ASTRONOMY

Observatory to Go Aloft

➤ A MANNED telescopic observatory will be flown 87,000 feet above the earth's surface by balloon soon, if preliminary tests prove successful.

Project Star Gazer is the name of the project to carry two men and a stabilized telescope above more than 90% of the earth's atmosphere. Its primary purpose is to determine how manned balloon observatories should be designed, built and operated.

Dr. J. Allen Hynek of Northwestern University's Dearborn Observatory, Evanston, Ill., believes balloon astronomy is equal to or better than satellite astronomy for the visual and infrared regions of light. He hopes to see national balloon observatories established.

Astronomers are now limited in their ability to learn more about the universe because earth's atmosphere absorbs both infrared and ultraviolet light waves coming from space. Even the visible light that does penetrate earth's sea of air is distorted, causing the twinkling of stars. Wind currents also hinder observations by causing star images to wander.

By going above most of the atmosphere, scintillation and image wandering will be markedly reduced, if not eliminated.

The two men scheduled to make the flight are U.S. Air Force Capt. Joseph W. Kittinger Jr. of the Aerospace Medical Research Laboratories, Wright-Patterson Air Force Base, Ohio, as pilot, and William C. White, a civilian scientist employed by the U.S. Naval Ordnance Test Station, China Lake, Calif., as astronomer.

Mr. White will not be looking through the 12-and-a-half-inch telescope during the flight, because it will be mounted on top of the pressurized gondola in which he and Capt. Kittinger will be riding. Instead he will use a small tracking telescope linked to the larger one.

The stabilizing system for the telescope, a gyroscopic-electronic assembly, was developed and built by the Massachusetts Institute of Technology for Project Star Gazer. It holds the telescope steady despite swaying and spinning of the gondola.

Two successful unmanned flights are planned to check out the balloon and operating procedure before the first manned flight. Capt. Kittinger holds the record for the highest balloon ascent, the longest parachute drop and longest free-fall. All were set on Aug. 16, 1960, when he jumped from a balloon-supported gondola at an altitude of 102,800 feet.

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TECHNOLOGY

Chicago Twin Towers Highest Made of Concrete

➤ THE WORLD'S tallest reinforced concrete structures, twin towers are rising near Chicago's Loop to provide apartments, garages, offices and recreation areas for many Chicagoans.

The 60-story silo-shaped towers will reach 588 feet above street level.

More than two dozen buildings in the United States are taller but are steel-framed. The Empire State Building in New York, for example, is 1,250 feet high excluding the 222-foot television tower.

The towers will have parking facilities on the first 20 floors. Elevators, water and electricity services are in the core, with pie-shaped apartments surrounding the center of the top 40 floors.

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