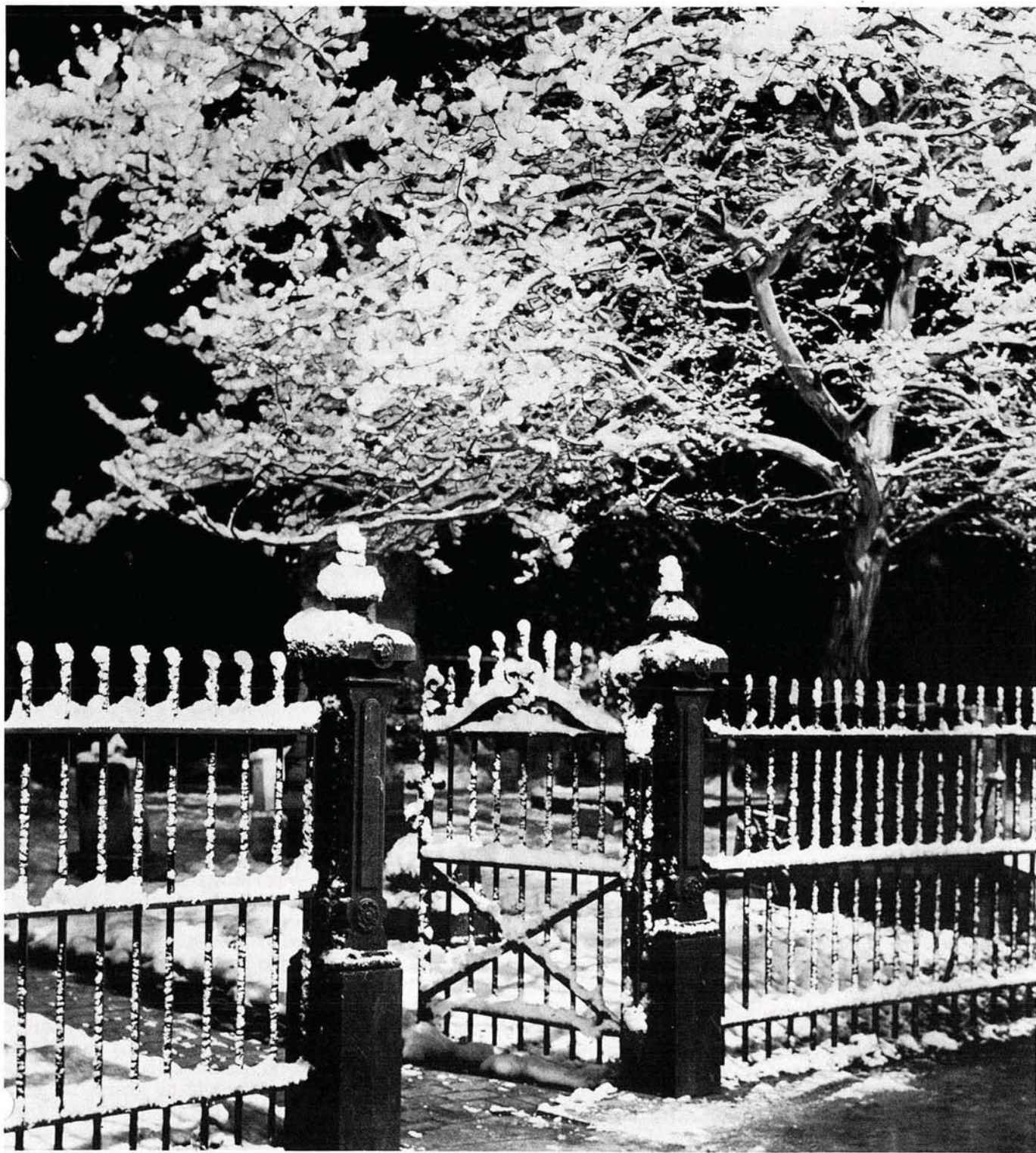


Air Scoop



LANGLEY AERONAUTICAL LABORATORY

CELEBRATION SET FOR DECEMBER 31

Taking priority on the Laboratory's social calendar is the debutante ball which will be given in honor of the New Year on Saturday, December 31 at the Activities Building. Sponsoring the gala affair is the Activities Association and invitations to this social event of the year have been issued to all Laboratory employees. The affair will get under way at 10 p.m. so that old Father Time may be ushered out in the proper manner and spirit and the main attraction will take place at the stroke of midnight when the New Year, 1950, puts in his personal appearance to pave the way for a new decade.

