
OPTIMUM DELAY TIME: 8
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NEXT LAUNCH

SEPT. 14

AT OUR ZELIENOPLE LAUNCH SITE!! 1 P.M.

There are mistakes in this newsletter. They were put there for a reason. You see, we try to please everyone and it seems there are always people looking for mistakes.

Powered by CENTURI ROCKET ENGINES

BE THERE!