# C U F O N℠

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Adobe Portable Document Format Version of
Air Technical Intelligence Center guide:
**HOW TO MAKE FLYOBRPTS**
Dated 25 July, 1953

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In association with The UFO Coalition, Dr. Michael Swords is the custodian of the papers of Edward Ruppelt, head of Project Grudge (later renamed Blue Book) from 1951 through 1953 and author of the seminal UFO work The Report on Unidentified Flying Objects (Doubleday, 1956.) From the Ruppelt Papers, Dr. Swords provided a copy of this guide to Jan Aldrich of Project 1947 and in turn, Jan provided it to CUFON for on-line publication.

This guide, written in 1953, was intended for US Air Force intelligence officers and others who might have to make UFO reports ("Flying Object Report = FLYOBRPT".) It cites as its authority Air Force Letter 200-5 (AFL 200-5) which preceded Air Force Regulation 200-2. This guide contains all the different report forms:

- Ground Observer's Information Sheet
- Electronics Data Sheet (radar)
- Airborne Observer's Data Sheet and,
- Supporting Data form

and also some statistics that may have not seen the light of day (for many years) until now.

Because this document was part of the Ruppelt Papers and because of the issue date of this guide, we suspect that Edward Ruppelt may have written it, but have no proof of this.

- Jim Klotz - CUFON SYSOP
- Dale Goudie - Information Director

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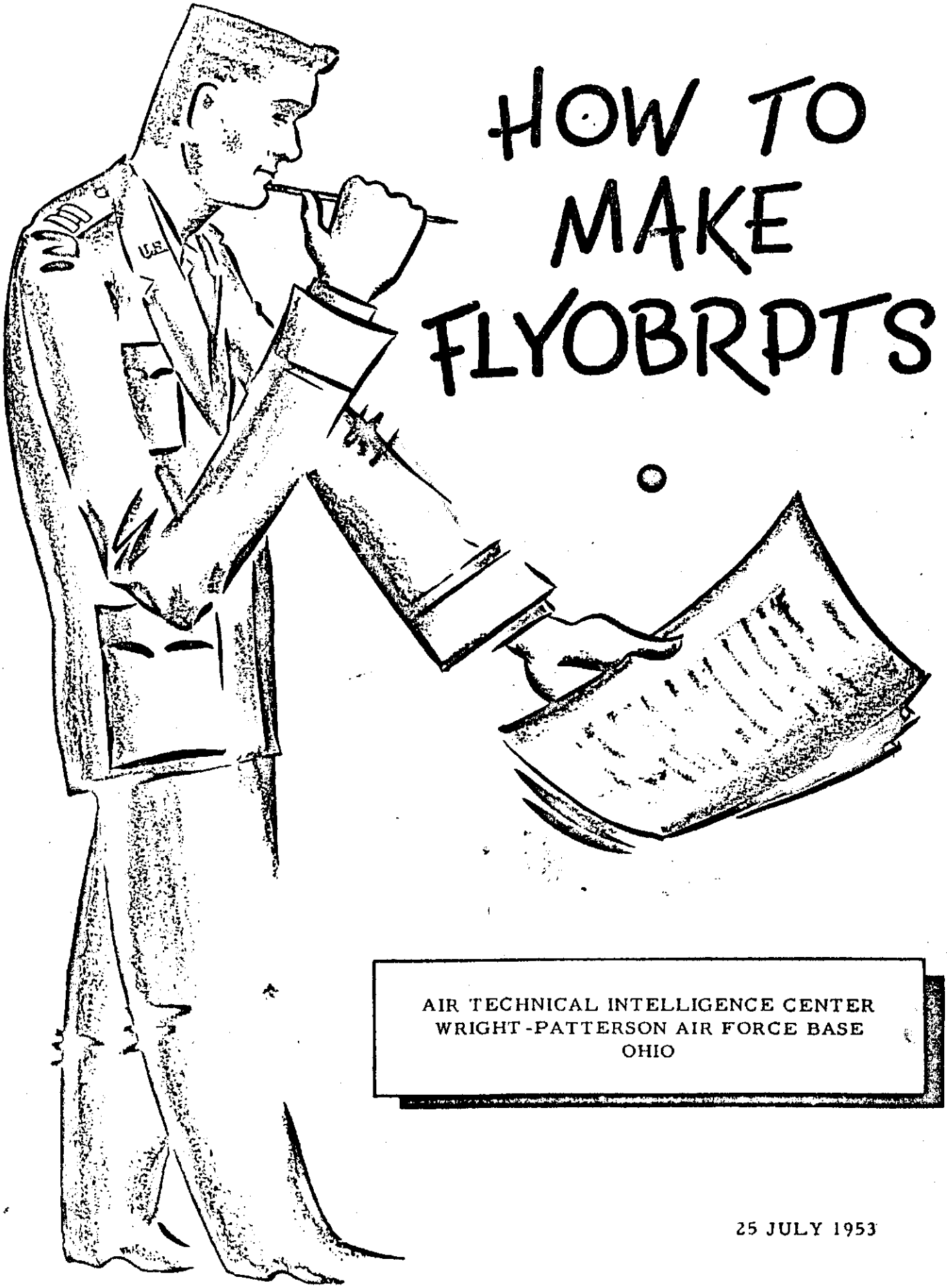

# HOW TO MAKE FLYOBRPTS

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
OHIO

25 JULY 1953

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## INTRODUCTION

This manual is intended for use by intelligence officers, operations officers, or anyone who may at some future date be required to submit a report of an unidentified flying object (a FLYOBRPT).

Although the quality of reports has continued to improve, in the past year, in many cases the data that are forwarded have been too nebulous to be of any value for analysis. It is realized that there is only a limited amount of specific data that can be obtained from a reported sighting, however, since the data are so scarce every possible bit of information should be obtained.

It is believed that this manual will aid in pointing out what information is wanted and make the collection of this information as easy and fast as possible. The whole manual has been slanted toward obtaining the greatest amount of data possible without greatly increasing the workload of the reporting officer.

In addition, the manual is intended to correct many misconceptions that many persons have had as to the purpose and operations of the project. Contrary to many reports, the Air Force is taking a genuine interest in the subject of Unidentified Flying Objects and will continue its efforts to find a solution. The cooperation of all Air Force personnel and especially those making reports of sightings is needed to accomplish this goal.

SECTION I

## Air Force Letter 200-5

The basic authority placing responsibility for the investigation, reporting and analysis of unidentified flying objects is outlined in AFL 200-5 dated 29 April 1952, Subject: Unidentified Flying Object Reporting (Short Title: FLYOBRPTS). This letter has received Air Force wide distribution and adherence to the reporting procedures outlined and has been a major factor in improving the quality of reporting.

### Paragraph 7c of AFL 200-5:

Paragraph 7c is the most important part of this letter insofar as the office preparing a report is concerned. The data requested represents the necessary minimum. These requirements are to be used only as a guide and all information pertinent to the observation will be reported. The quality and quantity of the investigation into the circumstances surrounding a flying object report are limited only by the initiative and resourcefulness of the preparing officer. More on this subject will be covered in Section V, "How to Report an Unidentified Flying Object".

### What Reports Should be Forwarded:

The second sentence of paragraph 1 of AFL 200-5 states: "All incidents observed by Air Force personnel or received at any Air Force installation from a civilian source will be reported . . . . . ." This, however, does not mean that the officer receiving such reports cannot make a preliminary evaluation and determine which reports should be forwarded. In making this preliminary evaluation, the content of the report and the source should be considered. In considering these items the accuracy of the reported observations, the source's ability as an observer, the amount of details observed,

etc., should be taken into account. Reports that do not contain a complete description of the incident are of little value for analysis.

Courtesy in Accepting Reports:

In all instances, no matter who is making a report, extreme courtesy should be shown the person making the report. Certain cases have been reported where civilians conscientiously believing they were helping the Air Force, reported a "flying saucer" only to receive very discourteous treatment. It should always be remembered that every effort should be made to maintain good public relations between military and civilians no matter how the reporting officer feels about such reports.

If a FLYOBRPT is "Solved":

If in the investigation of a FLYOBRPT the investigating officer should obtain data that allows him positively to identify a reported object, no initial wire report need be filed since AFL 200-5 pertains only to Unidentified Flying Objects. However, if the identification is made after the initial wire report is made, ATIC should be immediately notified by wire as to the identification.

Air Force Form 112:

There have been instances when a written report was delayed for several weeks because no Air Force Form 112's were available. Whenever possible, Form 112's should be used to transmit written reports, however, if the forms are not available and they cannot be obtained in a reasonably short period of time, a written report can be forwarded in letter form transmittal.

SECTION II

## General

Since 1947, the United States Air Force has been taking official notice of reports of so-called "flying saucers", since the reports have indicated, and continue to indicate, that the problem is related to the Air Force responsibility for the aerial defense of the United States. The necessity for this action is apparent when one considers that rapid, positive identification is the second phase of the four steps of defense: detection, identification, interception, and destruction.

### The Definition of an "Unidentified Flying Object":

It is impossible to define accurately the term "flying saucer" or unidentified flying object. For all practical purposes the term may be applied to any airborne object which by performance, aerodynamic characteristics, or unusual features fail to conform with presently known aircraft or missile types, and cannot be identified as a known object or phenomena (i.e., known objects being defined as balloons, aircraft, etc.). Naturally this definition places a burden upon the observer; an object which to an experienced pilot is explainable may be a "flying saucer" to a housewife.

### Project Started in 1947:

The Air Force commenced the investigation of unidentified flying objects in the fall of 1947. By 27 December 1949, 375 reported sightings had been investigated, and the Air Force announced its findings. At that time the evidence indicated, as it still does, that the majority of reports can be accounted for as misinterpretations of conventional objects, while a smaller percentage can be attributed to a mild form of hysteria, meteorological and

astronomical phenomena, light aberrations, hoaxes, or any combination of these items. There remain, however, a significant number of unexplained sightings by reliable persons, one reason why the Air Force has continued its investigation. These unexplained sightings have been termed "incredible reports by credible people".

The Responsibility for FLYOBRPT Investigations:

The responsibility for the investigation of unidentified flying objects has been delegated to the Air Technical Intelligence Center (ATIC), a field activity of the Directorate of Intelligence, Headquarters USAF. ATIC has established "Project Blue Book" for this purpose.

An "Unknown":

Many questions arise as to what exactly constitutes an unexplained sighting. An unexplained sighting, or a sighting that is classified as "unknown", is a comparatively well documented and investigated report from a reliable person or persons whose integrity in making the report cannot be questioned, and in which the reported object cannot be identified as a misinterpretation of a known object or phenomena. This does not mean that all reports carried as unknown represent some actual unknown aircraft or controlled vehicle in the earth's atmosphere. It simply means that after a reasonable amount of study the indicent cannot be plausibly explained. If more data on the incident could be obtained it might have a simple explanation.

A Few Statistics:

To date (May 1953) Project Blue Book has received through military channels and analyzed over 3,500 reports of unidentified flying objects. Inaddition, Project Blue Book has received hundreds of letters direct from civilians. In general, the data contained in these letters are too nebulous to evaluate.

