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Analysis of a UFO Photograph

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Abstract—This report reviews various investigative activities and analyses surrounding a photograph of a purported unidentified flying object (UFO) taken on October 8, 1981 at about 11:00 a.m. local time on Vancouver Island, British Columbia. The evidence consisted of a single frame of 35 mm color film which showed a sharply focused disc-like object against a clear blue sky with wooded mountain peak nearby. Analyses of the original negative included micro-densitometry, computer enhancements, and other measurements intent upon showing a support thread, atmospheric disturbance, or other evidences of a hoax. These analyses suggest that the disc was a three dimensional object located at a distance of at least 30 feet from the camera; the object's surface albedo was diffuse and of lower luminance than sunlit cloud. Extensive interviews with the photographer (who never saw the aerial object), her husband and daughter and site survey tended to support the entire narrative account. The identity of the disc object remains unidentified.

Introduction

Contrary to common belief there are many photographs of alleged UFOs. Of course the problem lies not so much with the details of the photograph and its negative as with the photographer and the equipment used. It is for this reason that one must be careful to fully document seemingly unimportant details concerning the person taking the photograph, the social situation which surrounded the photograph(s), the camera-lens-film data, the developing-printing-enlarging activities and the manner in which the photograph came to the attention of the investigator. Since such a photograph image is only as credible as the photographer who took it, one must exercise "due diligence" in each of the above areas. Many older UFO photographs remain useless artifacts of the UFO enigma because the investigator did not or could not obtain all of the relevant background information. As will be made clear, the author attempted to consider all of the above factors. Length restrictions of this paper impose certain practical limits upon the depth to which these facts can be documented, however.

The remainder of this report will cover the following topics: (a) the photograph and negative, (b) the camera and lens, (c) the film and its processing, (d) the results of image analysis, (e) the site visit results, (f) credibility of the photographer, and (g) a brief review of Frisbee characteristics.

The Photograph and Negative

The author received a color negative strip of two frames. The higher numbered frame showed a small child standing in front of a fireplace inside a

home. The lower numbered frame showed a mountain whose top was very nearly centered within the frame. The foreground detail was in sharp focus indicating that either a fairly high shutter speed had been used or the camera had been stabilized or both. Figure 1 is an enlargement of the full negative reproduced as a positive print. A sharply focused disc-like object is seen above and to the right of the mountain top. The tip of the mountain was located close to the geometric center of the 35 mm frame. This tends to support the statement made by the photographer that she was intent upon photographing the mountains and never saw the aerial object. The presence of a cloud directly illuminated by sunlight through extremely clear air provides a useful upper exposure limit in later densitometry measurements. Dark shadows seen within a stand of trees in the left foreground provides a lower end to the exposure. Thus, a maximum of 12,500 ft-L is assumed for the luminance of the cloud and approximately one ft-L for the shadow area. The atmospheric clarity makes it almost impossible to judge separation distance between the camera and object by means of an extinction coefficient calculation.

The negative measured 36 X 24 mm. A photographic enlargement of the disc image provided for linear measurements. Its major axis on this print was 5.70 cm while its minor axis was 1.60 cm for a width/height ratio of 3.56. The width of the "dome" protruding from the upper surface was 1.3 cm and

Fig. 1. Photograph of mountain and disc.

its height about 0.7 cm (ratio of 1.86). Finally, the dome to disc width ratio was 4.38 and the dome to disc height ratio was 2.29. While these ratios are a function of the viewing aspect angle, they may, in general, be compared with corresponding values given elsewhere (Haines, 1978, 1979) of similarly shaped aerial objects of unknown origin that have been reported over the years. This previous work shows that the present photographic image of a disc is not uncommon; there is a larger context of purported UFO drawings into which this object fits.

The *hyperfocal distance* is the nearest distance from an object being photographed to the camera at which the object is in sharp focus when the lens is focused on infinity. Since the mountain is in sharp focus and the photographer said that she took great care to manually focus the camera it is possible to determine the hyperfocal distance by also knowing the focal length of the lens and its aperture (Neblette, 1965). For a 50 mm focal length lens and f-11 aperture the hyperfocal distance is 15 feet. Corresponding distances for f-8 and f-16 apertures are 20 and 10 feet, respectively. Thus, the airborne object in question must have been farther than ten feet (and probably farther than 20 feet) from the camera since it also was in sharp focus.

The actual camera settings used can only be inferred. A film with an ASA 100 exposure index (as this was) and a lens with the optical quality of this one would have very likely automatically pre-set a shutter speed of 1/125th second at an aperture of f-11 for the ambient scene luminance which was present.

Finally, the negative was in very good condition and did not have any visible scratches, major blemishes, or other defects. An invisible vertical scratch was noted in one of the dye layers as will be described later, however, this scratch was well away from the disc image.

The Camera and Lens

The camera was a Mamiya, model 528AL, single lens reflex (SLR) type with permanently attached Mamiya/Sekor 48 mm lens with 1:2.8 aperture. The serial number on the lens was M197535. The camera is of the automatic exposure type meaning that all one needs to do to take a photograph is insert the film, pre-set the correct ASA number for the film used on the camera, aim and manually focus the lens for best focus, and press the shutter release. Both shutter speed and aperture adjust automatically for "best" exposure. The shutter actuation lever is of the standard top-mounted type which requires a downward finger depression. Once the shutter has opened and closed another exposure cannot be taken without first advancing the film to the next frame. The author borrowed this camera and took a series of photographs with it under closely similar sun angle, sky brightness, and other conditions to check on possible lens and/or shutter related image artifacts. None were found. The lens was coated with the standard anti-scattering material. No scratches or other flaws could be seen in the lens elements or surface coatings.

