

STAFF STUDY - 1952 (RUPPELT)

K243. 6012-2
1952

7-3745 - 382
1003824

RETURN TO
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Maxwell AFB, Ala 36112

UNCLASSIFIED

In order to accomplish the above it will be necessary for the Air Force to make a PIO release similar to "White Paper". In addition to explaining the Air Force policy (and proposed plan) for investigating future UAO observations, this paper should note that valuable scientific data will become available as a result of the proposed plan for implementing the collection thereof by use of instruments. It should be pointed out that only such data that is of military nature will be classified, whereas fully scientific data will be released to the scientists cooperating on the project and will be valuable to them in their studies.

As in the collection activities, so in the analyses operations it is planned to hold costs to a minimum by the employment of existing military and public agencies to a maximum. For this reason conferences have already been held with MATS to work out arrangements whereby the Balloon Screening activities will be monitored by the Air Weather Service and Aircraft Screening will be monitored by Flight Service.

The speakers who follow me will explain the technical details of the instrumentation plan.

Thank You.

Statement:

① - AF been accum. sight & evaluation over period 15 yrs.

② - 1948 eval. of total prev. sightings made by Dr. Heinig Astion, OSU. - Result. attr. to balloons - Mirages - Ice crystals, etc Planet Venus - Searchlights - Melons etc etc 25% unexplainable on basis of evaluation @ that time -

③ - since that time revised procedure initiated - monthly summaries made - ~~the~~ employt of ^{AFIC's} ~~regular~~ ^{Scient.} consultants - Declass. project except ~~for~~ names - protect individuals

④ - latest method ^(responsible) AF agency - Reports rec'd & screened into obvious & those req'd eval. latter sent result. to Air Weather Bureau, Flight Servs. & Astronomical Observ. These divided sightings into solve sightings when poss. & send others to a Scientific Advisory Committee consisting of ^{AF consultant} ~~Dr.~~ ^{SAB member} Dr. J. Kaplan Chum. & other eminent members in various fields, most of whom are

FLIGHT RESEARCH LABORATORY WCRRH

Suggested Sighting Station for Observation of Flying Saucers, Fireballs, Meteors, and other Atmospheric Phenomena.

CRITERIA:

1. The Sighting Station is cheap, transportable, easily maintained and easily operated.
2. The Sighting Station shall gather information from which can be determined:
 - a. Position
 - ✓ b. Velocity
 - ✓ c. Altitude
 - d. Size
 - ✓ e. Spectral Emission

It is proposed to build the Sighting Station component wise as follows:

- a. Light gathering and focusing source is a six inch Schmidt System f 12 with a 180° field fully corrected. (This system has only been available about three months based upon the results of a Flight Research Laboratory research project with Dr. James Baker of Harvard).
- b. The film travel and loading mechanism to be taken from standard Air Force cameras and adapted for spring operation. Five inch strip film would be suitable.
- c. The Sighting Station box would be fabricated as desired.
- d. A grating capable of being rotated by a spring drive would be placed at the focal plane. This would give the spectral characteristics of the body.
- e. A shutter capable of being driven by a spring drive would be incorporated to give timing marks on any film tracks.
- f. The film section would be mounted on a simple equatorial mount and rotated by a spring drive to eliminate the star tracks on the photographic film.

DISCUSSION:

Present Air Force film travel and loading mechanism for five inch film are available in quantity and have a storage capacity which can allow for an exposure every 10-12 minutes for a twenty-four hour period. It should be mentioned that ordinary film can be exposed for at least two hours at night time without excessive fogging.

The proposed Schmidt System is so completely color corrected that an accurate spectral analysis is perfectly feasible. The rotation of the grating is introduced to prevent the unfortunate case where the travel of the object would be into the spectral lines established from the previous position. At some point of the travel the spectra would be at right angles to the direction of travel if the grating were rotated.

The introduction of time by the shutter is all that is necessary during any one exposure. This comes about in the following manner and when fully understood it will be appreciated that the subterfuge introduced here will simplify the timing mechanism considerably. The frame every 10 or 12 minutes should be recorded time wise. This will bracket any track found on the frame within this period. The velocity will be determined by a shutter cutting the track at a constant number per unit time. If altitude and absolute diameter of an object are to be determined the object must be seen by at least two Sighting Stations. This gives the well known triangle method of analysis. The track in space against a star background is given in both plates from the two sighting stations. Absolute time is not given. However, there is only one time that an object could have made good the trajectory as given by both plates against the star background. Thus time is determined. From this comes absolute position in space at a specified time; from this comes absolute position; from this comes altitude; from this comes absolute size of object. The velocity and spectral analysis come from the other data.

The equatorial mount and its spring drive are old friends in the Astronomical Observatory business. A drive to eliminate star travel for periods of 10-12 minutes are really quite crude according to present standards.

The use of springs to drive the mechanisms as indicated previously are perfectly feasible. Springs have been suggested to increase the independence of the Sighting Station from electrical power connections.

The estimated cost of the Sighting Station in lots of 100 would be about \$3000 apiece.

JOHN E. CLEMENS
Chief, Physics Research Branch
Flight Research Laboratory
Research Division

- MATS Flying Service.
- Weather Bureau
- Air Weather Services
- Rand.

⑩.
Immediate Plans

- ① Add personnel
- ② Confer with Kaplan { to process the 25% unexplained
tell him appt. _____

- ③ Declass. Digest Anti & release to PIO.
- ④ Send monthly rept. immediately.
- ⑤ Use Stark questionnaire.
- ⑥ Assign higher rank officer.
- ⑦ Make definite arrangements with
MATS Flying Service
Weather Bureau
Air Weather Serv.
Rand.

Dr William J. Changier

Harvard University -

Dr. G. O. Kullback

Chief Scientist - NRL Dept. of the Navy.

Dr. F.A. Jenkins

Prag. of Hypothesis (Optics) Univ. Cal. Berkeley

Dr. E. H. Land

Dir. of Research - Polaroid Corp.

Member of SRS

Dr. Irving Langmuir

General Electric Company

Dr. L. N. Rideau

Physical Consultant

Dr. G. Stoney

Prag. of Hypothesis - (Stochastic)

University of California

Dr. G. E. Felder

Member of SRS

Prag. of Hypothesis (green fireballs)

Univ. of Chicago

Member of SRS

Dr. F. L. Wikipple

Prag. of Hypothesis (meteors) Harvard Univ.

Dr Fritz Zwicky

Prof. of astrophysics (Rockets) - CIT Pasadena
Calif.

~~The SAC~~

single
In the place of a ^{single} contractor
we believe that the interests
of the project will best be
served by ~~the~~ ~~the~~ ~~the~~ the
active collaboration of certain
other agencies such as

van Allen
Crozier

- ⑩ ~~Whitaker~~
- ⑨ ~~Feller~~
- ⑧ ~~Land~~
- ⑦ ~~Ridgeway~~
- ⑥ ~~Hubert~~
- ⑤ ~~Stratton~~
- ⑪ ~~Zwick~~
- ⑬ ~~Lougheed~~
- ④ ~~Jenkins~~
- ① ~~van Allen~~
- ② ~~Crozier~~

Confidential

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
DAYTON, OHIO

*Comments please
This has been discussed
with & approved by Capt. Russell*



Colonel Edward H. Porter
Deputy Director for Estimates
Directorate of Intelligence
Washington 25, D. C.

Dear Colonel Porter:

JUNE 1952, subject "Project Bluebook"

Your letter of the fifth is acknowledged. We are glad to obtain your general concurrence with our recommendations. There appear to be three possible methods of handling the situation, one of which (Proposal I) is at present utilized.

Plan

PROPOSAL I. (ATIC alone)

a. Project Blue Book would be handled by ATIC alone. There would be no organized outside help.

b. ATIC would receive all reports, consider and segregate them into two categories: (1) "ACTION," for immediate processing in a numbered folder; and (2) "NO ACTION," for ATIC reference file.

c. ATIC would be responsible for all PIO actions.

d. ATIC would prepare and furnish AFOIN-2 with a flash report, an interim report and a numbered folder containing a completed action report on each "ACTION" sighting.

e. ATIC would prepare and furnish AFOIN-2 with semi-annual reports on the situation. These reports would list all sightings during the period, with individual action, conclusion and recapitulation of origins (planet Venus, balloons, aircraft, mirages, etc., unknown).

