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

[OVE

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.

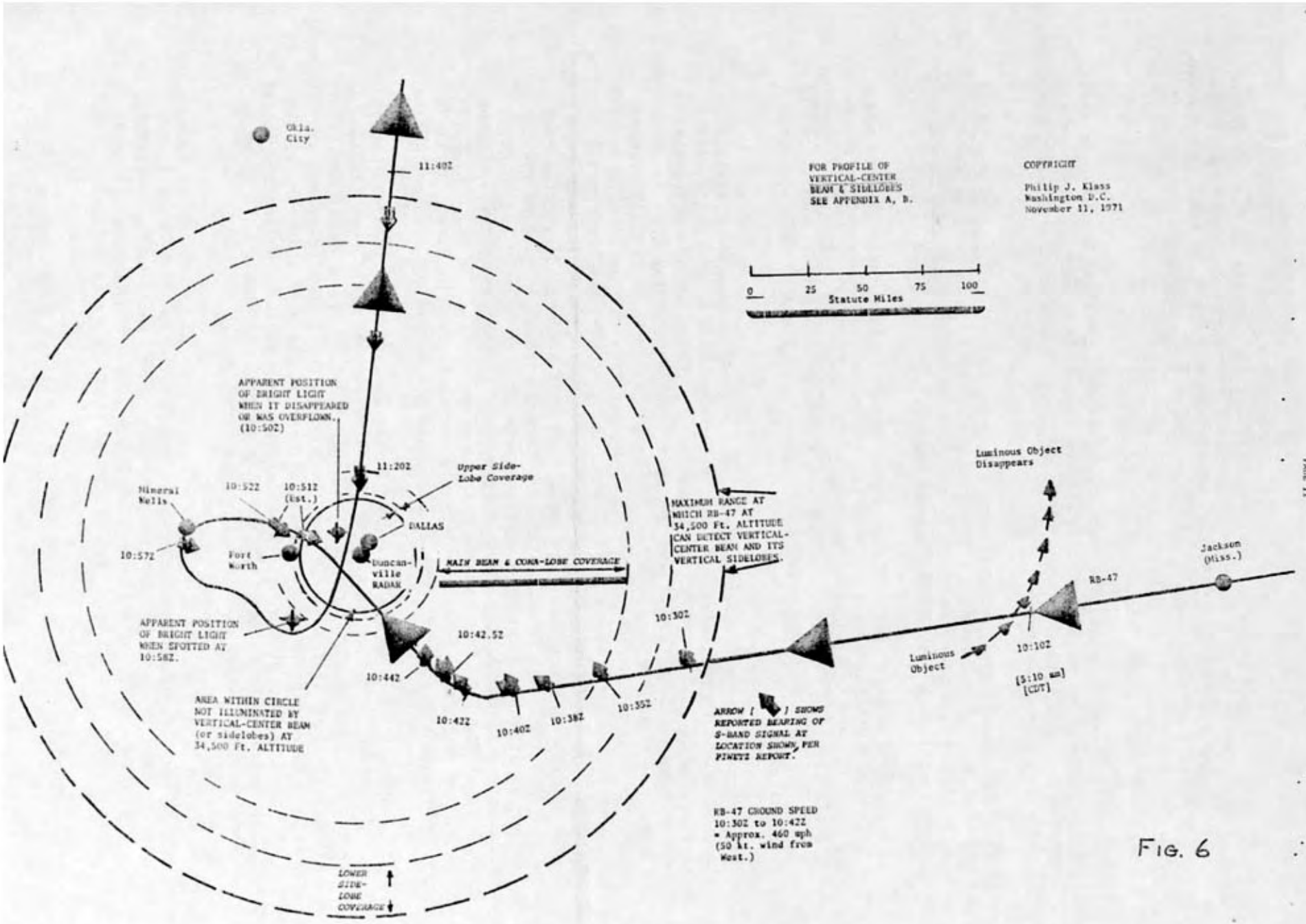

Okla. City
11:40Z
FOR PROFILE OF VERTICAL-CENTER BEAM & SIDELOBES SEE APPENDIX A, B.
COPYRIGHT
Philip J. Klass
Washington D.C.
November 11, 1971
0 25 50 75 100
Statute Miles
APPARENT POSITION OF BRIGHT LIGHT WHEN IT DISAPPEARED OR WAS OVERFLOWN. (10:50Z)
11:20Z
Upper Side-Lobe Coverage
Mineral Wells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

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.

