PROJECT TWINKLE

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K243.6012
51/11/27

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

Project TWINKLE - pt. of Proj. GRUDGE

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Project Twinkle

Study of fireballs in Southwestern states of U.S. This project is part of Project Grudge.

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4. Post Contractual Inquiry

In view of the unproductive nature of the contract with Land-Air, it was decided to make further inquiry concerning recent aerial object developments in New Mexico. On 9 August 1951, the situation was discussed with Lt. Col. Cox of the 17th OSI District (Kirtland AFB). Until 15 March 1950 the District had been diligent in forwarding copies of their reports on aerial object phenomena. Since then, no reports have been received by the Geophysics Research Division. Colonel Cox advised that reports of strange aerial phenomena were still received by the 17th OSI office, at the rate of once or twice a month but little attention was being given to this matter. Most of the reports originated from personnel at Los Alamos. The OSI files were reviewed. (A summary covering recent reports is attached.) It was learned that representatives from LIFE and also from ARGOSY were interested in publishing articles on aerial object phenomena.

On 27 August 1951, developments concerning aerial phenomena were discussed at Holloman AFB. Lt. John Albert previously associated with the project had now been transferred from Holloman. Therefore, the project was discussed with Major Edward A. Doty who had assumed responsibility. Major Doty, who seemed to be thoroughly acquainted with the situation, advised that there have been very few reports of

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aerial phenomena in the vicinity of Holloman since September 1950. The populace around HAFB seem to have lost their sensitivity as observers. Even during the meteor shower of 11-12 August 1951, no alarming reports were received. However, on 14 March 1951, nine Bell personnel reported sighting between fourteen and twenty bodies "not unlike a flock of geese". On 9 July a "red glowing ball" was sighted by a sergeant stationed at the Corona Experimental Radar Site at Corona, New Mexico. (Copies of both reports are attached). More recently, a pilot reported some aerial objects which, after investigation, were identified as planets.

Mr. B. Guildenberg, who is an assistant to Major Doty and an active amateur astronomer, commented that he has been spending several hours at his telescope almost every night for the past few years and never once observed an unexplainable object; that on one occasion, an excited acquaintance was pacified when a "strange object" showed up as an eagle in the telescope; that Clyde Tombaugh, discoverer of the planet Pluto and now engaged in activities at White Sands, never observed an unexplainable aerial object despite his continuous and extensive observations of the sky; that Fred Whipple in his work photographing meteors at Las Cruces, never detected a strange aerial object with his Schmidt cameras; and that the A and M College at Las Cruces engages in astronomical observations but had never observed strange aerial phenomena.

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It was learned from Major Doty, that Col. Baynes, C. O. at HAFB, no longer felt there was any justification for the allocation of funds for maintaining systematic investigation. Rather, he provided that the project be maintained on a standby basis and without official Air Force status. This entails assignment of an officer (Major Doty) to collect incoming reports, make periodic review of the files "for patterns or persistent characteristics in the reports", maintain liaison with OSI, Provost Marshall's Office and any other agencies whose activities may serve to provide information concerning future aerial phenomena developments. Land-Air has agreed to report and if possible photograph any abnormal sightings made during their scheduled periods of operation (about eight hours each day). The weather station will function similarly. Also, all pilots have been briefed to report any unusual observations. If necessary, the project can be activated very quickly, even to the extent where funds will be made available, for the purchase of equipment.

Major Doty also arranged a conference with Mr. Warren Kott, who is in charge of Land-Air operations. Mr. Kott pointed out that a formal report covering the year's vigilance period had not been issued since the contract contained no such provision. Actually, a time correlation study should be made covering the film and verbal recordings at both Askania stations. This would assure that these records did not contain significant material. However, such a study is quite laborious, and would require about thirty man days to complete. Again, no provisions are contained in the contract for this study, but Mr. Kott felt that

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this could be done by Land-Air at the additional expense in the near future when the work load diminished. Mr. Kott requested formal authorization to do this and Major Doty agreed to issue this letter of authorization. It was arranged further that at such time when the study is completed all photographic and tape recordings would be sent to the Geophysics Research Division. Prior to departing HAFB, the project files were reviewed. Major Doty advised that access to the files had not been requested by any periodicals.