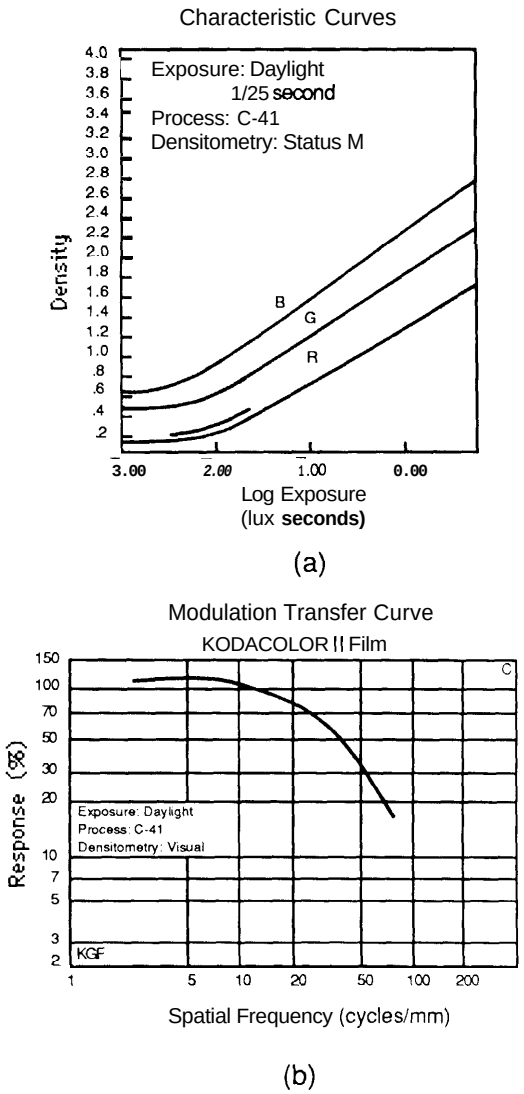


Fig. 2. Kodacolor II film characteristics: (a) Characteristic curves, (b) Modulation transfer curve, (c) Spectral sensitivity curves.

The Film and its Processing

The film used was Kodak Safety Film 5035, 35 mm, commonly known as Kodacolor II. Its ASA rating is 100. The photograph in question was located at frame 11. The so-called "characteristic curve" (i.e., exposure vs. optical density), modulation transfer function, and spectral sensitivity for this film are presented in Figure 2(a), (b), and (c), respectively (Eastman Kodak Co. Manual, 1980).

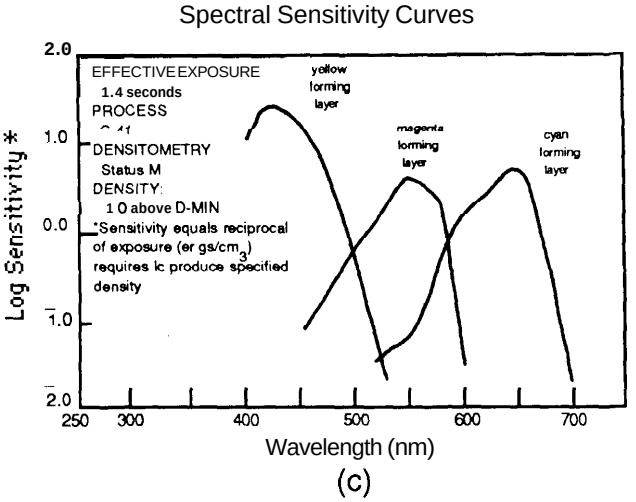


Fig. 2. **Continued.**

The concept of "graininess" and "granularity" of photographic film is important here. Graininess is defined as the subjective sensation one gets when viewing an enlargement of a photograph of a random pattern of variations in texture, color, or both in regions of homogeneous luminance and color exposure. Granularity is the result of an objective measurement of the film using an instrument known as a densitometer which measures the local density variations that give rise to the sensation of graininess (Kodak Publications F-20, 1973). Most silver halide crystals that make up photographic film are dispersed in a gelatin and coated in thin layers on a supporting (paper, etc.) base. Importantly, these crystals vary in size, shape, and sensitivity to light energy. In general, they are also randomly distributed. As the Kodak manual states, "Within an area of uniform exposure, some of the crystals will be made developable by exposure; others will not. The location of the developable crystals is random" (Kodak Publication F-20, 1973, p. 3; italics mine).

One result of this random distribution of light-sensitive crystals (grains) is that patterns can be produced which have nothing to do with the object that was originally photographed. If such a pattern is perceived as having a recognized shape, it is possible to conclude that the shape represents an object somehow related to the primary object when, in fact, there is no functional correlation with the object.

The diameter of the film's crystals is also important. The Kodak film manual indicates that a typical crystal diameter ranges from 0.2 to 2.0 micrometers. At a normal viewing distance of 25 to 35 cm the human eye can just discriminate a crystal (grain) on the order of 0.05 mm diameter. Normally the eye does not perceive the granular structure at low magnifications. The finer the mean diameter of the crystals the higher the magnification can be before graininess is noticed. It is the random nature of the exposed crystals, each

possessing a different spectral reflectivity in white light, which is a necessary condition for the appearance of graininess to occur. Also, the mean diameter of film crystals becomes a significant factor when deciding on a diameter for a scanning digitizer's entrance aperture. A six micron diameter aperture was used here which was approximately $\frac{1}{2}$ mean crystal diameter of the present film.

The roll of exposed Kodak film was developed commercially. According to the photographer, a normal processing delay occurred (approximately 1.5 weeks). She did not specify that special development or any enlargements were desired. A set of color positive prints ("jumbo size") and the developed color negatives cut apart into sets of two frames were received by the photographer on or about October 26, 1981. Inspection of the attached second frame to the one in question by the author showed that it was of a child standing inside a home. This child was the daughter of the couple who owned the camera; the scene was confirmed to have been taken inside their home in Campbell River, British Columbia. This fact agreed with the story told by the couple concerning the sequence of events of their automobile trip to the north end of Vancouver Island and return and the photographs they remembered taking.

It was not until the couple had received the set of color prints from the Vancouver processing laboratory that they noticed the strange aerial disc in the clear blue sky near the mountain top.

Image Analysis Results

The analysis of the negative (and also first generation positive black and white and color prints) included the following steps: (a) linear and angular measurements, (b) micro-densitometry scans to establish optical density range, (c) black and white photographic enlargements using papers having different spectral sensitivities, and (d) computer-based contrast enhancements.

Linear and Angular Image Measurements. Selected linear measurements of the disc's image on the enlarged print are given earlier (cf. The Photograph and Negative). The angular measurements shown in Figure 3 were determined on the basis of the linear measurements of the image, the camera lens' focal length, and on-site survey which is described below. Referring to Figure 3 it may be pointed out that the photograph's center was elevated about nine degrees arc above the horizontal and the tip of the mountain was very close to the geometric center of the photograph. The disc subtended 1.3 degrees arc. Elevation angles from the local horizontal were measured with a surveyor's transit to the top of the mountain, the location of the photographer, and the sun. These latter measurements were obtained at the same time of day, day of the year, and location as that of the original photograph but two years later. These results are presented in Figure 4 with the disc shown in side view. The exact outline of the disc is not known; also, the dome-like protruberance is not shown here.

