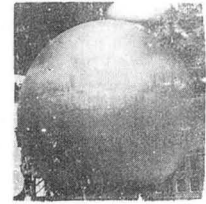
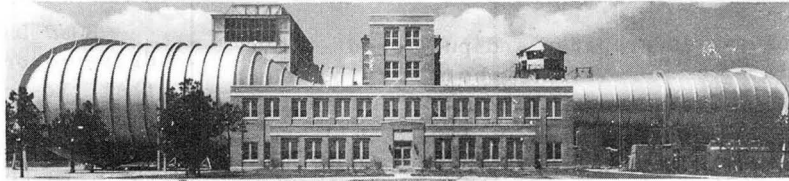
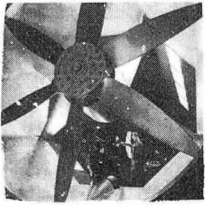


LMAL BULLETIN



LANGLEY MEMORIAL AERONAUTICAL LABORATORY

Issue 28, Vol. 3

Langley Field, Virginia, July 1-7, 1944

Page 1

FIFTH WAR LOAN DRIVE

The Fifth War Loan Drive is well under way with \$62,392 of the \$83,056.21 total cash goal already bought. The Laboratory still has \$20,664.21 worth of cash sales to make before the goal set can be attained.

By allotment \$35,777.22 of savings bonds has been bought during June 1-15. There are three other pay periods in which allotments can be counted in this Fifth War Bond Drive. The total goal set, which includes cash sales and allotments, is \$219,106.39.

DEMILLE TO BE JUDGE

Cecil B. deMille, well-known director of Paramount Pictures, Inc. for many years, will select the three winners in the Miss LMAL contest. The Bulletin received a letter of acceptance dated June 2, 1944, which read as follows:

"Mr. deMille is in receipt of your recent letter and will be happy to judge the contest sponsored by the BULLETIN staff of the Langley Memorial Aeronautical Laboratory.

"If you will send the photographs to Mr. deMille at the above address, he will make his selection and return them to you promptly."

Pictures of the Laboratory's sixteen winners will be sent off today in order that the contest may be closed as soon as possible. The Green Cow is working in conjunction with the Bulletin in deciding upon the method of announcement of the winners. As soon as plans have been completed, the Bulletin will print the story.

COL. GREENE DESIGNER OF FIRST MODEL OF PRESSURIZED CABIN

The news that the B-29 Superfortress is the first military airplane in the world to be equipped with a pressurized cabin gave a certain feeling of pride to one officer at Langley Field--Col. Carl F. Greene, Materiel Command Liaison Officer at the Laboratory. Col. Greene was the man chiefly responsible for the award of the Collier Trophy to the Army Air Corps in 1938 for "having designed, constructed and completely equipped the XC-35 stratosphere plane, the first pressure cabin airplane to be flown successfully anywhere in the world."

In commenting on the news concerning the Superfortress, Col. Greene said, "Now that it is known that the B-29 incorporates the idea of a pressure cabin, it is possible to say that this development was foreseen and preliminary engineering was started by the Army Air Corps in 1935."

Until that time, nearly every attempt at higher altitude flying was characterized by great discomfort and danger and many resulted in tragedy or near tragedy. The names of Major Rudolph Schroeder, Lieut. John Macready, and Capt. Hawthorne Gray come into the story and the picture is one of frozen faces, dizziness, fainting, and death due to lack of oxygen.

It was obvious to Col. (then Major) Greene that if higher level operations were to be successful, it would be necessary to afford the per-



Pictured above is Col. Carl F. Greene

sonnel concerned with more efficient and trustworthy protection from the rarified atmosphere in which they would travel. He then set out to find the answer. He spent much time on his plans and then went to Lieut. Col. Oliver P. Echols, chief engineer at Wright Field, and laid his cards on the table. An Army appropriation was obtained and Maj. Greene went to work.

With the help of Dr. John E. Younger he worked out the idea of a supercharger that would force air into a sealed cabin and equalize the difference in inside and outside pressures. A year of intensive laboratory work followed. The large amount of practical and

(Continued on page 4)



The LMAL Bulletin is prepared and published at the Langley Memorial Aeronautical Laboratory of the National Advisory Committee for Aeronautics, Langley Field, Virginia, in the interest of LMAL employees. Contributions of news and art should be sent to the Editor, in the Administration Building. Telephone: 376.

Editor Ruth E. Angel
Associate Editor Audrey C. Lange
Reporters LMAL Employees

How About A Ride?

