

APPENDIX A

Launch date: April 8, 1964.

Designation: Gemini I.

Crew: Unmanned.

Remarks: Gemini spacecraft launched into orbit by modified Titan II booster. Spacecraft decayed during 69th orbit over South Atlantic Ocean, with all tests objectives achieved. Purpose of flight was to test the Titan launch vehicle system; Gemini spacecraft structural integrity; spacecraft launch vehicle compatibility; and to demonstrate the launch vehicle and guidance systems.

Launch date: January 19, 1965.

Designation: Gemini II.

Crew: Unmanned.

Remarks: Gemini spacecraft launched into suborbital flight, splashing down approximately 1,848 nautical miles southeast of Cape Kennedy, Fla. Major mission objectives, all successfully accomplished, were to demonstrate basic structural integrity of spacecraft throughout the flight environment; and to verify the adequacy of reentry heat protection. In addition, satisfactory performance was demonstrated by flight control, life support, retrograde rocket, recovery and landing, and other systems critical to flight safety and mission success. Duration, 22 minutes.

Launch date: March 23, 1965.

Designation: Gemini III.

Crew: Virgil I. Grissom and John W. Young.

Remarks: Gemini spacecraft launched into three-revolution orbital flight by modified Titan II booster (Gemini-Titan 3). First U.S. two-man spaceflight, Grissom first man in space for second time. One orbital maneuver was conducted in each of the three orbits. During first orbit the apogee was lowered from 139 miles to 105 miles and the perigee from 100 miles to 98 miles; in second orbit a series of maneuvers produced a translational movement changing inclination by one-fiftieth of a degree; in third orbit the perigee was lowered to 52 miles. Manual control was exercised throughout the reentry phase, using the limited lifting characteristics of the spacecraft to steer toward touchdown. Two of three experiments were performed; experiment on effect of weightlessness on sea-urchin eggs during fertilization and cell division failed; successful experiments were effect of weightlessness in interaction with radiation on white blood cells and injection of fluid into the reentry plasma sheath in attempt to attenuate communication blackout. Duration, 4 hours, 53 minutes.

Launch date: June 3, 1965.

Designation: Gemini IV.

Crew: James A. McDivitt and Edward H. White II.