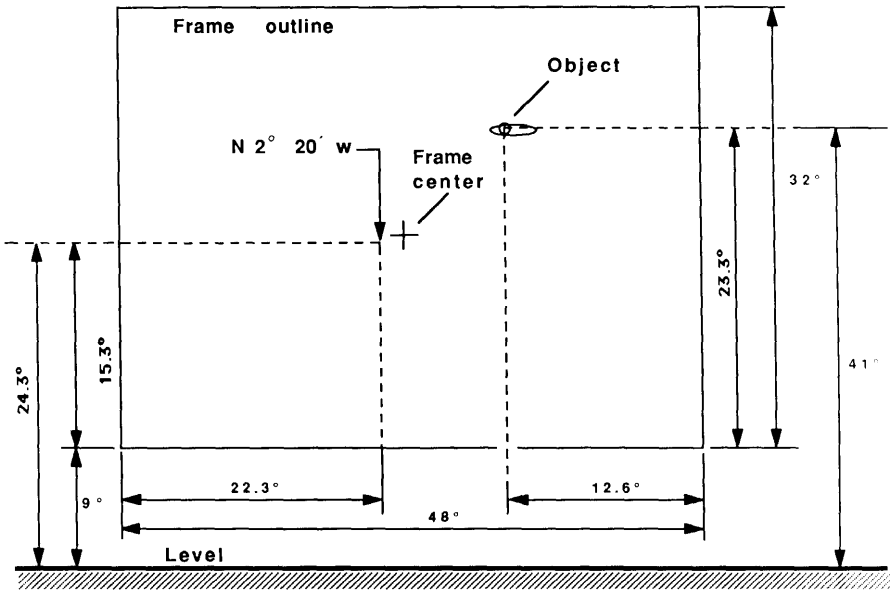


Fig. 3. Horizontal and vertical angles in the photograph.

Micro-densitometry Scan Results. A Joyce Loebl Recording Micro-densitometer with X20 power objective, 50:1 linear magnification ratio, slit width of 0.02 inches and vertical slit height of 1 mm was used on the original negative.

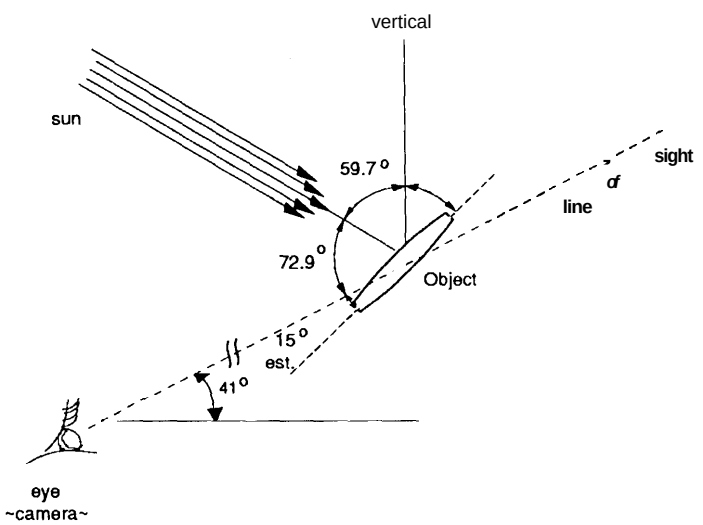


Fig. 4. Summary of elevation angles.

Density calibration was carried out using a Kodak ND step wedge spanning the densities on the negative. Greatest optical density (brightest positive image) was approximately 0.65 to 0.7 $\log_{10}$ ND and was found on the sunlit cloud. This is equivalent to about 12,500 ft-L luminance. Figure 5 is a vertical scan through the disc's two brightest areas using the micro-densitometer. The tracing peak marked T represents the upper-most (dome) bright area and B represents the lower area of brightness on the front edge of the disc. This scan line is shown in Figure 6 which is an enlargement of the disc's image. Points T and B both have optical densities of about 0.55 to 0.6.

Optical density of the blue sky on the negative is shown in Figure 5 and has a value of approximately 0.4 $\log_{10}$. The gradual slope of this densitometry tracing is due to the progressive sky brightness increase from the zenith to the horizon while the smaller amplitude deviations are due to single and grouped film grains.

Of particular note is the fact that the brightest area on the disc was of lower brightness than the cloud by approximately 0.15 $\log_{10}$ unit. According to a physics handbook (Allen, 1963), a smooth, polished silver surface reflects (within the visible spectrum) increasingly higher percentages of incident radiation with increasing wavelength. An average reflectance value of about 90% is found. Polished aluminum reflects about 85% regardless of wavelength of the incident radiation; this is also true for nickle (reflectance of about 60%), silicon (about 30%), and steel (about 54%). This comparison of dark areas on the negative suggests that the surface of the disc is very likely *not* a polished surface of any of the above metals. If direct sunlight has a brightness of about 750,000 ft-L and a 90% reflectance is assumed for the disc's surface, the brightest area should produce a brightness of about 675,000 ft-L which is more than an order of magnitude greater than what was found on the negative.

A horizontal scan using the micro-densitometer also was made to see if there was any evidence of a double exposure. A double exposure might be indicated by the presence of double edges if the film registration is not precisely the same during a manual rewind. No such evidence was found. In addition, this camera could not take double exposures due to its frame locking mechanism.

Black and White Enlargements on Different Wavelength Sensitive Paper. The disc area of the negative was enlarged and printed on panchromatic film which provided a relatively complete and undistorted translation of the three primary colors in the negative into shades of gray. This is shown in Figure 7(a). The top "dome" protruberance is clearly visible. The same area on the negative also was printed at the same enlargement using blue-green sensitive paper which significantly reduces the contribution of the red emulsion layer to the final black and white print. This is shown in Figure 7(b). The blue-green sensitive paper increases the overall brightness of the sky and causes the "dome" area on the disc to almost disappear. Apparently, the dome is not reflecting or emitting radiation in the red end of the spectrum.