With the influx of new employees to the Laboratory and with the recent migration of many old employees from private homes to the new apartment establishments, there is a desperate need, a real demand for new rides. Drivers who used to live in Wythe have moved closer to Hampton and left their riders stranded. Riders who used to live in Wythe have moved closer to Hampton and been abandoned.

Let us try our best to feel that we are being beseeched, not commanded, to give the riderless a lift. Let us try to realize that we are helping ourselves as well as our riders. For years past, riders have been accustomed to paying their driver the equivalent of bus fare to and from work; they expect and are glad to do so.

The Transportation Office is a center through which the riding combinations can be formed. It is not its intention to demand that a driver ride any specified person; it merely offers suggestions to help both sides. On Tuesday, June 27, girls were posted at all gates not only to fulfill the request of the Transportation Commission in Richmond but also to see which cars had vacancies. If it was discovered that your car could be used to serve more, you will be requested to do so. The notes taken will not be considered check-up on drivers but rather a lead or a means for helping to form more satisfactory arrangements for drivers and passengers.

Let's get together, let's work together, let's ride together! The day will be more pleasant - there will be less tardiness, less resentment, less antagonism, and more appreciation. No one owes their complete cooperation, but let's give it, let's be Americans.

A fat man made a rush through the gate for the rear platform of a departing train. As he came back perspiring and frowning, the gateman said:

"Just missed her, eh?"

"Oh, no!" the exhausted one replied. "I was only chasing her out of the station."

"Conductor! Help me off the train."

"Sure."

"You see, I'm stout and I get off the train backwards; the porter thinks I'm getting on and gives me a shove on again. I'm five stations past my destination now."

WANTED: 1 crankshaft for Bunch "Tiger Aero" or Mighty Midget (1940 or later), also used "Tiger" or "Midget" engines. Contact Paul Marchal, Engineering Section, 251.

WANTED: Ride to work for four passengers on 8:15 shift from 334 Hampton Roads Avenue to vicinity of Hangar. Contact Clo Wood, FRD, 229.

FOR SALE: 1 Ohlsson "60" special; 1 Cannon "300"; 1 Atwood "Champion" with flywheel. Contact Paul Marchal, Engineering, 251.

WANTED: Sail for Moth boat. Contact Harry Hamilton, Photo Lab, 259.

Cleveland Clippings

BOND DRIVE: The first bond drive reports at AERL indicate that the campaign is off to a good start. Already the Icing Research Division is over the top with 16 per cent more than its quota subscribed, and so far only half of its personnel has signed up.

BLOOD DONORS: With the goal set at 500, over 100 persons have already signed up to give blood when the Red Cross mobile unit makes its sixth visit to AERL.

HIGH SPEED CAMERA: A pre-war development by Cearcy D. Miller of the Combustion Photographs Section in the Fuels and Lubricants Division was a camera capable of taking pictures at the rate of 40,000 a second. Mr. Miller began the development of a high-speed camera when a Japanese camera known as the Suhara was given to him for modification. The Suhara operated at about 40,000 frames per second, but produced very small blurred pictures. Assisting Mr. Miller in further developments in high-speed photography are Mr. H. L. Olsen, Dr. Richard P. Krebs, and others.

BLOOD DONORS

Norman S. Silsby, FRD, to emergency case at Dixie Hospital on June 26.

Leo Diesentruck, Full Scale Analysis, to emergency case at Dixie Hospital on June 26.

Joseph Walker, Full Scale Tunnel, to emergency case at Dixie Hospital on June 26.

USO NEWS

This week's program at the Hampton Industrial USO will begin on Sunday, July 2 with open house. The bridge club will meet at 8 p.m. on Monday, July 3, and on Tuesday, July 4, the American Legion will meet. The USO Mimes will meet at 7 p.m. on Wednesday, July 5. The movie "Larceny With Music" will feature the Thursday, July 6, calendar. Open house will be held on Friday and Saturday nights.

Service Notes...

David Crump writes from Columbus, Ohio to say, "No flyer could intelligently say that he isn't acquainted with NACA. Frequently I see and use things which make our flying safer which I know came through LMAL. ... At my last post (Stewart Field) I was graduated from flying school as a Second Lieutenant and received my wings. Now I'm at LAAB for B-17 transitional training! David's address is: Student Officer Headquarters. Lockbourne AAB, Columbus 17, Ohio.

Robert Hill writes from Chickasha, Oklahoma to say, "If time permitted, I'd tell you about flying school, but they keep us jumping, so all I can say is it's a great life,

and I'm just itching to get a chance to fly some of the planes that NACA is helping to develop." Robert's address is: Class 44-K, Bar. A4B, 2540 A.A.F.B.U., C.P.S. (Pilot), Chickasha, Oklahoma.

