

A. ORIGIN:

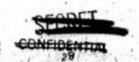
In compliance with verbal instructions from Naj General Cabell, Director of Intelligence, AFOI, this Hq proceeded to investigate the report concerning the sighting of an unidentified serial object in the vicinity of Montgomery. Ala, occurring 24 July 1948 between the hours of 0140 and 0245 EST.

B. ACTION INITIATED

- 1. On 25 July 1948, Najor R. A. Llewellyn, Project "SIGN" Officer, Mr. A. Deyaraond, Technical Assistant to Col Clingerman, Mr. A. C. Loedding, Assistant Deputy for Technical Analysis Division, and Capt R. J. Groseelpse, Security Officer, proceeded to Atlanta, Georgia where they interviewed Capt C. S. Chiles and Mr. John B. Whitted, EAL pilots, and obtained their algord statements as to the anomaly observed. Copes of these statements together with drawings executed by Chiles and Whitted are appended as Exhibit "A". On 31 July 1948 Maj Llewelyn personally interviewed Mr. C. C. McKelvie, the sole passenger asake during the hours of Ol40 and O245 EST, as to what he saw while a passenger aboard the DC-3 piloted by Chiles and Whitted. His statement is attached as Exhibit "B".
- 2. Following the above interrogations, requests were disseminated to Hq, UHAS. Naval and commercial mirlines by priority teletypes 2 Aug 1948 requesting data on aircraft povements in the general vicinity of Alabems, Florida, Mississippi, Georgia, South Carolina, Tennessee and North Carolina. Charts of these aircraft movements are submitted as Exhibit "C".
- 3. In compliance with Eq AMC letter dated 6 July 1948, the Sixth Office of Special Investigations (I6) District undertook an investigation pertaining to an aerial phenomena reportedly seen by various people within the 6th OSI District. A complete report of the various sightings, pages 1-16 is appended hereto as Exhibit "D". Further reports and statements as to reliability are also appended.
- the date and time, geographical location, and description of the object was charted. The completely assembled date, i. s., statements of witnesses, reliability statements, airline schedules and the collated data chart were forwarded to the various technical agencies to effect an evaluation and interpretation of the technological factors involved.

C. PACTUAL DATA

- The collated data chart (Exhibit "H") was drawn up to effect a trend or pattern in regard to the reported sightings.
- separate incidents were involved:



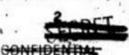
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- CONTOLWAL
- (1) That pertaining to sightings by Massey, Chiles, Whitted and McKelvie
- (2) That of Feldwary, Manafield and Kingeley
- (3) That of Avery, Ruysell, Resmith, Skinner and Provesu
- (4) That of Gall, Swaw, Mr & Mrs. Sebring, Mrs. Rill and Mrs. Renfrow
- b. To exclude irrelevent factors in a systematic menner, the information presented in Exhibit "A" is presented in the order of occurrence and significance.
 - (1) incident #1
 - a. Object was sighted 24 July 1948 between Olto and Ol50 K.T from the ground at Robins Air Force Base, Nacon, Georgia.
 - b Object was again eighted from an altitude of 5,000 feet by Chiles & Whitted while flying a DC-3 some 20 miles south of Montgowery. Alabama. The time of the sighting was 24 July 1948 at approximately 0245 207
 - Mitted describe the object as "cigar" or "cylinderical in shape. (Nckelvie perceived only the glow emitted by All observers agree that the object was traveling in a general southerly heading and that it was trailed by a flame varying in color and that it behaved like a normal craft insofar as disappearing from the line
 - MOTE: It is a known fact that atmospheric conditions such as varying degrees of humidity and incidence of light refraction often inflence the color of the light observed. This would serve to explain why many observers conflict in their descriptions as to color of light displayed by the object or its trail.

