THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 100 Winter 2013

OUR 100TH ISSUE!

Aeroscraft – Triumph and Tragedy?

Snow drifts got you down? Just close your eyes and remember going down to Gitmo for a two-week exercise.
These recently surfaced photos (made from slides) will help you remember what it looked like in 1952.
When you are dissatisfied and would like to go back to your youth, think of Algebra.

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On the Cover: Sunlight pours through a hole in the roof of a hangar in Tustin, illuminating an airship being built for the U.S. military. A portion of the hangar's roof collapsed, damaging the $35 million project inside. (Mark Boster / Los Angeles Times / October 7, 2013.)

THE NOON BALLOON
Newsletter of the NAA
Volunteer Staff

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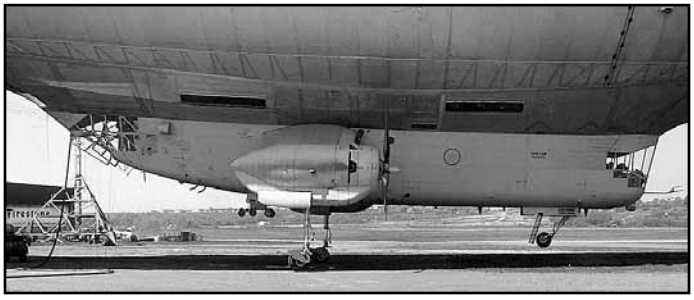

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EDITORIAL

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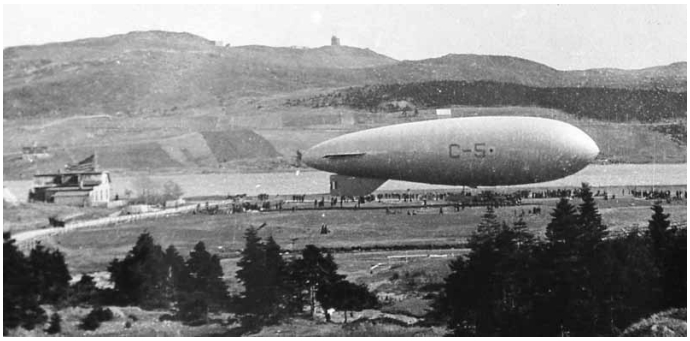
What would our late founder CAPT M. H. Eppes think, I wonder, at this 100th issue of the magazine he created? I think he'd be proud, and our organization is to be congratulated for overcoming our challenges and surviving to this milestone. A look back starts on page 20. Again I say, if there is something you like in any given issue, let the author know; if not, let me know. Silence breeds contempt, discouraging input.

My wife Deborah and myself dared to take a vacation, opting for a cruise of the North Atlantic at the season's close. Departing Southhampton like the HMS *Titanic* had in 1912, we landed near one of my "bucket list" airship sites, St. Johns. While the literature explains the C-5 was set to take off from Newfoundland in 1919, a visit there puts a little more detail into a caption for this historic photo.

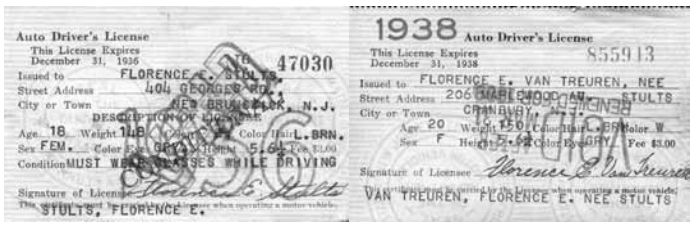


One would assume the photo shows the narrow channel of water leading into St. John's Harbor, where we would assume the cruiser *Chicago* was positioned in support. Instead, our visit reveals C-5 was landed and held near the tiny fishing village of Quidi Vidi. The body of water visible is Quidi Vidi Lake, the area being just on the north side of Signal Hill, which sculpts St. John's harbor. Cabot Tower, visible on top, was constructed to celebrate both the 400th anniversary of John Cabot's discovery of Newfoundland and Queen Victoria's 60th jubilee, the Tower was also the site where Marconi received the first wireless signals from across the Atlantic in 1902. As we visited the area, I could not help but wonder how much of the story we are really getting. The cruiser *Chicago* was listed as in support of the C-5 and NC boat effort, but clearly it could not have been floating in landlocked freshwater Quidi Vidi Lake. Some sort of transport would have had to been utilized to get the crew from where the airship was being held over to the cruiser in the harbor.

The record shows when the airship could not be held, the ripcord was pulled, but broke before opening the envelope. Unless *Chicago* was one of the ships equipped with a hydrogen generator to launch observation balloons, it might have taken quite a while to ship one up to Newfoundland - if such expense would have been supported. Either way the much more well-supported NC flying boat effort would have launched anyway. One can't help but suspect the Navy's primary effort was to get at least one of the NC boats across, while the C-5 and the LTA crew sort of crashed the party.

This issue also begins an incoming regular feature by new member **Harold Pelta**, "The Practical Airship." Harold also thinks we should organize an airship conference in the south, perhaps Florida, a good idea in search of a "Dr. Barry Prentice of the south," as it were. Are you that person? Let's make it happen!

Our unsustainable losses continued unabated this quarter, with the passing of too many enthusiasts to comprehend. Closest to me was my Aunt Florence, who passed at the age of 96. Growing up in New Jersey, she saw many of the rigid airships overhead; driving age in '36, she attended every visit of the LZ-129. So why did she not see the famous fire?



Her personal effects verify the story she told: her 1936 license shows her maiden name. Dating my Uncle Gerard, they would drive from New Brunswick down to Lakehurst for the *Hindenburg* arrivals. Under a strict family curfew, she could not be out in a car after dark; Uncle had to take her home when the first 1937 landing was delayed. Hearing of the accident, Uncle tried to return, but the roads were jammed. The two eloped in 1938 and settled into farming near Cranbury for the next 40 years; flying blimps, CAPT Eppes and many of our members undoubtedly flew over their farm. Witness to history, now gone.

– Richard G. Van Treuren

View From The Top: PRESIDENT'S MESSAGE

On this the 100th edition of The Noon Balloon my message is to report to our membership on the state of our business. On October 11, 2013, we held an executive council meeting at the home of Richard and Debbie Van Treuren in Edgewater, FL. The members in attendance were Fred Morin, Anthony Atwood, Peter Brouwer, David Smith, and Richard Van Treuren. (Betty Brouwer took the Secretary's notes). The meeting was called to order at 9:20 AM and immediately adjourned for lack of quorum. During an informal discussion period, I brought everyone up-to-date on the plans for the 14 -16 May, 2014, Reunion/ Conference to be held in Newport, RI. I discussed transportation arrangements from Providence T.F. Green Airport to the hotel in Newport and also to and from the Naval War College. Private cars will not be allowed as the NWC is on an active duty Navy base and parking at the museum is very limited. We will have unlimited use of a Ready Room and David Smith will provide refreshments for the ready room, sponsored by Airship International Press. Also, a projector will be provided by one of the council members for presentation of a continuing DVD show of our (3) new DVDs which will be available for sale through Small Stores as well as our NAA caps and men's and women's polo shirts. An excursion to the New England Air Museum in Windsor Locks, Connecticut, was discussed. Transportation costs will be investigated and a poll of potential members wishing to make the trip will be checked. The hotel and airport transportation will be the member's responsibility. Monies for the excursion and banquet will be collected by the Treasurer. Notification will be given thru The Noon Balloon and the mail.

I also discussed the need for a new History Committee chair as Al Robbins has resigned for ongoing health and family issues. Richard and I are already pursuing candidates. There were no other committee reports available. I also read an email from Mort Eckhouse concerning efforts by the Emil Buehler Library at Pensacola to update and catalog LTA materials and photos. Anthony brought everyone up-to-date on the continuing progress at the Military Museum & Memorial of South Florida. He also requested that the NAA send a letter to the Governor of Florida endorsing the effort to create the Museum and encouraging the Governor to support legislative bills providing funding for the Museum. Anthony will provide a couple draft letters of how the letter should be worded and addressed for Exec. Council review. David brought the group up to speed on the project to replace the signage at the USS *Shenandoah* crash sites in and around Ava, Ohio. This is a joint effort with the Lighter Than Air Society. We also discussed a possible event commemorating the 90th anniversary of the crash to be tentatively held in Ava in early September, 2015. The event will be organized locally and the NAA will make every effort to participate. At 11:45 we made a telephone call to Ross Wood to establish a quorum to conduct official business. Motions were made and seconded to accept the Treasurer's report and the minutes from the September, 2012 Executive Council meeting. Peter Brouwer presented the current month's financial report. We have 529 US members and 11 non-US members. Also, membership renewal notices will be sent out mid-November. Our financial position is still good, but we are close to breaking even on revenues and expenses. Our membership roll is not increasing fast enough versus losses due to deaths and non-renewals. There was also a brief discussion on ways to encourage more financial donations. No decision or plan of action was developed. To assist in increasing revenue, Richard volunteered to assemble three new DVD's from LTA-oriented home movies and David volunteered to edit them for duplication and sale through Small Stores. The first two should be available for the next Small Stores insert mailing. The meeting was adjourned at 12 Noon.

After lunch the informal discussion continued. David handed out draft copies of the new membership brochure that he and I created. Copies are available for anyone wishing to distribute them in locations for potential members. We will have a supply at the Reunion/Conference. David and I discussed a trip we took to the University of Akron's archival services section. They are more than willing to provide a climate controlled repository for any Navy LTA photos and information we have. They currently store all Goodyear aviation archives and photos from 1912 through 1985. The collections are expertly cataloged for easy access.

Finally, I noted that we need to update the NAA By-laws. I will be making recommendations on certain areas to make nominating and voting easier for the members and Treasurer as well as saving considerable printing and mailing costs. The meeting concluded at 2:30 PM.

Overall we are in fine shape and while we have lost many veteran members and feel their loss our membership continues to hold steady. I believe we will have a wonderful and exciting future and continue to do our best to support and promote not only Navy LTA history, but also future LTA advances around the world.

– Fred Morin, President

PROPOSED NAA BY-LAWS CHANGES

Every few years we need to evaluate the NAA By-Laws and bring them up-to-date. We have been reviewing the current edition for a couple of years now and believe that some changes are necessary to make the nominating process more effective, eliminate the NAMF Liaison Officer as redundant, add the Noon Balloon publisher as a permanent position to our Executive Council, and streamline the current voting by-laws that should make them more efficient and also result in significant postage and handling savings. With the current website we are able to distribute messages and receive notices quickly and efficiently. The Noon Balloon is still an excellent venue for announcing and distributing proposed changes to our non-internet using members.

Another change we are asking to be considered, and one that will surely generate a lot of comments, is to modify one of our basic purposes regarding the sending of all Navy LTA materials to the National Naval Aviation Museum (NNAM) in Pensacola. What is being proposed is to be able to offer and ship material that the NAA receives to appropriate other LTA museums. The NNAM will still receive everything the NAA receives, but it makes more sense to share those photographs, artifacts and personal papers our members submit with the institution that can make the most effective use of them, have the most relevance and put them on display for people to see and study. The NAA appreciates everything the NNAM does for us, but their space is limited and most LTA submissions are stored, not on public display and not easily accessible. As an example, personal photos and written memories of a veteran's service at Moffett Field belong on display at Moffett where they have significance. We will be establishing some guidelines as to what the NAA will share and what the receiving museum will need to do to be eligible for this sharing program.

The following is a summary of what changes are being proposed. Please address your comments to the NAA President or Vice President. A copy of the current By-Laws is published in the NAA Members Directory and is available on the NAA website, www.naval-airships.org. We would like to have a formal vote on the issues during the business meeting at the Reunion/Conference in Newport in May, 2014.

ARTICLE II, Purposes

Section 1. The purposes of this organization shall be:

-To gather, perpetuate and disseminate the lighter-than-air expertise and knowledge that has been accumulated during the U.S. Navy's long involvement with the development and employment of LTA principles in military aviation.

-To support and assist the Naval Aviation Museum Foundation, Inc. (NAMF), National Naval Aviation Museum (NNAM) and other certified and/or approved museums or foundations in their purpose of informing and educating the public on the important role of U.S. Naval Aviation, with specific reference to the LTA segment.

-To support and assist U.S. Government agencies in current or future LTA development and applications. (As written now: B. To support and assist the Naval Aviation Museum Foundation, Inc. (NAMF) and National Naval Aviation Museum (NNAM) in their joint purpose of informing and educating the public on the important role of U.S. Naval Aviation, with specific reference to the LTA segment.)

ARTICLE VI, Meetings

Section 1. Remove last sentence beginning, "Notice of such…" Replace with, **Notice of such a meeting and its agenda shall be printed in the most current issue of The Noon Balloon, published prior to the proposed meeting, but not less than 30 days prior to the proposed meeting.**

Section 2. Replace sentence beginning with, "Notice of the meeting…" Replace with, **Notice of such a meeting and its agenda shall be printed in the most current issue of The Noon Balloon, published prior to the proposed meeting, but not less than 30 days prior to the proposed meeting.**

ARTICLE IX, Committees

Section 3. No later than one year following the date of accepting the Presidency, the President shall appoint a Nominating **(C)**ommittee (hereafter NC) of five members **REMOVE, not of Council,** to nominate candidates for the elective offices.

2. Further in Section 3, The nominations shall be published in the NAA newsletter. **Remove everything following, beginning with: "with an appropriate ballot and an addressed return envelope, to provide each eligible… or at a special Council meeting."**

ARTICLE VIII, Officers

Section 1. The elective officers shall be President, a Vice President and a Secretary/Treasurer. Each of the **three** non-elective officers (namely (**REMOVE the NAMF Liaison Officer;**) the NNAM Liaison Officer; the Editor of the NAA publication and **the Publisher of the NAA publication.)** agreeable to continued tenure may be reaffirmed or replaced at the pleasure of the President. Each of the **six** foregoing officers shall be a voting member of NAA.

Section 2. When a NAA business meeting involves the installation of a new President, he shall within 30 days

of assuming office state his acceptance or rejection of the continued tenure of each of the **four** non-elective officers.
Section 8. Except for the President, **the NNAM Liaison Officer** shall be the sole representative of the NAA at the Naval Aviation Museum Foundation. Any representation in the name of NAA by a NAA member involving NAMF or **NNAM** shall proceed only via one of these two officers.
Section 9. Except for the President and (**REMOVE the NAMF Liaison Officer)** the NNAM **Curator** Liaison Officer shall be the sole representative of NAA at the National Naval Aviation Museum. Any representation in the name of NAA by a NAA member involving NNAM shall proceed only via one of these **two** officers.

ARTICLE X, Amendments
Section 1. The Council shall receive, review and report within 60 days of any proposed alteration, amendment or repeal of a bylaw, or bylaws, submitted to it by the Secretary/Treasurer. Any eligible member may make a proposal to the Secretary/Treasurer for distribution to the **(C)**ouncil and shall be notified of action taken by the Council. Any proposal that is accepted by the Council shall be submitted to a vote by the membership by publication in the NAA newsletter. **Ballots are to be mailed to the Secretary/Treasurer no later than 30 days following the last day of the month of receipt of the pertinent newsletter. A simple majority vote received by the closing date shall prevail, with results to be reported in the NAA newsletter.**

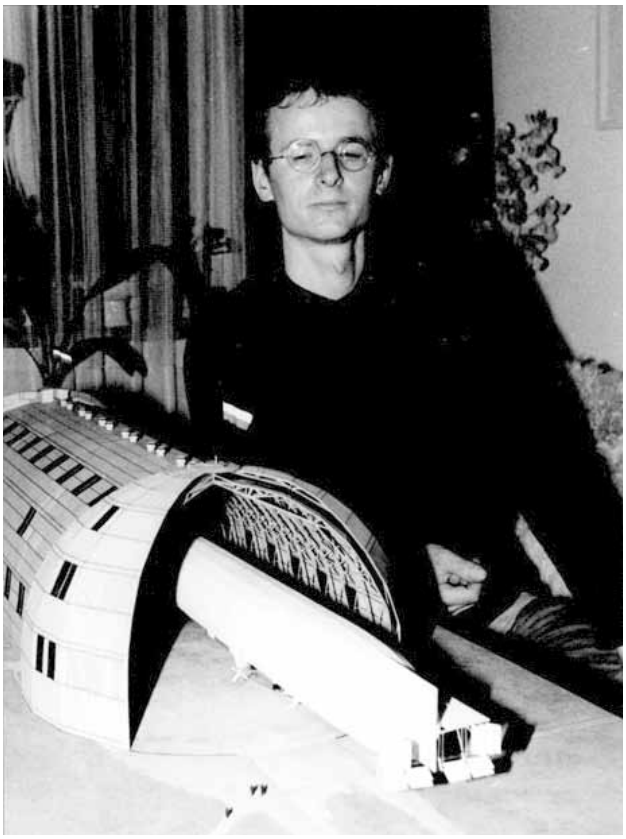
TREASURER'S STRONGBOX

We would like to thank all of you who were prompt in paying your renewal membership dues. Give us a call if you have any questions regarding your status. Thanks to those who use Paypal, it's safe and easy.

