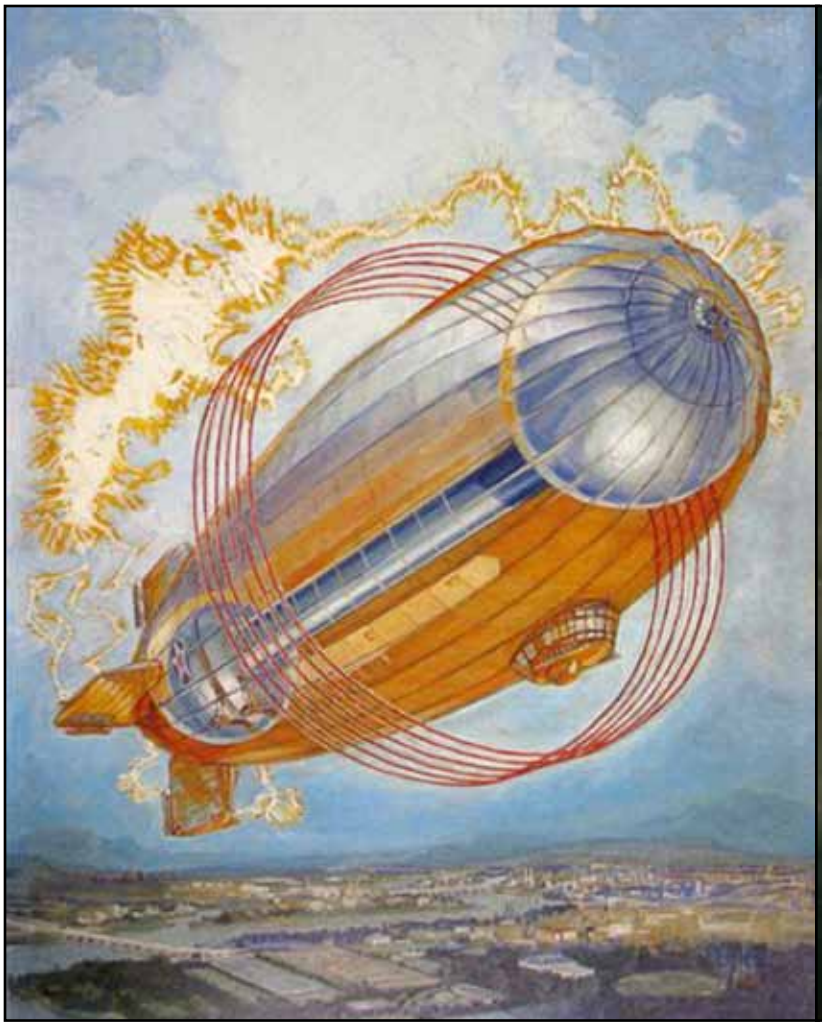
THE NOON BALLOON

The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 97 Spring 2013

Noble Effort Ends



Enjoy some colorful LTA-theme artwork from our friends, some supplied by those in the entertainment industry. The motion picture whose poster is at upper right should be out about the time you read this.

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Official Publication of the Naval Airship Association, Inc.

You don't stop laughing because you grow old…

You grow old because you stop laughing! ☺

THE NOON BALLOON
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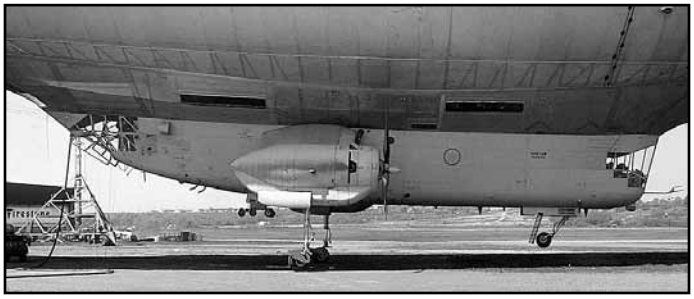

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EDITORIAL

R.G. Van Treuren, Box 700, Edgewater, FL 32132-0700, rgvant@juno.com

Commercial TV has once again milked the LZ-129 cash cow, this time featuring some unusual props.

You'll read C.P. Hall's review on page 33. Personally I found the careful attention to detail in their creations (above) reminiscent of the Cargo Cult (below).

With their airplane-like edifice, constructed of available materials, South Sea Islanders hoped to entice the return of the wartime flying machines that had brought them unimaginable bounty. Unlike these poor souls, TV producers also using available materials are assured riches, no matter how many times they revisit this well-traveled path, using only public-domain footage. Ultimately, the viewer is to blame for this level of TV quality – because we tolerate it.

On a happier note, Ms. Abbey Manalli, who was the sole proprietor of LTA wares at Oshkosh 2012 with her "Altered History Designs," writes, "I'm also running another crowd-funding campaign on Indiegogo, and this time it's to get my Airship Wing design (above) made into a 3 inch metal pin. You can see it here: www.indiegogo.com/airship-wing. "

I thought it useful to re-examine the Navy's last funded hope of the flying carrier airship, the ZRN of 1939. So once again I tapped the only man alive who had not just seen a rigid but could illustrate the concept, member **Herman Van Dyk**. In spite of his age, Herman accepted the daunting challenge, working with only the most fuzzy, fragmentary documentation, as he had done with ZRCV. Enjoy his original work in our center spread.

Our NOON BALLOON volunteers receive no reimbursement for costs incurred in producing material and are not usually recognized by readers. However, I want you to know a little about Herman. As a young boy in Holland, he saw the LZ-129 pass over his home town, beginning a lifelong fascination with airships. Herman studied aeronautical engineering in Holland, but landing a job with a large American firm, worked much of his life as a mechanical design engineer. "Retiring" in 1987, Herman started his own engineering company. He has been awarded eight US Patents. Really retiring in 1994, he turned his attention to his hobby, LTA.

Uniquely qualified to research obscure material owing to his knowledge of dialects that would be Greek to the rest of us, Herman has created some 50 articles for books and other publications in five countries. In addition to our own TNB, Herman has work in Buoyant Flight; Dirigible; Zeppelin Collector; Gasbag Journal/Airshipworld, and Aerostatica. Herman's drawings are on file in the National Air & Space Museum, where they are accessible to any established author or serious researcher. Member Lorrie Soffe published an entire book of Herman's work, but with our membership numbers declining, sales will never cover the cost of production. Nonetheless, for us that appreciate his work, we are very grateful to Herman (above) for his bringing this long-forgotten giant to life.

- R G Van Treuren

View From The Top: PRESIDENT'S MESSAGE

First of all, I would like to thank all of you who have renewed your memberships and those of you joining for the first time. I believe we have the finest LTA organization in the country if not the world and it is my goal and all of ours to continue to make that a reality. Our Executive Council continues to be highly interactive and we communicate frequently about issues concerning our operations, reunions, and LTA issues in general. The future success of the NAA is our prime concern. It is a distinct pleasure to work with such a fine and dedicated group of people.

Referring to our Executive Council, our Vice President, Anthony Atwood, has earned the distinct honor of now being addressed as Dr. Atwood. Anthony had a Ph.D conferred upon him by Florida International University in December where he is also a professor of history. With his permission we will post a link to his dissertation on Florida military history on our website. I know I speak for all NAA members in offering our sincere congratulations to Dr. Atwood on this honor.

We continue to seek out opportunities to work with the other excellent LTA organizations for the promotion of LTA. Plans are well underway to have a next Reunion/Conference in Newport, Rhode Island, on May 14-16, 2014 (subject to confirmation), and we have had a number of conversations with the Airship Association of the UK for them to hold their successful LTA Conference in conjunction with us. Our members would be welcome to sign-up for any of their conference sessions and hear papers presented on the state of LTA developments in the world. Our Editor, Publisher and Technical Committee chairmen have all participated or presented papers at previous Airship Association meetings. Their members would be welcome to join our tour of the Naval War College facilities and share a common banquet to close the event. This is an excellent opportunity to meet other LTA professionals and enthusiasts. We hope to attract other US LTA groups to join us as well, if not in Newport, perhaps in upcoming Reunion/Conferences.

One of my NAA Vision 2012 and Beyond goals is to bring all these groups and museums together to effectively promote our common objectives. Not necessarily under one banner, but as an effective industry group dedicated to preserving and promoting LTA history and developments in the US and around the world. There is strength in unity.

Regarding history, we formed a Website History Committee back in July to organize and greatly expand our web presence. One of my goals for the last several years has been to make the Naval Airship Association website THE source for US Navy airship history. The committee consists of David Smith, Richard Van Treuren, Al Robbins, Bo Watwood and Don Kaiser. Working under David Smith's chairmanship, Don Kaiser has been tasked with organizing the volumes of Navy airship history, photographs, video interviews and oral histories we have into a coherent website. A formidable task, but one I have faith in Don to accomplish. We will also be posting every back issue of The Noon Balloon in the new section as well with a searchable index to easily find articles. This collection of 'Noon Balloons' will only be available to members in good standing.

Finally, on a personal note, my father died in early December and I lost not only a father, but a true and trusted friend. He was 83 and had been too young to have served in WWII. He did enlist in the Navy Reserve after the war and served at NAS Squantum in MA. He was an aviation machinist mate and loved flying in TBM Avengers and C-47s. He would ask me why I devote so much time to naval aviation and blimp history and I would tell him, it was his doing. He took me several times when I was very young to sit by the fence at Squantum and watch the planes taking off and landing. When we moved to So. Weymouth, the airplane-watching trips continued as we saw planes and blimps at NAS So. Weymouth during the mid-fifties. I grew up with the sounds of Navy blimps and airplanes overhead. Thanks, Dad.

- **Frederick R. Morin, President**

TREASURER'S STRONGBOX

Welcome Spring! Thank you everyone for your cooperation in sending your renewals. Many of you used the Paypal System which is a safe way to send your renewal and help simplify the bookkeeping system.

Welcome Aboard New Members!
Charles Carson, Fort Worth, TX
Alan D. Rakestraw, Columbus, OH
Jonathan Eno, Hulls Cove, ME
Roy D. Schickedanz, Glenwood, IL
Zachary "Zack" Byers, Louisville, KY
Michael "Mike" Prisco, Port St. Lucie, FL
Steven Strasburg, Arlington, VA
Paul Hawley, Surfside Beach, SC
Daniel Grossman, Atlanta, GA

We also say thank you to all who made generous donations to the Naval Airship Association:
Ross F. Wood
Mort Eckhouse
Roy Lyon
Bruce G. Bohl
Jerry Bess
Charles Gray
Michael Hanneld
Vincent J. Hoye
Robert W. Keene
Donald Maurer
Jeffrey C. Evans
Ruth N. Barnes
James "Jim" E. Vaughn
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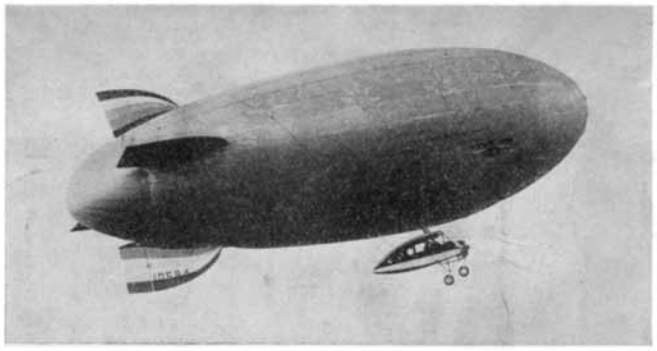
Eugene F. Albro
Arthur J. Sullivan
John M. Warden
Robert Sorrentino
Edward Cheng
W.W. Linkenhoker
Thaddeus A. Snell

If members wish to get an extra NAA decal (above) for car window etc. to help advertise our association, send a $1.00 donation to the Sec/Tres.

- Peter F. Brouwer Secretary/Treasurer

PIGEON COTE

New member **Chris Carson** had found a site featuring back issues of FLIGHT magazine free for the download, and he printed a January 1931 page that had this airship miss-identified as a Goodyear-Zeppelin product.

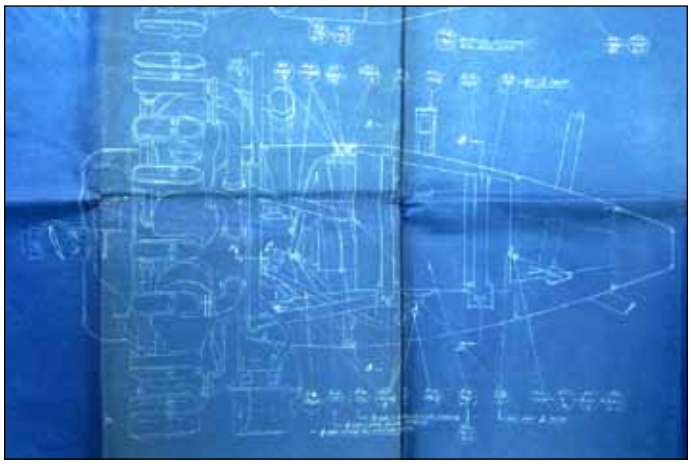


New Baby Dirigible Can Carry 3 Passengers

WE ARE very fortunate in securing some excellent information about The Heinen air yacht is a non-rigid dirigible. The hull (envelope) is about

This was in fact Anton Heinen's "Air Yacht" (as you see from our file photo, which still has part of the caption). C.D. later sent more clippings from FLIGHT showing a list of patents published in 1915 – with the names of Machechen and Kamp, just like our issue #95's page 9! The magazine had reprinted a WWI article in 1960 that revealed submarine-noise-detecting hydrophones were tested aboard the SSZ 49 in 1918. Too bad this was forgotten thereafter. **Ω**

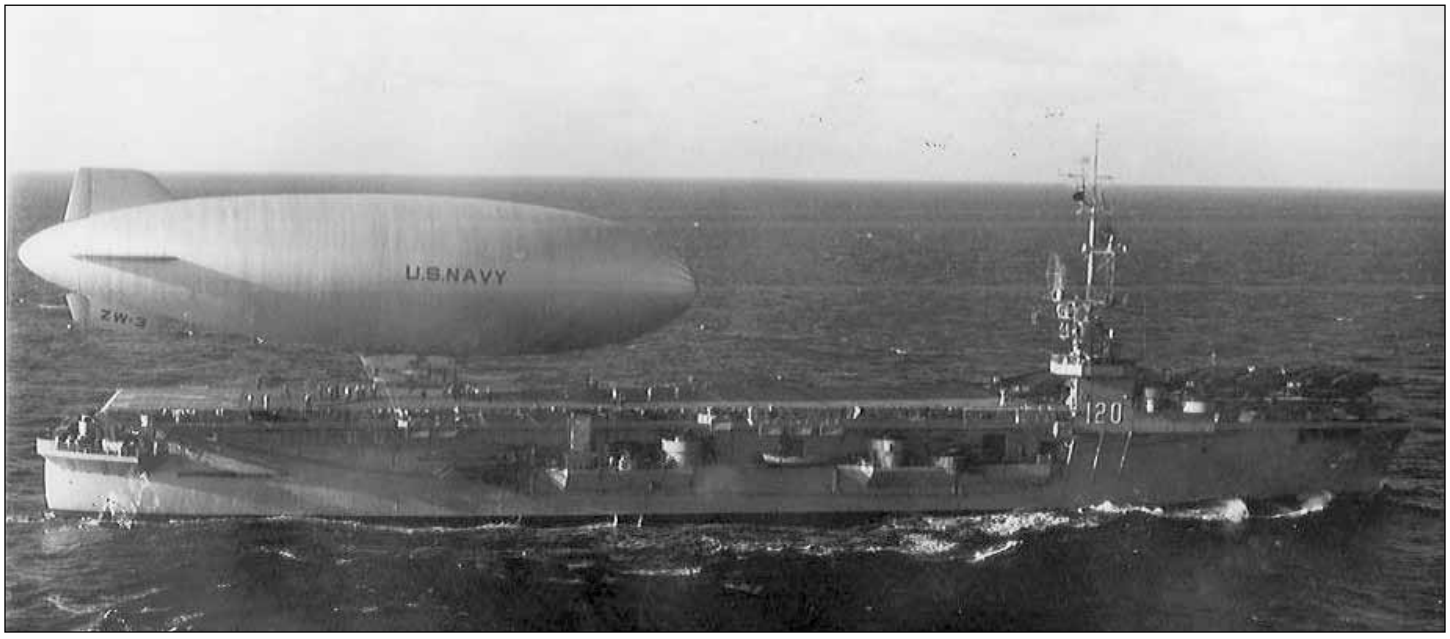
Another prospective member e-mailed Pres. **Fred Morin** concerning the ZMC-2: "I'm not really sure if I'm contacting the right person for my question, but I would appreciate any help you may be able to give. I recently purchased a blueprint of the ZMC-2 engine and nacelle assembly. The print is dated February 1929 and is 36 by 65 inches.



