PROJECT 10173 RECORD

1. DATE - TIME GROUP 26 Aug 66 27/0251Z	2. LOCATION Gaylesville, Alabama [redacted], [redacted] (2 Witnesses) (30-2)
3. SOURCE Civilian	10. CONCLUSION UNIDENTIFIED
4. NUMBER OF OBJECTS Four	
5. LENGTH OF OBSERVATION 4 1/2 Minutes	11. BRIEF SUMMARY AND ANALYSIS Observers were driving along on highway 35 when one observer noticed a small cluster of star-like objects. She rested her attention on them because they were brighter than other stars and were clustered so closely together. A few seconds later she noticed that they were moving relative to several near by stars, seemingly at a slow rate of speed. It was at this point she mentioned the objects to the other observer. He made a few comments and continued driving, then he looked up up and saw four circular, orange-yellow, glowing objects moving from E to W. Three were at the vertices of an obtuse triangle moving with the obtuse vertex in the direction of flight. The fourth object seemed to be at equilibrium in the center of the triangle and moved relative to the other three with rapid sporadic motion fore and aft, along the direction of flight, once leaving the confines of the triangle itself in the aft direction. A bright 3/4 full moon.
6. TYPE OF OBSERVATION Ground-Visual	
7. COURSE E - W	
8. PHOTOS ☐ Yes XX No	
9. PHYSICAL EVIDENCE ☐ Yes XX No	

FORM
FTD SEP 63 0-329 (TDE) Previous editions of this form may be used.

D-1

PROJECT 10173 RECORD

SURFACE OBSERVATIONS DATA SHEET

Amarillo AFB, Texas - March 6, 1968

0400L *3505 7402* 10205 ***** 52****
0500L *3305 7402* 10505 ***** 52****
0600L 83306 74012 10905 20977 53303
0700L *3304 7402* 12902 ***** 53****
0900L *0204 7402* 13005 ***** 52219

Winona, Minnesota - April 3, 1968

1800L 91321 08515 95211 9**** 10629 70030
1900L 61418 5645* 92510 ***** 09****
2200L 81610 5845* 91708 ***** 08****

Salisbury, N.C. - February 3, 1966

0430Z 03002 74000 14300 00900 55****

Houston, Texas - February 4, 1966

1200Z 00204 74000 32101 00900 52****

Surfside, Texas - March 20, 1966

0735Z 72112 74022 20819 754** 16302

Truth or Consequences, N.M. - April 3, 1966

0100Z 22915 74031 03328 00901 00****

Lycoming, New York - April 5, 1966

0800Z 82710 58858 99600 883** 51****

Bloomington, Indiana - July 4, 1966

0130Z 22405 6603* 14432 214** 28****

Donnybrook, North Dakota - August 19, 1966

2250Z 61208 6403* 18421 6087* 07****

Pecos, Texas - August 27, 1966

0300Z 21605 7402* 13124 214** 13****

Rome, Georgia - August 27, 1966

0251Z 33005 7402* 19323 3086* 18****

East Dennis, Mass. - October 8, 1966

2350Z 81808 48585 14512 872** 12****

ETAC Surface History Files

ATCH 1, P2-

Proj: 5992D - STAR TREK TIME: 0000Z

SOUNDING #36 LOCATION: Rome, Georgia DATE: August 27, 1966

HEIGHT gpm	PRESSURE mb	TEMP °C	R.H. %	DIRECTION deg	SPEED kts
580	950	23	63	080	8
1069	900	19	62	330	2
1556	850	14	68	310	6
2064	800	10	69	310	12
2590	750	9	31	330	16
3168	700	6	21	310	18
3760	650	4	17	290	24
4420	600	0	17	310	24
5100	550	-3	18	320	32
5862	500	-7	18	320	36
6670	450	-13	18	320	40
7570	400	-17	18	320	46
8584	350	-25	18	310	44
9652	300	-35	19	310	48
10894	250	-46		300	46
12336	200	-57		280	48
13174	175	-60		290	46
14124	150	-63		290	34
15246	125	-63		250	32
16624	100	-61		280	24
18014	80	-61		200	8
20963	50	-57		100	16
24233	30	-51		090	24

REMARKS:

DATA SOURCE: ETAC Upper-air History Files.

ANALYST: TSgt Dunham

Archive Pk-13

26 Aug 66

SAFOICC/J. Turnure/bp/76526/28 Nov 67

NOV 29 1967

Dear [redacted]

This will reply to your letter of November 5, 1967, in which you inquired as to the identification of your UFO sighting that you reported sometime ago.

We regret that we failed to notify you that your sighting could not be identified. You submitted a good report, but it was the only one received on this particular incident, and it cannot be correlated with other known objects observable in the area at the time.

Should you ever sight another flying object you cannot identify, if you will report it immediately to the UFO investigator at the nearest Air Force base, you will have a much better opportunity to have your sighting identified.

We hope the inclosed Project Blue Book report will be of interest. Thank you for your interest in the Air Force UFO program.

Sincerely,

DAVID L. STILES
Lt Colonel, USAF
Chief, Civil Branch
Community Relations Division
Office of Information

Attachment

[redacted]
Huntsville, Alabama 35800

SAFOICC

J. Turnure

D-4

~~Coord cy~~ - SAF-OIC
Combk cy - SAF-OIC
Reader cy - SAF-OI
Activity cy - SAF-OIC
Stayback

Unidentified

26 Aug 66

26 Aug 66
Rome, Georgia

TDET/UFO (Maj H Quintanilla, Jr/70916/mhs/9 Oct 66)

UFO Sighting, 26 August 1966

DEC 14 1966

FAA Control Tower
Gadsden Municipal Airport
Gadsden, Alabama 35901

1. Our office is in receipt of an unidentified flying object sighting which occurred in the Gaylesville, Alabama area on 26 August at approximately 2050 CST.

2. The observer reported a small cluster of star-like objects that appeared to be moving relative to the stars. The cluster of lights was moving toward the east but made a smooth maneuver turning from east to west and passing over the observer. The observer saw four circular, orange-yellow, glowing objects as they moved toward the west. Three were at the vertices of an obtuse triangle moving with the obtuse vertex in the direction of flight. The fourth object seemed to be at equilibrium in the center of the triangle and moved relative to the other three with rapid sporadic motion fore and aft, along the direction of flight, once leaving the confines of the triangle itself in the aft direction.

3. Request information on any aircraft activity or other stimuli known by your agency that could have been responsible for the sighting. If records are available, request positive or negative radar confirmation as to any objects on scope at time of observation. Any assistance which you can provide is appreciated.

LOUIS DeCOES, Colonel, USAF
Director of Technology and Subsystems

1 Atch
UFO Report, 26 Aug 66 (Cy)

COORDINATION:

TDET/UFO _____ DATE 12 Dec 66

TDET _____ DATE 13 Dec 66

D-5

Made copy for Condon

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 445TH MILITARY AIRLIFT WING (RESERVE) (~~CONAC~~ CAC)
DOBBINS AIR FORCE BASE, GEORGIA 30060

REPLY TO ATTN OF: WDO-O

SUBJECT: UFO Information

TO: AFCS (FTD)
Wright-Patterson AFB, Ohio 45433

1. The attached written report was received from M[redacted], age 30. [redacted] is a student at Georgia Institute of Technology, and is an aerospace engineer. His home address is: [redacted], Huntsville, Ala. His telephone number is [redacted]

a. This observation was made in part by his wife, [redacted] age 27, housewife.