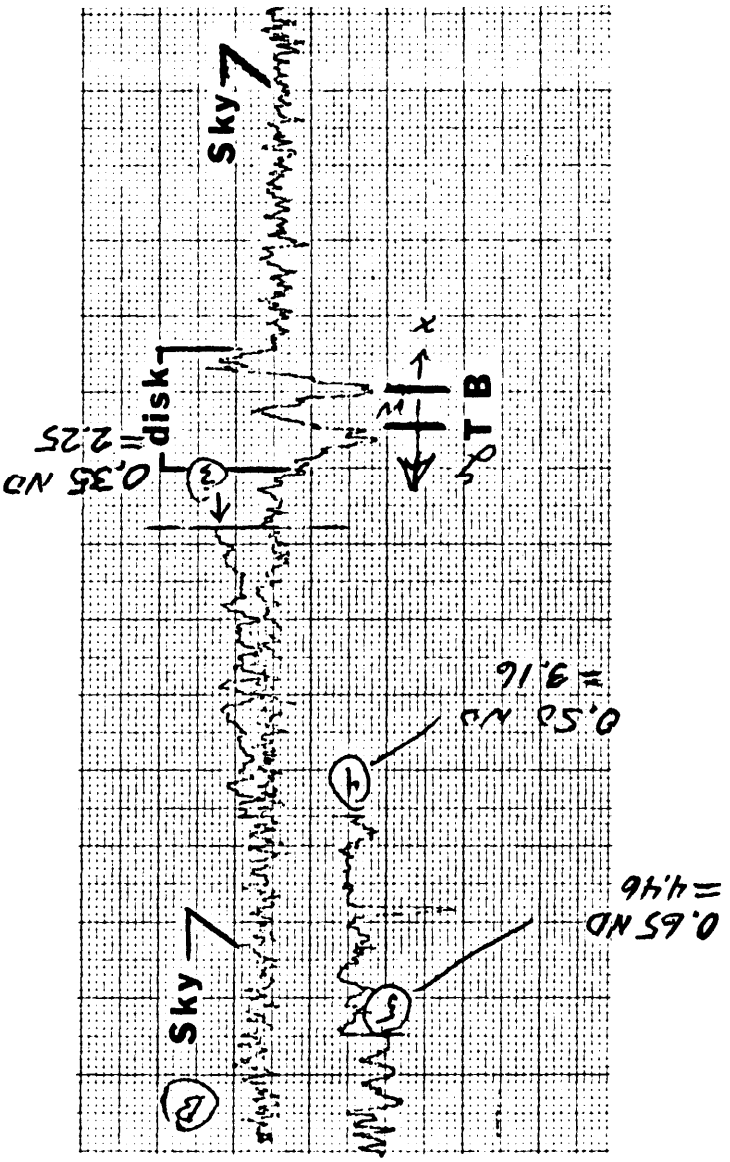


Fig. 5. Micro-densitometer vertical scan through disc image.

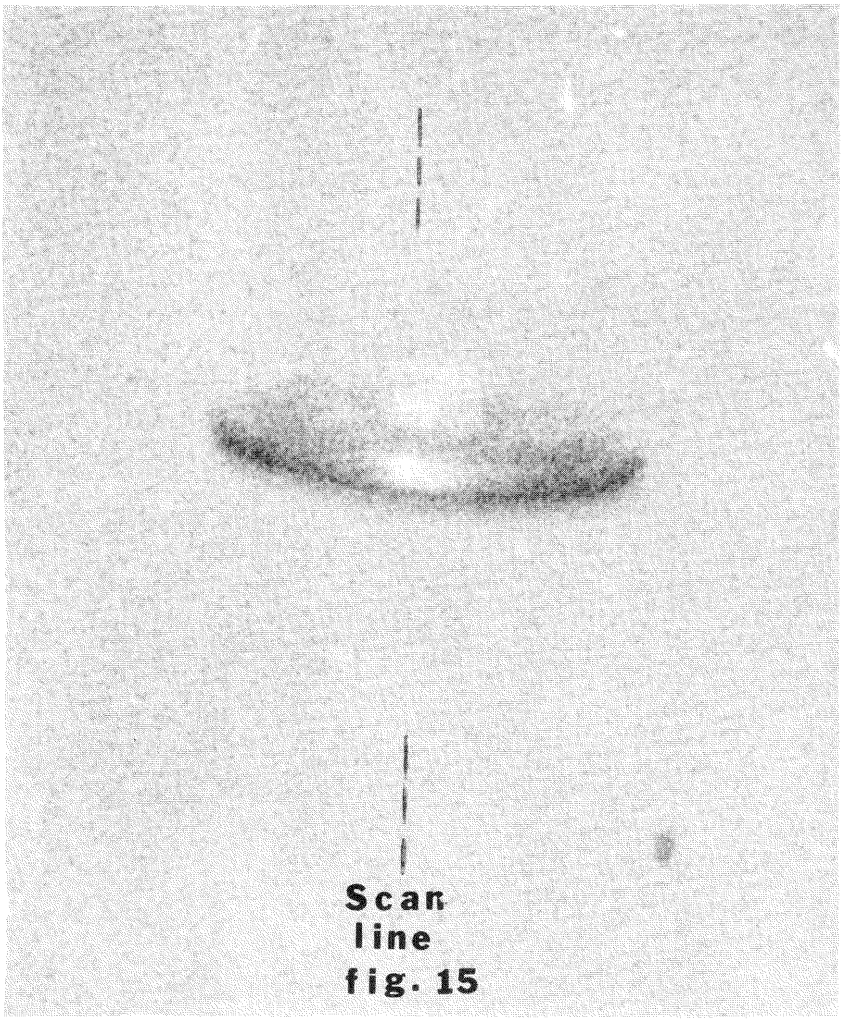
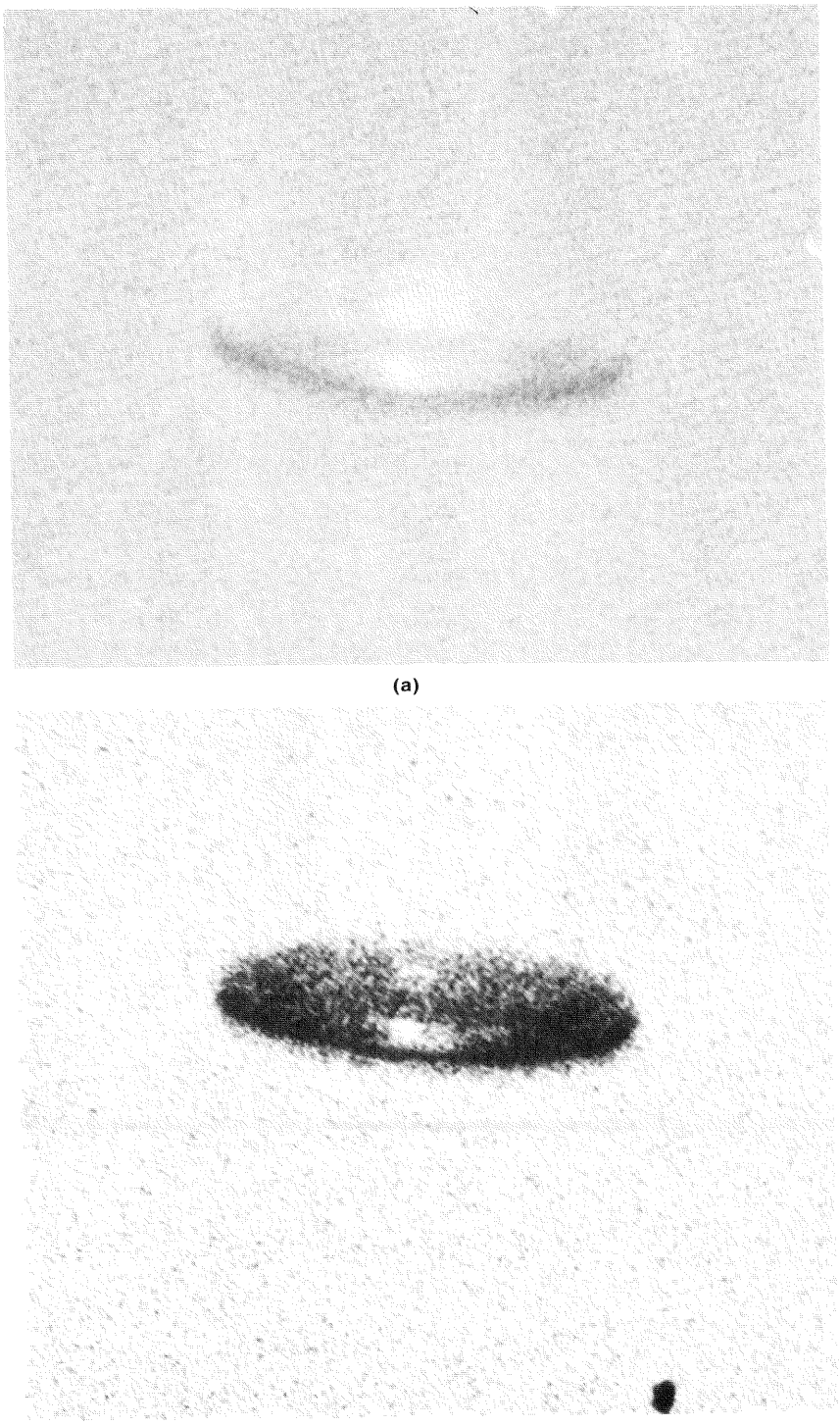


