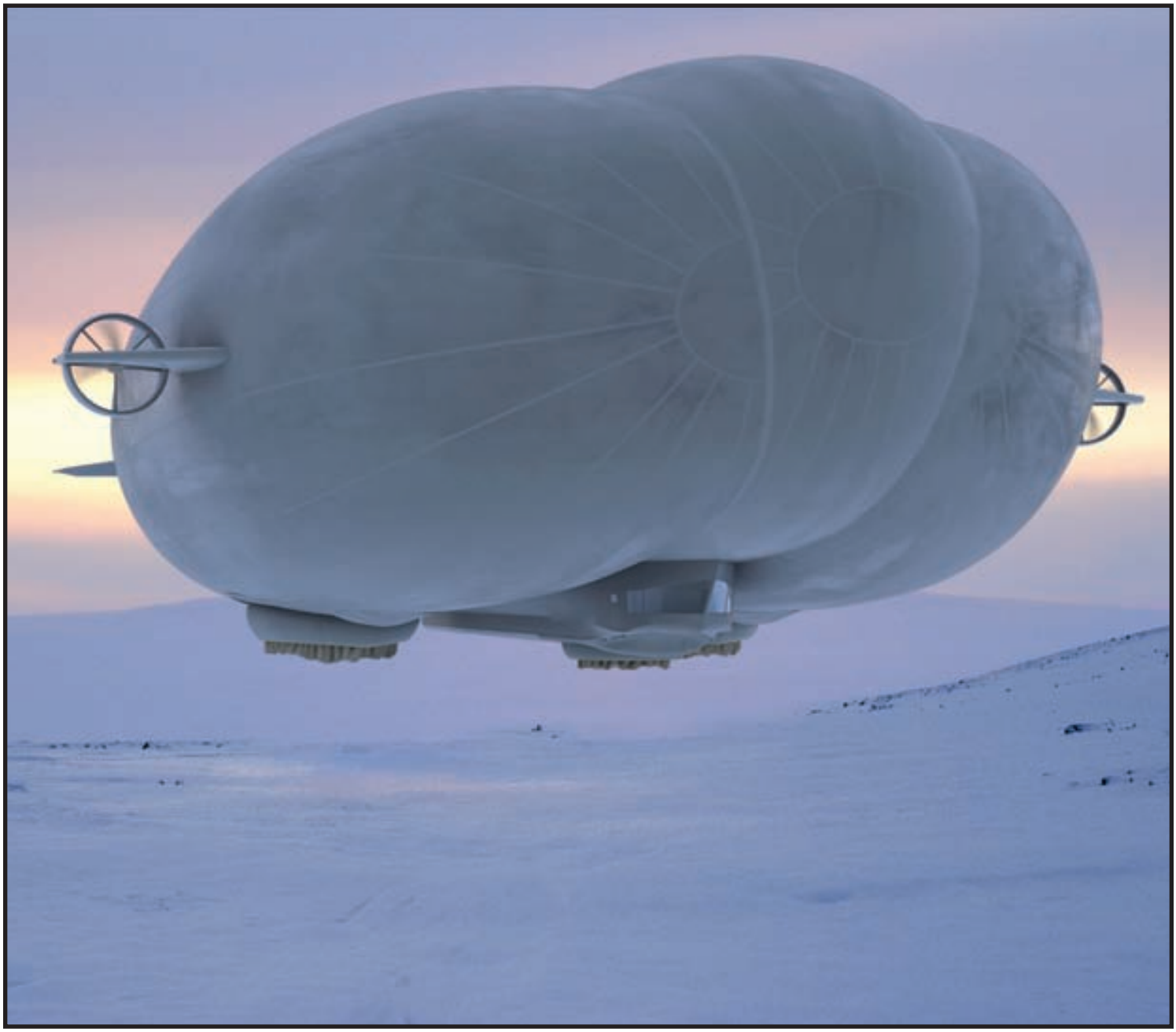
THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 90 Summer 2011



Lockheed Announces Sky Tug

Goodyear President Paul Litchfield's personal "Air Yacht," the 1929 *Defender*, laid up by the Depression, was purchased by the Navy in 1935. Using the G designation whose planned airship was skipped in the Great War, G-1 flew (until its fatal collision in 1942) with her fine upholstery and wood trim intact. This print of a color slide barely shows USS *Los Angeles* tri-color tail, mothballed in NASL Hangar #1. Below, their enlarged envelopes making them rough volume equivalents to the G's of yesteryear, the ABC A-170 and *Spirit of Innovation* briefly share the New Smyrna airport during the February 2011 Daytona 500 coverage. Both ships carry advanced day/night signs on their port sides only.

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Official Publication of the Naval Airship Association, Inc.

ISSUE #90 SUMMER 2011

Instead of pointing the finger,
how about lending a hand?

THE NOON BALLOON

Newsletter of the NAA

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EDITORIAL

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Father Time sees to it we have a steady stream of material for page 35 of this publication, a constant deluge that rises to Biblical proportions at renewal time. We are ill-prepared to fight this flood, nor are our efforts to celebrate these lives in any way adequate. We'd lost CDR Wade Harding's membership to poor health some cycles ago, yet I shall never forget his 1989 personal visit to bring me the first usable scraps of footage for what became our first video about the ZRS program. It was the first step of the thousand-mile journey, Wade giving us the hope we should start that walk.

Likewise, we just lost another member of the K-68 crew when word came of **Bob Higgins**' death. HTA and Naval historians (and, sadly, some stalwart NAA members) are tickled with the pre-declassification record set in stone as Blimps-0, U-boats-1, zero draws. No less than two U-boat historians, apparently unaware of this dogma, after interviewing survivors of the U-615, credited the circling airship with flagging the U-boat for destruction by HTA in concert with a destroyer. (This contrasts the scant mentions of K-68's ordeal, usually carried as randomly running out of gas and ditching. Sort of like rescue reports that ignore the reason lifeboats were out there for blimps to find.) We don't even have a photo of Higgins, except the one below, at his post, K-68's radio shack, lifted from the car. (That's AMM1 Ed Coty in the pith helmet.) **Fred Morin** had interviewed Higgins late in life but by then Bob couldn't remember much about the incredible story. I had gotten K-68's ordinanceman Bill Voda to talk to BBC documentarians at the Denver Reunion, but that show was never finished. Sad that so few care to set the record straight, also in the K-6, K-34, robot bomb patrol and K-72 cases, let alone the outrage of the K-14.

Lockheed's announcement they would capitalize on two decades' hard work studying LTA and building a prototype would seem inevitable to some, seeing as we have built the largest airplane and helicopter allowed by the square-cube law and fighter planes are no longer going to be designed around a pilot. Yet to my knowledge this is the first privately funded major aircraft effort in decades, certainly the first LTA since our own Jim Thiele's Lightships.

Sure sorry about the typo on the last cover, our publisher and myself struggle to get everything right but incompatible softwares have invented entirely new ways for errors to creep in. I think Nelson Grills himself would have understood. In this Eric Brothers photo Nelson and yours truly were getting ready for his interview at the Scotsdale Reunion. I'd found him the old fashioned way, the Yellow Pages, once I'd heard a rumor he was still practicing law in Indianapolis.

It would be nice if this, the 20th issue brought to you by your new team, would be perfect, and be the last in which we have to scrape, beg and steal images and information about the new LTA programs in development. While imperfections are bound to creep into any human endeavor, we hope that with three major players (four if Boeing's effort is revisited) all welding fabric for new envelopes as this is written, less effort will be spent trying to hide what is surely the most important LTA news in the last decade or three. A quarterly magazine is a sledgehammer trying to thread a needle when it tried to report breaking news, but we'll keep hounding locals to make reports from their areas to keep you informed. Ω

- R. G. Van Treuren

View From The Top: PRESIDENT'S MESSAGE

On Feb. 24, 2011, the NAA Executive Council held the first meeting of the year at Richard & Debbie Van Treuren's dome house in Edgewater, Florida. All Council members were present or accounted for (top). This has become the meeting place of choice, since five of the Council members live in Florida. Much was accomplished. I have commented before about the Council members, but I would say again, this is a high quality group of men, and it is a pleasure for me to work with them. Sec./Treas. Peter Brouwer led off the meeting, with the reading off past minutes, followed by a Treasurer's report. We are fortunate to have Peter's wife Betty as our Recording Secretary. Thank you, Betty! Al Robbins, Historical Chair, reported that the NAA website needs information on early naval history, World War I, rigid and World War II, post or modern airships. Also we need personal resumes of members. Norm Mayer, Technical Chair, asked that members who wish to contribute technical articles to "The Noon Balloon" please submit them to Norm first. Fred Morin, V.P. and Membership, has been active with other organizations, including the Naval War College & Museum, featuring 100 years of naval aviation and an LTA exhibit. Fred has also been working on indexing "The Noon Balloon" starting with issue #70. Fred and Donna Forand are preparing to restock "Small Stores" with NAA monogrammed shirts and hats & will publicize these items in future "Noon Balloons". David Smith, publisher of "The Noon Balloon" shared information about the wreckage site of the *"Shenandoah"* in Ava, Ohio. Permanent signs are needed to designate the site. It was decided that individual donations be made toward the construction & placing of these signs, rather than asking the NAA for the funds.

Of great importance was a discussion of our next Reunion, as to location and time. It was moved by Bob Ashford and seconded by George Allen, that our next Reunion be held in Tucson, Arizona, on May 3-5, 2012. Additional information may be found on the "Ready Room" page 36.

One of the pleasures of being President is the opportunity to talk to NAA members about their interesting experiences. I recently met a gentlemen who had not renewed his NAA membership. His name was Dan Cavalier, and I have his permission to say so. Initially I contacted Dan about renewing his membership, but in the course of things we started talking about his Navy career. Dan went into the Navy in 1942, and entered flight training at Lakehurst in the L-ship and K-ship. At completion of his training he was assigned to a squadron in Fortaleza, Brazil, where he was flying anti-submarine missions, and was also the Shore Patrol Officer. Three years later he was at NAS Richmond, FL, when the base was hit by a major hurricane resulting in a total loss of hangars and airships. At this point, I asked Dan, who is now 90, if there was any chance he could write this up for "The Noon Balloon." Dan said he would do his best. He is a bachelor, but likes to get together with his girl friend, before dinner, for a martini. Is this guy a naval aviator, or what! He also renewed his membership.

Rick Zitarosa, "Mr. Lakehurst", checked in the other day. Rick filled me in on all the happenings at Lakehurst. The Navy airship MZ-3A, featured on the cover of TNB issue #86, will be returning to Lakehurst this summer, where the Army/Northrup-Grumman LEMV is being built. LEMV will be housed in Hangar #6 and will start trail flights later in the summer. Once again, Lakehurst is becoming a major hub for airship activity.

The NAA web-site continues to grow, and Don Kaiser, one of our web-site gurus has brought Facebook to the web-site. I have not been a Facebook guy, but it's obvious that this will allow additional contact among NAA members. Please check the Reunion article on the "Ready Room" page and pencil in the date May 3-5, 2012, on your calendar. Ω

- Ross Wood, President, NAA

MEMBERSHIP COMMITTEE UPDATE

We continue to try different things to attract new members. Progress on website features is moving along nicely. The indexing of "The Noon Balloon" issues is moving along and will provide a good source of reference for those wanting information on specific squadrons, people, places, etc. that have been mentioned in TNBs. Thanks to a great effort by Richard Van Treuren and Herman Spahr, and Norman Mayer's expert input we have the LTA Fact Sheets loaded onto the website. The Fact Sheets highlight the four eras of US Navy LTA operations: (1) World War I & Postwar Era, (2) The Rigid Era, (3) World War II and (4) Postwar/Cold War Era. These Fact Sheets are intended to be an introduction to those periods in US Navy LTA. The intent is to link to more substantial data, information, oral histories and photos for those wanting to explore particular eras in more detail.

This year marks the Centennial of Naval Aviation and LTA should be well represented in the Navy's efforts to celebrate this milestone. The CoNA committee publishes an online newsletter monthly, www.public.navy.mil/airfor/centennial/pages/welcome.aspx, and Navy LTA has been well showcased in recent issues. One of our Fact Sheets, World War II, was the basis of a recent full-page article. The Maritime Patrol and Reconnaissance Forces Association held an event at NAS Jacksonville in April and the NAA was represented by several members and the MZ-3A blimp from Lakehurst/Patuxent River. Special thanks go to George Allen who worked very closely with Ens. John Leeds of JAX to prepare publicity and articles for the MPRF website. The AIAA will be holding their annual conference at Norfolk, VA, in conjunction with the NAS Oceana Air Show in September. Norm Mayer and Richard Van Treuren are both members of the AIAA LTA committee and will be present as will several other NAA members. Our presence at these types of events, whether major air shows or local airport open houses helps raise awareness of our organization. If you attend an event in your area, wear your NAA ball cap and let people know who you are.

Finally, Small Stores has introduced some new items that we think you will find very appealing and priced right. New NAA ball caps are available with the NAA logo. They are not crew or pilot specific. Blue polo/golf shirts are also available in a number of different sizes and sport the NAA logo as well. We have tried to provide a high quality product at an attractive price. Please see the website or enclosed flyer for more details. Later this year we will be adding more items to our inventory, watch for announcements in "The Noon Balloon". A small number of squadron patches are still available, but will not be reordered once they are gone; please call for availability. Donna Forand does have the newly produced, hard to find ZP-11 patches. Call her for details. Ω

- Fred Morin, Chairman

TREASURER'S STRONGBOX

Greetings from the Sunshine State! I would like to thank each and everyone for the continued support of our association. Your donations help pay for our operating expenses, which now include a monthly fee for our N.A.A. website. Remember! Snow birds, find your profile in the roster on the website and change your mailing address. You will not receive The Noon Balloon if this is not completed. The magazines are bulk mailed and will be returned to the publisher. We do not want you to miss a copy. If you don't have a computer to do this, please give me a call and I will make the changes.

WELCOME NEW MEMBERS

John E. Jackson, Middletown, RI
James Pryor, Canal Fulton, OH
Mary Wood, Vero Beach, FL
Fred R. Dominguez, Buffalo Grove, IL
Bryan Rayner, Ava, OH
David N. Wertz, Stow, OH
Joseph Gill, Canton, OH
Charles Sweeney, Coronado, CA
Anders Gidenstam, Torlanda, Sweden
Michael L. Collins, Manchester, CT
James M, Spahr, Hawthorne, FL
Russell Kennedy, Prospect Park, PA
Helen Pearman, Henderson, NV
James F. Coleman, Owings Mills, MD
Matts Backlin, Elizabeth City, NC
Paris Michaels, Cape Canaveral, FL

DONATIONS

L. B. Pouliot
In memory of Honora Hayes
From: Bob and Mary Forand
Robert W. Keene
In memory of Dottie and Henry Eppes
From: Evelyn E. "Eppi" Azzaretto
Ron Anderson
Pat S. Seal
In memory of Charles Bennett, Sr.
From: John T. Newman Family, Brother-in-law: His memories were always signed, L.T.A. Ω

Up Ship!

- Peter F. Brouwer, Secretary/Treasurer

PIGEON COTE

More photos, including our Reunion, came in:

Ren Brown sent in the above photo which included himself (right), CWO **Anthony Atwood** on Ren's right, **Dan Brady** and Ed.

Aboard Zeppelin NT *Eureka* are **Herm and Carol Spahr** flanking Jackie Nelson.

Charles Weithaus sent in this photo of (back) Ed., and wife Debbie, foreground l to r Donna Forand, Eric Brothers, and Dr. Robert Hunter.

Mark Lutz e-mailed, "I asked Alex Travell of Airship Ventures if "*Eureka*" can fly on tail prop only (like the "Silent Joe" efforts about 1970)." Travell e-mailed Mark, "I have conferred with the President of Airship Ventures, Brian Hall and he has given permission for you to include my comments in your magazine. The answer to your question is not so simple as it may at first appear. While yes, a tail prop is more efficient than one mounted elsewhere primarily because it decreases the boundary layer and therefore reduces drag and yes, in the right circumstances our Zeppelin could fly on the aft prop only. There are other factors to take into account however, not the least of which is that our tail prop loses efficiency because not only does it run through a 90° gearbox but is further driven by a belt and pulley arrangement which also powers the lateral thrust propeller. This in turn to some extent disturbs the airflow through that prop, so in reality this prop fails to produce as much thrust as its sister units mounted on the sides. A larger diameter prop driven directly from the engine would however be a considerable improvement should that be the layout of choice.

