MIT/IL PROGRAM CHANGE ROUTING SLIP

PCR/PCN # _____

ANOMALY # _LN489_

- ☐ COLOSSUS 1A
- ☐ COLOSSUS 2
- ☐ COLOSSUS 2A
- ☐ COLOSSUS ___
- ☐ LUMINARY 1
- ☐ LUMINARY 1A
- ☐ LUMINARY _1B_

P. RYE

☐ MIT Approved PCN

☐ NASA Approved PCR
☐ NASA Approved PCN

☐ NASA Approved Software Anomaly
☑ MIT Approved Software Anomaly

A. Coding

☑ Begin coding immediately

ACTION: _Phyllis R_____

Program Supervisor: _Margaret Hamilton_

○ Do not code until new GSOP material has been approved by the MIT
Mission Design Review Board (MDRB) and distributed.

B. GSOP Preparation

○ Prepare GSOP revisions for MDRB
consideration   _____

ACTION: _____

☐ Technical Committee Meeting not required.

☐ Technical Committee Meeting(s) held on   _____
Attendees:

C. KSC Testing and Checkout

○ Review for possible impact on KSC
testing and checkout   ACTION: _____

D. Other Programs Affected

○ Review for corresponding changes in   _____

ACTION: _____

Special Instructions

Project Manager _G. W. Cherry-KWF_

Date _8/5/69_

(Rev 1, 2/69)

MIT/IL SOFTWARE ANOMALY REPORT

1.1 ORIGINATOR: B. McCoy	1.2 ORGANIZATION: MIT/IL	1.3 DATE: 23 July '69	1.4 ORIGINATOR CONTROL NO.	PROGRAM LUMINARY 1A PROGRAM REVISION LNY 99 Rev 1

1.5 DESCRIPTION OF ANOMALY:

State Vector was integrated backwards while in POO, P27.

1.6 DESCRIPTION OF RUN:

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.

- MIT ANALYSIS -

2.1 CAUSE:

POO integration's ten-minute loop checks only for MODREG = O to prevent backwards integration. Thus backwards integration can occur during P27.

2.2 RECOGNITION:

MIT/AGC support at Mission Control Center in Houston during Apollo 11.

2.3 MISSION EFFECT:

Time: V96E needed to stop integration, select POO and uplink again.

2.4 AVOIDANCE PROCEDURE:

Do not select POO or V96 prior to uplink in power up sequence.

2.5 RECOVERY PROCEDURE:

See 2.3

2.6 PROGRAM CORRECTION:

In POOCHK routine also check for MODREG = 27, or devise new type of POO check.

2.7 RECOMMENDED DISPOSITION (Fix, Work-around, etc):

Fix for 1B.

2.8 RECOMMENDED RE-TESTING:

Special hybrid test.

2.9 MIT/IL SIGNATURE: George W Cherry	2.10 DATE: 8/5/69

3.1 NASA DIRECTION:

4.1 CLOSING ACTION TAKEN:

3.2 NASA/MSC SIGNATURE:	3.3 ORGANIZATION	3.4 DATE:	4.2 SIGNATURE:	4.3 ORGANIZATION	4.4 DATE:

MSC Form 1409 (Rev May 68)