THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 84 WINTER 2009

LAKEHURST TRANSITION

ZP2K airship from ZP-2 Glynco, Georgia is shown at GTMO, Cuba in 1952 in these two photos submitted by Mike Kolsa.

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On the Covers of TNB #84:
Front: Now old Hangar One, seen clearly in this photo by **Paul Adams** from his airship, will have a new leadership team. See Shore Establishments-Lakehurst report.

Inside Front (at left); Once again we are blessed with two terrific color images from Mike Kolsa, these two from Cuba. See a related GTMO story in "Pigeon Cote."

Inside Back Top: The eventual winner (Golden Eyes) inflates next to the 13th place finisher. See Peter Cumo's report and other photos on Gordon Bennett '09. Bottom: Robert Feuilloy supplied this amazing colorized image of WWI French airshipmen and their AT-ship. Americans were given and flew another AT airship in 1918. Member Robert, author of the definitive work "Les Dirigeables de la Marine Française," was so kind to offer an English-language synopsis for this issue, with more information on the subject than has ever been published in the English language. Enjoy!

Back Cover: Long-awaited photo of HALE-D awaiting funding for flight and a striking graphic of the proposed LEMV, both from Lockheed-Martin.

"What!? You still haven't renewed for '10?" Communications officer at South Weymouth in May '44. Walter Pilsbury, advises you to send in your dues! (NARA Photo via **Mark Frattasio**)

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www.naval-airships.org

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EDITORIAL

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Graced as we are again this issue with little-known and never-before published subjects by our activist members, the task of assembling what is becoming our nation's foremost LTA magazine would be thrilling enough. Yet history is now being made as well, with new airships being built and records falling even in the longtime sport of gas ballooning. So we are blessed that new work is continuing on our earliest and most obscure histories, and we will continue to search for the perfect mix of old and new for our three dozen pages.

Meanwhile, former NAA member William Althoff's long-awaited USNI-published WWII LTA history is out, and reviewed herein by **C.P. Hall**. USNI has a wide audience and Bill's book will receive mainstream attention. While it seems obvious anyone with LTA interest would become a NAA member, Bill has his reasons for not renewing. One of these I never would have suspected.

My copy of *FORGOTTEN WEAPON* now sports dozens of sticky notes, and I have invited Bill to a discussion of certain points here in our pages. I see this as useful, for Bill's book is the only WWII LTA history published by USNI in nearly two decades. (The last was our own **Gordon Vaeth's** BLIMPS & U-BOATS back in 1991. Looks to me that Bill's book, in spite of his Ramsey fellowship at NASM, shows this USNI heritage.) If our discussion starts next issue, it will hopefully entice experienced members to join in with their views.

Earlier USNI leadership had been LTA-tolerant, publishing articles by Bill, myself and others. Those currently at the helm took their sweet time with this former NASM Ramsey Fellow's study. As of this writing USNI hasn't even reviewed their own book in their magazine(s) and (of course) ignored mine. Bill suggests that, as an LTA advocate, my ASW conclusions are dismissed in the mainstream. He cited people – even former NAA officers – who said, in so many words, that since I believed veteran's insistence that there had actually been airship-vs.-submarine combats, I would tend to "find" these actions, thereby clouding the study's objectivity. (!) I plead guilty as charged. Yet I do not believe even if an institution offered a salary to be "objective" I could ignore the HTA safety record or would distance myself from NAA membership least the combats, when verified from both American and German records, would, while undeniable, nonetheless be blown off.

I devoted a chapter to ASW accounts jaded by advocacy; I cite one example of a single WWII action told as many different ways as there were organizations participating. The rule rather than the exception, one needs look no further than the average aerospace history to see airplanes glorified and LTA ignored or marginalized.

Herman Van Dyk just sent me the beautiful book *TAKING FLIGHT* by NASM Professor R. P. Hallion. Illustrated with pretty aeroplane pictures, it, for example, shows the successful flight of Langley's "aerodrome" model and the full-scale vehicle awaiting launch. In our new video *THE EARLY DAYS* we instead show the "Aerodrome" crashing into the river. Both are factual; which is jaded? The NASM author did not think it necessary to point out more than 1,000 people had been killed in aeroplane crashes before WWI, but you can guess what he did emphasize about LTA. Two new early aviation books are reviewed in the November *AIR & SPACE*. Dr. Tom Crouch charges anti-Wright bias in a review of a book covering 1910 aviation achievements without mentioning how the Wright airplane killed the US Army's Lt. Selfridge two years earlier. It does mention Wellman's failure to cross the Atlantic in his airship America. "Objective," or is the history just being written by the winners (as usual) or people who want to sell books by supporting the status quo?

A recent USNI article by a P-3 officer awaiting command of a P-8 squadron recently proclaimed his airplanes perform ASW, humanitarian aid, disaster relief, etc., without acknowledging the former airliners are most efficient at high altitude rather than down at survivor's level. (See Short Lines)

This attitude is eventually going to change as aerospace folks come to grips with the realities imposed by today's materials and fuels. We have built the largest airplane (25 cm wider than the 747) and the largest helicopter, since the limits of strength vs. weight and BTU weight/storage would hereafter decimate payload. Thomas Jefferson looked at the first French balloon in America and mused, "We could use that to move things!" A couple of centuries and a quarter later the wait may finally be over.

Likewise when they try to locate the new ultra-quiet, fuel-cell-powered, low-ferrous-steel submarines, they might consider how Zep NT #1 carried equipment sensitive enough to detect variations in the Earth's gravity - and that while enduring the wild environment of South Africa. It's no longer the lonely NAA member voice in the wilderness; it's the likes of Boeing and Lockheed whose actions speak louder than words. Hecklers take note. **Ω**

View From The Top: PRESIDENT'S MESSAGE

The Executive Council met on November 14, 2009, at the home of Debbie and Richard Van Treuren, Edgewater, FL. All members were present.

NAA Executive Committee meets November 14, 2009, in the office of Noon Balloon Editor Richard Van Treuren.

Following approval of past minutes and the Treasurer's report, committee members made their presentations, which were approved.

Pete Brouwer gave a presentation on behalf of the Site Selection Committee for our next reunion. The Site Committee considered several options and recommended the Reunion be held September 24-26, 2010, at Moffett Field, CA. The Council gave their approval. Members will be given complete details via personal direct mail. Additional publicity and details will be publicized in future issues of the Noon Balloon.

Joe Hajcak, liaison for the National Naval Aviation Museum will assume additional responsibilities as liaison for the Naval Aviation Museum Foundation.

Mort Eckhouse (FL) former Executive Council Member, has accepted an appointment as Chairman, Officers Nominating Committee. He will be assisted by Albert Robbins (IN) and Bob Forand (MA). Both are veteran members of the NAA. A search for two additional members is continuing; preferably from member representation in the western part of our country.

Our ***Noon Balloon*** is rapidly becoming recognized as among the top of leading not-for-profit aeronautical publications. We are striving to become the best. Bob Ashford has proposed submission deadlines for articles sent by our Membership to our Editor. There are countless stories of historical value and human interest which lie dormant in human minds. I strongly encourage all Members having such stories, to send them to our Editor to be published and cherished by our younger generations. I am grateful for the contributions sent by our regular writers, and am hopeful they will continue. **Ω**

- Herm Spahr

Attendees at the November 14 Executive Committee included, front row seated: Betty Brouwer, Peter Brouwer, Robert Ashford, Norman Mayer, George Allen and Dottie Allen. Back row: Richard Van Treuren, Fred Morin, Joe Hacjak, Herman Spahr, Margaret Mayer and Phyllis Ashford.

NAVAL AIRSHIP ASSOCIATION, INC.

U.S. NAVY

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Newsletter of the NAA

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MEMBERSHIP COMMITTEE UPDATE

As this column, #7, follows quickly after the Reunion issue column, it will be brief. We are still in the process of a direct mailing to the history departments at colleges and universities and are trying to establish a mailing list for military history groups, aviation historical societies and research groups. Outlets for placing an advertisement for the NAA are still a consideration. Member **Walter Lion** of Great Neck, NY, emailed with a suggestion of placing our brochures in the day rooms and libraries at the Merchant Marine Academies and this is being pursued. If anyone has similar contacts at military schools, etc., please let us know.

Due to an oversight, when you receive your copy of the 2009-2010 edition of the Membership Directory, **Donna Forand** was not listed under the Membership Committee. In TNB #82, her appointment to the committee was announced. We also anticipate adding a few additional members before the end of the year.

Finally, 2011 marks the centennial of Naval Aviation. The Navy will be publishing a quarterly newsletter beginning this December through 2010 and then monthly starting in 2011. The NAA has been asked to contribute articles on the role of LTA. In conjunction with the History Committee we will be producing a number of articles to highlight US Navy LTA from 1915 through present day activities for submittal to the Navy. From a membership standpoint this publicity should help expose the NAA to a broad range of potential members while highlighting the contribution LTA played in Naval Aviation. When the Navy website is up and running we will publish the address for anyone interested in seeing the newsletter.

As always, we are looking for ideas and suggestions to publicize Navy LTA and to increase membership. Please contact us with any thoughts. **Ω**

- Fred Morin, Chairman

2009 /2010 Membership Directories have been mailed and should have been received just forward of the time TNB #83 arrived at your address.

TREASURER'S STRONGBOX

Greetings once again to our NAA shipmates! I hope that all of you and yours are well and in good spirits. I do not have much to offer at this time except to remind everyone it is very important that you contact me regarding any changes in your mailing address, phone number or internet e-mail address.

Snowbirds!! Please take care of your own arrangements with the post office regarding the forwarding of the Noon Balloon. The Noon Balloon is mailed out bulk mail and the post office will not forward the magazine. You do not want to miss any issues!

Watch the mail for your renewal notice for the year 2010. Please be prompt in your payment. This will be appreciated.

WELCOME TO OUR NEWEST MEMBERS

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

DONATIONS

Joanne Wartman (H)
Cecelia T. Staley (H)
James D. Sandoz
Helen M. Horan (H)

- Peter F. Brouwer Secretary/Treasurer

Pete also called attention to these web sites…
www.roadsideamerica.com/story/10432
www.noblecountyohio.com
… and to recognize Bryan & Theresa Rayner, PO Box 41, Ava, OH 43711-0041 for their efforts in preserving the history of the ZR-1, USS *SHENENDOAH*. **Ω**

PIGEON COTE

Marion Tigert wrote, "The article mentioning that the pilot may have been the only one qualified in all four flight systems brought to mind a friend of mine, Richard (Dick) Munroe who was in ZP2, Glynco, GA, from 1952-54. Dick went with a group of us directly from fixed-wing training for LTA transition. However, his advanced fixed-wing training was single engine while, most if not all, the rest of us were less adventurous and went through multi-engine advance training. We all flew the F6F, SBD, and C-45 to maintain proficiency while at Glynco. Dick left, moved to Colorado in 1954 and joined an Air Force reserve jet fighter unit where he transitioned. He later moved to Montana where he joined the Air National Guard and became a qualified helicopter pilot. Of course these gents are unique but they may not be the only ones when we consider the pre- and post-activities of later poopy baggers.

Now for two of my somewhat unique experiences:

1. I am likely the only pilot to have stood on an aircraft instrument panel while the aircraft was in flight. This occurred at the end of a flight from Lakehurst to Glynco. The airship was neutral to light as we hurriedly made our landing approach in order to beat an approaching storm. We were not wearing seat belts as usual because blimps were so safe. An updraft caught the ship taking it to about 1,500 feet tail up, nose down. Full throttle was added to get some flight speed and elevator control, and alls well that ends well.

2. This one took place at Gtmo when I was O-In-C of an advanced base detachment. Gtmo has (had) two runways one of which was nice and long and the other rather short with the latter having a hill at one end of it. Gtmo aircraft were parked on a large portion of the long runway. I, a Lt, was reluctant to bother senior officers. I decided to start the launch toward the hill which would be directly into the wind. These ships, (loaded with very inexpensive alcohol, supplies, etc.) were to start an anticipatory right turn so as to go down the cleared longer runway. The two ships that I launched this way were still firmly on the ground when they started their right turn. There was a fair amount of wind (maybe 20 knots) and as the ships began their turn they tipped so far to the right as the wind caught them that I swear the props couldn't have cleared the ground more than six inches. There were no more launches until the fixed wing aircraft were cleared of the long runway." **Ω**

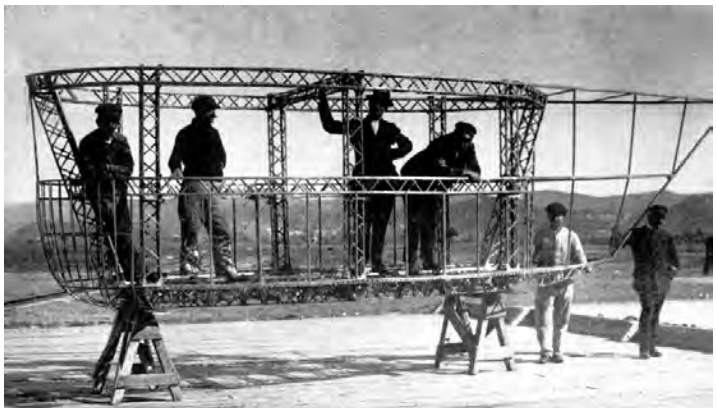
Harry Titus shared another PPB entry: "Margaret Anderson sent a copy of her husband's report of the K-21's attack on a possible sub. It occurred 1 JUN 1943, 23 miles 270-TRUE from Oceanside, Calif. He had sighted an oil slick approximately 300 feet long and 75 feet wide. After a positive MAD contact, two bronze slicks were dropped to monitor the oil slick's movement. MAD indicated a right turn to the target. Following along and getting other contacts, four more bronze slicks were dropped before climbing to 500 feet where two bombs were released. With only one exploding, the airship remained away for 3 minutes. Other than a black area caused by the one explosion and what might be a fresh oil slick, no further contact was made. He was relieved by the K-20 and his report to Operations stated that the MAD worked fine except when a change in engine speed was necessitated; however, during MAD runs, a constant RPM was maintained; that the bombs dropped by the 1st Rigger at his instruction fell true; and that the crew did an exceptional job. This narrative is a condensation of what he reported.

(1917 photo courtesy Robert Feuilloy, from his book "Les Dirigeables de la Marine Française").

Had both a call and a letter from Gordon Cousins telling me of an inaccuracy (really?) in the last PBB regarding the sole survivor of the AKRON. Unfortunately, I think I dumped it from the computer. The correct answer: Wiley, Erwin and Deal. Since I don't keep copies of correspondence once I enter it, I'm not sure what I was trying to say but that's not too unusual for me. Gordon has an 8x10 of the first post-war class of commissioned officers and he listed a lot of their names: Keiser, Holmes, Stannard, Anderson, Wise, McNaughton, DeLauer, Buswell, Davis, Eberley, Ambrose, Callahan, Madden, Dunn, McCormich, Clark, Swanson, Lane, Shively; Hughes, Collins, Madigan, Boyd, Anderson and Seiberlich. No, he says it's not a great memory. The names were written on the back of the picture. He also mentioned Pierce Brooks from a refresher course. Incidentally, Pierce was involved in the "Onion Field" murders as a member of the LAPD. LAPD officer Wambaugh wrote a brilliant story about that crime. Brooks remembers McCloskey climbing up on the top of those Poopies and of having to change engines while swinging at the mast, an exercise that caused a few mishaps such as a hole in the bag or an engine on the ground. Ah, yes, I remember. **Ω**

The EAA magazine *SPORT AVIATION* August issue featured an in-depth, well-illustrated article by Meg Godlewski entitled *"Flying A Zeppelin."* She enrolled in the rather pricey pilot's course (nearly $3G). One of the many photos she took for the article is seen below. Ω

Several members wrote in with discussion of **Herman Van Dyk's** *history of the* L-72/Dixmude *last issue.* **Andreas Horn** *offered photos that cleared up some of the ambiguity in the literature, suggesting changes to Herman's drawing. The French-built add-on observation car is seen below in a construction photo from* **Robert Feuilloy**, *as well as a striking view taken aloft from that very perch, looking forward:*



Rick Zitarosa pointed out we ran an incorrect photo that was not L-72, but of another Zeppelin's twin-engine car. Also thanks to Robert Feuilloy the actual Dixmude lower engine car appears below.

Rick also wrote, "Enjoyed **Herman Van Dyk's** Dixmude article but would like to point out a few things. With Hugo Eckener looking to re-launch commercial Zeppelin service in the post-war market, it was naturally in his best interest to downplay the dangers of hydrogen gas and blame the loss of the ship on the inexperience of its French operators. It is interesting to note that while Eckener rightly pointed out the "T.B.O." (time between overhaul) limitations of the main bearings on the Maybach MbIVa engines for long-endurance flights, he himself was at one point willing to go along with a scheme concocted by Ernst Lehmann to fly the same ship across the Atlantic and back in the period before it was handed over to France.

The original German gas cells of the LZ114/L72/Dixmude were two years old when the ship first flew, nearing the end of their useful life and very porous. (unlike modern synthetic materials, cells did not have a "shelf life." Though they would suffer from humidity, chafing, etc. in regular flight operations, they could be damaged if hung empty inside a ship for any length of time, if they were stored in a folded condition for too long, if they were stored in the wrong conditions of temperature/humidity and if rats or mice invaded the area.

Originally intended for absolute high-altitude performance with the lightest possible gas cells made from silk lined with goldbeater's skin (cattle gut) the ship probably had a mix of "skin" cells made from both silk and HH-grade cotton cloth when she was delivered to France. All Zeppelin gas cells of the period were manufactured by the wholly-owned subsidiary "B.G. Textilwerke G.m.b.H" (Ballonhullen Gesselschaft) located outside Berlin. Given the technology and materials of their day, they were the finest gas cells available in the world (Goodyear would also make excellent "skin cells" in the United States, while UK gas cell builders such as Shorts seem to have had difficulty in mastering the process of properly cementing the skins to the fabric without having them "bubble" or pull away from the fabric surface). Faced with gas cells which

did not hold their gas, DuPlessis wanted to go through an intermediary and order replacement cells from the former enemy, hoping that he could get the ship in the air within a year.

Ed. notes ZP-14 vets might recognize this place… a couple decades later, when they saw it, an American tank had lobbed some shells through the right hangar's doors. Below: One of L-72's many gasoline tanks.

The Ministry of Marine, in steering the contract to the Astra Nieuport firm, not only delayed the *Dixmude's* flight schedule by at least another year, but also got a badly inferior product. Far more than just experiencing "cracking" in the skins, the cotton cloth used to manufacture the cells was also prone to developing small tears amid the normal surging and movement that occurred with the gas cells in flight.