PROPOSAL II. (ATIC plus Contract Technical Group plus Advisory Committee)

a. High Level Advisory Committee

1. Would not exceed three people

2. Would act as counselor to ATIC

3. Chairman would act as high level spokesman on Blue Book matters for USAF. *(Material for utterances would be furnished by ATIC)*

Confidential

Colonel Edward H. Porter

2 July 1952

and would eventually be prepared by the Contractor Technical Group & coordinated by ATIC & submitted before submission. This, however, would not occur until the Contractor had acquired the necessary experience.

NOTE: Suggested names might include: General Doolittle; Dr. Griggs; a member of the scientific advisory board; others. They would be selected and appointed by AFOIN-2.

b. Contractor Technical Group

1. Contractor would set up technical group of scientific personnel (not exceeding three persons) to whom data on all sightings would be furnished in a numbered folder for immediate consideration.
2. Group would, when necessary, conduct interrogations.
3. Group would make continuing analyses of all incoming data to determine category into which phenomena could fall.
4. Group would return to ATIC completed action numbered folders on all sightings.
5. Contractor would make available, to the technical group, members of his scientific staff as consultants in various fields (including, for example, that of psychology).

NOTE: Suggested names of contractors might include: Rand Corporation; Battelle Memorial Institute; *Remond Ullis*; ? 3.
~~others.~~

c. ATIC Monitoring Activity

1. ATIC would ^{set up new project &} continue to monitor all phases as at present.
2. ATIC would be responsible for press releases in the early stages of all sightings. (One additional PIO type personnel reqd.)
3. ATIC would furnish the contractor technical group all data on sightings as they were received.
4. ATIC would plan the procedure to be followed and take necessary operational steps.
5. ATIC would investigate all sighting reports and prepare a folder in duplicate (1 copy for ATIC files and 1 copy for contractor technical group)
6. ATIC would furnish the high level advisory group with bi-monthly ~~periodic~~ summary reports based on the completed action numbered folders furnished by the contractor technical group. These summaries would supply the high level advisory committee with the necessary material for information releases.

NOTE: Direct commⁿ with Contractor would be necessary. Altern^t Contractor Techⁿ Group ~~might~~ have to be located near or in ATIC.
2

10003824
NSA
10436012-2
Director
Aerospace Studies Inst
ATTN: Archibald Brodch
McCrwall AFM Alabama

Part Four - ATIC PLAN FOR FUTURE OPERATIONS

1. In the spring of 1952 it became evident that the limited ATIC staff, assigned to unidentified aerial objects, could not possibly handle all the vast number of reports which volunteer observers were sending to the Center in exceedingly increasing quantities. After several conferences of the Center's staff, the Chief of the Center submitted by letter to the D/I a plan to increase the scope of operations. On 5 June, the Deputy Director for Estimates replied to ATIC's proposal stating, in part:

"It is generally agreed that some expansion of effort is called for at this time. An advisory group composed of high-level scientific personalities would be excellent for the purpose of providing guidance to the ** working level, and as spokesman representing the Air Force to the public. *** Our recommendations ** are to supplement further ATIC effort by inviting one contractor to attempt to resolve the problem. *** It is considered that ATIC must remain the responsible D/I agency **."

2. On receipt of this directive, ATIC began consideration of plans to implement it. Dr. Von Karman was invited to assist, and designated Dr. Joseph Kaplan as his representative. These plans were presented to Dr. Kaplan on his arrival at ATIC ten days ago. Following this, ATIC conferenced with other private and Air Force agencies whose collaboration is needed. The advice of these experts, and recognition of the problem of coping with the recent very large increase in voluntary reports of sightings of UAO's, enable us to present to you at this time a workable plan for future operations.

3. I would like to preface this plan with a brief reference to ATIC intelligence procedures. The mission of our Center is to prevent technological surprise by air. Our interest in UAO's is based on the fact that they can be of foreign origin. We must then determine identifying their characteristics and performance.

When we encounter identifiable aerial objects, for example, new types of foreign aircraft missiles, we attempt to obtain their configuration, performance and characteristics by measuring and recording devices, if possible, especially if we cannot get close enough to inspect/accurately in detail. Reliable data is essential.

10003824

2 July 1952

PROPOSAL III. (ATIC plus Contractor)

a. Contractor Handling of Projects

1. Contractor would be given complete monitoring, planning, handling and assessing of Project Blue Book under the overall supervision of ATIC who would act as AO (Approving Official).
2. There would be two handling categories: "ACTION" and "NO ACTION." The first ("ACTION") would be sent immediately to the contractor in a numbered ~~file~~ ^{folder} for processing. The second ("NO ACTION") would be filed at ATIC for reference.
3. Contractor would conduct all interrogations and would necessarily have to be in a position to operate with agencies in the Department of Defense since some needed actions might require ~~distribution~~ ^{collaboration} by Air Force ~~units~~, ^{Weather Bureau units, etc.}
4. Contractor would furnish ATIC with
 - (a) Flash report, based on available information, ~~and~~ with a rapid assessment. (This would be required within a few hours of receipt of the "ACTION" folder or telephonic information of the contents of this "ACTION" folder.)
 - (b) Interim report
 - (c) Completed action report ~~from folder~~ on each action sighting ^{numbered folder}
5. Contractor would furnish ATIC with semi-annual reports on the situation. These reports would list all sightings during the period with individual action, conclusions and recapitulation of origins (planet Venus, balloons, aircraft, mirages, etc., unknown).

b. ATIC Responsibility

1. ATIC would be responsible for all press releases and would act as spokesman for Project Blue Book. Alternately, it would furnish information to the Director of Intelligence, Headquarters USAF, for press releases or briefing actions.

Colonel Edward H. Porter

2 July 1952

immediate
It is considered that of the three possible methods outlined above, PROPOSAL II would yield the best results. This proposal leaves the responsibility for Project Blue Book activity with this Center, but it provides both the authoritativeness of a high level spokesman and the technical capabilities, in all scientific fields, of a reputable contractor. It is further considered that Rand Corporation, if available, would most adequately fulfill the contractual requirements. We propose, if no objections exist, to ~~attempt implementation of~~ PROPOSAL II *as soon as possible.*

effect prompt adoption
adopt

Sincerely,

Insofar as the future is concerned, the tendency should be to increase the responsibility of the contractor in proportion to his experience & thus more closely approach the procedure outlined in PROPOSAL III.

JOHN A. O'MARA

Colonel, USAF

✓

Col Porter Dear Colonel Porter:

Your letter of the fifth is acknowledged. We are glad to obtain your general concurrence with our recommendations. There appear to be three possible methods of handling the situation, one of which ^(Proposal I) is at present utilized.

PROPOSAL I. (ATIC alone)

- a. Project Blue Book ^{would be} handled by ATIC alone. There ^{would be} no organized outside help.
- b. ATIC would receive all reports, consider and segregate them into two categories: (1) "ACTION," for immediate processing in a numbered folder; and (2) "NO ACTION," for ATIC reference file.
- c. ATIC would prepare and furnish AFOIN-2 with a flash report, an interim report and a numbered folder containing a completed action report on each "action" sighting.
- d. ATIC ^{would} ~~will~~ prepare and furnish AFOIN-2 with semi-annual reports on the situation. These reports would list all sightings during the period, with individual action, conclusion and recapitulation of origins (planet Venus, balloons, ^{aircraft,} mirages, etc., unknown, ~~etc.~~)

PROPOSAL II. (ATIC plus Contract Technical Group plus Advisory Committee)

a. High Level Advisory Committee

1. ^{would} Not ~~to~~ exceed three people
2. Would act as counselor to ATIC
3. Chairman would act as high level spokesman on Blue Book matters for USAF

NOTE: Suggested names might include: General Doolittle; ^{Dr. Snuggs;} a member of the scientific advisory board; others. ^{They would be selected ~~and~~ appointed by} AFOIN-2

b. Contractor Technical Group

1. Contractor would set up technical group (not exceeding three persons) of scientific personnel to whom data on all sightings would be furnished in a numbered folder for immediate consideration.

