

Here's What Is Ahead Of X-15 Before Flight

By RAY CROMLEY
WASHINGTON (AP) — If all goes right:

The X-15—the U.S.'s first plane designed to carry man into space—should make its maiden flight under its own power some time around the end of the summer.

By early fall, the X-15 should make a flight over 29 miles high into the sky—higher than man has ever flown before.

Some time before winter, two X-15 planes should be turned over to the Air Force, Navy and the National Aeronautics and Space Administration for "real" testing.

Probably by the spring of 1960 the X-15 will hit a speed of around 3,600 miles an hour, faster than man has ever flown.

Perhaps in the fall of 1960—but more probably in the summer of 1961—the X-15 will go 100 miles into space. That's as high as a low-flying satellite.

Though the pilot of the X-15 will only stay in "space" for about five minutes, his feat will aim at paving the way for three major military and civilian goals, although these will be many more years in coming.

The first probability is a boost glide bomber that could be rocketed maybe 100 or 150 miles into the atmosphere at a speed of perhaps 5,000 to 3,000 miles an hour, then "glide" over Russia, drop its bomb load and "glide" on to a

landing in the U.S.

This bomber would be much more effective than a ballistic missile. It could maneuver—once it got into the atmosphere—thus evading enemy missiles. It could drop its bombs more accurately. The pilot could decide not to drop his bombs at all if the "war" proved to be a false alarm.

Thus the U.S. would no longer have to wait in time of war for Red bombers to arrive before returning the attack. Ballistic missiles, once fired, can't be recalled. So you have to wait and make absolutely sure you're being attacked before firing. That may be too late.

The X-15 experiment will also give the first elementary knowledge needed for controlling a space vehicle.

In space, planes can't be guided as they are in the atmosphere because there is no air. Guiding presumably will have to be done by small jets—facing in different angles on the space ship.

The X-15 will have small jets in its wings. During its approximately five minutes in outer space the pilot will use those jets to tip his plane to the precise angle he wants. How well this works will determine how engineers proceed in their plans for steering other space ships.

The X-15 experiment is also designed to find the most practical way to take men up to space stations, and to bring them down. That, in turn, will make space stations practical.

But there's considerable work to be done before the U.S.'s experimental X-15 "space plane" gets a hundred miles into the air.

Although the X-15 performed beautifully in its recent free glide to earth after being taken up to 38,000 feet, there will be a half dozen to maybe as many as 20 preliminary test flights by North American Aviation to see if the plane will actually fly.

These flights will begin at "slow" speeds with small power at "low" heights.

Very gradually the speeds and heights will be increased. All this may go on for 18 months or more before the final 100-mile-high flight into space.

Why all this testing? What do the scientists have to find out? The big problem is temperature. When the plane hits the atmosphere from space coming down at about 3,600 miles an hour, the temperature of the air may get up to 5,000 degrees Fahrenheit.

The plane won't get that hot, but it will get awfully hot just the same. The bottom will get hotter than the top; other places will get hotter than others. No one is certain what the effects will be.

The scientists are especially worried about the joints—where the wings are attached, for example. When some parts get hotter than others, that sets up strains. Those strains warp the plane. They could tear it apart. The change in shape may make the plane act differently than expected in the air—possibly make it difficult to control.

The X-15 will have 600 places to measure temperature, 140 places to measure pressure, when it goes up for its major tests.

Scientists also want to know how the "thousand and one" parts in an X-15 stand up under the vibration of the blast of its rocket engine and the hard blows the plane suffers when it hits the atmosphere at 3,600 miles an hour.

It's the "little things"—governors, electronics, auxiliary power supply—that have been breaking down so far. Such breakdowns could be extremely dangerous in a real flight.

The scientists will be testing the controls. Are they too complicated in the fast moving world the pilot will be living in? Will the pilot be too sluggish to do everything he has to do? Can the pilot be accurate enough in his decisions to keep from burning the plane and himself up as he comes down into the atmosphere?

All this is why the scientists plan to go at this X-15 testing slowly—and gradually—unless political pressures such as a Russian breakthrough force them to hurry things up.



