R. Larson

Mission Techniques Memo #31

TO: Distribution
FROM: Malcolm W. Johnston
DATE: July 9, 1969
SUBJECT: "G" Ascent

1. Can the DAP be used to provide supplemental RCS +X thrusting during normal APS ascent?

   Ans. Yes, 4 jet +X RCS translation is available unless a rotational attitude maneuver temporarily usurps translation jets. (P12 automatically selects 4 jet configuration).

2. Does ascent guidance depend on a nominal landing site platform alignment orientation?

   Ans. No! (Though pitchover FDAI display will not correspond to that predicted by P12 prior to liftoff as these represent "delta" angles).

3. At the bottom of page 2-6 of this Mission Techniques Document (June 25, 1969) it is stated that, if the PGNCS fails to recognize APS thrusting (R40) a switch to AGS should be delayed until after pitchover. MIT feels the switch should be done immediately (unless APS really isn't thrusting) as PGNCS will remain in att. hold.

4. The velocity residual values used on the charts of pages 2.14 - 2.19 disagree with those listed in Table 3. The latter are acceptable to MIT (R. White will supply more details on his error analysis ASAP).

5. On pages 3.9 and 3.10 logic is shown that calls for PGNCS nulling of post-insertion residuals, followed by a determination of the PGNCS state of health. Perhaps the order should be reversed! (ie., a degraded PGNCS should not be allowed to null PGNCS residuals).

6. On page 3.11 tests are shown for an Hp of 40K rather than 30K. MIT assumes the latter is considered a clear pericynthion.

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