2. Group would, when necessary, conduct interrogations.
3. Group would make continuing analyses of all incoming data to determine category into which phenomena could fall.
4. Group would return to ATIC completed action numbered folders on all sightings.
5. Contractor would make available, to the technical group, members of his scientific staff as consultants in various fields (including, for example, that of psychology).

NOTE: Suggested names of contractors might include: Rand Corporation; Battelle Memorial Institute; ? ; ~~and~~ ? ; etc..

c. ATIC Monitoring Activity

1. ATIC would continue to monitor ^{all} ~~on the~~ phases as at present.
2. ATIC would be responsible for press releases in the early stages of all sightings
3. ATIC would furnish the contractor technical group all data on sightings as they were received, ^{4. ATIC would} ~~and~~ plan the procedure to be followed, ^{and take necessary operational steps.}
- 5 4. ATIC would ~~process all sighting reports. This would consist of~~ ^{investigate all sighting reports and prepare} ~~investigating the report; preparing~~ a folder in duplicate (1 copy for ATIC files and 1 copy for contractor technical group)
- 6 5. ATIC would furnish the high level advisory group with periodic summary reports ^{based on the} ~~making use of~~ completed action numbered folders furnished by the contractor technical group. These summaries would supply the high level advisory committee with the necessary material for information releases.

PROPOSAL III. (ATIC plus Contractor)

a. Contractor Handling of Projects

1. Contractor would be given complete monitoring, ^{planning,} handling and assessing of Project Blue Book under the overall supervision of ATIC who would act as AO (Approving Official).
2. ^{There would be two handling} Categories: "ACTION" and "NO ACTION." The first ("ACTION") would be sent immediately to the contractor in a numbered file for processing. The second ("NO ACTION") would be filed at ATIC for reference.
3. Contractor would conduct all interrogations and would necessarily have to be in a position to operate with agencies in the Department of Defense since some needed actions might require distribution by Air Force units.
4. Contractor would furnish ATIC with
 - (a) Flash report based on available information and a rapid assessment. (This would be required within a few hours of receipt of the "ACTION" folder or telephonic information of the contents of this "ACTION" folder.)
 - (b) Interim report
 - (c) Completed action report from folder on each action sighting
5. Contractor would furnish ATIC with semi-annual reports on the situation. These reports would list all sightings during the period with individual action, conclusions and recapitulation of origins (planet Venus, balloons, ^{aircraft} mirages, etc., unknown).

b. ATIC Responsibility

1. ATIC would be responsible for all press releases and would act as spokesman for Project Blue Book. Alternately, it would furnish information to the Director of Intelligence, Headquarters USAF for press re-

leases or briefing actions.

It is considered that of the three possible methods outlined above, PROPOSAL II ^{would} ~~will~~ yield the best results. This proposal leaves the responsibility for Project Blue Book actively ^{ity} ~~ly~~ with this Center, but it provides both the authoritativeness of a high level spokesman and the technical capabilities, in all scientific fields, of a reputable contractor. It is further considered that Rand Corporation, if available, would most adequately fulfil the contractual requirements. We propose, if no objections exist, to attempt implementation of PROPOSAL II.

c ATIC Monitoring Activity:

- (1) ATIC would continue to handle all phases as at present.
- (2) ATIC would ~~not~~ be responsible for press relations in the ^{early} initial stages of all sightings.
- (3) ATIC would furnish the Contractor Technical Group with all data on sightings as they were received.
- (4) ATIC would process all sighting reports i.e. ~~prepare~~ investigation report - prepare folder in duplicate (one copy ATIC file, one copy to Cont T.G.).

PROPOSAL II (ATIC + Contractor)

a. Contractor handling of project

- (1) Contractor would be given complete ^(& assuming) monitoring & handling of project. Blue Book under the ^{overall} supervision of ATIC who would act as A.O. (Approving Office).
- (2) ATIC would receive all reports, consider them & segregate them into two categories, & immediately forward them the first "action": ~~but~~ these would be immediately forwarded to Contractor for

PROPOSAL I (ATIC alone)

a. Project Bluebook is handled by ATIC alone. There is no organized outside help.

b. ATIC would receive all reports, consider them & segregate them into two categories, first "action" & for immediate action in a numbered folder & second "no action" for ATIC ref. file ^{& furnish AFOIN-2 with}

c. ATIC would furnish preface, ~~as a~~ flash rept; an interim rept & a completed action report numbered folder on each "action" sighting.

d. ATIC would prepare & furnish AFOIN-2 with a semi-annual report on the situation. These reports would list all sightings during the period with individual action, conclusion & a recapitulation of origins. (

Only as a last and temporary resort do we use the report of an untrained non-technical person's visual observation of a complicated aerial object, especially if the information is volunteered.

4. It is of significance to note that an inquiry of technical employees of U.S. aircraft plants revealed that they could not give complete and reliable descriptions of the technical aspects of their own plants with complete accuracy. Likewise, the Air Force long ago eliminated its observers rating for crew members, supplanting these visual and audio observation duties with photographic and electronic recording devices. Any plan to determine if any UAO's are of foreign origin will require full use of measuring and recording instruments.

5. Because it is almost impossible to obtain technical intelligence from voluntary verbal reports of non-technical observers, ATIC proposes that the receipt and analysis of such reports by the USAF be discontinued in the future. Our evaluation of the enormous amount of correspondence and reports received over the past five years demonstrates that there is extremely little technical intelligence to be obtained from these voluntary sources. The plan which ATIC presents to you might be best described in the single phrase, "going on instruments".

6. Basically, any moving light source is either the result of (1) air expenditure of energy, e.g., an aircraft, missile, meteor, ionized clouds, etc., or (2) the reflection of light from another source, e.g., the sun, moon, etc.,. In the past, objects reflecting light from another source have been identified and eliminated from consideration only by tedious and expensive investigation and analyses by ATIC and other Defense Dept. agencies.

7. By application of the known basic laws of science, any aerial object which a foreign power might fly over the United States will require dissipation of energy. It should, therefore, be possible to detect the presence of such an object by the use of electronic, infra-red and neocular instruments, and to record its flight path and/or appearance by the use of a camera, especially if the camera^{is}/used in conjunction with a

make all this subject of letters
to Col Posters.

what to do meanwhile for to
help Ruppelt -

⑩ - Appoint Contractor &
obtain estimate ann. cost then
submit D/P for approval total
plan & ~~the~~ cost.

mtg of July 10 52

Plan decided upon (See Blackboard Old Room)

① Discussion with Kaplan & vanKammen if latter can be brought here. wk estg 17th

note: - one will ring about an West-Coast

② Decide upon Chairman of ^{scient} Adv. Group

③ Chairman to pick out & appoint members of group - eg.

- Meteorology

?

Physics

Langmuir - G.C.

Upper Air Res.

Kaplan

Astronomy

Vally

nucl. Physics

Hafstad

Psychology

?

Applied Physics

Dr. Alex. Wetmore Ctr Smithsonian

④ Convene BA Bd here - brief them completely & decide upon questionnaire.

also discuss method of procedure with a

caucus & who. Board to tell us how to proceed

note: Caulis - Rand? Gen. Mills? Stork? etc

note: Could Stork suggest Question^{naire} by next wk

note

over

PROJECT BLUE BOOK STAFF STUDY

SECRET

I. PROBLEM

Since 1947, the Air Force has been receiving many reports of unidentified aerial objects. These reports have emanated from individuals of varying degrees of reliability. In the five years since the first project for the investigation of the reported unidentified aerial objects was initiated, no definite conclusions have been reached as to their nature. The problem is to review the present operations of the project, point out the inadequacies, and recommend a future operational plan.

II. FACTUAL DATA

The Air Force became interested in unidentified aerial objects in the summer of 1947 when a private pilot observed nine disk-like objects over the Cascade Mountains in the State of Washington. The Air Technical Intelligence Center, or at that time the Intelligence Division of AWC, made a two year study of the sightings. In August 1949, a report was made which concluded that the reports were due to:

- a. Mass hysteria
- b. Hallucinations, hoaxes, and people seeking publicity
- c. Psychopathological persons
- d. Misinterpretation of known objects

The conclusions reached in this report were not substantiated by the necessary proof evidenced by the fact that the project is still in existence and still no conclusions can be made as to the identity of a certain percentage of the reported objects. The identity of the reported objects has become a highly controversial issue with the military, the press, and the public.