Edward Janov, formerly of the 24-Inch High-Speed Tunnel and East Machine Shop, writes, "At the present time I am in the Pacific area. I have been looking for direct results of NACA work that I witnessed while at the Laboratory, and I have noticed a great number of them." Ed writes that he would appreciate any letters from old friends. His address is: C.B.M.V. 562-5, Navy #24, c/o Fleet Post Office, San Francisco, California.

BOYS' SOFTBALL SCHEDULE CHANGED

Last week Instrument Research nosed out Low Turbulence 4-3 in a 9-inning overtime affair. Ray Hansen gave up nine hits for IRD while Carl Cecil, losing pitcher, gave up 13 hits.

East Area Shops emerged victorious over 8-Foot High-Speed 9-6 in a game marked by loose pitching. Cliff Link, on the mound for East Area Shops, gave up five hits, struck out six, and walked eight men, while Burlly Balls was pounded for twelve hits in losing his fourth game of the season.

Fred Daum, pitcher for FRD, gave up only three hits and his team went on to shut out Full Scale 8-0. Full Scale committed nine errors in losing its second game of the season. Roy Lange was the losing pitcher.

With Al Martino allowing only two hits and striking out nine batters, 19-Foot Pressure Tunnel defeated Structures 8-2. Si Diskin, pitcher for Structures, lost his second game of the season.

Stability finally came through to win their first game of season when they defeated Engineering Section 7-6. Marvin Pitkin, used as a door mat by the opponents, made five home plays. Dick Everett was the winning pitcher.

As a consequence of an ever broadening recreational and athletic program sponsored by the City of Hampton and Elizabeth City County, the USO-NACA Softball League has been requested to relinquish one of the diamonds now used at the Darling Stadium so that other municipal adult organizations might benefit from its use. This action necessitates a revision in the league schedule. Each team and its members is asked to cooperate fully in carrying out the new schedule.

The schedule for the week of July 3 is as follows: Monday, AID versus IRD; Tuesday, EAS versus Structures; Wednesday, FRD versus LTD; Thursday, 19-Foot versus PRT; and Friday, EAS versus Full Scale. For the week of July 10: Monday, Engineering versus AWT; Tuesday, Stability versus Tank; Wednesday, Full Scale versus EAS; Thursday, PRT versus EAS; and Friday, IRD versus FRD.

The revised schedule for the remainder of the season will be printed in next week's issue of the Bulletin. All games will be played on diamond one, and all postponed games must be played on Sundays.

RUSSIAN WAR RELIEF

Sixty kit cartons have been filled by employees for the Russian War Relief. Some of these kits have been financed here but packed by volunteer organizations in Washington. The others, which were financed and packed here, have already been forwarded to New York and the senders are eagerly awaiting answers of appreciation in genuine Russian.

Girls' Softball

Only one game was played last week in the girl's softball league. PRT defeated Structures 12-7. Bernice Weinbarger, Structures, made the only home run of the game. Doris Topping was the winning pitcher and Sybil Bateman, the losing pitcher.

STANDINGS:

Team	Won	Lost	Aver.
AID	4	1	.800
Structures	4	1	.800
AWT	3	1	.750
FRD & Tank	2	2	.500
Personnel	2	3	.400
8'-FGDA-TDT	1	3	.250
16'	1	3	.250
PRT	1	4	.200

Boys' Standings

Team	Won	Lost	Pct.
EAS	7	0	1.000
19' PT	7	1	.875
Struc.	6	2	.750
F. Scale	5	2	.714
Flight R.	5	2	.625
AWT	4	3	.571
PRT	4	3	.571
8' HS	4	4	.500
Tank	3	5	.375
LTD	3	5	.375
IRD	3	5	.375
Eng. Sec.	2	6	.250
Stab.	1	7	.125
AID	0	8	.000

INTER-OFFICE MEMORANDUMS

Clyde Lumpkin, head of Office Services, has announced that the new "Inter-Office Memorandum" blanks are available from the Duplicating Office. These blanks are to be used in as many cases as possible to avoid phone calls.

FOR SALE: One set of golf clubs. Contact Harry Hamilton, Photo Lab, 259.

LIFE AT THE LABORATORY

WEDDING BELLS: Meale Marshall, AWT, was married June 24 to Wallace Wingfield in Hampton. On Wednesday night, Winnie McLean entertained at a miscellaneous shower for her....Oleta Church, Beoky Boykin, Margaret Farmer, and Sarah Whitley have returned from Cerro Gordo, N. C., where they attended the wedding of Marjorie Bullock, formerly of AWT, to Bruce Jollie of Mullins, S. C. Oleta was maid-of-honor....Vernon Ward, 16-Foot Tunnel, married his home town girl on Sunday, June 25....Bernice Weinbarger, Structures, and George Stacey, Electrical, will be married today.

