covert reconnaissance [illegible] of WELL/L. In this study each of several possible approaches for night launch (N) and day launch (D) was explored. A circular orbit altitude of 117 n. miles is assumed. A summary of each plan is presented with a more detailed discussion of case D-3 which is the selected method.

Case N-1

1. Plan

   a. Launch south from Cooke at near midnight

   b. Orient pod at end of orbit boost phase so that pod is horizontal at 55° S latitude and therefore is also horizontal at 55° N latitude 180° around the orbit.

   [illegible] provides for [illegible]

   e. Reference Fig. 1, retro-angle of 120° provides a re-entry range of 1540 N miles.

   f. A night time [illegible] of Hawaii, latitude 20° N, [illegible]

   g. Dispersion is x = ± 145 N mi. Y = ± 41 N mi.

2. Comment

   a. Advantages

      - An optimum retro-angle is provided

      - Allows for complete coverage at southern latitudes.

   b. Disadvantages

      - Launch at night is somewhat more complicated than day launch

      - Requires 117L vehicle attitude control horizon sensor with night time (IR) capability which is not presently available

      - Impact at night greatly complicates the search and recovery operation or radio beacon and dye marker is used. Radio beacon and flashing light may provide better search than day.

Case N-2

1. Plan

Same as N-1 but with launch delayed from midnight the maximum possible, as limited by sun angle requirements for photography.

2. Comment

a. Advantages

- Provides impact closer to morning daylight hours.

b. Disadvantages

- Lighting requirements in winter restrict photography to noon plus or minus one hour thus restricting launch to midnight plus or minus one hour. Thus gain is insufficient, for

Case N-3

1. Plan

Same as N-2

2. Comments

Disadvantages

- If re-entry is commanded at first southerly crossing of Atlantic, photo coverage of USSR between longitude 50 W and 110 W (orbits 15, 16 and 17) will be missed.

- Maintenance of orbit for additional day in order to provide coverage is marginal at 117 n miles altitude. Also change in pod attitude caused by added pellets will be severely detrimental to impact dispersion.

Case D-1

1. Plan

a. Launch south from Cooke at near noon.

b. Orient pod at end of orbit boost phase so that pod is vertical at 35° S latitude with exposure toward earth.

c. Take pictures on passes 3, 4, 5, 6, 7, 8, and 9 with the vehicle axis parallel to earth at 55° N latitude

d. On pass 18 trigger the retro rocket at latitude 55° N -- where is the supplement if the retro angle

e. Reference Fig. 1, trigger at latitude 40°N, retro angle of 165 provides a re-entry range of 8060 n miles.

f. A daytime search and recovery is effected in the area of Palmyra Lat 6° N, Long 160° W.

2. Comments

a. Advantages

- Daytime launch and recovery

- Daylight horizon scanner

b. Disadvantages

- Low velocity range

- Large impact dispersion

- Search and recovery in area so far distant from Hawaii is difficult for search forces

c. Mode

a. Launch [illegible]

b. Orient pod at end of orbit boost phase so that pod is vertical at 35° S lat with capsule away from earth

c. Take pictures on passes 3,4,5,6,7,8 and 9

d. On pass 2 trigger retro-rocket at latitude 35.4
where [illegible] is the supplement of the retro angle

2. Comments

a. Disadvantage

- For practically small [illegible] (i.e. 15°) re-entry will not obtain since it adds velocity and modifies orbit as follows.

V = 25[illegible] + 150 cos 15°

[illegible] = [illegible] = .95

From Fig. 2, this gives apogee of 1[illegible]0 st miles. Perigee remains approximately the same.

SECRET

1. Flight Plan

a. Launch south from Cooke at near noon

b. Orient pod at end of orbit boost phase so that pod is vertical at 10° S latitude with capsule toward earth.

c. Install camera mirror so optical path is off the normal to pod axis by angle = 20° toward the capsule.

d. Take pictures on passes 3, 4, 5, 6, 7, 8, & 9.

e. Command drop from Alaska at 45° N lat, providing impact ranges of 1600 n miles in the vicinity of Hawaii at lat 15° N, long 160° W.

f. Track CW beacon installed in capsule or on motor with TLM-18 on Hawaii.

g. Attempt track of ionization with Mod II radar.

h. Dispersion for 3 probability is X = ± 305 n miles (down range), Y = ± 205 n miles, and y = ± 41 n miles.

2. Comments

a. Advantages

- Daytime launch and recovery
- Daytime horizon scanner
- A near optimum retro angle is provided
- Search force, aircraft and ships can operate directly out of Hawaii
- Improved security since recovery operations never previously operated in area.
- Present [redacted] tracking station in good position to track capsule or ionization trail.

b. Disadvantages

- Photogrammetry slightly complicated by curved swath
- Req lows modification to present camera and pod design.

SECRET

Impact Area Task Force Coordination

Atlantic Force

Advantages

(a) Task force in being

Disadvantages

(a) Use of present force would require coordination scheduling with other weapon systems which would compromise security.

(b)

(c) Requires tracking station for recovery initiation not now planned be established and not required for orbit tracking.

Pacific

Advantages

(a) Uses tracking station for recovery initiation now planned required for early orbit tracking.

(b) Possibly better security can be enforced

(c) No conflict with other programs.

Disadvantages

(a) Requires setting up of new operation.