WELCOME ABOARD NEW MEMBERS!
Luke R. Mann, Leominster, MA
August 25, 2013
Brett M. Mann, Leominster, MA
August 25, 2013
Quentin Fleming, Pacific Palisades, CA
September 6, 2013
Harold N. Pelta, Ellenton, FL
September 19, 2013
James Flex, Dickinson, TX
September 20, 2013
Patricia Alaynick, Crystal Lake, FL
October 23, 2013

– Peter F. Brouwer, Treasurer

PIGEON COTE



Eric Brothers wrote, "Met with Roland Fuhrmann, (right) in Akron from Dresden, Germany, on the trail of the Airdock's inspiration. He is a PhD student working on a dissertation on the building history of the Dresden-Kaditz hangar, clearly an inspiration for the aerodynamic shape of the Airdock and Moffett Field. Herr Fuhrmann is a bit younger than me, I think, but we have seen his handiwork: he built the Dresden hangar model we saw and admired in the Dresden Transport Museum in 2000 [see attachment]. He has found much unknown info about the Dresden hangar's origins, its designer, and construction not known anywhere else. I saw bits of a tantalizing PowerPoint with never-seen images; he has a book offer, too." **Ω**

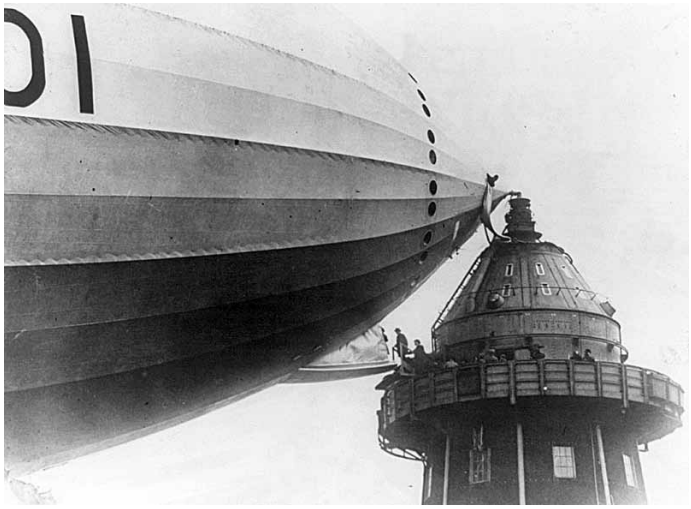
NAA past president **Herman Spahr** wrote, "the photo on page 4 was reminiscent of one taken at Weeksville around the spring of 1952. I was returning from my first flight to McKindley AFB at Bermuda. We were met by Cmdr. C. A. Bolam upon landing who was present to see what we have brought back. I had purchased a deluxe flyer baby stroller for my nine-month-old son and went to the after station to supervise its unloading. Capt. Bolam said, 'Herm -- I've seen a lot of things come out of the rear of an airship -- but never a baby stroller.' We were in a ZP2K -- CAG 303 -- my first long flight as a PAC." **Ω**

Wick Elderkin e-mailed, "It is with great sadness that I just received word from Florance Maggot of Greenville, Ohio of the sudden death last night of Bryan Rayner of Ava, Ohio. Bryan grew up with the ZR-1 in his veins and was well educated by his grandfather "Boots" Rayner who was one of the first responders to the USS *Shenandoah* crash site. Bryan kept his family tradition alive and deeply committed to the ZR-1 along with acquiring and maintaining the crash sites with memorials. A man of great energetic zeal and service to his community in addition to running his towing/garage business… The funeral for Bryan was well attended from the reports I got from the funeral home director who happens to be Theresa Rayner's cousin. Over 250 people attended! 25 tow trucks made procession also fire/police were in the procession as well… As tribute and memorial to Bryan I made for his family a special shroud of sorts consisting of a beautiful bolt of fabric red, white & blue about 4' long 35" wide upon which I attached a 30" x 5" new computer digitized enhanced photo of USS *Shenandoah* dated 1923 coming out of Hangar One taken by Rell Clements (glued & sewed into place on the white portion of the shroud). Flanking it I placed one golden cross on each side of the photo. In the blue section I was able to find cloth stitch letters in silver color along with the same in 5 pointed stars." [See "Black Blimp"] **Ω**

Eric Brothers also reported, **"**I know of at least three LTAS members attended calling hours for Bryan Rayner, all at different times. I was there at the end of Tuesday night's hours, and the lines of people were still out the door of the funeral home up until 10 or 15 minutes before closing. It was like that at the afternoon calling hours as well, I have been told, and the same on Monday. According to a friend of Bryan's mother, at least 800 people had paid their respects in the two days. Bryan's mother was stoic, by my estimation, and coping as well as could be expected. I met with Bryan's widow, Theresa Rayner, and reaffirmed the commitment of the NAA and LTAS to complete the ZR-1 wreck site sign project. She was gracious, but obviously had a lot on her mind to consider all of the details. She would still like to plan on a 90th ZR-1 crash observance in September 2015, but she will clearly need a lot of help. CDR Lanny Hunt (Zach's grandson) and his daughter Judy were present at the funeral home Tuesday night when I was there and were staying for the funeral Wednesday morning. I met with them briefly. They, along with Florence Magoto (age 94) from Lansdowne's hometown of Greenville, Ohio, sent a large floral wreath with a purple sash emblazoned in gold letters with the words USS *Shenandoah*, which was placed right at the entrance to the lobby. There were many floral tributes. I had seen both Florence and Judy on Labor Day Sunday at the Rayner's informal get-together of about a dozen folks marking the 90th anniversary of ZR-1's launch. (I had deployed the display case posters David Smith had shipped the week before so they were in place at the memorial and wreck sites 1 & 3 when the Rayners took friends on a tour of the wreck sites later that afternoon.) Bryan was his usual self then, as far as I could tell. At the calling hours, Theresa said he'd been tired that weekend, but would not see a doctor. I did not learn the cause of death, but presume it was a heart attack or stroke or similar sudden event. He apparently collapsed at home Thursday night; and despite the heroic efforts of the EMS crew which arrived quickly and worked on him all the way to the hospital, Bryan was gone.

Bryan's life was well documented in almost 200 images on display in the funeral home's lobby. Pictures of him in childhood, young adulthood, courtship, marriage and family life featured Bryan with his parents, wife, children, grandchild and friends. A large color photo of Bryan waving from the cab of his latest red "Rayners' Garage" wrecker adorned the casket. As with all of his tow trucks, an outline of the ZR-1 was painted on the side, along with the business phone number. I think the large number of people who paid their respects shows how much Bryan touched so many lives in a positive way. A quiet man, his many good deeds spoke volumes. We should all aspire to a lead a life filled with so much service to others." **Ω**

Ed. wrote DIRIGIBLE Editor **Dr. Giles Camplin**, "Attached is an R-101 photo that recently surfaced on the internet. What is going on with those limp-looking, collapsed-looking, hose-or-duct-looking objects atop the mast being fed into the ship? They wouldn't be for liquid, now would they?"



Giles responded, **"**Regarding the hoses running from the Cardington Tower into the nose holes of R101 - I cannot think what else they can be other than gas filler pipes. There are smaller tubes in evidence - presumably for oil and water. I am attaching a drawing from To Ride the Storm that shows the area in question and there does not look to be an easy way for the large hoses you are interested in to get connected to the gas cells. Not even sure where the filler holes were on the R101 gas bags but the gas main in the shed is under the centre of the floor and if you look under the floor of the winch compartment shown in the drawing there appears to be a biggish tube running along the underside of the hull. I wonder if this was a way in for the gas but then wonder why the hose you are talking of was not put in through a lower ventilation hole? Maybe the underfloor sketch from TRTS was the designed idea for solving the problem but the crew found an easier way to do it in reality later on a things progressed. It would not be the first time that TRTS used out of date info!"

CP Hall responded, "Judging from the structure of R101's nose (no reefing girders missing) and the multiple, well-dressed passengers loading, I would strongly suspect that this is the 1929 visit of 100 MPs. One presumes that the inflation hose was left in place merely as a 'talking point' for the edification of the visitors. If they were inflating the ship, the electricity would be cut off which would mean no lights and no cooking in the kitchen for the visitors. Since it was a dark day with miserable weather (they started an engine at the mast to provide steam to the heating system) they did not turn off the electricity. I occasionally wonder if the ship was receiving electricity from the mast or from wind-driven generators as the wind speed was 25 knots?" **Ω**

Former NAA Pres. **Ross Wood** e-mailed, "Here's a photo, which I referred to… The men in the photo, from your right to left are Bob Kiefer, Jack Hammond, Mickey Miefert, Warren Winchester, Ron Anderson, and myself. All are NAA members. All except Jack Hammond were ZW-1 pilots. Jack was a pilot with ZP-3. Bob Kiefer passed away a few days ago. [See "Black Blimp," pg. 35] **Ω**

William O'Hea e-mailed **Al Robbins** about the KLINKER flights, "Thanks for the info. It was a great experience. I note that 2 pilots from ZP-3 Lakehurst were omitted. They are Lt. Bill Riordan and Lt. Paul Platt who is experiencing some major health problems at this time. I do not know where Riordan is." **Ω**

Nigel Hills e-mailed from the UK, " I wonder if you could help me in identifying a piece of equipment that I believe comes from a US Military Airship or Aircraft (see photos attached). I could of course be wrong (again)."

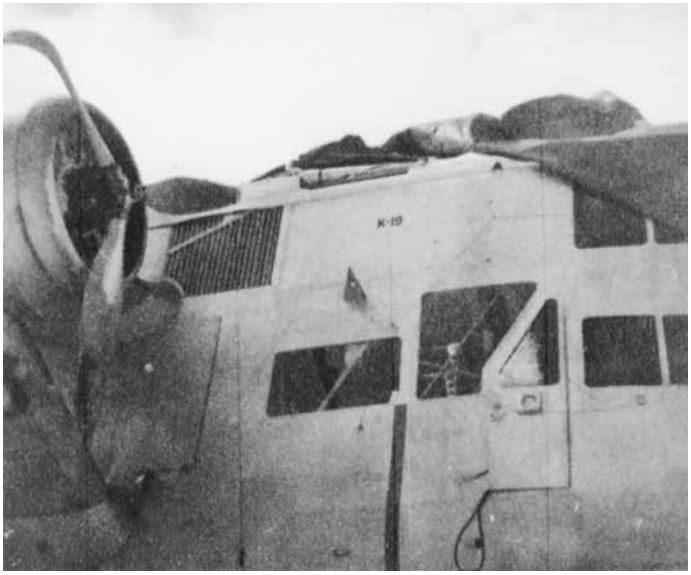
Ed. responded, "Never having actually seen one, this will be my best guess or just an exercise in how the well meaning can be mislead by appearances. If the claim was this item was from a US airship or aircraft, I could believe its label supports the idea it is a drift meter for use on US airships, dating from the WWII era. In my attached photo I have encircled the location on the port side of the K-ship car.

After the US entered WWII mounting brackets were added to the K-ship exterior to support a drift meter. I believe the meter itself was GFE (gov't furnished equipment) so the K-ship left the factory with the mount only; the instrument was fitted by the individual squadrons. From a photo booklet entitled "Operational Flight" made by the relocated ZP-24 toward war's end, the other attached photo shows the drift meter in use. Assuming that scissors-like fitting collapsed in the photo rotates upward, it seems to fit the photo description, don't you think?"

Former NAA Pres. **John Fahey** also responded, "There is no question in my mind that Nigel is right. The device pictured was from airships and something that we could have used if available to us in WWII. Sonobuoys, Loran, contact bombs, homing torpedoes, and other very useful items came in late, during or at the end of the war… Using it, only the drift angle from the heading of the airship could be determined. A wind star on three different headings provided the wind speed. Everything (ground speed) was determined with paper and pencil at the navigator's table. The ground tracking devise shown in the photos allows one to place the airspeed, wind, drift, etc, and come up with the ground speed. I never saw one provided to us during my time in WW II. It would have been nice to have one. It would have been used on the navigator's table… I never flew any of the larger Navy airships, except for one flight in a Nan ship and a couple in an Mike. Since I am sure it wasn't available in the K-ship [in our squadrons], possibly it might have been used later. I think that you both can find the answer eventually. With great admiration for your many contributions to airship collections and history," **Ω**

Jack Hartley sent along a number of photos of the wreck of the K-19 at (we are guessing) South Weymouth (lots of snow on steel hangar). No date is indicated, but while the official record does not include a damaging deflation, it does say K-19 was later revised to the ZP2K type, so it obviously survived this and the war. Anyone have any facts in this case?

In the photo above, it appears the drift gauge is mounted (see previous page), but what is the platform or shelf-looking addition just aft of the handrail? That would be pretty close to the prop's arc! (Below) Bent prop indicates engine turning when prop struck… yet damage including dislodging upper fuel tanks hint there was more than a snow-deflation at the mast. Can you fill in the details? **Ω**



SHORE ESTABLISHMENTS

NEAM

(L) Don Scroggs, Russ Magnuson (crew chief), George Diemer, John Craggs are looking forward to possibly showing off their K-28 restoration work to NAA Reunion attendees in the spring. **Ω**

HITCHCOCK

We met with the Hitchcock Public Library and Historical Society who has lots of neat things concerning the local airship base in Hitchcock. They have agreed to be the keeper of all historical documents, photos, etc., as they come in that they do not already have, and they are open year round if anyone is in the area and would like to see it. They will even set up special events if a group comes in and we will help with that as well. Our website is up www.galvestoncountyveteranscoalition.com and we will be posting a page on each area we are working on as we move forward. We welcome any information about the Hitchcock or Galveston County airships, or any military base in or near Galveston County over the last 100 years. We just received an artist drawing on the park layout, but not any specific static displays yet. That will go on our website soon. If in the Houston/ Galveston area, I hope you members will contact us and we would be honored to show you what we are working on and give you an update on the area. Lots of cruises sail out of Galveston, so you members might be seeing us soon. I am leaving my contact information for all to use should they have questions, or want info on the area for visiting. Thanks for your help and please, let all know about our website with links to the library and general information about our veterans project.

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AKRON

(Above) Dr. Michael Heil, President and CEO of the Ohio Aerospace Institute, addresses the guests at the 61st Annual Banquet.

On Saturday, Nov. 9, The Lighter-Than-Air Society held its 61st Annual Banquet and Fundraiser. This year's guest speaker was Dr. Michael Heil, President and CEO of the Ohio Aerospace Institute (OAI). A distinguished engineering graduate from the U.S. Air Force Academy, Class of 1975, Dr. Heil received a master's degree in flight structures from Columbia University on a Guggenheim Fellowship in 1976 and a doctorate in aerospace engineering from the Air Force Institute of Technology in 1986.

OAI's mission is to enhance its partners' aerospace competitiveness through research and technology development, workforce preparedness, and engagement with global networks for innovation and advocacy. OAI works closely with Ohio's two aerospace related federal research laboratories (the Air Force Research Laboratory in Dayton and NASA Glenn Research Center in Cleveland); numerous aerospace related companies with operations in Ohio and Ohio universities with Ph.D. and research programs in aerospace-related fields.

Dr. Heil spoke about the large number of industries and colleges in Ohio involved in aerospace as well as the many Ohio natives who have made contributions to the field and have attained noteworthy achievements. He also highlighted current projects of lighter-than-air vehicles for transportation and research.

(Above) This year, the P. Rendall Brown Lifetime Achievement Award was presented to **Eric Brothers**. Eric was recognized for his contributions to the Society since 1986 and to Lighter-Than-Air in general as a respected historian in the field. He is the editor of Dr. Dale Topping's *When Giants Roamed the Sky*. He has also published several historical articles about airships and served as consultant to several producers of historical programs about airships and buoyant flight. Since 1993, he has been editor of *Buoyant Flight.*

Dave Wertz, Chairman of the Board of Trustees, reviewed the activities of the LTA Society during the past year, including a special commemoration program on occasion of the 80th anniversaries of the losses of the USS *Akron* and the J-3 blimp as well as the first flight of the USS *Macon*; the return of *Buoyant Flight*, the Society's premier publication; and the receipt of several donations of significant historic items and a generous monetary gift.

As in the past few years, there were students and faculty members of the University of Akron's College of Engineering present at the event.

The silent auction once again yielded funds that will go toward operating expenses. Auction items included a guided tour of the Akron Airdock, several golf packages and a number of other LTA-related items.

The memorabilia displays included several personal collections of historic photographs as well as some artifacts received as donations throughout the year.

– Alvaro Bellon, Eric Brothers

MOFFETT FIELD

The recent temporary shutdown of the Federal Government has somewhat delayed the resolution of Hangar One at former NAS Moffett Field. But the process is continuing. Under the guidance of the General Services Administration (GSA), NASA has issued a request for Proposals (RFP), soliciting potential tenants to "lease" the facilities, including the golf course. All three hangars are available for lease, and some very strictly regulated access to the runway. Due to the government shut down, the deadline for RFPs has been extended from October 14th to November 20th. Any new tenant will be financially responsible for re-siding Hangar One. They will be allowed to develop commercial structures such as offices and research facilities in some areas of the base, including inside the hangars. Any new construction will have to comply with all historic covenants including protecting the appearance of Shenandoah Plaza.

There is currently no public access to Hangar One, and it is not likely in the near future. The hangar is still securely fenced off, and is in a state of arrested decay. The standard gauge railroad trucks which operate the orange peel doors, have been sealed in protective plastic to preserve them for future use. There are still some issues of potential hazardous materials, and the EPA has voiced concerns. In spite of all concerns, three to five bids are expected.

– Bill Wissel

RICHMOND

The Military Museum and Memorial of South Florida hosted a free Pearl Harbor Day observance on Saturday, December 7th, 2013, at 11 AM. The event, inside the historic NAS Richmond headquarters building, included speakers, the placement of a wreath, the sounding of taps, and a three-volley rifle salute. Dignitaries included the Mayor of Coral Gables, Miami-Dade County Commissioners, Veterans Groups, School Board officials, and the Daughters of the American Revolution. Co-hosts were the Naval Order of the US, Southeast Florida Commandery."

– Anthony Atwood

TUSTIN / SANTA ANA

Igor Pasternak's World Wide Aeros company has occupied one end of one of the hangars at former NAS Tustin while developing their Aeroscraft.
Recently, a 25 foot by 25 foot portion of the hangar roof collapsed, causing wood to fall on the $35-million airship. The damage to the envelope caused a release of helium, forcing the evacuation of the area. There were no injuries reported.

While the Aeroscraft project has revived LTA activity to the former World War II blimp base, this latest failure of the hangar has raised concerns about the hangar's stability.

Orange County plans to assume ownership of one hangar and surrounding land for use as a sports facility or regional park. The hangars currently require approximately $1M a year to maintain. This latest failure raises questions about Orange County's ability to pay for the structures.