The Zeppelin was not built in a three-engine configuration for no good reason however. In vertical mode, some 80% of the thrust is provided by the side motors, which again if you note, are mounted near to the Center of Gravity/Center of Buoyancy. In this configuration the aft prop provides attitude and lateral control. A large tail prop would not be able to achieve this. Again any reduction in applied power will occasion a greater angle of attack on the envelope in order to maintain level flight as the airship is always intended to be flown heavy and in forward flight this "heaviness" is counteracted by a small nose up angle and the envelope gaining lift in the same manner as a wing. This angle does however produce a greater coefficient of drag, and is therefore less efficient than a speedier flight. Are you aware that Airship Ventures are intending to transit East this summer and are highly likely to drop in at Lakehurst with our NT07 *"Eureka"* ? I know your team are familiar with the MZ-3A and some of you have flown in her. I strongly recommend a flight in the NT, it is a quantum leap in technological advance on previous airships, and a precursor of what is to come. As a fly-by-wire and genuine VTOL craft it's controllability has to be seen to be believed, and at around 2/3 the physical size of the LEMV and proposed MAV-6 it is the ideal vehicle for flight and ground support crews to transition from LTA into pre-large next generation airships." Ω

Remembering Frank Klingberg
By Tom Cuthbert

Page 9 of the TNB No. 88 (Winter 2010) asked if LT F. N. Klingberg was in Weeksville in the 50s. No, Frank was briefly in Lakehurst, NJ, and mainly in NAS Glynco (Brunswick) Georgia assigned to Squadron ZP-2 and then the Naval Airship Training Unit NZTU until at least 1956. He was briefly President of the N.A.A. in 2001 when he died of cancer; his obituary appears at: http://articles.orlandosentinel.com/2001-07-03/news/0107030161_1_blimps-seaplanes-franklin

Frank was one of those LTA pilots recalled to active duty in 1950 for the Korean War. I flew with him occasionally while we served in ZP-2; he was the Guantanamo refueling officer pictured on the cover of TNB No. 76 (Winter 2007). Frank was put in charge of the NZTU ground school where I was assigned in 1953 to teach airship electronics and construction until I left active duty in 1956. It was a privilege to work for such a precise and dedicated officer.

NZTU was then part of the Naval Air Basic Training Command (Pensacola) and the Ground School had a civilian Education Specialist, John D. Okerson, permanently assigned to tutor the teaching staff. We instructed student classes of 20-25 HTA pilots from varied backgrounds – Ensigns just out of HTA pilot training to a CDR who was a POW toting rice bags in Tokyo rail yards during the U.S. fire raids in WWII.

Of course their three months in NZTU included LTA flight qualification, and we sometimes started them out with a noisy take off statically light so we could kill both engines at 100 feet and watch them scurry around the car, frantically looking for the non-existent parachutes. One class took their revenge on me with a ceremonial presentation of a burned-out light bulb at a BOQ graduation celebration.

By September 1958 Frank had completed HTA pilot training and been stationed in Bermuda, flying seaplanes and helping land a distressed ZS2G-1 airship. He retired in 1972 with the rank of commander after serving on a Navy ship in the Middle East and then three years in the Panama Canal Zone. Frank Klingberg set a great example for a young Ensign, LTJG, and later LT, and I will always honor his memory. Ω

Frank Klingberg is in the back row second from the left in this New Orleans Reunion photo supplied by **Harry Titus**. Ω

Peter Brouwer wrote, "On a sunny Sunday afternoon in January in Vero Beach, Florida, Pete and Betty Brouwer, Paul and Helen Larcom and Warren and Charlotte Winchester of the N.A.A. met at the home of Mary Wood and her husband Mark. Mary, a former member, found Betty and I at the Ft. Pierce Airport Day last November. She was so excited to meet someone from the N.A.A. She invited all of us in the area to meet and discuss old times. Mary is very knowledgeable on the subject of airships. She had formerly worked for Goodyear in the Miami area and her "boss" was Joe Hajcak, also a member of the N.A.A.

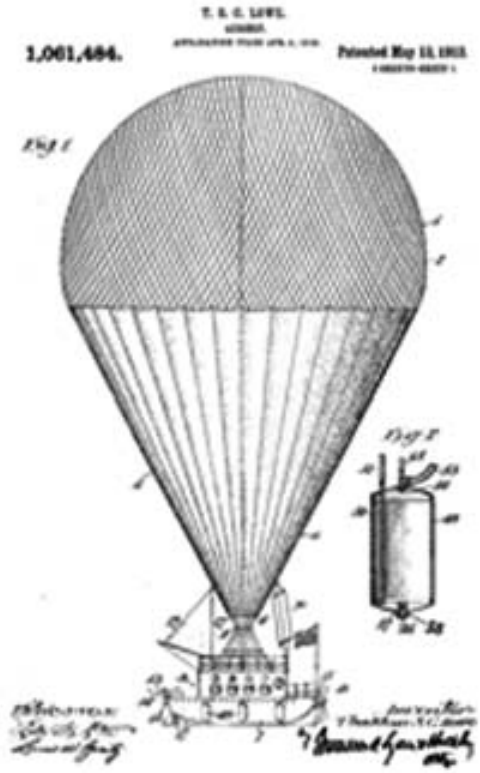
Mary and Mark live at an air park in Vero Beach, have their own turf runway and hangar. Mark and Mary have a 1930 Consolidated YPT-6A Fleet bi-plane, fully restored, that they fly to local air shows. There are only four remaining planes in the U.S. Theirs is the only one in the air. Mark restores vintage airplanes with Mary's help. Their hangar has model planes of all sizes and two planes in various stages of restoration. Mark's Dad was the inventor of the Wizard motorcycle. You just never know where you will find a member of the Naval Airship Association.

Thanks for a fun day! Ω

Continuing his LTA patent research, History Chair **Al Robbins** wrote **Don Kaiser**, "Back when the Air Force, Navy and Marines still operated photographic squadrons, I was a member of the Thaddeus T.C. Lowe Society, named in honor of our first aerial photographer. (That's before NASA convinced Congress that they could take better photographs from space.) His Airship patent is cited by three modern patents; his other patents, mechanical ice-making, improved coke processes, etc., aren't cited at all, even though they significantly improved several industries.

Thaddeus Lowe *[photo above]* established the Army balloon corps (as a civilian contractor) during the Civil War. Wartime accomplishments included first telegraph transmission from the balloon, and establishing aerial combat photography. He became a very wealthy man, as a result of his numerous inventions; patent numbers:

63,404 "Improvement in apparatus for the manufacture of Ice"
62/348 ; 62/344; 62/356
396,338 "Apparatus for the manufacture of gas" 48/82
401,570 "Apparatus for the manufacture of gas" 48/64
445,450 "Apparatus for the manufacture of water gas" 48/64
529,625 "Gas-cleaner" (cited by 4,191,153) 261/98; 261/106; 261/DIG.72
711,904 "Apparatus for the manufacture of coke and the recovery of gasses therefrom" 202/99
711,905 "Process of manufacturing coke" 201/27; 201/38; 48/200; 48/202
718,008 "Air-heater and steam-generator" 202/99; 202/111; 48/73; 48/78 1,061,484 "Airship" 244/30; 239/14.1; 239/171; 244/118.5; 244/129.2; 244/97; 43/8.



Curiously, only his ninth was classified as an aeronautical innovation, many many years later. Ω

Don Morris e-mailed, Hi, just got my "Noon Balloon Winter 2010" and wanted to complement you on your excellent publication. Thank you for keeping us informed about the world of airships.

You may know that I was a Naval Airship Pilot back in 1952 to 1957, attended the 2010 Moffett Field reunion, and have recently posted some video of one of our Squadron Airships that went down on the circle at Lakehurst. (the 8 mm film was going to be used in a court-martial on the overnight crew that was checking the pressure of the airship. Fortunately the film was never used for that purpose and instead it seemed the seam was not properly sewn, and fortunately the airship was not airborne when it burst the seam).

This video has recently been posted on YouTube and has had over 4,400 viewers and can be seen by entering the following line of code.
http://www.youtube.com/watch?v=nQdVffAHRFg

In addition I recently gave a talk to MOWW about my Lakehurst Airship flying experience and it can be seen by doing a search in YouTube on Don Morris, my posted videos are listed in the search results window.

I hope you find these videos of interest and thanks again for your excellent publication. Ω

Webmaster **Don Kaiser** continues his work to create websites for each LTA squadron, and he e-mailed Ed.: "If you stumble across any squadron histories please remember me, but don't go out of your way to search for them if they're not readily available. I want to make a site for each squadron. I'm almost done with ZP-33."

Ed. replied, *That's very ambitious. Just collecting them on paper was a project years in the making. I have just about all of them (or so I thought until I saw the alternate version you had of ZP-33) but the old fashioned way, standing at the zerox machine and copying the pages one after another from the files of the Naval Historical Center at the Washington Navy Yard. Norm Mayer paid a visit there on our behalf once as well. The researcher I paid to get the ones I'd missed just photographed them, hence the fuzzy prints that are barely readable in some pages.*

I was talking about photos at NARA, but be prepared for an entirely new world of frustration when you enter the still image branch. The finder's aids and their request paper/pull procedures are so convoluted you usually spend the first day becoming more fully aware of what a task it is to obtain specific images. They are not organized by squadron, era, or any particular method; anything and everything Navy in no order at all hides the rare airship image.

Dave Smith, Eric Brothers and myself have teamed up for three pilgrimages to Washington. On each of those we devoted three days to NARA. By working as a team we were able to maximize the number of images we copied from their files, using a variety of tricks to be ready at pull times, take advantage of the two 12-hour days they have per week, leave the hotel early to be first in and stay until being chased out each day, using their lunchroom, etc. We have come away with a mighty pile of images, but got the impression we'd only scratched the surface. For example, on our last day of the last visit, in the closing hours we stumbled upon a box that was almost entirely images from ZP-11 down to the mundane mugshot level. This in contrast to most boxes containing one or two random airship images from anywhere in the entire history of USN and USA LTA. We could have used a fourth person just to keep track of the numbers, because we still have ref #s that we did not get to and not sure of all we do have. Undoubtedly more research would yield more reference numbers one would want to look at, the titles offering only clues to the image.

The squadron histories are anything but uniform. You would expect ZP-12, the oldest, to be largest; but since combats were classified, Gordon Vaeth, who prepared most of them I believe, had to make a separate file "contacts and attacks" to be classified at a different level. ZP-12 appears to be the only one that was done for. In addition to the chronological anecdotal lists there are narratives that offer more detail. I have not been able to find a narrative for each squadron and don't know that they were written for each one. ZP-22 and ZP-23 are understandably short, only a few pages. I've organized the whole pile into a three-inch binder tabbed by squadron. NAA reimbursed me for the per-page copying fee when I made a set for Pensacola, so there is one copy outside Washington. It cost me a fortune to accumulate, and I used it as the basis for my WWII chapters in my book AIRSHIPS vs. SUBMARINES. *But few have shown any interest in the book and the histories are not doing anyone any good just sitting here in the binder. If you are aware of the depth of the project you've undertaken and still want to do it, I will lend you the well-traveled binder. Good luck!* Ω

Al Robbins e-mailed **Don Kaiser**, "First time I've checked out our Facebook!

First thing I found was a video of the SNOWBIRD. I explained that the unique paint job (the red spots) were so that our top-side video camera, and multiple 35 mm cameras could record snow and ice accumulation. Can't tell whether the film was recorded before or after we installed the experimental low-frequency radar. Our winter job was to seek out and fly in snow storms. We removed the radar and all the classified project equipment in preparation for the trip to Key West, via Spain in March of '57. Because most of our projects were highly classified, even crew members weren't permitted to have personal cameras in the hangar area or aboard any of our aircraft. Chief Steffen was given special permission to take his movie camera on that flight. Ω

CP Hall sent in this interesting Zep poster... in Dutch!

Speaking of language, UK AA Secretary **Mike Rentell** and Ed. sent a round of e-mails aimed at helping Dr. Gabriel Koury tweak the revision of his respected reference work, AIRSHIP TECHNOLOGY. When Ed. discussed lifting gas purity, Mike responded, "Ah, now we do stray into my area of expertise - linguistics. Richard recalled the term 'sour' as used by airshipmen which I suspect is used in America as 'generally contaminated'. Perhaps you know that the noun for 'oxygen' in German is sauerstoff and in the Dutch, is zuurstof which could be translated as 'sour stuff. Here the 'sauer/zuur' is undoubtedly referring exclusively to oxygen. I suspect that is from where the term entered the American airship lexicon. It actually means 'oxygen polluted'. As oxygen is obviously the source of oxide materials, *i.e.* depleted due to the action of oxygen, that is why a lot of things go sour. I don't think Dr. Koury needs to worry about such nitty picky linguistic stuff in his revision. But I just thought you might like to know that. Like I've always said, the problem is the oxygen - it gets everywhere." Ω

Don Morris e-mailed, I'm just back from the celebration of 100 years of Naval Aviation down in San Diego. No mention of any ASW flying and Airships. It was all about the carrier side pilots. They had a 100-plane flyover and lots of Marine and carrier fighter pilots some helo's and it was estimated that between 500,000 and a million folks watched the 3-hour flyover. Ω

Ross Wood alerted e-mail recipients of a Zep NT sighting on TV: "The first PGA Tourn. of 2011 at Torrey Pines, CA, is sponsered by Farmers Ins. and the Zeppelin from Moffett Field is overhead." Ω

Tom Powell kindly informed us the passing of his father, George Powell. In addition to the photo on page 35, he sent along this photo of George at ZP-14 HQ, Port Lyautey, North Africa, in 1944. Ω

Margaret Mashburn also sent a photo for page 35 and wrote, "It is with regret that I notify your membership of the passing of Charles A. Tuffield. My dad was an active member of your organization. In fact, he made sure all seven of his children were members because he wanted to protect and promote the history of Lighter-Than-Air. He enjoyed your association and in his last days it was your latest newsletter that gave him pleasure.

My dad was stationed at the Tillamook Naval Base during WWII. I noticed that it is his squadron that you are highlighting this month on your website—he would have been proud. After dad's services my family had a lot of time to reminisce and so I wanted to share a couple of blimp stories with your association members that I am sure they would appreciate and identify with. My parents were newlyweds when they moved to Tillamook. There was no way for my mom to know if the blimp arriving back at the hangar was the one my dad was on. So my dad would signal her by hanging out the blimp car and waving his cap.

During my dad's time in Tillamook, one blimp crashed. My mother had a one year old and a new baby on the way at the time. Word spread through the naval housing areas that an airship had crashed. Everyone knew of the accident except my mom. The neighbors took turns stopping in to visit and keeping her occupied. Not until dad's crew was safely back at the hangar did mom hear of the incident. Compassion, concern, and friendship certainly existed in dad's squadron. Thanks.

My dad made many contributions to the Tillamook Air Museum to preserve the history of that base. Dad supplied many photos that are on display there today. We have made a contribution to that museum in dad's name to allow others to experience the size of the hangar and the feel of the base that supported ZP-33. Many of us had the chance to visit the hangar and see dad's pictures there. He liked to tell us that "you know you are old when your picture is in a museum."

You know dad for his membership in your organization and his naval activities. What you might also like to know is that my dad was a bricklayer who built homes, churches, schools, and fire stations. He was a square dance caller for over 60 years. He was a mail carrier. He was a husband, a father of seven, and grandfather to six, and a great grandfather to four. He was a musician and a photographer. And he had a hobby—blimps.

Dad died on February 8, and was buried on Valentine's Day with military honors--a naval honor guard, taps, and a 21-gun salute—all befitting a WWII Lighter-Than-Air Radioman. Although his gravestone has not yet been laid at Fort Logan Military Cemetery, I am particularly proud of what is being printed on his stone:

Charles A. Tuffield ARM2 USN
Dec 12 1921 - Feb 8 2011

God took him home on a Navy Blimp.
We love you." Ω

Ed.'s wife Deborah, herself a pilot-in-training, was thrilled to meet new Goodyear pilot Mandy Martin. (photo above) This past February's Daytona 500 marked the first time in history a female was a pilot above the race in the Goodyear airship. Debbie later snagged a ride on the Direct TV airship (at least while being towed on the mobile mast) and met longtime Lightship pilot Terry Dillard. Both pilots were given NOON BALLOONs and encouraged to join NAA. Ω

"Red" Layton e-mailed, "A retired Naval Officer, who was a student of mine at the Naval Postgraduate School, is now President of The Distinguished Flying Cross Society. Chuck is seeking information about a DFC awarded as a result of an LTA accident in 1943. Could the following request get into the Noon Balloon?

The Distinguished Flying Cross Society is working on a book about the DFC that they hope to publish in the fall. A deceased Society member, Al Cope, was awarded a DFC for salvaging a wrecked non-rigid airship from the Bay of Biscayne on October 30, 1943. Anyone who has pictures, first-hand knowledge or references to that event may contact the President of the Society, Chuck Sweeney, at (645) 435-4758 or at csweeney2@san.rr.com

Ed. responded to CDR Sweeny with photos of our own Al Cope and the awash K-ship he recovered. A correspondence followed in which CDR Sweeny accepted information on other LTA DFC recipients – for example, K-74's Nelson Grills, no doubt off the record due to the 20-some year delay in the award – and then even after bad information. The DFC Society was aware of WWI pilot "Rip" Panuck's award for extinguishing a blazing engine carb aboard a hydrogen-inflated C-ship, and we supplied a photo of the ship. By sharing the fact he'd been CO of NAS North Island, we realized we'd had a photo of Panuk all along – published in that station's book, JACKRABBITS TO JETS. Here is an excerpt from their project release:

On Heroic Wings: Stories of the Distinguished Flying Cross

From the "Greatest Generation" flying propeller-driven fighter planes during World War II, to the male and female pilots maneuvering sophisticated jet aircraft over the skies of Iraq and Afghanistan, military aviators capture a special place in the hearts and minds of Americans. While the vast majority of these aviators has demonstrated extraordinary honor, only the best and most courageous are awarded a Distinguished Flying Cross.