Since 1 January 1952, Blue Book has analyzed over 2,000 reports received through military channels and these have been broken down into the following categories by percentages of the total reports.

| | | |
|---|---|---|
| Balloons | | Total - 15.4% |
| Known | - 1.6 | |
| Possible | - 9.9 | |
| Probable | - 3.9 | |
| Aircraft | | Total - 15.2% |
| Known | - 1.5 | |
| Possible | - 7.7 | |
| Probable | - 6.0 | |
| Astronomical | | Total - 17.8% |
| Known | - 6.6 | |
| Possible | - 7.1 | |
| Probable | - 4.1 | |
| Other | | 6.3% |
| Hoaxes | | 1.6% |
| Radar (where explanation is not obvious) | | 5.8% |
| Insufficient Data to Evaluate | | 23.6% |
| Unknown | | 14.3% |

As to the breakdown of types of sources making the report, the following figures represent percentages received from arbitrarily categorized groups:

| | |
|---|---|
| Civilians (General - no special qualifications that would establish them as better than average observers) | 39.7% |
| USAF Pilots and Aircrew Members (while flying) | 11.1% |
| Airline Pilots (while flying) | 2.0% |
| Civilian Pilots (non-airline while flying) | 4.0% |
| Tower Operators (civilian and military) | 1.0% |
| Balloon Observers | 2.5% |
| Civilian Scientists, Engineers, etc. | 3.2% |
| Military Personnel (general) | 24.0% |
| Radar Returns | 12.5% |

The percentage of military observers rose to 53 percent for the first five months of 1953 while civilian sightings dropped.

Thus far the relatively limited statistical approach to FLYOBRPTS has been worthwhile only in picking up the most general trends. For example, the month of July every year since 1947 has been one with relatively high numbers of incidents. Plausible explanations of this are as numerous as MIG's in Manchuria. Another general trend exists in the geographical location of sightings; these tend to concentrate in the Washington, D.C.; San Antonio, Texas; Albuquerque, New Mexico; and San Francisco, California areas. Another interesting development which the statistical approach has brought out is that a comparatively high percentage of sightings occurs during the twilight hours. The simplest explanation is that many people are out-of-doors at that time, and also at twilight, although the sun may be below the horizon, its rays are still penetrating the upper altitude levels and any reflective surface will be very bright against what appears to be a dark background.

As yet there seems to be no apparent pattern regarding shapes, sizes, estimations of velocity and altitude, course headings, or maneuvers of the unidentified flying objects.

The Present Situation:

After much study it can be said that the reported unidentified flying objects do not pose a threat to the security of the United States. There have never been adequately substantiated evidence of any overt hostile acts and to go a step further, there has never been any concrete evidence such as "hardware", measured speeds, or altitudes, etc., that prove there is any type of unknown controlled object in the skies over the United States.

In a discussion of this phase of the subject of unidentified flying objects, the question of interplanetary travel always arises. Could the earth be visited by some race from outer space? Many people qualified to answer this question will say that it is not impossible for such a thing to happen, but there is no evidence that any reports of an unidentified flying object is a report of a craft from outer space.

The question then arises why is the Air Force continuing its interest in the subject. There are two reasons: (1) as was stated before, there are credible reports of objects that cannot be readily identified and with the world situation what it is, it is well to develop a system for the identification of objects reported over the U.S. or its foreign bases; (2) nothing precludes the possibility that at some future time some radical new type of flying object, radical in performance and appearance, could be developed.

A possible third reason is the fact that some of the reports might be a description of some yet unknown natural phenomenon. Although this would have no direct bearing on the defense of the United States, it would be of great interest to scientists. It is interesting to note that one-hundred and fifty years ago those who reported meteorites as being "stones from the sky" were subjected to ridicule. Even when pieces of a meteorite were brought to the French Academy of Sciences, they were analyzed as being pieces of ordinary rock that had been struck by lightning.

Major General John A. Samford, Director of Intelligence, summed up the Air Force policy substantially as follows in a statement at the Pentagon Press Congerence on 29 July 1952: "So our present course of action is to continue with this problem to the best of our ability, giving to it the attention that we feel it very definitely warrants. It will receive adequate but not frantic attention".

SECTION III

## What Happens to a FLYOBRPT

Most FLYOBRPTS are initially received at ATIC by TWX, a lesser number by AF Form 112. Project Blue Book has developed a standing operating procedure for handling reports. Upon receipt of a report, a Blue Book file clerk completes a master file card which contains the date, time, and place of the incident. Simultaneously he prepares an incident folder, once again using date and place to identify the report. The folder and the card next move to the analyst. The analyst possesses a wide variety of background material, such as charted locations and times of all weather balloon launches, tracks of all upper air research balloons, daily weather and winds aloft observations, etc., any of which may account for or have some bearing on a FLYOBRPT. The analyst classifies an object tentatively as a balloon, possible aircraft, etc. In the event of a really "hot" sighting, a field trip may be made to the area of the sighting to gather more information and conduct reinterrogations. Paragraph 5b of AFL 200-5 authorizes direct contact by phone, wire, mail, or personal visit to any Zone of Interior base, installation, or unit.

### Classification of FLYOBRPTS:

As was noted above, the analyst will normally tentatively classify a report as known, probable, or possible balloon, aircraft, astronomical body, etc., or in some cases unknown. Blue Book uses this system to differentiate between degrees of certainty in conclusions of reports. The following definitions are applied to all reports:

"Was aircraft, balloon, etc.": This conclusion means that data on known objects (i.e., balloon tracks, aircraft flights, observed meteors, etc.)

were correlated with data from the sighting and there is no doubt as to the identity of the reported object.

"Probably aircraft, balloon, etc.": This conclusion means that a certain percentage of the data on known objects do not correlate with the data from the sighting, but there are factors that indicate that there may have been an error in the observations of the reported object and the analyst is reasonably sure the reported object is known. Many reports of "stray" or untracked balloons fall into this category.

"Possibly aircraft, balloon, etc.": This conclusion means that there is very little data to substantiate the belief that the reported object is a known object. However, from the description the analyst concludes that it is similar to other sightings that have had known conclusions and is possibly a known object.

"To little data to evaluate": This conclusion means that the observer could not furnish enough data on his observation upon which to base a conclusion. In addition, the analyst does not believe it economical in time and money to attempt to gather more data. Many sightings by single observers of doubtful observation powers fall into this category.

"Unknown": This conclusion means that the source of the report can be considered reliable and that a large percentage of the data in the report does not correlate with the characteristics of known objects or natural phenomena.

Theories on Natural Causes:

It can be noted here that, to date, with one exception, none of the proposed theories on natural causes of "flying saucers" such as mirages, inversion

layers, ionization, etc., have been positively proven to account for any sighting. The exception is radar. It is known that certain weather conditions can cause unusual radar returns called "anamolous propagation".

Specialists Aiding Blue Book:

In addition to full-time analysts assigned to Project Blue Book, many specialists are available to make their comments on selected reports. The Electronics Branch of ATIC reviews all sightings involving radar. An astrophysicist is under contract to review sightings in which an astronomical body may be involved or has some bearing on the sighting. A panel of scientists and engineers from many branches of the sciences, including a psychologist, astronomer and physicist are available on an "on call" basis. These are just a few of the people Blue Book may call upon when and if the need arises. At any time during this analysis, the reporting agency may be called upon to furnish additional information.

Final Analysis:

When the final analysis of the incident folder is completed, the information on the file card is augmented by addition of this conclusion, a brief summary of the incident, general comments, etc. This card is then reproduced in five copies which become a cross-reference index to the type of sighting, date of sighting, category of source, location of sighting, and conclusion. All of this information, plus certain additional information is also transferred to an IBM card for further statistical study.

F-86's Attempt to Intercept:

As an example of ATIC's procedures and problems, it is worthwhile to examine an interesting incident which occurred in the vicinity of Wright-Patterson Air Force Base on 1 August 1952.* 0951 E At 1551Z on that date, a ground radar station

* Revised [illegible]

located in Central Ohio picked up a track on its screen. The unidentified target was moving at a ground speed of 450 knots on a heading of 240°, from a position approximately 20 miles NNW of Wright-Patterson AFB. Two airborne F-86's then under the ground radar's control were immediately vectored and sighted the object at 1555Z. At 1556Z ground radar lost contact with the object. The F-86's climbed to their ceiling and photographed the object, but the object was still well above them. The F-86's were low on fuel, so at 1613Z they broke contact and returned to base. At this time they were about 12 miles SE of their original point of contact. Apparently the large round object, flying well above 50,000 ft., had slowed down from 450 to 40 knots and had nearly hovered over Wright Field.

In the case of this report, it was relatively simple to eliminate misinterpreted known aircraft, birds, etc., as possibilities simply because the object was at extreme altitude. Also, since the sighting occurred in broad daylight, well above haze level and the object's performance did not conform to that of any known astronomical body, it was apparent that the most plausible explanation might well be that the object was either a balloon, some freakish weather phenomenon, or a combination of both.

The image of the UFO on the gun camera films was fuzzy and indistinct, yet it served to corroborate the two pilots' descriptions of a round, brilliant, metallic appearing target. One of the pilots reported that as he made a gun camera run on the object, he received a weak electronic return on his radar gunsight. He also pointed out that the object was of a size to cover the "pip" on his gunsight and estimated it at 12,000 to 25,000 ft. above him. Since the gunsight of the F-86 is a range finding and measuring device, these factors would place the diameter of the object in the neighborhood of 25-40 ft.

From other sources, ATIC next determined that there were no large "skyhook" type balloons in the area at that time. However, Wright-Patterson AFB is scheduled to release rawinsonde weather balloons at 0300, 0900, 1500 and 2100Z daily. These balloons are of a light tan latex, expand to over 20 ft. in diameter at extreme altitudes, and carry aloft both telemetering equipment and a radar-reflecting triangle. On this date, the weather station reported that it launched its scheduled 1500Z rawinsonde balloon at 1450Z. A normal ascent rate of approximately 1,000 fpm would put this balloon at about the same altitude as the UFO. Simultaneously ATIC obtained the complete weather and winds aloft data. The former showed a completely normal temperature lapse rate and there was nothing significant in the dewpoint readings. These readings extended to 55,000 ft. and winds to that altitude were generally from 260° at about 30 knots. Computations from these figures and the track obtained indicated that the weather balloon would be at 1551Z perhaps twenty miles south of the position ascribed to the UFO, but this difference could well be accounted for by human error.

The factor which seemed to eliminate balloons from consideration remained the high ground speed of the UFO, as reported by ground radar, and the fact that the object ostensibly moved against the wind, even though there were no winds aloft observations over 55,000 ft.

The next step was to determine whether it was possible that the pilots saw one object, i.e., the balloon, while ground radar picked up another, in spite of the simultaneous nature of the sighting.

This was determined to probably be the most logical explanation of the incident. Since no height finding equipment was used, the exact altitude of

the unidentified target was unknown. The radar measured only the bearing and range thus the target could have been at any altitude on a large segment of a semi-circle, the radar station being at the center.

