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SECURITY INFORMATION

AIR TECHNICAL INTELLIGENCE  
STUDY

FC

STATUS REPORT NO. 2

PROJECT GRUDGE

31 DECEMBER 1951

PROJECT NO. 10073



AIR TECHNICAL INTELLIGENCE CENTER  
WRIGHT PATTERSON AIR FORCE BASE  
DAYTON OHIO

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This report is the second of a series of monthly status reports of Project Grudge. Each report will be written on or near the last day of the month and will contain a list of all incidents reported during the month covered by the report. The reports that are considered to be outstanding will be summarized in the appendices of the report so that more details can be presented. The overall status of the project will also be presented.

Additional information may be obtained on any incident by directing requests to Chief, Air Technical Intelligence Center, Attention: ATIAA-2c, Wright-Patterson Air Force Base, Dayton, Ohio.

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## STATUS OF PROJECT GRUDGE

### I. OVERALL STATUS

#### A. Files

The majority of the time devoted to Project Grudge during the period covered in this Status Report, 30 November 1951 to 31 December 1951, has been spent in sorting and filing old Project Grudge and Project Sign files. All of the incidents dating back to 1946 that are in ATIC have been sorted and filed. There are approximately 800 on file. Each incident has been put in a separate folder and filed in chronological order.

Summary cards are being made on each incident. These summary cards will include data such as description of the object, course, altitude, speed, maneuvers, etc. These cards will then be cross-indexed in an attempt to obtain characteristics or trends in the sightings. It is contemplated that this cross-indexing will be completed by the middle of February.

#### B. Missing Reports and Photographs

It is apparent that the details of some of the reports between early 1949 and mid-1951 are missing. An attempt will be made to obtain these reports from other agencies so that the ATIC file will be complete. Photographs referred to in some reports are also missing. Although there have not been very many photographs of alleged unusual aerial objects submitted to ATIC, there have been a few and an attempt will be made to obtain prints of these photographs.

#### C. Map for Plotting Sightings

A large map of the United States is being prepared and is nearly completed. All of the sightings will be plotted on this map in an attempt to establish some pattern in the sightings. A color code will be worked out so that as much information as possible can be graphically illustrated on the map.

#### D. Delays in Obtaining Information

It will be noted in the list of incidents that is contained in this report that the investigations of sightings reported several months ago are still pending or that some sightings have not been investigated due to the time that has elapsed since the sighting. The investigations being conducted in conjunction with the project are still being hampered by the delays in receiving information.

On 25 October 1951, it was requested that AFOIN-CC-1 letter dated 8 September 1950 subject: "Reporting of Information on Unconventional Aircraft" be revised and recirculated to all AF commands. It is hoped that as soon as this is done the situation will improve.

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In addition to delays in receiving additional information, it is believed that many sightings of unidentified objects are not being reported at all. This belief is founded on the fact that ATIC has received newspaper clippings or requests for information on sightings about which there is no information in the records.

#### E. Consultants

Several conferences have been held with members of a prominent research organization to determine whether or not there is enough information available on the unidentified aerial objects to warrant a thorough scientific investigation. These people have inspected the files, discussed the problem, and it is their opinion that there are enough reports that cannot be explained by known objects or phenomena to warrant a detailed investigation.

Several other prominent engineers and scientists have been contacted and their opinions are much the same as those stated above.

Negotiations are underway to obtain the services of consultants in the fields of physics, nuclear physics, astronomy, psychology, etc., to assist in the analysis of the reports. These consultants will also attempt to make a continuing statistical analysis of the reports in an attempt to determine whether or not there is any significant pattern or characteristics in the sightings. In this respect, it is hoped that the project can receive the full cooperation of all AF commands in promptly reporting all sightings of unidentified aerial objects, so that as many authentic reports as possible will be available for study by statistical analysis.

## II. REPORTS OF SPECIFIC INCIDENTS

### A. Inclosed Summary List of Incidents

The inclosed list is (1) a summary of all incidents reported during the period of 30 November 1951 to 31 December 1951; (2) those incidents that were reported in Status Report No. 1, dated 30 November 1951, and still have the conclusions pending; and (3) those incidents that have been closed during the month covered by the report.

Incidents which are considered too detailed to summarize in the list of sightings are again given in the appendices, and in greater detail.

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DATE	TIME (Local)	LOCATION	DESCRIPTION OF INCIDENT
25 Aug 51	2110	Lubbock, Texas	Group of lights that have been seen on many occasions.
25 Aug 51	2158	Albuquerque, N.M.	Dark flying wing type a/c with about 1 1/2 times the w (See Appendix II)
27 Aug 51	2000	Vandalia, Ill.	Bright orange light seen from the ground and again from
31 Aug 51	1245	Matador, Texas	Pear-shaped aluminum object seemed to hover then leave (See Appendix III)
3 Sept 51	2220	Spokane, Wash.	Bluish-white light with fiery trail. About the size o
3 Sept 51	1400	Spokane, Wash.	Three objects appeared out of NW. Appeared to be a di monocular.
8 Sept 51	1400	Spokane, Wash.	Bluish-white light about the size of an automobile head
10 Sept 51	2100	Goose AFB, Newfoundland	Radar return - GCA radar observed two objects near the
23 Sept 51	1210	March AFB, Calif.	Object sighted over Long Beach. Four F-86's scrambled Intercept was unsuccessful due to altitude of object. (See Appendix IV)
9 Oct 51	1342	Terre Haute, Ind.	Round, silver colored object passed over airport at high
9 Oct 51	1345	Paris, Ill.	Round, silver colored object seen by private pilot. (S
10 Oct 51	1010	Minneapolis, Minn.	Round, silver object seen by pilots tracking a balloon
11 Oct 51	0630	Minneapolis, Minn.	Round, silver object seen by pilots tracking balloon a (See Appendix VII)
11 Oct 51	0845	Neuburg AFB, Germany	Object seen by two airmen who described object as "som
21 Oct 51	1250	Battle Creek, Mich.	Disk-shaped object 30 ft. - 40 ft. in diameter. Pilot Object was disk-shaped, with a highly polished surface
21 Oct 51	0500Z	62°N 15°W	Bright yellowish flash on the horizon.
28 Oct 51	2000- 2030	Buena Vista, Col.	Greenish-blue brilliant light with an incandescent glow
30 Oct 51	1930	Four Corners, Col.	Object appeared white first, then red. Core glowed with neon tube.