[OV

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

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:

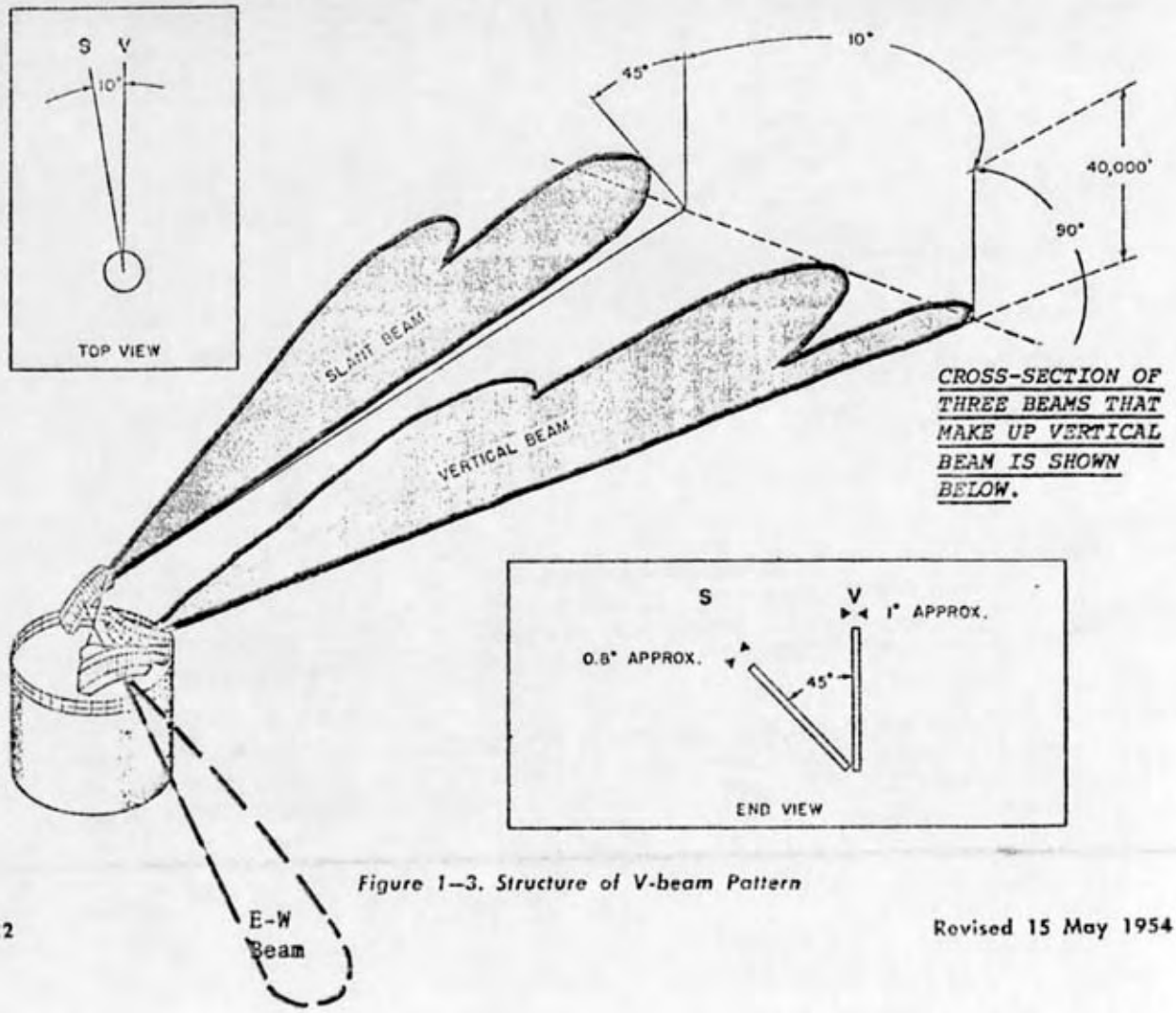
1. If it were not for the belated discovery of the original ("contemporary") records, meager as they are, this case would be unexplainable simply because of the discrepancies that have--understandably--crept into the current recollections by the principals of events that transpired 14 years ago. Because 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)