– Bill Wissel

COVER STORY


Los Angeles

TSUNAMI STUDY FINDS REGION AT RISK

Floating his dream

Igor Pasternak is about to test something few thought he could build: a cargo-carrying zeppelin

Pasternak Set To Start Test Flights Of New Zeppelin

In a 1,500-word article, the Los Angeles Times (9/5, Hennigan) profiles Worldwide Aeros Corp. Chief Executive Igor Pasternak, who is set to start test flights of a "massive cargo-carrying zeppelin that can take off and land with the precision of a helicopter." The article notes that FAA engineer Maureen Moreland reviewed an application from Pasternak, who at the time was seeking government approval to fly a small blimp that he was building. Moreland told the Times that she did not think that Pasternak would pass the certification process. However, the article notes that Pasternak eventually got permission to fly the blimp in 2000. **Ω**

First Flight For Aeroscraft (compiled from internet)

The Aeroscraft, which has been under development by Aeros Corp. since 1996, made its first tethered flight September 7, though shifting winds at the former military base in Tustin, CA, where the project is being developed, prevented an untethered flight test. The Pentagon and NASA have supported the development of the Aeroscraft to the tune of some $50 million, according to a story in the Los Angeles Times. The Dragon Dream airship has a rigid skeleton of aluminum and carbon fiber covered in a Mylar fabric. It obtains its lift from helium-filled bladders. The FAA gave its blessing to the airship's airworthiness September 5, setting the stage for the first flight. The test at Tustin lasted about two hours, according to the LA Times. It got the attention of many in the surrounding neighborhoods, as well as people driving by the facility. A crew of two was on board for the inagural flight. A spokesman for Aeros Corporation told Gizmag that the first untethered flight was planned "very soon," and was expected to reach an altitude of about 100 feet… More tests are expected in the coming months. NASA and the Pentagon have funded the project to show how a "novel buoyancy system" could be used to transport heavy loads. **Ω**

Adolfo Flores, Los Angeles Times, October 7, 2013

A 266-foot experimental airship that is being constructed inside an enormous World War II-era blimp hangar in Tustin was damaged Monday when a portion of the structure's roof collapsed.

Falling wood from the roof struck the $35-million airship, a prototype being built under a government contract, and caused a blast of helium to be released, forcing the evacuation of the area. Officials with Worldwide Aeros Corp. said the damage to the airship is "repairable" but declined to be specific. Crews working on the prototype reported hearing creaking from the ceiling of the 17-story hangar and got out before a 25-foot by 25-foot portion of the roof collapsed.

The blimp-like aircraft is being built for the military to carry cargo to remote areas around the world, part of a resurgence in the production of blimps, zeppelins and spy balloons for everything from espionage to hauling supplies to isolated areas. In Tustin, the site of the former Marine Corps Air Station Tustin, the project has brought

new life to a hangar that was a home for blimps during World War II. A beam of sunlight poured through the hole onto the deflated airship Monday afternoon as officials waited outside for building officials to say it was safe to enter.


Zeppelin idea wasn't all hot air

A cause for the collapse has not been determined, said Matt West, Tustin's principal management analyst. There were no reports of injuries. "The wood structure is 70 years old," West said. "The high winds we've been having could've been a contributing factor."

About 650,000 cubic feet of helium was inside the airship when the roof collapsed, said Anatoliy Pasternak, vice president of production for Worldwide Aeros. The airship, dubbed Aeroscraft, is made of aluminum and carbon fiber. Its builders say the craft is unlike other airships because it can control its weight and position by taking in and releasing air.

The prototype inside the Tustin hangar is half the size of the final product, which is expected to be capable of carrying 66 tons. The company hopes to put out a fleet of 24 airships, including some that could carry up to 250 tons. Orange County Supervisor Todd Spitzer, who was at the hangar Monday, said the roof collapse worried him because the county is slated to take over the structure. The hangar and surrounding land is to be turned over to the county, which has been looking into converting it into a regional park.

"This is going to raise serious questions about the future of this hangar and whether Orange County can afford future liability," Spitzer said. Spitzer said it costs about $1 million a year to maintain the hangar. Small pieces of wood fell from the hangar last week, Spitzer said, and while the incident was reported to the federal government, he said no one came out to inspect the building. **Ω**

<u>Damaged blimp hangar in Tustin worries O.C. officials</u>
By Adolfo Flores LA Times October 14

The twin blimp hangars in Tustin have stood tall since World War II, a home port to enormous zeppelins and fleets of helicopters that were being readied for war. But age is finally starting to catch up.

The roof of one of the 17-story structures collapsed last week, damaging an experimental airship and raising new questions about the future of the historic buildings that stand as reminders of a long-ago era. The damaged hangar, the best preserved of the two, is slated to be handed over to Orange County as the centerpiece of a proposed 85-acre regional park. Now county leaders say they are worried about inheriting a building that could cost millions to maintain or refurbish and no longer has a practical use.

"I don't want six months to go by and suddenly the Navy says, 'Take it or leave it as is,' " said Supervisor Todd Spitzer. "I don't want to be put in that position." County attorneys are reviewing conveyance documents to determine who will have to repair the hangar if plans for the park move forward. "I want to do everything we can to save it, but if it's a $500,000 or $1-million repair we're going to have to have some serious discussions," Spitzer said after the hangar's roof collapsed. "We're not a bottomless pit."

But repair and maintenance costs are premature at the moment, said Anthony Megliola, the base closure manager for the former Marine Corps Air Station in Tustin. The U.S. Department of the Navy is sending a structural engineer to investigate the roof collapse and assess the hangar's integrity, which was red-tagged after the accident. Megliola said annual maintenance costs have averaged $160,000 over the last five years.

County officials estimate that it would cost about $20 million to refurbish either one of the hangars. The Navy is responsible for maintenance and inspection costs. Megliola said it's too early to tell whether the Navy will be required to make any repairs before handing the hangar over to Orange County, and the Navy hasn't determined whether it'll pay for the damage to the $35-million airship. **Ω**

US Army sells cancelled LEMV airship to original designer By Erik Schechter, Flightglobal

The US Army confirms it transferred in mid-October a deflated airship previously known as the long-endurance multi-intelligence vehicle (LEMV) to the original designer – Cardington, UK-based Hybrid Air Vehicles (HAV). The UK company bought the LEMV — stripped of sensitive equipment — from the Defense Contract Management Agency (DCMA) for $301,000, or less than 1% of the total development cost. It was the only bid the agency had received for the craft. Despite the lowball price, alternatives to the sale (storage, for instance) were deemed "not cost-effective," says John Cummings III, spokesman for the Army Space and Missile Defense Command/Forces Strategic Command.

Intended to carry a 1,134 kg (2,500 lb) sensor and communications payload while keeping on station for up to three weeks at a time, the LEMV was supposed to offer a persistent surveillance capability… But despite a successful test flight in August 2012, the programme had been facing mounting problems. Last October, a Government Accountability Office report concluded that the LEMV was "about 12,000 pounds overweight." This cut the airship's loitering time at 20,000 ft down to 4-5 days. Already behind schedule, the Army cancelled the programme this February. The DCMA then put the LEMV on the market for its original acquisition cost of $44 million. But Cummings says, "There was no offer that came in that was deemed to be acceptable" — leading to a wide-ranging solicitation for bids. HAV was the only bidder to respond, offering $301,000 for the envelope, fins, mission modules, mooring mast, and spare engines. Sensors and equipment enabling remotely piloted flight were not included.

Still, the Army is interested in what the Cardington-based company does with the hybrid airship. "Should they fly again, we will receive data from their flight," Cummings says. **Ω**

Northrop Eyes 'Really Large' Unmanned Airships for Freight By Bill Sweetman Aviationweek.com

Northrop Grumman is looking at the potential of "really large" unmanned airships for commercial freight transport, Tom Vice President of the company's Aerospace Systems segment, said in Washington Aug. 20. Comparing the effect of such a system on air freight to the advent of the 747 freighter in its day, Vice said that while there is "a lot of work to do" on the concept, the company has looked at promising technologies, and said that the company would continue the work — if it does so — in partnership with a large air freight hauler such as FedEx or UPS. Another company official said that Northrop Grumman would disclose more details of the concept in the coming weeks.

The company's last airship venture, the U.S. Army-sponsored Long Endurance Multi-Intelligence Vehicle (LEM-V), was canceled in February after one test flight due to delays and cost overruns. The U.K.-based Hybrid Air Vehicles company, the airframe design partner on LEM-V, and its precursor, Airship Technologies Group, studied buoyant-lift craft with payloads up to 500 tons, and its designs were a strong influence on the Defense Advanced Research Projects Agency's Walrus program that studied heavy-lift airships in the early 2000s.

Vice did not identify a specific technology partner for the new project, but did say that it was not California-based Aeros, which is working on a variable-buoyancy craft. **Ω**

Weather Delays Stratos Balloon Program Launch

The Canadian Press (9/10) reports the first stratospheric balloon launch as part of the Stratos Balloon Program, a joint project between the Canadian Space Agency and the French space agency CNES, was delayed due to inclement weather. No new launch date was announced. **Ω**

Business is a gas for Orlando-based blimp entrepreneur
By Kevin Spear, Orlando Sentinel

Despite the rough-and-tumble business of keeping a blimp afloat, it's hard to sense from Julian Benscher that his airships are anything but whimsical and fun. "Who doesn't love a blimp?" the Windermere entrepreneur asks. He's one of the world's leading lighter-than-air businessmen, the son of a former British tycoon and once an investor with boy-band promoter Lou Pearlman. At 47, Benscher is wiry and shaves his head to support his youngest son, 11, who can't grow hair because of a condition called alopecia. And he steers talk away from Julian Benscher the person to Julian Benscher the enthusiastic promoter of rebranding an old thing — blimps — with new life. He owns seven of them, but only one is currently flying. It is the world's largest, containing 250,000 cubic feet of helium and equipped with a gondola 38 feet long. He'll sell it to you for $7 million or $8 million. Blimps are serene, even silly to some. But their whalelike physiques conceal extraordinary complexities, Benscher explained.

For example, as 200-foot airship rises, its helium expands and increases in pressure. Something has to give, or the blimp would burst. So in its gut are large bags of ordinary air. Rising pressure squeezes those bags, forcing them to pass air into the atmosphere, averting a rupture. "It's deceptively complicated to design, build and develop an airship," said Benscher, president of Skyship Services Inc. Orlando is headquarters for Benscher's company and for another flier, Van Wagner Communications LLC, which bills itself as the world's largest operator of airships. Together, they account for three-quarters of the dozen or so active blimps in the United States. Central Florida weather is nice to the ships. But they stay widely scattered to advertise, televise sports and, with Benscher's, ferry sophisticated instruments.

Benscher works hard at convincing scientists and government agencies that his stable craft is ideal for lasers, radar, heat-sensing optics, cameras and other instruments that are getting more portable and precise. His well-practiced pitch is that when attached to his blimp the devices can spot or measure such things as power lines on the verge of failure because of hot spots; elevations of coastlines vulnerable to sea rise; structural weaknesses of bridges; and, one day possibly, chemicals of improvised-explosive devices. "Julian has certainly been around the blimp business for a long time and knows blimps better than most people," said John Haegele, chief executive officer of Van Wagner Airship Group. "It's a very esoteric business, and for something that seems so simple on the surface, it can be terribly complicated." Benscher's workload, a combination of marketing, maintenance and employee management, has been daunting recently.

He rented out his ship for coast-to-coast filming by British television, scrambled to get helium in short supply, worried as his crew slipped the not-so-nimble aircraft through a mountain pass, lost work to the government shutdown and negotiated for a short-term business of flying Las Vegas tourists on a blimp for hundreds of dollars a seat. His other blimps are currently disassembled and empty of helium as Benscher hustles to find more business. His blimps lease for about $600,000 a month, which includes pilots, ground crew and vehicles.

Benscher was born and raised in London, and steeped in the wheeling and dealing of his father, Gabi Benscher, the eccentric chairman of a sports-gear and clothing company. Though his father died in a fall when Benscher was 13, he followed his father in the high art of creative finance. He studied it in school and then mounted an audacious but failed attempt to start blimp-borne advertising in Hong Kong, bringing almost no money to the table. He had been fascinated with them since he was a kid. And as buyouts, selloffs and trades unfolded, he teamed with another aficionado of lighter-than-air commerce, Lou Pearlman in Orlando. Benscher ejected himself from the partnership, and then he, too, got out of blimps in the 2000s. He's definitely back. Now in London, he is in talks over leasing his blimp to patrol for poachers in Africa. **Ω**

BBC Announces Cloud Lab – an Airship crossing the United States for Scientific Research (BBC)

BBC Two and BBC Four Controller Janice Hadlow announced a scientific mission across the United States. A team of scientists will be taking to the skies in the world's largest airship – the Skyship 600 – for BBC Two's ambitious atmospheric experiment – Cloud Lab. Flying from coast to coast, across the USA, in a month-long expedition, the team of British scientists will scrutinize insect life, the relationship between trees and the air we breathe as well as predicting where a hurricane is likely to hit the land. The team, which includes entomologists, weather specialists and professional explorers is also hoping to shed light on the creation of clouds and the relationship between diverse ecosystems and weather.

Several US agencies will be cooperating with this project. Among them are NASA (National Aeronautics and Space Administration), NOAA (National Oceanic & Atmospheric Agency), JPL (NASA's Jet Propulsion Laboratory) and USGS. Cloud Lab will be accompanied by a number of films on BBC Four, including An Ocean of Air which sets out to show who rightly deserves the title of 'the true discoverer of oxygen'. Using reconstructions, archive and experiments, chemist Gabrielle Walker will trace the remarkable and personal journeys of three leading contenders before making her choice as to who deserves the accolade. The BBC team will fly the Skyship 600 airship over a four week period from Florida to California to carry out their research. Travelling west their route will take them over some stunning and diverse landscapes: oceans, wetlands, forests, drylands and deserts with a smattering of cities along the way. On November 30, 2013, apparently unable to find another client, and once the BBC Cloud Contract was fulfilled, Julian Benscher, owner of the Skyship, abruptly put the entire inventory on the SkyShip 600-10, including all support vehicles, spares and even the type certificate up for auction. The auction was to be held on December 12, 2013. Only time will tell what will become of the SkyShip type of airships. **Ω**

Reported by **Dr. Barry Prentice**

Approximately 70 percent of Canada's land mass has no all-weather roads. This is easily explained because the area accounts for over 40 percent of Canada's permafrost soils, while the rest is Canadian Shield, where roads are equally expensive to build. Could a new generation of cargo airships fill the chronic gaps in Canada's northern transportation networks? Over the past 12 years, this question has been addressed at six *Airships to the Arctic* conferences, at three *Cargo Airship Workshops* in Alaska, and most recently, at the *Remote No More* conference held in Winnipeg (October 9-10, 2013) by the Manitoba Keewatinowi Okimakanak (MKO). The MKO is a non-profit, political advocacy organization that represents 30 First Nation communities in Manitoba's North.

Airship developers have come and gone during this period of study, but a core industry is becoming established. Of the seven airship companies that spoke at the *Remote No More* conference in 2013, three companies were featured on the program of the first *Airships to the Arctic* conference at Winnipeg in 2002 (Worldwide Aeros, Lockheed-Martin and RosAeroSystems). Here are a few observations that come out of the recent MKO meeting. Cargo airships are moving toward a dominant design. A decade ago, the only commercial market was advertising and carrying TV cameras at a football game. All these airships were inflatables, or "blimps". Most of the proposed cargo airship designs have rigid hulls that are made of aluminum or composite materials, although some inflatable designs are still being put forward.

Large ground crews are a thing of the past. The dominant cargo airship design that is emerging has vectoring engines, tail thrusters and modern aircraft avionics that give pilots sufficient control to land and take off independently. The issue still in flux is the role of aerodynamic lift versus static lift. One camp favours static lift with active buoyancy adjustment (gas compression), while the other side favours a heavier-than-air design with aerodynamic lift to provide control of buoyancy. Both ideas have merits, as was illustrated by RosAeroSystems in their presentation. The dominant design could incorporate elements of each. The proposed cargo lift is from 20 to 66 tons. However, the cargo bays are double or triple the volume offered by trucks, and most designs have the ability to carry slung loads, too. (*Below*)

In the 1930s, the *Graf Zeppelin* airship crossed the Atlantic Ocean on a scheduled basis. This was done without the aid of computers or strain gauges, and with the use of crude materials, like the intestines of 1,000,000 cows which were required to hold the lifting gas. Even larger, the *Hindenburg* had a useful lift of 70 tons and cruised at 120 kilometers per hour. Certainly better airships could be built today, to carry smaller loads a few hundred kilometers to St. Teresa Point. And what about the use of hydrogen gas – "Oh, the bovineity!" – science has moved on here, too. The Russian airship company, RosAeroSystems announced a new chemical compound that their scientists have discovered that stabilizes hydrogen gas. This additive greatly improves the safety, while only reducing the gas's lift marginally. The Russian solution has yet to be proven in practice, but it is only one of many proposals to use hydrogen in place of helium gas whose availability is unreliable.

The consensus of the experts at the MKO meeting is that no technical barriers remain to impede the development of cargo airships. The remaining questions are only economic, financial and regulatory. The airship companies at the *Remote No More* conference were challenged to estimate their freight rates to transport the materials required to build four First Nation's schools at Oxford House, Gods Lake Narrows, Gods River and Waasagomach. The estimates provided by three separate airship companies ranged from 17 to 22 cents per pound. This is less than one half to a quarter of the freight rates charged by airplanes to do the same job.

