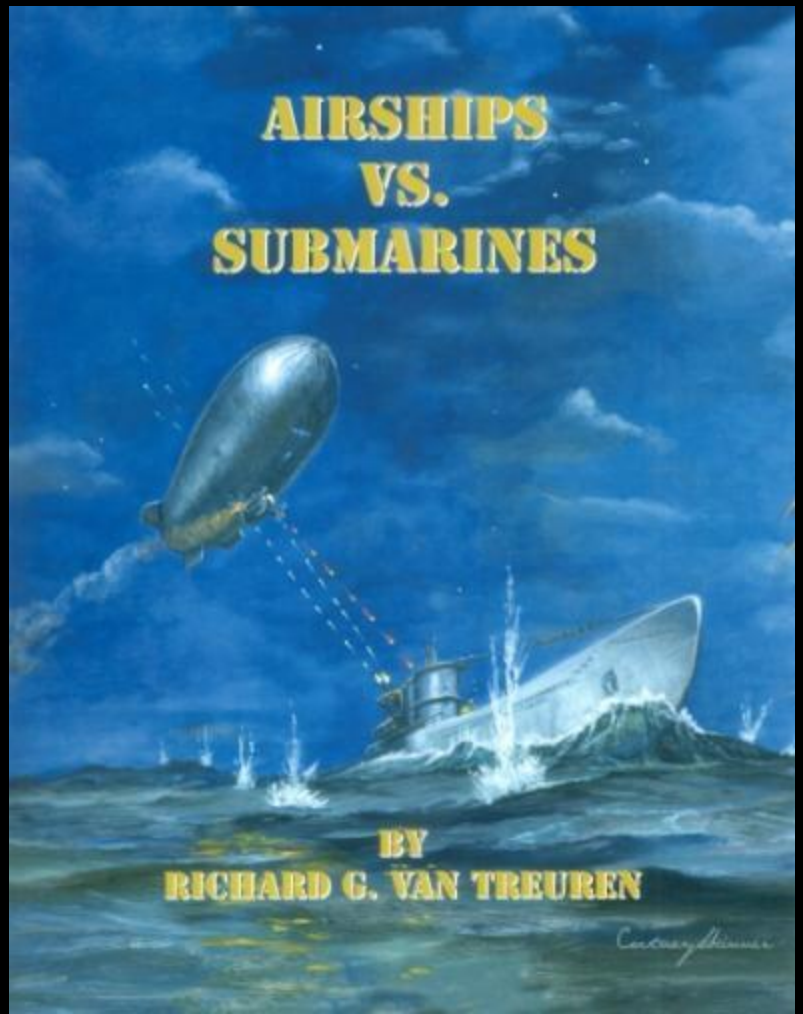
Airship Safety in Northern Weather Conditions

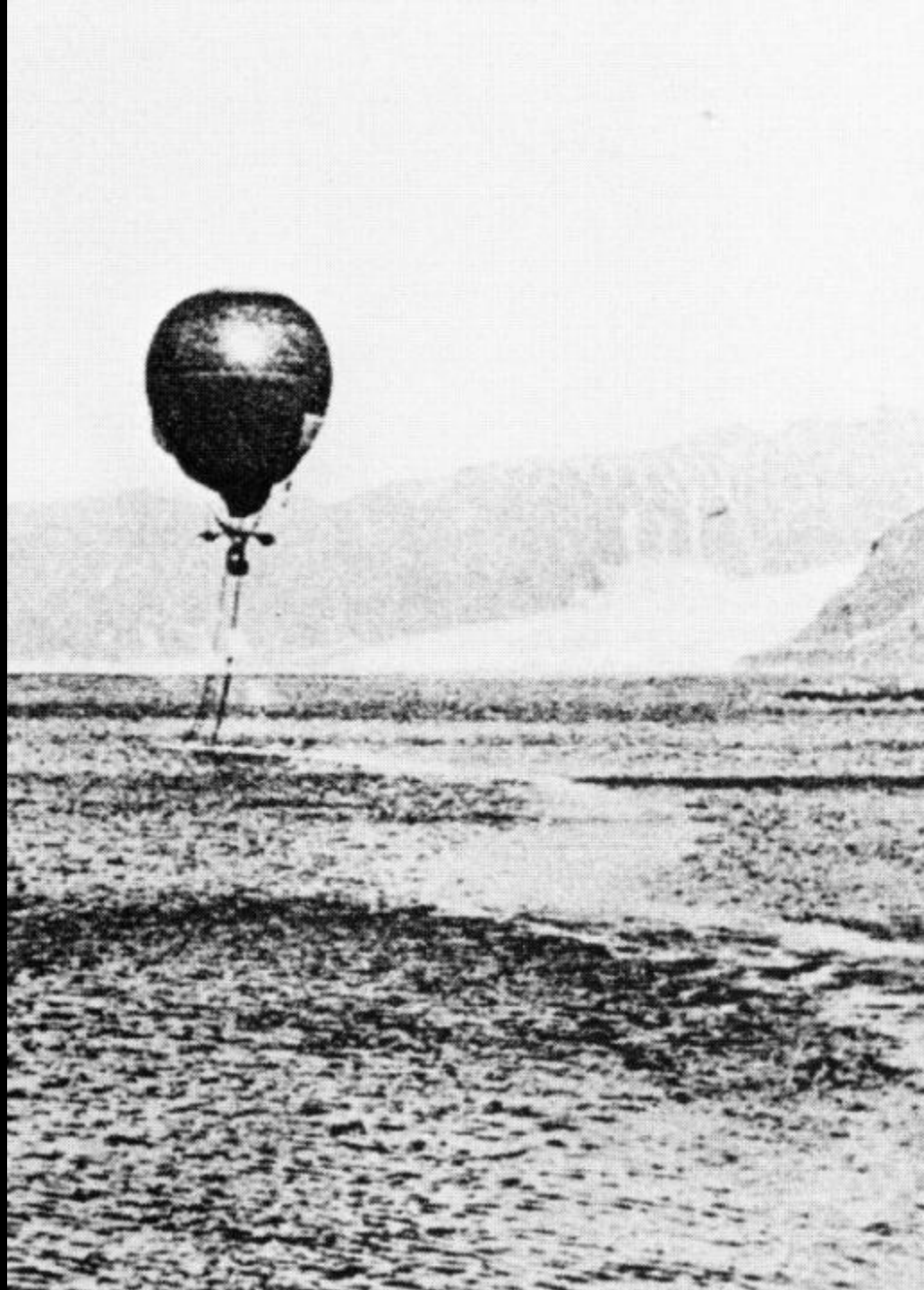
Airships to the Arctic VI

Rich Van Treuren
Editor, NOON BALLOON

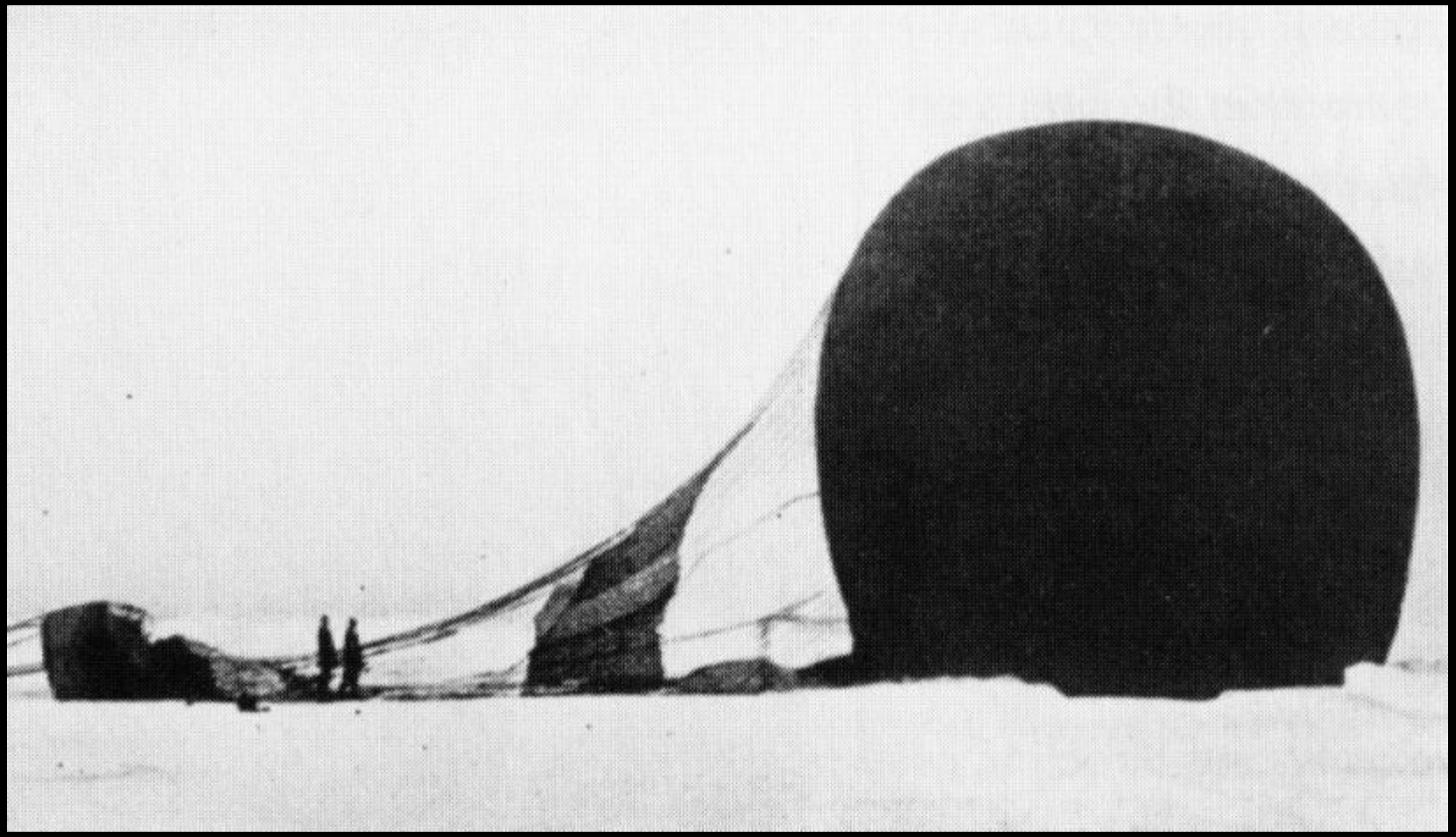


Men have been concerned about safe buoyant flight in the Arctic since 1897.