On 28 August 1951, the subject was discussed informally with Dr. Lincoln La Paz, who expressed disbelief in all aerial phenomena except for the green fire-balls. The red fire-ball occasionally reported he believed was the visual after-effect of the green. Their recent origin (1947) and peculiar trajectories did not permit, according to Dr. La Paz, them to be classed as natural phenomena. The most recent that has come to his attention occurred over Detroit on 7 July 1951. It crossed the city from Northwest to Southeast with a sharply descending trajectory which leveled out and was observed by many residents of the city. Dr. La Paz expressed the opinion that the fireballs may be of our own military origin, but if not, they are a matter of serious concern.

5. Conclusions

Undoubtedly, a good many of the observations reported are attributable to ordinary man-made objects such as airplanes, balloons, smoke rockets, etc. It appears that balloon observations especially are responsible for a large number of the reports. The possibility of small

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emissive clouds issuing from atomic installations also has been proposed.

Many of the sightings are attributable to natural phenomena such as flight of birds, planets, meteors, and possibly cloudiness. Dr. Fred L. Whipple of Harvard, in a memorandum to this laboratory dated 9 August 1950 relative to this problem, indicated that he had observed a tendency for the occurrence of small detached clouds in New Mexico which might have been mistaken for an aerial object when illuminated by the reflected light of the moon. Dr. Whipple investigated the possibility of a correlation between the frequency of aerial phenomena observations and weather conditions -- specifically cloudiness. A rough analysis of available weather data, indicated that on the 53 nights (between 5 December 1948 and 5 March 1951) when observations were reported, 10 were clear, 24 partially cloudy, 5 completely overcast and 14 had no record. The number of cloudy nights involved seems unusually high for New Mexico. The weather reports were for the Las Cruces Area only whereas many of the observations were a considerable distance from Las Cruces. Further investigation is therefore necessary to determine correlations with cloudiness.

Dr. Whipple also conducted a study as to whether the age of the moon was related to the frequency of aerial phenomena observations. The results did not indicate that the phenomena were observed largely at full moon. The statistics show that of the 72 observations reported, 45 occurred when the moon was up and 27 when it was down with many of the observations occurring at the time of the moon's first quarter. From the statistical study, Dr. Whipple suggests that the existence of moonlight is correlated with the phenomena. Dr. Whipple's frequency diagram of observations vs. age of moon is included in this report.

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It should be noted that Dr. Whipple made a careful study of meteor photographs taken in New Mexico on 35 nights when observations were reported. None of the photographs revealed the presence of unusual sky phenomena.

Finally, the overall picture obtained from the year of vigilance and inquiry does not permit a conclusive opinion concerning the aerial phenomena of interest. The comparatively high incidence of the phenomena since 1948 does not necessarily indicate that the objects are man-made. It is conceivable that the earth may be passing through a region in space of high meteoric population. Also, the sun-spot maxima in 1948 perhaps in some way may be a contributing factor.

6. Recommendations

Since the findings to date cannot be considered conclusive, it appears that the following recommendations would be pertinent:

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(1) No further fiscal expenditure be made in pursuing the problem. This opinion is prompted partly by the fruitless expenditure during the past year, the uncertainty of existence of unexplainable aerial objects, and by the inactive position currently taken by Holloman AFB as indicated by the "stand-by status" of the project. The arrangements by HAFB for continued vigilance by Land-Air, the weather station as well as the briefing of pilots on the problem in part relieves the need for a systematic instrumentation program.

(2) Within the next few months, Dr. Whipple will have completed the installation of two 18-inch Schmidt cameras for meteor studies. The cameras will be stationed about 20 miles apart in the vicinity of Las Cruces, New Mexico. Since these studies will be sponsored by the GRD, arrangements can be made for examining the film for evidence of aerial object phenomena.

