

Ltr, EMI, to CG, 200, Subj: Analysis of Proj. "Bugs" Reported Incidents

4. It is believed that certain of the items in the questionnaire "Character-Indefinitized Flying Objects" require insignificant and unreliable data from an observer. These are: 9. Distance of object from observer; 11. Altitude; 12. Speed; and 13. Size. For any unfamiliar object beyond the visual range of the human eye (about 50 ft.), these four factors are mutually inter-dependent and therefore inter-correlated unless at least one of them (and also observed angles) are known. Strictly asking an observer about these inter-correlated not only gets unreliable data but induces wild answers because the observer is led into making a statement about quantities for which he has no basis in fact. We will automatically assume accuracy of some one of these factors and he will give incorrect information on all. That people (many of whom should know better) will arbitrarily give answers to the wide-spread figures on these questions, which really cannot be assessed at all, is proof of the unreliability of their information.

5. It is suggested that these four items on the questionnaire be replaced by questions which will yield answers possible of being independent data in terms of the observer's best estimates of angles and time. From such data (given by observers of the same object at two different places), a reliable calculated estimate could be made of the object's size, altitude, speed and path. These data should include:

a. An estimate of the angular size of the object. A wide but reasonable estimate can be made by comparing the angle subtended by the index finger held at arm's length. The finger (1 1/2" wide) of an average man held at 20" to 30" (arm's length) will subtend an angle of approximately two degrees. If this any angular size from about 1/2" to about 6" can be estimated.

b. The range of the object's flight in terms of the angle subtended by NEW SPANISH POINT. If NEW SPANISH POINT is a reasonably accurate course it is important to observe the position at the beginning and the end of its course. After the flight has been completed a person can subdivide his arc towards the two points and also at 90° or 180° and by comparison estimate the angular extent of the flight. It is also important that information which will determine whose direction relative to a compass point he gives. If the angular course is associated with objects on the horizon, with roads, with the sea (if the time of day is also noted) or of the north star, the orientation can be corrected at any later time.

c. The time required for the object to traverse the observed course. This is probably the most difficult estimate to make. Timing with a watch is the most satisfactory, but an observer is seldom prepared to do so. Seconds can be counted with good accuracy by saying,

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