

T/DL PROGRAM CHANGE ROUTING SLIP

PCR/PCN # SL033
ANOMALY # _____
ADR # _____

- COLOSSUS 3
- COLOSSUS _____
- SKYLARK _____
- LUMINARY 1E
- LUMINARY _____

- MIT Approved PCN
- MIT Approved ADR
- NASA Approved PCR
- NASA Approved PCN
- NASA Approved Software Anomaly
- MIT Approved Software Anomaly

A. Coding

Begin coding immediately

Bob Haslam

ACTION: _____
Program Supervisor's Approval: 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

J. KLAWNSKI/E. OLSSON

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 Stephen L. Hoff
Date 1/28/71

APOLLO SPACECRAFT SOFTWARE CONFIGURATION CONTROL BOARD
PROGRAM CHANGE REQUEST

NUMBER (Completed by FSB)
SL 033

1.0 COMPLETED BY ORIGINATOR

| | | | | |
|----------------------------------|-----------------|---|------------------------|----------------|
| 1.1 ORIGINATOR B. F. Cockrell | DATE 7/29/70 | 1.2 ORGANIZATION FM4/MPB | APPROVAL R. Nobiles | DATE 8/3/70 |
| 1.3 EFFECTIVITY Skylab CMC | | 1.4 TITLE OF CHANGE Fixed Coordinate System for Skylab | | |

1.5 REASON(S) FOR CHANGE
The orientation of the current coordinate system for Apollo is the mean equinox and pole at the beginning of the nearest Besselian year. This system requires a yearly (continued on next page)

1.6 DESCRIPTION OF CHANGE
The choice of the fixed orientation of the coordinate system most commonly used is the mean location of the earth equator at 1950. Currently ephemeris tapes from JPL (continued on next page)

2.0 SOFTWARE CONTROL BOARD OR FLIGHT SOFTWARE BRANCH
DECISION FOR VISIBILITY IMPACT ESTIMATE BY MIT

| | |
|---|--------------|
| 2.1 <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED | 2.2 REMARKS: |
| 2.3 SOFTWARE CONTROL BOARD OR FLIGHT SOFTWARE BRANCH SIGN OFF | |
| DATE | |

3.0 MIT VISIBILITY IMPACT EVALUATION:

| | |
|---------------------------------------|---|
| 3.1 SCHEDULE IMPACT — | 3.2 IMPACT OF PROVIDING DETAILED EVALUATION |
| 3.3 STORAGE IMPACT — | 3.4 REMARKS: |
| 3.5 MIT COORDINATOR S. J. Coppicus | |
| DATE 11/5/70 | |

4.0 SOFTWARE CONTROL BOARD ACTION

| | |
|--|-------------|
| 4.1 <input type="checkbox"/> IMPLEMENT AND PROVIDE DETAILED CHANGE EVAL. <input checked="" type="checkbox"/> PROVIDE DETAILED CHANGE EVALUATION <input type="checkbox"/> DIS-APPROVED | 4.2 REMARKS |
| 4.3 SOFTWARE CONTROL BOARD SIGN OFF | |
| DATE 8-13-70 | |

5.0 MIT DETAILED PROGRAM CHANGE EVALUATION

| | |
|---------------------|--------------------|
| 5.1 MIT COORDINATOR | 5.2 MIT EVALUATION |
| DATE | |

6.0 SOFTWARE CONTROL BOARD DECISION ON MIT
DETAILED PROGRAM CHANGE EVALUATION

| | |
|---|--------------|
| 6.1 <input checked="" type="checkbox"/> START OR CONTINUE IMPLEMENTATION <input type="checkbox"/> DISAPPROVED OR STOP IMPLEMENTATION | 6.2 REMARKS: |
| 6.3 SOFTWARE CONTROL BOARD SIGN OFF | |
| DATE 11-5-70 | |

APOLLO SPACECRAFT SOFTWARE CONFIGURATION CONTROL BOARD
DATA AMPLIFICATION SHEET

PAGE 2 OF 2

| | | | |
|-------------------------------------|-------------------------------|-----------------|-------------------------|
| PROGRAM CHANGE REQUEST NO. 52033 | PREPARED BY B. F. Cockrell | DATE 7/29/70 | ORGANIZATION FM4/MPB |
|-------------------------------------|-------------------------------|-----------------|-------------------------|

CONTINUATION SECTION: (Refer to Block Number and Title on Program Change Request form.)

1.5 Reason(s) for Change, continued.

redefinition at July 1.0, of the coordinate system and, in turn, the fixed memory constants. For Skylab, a fixed system is required to avoid the use of several coordinate systems for each mission and the regeneration of fixed memory constants for each launch. The use of a fixed system simplifies the generation of RTCC coordinate transformation data and mission operations.

1.6 Description of Change, continued.

used by Apollo are converted from mean of 1950 to NBY. The recommendation is to use the mean equator of 1950 as the basic CMC and RTCC coordinate system. The predictor should be changed to compute oblateness acceleration in the true of date system and should convert it to the basic 1950 system for integration.

REMARKS: