



BULLETIN

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Langley Field, Virginia, August 7-13, 1943

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LMAL Has Many Visitors In A Year

During the past fiscal year there were 1,759 LMAL visitors registered, exclusive of salesmen and applicants for work. The present fiscal year got off to a good start with 170 visitors during July.

Government agency visitors totalled 864, the largest visiting group during the year. There were 631 visits from representatives of 80 aircraft and related industries; 137 from staff members of the Washington Office and other NACA laboratories; 40 from foreign countries, and 28 from educational institutions.

Twenty-five visits were made by officials of England, 13 from Canada, and one each from Brazil and Russia. The educational institutions represented by visitors included, among others, MIT, California Institute of Technology, Stevens Institute of Technology, and the University of Virginia. Many representatives of the aircraft industries remained at the Laboratory for extended periods.

Among the visitors to LMAL was, "Believe It Or Not", Robert L. Ripley, who came here to see Dr. George W. Lewis, Director of Aeronautical Research. He was here on Jan. 5.

ALTER KITCHEN OF CAFETERIA

Alterations to the Administration Building Cafeteria kitchen have been started. Plans call for expansion of the kitchen into what was originally the private dining room.

The additional space will make it possible to provide a 10' x 10' walk-in ice box for storing food. Plans also call for installation of an electric range, additional sinks, and work tables.

(See page 3)

West Area Receives Gas Board Service

The Laboratory Transportation Committee now has a representative in the West Area who will review gas, tire and similar applications of employees in that area.

In order to facilitate action, applications may be presented to Arthur Samet in the Cost Office, located in Warehouse Building.

OUR NEW SLOGAN: Fifteen per cent in war bonds each pay day. We've almost reached our goal.

MORE ALTOS, BASSES NEEDED BY GROUP

It never fails! Come Tuesday night, it rains or else it is scorching hot. If you like to sing, however, nothing short of being on night shift can keep you away, for the meeting of the LMAL Musical Group on August 3 was well attended and much enjoyed by all, with several new members coming into the organization. The greatest need now is more altos and basses.

The group missed Mary Noble Angel, who was one of those on night shift; but Don Brimley directed his share and hers, too, with Marvin Saunders at the piano.

At the business meeting that followed the rehearsal, it was agreed that sufficient copies would be purchased of several new selections which

(See page 3)

NEW NUMBERS: Seven frequently-used telephone numbers have been changed. The new numbers: Engineering Section Office, 350; Chief Clerk, 377; Machine Shop (East Area), 383; Personnel Office, 386; Personnel Office, Leave, Bonds, and Pay Roll, 387; Maintenance Office, 388; Electrical Office, 389.

LMAL MAINTAINS PACE IN WAR BOND PROGRAM

LMAL may continue to point with pride at its "Minute Man Flag" in the East Area Cafeteria, according to a report from the Washington Office which shows that the Langley Laboratory was investing in June a total of 11.53 per cent of its pay roll in bonds.

LMAL led all other NACA laboratories, including the Washington Office, in the per cent subscribed; and topped the other labor-

atories in the per cent of participation, although the Washington Office shaded Langley in this respect, 97.6 to 97.37 per cent.

LMAL is now only 3.47 per cent short of its new goal of 15 per cent invested every pay day. All but 2.63 per cent of the employees are participating in the allotment plan.

(See bond table on page 5)

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. The telephone number is 376.

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Associate Editor. Ruth Angel
Art Editor. Ben Vogel
Reporters LMAL Employees

For Dear Ole NACA

Whenever we hear the lilting strains of the Army Air Corps song, it prompts us to wonder why the NACA, an organization of 4,000 persons, does not have a song of its own.

There is no better way of building morale and of bringing the members of the group closer together in one common bond. We submit this thought to the Laboratory in the hope that some talented staff member might take up the challenge and try his or her hand at composing.

NACA Fashions Airplane Of The Future

Excerpts from an article by John A. McWethy, on the NACA, which appeared in *The Wall Street Journal*, July 31:

"The airplane of the future is being fashioned in the research laboratories" of the NACA.

"Backbone of basic aeronautical research in this country, NACA is devoting all its efforts now to solving urgent military flying problems".

"When a new aircraft is required, the Army Air Forces or the Navy Bureau of Aeronautics calls on NACA for fundamental data and advice".