# SIGHTINGS OF UNIDENTIFIED OBJECTS

DESCRIPTION OF INCIDENT	LENGTH OF TIME OBSERVED	SOUND	SPEED
Group of lights that have been seen on many occasions. (See Appendix I)	4 Sec.	None	30° Ar
Dark flying wing type a/c with about 1 1/2 times the wing span of a B-36. (See Appendix II)	30 Sec.	None	300-400 mph
Bright orange light seen from the ground and again from two aircraft.	Unknown	None	High
Pear-shaped aluminum object seemed to hover then leave the area at high speed. (See Appendix III)	Several seconds	None	Hovered to high speed
Bluish-white light with fiery trail. About the size of an automobile headlight.	Seconds	None	High
Three objects appeared out of NW. Appeared to be a disk when viewed through a monocular.	3-4 Min.	None	Erratic
Bluish-white light about the size of an automobile headlight leaving a fiery trail.	Seconds	None	High
Radar return - GCA radar observed two objects near the airfield.	Several Minutes	None	140 mph
Object sighted over Long Beach. Four F-86's scrambled and sighted object over Muroc. Intercept was unsuccessful due to altitude of object. Orbited March AFB at 55,000 ft. (See Appendix IV)	Unknown	None	Unknown
Round, silver colored object passed over airport at high speed. (See Appendix V)	15 Sec.	None	Very high
Round, silver colored object seen by private pilot. (See Appendix VI)	Unknown	None	Very high
Round, silver object seen by pilots tracking a balloon. (See Appendix VII)	Two Min.	None	High
Round, silver object seen by pilots tracking balloon and by ground observer team. (See Appendix VII)	Several Minutes	None	High
Object seen by two airmen who described object as "some form of flying disk".	Unknown	None	Unknown
Disk-shaped object 30 ft. - 40 ft. in diameter. Pilot in navion met object head-on. Object was disk-shaped, with a highly polished surface.	Several Seconds	None	High
Bright yellowish flash on the horizon.	Unknown	None	Unknown
Greenish-blue brilliant light with an incandescent glow in the form of a tail.	15-20 Sec.	None	Unknown
Object appeared white first, then red. Core glowed with brilliant green color like neon tube.	Unknown	None	Unknown

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# SIGHTINGS OF UNIDENTIFIED OBJECTS

DESCRIPTION OF INCIDENT	LENGTH OF TIME OBSERVED	SOUND	SPEED	ALTITUDE	HEADIN
have been seen on many occasions. (See Appendix I)	4 Sec.	None	30° Arc/Sec	Unknown	180°
a/c with about 1 1/2 times the wing span of a B-36.	30 Sec.	None	300-400 mph	1000 ft.	160°
seen from the ground and again from two aircraft.	Unknown	None	High	Unknown	Varied
object seemed to hover then leave the area at high speed.	Several seconds	None	Hovering to high speed	Low to high	90°
th fiery trail. About the size of an automobile headlight.	Seconds	None	High	Low	225°
out of NW. Appeared to be a disk when viewed through a	3-4 Min.	None	Erratic	Unknown	225°
ut the size of an automobile headlight leaving a fiery trail.	Seconds	None	High	Low	225°
ar observed two objects near the airfield.	Several Minutes	None	140 mph	4,000 ft.	Varied
ng Beach. Four F-86's scrambled and sighted object over Muroc. sful due to altitude of object. Orbitted March AFB at 55,000 ft.	Unknown	None	Unknown	55,000 ft.	Varied
bject passed over airport at high speed. (See Appendix V)	15 Sec.	None	Very high	Unknown	135°
object seen by private pilot. (See Appendix VI)	Unknown	None	Very high	5,000 ft.	45°
seen by pilots tracking a balloon.(See Appendix VII)	Two Min.	None	High	High	SE
seen by pilots tracking balloon and by ground observer team.	Several Minutes	None	High	High	Unknown
men who described object as "some form of flying disk".	Unknown	None	Unknown	20,000 ft.	Unknown
ft. - 40 ft. in diameter. Pilot in navion met object head-on, with a highly polished surface.	Several Seconds	None	High	3,000 ft.	85°
on the horizon.	Unknown	None	Unknown	Unknown	Unknown
light with an incandescent glow in the form of a tail.	15-20 Sec.	None	Unknown	Unknown	N to SW
first, then red. Core glowed with brilliant green color like	Unknown	None	Unknown	Unknown	N to SW

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# TIFIED OBJECTS

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LENGTH OF TIME OBSERVED	SOUND	SPEED	ALTITUDE	HEADING	SOURCE	ACTION OR COMMENTS
4 Sec.	None	30° Arc/Sec	Unknown	180°	Varied	See Appendix I
30 Sec.	None	300-400 mph	1000 ft.	160°	Sandia Base guard and wife	See Appendix II
Unknown	None	High	Unknown	Varied	Commercial pilots and Ground Obs.	No further investigation. No conclusions.
Several seconds	None	Hovering to high speed	Low to high	90°	Two ladies	See Appendix III
Seconds	None	High	Low	225°	AF Captain and wife	Believed to be meteor or fireball. No conclusions.
3-4 Min.	None	Erratic	Unknown	225°	AF Major	No conclusions.
Seconds	None	High	Low	225°	AF 1st Lt	Believed to be a meteor or fireball. No conclusions.
Several Minutes	None	140 mph	4,000 ft.	Varied	GCA Operator	No further investigation. Insufficient information.
Unknown	None	Unknown	55,000 ft.	Varied	F-86 pilots and Ground Obs.	See Appendix IV.
15 Sec.	None	Very high	Unknown	135°	CAA Chief A/C Communicator	See Appendix V.
Unknown	None	Very high	5,000 ft.	45°	Private pilot	See Appendix VI.
Two Min.	None	High	High	SE	Balloon Obs.	See Appendix VII.
Several Minutes	None	High	High	Unknown	Balloon Obs.	See Appendix VII.
Unknown	None	Unknown	20,000 ft.	Unknown	Two airmen	No conclusions.
Several Seconds	None	High	3,000 ft.	85°	Civilian pilot 14 yrs experience	No conclusions.
Unknown	None	Unknown	Unknown	Unknown	Scientist	No conclusions.
15-20 Sec.	None	Unknown	Unknown	N to SW	AF Major	Example of green fireball phenomena. No conclusions.
Unknown	None	Unknown	Unknown	N to SW	Civilian	Example of green fireball phenomena. No conclusions.

