

24 JANUARY 1953
CAPTAIN RUPPELT ADC BRIEFING

K243, 6012-12
24 Jan 1953

RETURN TO
USAF Historical Archives
ASI(ASHAF-A)
Maxwell AFB, Ala 36112

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PROJECT BLUE BOOK

SPECIAL BRIEFING FOR AIR DEFENSE COMMAND

MARCH 1953

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PROJECT BLUE BOOK BRIEFING FOR AIR DEFENSE COMMAND

4671st G.O.C. Sq
report to 30th at
Willow Run

This briefing has been prepared specially for Air Defense Command units.

Its purpose is to present all aspects of Project Blue Book so ADC personnel will have a better understanding of the goals of the project, be able to more accurately evaluate reports of unidentified flying objects, and increase the quality of those reports that are forwarded.

50% of U.A.O. forwarded to ATIC come from ADC units. 150,1953 reports 70 from A.O.C.
A copy of this briefing will be given to each ADC unit and should be given wide distribution.

As you have been told, this briefing is about Unidentified Flying Objects or "flying saucers" if you insist. We don't like the name "flying saucers" and only rarely use it because it seems to represent wierd stories, hoaxes, etc., sort of a joke.

We don't take "flying saucers" too seriously either, but we do take the problem of Unidentified Flying Objects seriously. The definition of an Unidentified Flying Object is any airborne object that by performance, aerodynamic characteristics or unusual features does not conform to any presently known type of aircraft or missile, or which cannot be identified as a known object or phenomenon.

The mission of the Air Defense Command is such that you are in a position to be recipients of the best reports of Unidentified Flying Objects. For that reason this briefing is being presented today. Three main points will be covered in this briefing.

a. The general aspects of Project Blue Book to clear up any misconceptions that anyone may have.

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b. How reports can be evaluated in the units.

c. How to increase the quality of reports that are forwarded.

Security Classification

First of all I would like to tell you about the security of this project.
The majority of the information is currently being carried as Restricted. This is merely to protect the names of the people who have given us reports, it is not any attempt to cover up any information that we have. The required security classification for admittance to this briefing is Secret, however. The reason for this is that in some instances we may get into a discussion of classified equipment, classified locations, or classified projects during the question and answer period that follows this briefing. When the project was first started, it was classified as Top Secret. This is probably the reason for the rumors that the Air Force has Top Secret information on this subject; it does not. The only reason for the original classification was that when the project first started the people on the project did not know what they were dealing with and, therefore, unknowingly put on this high classification.

We release all information to the press that they ask for, except the names of persons involved in the sighting, methods used to obtain information when this involves intelligence methods and anything else such as locations of radar sites, types of radar sets, performance of aircraft, etc., that may be classified.

The Air Technical Intelligence Center

Many people are not familiar with the Air Technical Intelligence Center. The Air Technical Intelligence Center was at one time part of Air Materiel Command, however, in mid 1952 the command was changed and it is now a field activity of the Directorate of Intelligence, Headquarters Air Force. Our chief, Brigadier General Garland, is directly responsible to Major General Samford, the Director of Intelligence, Headquarters USAF. The prime function of the Air

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Technical Intelligence Center is not to investigate "flying saucer" reports, it is charged with the prevention of technological surprise by a foreign country. This means that all enemy aircraft, guided missiles, etc., and any equipment related to these articles, is studied at the Air Technical Intelligence Center. *Project Blue Book - 4 offices, 2 airman, 2 stars as compared to 800 people in ATIC. - ATIC's scientific help us. Also Contractor*

ATIC "gets into the act" not in an attempt to protect the United States, that is the function of ADC. Our function is to tell you what you're protecting against. If Russia, for example, flew some totally unheard of new type of aircraft across the California coast, you would go up to intercept then ATIC would begin a study to tell you what you had intercepted, so that if you run into this aircraft again you'll know more about it. To come more to the point, let's use any Unidentified Flying Object. Say, for example, one of your radars picks up a target traveling 1500 mph, fighters are scrambled, vectored into the target, they see a light and chase it. If they don't intercept the light and identify it, it is unknown. ADC has accomplished their mission by attempting an intercept. It is now the mission of the intelligence officer to gather all the facts on the incident and forward them to ATIC to be studied. If in collecting the facts the intelligence officer identifies the reported object, fine, it is no longer an unidentified object and we are not interested. However, if he is not able to identify the reported object, a complete report shall be forwarded. It may be that the radar picked up some type of weather effect and vectored the aircraft toward it. About that time, the pilots saw an exceptionally bright star and gave chase. It has happened more than once. If we knew that every "light" that couldn't be intercepted was a star there wouldn't be any necessity for this project, but unfortunately that is not true. If the light hadn't been a star, we would very well want every scrap of information we could get and, as far as anyone knew, until the report was investigated,

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it was not a combination of a freak radar return and a star. ATIC's mission is not quite finished with an explanation. We'd like to know enough about the appearance of some of the more frequent objects that are reported, so if a real article even appears it can be immediately recognized. If the "whistle should ever blow" and someone sees two streaks of fire in the sky, which one is a slow-moving meteor and which one is a ram-jet powered missile? Possibly we can learn enough from your reports to be able to definitely point out the difference.

History of the Project

To give you a brief history of this project, it started in 1947, when on 24 June 1947 a Mr. Kenneth Arnold sighted several disc-like objects near Mt. Rainier in the state of Washington. From that time until August 1949, 375 reports were collected and analyzed. In August 1949, a report was written on these 375 incidents and it was concluded that all sightings were due to:

1. Mass hysteria or war nerves.
2. Hoaxes or persons seeking publicity.
3. Psychopathological persons.
4. Misinterpretation of known objects.