The balloon *Omen* (Eagle) set off for the North Pole on July 11 of that year.



Omen iced up, so the aeronauts had to land many miles short of their goal.



The aeronauts made for an island where they had stashed supplies.

Shooting an attacking polar bear, they had a fresh meat dinner.

All three aeronauts died from trichinosis.

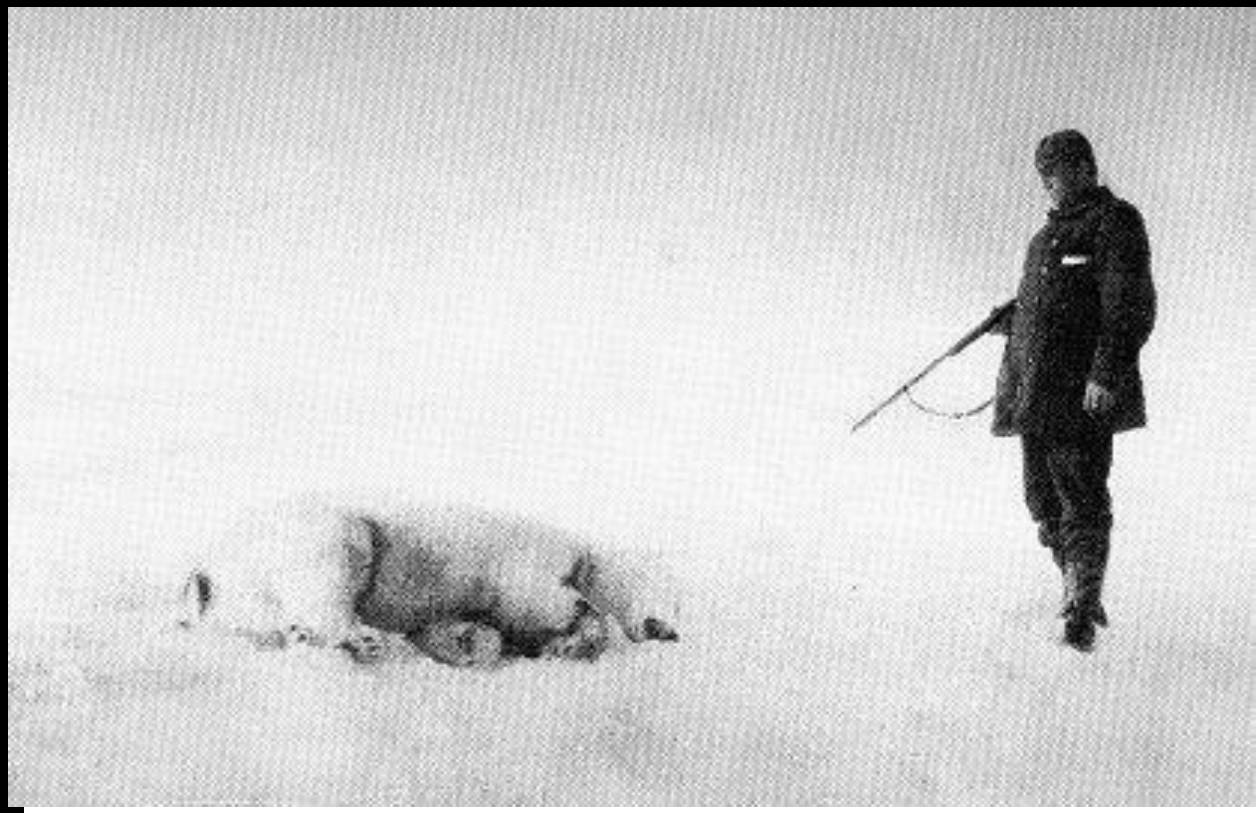
So, to operate an airship safely in the Arctic,

Remember:

DO NOT

EAT

THE BEARS!



Questions?

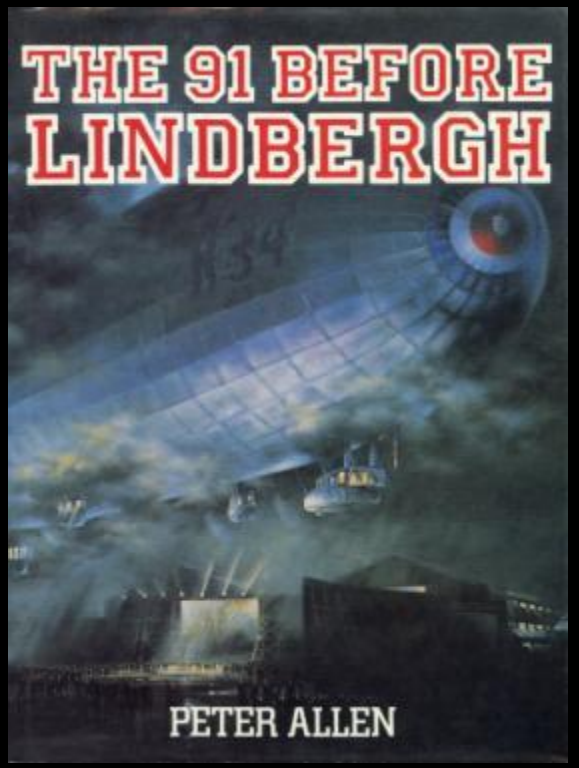
Be sure to visit our website,

www.airshiphistory.com

The airship safety question in the Arctic – and everywhere else – is clouded, because:

History Is Written
By The Winners.

Why are airplanes seen in context of their success, while airships are primarily remembered for their failures?



2011 celebrates the 100th Anniversary of US Naval Aviation.

Eugene Ely was the first to fly onto and launch from a prepared deck of a US Navy ship.

The part they don’t punch in the highlights -

AVIATOR CRUSHED BY FALL WITH AEROPLANE

Attempts Cross Country Flight and Found Dying on Prairie.

WINNIPEG, July 15.—Eugene Ely, an aviator, in his third attempt to fly between Winnipeg and Portage La Prairie tonight, fell several hundred fet and was picked up in a dying condition on the prairie.

Eugene Ely was killed in an aeroplane the following year.

Eugene Ely was not the first Naval Aviator. NA #1 was actually Theodore Ellyson.

Most histories neglect to mention Ellyson was also lost to an air crash.

1911 also saw the first crossing of America by aeroplane. Histories state Cal Rogers flew the “Vin Fiz” across America in 82 hours flight time.

Why bother to note it actually took 49 days… only one rudder and a single wing strut remained from the original aircraft by the end of the flight. Rogers was killed in this crash 5 months later.

More than 1,000 people were killed in aeroplane crashes before World War One.

AVIATION HAS LONG DEATH ROLL.

[BY DIRECT WIRE TO THE TIMES.]

CHICAGO, July 12.—[Exclusive Dispatch.] Deaths due to aviation during the last two years:

1910. July 12.—Sir Charles S. Rolls, son of Lord Llangattock, at Bornemouth, England.

January 4—Leon De La Grange, noted French aëronaut, killed in making flight at Bordeaux, France.

April 2—Hubert Le Blon, French aëroplanist, killed in making exhibition flight at San Sebastian, Spain.

April 17—Balloon Delitsch struck by lightning at Bitterfield, Germany, and four occupants killed.

May 13—Chauvette Michelin killed at aviation meeting at Lyons, France, by running into derrick with his monoplane.

June 2—Zosily, Hungarian aviator, killed at Budapest by falling with aëroplane.

July 3—Charles Wachter killed by falling with monoplane from height of 500 feet at Rheims, France.

1909. September 7—M. Lefebvre killed in flying in Wright biplane near Juvisy, France.

September 7—Signor Posa killed by fall of sixty feet at Milan, Italy.

September 22—Capt. Louis F. Ferber, French officer, killed near Boulogne, France.

September 25—Four men killed in explosion of the balloon Republique at Moulons, France.

1908. September 17—Lieut. Thomas F. Selfridge, U.S.A., killed in fall with Orville Wright, near Washington.

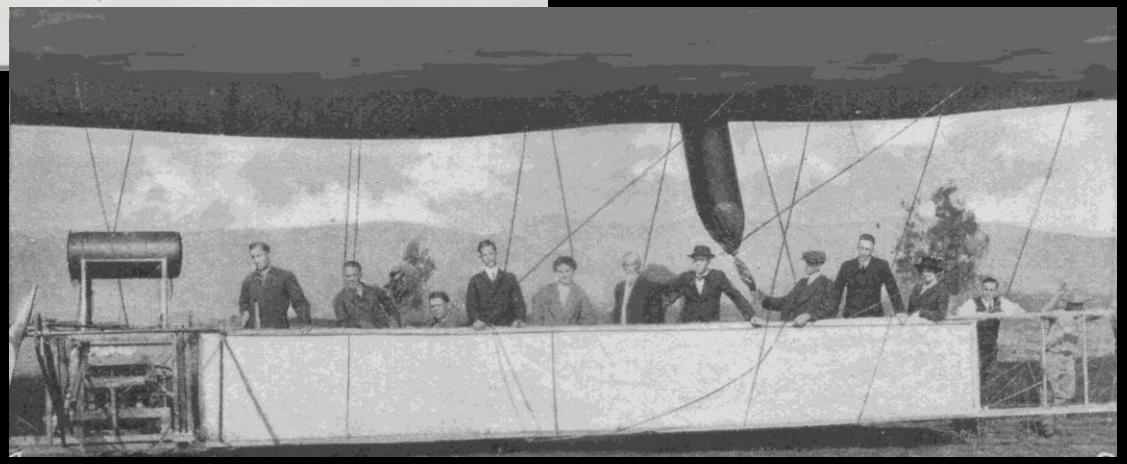
Florida is gearing up for the 100th Anniversary of the scheduled (airplane) airline. At least our FAHS sometimes mentions both the Janus brothers were killed by airplanes, and their mechanic had to dive from the flaming flying boat.