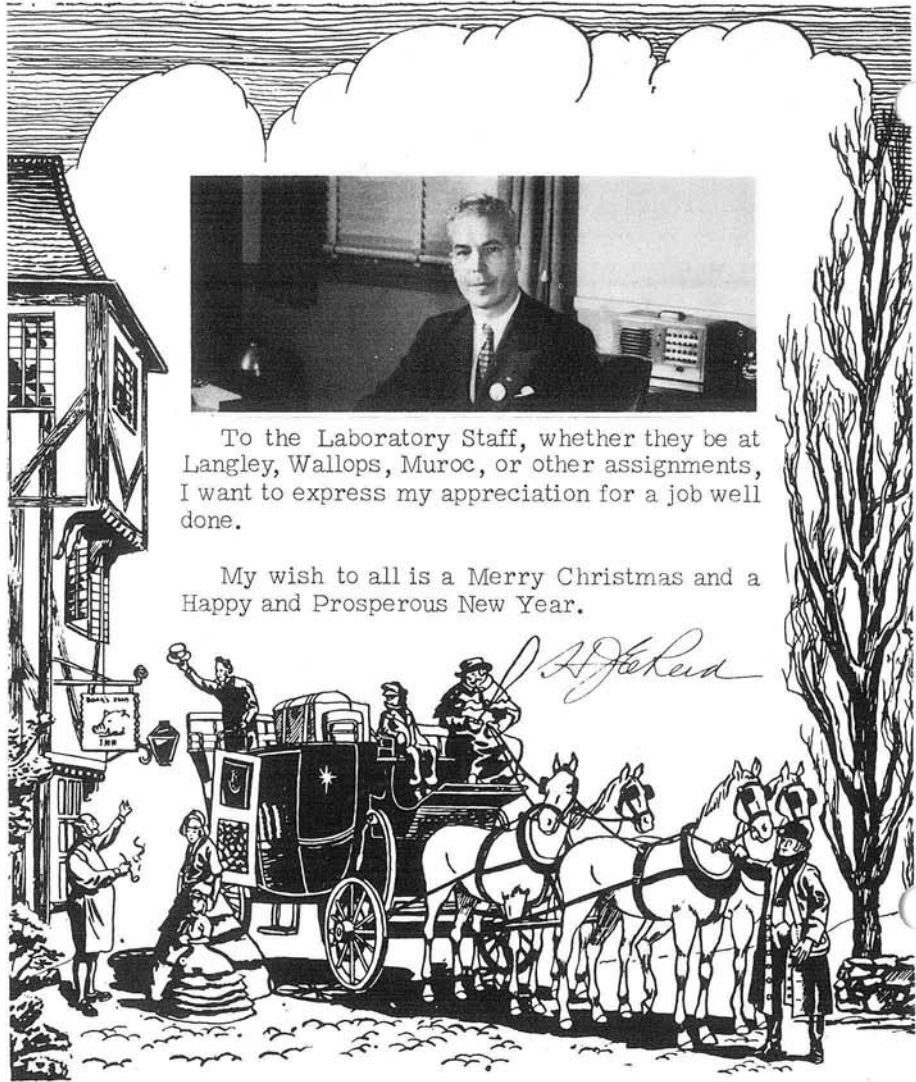
The dance will be semiformal, which generally means long dresses for the women and business suits, tuxedos, tails, or most anything for the men. Music will be furnished by Jimmy Marshall and his orchestra and the celebration will run into the wee hours of the morning.

As has been pointed out, only 250 tickets will be sold and a few more are still available in the East and West Cafeterias so make a special effort to get them today. The admission price is \$5.00 a couple and includes setups, favors, noise makers, ice, etc. Reservations for tables may be made by calling Harry Hamilton or Mrs. Branham at 2378. Since only 250 tickets are to be sold, it will be of advantage for all couples in a party to buy their tickets at the same time and make reservations together.

As has been pointed out previously, fireworks will not be permitted in the building and monitors will be stationed at various points for the safety and protection of Laboratory employees.

As a last reminder, the following is quoted from a memorandum written by Dr. Reid to the Laboratory Staff last year and the same regulations will be in affect this year: "Fireworks are not permitted in the Activities Building and the Air Forces prohibits their use on Langley Air Force Base. If you have any in your possession, you are requested to leave them outside the building. If you see any fire-

(Continued on page 6)



To the Laboratory Staff, whether they be at Langley, Wallops, Muroc, or other assignments, I want to express my appreciation for a job well done.

My wish to all is a Merry Christmas and a Happy and Prosperous New Year.

H. J. E. Reid

WILL GIVE AWAY TELEVISION SET

Well, Christmas is almost here and it's time to rush around and do that last-minute shopping, but don't forget to save aside a dollar so you can start the New Year off right by attending the Bingo Party on Thursday, January 5 at 8:30 p.m. at the Activities Building.