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## SIGHTINGS

DATE	TIME (Local)	LOCATION	DESCRIPTION OF INCIDENT
11 Nov 51	1030	42° 43'N 78° 32'W	Object not seen. Only vapor trail.
24 Nov 51	1825	Lower Michigan	Sighted by number of observers. Color variously described as grayish white. (See Appendix VIII)
24 Nov 51	1553	Minneapolis, Minn.	Flying wing shaped object.
7 Dec 51	1412	Kansas City, Mo.	Described as perfectly round, with inner core resembling tapered and stubby wings.
7 Dec 51	1630	Sunbury, Ohio	Shiny, silvery sphere seen through telescope.
10 Dec 51	1820 EST	Buffalo, N. Y.	Large, white, extremely brilliant and globular in shape.
12 Dec 51	2150Z	Hastings, Minn.	White object resembling a kite about 1000 ft. below a/c
28 Dec 51	1910	Alexandria, Va.	Pilot saw object glowing which circled and hovered.

# SIGHTINGS OF UNIDENTIFIED OBJECTS

ON	DESCRIPTION OF INCIDENT	LENGTH OF TIME OBSERVED	SOUND	SPEED
	Object not seen. Only vapor trail.	Unknown	None	Unknown
Igan	Sighted by number of observers. Color variously described as bright white, white, grayish white. (See Appendix VIII)	Unknown	None	High
s,	Flying wing shaped object.	Unknown	None	Hover
y, Mo.	Described as perfectly round, with inner core resembling fuselage of small a/c with tapered and stubby wings.	Approx. 1 Min.	None	Unknown
hio	Shiny, silvery sphere seen through telescope.	Half an hour	None	High
. Y.	Large, white, extremely brilliant and globular in shape.	15 Sec.	None	240 Knc
Minn.	White object resembling a kite about 1000 ft. below a/c.	3-4 Min.	None	380-400
, Va.	Pilot saw object glowing which circled and hovered.	2 Min.	None	Unknown

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# SIGHTINGS OF UNIDENTIFIED OBJECTS

DESCRIPTION OF INCIDENT	LENGTH OF TIME OBSERVED	SOUND	SPEED	ALTITUDE	HEADING
Only vapor trail.	Unknown	None	Unknown	High	Unknown
of observers. Color variously described as bright white, white, (See Appendix VIII)	Unknown	None	High	High	Unknown
1 object.	Unknown	None	Hovering	25,000 ft.	90°
ctly round, with inner core resembling fuselage of small a/c with by wings.	Approx. 1 Min.	None	Unknown	Unknown	NW
ere seen through telescope.	Half an hour	None	High	High	N to W
ely brilliant and globular in shape.	15 Sec.	None	240 Knots	3000-4000 ft.	S to N
bling a kite about 1000 ft. below a/c.	3-4 Min.	None	380-400 mph	9,000 ft.	Unknown
lowing which circled and hovered.	2 Min.	None	Unknown	1000-6000 ft.	Unknown

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# IDENTIFIED OBJECTS

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	LENGTH OF TIME OBSERVED	SOUND	SPEED	ALTITUDE	HEADING	SOURCE	ACTION OR COMMENTS
	Unknown	None	Unknown	High	Unknown	Civilian	No conclusions.
	Unknown	None	High	High	Unknown	Airlines pilot and others	See Appendix VIII.
	Unknown	None	Hovering	25,000 ft.	90°	AF Pilot	Pending.
th	Approx. 1 Min.	None	Unknown	Unknown	NW	Civilian	Pending.
	Half an hour	None	High	High	N to W	Civilian	No investigation. No conclusions.
	15 Sec.	None	240 Knots	3000-4000 ft.	S to N	USAF Pilot	Pending.
	3-4 Min.	None	380-400 mph	9,000 ft.	Unknown	USAF Pilot	Pending.
	2 Min.	None	Unknown	1000-6000 ft.	Unknown	USAF Pilot	Proved to be experimental helicopter from Patuxent Naval Air Station.



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## Appendix I

LUBBOCK, TEXAS - 25 August 1951

### I. DISCUSSION OF THE INCIDENT

The first of a series of sightings related to this incident occurred the evening of 25 August 1951 at approximately 2110 CST. Four Texas Technical College professors were sitting in the backyard of one of the professor's homes observing meteorites in conjunction with a study of micrometeorites being carried out by the college. At 2120 they observed a group of lights pass overhead from N to S. The lights had about the same intensity as high cirrus clouds on a moonlight night. The altitude was not determined but they traveled at a high rate of speed. The pattern of the lights was almost a perfect semi-circle containing from 20 to 30 individual lights. Later in the evening a similar incident was observed and during a period of about three weeks a total of approximately twelve (12) such flights were observed by these men.

The group of men included:

- a. The Head of the Petroleum Engineering Department
- b. Professor of Geology, has PhD.
- c. Professor of Physics, has PhD.
- d. Professor of Chemical Engineering, has PhD.

