

# MIT/IL SOFTWARE ANOMALY REPORT

MIT REPORT NO. <b>LN Y 59</b>
PROGRAM <b>LUMINARY</b>
PROGRAM REVISION <b>96</b>

1.1 ORIGINATOR: <b>J. KERNAN</b>	1.2 ORGANIZATION: <b>MIT/IL</b>	1.3 DATE: <b>4/15/69</b>	1.4 ORIGINATOR CONTROL NO.
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1.5 DESCRIPTION OF ANOMALY:

Two of the Ephemeris constants recently changed (PCN 707.2) are incorrect. The constants are used to compute the unit position vector of the moon with respect to the earth in reference coordinates by the lunar and solar EPHEMERIDES routine. The GSOP names of the two constants (see Section 5.5.4 of R-567) are LOMR and A. The program names are RATESP and VAL67, respectively.

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1.6 DESCRIPTION OF RUN:

Incorrect S-band antenna angle computations in R05.

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- MIT ANALYSIS -

2.1 CAUSE:

Human Error.

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2.2 RECOGNITION:

(1) Incorrect S-band antenna angle display in V64.  
 (2) Possible incorrect star choice by PICAPAR.

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2.3 MISSION EFFECT:

R05 is unusable.

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2.4 AVOIDANCE PROCEDURE:

(1) Don't use R05.  
 (2) Don't use PICAPAR.

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2.5 RECOVERY PROCEDURE:

N/A

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2.6 PROGRAM CORRECTION:

Correct two constants:  
 VAL67 is .072663888 B+1 and should be .0172666666 B+1.  
 RATESP is .0366098 B+4 and should be .03660098 B+4.

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

Fix.

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2.8 RECOMMENDED RE-TESTING:

Retest R05 and alignments with PICAPAR.

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2.9 MIT SIGNATURE: <i>George M. Cherry</i>	2.10 DATE: <b>4/15/69</b>
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3.1 NASA DIRECTION:

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4.1 CLOSING ACTION TAKEN:

Fixed in LUMINARY (Rev 97).

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