The Distinguished Flying Cross was created by an Act of Congress in 1926. Under the initial Act, along with military aviators and crew, a select group of civilians received the Distinguished Flying Cross for aerial achievement. Shortly thereafter, Congress modified the medal criteria for military actions involving heroism or extraordinary achievement while participating in aerial flight. Over the decades, DFCs have been awarded during World War II, Korea, Vietnam and the post-Vietnam era. The Distinguished Flying Cross has also been awarded to military aviators and/or their crew for civilian rescues during emergencies and natural disasters such as Hurricane Katrina.

Some of the notable Distinguished Flying Cross recipients are The Wright Brothers, Amelia Earhart, Charles Lindbergh, former President George H. W. Bush, South Dakota Governor Joe Foss, Tuskegee Airman Gen. Benjamin O. Davis, General Jimmy Doolittle, General Curtis Le May, actor James Stewart, and many of the earlier astronauts including John Glenn, Jim Lovell, Buzz Aldrin and Neil Armstrong.

The Distinguished Flying Cross Society authorized Dr. Barry A. Lanman (DFCS historian) and Dr. Laura M. Wendling to write an official publication on the history of the Distinguished Flying Cross and the heroes who received the highest aviation award in the United States. Dr. Lanman and Dr. Wendling have completed over eight years of research and conducted more than 130 oral history interviews in video format. Complimenting the first person accounts, photographs, documents and artifacts have also been obtained along with the corresponding legal releases. An archive of oral history interviews and other primary sources has been established at the Distinguished Flying Cross Society in San Diego, California. Ω

SHORE ESTABLISHMENTS –RICHMOND

In late December 2010 Miami-Dade County Commission legislation was unanimously passed awarding the Miami Military Museum and Memorial another $1 million grant for work on the interior of NAS Building 25, as part of the second round of the Building Better Communities General Obligation Bond Fund. In late February, 2011, the Commission authorized the sale of $200M in municipal bonds that will fund this and many other projects. The ten-working-day mayoral veto prerogative time just ended without a veto. So the bonds will now be sold on Wall Street, probably overnight. Then the projects they are authorized to fund will sign agreements and start, or in our case, resume work. Meantime we passed audit again, and the other pre-conditions (construction plans, budget, covenants, etc) were submitted and approved. Right now the project attorney is fine-tuning the license agreement with Miami-Dade County landlord Parks and Recreation Department for operations once open. Ω

- Anthony Atwood

CARDINGTON

Two ABC Lightships were erected at Cardington this past March (see back cover). "Fosbern Hangars Limited is currently refurbishing the oldest of the two hangars (Hangar No. 1). With a volume of 26,000,000 cubic feet and a height of 56 meters, these massive premises are commercially available for lease but refurbishment will not be complete until the end of 2012. Interest has streamed in from the film industry, music industry, the aircraft industry (hybrid airships, light airships, balloon manufacturers), warehouse users / operators…"
(This is from the web site http://www.cardington-hangars.co.uk) Ω

FRIEDRICHSHAFEN

Water, Road, Rail, Air - Mobility on Lake Constance:
20 May to 11 Sept 2011 in Zeppelin Museum Friedrichshafen

Friedrichshafen is strongly associated with mobility on Lake Constance. Not only can all modes of transport be found here: ships, trains, airplanes and Zeppelins, both historic and modern. Mobility has always played an important role. The region of Lake Constance has been a driving force in advancing global mobility, for example in the area of drive technology and engine construction. "Mobility" and "mobile society" are buzzwords that are omnipresent. For this reason, Zeppelin Museum is launching an exhibition that examines the 200-year history of the evolution of transport and mobility taking Lake Constance as an example. With its scientific and interdisciplinary approach, it aims to make the public more aware of current issues and looks ahead to possible future scenarios.

Children and teenagers in particular can find out how ships, trains, cars and airplanes work and investigate the technology used in them at various experimental stations around the exhibition. The interactive exhibits are not only geared to children and their parents, but to all visitors from 2 to 99 years of age who like to experiment, enabling them to experience mobility in an unconventional way.

Parallel to this, the technical and historical section of the exhibition presents innovative developments in the form of original exhibits and models. Selected works of art by contemporary artists comment on the technology used in the different modes of transport and its long-term impact on our environment and culture. The exhibition links historical technology and contemporary art, past and present, questioning the influence of future trends in mobility: How will it affect our personal lives? Against what historical background has mobility become the most important topic in modern times?

This exhibition is Zeppelin Museum's contribution to the 200th anniversary of the town of Friedrichshafen in 2011 and is part of the Automobile Summer in South-West Germany, in cooperation with the Archives of Luftschiffbau Zeppelin GmbH Contact: Sabine Ochaba Zeppelin Museum Friedrichshafen GmbH • Seestraße 22 • 88045 Friedrichshafen • Germany
Phone +49 (7541) 3801-0 • Fax +49 (7541) 3801-81 • www.zeppelin-museum.de Ω

MOFFETT FIELD

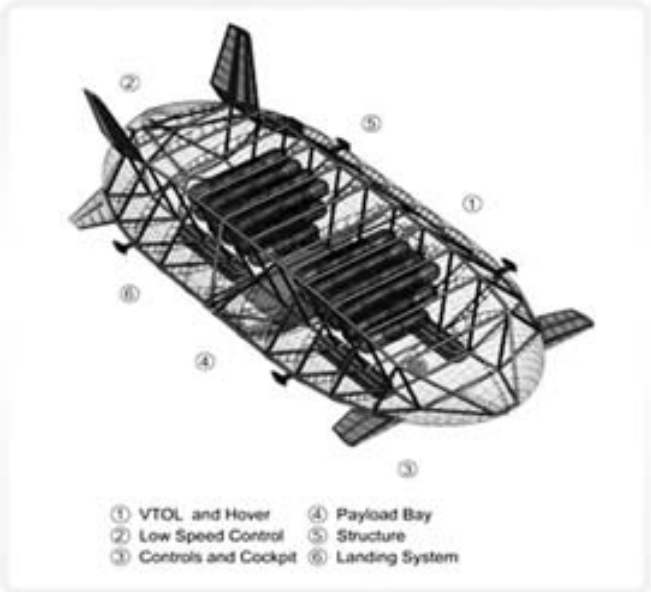
Race to save last historic piece of Hangar One: Unique windows at stake as Navy contractors complete interior demolition. by Daniel DeBolt

(Excerpt from Mountain View Voice) With Hangar One's restoration funding unexpectedly lost in last year's political re-shuffling in Washington, D.C., preservationists are fighting to save one last thing before it's too late -- the hangar's unique corrugated windows. In just over two months, the siding and windows will be torn off the landmark building, which will be left a bare steel skeleton unless funding for restoration can be secured. The windows on the top half of the hangar were designed to withstand the explosion of a 1930s airship filled with hydrogen, said architect and preservationist Linda Ellis in a presentation to the Moffett Field Restoration Advisory Board last week. The Navy has been planning to send the windows to a landfill rather than clean off the caulking that may contain toxic PCBs. Preservationists say that disposing of the windows may not be the cheapest way for the United States Navy to meet its environmental cleanup responsibilities, and would make long-term efforts to preserve Hangar One as a historic building much more costly. At the RAB meeting, Ellis passed around a square-foot sample of the wavy windows, which have what looks like a layer of chicken wire for reinforcement. Reproducing the unique glasswork would cost $200 a square foot, according to a quote from one custom glass maker, she said. "Holding this in my hand, I can tell that you can't just go down to Home Depot and buy this," said Lenny Siegel, RAB member and director of the Center for Public Environmental Oversight. As of late last year, the inside of Moffett Field's iconic Hangar One has been completely gutted of its interior buildings, along with the toxic asbestos and PCBs used on walls, floors and pipes. So far, 1,897 tons of debris and nearly 5,000 fluorescent light tubes have been taken to special landfills at Altamont Pass and Newby Island. During the project, water was used to keep down the toxic dust, which did not reach dangerous levels, according to air sensor placed just outside the hangar. The work took thousands of man hours, and there were no accidents, said Mike Shulz of U.S. Navy contractor AMEC Earth and Environmental. Navy officials say that NASA, Hangar One's owner, needs to come up with $1.2 million if it wants to save the windows, a figure that was questioned at the meeting by preservationists who wanted to know how much it would cost to send the windows to a landfill."Saving the glass could be cheaper than disposing of it," Siegel said. NASA Ames said last year that it is committed to finding $20 million for Hangar One restoration with new siding. But NASA Ames deputy director Lewis Braxton said last week that that is now more difficult without Congresswoman Anna Eshoo's $8 million earmark, lost when Republicans took over the House of Representatives late last year. Paying for new siding is "not a wise thing to do when you can't point out where you will get the additional funding to finish it," Braxton said, later adding that "we're facing significant cuts throughout the agency to try to deal with what's going on" in Washington, D.C. Braxton also announced that he had been called to work in NASA's Washington offices for a year, where he will be "trying to find that $20 million." If the Navy doesn't reconsider its plans to trash the windows, possibly in April, preservationists hope a few wealthy donors come forward to preserve them. It could be a step towards building a Smithsonian-chartered air and space museum in Hangar One. To that end, preservationists have formed the Air and Space West Foundation." This will be a test as to whether we can raise that kind of money," Siegel said. The foundation is not asking the public for smaller donations, at least not yet. "We would need a whole lot of $100 donations to get a million dollars," Siegel said. Shulz updated the RAB on AMEC's efforts to save artifacts inside the hangar. The Navy contractor said it succeeded in saving numerous explosion-proof lights, a mural of Moffett Field and many cranes that were installed along the ceiling. Also saved, mostly, is the most historic structure in the hangar, the temperature-controlled "cork room" where airship gasbags were stored. The steel frame was left intact, pieces of a conveyor system put into boxes and its wooden doors put in storage. But the cork walls and wood floors, which preservationists tried to save, were said to be contaminated with toxic dust and had to be taken to a landfill. Ω

SANTA ANA TUSTIN

Ed. dropped into the former MCAS Tustin last January primarily to scout the county's hangar for possible use as the ZRSthemovie.com studio and location. The custodians were most accommodating, but lamented that the Navy had passed on the opportunity to host the Northrop-Grumman LEMV effort there. Their hangar is doing well, and is often rented out as a movie studio at about $15K/week. They told me of our member Claude Makin (photo above with his Caddy) who happily gives guided Tustin tours. Down on the north end a large tarp obscures a lightweight structure, home of the Aeroscraft. I was allowed in and met Anatoliy Pasternak, their VP for production. We passed out some NOON BALLOONs and encouraged everyone to join NAA.

"The Aeroscraft achieves Vertical Take-Off and Landing (VTOL) thanks to the Aeros-developed Control of Static Heaviness (COSH) system. COSH works by using helium compression to adjust the vehicle's buoyancy. The low speed control system allows the Aeroscraft to hover, and provides maneuverability during takeoff and landing. Our cockpit is equipped with a newly developed fly-by-wire touch screen flight control system integrating avionics and an advanced instrumentation package. The innovative structure containing a rigid aeroshell was invented to reduce weight without losing strength.



"The focus of the BAAV program was to demonstrate a semi-monocoque structure of rigid design (Aerostructure) for a buoyancy assisted lift air vehicle. Aeros conducted scaled demonstrations to indicate that in a full scale vehicle, a rigid aerostructure can be both light and strong enough to accommodate high-speed dynamic air loads without failure. The Buoyancy Demonstration test validated this structural approach as the air platform basis for a new class of buoyancy assisted vehicles." Ω

NAVAL WAR COLLEGE MUSEUM NEWPORT, RI

The Naval War College in Newport, RI, has a small, yet excellent museum. Mostly dedicated to the history of the war college and the Naval history of Narragansett Bay, it is currently featuring an exhibit celebrated the Centennial of Naval Aviation. The exhibit includes many artifacts, posters, and memorabilia from NAS Quonset Point and local Navy aviators. There is an F-4 Phantom ejection seat and canopy from a Blue Angel F-4 that crashed into Narragansett Bay during an air show at NAS Quonset Point.

Prominent is a display case highlighting Navy LTA. Included are models of the *MACON* and a K-ship (donated to the NWC by the NAA), photos, a ZP-11 squadron patch, a plaque of aviator wings and insignia on loan from NAA member **Walter Swistak** as well as some of his photos and memorabilia from ZP-15 and ZP-31 and one of **Bo Watwood's** comparison charts of Navy airships that he did for the Pensacola reunion.

The neighboring walls have posters and reproductions of famous LTA pictures as well as a ZPG-3W pilot's seat. NAA member Prof. John Jackson, Capt. USN (ret.) was the force behind the LTA exhibit and many of the items come from his extensive LTA collection.

The exhibit will run through mid-June of this year. The Museum is open to the public, but 24 hour notice and registration are required as this is still an active Navy installation. For further details see the NWC website, www.usnwc.edu, and click on Museum for hours and directions. Ω **- Fred Morin**

COVER STORY

Lockheed Announces "SkyTug" Airship

(Compiled with internet report information)

On 23 MAR 11 Flight International broke the story Lockheed Martin will revive and scale-up the P-791 hybrid airship prototype to carry at least 20 tons of cargo under a contract signed by a Canada-based commercial start-up. The prototype, seen below, first flew in 2006, but had not been seen aloft in recent years. It will be reactivated.

Kirk Purdy, who is identified as the founder of Skunk Works, is quoted as saying Aviation Capital Enterprises of Calgary (Alberta, Canada) has ordered the first airship, which was rebranded from its original "Aerocraft" name for obvious reasons. The ambitious schedule calls for the first production airship from Lockheed's Skunk Works division in next year. "We're actually well along into the design of a 20-ton lifter," Purdy says. "The system requirements are close to frozen for that."

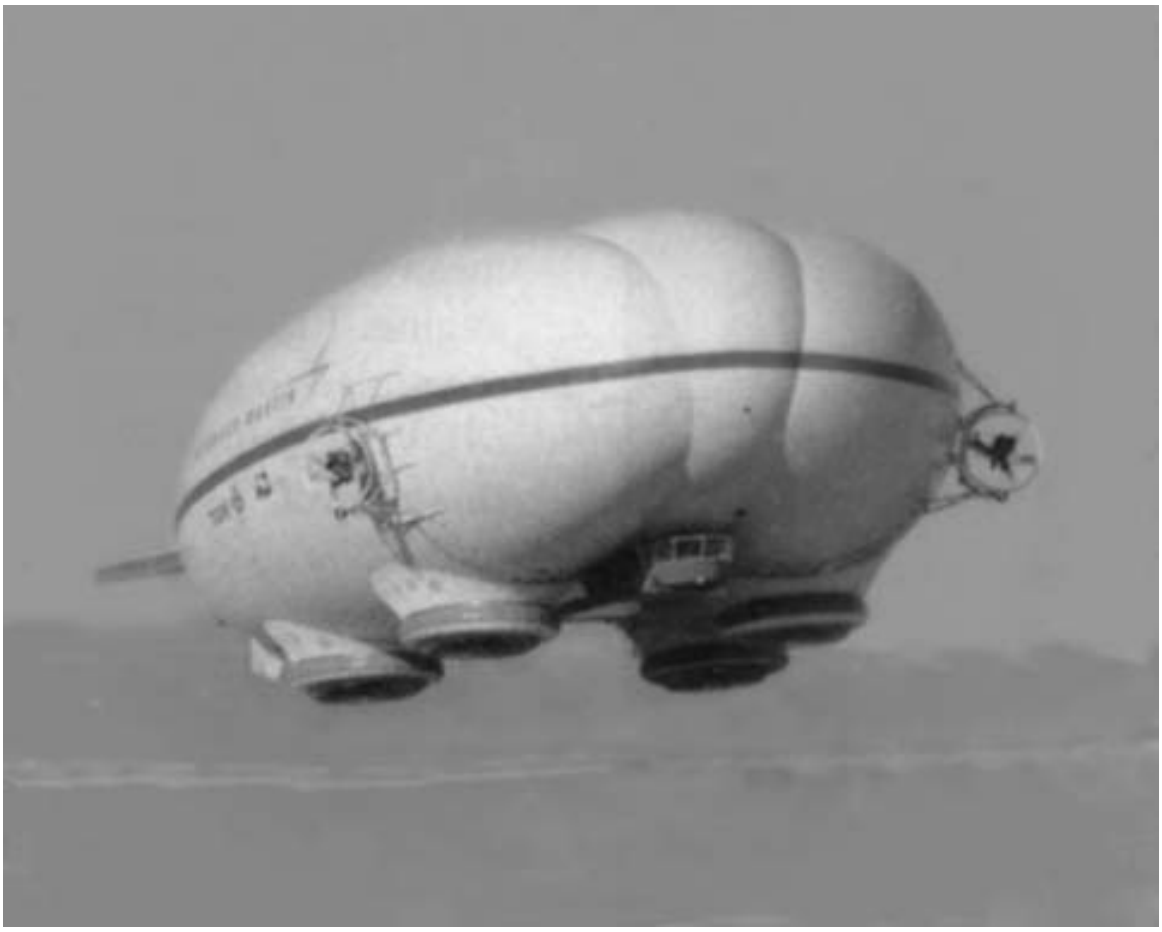
While the first SkyTug will be demonstrated next year under an experimental license to potential buyers, Lockheed will deliver a second hybrid airship to Aviation Capital in late-2012 for launching certification tests with the US Federal Aviation Administration, Purdy says.