2. This report was given to the Base Operations Officer, Dobbins AFB, Georgia at 1900Z, 30 August 1966.

FOR THE COMMANDER

CARL F RUDDER, Col, AFRes
Director of Operations & Training

1 Atch
a/s

Cy to: Mr B H Funk,Jr.

D-6

27 aug

0251 Z

S T A T E M E N T

Friday, 26 August 1966 my wife, three children and I were traveling from Atlanta, Georgia to Huntsville, Alabama. Our trip began on US 41 North to Highway 20, through Rome, Georgia to the State line where Highway 20 becomes Highway 9. Four miles past the State line we intersected Highway 35 at approximately 8:51 pm CST. It was at this time that my wife first saw a small cluster of star-like objects. We turned North onto 35 ~~xxxxxx~~ and the objects, which my wife noticed were then at our upper right (about two o'clock). She said her attention rested on them because they were brighter than other stars and because they were clustered so closely together. She said nothing to me at this time.

A few seconds later, she noticed that they were moving relative to several "near by stars." They moved toward our right, away from us and down - seemingly at a slow rate of speed. It was then that she first made comment of the objects to me. She said "There's an airplane flying up there." She pointed in the general direction. I paid little attention to this. Approximately one minuted later, she said "It's coming down; I think it's going to land." To this I commented that commercial airplanes just do not land in the middle of God's Country. She then looked over toward me and then back out the window and said, "That's the biggest airplane I have ever seen; It's going to land!"

It was then that I looked up (about 11 o'clock) directly in a plane containing the objects and our stationwagon and approximately normal to the road. The objects had made a smooth maneuver turning from East to West and passing over us. I immediately applied the brakes bringing the car to a stop on the side of the road. I rolled down the window while the car was slowing down.

I saw four circular, orange-yellow, glowing, objects moving from East to West. Three were at the vertices of an obtuse triangle moving with the obtuse vertex in the direction of flight. The fourth object seemed to be at equilibrium in the center of the triange and moved relative to the other three with rapid sporadic motion fore and aft, along the direction of flight, once leaving the confines of the triangle itself in the aft direction.

The objects passed directly overhead normal to the highway and off into the distance.

There was no noticeable wind on the ground, the temperature in Fort Payne, Ala. was 65° F (approximately 16 miles away), the sky was clear - so clear that I could have easily driven my car by the bright moon light (there was a 3/4 full moon), which was behind me and shining over my left shoulder. The objects were far off in the west at 8:55 (± ½ min) pm CST

D-7

When I rolled down the window and the objects were directly overhead, and for all time thereafter during the observation, the objects produced no detectible sound.

FACTUAL OBSERVATIONS:

(1) The size of the objects when directly overhead had a relative diameter from 1/5 to 1/4 that of the moon's diameter or about the size of a fingernail 30" from the eye.

(2) The objects' formation increased in size approximately seven to ten times.

(3) The time of final observation was 8:55 pm CST $\pm$ ½ min.

(4) The objects were circular.

(5) The triangular pattern was maintained by the objects for the duration of the observation.

(6) The color of the light received by us was orange-yellow when they were at maximum size and bright white when first sighted.

(7) The objects made a smooth maneuver, turning from East to West.

(8) There was no noticeable wind ~~no~~ over the ground and visibility was excellant from that time of night.

(9) The moon was bright and about 3/4 full.

(10) All objects were of equal intensity and were glowing when closest.

(11) There was no dectectible sound produced by the objects.

NON-FACTUAL IMPRESSIONS:

(1) The objects appeared to be higher than about 500 feet.

(2) If it were assumed that their speed was that of a conventional aircraft (about 300 mph), I would estimate their attitude at approx. 3000 feet. I do not mean that they were at 3000 feet, I am only trying to establish the angular velocity of their position vector.

D-8

(3) The time from first sighting to the time when they passed overhead was about 2 to 3 min.

(4) The time from passing overhead was approximately 1 to 2 min. (These are only good guesses.)

(5) The airport tower controller told me that there was only one small aircraft near the sighting area, but that it was South of there.

(6) I, personally, believe that it was not a conventional airplane.

(7) I leave open only the obscure possibility of balloons; however, I intutively do not believe it was balloons.

(8) If they were balloons at an altitude of 500 feet, and if assumption 2 is good, then the speed of the balloons would be 50 mph. Recalling that there was little or no noticeable wind on the ground, this would hardly seem realistic. If they were balloons and farthur away, they would have been travelling faster and they would have been very large.

(9) I do not believe the objects were reflection, since I saw them clearly with my head outside of the window. Also, since there were no clouds; I do not believe it was a reflection of a light on a cloud.

(10) I am considerably (but not dogmatically) sure of what it was not.

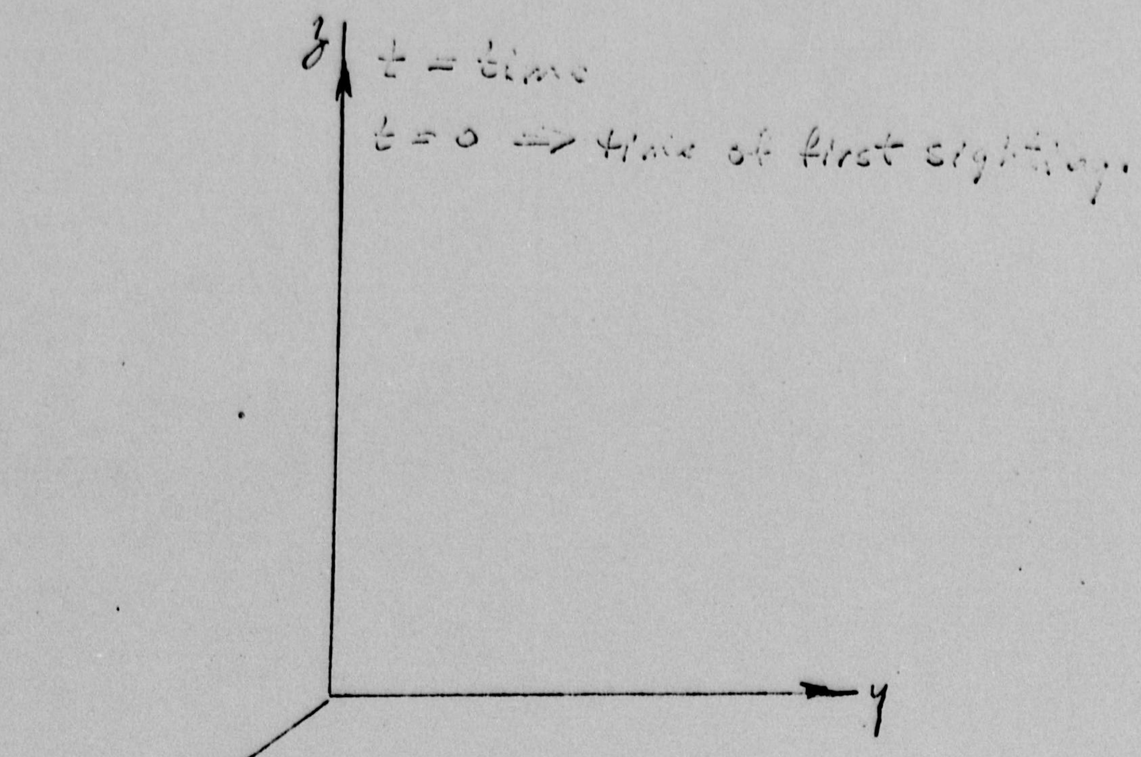
The objects were clearly seen by my wife, all of my three children, and myself. The above observations, as stated, is ture and contains our best knowledge of what actually happened.