Under these circumstances, not only would hydrogen loss be high but also since the cells were rarely at a state of "superpressure" it was very easy for air *[to]* diffuse inward, creating a potentially explosive gas mixture in the cells. Even if they were producing hydrogen gas of superior quality and purity (which I doubt) the purity would degrade fairly steadily and dangerously in the cells under these conditions. In Dr. Douglas Robinson's often-overlooked book *THE DANGEROUS SKY: A HISTORY OF AVIATION AND MEDICINE* particular attention is given to the fact that no large portions of wreckage were located, though scattered fragments of metal and fabric were recovered miles away on land. Outside of one other victim's body recovered a few months later, the corpse of DuPlessis was the only one found, and only a few days after the "flash" was seen in the night sky off Sciacca. A detailed autopsy performed on the deceased Commander indicated that he had undoubtedly been leaning partially out a control car window and was slammed against the frame by a force of incredible violence, being killed instantly as his body was blown clear. In the case of *Dixmude*, a hydrogen explosion was obviously the cause." Ω

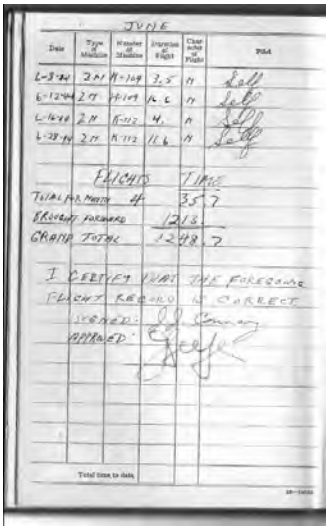
Ed. notes one LTA vehicle may have met defined criteria for a hydrogen explosion. The '34 National Geographic Explorer balloon accident report dated exactly seventy-five years to the date of this issue's layout reads in part,

"...A similar phenomenon is well known in the bursting of an overloaded parachute on opening... the velocity of the falling body is suddenly checked, subjecting the parachute to a force many times the weight of the body, so quickly that the fabric cannot readjust... in no conceivable aerodynamic force, could any explanation be found for the instantaneous disintegration of the upper part of the balloon into many fragments... Normally in bursting tests on fabrics under static forces the forces produce one or, at most, two tears (at right angles). Tests have been carried out by the National Bureau of Standards… The tests made confirm the conclusion that only explosive forces could produce the multiple tears and fragmentation observed… *[However]* the absence of any sensation of a loud noise has been cited as evidence against explosion as a cause. The maximum velocity of a hydrogen-air explosion is 15.7 feet per second. It would, therefore, have required somewhere between 5 and 11 seconds for the explosion to propagate across the balloon at the level of the break, depending on the position of the initial spark… The duration of the explosion was short in comparison with the time necessary for the fabric of the balloon to readjust itself and redistribute the stresses caused by a local change of shape… The noise of the explosion would be more in the nature of the rumble of distant thunder and would readily be unheard over the drone of the airplane flying in the neighborhood. The "thuds" reported seem well consistent with the sensations to be expected from such an explosion, and the barograph records prove the existence of a considerable shock. A hydrogen flame is almost colorless and could not have been seen under the circumstances. Finally, it would not set the balloon on fire or even scorch the fabric. None of the fragments in the tests at the Bureau of Standards showed any sign of scorching… multiple small fragments came almost wholly from the zone between patterns 29 and 39. This is consistent with the effect of the explosion of a layer of a hydrogen-air mixture lying between a layer of air and hydrogen too rich to explode. The sudden disintegration of the balloon can be fully accounted for on the basis of hydrogen explosion, and no other explanation has been found which is at all adequate to explain it. We conclude, therefore, that:

The final disintegration of the upper portion of the bag was caused by the explosion of the hydrogen-air mixture which it contained.

Respectfully submitted,
DR. LYMAN J. BRIGGS, Chairman;
DR. JOHN O. LA GORCE;
BRIG. GEN. O. WESTOVER;
DR. W. F. G. SWANN;
DR. L. TUCKERMAN;
Washington, D. C. September 17, 1934" Ω

Speaking of ZP-14, **Don Kaiser** *e-mailed the word* that **John J. Connery**, 89, passed 27 APR 09. Lieutenant (Junior Grade) John J. Connery was the pilot of K-130 (above) and officer in charge of the first leg of the transatlantic flights. The first pair of K-ships (K-123 & K-130) left South Weymouth, Massachusetts, on May 28, 1944, on the 800-mile (16-hour) flight from South Weymouth to Argentia, Newfoundland. From there, separate crews flew the blimps on the second leg to the Azores from where fresh crews flew the third and final leg of the transatlantic flights to Port Lyautey, French Morocco.


JUNE

Date	Type Machine	Number Machine	Duration of Flight	Character of Flight	Pilot
5-3-44	ZN	K-109	3.5	N	Lally
5-12-44	ZN	K-109	4.6	N	Lally
5-16-44	ZN	K-112	4.	N	Lally
5-28-44	ZN	K-112	11.6	N	Lally

FLIGHTS TIME

TOTAL FOR MONTH 4 35.7

BROUGHT FORWARD 1213

GRAND TOTAL 1248.7

I CERTIFY THAT THE FOREGOING FLIGHT RECORD IS CORRECT

SIGNED: J.J. Connery

APPROVED:

Total time to date


JUNE 1944

Date	Type Machine	Number Machine	Duration of Flight	Character of Flight	Pilot
MAY					
15	ZN	K-81	14.2	Trans	Lally
17	ZN	K-123	3.2	C	Lally
21	ZN	K-123	3.7	C	Lally
27	ZN	K-134	3.9	N	Lally
28	ZN	K-134	15.7	N	Lally

TOTAL FOR MAY (9 -31) 31.6

BROUGHT FORWARD 1181.4

GRAND TOTAL 1213.0

I CERTIFY THAT THE FOREGOING FLIGHT RECORD IS CORRECT

SIGNED J.J. Connery

APPROVED

Total time to date

Don wrote, "I am attaching the two pages from Lt. (jg) John J. Connery's ZP-14 logbook *[above]* that contain the entries relating to the squadron's transatlantic flights. Unfortunately, the first page is rather confusing because it was stamped "June" but the dates are for the month of May as written in on top. The second page is for June.

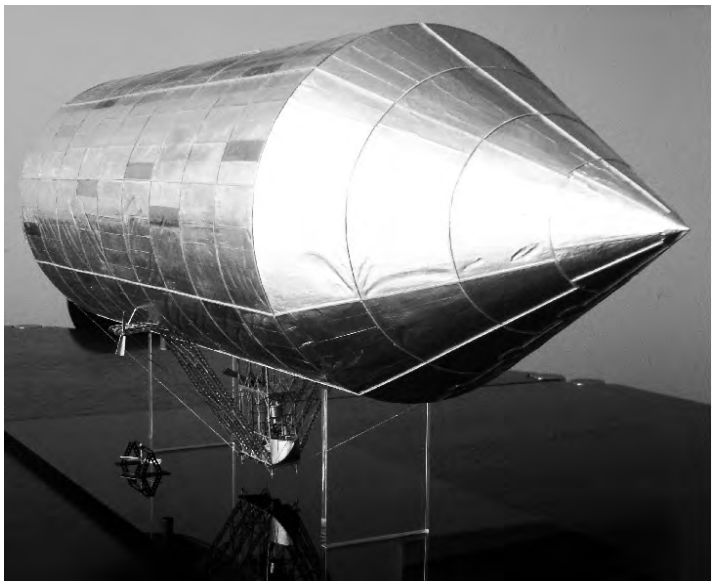
The first leg of the transatlantic flights was from South Weymouth NAS in Massachusetts to Argentia NAS in Newfoundland. J.J. Connery was the pilot of the lead ship, K-130 which along with the K-123 were the first non-rigid airships to make the transoceanic crossing. Connery entered the 15.9-hour flight in ZNP-K ship K-130 on May 28, 1944, in his log. History tells us that this is true, but this is the first example (that I have ever seen) of original source material documenting the historic flights.

Separate crews flew the blimps from Argentia, Newfoundland, to Lagens Field on Terceira Island in the Azores for the second leg of the flights. The third and final leg from the Azores to Port Lyautey, French Morocco, was flown by another set of fresh crews. For that final leg, Squadron Commander Emmett Sullivan piloted the lead ship K-130 and my uncle, Ens. William K. Kaiser, was one of the pilots in K-123.

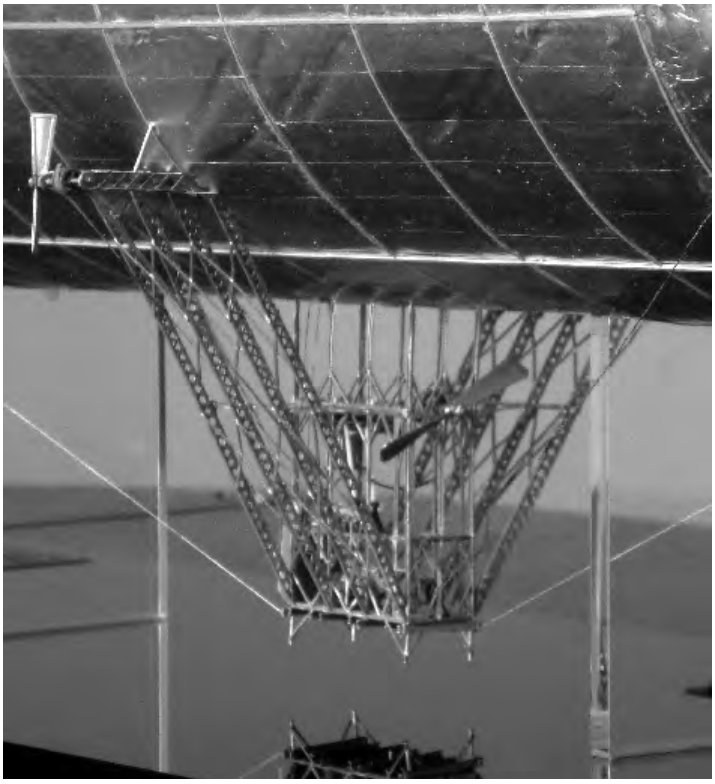
The Navy used fresh crews for each leg for safety reasons but also for route familiarity because the subsequent pairs of blimps eventually followed K-123 and K-130 along the same route. Connery clearly entered in his log the 16.6-hour first-leg flight in K-109 (which was paired with K-134) on June 12, 1944, and the surprisingly fast 11.6-hour flight in K-112 (paired with K-101) on June 28, 1944. The winds must have been very favorable on June 28th for the 800-mile cruise.

The Navy also employed USNA-trained navigators for each blimp on each leg of the flight. Many readers of the Noon Balloon are familiar with John Kane and Andrew Papageorge who were navigators on the first and second legs, respectively. Fred Miehe was the navigator on my uncle's blimp, K-123, on the final leg. In 1945, two replacement K-ships (K-89 and K-114) were delivered to Blimpron-14 via the southern route from Weeksville NAS in NC to the Bermudas, and then on to the Azores and Port Lyautey. A navigator of the longest leg on the northern route, Andrew Papageorge was also one of the navigators on the longest leg of the southern route (Bermuda-Azores), so he must have been held in high regard by the Navy. Papageorge recently informed me that celestial navigation on a blimp was especially difficult because only the stars about 30 degrees above the horizon could be used.

Additional details, maps, and photographs about the transatlantic flights can be seen on my website: http://www.warwingsart.com/LTA/zp-14.html.
Historical contributions are welcome to preserve the history of ZP-14." **Ω**



John Melburg *e-mailed*, "Thought you'd find the accompanying images of **Andreas Horn's** recently completed model of the Schwarz 'Metalclad' Airship enlightening. At last, we now have an idea of what this novel 'metalclad' airship looked like from views other than the few photos any of us have seen of the actual airship during our lives. The model is outstanding, and no doubt will be a 'center piece' at its new Museum home. Andreas' account of its challenging construction only adds to the interest in his model. This is a model that he can truly be proud of building. This certainly is worthy of publication in TNB at some future time." *[Future is now. Ed.]* Ω



Herm Spahr *e-mailed*, "**John Fahey** has picked up on Slaff's presentation and mailed an unspecified number of post cards with the following comment: "On June 8, 2009, Naval Academy Superintendent Vice Admiral Jeffery L. Fowler presented the Navy Air Medal with gold and silver stars and the Distinguished Flying Cross to a Maryland resident for flying Navy airship antisubmarine patrols as a crewman during World War 11 as did many thousands of other airship pilots and crewmen. The ANNAPOLIS CAPITOL in its headline news article on the presentation by Admiral Fowler highlighted the significant contribution of the Navy airships that led to defeat of U-boats and to the award of medals to the crewman. Surely the Navy airship pilots and crewmen who flew the nightly very low altitude Magnetic Anomaly Detector Straits of Gibraltar barrier patrols deserve no less. Navy fixed wing pilots and crewmen flew the day flights. Those who are responsible for the future development of the Virginia Beach Naval Aviation Monument should be aware of the obvious recognition of the Navy airship's stellar performance in World War 11 by the Navy Department's awarding such medals to a crewman and increase the present scanty airship display."

John has been working very hard to persuade Virginia Beach officials to correct some misstatements regarding airships and to increase the memorials by perhaps creating a sculpture of the "Snowbird" that set a record for any aircraft in duration and distance without refueling. The SOP on the flight was Captain Hoel, father of a Virginia Beach resident, Karen Adcock, the wife of Hugh "Nelson" Adcock… Congratulations, John, on your endeavor. Perhaps at some future date when the your suggestions become a reality, our NAA membership might consider more than a tacit support… One of John Fahey's postings reads, "12 August 2009: "Airships trumped U-boats" Diane Tennant's eight-part series, 'Torpedoed,' (front page, through Aug. 9) of the first seven months in 1942 is certainly worthy of awards. The U-boat success continued after July 1942 in the western Atlantic and adjacent waters. On June 16, 1942, the Congress, upset by the sinkings off Virginia Beach on the previous day, authorized the construction of 200 Navy airships, but the new airships didn't come on line in significant numbers until early 1943.

U-boats continued to dominate until the middle of that year. The darkest day of the Battle of the Atlantic was ahead after the July 1942 conclusion of the series. In February 1943, a U-boat sank two American passenger cargo ships with a loss of 850 officers and men. By the next month, U-boat sinkings had reached 639 since Pearl Harbor, but there were signs with the increase of Navy airships that the effectiveness of German submarines in coastal waters was diminishing. During the war, Navy airships escorted more than 89,000 merchant ships (55,000 in waters where U-boats were known to be operating) without loss or damage to a single merchant ship. I flew 162 combat airship patrol and escort flights as a pilot and was completely confident that with my detection equipment and weapons, no U-boat attack would be successful. " Ω

As we went to press the A2A5 Conference was underway in Canada. **Dr. Barry Prentice** *has promised a complete report for our next issue. In the meantime he sent the planned program, which we summarize here:*

Airships to the Arctic V: ***Approaching the Tipping Point***
The Coast Plaza Hotel & Conference Centre Calgary, Alberta, Canada, http://www.airshipstothearctic.com/
Conference Dedication: Delton Gates, U.S. Navy Airship Pilot, WWII

Wednesday, October 7

7:30 pm **Reception and Free Public Lecture**
Kenneth Laubsch, Project Manager & Chief Engineer, Boeing-SkyHook, Philadelphia, PA: "The SkyHook HLV – An Airship Answer to the Transportation Gaps of Northern Canada's Resource Industry"

Thursday, October 8

8:00 am **Logistical Challenges in Remote Areas:**
Chair: Jeff Ashcroft, Strategic Logistics Partners
Stuart Russell, VP Business Development, BBE, Calgary, AB: "Doing The Best With What We Have Won't Cut It Anymore"
Paul Larson, PhD, University of Manitoba, Winnipeg, MB: "Moving Heavy Equipment to Remote Locations: An Analysis of Transportation Cost, Service and Sustainability"

9:15 am **Promising Ideas for Cargo Carrying Rigid Airships**
Alan Handley, President, Varialift Airships PLC, United Kingdom: "Aluminium Monocoque Structure: A New Beginning for Heavy Lift Airships"
Gennady Verba, President, RosAeroSystems, Russia: "ATLANT: The Future Technology for Northern Areas Development"

11:00 am **Promising Ideas for Cargo Carrying Hybrid Aircraft**
Gordon Taylor, Director of Sales and Marketing, Hybrid Air Vehicles, United Kingdom: "Hybrid Airships: a Green Solution to Canada's Transport Challenge"
Kenneth Laubsch, Project Manager & Chief Engineer, Boeing-SkyHook, Philadelphia, PA: "The SkyHook HLV - A Heavy Lift, Short Haul Vertical Transportation System"

12:15 pm **Lunch Keynote Speaker:**
Brian Hall, President, Airship Ventures: "The business of getting an airship business off the ground"

2:00 pm **Commercial Applications for Small Airships**
Adrian Peña Cervantes, Avionics & Telemetry Manager, CIDEP, Mexico: "Unmanned blimp for monitoring and maintenance of high power electric lines"
Stephen Barkley, President, RATS, Lac La Biche, AB: "Remote Aerial Tripods – Unmanned blimps for advertising and photography"

4:00 pm **Promising Ideas for Future Lighter-Than-Air Developments**
Juergen Bock, DGLR and Prof. Uwe Apel, Hochshule Bremen: "Concept of an Unmanned Lighter-Than-Air Cargo Transportation System For Northern Canada"
Nykolai Bilaniuk, PhD, Consultant, Ottawa, ON: "Airborne Tethered Wind Generators"

6:30 pm **Banquet Keynote Speaker:**
Jacques Collignon, Senior Regional Logistics Officer, West Africa Regional Bureau, World Food Programme, Rome, Italy: "Sustainable Humanitarian Air Service for Emergency Relief"

Friday, October 9

8:00 am **Passenger and Surveillance Roles for Airships**
Chair: Jim Thomson, Hybrid Aircraft Canada
Hiroyuki Watanabe, President, Nippon Airship Corp, Tokyo, Japan: "Future Possibility of World Airship Transportation as New Business"
Brandon Buerge, PhD, Aerodynamicist, Guardian Flight Systems, LLC, Elizabeth City, NC: "Ready To Go: A Proven Approach and a Deliverable Airship for the North"
Edward Pevzner, Business Development, Aeros Corp., Montebello CA: "The Right Approach"

10:30 am **Arctic Sovereignty and Transportation**
Rob Huebert, PhD, University of Calgary, Calgary, AB: "Arctic Sovereignty and Airships: New Ideas for New Problems"
Ian Glenn, MSEE, P.Eng., Chairman and CEO, ING Engineering Inc., Ottawa, ON, and Founder, UVS Canada: "Getting beyond the Tipping Point: the Story of how the Canadian Army's Small UAV went from an idea to flying over 1000 hours every month - saving Canadian lives in Afghanistan in the process."

12:00 pm **Lunch Keynote Speaker**
Albert Robbins, U.S. Navy (Retired) "Slate's Metal Monocoque Structure Dirigible – Captain Tom and His Pioneering Family Airship".

