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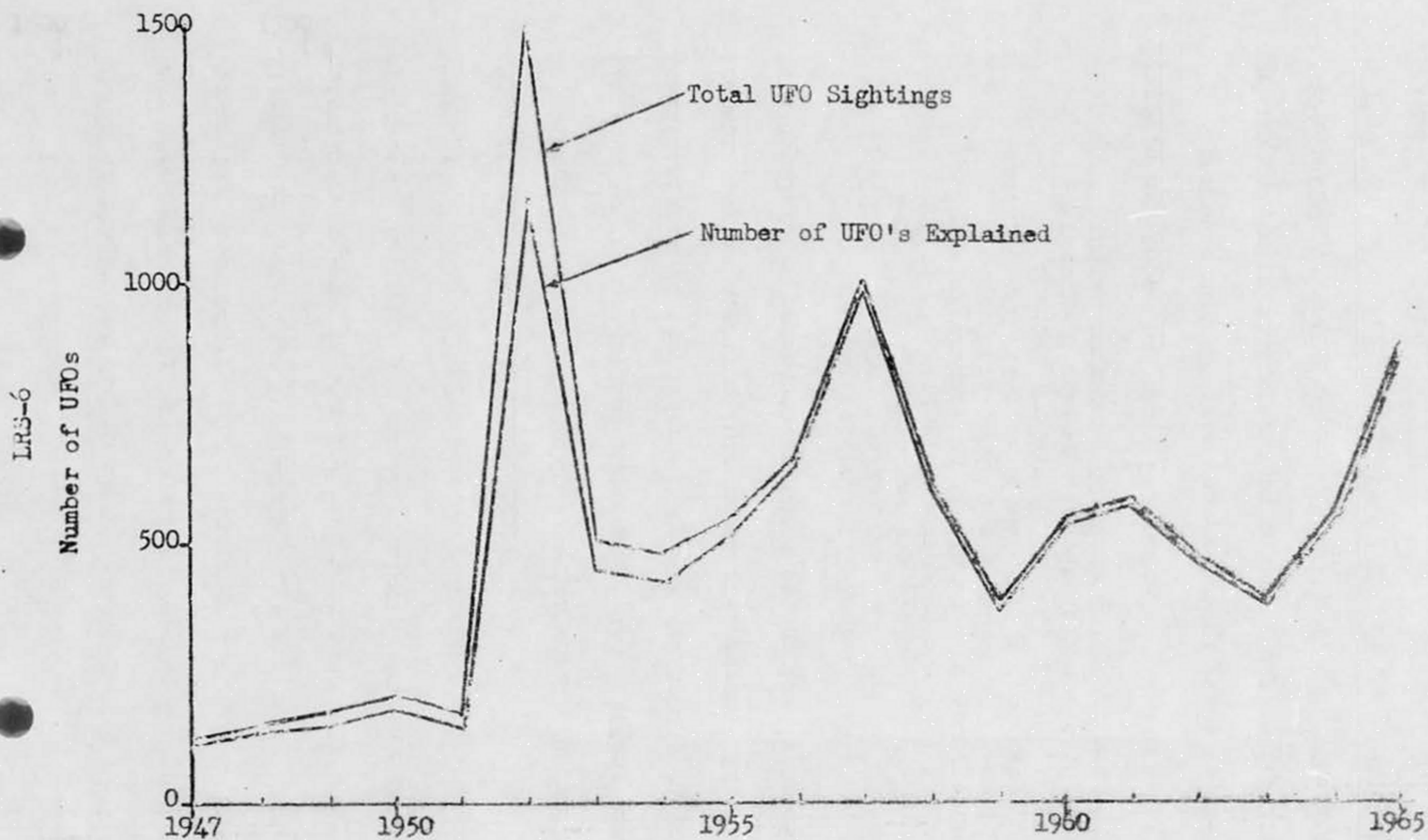


FIGURE 1 UFO Sightings by Year

records show that 701 sightings were recorded between October and December of that year.^{9/}

Historical Sightings of Aerial Phenomena

Prior to the so-called "modern era" (i.e., post-1947) of UFO activity, unexplained flying objects were reported less frequently. Peaks of activity are discernible in the 1882-1886 period, as well as in 1887, 1906 and 1909 (see Figure 2). Written sources, ranging from ancient manuscripts to noted newspapers tell of pre-twentieth century UFO sightings; Jacques Vallee, author of Anatomy of a Phenomenon, has assembled a file of more than 300 such reports for that period.^{10/}

After 1800, sightings became more numerous and were better documented, both in the public and professional press. The explanations of such phenomena involved much conjecture, but observers increasingly sought rational criteria against which to test observations.

The great lesson of western civilization is that such a relation, between natural phenomena, cannot be adequately understood on the basis of introspection, speculation or superstition, but requires investigation. The methods and techniques of investigation are what we mean by science. ^{11/}

Identification of Flying Objects (versus UFOs)

To evaluate UFO sightings, the Air Force has established categories of identification,^{12/} based upon previous experience that usually permits conversion of an unidentified flying object to an identifiable one:

Aircraft -- evaluations are made on the basis of description and flight characteristics. Essential performance elements are delineated for conventional, jet, photo, and advertising aircraft; helicopters, and refueling missions.

YEARLY NUMBER OF UFO REPORTS -- 1815-1915

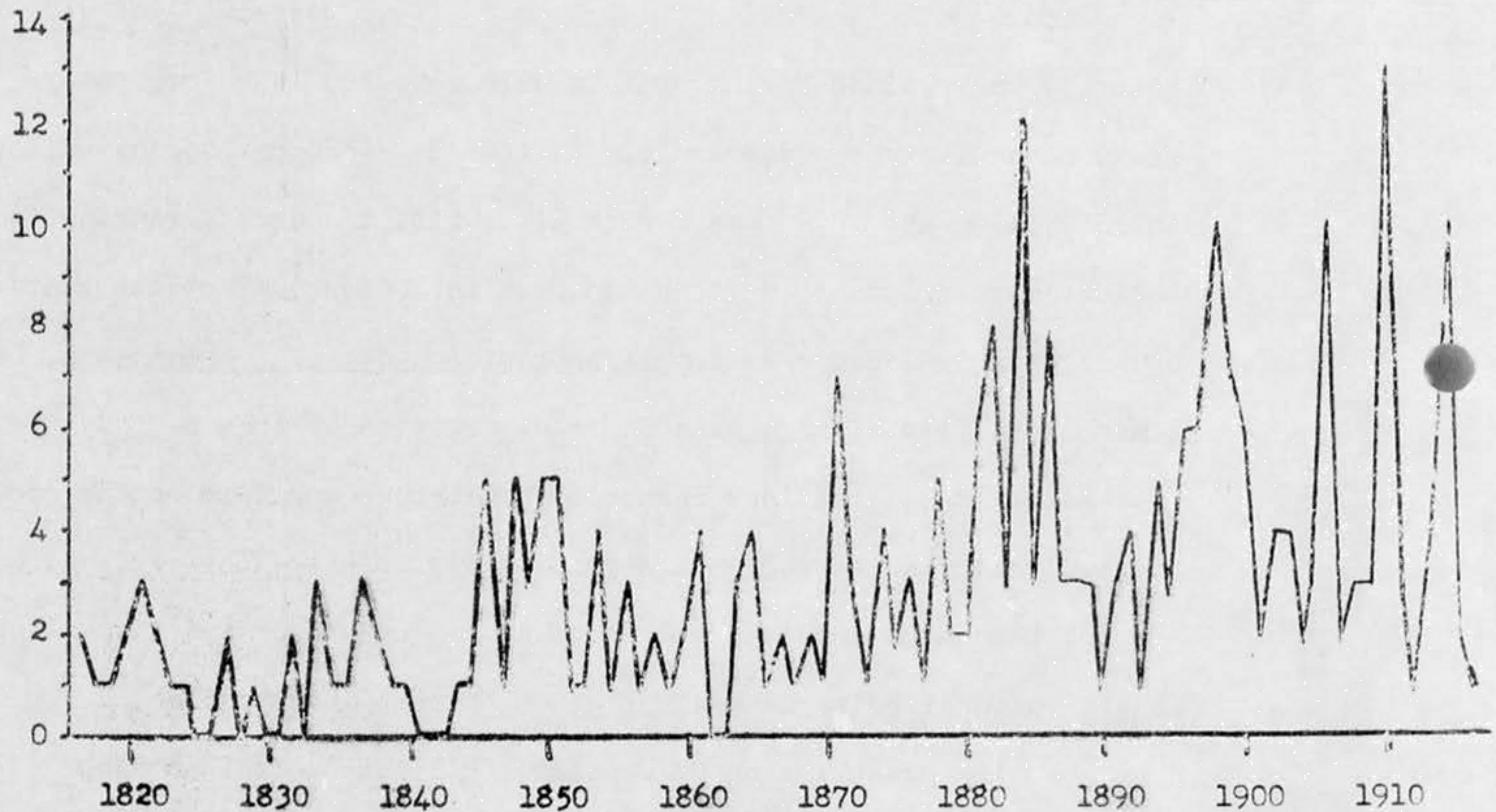


Figure 2

Chart reproduced with permission of Henry Regnery Company, from Anatomy of a Phenomenon by Jacques Vallee (Chicago, 1965), following p. 116.

Balloons -- evaluations are made on the basis of description and flight characteristics. Essential performance elements are delineated for weather (low level) balloons, upper research balloons, other research balloons (e.g., pillow, cluster, mylar), and miscellaneous (toy, "hot air") balloons.

Astronomical sightings -- bright stars, planets, comets, fireballs, meteors, auroral streamers, etc.

Satellites -- evaluation will be based on four elements of data: time of sighting, description of object, direction of flight, and duration of sighting.

Other -- missiles, reflections, mirages, searchlights, birds, kites, spurious radar indications, fireworks, flares.

Those UFO reports which are not relegated to one of the "Identified" categories (above) are designated either under "Insufficient Data" or as "Unidentified". Reports categorized as "Insufficient Data" lack one or more elements of critical information; every effort is made to obtain this data in order to perform a meaningful analysis.

A sighting is considered to be "Unidentified" when "a report apparently contains all pertinent data necessary to suggest a valid hypothesis concerning the cause or explanation of the report but the description of the object or its motion cannot be correlated with any known object or phenomenon."^{13/}

The role of the analyst who must evaluate the sighting reports is especially demanding because:

The attempted identification of the phenomena observed is generally derived from human impressions and interpretations and not from scientific devices or measurements. ^{14/}

The French student of UFO's, Vallee, agrees, but cautions that "We must analyze the evidence already gathered in such a way that we neither pre-suppose nor preexclude any possible conclusion."^{15/}

U.S. GOVERNMENT MONITORING OF UFO ACTIVITY

As the result of the flurry of sightings throughout the United States following Arnold's observation of several disc-shaped objects, a letter

was sent September 23, 1947 by Lt. Gen. Nathan Twining, Commander of the Air Materiel Command, to the Office of Chief of Staff of the U. S. Air Force, expressing the opinion that there was "sufficient substance to the reports to warrant detailed study."^{16/} On December 30, 1947 the Chief of Staff, Gen. Carl Spaatz, directed Gen. Joseph T. McNarney, Chief of the Air Materiel Command, to establish a special project for the purpose of collecting, collating, evaluating, and distributing information concerning UFO sightings. Thus, "Project Sign" came into being on February 11, 1948.^{17/}

Air Force Establishes a Special Project

In February of 1949, the Project Sign report was published, stating that on the basis of 243 of the "best documented" reports studied, "no definite evidence was available to confirm or disprove the actual existence of unidentified flying objects as new and unknown types of aircraft."^{18/}

On December 16, 1948, the project name was changed to "Grudge"; the conclusions reached after studying 244 reports (best documented) was that the phenomena presented no threat to the security of the United States and that the vast majority of sightings were misinterpretations of conventional objects.^{19/} The newly formed Department of the Air Force, then, was designated as the Federal Government's instrument for "investigating reports on unidentified flying objects and of evaluating any possible threat to our national security that such objects might pose."^{20/}

In March, 1952, the Air Force project name became "Project Blue Book", which remains its current official designation.