[redacted]

Huntsville, Ala. PHONE: 881-0190

NOTE: Sighting reported to Fort Payne, Ala
Police at 9:20 CST.

D-9



D-10

ATCH #1

K. H. Trask, Lt.
30 Nov 66

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 445TH MILITARY AIRLIFT WING (RESERVE) (CAC ~~CONAC~~)
DOBBINS AIR FORCE BASE, GEORGIA 30060

REPLY TO ATTN OF: WDO-O

6 September 1966

SUBJECT: UFO Information

TO: AFCS (FTD)
Wright-Patterson AFB, Ohio 45433

Reference our letter of 30 August 1966, regarding UFO sighting made by M[redacted] on 26 August 1966. Attached is additional information regarding that sighting, which should be made an attachment to and a part of the original information.

HAROLD H BARTON, CIVILIAN
Base Operations Officer

1 Atch
a/s

D-11

Factual Observation:

(12) When the center "object" (light) was in its most forward position (see figure), there was a definite decrease in the intensity of the region where the leading object and the center object overlapped (dark spot). This occurred only once and then only for a fraction of a second but it was long enough that it was noticeable.

I didn't think that this was important until I was discussing the event with some professors at Georgia tech. They seemed to think that it could be important. one professor in the Physics Dept. said that this could be a result of the light being polarized and the decrease in intensity cause by interference, however, this would indicate that the "objects" were transparent — possibly gases.

[redacted]

6 Sept. 66

Contact was made with schedueling section of the 17th BW, WP AFB, Ohio (74474). They had no record of any aircraft being in the refueling track Crimson Star on the night of 26 August 66. From time to time other organizations use this track but the 17th BW knew nothing of any other aircraft being on the track on or at the time in question.

23 Nov 66

The Flip Low Altitude High Speed Training Route Chart -Eastern U.S. was used to try and determine if any aircraft on a low level training mission could have been responsible for the observation. There are several low altitude, high speed routes in the area of the sighting. The most logical route was looked at but according to the Military Training Routes Flight Information Publication it is only used during daylight hours.

NOV 8 1967

Proposed reply to letter from [redacted], 1967 (Sighting26Aug66)

Dear [redacted]

Reference your letter of November 5, 1967. Your sighting has been placed in the unidentified category since we have been unable to find an explanation for your observation.

Huntsville, Alabama
5 November 1967

Dear sirs;

It has been over a year now since I sent you the report of a UFO sighting, or rather a UAP as I referred to it. I am interested in whether or not you have any remarks to offer as to what your findings were. Surely you have had enough time.

The report which you should have in your files was made very soon after I (and my family) made the sighting. Since then I have consider it for a long period of time and arrived at some possibly important findings. These findings are included in the conplete report enclosed. Please consider it carefully. I am no amateur when it comes to aerodynamics. I have completed all requirements for the Ph.D. in aerospace engineering at Georgia Tech with the exception of the thesis. I presently am employed by NASA-MSFC here in Huntsville. From 1958 until 1962 I was employed by Thiokol Chemical Corp. as propulsion evaluation engineer on the Pershing missle system. So you see I'm not a nut!!

Thank you for your time and waiting for your immediate reply.

Sincerely,

[redacted]

D-20

OFFICIAL STATEMENT MADE TO DOBBINS U. S. AIR FORCE BASE,

MARIETTA, GEORGIA, ON AUGUST 30, 1966,

OF A SIGHTING OF AN "UNIDENTIFIED FLYING OBJECT(S)" — AT

GAYLESVILLE, ALABAMA, 8:55 P.M. CST (NO DAYLIGHT SAVING)

LATITUDE = 34° - 16' - 8.1" N

LONGITUDE = 85° - 33' - 36.3" W

ADDITIONS TO ORIGINAL STATEMENT MADE AND UNDERLINED

MAY 16, 1967, HUNTSVILLE, ALABAMA

BY

[redacted]

HUNTSVILLE, ALABAMA

STATEMENT TO USAF DOBBINS AIR FORCE BASE

S T A T E M E N T

Friday, 26 August 1966 my wife, three children and I were traveling from Atlanta, Georgia to Huntsville, Alabama. Our trip began on US 41 North to Highway 20, through Rome, Georgia to the State line where Highway 20 becomes Highway 9. Four miles past the State line we intersected Highway 35 at approximately 8:51 pm CST. It was at this time that my wife first saw a small cluster of star-like objects. We turned North onto 35 and the objects, which my wife noticed were then at our upper right (about two o'clock). She said her attention rested on them because they were brighter than other stars and because they were clustered so closely together. She said nothing to me at this time.

A few seconds later, she noticed that they were moving relative to several "near by stars." They moved toward our right, away from us and down - seemingly at a slow rate of speed. It was then that she first made comment of the objects to me. She said "There's an airplane flying up there." She pointed in the general direction. I paid little attention to this. Approximately one minuted later, she said " It's coming down; I think it's going to land." To this I commented that commercial airplanes just do not land in the middle of God's Country. She then looked over toward me and then back out the window and siad, "That's the biggest airplane I have ever seen; It's going to land!"

It was then that I looked up (about 11 o'clock) directly in a plane containing the objects and our stationwagon and approximately normal to the road. The objects had made a smooth maneuver turning from East to West and passing over us. I immediately applied the brakes bringing the car to a stop on the side of the road. I rolled down the window while the car was slowing down.

I saw four circular, orange-yellow, glowing, objects moving from East to West. Three were at the vertices of an obtuse triangle moving with the obtuse vertex in the direction of flight. The fourth object seemed to be at equilibrium in the center of the triangle and moved relative to the other three with rapid sporadic motion fore and aft, along the direction of flight, once leaving the confines of the triangle itself in the aft direction.

The objects passed directly overhead normal to the highway and off into the distance.

There was no noticeable wind on the ground, the temperature in Fort Payne, Ala. was 65° F (approximately 16 miles away), the sky was clear - so clear that I could have easily driven my car by the bright moon light

(there was a 3/4 full moon), which was behind me and shinning over my left shoulder. The objects were far off in the west at 8:55 (± 1/2 min) pm CST (no daylight saving time).

When I rolled down the window and the objects were directly overhead, and for all time thereafter during the observation, the objects produced no detectible sound!

FACTUAL OBSERVATIONS:

(1) The size of the objects when directly overhead had a relative diameter from 1/5 to 1/4 that of the moon's diameter or about the size of a fingernail 30" from the eye.

(2) The objects' formation increased in size approximately seven to ten times.

(3) The time of final observation was 8:55 pm CST ± 1/2 minute.

(4) The objects were circular.

(5) The triangular pattern was maintained by the objects for the duration of the observation.

(6) The color of the light received by us was orange-yellow when they were at maximum size and bright white when first sighted.

(7) The objects made a smooth maneuver, burning from East to West.

(8) There was no noticeable wind on the ground and visibility was excellent for that time of night.

(9) The moon was bright and about 3/4 full.

(10) All objects were of equal intensity and were glowing when closest. (The center object was possibly a shade darker than the outer three.)

(11) There was no detectible sound produced by the objects.