In July 1951, this project was reorganized. A review of the data available at that time showed that the first three assumptions made in the 1949 report probably were not valid. The basis for this was the fact that although publicity had been at a low ebb, or nearly non-existent, between 1949 and 1951, reports from good sources continued to come in to ATIC. The fourth conclusion, that all reports are the misinterpretation of known objects may still be valid, although at this time there is not enough data to substantiate this conclusion.

Since the first of January 1952 there has been a steady increase in the number of reports received per month. This is due partly to the national publicity that has been received and partly to the more efficient military reporting system now in effect. The trend of the recent publicity is that the Air Force is seriously considering all reports. Consequently, many people, including airline pilots, who had previously feared the brand put on "flying saucer" reporters, now feel it is their duty to report.

III. DISCUSSION

A. Collection

1. ~~Air Force~~ Letter 200-5

The basis for all of the formal collection of material pertaining to observations of unidentified aerial objects is authorized by Air Force Letter 200-5. (See Tab 1) This letter states that all reports of unidentified aerial objects observed by or reported to AF personnel will be forwarded to the D/I USAF, ADC, ATIC, and other appropriate agencies by wire and that the wire message will be followed up in three days by an AF Form 112. The letter also outlines what basic information is needed by ATIC.

When the project was reorganized in July 1951, the basic premise of the reorganization was that if a large volume of complete reports could be obtained it might be possible to correlate these and possibly plot the track of an object and from triangulation obtain altitudes and size. Thus AFL 200-5 was designed to obtain all possible reports of unidentified aerial objects.

AFL 200-5 has been only moderately successful in fulfilling its purpose. It has been widely disseminated although on several occasions it has been noted that some lower echelon organizations are not aware of its presence and are reporting under old regulations.

In many instances AFL 200-5 has not been followed in reporting. A survey of 100 reports submitted in June 1952 showed that 37 reporting agencies did not follow-up the wire message with a written Form 112. In all of these cases the wire message stated that the report was in compliance with AFL 200-5 indicating that the reporting agency was familiar with the Air Force Letter. This discrepancy has been investigated to some degree and the reasons for not complying with the letter were:

- a. There was a manpower shortage in typists
- b. The reporting agency had no more data other than that inclosed in the initial wire message and did not have time to collect more data
- c. AFL 200-5 was interpreted to mean that some other agency would submit the Form 112
- d. The reporting officer did not believe in "flying saucers".

In a few instances no report of any type was submitted although the source was known to have reported the incident to an Air Force installation.

Observations by sources other than AF personnel are received in compliance with AFL 200-5 when they are reported to AF installations. Magazine and newspaper articles have stated that civilians should contact their nearest Air Force installation to report an unidentified aerial object. (This statement was not officially sanctioned by ATIC.) Civilian pilots contact CAA facilities who in turn relay the report through AACS communications nets to flight service centers who make the report in accordance with AFL 200-5.

During the peak of sightings that occurred in June and July of 1952, it became evident that AFL 200-5 was inadequate in the sense that a large percentage of the reports received did not contain enough information to evaluate or the reliability of the source was extremely doubtful. In only a very few cases did the report contain enough data to thoroughly evaluate the report. The cost of these communications in money and manpower was not balanced by the amount of useable data obtained.

2. Further Investigation of Reports

Since many reports of sightings are unique and the information desired cannot be covered by one standard AFL, more information than that asked for in AFL 200-5 is needed. This is obtained by phone calls, wire messages, or interviews by ATIC personnel. Since a thorough field investigation by ATIC field investigators may take up to a week, the manpower situation has greatly limited these trips. Only the most outstanding incidents have been investigated. Phone calls and wire messages are only practical when a very few specific items of information are needed. The inability to send investigators on field trips is, however, not a great disadvantage. It has been found by experience that only in the most important cases does it pay to send people to obtain more data. Except during the June-July 1952 peak, most incidents which have required a field investigation have been fairly well investigated. The need for the time and personnel to make field investigations was best exemplified by the Washington D.C. radar sighting. In this instance, if ATIC had had the personnel to investigate this sighting immediately the newspapers could have been given an answer and a lot of the publicity which was received would have been eliminated.

3. CIRVIS Reports

JANAP-146(b) (CIRVIS) states that any U.S. aircraft flying worldwide will report an observation they believe to be of vital intelligence nature to the nearest U.S. military installation. This concludes the reporting of sightings of unidentified aerial objects. ATIC receives such reports relayed from the D/I, as it does not receive direct distribution of such reports. In the past CIRVIS reports have not been utilized due to the fact that the information is too incomplete to evaluate.

It is understood that the recent peak of sightings of unidentified aerial objects saturated the service communication net. This is unfortunate and should be corrected because as was previously stated CIRVIS reports are generally not evaluated.

4. Letters from Civilians

Many reports are made directly to ATIC by letter. Magazines and newspapers have stated that ATIC is responsible for reports of unidentified aerial objects, consequently they are forwarded directly to ATIC by mail. This presents a major manpower problem since all such letters are acknowledged and filed. The quality of 95 percent of these letters is such that they are of no value. An attempt is being made to obtain information from these letters, however, by sending questionnaires to the sources.

5. Instruments

All reports that are substantiated by photographs or other instrument readings should be forwarded in compliance with AFL 200-5. No formal program of instrumentation by ATIC is presently in operation. On 12 June 1952, ADC requested that all its AC&W units that were equipped with radar scope cameras take action to have these cameras operational at all times when the radars were operational. A special electronics questionnaire was prepared by the Electronics Branch of ATIC and forwarded to ADC. It was requested that this questionnaire accompany all reports of radar sightings. To date, only several such scope photos have been received.

The Collection Division of ATIC is presently developing a camera equipped with the diffraction grating. A contract has been let to purchase the gratings. One hundred units will be supplied mounted in a Series VI lens attachment size. By using the grating and a lens adapter, the gratings may be attached to the camera. One hundred Videon stereoscopic cameras have been ordered and will be delivered, equipped with a diffraction grating, to ATIC by 1 September 1952. They will be placed with observers shortly thereafter. It has not been fully decided who will use the cameras. Air Force control tower operators, CAA control tower operators, and the Ground Observer Corps are the most likely prospects.

6. Questionnaire

ATIC is now using a questionnaire developed by a civilian contractor. The questions contained in the questionnaire were developed by a group of scientists and engineers who had previously made a study of the problem of the collection of data on visual sightings of unidentified aerial objects. These questions were then re-phrased and re-grouped by a panel of psychologists so that they would not "lead" the source in his interpretations of what he had observed. These questionnaires are now being used on a trial basis and after a fair sampling is obtained they will be reviewed and revised if necessary.

ATIC is presently sending one of these questionnaires to the majority of observers who make a report either through military channels or by direct mail.

7. Clipping Service

ATIC has secured the services of a newspaper clipping service through its contractual agency. All incidents pertaining to unidentified aerial objects, large meteors, and other aerial phenomena are clipped from the newspapers and forwarded to ATIC. This service has been beneficial in several ways. It has provided explanations of some reports by reporting large meteors in the area of the sighting. It has supplied supporting data for sightings, (i.e. more sources) and has enabled ATIC to determine the extent of "scares" in certain local areas. In some instances, it has shown how newspaper articles or lectures have triggered a local outbreak of reports. It also serves as an idea as to the amount

of national publicity the subject of unidentified aerial objects is receiving.

In the future it is hoped it can be used to make psychological studies.

B. Analysis

The analysis of reports received by ATIC varies from a full analysis to merely filing the report. The amount of time expended on analysis is inversely proportional to the number of reports being received. When only four to five reports per week are received they can be given a relatively complete analysis. When the number of reports increase to a peak as it did in July 1952 (250 reports) the full project staff is utilized in merely sorting and filing reports and answering queries from newspapers.