The objectives of Project Blue Book are twofold: first, to determine whether UFOs pose a threat to the security of the United States; and second, to determine whether

UFOs exhibit any unique scientific information or advanced technology which could contribute to scientific or technical research." 21/

Investigatory Procedures

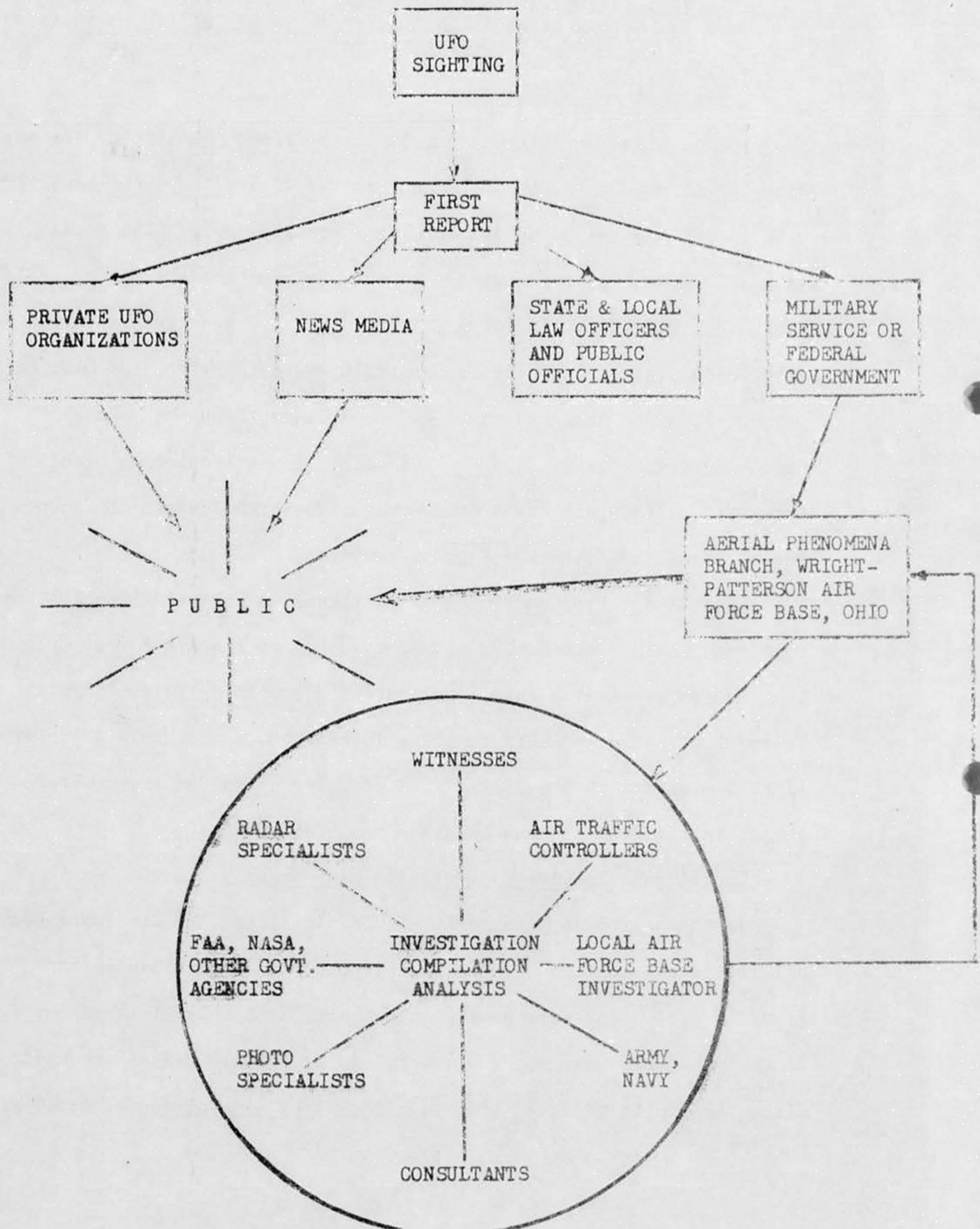
When a sighting is reported, it is the responsibility of the air base commander closest to the scene to investigate the occurrence, interview the witness(es), and complete the requisite form. The documentation (FTD Form 164) is forwarded to the Aerial Phenomena Branch, Foreign Technology Division, Air Force Systems Command, at Wright-Patterson Air Force Base, Ohio. There it is carefully reviewed by Project Blue Book personnel, and a check is made, as appropriate, with the cognizant specialty groups noted below. If a second investigation is deemed necessary, either Air Force or consultant personnel visit the scene of the incident, and submit a further report.

Since 1955, Project Blue Book continues to investigate only those sightings which are reported either directly to the Air Force, or via some law enforcement agency. Only sightings within the continental United States are included in these investigatory efforts. 22/ Information is prepared by the USAF Office of Information for the general public in the form of news releases and "Fact Sheets".

Consultants Provide Expertise in Many Areas

In the day-to-day treatment of UFO sightings, the Air Force team utilizes the expertise of many organizations and individuals (see 23/ Figure 3). For astronomical sightings, such scientists as Dr. J. Allen Hynek, Dr. Charles P. Olivier, and Dr. Donald Menzel are used; also, the staffs of scientific magazines (Sky and Telescope, etc.) are

Figure 3: REPORTING, INVESTIGATING, AND ANALYZING UFO SIGHTINGS



queried. In the case of suspected aircraft sightings, contact is made with the Air Defense Command, the Strategic Air Command, local airports, and the Federal Aviation Agency.

Balloon sightings are referred to one or more of the following: Balloon Control Center (Holloman AFB), U.S. Weather Bureau (Ashville, N.C.), local airports and weather stations, and various industries (e.g., General Mills) and universities which are conducting balloon research activities. Satellite information is checked by reference to printed ECHO (the large reflector satellite) schedules, NASA satellite reports, Smithsonian North and South Equatorial Crossings, and the Space Detection and Tracking Systems (SPADATS). Missile information is obtained by contacting Cape Kennedy (Fla.), Vandenberg AFB (Calif.), Point Magu (Calif.), Wallops Island (Va.), or military units involved in special exercises.

Special Air Force analytical groups, and on occasion Eastman Kodak Co., handle the technical aspects of radar sightings and most photographic reports. Physical specimens suspected of connection with the sightings are processed by such groups as Battelle Memorial Institute (ceramics), the Air Force Materiel Laboratory, the U.S. Food and Drug Administration, Libby Owens and Corning Fibreglass companies (glass), and certain academic groups (e.g., Northwestern University Department of Geology).

Special Studies of UFOs

In addition to in-house studies, the Air Force contracted with an industrial consultant in 1951, for an independent analysis leading to: Special Report No. 14 (Analysis of Reports of Unidentified Aerial Objects), dated May 5, 1955. The methodology use in the preparation of this report is discussed below.

Concurrently with this independent study, the Air Force appointed a Scientific Advisory Panel chaired by the late Dr. H. P. Robertson (California Institute of Technology). This five-man panel met during the week of January 14, 1953, and examined 75 of the best documented UFO cases. The panel concluded that the phenomena presented no threat to the security of the United States. It further recommended that the Air Force deprive the project of its special status, which would aid in decreasing the mystery attached to the subject. News releases and all matters dealing with the public would be handled by the Office of Information at the Secretary ^{24/} level.

Air Force Regulation 200-2

In 1953, Air Force Regulation 200-2 (see Appendix A) was issued, which established the responsibility and procedures for reporting information and evidence on UFO's, and for releasing information to the general public.

This regulation established the UFO Program to investigate and analyze UFO's over the United States. Such investigation and analysis are directly related to Air Force responsibility for the defense of the United States. ^{25/}

A questionnaire (see Appendix B) was prepared for use in documenting sightings of unidentified aerial phenomenon, entitled "U. S. Air Force

Technical Information" (FTD Form 164). The essential elements of information to be reported by observers include such items as time and place of sighting, ^{26/} weather conditions, object size and motion, and location of observer. Procedures were established -- JANAP 146, Cirvis, Merint -- to guide the other military services in reporting UFO sightings.

Special Report No. 14

Throughout the period of preparation of Special Report No. 14 by the industrial consultant study team, emphasis was placed on a step-by-step, rational analysis of sighting data, and care was taken to place the reports in a standardized, carefully structured form. A procedure then was developed for reducing the data to useable form, to be accomplished in four major steps:

- 1) a systematic listing of the factors necessary to evaluate the observer and his report, and to identify the unknown object observed
- 2) a standard scheme for the transfer of data to a mechanized computation system
- 3) an orderly means of relating the original data to all subsequent forms
- 4) a consistent procedure for the identification of the phenomenon described by the original data. ^{27/}

A questionnaire form and a coding system with appropriate work sheets were designed and a serial numbering system was established for sighting data. Key terminology then was agreed upon, with the term "Unit Sighting" referring to the actual sighting, and "Object Sighting" referring to the ^{28/} assumed number of phenomena.

Evaluation of sighting reports in preparation of data for later statistical treatment has been considered to be critical. The standardized procedure in Special Report No. 14 featured:

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FACTS ABOUT UNIDENTIFIED FLYING OBJECTS



Robert L. Chartrand
Specialist in Science and Technology
Science Policy Research Division

Assisted By:
William F. Brown
Analyst in Science and Technology
Science Policy Research Division

May 5, 1966
Washington, D.C.

Director
Aerospace Studies Ins
ATTN: Archives Branch
Maxwell AFB, Alabama

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- 1) the deduction of discrete facts from data which depended on human impressions rather than scientific measurements
- 2) the rating of the observer and his report as determined from available information
- 3) the determination of the probable identification of the phenomenon observed. 29/

Categories of identification included: balloon, astronomical, aircraft, light phenomenon, birds, clouds (dust, etc.), insufficient information, 30/ psychological manifestations, unknown, and other. Identifications were performed in two phases, first by the individual who first made the transcription of the sighting data, and second, by a conference of four persons (two from the Air Force, two from an outside consultant group) in order to maximize objectivity and thoroughness in the handling of this data.

Thus, the study team worked to ensure that the collection, collation, and interpretation of sighting data were performed according to the proper procedures. The relationship between the observed fact per se and the subsequent interpretation is noted by Menzel and Boyd:

In the study of UFO phenomena this question of 'evidence' is crucial. The careful investigator tries always to distinguish sharply between an observed fact, which is evidence, and an interpretation of that fact, which is not evidence no matter how reasonable it may seem. 31/

Vallee, in his discussion of report handling, goes one step further in urging that "the two operations -- maintaining a file of reports in accordance with official regulations, and doing research on the information contained in the reports -- should be very clearly separated, and 32/ separate codes should be used."

To best analyze sighting data on unidentified aerial objects, Special Report No. 14 declares that the Air Force should engage in a "systematic

sorting and tabulation program to give frequency and percentage distributions of the important characteristics of sightings.^{33/} In this way, sorting, counting, and tabulating of information from the punched card abstracts could be executed, and further, any emerging patterns or trends might be identified and used in future, more sophisticated treatment using statistical methods.

Attempts to Create a "Flying Saucer" Model

An attempt to discern meaningful trends and patterns in UFO sightings then was made by analyzing the descriptions of the physical appearance, flight characteristics, and other significant attributes of various classes of UFOs. Of the 434 object sightings identified as "Unknowns", only 12 were described in enough detail that they could serve as the basis for the creation of a "flying saucer model".^{34/} Other sighting data did, however, sometimes coincide with certain features of the reported UFOs in these four categories.

These 12 sightings^{35/} could be placed in four categories on the basis of their shapes:

