THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 89 Spring 2011

K-47 VS U-134

Courtney Skinner

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Official Publication of the Naval Airship Association, Inc.

ISSUE #89 Spring 2011

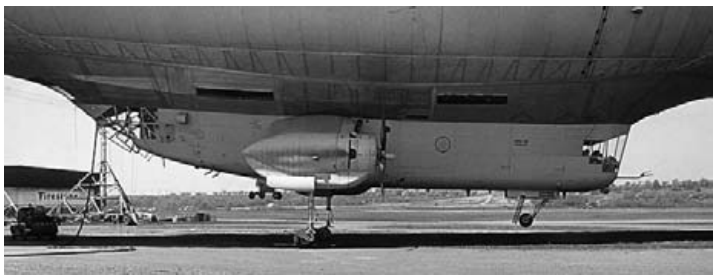
To the world you might just be one person, but to one person, you might just be the world.

On the Covers of TNB #89: Front: The K-74's daring attack run on the U-134 as depicted by member **Cortney Skinner**, used here with his permission to note the passing of yet another crewman from the single K-ship crew the US Navy acknowledges attacked a submarine. See "Pigeon Cote" and "Black Blimp."

Inside Front: (at left): "Back in the 1930s, the USS *Akron* and USS *Macon* supported a small squadron of scout biplanes from internal aircraft hangars. A modern version of this concept would be an airship designed to carry dozens of small, low-cost, unmanned aerial vehicles (UAVs), each equipped with miniaturized sensors, antisubmarine warfare systems, or even lightweight precision weapons. This pilot-optional airship could serve as a sky base from which the UAVs would launch, refuel, and relaunch."

Back Cover: Member **Mark Lutz** discovered a BIG typo! See "Pigeon Cote."

All material contained in this newsletter represents the views of its authors and does not necessarily represent the official position of the Naval Airship Association, Inc., nor its officers or members.



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EDITORIAL

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If you remember the Avis ads from back in the 60s, you might appreciate "we're number three, we try hardest." In the photo below you see me and my "opposite numbers" across the pond in the United Kingdom. In the center is **Kevin Nipress**, Editor of the Airship Association's magazine AIRSHIP, and at right is **Dr. Giles Camplin**, Editor of the Airship Heritage Trust's magazine DIRIGIBLE. At NAA we're somewhat at a disadvantage since those fine organizations have more narrow focus: AIRSHIP is primarily current events and developing technology, while DIRIGIBLE's main focus is history and preserving what was in LTA tech. The magazine you're reading now tries to balance its 36 pages between what's news and what made news. However, I'm not jealous of these old and respected organizations, other than in the one area we seriously trail them in: membership participation. How can a country that for decades had no airships whatsoever, let alone feast-or-famine for many other years, produce a member-ship body that continues to be so enthusiastic about LTA that their Editors' cups runneth over? I've been stuck in this groove for longer than you want to read this: YOU might be the last man alive who rode the YGAR basket; witnessed the Abacore design team remove yokes from an airship so as to "fly" their blimp-shaped submarine underwater; or participated in a secret development that was never made public. I can't tell you how many times members have told me, "I'm going to write an article/book/memoir about my LTA experiences," followed by dead silence. Next thing I hear of that individual is a third-hand forwarding (without photo) for Black Blimp. Can't type? Can't spell? Can't read your own writing? Lost your photos? It doesn't matter: contact one of our activist members and get your story down any way possible, before it's too late. The most outstanding example of LTA activism that we just lost, Mr. James Shock, never served a day in airships. Jim did more than just collect photos and facts: he organized and published them. My long friendship with Jim widened my vision from just looking for rigids film for videos, to learning publishing just to get his 40 years' work into print. If an old Army guy can produce four books and a host of articles, booklets and presentations on LTA, our experienced members can crank out a few paragraphs about experiences not otherwise recorded or declassified. <u>We can't print it if you don't send it in.</u>

Speaking of missing the late Jim Shock, Mark Lutz found a typo-type error that Jim dutifully copied into dimension tables in AMERICAN AIRSHIP BASES AND FACILITIES (see Pigeon Cote). I've heard grumbling that "BuNo ___ had a very short listing in Shock's book, he should have mentioned___" – but the record will never be complete unless you send it in. Jim would be tickled to know someone cared enough to pick up the torch and help make the references accurate. Ω

View From The Top: PRESIDENT'S MESSAGE

In my last report, I talked about the airport van accident, following the Moffett Field Reunion, involving Bob & Phyllis Ashford, Paul & Helen Larcom, and Norm & Margaret Mayer. I am happy to report a positive outcome. As reported previously, Paul & Helen were able to continue with their plans, Norm & Margaret were shaken up and remained another night at the Sunnyvale Sheraton. Bob & Phyllis were taken to the Stanford Medical Center, where both underwent surgery for broken necks. Bob, being the more serious. Without going into all the details, Bob & Phyllis are now back in their Naples, FL, home doing very well, with no paralysis. They were very appreciative of all the excellent medical care they received along the way to recovery.

Moving on to NAA matters, the Exec. Council remains mostly unchanged. Fred Morin is V.P. and Chair. of the Membership Comm. Peter Brouwer is Sec./Treas. Herm Spahr is Immediate Past Pres. Norm Mayer is the Technical Comm. Chair. Joe Hajcak is the National Naval Air Museum Liaison. George Allen is a Council Member-At-Large. Two additions are Bob Ashford as a Council Member-At-Large and Al Robbins is now the History Comm. Chair. Richard Van Treuren, Editor, The Noon Balloon, and David R. Smith, Publisher, round out the Exec. Council. Small Stores has been folded into the Membership Comm. Donna Forand has agreed to manage the Small Stores operation, reporting to Fred Morin. Regarding the Reunion Comm., for the past several Reunions, we have not had a Reunion Comm. per say. Peter Brouwer was doing an excellent job of staging the Reunions with local help from members like Rick Zitarosa - Lakehurst, and Mort Eckhouse - Pensacola. In fairness to Peter, I felt that on top of everything else he does, he should not have the burden of the Reunion. I talked Mort Eckhouse into becoming the Reunion Comm. Chair. & he accepted. Several weeks later, Mort came back to me and asked to be excused. I reluctantly accepted his resignation, so once again Peter Brouwer has the additional task. I hope, personally, to devote a substantial amount of time to our next Reunion. Which, having brought the subject up, we hope to have the Reunion in the Spring of 2012. The location and exact dates will be announced in the first half of 2011.

The four most important parts of the NAA are our Membership, The Noon Balloon, The NAA Website, and our bi-annual Reunions.

I would like to comment about the excellent NAA Website. NAA member Michael Vinarcik started the Website in the 1990's. Peter Brouwer, in conjunction with Bo Watwood, reformatted the Website in 2009. Peter also invited Don Kaiser to join the team. I would encourage all NAA members to log onto the Website - www.naval-airships.org and become familiar with what is offered. If you have questions, click on the "Elected Officers & Comm. Chairman" box, on the left sidebar. Scroll down to the "NAA Website Administrators" and e-mail or call Peter, Bo, or Don. If nothing else, go to the Membership box, and check your own listing for accuracy.

The next Exec. Council meeting will be held on Feb. 24th. I realize that by the time you read this, that date will have come and gone. If there are issues you would like to bring to the Council, please advise any one of us.

- Ross Wood

THE NOON BALLOON

Newsletter of the NAA

Volunteer Staff

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www.gyzep.com

MEMBERSHIP COMMITTEE UPDATE

A lot to cover in this installment. It was great to meet our West Coast members at Moffett Field who haven't been to the last couple of East Coast reunions. Nice to put a face with the name and email address! I also appreciate the input some of you had concerning ideas for attracting new members. It helps.

We were all saddened by the sudden death of our Small Stores chairman, Ford Ross. However, Donna Forand has stepped up to assume responsibility for this function. Overall responsibility for Small Stores now falls under the Membership Committee and we are currently pursuing a few changes and new additions to our product line. **First,** we are having a Small Stores SALE to reduce the inventory of existing items. Check the website for details and great prices. Once the current supply of ball caps and squadron patches are exhausted we will not be ordering more. The patches are slow moving items and are expensive to order as there is a minimum quantity that must be purchased. The ball caps will be replaced by a more modern design with an updated, but traditional, NAA logo.

Second, in addition to the modern ball cap design, we will be adding NAA logo polo shirts and possibly T-shirts. Wouldn't it be nice to see all our members in NAA logo shirts at a reunion, LTA event, or just any other event? Golf-style visors with the logo are also being considered as well. We are also bringing back the Norm Mayer-designed NAA lapel pin/tie tack. A number of you have asked about this to replace lost or damaged pins you had from earlier years or just to have extras for hats, jackets, etc. More on this as we progress.

Speaking of squadron patches, we were not able to purchase ZP-11 patches that some of you requested. Through the efforts of Donna Forand and her father, Bob Forand, they purchased these hard-to-come-by patches, designed by our West Coast member Sid Shaw back at NAS So. Weymouth during the war. Contact Donna direct for ordering. Complete your collection as these haven't been available for a number of years.

Finally, as noted in the last TNB editorial, we have created (4) data sheets covering the (4) eras of US Navy airship involvement. These will be submitted to the Navy Centennial of Aviation committee for publication in their newsletter and will also be on our website. The purpose is to have these as an introduction to the rich airship heritage of the US Navy and to attract people to look deeper into this history. In time the History Committee will have more in-depth information on each of these eras for further research. At present, Al Robbins has created a patent blog section on the website that provides excellent data not only for airship enthusiasts, but also to serious researchers of the Navy's LTA involvement. These are important areas we need to expand and refine as we seek to increase NAA membership into non-traditional areas. Please contact us with any questions, comments or suggestions.

- Fred Morin, Chairman

TREASURER'S STRONGBOX

Another year has come and gone and our N.AA. has survived since 1981 for a total of 30 years. All of the members, including myself, have a great passion for our association of proud former Naval LTA personnel and for the members who have a desire to be part of the N.A.A.

A thumbs up to our editor, Richard VanTreuren and our publisher, David Smith for their great dedication publishing *The Noon Balloon.* Also thumbs up to our members who have submitted excellent articles and photos and made them available for publication.

Another worthy award goes to our N.A.A. website staffers: Don Kaiser, Historian Web Master; Al Robbins, History Chairman and "Bo" Watwood, the man behind the scene. Thank you all for your contributions.

If you have a valid e-mail address, it is very easy to log onto the N.A.A. website: www.naval-airships.org. Once on the home page, look on the upper right hand side of the screen. Submit your e-mail address, then your password. Once you have completed that, go to your profile for all of your membership information, including paying your dues, checking you anniversary date, etc. When you are on your profile, you can make any necessary changes in your address, phone, or e-mail. This address change works well if you are a "snowbird.' You will never miss an issue of *The Noon Balloon.*

WELCOME ABOARD OUR NEW MEMBERS

John L. Gilman, Jr. and Jack Mills

DONATIONS

Robert H. Keneipp
George B. Stadten
Peter W. Halke
Berda Allen
Michael R. Hanneld
Harry Benoit
George L. Munn
Jan Tichenor
T.D. Scroggs
Harvey M Gladstone
John J. Leyden
Bill Gustin
Joanne Wartman
Larry Overson
Roy L. Lyon
Norman L. Larson
George Mitchell
Donald E. Barker
Vincent Hoye, in memory of
Lt Vincent J. Hoye, Army Air Corps
James D. Sandoz
Donald A. Geiger
M. 'Bud' Brandel
Gusti Simmons
Robert L. Sorrentino
David J. Brennan
Joseph Konkel
Robert L. Ashford
Kent C. Von Fecht
Julian Parrish
M 'Pappy' Sturges
Paul L. Stolar
Paul J. Larcom
'Jack' W. Vaughn
William E. Zidbeck
Frank J. Stryker
Anna Jean Minnick
Donald E. McKeon
Thomas R. Cuthbert, Jr.
Carl Jablonski
John Robson
Richard T. Mathis
Ramona J. Larson
Raymond F. Braun
John M. Warden
William F. Woosnam
William C. O'Hea
Daisy L. Cotton
W. W. Linkenhoker
Stephen J 'Steve' Ulrich
John C. Mitchell

- Peter F. Brouwer Secretary/Treasurer

PIGEON COTE

Dave Hayes' wife Honora, whom everyone called Nonnie, passed in January 2011. In lieu of flowers Dave approved donations to be made to NAA. Ω

Norm Mayer e-mailed, "Jim Shock's [below, addressing the 1991 NAA Reunion] death is a loss for all. His accurate and thorough reporting on LTA history will always be a memorial to him." Jim was honored with the LTAS Lifetime Achievement Award at the annual dinner on Nov. 6, 2010. Ω

Last Black Blimp also noted the passing of longtime activist and recent Small Stores Chairman **Ford U. Ross**. This clipping, of his retirement, was sent in. Ω

PIPED OVER THE SIDE — After 20 years of dedicated services, Chief Ross retires from Naval services in a ceremony conducted by VX-1 Commanding Officer, CAPT W. D. Wade. (Official Navy Photo)

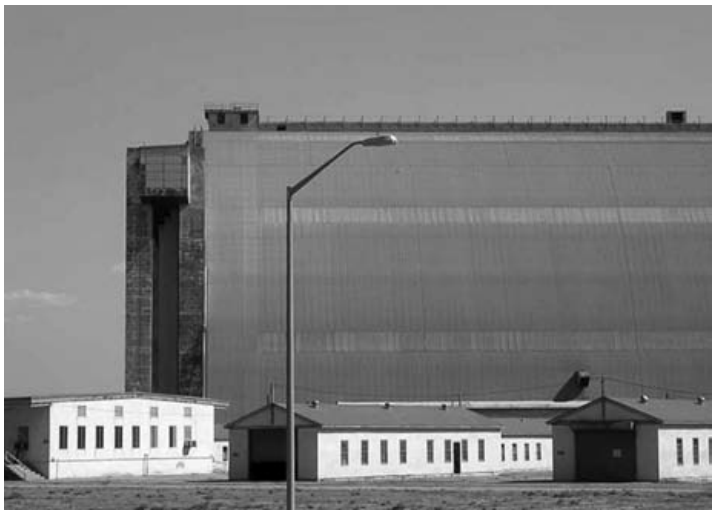
Mark Lutz e-mailed the back cover photo: "This is a bit of "trivia" which keeps appearing and bugs me. Those 16 *[timber]* hangars with sliding door panels really do open up 220 feet wide. There really are 6 panels. Source after source says the panels are 27.5 feet wide. Doing the simple arithmetic check, 27.5 x 6 = 165 feet. That's 55 feet short of closing the opening. The correct door panel width is 37.5 feet. 37.5 x 6 = 225 feet. The extra 5 feet are for overlap between panels of 10 inches (doors closed).

I think I found where 27.5 feet came from. It is in Arsham Amirikian's 1943 paper in the Journal "Civil Engineering." Shock used this paper as his source, and many other descriptions of the 16 wood hangars also say 27.5 feet. I believe 27.5 feet is a typo in the original Amirikian paper. It's easy for someone using a 1943 typewriter keyboard to hit the "2" key by accident when intending the "3" key.

The typist (or typesetter for the journal) is likely a nontechnical person who isn't going to pick up on the error. Amirikian's paper also says the hangar door area is 275,000 sq. feet; in fact it is 27,500 sq. feet (check: opening 220 feet wide x 120 feet high = 26,400 sq. feet, add 1,100 because the door panels extend beyond the opening.) A 27,500 square foot set of 6 door panels still has a very impressive potential windload: If I remember correctly, a 100 mph wind normal to a wall will produce a load of about 50 pounds per square foot. Integrated over 27,500 square feet, this is over 1 million pounds of load (1,375,000 pounds). (The local occasional January-March winds out of the desert to the East, called, simply, "Santa Anas" were on record once in a while hitting 85 mph, with higher gusts possible.) Santa Ana's hangars are designed to withstand this wind-load with a safety factor, plus some further safety factor - they were further beefed up because they are in known earthquake territory.

I just got off the phone with Ron Jones, the Navy's Caretaker Officer for NAS Santa Ana (MCAS Tustin). Ron says there has been a surprising increase in groups requesting tours of the WWII Airship Hangars, and that Claude Makin, who lives in the area, has been driving over in his black Cadillac and talking to the tour groups about Navy Airships - sometimes for 2 hours at a time. Ron says he stopped over at Claude's house, expecting to be there two minutes, and left after 2 hours of listening, fascinated, to Claude's Airship stories.

My Father, WWII K-ship pilot, apparently had instructors familiar with the US Navy rigids, and I believe received some instruction in their operation. He was trained summer of 1942 (Chapel Hill, NC, ground school) and winter of '42-43 (Lakehurst). Toward the end of Dad's life, when I showed him a photo of the crew of the *Macon* underneath their ship at Moffett Field, he was astounded - he had not realized the crew was almost 100 - he was used to his K-ship crew of 10.



To my knowledge, only three of the WWII-era hangars could hold a *[proposed 900-ft]* ZRCV: The Akron Airdock, the Sunnyvale steel hangar, and the Houma wood hangar with its "clamshell" doors. Hangar fit problems: Lakehurst #1, S. Weymouth #1 and Weeksville #1 were about 200 feet too short. The 16 wood hangars (other than the one at Houma) had door openings only 120 feet high - about 25 feet short. I suppose the wood truss-work of the door box beams of the 16 wood hangars could be removed, 25 feet or 30 feet added to the concrete towers and the 6 door panels, and the beam replaced or a new one built, and the fact that 17 wood hangars were built in about 1 year suggests this might have taken as little as 1 or 2 months. Maybe best to remember the 17 wood hangars were built in just 1 year, and the designer, Amirikian, wrote those hangars had not reached the size limit of his wood-arch design, "While to date these huge structures comprise the world's largest buildings of timber framing, both from the standpoint of dimensional magnitude and of the materials involved, <u>they do not necessarily represent the limit of wood construction</u>." ("Navy Develops All-Timber Blimp Hangar, Part 1", *Journal of Civil Engineering*, October 1943, Volume 13, Number 10, page 471). Amirikian also implies his hangar design was size-limited for the K-ships. "The main consideration in the development of such a

cross-sectional outline is, obviously, the requirement of operational clearance for the ships to be housed. This cross-sectional clearance is given by a rectangle 220 ft. wide and 120 ft. high." This, of course, is the size of the doorways on 16 of the 17 wood hangars. I expect people like Rosendahl and Goodyear's staff thought about this. Do you know what they intended? Ω

Ed. had heard Goodyear's final ZRCV design had been modified to fit in the standard timber hangar, 120-ft. sill and all, but has never been able to find published proof of same.

[Cover story] **John Rice** wrote, "I read with great interest Al Robbins' article in the fall edition (#87/pg 6) about Commander Grills and the K-74 *[postcombat]* crash. This crash occurred on July 18-19, 1943, not June 18 as reported in the letter. I was a crew member on the K-74 and also on the K-30, which had crashed after a night patrol the day before - July 17. Mr. Robbins mentioned that CDR Grills was a last-minute substitute on the K-74. I want to tell why he became a substitute command pilot on K-74.

The previous day (July 17) was the first of three night patrols our crew was scheduled to fly. We took the K-30 on this patrol. While K-30 was returning to Richmond from this patrol, we had just crossed the shoreline when we lost power in both engines of the ship. The K-30 immediately crashed into pine trees shearing off tops of many trees and eventually settling into the tops of the pines. We abandoned ship by climbing down ropes from the ship to the ground. The crew miraculously sustained no injuries even though tree parts had penetrated the car. Ensign McMillian was the command pilot on the K-30. Bob Bourne *[See Black Blimp]* was also a member of the enlisted men's crew of both K-30 and K-74.

The next day (July 18) we learned, much to our dismay, that the enlisted men in the crew were scheduled to fly that night on the K-74. We had hoped that we would be grounded for a while because of the crash and perhaps even get authorized leave. The initial officer crew of the K-30 were relieved of flying the next patrol on the K-74. The substitute officer crew was LT Grills, ENS Eversely, and A/P Jandrowitz. The enlisted men's crew stayed in tact except that AMM/2C Stessel replaced the 2nd mech on the original crew and ARM Giddings added on as an extra radioman. Both men needed to get their flight time in for the month.

More published information on the K-30 crash can be found in VADM Rosendahl's book, US NAVY AIRSHIPS IN WWII, Case #9." Ω

Ed. supplied the following copies of messages from the 10th Fleet Files at NARA, Folder/Case #3795, from his book AIRSHIPS vs. SUBMARINES (2009).

NAVAL MESSAGE — NAVY DEPARTMENT — 3795

DRAFTER	EXTENSION NUMBER		ADDRESSEES	PRECEDENCE
FROM COMGULFSEAFRON		FOR ACTION	COMINCH	PRIORITY / ROUTINE / DEFERRED
RELEASED BY				
DATE 19 JULY 1943				
TOR CODEROOM		INFORMATION	COMEASTSEAFRON	PRIORITY / ROUTINE / DEFERRED
DECODED BY				
PARAPHRASED BY				

INDICATE BY ASTERISK ADDRESSEES FOR WHICH MAIL DELIVERY IS SATISFACTORY.

190710

UNLESS OTHERWISE INDICATED THIS DISPATCH WILL BE TRANSMITTED WITH DEFERRED PRECEDENCE.

ORIGINATOR FILL IN DATE AND TIME — DATE — TIME — GCT

TEXT

AT 0455Z JULY 19 BLIMP K-32 RELAYED INTERCEPT FROM K-74 STATING 74 WAS BEING FIRED UPON IN POSITION LATITUDE 23-59 LONGITUDE 80-11 X PV FROM KEY WEST DISPATCHED TO SCENE X US DAHLGREN ORDERED TO AREA TO ASSIST X NO FURTHER COMMUNICATIONS FROM K-74 X

NAVAL MESSAGE — NAVY DEPARTMENT

DRAFTER	EXTENSION NUMBER		ADDRESSEES	PRECEDENCE
FROM COMGULFSEAFRON		FOR ACTION	COMINCH	PRIORITY / ROUTINE / DEFERRED
RELEASED BY				
DATE 19 JULY 1943				
TOR CODEROOM		INFORMATION	COMEASTSEAFRON	PRIORITY / ROUTINE / DEFERRED
DECODED BY				
PARAPHRASED BY				

INDICATE BY ASTERISK ADDRESSEES FOR WHICH MAIL DELIVERY IS SATISFACTORY.

191408

UNLESS OTHERWISE INDICATED THIS DISPATCH WILL BE TRANSMITTED WITH DEFERRED PRECEDENCE.

ORIGINATOR FILL IN DATE AND TIME — DATE — TIME — GCT

TEXT

MY 190710 X K-32 RADIO MAN REPORTS HE PICKED UP FIFTEEN "OSU" SIGNALS MEANING " WE ARE BEING FIRED UPON " . THE K-74 CALL SIGN WAS PICKED UP ONCE BUT NOT IN PROPER ORDER X AS SIGNAL WAS BEING REPEATED IT FADED OUT AS IF POWER WENT OFF. IN VIEW OF THIS INFORMATION AND THE FACT K-74 IS OVERDUE AT BASE SINCE 0800 Q X EVALUATION POSITIVE X

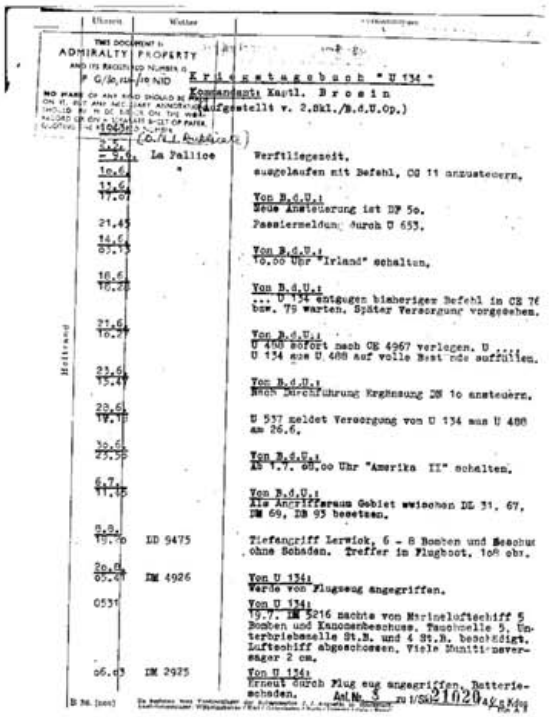
3795

REC'D BY TELETYPE

COPY

CONFIDENTIAL

Make original only. Deliver to communication watch officer in person. (See Art. 76 (4) NAVREGS.)



Kriegstagebuch "U 134"

Kommandant Kptl. Brosin

(Aufgestellt v. 2.Skl./B.d.U.Op.)

	La Pallice	Werftliegezeit.
		ausgelaufen mit Befehl, CG 11 anzusteuern.
		Von B.d.U.: Neue Ansteuerung ist DF 5o. Passiermeldung durch U 653.
		Von B.d.U.: 10.00 Uhr "Irland" schalten.
		Von B.d.U.: ... U 134 entgegen bisheriger Befehl in CE 7(bzw. 79 warten. Später Versorgung vorgesehen.
		Von B.d.U.: U 488 sofort nach CE 4967 verlegen. U ... U 134 ans U 488 auf volle Best nde auffüllen.
		Von B.d.U.: Neue Durchführung Kreuzung ZE 1o ansteuern.
		U 537 meldet Versorgung von U 134 aus U 488 am 26.6.
		Von B.d.U.: Ab 7.7. 08.oo Uhr "Amerika II" schalten.
		Von B.d.U.: Die Angriffsraum Gebiet zwischen DL 31, 67, DM 69, DB 93 besetzen.
	DD 9475	Tiefangriff Lerwick, 6 - 8 Bomben und Beschuß ohne Schaden. Treffer im Flugboot, 1o(obr.
	DM 4926	Von U 134: Werde von Flugzeug angegriffen.
		Von U 134: 19.7. DM 5216 machte von Marineluftschiff 5 Bomben und Kanonenbeschuss. Taschenlle 5. Unterpiebaszelle St.B. und 4 St.B. beschädigt. Luftschiff abgeschossen. Viele Munitionsverausgar 2 cm.
	DM 2925	Von U 134: Erneut durch Flug eug angegriffen. Batterieschaden. Ant.No. 3 zu WSG 21620

The German log (above) transferred to another U-boat before U-134's loss in the Bay of Biscay is nearly identical to their radio transmission, which our listening posts picked up and translated thusly:

2Ø JULY 1943 HUSH SECRET GP EH3

6554/2Ø/324/22 56 JDAK BUZD (SERIES 3,Ø)

FROM: BROSIN((134))

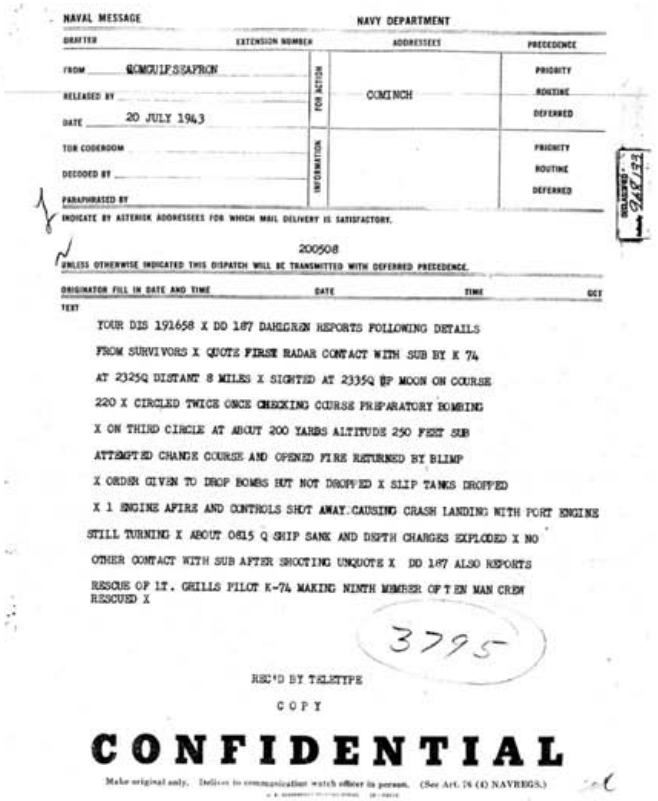
19 JULY NAV SQ DM 5216 ((23.5Ø N - 8Ø.5Ø W)) 5 BOMBS AND CANNON FIRE FROM NAVAL ~~FLYING BOAT~~ BLIMP AT NIGHT. DIVING TANK FIVE QUICK DIVING TANK STARBOARD, AND FOURTH STARBOARD DAMAGED. ~~FLYING BOAT~~ BLIMP SHOT DOWN. MANY MISFIRES ON 2Ø MM GUN.

D/F 24.35 N - 78.45 W L-13 CASE 2Ø/6/Ø8 X

TOI ØØ49 Z 5412 KCS

TOI 1257 Z 1434Ø KCS 1545/28

Note that the "marineluftshiff" was mistranslated into "flying boat" – no telling how often that happened – then someone minutes (or years) later penciled it in as "blimp" – which the Germans had no word for, so the correction could not have been a translation. (One wonders if the fifth splash was a drop tank.) Next item in the folder is also after sunrise, when the DD picked up 8 of the 10 survivors and mentioned Grill's separate rescue.



NAVAL MESSAGE — NAVY DEPARTMENT

DRAFTER | EXTENSION NUMBER | ADDRESSEES | PRECEDENCE

FROM COMGULFSEAFRON

RELEASED BY

DATE 20 JULY 1943

TOR CODEROOM

DECODED BY

PARAPHRASED BY

FOR ACTION: COMINCH

INFORMATION

PRIORITY / ROUTINE / DEFERRED

INDICATE BY ASTERISK ADDRESSEES FOR WHICH MAIL DELIVERY IS SATISFACTORY.

200508

UNLESS OTHERWISE INDICATED THIS DISPATCH WILL BE TRANSMITTED WITH DEFERRED PRECEDENCE.

ORIGINATOR FILL IN DATE AND TIME DATE TIME GCT

TEXT

YOUR DIS 191658 X DD 187 DAHLGREN REPORTS FOLLOWING DETAILS FROM SURVIVORS X QUOTE FIRST RADAR CONTACT WITH SUB BY K 74 AT 2325Q DISTANT 8 MILES X SIGHTED AT 2335Q UP MOON ON COURSE 220 X CIRCLED TWICE ONCE CHECKING COURSE PREPARATORY BOMBING X ON THIRD CIRCLE AT ABOUT 200 YARDS ALTITUDE 250 FEET SUB ATTEMPTED CHANGE COURSE AND OPENED FIRE RETURNED BY BLIMP X ORDER GIVEN TO DROP BOMBS BUT NOT DROPPED X SLIP TANKS DROPPED X 1 ENGINE AFIRE AND CONTROLS SHOT AWAY CAUSING CRASH LANDING WITH PORT ENGINES STILL TURNING X ABOUT 0615 Q SHIP SANK AND DEPTH CHARGES EXPLODED X NO OTHER CONTACT WITH SUB AFTER SHOOTING UNQUOTE X DD 187 ALSO REPORTS RESCUE OF LT. GRILLS PILOT K-74 MAKING NINTH MEMBER OF TEN MAN CREW RESCUED X

3795

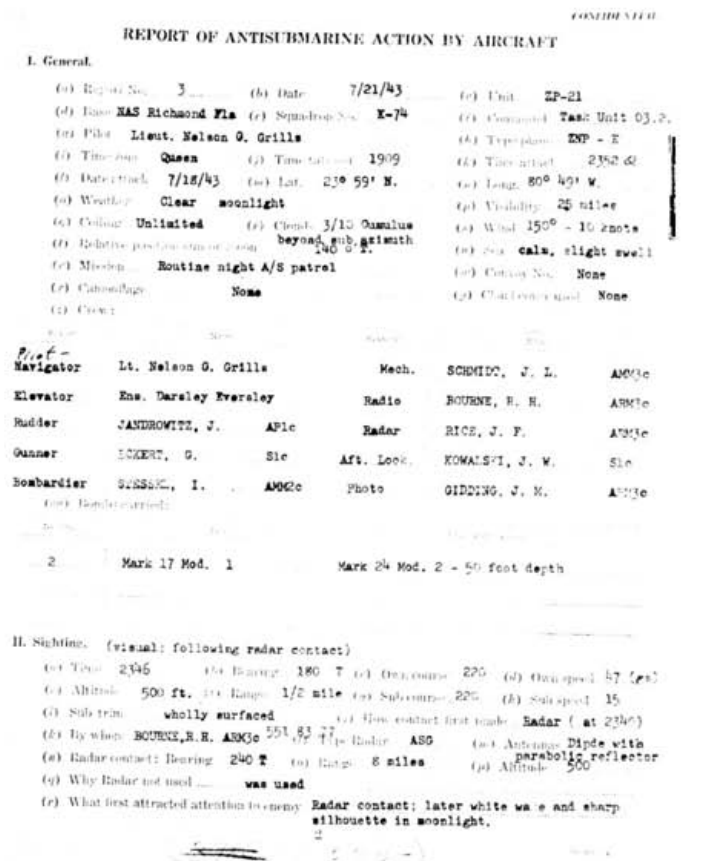
REC'D BY TELETYPE

COPY

CONFIDENTIAL

Make original only. Deliver to communication watch officer in person. (See Art. 76 (4) NAVREGS.)

The crew was debriefed on the 21st. The folder contains the entire standard form and the several pages of comments. Note that Grills, not actually at the controls, was penciled in as "pilot" to soften the fact an enlisted man (then quickly commissioned) was in the left seat.



CONFIDENTIAL

REPORT OF ANTISUBMARINE ACTION BY AIRCRAFT

I. General.

(a) Report No. 3 (b) Date 7/21/43 (c) Unit ZP-21

(d) Base NAS Richmond Fla (e) Squadron No. K-74 (f) Commander Task Unit 03.2.

(g) Pilot Lieut. Nelson G. Grills (h) Type plane PBY - 5

(i) Time zone Queen (j) Time of take-off 1909 (k) Time arrived 2352 GCT

(l) Date attacked 7/18/43 (m) Lat. 23° 59' N. (n) Long. 80° 49' W.

(o) Weather Clear moonlight (p) Visibility 25 miles

(q) Ceiling Unlimited (r) Cloud 3/10 Cumulus (s) Wind 150° - 10 knots

(t) Relative position of enemy beyond sub azimuth 140° T. (u) Sea calm, slight swell

(v) Mission Routine night A/S patrol (w) Convoy No. None

(x) Escort(s) None (y) Charts used None

(z) Crew

Pilot-Navigator	Lt. Nelson G. Grills		Mech.	SCHMIDT, J. L.	AM3c
Elevator	Ens. Darsley Eversley		Radio	BOURNE, R. H.	AM3c
Rudder	JANDROWITZ, J.	APlc	Radar	RICE, J. F.	AM3c
Gunner	ECKERT, G.	Slc	Aft. Look	KOWALSKI, J. W.	Slc
Bombardier	SZESZK, I.	AM2c	Photo	GIDDING, J. M.	AM3c

(x) Bombs carried:

2 Mark 17 Mod. 1 Mark 24 Mod. 2 - 50 foot depth

II. Sighting. (visual following radar contact)

(a) Time 2346 (b) Bearing 180 T (c) Own course 220 (d) Own speed 97 (es)

(e) Altitude 500 ft. (f) Range 1/2 mile (g) Sub course 225 (h) Sub speed 15

(i) Sub trim wholly surfaced (j) How contact first made Radar (at 2346)

(k) By whom BOURKE,R.H. AM3c (l) Type Radar ASG (m) Antenna Dipde with parabolic reflector

(n) Radar contact: Bearing 240 T (o) Range 8 miles (p) Altitude 500

(q) Why Radar not used was used

(r) What first attracted attention to enemy Radar contact; later white wake and sharp silhouette in moonlight.

