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## SATURN--THE LUNAR VEHICLE

For me it is a "dream come true" to be in Hawaii. It is my pleasure to be here today to tell you something of the Apollo program--the dream of many men.

I have long been associated with launch vehicle development and I would like to share with you some of the background and details of the launch vehicle that will be used for the three-man Apollo capsule. Our first flights will be training exercises for the final goal of injecting a lunar expedition into a lunar transfer trajectory.

It was just five years ago that President Kennedy established the national goal, "Within this decade to send men to the moon and return them safely." This definite specification enabled us to concentrate all research and development forces toward this goal.

At the George C. Marshall Space Flight Center in Huntsville we are responsible for research and development of the strong arm, or the muscle, to hurl the total lunar expedition toward the moon.

Although we bear the responsibility for the Saturn at the Marshall Center, credit for this vast and plural undertaking should be given equally to our nation's industrial and educational complexes. More than 90 percent of our Saturn budget goes to private industry for the delivery of finished stages, components, and supporting services. These giants of industry are doing an excellent job in this relatively new technological field and we at the Marshall Center have all confidence in them.

One of the most important aspects of our mission at Marshall is technical and financial management of these contracts and the program in general. The managerial task in such a broad effort is difficult, but we are improving each day and we shall continue to do so.

We are concerned basically with two Saturn-class vehicles, the intermediate-sized Saturn and the giant Saturn V.

The Chrysler Corporation is building the Saturn I booster at NASA's Michoud Assembly Facility in New Orleans, Louisiana, while the Douglas Aircraft Company is assembling the S-IVB second stage in California.

The Saturn V is a three-stage vehicle. The Boeing Company and the Marshall Center are jointly developing the first stage with Boeing production

SATURN HISTORY DOCUMENT  
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located at the Michoud facility. The S-II second stage of the Saturn V is being developed and built by S&ID Division of North American Aviation, Inc., in California. The third stage is almost identical to the second stage of the uprated Saturn I and is also the responsibility of Douglas.

When we consider that the engines for these stages and numerous other Saturn components are being built by contractors all over the nation, it becomes obvious that the managerial task is enormous and that the Saturn is truly a nation-wide effort.

The third improved Saturn I is being assembled now at Cape Kennedy and will probably be launched within a few weeks.

Test versions of all Saturn V stages have been static-fired and production is well along on flight stages. First unmanned flights of the Saturn V are scheduled for 1967.

Now, with the aid of a few slides, I would like to show you how the Saturn is taking shape in the industrial pipeline.

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It has been my privilege to be with you today as a representative of the George C. Marshall Space Flight Center. I hope that you have been interested in seeing some of the work we are doing.

Because dedicated men everywhere are contributing their best efforts to their jobs, representatives of these United States will reach the moon in this decade.

Thank you.