Mission Planning and Analysis Division
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS 77058

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November 30, 1970

MEMORANDUM TO: See List Below

FROM : FM/Mission Planning and Analysis Division

SUBJECT : Change for RTCC offline formulation for Apollo 14: Star-Horizon Observation Processor

1. Reference: MSC Internal Note No. 69-FM-326, "RTCC Offline Requirements for H-2: Star-Horizon Observation Processor," FM4/ P. Flanagan and TRW/R. Kidd, February 24, 1970.

2. The reference internal note should be updated as defined in the attached change sheet, and the RTCC offline star horizon observation processor should be altered accordingly for Apollo 14. The equation for D_3 is currently incorrectly defined.

Emil R. Schiesser
Assistant Chief
Mathematical Physics Branch

The Flight Software Branch concurs with the above recommendation and requests IBM to proceed accordingly.

Larry J. Dungan for
James C. Stokes, Jr., Chief
Flight Software Branch

APPROVED BY:

John P. Mayer
Chief, Mission Planning
and Analysis Division

Attachment

Distribution: (See attached list)

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TO:	3. FROM: Division Mission Planning and Analysis Branch Mathematical Physics Section

4. Title or Subject RTCC OFFLINE REQUIREMENTS FOR H-2: STAR-HORIZON OBSERVATION PROCESSOR	Date of Paper

5. Author(s)
Paul Flanagan, MPB, and Robert Kidd, TRW Systems Group

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CHANGE SHEET

FOR

MSC INTERNAL NOTE 69-FM-326 DATED FEBRUARY 24, 1970

RTCC OFFLINE REQUIREMENTS FOR H-2:

STAR-HORIZON OBSERVATION PROCESSOR

By Paul Flanagan, MPB, and
Robert Kidd, TRW Systems Group

Change 2

By T. J. Blucker, MSC

James C. McPherson, Chief
Mathematical Physics Branch

John P. Mayer, Chief
Mission Planning and Analysis Division

After the following pen-and-ink change has been made, place this CHANGE SHEET between the cover and title page and write on the cover, "CHANGE 2 inserted".

1. Pen-and-ink change on page 14a: Add -1 at the end of the equation for D_3. The new equation should read

$$D_3 = \left(\frac{Q_x P_z - Q_z P_x}{aQ_z}\right)^2 + \left(\frac{Q_y P_z}{bQ_z}\right)^2 - 1$$

3

CHANGE HISTORY FOR 69-FM-326

Number	Date	Description
1	8/13/70	Replace pages 13, 14: Eliminated some original parameters and added some new parameters. Expanded original pages to include additional discussion. Replace pages 21, 22: Flow charts added to define new computation logic for parameters mentioned above.
2		Pen-and-ink change for equation defining D_3 on page 14a.