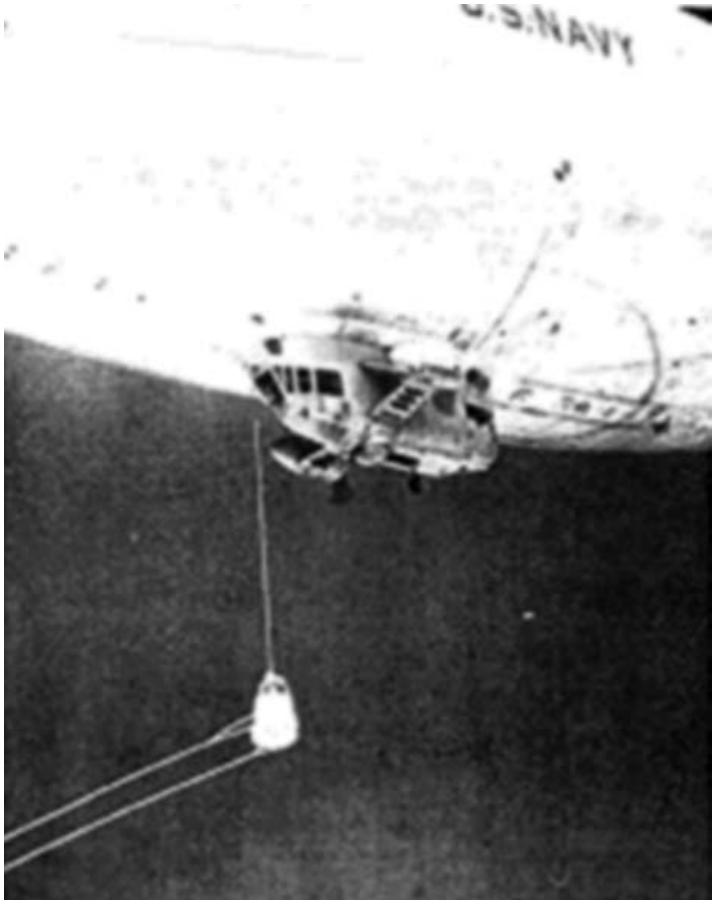
In welcoming new member **John Gilman**, formerly of ZTU, **Al Robbins** e-mailed, "Has the Noon Balloon ever published an article on ZTU? Opportunity knocks. The first Navy airship squadron wasn't formed until 1942. Do you know when or where the ZTU was formed (disestablished) or if it was a division within a command (RDT&E)? My Pilot's database doesn't show anyone being assigned to the VTU. Nearly a third of all blimp flight hours during World War II were devoted to primary flight and crew training - nearly all pilots were qualified LTA only - we haven't recorded when, how or why curricula was developed and implemented.

Three of the most important reasons that VADM Pirie (VCNO for Air) was able to eliminate Navy LTA in 1961:

1. Elimination of the low-cost training and utility airships (L-ships and G-ships). This made it very difficult for new pilots to log Pilot-in-command time (Start as Assistant Navigators on ZPGs).
2. Elimination of enlisted pilots.
3. Elimination of LTA-only flight training.

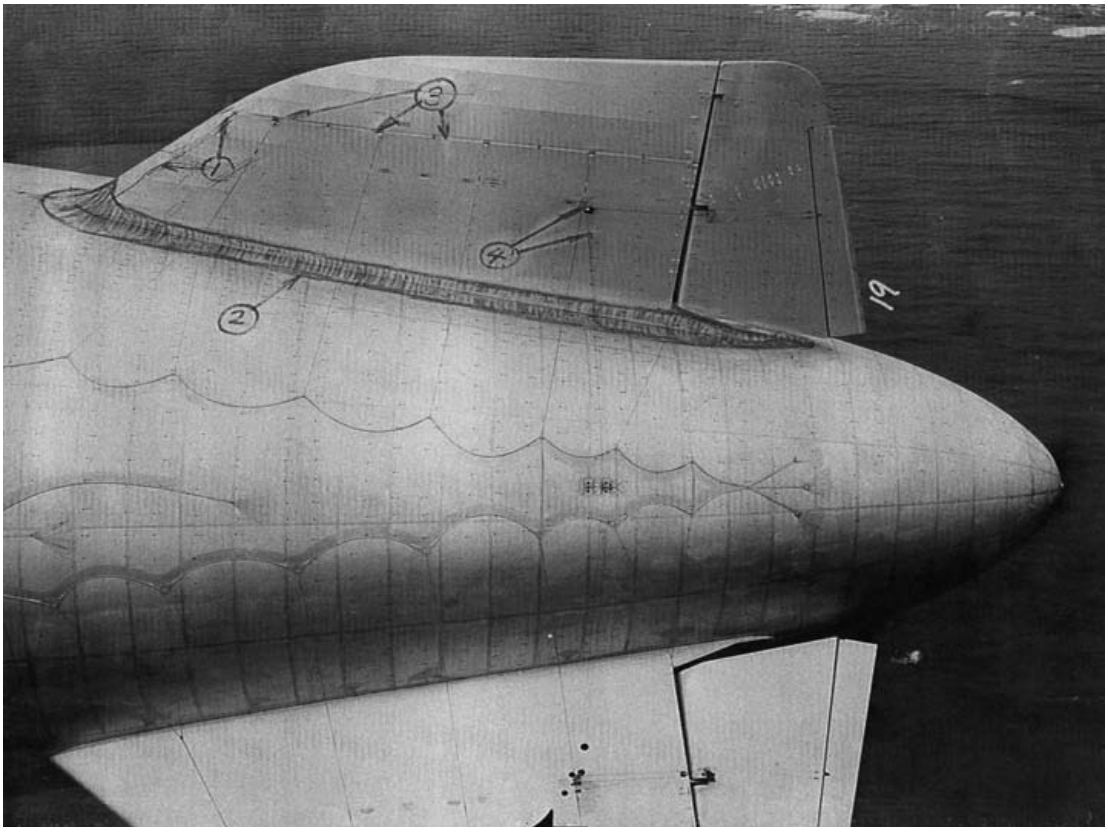
Nugget fixed-wing pilots reported to their first LTA assignment (ZTU-1?) halfway through their initial obligated service. Reservists (NROTC and OCS graduates) had to compete for promotion to Lieutenant and/or augmentation into the Regular Navy with a virtually blank service record: "Under instruction, not observed", "Rated fifth of 15 LTJG's in squadron." Ω

Past Pres. **Herm Spahr** e-mailed: "**Walt Ashe** called this evening. He is as "well as could be expected - having turned 90 last week." He is trying to recover a crew picture taken at Akron when the first ZPG-3W was received. Dick Whiddicombe was one of the crew. I suggested to Walt that perhaps **George Allen** or **Mort Eckhouse** might have a copy. It would make Walt a good late birthday present. I told him I'd inquire. *[Ed. found the photo below; CDR Ashe is front and center; Whiddicombe is right behind Ashe.]* Ω



You, gentle reader, might be the last member able to tell the story of your riding the basket. Ed. can remember seeing a heavily retouched photo of a ZPG-2 all smoothed out for boundary layer experiments. Yet, even the late **Hepburn Walker, Jr.,** who kept a meticulously complete collection on all things LTA, had only this one photo of the "5K" (ZS2G-1) BuNo 244240 fin (prior to the installation of the holes) showing where the fairings and other modifications were to be made. #240 went on to be the first "Flying Wind Tunnel" airship, which might also have been largely forgotten if not for NAA member efforts. You, gentle reader, should sit down and record your experiences on these and other obscure, even formerly classified projects. There are no less than two major postwar study efforts underway at this time, but these and other little-known airship experiments have never been detailed anywhere. If a now-declassified folder, stuffed with photos is gathering dust in an archive somewhere, there is no guarantee even paid researchers (if there are any) will find it. Ω

While Tech Comm Chair **Norm Mayer** was so kind as to fill in some details about the "Project Ygar" and Boundary Layer Experiments, we'd like to hear from other members recalling their experiences as well. In the photo above, courtesy our UK friends, we see the basket being tested on a "4K" but absolutely nothing has been published on this subject in spite of general declassification.



Harry Titus selected another story from a previous Poopy Bag Ballonet:

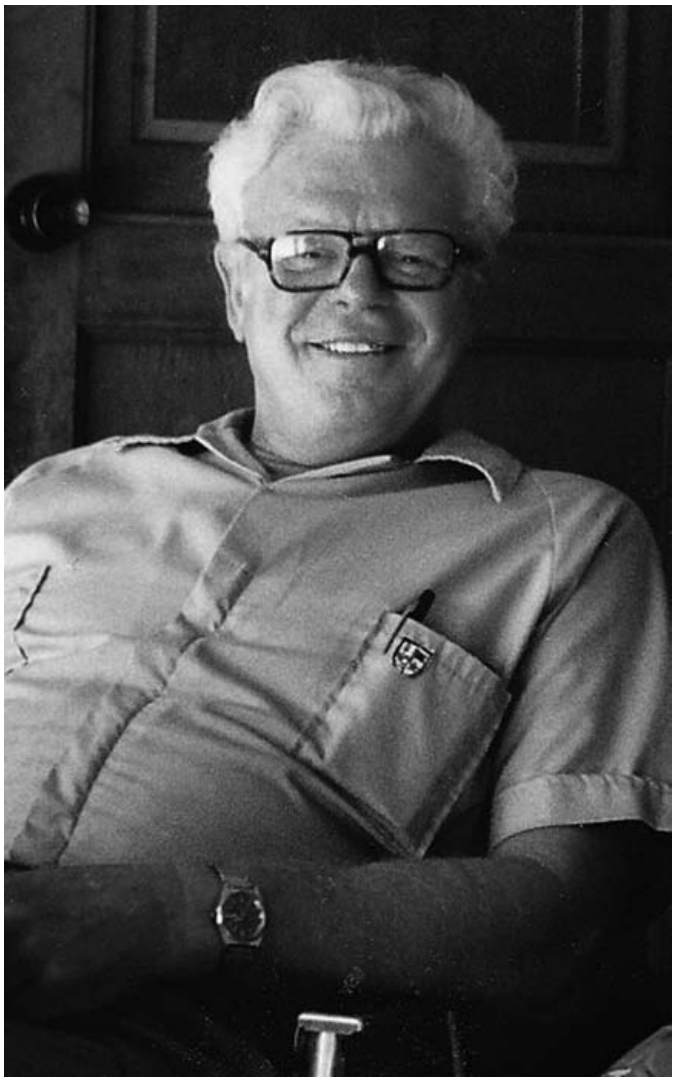
I heard from Fred Molander up Massachusetts way. He was with ZP-11 and later at Weeksville where he conducted carrier landings and crew changes in January 1949. Was this when you also did them, John Fahey?
Bob Wilson, here in California, sent a card telling of Ashby Harper swimming the English Channel at 65 (oldest yet). Bob and others of Class XV think that this is "Brud" Harper who was a well-known Princeton man. I didn't see the article but Bob was wondering if the LTA museum would like a copy.
"Chris" Christopher has another athletic story. tells of Pete "Ace" Culbertson winning the boxing wrestling championships for his weight and age this July at Los Angeles. Atta boy, Ace.
Hey! In the last newsletter I called Chris a horse rancher. He says he's a cattle rancher. Sorry, Chris. I wouldn't know the difference. They both have four legs.

Ross Dempsey called and told of a get-together at Pensacola next year for all who were aviation cadets prior to December 1942. If you want more information, contact CPT Frank L. DeLorenzo, 34 Star Lake Drive, Pensacola, FL 32507.

Dick Leaman sent an interesting article which appeared in APPROACH September 1958. He was the command pilot of a ZS2G-1 airship which had been forced to land in Bermuda due to severe weather conditions and with both the weather and inexperienced ground handlers on the ground and also some very tired men in the airship, he was instructed to "rip the ship."

The AAR stated: "(T)he crew's ingenuity and 'can do' was called upon several times to refuel by non-standard emergency methods .... " On board, besides Leaman, were COR E.D. Nunnery, LT O.J. Shuler, Ensign A.A. Cather. Ground personnel: LCDR C. Manship, LCDR H.C. Kock, LT F.N. Klingberg (Wasn't he at Weeksville in the 50s?), LT. L.A. Ahrendts and ENS J.M. Gow. Ω

Bill Wissel e-mailed, "Many of you who attended the Naval Airship Association Reunion at former NAS Moffett Field in California this year, had the opportunity to enjoy the Moffett Field Historical Society and Museum. It is with great sadness that I announce the passing of the founding president of the Moffett Field Historical Society, Ben DeBolt.



DeBolt joined the Navy in 1945. For three years he served as an electrician on the USS *Diphda* (AKA-59), an attack cargo ship. He was also the projectionist on the ship and faced many unhappy sailors when he was unable to find a decent movie to show to the crew. DeBolt continued in the Navy as a reservist for 35 years, eventually reaching the rank of chief warrant officer. In 1994, the Base Closure and Realignment Commission had identified NAS Moffett Field for closure. DeBolt had been active in local historical societies, including being president of the Mountain View Historical Association. DeBolt did not want to see the historical artifacts of Moffett Field lost, so he took the initiative to form the Moffett Field Historical Society and served as its founding president. It was through his vision that the society opened its first museum inside historic Hangar One. DeBolt regularly submitted articles to the Noon Balloon, providing updates on the status of Hangar One and its preservation. His grandson, Daniel DeBolt continues to report on Hangar One in the local community newspaper, The Mountain View Voice. Ω

Bill McElhaney e-mailed, "A few weeks ago, my wife and I were visited by Gene Wycoff who was on his way from Wisconsin to visit a relative in Charleston. Gene and I were roommates in the Moffett Field BOQ from 1942 to 1944. This was the first time that we had seen each other since 1945. Of course, we spent the day re-telling our old experiences. My wife was also a part of the story, since after college graduation she came to California to be with me. She got to spend a night in the BOQ, taken in the back door, since our rental house was not available until the next day. Gene, of course, being an officer and gentleman moved to another room for the night. The enclosed picture was taken during lunch at the Greenwood Country Club. From the left it shows Gene, my wife and myself." Ω

Al Robbins & **Mark Lutz** discussed "center tunnel" airship concepts: "Norm Mayer wrote me that in his archives he has a 1935 C.P. Burgess Paper regarding analysis of the Virginia Airship Company's Center Tunnel Airship concept (proposed to the US Navy) which concluded Center Tunnel propulsion would reduce overall propulsive efficiency by about 50%. This might be BuAer Design Memo #189. This seems to help explain why both companies disappeared, without either one building an airship, as far as I know… The 1933 patent for the Interocean "Flying Tube" airship (Garrett Peck) shows air jet steering." Photo below shows a model of the concept. Ω

Garrett W Peck, Designer (Left) with working wind-tunnel model of "Flying Tube" Passenger Dirigible. Propulsion via air flow through tube in center; swiveling nozzels provide steering. Aluminum skin hull and Helium cells. Photo: 14 March 1938 (Library of Congress) Interocean Dirigible incorporated in New York with 2.5 million shares on sale at $1 in 1938 to build this ship. Fate of Interocean after that: unknown.

SHORE ESTABLISHMENTS: LAKEHURST

The Navy's MZ-3A airship BuNo #167811 has received funding to operate thru FY 2011. Following arrival at Joint Base McGuire-Dix-Lakehurst (JBMDL) in August, the airship has been docked in Hangar #6 and received annual inspection, overhaul and upgrade of various systems (electronics/electrical). Next phase of operations will see the airship depart South for warm-weather-testing of new systems and installations. A minor "setback" occurred a few weeks ago when one of the overhead door cables in Hangar #6 parted with a loud "bang" as we were attempting to close the hangar doors following an undocking for engine runups/tests. The door has since been priority-repaired by JBMDL personnel.

Owned by the Naval Air Systems Command (NAVAIR) and assigned to Squadron VXS-1 (NAS Patuxent River, MD) the MZ-3A continues to be operated by contract personnel from Integrated Systems Solutions, Inc. (ISSI) which has overseen airship operations for the Navy since 2005. (ISSI is very fortunate in having obtained the services of three seasoned LTA pilots, two of which have over 10,000 hours of LTA flying experience and one who has over 20,000 hours, as well as a great crew recruited from LTA industry.)

Navy airship MZ-3A #167811 was "off mast" at Joint Base McGuire-Dix-Lakehurst at 0841 Sunday 12/19 following four months of electrical system upgrades and annual inspection and test flights on 12/17. MZ-3A now has just about the most advanced avionics of any LTA craft in existence.

Two months of tests/exercises are planned, including extensive utilization of new electrical system and avionics upgrades on board. Possible return to Lakehurst in March. It is planned to utilize HANGAR ONE for future longterm docking as HANGAR SIX will be occupied by Northrop-Grumman for the LEMV project.

Upcoming LTA projects should see Lakehurst Hangar #6 (and even possibly historic Hangar #1) as busy Lighter-Than-Air facilities for the next decade! (Not bad for a place that had one foot in the GRAVE!)

- Rick Zitarosa

MOFFETT FIELD

There may finally be hope for the preservation of Historic Hangar One at former NAS Moffett Field. The Navy expects to begin removal of the outer protective skin of Hangar One in early 2011. The Navy proposal will leave the frame as a skeleton and interior structures exposed to the weather. Preservationists have long argued that this plan will result in demolition by neglect as the exposed frame and interior will be extremely expensive to maintain, and likely deteriorate rapidly.

While NASA has no money to direct at historic preservation, NASA is offering a potential solution for re-siding the hangar. Deb Feng, the deputy director of NASA Ames Research Center, said that NASA has agreed to commit $20 million towards new siding for Hangar One and is looking for a source of the funds within its own budget. The $20 million "should be just about enough" to recover the structure, Feng said. But that is dependent on Congresswoman Anna Eshoo getting an additional $10 million by month's end during the congressional lame duck session. "That's obviously great news, but with the federal budget being the mess that it is, we don't know when the money will become available," said Lenny Siegel. Siegel has been one of the principle spokesmen for the Save Hangar One committee. "NASA Ames went to bat for this community, and I fear that NASA headquarters will use this commitment to reduce support for other activity at Ames. We should therefore be prepared, as a community, to go to bat for Ames and its scientific efforts."

According to Ames Director Pete Worden, one potential re-use for Hangar One is of its original purpose, housing airships. Three possible tenants for the hangar include private and government organizations that operate or build airships. While this is great news for preservationists, any historic artifacts connected with the hangar are still in jeopardy. There is currently no money for such structures as the historic "cork room" used to store the U.S.S. Macon's gas bags. And hundreds of windows in the hangar's siding that alone could cost $1.2 million to save may not be saved.

