

SPACE

## Women for Space Study

Women are needed to help support the men in the growing demand for persons with training in mathematics, computers and electronics in our space program—By Walter Wingo

► THE TASK of lifting missiles and men into space is getting too heavy for men alone.

"Let's get the girls in the act," said the commander of the Air Force's Atlantic Missile Range to members of the Conference on Aerospace Support in Washington, D. C.

Maj. Gen. Leighton Ira Davis thinks the U.S. reservoir of technical talent could double if its women were as scientifically inclined as Russian women.

"Women have the brains and ability to match men in many growing fields, such as mathematics, computer programming and the study of electrical circuits," he said. "We must have more and more people better and better trained."

Gen. Davis said the "exponential growth" in technical information is outdistancing the number of people who can comprehend it. Already there are not enough skilled men backing up the space program.

"Behind every scientist we need many engineers, and behind every engineer many, many technicians," he said. "In recent years the scientists were glamorized at the expense of engineers. We need a rebirth of

professionalism and a return to a pride in craftsmanship."

He said aerospace support people are a hapless lot when it comes to publicity.

"You don't hear much about them until something goes wrong," he said. "Like when the diesel engine failed to pull back the gantry in the Cooper shot.

"The matter of unsung heroes will always be with us. You know about St. George and the dragon, but who ever hears about who built St. George's sword or his dragon-seeking equipment?"

Gen. Davis suggested that women naturally do not mind playing a supporting role in business and science.

The first step in building up our pool of aerospace supporters, he said, is to take "a fresh new look" at our school systems, with an eye toward extending the school year beyond nine months. Needed, he said, are more schools that can prepare a student to take on a subject like vector mechanics after two years of college.

Rear Adm. H. P. Weatherwax, head of the Navy's astronautics program, told the conference that if he were a boy or girl of 19 or 20 today, he would throw his efforts "hard and fast" into learning all he could about electronics, which he thinks will be the biggest industry in the future.

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PALEONTOLOGY

## Dinosaur Tracks on Lawn Of London Museum

► SOME 100 FOOTPRINTS of a dinosaur, made an estimated 140 million years ago, are being removed from a stone quarry in Dorset, England.

The trackway of biped dinosaur footprints was uncovered during quarrying operations. It is the only one so far discovered in England. The tracks were made on what was then a mudflat on the shore of a lagoon.

The timing of the dinosaur's walk was critical, for shortly afterwards the sun baked the mud dry. Later deposits covered the prints and preserved them.

The complete trackway of dinosaur prints is about 150 yards long. However, the team of paleontologists from South Kensington Natural History Museum is attempting to lift only 24 yards of the trackway in which the prints are most clearly defined. For this delicate job, diamond-edged saws are being used to cut around the stone prints.

The diamond-sawed slabs will be removed by hand and transferred to the Kensington Museum where they will be placed on the lawn to become a permanent Dinosaur Walk in the heart of London.

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## Featherlight Landing On Moon's Surface

See Front Cover

► FEATHERLIGHT landing on the surface of the moon is the aim of engineers developing a lunar excursion model (LEM).

The buglike object seen on this week's front cover is a one-twentieth scale model of an LEM that the National Aeronautics and Space Administration is considering for its Project Apollo. It is being used by engineers of the Bendix Products Aerospace Division, South Bend, Ind., in developing legs that will give the best landing conditions on the moon.

The structural parts of the landing gear are being tested under various conditions in both hot and cold environments. The legs of the LEM retract inside the 260-inch booster adapter and the landing gear is stowed alongside the vehicle. The landing weight is assumed to be about 10,000 pounds, earth weight.

Systems have also been developed in which the landing gear retracts beneath the vehicle instead of retracting to the sides.

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## Enormous Roof Houses American Moon Hopes

► A METAL ROOF, four times the size of the nearby Sugar Bowl, glares in the summer sun at Michoud Space Center, La.

During World War II the 43-acre roof sheltered warships as they were built. During the Korean War, a steady stream of tank engines poured from under it. Beneath it today technicians are assembling this country's mightiest rocket.

Before the year ends, that rocket, called Saturn I-5, is to be transported to the National Aeronautics and Space Administration's new Mississippi Test Operations facility where all of its power units will be checked out. If it passes, the United States will be well on its way to putting a man on the moon this decade.

The huge building is an annex of the George C. Marshall Space Flight Center at Huntsville, Ala. Since 1958, the Center's director, Dr. Wernher von Braun, has had his team working on a cluster of booster rockets which could produce a thrust of 1.5 million pounds.

Saturn I is the result. The first stage of the 180-foot rocket consists of eight Rocketdyne H1 engines. They can produce 32 million horsepower, enough to run ten battleships.

Atop the 80-foot boosters two more stages, of less power, are being built.

Saturn I is being put together by engineers from the Boeing and Chrysler companies.

The actual moon shot will be assigned to a Saturn V, which is to be 30 stories high and five times more powerful than Saturn I.

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**GIANT FOOTPRINTS**—The dinosaur footprints to be installed at the South Kensington Natural History Museum are being painted with a hardening solution to assist their preservation during removal. In the background is the natural diamond saw used to cut around the fossil prints.