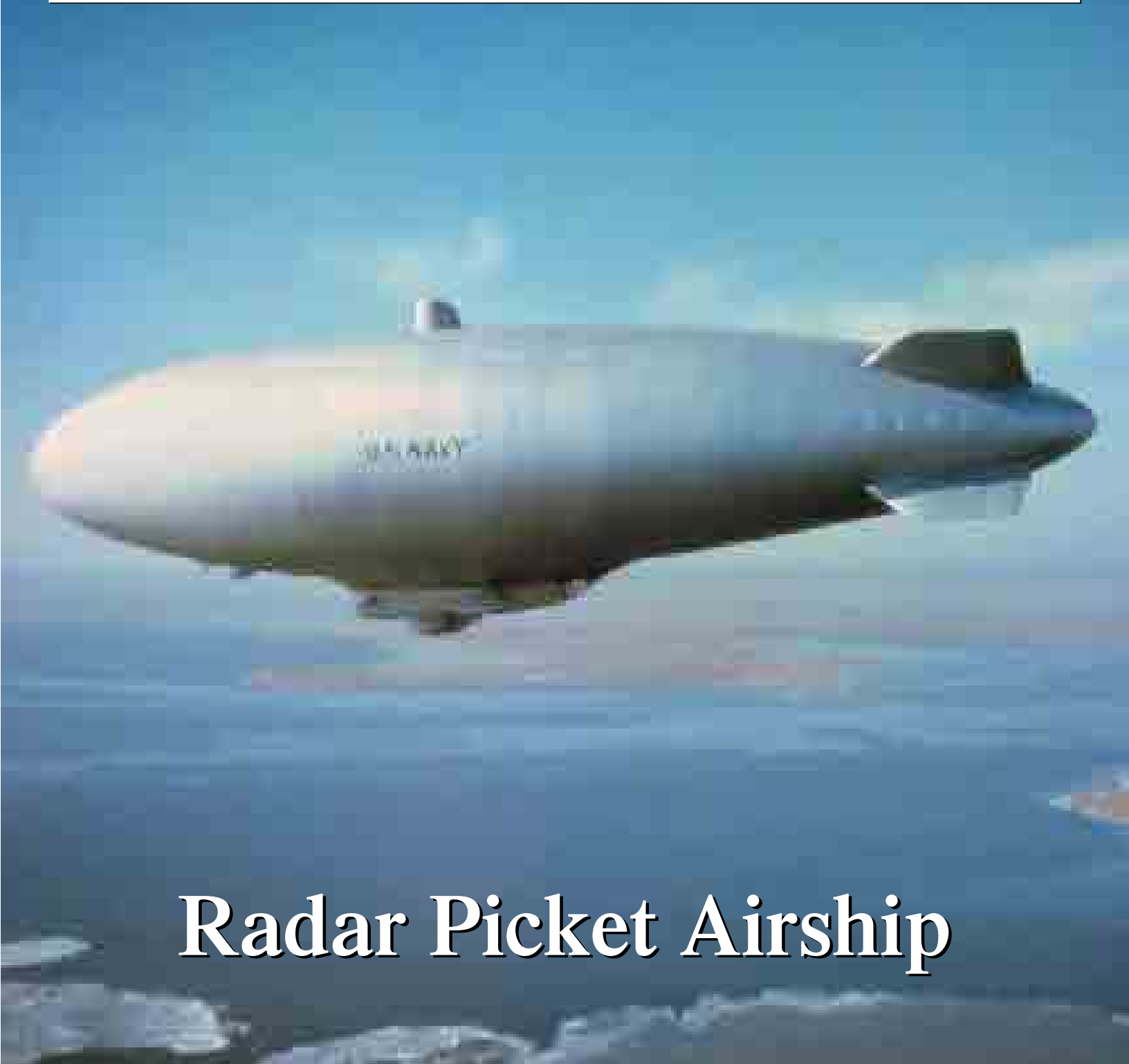
THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 83 Fall 2009



Radar Picket Airship

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ISSUE # 83 FALL 2009

Goodyear-Florida's Spirit of Innovation moored at New Smyrna for the 4th of July race. Debbie Van Treuren (stripes) was showing young cousin Olivia Schiutema the ship when NASCAR legend Kyle Petty (left) appeared with Speedvision TV producer Rutledge (right) for their ride. Petty saw the Daytona Raceway from an entirely new perspective!

On the Covers of TNB #83:
Front: A magnificent color slide of the ZPG-2W, radar picket adaptation of the ZPG-2 ASW airship. We are here blessed with original material and unpublished photos to re-examine this airship role, so timely with the pending first flight of the prototype High Altitude Airship.

Inside Front (at left); Mike Kolasa again shares two of his personal photos. That's Mike atop the engine nacelle of the ZP3K-80, the only known K-ship to test the Navy blue color scheme. Too bad the bright yellow sonar towing "fish" was not mounted for even greater contrast in these unique photos courtesy Mike.

Inside Back: Other interesting photos from members and NASA, captioned in place.

Back Cover: Major announcement from Boeing was released 28 JUL 09 with this striking graphic, a Boeing image by Joe Naujokas. See story, page 22.

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EDITORIAL

R. G. Van Treuren, rgvant@juno.com
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As you read this we are finishing the airship video history chapter long promised, *The Early Days*. Actually the first in chronological order, this DVD covers LTA's origins through 1937, excluding the rigids (covered in the other chapters, *American Zeppelins* and *The Flying Carriers*). I don't expect this last one to break even either, but if you would like to get one drop me a line, call or visit my website. We may do a mailing, but please remember this has nothing to do with the NAA. Though it was originally an NAA project, a follow-on slate of officers found reason to remove the connection. Meaning no disrespect to anyone - there is no nice way of saying this – the raw fact is undeniable: former enlisted men picked up the ball and provided the bucks to make the series happen. First was **James Shock** (below, hatless, next to his wife **Pat**) who hired us to produce his books trilogy, which provided historical background and paid for computer equipment. Next came the substantial cash donations of **James Johnson** (NAA hat, next to **Pat Shock**), **Hepburn Walker, Jr.** (below center, with his wife **Shirley**) and **Adolph Schoppe**, (right, with yours truly). These gracious sponsors paid the huge sums required to purchase film from the National Archives and transfer it (and other films) to video tape. Many others – including officers who've been part of the project from 1992 onwards – provided key help, and the series is now complete. Whew!

Thankfully Jim, Pat and Shirley are still with us, but the other sponsors have passed on. I now plan on spending every spare moment on the best hope of bringing LTA alive for the masses – our big-screen movie, *ZRS*. This effort also has nothing to do with the NAA whatsoever. But, if you want to see what the ZRCV might have become in war, get in touch with me to help make it happen.

As we go to press, **William Althoff's** long-anticipated book *Forgotten Weapon* arrived. At first I'd hoped to collaborate with Bill as I sent him some results of our now-declassified combats research. His sponsors ruled out a joint venture, and Bill even found reason to not renew his NAA membership. So his book can be said to be an independent, unbiased study, possibly with a better chance for acknowledgement in the general media. LTA certainly can't have too much of that. We are already preparing a review for next issue.

DIRIGIBLE, our sister publication in the UK, ran a nice review of my book *Airships vs. Submarines* for which I am grateful, but even more happily two items in that issue (#57) reinforced two points: one, that Winston Churchill was possibly even a bigger enemy of airships than FDR. Also, Kaptain-Leutnant Freiher Treusch von Buttlar, skipper of their L-71 and OberLeutnant Zur See von Schiller, told a 1917 German audience, "Airships have developed as a weapon of war to approximately the same extent as U-boats, and, like these, several other things have been especially advanced in efficiency during the war." (See also "Lighter Side" for more parallels.) Can't thank those members enough who've shown interest in the previously classified WWII combats. **Jarvis Frith**, who'd helped our current video effort with rare photos and information about Americans at Cranwell, wrote, "I cannot fathom how you could concentrate all the intricate detail, day after day, week after week, for ten years… It must have been an awful burden collating and coordinating and just plain collecting all that information… Congratulations on a real masterpiece of history." Thanks, Jarvis, and believe me, those who constantly reminded me it was all befuddled old men telling tales, and/or no one would care, almost won out during many of those years. **Norm Mayer**, Tech. Com. Chair, wrote, "… I hope I live long enough to read it." We're counting on Norm to be around to help us bring an entirely new generation of airships to the skies! **Ω**

- R. G. Van Treuren

Pat and Jim Shock

Shirley and Hep Walker, Jr.

Adolph Schoppe & Richard Van Treuren

View From The Top: PRESIDENT'S MESSAGE

WWI Photo: **Robert Feuilloy**, from his book
Les Dirigeables de la Marine Française

THE NOON BALLOON
Newsletter of the NAA

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Publisher: **David R. Smith**

www.gyzep.com

(This is the New Team's "dozenth" Issue!)

Except for the appointment of **Ford U. Ross** as Small Stores Officer, I am pleased to announce that the Executive Council and Organizational Chart of the Naval Airship Association remains unchanged.

The 2009 Reunion Committee has been dissolved and the 2010 Reunion Committee is yet to be appointed. This Committee and input for the selection of the Nominating Committee will be discussed at our first Executive Council Meeting. Basically, the Organizational Chart is as follows:

Herman G. Spahr	President	765 447 3676
Fred R. Morin	Vice Pres.	508 746 7679
Peter Brouwer	Sec/Treasurer	772 871 9379
Robert L. Ashford	Past Pres.	804 598 4664
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Editor, NAA Publication		386 345 4208
George W. Allen	Member at-large	904 264 0903

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Fred R. Morin	Membership	508 746 7679
Richard Van Treuren	History	386 345 4208
Norman J. Mayer		
Technical & Engineering		703 765 6060
Ford U. Ross	Small Stores	954 472 2631

Support Personnel

David R. Smith	Publisher	309 827 8039

Committee Chairmen have full authority to recruit and appoint individual members to their committee, keeping the Secretary/Treasurer, Vice President and President informed. The duties of each elected and appointed Member of the Executive Council are delineated in the NAA By-Laws printed in the current Membership Directory. **Ω**

- Herm Spahr

MEMBERSHIP COMMITTEE UPDATE

As I wrote earlier, I appreciate the many members who took the time at Reunion 2009 to offer suggestions on ways to attract new members. Ideas ranged from placing ads in veteran's magazines, and aviation enthusiast's magazines, putting new or recent issues of The Noon Balloon in school and public libraries to wearing your NAA hat and jacket patch as much as possible. As I write this several of these ideas are being implemented. I am also preparing our second mailing to college and universities that offer military history programs as well as those with ROTC programs.

Another area I talked about was free publicity. If you have an interesting story or participated in an historic event, we can help you prepare a short article or press release. Contact the membership or history committee. Recently I did a video interview of some veterans for the history committee in conjunction with a proposed program to be aired on the BBC about U-boat operations in the Caribbean. When it is finally done and airs in the USA it should give the NAA some needed publicity.

Also please keep looking for other outlets where we can display NAA brochures and contact me with your thoughts. We will do the follow up work and any mailings necessary. I recently participated in an open house at the Taunton, MA airport. We had brochures to pass out and back issues of The Noon Balloon on display. Positive results? I don't know yet. However, the director of a local historical society approached me about speaking at one of their events on aviation in SE Massachusetts and also, "Please talk about the blimps. I don't think many people know their history around here." This is in keeping with our goal to target veterans' organizations, military history groups, aviation historical societies and those types of groups that cater to aviation enthusiasts and researchers. It takes time and effort to get our message out.

In the next issue I plan to talk about the preparations for the Centennial of Naval Aviation which will be celebrated in 2011 and how it will be beneficial to our membership efforts. Airships have played a vital role in Naval Aviation dating back to 1915 and the NAA will be supplying information for this historic event. **Ω**

- Fred Morin, Chairman

TREASURER'S STRONGBOX

Greetings to all, hope this finds all of our N.A.A. shipmates doing well!

At this writing, I want to report that our association membership total is 839. This includes all paid up United States, Foreign and Honorary members.

A reminder! To those of you who are snowbirds and will be away for the season, your mailing of **THE NOON BALLOON** will not be forwarded. The magazine is sent out bulk mail from our printer in Bloomington, IL. Please note we will not change addresses for this vacation period. If you want uninterrupted service, please make other arrangements.

WELCOME TO OUR NEWEST MEMBERS

Clark, Edward B. Jr. ---------- Green Cove Springs, FL
Smith, Kenneth E. ----------San Antonio, TX
Horn, Andres----------Basel, Switzerland
Porterfield, Jay G. ----------Tahlequah, OK
Laaper, John G. ----------Coshocton, OH
Padelt, Bert----------Barto, PA
Ellis, Linda & Larry----------San Jose, CA
Cuneo, Peter----------Albuquerque, NM
Handler, George S. ----------Santa Barbara, CA
Johnson, Mary E. ----------West Lafayette, IN
Barnes, Clifford H. ----------Niceville, FL
Jackson, Ronald G. ----------Tucson, AZ

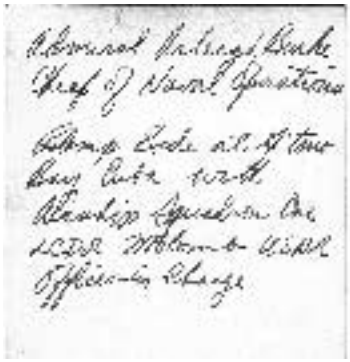
DONATIONS

Clark, Edward B. Jr.
Mathis, Richard T. 'Slim'

- Peter F. Brouwer Secretary/Treasurer

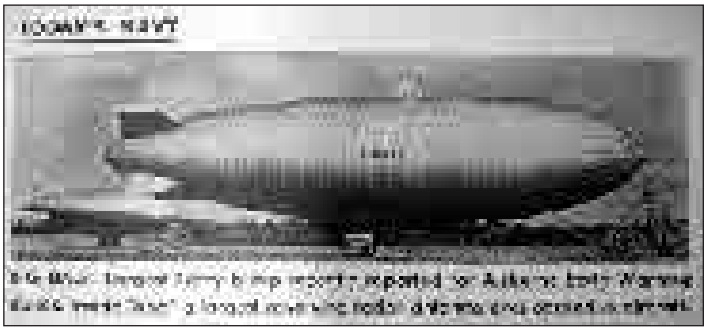
PIGEON COTE

Richard McComb was so kind as to digitize a pile of his late Father's photos. Here are a few:



Captions on back: Left, photo above; right, below.

Carl Honaker wrote, "Friends, Shipmates and Aviation History Supporters, we are once again on the precipice facing the demise of a major historic artifact and iconic structure in the Bay Area. It appears from the articles below that the talks between NASA and the Navy to find a solution to reskin Hangar One have not been productive. The Navy's environmental team is now poised to go forward with the removal of the contaminated siding on the hangar, leaving the skeletal remains of this great building standing as a testimony to their insensitivity to the pleas of Congress, the National Advisory Board on Historic Preservation, the State's Historic Preservation Office and the citizens of Silicon Valley. The outcries of the public at previous meetings has been critical to our efforts to stop (or at least slow down) the Navy's determined progress to destroy this building. Please pass this message along, and encourage your friends and associates to join us at the Restoration Advisory Board meeting… Details at **www.SaveHangarOne.org**. We hope to see you there." [See Shore Establishments.] **Ω**



May 1959 *ALL HANDS* magazine announced the arrival of the ZPG-3W and called attention to its interior radar antenna.

George Allen wrote, "My flight log shows 264 pilot hrs in the ZPG-3W. I daresay there will be few to top that. The BIS team consisted of **Lcdr Dick Widdecombe**, **Lcdr Dave Hayes**, **Lcdr Bob Keiser** and **Lt George Allen**. Dick covered the physical aspects of the ship and Dave Hayes the electronics. Bob and I worked on support gear (mast). (While in Pensacola, I was told Dave is in pretty poor shape so if you have questions get to him soon.) I was in 242 over Lake Erie the day the Akron test pilots dove the ship and it folded. I was up in the height finder and witnessed the fold. Following a check list the test pilot shut down one engine. When he attempted a restart it didn't kick in. About ten miles from the base I requested permission to attempt a restart. It was granted. It kicked off! The next morning retired ADM Lange presented me with ten penny nail bent in the shape of a crank with a red ribbon on it. Ha...hope this makes sense. **Ω**
[See George's piece "Red Feathers" in this issue.]