*(12) (12) When the center "object" (light) was in its most forward position (see figure), there was a definite decrease in the intensity of the region where the leading object and the center object overlapped (dark spot). This occurred only once and then only for a fraction of a second but it was long enough that it was noticeable. COMMENT: I didn't think that this was important until I was discussing the event with some professors at Georgia Tech. They seemed to think that it could be important. One professor in the Physics Department said that this could be a result of the light being out of phase and the decrease in intensity caused by interference, however,

*This statement was sent to the Air Force the next day as an appendix to official report. I believe it to be the most significant factual observation.

this would indicate that the "objects" were transparent — possibly gases.

NON-FACTUAL IMPRESSIONS:

(1) The objects appeared to be higher than about 500 feet.

(2) If it were assumed that their speed was that of a conventional aircraft (about 300 mph), I would estimate their attitude at approximately 3000 feet. I do not mean that they were at 3000 feet, I am only trying to establish the angular velocity of their position vector. My best guess would be 500 feet when directly overhead with speed of 50 mph, diameter of each object 8-feet.

(3) The time from first sighting to the time when they passed overhead was about 2 to 3 minutes.

(4) The time from passing overhead was approximately 1 to 2 minutes. (These are only good guesses.)

(5) The airport tower controller in Huntsville the next morning told me that there was only one small aircraft near the sighting area, but that it was South of there.

(6) I, personally, believe that it was not a conventional airplane.

(7) I leave open only the obscure possibility of balloons; however, I intutively do not believe it was balloons, because of the rapid motion motion of the center object and the cancellation of light when the two crossed.

(8) If they were balloons at an altitude of 500 feet, and if assumption 2 is good, then the speed of the balloons would be 50 mph. Recalling that there was little or no noticeable wind on the ground, this would hardly seem realistic for such clear weather conditions. If they were balloons and farthur away, they would have been traveling faster and they would have been very large.

(9) I do not believe the objects were reflection, since I saw them clearly with my head outside of the window. Also, since there were no clouds; I do not believe it was a reflection of a light on a cloud. (Absolutely a clear sky.)

(10) I am considerably (but not dogmatically) sure of what it was not.

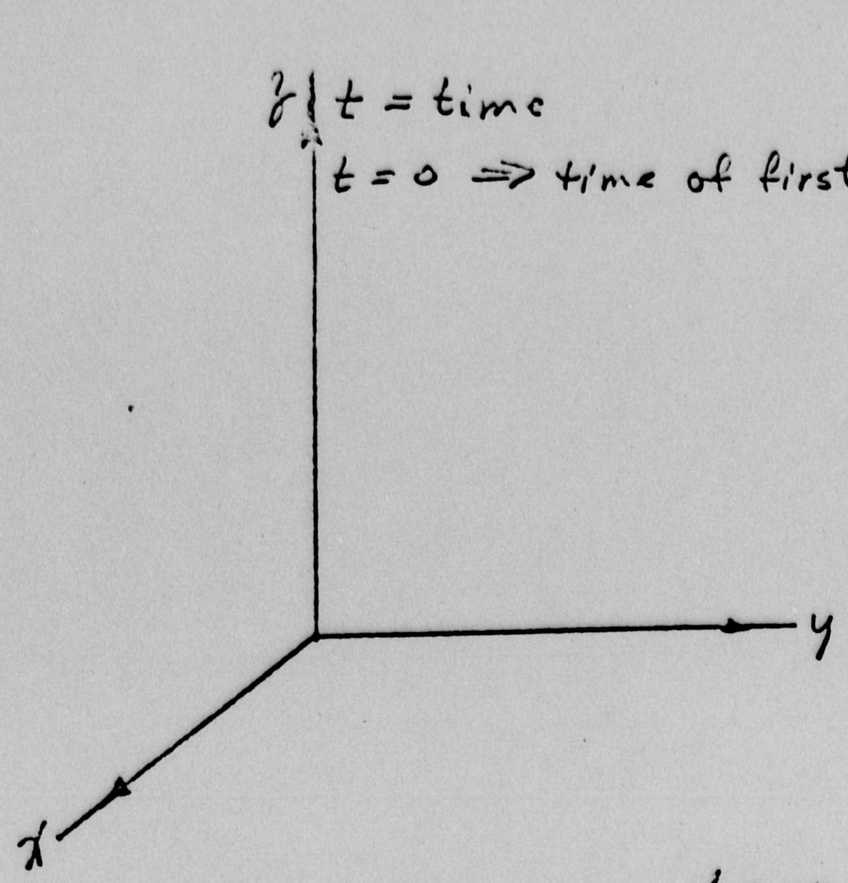
The objects were clearly seen by my wife, all of my three children, and myself. The above observations, as stated, is true and contains our

best knowledge of what actually happened <u>as of this date.</u>

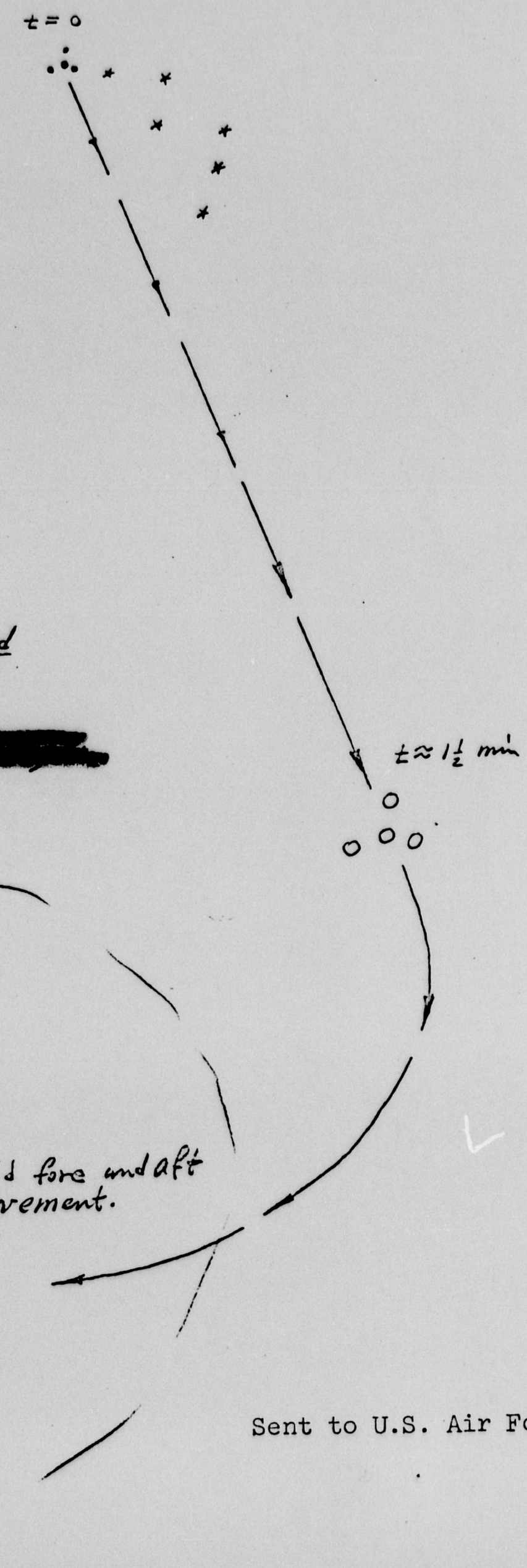
[redacted]
Huntsville, Alabama
Phone: [redacted]

NOTE: Sighting reported to Fort Payne, Alabama police at 9:20 <u>pm</u> CST.

