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Op-Air  
0155-86

NAVY DEPARTMENT  
OFFICE OF NAVAL OPERATIONS  
WASHINGTON

I-32-GB

November 25, 1918.

From: Director of Naval Aviation,  
To: All Naval Air Stations, Aviation Detachments,  
Bureaus and Naval Districts.

SUBJECT: Weekly Report - November 25, 1918.

1. Hours of patrol obtained during the past week at  
Naval Air Stations, together with the number of flights and  
seaplanes used for patrol, for week ending November 25, 1918:

P A T R O L S -

Stations	Flights	Hours	Mins.	Aircraft in commission	Complement at station
Cape May	12	38	- 5	3 seaplanes	13 seaplanes
" "					1 kite balloon
" "	3	35	÷	1 dirigible	1 dirigible
Chatham	3	19	- 18	15 seaplanes	13 seaplanes
Coco Solo	10	21	- 45	3 "	13 "
Hampton Roads	63	202	÷ 34	23 "	24 "
" "	1	3	31	1 dirigible	1 dirigible
Montauk					0 kite bal.
" "	6	3	- 30	11 seaplanes	13 seaplanes
Rockaway	24	317	-	3 kite bal.	2 dirigibles
" "	45	96	- 5	14 seaplanes	6 kite bal.
" "	3	3	- 18	3 dirigibles	34 seaplanes
	<u>173</u>	<u>747</u>	<u>- 34</u>		3 dirigibles

	Flights	Hours	Mins.
Lighter-than-air total	30	365	59
Seaplanes total .....	143	384	15

NOTE: The sign ÷ indicates that the record for the week is  
greater, the sign - indicates that the record for the  
week is less than for the preceding week.

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2. Hours of flying other than patrol obtained during the past week at Naval Air Stations, together with the number of flights and seaplanes in commission and at each station, for the week ending November 25, 1918:

Stations	Flights other than patrol		Aircraft in Commission other than patrol		Complement at station
	Flights	Hours	Mins.	Aircraft	
Anacostia	39	29	32	5 seaplanes	m 9 seaplanes
Akron	23	29	20	19 free bal.	
Bay Shore	392	358		23 seaplanes	48 seaplanes
Cape May	6	3	50	8 "	
Chatham	25	17	1	9 "	
Coco Solo	22	23	25	4 "	
Halifax	7	4	50	1 "	
"	6	3	35	1 kite bal.	
Hampton Roads	57	38	32	2 seaplanes	m 14 seaplanes
" "	4	5	55	1 dirigible	
" "	19	3	30	1 kite bal.	
Key West	993	843	8	25 seaplanes	36 seaplanes
" "	20	23	50	1 dirigible	
Miami	1908	1614	4	41 seaplanes	114 seaplanes
Miami Marines	561	609	53	airplanes	
Montauk	10	7		11 seaplanes	
Onsacola	1162	853	5	69 "	108 seaplanes
"	43	25	45	1 dirigible	
"	19	65	10	1 kite bal.	
"	1		30	1 free bal.	
Rockaway	24	10	45	14 seaplanes	
"	5	4	56	3 dirigibles	
"	4	3		3 kite bal.	
San Diego	383	326	10	14 seaplanes	
	<u>5736</u>	<u>4912</u>	<u>6</u>		

	Flights	Hours	Mins.
Seaplanes	5031	4133	2
Airplanes	561	609	53
Balloons	73	104	5
Dirigibles	72	65	6
	<u>5736</u>	<u>4912</u>	<u>6</u>

GRAND TOTAL FOR FLYING TIME:

Patrol	173	747	5
Other than patrol	<u>5736</u>	<u>4912</u>	<u>6</u>
	5909	5659	

m - Experimental.