"Speed of war planes, for example, has been stepped up many miles an hour as a result solely of scientific streamlining, based on wind tunnel studies of the Langley and Ames Laboratories".

Nearly completed at Cleveland is "the world's first altitude wind tunnel that will produce a 500-mile-an-hour wind and simultaneously create temperatures of 67 degrees below zero and simulate rarefied air encountered at 50,000 feet altitude."

"The largest wind tunnel in the world is under construction at Moffet Field. It will have an air stream 80 feet wide and 40 feet high."

"Another new device is the impact basin at Langley Field for investigating the loads encountered in the landing of flying boats."

The Committee maintains "one of the most complete technical libraries in the world."

"Dr. George W. Lewis, Director of Aeronautical Research, believes the next great advance in improving speed, range, and usefulness of aircraft will come from a better means of aircraft propulsion."

"One of the most important developments after the war will be in cost reduction" is the opinion of Edward R. Sharp, AERL Manager.

Development of the NACA cowling "has been a major contribution to the present superior performance of American aircraft and, measured in terms of money alone, has saved many millions of dollars more than the entire appropriation for the NACA for the 28 years of its existence."

CLEVELAND CLIPPINGS

A PROGRAM of classical music, featuring Fred Bonnie Jr. and the AERL orchestra, will be presented Aug. 12. Sponsors hope to find one or more voices for the program among the AERL staff.

MORE THAN 100 persons responded to the recent call for volunteers to serve in a plant protection program, it was announced by Charles A. Herrman, Defense Coordinator.

JOHN H. BREISCH, of LMAL, who was assigned to supervise the drive propeller assembly and installation in the Altitude Wind Tunnel, is back at LMAL but will return to Cleveland soon to finish his job at AERL.

AERL EMPLOYEES who donated blood in a recent Red Cross campaign in Cleveland received the following communication from the official in charge: "You helped contribute to the highest total we have reached in the Cleveland area for any one week."

BETSY SPURR suggests the organization of a drama group. Harry Bowles has offered his help. Those forming a nucleus include Virginia Duncan, Mildred Hipshur, Jean Hoeft, Freddie Nichols, Betsy Spurr, Robert Spurr, Burt Stevens, Helen Townsend, Ruth Vanderhoff, Arthur Varian, Jean DeWitt, and Pearl Young.

SPORTS: The recent Rifle Club picnic drew 150 persons. Shooting prizes went to Ray Griffin, June Nordquist, E. Hudnell, Evelyn Elicker, A. E. Bittner, and Ernie Neuhoff; Leading the softball loop with a perfect percentage are Engine Components and Supercharger No. 2.

NACA TAKES IT: The NACA baseball team took it on the chin in its last game, against Second Air Base in the Langley Field League, 10 to 4. Claude Hart pitched for the NACA and Willie Miller, brother of Cincinnati's Eddie Miller, twirled for the Second Air Base.

MR. KNIGHT DIES; FORMER AWT HEAD

Montgomery Knight, former head of the Atmospheric Wind Tunnel at LMAL, died July 25 at an Atlanta hospital. He was director of the Daniel Guggenheim School of Aeronautics of Georgia Tech, and was well known for his development and design of helicopters.

Heads AWT Three Years

Mr. Montgomery was head of the AWT from 1927 to 1930. He became the first director of the aeronautics department of Georgia Tech when it was established in 1930. He had also served as a member of the aeronautics department of the Massachusetts Institute of Technology.

A native of Lynn, Mass., Mr. Montgomery graduated from MIT in 1922 and later attended graduate schools of Johns Hopkins and Harvard Universities. The 42-year-old scientist was an associate fellow of the Institute of Aeronautical Sciences, a member of the Georgia Engineering Society, and a member of the advisory council of the State Engineering Experiment Station at Georgia Tech.

Marries Norfolk Girl

He is survived by his wife, the former Miss Emily Millner of Norfolk, a daughter, two sons, his parents, a sister, and two brothers.

ALTER KITCHEN (From page 1)

These alterations will make it possible for the kitchen to handle efficiently the large load imposed upon it as a result of the large increase in LMAL Personnel.

This work is all being done by Maintenance Personnel and it is planned to schedule the operations in such a manner as not to interfere with the operation of the cafeteria.

LOST: Gray and red automatic Schaeffer pencil; if found please return to Bernice Richardson, Aerodynamics Division.