NOTE: All remarks that are underlined have been added to the original statement to the Air Force. - I believe them to be important for purpose of clarity.



this picture was drawn by me in the office of the Dobbins A.F.B. near Atlanta, Ga. where I reported the sighting to the US Air Force on 30 Aug. 1966. 18 May 1967 [redacted]



Overhead View
(looking up from ground)

Sent to U.S. Air Force

D-26 ATCH #1

[redacted]
30 Aug. 66

ITEMS UNDERLINED WERE NOT INCLUDED IN AIR FORCE REPORT

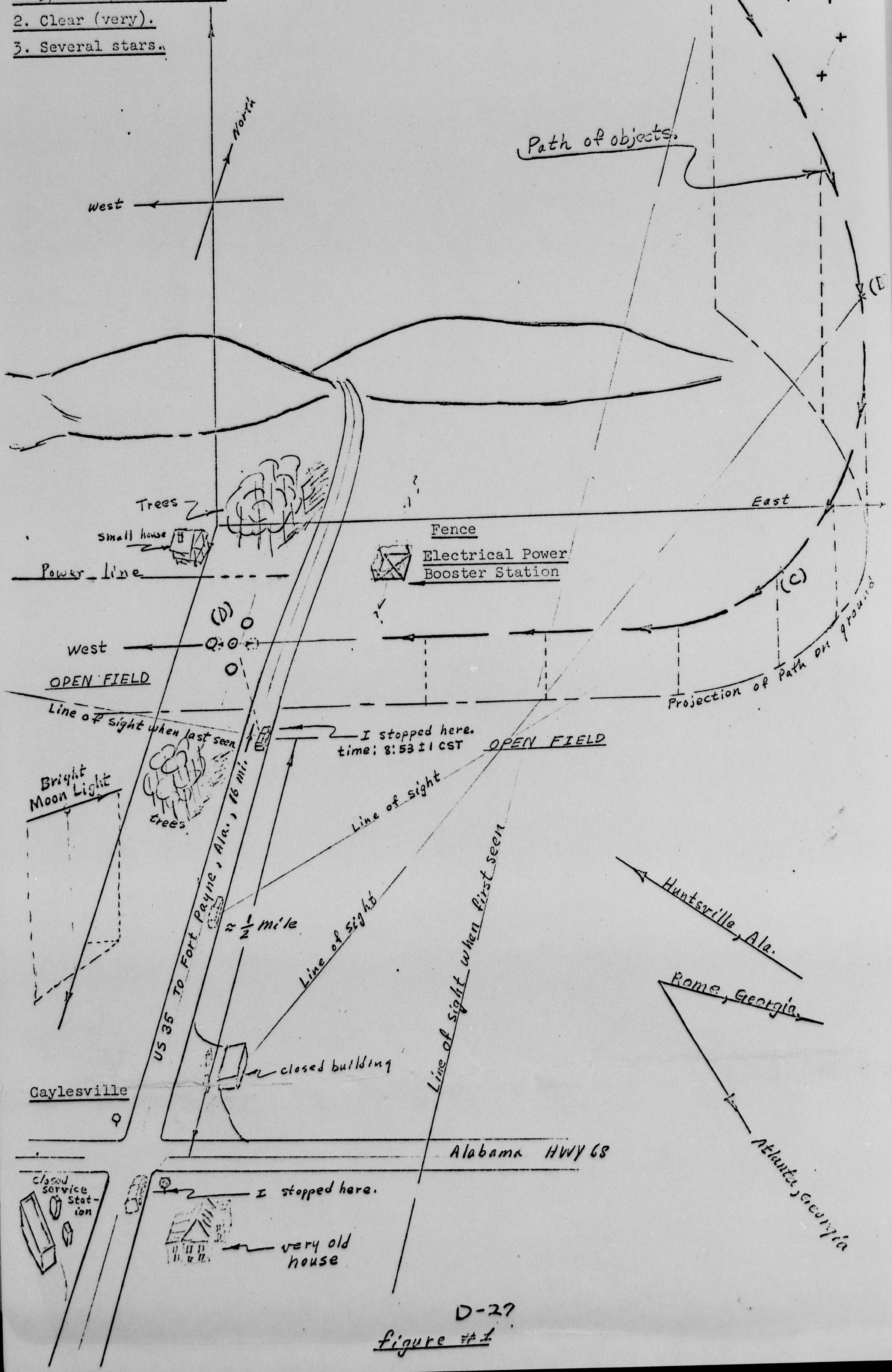
Time: 8:50 pm to 8:55 pm CST ±1 minute

Friday, August 26, 1966

1. 3/4 to 7/8 full moon.

2. Clear (very).

3. Several stars.



D-27

figure #1

ESTABLISHMENT OF MODEL OF THE U.A.P. (U.F.O.)

COMMENT 1: The "lights" (objects) were seen by my family and me as distinctly as you see the figures which are included herein. There was absolutely no blur and their outline was sharp.

COMMENT 2: I arrived at this solution about two weeks after the sighting, but waited for the Air Force to contact me. - They never have. - I then made these calculations which only establish necessary conditions for validity of the model. However, the electrical power lines were not noticed by me until May 1967 when I saw them on the enclosed map while calculating the longitude and latitude of sighting when the objects were nearly overhead.

[redacted]

May 19, 1967

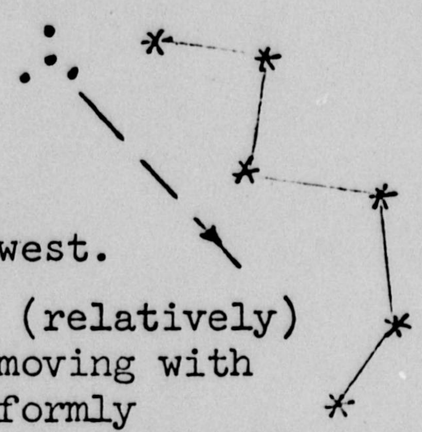
May 12, 1967

Establishment of Model of U.A.P. (Unusual Aerial ~~Phemenon~~ Phenomenon or U.F.O)

The triangular pattern of the U.A.P. (U.F.O.) - (lights) never changed during the sighting. (Since my wife made initial observation, this statement is based upon detailed discussion with her.) - They definitely maintained formation pattern after they pasted over the road traveling west. (Center object in motion relative to other three.)

When first sighted, they had acute angles and were as small as "near by" stars with the center object not moving noticeable relative to the others. However, my wife mentioned that the formation was moving (recall that we were traveling at approximately 50 mph) relative to the "near by" star. See below.

Figure 1. Formation of U.A.P. when first seen by my wife. Formation moving very slowly southwest.



