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RANGER VII

The primary objective of the Ranger spacecraft program was to obtain close up television pictures of the lunar surface during the last few minutes before the spacecraft crashed into the surface.

At 9:25 and 49 seconds a.m. on July 31, 1964 Ranger VII impacted the moon. This was precisely the time calculated for the impact and it ended a performance which was near perfection from launch to impact. It was one of the most complicated scientific and engineering feats attempted by man.

July 28 at 12:50 p.m. Ranger VII left the launching pad at Cape Kennedy. A few hours later, about 5:00 a.m. on July 29, commands were sent to and stored in the spacecraft from Goldstone, Calif., a station in the deep space network. These commands directed and altered the course of Ranger VII so that it was in its precise trajectory for impact on the moon. The spacecraft executed every command with accuracy and precision.

During the minutes between 9:08 a.m. and the impact time 9:25 a.m. 4,316 astonishingly excellent photos of the lunar surface were sent to Earth by the 6 television cameras in Ranger VII.

Ranger VII was 5' in diameter and 8 1/4' high. The 2 solar panels, hinged to the base of the hexagon, were folded like butterfly wings during launch.

The unbelievably perfect launch of Ranger VII was followed by Ranger VIII on Feb. 17, 1965, which returned over 7,100 high quality pictures before impact, and Ranger IX, launched on March 24, 1965. Ranger IX concluded this phase of the unmanned lunar program by returning more than 5,800 high resolution pictures. The last of the Ranger IX pictures showed surface objects as small as 12 inches.