The quoted airship freight rates are a bit higher than ice-road truckers would charge, which is 12 to 17 cents per pound for full 45,000 pound loads (not including any fuel surcharges). However, taxpayers also have to spend $10 million each year to build the ice-road network. Each spring when the ice roads melt into the swamps and muskeg, a 10-month gap reopens in the transportation network. Any cargo that misses the truck has to wait until the following year, or pay airplane freight rates. Cargo airships would reduce inventory holding costs and allow construction projects and resource developments to operate year-round. The most repeated phrase at the *Remote No More* conference was: "It's no longer a question of if; it is only a question of when." **Ω**

COME TO THE NAA

READY ROOM

Naval Airship Association Reunion
14-16 May 2014 Newport, Rhode Island

Tentative Schedule (subject to revision):

Wednesday, Arrival, register at the Best Western Mainstay Hotel, register for the Reunion-Conference, and a Meet & Greet reception in the hotel banquet hall. (Hotel below)

(Above) The Naval War College Museum

Thursday - Bus to the Naval War College. We will be split into two groups, one group touring the Museum and the other touring the War College facilities. Groups will switch. Lunch will be at the Officers' Club located on the waterfront and then the balance of Thursday is open and attendees can choose a restaurant of their liking in town or dine at the hotel.

Depending upon interest, a visit to the New England Aviation Museum (where the airship K-28 is being restored) is being considered. It requires a two-hour bus ride.

REUNION – MAY 2014

(Above) The NWC President's house, which is next door to the Museum.

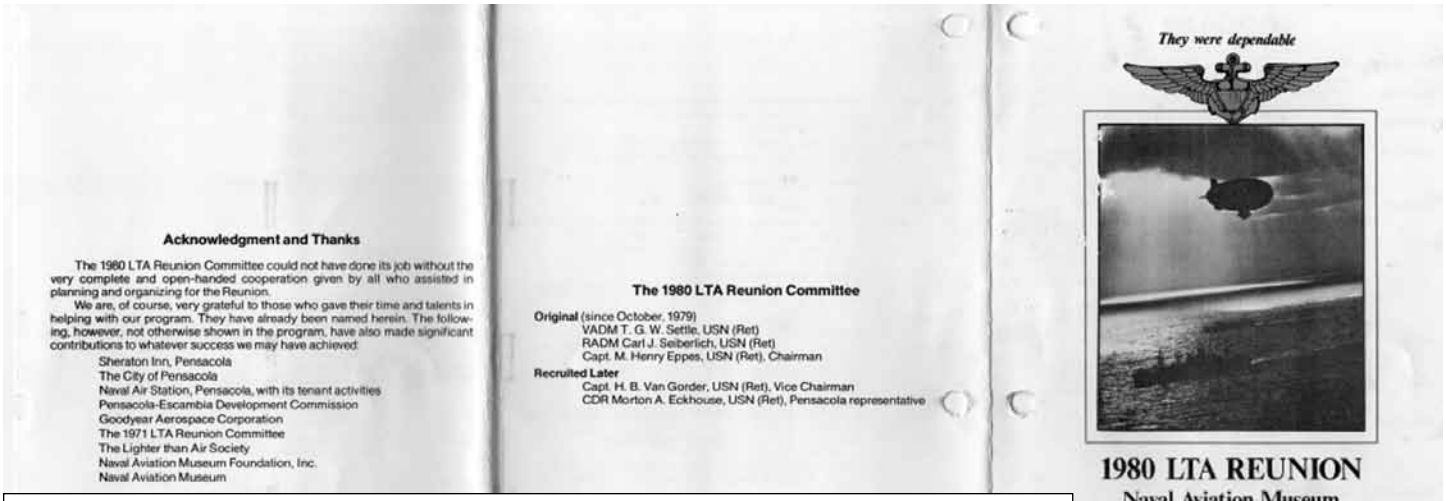
Friday – We will have a general business meeting and presentation of the Nominating Committee's recommendations. Depending on interest, there will be author's presentations. Friday evening will conclude with our banquet and a special guest speaker and presentation.

NWC CO's house is seen above; it was an Eisenhower summer White House.

Details as to cost and how to sign up will be forthcoming. For now, block out the dates **14-16 May 2014** on your appointment calendar, check the NAA website, and watch for a special mailing.

Reunion Ready Room – Hours for the Ready Room will be very flexible and coffee, water, and snacks will be available. Anyone bringing artifacts, photos, etc. will be provided space and tables. Small Stores will have tables set up for sales of NAA merchandise. It would be very nice to see NAA caps and shirts being worn all over Newport.

So, get set to drop your mooring lines in beautiful Narragansett Bay, like the USS *Shenandoah* did. We'll have a terrific time!!



Acknowledgment and Thanks

The 1980 LTA Reunion Committee could not have done its job without the very complete and open-handed cooperation given by all who assisted in planning and organizing for the Reunion.

We are, of course, very grateful to those who gave their time and talents in helping with our program. They have already been named herein. The following, however, not otherwise shown in the program, have also made significant contributions to whatever success we may have achieved:

Sheraton Inn, Pensacola
The City of Pensacola
Naval Air Station, Pensacola, with its tenant activities
Pensacola-Escambia Development Commission
Goodyear Aerospace Corporation
The 1971 LTA Reunion Committee
The Lighter than Air Society
Naval Aviation Museum Foundation, Inc.
Naval Aviation Museum

The 1980 LTA Reunion Committee

Original (since October, 1979)
VADM T. G. W. Settle, USN (Ret)
RADM Carl J. Seiberlich, USN (Ret)
Capt. M. Henry Eppes, USN (Ret), Chairman

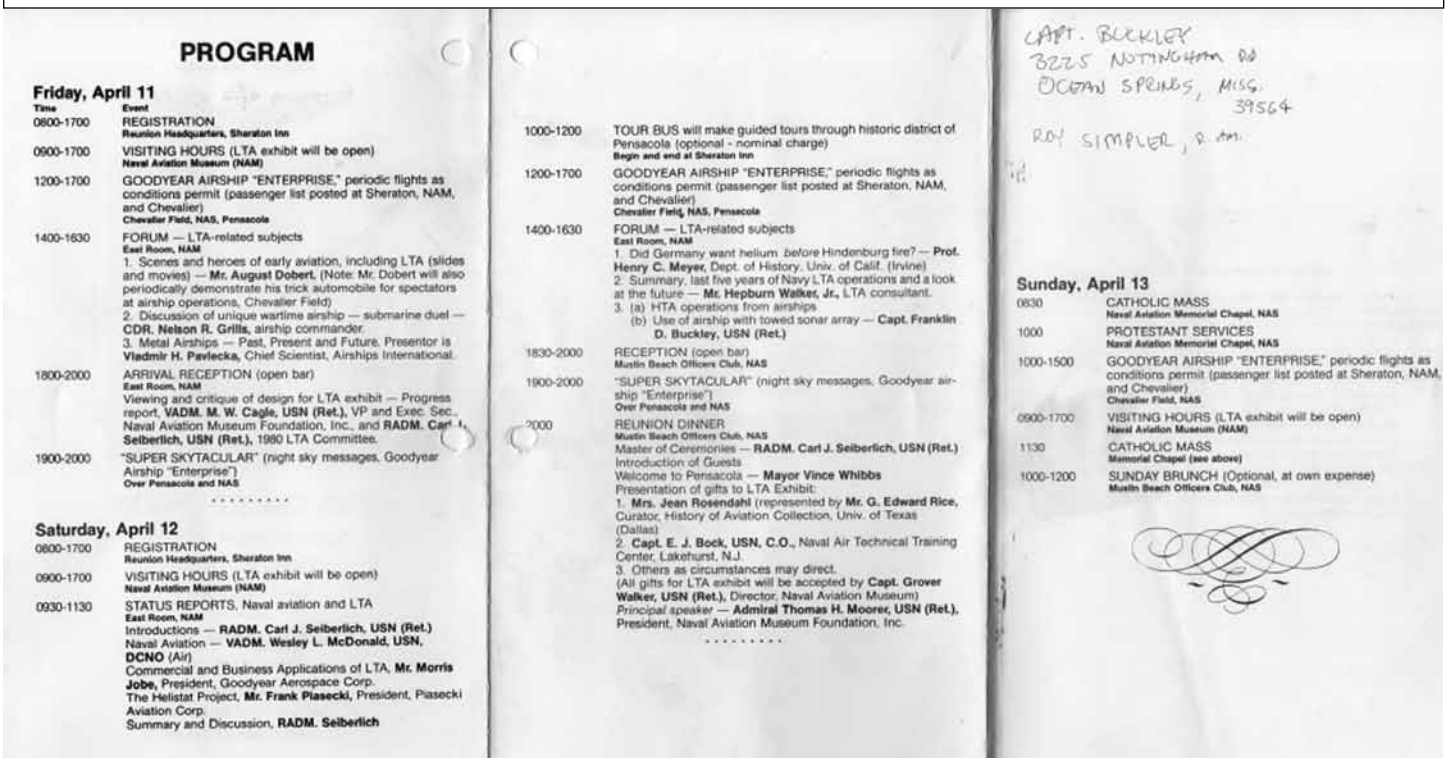
Recruited Later
Capt. H. B. Van Gorder, USN (Ret), Vice Chairman
CDR Morton A. Eckhouse, USN (Ret), Pensacola representative

They were dependable

1980 LTA REUNION
Naval Aviation Museum
Pensacola, Florida
April 11-13, 1980
Sponsored by
The Naval Aviation Museum Foundation, Inc
On the occasion of the Inauguration of the Museum's Lighter-than-Air Exhibit

The roots of the NAA date to this first LTA Reunion, in Pensacola, FL, in 1980. This first brochure, (obverse below), reads like a "who's who" of Navy LTA, with many of the names seen again as officers of the incorporated NAA in 1984. Your current editor's scribbled notes below show early interest in the ZRS program, with CAPT Frank Buckley telling the young attendee about motion pictures of Akron & Macon at NARA, and monopolizing the time of RADM Leroy Simpler, a hook-on pilot.

While the NAA's first actual day of existence is probably legally defined by its incorporation date, it may be more difficult to pinpoint what day we should celebrate its upcoming 30th anniversary. We can, however, celebrate the milestone of the 100th issue as you hold it in your hands. Let's take a moment to reflect on our progress, starting with a reproduction of the first issue's cover page. CAPT Marion Henry Eppes created the stencil and mimeographed the issue for the few tens of dozens of original members. In the issue he explains the reasoning for the seemingly off-subject title, something we have been questioned about – and urged to change – many times over the years. The NAA mailing list quickly outgrew these beginnings, and Mr. Ed Higgleston of "Mr. Ed's Printing," who'd done the brochure, was contracted to print and distribute the ever-enlarging magazine. The deaths of founders Eppes and CAPT H. B. Van Gorder, as well as longtime treasurer CAPT John Kane, tossed NAA and its newsletter into a period of confusion. Ironically, the current team of Editor and Publisher were brought on just as the US Navy contracted its first airship in more than 44 years, the MZ-3A. Like NAA and its newsletter themselves, LTA since 1980 has come a long way, baby!



PROGRAM

Friday, April 11

Time	Event
0800-1700	REGISTRATION **Reunion Headquarters, Sheraton Inn**
0900-1700	VISITING HOURS (LTA exhibit will be open) **Naval Aviation Museum (NAM)**
1200-1700	GOODYEAR AIRSHIP "ENTERPRISE," periodic flights as conditions permit (passenger list posted at Sheraton, NAM, and Chevalier) **Chevalier Field, NAS, Pensacola**
1400-1630	FORUM — LTA-related subjects **East Room, NAM** 1. Scenes and heroes of early aviation, including LTA (slides and movies) — **Mr. August Dobert.** (Note: Mr. Dobert will also periodically demonstrate his trick automobile for spectators at airship operations, Chevalier Field) 2. Discussion of unique wartime airship — submarine duel — **CDR. Nelson R. Grills,** airship commander. 3. Metal Airships — Past, Present and Future. Presentor is **Vladmir H. Pavlecka,** Chief Scientist, Airships International.
1800-2000	ARRIVAL RECEPTION (open bar) **East Room, NAM** Viewing and critique of design for LTA exhibit — Progress report, **VADM. M. W. Cagle, USN (Ret.),** VP and Exec. Sec., Naval Aviation Museum Foundation, Inc., and **RADM. Carl J. Seiberlich, USN (Ret.),** 1980 LTA Committee.
1900-2000	"SUPER SKYTACULAR" (night sky messages, Goodyear Airship "Enterprise") **Over Pensacola and NAS**

Saturday, April 12

0800-1700	REGISTRATION **Reunion Headquarters, Sheraton Inn**
0900-1700	VISITING HOURS (LTA exhibit will be open) **Naval Aviation Museum (NAM)**
0930-1130	STATUS REPORTS, Naval aviation and LTA **East Room, NAM** Introductions — **RADM. Carl J. Seiberlich, USN (Ret.)** Naval Aviation — **VADM. Wesley L. McDonald, USN, DCNO** (Air) Commercial and Business Applications of LTA, **Mr. Morris Jobe,** President, Goodyear Aerospace Corp. The Helistat Project, **Mr. Frank Piasecki,** President, Piasecki Aviation Corp. Summary and Discussion, **RADM. Seiberlich**
1000-1200	TOUR BUS will make guided tours through historic district of Pensacola (optional - nominal charge) **Begin and end at Sheraton Inn**
1200-1700	GOODYEAR AIRSHIP "ENTERPRISE," periodic flights as conditions permit (passenger list posted at Sheraton, NAM, and Chevalier) **Chevalier Field, NAS, Pensacola**
1400-1630	FORUM — LTA-related subjects **East Room, NAM** 1. Did Germany want helium *before* Hindenburg fire? — **Prof. Henry C. Meyer,** Dept. of History, Univ. of Calif. (Irvine) 2. Summary, last five years of Navy LTA operations and a look at the future — **Mr. Hepburn Walker, Jr.,** LTA consultant. 3. (a) HTA operations from airships. (b) Use of airship with towed sonar array — **Capt. Franklin D. Buckley, USN (Ret.)**
1830-2000	RECEPTION (open bar) **Mustin Beach Officers Club, NAS**
1900-2000	"SUPER SKYTACULAR" (night sky messages, Goodyear airship "Enterprise") **Over Pensacola and NAS**
2000	REUNION DINNER **Mustin Beach Officers Club, NAS** Master of Ceremonies — **RADM. Carl J. Seiberlich, USN (Ret.)** Introduction of Guests Welcome to Pensacola — **Mayor Vince Whibbs** Presentation of gifts to LTA Exhibit: 1. **Mrs. Jean Rosendahl** (represented by **Mr. G. Edward Rice,** Curator, History of Aviation Collection, Univ. of Texas (Dallas) 2. **Capt. E. J. Bock, USN, C.O.,** Naval Air Technical Training Center, Lakehurst, N.J. 3. Others as circumstances may direct. (All gifts for LTA exhibit will be accepted by **Capt. Grover Walker, USN (Ret.),** Director, Naval Aviation Museum) *Principal speaker* — **Admiral Thomas H. Moorer, USN (Ret.),** President, Naval Aviation Museum Foundation, Inc.

CAPT. BUCKLEY
3225 NOTTINGHAM RD
OCEAN SPRINGS, MISS.
39564

ROY SIMPLER, R. Adm.

Sunday, April 13

0830	CATHOLIC MASS **Naval Aviation Memorial Chapel, NAS**
1000	PROTESTANT SERVICES **Naval Aviation Memorial Chapel, NAS**
1000-1500	GOODYEAR AIRSHIP "ENTERPRISE," periodic flights as conditions permit (passenger list posted at Sheraton, NAM, and Chevalier) **Chevalier Field, NAS**
0900-1700	VISITING HOURS (LTA exhibit will be open) **Naval Aviation Museum (NAM)**
1130	CATHOLIC MASS **Memorial Chapel (see above)**
1000-1200	SUNDAY BRUNCH (Optional, at own expense) **Mustin Beach Officers Club, NAS**

NAVAL AIRSHIP ASSOCIATION

CAPT. M. H. EPPES, USN (Ret.)
President
3304 Spring Mill Circle
Sarasota, FL 33579

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THE NOON BALLOON

Newsletter of the
Naval Airship Association
3304 Spring Mill Circle
Sarasota, FL 33579

Number 1 - November, 1984

Editorial Notes

What's with that title?

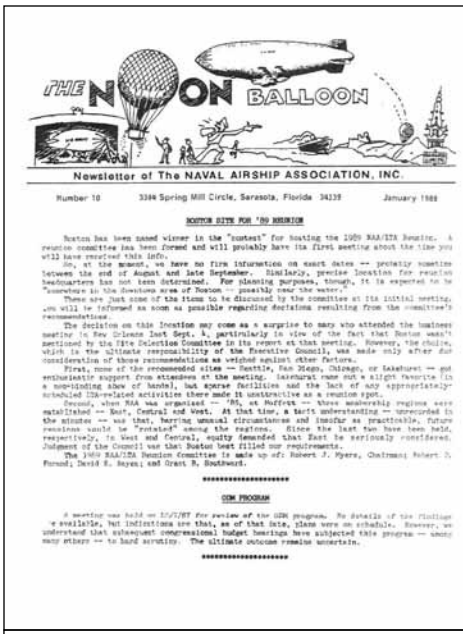
Well, frankly, it hasn't been easy to come up with one that is pertinent but doesn't infringe on the "territory" of existing LTA-related publications, with which we do not wish to compete. Among these are: BUOYANT FLIGHT, the long-established and respected bulletin of the LTA Society; THE POOPY BAG BALLONET, an interesting and chatty compendium of airship and LTA stories and anecdotes, issued periodically by member Harry Titus; and THE AVIATION CIRCULAR LETTER, a collection of historical and technical facts relating to general aviation including LTA, put out by another of our members, William Coret.

This title, THE NOON BALLOON, may sound frivolous but is not so intended. It is a direct steal from the repertoire of an old friend, "Pinky" Hosmer, who got it from who knows where. Combining a catchy, rhyming sound with an obvious LTA reference, it is, to say the least, distinctive.

The full line (based on less than total recall) went something like this: "The noon balloon to Rangoon is leaving soon", the "soon" meaning sometime or perhaps never. "Balloon" covers the whole range of LTA vehicles, including those of the dirigible type - which brings us back to airships. "Noon" is used here in a very indefinite sense, with no real schedule for publication. We will go to press when there is a need or when the mood strikes.