In the wake of American Airlines' Chapter 11 filing, CBS News announced that day the net profit from all airlines combined, since 1951, was negative $34 billion.

"In other words, the entire airline industry hasn't made a nickel throughout its history."

1904-14, Americans were flying “Rubber Cows” for fun and profit.

To our knowledge there were no passenger fatalities, and less than one-tenth the contemporary airplane overall losses.



No matter the basic physics,

History Is Written

By The Winners.

“Airplane crashes are statistics;

airship crashes are disasters.” – C. E. R.

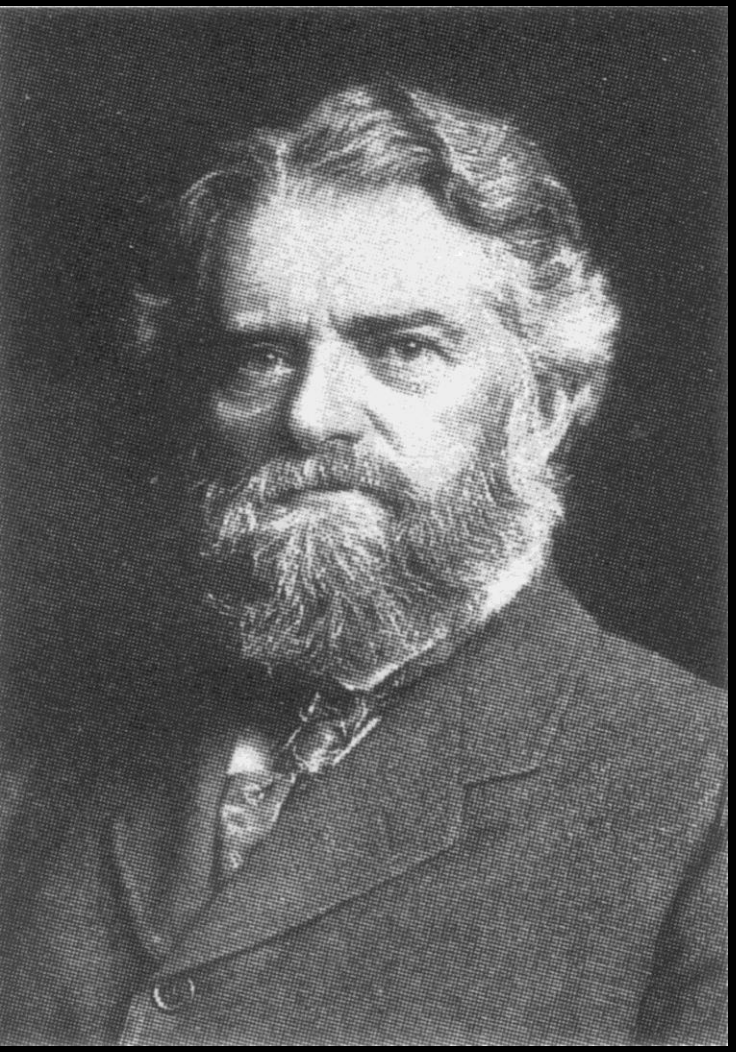
DELAG Accident Record:

Operations 1909-1939

- 175+ Atlantic Crossings
- Tens of Millions of Passenger Miles
- Total of 13 passenger fatalities, all owing to jumping out before landing

"Disasters" of airships ZRS-4, LZ-114, R-101, R-38, LZ-129, *Roma*, ZPG-3W and *Shenandoah* in which 73, 50, 48, 44, 36, 34, 18 and 14 were lost respectively, would today not be classified as major accidents.

In fact, adding up all airship fatalities since 1852 - even ground handlers – would still be less than the 520 killed in this one airplane.



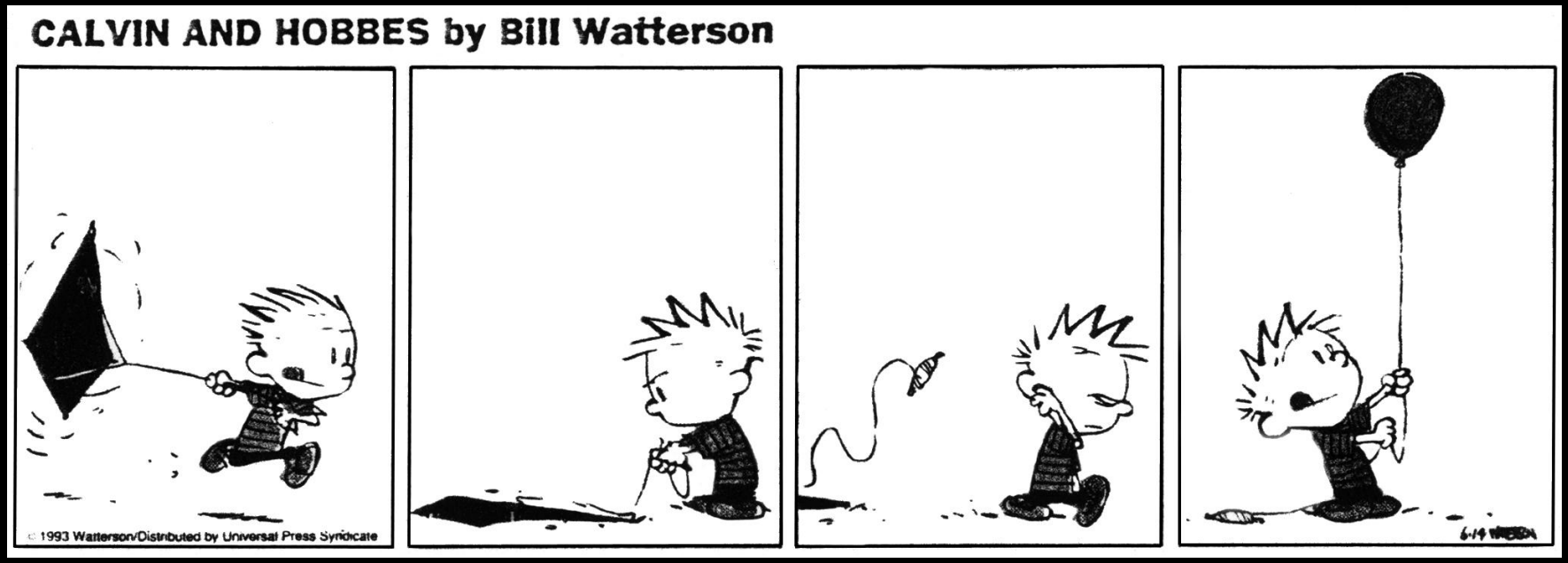
Newcomb logically concluded

“If, therefore, we are ever to have aerial navigation with our present knowledge of natural capabilities, it is to the airship floating on the air, to which we are to look.”

Inherent Safety of LTA

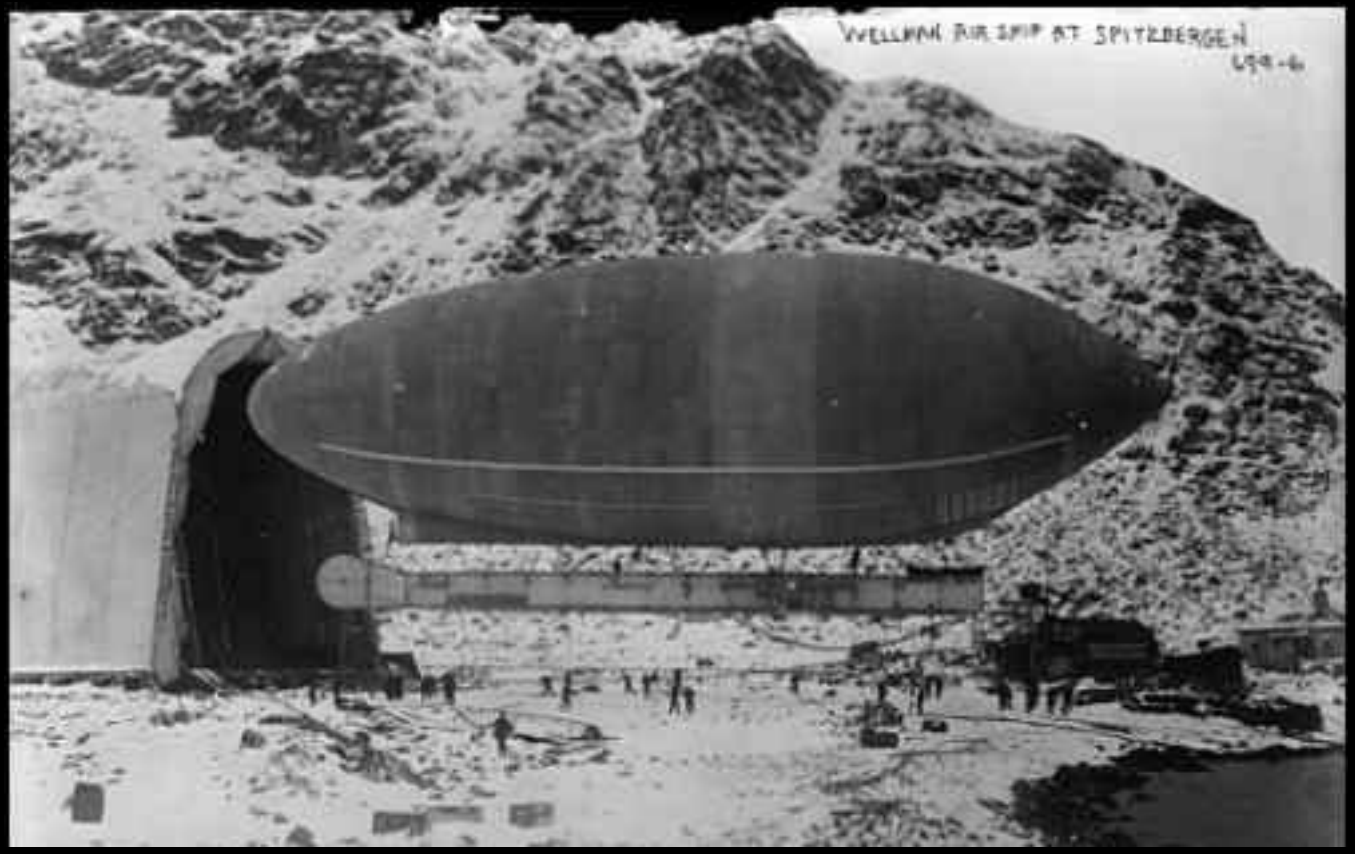
In 1906 Simon Newcomb pleaded,

… would you go to sea on a ship that depended on engine thrust for flotation?