Approximately 20 percent of the total of nearly 1500 reports on file at ATIC are being carried as unknown. This figure is not truly representative of the facts due to the methods used in evaluating the reports. In some instances reports were investigated thoroughly and the reported object was identified or could be reasonably stated that it was unknown. This type of analysis has been given to only a small percentage of the incidents, however. In the majority of the cases, the investigation was much less extensive. In some instances if there was air traffic in the area, the conclusion was that the object was an aircraft with no further investigation. In other instances, the description of the sighting coincided with that of a sighting where the object was known and it was also classed as known. The percentage of reported objects that have actually been proven to be known objects is very low.

The same range of thoroughness of investigation applies to the unidentified 20 percent. In some cases reports were thoroughly investigated and no identification could be made. In other cases the source, circumstances under which the sighting was made, and the description of the sighting, were taken into consideration and if it was not similar to any previous known report, it was classified as unknown. In all cases that do not contain relatively sufficient data for analysis, or if the source is doubtful, it is classed as having "insufficient data".

Complete weather data, which are extremely important in sightings, are presently not being obtained for each sighting. In certain instances the data are obtained from the weather section of Patterson Organizations. Obtaining weather data on each sighting is not feasible in that it would increase the workload of the weather section to a point that it would hinder its primary mission.

This method of analysis is not adequate to substantiate any definite conclusions. It is entirely possible that the percentage of

knowns and unknowns would be different if a thorough analysis of each case could be made.

1. Visual Observations

Assuming that some object or unknown natural phenomena does exist observations from one point even by a group of observers can never give accurate data. All it will establish is that an unknown object or natural phenomena was sighted on a certain time, date, and at a given location. No estimates of speed, altitude or size, if they are given, are ever considered valid. It is a well known fact that the factors of speed, altitude, size, and height are all inter-related and if two or more of these factors are unknown estimates cannot be made. Only in rare instances has an object passed under a cloud or in front of a known landmark to establish an upper limit in distance.

Data from visual observations can be used at times to establish the identity of a known object. If a known object such as a balloon, aircraft or meteor can be determined to have been in the area of the sighting the data reported by the observer can be correlated with the data of the known object to positively establish that the object viewed was a balloon, aircraft, meteor, etc. If the observer reports such items as the bearing, elevation, time of observation, a rough description, and other pertinent items, they can be used.

a. Methods of Segregating Knowns from Visual Reports

Past experience has indicated that a large percentage of the reports are due to misinterpretation of known objects, the majority of which are balloons, aircraft, and meteors. Several methods are presently being used to segregate these reports when time permits.

(1) Balloons

Balloons released in the U.S. fall into three categories:

- (a) Regularly released weather observation balloons
- (b) Irregularly released weather observation balloons
- (c) Large balloons released for upper air research, cosmic ray research, etc.

Of these, the regularly released weather observation balloons are most generally reported as unidentified aerial objects. This type includes the piball, rawinsonde, rawin, and radiosonde types. The piball balloons which are about 24 inches in diameter when launched rise to medium altitudes before burst. The rawinsonde, rawin, and radiosonde balloons are from 8 to 9 feet in diameter at launch then rise to altitudes of 90,000 to 100,000 feet at which time they expand to 15 to 20 feet in diameter. Atmospheric conditions and the relationship of the balloon to the sun determine how far they can be seen. Under ideal conditions these balloons have been seen at 100,000 feet. The larger balloons

are tracked, consequently their exact flight path is known. The smaller piball balloons are not tracked but due to the fact that they are small, they are not often seen. All balloons released at night carry a battery-powered light. The balloons are launched at 0300Z, 0900Z, 1500Z, and 2100Z. In a 24-hour period 900 small balloons and 600 large balloons are regularly launched in the U.S. by the Air Weather Service, the U.S. Weather Bureau, and the Navy Aerology Department.

The present method of determining whether or not a reported object is a balloon is to first check the time that the object was reported. If the sighting occurred within two hours after a scheduled balloon launch and the description of the object reported is that of a comparatively slow moving body, it is possible that the observer saw a balloon. The reported color or shape are not factors as experience has shown that a balloon can appear to be various shapes and colors depending on atmospheric conditions and its position relative to the sun.

When a report is determined to possibly be a balloon, all balloon launch stations upwind of the area of the sighting are noted, the winds aloft having been obtained from the W-P AFB weather station. A map of all U.S. weather observation balloon launch sites has been prepared. Wires are sent to each station that could have had a balloon in the area and the time of launch, general track, and time of burst are requested. ATIC is authorized to direct communications with these weather agencies under the authorization given in AFL 200-5.

In some instances known organizations launching research balloons are also queried, but ATIC does not have a complete file on what organizations are launching this type of balloon.

A small percentage of the balloons launched are lost and not tracked. A tracking station may break down during a run and not record a complete flight or a balloon may develop a slow leak and float for a long period of time covering a long distance and moving out of range of the tracking station. Since there is no tracking on these balloons they could be observed and a check on balloons would give negative results. It is believed, however, that this only occurs in a small percentage of reports.

The above described procedure has been successful in the majority of the cases in which it was used. It has only been used in a small percentage of the total incidents, however, due to limited manpower available.

A system should be developed whereby information needed could determine whether or not an object is a balloon.

(2) Aircraft

The determination as to whether or not a reported object is an aircraft is difficult. Attempts have been made to check back with USAF Flight Service or CAA in an attempt to examine flight plans. This has been unsuccessful due to the fact that the flight plans are not filed in a way that makes it practical to go back into old records. In addition, local flights are not filed with Flight Service.

Airline logs can be examined to determine the position of commercial airliners but this is a devious process and is only done on rare occasions.

Air Force Letter 200-5 requests that the reporting officer immediately determine what air traffic was in the area at the time of the sighting. If this is done immediately, the results are comparatively successful. Consequently, in any future directives regarding Project Blue Book, it should be emphatically stated that the reporting officer will immediately check the local area for the location of any airborne aircraft.

When it is determined that aircraft were in the area, it has been the policy to state that the observed object was possibly an aircraft. There are two exceptions to this, however. If the observer reported seeing the aircraft at the same time he saw the object and if the object passed nearly over (within 30° of the Zenith), and there was no great amount of background noise, and the observer heard no sound.

(3) Astronomical Bodies

Astronomical bodies can be divided into two categories, (a) planets and stars, and (b) meteorites or fireballs. If the observer is able to supply a rough "fix", it can be determined whether or not the object was a planet or bright star. Navigators assigned to ATIC in other duties are utilized for this purpose. Objects that are described as "large star" either hovering for long periods of time or reported to be going directly away from the observer at high speed, either in the daylight or night, are sometimes planets.

The possibility of a reported object being a meteor is difficult to establish under the present operational procedures since no astronomer is available for evaluating reports. Present practice is to analyze the description. If the source reports a rapidly moving light, either arching down or in a horizontal trajectory, with a trail or "exhaust", it is classed as "possibly a meteor". In rare instances, astronomers in the local area of the sighting will substantiate the fact that the object was a meteor. This fact is usually obtained from the newspaper clipping service. Although a contract astronomer is available, he has not been consulted as he is only a part-time consultant and cannot devote any time to screening reports. All of the screening and evaluations are done by ATIC engineers.

(4) Electronic Observations

Approximately five percent of the reports received at ATIC have involved radar. Some have been definitely established as being caused by weather, malfunctions in the equipment, interference, etc., and some of the reports have not been adequately explained.

To date most of the indications on the scope have

telescope, defraction grating and radar scope, or carried aloft by aircraft. By limiting its study to only those observations, obtained or correlated by instruments, this plan will distill from the raw information technical data capable of quantitative analysis so that ATIC might determine if any UAO's are of foreign origin. This plan does not preclude consideration of sightings by competent technical observers who make such sightings as part of their regular employment (e.g., astronomers, weather observers, military and airline pilots, surveyors, trained personnel of the Army, Naval, Coast Guard, CAA, Merchant Marine, and possibly certain civilian aircraft spotters, etc.) Rather, this plan suggests that such personnel carry photographic equipment and be trained to record the technical data required of such observations so as to improve the quality of their reports.

8. By requiring the use of instruments for the collaboration of such sightings, the USAF will eliminate many needless scrambles of its interceptor aircraft (E.G., the incident near Columbus on 23 July when the UAO was identified as balloons by ATIC's Consultant Astronomer using the Ohio State University ~~Observatory's~~ Observatory's telescope). By designation and instrumentation of specific sources, as the field collection agencies, for data regarding UAO's, the USAF will simply speed and secure the processing of this data. (Go on to Page 4).