These conclusions have been given a great deal of study and it is now concluded that the vast majority of the reports received are not due to hysteria, war nerves, hoaxes, publicity seekers, psychopathological persons, etc., but they are reports made by persons who have definitely seen something that they themselves could not explain at the time of the sighting and have very sincerely made their report to the Air Force. This does not mean that these reports could not have been misinterpretations of known objects, as not all of us are familiar with the many different ways known objects can appear under various conditions.

In the Summer of 1951 the project was reviewed at the request of Headquarters USAF and Project Blue Book was established. Between 1949 and 1951 the project had

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not been dropped, but it was being carried on a low priority basis. The reason for the renewed interest in the project was that between 1949 and 1951 very little publicity had been given this subject, however, reports continued to come in. These reports were mainly from military personnel, and could be classed as good reports. I would like to stop here a minute and explain what we mean by a good report. To us, a good report is one in which several people were involved and the motives of these people in making the report cannot be questioned. They have made comparatively careful observations and have reported everything that they observed. Very few, if any, of the reports in ATIC files could be classed as an excellent report, since everyone is familiar with the frailties of human powers of observation and with the necessity for obtaining readings by instruments to get exact calculations.

After reorganization of the project in the summer of 1951, reports continued to come in at the rate of about ten a month. In the spring of 1952 there was an increase in the number of reports and they hit a peak of 70 per day in July 1952. At the present time they have dropped off to about five a week. There is no doubt that the emphasis placed on this subject by the press caused this big up-sweep in reports.

Current Situation

It can be stated now that as far as the current situation is concerned, there are no indications that the reported objects are a direct threat to the United States nor is there any proof that the reported objects are any foreign body over the United States or, as far as we know, the rest of the world. This always brings up the question of space travel. We have gone into this with many people and it is the opinion of most scientists or people that should know that it is not impossible for some other planet to be inhabited and for this planet to send beings down to the earth. However, there is no, and I want to

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emphasize and repeat the word "No", evidence of this in any report the Air Force has received. I would like to go back over that once more for the sake of the record. We have no evidence in any of our reports that the earth is being visited by any people or beings from outer space.

We have arrived at the conclusion that these reported objects are no direct threat to the United States for several different reasons. One, we have never picked up any "hardware". By that we mean any pieces, parts, whole articles, or anything that would indicate an unknown material or object. We have received many pieces of material to be analyzed but in every case there was no doubt as to what this material was.

Photographs

We have photographs of some unusual things, but in all of those that show any amount of detail, there is a varying amount of doubt as to their authenticity. Still photographs are very easy to fake, without retouching the negative. Our files contain many photos that were submitted in good faith. Some have turned out to be flaws in the negative, light flares or photos of some relatively rare known natural phenomena. We have some that cannot be readily explained since they are merely "blobs" of light and could be various things. None of the photos on file that cannot be explained show any detail in the object or are cause for any undue speculation. Tremont

Statistical Study

We have made a statistical study of the data that we have collected in order to attempt to determine whether or not there is any common pattern in the sightings but we have had no success in finding any such pattern. The statistical study made by ATIC was made on cross-index cards with 16 items, such as a reported shape, a reported direction, color, etc., being cross-indexed in an attempt to find a pattern, but we found none. In order to make a more detailed

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study, and since it is very difficult to handle ^{3,000}~~2,000~~ reports on cross-index cards, an IBM study is now being made. In this study approximately 80 items will be placed on the IBM cards. These items will be cross-correlated and any patterns should be apparent. This has not yet been completed. The results we will obtain will possibly help us in the future planning for the project.

A Few Statistics

Two points that are of interest but are not in themselves greatly significant are plots of the distribution of our unknown sightings and a plot of the frequency of reports. A definition of the term "unknown" will be given later.

#1 (Slide of Location of Unknowns)

You will notice that the unknown reports do tend to cluster around critical areas in the United States. One explanation might be that the people in these areas are aware of the fact that they are in a critical area and are more aware of unusual things.

#2 (Slide on Frequency of Reports)

A plot of the frequency of reports shows a series of peaks in July of each year. We cannot account for this. Some people have offered the explanation that there is better weather in July, more clear skies. We have checked this and there seems to be no correlation; other months also have clear skies. The fact that July nights are warmer and more people are outdoors has also been advanced, this doesn't appear to have any bearing on the problem either.

You might be interested in a breakdown of our reports for 1952. In breaking down these reports, we use several degrees of certainty under each category. We'll take balloons, for example. We will classify them as a known balloon, a probable balloon, or a possible balloon. A known balloon means that we were definitely able to correlate the facts of the sighting with the data on a balloon track and there is no doubt that the object was a balloon. Probably a balloon

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means that we were not able to correlate all the data, but there is no doubt in our minds but what the reported object was a balloon. A possible balloon is where we check the report with balloon data and cannot find a correlation yet we still believe the object was a balloon. This factor accounts for "lost" balloons, that is, balloons that may have developed slow leaks and floated great distances. In all our categories of balloons, aircraft, and astronomical bodies, we use these three breakdowns.

#3 (Slide showing Breakdown of Conclusions)

In analyzing 1021 reports, ^{for 1952} and those are reports that have been received through military channels and do not include several hundred reports from civilians direct to ATIC, the following is the breakdown of conclusions as of 22 Dec 52:

<u>Balloons</u>		18.51%
Known	1.57	
Probable	4.99	
Possible	11.95	
<u>Aircraft</u>		11.76%
Known	0.98	
Probable	7.74	
Possible	3.04	
<u>Astronomical Bodies</u>		14.20%
Known	2.79	
Probable	4.01	
Possible	7.40	
<u>Other</u> (Ducks over drive-in movies, searchlights on clouds, etc.)		4.21%
<u>Hoaxes</u> low with	→	1.66%
<u>Radar</u> (Explanation not proven)		6.84%
<u>Insufficient Data to Evaluate</u>		22.72%
<u>Unknown</u>		20.1 %

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This leaves a balance of 20.1% of the reports which are classified as unknown. At this point, a definition of the term "unknown" is in order. ^{usually ~~one or more of the~~ ~~mentioned categories~~ ~~can't be applied~~} Usually there is more than one source or observer. Again, this does not mean that just because a person is alone, sees something he cannot explain to himself and reports it, his account of what he saw is laughed off. Normally one person just cannot supply the necessary data. For this reason, we dwell more on reports where the data can be substantiated by others. To go a step further, in a report we classify as unknown there can be no doubt as to the reliability of the persons making the observation. If the report contains a relatively good amount of data, it is then checked against the location of known objects, phenomena, etc. If none of these explain the sighting, it is classed as unknown. It might well be that if we had more data on the sighting, it could easily be explained.

