

Sequence Adaptation Strategy for *Cassini*

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For Space Operations 2002 Conference, Houston, Texas

October 2002

ABSTRACT: Real-time commands are a necessary part of spaceflight operations. Deep space robotic missions typically operate on pre-planned “sequences” spanning several days to several weeks. Generally, real-time commands are not intended to be a standard alternative to these planned sequences. However, due to the anticipated increased activity levels during the Saturn Tour Phase; ephemeris uncertainties; radar, imaging and radio science teams’ pointing requirements, and the resultant demands on the Cassini science and operations teams, it is anticipated that some form of adapting a pre-planned sequence is required. This paper discusses Cassini sequence adaptation strategies 1) late in sequence development (before uplink to the vehicle) and 2) “live” methods of sequence adaptation (i.e., after the original pre-planned sequence has been uplinked to the vehicle).