John Mellburg *passed the word and Mitchell Gallery of Flight Museum immediately found a home for the LZ-127 Graf Zeppelin model he assembled to enhance the airship exhibit. The Museum, located inside Milwaukee's General Mitchell International Airport, proudly displays John's magnificent scratch-built LZ-130 model:* "Chuck Boie didn't waste any time in getting my Hawk GZ put on display at MGoF Museum. It sure looks beautiful the way he's displayed it in the exhibit case. This is an appropriate home for it, and besides, its D-LZ 130 Graf 2 namesake sibling hangs above it. The 2 Graf's are together, just as they were at Frankfurt. I'm sending the Revell Zeppelin NT-07 model that **Mike Robson** made a couple of years ago to them too (this will be a donation on Mike's behalf), so they have both the historic, old Zeppelins and the new Zeppelin to show that the Zeppelin dream is still alive and well. I've had this Hawk GZ since getting it for Xmas from Grandpa and Grandma Mellberg in 1959." **Ω**

CDR Wesley H. Schmidt, Jr. US Navy (Ret), USNA '72, e-mailed, "It is our sad duty to report that **CDR Wesley H. Schmidt**, USN (Ret) arose into the ether without visible means of support, LTA or otherwise, on his final flight at 1400 Hrs, 28 June 2009… Dad was quite a guy and maintained his love of Naval Aviation (especially Blimps) and the Navy to the end. The three oldest of us played in Hangar 1 at Lakehurst as small fry and have helium in our blood. The Schmidt Family is secure in the knowledge that he is rejoining the fearless Crew of The Black Blimp in a place where the cloud cover always arrives just in time to land for supper and there is ample hangar space and good Navy coffee for All Hands. To Dad and his Crewmates .... 'fair winds and following seas.'" His brother **Austin B.C. Schmidt**, Colonel, Special Forces (Ret), added: "…He served proudly in Navy Lighter-Than-Air and the oldest four of his six children were born into that community. Wesley Jr, and Austin were inducted into LTA while Dad was flying out of NAF Weeksville, NC and Peter was born at NAS Lakehurst, NJ. Geoffrey was born in Elizabeth City, NC when Dad went back to NAF Weeksville. Peter is married to the granddaughter of **LTJG Edgar William Sheppard**, Engineering Officer of the USS Shenandoah (ZR-1) who went down with his ship on 25 September 1925. [See Lansdowne tribute later in this issue. Ed.] Schmidt's LTA highlights: 1947, Ordered to Lighter-than-Air Flight Training, under instruction, 1948: Designated: Naval Aviator Airship. Ordered to Duty with Airship Squadron ONE. ZP-1 at Naval Air Facility Weeksville, NC. Designated: Airship Combat Aircrew Commander. 1951 Ordered to: Duty at U.S. Naval Airship Training Center, Lakehurst, N.J. as Flight Training & Ground School Instructor in Airships. Senior Ground Handling Officer. Duties including launching and recovery of airships at Lakehurst, NJ., including moving airships out of the hangar and positioning them on the airfield for flight operations and returning the airships to the hangar, upon return from flight. 1952 Ordered to: U.S. Naval Postgraduate School as a student in the Communications-Electronics Curriculum. 1953 Graduated: From USNPGS. 1953 Ordered to Duty as Staff Communication Officer, Commander, Fleet Airship Wing One. 1962 Attended the [last Navy LTA flight of the century] ceremonies in September at NAS Lakehurst. " [How did we miss having these folks as members? Ed.] **Ω**

Referred by **Hill Goodspeed**, USAF **Major T. T. Richard** e-mailed, "Mr. Van Treuren, I am an active duty Air Force Judge Advocate. I'm working on a research paper about privateers and letters of marque. I'm trying to get to the bottom of rumors that Goodyear airships operated as privateers in the early days of WWII. Here is what I currently anticipate including in my paper:

- The Unites States has not commissioned any privateers since the War of 1812. World War II airships, however, have generated some confusion on this point. In 1946, the L.A. Times reported on the retirement of the airship *Volunteer*, explaining, "The big gas bag went to war as a privateer just 10 days after Pearl Harbor, with a hunting rifle as her only armament while she escorted merchant ships to sea." Blimp Volunteer Mustered Out of Navy Service, *LA TIMES*, Oct. 5, 1946, at A1. A similar story was repeated in a history of Goodyear a few years later: "The Goodyear blimp in California became the first privateer in the Navy service since the War of 1812, when Sea FrontierDefense at San Diego asked the Ranger, based at Los Angeles, to lend a hand, ten days after Pearl Harbor." HUGH ALLEN, *THE HOUSE OF GOODYEAR* 513 (1949). A later history provides more detail (naming yet another airship): "The Resolute, operating in Los Angeles, was armed and in service even before completing the legal technicalities of swearing in the crew and commissioning. This made the crew members temporary pirates aboard a privateer, but international protocol was not much of a concern." MAURICE O'REILLY, *THE GOODYEAR STORY* 92-93 (James T. Keating, ed., 1983). These airships were not privateers-especially if they lacked a legal commission. There is nothing in the Congressional record authorizing any second world war letters of marque, nor are there

any executive orders commissioning these aircraft as privateers. Prior to being officially commissioned into the armed forces, the airships probably had the same legal status as the pre-1943 Civil Air Patrol. -

Do you have any insight into this matter?" Signed, TTR

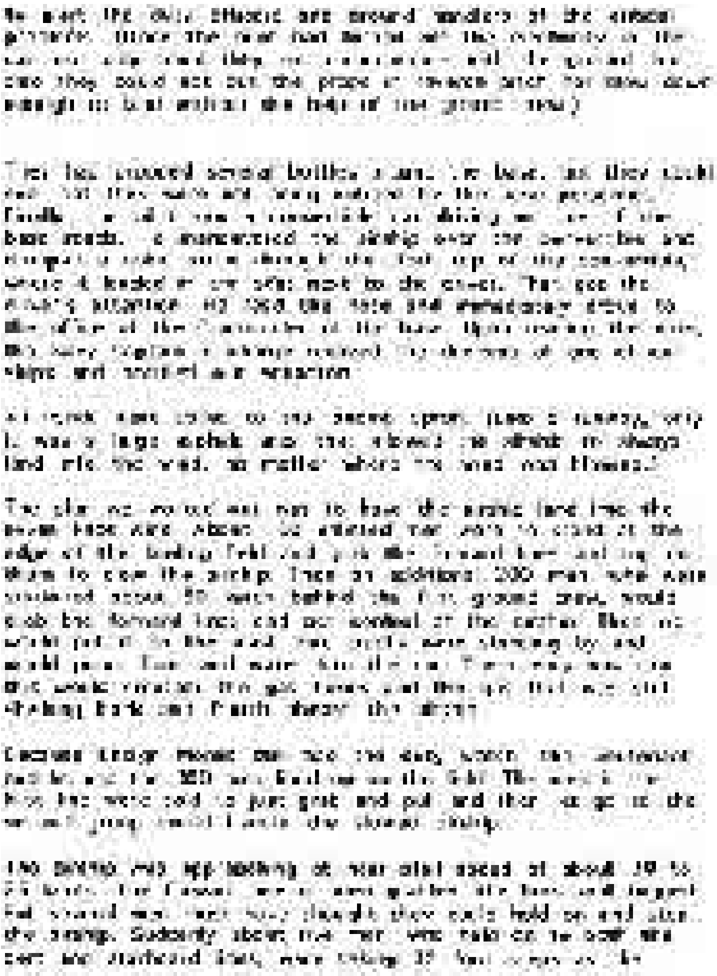
Ed. replied, "Good morning Major, Congressman Ron Paul's office had recently contacted Naval Airship Association members on this matter as well. (They had been unable to find anything in the Congressional Record specifically issuing a Letter of Marque.) We had only lightly touched on the subject during research on our video *The Blimp Goes To War... Again*. Our best information comes from the book *The Goodyear Airships* by our members **James Shock** and **David Smith**. Pg. 43 is a photo of Resolute's crew being sworn in the Navy with the caption: "The Los Angeles based *Resolute* was the only airship based on the west coast when the Japanese attacked Pearl Harbor on December 7, 1941. She operated for the Navy under privateer status, armed only with the pilot's hunting rifle, until joining the Navy officially as the L-4 on March 10, 1942, as seen in the view of the swearing in ceremony above. Goodyear reacquired the *Resolute*/L-4 car as Navy surplus in 1946..." It is most probable, during the early panic over possible Japanese attack on the west coast, the crew of the only long-duration patrol vehicle available was given a verbal promise of official status. (It was still several weeks before the first squadron was organized up at Moffett Field, and half a year passed before NAS Santa Ana opened in the LA area.) The *Resolute* crew jumped at the chance to officially patrol the LA/Long Beach area which they were already flying anyway. The absence of any official record is in keeping with the back-burner status afforded LTA, Roosevelt's War Department keeping airship production on the lowest priority - 4 - during the entire war. There should be no surprise a verbal contract was overlooked before all the Goodyear airships were commandeered for Navy service a few months later.

The confusion over Volunteer probably came as a result of its previous posting in Los Angeles, but it is probable, just as fishermen were issued radios, the company was asked to have all its airships operating in coastal areas to keep watch and report back, before they were officially sworn in by March '42. I am sorry we do not have anything more helpful, but if you have any use for a copy of the book or video the NAA would consider donating them if your research requires more on airships. Best wishes, R.G. Van Treuren, Ed. TNB" **Ω**

Don Harris e-mailed: The friends of **Gennady Oparin** living in many countries of the world will be greatly saddened to learn of his untimely and sudden death as a result of a heart attack sustained while going about his business in St. Petersburg on 10th June 2009. Gennady was born in Arkhangelsk (*Eng*. Archangel) on the shores of the Arctic Ocean on 6th September 1947, and after training as a professional navigator and pilot of multi-engined civilian aircraft, he flew many thousands of hours throughout the former Soviet Union with Aeroflot, often in the versatile Antonov-24. His flying duties included long periods flying in and out of Mirny, in central north east Russia, where the extreme winter temperatures were so cold that aviation fuel would freeze if not heated continuously. He returned to college in St. Petersburg to study aviation subjects to a higher level, was appointed to the teaching staff, and eventually retired as Head of Design in the St. Petersburg International Civil Aviation Academy His introduction to long distance ballooning came when he flew non-stop from Cardington (U.K.) to Latvia with Donald Cameron in the "Doctus" balloon, and to promote sport ballooning in Russia, he soon afterwards established the independent sport balloon company "Aerotour Balloons" in St. Petersburg, and developed this business as a means for training Russian hot air balloon pilots. As the Cameron Balloons Ltd. dealer for Russia, he introduced high quality artwork on advertising balloons and special shaped balloons supplied for Russian balloonists, and provided a repair facility for these balloons.

As the organizer of the first international hot air balloon fiestas in the city of St. Petersburg, he ensured that a warm welcome was given to many international balloonists who took advantage of this unique opportunity to fly in and above one of the most beautiful cities in the world, and the resulting media coverage helped to promote St. Petersburg positively to the rest of the world as a tourist destination. He also operated several large Cameron balloons for passenger rides and sightseeing over the spires and domes of the city centre of St. Petersburg, where the local wind system over the River Neva provided unique opportunities for some skilled flying. Gennady introduced hot airship flying to the skies above St. Petersburg, first with the Cameron AS120 "Baltika" 2-seater airship promoting the Baltic beer, and more recently with the GEFA-FLUG GD105 "MegaFon" 4-seater, promoting one of Russia's largest GSM phone networks, which he also flew in the FAI World Hot Air Airships Championships held in St. Petersburg in 2008. Within Russia, Gennady flew numerous TV and film camera operators in hot air airships to record beautiful aerial films of Russian landscapes, palaces and cultural history, in the way that it is impossible to achieve with any other type of aircraft. In addition to representing Russia at CIA/FAI meetings, he became a welcome and respected ambassador for Russian air sport whenever he flew hot air balloons and airships at such international fiestas as those in Chateau d'Oex and Bristol. At the time of his death he was actively involved in several airship and balloon projects. Gennady is survived by his wife, daughter, and a young son, as well as by his father and his brother and sister. aeroball@inbox.ru **Ω**

Don Morris sent this story "The Launch of a Killer Airship" which we've tried to fit into our format:



Ω

New member **Peter Cumo** e-mailed, "Holland has lost one of its most famous balloon pilots, **NINI BOESMAN**. Nini passed away on June 2nd 2009 at the age of 92 after a short illness. Nini has been an enthusiastic balloon pilot from the early days when she was flying with her husband **Jo Boesman**. Nini and Jo became famous in the years after WW II when they flew gas balloons in various locations around the world. After the death of her husband Jo, Nini continued being active in the ballooning world and flew in the Gordon Bennett race in 1983. She was President of the Ballooning Club of the Royal Netherlands Aero club, examiner and occupied many other functions.

Member **Rick Zitarosa** reports that noted balloonist **DON OVERS**, believed to be 82, passed away 4 AUG 09. Author of *Dangerous Gases*, a reference work for balloonists, Overs was a well-experienced gas balloonist and LTA enthusiast. **Ω**

SHORE ESTABLISHMENTS: LAKEHURST

On September 30, 2009, the physical facilities of NAES Lakehurst, NJ, will become custody of the U.S. Air Force under the administrative umbrella of "Joint Base McGuire-Dix-Lakehurst." The Navy will continue its presence at Lakehurst as before, but as a "tenant" rather than a custodian, ending an 88-year presence that started with Naval Air Station, Lakehurst (1921-1977) and then Naval Air Engineering Center, Lakehurst (1977-1992) Naval Air Warfare Center, Lakehurst (1992-1996) and finally Naval Air Engineering Station, Lakehurst (1996-present.) Of course, Lakehurst started as a Navy LTA base, and while the Navy currently maintains an LTA presence there today its functions are almost exclusively geared toward support and testing of equipment of the Navy's aircraft carrier fleet. The *bad* news is that it will no longer be a "Navy base" per se. The *good* news is that the Air Force generally has higher standards for shoreside buildings/facilities maintenance than the Navy, and the place actually stands to benefit as an LTA site with a bolstered Air Force presence.

As many will recall, Lakehurst has been the target of closure rumors for decades (I like to tell visitors that the Navy has been talking about closing the place since the *Shenandoah* was lost in 1925!) Lakehurst survived the demise(s) of LTA (rigid and non-rigid airships), the recession of the 1970's, the massive military drawdown at the end of the Cold War and the Military Base Realignment and Closure (BRAC) lists of 1995 and 2005. Its diversification and location have saved it on numerous occasions....becoming part of the "Joint Base" was a sure win for the place, as it gives the government an Air Force, Army and Navy facility in one contiguous piece or real estate with significant cost savings in terms of public works, facilities management, base security, etc.

As the former CO and creator of the idea (some have called him "The Savior!"), **Captain Mark Bathrick**, USN (Ret.) told me when the plan was hatched in 2005, "I don't care which branch of the armed services is responsible for paying the electric bill and fixing the roads, as long as the base maintains its unique function and usefulness to the Navy and the people here have their jobs!" And so, on October 1st, Lakehurst hands over the keys to the Air Force. The position of "CO" will be abolished and the Navy people will answer to a Navy OIC (Officer-in-Charge) instead. Administrative Command of "Joint Base McGuire-Dix-Lakehurst " ("JBMDL" as they are calling it) will fall under **Colonel Gina Grosso**, USAF, current commander of the 57th Air Wing, McGuire AFB.

The Navy Lakehurst Historical Society will continue to operate and administer the Information Center and Historic Artifacts Display in Hangar #1, all tours and other functions will continue as before through our affiliation with tenant NAVAIR.

We have met several times with Colonel Grosso and she is appreciative and understanding of the rich history she is inheriting when she takes charge of Lakehurst (making a bit of history herself in the process as the first female CO of the place!) In recognition of the upcoming changes, the Navy Lakehurst Historical Society commissioned a piece of watercolor artwork highlighting the long-standing roots of Navy-Air Force cooperation with an added Lakehurst "twist."

After much haggling and arguing with the "artist" (a temperamental fellow who had to be continually fought over his desire to use "artist's license") we achieved a reasonably-decent commemorative showing a Navy airship (the L-8) which delivered urgent spare parts to the carrier USS *Hornet* (CV-8) underway in the Pacific with a deckload of Army Air Force B-25 bombers which launched the famous "Doolittle Raid" of April 18, 1942… a tribute to the Navy, the Air Force and the unique roots of cooperation between the two services, with Lakehurst having its own "unique connection. **Ω**

- Rick Zitarosa

MOFFETT FIELD

Rep. Anna Eshoo buys time for Hangar One
by Casey Weiss, Mountain View Voice Staff

There may be hope for Hangar One after all, city officials say, after Congresswoman Anna Eshoo negotiated with the Navy to delay plans to strip the structure for 30 days. The Navy, NASA Ames and the city of Mountain View have been debating the future of Hangar One for years. But discussions were at a relative standstill over the past several weeks after Navy officials announced they had resolved once and for all to strip the historic structure's toxic siding away and leave a bare skeleton behind -- an option preservationists said would spell the end for the hangar. Before its discussions with Eshoo, the Navy reportedly was trying to enter into a contract by the end of the month to remove the siding. Earlier this week, Eshoo sent out a press release saying that after meeting with Secretary of the Navy Ray Mabus, he had agreed to "delay any action for 30 days to determine a mutually acceptable solution for both NASA Ames and the city of Mountain View."

"Both the Secretary and the Undersecretary understand the history and significance of Hangar One and are willing to examine new avenues to facilitate its restoration and reuse," Eshoo said in the press release. "I am eager to move forward with NASA and the Navy so that together, we will find the right solution." On Wednesday, city manager Kevin Duggan applauded the development, though he remained cautiously optimistic." We view the delay as good. But it is not a solution. What is critical now is that a solution needs to be reached," he said. "The patient is very much at risk."

Duggan, who calls the hangar an "iconic structure," said the city plans to join in the discussion and "will get more involved if a contact comes up." The more delay the better, he added, because once arrangements are made for re-covering the hangar -- arrangements which have been elusive so far -- the whole process will be easier and less expensive if it's done right after the Navy removes the toxic siding. Last month, Mountain View City Council members sent a letter to the Navy saying that "the skin should not be removed until a plan was in place to replace it," Duggan said. "We were concerned," he said, that "when the Navy made a contract, we would be at a point of no return." Navy and NASA Ames representatives were not immediately available for comment. Others who have closely watched the debate over the hangar's fate also said they were happy with the Navy's decision to hold off for 30 days. "It certainly looks encouraging," said Bob Moss, co-chair of the Moffett Field Restoration Advisory Board. NASA inherited Moffett Field from the Navy in 1993, but environmental cleanup of the site, including the hangar, is still the Navy's responsibility. The Navy put a protective coating on the hangar's outer panels after dangerous PCBs and other chemicals were found to be leaching from the siding. Although the coating has worked as a stopgap measure, experts say the hangar will eventually start releasing toxins once more. **Ω**

- Ben DeBolt, Member,
NASA & Moffett Field Historical Society

NEWS FROM FRIEDRICHSHAFEN
Submitted by Sig Geist

In its Summer 2009 edition,TNB # 82 announced 66°33' Nord - Airships over the Arctic, a temporary exhibition at the Zeppelin Museum Friedrichshafen. Since the official opening on June 19, 2009, thousands of visitors have been able to learn about the exciting history of airship journeys over the Arctic. They reached a high point in July 1931 when LZ 127, GRAF ZEPPELIN undertook its remarkable trip to the Arctic. Much of this journey is central to the exhibition. Owing to the zeppelin airship's great capabilities, a team of international scientists were able at that time to conduct extensive investigations into the fields of geomagnetism, meteorology and geography. Taking only a few days, vast areas could be surveyed and mapped, new islands found and others deleted from the map. Employing traditional means of polar exploration such as ship and sled expeditions would have required years.

Using a staged version of the LZ-127 gondola, the exhibition by means of exhibit pieces, photos, sound and film archives picks out as a central theme the past history of the AEROARCTIC * initiated journey and deals with questions pertaining to equipment, provisions, scientific pieces of equipment or the marketing and introduces the crew and participating scientists. But aside from this optimum use of airships in the Arctic, the exhibition also presents the Arctic's predecessors among them Swedish engineer Salomon Andrée, who with two companions in 1897 set out to reach the North Pole in a balloon. They were the first to challenge the formidable Arctic using an aerial vehicle. It proved fatal as several hours into the bumpy flight, Andrée was forced to land and the trio succumbed to illness and exhaustion as they tried to make their way back to Spitsbergen. Heroically, they had marched for 12 weeks on foot across pack ice. Early on Graf von Zeppelin also had thoughts using his airships for arctic research and in 1910 fitted out a preparatory expedition by ship to Spitsbergen.