LOUIS ELTERMAN
Project Scientist
Atmospheric Physics Laboratory
Geophysics Research Division

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Summary of Recent Aerial Phenomena Reports from 17th OSI District

11 Nov. 1950 - Reports of a large-sized balloon. It was determined that this was released by General Mills. The balloon subsequently was recovered.

12 Jan. 1951 - Report from ten Los Alamos employees. Tear shaped object with small tail; very bright appearance; descended slowly; sky lighted up for about 1 sec; observation time 05:00.

Unconfirmed rep'ts flare dropped by military pilot who momentarily lost his bearings.

16 Feb. 1951 - Aerial object reported in the vicinity of Holloman AFB. This turned out to be a General Mills balloon functioning for Project "Skyhook".

19 Feb. 1951 - A C-54 pilot reported a green flare or rocket observed in the vicinity of Rodeo, N.M. Its motion was vertical and passed the plane at 9000 ft. Investigators believed this to be a meteor.

6 Mar. 1951 - Report from four Los Alamos personnel of very bright object crossing sky. Also observed by two Kirtland AFB pilots who reported this as a meteor; time - 14:30; reported by Dr. La Paz to be a detomating fire-ball. No fragments recovered.

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12 Mar. 1951 - Report from Albuquerque, N.M. by two individuals of ball-shaped object, shining-white appearance. The object descended rapidly to the horizon.

1 April 1951 - Report from a Los Alamos employee. Oblong shaped object moving slowly both in horizontal and vertical directions. Bright appearance.

7 June 1951 - Report from a Los Alamos employee. Pointed cylinder in vertical position. Cloth-like construction. Fell in canyon at 11:10 A.M. Search party was unable to find the object or any remains.

8 June 1951 - Report from a Los Alamos employee. Large reddish dot, dull appearance which turned bright green. Observed for three seconds.

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AIR MAIL

R-114-16S

11 Dec 1951

CRNTO

SUBJECT: Transmittal of Final Report of Project Twinkle

TO: Director of Research and Development
Headquarters, USAF
ATTN: AFDRD-RE, Colonel John Tucker
Washington 25, D. C.

1. Inclosed is a copy of the Final Report on Project Twinkle, forwarded at your request.

2. As there is interest in this matter outside of the Department of Defense, we have recommended to Hq., ADC, that consideration be given to its declassification, particularly in view of the fact that nothing of a security nature has been discovered.

FOR THE COMMANDING GENERAL:

1 Incl
a/s

EPHRAIN RADNER
Chief, Operations Section
Plans and Operations Branch
Geophysics Research Division

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It is a well known fact that the Russians have been hard at work on several urgent projects to study 'fireballs'. Many years ago the Air Force concluded a study of the mysterious 'green fireballs'in the Southwestern states in the U.S.A. It was called 'PROJECT TWINKLE', but its findings have never been revealed.

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Extract of Letter from AFCRL, dated 15 September 1950, Subject: Status of Project Twinkle

TO: Commanding General
Air Materiel Command
Attn: MCREEP-4 Major J. W. Kodis
Wright-Patterson Air Force Base, Dayton, Ohio

"If no fire balls are observed in the next six month period, it is recommended that the project be discontinued. In a phenomenon as sporadic as the fire balls appear to be, it is felt that at least one year is required in order to establish whether their occurrence is or is not a seasonal phenomenon.

4. There is considerable doubt in the minds of some of the project personnel that this is a natural phenomenon. As long as a reasonable doubt exists, it is not wise to discontinue entirely the observations. Dr. Whipple s suggestion that these may be moon reflections on small clouds cannot be discounted. That fire balls have been observed in the past cannot be discounted due to the reliability of several witnesses. It may be considered significant that fire balls have ceased abruptly as soon as a systematic watch was set up. At present it does not appear likely that the next six months of observations will yield any more information than the first six months, but it is felt that even negative information may be significant.

5. It is requested that a six month extension of the Land Air contract be negotiated. It is also requested that the spectrographic equipment abandoned by Holloman Air Force Base due to lack of personnel be turned over to Land Air for operation in the next six month period. At the conclusion of the six month extension, an evaluation of the observations will be accomplished by this Directorate and recommendations as to the future conduct of this project will be forwarded to your command."

