

31 Oct 54 01 43

~~TOP SECRET~~

PRIORITY [REDACTED] CITE [REDACTED]

[REDACTED]

REF A: MEN 1014

1. ^{B.} OUR ANALYSIS CONFIRMS THE GAPPING PROBLEM. OUR DATA SHOWS GAP OF APPROX 10 NAUTICAL MILES BETWEEN REV 68 AND 79; APPROX 21 NAUTICAL MILES BETWEEN REV 79 AND 95; 33 NAUTICAL MILES BETWEEN REV 95 AND 111; AND 45 NAUTICAL MILES BETWEEN REVS 111 AND 127.

2. YOU ARE CORRECT IN THAT THE PROBLEM IS DUE TO INCREASING ORBITAL DECAY. ORBIT IS APPROX 8 DAYS EQUALLY SPACED ON REV 63 AND DECAYS TO AN 6 DAY EQUALLY SPACED CONDITION ON REV 127.

3. AS TO WHETHER THIS ^{DEFICIENCY} ~~DISPERSSION~~ CAN BE OVERCOME, A FURTHER ANALYSIS IS REQUIRED BY ^{LMSC} SUNNYVALE. ^{FIRST} ANALYSIS IS NOW IN PROGRESS. WE ~~HAVE~~ ASKED THEM TO PROVIDE US WITH EITHER AN ADDITIONAL 18 NAUTICAL MILES ALTITUDE OVER CUBA ON DAY 8 OR AN ADDITIONAL .2 MINUTES PERIOD ON DAY 8.

ANSWER IS PROBABLY NO.

^{NO. 18} POSSIBLE MEANS OF ACHIEVING THIS ^{WOULD BE} ARE BY EITHER ROTATING INITIAL PERIGEE LOCATION NORTHWARD TO PROVIDE ADDITIONAL ALTITUDE OVER CUBA OR BY PROVIDING A BOOSTER ROCKET FIRING AFTER FIRST RECOVERY TO ACHIEVE ADDITIONAL .2 MINUTES PERIOD. BOTH THESE CAPABILITIES REQUIRE FURTHER ANALYSIS.

^{YOUR VEHICLE PERFORMANCE CAPABILITY. BOOST ROCKET INSTL WOULD REQUIRE TOMORROW, HOWEVER, CONSIDER IT DOUBTFUL THAT IT CAN BE ACCOMPLISHED ON MEN 1014 DUE TO TIME TO LOCATE INSTALL AND WAS NOT CONSIDERED DESIRABLE}

4. ADDITIONALLY SHOULD POINT OUT THAT LARGE DISPERSIONS ON PERIGEE LOCATION COULD WORK TO YOUR ADVANTAGE IN REDUCING GAPPING PROBLEM. HOWEVER THE ABILITY TO PLACE PERIGEE AT A PRECISE LOCATION ON THIS NEAR CIRCULAR ORBIT IS NOT WITHIN PRESENT CAPABILITIES. DISPERSION ANALYSIS ON THIS MISSION INDICATES AN UNCERTAINTY IN THE ARGUMENT OF PERIGEE OF PLUS OR MINUS 55 DEGREES.

BY LMSC PROGRAM OFFICER

Declassified and Released by the NRO

In Accordance with E. O. 12958

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on NOV 26 1997

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5. BASED ON YOUR REQUIREMENT OF COVERAGE OF CUBA IN THE FIRST 4 DAYS
WE BELIEVE AN ENTIRELY NEW ORBIT IS PREFERABLE.

● PRELIMINARY ANALYSIS OF THE POSSIBLE ORBITS INDICATES ONE LIKELY POSSIBILITY.

THIS ORBIT HAS BEEN KEYED TO CUBA COVERAGE WHILE STILL GIVING AN 8 DAYS EQUALLY
SPACED PATTERN FOR TOTAL COVERAGE. ORBITAL PARAMETERS FOR THIS MEN ARE:

INCL ANGLE 75 DEGS; PERIOD 90.18 MINUTES; ARGUMENT OF PERIGEE (REV 0)

55 DEGS NORTH, PERIGEE HEIGHT APPROX 105 N.MI. FURTHER WORK ON THIS ORBIT IS
CONTINUING. APPRECIATE YOUR COMMENTS ON THIS TYPE ORBIT, AND WILL BE ABLE TO

^{PRELIM}
SUPPLY BREAKWELL ELEMENTS 31 OCT AT CLOSE OF OUR WORKING DAY. LMSC-SV

STATES THIS ORBIT IS FEASIBLE FOR 3 DAYS WITH POSITIVE
END OF MESSAGE WEIGHT MARGIN, 3 DAYS POSSIBLE WITH MINUS
7 POUNDS MARGIN, AND COULD BE FLOWN ON MAXIMUM EFFORT
BASIS WITHIN 16-17 DAYS, OR ON NORMAL EFFORT IN 22

6. MEANTIME WE WILL PROCESS CAMERA PROGRAM
FOR PRESENT ORBIT AND LAUNCH DATE ~~ON~~ ON
MAX EFFORT BASIS

WORKING
DAYS

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