Actually the first time the North Pole was reached was in 1926 with semi-rigid airship NORGE under the direction of expedition leader and polar explorer Roald Amundsen whereas Italian general Umberto Nobile was the designer and commander of the NORGE. Their trip from Kingsbay/ Spitsbergen to the North Pole and onward to Teller, Alaska covered a distance of 3250 miles and took 70 hours, an outstanding aviation first. Ironically, they started out on their history-making flight from the assumption that the North Pole had already been reached by Robert Peary on foot and by Richard Byrd with a plane. Two years later, Umberto Nobile was back in the Arctic. However, this time without Amundsen and in command of his own arctic expedition with airship ITALIA, the smaller sister ship of the NORGE. Of the three excursions that Nobile undertook from Spitsbergen, the second one, led by scientific pursuits was quite successful and managed to cover a distance of nearly 2500 miles in 69 hours. Already having reached the North Pole after 20 hours during the third flight, disaster struck on the way back when ITALIA crashed on pack ice. What ensued in the following seven weeks was the first international search and rescue mission which at that time (in 1928) provided headlines around the world. Nobile's rescue prior to that for his remaining crew of eight was seen as cowardice and cost him his reputation. It was made worse when rival Amundsen was killed while trying to save stranded Nobile and his crew just days before Nobile was flown to safety by Swedish flyer Lundborgh.

For the first time two books are accompanying the exhibition: The richly illustrated of the same name book ("66°33' Nord - Luftschiffe ueber der Arktis") and a children's book "Hugo's Arktisfahrt - Ein Eisbaer entdeckt den Zeppelin". Both are available from the MuseumsShop, Phone: + 49 7541 3747860, Fax: + 49 7541 3747861

Note: The above report was based in part on an article (in German) that appeared in the July 2009 edition of Zeppelin Brief, the newsletter of the Friends for the Zeppelin Museum. The article was written by Juergen Bleibler, head of the Museum's Zeppelin section and co-curator of the exhibition.
Ω

* A society founded in the mid-1920's and made up of aeronauts, engineers and scientists who made scientific exploration of the Arctic with the airship their goal.

SOUTH WEYMOUTH

Left to Right: **Russ Magnuson**, **John Craggs**, **Don Scroggs**, **Bill Horsch**, and **Fred Morin**. Bill Horsch is Director & Curator of the proposed ANA Patriot Squadron Museum to be located at S.W. Bill served in the Navy at both NAS Squantum and NAS So. Weymouth. Photos by Bill Sargent, Weymouth Historical Society director and NAA member, (Bill is cataloging every building ever built at SW from day one.)

We met John Craggs, Russ Magnuson and Don Scroggs of the New England Air Museum at 10:30 outside the former NAS So. Weymouth property. I had asked NAA member Bill Sargent to join us as Bill is cataloging all the buildings that were ever on the property with photos and/or drawings. Bill presented John with a 3-ring binder of a synopsis of his catalog work along with some photos and a full size copy of a 1945 Navy layout drawing of the property.

We then met with Bill Horsch at the Grove on the base. The Grove is a grass area with benches and markers commemorating all the Medal of Honor winners from Plymouth and Norfolk counties. The centerpiece is an A-4 mounted on a pylon with Cdr. Jack Shea painted on the side, as pilot. Cdr. Shea was the executive officer at NAS Squantum and was killed fighting fires on the USS Wasp when she was sunk in the Solomon Islands. His body was never recovered. His story was covered extensively by LIFE and LOOK magazines at the time due to a letter he wrote to his son just before he died. The "Letter to Jackie," was a famous WW II inspiration. NAS Squantum was named Shea Field in tribute to Cdr. Shea. When NAS Squantum closed in 1953 and all the assets were transferred to So. Weymouth, "Shea Field" came with it. Then Bill took us for a tour of the museum the ANA Patriot Squadron is trying to establish on the field. They have a lot of photos and quite a few artifacts that were saved when Squantum and then So. Weymouth were closed. Bill is the executive director of the museum planning committee and curator. We then met with David Barney who is the BRAC Environmental Coordinator and Navy Caretaker of the property. Dave showed everyone a map of the property and what areas had already been turned over to the developers and what areas the Navy still owned. We also got to look through the extensive collection of Dept. of Public works drawings that are on file there that they use for the demolition of the buildings and for tearing up the runways. One very interesting point was that after WW II all the blimp era drawings were destroyed. Dave mentioned how exciting it is to start to tear up portions of the property and find underground passageways or pipe and conduit runs that don't show on current drawings. As most LTA people know there were extensive underground tunnels for elec. or fuel between hangars.

Dave also allowed us to walk around the existing HTA hangar that was constructed in 1967 when the original LTA Hangar #1 was demolished. The footprint and door opening rails are still visible and you get a real feel for the enormous size of the LTA hangar. Most of the "lean-to" buildings that were originally inside the LTA hangar still exist, well outside the current hangar footprint. Dave did a superb job of detailing the complexity of his job and describing what other relics of the blimp era had been discovered in dumps or buried on the property. Almost all of it was rusted away or rotted, naturally. Russ Magnuson is looking for an original landing gear mechanism for the K-28 and anything else he can find. Quite generously Dave took us into the old power plant and brought out a large cardboard box. The box had a complete set (about 50 or 60 blueprints) of Goodyear Co. drawings for a Model 5 blimp mast. Dave found them tucked away in a closet and told Russ they were now his. We spent about 4 hours on the property and I think it was a good visit. **Ω**

- Fred Morin

RICHMOND

(Photo: **CWO Anthony Atwood**) The former Richmond Naval Air Station [HQ Bldg] is being converted into the Miami Military Museum and Veterans Memorial, which is set to open in the fall. The museum will honor South Florida service men and women.

By Paradise Afshar, MIAMIHERALD.COM

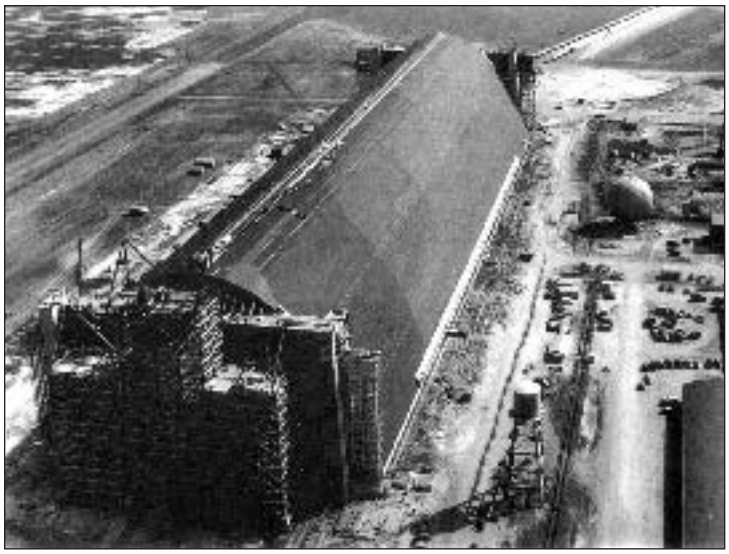
Over the past decade Naval Reserve Chief Warrant Officer **Anthony Atwood** has noticed an increased interest in military history from South Floridians. And he wanted to take advantage of that rising interest by teaching people about one of the oldest military landmarks in the area, Building 25 at the former Richmond Naval Air Station. ''Twelve years ago we had a retrospective along with the bicentennial of the city [of Miami] and 300 people showed up,'' Atwood said. The event was held near the Gold Coast Railroad Museum, and Atwood remembered at the event: "One old veteran points across the fence and says `Hey, why didn't you save that building there.'" Within a couple of years "that building'' was on its way to being saved by Atwood and a team of people who are just as passionate about preserving the building and turning it into the Miami Military Museum and Veterans Memorial. "I didn't wake up one morning and say `I am going to save this building,'" he said. "I was like Columbus before he hit land." The building was used as the Navy blimp headquarters during World War II when German U-boats attacked ships off the coast of Florida. ''We got hit, no doubt about it,'' said Paul George, a historian for the Miami Historical Society. He added that ''hundreds of thousands of soldiers trained here'' during the war and the opening of a museum will show the area's rich military history. ''I think it is going to be fabulous,'' he said. "We welcomed hundreds of thousands of service men and women here and it's going to be great so we can put that page in our history."

The location was also used by the Marine Corps, the Army and the CIA. Atwood's work on the project was halted after Sept. 11, 2001, when he was called overseas. ''I was on the initial team at Guantanamo guarding the Taliban,'' said Atwood, who has a combined active and reserve service of more than 20 years. When he returned from duty, he quickly began working on this project and in 2007, like Columbus, he hit land.

The $2 million was awarded ceremonially in a presentation May 16. It will restore the building as a part of the Building Better Communities Bond Fund, one of the largest grants awarded to a community project in Miami-Dade County. The restoration project has already begun and is expected to be completed in the fall. Once that is done, the museum will be moved from its current location across from the Miami Metrozoo, to between the Miami Gold Coast Railroad Museum and the zoo.

According to Atwood, the idea behind the museum is not war. ''Anyone who has been to war knows it's nothing to cheer about,'' he said. Instead the intention is to honor locals who have served in the military and the sacrifices they have made. "We should know it is part of our heritage,'' Atwood said. "There was a lady there [on May 16] whose father was shot down at the Bay of Pigs; her father gave his life. We need to remember that freedom is not free.'' Photographs of men and women who served in every branch of the military will be on display at the museum, along with medals earned by local service men and women and items such as a B-17 bomber. There will be a parade ground where high school JROTCs can have drill meets, a row of cannons and other items used by the military, such as a blimp car. Restoring Building 25 was no easy task for Atwood and those who helped him with the project. The building was initially full of asbestos and architects told Atwood it was a wonder the building was even standing.

''When I went to see [the building] it was about to collapse,'' said Congressman Mario Diaz-Balart, who was supporter and fundraiser for the project. ``[Atwood] refused to allow this building with such history to disappear.'' The plans are to make the new museum look as much like the original building as possible. ''We're going to keep every bit of original wood that can be saved,'' said Richard Heisenbottle, an architect at R.J. Heisenbottle. According to Heisenbottle, the goal is to get the building to look as much as it did back when it was fully operational. Atwood hopes the museum will help educate the community on this area's military history. ``There is a huge number of veterans living in Florida and there is nowhere that South Florida's military story is told.'' **Ω**

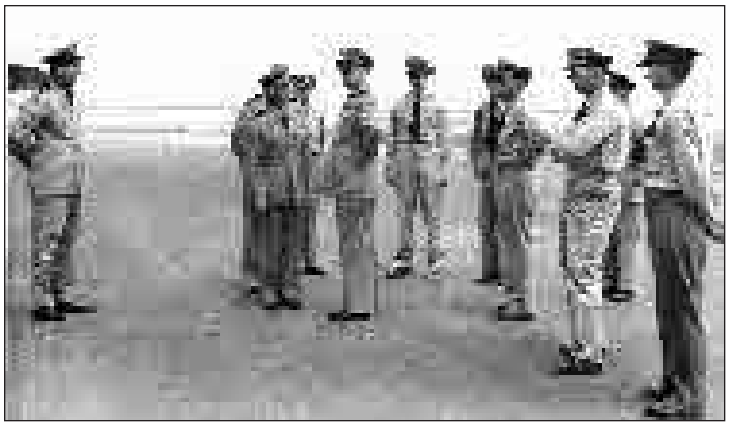


BLIMPS OVER TEXAS: A BRIEF HISTORY OF THE NAVAL AIR STATION AT HITCHCOCK

Excerpt from the paper by **John T. Moore**

In June of 1942, authorization for two hundred blimps was enacted by Congress through Public Law 612.15… these blimps [*were to be based*] at newly identified locations along the Atlantic and Gulf Coast from which they could conduct anti-submarine operations against the enemy U-boat threat. The site chosen near Galveston (in Hitchcock) by Admiral Rosendahl was made to order. It had the proper elevation, or lack of it, and the soil make up could support the bases construction. The location was between two major Texas cities that could supply it. In all the base covered 2,938 acres of land, most of which was bought by the government through a "Declaration of Taking." Through the declaration the government was able to buy up all the land, which was comprised of several small tracks of land owned by 99 different individuals without having to negotiate with each owner. Records indicate that the government paid $142, 921 for the land needed. Work at the Hitchcock site was initiated soon after the acreage for the base became available. Prime contractors involved in the construction of the base included Norgaard, Shaw and the Vilbig Brothers, along with Nathan Wohlfeld. During the construction of the blimp base, there was a delay due to labor disputes involving truck drivers. While strikes were expressly forbidden, during world war the operators did not feel obligated to participate in either the loading or unloading of any vehicles. All drivers involved in the delay were reportedly members of the Teamsters Union. The movement of needed supplies to the construction site was hampered by these men who obviously put their union ahead of their country. Railroad access to the base was provided by a short piece of track connecting it to the major railroad which paralleled State Highway Six (the Alvin Road) a couple of miles to the north. A runway near the hangar was built to accommodate the heftier fixed wing transports of the day. Facilities on the new naval station included an operations building, a fire station and garage, a laundry, water tower, a storehouse, two public works lumber storage buildings, a power plant, a recreation and ships service building, a helium storage sphere above ground, helium underground storage, a helium re-purification building, a station maintenance and utility building, a pump house and reservoir that belonged to the nearby city of Hitchcock, a paint and lubrication oil storage facility, a paint and dope shop for the hangar, an administration building, and, of course the gigantic hangar itself. There were individual blimp landing sights, or tarmacs, for six separate airships. The hangar built at NAS Hitchcock was 175 feet high, 1000 feet deep, and 30 feet in width. Rumor has it that its size allowed the formation of clouds within its internal "ceiling rafters." Finished within the first five months of 1943, the price tag of the new base in Hitchcock was $8.5 million dollars.

The blimp base at Hitchcock was home to 133 naval servicemen at the initial opening of the base. As the squadron of blimps came onboard, in June of 1943, an increase in the naval contingent was experienced. During this American commitment to war, what kind of men came to Hitchcock, deep in the heart of Texas, to curtail the Nazi submarine threat? The simple answer is just ordinary men, doing their extraordinary patriotic duty. One such man was Ensign Jay G. Porterfield, a young farm boy from Alexander, Iowa. His service at NAS Hitchcock as a blimp pilot was representative of many of the servicemen who served at the newly completed base. While a college student in Ames, Iowa, in 1943, young Porterfield had flown forty hours of instructional flights in fixed wing Taylor Craft airplanes. Upon graduation, he was ordered to California for completion of this training. His first blimp instruction came at Moffett Field… Training continued and included mission flights of 17 hours in duration, something that would later serve the young ensign well in preparation for the long patrols over Texas. Completion of training finally culminated in receiving his wings after the advanced training during a graduation ceremony.



None other than the one man driving force behind airship development in the United States himself, **Admiral Charles E. Rosendahl**, [*above, visiting Texas*] spoke to the graduation class and congratulated the new airship pilots personally. Upon graduation, Mr. Porterfield was to have been ordered to Weeksville, North Carolina, to the recently established blimp base there. His orders, however, were modified to NAS Hitchcock, Texas. When he arrived at his new base in the summer of 1944, it was after a lengthy cross country trip by rail that culminated with a bus ride from Houston down to the coast. The ensign found his new accommodations recently built, with a nearby canal to drain off standing water on the base, still under construction.

Like all good sons, Pilot Porterfield wrote home to his family religiously while away in the service. A sampling of the letters he wrote home, while stationed in Hitchcock, reveals something about the military, the times, and even more about the young man himself. The overriding purpose, in all of this letters home, seemed to be a concerted effort to reassure his parents about his well-being and thereby minimize their anguish or concern. In his first letter home, upon arrival in April of 1944 onboard the Naval base at Hitchcock, he wrote in astonishment of the local petro-chemical plants and the extensive oil industry that seemed to dominate the Texas countryside. Subsequent correspondence home mentioned the rain and tropical nature of the Gulf coast region of Texas, with its lack of both trees and elevation. The ever present Texas-sized mosquitoes dominated several of the letters sent home to the folks back in Iowa. There were also frequent referrals to the local stormy, hot, weather systems that included both fog and hail, which impacted on their sons' flying. The flying at Hitchcock consisted of practically around-the-clock scheduled missions that kept the few airships available airborne almost continuously. Naval Officer Porterfield also wrote with a nothing short of glowing admiration for each and every local Texan that he met during his brief but memorable stay. The pilot actually displayed a distinct remorse when he was forced to move with his squadron to North Carolina in early June of 1944. Possibly his last thoughts on the subject of Texas before leaving were written in a letter to his parents dated 31 May 1944:

"What I had hoped wouldn't happen has—the entire squadron here is being moved to North Carolina. Today is our last official day of operation... Had I my way I could stay here quite a long time before I would have gotten tired of Texas."

An enlisted service member stationed at NAS Hitchcock during the war was a yeoman (administrative clerk) named Bernie Jacob. He had been raised in Hitchcock before the war and then shipped out to the Pacific. A knee injury sustained while on duty there brought him back to Hitchcock after a lengthy hospital stay. While his main duties consisted of paperwork, on occasion he was required (as many enlisted men at the base) to join the ground crew in manning the blimp's lines for takeoffs or landings. Unlike blimp pilot Ensign Jay Porterfield, whose stay at Hitchcock was short before moving on, Jacob was there for the duration of his service commitment, which became two years.

First airship to dock at Hitchcock was K-62. (**James Shock**)

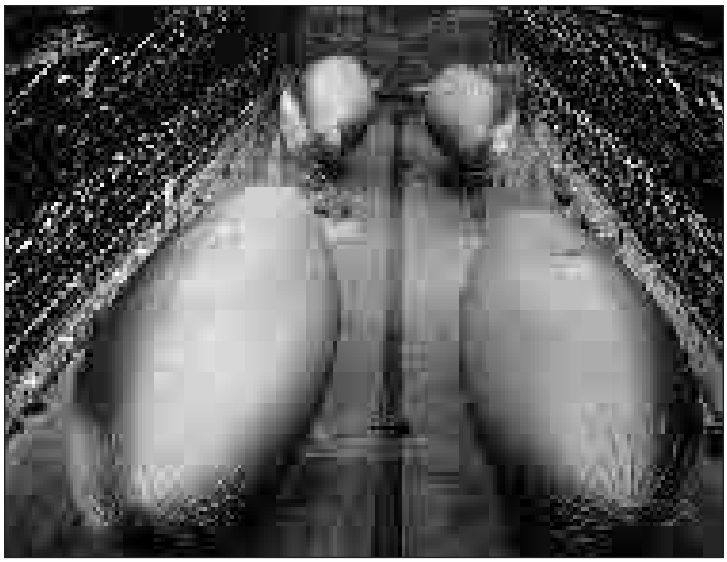
Another enlisted sailor, Aviation Radioman **Robert Higgins** of Massachusetts, served as the radio operator aboard both airships K-77 and K-129 at NAS Hitchcock for a short time. (However, he was stationed there long enough to find his future wife of sixty-five years while on liberty call to the north of the base in Houston. They met at the F.W. Woolworth's store downtown around Mother's Day 1944 on a date they shall never forget.) Earlier in his naval service, radioman Higgins was stranded for days on a desolate island off the coast of Venezuela. His blimp (K-68), based on Trinidad, had to crash land when they ran out of fuel on the Island of Blangquilla. He and the crew were later re-supplied by another blimp and finally rescued by a naval vessel. He remembers well his friends Philip Hudson and James I. Smith of Fredricksburgh, Texas. Both men interviewed by this writer certainly had fond memories of their wartime service there. Both men later returned to Hitchcock, after the war, to revisit the local area and reminisce about their time spent there.