"We barely have funding for re-skinning Hangar One," Feng said. "The agency has no money for the restoration of historic" artifacts and structures inside the hangar. "It's not good news but I don't think it's going to be a surprise." (via **Bill Wissel**) Ω

'World's largest' airship comes to NASA Ames in Mountain View By Diana Samuels, San Jose Daily News Staff Writer

A really big blimp is on its way to NASA Ames Research Center. The "Bullet Class 580," considered the world's largest airship by volume, will have a new home at Moffett Field's Hangar 2 as it prepares for a first flight possibly in February, NASA announced Wednesday. The company developing the airship, E-Green Technologies Inc./21st Century Airships, has leased roughly 24,000 square feet of hangar space from NASA Ames beginning Jan. 1. The ship, 235 feet long and 65 feet in diameter, is expected to arrive in Mountain View packed into two 40-foot ship containers… "Although traditional blimps have been around for centuries, they have undergone surprisingly little evolution throughout their more than 150-year history," John Youngbeck, the company's vice president of manufacturing, said in a statement. While most blimps fly 4,000 to 5,000 feet above the ground, this one will top out at about 22,000 feet, Samuels added. The company hopes to eventually create an airship that flies at altitudes of 40,000 to 60,000 feet. The airship can also run on algae-based biofuel and is made of Kevlar, the same material used in bullet-proof vests. Compared to the rigid materials used for traditional blimps, Kevlar is more resilient and can be manipulated into various shapes and sizes.

On its first flight, the Bullet Class 580 will carry a meteorological instrument for measuring barometric pressure. But Murphy said the airship can be used for a variety of purposes, including ferrying sightseers as well as carrying military or communications satellites.

Anyone who wants to buy one of the company's blimps will have to shell out $8 million to $15 million. Moffett Field and airships share a long history, dating back to the 1930s when the U.S.S. Macon was housed in Hangar One. Information was not available Wednesday on how much the new three-year lease is worth. "EGT's airship is another partnership Ames has been developing in the area of green aviation research and development," NASA Ames director Pete Worden said in a statement. "This partnership takes advantage of Ames' unique infrastructure to develop green aircraft and other green technologies."

(via **Bill Wissel**)

FRIEDRICHSHAFEN

Starting in the summer of 2011 there is going to be an additional airship under construction at ZLT. Disassembled "Yokoso" parts have been arriving piecemeal in FN for months. Not sure how much of the former Japan Zep NT is going to be re-used for the new ship. A new structure and envelope were reported to be among the improvements. Once finished in 2012, aside from supplemental passenger usage, the airship is reported to be used extensively for special missions for which ZLT has many inquiries. Anyway, when NAC ceased operations in May 2010, ZLT bought the airship back from the Japanese at a favorable price. (Translated and based on Dec. 11, 2010, FN news media by Sig Giest)

Zeppelin Museum Friedrichshafen presents unknown and largest remnant so far of the legendary "Hindenburg" until 12 October 2010.

The Zeppelin Museum Friedrichshafen has been given some pieces of wreckage. Jürgen Bleibler, curator of the Zeppelin Museum Friedrichshafen, together with the head of the Archives of the Luftschiffbau Zeppelin GmbH, Barbara Waibel, has been able to identify it as part of the "*Hindenburg*". It is the middle bearing pedestal of the control surface from the tail fin of the world-famous Zeppelin and the largest remnant of the "*Hindenburg*" to be found to date. So far, the Zeppelin Museum's collection only includes a bench and some tiny charred remains of the largest passenger airship in the world that burned up almost completely before the eyes of the world in just 32 seconds. The aviation artifacts were discovered during a clean-up in Akron, Ohio. The staff of U.S. airplane company Lockheed Martin, which is located there, sent photos of the findings to aviation museums around the world to identify the pieces. One third of the objects went to the Smithsonian National Air and Space Museum in Washington and one third remained in Akron, where there is also an airship museum. The final third was transported to Germany in September, including the only remaining fragment of the LZ-129 "*Hindenburg*". The wreckage will be presented in a permanent exhibition in the future. For now, it is on show from 9 a.m. to 5 p.m. daily between 30 September and 12 October 2010, in the "Grenz-Raum" temporary exhibition space at the Zeppelin Museum Friedrichshafen. Entrance is free!

(via **Sig Giest**)

Member **Peter Cuneo** reports:

Two major gas balloon events occurred in the closing months of 2010. For the first time since its inception in 1906, the Coupe Aeronautic Gordon Bennett launched on September 25th, from England (Bristol) with 20 teams competing. The event was won by the Swiss team of Kurt Frieden and Pascal Witpraechtiger. Swiss II flew for about 58 hours and covered 2,434 kilometers by landing a few hundred meters from the Black Sea coast in Romania. Germany I (Wilhelm Eimers and Ulrich Seel) took the more leisurely route, flying for 83 hours while covering 2,313 kilometers.

The event was tragic for the US, as team USA II (Richard Abruzzo and Carol Rymer Davis) was lost in foul weather over the Adriatic Sea. Richard and Carol were very experienced gas pilots and had won the 2004 Gordon Bennett, flying together from Wassmunster, France, to northern Sweden. They have also won many US National Championships.

Their deaths were confirmed in December, when an Adriatic-based, deep-water-fishing trawler's nets brought up Richard and Carol's bodies along with the basket and balloon envelope. On Wednesday, December 22, a graveside service was held for Richard in Albuquerque. There will be a private cremation service for Carol in Denver. A preliminary finding report by the NTSB did not reveal any cause for the accident. The Gas Division of the Balloon Federation of America is planning a future safety-oriented project in Richard and Carol's memory.

Just after midnight on Saturday morning, October 4, the America's Challenge Gas Balloon competition launched from Albuquerque, New Mexico. *[See inside back cover, bottom photo]* It ended 58 hours and 2,175 kilometers later when the winning team of Barbara Fricke and Peter Cuneo landed on a loading dock on the east side of the Detroit River in Windsor, Ontario. The second place team of Danielle Franceour and Linda Ellis were just behind at 1,971 kilometers in Hopkins, Michigan. This event qualifies the top three US finishers for the 2011 Gordon Bennett which is scheduled to be held in Gap, France, next September. More info on each event is at:
http://www.gordonbennett2010.com/
http://www.balloonfiesta.com/gas-balloons/america-s-challenge
Ω

Above photo of N-47FC shows the very gas depleted, winning America's Challenge team preparing for a landing over the Detroit River after 58 hours of flight. (photo by Kim Reed)

Italian boat finds remains of US balloonists

By Nicole Winfield, Associated Press

An Italian fishing boat on Monday pulled the remains of two American balloonists from the Adriatic Sea, ending a two-month hunt for the pair's bodies in one of ballooning's darkest chapters. The boat hauled in the balloon and its gondola with the bodies of the Americans still inside while fishing 11 miles (17 kilometers) north of Vieste before dawn, said Cmdr. Guido Limongelli of the Vieste port. Viete is on Italy's eastern Adriatic coast in the southern Puglia region, which makes up the "heel" of boot-shaped Italy. Search crews looked for the veteran balloonists in vain for a week before determining that their craft had plunged toward the water at 50 mph (80 kph) and they likely didn't survive. The gondola appeared to be remarkably intact despite the impact. The outer wicker frame had just a few holes punched in it, and cords, canvas flaps and ropes were still attached to the inside. A heap of torn white fabric appeared to be the balloon shell itself. As soon as the fishing boat "Sharon" discovered what was in its nets it alerted port officials in Vieste, who sent out a patrol boat to escort the vessel back to port, Limongelli said. A coroner was performing an autopsy and officials were investigating to determine what might have caused the balloon to crash. Ω

TECHNICAL

Airships for the 21st Century:
Long-duration, heavy-lift designs breathe new life into the world's oldest aircraft technology
By **Ron Hochstetler** / IEEE Spectrum OCT 2010

Illustration: Science Applications International

Residents of Caribou, Maine, who happened to glance up at the skies over the former Loring Air Force Base recently got a glimpse of the future—although they might have thought they were looking at something out of the past. Engineers from my company, Science Applications International Corp. (SAIC), in McLean, Va., have been conducting test flights of a new type of lighter-than-air vehicle. In appearance, the Skybus 80K bears the same oblong shape as the Goodyear Blimp, and it's based on the same flight principles that have governed airships since the 1800s. But this airship, one of a number of commercial and military vehicles now under development, represents a distinct break from tradition. Unlike their dirigible cousins of past centuries, these new vehicles are being designed to lift heavy payloads, remain aloft for weeks or even months at a time, and fly without pilots—all while expending far less energy than a conventional airplane or unmanned aerial vehicle. The Predator UAV, for instance, can carry a payload of 340 kilograms on a typical mission of up to 40 hours. SAIC's Skybus 1500E pilot-optional airship is being designed to carry a payload three times that size and stay aloft for up to 21 days.

The renewed investment in airships comes at a time when the energy footprint of all modes of transportation is being scrutinized. Some aviation visionaries now argue that we can't continue using exclusively petroleum-based fuels to power our aircraft. Such concerns have prompted new research into jet biofuels and energy-efficient jet engines. We've also begun to understand that not every flight has to be made at eight-tenths the speed of sound. For certain tasks, airplanes just can't compete with airships.

Modern airship designers are targeting four pressing needs: intelligence, surveillance, reconnaissance missions and the transporting of multi-ton payloads to locations unreachable by conventional transport. For example, airships are ideal for continuously monitoring sites where improvised explosive devices or rocket launchers may be deployed. They also excel at scanning for distant airborne threats. That's why, in June, the U.S. Army awarded a US $517 million contract to Northrop Grumman and British firm Hybrid Air Vehicles to build three airships, each as long as a football field, to monitor trouble spots in Afghanistan. Cargo airships, meanwhile, are especially attractive for places that have poor roads and for remote regions that have no roads at all. At a transportation conference I recently attended in Canada's Northwest Territories, mining company executives and community leaders expressed strong support for using airships to shuttle equipment and supplies to distant mining outposts and villages. Such needs are driving the reinvention of the airship.

An airship flies primarily by Archimedes's principle, which describes the buoyancy of a body submerged in a denser fluid. That is, an airship operates more like a submarine than an airplane or a helicopter. Those aircraft have to generate 100 percent of their lift from the flow of air over their wings or rotor blades. An airship, however, employs a lighter-than-air nonflammable gas such as helium to give it buoyancy. When the lifting gas displaces a volume of air that weighs more than the entire airship (including fuel and payload), the airship floats. That resultant lift is what's known as the airship's static buoyancy. For instance, to lift one kilogram at sea level, the airship needs approximately one cubic meter of helium gas. Airships weigh considerably more than that, of course; the Skybus that recently flew in Maine tipped the scales at 1600 kg unfilled.

The lifting gas is contained within the airship's outer skin, a large fabric bag or envelope that is aerodynamic,

lightweight, and rugged. Inside the envelope are one or more smaller bags, called ballonets, which hold ordinary air. On the ground, electric fans pump air into the ballonets until the pressure of the helium surrounding the ballonets exceeds atmospheric pressure by a very slight margin of about 480 pascals. The ballonets occupy between 25 and 50 percent of the airship's total gas volume. Bleeding off a measured amount of air through valves in the ballonets provides room inside the envelope for the helium to expand as the ship rises. As the airship ascends, the decreasing atmospheric pressure causes the helium inside the airship to expand steadily. Once all the air in the ballonets is gone, the airship cannot ascend higher without either bursting or venting its helium. This point is known as the airship's pressure altitude. To descend, the airship uses its electric fans to blow air back into the ballonets. This gas-management system must constantly keep the helium at a pressure that's slightly higher than the surrounding atmosphere, to preserve the aerodynamic shape of the envelope.

If ascending and descending were all an airship did, this combination of gases and ballonets would be sufficient. But an airship also needs a certain amount of power and propulsion, to run the onboard navigation and communications systems and any electronics in the payload, and to maneuver to different locations. Most current airships use traditional gasoline engines, but increasingly designers are looking at alternative power and propulsion systems. One idea is a regenerative system incorporating photovoltaics and fuel cells, in which hydrogen fuel cells produce water vapor. The solar power could be used to separate the water back into its component gases; the hydrogen would then be fed back into the fuel cells.

Almost all airships flying today are of a nonrigid design, which means the ship's shape comes only from the pressure of the gases inside. By contrast, the giant airships of the 1930s, the *Hindenburg* being the most iconic example, had rigid internal skeletons made of aluminum or wood. Inside this cage were a dozen or more gas-filled lifting bags. Those days also saw the development of semirigid designs, which typically had a stout aluminum keel running lengthwise from the nose to the tail, providing a convenient mounting point for the individual gas cells and distributing the lift of each cell evenly. The only semirigid airships flying today are the Zeppelin NT series, which began operations in the late 1990s and are used primarily for sightseeing and advertising.

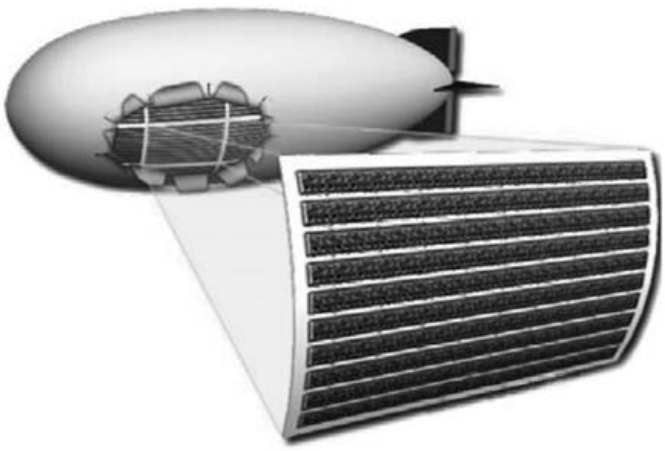
Although nonrigid airships aren't weighed down by an internal framework, they still have to support the gases, fabric, and other components, as well as any payload. Obviously, the greater the airship's weight, the larger the volume of lifting gas needed and the bigger the envelope size. As the size increases, so does the vehicle's surface area and consequently the amount of aerodynamic drag during flight. These and other factors dictate the amount of power required to propel the airship through the sky.

Although people pilot most of today's airships, the newer designs are increasingly pilot optional, meaning that a crew can fly them during tests or initial deployments and then quickly switch them to remote operation. Several fully remotely operated airships are also in development. One of their chief uses right now is for battlefield surveillance. These airships carry various imagers and detectors to altitudes of 1500 to 5500 meters on missions lasting 24 hours or more. Guardian Flight Systems, based in North Carolina, developed the pilot-optional Polar 400 for the U.S. Department of Defense. In the fully pilotless category is SAIC's Skybus 80K airship, which so far has conducted more than 62 hours of flight tests in Maine. To date, the Skybus 80K is the only unmanned airship to hold an experimental designation from the U.S. Federal Aviation Administration. It has a gas volume of 2300 m3 (80 000 cubic feet) and is designed to carry a 230-kg surveillance payload as high as 3000 meters for up to 24 hours.

More ambitious is the U.S. Army's Long Endurance Multi-Intelligence Vehicle. The LEMV will carry an 1100-kg payload up to 6000 meters for as long as 21 days without refueling. Its first deployment is to be in Afghanistan in late 2011 or early 2012. A number of defense companies considered vying for the LEMV contract. But two months ago, the five-year contract—one of the largest airship contracts to be awarded since World War II—went to Northrop Grumman and Hybrid Air Vehicles.

To operate in the thin atmosphere at such high altitudes for extended periods of time, an airship needs to be light (at least compared with lower-flying counterparts) and have an efficient propulsion system that can function with little or no oxygen. Also essential is a design that minimizes aerodynamic drag, which is why high-altitude airships almost always have the familiar ellipsoidal shape. Among the power sources being considered for high-altitude airships are electric motors coupled with lithium-ion batteries, hydrogen fuel cells, and flexible-film photovoltaics, which would blanket the upper parts of the airship's huge surface. Any of these options would need to weigh less and be more efficient than standard engines. To fly even higher and longer with heavier sensor payloads is the ultimate goal of military leaders who see the modern airship as an unblinking, ever-present eye in the sky. Under the Defense Department's $149 million High Altitude Airship program, Lockheed's Maritime Systems & Sensors Division in Akron, Ohio, is now exploring ways to build an airship capable of carrying a 230-kg sensor package into the stratosphere, as much as 18 kilometers up, where it would remain for a month at a time. At that altitude, one airship would be able to monitor a patch of ground 1200 km across. Just 11 of them could provide radar coverage of the coastal and southern borders of the continental United States, according to the North American Aerospace Defense Command.

If that sounds ambitious, consider the proposed high-altitude airship known as the Integrated Sensor Is Structure, or ISIS. Under this $400 million program jointly funded by the Defense Advanced Research Projects Agency and the U.S. Air Force, Lockheed's Skunk Works is building an unmanned stratospheric airship powered by solar cells and fuel cells that would be capable of operating at 21 kilometers' altitude for up to 10 years at a time. A one-third-scale prototype, itself longer than a football field, is scheduled to fly in 2013. What makes ISIS unique is the integration of its mission sensors—a UHF radar for monitoring vehicles and soldiers on the ground and an X-band radar for tracking cruise missiles up to 600 km away—into the body of the airship. According to Raytheon, which is building the radars, the radar antennas



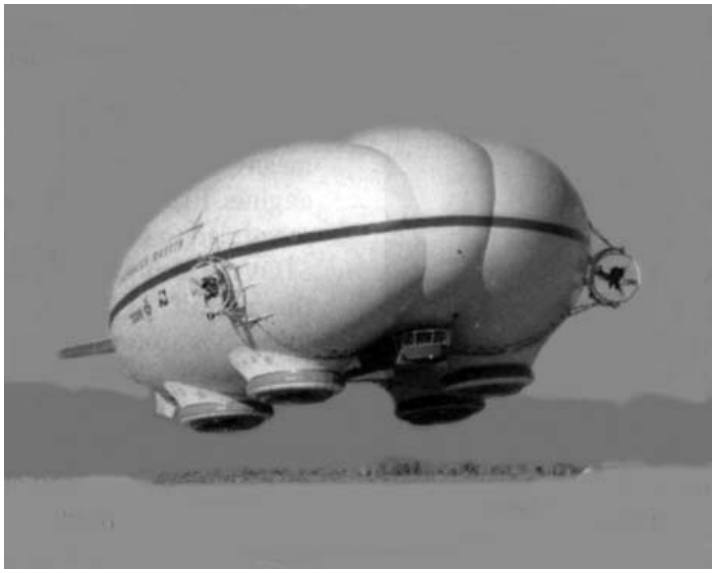
form a cylinder in the center of the airship. By integrating the sensor system into the structural supports, the design reduces the airship's overall weight and adds structural stiffness. Even so, the demands of a 10-year high-altitude mission means that the full-scale ISIS will need to be made of extremely durable, yet lightweight materials—materials that may not yet exist. In addition, its power system will need advanced photovoltaics and fuel cells capable of generating enough power to operate the radars, navigation system, communications gear, and the electric motors that will turn the airship's giant propellers. A lot of extreme engineering is going into today's airship designs.

