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APOLLO LUNAR MODULE ABORTS

Abstract

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A typical Apollo lunar landing mission was divided into phases. Each phase would normally be preceded by a Go/No Go decision from Mission Control. Apollo mission design had a built in recovery from contingency, and the flexibility to rebound from unexpected emergencies. Outlined is a monomial Apollo mission. This presentation will only deal with the operational mission phases of the Lunar Module, powered descent, ascent and rendezvous with the Command Module. These were the prime phases of the Lunar Module's mission. The safety of each of these stages was critical and needed careful planning. There was a dedicated subset of instrumentation and hardware for guidance, navigation and control for aborts of LM flight phases. Failure of a LM subsystem during powered descent, landing, surface operation, powered ascent and rendezvous had special planning and crew procedures. The evolution of each of the abort phases is reviewed here with as much detail that is reasonable. Keywords: Apollo History, Spaceflight Contingency, Trajectory Design