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Bas Ltr fr Hqs, AMC, Wright-Patterson Air Force Base, Dayton Ohio
dtd 9 December 1949, Sub: Light Phenomena

2nd Ind.

Hq AMC, Wright-Patterson Air Force Base, Dayton, Ohio 17 May 1950

TO: Director of Research and Development ,Hq, USAF, Washington 25, D. C.
ATTN: AFMRS-4

1. Since the date of basic correspondence this Command has been able to initiate subject project on a limited basis utilizing personnel and equipment which have become available at Holloman Air Force Base. For your information the investigation involves the following observational techniques:

a. Optical tracking with Askania photo theodolites in order to provide trajectory data and photo records.

b. Optical spectro-photography using standard cameras with suitable diffraction gratings.

c. Radio spectrum analysis through the range from 500 kc to 4000 mc. This portion of the program will be shortly started with the Signal Corps providing equipment and personnel.

2. The request of this Command as contained in Paragraph 2 of basic correspondence is withdrawn. In view of this, prior RDB approval for the project is not believed necessary. This Command will take action to coordinate the project through normal channels.

3. In order to better evaluate the results of the investigation outlined in Paragraph 1 above, it would be very desirable to have the activities of the 17th District OSI at Kirtland Air Force Base re-initiate in making field investigations of light phenomena reports. Such reports would be important in the verification of any results of the project work at Holloman. It is therefore requested that action be taken for re-initiation of the 17th District OSI investigations for the period of this project.

FOR THE COMMANDING GENERAL:

S, R, BRENTNALL
Major General, USAF
Director,
Research and Development

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2nd endorsement

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Bas Ltr fr Hqs AMC, Wright-Patterson Air Force Base, Dayton, Ohio
dtd 9 December 1949, Sub: Light Phenomena

AFMRS-4 1st Ind
Department of the Air Force, Hq., USAF, Wash. 25, D. C. 20 December 1949

TO: Commanding General, Air Materiel Command, Wright-Patterson Air
Force Base, Dayton, Ohio

1. This headquarters concurs in the establishment of a project within the Air Force Geophysical Research Program in order to further investigate and secure quantittative data on the "Light Phenomena" observed in the Southwestern United States.

2. Prior to securing the approval of the Research and Development Board and accomplishing the necessary reprogramming within the Geophysical Sciences Budget, it will be necessary for you to prepare a project plan. This plan should include a statement of the problem, method of accomplishment, money, facilities and personnel required to make the necessary measurements. The funds requirement should be stated by object classification.

3. When this necessary information has been received from your command, this headquarters will take appropriate action to secure Research and Development Board approval. As soon as an approval is forthcoming, your command will be requested to initiate the project.

BY COMMAND OF THE CHIEF OF STAFF:

Incls.
w/d

B. G. HOLZMAN
Colonel, U.S.A.F.
Chief, Geophysical Sciences Branch
Directorate of Research & Development
Office, Deputy Chief of Staff, Materiel

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1st endorsement

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HEADQUARTERS
AIR MATERIEL COMMAND
Wright-Patterson Air Force Base
Dayton, Ohio

MCGO 9 December 1949

SUBJECT: Light Phenomena

TO: Director of Reseach and Development
Headquarters, USAF
Washington 25, D. C.

1. Reference is made to:

a. Headquarters USAF (AFMRS-4) letter, dated 14 September 1949, Subject: "Light Phenomena." (See Inclosure No. 1.)

b. Cambridge Research Laboratories letter, dated 7 November 1949, subject: "Report of Conference on "Green Fireballs" (Project Grudge)." (See Inclosure No. 2.)

2. A report of the conference held at Los Alamos on the subject of phenomena observed in the New Mexico area is forwarded as inclosure No. 2. Inasmuch as the phenomena appears to be atmospheric in nature, it is recommended that the investigation continue under the Air Force Geophysical Research program. In order to establish such a project it is requested that Research and Development Board approval be accomplished and that necessary funds be provided.