While the upcoming stratospheric surveillance airships will carry relatively small payloads, some airships now in development will lift a great deal more—payloads of hundreds of tons, albeit at lower altitudes. That presents an entirely different set of challenges.

An airship designed to carry 50 metric tons of cargo would be hundreds of meters long and weigh tens of tons lying empty of helium on the factory floor. The sheer size would make its assembly a daunting task. These new vehicles would likely be built in smaller subsections that would later be joined together in immense hangars.

A more critical issue is how to compensate for the sudden increase in the airship's static lift that occurs when a heavy payload is unloaded. The most straightforward remedy is to add onto the airship an amount of weight equal to the payload as the payload is removed.

Some heavy-lift designers are also developing hybrid vehicles. These incorporate the static lift of helium along with some form of dynamic lift, such as helicopter-style rotors or airplane-like wings. In most of these designs, the helium is sufficient to lift the vehicle's weight, while the dynamic lift is devoted to the payload's weight. This produces an aircraft that is slightly heavier than air and so is much less buoyant during cargo unloading.



Lockheed's Skunk Works first test-flew its P-791 proof-of-concept hybrid airship [above] in 2006. The aircraft has two propulsion motors on the exterior of its envelope and two attached to its tail. This generates about 20 percent of the dynamic lift when the vehicle is flying forward. Other hybrid airships under development include Hybrid Air Vehicles' SkyCat, which will be the basis for the U.S. Army's LEMV; the Worldwide Aeros Corp.'s Aeroscraft, which was recently submitted to the FAA for design certification; and the proof-of-concept Dynalifter, being readied for test flight by Ohio Airships.

While these hybrids hold promise, they also have some inherent technical challenges. For one, the additional dynamic lift increases aerodynamic drag. To help with generating dynamic lift, they also typically have a flatter profile than conventional airships, but this shape gives them a higher ratio of envelope fabric to gas volume, increasing the airship's empty weight. Higher weight and drag, of course, mean more propulsive power and more fuel, both of which make the ship even heavier. And some hybrids employ multiple lobes in their design, which can create problems as the gases inside heat up from the sun's rays. Helium conducts heat six times as efficiently as air, so a multi-lobed hybrid may tend to list toward the side that's not exposed to the sun.

Perhaps the biggest issue, though, is the hybrid's potential to pitch nose up or down and to roll from side to side. A conventional, single-hulled airship avoids this problem because the majority of its gas volume is positioned well above its center of gravity, imparting what's known as pendulum stability. The higher up the center of lift is, the more stable the airship is; conversely, the closer the center of lift is to the center of gravity, the greater the tendency of pitching from wind gusts. To get around these problems, Boeing and the Canadian company SkyHook International are collaborating on a different approach: a rotary-airship hybrid. It combines a conventional ellipsoidal envelope with four powerful helicopter rotor units, which are installed below the helium envelope. The helium is sufficient to support the weight of the vehicle itself, leaving the full power of the rotors to lift a 36-metric-ton payload. One of the first applications of the SkyHook is moving equipment and supplies for oil-drilling operations in northern Canada.

To spur further progress in heavy-lift designs, I and several other airship enthusiasts are setting up an international contest to promote the development of airships as a green, low-carbon form of cargo transport for commercial operations. The Zero Emissions Transport Airship Prize, or Z-Prize, similar to the more familiar X-Prize, will offer a large cash award for the successful development and flight test of a heavy-lift airship that meets the competition's criteria. We hope to entice airship developers to focus their efforts on designing cost-effective cargo airships that will have their greatest applications in developing regions—places where moving freight by conventional transport is difficult and hugely expensive or subject to disruption by criminals or terrorists. And by emphasizing airship designs with low carbon emissions, we hope also to encourage the creation of the first environmentally sustainable air-transport system.

It's an exciting time to be an airship engineer. These vehicles represent both the oldest and now the latest forms of aircraft. They're also an aviation technology that has yet to be fully exploited. While some naysayers may think the time of these leviathans is long past, in fact their day is just dawning. Ω

This article originally appeared in print as "Airships Ahoy". Member **Ron Hochstetler** is director of lighter-than-air programs for Science Applications.

Price Shocks Waiting As US Abandons Helium Business
By John Timmer (Excerpt)

Robert Richardson got a Nobel Prize for creating a superfluid comprised of chilled helium. But he started his talk at the Lindau Nobel Laureates Meeting by announcing that he'd be focusing purely on science policy… Because of how the US is privatizing its stock of the gas, prices are artificially low, which is encouraging a pattern of consumption that may leave us without significant supplies of the gas midway through the century.

The light weight of a helium atom, which makes it perfect for party balloons and blimps, is also the key to its scarcity. The Earth simply doesn't exert enough gravitational force to keep it on the planet. Once in the atmosphere, helium will migrate to the stratosphere and be lost to space. All the primordial helium in the Earth's vicinity when it formed is long since gone, and only flukes of geology have given us the opportunity to study it on Earth.

Richardson noted that the only places with significant helium deposits are areas where salt domes have formed above deposits of granite. Over geological time, radioactive decay has released alpha particles—helium nuclei—into these deposits, where they can generally be found in a mixture with natural gas. By chance, the vast majority of these deposits are located in the US, in the Great Plains and the western states. Most of the other sites where helium can be commercially isolated are facilities that liquify natural gas, which leaves helium as a byproduct. Although helium had been detected in the sun back in the mid-1800s, the first deposits were found in a natural gas field in Kansas in 1903. Within two decades, the US military was using helium in dirigible aircraft, which led to it being managed by the government as a strategic resource. Even as technology changed, helium found new and equally critical roles, first as a component of large balloons [sic] that protected ships from air attack in World War II, then to purge rocket fuel tanks before loading them with hydrogen and liquid oxygen. To ensure a stable supply, the US government gradually built a pipeline system that paralleled the one for natural gas and brought helium to a salt dome for storage. The site, called the Bush Dome, has a liquefaction facility on site and a huge fraction of the world's total supply of helium. That's where things stood in the mid-1990s, when Congress decided that the US government needed to get out of the business of managing helium. Ostensibly, this would allow market forces to set a price proportionate to its remaining supply, something Richardson indicated he supported. But Congress dictated that the supply had to be wound down within about 20 years, even though the Bush Dome had enough helium to supply the entire globe for most of a decade, even if all other sources were cut off. The result has been low prices for the gas even though, at 2008 rates of consumption, we had only a 25-year supply. Helium usage elsewhere has continued to rise, driven in part by its artificially low price. Even with the lower rate of use, however, we'll go through the remaining supply within a century.

Richardson's solution is to rework the management of the Bush Dome stockpile once again, this time with the aim of ensuring that helium's price rises to reflect its scarcity. In practical terms, he said that it would be better to deal with a 20-fold increase in price now than to deal with it increasing by a factor of thousands in a few decades when supply issues start to become critical. But he also made an emotional appeal, stating, "One generation doesn't have the right to determine the availability forever." Ω

Robert Richardson was also interviewed in New Scientist August issue and made additional comments: "There are some substitutes, but it can't be replaced for cryogenics, where liquid helium cools superconducting magnets for MRI scanners. There is no other substance which has a lower boiling point than helium. It is also used in the manufacture of fibre optics and liquid crystal displays. The use of helium in cryogenics is self-contained, in that the helium is recycled. The same could be done in other industries if helium was expensive enough that manufacturers thought recovering it was worthwhile."

When questioned how the price is set for such a scare resource, Richardson said, "The ridiculously low price is dictated by the calendar… As a result, helium is far too cheap and is not treated as a precious resource." Also asked about other sources, he answered, "The so-called Eastern oil shale in Kentucky and Ohio, which is also a source of natural gas, contains only trace amounts of helium… The same is true of North Sea gas and wells in Europe… party balloons will be $100 rather than $3… but we will have to live with those prices eventually anyway." Ω

CONCEPT FOR AUTONOMOUS UNMANNED AIRSHIP LOGGING (Excerpt)

Juergen K. Bock, Uwe Apel & **Barry E. Prentice**

This paper proposes an Unmanned Aerial Vehicle (UAV) for lighter-than-air transport of logs. For expedient cargo exchange, payloads would be suspended externally. For economic and ecological reasons, hydrogen gas is specified for aerostatic lift and as a fuel in combination with liquefied methane. For UAV-type monitoring and control, a ground coordination system is required to manage weather conditions and physical operations.

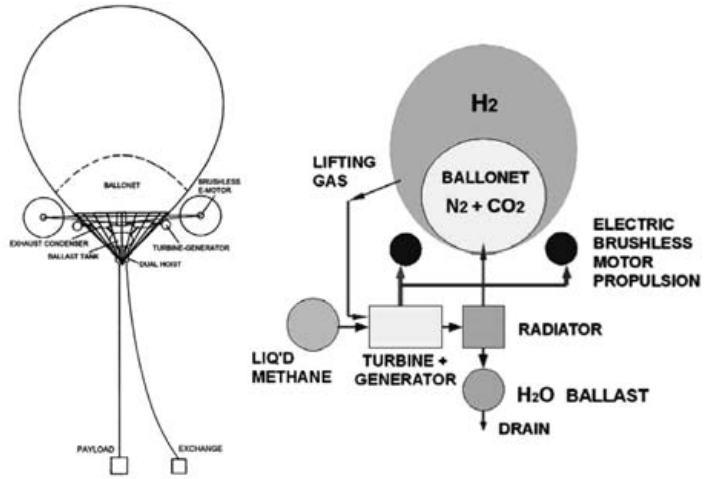


Figure 1 (left) presents the most practical shape for short-range suspended cargo haul. Figure 4 (right) provides a schematic overview of the envisioned propulsion, fuel and ballast system.

The advantage of mixed fuel for buoyant flight is obvious: 1 kg methane at 1 bar contains an energy equivalent of about 15 kWh or for 100 kg an equivalent of 1500 kW/h, respectively. One cubic meter of hydrogen is capable of lifting 1.09 kg/m3, thus lifting the weight of 100 kg methane by 100/1.09 = 91.7 cubic meters of hydrogen with an energy content of 3.50 kWh/m3, *i.e.* corresponding to about 321 kWh. In other words, there is 21 percent more propulsive energy available as compared to using methane as the only fuel.

Two *[turbines]* are used for reasons of redundancy and economy. The nominal indicated airspeed near ground is about 72 km/h if both turbines are running in the standard case. If only one turbine is in operation, the nominal indicated airspeed will drop to about 57 km/h. Two lateral propellers are mounted on outriggers. Electrical power is provided to two lateral propellers of 6 meter diameter, each of which is driven by a brushless electric motor of about 800 kilowatts. Directional control is achieved by differential thrust, while climb and descent are controlled by a combination of aerostatic trim and thrust control.

A major part of the exhaust gas from the propulsion system is scooped up by the ducts of the condenser system. The gases are primarily nitrogen and carbon dioxide which are - as a fire safety measure – ducted into the ballonet to displace the oxygen in atmospheric gas. In addition, the exhaust contains a major portion of water vapor for the optional collection of safety ballast.

The external suspension of the airship payload would follow methods already practiced in the field of helicopter logging. Neither an airship nor a helicopter touches the ground under normal operational conditions because of the external payload suspension. This avoids extensive area clearance on the ground. Mooring without a mast is an attractive feature for ground operations, *i.e.* during cargo exchange. The anchoring stays may serve as tie-downs against excess aerostatic lift until the ship is reloaded. The airship carries no external payloads when moored for parking. The excess lift is counteracted by a ground anchor and the craft stands upright as long as there is calm air. Wind blowing from any direction would cause the airship to lean, but the excess lift component would withstand the wind pressure up to a certain equilibrium angle. It would be appropriate for the ground crew to be equipped for airship remote control during the landing and takeoff phases. This applies to servicing stations and where routine operations and ballasting are concerned. A primary task of the servicing stations is refueling liquefied methane and replenishment of gaseous hydrogen for a two-way flight. Fuel reservoirs are not practical for outpost stations.

Most of the technology needed to build a UAV airship logger is at hand. Some technology needs to be adapted, like the computer avionics systems, but this is more a matter of programming and simulation rather than new development. The principal challenges are found in the integration of technologies and creation of reliable systems. Ballasting and the ballast water recuperation system require design for this specific application. Safe systems for handling hydrogen and the methane fuel system have to be engineered. This technology is not without its challenges, but no “make or break” problems can be identified. Ω

Full paper is available through www.isopolar.

Floating Alternative to Winter Roads

By: Adam Wazny

The answer to the annual uncertainty of Manitoba's winter road system could be floating in the sky. Hybrid airships, souped-up Zeppelins that could act as transports to remote northern communities, suddenly seem more attractive these days. The U.S. military has signed a multimillion-dollar contract to fly the vessels in Afghanistan. Airship firms have had two meetings in Winnipeg, with more visits being scheduled. And Manitobans are definitely interested in hearing about any alternative to paying the $2 billion proposed for building an all-season road system to northern Manitoban communities.

Barry Prentice, a University of Manitoba professor who has long been a champion of the airship, says for the price of building a few bridges on these proposed fixed roads, governments could help finance transport airships that could be used year-round.

The life of the soft infrastructure of Manitoba's 2,200-kilometer winter road network falls around six to eight weeks. That short season -- the only time when trucks can ship in larger quantities of things like food, medical supplies and building materials -- is pushing the conversation for the need of permanent roads, but the numbers for such an endeavour are lofty.

The province has committed $75 million for the next 15 years to build a permanent network east of Lake Winnipeg, with an estimated total price tag at over $2 billion. A road to Island Lake (a region of 10,000 people 500 kilometers northeast of Winnipeg) is estimated at $1.4 billion. Those figures make the airship an intriguing northern alternative.

Measuring the length of a football field and standing up to seven stories tall, the modern airship could transport large quantities of goods that would allow communities to thrive, Prentice believes. He says regular delivery of construction materials would allow projects to be built quickly (not over two summers) and an increased volume of supplies would eventually drive the cost down for the intended consumer. "Trucks are a lot cheaper, but if you don't have the road then what do you have?" asks Prentice, who specializes in supply-chain management at the U of M. "What do we have to lose by trying this?" Alot, especially if your company ships goods up to northern Manitoba during the winter road season. Initial capital costs for a venture like this can rise into the tens of millions, and without a definitive commercial model to draw from, private-sector investment remains quiet.

As one manufacturer suggested, there's a misconception about airship safety out there -- one the industry will need to fight through.

But before Led Zeppelin album covers cloud your mind, consider the developments down south. The U.S. navy has been using airships since 2006 and this past summer, the U.S. army awarded a $517-million contract to Northrop Grumman to build surveillance ships for use on the front lines as early as next year.

The LEMV (long-endurance multi-intelligence vehicle) is designed to reach altitudes of 20,000 feet and be able to stay in the sky for three weeks at a time. More importantly, Prentice notes, the research and development of airships is being handled by the U.S. military.

Much like the armed forces assumed all the risk in developing the jet engine for the Second World War, the same is being done now with regards to airships. "Once people see these things in the sky next summer, I feel it will really open up some eyes," said Prentice. "It'll be like wind turbines. Wind turbines had a hard time coming back but once (Denmark) took the bit in their teeth, now they are everywhere."

John Spacek, assistant deputy minister with Manitoba Infrastructure and Transportation, is keeping a close eye on hybrid airship developments. The province has met with manufacturer representatives and has even helped fund demonstrations (a 2008 demo never got off the ground due to the absence of a giant hangar to set up the airship for flight), but the government has no plans to grant more than a courtesy look at this time. "We're at that pre-commercialization era for hybrid airships, between the military and the public sector," said Spacek, noting the government is a transport facilitator, not a shipping company.

"We have an open mind; we just haven't seen a business case from anybody involved yet."

Republished from the Winnipeg Free Press print edition December 10, 2010.