"Lockheed is taking us through that right now," Purdy is quoted as saying. "This is not a surprise to the FAA. They've been briefed."

Although Calgary's Aviation Capital has not signed up any firm customers as of this writing, they are undoubtedly familiar with NAA member **Dr. Barry Prentice's** continued efforts to bring LTA to Canada, via the several "Airships To The Arctic" conferences reported in these pages. The report states discussions are ongoing with "strongly interested parties" in the Middle East, Brazil, Mexico and Canada for the SkyTug, Purdy is quoted as saying.

Lockheed lost the competition for last summer's $517 million long endurance multi-intelligence vehicle (LEMV) contract, which the Army awarded last June to Northrop Grumman and Hybrid Air Vehicles. (See page 20.) Industry observers have speculated the Army wanted to add an airship component to its existing command and control structure, so they chose the contractor in that field they had been using for many years.

LTA watchers should note this is the first airship developed and fielded without a Government contract since our own **Jim Thiele** of American Blimp Corporation rolled out his Lightship. It is one of a very few large aircraft programs in aeronautic history to be so funded. Ω



USAF Returns to LTA

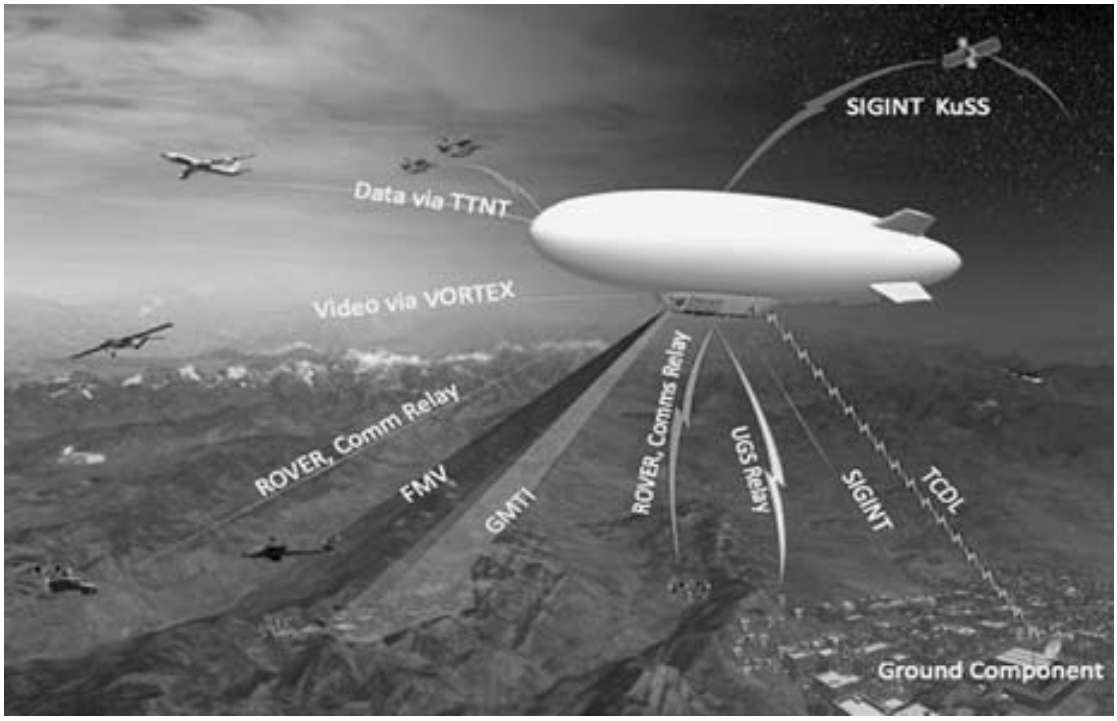
(from techalps.com)

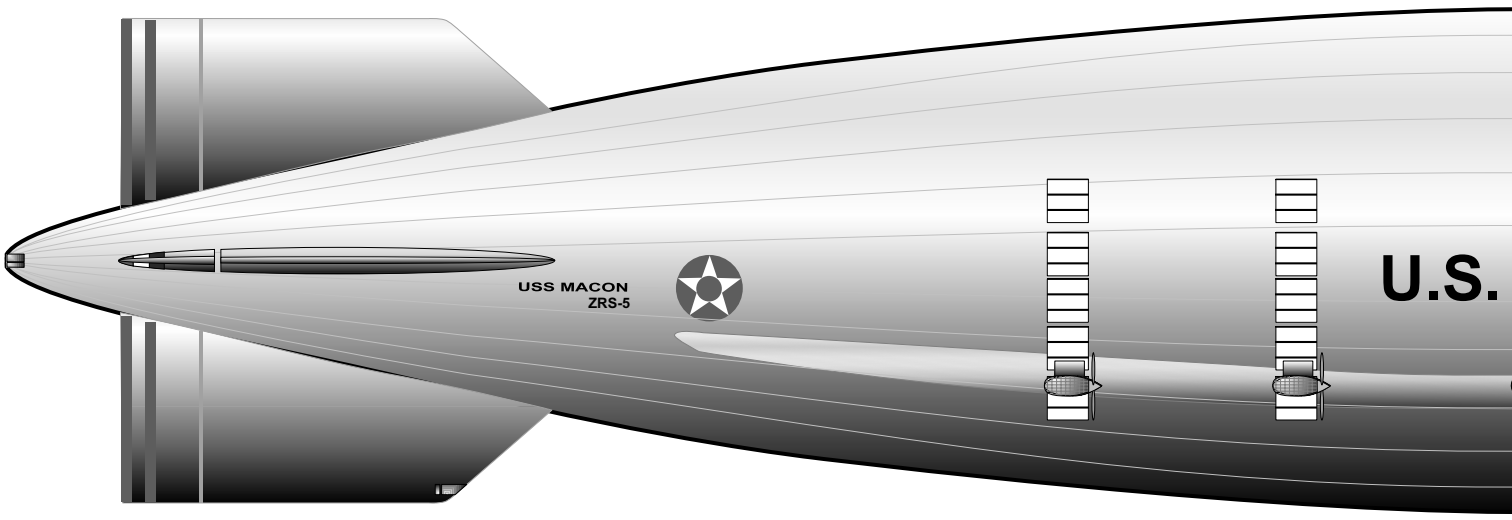
The U.S. Air Force is developing a massive blimp to gather and process all intelligence feeds from Afghanistan. The airship will be longer than a football field, seven times the size of the Goodyear Blimp and will be able to stay afloat for nearly a week at nearly four miles up. The key feature of the ship will be its sophisticated supercomputer which can process 300 terabytes of data an hour. This computer will help limit data overload as surveillance sensors become increasingly complex. It currently takes 14 analysts to monitor a single feed from a predator and the next generation drones will have 96 cameras. The blimp's first test flight is scheduled for 15 October. The airship would fly at 20,000 feet and collect data from the various unmanned surveillance drones patrolling the skies. The supercomputer housed aboard the blimp will sift the various data streams and automatically direct sensors to collect critical information.

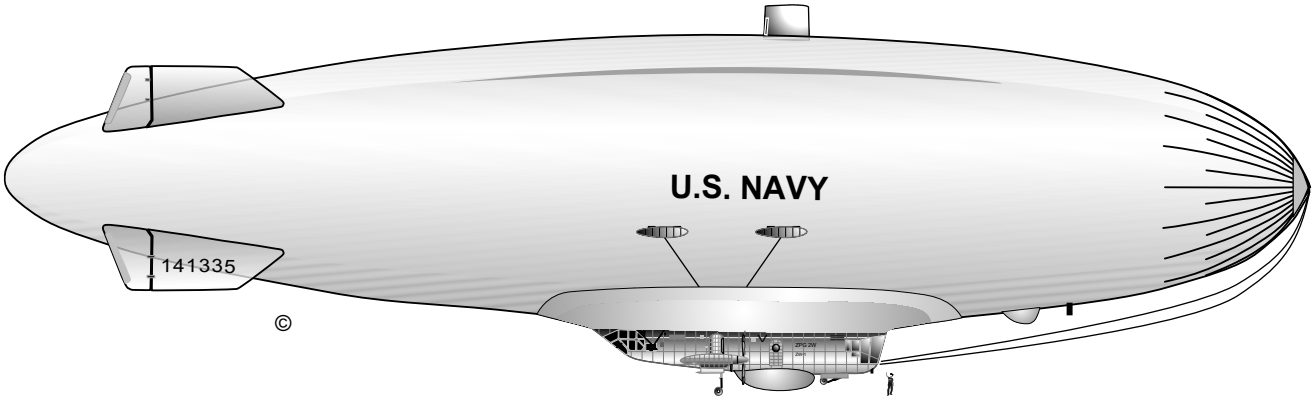
The Air Force already monitors all the video and audio streams from surveillance drones, but the time it takes personnel to determine which bits of information are critical have sometimes allowed the enemy to escape. The supercomputer is designed to cut down on this lag time and feed coordinated information to troops on the ground in less than 15 seconds. Lt. Gen. David Deptula, the recent head of the Air Force's intelligence operations believes the project "could change the nature of overhead surveillance." He says, "There's huge potential there." The next generation of surveillance equipment, Gorgon Stare and wide-area airborne surveillance systems (WAAS), use hives of a dozen cameras to film areas within a 2.5 mile radius. With as many as ninety-six cameras, these drones can cause massive data overloads for both human operators and digital networks. It currently requires 19 analysts to watch a single feed from a Predator drone. With the next generation surveillance equipment, a single drone would generate 274 terabytes of data every hour from its 96 cameras. Gen. James Cartwright, vice chairman of the Joint Chiefs of Staff, said that he would need 2,000 analysts to process the information collected by a single drone using WAAS sensors.

To prevent this information overload from overwhelming intelligence analysts, the Air Force is designing the supercomputer to be housed aboard the Blue Devil. The computer will have the equivalent of 2,000 single-core servers and process up to 300 terabytes an hour. Instead of sending all of this processed information to troops, like with today's sensors, the Blue Devil's processors will calculate the data and filter it into an easily searchable format. Troops on the ground will then be able to search the ship's computer for relevant information. Lt. Gen. Deptula explains that this process will reduce bandwidth consumption.

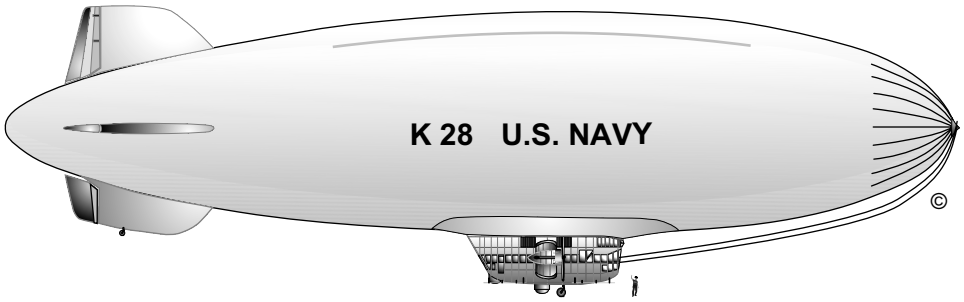
"People ask: 'With all these sensors, how're you gonna transmit all that data down to the ground?' Well, we don't necessarily need to send it all down," said Deptula. "A potential solution is to process part of the data on-board, and only send what is of interest. That reduces the bandwidth requirements." The ambitious project dubbed "Blue Devil" will cost $211 million and is currently in its second phase of development. Ω



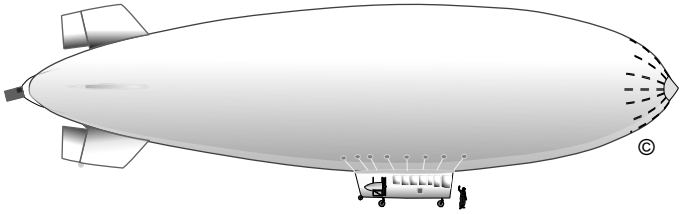




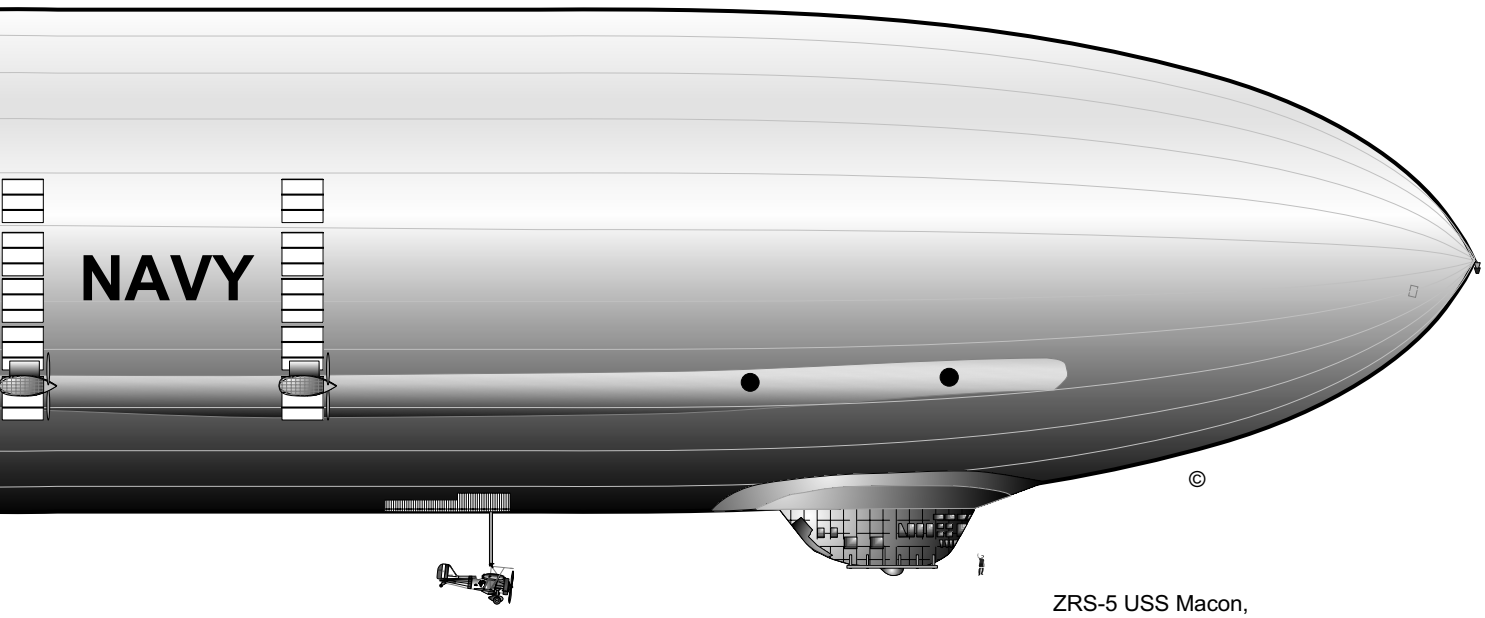
ZPG-2W, ZPG2.5W 1952 - 1961 141335. Built by Goodyear Aircraft Corporation.
ZP2N re-designated ZPG-2 (1954). W model for Airborne Early Warning picket duty.
Length 343 ft. Helium capacity 1,011,000 cu.ft.Powered by two 700 hp Wright Cyclone engines.
Max speed 80 mph. Cruising speed 57 mph.Record flight of 8,216 miles in 264 hours.
Lakehurst NJ to west Africa to Key West FL non-stop. In service until Navy lighter than air program discontinued on 30 November 1961. Last Navy Airship flight - 31 August 1962.



K - 28
OA Length 251.7 feet
Car Length 42.6 feet
Gas volume 425,000 cu feet
Weight empty 18,000 lbs
Lift 8,000 lbs
Gross weight 26,000 lbs
Engines: (2) P&WA R-1340 AN2
WASP 425 hp, geared 3:2
Propellers: (2)Hartzel No. 5694,
3 bladed ground adj. 12.5 ft. dia.
(K-9 through K-30) were ordered
on October 14,1942.

