

Picture Story No. 825

MOST POWERFUL U.S. ROCKET ENGINE ADVANCES TOWARD MOON-FLIGHT GOAL

When American astronauts start for the moon, their Apollo capsule will ride atop the Saturn V, a mighty rocket as tall as a 30-story building. The first stage of the rocket, which will boost the capsule from its launching pad, will be powered by a cluster of five F-1 engines with a total thrust of 7,500,000 pounds (3,375,000 kilograms). The F-1, a liquid-fueled giant, is the most powerful rocket engine ever built in the United States. Because the F-1 is scheduled for a test flight in 1966 and the Apollo moon flight during this decade, the engine is being extensively tested on the ground and will undergo limited test flights. Developers say that when the F-1 is first tested in flight it will be better qualified than other rocket engines after 100 flights.

3-6 When the F-1 engine is tested on the ground, instruments record every detail about the engine's performance and reliability. All the recorded information is fed into computing machines, which perform mathematical tasks much faster than men. Through the use of instruments, F-1 engineers eliminate the possibility of human error and obtain within 30 minutes test data that formerly required at least eight hours of calculations. (63-4560)



SCIENCE - PROPERTIES (SATURN)