

MIT/IL SOFTWARE ANOMALY REPORT

J. Dumban

1.1 ORIGINATOR: K. W. KRAUSE	1.2 ORGANIZATION: TRW (MPAD-200)	1.3 DATE: 6-20-69	1.4 ORIGINATOR CONTROL NO. MPAD-3	MICRO REPORT NO. LN Y 78	
1.5 DESCRIPTION OF ANOMALY: Steady-state non-zero attitude errors near orbit insertion. Non-zero steady-state attitude errors have been observed during the final 100 seconds of a nominal ascent burn. Due to the varying offset acceleration causing changes in the DAP phase plane logic and due to the non-orthogonality of the control axes, steady-state attitude errors of +1.5 degrees and -0.5 degrees about the Z and Y body axes respectively, occur during the final 20 seconds of the burn.				PROGRAM LUMINARY 1A PROGRAM REVISION 99	
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1.6 DESCRIPTION OF RUN: TRW 6-D Apollo Reference Mission Program ascent runs for Landing Analysis Branch (FM-2) under TRW Task A-200.					
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- MIT ANALYSIS -					
2.1 CAUSE: See Spacecraft Autopilot Development Memo #25-69 (attached).					
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2.2 RECOGNITION: Attitude error needles show off-centered limit cycle.					
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2.3 MISSION EFFECT: Increase in RCS jet firing rate and insignificant fuel penalty.					
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2.4 AVOIDANCE PROCEDURE: None.					
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2.5 RECOVERY PROCEDURE: None.					
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2.6 PROGRAM CORRECTION: A PCR will probably be generated to center the limit cycle.					
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2.7 RECOMMENDED DISPOSITION (Fix, Work-around, etc): Possible PCR for LUMINARY 1B.					
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2.8 RECOMMENDED RE-TESTING: DAP Re-verification for ascent if PCR implemented.					
CONTINUED ON PAGE			2.9 MIT/IL SIGNATURE: <i>George W. Cherry</i>	2.10 DATE: <i>7/11/69</i>	
3.1 NASA DIRECTION:			4.1 CLOSING ACTION TAKEN:		
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3.2 NASA/MSC SIGNATURE:	3.3 ORGANIZATION:	3.4 DATE:	4.2 SIGNATURE:	4.3 ORGANIZATION:	4.4 DATE: