# PROJECT 10073 RECORD CARD

| | | |
|---|---|---|
| 1. DATE<br>17 July 1957 | 2. LOCATION<br>Forbes AFB, Kansas/Oklahoma City, Oklahoma/Ft Worth, Tex | 12. CONCLUSIONS<br>☐ Was Balloon<br>☐ Probably Balloon<br>☐ Possibly Balloon<br>☒ Was Aircraft<br>☐ Probably Aircraft<br>☐ Possibly Aircraft<br>☐ Was Astronomical<br>☐ Probably Astronomical<br>☐ Possibly Astronomical<br>☐ Other<br>☐ Insufficient Data for Evaluation<br>☐ Unknown |
| 3. DATE-TIME GROUP 1st sighting<br>Local 0350 AM<br>GMT 17/1050Z | 4. TYPE OF OBSERVATION<br>☐ Ground-Visual ☐ Ground-Radar<br>☒ Air-Visual ☒ Air-Intercept Radar | |
| 5. PHOTOS<br>☐ Yes<br>☐ No | 6. SOURCE<br>USAF A/C Crew | |
| 7. LENGTH OF OBSERVATION<br>not given | 8. NUMBER OF OBJECTS<br>one | 9. COURSE<br>not given |

10. BRIEF SUMMARY OF SIGHTING

A blue light was seen in sky that stayed with a/c for 420 NM. Object was picked up by B-47 radar but could not be seen by ground radar.

11. COMMENTS

Identified as american Airlines flight 655. - Hopkins, ATI

See article by Dr. James E MacDonald - Astronautics and Aeronautics - Summer 1971

329 (REV 26 SEP 52)

LACY 17

(1) N/A

CAA Report No. 1

3.

Again which direction or bearing of object? N, E, S, W, etc.

NOR THREE OF RJWFHW 70

(1) AT 14 NZ HENSLEY TOWER STATED THAT THEY SAW BLUE LIGHTED OBJECT IN SKY IN VICINITY OF DALLAS TEXAS.

(1) CLEAR, 15 MI VIS, CLOUD COVER OMITTING.

(2) 35/15 MI

(3) UNLIMITED

(4) 15 MILES

(5) ZERO

(6) NONE

N/A

-47 TRIED TO INTERCEPT OBJECT BUT WAS UNABLE DUE TO SPEED AND MANEUVERABILITY OF OBJECT.

AIR TRAFFIC WAS VERY LIGHT.

NONE

NONE

PILOT STATED THAT HE WOULD FILL OUT SIMILAR REPORT ON HIS FACTS WILL BE PROBABLY MORE CONCISE.

IMP. DATA

1. What direction was pilot traveling?
2. Bearing & object from a/c?
3. Elevation of object from a/c?

Pertinent data - such as estimated size, shape, directions, bearings & elevations. If NOT given (encircled items above), & if this person could determine if bright celestial body could be seen from the ac.

CAA Conclusion identified as AMARYLLIS U.S. 6?

Pertinent info.

Review - after detailed report received.

1557Z JUL RCHFH

Detailed report req 25 Oct 57 GDS.

(2) AIRCRAFT CALLSIGN LACY 17, TIME OF SIGHTING: 1105Z, 17

JL 57, B-47, 3[illegible],000 FEET, SPEED MACH.87. CHASED AFB, KANSAS

-47 CHASED UFOB OVER FT WORTH, TEXAS BUT WAS UNABLE TO OVERCOME

JECT. ← No report from this area.

(1) 17/1105Z JUL 57 ← 1050Z − 7 = 0350 hrs (MST)

(2) NIGHT

(3) AIRBORNE AT TIME

. LACY 17 .

(4) N/A

See Part Report for Questions 3

Again which direction or bearing of object? N, E, S, W, etc.

SEE THREE OF RJWFHW 7[illegible]

(2) AT 0400Z HENSLEY TOWER STATED THAT THEY SAW BLUE LIGHTED

JECT IN SKY IN VICINITY OF DALLAS TEXAS

. (1) CLEAR, 15 MI VIS, CLOUD COVER O[illegible]

(2) 350/15 MI

(3) UNLIMITED

(4) 15 MILES

(5) ZERO

(6) NONE

. N/A

IMP. DATA
1. What direction was pilot traveling? Bearing?
2. a/c?
3. Elevation of object from a/c?

Pertinent data - such as estimated size, shape, directions, bearings, elevations, if UFO NOT given (encoded items above). If this given and determine if bright electrical body and have anything [illegible] area

. B-47 TRIED TO INTERCEPT OBJECT BUT WAS UNABLE DUE TO SPEED

D MANEUVERABILITY OF OBJECT.

. AIR TRAFFIC WAS VERY LIGHT.

CAA Cooperating Identified as

. NONE

(4) PILOT STATED THAT OBJECT COULD OUT MANEUVER HIS A/C AND [illegible] TO FASTER THAN HE COULD. ← so? (a "bored pilot" playing tag with the 47: (Navy))

(5) UNKNOWN BECAUSE A/C WENT OUT OF OUR AREA TO THE AREA OF [illegible] SISTER STATION AT OKLAHOMA CITY 746TH ACWRON. (no report of UFO from that area.)

(6) APPROXIMATELY 520 NM, BY A/C

(7) AIRBORNE RADAR WAS BEING USED ON B-47 TO TRACK OBJECT AIRCRAFT STATED THAT THEY HAD OBJECT IN GOOD CONTACT HOWEVER GROUND RADAR HAD NEGATIVE CONTACT WITH OBJECT (Not?) 3?

CLAS (INTL) 7-967 PD SUBJECT: UFOB PD

( ) UNKNOWN — Shape?

(2) UNKNOWN — Size?

(3) BLUE

( ) ONE

( ) NONE

( ) LIGHT FLASHED

( ) NONE

( ) NONE

( ) S.67

ASX Rec'd

? Director, hearing also from UFO?

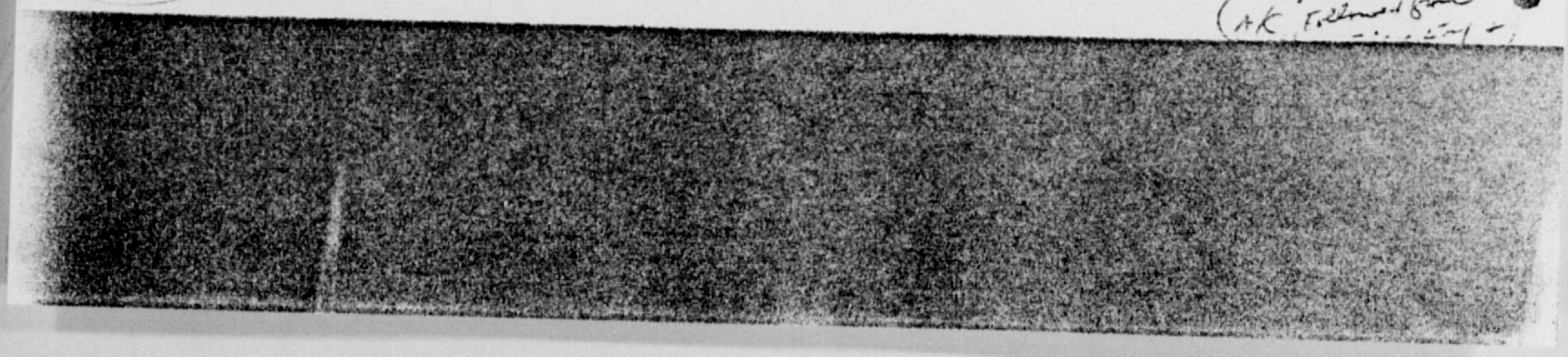
TWO OF RJUFHW 72

) STAYED WITH AIRCRAFT FOR APPROXIMATELY 42 NM.

( ) YES

( ) NO

SEE GRIFFIS AFB SIGHTINGS, 9 APR 56 — (AK



17 July 1957

1050Z

-7 = 0350 Local (early in the morning) 1/2 4E4

17 JUL 57 13 57

3 4 x x a

WD

FM145V WPT161 YDB 96 WYD463 WMB 93HWA437

RR RJEDEN RJEDWP RJEPHQ RJWFHW

DE RJWFHW 72

P 171445Z

FM COMDR 745TH ACWRON DUNCANVILLE AFSTA TEX

TO RJEDEN/COMDR ADC ENT AFB COLO

RJEDWP/COMDR AIR INTEL TECH CENTER WRIGHT AFB OHIO

RJEPHQ/DIRECTOR INTELL HEADUSAF WASH 25 DC

RJWFHW/COMDR 33D ADIV OKCITY AFSTA OKLA

BT

UNCLAS (INTL) 7-967 PD SUBJECT: UFOB PD

(1) UNKNOWN — Shape?

(2) UNKNOWN — Size?

(3) BLUE

(4) ONE

(5) NONE

(6) LIGHT FLASHED

(7) NONE

(8) NONE

(9) 5.57

atic

? duration, bearing elevation UFO?

?

SEE PAGES

UNCLASSIFIED

SUBJECT: Request for Analysis - Electronic UFO Report

TO: AFCIN-4E4
ATTN: Capt. G. T. Gregory

FROM: AFCIN-4E1

DATE: 30 Oct 57 COMMENT NR 2
AFCIN-4E1a/V. D. Bryant/jc
72131/Bldg 263-D/Rm 14

1. This report is difficult to evaluate because there is such a mass of evidence which tends to all tie in together to indicate the presence of a physical object or UFO. With the exception of rather abrupt disappearance of returns on the electronic equipment and indication that the object traveled at relatively high speed, there are no abnormal electronic indications such as are usually present in reports of this type - extreme speeds, abrupt changes of course, etc. These abnormal indications are usually the basis for considering anamalous propagation, equipment malfunction, etc., as responsible for the "sightings".

2. The electronic data is unusual in this report in that radar signals (presumably emanating from the "object") were picked up. These intercepted signals have all the characteristics of ground radar equipment, and in fact are similar to CPS-6B. This office knows of no S-band airborne equipment having the characteristics outlined.

3. Since the type equipment on the ground (at "Utah") is not known, and since there are no "firm" correlation between the ground intercept and the sightings from the aircraft, it is impossible to make any determination from the information submitted. On the other hand, it is difficult to conclude that nothing was present, in the face of the visual and other data presented.

1 Incl
n/c

Edwin H Mammen Capt
for

Classification Cancelled
(or changed to UNCLAS)
Auth. Quintanilla, ltr dtd, USAF
By ITD PT (LLFD)
Date 27 Jan 69
AFR 205-1, para 1-326

Page 1 of 1 page
Cy 1 of 4 cys

[redacted]

UNCLASSIFIED

[redacted]

July 17-Amarillo,Texas-11:45pm-7 red,whirling LIGHTS with slow,irregular paths,reversing,hovering.'5 went N to S,2 went S to N.. Passed over at regular intervals,except 2 that came together. Clear..

July 17-50miles E.of El Paso,Tex-3:30am(MST)-Amer.Airlines Flight #665 almost collides with huge.green UFO!(Shot E.)(Fireballs mounting).

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON 25

NOV 8 1957

Maj. Gregory 4E

Brig. Gen. Harold E. Watson, USAF
Air Technical Intelligence Center
Wright-Patterson Air Force Base, Ohio

Dear General Watson:

This will acknowledge receipt of your letter, reference number AFCIN-4E4, dated October 7, 1957, in which you requested copies of the Civil Aeronautics Administration final report of investigation of two incidents involving commercial airliners and the sighting of unidentified flying objects, which had been previously reported in local newspapers.

The first incident mentioned occurred on July 22, 1957, near Amarillo, Texas, and involved Trans World Airlines' Flight No. 21. Subsequent investigation proved that the unidentified object was another aircraft which was displaying the proper navigation lights. The true identity of this aircraft was never determined, however, it is assumed that it was a U. S. Air Force KC-97 aircraft which was known to be operating in the area at the time of the incident.

The second incident mentioned occurred on July 17, 1957, near El Paso, Texas, and involved American Airlines' Flight No. 655. Investigation of this incident definitely established the fact that the unidentified flying object was American Airlines' Flight No. 966, which had previously departed from El Paso, Texas, en route to Dallas, Texas.

Since both incidents, referred above, have been determined to involve other aircraft, it is assumed that the above information will suffice for your records.

In accordance with your request, we are establishing a procedure whereby your organization will be informed of the results of all Civil Aeronautics Administration investigations involving civilian aircraft and the sighting of unidentified aerial phenomena.

Sincerely yours,

for R. L. Coulter

Roy Keeley
Director, Office of Flight
Operations and Airworthiness

UNCLASSIFIED

HEADQUARTERS
AIR DEFENSE COMMAND
UNITED STATES AIR FORCE
ENT AIR FORCE BASE, COLORADO

TEL: MELROSE 2-5511
EXT 2220

ADODI-B

15 AUG 1957

SUBJECT: UFOB Sighting

TO: Commander
38th Strategic Reconniassance Squadron
55th Reconniassance Wing
Forbes Air Force Base
Kansas

Request that the officer who made a UFOB sighting over Fort Worth, Texas, on 17 July 1957, Major Lewis D. Chase, A0554018, complete the inclosed Airborne Observer's Data Sheet and return it to this Command.

FOR THE COMMANDER:

1 Incl
Abn Observer's Data Sheet

Robert J. Hefling Lt Col
FRED T JEEP
Colonel, USAF
Director of Intelligence

1st Ind

38th Strategic Reconnaissance Squadron M (Jet) Forbes Air Force Base, Kansas

TO: Commander, Air Denfense Command, Ent Air Force Base, Colorado

Basic communication complied with.

John A Harrison
JOHN A HARRISON
Major, USAF
Operations Officer

1 Incl
n/c
1 Incl added
DD Form 173, DD Form 173-1

Classification Cancelled
(or changed to UNCLAS)
Auth Contarsilay LT COL, USAF
By DDPI (AFO)
Date 27 Jan 69
AFR 205-1 para 1-12b

If inclosure(s) No. 1 & 2 is (are) withdra
(or not attached) the classification of th
correspondence will be downgraded to UNCLAS
in accordance with AFR 205-1.

Page 1 of 1 pages
Copy 1 of 2 copies

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

UNCLASSIFIED

UNCLASSIFIED [redacted]

ADODI-B, Hq ADC, 15 Aug 57, Subj: UFOB Sighting

ADODI-B 2nd Ind 17 OCT 1957

Headquarters, Air Defense Command, Ent Air Force Base, Colorado

TO: Commander, Air Technical Intelligence Center, ATTN: AFCIN 4E4, Wright-Patterson Air Force Base, Ohio

1. The attached documents are forwarded to your center for analysis.

2. This Command is unable to offer any explanation for the sighting. Therefore, this sighting is being carried as unknown.

3. Request your center advise this Command of final analysis of this sighting.

2 Incls
n/c

ROBERT J HEFLING
Lt Colonel, USAF
Acting Director of Intelligence

Classification Cancelled
(or changed to UNCLAS)
Auth [redacted] CO, USAF
By LtDPI(WPD)
Date 27 Jan 69
AFCIN-1 ltr dtd 1-26

DOWNGRADED AT 2 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

This correspondence may be downgraded to
UNCLASSIFIED upon removable of incls.

[redacted]

Page 1 of 1 pages
Copy 1 of 2 copies

Rec'd AFCIN-4E4
25 Oct 1957
10:00 AM



[redacted]

17 July 1957 - B-47 Sighting.

Brief Summary

On the 17th of July the Air Force received a priority UFO message from the Commander of a B-47, who reported that while flying at approximately 3,30 a.m. at about 30,000 West of Shreveport Louisiana he observed a strange flashing blue light, but could not give a definite range or shape. The object was seen intermittently, ~~for~~ about, for 1½ hours. The light appeared to keep a distance of between 300 to 400 yards from the B-47. The B-47 chased the object over Ft. Worth, when it appeared but was unable to intercept it, because of its speed and maneuverability claimed by the aircraft. Ground radar at Ft. Worth confirmed the presence of the object.

The B-47's radar, meanwhile continued tracking the object, until it disappeared in the vicinity of Oklahoma City.

Study of radar data, which was later submitted, indicated that the aircraft (Signals) ~~which presumably followed the B-47 from the vicinity of Shreveport to~~ ~~Kansas to Oklahoma~~) had set the characteristics of ground radar equipment. Further study ~~of~~ showed no firm correlation between the ground intercept and the visual sightings. The change of colors: blue, white

...ird red, and a suggestion of an aft light. Obviously, all aircraft would have little trouble in recognizing. It was also strange that the objects disappeared or stopped when they had reached the large cities (Dallas, Ft. Worth - Oklahoma City).

In joint review with the CAA of the data from the incident, it was definitely established by the CAA that object observed in the vicinity of Dallas and Ft. Worth was an airliner.

1st Astronautics Aeronautics Jul/19

13 August 1971

# Sample Case Selected by the UFO Subcommittee of the AIA

In its "Appraisal of the UFO Problem" *AIA* Nov. 1970, pp. 45, the Subcommittee pledged to give the members of the Society an opportunity to form their own opinions with respect to the type of observations which form the core of the UFO controversy.

The selected case, which occurred on July 17, 1957, is treated in the Condon Report (Condon, E. U., ed. *Scientific Study of Unidentified Flying Objects*. Bantam Books, n. pb., pp. 56-58, 136-139, 260-266, 750, 877-914). During the study by the University of Colorado group, the case files were not located due to an error in dating. In addition, radar and weather analyses were made for September 19, 1957, rather than July 17, 1957. The conclusions drawn by members of the Condon Committee, based on available information are as follows:

1. *If the report is accurate, it describes an unusual, intriguing, and puzzling phenomenon, which, in the absence of additional information, must be listed as unidentified. (Condon, p. 57).*
2. *In view of . . . the fact that additional information on this incident is not available, no tenable conclusions can be reached. From a propagation [Based on a wrong date.] standpoint, this sighting must be tentatively classified as an unknown. (Thayer, p. 139).*
3. *If a report of this incident, written either by the B-47 crew or by Wing Intelligence personnel, was submitted in 1957, it apparently is no longer in existence. Moving pictures of radar scope displays and other data said to have been recorded during the incident apparently never existed. Evaluation of the experience must, therefore, rest entirely on the recollection of crew members ten years after the event. These descriptions are not adequate to allow identification of the phenomenon encountered. (Craig, p. 266).*
4. *After review the unanimous conclusion was that the object was not a plasma or an electrical luminosity by the atmosphere. (Altschuler, p. 750).*

Subsequently, James McDonald has been able to locate the case files, to correct the date of the flight and to draw additional information from the files as well as from personal interviews with the crew. At the request of the UFO Subcommittee, he describes the case in the following article. It is left to the reader to draw his own conclusions.

The aircraft Commander, Lt. Colonel Lewis D. Chase, USAF (Ret.), has confirmed the accuracy of this report in a letter to the Subcommittee.

This sample case may serve to illuminate the difficulties in deciding whether or not the UFO problem presents a scientific problem.

