

AERONAUTICS

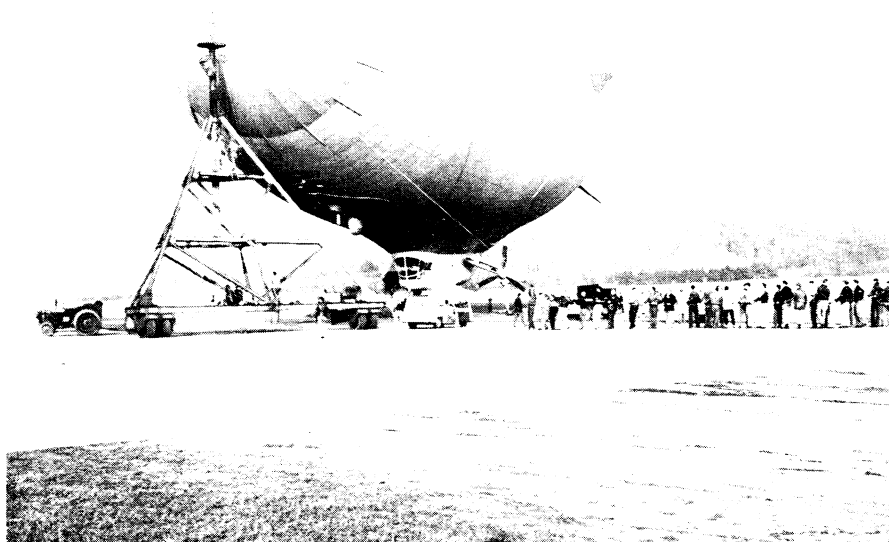
Five Research Planes Yield Valuable Data See Front Cover

► FIVE OF the research aircraft at the Air Force Flight Test Center, Edwards Air Force Base, Calif., line up on the runway during a test program. They are shown on the cover of this week's Science News Letter.

In the first row are the Navy's Douglas D-558-I Skystreak, the USAF's Bell X-5 and the USAF's Convair XF-92A experimental delta wing interceptor. Behind them are the Navy's Douglas D-558-II Skyrocket and the USAF's Northrop X-4.

The "NACA" markings are for the National Advisory Committee for Aeronautics, which works on the research aircraft project with the Air Force's Air Research and Development Command and the Navy's Bureau of Aeronautics to obtain data for the nation's future high performance aircraft.

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ANTI-SUBMARINE BLIMP—The new non-rigid blimp, ZP2N-1, has successfully flown for 42 minutes, the U. S. Navy announced. The blimp, designed for anti-submarine warfare, was test flown from the Goodyear Aircraft Corp. plant in Akron, Ohio.

MEDICINE

Eyes Cause Headaches

In about one-fourth of cases, eye trouble causes or increases headaches. Suggest reason is that indoor life puts undue strain on eyes.

► IF YOU have a headache at the end of the morning or afternoon at the desk, it may be from your eyes. Many, many conditions, of course, can cause headaches, but in about one-fourth of the cases, the headaches are caused by or made worse by eye troubles.

How the eye trouble and headaches are related is explained by Dr. Franklin M. Foote, executive director of the National Society for the Prevention of Blindness.

"Your eyes are part of your body, and when they are strained, or their normal function is disrupted, physical symptoms such as headache often result," he says.

Dr. Foote points out that nature originally intended our eyes to be used for outdoor, distance seeing, but modern life requires a great deal of detailed work. As a result of this added burden on our vision, many of us suffer eyestrain, one sign of which is headache.

"You can't 'wear out' healthy eyes no matter how much you use them," Dr. Foote says. "However, many eye conditions—such as astigmatism, farsightedness (hyperopia),

and muscle imbalance—become more noticeable under the demands of detailed visual tasks.

"We know of many cases where these conditions, often unsuspected, cause fatigue, headache and even loss of appetite after long hours of reading or desk work.

"For example: many business men and women who complain of headaches in the late morning or afternoon, are found to be suffering from an eye defect. The same may be true of the child who is inattentive at school, the student who cannot concentrate, the patient who has a headache when he reads in bed and many others."

Headaches may be caused by more serious trouble.

"An increase in fluid pressure in the eye," Dr. Foote warns, "often causes head pain like that of a common 'ache', yet this increased ocular pressure may mean glaucoma, a sight-robbing disease which is slowly destroying the vision of about 800,000 Americans."

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TECHNOLOGY

One Photographic Bath To Develop and Print

► FILM AND paper prints of aerial photographs can be successfully developed and fixed all in the same bath, H. S. Keelan of Boston University's Physical Research Laboratories told the Society of Photographic Engineers meeting at West Point, N. Y.

Four monobaths, as they are called, were evolved to reduce the time, space and equipment needed to process aerial pictures. These monobaths contain various amounts of commonly used photographic chemicals.

A proper balance between developing and fixing is obtained by varying emulsions, contrast, acidity, temperature and agitation. A loss in photographic speed of from 40% to 50% in the monobaths is compensated for by use of opaque dyestuffs placed on the silver particles of the photographic image during development.

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TECHNOLOGY

Use Plastics as Photographic Material

► PLASTICS CAN be made into photographic material, S. B. Elliot of the Ferro Chemical Corp., Bedford, Ohio, told the Society of Photographic Engineers meeting in West Point, N. Y.

Small quantities of halogenated compounds unstable to actinic light are incorporated into various plastics. Among the plastics that can be treated in this way are polyvinyl chlorides, polyvinylidene chloride, cellulose acetate, ethyl cellulose and other materials.

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