INSTALLATION of a huge data processing system in Klamath Falls signifies the community's entrance into a continental air defense role. Here, unidentified U.S. Air Force technicians and a Burroughs Corporation engineer put the machine, titled AN-FST-2 through its paces. The "T-2," chief building block for SAGE, is a duplexed data processing system which processes friendly and enemy target information picked up by radar in outlying sites and transmits the information to direction centers. There it is coordinated with target information from other sites to alert defense weapons, if necessary.

New Machine To Process Target Info

Burroughs Corporation engineers and U.S. Air Force technicians this week are installing a huge data processing system here, signaling the community's entrance into its role in continental air defense.

Marin Youths Die In Blaze

SAN RAFAEL, Calif. (AP)—Two little boys played with matches in a basement room Monday. They burned the house down and died screaming in the flames.

Dead were Robert and Rocky Wilson, aged 3 and 2, youngest of the eight children of Mr. and Mrs. Woodrow H. Wilson.

A playmate, Barbara Stevens, 9, told police the boys were striking matches then stamping them out.

Barbara escaped from the basement, which had only one exit.

The data processing equipment, labeled AN-FST-2, is the chief building block for SAGE (Semi-Automatic Ground Environment), a nationwide radar and data processing network.

The purpose of the "T-2" is to process enemy and friendly target information picked up by radars in outlying sites and transmit the data to direction centers. There it is coordinated with target information from other sites to alert de-

DREAM COMES TRUE

MEMPHIS, Tenn. (UPI)—Judge William B. Ingram Jr. had a politician's dream come true Monday. Bernie Mullikan—who is opposing Ingram for his job in upcoming city elections—appeared as the defendant in a traffic case.

But Mullikan said it was the first time he had been involved in a traffic accident. Ingram acquitted him.

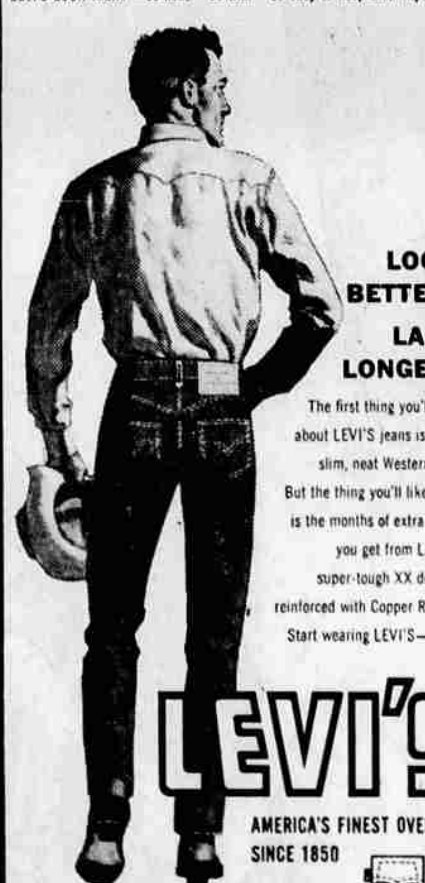
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JERRY L. PATZKE, grandson of Myrtle Patzke, Bly, entered the Navy as a high school seaman recruit at Portland July 28. He was graduated from Bly High School in June.

Lamb Sale Total Told

LAKEVIEW—A total of 492 fat lambs averaging 91 pounds apiece were sold through the Lake County lamb pool last week. Price received for this shipment of fat lambs was \$29 per hundred weight which is somewhat better than was expected. There was a total of 250 feeder lambs averaging 83 lbs per head sold at \$16 to \$17 per hundredweight.

It was apparent in sorting through the lambs prior to the pool that hot weather and dry feed conditions have taken their toll this year. There were not as many fat lambs as should have been expected for this time of year. Oris Rudd, county extension agent, believes that growers who still have wooled lambs on the ranch may find it profitable to shear these lambs in order to get best gains.

Rudd reports too that it was noticeable in many farm flocks that worming programs have been neglected this summer. Drenching with phenothiazine is probably the best available method for controlling stomach worms in sheep and is one practice which should be diligently applied by the farm flock sheep owner.

