Missions for America

Semper vigilans!
Semper volans!

The Coastwatcher

Publication of the Thames River Composite Squadron
Connecticut Wing
Civil Air Patrol

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http://ct075.org.

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Issue 10.3 19 January, 2016

Cadet Poe displays her Commendation Certificate
(all photos credit: Maj Roy Bourque)

Cadet Benjamin Ramsey receives his C/MSgt insignia from siblings Daniel and Hannah Ramsey

Cadet Drost has his new insignia pinned on by Mrs. and Lt Drost

C/2d Lt Daniel Hollingsworth reports for his Community Service Ribbon

Daniel and Benjamin Ramsey pins C/MSgt stripes on Hannah Ramsey

CADET MEETING

19 January, 2016
Submitted by
C/TSgt Benjamin Ramsey

Cadets Benjamin Ramsey and Hannah Ramsey have been appointed as TRCS representatives to the Cadet Advisory Council.

The following Cadets received promotions or awards. C/2d Lt Virginia Poe received a commendation ribbon for her contribution to the last Wing inspection. Cadet Benjamin Ramsey and Cadet Matthew Drost was promoted to C/MSgt. Cadet 2nd Lt Daniel Hollingsworth and C/MSgt Drost received Community Service Ribbons. Cadet Hannah Ramsey was promoted to C/MSgt.

MONTHLY SPECIAL CADET ACTIVITY

The Squadron will host a Science, Technology, Engineering, and Mathematics (STEM) activity on Saturday, 27 January from 0900 to 1500. Lt Meers will lead the workshop assisted by Maj Bourque and Lt Col Rocketto.

Participant will form teams to construct robot arms, reflector telescopes, and possibly unmanned aerial vehicles from kits.

Cadets not interested in these projects are invited to attend and work on their rockets in order to qualify for the Rocketry Badge and support TRCS in the annual Commander's Cup competition.

The activity will count towards the AEX award.

January 2016

SUN	MON	TUE	WED	THU	FRI	SAT
					1 New Years	2
3	4	5	6	7	8	9
10	11	12 CC CALL	13	14	15	16 Tranex
17	18 MLK	19	20	21	22	23
24	25	26	27	28	29 CyperPatriot	30 OFlight STEM Pilot Mtg

February 2016

SUN	MON	TUE	WED	THU	FRI	SAT
31	1	2	3	4	5	6
7	8	9 CC CALL	10	11	12	13
14	15 Holiday	16 No Mtg(Cadet)	17	18	19 CyperPatriot	20 OFlight SQ SAREX CyperPatriot
21 CyperPatriot	22	23 Ground Team Safety DD	24	25	26	27 STEM
28	29	PT Logs this month/ 4 days (Cadet)(Encouraged for Seniors)				

March 2016

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8 CC CALL	9	10	11	12
13	14 Canada	15 Canada	16 Canada	17 Canada	18 Canada	19 OFlight TRAEX
20	21	22	23	24	25	26
27 Easter	28	29	30	31		

April 2016

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2 STEM
3	4	5	6	7	8	9
10	11	12 CC CALL	13	14	15	16 OFlight SQ SAREX
17	18	19	20	21	22	23
24	25	26	27	28	29	30 STEM

Other	Ground	Tranex	O-Flight	Meeting	Wing	National

Respect

Date	Senior	Cadets
5	Planning / Staff	Leadership, Testing, Admin (civies)
12	Commanders Call	Drill, Insp, Sfty, CD, Lead, Promo (Blues)
19	Emergency Service -Communication	Drill, Insp, AE, Guest Speaker (BDU)
26	Speciality Track Brief	Drill, Insp, Fitness, Special Activity (PT)
29-31		CyperPatriot
30	Pilot Mtg (Meriden)	STEM: Build Telescope

Excellence

Date	Senior	Cadets
2	Planning / Staff	Leadership, Test, Admin (Civ)
9	Commanders Call	Drill, Insp, Safty, CD, Promo (Blue)
16	Emergency Service - MO	No Meeting
20	SQ SAREX	SQ SAREX
23	Safety Down Day- Winter,etc (60min)	Drill, Flight, Ground Team, Rocket (BDU)
27		STEM: Build Robot Arm

Integrity

Date	Senior	Cadets
1	Planning	Testing, admin, Leadership, Planning
8	Commanders Call	Drill, Safety, CD, Promo (Blue)
15	ES	Canada Troop - Special Activity (BDU)
14	Visit of Canadan Cadets- POC?	
22	PD - Personnel/ES Officer Roles	Fitness, Ground Team (PT)
24	OFlight	OFlight
29	no meeting	Drill, Rocket (BDU)

Volunteer Service

Date	Senior	Cadets
2		STEM: Helicopter
5	Planning: Staff Mtg	Leadership
12	Commander's Call / Promotions	Drill, CD, AE, Promotions (Blues)
16	Sarex	Oflights
19	Open	
26		
30		STEM: Flight Simulator

This schedule is not a replacement for good communications.

