AERONAUT

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First Commish's Corner, April 1997

by Pius Morozumi, AERO-PAC First Commissioner

The 1997 AERO-PAC rocket season got off to a great start this month with a guided tour of the refurbished Nike Site SF88L in the Marin Headlands. I counted over 70 members, their families and friends who turned out for this outstanding club field trip on a gloriously beautiful spring day. You can read all about it in Randy Mitchell's article in this newsletter. For those of you who missed out on this opportunity, as well as for those of us who would like to go back for another look, I propose that we do another tour of the site next year. Of course, you're always welcome to make your own arrangements by calling (415) 331-1540. There's a self-guided tour that is available on the 1st Sunday of each month.

Paul Campbell officially announced the results of this year's Board of Directors election. Everyone who was nominated for each position received a majority vote. I will continue as First Commissioner and Prefect. Jerry Vaughn will serve as Second Commissioner. Mike Penner will be Launch Director, Mike Vaughn Newsletter Editor, and Walt Rosenberg Secretary. It turns out that William Walby will be available this season after all, and Randy Mitchell graciously gave up his position to allow William to continue as Treasurer. Randy will apprentice himself with William this year to learn the Treasurer's job. I think that this type of mentoring, where a person learns about what it takes to do the job before taking on the full responsibility, is an excellent way to "test the waters" to see if you want to take a Board position. Please let me or any Board member know if you would like to participate in learning about a Board position this year. We will need to find new people to fill many of the Board positions next year as the current crew retires.

The Annual Equipment Party took place this weekend at my house with 14 volunteers cleaning and testing all of the AERO-PAC launch equipment. Ed Armanini, Gary Chu, Jim and Becky Green, Rob Briody, Todd Powers, Randy Mitchell, Al Frazier, Mike Markert and Gordon Hom all worked hard to clean and repair the PA and launch system. Four members of the Board, William Walby, Mike Penner, Walt Rosenberg and yours truly were also there. Please be sure to thank all of these volunteers for helping to make sure that you get the finest and safest high power experience at our AERO-PAC launches this summer.

Speaking of safety, the AERO-PAC Board recently met to review that AERO-PAC Range Safety Regulations that were last revised two years ago. Since NFPA 1127 Code for High Power Rocketry has now been officially approved, we feel it is appropriate to adjust our club safety rules to be consistent. Therefore, the Board voted to use the Safe Distance Table found in NFPA 1127, which is the same as the one used by both Tripoli and NAR. Additionally, we've simplified the operations of the Safety Team to make it more responsive to the needs of our flyers and RSO's. You can see these new changes on the AERO-PAC webpage at www.aeropac.org/aeropac, or you may receive a copy upon request to William Walby or me. You can also read the complete set of AERO-PAC Safety Regulations at each of our launches. They are in the launch documents binder at the RSO table.

Check out the schedule of AERO-PAC launches and meetings for this year. We will hold meetings to prepare of the Black Rock launches about two weeks before each launch. Speaking of launches, Hayburner VII is just around the corner on May 17 and 18 down in Paso Robles. Call Jerry Vaughn at (805) 239-3818 for more information about the launch.

Mudroc 4.0 on June 14-15 will be the first launch at Black Rock this summer. The Members Meeting will be held on May 31 at 1 PM at Portal in Santa Clara. I want to thank Al Frazier for arranging the use of the meeting room for us. Directions to Portal are as follows:

Take Freeway 280 to DeAnza Blvd. exit in Cupertino. If southbound on 280, turn right. If northbound on 280, turn left. At the 3rd or 4th light, turn right onto Stevens Creek Blvd. Travel about 3 blocks on Stevens Creek Blvd. and you will see a Good Earth Restaurant on the right hand side. Immediately past the restaurant turn right into the business park. We are in the first row of buildings on the left side past the ACI building. The meeting will be in suite 100. Please find the open door and sign welcoming you into the building. If you are having any trouble or need help, call the conference room phone (408) 343-4486. The main address is: The Portal Information Network, 20863 Stevens Creek Blvd.

Treasurer's Note

by William Walby, AERO-PAC Treasurer

We have had 84 people join or sign up for renewal of their AERO-PAC membership so far this year. This will be the last newsletter you will receive if you do not rejoin now. You can tell your membership is current if there is a "97" on the mailing label of this newsletter. If not, you should fill in a renewal form and send it to me. Remember as an AERO-PAC member you get a $5 discount off AERO-PAC launch registration fees when you preregister. So if you're planning to go to Mudroc in June, send me your renewal and registration fees, and save five bucks. If you do this for all three launches, you essentially get your membership for free.