Fl.  
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Arrowsmith, John Robert.  
Austill, Jere.  
Batcheller, Harry C.C.  
Bender, Edwin Samuel.  
Brann, Maurice Robert.  
Briggs, William Wright.  
Brimer, Francis Clay.  
Burd, Theodore Allen.  
Bush, James Irvine.  
Cadwell, Marion Staples.  
Catlin, Ephron Jr.  
Coleman, Richard Logan.  
Conley, Matthew Manvell.  
Cornet, Henry Louis, Jr.  
Crump, Raymond Floyd.  
Curtze, Frederick August.  
Deniston, Noble Graham.  
Dennis, John Waldron.  
DeViney, Alfred Emanuel.  
Dodge, Harris Taylor.  
Duke, John, Jr.  
Dupuy, Albert Edward.  
Dutton, Daniel Fleming.  
Elder, William Fitch.  
Emery, John Josian.  
Evans, Springer Fulton.  
Farnham, William Edward.  
Finkler, Albert Trostel.  
Fleming, Harvey Carruthers.  
Flood, Thomas Bernard.  
Franklin, Lafayette.  
Gaskins, Palemon Hilkman.  
Gerry, Frank Henry.  
Gillett, D.L.  
Goodrich, Albert Herbert.  
Gourley, Russell Conwell.  
Grant, William Daniel.  
Griffith, Dorsey James.  
Griswold, Milton Pettit.  
Gurley, Dorris D.  
Hadfield, Harold Frederick.  
Hadley, Fred Lytton.  
Hart, Alfred Lucius.  
Henry, Winston Patrick.  
Heydt, Edward Forrester.  
Hicks, Robert Holliday.  
Honold, Henry Shriver.  
Howard, John Groun.  
Hunter, Robert Duncan.  
Kendall, John Wiley.  
Laffan, Stanford.  
Lavis, Ransom Rush, Jr.  
Linderman, Garrett Brodasad.  
Lindsay, Jean Chandler.  
Lynch, Kenneth Ransome.  
Lyon, Robert Albart.  
MacCalman, Donald James.  
MacCartny, Charles Franklin.  
McCormick, Ralph Rooy.  
MacMillian, Kenneth Duncan.  
Markthaler, Arthur Frederick.  
Meyers, William Bladgen.  
Miller, Richard Boyce.  
Millet, Emile Henry.  
Morrill, Frank Whitney.  
Mossar, Philip Dudley.  
Moultrie, Luther G.  
Nethercot, David George.  
Newton, Oscar, Jr.  
Noel, Celest Joseph.  
Noel, August Louis.  
Nuckols, Ira Frederic.  
Oran, Robert Corbert.  
Osburn, Clarence Wilson.  
Ottoway, Frederick H.  
Palmer, Richard Raymond.  
Philbrook, Walker Merriam.  
Pierce, Allen Flitcraft.  
Plumo, Walter Gerald.  
Price, Hugh Stanley.  
Price, Robert Morgan.  
Prindle, Kirk Hubbard.  
Pulitzer, Joseph, Jr.  
Ramsburg, John Homer.  
Raycroft, Harlan Long.  
Rockwell, Charles Henry, Jr.  
Rockey, Stuart Sneldon.  
Rodes, Clifton.  
Roarbach, W. H. Hiss.  
Ross, Charles Everett.  
Royster, Frank Sheppard.  
Schmuck, James Howard.  
Schmid, Herbert William.  
Smith, Chester Clinton.  
Smith, Charles B. Wharton.

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Wells, Ernie William.  
Wells, James Harold.  
Wells, James Harold.  
Wells, Henry.  
Wyndington, Thomas Randolph  
Yeague, Addison Davison  
Thomas, Charles Neil.  
Titus, Harry Lewis.  
Tomlinson, Gilbert Ewing.  
Tramblay, Lafayette Arthur  
Westerfield, Jason Rogers.  
Whidden, William Bush.  
Whitaker, Richard Allison  
Williams, Alford Joseph, Jr.  
Wilson, Julius Lane.  
Winslow, Burnside  
Woodruff, Bruce Franklin  
Wright, Marc Snowell

Emmert, Allen Rogers.  
MacDonald, George Ronald.

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Gunnery.

Five drops of Mark IV aero bombs were made to determine the weight of detonator shock necessary to insure firing by water impact from a height of 500 ft.

An experimental mechanism designed to indicate whether or not the bomb fired was incorporated in each case.

The experiments to date have shown a successful operation of the indicating mechanism and have demonstrated that a weight of detonator of five ounces is just sufficient to cause firing, but giving no factor of safety. One drop was made with a weight of eleven ounces and was highly successful.