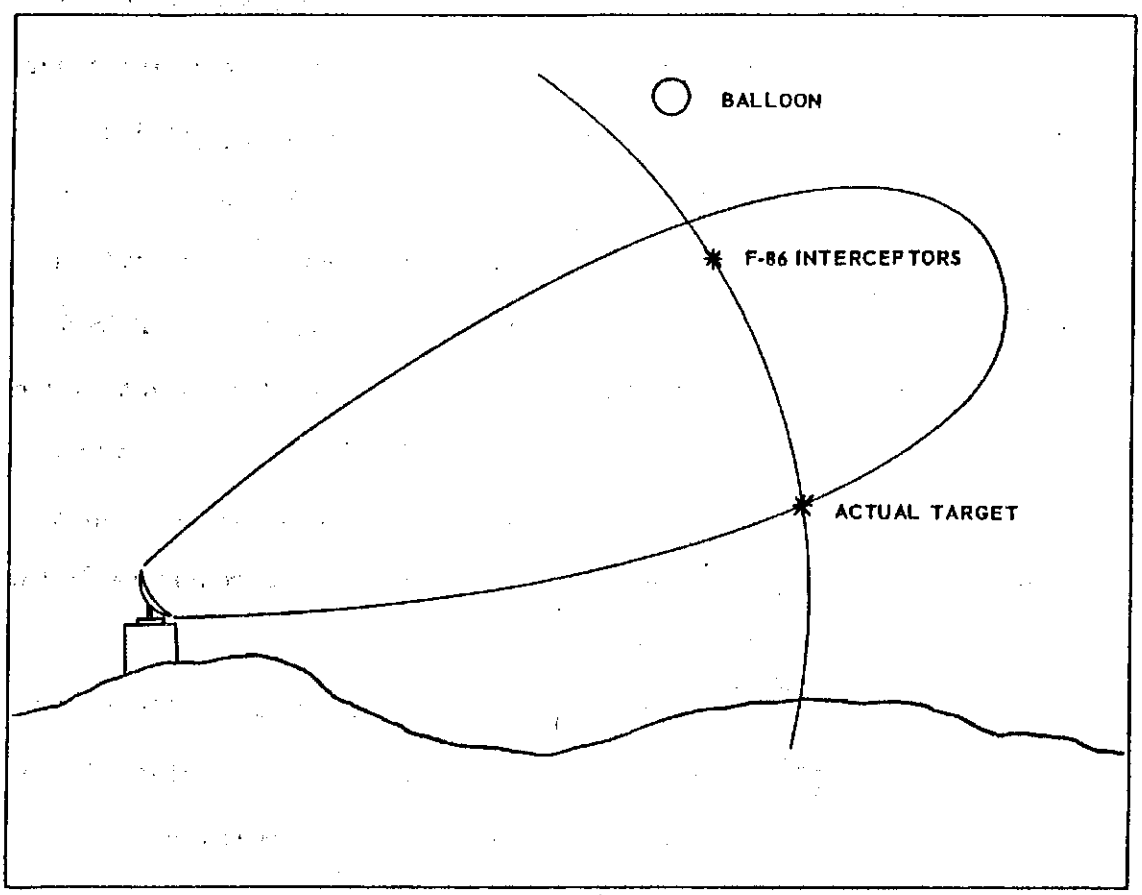



Figure 1 How F-86's missed the target they were vectored into and saw a balloon.

The target could have been a fast aircraft below the F-86's and one that they did not see. When they got to the apparent intercept point they could have noticed the balloon above them, instead of the aircraft below them, and thought the balloon was the object that they had been vectored into. Since the ground radar lost the target soon after the F-86's made contact the unidentified aircraft was not observed leaving the area. This is further brought out by the

fact that the contact was broken off only 12 miles from where it started and to a certain degree, downwind. If the object picked up on the ground radar and the object the pilots observed were the same there would have had to be a change in speed or maneuvers to stay in the area. Since the radar return was tracked at 450 knots during the 18 minute chase by the F-86's it would have traveled 165 nautical miles, actually it only traveled 12 nautical miles or at a speed of about 40 knots if it stayed on a straight course. The pilots did not report the object making any violent maneuvers (i.e. series of 360° turns) to stay in the area, therefore it can be assumed that the object either slowed down from 450 to 40 knots or was traveling at 40 knots all the time. The wind was given as 30 knots but since the pilots could not give a pinpoint location, the error is reasonable. The balloon was carrying a radar reflector, it could very easily give a radar return on the gunsight.

From the above analysis Project Blue Book has written this incident off as an unusual coincidence wherein aircraft were vectored into an unidentified target only to make visual contact with a second object thus missing their original target.

SECTION IV

## What You Can Do To Help

The quality of FLYOBRPTS can be increased to a great extent if certain steps are taken before a report is made. The first recommended step is to establish who on the base is responsible for reports of Unidentified Flying Objects. Since AFL 200-5 states that it is the responsibility of the Commanding Officer to see that all FLYOBRPTS are forwarded to the appropriate agencies, this step usually has already been taken. It is wise to establish who will be contacted during duty hours, and who will be contacted during off-duty hours. This may save a few midnight telephone calls. The base telephone operator should be advised as to whom on the base to contact if someone calls to make a report. Many bases have gone so far as to publish this data as a base regulation and have listed the Unidentified Flying Object number along with the fire, ambulance, and police numbers in the phone book. In any event, the tower, operations, weather station and the air police detachments should be advised since they may receive reports.

Local Radar:

Many bases now have radar of some type, either regular search radar or GCA, ASR, PAR, or storm warning radar. The officer responsible for preparing FLYOBRPTS should find out what kind of radar is in the area and how to contact these units in case their services are needed in a hurry. Some radar sites may not be operational 24 hours a day, but might be operating when needed. The radar operators should be briefed on the subject of FLYOBRPTS so they will know what data to look for and what to remember in case they receive an unidentified return.

Since a certain percentage of the unusual or unidentified radar tracks that have been reported to Blue Book have been due to weather or interference between two radars, there is very little that an operator can do to quickly check the possibility of a spurious signal from weather or interference; however, if it can be done the set should be switched from high to low beam or vice versa. This might shed some light on the cause of the target if it is weather. To check interference the frequency of the set can be changed by 20-40 megacycles, again if the set is such that the frequency can be varied.

The Control Tower:

The tower should be "read-in" on FLYOBRPT reporting. Tower operators have the best vantage point on the base in that they have excellent visibility, are usually on duty 24 hours a day, and can contact aircraft in the area to request aerial observations. They may make the initial sighting or they can be contacted to verify or explain sightings that others report.

The Photo Lab:

Photo labs usually have several cameras loaded and ready to go. Admittedly, many reported objects appear extremely small and a photo would be of little value for the purpose of analysis. A photo, however, does substantiate the existence of an object and can be analyzed to determine the brightness.

The Base Weather Station:

Last, but not least, is the base weather station, which possesses a theodolite, an instrument used to measure the azimuth and elevation angles of a balloon. In addition, the weather station can communicate with weather stations at other nearby air bases and request them to make theodolite readings. If an object can be seen from two locations that are simultaneously tracking with a theodolite,

the data they gather in the form of angles of azimuth and elevation and time is equivalent to a dollar jackpot. From these data, the speed, altitude, and approximate size can be obtained. These three features allow positive identification to be made. Although two theodolites making similar simultaneous readings are the ultimate, data from one instrument is very helpful. No exact triangulation can be obtained, but these data plus estimates of the angles by other observers can be used to get a rough approximation. A theodolite also utilizes a low-power telescope which will aid in a possible identification of the reported objects.

Triangulation:

The word "triangulation" was mentioned in conjunction with theodolite. For those who may not be familiar with the word it simply means applying trigonometry to angles that two or more observers may measure or estimate, measuring the distance between these observers, and arriving at an altitude and speed (see Figure 2). The accuracy is limited to the accuracy of the estimation of the angles involved. Triangulation can be accomplished without instruments which is the reason for wanting everyone who might see an Unidentified Flying Object to note the estimated azimuth and angular elevation. Two people at separate locations can give this data, but the more observers the better. Their data can be averaged out to give more accurate results. Astronomers use these methods to establish the tracks of meteors. Many times a person will have no idea of angles but can tell you he saw the object over the tip of the flagpole while he was standing in front of base headquarters. By going back to the spot, the angles can them be estimated or measured with a surveyor's transit or sextant and compass. Establishing the position or flight path of an object in relation to known landmarks produces helpful data.

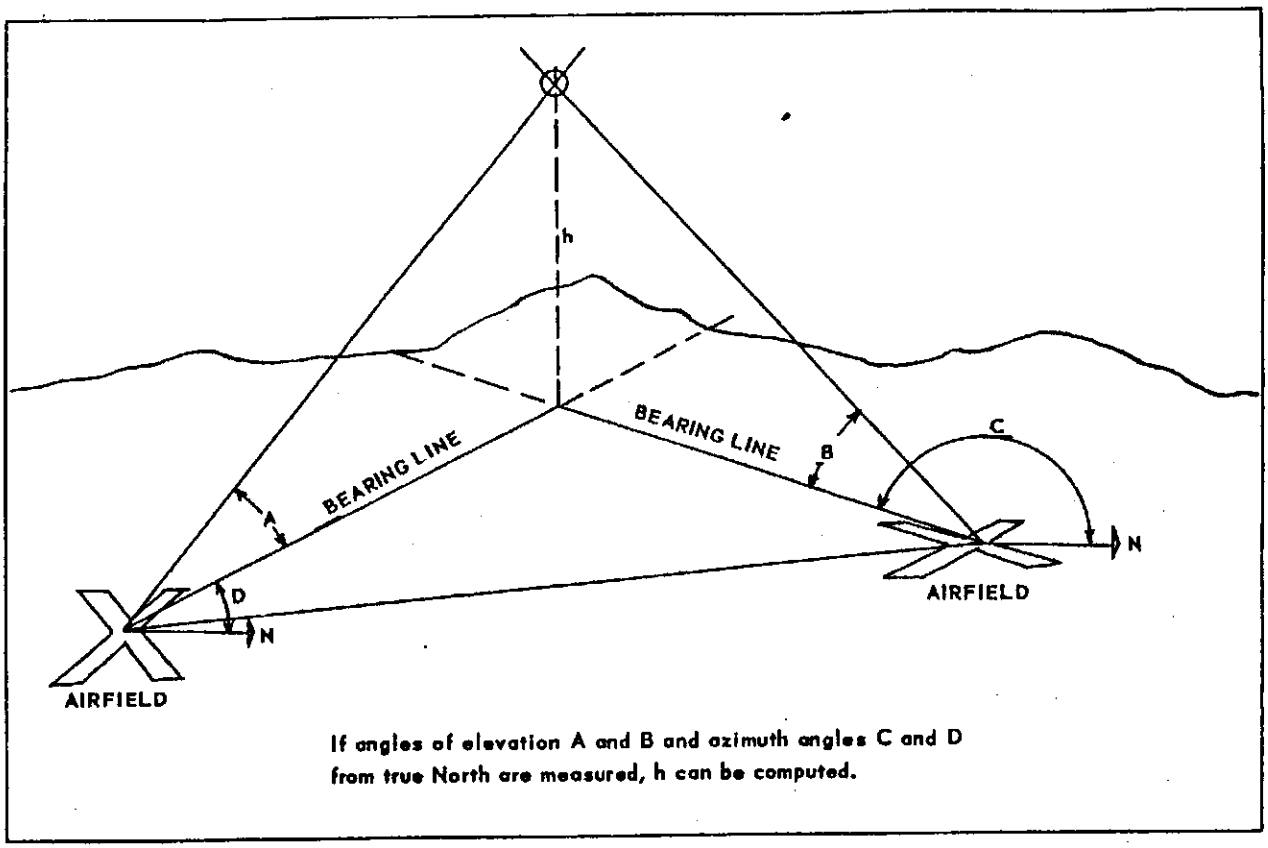
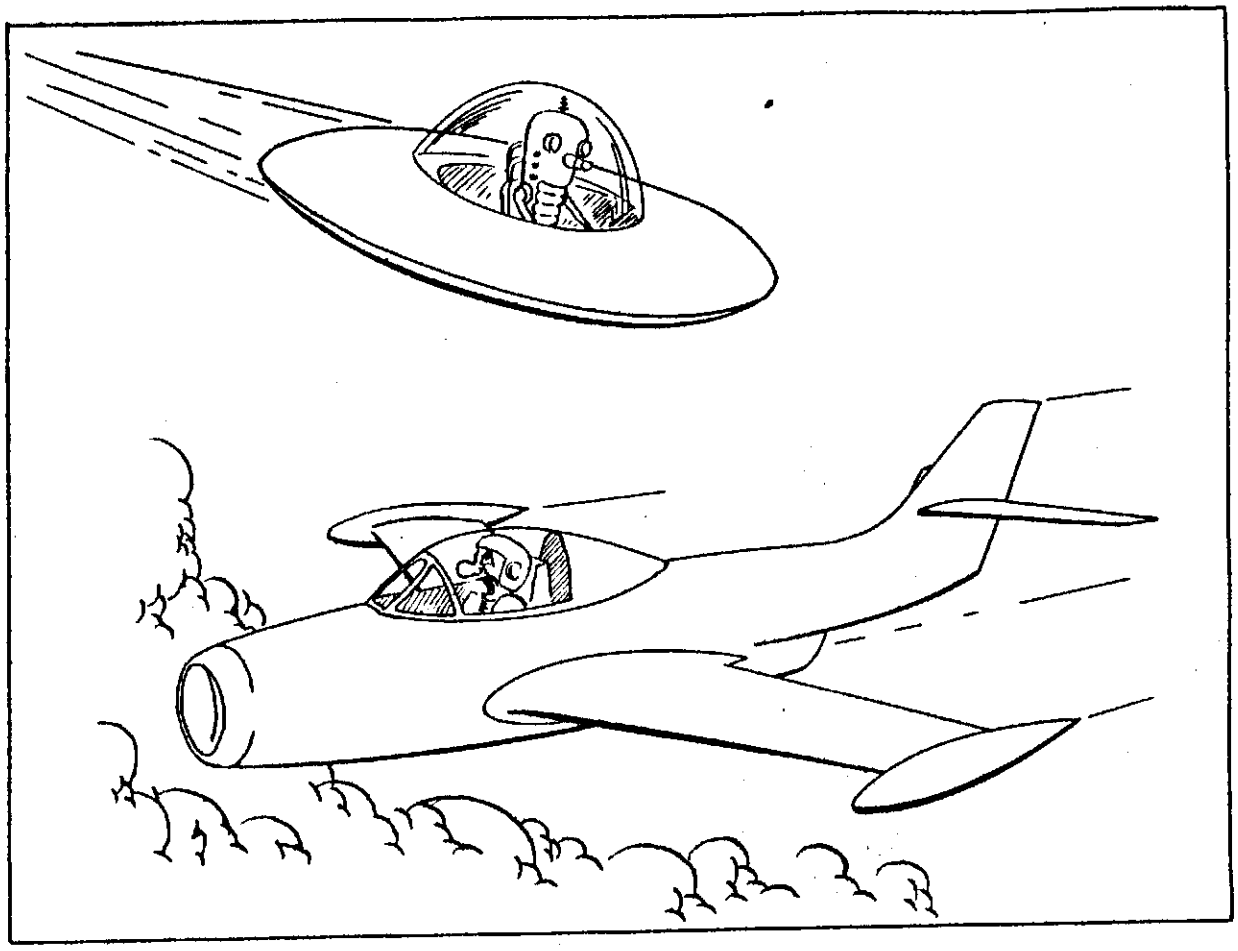