FOR THE COMMANDING GENERAL:

/s/ M. B. Lammers
M. B. LAMMERS
Technical Assistant
Deputy to the Command General
for Operations

Incl:
1 - See par 1a abv
2 - See par 1b abv

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Basic Letter

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AIR FORCE CAMBRIDGE RESEARCH LABORATORIES FCEO/epa

230 Albany Street
Cambridge 39, Mass
7 November 1949

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In reply, address
Commanding Officer.
Attn: ERH

SUBJECT: Report of Conference on "Green Fireballs"
(Project Grudge)

TO:
Commanding General
Air Materiel Command
Wright-Patterson AFB
Dayton, Ohio
ATTN: MCREEO, Major G.H. Duncan

1. In accordance with instructions contained in classified letter from Chief of Staff, USAF to CG, AMC, subject "Light Phenomena," 14 September 1949, the undersigned attended a conference at Los Alamos on the subject of a phenomena observed in the northern New Mexico area. The phenomena has the appearance of a green fireball and because of the fact that it has been observed only (as far as can be determined) in the northern New Mexico area and only since the year 1947, has caused a high degree of apprehension among security agencies in the area. Two reports from the 17th District Office of Special Investigations (inclosures 1 and 2) summarizes present information on the phenomena. In view of the fact that the phenomena has been observed by independent and trained observers there is little doubt that something was actually observed.

2. Inclosure 3 lists those personnel attending the conference.

3. The first part of the conference was devoted to a summary presentation of all collected and organized observational information regarding green fireballs. The presentation was made by Dr. Lincoln LaPaz (Professor and Head of Department of Meteroritics and Mathematics, University of New Mexico) and Capt. Melvin E. Neef (17th District OSI, USAF). Dr. LaPaz has been cooperating with the OSI investigators in the matter at their request and on an unpaid basis. Capt. Neef is the principal OSI agent on the case. Both Dr. LaPaz and Capt Neef have personally and independently observed the phenomena.

4. The second part of the conference was a discussion by the scientists present of various possible explanations and hypotheses concerning the phenomena. Little success was had.

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Ltr ERH to CG, AMC, Subj: Report of Cofference on "Green Fireballs"
(Project Grudge)

5. It was the conclusion of the group present at the meeting that the present information on the phenomena was not sufficiently quantitative and objective to allow any profitable scientific consideration. Instrumental observations (especially photogaphs, triangulation, and spectroscopic) were considered as essential.

6. Dr. Joseph Kaplan, who was officially representing the Scientific Advisory Board, USAF at the meeting, plans to report the problem to the next meeting of the Board (2 and 3 November)1949) with the recommendation that the USAF provide a suitable investigation of the phenomena using the Geophysical Research Directorate, Air Force Cambridge Research Laboratories, AMC as the agency for the project.

7. It is the opinion of this office that the Geophysical Research Directorate, AFCRL, is capable of performing the required investigation (by photographic and spectroscopic means) provided that necessary funds, personnel authorizations and equipment are provided. Inasmuch as the phenomena appears to be atmospheric in nature, such an assignment is considered appropriate.

FOR THE COMMANDING OFFICER:

/S/ Frederic C. E. ODOR
Major USAF
Acting Director
Base Directorate for
Geophysical Research

3 Incls:
1. Summary #1
2. Summary #2 (in dup)
3. Personnel at mtg

cc: Major D. Crowson, Hq USAF

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enclosure #2

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Auth: C.G., AMC
Initials: ____________
Date: ____________

MCGO

SUBJECT: Light Phenomena

TO: Director of Research and Development
Headquarters USAF
Washington 25, D.C.

1. Reference is made to:

a. Headquarters USAF (AFMRS-4) letter, dated 14 September 1949, subject: "Light Phenomena." (See Inclosure No. 1).

b. Cambridge Research Laboratories letters, dated 7 November 1949, subject: "Report of Conference on 'Green Fireballs" (Project Grudge)." (See Inclosure No. 2).

