If a Restart (Hardware or Software) occurs during the Trunnion or Shaft incorporations of P20 Rendezvous Navigation (or P22), an incorrect State Vector Update can occur.

Luminary 69 Level 6 test of a stable orbit rendezvous - V37 selection of P39 while P20 running resulted in a Noun 49 excessive State Vector Update display.

**MIT ANALYSIS**

2.1 **CAUSE:**
An Index Register is not properly Restart protected.

2.2 **RECOGNITION:**
Noun 49 Display occurred when it shouldn't have (this may or may not happen).

2.3 **MISSION EFFECT:**
Possible incorrect State Vector Update or else incorrect Noun 49 Display.

2.4 **AVOIDANCE PROCEDURE:**
Do not select another program via Verb 37 while P20 is incorporating a mark (i.e., wait until mark counter is incremented in the V16N45...).

2.5 **RECOVERY PROCEDURE:**
If a Noun 49 Display occurs following a Restart, key in Recycle to reject the mark.

2.6 **PROGRAM CORRECTION:**
Fix Restart protection for the Trunnion and Shaft Angle incorporations.

2.7 **RECOMMENDED DISPOSITION** (Fix, Work-around, etc.):
Work-around for LUMINARY 1 and 1A; fix subsequently.

2.8 **RECOMMENDED RE-TESTING:**

3.1 **NASA DIRECTION:**

2.10 DATE:

2.10 DATE:

3.2 **NASA/MSC SIGNATURE:**

3.3 **ORGANIZATION:**

3.4 **DATE:**

4.2 **SIGNATURE:**

4.3 **ORGANIZATION:**

4.4 **DATE:**
2.4 Avoidance Procedure, cont'd.

... Display before executing a V37 request for another program); or use V95 to stop updating then wait at least 15 seconds before requesting a new program (a V80 or V81 must be done to start state vector updating again).