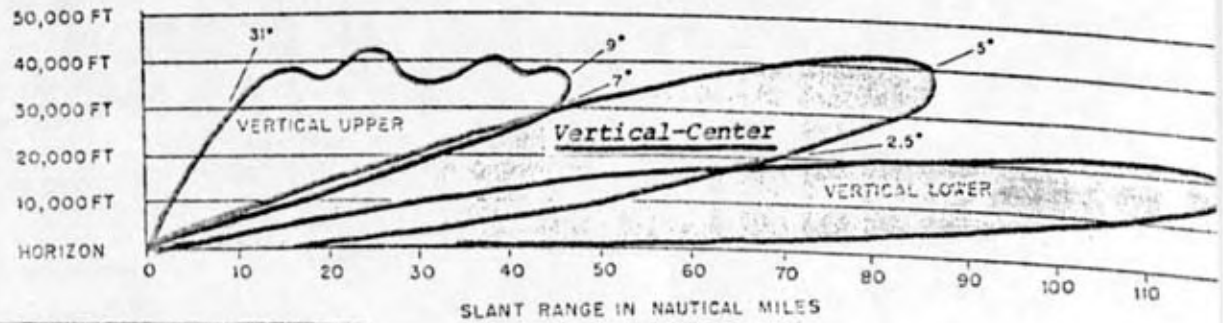


CROSS-SECTION OF THREE BEAMS THAT MAKE UP VERTICAL BEAM IS SHOWN BELOW.

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

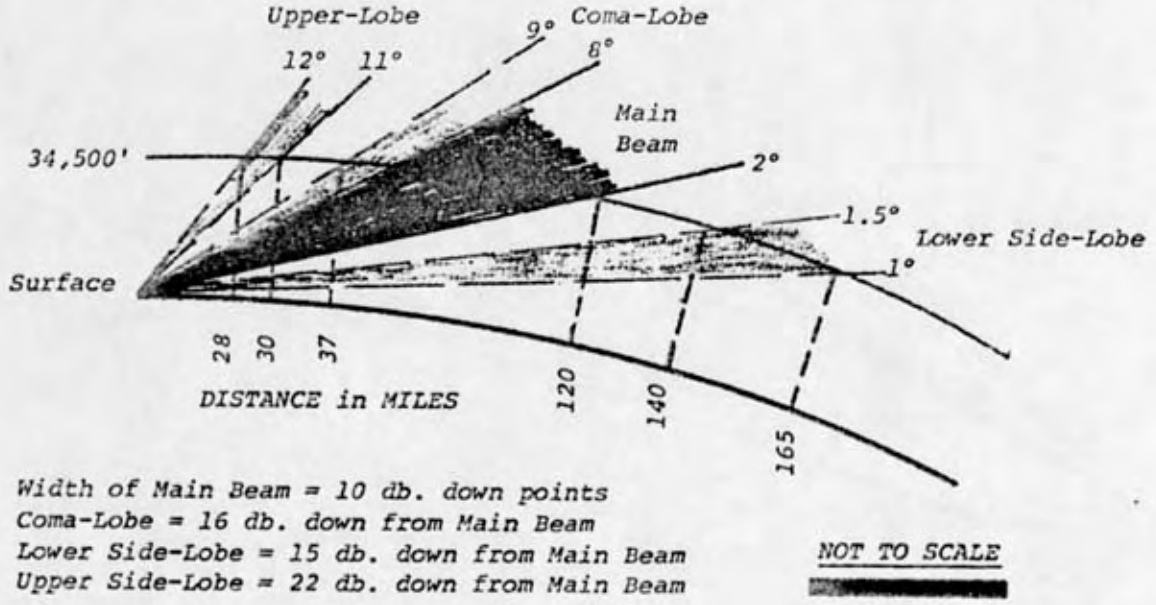
NOTE: ANGULAR DIMENSIONS SHOWN FOR BEAMS ARE FOR 3 db.-down points and do not include sidelobes.

(A)

