A spurious commanded firing of a downward forcing RCS jet in powered ascent.

An off-nominal run, LAUNCH82, was made for powered ascent from surface of moon to ascent engine cutoff. An off-nominal c.g. displacement was simulated in which c.g. displacement from the ascent engine thrust axis increased from a small value to approximately 2.5" along the +z-axis at cutoff.

Coding error in "ERRTEST" section of program. If the following conditions occur simultaneously about a control axis, then the LM DAP can enter the...

1 or 2 Isolated firings (of 100 ms duration) of a downward forcing jet during period of normal single jet control for ascent vehicle.

For nominal mission anomaly will not occur. For off-nominal case 1 or 2 extra firings of a downward forcing jet may occur during 430-second powered ascent. For 2 extra 100 ms firings of a downward forcing jet, an...

None needed.

None.

Change ERRTTEST section of section. An increase of 2 words of coding is required.

Fix in next release.

Rerun test run.

Fix in LUMINARY 1B
2.1 Cause, cont'd.

..."MAXJETS" section of coding and command an unwanted 2 jet firing about the axis.

\[
(1) \quad E = \pm 0 \\
(2) \quad \text{FIREDB} < 0
\]

Condition 2/ can occur only if \( \text{ABSAOS} > 11.25^\circ/\text{sec}^2 \) and \( \text{EDOT} \) and \( \text{AOSU} \) have the same sign.

2.3 Mission Effect, cont'd.

...additional \( \Delta V \) penalty of \( 0.09 \text{ ft/sec} \) may be incurred, or equivalently a fuel penalty of approximately \( 0.05 \text{ lbs} \) of fuel may be incurred.