SHORT LINES

Northrop Blimp Could Fly [This] Summer.
Spencer Ackerman at the Wired (11/5) "Danger Room" blog writes, "Northrop Grumman's ginormous experimental spying blimp is progressing rapidly, the company wants you to know. In barely a year, Northrop predicts, it'll be ready to test in an (operational environment)". Northrop is developing the "unmanned, seven-story, football-field sized mega-blimps called Long Endurance Multi-Intelligence Vehicles," which could stay in the air for weeks. "According to a Northrop statement, the blimp passed three initial tests that judge the feasibility of its design, its ability to talk to a ground station and the success of its software. The company says it'll inflate the first blimp in the spring and fly it in the summer; all tests are supposed to finish by the end of 2012." Ω

Homemade hydrogen could power vehicles: Honda working on residential system to break apart H2O

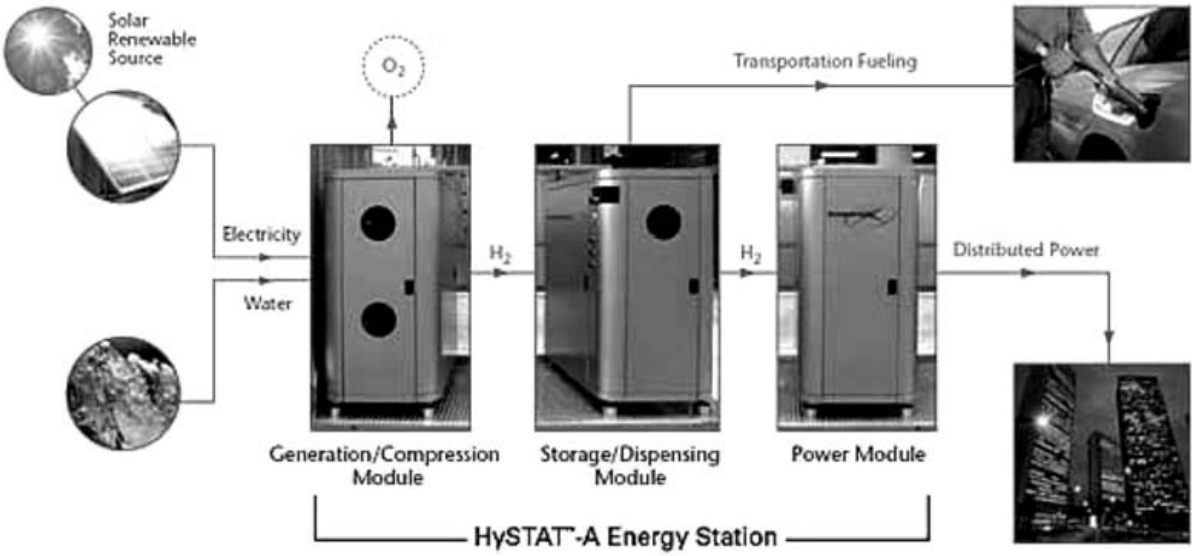
By Susan Carpenter [Excerpt] LA Times

…[E]merging technology that someday could turn your house into a personal, zero-emission gas station. It's called a residential hydrogen refueler, and only one currently exists. Tucked away on the Torrance, Calif., campus of American Honda Motor Co. the sleek system is designed to power Honda's limited-production FCX Clarity sedan and other hydrogen fuel-cell vehicles. The system uses solar panels & a 6-kilowatt array of thin-film cells to power a machine the size of a small refrigerator that sips H2O and breaks it apart into hydrogen and oxygen gases. The hydrogen is then pumped directly into the car, which uses the gas to generate electricity for the car's electric motor. No fossil fuels, no pollution, no additional strain on the power grid, and all done at home. Ω

Human Errors Led To NASA Balloon Crash.
Space.com reported, "Complacency in a variety of forms led to the April crash of a huge NASA science balloon carrying a multimillion-dollar telescope in the Australian outback, according to a new report released today [Oct. 22]." A NASA Mishap Investigation Board investigation found "no technical problem" was responsible for the incident in April that "partially destroyed" a gamma-ray telescope. "Most of these causes were related to shortcomings in risk analysis, contingency planning, personnel training, technical knowledge, government oversight and public safety accommodations, according to NASA officials." Since the incident, "launch operations at all of NASA's balloon sites were suspended. NASA's Balloon Program Office plans to resume launches once it has implemented and verified new procedures to safeguard launch crews and the public, agency officials said."

Students to Cross English Channel In Solar-Powered Dirigible. NY Times

French students from INSA Lyon University and Essec International Business School will try to cross the English Channel this summer in a solar-powered dirigible under Project Sol'R. The dirigible "consists of a lightweight aluminum frame with an outer skin of nylon and polyethylene. Stretched along the top of the balloon are 42 thin-film solar cells that produce enough energy to drive an electric motor turning two large propellers." According to the article, it "is a concept vehicle for technologies that may lead the way to cleaner, greener future aviation. At the very least, its value is symbolic: calling people's attention to the possibilities of carbon-free air travel." Ω



NASA Balloons Back to Space

By Licia Avelar 15 DEC 10

NASA's scientific balloon program is finally resuming flights this month after a mishap back in April put a halt on the project. The high-altitude balloons fly instruments for scientific and technological investigations that help us better understand the universe. The scientific balloons are composed of a lightweight polyethylene film and fly to altitudes of nearly 25 miles carrying payloads weighing up to 6,000 pounds.

Recently, NASA listed a total of 25 causes of the accident including insufficient risk analysis, contingency planning, personnel training, government oversight and public safety accommodations. After an intense evaluation of safety processes following the failed launch attempt from Australia, NASA has deemed the balloons ready for departure.

NASA's Goddard Space Flight Center, Wallops Flight Facility, and contractor balloon team have done an outstanding job over the past eight months to develop and implement plans to return the balloons to flight," said Jon Morse, director of the Astrophysics Division in the Science Mission Directorate at NASA Headquarters in Washington in a NASA press release. The new flights are scheduled throughout the coming month over Antarctica. This flight will be different in that NASA will use a vehicle built to handle the large LDB (long-duration balloon) to launch the balloons instead of a commercially obtained mobile crane (used during Australia mishap). Ω

New Scientist reports that at the Astrodynamics Specialist conference in Toronto, Canada, Kristin Gates of the Global Aerospace Corporation proposed that balloons could be used to drag satellites into an orbit where they would burn up in the atmosphere so they do not add to space debris. "A balloon 37 metres across would take just one year to drag a 1200-kilogram satellite from an initial orbit of 830 kilometres to an altitude low enough to burn up in the atmosphere, the Global Aerospace team calculates. Without the balloon, this would take centuries." "Global Aerospace president Kerry Nock admits that the balloon concept would only work below 1500 km or so but notes that this includes a particularly congested region between 750 and 900 km." Ω

Boeing's Corpulent Hydrogen-Powered Spy Plane *[above]* Will Fly at 65,000 Feet For Four Days

By Rebecca Boyle

The future of spycraft looks pretty heavy, if this new Boeing plane is any indication. Adding to today's parade of pretty new planes, Boeing unveiled a hydrogen-powered unmanned aircraft system Monday that will stay aloft at 65,000 feet for four days. The Phantom Eye is not exactly sleek, but it's one of the greenest aircraft out there, its only by-product is water.

The aircraft heralds a potential new market in data and communications collection, Boeing says. Later this summer, it will be shipped from Boeing's Phantom Works facility in St. Louis to NASA's Dryden Flight Research Center for ground and taxi testing. The debut flight will likely take place next year and should last four to eight hours, a mere preview of the aircraft's apparent capabilities. Ω

In a related effort, with GM, ONR is testing small, hydrogen fuel cells as possible power sources for unmanned undersea vehicles (UUV). UUVs augment existing Navy platforms to provide extended surveillance and ocean-sensing capabilities. A variety of fuel cells, solid oxide, direct borohydride and hydrogen fuel cells are being tested as air-independent power sources for the UUV's electric propulsion systems. "Unmanned autonomous vehicles are increasingly being integrated into our intelligence systems, and the key to leveraging them effectively as a force multiplier is finding a high-endurance power source." The University of Hawaii's fuel cell test facility at the Hawaii Natural Energy Institute (HNEI) addresses the development and testing of advanced fuel cell systems, including processing and the characterization and development of sea-floor based methane hydrates. Ω

The New York Times (9/14, A1, Wollan) reports in a front-page article on the "manufacturing revolution" spurred by 3-D printing, which "has been radically transformed from its origins as a tool used by manufacturers and designers to build prototypes," and "is giving rise to a string of never-before-possible businesses that are selling iPhone cases, lamps, doorknobs, jewelry, handbags, perfume bottles, clothing and architectural models." Proponents of the technology "say that by doing away with manual labor, 3-D printing could revamp the economics of manufacturing and revive American industry as creativity and ingenuity replace labor costs as the main concern around a variety of goods." One entrepreneur said, "There is nothing to be gained by going overseas except for higher shipping charges… some wonder how successfully the technology will make the transition from manufacturing applications to producing consumer goods, its use is exploding." Ω

Liquid Hydrogen UAV Begins Test Program

Aviation Week reported, "Following an initial hour-long, battery-powered flight, AeroVironment's Global Observer unmanned aircraft is beginning a test program planned to culminate in a week-long flight in the stratosphere using liquid-hydrogen fuel." The article notes that the Global Observer "is flying from Edwards AFB, Calif., where it will undergo an operational utility assessment under a joint concept technology demonstration (JCTD) sponsored by several US agencies and led by Special Operations Command." The aircraft reached "almost 4,000 ft" during its journey, and "after battery-powered flights to expand the envelope, the Global Observer will begin using hydrogen fuel." Ω

Office of Naval Research Scientist Awarded for Advancements in Fuel Cell Technology

By Office of Naval Research Public Affairs

The director of the Sea Warfare and Weapons Department in the Office of Naval Research (ONR) was honored with the 2010 Fuel Cell Seminar and Exposition Award Oct. 19 *[10]* in San Antonio. Dr. Richard Carlin was presented the award by Dr. Mark Williams, Fuel Cell Seminar and Exposition vice president, at this year's seminar, which is considered the premier meeting for that industry.

"It's an honor to be recognized by my peers," said Carlin. "But I want to emphasize that this award is more of an affirmation of the collective energy research efforts of many here at ONR who have contributed to meeting the Navy's energy needs." Ω

World Sky Race™

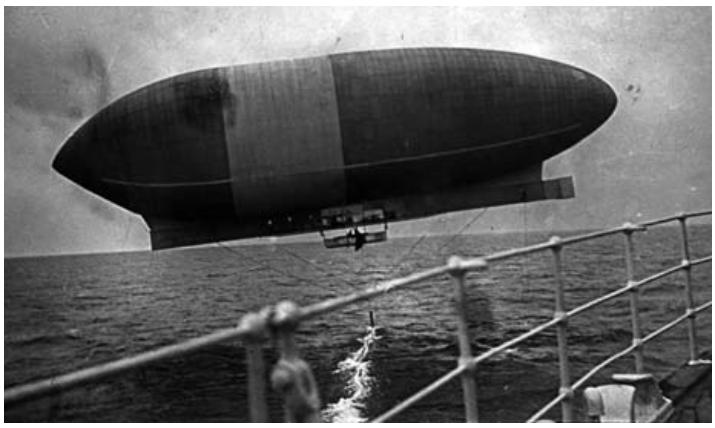
Eurosport and the World Air League Initiate International Broadcast Partnership to cover the World Sky Race

26 October 2010

The Eurosport Group and the World Air League formalized a partnership for broadcast coverage of the inaugural 2011-2012 World Sky Race. This event is a first of its kind, global aviation race featuring teams flying lighter-than-air skyships, blimps and zeppelins. Each of the individual race stages in this historic around-the-world skyship air rally will be featured in a series of programs broadcast on Eurosport, the leading pan-European sports broadcaster. The inaugural race is planned to start on the Greenwich Prime Meridian in London in September 2011 and the final stage will return to the Prime Meridian 180 days later.

To initiate the partnership, Don Hartsell, Managing Director for the World Air League stated, "The Eurosport and World Air League Broadcast Partnership is a significant development in making the World Sky Race a major new global event for fans and sponsors. Literally, around the world, we will provide racing fans of all types with dramatic coverage of the epic challenges faced by each Sky Team, adding value for the World Air League's involved sponsors. Eurosport's leadership in sports entertainment programming will elevate the stakes for the competitors. The crowning of the historic first circumnavigation World Sky Champion will be now televised around the world."

The World Sky Race will be a grand aviation adventure of airships dominating the sky. For dramatic visuals, the race course will include iconic monuments around the globe. UNESCO and the World Air League have formed a partnership for the race to fly over 130+ World Heritage Sites. Some of the historic highlights will include: flying over Versailles Palace; landing next to the Great Pyramids; cruising above the Taj Mahal; and saluting the Statue of Liberty. In addition to the UNESCO sites, the World Sky race will: fly past Big Ben; circle the Petronas Towers in Kuala Lumpur and Mt. Fujiyama in Japan; use the skies above the Golden Gate Bridge; and touch down at the NASA Johnson Space Center. The World Sky Race is a first-of-its-kind sporting event. Ω



COMMEMORATING AIRSHIP AMERICA OVER THE ATLANTIC 100 YEARS AGO

by Anthony Simon, grandson of Navigator Murray Simon (1881 – 1969)

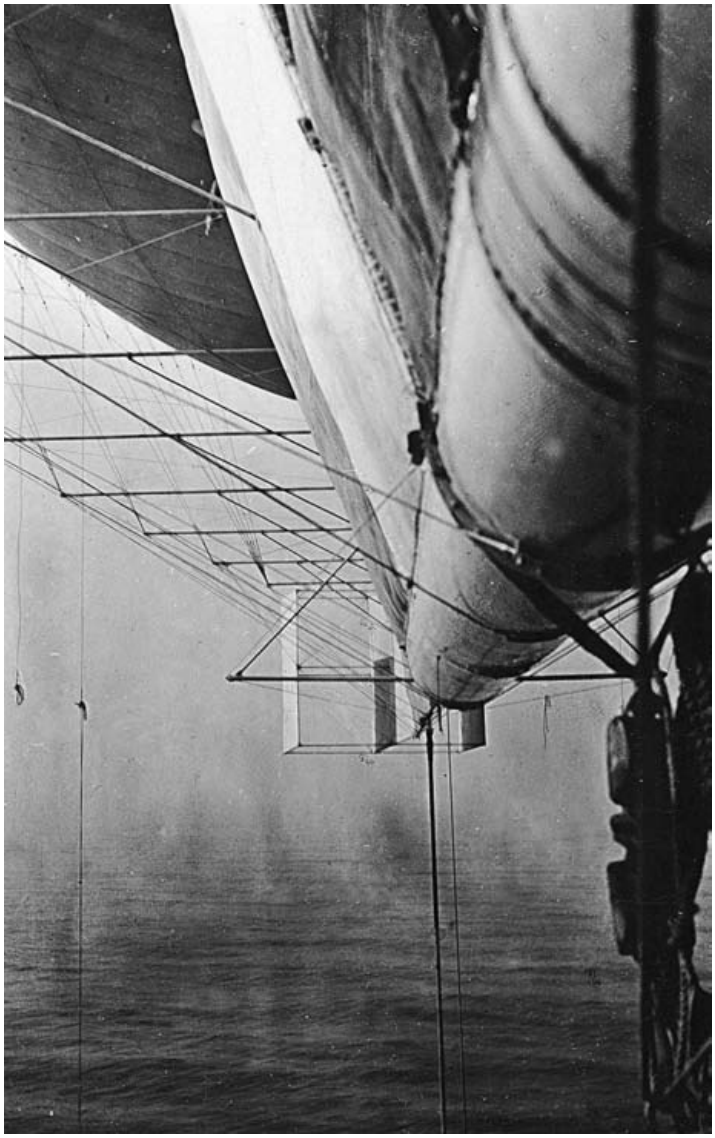
You probably think there is nothing more to say about Walter Wellman's *America*. Well, here goes! My name is Anthony Simon. I am British, 65 years old and live in Brussels and Sweden. I spent my career in the global food industry working for two large multinational corporations. I knew nothing about airships one year ago. I only heard of my grandfather's connection to the *America* when a cousin sent us a copy of Murray Simon's logbook, extracted from Walter Wellman's The Aerial Age, three and a half years ago. My father, John Murray Simon, was still alive. He had been a naval officer and navigator during WW2 on sloops in the North Atlantic (HMS *Crane* and HMS *Totland*) and on the aircraft carrier HMS *Arbiter* which was attached to the US fleet for two years in the Pacific through the islands and all the way to Japan. By the way, my mother was WREN No. 34, served throughout the war and married my father on HMS *Totland* on January 4, 1943. And my uncle, Noel Murray Simon, my father's younger brother, was in the Fleet Air Arm for most of the war, surviving various theatres, including three Murmansk convoys.

The only time my father ever spoke to me about his father was in connection with the *America* logbook three weeks before he died in September 2007. He praised fulsomely the courage of all who sailed in the *America* including his own father. You may already have noticed above that my grandfather, whom I never met, died in 1969. So there is a story here of a broken family, estrangement and a long, lonely later life for Navigator Murray Simon, man of the sea, junior officer and navigator of the White Star Line's *Oceanic* (older sister ship to the *Titanic*), Royal Navy officer (Commander) much of the time from 1914 to 1942 and in 1910 one of the heroes who volunteered to try to cross the Atlantic in the *America*. About a year ago my Aunt Jean, only surviving child of Murray Simon and the youngest of three sisters to my father and Uncle Noel, asked me to help commemorate the centenary of the *America* flight in some way. So I did and the rest of this article summarizes where we've come to so far.

I started on the phone to the British museums in early 2010 and frankly got nowhere. I moved (by phone) to the Smithsonian's NASM and the Zeppelin Museum in Friedrichshafen. Oh! What a difference! Dr. Tom Crouch *[photo below]* was wonderful from my first cold call, as was Juergen Bleibler at the Zeppelin Museum. Before I knew where I was I was invited to lecture in German on the *America's* Atlantic adventure on October 21, 1910, which I subsequently did. At the time I knew nothing! And pretty soon I heard from Tom that the *America/Akron* lifeboat had been discovered in a Goodyear warehouse after 98 years and would be donated to the Smithsonian around June 2010 (which also happened) for subsequent cleaning etc. and display in the Steven F. Udvar-Hazy facility outside Dulles Airport near Chantilly, Virginia. We hope that this latter event now takes place during 2011. And, I for one, will be there!

The Zeppelin Museum invitation forced me to put my skids on! I put on one side my active engagement through quite an elaborate network of boards etc. with sustainable

development and the business role. I spent large parts of my long SSwedish summer accessing and absorbing all I could find. Most useful were the New York Times and Daily Telegraph archives, even though the latter newspaper literally put the phone down on me the first time I rang the marketing department! You probably don't know that three newspapers were persuaded by Walter Wellman to finance this *America* venture across the Atlantic. They were Wellman's own Chicago Herald (he was a very experienced and well-connected journalist), the NYT and the London Daily Telegraph. I must have digested at least 60 separate articles on the America story from July to November 1910. In September and October there was practically daily coverage.



In addition there were magazines like the *Scientific American* (their staff of today knew nothing of any of this story though covered extensively in 1910) and Hampton's which was well-viewed at the time but disappeared in the 1920s, I believe. The Library of Congress and the Smithsonian themselves in Washington were invaluable. I only met with tremendous, highly professional and courteous assistance. The same can be said for the Atlantic City Public Library (though the City itself and the local press there simply have no more interest whatsoever in this subject, amazingly enough! It looks to me as though they could use all the help they can get down there!).

Then there were of course masses of books, some DVDs, etc.. Of greatest help in terms of books, besides Wellman's own The Aerial Age (published in 1911 by A. R. Keller), is Edward Mabley's little gem The Motor Balloon *`America´* published in 1969 by Stephen Greene Press (no longer in business under this name). Edward Mabley was a distinguished writer, playwright and radio/tv director living in Pomona, New York State. As a young boy he had stood on the boardwalk in Atlantic City on the morning of October 15, 1910, and watched the *America* lift off into the fog towards Europe. As he writes in his introduction to The Motor Balloon: "it is a story that deserves to be remembered in a rocket-minded age." He carried the experience with him all his life, as did Paul Garber, also on the same boardwalk at the same time on the same day. Paul Garber went on, of course, to become the founder and most distinguished first curator of the NASM.