Fig. 6. Photo enlargement of disc

Computer-Based Contrast Enhancement Results The negative was digitired using a Perkin–Elmer Scanning Densitometer set to six microns diameter entrance aperture. Optical density was achieved to 16 bit resolution. The negative was scanned and digitized three times; each scan was made using a color filter having the approximate spectral distribution as the dye layers in the negative.' System output was recorded on $\frac{1}{2}$ inch magnetic tape at 1,600 bits per inch density for processing and display by a digital computer. The region studied was only slightly larger than that of the disc in order to conserve



(a)

(b)

Fig 7 Black and white image enlargement: (a) Panchromatic paper. (b) Blue–green sensitive paper.

memory and processing time. The range of optical densities found within this image area ranged from five to 400. Since the optical densities extended only from about 200 to 400 for the disc's image, the computational range was truncated by dropping the top 8 bits. Thus, the 8 bits from zero to 255 levels of density are presented in all of the following computer color enhancements.

Figures 8 and 9 are enhancements obtained using only the blue filter scan, that is, there is almost no contribution to this image from green or red wavelengths. A very high contrast color enhancement is shown in Figure 8 using blue picture elements (pixels) on the cathode ray tube monitor to represent film densities associated with the image of the disc and orange and red pixels to represent film densities characteristic of the surrounding sky density. It must be emphasized that there is no particular significance to the colors seen in these computer-enhanced photographs.

Figure 9 shows a black and white enhancement using an undistorted contrast. Much of the top surface detail becomes invisible in both Figures 8 and 9. Presumably this is due to the particular range of wave-lengths that are being reflected or emitted by the disc. Both of these figures show that the sky is relatively homogeneous, the film's crystals (each possessing different sensitivity to light) are approximately random in their spatial distribution as expected. Also shown is a relatively sharply defined bottom edge of the disc relative to its upper edge. The shadow seen under the disc's lower edge in Figure 6 is barely evident here.

Figure 10 presents an enhancement made using a green filter where purples and blues are assigned to densities which predominate within the image of the disc and yellows are assigned to densities characterizing the background sky. A long vertical scratch exists to the left of the disc's image within this particular emulsion layer. Not only is the sky's density relatively homogeneous in its density but the two regions of greater brightness on the disc become much more apparent. The overall shape of the disc is symmetrical but has more pointed ends. The significance of this is unclear.

A red filter was used to generate the enhancement shown in Figure 11. As was noted in enhancements using a green filter, the dome is missing in this enhancement suggesting that the protruberance on top of the disc is reflecting or emitting wavelengths mainly in the blue-green portion of the spectrum.

Finally, a three-color composite enhancement including blue, green, and red wavelengths was made. Figure 12 presents one such enhancement to illustrate the homogeneity of the sky as well as the emulsion flaw and highlights on the image of the disc. None of the above enhancements show any evidence for a suspension line or thread above the disc.

Site Visit Results

A comprehensive site visit was made by the author on October 7–8, 1983.[2] Photographs, measurements, and general inspections were made of the entire

[1] The film's yellow forming layer, magenta layer, and cyan layer peaked in sensitivity at 425, 545, and 650 nm, respectively. This technique permitted the information content in each layer to be analyzed separately.

