

In five of the six cases, the probability is less than 1 per cent that the distributions are the same. In the sixth case, Light Brightness, the classifications are too nebulous to be of real value. However, these tests do not necessarily mean that the UNKNOWNNS are primarily "flying saucers" and not aircraft, balloons, or other known objects or natural phenomena. The UNKNOWNNS might still be unidentified KNOWNNS if either of the following cases occurred:

- (1) The characteristics which were observed for the UNKNOWNNS were different from those observed for the KNOWNNS because of the psychological make-up of the observer or because of atmospheric distortion. This assumes the distribution of objects in KNOWNNS and UNKNOWNNS is the same.
- (2) The UNKNOWNNS may be known objects in different proportions than the group identified as KNOWNNS. (That is, a greater percentage of the UNKNOWNNS could be aircraft than the percentage of aircraft in the identified KNOWNNS.)

The second case is the more probable one. In this connection, it is interesting to note the factors which contributed to a large chi square result in the tests made above:

(1) Color

The major contribution to chi square in color is from the color green. There is a large excess of green sightings among the KNOWNNS over the UNKNOWNNS. Of the 130 known objects in this classification, 98 are astronomical, and are due mostly to the green fireballs reported from the Southwest U. S.

(2) Number

The large chi square is due to a greater proportion of UNKNOWNNS in the multiple object classification. Apparently these are harder to identify.

(3) Shape

In this case, there is a higher percentage of UNKNOWNNS in the rocket-aircraft-shape classification. These might be familiar objects for which unusual maneuvers were reported.

There is a higher percentage of KNOWNNS in the flame and in the meteor- or comet-shape category, which in both cases appears to result mainly from excesses of astronomical sightings.

(4) Duration of observation

Here there is an excess of KNOWNNS in the less-than-5-second group. Again, the majority of KNOWNNS in this group are astronomical. The greater proportion of UNKNOWNNS in the 31- to 60-second and 61-second to 5-minute groups cannot be explained.

(5) Speed

The major contribution to chi square for this characteristic is due to a large excess of UNKNOWNNS in the over 400-mph class. It can be assumed that some of the excessive speeds are inaccuracies in estimates by observers. However, some radar sightings, which are practically impossible to identify, show objects with speeds of 1,000 to 2,000 mph and over, and these reports account for a number of these UNKNOWNNS.

(6) Light brightness

Since this chi square was not significant, it is not necessary to discuss it here.

An examination of these discrepancies thus brings up a very interesting point. In every case for which there is a significant excess of KNOWNNS over UNKNOWNNS, the excess can be attributed to an excess of identifiable astronomical phenomena. This would seem to lead to the conclusion that astronomical phenomena are easy to identify and there are very few left in the UNKNOWNNS. Accordingly, the astronomical object sightings were deleted from the KNOWN object sightings and the Chi Square Test was again applied. The results are shown in Tables VIII through XIII, where in this case the KNOWNNS do not contain astronomical sightings.

It will be noted that some groups were combined when the adjusted number of KNOWNNS was ten or less, except for the case for which the number of objects per sighting was the characteristic studied. These were borderline cases, and no good combination of groups existed.

It is apparent that the deletion of astronomical sightings gives a better fit, although the decision is not clear cut, since for two cases (light brightness and speed), the chi square increased. However, it can again be pointed out that the reporting of these two characteristics is highly subjective and is open to question. The estimation of speed is especially open to question because of the impossibility of accurately determining it visually.