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## Air Force Close Approach of an Unidentified Object in the South-Central U.S., July 17, 1957


### Summary

An Air Force RB-47, equipped with electronic countermeasures (ECM) gear and manned by six officers, was followed by an unidentified object for a distance of well over 700 mi. and for a time period of 1.5 hr., as it flew from Mississippi, through Louisiana and Texas and into Oklahoma. The object was, at various times, seen visually by the cockpit crew as an intensely luminous light, followed by ground-radar and detected on ECM monitoring gear aboard the RB-47. Of special interest in this case are several instances of simultaneous appearances and disappearances on all three of those physically distinct "channels," and rapidity of maneuvers beyond the prior experience of the aircrew.


### Introduction

In the early morning hours of July 17, 1957, an RB-47 was flying out of Forbes Air Force Base, Topeka, Kansas, on a composite mission that included gunnery exercises over the Texas Gulf area, navigation exercises over the Texas Gulf, and finally ECM exercises scheduled for the return trip across the south-central United States. The RB-47 was carrying a six-man crew, of whom three were electronic warfare officers manning ECM gear in the aft portion of the aircraft. Their names are as follows: Lewis D. Chase, pilot; James H. McCoid, co-pilot; Thomas H. Hanley, navigator; John J. Fregnizano, No. 1 monitor; Elwin L. Dyer, No. 2 monitor; Quinton T. Wheelerer, No. 3 monitor.

I shall report here on my interview with the crew as well as case files which I finally located. The files consist of a three-page TWX filed from the 745th ACWRON, Duncanville, Texas, at 1557Z on July 17, 1957, and a four-page case summary prepared by E. T. Pivetz, Wing Intelligence Officer, 55th Reconnaissance Wing, Forbes AFB, and transmitted to ADC Hq., Ent AFB, Colorado, in compliance with [illegible] of August 15, from Col. F. [illegible], Director of Intelligence, ADC. The summary, plus a 12-page Airborne Observer's Data Sheet, was classified on November [illegible] as Top Secret notification Project [illegible] received concerning this case. The 12-page Data Sheet (ATIC OP #2) was prepared by Major [illegible] on September 10 and contains a number of points of relevance not covered in other parts of the case file. There is very relevant information in the case file as to procedures, locations, and other circumstances, and the case file does have the great

virtue of representing a summary account prepared while all of the details were fresh in the minds of the crew.

Before describing the first ECM contact, it is necessary to explain briefly the nature of the ECM gear involved in this case. (Details are no longer classified, although all of the basic case-file documents were initially SECRET.) This RB-47 had three passive direction-finding (DF) radar-monitors for use in securing coordinate information and pulse characteristics on enemy ground-based radar. The #2 monitor, manned by McClure, was an ALA-6 DF-receiver with back-to-back antennas in a housing on the belly of the RB-47 near the tail spun at 150 or 300 rpm as it scanned an azimuth. (Note that this implies ability to scan at 10/sec past a fixed ground radar in the distance.) It's frequency range was 1000-7500 MHz. Inside the aircraft, the signals from the ALA-6 were processed in an APR-9 radar receiver and an ALA-5 pulse-analyzer. All subsequent references to the #2 monitor imply that system.

### Number 1 Monitor

The #1 monitor, manned by Provenzano, was an APD-4 DF system, with a pair of antennas permanently mounted on either wing tip. It was working at a higher frequency. The #3 monitor, with a frequency range from 30-1000 MHz, was manned by Tuchscherer. It was not affected and will not be described here. VHF communications were likewise not affected.

For emphasis, it needs to be stressed that the DF receivers are *not* radars and do not emit a signal for reflection off a distant target. They only listen passively to incoming radar signals and analyze signatures and other characteristics. When receiving a distant radar set's signal, the scope displays a pip or strobe at an azimuthal position corresponding to the relative bearing in the aircraft coordinate system. For the case of a fixed ground radar, approached from one side, the strobe is initially seen in the upper part of the scope and moves *down-scope*, a point to be carefully noted in interpreting the following discussion.

Having completed the navigational exercises over the Gulf, Chase headed across the Mississippi coastline, flying at an altitude of 34,500 ft, at about Mach 0.75 (258 kt IAS=500 mph TAS). The weather was perfect and practically cloudless under the influence of a large high-pressure area extending throughout the troposphere. There were no showers or thunderstorms anywhere along the flight route. Shortly after the coast near Gulfport was crossed at a point marked A on the map in page 00, McClure detected on the #2 monitor a signal painting at their 5 o'clock position (aft of the starboard beam). It looked to him as if he were receiving a legitimate ground-radar signal. Upon noting that the strobe was moving *up-scope*, McClure tentatively decided that it must be a ground radar off to their northwest painting with 180 deg ambiguity for some electronic reason. But when the strobe, after sweeping up-scope on the starboard side, crossed the flight path of the RB-47 and proceeded to move *down-scope* on the port side McClure said he gave up the hypothesis of 180 deg ambiguity as incapable of explaining such behavior.

Fortunately, he had examined the signal characteristics on his ALA-5 pulse-analyzer, before the signal left his scope on the port side aft. In discussing it with me, his recollection was that the frequency was near 2800 mcs, and he recalled that what was particularly odd was that it had a pulse-width and pulse repetition frequency (PRF) much like that of a typical S-band, ground-based, search radar. He even recalled that there was a simulated scan rate that was normal. Perhaps because of the strong similarities to ground-based sets such as the CPS-6B, widely used at that time, McClure did not, at that juncture, call this signal to the attention of anyone else in the aircraft. The #1 monitor was not working the frequency in question, it later developed. The #3 monitor was incapable of working the frequency in question, McClure and the others indicated to me.

I next quote information transcribed from the summary report prepared by the Wing Intelligence Officer, COMSTRATRECONWG 55, Forbes Air Force Base, concerning this part of the incident that involved this aircraft (call sign "Lacy 17"):

*ECM reconnaissance operator #2 of Lacy 17, RB-47H aircraft, intercepted at approximately Meridian, Mississippi, a signal with the following characteristics: frequency 2995 mc to 3000 mc; pulse width of 2.0 microseconds; pulse repetition frequency of 600 cps; sweep rate of 4 rpm; vertical polarity. Signal moved rapidly up the D/F scope to 11 o'clock position, indicating a rapidly moving signal source; i.e., an airborne source. Signal was abandoned after observation . . .*

### Initial Visual Contact

If nothing further had occurred on that flight to suggest that some unusual object was in the vicinity of the RB-47, McClure's observations undoubtedly would have gone unmentioned and would have been quickly forgotten even by him. He was puzzled, but at that point still inclined to think that it was some electronic difficulty.

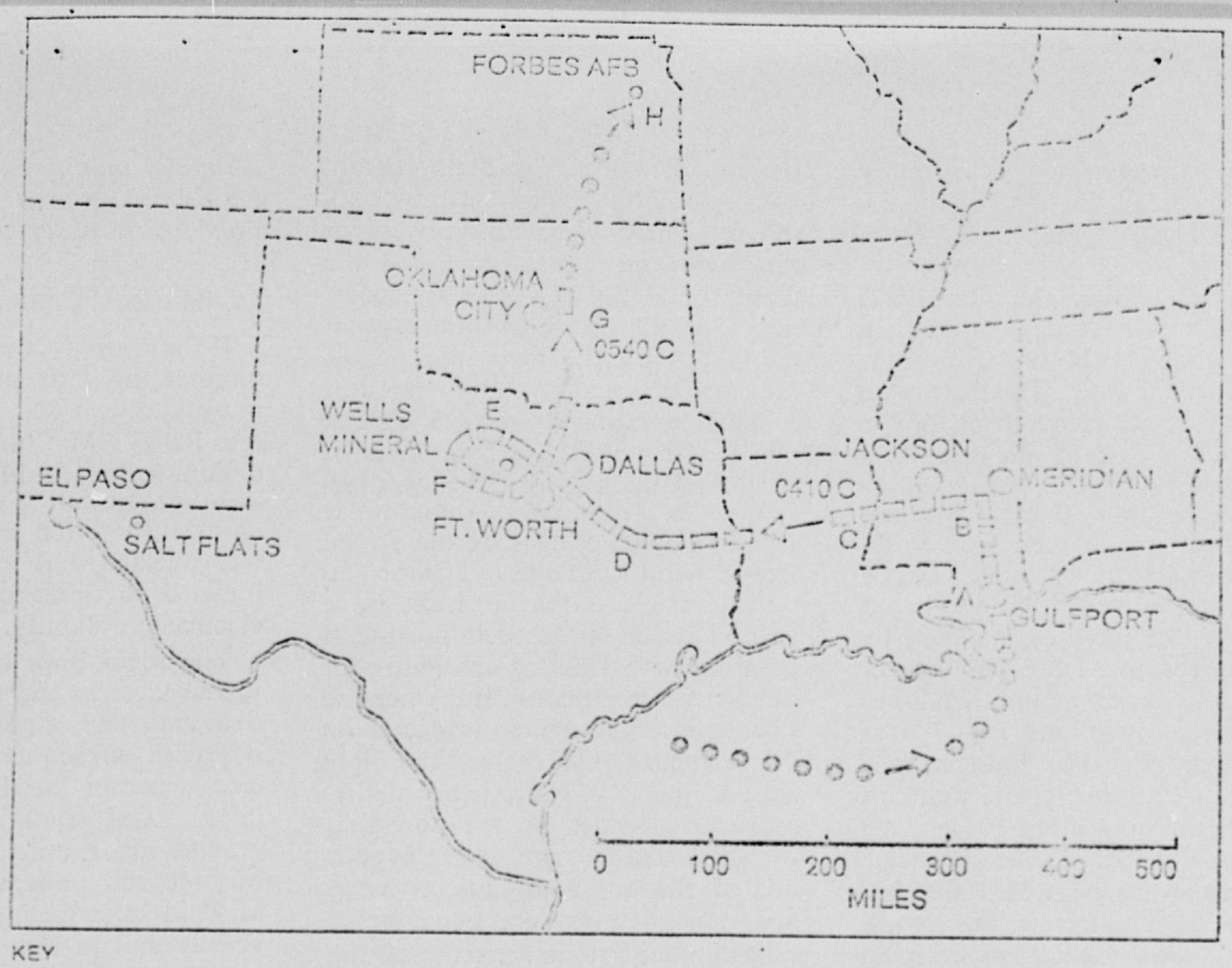
The flight plan called for a turn to the west in the vicinity of Meridian and Jackson, Mississippi (Point B), with subsequent planned exercises wherein the EWOs did simulated ECM runs against known ground radar units. The contemporary records confirm what Chase and McCoid described to me far more vividly and in more detail concerning the unusual events that soon ensued.

They turned into a true heading of 265 deg, still at Mach 0.75 at 34,500 ft. At 1010Z (0410 CST), Major Chase, in the forward seat, spotted what he first thought were the landing lights of another jet coming in fast from near his 11 o'clock position at, or perhaps a bit above, the RB-47's altitude. He called McCoid's attention to it, noted absence of any navigational lights, and as the single intense bluish-white light continued to close rapidly, he used the intercom to alert the rest of the crew to be ready for sudden evasive maneuvers.

But before he could attempt evasion, he and McCoid saw the brilliant light almost instantaneously change direction and flash across their flight path from port to starboard at an angular velocity that Chase told me he had never seen matched in all of his 20 years of flying, before or after that incident. The luminous source had moved with great rapidity from their 11 o'clock to about their 2 o'clock position and then blinked out.

The Airborne Observer's Data Sheet filled out by Chase as part of the post-interrogation gives the RB-47 position at the time of that 1010Z first visual contact as 32-00N, 91-28W, which puts it near Winnsboro in east-central Louisiana (Point ).

The descriptions obtained in the 1969 interviews with these officers are closely supported by the original intelligence re-




*At 1010Z aircraft cmdr first observed a very intense white light with light blue tint at 11 o'clock from his aircraft, crossing in front to about 2:30 o'clock position, copilot also observed passage of light to 2:30 o'clock where it apparently disappeared.*

Chase did not observe any magnetic compass anomalies during the flight.

### Actions over Louisiana—Texas Area

Immediately after the luminous source blinked out, Chase and McCold began talking about it on the interphone, with the already alerted crew listening in. McClure, recalling the unusual signal he had received on his ALA-6 back near Gulfport, now mentioned for the first time that peculiar incident and concurrently set his #2 monitor to scan at about 3000 mcs to see what might show up. He found he was getting a strong 3000 mcs signal from about their 2 o'clock position, just the relative bearing at which the unknown luminous source had blinked out moments earlier.

Provenzano told me that immediately after that they checked out the #2 monitor on other known ground-radar stations, to be sure that it was not malfunctioning; it appeared to be in perfect working order. He then tuned his own #1 monitor to 3000 mcs and also got a signal from the same bearing. There remained, of course, the possibility that, just by chance, this signal was from a real radar down on the ground and off in that relative direction. But as the minutes went by and the RB-47 continued westward at about 500 mph, the relative bearing of the 3000 mcs source out in the dark did not move fore-and-aft on the monitors as should have occurred with any ground radar, but instead kept up with the RB-47, holding a fixed relative bearing.

I found these and ensuing portions of the entire episode still vivid in the minds of all the men, although their recollections for various details varied somewhat, depending on the particular activities in which they were then engaged.

Chase varied speed, going to maximum allowed power, but nothing seemed to change the relative bearing of the 3000-mcs source. They crossed Louisiana and headed into eastern Texas, with the object still maintaining station with them. Eventually they got into the radar-coverage area of the 745th ACWRON, Duncanville, Texas, and Chase dropped his earlier reluctance about calling attention to these peculiar matters and contacted that station (code-name "Utah"). The crew was becoming uneasy about the incident by this time, several of them remarked to me. That phase of the incident is tersely described in the following quotes from the report of the Wing Intelligence Officer:

*Aircraft comdr notified crew and ECM operator Nr 2 searched for signal described above, found same approximately 1030Z at a relative bearing of 070 degrees; 1035Z, relative bearing of 065 degrees; 1038Z, relative bearing 060 degrees.*

Note that the above time would indicate that McClure did not immediately think of making his ALA-6 check, but rather that some 20 min went by before that was thought of. Note also that by 1038Z the un-

THE UFO SUBCOMMITTEE OF THE AIAA

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National Oceanic and Atmospheric Administration
Boulder, Colorado

known source of the 3000 mes radar-like signal was moving *up-scope* relative to the 500 mph RB-47.

The Wing Intelligence Officer continued:

*At 1039Z aircraft comdr sighted huge light which he estimated to be 5000 below aircraft at about 2 o'clock. Aircraft altitude was 34,500 ft. weather perfectly clear. Although aircraft comdr could not determine shape or size of object, he had a definite impression light emanated from top of object.*

*At about 1040Z ECM operator #2 reported he then had two signals at relative bearings of 040 and 070 deg. Aircraft comdr and copilot saw these two objects at the same time with same red color. Aircraft comdr received permission to ignore flight plan and pursue object. He notified ADC site Utah and requested all assistance possible. At 1042Z ECM #2 had one object at 020 deg relative bearing.*

In my interviews with the aircrew, I found differences between the recollections of the various men as to some of these points. McCoid recalled that the luminous source occasionally moved abruptly from starboard to port side and back again. Chase recalled that they had contacted Utah (his recollection was that it was Carswell GCI, however) prior to some of the above events and that Utah was ground-painting the target during the time it moved up-scope and reappeared visually. As will be seen below, the contemporary account makes fairly clear that Utah was not painting the unknown until a bit later, after it had turned northwestward and passed between Dallas and Ft. Worth. Chase explained to me that he got FAA clearance to follow it in that off-course turn (Point D) and indicated that FAA got all jets out of the way to permit him to maintain pursuit. The Intelligence summary continues:

*At 1042Z ECM #2 had one object at 020 deg relative bearing. Aircraft comdr increased speed to Mach 0.83, turned to pursue, and object pulled ahead. At 1042.5Z ECM #2 again had two signals at relative bearings of 040 and 070 deg. At 1044Z he had a single signal at 050 deg relative bearing. At 1048Z ECM #3 was recording interphone and command position conversations.*

*ADC site requested aircraft to go IFF Mode III for positive identification and then requested position of object. Crew reported position of object as 10 n. mi. northwest of Ft. Worth, Texas, and ADC site Utah immediately confirmed presence of objects on their scopes.*

*At approximately 1050Z object appeared to stop, and aircraft overshot. Utah reported they lost object from scopes at this time, and ECM #2 also lost signal.*

Chase, in reply to my questions, indicated that it was his recollection that there was simultaneity between the moment when he began to sense that he was getting closure at approximately the RB-47 speed, and the moment when Utah indicated that their target had stopped on their scopes. He said he veered a bit to avoid colliding with the object, not then being sure what its altitude was relative to the RB-47, and then found that he was coming over the top of it as he proceeded to close. At the instant that it blinked out visually and disappeared simultaneously from the #2 monitor and from the radar scopes at Site Utah, it was at a depression angle relative to his position of something like 45 deg.

Chase put the RB-47 into a port turn in the vicinity of Mineral Wells, Texas (Point E), and he and McCoid looked over their shoulders to try to spot the luminous source again. All of the men recalled the near simultaneity with which the object blinked on again visually, appeared on the #2 scope, and was again skin-painted by ground radar at Site Utah. The 1957 report describes these events as follows:

*Aircraft began turning. ECM #2 picked up signal at 160 deg relative bearing. Utah regained scope contact, and aircraft comdr regained visual contact. At 1052Z ECM #2 had signal at 200 deg relative bearing, moving up his D/F scope. Aircraft began closing on object until the estimated range was 5 n. mi. At this time object appeared to drop to approximately 15,000 ft altitude, and aircraft comdr lost visual contact. Utah also lost object from scopes.*

*At 1055Z in the area of Mineral Wells, Texas, crew notified Utah they must depart for home station because of fuel supply. Crew queried Utah whether a CIRVIS Report had been submitted, and Utah replied the report had been transmitted. At 1057Z ECM#2 had signal at 300 deg relative bearing, but Utah had no scope contact. At 1058Z aircraft comdr regained visual contact of object approximately 20 n. mi. northwest of Ft. Worth, Texas, estimated altitude 20,000 ft at 2 o'clock from aircraft.*

Case added further details on this portion of the events, stating that he requested and secured permission from Utah to dive on the object when it was at lower altitude. He did not recall the sudden descent that is specified in the contemporary account, and there are a number of other minor points in the Intelligence Report that were not recollected by any of the crew. He told me that when he dove from 35,000 ft to approximately 20,000 ft the object blinked out, disappeared from the Utah ground-radar scopes, and disappeared from the #2 monitor, all at the same time. McClure recalled that simultaneous disappearance, too. It should be mentioned that the occasional appearance of a second visual and radar-emitting source was not recalled by any of the officers when I interviewed them in 1969.