Radio.

During the recent armistice consultation, this station received by radio the reports sent out by the Workmen's and Soldiers' council from Berlin, direct, and also from allied headquarters in Paris.

Pigeons.

Carrier pigeons have been used very successfully in connection with the patrols at this station.

Here is an instance where a homing pigeon of the U.S. Naval Air Station, Chatnam, Mass., also performed a remarkable feat. This pigeon was confined to a carrier without room enough to turn around and remained in the same cramped position for approximately 9 1/2 hours with less feed than it ordinarily would receive. After its period of solitary confinement, it was liberated about thirty miles from the station and arrived at the loft 42 min. later.

HALIFAX - November 16, 1918.

The crank handle of the Liberty Motor has caused extra vibration and inconvenienced operations around the engine. A detachable crank handle has therefore been devised here, to be carried in the cock-pit, when not in use.

Instead of the wire dope ordinarily used, a mixture of 70 per cent linseed oil and 30 per cent turpentine has been found best for the humid atmospheric conditions of this locality.

HALIFAX - November 16, 1918. Cont'd.

It has been found that sperm oil is too heavy, in this climate, for use in comb-head mechanism, as it delays the action of arming, and, in many cases, has made the dash-pot useless in arming. Instead of sperm, 3-in-1 oil has been used successfully, under our conditions, for bomb mechanism also for operating the Lewis Machine Gun.

BAY SHORE - November 18, 1918.

From other stations reports have been heard from time to time of difficulties experienced with cam shaft gears and housings of the Liberty Motors the general opinion being that the breakage was due to faulty material or workmanship. As this seems to be the chief defect in the motor as seen through our experience on this Station, it is felt here that we would like to corroborate the statements of the Miami, Florida, Station in its news letter item of November 2, 1918. Our experience has been practically the same. A large portion of the motors recently taken down after seventy hours use have been found to have teeth broken off the cam shaft gears. Recently in as many as ten instances has this been the case. A week ago, while on a Navigation Flight along the coast, one of the HS-2 boats was forced to come down in a heavy sea, her cam gears having been stripped, with the result that both wings were badly smashed in beaching the plane. It is felt here that losses like these would be prevented if the matter were given very careful consideration and a study made of this point in particular. Rather than being made of imperfect material it is the opinion of this Station that the gears are perhaps too hard and too brittle.

MONTAUK - November 16, 1918.

On November 9th, a party consisting of Commander J.H. Towers, U.S.N., Lieut. Commander R. P. Bellinger, U.S.N., Lieut. (jg) C.W. Bell, USNRF., Lieut. (jg) D.A. Mount, USNRF., and Lieut. (jg) M. Valdez, USNRF., inspected this Station.

On November 6th, four "R" type Seaplanes were flown from here to Philadelphia. The planes left here at 6:30 A.M. in a wind of 35 knots and left Bay Shore at 10 o'clock after having repaired a broken oil lead. The pilots stopped at Rockaway for lunch and left there at 1:15 arriving at Cape May at 3:25 P.M. where they spent the night. They left Cape May at 9:00 A.M. November 7th, three of the machines went out of commission before reaching Philadelphia. Seaplane

No. 155 piloted by Gunner G. F. ... the oldest R-6 in the Navy was the only plane to complete the trip successfully. It added more to the record by making a flight over Philadelphia in celebration of the Armistice declaration.

### Bureau of Construction & Repair.

The Bureau of Construction & Repair have issued the following changes in Heavier-than-Aircraft:

#### HS-2-L Flying Boats.

Change #38 - Provides handholes in the tops of fins for the purpose of ventilation, dated November 2, 1918.

#### H-16 Flying Boats.

Change #44 - Angle of incidence of horizontal stabilizer changed from 2° to 3°, dated November 7, 1918.

#### F-5-L Flying Boats

Change #12 - Hinge connected sidewalk panels substituted for removable sidewalk panels, dated November 5, 1918.

MIAMI, FLA. - November 20, 1918.

