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MEMO

TO: Distribution

FROM: K. W. Greene

DATE: 14, January 1971

SUBJECT: Notes on SCB Meeting #43 held at MSC on 13 January 1971.

I Review of Action Items

- a. Permanent fixed memory constants for Apollo 15. - MIT
Status: Open

The memos listing the constants prepared at MIT/DL have been circulated at MSC for review and comments. This item is to be further discussed at the next Development Plan Meeting (1/21/71). At that time it is hopeful that the next step to be taken in this constant review can be agreed upon.

- b. Submit a PCR giving all SKYLAB fixed ephemerides constants. - MIT
Status: Partially closed by the submission of PCR SL408 which gave the necessary star data. Still to be submitted by MIT/DL is a PCR containing the LOSSEM data for SKYLAB.
- c. Verify AGS RR Filter changes - MPAD
Status: Open
Still in process. MPAD and FSB are to develop a schedule for the completion of this review.
- d. Deliver a SKYLAB Development Plan to FCSD - MIT
Status: Closed

A SKYLAB Development Plan was given to MSC at the Development Plan Meeting held in mid-November.

- e. Hold a SKYLAB RCS DAP Design Review - GCD

Status: Closed

The DAP review was held at MSC last week. Present plans are to have a preliminary Section 3 out in Mid-February. And a DAP review is to be held in late February or early March.

- f. Submit a PCN to show the correct PINBALL nautical mile/revolution scale factor in the GSOP. - MIT.

Status: Closed by submission of PCN 1136.

- g. Report on Detail design of LGC bit protection PCR's - MIT

Status: Closed. An explanation of the implementation of these PCR's was given at the meeting. MIT is to prepare a memo describing the implementation of the LGC Bit Protection.

- h. Review implementation method of PCR 1111. - MIT

Status: Closed along with item g above.

- II The status of the remaining outstanding problems for Apollo 14 were discussed. The decision was made not to fix the DOWNRUPT problem in Colossus until SKYLAB unless MSC can come up with a real time necessity for this data lost during SPS powered flight. MIT should continue to develop the erasable program and procedure that could be utilized as a work around if MSC should later find this necessary.

III SKYLAB

SL 020 Program 33 Deletion

Status: Disapproved

SL 028 Docked Alignment Capability

Status: Disapproved

SL 029 Rendezvous Display Logic

Status: Disapproved

- SL 030 Addition of NCC Maneuvers Computation Capability
Status: Approved
- SL 031 Addition of NC1 Maneuver Computation Capability
Status: Disapproved (Replaced by PCR SL 042)
- SL 032 VHF Range Rate Computation and Display
Status: Approved
- SL 041 Use Full Lift in Splash Error Computation (N50)
Status: Pending MIT/DL analysis.
A suggestion was made that a similar change (PCR) was prepared in the early days of Colossus and that the review conducted at that time might assist in the analysis of this change.
- SL 042 Skylab 4DKI Sequence
Status: Approved
- SL 403 Extended Alignment Capability
Status: Pending (See Comments Below)
- SL 405 Transform Optics angles to Tracking Angles.
Status: Approved
- SL 406 Noun 67 Sign Reversal of RTGO
Status: Disapproved
- SL 407 Incorporate P51, P53 and P54 into P52
Status: Pending (See Comments Below)
- SL 408 FK1 Navigation Stars at 1973.0 in 1950.0 Coordinates
Status: Pending, MSC to review star data.

Skylab Comments:

H. Tindall re-emphasized at the meeting that an objective of the SKYLAB program was to utilize all possible Mainline Apollo parts which also includes software. And that changes to existing hardware/software are to be held to a minimum. Changes will only be allowed when they are absolutely necessary for SKYLAB. In other words no major R & D or program renovation are going to be allowed unless absolutely necessary.

MIT presented the proposed new alignment technique for SKYLAB to MSC personnel in morning of the SCB. Unfortunately, through a misunderstanding of what the meeting was about, principals that should have been at the meeting were not. As a result no decision could be reached at the SCB on this item. To provide proper review of this proposed change a separate meeting was scheduled for Thursday AM to brief and receive comments from a member of Astronaut Office. A portion of the Data Priority Meeting to be held Thursday afternoon was set aside to discuss the proposed alignment changes. (As you can see R. White/D. Millard have organized a traveling road show).

Many PCR's have been submitted over the past year to define or modify the planned Rendezvous scheme for Skylab. The number and scope of these PCR's have raised some confusion over the actual definition of the SKYLAB Rendezvous Scheme. To illiminate this problem MIT (S. Copps) proposed that MIT/DL prepare a prel-GSOP for Rendezvous which would contain MIT's current understanding of the desired Rendezvous scheme. This GSOP would then become the baseline design to which additional changes could be proposed via PCR's to this document. This sounded like a good idea but no formal decisions were made. From the authors point of view I think MIT should take the bull-by-the-horns and proceed with this plan, if not just more confusion and mis-understanding is bound to result.

IV. Colossus 2E (Apollo 14)

PCN 1101	Change GSOP Sect. 5 Rev 12 Status: Approved
PCN 1102	Change GSOP Sect. 2 Rev 12 Status: Approved
PCN 1103	Change GSOP Sect. 3 Rev 12 Status: Approved
PCN 1104	Change GSOP Sect. 4 Status: Approved

"A NOTE OF CAUTION"

PCRs/PCN describing editorial changes or containing mark-ups of actual GSOP pages need to be prepared more carefully and reviewed more thoroughly at MIT before submission to MSC. Many omissions and errors have been noted by MSC personnel thus providing confusion and a feeling of sloppiness in GSOP preparation.

V. Colossus 3 (Apollo 15)

PCN 1123	Put H for P31 into Erasable Status: Approved
PCN 1125	Change R31 to Use Precision Integration Status: Approved
PCN 1123	Remove Restart Requirement for IMUPULSE Status: Approved
PCN 1135	Change GSOP Sect. 2 Description of REINTFLG Status: Approved
PCN 1136	PINBALL Scale Factor Note for GSOP Status: Approved

VI. Luminary 1D (Apollo 14)

PCN 1009	Editorial Changes to Sect. 4 Status: Approved
PCN 1037	GSOP Section 2 Rev 10 Editorial Changes Status: Approved

VII. Luminary 1E (Apollo 15)

PCR 347	Modification to Code Word Configuration for PGNS/AGS Data Transfer Status: Approved
PCR 343	New Target Δ V Program for LGC Status: Approved
PCN 1124	Flag Resetting in P00D00 Abort Status: Approved

PCN 1126 Set NOTHROTL for DPS Impulse Burns
 Status: Approved.
 Note this PCN also requires a change to Section 4 as well.

PCN 1127 Change to Downlink List
 Status: Approved

PCN 1132 Corrections to PCR 1117.2
 Status: Approved
 Note this PCN was amended slightly at the SCB meeting.

PCN 1133 Revision to Descent Mass Limits
 Status: Approved as modified at SCB Meeting

PCR 1134 Revision of PCR 1111
 Status: Approved

PCR 1129 Update Mass - Dependant Calculation in 1/ACCS.
 Status: Approved

PCN 1137 Correct Constant for Ascent Guidance
 Status: Approved

Action Item

MIT/DL should prepare a PCN which describes how PCR 334 Rev 1 was modified during implementation into Luminary 1E.

K. W. Greene

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KWG:ejt

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