Life At The Laboratory

Big times are being planned for Sunday, Aug. 7, by the Instrument Calibration Laboratory. Buckroe Beach is to be the scene of action and the occasion is a get-together picnic. Trolley cars are expected to be loaded, since about 40 will join in the festivities. Games and stunts, from baseball to three-legged races, have been planned, in addition to a super-picnic lunch. June Wyatt, Reproduction, suggested the affair and a merry time is expected by all.

Spencer Watkins (godfather of Flight Research babies) has been passing out cigars for Sam Eakin Sr., Shop Superintendent, who is the father of a baby boy, and for Ivan E. Stone, who is the father of a new girl.....Dickie Creech, Circulation's sun-browned emissary of goodwill, is "going out of circulation." She is engaged to Frank Gough Jr., Instrument Service.....Frances Hoback, Virginia Rotter, and Anna George were entertained at a birthday dinner by the girls of Physical Research last week in the PR office.

John F. Victory, NACA Secretary, was a LMAL visitor last week.....Elmer Horton, TDT, who was called to Flint, Mich., upon the death of his aunt, has returned.....Leonard Damratowski is nursing a broken arm suffered while playing softball for the Tank.....Joe Spiegel, FRM, has departed the Laboratory to become an aviation cadet.....Two ex-LMAL boys are flying cadets: Eli Druckman, Instrument Service, is stationed at Gettysburg, Pa., and William O'Rourke, Erection Shop, is learning to fly at Miami Beach.

Vacation rhapsody: Those who are enjoying a respite from work are Frances Daniel, Duplicating, at her home in Petersburg; Jerry Crouch, East Area Computing Section, in Goldsboro, N.C.; Alice Westcott, LW Purchase, in Washington; Walter Robbins, LW Purchase, at his home in Kentucky. Among the returned are Richard Sawyer, FRM, from Arvon, Va., where he visited at the home of Mary Lou Duval, Stability; Bill Gray, Pilot, from Pittsburgh; Hazel Philyaw and Dorothy Estes, 19-foot Pressure Tunnel Computing Section, from New York; Joe Getsug, Electrical Office, from a business trip to Washington; Ruth Webb and Ruth Ludwig, Stenographic, from Ocean View with the results of too much sun; Helen Bundick, Stenographic, from New York; Jack Posner, Tank, from Lake Huntington, N. Y.; Frances Moore, Tank, from Virginia Beach; Paul Fariss, Tank, from Washington; Margaret Hodgens, Loads, from sunny Florida; Albert Peter Ianuzzi, Instrument Service, from New York; and Tilford Crandall, Instrument Service, from his farm where he has been tending his crops.

Dot Severance, ICL, has a theme song: "Why didn't somebody tell me those things?" Being a newcomer, she hopped an Army shuttle bus the other day in an effort to reach the West Area. "It was a fine ride," she reports, "but we covered the whole of Langley Field before we got there; and then I had to walk half a mile.".....Elton W. Miller, Chief of Aerodynamics, may not admit it but he is the "song bird" of the Hampton Kiwanis Club.....Congratulations to Tom and Lenore Hulcher. They celebrated their tenth wedding anniversary August 5.

MORE ALTOS (From page 1) have been chosen by the music committee. There was a discussion of a name for the group and also of the proposed constitution and by-laws.

Further consideration will be given these matters at the next meeting.

The group will meet Tuesday night, Aug. 10, at 7:30 at the Hampton USO.

LIBRARY RECEIVES MORE BOOKS

Books which have been procured by the Library from Jan. 1 to July 31 and which are available for use by the Engineering staff:

American Aviation Directory, Calculus of Finite Differences, by C. Jordan; Fluorescent Chemicals, by J. A. DeMent; Complex Variable and Operational Calculus with technical applications, by N. W. McLachlan; Heat Transmission, by McAdams; Janes's all the World's Aircraft;

Proc. Handbook of Arc Welding Design and Practice, Proc. 14 Photolasticity Conference, Photolasticity, by Frocht; Operational Methods in Applied Mathematics, by H. S. Carslow; Frequency Modulation, by A. Hund; Aircraft Inspection, by E. E. Wissman;

Set of ASTM Standards, 1942 and Index; Aircraft Spotters Guide, Plastics Catalogue 1943; Virginia State Code, Pamphlets of National Board of Fire Underwriters, Pamphlets of National Fire Protection Association;

Chemistry of Engineering Materials, by Leighou; American recommended practice for the inspection of Elevators. Inspectors Manual, 1937; Budgeting, by Prior Sinclair; Plastics for Industrial Use, by John Sasso; Combustion, Flames and Explosions of gases, by Lewis; Statistical Mechanics, by Mayer and Mayer.