On November 15, 1918, HS-1L, A-2227, piloted by Ensign Demonet with two Students under instruction, spun into the Bay from a height of four hundred (400) feet. The Student under instruction was practicing spiraling and shooting the buoy. The Instructor noticed that the glide was rather flat and pushed down on the controls in order to gain speed. As he did so, the back of his seat broke allowing him to fall back into the compartment containing gasoline tanks, his feet catching in the yoke as he fell back. The machine immediately went into a tail spin which very closely resembled a spinning nose dive inasmuch as the nose of the machine was pointed straight down. Before Ensign Demonet could regain his position in the cockpit and bring the plane out of the spin, the machine struck the water, crashing the whole hull forward of the main cockpit. None of the crew with the exception of the Student in the observer's cockpit suffered other than slight injuries. The Student in the forward cockpit suffered somewhat from a sprained back.

As the station is not under the necessity of carrying on so many patrols, the seaplanes have been used during the past week for carrying officers on important missions to Yorktown and other centers of Naval activities in the vicinity. Owing to the great number of Government activities being carried on in this vicinity, and the slow unsatisfactory surface communication, due to the topography of this region with land and water forming mutual barriers, the Naval Air service is able to save infinite time for the Government by thus carrying passengers and messages.

Three new planes were delivered in good condition at the station during the week. Ensign Wilson, in HS-2 number 2251, left East Greenwich, R.I. on November 8th, at 10:15 A.M. and arrived at Rockaway at 3:10 P.M., having stopped at Bay Shore enroute. Owing to adverse weather conditions, he did not leave Rockaway until the morning of November 11th, and arrived at Hampton Roads at 1:35 P.M. making a short stop on the way at Assateague. Lieutenant (jg) J.M.Vorys, USNRF flew a new C-1, number 3492, from Philadelphia on November 13th, leaving at 1:40 P.M. and arriving at Hampton Roads at 4:40 P.M. The seaplane was very well balanced. It flew for 35 miles without the pilot's hands touching the controls. Ensign Johnson brought a second C-1, number 3499, from Philadelphia on November 15th, leaving there at 12:58 P.M. and arriving at the Naval Air Station, Hampton Roads, at 5:20 P.M.

On November 16th, an emergency patrol was ordered to carry two officers to Yorktown. The orders were given at 9:19 A.M. C-1 number 3492, Ensign Clark, left the beach at 9:24 A.M.

#### AERIAL MAIL SERVICE.

Regular aerial mail service was inaugurated on November 16th, between Hampton Roads and Washington. The starting time was set for 1:00 P.M., and the plane, with Lieutenant (jg) L.P.Jacobs, USNRF pilot, left the beach on the minute and arrived at Washington at 2:52 P.M. A speed boat carried the mail to an awaiting automobile and the mail was in the Navy Department 2 hours and 30 minutes after leaving Hampton Roads. It is contemplated to start one plane from Washington and one from Hampton Roads daily. In this connection it is interesting to note, that aerial service now exists between Morehead City, N.C. and New York City, via



HAMPTON ROADS - November 20, 1918.

Washington, a distance of approximately 600 miles.

Experimental Department.

Experiments are being conducted to determine the value of wooden spray strips for reducing the amount of spray thrown by flying boats when taking off and landing. These spray strips are simply pieces of wood running along the bottom under the bilge member and of triangular section so that they tend to deflect the spray downwards as it shoots away from the bottom of the boat. Strips of this type have already been installed on an F-5 type flying boat running from near the nose to a point slightly aft of the propellers, and have been found to reduce the spray quite materially.

A test has been conducted with the new Olmstead propeller. This propeller, which is of a very radical design, gave some very remarkable results. With an HS-1 fully loaded, a climb of 3200 feet in ten minutes was obtained. This is far in excess of any performance obtained during previous tests on either the HS-1 or HS-2. The increase in speed in horizontal flight was 4-1/2 M.P.H.

A flight was made for an inter-plane test of the telephone transmitters type CG-1104. One set was installed on the dirigible and the other on seaplane F-5-L 3578. Satisfactory conversation was carried on between the dirigible and seaplane when the seaplane was 12 miles away. Both the dirigible and seaplane also carried on conversation with the shore station. This test was considered highly satisfactory.

A flight was made to test the direction finder coils using the British seven stage amplifier. Signals were received from Arlington with great intensity when the plane was 150 miles away. Very little trouble was experienced with engine noise, and it was found unnecessary to use full amplification, even though three telephones were in use at one time.