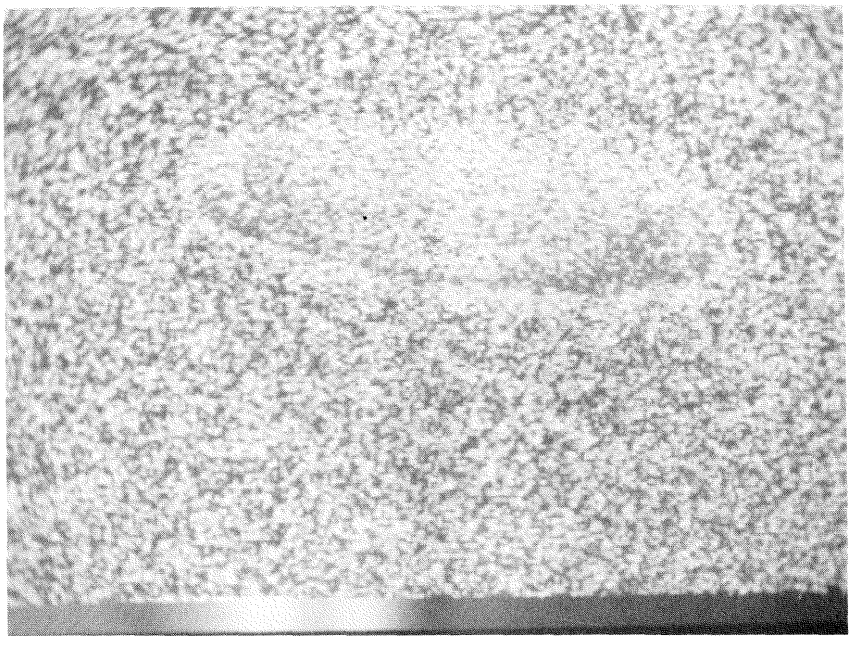


Fig. 8 Color enhancement of disc image using a blue filter

vicinity of the Provincial park where the photograph had been taken. Figure 13 is a topographic chart of the area with the mountain darkened. This location is just east of highway 19 at the Eve River bridge, about 49 miles west northwest of Campbell River, British Columbia on Vancouver Island. Area X on this chart marks the approximate location of the photographer. This spot is located at 126°14' West and 50°19.4' North. The photographer and her family had stopped at this park for a rest when the photograph was taken. The rectangular area marked with a C is property operated by the McMillan–Bloedel Lumber Co. Ltd. camp which was unoccupied when the author was there. The clearing in the forested area was gravel covered with a few buildings, fuel pumps, a dynamite shack, and vehicles of various kinds. Intense white yard lights illuminated the area at night (in 1983). A registered civil engineer[3] conducted a site survey and determined that the photographer stood approximately 4,240 feet north of highway 19 (within the Provincial park) and faced 3°18' north by west toward the peak of the mountain. The slant distance to the mountain peak was 7,580 feet for an elevation angle of 24°17'. The height of the moun-

[2] I am greatly indebted to Donald H. Haines, my father and registered civil engineer who accompanied me and who performed the survey of the site. I am also grateful to the Fund for UFO Research, Maryland who supported a part of the travel costs to British Columbia from California.

[3] *Ibid.*

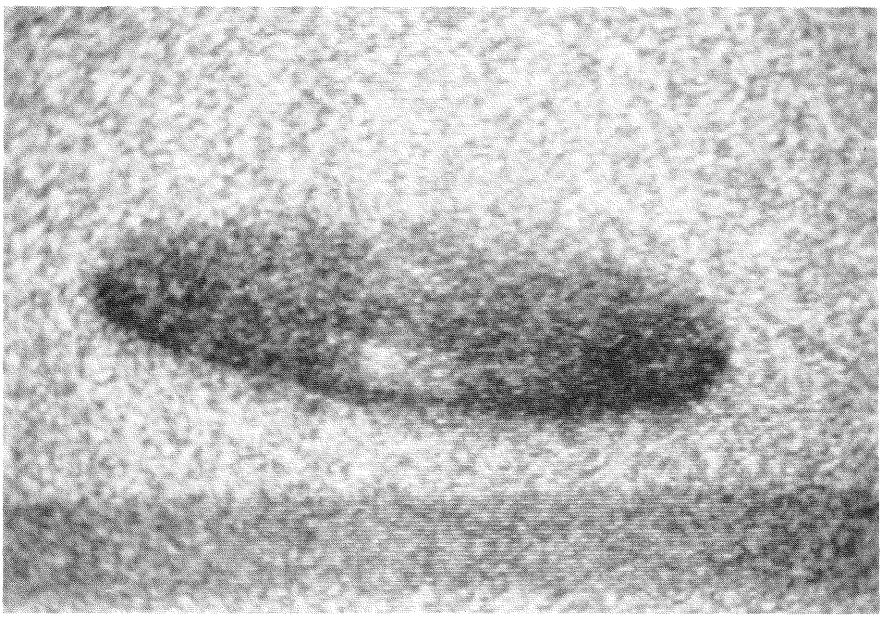


Fig. 9. Black and white enhancement with undistorted contrast.

tain from the local horizontal was 3,117 feet while the elevation of the photographer's position was 984 feel above mean sea level.

Although the Provincial park was located within an area cleared of evergreen trees, second growth timber extended from the base of the mountain almost to its top, After inspecting the site it was clear that there was sufficient Rat ground to have flown a model airplane or thrown a Frisbee[4] into the air. Neither the photographer nor her husband admit to doing this, There are no buildings or stores within a radius of 15 miles of this spot. The photographer does not remember passing any vehicles on the morning she took the photo other than a few logging trucks with loads of logs.

Credibility of the Photographer

In cases such as this it is essential to establish the credibility of the persons involved. Mrs. D.M. (age 26) was the photographer. She was accompanied by her husband (age approximately 30) and their 18 month-old daughter and

[4] Both Mr. and Mrs. D.M. stated that there were no other persons at the Provincial park before, during, or while they were leaving the camp site The large open area would have afforded a wide and unobstructed vtew of the surrounding terrain had there been someone else there. They also stated that no sounds were heard from the direction of the mountain while they were at the camp site.