(Slide of Locations of Unknowns)

As you will note on this slide we have plotted all of our reports we classify as "unknown". They tend to concentrate around Albuquerque, Washington, D. C., San Francisco, and San Antonio, with Albuquerque presenting the greatest area of concentration. It may be that the people there are more aware of the vital nature of their industry and are more alert to report things they see in the air.

Why Continue The Project?

The question now arises, "If most of these reports can be explained, why continue the project?" I might state now that the project will be continued and the subject will continue to be treated seriously. There are several reasons why the project will be continued.

a. There are reports we cannot explain. We believe we can explain all but about 20%, but if you noted the breakdown of conclusions, we only can positively identify about 7%. With the world situation what it is and with the present advances in science, it behooves the Air Force to have a system whereby

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they can receive reports of, evaluate, and determine the identity of objects reportedly flying over the United States.

b. There is no assurance that at some future date some foreign power could not develop some object that by present day standards is unconventional in appearance or performance. Due to the fact that the term "flying saucer" has become almost a household word for anything that cannot be identified as a conventional object, it might be reported as a flying saucer. The Japanese paper balloons of World War II are an example of this.

c. The third reason is related to the first. The Air Force is responsible for the aerial protection of the United States. It is our responsibility to assure ourselves and the public that these continuing reports, and we believe they will continue, are not a threat.

Operations of the Project *AFL 200-5*

To give you a little better idea of the project, I would like to tell you how we operate. Air Force Letter 200-5 is the basis for our operation. It states that the Air Technical Intelligence Center is responsible for analyzing all reports of unidentified flying objects and that each Air Force unit is responsible for forwarding reports that they receive to the Air Technical Intelligence Center.

It further states that all reports will be forwarded by wire then followed up

within three days by a written AF Form 112. *Hereafter only TWX and ATIC*
~~If AF Form 112's are not available,~~
will ask for 112 if it seems right. important
~~the report can be made in letter form.~~ *enough.* This reporting requirement in AFL 200-5

does not mean that the officer receiving the report from the source or the observer does not have the prerogative to make his own evaluation and determine whether or not the observation is worth forwarding. He may do this in two ways. *WADF = 100 reports per month not for*

He may be able to identify the object, if he does, it is no longer an unidentified flying object, and therefore, does not have to be forwarded. Secondly, he may evaluate the report according to source and content and determine that it

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judges - listed because they are just "flying saucer" reports - not good!

7 To be frank, use ~~give many reports of observing~~ known subjects
Short waves in first ash ~~later~~.

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would be of no value as far as analysis is concerned. To break this last point down further, the officer receiving the report may believe the source is of doubtful character or it may be obvious that the source did not make careful observations. In general, a report from only one inexperienced observer is not too helpful. *You should jot down the source's name, address + phone #*

This is not because we doubt the observer's word as to what *in any event?* he saw; it is because most people have difficulty estimating time, angles, relative size, etc. If several people make an observation their estimates can be arranged and the results are a little more accurate. It is a good idea, *?*

however, to at least note the name and address or telephone number of such sources since it might be that their observation would tie in with others and it would be necessary to contact them again. *In short, the reporting officer should try to determine the cause of the sighting himself at the base level with*

Project Operations the check will go in to in a minute on balloons, etc, etc.

Very probably some of you have forwarded reports of unidentified flying objects to ATIC and have wondered what happened to them. Project Blue Book is set up to receive and analyze all such reports. The T.O. calls for 4 officers, 2 airmen and 2 civilians. Like any other organization, the actual strength fluctuates. In addition to these full-time personnel, the Center has many specialists, mostly engineers in many fields, and these people are called upon to aid in analysis as they are needed. To supply people with specialties not available at ATIC, ATIC has a contract with a large research organization which employs people in many fields. These include physicists, nuclear physicists, metallurgists, psychologists, an astronomer, and almost any other field you can name. These people can be called upon if they are needed. The astronomer is frequently consulted. *No*

In going over the operation of Project Blue Book, I will tell you how we check reports. You can use these same processes to make your own evaluations *before you* submit a U.A.C. report *and* and as was stated before, if you are convinced that the object was a conventional

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object, don't forward it as an unidentified flying object. To be very frank about this subject, ATIC receives many reports that are obviously known objects.

This only clogs up channels of communication and at times has approached being

For this reason I want to stress serious. *on the person preparing the report* It is obvious that the intelligence officer did not make any effort

to determine whether or not there were any balloons in the area, etc. We realize

that in some cases a wire was sent immediately upon receiving the report like

"shoot and then ask questions". *This is the only way to proceed if the report*

For this reason I want to stress right here looks "hot". However, in many other cases there was plenty of time between the

time of the sighting and the time the wire report was sent to pick up a phone

That the preparing officer should and check with the tower, CAA radio, the weather station, radar, etc. *To try to*

find a solution himself - This brings up the question of sources - good or bad
Evaluating the Source *If you can't determine it definitely send it to ATIC.*

As in all intelligence matters, the source is extremely important. We

know psychology is a strong element in this project. Although we maintain

that almost everyone who reports actually has seen something, at times they un-

consciously let their imagination twist the facts. It is very difficult, if

not impossible, to set down any rule to use in evaluating a source. Sometimes

you can talk to a person and learn that they are very imaginative. We go a lot

on the person's background, age and sex. An airline pilot may see a vapor trail

but to a housewife it is a flying saucer, possibly enhanced by the fact that she

just read "Amazing Stories". This does not mean all housewives are poor sources,

but category for category, commercial airline pilots are more reliable than

housewives simply because they have seen a larger variety of things in the air

and are naturally more prone to be conservative in reporting.

check for the following, as we do.