Not much information is readily available about the woman's Naval detachment onboard NAS Hitchcock during the war, other than one existed, as evidenced by photographs from the Hitchcock Public City Library. (Above) A recent telephone interview with author **Richard Van Treuren** revealed that Hitchcock, as well as other blimp bases, had women serving in its control tower, maintaining the homing pigeon lofts, as well as handling clerical and administrative duties. In early February of 1944, the compliment of air assets at Hitchcock NAS reached five K-Class (LTA) Navy blimps. They were the K-60, K-62, K-77, K-57 and K-122. Airship K-77 flew to Galveston for the "War Bond Drive" held there to assist the Hitchcock Naval Base in reaching a high level of success for the number of bonds sold. Joining the compliment of airships at Hitchcock was Blimp K-129 in late March of 1944. She would later become an accident victim when both of her propellers, her landing gear, and other parts were damaged. Three navy men were also injured. Later, on September 15, 1945, this same airship would be completely burned up in Richmond, Virginia, during a hurricane.

The Texas gulf coast weather affected blimp operations at NAS Hitchcock on several occasions during the war. Three such occasions are noteworthy. In 1943, the volatile weather became a reason for concern when, in July it forced the base to close due to hurricane winds (sending the airships to Glynco, Georgia to avoid damages). Two other separate instances threatened airship safety and missions over the Gulf. The first of these two weather threatened missions involved Navy Airship K-77, serving in Squadron ZP-23. While out on convoy escort, the blimp and crew became caught up in a storm that blew them all over the heavens. On their radar the station showed up as an oval shape about 150 miles long and 50 miles wide… while making about 70 knots over the ground, suddenly, without warning, a seemingly invisible hand picked the little airship up and tossed it skyward. At 1000 feet, the ship plunged seaward, reversing the course from North to due South. The noise of the rain beating against their Plexiglas drowned out the engines... blinding lightning flashes forced the crew to wear dark glasses and the car glowed with a bright blueish hue. The ordeal lasted approximately two hours and resulted in the blimp being blown about forty miles off course. Through persistence by the crew, and sturdy craftsmanship of the equipment, the K-77 made it home to Hitchcock safely.

Another weather-affected mission took place in early December 1943. The strange event took place one day after K-60 was involved in a search and rescue mission with two ships that had collided in the Gulf. K-60 was inbound following an exhausting patrol when she "became lost." One thing led to another and K-60 was flying over Kosciusko, Mississippi. Newspaper accounts of the day recorded the event: "Residents of this area played a real part in the war Monday when they rescued a lost Navy blimp and saved 10 crewmen the necessity of bailing out. . .The ship, which was from Hitchcock field near Galveston, became lost in rough weather on the coast and circled the town of Kosciusko, nearly all night, dropping flares and 'scaring people to death' as one resident put it. When morning came, a signalman aboard used semaphore, but no one could read them. . .the ship was operating on one motor and was nearly out of fue1. George Sowel, [Should be Howard], an auxiliary highway patrolman, played top role in the rescue, guiding the blimp over Kosciusko with the aide of two loudspeakers on his car, gathering a parade of curious citizens as he directed the drifting ship to an open field. After flying the airship to the open field, and descending to under 50 feet, one of the crew exited the craft to the ground and directed both the blimp and the civilian line handlers during the landing evolution. Once on the ground, crew members obtained fuel in Columbus, Mississippi, and quickly got the blimp airborne once more. The K-60's first destination was that of Columbus Army Air Field for some real aviation fuel because the previously obtained fuel was for cars and trucks and did not posses the adequate octane needed for the airship's engines. The haggard blimp's woes were not yet over however. Becoming disorientated by a broken altimeter, in foggy conditions, the blimp became too low and dipped into Lake Pontchatrain. With the airship's destination set for Houma, Louisiana for additional fuel, the crew found their craft to be overweight and therefore decided to jettison the single remaining depth bomb still onboard. Unfortunately, they were unaware that the bomb was armed when they pickled (dropped) it into the night, and just as unaware of what was below them. However, it was quickly revealed to the crew that the bomb was in fact armed when it detonated in the electrical substation located near the base. Damage of the ship's balloon structure, affecting her aerodynamics, led to an unscheduled stop in Lafayette, Louisiana on her return home. Limping into Hitchcock, the K-60 had flown some 54 hours across nearly 1,800 miles during this escapade. This being wartime, the blimp received any needed restoration and then assumed its regular duties on the following day.

Perhaps, in retrospect, one could argue that this blimp base never needed to be constructed. However, no one in 1942, especially Admiral King, could have been completely sure that the German submarine menace



would not return to the American coastal waters… A late resurgence of Germany's Naval Submarine force could have quickly placed U-Boats once again back in the Gulf of Mexico, just off the Texas coastline. The decision to build the Naval blimp facility in Hitchcock was made based on the best intelligence information at the time, while a clear and present danger existed, with a real possibility of escalation to an even greater danger. It was simply a case of the Navy Department's position being one of much better safe than sorry.

In conclusion, the Naval Blimp Base at Hitchcock served as a valuable deterrent against a wider submarine war along the Gulf coast and helped to ensure that there would be no second "feeding frenzy" by additional German submarines. The cost of the base was well worth the insurance policy it gave to the United States Navy and our nation. The citizens of Hitchcock and the surrounding area, contributed their part to the war effort while deriving some economic benefits as well. The naval servicemen, who came from various locations all across the nation to this remote region of the Lone Star state, returned home with a better understanding of native Texans, along with a great appreciation for the warm Texas hospitality they received and will long remember.

[Above: Admin. building, then and now; Ralph Stencel]
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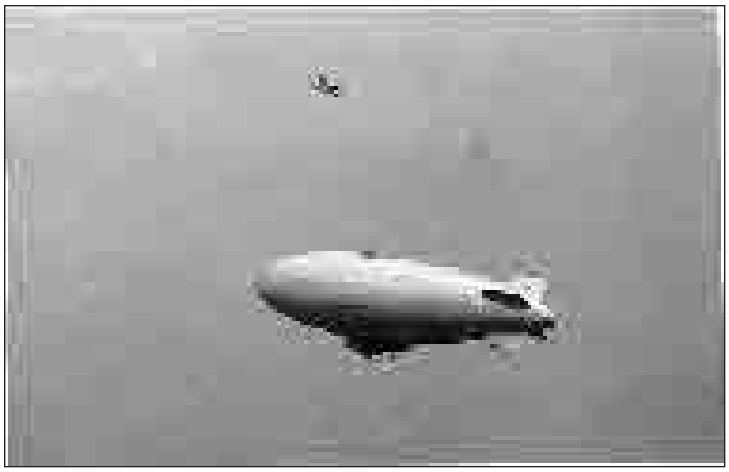
RED FEATHERS

by George Allen

One of the shortcomings in our flight logs is the lack of information about the flight. Granted there was the NAVAL AIRCRAFT FLIGHT CLASSIFICATION SYYSTEM but it only tells you the condition of the flight. Day/night/ Instruments. Then the General Purpose, i.e. training. In preparation for this article I went back and researched through my 4 log books. I even found my Patrol Airship Commander papers taped inside the front cover of my LTA log book. They had been signed by Commodore COPE on 1 OCT 1956.

Through a series of deductions and referring to the LTA log book, I concluded I flew on OCT 3rd 1956 Naval Airship ZPG-2W 141335 for 13 hours on a 1Q5, a Miscellaneous Non Training Flight. A "boondoggle" to dump a bushel of "RED FEATHERS" over the city of MONTREAL, CANADA. Recall if you will this activity was a predecessor to today's UNITED WAY.

The flight path took us up to New York, thence up the Hudson River over Lake Champlain. North of the Military Academy (West Point). Over the lake there was a YELL on the intercom from the AT position located inside the bag, forward of the height-finder. "There is someone on top the bag". A quick count of the crew indicated **LCDR ADOLF (Al) FURTEK** was missing. You may remember Al at one time had been assigned to development of the parachute. He was fearless. He'd climbed through the tunnel to the top of the bag, opened the hatch of the height finder and crawled to the navigation dome. Banged on it and scared the "tar" out of the poor kid. Difficult as it was I (as a Ltjg) let Al (a LCDR) know we would have no more of that. How would I ever explain losing a member of the crew while in flight. A short time later the mech reported a fuel leak in the port engine. I secured the engine and reported to Base that I was canceling my appearance over Montreal and returning to Lakehurst. Unfortunately we had a pretty strong wind from the West and our ground speed was about 6 knots. Approaching the IDLEWILD control zone I requested clearance and it was so granted. Several minutes later we had a near miss by a commercial liner departing the airport. The controller in the tower was bent out of shape. I repeated my status as an airship, single engine, making a speed of advance of 6 knots. Anyway we cleared the area and proceeded to NEL. The mech and I turned our attention to the leak in the fuel line. God Bless the Mech. If he reads this I would like to hear from him. He determined there was a piece of rubber tubing in the APU that cold be used to repair the leak. Crossing Asbury Lake the repairs were completed and we landed without incident. If you were on this flight please contact George Allen by phone 904-264-0903 or by email.
georgewallen@bellsouth.net. **Ω**



ZW-1 AND THE NAVAL AVIATION OBSERVER (CONTROLLER) NAO(C)

By Wally Turner

ZW-1 was the only Airborne Early Warning (AEW) Blimp Squadron that participated in the Cold War after World War II. It was commissioned in January 1956 and decommissioned in 1961. Its mission was to protect the Boston-New York-Washington, DC air approaches from any sneak attacks from the East. When the ZPG-2Ws were on station they were under the control of the North American Air Defense Command (NORAD). I reported to the Squadron in late January 1956, just after it was commissioned. I was the first officer to report with the intention of becoming a Combat Information Center (CIC) officer and NAO(C) who was responsible for the mission of the Squadron.

The Crew consisted of 25 sailors and the normal flight was 36 to 48 hours with 24 to 36 of those hours spent on station reporting all air contacts back to the Ground Control Intercept (GCI) sites run by the US Air Force. In the 50s, the picket lines for defense were the GCI sites on the coast: a radar stationed on an ocean (oil type) platform about 100 miles east of Boston; ZW-1 stationed about 250 to 300 miles east of Lakehurst; Naval picket ships stationed about 1,000 miles east of the coast; and WV-2s (Navy) or RC-121s (Air Force) 1,500 to 2,000 miles east of the coast. In the 1950s the radar could only see approximately 200 miles from the GCI site because of the curvature of the earth, which is why the other AEW units were used to extend the defense capability in order that sufficient warning would be sounded if we indeed were attacked. Once the bogeys were reported to the GCI site the flight plans were checked to see if it was a scheduled flight; if not, would scramble interceptors to visually identify the bogey. Usually, it was an aircraft such as a plane off of a carrier whose flight plan was late in getting to Traffic Control or the military testing our defense capabilities. Because of the long times on station, we had port and starboard crews that manned the search radar, height finding radar, and Electronic Countermeasure (ECM) gear. The only mission for the squadron was AEW. In fact, ZW-1 was the only LTA, AEW squadron that was ever commissioned.

Officers of the CIC Department. Left to Right: LCDR John Cabral, Ltjg Steve Kutner, Ltjg John McGuillicudy, Ens. Brad Giffard and Ltjg Wally Turner. Only three of us had NAO(C) wings at the time. Brad and John received theirs later. The interesting thing is that Steve, John McG, and I all graduated from the same OCS class in November 1955. McGillicudy and Kutner reported into the squadron shortly after I did, and together we formed the nucleus of the first CIC Department.

We usually flew between 1,500 and 3,000 feet. The CIC compartment was the site of all the action which was located just aft of the cockpit. That is where the radar scopes, position plotter, ECM gear and communication gear for reporting contacts was located. Manning CIC was a CIC officer, 3 radar operators, 1 plotter and 1 ECM operator. They were manned for the entire time that the airship was on station. The plotter was synchronized with the movements of the airship and our location on station. In this manner, when the bogey was plotted, it would show the exact position of the aircraft in relation to the airship, which was then reported back the GCI site.

The GCI sites would scramble interceptors to investigate the bogey and after 200 miles we would take over the rest of the mission until the bogey was visually identified. If the bogey was identified as an unfriendly, the interceptor pilot would try to contact him and persuade him to turn around and return to base. If they persisted in continuing their original flight path, he would then ask permission to blow the bogey out of the sky. This never happened on my watch. Because of our connection with the United States Air Force, in May 1956, I was the first Naval Officer to attend their Air Director School in Valdosta, GA (Moody AFB). By the time I left ZW-1 I had also attended the first Naval Air Controller School in Glynco, GA. Because most of the intercepts were done by the Air Force it was unusual for a NAO(C) to have more than 40 or 50 intercepts. Usually 15 or 20 was all most Naval Air Controllers ever experienced. I was lucky enough to personally have had between 1,500 and 1,600 live intercepts to my credit, which means that ZW-1 had the most experienced Air Controllers in the Navy.

Because we were trying to prove a point of how effective blimps were compared to other types of AEW aircraft, we flew in any kind of weather. In late 1956 we were airborne in hurricane force winds and stayed on station for 24 hours. We were the only aircraft airborne on the northeast coast that day and effectively showed that we could operate in any type of weather. Our flights were long and productive. On one flight, we were airborne for over 60 hours and over 50 of those hours were on station. Another time, our crew was in the air for over 108 hours in 8 days (2 missions.) This meant that we were in the air 4.5 days out of the 8. I know I was one tired Ltjg. when we landed at the end of the 8th day.

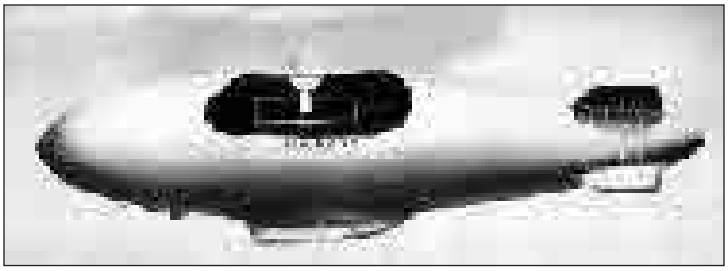
One of the benefits of using LTA as a stable radar platform was the fuel efficiency. Because of the gear arrangements between the two propellers, we could fly dual engine dual prop; single engine single prop; or single engine dual prop. This meant that at times we could fly on station performing our duty and burn about 25 pounds of fuel an hour. In comparison, the WV-2s/RC-121s would burn 125 to 150 pounds of fuel per engine and they had four.

A galley was located on the second deck that provided three hot meals a day and a snack at midnight. The Rigger usually did the cooking and we had some great cooks.

The 3 years that I spent in ZW-1 were rewarding and interesting. We all worked hard and felt that we served an important service to our country during the cold war. I personally would not have traded my time in LTA for any other duty. **Ω**

1st Row: CWO Clay Perry, Ltjg Dan Hopkins, Ltjg Don Hartman, Ltjg Don Benn, Ltjg Wally Turner, Ltjg Fred Butler, Ltjg Jim Yarnell, Lt (Doctor) Lloyd Carnahan, Lcdr John Cabral

2nd Row: Ltcdr George Gillings, Ltjg Dave Lawrence, Lt John Hofmockle, Lcdr Bob Gill, Lt Roy Bellotti, Lcdr Ernie Babb, Lcdr John Wise, Lcdr Bruce Smithee, Lt Don Patterson, Ltjg Warren Winchester and Lt Mac McDannold



(Drawing shows interior antenna on ZPG2.5W.
Charles Weithaus provided three photos.)

APPENDIX 1

(Excerpt from *The Airship Experience*,
discussion of ZPGs as radar pickets)
by **CDR Lundi Moore**, USN

3. Tactical utilization of the ZPG-2 varied during this period from the modified ZSG ship tactics to those more suited to the AN/APS-20E radar potential of the ZPG-2. Due to this airships configuration including, in addition to the APS-20, radar, MAD ECM, sonobuoys, and towed sonar, there has been some reluctance to divorce it from the low-altitude, close-in tactics of the smaller ZSG series and employ the ZPG-2 strictly from maximum utilization of its excellent radar. It is considered that exploiting the features of good radar and long endurance constitute the best tactical application of the ZPG-2 airship.