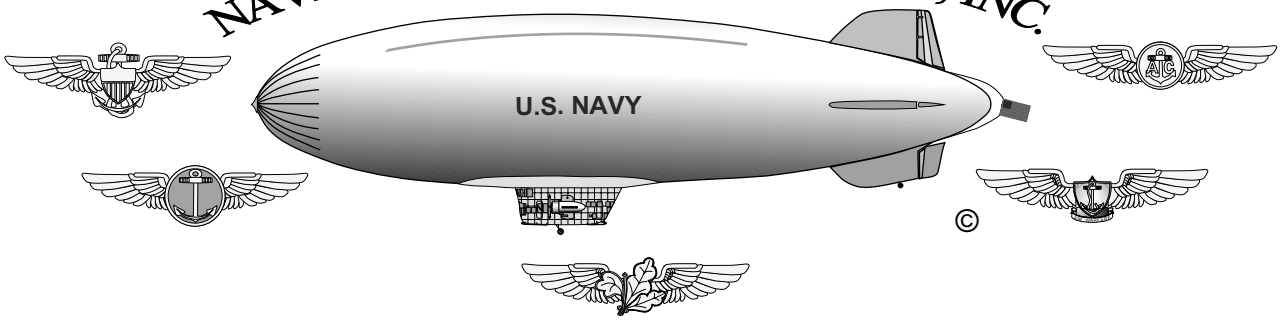


U.S. Mavy, Airship MZ3A 167811,LTAV
Call sign "Waterbug 811"
First crew;
Lieutenant Commander Brian Stephens, USNR
Lieutenant Commander Robert Pudlo, USNR
Senior Airship Pilot Jim Dexter, ISSI Corp.
Senior Chief Petty Officer Dave Dickson, USN



ZRS-5 USS Macon,
Commissioned June 23, 1933.
Built by Goodyear- Zepplin Corp.
Length: 785 feet;
Helium 6,500,000 cubic feet.
Engines; eight 560 horsepower Maybach.
Maximum airspeed; 88 miles per hour.
Carried four F9C Sparrowhawk fighters.

NAVAL AIRSHIP ASSOCIATION, INC.



AIRSHIP COMPARABLE SIZES

www.naval-airships.org

Drawings by. Bo Watwood
blwatwood@charter.net
March 2002
Rev 24May09

SCALE 0 10 20 30 40 50 60

Drawing #5 of series

Rev. 3 MAR 11

TECHNICAL

Northrop Grumman's LEMV Program Completes Critical Design Review Fourth Major Milestone Completed; Next Major Milestone is Hull Inflation

MELBOURNE, Fla., BETHPAGE, N.Y., and LONDON — Six months after signing the Long Endurance Multi-Intelligence Vehicle (LEMV) agreement with the U.S. Army to build three airships with 21-day persistent intelligence, surveillance and reconnaissance (ISR) capability, Northrop Grumman's (NYSE:NOC) LEMV program team has completed its Critical Design Review (CDR). This is the fourth major milestone achieved by the program since contract award.

"The entire U.S. Army/Northrop Grumman LEMV industry team has done an outstanding job working through a very aggressive development schedule to achieve all of these important milestones. The CDR provided an in-depth review of the complete system design of the program giving us the opportunity to assess where we are in our development and air vehicle production. It went very well," said Alan Metzger, Northrop Grumman vice president and integrated program team leader of LEMV and airship programs. "The entire team has been collaborating and remains very focused on meeting our objective of delivering this powerful capability into the hands of our combat commanders as soon as possible."

"There are 3 major milestones upcoming in the next 10 months," Metzger said, "We'll have hull inflation in the spring and first flight of the airship test article by mid-to-late summer. Upon completion of the development ground and flight testing phase, we expect to transition to a government facility and conduct our final acceptance long endurance flight just before year's end. In early 2012, LEMV will participate in an Army Joint Military Utility Assessment in an operational environment," he added. "As you can imagine, it's a very aggressive schedule to deliver from concept-to-combat in this time period."

Under the June 2010 agreement, awarded by the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, Northrop Grumman will design, develop and test a long-duration hybrid airship system all within an 18-month time period.

"The power of the LEMV system is that its persistent surveillance capability is built around Northrop Grumman's open architecture design, which provides plug-and play payload capability to the warfighter and room for mission growth," Metzger said "The system rapidly accommodates next-generation sensors as emerging field requirements dictate and will provide increased operational utility to battlefield commanders. Today, our system readily integrates into the Army's existing Universal Ground Control Station and Deployable Common Ground System command centers and ground troops in forward operating bases.

"Beyond the value of seamless interoperability, the LEMV system provides a high level of fuel efficiency to the user community—a crucial part of life cycle logistics and support in theatre. While LEMV is longer than a football field and taller than a seven-story building, it utilizes approximately 3,500 gallons of fuel for the air vehicle to remain aloft for a 21-day period of service, that's approximately $11,000 at commercial prices," Metzger added.

Northrop Grumman's industry team includes Hybrid Air Vehicles, Ltd. of the United Kingdom, Warwick Mills, ILC Dover, AAI Corporation, SAIC and a team of technology leaders from 18 U.S. states and 3 countries. In addition to leading the program, Northrop Grumman leads the system integration, and flight and ground control operations for the unmanned vehicle to safely take off and land in worldwide operations. Northrop Grumman Corporation is a leading global security company whose 120,000 employees provide innovative systems, products, and solutions in aerospace, electronics, information systems. Ω

SHORT LINES

Future Antarctic Balloon Missions Could Last Up To 100 Days.

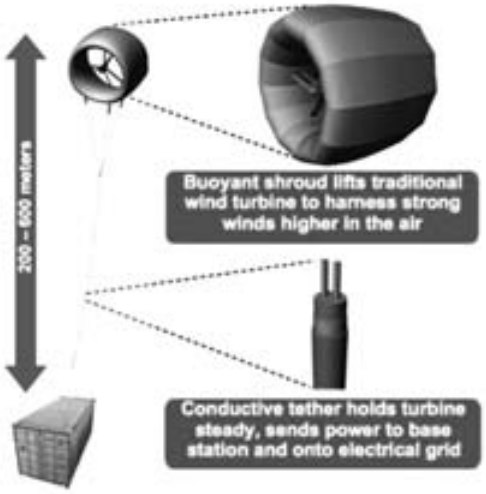
Flight International (2/24, Putrich) reported on NASA "successfully" conducting long-endurance super-pressure balloon missions over Antarctica, which "could get even longer as balloon technology advances." The latest mission lasted three weeks in the air at an altitude of 33,550 meters or 11,000 feet. Raven Aerostar, which manufactured the balloon for the recent mission, "says the balloon was showing no signs of stress and future flights could last up to 100 days. NASA's longest balloon flight was 41 days 21h 36min, in December 2004, over Antarctica." Ω

Unmanned Vehicle Powered By Hydrogen-Fueled Propulsion System Tested For First Time.

Aviation Week (1/13, Norris) reports, "AeroVironment's Global Observer GO-1 long-endurance unmanned air vehicle has flown for the first time powered by a hydrogen-fueled propulsion system. The all-composite, 175-ft.-wingspan vehicle climbed to 5,000 ft. above sea level over Edwards AFB, Calif., driven by 4 propellers and flew for 4 hours. Unlike GO-1's previous test flights in August and September, in which the propellers were battery-driven, the latest flight marked the first time electrical power was supplied by a liquid hydrogen-fueled internal combustion engine. The engine, in turn, drives a generator that powers the propellers, payload and batteries. The flight also marks the beginning of high-altitude, long-endurance flight testing for the demonstration and operational utility phase of the Joint Capability Technology Demonstration (JCTD) program, which is expected to culminate in a week-long flight in the stratosphere." Ω

Nanoscale Polymers In Engine Oil Cut Friction In Half During Tests.

Popular Science (3/3, Dillow) reports Guojun Liu of Queen's University "augmented a base automobile engine oil with nanoscale polymer particles" that in tests "reduced friction--and the energy lost to it--by more than half." According to the article, this development has a wide range of application that it "could put a huge dent in wasted energy." Ω



Altaeros Energies Inc, a Cambridge, MA, start-up founded a year ago by MIT and Harvard alumni, is adapting lighter-than-air technology to the renewable energy sector. The company's Airborne Wind Turbine (above) modifies traditional aerostat design to lift a standard horizontal-axis wind turbine 200 to 600 meters above ground. The patent-pending design enables the harnessing of the powerful winds found at these altitudes, allowing Altaeros' turbine to deliver up to five times more energy and ultimately deliver power at a third of the cost when compared to an equivalent ground-based turbine.

By 2013, Altaeros plans to pilot a commercial 100 kW turbine. Rapidly deployed from a standard shipping container, this turbine is aimed at the $12 billion off-grid military, island and mining markets. Altaeros' design ensures a 60% reduction in the levelized cost of energy and eliminates the need for remote fuel re-supply when compared to the current solution of relying on diesel generators. The Department of Defense has expressed interest in Altaeros' concept, in particular given their familiarity with lighter-than-air deployments. The company also recently presented at the DOE ARPA-E Energy Technology Innovation Showcase and the MIT Energy Conference. The company is currently seed fundraising and has established research collaborations with MIT, Virginia Tech and NREL. Current fundraising will be used to complete the on-going design and then subsequent testing of a 2 kW proof-of-concept prototype by fall 2011. Altaeros is seeking further support in developing its understanding of lighter-than-air operation and maintenance characteristics and invites Noon Balloon readers interested in supporting or learning more about the company to contact info@altaerosenergies.com or Alain Goubau at 857 207 8272. Ω

Airship Ventures and Farmers® Insurance Announce the Farmers® Airship's First-Ever National Tour

Airship Ventures and Farmers® Insurance announced last April that the Farmers® Airship will embark on a six-month journey, "Covering Communities," which will take the world's largest airship across the United States and back. The journey will mark the first time a Zeppelin airship has ever barnstormed across the nation. (The Graf Zeppelin flew from Los Angeles to Lakehurst, N.J. as part of its famed 1929 around-the-world voyage, but its journey was non-stop.) In total, the Farmers® Airship will sail in the skies of nearly half of the nation's states, two dozen communities expected to host the Zeppelin for extended stays that will include airship-related community events, as well as public "flightseeing" tours. Within each state on the "Covering Communities" tour route, the public will have a chance to go flightseeing on aerial tours above their local communities. These sightseeing tours will be offered above nearly two dozen cities and will range from $375-$950/person, plus taxes.

The journey began April 6 when the Farmers® Airship departed its home base, the historic airship hangars at Moffett Field, Calif. The Farmers® Airship is spending the next six months traveling more than 12,000 miles, across the skies of 24 states, primarily in the Southern, Mid-Atlantic and Midwestern United States, inspiring millions of Americans along the way. In addition to offering passenger tours in select cities, the Farmers® Airship will make some very special appearances, including serving as a TV platform for the Zurich Classic Golf Tournament in New Orleans and becoming the first-ever Zeppelin to attend the nation's largest celebration of aviation, EAA AirVenture in Oshkosh, Wisconsin. Along the journey, the airship will champion Farmers® Insurance-supported community events and charitable initiatives. Updates on operating locations and dates, as well as additional Farmers® Insurance-supported events where the airship will appear, will be posted regularly to www.FarmersAirship.com. Ω

Al Attiyah Welcomes Helium 2 Buyers

DOHA, QATAR:

His Excellency Abdullah Bin Hamad Al Attiyah, Deputy Prime Minister, Minister of Energy and Industry, hosted senior representatives from Linde Gases and Iwatani Corporation; two buyers of helium from the Qatar Helium 2 Project. Linde Gases, a division of the Linde Group, signed a Sales and Purchase Agreement (SPA) for 30 percent of the project's helium production; while Iwatani Corporation signed an SPA for 20 percent of the production. The third buyer is Air Liquide which signed an SPA for the remaining 50 percent of the production. When completed in 2013, the Qatar Helium 2 Project will make Qatar the second largest helium producer in the world, and the largest exporter of helium. "I am delighted to welcome our distinguished guests to Doha today," said Al Attiyah. The Qatar Helium 2 project represents a significant milestone in achieving the vision of his highness the Emir, Sheikh Hamad Bin Khalifa Al Thani. Since 2000, world demand for helium has increased by around 20 percent, and the bulk of this increasing demand can be met from Qatar's North Field for many years. Ω

Local man makes rare flight in hydrogen-filled balloon
By Bethany Fuller (Excerpt)

After several hours of preparation, the hydrogen balloon carrying Sam Parks and his crew finally lifted off the ground around 8 a.m. Wednesday morning. Parks' balloon was one of two hydrogen-filled balloons that launched from the field behind Parks' home en route to Virginia and into the history books. Parks and his fellow balloonists believe their gas balloon flight on Wednesday was one of the first in the southeast since the Civil War. "Hopefully, we are taking it to the next step with gas ballooning," he said. Parks and fellow balloonist Andy Cayton, from Savannah, GA., said another reason for their flight was to illustrate it was practical to use hydrogen instead of helium to inflate gas balloons. Parks said the days of using helium to inflate these balloons are going away. He and several other balloon pilots had worked late into Tuesday night and early Wednesday morning to get the two balloons inflated. (con't)

Photo: Bruce Matlock

"We've always had the market on helium," Cayton said. However, with the price of helium increasing, balloonists need to find a way to start flying with hydrogen, he said. Parks said it took them five hours to inflate both balloons with hydrogen. [Ed. – using skids of K-bottles; 500 cu m and 1000 cu m]

Each balloon spent the night tethered to a tractor and was weighed down with sand bags. In the other, smaller gas balloon was pilot Drew Barrett from Tampa, FL. Barrett, who has a history of flying airplanes, said gas ballooning is the "most perfect and pure flying I've ever done." Gas balloonists can take off at night and fly long distances, he said. "It's pretty cool," Barrett said. "This should be a beautiful flight, if it works the way we think it will." Among the crowd of well-wishers Wednesday morning were several hotair balloon pilots who regularly participate in Statesville's annual Carolina BalloonFest. Two faces in particular stuck out — Balloon Ascensions Founder Bill Meadows and former Balloon Works Owner Tracy Barnes. Barnes said the event was exciting. He said gas ballooning is a big part of ballooning history. "Gas ballooning in the southeast is a rare, rare thing," Meadows said. "This is very special." By 3:30 p.m. Wednesday, Barrett's balloon had already landed. Parks balloon was still flying near Lynchburg, Va. "It's been very nice," Parks said of the flight at mid-day. Parks said he hopes to make gas balloons a part of the 39th annual Carolina Balloon Fest in October. Parks and the crew ended up landing eight miles out of Appomattox, VA, around 5 p.m. The crew agreed that the flight and its promotion of gas ballooning in North Carolina was successful. "We had a student pilot that passed all of his requirements today," Parks said. "We want to do it again. Hopefully, we will be seeing more." Ω

Riley Ridge Helium plant under construction - will be key in U.S. production by Jeff Gearino Excerpt, Casper Star-Tribune/Billings Gazette

Hidden in a remote, aspen-bordered spot east of towering Darby Mountain and at nearly 9,000 feet elevation, Cimarex's approximately $350 million Riley Ridge Methane and Helium Recovery facility will substantially increase the nation's helium production. Cimarex officials and their partner, Air Products and Matheson Tri-Gas, broke ground on a separate helium refining facility located about 18 miles east of the plant. The plant will take the helium gas that is separated at the Riley Ridge facility and refine the product to about 99.9 percent purity before it is trucked to market. Mobil first discovered gas in the Riley Ridge area after drilling exploratory wells in the deep Madison formation in 1961. But the produced gas contained a low heating value and high concentration of CO2 and hydrogen sulfide, which hindered the field's development.

The Riley Ridge facility will produce as much as 400 million cubic feet of helium a year — which would be about 10 percent of the nation's current helium production — once operations begin late in 2011. The sour natural gas found in the Big Piney-LaBarge area of southwest Wyoming contains about half of the country's known helium reserves.