I found some information about the ZMC-2 on the internet, (http://nasgi.net/zmc2.html) but I would like to know more about the history of the airship and this

particular print. I hope you may be able to point me in the right direction. I added a link and some images of the print. Thank you for your help, Gus C." History Chair **Al Robbins** chimed in, "It's a Ford Motor Company blueprint, (I don't see any signatures on the data block. Bill Stout was probably still Chief Engineer at that time) indicating that Ford designed the engine installations. I don't remember reading anything about Ford being subcontractor on the program. Nice write-up in the link. A few typos and other errors. (Not quite unique, CITY OF GLENDALE was much larger, and a simpler design. Pavlecka was a key player, and the smooth skin, flush-rivet design led to the development of the next generation of heavier-than-air aircraft. Upson had left Goodyear, (I believe) primarily because Goodyear refused to support his Alclad airship concept. It required a great deal of political influence to get the Navy to sign a contract. The Navy wanted large rigid airships, and most definitely wasn't interested in any program which cast doubts on its preferred Goodyear-Zeppelin approach. Norm might have something in his files regarding the total drawing package for the TINSHIP." **Norm Mayer** answered, "A very detailed paper on the ZMC-2 was given by Carl Fritcshe who was the vice president of the Aircraft Development Corp. in 1929. I never met him, but his widowed wife lived near me and I visited her once. I believe that her husband was the one who made the important contacts in Congress. In his paper, later published as a book, he gives credit to Ford, General Motors and other large companies. Their help was not financial. Stout is not mentioned." **Ω**

Discussion concerning more of **Herm Spahr's** collection donations via the History Committee centered on CVE Ops photos. "The photos all had the same date (March 13, 1950) and caption "Blimp operations aboard the *Mindoro*." Can't read the BuNo, tail numbers ZW2 and ZW3 is visible. Perhaps **Walter Ashe** or **John Fahey** can tell when the exercises were actually conducted. I vaguely remember that Walter ran the detachment which was assigned to the jeep carrier for one such exercise." **John Fahey** e-mailed, "I checked my flight log and found March 1950 to be a busy month for ZP-1 and the USS *Mindoro*. The 14th to the 22nd I flew the K-124 back to Weeksville. K-124 for sure wasn't there on the 13th because it was in GTMO. I flew Z-124 to GTMO from NAS Glynco on the 10th. Then on the 14th in a 19.6 hour flight I flew K-124 to the ship. This was a lucky flight with lots of tension flying an airship to a carrier at sea such a distance from GTMO with no alternative and just barely enough fuel to make it. The next day, the 15th, I flew K-80 in ASX flights. Again ASX in K-80 from the *Mindoro* on the 21st and then flew the K-124 from *Mindoro* to NAS Weeksville. The most likely airships present on the 13th were K-80 and K-93. The March exercises with the *Mindoro* led to the flight I made in K-93 on May 23 to demonstrate airship carrier landings and ASX exercises to the CNO who then scheduled the USS *Midway* demonstration for himself, Commander-in-Chief Atlantic Fleet, and Commander Air Atlantic who were aboard *Midway*, sending RADM Bob Hickey, COMAIRWINGSLANT, to fly with me



during the demonstration. It was always interesting to me that in those days only airship pilots lieutenant and below in ZP-1 were pilots of aircraft carrier landings and/or exercises or command duty ground handlers or supervisors of the watch. The lieutenants and below seem to run the squadron and the more senior officers handle the paperwork. I hope that this is helpful, Al, The only other airship that possibly be could have been present on the 13th was K-118."

Al responded, "Thanks again John. June was a busy month, North Korea invaded South Korea on the 25th; supposedly a complete surprise. AIRPAC wasn't yet involved with the coming conflict, and had never been interested in establishing any lighter-than-air capability in WestPac. I'm assuming that the primary driving force behind this exercise was to improve the Navy's ability to operate in the North Atlantic. (No full-size carriers available?) The Navy still had only two operational airship squadrons, ZP-1 and ZP-2, each with four airships. I'm assuming that all eight were high-number K-ships. (Did you have reversible-pitch props yet?) Did you participate in the post-exercise meetings? Did you ever see a copy of any of the exercise reports? I suspect that these exercises justified and led to the first major modification program, the ZP-2Ks, despite the lack of any expected usefulness to our Korean War programs." **Ω**

Our History Chair also made some interesting points in a message to Webmaster **Don Morris**: "The Navy didn't have forty years of LTA experience. We had two years of experience, repeated at random intervals over a forty year period; residual assets retained at NAS Lakehurst. LTA only had one active duty Admiral devoted to LTA throughout the entire period; compared to dozens of two, three, and four star Admirals supporting Heavier-Than-Air operations, training, and development. The Navy didn't form its' first LTA squadron until 1942, and all but two were decommissioned by 1946. The postwar airships, which were designed to replace the K-ship, and to operate with the fleet were introduced after the ZPG-2s. They would have been the only airborne platform capable of plugging the GIUP gap (Greenland, Iceland, Europe) to submarines. The Navy didn't want to emphasize Anti-submarine Warfare as a significant responsibility of the carriers, we were competing with the Air Force for budgetary control in the Mutually Assured Destruction policy of the time, and submarines were viewed only as a threat to the large carriers. The bases and the squadrons convenient to our major ports were decommissioned. VADM Pirie, as DCNO for Air, made LTA disappear during his single tour of duty at OPNAV." **Ω**

In the continuing effort to uncover more about Klinker, Al e-mailed, "I've gotten some input and some photos regarding the Klinker project. Unfortunately, none from anyone that actually worked with the Klinker equipment. Paul Platt sent a couple of photos of the NADU LCDR that was the project officer, a couple of the NADU pilots, and their ground crew on the spring exercise in California, but he doesn't recall any of their names. (Photos taken with his personal C-3 camera.)

Paul vaguely remembers that the Klinker operator's station was nearly seven feet tall - apparently with a thermal paper printer. The recordings were sent to contractors for interpretation after each flight. I assume there was just the one Klinker trip to Santa Anna in '61. Bob clearly remembers having to change out both engines, a two-day, round-the-clock operation inside the Marine's hangar. Any ideas of how the ground support crew and equipment got there? Bob sent one other (undated) photo of the enlisted crew at NADU. No names yet. Bob remembers Bill O'Dea, and Chief Brewster but not Paul. Bob and Paul both remember the Klinker sensor station being a very tall machine. (Printed its' results on a thermal paper chart, apparently a long vertical display, unlike the shorter chart used by JEZEBEL. Wonder if it stunk as bad as the Jez traces?) Bob doesn't remember ever seeing a white hat supporting the Klinker equipment. Operated and maintained by civilians?" Al attached the photo.

Ed. had filed the same photo, obtained from the late CAP Brewster at a reunion, his copy featuring a caption (see next page). Al has also organized additional postwar LTA Class images and info for us, see page 24, "History Committee."

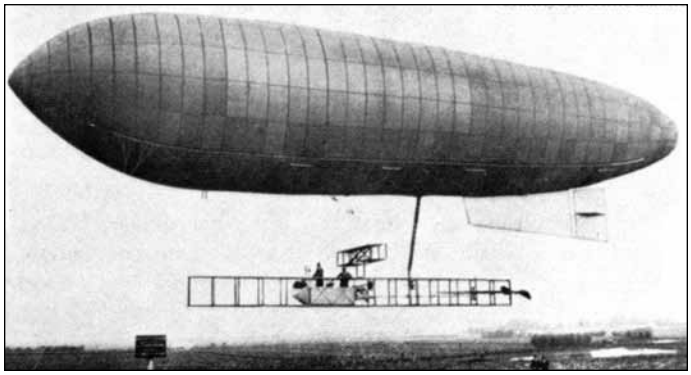
Al continued: "Hadn't even noticed the pilot was still on board (or that someone was in the right seat) until Bill O'Hea mentioned that it was probably LT Riordon. I knew that Bill O'Hea was on loan from ZP-3, and he assures me that he was a pilot, even though the Wing left his name off the 1960 Register. Bob said they sent their results (rolls of paper from the Sensor Station - it'd be interesting to discover how they annotated those tapes.) to La Jolla when they were on the West Coast, normally to an East Coast activity. The NADU project officer isn't in the photo, and no civilians. Don't know how many others might have been in the support detachment. It looks like the Navy operated and took care of the "Tour Bus," and the civilians maintained and operated the experimental systems.

In the photo - four Captains on the January trip. The 1960 Register includes: Captain Marion H. Eppes (NAS Lakehurst); Captain Walter H. Keen, Jr., serving at BUWEPS in 1960; LCDR Cecil Manship (NADU); LT Russell Scherer (shown as assigned to NAS Columbus). I don't have any info on Captain Rodgers. (Perhaps CO NAS South Weymouth?) LTJG O'Hea (no record indicating Bill was a pilot.) In its final days, Lakehurst tried to market the airship as a flying laboratory, rather than a weapons system. We've ignored the idea of a benign air-mobile facility (laboratory/reviewing stand/ Command post), perhaps the most potent argument for the reintroduction of airships. They say the most valuable real-estate on a ship is the top of the tallest mast." **Ω**

Members please note: Author working on nonfiction book about the USS *Macon* (ZRS-5, above) seeks any and all first person (eyewitness) accounts of life aboard that airship. Letters from officers or crew, personal diaries etc. would be especially helpful. If you have, or know of, such material please contact member **John J. Geoghegan** either by mail: 1040 Canada Road, Woodside, CA 94062; or by email: johnjgeoghegan@yahoo.com **Ω** *Ed. adds: John has kindly volunteered to transcribe audio and video interviews with rigid's men collected by Ed.*

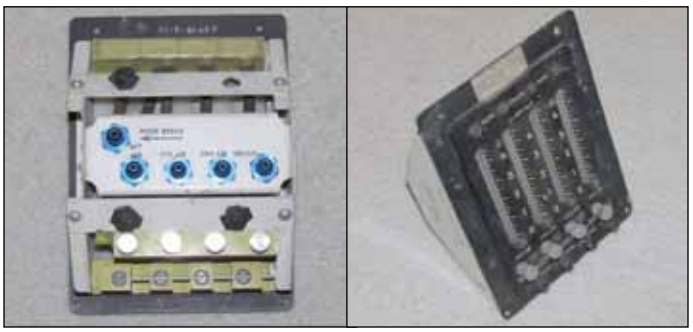
New member **Chris Carson** e-mailed Al Robbins, "My father was living in San Diego, California, in 1978, and he recalls that one of the Goodyear blimps was sent to provide television coverage of the Tory Pines Open that year. The day before the golf tournament began, he observed the airship passing "low & slow" over Black's Beach, which is the "clothing-optional recreation area" in the area. Since the LTA community isn't all that large, I offered to mention it to the NAA History Committee, on the chance that somebody might recall the incident. It seems like the sort of thing which might become an amusing anecdote. Al responded, "Many thanks and welcome aboard. **Joe Hajcak** might know who was crewing the blimp that season. Was your father looking up, or was he estimating the ship's position from a distance. I can't believe that one of our starchy former Naval Aviators might have been taking a sight-seeing tour. However, a dedicated Videographer might have been trying to optimize his camera equipment prior to the Tournament. The crew might have been providing a security patrol, ensuring there were no sharks, or jelly fish near the beach. ☺

One of the prints from FLIGHT sent by Chris Carson mentions: "An Aerial Ferry", A Zodiac dirigible has just been imported into America with the object of maintaining ferry service during the summer between Narrangansett Pier and Newport, Rhode Island, a distance of 11 miles. Airship docks have been built at each end of those points and equipped with hydrogen apparatus. The dirigible is 100 ft. long, and can carry half a dozen passengers for two hours if necessary." Ed. asked member **Robert Feuilloy**, our authority on the subject, if he'd heard of this one, and he answered "Yes, Sir. It is the Zodiac n° 4. First flight at Saint-Cyr (west of Paris) on 28 May 1910, sold to an American citizen called Davis. Volume 800 cubic meters, length 31 meters, one 20 hp engine Ballot, max speed 35 km/h." Member **Francisco Gonzalez Redondo** even sent a photo:



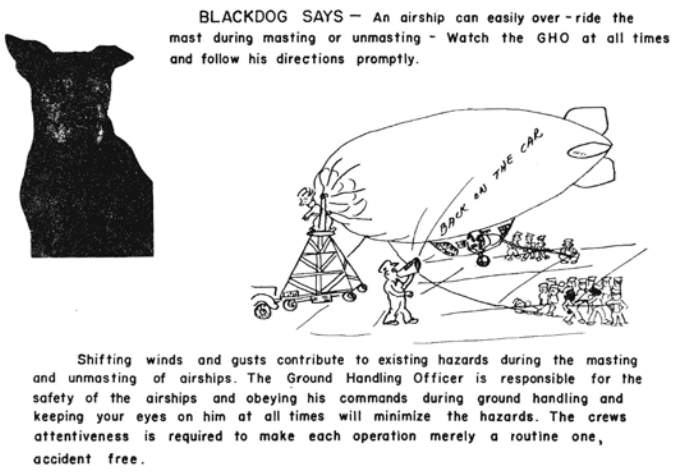
So, the question is, whatever happened to Mr. Davis and his plan to start an airline four years before Tampa Bay's Benoist airplane-based "1st" claim? **Ω**

Member **George Diemer**, volunteering at the New England Air Museum, e-mailed: "We have come across a piece of Goodyear blimp equipment we cannot use in our K-ship restoration, but which another collection might want. It is a panel containing 4 manometer tubes, apparently from 1959, and may fit a ZPG-2 or ZPG-3. The 1955 ZPG-2 flight manual indicates a 4-tube manometer panel at the top of the pilot's main instrument panel. The face of the panel is 8-1/2 inches by 6-3/8 inches." *Ed. put George in touch with NASM.* **Ω**



George Mitchell wrote a note to our Treasurer, "Mr. Brouwer, this is my check for the renewal of my membership for 2013. I enjoy keeping in the loop of LTA. LTA played a very important role in my life. I served in ZP-2 Detachment 1 in Key West and then ZX-11 in Key West and a year in ZX 11 Detachment in NAF Glynco. After attending Guided Missile School in Point Mugu, I did 3 years at Lakehurst. Was in the original crew of the N-1 (went to Akron to get checked out) I was an original crewman in the ZPG. Was on the record setting flight on the ZPG 126716 in 1954. Capt. M.H. Eppes always had me aboard when he got in his flight time. He gave me the opportunity to go with him to Midway when he left Lakehurst. I opted to get out of the Navy after 8 years and pursue other endeavors. Capt. looked me up when he came back to Lakehurst as CO in 1961 (I think it was). I have many wonderful memories of my LTA days and the NAA helps me keep them alive. I have the walls in my den covered with newspaper pictures and stories of the ship and crew of the record flight of 126716 plus Hangar #1 and a K-Ship passing the Statue of Liberty. (Priceless stuff) I also have the "Yearbook of Lakehurst" for 1953. It has pictures of all the units at Lakehurst as well as pictures of all personnel. I also have some pictures of the award ceremony in Akron when Admiral Rosendahl presented the 126716 crew with air medals. Thank you, H. George Mitchell AT2." **Ω**

Member **Tex Bercher** e-mailed, "For your info: I was in NADU from 1959 to closure in 61. I spent my entire tour in LTA, I was a rigger, I advanced from AMHAN to AMH2 during that period. My ground handling assignment was Mule Driver/winch operator. Mostly Mule driver. On page 27, Para. 3.1 Mills lists required personnel for ground handling evolutions. He lists Mule drivers and Winch operators but does not include line runners / quick release operators. These are required to go out on foot and retrieve the bow lines of ships in the landing cycle and hook them to the Mule's winch cable. They subsequently handle the quick-release mechanism to allow release if required. During launch operations the line handlers release the bow lines from the Mule winch cables on the signal of the Ground handling Officer. During landing ops, the line handlers go in at the signal of the ground handling officer. Under normal conditions this is relatively uncomplicated, however in adverse weather or wind conditions it can be extremely hazardous. On one occasion during a landing we had a mule drive over the legs of a line handler who had fallen. He was hospitalized with severe injuries. On one other occasion, while I was operating one of the Mules for a ship up from Lakehurst, the pilots mis-judged the cross-wind and drifted off the runway and I took my mule into the open space between runways. Turned out that there was a spring out there somewhere and we wound up in mud up to the axles. We left the mule where it stood and returned to the hangar and got the



spare. Later the base Public Works Dept. got a D8 or D9 Cat and retrieved the Mule."