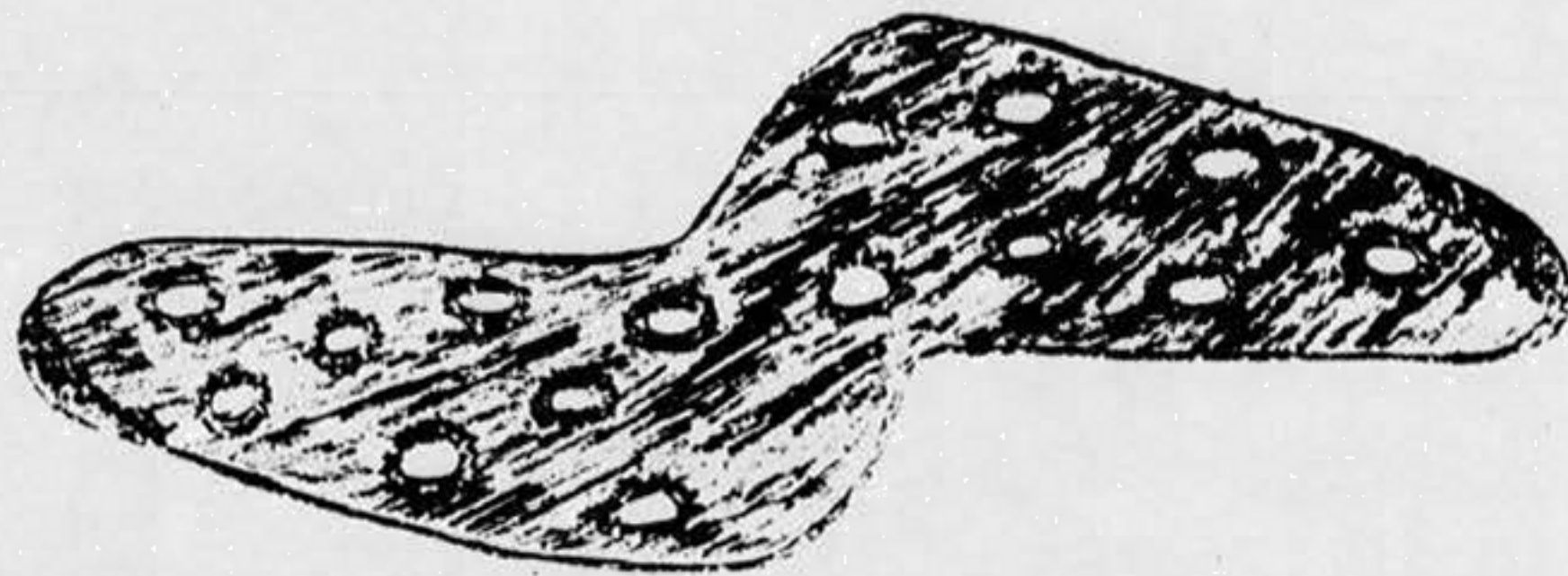


Figure 4 - Propeller Shape

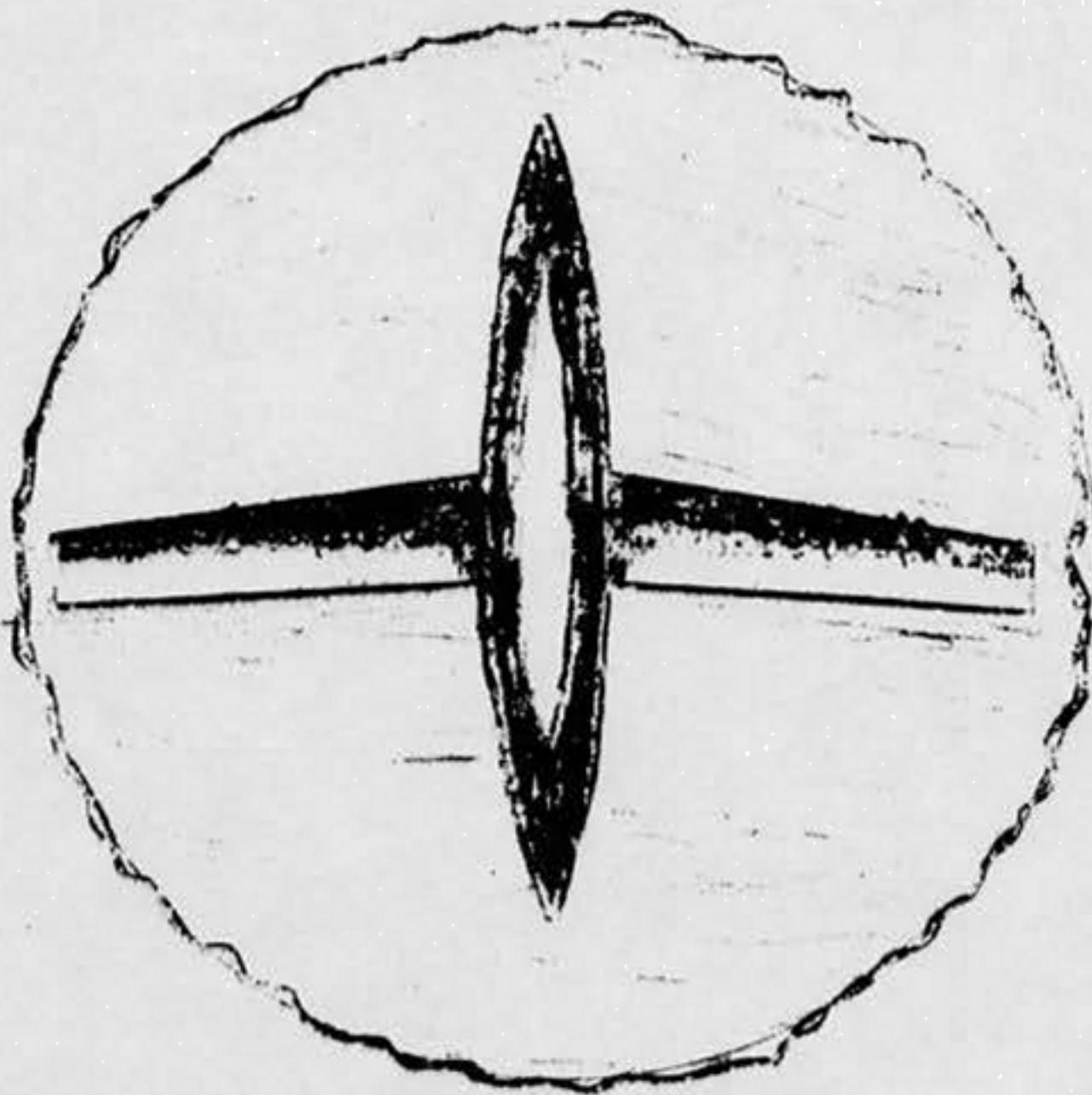


Figure 5

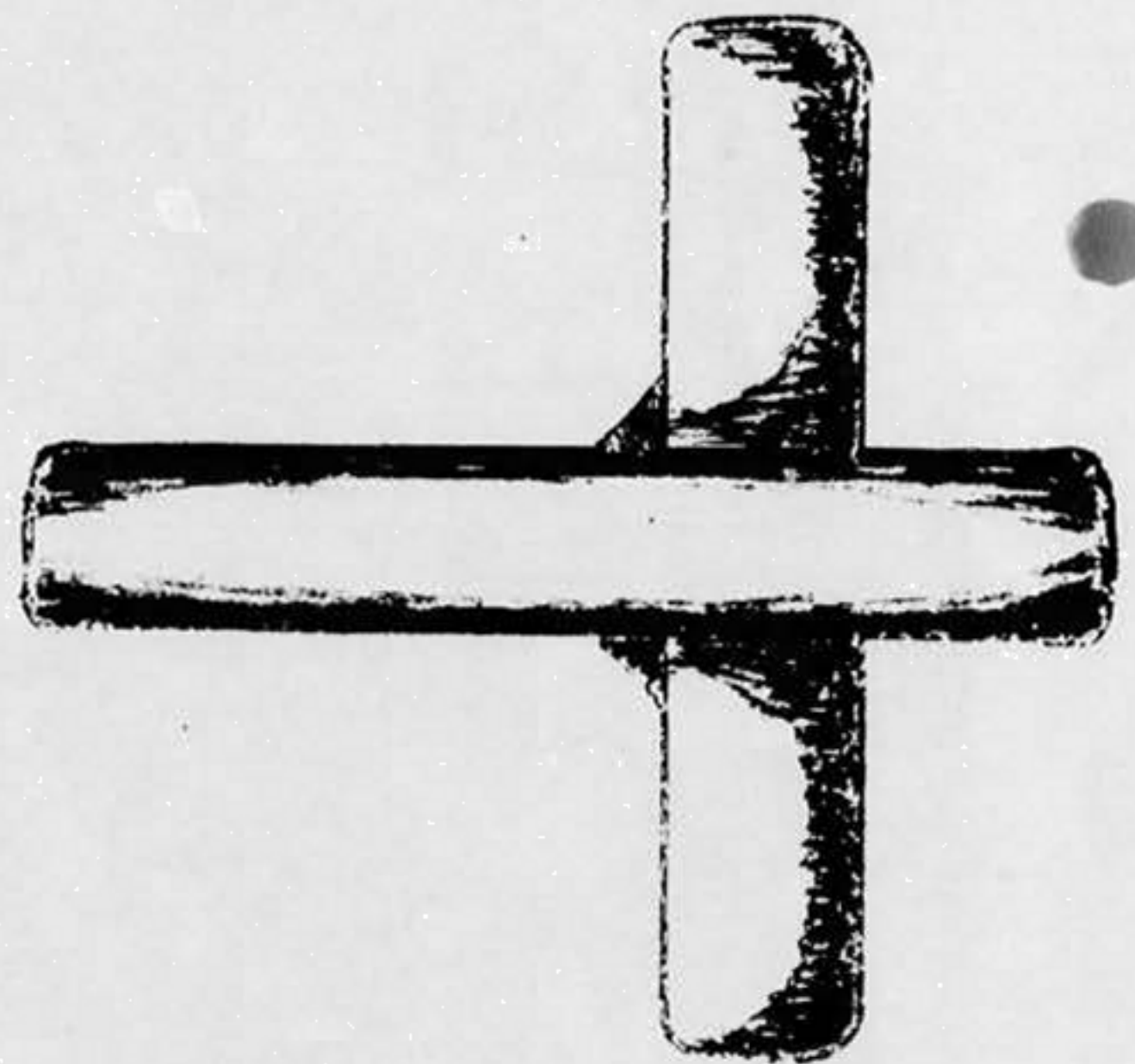


Figure 6

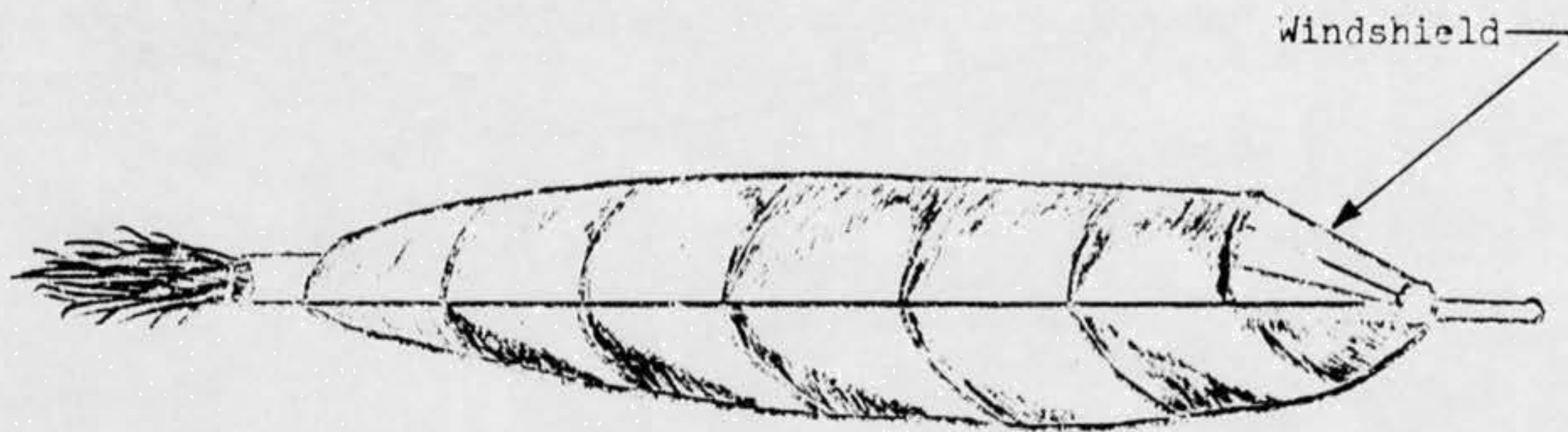


Figure 7

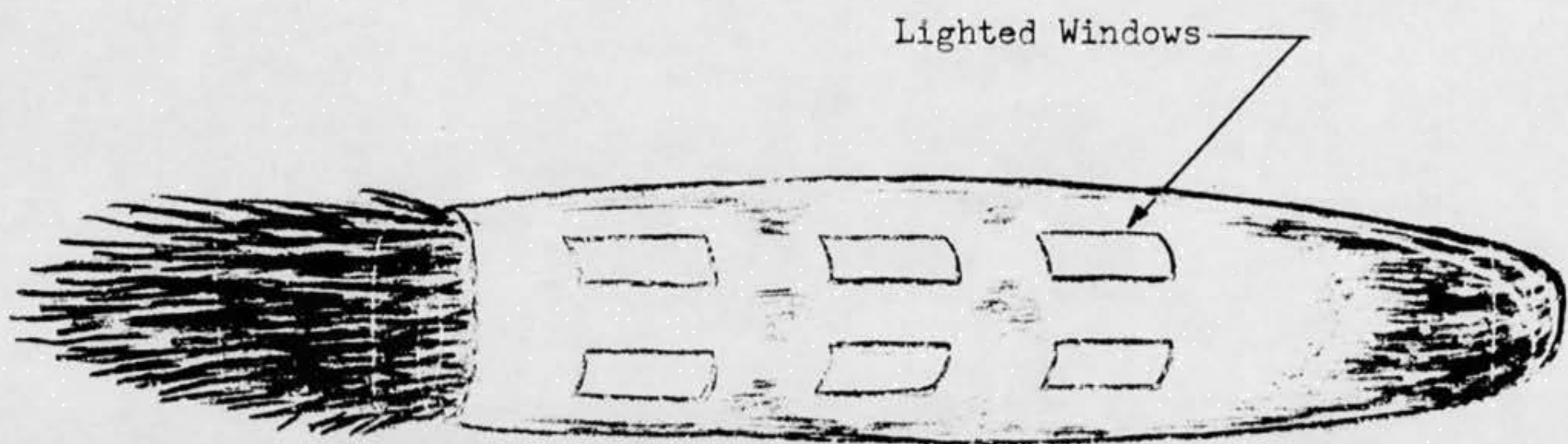


Figure 8

Cigar Shapes

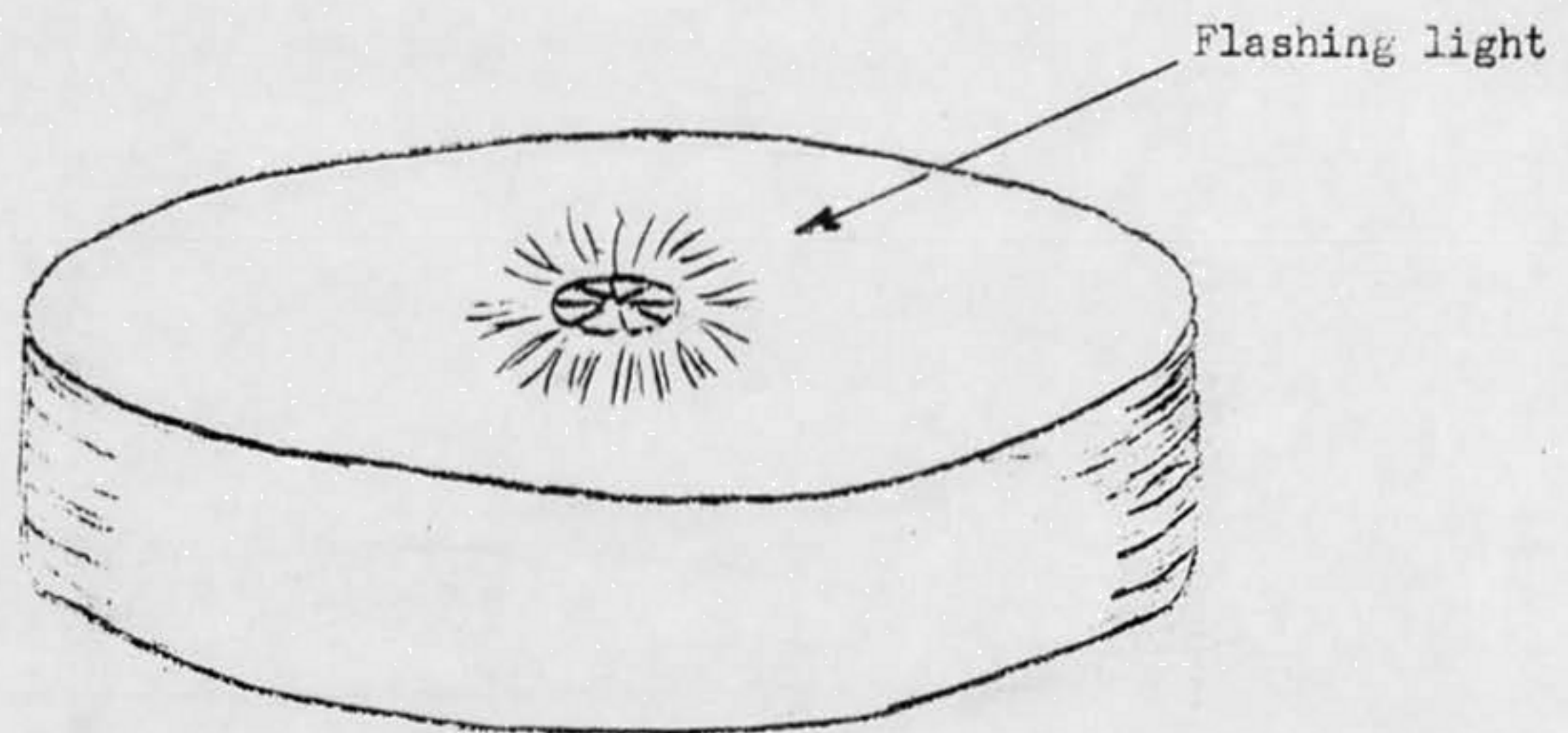


Figure 9

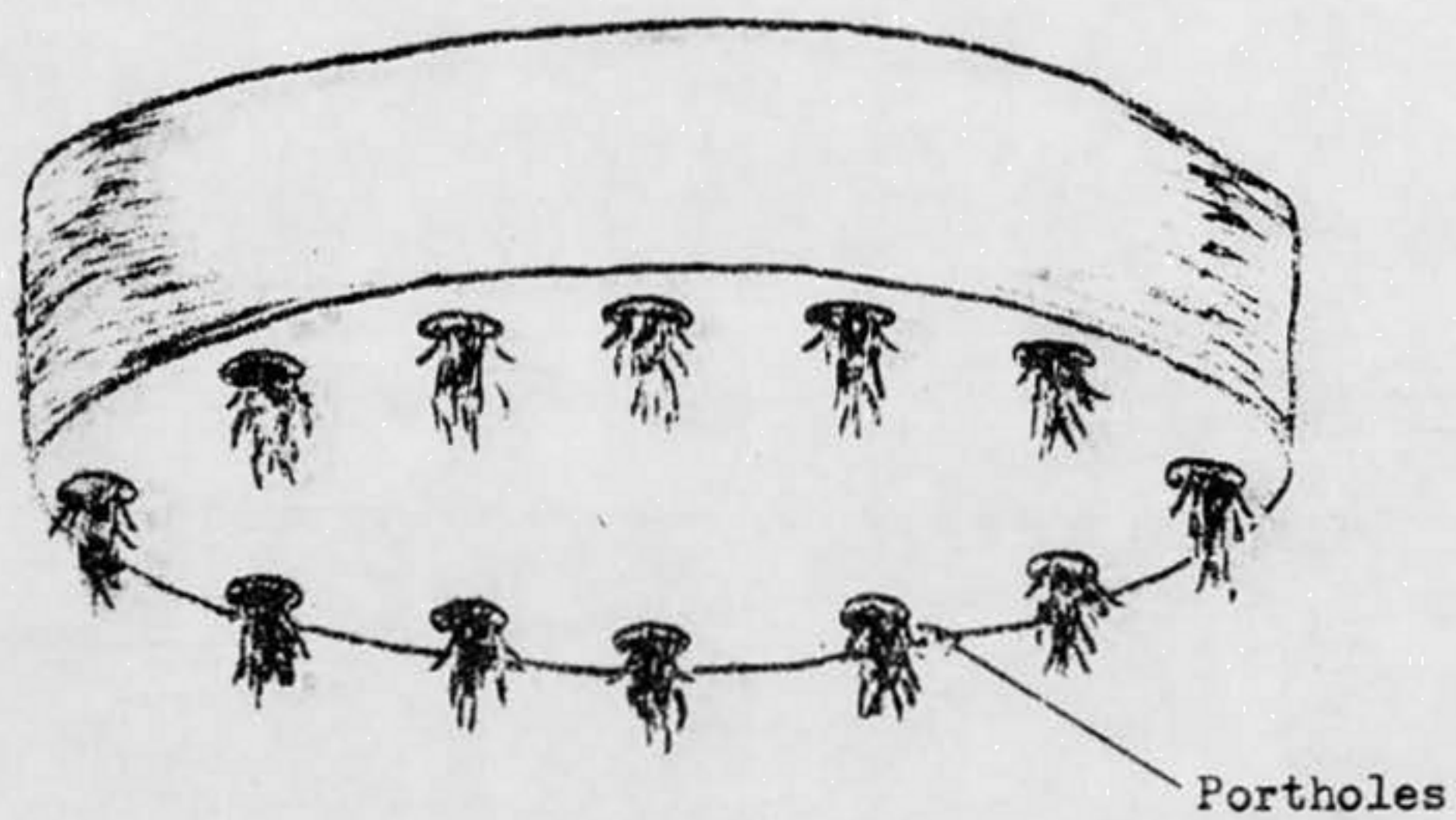


Figure 10

Elliptical or Disc Shapes