Balloons

When we receive a report, the first thing that we check it for is the possi-

bility of its being a balloon, aircraft or astronomical body because these three

objects give us the most trouble. To go into each of them a little more specifi-

cally, we will start with balloons. 12

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There are two different general categories of balloons. One is the research type balloon. These balloons vary in shape and size and are released from various points in the United States depending upon what projects are being conducted and are not launched at any scheduled time. They may be small like weather balloons, they may be clusters of these weather balloons, or they may be large polyethylene balloons that are 100' in diameter. With the present emphasis on cosmic ray study many different types of balloons are being launched in the United States.

7 Balloon Tracks
The other category is the regularly launched weather balloons. These are launched from known locations in the United States at definite times.

Project Blue Book gets data on the large research type balloons either through Hq ADC or, if necessary, direct from the launching agency. Due to the nature of this problem, ATIC is familiar with most of the agencies in the country who are launching research balloons and can go directly to these people to get information on their balloon tracks. Since the launch sites are changed frequently, this requires constant liaison.

It is possible that now or in the near future your division or Force will get data on all launches of research type balloons. It is definitely worth a try to contact the division or Force. If they do not have the tracks, they may know of a launch program. Normally these large balloons travel great distances and it may be difficult to get data without going to Hq ADC.

On the regularly scheduled weather balloon launches, Blue Book has data on all launch sites and knows the approximate time of launch each day. We have *4-1-56,* the authority to directly to these stations to obtain data on their balloons or, if the time element is not critical, to go through Air Weather Service to get it from their central files. Fortunately, many of these balloons are tracked, either by radar or by radio DF and it is possible to get the exact tracks of the balloons.

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These balloons are scheduled to be launched at 0300Z, 0900Z, 1500Z and 2100Z each day, ^{from 400 different airbases (A.W.S.) PAA Stations, Naval Air Stations,} but can be launched plus or minus 30 minutes of this time.

Nearly every airbase and civilian airport servicing a scheduled airline releases some type of weather balloon, either the small piball that is tracked visually or the instrument carrying type that is tracked by radio or radar. Although these balloons can develop a slow leak and float for long distances, they normally will not get more than 30 miles from their release point. To be safe use a distance of 50 miles.

If you get a report of an object you believe to be a balloon, check with your weather officer. ^{at A.W.S.} He will know what stations in your area launch balloons and from the general wind conditions at the time of the sighting tell you where the balloon probably came from. You can then get the plot of balloon tracks and definitely establish whether the object was a balloon. If there are several launch locations in your area, you may have to check them all. Many times a call to the unit launching the balloon will suffice as they can tell you the location of their balloon at a given time.

~~HA~~ (Slide of Weather Balloon Launch Sites)

Balloons do not give us any trouble when they look like balloons, it is when they don't look like balloons that they give us trouble and they can take on many odd appearances. In the daytime a balloon will appear to be a very bright star in the sky. What is happening is that the sun's rays are diffusing into the balloon and causing it to glow. Under ideal conditions, a balloon can be seen as high as 90,000', but under more adverse conditions a balloon possibly cannot be seen over 4,000' to 6,000'. It depends a great deal on the haze. During the daytime a balloon at very high altitude will appear to be stationary or traveling very slowly. At night balloons that are lighted will appear to be a radically moving light. This light may even appear to change color, due to

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atmospheric conditions. The balloon will change direction with wind and will appear to be on a jerky, zig-zaggy course. Since most people observing these balloons do not have any reference point in the sky, the balloons appear to be moving very much faster than they really are. At dawn or dusk a balloon can appear to be a fiery red, circular shaped object in the sky. The reason for this is that the balloon is picking up the slanted rays of the sun, exactly the same as a cloud will pick up the sun's rays in a sunset. It may be that if the balloon is high enough, it can be dark on the ground but it will be sunset at altitude.

Some balloons carry radar reflectors or metallic loads capable of giving a radar return. The clue to this is that they will be traveling with and at the same speed as the wind at their altitude.

Aircraft

Aircraft, as aircraft, do not give us a great deal of trouble, it is when they are high and reflecting sunlight or leaving a vapor trail that they are most often misrecognized. Similar to the situation with balloons, a vapor trail will appear to glow at dawn or dusk. Many times the aircraft leaving the vapor trail cannot even be seen, however, the vapor will appear to be a bright fiery red streak of flame in the sky. Formations of aircraft reflecting the sunlight can very often appear as a formation of disc-shaped objects. At times the reflection will suddenly diminish causing the objects to look like they were either moving rapidly out of sight or just disappearing.

ATIC does not have a satisfactory system for checking aircraft. This is because Flight Service and CAA does not keep a permanent record of aircraft flights very long after the aircraft has landed. Therefore, it is up to the officer receiving the report from the observer to thoroughly check aircraft movements immediately. He may check these through the control tower, through Flight

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Service, through CAA radio stations, radar, or many various ways, but he should check thoroughly to see whether or not there were any aircraft flights in the area of the sighting. ADC units have a distinct advantage here, because if the report is received soon enough, radar can be checked.

Astronomical Bodies

As far as astronomical bodies are concerned, ATIC has a professional astronomer under contract to review sightings that they believe to be caused by astronomical bodies. By astronomical bodies we mean bright stars, planets, or meteors.

The most valuable information in the analysis of an unidentified flying object that is suspected of being an astronomical body is the bearing, the azimuth, and the time. From this we can check back through almanacs and determine the locations of certain bright stars. Stars that give us trouble are Venus, Jupiter, Capella and several others. You can check stars by obtaining the approximate time, azimuth and elevation of the reported object and grabbing the nearest navigator.