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

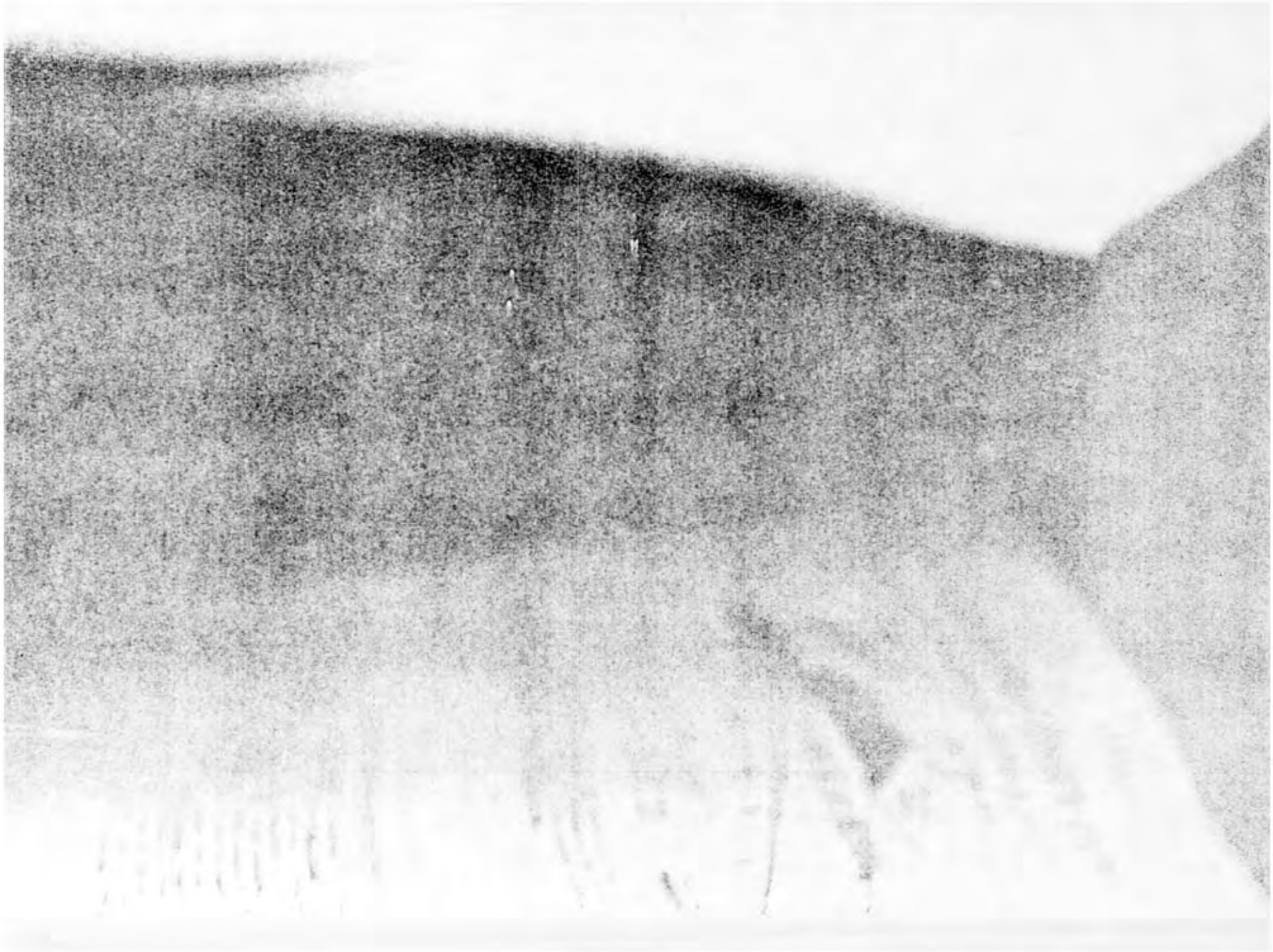
I lack the technical background for full appreciation of your detailed account of the RB-47 UFO case, but the explanation you derive from your detailed analysis of the evidence provides a reasonable explanation.

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	OO						
INFO			x		AF	X	

FROM:
COMSTRATRECONWG 55 FORBES AFB KANS

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 D/F

SPECIAL INSTRUCTIONS

Classification Cancelled
(or changed to UNCLAS)
Auth [illegible]
By OFDPT(UFO)
Date 27 Jan 69
AFR 205-1 para 1-20

DATE	TIME
MONTH	YEAR

SYMBOL
55DOI/rkg

TYPED NAME AND TITLE (Signature, if required)
ELWIN T. PIWETZ, Wg Intel Officer
PHONE 707

SECURITY CLASSIFICATION UNCLASSIFIED PAGE NR 1 NR OF PAGES 5

[redacted]

RELEASER

SIGNATURE

TYPED (or stamped) NAME AND TITLE

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

7-3745-40

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

CL #2

[redacted]

FROM:

COMSTRATHECONWG 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

JOINT MESSAGEFORM - CONTINUATION SHEET | SECURITY CLASSIFICATION [redacted]

FROM: COMSTRATRECONWG 55 FORBES AFB KANS

UNCLASSIFIED

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

SYMBOL	PAGE NR	NR OF PAGES	SECURITY CLASSIFICATION	INITIALS
55DCI/rkg	3	4	[redacted]	

DOWNGRADED AT DECLASSIFIED

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 of Radar Questionnaire for track plots of B-47 and U.F.O.