Both those conditions apply here. We do have a number of things to report, and the spirit is willing. So, here goes on what may be a short but, we hope, an informative issue.

Any new publication is bound to experiment. Thus, we have no guide to the ultimate form this letter might take. Or, for that matter, how long it might endure. Those eventualities will depend on response from our readers, including both criticism and contributions. Give us your reactions to title, format and content, and send us the news you would like to get around.



THE NOON BALLOON

Newsletter of The NAVAL AIRSHIP ASSOCIATION, INC.

Number 10 3304 Spring Mill Circle, Sarasota, Florida 34239 January 1988

BOSTON SITE FOR '88 REUNION

Boston has been named winner in the "contest" for hosting the 1988 NAA/ITA Reunion. A reunion committee has been formed and will probably have its first meeting about the time you will have received this info.

So, at the moment, we have no firm information on exact dates -- probably sometime between the end of August and late September. Similarly, precise location for reunion headquarters has not been determined. For planning purposes, though, it is expected to be "somewhere in the downtown area of Boston -- possibly near the water."

There are just some of the items to be discussed by the committee at its initial meeting. We will be informed as soon as possible regarding decisions resulting from the committee's recommendations.

The decision on this location may come as a surprise to many who attended the business meeting in New Orleans last Sept. 4, particularly in view of the fact that Boston wasn't mentioned by the 1984 Selection Committee in its report at that meeting. However, the choice, which is the ultimate responsibility of the Executive Council, was made only after due consideration of those recommendations as weighed against other factors.

First, none of the recommended sites -- Seattle, San Diego, Chicago, or Lakehurst -- got enthusiastic support from attendees at the meeting. Lakehurst came out a slight favorite (in a non-binding show of hands), but sparse facilities and the lack of easy appropriately-scheduled ITA-related activities there made it unattractive as a reunion spot.

Second, when NAA was organized -- '85, at Moffett -- three membership regions were established -- East, Central and West. At that time, a tacit understanding -- unrecorded in the minutes -- was that, barring unusual circumstances and insofar as practicable, future reunions would be "rotated" among the regions. Since the last two have been held, respectively, in West and Central, eighty favored that East be seriously considered. Judgment of the Council was that Boston best filled our requirements.

The 1989 NAA/ITA Reunion Committee is made up of: Robert J. Myers, Chairman; Robert D. Forrest; David R. Hayes; and Grant B. Southward.

****

GDN PROGRAM

A meeting was held on 1/27/87 for review of the GDN program. No details of the findings are available, but indications are that, as of that date, plans were on schedule. However, we understand that subsequent congressional budget hearings have subjected this program -- among many others -- to hard scrutiny. The ultimate outcome remains uncertain.

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THE NOON BALLOON

Newsletter of The NAVAL AIRSHIP ASSOCIATION, INC.

No. 26 3304 Spring Mill Circle, Sarasota, FL 34239-6718 OCTOBER 1990

YEZ-2A -- VIEW OF THE PROGRAM MANAGER

(Ed. Note -- The following report is based on a letter of August 28, 1990, from LCDR Michael (Mike) S. Hayes, USN, Program Manager for YEZ-2A. It represents a significant update and addition information to the given in TNB #36, p. 1.)

Program sponsorships for the YEZ-2A has formally moved from DARPA to the Air Defense Initiative (ADI) program office in DCD. Design of the airship has steadily progressed to the point that we are ready to begin construction. The problem, of course, is funding.

The ADI director (also) Director, Defense Systems, DOD -- Bd.). Dr. Bruce Pierce, has agreed to fund the airship at $40M in FY 91 and to support full funding in FY's 92-95. However, unless the FY 91 amount is increased by congress or DOD to the $65-70M level we will have to slip first flight 9-12 months. This carries with it the risk of getting out of phase with the ADI radar (PTSS). We are working very hard to add to the promised $40M.

The ADI program has many aspects, including a requirement to haul a very large antenna array (three faces 80 by 12 ft. each) to 15,000 ft. The cost to integrate a single face of such an antenna on a B747 approaches $700M, so the Navy airship offers a very attractive alternative. This antenna and radar will be completely evaluated on the ground prior to deployment in the airship.

We feel that there are no significant technical issues remaining in the YEZ-2A design. Naturally, there are many details to deal with on every system, but the preliminary design has been presented to the Navy and approved. Of the two remaining critical design reviews, the car structure presents the greatest risk.

The magnitude of the required structural qualification tests will be expensive and difficult to complete; no short cuts will be permitted. It is not clear that Airship Industries fully understands what they agreed to but they soon will.

The propulsion system presents the greatest technical challenge. The waste heat alone requires radiators on almost all forward-facing surfaces. The qualification of a new marine engine (CRM BR-2.2000) on a different fuel (JP-5) at altitude is a first departure for the manufacturer.

In fact, since there is no technical expertise on diesel engines in NAVAIR, we have gone to NAVSEA for assistance. In March a NAVAIR/NAVSEA team visited Airship Industries (England) and CRM (Milan, Italy) at their respective facilities to discuss our operational requirements and test plans. A broad agreement was reached and work is progressing.

The water recovery system prototype is up and running at Westlake Engineering in UK. Preliminary results are encouraging, with recovery rates of 80% being achieved. The trick is to use all of that waste heat to drive the water recovery system for free.

I am very excited about the Sentinel 1000, which will probably fly in October. This (approximately) one-half linear dimension airship will enable us to gather actual inflight aerodynamic and structural strain data as well as proving the pneumatic/electrical powered flight control system, fly-by-light, digital flight control computer, autopilot modes, ground handling and underway replenishment procedures which now only exist on paper. Airship Industries has instrumented some 250 parameters to be recorded onboard. The Navy is working on an off-board telemetry system to allow real time data reduction, making it possible to modify test plans during

The new Level across - has most bore noticed. Beginning with this issue of TNB we are taking advantage of the recently increased capability of the commercial copier/reproduction/mailing service (Mr. Bill's of Sarasota) to "spread" our material.

It puts us a step further into the "high-tech" age, besides just plain looking better. But this is only the beginning -- next, returning instead of page-width lines (as I write it happens) -- and, as may have already hit you, a change in the size of the type we're using but eliminating your favorite number of pgs. of text.

Any other suggestions?

THE NOON BALLOON

Newsletter of The NAVAL AIRSHIP ASSOCIATION, INC.

No. 40 Published in Sarasota, Florida MAY 1993

FOUR-WAY RELAY TESTS SUCCESSFUL

USS ANZIO/Sentinel 1000/USS CONOLLY/Ground Station
Linked In 4-Way "Symposium"

Ed. Note - This article refers to the ANZIO/Sentinel-1000 tests described in the two immediately preceding issues of TNB (#39 & 39). An unclassified report on the results, dated 4/30/93, has been sent to DARPA by NAVCAIRWAR. This document, titled "Airship Communications Relay Demonstration Report", gives more details on the "blow-your-socks-off" success of the tests you reported in TNB 39).

The report is too long for complete coverage, so this item will contain selected (and abbreviated) excerpts intended to give NAA members a feel for what went on. (Our sincere thanks to NAVCAIRWAR for giving us the information.)

Following acronyms used herein are "denoted":

AIS - display (Sentinel-1000);
DARPA - Defense Advanced Research Project Agency;
ECC - Elizabeth City, NC; base site, & ops base;
GFE - government-furnished-equipment;
LITE - large image intensification equipment;
NAWCAIRWAR - Naval Air Warfare Center, Aircraft Div., Warminster, PA;
NM - nautical miles;
OTH - over the horizon;
UHF - ultra high frequency;
WAI - Westinghouse Airship Inc.

Summary - A DARPA contract requires WAI to conduct a Communication Relay demonstration on AIS using GFE.

Selected components were installed in AIS to demonstrate its utility as an OTH communications and surveillance platform.

A successful demonstration was conducted 10/20-28/92, with participants A/S, USS CONOLLY (stateside, Norfolk), USS ANZIO (I was here station @ EC. First day (10/20), equipment and procedures checkout @ EC w/ing mobile van.

Equipment installed on A/S: multi-banned (6) UHF voice & Link-11; LITE, as "piggy back" surveillance demonstration (given limited test time, but provided direct S-band video transmission to CONOLLY and EC).

Radio relay communication was established with A/S (alt., 3000') positioned between surface vessels, with separation ranges up to 92 NM from ANZIO and 86 NM from CONOLLY.

All 5 were comprising UHF radio relay demo were successful: T1 - AM short voice; T2 - FM Link 11; T2A - FM short voice; T3 - AM secure voice; T4 - AM short voice (alt. freq.); T5 - all 4 channels simultaneously.

LITE system functioned right S-band operated 35 to 40 NM from CONOLLY and up to 15 NM from base station. Satellite communications/A/S video data link was degraded due to inappropriate antenna on A/S.

(Excerpts from ANZIO report -- Appendix G).

The Comm relay system is an Office of Naval Technology-sponsored demo model, very compact (17"x24"x19") and light (100 lbs.) and is ideal for aircraft installation. Three features were assessed during the test for supporting A/S/comm. relay: installation design issues and demonstrating A/S utility for employment with surface forces.

(cont'd. on p. 2)

THE NOON BALLOON

Newsletter of The NAVAL AIRSHIP ASSOCIATION, INC.

TNB No. 40 Published in Sarasota, Florida OCTOBER 1995

WEEKSVILLE HANGAR FIRE

Ed. Note: On the morning of Aug. 3., 1995, Airship Dock #2, the wooden hangar at Weeksville, NC, was completely destroyed by fire. The resulting furnace-like conditions demolished Sentinel-1000 (S-1000) -- the Westinghouse Airships, Inc. (WAI) half linear (linear) model of the proposed HEZ-2A -- and three aeronaut belonging to TCOM LP. It wiped out the manufacturing facilities of TCOM as well as the service/operational spaces, tools and spare parts relating to WAI operations). Fortunately, there were no human casualties.

These facts will not be new to most of our readers by the time this report is received. Further, as this late date there and always will take a back seat, to a delight, to the Pensacola reunion-we account of which will be the main subject of this issue of TNB.

However, that does not minimize the importance of the losses incurred by the destruction of that historic structure, including virtually everything it housed. It is simply to recognize that what's done is over and cannot be reversed. We have to face the situation that now exists.

The Naval Airship Association has an inherent interest in Weeksville that goes back many years before its own formation. Weeksville was chosen as the early years of WWII as the site of an airship base as close as possible to the heavy naval presence at Norfolk, VA. Airship Dock #1, the first hangar to have been constructed there, was if done, completed in early 1942.

The decision to use wood in design and construction of Hangar #2 -- occurring about 1,900 x 300 ft., and over 120 ft. high inside, one of the largest wooden structures in the world -- was imposed by wartime shortages of steel and related materials and services. It was basically similar in size and construction to some 13 others built later on all three U. S. coasts -- with differences in door operational design and other minor changes to suit local conditions or requirements.

It was the earliest of the wooden hangars to be built (1942), with pine plywood sinkers which had been treated with fire-retardant chemicals. During its life of about 53 years there had been relatively little maintenance, especially during the post-war years. It was leased by TCOM from the private owners who acquired it after the Navy disestablished the Naval Air Station, Weeksville in 1947.

The following account is based on (a) an initial telephone call on 8/3 from CDR W. A. (Jack) Overman, Jr., which he followed with excerpts from The Daily Advance (Ed. Elizabeth City, NC) 8/3/95 and 8/4/95; The Hampton Daily Press, Norfolk, VA) 8/4, 8/5 & 8/6;

(b) from CDR John A. Fahey, excerpts from VP (Ed's: 1) a FAX from Wild Aired KA8S, "Hangar Five"; addressed to "Wild Aired and business associates"; (2) a telephone conversation of 8/7 with CAPT R. L. (Bob) Ashford, of TCOM; and (c) notes and other fact gleaned from articles in DA referring to the historical materials accumulated by Stephen D. Chaillet, the senior production planner for TCOM, who redirected those into an e-letter of love. (Hmmm; e.g., Frank Hudnut and Al Cope sent additional copies of the VP references.) We thank each of them for their contributions to our understanding of this tragic loss, giving special appreciation to Jack Overman for his remarks in support during an anxious period when he must have had personal concerns for the vagaries of tropical storm "Felix" -- which was threatening the section of the NC coast at almost the same time the disaster occurred.

Photo below shows the remains of the eastern door, where the fire started.

THE NOON BALLOON

The Official Newsletter of The NAVAL AIRSHIP ASSOCIATION, INC.

TNB No. 50 Published in Sarasota, Florida MAY 1998

NOW HEAR THIS

by
Lou Prud

The latest news from your president is about a successful trip to Pensacola. If you have not been to the Museum since its latest expansion has been completed, you would be pleasantly surprised. The LTA section has been enlarged and more is displayed in an interesting and attention-getting manner.

Our business meeting was a great success (see the secretary's minutes). With a quorum present, the revised By-Laws were accepted by a unanimous vote.

Let me, in addition to the meeting, the camaraderie of spending time with old shipmates made the 2,400 mile round-trip very worthwhile. Speaking of former shipmates, I would like to welcome Jim Deardorff aboard. Jim and I spent many an hour together in the gondola of advertising airships. Also, I saw the name of an another dear friend, George Schultz, from Lakehurst in the new roster. I gave him a call and my wife Lillian and I had a nostalgic talk with his wife Lois and him. After 50 years we certainly had a lot to talk about. The roster is a great place to look for friends and reminisce about the good old days.

Incidentally, my e-mail address is still ptrdlou@aol.com (not ptrdlou.com as shown in the new roster).

THE NOON BALLOON

Newsletter of the Naval Airship Ass'n., Inc.
Editor: N. H. Epps, 735 S. Palm Ave
Apt. #206, Sarasota, FL 34236
Tel: (941) 957-3280

"The noon balloon to Rangoon is leaving soon" - WWI saying attributed to airship commander, referring to imminent patrol mission.

Naval Airship Ass'n., Inc.
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THE NOON BALLOON

The Official Newsletter of The NAVAL AIRSHIP ASSOCIATION, INC.

TNB No. 66 Published in Sarasota, Florida NOVEMBER 2000

THROUGH MY EYES

by
Herb Hardebach, Immed. Past Pres.

NAA Reunion 2000, 21-23 Sept.

As members and their guests began arriving at the Pensacola Grand Hotel for Reunion 2000, the words "tropical depression" reasoned in the hallways, lobby and bars. There was speculation and concern that high winds and heavy rains would interrupt our proceedings. On Wed., 9/20, Tropical Depression Helene was clearly defined and heading for Pensacola.

Many familiar faces appeared at new arrivals checked in and preparations for our reunion continued. Bob Clancey was seen everywhere, checking on a myriad of details to insure that meeting rooms would be ready, sound and projection equipment would be in place and the Ready Room equipped for Norm Eckhouse, Bill Frannea (Reunion Chairman) and helpers to dispense gallons of beverages (coffee, tea and soft drinks), snacks and dozens of donuts during the festivities.

Walt Aymond was all around too busy acting to it that the award for Adolf Schoepe and the gifts for our co-founders, Captains Epps and Van Gorder were ready. Your then-NAA president was at the Museum making courtesy calls on officers of the Naval Aviation Museum Foundation.

Thursday morning, 9/21, the hotel restaurant was "full up" with people wearing NAA name tags. At 1:45 PM the Executive Council (Exec Com) convened for the scheduled meeting. Items of New Business of general interest to the membership are:

(a.) A discussion led by Carl Seiberlich, concerning the reorganization of the existing LTA exhibit and add new material as it is the history and development of LTA from ballooning through non-rigid airships and the rigids, to the employment of blimps (non-rigids) in WWII is clearly display of. Attention should also be directed to the applications of ASW hardware developed by the LTA community for use by airships during the post-war period (1947-62) that are now being used by fixed-wing aircraft and helicopters.

(b.) There was unanimous approval of a suggestion that the swastika hanging across the HINDENBURG display be removed. As currently shown, it subverts the "Hall" Tobin story. "Navy must stand fast!"

(c.) The Exec Com learned that the Harmon Trophy for LTA is no longer on display at the National Air & Space Museum, Washington, DC.

(cont'd. on p. 2)

THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 70 Summer 2006

NEW A-170 AIRSHIP

THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 80 Winter 2008

Zeppelin NT-7 04
Arrives at Moffett Field

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THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 90 Summer 2011

Lockheed Announces Sky Tug

THE PRACTICAL AIRSHIP

Geopolitics & Powerful Applications

For many years, Dr. Barry Prentice, (above, rt) a faculty member of the University of Manitoba, has been trying to raise the world's consciousness about two aspects of the same subject: the importance of the Arctic regions to the world, AND the necessity of being able to traverse it in any weather. Travel is difficult, essentially because the vast tundra, studded with frozen lakes, has no transportation infrastructure, AND the irrefutable fact that the frozen lakes, formerly usable as so-called ice roads, are melting because average temperatures appear to be rising just a few degrees (centigrade or Fahrenheit, take your choice --- it makes no difference). This increase in temperature converts those ice roads into, at best, slush. Recent events appear to indicate that mankind is finally beginning to notice and appreciate the significance of those changes. No matter which side of the climate change debate over man-made versus natural climate cycles one is on, it's clear that it is happening.

Dr. Prentice's solution, quite simple on the face of it, has been to use airships --- dirigibles, blimps, etc. --- capable of lifting and transporting heavy cargo for long distances. That solution appealed not only to logistics people, but also solved a long-standing worrisome problem of military forces who, given their need for quick response over long distances, have to be able to transport large, well-equipped units to battlefields with no landing strips and no transportation modalities. Pack a battalion of special forces, with armored vehicles and ammunition, into heavy-lift dirigibles (that is, a lighter-than-air vehicle that can be directed --- steered) and they can travel and land this critical cargo almost anywhere, at minimum notice.

