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MEMO

TO: Distribution
FROM: K. W. Greene
DATE: 1 October 1970
SUBJECT: Notes on SCB Meeting #41 held at MSC on 9/30/70.

I AGS SCP #59

This SCP added the variable scaling to AGS RR filter, put filter in Matrix form and Modified out-of-plane filter gains.

The accomplishment of this SCP requires a change to the polarity in Luminary 1E (See PCR 340) GAC is to receive the AGS tapes on about 1, November for checkout. A PGNSC tape will have to be supplied GAC to support testing of AGS at GAC.

II ACTION ITEMS

- a) Bit Failure Protection - The analysis of bit failure protection has been completed for Colossus and three PCR's have been submitted. (PCR 1074, 1075, 1076) The analysis of bit failure protection for Luminary is continuing. This effort should be reported on at the next SCB.
- b) Permanent Fixed Memory Constants - It was reported that this effort is continuing at MIT/DL and should be available in about one month. It was also reported that the current mass properties for Apollo 15 include the addition of the Rover.
- c) Fixed Co-ordinate System for SKYLAB - This action item is closed by the submission of several PCR's.
- d) PCR 320 TLI Cutoff/Initiation - The required co-ordination with the Data Priority meetings has taken place. This item is closed.

III LUMINARY 1D (APOLLO 14)

- PCR 331. 2 Section 2 GSOP Additions
Status: Approved. MIT will attempt to accomplish this GSOP change for Luminary 1D.
- PCR 1056 Rev. 1 Improvements to Impulse and Ullage Logic
Status: Approved. The GSOP should clarify the setting of 4 jet ullage by RO3.

IV LUMINARY 1E (APOLLO 15)

- PCR 333 Change Recognition of ROD Switch
Status: Approved.
- PCR 334 Change DSKY descent/ascent nouns
Status: Withdrawn. (MIT has an action item to co-ordinate this change and re-write).
- PCR 335 Remove alignment Option from P63
Status: Approved.
- PCR 336 Allow extended verbs during P20
Status: Withdrawn. (MIT has an action item to co-ordinate and re-write).
- PCR 337 Illuminate unused DSKY light for N49
Status: Withdrawn. (MIT has an action item to co-ordinate and re-write).
- PCR 338 Change LPD scaling to 1⁰ in all directions
Status: Approved.
- PCR 339 Have P20 F50 72 Display Update
Status: Approved.
- PCR 340 LATVEL Polarity CHANGE
Status: Approved.
- PCN 1059 Have Major Modes Changes Set
Status: Up a 1/ACCS Job. Pending MSC review.
- PCR 1066 Display N81 on all Passes of P34/74 and P35/75
Status: Approved. N59 should be available on call. Colossus should be looked at to assure if it is also available on call in Colossus.

PCN 1070	GSOP Change for FDAI Needle Initialization fix for L-1D-01
	Status: Approved.
PCR 1079	ALMCADR on Telemetry
	Status: Approved.
PCR 1082.2	Ephemerides
	Status: Pg 1 of the PCR was approved. (See Comments contained in this memo under general discussion of Ephemerides Data).
PCR 1080	Change Time to Perform IMUCDU Zero
	Status: Disapproved.

The anomalies for Luminary 1D were reviewed.

In the future anomalies will not be fixed until direction is given by the SCB.

IV COLOSSUS 2E (APOLLO 14)

PCR 331.1	Section 2 GSOP Additions
	Status: Approved for Apollo 15 (Colossus 3).
PCN 1004	GSOP Section 4 Changes
	Status: Approved.
PCN 1005	GSOP Section 5 Changes
	Status: Approved.

V COLOSSUS 3 (APOLLO 15)

PCR 325	New Target ΔV Program
	Status: Approved. (The Astronaut office is to look at this for possible inclusion in the LM).
PCR 326	R6; Maneuver Recomputation
	Status: Approved. (The Astronaut office is to look at this for possible inclusion in the LM).
PCR 327	Reverse P22N89 Response
	Status: Approved.
PCR 328	P34 Elevation Angle Initialization to +000.00
	Status: Approved.

PCR^S 325, 326, 327, 328 had been previously approved at an informal SCB on 27 August 1970.

COM43 Entry Problems-This anomaly was discussed. The board requested that additional work to correct this anomaly be conducted by MSC and MIT. This effort should be reported on at the next SCB.

PCR 332	MINKEY fixed Constants to E-Memory Status: Pending (An action item was established that everyone should bring in their candidates for transferal from fixed memory to erasable memory at the next SCB).
PCR 1071	Display N11 in P36 Status: Disapproved.
PCR 1074	Input Channel Bit Failure Protection for Ch. 31, 1-6. Status: Pending review by System Group at MSC.
PCR 1075	Input Channel Bit Failure Protection for 31, 7-12 Status: Pending review by System Group at MSC.
PCR 1076	Input Channel Bit Failure Protection for Chan. 33, 4 and 5 Status: Approved (one weeks schedule impact).
PCR 1077	Delete Auto RCS-DAP selection in MINKEY Status: Approved.
PCR 1078	Mod. of Pulse Torquing in MINKEY and ΔV test for SPS or RCS selection. Status: Approved.
PCN 1081	Coding Change to fix anomaly COM44 Status: Approved.
PCR 1082.1	Ephemerides Status: Approved.
PCN 1083	Improvements to Deadband Selection via N79 Status: Approved.
PCR 1084	Eliminate V37 Lockout During Option zero Status: Approved.
PCR 1086	P24 Shaft Stop Avoid. Status: Approved.

VI SKYLAB

MIT was given an action item to come up with a name for the SKYLAB Assembly. This is to be reported on at the next SCB.

SL035	Add TEPHEM to C/A Downlist
	Status: Approved.
SL036	Compute ATM Star Tracker Gyzabal Angles
	Status: Approved.
SL037	NSR Maneuver Computation
	Status: Withdrawn. It is assumed this capability is already in existence. If it is not the PCR should be re-submitted.
SL038	NC1 and NC2 Iterative Maneuver
	Status: Disapproved.
SL039	DKI Maneuver Sequence
	Status: Approved.
SL400	Program 15 Deletion
	Status: Approved.
SL401	Ephemerides Routine
SL402	Eliminate 481 Dag Limitation in TEPHEM (For SL401 & 402 see comments at the end of this memo).
SL403	New Alignment Technique
	Status: Pending.

VII PCR's Involving Astrodynamics and Ephemerides

At the conclusion of the SCB a meeting was held in the FSB office. The following action is to be taken.

PCR SL023 and SL401 are to be disapproved. A new PCR is to be prepared by MIT which specifies which constants are to be in fixed and which constants are to be in erasable, plus the transfer of the Luminary Ephemerides Routine to the Skylab Program.

PCR SL034	Improvements to Ephemerides is to be approved.
PCR SL033	Use 1950 Fixed Co-ordinate System. R. Robertson's Memo is to be sent to FSB as a detail evaluation of SL033 this PCR with the memo attached is then to be approved for implementation.

SL ??

Incorporate Star Position Vector data in the 1950 Co-ordinate System, but with stars proper-motioned to January 1973 is to be written by MIT.

MIT is to write a PCR for Luminary 1E to change the scaling thus removing the present restrictions.

In addition MIT is to submit the constants data attached to PCR 1082.2 as a detail evaluation to Page 1 of 1 of PCR 1082.2. This data will then be approved for implementation.

K. W. Greene

KWG:ejt

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