SENIOR MEETING
19 January, 2016
Submitted by
Capt. Oliver H. Perry

Maj Scott Farley conducted observer training.

Lt Col Stephen Rocketto briefed the Squadron on the mysteries of communication forms 105 and 110 and a practical demonstration was conducted with the station and portable radios.

TRCS SPECIAL AEROSPACE EDUCATION ACTIVITY
20 February, 2016

Plans are underway for a field trip to a science and engineering colloquium and museum visit sponsored by the MIT Club of Hartford.

The event will consist of a lecture by Professor of Physics Ed Bertschinger who will speak on relativity which will be followed by a question and answer session.

Ed Bertschinger is Professor of Physics at MIT. He is a theoretical astrophysicist whose work focuses on cosmology, gravitation, and relativistic astrophysics. Bertschinger leads a research program studying dark energy and dark matter. He and his research students (from high school to postdoctoral) investigate the formation of cosmic structure after the big bang, the physics of dark matter both in the early universe and in forming galaxies, the physics of gravitation in general relativity and alternative theories, and the physical processes governing matter and radiation close to black holes. His group uses a combination of analytical, computational, and statistical methods.

This will be followed by an informal discussion with students over pizza regarding his research on the big bang and dark matter.

The event will conclude with an informal, self-directed tour of the Pratt aircraft engines and a chance to visit the Next Generation Technology Center.

Attendance is limited. Interested Cadets should contact Lt Col Rocketto by e-mail by Wednesday, January 27th.

Aerospace History

Nostalgic Trips into the Past

Me, My Bro', and the Blimps
by Hap Rocketto

As a kid, back in the 1950's, one of my big thrills was watching the US Navy's K-class blimps glide over New London while on antisubmarine patrol between Naval Air Station Lakehurst in New Jersey and Naval Air Station South Weymouth in Massachusetts. If we were in the classroom, the windows of Harbor School quickly filled with little boy's excited upturned faces. Our teachers quickly herded us back to the dreary world of spelling or fractions, but I have never forgotten a little boy's excitement at the sight of the dignified silver behemoths quietly cruising over head keeping the Soviet submarine fleet at bay.

Some time back, my brother Steve and I, needing to log a few hours aloft to maintain our airman certificates' currency, thought a cross country flight would be in order and we had a specific historic destination in mind. It was a beautiful day for flying. There were few clouds in the sky, the visibility was 25 miles-good for the East coast, and the winds aloft were pushing us along with nary a bump.

We departed Westerly with Steve, befitting his majestic status as Pilot In Command sitting imperially in the left seat. I sat, below the salt, in the right hand co-pilot's seat, preoccupied with the

duties of the vassalage germane to my humble office: communications, navigation, and keeping the aircraft commander supplied with position reports, cold drinks, and snacks. We crossed to the south coast of Long Island and followed it westward. To avoid the cluttered New York City airspace, and its odious flying regulations, we swept south over the Atlantic Ocean and made a beeline for Sandy Hook, New Jersey.

Flying a single engine airplane out of gliding distance of land always makes for a little pilot anxiety. The airplane make strange noises and the engine sounds a bit rough. Even though the gas tanks had been visually checked to insure that they were filled to the top, the fuel gauges seemed to unwind faster than expected. As we raised Sandy Hook the odd rattles stopped, the engine smoothed out, and there now seemed to be plenty of gas. Crossing the coast of New Jersey we intersected an electronic highway in the sky, Victor Airway 229, and turned left to follow it southward.

In a few minutes our turning point, NAS Lakehurst's Hanger Number One, came into view. At 961 feet in length, 350 feet in width and standing 200 feet high it would be hard to miss. The building, a Registered National Historic Landmark, was built in 1921 at the height of the lighter than air era. Many of the air ship hangers built during that time still exist, notably another Hanger Number One at Moffett Field California and The Goodyear Air Dock in Akron, Ohio.

