

## Lunar Mission Accomplished

In the few minutes that its cameras operated yesterday morning, Ranger 7 obtained and transmitted to the earth more detailed information about the moon than man has ever had. Before the equipment on this rocket performed its historic mission, this planet's knowledge of its lunar satellite had come primarily from telescopes. But even the most powerful such instrument can see far less clearly and precisely across the nearly quarter-million miles that separate us from the moon than could the cameras on Ranger 7 taking pictures from a few hundred or tens of miles away. During the last quarter hour of its flight Ranger 7 was in effect a mobile astronomical observatory gathering and transmitting lunar data that scientists have hitherto been unable to obtain by any means at their disposal.

The immediate purpose of the Ranger voyage was to gain information needed to plan equipment for use in the effort to send men to the moon. Until now the character of the lunar surface has been a subject of heated dispute. There has been no prior way to know in detail how regular or irregular that surface is, nor whether the moon's upper layer consists of hard rock or of a more or less thick mantle of dust. Now a major beginning has been made toward obtaining the vital data on these points.

Ironically, however, the Ranger 7 success must again raise the question of how urgent it is to send a man to the moon. Many scientists who are dubious about the vast sums being spent on Project Apollo have pointed out that enormous amounts of information about earth's nearest heavenly neighbor can be obtained far more cheaply by unmanned rockets like Ranger 7. These can bring instruments to the neighborhood of the moon, and can also land them softly on the lunar surface to take samples of the environment there, analyze them and radio the findings back to this planet.

Ranger's pictures of the moon will properly be made available to all nations and thus will aid the scientists of the Soviet Union and other lands as well as American researchers. This is as it should be. It follows the sound precedent the Soviet Union set almost five years ago when it released the historic pictures of the dark side of the moon taken by Lunik 3. Proud as this country has reason to be of Ranger 7's accomplishment, we can only conjecture how much more rapidly and cheaply its photographs could have been obtained had Soviet and American scientists been able to pool their efforts and resources years ago, rather than being required to pursue their efforts in competitive—and costly—isolation. The case for a unified international effort to reach the moon—as urged by Presidents Kennedy and Johnson—is strengthened by every consideration of the needless waste and duplication that have marked humanity's space exploration to date.