Besides the above four men, the following have observed the incidents:

- a. Professor of Mathematics, has PhD.
- b. Graduate student working on PhD.

In addition, a Professor of Astronomy was consulted on the incident, but he did not observe any of these flights.

The above mentioned men took a personal interest in the phenomena and undertook a study of the objects. Attempts were made to obtain an altitude measurement by laying out a measured base line perpendicular to the usual flight path of the object and placing angle measuring devices at the end of the base line, however, all their attempts failed because the objects did not appear on the nights the observers were waiting for them.

From the series of observations, the following facts were obtained:

- a. The angular velocity of the object was very nearly  $30^\circ$  of arc per second.
- b. There was no sound that could be attributed to the object.
- c. The flight path of the object was from N to S in the majority of the flights although some were NE to SW.
- d. On several nights there were two or three flights.

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- e. The color of the lights was blue-green.
- f. There were from 15 to 30 separate lights in each formation.
- g. The first two flights observed were a semi-circle of lights but in subsequent flights there was no orderly arrangement.
- h. The object always appeared at an angle of about  $45^{\circ}$  from horizontal in the north and disappeared at about  $45^{\circ}$  in the south. The object did not gradually come into view as would an aircraft approaching from a distance, neither did it gradually disappear.
- i. There was no apparent change in size as the object passed overhead.
- j. The "angular span" was estimated to be  $10^{\circ}$ .

Attempts were made to obtain the relative height of the object in respect to clouds. However, these attempts were also unsuccessful due to the fact that the objects passed between widely scattered clouds.

Attempts were made to determine whether or not there was any form between the lights by trying to see stars between the lights. These also was unsuccessful due to the short time the object was in view.

This phenomena was observed by at least one hundred people in and around Lubbock, Texas. Some of these people were of the opinion that the objects were birds reflecting lights from the city.

On the evening of 31 August 1951 at about 2330 CST, a college freshman from Texas Tech observed a flight of the unidentified objects pass over his home. The flight was observed through an open window. Upon observing the first flight of the objects, the observer obtained his camera and went into the backyard of his home in an attempt to get photographs of additional flights of the object. (Comment: This would be logical as by 31 August 1951 these flights of the objects, and the fact that several flights might occur in an evening, was well known.) Two more flights of the object allegedly did occur and were photographed. Two photos of one flight and three of another were obtained. ATIC has four of the negatives but the other one was lost or misplaced by the photographer. The photographs show a V-shaped formation of lights. In one photo a single-V of lights appear, while on three photos there is a double-V. The separate lights, which appear to be pinpoint light sources, vary in intensity.

(See Appendix II for possibly related incidents.)

## II. STATUS OF THE INVESTIGATION

### A. Trip to Lubbock, Texas

A trip was made to Lubbock, Texas, on 6-9 November 1951 to obtain more details on the incident. Many people who had seen the object or who were involved in the incident were interrogated. A conference was held with the college professors and they prepared a signed statement describing the objects they they observed.

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The photographer was interrogated, in conjunction with OSI, in regard to the photographs of the objects. His account of the incident seemed logical, and there were no obvious indications of a hoax. The photographer had previously been interrogated by the Lubbock newspaper and the photos inspected by Associated Press and Life Magazine representatives. It was their opinion that the photos were not obviously a hoax. The college professors were doubtful as to whether or not the photographs were of the same objects that they had observed because:

1. They had never observed a V-shaped formation of lights. This is not too significant, however, as the arrangement of the lights that they observed varied and since there were several flights the college professors possibly did not see the flights that were photographed. In addition, the photographer states that the object appeared to be U-shaped but when he developed the negatives, the object was V-shaped.

2. The objects that the professors observed were, in their opinion, not bright enough to be photographed. This is, however, an estimate and could be in error.

It was found that one school of thought of the people in the Lubbock area was that the objects were some type of migratory birds reflecting light from the city. Several people reported that they definitely knew the objects were birds because they could see wings "flapping". It is very possible that some of the people who were looking for the object did see ducks as there were duck flights passing over during the period.

The college professors do not believe the theory that the objects were birds, but they are giving the possibility more thought. If they were birds, they would have to be relatively low to give the illusion of high speed. An occasional flight of birds might pass low over a city on a clear night but it is highly doubtful if they would continue to do this for several nights. Migratory birds usually try to keep away from cities.

The Federal Wild Life Game Warden was visited and although he was not familiar with the incident he doubted if the objects were birds. He stated that they could have been, however. The most likely suspect, if it is a bird, is a member of the Plover family which has a pure white breast, but unless there was a sudden influx of the birds into the Lubbock area, the game warden doubted if there would be enough of these birds to make up as many flights as were observed.

If the photos are authentic, the objects very probably are not ducks because an experienced photographer from the Lubbock Avalanche Newspaper attempted to get photos of ducks using both natural light and flash, but failed.

#### B. Analysis of Photos by Wright Air Development Center

The Photographic Reconnaissance Laboratory of WADC made a preliminary analysis of the photographs. The analysis was made by inspecting the negatives in a comparator microscope. Their conclusions were:

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1. The images on the negatives were caused by light striking unexposed film, (i.e., the negatives were not retouched).

2. The individual lights in the "formation" varied in intensity.

3. The intensity was greater than any surrounding stars as the stars did not register. (The photos were taken under CAVU conditions.)

4. The individual lights changed position in the "formation".

## C. Reinterrogation of the Photographer

The OSI was requested to reinterrogate the photographer in another attempt to determine the authenticity of the photographs. The details of this reinterrogation have not been received but a preliminary report stated that there were no indications that the photographs were not authentic.