The crowd's favorite bingo caller, Axel Mattson, will be on hand to assist and keep the group entertained throughout the evening. Once again the Social Committee has been fortunate enough to secure a television set for the Grand Prize. There will not be a jack pot game

(Continued on page 6)

Air Scoop, December 25, 1949
Vol. 8, Issue 51

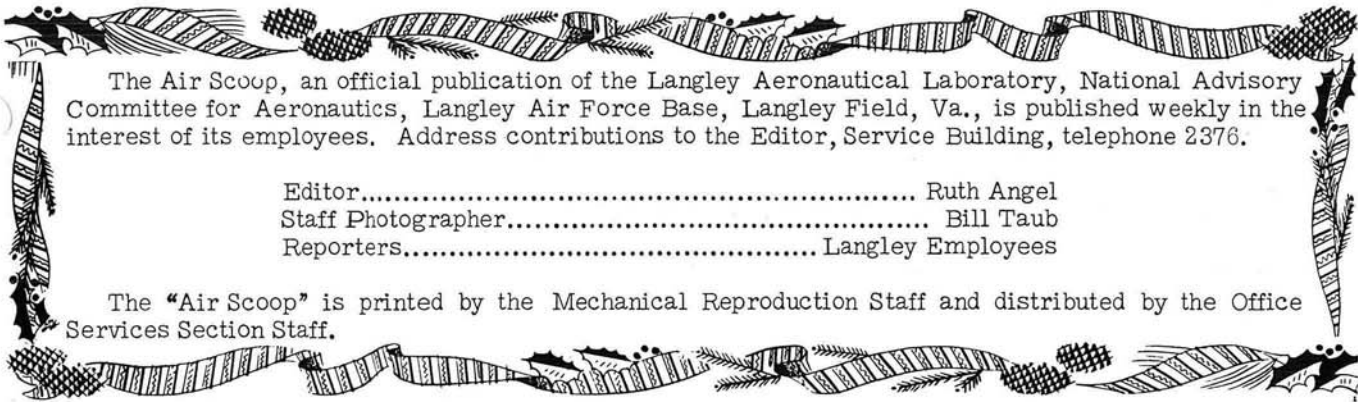
BLOODMOBILE VISITS LAB

The Red Cross Bloodmobile visited the Laboratory yesterday and at press time the number of persons donating blood had not been determined; however, it was anticipated that 100 or more pints would be collected here.

Approximately 290 employees submitted registration slips signifying their willingness to donate blood and Dr. H. J. E. Reid, Director, was the first employee to participate in the drive yesterday.

The blood will be returned to the blood center at Norfolk where it will be processed and distributed to local hospitals and physicians for use. There is no charge made to the patient for the blood used from the blood center, the only cost being

(Continued on page 6)



The Air Scoop, an official publication of the Langley Aeronautical Laboratory, National Advisory Committee for Aeronautics, Langley Air Force Base, Langley Field, Va., is published weekly in the interest of its employees. Address contributions to the Editor, Service Building, telephone 2376.

Editor..... Ruth Angel
Staff Photographer..... Bill Taub
Reporters..... Langley Employees

The "Air Scoop" is printed by the Mechanical Reproduction Staff and distributed by the Office Services Section Staff.

LIFE AT THE LABORATORY

Quite a few.

new arrivals managed to make the income tax deadline. One such fortunate young lady is the new daughter of Harold I. Johnson, Flight Research. She was delivered on Monday, December 12.

With the beginning.

of the New Year we hope the stork will turn over a new leaf and slow down his visits to Instrument Research. It seems that the division will reach the 50 mark before 1949 bows out. Numbers 48 and 49 arrived last week when a 9-pound, 1-ounce daughter, Linda, was delivered to the Harold Held household and a 7-pound, 6-ounce son, Robert Ward, was left at the Frederick Stockum's.

Wedding bells rang.

last Saturday when Buz Walters, East Library, and Jack Schiffs, Low Turbulence, took their final vows in Newport News. Mary Margaret McCarran, East Library, was maid-of-honor, and Bob Harrington, Full-Scale Tunnel, was best man.

Keeping the.

Leonard J. Pepe, household awake nights is a son who arrived on Thursday, December 8. The proud father works in West Machine Shop.

Weighing in.

at 7 pounds, 5 ounces on Wednesday, December 14, was Robert Thomas Andrews. The sponsors of the new arrival are Eleanore, formerly of 7- by 10-Foot Wind Tunnels, and Tommy Andrews, Bell Computing.

After having two daughters.

Ralph Westphal, Planning Office, is quite pleased over his new 8-pound, 7-ounce son, James Martin, who arrived on Wednesday, December 14.

Not that anyone.

needs to be reminded, but don't forget that when a holiday falls on Sunday, the occasion is observed by Federal employees on the following Monday.

Wheels spiel but cogs have final say.

With more than 300 well-filled and spirited partici-

A NOTE OF THANKS

Well, it's time to close another chapter and start looking forward to what the New Year will unfold. But before turning over a new leaf, we want to take time out from rushing around and gathering news to express our sincere appreciation to Laboratory employees for their patience and cooperation during the outgoing year. You have been most helpful in keeping us informed as to the latest happenings around the Laboratory and we hope you will continue to show your interest and lend us your much-needed support throughout the coming year.