Meteors are not too difficult to evaluate because they seem to have a standard description. If someone reports an object similar to a rocket going across the sky at high speed and leaving a trail behind it, chances are it is a meteor. However, in certain instances we have had very unusual meteors reported. We have found that there are certain classes of meteors that astronomers call fireballs. These are so rare that there is a good chance that you may see only one in your life, if any. This has probably accounted for many reports by pilots who state that they met a huge ball of fire coming directly at their aircraft and at times have even racked up the aircraft to get out of its path. Many times these are reported as missiles. We have had pilots who have complained to the Air Force about shooting rockets, or experimental missiles, through the airways and endangering their aircraft. This is a rather foolish statement,

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however, when you get to thinking about it. One, if a missile appeared anywhere outside the proving grounds chances are it would be enemy. However, if you have studied missiles you will note that the burning time, or the time before fuel cut-off, is only a relatively short period during the missile's flight. If we would say, hypothetically, a rocket was shot from some foreign country into the United States, chances are very good that the fuel shut-off point would have come long before the rocket ever reached the United States and it would not be emitting a flame.

You can check meteors by looking for accounts of them in the newspaper, or consulting local astronomers.

Other Causes of Reports

Naturally balloons, aircraft and astronomical bodies do not account for all the sightings. We have a smaller percentage of other things, such as ducks flying over drive-in theaters at night, searchlights on clouds, blimps, pieces of paper caught in an updraft, and many other things that cause reports. These are very difficult to check and to check them we normally go back to old sightings. For example, sometime back, approximately a year ago, the city of Fargo, North Dakota, was somewhat disturbed by glowing objects that flew over the city on various nights. Finally, some of the more enterprising souls in the city took enough interest in the subject to attempt to determine what they were. All it was were flocks of ducks or geese reflecting the city's lights. We will take a case like this and mentally file it. When we come across a similar report, we'll go back and compare the two reports. If they are similar enough, we will write the new report off as being the same thing. This is about the only method we have of checking such things.

Radar Sightings

Since ADC has the vast majority of the radar that is operating 24 hours

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per day, we receive many reports from them. ADC Regulation 200-5 covers such reporting. This regulation states what information is to be forwarded. ATIC uses a very similar questionnaire. It was designed after the one in ADC Regulation 200-5, but contains a few more items.

We receive quite a few radar sightings and are well aware of the fact that weather and interference between two radars can cause wierd effects. Our problem is to determine methods of more positively establishing the cause of certain effects and even being able to predict when these effects may be more noticeable. Naturally, you people are also very much interested in this.

We understand that ADC has already published their latest material on how to check for interference and weather, so I will not go into this.

When reporting a radar sighting, the weather data are extremely important. Plots of the temperature and moisture vs. altitude should always be reported.

There are no reports of radar sightings in our file whose authenticity cannot be questioned to some degree. In none of the cases of erratic or high speed (above Mach 1) that we have on file can it be shown that the track was actually that of a material object. One rare exception to this is when radars have happened to track meteors. More of our unknown high speed tracks might be meteors but unless we get reports of a meteor track to correlate with the radar track, it is difficult to separate out these reports. Lightning is another possibility but a very vague one.

Radar Scope Photos

A large number of Air Defense Command radar stations are equipped with radar scope cameras. ADC Regulation 200-5 authorizes the use of these cameras for photographing abnormal returns. These scope cameras should be ready to operate at all times since scope photos are an absolute necessity for the accurate evaluation of reports involving radar. In addition, they give valuable

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data for the study of weather and interference effects. *In this connection, Video cameras, etc.*
Simultaneous Radar Visual Sightings

Reports of simultaneous visual reports that supposedly correlate with unusual, high speed or erratic radar tracks, with the rare exceptions of meteors and lightning, are a different story. No presently known phenomena or condition will give this situation. If it can be shown that the object sighted visually and the radar track are the same, the report warrants a detailed investigation. ~~So far, this has not happened in any of our unknown cases.~~ We have good reports of simultaneous visual-radar sightings ^{U. A. C.'s} but again there are always factors that shed varying degrees of doubt as to whether or not the observations involved the same object.

The first factor in establishing a correlation is to check the flight path or location of the visually observed object with that shown on radar. If this correlates closely the next step is to establish that the time was the same, sometimes a difficult task. Other checks can also be made but these two are basic.

Other Simultaneous Sightings - *triangulation*

Any report of an object seen from two separated locations is relatively important. These include two locations on the ground, from the ground and air, etc. Of these, the best way to gather very accurate data is to utilize two theodolites or a theodolite combined with a plain visual sighting. The use of a theodolite is considered an instrumental observation. For those who are not familiar with the term, a theodolite is a device for accurately measuring the azimuth and elevation angles during weather balloon flights. Nearly every air base and large civilian airport has one. It can be put into use by merely calling the weather station and requesting that they try to observe the reported object. The data needed are the time, elevation, and azimuth at one minute

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intervals for as long as the object is in view or for at least 20 minutes if it appears to be hovering. If an adjacent air base can be contacted and requested to do the same, preferably at the same time, you've hit the jackpot as far as good data are concerned.

No ~~(Show Triangulation Slide)~~

Cross Check With The GOC

Another ready source of possible information that may shed some light on a report of an unidentified flying object is the Ground Observer Corps. The GOC can be used in two ways, they may make reports and they can cross-check reports.

If one GOC post calls in a report as they are directed to do in ADCR 55-31 a nearby post can be contacted by the filter center to see whether they can see the reported. If they can, there is a beautiful set up for triangulation. The observers can estimate the elevation and azimuth. Posts equipped with angle measuring devices could make very accurate readings.