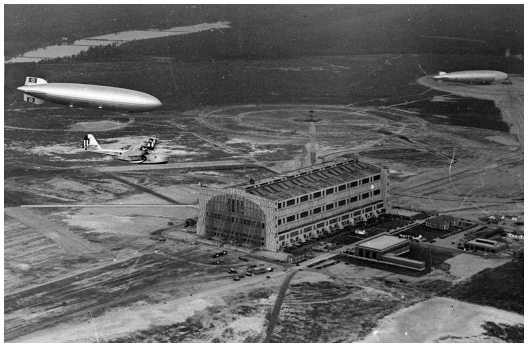
During its active service Lakehurst's Hanger Number One housed every type of American lighter than air ship from 1921 until the demise of lighter than air Naval Aviation in 1960. The massive building was, at one time or another, home port for the US Navy's four rigid airships, the ill fated trio of *USS Shenandoah, USS Akron and USS Macon,* as well as the *USS Los Angeles*, who avoided the disastrous fates of her sisters only to be ignominiously dismantled in 1939.

It was also at Lakehurst, on May 6, 1937, that the largest flying object in the world, the German zeppelin *Hindenburg*, burst into flames as it was mooring. The immolation of the flag ship of the Third Reich's air fleet, emblazoned with giant Nazi swastikas, was a great blow to the pride of the totalitarian state and its leadership.

Over the frying bacon like sizzle in our headsets Steve, the walking footnote, delivered a detailed lecture on the disaster. With the muted chatter of the New York Air Traffic Control Center as back drop he closed with his best imitation of Herbert Morrison's famous narration of the Hindenburg disaster, "There's smoke, and there's flames, now, and the frame is crashing to the ground, not quite to the mooring mast. Oh the humanity, and all the passengers screaming around here!"" Ending his little monologue with a humorous play on words Steve said, "I bet that burst Herr Hitler's and Herr Doctor Goebbels's little propaganda balloon."

U.S. Navy Dirigibles, Blimps, and their Roosts
by
Stephen M. Rocketto

I have always been fascinated by lighter than air craft and my brother's story about our flight to Lakehurst awakened long dormant memories. I remember my mother relating a story about her father taking her to Naval Air Station (NAS) Lakehurst to gawk at the Hindenburg wreckage.



Hindenburg with Coast Guard escort approaches landing zone at Lakehurst. US Navy airship Los Angeles in seen in background. *(Credit: US Navy)*

At New London'sHarbor School, four years earlier, I also thrilled to the sight of the the stately and dignified passages of K and N Class blimps wending their way from NAS South Weymouth to Lakehurst.

Better yet, the Pequot Council, Boy Scouts of America held an annual camporee at Fishers Island. The Scouts were transported by Navy tug boat and went ashore at Silver Eel Cove, hard by the abandoned coast artillery site, Fort H.G. Wright, and its still active airport, Elizabeth Field. As we hiked east to our camp grounds, I noted both a mobile mooring mast and a very large structure which I took to be a blimp hangar. In retrospect it was a shelter for inflating and launching meteorological balloons.

ZJ-1 G-Class blimp moored to a portable low mast similar to those employed at Fishers Island.
(Credit: US Navy)

I also toyed with constructing lighter-than-air (LTA) ships. As a teenager, a coterie of scampish friends and I experimented with the construction of hot air LTAs using bags of various sizes foil, straws, and birthday candles. They were spectacular when launched at night, probably resulted in UFO reports, and fortunately set no fires. My great moment was at a formal dinner. Helium balloons were affixed to the table centerpieces. I prepared a flight of them using small beads and other folderol from the table setting, got them to neutral buoyancy, and set them adrift. Mr. Vice was not amused. Perhaps this why I no longer get invited to formal dinners.

The mast was a vestige of the days when Elizabeth Field served as a base for Detachment 1 of ZJ-1, a blimp squadron based in Key West with a special duty detachment NAS South Weymouth. This WWII outfit was a utility squadron flying G and K Class blimps. The primary duty of 1-1 was to observe the firing of practice torpedoes and to mark their termination points so that they might be recovered. They also flew photo missions and supported engineering and electronic development programs at Massachusetts Institute of Technology.

Two blimps, probably G Class, moored at Elizabeth Field during WW II.
(Credit: US Navy)

The Navy has had a long relationship with LTA starting with the DN-1 (Dirigible Non-rigid 1) built by the Connecticut Aircraft Company in New Haven. This essay will take a cursory look at what might be termed the "golden age" of naval dirigibles and blimps from about 1923 until 1961.

