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Remembering Our Heritage

One small step on the Moon, one giant footprint on Mars

By Kay Grinter
Staff Writer

If a NASA zodiac were created, 1969 might be designated the year of the footprint.

Days after photos of the first Apollo footprints on the moon made front pages worldwide, pictures from the Mariner '69 mission captured what looked like a giant martian footprint.

Mariner '69 was the first dual mission to Mars, with Mariner 6 launching from Cape Canaveral on Feb. 24, followed by Mariner 7 on March 27.

The identical craft were relatively small, weighing less than half a ton when unfueled. Each was designed to study the surface and atmosphere of Mars during close flybys.

The mission was a success, returning 201 images of Mars' surface, including the picture of the "footprint" that actually was a land formation. Positioning the Mariner '69 spacecraft to take those photos, however, caused excitement for the mission teams on both coasts.

During a routine pre-launch test on Feb. 14, the engine relay box of the Atlas/Centaur for Mariner 6 malfunctioned, causing the pre-valves to remain open. The vehicle, which relies on internal pressure to maintain its shape, lost its rigidity.

John Gossett, chief of the Centaur Operations Division, was in the blockhouse. Now retired and living in Brevard County, he explained: "The Atlas collapsed to a 20-degree angle and banged into the platforms on the gantry. Two fast-thinking propulsion technicians risked their lives to close the valves manually. Their efforts restored the vehicle's pressure and returned it to an upright position."

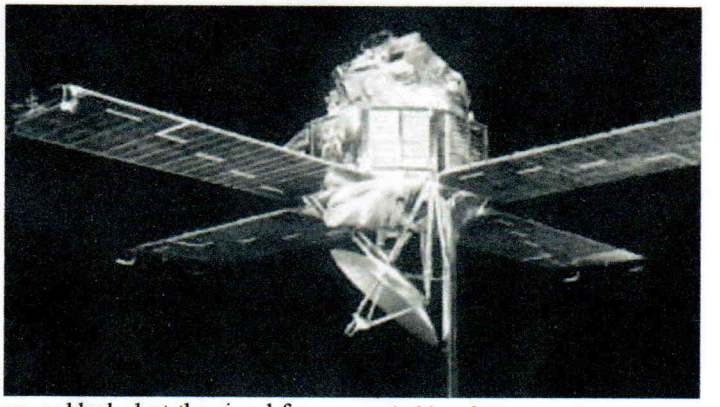
Both General Dynamics employees, Charles Beverlin and Billy McClure, later received the NASA Exceptional Bravery Medal for their prompt action which prevented the destruction of the spacecraft.

Harris Schurmeier Sr., the Mariner '69 project manager, was in mission control at the Jet Propulsion Laboratory during both encounters, which occurred only five days apart.

From his home in San Diego County, Calif., he recalls: "Following the arrival of Mariner 6 at Mars, we found ourselves in a kind of crisis. While we were managing its flyby on July 30, we suddenly lost the signal from Mariner 7."

Thankfully, the signal was reacquired seven hours later by switching from one antenna to another, and Mariner 7 made its closest flyby of Mars on Aug. 5.





A CAMERA ABOARD MARINER 7 captured this giant "footprint" (above) on the martian surface. Below, both Mariner 6 and 7 (pictured) carried a wide and narrow-angle television camera, an infrared spectroscope, an infrared radiometer and an ultraviolet spectroscope.