## D. Future Investigations

A trip to Lubbock, Texas, will be made during January. Arrangements are being made to have a Project Grudge consultant and a physicist accompany Project Grudge personnel. If the photographs are authentic, they are important in that:

1. They will give an accurate measurement of the "angular span".

2. The light source, although it appeared to be of low intensity to the eye, was highly actinic.

3. The movement of the individual lights in the formation can be studied further.

4. Density comparison tests can be made.

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## Appendix II

ALBUQUERQUE, NEW MEXICO - 25 August 1951

### I. DISCUSSION OF INCIDENT

On the evening of 25 August 1951, at 2158 MST, a Sandia Base Security Guard and his wife observed what they described to be a flying wing type aircraft similar to the Northrop Fly-Wing Bomber (B-49) pass over the backyard of their trailer home in the east part of Albuquerque. They judged the wing span of the aircraft to be about one and one half times the wing span of a B-36, with which they were familiar. The object was flying low, the altitude was thought to be about 800 ft. - 1000 ft., and there was no sound that could be attributed to the object. The color of the object was not apparent due to the twilight but dark chordwise stripes were noticed under the wings. Six to eight pairs of soft flowing lights were noticed on the trailing edge of the wing. The speed was judged to be about 300 - 400 mph and the object was on a heading of approximately 160°.

(See Appendix I for possible related incident.)

### II. WEATHER

Broken clouds at 17,000 ft., visibility five miles, wind S at 5 mph.

### III. STATUS OF INVESTIGATION

The possibility of this being a known aircraft was checked with negative results. The AC and W Radar Station at Kirtland AFB did not observe any unusual or unidentified aircraft.

The guard's background was checked and since he has a "Q" clearance, it has been assumed that he apparently is mentally stable.

An investigation was made to determine whether or not any one else had seen the object but only negative results were obtained.

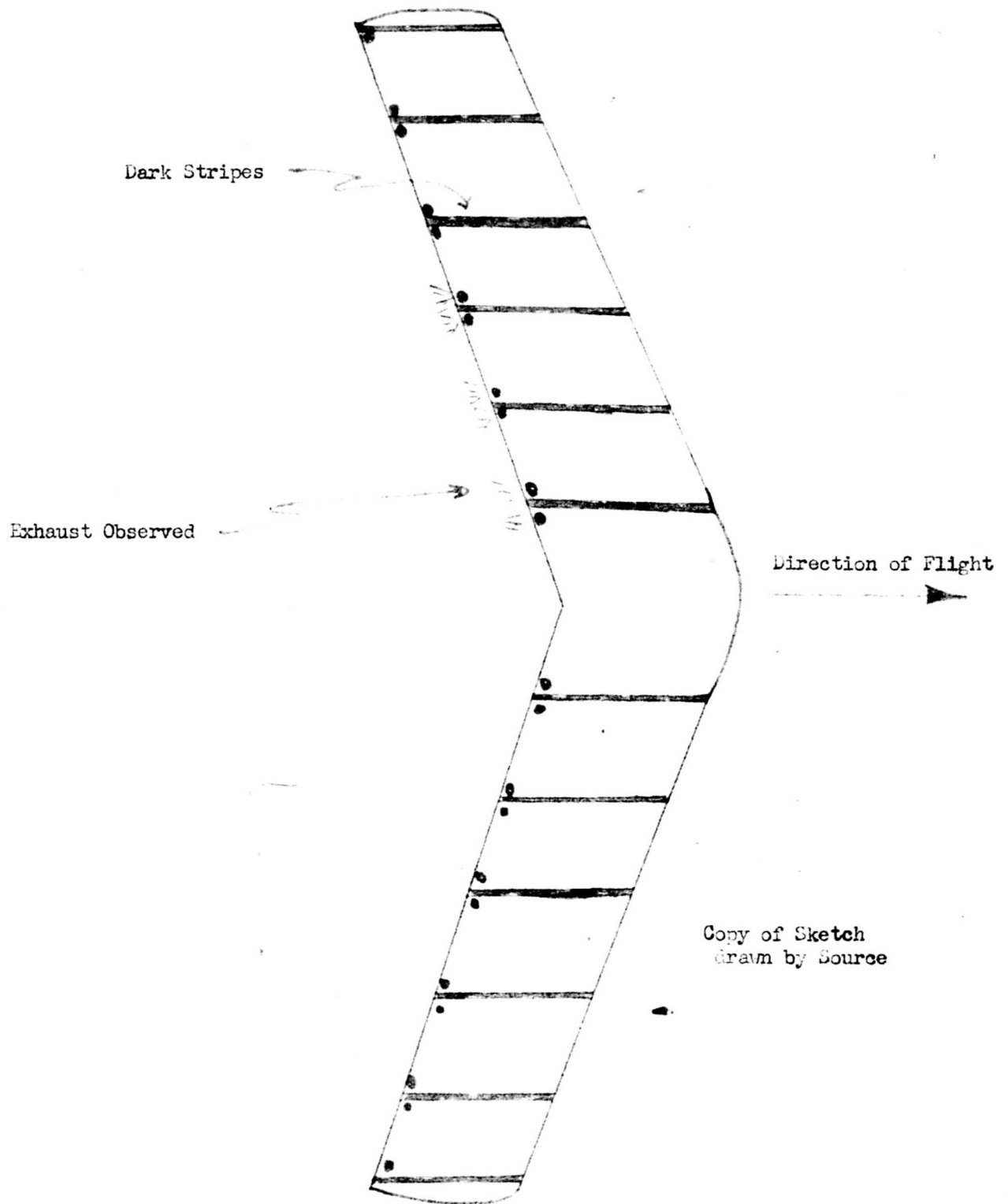
The photographs referred to in Appendix I were sent to the OSI at Kirtland AFB. These photos were shown to the sources and they stated that the photos resembled the "exhaust" or light pattern of the object. A sketch, drawn by the observers, is shown in this Appendix.

It is interesting to note that a very similar sighting took place in Lubbock, Texas. The exact time and date of the sighting could not be determined due to the fact that the observer believed she had seen an illusion of some type and did not report the incident. The only date that could be given was "late in August or early September".

### IV. CONCLUSIONS

None. The investigation will be continued until the authenticity of the photos in Appendix I can be determined.