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

See OAA report

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

UNCLASSIFIED

AUTHOR	PAGE NR	NR OF PAGES	SECURITY CLASSIFICATION	INITIALS
55DOI/rkg	4	4	[redacted]	

FORM MAY 55 173-1

☆ U. S. GOVERNMENT PRINTING OFFICE: 1955—432238

[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. [illegible]
By OTDPT (UFO)
Date 29 Jan 69
AFR 205-Pgmt 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 orig. report 1005 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
[redacted]	1/LT	COPILOT

AISOP # 2
(19 Sep 56)

UNCLASSIFIED

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[redacted] [redacted]

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. —

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DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

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

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? To 700 MPH. EXTREMELY SLOW!

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

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 ?

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.

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.

E-1 note:

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

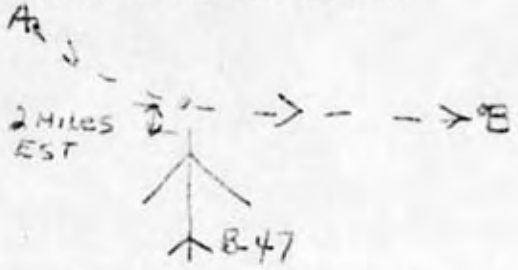
38. What direction were you looking when you last saw the object? (Circle one)

(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.

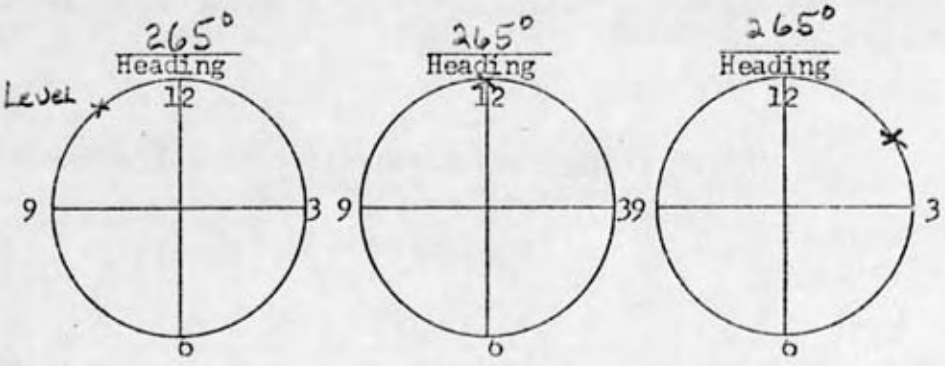
NOTHING BUT FAST MOVING LIGHT WAS VISIBLE

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.



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



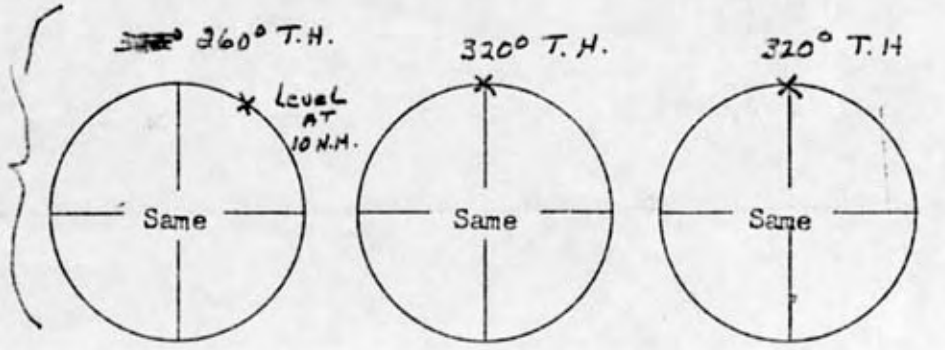
Moved From Approx 10 Across Nose and Disappr at Approx. 2.