~~9. This plan will also involve the assignment of personnel who are presently engaged in these activities as additional duty in order to handle the very voluminous reports presently being submitted to the Air Force.~~

been verbally described by the radar operators, only in a few instances have scope photos been available. The shape, action, and location of a signal is extremely important in making an evaluation and in the past it has been necessary to rely on the operator's impressions of what they observed. In addition to the situation observed on the radar scope, data on the condition of the equipment, technical data on the set, weather conditions, etc., are needed for a complete evaluation. In the majority of the instances, this has not been available due to manpower shortages.

The Electronics Section of ATIC is charged with the evaluation of all radar sightings.

(5) Supporting Studies

In addition to the analysis of each separate report, ATIC has a contract with a civilian research organization for a statistical study of reports. A coding system for certain key items in each report has been established. Each report is being reviewed and these key items are being transferred to coding sheets. IBM punch cards will then be made. When this is complete a statistical study will be made. To date 900 reports have been reviewed and punch cards made.

(6) Photographs

All photographs that are believed to merit an analysis are analyzed and evaluated by the Photo Reconnaissance Laboratory at Wright Air Development Center. The circumstances under which the photographs were taken and the current reliability of the source are considered before determining whether or not an analysis by WADC is warranted. To date the work has been done on a gratis basis, consequently the evaluation has been quick and not too complete. An agreement has now been made with the Photo Reconnaissance Branch of WADC to establish a project for the evaluation of photographs of unidentified aerial objects. In this way, a more complete and thorough analysis can be given to photographs.

(7) Panel of Consultants

The civilian research institute that is acting as the contractor to ATIC on this project has available a great number of scientists and engineers. These people are on an on-call basis and can be consulted individually or as a panel on any problem that may arise. A psychologist and an astro-physicist who were not regularly employed by the institute have been retained on a consultant basis.

To date these people have been consulted on several occasions. On one occasion 12 of them were consulted as a panel on the problem of preparing the questionnaire. In two other instances, these people were consulted as a panel to aid in evaluating incidents. It was found that due to the nebulous type of data contained in the reports they could be of no aid in evaluations.

V. PUBLIC RELATIONS

The recent national publicity received on unidentified aerial objects has shown the need for carefully supervised public relations. The present policy is for the USAF PIO to request all needed information from the D/I. D/I in turn obtains it from ATIC, if necessary. In the case of personal visits to ATIC by accredited members of the press, ATIC is notified by D/I and only then are the press representatives given information.

A close working arrangement between ATIC, D/I and PIO is a necessity. It has been found in the past that the newspapers and magazines are not nearly as interested in the project as they first believed if they are given all the facts.

VI. PARTICIPATION BY OTHER COMMANDS

All Air Force Commands participate in the collection of reports as specified in AFL 200-5.

A. Air Defense Command

Air Defense Command and ATIC have worked in close coordination on this project. ADC through their AC&W units, fighter squadrons, and their contact with the Anti-Aircraft Command have provided assistance such as radar observations, radar scope photography, and fighter interception under existing ADC regulations. The Ground Observer Corps has made the observation of unidentified aerial objects a secondary objective. The potential aid that ADC has available has not been fully realized.

VII. PANEL OF SCIENTISTS

At the suggestion of Dr. Joseph Kaplan of UCLA, a panel of well-known U.S. scientists is being established to give guidance on this project and to evaluate reports. They will be furnished those reports which have been thoroughly screened by all agencies for the possibility of being a balloon, aircraft, or known astronomical phenomena.

VIII. CONCLUSIONS

It can be concluded that two courses of action are possible, either discontinue the project entirely or expand the scope of the project so that more conclusive data can be obtained and more concrete conclusions made.

A. Discontinue the Project

To date it can be concluded that the reported objects are no threat to the United States since they have committed no hostile acts.

The hypothesis that since nothing hostile has been discovered in the past nothing hostile will be discovered in the future can be followed and the project discontinued. However, with the present day technological advances, this hypothesis may involve a certain degree of risk in the future.

B. Continuing Expanded Project

1. If the project is to continue it must be expanded in scope. This would require both a limited increase in the amount of funds and personnel. Reports now being received are not thoroughly analyzed. Many sources of information that are available have not been utilized due to the limited scope of the project. The possibility of any definite conclusions as to the nature of the objects being reported will ever be reached is extremely doubtful under the present operations.

2. At the present time the objects that have been reported apparently present no threat to the United States. However, sometime in the future some unfriendly nation might conceivably develop unconventional weapons that would appear similar to the objects that are presently being reported and it is apparent from the past five years history of this project that present operations could not adequately cope with such an occurrence.

3. There are still "incredible reports by credible observers" that have not been and should be thoroughly explained.

4. An enemy could use the present flying saucer report as a psychological weapon and if an organization is not available to cope with such reports (i.e., the mere existence of such an organized project would be a counter-weapon) a certain degree of panic could result.

5. It is thought possible that all the reports of unidentified objects are due to misinterpretation of known objects. The continuance of an expanded project will provide the necessary data to arrive at more definite conclusions as to this possibility.

Recommended Action

It is recommended that the project be continued and a maximum effort made to eliminate as many nebulous reports as possible, thoroughly evaluate reports that appear credible and to obtain more qualitative data. To accomplish this, it is recommended that the following action be taken. Such action would give a flow of reports as shown in Tab B.

A. Present directives regarding unidentified aerial objects be modified to give reporting agencies more background on the subject of reporting unidentified aerial objects, and to instruct them to be more selective in deciding which reports will be forwarded. (see Tab C).

B. A survey be made of qualified astronomical observatories in the U.S., one selected, and a contract negotiated for assistance to ATIC in evaluating reports and in contacting other observatories. (see Tab D).

C. Air Weather Service be contacted and a more positive system for obtaining weather and balloon data be worked out for both future and past balloon and weather data. (see Tab E).

D. It be determined what agencies in the U.S. are launching high altitude research balloons (i.e., all balloons except regularly launched weather observation balloons) and determine how ATIC can get this data on the flights. (see Tab E).

E. A survey be made of the potentialities of the Air Defense Command radar net, ground observer corps, fighter aircraft, and the Anti Aircraft Command to determine how they can be utilized without detracting from the basic ADC mission.

F. A survey be made of the potentialities of presently instrumented test areas in the United States, beginning with the AF installations at Holloman Air Force Base, Patrick Air Force Base, and Edwards Air Force Base, and determine how they could be utilized in this program. (see Tab F).

G. A project be established with the Photo Reconnaissance Laboratory of Wright Air Development Center (WCEFP) to evaluate supposedly valid photographs of airborne objects (i.e., not radar scope or spectrum photos) that are submitted to ATIC.

H. ATIC continue to have Project Stork produce supporting studies and that the following studies be initiated in addition to the present statistical analysis and development of a questionnaire.

1. Possible correlation between sightings from Bible times to 1947 with sightings after 1947.

2. Correlation of radiation measurements with unidentified aerial object reports.

3. Preliminary studies on the psychological aspects of the subject of unidentified aerial objects.

4. Time-space study of reports.

I. A preliminary survey be made to determine the possibilities of negotiating a contract to estimate the type, degree and cost of an expanded instrumentation program (i.e., other than diffraction grating cameras). (see Tab G).

