The Least Known Flight Control Position for Gemini

For GT-4 thru 6A I was the LPO at the Cape. LPO stands for Landing Position Observer. I was assigned to develop and man this position to cover a near launch site abort concern. The normal landing mode for Gemini was to go from entry configuration to a single point attached parachute and then to a dual point attach which oriented the vehicle for a water landing. It also had ejection seats for pad abort or near pad abort with launch vehicle destruction. This ejection had to be more powerful than a normal ejection due to the need to get the crew out of the expected fireball and was expected to probably cause spinal injury. The ejection seats could not be used after transfer to a two point suspension since ejection would have been into the spacecraft parachute. It had been determined that landing on land or in water less than 6 feet deep would have been likely to be catastrophic. So the LPO task was to devise a method to track the vehicle after a launch site abort, predict whether landing would occur on land or in water of sufficient depth, then recommend to the flight director whether to go to dual point suspension in anticipation of a water landing or remain single point and eject. Weather balloons were launched starting 6 hours before launch to be used to estimate a probable wind profile at launch time. This wind info allowed the location of wind displaced beach lines (water less than 6 feet) for several altitudes. Vehicle position relative to these lines could then be used to predict landing position relative to the actual 6 ft water depth contour. The vehicle position and altitude were supplied by radar info from the Airforce who also supplied the plot board. This was all done in the old Mission Control Center at the Cape and before and after the move of the MCC to Houston.

During preparation for GT-6A I trained Fred Koons to replace me as LPO so I could return home to continue managing the effort to build and test a ground control system to support a planned land landing for Gemini. For GT-6A Fred was on the plot board while I was monitoring. Near launch time I went to a door at the back of the MCC which had a view of the launch pad. It was startling to see the Titan ignite and immediately shut down. The shutdown was found to be caused by an out of sequence lanyard disconnect. Liftoff had actually occurred, but it sat back down on the pad and was later launched.

Since this task was over after launch, I was assigned to the Cape Recovery Control Center to work with our recovery team to coordinate with the military to locate ships and recovery forces to cover landing sites for each spacecraft orbit.

July 28, 2019

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