Al Robbins agreed, "CDR Mills' article oversimplified the mule operations. In addition to the runners Bercher mentioned, there would always be spotters, or lookouts, by the hangar doors while docking or undocking. (Plus a couple of trainees at the various positions). NADU hadn't received their first mules before I left in April of 57; so I never saw them operating there. We always launched heavy; we always used the runway. A portable mast with its tow tractor, plus a couple hundred man landing party, represent a lot of obstacles for conventional aircraft. Any airship launch and recovery pretty well closed the South Weymouth runways for an extended period - at least half an hour. I remember one winter launch in particular. The runways and taxi-ways were scraped nearly clean, but there were head-high snowbanks on each side. The pilots and one mech rode the SNOWBIRD out to the launch position. The landing party wore their "Granny grippers" and parkas, and held on to the handling lines. The rest of the crew trudged along behind the ship; this reduced the weight on wheels by roughly a ton and a half. We wore long-johns under our dungarees, damned cold even in the morning calm. Theoretically,

if the wind picked up or shifted, the pilots should have time to goose the power and lift the tail before the snowbank destroyed the outrigger wheel assembly. Luckily the calm held, and we were able to clamber up the ladder, and proceed with the launch sequence. Equally lucky, the ship's heaters were working that day and we were fairly comfortable in our shirt-sleeves by the time we'd left the base behind. We just hoped that we'd have a nice evening calm when we returned the next day." **Ω**

Mr. Nigel Hills, of our kindred organization across the pond, the UK's Airship Association, e-mailed, "I was hoping that you could help me with an unfunded project to preserve knowledge of LTA related activities. I ask, because in a discussion with *[AHT's DIRIGIBLE Editor Dr.]* Giles Camplin the other evening he made the point that our generation have lost (are in danger of losing) a vast amount of "common knowledge" or "tips and tricks" that the previous generation knew. For example, I understand that the US Navy proceduralised the replenishment at sea of the Airship fleet. I have seen photos of airships approaching an Aircraft Carrier, but was hoping that you may know some more about the procedures (are they documented anywhere? Were there any accidents/lessons learned etc). Initially, I am interested in replenishment because I believe that replenishment "on-the-move" is an important factor in the up-take of airships for commercial/military use. If there are other areas of LTA common knowledge that are in danger of being lost, then those too should be included in this project. The Airship Association Web-site was updated a couple of years ago, and one of the facilities that we included was the ability of members to write their own papers or documents on-line, with the objective of providing a knowledge repository, a place of discussion and debate. Do you have anyone who has the manuals/experience of replenishment, who would be prepared to put down in writing (or on video?) the full process, including "common knowledge;" for example, what types of fastenings/knots were used for particular activities (Giles is very keen on knotwork). It would also be interesting to know how they perceive the procedures that they used could be adapted to more recent innovations (vectored thrust etc). If you feel that this is a reasonable project for collaboration, and have people who would be prepared to share their knowledge on these procedures, please let me know, and I can arrange access to the Airship Association web-site for individuals that you recommend. Regards, Nigel"

Ed. passed the word and responded, "Yes there is a great deal of information about underway replenishment including refueling. Of course you are right, it is best to get the original participants to write things down or at least speak into a mic and record their experiences. We published the memoir of Lundi Moore, and there is some discussion of the "bag method" and reballasting inside. We also have a training film that covers it in our "Navy Blimp Training" and of course I did my best to chronicle and illustrate with motion pictures the various procedures with the postwar airships in our DVD 'Airships Fight A Cold War'."

George Allen responded, **"**Nigel, for what it is worth in 1954 I was an Ensign in ZP-3. I was ordered aboard the *LEXINGTON* to participate in a refuelling exercise. I was "paddles" commmuting with the pilot. Vern ?? was the pilot. There was a HUGE pump with a 4" hose, allocated starboard aft. The ship lowered a cable and the hose was attached and raised to the ship. I unwittingly allowed the pilot to get too far up the deck and when he pulled back the power I was almost wiped off the deck into the ocean. Fortunately I went into the net. That ended the op. In 1959 as a LT in T&D I developed a procedure where an USAF aircraft dropped a 1000# bag of fuel with a 100 foot of plastic line and a float on the end into the ocean. The ship then engaged the cable and winched it up to the ship and pumped the fuel aboard." *Ed. found this photo but George said, "*I never saw a rig like that, they were plain black. Sorry to be so slow in returning but the brain at 83 doesn't recall very fast. If I recall the "hook" engaged the line which dragged along the water and looked like a sharks fin. Using the winch it was raised to be down loaded directly to the fuel tank. I remember there was some work getting the hook to engage. I was 90 feet away in the cockpit."

Ross Wood *also responded*, "This is my photo of the refueling bag being picked up, taken at Bermuda, Kindley AFB. The ship being re-fueled is a ZPG-2, Command pilot, LCDR Claude Makin, of ZW-1, temporarily assigned to ZP-3, for a special operation. Makin had been airborne for 75 hours when we refueled him, I think for the second time. The winds were still too high in Bermuda to attempt a landing.

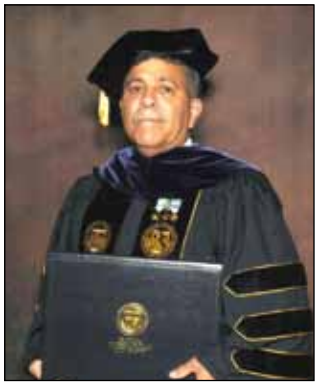
I have a second photo, taken after the landing, showing a crushed radar dome and collapsed nose wheel. I read your e-mails to Nigel, and would like to contribute, but it would be from the ZPG-2W - 3W standpoint." **Ω**

Dan Cavalier responded to a non-member's request for information concerning an HTA crash in Brazil, "I left Richmond Naval Air Station in February 1944 for Brazil and returned to the U. S. in January 1945. I do vaguely remember the crash. I was stationed at Fortaleza for a little over 2 months, Salvador, Bahia about 4 months and Maceio/Caravelles until returning to US. I did not see the plane's destruction, and if my vague memory serves me correctly, there were no survivors. **Ω**
Dan also sent along this clipping recalling the two-blimp collision he'd narrowly avoided.

Outside the Banquet Room

War Fund Dinner Is Scene of Family Reunion
Bringing an End to a Mother's Anxiety

We are pleased to note that the Ph.D. degree was conferred on NAA Vice-President **Anthony D. Atwood** by Florida International University on Dec. 10, 2012. Atwood worked his way through graduate school as an Adjunct Professor in History the last seven years. Atwood's Doctoral dissertation, a history of WWII in Florida entitled "A State of War: Florida from 1939 to 1945," can be downloaded at http://digitalcommons.fiu.edu/etd/777/.



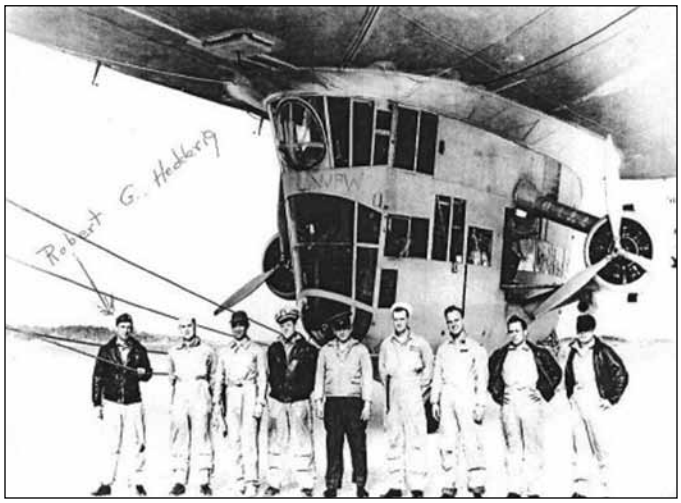
His earlier Master's thesis, a history of the K-74 entitled "An Incident at Sea: the Historic Combat between Navy K-74 and U-boat 134," is at http://digitalcommons.fiu.edu/etd/12/

A ten-year NAA member, Atwood is the Executive Director of the Military Museum and Memorial of South Florida, which is currently restoring the NAS Richmond LTA administration building to house the museum. He is a recently retired Navy Reserve CWO3. **Ω**

One of our UK correspondents came up with this image from a website. It was that snowy December day in 1921 when the US Navy airship C-7, with the first test inflation of helium of any airship, had made a demonstration flight around DC. The crewmen there at Bolling Field, Anacostia, are not identified but Ed. is pretty sure command pilot Zack Lansdowne is seen on the left in the photo below. **Ω**

Actor Charles Durning passed last December. A Normandy D-Day landing vet, he portrayed Captain Max Pruss in the 1975 movie "*Hindenburg*." **Ω**

Helen Hedderig, widow of **Robert Hedderig** (see "Black Blimp," page 35) kindly sent along this image of her late husband in his early days with ZP-12. She also supplied a zerox of the below picture pointing him out, which has several other names on the back: G.M. Binegar ARM 3/C; Robert M. (T)errier (?); J.L. Reaves; H.S. Ducrow CAR; and our past pres. **Robert L. Ashford**. The presence of an African-American crewman, the lack of machine gun and the visible terrain lead Ed. to guess this is not only postwar, but perhaps a pose from the atomic testing program… anyone have an original image and/or care to comment? **Ω**



Germany's last surviving U-Boat captain gets modern military honor By Allan Hall In Berlin

Reinhard Hardegen, 99, was one of the most successful commanders during Operation Drumbeat, has been honoured by the modern military in his homeland seven decades after he was twice decorated by Hitler for bravery. "During Operation Drumbeat we were underwater for 14 days off the east coast of America when we surfaced. In just under three weeks we sank seven ships with a tonnage of 46,744." He went on to be a member of Parliament in his hometown of Bremen for 32 years. Hardegen has already reserved space in the town hall restaurant in Bremen for his 100th birthday next year. **Ω**

SHORE ESTABLISHMENTS:

Lakehurst

Hurricane Sandy's devastation of so many East Coast states affected all of our members in those areas, and our thoughts are with them. Lakehurst had its share of cleanup following the storm which knocked out power in the area.

The area around LZ-129's memorial site was used as a staging arena for FEMA relief efforts in the state.

The winter's first snow is seen blanketing Hangars Five and Six, which were damaged by Sandy. LEMV is unlikely to emerge again until the Congress works out some kind of "fiscal cliff" deal and the Army is empowered to resume testing. Rumors are flying that funding could be held up until late spring. **Ω**

SHORE ESTABLISHMENTS

Akron

Lighter-Than-Air Society Launches Virtual Museum
By Alvaro Bellon

As part of its 2012 Annual Banquet last November, The LTA Society celebrated the 60th anniversary of its founding and unveiled the new Dr. A. Dale Topping Lighter-Than-Air Virtual Museum under the Society's website, www.blimpinfo.com.

Publisher **David Smith** (center) presents the Lighter-Than-Air Society with the ZRS-4 painting "Our Hearts, Our Hopes" balanced by **Eric Brothers** (left). LTA Society Chairman David Osterland is at right. Photo by Diego J. Bellon.

Initially, the online Virtual Museum exhibits include displays of items from the Society's collection relating to the USS *Shenandoah* disaster, a propeller from the USS *Akron*, an inflation tube used with barrage balloons during World WarII, the original plaque from the *Daniel Guggenheim Airship Institute* building, and pictures of some of the many Macy's Thanksgiving Day Parade balloons manufactured by Goodyear Tire and Rubber. The views include slideshows of some of the items, images that can be rotated 360º, and close-ups of some item details. During 2013, the LTAS plans to expand these exhibits as well as add new exhibit items.

In addition to the Topping Virtual Museum, the Society's revamped website includes current events in the world of buoyant flight, a section dedicated to historic events by month, and a Members Only section that features many articles about lighter-than-air flight in a great variety of publications. Also included are links to other organizations, including the Naval Airship Association and the U.S. Navy Airship Squadron history websites that **Don Kaiser** is developing.

Beyond the Internet, the Society continued to host events in Akron relating to lighter-than-air history. During 2012 these included showing the movie, *The Hindenburg*, starring George C. Scott, on the 75th anniversary of the Zeppelin's destruction. The Society also gave a presentation on the L-8 "Ghost Blimp" in conjunction with the 70th anniversary of the mystery at the Military Aircraft Preservation Society (MAPS) Museum at the Akron-Canton Regional Airport.

The LTA Society continues to exhibit a variety of airship-related artifacts at the Akron History Museum at Lock 3 Park in downtown Akron as well as in an exhibit at the MAPS museum.

Plans for 2013 include refreshing those displays and continuing to offer special presentations related to historic events throughout the year. The Society also looks forward to joining the NAA in refurbishing memorial signage at the crash sites of the USS *Shenandoah* in Noble County in southern Ohio. **Ω**

Purposed Joint Effort to Refresh the Noble County ZR-1 Signs

Recognizing the need to refresh and perhaps replace, as needed, some of the signs that document the sites where wreckage from the Navy's first rigid airship, the *Shenandoah*, ZR-1 came to rest, the NAA and the LTAS, will discuss details as to how the two organizations can work in partnership to accomplish the task in 2013. NAA President Fred Morin and Publisher David Smith will meet with the LTAS Executive Committee on April 9 to discuss details of the project. The funds for the restoration project were provided by individual contribution from NAA members. The LTAS will be asked to contribute some local manpower to help rework and recover two large signs (8 ft x 4 ft) and 2 smaller signs (36 in x 24 in) located in Noble County, Ohio, about two hours south of Akron on Interstate 71. The three *Shenandoah* sites are on private property. The property owners have been marking and preserving these historic airship sites with their own resources for many years and this joint effort of the NAA and LTAS will assist these good people as well as make the public aware of both of our airship history organizations.