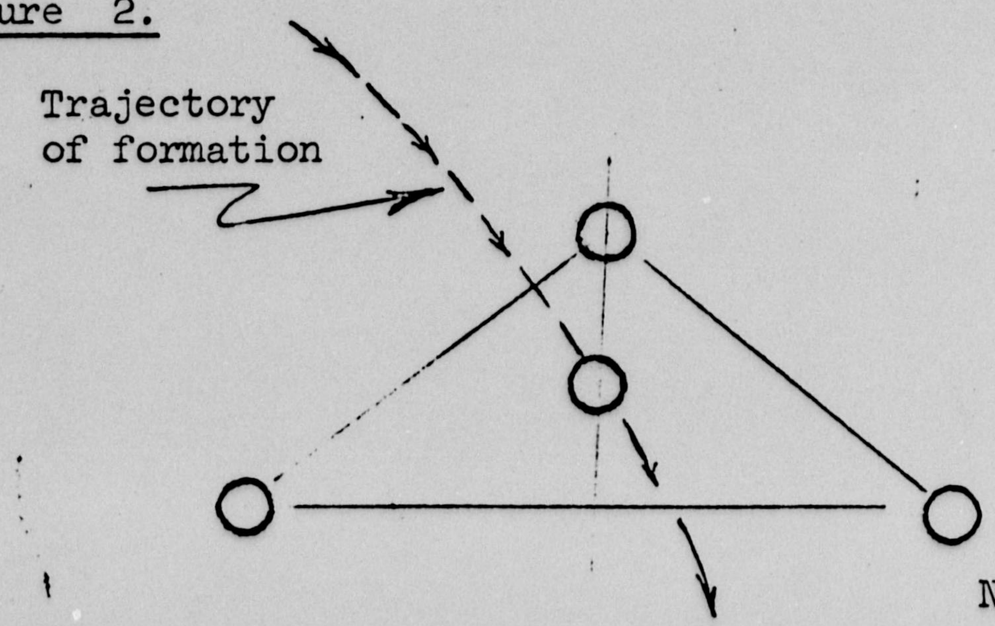
star pattern (not absolutely sure of pattern, but there was a cluster of stars similar to this)

(a) moving slowly (relatively)
(b) center light moving with formation uniformly
(c) color: bright as brightest stars - but small

Notice acute angles of triangle formed by outer three objects. Also lights appeared high in the NEN (or about 25° to 35° clockwise from the north)(road direction is 10° counterclockwise from the north).

As "lights" approached us (turning westward) they appeared as shown in the figure below (see point (c) on trajectory of overall colored figured) from our line of sight.

Figure 2.

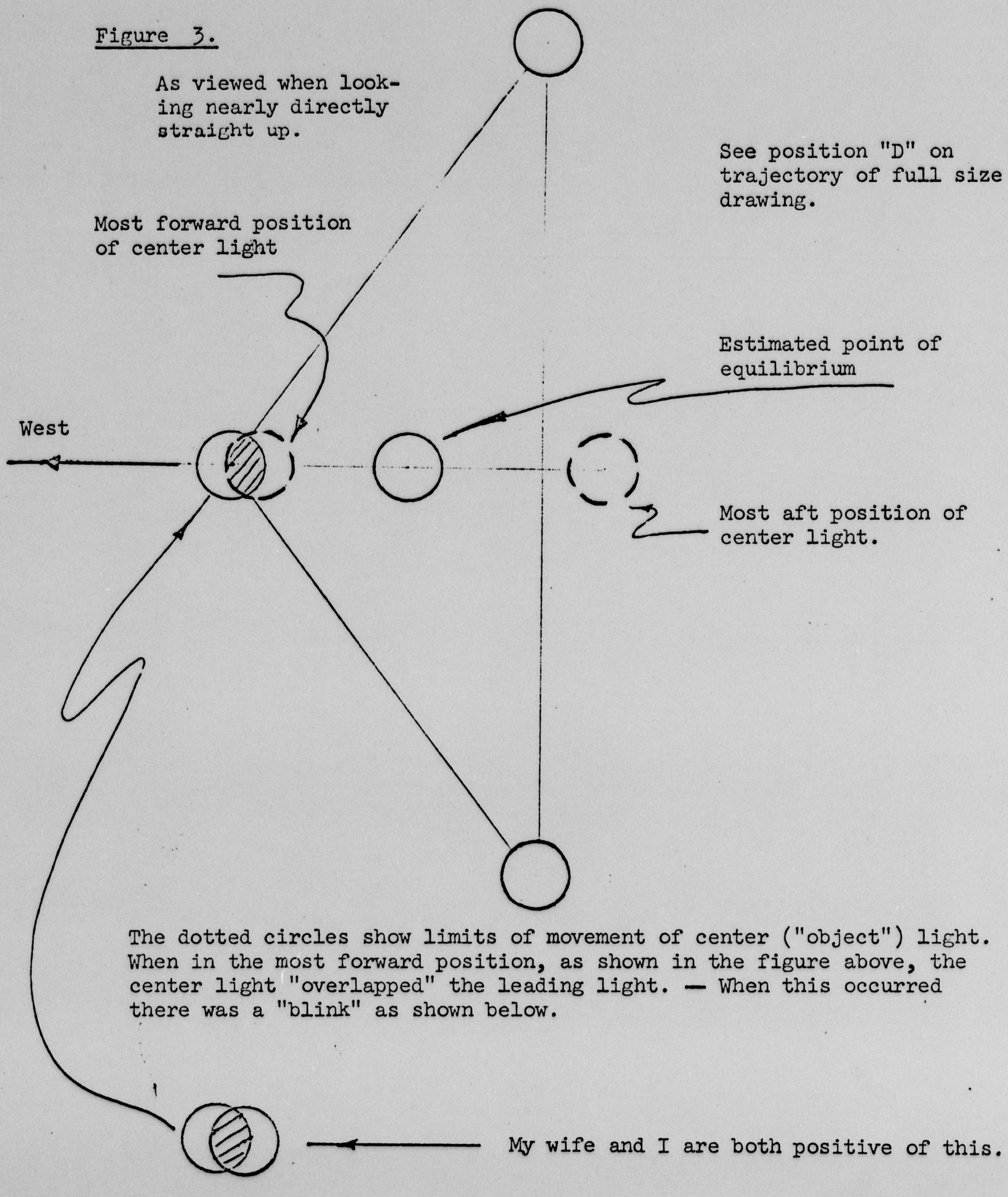


(a) Approximate formation (scale)
(b) Center object was now "jumping around" but not as much as when overhead.

Note: Obtuse angle at top.

When "lights" passed over the car (station wagon), I first saw them. The figure below is as close to scale as I can estimate, however, the center "object" ("light") was "jumping" backward and forward relative to the other "lights" and with a frequency of about 5 or 7 cycles per second. (Notice the obtuse angle formed by the leading light.)