Figure 2 Triangulation from two locations.

Pilots:

Air Force pilots should certainly be fully briefed as to what is expected of them. Their actions in intercepting Unidentified Flying Objects will be governed, of course, by other regulations, but there is certainly nothing to prevent their attempting air-to-air photography. Also, pilots are encouraged to attempt radio contact with Unidentified Flying Objects, utilizing all channels and equipment. There will be no Martian dictionaries distributed for this purpose, but the pilot may by this method be able to determine that the Unidentified Flying Object is a conventional aircraft by calling, or the pilot may note an unusual amount or kind of static on a certain frequency which to an electronic's specialist might be a factor in analysis.



"JUST ANOTHER WEATHER BALLOON"

Conclusion:

It may be stated that the type of unidentified object reporting system established on a base or within a unit is limited only by the initiative of the individual officer responsible for such reports.

SECTION V

## How to Report an Unidentified Flying Object

This section is devoted to pointing out the "whats" and "whys" of a FLYOBRPT. The section can be divided into two parts: What information do we need from the observer and what supporting data do we need? Supporting data means that data necessary, in addition to what the observer actually saw, to aid in determining whether the reported observation was of a known object or phenomenon.

### The Observers Questionnaire:

The data desired from the observers are given in the questionnaires that are shown in the appendices of this manual. Appendix I is a questionnaire entitled "Ground Observers Information Sheet". It is designed for persons making a visual sighting. Appendix II, "Electronics Data Sheet", is for sightings involving ground radar and contains a few technical items regarding the radar set, in addition to general questions about the sighting. Appendix III is entitled "Airborne Observers Data Sheet". It is designed to obtain data on observations of Unidentified Flying Objects that are made from aircraft. Each question has been carefully worked out and has some significance on the overall evaluation.

These questionnaires evolved after a considerable length of time and study. Early in 1951 a contract was given to a civilian research group to develop a questionnaire that would include questions that people could answer from visual observations they made of an object and that would supply Project Blue Book with data that would aid in analyzing reports of sightings. The past history of this project includes many different types of questionnaires; these plus all the past reports were studied by a group of engineers, psychologists, physicists, astronomers, etc. Several data sheets were

devised, used on a trial basis, studied, and again revised. The ones in the Appendices are the final products.

Blue Book sends one of these questionnaires to anyone that reports what is believed to be a reliable sighting. In many cases they are sent out in response to letters received at ATIC. If a message sent in compliance with AFL 200-5 contains the addresses of civilian observers, the data sheet is mailed directly to them. This is why the name and home address of all civilian observers should be put in the TWX. In the case of military personnel, questionnaires are sent to the agency making the report with a request that they be completed by the observer and mailed directly back to ATIC.

How You Can Use The Questionnaires:

If you should ever have a sighting to report, you will find that by following the questions in the appropriate questionnaire the task of collecting the data required for compliance with AFL 200-5 is greatly simplified and hastened. The information necessary for the initial TWX is in the questionnaire and the questionnaire itself may be used as the required written report if it is attached to an Air Force Form 112, or to a letter of transmittal, if no AF Form 112 is available.

The completion of the questionnaire represents very little work on the part of the interrogating officer, since he can merely see that the observer immediately gets a questionnaire, fills it in, and returns it. In case of an emergency, or when it is totally unfeasible for an observer to be personally contacted, the data can be obtained over the telephone or by mail. All questionnaires have been designed to be filled out by the observer himself, however, and this should be done whenever possible.

Extra copies of these questionnaires can be had by reproducing them in the field or by writing directly to the Commander, Air Technical Intelligence Center, Attn: AFOIN-ATIAE-5, Wright-Patterson Air Force Base, Ohio.

Photographs:

There is one point that is not covered by the questionnaires and that is photographs. It is assumed that any time a photograph of the reported object, a radar scope photo, a gun camera movie, etc., is taken it will accompany the report.

With any type of movies or color transparency, the original film should be sent. For still photos the original negative and a print will be needed, and with radar scope photos only the print is required.

Photographs, except radar scope photos, should be accompanied by the following data:

1. Type and make of camera
2. Type, focal length, and make of lens (except on a "box camera")
3. Brand and type of film
4. Shutter speed
5. Lens opening
6. Any filters that were used
7. Was a tripod used?

Any still or movie photograph forwarded with a report will be returned to the owner if Blue Book is so instructed by the sender. The film will be copied but it will not be released by the Air Force for unclassified publication. The rumor that the Air Force has confiscated photos in the past is not true.

Supporting Data:

As was previously stated, supporting data are data in addition to what the observer actually saw. It is required by Sections (6), (7), (9), and (10)

in paragraph 7c of AFL 200-5. It includes data on weather, aircraft in the area, balloons, interception, or identification action, etc. It is in obtaining these supporting data that many reports are "solved" by the reporting agency.

The purpose of the three previously mentioned questionnaires was to gather data from the observer. To aid in methodically and quickly gathering the supporting data, a fourth questionnaire has been devised. This is shown in Appendix IV of this manual and is entitled "Supporting Data". The data requested in this questionnaire should accompany each report either re-written on a Form 112, as an attachment to the Form 112, or with a letter of transmittal.

Section (6), Paragraph 7c:

Section (6), paragraph 7c, of AFL 200-5 states, "Weather and winds aloft conditions at the time and place of sighting". Items of weather and winds aloft can be obtained from the base weather office. These items include amount of cloud cover, visibility, winds, temperature lapse rate, and the moisture lapse rate. In some instances these data may not be available for the locality near the sighting. In this case, data from the closest weather station, military or civilian, should be obtained.

The cloud cover is reported as being a certain number of tenths coverage at a certain height. There may be several layers and each should be noted.

Visibility is reported in miles.

The winds aloft are reported in knots and degrees at given intervals of altitude up to various heights, depending upon how high the measurements were made. For the purpose of this project the wind at each increment of altitude is not needed. Data for the surface, 5,000', 10,000', 16,000', 20,000', 25,000', 35,000', 45,000', 55,000', 65,000', 75,000', and 100,000', if the winds are measured to these altitudes, will suffice.

The lapse rates (i.e., the existing rate of decrease or increase in temperature and moisture content of the air with increasing altitude) are important weather elements especially in sightings involving radar. It is known that under certain general conditions (the exact conditions are unknown) an inversion can cause unusual radar targets. Normally the temperature and moisture content of the air decrease with an increase in altitude. At certain times, however, this is not the case and there will be a level where there will be an increase with a gain in altitude. This is called an inversion. This inversion can cause a radar beam that is normally going upward relative to the earth's surface to bend down toward the ground and pick up an object on the ground. If the radar operator does not recognize this bending (called "anomalous propagation" or ducting effect) a ground target can appear to be in the air.

An inconsistency in either the normal moisture or temperature lapse rate can cause a spurious radar return. An inconsistency in the moisture lapse rate, however, tends to be the dominant factor in anomalous propagation. Clouds can also cause spurious radar "blips".

The effects of weather on radar are not fully known and are being continuously studied. Three examples of possible effects are shown in the following figures.