Plans for another shipment of lambs through the Lake County lamb pool were tentatively made for September 10 or 11. This will give growers time to put desired finish on their younger lambs. A notice will be mailed to all sheep owners prior to the next pool.

Payment Bill Gets Speedup

WASHINGTON (AP) — The Senate Interior Committee today approved a bill aimed at speeding the payment of about \$475,000 to the Klamath Indians in Oregon. The bill now goes to the Senate.

The bill would change the date for federal acquisition of the Klamath Indian marsh from April 1, 1961, to the earliest date that duck-stamp funds are available to pay for the property.

FOR HEAVEN'S SAKE
SAN DIEGO, Calif. (AP) — For nearly a week, the announcement board in front of St. Mark's Episcopal Church carried the plea: Choir is badly in need of voices.

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GRANGE NEWS

Klamath County Pomona Grange met for an all-day session starting at 10 a.m. Saturday, August 8, at Midland Grange Hall. Midland and Henley Grange Units co-hosted the meeting.

Francis Flowers, Pomona master, and his staff exemplified an opening drill. Rosa Meeker, cures; Bill and Mildred Novotny, assistant steward and lady assistant steward, presented the flag.

Chaplain Aletha Macken and the attendance presented a service in memory of the late Joe Milani. Officers gave reports and County Deputy L. W. Barleen delivered a "pep talk" exhorting members to attend Pomona meetings.

Reports were given by the following committee chairmen: Zeta Sullivan, home economics; Ruth Johnson, picnic; Charlie Henderson, agricultural; Bill Novotny, visitation and Mildred Novotny, newsletter.

Host granges served food at noon. During the hour, visitation committee chairman Novotny and his staff met to plan visitations to Fort Klamath, August 18, Bly, September 18, Merrill, October 12 and Malin, November 10, all at 8 p.m. All grangers are asked to attend these meetings.

Lecturer Mayme Cammock presented a program after dinner. It opened with a prayer by Chaplain Macken. Winners of a game which followed won a prize.

Sandy Bucanich sang and played piano. A quiz on Alaska and on plants was staged. Moderator Pauline Flowers and eight juvenile grangers, Sylvia Andrieu, Marjorie, Dorothy, Jimmy and Bobby Flowers, Louise Sukraw, Garry Houck and Dolores Macken, presented a skit.

Minnie Andrieu recited. Peggy Matson and Linda Gibson entertained with several accordion numbers.

DRIVERS STRIKE BRIEFLY

CAPE CANAVERAL, Fla.

(UPI) — Members of the Transport Workers Union staged a brief strike Monday protesting the use of Air Force drivers to bring liquid nitrogen into the missile test center. The walkout involving nearly all the union's 1,200 members ended when the Air Force agreed to let TWU drivers take the place of the airman truck drivers.

Auto Pioneer, Stutz, Dies

MIAMI, Fla. (AP)—Charles E. Stutz, 76, builder of a pioneer American sports car, died Monday of cancer.

The Stutz Motor Car Co. manufactured a variety of automobiles but its top-drawer model was the Stutz Bearcat, still hallowed in memory by sports car enthusiasts.

Charles and a cousin, the late Harry Stutz, founded the firm in 1909 at Indianapolis. Harry was administrator and Charles, by then already a well-known race driver, built the cars and raced them widely.

Stutz came to Miami in 1940 after the auto firm stopped production.

There are no known survivors.

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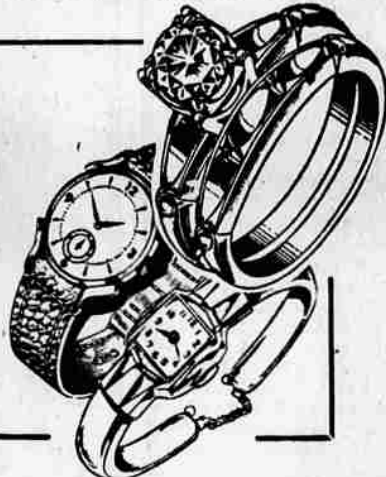


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