Launch Director's Note

by Mike Penner, AERO-PAC Launch Director

AERO-PAC has purchased a 98 mm Dr. Rocket (RMS) motor set to help our members get their Level 3 certifications. You may rent a case with two closures for $20 per firing. This fee will be placed in escrow to be used to replace the motors should they be lost or damaged. Of course, we know that you will be extra special careful with your club's equipment. Contact me if you are interested in borrowing one of these motors.

1997 Meeting and Launch Schedule

May 17, 18 Hayburner VII (Paso Robles, CA)
May 31 Members Meeting (Portal in Sunnyvale)
June 14, 15 Mudroc 4.0 (Black Rock)
July 12 Members Meeting
July 19, 20 No-BALLS (sports launch- Black Rock)
July 21, 22 BALLS 007 (experimental launch- Black Rock)
August 2 Members Meeting
(LDRS XVI in Colorado- August 7, 8, 9, 10)
August 22, 23, 24 Black Rock IX Launch
September 27, 28 Hayburner VIII (Paso Robles, CA)

T-Shirt Design Contest

The design should include the original Aero Pac logo, either on the front or as part of the new design to be printed on the back. No more than 3 colors.Any format excepted although computer generated camera-ready artwork perferred. All entries should include a hardcopy representation. All entries to be sent to William Walby with a due date of 15 June 1997. Entries will be judged by the BOD and a decision made at the June meeting. The winner will be awarded a Lifetime Membership in Aero-Pac and will be given a free T-shirt. Runner-up will be given a free T-shirt.

A Walk Through History

by Randolph Mitchell

During the early 1970's I dated a beautiful and daring photographer named Katie. Acting on a tip, she once camped overnight in the Marin Headlands, and at dawn photographed a battery of guided missiles as they rose from within the earth and pointed skyward for launch.Changing times was the theme last Saturday in the same Marin Headlands as 50 AERO-PAC visitors strolled past checkpoints once designed to foil the likes of my beloved Katie. Nike Missile Site SF88L is the lone survivor of some three hundred such sites, and it is America's only National Park commemorating the Cold War.Colonel Bud Halsey was our knowledgable host, a man in command of enough facts to supply a dozen small republics or sink a dozen ships. Col. Halsey gave us an overview of the site: the Integrated Fire Center on a nearby ridgetop; the control hardware including LOPAR and MTR radars used to acquire incoming targets and send steering and burst data to the missiles in flight (1.5 million watts of microwave energy - can locate a target with 1 cubic yard of mass at 150 miles); the analog mainframe computer (400 vacuum tubes, 21 miles of wire and less computational power than the chip in my watch); the Missile Test and Assembly Building (which resembles the Morozumu workbench), the generator building, and the assembly and fueling area.A final checkpoint admitted the Aeropac contingent to the launcher area and underground storage magazine. Here, concealed from the public eye and protected from the elements, rested six Nike Hercules missiles, resembling half-scale prototypes of a Chuck Sakett project. The birds could be rolled by hand from their storage position onto an elevator, then to one of the site's eight launchers at the rate of 4 missiles per five minutes for each of the two onsite magazines.A flight-ready Nike Hercules weighs 10,711 lbs, is 41'-6" in length, and it's 279,000 lbs. of thrust give a very respectable airspeed even before the tail fins clear the launch rail. It's 150 decibels of sound and peak velocity of mach 3.65 make for a spectacular two minute flight. With a range of 87 miles, it can shoot down any aircraft made today at altitudes up to 28 miles, though de-

ployment is currently limited to Turkey and South Korea. As a finale to our visit, we rode alongside a missile up the elevator on it's trip from the underground magazine to the launch pad, then watched as newly restored hydraulics swiftly raised the 5 ton bird erect to firing position. As cameras clicked and whirred, I thought again of Katie. How did I like the day's visit? Well, to paraphrase my favorite Black Rock LCO... it reminded me of an old girlfriend.

A restored Nike-Hercules missle being raised to firing position on the recently refurbished launcher

The AERO-PAC crew taking the elevator ride down into the underground missle storage bunker

Col. Bud Halsey (ret) fills us in on the history of this cold war Nike site

A cut-away exhibit shows the use of honey-comb construction in the Nike booster fins

The AERO-PAC boys inspecting a restored Nike-Ajax