

Photo Analysis of an Aerial Disc Over Costa Rica: New Evidence

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Abstract—The original negative of the Costa Rica film of an oval aerial disc-like object was obtained and carefully analyzed. Not only was there no evidence of optical defects, deliberate hoax, or support for other prosaic explanations for the disc image, but interesting new surface details were found, all of which possess the same oblique orientation. The disc shaped object remains unidentified.

In our original article, "Photo Analysis of an Aerial Disk Over Costa Rica" (Vol. 3, No. 2, p. 113-131), we concluded by saying that we were trying to obtain the original negative of the unidentified object photographed by chance during an aerial mapping mission for further study. Indeed, we were concerned that some of our reviewer's suggestions might require stricter tests than we could carry out on a second generation negative. We are pleased to state that through the efforts of Peter Sturrock, Jacques Vallee, and Ricardo Vilchez in San Jose, Costa Rica we received three connected frames (No. 299-301) of the original black and white negative on February 11, 1990.

As one would expect, there is more fine detail visible on the original negative than on the copy and this detail is highly interesting. Several points deserve further comment based on careful unaided and magnified visual inspection of this new negative and different contrast positive print enlargements that were made. Figure 1 is a high contrast enlargement of the disc made from the original negative.

First. The oval disc image is present in the same relative location on frame 300 as already described in our first article. Also, the entire film plane on frames 299, 300, and 301 is flat with absolutely no protrusions or depressions anywhere. The thoughtful comments by our original reviewer in this regard were shown to be unsupported.

Second. The emulsion side of frames 299 and 301 possessed several small, irregularly shaped developer stains which only affected the specular reflectivity of the emulsion, but did not in any way influence the transmissivity of the film. These stains were completely invisible except when the film was

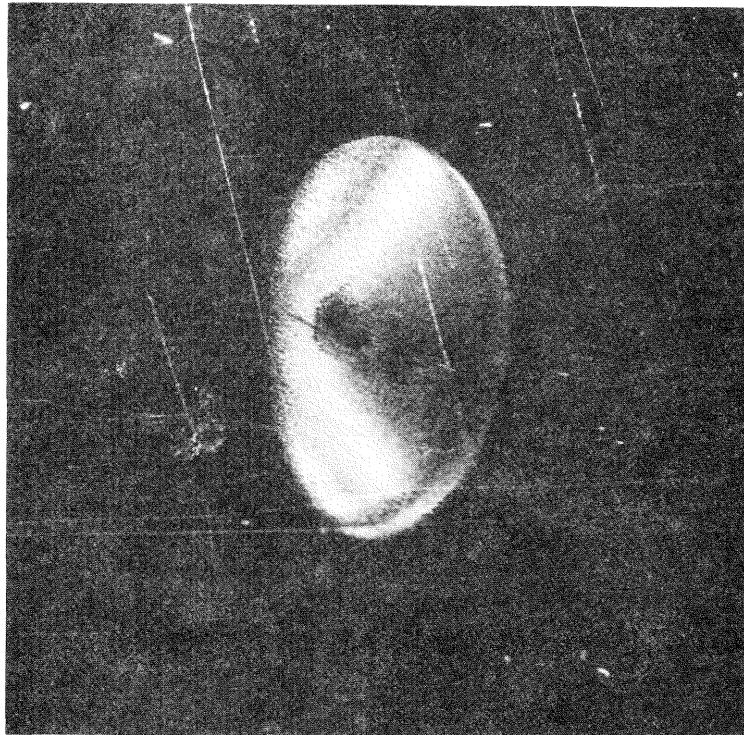


Fig. 1. Enlarged positive print of disc from original negative.

viewed against a diffuse, glancing, reflecting light source. No stains were found at any place on frame 300, the frame on which the image of the disc was located.

