

September 1, 1968

Dear Dave:

Got the Richmond contact print from Congressman' Udall's office yesterday, along with a copy of the Bluebook "fact sheet" on the case explaining it as ice crystal reflection off "ice platelletes". Marvelous how even misspellings get faithfully perpetuated within the military machinery.

I spent most of last evening checking various distances and angles again, a few small changes emerging. As I proceeded a number of new points and questions came to mind, especially re queries I'll put to Brubaker if and when I get his current location.

II Also, I read up on the photometric relationships required to exploit the figures on film-illuminance given in the Bluebook file material you have, and now understand that in a way I didn't when I was at your house. I can see that the photometry bears quite strongly on the subsum hypothesis -- negatively. Unfortunately I made only very condensed notes on those matters when I was studying the file, so again I'm wondering if there isn't some way I can get a complete Xerox of all that file material. Are you interested in including a summary of my final conclusions in the book? That arrangement is still quite agreeable with me, if it seems relevant to your book-outline. It'd be very relevant if we were sure the project is sticking with Blumen's casual acceptance of the USAF explanation. And even if they aren't, even if someone else has taken a close enough look at it to recognize the contradictions in that explanation, an independent analysis of it would seem a valuable addition to your book.

What I'd propose, if all this is still of interest to you, is that I write up my analysis in such a form that you can insert it as a direct quote, or something equivalent thereto. I'd say it will take something like 15-20 pages double-spaced to do justice to it. Are you strapped for space at this juncture?

I'm getting copy prints made, since this one is very dark. I hope our photo people can bring out the terrain features in a copy. I'd be happy to send a glossy for use in the book if you do still want to cover the case in detail. The overwhelming point of interest in this photo is that we do not have to agonize over the credentials of the photographer, as with the Heflin photos and all the rest. And if I do get through to Brubaker there'll be the good possibility of even better authentication.

In the analysis I badly need copies of those Xeroxes of the print showing A/C path and UFO path, and I think I'd now see import in a lot of odds and ends of data in the full file that I didn't take time to copy in Boulder.

I've thought again about the matter of accounting for availability of those file items. Mary Lou sent me several fat Xeroxes of cases I expressed strong interest in and Norm sent one or two. I understand

October 3, 1968

Mr. Richard C. Olson
c/o Hon. Morris K. Udall
House of Representatives
Washington, D. C., 20515

Dear Dick:

I have worked on that May 24, 1954, photo which you kindly got for me, but just cannot get out of it the information I need. The very dark print which they sent is excellent with respect to the luminosity, but terrible with respect to ground features. I have to cross-check shadow geometry on a number of barns and buildings, and hence need a much lighter print.

I Also, I'm deeply puzzled by the fact that they chopped off all the data-card when they sent that to me. Even if the negative had been a little frayed or torn, the data-card would surely show on the edge. It's quite crucial to have the clock-time pinned down unequivocally, because that's the clue to the solar azimuth, which, in turn, governs the possibility that this is an ice crystal reflection of the subsun type. I don't like to become over-suspicious, but I find that cropping of the entire edge exhibiting all of the relevant flight-data and time pretty hard to understand.

No need to mention it to the Air Force people, but I finally located Leo N. Brubaker, who took that photo. He is a retired Lt. Col., living in Washington, D. C., and working at the Defense Intelligence Agency. I got his name and address through the National Personnel Records Center, in St. Louis, and telephoned him a couple of days ago. He was very helpful, and I am sending him a letter with a long list of questions over and above those which he answered on the phone. He has somewhere in his files the in-flight notes he made that day, and he volunteered to dig them out and use them in answering my further questions. His own impression was that this was an ice crystal reflection phenomenon. As I pointed out to Col. Brubaker, my interest in the atmospheric physics of the subsun phenomenon makes me just as eager to pin down that hypothesis as the hypothesis that it may have been some unconventional object. In fact, my analyses of

October 3, 1968

Lt. Col. Leo N. Brubaker
5105 - 25th Place, S.E.
Washington, D. C., 20031

Dear Colonel Brubaker:

Thanks again for the helpful information which you gave me on the telephone on the 30th. I'll put down below some questions which I would very much appreciate your answering, if possible.

If, in addition, it is feasible for you to send any kind of a copy of the in-flight notes you made on May 24, 1954, concerning that luminous phenomenon and if, further, you could send or loan me one of your prints from the original negative, that would be extremely helpful in my analyses.

