

## Splashdown and Recovery Viewed on Live TV

► THE DRAMATIC recovery of Gemini 9 astronauts who splashed down within two miles of the USS Wasp was witnessed as it happened by millions of television viewers both in the United States and abroad.

As Lt. Col. Thomas P. Stafford and Lt. Cmdr. Eugene A. Cernan were hoisted aboard the aircraft carrier in the south Atlantic Ocean, a transportable earth communications terminal, engineered and designed by International Telephone and Telegraph Corporation, transmitted recovery operations live to the Early Bird international satellite system for broadcast throughout the world.

Just after splashdown, frogmen reaching the space capsule plugged a floating telephone into a socket on the craft's exterior and immediately established hard-line communications with Astronauts Stafford and Cernan.

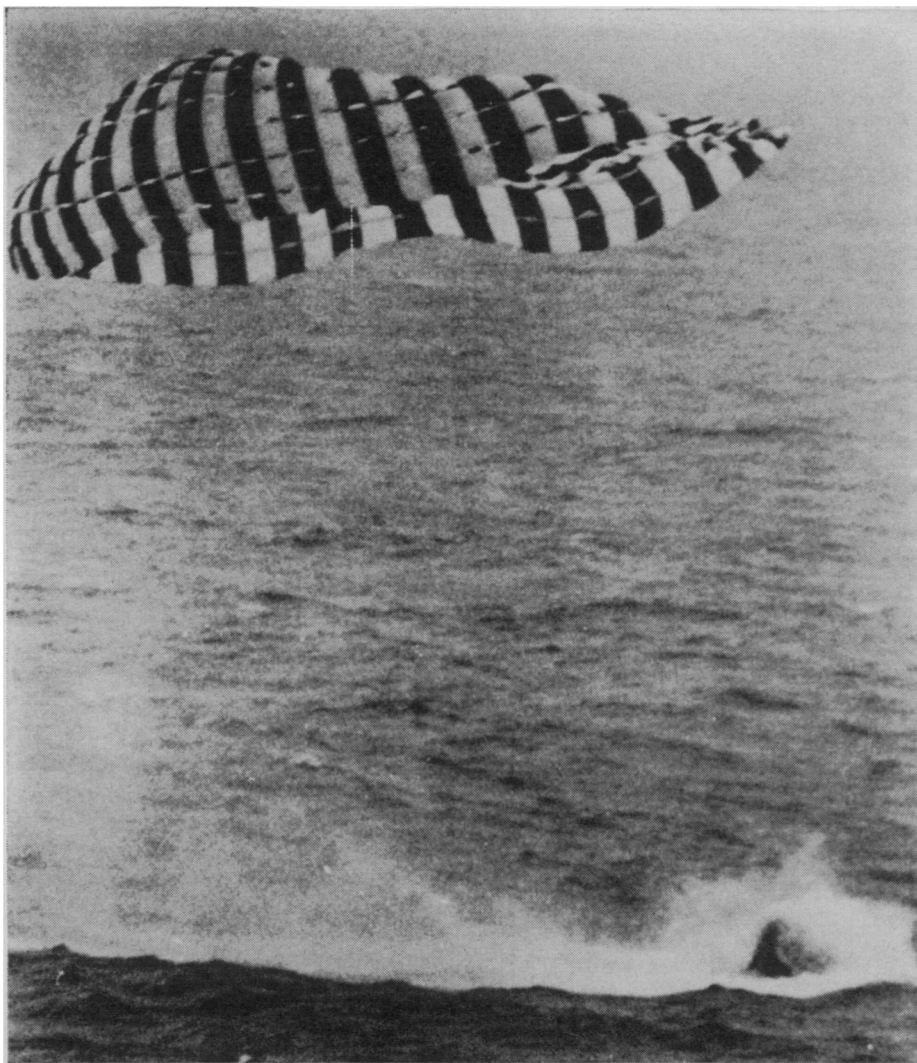
• Science News, 89:484 June 18, 1966

SPACE

## Revised Program May Save Time and Money

► A MALFUNCTIONING computer guided Gemini 9 toward a malfunctioning target. The fact that the spaceship was allowed off the ground at all reflects a new and growing attitude among space officials that may save the U.S. millions of dollars in future space programs.

An experimental anything—be it a man-carrying vehicle or a small piece of equipment—is usually “beefed up” more than is actually necessary, since nobody knows where it is safe to cut corners. Extremely close and expensive tolerances for nuts and bolts can add a great deal to the cost of proto-



NASA-UPI

**SPLASHDOWN**—With Astronauts Thomas Stafford and Eugene Cernan inside, the Gemini 9 capsule splashed down in the Atlantic Ocean three days after launch from Cape Kennedy. Sailors and newsmen on the USS Wasp, the recovery carrier, watched the giant orange and white parachute float through space as it lowered the men in the sea two miles from the ship. The parachute is seen here beginning to collapse overhead after lowering the capsule safely in the water.

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type models over the production line version. Only a backlog of experience with experimental models will reveal what parts are unnecessary or what procedures can be eliminated without endangering chances of success.

In the case of Gemini 9, which was launched on June 3 in spite of the same computer difficulty that had postponed its flight two days before, the key decision was made when officials at the Mission Control Center in Houston, decided that they would do without their last-minute computer data and go anyway.

The more such problems can be ignored as reasons for canceling flight, the faster the U.S. space program will move.

In an overall sense, the ability to improvise during a mission, an inconceivable idea during the Mercury program, is the best thing that has hap-

pened in the course of Project Gemini. Independence from particular pieces of equipment, combined with the willingness to alter plans on the go, could even knock several months off the time when two Apollo astronauts will set foot on the moon.

Actually, the entire Gemini program is a series of experimental flights.

There will never be such a thing as a “production” model, since each flight is expressly designed to discover changes needed in later ones.

Officials of both industry and the National Aeronautics and Space Administration have agreed that ultra-precision manufacturing techniques and redundancy (the use of two, three or even four backup systems for every job that could possibly go wrong) are expensive and time-consuming luxuries. Perhaps the need for either or both principles is lessening.

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