1:30 pm **Helium and Hangars: Developing An Airship Industry in Canada**
Chair: Fred Petrie, First Nations Transport
David Limb, Consultant, David Limb Associates Ltd, Calgary, AB: "Airship Transportation System - Helium Handling and Storage"
Rick Chale, President & CEO, FWS Construction Ltd, Winnipeg, MB: "Building large Airship Hangars in Canada – Engineering Considerations"

3:00 pm **Panel Discussion –**
Is the Airship Industry at a Tipping Point?
Igor Pasternak, CEO, Worldwide Aeros, Montebello, CA
Dr. Carl von Gablenz, Head of Board, CL CargoLifter, Berlin, Germany

Ω

2009 Gordon Bennett Race Results

1	FRA 1	1587 km
2	SUI 1	1570 km
3	USA 2	1528 km
4	USA 3	1295 km
5	SUI 2	1179 km
6	GBR 2	1105 km
7	AUT 1	1044 km
8	BEL 1	1043 km
9	FIN 1	1041 km
10	SUI 3	935 km
11	GER 3	750 km
12	GER 1	711 km
13	GER 2	709 km
14	GBR 1	521 km
15	FRA 2	484 km
16	USA 1	470 km

Ed. e-mailed Pete Cuneo and asked why no one entered a helium balloon in the Gordon Bennett [see also Pete's first-person report on the 2009 race, final standings above]. He replied, "A quick look at the results for the 42rd Coupe Aeronautique Gordon Bennett, scheduled for September 12, 1998, out of Paris, France, shows that the thirteen balloons assembled for the competition, never got airborne. The Leys brothers had won the first of their four and a half Gordon Bennetts the year before and earned the right for their home country to sponsor the 1998 event. Paris was chosen as the locale due to its honored place in ballooning history and its good sponsorship possibilities.

However, a gas race out of modern day Paris proved to be problematic. City fire regulations forbid using hydrogen for this many balloons launching in close proximity to each other. The only other option was the very expensive (especially in Europe) helium lifting gas. The launch window was originally scheduled for three days to allow for the vagaries of the weather, but the site chosen for the launch was in the heart of Paris and required temporary halting all flights in and out of DeGaulle airport, so in the end the organizers were only able to negotiate a single, four-hour window at this site. There was supposed to be an alternate site at the outskirts of Paris for the rest of the three-day window, but when the weather did not cooperate at the first site, no effort was made by the organizers to actually move the event to the alternate site. The event was simply declared cancelled.

For years, rumors have been circulated that the organizers could not afford the cost of filling the large number of balloons with the expensive helium gas and that using the weather as an excuse to cancel the event may have been the expedient way around the funding problem. Call it an unsubstantiated rumor, as we will probably never know the real rationale behind the decision. Suffice it to say that there were some very unhappy balloonists who had invested their own effort, time and money to get to Paris for this event." **Ω**

Herm Spahr *e-mailed* **Rick Zitarosa** "Rick: I have just reviewed our summer issue, TNB #82. It's a wonderful professional publication and I want to sincerely thank all those who contributed.

But I want especially to "thank you" for your articles which appear on page 10. Your numerous contributions to TNB have always been well-written and much appreciated... Regarding your story reflecting the 50th anniversary of the crash of ZPG-2 135448 - I hate to sound like a broken record - but I was there at the time and climbed into the upper structure of Hangar ONE - hearing no sounds except the rescuers slowly moving and listening to the dripping gasoline falling on the hangar deck. I realized there was nothing I could do and returned to our hangar to set up a press station and keep the public informed of our progress.

But I would like to correct the record: the 446 crashed into the upper structure of Hangar ONE near the top and was lodged upside down making orientation very difficult for the rescuers. It DID NOT crash into Hangar Three, but the wreckage fell on Hangar THREE several hours later when it was trying to be removed. Unfortunately, that was when the photographs were taken. **Ω**

F. A. González Redondo reports the exhibition "The Airships of Leonardo Torres Quevedo" is being shown in Madrid at the School of Aeronautical Engineers of Madrid's Polytechnical University, opening 19 NOV. Fransisco gave a lecture. See http://www.torresquevedo.org/LTQ10/index.php?title=Otras_noticias_de_actualidad.

Also, Aeronautical week was held in Guadalajara (60 km East from Madrid), 16th-22nd November 2009. Lectures on the History of Spanish Aerostation were given every day, and competition with aeronautical models on Friday 20th (airships; indoor) and Sunday 22nd (aeroplanes, helicopters and autogiros; outdoor). **Ω**

Owing to a conversion error, the last of **Don Morris**' story was chopped off in TNB 83. It reads:

Because Ensign Morris still had the duty watch, the Lieutenant and he and the 300 men lined up on the field. The men in the first line were told to just grab and pull and then let go so the second group could handle the slowed airship.

The airship was approaching at near stall speed of about 20 to 25 knots. The forward line of men grabbed the lines and tugged. But several men must have thought they could hold on and stop the airship. Suddenly about five men, who held on to both the port and starboard lines, were taking 35 foot steps as the kept on with its speed. Several of the men tumbled to the ground with broken arms and legs. But the airship had been slowed just enough so that the 200 men in the second line could grab the lines and get control of the airship's forward motion.

As soon as it slowed, the ground crew brought the mast up and secured the airship. Immediately, several fire trucks shoved foam and water into the car's windows and doors.

Crew members tumbled out the airship's exits and dropped to the ground - some to thank God and some to kiss the ground and some to run away from this potential bomb. It was obvious that several of the men in their fear had lost control of their bladder and bowels.

SHORE ESTABLISHMENTS: LAKEHURST

Joint Base McGuire - Dix - Lakehurst

Lakehurst as photographed by airship pilot and NAA member Paul Adams.

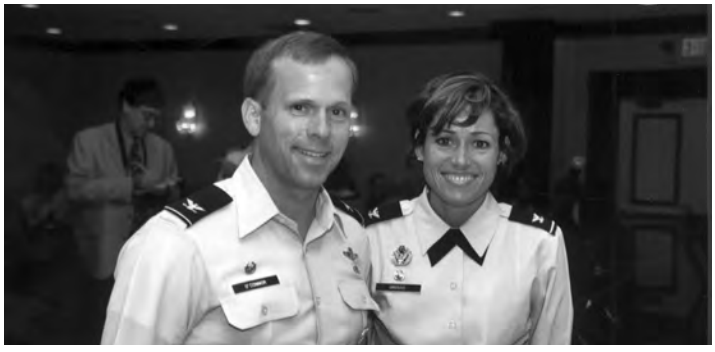
Lakehurst - Eighty-eight years after a dozen Navy men arrived here to take charge of the world's biggest airship hangar, Capt. Phillip Beachy was the last Navy commander to depart.

In a traditional Navy change of command ceremony with a twist, Beachy stood at attention in dress whites while that responsibility was handed off to Col. Gina Grosso, clad in Air Force Blue.

The consolidation of three military bases into the new Joint Base McGuire-Dix-Lakehurst began officially with a change of command and the "disestablishment" of Lakehurst Naval Air Engineering Station. Neighboring Fort Dix likewise changed its long-held status as an Army post, and both facilities will come under joint management of the Air Force.

That process was "eye-watering in the beginning...We had to break down walls, break down service loyalty," Beachy told an audience in the base gymnasium. But in the end, he added: "I think Joint Base McGuire-Dix-Lakehurst will be a model."

As for fitting that new name into the military's galaxy of acronyms, "that's up to Col. Grosso to figure out," Beachy quipped.



Joint Base McGuire-Dix-Lakehurst Commanders Col. Brian O'Connor, Commander, 621st Contingency Response Wing and Joint Base Commander, Col. Gina Grosso.

The missions of the three bases won't change under the merger, which creates one of 12 joint bases recommended by the 2005 federal Base Realignment and Closure Commission. It's the only "tri-service facility" to accommodate three branches of the military at one location. Grosso will have Navy and Army Reserve staff deputies to help manage installation support across its 40,000 acres.

All three former divisions have deep histories: McGuire Air Force Base as a hub for air transport, Fort Dix as the place where generations of recruits first met the Army, and Lakehurst with its romatic associations of airships and roaring carrier jets.

"I know it's not easy for you" to hand off command, Grosso told Navy officers. "We will do all we can to continue that legacy." Her recently created 87th Air Base Wing now has a "mission with no playbook," but there is a "culture of collaboration" already here among the services, she added.

NLHS Historian Rick Zitarosa shares a moment with new Joint Base Commanding Officer, Col. Gina Grosso.

"We were the only (new joint base) that suffered from that," said Beachy. Now, he said, "if I have a fireman at Lakehurst who has a chance to make the shift to McGuire, he doesn't have to worry about taking a hit in pay."

Most workers are staying in place where they have worked, said Tom Szallai, director of the joint base business office and a key planner in the merger.

"There's no jobs lost in any of this," Szallai said. "If you're an electrician or a plumber or an environmental engineer, you're still doing that job."

The Navy's engineering and science laboratories here the support the Navy carrier fleet are unaffected by the merger, along with the test site and manufacturing plant that builds flight deck equipment.

The next generation of electromagnetic catapults and aircraft-arresting gear will keep Lakehurst busy for years to come.

"It's actually not going to affect us at all. It's a seamless transition," said Kathleen Donnelly, director of support and launch and recovery equipment engineering, a department that employs some 1,200 professionals. "We're actually the largest employer in Ocean County and we

don't expect that to change. I've hired about 100 engineers in the past year."

In the simplest terms, Navy employees say workday life will go on as before. If the water stops running in their building, it's an Air Force plumber who will show up.

"It's more a facilities management perspective," said Bill Leach of Shamong, an engineer and team leader for the Navy's aircraft launch and recover/scientific and technology transition group at Lakehurst. "From a day-to-day workload perspective, we've been told not to expect any change from that."

Capt. Andrew Butterfield, Col. Gina Grosso, Carl Jablonski and Capt. Phillip Beachy.

Capt. Andrew A. Butterfield, USN named as Deputy Missions Support Group Commander

New Navy Lakehurst Missions Support Group Commander Capt. Andrew Butterfield and Naval Airship Association President Herm Spahr.

Following commissioning at the US Naval Academy in 1985, Captain Butterfield completed rotary wing flight training at Pensacola, FL, in 1987. He reported to Helicopter Squadron Seven, deploying twice to the Mediterranean and Red Seas, flying missions in the SH-3H Sea King from USS John F. Kennedy (CV-67), including support of Operation Desert Shield. He also served as Flight Officer, Schedules Officer, Public Affairs Officer, Aircraft Division Officer and the Aircraft Maintenance Quality Assurance Officer (QAO) during this tour.

A History of Excellence Dinner

NLHS President Carl Jablonski addresses members and guests.

On the eve of the Navy Base Lakehurst disestablishment and in commemoration of NAES Lakehurst and the ending of 88 distinguished years as a Navy base, which began as NAS Lakehurst in June, 1921, the Navy Lakehurst Historical Society hosted a dinner saluting "Navy Lakehurst - A History of Excellence 1921-2009" on Tuesday, September 29 at the Quality Inn in Toms River.

Navy Lakehurst Historical Society president, Carl Jablonski, served as emcee for the dinner meeting which was attended by nearly 70 Society members and guests. Special guests included USAF Col. Gina Grosso, the new commanding officer of Joint Base McGuire-Dix-Lakehurst, retiring Lakehurst commanding officer Capt. Phil Beachy and the new Deputy Mission Support Commander for the Joint Base, Capt. Andrew A. Butterfield, USN.

President Jablonski took this opportunity to commit the Society's continued mission to promote the rich history and culture of Navy Lakehurst, McGuire AFB and Ft. Dix. The society will look forward to telling the story of the past, present and future missions of Joint Base New Jersey.

President Jablonski recognized many of the guests for their years of service to the Navy Base and Society and then surprised member CC Moore with a special placque that dedicated an exhibit room in his honor.

Although not an official function of the base Realighnment Ceremonies held the next day, the Heritage of Excellence dinner helped set the stage for a very historic day in the life of Lakehurst. Ω

Lakehurst photos courtesy of Max Frei

MOFFETT FIELD

Navy says Hangar One won't be de-skinned until White House makes decision
by Daniel DeBolt, Mountain View Voice Staff

In response to a letter and phone calls from Congresswoman Anna Eshoo, Navy Secretary Ray Mabus says that the Navy will not remove the siding from Moffett Field's historic Hangar One until the White House makes a decision on its restoration.

"It is my intention that no siding will be removed from the hangar until the arbitration process has concluded," Mabus writes. "Once OMB's decision has been made, the Navy will work with all parties to ensure that the 30-month remediation effort supports future plans for Hangar One."

The Navy is responsible for toxic cleanup of Hangar One's asbestos- and PCB-laden siding, while NASA Ames is the owner of the property and would like to see the structure re-used. The two agencies asked the White House Office of Management and Budget to make a decision on how the hangar would be restored after negotiations broke down over funding for the restoration project, which could cost over $15 million.

Two weeks ago the Navy made a surprise announcement that it was awarding a contract to remove the siding regardless of the OMB's decision, which drew criticism from Eshoo as well as the city of Mountain View, the Moffett Field Restoration Advisory Board and local preservationists. The concern is that leaving Hangar One as a bare skeleton would cause irreversible corrosion damage to its steel frame. Mabus said de-skinning the Hangar wouldn't begin for at least six months.

"We are sensitive to the desires of the city and recognize the historic significance of Hangar One to the local area," he wrote. "I'm extremely pleased with the Secretary's letter," Eshoo said in a press release. "Our conversations have been very productive and I'm pleased that he is committed to a remediation plan that supports future plans for Hangar One."

"It is clear that the Secretary will not allow any siding to come down until the Office of Management and Budget has issued a decision," she said. **Ω**
Via: Ben DeBolt, Member,
NASA & Moffett Field Historical Society

NEWS FROM FRIEDRICHSHAFEN

Submitted by Sig Geist

Deutsche Zeppelin Reederei (DZR): Nine days of sightseeing flights with Zeppelin NT #3 over Munich in the spring of 2009 turned out to be very popular again. Because of the large demand, DZR already scheduled another return of the NT airship to the Bavarian capital during spring 2010 when round trip flights will take place over an 18-day period starting April 16. To bridge the gap until then, passengers will have an opportunity to enjoy Munich's many attractions from the air between November 26 and 30, 2009.

DZR's Zeppelin passengers have a new terminal. The old terminal used to be situated in a white tent adjacent to the airship hangar. In its place now stands a brand new building that was officially opened September 11, 2009. An open house followed two days later. In its dual function the new building will not only take excellent care of Reederei's flying guests, but will also cater to their gastronomic appetites by means of a first rate in-house restaurant and lounge. Named 'Zeppelin Hangar FN Restaurant Lounge', the establishment is also open to the public with extended hours of operations on a year-round basis. The Reederei has leased restaurant/lounge operations to a highly qualified restaurateur.

Also new: Zeppelin-Newsletter. With its first edition, dated September 2009, Thomas Brandt, ZLT/DZR managing director, informed readers that from now on the Zeppelin-newsletter was going to be the format by which they would be kept up-to-date with all the news pertaining to Zeppelin New Technology and the enterprise. Brandt went on to say newsletter readers will be among the first to learn of coming events and be informed about zeppelin technical innovations. A column "Fragen an Experten" ("Questions to the Experts") is one of the newsletter regular features. Each edition will contain one inquiry pertaining to Zeppelin NT that a Specialist will respond to at the same time. The newsletter is not available in English, maybe later. Its appearance will be every 3 months. The newsletter does not replace press releases; news bulletins maybe.

Zeppelin Luftschifftechnik (ZLT): According to a ZLT-authored article titled 'Neues vom Zeppelin NT' ('News from Zeppelin NT') that appeared in the July 2009 edition of Zeppelin Brief, Zeppelin NT was to go to France in the fall of 2009. ZLT's reply to a late September 2009 inquiry as to the status of that undertaking was: "There is no further information about the French project except that we talk about a special mission. The rest is under confidentiality".

Zeppelin Museum Friedrichshafen: After welcoming more than 3.8 million visitors since opening in 1996, the museum under the leadership of its director Dr. Ursula Zeller is showing first signs of renewal. The newly opened 'Grenzraum' (ground floor room bordering the entrance hall) is well accepted. The room has already served to exhibit FK's new acquisitions for the museum. Though not yet completely finished, 'Grenzraum' acoustics and air circulation are a big improvement over the former upstairs movie room. Among the expected near term improvements is the entrance hall display of a Zeppelin NT informational film, possibly connected to live webcam coverage of zeppelin take-offs and landings. Also included prior to year's end are physical innovations to the entrance hall. Continuing its series of Thursday evening presentations and also remembering the 80th anniversary of the Round-the-World flight of LZ 127 in August 1929, the museum is showing the movie **"Weltfahrt des Luftschiffs LZ 127 *Graf Zeppelin*"** in October 2009. The film is from the archive of the Luftschiffbau Zeppelin GmbH and is said to document the remarkable journey with impressive pictures. Nice gesture: the movie is free. Coming winter, every second Friday of the month the museum is offering short subject-oriented tours for the 60+ generation. During the 45-minute sessions in the museum, important exhibition pieces or complex topics are introduced in concentrated fashion. "Folding chairs will be provided that you will have with you during the tour because when you are seated, listening becomes more pleasant", so states the museum newsletter. Tour cost is two Euro, museum admission extra. **Ω**

Technical Committee

Development of unmanned airships and aerostats continue to dominate the lighter-than-air field in terms of funding and advanced technology. Projects are aimed at the military requirements of intelligence, surveillance and reconnaissance (ISR). High altitudes will be utilized to achieve a wide area of coverage. These requirements have forced the development of very light-weight materials for airship and payload structure as well as finding novel ways for incorporating payload and structure to combine their functions such as DARPA's ISIS project. DARPA recently awarded Lockheed Martin a $400 million contract in April, 2009, to proceed with Phase 3 which includes design and construction of a one third scale demonstrator airship, to fly in 2012. Lockheed Martin planned to fly its Long Endurance Demonstrator (HALE-D) in August, 2009. It is designed for a two-week flight in the stratosphere while carrying a 50-lb. payload. This is a scaled version of the High Altitude Airship (HAA) sponsored by the U. S. Army Space and Missiles Command. The Army also announced its interest in rapidly acquiring a Long Endurance Multi-payload Vehicle (LEMV) with a 2,500- lb. package of sensors while on station at 20,000 ft. altitude. *[See back cover color illustration]*

Raytheon and TCOM LP, under a $1.4 billion contract, have developed a superior airborne sensing system for the U. S. Army's JLENS project (Missile Defense Elevated Netted Sensor). TCOM provides 74m, 650,000 ft^3 tethered aerostats to lift 7,000 lb. Raytheon developed radars to 10,000 ft. altitude. Two aerostats are required for each operating system, one carrying a surveillance radar and the other a fire control radar. The system is capable of detecting missiles flying at low altitude 340 miles away. Sixteen aerostats equipped with the Raytheon radars are on order. *[See related article page 18]*

TCOM demonstrated the first of the aerostats at its North Carolina Manufacturing and Flight Test Facility to Army personnel in August. TCOM has also delivered 147 17m Tactical Aerostats for the Army's Rapid Aerostat Insertion Program (RAID) These have been successful in the Middle East in providing day/night surveillance and communication for force protection. *[Photo, left]*

Guardian Flight Systems (formerly Blackwater Airships) has demonstrated improved broad area persistent surveillance carrying a megapixel compound focal plane camera on its Polar 400 airship. The demonstration was sponsored by the Office of the Secretary of Defense, Advanced Systems and Concepts. *[Photo, above]*

Hybrid Air Vehicles in the U.K. is flight testing its HAV3 scale demonstrator. Test results will be applied to the design of full scale 20 to 200 ton payload aircraft.

