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Psychological Analysis

A psychological analysis of the reported data is being prepared by Aero-Medical Laboratory, A.M.C., for the purpose of determining those incidents that are probably based upon errors of the human mind and senses. A preliminary verbal report from the professional psychologists indicates that a considerable number of incidents can be explained as ordinary occurrences that have been misrepresented, as the result of human errors.

The condition of "vertigo", well known to airplane pilots, as well as others, is considered to be an important factor in some of the reported incidents. "Vertigo" is defined from a medical viewpoint by Webster's Dictionary as "Dizziness or swaying of the head; a disturbance in which objects, though stationary, appear to move in various directions, and the person affected finds it difficult to maintain an erect posture. It may result from changes in the blood supply of the brain or from disease of the blood, eyes, ears, stomach, or other organs."

Space-orientation difficulties at night in an airplane, due to the lack of an awareness of visual references, under a condition of "vertigo" were likely to appear in personnel in night-vision equipment than under more normal conditions. The fact that both pilot and co-pilot may report the same impressions is not complete proof of accuracy, since both individuals have experienced the same maneuvers and accelerations and have viewed the same lights and surroundings under the same optical conditions (including the same window and canopy glass).

A more complete discussion of psychological factors is expected to be profiled in a future status report. Quite probably, some of the incidents of fast, highly maneuvering "lights" reported by both air and ground observers, are the result of "vertigo" or optical illusions.

Strictly speaking, no engineering analysis of an incident should be initiated until the psychological analysis has been made and has shown that psychological factors cannot explain the observation.

Activities Outside Air Materiel Command, Supplying Information and Analysis

Specialist services, supplementary to those of Air Materiel Command technical offices, are being provided by a number of agencies.

The Air Weather Service has reviewed the list of incidents and has provided the information that twenty-four of them coincide, both with respect to location and time, with the release of weather balloons.

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