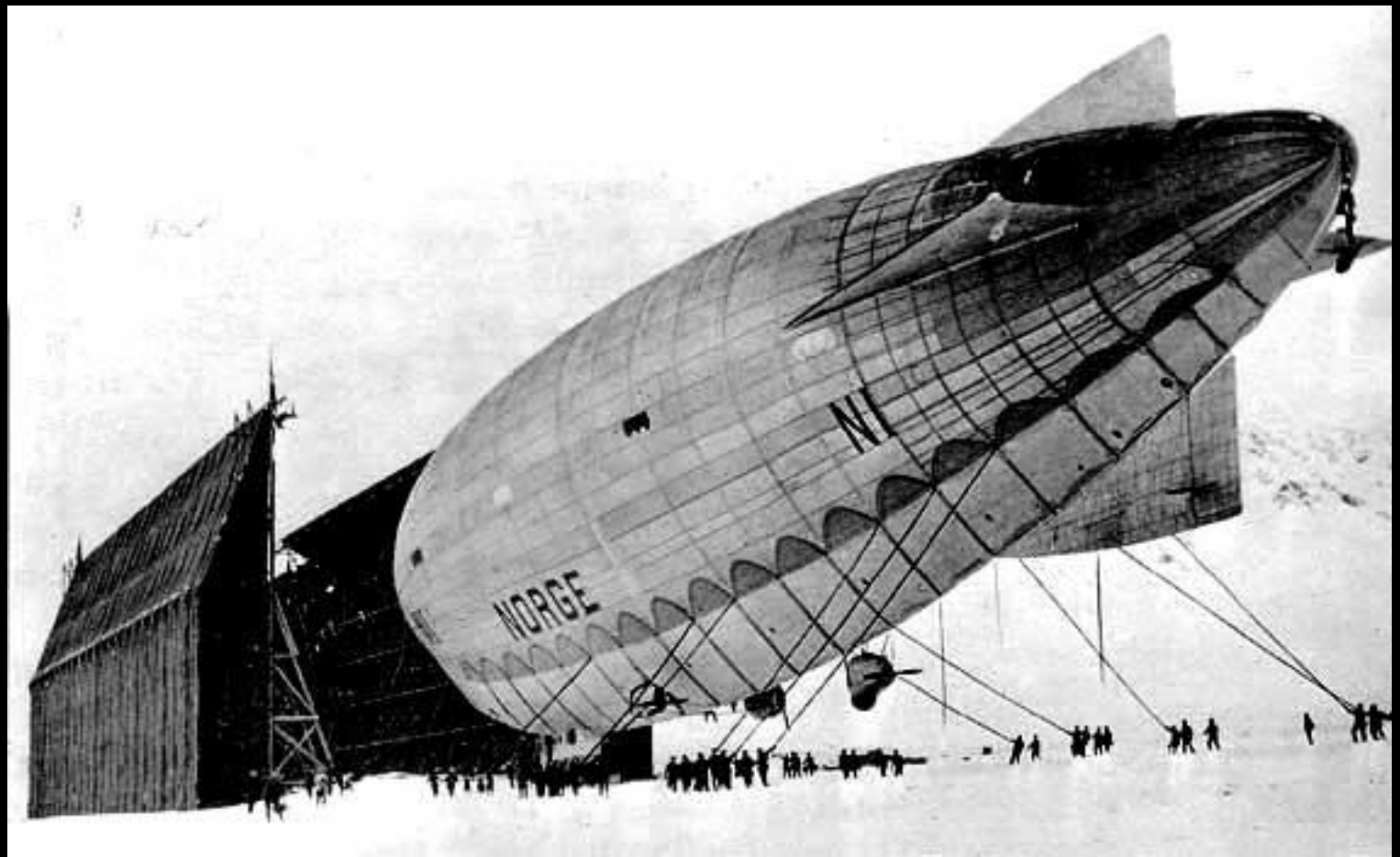
History,
even in the Arctic,
was written
by the winners.

American Walter Wellman tried to reach the North Pole in 1906.



History books only mention Richard Byrd first reaching the Pole by airplane.

Fact is, first to the Pole and across the top of the world: an Italian airship.

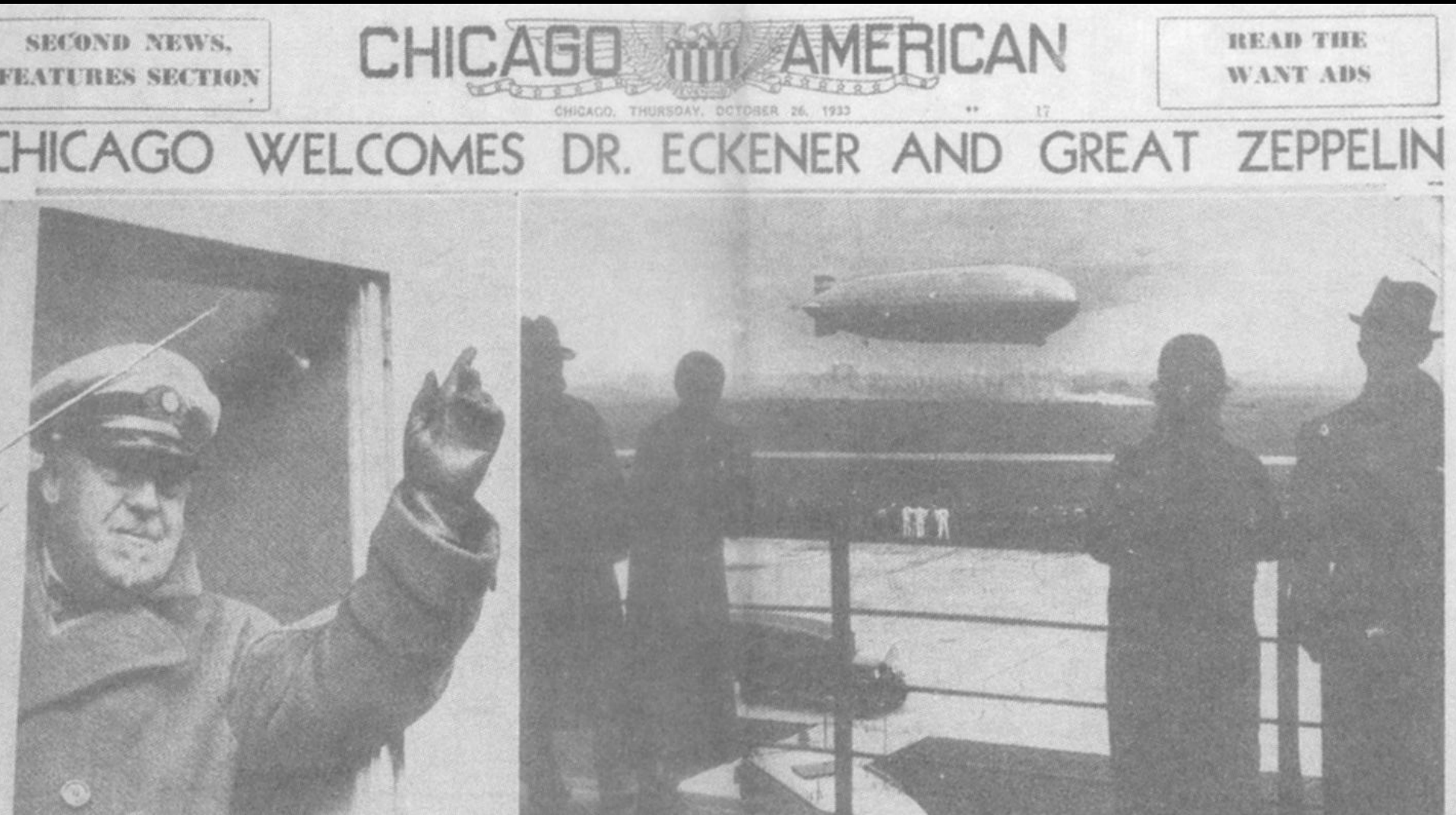


While few airships have operated in the Arctic, documentation and artifacts exist.

Seemingly harsh conditions are surprisingly non-corrosive.

Early airships achieved some control over icing by rising and dropping to levels of different temperatures.

Hugo Eckener considered the Arctic to be a natural environment for airships.