I have searched the literature for quantitative discussions of the luminance of subsuns (specular reflection off horizontally falling ice crystals) but found no treatment of that problem. Hence, I have been looking into it myself and am making some progress towards solution of the problem of working backward from film-density to subsun luminance and then back further to the fraction of projected area covered by ice crystals. As you pointed out on the phone, it is surprising how much reflection you can get with sufficiently small covering-fractions of ice crystals.

Incidentally, I examined the print that I got from Wright-Patterson (through the Congressional Legislative Liaison Office of USAF), and I can't find any clear indication of cloud-patches in any corner.

Here are points on which I'd like to get your comments:

(1) In going over my phone notes, I find that I am still not clear on where you first spotted the luminosity relative to the B-17. You mentioned that, from your position in the nose compartment, you had a view downward and aft to roughly 30 degrees to the rear. Do you recall, or do your notes indicate, whether the luminosity first showed up aft of the aircraft?

5105 Twenty-fifth Place, S.E.
Washington, D. C.
20031

November 26, 1968

Dr. James E. McDonald
Institute of Atmospheric Physics
Room 518, PMM Building
The University of Arizona
Tucson, Arizona 85721

Dear Dr. McDonald:

Because of local pressing matters, I have been unable to reply earlier to your letter of October third. I will try to answer as many of your questions as possible, but of course it is difficult to recall additional details after fourteen years. Fortunately many details were recorded at that time and I believe that I have most all of the original data.

Following is exact copy of original notes made while in flight "24"24 May at 1225 E.S.T. -- 19,500 ft. altitude above sea level, 10 miles W N W of Richmond, Indiana -- T-11 camera with 6" lens in stabilized mount 1/150 sec exposure at F 11 with metrogon lens (calibrated) visibility unlimited -- aircraft (B-17) heading approximately 120° sun altitude approximately 70° azimuth 171°. Object seen traveling southeast at approximately 433 knots for approximately 45 seconds at an apparent estimated altitude of 3,000 to 5,000 ft. terrain 1,000 ft. above sea level in this area. Object appeared to be an intense light, with no distinct shape. Terrain could be seen with an apparent movement of the object above the ground. Atmosphere immediately surrounding the object was clear at all times making high quality photography possible. Aircraft ground speed 216 knots -- wind direction 295° at 20 knots -- temperature at 19,500 ft. altitude -10° centigrade, at 10,000 ft. +4° centigrade aircraft serial number 340. "

Enclosed you will find one original print made from the original negative at normal exposure plus one print which is exposed to almost obscure terrain background. In addition there is one enlargement of the object and two prints of a low altitude photograph taken of the area of the spot on 26 May, (two days later).

I entered military service as an aviation cadet about one month after Pearl Harbor and graduated as an aerial navigator in August 1942. I flew as Navigator/Radar operator in World War II in B-29's from Tinian and Okinawa and upon retirement from the Air Force in 1964 had several

his continuing concern. Incidentally, the reference there to Col. Ettenson deals with the Richmond, Indiana, photo that I have been trying to get for some time in connection with my analyses of sundog luminates. Through Udall's office I got one print, but it wasn't of the right light and dark value and Udall's office has asked the Air Force for another print. Concurrently I have been searching for and finally found the Air Force officer who took the photo aboard the B-17 in May, 1954. He is a retired Lt. Col. now working with the Intelligence Defense Agency in Washington. He had his own set of prints, he loaned them to me, and sent three pages of transcribed notes on the incident. I regret to say that between the analysis of the sun-angles and the rather clear-cut description of the high angular velocity of the luminous entity as it sped into the B-17, I cannot agree with the Air Force explanation in terms of the sundog that has been on the record for 14 years. The print we are trying to get from Project Bluebook is one that shows the duty card to double check the time. However, Lt. Col. Brubaker, who took the photo, sent me a verbatim transcript of his notes and it checks the information I already have. That time will not support the sundog hypothesis, it turns out. Thus we may have in this photo one that is above reproach with respect to credentials and yet has no obvious explanation in the area of meteorological optics.

Another development with respect to unimpeachable witnesses of unusual aerial phenomena came to my attention this week when I was in Dallas speaking to the Aviation/Aerospace Writers Association. The question came up from the floor about sightings by Gemini astronauts. I made certain remarks based on my past look at the problem, and then was shown a clipping from the Dallas Times-Herald of early October in which Astronaut McDivitt unequivocally acknowledged that the objects he had seen in his June 4, 1965, Gemini-4 flight did not fit any of the early attempts at explanation. Then much to my surprise, I found that the latest NICAP Investigator confirms that and even sights the latest NASA annual publication, "Astronautics and Aeronautics," confirming the unidentified status of the photograph that McDivitt made of one of the two objects.