The new plant will tap into helium reserves in the Madison formation — a proven resource for natural gas and helium — much the same way the nearby Exxon Mobil Corp.'s Shute Creek Plant does. But while Exxon's plant vents carbon dioxide into the atmosphere, Cimarex's facility will reinject all the byproduct gases such as CO2 and deadly hydrogen sulfide back into the source formation. The Riley Ridge plant is expected to play a significant role in the nation's helium reserves because the federal government will be selling [out] its strategic helium reserves in west Texas over the next few years. The reserve at Bush Dome in Texas currently provides for about half the U.S market. Ω

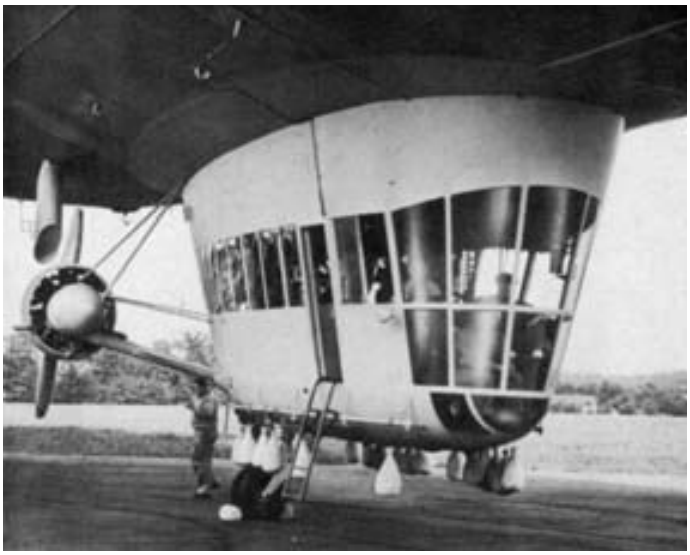
The Office of Naval Research showcased the latest innovations in fuel cell vehicles, robotics and weapons during the 2011 Pacific Operational Science and Technology Symposium and Exhibit in Honolulu, March 14-17. ONR's exhibit included a hydrogen-based fuel cell vehicle, designed and manufactured by General Motors for the Marines in Hawaii. The vehicle is anticipated to be available to the public by 2015. Ω

HISTORY

A look back at the G-Type Airship

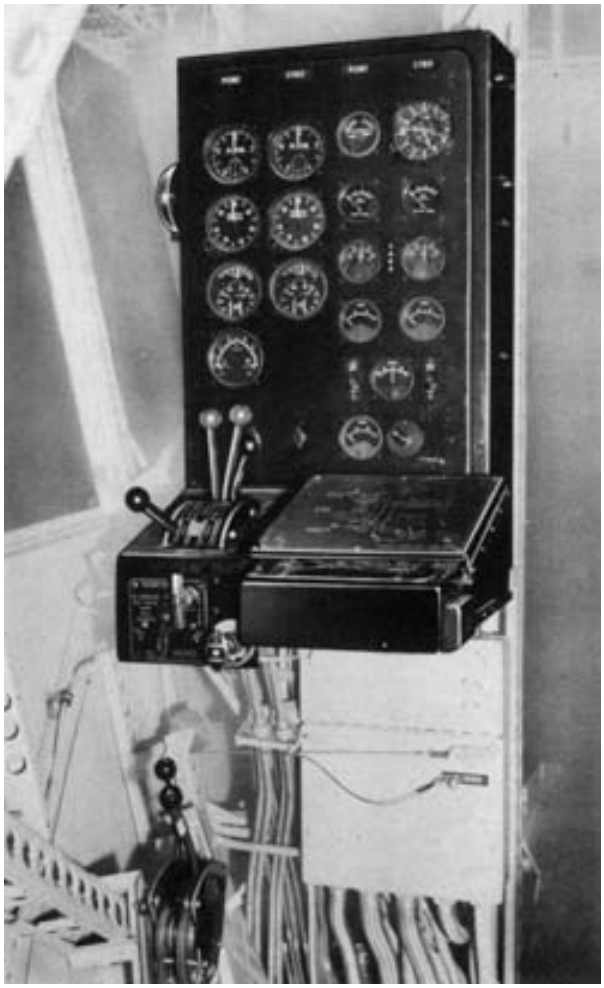
by David Smith

The U.S. Navy G-Type airship was basically derived from the Goodyear *Defender*, built in 1929, to train Goodyear rigid airship pilots. Goodyear had hoped that its agreements for building Zeppelin rigid airships would require it to develop its own corps of rigid airshipmen.



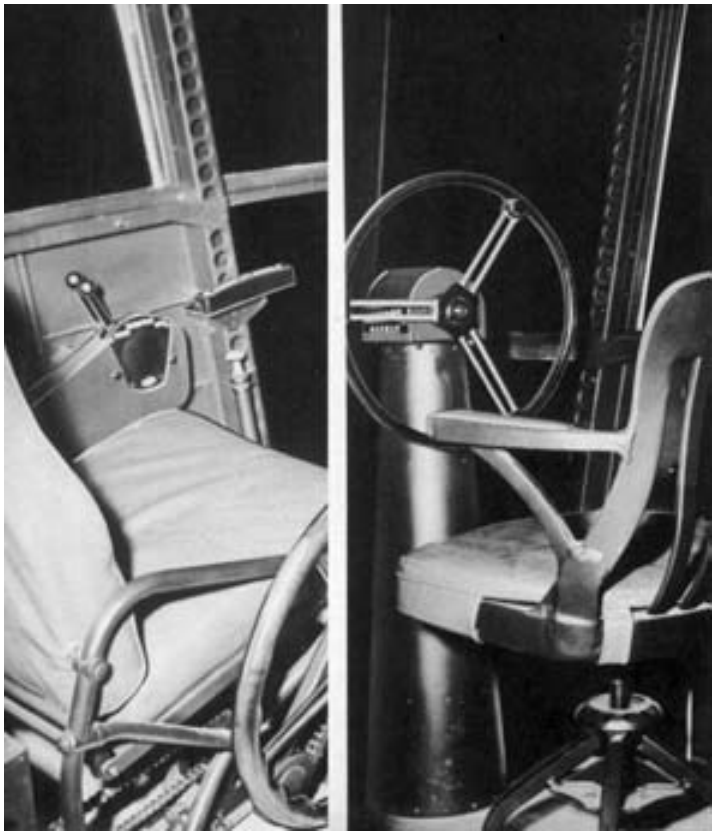
The *Defender*, which would be sold to the Navy in 1935 and subsequently became the G-1, was significantly larger (196,700 cu. ft.) than its smaller predecessor the TZ series or L-Ship at 123,000 cu. ft. The G-1 was lost when it collided with the L-2 on June 8, 1942, while conducting nighttime visual and photographic tests with underwater flares.

In addition to the G-1, seven other G-Ships were delivered by Goodyear to the Navy from late 1943 thru early 1944. The G-Ship control cars and control surfaces were subcontracted to the Twin Coach Company of Kent, Ohio.

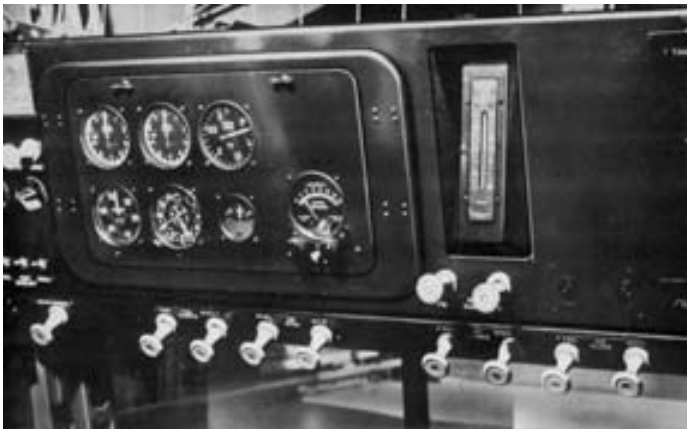


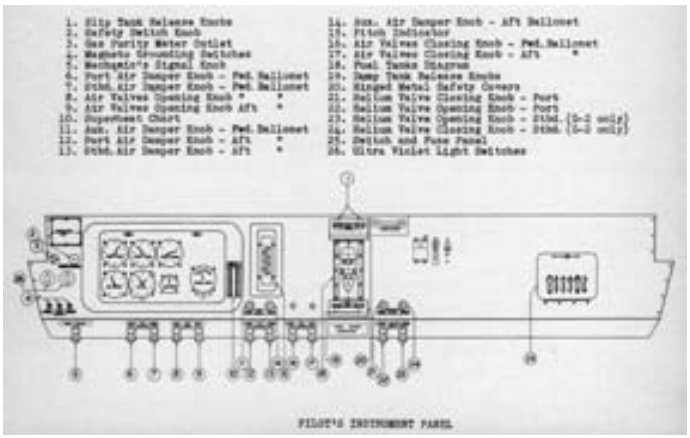
Flight Mechanic's Panel and controls located in the aft portion of car.

Compared to the L-Ship car, the G-Ship car was spacious and the Navy adapted it as a K-Ship crew trainer ship with interior and flight controls layout very similar to what crews would expect once they transitioned to the larger K-Ships.

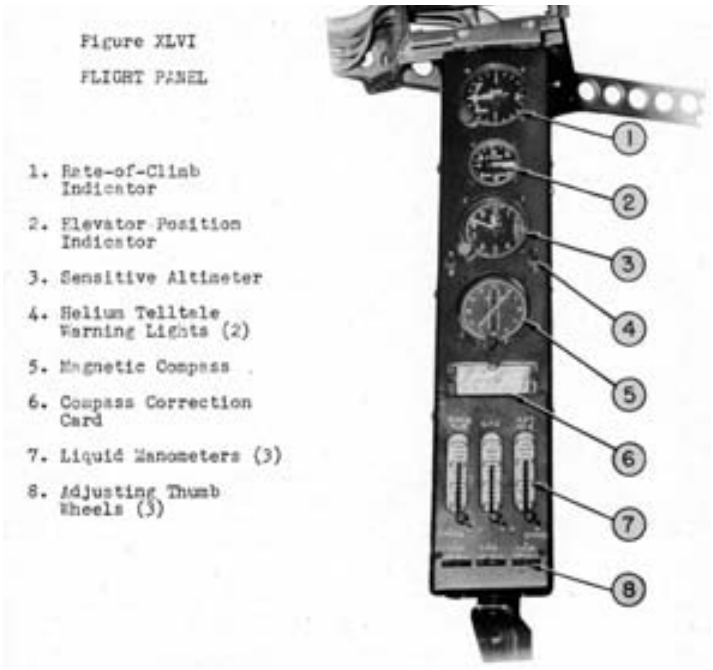


Like the K-Ship, the G–Ship required two pilots. The elevators pilot position was on the left side of the car and the rudder pilot position was on the right.

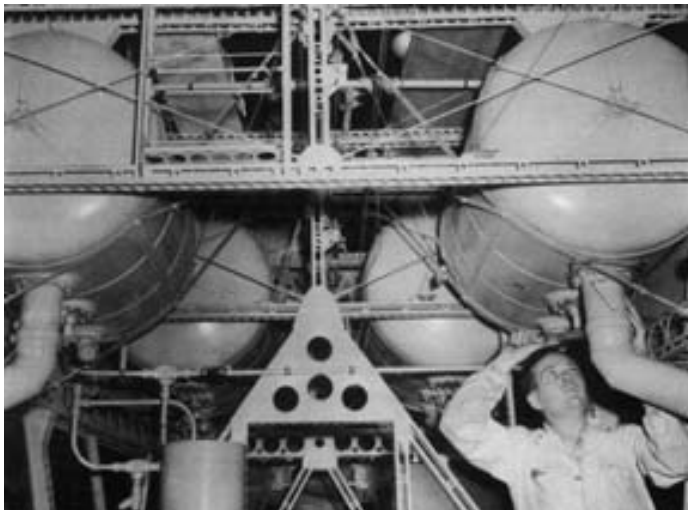




View of Pilot's Instrument Panel



The Flight Instrument Panel which was directly in front of the elevator pilot, was mounted in a vertical position on the car structure.



View of the fuel tanks at assembly.

The G-Ship fuel system also resembled that of the K-Ship. It consisted of four main 100-gallon tanks mounted overhead in the car between frames 4 and 6 and two 40-gallon auxiliary slip tanks mounted below the floor at frames 2 & 3. Total capacity was 480 gallons.

In summary: the G-Ship was an intermediate class between the L-Type and K-Type airships, designed for pilot transition training and capable of limited patrol duty. It was designed to reproduce, on a smaller scale, most of the equipment and operating characteristics of the K-type airship. Today's modern Goodyear GZ-20 Type airship features a 202,700 cu. ft. envelope and is quite similar in size to the G-Type. The GZ-20 airship however uses a car more closely related to the L-Type car in size and shape. Ω

On May 29, 1917, the Navy made a contract with the Goodyear Tire and Rubber Company of Akron, Ohio, to train 20 men in free ballooning and in the operation of kite balloons and dirigibles. Negotiations for this training began before the declaration of war. Goodyear had already started construction of a training field and, when the contract was signed, was ready to receive the students. The story of the first men to be trained there is told by one of them, Naval Aviator No. 101, W. L. Hamlen.

FIRST LIGHTER-THAN-AIR CLASS AT AKRON
by: W. L. Hamlen

Like hundreds of young Americans in the spring of 1917, I wanted to fly—and I wanted to fly Navy. All I had to back up the desire was less than a year of college and five years of weekend ballooning as a member of the Flight Club at Akron, sponsored by Goodyear. I was working in Chicago at the time and I haunted the local recruiting office and the Great Lakes Training Station, seeking a way in.

In mid-May I received my call. A letter from Great Lakes, stating that I was eligible for enrollment as a Seaman 2nd Class, Class 4, for training in aviation, instructed me to report for a physical, I reported and I flunked—underweight! My only resource was to request a waiver, but no one knew how long that would take or if indeed it would be granted.

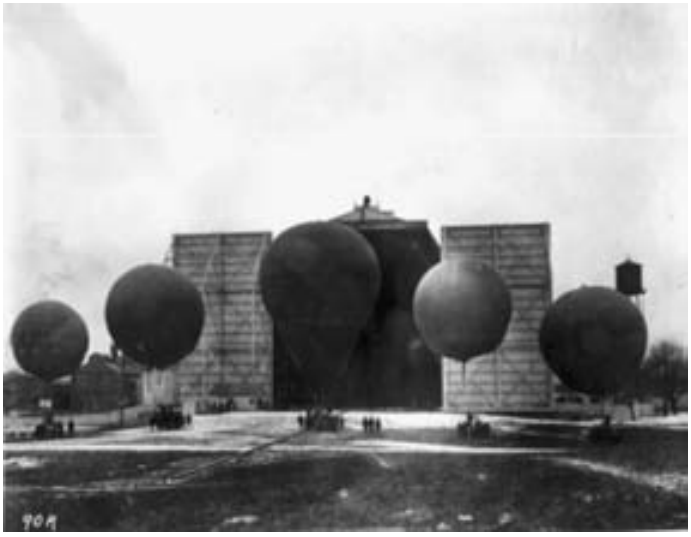
One of the circulars accompanying the letter from Great Lakes referred to "work to be done about aircraft (airplanes, seaplanes, balloons and dirigibles)." This indicated to me that Goodyear might be involved. Since Akron was my home and I was a former Goodyear employee, I got on the phone and learned that extensive plans were being formulated for Navy lighter-than-air training at Akron and that Goodyear was indeed involved. Details would have to come from the Navy Department, but Navy personnel in Chicago were helpful to the point of indicating that the program was to get underway June 1st. They also suggested that I go to Akron to see the senior naval officer. They gave me a letter dated May 26, 1917, addressed to that officer, stating that waivers on weight had been requested and that I was otherwise qualified.

On arrival in Akron, an inquiry or two revealed the senior officer's name, Lt. Louis H. Maxfield, and his current headquarters. Any early phone call on a rainy morning announcing the arrival of his first trainee, who was not even enrolled in the Navy, was, he told me later, somewhat of a surprise. Lt. Maxfield instructed me to meet him the next morning at 0830 for a trip to the "station" located at Fritsche's Lake (later Wingfoot), a few miles southeast of Akron. After reminding me not to discuss my un-enrolled status with anyone, we took off in a pickup truck assigned to the unit by Goodyear. En route, we speculated on where the rest of the trainees were and when they might arrive.

The station area was a sea of mud. However, a landing field had been cleared and leveled. A hangar measuring 400x100x100 feet was almost complete, shops had been built and equipped, a hydrogen plant was ready for use and barracks for the students and quarters for the officers were finished. A temporary mess hall had been provided in a farm house on the property and work was being rushed on larger barracks, mess halls, and other facilities necessary to house the station complement of enlisted men when they arrived. All this construction on a field of roughly 720 acres was done in an incredibly short time by contractors working night and day under Goodyear supervision.

I learned that arrangements as they stood at the time were that Navy would provide the trainees and Goodyear would do the rest. This included furnishing

the equipment and supplies, providing instructors for flight training and for some of the ground school subjects such as elementary physics and meteorology, and responsibility for the day-to-day operation of the field. Naval officers would teach navigation, seamanship, signaling, communications and—Drill! Later many of these subjects were transferred to special Ground Schools such as the one at MIT, but for our gang, Wingfoot Lake was it.



Returning to town, we found that three officers and one trainee had arrived. The officers were: Ltjgs. Emory W. Coil and Ralph G. Pennoyer and Ens. Frederick P. Clubert, all of whom would serve on the staff; the trainee was Colley Bell. Next day we moved to the station. Ens. Culbert drove his own car, the rest of us piled into the pickup. I don't know how the officers worked out the assignment of quarters, but Bell and I had free choice in the barracks and we picked bunks in the corner, where there was a good cross-ventilation, and far away from the stairs and showers.

Before too long, we were called below—pleasantly enough, this being the first time—and asked what experience we had in drill. Our answer was negative. Everyday from then until the rest of the group arrived, the two of us marched and countermarched, forward and to the rear; we advanced as skirmishers, faced right, left and about; and soon could do the grand right and left by squads with our eyes closed. We heard many a snicker and guffaw from the civilians, but our officers appeared to take it seriously, as indeed we did. Neither one of us will ever forget Ens. Culbert.

After only a few days, which seemed like weeks to Bell and me, the main body of the first class arrived. As finally constituted there were 12 members, as follows: Colley W. Bell, Arthur D. Brewer, Noel Chadwick, George Crompton, Merrill P. Delano, Richard C. Gartz, Warner L. Hamlen, Charles G. Little, Ralph M. Strader, Andrew B. Talbot, William P. Whitehouse and Arthur S. Williams. Of the 12 class men, 7 were from Harvard.