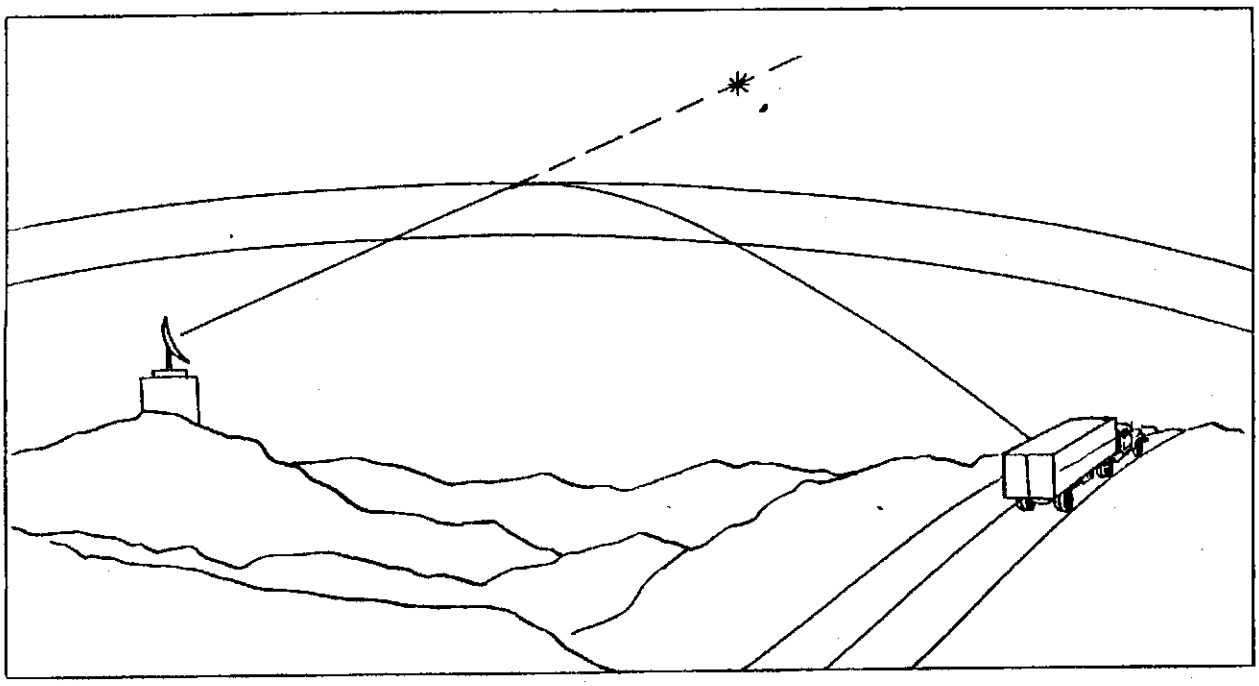


Figure 3 Inversion layer causes the radar beam to bend and pick up the truck on the highway giving the appearance of a high slow-moving target.

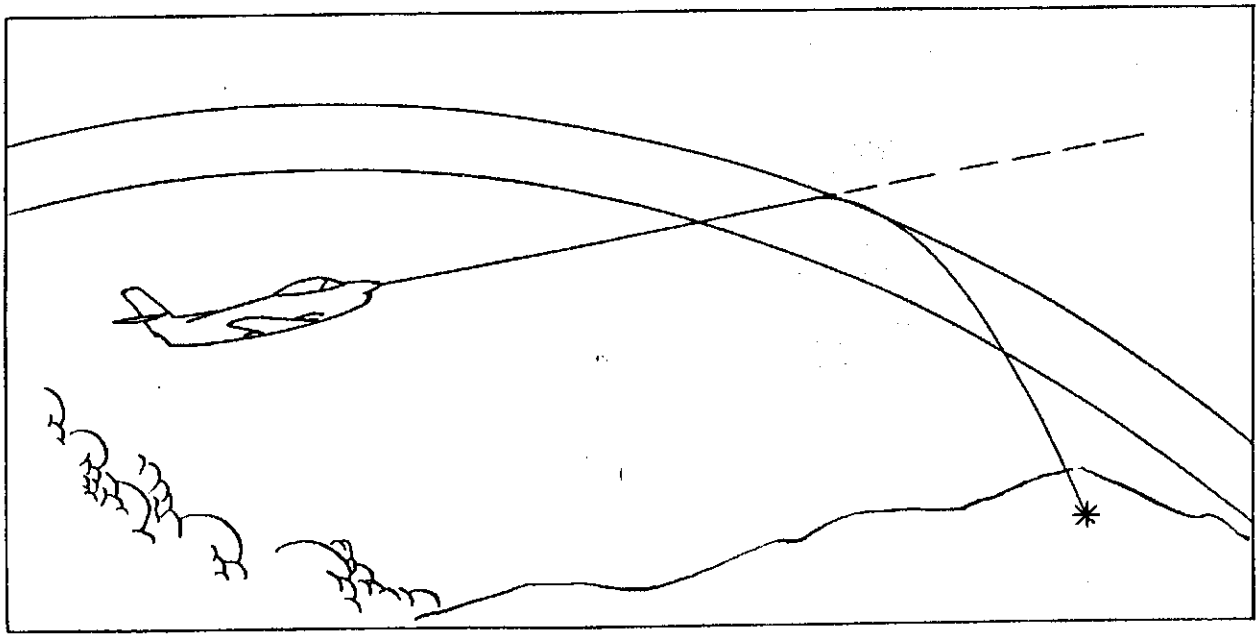


Figure 4 An airborne radar can get a ground return from an inversion as shown above. One occasion when the pilot tried to close, he nearly flew into the ground.

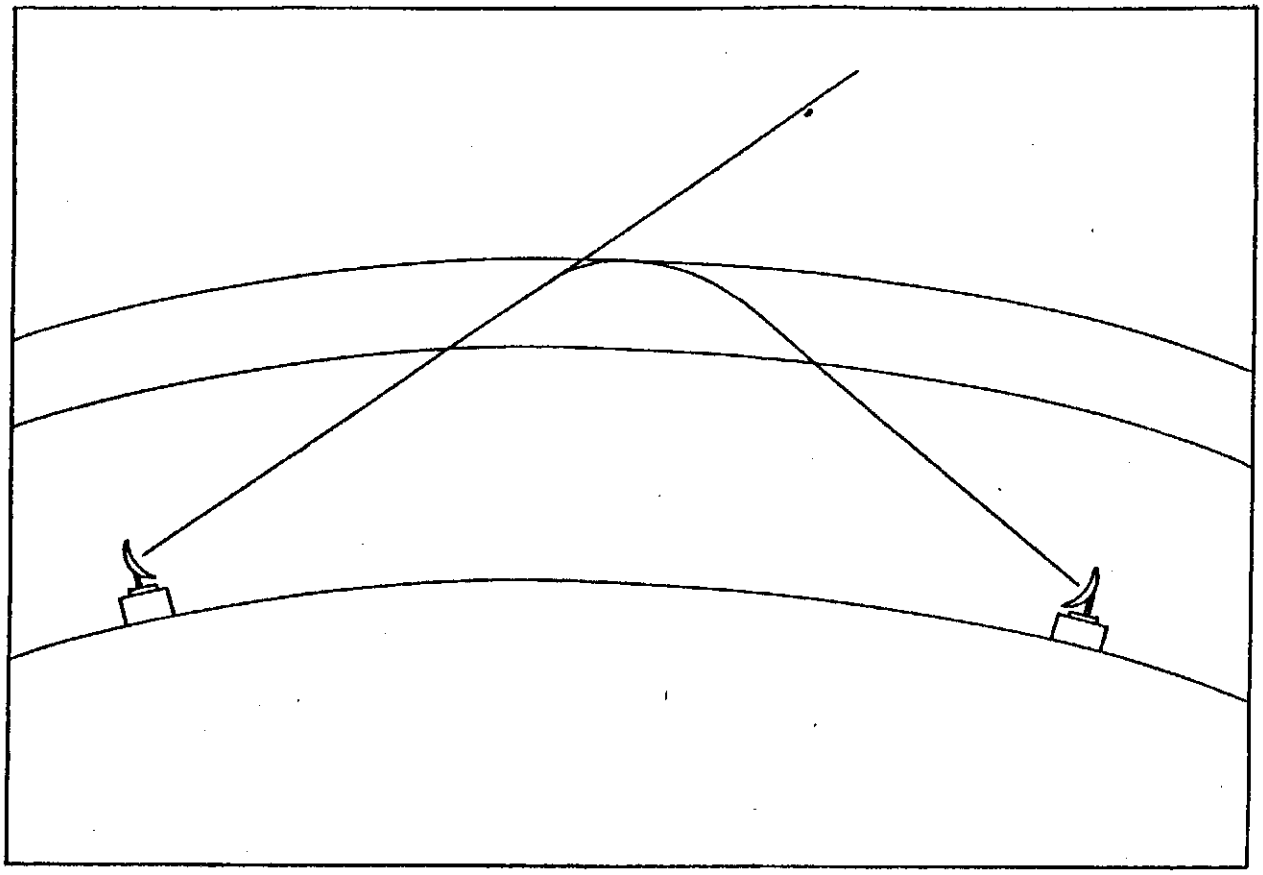


Figure 5 How an inversion layer can cause interference between two stations a great distance apart. Normally these two stations are so far apart the operators would not expect interference between the two.

In addition to the bending of radar beams, the hypothesis has been offered, with no proof, that light rays from a far distant source respond similarly to inversion layers. Only after a large amount of data has been obtained can either of the above phenomena be studied; consequently, there is a need for data on the temperature and moisture lapse rates.

These data cannot be obtained from all weather stations. However, if they are available they will be plotted on WBAN's 31A, 31B, and 31C, the standard forms used by all weather agencies. The easiest way to forward the information is to obtain a copy of these WBAN's and attach them to the written report. In the TWX it should be mentioned if inversions were present and the altitudes should be stated.

Section (7), Paragraph 7c:

Section (7), paragraph 7c, of AFL 200-5 states that, "Any activity or condition, meteorological or otherwise, which might account for the sightings," be reported. This is a broad category and includes balloons, meteors, bright stars, planets, and all types of natural phenomena.

As will be noted in Section II of this manual 15.4% of all reports made could be concluded to be reports of balloons. Of the two general classes of balloons launched in this country, the scheduled weather balloon launches and the non-scheduled research type balloon, the weather balloons are seen in the vast majority of the cases. A survey of 60 "cross-country" flights of the large "skyhook" type balloon showed that these balloons were only reported as "flying saucers" four times. Several different types of weather balloons are launched by many military air bases and civilian airports throughout the United States. These balloons are scheduled to be launched either four times per day at 0300Z, 0900Z, 1500Z and 2100Z, or twice daily, at 0300Z and 1500Z,

but may be launched up to within plus or minus one half hour of these scheduled times. In certain cases, balloons are launched irregularly for training or special test purposes. The weather officer or nearby civilian weather station can give details as to where and when balloons are launched and their probable flight paths. Since these balloons are tracked to obtain winds aloft observations, the location of the balloon can be determined for any given time during its flight or until it is lost. These data are also plotted on a standard form called a WBAN 20 and 20A and a copy of this form can be attached to the written report. A brief description giving the exact time of launch, general direction of the drift, and time of burst or when it was lost, will satisfy the requirements for a TWX.

Data on special balloon projects such as the large "skyhook" type of balloon launched by General Mills is difficult to get. However, ATIC has a channel to the agencies launching these balloons and can obtain the information easier than it can be obtained in the field. An additional check on balloons are colleges and universities located near your base. With the great interest presently being shown in cosmic rays, many colleges and universities have contracts with the government for cosmic ray research. In these research projects, they may be launching small instrument-carrying balloons or large clusters of balloons. Consequently, in your check for balloons, it would be advisable to call the Physics Department of the local colleges and universities to determine whether they have launched any balloons. If they have, they can tell you the time of the balloon launch and the general path.

Balloons can take on many appearances other than the standard spherical shape. From certain angles in the air, they can appear to be nearly disk-shaped. In the evening or early morning, when it is dark on the ground but

light at the higher altitudes, they can appear to be glowing "fiery" balls. In the daytime, if the sun reflects off or diffuses through the balloon, it looks like a bright star. At night a lighted balloon (all balloons launched during darkness carry lights) can appear to be a swiftly moving erratic light or star.

Meteors and other astronomical bodies such as bright stars and planets also fall into this category. There are many possible sources of information on meteors. If an unusually bright or outstanding meteor, or fireball, as large meteors are called, passes over an area the newspapers will usually carry a story about it the next day. Local astronomers may have either heard about an outstanding meteor or might even have seen it. Occasionally, a meteor that is reported as an unidentified flying object by someone will have also been seen by the control tower operators or aircrews flying in the area and can be identified by them.