After WWI, the Navy entered the market for dirigibles, LTA ships whose shape was maintained by a rigid internal structure. The first commissioned dirigible was the *U.S.S. Shenandoah (ZR-1.)* She was built by the Naval Air Factory in the first of the special airship hangers erected at Lakehurst. A sister base was established at Sunnyvale, California, now known as Moffett Field. Based in a German Zeppelin, the *LZ-49*, she was the first airship to cross the United States. In 1923, the *Shenandoah* was caught in a line squall over Ohio and destroyed. The incident was one of the factors which led Billy Mitchell to accuse senior leaders in the Army and Navy of incompetence and "almost treasonable administration of the national defense." His court martial and conviction followed.

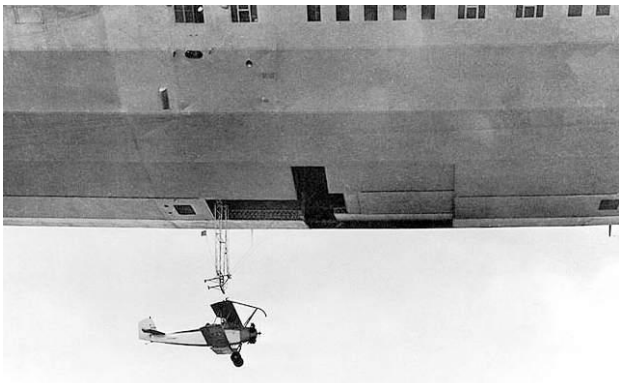
The 680 foot long, 79 foot wide Shenandoah under construction in the hangar at Lakehurst.
(Credit: US Navy Photographic Information Center)

ZR-2 followed. She was British built and registered as *R-38*, at the time, the world's largest airship. *ZR-2* was acquired as part of WWI reparations and paid for by Germany. After being turned over to the Navy, she was undergoing flight testing near Hull, England, suffered structural failure after conducting a series of turns and crashed into the Humber River..

ZR-3, *U.S.S. Los Angeles*, was constructed in Germany by the Zeppelin company in 1923. *Los Angeles* served as a flying laboratory and training vessel for the next 16 years before being broken up for scrap.

A freak meteorological condition changers the buoyancy of Los Angeles and it momentarily assumes a near vertical position while moored to a high mast.
(U.S Navy Photo)

By this time, the Navy started to evolve a doctrine for employment of dirigibles. The dirigible was envisioned as a long range scout for the battle fleet. The Akron Class consisted of two vessels: *U.S.S. Akron, ZRS-4 and U.S.S. Macon, ZRS-5*, both constructed by Goodyear-Zeppelin. To maximize the area which could be scouted, they were fitted with five Curtiss F9C Sparrowhawks which could be launched and recovered in flight. Each survived for a mere two years. Akron crashed in a storm off the New Jersey coast and Macon suffered a structural failure and made a forced landing in the sea off Point Sur, California.



U.S.S. Akron exercises launch-recovery "trapeze" with Curtiss Sparrow Hawk *(Credit: U. S. Navy)*

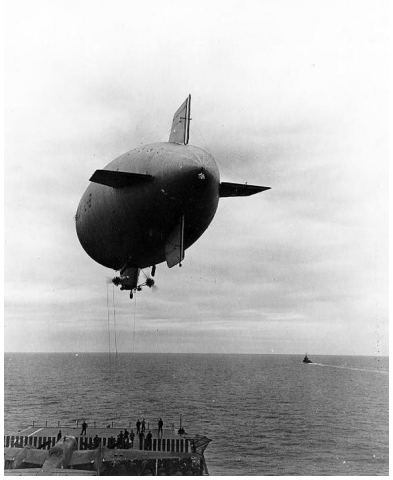
The Navy flirted with two other design concepts. They purchased the *O-1* from Italy, a semi-rigid airship utilizing a keel as its main structural member. And for 12 years, 1929-1941, experimented with a metal clad airship, the *ZMC-2.* The alclad skin, around 0.008 inches thick, was "sewn' together in 18 inch segments requiring 3.5 million rivets! Years of experimental followed but the demise of the dirigible program and the exigencies of the Second World War consigned it to the scrapyard.