As far as DVDs are concerned, I have had great pleasure, in particular, from Richard Van Trueren's *The Early Days* published by Atlantis Productions. So what has come out of all this research? Let me simply summarize as follows:

I have a 130-slide powerpoint presentation with synchronized written script (so far available and given in German and English, with French to come). Perhaps 75% of the slide material consists of photos from 1910 from various sources, including Murray Simon's own camera, some never seen before. A key part of the remainder is a synthesis of newspaper headlines. The single most unique part of this presentation is the Navigator's logbook, written by Murray Simon literally almost in its entirety during the 72-hour voyage in the air, followed by the rescue and triumphant return to NYC and Atlantic City. In my view it is basically a work of literature! It is a compelling read, witty and deadly serious at the same time. I have made it the central pivot of my presentation by summarizing it using only my grandfather's words and by organizing the photographic and other visual material around this summary. I think it works!

America in October 1910, with a crew of six brave airship pioneers and a cat, as an important milestone in aviation history. It was a thoroughly international effort with crucial, as yet not fully recognized, contributions from the Brits! The leader, chief engineer and two mechanics were Americans. The airship was mostly French (with some key bits from Germany). My ancestor, the navigator Murray Simon *[photo below, aboard Trent]* was British. The lifeboat was British.

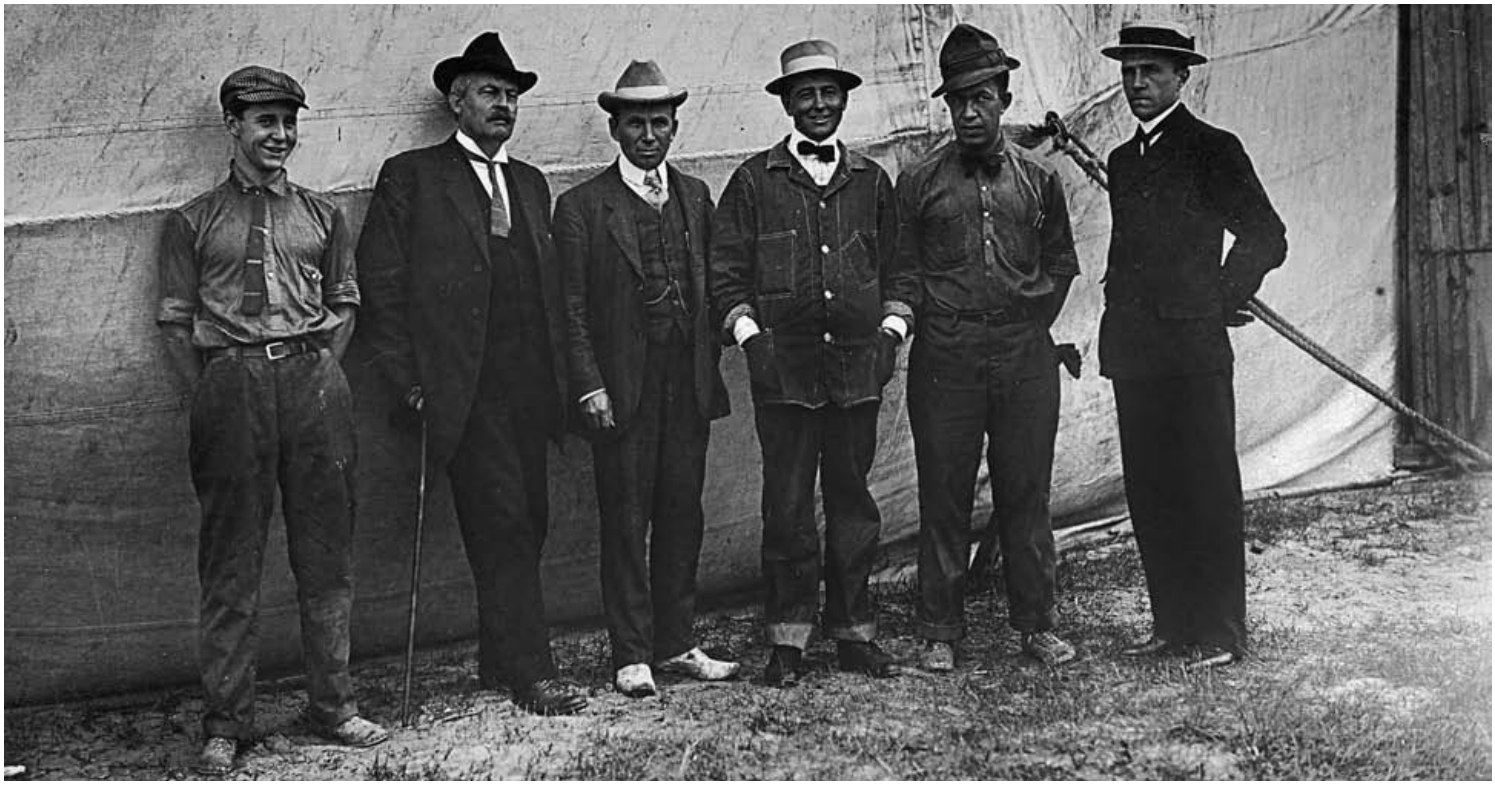
The radio operator was Australian. The Marconi radio which played a crucial role was British. The mailship *Trent* which rescued the *America* and crew was British. The cat was an American!! I cannot finish this brief article without referencing other parallel efforts which I have encountered on my way to a 100-year celebration of this *America* milestone in aviation history.

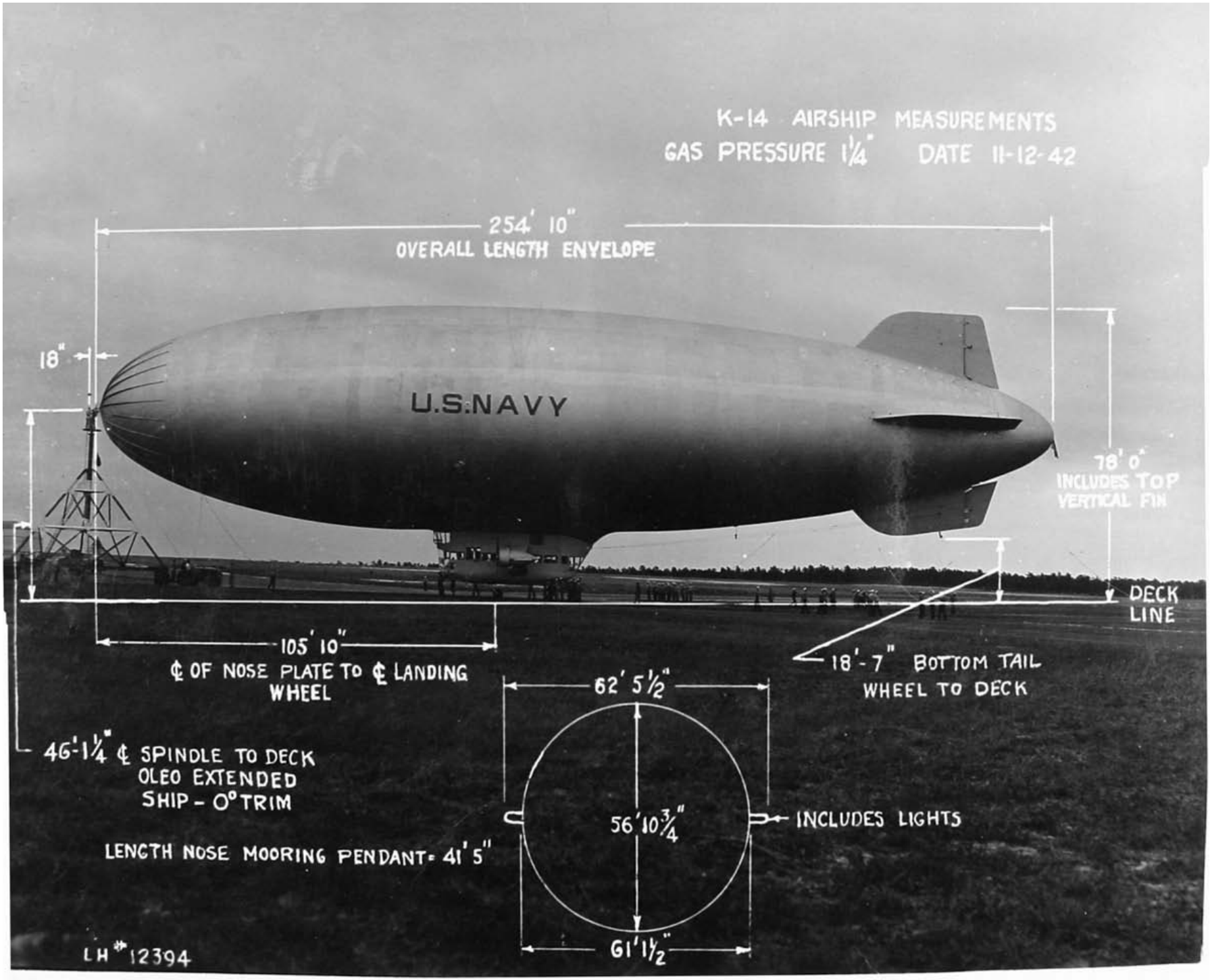
Please be aware of the great output of two amateur radio groups in New Jersey and Chelmsford, Essex, UK, respectively. On October 8, 2010, John Dilks of the New Jersey Antique Radio Club (NJARC) gave a superb 45- minute presentation on Radio and Airships on the campus of Princeton University. It was webcast and is available at http://www.ustream.tv/recorded/100801192. In addition John (K2TQN, oldradio@comcast.net) has summarized the Marconi radio story linked to the America in Vintage Radio (four monthly articles August to November 2010 at k2tqn@arrl.org).

On October 17 there was a worldwide amateur radio enthusiasts' celebration orchestrated by John Bowen and his colleagues of the Chelmsford Antique Radio Society (CARS) at the Marconi Hut at the Sandford Mill Museum. This included a series of articles available at http://kn.theiet.org/magazine/issues/1015/airship-wireless.cfm and an outstanding separate powerpoint presentation by John Bowen.

Separately, Tom Farner has recently published a series of outstanding articles on the America's Atlantic story in 200 PLUS (available from tpfcjf@comcast.net). On October 9/10 Jasper Copping's excellent article on the America appeared in Seven, the Sunday Telegraph's weekly magazine and subsequently on the Daily Telegraph's website. Ω

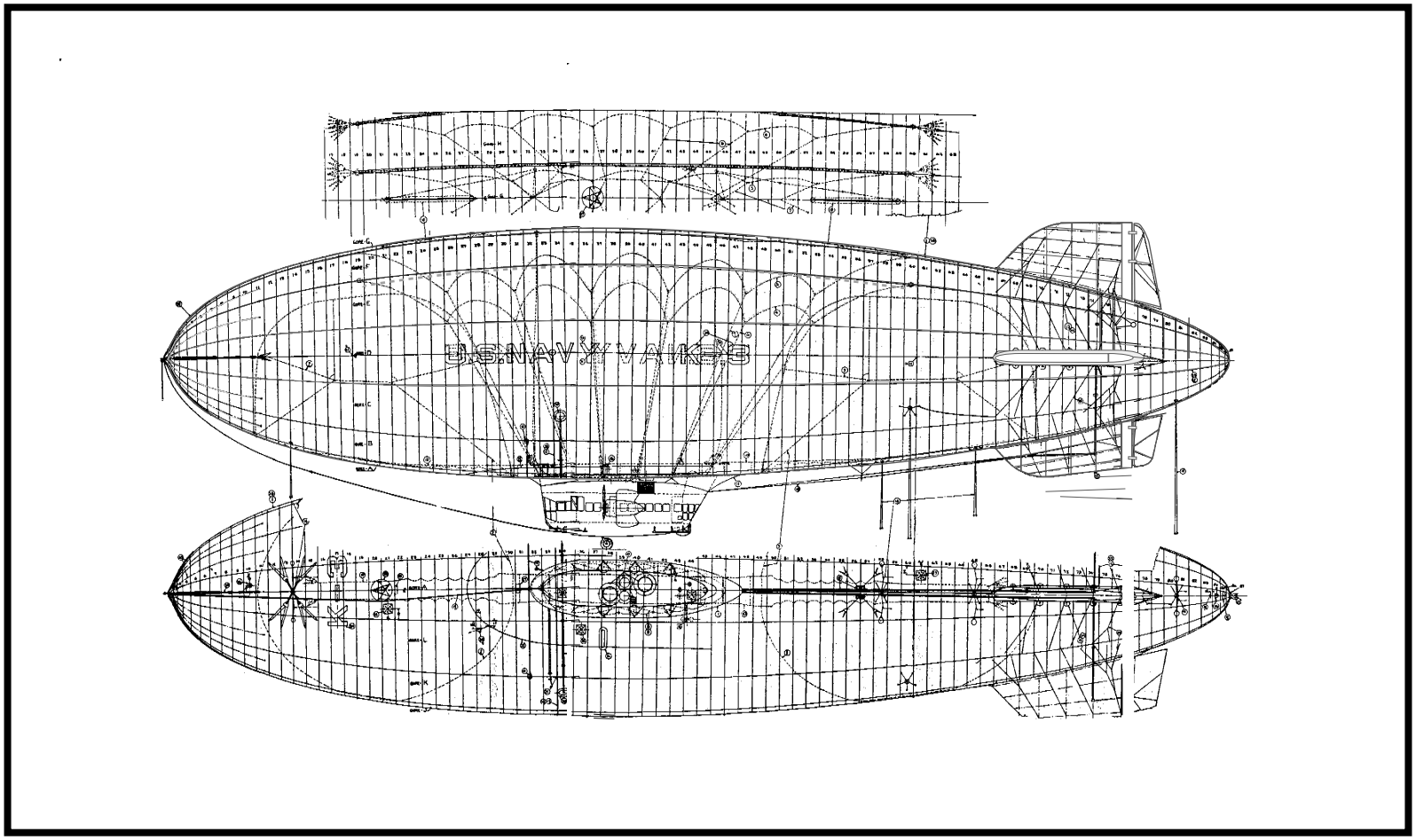
[Readers can compare this 1910 crew photo below with one of the US Navy's last crews on page 9.]

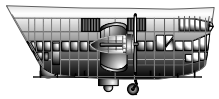



K-14 AIRSHIP MEASUREMENTS
GAS PRESSURE 1¼" DATE 11-12-42
254' 10"
OVERALL LENGTH ENVELOPE
18"
U.S.NAVY
78' 0"
INCLUDES TOP
VERTICAL FIN
DECK
LINE
105' 10"
℄ OF NOSE PLATE TO ℄ LANDING
WHEEL
18'-7" BOTTOM TAIL
WHEEL TO DECK
62' 5½"
46'-1¼" ℄ SPINDLE TO DECK
OLEO EXTENDED
SHIP - 0° TRIM
56' 10¾"
INCLUDES LIGHTS
LENGTH NOSE MOORING PENDANT = 41' 5"
61' 1½"
LH #12394

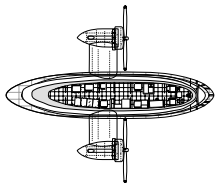
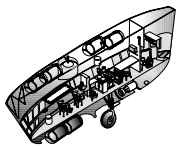
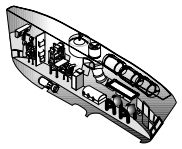
K 3

Drawing No. 001







Specifications

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

Performance

Max. speed: 67.5 knts
Range: @50knts; 1910 NM
Endurance: 48 hours
Crew: 9 to 10
Armament: None

Reconstructed Drawings
Original artist unknown
by. Bo Watwood
March 2002

Taking a blimp from the hangar

By Donald J. Donatt

ZP2 GLYNCO

Let me review the procedure to take a blimp out of the hangar. After the portable mast is attached at the nose, the blimp is moved forward. However, the tail section is controlled by hauling on the two long lines attached at the stern. Crewmen are directed, to pull one way or another, by the chief in charge (to keep the tail from the side of the hangar). When the blimp reaches the sill, the tractor pulling the mast accelerates to clear the sill quickly, in case a side wind outside would blow the blimp into the side of the hangar. At this time the handling crew releases the two aft lines and after the tractor has stopped someone (in the tradition, the first man on the line) disconnects the line, gathers it up, and returns it to the hangar.

Well, we discovered that as long as the person who recovers the line has to go out there, why not hang on to the line and play Tarzan. With the tractor accelerating, the swing on the line turns out to be very long.

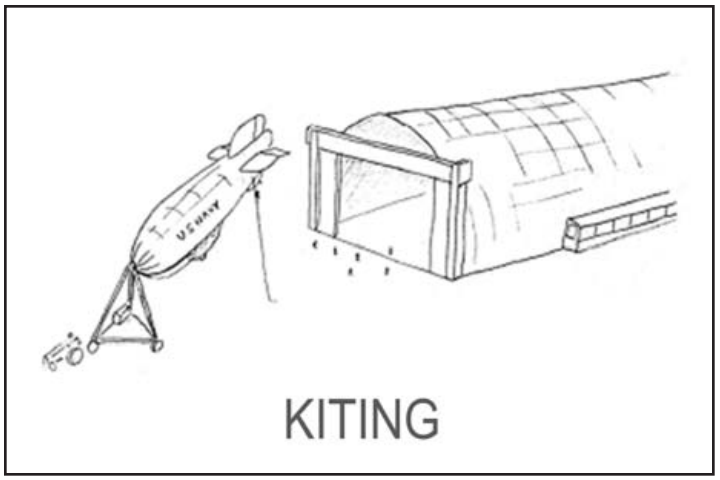
It was my turn to play Tarzan that day except there was one problem. The man in the cockpit was not paying attention. He was supposed to give the blimp up elevator as it cleared the hangar to keep the blimp from "kiting". (Kiting happens when the tail rises while on the portable mast). Well, he gave it down elevator instead, and it kited!

