

## Presentation Abstract

Presentation Title	Dependability and Safety Case for safe hold mode
Author(s)	Steve Driskell, Judy Murphy
Point of Contact (POC)	Phil Loftis
POC E-mail	Philip.D.Loftis@nasa.gov
POC Fax	304.367.2035
Presentation Abstract	<p>Dependability topic will present an approach for how GPM built a safety case for spacecraft safe mode. The references used built a superset of safe mode information which can then be used over multiple spacecraft. So far, the safety case approach is used on GPM. The Safe Hold spacecraft hazard initiating events, which in turn prevent potential "loss of spacecraft or mission" involves a mapping from the system and subsystem hazard analyses to the failure modes and effects analysis. This is further mapped to from the requirements to the implementation. Where there are unmapped traces, there is room for developer consideration for expanding the hazard controls. This approach increases the spacecraft safety by comprehensively managing in subsystems and on the spacecraft main system this potential for loss of spacecraft. There will be discussion of GPM, LRO (lookback). The result of the safety cases is an argument for improved spacecraft and software dependability.</p>