The location of exceptionally bright stars or planets can be quickly checked by any navigator. If an observer can give a fairly close estimate as to time, elevation, and azimuth these data can be checked against known locations of astronomical bodies. It is well to keep in mind that certain planets can be seen in the daytime. Recently ATIC received a report from Wisconsin in which an object was viewed for 6 daylight hours. A check established the object as the bright planet Venus seen at its maximum brilliancy.

The large general category of possibilities such as ducks flying over a drive-in theater, searchlights on clouds, bits of paper in an updraft, etc., are difficult to list completely. These do occur occasionally, however.

Section (9), Paragraph 7c:

Section (9), paragraph 7c, of AFL 200-5 states that a description of the "Interception or Identification Action Taken" will be given.

Any interception action by aircraft will be governed by existing Air Defense Command regulations. Such action should be reported along with the results.

Identification action covers many aspects. Querying radar installations in the local area as to whether they had a target at the time of the sighting is one phase of identification. They may have had a known track, and can remember it, or, as has happened, were carrying an unusual track or target they failed to report.

If the time lapse between a sighting and its being reported is not too great, the Ground Observer Corps can be contacted providing the organization receiving the report has a direct channel to the GOC. They might be able to make the identification or confirm the sighting. This cross-checking between radar, the GOC, control towers, etc., can be developed to a high degree and it may yield results.

Data very valuable for analysis are simultaneous sightings such as from the ground and air, air-visual and radar, ground-visual and radar, or any such combination. Sightings such as these do occur occasionally and are always given a great deal of attention by Project Blue Book. The first factor of such a sighting to be checked, and often a difficult task, is to establish whether the object was observed by all of the observers or the radar was actually the same object in every case. The best place to start in such a check is the time of the sighting. If all observers report that they made their observations at the same time, the field of possibilities is narrowed down. The next step is to correlate locations. If radar says their return was first observed at a bearing of 90° from the station traveling on a course of 180° and a guard at the gate of the radar installation says he saw an object to the east and it was traveling south, there is a good chance both observed the same object.

The reporting officer should make every effort to gather data that will substantiate or refute simultaneous sightings.

Section (10), Paragraph 7c:

Section (10), paragraph 7c, of AFL 200-5 states that the "Location of any air traffic in the general area at the time of sighting" will be reported.

This section is extremely important as it is very difficult to obtain information on the location of air traffic several days after an incident has been reported. There are many sources of information on air traffic. Base Operations can give information on local flight, the tower many times can give location of local or transit aircraft, and CAA radio range stations keep logs of all flights that are checked into their stations.

If there were aircraft in the area which could account for the sighting, many times the pilots can be contacted and they will be able to tell approximately where they were flying, especially when on a local flight. These pilots may have also seen the object or, as has happened several times before, they may have seen the reported object and identified it and consequently they did not make a report. Not too long ago, a series of reports were received from Virginia. A formation of glowing objects was reported from several locations. This remained a mystery until a pilot contacted ATIC and told of seeing a cluster of balloons in the area. He hadn't reported it since from the air he could definitely identify the object, consequently, they were not unidentified flying objects to him. Blue Book had checked balloons, but this was one of the cases of strays which had been lost.

Checks Vary with Type of Sighting:

The types of checks mentioned above, for aircraft, meteors, balloons, will naturally vary with the sighting that was reported. If an object is reported to have gone from horizon to horizon in five minutes, balloons are out of the

question. Conversely, if an object is observed to have stayed in the same location for several hours the chances of it having been a meteor are nil.

## APPENDIX I

### "Ground Observers Information Sheet"

The purpose of this questionnaire is to gather data on sightings of unidentified flying objects that are made by ground observers. It has been designed for both military and civilian use.

In general, the form is self-explanatory, although the following point should be noted:

A #4 - In this question, the coordinates should be given under "Additional Remarks", the other part of this item can be omitted. The location should be as exact as possible.

Form A

# U. S. AIR FORCE TECHNICAL INFORMATION SHEET

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, 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. 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 Country

Additional remarks: _____

5. Estimate how long you saw the object. _____ Hours _____ Minutes _____ Seconds

5.1 *Circle one* of the following to indicate how certain you are of your answer to Question 5.

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

6. What was the condition of the sky?

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

7. 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
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, TWILIGHT, or DAWN, 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. Was the object brighter than the background of the sky?

*(Circle One)*: a. Yes b. No c. Don't remember

10. 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 _____

11. 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 |

12. 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: _____

_____

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

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

_____

14. Did the object appear: *(Circle One)*: a. Solid? b. Transparent? c. Don't Know.

15. 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 _____ | | |

16. Tell in a few words the following things about the object.

a. Sound _____

b. Color _____

17. 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.

18. 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 _____

19. 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. 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.

21. IF POSSIBLE, try to guess or estimate what the real size of the object was in its longest dimension.
_____feet.

22. How large did the object or objects appear as compared with one of the following objects *held in the hand* and at about arm's length?

*(Circle One)*:

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

22.1 *(Circle One* of the following to indicate how certain you are of your answer to Question 22.

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

23. How did the object or objects disappear from view? _____
_____
_____

24. 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.

25. 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
e. At sea
f. Other _____

26. 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. Flying near an airfield?
e. Flying over a city?
f. Flying over open country?
g. Other _____

27. What were you doing at the time you saw the object, and how did you happen to notice it?

_____

_____

_____

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

28.1 What direction were you moving? *(Circle One)*

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

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

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

*(Circle One)* Yes No

29. What direction were you looking when you first saw the object? *(Circle One)*

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

30. What direction were you looking when you last saw the object? *(Circle One)*

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

31. If you are familiar with bearing terms (angular direction), try to estimate the number of degrees the object was from true North and also the number of degrees it was upward from the horizon (elevation).

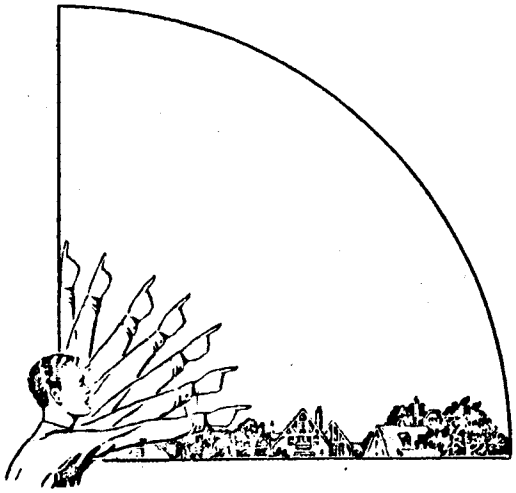
31.1 When it first appeared:

a. From true North _____ degrees.
b. From horizon _____ degrees.

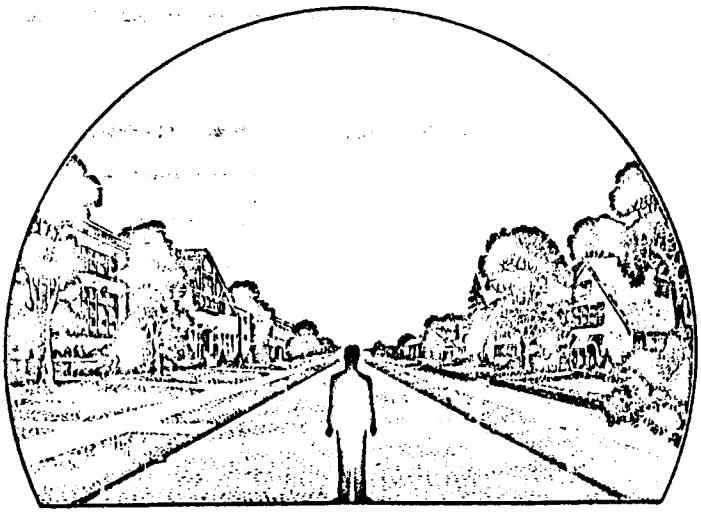
31.2 When it disappeared:

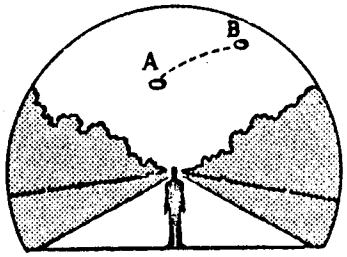
a. From true North _____ degrees.
b. From horizon _____ degrees.

32. 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.



33. In the following larger sketch place an "A" at the position the object was when you *first* saw it, and a "B" at its position when you *last* saw it. Refer to smaller sketch as an example of how to complete the larger sketch.





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

34.1 CLOUDS *(Circle One)*

a. Clear sky
b. Hazy
c. Scattered clouds
d. Thick or heavy clouds
e. Don't remember

34.2 WIND *(Circle One)*

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

34.3 WEATHER *(Circle One)*

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

34.4 TEMPERATURE *(Circle One)*

a. Cold
b. Cool
c. Warm
d. Hot
e. Don't remember

35. When did you report to some official that you had seen the object?

_____ Day _____ Month _____ Year

36. Was anyone else with you at the time you saw the object?

*(Circle One)* Yes No

36.1 IF you answered YES, did they see the object too?

*(Circle One)* Yes No

36.2 Please list their names and addresses:

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

*(Circle One)* Yes No

37.1 IF you answered NO, then when, where, and under what circumstances did you see other ones?

_____

_____

_____

_____

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

39. 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? _____ m.p.h.

40. 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? _____ feet.

41. Please give the following information about yourself:

NAME _____ (Last Name) _____ (First Name) _____ (Middle Name)

ADDRESS _____ (Street) _____ (City) _____ (Zone) _____ (State)

TELEPHONE NUMBER _____

What is your present job? _____

Age _____ Sex _____

Please indicate any special educational training that you have had.

a. Grade school _____
b. High school _____
c. College _____
d. Post graduate _____
e. e. Technical school _____
(Type) _____
f. Other special training _____
_____

42. Date you completed this questionnaire: _____ (Day) _____ (Month) _____ (Year)

Form B

## U. S. AIR FORCE TECHNICAL INFORMATION SHEET

*(SUMMARY DATA)*

In order that your information may be filed and coded as accurately as possible, please use the following space to write out a short description of the event that you observed. You may repeat information that you have already given in the questionnaire, and add any further comments, statements, or sketches that you believe are important. Try to present the details of the observation in the order in which they occurred. Additional pages of the same size paper may be attached if they are needed.

NAME _____
(Please Print)

SIGNATURE _____

DATE _____

*(Do Not Write in This Space)*

CODE:

## APPENDIX II

### "Electronics Data Sheet"

The purpose of this questionnaire is to obtain data of both a general and technical nature on unusual radar targets or tracks.

It is important to note that if radar scope photographs are available, they should be attained.

## ELECTRONICS DATA SHEET
(GROUND RADAR)

The purpose of this questionnaire is to provide technical data for evaluating the report of an unusual radar target or track. It is requested that it be completed as accurately as possible.

When not filled in, the form is Unclassified. The reporting officer will use his own judgement as to what degree of classification is required.

It is preferred that the answers to the questions be typewritten, however, if it will expedite the completion of the form, the answers may be printed in ink. If additional space is needed, use reverse side of form.