If a report should come in from a source other than the GOC, they could be contacted and possibly identify the reported object. It might be that they have seen and positively identified a balloon, meteor, or aircraft, while a pilot flying in the area observed the object from a different angle and could not make an identification.

Summary on Report Evaluations

It would be impossible to give you all the checks that can be made on reports since each report requires a different approach. I've given you a few ideas and you can undoubtedly think of more. One thing we do ask is that when you make a check on a report you obtain enough data to substantiate your conclusion. Just because someone reported four objects near a city and there were four aircraft in formation near the same city, don't quickly assume they were

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one and the same. Get some information on the location of the reported object, the time and course, then check this against the flight of the aircraft. If it correlates to a reasonable degree, they were very probably the same thing.

~~(Slide Showing Possible Checks)~~

Reporting Solutions

If, during an investigation of a sighting, after a TWX has been sent reporting the incident, the investigating officer should identify the reported object, ATIC should be immediately notified as to the solution.

Popular Theories

Many theories have been advanced that all of the reports are due to mirages, sun dogs, ice clouds and what-have-you. Some of our reports are caused by such things. We have received excellent photos of sun dogs and descriptions of mirages. These are definitely in the minority, however, and cause only a small percentage of the sightings.

Another popular solution is that all "flying saucers" are "skyhook" balloons. To check this a study of about ⁵⁵~~25~~ cross-country balloon tracks were made. To remove any doubt, the tracks were taken of flights made during July and August 1952 when reports were coming in at the rate of 50 per day. These balloons were seen and reported as "flying saucers" at only 8 points.

~~No 27 (Slide Showing Typical Balloon Tracks)~~

Questionnaires

~~We are continually being asked, "What information do you want in a report?" This is a rough question because each report is unique in that questions will come up that have never been encountered before. There are, however, certain items that pertain to every sighting. These are briefly listed in AFL 200-5, but are not given in any great detail.~~

and what is A.D.C.'s procedure in submit report?

up till now
Two types of reports are required by AFL 200-5, a report by wire and a written report on an AF Form 112. *Here after only the wire, a complete one based on 200-5, should be sent out to ATIC on T.W.X.*
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Will ask for addit 112 if sight. looks good
WEAF - 100 reports from last. this not being turned in, not being evaluated.

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to give a description of the sighting and the source. This includes the date, time, location, description of the object, its apparent course, and the source's name and occupation. Any other details that will help clarify the sighting should be reported. *Change*

To aid the intelligence officer in collecting data for the written report, Blue Book has compiled lists of questions that pertain to nearly every sighting. These questions have been arranged in the form of a questionnaire. Two questionnaires, one for radar and one for visual sightings, have been completed and are now in use. Two others, one for sightings made from the air and one for general background data, are in the process of being developed. These questionnaires are designed to require a minimum amount of work on the part of the intelligence officer and will insure that all available data are included in the report.

No The Ground Observers Data Sheet (presently called USAF Technical Information Sheet) is to be filled out by the observer. It can be handcarried or mailed. The "Electronics Data Sheet" is to be filled out by the intelligence officer at the AC&W Squadron with the assistance of a technician, if he is not a technician. The "Aerial Observer's Data Sheet", that will be published soon, is to be filled out by the pilot of the aircraft from which the observation was made. The forthcoming "Supporting Data Sheet" will be filled out by the intelligence officer making the report.

These questionnaires have been made up after a great deal of study. Approximately a year ago, ATIC arranged to have a group of scientists and professional people to design a questionnaire. These people studied all questionnaires that had been previously used in this project, they studied our file of sightings, and arrived at a tentative version of our present questionnaire. This tentative questionnaire was used for a period of approximately three months, the results

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analyzed, revisions made, and a final questionnaire was made up.

AFL 200-5 specifies that the written report be submitted on an AF Form 112 and that certain data be included. The questionnaires cover all the required data. To comply with the requirement for submitting a Form 112 the questionnaires may be attached as inclosures using Part A of the Form 112 as a cover sheet or letter of transmittal. Doing this saves a great deal of typing on the 112.

Extra copies of these questionnaires should be available soon. It has been tentatively agreed that they will be distributed through ADC channels.

To further aid in reporting, a manual "How to Make Flying Object Reports" will soon be distributed.

We hope that by using the questionnaire and guidance material that is furnished to intelligence officers, the quality of the reports will improve. Some reports are satisfactory but very few contain enough data to make a good analysis. Many highly qualified scientists have reviewed our files of reports in the past two years and they always comment on the fact that additional data were available and should have been reported.

Be Sure to Include Angles

One item that is habitually left out of reports is the position of the object in the sky. If a person is familiar with the location of stars, such as a navigator or an astronomer, he can locate the path of the object relative to these bodies. An easier way, however, is to use angles. The elevation and azimuth at the point of initial sighting and at the point of disappearance can be given. A short word description can describe the flight path between the two points.

A pilot observing a light in the sky while he is airborne can establish its position by pointing the nose of the a/c toward it, reading his compass,

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and estimating the elevation while flying straight and level. When reporting any angle, it should be stated whether it is true or magnetic.

Videon Cameras

No You may have heard about a camera that has been modified for use on this project. At the present time, we have 100 of these cameras. They are a commercial model stereo camera with one lens fitted with a diffraction grating. The grating serves as a prism to separate the light source into its various components. Any light source that is made up of an element or combination of elements has a distinctive spectrum. This spectrum is similar to a finger print. A file of the spectra of known objects, stars, meteors, etc., is being assembled and this file spectra can be compared to the spectra obtained from photos from the cameras. These cameras will be placed in control towers and a few selected radar stations throughout the United States. We are having some difficulty with the gratings on these cameras, however, and consequently have not put them out in the field. The grating is a rather touchy piece of equipment and we are having trouble getting it to stand up under certain conditions.

We realize that this is not a fool-proof measure. These cameras are not a piece of highly developed scientific equipment, but we do hope that we may be able to obtain some information.