SECOND NEWS, FEATURES SECTION

CHICAGO AMERICAN

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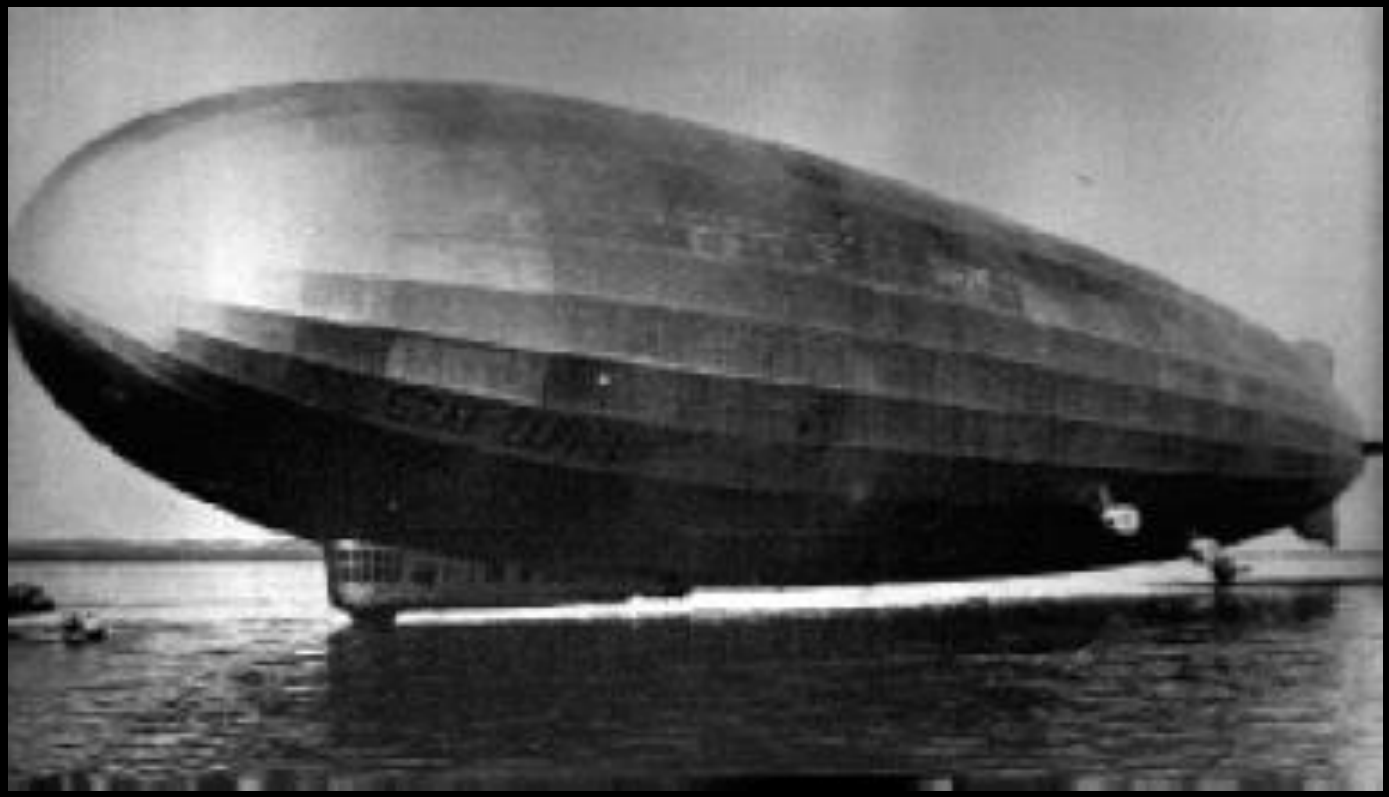
CHICAGO, THURSDAY, OCTOBER 26, 1933 ** 17

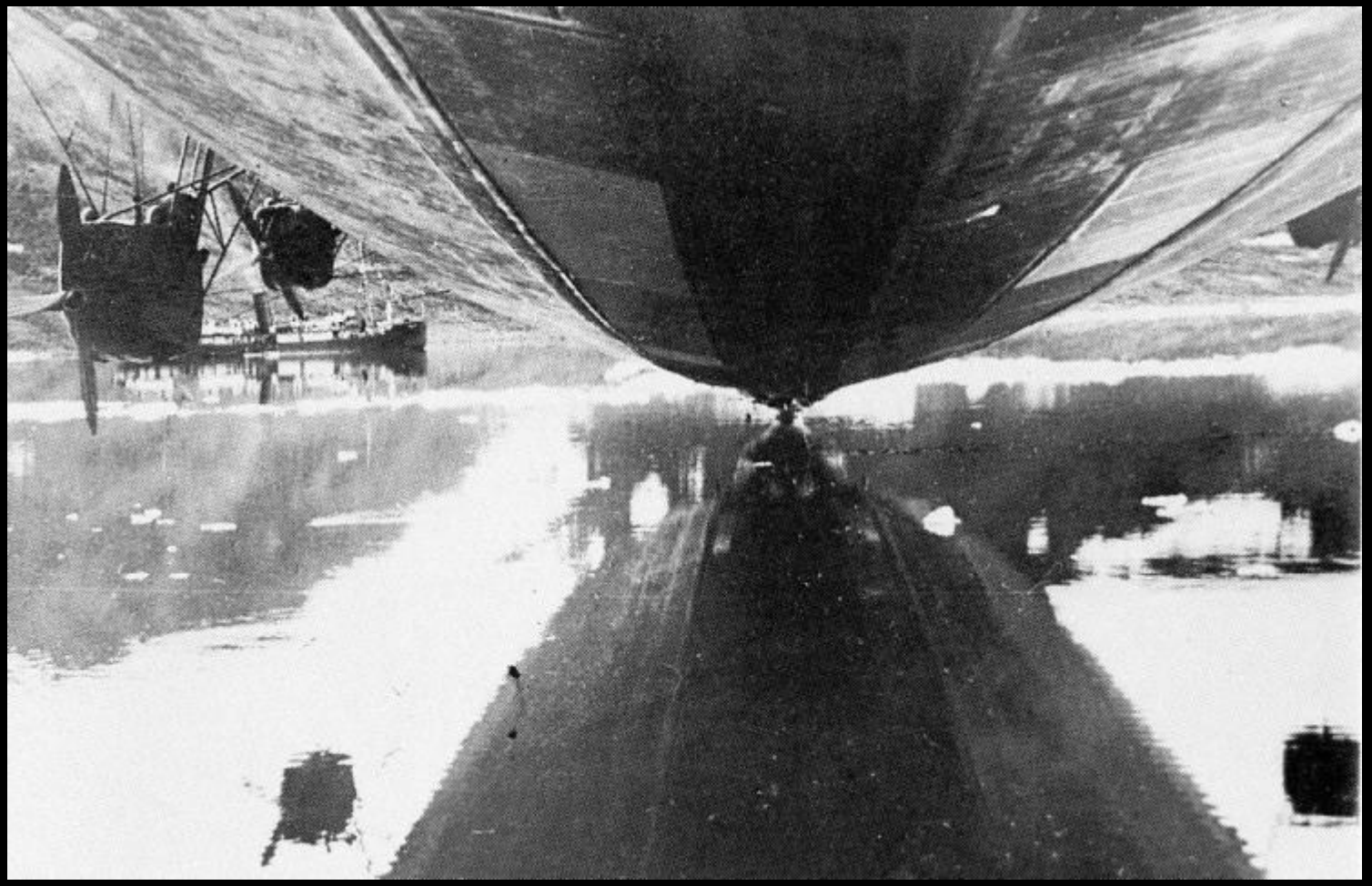
CHICAGO WELCOMES DR. ECKENER AND GREAT ZEPPELIN

Eckener concluded a large cargo - carrying dirigible could bring supplies to isolated Arctic regions more cheaply and with greater ease than any other way.



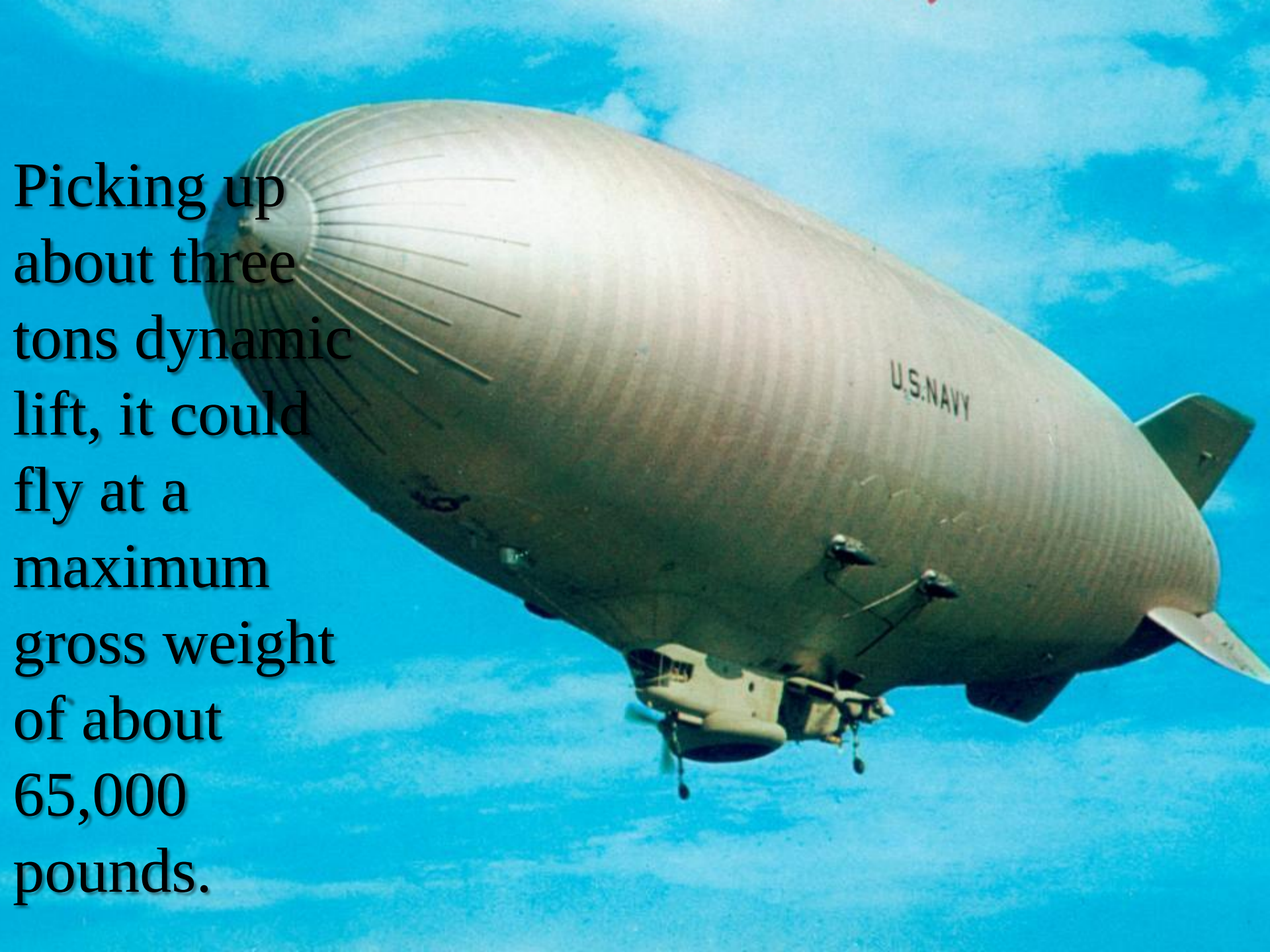
Eckener pointed out increased buoyancy was provided by the cold dense air, and there was little wind during late spring and summer months.