HEIR MAIL: Gerald Brewer, Full Scale Tunnel, became the father of a son on Monday, June 26....Joe Getsug, Electrical Office, is the father of a daughter, Judith Leigh, born Tuesday, June 20.

ILL WINDS: Mary Lou Mackie, Editorial Office, is at her home in Gastonia, N. C. recuperating from a recent appendectomy....Annette Coope, Engineering Section, recently underwent an appendectomy....Kent Horton, Project Engineering, is recuperating from a tonsillectomy....Betty Harper, FRD, is recuperating from a recent operation at her home in Rocky Mount, N. C.

PARTIES: The Duplicating Office threw a super Beach Party at the home of Betty Rodman and Mickie Kammer Monday evening, June 26. Hot dogs, potato salad, and an exciting baseball game, umpired by Clyde Lumpkin, were the highlights of the evening....Kitty and

Upton Joyner entertained at a party for Pearl Young, AERL, on Wednesday, June 21....16-Foot Tunnel had a beach party at Grand View on Friday night, June 23. Several persons were thrown into the water and others were forced to sit in buckets of ice....The computers of Structures had a farewell party for Emily Rivers on Thursday night, June 29, at the apartment of Shirley Riley....FGDA had a get together at Virginia Beach, Sunday, June 25.. .Stability Analysis had a party Saturday night, June 24, at the home of Bob Jones.... Betty Ludwig, FRD, had a farewell party Saturday night, June 24, for Charles Liddell, FRD, who left Tuesday for the Navy...The Tank had a beach party at Yorktown on Sunday, June 25.

ENGAGED: Marjorie Luke, Employment, and Ira Ramsey, Project Engineering, became engaged last Wednesday, June 21. No definite plans have been made.

MISCELLANY: Ted Bloomer, FRD, has left the Laboratory to become one of the boys in Navy blue...Harold Downes has left Structures to become an Ensign in Uncle Sam's Navy. Electrical Office welcomes back Elaine Taylor who has been away several months with her Army husband who has been on detached service in Savannah, Ga....Eileen Schwartz, Stenographic Section, and her soldier husband are visiting their home in Baltimore.

VISITORS: Virginia Lee Brightwell of AERL visited Structures Laboratory, where she used to work, on Thursday, June 22.

COL. GREENE

From page 1

theoretical data thus collected was incorporated into the XC-35 airplane which was built at the Lockheed plant on the west coast. Final details were worked out during the completion of the airplane and by the middle of the summer of 1937 it was ready for acceptance flights.

Capt. Alfred Johnson was selected as pilot and with Maj. Greene and four crew members in the sealed cabin they took off. They carried a row of oxygen tubes--just in case. The airplane climbed to 12,000 feet and then the superchargers were turned on. No oxygen was necessary. They went on to 28,000 feet, where ordinarily the need for oxygen would have been serious, and they still had not touched their supply. The airplane descended and completed the first successful

stratosphere flight which had been made without the use of oxygen. There were no frozen faces, no dizziness, no fainting, no death. The occupants felt as though they had been on a routine flight.

The Army made the data on this aircraft and the results of its tests available to the aircraft companies and Maj. Greene's work on the project was finished. Then came the Collier Trophy which is awarded each year for the most significant advancement in aviation. Cited along with Maj. Greene were Lieut. Col. Oliver P. Echols, now Major Gen. Echols, Deputy Chief of Staff, Materials, Maintenance, and Distribution, AAF, and member of the NACA: Capt. Alfred H. Johnson, now Col. Johnson, District Supervisor for Central Procurement Division, AAF; and Dr. John E. Younger, now head of the department of Mechanical

Engineering at the University of Maryland.

Sometime after its tests were completed, the XC-35 was sent to LMAI where its pressure cabin proved very valuable for the high altitude flying necessary in studying atmospheric conditions and the effects of gusts during thunderstorms.

Col. Greene has been at his present station since 1939. He and his wife are mighty proud of their "all service" family. Their two daughters are married to Army men. One, Lieut. Col. James C. Jeffries, is in anti-aircraft, and the other, Lieut. Col. Harry M. Pike, was a fighter pilot in China and now is believed to be in Japanese hands. Their only son, Bill, graduated from Wdst Point in the class of 1943; and is a Lieutenant in the AAF, flying an A-20 (Douglas Havoc) "somewhere in England."