Third. There are a number of long linear scratches (mostly on the non emulsion side) running parallel to the edge labelled with the Kodak Safety Film markings running east-west. It is apparent that the negative has received rough usage over the years. There are three very thin parallel scratches running through the image of the disc as well that are visible in Figure 1.

Fourth. The individual film grains were somewhat more apparent on this original negative throughout all three frames as compared with the second generation negative, as would be expected. They appeared to be randomly spaced and possessed random diameters as well,

Fifth. Our examination of the original negative confirms our initial speculation that the image of the disc is not the result of a double exposure, a reflection, a deliberate paste-up, or other kind of hoax.

Sixth, There appears to be a very interesting obliquely oriented micro- and macrostructure detail on the image of the object itself. Figure 2 is a drawing of the disc that indicates the location of this detail.

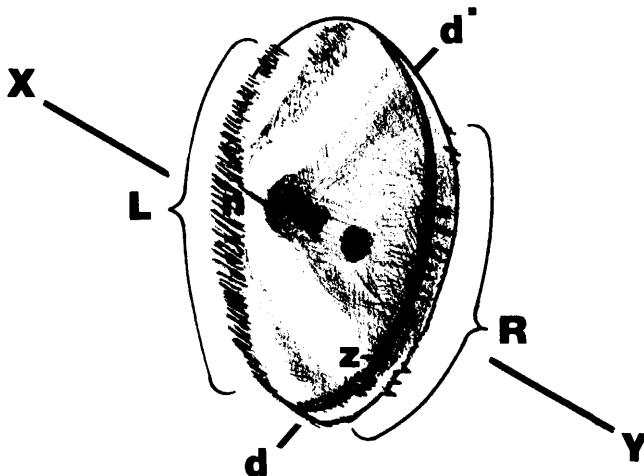


Fig. 2. Drawing of fine surface details based on original negative.

Referring to Figure 2, the left-hand edge (L) consists of dozens of thin, parallel fingers of light that originate in the "body" of the object and fade off into the background luminance. The tips of these fingers end approximately along a curved line that corresponds to the oval shaped outline of the disc's form. The right-hand edge (R) possesses a much more regular (smooth) contour than the left but also possesses many very short jagged lines of light, each of which is oriented in the same direction as the longer fingers discussed above. *The line labelled X-Y is the orientation of all of this microstructure just described.* There are even some very short jagged lines with this orientation found along the inner edge labeled (z).

Three other details having this same orientation are also of note. They are (a) the upper and lower edges of the disc labelled (d') and (d), respectively, (b) a relatively long, thin, dark line that originates at the central dark region, which is labelled (n), and (c) the alignment of the two dark regions near the middle of the disc. We have no clear understanding of the origin or meaning of this oblique orientation effect seen in so many of its surface details.

On the basis of a very careful examination of the preceding and following frame, under different levels of magnification, it is clear that a second image of this aerial disc is not present in either one (unless it is concealed behind a dense cloud). Therefore, it must have flown into and then out of the field of view of frame 300 within a 20 second period of time or otherwise become invisible. Assuming that the object did not simply disappear, but travelled in a straight line, it is possible to calculate its maximum speed of travel. Assuming that the disc flew along a straight west to east path at ground level, it would have had to travel about 1,988 miles per hour to traverse the entire distance from its current image location on frame 300 to just beyond the eastern edge of frame 299 (a distance equivalent to 11.04 miles). Likewise,

assuming that the object travelled along a straight line connecting its current position to the SW corner of the same frame (No. 300) (7.92 miles), moving generally southwest in the same general direction as the thin, parallel fingers of light originating on the body of the object, it would have had to travel at least 1,425 miles per hour.

Seventh. We examined frame 299 and 301 under various magnifications in the same region of the lake where the disc is found. We were looking for any kind of disturbance to the surface of the water. There was none.

In summary, our good fortune in obtaining the original negative for frames 299-301 has resulted in confirmation of our earlier speculation that the aerial disc is certainly anomalous. While it may not be inexplicable, it is at least unidentified.