Sanswire-TAO Corp. has acquired its first envelope for its STS-111 multi-segmented nonrigid airship. *[above]* A lightweight efficient engine has been modified to operate the patented FuelGas design for the mid-altitude STS-111 autonomous airship.

The Boeing Co. and Skyhook International reached a configuration freeze milestone in July, 2009, on the heavy-lift airship. *[Above, also color illustration on back cover, TNB 83.]* It establishes the aircraft's overall performance and layout. These include adding a three-piece tail, integration of lifting and thrusting propulsion systems and improved aerodynamics on the aircraft which combines helicopter and airship components.

Zeppelin Luftschifftechnik delivered its NT-07 number 4 airship to Airship Ventures in California in October, 2008. Passenger sightseeing flights are conducted at Moffett Field near San Francisco and at various local airports. Longer excursions are flown to Monterey and Los Angeles. Zeppelin's passenger flights also continue to be popular in Germany. A fifth NT-07 airship is under construction.

The American Blimp Corp. through its subsidiary, The Lightship Group, has delivered A170 airships to the Wind Creek Casino in Atmore, Alabama, *[photo, above]* and to the Beijing Advertising Co. in China *[TNB 82]*. Both airships are equipped with 70 x 30 ft. LED video screens.

The 21st Century Airships Team in Ontario has developed a 231 ft. airship designed for mid-altitude flight (15-20,000 ft.) It is controlled by three vectoring propellers and designed for manned/unmanned flight. *[Concept, below]*

Ω -Norman Mayer

Short Lines

Boeing to test submarine-tracking air-launched UAV

Aerospace Daily & Defense Report Aug 10 , 2009:

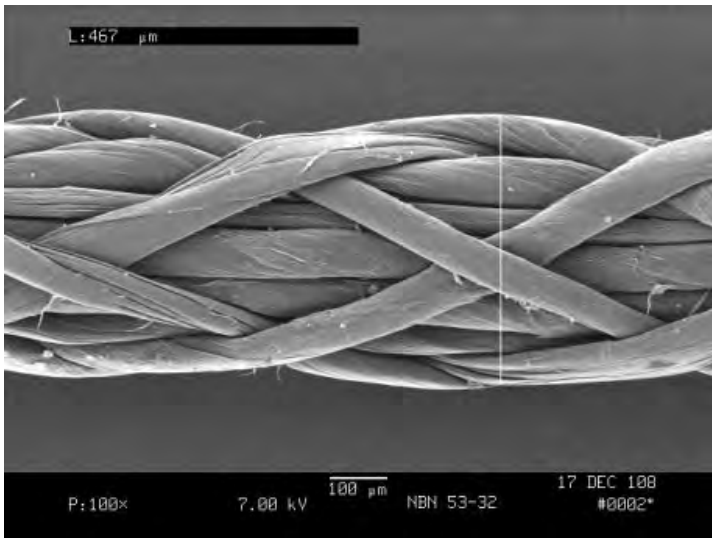
MAG UAV: The U.S. Navy is tapping Boeing to flight test an air-launched version of the ScanEagle *[photo]* unmanned aircraft carrying a magnetic anomaly detector to locate submerged submarines and track them for up to 24 hours. The MagEagle is based on Boeing's ScanEagle Compressed Carriage air-launched small UAV, which will undergo ground-launched flight tests this year. The MagEagle Compressed Carriage flight-test will support the Navy's high-altitude anti-submarine warfare concept, which is being developed to allow turbofan-powered P-8 Poseidons to detect, track and attack submarines without descending to low altitude, thus reducing fuel burn and extending airframe life." *[Emphasis added]*

Editor comments:

MAD gear has obviously evolved a great deal if now tracking subs from tiny platforms. (!) Once launched, the UAV cannot return to the airliner-like P-8 ala "Flying Carriers." We noted the earlier admission of a goal of a $10,000.00-each sonobuoy as well as a wing-quipped, high-altitude launched torpedo (undisclosed price) to allow the airliner-based P-8 to remain at cruise altitude performing ASW. These question the accuracy of the publicized artist's conceptions showing the P-8 sucking salt spray locating subs attractively cruising near the surface. Editor bets the most common submarine boats operating today – home-built smugglers' – actually cost considerably less than dropping a couple of these sonobouys, let alone the unrecoverable compressed Scan Eagle, let alone the winged-torpedo package. **Ω**

Lightweight Conductor and Shield Breakthrough

Nanocomp Technologies Inc., a Concord, NH-based developer of performance materials and component products from carbon nanotubes (CNTs), has been awarded two new Small Business Innovation Research (SBIR) contracts by the U.S. Air Force.



The first contract is the next step toward commercialization of lightweight CNT wiring as a replacement for copper in air vehicles; the second is a new project, deemed "critical" by the U.S. Department of Defense, to develop CNT material for electrostatic discharge (ESD) and electromagnetic interference (EMI) shielding in aircraft. The lightweight and conductive nature of CNTs makes them attractive for aerospace applications. In Phase II, "advancing our yarn's electrical conductivity properties to those of copper for dc power applications is perhaps the most significant technical hurdle to overcome." The performance of CNT wiring is superior to that of copper for high-frequency applications, while offering significant weight savings. The USAF awarded Nanocomp the second SBIR contract to develop CNT mats as a viable substitute for nickel-based conductors in ESD and EMI shielding applications. By simply replacing the braided shield of commonly used cables (e.g., coax, twisted pair) with Nanocomp's CNT material, we can save 35-40% of the total weight of a cable harness assembly," he said, noting that additional savings are possible by replacing the inner conductor(s), which can result in weight reductions of approximately 70% for data cables. Optimizing its manufacturing process for wire and cable applications is the "critical next piece" of moving to commercialization, according to Antoinette. Current plans place Nanocomp in a significantly larger production facility within one to two years. "We expect to be operating a fully implemented pilot factory, annually delivering millions of kilometers of yarns and more than 50 acres of sheet materials (or greater than 4 aggregated metric tons) by 2013." **Ω**

TEWKSBURY, Mass., Aug. 25, 2009 /PRNewswire/ -- The U.S. Army's Joint Land Attack Cruise Missile Defense Elevated Sensor (JLENS) System, which uses aerostats to elevate sensors for long-range target detection and tracking for superior land-attack cruise missile defense, demonstrated its first flight today during a ceremony in Elizabeth City, N.C. This flight reflects the maturity and operability of the JLENS platform -- an aerostat platform that features long-duration, wide-area, over-the-horizon detection and tracking of low-altitude cruise missiles. Its capabilities provide battlefield commanders with enhanced situational awareness and elevated communications, enabling sufficient warning to engage air defense systems and defeat threats. The flight demonstration marked the first time a JLENS aerostat was elevated to an altitude of 3,000 feet. "JLENS makes our current weapons systems more effective," said Lt. Col. Steve Wilhelm, project manager for the JLENS program. "Missiles that were once limited by their organic radars can now meet their full kinematic potential because of the extended ranges provided by JLENS radars. This first flight brings us one step closer to providing that capability."

The surveillance sensor performs wide area surveillance and fire control sensor cueing. A multi-functional fire control sensor then performs sector surveillance, provides combat identification support, and supports intercepts. Each sensor is deployed on a 74M™ aerostat tethered to a mobile mooring station and connected to ground-based communication and processing equipment. This provides the warfighter with a low-altitude single integrated air picture and the ability to conduct air-directed surface-to air missile engagements. Earlier this year, JLENS successfully conducted a critical design review (CDR) representing a key milestone in the U.S. Army program. The CDR thoroughly assessed all aspects of the JLENS design maturity and confidence for the $1.4 billion system design and demonstration contract. With this milestone completed, the JLENS program transitioned into the fabrication, assembly, integration and test phase. **Ω**

Soldier Input Helps JLENS System Design

Early user assessment is akin to kicking the tires on a new vehicle. It's best for the designers to get the user's input before the final product. That's the idea behind bringing a group of Soldiers from Fort Bliss, Texas, to Raytheon in Huntsville for early user assessment of the JLENS communication and control station March 4-6. JLENS stands for Joint Land Attack Elevated Netted Sensor System. "This is the first of several evaluations with the user community that we will have as we mature the design prior to fielding," Neal Tilghman, a principal human systems engineer at Raytheon Warfighter Protection Center, said. The second early user assessment is scheduled in October. The goal is to get user feedback on the design concepts and layout of the JLENS communication and control station. "We're in the early prototype stage and we want to head off any early issues, design concerns, in the early phase of the program," Tilghman said. "The key takeaway from that is we have prototyped the CCS shelter and we're conducting in-shelter exercises with the Fort Bliss user team to validate the design objectives."

Photo: Soldiers from Fort Bliss, Texas, try the prototype communication and control station for the Joint Land Attack Elevated Netted Sensor System. From left are 2nd Lt. Mike Jones, Staff Sgt. David Brandau, Master Sgt. Greg Heidenescher and Chief Warrant Officer 3 Chad Sneller. Photo by Samuel Vaughn (AMCOM photo) **Ω**

Mini-Patoka: ***SkySentry Aerostat balloon to keep tabs on algae growth in Lake Erie***

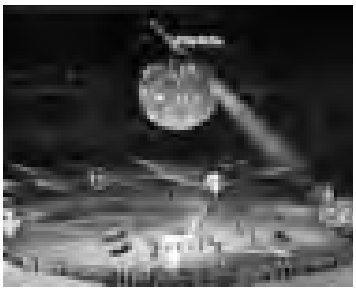
by Michael Scott, The PLAIN DEALER:

"The aerostat near Maumee Bay is using high-resolution spectral imagery to find the light "signature" of the algae in the water below and matching it up with algae sighted from boats below and aircraft several times a week… the SkySentry experiment aims to be a less expensive alternative to satellite-only images, which are not as clear and are recorded only every eight days." **Ω**

The first piloted aircraft powered only by a fuel cell flew July 7 at Hamburg. According to Professor Dr-Ing Johann-Dietrich Wörner, "We have improved the performance capabilities and efficiency of the fuel cell to such an extent that a piloted aircraft is now able to take off using it. This enables us to demonstrate the true potential of this technology, also and perhaps specifically for applications in the aerospace sector. Coupled with our expertise in fuel cell technology, DLR's many years of extensive experience in gaining official approval for aerospace systems are what made the Antares DLR-H2 a feasible proposition."

The Antares DLR H2 has a maximum flying speed of around 102 mph with a range of around 450 miles. The fuel cell sits underneath the left side of the airplane wing while the hydrogen storage tank sits under the right wing. The 66-ft wingspan motorglider, built by the German Aerospace Center, flies with zero carbon-dioxide emissions and is much quieter than similar aircraft. "This motorglider achieves new quality standards in the field of high-efficiency, zero-emission energy conversion and clearly demonstrates the progress that has been made in fuel-cell technology." With its fuel-cell propulsion system, the aircraft can stay aloft for five hours. "With our successful first flight, we have verified the feasibility of fuel-cell-powered flight and our next steps will focus on improving efficiency levels and on extending the service life of these systems," said Dr. Josef Kallo, Antares project manager from the DLR Institute for Technical Thermodynamics. "At this stage, we have only tapped into a fraction of the performance capabilities of this technology for aerospace applications. To accommodate the fuel cell and its hydrogen supply, two external pods were attached under the aircraft's wings, which were reinforced to carry the load. The total efficiency of the drive system from tank to powertrain, including the propeller, is about 44 percent, making it about twice as efficient as conventional propulsion technologies based on combustion processes, according to the Aerospace Center. **Ω**

An eight-meter helium balloon constructed as a video screen was the highlight of the 2009 FIFA Confederation Cup closing ceremony in Capetown, South Africa. The balloon, constructed by Air Space and rigged by Gearhouse Rigging, took two hours to inflate and consumed 22 bottles of helium. To achieve the show's desired timing, the video screen-balloon had to be passed between three winch teams; one in the parking lot, one on the stadium roof, and one on the soccer pitch itself. A pre-show test found gusts impaling the balloon on a concrete post, and repairs took 24 hours. 15 men, using Vectran-12 ropes, managed the difficult maneuvering for which they had line of sight only part of the time. The whole show went well and the balloon remained in control as it exited the "fantastically noisy, animated audience cheering, shouting, jumping and blasting their vuvuzelas (horns) at dB levels louder than the PA." **Ω**



A group of French students are getting ready to fly across the English Channel in the world's first solar-powered airship. One hundred years after Louis Blériot, the Projet Sol'r team will take to the skies in *Néphélios,* a 22 meter long airship capable of cruising at 30-35kph. More than 50 students and volunteers are involved in the building of the world's first solar powered airship, the Néphélios. The project's blog echoes the determination and commitment of the whole team: "Our team is dynamic, motivated and totally voluntary. We are driven by the desire to create a project for the future and for sustainable development but also to realize a dream: to fly pollution-free, with full autonomy and drawing all our energy needs from the air and sun."

The structure is made of carbon and aluminum, covered by a synthetic fabric coated with polyurethane for waterproofing. The majority of the funding came from sponsorship. Forty two photovoltaic panels, covering a 40 sq m area, are secured on top of the airship to provide the 2.4kW peak power needed for the electric motor to the rear of the nacelle. As take off and landing will require a bit more power than the solar panels can generate alone, onboard batteries will be used to provide the extra boost needed. A system controller regulates power generated by the panels and directs it to either the motor or to the batteries depending on need. **Ω**

Concept: Lockheed Martin

Pentagon Pushes For Unblinking Surveillance

Excerpted from Aviation Week & Space Technology

U.S. plans to deploy an unmanned surveillance airship to Afghanistan are moving forward, with a contract for the Long Endurance Multi-Intelligence Vehicle (LEMV) demonstration expected to be awarded by year-end.

Designed to stay aloft for three weeks carrying a heavy payload of wide-area sensors, the airship is becoming a flagship for Defense Dept. efforts to provide unblinking airborne surveillance to defeat the threat from roadside bombs.

With other programs pushing unmanned aircraft to greater persistence and heavier payloads, the Pentagon is coming to grips with the consequence: a torrent of motion imagery that must be analyzed and archived to be of use.

The Pentagon's intelligence, surveillance and reconnaissance (ISR) task force has the LEMV on the fast track, with a single demonstrator vehicle to be fielded to Afghanistan within 18 months of contract award. Congress has fully funded the Fiscal 2010 budget request of $90 million for the program.

U.S. Army Space & Missile Defense Command (SMDC) is to lead the airship program, contracting with an industry consortium now taking final shape.

The consortium is expected to be established by early October, with a request for proposal to follow in November, leading to contract award by the end of December. The airship would fly within 15 months and deploy by mid-2011.

Exactly how the government will interact with the consortium is not yet clear. There are several potential platform providers involved, including Lockheed Martin's Skunk Works and the U.K.'s Hybrid Air Vehicles, both of which are expected to brief SMDC on their proposals in October.

The LEMV is required to stay aloft at 20,000 ft. for 21 days carrying a 2,500-lb. payload, a combination of either a multi-camera wide-area airborne surveillance (WAAS) sensor or a ground moving-target indication (GMTI) radar plus a signals-intelligence system and multiple electro-optical/infrared (EO/IR) sensors.

Lockheed Martin's design is a 250-ft.-long hybrid airship, which derives 80% of its lift from helium buoyancy and the rest from aerodynamics so it can be launched and recovered without the traditional airship ground infrastructure. The vehicle will be optionally piloted: manned for self-deployment and unmanned for surveillance missions. **Ω**

Hybrid Airship for Afghan ISR Takes Shape

Posted by Graham Warwick at 9/21/2009

The consortium will include sensor and system suppliers, and Lockheed Martin's Skunk Works says it will supply the air vehicle - a development of its P-791 experimen-

tal hybrid airship flown in 2006. The company-funded P-791, which flew six times, was 125 ft long. The LEMV will be 250 ft long, and designed to loiter at 20,000 ft for up to 21 days carrying a 2,500 lb ISR payload.

The LEMV is a hybrid airship - it's heavier than air, 80% of its lift coming from buoyancy and 20% from aerodynamics. Propulsion comes from six thrusters - three per side - powered by individual turbo-diesels for take-off and climb, and electrically from a central turbo-generator for loiter. And it's non-rigid, structural stability results from the three-lobe envelope design. The airship is also optionally piloted - flown manned for self-deployment and unmanned for persistent ISR missions.

An air cushion landing system allows the airship to be maneuvered for taxiing and take off, and sucks the vehicle down on to the ground - or sea surface - for landing, loading and unloading.

Hanging under the envelope, behind the sometimes-occupied cockpit, is a payload bay 40-ft long, 15-ft wide and 6-8 ft tall - more than enough room to mount either a ground moving-target indication radar or multi-camera wide-area motion imagery sensor, plus a signals-intelligence payload and multiple EO/IR sensors.

A single air vehicle is to be built and ready to deploy within 18 months of contract award, LEMV joining an expanding pantheon of persistent ISR options under evaluation by the Pentagon. This is a case of persistence pays, as the Skunks have been pursuing hybrid airships for a long time, for transport as well as ISR - but that's another story...
Ω

Lockheed Martin's Other Airship

Posted by Graham Warwick at 9/23/2009 12:05 PM

Researching the Long Endurance Multi-intelligence Vehicle (LEMV) program for an earlier blog led me to wonder what had become of another surveillance airship, Lockheed Martin's High Altitude Long Endurance Demonstrator (HALE-D), which was supposed to have flown this summer. I hadn't heard anything, so I asked. Turns out it didn't fly, but the envelope was inflated inside the Airdock at Akron.

It seems the program ran out of money before the airship could be flown, and Lockheed says it is now working with the US Army's Space & Missile Defense Command to find additional funds to complete the demonstration.

The HALE-D is a subscale prototype of the long-proposed High Altitude Airship (HAA), an unmanned surveillance platform intended to stay aloft in the stratosphere for months. The 240-ft-long HALE-D is more modest, designed to carry a 50-lb payload to 60,000-ft for at least 15 days. powered by a combination of solar arrays and batteries. **Ω**

2009 Gordon Bennett Shatters Records

Story and Photos: Peter Cuneo with Barbara Fricke

The winners, the French #1 team, celebrate in Portugal.