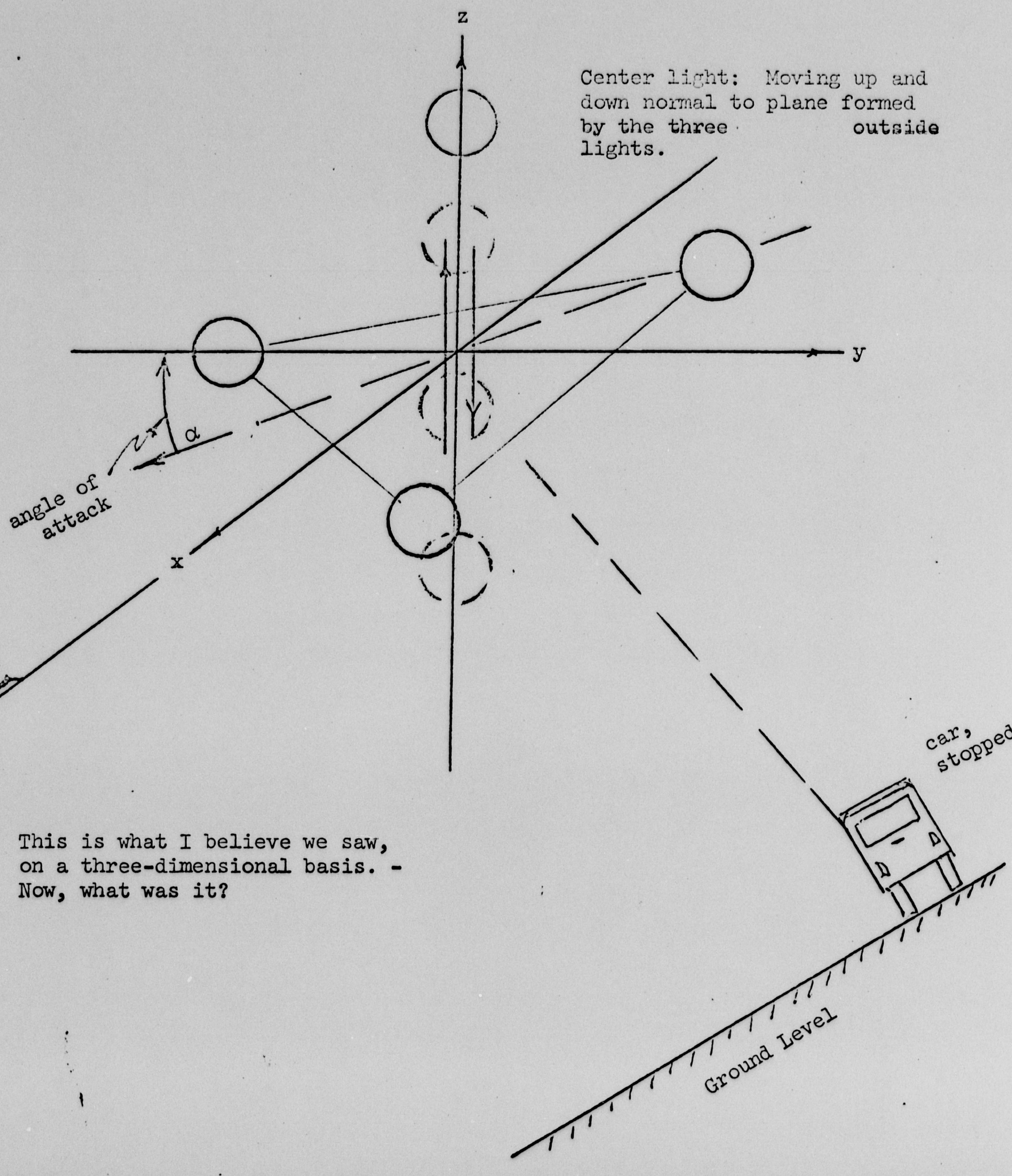
Figure 3.



The dotted circles show limits of movement of center ("object") light. When in the most forward position, as shown in the figure above, the center light "overlapped" the leading light. — When this occurred there was a "blink" as shown below.

My wife and I are both positive of this.

If one now considers the views with respect to their position on the trajectory, as I have done, the three dimensional figure could possibly look as shown below.

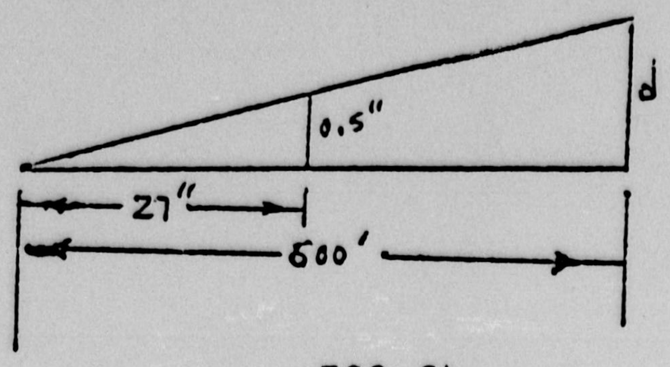


This is what I believe we saw, on a three-dimensional basis. - Now, what was it?

CALCULATION OF FREQUENCY OF CENTER LIGHT BASED UPON THE ASSUMPTION THAT IT WAS AN AERO-ELECTROMAGNETIC PHENOMENON

Assumptions: (1) Objects (lights) were 500 feet above the level of the road. (My best guess)

(2) Each object was approximately 9.3 feet in diameter. (Based upon: measurement of finger* 30 inches from the eye and the estimate that the diameter of the lights were approximately the size of the (my) index finger nail.) (= 0.5 inch)



*Actual measured as 27"

500 ft
estimated
(Best Guess)

$$\frac{0.5}{27} = \frac{d}{500 \times 12} \Rightarrow d = \frac{6000}{64} \doteq 111.1 \text{ inches} = 9.26 \text{ ft}$$

$$\underline{d = 9.3 \text{ ft} \doteq (3 \text{ meters})}$$

(3) Assume three outside objects form equillateral triangle. (All angles = 60°)

(4) Guess from scaled drawing that, sides of triangle are 10 meters.

(5) Assume angle of attack (α) about 30° or so and get height of center light at maximum of about 8 meters.

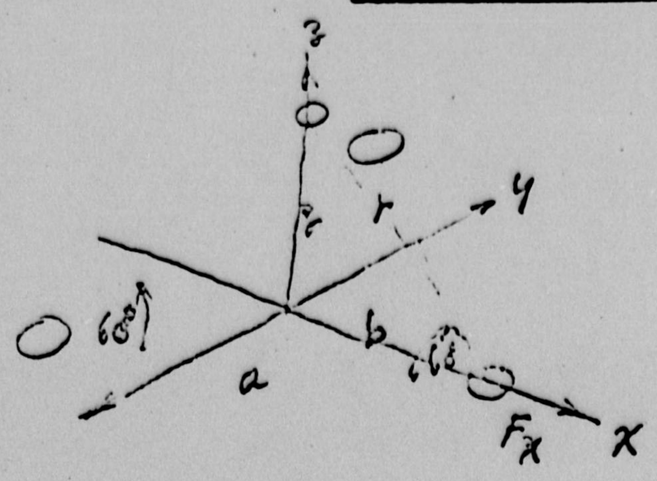
(6) Assume the "lights" were electrons (electron clouds) and motion unaffected by atmosphere (assume vacuum).

(7) Assume positive charge for three outside lights and negative charge for moving center "object" (light).

(8) Assume dynamic stability - this can probably be shown to be true only for the dynamic case.

Original Calculations By Numerical Integration.

Done about Dec. 16 late in morning.



$$F_x = 2\frac{e^2}{a^2}\cos 60° - \frac{e^2}{r^2}\frac{b}{r}$$

$$F_x = \frac{e^2}{a^2} - \frac{e^2 b}{(z_0^2+b^2)^{3/2}}$$

when is $F_x = 0$

$$\frac{e^2}{a^2} = \frac{e^2 b}{(z_0^2+b^2)^{3/2}}$$

$$\frac{1}{a^2} = \frac{b}{(z_0^2+b^2)^{3/2}}$$

$$a = \sqrt{\frac{(z_0^2+b^2)^{3/2}}{b}}$$

let $b = \frac{a}{\sqrt{3}}$

$$a^2 = \frac{(z_0^2 + \frac{a^2}{3})^{3/2}}{\frac{a}{\sqrt{3}}}$$

$$\sqrt{3}a^3 = (z_0^2 + \tfrac{a^2}{3})^{3/2} \Rightarrow 3a^6 = (z_0^2+a^2)^3$$