Immediately, the semi-literates --- defined as those who have read a little bit on a subject and only vaguely remember what they've read --- pepper the Internet forums and semi-scientific and almost-engineering literature with comments about the *Hindenburg*, how dangerous those "blimps" were, how inefficient it was, and how Lighter-Than-Air (LTA) vehicles can be "brought down with small arms fire". Regarding the latter, it's been tried, and unsuccessfully.

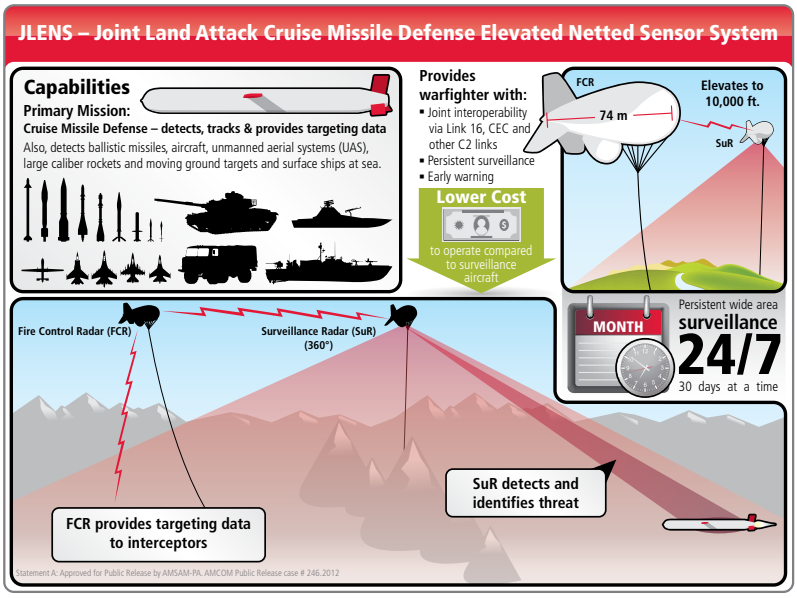
Please consider that one memorable photo of that era showed a giant airship that had been peppered with .30-caliber machine gun fire for a lo-o-o-ong period of time, serenely sailing along with its envelope full of holes, until it safely reached the hangar at its home base. It can perform this apparent miracle because, contrary to prevailing belief, LTA airships are not similar to giant children's balloons, with internal gas under high pressure, just waiting to be let out through a small puncture wound. In almost all modern airships, the gas is contained in one or more internal ballonets --- a sort-of container inside a container. Although the outer container is punctured, the inner ones can retain their integrity. In addition --- and a significant addition it is --- the differential gas pressure is very low, that is the pressure between that at which the lifting gas (helium, hydrogen) is maintained is only a few pounds-per-inch above that of the atmosphere. The airship does not begin zooming all over the sky like a toy balloon. Rather, the lifting gas seeps out so slowly that it is most likely to maintain its lift capability until its return to a safe landing.

It's not just military missions that LTA can handle. Our group, using information on unusual and hazardous missions worldwide, has suggested over twenty different uses --- not just in the former Northwest Territories of Canada --- but, indeed, all over the world. **Ω**

– Harold Nils Pelta

Technical Committee

Two 243-foot-long aerostats manufactured by TCOM LP will provide the aerial support for the Joint Land Attack Cruise Defense Elevated Netted Sensor System (JLENS) developed by Raytheon. It will be located near the Washington, DC, area beginning in September, 2014. It will be flown at 10,000 ft. altitude for 30-day periods. One aerostat will carry powerful long-range surveillance radar with a 360-degree look reaching out to 340 miles to detect and react to threats including cruise missiles and manned and unmanned aircraft. The other aerostat carries a radar used for targeting on tactical ballistic, large-caliber rockets and moving vehicles including boats, cars and trucks. An up-to three-year-capabilities demonstration test period is planned.



TCOM has announced its use of a new aerostat hull (envelope) fabric that offers in overall strength, strength-to-weight ratio, environment resistance against temperature and humidity and improved helium retention. Together these attributes enable TCOM aerostats to fly longer at high altitudes, in greater winds and with heavier payloads. TCOM is using the new material on its 71m High Block high aerostats including the Army & rsquo's. JLENTCOM has signed an agreement with Bharat Electronics Limited (BEL) in India for cooperation on developing advanced aerostat surveillance and communication systems to address the aerostat-based ISR requirements of the Indian Defense Services, security services and law enforcement agencies.

In May the Navy used its MZ-3A airship (A170) in demonstration flights for intelligence and surveillance operations in the Caribbean area against illegal drug smugglers, some of which use submarines. The airship was equipped with a Surface Optics full motion spectral imagers (FMV--SI) which has the capability to find submerged targets.

The Navy tested a unique combination of sea vehicle and aircraft in April in their search against drug smuggling in the Caribbean area. They used an Australian-built named Swift Ship (HSV-2) with a 76-foot-long aerostat tethered on the ship's deck to fly up to 2,000 ft. altitude and a small drone airplane. The aerostat is equipped with cameras and sensors to provide a 50-mile view.

Work by Northrop Grumman on the LEMV ceased on notification by the U.S. Army that the contract would be cancelled in February, 2013. Failure to meet the goals and a shortage of funds were reasons for cancellation of the contract and disassembly of the airship.

Airship Ventures Inc., based on the historic Moffett Field in California ceased operations in August, 2012. Their Zeppelin NT-07 airship *Eureka* was dismantled and returned to its owner ZLT Zeppelin in Germany. The cost of operation without supporting advertising was the cause for ceasing operations. World Wide Aeros continues to develop its hybrid rigid airship. "*Pelican*" is now named "*Dragon Dream*". Its hull incorporates an elliptical cross-section built with aluminum and carbon fiber composite structure. The hull shape is designed to develop dynamic lift more effectively than a conventional airship. Fabric covers the outer surface. A system to compress or expand the lifting gas has been incorporated. This will permit off-loading payload without taking on ballast. Three engines will propel the airship. Vectored thrust will assist in vertical takeoff and landing. The program is under government funding.

Lockheed Martin is developing a 290-foot SkyTug as reported in previous issues. It is now identified as the LMZ-1M. Further details have been revealed: Envelope has a tri-lobe shape with a volume of 1,285,000 cu. ft. It will be a hybrid design with four thrusters which can be vectored. It will have fly-by-wire controls and have an air cushion landing system capable of land and water landing and assist in ground handling. Its gondola will accommodate eight passengers and two crew. The large cargo bay and external load capabilities will handle most payloads up to 500 tons.

– Norman Mayer

Helium Roundup

Helium Reserve Faces Shutdown
By Kristina Peterson, WSJ (excerpt)

Industry officials have dubbed it the "helium cliff," a play on the year-end "fiscal cliff" deadline that Congress had to navigate last year to avoid broad tax increases. "The shortages we're experiencing today will be much worse" if the government program ended abruptly, said Walter Nelson, an executive at Air Products and Chemicals Inc. Congress has known for years about the difficulties involved in extricating the government from its decades-long involvement with helium, which includes operating the helium reserve along with a processing plant and 450-mile pipeline system. An abrupt closure of the federal helium program would trigger nearly immediate problems for industries reliant on the element, including aerospace, defense, high-tech manufacturers, medical equipment users and researchers. The biggest users of helium rely on its ability to reach very low temperatures, often in magnetic resonance imaging and scientific applications. "We're running out of time," said David Isaacs, vice president of government affairs for the Semiconductor Industry Association, which represents many companies that would be affected if lawmakers don't pass legislation extending the government's operation of the helium program.

The federally-operated reservoir will contain just under 11 billion cubic feet of helium in October, when the government is expected to finish paying off the debt, triggering the closure of the government's helium activities. In 2012, the Federal Helium Reserve produced 2.1 billion cubic feet, according to the BLM. Closing the reservoir would likely lead to immediate shortages that could translate into a spike in the price of helium and a rise in the price of technology goods. Although helium is the second most-abundant resource in the universe, its small molecular size makes it difficult to store. Helium is generally extracted from natural gas reservoirs, including in the U.S. and those overseas in Algeria, Qatar, Iran and Russia, though it is difficult and expensive to transport.

"There's simply not enough other gas in the U.S. to make up for the BLM [reserve] going dark," **Ω**

World helium shortage expected to balloon drastically
By Marc Lallanilla, NBC News (excerpt)

The United States is the global leader in helium production, producing about 75 percent of the world's helium. About half of that is stored outside Amarillo, Texas, in the country's Federal Helium Reserve, a vast subterranean complex of storage reservoirs and pipelines that extend to natural-gas fields as far away as Kansas. But the looming helium shortage is actually the government's fault, according to Science magazine. The U.S. Bureau of Land Management (BLM), which manages the Federal Helium Reserve, sells off helium at below-market rates, encouraging waste and discouraging the development of new sources. "If companies can buy the federal helium gas at a relatively low price, there is less incentive to develop it," physicist Moses Chan, a member of the National Academy of Sciences panel studying the helium reserve.

The Federal Helium Reserve got its start shortly after World War I, when helium was used to float military reconnaissance aircraft. Since then, helium has proven to be indispensable in a wide range of industrial and medical uses.

Magnetic resonance imagery (MRI) relies on helium to regulate the powerful magnets needed to create MRI scans, which are cooled to minus 452 degrees Fahrenheit (minus 269 degrees Celsius). Indeed, the fact that helium has the lowest boiling and melting points of all the chemical elements liquid helium is the only liquid that cannot be solidified by lowering its temperature is what makes it so irreplaceable in so many industries. Helium is also essential to the manufacturing of computer chips, optical fiber and medical lasers. It's often needed for rocket-engine testing, arc welding, air-to-air missile guidance and other civilian and military uses, according to the BLM.

There are some plans in place to address the current helium shortage, including a new helium plant in Wyoming and increased development overseas. And assuming that demand for helium remains strong, "new technologies for extracting and refining helium would bring new sources of helium to the market," according to the BLM. **Ω**

SHORT LINES

Fairbrother: Balloons Are Capable Of Reaching As High As World View Wants.

The ABC News (10/23, Farnham) website continued coverage of World View Enterprises' plan to send passengers up 19 miles to the "edge of space" via balloon. Debora Fairbrother, chief of the Scientific Balloon Program Office at the Wallops Flight Facility and also a member of the AIAA's technical committee on balloons, reportedly said balloons are capable of reaching this altitude as NASA "routinely" launches scientific balloons that weigh "many thousands of pounds" this high or higher. The article noted that Fairbrother also added that the balloons are relatively inexpensive, but the cost of helium is "pricey." **Ω**

World View To Start Selling Tickets For "Near-Space" Balloon Rides Soon.

Discovery News (10/22, Klotz) reports that World View is developing a "balloon-launched, near-space ride" for tourists, and expects to start selling tickets for the trips "within a few months." The company is an "offshoot" of Paragon Space Development Corp. While passengers will only travel to an altitude of 30 km, the FAA has ruled, "At Paragon's intended altitude, water and blood boil, and an unprotected person would rapidly experience fatal decompression. ... Regardless of whether 30 kilometers constitutes outer space – and the FAA renders no opinion on that questions – a person would experience the same physiological responses at 30 kilometers as if exposed to the environment of low-Earth orbit. Thus, Paragon's capsule will need to be space-qualified." According to documents, the company is "eyeing" launching from Spaceport America, but no determination has been made yet.

The Wall Street Journal (10/22, Pasztor, Subscription Publication) reports industry consultant Jim Muncy said projects like this one show how commercial spaceflight has become more viable and not just the province of a few groups. According to the article, the success of ventures like this one will be impacted by just how NASA and the FAA split regulatory powers. Some want the FAA to have more authority because NASA is viewed as a stricter regulator when it comes to manned spaceflight. **Ω**

Small UAV Could Be Used To Combat Dengue Mosquitoes.

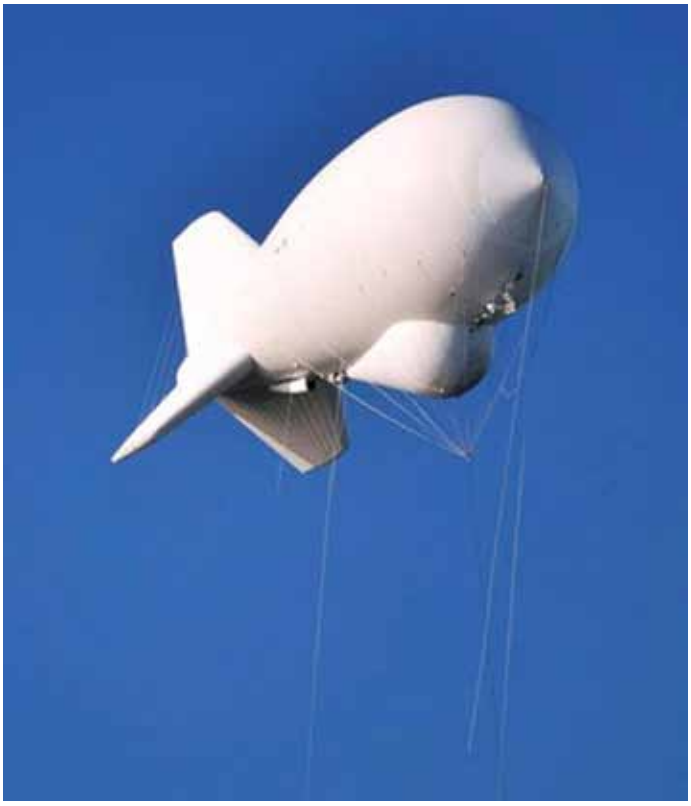
Reuters (8/17, Fagenson) reports on the Maveric UAV, a $65,000 two-pound aircraft being tested by Florida Keys officials attempting to combat mosquitoes. The *Maveric*, produced by Condor Aerial, can be outfitted with thermal cameras to find areas where mosquitoes lay eggs. The project would be used to target dengue, which infected 63 people in 2010. The *Maveric* still has to pass FAA approval. **Ω**

RosAeroSystems Displays Atlant Airship Model.

Flight International (8/29, Trimble) reported RosAeroSystems displayed a model of a hybrid airship, the *Atlant*, it wants to develop in the next four years at the MAKS air show. Ground test rigs for some of the systems have already been developed, but official admit there are some challenges to overcome before the airship will fly. The article noted RosAeroSystems is targeting those that need to fly cargo or people in Russia's remote Arctic regions.

Eastern UFO Sighting Attributed To Google Loon Project.

The Discovery Channel (8/19, Radford) reports an unidentified flying object reported in Kentucky, Virginia, and Tennessee was a balloon used for Google's Project Loon web-connectivity program, intended, according to Google, to connect people in rural and remote areas, help fill coverage gaps and bring people back online after disasters. The Google Loon balloons would allow connection to the Internet by using a special Internet antenna attached to their building, which would picking up on a signal bouncing from balloon to balloon, then to the global Internet back on Earth. Discovery opened the article by describing various different theories behind unidentified flying objects. **Ω**



TCOM President Says There Is Rising Demand For Aerostats.

The Washington Business Journal (8/30, Aitoro, Subscription Publication) Fedbiz Daily interviews TCOM President Ron Bendlin, whose company is building the aerostats that may be used to detect any missiles heading for Washington, DC. Bendlin said he has seen a growing demand for these types of products especially for surveillance operations. While deferring on talking about the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS), Bendlin did think aerostats could be easily applied to border security. **Ω**

US military's airship programs lose altitude
By Daniel De Luce (AFP).

The US military has invested billions in blimp-like aircraft to track militants planting roadside bombs but the spyship experiment is losing altitude because of technical failures and changing priorities. The lighter-than-air projects were billed as an innovative revival of an old aircraft design to conduct "unblinking" surveillance on the battlefield -- at a fraction of the cost of fuel-guzzling planes or helicopters.

The Pentagon invested $7 billion in airship programs between 2007 and 2012, but the funding has mostly dried up amid budget cuts and embarrassing setbacks. The LEMV, manufactured by Northrop Grumman, was supposed to be equipped with sensors that could track enemy mortar rounds, withstand small arms fire with special material and also serve as a cargo ship that could handle up to 20 tons of supplies. Northrop Vice President Brad Metzger promised it would "redefine persistent surveillance."

After falling behind schedule, the 300-foot-long (90 meters) airship ran into major trouble after its first flight at Lakehurst Naval Air Station in New Jersey in August 2012. It turned out to be 12,000 pounds (5,400 kilograms) overweight because of problems with its tailfins and other systems, according to a report from the Government Accountability Office, the investigative arm of the US Congress. The weight problem meant that the craft could not stay in the air for three weeks as planned at an altitude of 20,000 feet, but only for four to five days. After the first test, there was a post-flight review and engineers came with up "with a long list of things that needed to be repaired," said John Cummings, an Army spokesman. **Ω**

Army lets air out of battlefield spyship project
By W.J. Hennigan.

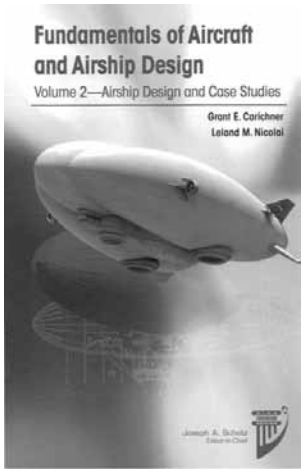
Near the height of the Afghanistan war, the Pentagon spent $297 million on a seven-story blimp-like aircraft — as long as a football field — that would hover over the war zone for weeks at a time, beaming back crucial intelligence. The aircraft fell behind schedule, became 12,000 pounds overweight and was ultimately canceled after just one test flight. Last month, the Pentagon quietly decided to sell back the sophisticated spyship to the British company that built it for $301,000 — a fraction of its investment.

The Army maintains that technical data and computer software for its airship program will be useful for future projects. They say selling the aircraft will save them money in the long run. "We learned quite a bit from the technology," said John Cummings, an Army spokesman. "In the end, it was determined not to pursue it."

"We feel that getting a hybrid airship to first flight in such a tight timeline was an accomplishment unto itself," said Timothy Paynter, a Northrop spokesman.