The U-boat menace breathed new life into the naval LTA program. The WW II submarine was primarily a surface craft, its attack potential seriously constrained when operating submerged. The blimps long loiter time and slow speed made it ideal for escorting coastal shipping. Like the light aircraft of the Civil Air Patrol's coastal patrol, they forced the U-boats to submerge to avoid the anti-submarine ships and aircraft summoned to attack. Another major contribution was their ability to locate and succor the survivors of sinkings. The ability of the blimp to hover allowed them to lower survival equipment and even lift personnel. By the end of the war, blimps patrolled the east, west, and gulf coasts, the Caribbean and Brazilian sea lanes, and the African coast fronting on the Mediterranean. These blimps required bases and 12 were built, seven in the continental United States, two in the British West Indies, two in Brazil, and one in French Morocco.

Two military blimps and E Class of Goodyear blimps have interesting histories. At the start of the war, the Navy desperately needed more blimps so they commandeered the Goodyear L Class ships: *Resolute*, *Enterprise*, *Reliance*, *Rainbow*, and *Ranger,* designated *L-4* through *L-8*. They were flown with civilian crews and armed with rifles. According to the story, this made them privateers so the claim is that these ships were issued letters of marque and reprisal to protect the crew from charges of piracy if captured.

Issuance of letters of marque and reprisal is one of the enumerated powers of Congress and may be found in Section 8 of the Constitution of the United States. *The 1856 Paris Declaration Respecting Maritime Law* established a treaty obligation among the signatories to refrain from commissioning privateers. The United States was not a party to the *Declaration* and, given its small navy, compared to the Europeans, wished to maintain the right to commission privateers but acceded to the general principle. However there is no evidence that Congress authorized issuance or that the President signed authorization so the story is probably apocryphal. However, I would like to believe the that we once commissioned aerial privateers. Perhaps it is the romantic in me.

L-8, formerly Goodyear's *Ranger* was also the blimp which rendezvoused the the *U.S.S. Hornet* on 04 April, 1942 and delivered 300 pounds of spare B-25 parts for the Doolittle raiders.



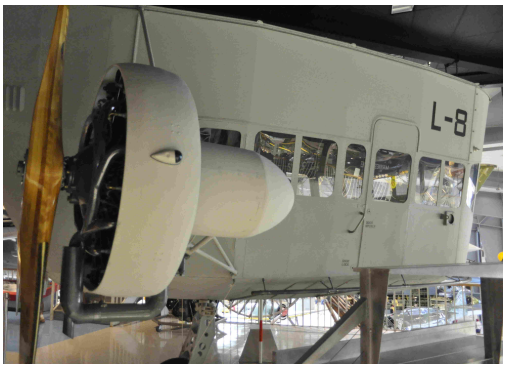
L-8 lowering cargo to the Hornet *(Credit: US Navy)*

L-8 became a mystery ship in August of 1942. Assigned to submarine patrol out of Moffett Field, she was seen adrift near San Francisco and came to rest on a street in Daly City, California. There was no sign of the two man crew, no evidence to suggest what might have happened, and no bodies were ever recovered.

L-8 became the aerial counterpart of the brigantine, the Mary Celeste, found abandoned in 1872. The cargo was still aboard and she was seaworthy but no trace of the seven man crew, the captain, his wife and infant daughter was ever found.

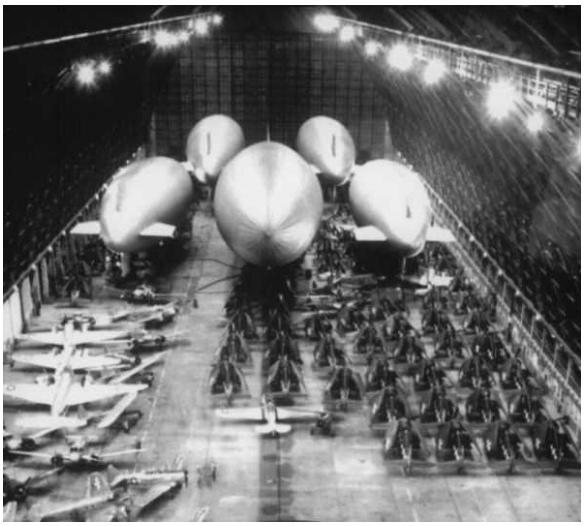
L-8, partially deflated and powerless, drifts over the California coast. *(Credit: Moffett Field Museum)*

The crew consisted of Lt. Ernest DeWitt Cody and Ensign Charles Adams. Both men were experienced LTA crewmen. Cody piloted the *L-8* when it delivered the spare parts to the Hornet. Adams was commended for bravery saving passengers and crew when the *Hindenburg* burned. The *L-8* gondola was salvaged and at war's end returned to Goodyear, refurbished, and served as the *America*. When she was retired Goodyear donated it to the National Museum of Naval Aviation.



