MIT/IL SOFTWARE ANOMALY REPORT

MIT REPORT NO.	PROGRAM	PROGRAM REVISION
LNY 48	LUMINARY	69

1.1 ORIGINATOR:	1.2 ORGANIZATION:	1.3 DATE:	1.4 ORIGINATOR CONTROL NO.
P. VOLANTE	MIT/IL	3/18/69	

1.5 DESCRIPTION OF ANOMALY:

In P20 Rendezvous Navigation (or P22) the range greater than 400 n.m. alarm (526) may not be triggered when the range is between 566 and 980 n.m.

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1.6 DESCRIPTION OF RUN:

P22 Lunar Surface Navigation, with initial range about 590 n.m., the 526 alarm was not displayed.

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MIT ANALYSIS:

2.1 CAUSE:

Overflow of the UNIT operation which is used to get the magnitude of the range vector.

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2.2 RECOGNITION:

Failure to get 526 alarm when range known to be over 566 n.m.

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2.3 MISSION EFFECT:

It is possible to try to lock on in P20 when the range is greater than 566 n.m., but designate should fail.

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2.4 AVOIDANCE PROCEDURE:

Use R31 to check range prior to selecting P20. (Note range never exceeds 400 n.m. on nominal F Mission trajectory.)

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2.5 RECOVERY PROCEDURE:

Terminate P20 when designate fail alarm (503) appears and reselect when within range.

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2.6 PROGRAM CORRECTION:

Test for overflow after UNIT.

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

Work-around in LUMINARY 1. Fix in LUMINARY 1A.

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2.8 RECOMMENDED RE-TESTING: Repeat P22 test above in LUMINARY 1A.

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2.9 MIT/IL SIGNATURE:	2.10 DATE:
George W. Cherry	3/19/69

3.1 NASA DIRECTION:

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4.1 CLOSING ACTION TAKEN:

Fix in 1A
Program Note for LUMINARY

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

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