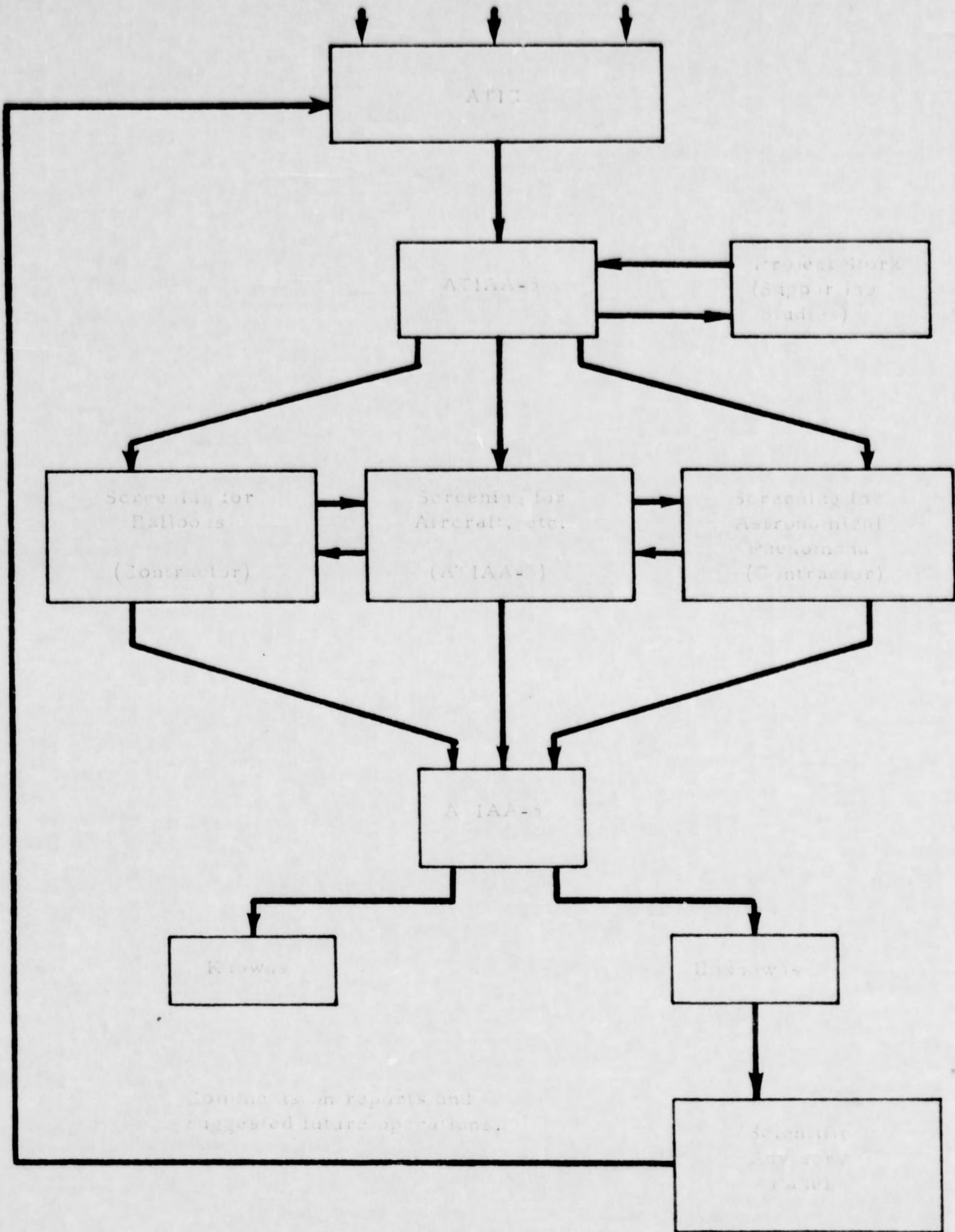
Concurrence:

ATIAA _____

ATIA _____

ATI _____

Reports from Civilians, Military, etc.



Comments on Reports and Suggested Future Operations.

TAB C

I. FACTUAL DATA

The directive for establishing all collection operations in conjunction with this project is AFL 200-5, dated 29 April 1952, subject: (Unclassified) Unidentified Flying Object Reporting (Short Title: FLYOBRPT) (See Tab A). It has been found that by revising the directive or issuing a supplemental instruction, the effectiveness of the directive could be increased.

II. DISCUSSION

The following changes in AFL 200-5 which are inclosed as Tab A are recommended:

A. Paragraph 1 of AFL 200-5 be changed so that the second sentence reads, "All significant incidents will be reported"

B. Paragraph 2 of AFL 200-5

No recommended changes.

C. Paragraph 3 of AFL 200-5 be expanded to give the reporting officer or agency a more complete background on the entire subject of unidentified aerial objects. At the present time many persons in lower echelon agencies are not aware of the true nature of the project and have derived their knowledge solely from newspapers, magazines, and popular books. It is believed that a more thorough knowledge of the subject of unidentified aerial objects will increase the efficiency of the reporting.

D. Paragraph 4 of AFL 200-5 be expanded to include more data on how preliminary screening of reports can be accomplished so that ATIC will only receive those reports that are considered to have sufficient information to evaluate.

E. Paragraph 5 of AFL 200-5

No recommended changes.

F. Paragraph 6 of AFL 200-5

No changes recommended.

G. Paragraph 7 of AFL 200-5 be expanded to require more accurate data to more clearly define what data are required and to explain why certain items are needed for evaluation.

TAB D

I. FACTUAL DATA

There is a definite need for the contractual aid of a qualified astronomical observatory to assist ATIC in evaluating reports that appear to involve astronomical phenomena and to contact astronomical observatories and societies in the United States and to enlist their aid in making possible voluntary observations.

II. DISCUSSION

A. Assisting ATIC in the Evaluation of Reports

Many of the observations of unidentified aerial objects that are reported to ATIC possibly involve astronomical phenomena. Such reports would be forwarded to the contractor for evaluation either by comparing the data of the report to known meteor data or by arriving at a conclusion solely from the data included in the report.

B. Contacting Other Observatories, Astronomers, and Astronomical Societies

The largest and most qualified group of observers of the sky are the professional and amateur astronomers. It is believed that if these people are approached by members of their own profession they would voluntarily be on the alert for any unknown phenomena or objects, make all possible observations and immediately report these observations. The contractor could approach these people and enlist their aid, establish communication channels and handle all correspondence with these people.

III. RECOMMENDED PROCEDURES

A. It is recommended that the following steps be taken as soon as possible:

1. Dr. Joseph Kaplan be contacted by wire as soon as possible requesting suggested contractors and obtaining comments on already suggested contractors. Dr. Wylie of the University of Iowa and Father Hyden of Georgetown University have been suggested as possible contractors.

2. Contact Observatories or Astronomy Departments suggested by Dr. Kaplan and determine whether or not they would accept such a contract.

3. Obtain a contract with selected contractor.

TAB E

I. FACTUAL DATA

An estimated 15 percent of the reports received by ATIC are evaluated as possibly or probably being balloons. It is highly probable that if more positive information could be obtained on balloon launches in the United States this percentage would increase and more positive identification could be made.

II. RECOMMENDED PROCEDURES

It is recommended that the attached proposal be forwarded through channels to Air Weather Service and that, if the proposal is concurred upon by AWS, action be taken to initiate a transfer of funds.

TAB E

TO: Headquarters, Air Weather Service
Andrews Air Force Base
Washington 25, D.C.

SUBJECT: Aid in Evaluating Reports of Unidentified Aerial Objects

1. A survey of reports of unidentified aerial objects received by the Air Technical Intelligence Center indicates that approximately 15 percent of these reports can be evaluated as probably or possibly being balloons. It is believed that if more complete data on balloon launches and weather data were available, this percentage would increase. It is proposed by the Air Technical Intelligence Center that Air Weather Service establish a project to thoroughly screen these reports to establish whether or not the objects observed may have been a balloon.

2. To accomplish such a screening, it would be necessary to have all data on balloon launches in the United States. It is understood that the data on Air Weather Service, U.S. Weather Bureau and Navy Weather balloon launches are readily available. A survey of all government and private agencies launching research balloons (i.e., all balloons except those regularly launched, weather observation balloons) would have to be made. Communication channels to obtain data on all research balloons would have to be established.

3. When a report is received at ATIC it would be given a preliminary screening. If there was any probability that the object reported might have been a balloon, it would be forwarded to Air Weather Service by phone, wire or mail, depending upon the urgency of obtaining an evaluation. Air Weather Service would then determine whether or not a balloon of any type was in the area of the sighting and from a plot of the track of the balloon determine whether or not the reporting observer saw a balloon. It is believed that in some cases, the existence of a balloon can be definitely established while in other cases there may be some degree of doubt as to the possibility that the object was a balloon. In all incidents submitted for screening, written conclusions with the necessary supporting data would be required. Wherever possible, actual plots of balloon traces should be submitted to substantiate conclusions that the object was a balloon.