Hybrid Air Vehicles declined to comment for this story. **Ω**

MEDIA WATCH



As a co-author of the book "Fundamentals of Aircraft and Airship Design, Volume 2-Airship Design and Case Studies," I read with interest the review of my book by Al Robbins in the Fall 2013 edition of The Noon Balloon. Mr. Robbins writes that he hoped to learn what happened to airships in the last 60 years. Unfortunately, Mr. Robbins appears to have misunderstood the purpose of my book. As it states in the book's preface, the book was written as a comprehensive design guide on the fundamentals of designing an airship. Its target audience is college seniors, graduate students, and practicing engineers. The book was never intended for the lay person, although a number of chapters are basic enough for readers without a technical background.

Mr. Robbins writes that the book includes several hundred pages of case studies unrelated to LTA. Actually, Case Study #5 is about the trials and tribulations of bringing a hybrid airship to operation. The other case studies can easily be read by people with non-technical backgrounds to give them an appreciation of what it really takes to bring a conceptual design to a final operational air vehicle. Although these nine case studies are about different air vehicles, they all have a common theme of the difficulty and perseverance needed for success.

Contrary to Mr. Robbins' assessment, it is not the case that the book's primary focus is hybrid aircraft. There are 13 chapters in the book of which the first 10 can be applied to either conventional or hybrid airships. One chapter is dedicated to conventional designs and one chapter is dedicated to hybrid designs. The final chapter is an excellent chapter on designing balloons written by a NASA balloon expert.

Mr. Robbins observes that the book does not discuss how to adjust or regulate aerodynamic and aerostatic forces, which are inherently incompatible. Actually, the book contains numerous discussions about the importance of aerodynamic lift which changes instantaneously with angle of attack. There are no discussions of regulation of aerostatic forces by, for example, changing buoyant lift mechanically by compressing helium. That is because such buoyancy control schemes are in the distant future and quite possibly will never be light weight enough to be useful for airship operations.

Mr. Robbins states that buoyancy is strongly affected by changes in ambient pressure, temperature, and humidity. This statement is only partially true. Pressure does significantly affect buoyancy, hence the need for a ballonet. However, temperature effects have much less of an impact on the change in the buoyant force. Lifting gases in airships are rarely heated and sun heating (superheat) is only a modest correction to the buoyant lift (less than 2%). Similarly, relative humidity is even less of a correction to the buoyant force (less than 0.5%). These concepts are discussed in detail in chapter 2 of the book. Mr. Robbins also incorrectly states that the Center of Buoyancy is variable depending on shape, location, pressure, and temperatures of its several gas cells and ballonets. In fact, the center of buoyancy (CB) is defined as the location of the centroid of the immersed shape. This does NOT change with internal gas attributes or arrangements (see Figure 3.10). What can change is the location of the resultant buoyant force. This force is often placed at the CB with its associated moment. This confusion is common.

Mr. Robbins was disappointed there was no discussion on monitoring and controlling airship movement or discussions about sensor, display or man-machine interface. But these subjects are not part of the conceptual design phase, which is the focus of the book. They are typically integrated into the design in the next phase (preliminary design). Airship movement itself is discussed in great detail in chapter 10. Mr. Robbins opines that "aerodynamic lift is a minor player." Actually, aero lift is an important aspect of airships because it is what allows them to function efficiently. Without aero lift, all airships could only operate as powered balloons! Aero lift is typically about 5% of buoyant lift for conventional airships and anywhere from 10% - 40% for hybrid airships. This concept seems quite important to me.

Mr. Robbins states that "both aerodynamic and aerostatic forces are capable of large rapid changes." This is true for aerodynamic forces but large aerostatic force changes are difficult to generate and very difficult to change rapidly! Mr. Robbins is particularly off base

with his statement that the book contains no methods of minimizing, monitoring, or controlling drag or of advances in vehicle dynamics. In fact, Chapter 3 devotes much space to showing the effect of Reynolds Number and body fineness ratio on minimizing drag. What is really troubling is Mr. Robbins' expectation that one can monitor or control drag. Anyone with an aerodynamic background knows that there is no known way of measuring drag in flight and controlling drag is not a fundamental design issue! Vehicle dynamics are much better understood now than 50 years ago. Chapter 10 addresses the stability, control, and handling qualities of modern airship designs.

Overall, I was disappointed that Mr. Robbins' review did not reflect an understanding of the book's main focus, which is fundamental design, and that he mischaracterized the book as overlooking concepts which it did in fact discuss. I agree that the historical background could have been much more detailed but what is included in Chapter 1 is sufficient for the purposes of this textbook.

– Grant Carichner

Ed. notes The AIAA publication AEROSPACE AMERICA, for which our own Norman Mayer produces the annual airship summary, devoted its back cover to promoting the book by Leland Nicolai and member Grant Chrichner previewed in TNB 98 and Norm Mayer reviewed in TNB 99. **Ω**

In the September issue of "Combat Aircraft - monthly", within three pages of the back page, is a one page article about the US Army/Northrop LEMV. There is one photo. The author seems to have missed the journalism class regarding "who, what, when, where, & why". I declined to pay $8+ for a magazine with more photos than content though there were some nice aviation photos. What struck me was the similarity to a comment by Sir Samuel Hoare (Lord Templewood) to the effect that Burney's propaganda had people believing that airships would be flying in a few months. Also a line about how the first prototype is always heavy and the second one loses weight from lessons learned on the first. **Ω**

– C P Hall


A BRIEF HISTORY OF THE . . .

Airship

From glorified balloons to high-tech military vehicles, we look up the flighty past of dirigibles. BY AMANDA ROSEN

THIS ZEPPELIN AWAIT!

1783: Inventors Jean Pierre Blanchard and John Jeffries are the first to cross the English Channel in a hydrogen balloon. After nearly crashing, they lighten the load by bidding adieu to supplies, decorative oars, and even their pants.

1852: Henri Giffard flies full steam ahead—17 miles at 6 mph—in the first steam-powered, steerable airship.

1895: Count Ferdinand von Zeppelin patents a rigid airship that combines balloon gas cells with a structural framework.

1925: After years of providing rubber envelopes for other airships, Goodyear launches the *Pilgrim*, the first in a fleet of iconic helium-filled blimps. The company soon goes on dirigible duty for the U.S. government.

1937: The *Hindenburg*, the world's largest passenger zeppelin, bursts into flames while landing in New Jersey after a trans-Atlantic flight. The disaster kills 36 people as well as the luxury-airship travel industry.

WHO NEEDS A STAIRWAY? I'VE GOT AN AIRSHIP!

NO TICKET.

1960: Televised sports gets a blimp's-eye view when the Goodyear blimp flies its first game at Miami's Orange Bowl.

1968: Keith Moon, drummer of The Who, predicts that guitarist Jimmy Page's new band will "go over like a lead balloon." Inspired, Page calls the group Led Zeppelin.

1981: In *Indiana Jones and the Last Crusade*, Indiana and his father flee Germany on a commercial zeppelin. A Nazi tries to stop them, but his plans are deflated when Indy throws him out the window.

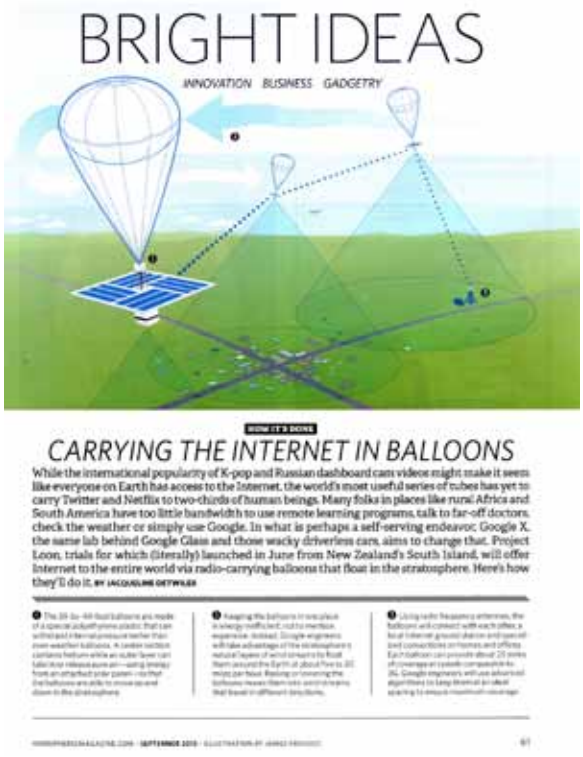
2009: In the Disney-Pixar animated film *Up*, a cranky widower ties thousands of balloons to his house and takes flight. Three years later, cluster-balloonist Jonathan Trappe tries the stunt himself and soars 20,000 feet in the air.

2012: Big Blimp is watching you. The U.S. Army launches a hybrid airship that can provide surveillance of an area for 21 days nonstop. The program is killed within six months.

2013: More than 75 years after ending their partnership during World War II, ZLT Zeppelin Luftschiffbetrieb and Goodyear return to replace Goodyear's blimps with a fleet of quieter, faster zeppelins that are still called Goodyear blimps.

AND BEYOND: Igor Pasternak, president and CEO of Worldwide Aeros, plans on building a 500-foot-long airship that can carry 66 tons of cargo.

(Above) Popular Science monthly devoted a full page to its take on airship history. (Below) Hemispheres helped entertain travelers with a page devoted to Google's


BRIGHT IDEAS

INNOVATION BUSINESS GADGETRY

HOW IT'S DONE

CARRYING THE INTERNET IN BALLOONS

While the international popularity of K-pop and Russian dashboard cam videos might make it seem like everyone on Earth has access to the Internet, the world's most useful series of tubes has yet to carry Twitter and Netflix to two-thirds of human beings. Many folks in places like rural Africa and South America have too little bandwidth to use remote learning programs, talk to far-off doctors, check the weather or simply use Google. In what is perhaps a self-serving endeavor, Google X, the same lab behind Google Glass and those wacky driverless cars, aims to change that. Project Loon, trials for which (literally) launched in June from New Zealand's South Island, will offer Internet to the entire world via radio-carrying balloons that float in the stratosphere. Here's how they'll do it. BY JACQUELINE DETWILER

experiments with high altitude data LTA.

The October 25 issue of General Aviation News features both an article about Goodyear's *Spirit of Goodyear* retiring to Florida and a profile of Ed. and wife Deborah's airship history publishing efforts. **Ω**

HISTORY

A Memorable Flight By Ross Wood

Every pilot or air crew has a memorable flight. One which you do not forget, no matter how many years have passed. I had three of them, and this is the one that sticks in my mind the most vividly. Before beginning, I need to honor an outstanding book, The Airship Experience by Hans Von Schiller, Ducky Ward, Charlie Mills, C.E. Aldrich & Lundi Moore, with a Forward by Rick Zitarosa. It was Lundi Moore s section that discusses the flight I wish to write about. Lundi was one of the best post war LTA pilots and it was my privilege to know him and fly with him. Having said that, I will say that my memory of the flight and Lundi s differ in minor ways.

The story begins on March 27, 1959, at Lakehurst, N.J. Squadron ZW-1. ZW-1 had a ZPG-2W moored on circle 5, on the mast, with a low pressure system approaching. Snow and freezing rain were forecast. Wind direction and velocity prevented docking of the ship since the previous day. Shortly before 1600, a decision was made by Squadron C.O. B.B.King to fly the ship south if snow and ice begin to accumulate on the envelope. Lundi Moore is the designated Aircraft Commander. I was in the pilot ready room, getting ready to go home, when Lundi walked in and said Wood, do you want to volunteer for this flight? I was never sure if Lundi ever did know my first name, but that is immaterial. Two members of Lundi's crew had already volunteered, LTJG. Gerry McOmber & LCDR Tom Pugh. I was not a member of Lundi's crew and had just been designated Aircraft Commander in the 2W a couple of weeks before. In any event I said I would volunteer, and called my wife, Ileana, to tell her I would not be home for dinner. She was use to those calls. From Lundi's record, the other crew members were mech AO3 Sctirioni, electronicsman AT3 Banks, electrician AE2 Schneider, and AM1 Dulin, the rigger. All are volunteers. I changed into my winter flight suit, and started getting up to speed on what was happening.

The ship, #137832, had 8,800 lbs of fuel aboard. As Lundi wrote in his account, useful lift was 7,500 lbs, but with fuel, minimum crew & provisions, and allowing for snow & ice load we are at least 8,000 lbs heavy. By 1900, there is no question about flying the ship out - or watch it collapse on the circle. Lundi and CDR King climb up in the access tunnel to the height finder dome, and visually look at the accumulation of snow & ice. The temp. is slightly below freezing, so the weight of the obvious accumulation is difficult to judge. The oleos and tires are showing the weight. The oleos are showing 3 to 4 inches. At 2100 the crew is onboard and we are being towed to take-off position on the mat. The wheels are having a hard time castering during the towing.

Lundi has put me in the right seat. Before coming off the mast, Lundi and I talk about dropping the slip tanks, and or dumping fuel from the starboard main tank, should it become necessary. The forward ballonet is full, forcing lift aft. It is totally dark and the landing lights, once airborne will be of little use, with snow still falling. At 2110, I call Lakehurst tower for take-off clearance and we begin our take-off roll, to the northwest. X.O. CDR Clem Williams is on the starboard side of the 832, jogging in the snow, and waving us on. Acceleration is very slow, and despite Lundi holding the yoke full forward, the nose is rising to a point where I know the tail fins are dragging through the snow and ice behind us. My hand is on the slip tanks release. As we accelerate, the thought goes through my mind that we will be taking off right over the Marine barracks. The ship finally lifts off, but the nose continues to rise. I know that angles of attack are prone to exaggeration, but I felt we were at 50 to 60 degrees nose up. Behind me I can hear the noise of things falling in the car, and I know the air crew are hanging on to anything they can. We are at full power, but the airspeed is approaching zero. I am guessing that the tail fins may be 200 feet above the buildings below us. Both Lundi & I are thinking that dropping the slip tanks, would be a disaster for the people below us. We are literally hanging on the props.

As Lundi said in his account, there were eight people who wondered why they had volunteered. I glance at the rate of climb gauge, and it is going slightly negative. Lundi calls for opening the main tank dump valve. I

open the valve and call Lakehurst tower to advise that we are dumping fuel over the vicinity of the Marine barracks and to advise the Base Fire Dept. We can only hope the fuel vaporizes rapidly. I watch the main fuel tank gauge slowly declining. There are 2,600 lbs of fuel in that tank. We dump 2,000 lbs. The rate of climb begins to go positive. We really have very little directional control, but the wind is carrying us to the southeast.

We are assuming that the snow and ice aft of the height finder radar may have shifted aft, and hung up in the cup of the upper tail fins. Lundi is finally able to reduce power to 40 inches and maintain altitude somewhere between 300 & 500 feet. The angle of attack is still ridiculous, but has improved and we have some directional control. With the fuel cross feed on, we are able to valve off some more fuel and eventually dump a total of 3,300 lbs. Power is reduced to 33 inches. We are approaching Atlantic City. ZW-1 radio advises us that a landing party from Lakehurst will depart at 0600 and fly the R4D to Marine Cherry Pt., where we have an emergency mast.

The night passes slowly, and before dawn, Lundi takes a break, and I move into the left seat, with Gerry McOmber in the right seat As the sun comes up, we are just coming up on Chesapeake Bay. At this point, an amazing thing happens. All the snow and ice begins to melt and it is like being parked under a waterfall. A surprising amount of water is coming down the sides of the envelope, forward of the car. Our trim, airspeed, control, & power settings improve dramatically. The downside is we find ourselves getting light, very quickly. We start setting up for water pick-up and eventually pick up 3,500 lbs of water. Lundi is back in the left seat and we prepare for landing at Cherry Pt. MCAS. CDR Clem Williams has flown in with the landing party and has organized the Marines to assist in the landing. Lundi valved helium for 60 seconds on final, and a quick weigh-off showed we were slightly heavy for landing.

The landing was uneventful, and we were soon on the mast and 20 some Marines climbed aboard and stood in the CIC compartment for ballast. It was a very tired crew, but we saved the ship, and felt good about what we did. Truly, a Memorable Flight! **Ω**

Next Page: One of the signs co-sponsored by NAA and LTAS for erection in Ohio. Ω

At least three current NAA members were on the crew that made the last airship *[ZPG-2]* trip to the west coast. **Bob Mangassarian**, one of our newest members, sent me a trove of photos, newspaper clippings, and other personal memorabilia of his two year involvement with BuNo 141561, known variously as the *SNOWBIRD*, *Falcon*, or the *Klinker* ship. We removed the experimental low-frequency radar (AN/APS-70 (XN-1)), and other classified experimental systems before the *SNOWBIRD* left South Weymouth in March of 1957 on its record-setting flight across the Atlantic and back to Key West. I left NADU in May and the ship wasn't back yet. Apparently *SNOWBIRD* was reworked and modified at O&R Lakehurst to support the *Klinker* installation before it was returned to NADU in South Weymouth. Notice the flat bottom on the belly "radome". Perhaps one of our members remembers if the *Klinker* ship had any radar - it certainly did have the APs-70, or the usual ZPG-2s APS-20 installation. Bob was an AD (Mech), and a regular member of the 561 crew for most of his tour at NADU. He also participated in two complete engine changes on the West Coast. Definitely not a sailor-friendly task. The *Klinker* equipment appears to have been operated and maintained by civilians from Lincoln Lab; he didn't remember any of their names. Unfortunately the most productive uses of airships after the Korean Armistice, was in support of basic and advanced research programs, primarily supporting the Air Force and NASA. Neither OPNAV nor the Fleet had any particular interest in airships. The two airships, one at Lakehurst, the other at NADU were the only Navy airships still in use after September 1961. It's a shame, the large airships were the only platforms which could have placed and recovered the large active sonobuoys which the Navy unsuccessfully attempted to develop over the next three decades. A couple stationed off Cuba could have saved millions in fuel for P-2s, A-3s, and the Atlantic Fleets photo-recce squadrons during the Cuban Missile Crisis. (I was staff Avionics officer at COMFAIRJAX at the time; I didn't know that the Navy had already pulled all the blimps out of War Reserve Storage, de-milled and scrapped them.)