4. The extremes of weather conditions encountered on flights during the period included in this report are as follows:

Cold frontal passage, moderate to severe
Warm front passage, moderate
Winds to 50 knots
Continuous instrument conditions in excess of 18 hours

5. Utilization of the ZPG-2 to date has included, in addition to normal airship MAD, ECM, and sonobouy tactics, the following:

On-station time of 24 hours
Continuous on-station radar coverage
Control of VS aircraft to and from search stations when beyond shipboard radar coverage
Control of VS and VP while on search station
Control of VS, VP, HS, and SAU for investigation and/or attack of the radar contacts
Relay of communications to aircraft beyond shipboard UHF radio range
Continuous plot and report of all air and surface contacts

6. Following is an analysis of the utilization of the ZPG-2 with its standard configuration:

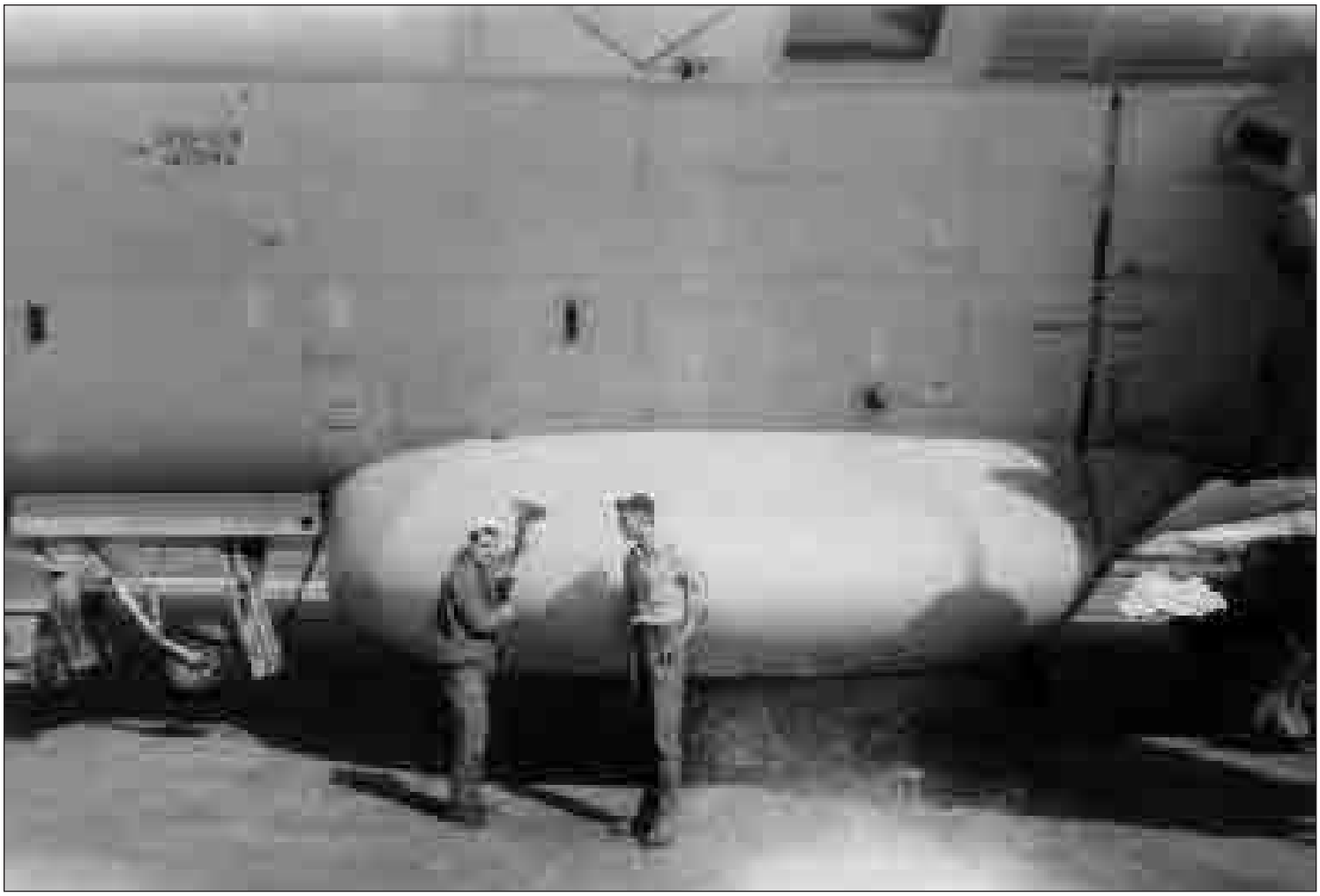
a. On-station time of 24 hours. This has been an arbitrary figure based primarily on the limiting factors of: The airship requiring a maintenance check every 60 hours. The conviction that the fatigue factor could be excessive if flights of greater than 24 hours duration were flown.

It should be noted that living accommodation on a ZPG-2 are comparable to those on a submarine and the habitability is compatible to that of any small ocean going ship such as a PC or SC. On flights of 40 to 50 hours, standing watch 4 hours on and 4 hours off, the fatigue factor was not found to be excessive. Use of total fuel capacity, single engine, and single engine two propeller operation, with good fuel economy procedures, can bring total flight time without in-flight refueling to 90 hours. Maximum length training and operational flights, with carrier and tanker in-flight refueling when feasible, will serve to take such tactics out of the unusual category and put them in their proper perspective as normal operations, to be expected by both fleet and airship personnel.

b. Continuous on-station radar coverage. Operational flights have been flown during which continuous radar coverage for 24-hour on-station period was provided.

However, with the ZPG-2's present configuration, multiplicity of assignments, personnel, material and equipment limitations, optimum performance of the APS-20E radar and the airship has not been realized. It has been found that the APS-20E radar will not always operate for periods of 24 hours without maintenance difficulties requiring tube or component change. Further, the radar sensitivity will normally decline unnoticed without periodic checking. This requires tube spares, minor components, and test equipment. Longer flights will require a greater weight of in-ship stores. If further evaluation indicates the advent of longer flights with fleet units and a resultant necessity of restricting the weight of in-ship spares, a form of ship-to-ship supply system may be required with the ship stocking high usage spares for in-flight reprovisioning.

Another factor of extreme concern is the in-flight maintenance capability of the enlisted technicians carried in each airship. The scarcity of trained technicians is, of course, critical throughout the Navy. In an airship, it is compounded by the necessity of repairing the electronic



Bucky Moran and Tom Wentz

equipment in flight without the benefit of test facilities. The length of time necessary to replace an airship on station makes such a substitution impractical. As flights become of longer duration and greater distance from base, such replacement becomes impossible. It should be noted that the airship is so configured that all radar components are readily accessible for in-flight maintenance and normally, with adequate spares, common discrepancies can be corrected by a good technician long before a replacement airship can be on station. In order to better utilize the in-flight accessibility of the equipments and to better effect repairs (both mechanical and electronic) in flight it is strongly recommended that a manual be furnished which includes information that will better assist in making in-flight repairs and routine maintenance checks.

In an analysis of radar search potential of the ZPG-2, it should be noted that the standard configuration if two 7-inch scopes, each with provisions off-center expanded sweep presentations. When the airship is faced with the task of both search and air control, it must, of necessity, use one scope for air control and one for search. This, therefore, relegates one scope to the inefficient mode of centered 360 degrees search with one of the following ranges:

1. 10 or 20 mile for very close in
2. 50 mile for snorkel and periscope
3. 100 mile if surfaced subs are suspected
4. 200 mile if aircraft are the targets

Normally 10 or 20 mile centered presentations are not used because the effects of side-lobing and sea-return plus the limited area make them of little value. When using 50 mile centered presentation the maximum effective range of the APS-20E is not being realized due to the radar horizon being greater than the sweep presentation. A 200 mile centered presentation so reduces blip strength as to make any but the largest targets undetectable in the large areas represented on the scope. This leaves the 100 mile centered presentation the most acceptable when a 360-degree search must be conducted and only one scope is available. If an approach quadrant is known and designated, a highly efficient search can be conducted using an off-center expanded 50 or 100-mile sweep, depending on the type of search desired (surface or air/surface). With more scopes available, more quadrants can be searched.

The inefficiency resulting from multiplicity of assignments cannot be disregarded, for an airship

employing MAD tactics or streaming a sonar fish at 150 feet altitude will not be able to maintain an adequate radar search or exercise air controlling functions. If the airship is employed to deliver an attack with its armament or lay a sonobouy pattern, not only is the radar efficiency reduced, but the time off search station, resulting from a long transit time, makes it prohibitive. All the foregoing tactics require high power with resultant high fuel consumption thus decreasing the endurance of a given flight in a direct ratio to the time employed.

c. Control of VP, VS, HS, and SAU by airships. The control of HS and SAU is relatively simple and limited only by the radar horizon. Resolution, blip strength, and illumination characteristics are excellent.

VS and VP, because of their smaller radar return and higher speeds are more difficult to track on the scope. However, with recourse to the use of IFF interrogation equipment such tracking is usually successful to the limit of the radar detection range for that type target. The number of units that can be controlled simultaneously is limited by normally having but one scope available and by training and experience of the operator. In all cases, the use of expanded, off-center expanded sweep presentations will permit tracking through sea return, fade areas, and areas with high density of targets.

When the control of VS and VP is primarily concerned with maintaining the aircraft on a specific search station or pattern, it is possible to adequately check on their adherence to assignment by reference to the radar plot with its regular reports from the search operators.

d. Relay of communications to aircraft beyond shipboard radio range. At present the relay of voice communications is limited by the number of UHF transceivers (one) and MHF transmitters (one) that the airship carries, and by the density of traffic possible on either net. A service change has been approved which provides for installation of a second UHF transceiver and UHF relay equipment. This will provide separate circuits for air control and contact reporting; and will provide radio relay when it is desired.

e. Continuous plot and report of all surface and air contacts. The plotting of radar and ECM contacts is presently being effected on a polar plotting tub, 30 inches in diameter. As all except a few evaluation flights have been concerned with surface targets with a maximum required range of 100 miles, this plot has been adequate. If the reporting of air contacts is to be included in the ZPG-2's employment a vertical plot with an expanded scale can be installed for efficient plotting and track and speed computation... **Ω**

(Below: ZPG-2.5 [or 2 _] W. NARA / **Eric Brothers**)

BOEING COMPLETES MAJOR DESIGN MILESTONE FOR SKYHOOK HEAVY LIFT VEHICLE

(See also back cover) Boeing image by Joe Naujokas

ST. LOUIS, July 28, 2009 -- The Boeing Company [NYSE: BA] and SkyHook International Inc., today announced that the design of the SkyHook Heavy Lift Vehicle (HLV) has reached the configuration freeze milestone, meaning the aircraft's overall performance and layout have been established.

Boeing and SkyHook have worked on the SkyHook HLV's structural and systems design and its concept of operations since July 2008, resulting in the following improvements:

- the addition of a three-piece tail for enhanced maneuverability
- integration of lifting and thrusting propulsion systems
- improved aerodynamics for increased payload capacity and range.

"Boeing's Advanced Rotorcraft Systems team and our industry partner, SkyHook International Inc., are extremely pleased with the progress on the engineering of the aircraft," said Kenneth Laubsch, SkyHook program manager for Boeing. "We all sense that we are part of something revolutionary in the advancement of this extraordinary technology, and the aerospace industry in general." The next major program milestone will be Detailed Design in 2011, which centers on the design, analysis and specification of all hardware, software and related aircraft and ground support systems interfaces.

"The SkyHook HLV technology is like nothing that has ever existed. We anticipate that the operational capability of this aircraft will allow SkyHook's customers to radically change the way they resupply and operate in remote regions, especially the north," said Rob Mayfield, director of SkyHook. "In the oil and gas industry, there are significant pressures on cost, speed, safety, and environmental impact, and the SkyHook HLV represents solutions to each of these challenges in various applications."

SkyHook is designed to carry 80,000-pound (40-ton) sling loads up to 200 nautical miles without refueling -- a capability that is not currently available, but is desired by several industries, including oil exploration and mining operations in the Canadian Arctic and Alaska, as well as companies operating in remote locations in South America, Europe and Africa.

Boeing is designing and will fabricate a production SkyHook HLV prototype at its Rotorcraft Systems facility in Ridley Park, Pa. The new aircraft will enter commercial service after it is certified by Transport Canada and the U.S. Federal Aviation Administration. The first SkyHook HLV aircraft is scheduled to fly in 2014.

SkyHook International Inc. is a privately owned company located in Calgary, Alberta, Canada.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses specializing in innovative and capabilities-driven customer solutions, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $32 billion business with 70,000 employees worldwide. **Ω**

MEDIA WATCH

FLYING AIRCRAFT CARRIER
By Der Spiegel TV for National Geographic Channel
A review by **C.P. Hall II**

The focus of this television presentation is the second rigid airship built for the United States Navy by the Goodyear / Zeppelin Corporation, the U.S.S. Macon. The program follows what I think of as the "Robert Ballard formula" which intermingles the story of a modern day search for a wreck with the history of how the wreck came to happen. This formula works well in the television medium and, once the tale gets on track, it works well in this case.

The bad news is that getting on track is the initial problem as, early on, the need to briefly relate the history of Zeppelins is not to be denied and predictably botched. The film footage is of good quality, however, chronologically speaking, the film editor hopped about with neither rhyme, nor reason. At one point, I received the impression that "Earl Zeppelin" (neither Count, nor Graf von Zeppelin) hired Karl Arnstein to design the Akron?!? Another tidbit is that LZ-126 Los Angeles was larger and lighter than wartime Zeppelins!?! Several familiar, recognized, knowledgeable, capable experts were interviewed and appear, briefly, in this program. I wager that not one of them was asked to fact-check the script. The good news is that, once on track, once reaching the Goodyear / Zeppelin era and the ZRS – 4 & 5, things get better. The stories of three expeditions in search of the Macon's wreck are blended into a coherent whole. The stories of design, construction, and flying of Akron and Macon are told with actors portraying significant individuals such as Karl Arnstein and Lt. Cdr. Herbert Wiley. There is a good deal of historic film footage and some high quality, illustrative, computer graphics of the Macon in flight.

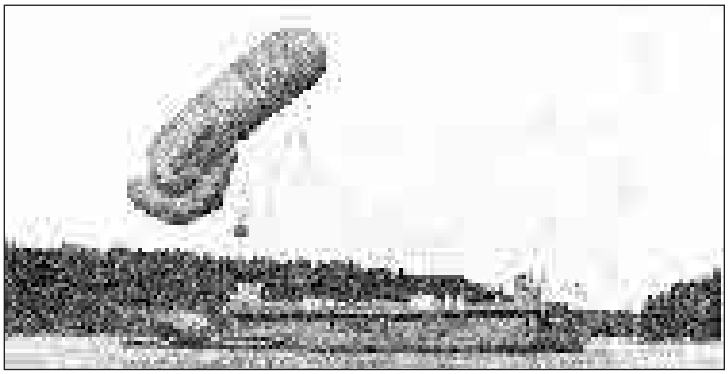
This portion is interesting but not without flaw. The dramatization of the period of time between the Macon's fin failure and the descent into the sea is not how I picture it; a comment worth exactly what you paid for it. The Officer's uniforms seem to be castoff costumes from "The Court Martial of Billy Mitchell"; the enlisted men's from "H.M.S. Pinafore". The computer graphic of the fin failure would have been more accurate had they consulted either Thom Hook, or Jeffrey Cook. For the best results your method must be "by hook or by cook"?

I have a final comment and request regarding the computer graphic of Macon in flight. To me, Macon appears elongated but I am not old enough to have seen this rigid airship in flight. I have seen only stills and motion picture footage. Perhaps someone older than me, who has actually seen a 20th Century rigid, will watch FLYING AIRCRAFT CARRIER and answer this question. Does any lens used to photograph something as large as a rigid airship create a myopic distortion? Does this mean that National Geographic's computer graphic is more true to what a passing airship would look like while my 'standard' is based upon the photographic distortion because I have never seen the real thing? **Ω**

For reasons we shall never understand, the Rob McCauley 3-part "The Airships" show many members worked on was shown on BBC, Australian TV, Canadian TV, etc. but not in the US. Instead it can now be seen on the internet at :
http://www.guba.com/watch/3000093331. Go figure. **Ω**

(From internet) STX Europe has released photos and videos of Royal Caribbean's Oasis of the Seas on trials near its Turku, Finland, yard (above). What's caught the attention of cruise enthusiasts is the "blimp" that appears to be following the world's largest cruise liner. In fact, it's not a blimp, though it is, in a sense, a trial balloon. Actually, it's an aerostat--and here's what RCL Chairman Richard Fain says about it on his blog at www.oasisofthe seas.com: "Secondly, I will comment on one experiment we are performing which has already been the subject of some rumors. This idea is to put an aerostat onboard tethered to the ship. The idea is interesting, but it has such a cornucopia of practical issues that I give it less than a 50% chance of being used on Oasis. If we don't use it on the ship, I will consider it just another of the many ideas our people develop that didn't work. On the other hand, if it is successful and we do decide to use it on the ship, I will consider it another of my better ideas. Remember, this is just one of many experiments we undertake and, unless we actually decide to go forward with it, one that you will never hear about again." **Ω**

Ed. Notes, Think it's new? Think again! 100 years ago there were balloon observer ships like these:



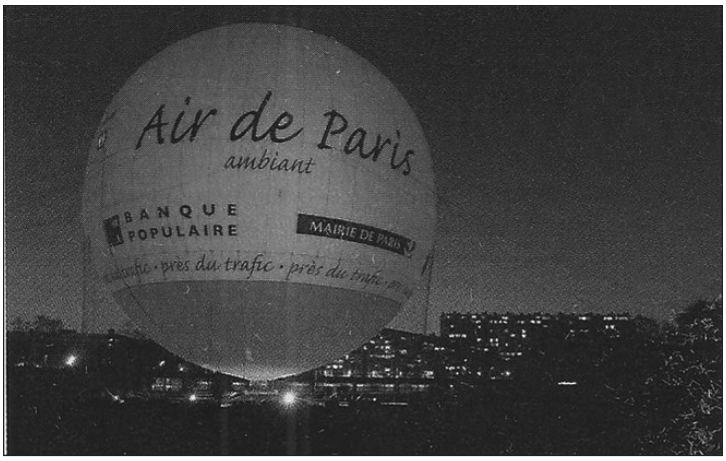
Also 100 years ago: "British Naval aviation was born on 7th May, 1909, with an order placed by the Admiralty for an airship. That airship, HMA 1 or the Mayfly, was not entirely successful." **Ω**

TECHNICAL COMMITTEE

Larger, multi-mission balloons in the news

Gigantica is the largest of its kind and can carry up to 30 people. A Guinness World Record, Gigantica is the largest gas balloon in the world with a lifting capacity of 8.5 tons. It is an amusement ride, billboard and landmark all in one. Gigantica will introduce 20,000-30,000 guests a year to lighter-than-air flight. **Ω**

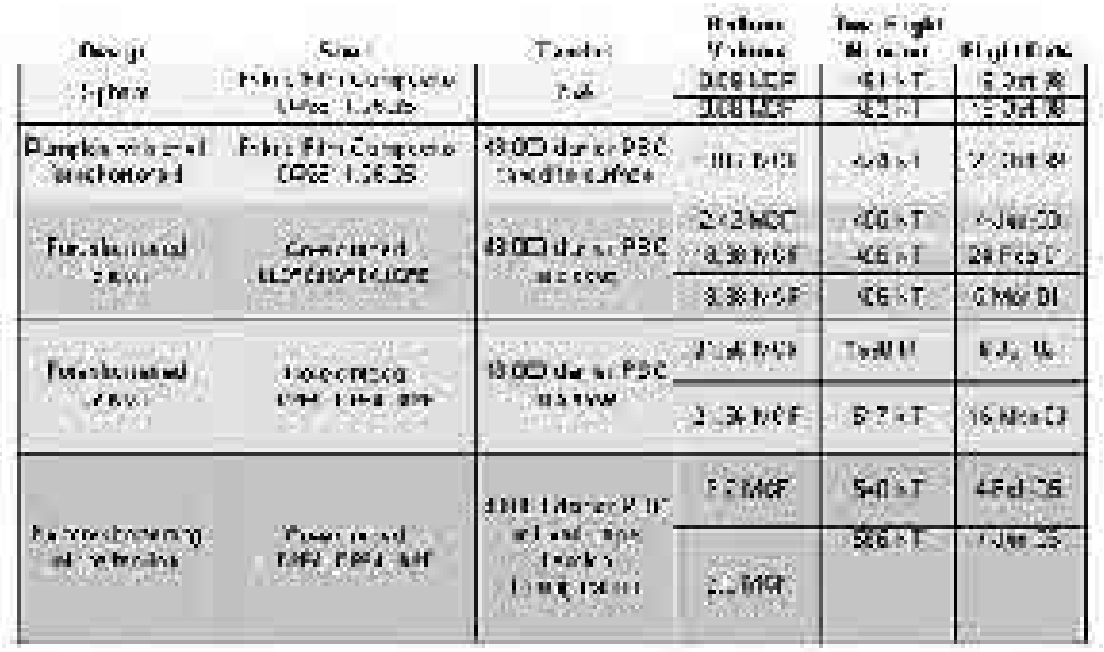
Downtown Disney® in Lake Buena Vista, Fla., gets its own iconic attraction, in the form of a giant, tethered balloon that takes guests 300 feet into the air to view the vistas of Walt Disney World® Resort. The balloon give visitors keen for thrills the chance to ascend to the skies above Downtown Disney® for a six-minute trip, by day or night. It gives up to 30 guests at a time an unparalleled, 360-degree view of up to 10 miles. The balloon with a volume of 210,000 cubic feet, a 72-foot diameter, a circumference of 240 feet, and a height of 105 feet. It has a quick mooring system and a landing platform designed especially for Downtown Disney®. **Ω**



The "Air de Paris" Balloon is a unique moored balloon in Paris that provides a source of information on air quality that is visible from over 20km. The balloon is also a tourist attraction that provides excellent views of the city. The tethered balloon, which is located in the Parc Andre Citroën, in Paris's 15th arrondissement, uses an innovative lighting system to provide real-time reports on atmospheric pollution via two distinct indexes:

-Ambient air quality, reflected through general illumination of the balloon using three projectors located upon the envelope's equatorial plane, with better night time visibility.