4. The exact volume of reports that would be submitted to AWS for screening cannot be predicted, however, it is estimated that the volume would be approximately 20 per week. If current sightings drop below this total, the difference will be made up with reports dating back to January 1952.

5. It is requested that this proposal be studied and comments made as soon as possible. A transfer of funds from ATIC to AWS can be made if necessary.

COLONEL O'MARA

INCLOSURE TO TAB E

9. This plan will also relieve the military personnel who are presently engaged in these activities as additional duty in order to handle the many voluntary reports presently being submitted to the Air Force. Reliance upon instrument observations will, with the exception of meteors and meteor trains, not only provide for the positive identification of many objects, but in some cases certain performance characteristics (speed, climb, altitude and configuration) can be obtained enabling observersto eliminate reports on known objects at the source and relieve the expense and burden which would otherwise be placed on the reporting agencies and the vital military communication networks. Air Defense Command should find this quite advantageous to its "Operation Skywatch", filter centers, etc.

10. The operation of the plan is illustrated on the accompanying chart. The designated field collection agencies will hold reports of those observations which do not permit technical evaluation due to unreliable or incomplete evidence until they can be collaborated or discarded. Reports containing quantitative technical data suitable for analysis will be forwarded to ATIC.

11. The first step on receipt of a report at ATIC will be to screen it to determine whether further study is required by one or more of its special group of analysts. This screening will be based primarily on the behavior of the object. If slow or hovering, it might be checked by the Balloon Group. The Aircraft Group would examine those objects traveling at speeds similar to those of aircraft and guided missiles, while the astronomical group would investigate objects having a performance similar to meteors, meteor trains, solar flares and astronomical bodies. Groups for other categories would be organized if required, e.g. a group familiar with the problems of radio activity

TAB F

I. FACTUAL DATA

A. At the present time there are a number of instrumented test installations throughout the United States that are capable of tracking aerial objects. Such installations are Holloman Air Force Base, Edwards Air Force Base, Patrick Air Force Base, etc.

II. DISCUSSION

A. It is suggested that these installations be contacted and their capabilities for assisting in this project be determined. It may be possible that by slightly altering present operational procedures the tracking equipment could be utilized in this project.

III. RECOMMENDED PROCEDURES

A. Contact the Air Research and Development Command and request permission to visit the above-mentioned facilities to determine how they could be utilized, hours per week the tracking equipment is operational, etc.

B. Determine whether or not it would be feasible to establish coordination between these tracking facilities and ground observers such as the GOC, Security Patrols, etc.

C. Submit a proposed plan for utilizing tracking facilities in conjunction with reported visual sightings.

D. As soon as a plan for the utilization of AF facilities is established, approach the Army and the Navy with the same plan.

TAB F

TAB G

I. FACTUAL DATA

Since 1947 the Air Force has received nearly 1500 reports of unidentified aerial objects. Of the 20 percent of these reports that remain unexplained none contain enough technical data to adequately evaluate them. The only possible means of gathering useable data on unidentified aerial objects are to obtain the data from instruments. Some useable data may be obtained from sightings made at presently instrumented test installations. (See Tab F). At the present time the only instrumented test program being conducted by ATIC is the use of diffraction grating cameras.

II. DISCUSSION

At some future time it may become desirable to initiate a program for more extensive instrumentation than the diffraction grating cameras. If this situation should ever arise it would be desirable to have some indication as to the scope, cost and type of program that would be necessary to achieve certain results. It is believed that it would be advisable to obtain a contract with some civilian organization that is familiar with the design of tracking and detection equipment and have them outline a plan for instrumentation. In arriving at this plan they would use all available data on unidentified aerial objects to determine the type of equipment that could possibly be used. Two plans would be requested, such as:

A. An instrumentation program using already designed equipment needing only minor modifications, such as cinetheodolites, aerial cameras, etc.

B. An instrumentation program using specially designed equipment.

These programs possibly will never be used; however, if the occasion should ever arise that such an instrumentation program was urgently needed, these studies would provide a starting point for additional planning.

III. RECOMMENDED PROCEDURES

A. Determine what civilian organizations, if any, could undertake such a contract.

B. Contact these organizations and discuss the proposal with them, requesting that they submit a proposal on the contract.

C. If the cost is not excessive, negotiate a contract for such a study.

in the event the instrument program picks up any evidence of such in the observation of UAO's. The reports of the analyses performed by these special groups would be returned to ATIC.

12. The first step will identify some of the objects reported. A further study by ATIC's staff of analysts is the second step. In this phase ATIC will call on its scientific staff of specialists in electronics, geophysics, nuclear energy, photography, and photo interpretation, astronomy, missiles, aerodynamics, armament, materials, etc. When required ATIC's research staff will consult with technicians at Wright Air Development Center and other Air Research and Development Command facilities. This step will identify additional objects.

13. Those reports remaining will be processed by the third step which will be conducted by ATIC's Scientific Advisory Committee. This Committee is Chairmanned by Dr. Joseph Kaplan, who like many of the members also serves on the Air Forces Scientific Advisory Board. It is not intended to keep any committee member constantly occupied with this work nor to have the full committee meet together at less than two or three month intervals, except on receipt of technical data requiring the immediate attention of all members. It is planned that reports of UAO's will be referred individually to committeeman according to their field of interest.

14. Those incidents which are not resolved by the committee will be processed by the fifth and final step. Upon the advice and recommendation of the Committee, ATIC plans to submit to the Director of Intelligence the names of a general contractor (Rand has been suggested) and certain specialized contractors and consultants to undertake the analysis of those objects not identified by previous study. In some cases this might require considerable

time, experiment and study (even to the extent of recreating the incident if necessary), but it is planned to pursue each case until the object is identified, which is the purpose of this project.

15. As each reported sighting is identified, compatible with security, it is planned to make available to those in the field responsible for the observation, information as to the nature of the object. In addition, ATIC's monthly report of sightings will continue to be compiled. It is recommended that this be disseminated to all military establishments contributing to the work of the project. In addition, an unclassified version, e.g., the statistical summary, of this monthly report could be released to the PIO in the event the press continues to clamor for information on the adoption of this plan to have the Air Force decline voluntary reports by non-technical personnel.

16. I would like to take the remaining few minutes to discuss the overall operation and the work of collaborating agencies. It is recommended that wherever possible existing military facilities and agencies be used. Many organizations can contribute the required technical data on observations of UAO's. To minimize expense and complications, it is recommended that one organization be responsible for the field collection and transmissions of observation reports in the ZI. It is believed that ADC is the logical organization inasmuch as the command which has responsibility for intercepting enemy aerial objects should be the command which operates air observation and instrument network for spotting UAO's.

17. Major contributors to the field collection operations would be:

A. Military:

1. Air Defense Command (for ZI) thru
 - a. Radar network (including Navy picket ships)
 - b. Attached Army Anti Aircraft Units
 - c. Intercept operations
 - d. Civilian Aircraft Spotters
2. Strategic Air Command
3. Tactical " "
4. Air Research and Development Command
 - a. AF Missile Test Center (Patrick AFB, Cocoa, Fla)
 - b. AF Special Weapons Center (Kirtland AFB, Albuquerque, N.Mex)
 - c. AF Flight Test Center (Edwards AFB, California)
 - d. AF Cambridge Research Center, Cambridge, Mass
 - e. Other Centers
5. Overseas Commands
6. Department of the Army
 - a. White Sands Proving Ground
7. Department of the Navy
 - a. Naval Observatory
8. Research and Development Board
9. Military Transport Service thru
 - a. Flight Service.
 - b. Air Weather Service

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B. Government Agencies

1. U.S. Weather Bureau
2. Civil Aeronautics Authority
3. Atomic Energy Commission

C. Civilian Agencies

1. Scheduled Airlines
2. Public and Private Observatories (including Departments of Astronomy at Universities and Colleges)
3. American Astronomical Society
4. American Physical Society
5. Optical Society of America

To fully utilize consistence of all these agencies it is extremely desirable that the Air Force assure them that it is making efforts to identify these objects by collection in their analysis of technical information.

In the past, it has been desirable for ATIC to shield its scientists from identification with this Project in order that they might have the confidence of their professional associates. This is especially true of private organizations and ATIC plans to send out letters to them soliciting their help.