The 53rd Coupe Aeronautique Gordon Bennett gas balloon distance competition launched from the Sports complex of Geneva, Switzerland at about 2300-hrs local on Saturday, September 5, 2009 (0100-hrs, Sept. 6 UTC). Sixteen hydrogen gas balloon teams from eight nations, with two pilots per balloon, launched and headed in a southerly direction toward the Rhone River valley. In preflight briefings, race officials had noted that VFR flight was not allowed in any part of Italy including Corsica, Sicily and Sardinia after sunset. It was also noted that all of Africa was out-of-bounds. During the first night balloons reached speeds up to 105 kilometers per hour, driven by the fabled Mistral winds that flow down the Rhone valley during periods of high pressure. It was very fortunate that no balloons were forced to land during this period.

Montpellier coast from 3,000 feet.

Most balloons exited land during the next day and headed south across the Mediterranean as the pack started to spread out. All three German balloons landed on islands (two on Menorca-the small island next to Majorca, and one on Sardinia), while three balloons headed towards Ethiopia and disqualification. The main pack turned to the west and flew on into eastern Spain on the third day. Weather and time started to take its toll as several teams were forced to land. USA #2 had a sizeable lead having gone the furthest south before coming back to land, however they were forced to either land on the third evening or go back out over water and hope to reach Gibraltar. They wisely chose to land.

Setting sun, day 2.

It was now between the Swiss #1 and France #1 with the Swiss in the lead. They also ran out of land in southern Portugal after covering a total of 1570 km. The patient French team of Vincent Leys and Sebastien Rolland managed a just sufficient, 1587 km before landing near the coast in south west Portugal to gain victory. Vincent has now been a member of five Gordon Bennett winning teams, the first four with his brother, Jean Francois. They once again proved that it is not he who gets there first who wins, but rather he who gets there best.

The retrieve from Algeria proved to be complicated as the western coast is fairly untamed territory. The Algerian authorities moved in to protect the six pilots from "civil unrest" and general lawlessness. The balloonists were delayed (detained?) for two days while various embassies were contacted. Much hardship was endured by all, owing to a prohibition on the sale of beer during the holy feast of Ramadan! Eventually all teams returned to Geneva for the Survivors' Banquet. The African balloons are on their way home, also.

The Gordon Bennett is stated to be the oldest ongoing aeronautical contest, having first flown in 1906. Several additional highlights included:

1) new women's world duration and distance records for the British team of Janet Folkes and Ann Rich;

2) Swiss Christian Stoll's twenty-first entry into the race, more than any other competitor ever;

3) Third and fourth places for USA teams #2 and #3 respectively;

4) Perhaps the first ever crossing of the Mediterranean by a free gas balloon…and it was accomplished by three teams (Finland, Belgium and Austria);

5) The first ever entry into the Gordon Bennett by a Finnish team. They were one of the teams that reached Africa!

6) The winning French team came very close to setting a world duration record for this class of balloon.

Pre-flight preparations were marred by tragedy when Great Britain #3 landed in the Alps a week before the race while on a training flight. Pilot Serge Cuhat lost his footing while stepping out of the basket and fell to his death. His loss was memorialized by France #2 who chose to fly non-competitively in his balloon in his honor. For more details:

http://www.satpro.org/gordon2009/index.php. **Ω**

STARTING ON A MAXIMUM EFFORT

By J.H.L. Garricon [1]

I was involved in a number of 'maximum efforts' but this one was unusual. For some reason, we had 4 pilots aboard (normally we did not operate with 4 pilots.) Perhaps, because the squadron maintenance officer was going along, and he did not fly very much. However, he should have known how to operate the 4K Beta engine controls because he was responsible for maintaining them. The command pilot was a lieutenant. The pilot was the maintenance officer and a lieutenant commander. I was the co-pilot and we had an Ensign aboard for navigator. The blimp was parked on a 'circle' away from the landing mat. It was after dark (8PM) and the blimp was heavy, very heavy because we had to go 50 miles at sea and relieve a blimp crew that was tracking a submerged sub. We would have to remain 'on station, tracking the sub' for at least 8 hours before we would be relieved by another blimp.

After pre-flighting the blimp and checking out the engines, the blimp was moved onto the landing (take-off) mat. The pilot told me to set-up the engines with 2200 revolutions per minute (flat pitch - neither forward nor rearward pitch) and 28 inches of manifold pressure on the engines (meaning that the throttles were almost fully opened.) The pilot (maintenance officer) indicated to the ground handling officer that we were ready for take-off. The ground handling officer motioned for us to start rolling forward while he slowly moved backward. The pilot grabbed the pitch levers (except for this model airship these would have been the throttles) and pushed them full forward putting 43 degrees of forward pitch on the propellers. (For take-off we usually used 23 degrees of pitch.) The throttles automatically went to full-open and the propeller revolutions per minute dropped from 2200 to 1200 revolutions per minute` because the engines could not handle a pitch-angle that large on take-off.

The blimp slowly lumbered across the take-off mat as the pilot pulled the nose away up in the air causing the lower vertical tail surface to drag across the take-off mat. After goin1g about 1000 feet (while the tail surface was being dragged or scraped off) the command pilot asked the pilot: "Are you going to get her off, Sandy?" The pilot said: "S**t no!" The command pilot said: "Well, I guess that we had better do something then." One of the mechanics in the blimp after-station said, on the blimp intercommunication system: "Well you had better do something fast because we are running out of "lower vertical" which is being scraped off." The command pilot said: 'Okay, drop the slip tank.' (The slip tank is a 110-gallon tank of gasoline, which is located at the bottom rear end of the gondola and is rigged with an electrical release and quick disconnect. permitting it to be dropped, in an emergency, with the flip of a switch in the cockpit.) I hit the release switch and the slip tank dropped (it was only 2 feet above the around at that time.) The tail came dragging along and ran into the slip tank, which left a large gouge in the lower tail vertical. What is amazing is that the whole blimp did not go up in a puff of flame and smoke at that time. That tail had dragged across the take-off mat for a thousand feet leaving a string of sparks all over the place as the metal was being machined away, and we had added 110 Gallons of high octane gasoline to the mix. With the release of the slip tank, the blimp was 1000 pounds lighter but we still did not get airborne. We lumbered on off the 2500 foot landing mat and into an adjacent field. The propellers were still turning up at 1200 revolutions per minute and chomping weeds, which were higher than the cockpit windows. About 500 feet away, dead ahead, was a row (hedgerow style) of 30-feet tall trees which it appeared would impale the blimp. Fortunately, the field was rough and the blimp started to bounce as it rolled over the rough spots in the field.

Just before we hit the trees, the blimp was bounced into the air and pilot turned parallel to the trees, at an altitude of 10 feet, and heading for the river about 500 feet away. Weeksville control tower saw all of this happening (even though it was dark they saw the sparks flying from the blimp's tail as it dragged across the take-off mat, the blimp bouncing across a field of high weeds, the blimp bouncing into the air just before hitting the row of trees, and finally the airborne blimp over the river at about 200 feet altitude.) The control tower called and asked if we were "declaring an emergency?" I was handling the radio communications and I told the tower to "wait 1," then I asked the command pilot if he was declaring an emergency (conference-type flying.) He said: "No," told the tower that we were "not declaring an emergency." The control tower knew that 110 gallons of our fuel was sitting in the middle of the landing mat and that we had suffered some structural damage to the lower vertical tail surface and they asked if we wanted an immediate landing?' I told the control tower to "wait 1" And asked the command pilot if he wanted an immediate landing. He said we would land but not immediately, because we must first assess the damage to the blimp. I advised the control tower that we would be landing shortly but must first assess the blimp damage to determine if we could land.

With an "aidis lamp" we determined that about 18 inches

[1] This is part of my memoirs written and copyrighted in 1984 and might be of interest for those members who are not too familiar with blimp operations Weeksville: N.C. 1955-1957. As I recall, **Peter Brouwer** was also at Weeksville at that time and might remember some of this. *(Ed. found the earlier photo of a K-ship's damaged fin.)*

of the 6 foot long lower tail vertical had been machined off by dragging the ground. There was a large chunk missing from the front of the tail lower vertical where it had hit the slip tank. However, the flight controls appeared to work and there were no apparent holes in the bag. We told the tower that we would land in 10 minutes. They sent the landing party out onto the landing mat and we made a "nervous" but uneventful landing. The damage to the blimp would require several days to repair and the only other blimp that was fueled and loaded for a flight of that duration was the blimp belonging to the duty crew. They took the "maximum effort" flight and we stood the remainder of their duty watch.

COMMAND DUTY OFFICER

Except when they are in training or transit all naval officers stand a duty watch. The frequency and type of duty watch depends upon the number of people available to stand the watch and the type of unit to which they are attached. All Naval aviators are first "an officer" and second a specialist of some type. Naval aviators are "officers of the line" (they wear a 5-pointed star on their sleeve) and are eligible to 'succeed to command' of any line unit' in the Navy.

As a line officer (although few ever make it), all Naval aviators are eligible to become commanding officer of their squadron; commanders of an aircraft wing; commanding officers of a Naval Air Station; commanding officers of an aircraft carrier; and on up through the procession to the Chief of Naval Operations, the most senior assignment in the Navy.

Although there was a 'glitch' in my promotion potential of which I learned much, much later. I was becoming a very senior senior-grade Lieutenant (2 bars like a Marine/Army/Air Force Captain.) And, long before I was designated a ground handling officer or an airship commander, I was standing command duty officer watches.

With 6 airship crews we were standing the squadron duty every 6th day, plus we had an emergency 'standby crew' every 6th day. This meant that every 3rd day we were either on 'standby" and could remain near our phone at home, or we had the squadron duty at the air station. Operating the squadron as the command duty officer was not too difficult. During the daylight squadron operations the commanding officer or executive officer were usually around and would issue the necessary command orders. After normal working hours the squadron command duty officer was responsible for the squadron operations or unit integrity. The blimp was a good anti-submarine weapon, but it was also the only weapon which the Navy had that would completely destroy itself, within 24 hours, if not constantly watched. It was a gas-filled bag, which was very susceptible to air pressure changes and air currents. It therefore, required constant watching to ensure that it did not deflate. An enlisted man "pressure watch" was assigned to ensure that the approach of a high pressure air mass did not cause the blimp to shrivel up and fall over. With blimps sitting out in the field, if a cloud passed between the sun and the blimp, the gas in the bag would start to contract and the blimp had to be pumped up to keep it from shriveling.

Because the blimps were so susceptible to air currents, care must also be exercised in where the blimps were parked on the field to ensure that air currents tumbling over the hangars did not cause the blimps to "kite." (Kiting is when one end of the blimp is attached to a mast, while air currents flowing past the blimp cause the other end to lift UP in the air, sometimes straight up.) Ground handling the 300 foot long blimps in and out of the hangars, without scraping the wall (which could result in a deflation) was also a very tricky operation. Most of the command duty days were more of a routine nature but there were some that presented special problems.

In one instance the duty chief petty officer came into the 2nd floor squadron office in the early evening and said; "Mr. Garrison, that pressure watch on circle 4 is just having a fit." (In that part of the country - when someone says that somebody is "having a fit" they usually mean that the other person is excited or annoyed about something.) So I asked: 'What's the problem?' The chief said: 'He is just having a fit." I said; "well, what is he excited about?' The chief said; 'He isn't excited, there is blood all over the place," I said; "Blood! Do you mean that he is having an epileptic fit?" The chief said; "Yes," so, we sent the man to sick-bay and sent out another pressure watch to keep the blimp pumped up.

In another instance, I was sitting in the squadron duty office at about 9PM when the station "crash horn" sounded. Since there were no landings or take-offs in progress, 1 could not imagine why the crash horn was sounding. I looked out on the hangar deck where all of our blimps were sitting and saw one that was about to lie down.

I rushed down to the hangar deck and saw this blimp that was tied at the front and rear rolling over with 12 inch deep wrinkles in the bag. The duty chief was rushing around getting someone into a "bosun's chair" to skirt along the top of the bag, thinking that something had fallen through the bag creating a hole. No holes were found.

I climbed aboard the blimp and the pressure watch told me that he had been pumping air into the ballonets for 10 minutes but the blimp continued to deflate. There was water in the ballast tanks and I valved 450 gallons of water onto the hangar deck but the blimp continued to roll over. The duty chief got aboard the blimp and I said: "Chief, pump air-to- helium. The chief said: "But sir -" I said: "Goddamit chief, I said pump air-to-helium," The chief

said: "Yes sir," And, started pumping air directly into the helium bag, contaminating the purity of the helium. (Directly above the gondola there is a boxlike chamber used for directing the air into the forward or aft ballonets. There is also a patch in that chamber which can be ripped off permitting air to go directly into the helium bag.)

This was a $10,000 decision, but it was the correct decision. (I was not earning $10,000 in a year - even with flight pay.) Since I had directed the contamination of the blimp full of helium, later the helium must be purged from that blimp and the air filtered out of the helium with charcoal filters. This took several days and cost $10,000. Subsequently we learned that the blimp was deflating because a 22-inch valve in the forward ballonet had stuck open. With no air in the ballonet pressing against the helium in the bag, the blimp was losing its shape. The blimp would not have deflated completely because the helium bag was not ruptured, but it could have rolled over, and damaged the bag by lying on the hangar deck.

With the station crash horn sounding, the squadron commanding officer, the executive officer, and the station commanding officer came to the hangar to find out what was happening. By the time that they arrived, we had the blimp almost fully pumped up.

A ROUGH DAY

One morning after I had been designated as a "ground handling officer," I went in to relieve the command duty officer. I found him on the South 'hangar deck and saluted him saying: "I relieve you, sir." At that point we both looked out the North doors of the South hangar and saw a blimp that he had pulled over near the West hangar with the intention of hangaring it there.

As we watched the blimp 'kited' probably 75 feet in the air. We ran to the duty jeep, jumped in and started across the landing mat toward the kiting blimp. Just as we arrived, the blimp came down with a 'resounding crash' driving the wheel up through the floor of the blimp, causing significant structural damage. I got aboard the blimp to find that the pressure watch was attempting to keep the blimp down, by using the elevator control surfaces. I valved some of the water ballast and the blimp floated 3 feet off the ground.

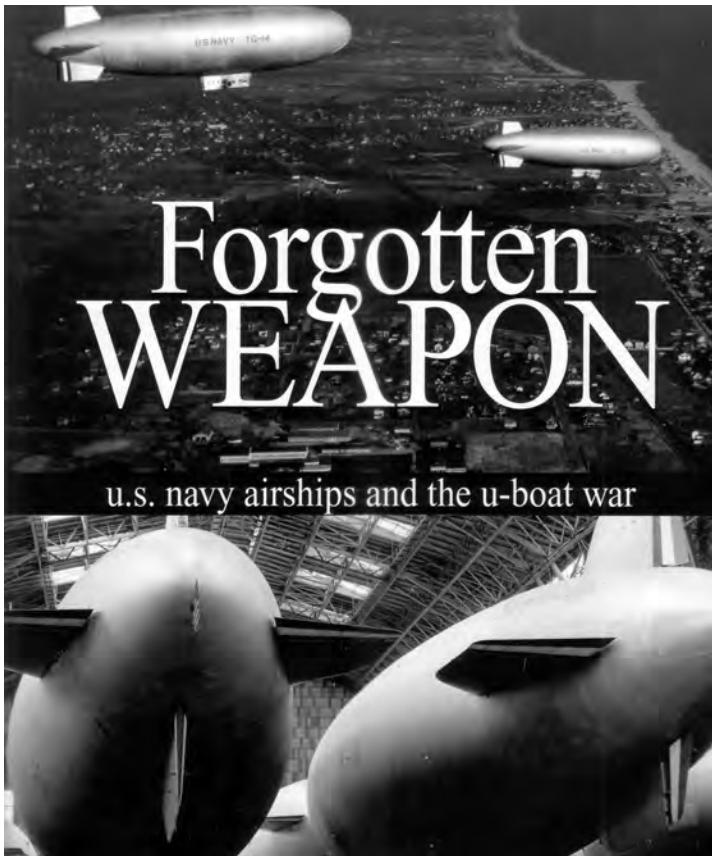
The emergency wheel was brought over from the hangar and bolted to the blimp. Now we had a damaged blimp that had to be put into the hangar for repair. (ZP-1 had only 1 emergency wheel, but ZP-4 had another wheel that would fit.) As the day wore on, the breezes started to pick-up and the flight operations officer wanted a blimp, which was moored out on circle 4, put into the West hangar. Since the winds were from the West there was considerable 'burbling' (air rolling along tumbling as it went) over both hangars. This caused heavy turbulence in the landing mat area and around the West hangar. At about noon I decided that I had better get that blimp into the West hangar before landing the 2 blimps that were flying. When the tractor driver towing the mobile mast and the blimp went past the South hangar, the blimp started to kite with the tail going up about 100 feet in the air. I had been expecting this and had instructed the pressure watch, aboard the blimp, on how to handle the elevator control surfaces and even valving off some of the water ballast. However, just as the blimp started to kite, the commanding officer looked out the window of his office and said "jesus christ, that goddamned garrison is going to de-commission (wreck) this squadron before the day is over."

Being unaware of the commanding officer's concern, 1 had the blimp towed over toward the West hangar and parked until we could get enough ground handlers around it to put it in the hangar. The wind continued to become more gusty and I had the blimp stopped more than 300 feet from the hangar in the event that it swung all of the way around the mast, it would not hit the hangar. The chief petty officer pilot (an enlisted pilot) who was helping with the ground handling wanted to load the blimp down with sand bags to stop the blimp from kiting but I would not allow him do that because the blimp would he so heavy that if it kited, it would drive that wheel up through the floor too.

Just as we were about to start the blimp hangaring activity, it appeared that all hell broke loose." People started coming toward us from all directions. They were running, riding jeeps, riding trucks, and riding tractors. It seems that the commanding officer had summoned 'all hands' to help out there and hangar that blimp. There must have been 150 people there. One of the other senior grade Lieutenants who had flown blimps (for about 3 years) came up to me and said "Joe I am not relieving you of the duty, you are still the duty officer" but I will ground-handle this blimp for you. I said "That's fine, please do."

We got the blimp in the West hangar but he scraped 6 feet of the blimp on the hangar sill as he backed the blimp into the hangar. It did not rupture the bag or deflate. When the 2 blimps that were flying returned, the weather was quite gusty. One blimp landed alright but the other one was so 'light' and had to he pulled down using both the short and long lines. The rest of the duty watch went along as normal and I was relieved at the regular time the following morning. (The commanding officer might have thought that I would wreck the squadron, but I hadn't done any blimp damage during that watch. The prior duty officer had parked the blimp that damaged the wheel and the expert ground handler had scraped the blimp while hangaring it.) **Ω**

MEDIA WATCH



FORGOTTEN WEAPON
By William Althoff,
Naval Institute Press (2009) 417 pg.
Reviewed by **Charles P. Hall**

Let me begin by saying that FORGOTTEN WEAPON is a handsome volume and a noble addition to anyone's library. It is hard-bound, the dust jacket in imposing, the layout is well-done, and then come the photographs. The photographs are beautifully reproduced and incorporated throughout the book. As there are no more World War II vintage photos being taken, it is likely that the reader will be familiar with some of them which have been published previously. Some were new to me and all are presented well.