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## Appendix III

MATADOR, TEXAS - 31 August 1951

### I. DISCUSSION OF THE INCIDENT

On 31 August 1951 at approximately 1245 CST two ladies were driving in an automobile several miles north of Matador, Texas. The object was described as a pear-shaped object about the length of a B-29 fuselage, aluminum or silver in color, which readily reflected the sunlight. The object had a port or some type of aperture in the side and moved through the air with the small end forward. There was no sign of any exhaust and no noise was heard.

As the two ladies were driving north from Matador, Texas, the driver of the automobile first noticed the object about 150 yards ahead of the automobile. They stopped and both ladies got out to observe the object. It was drifting slowly in an eastward direction at a speed they judged to be less than the speed required to take off in a Cub aircraft and an altitude of about 120 ft. Seconds later the object began to ascend rapidly and moved out of sight into the wind in a circular ascent. (The wind at this time was from NE at about 5-7 knots.)

A background investigation showed that both women were of excellent character.

This incident is of interest because it was observed during the same period as the objects over Lubbock, Texas (See Appendix I).

### II. WEATHER

- A. 1230 CST - Reese AFB - 31 August 1951  
Estimated ceiling 6,000 ft., broken clouds, with thin scattered clouds at 25,000 ft. Visibility 15 miles. Wind ENE at 3 knots.
- B. 1230 CST - Childress, Texas - 31 August 1951  
Estimated ceiling 25,000 ft., overcast. Visibility 15 miles.  
Wind NNE at 7 knots. Towering cumulus clouds in SE quadrant.

### III. STATUS OF INVESTIGATION

It has been reported that a road repair crew saw the same object later on the same day. Attempts will be made by Project Grudge personnel to contact members of this road crew and obtain their statements. There were also reports of crop dusting activity in the area, so attempts will be made to determine whether or not the ladies could have seen this activity.

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Appendix IV

MARCH AIR FORCE BASE - 23 September 1951

I. DISCUSSION OF INCIDENT

The first report of this incident, which appeared in Status Report No. 1, proved to be incomplete and misleading. Further investigation has corrected the discrepancies and the following account of the incident is considered to be accurate.

At approximately 0700 PDST, two F-86 aircraft were scrambled from George Air Force Base, California, on a routine mission. The flight was vectored to 118° 40'N - 33° 50'N by GCI. (See inclosed overlay.) The flight orbited the position and took up a heading toward Long Beach Radio. At approximately 0755 PDST the flight reported to GCI that they observed an unidentified object high at 12 o'clock. The flight was 30 seconds out of Long Beach Radio at this time. The object appeared to be in a left orbit at about 50,000 ft. The object could not be picked up by the ground radar, however, visual contact was maintained. The object continued a left orbit and passed over the two aircraft. Attempts were made by the F-86's to identify the object but they were unsuccessful due to the altitude of the object and a fuel shortage. At approximately 0810 or 0815 the flight was released by the ground controller and they returned to George Air Force Base. The object appeared to be an aircraft with 45° swept wings and bright silver in color. When last seen the object was in a left orbit, or circling to the left. The pilot's opinion was that it was a swept wing type aircraft.

At approximately 0800 PDST four additional F-86 aircraft were scrambled from George AFB to relieve the two above mentioned F-86's. The four aircraft split into two, two-ship elements, denoted as Flight 2-A and 2-B on the inclosed overlay. Flight 2-A was vectored to a position at 117° 30'W and 30° 20'N. They arrived at this position at approximately 0810 and sighted the object high at 12 o'clock at what appeared to be over Hueco AFB. A steady climb was made to 43,000 ft. and the object was found to be near March AFB. The object appeared to be in a controlled orbit to the right and left at 50,000 to 55,000 ft. The two aircraft stayed in the area for 10-15 minutes before breaking off the intercept due to a fuel shortage and landed at 0845 ELST. The object appeared to be a swept wing aircraft.

The second element of the group, noted as Flight 2-B on the overlay, observed the object soon after take-off. The object appeared to be going south. The flight made a series of climbing turns under the object as they climbed to 43,500 ft. The object was in a wide right turn. At approximately 0925 PDST the aircraft broke off the attempted intercept and returned to their base. This flight reported that the object appeared to be round and silver.

No more intercepts were attempted. At no time was the object observed on the radar screen nor was it reported to be observed visually from the ground. The F-86's, however, were continually tracked by radar.

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The F-86's were unable to climb to the estimated altitude of the object due to the fact that they were carrying external fuel tanks and elected not to jettison them.

## II. STATUS OF INVESTIGATION

At 0700 PDST a radiosonde balloon was released from the Long Beach Municipal Airport. This balloon was lost at 0743 PDST, eight miles from the airport on a bearing of 95° true, due to a malfunction of the tracking equipment. (See Point A on overlay.) At this time the balloon would have been at approximately 40,000 ft. The winds above 40,000 ft. are unknown but it is logical to assume that at this altitude they will be relatively constant in direction. Assuming a relative constant direction of 270° and an average velocity of 30 knots above 40,000 ft. (the wind at 40,000 ft. was 280° at 21 knots) the possible flight path of the balloon can be plotted on the overlay.

The original sighting by Flight 1 could very possibly have been the balloon as their heading was toward Long Beach Airport. The altitude of the F-86's at the time of the sighting is unknown but was probably below 40,000 ft. At 0755, the time of the original sighting, the balloon would be at 50,000 to 55,000 ft. and approximately ten miles directly ahead of the two aircraft. The apparent orbiting of the balloon cannot be explained. The balloon would make a gradual turn due to wind shifts but these are so gradual that it is doubtful if the movement would be apparent from an aircraft as fast as an F-86.

Referring to the ground track of Flight 2-A, if a 30 knot wind at 270° is assumed, at 0810, the approximate time the F-86's sighted the object from a 355° TC, the balloon would be at B on the overlay. The balloon would probably be at an altitude of 60,000 ft. and nearly straight ahead of the aircraft. Due to the size of the balloon, the distance could have been misjudged and the balloon could have appeared to be near Muroc. Once again the orbiting of the object cannot be explained.

