SAO's Historic Photos of Apollo 8

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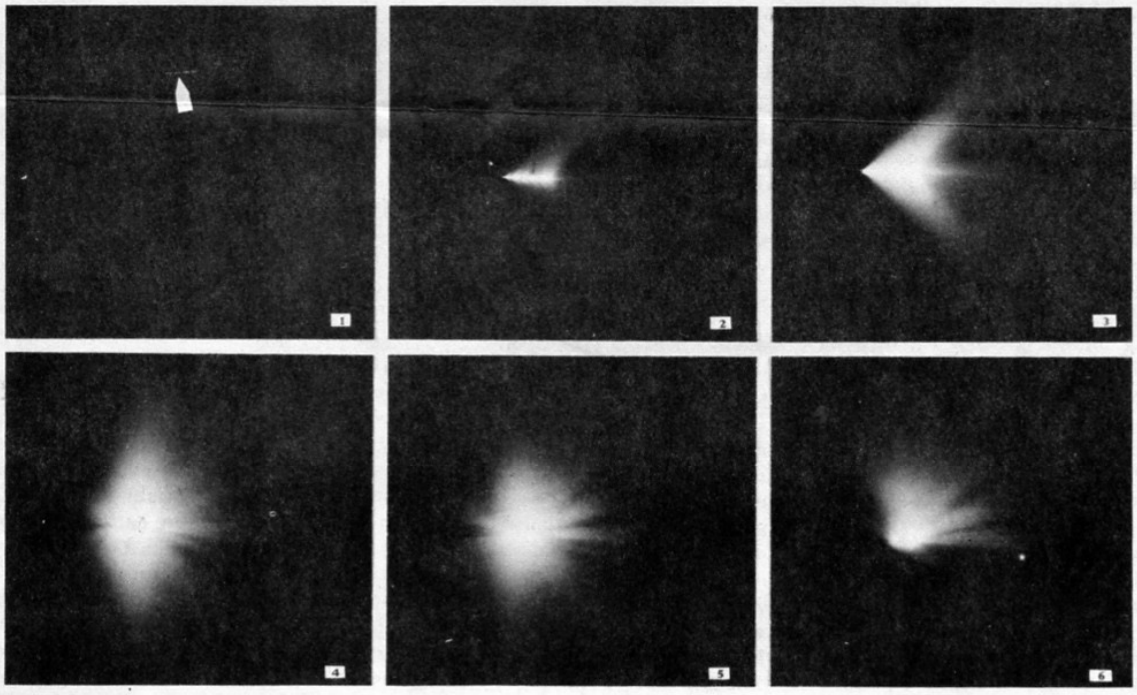

ABOVE -- The injection of the Apollo 8 spacecraft into translunar orbit was photographed by Joe Coldwell, Bill Perry and Dave LeConte at SAO's field station atop Mt. Haleakala, Maui. These photos, made at 1544 UT (10:44 am EST), December 21, show (1) the first acquisition before burn, (2) the firing of the booster rockets, (3 to 5) build-up of exhaust cloud, and (6) the last view of the spacecraft before it goes behind the mountain. In the later photos, the satellite was photographed through its own exhaust cloud, thus causing the sunburst effect. Apollo 8 was approximately 106 miles above a point southwest of Hawaii and traveling more than 35,000 feet per second. Reproductions of these photos were carried by UPI and AP, and published by LIFE, TIME, AVIATION WEEK, ELECTRONIC NEWS, SATURDAY REVIEW, and scores of other newspapers and magazines.

LEFT -- The cloud of excess fuel dumped 30,000 miles out in space by the Apollo 8's S4-B stage was photographed about 2½ hours later by SAO's station at San Fernando, Spain. The Apollo entered the translunar phase of its flight and had separated from the S4-B. More than 275 photographs of the cloud formation, the S4-B stage, and the Apollo capsule were made by Spain during a two-hour period.

The photograph clearly shows the 450-mile-wide, mushroom-shaped cloud of ice crystals formed by the venting of the remaining liquid oxygen aboard the S4-B; and the S4-B booster with its double exhaust cloud. Just barely visible between the spacecraft and cloud are two bright spots: the Apollo 8 Spacecraft on its way to the moon, and one of the adapter panels of the SLA stage.