We would like to issue a special note of thanks to Joy Rodgers, Varitypist, for typing the printed matter in this issue on the Electromatic typewriter and to members of the Mechanical Reproduction Staff for their faithfulness in seeing that the "Air Scoop" is printed and distributed on time each week and for their patience in making up for our shortcomings when we were a bit lax on meeting deadlines.

With this issue we're "closing up shop" and taking off for 2 weeks to celebrate Christmas and New Year but we'll be back in print Friday, January 6, so until then we wish each of you a very MERRY CHRISTMAS and a HAPPY NEW YEAR.



pants, the Engineering Division pulled off another of their well-planned annual affairs. Under the able leadership of chairman Joe Vricilla, the guests were stuffed with turkey and trimmings and treated to a riotous skit prepared and directed by G. T. Strailman, one of the "wheels" who were inveigled into furnishing the evening's entertainment. Of course, the "wheels" had their revenge by making the members of the program committee a part of the skit - serving as the butt of their jokes to the great amusement of the crowd. The tables were turned in the end, however, when the "wheels" were presented with "Oscar" for their noble efforts and grand style.



To have the reputation of possessing the most perfect social tact, talk to every woman as if you loved her, and to every man as if he bored you. --Wilde

The relatives of a suicide always take it in bad part that he did not remain alive out of consideration for the family dignity. --Nietzsche

LANGLEY LABORATORY



Northrop XF-89

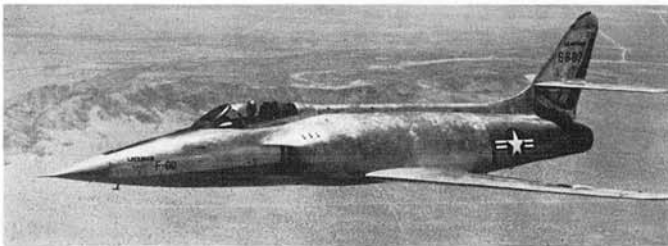
Looking back over the growth of the NACA and its outstanding contributions to aeronautics, there is little doubt that the decade just passing will go down in history as one of the most outstanding periods in the advancement of aviation.

The NACA's large expansion program started back in 1940 when the Committee was struggling to prove that a second research station, in addition to the one at Langley, was needed. The early months of the war in Europe had moved public opinion so fast that by the summer of 1940 the Committee had received full authorization to expand its existing Laboratory facilities at Langley and build two other stations - one at Moffett Field, Calif. and the other at Cleveland, Ohio.

With the attack on Pearl Harbor, it was recognized that the Laboratory enlargement planned in 1940 would not be adequate to care for the growing number and increasing complexity of the problems referred to it for investigations. Additional equipment and men became a pressing necessity, so the Laboratories were enlarged still more to meet the mounting demands of the armed services. The NACA conducted an extensive recruiting program to meet the personnel needs and by V-J Day had increased its personnel thirteenfold.

The war's effect on the NACA was to switch its program from the pursuit of fundamental research to that of specialized research on immediate projects for the improvement of military airplanes. An emergency program for working on specific military airplanes to improve their performance was adopted and between December 1941 and December 1944, the Committee's Laboratories made design studies and tests of 115 types of airplanes.

One of the NACA's major contributions to the war was the discovery of a new principle in airplane-wing design. Tests conducted in the low-turbulence wind tunnel showed that the better pressure distribution over the wing was accompanied by a prolongation of the laminar flow, and the drag reduction was considerable. The "new principle" was applied to the P-51 fighter whose performance made history on the battle-



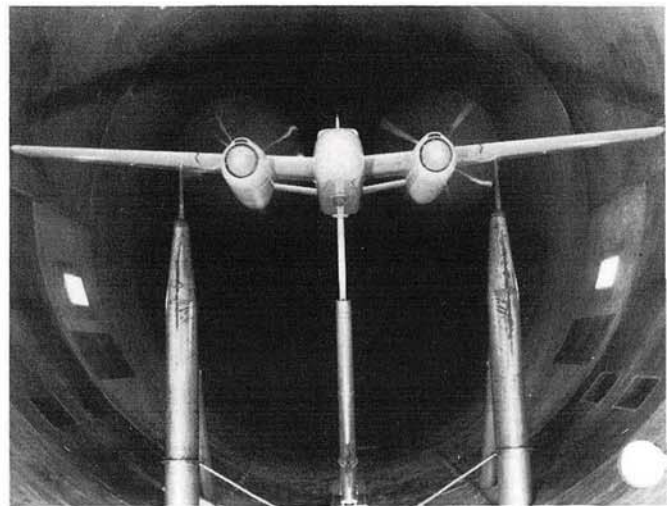
Lockheed XF-90

fields of Europe. A Series 8 family of airfoils worked out which provided a more favorable distribution of pressure over the chord and which won recognition as the standard low-drag wing. By the end of 1944, wings of this family were used on the P-6 Kingcobra, the A-26 Invader, the jet-propelled Shooting Star and Airacomet, and a new version of the Mustang.