 Four witnesses to this signting are involved; three are trained observers. In no instance were there any
 - indications of subversive or ulterior influences involved.

 f Both the Massey account and that of Chiles, Whitted and McKelvie were officially made within a period of time that would preclude any chance of impressions

being gained from radio or newspaper reports.



of sight was concerned.

Incident #2

Object #2 was observed by Feldwary, Mansfield and Kingsley at 0230 hours 24 July 1948, while dirborns, between Blackstone, Virginia, and Oreensbero, North Carolina. This sighting is considered deparately since the descriptions of speed as "meteoric" or "terrific", the manner of travel described as an arc or horizontal, and the fact that it "faded like a meteor" seem to indicate that the object seem was not the one observed in Incident 1.

Incident #3

This object was observed between 2100 and 2300 hours 26th July 1948 at Chamblee, and Augusta, Georgia, by observers Avery, Russell, Bell, Battle, Atkinson, Mrs. Skinner, Provens and Gall. This object was not thought to be a meteor in that it meneuvered. The glow was described as varied in color but predominently brilliant blue-white. The course was described as generally "southern". Although the dates seem to indicate that this sighting could not be the same as that described in incident 1, yet the major portion of this testimony refers to a "blue white light". Observations in the first instance describe a "blue glow" running the entire length of the fuselage. When viewed from the ground it is logical to assume that the blue glow would be mostly visible.

NOTE: In this connection, or. Josef Allen Hynek, astrophysicist, OSUNT, who is presently to serve as consultant on this project, has advised that it is possible for a celestial body to appear to travel in a straight line and slant downwards. (It is extremely improbable, although aerodynamically possible, for some objects to achieve an effect of lift through the forces generated during their flight through the atmosphere). It is his further opinion that it is impossible for any celestial body to maneuver violently and make sharp turns. It is extremely unlikely for heavenly bodies to appear to move slowly when passing through the lower layers of the atmosphere, but, from greater distances, it is possible to observe far-distant bodies for extended periods of time. Objective size is contingent upon (1) distance of the heavenly body from the earth and (2) its mass. The menner of disappearance of a meteor is like a light suddenly blinking off.

(4) Incident 4

Object #4 was observed by Shaw, Mr & Mrs. Sebring.
Mrh Hill, Mrs Renfroe and Mr. Nesmith, between the
hours of 2045 to 2050, 26 July 1948, at Chembles.
Georgia and Augusta, Georgia. Description of this
object seems to indicate that it was a meteor. Five
of the observers said that the object was "football"
shaped"; that it appeared to be a green light with
a silvery tail and that it observed level flight. The
last observer stated that the speed was "10,000 to 20,000
mph" and that "it appeared to be 1/4 the size of a full
moon", and that "it was a multi-colored, brilliant light
trailing burning fragments." The terrific speed together
with the description of a multi-colored light trailing
burning fragments seems to establish this object as a
meteor.

D. COMMUNITS

- 1. The only incident which possesses absolute intelligence significance is incident #1. It is obvious that this object was not a meteor. There has been no evidence to support any findings of unreliability, nor have there been any major inaccuracies on the part of the witnesses.
- . 2. Weather reports establish areas of visibility as stated in the observers' reports.
- 3. Available information from Ordnance, Army, Navy and AF Weather Buremis, Research Organizations, and other, failed to reveal any evidence of testing devices to which this incident could be attributed.
- 4. Apparently it is not of domestic origin since a thorough check of 225 flight schedules, both commercial and governmental, revealed that in only one instance did the reported flight paths cross. (See chart inclosed as Schibit "1". This single exception was the flight in a northwesterly direction of a C-147 enroute Robins AF Base to Olmsted Fields, Pa. Its time of departure would have enabled it to have passed through the approximate areas on the 24 July 1948 where the sightings were reported. However, the factors of speed direction of flight, maneivers, configurations, lights and other factors rule out this one possibility.
 - 5. Objects similar in configuration have been reported as follows:
 - a. Rocket-like objects capable of immense speed were seen during the past summer in broad daylight in Denmark. Norway and Sweden.
 - at Obrechstreet, Arnheim, The Hague, Holland. The object was seen intermittently through clouds and was reported to have two deckers.