The continuous Sun offers a uniform buoyancy, unlike the daylight - dark cycles of temperate latitudes.



The US Navy worked with Canada in a single experiment to test operation of a modern anti-submarine airship above the Arctic Circle for scientific purposes during the IGY.

The ZPG-2 was about 345 feet long and about 75 feet diameter. Its 7000 yd^2 of fabric enclosed a bit more than 1,000,000 $ft.^3$ of helium.



Picking up about three tons dynamic lift, it could fly at a maximum gross weight of about 65,000 pounds.

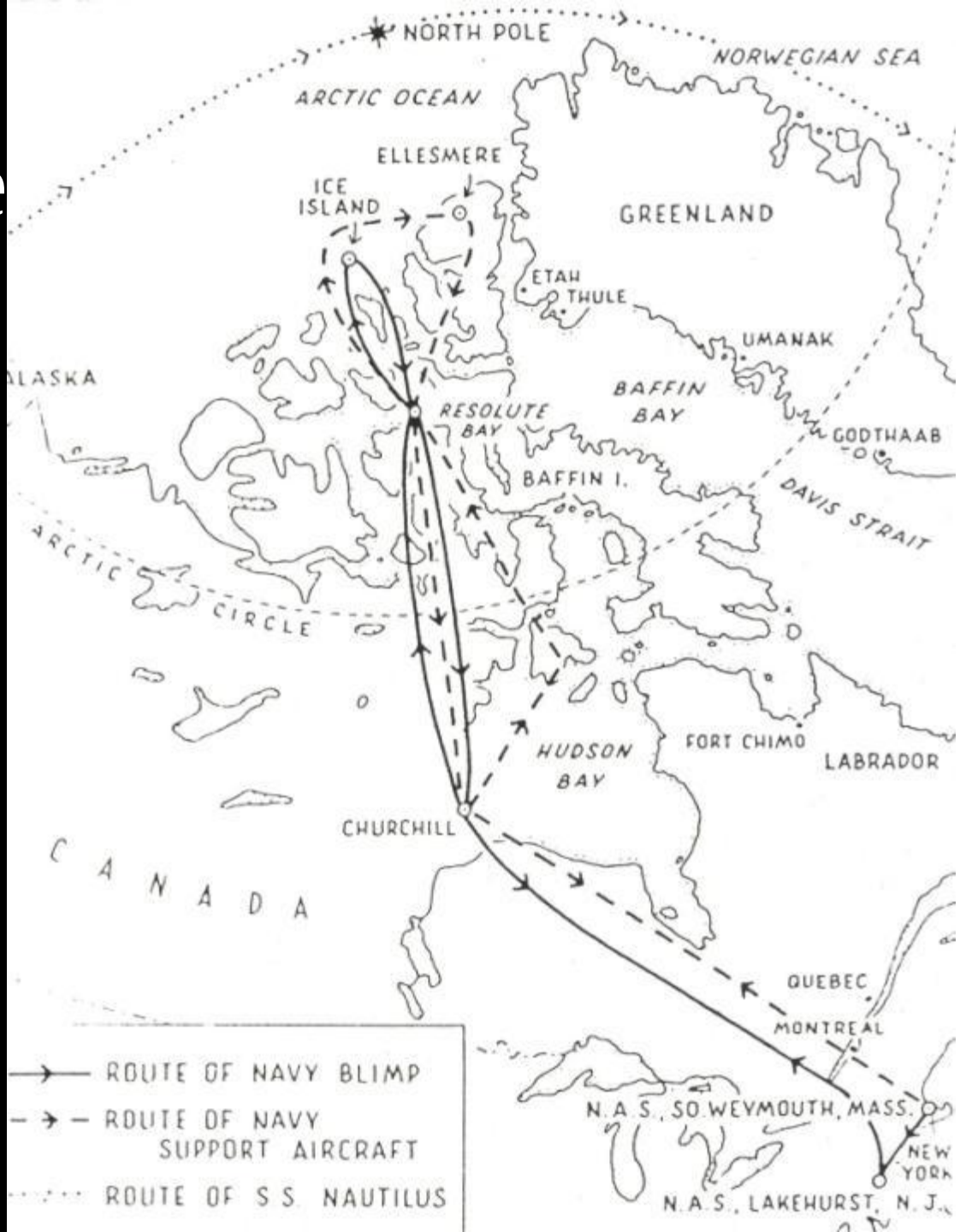
Bureau number 126719, the fourth production ZPG-2, had been banged up in a Cuban landing accident. Overhauled at Lakehurst, it was assigned to NADU at NAS S. Weymouth, Massachusetts.

Late summer 1958, the sonar and sonobuoy equipment were removed. Its compass was modified for use with the autopilot in areas of no magnetic compass operation. An additional compass and navigation electronics were installed.

126719, nicknamed "Snow Goose,“ left NASW in July 1958.

It masted at Churchill, Manitoba for refueling, and again at Resolute Bay before overflying ice station T-3 on the 9 AUG 58.

Snow Goose skipped Resolute Bay homebound.

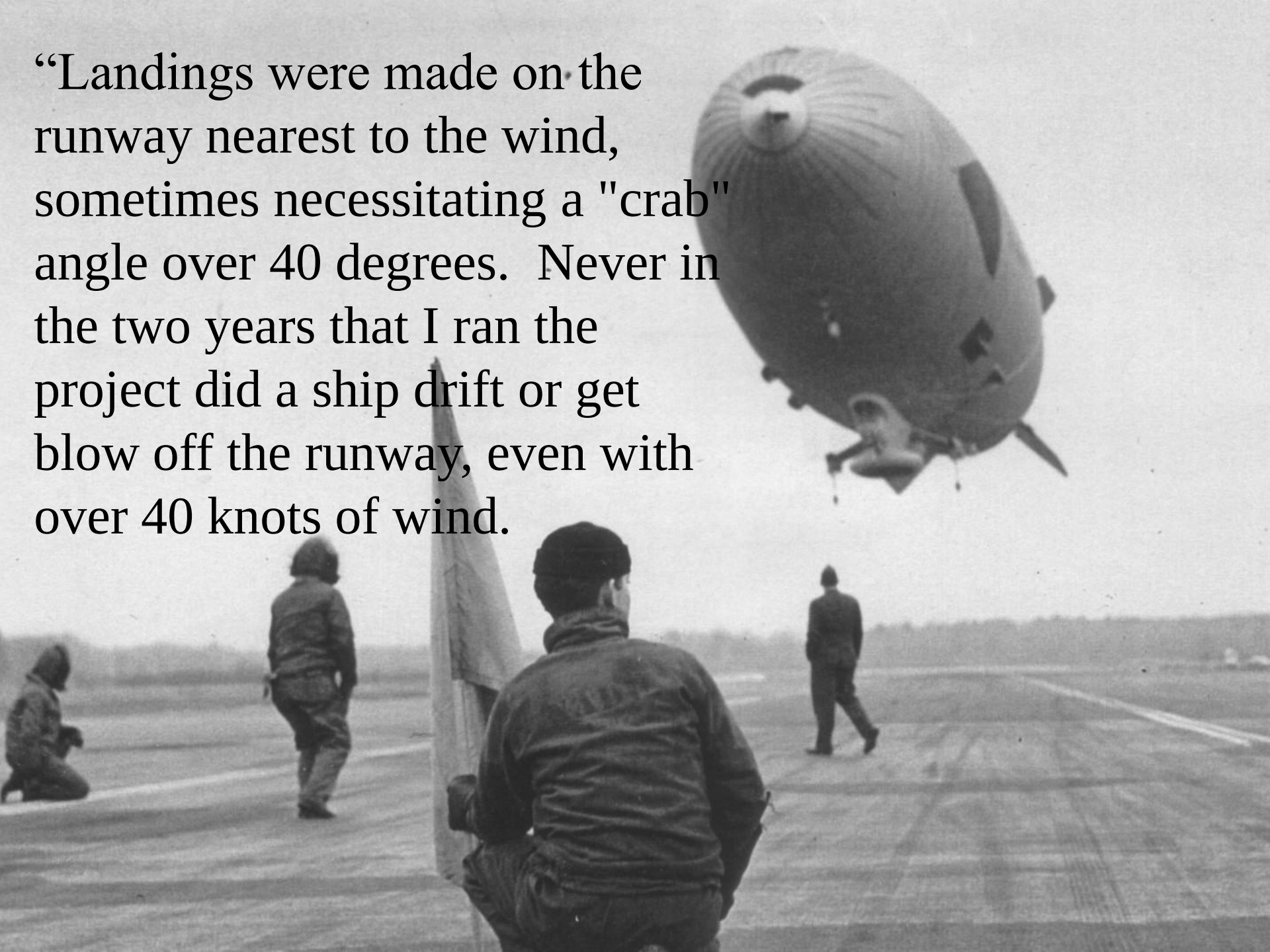


Upon return to South Weymouth on 12 August, 6200 miles of been covered.

“Snow Goose” proved a production ASW airship with few modifications could carry on Arctic operations. Icing was not encountered and has obviously been a concern since 1897.

ZPG-2 BuNo 126561, the first production ship, was tested with recording television mounted topside forward and aft. Flights revealed prop anti-icing was effective in removing damaging ice.