Scientists had foreseen the possibility of the shock stall, but this difficulty in high-speed dives was unknown as a practical problem until 1940, when it was encountered in a test flight of the P-38 Lightning. In 1942 the P-38 was put through a series of tests at Langley and Ames and the application of dive-recovery flaps was worked out. It has been applied also to the Thunderbolt, Airacomet, Shooting Star, Fireball, and several other military airplanes. When the war ended the NACA was in the midst of an extensive program of testing and developing stability and control devices for the Army and Navy's proposed jet-propelled bomber; and among these devices was an improved dive-recovery flap designed to increase the lift only at high speeds.

For the safety of pilots flying over water, the NACA began a study of ditching in 1943. This project was worked on by several divisions at Langley. Structure Research made static tests of the body of three bombers, Loads measured the stress of landing, and the Hydrodynamics Division studied the ditching behavior of a number of landplanes. The NACA provided the instruments and supervised their installation for two B-24 airplanes which were experimentally ditched by the Army Air Forces in 1944 and 1945.

In the summer of 1940, the Lockheed 12 with wing and tail protection was completed and flown from Langley to Moffett Field with an icing research staff. In November of 1941 the Lockheed was flown to Minneapolis, and within 5 days the researchers had gathered a large supply of data. In January, the anti-icing system was applied to a B-24 Liberator at the request of the Consolidated-Vultee Company and late



Model of A-26 Invader

NDS HISTORIC DECADE

... installed in the Flying Fortress. In 1943, the Army turned over a C-46 airplane to the Ames Laboratory and the improvement of thermal systems was rapidly advanced by the use of this large airplane with its extensive instrumentation. As a result of this extensive program, the Robert J. Collier Trophy for 1946 was awarded to Lewis A. Rodert for the development of a thermal ice-prevention system for aircraft.

During World War II all piloted airplanes were propeller-driven, up to the latter part of 1944, but jet-propulsion finally emerged from the experimental stage and by 1944 both European and American jet-propelled fighters had demonstrated their flying abilities. The P-59 Airacomet, the United States' first jet-propelled airplane, underwent tests at the Langley full-scale tunnel and recommendations were made to modify or redesign certain parts of the airplane to produce smoother air flow, less drag, and increased speed.

As airplane speeds steadily increased, a new era in aeronautical research was opened up and a major part of the research program is now being devoted to the study of the transonic and supersonic realms of flight. It has been a major problem of the research scientist to find out what happens when the airplane approaches the speed of sound. There is no sharp transition between the subsonic and supersonic ranges of flight as one would suppose. During the transition, an airplane must pass through the transonic range where part of the air flow is at subsonic speeds and part is at supersonic speeds. In studies of speeds approaching and exceeding the speed of sound, it was discovered that the wind tunnel suffered from limitations produced by the phenomenon known as "choking," thus the basic research tool, the wind tunnel, has a blind spot in the region of most concern to researchers. To bridge the gap between the subsonic and supersonic range, various substitutes for the wind tunnel have been projected at Langley including the free-fall technique, the wing-flow method, the rocket-propelled



X-4 in Flight

method, the wind-tunnel bump, and the free-flight method. In conjunction with research on missiles and falling bodies, the NACA set up a Pilotless Aircraft Research Station on Wallops Island and flight research with full-scale transonic and supersonic airplanes is conducted at Muroc Dry Lake, Calif.

1945 saw the design and construction of the X-1 and the D-558-1. These two research airplanes were designed with the idea of getting into the transonic region and pushing as far beyond as possible. The first flight of the X-1 without power was made in the spring of 1946 and the first flight with power on December 9, 1946. On October 14, 1947, the X-1 exceeded the speed of sound in horizontal flight at high altitude. The D-558-1 made its first flights in 1947 and in August of that year broke the official world speed record, since exceeded by the F-86.

The success of the original venture, plus the introduction of new ideas, has resulted in an expansion of the original program to include the X-2, X-3, X-4, and D-558-2. In connection with the supersonic program, the Langley 4- by 4-foot supersonic pressure tunnel, one of the three largest of its kind, was opened this year. The other two are located at Ames Laboratory and the Lewis Laboratory.

Last year the Collier Trophy was presented to John Stack for his pioneering research to determine physical laws affecting supersonic flight and for his conception of transonic research airplanes.

No attempt has been made here to describe all the outstanding accomplishments in aeronautics during the past decade or to claim which, of those mentioned, were the most important. Suffice it to say that the advancements have been noteworthy.