MOFFETT FIELD (Cover Story)

Airship Ventures Ceases Operations by Bill Wissel

Falling exactly one week short of their 4th year anniversary, Airship Ventures (AV) has ceased operations as of November 14, 2012. The struggling economy, loss of government contracts, and lack of sponsorship were cited as reasons for discontinuing flight operations.

AV had entered into a lease option agreement with Zeppelin Luftschifftechnik (ZLT) to operate the ship in the United States. The Zeppelin-NT, the fourth such ship built by ZLT, was named "*Eureka*" at the November 21, 2008, dedication ceremony. Originally, there were hopes that the Zeppelin fleet would eventually expand to three airships.

Many NAA members flew on *Eureka* during the NAA reunion at Moffett Field in 2010. Bill had the opportunity to fly on her several times, including an historic commemorative flight over the wreck site of the USS *Macon* off Point Sur on February 12, 2009 (below).

MBARI's **Chirs Grech** renders honors on the USS *Macon*'s gravesite during one of many maritime flights of Airship Venture's *Eureka* Zep NT-07.

The flight crew and staff at AV were always courteous and professional about their business, as well as enthusiastic about their passion for lighter-than-air flight. They offered an incredible experience for thousands of passengers who never imagined such technology.

AV's **Brian Hall** (left) and the Bill Wissel enjoy *Eureka*'s panoramic aft window.

Eureka has been disassembled and crated for shipping back to Germany. Hopefully Airship Ventures pioneering vision and ground-breaking work will make it easier for others to follow, and encourage future efforts in LTA flight.

Hangar One Details

It has been frustrating to watch the removal of the outer skin of Hangar One at former NAS Moffett. The process is virtually complete now, leaving the interior structure exposed and visible.

But even bare and exposed, Hangar One is a fascinating structure. Although constructed in heavy I-beams and riveted box girders, it is incredibly elegant and even graceful. With the siding removed, much of the detail is now visible. One feature that has been exposed are the two remarkable "expansion joints." Hangar One was built as three completely separate structures separated by two expansion joints. These two joints run across the entire width of the hangar. They separate Hangar One into three structures with no mechanical connections between them. The two expansion joints are easily visible in most any view of Hangar One, especially when taken from Shenandoah Plaza. The expansion joints appear as two vertical black lines, dividing the hangar into thirds.

The purpose of the joints is to allow the structure to expand and relax with changes in temperature. Without the joints, the great length and sheer size of the girders would cause the metal to eventually fatigue and buckle in the weather. The gaps were previously covered with rubber gussets and thus only visible from the inside of the building.

Hangar One had eight electrically powered rail cranes running the entire length of the hangar, originally to service the USS *Macon*. The rails were mounted from the ceiling, with the crane cars suspended below the rails from two sets of wheels. Even the crane rails had overlapping plates that slid back and forth at these expansion joints. A crewman of the infamous L-8, [later pilot] Riley Hill, once told me that while the blimps were out on patrol, the ground crews would become bored, waiting for the ships to return. To amuse themselves, the crew would hold "rail crane races" from the ceiling of Hangar One. On one particularly cold day, Riley was involved in one of these "crane races." The cranes were all set at the north end of the hangar (the operator's seat faced south), and on signal, all crane cars raced along the ceiling of the hangar. Upon reaching the expansion joint in the overhead rail, Riley's crane car slammed to a sudden, and violent stop, knocking Riley out of the operators' seat and onto the floor of the cab of the crane car. When Riley recovered from the impact, he saw that the front wheels of his car had derailed at the expansion joint. The unusually cold day had forced a larger-than-normal gap in the overhead rail. Riley's car was now dangling 190 feet above the cement floor of Hangar One, suspended only by the rear wheels of his crane car. Riley was rescued, and the rail crane car was eventually repaired. But Riley told me that, after that, he never raced another rail crane.

Janne Wissel (above) holds one of the commemorative wooden plaques offered by MFHS.

With the removal of the outer skin of Hangar One at former NAS Moffett complete, the corrugated metal siding with the toxic PCB coating has been disposed of at a dump site in Utah.

The wooden "battens," used as roofing on the top of Hangar One, have also been removed. The Moffett Field Historical Society has recovered some of that wood material, cleaned it, and milled it into very nice commemorative plaques which are available for purchase. The plaques have been laser etched with an outline of the USS *Macon* entering Hangar One, and the phrase "Hangar One Moffett Field 1933-2012." Approximately 120 of these plaques have been produced. At this writing, there are 80 still available. The cost is $100. Custom plaques are $125.00. Contact the Moffett Field Historical Society at http://www.moffettfieldmuseum.org/ **Ω**

- Bill Wissel

SANTA ANA (Back Cover Story)

Aeroscraft Dirigible Airship Prototype Approaches Completion By Leon Gettler (Excerpt)

California-based Aeros Corporation has created a prototype of its new breed of variable buoyancy aircraft. The Aeroscraft prototype is 79 meters (260 ft) long, and while it is not designed to carry a payload, Aeros says the planned full-scale craft will be almost twice as long and will be capable of carrying a maximum payload of 66 tons with no infrastructure requirements. With its new cargo handling technology, minimum fuel consumption, vertical take-off and landing features and point to point delivery, the Aeroscraft platform promises to revolutionize airship technology.

The Aeroscraft ship uses a suite of new mechanical and aerospace technologies. It operates off a buoyancy management system which controls and adjusts the buoyancy of the vehicle, making it light or heavy for any stages of ground and flight operation. Automatic flight control systems give it equilibrium in all flight modes and allow it to adjust helium pressurized envelopes depending on the buoyancy requirements.

It just needs one pilot and has an internal ballast control system, which allows it to offload cargo, without using ballast. Built with a rigid structure, the Aeroscraft can control lift at all stages with its Vertical Takeoff and Landing (VTOL) capabilities and carry maximum payload while in hover. The United States Patent and Trademark Office assigned a design patent for the Aeroscraft in July 2012. Design elements include a smart automotive digital flight control system, enhanced envelope fabric and a robotic mooring system that make it superior in operations and maintenance. Of course, that means it has a minimum personnel requirement. Significantly, Aeros already has a commercial relationship with the US Army, picking up a contract in July for Technology Enabled Capability Demonstrations (TECD) in areas related to force protection. This involves the shrapnel and fragment resistant flexible panels based on Aeros Interfacial Debonding Energy Absorption (IDEA) fabric technology and portable lightweight structural hybrid truss towers based on Aeros' composite hybrid truss design and fabrication process. Ω

A Helium Shortage Leads to Fewer Balloons in the Sky (NY Times, Fernandez)

One chain of party supply stores in Texas and Oklahoma was forced to make a cut worthy of Scrooge: no more balloons donated to charity events. Physicists, industry experts and federal officials said that this year's shortage had been one of the worst, for its duration and scale. The shortage is the result of a complex interplay between commercial gas companies and the federal government. Because helium is a byproduct of natural gas extraction, a drop in natural gas prices has reduced the financial incentives for many overseas companies to produce helium. "The shortage is due to demand exceeding our ability to produce helium," said Sam Burton, assistant field manager for helium operations for the federal Bureau of Land Management, which operates the reserve in Amarillo. Though the government's role has been scaled back, it continues to dominate the market, effectively setting the global price and supplying enriched crude helium for sale to private refineries and plants via a 450-mile pipeline system. In October, the Bureau of Land Management raised the government's price for crude helium to $84 per thousand cubic feet, up from $75.75.

A satellite image of the helium reserve and wells near Amarillo, Tex. The federal government maintains the reserve, which produces roughly 30% of the world's helium.

Helium has long been used to cool magnets in magnetic resonance imaging machines, and manufacturers have been struggling to cope with high prices and low supplies, according to the Medical Imaging and Technology Alliance. Leaders of the industry group said one company came close to temporarily shutting down a factory that makes the magnets because of the shortage, but scrambled to obtain additional helium. Heightening fears about the long-term supply of helium is the uncertainty surrounding the future of the federal reserve in Amarillo. A 1996 law aimed at privatizing the government's helium program would further strain the national helium supply, said industry experts, several of whom are urging Congress to adopt new legislation that would extend the sales. (See pg 20) Ω

ZRN: The Giant That Almost Was

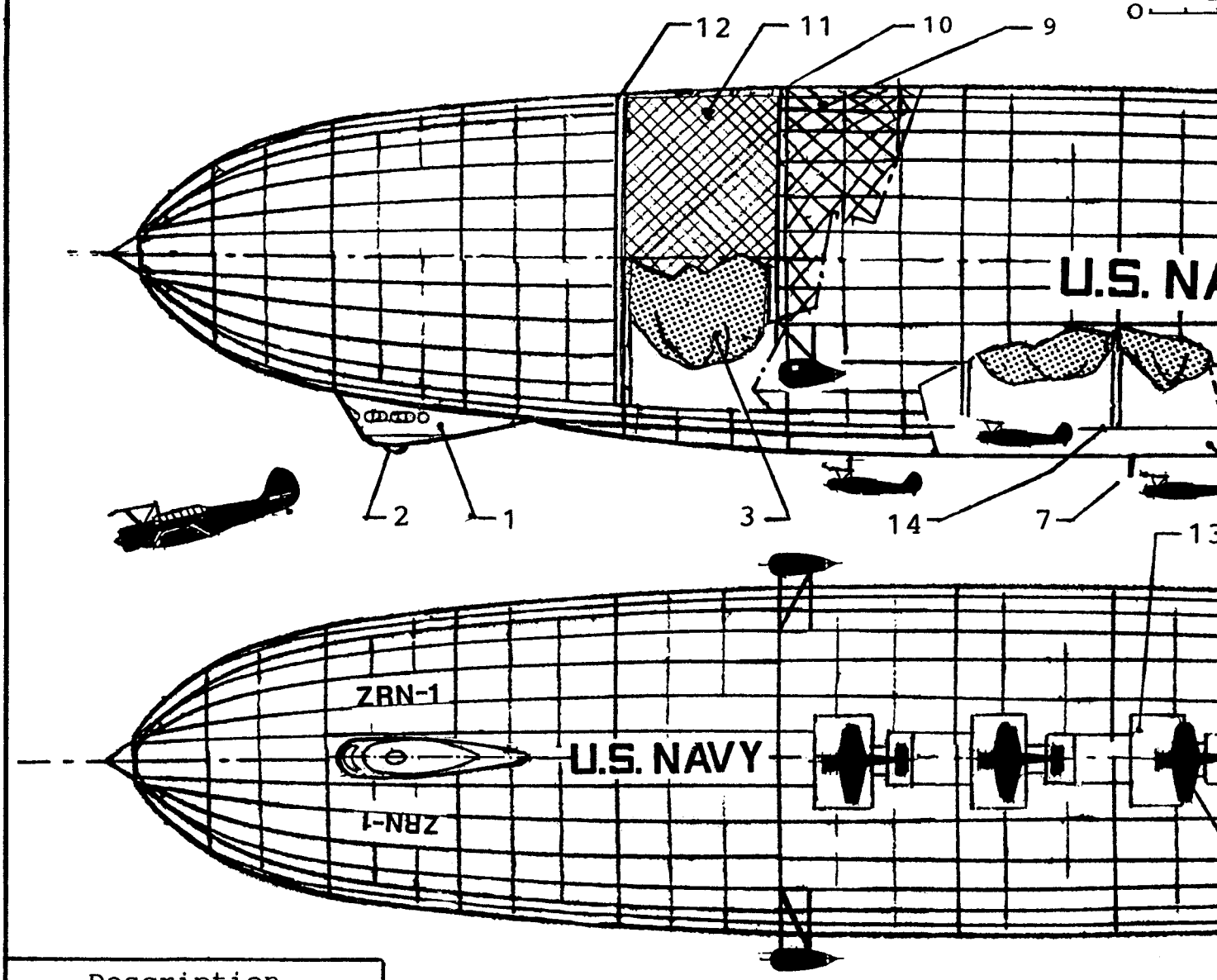
Illustration by **Herman Van Dyk**

The Navy's General Board had in 1937 passed on the Durand Committee's recommendations for a large rigid ZRCV-type rigid at that time, instead opting to recommend procurement of the long-discussed training airship. The Board specified a 3 mil cu ft capacity with the provision to carry at least two airplanes. Section Six of the Naval Expansion Bill, passed May 17, 1938, specified: "There is hereby authorized to be appropriated the sum of $3,000,000 to be expended at the discretion of the President of the United States for the construction of a rigid airship of American design and American construction of a capacity not to exceed three million cubic feet either fabric covered or metal covered to be used for training, experimental, and development purposes." So, it seemed, at last there would be a Navy rigid airship again, the "ZRN." Congressman John O'Connell wrote to CNO Admiral Leahy in June 2nd, suggesting an impartial panel of non-airship, non-Government structural experts be employed to choose the best frame structure for the new airship. "…I have for several years advocated the construction of American airships upon American design, particularly that their construction be upon a dirigible frame of the 'self anchored suspension bridge' principle, in preference to the Zeppelin frame that is an adaptation of the 'arch frame bridge'…"

BuAer responded with a three mil cu ft design was 650 feet long that carried three airplanes. (The BT-1, already foreseen for the ZRCV design of two years earlier, would have been the most likely airplane to be equipped with skyhooks.) However the language "the discretion of the President" was the fatal flaw in the Bill's wording; Roosevelt forbid anything longer than an aerostatically impossible 325 feet(!) R. K. Smith wrote, "In short, Franklin Roosevelt's dwarf airship was a militarily useless joke." Ω - Ed.

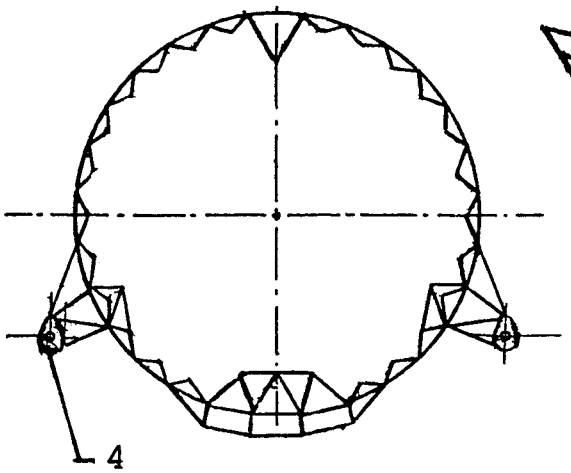
Ed. note: ZRN featured a distinct lower airplane bay structure rendered here by Herman with one airplane hooked, one coming in to hook, and the third stowed in the bay. Also unique is the engine car support structure seen in the three-view. The design's overall height was not published; this was extrapolated with the help of Technical Committee Chair Norman Mayer for Herman's illustration.

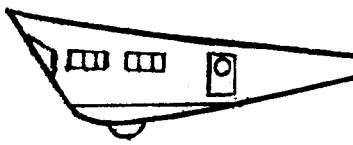
Drawn by Herman Van Dyk, Jan.2013.