### Abilene area Texas—Oklahoma Area

McCoid recalled that, at about this stage of the activities, he was becoming a bit worried about excess fuel consumption resulting from use of maximum allowed power, plus a marked departure from the initial flight plan. He advised Chase that fuel limitations would necessitate a return to the home base at Forbes AFB, so they soon headed north from the Ft. Worth area (Point F). McClure and Chase recalled that the ALA-6 system again picked up a 3000 mcs signal on their tail, once they were northbound from Ft. Worth, but there was some variance in their recollections as to whether the ground radar concurrently painted the object. McCoid was unable to fill in any of those details. Fortunately the 1957 Intelligence Report summarized further events in this part of the flight, as they moved northward into Oklahoma:

*At 1120Z aircraft took up heading for home station. This placed area of object off the tail of aircraft. ECM #2 continued to* [get] *D/F signal of object between 180 and 190 deg relative bearing until 1140Z, when aircraft was approximately abeam Oklahoma City, Oklahoma. At this time, signal faded rather abruptly. 55 SRW DOI* [55th Strategic Reconnaissance Wing, Director of Intelligence] *has no doubt the electronic D/F's coincided exactly with visual observations by aircraft comdr numerous times, thus indicating positively the object being the signal source.*

It was Chase's recollection that the object was with them only into southern Oklahoma; Hanley recalled that it was with them all the way to Oklahoma City area (Point G); the others remembered only that it was there for some indefinite distance on the northbound leg between Ft. Worth and Topeka, their home base.

### Blue Book

The records indicate that Project Blue Book received summary information on this incident from ADC on Oct. 25, 1957 (over two months after occurrence of the event). A "Brief Summary" ends with the following paragraph:

*In joint review with the CAA of the data from the incident, it was definitely established by the CAA that object observed in the vicinity of Dallas and Ft. Worth was an airliner.*

This refers to a near-collision of two DC-6 American Airlines near Salt Flats, Texas, 50 mi. from El Paso at 14,000 ft at 5:30 a.m. of this day. (See the map on page 68.) The case is now carried in the official Blue Book files as "Identified as American Airlines Flight 655." □

### MacDonald Died

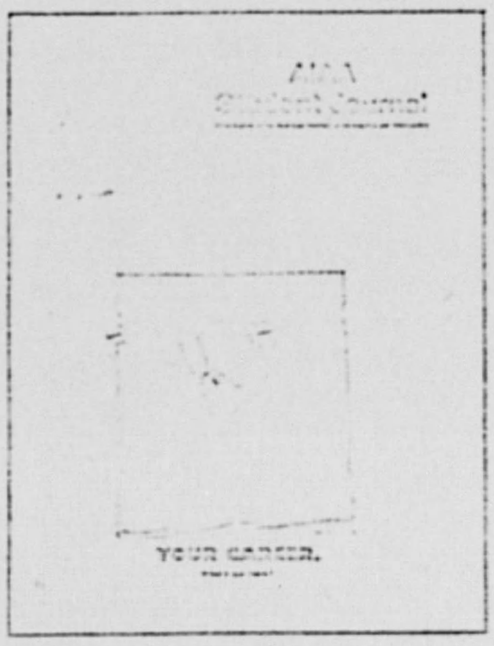
On June 13, James E. MacDonald was found dead in the desert near Tucson, apparently a suicide. He was 51 years old. *(See page 18)*


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pers in committee hearings) consistently voted *for* the SST. This year, after four days of hearings, the House Appropriations Committee voted 7 to 2 in favor of the SST. The vote in the full committee was 26 to 15. In the Senate, where the full Appropriations Committee heard two days of testimony, the SST was supported by a three-to-one margin—a vote of 17 to 5. This kind of evidence supports my belief that digests of major issues—condensations of important subjects—can't do the job. *We have to find ways to communicate in depth, from a solid foundation of facts.*

A fifth post-SST observation I would share with you concerns the all too-human tendency to draw erroneous conclusions from superficial understanding of a situation. I offer in evidence the Junior Senator from California.

Now, there are many plausible reasons why a particular Senator might choose to vote against the SST. Like Secretary Volpe, I do not question the motives of any Senator or Representative who voted to kill the program. I am sure those who did so acted in good conscience. I am disturbed, however, when a Senator from the State of California announces he is in opposition because he believes the SST is "so terribly wrong for California."

I cannot say Senator Tunney did not believe this, or that he voted in bad faith. I do suggest, however, that the industry has to do a better job, especially in California, of assuring that those who represent that state are properly and fully informed. It is understandable that a Concorde is flying, [illegible] for two years, in both Britain and France. A dozen Concordes are on the assembly lines. In Russia, the TU-144 is being groomed for commercial service, which may begin sooner than anyone will admit.

Everyone in the industry also knows that people always have opted for speed, where speed is available at a reasonable price . . . practical, feasible, convenient. When the jets cut flight times in half, piston-powered aircraft gradually faded from the airways. Flying actually became cheaper. With another 50% reduction in flight time, subsonic jets will give way to the supersonic on over-ocean routes where the sonic boom will not be annoying or damaging.

The SST day is just over the horizon. Its day will dawn, as surely as the days of other, better modes of transportation have come. It will not spoil the environment. It will not fly empty, for want of passengers. It will not cause the ice to melt and make skin cancer more common.

But what *will* happen, unless something now unforeseen occurs, will be that America, for the first time in history, will be left at the starting gate, and our aviation industry—second largest industry in our country—may well go the way of shipping, electronics, steel, autos, movies, and other once dominantly American exports: down, swamped by the advanced products of other nations.

When we look back on history, it wasn't our capacity for winning that made America great: it was our willingness to take a chance. It's almost [illegible] our attitude—by taking refuge in guarantees rather than in rights, and by becoming enamored of personal security and individual welfare at the expense of long-term national interests—we may erode all we have won and, as columnist William S. White suggests, "adopt weakness as a national policy."

In the SST battle, we made a mistake—we did not communicate as fully or as effectively or as soon as we should have. But it is not our nature as Americans to make the same mistake twice. If the aviation industry is to survive, let alone prosper, we must speak out for what the industry *can* do for a better America—*will* do, given the chance. □

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McDONALD: A LAST RESPECT

With deep sadness we received the news that Jim McDonald, author of the UFO case study on page 60, has taken his life.

The history of the UFO problem has been full of unusual and tragic events. Men of highest scientific achievements have seen themselves involved in strongly opposing views. Others have become victims of vitriolic attacks or, perhaps worse, of ridicule. McDonald was one of them.

As is well known, McDonald believed UFO observations, especially those by professionals, cannot be ignored and that the extraterrestrial hypothesis cannot be ruled out. The members of the AIAA UFO Subcommittee have concluded that the question is unsettled.

It is too early to know if McDonald was right or wrong. It is our hope, however, that his article in this issue will be read by scientists and engineers with the attention and impartiality that McDonald—and the observing aircraft crew—deserve.

Joachim P. Kuettner
Chairman, UFO Subcommittee, AIAA

# SCIENTISTS SAY NEAR COLLISIONS MAY INVOLVE SPACE VEHICLES

## Congressmen Investigate Cases

The possibility that spaceships may be involved in some near collisions on airways has been publicly stated by Dr. Clyde Tombaugh, discoverer of the planet Pluto, and Nathan Wagner, missile flight chief for the White Sands Proving Ground.

The two scientists made this suggestion after news reports on recent near collisions including two close brushes by American Airlines and Trans-World Airlines planes over Texas.

Of special interest is the fact that several Congressmen participated in the hearing conducted by American Airlines and that Representative Harry G. Haskell, Jr., (R.-Delaware) made an investigation of the TWA case. To date, none of the Congressmen has made any statement on either case.

In the first case, a DC-6 aircoach with 85 persons aboard barely averted collision in early morning darkness with what news stories called "a mysterious unidentified aircraft." Two persons were hospitalized and several shaken up when Captain Ed Bachner dived the airliner to avoid a collision.

In the second incident, several of the 34 passengers aboard a TWA Constellation airliner were thrown into the aisles and two suffered minor injuries when Captain G. M. Schemel dived 500 feet to avoid hitting an unidentified object. Schemel told investigators he had no idea what the object was.

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The suggestions that space vehicles were sighted were made in statements to the El Paso TIMES.

"I don't want to start a scare," said missile safety chief Wagner, "but I would say it is a reasonable position to take to say that such a craft might have been involved in some accidents."

Astronomer Clyde Tombaugh, former head of the Armed Forces search for unknown natural satellites, stated the same opinion.

"It is not at all out of the question," Dr. Tombaugh said, "that the phenomena observed by these airline pilots may be related to the question of space travel."

The Civil Aeronautics Board informed NICAP just before this issue went to press that the objects in both cases were still unidentified. But there is reliable evidence explained later which indicates that the American Airlines incident was a conventional near-collision between airliners.

The TWA case, however, seems at this time to be a bona fide UFO encounter. The facts as related by TWA Captain G. M. Schemel and as stated in a CAA "Near Miss Incident" report dated July 24, 1957, are as follows:

At about 2215C (10:15 pm Central Time) TWA Flight 21 en route from New York to Phoenix was flying at 18,000 feet over Amarillo, Texas. The airliner, a four-engine Constellation, was carrying 34 passengers. The sky was dark, with thin scattered clouds, and Captain Schemel was operating on IFR (under CAA Instrument Flight Regulations) although the visibility was 15 miles plus.

Suddenly — considering the 15 mile visibility—an object with red and green lights appeared directly ahead. It was flying at the same altitude on what Captain Schemel called "a collision course."

"The object went overhead," Captain Schemel stated later. "I have no idea what it was."

According to the CAA report, eight passengers and two hostesses were injured:

"One elderly lady was thrown against the ceiling, receiving a bad head cut. Seven additional passengers and two hostesses received bad head bumps and bruised hips and legs."

Neither Captain Schemel nor his co-pilot would identify the unknown object as another aircraft. A check by the Amarillo CAA communications station showed that the only other known traffic was a USAF K-97, 45 miles east of Amarillo at 17,000 feet. This has been ruled out by the CAB (Civil Aeronautics Board) investigation and no conventional aircraft has been located as having been in the area.

In the AA (American Airlines) case, the CAB has information almost positively identifying the "unknown" as an eastbound four-engine airliner.

As correctly described in press-wire stories, the AA DC-6 aircoach with 85 aboard narrowly averted collision near Salt Flats, Texas, in the pre-dawn darkness of July 17, 1957.

Captain Ed Bachner dived the airliner from its 14,000-foot altitude when he saw a green light ahead. Ten passengers were injured when thrown from their seats. Though the weather was clear, the crew said the other aircraft appeared without warning.

The preliminary CAA near-miss report stated that an unidentified B-36 was involved. A later check showed that the nearest airborne B-36 was several hundred miles away. After a further check ruled out all military flights, it was discovered that a scheduled flight of an eastbound four-engine airliner was undoubtedly the "unknown" though no negligence was indicated.

A comparison of compass readings during a conference between the two airliner crews, convinced the two captains that the eastbound plane flying at 14,300 feet was the one involved. The CAB report will probably identify this plane in the next month or so.

Near collision reports average about three a day, according to the Civil Aeronautics Board.

The large majority are believed due to heavy airline traffic and efforts to solve the problem are being made by all involved groups.

However, several near-miss reports appear definitely linked with UFOs. In some cases the unknown objects have been reported as large as four-engine planes and official checks have proved no such aircraft were anywhere in the areas.

Also there are fully verified reports of UFOs approaching or pacing airliners. To name a few:

The famous Chiles-Whitted Eastern Airlines case in 1948 when a rocket shaped object with windows veered sharply to avoid collision.

The well-known Pan American encounter described by Captain William B. Nash (NICAP Special Adviser) when a formation of 100-foot discs flew under his DC-4 near Norfolk.

In all three of these cases the UFOs either veered to avoid collision or evaded the pilot's attempt to get closer. In the absence of contrary evidence, it still appears that any near-collisions with UFOs are accidental.

It is probable that the increase in conventional near-miss reports will speed the installation of anti-collision radar equipment on all airliners. If so, this may provide valuable data in regard to speeds and maneuvers of any UFOs encountered.

On the same day as the American Airlines near-miss case, Dr. Clyde Tombaugh told the Associated Press it was "sheerest egotism for man to believe that the universe was created for his special benefit, or even for life at all."

While there is no indication that this was connected with his later comment on the near collisions, it is encouraging to note that Dr. Tombaugh continues to make his convictions public.

Earlier this year Dr. Tombaugh stated he had seen several UFOs and added: "These things, which do appear to be directed, are unlike any other phenomena I have ever observed....No one so far has sure-fire, absolute proof....Other stars in our galaxy may have hundreds of thousands of inhabitable worlds. Races on these worlds may have been able to utilize the tremendous amounts of power required to bridge the space between the stars." ●

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# THE RB-47 UFO CASE -- A NEW EXPLANATION

*By Philip J. Klass*

This is an analysis of one of the most curious UFO cases on record. It illustrates that a UFO report which may at first seem to be explainable only in terms of an extra-terrestrial spaceship can, when investigated in depth, yield a more plausible, if less exotic, explanation.

The case involves an Air Force RB-47 on a flight over four southern states (Mississippi, Louisiana, Texas and Oklahoma) during the pre-dawn hours of July 17, 1957. An account of the incident was published in the July, 1971, issue of the AIAA magazine Astronautics & Aeronautics (p. 66). It was written by the late Dr. James E. McDonald, an outspoken proponent of the hypothesis that the Earth is being visited by spaceships from other worlds.

*McDonald's investigation convinced him that an "unusual craft," which had the ability to fly at supersonic speed and to hover, had "played tag" with the RB-47 for approximately two hours. The presence of the "unusual craft," McDonald believed, was confirmed by three independent means: visual sightings by the RB-47 pilot and co-pilot; by electronic intelligence (Elint) equipment aboard the RB-47; and by an Air Defense Command ground radar located at Duncanville, Texas, near Dallas.*

*In another published paper on the RB-47 incident, McDonald called it "a case in which the reported phenomena appear to defy explanation in terms of either natural or technological phenomena." (UFO symposium sponsored by the American Association for the Advancement of Science in Boston, Dec. 27, 1969.)*

My own investigation prompts quite a different conclusion, after a careful study of the same source material used by McDonald, followed by an analysis of the electronics equipment that figured so prominently in this UFO case.

An inherent difficulty in investigating any old UFO case, such as this one which occurred more than 14 years ago, is that the principals have difficulty in accurately recalling some details. A more serious problem is possible embellishment, due to the passage of time and repeated re-telling of the story. Embellishment need not be the result of a conscious effort to alter the facts. A principal may unconsciously report how he thinks he should have behaved at the time of surprise or stress, rather than how he actually did behave.

When an investigator must choose between conflicting accounts given by the same individual, where one account was made shortly after the incident and the other was given a decade or more later, generally the earlier version should be accepted -- unless there is physical evidence to support the later. (In the A/A article, the early account is referred to as the "contemporary" version.)

However, there may be an obvious error in the contemporary report. For instance, the Airborne Observer's Report prepared by RB-47 commander/pilot Lewis D. Chase with the aid of the navigator's log, diagrams the airplane's flight path and the time of major events. This report shows the RB-47 to be at two widely separated locations at the same time -- 10:30Z. From the airplane's reported airspeed, it seems certain that the second notation should be 10:30Z.

Where there is a discrepancy between early accounts of two crew members, the report by the individual most directly involved in the duty seems most likely to be correct. For example, in Chase's original report, the pilot said that the UFO did not show up on

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* AUTHOR OF: "UFOs--Identified" (Random House, 1968)

[OVE

the RB-47's navigation radar (AN/APS-23). This was confirmed by the navigator himself, McDonald reported. However, ECM (Elint) Monitor #2, Frank B. McClure, told me that he was sure that the UFO had produced an echo on the RB-47 navigation radar, based on his recollection of interphone conversations between the pilot and navigator which he overheard. In this case, it seems appropriate to accept the recollection of the pilot and navigator, especially since the pilot noted in his original Airborne Observer's Report that the UFO was not detected on the RB-47 navigation radar.

Another example: McClure is positive that the mission on July 17, 1957, was intended to check out the RB-47 equipment prior to the airplane's being sent overseas and that it was not a regular training mission. RB-47 pilot Chase disagrees. In this instance there is circumstantial evidence to support McClure's recollection. During a normal training mission, the ECM Monitors make a very detailed log of each measurement and the time it was taken. If such a log were available, it would have been turned over to the Wing Intelligence Officer when he interviewed the crew about the UFO incident following their return to home base. Yet the Wing Intelligence Officer's report to Strategic Air Command Headquarters contains only spotty data. Further, McClure says that if the flight had been a regular training mission, the ECM equipment cameras would have been loaded with film to photograph the equipment displays and such film would have been turned over to the Wing Intelligence Officer. Yet there is no reference to such film in any of the contemporary reports.

None of the discrepancies between the crew members' original and recent accounts, or between different members, are thought by this investigator to be the result of an intentional effort to alter the facts. Rather, they are believed to be the result of the "ravages of time."

Were it not for the initiative of Dr. James E. McDonald in locating the original reports in the UFO archives at Maxwell AF Base, Ala., this case almost certainly would remain inexplicable because of the discrepancies that have crept into the recent recollections of the crew and the extreme difficulty of trying to reconstruct the details of what actually happened. The original (contemporary) reports include the following:

1. Report by Wing Intelligence Officer Elwin T. Piwetz, based on interview with the crew shortly after they returned to home base. The date when Piwetz actually wrote his report and transmitted it to SAC Hdqtrs. is not known. A "Received" stamp on the last page is illegible except for the date "Oct. 11, 1957." This is believed to be the date that the report was received by UFO Project Blue Book in Dayton, Ohio. Unfortunately, Piwetz did not show his report to the RB-47 crew members to check its accuracy--so far as is known--before filing it with SAC Hdqtrs.

2. Airborne Observer's Report, prepared by RB-47 pilot (then Major) Lewis D. Chase. The report is dated Sept. 10, 1957, nearly two months after the incident.

3. Teletype message from the Commander of the Duncanville radar station (Code name: "Utah") to Air Defense Command Headquarters. The message was dispatched at 14:45Z, or approximately four hours after the UFO incident involving the Utah radar.

So far as is known, there are no other contemporary reports of this UFO incident that were prepared by the RB-47 crew members or by others with their assistance.

The RB-47 had departed from its home base at Forbes AFB, Topeka, Kan., and headed south to the Gulf of Mexico. Turning to the east, the tail turret was tested over a gunnery range set aside for this purpose in the Gulf. This was followed by a celestial navigation test/mission. Then the RB-47 turned north toward Meridian. Its flight plan called for the airplane to turn west at Meridian and fly to Waco, Tex. During this

west-bound leg, the three Elint (ECM) operators would check their equipment against the numerous ground radars and military communications facilities in that region.

THE FIRST INCIDENT:

This event involved ONLY some unusual behavior of the AN/ALA-6 Elint equipment operated by ECM Monitor #2, Frank B. McClure. There are no reports of any visual UFO sightings.

McClure's current recollection is that the incident occurred as the RB-47 was approaching the coast, near Biloxi, Miss. The contemporary account by Piwetz disagrees saying that it occurred "approximately at Meridian." Because McClure did not notify ar other crew members of the anomalous behavior of his equipment at the time, it is not possible to check other crew members for their recollections. However, for reasons to be discussed shortly, it is believed that McClure's recollection is correct and that the incident occurred near Biloxi.

As the RB-47 neared the coast, McClure decided to check the operation of his ALA-6 equipment, knowing that the aircraft was approaching air defense ground radars against which it could be operated. The system involved included the ALA-6 direction-finder, an associated AN/APR-9 Elint receiver and an AN/ALA-5 pulse analyzer.