After reporting aboard, the scrambling for bunks ended up with all hands reasonably satisfied. Compared with some of the quarters in those early days, we were well off, as many of us were to learn in future assignments. Class schedules were now posted, notebooks broken out, and we were ready for the serious business of learning to fly.

We started on the ground with classes in Theory of Flight, Meteorology, Signaling and Radio Engines, much of which was practical work, and—Drill. Flight training was in three types of lighter-than-air craft. We began with kite balloons which were tethered by a cable to a winch on the ground. Three flights were required at between one and two thousand feet, primarily to accustom us to the sensation of being in the air but also to give us some experience in reading instruments. From these, we graduated to free balloons. These ride the air and wind currents and can be controlled only to the extent of changing altitude to meet air moving in the general direction of desired travel. The balloon rises when ballast is dropped; descends when gas is valved. We made three flights as passengers in these balloons and then two solo flights about one hour each. On the latter, the student supervised inflation, directed the start, and after landing, deflated and packed the balloon for return to base in a pickup truck.

One of my darkest moments occurred during my first free hop. Lt. Maxfield was the skipper and there were two others in the basket with us. Lift-off was uneventful. We sailed along, keeping an eye on the ground crew following us in the pickup truck. It carried two students who would exchange places with us as we made two intermediate landings. On the first landing I was to be first out and, in spite of my previous experience ballooning, all I could think of was the "step lively" instruction given by the skipper. I was out before my replacement had a chance to get aboard and with the load suddenly lightened the balloon went up, fast, to almost 9,000 feet, before the skipper could stop the ascent. I didn't dare look up. They lost so much gas

stopping that further flight had to be abandoned and I had to face the stony silence of all of them as we packed up the balloon and loaded it on the truck for return to the station.

From balloons we progressed to blimps. The first we flew were the A type, slimmer and more pointed than those of later years. Then we moved to the B's, but there were many modifications of both. The earliest had three ballonets inside the envelope, the center for hydrogen and those fore and aft for the air. The air bags were separately connected to a blower engine in the car. By blowing air into or exhausting it from these ballonets, the nose or the tail could be made heavy or light to bring the nose up or down. The volume of air also provided pressure to compensate for the expansion and contraction of the hydrogen gas during ascent and descent, thus retaining the shape of the envelope and the tension on all cables to the car. In later models the arrangement of the ballonets was modified and an air scoop set in the prop wash replaced the blower engine, but the principle of operation remained the same. The car was simply a modified Curtis Jenny fuselage, complete with OX-5 engine, slung under the bag. Skids with small pneumatic bumper bags underneath were used instead of wheels.

Three-place affairs, the forward seat was for the mechanic, the after seat for the aide and the center seat for the pilot. Progress of the student determined his place. The course required 18 flights in all. On the first five, the student served as mechanic with responsibility for starting the engine and watching over it generally. On the next five, he rode in the back seat from which point he operated the blower motor, if the blimp had one, and began operating the dual controls under direction of the pilot/instructor. Assuming he was ready, he then took over as pilot with the instructor in the after seat, and, after a few flights in full command, he was ready for the final qualification flights.

Our first muster was something to see. Uniforms were only things to dream about and look forward to. Nothing matched anything; black shoes—brown shoes, yachting caps—pancake caps, wrap-arounds—leather puttees—no puttees, jodhpurs—slacks; each outfit reflected individual personality. Not a few Adam's apples bobbed up and down as our officers looked us over. Lt. Maxfield took appropriate action. Within the week, a naval tailor from Washington promised an early appearance which he made, complete with tapes, chalk, measurement pads, swatches and photographs galore—to show how we would look. Visions of khakis, greens and dress blues, leather puttees, shoulder boards and caps with assorted covers were just too much for some of us. All evening the phone was kept hot as families, sweethearts, girl friends and business friends had to be told the good news. It was mid-July, however, before the uniforms arrived. Having them perked up our appearance considerably; we all stood a little taller and straighter.

On June 22nd, Lt. Maxfield issued orders involving actual flying of naval aircraft to all of the group—except me. I was still not enrolled. But on that same day, I was notified that my request for waiver had been granted and I could now be sworn in. After better than three weeks of hard active duty, I was finally in the Navy.

Training went along on schedule. With preliminary ground school well underway, we started in kite balloons on June 16, moved to free balloons the next week and then progressed to blimps about the middle of August. We accomplished some things that loom important today but at the time none of us knew enough to realize it. We did know what was going on, however—we were flying like crazy. This was particularly true after a distinguished looking middle-aged gentleman arrived on the station, carefully carrying a glass tube or bottle some 20 inches tall. We had no idea what it was but it looked exactly like today's radio tube in a giant economy size. It was Dr. Lee DeForest who, with Lt. James Lavender, was engaged in a research project associated with ground-to-air communications. Between training flights, we took them up or helped handle the lines, day after day. Sometimes they would scarcely be clear of the

This photo and caption appears in The Naval Historical Center's official LTA history published 25 years ago, reading, “The first class of LTA students from Akron. Standing: Gartz, Whitehouse, Delano, Williams, Talbot, Little, Brewer, Hamlen, Strader, Crompton and Chadwick. Sitting: Pennoyer, Norfleet, Culbert, Preston (of Goodyear), Maxfield (C.O.) and Coil. The mascot is Maxfield’s 'Lanny.'” A short story was published elsewhere in which Maxfield’s dog was tangled in a “B” ship’s lines and carried aloft before being discovered and rescued via emergency landing, not unlike 'Black Dog' of the next generation. W. L. Hamlen’s mention of training in an “A” ship most likely means one of the other envelope/fin configurations of “B” since A-1 (DN-1) never flew out of Pensacola. Photos show distinctly different bags between the manufacturers, including different fineness ratio Hamlen calls out. A drawing, though no photos, indicates one two-cockpit “Jenny” fuselage was used with little other modification. Photo research and delivery by Eric Brothers.

ground before the "land" signal was given and down they would come again. It was exhausting work but it gave us what we know now was an opportunity to participate in a small way in an important development. Eventually these experiments were completed and our training continued. By now we were flying on longer and more frequent flights. Night flights came into the picture and, although we had been up at night in a balloon, a night flight in an airship was an interesting experience. Finally we began to qualify. On September 21, the first eight men successfully passed the final tests and when the recommendation of our commanding officer was approved by the Secretary of the Navy on October 5, 1917, they were designated Naval Aviators (Dirigibles). The others qualified not too long afterwards.

By late October, shoulder boards and cap devises could be broken out and our uniforms were complete. We were now Ensigns, USNRF, and ready for any operational task to which the Navy might decide to assign us.

The detachment of our commanding officer, LCdr. L. H. Maxfield, and Ltjg. F. P. Culbert on September 27, and the assumption of command by Lt. E. W. Coil was the beginning of the change. But for us the real break-up began on October 7. On that day, seven of us destined for immediate assignment overseas were given leave to await further orders. They came on November 2. We were ordered to France with several stops en route.

It turned out to be quite a tour. On November 9th, we gathered at the Brooklyn Navy Yard—Strader, Talbot, Whitehouse, Brewer, Little, Delano and Hamlen—and sailed aboard the American liner St. Louis. The monotony of the voyage was tempered by the company of young ladies of the Red Cross, chaperoned by Mrs. J. Borden Harriman, en route to service in France. After landing at Liverpool, we "Reported Aboard" to the American Consul at Liverpool; to Admiral Sims and the Naval Attaché at London; to the Commander, U.S. Naval Aviation Forces, France, and the Naval Attaché at Paris; to the Commandant, Centre d'Aviation Maritime and the U.S. Navy Senior Officer Present at Rochefort; to the Commandant, Patrouilles Ariennes de la Loire at St. Nazaire; and to the U.S. Navy Command at Center de Dirigible, Paimboeuf.

[Above, "ZDUS-2" rolling out of the Zodiac factory. Below, American airshipmen at Paimboeuf. Both 1918 photos from R. Feuilloy.]

Although there was little chance of getting lost on this one-week journey, what with the "tabs" being kept on us, there was at least one bright spot—and one dark one. The first was a pleasant reunion with LCdr. Maxfield at Rochefort which carried on to duty at Paimboeuf under his command. The shocker was our first lunch at the Officers' Mess at Rochefort where we were informed that we were to speak only French in the Mess as well as elsewhere on board, as quickly as we could get a working vocabulary in shape. The second was that the entrée at our first meal was escargots—snails, by whatever other name, to me! Thank goodness there was plenty of vin rouge available.

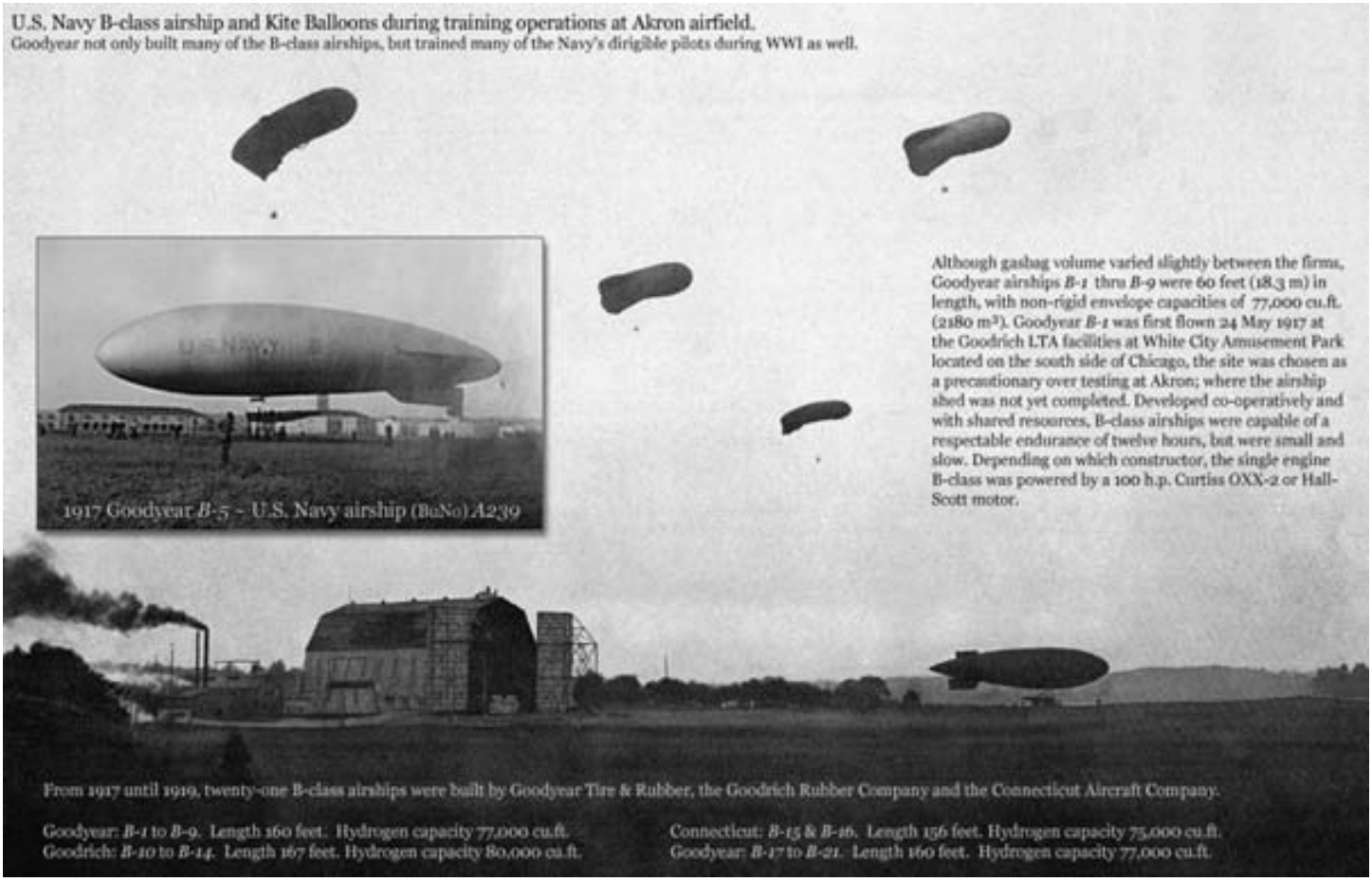
Those less fortunate that we were assigned to duty at lighter-than-air patrol stations along the Atlantic Coast. Gartz went to Cape May, Bell to Rockaway, Crompton and Williams to Montauk Point, and Chadwick, who would eventually go to Key West, stayed at Akron to help train the next class. It was considerably larger than ours and included many of the enlisted men who had handled our lines and kept us flying.

Others who took training with this class while serving on the staff or in other capacities included L. H. Maxfield, E. W. Coil, F. P. Culbert, R. G. Pennoyer and W. G. Child, all of whom qualified before leaving, and Ralph Kiely, Zachary Lansdowne and J. P. Norfleet, who completed their training at other locations.

Training continued at Akron through the war period and as more men acquired the necessary skills, the Navy gradually took over more of the responsibility for instruction and upkeep. When graduates of the Ground School at MIT began arriving, some reduction in the length of the course was possible by eliminating some of the ground subjects already covered at that school.

This was the first airship pilot-training program established by the Navy. Through the war, Akron remained the main source of LTA pilots, although some were trained at other stations. The Company and the many people of Goodyear, who undertook this program without previous experience in airship design and with very little background in their operation, deserve credit and praise for their enterprise, their contribution to the war effort and, above all, their work in making this the true launching of the Navy's lighter-than-air program. Ω

[Below: Akron and "B" ship info from a website.]



History Committee

Remember the old newspaper checklist - Who, What, When, Where, Why. and also, So What? I started reading VADM Rosendahl's "SNAFU: The Strange Story of the American Airship" on the way home from the NAA Ex Com meeting. Hepburn Walker's outstanding intro started me thinking. When and why did they get involved in LTA? I didn't even know the Navy had airships when I was assigned to the Naval Air Development Unit. Did, or why did Rosendahl request transferring into LTA? He was still a student, hadn't even taken his first balloon ride, when he was assigned to the ZR-1 *SHENANDOAH* as Navigator. (Photo, above.) He was a lucky survivor, who happened to be the senior officer afloat, as his segment of the *SHENANDOAH* settled to earth.

Two thousand officers won Navy wings before and during World War I. Most that were trained in the U.S. only learned to fly seaplanes. Only a handful of the 167 who qualified as NA (LTA) also learned to fly fixed-wing aircraft. Only 14 of the 167 were Naval Academy graduates:

BABBITT	Leman Lee
CHILD	Warren Gerald
COIL	Emery Wilbur
CULBERT	Frederic Paul
HOYT	Henry Willets
KIELY	Ralph
KIRKPATRICK	Robert Dudley
LANSDOWNE	Zachery
MASON	Charles Perry
MAXFIELD	Lewis Henry
MCCRARY	Frank Robert
NORFLEET	Joseph Pugh
PAUNACK	Robert Rudolph
PENNOYER	Ralph Gilbert

Most of the 2,000 were discharged, released from active duty, by 1920. I don't know what most of the airshipmen did; but the released HTA pilots had an enormous influence on both civilian and military aviation between the wars and throughout World War II:

Artemis Gates
Robert Lovett
Graham Brush
James Whitted
Joshua Crane V
Lawrence Sperry
Herbert Pulitzer
James Taylor, Jr.
George Cobb
Frederick Oakes, Jr.
Russel Merrill
John Montgomery
Irving McQuiston
(Created the NAVCAD program)
George Post
Joseph Lynch (ACDu at NAS Squantum in '28)
Leroy Grumman

And last but not least David Ingalls (right) SEC NAV during Macon construction.

I think that Juan Trippe, the founder of Pan American, Naval Aviator No. 1808, was the unidentified nemesis of LTA, that Rosendahl referred to in his writings.

- Al Robbins

MEDIA WATCH

LA Times 30 JAN 2011 carried the story "Up, Up – but not away – over Arcadia" describing the family of millionaire E. J. "Lucky" Baldwin turning his failed racetrack property over to become Ross Field. (Sent in by Eileen Salmas.)

US Army Observation balloon seen at Scott Field, Illinois, in a photo found in the NARA by Eric Brothers. Similar equipment and facilities were used in California in 1918.

It says the Arcadia Historical Museum mounted "Dirigible!! Airships Over Arcadia" which ran through Feb. 19. "The balloon school's sausage-shaped craft, known as Caquot dirigibles in honor of designer Albert Caquot…"

Speaking of balloon flight, our own **Bill Althoff** managed to get AIR & SPACE to run NAA "Founding Father" CAPT **M. H. Eppes**' last balloon flight story in their March issue. Ed. forwarded a photo at their request and, with your magnifier, you can see they correctly credited our member **David Hazen**, who had supplied that and other gems. That issue also includes a Zep NT story that as usual opens with the statement, no surprise, that the *Hindenburg* exploded.