Trigonometric Functions to Hundredth of a Degree, Amelia DeLella; Logarithmic Tables, by Vega; Barlow's Tables, Lubrication, by Norton; Properties of Ordinary Water Substance, by Dorsey; Physics of the Air, by Humphreys;

Who's Who in Aviation,

Welding Handbook, 1942; Mathematics of Modern Engineering, by Keller; Introduction to Physics, by Howe; Metal Castings, by Campbell; Dictionary of Aeronautical terms, English, French, Japanese, German;

Weston Aviation Instruments, General Service Instructions; Practical Treatise on Milling and Milling Machines, Brown and Sharpe Mfg. Co.; Spectroscopy and Combustion Theory, by Gaydon and Egerton; The Wright Brothers, by Fred C. Kelly; Practical Physics, Industrial Series, by White, Manning, Weber & Cornett;

Ingenious Mechanisms for Designers and Inventors, By F. D. Jones; Tables of Functions, By Jahnke and Emde; American Electricians' Handbook, By Croft; Practical Electricity, By Croft; Electrical Principles, Airlines War Training Institute; Electrical Shop, Airlines War Training Institute;

Use of Numbers, Airlines War Training Institute; Flight Principles, Airlines War Training Institute; Radio Operating, Airlines War Training Institute; Hydraulic Principles, Airlines War Training Institute; Instructor's Manual, Airlines War Training Institute;

Proceedings of the 8th American Scientific Congress, Physical and Chemical Sciences; Mechanical Principles, Airlines War Training Institute; Engine Principles, Airlines War Training Institute; Physikalische Hydrodynamic, By Bjerknes, Bjerknes, Solberg and Bergeron; Airplane Structural Design, By Elmer H. Bruhn; WPA Mathematical Tables (MP-1-18).

List Magazines Available Here

The following magazines, received by the Library, are available to the Engineering staff after the routine circulation is completed:

Aero Digest, Aeronautical Engineering Review, The Aeroplane, Aircraft Engineering, Astronautics, Aviation, Diesel Progress, Engineer's Digest, Engineering, Flight;

Instruments, Inter Avia, Journal of Acoustical Society, Journal of Applied Physics, Journal of Chemical Physics, Journal of Institute of Aeronautical Sciences, Journal of Mathematics and Physics;

Journal of Optical Society of America, Journal of R.A.E., Journal of Scientific Instruments, Journal of S.A.E., London, Edinburgh, & Dublin Philosophical Magazine and Journal of Science, Mathematical Reviews, Mechanical Engineering, Monthly Weather Review, National Bureau of Standards Journal of Research, Nature;

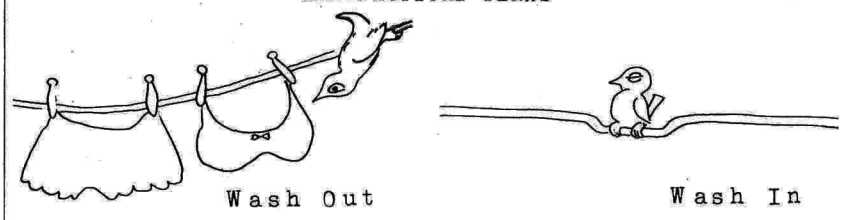
North East Coast Institute Engineers and Shipbuilders, Patent Office Gazette, Physical Review, Proceedings of the Institute of Radio Engineers, Proceedings of National Academy of Sciences, Proceedings of Royal Society of London, Quarterly of Applied Mathematics, Review of Scientific Instruments, Reviews of Modern Physics, Science Abstracts (Section A), Science Abstracts (Section B), and Technical Data Digest.

Magazines not now being received by the Laboratory as a result of the war are:

Annalen Der Physik, Atti di Guidonia, A.T.Z., Comptes Rendus, E.N.S.A., Forschung auf dem Gebiete Ingenieurwesens, Ingenieur Archiv;

L'Aeronautique, L'Aerotecnica, Luftfahrt Literature, Luftfahrt-forschung, Luftwissen Physikalische Zeitschrift, Review Technique Aeronautique, V.D.I., Z.A.M.M., Z.T.P., and Zentralblatt Fur Mechanic.