William Althoff has written about Lighter-Than-Air before and this is an interesting addition to his previous body of work. A subject such as this can be approached 'generally' or 'anecdotally'. Althoff has chosen to emphasize the general over the anecdotal.

FORGOTTEN WEAPON is quite specific to World War II. The brief introductory comments go back as far as *Macon*. The Epilogue consists of a single photo and 2 1/2 pages of text. Most everything in between is blimps during World War II. The first half generally covers blimps, weapons and organizational developments along America's Atlantic coast. The second half generally cover South America, Gibraltar, the Mediterranean and plans to begin operations around the United Kingdom when the war in Europe comes to an end in 1945. Over the past few years, interest in and comments about specific engagements between blimps and submarines have come forth from various sources. Althoff provides irregular coverage of the best known examples. His analysis of the K-74 episode is brief. His further discussion of the after-effects of the K-74 episode is insightful. His comments regarding the loss of K-14 are brief and cryptic yet have the ring of a truth yet to be revealed in complete detail.

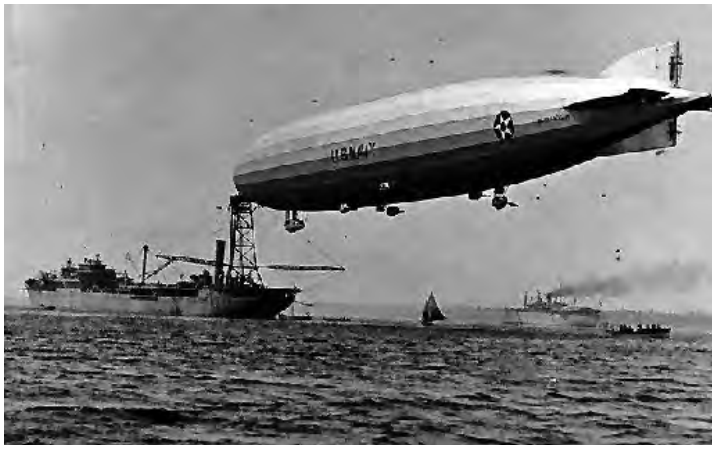
It would not be a book about blimps in World War II without mentioning Captain (eventually Vice–Admiral) Charles Emory Rosendahl. While Althoff covers Captain Rosendahl, his primary interest seems to lay with Rosendahl's deputy, Commander (eventually Commodore) George Henry Mills. While this may strike readers as out of the ordinary, I believe that most will discover that Althoff's emphasis on Mills adds a dimension to the story told here for the first time. That said, there was, for me, a personal disappointment related to this aspect.

In the first 80 years of the modern, steel, U.S. Navy (approx. 1885 thru 1965) it was occasionally the case that an officer receiving favorable publicity, or public recognition - which was not pre-approved, or was inconveniently timed in relation to that which was "the story" as approved by the Navy Department - often incurred the wrath of his seniors and peers to the detriment of his career and /or his area of specialization. Better known examples of this phenomenon include Alfred T. Mahan, Winfield Scott Schley, Charles E. Rosendahl, and Hyman G. Rickover.

In the case of Rosendahl, Althoff offers several allusions to Rosendahl's relationships within the Navy. Once again, he tends toward the 'general' discussion with slight anecdotal support. One could read it as, 'We all know the story so I really do not need to repeat it.' Towards the end are general comments regarding such matters as, "The pernicious effects of naval politics. . ." and how the HTA establishment's attitude toward LTA reflected ". . . individual personal feelings toward Rosendahl". It is said that these personal feelings dated back to the 1920s and 30s when scant naval aviation dollars were fought over by mid-level naval officers as that is how high-in-rank senior naval aviators had progressed. In the 1940s, these officers had risen in rank based upon time-in-grade and wartime expansion and, though the money was then available, the old animosities remained. It is an interesting generalization with little in the way of support by specific examples; that is a disappointment!

By way of interesting contrast, if anyone still doubts the self-aggrandizing, history rewriting, insufferable arrogance of the former American legal council for the Schutte – Lanz Company, one need read no further than the photocopy of White House correspondence on page 54. As for the rest, the official Guiness record is that no volume, about LTA with photographs, has ever been published without flawed photo captions; that record remains unbroken. The end notes are a marvelous resource as well as occasionally interesting reading. These notes alone will be worth the book's purchase price to the next scholar who wants to research this topic. Ω

History Committee



One of my favorite photos of one of the greatest airships of all time. ZR-1 *Shenandoah* on the PATOKA mast, Narragansett Bay Newport, RI August 8-9, 1924. USS *Wright* (AV-1) standing by making smoke in the background. Note the 80-foot "yaw booms" which take the place of the "snatch block" yaw-guy anchorages of the shore masts, the relative size of the water recovery units visible on engines #1 and #5 rudder/elevator angles indicating corrective inputs by control car personnel trying to keep the ship riding steadily at the mast.

We just marked the 85th anniversary of a very innovative and interesting undertaking in rigid airship operation when the USS *Shenandoah* (ZR-1) moored to a mast on the stern of the converted fleet oiler *Patoka* (AO-9.) The genesis of this undertaking lay in the original idea to attempt a flight to the North Pole sometime in summer 1924. "Semi portable" 160-foot wire braced masts at Fort Worth, San Diego and Camp Lewis (near Tacoma, WA) would facilitate the airship's passage across the southwest and then up the Pacific Coast but for further fuelling/gassing facilities at Nome and Spitzbergen it was judged most practical to use a shipboard mast. Relatively modern *Patoka* and near-sister *Maumee* (AO-2, the first large diesel-engined surface vessel in the Navy) were selected for the "airship tender" role.

In the delicate environment of political tension following the January 1924 "mast breakaway" incident in which many bits of "dirty laundry" regarding Lakehurst, the *Shenandoah* and the Bureau of Aeronautics got a painful public airing, President Coolidge withdrew his support for the North Pole flight. However, work on the expeditionary base facilities in Texas, California and Washington continued in anticipation of a West Coast demonstration flight. Work on the *Patoka* continued as well and her mast facilities were considered complete and ready for testing when she left the Norfolk Naval Shipyard in mid-July and sailed for Newport, RI.

Lieutenant Commander Zachary Lansdowne and his crew were honing their skills in a series of short/intermediate flights and mast mooring tests that summer. The "best and brightest," hand-picked and regarded as the elite of Naval Aviation, the most experienced of the group only had a few hundred hours of rigid airship flight time at best. Operation of their airship was complicated by such realities as the expense, scarcity and decreased performance from the use of helium gas and the further handicap of excess weight, increased drag and reduced speed resulting from the use of exhaust gas water recovery condensers on three of the five engines. First and foremost, Lansdowne was committed to making the airship a useful adjunct to the Fleet. Helium conservation was an obsession with him, techniques of using daytime "superheat" to lift excess fuel/ballast on takeoff and (conversely) nighttime cooling effect to facilitate landings without valving gas, were maximized. The ship was lovingly maintained in a superb state of maintenance and readiness ("I believe the *Shenandoah* should not fly unless in first-class condition!" he declared.)

With Lieutenant C.E. Rosendahl dispatched to serve as mooring officer on the *Patoka* and four other men from the airship's crew to assist him, the *Shenandoah* and her crew awaited suitable weather to fly to Newport and test the new mast. Seaplane tender *Wright* had also proceeded to Newport for additional logistical support. *Patoka* sent word that she was ready to commence mooring operations on August 4th.

The wait ensued as Zach Lansdowne agonized over "superheat" and chain-smoked Chesterfields while *Shenandoah's* aerologist, Lieutenant J. Bruce Anderson, poured over his weather data ("He could smell a storm.....he was always right, there were no pleasant surprises!" Rosendahl would observe years later.) Everything had to be near-perfect; with 85% inflation on the gas cells, they had in fact exhausted Lakehurst's helium supply (though the monthly allotment of 350,000 cubic feet was due by rail in a week.) In a worst-case scenario, late day thunderstorms might delay their docking and force them to wait until morning when they might end up extremely "light" from morning superheat and from burning fuel all night. ("Will not proceed to Newport until such time as we think conditions are perfectly satisfactory for the first mooring unless directly ordered to do so " Lansdowne advised Admiral Moffett.)

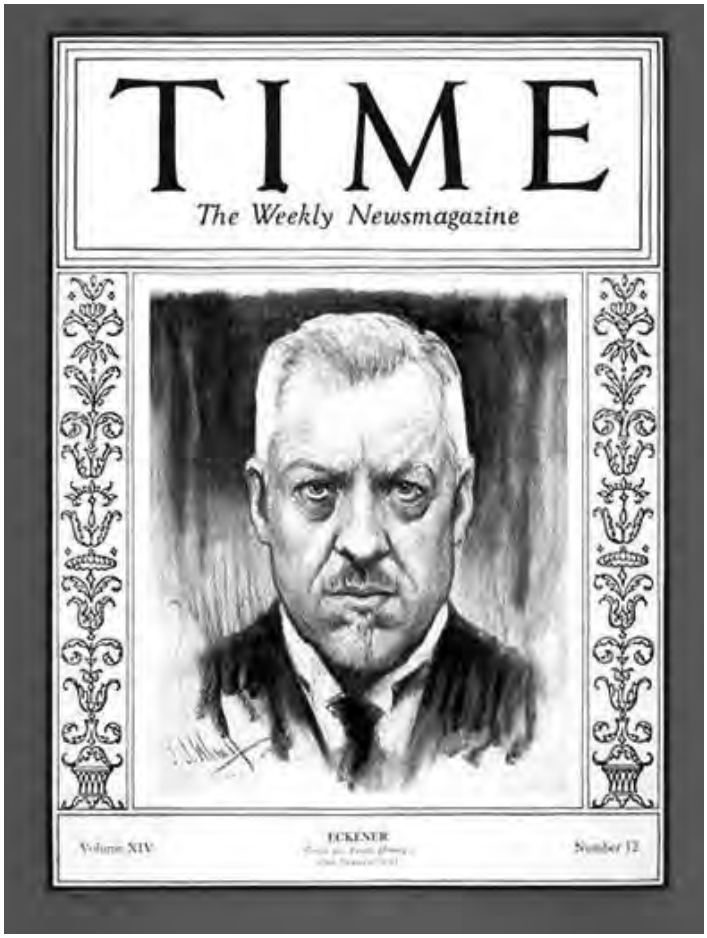
Shenandoah undocked from the Lakehurst "high mast" at 0921 on August 8 with 12,200 lbs. (about 2000 gallons) of gasoline 5850 lbs. (a little over 700 gallons) of water ballast and 38 men aboard for a leisurely 6-hour flight up to Newport (Lansdowne tended to favor using engines #1, 4 & 5 because they were fitted with water recovery with #2 and #3 running at reduced speed or secured unless they hit headwinds.) After nearly two hours of circling an approach was made and the main mooring cable was lowered to be picked up by *Patoka's* motor whaleboat carrying the end of the mast mooring cable.

In one of those wonderful instances that make airship ground handling so interesting, it turned out that the wind direction on the surface and the wind direction at the *Shenandoah's* approach altitude were different; the airship veered to port, the main mooring wire went dangerously slack and kinked badly. Ballast was dropped forward, the wire took up tension and the *Patoka* was able to alter course, whereby the wind direction lined up, the yaw guys were finally connected and the *Shenandoah's* cone slipped into the masthead after an elapsed time of about one hour. As it turned out, the mast cup and nose fitting of the airship didn't quite match up so the main mooring cable had to be left connected to hold the airship in place (the machine shop on the nearby *Wright* went to work modifying and re-fitting the mast cup lugs.) Fuel and water were immediately pumped aboard.

The *Shenandoah* spent all night and much of the next day moored to the *Patoka*, receiving visitors and local dignitaries. She swung completely around and over the *Patoka* without difficulty, but the operation was not without its own hazards. Nasty "stack gas" from the *Patoka's* funnel below frequently wafted into the open windows of the control car. If the tail began to rise, crewmen were ordered aft to strategic positions along the keel walkway; if the tail began to fall towards the water, men were hastily ordered forward and ballast would be dropped aft (which would usually cause the stern to ultimately too light and require men and ballast to be shifted aft a few minutes later, with the cycle eventually repeating itself.) Tall boats innocently sailing underneath caused added anxiety when the stern would dip. (While it never happened to the *Shenandoah*, the larger ZR-3 *Los Angeles* actually "dunked" her tail in the water on a couple of occasions....fortunately without damage.....even after the *Patoka's* mast height was raised by 25 feet in 1926.)

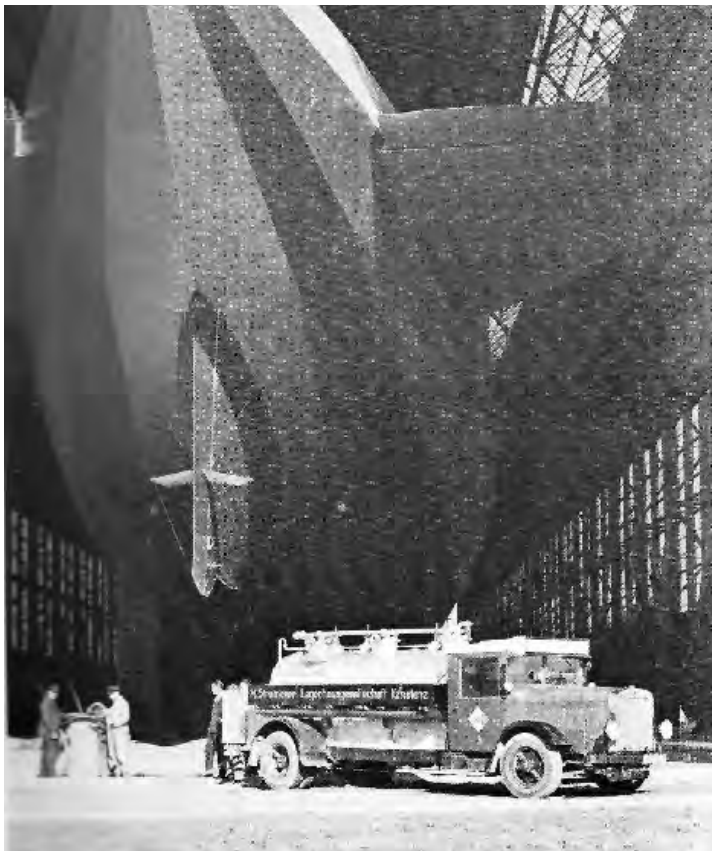
Shenandoah slipped from the *Patoka* mast on the afternoon of August 9th, flew an arc out to sea to avoid a thunderstorm at "all engines standard speed" (about 40 mph) and landed on the field at Lakehurst shortly after 4 am following a flight of 13 hours. No helium had been valved on the entire trip, while a fresh supply of gas had arrived; the ship was ready for new conquests and adventures and the *Shenandoah* would certainly see her share. Too bad that with all the professionalism, dedication and positive momentum the *Shenandoah*, Zach Lansdowne and 13 others of her crew had only a little more than a year's life remaining to them!

I remember it was late July of '77 and I was a weekend guest at the house of Dr. Douglas H. Robinson, a man who was a personal friend, teacher and mentor to many of us. We had been up flying a sailplane all morning, we were now sitting by the pool in our bathing suits (I was drinking a Coke, he was drinking a Manhattan) and I was looking at the hand-written manuscript of what would become his book UP SHIP! US NAVY AIRSHIPS 1919-1935 (with Charles Keller.) I could not help but marvel at the beautiful treatment he had given the Shenandoah and Lansdowne. "I want a book that tells the story so that people will know what a fantastic accomplishment she was and that Lansdowne, in addition to being one of my boyhood heroes, was one of the greatest rigid airship commanders of all time," he said. "This book will accomplish that." It did. Ω



Hugo Eckener played all his considerable skills as a businessman/showman in order to accomplish the August 1929 "Weltfahrt" depending on strong relations with the Americans to help carry the project through financially. Estimated cost was over $200,000 for the entire operation. As Chairman of the Board, Director of Flight Operations and Chief Pilot at Luftschiffbau-Zeppelin, Hugo Eckener was never one to stand still very long. Having risen to worldwide prominence following his successful gamble to build and deliver the LZ126/ZR3 to the United States Navy in 1924 and then fantastic political and financial maneuverings of the "Zeppelin-Eckener Spende" which produced the *Graf Zeppelin* in 1928, Eckener was a man with a mission in 1929.....to take the enthusiasm and goodwill he had built in precarious times with sometimes-precarious resources and parlay them into making the Zeppelin airship a truly accepted conveyance which would put Germany (and the Zeppelin Co.) at the forefront of worldwide commercial aeronautical commerce. It was also understood in Friedrichshafen that 1929 was shaping up to be a crucial year....Great Britain was poised to fly two new giant government-sponsored commercial airships, the R100 and R101, which were not only bigger

than the *Graf Zeppelin* but would enjoy official government financial and logistical support.... something Eckener sorely lacked, as mostly what he got from Berlin was tepid enthusiasm and "lip service." With Germany still trying to pull itself out of the economic deprivation of the Treaty of Versailles, it was hoped to generate enthusiasm (and financial backing) from that great phenomenon of Jazz-age mysticism, "The American Millionaires." In executing this dream, he was willing to be bold, in this case envisioning a spectacular journey around the world carrying mail and paying passengers. Virtually the stuff of adventure writers, nothing like this had ever been done before on a commercial basis.