This Elint system is designed to locate the position of ground radar and to measure its signal characteristics. By taking several bearings to the source of a radar signal at different, known locations along the airplane's flight path, the position of the radar can be determined by triangulation. The ALA-6 bearings are displayed relativ to the airplane's fore-aft axis.

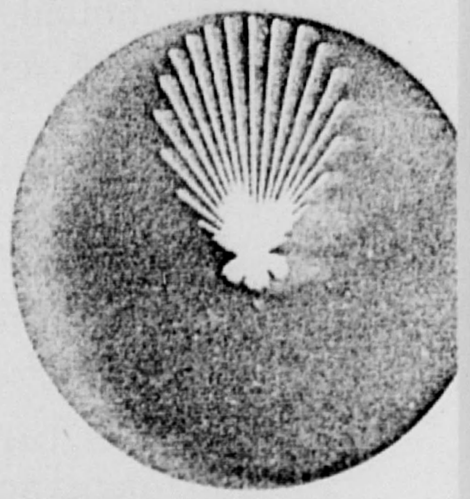
The ALA-6 can be fitted with several different types of antennas, depending on the frequency of the ground radars involved. (See: ALA-6 Handbook of Operating Instructions, T.O. 12P3-2ALA6, dated 1 May 1954.) During this mission, the RB-47 was using a Type AS-656 antenna system that covered the frequency range of 1,000 mc. (L-band) to 5,000 mc. (C-band). It consists of TWO nearly identical parabolic antenna dishes which are mounted back-to-back. The antenna assembly rotates at 150 rpm or 300 rpm, selectab by the operator.

To illustrate how the ALA-6 functions to measure bearing to a ground radar, which is important to understanding this UFO case, only ONE of the two back-back antennas wil be considered for the moment. When the Elint aircraft is within receiving range of a ground radar, and when the radar antenna is illuminating the airplane, the ALA-6 antenn will receive the radar signal. (Because of the comparatively high scan rate of the ALA antenna relative to the ground radar, the ALA-6 is assured of receiving ground radar pulses whenever the airplane is illuminated by the radar.)

The signals received are fed to the APR-9 Elint receiver for detection/amplificati for subsequent display on a small cathode-ray-tube (CRT) for the Elint operator. To display the bearing of the source of the received signal relative to the airplane's for aft axis, the antenna assembly contains a synchro-resolver whose rotor is geared to the antenna drive mechanism. The rotor winding of this synchro-resolver is excited from the output of the APR-9 receiver. And its sine/cosine output windings are connected to the deflection amplifiers and then to the vertical/horizontal deflection plates of the ALA-6 CRT display. (See Fig. 3.)

At such times as the airplane is illuminated by a radar, the ALA-6 will display the situation somewhat as shown in Fig. 1. (See next page.) The photo shown is an idealized version copied from the ALA-6 operator's manual.

FIG.1



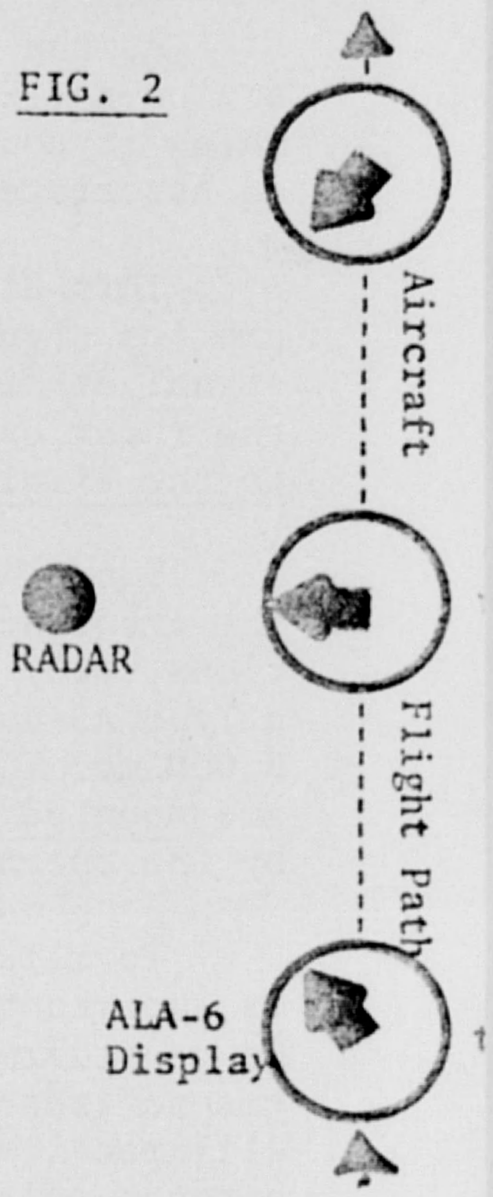
*NORMAL OPERATION of AN/ALA-6 Elint Direction-Finder*

Because the top of the ALA-6 display corresponds to a bearing of 0°, the radar shown in Fig. 1 is dead-ahead of the airplane. If the center of the displayed pattern were at the 3 o'clock position, then the radar would be abeam of the airplane, on its right-hand side.

As the aircraft flies along, unless the radar is dead-ahead or astern, the displayed bearing to the signal source will move DOWN-SCOPE, providing the aircraft is in straight/level flight. If the airplane is turning toward the radar, then the bearing displayed will move UP-SCOPE. (See Fig. 2.)

As the RB-47 approached the coast in the pre-dawn hours of July 17, ECM Monitor #2 (McClure) decided to check out his equipment. Beginning at the high end of the APR-9 frequency range (5,000 mc.), McClure worked down until he found an S-band signal. The signal had all the characteristics of a CPS-6B air defense radar, one of several models then in use. (A slightly later version of the CPS-6B, known as the AN/FPS-10, had identical signal characteristics.)

FIG. 2




It is important to note that McClure did not write down the specific frequency or other signal characteristics at this time, so we are not certain of the precise frequency of the S-band signal involved in this first incident.

The S-band signal even showed that the source was a scanning one, typical of radar. This is manifested by the brief appearance, then disappearance, of the signal bearing display on the ALA-6. As a ground radar antenna begins to illuminate the Elint airplane, the signal is briefly displayed. Then, as the radar antenna rotates to where it no longer illuminates the airplane, the signal displayed slowly disappears as the CRT phosphor decays.

McClure was not surprised to see a signal with the characteristics of a CPS-6B, as he explained to me, for he knew that such a radar was installed near Biloxi, near the RB-47 position. This radar was used in conjunction with an Air Force training school for ECM operators.

The signal was "mighty strong," according to McClure, as would be expected if it came from the CPS-6B radar at Biloxi. However, the bearing to the signal displayed on the ALA-6 showed the radar to be on the RIGHT-HAND SIDE of the RB-47, at roughly the 5 o'clock position. The Biloxi radar would be on the LEFT-HAND SIDE of the aircraft. The bearing displayed on the ALA-6 would place the unknown radar in the Gulf, and McClure knew there were no such shipboard radars.

As the RB-47 proceeded toward Meridian, McClure noted another anomalous characteristic. Instead of the displayed bearing moving down-scope, it moved up-scope. McClure, knowing that such behavior could occur if the airplane were in a turn, says he called the pilot on the intercom to ask if he was maneuvering. The pilot replied that he was not. (This would confirm the fact that the incident happened near the coast rather than at Meridian, as Piwetz reports, because the airplane did turn west at Meridian.)

McClure decided that there must be a malfunction in his ALA-6, but he did not report it to the aircraft commander at the time. (It was not until later, following the visual sighting of a luminous object by the pilot/co-pilot that McClure realized that the unusual up-scope movement could result from an airborne signal source passing the RB-47 at greater than the RB-47's 500 mph speed.)

Analysis of the circuit diagram from the ALA-6 instruction books suggests several possible malfunctions that could cause an anomalous up-scope movement, one of which will be considered here. As previously noted, the AS-656 antenna assembly installed on the RB-47 employs TWO back-back dishes. One of these is selected when the ground radar signal is horizontally polarized, while the other is used when the signal is vertically polarized. Only one antenna dish is used at any instant.

The ALA-6 operator selects the proper antenna dish by means of a toggle switch on the front of the ALA-6 control panel. If the operator lacks apriori knowledge of the radar signal polarization, he toggles back/forth and selects the dish which gives the optimum signal.

When the switch is thrown to the "Vertical" position [See Fig. 3 below], it applies + 28 volts to relay K-701, which then connects the vertically polarized dish to the APR-9 Elint receiver. When the toggle switch is thrown to the "Horizontal" position, it removes the +28 volts from relay K-701 and the spring-loaded relay then connects the horizontally polarized dish to the APR-9 receiver.

When selecting the appropriate antenna dish, it is also necessary that the correct polarity of APR-9 signal be applied as excitation to the synchro-resolver rotor

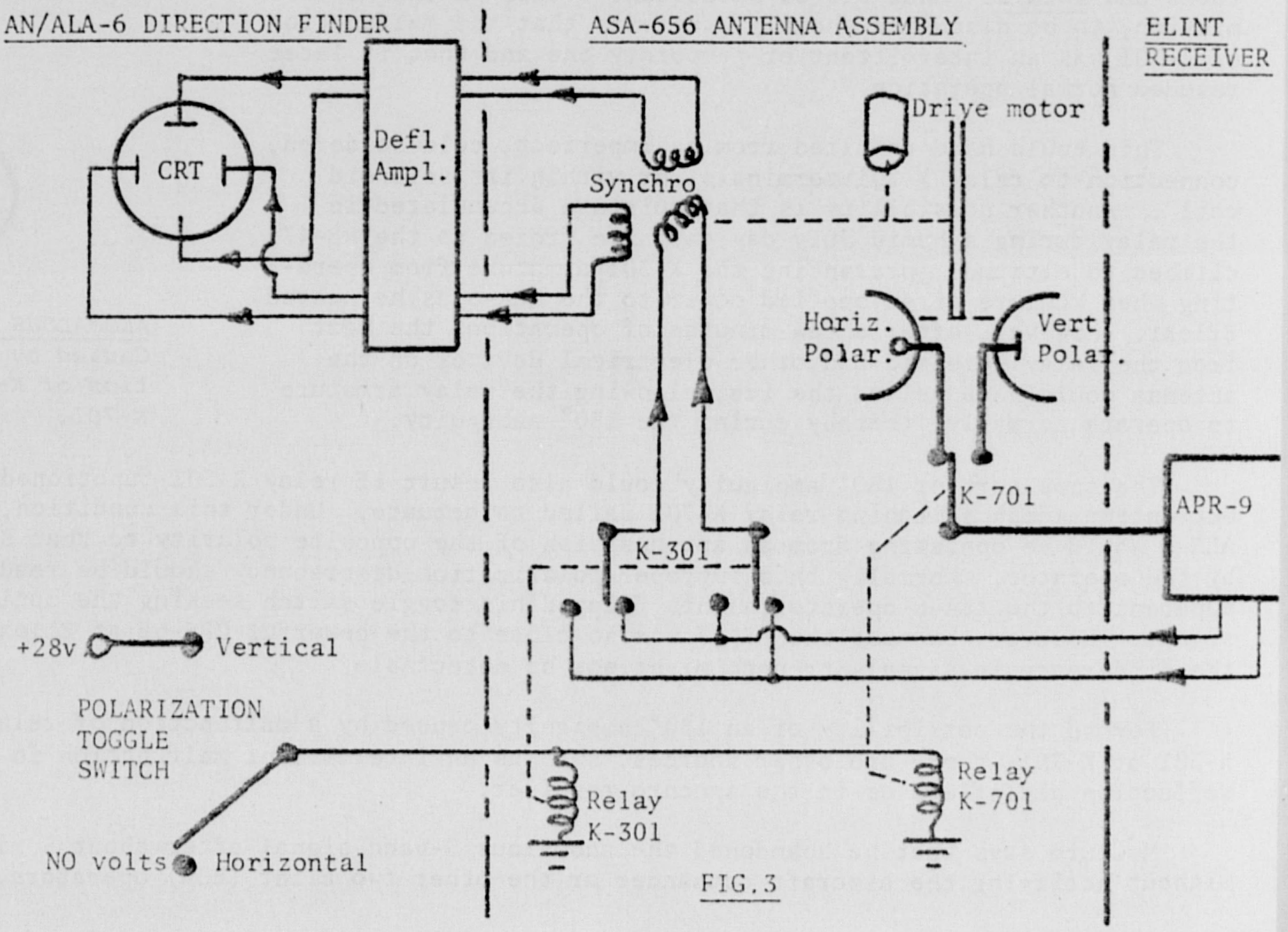



FIG.3

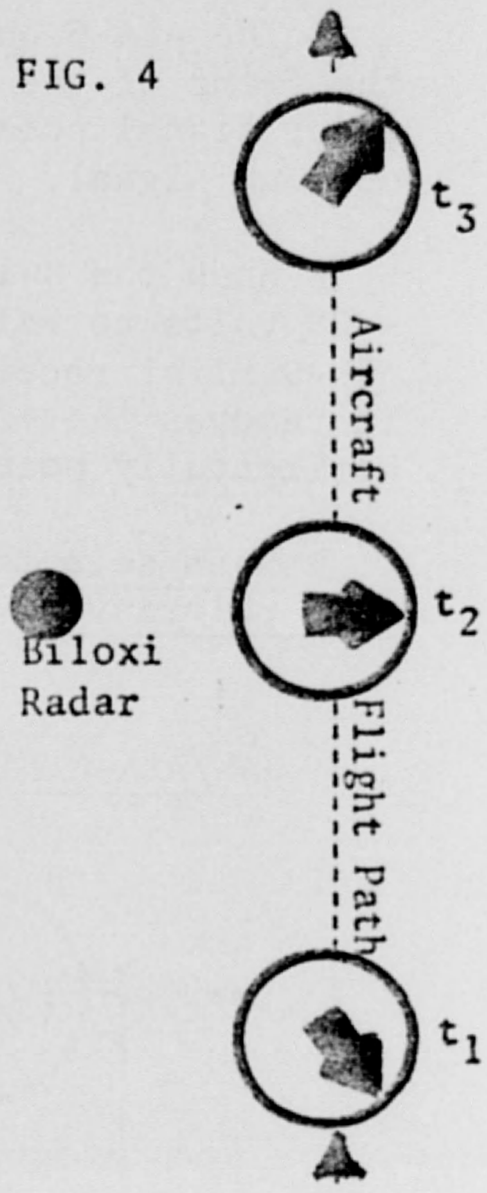
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so that the bearing displayed on the ALA-6 will correspond to the antenna dish in use.

The same toggle switch that applies, or removes, the +28 volts from relay K-701 also does the same for relay K-301, whose function is to apply the correct polarity excitation to the synchro-resolver rotor. IF RELAY K-301 SHOULD FAIL TO ACTUATE WHEN THE TOGGLE SWITCH IS THROWN TO THE "VERTICAL" POSITION, THEN THE BEARING-TO-THE-RADAR DISPLAYED BY THE ALA-6 WILL BE 180° IN ERROR. AS THE AIRCRAFT FLIES PAST THE RADAR, THE INDICATED BEARING THEN WILL MOVE UP-SCOPE INSTEAD OF DOWN-SCOPE.

Thus, if K-301 failed to actuate when McClure positioned the toggle switch to the "Vertical" position (to coincide with the known vertical polarization of the CPS-6B radar at Biloxi), the bearing displayed on the ALA-6 not only would be 180° in error (pointing out toward the Gulf, as reported), but the bearing would move up-scope as the RB-47 proceeded toward Meridian, also as reported. [This is shown in Fig. 4 in a not-to-scale representation.]

FIG. 4




*ANOMALOUS BEARING*
*Caused by malfunction of K-301 or K-701.*

According to McClure's recent recollection, the displayed bearing moved from approximately 5 o'clock to roughly 1 o'clock during the approximately 5 minutes which he "worked" the signal. This would be the angular movement expected if the RB-47 was within approximately 20 miles of the Biloxi radar.

In the mid-1950s, at the time the ALA-6 was built, the two principal sources of equipment malfunctions were vacuum tubes and relays. Analysis of subsequent events in the RB-47 mission, to be discussed shortly, suggests that the malfunction of K-301 was an intermittent or temporary one and that it later resumed normal operation.

This could have resulted from an imperfect, cold-soldered, connection to relay K-301 terminals, or within its solenoid coil . Another possibility is that moisture accumulated in the relay during a humid July day may have frozen as the RB-47 climbed to altitude, preventing the K-301 armature from operating when McClure first applied power to the ALA-6 as he neared Biloxi. However, after a few minutes of operation, the heat from the relay solenoid and other electrical devices on the antenna could have melted the ice, allowing the relay armature to operate normally, thereby curing the 180° ambiguity.

The same sort of 180° ambiguity could also result if relay K-301 functioned properly but antenna-dish switching relay K-701 failed to actuate. Under this condition, the ALA-6 would be operating from an antenna dish of the opposite polarity to that selected by the operator. Normally this improper polarization discrepancy should be readily apparent to the ALA-6 operator as his flipped his toggle switch seeking the optimum signal. However, because the RB-47 was so close to the powerful CPS-6B at Biloxi, the difference in signal strength might not be detectable.

Beyond the possibility of an 180° ambiguity caused by a malfunction of relay K-301 or K-701, there are other sources, such as an intermittent malfunction in the deflection amplifiers or in the synchro-resolver.

McClure says that he abandoned the anomalous S-band signal after about 5 minutes, without notifying the aircraft commander or the other two Elint (ECM) operators. Some

time later, McClure recalls that he decided to check the ALA-6 against other air defense radars in the region. These operate at a lower frequency in L-band (1,000 mc.) McClure recalls that the ALA-6 seemed to give the correct bearing for the known location of these L-band radars. (This detail is not included in the original Piwetz report.) Unfortunately, McClure did not think to tune back to S-band to check the ALA-6 performance against the original signal. If McClure's recent recollection of having checked the ALA-6 against L-band radars is correct, it would seem that the transient malfunction had by this time cleared.

THE SECOND INCIDENT:

The RB-47 turned west near Meridian and took up a true heading of 265° on a path toward Waco, during which time the three Elint operators were to check out their equipments against radars and communications stations in the region. At 10:10Z, while the RB-47 was in the vicinity of Winnsboro, La., the pilot observed "a very intense white light with light blue tint" coming toward the aircraft from the 11 o'clock position. As the pilot and co-pilot watched, the luminous object cut in front of the RB-47, at a distance later estimated to be roughly two miles, and zoomed off to the right of the airplane, disappearing at roughly a 2:30 o'clock position.

The encounter would have been an unnerving one for the flight crew because the luminous object seemed to at first threaten a head-on collision. So far as the record shows, the RB-47 had not received any warning from the Civil Aeronautics Administration (Now the Federal Aviation Administration) traffic controllers or from any of the several nearby air defense radar stations that there was any other traffic near their altitude/position.

Large meteors, or "fireballs," on a near-horizontal trajectory often produce UFO reports, even from experienced pilots. For example, on Dec. 9, 1965, a former Royal Canadian Air Force pilot (Mr. A.G.M. of Toronto) wrote a letter to the USAF's Project Blue Book office describing a UFO he had seen while flying near Pittsburgh, Pa., at 4:45 p.m. (daylight) on Air Canada Flight #781.