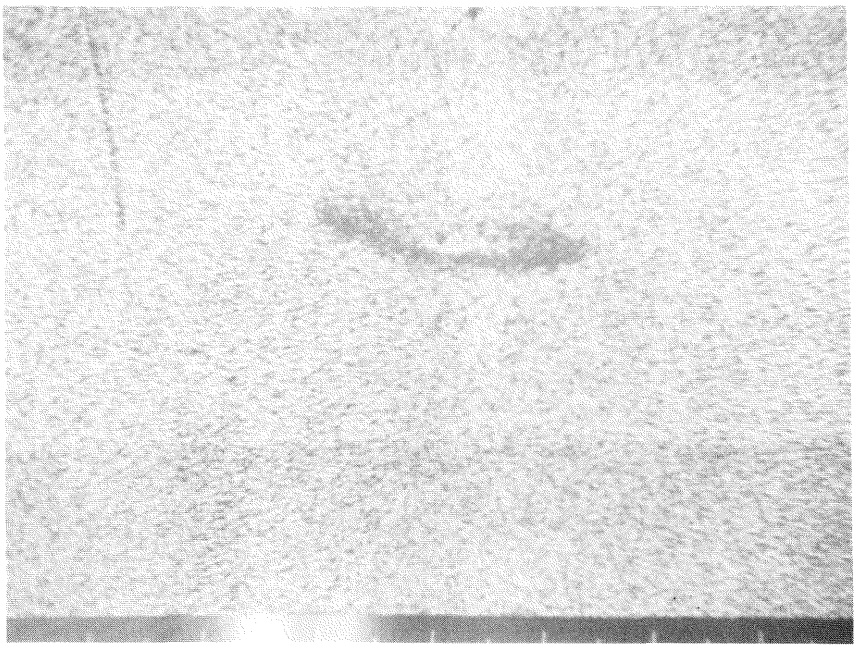


Fig. 10. Color enhancement of disc image using a green filter

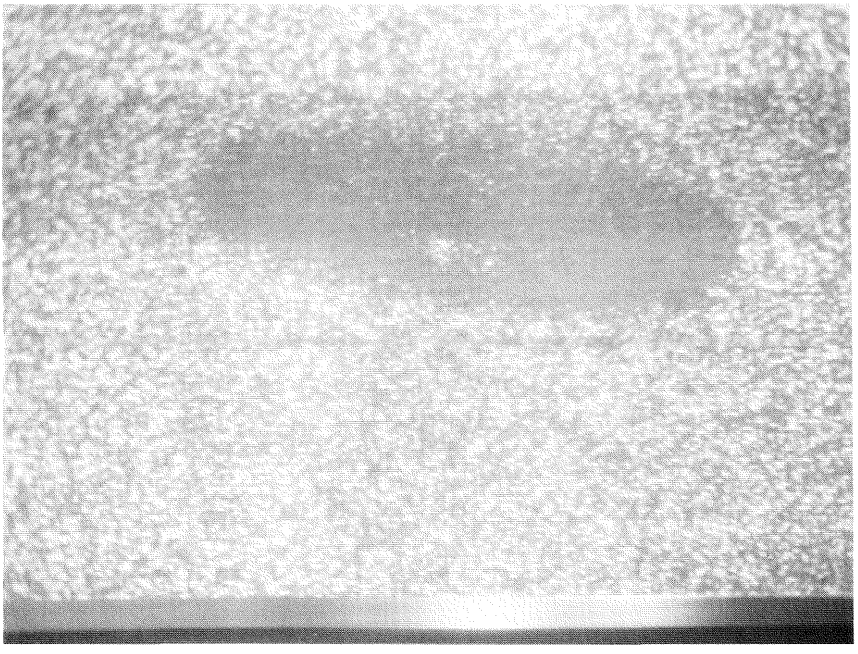


Fig. 11. Color enhancement of disc image using a red filter.

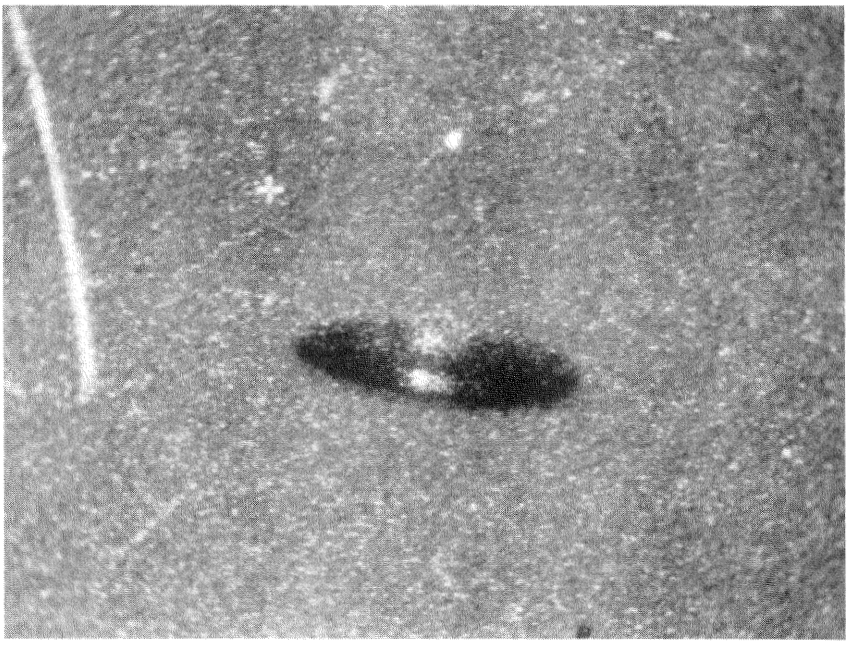


Fig. 12. Three color enhancement of disc image

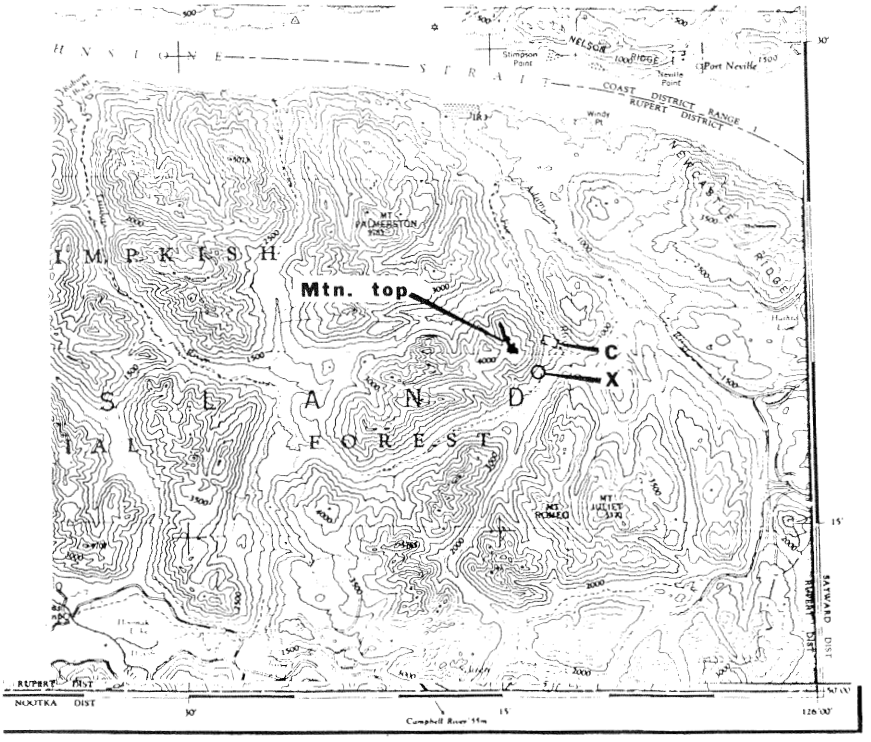


Fig. 13 Topographic chart of photographic site on Northern Vancouver Island, British Columbia.

the family dog. The family was on their way to visit her sister at Holberg, located at the northwest tip of Vancouver Island. Mrs. D.M. was an outgoing, pleasant person with a casual interest in UFOs. Inspection of their home did not indicate any interest at all in the occult, the psychic realm, or related subjects. Mr. D.M. worked at the lumber mill in Campbell River. Neither person claimed to have read any books specifically on UFOs, but had seen the movie *Close Encounters of the Third Kind*. The husband was an avid science fiction fan in earlier years.