The most important tool in aeronautical research, of course, is the human mind and only time will tell what new and revolutionary accomplishments, especially in the field of high-speed research, are yet to come from the recesses of America's imaginative minds.



MX-570 Missile at Wallops Island



D-558-II



SAM SCATBACK MAKES THE TRIP HOME FROM THE SHOP EVERY DAY IN 18½ MINUTES FLAT...



AND WHAT DOES OUR HERO DO WITH THE MINUTE AND A HALF HE SAVES? GIVE A LOOK!

NEW YEAR'S EVE

(Continued from page 2)

works in the possession of anyone in the building, please warn the person involved to take them outside, and if the warning is not heeded, please advise Bruce Amole in order that he may take the necessary steps to secure their removal.

I have instructed Mr. Amole to clear the building immediately if fireworks are exploded or if conditions in other respects are unsafe for personnel or property. I would regret having to take such action but my responsibilities for safety of persons in the building would make such action imperative."

BINGO PARTY

(Continued from page 2)

next time but a very important announcement that will no doubt please everyone will be made concerning the future plans for the jack pot.

The regular prize list will consist of such articles as an electric hair dryer, musical alarm radio, clothes hamper, never-lift electric iron, waffle iron, kitchen wall clock, pressure cooker, and other useful household articles. A special children's game will also be played so be sure and reserve Thursday, January 5, for a night at the Activities Building.

FOR SALE: 12-gage Remington automatic shotgun, 20-in. boy's bike. Todd, IRD.

PARRIS ISLAND DEFEATS HAWKS

In their fifth game of the season, the NACA Skyhawks came out on the short end of a 67-63 battle with Parris Island, South Carolina. The game was close all the way with the lead changing hands constantly.

Getting off to a good start, the Skyhawks chalked up 39 of their points in the first half to take a 39-34 lead at the halfway point. However, the Hawks had trouble hitting the basket during the second half and fell short of winning the game.

With 1 minute left to play, NACA was only two points behind, 65-63, but Sammy Gelal sank a layup to take a 67-63 win.

Wally Luchuk, Skyhawks, and Sid Meyerson, Parris Island, tied for top scoring honors with 23 points each. Getting their share of the points for NACA were Bob Thompson and Harder with 17 and 13 points, respectively.

The Hawks first home game after the holiday season will be on January 7 with Hampton Institute.

FOR RENT: 2-room apartment - furnished. Mrs. Barnes, N.N. 42131.

FOR RENT: 4-room unfurnished house in West Hampton. H-8391.

FOR RENT: Bedroom with kitchen privileges. N.N. 2-4668.

FOR SALE: Children's swing set. Sivells, H-7242.

SKYHAWK SCHEDULE

Jan. 5	There	Camp Lee
Jan. 7	Home	Hampton Institute
Jan. 9	There	Navy Mine Warfare
Jan. 12	Home	Mitchell Field, N. Y.
Jan. 14	Home	McGuire General Hospital
Jan. 16	There	Hampton Institute
Jan. 17	Home	William & Mary "B"
Jan. 20	Home	Little Creek Amphibs
Jan. 23	Home	Newport News Legion
Jan. 25	Home	Apprentice School
Jan. 28	There	Roanoke Rebels
Feb. 1	There	Newport News Legion
Feb. 4	Home	Richmond Royals
Feb. 6	There	USS Coral Sea
Feb. 9	Home	Navy Mine Warfare
Feb. 11	Home	Roanoke Rebels
Feb. 15	There	Langley Flyers
Feb. 18	There	McGuire General Hospital
Feb. 20	Home	Open
Feb. 22	Home	Langley Flyers
Feb. 25	There	Norfolk Div., Wm. & Mary
Feb. 28	Home	USS Coral Sea
Mar. 4	Home	Fort Dix, N. J.