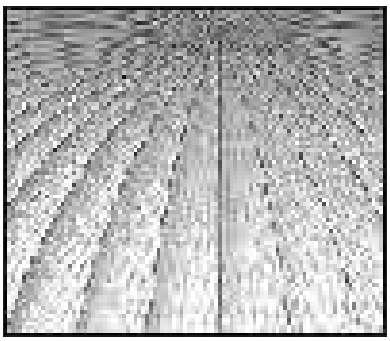
-Air quality near major traffic arteries, using a LED belt at the tropicalline of the balloon. In Paris, data is collected by sensors set up by "Airparif" in several spots throughout the City (data complies with the new European index developed for the CITEAIR project and currently used by about thirty large cities.) It monitors the quantity of the three most harmful contaminants (nitrogen dioxide, ozone and particles) found in the atmosphere, using an easy-to-understand color coding – red for highly toxic. **Ω**



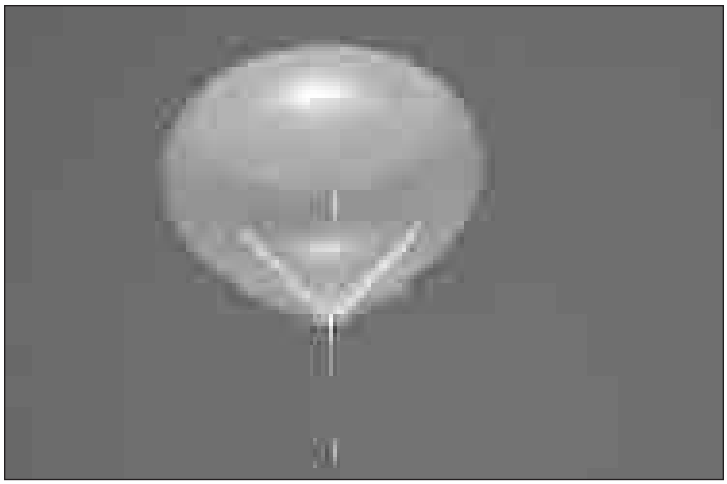
The National Science Foundation (NSF) and the National Aeronautics and Space Administration (NASA) have successfully launched and demonstrated a newly designed super pressure balloon prototype that will one day enable a new era of high-altitude scientific research. The super pressure balloon is expected to ultimately carry large scientific experiments to the brink of space for 100 days or more. "This flight test of NASA's seven-million-cubic-foot super pressure balloon is a very important step forward in building a new capability for scientific ballooning based on sound engineering and operational development," said W. Vernon Jones, NASA's senior scientist for suborbital research at NASA Headquarters in Washington. "While the team has a ways to go in scaling up the pumpkin balloon to be able to lift a one-ton instrument to a float altitude of 110,000 feet, the team has demonstrated they are on the right path". The super pressure balloon was highlighted in the National Research Council's decadal survey, "Astronomy and Astrophysics in the New Millennium," and will play an important role in providing inexpensive access to the near-space environment for science and technology.

The test flight was launched Dec. 28, 2008, from McMurdo Station, NSF's logistics hub in Antarctica. NASA and NSF conduct an annual scientific balloon campaign during the Antarctic summer. NSF manages the U.S. Antarctic Program and provides logistic support for all U.S. scientific operations in Antarctica.

In January 2008, the agencies jointly achieved a new milestone in the almost 20-year history of scientific ballooning in Antarctica by launching and operating three long-duration sub-orbital flights within a single southern-hemisphere summer. Unique atmospheric circulation over Antarctica during the austral summer allows scientists to launch balloons from a site near McMurdo Station and recover them from very nearly the same spot weeks later, after the balloons have circled the continent one to three times. Antarctic flights are of a long duration because of the polar vortex, a persistent, large, low-pressure system, and because there is very little atmospheric or temperature change. Constant daylight in Antarctica means no day-to-night temperature fluctuations on the balloon, which helps the balloon stay at a nearly constant altitude for a longer time. The newly tested balloon reached a float altitude of just over 111,000 feet and continues to maintain a nearly constant altitude into its eleventh day of flight. The purpose of this flight is to test the durability and functionality of the scientific balloon's unique pumpkin-shaped design and its novel material, a lightweight polyethylene film. The new material is a special co-extruded polyethylene film, about the thickness of ordinary plastic food wrap. "Our super pressure balloon development team is very proud of the tremendous success of the test flight and is focused on continued development of this new capability to fly balloons for months at a time in support of scientific investigations," said David Pierce, chief of the balloon program office at NASA Goddard Space Flight Center's Wallops Flight Facility, Wallops Island, Va. "The test flight has demonstrated that 100 day flights of large, heavy payloads is a realistic goal".



There are sufficient test data of materials (film cylinder tests, tendon tests, etc.) to determine their strength, and these have been applied to the design and analytical process. Operational loads are well below material limits. The current Super Pressure Balloon is a 200-lobed structure, and is straightforward to model and analyze and float at constant pressure. Project has gone the extra step of using actual fabrication measurements to refine the predicated stresses in the flight balloon. The promise of ultra-long duration missions using the super pressure balloon is that the balloon cost is considerably less than a satellite and the scientific instruments flown can be retrieved and launched again. This 7 million cubic foot balloon is the largest single-cell, super-pressure (fully sealed) balloon ever flown. When development ends, NASA will have a 22 million cubic foot balloon that can carry a one-ton instrument to an altitude of just over 110,000 feet--three to four times higher than passenger planes fly. The University of Hawaii Manoa's Antarctic Impulsive Transient Antenna (ANITA) launched December 21 and is still aloft. Its radio telescope is searching for indirect evidence of extremely high-energy neutrino particles possibly coming from outside our Milky Way galaxy. The University of Maryland's Cosmic Ray Energetics And Mass (CREAM IV) experiment launched December 19 and landed January 6. The CREAM investigation was used to directly measure high energy cosmic-ray particles arriving at Earth after originating from distant supernova explosions elsewhere in the Milky Way galaxy. The Wallops Flight Facility manages NASA's scientific balloon program for NASA's Science Mission Directorate. Launch operations are conducted by the Columbia Scientific Balloon Facility, Palestine, TX, which is managed for NASA by the Physical Science Laboratory of New Mexico State University, Las Cruces. **Ω**



This picture shows the high-altitude balloon fully expanded to a diameter of 459 feet. The shroud immediately below the balloon is the parachute. The LEE payload of cosmic ray detectors is at the bottom of the chute shrouds. This photo was taken through a telescope by Drew Denney, NASA Columbia Scientific Balloon Facility.

Giant balloon flying high over Atlantic to catch cosmic rays (Edited from Internet sources)

The photo above shows the launch of high-altitude balloon carrying cosmic ray detectors over Kiruna, Sweden, May 17, 2009. The balloon is made of a polyethylene film (the same material used to make trash bags) and weighs 4,150 pounds without its payload. The balloon, which is 396 feet tall and 459 feet in diameter when fully inflated, was set aloft at 4:34 a.m. on May 17 from Esrange Space Center near Kiruna, Sweden, in the Arctic Circle. It is flying at a speed of more than 40 knots and an altitude of nearly 27 miles. Its payload of cosmic ray detectors, housed in a pressurized shell, was cut free in north-western Canada and floated back down to Earth on a parachute. With support from a $961,710 grant from NASA, the effort entails launching two helium-filled, high-altitude balloons -- one to carry the "Low Energy Electrons" (LEE) instrument payload, which is now afloat, and one to carry the "Anti-Electron Sub-Orbital Payload" (AESOP), which launched on May 23 and traveled to the upper limits of the atmosphere.

AESOP can detect electrons with energies up to about 10 gigaelectron volts, according to Clem. The instrument utilizes a system of different radiation detectors and a magnetic spectrometer to identify the particle's electric charge, energy, and mass. The major component in the magnetic spectrometer is the spark chamber.

AESOP's chambers contain five parallel aluminum plates connected, in alternate order, to ground and a high-voltage pulser. The medium between the plates is a slow-moving mixture of neon and helium. As a charged particle passes through a chamber, it leaves behind an ion trail in the gas. In the presence of a high electric field, the ions in the gas are accelerated toward the plate surface, resulting in a bright red vertical spark, which is digitized and recorded by a linear charge-coupled device (CCD) camera. The study of cosmic rays at Bartol Research Institute began in 1934 with the launch of several balloon flights. After a hiatus of several decades, balloon observations at the institute resumed in 1984 when the Low Energy Electrons (LEE) instrument was moved from the University of Chicago to continue a series of measurements focusing on solar modulation of cosmic electrons, which originate outside the solar system, with energies up to -20 GeV (gigaelectron volts). The institute expanded its balloon borne research in 1991 with funding from the National Aeronautics and Space Administration (NASA) by building the Anti-Electron Sub Orbital Payload (AESOP) instrument. AESOP is carried by a 40 million cubic foot helium balloon measuring 650 feet in diameter that floats at an altitude of approximately 135,000 feet. In 2002, the University of Delaware's LEE cosmic ray detector rode aboard the largest high-altitude balloon ever flown. The 60 million cubic foot balloon, fabricated by NASA's Columbia Scientific Balloon Facility, flew at a height of 161,000 feet from Lynn Lake in Manitoba, Canada. In summer 2006, AESOP was launched from NASA's Columbia Scientific Balloon Facility in Kiruna, Sweden. The balloon made its way northwest across the Atlantic Ocean, over the northern tip of Iceland and Greenland's ice cap, and past Canada's Baffin Island, where it reached an altitude of 135,500 feet and a maximum cruising speed of 51 knots. After five days, it landed safely on Victoria Island, north of Canada's Northwest Territories, near the Arctic Circle. **Ω**

Michelle Pemberton/The Star /5/29/2009: Conner Prairie Living History Museum employees go for a flight during an employee preview day on Conner Prairie's newest exhibition, "1859 Balloon Voyage," opening June 6 culminates in a 350 foot ride above Conner Prairie in the tethered, helium-filled balloon. 2009 mark's the 150th anniversary of the first airmail delivery by the U.S.P.S. and John Wise, a pioneer in manned flight. In 1859 the balloon launched from Lafayette, Ind., and landed near Crawfordsville, Ind. **Ω**

SHORT LINES

Airship To Provide University Of Delaware With New Research Tool by **Diane Kukich**

Rachel Jewett Ledbetter christens the new UD airship. Note the wording on the gondola, with the airship dedicated to the memory of her grandfather, Thomas Tustin Cloward. Looking on are UD President Patrick Harker, left, and professors Jack Puleo and Michael O'Neal. Photo by Doug Baker

The University community was invited to view the airship, known as the Low-Altitude Environmental Analysis Dirigible (LEAD) for the first time on Tuesday, Jan. 14, in its temporary home in the Center for Applied Coastal Research. Believed to be the first of its kind in a university setting, the UD blimp project crosses three colleges and is expected to impact thousands of students taking more than 50 courses, ranging from Geographic Information Science, Coastal Field Biology, Geological Oceanography, and Population Ecology to Meteorology, Surveying, Hydrology, and Microclimatology. The brainchild of Michael A. O'Neal, assistant professor of geography, the 60-foot long blimp operates via remote control at altitudes of up to 500 meters with instrument payloads of up to 100 pounds. It has an interchangeable payload design, enabling it to be equipped with a variety of imaging instrumentation, including a laser scanner and visible, ultraviolet, and infrared cameras. Depending on the instrumentation used, researchers will be able to capture data and analyze land-use and land-cover change, geomorphology, climate variability, coastal processes, landfill chemistry, and a broad variety of other environmental phenomena. Manufactured by Galaxy Blimps in Dallas, the airship underwent test runs filming sports events before the University of Delaware purchased it. In addition to the purchase of the blimp itself, which was enabled by Mrs. Ledbetter's donation, the colleges of Arts and Sciences, Engineering, and Marine and Earth Studies provided funds for accessories, including the 20-foot trailer used to transport the blimp when it is deflated. **Ω**

Draft Statement of Objectives for the Long Endurance Multi-INT Vehicle LEMV is posted for Industry comment. 5/29/2009 Dept. of the Army W91260-LEMV

Engineer, design, develop, construct, integrate, test, operate and maintain an unmanned, untethered, hybrid airship with a contractor-supplied, Government-approved payload. Advance the technologies for a system that will be capable of accommodating and powering a heavier payload and operating autonomously for sustained, long endurance (greater than 21 days) operation as a stable, geostationary platform suitable for various payloads. Untethered and unmanned; optionally manned for self-deployment (CONUS operations). Deployable and sustainable at a nominal altitude of 20,000 feet above Mean Sea Level (MSL). Capable of flying missions with weather avoidance and within national and international airspace. Must be able to forward deploy to support extended operations from austere, forward operating locations with a goal of flying 2500 statute mile roundtrip missions, contractor is to assume sole responsibility for platform system performance and assist in Payload-to-Airship integration. Payload must be capable of being recovered intact with interfaces to allow destruction (or zeroed out) to prevent enemy capture if required by the government. Provide an environmental enclosure(s) (as required) and interface(s) for the designated payload(s) that is self-contained. Payload subsystems required to maintain the environment for payload components is to be considered part of the payload with regard to weight and power allocations. The payload bay (gondola) is to be as large as possible in size relative to the 2,500 lbs with plug and play interfaces. The contractor shall ensure the gondola and airship structure is capable of carrying heavier payloads (~5000 lbs.) for designed flights as low as 10,000 feet altitude. Payload bay design must be modular for easy access and testing. Sustain station-keeping at operational altitude for three continuous weeks at the designated demonstration location(s) within following parameters: In the local horizontal plane around the desired station keeping point, the LEMV must remain within a 3.5-km radius circle 50% of the time, within 75 km radius 75% of the time, and within a 150-km radius circle 95% of the time. Nominal cruise operating altitude is 20,000 ft above MSL. Airship stability and control parameters consistent with integration of payload(s) into the airship. Wind speed profile: Airship is to be capable of average cruise speed of 20 knots true airspeed at the nominal cruise altitude carrying a capacity payload over the flight duration. Provide detailed operational template for wind events in excess of the parameters above. The airship shall be capable of a dash speed of 80 knots. Maintain internal environment (humidity, gaseous composition, pressure, electromagnetic, vibration, temperature, etc.) for airship electrical, power and propulsion subsystems. without degradation of performance.

FAA Recognizes Two Master Pilots

NAA's Robert Oerzen, (left) and Leonard Gold

Recently, two outstanding pilots were recognized for their aviation achievements and received the prestigious FAA, Wright Brothers Master Pilot Award*: Robert Oerzen and Leonard Gold. They received the award at the Cradle of Aviation Museum, Long Island, NY. Both fliers started earning their wings shortly after the attack on Pearl Harbor and WWII was knocking on the door of U.S. shores. Although each flyer followed a different path in the military their flying experience expanded and crossed paths after the war as they continued to fly into the next century.

Robert Oerzen joined the Naval Aviation Cadet program in 1942. The race to get pilots trained was constrained in the early days of WWII and Robert was assigned to the civilian flight school at Cornell University. He soloed in a Piper J-3 in October 1942 when WWII was raging. The newspaper headlines in late 1942 told of a second Japanese plane bombing the U.S. West Coast and Japanese submarines shelling an Oregon military base and sinking tankers off the California coastline. German submarines were sinking ships off the East Coast in broad daylight. The first big offensive land battle against the Japanese was underway, the Battle of Guadalcanal, and was yet undecided. There were thousands of Marines who were entrenched in deadly combat while the Navy was trying to stem the "Tokyo Express" which continued to fortify the enemy garrisons.

* The FAA estimates that there are fewer than 600,000 active certificated pilots today. A significantly smaller number of pilots are recognized as Master Pilots, identified as receiving the Wright Brothers Master Pilot Award. The pilots recognized are just over 1,300 as of early 2009. The FAA established the award on Dec. 17, 2003, and recognizes a lifetime of safe flying for pilots who have been active for at least 50 years and who also meet strict eligibility requirements demonstrating pilot professionalism, skill, and aviation expertise.

Robert, upon earning his wings, was assigned to the Naval Air Station at Lakehurst NJ Navy Aviation School and became a Naval Aviator. He joined the lighter-than-air Service and piloted a Navy K-Ship. He was stationed in Tillamook, OR, as part of ZP-33 squadron. From his base he and his crew completed many missions patrolling the coast and keeping enemy submarines on the defensive. At the end of the war there were only 130 [sic] non-rigid airships in Navy operation. Many of today's young pilots may not know what a K-Ship is. Imagine, if you will, a blimp, just over 250 feet in length, longer than a Boeing 747 or 787 and designed for the war at hand.

The K-ship was well equipped with communications gear and instruments for "blind" and night flying which included ASG-type radar with a 90-mile detection radius, Loran long-range navigations systems, and underwater search equipment, such as sonobuoys and MAD (magnetic anomaly detection) gear. During war, the K-ship carried a flight crew of nine skilled men, including a command pilot, one or two co-pilots, two mechanics, two airship riggers, and two radiomen. With the ability to stay in the air for more than 17 hours, an arsenal of depth charges and surface speeds of more than 70 mph and the ability to hover at low altitudes, blimps were well-suited for convoy protection. Rough weather and night flights were no deterrent for airships and by 1943, the number of ships lost to submarines was reduced dramatically. Lighter-than-air helped, Robert said: "The enemy never sank a ship that was escorted by a blimp."