Gondola of L-8 at rest at Pensacola

In July of 1943, the only recorded gunfight between a submarine and a Navy blimp occurred. *K-74* departed NAS Richmond, Florida and radar detected *U-134,* a type VIIC U-boat. A nearby tanker and a freighter were threatened so the blimp commander, Lt. Nelson C. Grills, decided to attack. This was contrary to Navy doctrine which required blimps to avoid combat, stand off, and direct aircraft and surface vessels to the target. The U-boat was armed with an 88mm cannon and two 20mm anti-aircraft guns. The blimp carried one .50 caliber machine gun and four depth charges. Whether the depth charges were ever dropped is controversial. The sub and blimp exchanged fire and the *K-74's* engine, gondola, and control surfaces were damaged. Grills struggled to maintain control but the heavily damaged airship settled to the sea. The ten man crew escaped although one was lost later to a shark. Postwar reports indicate that the *U-134* recovered part of the wreckage but after examination, jettisoned it.



South Weymouth hangar used to protect blimps and aircrafts from a hurricane *(Photo: US Navy)*

In 1948, the Cold War revived interest in blimps for anti-submarine duty and for use as radar aircraft to provide early warning of incoming Soviet bombers. They worked detection problems with U.S. submarines and even operated in

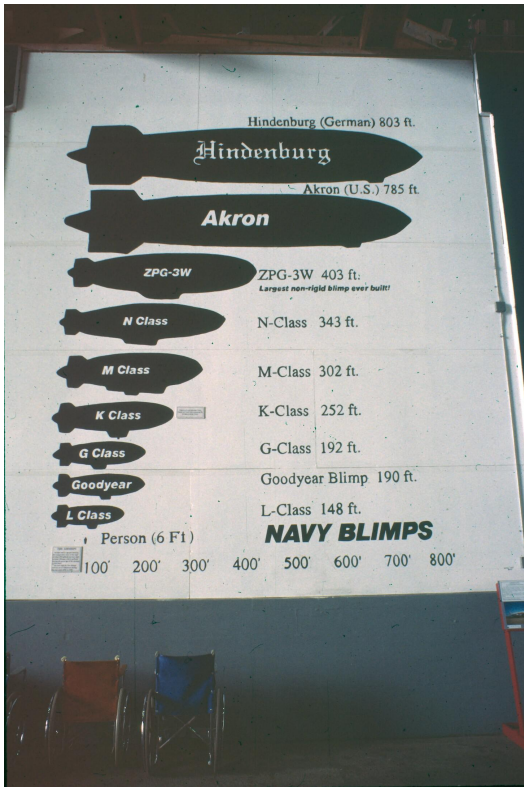
conjunction with the *U.S.S. Nautilus*, our first nuclear powered submarine. *The Snowbird*, a ZPG-2 Class blimp set the world record for unrefueled flight and the LTA non-stop distance, Key West to Casablanca and back, a distance of 9,488 miles in 262.4 hours.

Past and Future: a blimp exercises with nuclear powered USS Nautilus. *(US Navy Photo)*

The ZPG-3 Class, the largest blimps ever flown, filled in gaps in the land based early warning system. They carried an height finding radar in a dome on top and a 40 foot rotating search antenna inside the envelope! The early warning squadron, ZW-1, was decommissioned in 1961 and the last blimp flight occurred a year later.

ZPG-3W height finding radar dome is visible on top. the 40 foot search antenna is concealed within the envelope. *(US Navy Photo)*

The program received some life in 2006. The Navy purchased an American Blimp Corporation A-170 series and designated it MZ-3A. She operated for six years as an airborne laboratory, recapitulating the scientific work of the WW II utility squadron, ZJ-1. The retirement of MZ-3A brought an end to the 95 year history of the U.S. Navy's manned LTA effort.



A comparison of airship sizes from the 800 foot dirigible Hindenburg to the 148 foot L Class.

Ground crew at NAS Patuxent River wrestle with MZ-3A as it prepares to launch. *(Credit: John F. Williams)*