BLOODMOBILE

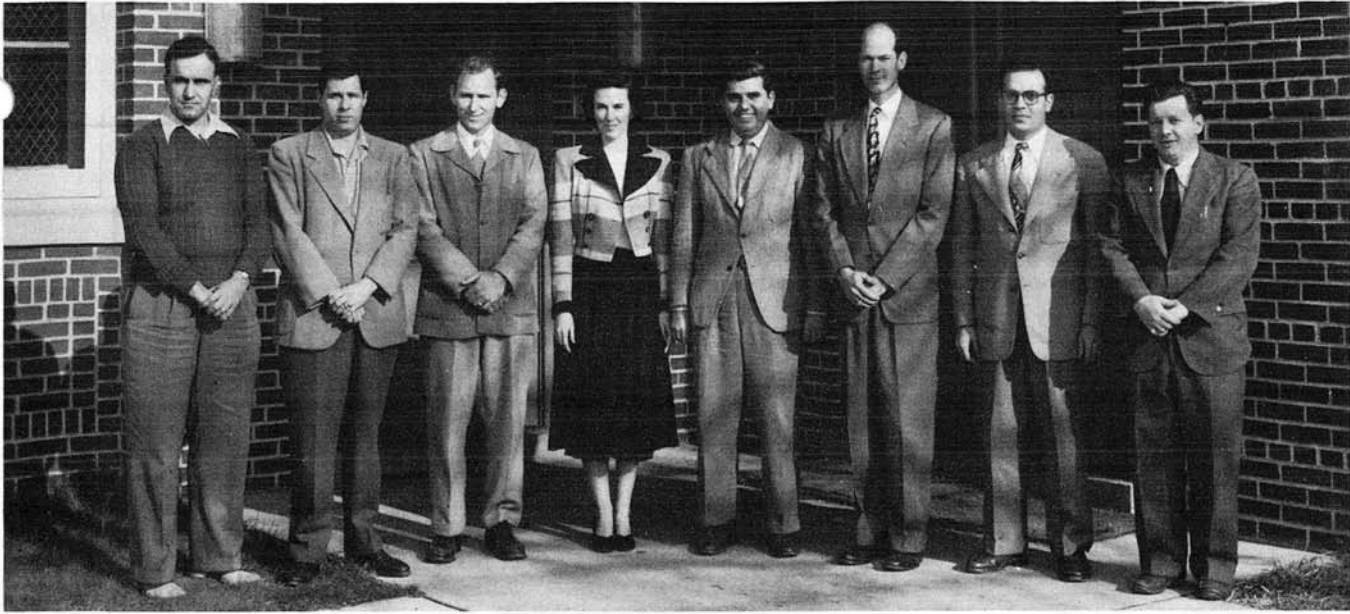
(Continued from page 2)

service charges by the hospital and the physician's fee.

The Gray Ladies and aides of the Elizabeth City County Red Cross Chapter served refreshments to the donors following drawing of the blood.

WANTED: 2 passengers to Miami Jan. 11. Dreisbach, 4565.

WANTED: passengers to N. Y. Dec. 30. Berman, 2245.



Shown above are members of the retiring Executive Board of the Activities Association who will close their year of activity with the New Year's Eve dance. Shown above are (from left): Pat Cancro, Bob Harrington, Ed Hoffman, Mary Margaret McCarran, Nick Jevas, Cloyce Matheny, Manny Stein, and Leonard Bartone.

RETIRING BOARD THANKS STAFF

By Pat Cancro, President

The retiring Executive Board of the NACA Activities Association would like to take this opportunity to thank the Laboratory Staff for their splendid support and cooperation during the past year.

It has been a pleasure and an honor to serve on the Executive Board. We hope that we have been able to give some entertainment

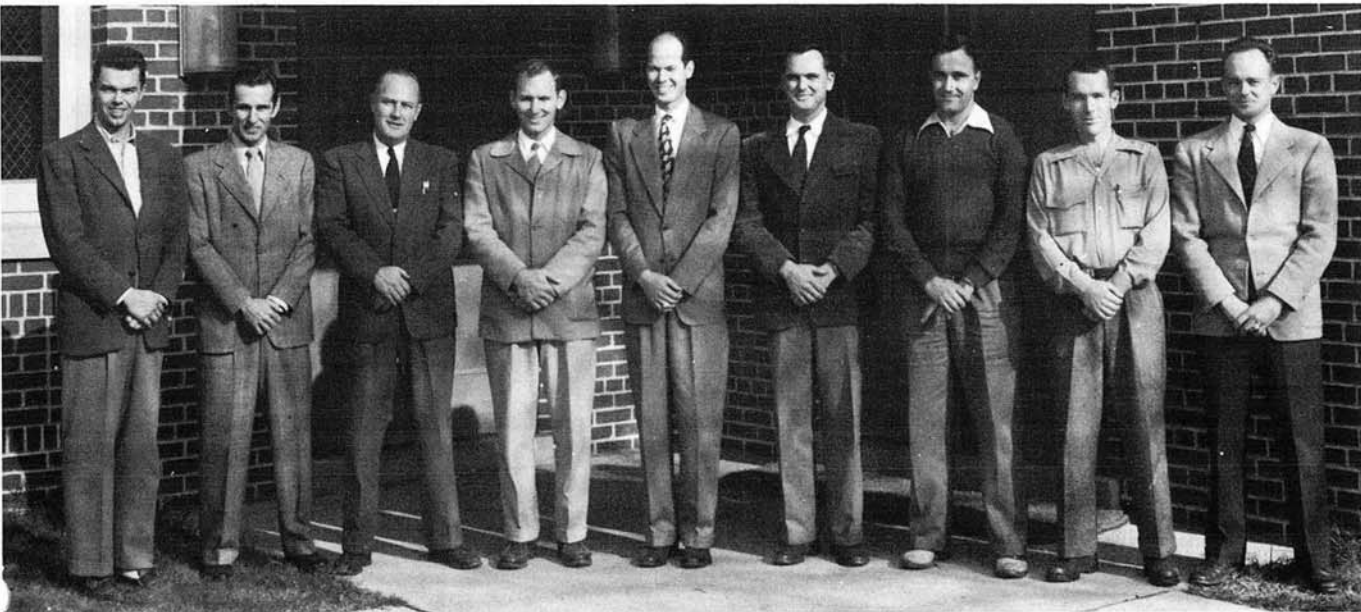
and activities of interest to all employees.