AERONAUTICAL TERMS



NACA WAR BOND RECORD DURING JUNE					
	Washington	Langley	Ames	Cleveland	Total
On Pay Roll	125	2018	423	1171	3737
Number Participating	122	1965	401	1116	3604
Percent Participating	97.6%	97.37%	94.80%	95.31%	96.44%
Monthly Pay Roll	\$27,265.46	\$394,398.31	\$89,745.85	\$243,182.89	\$754,592.51
Amount Subscribed	\$ 2,932.23	\$ 45,484.43	\$ 9,433.66	\$ 25,937.31	\$ 83,797.63
Percent Subscribed	10.75%	11.53%	10.52%	10.68%	11.11%

HELP SPEED UP CAFETERIA SERVICE

Do you fumble for funds to pay your lunch bill; or pause to engage the cashier in conversation during a rush? Well, perhaps it's you who are holding up the West Area Cafeteria lunch line.

The NACA Exchange Council suggests, after a recent survey, that the lunch line will

move faster if customers have their money ready as they approach the cashier, place the change on their trays and move on; and also if they will confine conversation with the cashier to necessary business.

AERONAUTICS: First in war; first in peace.

Just two little phrases:

"thank you"

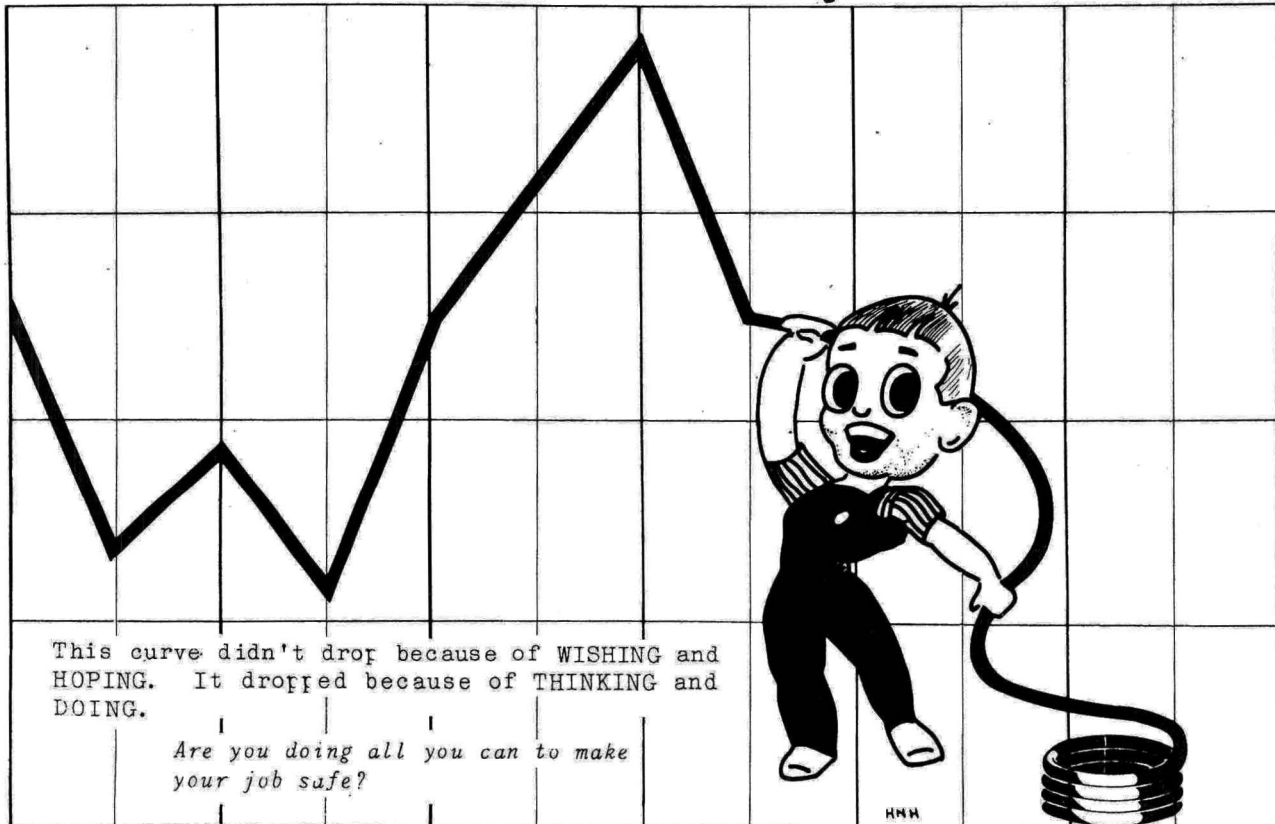
and

"if you please"



They never hurt anyone...

