

# MIT/IL SOFTWARE ANOMALY REPORT

MIT REPORT NO.	LNY 89
PROGRAM	LUMINARY 1A
PROGRAM REVISION	LNY 99 Rev 1

1.1 ORIGINATOR: <p style="text-align: center;">B. McCoy</p>	1.2 ORGANIZATION: <p style="text-align: center;">MIT/IL</p>	1.3 DATE: <p style="text-align: center;">23 July '69</p>	1.4 ORIGINATOR CONTROL NO.
1.5 DESCRIPTION OF ANOMALY: <p style="text-align: center;">State Vector was integrated backwards while in POO, P27.</p>			
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1.6 DESCRIPTION OF RUN: <p style="text-align: center;">Flight of Apollo 11 - state vector time pad-loaded as pos - max. A P27 was used to uplink a new vector and integration started to bring the old vector to present time.</p>			
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- MIT ANALYSIS -			
2.1 CAUSE: POO integration's ten-minute loop checks only for MODREG = 0 to prevent backwards integration. Thus backwards integration can occur during P27.			
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2.2 RECOGNITION: MIT/AGC support at Mission Control Center in Houston during Apollo 11.			
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2.3 MISSION EFFECT: <p style="text-align: center;">Time: V96E needed to stop integration, select POO and uplink again.</p>			
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2.4 AVOIDANCE PROCEDURE: Do not select POO or V96 prior to uplink in power up sequence.			
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2.5 RECOVERY PROCEDURE: <p style="text-align: center;">See 2.3</p>			
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2.6 PROGRAM CORRECTION: <p style="text-align: center;">In POOCHK routine also check for MODREG = 27, or devise new type of POO check.</p>			
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2.7 RECOMMENDED DISPOSITION (Fix, Work-around, etc): <p style="text-align: center;">Fix for 1B.</p>			
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2.8 RECOMMENDED RE-TESTING: <p style="text-align: center;">Special hybrid test.</p>			
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3.1 NASA DIRECTION:		2.9 MIT/IL SIGNATURE: <p style="text-align: center;"><i>George W. Cherry</i></p>	
3.2 NASA/MSC SIGNATURE:		2.10 DATE: <p style="text-align: center;">8/5/69</p>	
3.3 ORGANIZATION		4.1 CLOSING ACTION TAKEN:	
3.4 DATE:		4.2 SIGNATURE:	
4.3 ORGANIZATION:		4.4 DATE:	
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