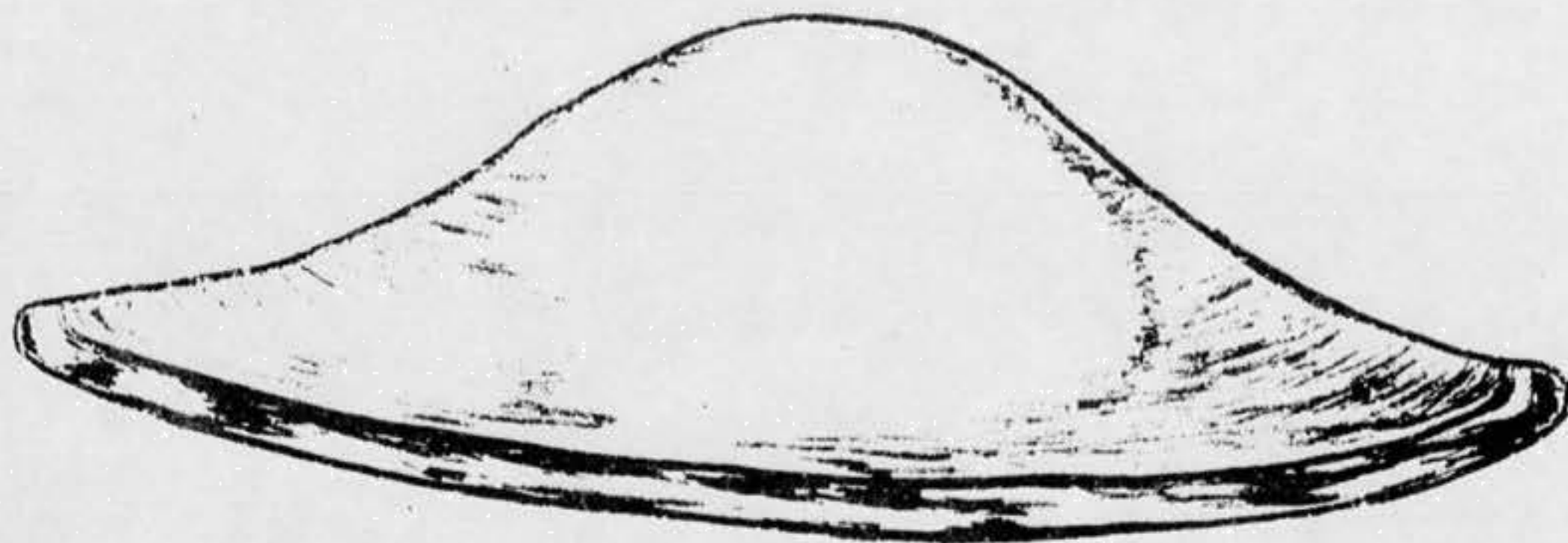
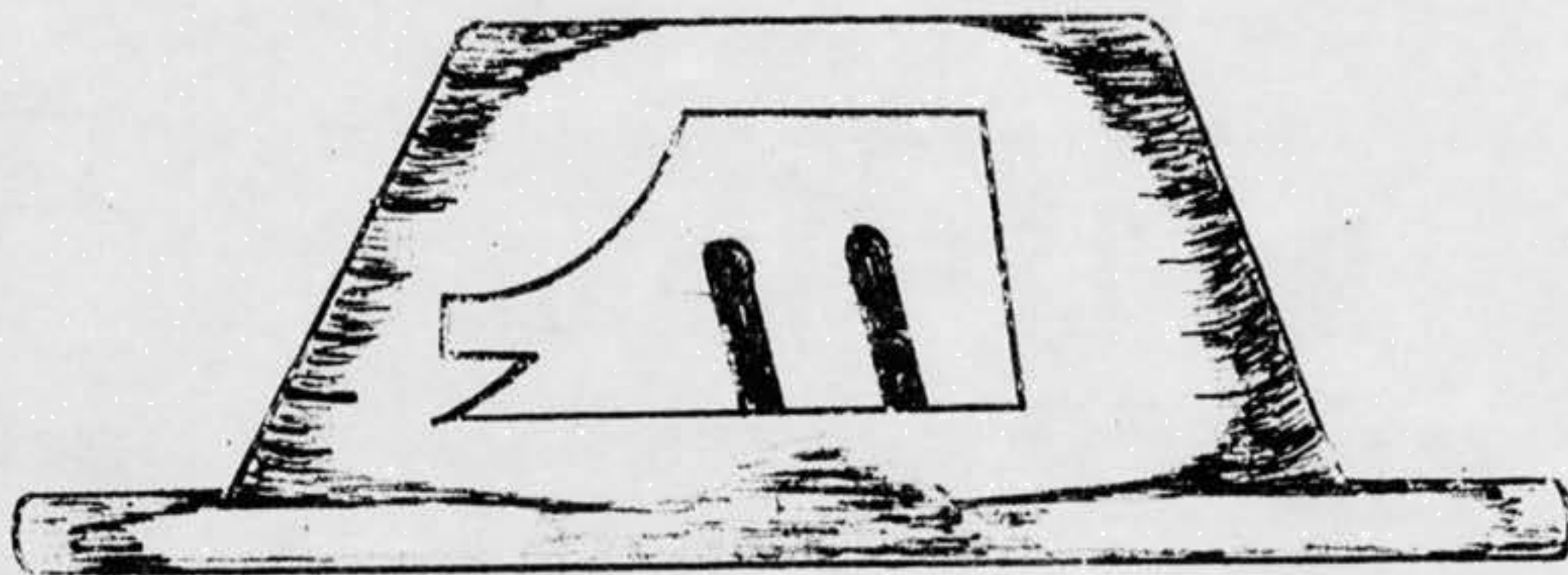


Figure 11



(Side View)

Figure 12

Elliptical or Disc Shapes

As a result of studying intensively the 12 subject cases, the study team was unable to develop a verified model of a "flying saucer". However, the four categories of reported flying objects (as shown in Figures 4 through 12) did evolve and could be used for future references.

The conclusions contained in Special Report No. 14 noted that:

it is considered to be highly improbable that reports of unidentified aerial objects examined in this study represent observations of technological developments outside of the range of present-day scientific knowledge. It is emphasized that there has been a complete lack of any valid evidence of physical matter in any case of a reported unidentified aerial object. 36/

Ad Hoc Committee of USAF Scientific Advisory Board

Early in 1966, an ad hoc committee of the USAF Scientific Advisory Board reviewed the resources and methods of investigation prescribed by Project Blue Book, at the request of Maj. Gen. E. B. LeBailly, Secretary of the Air Force Office of Information. 37/ After reviewing the findings of the 1953 Robertson panel, and hearing briefings by Air Force Project Blue Book personnel, the committee then reviewed selected case histories of UFO sightings.

The committee felt that it was significant that in spite of thousands of hours of astronomical observation and photographic coverage, "not a single unidentified object has been reported as appearing on any of these plates or been sighted visually in all these observations." 38/ Finally, it was concluded that "in the 19 years since the first UFO was sighted there has been no evidence that unidentified flying objects are a threat to our national security." 39/ However, in order to reduce the number of reported flying objects classified as "Unidentified", the reports included recommendations for strengthening the project staff, contracting with a

few selected universities to assist in UFO investigations, initiation of studies in depth of selected cases, an expanded form (questionnaire) for reporting, and wider distribution of UFO official literature. ^{40/}

It was announced on April 21, 1966 by Rep. Gerald R. Ford ^{41/} that the United States Air Force has contracted with a group of scientists to perform an independent study of UFOs. This "in depth" analysis will commence after July 1, and will concentrate on some of the reports which remain unexplained after investigation through established Air Force procedures.

Special Briefings on UFO Activity

Periodically, the attention given to UFO activity by the public and news media has caused various high level military and civilian requests for special briefings. In October, 1956, a briefing was given by Project Blue Book personnel for Maj. Gen. Millard Lewis, Director of Air Force Intelligence (DCS/Operations). Less than a year later, on September 16, 1957, the Defense Science Board was briefed on the status of UFO activity. ^{42/}

In the period following the launching of Sputnik I, the number of reported UFO sightings rose spectacularly. A special briefing was conducted during January, 1958, for the Senate Committee on Government Operations (Hon. John L. McClellan, chairman). ^{43/} In August of the same year, a briefing was held for the Subcommittee on Atmospheric Phenomena of the House Select Committee on Astronautics and Space Exploration (Hon. John W. McCormack, chairman). ^{44/}

The next request for a special briefing was not recorded by Project Blue Book until July, 1961, when Robert Smart, "chief counsel", to Congressman Joseph E. Karth, was given a status report on the UFO program. ^{45/}

On April 5, 1966, Dr. Harold Brown, Secretary of the Air Force, accompanied by Dr. J. Allen Hynek and Maj. Hector Quintanilla, Jr., UFO project officer, appeared before the House Committee on Armed Services. Dr. Brown assured the Committee that:

Although the past 18 years of investigating unidentified flying objects have not identified any threat to our national security, or evidence that the unidentified objects represent developments or principles beyond present-day scientific knowledge, or any evidence of extra-terrestrial vehicles, the Air Force will continue to investigate such phenomena with an open mind and with the finest technical equipment available. 46/

Later in the testimony, various Committee members raised questions regarding UFOs sighted on radar, or photographed. Dr. Hynek estimated that "only about 1 percent, or less" 47/ of the cases reported to the Air Force have included photographs. When asked what percentage of the reported incidents in the United States have been viewed on radar screens, Maj. Quintanilla indicated "about 1.5 percent", and later noted that "We have no radar cases which are unexplained." 48/

It has been shown that several groups -- Congressional, senior military, and scientific -- have taken an interest in and examined evidence related to UFO sightings. The great majority of UFOs have been identified as known objects or natural conditions. In no instance has the Air Force or any other official group purported to have the answer regarding the existence of life in outer space. Lt. Col. Lawrence J. Tacker, author of Flying Saucers and the U. S. Air Force, emphasizes this:

It is important to state once again that the United States Air Force does not deny the possibility that life could exist on other planets or in other solar systems, or that conditions for life as we know it on earth could not exist somewhere out in space. 49/

PUBLIC REACTION TO UFO'S

For nearly two decades, people throughout the world have evinced a strong, though cyclical interest in UFOs. The reported presence of aerial phenomena has held psychological significance for some, quasi-scientific importance for others, and a religious connotation for yet others. In general, there are two main groups of persons who study UFO's:

1. 'UFOlogists' -- serious, scientific students of the exciting phenomena now taking place in our heavens ...among such intellectually curious students are numbered today many outstanding aviators, space scientists, engineers, radar experts, college professors, ministers, high-ranking officers of the armed services, and others.
2. 'contactees' or saucerians -- many of these people purport to have made contact with those whom they call the space people -- either by physical means or utilization of mysterious and mystical techniques which are never subject to objective scientific analysis or other kinds of demonstrable proof. 50/

Dr. Carl Jung, the psychologist, points out that despite the mass of observational data which has been accrued, "the physical reality of UFOs remained a problematical matter."

The longer the uncertainty lasted, the greater became the probability that this obviously complicated phenomenon had an extremely important psychic component as well as a possible physical basis. 51/

The psychological significance of the UFO, then, is a factor to be considered. Sagan states that "the interest in unidentified flying objects derives, perhaps, not so much from scientific curiosity as from unfulfilled religious needs." 52/ Whatever the significance of UFOs to various persons, dozens of organizations have been organized throughout the world "to collect UFO reports and publish 'the truth' allegedly suppressed by government sources." 53/ Some of these groups maintain extensive data files,

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disseminate news on UFO sightings, and send their own investigators to interview citizens who have seen unidentified aerial objects.

A literature has developed on the subject, ranging from the serious to the remotely relevant. Many of the civilian organizations feel that the Air Force effort to document and evaluate sightings is inadequate, and that a full Congressional inquiry on the subject should be held. Menzel and Boyd state that "most UFO organizations cling to the belief that a conspiracy exists to conceal the existence of extraterrestrial vehicles, but they disagree on its precise composition."^{54/}

The Air Force steadfastly has stated that it "does not seek to limit discussion on such reports and does not withhold or censor any information pertaining to this unclassified program."^{55/} Recommenda-^{56/}tions to expand the Air Force project now are under consideration and a consultant group, as noted above, soon will undertake an intensive, comprehensive study of selected facets of UFO activity.

FOOTNOTES

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18. Ibid., p. 2.

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32. Vallee, op. cit., p. 103.
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38. Ibid., p. 2.
39. Ibid., p. 2.
40. Ibid., pp. 2-4.

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Intelligence Activities

UNIDENTIFIED FLYING OBJECTS (UFO)

This regulation establishes the UFO Program to investigate and analyze UFO's over the United States. Such investigation and analysis are directly related to Air Force responsibility for the defense of the United States. The UFO Program provides for the prompt reporting and rapid identification needed for successful "identification," which is the second of the four phases of air defense—detection, identification, interception, and destruction. All commanders will comply strictly with this regulation.

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SECTION A—GENERAL

1. Explanation of Terms. To insure proper and uniform usage in UFO screenings, investigations, and reportings, an explanation of the objects follows:

a. *Familiar or known objects:*

(1) Aircraft, balloons, kites, birds, searchlights, astronomical bodies (meteors, planets, stars, comets), pilotless aircraft, missiles, satellites in orbit, and others identified by the observer as normal appearing objects.

(2) Flying objects determined to be aircraft. These generally appear as a result of ADIZ violations and often prompt the UFO reports submitted by the general public. They are readily identifiable as, or known to be, aircraft, but their type, purpose, origin, and destination are unknown. Air Defense Command is responsible

for reports of "unknown" aircraft, which should not be reported as UFO's under this regulation.

(3) Aircraft flares, jet exhausts, condensation trails, blinking or steady lights observed at night, lights circling or near airports and airways, and other phenomena or objects known to be emanating from, or to be indications of, aircraft. These should not be reported under this regulation, as they do not fall within the definition of a UFO.

b. *Unidentified Flying Objects.* Any aerial phenomena, airborne object or objects which are unknown or appear out of the ordinary to the observer because of performance, aerodynamic characteristics, or unusual features.

2. Objectives. Air Force interest in UFO's is three-fold. First, as a possible threat to the security of the United States and its forces; sec-

This regulation supersedes AFR 200-2, 14 September 1959, as amended.

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ond, to determine the technical or scientific characteristics of any such UFO's; third, to explain or identify all UFO sightings as described in paragraph 1b.

a. *Air Defense.* The great majority of flying objects reported have been conventional, familiar things of no great threat to the security of the United States and its possessions. However, since the possibility exists that UFO's reported may be hostile or new foreign air vehicles of unconventional design, it is imperative to report sightings rapidly, factually, and as completely as possible.

b. *Technical and Scientific.* The Air Force will continue to collect and analyze reports of UFO's until all are scientifically or technically explained or until the full potential of the sightings has been exploited. In performing this task the following factors are of great importance:

(1) To measure scientific advances, the Air Force must have the latest experimental and developmental information on new or unique air vehicles or weapons.

(2) The possibility exists that foreign countries may develop air vehicles of revolutionary configuration or propulsion.

(3) There is need for further scientific knowledge in such fields as geophysics, astronomy, and physics of the upper atmosphere which the study and analysis of UFO's and similar aerial phenomena may provide.

(4) The reporting of all pertinent factors will have a direct bearing on scientific analyses and conclusions of UFO sightings.

c. *Reduction of Percentage of UFO "Unidentifieds."* Air Force activities must reduce the percentage of unidentifieds to the minimum. Analysis thus far has explained all but a few of the sightings reported. These unexplained sightings are carried statistically as unidentifieds. If more immediate, detailed, objective data on the unknowns had been available, probably these, too, could have been explained. However, because of the human factors involved, and the fact that analyses of UFO sightings depend primarily on the personal impressions and interpretations of the observers rather than on accurate scientific data or facts obtained under controlled conditions, the elimination of all unidentifieds is improbable.

3. Responsibilities:

a. *Reporting.* Base commanders will report all information and evidence of UFO sightings, including information and evidence received from other services, Government agencies, and civil

ian sources. Investigators are authorized to make telephone calls from the investigation area direct to the Foreign Technology Division (FTD), of the Air Force Systems Command, Wright-Patterson Air Force Base, Ohio (Clearwater 3-7111, ext. 69216/66378). The purpose of the calls is to report high priority findings. (See section C.)

b. *Investigation.* The commander of the Air Force base nearest the location of the reported UFO sighting will conduct all investigative action necessary to submit a complete initial report of a UFO sighting. The initial investigation will include every effort to resolve the sighting. An Air Force base other than that closest to the scene of a reported UFO sighting will refer the sighting immediately to the commander of the nearest Air Force base for appropriate action. (See paragraph 5.)

c. *Analysis.* The Air Force Systems Command Foreign Technology Division will analyze and evaluate:

(1) Information and evidence reported within the United States after the investigators of the responsible Air Force base nearest the sighting have exhausted their efforts to identify the UFO.

(2) Information and evidence collected in overseas areas.

EXCEPTION: The AFSC (FTD), independently or in participation with pertinent Air Force activities, may conduct any additional investigations necessary to further or conclude its analyses or findings.

d. *Findings.* AFSC (FTD) will prepare a final report on each sighting after collection and analysis of data, and will forward a copy of the report to HQ USAF (AFCIN).

e. *Public Relations and Information Services.* The Office of Information, Office of the Secretary of the Air Force, will be responsible for releasing information on sightings, and, in coordination with AFSC (FTD), answering correspondence from the public regarding UFO's. (See paragraphs 7 and 8.)

f. *Congressional Inquiries.* The Office of Legislative Liaison will:

(1) In coordination with the AFSC (FTD) and/or the Office of Information, when necessary, answer all congressional mail regarding UFO's addressed to the Secretary of the Air Force and Headquarters USAF.

(2) Forward those inquiries which are scientific and technical to the FTD for information on which to base a reply. The FTD will re-

CHANGE

APPENDIX A

AFR 200-2A

AIR FORCE REGULATION
NO. 200-2A

DEPARTMENT OF THE AIR FORCE
Washington, 30 March 1964

Intelligence Activities
UNIDENTIFIED FLYING OBJECTS (UFO)

AFR 200-2, 20 July 1962, is changed as follows:

3d. *Findings.* AFSC (FTD) will prepare a final report on each sighting after collection and analysis of data. When final report contains information of significant intelligence value, AFSC (FTD) will forward a copy of the report to HQ USAF (AFNINDE), Wash DC 20330.

3e. Change references to paragraphs "7 and 8" to "6 and 7."

4b. Change "or" to "of."

10. *Contacts.* Private individuals or organizations desiring Air Force interviews, briefings, lectures, or private discussions on UFOs will be instructed to direct their requests to the Office of Information, Office of the Secretary of the Air Force. Air Force personnel, other than designated investigators (see paragraph 3b) and those of the Office of Information, will not contact private individuals on UFO cases, nor will they discuss their operations and functions with unauthorized persons, unless so directed, and then only on a need-to-know basis.

11a. Change references to paragraphs "2 and 5" to "1 and 4."

11c. Change references to paragraphs "7, 8, 9, and b(2)" to "6, 7, 8, and b(2)(b)."

12b. Submit reports of sightings over 3 days old by letter; however, keep the use of letter reports to a minimum in reporting initial sightings. The delays often involved in processing and transmitting correspondence through normal channels may make followup investigations difficult, producing only limited usable information. This factor is a necessary consideration. Reporting by electrical means will eliminate delays. Submit a followup and/or complete report on all sightings initially reported electrically, if so requested by AFSC(FTD).

13a(4). Change "AFCIN" to "AFNIN."

13b. *Written Reports.* Submit all letter reports (basic letters and followup or complete reports) direct to AFSC (FTD), Wright-Patterson AFB, Ohio, 45433. AFSC (FTD) will distribute the reports to interested intelligence activities in the United States and to the Office of Information, if necessary.

13b(1). Delete.

13b(2). Delete.

16. Change reference to paragraph "5" to "4."

18. Change "TD-E" to "TDEW."

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

CURTIS E. LeMAY
Chief of Staff

R. J. PUGH
Colonel, USAF
Director of Administrative Services

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turn this information to the Office of Legislative Liaison for reply to the inquiry.

(3) Process requests from congressional sources in accordance with AFR 11-7.

g. Cooperation. All Air Force activities will cooperate with Air Force UFO investigators to insure the economical and prompt success of investigations and analyses. When feasible, this cooperation will include furnishing air or ground transportation and other assistance.

4. Guidance. The thoroughness and quality of a report or investigation of UFO's are limited only by the skill and resourcefulness of the person who receives the initial information and/or prepares the report. The usefulness and value of any report or investigation depend on the accuracy and timeliness of its contents. Following are aids for screening, evaluating, and reporting sightings:

a. Careful study of the logic, consistency, and coherence of the observer's report. An interview with the observer by personnel preparing the report is especially valuable in determining the source's reliability and the validity of the information given. Factors deserving particular attention are the observer's age, occupation, and education, and whether his occupation involves observation reporting or technical knowledge. A report stating that a witness is completely familiar with certain aspects of a sighting should indicate his or her specific qualifications.

b. Theodolite measurements of changes or azimuth, and elevation and angular size.

c. Interception, identification, or air search, if appropriate and within the scope of air defense regulations.

d. When feasible, contact with local aircraft control and warning (ACW) units, and with pilots and crews of aircraft aloft at the time and place of sighting. Also, contact with any other persons or organizations that may have factual data on the UFO or can offer corroborating evidence—visual, electronic, or other.

e. Consultation with military or civilian weather forecasters for data on tracks of weather balloons released in the area and any unusual meteorological activity which may have a bearing on the UFO.

f. Consultation with navigators and astronomers in the area to determine whether any astronomical body or phenomenon would account for the sighting.

g. Contact with military and civilian tower operators, air operations units, and airlines to

determine whether the sighting could have been an aircraft. Local units of the Federal Aviation Agency (FAA) are often of assistance in this regard.

h. Contact with persons who may know of experimental aircraft of unusual configuration, rocket and guided missile firings, or aerial tests in the area.

i. Contact with photographic units or laboratories. Usually, these installations have several cameras available for specialized intelligence or investigative work. Photography is an invaluable tool for use, where possible, in investigating and analyzing UFO sightings. (See paragraph 18).

j. Whenever possible, selecting as a UFO sighting investigator an individual with a scientific or technical background as well as experience as an investigator.

k. Submission of reports on all sightings even though identification may be assumed by the preparing officer under paragraph 16 of this regulation.

5. Reporting UFO Information. Both the Assistant Chief of Staff, Intelligence, Headquarters USAF, and the Air Defense Command have a direct and immediate interest in the facts pertaining to UFO's reported within the United States. All Air Force activities will conduct UFO investigations to the extent necessary for their required reporting action (see paragraphs 14, 15, and 16). No activity should carry an investigation beyond this point, unless the preparing officer believes the magnitude (intelligence significance or public relations aspects) of the case warrant full scale investigation. The officer may contact the FTD of AFSC (CLEARwater 3-7111, ext 69216/66378) at Wright-Patterson Air Force Base, Ohio, to obtain verbal authority for continued investigation.

SECTION B—PUBLIC RELATIONS, INFORMATION, CONTACTS, AND RELEASES

6. Maintaining Public Relations. The Office of Information is responsible for:

a. In coordination with the AFSC (FTD) when necessary, maintaining contact with the public and the press on all aspects of the UFO program and its related activities.

b. Releasing information on UFO sightings and results of investigations.

c. Periodically releasing information on this subject to the general public.

d. Processing, answering, and taking action on correspondence received from the general public, pertaining to the public relations, interest, and informational aspects of the subject. (See paragraph 8.) This office will forward correspondence and queries which are purely technical and scientific to AFSC (FTD) for information on which to base a reply.

7. Releasing Information. The Office of Information, Office of the Secretary of the Air Force, will release to the public or unofficial persons or organizations all information or releases concerning UFO's, regardless of origin or nature. This includes replies to correspondence (except congressional inquiries) submitted direct to the AFSC (FTD) and other Air Force activities by private individuals requesting comments or results of analyses and investigations of sightings.

8. Exceptions. In response to local inquiries regarding any UFO reported in the vicinity of an Air Force base, the commander of the base concerned may release information to the press or the general public only after positive identification of the sighting as a familiar or known object. The commander must exercise care not to reveal any classified aspects of the sighting or names of persons making reports. (See paragraph 17.) If the sighting is unexplainable or difficult to identify, because of insufficient information or inconsistencies, the only statement to be released is the fact that the sighting is under investigation and information regarding it will be available at a later date. After completion of investigative action, the commander may release the fact that the AFSC (FTD) will review and analyze the results of the investigation. He will then refer any further inquiries to the local Office of Information.

9. Release by Non-Air Force Sources. If newsmen, writers, publishers, or private individuals desire to release unofficial information concerning a UFO sighting, Air Force activities will make every effort to assure that the statements, theories, opinions, and allegations of these individuals or groups are not associated with or represented as official information.

10. Contacts. Private individuals or organizations desiring Air Force interviews, briefings, lectures, or private discussions on UFO's will direct their requests to the Office of Information, Office of the Secretary of the Air Force. Air Force personnel, other than those of the Office of Information, will not contact private individuals on UFO cases, nor will they discuss their operations and functions with unauthorized persons unless so directed, and then only on a "need-to-know" basis.

SECTION C—PREPARING AND SUBMITTING REPORTS

11. General Information:

a. Paragraphs 2 and 5 will serve as aids and guidance to screenings, investigations, and reportings. Paragraph 14 contains an outline of the reporting format. Activities initially receiving reports of aerial objects and phenomena will screen the information to determine whether the report concerns a valid UFO within the definition of paragraph 1b. Reports not within that definition do not require further action under the provisions of this regulation.

b. To assist activities and personnel responsible for handling, screening, and processing initial, incoming UFO information, a summary follows of the general sources and types of reports:

(1) Generally, initial UFO reports originate from two sources:

(a) Civilian (airline, private, and professional pilots, tower operators, technical personnel, casual observers, and the public in general), by correspondence, telephone or personal interview;

(b) Military units and personnel (pilots, observers, radar operators, aircraft control and warning units, etc.), by telephone, electrical message, or personal interview;

(2) Generally, UFO reports received from civilian sources are of two types:

(a) Those referring strictly to an observed UFO, containing either detailed or meager information;

(b) Those referring only in part to an observed UFO, but primarily requesting information on some aspect of the UFO program.

c. Reports considered to fall primarily in a public relations or information service category (see paragraphs 7, 8, 9, and b(2) above) are of primary interest to the Office of Information. UFO data sufficient for investigation and/or analysis may be extracted before referral to that office.

12. Methods for Transmitting Reports:

a. Together with any necessary screenings and investigations preparatory to reporting, report all information on UFO's promptly. Electrical transmission with a "Priority" precedence is authorized for reports under 3 days from date of sighting. Electrically transmitted reports over 3 days old should carry a "Routine" precedence.

b. Submit written reports of sightings over 3 days old on AF Form 112, "Intelligence Report,"

and AF Form 112A, "Supplement to AF Form 112" (see paragraphs 14 and 15); however, keep the use of these forms to a minimum in reporting initial sightings. The delays often involved in processing and transmitting AF Form 112 through channels may make followup investigations difficult, producing only limited usable information. This factor is a necessary consideration. Reporting by electrical means will eliminate delays. If requested by the AFSC (FTD), AF Form 112 will provide a followup and/or complete report of all sightings initially reported electrically.

13. Where To Submit Reports:

a. *Electrical Reports.* Submit multiple addressed electrical reports to:

- (1) Air Defense Command, Ent AFB, Colorado
- (2) Nearest Air Division (Defense) (For United States only)
- (3) Air Force Systems Command, Foreign Technology Division, Wright-Patterson AFB, Ohio
- (4) Headquarters, USAF (AFCIN), Wash 25 DC
- (5) Secretary of the Air Force (SAFOI), Wash 25 DC

b. *Written Reports* (Basic letters and AF Form 112):

(1) *Basic Letters.* Submit all letter reports direct to the AFSC (FTD). The AFSC (FTD) will distribute the reports to interested Intelligence activities in the United States and to the Office of Information, if necessary.

(2) *AF Form 112.* Submit original report, as prescribed in "Intelligence Collection Instruction (ICI)," June 1954, direct to HQ USAF (AFCIN) Wash 25 DC, and a copy to AFSC (FTD).

c. *Reports from Civilians.* Where possible, advise civilian sources contemplating reporting UFO's to submit the report, for processing and transmission, to the nearest Air Force base.

14. Basic Reporting Data and Format. Show the abbreviation "UFO" at the beginning of the text of all electrical reports and in the subject of written reports. Include the required data in all reports, in the order shown below:

a. *Description of the Object(s):*

- (1) Shape.
- (2) Size compared to a known object (use

one of the following terms: Head of a pin, pea, dime, nickel, quarter, half dollar, silver dollar, baseball, grapefruit, or basketball) held in the hand at about arm's length.

- (3) Color.
- (4) Number.
- (5) Formation, if more than one.
- (6) Any discernible features or details.
- (7) Tail, trail, or exhaust, including size of same compared to size of object(s).
- (8) Sound; if heard, describe sound.
- (9) Other pertinent or unusual features.

b. *Description of Course of Object(s):*

- (1) What first called the attention of observer(s) to the object(s)?
- (2) Angle or elevation and azimuth of object(s) when first observed.
- (3) Angle or elevation and azimuth of object(s) upon disappearance.
- (4) Description of flight path and maneuvers of object(s).
- (5) How did the object(s) disappear? (Instantaneously to the North, etc.)
- (6) How long (were) the object(s) visible? (Be specific, 5 minutes, 1 hour, etc.)

c. *Manner of Observation:*

- (1) Use one or any combination of the following items: Ground-visual, air-visual, ground-electronic, air-electronic. (If electronic, specify type of radar.)
- (2) Statement as to optical aids (telescopes, binoculars, etc.) used and description thereof.
- (3) If the sighting occurred while air-borne, give type of aircraft, identification number, altitude, heading, speed, and home station.

d. *Time and Date of Sighting:*

- (1) Zulu time-date group of sighting.
- (2) Light conditions. (Use one of the following terms: Night, day, dawn, dusk.)

e. *Location of Observer(s).* Give exact latitude and longitude of each observer, and/or geographical position. In electrical reports, give a position with reference to a known landmark also, such as "2mi N of Deeville"; "3mi SW of Blue Lake." Typographical errors or "garbling" often occur in electrically transmitted messages, making location plots difficult or impossible.

SUMMARY

For almost two decades, there has been high public interest in the reported sightings of many kinds of mysterious objects in the sky. These aerial phenomena have been called "flying saucers" or "Unidentified Flying Objects" (UFO's) both in the public press and in official documentation.

A series of sightings early in 1966 caused renewed interest in the subject, and the Secretary of the Air Force was requested ^{1/} to provide information concerning Air Force activities in the area of reported UFO's to the Armed Services Committee of the U. S. House of Representatives. The essential elements of his report are included in this study, together with an historical perspective and details regarding the development of reporting and evaluation procedures for handling UFO sighting information.