Now, everyone in LTA knows, that once your feet leave the ground you let go of the line—except when you're playing Tarzan. The next thing I remember was the chief hollering "get the hell down from there!" There I was, about 100 feet above ground and everyone looked like ants. Well, I fortunately did not panic and came down hand-over-hand while the idiot in the cockpit turned to up elevator.

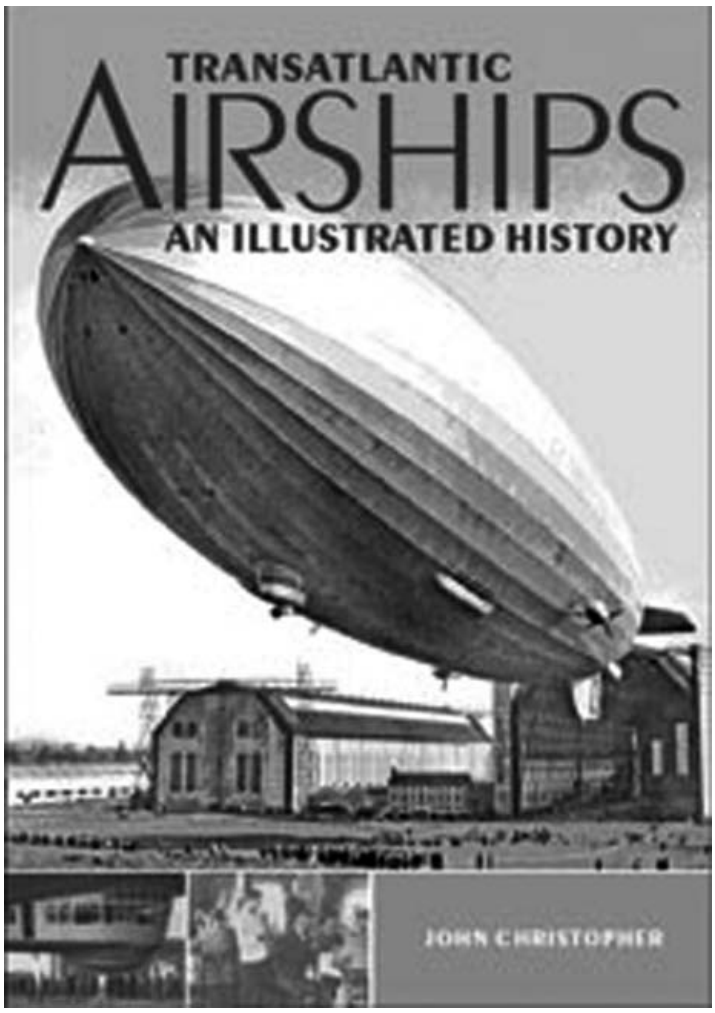
Don Donatt at Gitmo 1952 with K98

The next day in the bulletin there was an announcement: no more Tarzan play--I still feel queasy though, when I am in a high area. Ω

(Below and to the right are more photos that Don shared with us.)



MEDIA WATCH



TRANSATLANTIC AIRSHIPS
AN ILLUSTRATED HISTORY
By John Christopher
Reviewed by C.P. Hall

TRANSATLANTIC AIRSHIPS - An Illustrated History is precisely what the title declares, and a bit more. I would submit that transatlantic airships operated between 1919 (R34) and 1937 (*Hindenburg*). Christopher briefly mentions of 19th Century Balloonists before beginning with Graf von Zeppelin and the first three chapters are pre-war and wartime airship development. Chapter 4 begins with R34. Chapter 12 concludes with the destruction of both *Graf Zeppelins*. There follows a chapter about World War II, a chapter about post-war commercial proposals, a chapter about record-breaking blimp flights, and a final chapter about craft currently flying and craft at the proposal stage.

This is an attractive if diminutive volume. The text is divided into two columns per page; the illustrations are of various sizes, occasionally as large as a page. As an "illustrated history" it is hardly a surprise that the illustrations are the exceptional part of the book. Photos, drawings and posters are well-chosen to illustrate the subject matter and the reproductions are of high quality. For example the photos of LZ-130 *Graf Zeppelin* distinguish several differences with the *Hindenburg* with a few photos. The illustration of the R100's passenger compartment on page 102 reveals many details of a complex layout. In the near center, upper level cabin, is the woman in the doorway walking in on a man riffling through her overnight bag? Perhaps illustrating a hazard of airship travel? Eye-catching indeed!

The text of the book is also very readable. It is at its best when the author is writing about transatlantic airships and weaker at the margins when, either he is laying historical groundwork, or tidying up loose ends. The author strikes his balance - between the details of airships themselves and of their flights - and most readers will find it acceptable.

There are a certain number of errors, either typographical, counterfactual, or both. This reviewer is mellowing in his dotage as he finds them more amusing that irritating. They are mostly found before chapter 4. Examples include: the President of Goodyear was F.A. Seiberling, not "Frank Seiberberg." In the right-hand column of page 31, the only correct date is "1914." Yes, I did notice that the photo on page 101 is of R100 being disassembled, not "R101 during construction"; and yes, I caught the photo caption on page 108 which reads in part, "Sir Dennistoun Burney, designer of R100". It is Sir Dennis Burney and, though Burney probably contributed more to R100 than Barnes Wallis would ever admit; it was Wallis (not in the photo) who designed R100.

I enjoyed John Christopher's book. It is enjoyable on more than one level throughout and it is strongest when he covers the airships and events between 1919 and 1940. I intend to buy a copy as soon as I can find a seller with a price stated in dollars (US) as $37.95. Ω

The Florida Aviation Historical Society newsletter *Happy Landings* in issue 214 makes a rather astonishing claim. Under the heading "Airships Are Coming Back?" a researcher is asked what he's spotted at Area 51 lately. "There is experimentation going on now with a huge balloon-type device about the size of a football field and about ten feet thick." (We here at TNB will have to add that to the pile of reports of something big enough to blot out a portion of the night sky that has been spotted by other reporters.) FAHS #214 also reports, based on an old publication: "The original Model T Ford and other autos of the period were burning alcohol for fuel. That

created a lot of business for alcohol distilleries. But oil was discovered in Pennsylvania and John D. Rockefeller's Standard Oil Co. cornered the market for oil products, including gasoline. But the alcohol industry was a strong competitor. So Rockefeller financed the movement against alcohol, *i.e.* PROHIBITION to force the alcohol industry to its knees. He got the women organized to support his case for claiming alcohol was the curse of humanity. By the time prohibition was repealed, the alcohol industry was destroyed. That is why we drive gasoline fueled vehicles today… Brazil uses very little gasoline because they burn mostly alcohol." (Ed. notes, as this issue goes to press, with gasoline passing $3/gal., there are dire reports gasoline will reach $5/gal. in 2012. Perhaps the Myan calendar just indicates the world of transportation will come to an end!) Ω

AEROSPACE AMERICA in November ran the now-stock photo of the Lockheed-Martin HAA prototype but reports nothing new. An extensive USAF report on the coming twenty year's technology contains a well-worn paragraph: "The study also puts a premium on technologies for systems that lower fuel costs while improving performance. Prime examples of such systems are hybrid wing/body aircraft, high altitude long-endurance airships, and partially buoyant cargo airlifters." Ω

THE ECONOMIST Tech Quarterly reported on the Australian Skylifter effort in its 11 DEC 10 issue. An artist's conception of the saucer-shaped craft with its suspended payload was shown. (A model of this concept was displayed at the AA Symposium last October in Bedford, England. Ω

EAA's Sport Aviation featured a large photo-rich story on the 100th anniversary of Naval Aviation in its January 2011 issue. Our readers would not be surprised to learn what part of that history was conspicuous by its absence. Ω

Long Flight Home

By Capt Dean Nelson, USNR (Ret.)

On December 11, 1956, while attached to Airship Squardon Two (ZP-2) at NAS Glynco, Georgia, I was part of a crew that went to Lakehurst to fly a blimp back to Glynco.

Our departure from Lakehurst was scheduled for mid-afternoon in order to avoid a predicted cold front. We took off on schedule with clear skies, but things rapidly changed as we encountered the cold front much sooner than aerologists had forecast. Flying at 700 feet, following the coastline in a southerly direction, we ran into clouds that forced us lower in order to see the ground. At 300 feet with rain, we filed an instrument flight plan. We were assigned an altitude of 3,000 feet.

The weather continued to deteriorate with rain changing to snow. Fortunately, it didn't snow very much as that would add considerable weight to the blimp causing problems with staying lighter than air. The wind also had shifted from a favorable tail wind to a head wind that kept increasing in velocity. Soon we were heading into a 60 mph wind. Normal cruising speed for a blimp is 62 knots or about 75 mph so our ground speed was about 15 mph as we approached the controlled air space over NAS Chincoteague, Virginia. I contacted the control tower at 2145. The conversation went something like this:

"Chincoteague Naval Air Station, this is Navy Z12203, currently 3,000 feet, bearing 030, 15 miles from your station. Request clearance through your control zone. Estimated time over station at 2245."

"Navy Z12203, this is Chincoteague, permission granted to pass through our control zone. Understand time over station to be 2245."

After a pause of maybe 30 seconds: "Navy Z12203, This is Chincoteague, request time over station again."

I confirmed time over station as 2245. Again another short pause. "Navy Z12203, this is Chincoteague, request current location."

After confirming our location: Navy Z12203, this is Chincoteague, request your airspeed?"

Reporting our airspeed as 62 knots with ground speed 15 mph resulted in another long pause. Then, in a very quizzical voice: "Navy Z12203, this is Chnicoteague, request type aircraft?"

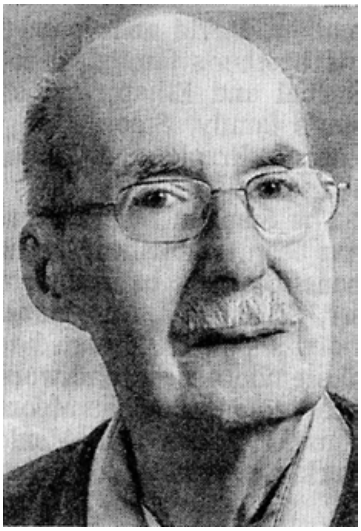
This created a chaotic mess for Chincoteague as they were holding outgoing flights on the ground and re-routing incoming flights to alternate destinations while we spent the next two hours within their controlled airspace. I'm certain many pilots that night were not happy with blimps. We landed the next morning at NAS Weeksville, North Carolina, and finally arrived back at Glynco on December 13th. Ω

Capt. Nelson is a member of the Olympic Squadron. Thanks go to Ted Wright for encouraging Capt. Nelson to send in this story.

BLACK BLIMP

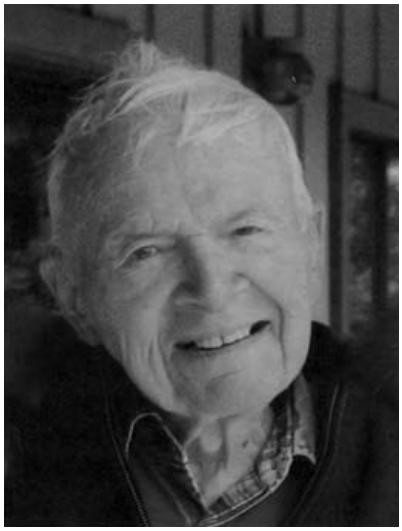
Robert Bourne, 88, passed 13 OCT 10. He grew up in Fort Wayne, Ind., and Tampa before enlisting in the Navy. On the night of July 18, 1943, Navy blimp K-74 on a routine patrol picked up German submarine U-134. The ensuing battle lasted only five minutes, but Robert Bourne issued several mayday warnings before all 10 crew members swam out of the flooded gondola. Mr. Bourne told his family about bobbing for 20 hours in the water with crewmates. Around 1950 he married Earline Jackson. The couple settled into a comfortable routine, taking their two sons on vacations to Crystal River or the Pinellas County beaches. Ω

Wendell E. Klinker, 84, passed on 4 NOV 10. Enlisting in the Navy at age 17, Klinker rose to AO1 before being accepted in pilot training, and was commissioned in 1961. He retired as a LCDR in 1966 and after operating an air taxi he established a radio service business. Klinker is survived by four sons, grandchildren and great-grandchildren. Ω



August F. Dobert passed away on 2 DEC 10. Ω

Robert B. Suhr, 91, passed 10 OCT 10. A 1941 graduate of Baldwin Wallace College, Bob entered the US Navy and served in LTA on the West Coast during WWII. Bob started an insurance business and was an activist for government accountability. He is survived by his wife of 64 years, Juliette, two sons, a daughter and several grandchildren. Ω



Ben DeBolt (left), 83, passed NOV 10. Born in 1927, DeBolt grew up during the Depression in Santa Maria and joined the Navy in 1945. He joined the Navy just as World War II was ending in 1945. He served for three years as an electrician on the U.S.S. *Diphda*, a Navy reservist for 35 years retiring as a CWO. He was the founding President of the Moffett Field Historical Society. Ben is survived by two sons, grandsons and a great-grandson. Ω

Naval Airship Aircrew

(by Warren Winchester)

I know there is a place, way up in the sky,
Where airship crewmen go when they die.
A place where a guy can buy a cold beer
For a friend or comrade whose memory is dear.

A place where no blackshoe or pork chop can tread,
Nor a Pentagon Type would ere be caught dead!
Just a quaint little Club; kind of dark and full of smoke,
Where they like to sing loud, and love a good joke.

Where rank is forgotten, but friendship is not.
The kind of place where a lady can go
And feel safe and protected by the men she would know.
This is the place where old poopy baggers go,
When their helium gets dirty, and their airspeed too low.

Where the whiskey is old and the women are young,
And songs about living, flying and then dying, are sung.
Where you'll see the shipmates you served with before,
And they call out your name as you come thru the door.

They will buy you a drink if your thirst be bad,
And relate to all gathered, "He was quite a good lad!
And then through the mist you'd spot and old guy
You'd not seen for years but he'd taught you your job, and to fly.

He'd nod his old head and grin ear to ear,
And say welcome shipmate, I'm pleased that you are here!

For this is the place where old Poopy Baggers come
When the battles are over and the Wars have been won.
They've come at the end to be safe and afar,
From government clerk and the management czar!

From politicians and lawyers, the feds and the noise.
Where all hours are happy for these good ole' boys,
They can relax with a cool one, and tell a few stories.
Of being young and daring, and brag of their glories.

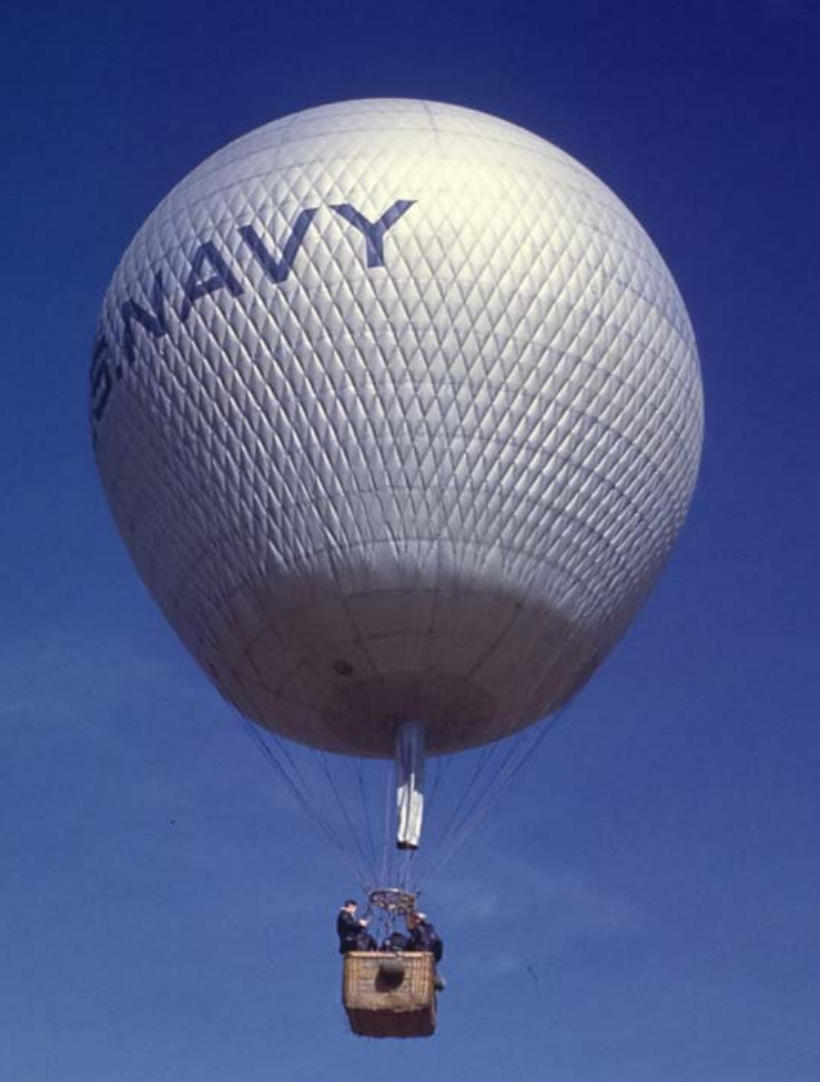
Yes you are here for a well deserved rest!
This is Heaven my son; you've passed your last test! Ω

LIGHTER SIDE OF LTA

Helium walks into a bar.
The bartender says: "I'm terribly sorry, we don't serve noble gases."
Helium doesn't react. ☺

...A neutron walks into a bar. "I'd like a beer" he says. The bartender promptly serves up a beer. "How much will that be?" asks the neutron. "For you?" replies the bartender, "no charge." ☺

In operations, what is the primary difference between Lighter-Than-Air craft and Rotary-Wing (HTA) aircraft? ☺



The simple, basic ZTF used in primary airship pilot training is contrasted with high-tech HB-QFK, the winning Swiss balloon ready for launch from Bristol, England, at the 2011 Gordon Bennett. (photo credit: Pascal Vitpraechtiger) (Below) Three H2 (front) and three HE (back) balloons ready to launch in that race as well, though one would not land safely. (Kim Vesely) On the back cover: Mark Lutz visited Tustin, (old Santa Ana) and discovered a HUGE Mistake! See “Pigeon Cote” on page 6.

Member Mark Lutz discovered a BIG Typo! See “Pigeon Cote.”