LMAL ACCIDENT FREQUENCY



Safety Cap - New LMAL Millinery Note

A large number of LMAL women workers in all the shops are striking a new note in millinery this week as they blossom out in the latest style safety caps--(see picture).

Sporting a completely ventilated felt crown with large visor and porous rayon snood, all in dark blue, the cap is considered as not only flattering to the wearer but comfortable as well.

A member of the Safety Board said that the hat, if properly worn, prevents entanglement of the hair with machinery. He warned, however, that the hat should be worn so that all hair is caught up by the hat and snood. "Worn back on the head the effect is highly decorative but extremely dangerous".

Use of the hats was suggested at a recent meeting of Lead Women. The hats are available at cost through the Apprentice Tool Procurement Committee.

Acceptance of the hat by the women employees was described as gratifying to the Safety Board.



LMAL GOLFERS URGED TO USE LANGLEY LINKS

LMAL golfers, who have been trekking the neat nine-hole Langley Field course this summer, are anxious to enlarge their "brother-dubber-hood".

Men and women golfers, from veterans to the rankest amateur, are invited to join the sports parade. A monthly fee of three dollars entitles Laboratory employees to membership in the Langley Field Recreation and Athletic Association and use of the golf course.

Golfers interested in applying for membership for this month may communicate with Dale Burrows, telephone 360, before Aug. 10.

There are many advantages in utilizing the Langley links, local golfers point out. For instance: 1) transportation problems are lessened (the Army shuttle bus runs every 20 minutes and stops at the clubhouse); 2) equipment may be checked at the clubhouse at no extra charge; and 3) employees get an opportunity for much-needed recreation and they make new friends.

The course, located near the West Area and to the west of the Army landing field, was completed by the ARAA about two years ago and its facilities made available to employees of the NACA. The biggest response to this opportunity was made by the Engine Division, which since has been transferred to the Cleveland Laboratory.

LMAL golfers emphasized that reconditioned golf balls are easily obtained and are regarded as about equal to the pre-war product.

BACK ISSUES: The Bulletin Office has back issues of the LMAL Bulletin. Any one wishing a copy may have one by telephoning 376 and leaving an order.

FULL SCALE LEADS AS SEASON NEARS END

(By Si Diskin)

Full Scale tightened its hold on first place in the NACA Softball League last week by defeating Flight Research Maneuvers, 10 to 8, and West Sheetmetal Shop, 8 to 2.

In other games played during the week, Propeller Research toppled the Tank, 12 to 5; 8-foot High Speed took a 10 to 7 decision from Structures, and 19-foot Pressure Tunnel outclassed 16-foot High Speed, 19 to 2.

The regular season has been extended one week to permit all postponed games to be made up. All teams are requested to take advantage of the respite period. Games may be arranged through Jerry Teplitz.

Play-offs are expected to begin the week of August 23.

The first practice session of the newly-organized NACA softball team will be held at Darling Park in Hampton on Monday afternoon, August 9. A good turnout is expected for the practice, which gets under way at 5:30.

	Won	Lost	Pct.	Games Behind
1. Full Scale Tunnel	9	1	.900	
2. 8' High Speed	8	1	.889	1/2
3. Stability Research	6	2	.750	2
4. West Sheetmetal Shop	6	3	.667	2 1/2
4. Structures Research	6	3	.667	2 1/2
6. Propeller Research	5	3	.625	3
7. 19' Pressure Tunnel	6	4	.600	3
8. Erection Shop	4	5	.444	4 1/2
9. 16' High Speed	2	5	.286	5 1/2
10. West Machine Shop	2	6	.250	6
11. Air Flow Research	2	7	.222	6 1/2
12. Tank	1	8	.111	7 1/2
13. Flight Research Maneuvers	1	10	.091	8 1/2