1. STATION OBSERVING TARGET:

_____
Organization

_____
Location

2. DATE OF THIS REPORT:

_____ _____ _____
Day Month Year

3. DATE TARGET OBSERVED:

Local Time ☐
Z Time ☐

_____ _____ _____
Day Month Year

Time-Local _____ Time-Z _____

4. NAME, RANK AND ORGANIZATION OF REPORTING OFFICER:

_____
_____
_____

5. EXACT LOCATION OF STATION (COORDINATES):

6. OBSERVER DATE (LIST EACH OBSERVER):

| | Name | Rank | Duty | No. of Years Exp. in Radar |
|---|---|---|---|---|
| A. | | | | |
| B. | | | | |
| C. | | | | |
| D. | | | | |
| E. | | | | |

7. WAS A VISUAL SIGHTING MADE BY ANY PERSONNEL OF THE STATION? ☐ YES ☐ NO
IF SO, GIVE NAME AND RANK OF ALL PERSONNEL MAKING A VISUAL SIGHTING AND A BRIEF DESCRIPTION OF WHAT THEY SAW:

ATIC FORM 112 (REVISED 25 NOV 1952)

8. HAVE YOU HEARD OF ANYONE NOT AT THE RADAR STATION MAKING A VISUAL SIGHTING AT APPROXIMATELY THE SAME TIME THE RADAR CONTACT WAS MADE? ☐ YES ☐ NO
IF SO, GIVE NAME AND ADDRESS.

9. RADAR SCOPE PHOTOS:
IS RADAR EQUIPPED WITH A SCOPE CAMERA? ☐ YES ☐ NO
WAS CAMERA OPERATIONAL? ☐ YES ☐ NO
WERE SCOPE PHOTOS TAKEN? ☐ YES ☐ NO
WERE PRINTS OF THE SCOPE PHOTOS FORWARDED TO THE AIR TECHNICAL INTELLIGENCE CENTER? ☐ YES ☐ NO

10. TRACK DATA:
WHAT WAS THE NUMBER OF THE TRACK? _____
WAS A PERMANENT PLOT MADE OF THE TRACK AT THE TIME OF THE OBSERVATION? ☐ YES ☐ NO

11. WERE AIRCRAFT SCRAMBLED TO INTERCEPT THE TARGET? ☐ YES ☐ NO
IF SO, WERE THE AIRCRAFT BEING OBSERVED ON THE SCOPE AT THE SAME TIME AS THE TARGET? ☐ YES ☐ NO

12. WERE ANY NEARBY RADAR INSTALLATIONS QUERIED WHETHER THEY HAD OBSERVED THE SAME TARGET OR TRACK? ☐ YES ☐ NO
IF SO, WHICH STATIONS? _____

13. WAS THE TARGET OBSERVED ON SEARCH RADAR? ☐ YES ☐ NO
IF SO, WHAT IS THE NOMENCLATURE OF THE EQUIPMENT? _____

14. WAS THE TARGET OBSERVED ON HEIGHT FINDING RADAR? ☐ YES ☐ NO
IF SO, WHAT IS THE NOMENCLATURE OF THE EQUIPMENT? _____

15. HAVE THERE BEEN ANY RECENT MAINTENANCE DIFFICULTIES? ☐ YES ☐ NO
IF SO, DESCRIBE. _____

16. WHAT TYPE MODULATOR (I.E., SPARK GAP, HARD TUBE, ETC.) IS USED IN THE RADAR EQUIPMENT?

17. WAS THE AFC (AUTOMATIC FREQUENCY CONTROL) CIRCUIT OPERATING PROPERLY? ☐ YES ☐ NO
COMMENTS: _____

18. HAS INTERFERENCE FROM ANOTHER RADAR SET BEEN OBSERVED RECENTLY: ☐ YES ☐ NO
COMMENTS: _____

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19. ARE PERSONNEL FAMILIAR WITH THE EFFECTS CAUSED BY AN INTERFERING SIGNAL? ☐ YES ☐ NO
COMMENTS: _____

20. ARE PERSONNEL FAMILIAR WITH THE EFFECTS OF ANOMALOUS PROPAGATION (DUCTING EFFECTS) AS THEY PERTAIN TO THIS TYPE OF RADAR? ☐ YES ☐ NO

21. HAS ANOMALOUS PROPAGATION (DUCTING EFFECT) BEEN OBSERVED TO EXTEND THE RANGE OF THE GROUND CLUTTER OF THIS RADAR AT THIS SITE? ☐ YES ☐ NO
COMMENTS: _____

22. WAS ANOMALOUS PROPAGATION (DUCTING EFFECT) EXTENDING THE RANGE OF THE GROUND CLUTTER AT THE TIME THE TARGET WAS OBSERVED? ☐ YES ☐ NO
COMMENTS: _____

23. HOW DID THE TARGET APPEAR IN SIZE AND SHAPE AS COMPARED TO CONVENTIONAL AIRCRAFT TARGETS?

24. PERFORMANCE OF TARGET:

| | | | |
|---|---|---|---|
| a. REMAINED CONSISTENT IN SIZE | ☐ | CHANGED SIZE RAPIDLY | ☐ |
| b. SPEED WAS CONSTANT | ☐ | SPEED WAS VARIABLE | ☐ |
| c. FOLLOWED CONSISTENT TRACK | ☐ | APPEARED, DISAPPEARED, THEN REAPPEARED IN NEW LOCATION | ☐ |
| d. FUZZY COMPARED TO AIRCRAFT TARGET | ☐ | SHARP COMPARED TO KNOWN AIRCRAFT TARGET | ☐ |
| e. SAME AS AIRCRAFT TARGET | ☐ | | |

25. WERE OTHER TARGETS (KNOWN) OBSERVED IN THE SAME GENERAL AREA, AT APPROXIMATELY THE SAME TIME AND AT THE SAME ALTITUDE AS THE UNUSUAL TARGET? ☐ YES ☐ NO
IF SO, DESCRIBE. _____

26. WHAT TYPE INDICATORS ("A" SCOPE, "B" SCOPE, ETC.) WERE USED TO FOLLOW THE TARGET?
DESCRIBE THE SIGNAL: _____

27. WHAT WAS THE RADAR SCAN RATE? _____

28. WHAT WAS THE FREQUENCY OF THE TRANSMITTER?

29. DID ANY OF THE OBSERVERS HAVE ANY OPINIONS AS TO THE NATURE OF THE TARGET? ☐ YES ☐ NO
IF YES, GIVE THEIR NAMES AND OPINIONS BELOW.

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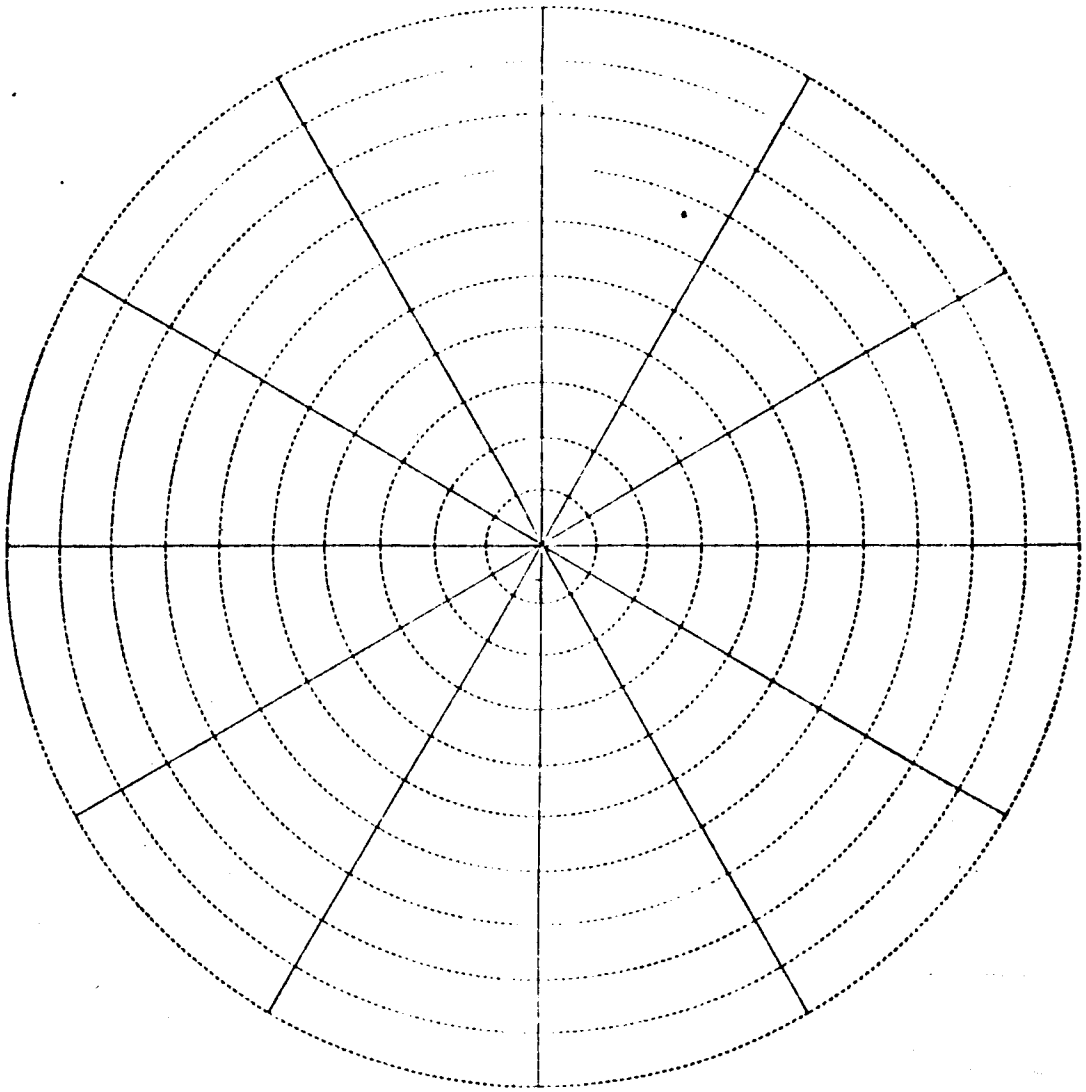
30. IF SCOPE PHOTOS ARE NOT AVAILABLE, PLOT THE TARGET TRACK AS ACCURATELY AS POSSIBLE. GIVE THE TIME AND ALTITUDE (IF MEASURED) FOR EACH POINT PLOTTED. PUT THE NECESSARY RANGE SCALE ON THE DIAGRAM.



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31. USE THIS SHEET FOR ANY COMMENTS, OPINIONS OR ADDITIONAL DATA NOT COVERED BY THE QUESTIONS.

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## APPENDIX III

"Airborne Observers Data Sheet"

The purpose of this data sheet is to obtain data from observers who make observations of unidentified flying objects from the air.

AIRBORNE OBSERVER'S DATA SHEET

The purpose of this data sheet is to provide data that will aid in evaluating reports of unidentified flying objects that are observed from aircraft in flight.

It is preferred that the answers be typewritten, however, if it will expedite the completion of the form, the answers may be printed in ink. If additional space is needed, use the reverse side of the form or use extra sheets of paper and attach them to this form.