Quoting from his letter: "We were at 18,000 ft., I was looking out the window toward the east when I saw 'it.' A sort of pencil shaped object flying horizontal for a split second, then going into a 70° dive with an orange flame then appearing behind it. In a matter of just 3 or 4 seconds it was gone. Just like a rocket taking off...Am a former Royal Canadian Air Force pilot from the last war. I had never seen anything like it before, especially the rapid changes in direction and terrific speed." [Emphasis supplied.]

If this incident had occurred very late at night and/or over a thinly populated area, this particular UFO report might still be unexplained. However, because the same object reported by this RCAF pilot was also seen and reported by hundreds of observers on the ground, this UFO is known to have been a bright meteor. It left a characteristic meteor trail which persisted for 20 minutes and which was photographed by a man in Michigan who obtained four good pictures.

The RB-47 incident occurred at 5:10 a.m. Central Daylight Savings time, when there would be few ground observers if any. In the summer of 1957, it was not surprising that the RB-47 flight crew began to consider the possibility that the luminous object they had seen might be a UFO, for the U.S. was in the midst of a major "UFO Flap" that summer. Since the "discovery" of UFOs in 1947, there would be more UFO reports filed with the USAF in 1957 than in any previous year except 1952!

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In the RB-47, the pilot and co-pilot sit in tandem in a bubble canopy so their conversations must necessarily be conducted via the airplane's interphone system. As Chase and co-pilot James H. McCoid began to speculate on what they had seen and the possibility that it might be a UFO, their conversation was heard by the Elint operators sitting within the RB-47 fuselage who had not been able to see the luminous object.

THE THIRD INCIDENT:

When McClure noticed ECM Monitor #3, Walter A. Tuchscherer, laughing and asked the reason, Tuchscherer (who had been listening on the RB-47 intercom) replied: "They're chasing flying saucers up-front," according to McClure's recent recollection. This prompted McClure to think about the anomalous S-band signal he had earlier worked near Biloxi.

During the intervening time, McClure had re-tuned to work L-band radars in Louisiana and Arkansas. Now he decided to tune his APR-9 and ALA-6 back to S-band to see if he could find the earlier S-band signal. But it was not until 10:30Z, or 20 minutes after the visual sighting, that McClure detected an S-band signal, according to the Piwetz account. (This time figure and subsequent ones were hastily jotted down by McClure on scraps of paper, he recently told me.) It was only after this second encounter with an S-band signal, after 10:30Z, that McClure jotted down the characteristics of the signal:

*Frequency: 2,995-3,000 mc.; Pulse repetition frequency (PRF): 600 per second; Pulse Length: 2 microseconds; Scan rate: 4 rpm.*

The CPS-6B radar, an early post-war design, radiates six separate beams from three different antenna dishes. Each beam operates in a different part of S-band. The frequency and other signal characteristics noted by McClure are identical to those for the VERTICAL-CENTER BEAM -- except for the pulse duration/length at a PRF of 600/sec. According to the Handbook of Operating Instructions for the CPS-6B [T.O. 31PG-2CPS6-11, revised 15 Jan. 1957], when the radar is operating at a PRF of 600/sec., the pulse length is 1 microsec., not the 2 microsec. noted by McClure. But an Elint specialist who is familiar with the APR-9 Elint receiver says that smearing of the received pulse due to ground reflection could easily cause an operator to err by this small increment.

The newly acquired S-band signal, at 10:30Z, showed a bearing of roughly 70°. This was roughly the same relative bearing at which the bright luminous object had zoomed out of sight some 20 minutes earlier as it headed north. IF this S-band signal came from the UFO, then the UFO must suddenly have changed course and was now flying abeam of the RB-47, somewhere out there in the darkness. However, the flight crew did NOT see any visual target at 10:30Z -- at a 70° bearing or elsewhere.

One of the curious aspects of this incident is why the S-band signal did not show up on the ALA-6 until 20 minutes after the initial visual sighting. McClure assures me that it would not take more than 10-15 seconds for him to re-tune from L-band to S-band.

This delay is readily explained IF the signal detected by McClure at 10:30Z came from an FPS-10 radar (with signal identical to a CPS-6B) situated at Duncanville, just southwest of Dallas. Analysis of the RB-47's flight path and the coverage of the Duncanville radar's Vertical-Center beam at the RB-47's 34,500 ft. altitude shows that this beam's lower sidelobe would first begin to illuminate the aircraft at approximately 10:30Z. (See Fig. 6; also Appendix.)

However, if the signal was coming from the Duncanville radar the displayed bearing should have been approximately 35°, whereas the bearing reported by McClure and listed in the Piwetz account is 70°. But as earlier noted, all bearings are measured relative to the airplane fore-aft axis so that if the RB-47 were maneuvering at the time this would introduce a discrepancy. Since there is no way to know for certain whether the aircraft was in level or maneuvering flight at that moment, it will be useful to examine subsequent ALA-6 bearing measurements and compare them with the expected values to determine if the S-band signal was coming from the Duncanville radar.

Figure 6 (p. 11) is a careful plot of the calculated RB-47 flight path, developed with the assistance of aircraft commander Chase, showing all reported bearings of the unknown S-band signal, so the reader can compare them with the actual bearing to the Duncanville radar. All times/events are based on the Piwetz report, unless otherwise noted.

At 10:35Z, McClure reported the S-band signal to be at a relative bearing of 68°. From my calculated RB-47 flight path, assuming the airplane in level flight, the bearing to Duncanville would be roughly 40°

At 10:38Z, the S-band signal bearing was approximately 40°. The bearing to the Duncanville radar would be roughly 45°.

At 10:39Z, the aircraft commander "sighted a huge light which he estimated to be 5,000 feet below aircraft at about 2 o'clock. [Piwetz account.] Aircraft altitude was 34,500 feet, weather perfectly clear. Although aircraft commander could not determine shape or size of object, he had a definite impression light emanated from top of object." [NOTE: This was the first visual sighting since 10:10Z, and did not occur until nine minutes after McClure acquired S-band signal.]

At 10:40Z, McClure "reported he then had <u>two</u> signals at relative bearings of 40° and 70°." Based on calculated RB-47 position, the bearing to the Duncanville radar would have been roughly 50°. Piwetz account states: "aircraft commander and co-pilot saw these two objects at the same time with same red-color." However, Chase recently told me that he does not recall ever seeing <u>two</u> visual objects.

<u>If the S-band signal was coming from a UFO, then the craft apparently had divided into two widely separated objects!</u> A more plausible explanation is suggested by the ALA-6 Handbook of Operating Instructions IF the signal was coming from the Duncanville radar. The handbook says that the ALA-6 may at times display what appears to be TWO SIGNALS AT TWO DIFFERENT BEARING ANGLES (from a single radar) "due to a reflection from some nearby object to the left of the true signal reflection." This condition is illustrated in Fig. 5, using a photograph from the ALA-6 handbook.

<u>FIG. 5</u>



Shortly after 10:40Z, the RB-47 commander obtained permission from the Civil Aeronautics Administration to deviate from the original flight plan to pursue the UFO. The RB-47 then turned right, to a heading of 320°, putting it on a path that would take it toward Dallas-Ft. Worth. [See Fig. 6, p. 11.] The RB-47 contacted the Duncanville radar station (Code Name: "Utah") and "requested all assistance possible," in its UFO chase, according to the Piwetz account.

At 10:42Z, only a <u>single</u> S-band signal was noted by McClure, having a bearing of 20°. From the RB-47 calculated flight path, the bearing to the Duncanville radar also

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would be approximately 20°. Chase accelerated the RB-47 as the "object pulled ahead" [Piwetz account] in an effort to close on it. [Chase's original Airborne Observer's Report says the RB-47 accelerated to Mach 0.83, but his more recent recollection is that he was near maximum speed, or at roughly Mach 0.87.]

At 10:42.5Z, the ALA-6 once again showed TWO S-band signals, with bearings of 40° and 70°. If the RB-47 had by this time completed its turn onto the new 320° heading, the bearing to Duncanville would have been roughly 15°, but the bearing would be larger if the turn was still in process. So far as the Piwetz report shows, and Chase's current recollection, there was only a single visual target.

At 10:44Z, the ALA-6 once again showed only a single S-band signal, with a bearing of 50°. The estimated bearing to Duncanville, assuming the aircraft was not maneuvering, should have been roughly 10°.

At 10:48Z, the Duncanville station asked the RB-47 to turn on its radar transponder to Mode III "for positive identification, then requested (crew to advise) position of object." [This seems curious because the air defense radar personnel should have been able to identify the RB-47 some minutes earlier when assistance was first requested, considering the typically light traffic in the pre-dawn hours. The radar had height-finder beams so it should have been quite easy for experienced operators to identify the RB-47 from the pilot's estimated position and reported altitude.]

When the RB-47 crew "reported position of object as 10 nautical miles northwest of Ft. Worth, Texas" [Piwetz account.], the radar station "immediately confirmed presence of object on their scopes." [Again, it seems curious that an air defense radar station had overlooked an unidentified craft until the RB-47 called attention to it. This almost suggests an inexperienced or inattentive radar station crew.]

At "approximately 10:50Z object appeared (to flight crew) to stop and aircraft overshot. Utah (radar) reported they lost object from scopes at this time, and ECM #2 (McClure) also lost signal." If the ALA-6 signal was coming from the Duncanville radar, it would logically disappear from McClure's scope at about this time because the RB-47 was now so close that it no longer would be illuminated by the Vertical-Center beam to which the ALA-6 and APR-9 were tuned (2,995-3,000 mc.) A possible explanation for why the Duncanville radar lost its unidentified target and the RB-47 crew lost its visual target will be discussed shortly.

The RB-47 commander, thinking he had overshot the UFO, began a turn to the left shortly after passing between Dallas and Ft. Worth. At roughly the same time (which I estimate to be 10:51Z), "ECM #2 picked up signal at 160° relative bearing." Reference to Fig. 6 shows that by this time the RB-47 would now be far enough away from the Duncanville radar so that it would again be illuminated by the Vertical-Center beam. And the bearing to the radar would be roughly 160°, as McClure observed. [For coverage of Vertical-Center beam at RB-47 flight altitude, see Appendix B.]

At the same time, "Utah (radar) regained scope contact and aircraft commander regained visual contact." This is believed to be an error in the Piwetz account, according to extended correspondence with pilot Chase, who is certain that the new visual contact did not occur until several minutes later. IF there was visual contact at this time, the "object" could NOT POSSIBLY BE THE ONE GENERATING THE S-BAND SIGNAL ASTERN OF THE RB-47 (160°) BECAUSE THE FLIGHT CREW COULD NOT LOOK IN THIS DIRECTION AT AN OBJECT BELOW RB-47 FLIGHT ALTITUDE. IF the Utah radar operators advised of the position of their new unidentified radar target, this is not indicated in the Piwetz account.

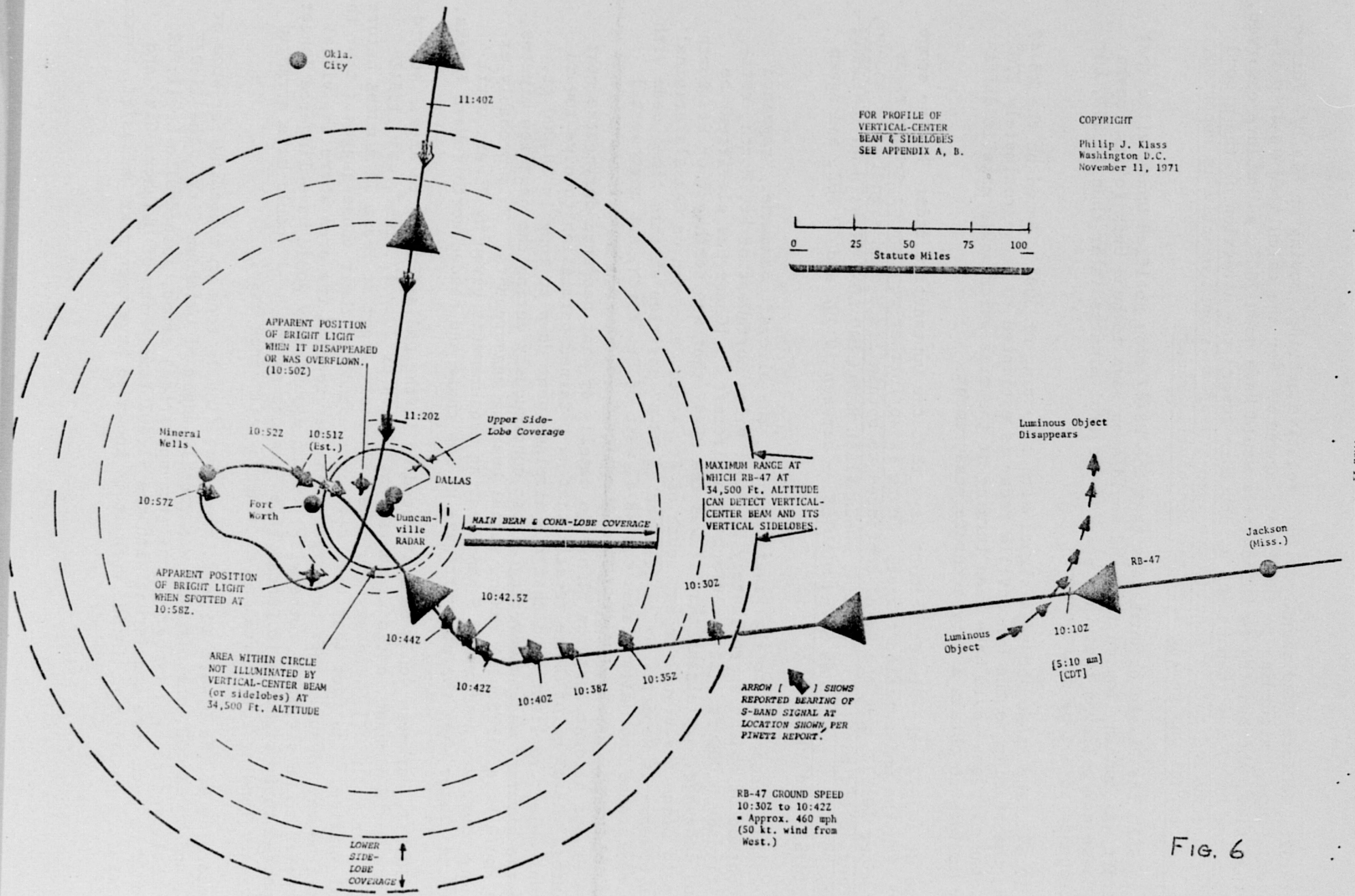

Okla. City
11:40Z
APPARENT POSITION OF BRIGHT LIGHT WHEN IT DISAPPEARED OR WAS OVERFLOWN. (10:50Z)
11:20Z
Upper Side-Lobe Coverage
Mineral Wells
10:52Z
10:51Z (Est.)
DALLAS
10:57Z
Fort Worth
Duncan-ville RADAR
MAIN BEAM & COMA-LOBE COVERAGE
APPARENT POSITION OF BRIGHT LIGHT WHEN SPOTTED AT 10:58Z.
AREA WITHIN CIRCLE NOT ILLUMINATED BY VERTICAL-CENTER BEAM (or sidelobes) AT 34,500 Ft. ALTITUDE
10:44Z
10:42.5Z
10:42Z
10:40Z
10:38Z
10:35Z
10:30Z
MAXIMUM RANGE AT WHICH RB-47 AT 34,500 Ft. ALTITUDE CAN DETECT VERTICAL-CENTER BEAM AND ITS VERTICAL SIDELOBES.
LOWER SIDE-LOBE COVERAGE
ARROW [ ] SHOWS REPORTED BEARING OF S-BAND SIGNAL AT LOCATION SHOWN PER PIWETZ REPORT.
RB-47 GROUND SPEED 10:30Z to 10:42Z = Approx. 460 mph (50 kt. wind from West.)
FOR PROFILE OF VERTICAL-CENTER BEAM & SIDELOBES SEE APPENDIX A, B.
0 25 50 75 100
Statute Miles
COPYRIGHT
Philip J. Klass
Washington D.C.
November 11, 1971
Luminous Object Disappears
Jackson (Miss.)
RB-47
Luminous Object
10:10Z
(5:10 am) [CDT]

FIG. 6

At 10:52Z, McClure "had signal at 200° relative bearing, moving up his D/F (direction finder) scope," according to the Piwetz account. For the calculated RB-47 position at that time, the bearing to Duncanville would have been 200°, as McClure observed. And because the RB-47 was then making a left turn toward the direction of the ground radar, the bearing indication should have been moving up-scope, exactly as reported, if the S-band signal was coming from the Duncanville radar.

At 10:55Z, the Piwetz account says that the RB-47 crew notified Duncanville that the aircraft was running low on fuel and would soon have to head back to its Topeka base. [Chase now believes that this was done several minutes later than 10:55Z, but the discrepancy is not of consequence.]

At 10:57Z, the ALA-6 showed a signal with a bearing of 300°. Based on the RB-47 position, the bearing to the Duncanville radar is estimated to be approximately 270°. However, the airplane would have been turning at the time which would make it difficult for McClure to obtain a very accurate measurement.

Also at 10:57Z, the Piwetz account says that the Duncanville radar "had no scope contact" with the unidentified target. There is no further mention of ground radar contact after 10:57Z, yet the RB-47 continued to obtain its S-band signal, off-and-on, for another 40-odd minutes! THUS THE DUNCANVILLE RADAR HAD CONTACT WITH AN "UNIDENTIFIED TARGET" FOR NO MORE THAN SEVEN MINUTES -- between 10:48Z and 10:50Z, and again between 10:51Z and 10:56Z.

At 10:58Z, according to the Piwetz account, the aircraft commander "regained visual contact of object approximately 20 naut. miles northwest of Ft. Worth, estimated altitude 20,000 ft., at 2 o'clock from aircraft." [Chase has clarified the ambiguous language, explaining that it was the RB-47 that was northwest of Ft. Worth which would place the visual object south of Ft. Worth, as shown on Chase's original Airborne Observer's Report. My calculation of RB-47 position at this time, made with Chase's assistance, actually places the RB-47 west of Ft. Worth, not northwest.]

The Piwetz account contains almost no details of what happened during the next few minutes. RB-47 pilot Chase recalls that he obtained permission to dive toward the visual object (a light) and that the airplane went down to roughly 20,000 ft. Because the aircraft was maneuvering almost continuously during the next few minutes, McClure would have difficulty taking signal bearing measurements. This probably explains why there are no further S-band bearing measurements given by Piwetz until some minutes later when the aircraft gave up its chase and headed north toward Topeka.

By 10:58Z, darkness would be fast receding in the Dallas/Ft. Worth area. According to the World Almanac, official sunrise at Dallas on July 17, 1957, was 11:31Z (5:31 CST, or 6:31 CDT). The sky would be moderately light at least 30 minutes before official sunrise. The fact that the RB-47 crew abandoned their chase suggests that they did not find any unusual craft or object when they reached the area where the visual light seemed to be situated. Otherwise, we can assume they would have lingered longer and reported their sighting to Duncanville inasmuch as the RB-47 could have arranged an emergency landing for re-fueling at a nearby Air Force base.