– Al Robbins, outgoing Chairman

WRECKAGE SITE NUMBER 3
OF THE U.S. NAVY AIRSHIP SHENANDOAH

ERNEST NICHOLS FARM
SEPTEMBER 3, 1925 • NOBLE COUNTY, OHIO

The USS *Shenandoah* made its maiden flight on September 4, 1923. An impressive achievement, it had cost the government $2.9 million to construct. America's first lighter-than-air rigid airship, designated the ZR-1 (Zeppelin Rigid 1), was christened by the wife of the Secretary of the Navy, Mrs. Edwin Denby, on October 10, 1923. A native of Virginia, she gave the airship the name *Shenandoah*, which means "Daughter of the Stars" in the Algonquian Indian language.

Stern section – near Ava, Ohio

In addition to being the first rigid airship constructed in the United States, the *Shenandoah* was also the first to be inflated with non-inflammable helium and the first to be moored to a mast mounted on the surface ship, USS *Patoka*. Built for the U.S. Navy as a scouting vessel and a flying laboratory, *Shenandoah* participated in maneuvers, but because of its elegant form, was often used as a showpiece for the Navy. Flights to Virginia, Buffalo, N.Y., New York City, and St. Louis were included in the airship's itinerary.

Components of the *Shenandoah* were built in Philadelphia and Akron, Ohio. It was assembled at the Naval Air Station at Lakehurst, N.J. When completed, the majestic airship was 680 feet in length, 78 feet at its maximum diameter, and 93 feet 2 inches in total height.

The ship had 41 longitudinal girders and 19 circular frames made of lightweight duralumin alloy, of which there were 400,000 pieces in the ship's framework. The airship's hull was enveloped by a cotton outer cover coated with aluminum paint. Under the cover were 20 gas cells, made of cotton lined

with gas-impermeable "goldbeaters skin," the stomach lining of oxen, which were attached to the framework by 20 miles of cordage. Five Packard engines, each rated at 325 horsepower,

gave the ship a cruising speed of 50 knots. Fuel for the engines was supplied by 40 fuel tanks, with a total capacity of 4,424 gallons. *Shenandoah*'s hull volume was 2,300,000 cubic feet, its empty weight 80,400 pounds, its useful load 44,100 pounds.

Bow section – Ernest Nichols farm Sharon, Ohio

The most spectacular of the *Shenandoah*'s 59 voyages was a 1924 transcontinental flight. Departing from her base at Lakehurst, the "Daughter of the Stars" crossed the continental divide, flew to San Diego, then continued up the west coast to Seattle before returning home. A subsequent article about the flight in National Geographic magazine further enhanced the reputation of the *Shenandoah* in the public's eye.

Shenandoah's captain was Ohio native Lieutenant Commander Zachary Lansdowne, who was born and raised in Greenville, located in Darke County. After Graduating from high school, Lansdowne entered the United States Naval Academy at Annapolis, Maryland, and graduated in the class of 1909. Lansdowne received aviation training at the Naval Air Station, Pensacola, Florida; airship instruction at Akron; and was designated a Naval Aviator after completion of training at air stations in England. On February 16, 1924, Lansdowne became the *Shenandoah*'s commander. A soft-spoken, unpretentious leader, Lansdowne was widely admired and respected by his officers and enlisted men.

Control Car – Andy Gamary farm near Ava, Ohio

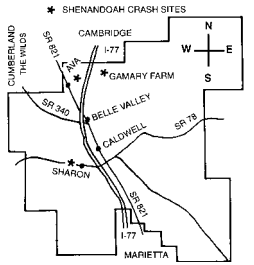
On the evening of September 2, 1925, the *Shenandoah* began what would be its final flight. A six-day itinerary, including 40 cities and five state fairs, had been arranged by ambitious Navy publicists eager to "show" the ship to the populace.

Early on the morning of September 3, the *Shenandoah* was met by a violent thunderstorm over the hills of southeastern Ohio. Winds tore the ship in two and sent the control car plummeting to earth, crashing on a farm just east of present-day Interstate 77. The stern section of the ship floated to the ground, landing in the valley less than one mile west. The bow remained aloft, floating about 13 miles to a farm east of Sharon, where Ernest Nichols tied it down, ending a horrifying ride for the seven men aboard that section.

Fourteen crew members, including Lt. Cmdr. Zachary Lansdowne, perished in the crash. Ironically, this Midwest flight of the *Shenandoah* was to have been Lansdowne's last flight: he was scheduled to report for sea duty in the fall of 1925 to meet a requirement for promotion to the rank of full commander.

Remarkably, 29 men survived, proving the wisdom of the decision to inflate the *Shenandoah* with helium. Also lost, to a large extent, was the Navy's lighter-than-air program, as the military's emphasis shifted to airplanes in the wake of the crash. Surviving were memories – memories of a magnificent airship, its gallant crew, and the history they together made.

Site 3 is owned by the Ernest Nichols family and maintained by the Noble County Historical Society. Text for this display developed by the Noble County Tourism Association. For more information call (740) 732-5681.



Sign provided and sponsored by the Naval Airship Association and The Lighter-Than-Air Society of Akron, Ohio.

The Historians' Letters (Part II)
By Roy D. Schickedanz

Having been drafted into the United States Army in the Fall of 1965, finding myself being trained as a radio-teletype operator of High Frequency (HF) equipment, it was either ANG-46 mounted on a three quarter truck or ANG-26D on a duce and half truck having both voice and teletype capabilities. Settling into my permanent party at 93rd Signal Bn located on the Cambrai-Fritish Casern in Darmstadt, Germany. After making pilgrimage to Friedrichshafen on the Bodensee, I decided to write Dr. Topping of The Lighter-than-Air Society, receiving a reply early June 1967 with a lengthy one-page letter proving people and places to visit:

"Next, a list of people you might visit. Well, first let me suggest that there are a couple of other museums besides the one in Friedrichshafen that you might visit which have LTA exhibits. First, the Deutsches Museum in Munich-I've see this myself and they have some excellent thing. Second, I am told there is a Zeppelin room in the Hamburg airport at Fuhlsbuttel (there are some umlauts on that last but I forget where they go). Third, I understand the Daimler-Benz Co. in Stuttgart has an interesting museum which includes some airship engines. Stuttgart is also where Count Zeppelin is buried. Fourth, if you can get over there, don't miss La Musee de l'Air at Chalais-Meudon, just outside Paris. (If you buy a ticket on the commuter train, get a ticket to Meudon. If you say Chalais-Meudon, it will take the ticket-seller a while to figure out that to want to go to Meudon, especially if you don't know it yourself).

Well, as for people, we have lots of German members. I'd suggest Klaus F. Pruss, son of Capt. Max Pruss, who lives at Frankfurt/Main, not far from Darmstadt. The street address is Keplerstrasser 28. Before I forget it, let me also mention Th. E. Santschi, Alpenstrasse 64, Wabern-Be (suburb of Bern), Siwtzerland, who has invited any member of the Society to visit him while in Europe. He has, I believe, a very fine private museum, all LTA mostly ballooning rather than airships, however. Pruss, I know, speaks excellent English, and I expect that Santschi does, too. The other people I will mention I am not sure of. Wolfgang von Zeppelin, Primelweg 2, Kirchheim-Teck (I this is near Stuttgart), is a young man probably about your own age. He is interested in balloons as well as airships and recently piloted a new balloon named GRAF ZEPPELIN for the Stuttgart Balloon Club. The Society (WLAST) contributed a modest amount toward the cost of this balloon, launched in March on the anniversary of Count Z's death. A. F. Weber, 53 Belchen Strasse, Karlsruhe, is an LTA enthusiast who knows many people you might like to meet, including Capt. Hans von Schiller, Osterholzweg Haus Anna 1, Stockach. Hosrt Hassold, Ballonfabrik Augsburg, Jungklaass, Bergische Landstrasse 2, Dusseldorf, gas been an active participant in attempts for a German airship society. Capt. H. Guldsdorf, Schloss-strasse 1, Mulheim-Ruhr is a German blimp pilot. There are more, but these should be enough."

I quickly wrote Alfred Weber of Karlsruhe, receiving a reply date June 25, 1967:

"Many thanks for your letter from June 23. I have a large collection in LTA things in particular books and plenty of fotos. My first department of knowledge are rigids in Germany and USA and Great Britain, then the Blimps. If I can do something for you, of course I shall do it with pleasure. Yes, I know Mr. Hans von Schiller and his family and I enclose a photo which I have taken at Friedrichshafen in 1964. The same photo I shall send Mr. von Schiller in the next days and please for an autograph for you. I saw him last time on March 8 at Stuttgart on the 50th anniversary of the death of Count Ferdinand von Zeppelin. Hans von Schiller wrote a book last year: "Zeppelin-pioneer of world-air-traffic" which was published some months ago. It was very interest to hear that you are the editor of bulletin "The non-rigid in Combat." Is it possible to subscribe to it and under what conditions? About this subject I have only the booklet "They were dependable" from the LTA Society. A friend from New Jersey sent me a small piece of a girder of a ZPG-2W last week. In my collection I have, too, the books of Mr. Robinson (The Zeppelin in Combat and HINDENBURG) and the Smith's book about AKRON and MACON. If you go to Germany I am glad to see you, of course. I hope we can understand, my English (spoken) is not bet. Written it is better. I esteem Mr. Dr. Topping. He is doing very much for LTA-things."

- To be continued

ZP-1 MAKES FIRST FLIGHT — On Jan. 3, 1960, ZP-1 launched their first flight. The new squadron came into being that same morning when ZW-1 was redesignated as ZP-1. The initial flight of the squadron was a ASW training flight. The airship and crew were airborne for 38.5 hours. The airship crew (l. to r.) top row: L. R. Hendricks, AD3; Q. Doll, ADC; Lt. B. L. Fish; Lt. Cdr. R. W. Widdicombe; Lt. (jg) E. S. Pietrazk; Lt. Cdr. C. H. Mohr; Lt. (jg) G. W. Apgar; Lt. D. G. Champlain; R. L. Pierson, AE3. Bottom row: E. D. Lane, AE2; L. L. Ruby, ACW3; K. D. McIver, AO3; I. B. Seigle, AC2; D. J. Woven, AT1; F. H. Pooler, AT2; H. J. Siegfried, AT2; G. J. Davis, AM3 and N. J. Blackbrough, AT3.

In the requested effort to compile a list of all those lost in USN LTA service, Ed. had been sloppy and left off the tragic storm loss of ZP-22's K-133 off Houma.

K-133 crew drowning 19 APR 44: Ensigns Arthur Clelee, H. O. Dyste, G.A. Foster; AOM3 W.J. Fitzgerald; ARM2 J. E. Byrne; AMM2 G. D. Adams; ARM1 K.S. Blau; BM2 J. F. Ostrowski; AMM1 V. J. Hanninen (1 surv.)

Just as tragic to their loved ones, non-crew losses should also be noted and remembered. Though we will never have a complete list when all ground accidents - prop strikes, runovers, falls, electrocutions, helium dives gone wrong – are included, other members may be able to fill in the blanks. When making the DVD "The Flying Carriers," Ed. noted Harold Edsal and then Nigel Henton had dropped to their deaths from USS *Akron's* spider lines.

"Torp" Toleno filled in a number of the blanks for those lost in the 3W accident. **Jim Terra** wrote, "I was a member of CAC Crew 103 in ZW-1 and had flown a number of flight hours in the ZPG-3W BuNo 144242. Two of the three survivors of the 6 July accident off Barnegat Light in NJ were AE2 Joe Culligan and AE3 Tony Contreras.

The total flight crew with rank are listed below:

LT	J.J. Saniuk
LT	W.J. Carey
LT	W.E. Jennings
LT	R.H. Clapper
LT	O.V. Montgomery
LTJG	R.V. Hall
LTJG	R.E. Leonard
ENS	R.H. Pipes
GM1/AT	L.J. Coutu
AD1	F.E. Blalock
AT1	F.J. Rosley
AD2	S.B. Thompson
AMS2	F.A. Furney
AT2	B.O. Garrison
ACW2	E.B. Turner
ATN3	J.E. Shabel
ACW3	R.C. Kussel
ACWAN	H.V. Godbold

This was a tragic day in my tour with ZW-1. I hope this information helps clarify the records. This airship was also involved in another crash when the landing gear failed. I was on that flight." **Ω**

BLACK BLIMP

Bryan E. Rayner, 56, of Ava, Ohio, passed Sept. 19, 2013. He was a 1975 graduate of Shenandoah High School and the Guernsey-Noble Vocation School's auto mechanic program. Mr. Rayner, along with his wife, Teresa, operated a mobile museum dedicated to the history of the USS *Shenandoah* airship, which crashed in Ava in 1925. He was a well-known local historian who promoted the history of the *Shenandoah* and the Ava community. His museum displayed a great deal of memorabilia, including pieces of ZR-1 wreckage. In addition to his mother, he is survived by his wife, Theresa E. Perkins Rayner, two daughters, one sister, one grandson, several nieces, nephews, cousins, and many, many friends. **Ω**

Arthur V. Van Nostrand, 83, of Green Cove Springs, FL, passed on September 18, 2013. He was born in Farmingdale, NY, on September 21, 1930. He was a decorated CPO and retired after 27 years of service. He was an active member in his community, volunteering in politics and Naval RAO Counselor. In lieu of flowers the family has requested a donation be made to the Disabled American Veterans (DAV) organization. **Ω**

William D. Harkins, 86, passed February 5, 2013. USNA '48, USNPS and Calif. Inst. Of Tech graduate, Bill received a 1972 Management Improvement Award from President Nixon. Active in NAA, AIAA, and other organizations. William is survived by his wife Grace, a son and daughter, and grandsons. **Ω**

Robert Forand, 91, passed on September 17. As a naval command pilot in World War II, Bob led his blimp crew on patrols along the eastern seaboard. He was active in the Naval Airship Association (NAA), the Lighter-than-Air Society (LTAS), Disabled American Veterans (DAV), and the Veterans of Foreign Wars. He served as Commander of the American Legion, Post #99, and was a founding member of the Museum of Naval Aviation in Pensacola, FL. As a private pilot, he was an active member of the Quiet Birdmen (QBs), and he flew missions for Civil Air Patrol and Air Life Line, assisting patients in New England who needed to access critical medical services. Robert is survived by his wife of 70 years Mary (Nielsen), a son and five daughters, He is survived by 22 grandchildren, 19 great-grandchildren, many nieces, nephews and special friends. **Ω**

Robert C. Kiefer, 83, passed August 5, 2013. Robert was designated a Naval Aviator in 1957, joining ZW-1 flying AEW patrols. He continued to fly occasionally until just before his death. Robert had a business career in the steel industry. He is survived by his wife of 37 years Norma Louise, two daughters and two sons, and several grandchildren. **Ω**

CIVILIAN FRIENDS: Will leave you behind if that's what the crowd is doing.

VETERAN FRIENDS: Will stand by you no matter what the crowd does.

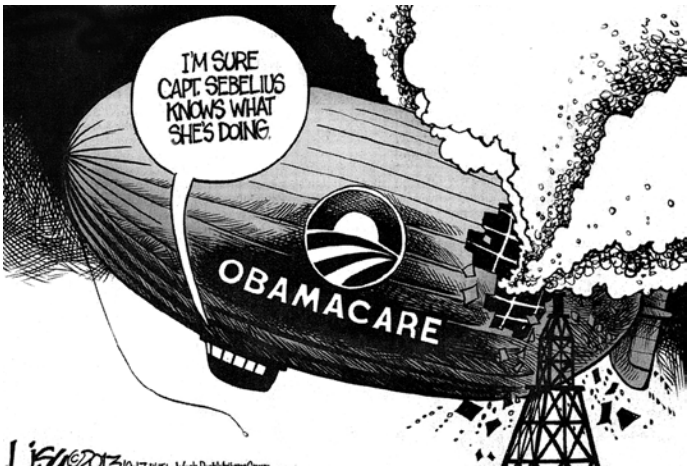
CIVILIAN FRIENDS: Are for a while.

VETERAN FRIENDS: Are for life.

CIVILIAN FRIENDS: Have shared a few experiences...

VETERAN FRIENDS: Have shared a lifetime of experiences no citizen could ever dream of. **Ω**

LIGHTER SIDE



In a democracy it's your vote that counts. In feudalism it's your count that votes. ☺

A depth charge inadvertently dropped into a kitchen in Cures, France, resulted in Linoleum Blownapart. ☺

I thought I saw an eye doctor on an Alaskan island. But it turned out to be an optical Aleutian. ☺

Did you ever notice: When you put the 2 words 'The' and 'IRS' together it spells 'Theirs...' ☺

A penny saved is a government oversight. ☺

Two silk worms had a race. They ended up in a tie. ☺

I wondered why the baseball kept getting bigger. Then it hit me. ☺

The easiest way to find something lost around the house is to buy a replacement. ☺

Two fish swim into a concrete wall. One turns to the other and says 'Dam!' ☺

The older you get, the tougher it is to lose weight, because by then your body and your fat have gotten to be really good friends. Did you ever notice: The Roman Numerals for forty (40) are XL ? ☺

If you can smile when things go wrong, you have someone in mind to blame. ☺

The sole purpose of a child's middle name is so he can tell when he's really in trouble. ☺

He who hesitates is probably right! ☺

"The air is an endless ocean, that touches every door. We need an airship that can sail this ocean." *Cloud Lab* Skyship (page 16) over the Indian River, central Florida, as seen from the cockpit of EAA Chapter 866 member Lennie Duncil. BACK COVER: Oddly, cluster balloonist Jonathan Trappe, attempting his float across the Atlantic passed near the Editor's cruise ship the same day our vessel made her closest pass to the resting place of HMS *Titanic*. Happily the Atlantic attempt was called off and the balloonist landed safely. Photo from the balloonist via Peter Cuneo.