Flying Fuselages (Torpedo or Cigar-Shaped Body)

- ficient, form for the fuselage of an eirplane or the body of a guided missile, in neither case has it been used as a primary lift producing surface. However, an extension of the Pradtl theory of lift indicates that a fuselage of the dimensions reported by the Eastern Airlines pilots Wited and Chiles, in the Montgomery, Alabema, incident could support a gross weight of approximately 12,000 pounds at an arbitrarily chosen stalling speed of 150 miles per hour, conservatively estimated. The Pradtl theory probably gives very conservative values of maximum lift for bodies of this shape. If a lift coef icient twice as great where used (such as value has been given by a German scientist from #Mstory of his wind tunnel researches in Germany), a gross weight of 24,000 pounds could be supported at the assumed stalling speed.
- Although the craft sighted by Whited and Chiles was reported to be without wings or fins, it is possible it could have been equipped with extensible wings for take-off and landing, contained within the fuselage. In such a case a wing span of nearly 90 feet would be possible. If an aspect ratio of 5 were used (18 ft. mean aerodynamic chord), and if the wing design incorporated slots and flaps, the wing could support 115,000 pounds at a stalling speed of 150 mph. It is possible that the fuselage could also contribute lift with this arrangement, depending upon the incidence of the wing. This type of aircraft could also be partially supported in the take-off and landing condition by the vertical component of the jet thrust, if the landing and take-off took place with the fuselage axis, or the jet stream direction in a vertical or nearly vertical aftitude. The further possibility that an extensible rotor, concealed within the fuselage, could have been used, would provide another method for landing and take-off that would allow wingless flight at very high speed. Such a design could result in a relatively large duration of flight and corresponding range.
- c. While no stabilizing fine were apparent on the "flying fuselage" reported by Whited and Chiles, it is possible that vanes within the jet, operated by a gyro-serve system could have provided static stability, longitudinally, directionally and laterally. The same vanes could also have been used for accomplishing static balance or trim, as well as control for manuvering. A square tailed body of the type reported with the center of gravity sufficiently far forward can develop, approximately, a neutral stability and the possibility exists that definite static stability could be produced by a judicious use of flow-control slots located somewhere along the fuselage.
- d. The above estimates regarding weight, controllability, stability, etc, are not intended to represent deductions regarding the exact nature of the torpedo or cigar-shaped aircraft which were sighted by the airline pilots, Whited and Chiles, and others, they are merely statements of possibilities, which are intended to show that such an aircraft could support and control itself by aerodynamic means. The propulsive system of this type of vehicle would appear to be a jet or rocket engine. The specific fuel consumption of engines of this type would be rather high. This, coupled with the fact that aerodynamic lift



on such a body would be accompanied by high drag, places a serious limitation on the range of the siroraft for any particular cross weight. If this type of unidentified aerial object has extremely long range, it is probable that the method of propulsion is one which is far in advance of presently known engines.

POWER SOURCES

- (a) The foregoing discussion is predicated upon the assumption that power sources presently available would have to be used. If an asomic energy powered engine were available, a small mass flow at a large velocity would accomplish the required lift and propulsive forces and the large energy expenditure would be of small importance.
 - (b) However, the heat exchange requirements for the atomic powered engine appear to demand physical dimensions of inordinate size that presently would preclude the use of this powerplant for aircraft. Experimental work in progress to convert the energy of the atomic pile directly to electricity, rather than heat, offer the promise of a more compact atomic powerplant.

Conclusions: 1. The 'lying anomaly observed, remains unidentified as to origin, construction and power source.

2. A definite trend of flight headings has evolved as generally south in bearing.

 Supporting evidence from separate reliable sources establish existence of this configuration.

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Robert R. Sneider Capt, USAP Project Officer

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