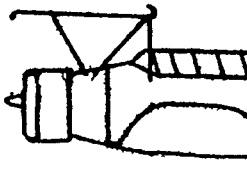


Description

1, Control cabin
2, Bumper
3, Gas cell
4, Engine nacelle
5, Aircraft
6, Sub floor
7, Trapeze
8, Observation post
9, Steel bracing
10, Main frame ring
11, Netting
12, Air/gas shaft
13, Door ?
14. Keel







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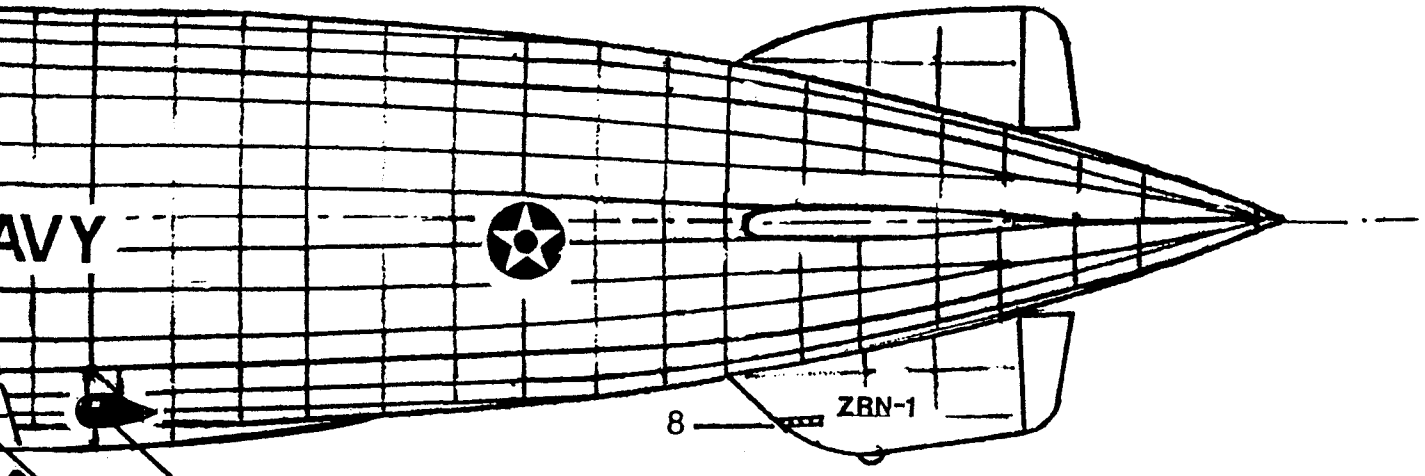
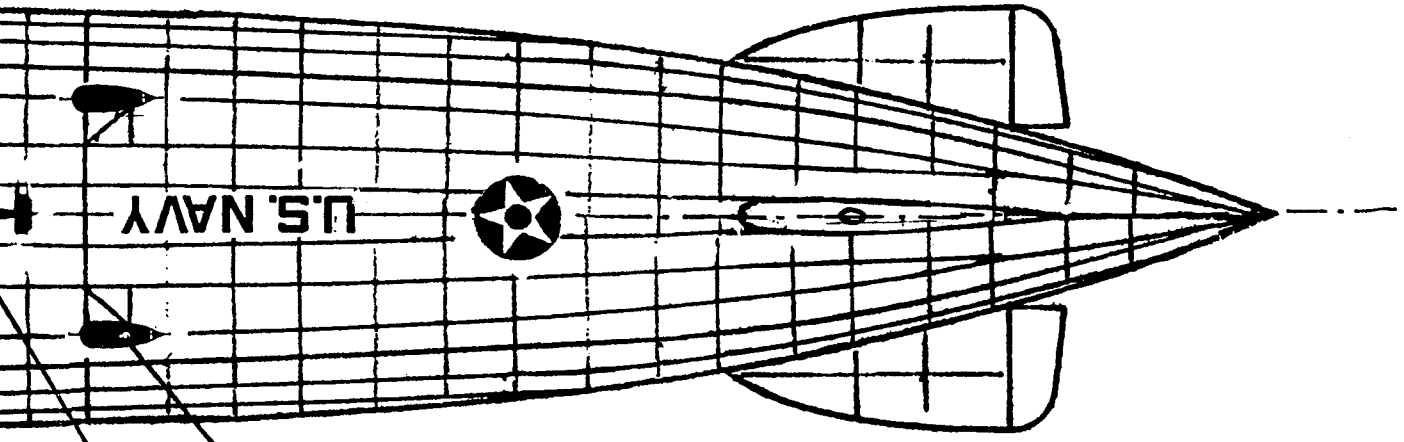
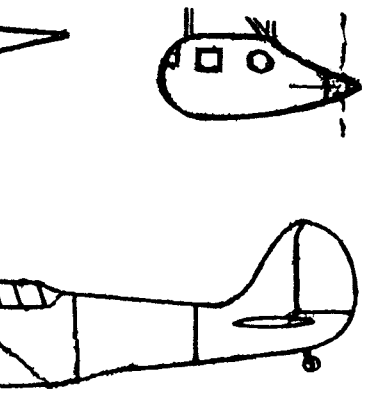
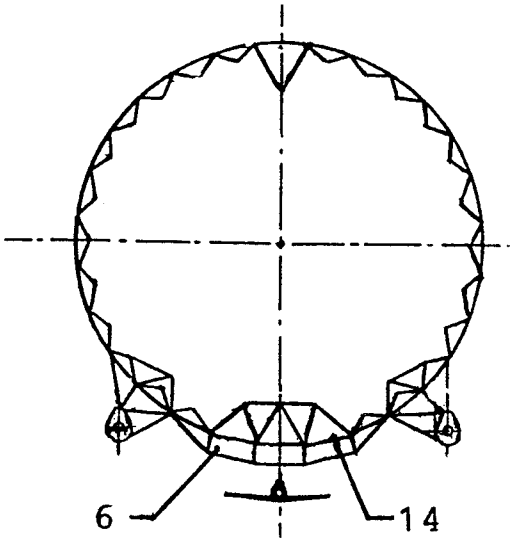


ZRN







e not to the same scale.

The ZRN training airship was proposed by the Navy Bureau of Aeronautics in 1938. It was rejected by FDR in 1940.

Specifications

Length	650 ft
Max.Dia.	100 ft
Height	108 ft
Volume	3.000.000 cu.ft
Gross lift	192.000 lbs
Engines	4
Gas cells	14
Aircraft	3x Northrop Bt
Cruising speed	50 knots

May 7, 2012

To: Chairman Jeff Bingaman, Senate Committee on Energy and Natural Resources and Ranking Member Lisa Murkowski, Senate Committee on Energy and Natural Resources, Washington, DC 20510

Dear Chairman Bingaman and Ranking Member Murkowski:

As a broad coalition of industrial, scientific and medical industry stakeholders, we are writing to express our support for the Helium Stewardship Act of 2012 (S.2374) introduced by Senators Bingaman, Barrasso, Wyden, and Enzi. Helium is a critical element used in numerous applications in our medical, industrial and scientific communities. This legislation is urgently needed to continue administering our federal helium program to maintain a reliable domestic supply and minimize market disruptions. Hundreds of thousands of jobs depend on reliable access to and stable pricing for helium. Helium plays a vital role in a wide array of products in the industrial manufacturing, commercial, medical and government markets. Key uses include MRI scanners, semiconductors, fiber optic cable, space exploration, scientific research and welding. It is a non-renewable resource that naturally occurs in only a few places globally, and any reduction in supply could dramatically impact our markets and the availability of these and other important products and services. It is therefore imperative that a stable domestic resource of helium is sustained to keep our markets operating smoothly.

U.S. entities acquire much of their helium from the Federal Helium Reserve at the Bush Dome just outside of Amarillo, Texas. While operations stretch back to the 1960s, the Helium Privatization Act of 1996 was the last time that Congress considered this issue. When this statute expires in 2014, a significant portion of current global supply will no longer be accessible. In practical terms, this will happen sometime in 2013 when operating funds are projected to cease if action is not taken to reauthorize the Reserve.

The result of inaction will be to take 30% of the world's supply off the market, causing enormous dislocations in the affected industries and ripple effects beyond them – patients forced to travel long distances to find working MRIs, semiconductor manufacturers and other industrial and commercial businesses uncertain where they will turn for essential helium, creating new dependencies on unstable foreign sources. Essential scientific research could suffer major adverse impacts.

The Helium Stewardship Act of 2012 will authorize the continued management of the Reserve to ensure maximum helium recovery and value to the US Treasury and taxpayers. It does not authorize or require any new appropriations. Instead, it keeps the federal helium program revenue positive through continued crude helium sales from the federal stockpile. It would create certainty and stability in the helium markets for all stakeholders, federal and private alike.

In closing, we'd again like to reiterate our strong support. The Helium Stewardship Act will protect our economy and national security from unpredictable supply sources across the globe. It will ensure that a safe supply of domestic helium is available for many years to come.

Sincerely,

2012 Coupe Aeronautique Gordon Bennett and America's Challenge Cup by **Peter Cuneo**

Both of the two major manned gas balloon distance championships for 2012 were hydrogen-only events for the first time in many years.

The 56th edition of the Coupe Aeronautique Gordon Bennett, which has been newly subtitled as The World Championship of Distance Gas Ballooning, was contested this year from the small town of Ebnat-Kappel in the Toggenburg district of the Swiss Alps. The seventeen teams from seven countries were greeted by sunny forecasts from the event director and three days of unrelenting rain. Forecasts were dominated by a low pressure system in Southern Italy which wanted to draw the balloons counterclockwise around it and then out over the Mediterranean. The fight would be to head west southwest and get far enough west to avoid the water.

The rain continued throughout the launch day, Saturday, September 1 as special fat tire vehicles were used to ferry the balloons and equipment onto the water-logged launch field. After seventeen soggy inflations the launch did start at around 2300 hrs (local) and two strategies emerged: Either find a hole to rise above the clouds and head west or stay below the bottom layer and wait for better weather. Miraculously, all the balloons managed to avoid entering the clouds. Just ask the pilots: I did, and I trust them! Eight balloons made it thru the second night and only two were aloft, both now into Spain, after three nights. Swiss-1, the local favorites, held a large lead when they encountered military zone R-86b and chose to land rather than try to fly under it. Over the next ten hours France-1, the defending champions, inched their way around the military area and slowly moved towards the leaders distance mark, finally landing with a sixteen kilometer lead over Swiss-1. A great race and a great victory for Sebastien Rolland and Vincent Leys, covering a distance of 1,620 km during 69 hours aloft. USA was the only to country to place two teams in the top six, with USA-2 gaining bronze and USA-3 finishing sixth.

The 17th America's Challenge competition launched under much better weather conditions on Sunday, October 8th from Albuquerque, NM with a small, but international, field of five teams. For the first time in its history, the 2012 event was not able to secure helium and had to cancel entries for several teams whose balloons were certified for flying with helium, but not with hydrogen. All the hydrogen balloons launched safely and initially headed east at a fast clip. After 62 hours, the final, un-moveable obstacle for the last three teams aloft proved to be … the Atlantic Ocean. The third place team of Peter Cuneo and Barbara Fricke landed in South Carolina after covering 2,345 km in 62 hours. The second place team, piloted by Leonid Tyukhtyaev of Russia and Wilhelm Eimers of Germany, landed just outside the 60 mile ADIZ surrounding Washington, D. C. after covering 2,505 km in 62:19 hours:min.

The winning team of Cheri White [seen here at inflation] and Mark Sullivan landed in North Carolina after covering 2,623 km in 62:18 hours:min. A map of their track showed an almost straight line to the east throughout the entire flight. The fourth place team of Jon Mason and Clive Bailey represented Great Britain. All of the top three teams said that they had enough ballast to continue beyond their final landing spots except for the lack of land underneath them for landings. All balloons flew through fairly heavily used airspace and through multiple airport airspaces, up to and including Atlanta's Class B with no problems thanks in a large part to the outstanding coordination of the official race Command Center which alerted airspaces before the balloons arrived. Hydrogen did not prove to be an issue in any case. All balloons carried Mode-C transponders, full capability Aircraft Radios, ELTs, Aviation GPS's, night time position lights and landing lights. Many also carried night vision equipment, laser altimeters and laser flares.

This event was also significant for fielding hydrogen compatible balloons from three different manufacturers: two Wörner balloons from Germany, one Best Aviation experimental balloon from the U.S. and one from Cameron Balloons of England. **Ω**

TECHNICAL COMMITTEE

The Government Accountability Office has prepared Report GAO -13-81. This was given to the U.S. Senate Subcommittee on Emerging Threats and Capabilities in October, 2012. The initial comments of the GAO report deal with identifying the major projects and their funding. The total amount for a five-year period is $7 billion. This includes all military projects using aerostats and the later airship programs. It is pointed out that endurance, of both aerostats and airships while carrying ISR mission payloads is a major reason for their use. Operating costs are also a major reason for choosing aerostats and airships, but this is not mentioned. Comparisons are made between initial requirements and reduced values caused by weight increases on the LEMV and the Blue Devil 2. The report points out that aerostats can fly six days but must be retrieved for helium and fuel replenishment, whereas ISIS's endurance could be one year. Helium replenishment is required on both types. Some aerostats are powered by conducting tether cables allowing increased endurance.

The costs are a combination of contracts for production aerostats and research programs to develop advanced ISR equipment and systems. In the latter, the aerostat itself is not usually the research component. It would be to see this information made since much of the ISR research may be borne by aircraft as well.

The airships thus far should be considered as research projects. Their costs should be on a larger scale. It was a mistake to assume that the LEMV and Blue Devil airships represented a high level of technology readiness. Instead they would require higher funding as well as more time for development. It did represent a lack of experience both in contractors' and government agencies. Aerostats should be separated, as a category, from airships. Hundreds of aerostats of various sizes exist in the war zone and represent developed technology. The GAO report emphasizes the need for monitoring programs and their costs better and improved coordination among various DOD agencies involved with lighter-than-air projects. The need for qualified and experienced personnel could be added.

The U.S. Army has released a few more details on their LEMV airship following its initial flights at Lakehurst. Envelope: Total volume – 1,350,000 cu. ft. (38,233 m^3) including ballonets and helium chamber. The envelope fabric is a composite laminate of Vectran, Kevlar and Mylar. Vectran is a liquid crystal polymer four times as strong as polyester with other superior characteristics. The shape consists of two ellipsoidal forms mated at the centerline to provide a wider cross section and a more effective aerodynamic lifting surface. From photos, it can be noted that the center of buoyancy is further aft than on conventional airships. This will compensate for the power plant weight at the tail and possibly achieve improved aerodynamic efficiency. Propulsion: Four 350 hp V8 diesel engines, manufactured by Centurion Engines in Germany, are used to propel the LEMV. Each is mounted in ducts and has movable vanes to direct the thrust. Two are mounted on the forward part of the hull and two are at the stern. Since there is no internal structure in the envelope all loads are attached by cables and patches. When on station an average speed of 30 knots will be maintained, but a dash velocity of 80 knots can be achieved. A maximum range of 2400 nm is a design objective but this may be reduced due to structural weight increases. Payload Features: Twelve equipment bays are located on the underside of the envelope aft of the cockpit car. These are designed to carry a maximum payload of 2,750 lbs. at an altitude of 20,000 ft. The payload will consist largely of IFR equipment installed in Melbourne, Florida and then flown to the Eglin Air Force base for testing. Flight at lower altitudes may allow extra fuel to be carried for the deployment flight to Afghanistan. While the LEMV is a large nonrigid it does not equal or surpass the historic Navy ZPG-3W.

LEMV major specifications:
Volume – 1,465,000 cu. ft. (Design value)
1,516,300 cu. ft. (Dimensionly relaxed)
Total Length- 403.4 ft.
Gross Weight – 82,996 lbs. with static lift – 93,496 lbs. with dynamic lift.
Max. Speed – 82 knots at 5000 ft. altitude.
Endurance – 80 hrs. with heavy take-off.
Useful Load – 22,336 lbs. with dynamic lift of 10,500 lbs.

