MIT/IL SOFTWARE ANOMALY REPORT

1.1 ORIGINATOR:	1.2 ORGANIZATION:	1.3 DATE:	1.4 ORIGINATOR CONTROL NO.	MIT REPORT NO. LNY 29
J. KERNAN	MIT/IL	1/20/69		PROGRAM LUMINARY PROGRAM REVISION 69

1.5 DESCRIPTION OF ANOMALY:

The scaling of the computations in P32 and the APSIDES routine causes values of $e < .000488$ to be treated as 0. The program will therefore take the incorrect branch when $.0001 \leq e < .000488$. (Refer to Fig. 4.4-4, page 5.4-27 of R-567.)

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1.6 DESCRIPTION OF RUN:

SUNDANCE Level 6 Test L6.4.1.

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- MIT ANALYSIS -

2.1 CAUSE:

Computations yield $e = 0$ if $e < 2^{-11}$.

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2.2 RECOGNITION:

A slight change (< 18 seconds) in the computed CDH time, if $e < .000488$.

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2.3 MISSION EFFECT:

None

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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:

Change scaling for computing e.

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

1. Program note for LUMINARY 1.
2. Change GSOP for LUMINARY 1A.

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2.8 RECOMMENDED RE-TESTING:

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2.9 MIT/IL SIGNATURE:	2.10 DATE:
James E. Kernan pro e.	1-21-69

3.1 NASA DIRECTION:

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4.1 CLOSING ACTION TAKEN:

Do not fix in LUMINARY1A since NX180° option is nominal in P32 (Memo #V Chang)

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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)