1. Date observation was made:

_____ Day _____ Month _____ Year

2. Time observation was made:

_____ Time _____ Zone ☐ Daylight Saving

☐ Standard

or Z

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

_____
Coordinates

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

| Name | Rank | Crew Position |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

5. Aircraft identification

a. Type aircraft _____

b. Serial No. _____

c. Home Station _____

_____

6. Flight Data

a. Heading _____

☐ Mag ☐ True ☐ Compass

b. Ind. Altitude _____

c. Ind. Airspeed _____

☐ Knots ☐ MPH

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

Yes. No. No Radar. Radar Inoperative.

a. If yes, describe _____

_____

_____

_____

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

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

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: _____

_____

_____

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

(Circle one) Yes No

Comments: _____

_____

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

Comments: _____

_____

14. Estimate how long you saw the object. _____ Hours _____ Minutes _____ 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. What was the condition of the sky? (Circle one)

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

16. 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
b. In back of you
c. To your right
d. To your left
e. Overhead
f. Don't remember

17. 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

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

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

19. Cloud cover (Circle one)

| | |
|---|---|
| Clear | Above scatter clouds |
| Overcast | Below scattered clouds |
| Undercast | Through scattered clouds |
| Between two layers | Other _____ |

20. 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 |

21. 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. _____

_____

22. 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. _____

_____

23. Did the object appear: (Circle one) a. Solid? b. Transparent? c. Don't Know.

24. 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 _____

25. 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.

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

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

27. Circle one of the following to indicate how certain you are of your answer to Question 26.

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

28. How did the object or objects disappear from view? _____

_____

_____

_____

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

(Circle one) Yes No

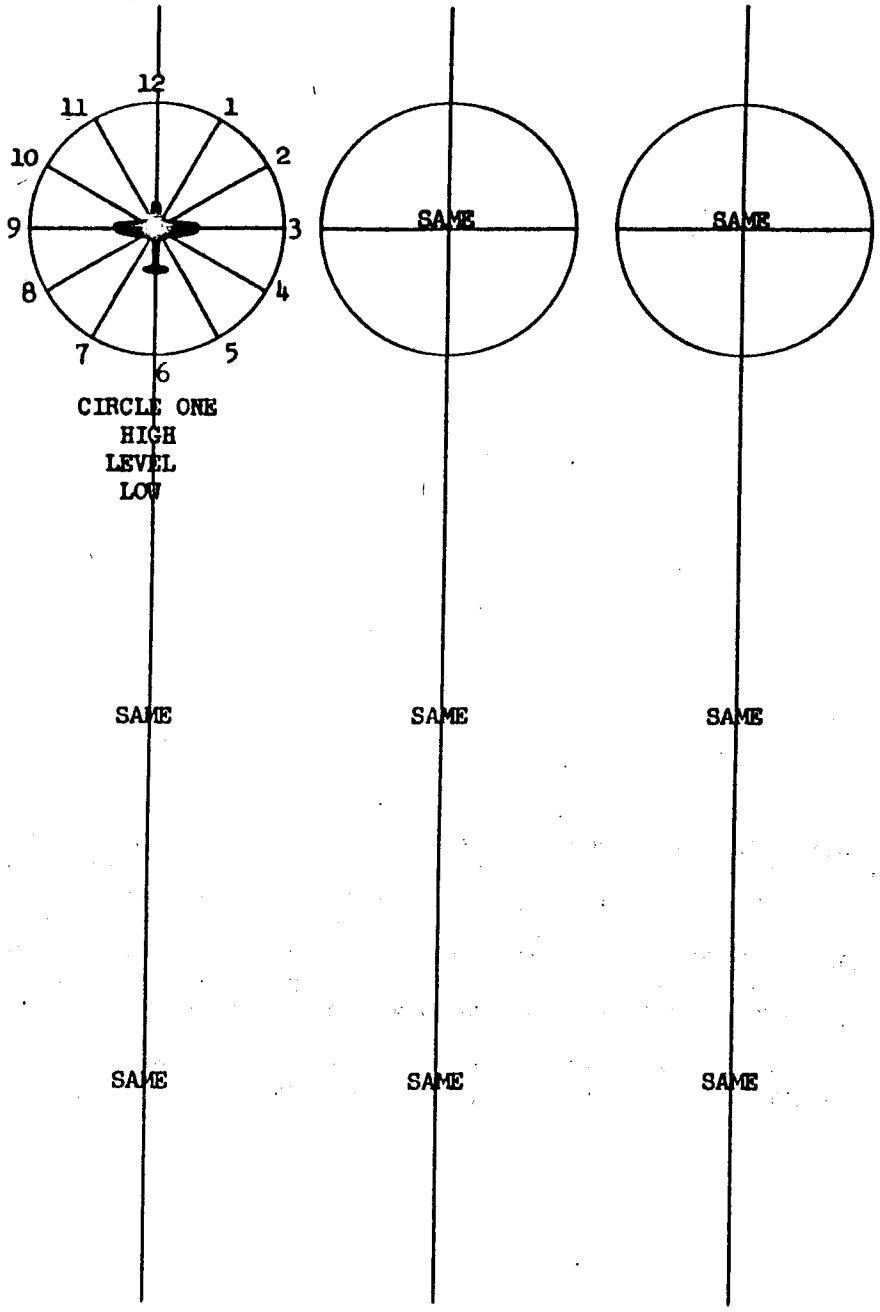
If you answered no, then when, where, and under what circumstances did you see other ones?

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

31. The above is a grid representing an overlay of a local area chart. Each division represents a nautical mile. Sketch in the apparent flight path of the object and the flight path of the aircraft as near as possible. Mark points such as the location of the aircraft and object when the object was first observed and the location of the object and aircraft at the end of the first, second, third, fourth, etc., minutes. Mark them A, B, C, D, etc. Put in prominent landmarks as necessary.

Note: If it is more expedient, sketch above data on an aeronautical chart, aerial photo, etc., do so and attach it to this report.

32. At each point (i.e., position at each minute) A, B, C, etc., that is requested in the preceeding question, 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.



33. Brief narrative account of sighting and any other additional data or Comments:

## APPENDIX IV

### "Supporting Data"

The purpose of this check list is to provide a guide for the collection of additional data, in addition to the facts dealing directly with a sighting, needed by Project Blue Book to aid in evaluating reports of unidentified flying objects.

A "negative" answer on any item is construed to mean the item has been thoroughly checked and is of no use in evaluating the sighting. It is advisable to qualify negative answers with a statement as to what action was taken and the results.

SUPPORTING DATA

The purpose of this questionnaire is to provide a check list for reporting the supporting data that is to be used in the evaluation of a report of an unidentified flying object. It is to be completed by the reporting officer.

It is preferred that the answers be typewritten, however, if it will expedite the completion of the form, the answers may be printed in ink. If additional space is needed for answers, attach other sheets of paper to this form. Certain sections may not be applicable due to the nature of the report. In these cases, circle "not applicable".

I. General Information

1. Date of this report. _____

2. Date the sighting was reported to you. _____

3. Organization and duty of the reporting officer.

_____ Organization

_____ Duty

4. Was any local astronomer queried as to whether any large or outstanding meteor in the vicinity of the sighting was seen by him or reported to him? (Circle one)

a. Not applicable.

b. Yes, but he knew of no meteors.

c. Yes, there was a meteor.

If "c" is circled, give comments. _____

_____

_____

_____

_____

5. Did local newspapers carry any reports of large meteors or fireballs that might have accounted for the sighting? (Circle one)

a. Not applicable.

b. Newspapers were checked, but there was no mention of meteors.

c. Yes, there was an account of a meteor.

If "c" is circled, give comments. _____

_____

_____

6. Were CAA radio facilities in the area queried about any aircraft in the area of the sighting, near the time of the sighting, that could account for the report? (Circle one)

a. Not applicable.

b. Yes, but no known aircraft were in the area.

c. Yes, aircraft were in the area.

If "c" is circled, give comments. _____

_____

_____

7. Was the control tower queried to determine whether any aircraft or other object (i.e., meteor, balloon, etc.) could have caused the sighting?

(Circle one)

a. Not applicable.

b. Yes, but they could give no aid.

c. Yes, they had seen an object that could have accounted for the sighting.

If "c" is circled, give comments. _____

_____

_____

8. Was base operations queried to determine whether any aircraft were in the area of the sighting at the time of the sighting that could account for the report? (Circle one)

a. Not applicable.

b. Yes, but there were no known aircraft in the area.

c. Yes, aircraft were in the area.

If "c" is circled, give comments. _____

_____

_____

9. Did any type of radar in the area, whose range covered the vicinity of the sighting, carry any unknown tracks or targets at or near the time of the sighting? (Circle one)

a. No radar in the area.

b. Radar in the area carried no unidentified tracks or targets.

c. Radar in the area did carry an unknown track.

If "c" is circled, attach an "Electronics Data Sheet".

10. This question is to be answered only if the reporting agency has contact with the GOC Filter Center in the area of the sighting.

Did any GOC Observation Post report any unidentified flying object?

(Circle one)

a. No GOC in area.

b. GOC reported nothing.

c. GOC reported unidentified flying object.

If "c" is circled, attach completed "Ground Observers Information Sheet" describing the observation.

11. Have local newspapers recently been carrying stories on "flying saucers"?

(Circle one)

a. No

b. Yes, a little.

c. Yes, a moderate amount.

d. Yes, a great deal.

II. Weather Data

12. Station making the following meteorological observations.

_____

13. Time following observations were made.

_____

14. Cloud Cover ☐ CAVU

_____ tenths at _____ feet

_____ tenths at _____ feet

_____ tenths at _____ feet

_____ tenths at _____ feet

15. Visibility _____ miles.

16 Thunderstorm Activity

a. ☐ None in the area.

b. Thunderstorms in _____ quadrant.

17. Winds aloft

| Altitude | Direction | Speed (Knots) | Altitude | Direction | Speed (Knots) |
|---|---|---|---|---|---|
| Surface | _____ | _____ | 35,000 | _____ | _____ |
| 5,000 | _____ | _____ | 45,000 | _____ | _____ |
| 10,000 | _____ | _____ | 55,000 | _____ | _____ |
| 15,000 | _____ | _____ | 65,000 | _____ | _____ |
| 20,000 | _____ | _____ | 75,000 | _____ | _____ |
| 25,000 | _____ | _____ | 100,000 | _____ | _____ |

18. Temperature and moisture lapse rate. (Note: In this space plot the variation in the temperature and moisture content of the air vs. altitude.- In lieu of this plot, WBAN's 31A, 31B, 31C may be attached.)

III. Balloon Data

In this section give data on all balloons launched within a radius of 25 miles of the location of the sighting. The times required are the times of the first balloon release prior to the time of the sighting for each balloon launch location.

19. Balloon Launch Data (Circle one if appropriate)

a. Not applicable

b. No balloons launched within 25 miles.

| | Time of Launch | Location of Launch (Coordinates) | Definite Burst Rec. (Circle one) | Lost Before Burst (Circle one) | Time Lost or Burst | Was Balloon Lighted? (Circle one) |
|---|---|---|---|---|---|---|
| a. | _____Z | _____ | Yes No | Yes No | _____Z | Yes No |
| b. | _____Z | _____ | Yes No | Yes No | _____Z | Yes No |
| c. | _____Z | _____ | Yes No | Yes No | _____Z | Yes No |
| d. | _____Z | _____ | Yes No | Yes No | _____Z | Yes No |

20. Types of balloons noted in Question 19 above.

a. _____

b. _____

c. _____

d. _____

21. In this item sketch in the path taken by all balloons mentioned in Question 19 above. Use a solid line for known tracks and a dotted line for estimated tracks. Label tracks a, b, c, etc., to correspond with Question 19. Use the center of the grid as the launch location. WBAN 20 and 20A may be used in lieu of this diagram.

22. Any comments on observers, possible causes of the report, etc., not covered in other parts of this questionnaire.