$$\sqrt[3]{3}\,a^2 = z_0^2 + a^2 \Rightarrow z_0^2 = \sqrt[3]{3}\,a^2 - a^2$$

$$z_0 = a\sqrt{\sqrt[3]{3} - 1}$$

By [redacted]
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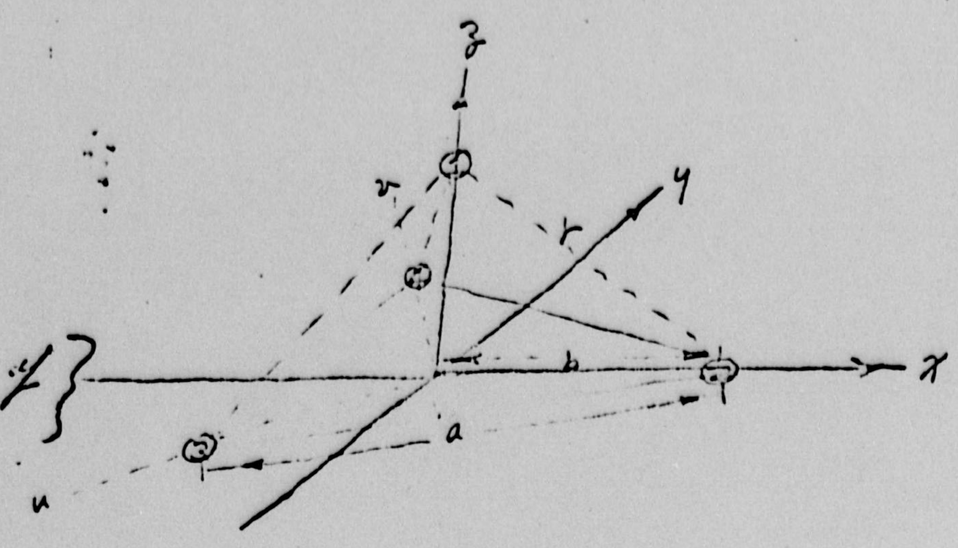
⊛ guessed at frequency to be 5 cycles/sec, prior to calculation

$$F = 3\frac{e^2}{z^2}\cos\theta$$

$$z_{k+1} = \dot{z}_k \Delta t + z_k + \tfrac{1}{2}\ddot{z}_k(\Delta t)^2$$

$$\dot{z}_{k+1} = \ddot{z}_k \Delta t + \dot{z}_k$$

$$\ddot{z}_{k+1} = -\frac{3e^2 z_{k+1}}{m_e(z_{k+1}^2 + b_{k+1}^2)^{3/2}} \quad \left\{\text{Equation of motion.}\right\}$$



m_e = mass of an electron.

Let $a = 10$ meters $\Rightarrow b = 5.77$ meters, $b^2 = 33.33\ m^2$

$z_0 = 8$ meters

$m_e = (0.912)10^{-27}$ gm

$e = (-4.802)10^{-10}$

$e^2 = (2.306)10^{-19}$ ergs-cm (dyne-cm^2)

$h = 6.598 \times 10^{-27}$ erg-sec

$e^2 = \frac{h}{2\pi}\frac{c}{137.06}$

$c = 3\times10^{10}$ cm/sec

$e^2 = \frac{(6.598)10^{-27}(3)10^{10}}{2\pi\ (137.06)10^2} = (2.298)10^{-19}$

$$\ddot{z}_0 = -\frac{3(2.3)10^{-19}(8)10^2}{(.91)10^{-27}(64\times10^4 + 33.33\times10^4)^{3/2}10^3}$$

$$K = \frac{3e^2}{m_e} = \frac{3(2.3)10^{-19}}{(.91)10^{-27}} = (7.582)10^8$$

$$\ddot{z}_0 = -\frac{(60.66)10^{10}}{\sqrt{.92202}\ 10^3\times10^3} = -\frac{60.66}{.96}10^4 = -(63.1\cdot9)10^3 \text{ cm/sec}^2 = -6.319.\ \text{m/sec}^2 \times 10^3$$

Since $\ddot{z}_0 m_e \simeq m_e g \Rightarrow a \approx 12$ ft $\simeq 4$ m $= 400$ cm

better approximation $\doteq 5$ meters $\quad b^2 = 8.33$ meters $\quad z_0 \approx b = 3.0$ meters.

$$\ddot{z}_0 = \frac{K z_0}{(z_0^2 + b_0^2)^{3/2}} = \frac{3(7.582)10^8 10^2}{(9+8.33)^{3/2}10^3} = \frac{(22.746)10^7}{(17.33)^{3/2}} = \frac{(22.75)10^7}{\sqrt{.5205}\ 10^2} =$$

$\zeta_0 = 8\times10^2$ cm, $\dot\zeta_0 = 0$, $\ddot\zeta_0 = -(6.32)10^5$ cm/sec²

$\Delta t = 0.01$ $\quad \dot\zeta_1 = 0 - (6.32)(10^5)(10^{-2}) = -6320$ cm/sec

$\zeta_1 = 800 - \frac{(6320)}{2}(.01)^2 - \frac{1}{2}(6.32)10^5 10^{-4} = 800 - 31.6 - 31.6 = 736.8$

$\ddot\zeta_1 = -\frac{(7.522)10^8(7.05)10^2}{(49.73+33.33)^{1/2}10^3} = \frac{-(5.347)10^8}{(83.33)^{3/2}} = \frac{-5.347}{(.5788)^{1/2}}10^5 = -7.03\,10^5$

$\dot\zeta_2 = -6320 - (7.03)10^5(10^{-2}) = -13,340$ cm/sec

$t_2 = 0.02$ $\quad \zeta_2 = 737 - 98.3 - 35 = 603.5$

$\ddot\zeta_2 = -\frac{(7.58)10^8(6.03)10^2}{(36.42+33.33)^{3/2}10^3} = -\frac{(45.73)10^7}{(69.75)^{3/2}} = -(7.82)10^5$ cm/sec²

$\dot\zeta_3 = -13,340 - (7.4)10^5(10^{-2}) = 20,740$ cm/sec

$t_3 = 0.03$ $\quad \zeta_3 = 603.5 - (17,040)10^{-2} - \frac{1}{2}(7.4)(10)^5(10^{-4}) = 603.5 - 170.4 - 37 = 396.1$ cm

$\ddot\zeta_3 = -\frac{(7.58)10^8(3.96)10^2}{(15.68+33.3)^{3/2}10^3} = -\frac{(30.02)10^7}{(49.01)^{3/2}} = -\frac{30.2}{3.43}10^5 = -(8.80)10^5$ cm/sec²

$\dot\zeta_4 = -20,740 - (8.32)10^5(10^{-2}) = 29,060$ cm/sec

$t_4 = 0.04$ $\quad \zeta_4 = 396.1 - (24,900)(.01) - \frac{1}{2}(8.32)10^5 10^{-4} = 396.1 - 249 - 41.6 = 105.5$ cm

So $t_5 \approx 0.04 + 0.003 = 0.043$

So period $T \doteq 4(0.043) = 0.172$ sec.

$f \doteq 5.7$ cycles per sec → frequency of outer object.

This confirms my guess and gives one explanation for the nature of the phenomenon. (necessary condition fulfilled)

May 18, 1967

Personal Comments:

1. After considering the facts as stated in the report to the Air Force, I have concluded that the unusual aerial phenomenon that we observed was an aero-electromagnetic phenomenon - most probably a result of natural atmospheric conditions combined with the electrical field nearby on the ground and the magnetic field of the earth.

2. I believe that the "lights" were gases, electrically charged, which derived their motion from a force which was a combination of the nearby electrical field and the magnetic field of the earth.

3. I think others, working in the field of U.F.O. or U.A.P. (unusual aerial phenomenon) should be made aware of this observation - especially the "BLINK" which occurred when the two "Objects" (lights) crossed. - This could have a definite effect upon the establishment of the cause of such phenomena.

4. NASA should not ignore the U.A.P. since it could possibly lead to new ideas for interplanetary probes for purposes of mapping the magnetic fields of other planets.

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