



MARINER VENUS / MERCURY 1973

STATUS BULLETIN

MVM '73 Mission Ready for Launch on Friday

The first spacecraft flight to the planet Mercury is scheduled to begin Friday night at 9:45 p.m. PST when Atlas/Centaur No. 34, carrying the MVM'73 spacecraft which will become Mariner 10, lifts off Pad 36B at the Cape. The spacecraft is scheduled to fly by Venus on Feb. 5, after two midcourse maneuvers. It will make a gravity turn around the planet to a course which will, after two more maneuvers, bring it to Mercury March 29. After the Mercury flyby it should be on a course which will lead to a second Mercury encounter six months later.

The spacecraft was built by The Boeing Company at Kent, Washington. The Atlas/Centaur (a new D-1a model employing a special digital flight computer to operate the Atlas and Centaur) was built by General Dynamics/Convair Astronautics, San Diego, for NASA's Lewis Research Center. Tracking and data acquisition are provided by the NASA/JPL Deep Space Net, including the new 64 meter antennas in Australia and Spain. Mission operations will be conducted by a joint JPL/Boeing team from the SFOF at the Laboratory.

The launch window is just one hour long on Friday night. A selection of prelaunch and early flight events follows:

T — 5-1/2 hr:	Spacecraft joins Atlas/Centaur countdown
T — 1 hr:	Atlas LOX tanking begins
T — 40 min:	Centaur LH ₂ tanking begins
T — 9 min:	Spacecraft on internal power
T — 7 min :	CC&S inhibit release
Liftoff, 12:45 a.m. to 1:45 a.m., EST	
L + 2 min, 22 sec:	Atlas booster engine cutoff
L + 4 min, 10 sec:	Atlas sustainer engine cutoff
L + 4 min, 22 sec:	Centaur main engine start
L + 9 min, 30 sec:	Centaur first cutoff
L + 34 min, 30 sec:	Centaur restart, after coast
L + 36 min, 40 sec:	Centaur final cutoff
L + 38 min, 15 sec:	Spacecraft separation
L + 42 min, 43 sec:	Solar panel, boom, antenna deployment
L + 50 min:	Deep Space Station 42, Canberra, acquires Spacecraft
L + 4 hr:	Spacecraft star tracker acquires Vega
L + 16 hr., 13 min:	First TV picture of Earth taken

On Saturday afternoon, two 88-picture TV mosaics will be taken of the Earth and two of the Moon. Additional TV sequences are scheduled for Sunday and Tuesday. The first midcourse maneuver is planned for Tuesday, Nov. 13.

Launch operations may be monitored Friday night in von Karman auditorium, beginning about 8:00 p.m. Mission Operations status may be obtained by calling extension 6073, 6075, or 6076. The next Status Bulletin is planned for Tuesday, possibly including early TV data.