No ~~(Slides of Videon Camera)~~

~~(Slide on How the Videon Operates)~~

Other Instrumentation

- Videon Camera, Questionnaire, Elect. plotting sheet.
The possibilities of more extensive instrumentation has been discussed in detail. Many suggestions for more complete cameras, special aircraft instrumentation, and other detection devices have been studied. It is possible that a study contract for such instrumentation may be let, but no actual program will be started now. The cost of such a program would out-weigh the results.

+ copy of this briefing will be given out after the lecture is over. They are guides for your future reporting.

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Sample Incidents

You might be interested in some of the reports we get. I'll give you a brief description of two or three.

On the night of 13 May 1952 about 10 P.M. four amateur astronomers were making observations through a small telescope on a college campus. All of a sudden they noticed four oval shaped objects in a diamond-shape formation. The objects appeared nearly overhead and disappeared at an angle of 12° above the horizon in about 3 seconds. The objects or lights were reddish brown in color and about the size of a half dollar, quarter turned, at arm's length.

Our evaluation of this was unknown. It could possibly have been ducks or geese reflecting light, except the observers pointed out that they had purposely set up their telescope in an area that was completely dark so that there would be no ground lights to hinder their observations.

Another interesting sighting occurred at Patrick AFB in July 1952. Seven people, all AF personnel, observed five different lights near the base during a period of 15 seconds. The first one was hovering in the west, three traveled very swiftly over the base on a west to east heading, and the fifth light came over the base from the west, made a turn, and went back to the west. All of the lights appeared to be much brighter than a star and amber-red in color and there was no sound. No aircraft were in the area.

A balloon had been launched prior to the sighting and could account for the hovering light. It is possible that the three fast-moving lights were meteors, although to see three meteors all traveling the same direction only seconds apart is doubtful. The fifth light that was observed is the one that makes the sighting interesting, no meteor comes in, makes a 180° turn, and departs.

- 1) On 14 July 1952 at 2012 EST two Pan American pilots flying on a heading of 60° near Norfolk, Virginia, observed eight objects over Chesapeake Bay near

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Old Point Comfort, Virginia. The DC-4 aircraft was at 8,000'. When the aircraft was about 20 to 25 miles out on the NE leg of the Norfolk beam, six objects in trail were observed below and coming toward the DC-4. When they reach a point under and slightly below the aircraft, they appeared to roll on edge and without any radius of turn, shoot off on a heading of about 270° rolling back into a flat position. Immediately after the change in direction the formation was joined by two other objects.

When first seen the objects were glowing on the top side with an intense amber-red light, many times more brilliant than the lights of the city below, they resembled a glowing red hot coal. They appeared circular. As they approached the DC-4 they appeared to decelerate just before they changed direction. During their approach they held a good formation but just before the turn, they appeared to tend to overrun the leader. With the deceleration the glow seemed to dim. Immediately after turning and flattening out, the glow disappeared entirely. They reappeared at once, glowing brilliantly again. As they began to climb, the lights went out one by one.

They were in view long enough for the pilot to get out of the left seat after he first observed the objects, cross the cockpit, pick them up just as they completed their turn and watch them disappear. It was estimated that this was between 10 and 20 seconds.

The only "clue" as to a possible identification of the objects is a part of the initial report that stated that there were five jet aircraft in the vicinity of Langley AFB, Va., at the time of the sighting. (Note: The incident took place about 10 miles NE of Langley AFB.) Efforts to obtain more data on these jets were unsuccessful.

Since aircraft were in the area it is possible that they were observed. The in-trail formation could have been a "rat race" although doing this in jet,

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at night, below 8,000', is difficult to believe. The almost instantaneous turn could have been some type of an illusion. The diminishing light could have been the jets pulling off power before the turn. This again is a doubtful point since there is no data available on the appearance of the tailpipe of a jet head-on from above.

Since there were jet aircraft in the area, it is possible that the two Pan American pilots saw these jets. Therefore, we have written this off as "possibly aircraft".

Conclusion

In concluding this briefing, it can again be stated that in none of the reports so far received are there any indications that the reported objects are a direct threat to the United States, nor is there any proof that any of the reports received have been reports of any radically new unknown material object. We admit we cannot explain every report, but we believe we know enough about the unknowns to say they are not anything to invoke undue speculation.

The project will be continued. Even if a system for the fool-proof explanation of every sighting is developed, it will continue because ~~you never know~~

it is intelligence job to be on the alert for unidentified flying objects and to guard against hysteria. By assuming the public will
~~what may happen in the future.~~

The one threat that could come out of this problem of "flying saucers" is *the psychological problem and Russia's coordinating an attack with it.* ~~a "wolf, wolf" situation.~~ Some people take an exceedingly "dim view" of such reports and use no logic in trying to explain them. We do not want to clutter communications channels with worthless reports. If you can logically explain a report, fine, there is no need to waste your time and effort forwarding it.

All we ask is that you do use logic in writing off a report as a "flying saucer" *and register U.A.O. seriously*

But, if you believe you have a report that merits the attention of Hq USAF, it

~~For To ATIC, who will ask for further info on a 102 if it seems~~
should be a complete report. The only way we will continue to learn more about *necessary*

reports of unidentified flying objects is to receive and analyze accurate detailed reports.