The attempted intercept by Flight 2-B cannot be explained. If the ground track given by the leader of Flight 2-B is correct it is very doubtful that the flight was observing a balloon. The time that they sighted the object is not known but if it is assumed that they flew beneath the object for 30 minutes, it is highly doubtful that a wind shift of nearly 360° could occur above 60,000 ft. to give the illusion of a turn.

The possibility of this object being an experimental aircraft from some southern California aircraft plant, naval airfield, or from Edwards Air Force Base was checked with negative results. No other balloons were released in the vicinity.

## III. CONCLUSIONS

With the information available, it cannot be concluded that the object was definitely the radiosonde balloon released from Long Beach Municipal Airport. However, since the balloon was near the flight path of two of the F-86 elements, and assuming that the orbiting of the object was an illusion due to the relative motion between the balloon and the aircraft, it can be concluded that the unidentified object was very possibly a radiosonde balloon.

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The third attempted intercept, the one in which the object was followed in a wide turn, cannot be explained.

It is not believed that further interrogation would produce any additional significant details due to the fact that some of the personnel involved have been transferred overseas and due to the time since the incident.

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Path of aircraft (reported)

Path of balloon

○ George AFB

○ Muroc

35° 00'

118° 30'

Flight 2-B

117° 00'

34° 00'

○ March AFB

Prevailing Wind at  
40,000'

Scale (nautical miles)  
0 10 20 30

Flight 2-A

117° 30'W  
33° 20'N

Long Beach A.P. A B  
Long Beach Radio

Flight I

118° 40'W  
33° 50'N

Overlay of FC-219

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Appendix V

TERRE HAUTE, INDIANA - 9 October 1951

I. DISCUSSION OF THE INCIDENT

On 9 October 1951 at 1342 CST, a GAA Chief Aircraft Communicator observed a silver object pass directly overhead while he was at Hulman Municipal Airport, five miles east of Terre Haute, Indiana. The object was judged to be approximately the same size as a 50 cent piece held at arm's length. The object passed overhead at a very high rate of speed going in a southeasterly direction, passing from directly overhead to the horizon in about 15 seconds. There was no sound or vapor trails. The shape and general form of the object could be seen as the object passed over the horizon and out of sight.

(For related incident, see Appendix VI.)

II. WEATHER

Clear, bright sun, no clouds or haze.

III. STATUS OF INVESTIGATION

Further investigation revealed no additional information.

IV. CONCLUSIONS

None.

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## Appendix VI

PARIS, ILLINOIS - 9 October 1951

### I. DISCUSSION OF THE INCIDENT

On 9 October 1951, at approximately 1345 CST, a private pilot enroute from Greencastle, Indiana, to Paris, Illinois, sighted a silver object just east of Paris, Illinois, at 5,000 ft. altitude. The object appeared to be stationary in as much as it did not increase or diminish in size with the approach of the aircraft. The object then started to travel in a northeasterly direction south of the Newport, Indiana, Atomic Energy Plant.

(See Appendix V for related incident.)

### II. WEATHER

Clear, bright sun, no clouds or haze.

### III. STATUS OF INVESTIGATION

Further investigation revealed no significant facts. It was impossible to determine whether or not there were any jet aircraft in the area due to the lapse of time since the sighting.

### IV. CONCLUSIONS

None.

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## Appendix VII

MINNEAPOLIS, MINN. - 11 October 1951

### I. DISCUSSION OF INCIDENT

The only information available on this incident is a letter quoted below:

TIME: 0630, 11 Oct 51. Dick Reilly and I were flying at 10,000 ft. observing the grab bag balloon when I saw a brightly glowing object to the SE of University of Minnesota Airport. At that time we were a few miles north of Minneapolis and heading east. I pointed it out to Dick and we both made the following observation:

"The object was moving from east to west at a high rate and very high. We tried keeping the ship on a constant course and using reinforcing member of the windshield as a point. The object moved past this member at about 50 degrees per second.

This object was peculiar in that it had what can be described as a halo around it with a dark undersurface. It crossed rapidly and then slowed down and started to climb in lazy circles slowly. The pattern it made was like a falling oak leaf inverted. It went through these gyrations for a couple minutes and then with a very rapid acceleration disappeared to the east. This object, Dick and I watched for approximately five minutes.

"I don't know how to describe its size, because at the time I didn't have the balloon in sight for a comparison.

"Shortly after this we saw another one, but this one didn't hang around. It approached from the west and disappeared to the east, neither one leaving any trace of vapor trail.

"When I saw the second one I called our tracing station at the U. of M. Airport and the observers there on the theodolite managed to get glimpses of a number of them, but couldn't keep the theodolite going fast enough to keep them in the field of their instruments. Both Doug Smith and Dick Dorian caught glimpses of these objects in the theodolite after I notified them of their presence by radio."

### II. WEATHER

Unknown, but evidently clear.

### III. STATUS OF INVESTIGATION

Further investigation produced no additional information as to the identity of the object. The theodolite operator was interrogated and stated that he could only observe "a brief blur for about two seconds". During his brief observation, the object appeared to be a smoky grey cigar shaped object. It left no vapor trail and gave off no reflection.

All observers were positive of the following facts:

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- A. The object, though vaguely defined and blurred, retained a definite shape.
- B. No vapor trails, exhaust flashes, or jet propulsion were observed.
- C. The object definitely seemed to be controlled. The sources are all experienced engineers with General Mills Balloon Projects and have been observing all types of balloons for several years.

## IV. CONCLUSIONS

No conclusions can be made. It is significant however, that the sources can be graded as very reliable and that they observed an object with which they were entirely unfamiliar.