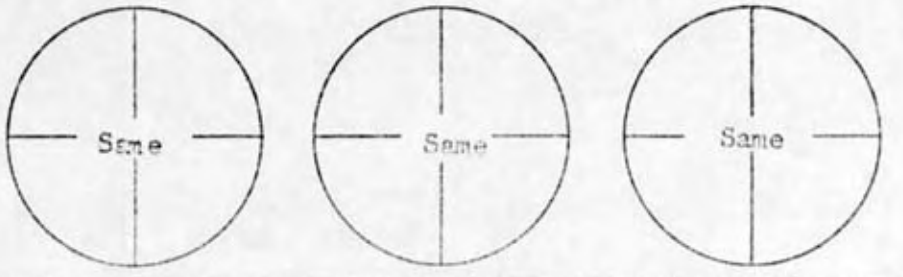
(Circle one)
HIGH
LOW
LEVEL

(Circle one)
HIGH
LOW
LEVEL

(Circle one)
HIGH
LOW
LEVEL

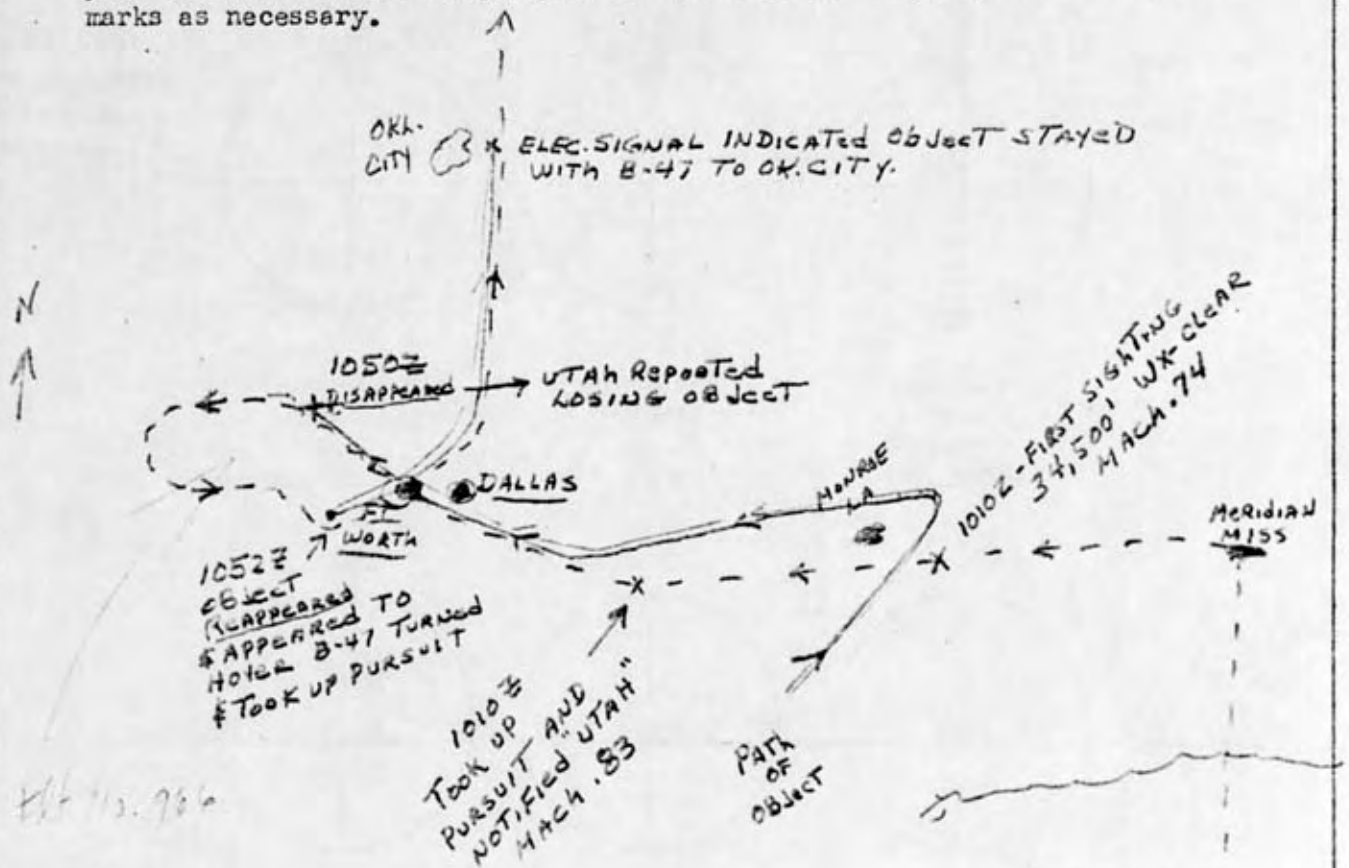
WHEN PURSUIT WAS TAKEN UP





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.



CLOUDS TO SOUTH

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)

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

See Inclosure #2.

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