- **Norman Mayer, Chairman**

SHORT LINES

Idaho Scientist Seeks to Launch Aerial Bigfoot Search With Blimp By Laura Zuckerman / Reuters (Excerpt)

An Idaho scientist shrugging off skeptical fellow scholars in his quest for evidence of Bigfoot has turned his sights skyward, with plans to float a blimp over the U.S. mountain West in search of the mythic, ape-like creature. Idaho State University has approved the unusual proposal of faculty member Jeffrey Meldrum, an anatomy and anthropology professor ridiculed by some peers for past research of a being whose existence is widely disputed by mainstream science. Now Meldrum is seeking to raise $300,000-plus in private donations to build the remote-controlled dirigible, equip it with a thermal-imaging camera and send it aloft in hopes of catching an aerial glimpse of Bigfoot, also known as sasquatch.

'Well-Manicured' Bigfoot? The blimp-based search - dubbed the Falcon Project - was the brainchild of William Barnes, a Utah man who said he watched an immense, hairy creature that was otherwise "well-manicured" approach his tent before striding up a rocky ledge. Years later, he approached Meldrum, well known in Bigfoot circles, about his idea for an airship expedition. Barnes and Meldrum hope the Falcon Project will take flight next spring. Financial support for the venture has been slow in coming, with Meldrum failing so far to raise a single dollar for the effort. **Ω**

Researchers Develop Hydrophobic Coating That Prevents Buildup Of Ice On Aircraft Wired UK (11/19, Warr) reported, "A super water-repellant coating for planes is being developed to help planes fly safely through icy weather. The hydrophobic coating would be applied to the whole plane and could help prevent the buildup of ice deposits which disrupt the movement of the craft."

UK's The Engineer (11/19) reported, "Current anti-icing techniques include diverting hot air from the engines to the wings, preventing ice from forming in the first place, and using inflatable membranes known as pneumatic boots, which crack ice off the leading edge of an aircraft's wings. The super-hydrophobic coating being developed by Sakaue, Katsuaki Morita, a graduate student at Tokyo University, and colleagues from the Kanagawa Institute of Technology and Chuo University works by preventing the water from sticking to the aircraft's surface in the first place. According to a statement, the researchers developed a coating containing microscopic particles of a Teflon-based material called polytetrafluoroethylene (PTFE), which reduces the energy needed to detach a drop of water from a surface." **Ω**

Airship With Romney Ad Forced To Make Emergency Landing In Staunch Democrat Area

(compiled from Internet reports)

A blimp-like aircraft with a Mitt Romney campaign ad made an emergency landing. Luckily nobody was injured in the crash, which was caused by high winds, but it did cause some amusement in a town which generally supports the Democrats. Neighbor Teri Balter said: "We saw the blimp hovering over the house and it was floating backwards - it looked like it was coming down. I thought boy, Mitt Romney really wants us to vote for him." The blimp contained the slogan 'America Needs Romney', and it was flying from Boca Raton to North Perry Airport. "It came down tail first and then the gondola struck and then rolled to its side as it deflated." **Ω**

HISTORY COMMITTEE Al Robbins, Chair

By June 1948 the Navy had a total of 18 operational airships, Four each at ZP-1 and ZP-2, eight at CNATE, plus two at the newly created NARTUs (Naval Air Reserve Training Units).

The Navy received its first modified K-ship (ZP-2K) on August 7, 1951. Some of these modified K-ships received additional improvements, and were designated as ZP-3Ks (ZSG-3s in the new nomenclature system). The first ZSG-3 was delivered on November 12, 1952. New designs and production airship types were accepted and delivered in rapid succession: ZPG-2 June 1953; ZSG-4 June 1954; ZS2G-1 April 1955; ZPG-2W May 1955; ZPG-3W June 1959. We rapidly expanded from two to four Squadrons, introduced replaced the WWII era airships with the new production models, then began decommissioning squadrons and Air Stations toward the end of the fifties. We hope to have the part of the story of the only two airships permitted to fly, after the LTA program was officially terminated, in the next NOON BALLOON. (Still searching for someone that operated the KLINKER System.) Former NAA President Herman Spahr recently found copies of the formal graduation photographs of six subsequent LTA pilot training classes conducted at NAS Lakehurst. We had no previous record of Class 1-49, and only have initials for many of the officers in the following five classes. According to the official history of post-war LTA, the first class of 20 officers commenced training at NAS Lakehurst in April 1946. (The same paragraph reports that Pilot training was shifted to NAS Glynco, Georgia, in 1954.) We don't have the names of these 20 pilots, or their initial assignments after training. We'd greatly appreciate any information regarding members of this forgotten class. Presumably all would have been assigned to ZP-1, ZP-2 or to the LTA stations after winning their wings. We don't have class numbers or class photos for other pilots trained before training was shifted to Georgia, and only have class rosters for two Glynco classes. Sixty-two of the 100 pilots trained in 1949, 1950 and 1951 were still on active duty in 1958, less than twenty of them in LTA assignments. Here are some other pilots trained at Lakehurst before LTA training shifted, probably after these six classes:

ALTZ	Leroy V.
AUSBROOKS	Jr. Erskine P.
BALLOU	Justin G. (J. Guy)
BARTON	B.M. (Bruce M.)
BERGSTROM	C.O.
BIRO	William Ernest
BONSIGNORE	G.R.
BRANDORFF	Paul A.
BROWN	Donald R.
CHANDLER	Hamilton
COX	C.B.
CURRY	Raymond F.
DEBOUT	A.E.
DUNCAN	C. (Charles)
ERHART	James W.
FITZGERALD	William M.
FRY	Jr. Orris J.
GRIFFIN	William E.
HALE	John J.
HARTLEY	Jack H.
HICKMAN	Wilbur M.
HOGAN	John Lorenn
HUNTER	William B.
JENSEN	Edward O.
KEPHART	Robert D.
KIMBALL	William A.
KLINKER	Wendell Evan
KULUS	R.J.
LADERER	Niles A.
LAPPLE	C.F.
LOWRY	R.C. (Robert)
MCCLONE	L.H.
MCCONNELL	Edward D.
MCDONALD	E.A.
MORGAN	George H.
NELSON	Robert L.
PAYNE	W.J.
PETERSON	Frank
PETTIGREW	Raymond Arthur
PHILLIPS	Cass E.
REDMAN	James R.
REDMOND	Richard E.
ROWAN	Frank E.
RYLEE	James E.
SAXE	V.L.
SCHERER	Russell J.
SCHUBERT	Leslie H.
SCHWARTZ	Ira Norton
SENGSTACKEN	E.H.
SMITH	George F.
STIELER	N.O.
STROMSKI	Alex S.
VASTVELT	A.R.
WALSH	Arthur L.
WEIMER	Walter H.
WILLIAMS	H.L.

President Emeritus **Herman Spahr** has located photographs of six LTA pilot classes conducted at NAS Lakehurst. Anyone have copies of the other classes taught at Lakehurst, before the pilot training program was transferred to Glynco? I'd like to use the TNB as a vehicle for surfacing some of the remaining 600 pilots trained between 1946 and 1958 as well as filling in the blanks about these pilots.

We don't know where most were assigned after they graduated. We don't have any idea how many were regular Navy or augmented to complete a Navy career, as an aviator, engineering duty officer, or other staff officer, regular or reserve. Do you have any idea how many ever belonged to the NAA?

Class 1-49 All non-pilots. Only the five underlined still were listed in the Wing's 1959 Register.
(All Official Navy Photos – Names listed left-to-right, front row to back row.)

Front row. ENS SHORTS, Donald R.; ENS NESBITT, F.R.; LT. BENOIT, H.; ENS YOUNG, Lawrence R.; ENS GERMAN, M.H.; ENS MAYER, Donald R.

Second row. LTJG WYMAN, Charles L.; ENS CUTSHALL, H.; LTJG POWERS, H.S.; LTJG BEYER, S.E.; LTJG BOYLE, C.J.; ENS BACON, F.M.

Third row. ENS MATHIS, L.G.; ENS WENTE, D.A.; ENS HARKINS, W.D.; ENS STONE, F.K.; ENS FLEISCHLI, R.L.

Class 2-49 All pilots, volunteers from the fleet. All of the officers in Class 2-49 and subsequent were naval aviators before reporting to Lakehurst to learn to fly airships.

Front Row. LTJG SPAHR, Herman G.; LTJG BORN, Robert J.; ENS TWADELL, Miles E.;
LTJG FINKEL, Herman C.; ENS JONES, R.F.; ENS LITTLE, C.D.

Second Row. LTJG HAUGH, Edward M.; LTJG HAGADORN, Robert L.; LTJG DULHAGEN, John H.; LTJG FINKEL, Herman C.; ENS JONES, R.F.; ENS LITTLE, C.D.

Third Row. LTJG MULHOLLAND, William P.; ENS LONGLEY Wilbur E.; LTJG DRACE, T.D.;
LTJG DENNEY, W.W.

Fourth Row. LTJG OVERALL, Sidney R.; LTJG GAWTHROP, W.R.; LTJG DILGREN, Paul A.
Last Row. ENS ROSE, Charles J.; ENS TULL, Robert

Class 1-50

Front Row. LTJG RICHISON, Warren C.; LT LONGINO, Walter B.; LT NEWELL, Harold P.; LT RICHARDSON, John D.; LTJG RIVERS, Francis E.

Second Row. LT KEST, Jr., H.W.; LTJG MOSSER, D.; LTJG RICHELL, M.O.; LTJG BALESTRI, William L.

Third Row. LTJG LEMERT, Russell C.; LTJG POYNTER, Robert J.

Class 2-50 All fixed wing pilots.

Front Row. LCDR HEWITT, Floyd; LCDR King, J.W.; LT COLOPY, Robert E.; LT MEISSNER, Clarence R. LT CARTER, Harold A.

Second Row. LTJG HURST, Walter; LT POWELL, A.C.; LTJG KNICK, Victor R.; LTJG BAKER, Robert G.; LT DUNCAN, Richard E.

Class 1-51 All fixed wing pilots (Undated photo)

Front Row. LT BYRD, A.W.; LT YOUNG, E.B.; CDR HALMAN, Robert M.J.; LCDR WEATHERLY, J.F.; LCDR REAGAN, Lawrence Hunneman

Second Row. LTJG PAULS, Robert H.; LT RHODES, A.B.; ENS WARTMAN, Albert C. (Bud); LT DEVER, W.B.

Third Row. ENS CUTHBERT, Thomas Remy; ENS SCHNEIDER, John Frederick; ENS GERCKEN, Otis E.; ENS CARTER, A.G.

Fourth Row. LTJG HARPER, William J.; LTJG SNYDER, James G.; ENS SPRING, Joseph Nelson

Class 2-52 All pilots (Photo dated June 2, 1952)

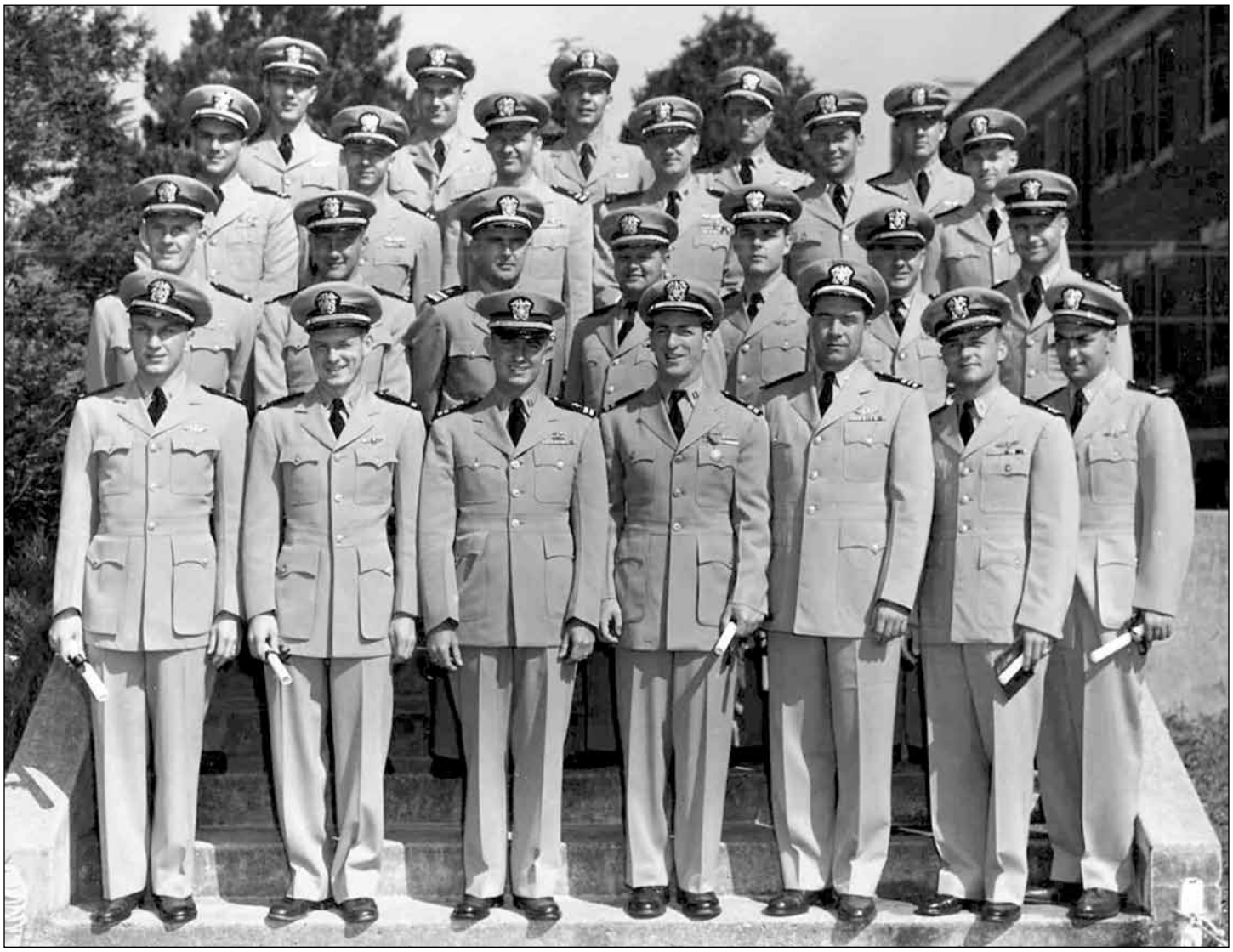
Front Row. ENS RZEWNICKI, D.D.; ENS TUTTLE, Richard A.; LT MACON, Benjamin H. LT ALOISIO, Veto (N); LCDR JAMES, Richard C.; ENS SMITH, P.W.; ENS DEMEO, L.A.

Second Row. ENS WOLCOTT III, J.H.; ENS ONES, J.L.; LCDR MILLER, Clarence King; LTJG NOBLE, Lee V.; ENS OLSON, Thane N.; LT FARRELL, T.L.; ENS CARTER, Frank R.

Third Row. LTJG SPEICHER, R.R.; ENS JARRELL, Donald L.; ENS SHANNON, Milner N.; LT ALFORD, R.; ENS MILLIS, Marion L.; ENS LARSON, N.L. (Norman)

Back Row. COLEMAN (?); LTJG BUCHANAN, C.G.; ENS EASTMAN, Alfred C.; LTJG KELSO, Quentin A.; ENS HURST, R.S.