Public awareness of unusual flying objects commenced in 1947, now considered to be the beginning of the "modern era" of sightings, and has continued with periodic "waves" of activity to the present. Of the 10,147 cases investigated ^{2/} by the U. S. Air Force project established to analyze such reports, 9,501 objects have been identified officially as bright stars and planets, comets and meteors, satellites, balloons, aircraft, and other known causes. This study is concerned with those sightings in which the flying object remained unidentified; i.e., in which the information available to the investigators is not adequate for analysis, or for which the existing information suggests a hypothesis but the object or phenomenon explaining it

Example: 89 45N, 192 71W for 39 45N, 102 21W.

f. Identifying Information on Observer(s):

(1) Civilian—Name, age, mailing address, occupation, and estimate of reliability.

(2) Military—Name, grade, organization, duty, and estimate of reliability.

g. Weather and Winds—Aloft Conditions at Time and Place of Sightings:

(1) Observer(s) account of weather conditions.

(2) Report from nearest AWS or U. S. Weather Bureau Office of wind direction and velocity in degrees and knots at surface, 6,000', 10,000', 16,000', 20,000', 30,000', 50,000', and 80,000', if available.

(3) Ceiling.

(4) Visibility.

(5) Amount of cloud cover.

(6) Thunderstorms in area and quadrant in which located.

(7) Vertical temperature gradient.

h. Any other unusual activity or condition, meteorological, astronomical, or otherwise, which might account for the sighting.

i. Interception or identification action taken (such action is authorized whenever feasible, and in compliance with existing air defense directives).

j. Location, approximate altitude, and general direction of flight of any air traffic or balloon releases in the area which might possibly account for the sighting.

k. Position title and comments of the preparing officer, including his preliminary analysis of the possible cause of the sighting(s). (See paragraph 16.)

l. Existence of physical evidence, such as materials and photographs.

15. Negative or Inapplicable Data. Even though the source does not provide, or an interviewer has not asked for specific information, do not use the words "negative" or "unidentified" before exhausting all logical leads to obtain the information outlined under paragraph 14. For example, information on weather conditions in the area, as requested in paragraph 14g, is obtainable from the local military or civilian weather facility. Use the phrase "not applicable (N/A)" only when the question does not apply to the particular sighting under investigation.

16. Comments of Preparing Officer. The preparing officer will make a preliminary analysis and a comment on the possible cause or identity of the object he is reporting, together with a statement supporting his comment and analysis. He will make every effort to obtain pertinent items of information and to test all possible leads, clues, and hypotheses concerning the identity or explanation of the sighting. (See paragraph 5.) The preparing officer who receives the report initially is in a much better position to conduct an "on-the-spot" survey or followup than subsequent investigative personnel and analysts, who may be far removed from the area, and who may arrive too late to obtain vital data or the missing information necessary for firm conclusions.

17. Classification. Do not classify reports unless data requested in paragraph 14 require classification. Classify reports primarily to protect:

a. Names of sources reporting UFO's and other principals involved, *if so requested by these persons or considered necessary;*

b. Intelligence, investigative, intercept, or analytical methods or procedures;

c. Location of radar and other classified sites, units, and equipment;

d. Information on certain types, characteristics, and capabilities of classified aircraft, missiles, or devices that may be involved in the sighting.

18. Reporting Physical Evidence. Report promptly the existence of physical evidence (photographic or material). Mark all physical evidence forwarded to the AFSC (FTD) for the attention of TD-E, Aerial Phenomena Branch.

a. Photographic:

(1) *Still Photographs.* Forward the negative and two prints. Title the prints and the negatives, or indicate the place, time, and date of the incident.

(2) *Motion Pictures.* Obtain the original film. Examine the film strip for apparent cuts, alterations, obliterations, or defects. In the report comment on any irregularities, particularly those received from other than official sources.

(3) *Supplemental Photographic Information.* Negatives and prints often are insufficient to provide certain valid data or to permit firm conclusions. (See AFM 200-9—a classified document receiving limited distribution.) Information that will aid in plotting or in estimating distances, apparent size and nature of object, probable velocity, and movements includes:

- (a) Type and make of camera,
- (b) Type, focal length, and make of lens,
- (c) Brand and type of film,
- (d) Shutter speed used,
- (e) Lens opening used; that is, "f" stop,
- (f) Filters used,
- (g) Was tripod or solid stand used,
- (h) Was "panning" used,
- (i) Exact direction camera was pointing with relation to true north, and its angle with respect to the ground.

(4) *Other Camera Data.* If supplemental information is unobtainable, the minimum camera data required are the type of camera, and the smallest and largest "f" stop and shutter-speed readings of the camera.

(5) *Radar.* Forward two copies of each still-camera photographic print. Title radarscope photographic prints in accordance with AFR

95-7. Classify radarscope photographs in accordance with Section XII, AFR 205-1, 10 June 1960.

NOTE: If possible, develop photographic film before forwarding. Mark any undeveloped film conspicuously to indicate this fact, to avoid destruction by exposure during examinations en route through mail channels to final addressees.

b. *Material.* Each Air Force echelon receiving suspected or actual UFO material will safeguard it in a manner to prevent any defacing or alterations which might reduce its value for intelligence examination and analysis.

c. *Photographs, Motion Pictures, and Negatives Submitted by Individuals.* Individuals often submit photographic and motion picture material as part of their UFO reports. All original material submitted will be returned to the individual after completion of necessary studies, analyses, and duplication by the Air Force.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

OFFICIAL:

CURTIS E. LeMAY
Chief of Staff

R. J. PUGH
Colonel, USAF
Director of Administrative Services

U.S. AIR FORCE TECHNICAL INFORMATION

This questionnaire 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. 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. When did you see the object?

Day

Month

Year

2. Time of day:

Hour

Minutes

(Circle One):

A.M.

or

P.M.

3. Time Zone:

(Circle One):

a. Eastern

b. Central

c. Mountain

d. Pacific

e. Other _____

(Circle One):

a. Daylight Saving

b. Standard

4. Where were you when you saw the object?

Nearest Postal Address

City or Town

State or County

5. How long was object in sight? (Total Duration)

Hours

Minutes

Seconds

a. Certain

b. Fairly certain

c. Not very sure

d. Just a guess

5.1 How was time in sight determined?

5.2 Was object in sight continuously?

Yes

No

6. What was the condition of the sky?

DAY

a. Bright

b. Cloudy

NIGHT

a. Bright

b. Cloudy

7. IF you saw the object during DAYLIGHT, where was the SUN located as you looked at the object?

(Circle One):

a. In front of you

b. In back of you

c. To your right

d. To your left

e. Overhead

f. Don't remember

8. IF you saw the object at NIGHT, what did you notice concerning the STARS and MOON?

8.1 STARS (Circle One):

- a. None
- b. A few
- c. Many
- d. Don't remember

8.2 MOON (Circle One):

- a. Bright moonlight
- b. Dull moonlight
- c. No moonlight - pitch dark
- d. Don't remember

9. What were the weather conditions at the time you saw the object?

CLOUDS (Circle One):

- a. Clear sky
- b. Hazy
- c. Scattered clouds
- d. Thick or heavy clouds

WEATHER (Circle One):

- a. Dry
- b. Fog, mist, or light rain
- c. Moderate or heavy rain
- d. Snow
- e. Don't remember

10. The object appeared: (Circle One):

- a. Solid
- b. Transparent
- c. Vapor
- d. As a light
- e. Don't remember

11. If it appeared as a light, was it brighter than the brightest stars? (Circle One):

- a. Brighter
- b. Dimmer
- c. About the same
- d. Don't know

11.1 Compare brightness to some common object:

12. The edges of the object were:

- (Circle One):
- a. Fuzzy or blurred
 - b. Like a bright star
 - c. Sharply outlined
 - d. Don't remember

c. Other _____

13. 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. Flash or flicker? | Yes | No | Don't know |
| h. Disappear and reappear? | Yes | No | Don't know |

30. Have you ever seen this, or a similar object before. If so give date or dates and location.

31. Was anyone else with you at the time you saw the object? (Circle One) Yes No

31.1 IF you answered YES, did they see the object too? (Circle One) Yes No

31.2 Please list their names and addresses:

32. Please give the following information about yourself:

NAME _____
Last Name First Name Middle Name

ADDRESS _____
Street City Zone State

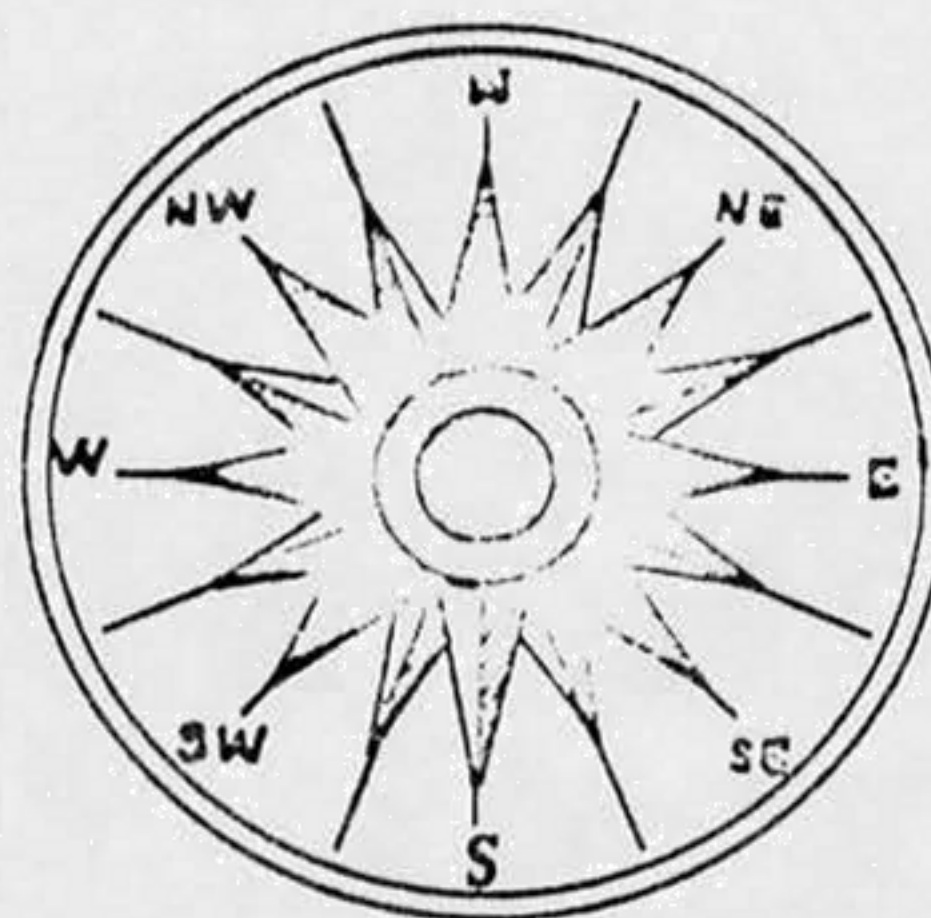
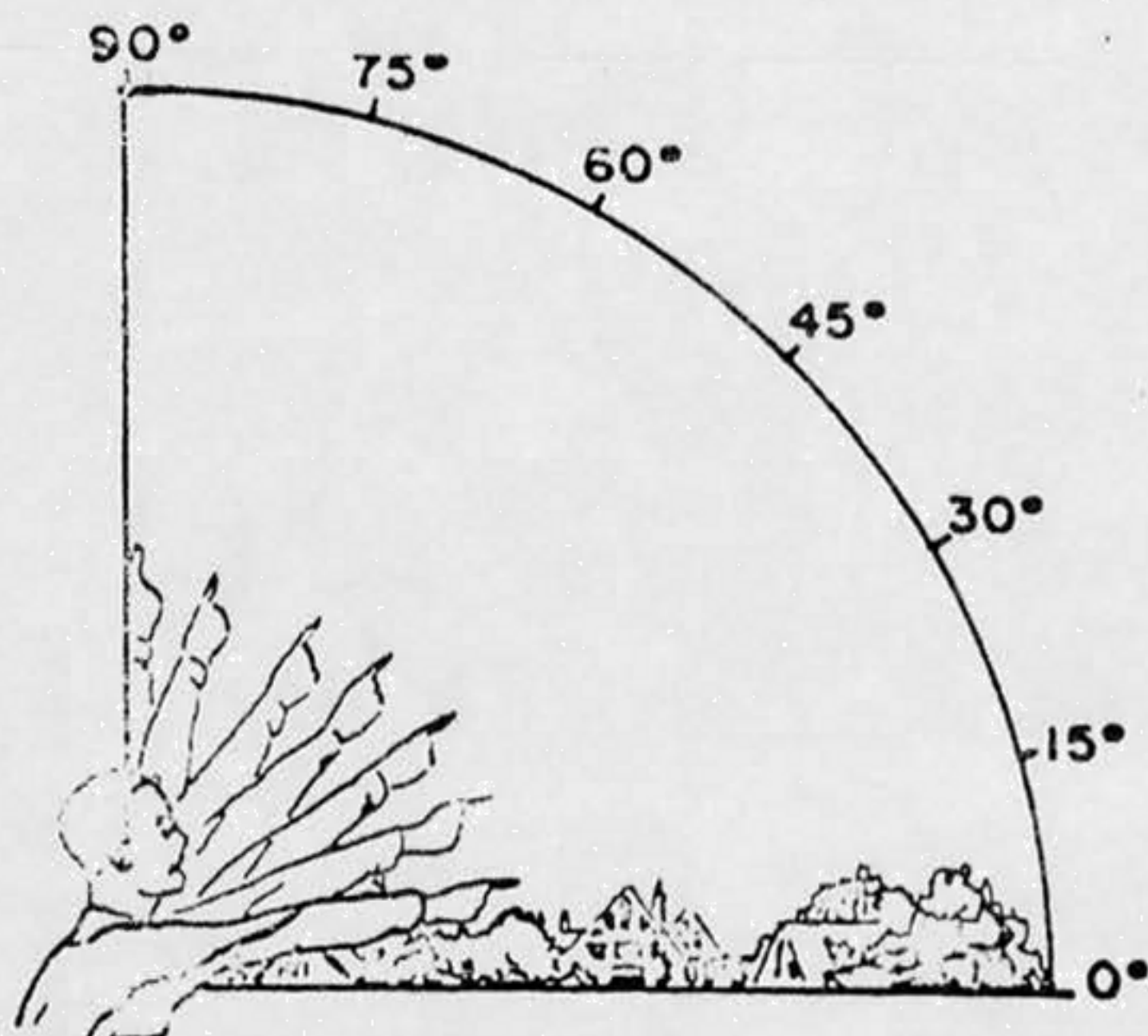
TELEPHONE NUMBER _____ AGE _____ SEX _____

Indicate any additional information about yourself, including any special experience, which might be pertinent.