Robert's successful civilian career allowed him to continue flying after the war. He has flown thousands of hours and owned many aircraft over the years. He currently volunteers at the Cradle of Aviation Museum and has consulted with the New England Air Museum, that has restored a K-Ship control car. It is a must see if you've not experienced the magnitude of a lighter-than-air, K-Ship.

Leonard Gold chose to join the U.S. Army Air Corps and soloed in a Stearman PT-17 December 7th 1942. He was stationed in Arizona and California and while in California Leonard flew coastal patrol duty in a P-38 twin engine Lightning and test flew any U.S. aircraft prior to them being sent to the Pacific combat zone. By 1944 he had flown every single engine aircraft in the Army Air Corps and many Navy aircraft. Wanting more action, Leonard asked to transfer to a war zone and in 1944 began flying P-38 fighters for the 9th Air Force in Europe. After completing 25 fighter missions over European skies he joined the 33rd Photo Recognizance squadron flying the very fast but unarmed F-5 model P-38 flying another 75 missions. **Ω**

[Ed. notes: K-ships rec'd sonobuoys very late in WWII.]

History Committee

Roy B. Rogers (standing) with his shipmate Robert Powell, 1918.

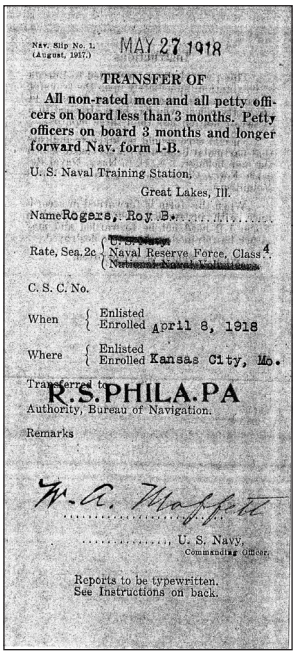
ROY B. ROGERS, SAILOR IN FRANCE

By Donald R. Rogers, with Tim Rogers and Ed.

With the U-boat war going badly for the Allies, the French Army turned over its airships to their Navy. A number of bases were created and others expanded; a station was opened at Paimboeuf, France, and a hangar site was laid out.

When the United States declared war on the Central Powers on 6 APR 17, the US Navy had single air station – Pensacola – and one impractical airship. On 20 MAY 17 the Navy contracted the Goodyear Tire & Rubber Company, then racing to complete its own hangar and hydrogen generating facility near Akron, Ohio, to train the first class of twenty officers in ballooning and, as the first practical airship was then arriving, airship operation. In that first class were Ensign Frederick P. Culbert and Lieutenant Lewis H. Maxfield. On 26 SEP 17 Lieutenant Maxfield, commanding the Naval Air Detachment at Akron, Ohio, reported the qualification of eleven students, including himself, as lighter-than-air pilots and requested their designation as Naval Aviator (Dirigible). These men, the first trained specifically as dirigible pilots, were subsequently assigned Naval Aviator numbers ranging from 94 to 104. (The Navy's first practical scout dirigible, still designated "DN" or Dirigible, Non-rigid, would not arrive at Akron until Christmas.) Military spending quickly grew and Americans prepared to ship out "over there" even before American industry could give them war machinery. Americans had been arriving in France during the fall, and on 1 DEC 17 Naval Air Station Pauillac, France, was established as an active assembly and repair station. On 1 March 1918 the dirigible station at Paimboeuf was taken over by the Americans. LCDR Lewis Maxfield became the commanding officer. With the transition the Astra-Torres #1 was turned over to the Americans and they made their first patrol in it on the 3rd.

The next day Roy B. Rogers, a Camden, Missouri coal miner, was 21 years old. Rogers enlisted in the U.S. Navy Reserve Force four days later at Kansas City, Missouri. He came from a coal miner family with two of his brothers being Navy veterans (another brother was a U.S. Marine).



Nav. Slip No. 1. (August, 1917.) MAY 27 1918

TRANSFER OF

All non-rated men and all petty officers on board less than 3 months. Petty officers on board 3 months and longer forward Nav. form 1-B.

U. S. Naval Training Station,
Great Lakes, Ill.

Name Rogers, Roy B.

Rate, Sea. 2c { ~~U. S. Navy~~ Naval Reserve Force, Class 4 ~~National Naval Volunteers~~

C. S. C. No.

When { Enlisted / Enrolled April 8, 1918

Where { Enlisted / Enrolled Kansas City, Mo.

Transferred to R.S. PHILA. PA

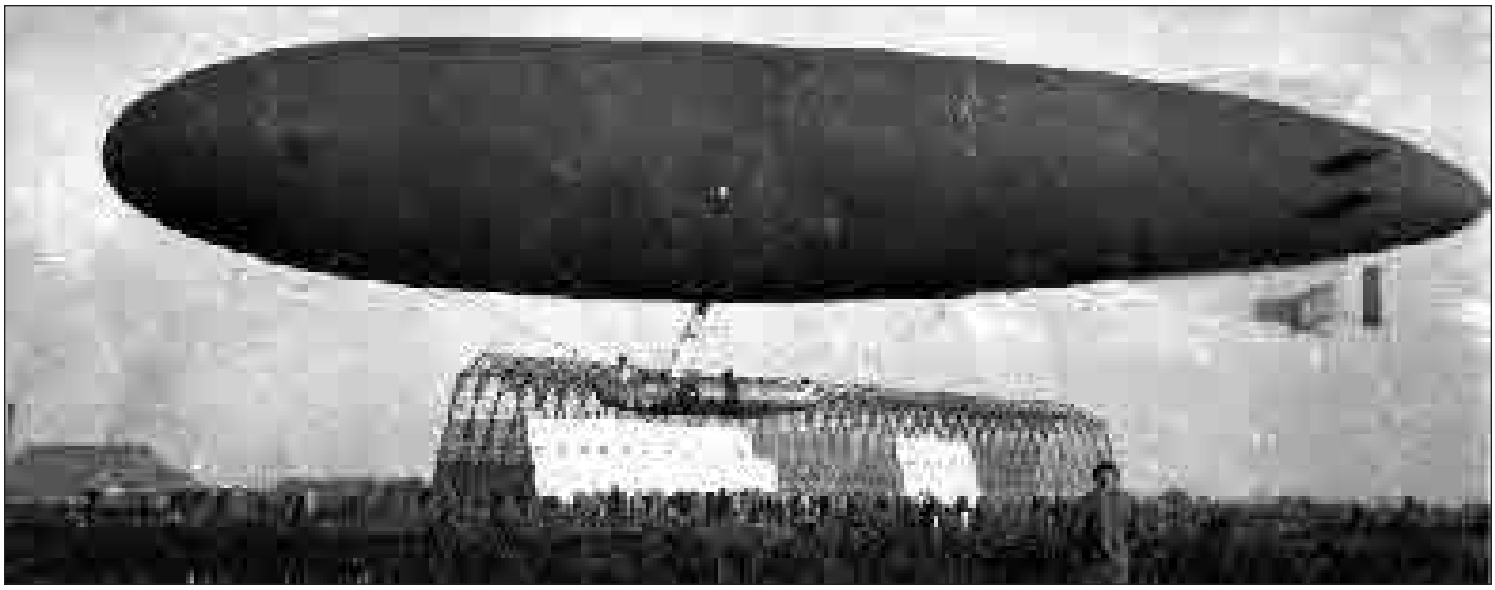
Authority, Bureau of Navigation.

Remarks

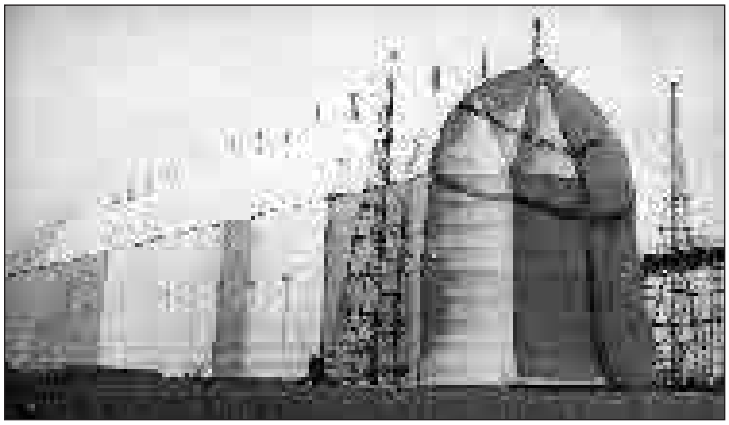
W. A. Moffett
....., U. S. Navy,
Commanding Officer.

Reports to be typewritten.
See Instructions on back.

On May 27, 1918, Roy Rogers was transferred from NTC Great Lakes (paper, above left). The Commanding Officer of the Training Center was William A. Moffett (above right, later RADM). While Rogers had been awaiting orders, Frederick P. Culbert would cited for action. The citation reads: "The Navy Cross is awarded to Lieutenant Frederick P. Culbert, U.S. Navy, for extraordinary heroism on the occasion of the fall of the French dirigible Capitaine Caussin (shown here with the Paimboeuf hangar under construction) on April 25, 1918. Two of the crew of the dirigible were in the nose of the machine and jumped overboard immediately. Being encumbered by their fur-lined coats and boots they

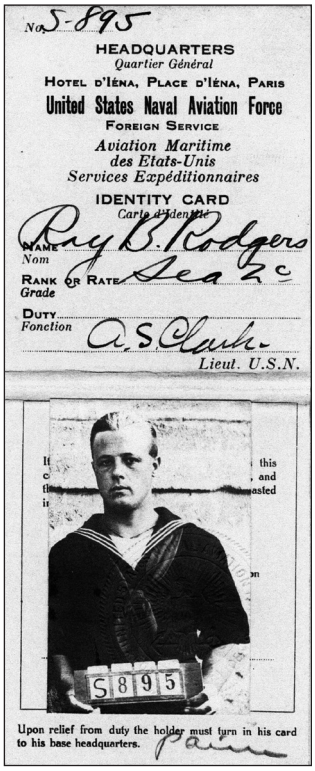


called for help, and Lieutenant Commander Maxfield went to their assistance. When he in turn called for help Lieutenant Culbert went overboard and swam to the assistance of the three who were in danger of drowning." Back in the saddle just two days later, the airship AT-I, commanded by Culbert and a crew including Ensigns Merrill P. Delano, Arthur D. Brewer and Thomas E. McCracken, completed a 25-hour 43-minute flight out of Paimboeuf. Three convoys were escorted through a mined zone. For their flight, the longest on record for an airship of the type, the commanding officer and crew were officially commended by the French Minister of Marine. (Below, hangar and barracks.)



On June 13, Rogers was shipped via the U.S.S. George Washington to St. Nazarire, France, and transferred to USNARS Pauillac, France, on July 2, 1918. Commanding officer at Pauillac was the record-setting and decorated Lieutenant Frederick P. Culbert. Rogers was soon transferred to N.A.S. Paimboeuf, France, where his commanding officer was L. H. Maxfield.

(Below; Roy earned promotion to Seaman First Class on 1 SEP 18 and it was signed by Maxfield, below left.)



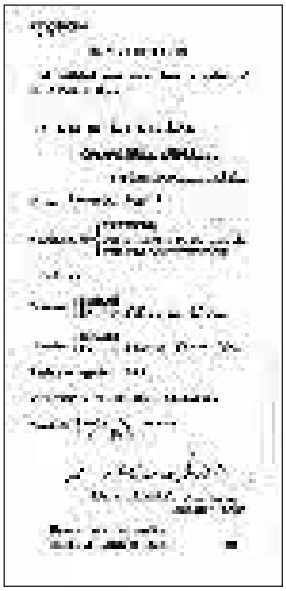
No. 5-895

HEADQUARTERS
Quartier Général
HOTEL D'IÉNA, PLACE D'IÉNA, PARIS
United States Naval Aviation Force
FOREIGN SERVICE
Aviation Maritime des Etats-Unis Services Expéditionnaires
IDENTITY CARD
Carte d'identité

NAME *Nom* Roy B. Rodgers
RANK OR RATE *Grade* Sea 2c
DUTY *Fonction* A. S. Clark
Lieut. U.S.N.

5895

Upon relief from duty the holder must turn in his card to his base headquarters.

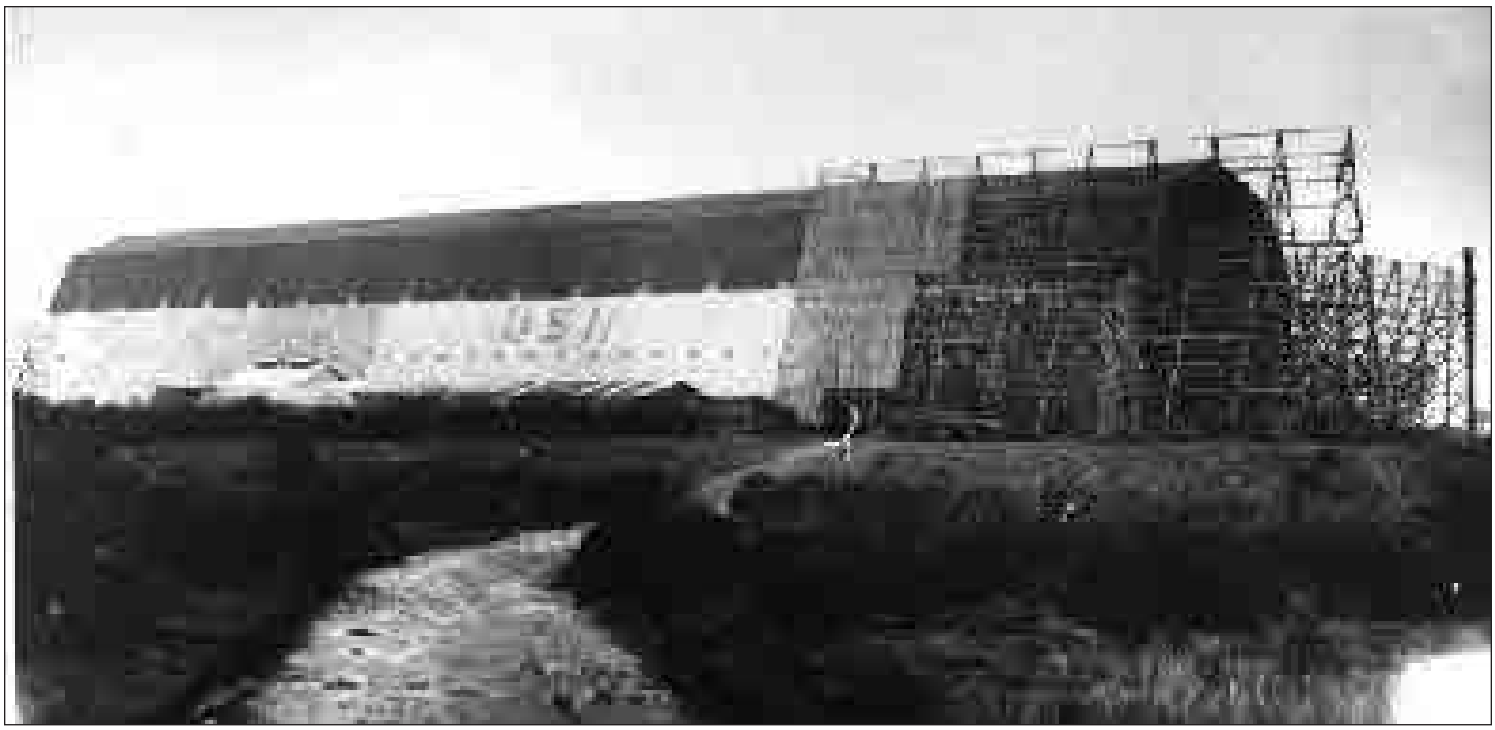


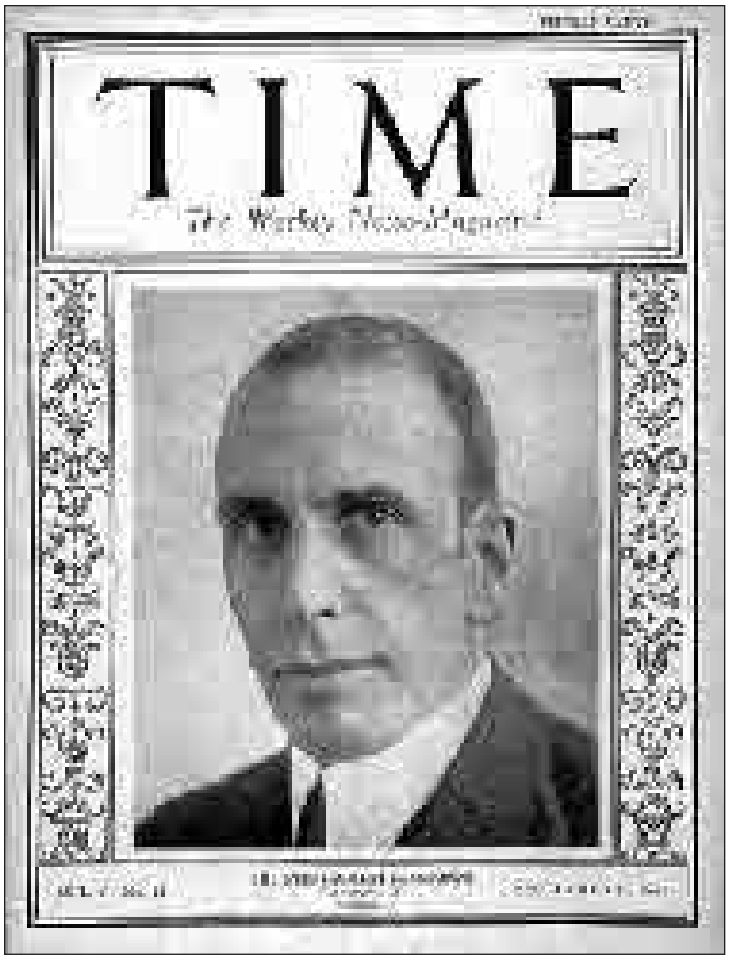
Rogers' primary duties were construction, freight handling and public works. Paimboeuf grew to a complement of 4 airships, 30 officers and 477 enlisted men. The Americans flying AT and VZ airships escorted convoys in the Bay of Biscay as well as the English and St. George's Channels. On 9 JUN 1918 a submarine listening device was tested on AT-1. On August 7th Asst. Sec Nav Franklin Roosevelt took a ride in AT-1. (See TNB 79: Griffin and Rogers must have seen each other.)There had been 257 flights totaling 1,538.5 hours covering 48,000 miles when the Armistice was signed November 11, 1918. In spite of hydrogen ships having to be ripped to save them for later repair, and various other hickups, there were no airships lost or personnel killed.