Balloon Division.

A test was made Friday, November 15th, of a radio telephone set installed in Dirigible A-248. Communication was established and maintained between the dirigible, the station and two seaplanes similarly equipped. During the conversation the motor on the dirigible was running at about 900 RPM, but the voice came in fairly distinctly at full throttle.

HAMPTON ROADS - November 30, 1918.

Conversation between one of the seaplanes and the dirigible was carried on at a distance of about twelve miles. The test which was very satisfactory, was conducted by Lieutenant Commander Taylor, USNRF, with Ensign J. B. Lawrence, USNRF, pilot.

KEY WEST, FLA. - November 19, 1918.

A sample front pontoon strut for N9 type seaplane has been made of Majagua, a Cuban wood. This strut, through an accident in the hangar was subjected to a very severe test. The seaplane was hoisted from the ground for repair and fell, breaking all the spruce and hickory struts. The majagua strut sustained the entire weight of motor, fuselage and wings. It, however, was bent along the curvature of the pontoon but when the extreme weight was lifted the strut straightened out.

The Majagua strut weighs, with fittings, three pounds fifteen ounces; a spruce strut three pounds, and a hickory strut four pounds fifteen ounces. The weight of majagua could be reduced by proper seasoning.

On November 20th two HS-21 type seaplanes flew to Miami by moonlight, accompanying a Miami seaplane which had Lieut. Colonel Arnold as a passenger. The trip was made without mishap, the motors acting particularly well due to the cooler air.

Engineering.

The Engineering Department has devised an aluminum lock nut attachment which is employed on this station as a means of securing in place the piston pin set screw in the Hispano-Suiza piston head. This is a marked improvement over the manufacturer's method. This attachment has been in use for more than a month during which time no instances have occurred of the piston pin set screw backing out. Previous to this improvement, this was a frequent occurrence, causing the scoring of cylinders to an alarming extent.

Radio.

Type CQ-1115 radio transmitting sets have been operated with much success during the past week. Proper care and attention have resulted in increased efficiency and break downs, while on patrol, have been reduced to a minimum. A Sperry Short Wave Radio Receiver has been set up and operated with successful results.

SOURCE O.N.I.

German Halberstadt Two-Seater Fighter.

Germany's best biplane, the Halberstadt two-seater fighter, is well and strongly built, and its general behavior in the air is good, according to modern fighting standards. It can not be considered stable, there being a tendency to stall with the engine on and to dive with the engine off. Pilots report that it is light and comfortable to fly. Its maneuvering power is good, and this feature, taken in conjunction with the exceptionally fine view of the pilot and the observer, and the field of fire of the latter, makes the machine one to be reckoned with as a two-seater fighter. Its climb and speed performances are, however, poor, judged by contemporary British and American standards. It can climb to 5,000 feet in 9 minutes 25 seconds; to 10,000 feet in 24 minutes 30 seconds; to 14,000 feet in 53 minutes 45 seconds; and to 14,800 feet, the greatest height reached, in 64 minutes 40 seconds. At 10,000 feet its speed is 97 miles an hour, with the 180-horsepower Mercedes engine making 1,385 revolutions a minute. There are two guns, one fixed and one movable. The gun ring is not incorporated in the fuselage, but is attached to its top surface by stream-line struts.

Quartermaster Charles H. Hammann, United States Naval Reserve Force, has been recommended by his commanding officer for the Distinguished Service Cross of the United States. Hammann took part in a recent flight over Pola, in the squadron commanded by Ensign G. H. Ludlow, United States Naval Reserve Force. Ludlow, after driving off an enemy Albatross, had his magneto shot off, his propeller splintered, and the engine crank case cracked. He went into a nose spin, and landed safely in the water. Hammann, fearing Ludlow would be taken prisoner, went into a nose dive to make the enemy think he was out of action. He landed near Ludlow, left his wrecked machine, swam over, and stowed himself under Hammann's engine. Although this meant much additional weight for the one-seater, Hammann, after sinking Ludlow's plane by gunfire, got into the air from a fairly heavy sea, and carried Ludlow back to the base without being attacked. Upon attempting to land, the plane turned over, both men being picked up by motor launch. Ensign Ludlow has been commended for his share in the action which drove off the enemy.