According to the Piwetz account, the RB-47 finally took up a heading for home at 11:02Z, and by 11:40Z, the aircraft was roughly abeam of Oklahoma City. The 11:02Z time is believed to be a typographical (transposition) error, intended to be 11:20Z. This would be much more consistent with the 11:40Z time abeam of Oklahoma City and the aircraft's position at 10:50Z when it is known to have been near Dallas/Ft. Worth.

From 11:20Z (or 11:02Z) until 11:40Z, the ALA-6 was again showing an S-band signal with a measured bearing of "between 180° and 190°." The signal "faded rather abruptly" as the RB-47 neared Oklahoma City, according to the Piwetz account.

This is precisely what would be expected if the S-band signal were coming from the Vertical-Center beam of the Duncanville radar, which would be at a bearing of roughly 180° as the RB-47 headed north. (See Fig. 6.) Furthermore, the signal should disappear as the RB-47 neared Oklahoma City, for this would be the outer limit of coverage of the beam at the airplane's flight altitude.

On Sept. 5, 1971, I first wrote to ALA-6 operator McClure, seeking clarification of some aspects of this case. In his reply, dated Sept. 10, McClure volunteered the following view:

> *"I personally think that there was no airborne signal of this nature, so I can only say that it [i.e. the anomalous signal near Biloxi] must have been caused by some other reason, unknown to us. I also think later we became mixed up with signals from Houston, Dallas or Oklahoma City, all of which had operational CPS-6B radars." [Actually, these were FPS-10 radars with signal characteristics identical to the CPS-6B.]*

In a subsequent telephone conversation and later correspondence, McClure re-stated his opinion even more emphatically.

If the CPS-6B type signal had indeed come from an airborne vehicle, the signal would have been within receiving range of the air defense radars at Houston, Dallas and Oklahoma City at various times between 10:40Z and 11:40Z. Such a signal could be expected to cause severe interference with one or more of these ground radars, if it came from an airborne source within receiving range. YET THERE WAS NO REPORT OF ANY SUCH INTERFERENCE FROM ANY OF THESE RADARS, SO FAR AS IS KNOWN.

Furthermore, if there had been an unknown craft flying in the vicinity of the RB-47 from the time it neared the coast until roughly two hours later when it neared Oklahoma City, it is strange that the unknown craft was not spotted by any of the many air defense radar stations in Mississippi, Arkansas, Louisiana, Texas or Oklahoma, except for the brief, sporadic report from the Duncanville station.

Curiously, the formal teletype report filed by the Duncanville radar station commander to Air Defense Command Headquarters within four hours of the incident (14:45Z, July 17, 1957) denies that the UFO appeared on the station's scope! The report says: "UTAH (Duncanville radar) HAD NEGATIVE CONTACT WITH OBJECT."

This seems to contradict statements by the RB-47 crew members, yet there is no reason to question the veracity of the latter. The most logical explanation for this apparent discrepancy is that between the time of the incident (roughly 10:50Z) and the time of the report (14:45Z) the unknown target on the Duncanville radar scopes had been identified as an ordinary airplane!

If this were the case, the Duncanville station commander might well have been too embarassed to admit the temporary "goof" of possibly inexperienced operators and would logically try to minimize the whole incident with the cryptic report: "NEGATIVE CONTACT WITH OBJECT." By the time the unknown was identified, the RB-47 could have been well beyond direct radio communications range of Duncanville.

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There is reason to believe that the "unidentified" target that appeared on the scopes of the Duncanville radar sporadically between 10:48Z and 10:56Z may have been American Airlines Flt. #966. This flight from Los Angeles, via El Paso, was scheduled to arrive at the Dallas Airport (Love Field) at 6 a.m. CDT, which would be 11:00Z. If the flight was on time on July 17, the aircraft would have been making its approach to Love Field at approximately the time that Duncanville reported its "unidentified" target. Since the weather conditions were good, and pre-dawn traffic is light, Flt. #966 should have been on schedule, but 14 years after the fact it is not possible to locate original records to confirm or deny this speculation.

Recall that the RB-47 flight crew reported that the visual object (light) was located northwest of Dallas/Ft. Worth, and Duncanville confirmed this approximate location for its unidentified radar target. Love Field is situated northwest of Dallas.

The original Airborne Observer's Report has a question which asks whether the flight crew saw any other air traffic. Chase reported that he saw no other traffic and he recently re-confirmed this in response to my query. Yet if Flt. #966 was approximately on schedule there would have been at least one other aircraft in the Dallas area at the time.

If the unidentified radar target noted by the Duncanville radar was indeed Flt. #966, the explanation for its brief disappearance from the scopes at 10:50Z and subsequent re-appearance is understandable by examination of the coverage patterns of the multiple beams of the radar. (See Appendix A) At such time as Flt. #966 came within roughly 5 miles of the radar, the airliner would no longer be illuminated by any of the beams. Depending on the airliner's approach path, it could have passed through this zone of no-illumination twice if it made an outbound/inbound approach and landing--finally disappearing for good as it descended for its landing.

If the landing lights of Flt. #966 were the "visible UFO" which the RB-47 flight crew saw northwest of Dallas, and which was over-flown at 10:50Z, it seems certain that this particular airliner could not have been the "visible UFO" seen by the RB-47 crew at 10:39Z which prompted them to change flight plan and head toward Dallas/Ft. Worth.

Any attempt to identify the source of this light 14 years after the incident is a hopeless task, especially for an investigator who is not familiar with possible ground-based light sources in that region, such as industrial facilities, oil refineries, etc.

IN SUMMARY:

The real crux of this UFO case is whether the source of the S-band signal, which had all of the characteristics of a CPS-6B/FPS-10 radar, did in fact come from such radars located near Biloxi and Duncanville, or whether the signal was being radiated by an airborne object/craft.

IF the signal was being radiated by an airborne craft, there are only three possibilities:

1. A U.S. aircraft: It makes no sense for the U.S. to go to the expense and trouble of building a CPS-6B like radar and mounting it on an aircraft. If the purpose were to mimic enemy jammers, to train our own air defense radar operators, there are far simpler and less expensive ECM equipments available for that purpose. The RB-47 UFO case file contains a letter dated Oct. 30, 1957, signed by Capt. Edwin H. Mammen of Air Intelligence, in reply to a query from Project Blue Book,

prompted by the RB-47 incident. The letter, originally classified, says: "This office knows of no S-band airborne equipment having the characteristics outlined."

I have personally questioned several long-time Elint specialists, including a former official in the USAF's airborne electronic warfare laboratory who would have been respo ible for having developed the airborne CPS-6B radar-mimic. Today, nearly 20 years afte such equipment--if it existed--had been developed, it would certainly be declassified. Yet none of the Elint specialists had ever heard of such equipment.

2. A foreign aircraft: Only two countries -- Britain and the USSR -- had jet aircraf large enough to carry a powerful CPS-6B type radar and fly at speeds comparable to that of an RB-47. If either country had built such equipment, it could test the equipment against U.S. air defense radars by flying over the international waters of the Gulf of Mexico, without risking a grave international incident by penetration of U.S. airspace.

   If either country had built the equipment for the purpose of spoofing, or "playing games" with U.S. Elint aircraft, this sort of experiment could have been conducted in West Europe or Asia where numerous RB-47 Elint aircraft were based.

3. An extra-terrestrial (E-T) spaceship: Inasmuch as the signal had all of the characteristics of a CPS-6B/FPS-10, it seems certain that the equipment was specifically designed either for use against American air defense radars or against U.S. Elint-type aircraft.

   If the intent was to interfere with (jam) CPS-6B/FPS-10 radars, then clearly the E-T mission of July 17, 1957, was a complete failure for there were no reports of such interference from the radars at Houston, Oklahoma City, Duncanville or at Biloxi. Having gone to so much trouble, it would seem logical for the E-Ts to subsequently modify their equipment and to return to Earth for another attempt--hopefully more successful. Yet this has never happened, so far as the record shows.

   If the E-T went to the trouble of building a CPS-6B type radar and transporting it all the way to Earth for the capricious mission of playing games with the crew of an Elint airplane, then clearly the mission was a success. But an important question is how the E-T spaceship was able to identify this particular aircraft--the RB-47--among all of those aloft around the Earth on July 17, 1957, as an Elint aircraft?

   Elint aircraft do not radiate any distinctive signal to identify their function. They do carry a number of appendages and antennas, but many other types of military aircraft carry a variety of appendages, such as mapping radar, doppler radar, fuel tanks, etc. In darkness and at high speed, it would be especially difficult even for a U.S. Elint specialist to identify an Elint aircraft.

   Another curious aspect is that having gone to all the trouble to build equipment to spoof an Elint aircraft, the E-Ts have never since attempted to play games with such an aircraft, so far as is known.

CONCLUSIONS:

This analyst believes that the S-band signal with all of the characteristics of a CPS-6B/FPS-10 radar actually came from radars of this type at Biloxi and Duncanville. The signal bearings reported by Piwetz, based on figures hurriedly jotted down by

[0

McClure, when plotted against the RB-47 flight path, generally coincide with the direction to the Duncanville radar. The match is not perfect, but McClure never had the opportunity to check the accuracy of the figures contained in the Piwetz report and we are almost certain that there was at least one typographical error [11:02Z vs. 11:20Z.]

If the S-band signals displayed on the ALA-6 came from ground radars, and if the unidentified radar target briefly observed on the Duncanville scopes was later identifield as ordinary air traffic, then this case really boils down to the bright luminous object that flashed by the RB-47 at 10:10Z, which had all the earmarks of a bright meteor, and the various colored lights later observed in the general vicinity of Dallas/Ft. Worth. The latter could have a variety of explanations, including other air traffic.

IT IS NOT SURPRISING THAT THE SERIES OF UNUSUAL INCIDENTS PROMPTED THE RB-47 CREW TO BELIEVE THAT THEY HAD HAD AN ENCOUNTER WITH A UFO. In 1957, with UFO reports and interest at nearly an all-time high, it would have been surprising if the RB-47 crew had not reached such a conclusion.

CREW COMMENTS:

A draft of this analysis-report was submitted to the two principal RB-47 crew members involved in this incident for their reactions, which follow:

Lewis D. Chase, RB-47 aircraft commander/pilot:

*"I think this study is an excellent work! I apologize for fearing you would not go in deep enough with your analysis. Congratulations, and my thanks, for giving me a plausible explanation for the events that happened to my crew that night in 1957."*

Frank B. McClure, ECM Monitor #2:

*"I am certain that for some reason we had intercepted ground signal that moved up-scope. I know that once we were near Dallas and (flying) north toward Forbes (AF Base), the signals were undoubtedly CPS-6B/FPS-10 air defense radars. I do not believe any UFO was emitting these signals."*

IMPLICATIONS:

In presenting this case to AIAA members, the AIAA's UFO Subcommittee observed: "This sample case may serve to illuminate the difficulties in deciding whether or not the UFO problem presents a scientific problem." This case does indeed illuminate two central aspects of the entire UFO issue:

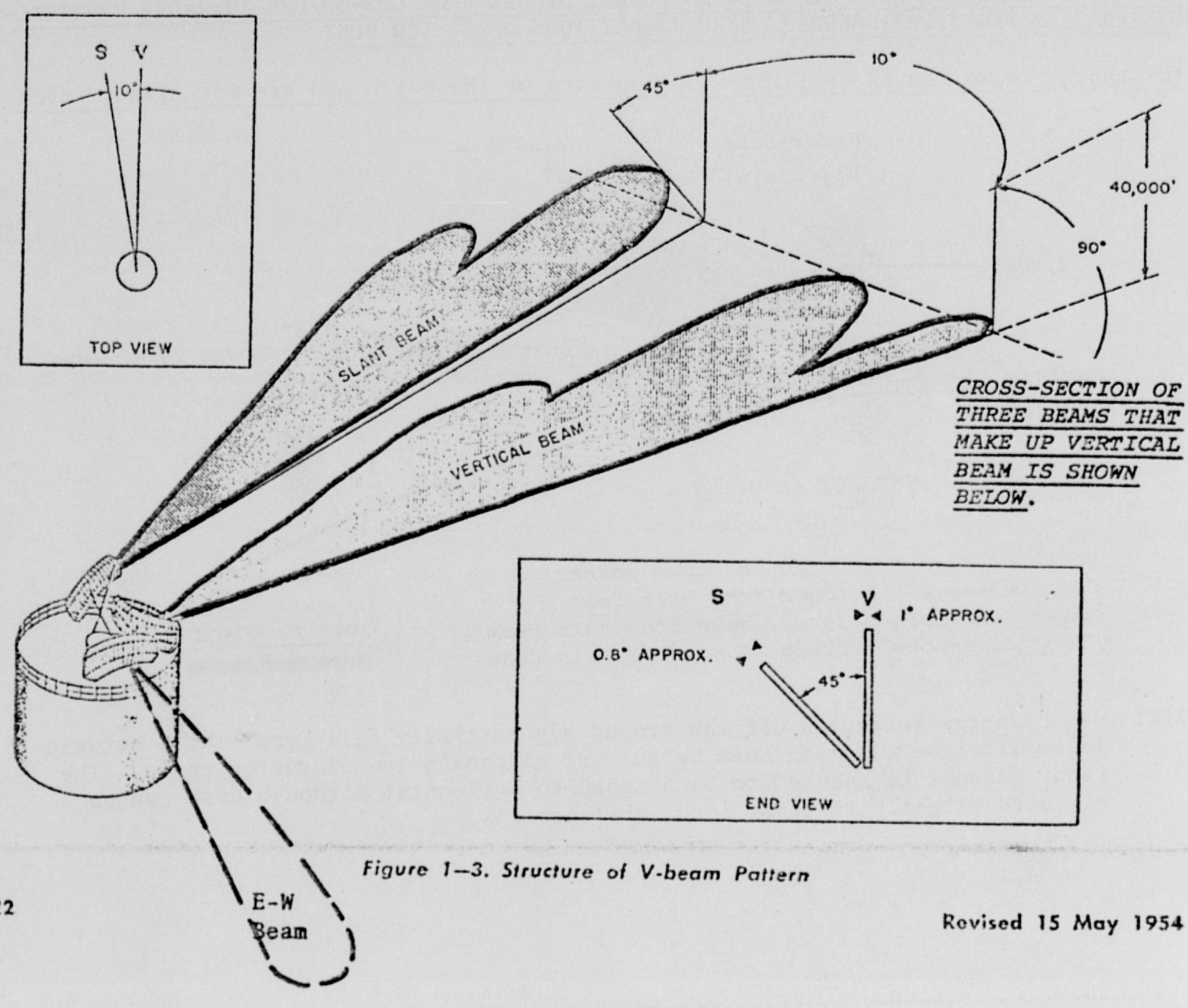
1. If it were not for the belated discovery of the original ("contemporary") records, meager as they are, this case would be unexplainable simply because of the discrepancies that have--understandably--crept into the current recollections by the principals of events that transpired 14 years ago. Because most of the old UFO cases lack such original documentation, they must remain unexplained. But this lack-of-explanation should not imply that they involve extraterrestrial spaceships or other exotic phenomena.

2. Even when original data are available, if an investigator approaches his task with a conscious, or unconscious, desire to find no conventional explanation so as to end up with extraterrestrial spaceships as the only possible alternative, then the investigator will find no plausible conventional explanation.

* * *

*Philip J. Klass*
*December 30, 1971*

RADIATED BEAMS OF CPS-6B and FPS-10 RADARS: (From T.O. No. 16-30CPS6-7)

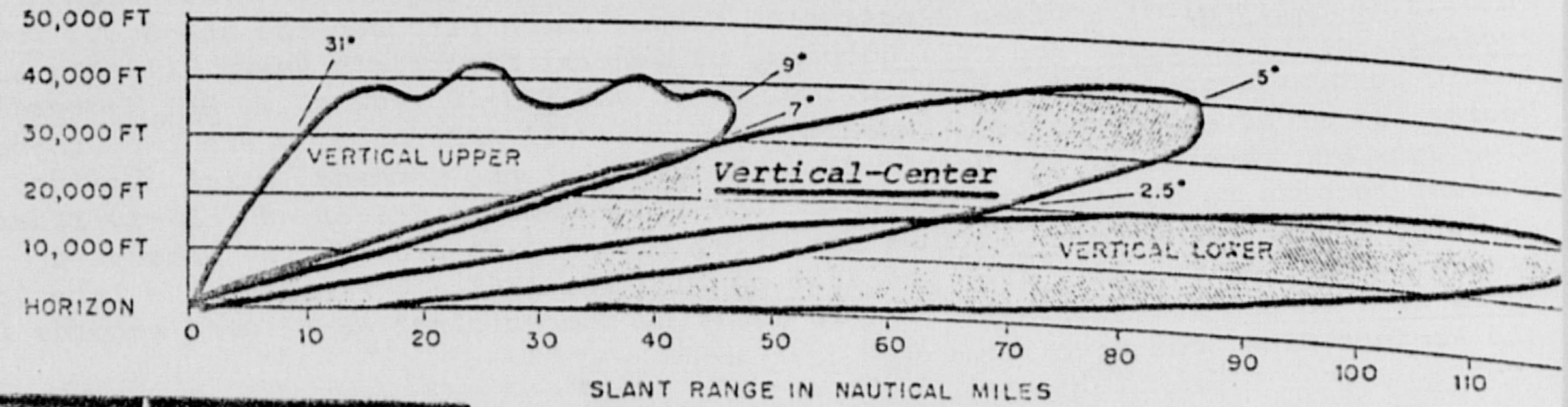



*CROSS-SECTION OF THREE BEAMS THAT MAKE UP VERTICAL BEAM IS SHOWN BELOW.*

*Figure 1—3. Structure of V-beam Pattern*

VERTICAL PROFILE OF VERTICAL-CENTER BEAM (2,992 - 3,019 mc.) WITHOUT SIDELOBES:

[Detection range shown for fighter aircraft (1 sq. meter target); detection range for bomber-type aircraft is approximately twice distance shown.]