(Below: Guipavas, the second French airship station given to the Americans, shows its hangar markings; it was too late to see action. Photo: **Robert Feuilloy**, from his book *Les Dirigeables de la Marine Française)*

Roy was shipped from Paimboeuf, France on the U.S.S *Susquehanna*, arriving in time to be home for Christmas leave. (The day after Christmas, Ensign Thomas E. Maytham, piloting a B-type airship, completed a flight from Key West to Tampa, Cape Sable, Palm Beach, and back that covered approximately 690 miles. This bettered his earlier endurance mark of 32 hours with a continuous flight of 40 hours 26 minutes. Although recognized only as an American record, this time surpassed, by more than 25 hours, the existing world mark.)

Rogers spent his remaining Naval Service at shore stations and Caribbean fleet ships. He was ordered to inactive duty December 20, 1919, and returned home. He received an Honorable Discharge on September 30, 1921. Roy returned to work as a coal miner and railroad "gandy dancer." Rogers' story was given special attention by the National Archives in 2007. **Ω**





Most of USS *Shenendoah's* success as a pioneering platform for large scale use of non-flammable helium gas in airships should be credited to the skill, perseverance and determination of her commander, **Zachary Lansdowne**, (December 1, 1888-September 3, 1925.) Helium, which at the time was available in quantity only in the United States, was considered a "natural resource blessing" by American airship proponents. Realistically, there were times the LTA operators felt like the "blessing" was being rammed down their throats. Politics and money played a huge role even "way back when"... with helium, in the end, it can surely be safely said that at least the American taxpayer and the LTA (as well as medical, industrial and scientific) world got a true, tangible benefit which endures to this day.

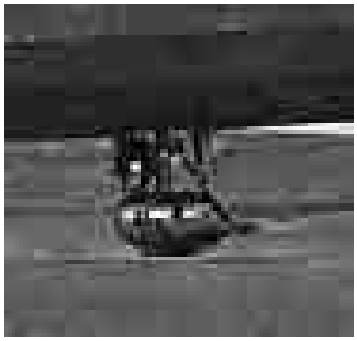
With strong political support from the congressional delegations of the "gas" states (as well as the "Blue Water Navy" and "Industrial" states) airship programs in the U.S. looked to lead the LTA trends throughout the world with "safe, long-ranged dirigibles" as "airshipmen's greatest fear, fire, was now a thing of the past! " US Navy rigid airship USS *Shenandoah* (ZR-1) had initially demonstrated the safety and practicality of helium for airship use on a large scale when she first flew in September 1923. The cost of $122 per thousand cubic feet of helium (versus $2-$3 for hydrogen) was considered "worth it" so that (as one Congressman put it) "None of our boys will have to be sent up with dangerous hydrogen gas." With 77 personnel killed in a six-month period in hydrogen-related accidents to the British-built R-38 (tentatively purchased by the US Navy as ZR-2) and US Army's Italian-built semi-rigid airship Roma still fresh in memory, helium did indeed seem like a wise move, despite the astronomically greater costs.

Cost was not the only factor. There was also the reduced lifting capacity of helium vs. hydrogen (92.6%.) Coupled with the fact that the helium produced at the time was only about 90% pure and the further reality that the ship could only be inflated about 90%-92% to allow for a sufficient "pressure height, " the actual results were rather appalling. German Zeppelin L-49, on which the ZR-1 was modeled, had 1,970,000 cubic feet of hydrogen in 18 gas cells for a useful lift of 87,200 lbs .according to her original "lift and trim" (weight and balance) figures copied by Douglas H. Robinson from a notebook belonging to Dr. Arnstein in 1955. The slightly larger ZR-1 with 2,115,100 cubic feet of helium in 20 cells had original "lift and trim" (weight and balance) figures showing only 53,600 lbs (!) of useful lift. (True, there was a difference in overall design "weight" but this was only a few thousand pounds.) In the period of overhaul/ repair following the famous "mast breakaway" flight of January 16, 1924, there were various modifications made to the *Shenendoah*. Nose mooring was reinforced, and tail fins which had shown signs of weakness were strengthened, while wireless communication and cooking equipment was augmented for long-duration flight. (In keeping with moderate concerns expressed by NACA regarding the overall strength of the copied German "height climber" structure and the belief that the ship should not be flown above 50 knots, the #6 Packard engine abaft the control car was removed.) Also, keeping in mind that the initial "test period" was clearly finished and now helium conservation would be of paramount importance, the first set of Exhaust-Gas "Water Recovery Condenser Units" were fitted to Engines #1, #4, and #5.

Lieutenant Commander Zachary Lansdowne (USNA, 1909) had reported in February 1924 to take command of the ship. While aware of the political and PR importance of selling helium as a "cutting edge technology asset" even Lansdowne must have been shocked at the revised "weight and balance" figures for the *Shenandoah* on her first post-repair test-flight of May 22, 1924. Despite the removal of the #6 engine, useful lift went down 10% (from 53,600 lbs, to only 47,500 lbs.) while exhaust "back pressure" and "drag" from the water recovery condensers reduced the ship's standard speed from 42 to 36 knots! (When it was suggested that he should add water-recovery units to Engines #2 & #3, Lansdowne flat-out refused.)

Yet with tight budgets, sporadic helium supplies on a hand-to-mouth basis, a basically obsolete

airship and tremendous operational handicaps underfoot, Lansdowne and his incredibly-resourceful crew "made it work." Of the 740 hours put on the Shenandoah, 605.5 hours' flight time took place after Zachary Lansdowne assumed command.



[Left: Water Recovery condenser can be seen on ZR-1 as she swung at the North Island mast in 1924. NARA/ED]

It was an impressive list of "firsts" for an experimental airship and pioneering crew being pushed at (and often beyond) the limits of their performance capability through superb training and discipline. Helium was the life blood of their operation and every effort was made to conserve it. "I will never pull the top valves unless absolutely necessary! We can minimize or totally avoid loss of gas if we plan our schedules correctly using superheat for takeoff!" Lansdowne once wrote.

On another occasion, he penned "If we had 40 or 50 airships like the Germans did, losing one occasionally would be inconsequential....I do not believe the *Shenandoah* should fly unless it is in first class condition!" *Shenandoah* was lost in a line squall over Ohio with her Commander and 13 others out of 43 aboard killed on September 3, 1925. TIME Magazine published Zachary Lansdowne's picture on the cover with the caption "Let Trumpets Roar!" and even nearly 85 years later, the Navy's first rigid airship stands out as wonderful story of dedication, determination and resourcefulness by a crew and a commander who stood out as the ELITE of Naval Aviation.

The story of the *Shenandoah* and Zachary Lansdowne is at the forefront of the story of helium and its use in modern aeronautics and technology. It is probably fitting to have a rather LARGE debate (someday) about gas valves, helium supplies, political/professional pressures and operational "realities" but as we look upon the history and see a SUM even GREATER THAN ITS PARTS, let us not forget the "Determination and Heroism." Indeed, as that TIME cover said so long ago, "Let Trumpets Roar!"

- Rick Zitarosa Ω

90TH ANNIVERSARY

PASSES UNHERALDED

Though hydro- and land-aeroplane jockeys had grabbed fame and fortune by hopping, sailing (and crashing) with the wind across "the pond," the bold crew of the British R.34 quietly flew from city to city against the wind to make the first practical air crossing of the Atlantic (and back!) ninety years ago. Pulling weight with that crew was an American in training, LCDR Zachary Lansdowne, (below, far left) the first American to actually fly the Atlantic. Has the reader ever met a non-NAA member who had heard of their achievement?

Lansdowne's selection for the next great LTA experiment may be no more complicated than the selection of the ship, the C-7, having just then been ripped and in line for re-inflation; the literature does not state why this war veteran got the job. Why the test was necessary is known. C.W. Seibel, in his book Helium, Child of the Sun, cheerfully confesses the Bureau of Mines hoped the Roma/ZR-2 accidents would keep their helium empire funded in the postwar drawdown. Seibel wrote:

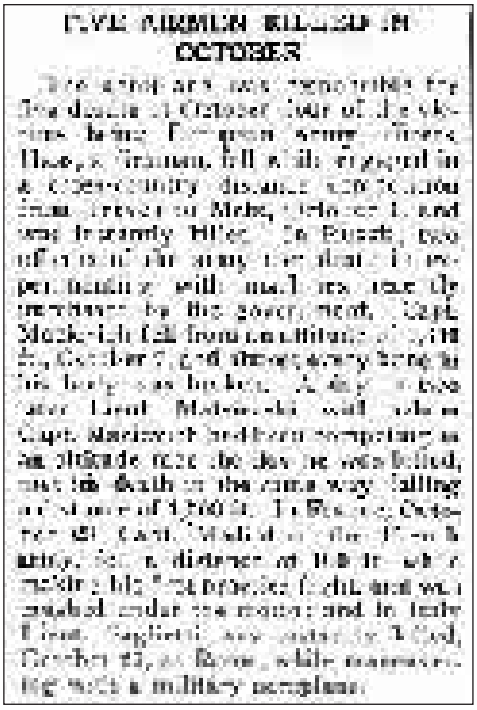
"With this history of lighter-than-air craft, it was not strange that early in December 1922, Dr. Moore was greatly concerned over the coming hearings which were to consider the future of the airship program. With a worried look, he told me a Congressional Appropriations Committee would consider the question on December 5, and he felt that a demonstration was needed to show the hazards of hydrogen and the advantages of helium. I suggested a simple experiment using two toy balloons, each filled with one of the two gases. He liked the idea. As the Congressional Committee watched, Dr. Moore proceeded with the experiment. Holding a helium-filled yellow balloon at the end of a string, he applied a burning taper. His hand was trembling and the wobbling taper merely seared a spot on the balloon, weakening it enough for the gas to escape with a hissing sound, but without bursting the balloon. When the taper was applied to the red balloon filled with hydrogen, there was a terrific explosion. The windows were rocked, and Congressmen raised out of their seats. Dr. Moore must have been as surprised as any member of the group, but

he never batted an eye. 'Gentlemen,' he said, 'if any of your boys are flying in military balloons or airships, do you want their ships filled with helium or will you be satisfied if they use hydrogen?' Afterwards, a member of the group said, 'We can't make the Army and Navy use helium, but we can say that none of the money we appropriate can be utilized to fill balloons or airships with hydrogen.' From that day on there was never a question about the advisability of using helium in lighter-than-air craft. Later, with a twinkle in his eye, Moore accused me of adding some air to the red balloon to create an explosive mixture—something I never admitted." This fraud has never been challenged to this day.

In the NARA C-7 photo below, these civil servants who benefited from the congressmen not checking their high school chemistry (concerning the buoyancy/containment of explosive contaminations) are all smiles. Dr. Moore is on the extreme right. If the sailors look less than excited – even the irrepressible Lansdowne does not seem jubilant – perhaps it's because they realized flying, as they knew it, was over for the remainder of their careers. Lansdowne, who'd flown combat patrols under hydrogen, again found himself charged with making this largess look good when he was handed the ZR-1 mess less than two years later.

While hydrogen did not cause the crashes of either the Roma or ZR-2, the helium policy was fingered as leading to the ZR-1 structure failing during the Ohio thunderstorm. Politically incorrect Anton Heinen made himself unpopular by telling the press he could have taken Los Angeles in ZR-1's wake under hydrogen with no problem. "Those valves were put there for a purpose!" Heinen blabbed to the newspapers, unwilling to see the "Emperor's new clothes." So what was different about the loss of ZR-1 than, say, the gruesome July 1953 fireball crash of the Navy Fairchild R4Q Packet that killed thirty-eight of the forty midshipmen passengers (a still-standing Academy record)? In 1925, the loss of fourteen sailors in a single air crash was still unthinkable. Yet even in the midst of the "Billy" Mitchell trial in which Zack's widow gave emotional testimony lamenting his death having come not scouting for the fleet, but keeping a Congressional-driven show schedule, no one listened to Heinen or questioned the PT Barnum-style sham that so effected airship development for the remainder of the century. Perhaps the largest tragedy was that such an outstanding officer (and crew and ship) was lost to a policy whose perpetrators were unaffected by their actions.

- R.G. Van Treuren Ω


FIVE AIRMEN KILLED IN OCTOBER

Ed. Note: As HTA moves to celebrate the 100th anniversary of exhibition "powered flight," as they are fond of calling it, we should note they rarely include the harsh reality that early aero-planes were death traps, killing more than 1,000 people – mostly pilots – before World War One. The citigas-filled "rubber cows" of those days wowed the crowds, even carrying passengers, with very few deadly accidents 1900-1914. **Ω**

Kay Keating, 87, passed 23 MAY 09. Keating was a Colorado Women's Hall of Fame inductee whom fellow NAA members will remember from the 1999 Denver Reunion. Keating was a seaman recruit in WWII, saw duty in Korea and Viet Nam, and was one of the first women to reach the rank of Captain in the Navy. Retiring in 1972, she ran a bed and breakfast, and collected and refurbished old horse-drawn carriages. **Ω**

George West Roberts, passed 11 JUN 09. Retired Master Chief Bowswain's Mate, Roberts was the last known member of the K-72 crew that attacked a sound contact with a homing torpedo on 18 APR 45. He was active with the History Committee's effort to investigate this combat. **Ω**

Ernest W. Clark, 86, passed 29 JUN 08. He served his country with distinction in the United States Navy during World War II. He saw duty at Houma, LA, and with Headron 2. Mr. Clark was a firefighter for many years with the Boston Fire Dept. and then served with the U.S. Postal Service for 32 years at the Boston South Postal Annex. He is survived by his wife Mildred, five children and many grandchildren and great grandchildren. **Ω**

LIGHTER SIDE OF LTA

As if we needed more evidence that blimps and submarines are paternal twins...

READY ROOM

THE AIRSHIP ASSOCIATION (U.K.)

35th Annual Joint Airship Symposium
with the Royal Aeronautical Society

Wednesday 11th November 2009
The Argyle Room at The Royal Aeronautical Society 4 Hamilton Place, London W1J 7BQ

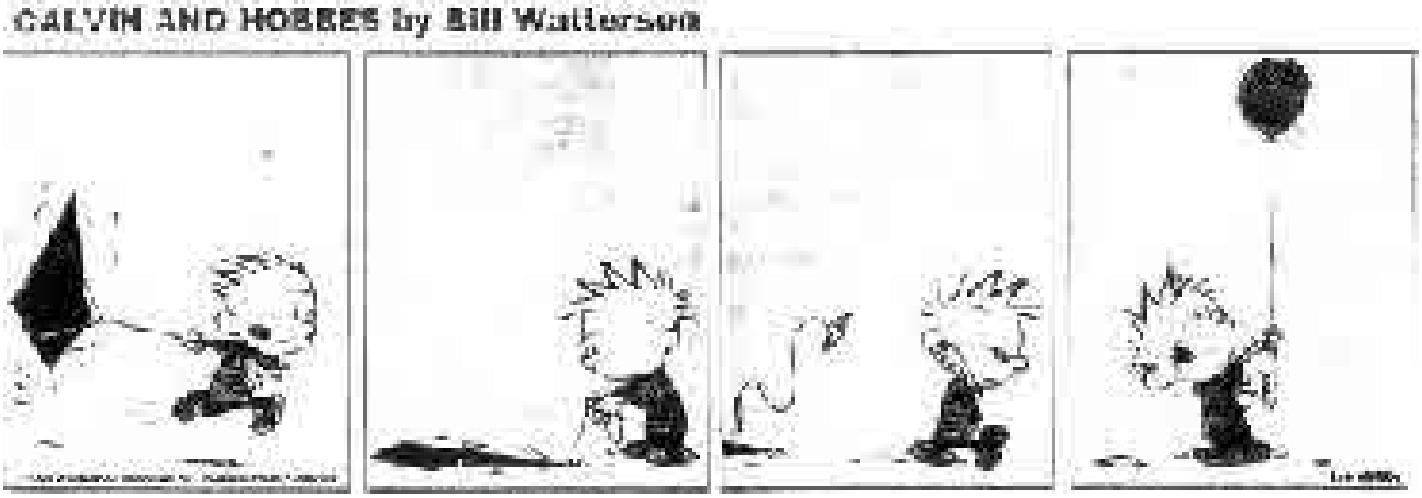
Speakers:
1. Professor Francisco A. González Redondo of La Universidad Complutense de Madrid
Subject : Torres Quevedo and the British RNAS tri-lobe blimps

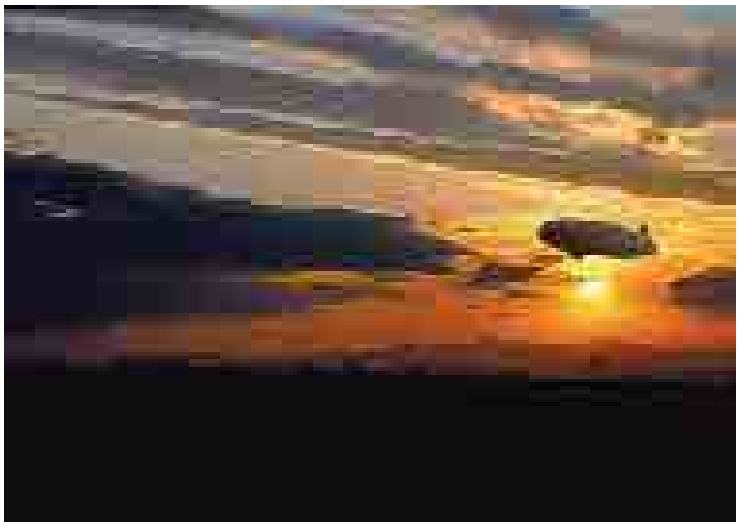
2. Mr Rob Mayfield
Subject: Skyhook Project Developments

3. Mr Erwin Krijger of Aerwin Ltd
Subject: Recent LTA Developments in The Netherlands

Doors open: 6.00 pm
Tea and biscuits: 6.30 pm
Presentations begin: 7.00 pm

Free to members,
non-members pay a modest entry fee.





Clockwise from upper left: Lightship contracted to M Resorts in Las Vegas (Paul Adams); Instrument Airship sponsored by College patron (Photo by Doug Baker, see story inside); Nippon Airships ZEP NT #02 in Japan (H. Watanabe); Ecuadorian Air Force personnel in training in the operation of Mexican twelve- meter blimp (A. P. Cervantes, see story in "Pigeon Cote.")
Below: Your helium tax dollars at work… Hawaiians… in Antarctica! (NASA, see story inside.)


SkyHook HLV