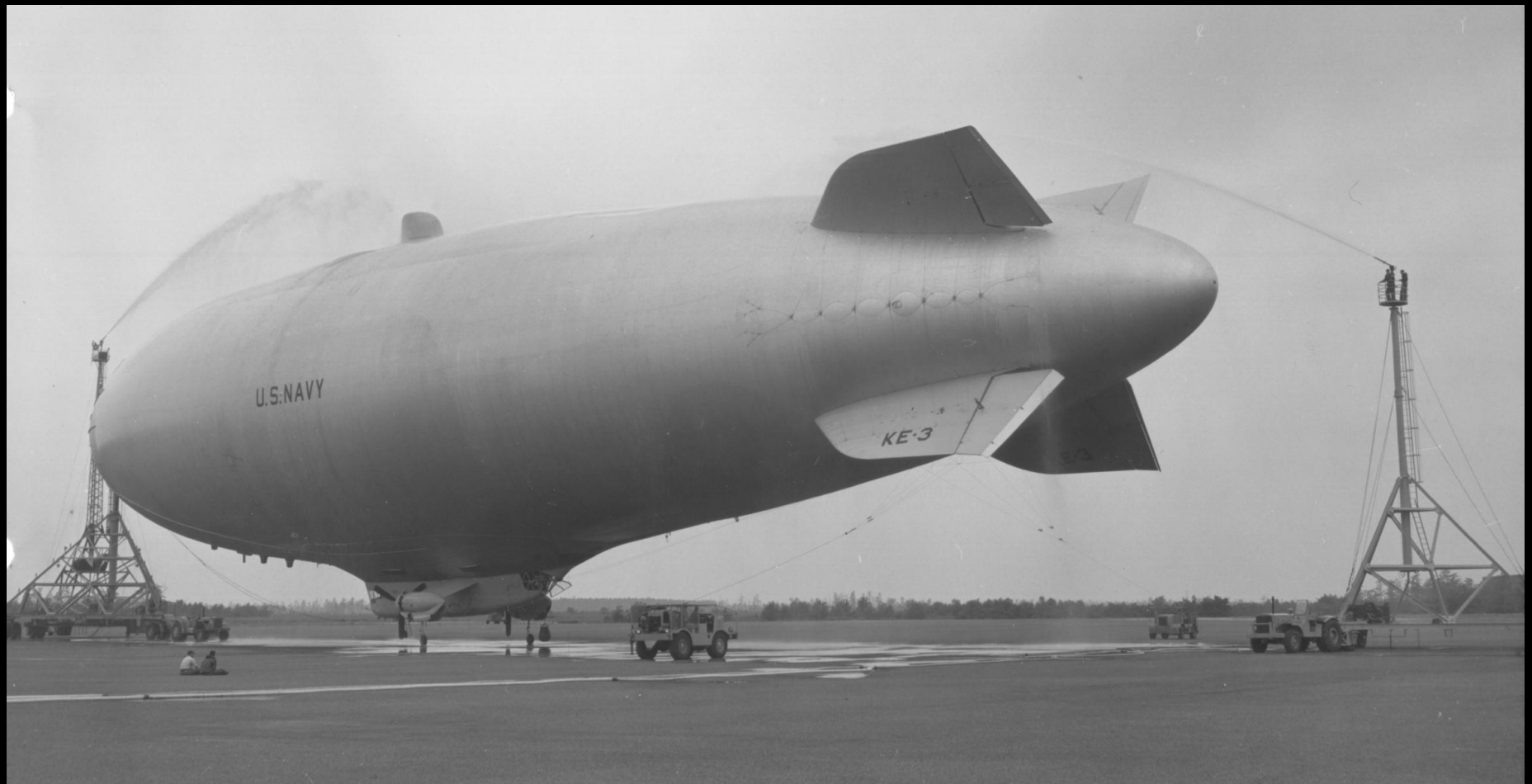
CDR Charles Mills wrote during an “...airship test project on icing ZPG-2s were operated from three 150 ft wide runways - no landing mat or field.



“Landings were made on the runway nearest to the wind, sometimes necessitating a "crab" angle over 40 degrees. Never in the two years that I ran the project did a ship drift or get blow off the runway, even with over 40 knots of wind.

CDR Mills wrote, “On one flight, intentionally ascending and descending through freezing rain, about 3000 lbs of clear ice were accumulated. At no time were control or flight characteristic changed, except for the static heaviness, and the crew become adapted to flying in icing conditions.“

Ice pack and snow accumulation proved a non-problem in flight, instead posing a substantial damage risk while masted. Various techniques were developed in answer.



The airships' X- configuration tail grouping once accum-ulated such a snow load that, upon takeoff, the airship was flown for several hours with an extremely high pitch angle.

Two major US Navy exercises offer the most experience in near Arctic conditions. ‘Project Lincoln’ and ‘Operation Whole Gale.’

Blimps Tested In N. E. Winter As Radar Posts

By HENRY BOSWORTH

Navy blimps are being tested secretly as first line radar outposts, the Traveler learned today.

Two "pulses pig" airships form the South Weymouth Naval Air Station are undergoing rugged weather experiments off the Atlantic Coast.

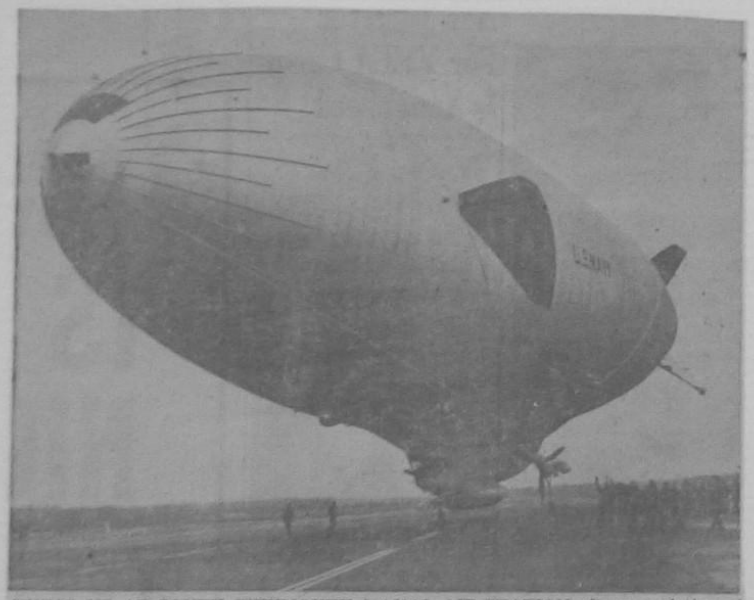
COULD OUTMODE TEXAS TOWERS

A naval source said the results could make a defensive "last been" of the Air Force-manned Texas Towers.

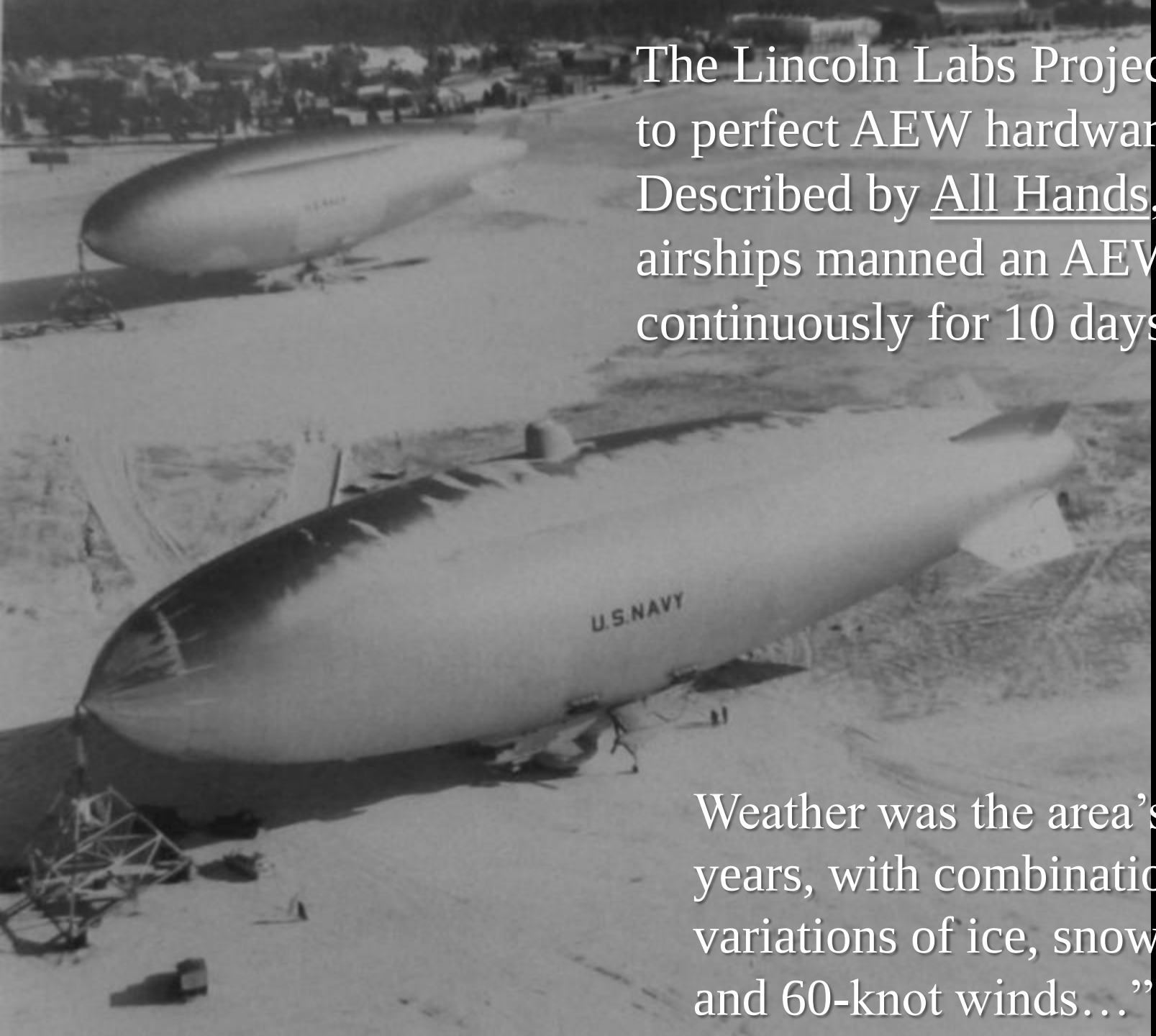
The source said the experiments indicate the blimp is "more practical and economical" than the Texas Towers.

