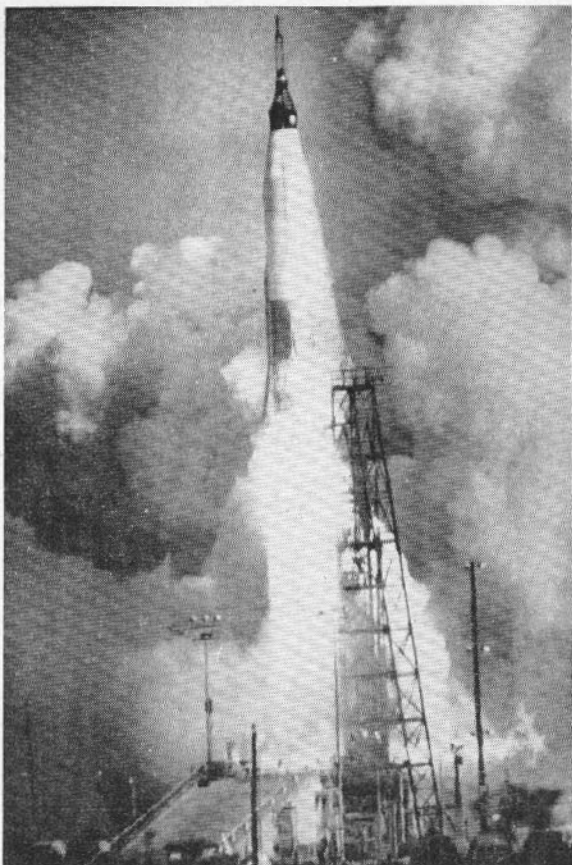
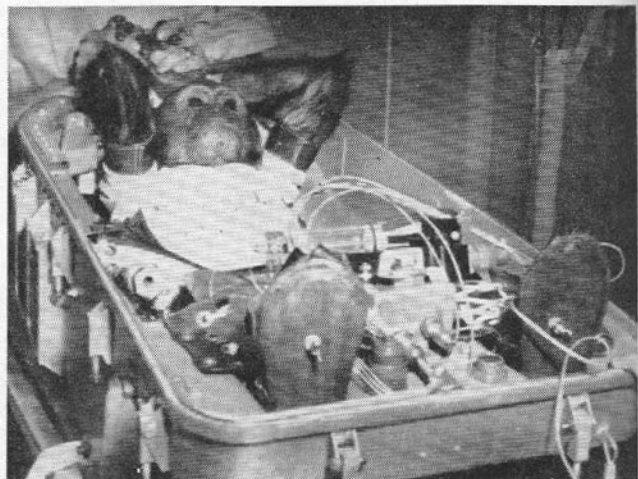


Missiles and Spaceflight



Orbital chimpanzee Enos relaxes in his couch (below) prior to the Atlas-boosted, two-orbit Mercury flight of November 29. Left, the lift-off from Cape Canaveral. As reported on this page, re-entry and successful recovery were effected after two orbits instead of the planned three



GHIMPANZEE IN ORBIT

The occupant of the National Aeronautics and Space Administration's Mercury spacecraft used in the Atlas-boosted MA-5 orbital launch from Cape Canaveral on November 29, a chimpanzee of superior intelligence named Enos, performed his scheduled in-flight tasks efficiently and was recovered safely after two orbits of the Earth. The flight was intended to involve three orbits, but was terminated after two orbits following an attitude-control system malfunction and the apparent overheating of an electric inverter in the spacecraft. It was later announced that the pilot in the first US manned orbital attempt, which might take place later this month, would be Mercury Astronaut John Glenn, a lieutenant-colonel in the US Marines.

APOLLO CONTRACTOR NAMED

North American Aviation Inc has been selected by the National Aeronautics and Space Administration as prime contractor for the initial phase of the Apollo manned lunar spacecraft programme, at an estimated contract value of \$400m. The company will design and develop two of the three main sections of the spacecraft—the "command centre" to house the three-man crew, and the section housing fuel, electrical power supplies and propulsion units needed for lunar take-off. A separate contract for the third main section of the spacecraft, containing decelerating rockets intended to lower the craft gently on to the surface of the Moon, is expected to be awarded within six months.

The space administration had previously selected the Instrumentation Laboratory of Massachusetts Institute of Technology as an associate contractor for the development of the Apollo guidance and control system. The three basic Apollo missions will be Earth-orbital flights, circumlunar flights, and manned landing and exploration of the Moon. Earth-orbital flights should begin in 1964-65. Further details of Apollo, as given by Mr Robert Gilruth, Director of NASA's Manned Spacecraft Center, are reported in the article "America's Plans in Space" on pages 874-6.

UN SPACE COMMITTEE MEETS

First meeting of the United Nations Committee on the Peaceful Uses of Outer Space was held in New York on November 27. The session was called by Britain and the USA, after the committee had failed to meet previously because of disagreement over its leadership. This dispute had broadened into Soviet objections to the composition of the committee, although Soviet UN representative Valerian Zorin said that Russia would not boycott the meeting.

At the meeting the US representative, Mr C. W. Yost, said: "The time is ripe for certain initial measures to preserve peace in outer

space, and extend to all nations the benefits of exploring it. The United States considers that the General Assembly should take such action now. . . .

"First, we believe that the time has come to acknowledge explicitly that international law and, in particular, the Charter of the United Nations, extends to the outer limits of space exploration. Similarly, we believe recognition should be given to the principle that outer space and celestial bodies are freely available for exploration and use by all States and are not subject to national appropriation by claim of sovereignty or otherwise.

"Second, in order to encourage the open and orderly conduct of outer space activities, we believe that provision should be made for registration of all space vehicles launched into orbit or sustained space transit. . . .

"Third, the United States would like to see initiation of measures to facilitate the international sharing of the benefits of practical applications of outer-space technology which we are developing. . . . The United States proposes that member States and specialized agencies such as the World Meteorological Organization undertake early and comprehensive study of measures to advance the state of atmospheric science and technology and to develop existing weather-forecasting abilities and help member States make effective use of these through regional meteorological centres.

"Fourth, the United States believes that communications satellites can eventually play an important role in the expansion and improvement of international communication and the fostering of international understanding. We recommend that study be undertaken by ways to make this service available to the nations of the world as soon as practicable on a global and non-discriminatory basis. . . ."

VIGILANT AND SEASLUG

The War Office has announced an inventory order for the Vickers Vigilant anti-tank missile. Following extensive evaluation trials in the past year, Vigilant is to become the standard anti-tank guided weapon of the infantry and of reconnaissance units of the Royal Armoured Corps. Many thousands of rounds must be involved, and they will be made by English Electric Aviation at Stevenage, the value of this contract amounting to several million pounds. This is the first purchase of a British surface-to-surface missile, and the first order for a British weapon developed solely with private capital.

The Admiralty and MoA have allowed the main contractors for the Seaslug ship-to-air missile—Whitworth Gloster Aircraft, GEC and Sperry—to announce that "in recent acceptance trials of Seaslug Mk 1, from HMS *Girdle Ness*, a run of 16 consecutive firings resulted in 16 successful interceptions."