When asked what they had done immediately after noticing the disc on the photograph (some 18 days later on October 26, 1981), Mrs. D.M. replied, "Well, we didn't know what to do. Eventually we showed it to our neighbors and Mr. and Mrs. M. Sr. (husband's parents)." Mrs. D.M. phoned the Canadian Forces Base at Comox in mid-November 1981 concerning their possible interest in seeing the photograph. She ". . . just wanted to see if they were interested in it and if they knew anything about what the object could be." An air force representative (allegedly) said they were not interested in viewing it, but did take her name and address. It was not until the summer of 1982 that the family travelled to Vancouver, B.C. bringing one 4" X 5" color print with them. They visited the Vancouver Planetarium and spoke with the Director, David Dodge who called in David Powell who was interested in UFO phenomena. The couple were pursuaded to lend the original negative to them to make enlarged copies. The negatives were delivered to Mr. Powell in June 1982 and were returned to Mr. and Mrs. D.M. on January 28, 1983. These dates may be significant since they suggest that the photographer was willing to wait a long time before pursuing an explanation for the disc-like image on her photograph. If this event had been a deliberate hoax it is more likely that some overt action to capitalize on it might have been taken soon after the disc had been discovered and not almost a year later. Of course this is not a conclusive argument to support this contention.[5]

The author found the photographer and her husband to be middle-class, hard-working people. Their property was well kept. Nothing could be found which pointed to a deliberate hoax. Both displayed genuine puzzlement about the origin of the disc on the photograph. Mr. and Mrs. D.M. were not defensive nor did they ever attempt to cover up anything as far as could be determined. For example, when asked if he owned a Frisbee, Mr. D.M. said yes and located it immediately for the author's inspection. It was a 9" diameter, dull black, "Professional FIFI model." He claimed to have been proficient in throwing it in the past, but had not done so in some time. There was no indication that some type of dome-like structure had been attached to it. The suspicion lingered throughout the investigation that a Frisbee or other similar object had merely been tossed up into the air and photographed. It became important to learn more about the subject of Frisbees and their "flight" qualities.

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[5] While it is true that Mr. and Mrs. D.M. have had color enlargements made of their photograph and have sold some, this was done as a courtesy to their friends and to others who wrote asking for copies. Almost no profit has been made from the sale of these photographs.

A Review of Frisbee Characteristics

Three topics are briefly reviewed here (a) surface characteristics, (b) flight records in competition, and (c) subtended angles and related distances. The author consulted with a person[6] who had previously worked for a well known manufacturer of Frisbees. He explained the necessity of having a smoothly curved leading edge at the circumference of the disc and tiny microgrooves in the top surface in order to create a lifting force during its spinning flight. He suggested that the addition of a dome-like structure to the top would probably reduce or destroy this aerodynamic lift. The author (later) proved that this was indeed true. The author also contacted various toy stores to inspect various Frisbee models. A total of seven different models were inspected. All possessed a glossy (specular) outer surface. Most had reflectances of about 80% or less. Of the six models produced before 1981, only two had paper labels, the other four[6] had colorful embossed drawings centered across the top surface.

Men's and women's world records for throwing Frisbees were obtained from the International Frisbee disc Association (IFA). This organization has hosted tournaments which have become qualifying events for the World Frisbee Championship. It was discovered that the men's outdoor distance record is 166 m (540 feet) and the women's record is 122 m (397 feet). These records were set in 1983 and 1980, respectively and are meant only to indicate the general range of human capability for this skilled activity. The men's world record for maximum time aloft is 15.5 seconds (1981); the women's record is 11.4 seconds (1980).

The linear width of the disc's image on the negative was 0.98 mm. The width of the 36 mm frame was equivalent to a horizontal angle of 48°. The useful ratio can be formed:

$$36/48 : 0.98/X$$

where: X = the angle subtended by the disc. This angle is 1.307°. Therefore, Tan 1.307/2 = 0.0114 = (W/D)2 where: W = the assumed object width and D = the separation distance between the camera and object. Letting W = 9 inches, D = 32.88 feet which exceeds the hyperfocal distance. If the disc object was 10 or 50 feet in width it would have been 438 feet or 2,192 feet from the camera, respectively. And if the disc had been hovering directly over the mountain (i.e., 7,580 feet away) it would have been 173 feet in width.

Assuming that the camera shutter speed was 1/125th second and the disc image was produced by a typical Frisbee travelling at 10 feet per second, a 9 inch diameter disc moving normal to the line of sight would move 0.96 inches in his duration. Approximately 9.3% of the Frisbee's diameter would show up as a blur on the leading and trailing edge of the Frisbee's photographic image. There is virtually no blur visible on the photograph in question which strongly argues that the disc was not travelling normal to the line of sight. If it was motionless it would be far more difficult to perceive, particularly if the

[6] I wish to thank Mr. Gordon Holt for his professional assistance in this phase of the analysis.

photographer was (a) looking through a camera's optics and (b) was not expecting to see anything hanging motionless in the air.

It is highly unlikely that the object photographed was a commercially available Frisbee. There are significant top surface contour differences between a Frisbee and the photographed disc. This was shown by a careful comparison of photographs of a Frisbee model with scale dome oriented the same as the photographed disc and illuminated by sunlight under the same angular conditions. The surface reflections were markedly different in each case. In addition, the presence of the tiny, concentric micro-grooves on all Frisbees would not be expected to yield a sharp contrast gradient as is seen in Figures 7(b), 8, and 9. When the author attached a light-weight dome to a Frisbee it would not fly very far nor very high. It is problematical whether another person could have achieved such a feat. The author inspected the frame immediately following the frame in question and found that it had been taken in Campbell River following the trip north. The immediately preceeding frame was also located. It showed Mr. D.M. and their daughter standing in front of a small pond at the Provincial park on the day the photograph had been taken, exactly as stated by the photographer. If someone had tossed a model up into the air in order to photograph it, only one photo was taken. It is fortuitous that such a clearly focused image was obtained on the first try, if this is what happened. Furthermore, this explanation does not stand up under scrutiny of the author's in-depth interviews and site visit. The fact that the photographer stated that she was taking a photograph of the mountain (and not of a UFO disc or model) is further supported by the fact that the top of the mountain was well centered in the photograph. The object was not centered. The lack of any image blur suggests that the disc was nearly motionless which would make it more difficult to see, other factors equal.

In summary, this investigation has shown that a mature adult with high credibility and little or no interest in UFO phenomena obtained a single, colored, sharp imaged photograph of an unidentified aerial disc-like object. Her subsequent reactions to seeing the disc's image on her photograph produced surprise and dismay as well as the normal array of "answer-seeking" behavior. She has not capitalized on having such a photo[7] and still acts somewhat embarrassed at having taken it without seeing the disc. The disc's identity has not been identified to date.

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[7] See footnote 5.