Ω



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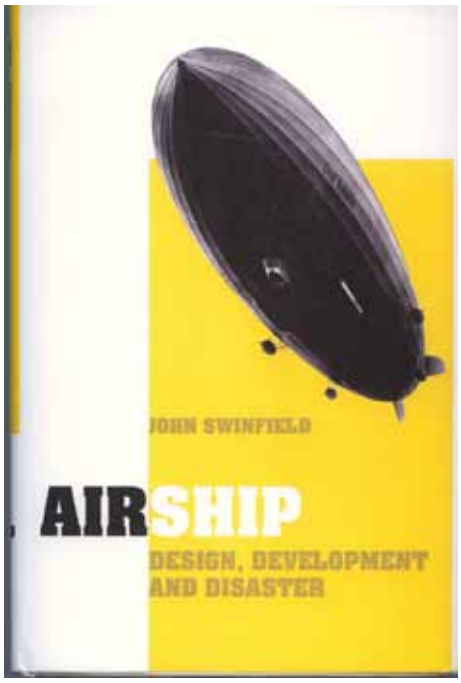


AIRSHIP Design, Development and Disaster
By John Swinfield

Reviewed by **C. P. Hall**

A volume of LTA history tracing the story of airship development, beginning with 19th century European pioneers, and leading to the design and development of airships in Germany, Italy, the United Kingdom and the United States, is a project of ambitious scope. It is obvious that each country's airships will not receive an equal amount of attention and, on this point, begins my review.

John Swinfield is "an ex-Fleet Street and BBC reporter" and the preponderance of his interest and research was devoted to the post-World War I British rigid airships. There is a chapter for German rigids, a chapter for the Italian semi-rigids, and a chapter titled, "Aircraft Carriers of the Sky: America's Airships" but the emphasis of this book is the rigid airships built in the United Kingdom.

If you are interested in lighter-than-air craft, then you should be interested in this aspect of British aviation, as they built more rigid airships than any country except Germany. They took several approaches to this arcane branch of aeronautical engineering, and learned lessons that remain of value to this day. Such a book should offer either new or new found material which brings forth a better understanding of the subject. Three primary examples found in AIRSHIP include: The role of Major G. H. Scott in recreating interest in airships within the Royal Navy after the crash of R38, a topic well footnoted. The letters of Molly Wallis (Mrs. Barnes N. Wallis) revealing the trials of airship design and construction from the wife's perspective. Finally interviews and correspondence with Mary Stopes Roe, the daughter of Barnes and Molly Wallis; the last two, taken together, provide novel insight into the mind of one of British aviation's most brilliant designer.

There are shortcomings. Early on, under the heading, 'A Note by the Author,' He comments, "I have shrunk from the overly technical and mad-eyed enthusiasts whose eager fascination with the arcane can bewilder; kindly and well-meaning all of them." The sub-title key word is "design." A tiny bit more of well-chosen technical, arcane detail could have added substance to the finished product.

Illustrations: There are four sections of photographs, some are commonplace, a few are quite unique, and a few are just arcane. Why avoid arcane airship detail; then include "an early image of the French using tethered balloons in the capture of the fort at Hung Hoa, April 1884, during the French Tonkin campaign (Vietnam, 1883-6.)" ? In the text, separate from the photos are included added illustrations, a few little treasurers! There is a detailed drawing of R.80 which is often shown incomplete elsewhere. There is the program for a June 17, 1921, Parliamentary visit to "CIVIL AVIATION AIRSHIP STATION, PULHAM" which includes a photo of R36 at the mooring mast and a schedule of events. I seem to have missed the arcane detailed explanation as to why this was The Civil Aviation Airship Station in 1921. Dr. Dale Topping once told me that no book about LTA with photos has error free photo captions. Dr. Topping has left us; that record remains unchallenged.

Appendices: A bit disappointing and often anecdotal. The best is Appendix A, the Grabowsky Atherstone Log. Often quoted but never published, this is the Readers Digest version, with many entries omitted and explanatory comments which are underwhelming. A printed version misses such nuance as, when R101 finally escapes the hangar in time for a trial flight before the departure deadline, pressure abates and Atherstone's handwriting suddenly improves.

The most serious problem that I have with this book is the lack of consistency regarding the order of events

and the odd placement of informative commentary. For example, Swinfield offers interesting insights into several key British participants in the airship era. In several cases these are dropped into the text with some lack of regard for the subject at hand. For example, some of the most interesting observations regarding Barnes Wallis are found in Chapter 9, the topic of which is the design and disaster of R101. It is, however, the example of Major G. H Scott that rankles. Major Scott is a controversial character in British aviation history. Opinions differ to say the least. Swinfield offers what I perceive as balanced analysis at every mention for 12 chapters. Then, within the "Epilogue: Will the Airship Sail Again?" he chooses to drop in the story of Scott's actions saving R36 when its tail fin failed in flight in 1921. In this version, Scott seemed responsible for the fin damage, and he returned to the control car only after the navigator's actions, "I let go half-a-ton of water ballast in the airships forward gasbags," prevented disaster. Scott is said to have supervised the securing of the damaged fin and specified the flying speed to return safely to Pulham. There are lengthy quotations. The relevant footnote reads, "Nigel Caley email to author 25 November 2011; from "˝Recollections, Air Marshal Sir Thomas Elmhirst, privately published 1991, Whitestable Litho Printers; Caley private archive." Elmhirst was the navigator of R36. A review of the memoirs of Sir Samuel Hoare, N.S. Norway and Barnes Wallis demonstrate that history written by those involved, 30 years after the fact, are strong on the big picture, weak on the details and should always be viewed with skepticism unless confirmed by a second source.

The book contains the usual number of typographical errors and a few errors of fact, but is none-the-less an interesting read. The researcher planning on using AIRSHIP as a reference should bring post-it notes to reference anecdotes of interest as they may be easy to recall, but hard to locate a few months after the first read. **Ω**

Our member and "Delaware Reporter" **Waldo D. Jones** sent along a clipping from the Asbury Park Press covering the LEMV first flight illustrated with photos of the Navy's MZ-3A. Included is a cockpit shot featuring pilots Mark Kynett and Larry Chambers, the latter who had been chief pilot for Goodyear Tire & Rubber. **Ω**

Dr. Barry Prentice was on the PBS program "Prairie Pulse" whose release states: "Barry Prentice, President of IsoPolar in Winnipeg [will be] talking about airships and how they can be used today." Barry was not sure whether it will get picked up by other PBS stations, but hopes that it helps move the conversation on airships forward a little bit. **Ω**
http://www.prairiepublic.org/television/prairie-public-on-demand/prairie-pulse/prairie-pul se-1008

NAA immediate Past Pres. **Ross Wood** sent the OCT 2012 issue of SEAPOWER, magazine for the Navy League of the United States. It contains a 4-page article by one William Matthews about the military's current LTA efforts, a very positive and complete, well-illustrated piece. **Ω**

Alastair Reid announced, "I have just published the first of two 600 page volumes covering the Airship Industries Skyships. The book is called "Moving Mountains," and the aim was to chronicle each of the Skyships that were built, where they went and what they were used for. It started as a private tribute to the work of my father Iain Reid, and the rest of the Airship Industries design team, led of course by Roger Munk, but grew substantially as it went along. Volume I focuses on the early UK development from 1971 to 1990. It covers the development of the SK 500 and SK 600 designs, and follows the struggle to make them a commercial reality. The US PACE (Patrol Airship Concept Evaluation) and French military trials are examined in some detail, as are the introduction of advertising programmes and the Skycruise commercial passenger services. The use of Skyships in Australia and Japan is reviewed and the book ends with a look at some of the more unusual AI designs that never quite made it.

The story of Airship International & of Airship Operations and of Airship Management Services are covered separately in Volume II, which also examines the Airship Industries US Navy ODM/SK 5000 design, and subsequent Sentinel 1000 airship program. See http://www.lulu.com/shop/alastair-reid/moving-mountains-volume-/paperback/product-20446121.html **Ω**

"Curiosity: What Destroyed the *Hindenburg*?"
Sponsor: Intel, Reviewed by **C.P. Hall**

Good News: I come out of the shower and my wife says that it was just announced on GMA that a new program about what destroyed the *Hindenburg* will air on Sunday night. Bad News: I look it up in the cable guide and it says "Mythbusters." Good News: On Sunday night, it is a new production, backed by Intel, with none of the "usual suspects" in the cast and the promise of testing theories on 1/10th scale, 80 ft. facsimiles of *Hindenburg*. Perhaps a new set of eyes with a suitable budget will find something fresh! Bad News: The execution of the program. *

The setting for the program is the Southwest Research Institute in Texas. The principals are identified as Jem *(sic)* Stansfield, aeronautical engineer and Dan Grossman, airship historian. Also offering occasional comment is Steve Wolf, explosives expert. The premise is to consider various theories and test the most likely on 1/10th scale proximate replicas of the *Hindenburg*.

The first theory worth exploring is sabotage. The first 1/10th scale model, complete with outer cover, aluminum frame, individual gas cells (they call "ballonets"), is assembled and a bomb placed between cells #4 and #5 where surviving crewman, Helmut Lau, witnessed a detonation. The bomb is detonated; the model burns and descends, in the eyes of the principals, in a manner very similar to the archival footage of the *Hindenburg*.

The problem with this solution is said to be that sabotage does not explain reported "tail heaviness" which is said to have existed for 8 minutes before the disaster and which it is estimated represents a 50,000 cubic foot hydrogen leakage. It is theorized that hydrogen leaked from a gas cell and it was retained inside the hull, contaminated with air, and is set off by a localized, retained static charge which arcs when the hemp landing line grounds the statically charged ship. There are lab tests, a detour to "prove" that this process did not ignite airship fabric as hypothesized by an unnamed NASA scientist, and finally a second 1/10th model test which does burn but does not look right.

* Errata: *Akron* and *Macon* cost $8,000,000. R100 & R101 cost about $10,000,000 including two sheds rebuilt at Cardington, various full scale experiments, and one year of operational flying. The *Hindenburg* did not cost $42,000,000. Rosendahl cited LZ-129 costing about $2.7 million.

Now comes "evidence hidden for 75 years" [unless you count Doug Robinson's interview with the senior Heald, page 33 of his 1964 book]. Mark Heald, retired physics professor, is introduced. Mark (then 8 years old) and his father witnessed the arrival and destruction of the *Hindenburg* from an unusual vantage point. Just before the explosion, they saw blue flame "forward of the upper rudder." St. Elmo's fire is suspected.

Under the heading, "Fire in the Hold" *(sic)* a new set of experiments are undertaken. Using an aluminum foil blimp and an electro-static generator, it is possible to create a static phenomenon at the tail of the foil blimp which is barely visible and blue. It is hypothesized, but not demonstrated, that leaking hydrogen escaping a vent shaft could have been ignited by such a phenomenon. A plastic tube, "two meters long" and I estimate one foot in diameter, is set upright in a vertical position. A smoke generator and hydrogen source are installed at the base; a smoke and hydrogen mix flow up this tube. At the top, on the end of the proverbial ten foot pole, is a burning, hand-held type torch. The hydrogen seems slow to ignite, however, infrared photography shows ignition at the top which eventually travels down the tube and pops at the source (the lower, wide open end of the tube).

Taking two 2' x 4' fabric sheets, one unpainted, and the other "painted like the *Hindenburg*" and sticking a lighted Bunsen burner under each one, is an experiment which has no relevance to the *Hindenburg* event. It proves nothing beyond a two small swatches of fabric may burn at similar rates. Wetting the two sheets would have changed the experiment.

Approaching the mast the *Hindenburg* was likely not tail heavy. Certainly 50,000 cubic feet of hydrogen was not leaked and some was not trapped inside the hull. The *Hindenburg* had been weighed off in anticipation of landing and was likely "heavy" in trim. A "heavy" ship in trim with engines running will tend to nose up. Falling rain will tend to drain aft. The tail heavy situation is described as occurring over eight minutes. What would be the nature of a leak losing that amount of hydrogen from a gas cell already about 20% depleted? 50,000 cubic feet of hydrogen represents about 1.66 short tons of lift; an amount easily offset releasing ballast, valving gas forward, and shifting crewmen. If there was a leak, the cowled vents along the top of the ship were designed to let the escaped hydrogen vent rather than to accumulate. Finally, regarding a related experiment,

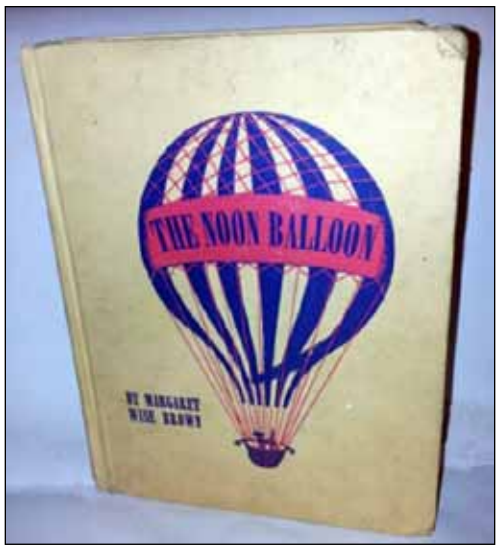
a charged anode on top of a wet fabric section over a grounded metal frame is hardly comparable to the claim that the fabric section retained an isolated static charge when the rest of the charged ship became grounded.
The last 1/10th scale model is assembled. There is no static electricity component, there is no leak, there is a remote detonated ignition source placed between two gas cells (where "the bomb" was placed in the first such test). The result lacks an audible pop but the visuals are deemed quite satisfactory, true to the original, and the explanation that satisfies these experts. **

In the final minute of the program, we are shown twice the historic footage of *Hindenburg*'s bow coming to earth. The cameraman focused on the control car and the printed word *Hindenburg* painted upon the fabric, just above that car. It is an interesting detail that the word *Hindenburg* is consumed by the flames coming from above and forward. The letters are consumed in order, H-I-N-D-E-N and the fire pauses along the vertical line of a main transverse ring. There is a final whoosh of flame and the panel with B-U-R-G dissolves in flame from behind. I submit that, if you watch carefully, at the moment that the burn pauses, you can see flailing gas cell fabric behind the unburned outer cover if you are focused upon the point where the H-I-N-D-E-N just burned away. It seems that a jet of hydrogen passed up the axel corridor and, perhaps, popped at the bow igniting the bow gas cells, resulting in that fire burning from the bow towards the stern meeting the original fire over the control car and passenger accommodation last. This is why such an experiment needs an axel gangway if an accurate duplication of events is the goal. Videos compare this last model burn to *Hindenburg* news reels, the credits begin to roll, and we close with the bow of *Hindenburg*, in flames, coming to ground.

** Errata: "Between 1918 and 1937, five British, French and American airships were destroyed by hydrogen fire." *Dixmude* (Fr.) NS-11, R.38 & R101 (Br.) and *Roma* (USA). Not including the "*Wingfoot Express*" Perhaps the R27 that burned in a shed at Howden? Just curious?