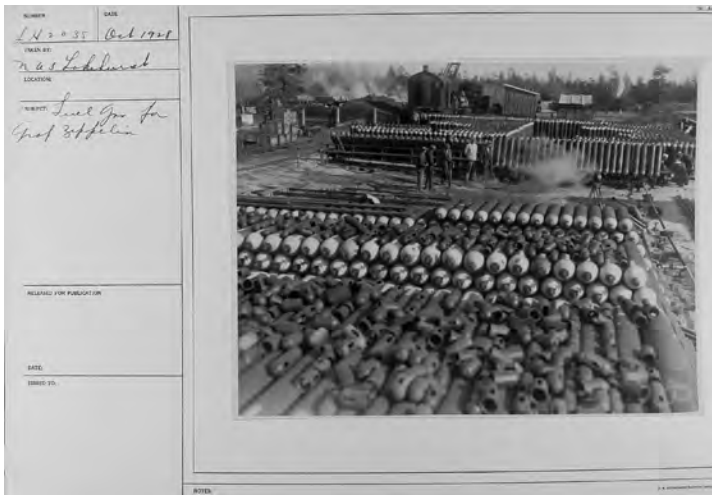
While Eckener had supreme confidence in the ability of the *Graf Zeppelin* to meet the technical and meteorological challenges such a journey (even after nearly losing the ship after having to put down for an emergency landing in France with broken crankshafts on four of his five engines during an abortive round-trip transatlantic demonstration flight in May.) Overall, huddling with his officers and staff at as they studied stacks of reports on weather conditions, ocean currents/temperatures and sometimes-incomplete mappings of areas like Siberia, the logistical difficulties were deemed manageable while (typically) the financial aspects of the flight were the biggest headache. Money. Silly old money. Very much a necessity when operating a flying machine the size of an ocean liner requiring a flight crew of forty, scores of ground support personnel and a physical plant/berthing space equivalent to a small Naval dockyard. To make such a journey, he was going to have to send advanced support personnel, spare parts and equipment to at least two or three stopover locations around the globe. He was going to need hydrogen, blaugas (gaseous fuel), gasoline, oil, provisions, ground accommodations, field security and a couple-hundred able-bodied ground crew at each location, among other things. Estimate cost for the "Weltfahrt" was $225,000 (USD). Remarkable for days when most long-distance communications were conducted by letters (sent by rail and steamships) and cablegram, ideas were "shopped" through various channels and the details were ironed out in a space of about eight months. Unable to simply takeoff and land from just any pasture airport like an airplane, the *Graf Zeppelin's* route would be dictated largely by available facilities; Friedrichshafen, the US Naval Air Station at Lakehurst, NJ, the Imperial Japanese Navy airship base at Kasumigaura (outside Tokyo) and a U.S. Navy wire-braced "semi-portable" mooring mast erected at Mines Field, Los Angeles (today known as LAX Airport.) The financial picture brightened considerably when none other than millionaire publisher William Randolph Hearst offered to pay $150,000 provided that Hearst newspapers had exclusive rights to cover the story and the flight and that the trip began and ended with a circuit of the Statue of Liberty. Eckener had little problem with this, it would simply mean crossing and recrossing the Atlantic to Lakehurst at the beginning of the voyage, a potentially beneficial move that would give the ship a good functional test and still enable a layover in the hangar at Friedrichshafen to correct any defects before proceeding across Europe and Asia. The problem was that Eckener also was obliged to accommodate the German press as well, which resulted in Hearst reducing his offer to $100,000. In the end, three German newspaper firms put up $12,500.....a paucity which could hardly have pleased Eckener, but which he accepted with grace. With about $50,000 in passenger revenue (only half the passengers would be paying, others would be guests and official "observers" such as Comrade Karklin of the Soviet government, Lieutenant Commander Rosendahl and Lieutenant Richardson of the U.S. Navy and Commanders Fuyoshi and Kusaka of the Imperial Japanese Navy) the balance of the revenue needed came from special mail sent by philatelic collectors around the world, including items bearing special *Graf Zeppelin* airmail stamps issued by the U.S. Postal Service (highly-prized collectibles to this day.) The *Graf Zeppelin* left Friedrichshafen on August 1, 1929, and landed at Lakehurst 95 hours later. On August 7th they departed Lakehurst and made a speedy 55-hour crossing to Friedrichshafen by utilizing Eckener's scientific approach to harnessing the clockwise and counterclockwise winds of storm fronts in "pressure pattern flying." After a five-day layover at Friedrichshafen, the most exciting part of the journey began, an 8700-mile journey across Europe and Asia where the ship was pushed ever-higher by uncharted mountains and the round continually rose up beneath them.....150 feet below with the altimeter showing 6000 feet.....until finally the mountains fell away and Eckener found himself descending over the Sea of Okhotsk which put them down for a landing at Kasumigaura after a flight of 101 hours. After a ground handling mishap at Kasumigaura caused a delay to repair

broken struts on the rear engine gondola (Eckener and his officers having to seriously dissuade offers by the responsible Japanese Navy officers and men to commit ritual suicide if their error caused the *Graf Zeppelin* to fail in its endeavor) the Zeppelin was off for Los Angeles on August 23. Taking advantage of the counter clockwise winds from a known typhoon that had brushed Japan, the *Graf Zeppelin* followed the fringes of the storm and made the Pacific crossing in 52 hours, arriving off San Francisco on the late afternoon of August 25.... and here, Hugo Eckener throttled his motors and then made a dramatic entrance over the Golden Gate with a magnificent sunset in the background, then down to Mines Field to land early on August 26th.

The laws of physics played havoc with the *Graf Zeppelin* during her visit to California. She hit a temperature inversion on landing which required valving hydrogen. Sitting in the hot sun all day, the ship vented hydrogen and then when it came time to depart that night the ship found a steep temperature inversion only a few feet above the ground. All available hydrogen at the field was emptied into the gas cells; there would be no more hydrogen available in quantity for at least a full day. A dozen crew were taken off and sent ahead to cross the continent to Lakehurst by plane and Pullman coach. Spare parts were reduced by half, water ballast and gasoline was cut back to the absolute minimum; they would rely on the 1-million-cubic-foot supply of "Blaugas" gaseous fuel to get them through. A harrowing "heavy" takeoff ensued shortly after midnight on August 27th with the *Graf Zeppelin* refusing to rise as her engines drove her full-speed across the field toward a row of tall high-tension power lines. Going with full up elevator and actually dragging the bottom of the lower fin along the ground for a few hundred feet, Eckener's and his skilled crew manage to coax the ship into the air and over the power lines to safety. After rising into the cooler air above the ground layer, the Zeppelin flew easily down to San Diego then East across the lowest possible points of the Continental Divide thru Arizona and New Mexico to El Paso and then up to an enormous welcome at Chicago, overflight of the National Air Races site at Cleveland and on to a triumphant arrival at Lakehurst on August 29th. The *Graf Zeppelin* returned to Friedrichshafen on September 4th, but not before a grand ticker tape parade in New York for Eckener and his men and a meeting at the White House with President Hoover. Success seemed assured. Eckener had stayed behind in the U.S. (his trusted right-hand man Ernst Lehmann piloted the *Graf Zeppelin* home) as there were meetings with American industrialists and financiers who saw August of 1929 as proof positive that the Zeppelin was a tried and proven platform with tremendous commercial possibilities.

So what happened, you ask? Great achievement that it was, the timing was rotten. Less than two months later, the bubble of manipulated credit and artificial wealth burst and the U.S. stock market crashed, triggering the beginning of the Great Depression, the collapse of the German economy and government, the rise of Adolf Hitler and finally, World War II, which lead to the destruction of much of the German Zeppelin infrastructure itself. Within four years, the *Graf Zeppelin* would be sporting the "swastika" emblem on her tail fins. Within eight years, much of the dream of German Zeppelin progress would perish along with 13 passengers and 22 crewmen in the Hindenburg disaster at Lakehurst. But all of this was very much in the future and almost beyond comprehension when the future of the Zeppelin looked so bright following the *Graf Zeppelin's* "Weltfahrt" of 1929.

- Rick Zitarosa Ω



Publisher **David Smith**, *Ed. and* **Eric Brothers** *located this photo in the National Archives. Part of a portfolio of many angles, the extensive facilities built to support fuel gas are seen at Lakehurst. No less a person than the future CinC Fleet Admiral E. J. King had written about the advantages of the equilibrium-preserving gaseous fuel. The most powerful argument for its employment is seen in the Graf's astonishing record, by far the most successful airship in history. By contrast every rigid airship designed for diesel oil crashed and burned with heavy loss of life. Graf skipper Hans Von Shiller diplomatically wrote the change to heavy petroleum, whose weight disappeared as the airship flew, was less than optimal "from a technical" perspective.* **Ω**

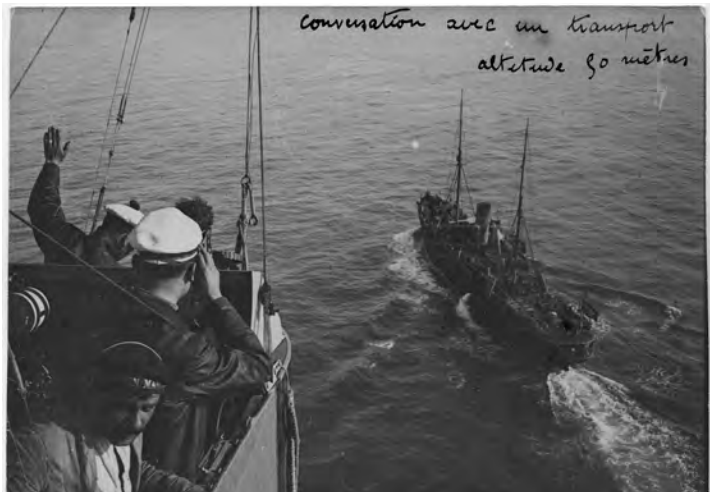
THE FRENCH NAVY AIRSHIPS (1915-1937)

By Robert Feuilloy

The French Navy took interest in the question of airships as early as April 1910, when a commission of officers and engineers was created to study the technical possibilities, in view of the experience accumulated by the French Army. The first airship to have successfully flown in France, in August 1884, was *La France*, flying off from Meudon, at the southern outskirts of Paris. In December 1905 the Army took delivery of the Lebaudy 1, alias *Le Jaune (The Yellow)*, which was offered by the manufacturer. By 1910 the Army has had in its inventory 6 airships and was in a position to determine what was to be specified for the future builds. The Navy Commission, against all expectations concluded that the aircraft was much more suited to fight at sea than the dirigible and therefore the naval aviation programme started with the buy of a Henri Farman airplane delivered in December 1910. Then in 1915, the wind changed direction, after the demonstration of the mighty *Zeppelin*, and the good results of the small non-rigid balloons in the UK Navy against the German submarines. The French launched a programme of airships to counter the growing threat of the U boats, to detect the mines which were laid down by them, and in a general scheme to protect the merchant ships which were not yet organized in convoys (1917).

In April 1915, the British set an airship base at Marquise Rinxent, close to the harbour of Boulogne sur Mer, in the channel. In June, Lt (FN) Sablé, a naval officer sent in England to evaluate the Royal Navy Airships work, provided the recommendation to the French staff to buy a few number of Sea Scout (SS) for the Channel service and Coastal Patrol (CP) for the Mediterranean coast.

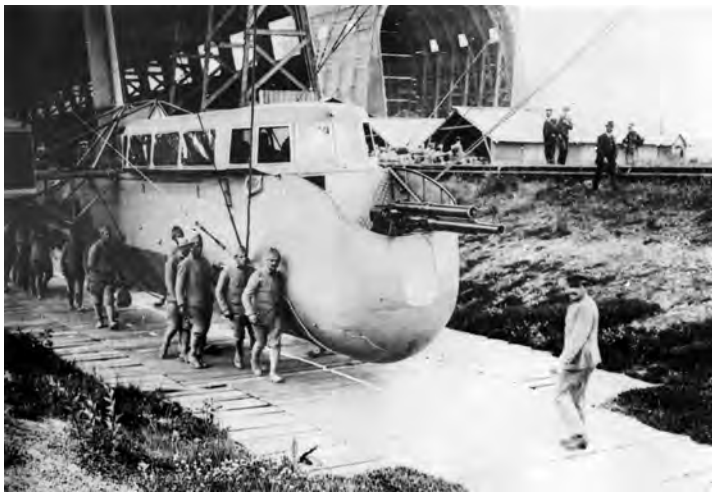
On 7 July the French Navy requested from the British Air Department the sale of 2 SS. Simultaneously, the French manufacturers Astra-Torres and Clément-Bayard were asked to study small dirigibles with 6 hours endurance, a speed of 70 km/h and patrol altitude of 300 meters. Four young officers were sent for training in England, at Polegate, in September. In December the British relinquished the Marquise Rinxent base to the French. The RN will deliver in total 7 balloons to the French from December 1915 to September 1917: 4 SS, 2 SSZ and the C4 patroller. In the same time, the Army starts to transfer to the Navy a few dirigibles in 1916, then followed with all what was left available in February 1917, after the destruction in combat patrol over Germany of the *Pilatre de Rozier II*. In total 8 airships were transferred. The CM-T (lost at sea in May 1916), CMT-2 *Capitaine Caussin*, *Fleurus, Lorraine, Tunisie, Montgolfier, D'Arlandes and Champagne*. February 1917 marks the end of the Army dirigibles. In June 1916, a first order is given to Astra-Torres for the build of a first lot of medium size (5-200 m3) airships, which receive in December the names AT-1, 2, 3 and 4. The first flights of those Astra take place from February to June 1917. In 1917 and 1918, the Navy receives 14 Astra (AT), *[below]* 4 Chalais-Meudon (CM) *[left]* and 18 Zodiac. The inventory culminates at 37 units at the Armistice in November 1918, and then drops afterwards as quickly as it has been rising.



From 1916 to 1918, the airships have pronounced 31 bombing attacks on submarines or supposed to be, and have detected about one hundred mines. No certain victory has been established except one by misunderstanding on a British sub in March 1918. The French have helped the setting of the US naval aviation in France both for the seaplanes and the lighter than air and, and for the later has transferred 6 airships in 1918 and, in addition, has trialed newly built ZD (US)-1 in 1919 *[photo, next page]* and CM5 (US) in 1920. In 1922, the Japan will also take delivery of the Astra AT-47. During the following period, from 1919 to 1926, the Navy employs alternatively the machines ordered during the war and they are indeed redundant for the peacetime. In addition three Zeppelin are received in France in 1920 and 1921, by air, but the LZ83/LZ113 will never fly again, being "deconstructed" for tests by the STAé (Service Technique Aéronautique). The LZ114/L72 will be renamed *Dixmude* and flies again in 1923, but is destroyed in December in a thunderstorm with all crew (50) being killed. The third one, LZ121 *Nordstern* is given to the Navy in 1922, renamed *Méditerranée* and flies successfully until its decommissioning in 1926.

Name	Builder	Type	1st flight	Place	Last flight	Place2	Volume m3	Hours flown
AT19>E6	Astra	Non rigid	08/09/1920	St-Cyr	26/07/1935	Rochefort	9 600	1202
C 4>Ce>CP4 Fr>AT 0	Kingsnorth	Non rigid	05/03/1916	Kingsnorth	11/11/1918	Havre	4 800	1178
AT 6	Astra	Non rigid	19/10/1917	Issy	10/07/1919	Bizerte	6 700	*1 072*
ZD4>E1	Zodiac	Non rigid	12/03/1918	St-Cyr	08/07/1927	Cuers	6 200	952
AT 8	Astra	Non rigid	20/11/1917	Issy	21/10/1918	Bizerte	6 700	*950*
AT 4	Astra	Non rigid	19/04/1917	Issy	15/01/1920	Rochefort	5 200	937
V 8	Zodiac	Non rigid	06/03/1928	Bizerte	juin-37	Rochefort	3 000	840
AT10>E2	Astra	Non rigid	15/04/1918	Issy	14/09/1925	Rochefort	8 300	839
V 7	Zodiac	Non rigid	12/04/1927	Roch	12/05/1934	Rochefort	3 335	750
VZ 2	Zodiac	Non rigid	15/05/1917	St-Cyr	04/02/1925	St-Cyr	2 750	679
AT 7	Astra	Non rigid	15/11/1917	Issy	28/12/1918	Baraki	6 700	*655*
ZD3	Zodiac	Non rigid	18/02/1918	St-Cyr	16/12/1921	Rochefort	6 200	643
AT 1>P1 USN	Astra	Non rigid	03/02/1917	Issy	10/09/1918	Paimboeuf	5 200	642
SS26>VA1	Cavendish Dock	Non rigid	17/12/1915	Polegate	20/12/1917	Havre	1 755	642
AT 9	Astra	Non rigid	25/01/1918	Issy	30/04/1920	Aubagne	6 700	641
AT 2	Astra	Non rigid	17/05/1917	Aubagne	28/06/1919	Rochefort	5 200	625
SS49>VA3	Wormwood Scrubs	Non rigid	20/06/1916	Havre	20/02/1918	Havre	1 755	584
D'Arlandes	Zodiac	Non rigid	10/08/1915	St-Cyr	25/09/1918	Corfou	14 200	564
AT 3	Astra	Non rigid	07/06/1917	Aubagne	13/05/1918	Bizerte	5 200	554
CM1(T3)	Chalais-Meudon	Non rigid	27/09/1917	St-Cyr	23/11/1918	Guipavas	6 000	550
AT14>E3	Astra	Non rigid	02/10/1918	St-Cyr	12/07/1928	Rochefort	8 300	510
CM3(T5)	Chalais-Meudon	Non rigid	10/04/1918	Issy	11/11/1918	Guipavas	6 000	505
VZ 1	Zodiac	Non rigid	07/05/1917	St-Cyr	28/10/1918	Boulogne	2 750	491
CM2(T4)	Chalais-Meudon	Non rigid	02/01/1918	St-Cyr	06/09/1920	Rochefort	6 000	*450*
Tunisie ex Fleurus3	Chalais-Meudon	Non rigid	Dec-15	St-Cyr	11/02/1918	Bizerte	10 500	*450*
AT17>E5	Astra	Non rigid	21/06/1926	Roch	16/02/1937	Rochefort	8 300	444
VZ 3>P2 USN>VZ3	Zodiac	Non rigid	02/07/1917	St-Cyr	23/05/1923	Rochefort	2 750	*440*
VZ24>V6	Zodiac	Non rigid	23/08/1923	St-Cyr	06/11/1931	Rochefort	3 812	438
L72>DR1>Dixmude	Zeppelin	Rigid	09/07/1920	Lowenthal	21/12/1923	Méditerranée	68 500	425
Nordstern>Méditerranée	Zeppelin	Rigid	08/07/1921	Friedrichschafen	25/08/1926	Cuers	22 250	417
CM4(T6)	Chalais-Meudon	Non rigid	26/05/1918	Issy	18/04/1919	Guipavas	6 000	414
SSZ21>VA4	Wormwood Scrubs	Non rigid	04/09/1917	Montebourg	17/07/1918	Havre	2 000	410
VZ10	Zodiac	Non rigid	29/08/1918	Guipavas	27/08/1925	Rochefort	2 800	373
SS48>VA2	Wormwood Scrubs	Non rigid	07/05/1916	Boulogne	06/05/1918	Boulogne	1 755	372
VZ 5 belge>V1, ex Belgique 4	Zodiac	Non rigid	25/07/1917	St-Cyr	17/03/1922	Rochefort	3 000	350
SSZ22>VA5	Wormwood Scrubs	Non rigid	03/09/1917	Montebourg	26/06/1918	Havre	2 000	346
V11(VZ26)	Zodiac	Non rigid	30/06/1931	Orly	04/08/1936	Rochefort	3 400	327
CMT2 Cne Caussin>USN	Chalais-Meudon	Non rigid	avr-17	St-Cyr	01/10/1920	Norfolk	9 100	304