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## Appendix VIII

### SOUTHERN MICHIGAN - 24 November 1951

#### I. DISCUSSION OF INCIDENT

On the evening of 24 November 1951, seven people observed an unidentified aerial object, from four separate locations in Southern Michigan. The object was observed in the SE quadrant traveling at speeds "much faster than a Jet" at an apparently low altitude (below 2,000 ft. or  $2^{\circ}$  -  $4^{\circ}$  above the horizon) in all the observations. The object traveled horizontal to the earth and in one instance was noted to lose altitude just before it disappeared. No sounds were heard by any of the observers. In each case the time the object was in sight was 5-6 seconds or less.

Additional information is given below and in inclosed overlay which shows apparent track of objects. It will be noted that these are only the apparent tracks.

Location	Time	Shape	Color	Trail	Course	Apparent Distance	Observer
Selfridge AFB	1820 E	Egg	White	Red	WSW	(miles) 2-3	AF PFC
Selfridge AFB	1820 E	"Football"	White	Orange red	W	1	AF PFC
Battle Creek	1825 E	Oval	White	White	SW	10-20	AF Pvt
Grand Rapids	1824 E	Round	White	None	SW	-	Tower Operator
Coopersville	1825 E	Round	Bluish White	None	SW	30-40	Airline Crew (Airborne)

#### II. WEATHER

CAVU and exceptionally clear at all points of observation.

#### III. STATUS OF THE INVESTIGATION

The possibility of jet aircraft in the area, unidentified radar returns, and known meteoric or aurora phenomenon were checked with negative results. From the reports, it is reasonable to assume that all the observers sighted the same object. There is a time span of five minutes between various sightings but this could be due to errors in the watches of the observers. Assuming that the tower clock would be the most accurate, the time would be 1824 EST. From the estimates of

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the altitude (i.e. appeared low), it is apparent that the object must have been a comparatively great distance from all the observers. The fact that the observers in Grand Rapids and over Coopersville did not observe a tail or trail can be explained by the fact that they were farther away from the object.

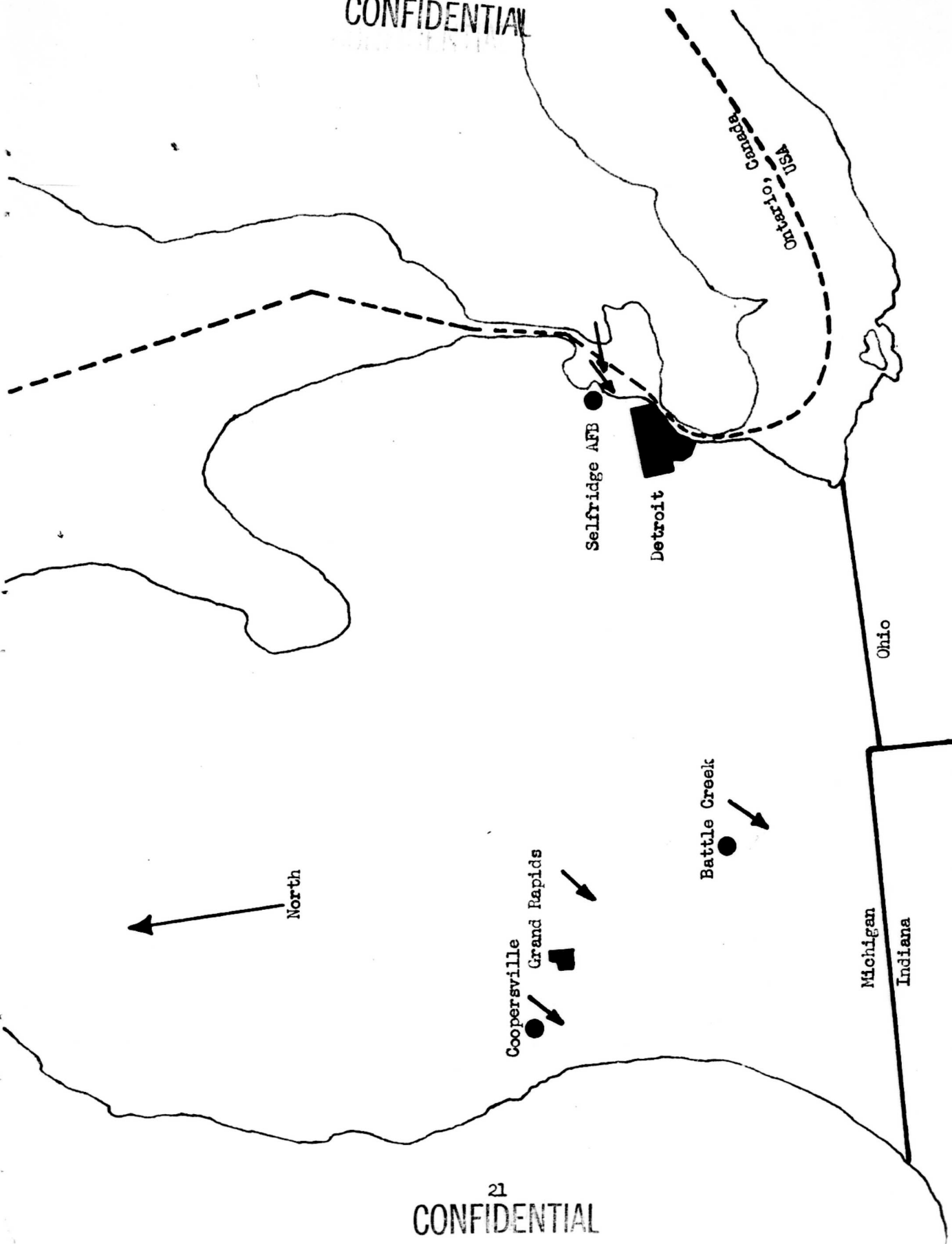
The actual flight path of the object was probably high over Ontario, Canada. It would probably be possible to determine the exact location by collecting reports or interrogations in Canada. It is not believed that this would be worth the effort, however, as it would still not definitely identify the object unless it had been observed by competent astronomers.

#### IV. CONCLUSIONS

It is concluded that the object observed in Southern Michigan on 24 November 1951 was a large meteor-like object that probably passed over Ontario, Canada, or upper New York State.

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