It has been suggested to me that this is nothing more than one more *Hindenburg* disaster exploitation show; I beg to differ. I submit that this was conceived and "sold" as a real scientific investigation with a budget for lab time and multiple 1/10th scale test models. Once underway, technical issues required choices to be made. Example: the 1/10th scale models have most of the needed Zeppelin elements: outer cover, metal frame, and multiple hydrogen-filled gas cells; however, to accurately replicate the burn, an axel corridor and gas valves are needed. If you include an axel corridor and valves, no more cheap weather balloons for gas cells, custom-made cells of odd shape, difficult to inflate and prone to leaks becomes the norm. My guess is that hydrogen is deemed too dangerous. No leaks, either by accident, or deliberate, to demonstrate any scenario, are allowed! Thank you corporate liaison, insurance rep, and range safety officer for neutering the experimenters and their work. The result is a disjointed collection of experiments in the lab and the field which may have found something but actually proved nothing! **Ω**

Issue #1 from long ago? No. Member **Peter Cuneo**, award-winning gas balloonist, was so thoughtful as to



find and send Ed. this little jewel of a children's book from 1952. Googling author Margaret Wise Brown (below) for possible namesake connection revealed nothing about any relation to the famed Civil War era Atlantic-attempting balloonist. The internet did not even list this amid her published works, possibly because it was released after her November 1952 passing. There seems to be no other LTA in the author's works, not that the internet knows everything. **Ω**

BLACK BLIMP

Bert Austin Jr., 87, passed April 7, 2012. Mr. Austin was born on Dec. 9, 1924. At the age of 17, he joined the Navy during WWII. He was a radioman on blimps while stationed at Moffett Field, Calif. After retiring from EMCO Distributing Company, he and his wife Alice delighted in travelling extensively in their RV and playing golf along the way. He is survived by his wife of 65 years, Alice Austin, two daughters, six grandchildren, six great-grandchildren; two brothers and two sisters. **Ω**

David Venn, 70, passed Dec. 30, 2012. He reported to ZP-3 at Lakehurst early in 1959; an Electronics Technician, he was an exceptional worker and a great athlete. David competed in every sport during a year in which ZP-3 won the Captain's Cup, as the best unit at Lakehurst in athletics. He was also a member of the base varsity softball team which won the 4th Naval District Championship, the North Atlantic Regional Championship, and reached the All-Navy Finals. He left LTA for NESEP. David is survived by his wife Carole, a son, a daughter, and six grandchildren. **Ω**

Robert J. Donatelli, 83, passed Nov. 4, 2012. Robert was born and raised in Scotch Plains, New Jersey. After retiring from the Navy, Robert worked testing catapults and arresting gear for aircraft carriers at Lakehurst Naval Base. Robert is survived his wife, Margaret Dolan Donatelli; his daughter, son, and two grandchildren. **Ω**

Robert G. Hedderig, 94, passed October 6, 2012. Mr. Hedderig was born in Natick, Massachusetts, on July 13, 1918. He enlisted in the Navy serving as a blimp pilot in ZP-12 and later NATS in the Pacific. He retired from McDonnell-Douglas in 1987. Robert is survived by his wife of 68 years, Helen; two children; four great-grandchildren; and two great-great-grandchildren. **Ω**

Raymond F. Braun, 90, passed March 14, 2012. Mr. Braun was born Jan. 29, 1922, in Edgerton, KS. Joining the Navy in WWII, he served in LTA on the East Coast. Returning to Edgerton, he served the town for many years as a deputy sheriff, mayor, and fire chief. Ray is survived by his wife Jo of 62 years; 5 children; 12 grandchildren and 2 great-grandchildren. **Ω**

John J. Leyden, 91, passed Sept. 7, 2012. Mr. Leyden was born in Philadelphia and enlisted in Navy at the age of 20. A Mustang, he retired as a LCDR after 30 years. "Jack" was an ordained minister serving the Roman Catholic Diocese of Camden for 30 years. Jack is survived by his wife of 70 years, Helen Leyden; 9 children; 25 grandchildren, and 16 great grandchildren. Contributions in memory of Jack can be made to Our Lady of Peace Parish, 32 Carroll Ave, Williamstown, PA 08094. **Ω**

Frank Luppino, Jr., 90, passed Nov. 10, 2012. Frank grew up in Watkins Glen, NY, and attended Alfred University before serving in the Naval Air Transport in Paris, Morocco and England (con't)

BLACK BLIMP (con't)

during World War II. He was the Associate Publisher of Billboard magazine before directing his own corporation for more than 20 years. Frank is survived by his spouse of 49 years, Bjorg V. Luppino, a son and daughter, and 4 grandchildren. **Ω**

Bobby E. Sherrill passed January 15, 2012. Bobby, of Maiden, North Carolina, was a Lt. Colonel in the Air Force, an employee of the Secret Service, a special agent for the U.S. Treasury Department, and the U.S.S. Service command. He is survived by his wife of 61 years Betty Ann and a daughter.

John D. Martel, 75, passed Nov. 17, 2012. He served in the US Navy for 30 years, retiring as Command Master Chief, NAS Cecil Field. John is survived by his wife Doris, a son, two daughters and several grandchildren. **Ω**

William Franzen, 82, passed Nov. 25, 2012. After sea duty, Bill joined ZP-1 at Elizabeth City, NC. He chaired the Denver NAA Reunion. Bill is survived by his wife Shirley of 59 years, two sons, a daughter, grandchildren and great-grandchildren. **Ω**

Roy Arrick, Jr. passed September 7, 2012. **Ω**

READY ROOM

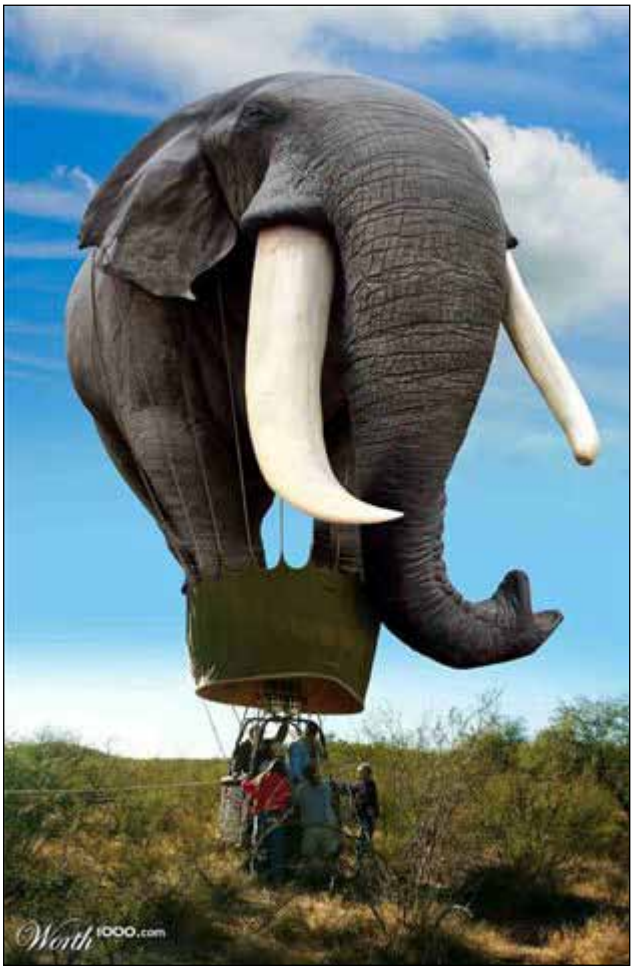
DGLR-LTA-Workshop XIV, 1-2 March 2013, Bremen, Germany. Main topic: "Hybrid Technology." **Ω**

20th AIAA Lighter-Than-Air Systems Technology Conference, co-located with the 22nd AIAA Aerodynamic Decelerator Systems Technology Conference & Seminar and AIAA Balloon Systems Conference, Dates: Monday-Thursday, 25-28 March 2013. Location: Hilton Daytona Beach Oceanfront Resort, Daytona Beach, FL. **Ω**

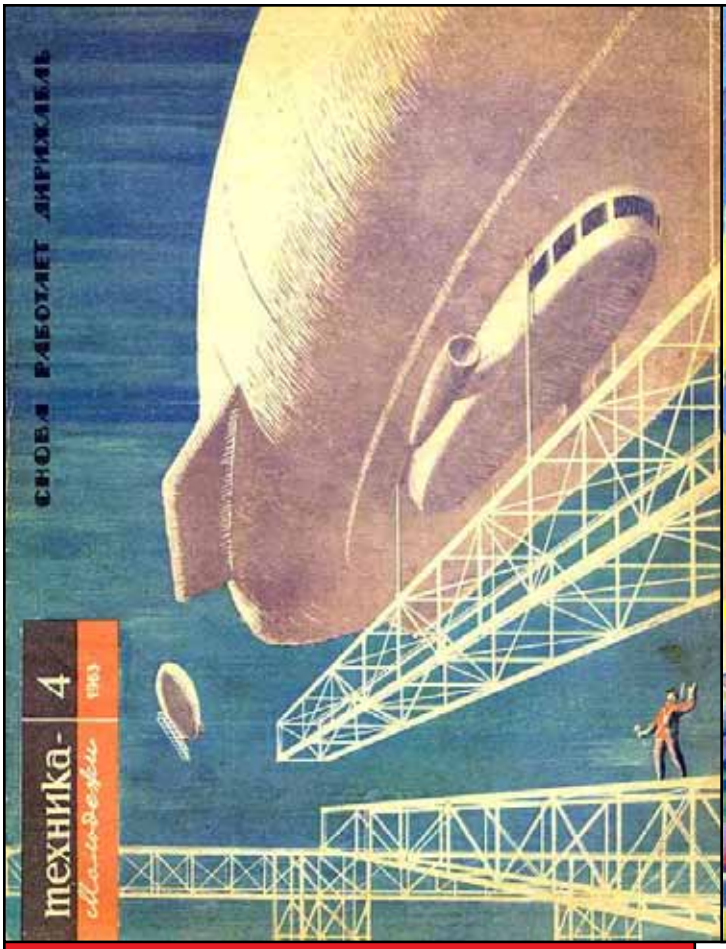
LIGHTER SIDE

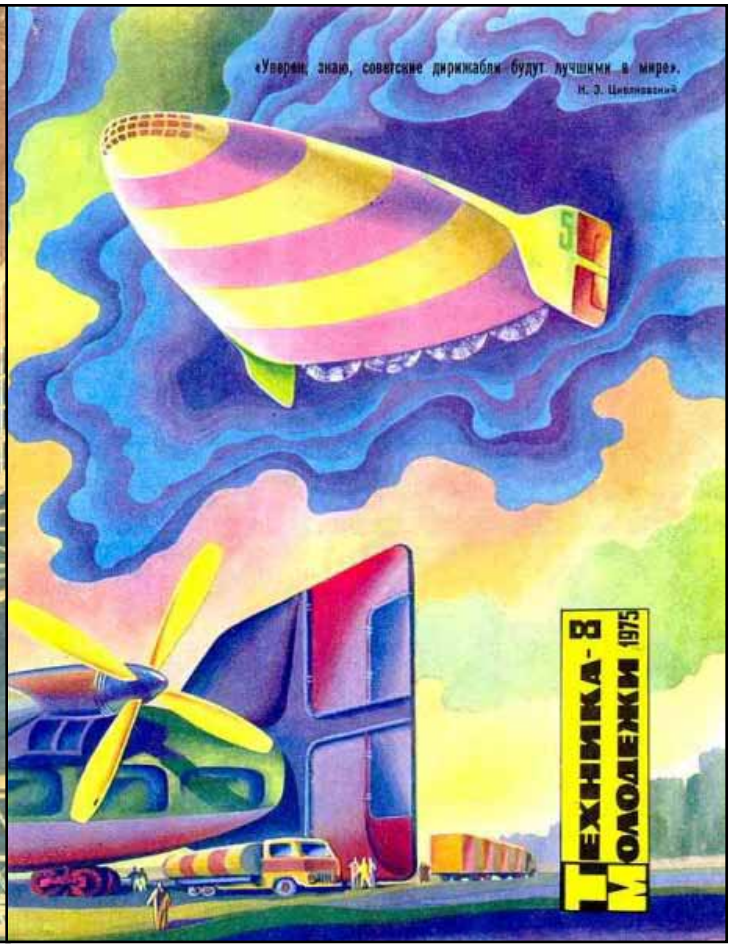
A mysterious hole has been detected in the wall of the nudist camp. The police are looking into it. ☺

18 years ago the USA had Steve Jobs, Bob Hope and Johnny Cash...Now they have no Jobs, no Hope and no Cash. ☺

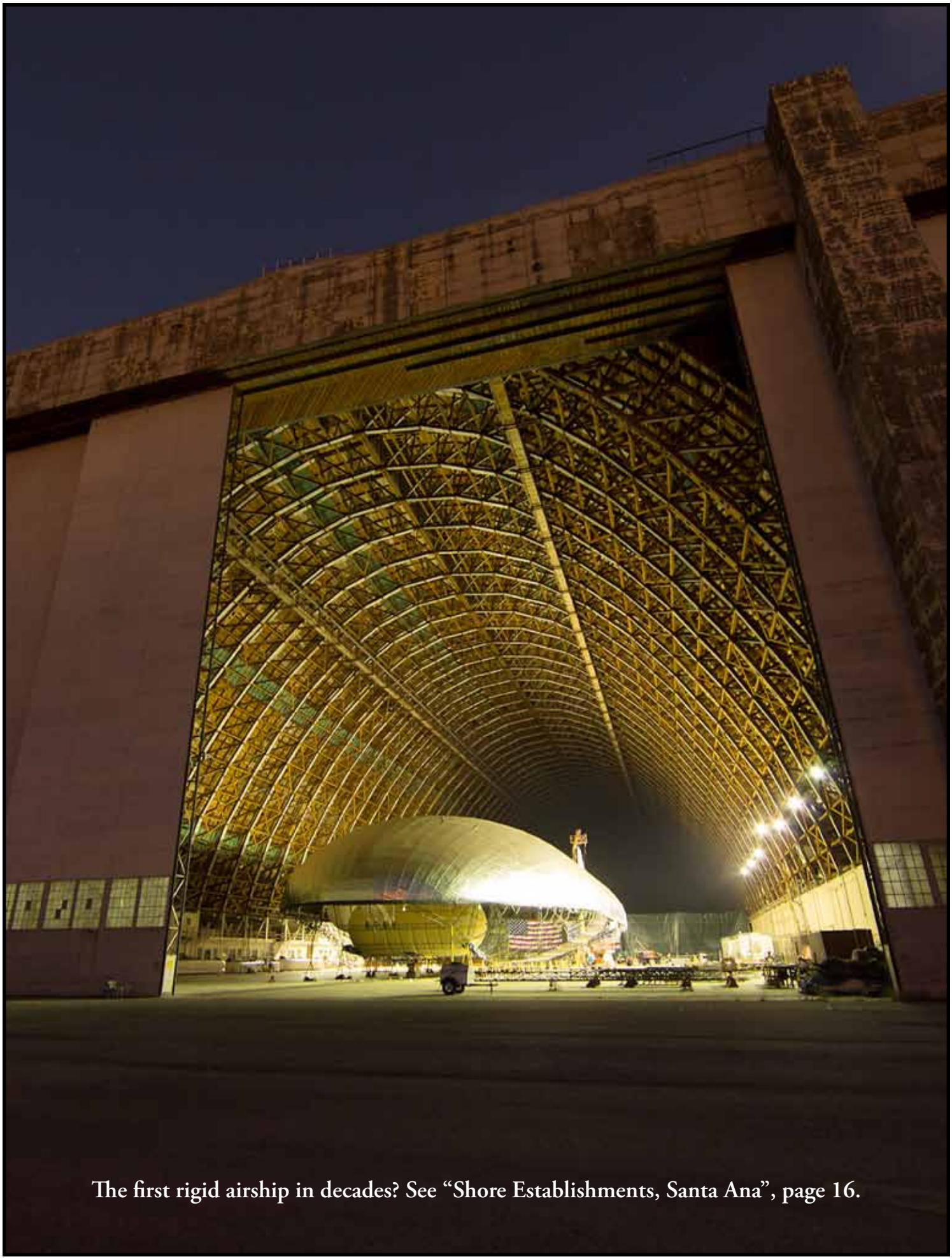


"I don't make jokes. I just watch the government and report the facts." -- Will Rogers ☺





Magazines, both Russian (above) and domestic, can be counted on to regularly produce colorful graphics to accompany stories about airships that are always just around the corner. Wasn't the future wonderful?



The first rigid airship in decades? See "Shore Establishments, Santa Ana", page 16.