Montgolfier (Clément-Bayard VI)	Clément-Bayard	Non rigid	31/07/1913	Lamotte-Breuil	10/06/1918	St-Cyr	7 000	292
Fleurus	Chalais-Meudon	Non rigid	23/11/1912	St-Cyr	21/05/1918	Fontenay	6 700	247
V 9	Zodiac	Non rigid	08/06/1929	Bizerte	13/08/1931	Bizerte	3 000	244
V12(VZ28)	Zodiac	Non rigid	05/08/1936	Orly	09/09/1937	Rochefort	4 020	241
Champagne	Zodiac	Non rigid	déc-15	St-Cyr	11/02/1918	Corfou	16 000	232
AT16>transaérien VI	Astra	Non rigid	juil-19	St-Cyr	08/02/1922	Rochefort	8 300	230
VZ 6	Zodiac	Non rigid	26/04/1918	St-Cyr	22/06/1919	Montebourg	2 800	225
VZ 8>V2	Zodiac	Non rigid	14/06/1918	St-Cyr	07/09/1919	Montebourg	2 800	216
AT15>E4	Astra	Non rigid	03/03/1925	Roch	23/11/1925	Cuers	8 300	213
ZD1	Zodiac	Non rigid	12/11/1917	St-Cyr	16/04/1919	Bizerte	6 200	203
AT13>P4 USN	Astra	Non rigid	21/08/1918	Issy	13/12/1918	Paimboeuf	8 300	200
VZ 4	Zodiac	Non rigid	07/08/1917	St-Cyr	25/04/1923	Cuers	2 750	200
V10	Zodiac	Semi-rigid	17/01/1929	Orly	14/11/1930	Nieulles sur Seudre	3 400	190
VZ12>V4	Zodiac	Non rigid	17/11/1918	Corfou	05/06/1925	Cuers	2 800	175
Lorraine ex Fleurus2	Chalais-Meudon	Non rigid	13/09/1915	St-Cyr	12/08/1917	Bizerte	10 500	148
ZD5	Zodiac	Non rigid	20/04/1918	St-Cyr	09/09/1918	La Senia	6 200	139
VZ11>V3 Transaérien VII	Zodiac	Non rigid	juil-19	Roch	24/02/1930	Rochefort	2 800	123
VZ 9	Zodiac	Non rigid	13/07/1918	Havre	19-Oct	St-Cyr	2 800	122
AT24>E7	Astra	Non rigid	06/10/1925	Cuers	23/06/1926	Cuers	12 500	115
AT 5	Astra	Non rigid	23/09/1917	Issy	30/01/1918	Montebourg	6 700	114
AT11	Astra	Non rigid	17/04/1918	Issy	21/10/1918	Aubagne	8 300	106
VZ 0 Grain de café Caiffa	Zodiac	Non rigid	<août 16		15/05/1917	Boulogne	2 150	98
ZD2	Zodiac	Non rigid	19/12/1917	St-Cyr	03/04/1918	La Senia	6 200	96
VZ14	Zodiac	Non rigid	20/07/1923	St-Cyr	01/12/1925	Rochefort	2 800	75
AT18	Astra	Non rigid	03/02/1920	St-Cyr	20/05/1920	St-Cyr	9 600	50
E 9	Zodiac	Semi-rigid	08/11/1932	Orly	04/04/1933	St-André des Eaux(56)	10 200	44
SS21>France	Kingsnorth	Non rigid	08/09/1915	Barrow	12/06/1916	Havre	1 755	38
CMT	Chalais-Meudon	Non rigid	28/01/1916	St-Cyr	12/05/1916	Méditerranée	5 600	*30*
AT12	Astra	Non rigid	juil-18	Issy	07/06/1924	Bizerte	8 300	30
ZD-US1	Zodiac	Non rigid	17/05/1919	St-Cyr	Dec-23	Scott Field	9 300	15
AT47>Japon (Navy 2)	Astra	Non rigid	22/09/1922	Roch	01/12/1924	Kasumigaura, Japan	9 830	15
VZ16	Zodiac	Non rigid	18/07/1919	St-Cyr	févr-22	??	3 100	12
E 8	Zodiac	Semi-rigid	08/07/1930	Orly	23/09/1931	Orly	10 000	9
VZ17>V5	Zodiac	Non rigid	23/04/1924	St-Cyr	08/06/1929	Rochefort	3 100	7
CM5>USN	Chalais-Meudon	Non rigid	22/01/1920	Issy	03/02/1920	Issy	8 640	6
VZ 7>P3 USN>VZ1	Zodiac	Non rigid	02/06/1918	St-Cyr	06/10/1919	Coco Solo(Panama)	2 800	5
VZ13>P5 USN>VZ2	Zodiac	Non rigid	25/10/1918	St-Cyr	06/10/1919	Coco Solo(Panama)	2 800	5
VZ15	Zodiac	Non rigid	12/12/1922	St-Cyr	12/12/1922	St-Cyr	2 800	2

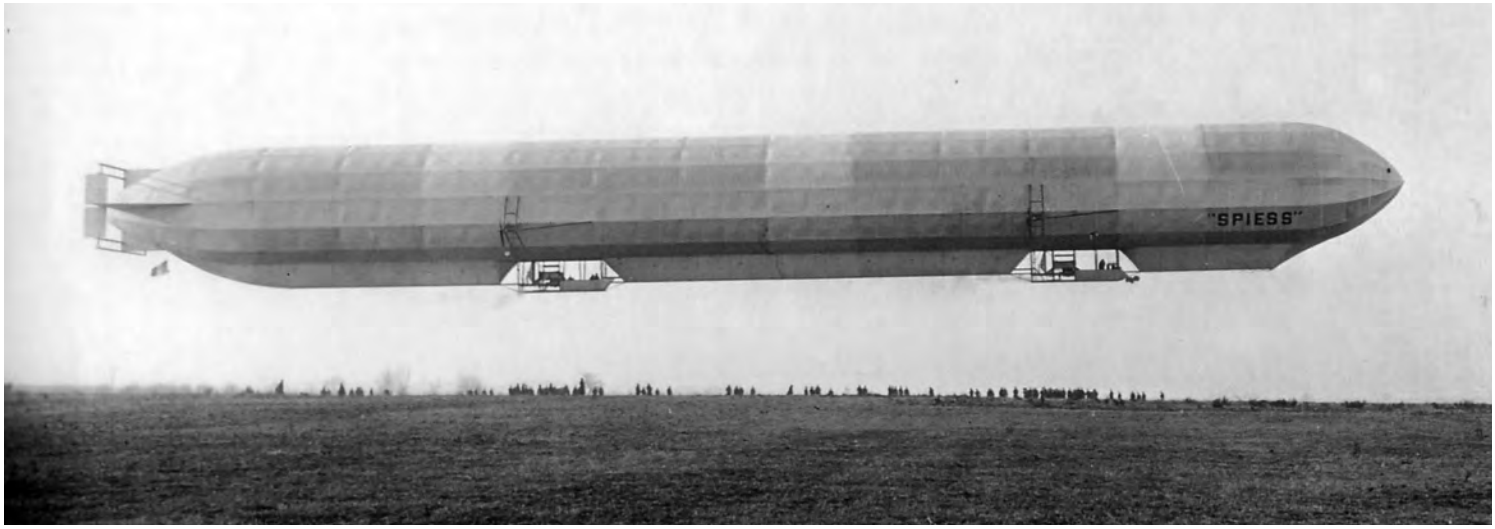


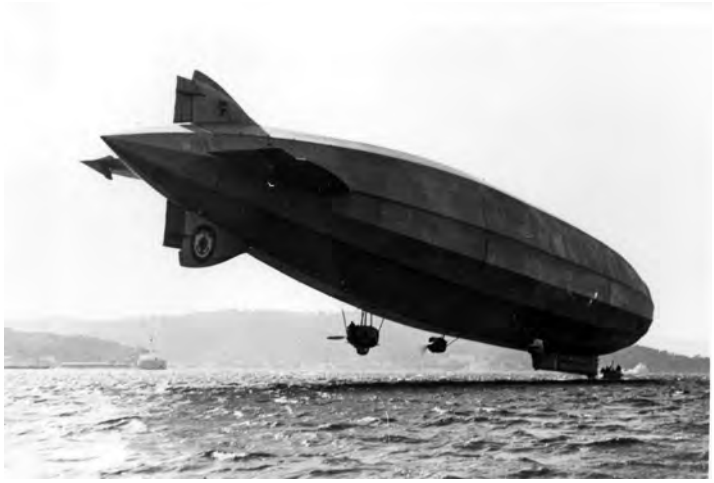
Zodiac's airship built for the Americans, ZDUS-1.

On 1st January 1926, there are only 14 airships in the inventory, but not all of them are in active service, but rather half of it, and this number will steadily decrease to 3 in service in the thirties until final retirement in September of 1937. Their main mission remains anti-submarine warfare. A programme of new constructions takes effect in 1927, sustained by only one manufacturer, Zodiac which delivers a total of 8 new balloons until 1936. These constructions are however hampered by several accidents, probably due to the defects of hydrogen damping valves, which do not close perfectly after use and cause the balloon to become too heavy to fly. In total the French Navy has flown 74 dirigibles (2 rigid, 3 semi-rigid and 69 non rigid), much more than the Army since this one has flown only 17 units (1905-1917). The total flight time of the FN airships is above 27,000 hours. Taking into account that 8 machines have been transferred from the Army to the Navy, the French military forces have employed 83 airships, which position them in the World 4th position, behind United States (315 airships), United Kingdom (248), and Germany (145), and before Italy (78), Russia (26) and Japan (15); the other nations being below the number 10.

The airships stations :
The two first air bases for airships were Marquise-Rinxent opening in December 1915 and Le Havre in April 1916, both on the Channel coast. A total of 14 stations were used by the Navy
-Two in Paris area Saint-Cyr, close to Versailles used from 1917 to 1927, then replaced by Orly in the south of Paris from 1927 to 1936.
-Three in the Channel Marquise (1915-1919), Le Havre (1916-1919), Montebourg (1917-1920)
- Three along the Atlantic coast Brest-Guipavas (1917-1920), Paimboeuf (1917-1918, transferred to the USN on 1st March 1918), Rochefort (1917-1937)
-Two along the Mediterranean coast Aubagne (1917-1922), in the vicinity of Marseille, replaced by Cuers-Pierrefeu (1920-1928), in the area of the military harbour of Toulon
-One in Greece, on the island of Corfou (1917-1918)
-Three in northern Africa Bizerte Sidi-Ahmed (1916-1932), in Tunisia, Alger-Baraki (1917-1924) and Oran La Sénia (1917-1918) in Algeria

The personnel:
Four naval officers were trained as airship pilots by the Army in 1914. They received the Army brevet officially created in 1911. Those pioneers served more or less within on board the military dirigibles until 1916 then were assigned to the command of the new Navy stations.
As we have seen, four Ltjg were trained in 1915 in England. The following LTA aviators were trained at Saint-Cyr which relinquished its role as a school to Rochefort in 1918. A total of 222 LTA naval pilots were designated from 1914 to 1936, including 171 naval officers, 33 Army officers and sub officers, 5 US Navy officers, 5 US Army officers, 2 Belgian officers and one from Japan. For the LTA aircrew having a special certificate, the number rises to about 400 up to 1923. After this date there was no more distinction between LTA and non-LTA aircrew. At the apogee of November 1918, the 13 stations in service were totaling more than 2 500 men including 100 LTA pilotes and 200 specialized aircrew.





Photos not previously published in the U.S.: Top: The home-built Zodiac rigid SPIESS. *Other photos: Zeppelin LZ-121 rechristened* MEDITERRANEE, *all but unknown owing to her success.* **Ω**

TRANSITIONS

M. A. "Mort" Eckhouse has resigned as a member of the NAA Executive Council in order to pursue other activities of personal interest. He plans to continue his active membership and support of the NAA. President Spahr accepted his resignation with understanding and regret. Mort has been a council member for many years, representing the NAA as Liaison Officer to the Naval Aviation Museum Foundation. He was co-chair of the past successful reunion held at Pensacola. On a volunteer basis he has contributed thousands of man-hours of labor helping to restore vintage aircraft and other exhibits for the National Naval Aviation Museum. On behalf of the NAA, President Spahr gave Mort a "WELL DONE" for his services and wished him calm seas and fair winds. Ω

W. A. Wright new address:
1550 El Camino Real # 344 The Villages, FL. 32159
Phone# 352-259-0828 Email: pwright00xaol.com
Charles J. Rose new address:
5801 Royal RDG San Antonio, TX 78239
Jack Bernstein new address:
250 58th Street North, Apt. 1102,
St. Petersburg, FL 33710
David Hazen new e-mail: dch@atlanticbb.net Ω

BLACK BLIMP

Donald J. McDougall passed 19 OCT 09 after a long illness. Don was a resident of West Palm Beach, FL. Ω

Joseph T. Katz, 87, passed 20 OCT 09. Katz was an All-Prep baseball player at Fortier in 1938 and 1939, and he signed with the Detroit Tigers that year. He later attended Tulane before joining the Navy prior to America's entry into World War II. Joe served with ZP-22 in Houma, LA. He served in the Pacific Theater as a fighter pilot and later in Korea during the Inchon landing. During Vietnam, Katz served on the USS Enterprise. He also did tours of duty at the Pentagon and at bases throughout the country. Retiring as Captain, Katz came to New Orleans and the Sugar Bowl. Katz oversaw the growth of the event coming out of the limitation of the segregation years to one that put together pairings for the national championship, most notably in 1973 between Alabama and Notre Dame and in 1978 between Alabama and Penn State. "The three things Joe loved so much were the Navy, the Sugar Bowl and the hospitality industry," Katz's widow, Margie, said Monday. "I never tried to get him to slow down because that was his life." Katz is also survived by his brother, Eugene Katz, two daughters, Suzanne Farrar and Joanne Ehrhard, stepdaughter Leslie Doskey, stepson Chuck Doskey, four grandchildren, two step-grandchildren, one great grandchild. Katz was preceded in death by his first wife, Dorothy, whom he will be entombed next to at Lakelawn-Metairie Cemetery. Ω

Lincoln George Rock, 88, passed 26 OCT 09. Lincoln attended Ocean Beach Elementary School and Point Loma High where he was active in varsity basketball, ASB and a charter member of the QWIIGS. He worked as a San Diego City Life Guard in Ocean Beach. He attended SDSU where he met his future wife, Olive, and was a member of Epsilon Eta. In 1942, he joined the Navy as an aviation cadet. He became a Lt. Commander USNR and saw service on the Pacific coast as a blimp pilot. He married Olive Burnett in 1943. After the war he completed his education and became a teacher/administrator for over 30 years with the San Diego City Schools. Upon retirement, he and Olive spent much time with the Rock clan and traveled the world. He is survived by his wife, Olive; his son, John (Heidi), three grandchildren Andy, Alex and Kristin, one great-grand-child, Damian; and his daughter, Joanne Rock Newman (Jim), and two grandchildren, Kelsey and Jack. Ω

Walter E. Aymond, of Kaneohe, HI passed. Ω

Ready Room

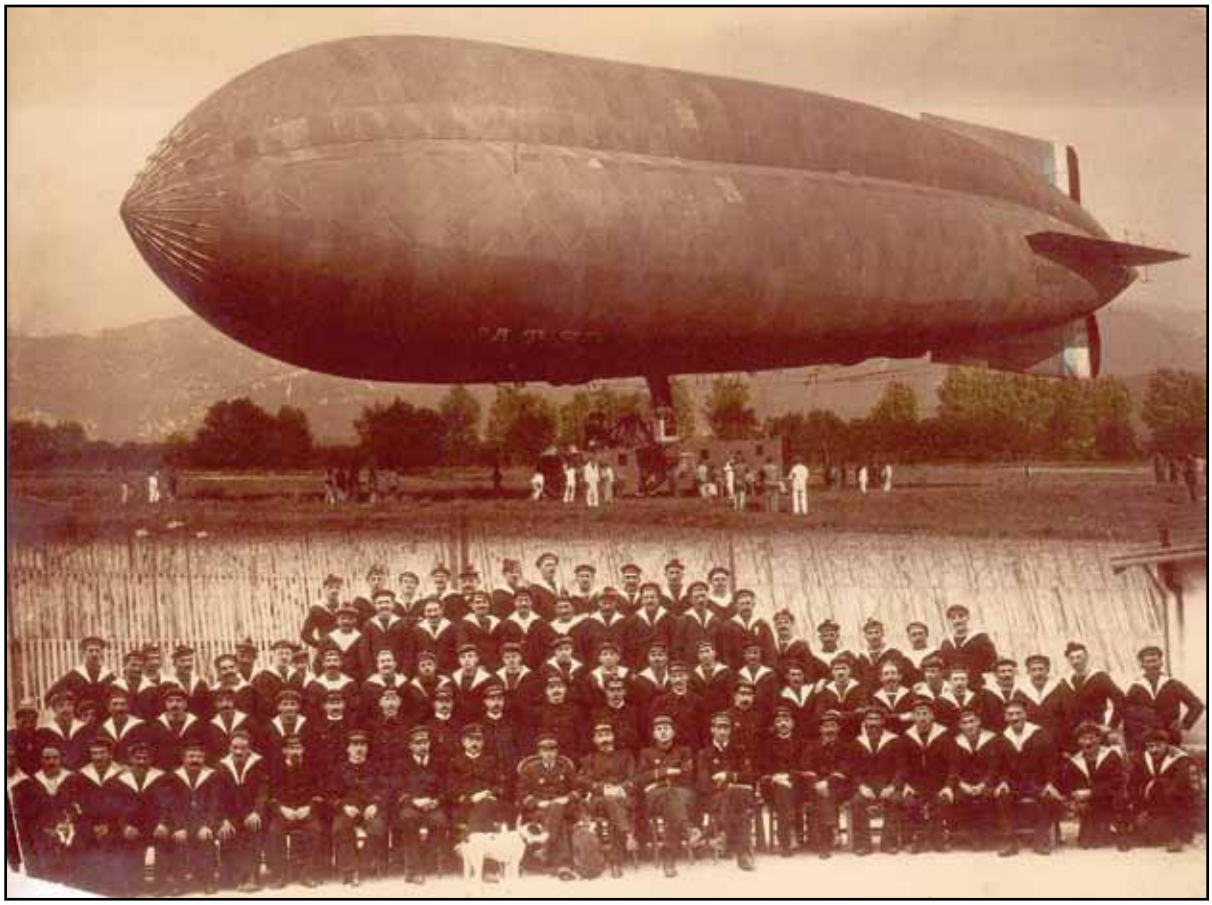
NAA REUNION

24-26 SEPTEMBER 2010
Sunnyvale, California
Sheraton Hotel

Probable itinerary:
Moffett Field Historical Museum and group rate flights on the "Eureka" Zeppelin of Airship Ventures.

Watch for further information!

2009 Gordon Bennett gas balloon race winning entry “Golden eyes” flown by the French #1 team.



WWI French Astra - Torres airship and French crew.

(Above) Inflated in Akron's refurbished AirDock, the HALE-D awaits flight funding. (Below) LEMV, an outgrowth of the flying prototype P-791, may be funded soon. Both images: Lockheed-Martin