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*✓ You as members of A.D.C. can help Project Blue Book - :
1) Take reports seriously
2) Try to eval. them yourselves
3) In about 3 months - Only TWX*

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

SECRET

AUTH: CG, ATIC
 BY: E.J. RUPPELT
 Capt, USAF
 DATE: 23 Dec 52

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FROM: (Originator) SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

CG ATIC

TO: CG AIR DEFENSE COMMAND ENT AFB COLO

INFO:

DATE-TIME GROUP 231400Z DEC 52		SECURITY CLASSIFICATION [REDACTED]
PRECEDENCE FOR:	ACTION ROUTINE	INFORMATION
☐ BOOK MESSAGE	☒ ORIGINAL MESSAGE	
☐ MULTIPLE ADDRESS	CRYPTOPRECAUTION ☐ YES ☐ NO	
REFERS TO MESSAGE:		
IDENTIFICATION	CLASSIFICATION	

FROM: AFOIN-ATIAA FOR DCS/I

DOWNGRADED AT 2 YEAR INTERVALS:
 DECLASSIFIED 12 YEARS
 DOD DIR 5200.10

Reference telephone call from Maj Sadowski to Capt Ruppelt on 22 Dec 52. Proposed tour to brief your forces and divisions has been postponed and is tentatively scheduled to start in late January or early February. Postponement was necessary due to time being taken up by meetings with and preparing data for CIA. CIA has made survey of some of the sightings in the ATIC file and has arranged for a panel of several top U.S. scientists to review them. Although plans are not completely firm, this meeting is tentatively scheduled to take place in early January. CIA's interest is from standpoint of reports similar to present reports of unidentified flying objects being used as psychological warfare and to add confusion in possible attack. They believe a system for rapidly sorting out false reports or reports of known objects and phenomena should be established. Referenced briefing tour is being given high priority and you will be notified as soon as it can be started and of the planned itinerary.

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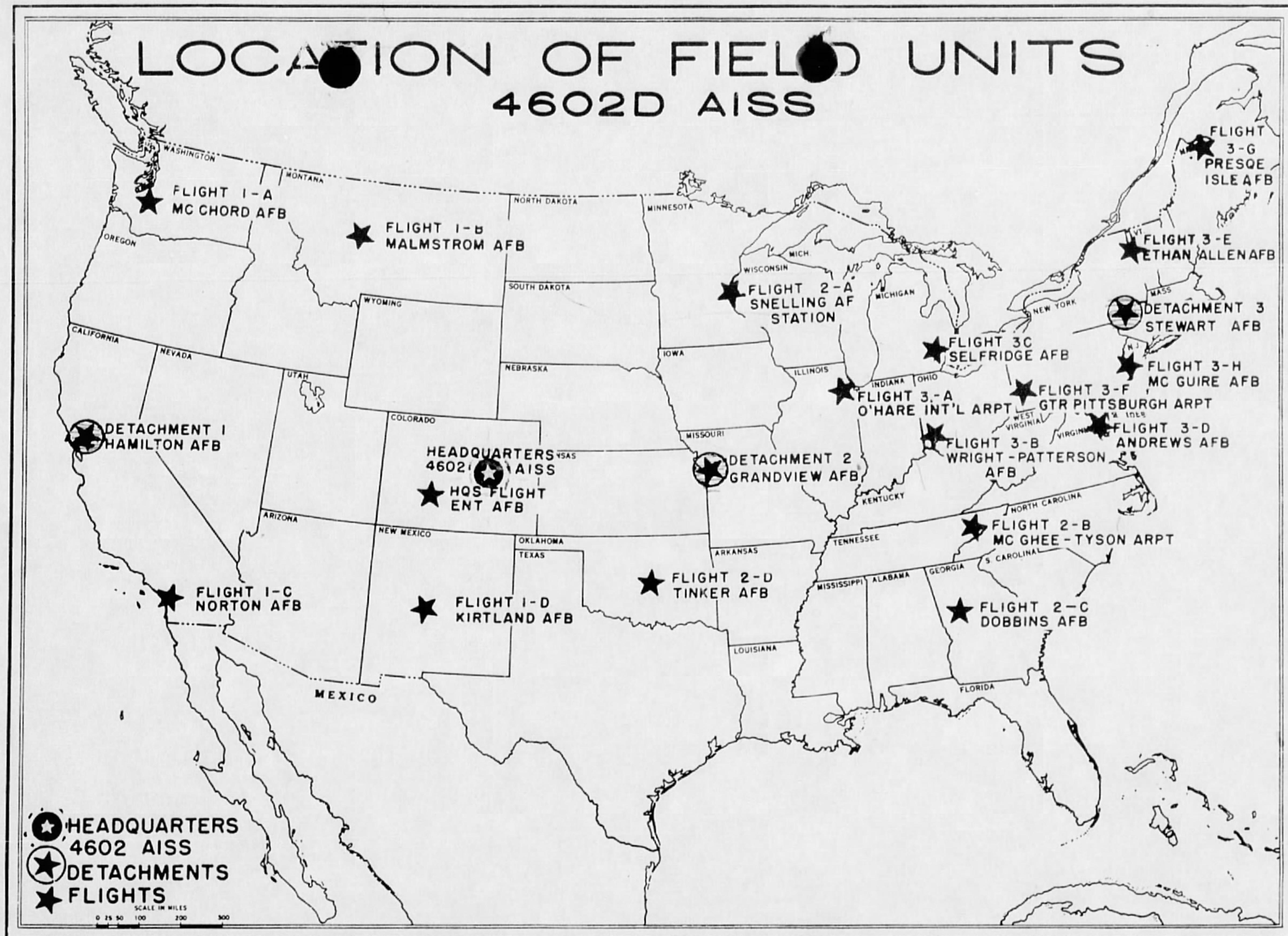
DRAFTER'S NAME (and signature, when required)

CAPT E.J. RUPPELT

SYMBOL
ATIAA-5TELEPHONE
65365

SECURITY CLASSIFICATION [REDACTED]	PAGE 1 OF 1 PAGES
RELEASING OFFICER'S SIGNATURE ROBERT E. KENNEDY, MAJOR, USAF	
OFFICIAL TITLE AIR ADJUTANT GENERAL	

LOCATION OF FIELD UNITS 4602D AISS



400210

Air Intelligence Service Squadron

MISSION
CAPABILITIES
REQUIREMENTS

CONTINENTAL
AIR DEFENSE COMMAND

FILE - 4-54 Aerial Phenomena Group - Air Sciences Division