As President, and speaking for the Executive Board, I wish to thank each and every employee who helped in making the past year the success that it was and hope that you will continue to cooperate, as in the past, with the newly elected Board.

COMING EVENTS

Printed below is a calendar of events scheduled to take place in the Activities Building throughout the next 2 weeks.

- December 31 - New Year's Eve Dance
- January 3 - Bridge Club
Ping Pong
Girl's Basketball
- January 4 - Male Chorus
Skyhawk Practice
- January 5 - Bingo Party



Taking over the new offices on the Executive Board are (from left): Henry Webber, Harry Hamilton, Paul Taylor, Ed Hoffman, Cloyce Matheny, Alfred Eickmeier, Pat Cancro, Chuck Bennett, and Dave Maloney.

LIFE AT THE LABORATORY DURING '49

Well, as another year comes to a close and we stand on the threshold of a new decade, let's look back over the past year and recall some events that made Laboratory history in 1949.

January---The New Year was given its traditional welcome with a big celebration at the Activities Building---The usual Christmas diamonds were flashed around the Laboratory--Herbert Henderson died after long illness-----Skyhawks started off New Year with 74-55 win over Little Creek Amphibs-----Apprentice Club formed-----Golfers admitted to Langley Golf Association.

February---Apprentice School started new term--March of Dimes had successful Laboratory campaign--Chairoteers defeated Skyhawks 40-27 with both teams playing in wheelchairs-

March---Meritorious Service Emblem picked for NACA employees---NACA Golf Association formed--Activities Association sponsored costume dance--IRD won Basketball Championship-----26 teams entered Softball League.

April--E. J. Shave retired from Lab after 26 years of service---Brigadier General Donald L. Putt named to Committee---Abe Silverstein spoke at smoker on "Research on Aircraft Propulsion Systems"---Committee toured Wallops Island---University of Virginia appointed faculty advisors---Golf Association opened season with blind bogey---"House of Magic" shown to employees.

May---Biennial Inspection held at Laboratory---Plans announced for Carnival---Thomas L. K. Smull, Washington Headquarters, honored with honorary degree---NACA Lowers High-Speed Flight Hurdles---Floyd Thompson delivered paper at joint meeting of American and British scientists-----Stack received Collier Trophy plaque-----Activities Building opened week days.

June---John T. Haines retired after 23 years with Committee--Opportunity Drive opened at Lab---2-day carnival turns out to be high success---Dr. Hugh L. Dryden awarded honorary degree by Polytechnic In-

stitute of Brooklyn-----Francis J. Howard celebrated 25th anniversary with Committee---Decals replace NACA identification tags---Carl Roberts elected president of Engineers' Club-----Blanche Sponsler and Randall Scarborough died after lengthy illness---39 golfers entered "Air Scoop" Championship Tournament.

July---46 employees attended summer school at University of Virginia---Apprentice School graduated five---Harry Lyons retired after 26 years of service--Joe Boyle selected to represent U. S. at Wakefield Model Contest--NACA development used by Republic--Jim Bertoci, Harold Crate, and Gene Buryanski won Golf Tournament---William E. Wallace retired.

August---2510 employees participated in X-ray survey--Robert E. Mixson celebrated 30th anniversary with Committee---Frank J. Campbell died suddenly---University of Virginia announced plans for Fall semester--New employees taken on tour of Lab.

September-----Service emblem presented to Lab employees--Henry Harwood Moore died after illness--Abe Silverstein appointed Lewis Research Chief--West Machine crowned softball champions-

October---66 apprentices entered on duty---John Schaaf elected employee member of Efficiency Rating Board of Review---J. M. Shoemaker died in Texas---John Houbolt was speaker at smoker---Bloodmobile plans to visit Lab---Employees get pay increase---Election held for General Assembly--Walter Bressette and Johnny Campbell won golf team match tournament.

November-----Paul Taylor elected president of Activities Association---Unitary Plan signed by President Truman--Compensation Act Amendments cited--Activities Association sponsors Turkey Shoot---Community Chest Drive gets under way-----Credit Union raised monthly deposit limit---Miss Ruth Scott and Miss Margaret Muller honored at reception---E. J. Shave made debut on Little Theatre stage.

December---Plans announced for New Year's celebration---19 apprentices on honor roll--Skyhawks open season with defeat---Laboratory exceeded last year's Community Chest donation-