Meanwhile the Disney/Pixar 2009 film UP made history when the Nat'l Geo channel re-created the scene live with a small house and a multitude of latex balloons. (Above) Ω

Movie illustrator George Akimoto passed away last year, his obit accompanied by this photo:

His 1975 *Hindenburg* film could best be summed up in the words of the director, Robert Wise, who stuck to the Mooney novel's mad bomber, saying "Where is the drama in static electricity?" George Akimoto was given the task of fitting the sausage-shaped airship on a vertically-oriented theater poster. (It's a problem we share at TNB, searching for correctly oriented cover material!) His illustration correctly shows the starboard fire advancing ahead of the port. Ω

The upcoming film "Sucker Punch" also looks to have some Zeps, as well as the TV series "Fringe," but nothing historical there. Ω

The Ballooning Federation of America is celebrating its 50th anniversary. By the time you read this their March/April issue will feature Editor Glen Moyer's retrospective of their first five decades. Included is his review of the new David Bristow book, SKY SAILORS, covering LTA 1783-1900. Though airshipmen are sometimes called by that title, balloonists might take exception – just as square-rigged men objected to steam jockeys moving against the wind having the audacity to call themselves "sailors." Ω

Excerpt from OCT 2010 *The Atlantic Flyer*, column "The Vintage Flyer" by John Cili: "WWII Airborne Anti-Sub Warfare — Big was Beautiful."

…German U-boats sunk over 2,700 ships and 14 million tons of cargo during the war. Almost half of those losses were incurred along the U.S. coast in 1942. It's staggering to think of what the losses could have been if Congress had not appropriated 10 million dollars ($155 million in 2010 dollars) to create balloon and aircraft response stations along the coast, these giant, non-rigid bags of helium were arguably the most effective submarine deterrents of the war. As the bases came online with convoy techniques deployed, shipping became much safer.

New blimp pilots would inadvertently learn that being 250+ feet long meant that you could easily drag your tail into the water if you pulled up too late from a dive.

I've had the pleasure of knowing two airship pilots, both of whom are healthy and active today. A few months ago I sat down with A. L. Whitt Jr., [1943 photo] to listen to more of his personal experiences. Whitt was recruited into the Navy and immediately upon graduation went to the Navy's Murray State Teachers College (now Murray State University) to train on light planes. In 1942, a Navy pilot candidate would learn to fly and solo in eight hours to determine if they had a flight career ahead of them. Whitt soloed and advanced to the preflight training facilities at the University of Iowa. It provided intense physical conditioning which he would appreciate later as he took the controls of the airship. Whitt became a pilot after graduating class 2-43 at Lakehurst, New Jersey. It took hours of flight training to solo in one of these lighter than air airships. One of the highlights of airship training was learning how to use ballast and to control flight in a small hydrogen-filled balloon. Known as free ballooning, a cadet would be sent aloft in a balloon that they had little control of, initially. A cadet would learn how to gain altitude with ballast and drag or change direction with the winds. A favorite tool was a roll of toilet paper to determine vertical direction and long drag rope to control speed. The cadet would let the rope out to lighten the load and reel it in to make the balloon heavier. It helped in landing, too. It was crucial training in WWII because what you learned in free ballooning would pay dividends when your airship engines failed and you needed to keep altitude until you could restart the engines.

Whitt became an Ensign when he earned his pilot wings in the USN. There were airship bases all along the east coast and down through most of South America and along the west coast. Whitt served at several bases. He attended advanced training at Squadron 21 below Miami, convoy duty at Lakehurst, NJ, and at Squadron 15 located in Brunswick, GA, and finally patrolled in Oregon from the Naval Air Station Tillamook. The airship was an ideal platform to perform the mission. The airship could attack a sub with its four depth charges which evolved to airborne mortars, the first being Hedgehog and later Torpex which fired a pattern of small depth charges. They could damage a U-boat from 35 feet away. Later acoustic homing torpedoes became available and could find its target from 10 miles away. But the most important weapon was simply being in the air with the radar on. The airship kept the submarines underwater by their presence and by doing so the enemy could not report on ships in transport, their direction or speed nor could they make an attack.

Whitt shared a sad proof of how the cat and mouse relationship of U-boats and airships collided. The SS Esso Gettysburg was a speedy tanker 90 miles off the Georgia coast and bound for Philadelphia with crude oil. The day, June 10, 1943, started out sunny and an airship from Squadron 15 was patrolling overhead. As the day progressed a large thunderstorm squall forced the airship to divert with a plan to intercept the tanker on the other side of the squall.

Ed note: Of course no blimp ever fired a rocket and the hedgehog-derived contact bomb had to strike to explode. More important, VADM Rosendahl in his WWII LTA history book dispelled the persistent malicious rumor that the Esso Gettysburg's *escort airship had chickened out due to weather. Still, it's great to see even a non-NAA member get some ink for his LTA service!* Ω

BLACK BLIMP

David A. Frecker of San Antonio, TX, passed on January 16, 2011. Dave had served in ZX-11 at Key West and ZP-3 at Lakehurst in the 50s. David is survived by his daughter Madeleine. Ω

George E. Powell (above) passed March 2, 2011, in Collingswood, N.J. He served in the U.S. Navy as an officer and a blimp pilot. George served in the North African theater in 1944 and southern France in 1944 and 1945. During his training he was stationed at the Naval Air Station at Lakehurst, New Jersey, which was near Georgian Court College, where he met Mary E. Morris. He married Mary on June 15, 1946. George was mustered out of full time active duty in 1947 and stayed in the active reserves until his 60th birthday, retiring as a Lieutenant Commander. George and his wife were teachers, and also sponsored a ballroom dance group for their students. They retired from the Phillies office in 2001. Ω

Wade Pitts Harding III, 86, (right) passed February 4, 2011. Commissioned as a Naval Aviator (Airships) in 1943. Commander Harding also served as an Aircraft Maintenance Officer in both lighter-than-air and heavier-than-air squadrons, retiring after 26 years in the United States Navy. After retirement, he volunteered with the American Red Cross. Harding is survived by his wife Helen Louise and numerous children. Ω

Robert Powers Higgins, 86, passed 17 APR 2010. Higgins served in LTA in WWII, including ZP-51 in Trinadad. (See "Editorial") He was survived by his wife of 55 years, Marie, numerous children and grandchildren. Ω

Charles A. Tuffield, (above) 90, passed Feb. 8, 2011. Tuffield was stationed at the Tillamook Naval Base with ZP-33 during WWII. (See "Pigeon Cote.") He is survived by seven children and numerous grand and great-grand children. Ω

Albert A. Schatzl (right) passed February 18, 2011, in Weymouth, Mass. Albert was an Aviation Radioman First Class with the Blimp Squadron #31 Fleet Airships, Pacific. He was a crew member of a blimp which was caught in a lightning storm and crashed in the Atlantic off the Carolinas in 1955. Albert was a retired Lt. in the Quincy Fire Department. He is survived by his wife Sally of 55 years and daughter Joan and grandchildren. Ω

Dr. William Standish Reed, 89, passed 28 December 28, 2010. Bill was a dedicated medical doctor and surgeon who served at Moffett Field during WWII. Both the Reeds were badly injured in a pedestrian/truck accident. Bill was last at the 2007 reunion in Lakehurst and is survived by his wife Coppi. Ω

James H. Wiedman, 94, (right) of Strafford, Pennsylvania, passed January 2, 2011. Ω

READY ROOM

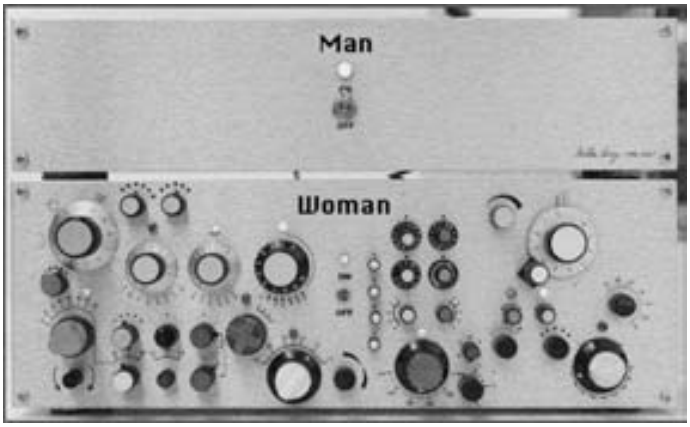
26 June 2011 – 90th Anniversary of Lakehurst and Hangar #1. NLHS will present a special program 11 am to 1 pm at #1's West end mat.

20 - 22 September 2011 - 11th AIAA Aviation Technology, Integration, and Operations (ATIO) Conference, including the AIAA Balloon Systems Conference and 19th AIAA Lighter-Than-Air Technology Conference. Virginia Beach Convention Center, Virginia Beach, VA.

3 – 5 May 2012 NAA Reunion, Tucson, Arizona DoubleTree Hotel NAA room rate $105 per day will be honored before and after the Reunion, We are planning a visit to the Pima Air & Space Museum – 300 aircraft on display in 5 hangars and outdoor exhibits. Immediately next door is the Davis-Monthan AFB, with the famous "Boneyard" containing multi-thousands of aircraft, including the last remaining ZPG-3W car , BuNo 144243.The DoubleTree is located 7 miles north of Tucson Airport, which is served by all major airlines in the U.S. Mark this on your calendar and watch for forthcoming information regarding registration.
This will be a great Reunion. Plan to be there!

9 – 12 September 2012 UK's Airship Association 9th International Airship Convention, to be held at le Centquatre, Paris, France

LIGHTER SIDE OF LTA

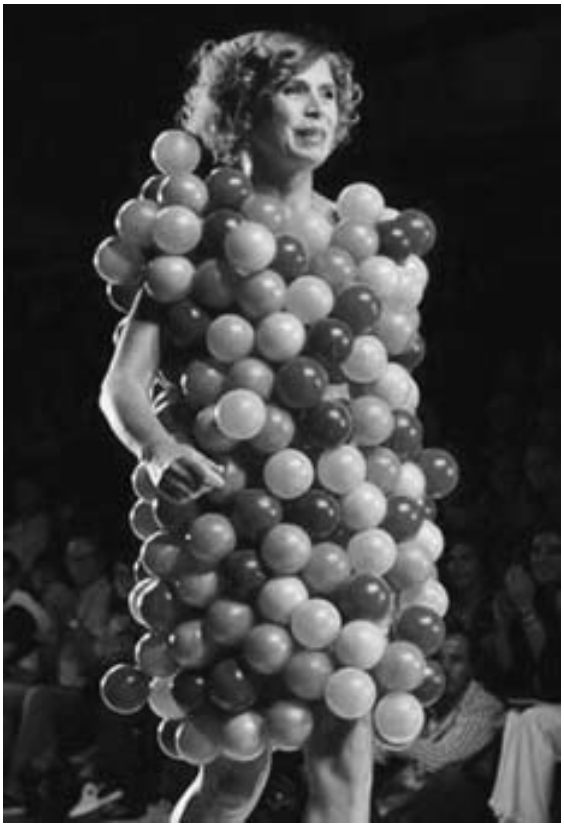


Even the best radioman would have trouble with the bottom half this console. ☺

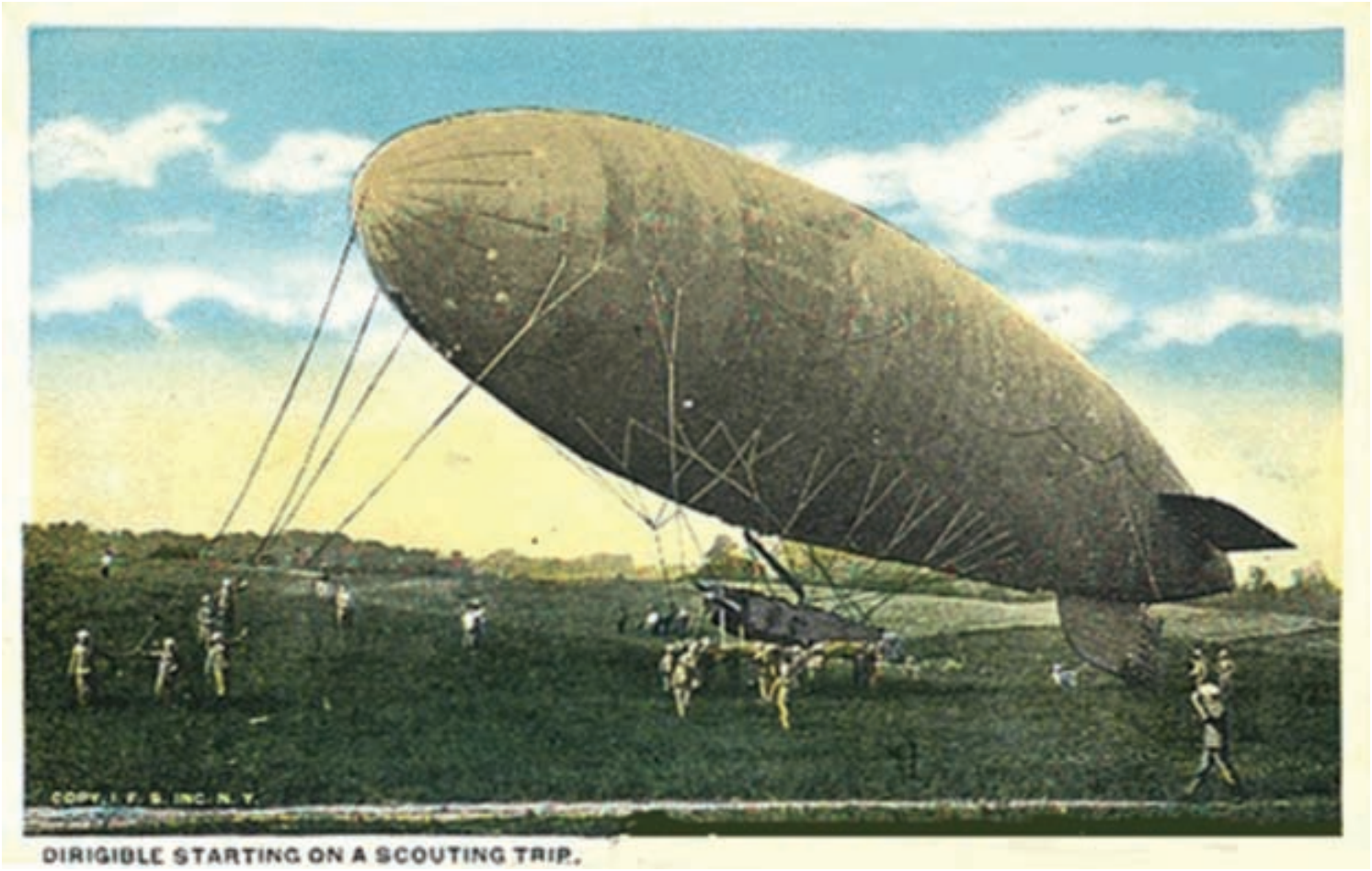
CNN reports: Beginning in early 2011 gasoline stations will start showing pornographic movies on the screens of the pumps so that you can watch someone else get screwed the same time you are. ☺

Aircraft Crashes Into Four Buildings

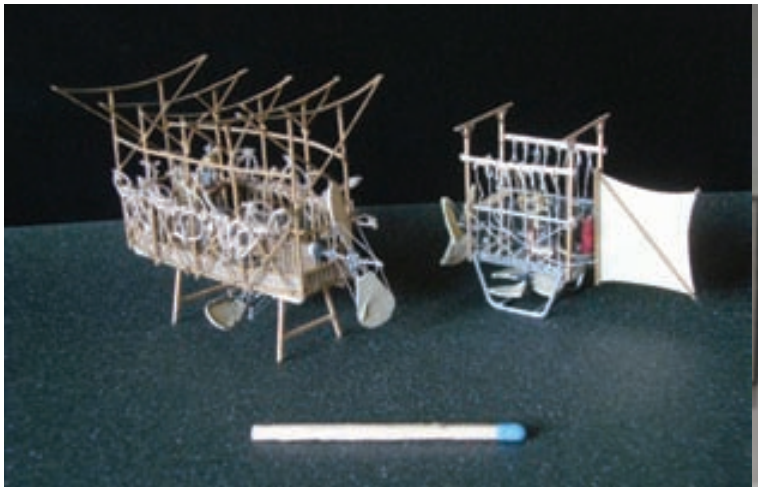
Interior reaction: "Holy S***! ☺



"I could bring that thing down with a BB gun! ☺



Inside this issue we find a first-person account of the earliest Navy LTA days, including training in the "B" type airship seen in the colorized postcard above. Three manufacturers created "B" ships, some having twin lower fins. How advanced this high-tech Curtiss ship must have seemed to young men entering the service in 1917, compared with the "rubber cows" touring American cities when they were kids in the decade before the Great War. A generation before that were German experimenter Dr. Karl Wolfert's ships of the late 1880s, seen here in intricate model form created by our own Andreas Horn for museum display. Wolfert was the first to use the benzene motor of Daimler to propel a gasbag against the wind, but this open-flame motor proved to be his eventual undoing.



Last of the G-ships. Eight of these 183,000 cubic foot airships were built by Goodyear for the Navy in 1943 and 1944. Used and an advanced training airship the G-8, above in this photo, served as a Naval Reserve airship operating out of the Oakland and Alameda area on San Francisco Bay. See pages 24 and 25 for G-ship details.