VERTICAL BEAM COVERAGE
FOR 1.0 SQUARE METER EFFECTIVE TARGET AREA

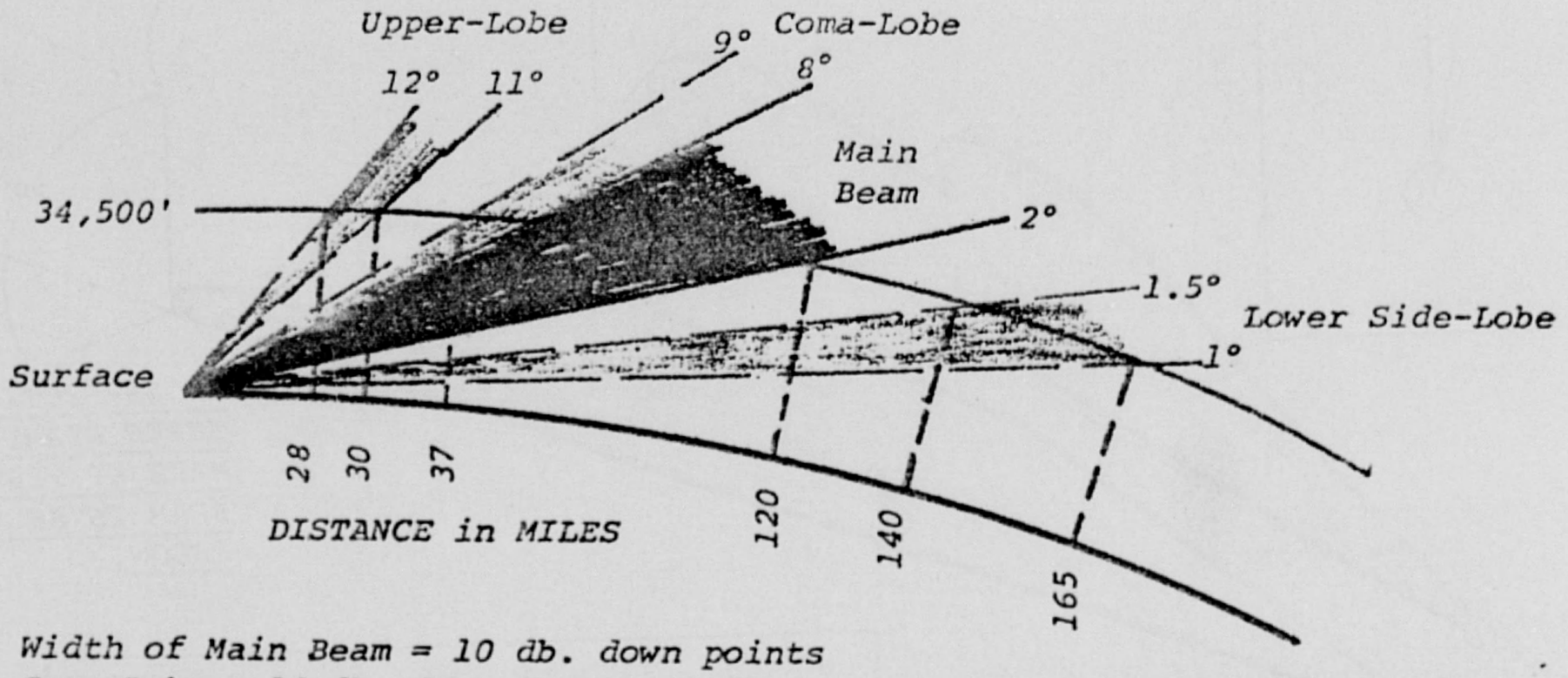
Ⓐ

*NOTE: ANGULAR DIMENSIONS SHOWN FOR BEAMS ARE FOR 3 db.-down points and do not include sidelobes.*

## APPENDIX B

ESTIMATED RANGE AT WHICH ALA-6 COULD DETECT SIGNAL FROM CPS-6B/FPS-10 RADAR VERTICAL-CENTER BEAM AND ITS SIDELOBES AT RB-47 ALTITUDE OF 34,500 FEET.

(Distances shown are as measured along surface of the earth and are not slant ranges.)




*Width of Main Beam = 10 db. down points*
*Coma-Lobe = 16 db. down from Main Beam*
*Lower Side-Lobe = 15 db. down from Main Beam*
*Upper Side-Lobe = 22 db. down from Main Beam*

*NOT TO SCALE*

NOTE: Radar energy reflected off the ground may partially fill "gap" shown between lower sidelobe and main beam because of antenna's low elevation angle. The radar antenna is assumed to be aligned to horizontal although dish can be elevated slightly to clear local obstructions.

---

MY THANKS TO THE FOLLOWING PERSONS AND ORGANIZATIONS FOR THEIR VALUABLE ASSISTANCE

*RB-47 crew members: Pilot Lewis D. Chase, ECM Monitor #2, Frank B. McClure, and ECM Monitor #1 John Provenzano.... Elint specialist Rod Simons of the AIL Div. of Cutler-Hammer, which developed the APR-9 Elint receiver.... George Rappaport, former technical director of USAF's electronic warfare laboratory at Wright-Patterson AFB, Ohio....Ken Klippel of Hoffman Electronics Corp., which produced the ALA-6.... Tom Paganelli, Paul J. Teich and C.I. Robbins, of General Electric's Heavy Military Electronic Systems Dept., which produced the CPS-6B and FPS-10 radars.... Dr. Maurer Maurer, chief of the Historical Research Div., Maxwell AFB, Ala., where the Project Blue Book UFO case files are archived.... The Air Defense Command, which dug into ancient records to obtain information on the deployment of CPS-6B and FPS-10 radars in July, 1957,....American Airlines for doing the same to provide the scheduled arrival times for its Flt. #966 and #655 on July 17, 1957.... Finally, the late Dr. James E. McDonald for his initiative in locating the original RB-47 case records in the Project Blue Book archives.*

* * *

Philip J. Klass
Washington D.C.

14 January 1972

Mr. Philip J. Klass
Aviation Week & Space Technology
McGraw-Hill, Inc.
Rm 425, National Press Bldg.
Washington D C 20004

Dear Mr. Klass

I lack the technical background for full appreciation of your detailed account of the RB-47 UFO case, but the explanation you derive from your detailed analysis of the evidence provides a reasonable explanation.

Thank you for sending us copies of your report.

Sincerely

MAURER MAURER
Chief, Historical Research Division

Copy to: Blue Book Case File

JOINT MESSAGEFORM

SECURITY CLASSIFICATION [redacted] UNCLASSIFIED

SPACE BELOW RESERVED FOR COMMUNICATION CENTER

| PRECEDENCE | | TYPE MSG (Check) | | | ACCOUNTING SYMBOL | ORIG. OR REFERS TO | CLASSIFICATION OF REFERENCE |
|---|---|---|---|---|---|---|---|
| | | BOOK | MULTI | SINGLE | | | |
| ACTION | 00 | | | | | | |
| INFO | | | X | | AF | X | |

FROM:
COMSTRATRECONWG 55 FORBES AFB KANS

SPECIAL INSTRUCTIONS

TO:
CINCSAC OFFUTT AFB NEBR

COMAF 8 WESTOVER AFB MASS

1. ZIPPO _____ M-12 AMPLIFY CIRVIS REPORT SENT BY ADC SITE UTAH

2. NA/NA/55SRW

3. UNIDENTIFIED FLYING OBJECT.

4. LACY 17

5. 1010Z 17 JUL 57 TO 1140Z 17 JUL 57.

6. APPROXIMATELY 3200N and 91-30W ON A TRACK PLANNED FROM MERIDIAN, MISS. TO WACO, TEX.

7. FIRST SIGHTED AT APPROX 32-00N AND 91-28W.

8. ECM RECONNAISSANCE OPERATOR #NR 2 OF LACY 17, RB-47H AIRCRAFT, INTERCEPTED AT APPROXIMATELY MERIDIAN, MISSISSIPPI, A SIGNAL WITH THE FOLLOWING CHARACTERISITCS: FREQUENCY 2995 MC TO 3000 MC; PULSE WIDTH OF 2.0 MICRO-SECONDS; PULSE REPETITION FREQUENCY OF 600 CPS; SWEEP RATE OF 4RPM; VERTICAL POLARITY. SIGNAL MOVED RAPIDLY UP THE B/F

Classification Cancelled
(or changed to UNCLAS)
Auth Quinton Hq 4T 5AF
By USDPT (WFO)
Date 27 Jan 69
AFR 205-1 para 1-22c

| DATE | TIME |
|---|---|
| MONTH | YEAR |

7-3745-40

| SYMBOL | RELEASER | SIGNATURE |
|---|---|---|
| 55DOI/rkg | | |
| TYPED NAME AND TITLE (Signature, if required)<br>EDWIN T. PINETZ, Wg Intel Officer | | TYPED (or stamped) NAME AND TITLE |
| PHONE 707 PAGE NR 1 NR OF PAGES 1 | | |
| SECURITY CLASSIFICATION UNCLASSIFIED [redacted] | | DOWNGRADED AT 3 YEAR INTERVALS; DECLASSIFIED AFTER 12 YEARS. DOD DIR 5200.10 |

FORM MAY 55 173 REPLACES DD FORM 173, 1 OCT 49, WHICH WILL BE USED UNTIL EXHAUSTED

CL #2

FROM:

COMSTRATRECONWG 55 FORBES AFB KANS

SCOPE INDICATING A RAPIDLY MOVING SIGNAL SOURCE; I.E. AN AIRBORNE SOURCE. SIGNAL WAS ABANDONED AFTER OBSERVATION. AT 1010Z AIRCRAFT COMDR FIRST OBSERVED A VERY INTENSE WHITE LIGHT WITH LIGHT BLUE TINT AT 11 O'CLOCK FROM HIS AIRCRAFT, CROSSING IN FRONT TO ABOUT 2:30 O'CLOCK POSITION, CO-PILOT ALSO OBSERVED PASSAGE OF LIGHT TO 2:30 O'CLOCK WHERE IT APPARENTLY DISAPPEARED. A/C NOTIFIED CREW AND ECM OPERATOR NR 2 SEARCH FOR SIGNAL DESCRIBED ABOVE, FOUND SAME APPROXIMATELY 1030Z AT A RELATIVE BEARING OF 070 DEGREES; 1035Z, RELATIVE BEARING OF 068 DEGREES; 1038Z, RELATIVE BEARING 040 DEGREES. AT 1039Z A/C SIGHTED HUGE LIGHT WHICH HE ESTIMATED TO BE 5000 FEET BELOW AIRCRAFT AT ABOUT 2 O'CLOCK. AIRCRAFT ALTITUDE WAS 34,500 FEET, WEATHER PERFECTLY CLEAR. ALTHOUGH A/C COULD NOT DETERMINE SHAPE OR SIZE OF OBJECT HE HAD A DEFINITE INPRESSION LIGHT EMANATED FROM TOP OF OBJECT. AT 1040Z ECM OPERATOR NR 2 REPORTED HE THEN HAD TWO SIGNALS AT RELATIVE BEARINGS OF 040 AND 070 DEGREES. A/C AND CO-PILOT SAW THESE TWO OBJECTS AT THE SAME TIME WITH THE SAME RED COLOR. A/C RECEIVED PERMISSION TO IGNORE FLIGHT PLAN AND PURSUE OBJECT. HE NOTIFIED ADC SITE UTAH AND REQUESTED ALL ASSISTANCE POSSIBLE. AT 1042Z ECM NR 2 HAD ONE OBJECT AT 020 DEGREES RELATIVE BEARING. A/C INCREASED SPEED TO MACH 0.83, TURNED TO PURSUE, AND OBJECT PULLED AHEAD. AT 1042½Z ECM NR 2 AGAIN HAD TWO SIGNALS AT RELATIVE BEARINGS OF 040 AND 070 DEGREES. AT 1044Z HE HAD A SINGLE SIGNAL AT 050 DEGREES RELATIVE BEARING. AT 1048Z ECM NR 3 WAS RECORDING INTERPHONE AND COMMAND POSITION

UNCLASSIFIED

| SYMBOL | PAGE NR | NR OF PAGES | SECURITY CLASSIFICATION | INITIALS |
|---|---|---|---|---|
| 55DOI/rkg | 2 | 4 | [redacted] | |



DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

☆ U. S. GOVERNMENT PRINTING OFFICE: 1955—352236

CONVERSATIONS. ADC SITE REQUESTED AIRCRAFT TO GO TO IFF MODE III FOR POSITIVE IDENTIFICATION THEN REQUESTED POSITION OF OBJECT. CREW REPORTED POSITION OF OBJECT AS 10NM NORTH WEST OF FT WORTH, TEXAS, AND ADC SITE UTAH IMMEDIATELY CONFIRMED PRESENCE OF OBJECT ON THEIR SCOPES. AT APPROXIMATELY 1050Z OBJECT APPEARED TO STOP AND AIRCRAFT OVERSHOT. UTAH REPORTED THEY LOST OBJECT FROM SCOPES AT THIS TIME AND ECM NR 2 ALSO LOST SIGNAL. AIRCRAFT BEGAN TURNING, ECM NR 2 PICKED UP SIGNAL AT 160 DEGREES RELATIVE BEARING, UTAH REGAINED SCOPE CONTACT AND A/C REGAINED VISUAL CONTACT. AT 1052Z ECM NR 2 HAD SIGNAL AT 200 DEGREES RELATIVE BEARING, MOVING UP HIS D/F SCOPE. AIRCRAFT BEGAN CLOSING ON OBJECT UNTIL THE ESTIMATED RANGE WAS 5NM. AT THIS TIME OBJECT APPEARED TO DROP TO APPROXIMATELY 15,000 FEET ALTITUDE AND A/C LOST VISUAL CONTACT. UTAH ALSO LOST OBJECT FROM SCOPES. AT 1055Z IN THE AREA OF MINERAL WELLS, TEXAS, CREW NOTIFIED UTAH THEY MUST DEPART FOR HOME STATION BECAUSE OF FUEL SUPPLY. CREW QUERIED UTAH WHETHER A CIRVUS REPORT HAD BEEN SUBMITTED AND UTAH REPLIED THE REPORT HAD BEEN TRANSMITTED. AT 1057 ECM NR 2 HAD SIGNAL AT 300 DEGREES RELATIVE BEARING BUT UTAH HAD NO SCOPE CONTACT. AT 1058Z A/C REGAINED VISUAL CONTACT OF OBJECT APPROXIMATELY 20NM NORTHWEST OF FT WORTH, TEXAS, ESTIMATED ALTITUDE 20,000 FEET, AT 2 O'CLOCK FROM AIRCRAFT. AT 1102Z AIRCRAFT TOOK UP HEADING FOR HOME STATION. THIS PLACED AREA OF OBJECT OFF THE TAIL OF AIRCRAFT. ECM NR 2 CONTINUED TO D/F SIGNAL OF OBJECT BETWEEN 180 AND 190 DEGREES RELATIVE BEARING UNTIL 1140Z WHEN AIRCRAFT WAS APPROXIMATELY ABEAM

JOINT MESSAGEFORM - CONTINUATION SHEET

SECURITY CLASSIFICATION [redacted] UNCLASSIFIED

FROM:

COMSTRATRECONWG 55 FORBES AFB KANS

OKLAHOMA CITY, OKLAHOMA. AT THIS TIME SIGNAL FADED RATHER ABRUPTLY. 55SRW DOI HAS NO DOUBT THE ELECTRONIC D/F'S COINCIDED EXACTLY WITH VISUAL OBSERVATIONS BY A/C NUMEROUS TIMES THUS INDICATING POSITIVELY THE OBJECT BEING THE SIGNAL SOURCE.

See Item 44 & Radar Questionnaire for track plots of B-47 and UFO.

Maneuvers of object rule out balloons, ~~,~~ astronomical bodies and meteors. Another (AC) plane in the area "playing tag" with the B-47?

Ltr Dtd report

DOWNGRADED AT 2 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR. 5200.10

UNCLASSIFIED

| SYMBOL | PAGE NR | NR OF PAGES | SECURITY CLASSIFICATION | INITIALS |
|---|---|---|---|---|
| 55DOI/rkg | 4 | 4 | [redacted] | |



☆ U. S. GOVERNMENT PRINTING OFFICE: 1955—332238

[redacted]

5. Aircraft identification

a. Type aircraft RB-47H

b. Serial No. 53-4305

c. Home Station FORBES AFB, KANSAS

6. Flight Data

a. Heading 265°

☐ Mag ☒ True ☐ Compass

b. Ind. Altitude 34,500'

c. Ind. Airspeed 258

☒ Knots ☐ MPH

7. Was an attempt to detect the object on airborne radar made? (Circle one)

(Yes) No No Radar Radar inoperative

a. If YES, describe: UNSUCCESSFUL

8. Was an intercept attempted? (Circle one) (Yes) No

9. Were photographs taken? (Circle one) Yes (No)

OBJECT WAS TRACKED ON ECM EQUIPMENT AND RADAR SCOPE PICTURES TAKEN

10. Were any other aircraft seen in the area? (Circle one) Yes (No)

a. If YES, was any attempt made to contact them? Comments:

11. Were any nearby ground stations contacted during or soon after the sighting?

(Circle one) (Yes) No Comments:

"UTAH" GCI WAS CONTACTED AND TRACKED OBJECT

[redacted]

UNCLASSIFIED

Classification Cancelled
(or changed to UNCLAS)
Auth: Quintanilla, Jr. COL, USAF
By OTDPT (AFO)
Date 29 Jan 69
AFR 205-Figure 1-120

AIRBORNE OBSERVER'S DATA SHEET

This questionaire has been prepared so that you can give the U.S. Air Force as much information as possible concerning the unidentified aerial phenomenon that you have observed. Please try to answer as many questions as you possibly can. The information that you give will be used for research purposes, and will be regarded as confidential material. Your name will not be used in connection with any statements, conclusions, or publications without your permission. We request this personal information so that, if it is deemed necessary, we may contact you for further details.

1. Date observation was made:

17 (Day) JULY (Month) 57 (Year)

2. Time observation was made:

____ (Time) ____ (Zone) ☐ Daylight Saving ☐ Standard

See Comp. Report 1010 Z or 1010 Z (GMT)

3. Exact location of aircraft when the observation was first made:

32-00N 91-28 W
Coordinates

4. Crew members who made the observation. (List each name)

| NAME | RANK | CREW POSITION |
|---|---|---|
| [redacted] | MAJ | AIRCRAFT COMMANDER |
| | 1/LT | COPILOT |
| | | |
| | | |
| | | |
| | | |
| | | |

AISOP # 2
(19 Sep 56)

UNCLASSIFIED

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DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED



18. If you saw the object at night, twilight, or dawn, what did you notice concerning the stars and moon?

STARS (Circle one)
a. None
(b.) A few
c. Many
d. Don't remember

MOON (Circle one)
a. Bright moon light
b. Dull moonlight
(c.) No moonlight — pitch dark
d. Don't remember

(Some Clouds To South)

19. Was the object brighter than the background of the sky? (Circle one)

a. (Yes) b. No c. Don't remember

20. If it was BRIGHTER THAN the sky background, was the brightness like that of an automobile headlight? (Circle one)

a. A mile or more away (a distant car)? b. Several blocks away?
c. A block away? d. Several yards away? e. Other INTENSE BLUE-WHITE LIGHT.

21. What were the wind conditions at the time you saw the object? (Circle one)

a. No wind b. Slight breeze c. Strong wind d. Don't remember

USUAL WIND AT ALTITUDE - 260/50K

22. What type of cloud cover were you flying through at the time you saw the object? (Circle one)

(a.) Clear. b. Overcast c. Undercast
d. Above scattered clouds e. Below scattered clouds
f. Through scattered clouds g. Other _____

23. Did the object appear: (Circle one)

a. Solid?
b. Transparent?
(c.) Don't know. —

DOWNGRADED AT 12 MO INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

12. Were any unusual disturbances noted on the compass or radio?

(Circle one) (Yes) No Comments: OBJECT TRACKED WITH D/F EQUIPMENT ABOARD THIS TYPE AIRCRAFT - SIGNAL ANALYZED.