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MONTAUK, L.I. - November 30, 1918.

When conditions are favorable the regular patrol from this station in search for floating mines consists of 7 machines in a V formation one-half mile distance between planes. This formation allows a very thorough search of the coast line.

The following suggestion is offered - that a small piece of moulding be tacked up the edge of each panel on the flying boat hull where men walk when working on the hull or motor.

The following suggestion is offered as an improvement on the present oil pump on Liberty motor. It has been found that very often oil pressure drops while the machine is in the air due to an air lock in the oil lead. To relieve this air lock it is necessary to take a screw driver and unscrew a small plug in the oil pump which allows oil pressure to again rise. This station has substituted a small pet-cock to replace this plug in the oil pump, and when oil pressure drops it is only necessary to open the pet-cock to relieve the air lock and raise the oil pressure.

MONTAUK, L.I. - November 16, 1918.

It is thought that Dirigible A-247 at this Station is by far the oldest ship still in service in the Navy. This ship was built in June 1917. It has been inflated five times the last of which was on July 30, 1918. Previous to this last inflation the envelope was given five coats of Delta Dope and this Dope has prolonged the life of this ship more than four months.

PENSACOLA, FLA. - November 16, 1918.

Service Flight School:

The Patrol Office Radio Station is now in full operation. All planes which are equipped with radio report their position at regular intervals, and a chart showing position of each plane is kept in the Radio Station.

H-16 Flying Boat #A-4053, was wrecked in the Gulf, due to the freezing of ailerons. Ensign L. C. Avery, USNRF., safety pilot in charge of boat, is to be highly commended for his skill and coolness in landing the boat in the Gulf without injury to occupants.

H-16 Flying Boat #A-4051, porpoised in taking off the water and nosed in. The nose of the boat was broken in,

PENSACOLA - Cont'd.

the wings folded forward; the engines were torn from their beds but were not entirely detached and were held afloat by the wings. The hull was broken directly in back of the engineer's cockpit. No one was seriously injured and all the occupants were rescued by a speed boat.

Gunnery School.

During the week two motors were installed at firing point on the range to furnish propeller blasts. Scarf rings had been built into revolving frames representing N-9 wings and tail. The student fires from these revolving turrets with the propeller blast directly upon him, thus giving practice corresponding as nearly as possible to the actual conditions undergone in the air.

Plane #2472 after 150 hours in the air, was given a rigid inspection and found to be in correct alignment. We consider this quite remarkable, as the plane has been used almost continually as a stunt machine and consequently has been subjected to most severe strain.

During the past week the tests being made on the modified N-9 (#365-Curtiss CXX Motor) were concluded. These tests demonstrated, to our mind, the practicability of the use of the modified N-9 type as a Gunnery plane. This type of plane combines speed with ease of control and if equipped with Hispano-Suiza motor would be the ideal Gunnery plane.

Bombing School:

In spite of the fact that students are now piloting the bombing planes, the bombing results over test and towed targets have been remarkably accurate since the installation of the new Mark III Pilot Directing Bomb Sight. Averages of 10 to 15 feet for twelve bombs dropped over the Stationary Water test targets are becoming very common. Towed targets moving from five to ten knots per hour have to be repaired each night, due to the increasing proficiency of the bombers. Comparative results have proved the Mark III Sight fifty per cent more accurate than the old Mark IV Sight.

PENSACOLA - Cont'd.

Dirigible School.

During the past week several successful experiments were made on the Spencer type Parachute. The parachutes were secured to the Dirigible and taken to an altitude of approximately 1200 feet and were dropped from this height. Two parachutes were dropped with sand as a load to make initial tests as to the packing of the chutes. Six jumps were made then by Officers and Students attached to the Dirigible Section.

All parachutes opened satisfactorily and apparently functioned at a distance of 75 to 200 feet from the Dirigible. The period of descent was noted by means of a stop watch and it was calculated that the speed of descent was approximately 1000 feet per minute. No injuries were sustained by the parachute jumpers and no one seemed affected from the shock of the drop.

/s/ J. H. Towers,

By direction.

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