Its maneuverability, he said, enables the blimp to cover a [illegible] radar range than the stationary tower.

The Traveler also learned the Navy plans "endurance" flights in March or April to see how long a blimp can be kept aloft.



TYING UP AT SOUTH WEYMOUTH NAVAL AIR STATION after completion of a 10-day series of tests is this radar-equipped, "all-weather" airship. The possibility of using these big blimps as radar platforms or weather observation posts is now being studied. (Patriot Ledger Photos by Laban Whittaker Jr.)



The Lincoln Labs Project sought to perfect AEW hardware. Described by All Hands, "…five airships manned an AEW station continuously for 10 days...

Weather was the area's worst in years, with combinations and variations of ice, snow, rain, fog and 60-knot winds…"

“One airship flew in continuous icing conditions for 32 hours; another was airborne under similar conditions for 56 hours…”

Takeoffs and landings were made with ceilings under 100 feet during snowstorms, and with winds from 30 to 50 knots…

“Conclusion? Blimps could relieve each other on station during a period when weather had grounded *[all]* other types of military and commercial aircraft.”

“Even though field conditions at Weymouth were rigorous, the operations were conducted off a mobile mast, the test ship was hangared only once for a regular maintenance check.

Operation “Whole Gale”…

taken on as a challenge or dare. ASW was to be performed in the worst winter months, February and March…

Blimps Getting Heavy Weather Tests

WEYMOUTH, Jan. 23—Experiments conducted by two Navy blimps flying during the past 10 days under what has been termed "rugged conditions" have demonstrated the all-weather capabilities of the airship, it was disclosed here today.

The two blimps, one from the South Weymouth Naval Station and the other from Lakehurst, are still out on the experiments.

Fair Weather Reputation

The airship in the past has earned a reputation of not being able to withstand extreme weather conditions, it was pointed out.

Comdr. Jack Hunt, who was at the controls of the Naval Air Development Unit's airship, declared:

"The weather at South Weymouth yesterday afternoon was down to 200-foot ceiling and a ¼ mile visibility. It was ideal for the purpose of the flight. You see, we are out to demonstrate that this hugh bird can fly in any kind of weather."

Comdr. Ronald Hoel, commanding officer of the unit, said today that the flight of the ships would bring to an end a particular phase of evaluating the airship as an all-weather ship.

"Tests so far have been completely satisfactory. But it will be for others to decide its operational value as an air defense electronic platform."

Officials at the base today denied that the tests had shown that the blimps could replace the Texas Towers as a defense radar instrument of the Air Force.

It was pointed out that it was impossible to compare the efficiency of the two as detection instruments and, although the blimps could be supplemental to the Texas Towers, they were not equipped to fulfill all the detection duties of the stationary towers.

"The Naval Air Development Unit's purpose in being," a statement issued today declared, is to conduct experiments of a wide variety under the direction of the Office of Naval Research in Washington. They are also associated with the work of the Lincoln Laboratory of the Massachusetts Institute of Technology.

"We hope our work will ultimately prove itself in adding to the defensive strength of this country," Commander Hoel said. "We have every reason to believe that the officers and men of this unit are making a real contribution in this regard."

It was pointed out that the airship is also considered as an important factor in anti-submarine warfare.

Commander Hoel expressed concern and disappointment when informed that local news outlets had reported that recent tests conducted at South Weymouth had proven that airships could replace the Texas Towers and do the job more cheaply" a news release from the Weymouth air station declared.

"He emphasized," the release stated, "that the tests being carried out at South Weymouth are directed by the Chief of Naval Research and are designed to investigate the capability of the airship to fly under all-weather conditions and not to determine their relative capability as opposed to other detection systems."

GETTING SET to prove its capabilities as an "all weather airship" this huge blimp from the Naval Air Development Unit at the South Weymouth Naval Air Station, is shown prior to taking off on a 40-hour test flight which was termed as "completely satisfactory." (U.S. Navy Photo)

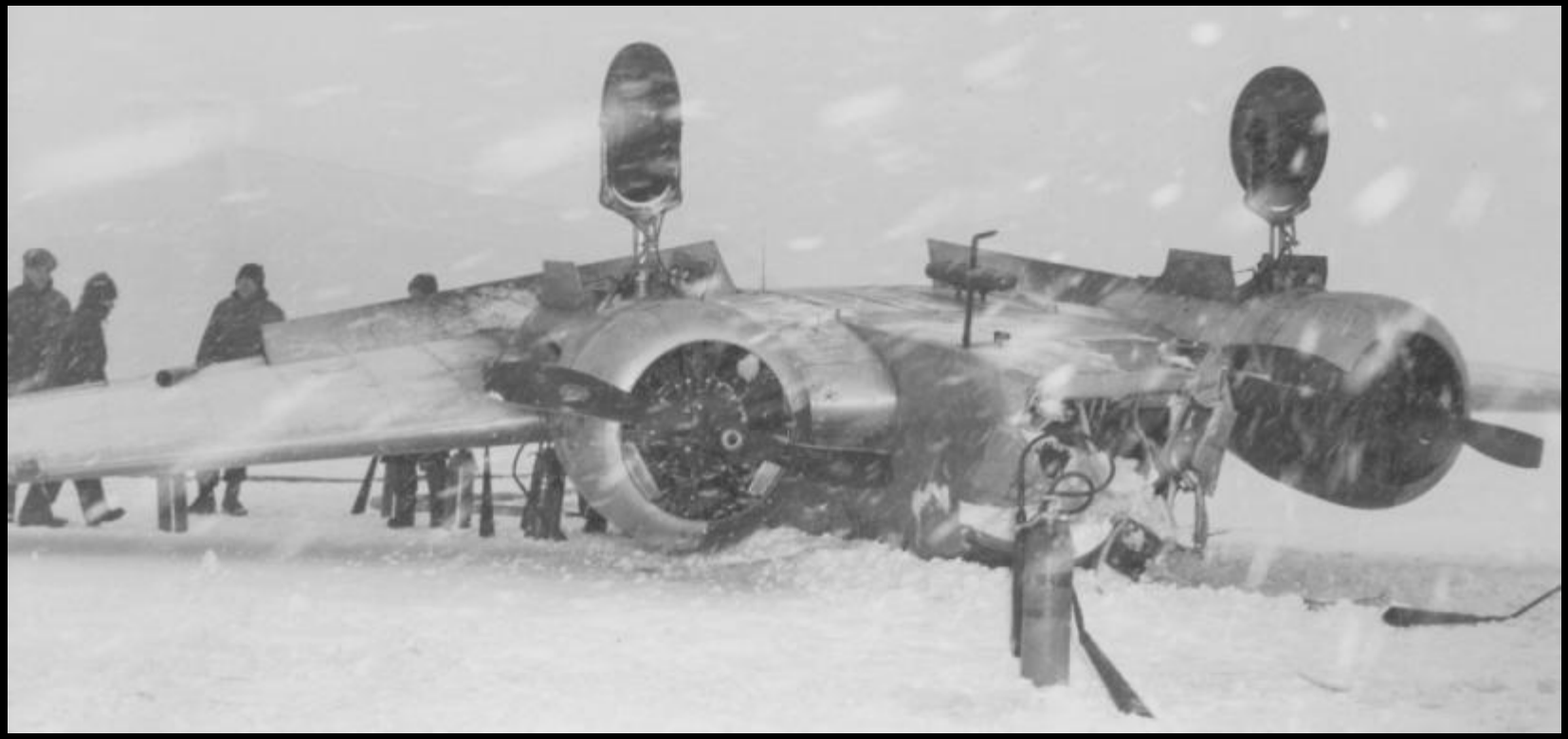
The mission was to maintain at least one airship over a wide area, starting 25 miles offshore, 24 hours a day for the entire two months.

Operations began on 1 February 1960. One crew set a record of on-station patrol time, almost 73 hours.

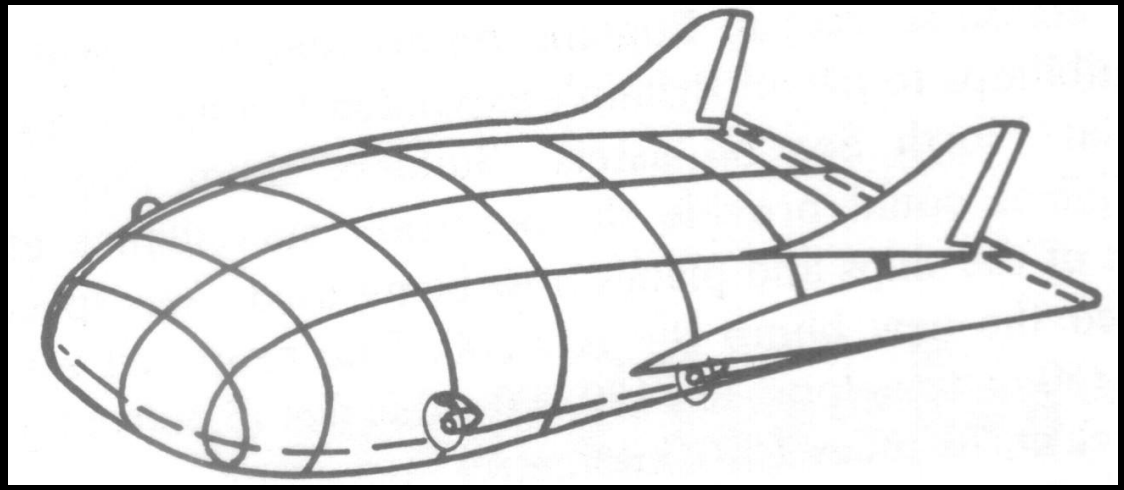
Another crew remained on station for 95.5 hours. No submarine got through.

Obviously an airship designed for sustained Arctic conditions would have better waste line heating, care with ballast water in fuel lines, etc., however…

Buoyant flight, with its inherent independence from forward speed to defy gravity, has built-in safety for Northern conditions.



Airships, today equipped with modern technology for navigation and synthetic vision, are ready to take on the Arctic.



Questions & Discussion

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