

## UNCLASSIFIED

Considerations Affecting Analysis and EvaluationOPERATIONAL

Inasmuch as there is a distinct possibility that a number of the reported accidents represent aerospace projects of a security-classified nature, the list of incidents has been submitted to higher echelons for review.

Since weather balloons, blimps, airplanes of unusual size, or configuration, and guided missiles test vehicles may represent some of the observations, action has been taken to obtain information concerning schedules and flights of such craft from the appropriate agencies.

In connection with the psychological studies being performed, extensive investigations, concerning the character and reliability of the reporting witnesses have been made.

TECHNICAL

A certain proportion of incidents appears to be oval aircraft, though of unconventional configuration. In order to investigate the credibility of their existence the following factors must be considered in any technical analysis.

## Aircraft

## Method of Support (Lift)

Wings  
 Free-lift (Hindle-ess)  
 Rotor  
 Vertical Jet  
 Magnus Effect (rotating cylinder, cone or sphere, subjected to relative translational air velocity)  
 Aerostatic (lighter-than-air craft)

## Method of Propulsion (Thrust)

Propeller-revolving engine combination  
 Jet, rocket, ramjet (utilizing conventional fuels and oxidants or possibly atomic energy)  
 Aerodynamic (Magnus Effect - oscillating airfoils - developing negative drag (thrust))

If an atomic energy powered engine were available, a small mass flow at a large velocity could accomplish the required lift and propulsive forces and the large energy expenditure would be of small importance.

However, the heat exchange requirements for the atomic-powered engine appear to demand physical dimensions of inordinate size that presently would preclude the use of this powerplant for aircraft.