13. Was any turbulence noted? (Circle one) Yes (No)

Comments:

14. Estimate how long you saw the object. 1 Hours 30 Minutes (OFF & ON AT INTERVALS) Seconds

Circle one of the following to indicate how certain you are of your answer to Question 14.

(a.) Certain b. Fairly certain c. Not very sure d. Just a guess

15. Did you observe the object through any of the following?

a. Eyeglasses Yes (No)
b. Sun glasses Yes (No)
c. Other no.

16. What was the condition of the sky? (Circle one)

a. Bright daylight
b. Dull daylight
c. Bright twilight (NIGHT)
d. Just a trace of daylight
e. No trace of daylight
f. Don't remember

17. If you saw the object during daylight, twilight, or dawn, where was the sun located as you looked at the object? (Circle one)

a. In front of you (N/A)
b. In back of you
c. To your right
d. To your left
e. Overhead
f. Don't remember

UNCLASSIFIED

DOWNGRADED AT 3 YR INTERVALS
DECLASSIFIED AFTER 12 YRS
DOD DIR 5200.10

30. Do you think you can estimate the speed of the object?

(Circle one) (Yes) No

If you answered YES, then what speed would you estimate? EXTREMELY SLOW, To 700 MPH. Variable

31. Do you think you can estimate how far away from you the object was?

(Circle one) (Yes) No

If you answered YES, then how far asay would you say it was? 11,000 feet.

32. Try to estimate the number of degrees the object was from true North (Azimuth).

32.1 When it first appeared: 240 degrees.

32.2 When it disappeared: 360 degrees.

33. If there was more than one object, then how many were there? 2 ?

Draw a picture of how they were arranged, and put an arrow to show the direction that they were traveling.

(SEE NARRATIVE)

34. How large did the object or objects appear as compared with one of the following objects held in the hand and at arm's length? (Circle one)

a. Head of a pin
b. Pea
c. Dime
d. Nickel
e. Quarter
f. Half Dollar
g. Silver Dollar
h. Baseball
i. Grapefruit
j. Basketball
k. Other ?

35. Circle one of the following to indicate how certain you are of your answer to Question 34.

a. Certain b. Fairly certain c. Not very sure d. Uncertain ?

UNCLASSIFIED [redacted]



24. Did the object: (Circle one for each question)

| | | | |
|---|---|---|---|
| a. Appear to stand still at any time? | (Yes) | No | Don't know |
| b. Suddenly speed up and rush away at any time | (Yes) | No | Don't know |
| c. Break up into parts or explode? | Yes | (No) | Don't know |
| d. Give off smoke? | Yes | No | (Don't know) |
| e. Change brightness? | (Yes) | No | Don't know |
| f. Change shape? | Yes | No | (Don't know) |
| g. Flicker, throb, or pulsate? | Yes | No | (Don't know) |

25. Did the object move behind something at anytime, particularly a cloud?

(Circle one) Yes (No) Don't know. If you answered YES, then tell what it moved behind. _____

26. Did the object move in front of something at anytime, particularly a cloud?

(Circle one) Yes (No) Don't know. If you answered YES, then tell what it moved in front of. _____

27. The edges of the object were: (Circle one)

a. Fuzzy or blurred (b.) Like a bright star c. Sharply outlined

d. Don't remember e. Other → (APPEARED AS A BRIGHT LIGHT)

28. Describe in a few words the color of the object. WHEN PASSING IN FRONT OF OUR AIRCRAFT IT APPEARED AS A BRIGHT BLUISH-WHITE LIGHT. WHEN ABOVE THE OBJECT IT APPEARED AS A BRIGHT LIGHT WITH A REDDISH TINGE.

29. IF POSSIBLE, try to guess or estimate what the real size of the object was in its longest dimension. (UNABLE) feet.

UNCLASSIFIED

UNCLASSIFIED [redacted]

41. In order that you can give as clear a picture as possible of what you saw, we would like for you to imagine that you could construct the object that you saw. Of what type material would you make it? How large would it be, and what shape would it have? Describe in your own words a common object or objects which when placed up in the sky would give the same appearance as the object which you saw.

AGAIN - NO SIZE OR DIMENSION COULD BE DETERMINED. ONLY THE LIGHT.

42. Was this the first time that you had seen an object or objects like this?

(Circle one) (Yes) No If you answered no, then when, where, and under what circumstances did you see other ones? _____

_____

_____

43. In your opinion what do you think the object was and what might have caused it?

SOME OBJECT OR ENERGY SOURCE THAT HAD THE ABILITY TO MOVE AT A MUCH HIGHER VELOCITY THAN THE B-47. SOLIDITY OF THE OBJECT CONFIRMED BY TRACKING FROM GROUND BY "UTAH", THE GCI SITE.

AF E-1 14 Oct

36. How did the object or objects disappear from view? LIGHTS WENT OUT.

37. What direction were you looking when you first saw the object? (Circle one)

a. North c. East e. South (g.) West
b. Northeast d. Southeast f. Southwest h. Northwest

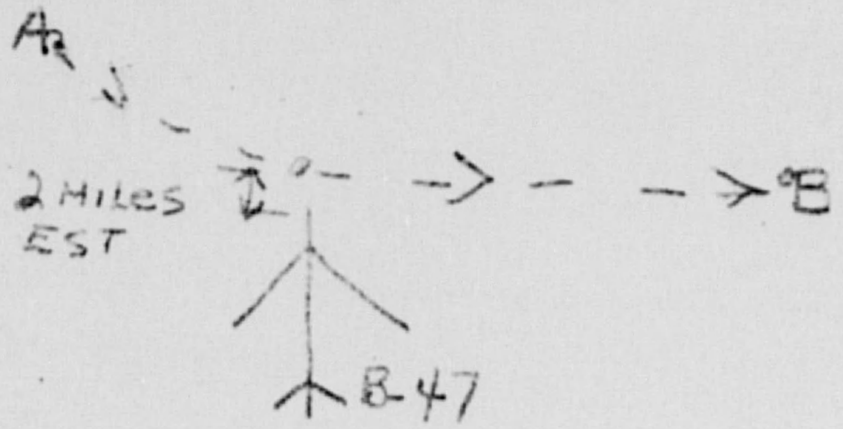
38. What direction were you looking when you last saw the object? (Circle one)

(a.) North c. East e. South g. West
b. Northeast d. Southeast f. Southwest h. Northwest

39. Draw a picture that will show the shape of the object or objects. Label and include in your sketch any details of the object that you saw such as wings, protrusions, etc., and especially exhaust trails or vapor trails. Place an arrow beside the drawing to show the direction the object was moving.

NOTHING BUT FAST MOVING LIGHT WAS VISIBLE

40. Draw a picture that will show the motion that the object or objects made. Place an "A" at the beginning of the path, a "B" at the end of the path, and show any changes in direction during the course.

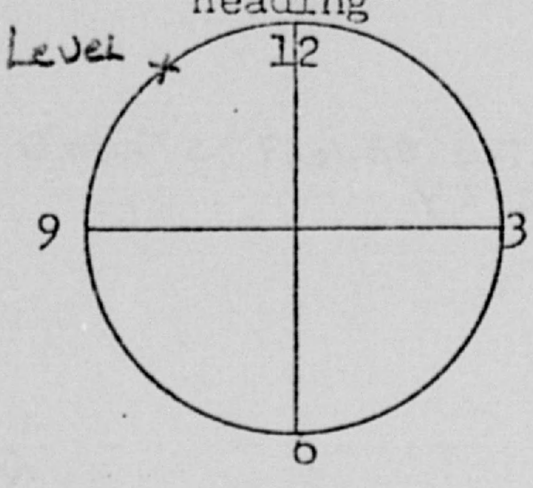



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45. Show the location of the object in relation to the aircraft by placing an "X" on the edge of the circle at the o'clock position and state high, low or level. If this relationship changed during the sighting, use another circle and show the new relationship of the object to the aircraft. Also indicate any changes of heading of your aircraft.

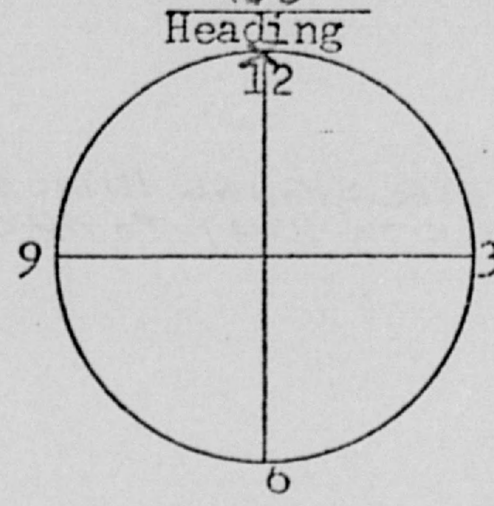
1ST SIGHTING

265° Heading



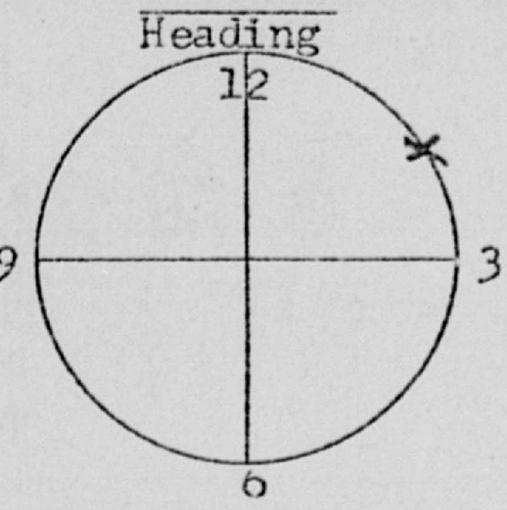

(Circle one)
HIGH
LOW
LEVEL

265° Heading




(Circle one)
HIGH
LOW
LEVEL

265° Heading

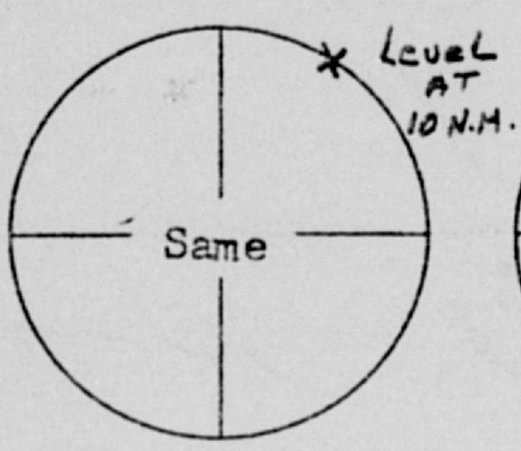



(Circle one)
HIGH
LOW
LEVEL

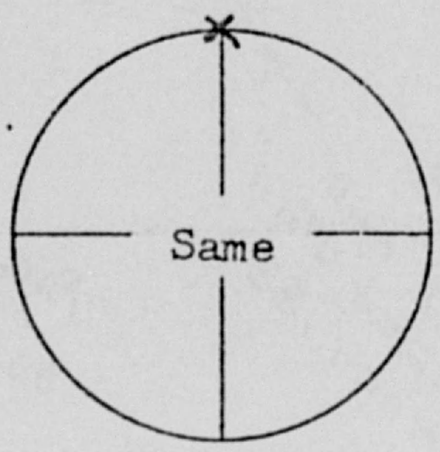
Moved From Approx 10 Across Nose And Disappeared At Approx. 2.

WHEN PURSUIT WAS TAKEN UP

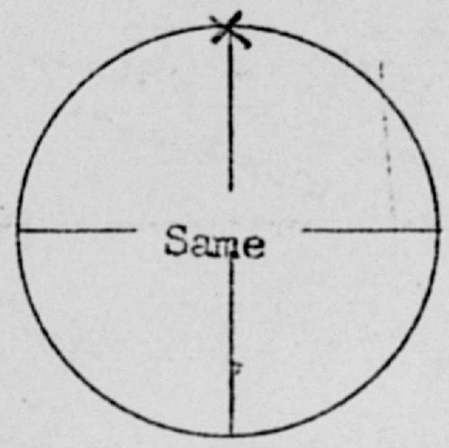
[redacted] 260° T.H.

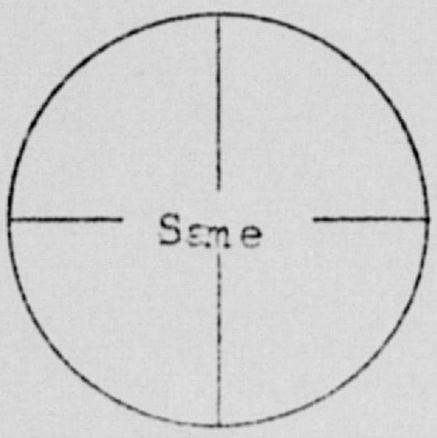


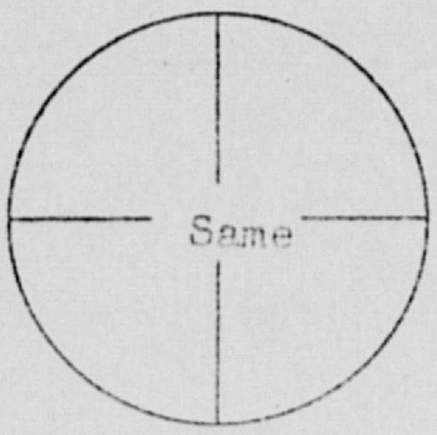

320° T. H.

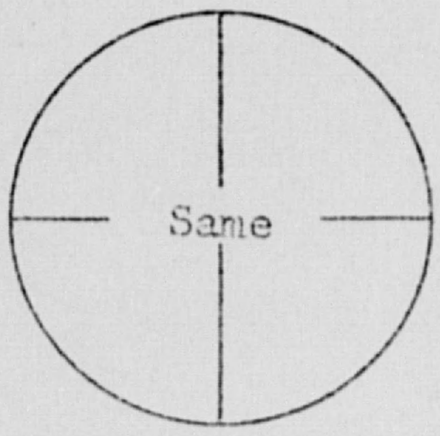



320° T. H



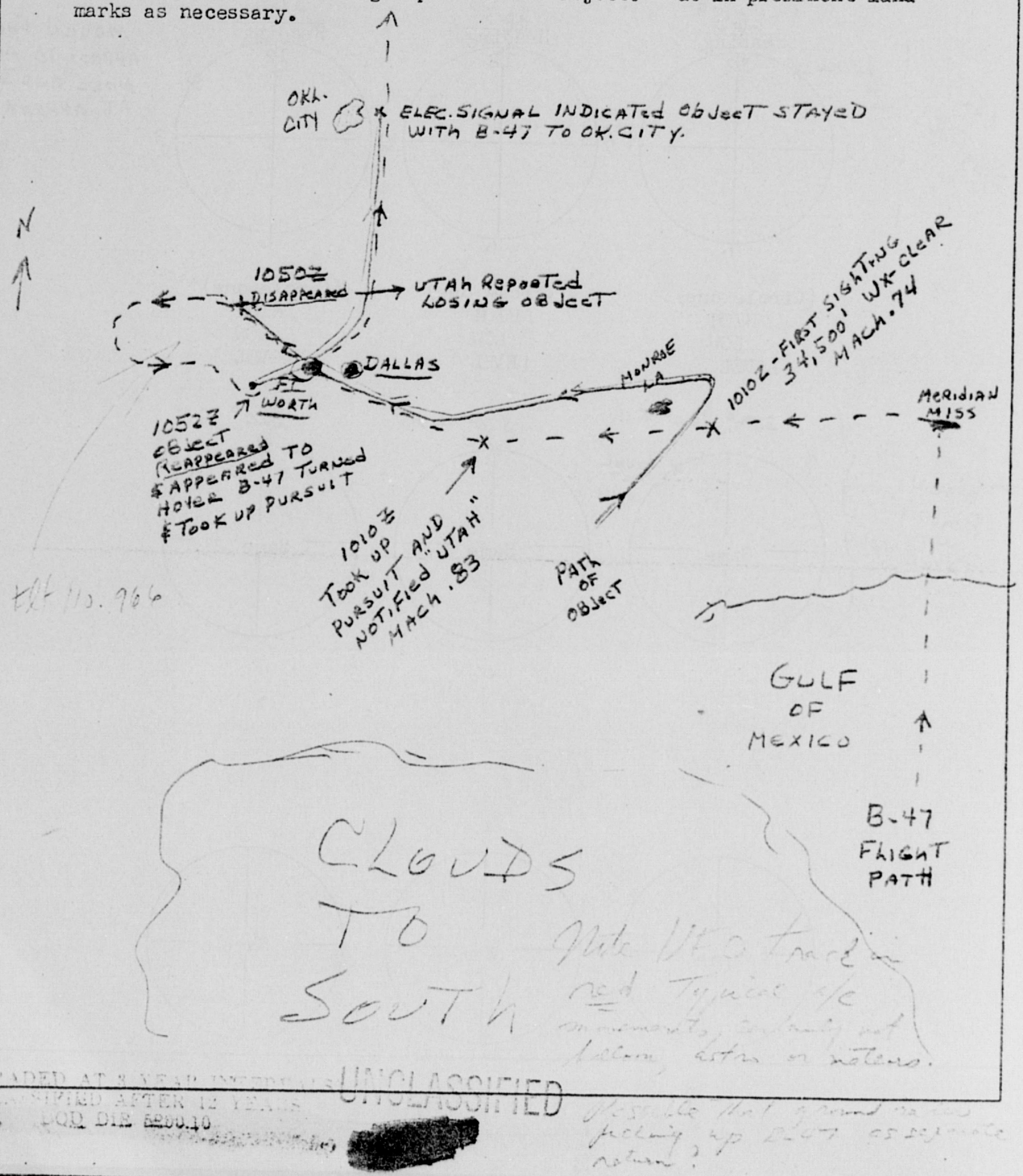



44. If practicable, attach to this page the section of a local area chart which shows the location of the sighting. On this chart plot the flight path of your aircraft and the flight path of the object.

If a local area chart is not available, roughly sketch in the area of the sighting showing latitude and longitude. Then plot the flight path of your aircraft and the flight path of the object. Put in prominent landmarks as necessary.




Ltr No. 966

Note Ut track in red Typical a/c movements, including not [illegible] acty up 2107 as separate return?

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47. Please give the following information about yourself:

NAME MAJ. CHASE (Last Name) LEWIS (First Name) DORMON (Middle Name)

ADDRESS 38TH S.R.S. (Street) FORBES AFB, (City) KANSAS. (Zone) (State)

TELEPHONE NUMBER 8101 (EXTENSION)

What is your present job? AIRCRAFT COMMANDER ON RB-47H

Age 35 Sex M

Please indicate any special educational training that you have had.

a. Grade School ✓
b. High School ✓
c. College ✓
d. Post graduate
e. Technical School
(Type)
f. Flying School ✓
g. Other special training

48. Date you completed this questionaire?:

10 (Day) SEPT (Month) 57 (Year)

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46. Please give a brief narrative account of sighting and any other additional data or comments.

See Inclosure #2.

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