33. When and to whom did you report that you had seen the object?

Day Month Year

27. In the following sketch, imagine that you are at the point shown. Place an "A" on the curved line to show how high the object was above the horizon (skyline) when you *first* saw it. Place a "B" on the same curved line to show how high the object was above the horizon (skyline) when you *last* saw it. Place an "A" on the compass when you *first* saw it. Place a "B" on the compass where you *last* saw the object.



28. 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.

29. IF there was MORE THAN ONE object, then how many were there? _____
Draw a picture of how they were arranged, and put an arrow to show the direction that they were traveling.

20. 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? _____

21. 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 away would you say it was? _____

22. Where were you located when you saw the object?
(Circle One):

- a. Inside a building
- b. In a car
- c. Outdoors
- d. In an airplane (type)
- e. At sea
- f. Other _____

23. Were you (Circle One)

- a. In the business section of a city?
- b. In the residential section of a city?
- c. In open countryside?
- d. Near an airfield?
- e. Flying over a city?
- f. Flying over open country?
- g. Other _____

24. IF you were MOVING IN AN AUTOMOBILE or other vehicle at the time, then complete the following questions:

24.1 What direction were you moving? (Circle One)

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

24.2 How fast were you moving? _____ miles per hour.

24.3 Did you stop at any time while you were looking at the object?

(Circle One) Yes No

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

- | | | | | | |
|-----------------|-----|----|----------------|-----|----|
| a. Eyeglasses | Yes | No | e. Binoculars | Yes | No |
| b. Sun glasses | Yes | No | f. Telescope | Yes | No |
| c. Windshield | Yes | No | g. Theodolite | Yes | No |
| d. Window glass | Yes | No | h. Other _____ | | |

26. In order that you can give as clear a picture as possible of what you saw, 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.

14. Did the object disappear while you were watching it? If so, how?

15. Did the object move behind something at any time, particularly a cloud?

(Circle One): Yes No Don't Know. IF you answered YES, then tell what
it moved behind: _____

16. Did the object move in front of something at any time, particularly a cloud?

(Circle One): Yes No Don't Know. IF you answered YES, then tell what
in front of: _____

17. Tell in a few words the following things about the object:

a. Sound _____

b. Color _____

18. We wish to know the angular size. Hold a match stick at arm's length in line with a known object and note how much of the object is covered by the head of the match. If you had performed this experiment at the time of the sighting, how much of the object would have been covered by the match head?

19. 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.

34. Date you completed this questionnaire:

Day

Month

Year

35. Information which you feel pertinent and which is not adequately covered in the specific points of the questionnaire or a narrative explanation of your sighting.

APPENDIX C -- BIOGRAPHICAL INFORMATION

*

Dr. Joseph Allen HYNEK. Ph.D. in astrophysics from the University of Chicago. Director of Dearborn Observatory, and Chairman of the Department of Astronomy, Northwestern University, Evanston, Illinois. Consultant to the Air Force since 1948 on the problem of Unidentified Flying Object phenomena.

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Dr. Donald Howard MENZEL. Ph.D. in astrophysics from Princeton University. Director of the Harvard Observatory and Professor of Astronomy, and Paine Professor of Practical Astronomy. Consultant to the Air Force on UFO cases involving Sun Dogs and Parhelia.

*

Dr. Charles Pollard OLIVIER. Ph.D. in astronomy from Vanderbilt University. Formerly Director of Flower Observatory and Professor, University of Pennsylvania. President, American Meteor Society.

Edward J. RUPPELT. (Deceased) Formerly head of Project Blue Book, Aerial Phenomena Branch, Foreign Technology Division, Air Force Systems Command, Wright-Patterson Air Force Base, Dayton, Ohio. Research engineer for Northrop Aircraft Company.

*

Dr. Carl SAGAN. Ph.D. in astronomy and astrophysics from the University of Chicago. Department of Astronomy, Harvard University, and Smithsonian Astrophysical Observatory, Cambridge, Massachusetts. Member of the panel on extraterrestrial life, U.S. Air Force and National Research Council.

Lawrence J. TACKER. Formerly Lt. Col. USAF. Chief of Magazine and Book Branch, Office of Information, Office of Secretary of the Air Force.

Jacques VALLEE. Born and educated in France. University degree in mathematics and astronomy. Consultant on NASA "Mars Map" project.

* Biographical data from American Men of Science, edited by Jacques Cattell. Tempe, Arizona: Jacques Cattell Press, 10th edition, 1960. pp. 1939, 2742, 3030, 3516.

SUMMARY

For almost two decades, there has been high public interest in the reported sightings of many kinds of mysterious objects in the sky. These aerial phenomena have been called "flying saucers" or "Unidentified Flying Objects" (UFO's) both in the public press and in official documentation.

A series of sightings early in 1966 caused renewed interest in the subject, and the Secretary of the Air Force was requested ^{1/} to provide information concerning Air Force activities in the area of reported UFO's to the Armed Services Committee of the U. S. House of Representatives. The essential elements of his report are included in this study, together with an historical perspective and details regarding the development of reporting and evaluation procedures for handling UFO sighting information.

Public awareness of unusual flying objects commenced in 1947, now considered to be the beginning of the "modern era" of sightings, and has continued with periodic "waves" of activity to the present. Of the 10,147 cases investigated ^{2/} by the U. S. Air Force project established to analyze such reports, 9,501 objects have been identified officially as bright stars and planets, comets and meteors, satellites, balloons, aircraft, and other known causes. This study is concerned with those sightings in which the flying object remained unidentified; i.e., in which the information available to the investigators is not adequate for analysis, or for which the existing information suggests a hypothesis but the object or phenomenon explaining it

APPENDIX D

UNIDENTIFIED FLYING OBJECTS: SELECTED BIBLIOGRAPHY

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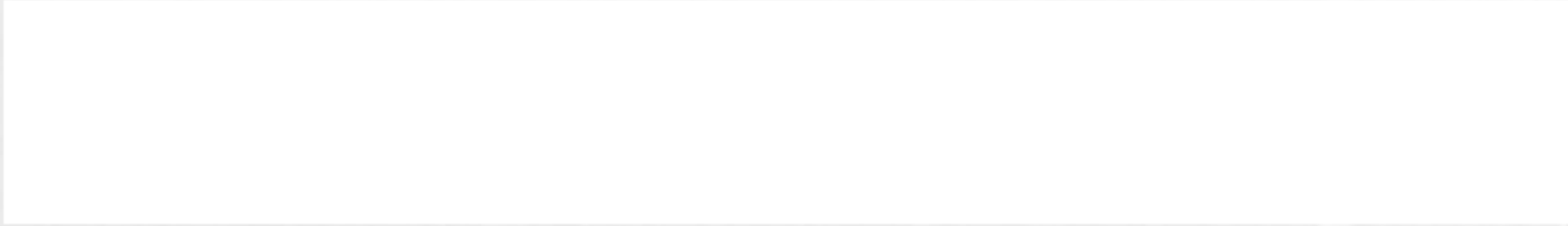


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cannot be proven to have been present or taken place at the recorded time of the sighting.

Late in 1947, the Department of the Air Force was designated as the official mechanism of the United States Government for investigating and evaluating reports on unexplained flying objects and of determining any latent threat to the national security. The organization then established, known for many years as Project Blue Book, is charged with monitoring, investigating, documenting and evaluating alleged UFO sightings within the continental United States.

In addition to Air Force in-house efforts to document and analyze the broad spectrum of sightings, special non-government consultant panels periodically have been formed to review investigatory procedures and findings of the best documented UFO cases. Also, an industrial consultant firm was directed to conduct an exhaustive examination of the procedures adopted for reducing sighting data to a form useable in later statistical manipulation and graphic depiction.

The published findings of the study efforts, both by the Air Force and independent consultants, contain five major points:

1. UFO's do not pose a threat to the nation;
2. UFO's do not represent developments or principles beyond present-day scientific knowledge;
3. There is no evidence of extraterrestrial vehicles under the control of an intelligent being;
4. There is no evidence of physical matter left behind by a reported UFO;
5. Some small fraction of total sightings remain "unidentified."

LRS-3

Today, numerous unofficial organizations exist which collect information and publish news on UFO sightings. Many of these groups allege that the Air Force is not revealing all of the truth about unidentified flying objects. No evidence of such concealment has been developed. However, to strengthen its investigatory capability, the Air Force has announced that a new "blue ribbon" panel of scientists has been appointed to conduct an independent, comprehensive study of data pertaining to sightings that so far have been denoted as "Unidentified."

INTRODUCTION

Shortly after the end of the Second World War, the inhabitants of various countries reported observing unusual aerial phenomena. The news media publicized many of these sightings -- including opinions as to their possible extraterrestrial origin -- and a high degree of public interest developed. Although numerous reports of unexplained flying objects were reported throughout Europe in 1946,^{3/} attention in the United States was focused on the subject as the result of businessman Kenneth Arnold, flying his private plane on June 24, 1947, reporting that he had seen "a chainlike formation of disc-shaped objects"^{4/} near Mount Rainier, Washington. Due to the wide circulation of this story, and the use of the descriptive phrase "flying saucers", nationwide interest quickly developed and was sustained by numerous other alleged sightings of unidentified flying objects.

"Unidentified flying objects," the terms used in all official and most popular references to the subject today, are defined by the United States Air Force as "any aerial object which the observer is unable to identify."^{5/} Dr. Carl Sagan of the Department of Astronomy, Harvard University, prefers to consider "UFO" as a "generic term for atmospheric phenomena, detected visually or by radar, of a nature not immediately understood."^{6/}

THE UNIDENTIFIED FLYING OBJECT

It is not possible to state that there is a "typical" UFO but, as discussed later, such aerial phenomena may be separated into several categories. The numerous reports on sightings, which number more than

10,000 in the United States alone for the period 1947 through 1965, have been described by Dr. Donald H. Menzel, Director of the Harvard University Observatory, as "a heterogeneous collection of facts, fiction, and guesses."^{2/} The Air Force indicates that reports of unfamiliar objects in the sky have been made by a wide range of observers: military and civilian pilots, amateur astronomers, housewives, etc.

Description of Various Types of UFOs

Descriptions of UFOs often are inadequate for subsequent explanation due to the conditions under which the sighting was made, the qualifications of the observer, or the difficulty of translating the elements of the sighting into meaningful terms. Basic descriptive data usually are expressed in these categories (with examples):

- Shape (cigar, propeller, aircraft, disc)
- Size (varies widely)
- Color (red, green, white, etc)
- Motion (hovering, supersonic, vertical, zigzag)
- Means of propulsion (unknown -- flaming exhaust or none; various noises or silent)
- Incidence (day or night; seldom over water or touching the earth)
- Structure (unknown: apparently solid to "invisible")
- Purpose (unknown) 8/

Trends in UFO Activity

Experience derived from nearly twenty years (post-1947) of UFO sighting activity indicates that activity may be reported in "waves" of observations, sometimes in a localized area. The activity in Europe in 1946, in the United States in 1952, and the high number of sightings in 1957 after the launching of Sputnik reflect such patterns (see Figure 1). In the aftermath of the Sputnik I launching in October of 1957, official