2. A report of the conference held at Los Almos on the subject of phenomena observed in the New Mexico area is forwarded as inclosure No. 2. Inasmuch as the phenomena appears to be atmospheric in nature it is recommended that the investigation continue under the Air Force Geophysical Research Program. In order to establish such a project it is requested that Research and Development Board approval be accomplished and that necessary funds be provided.

FOR THE COMMANDING GENERAL:

Incl:
1 - See par 1 a abv
2 - See par 1b abv

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Copy of basic Letter

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AFMRS-4

14 September 1949

SUBJECT: Light Phenomena

TO: Commanding General
Air Materiel Command
Wright-Patterson AFB
Dayton, Ohio

1. Since the establishment of the special project at Hq AMC, (Project GRUDGE), to investigate and analyze reports on so-called "Flying saucers" and unidentified aerial phenomena, many reports have been received through intelligence channels from persons who have observed what they considered to be unusual light phenomena. Foremost in this category have been those which are described as "green fireballs".

2. Analysis by various specialists has indicated that many of the incidents involving light phenomena were undoubtedly observations of natural phenomena. Particular attention was given to the "green fireball" variety by Dr. Joseph Kaplan, member of the USAF Scientific Advisory Board. Dr. Kaplan has concluded that the "green fireballs" are natural phenomena.

3. Correspondence relative to Dr. Kaplan's conclusions on the phenomena and correspondence relative to a request from the Second Armored Division, Camp Hood, Texas, for scientific investigation of similar phenomena, are forwarded for your information.

4. The Air Materiel Command has under contract several organizations in the Boston area that are specialists in observing techniques and the interpretation of celestial phenomena. It is desired that these organizations be consulted regarding the "green fireball" phenomena. If necessary, considdration should be given to the establishment of an observational program designed to obtain additional information necessary to an explanation of the phenomena.

5. A meeting at Sandia in the New Mexico area is scheduled for the middle of October to continue discussions of the light phenomena. It is requested that representatives from Air Force Research Laboratories, Base Directorate for Geophysical Research attend.

6. This Headquarters should be apprised of the progress of the evaluation and the results of the Sandia meeting as soon as possible.

BY COMMAND OF THE CHIEF OF STAFF:

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3 Incls:
1-4th Ind to GSUSA w/bltr & Inds (cy) dtd 9/1/49
2-Cy ltr to Dr Kaplan dtd 8/9/49
3-Cy ltr fm Dr Kaplan dtd 7/31/49 w/incls

enclosure #1

/s/ JOHN McK. TUCKER
Lt Col, USAF
Actg Chief, Geophysical Sciences Br
Directorate of R&D
Office, DCS/M

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(UNCLASSIFIED) Project TWINKLE

Directorate of Intelligence
Attention: Colonel John G. Ericksen, Chief
Technical Capabilities Branch
Research Division, Directorate of Research and
Development, Office, DCS/Development

19 Feb 1952
1
Lt Col Clayton/djh/52497
AFDRD-RE

1. Attached is a copy of a letter from the Air Research and Development Command requesting declassification of Project TWINKLE, a project which was carried out by AMC and ARDC for investigation of unusual light phenomena in the general area of Holloman Air Force Base and Vaughn, New Mexico.

2. The Scientific Advisory Board Secretariat has suggested that this project not be declassified for a variety of reasons, chief among which is that no scientific explanation for any of the "fireballs" and other phenomena was revealed by the report and that some reputable scientists still believe that the observed phenomena are man-made.

3. In view of the great interest of the Directorate of Intelligence in such phenomena and the related manifestations, evaluation of the final report of Project TWINKLE with a view to its declassification is requested.

2 Incls
1. cy ltr fr ARDC
to Hq 14 Jan 52
2. cy of Proj TWINKLE
Final Report

ALBERT E. LOMBARD, JR.
Chief, Research Division
Directorate of Research and Development
Office, Deputy Chief of Staff, Development

JOHN H. CLAYTON
Lt Colonel, USAF

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SECURITY INFORMATION

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PROJECT " TWINKLE"

SOURCE: CRIFO Newsletter, 3 Feb 56

The damage may have already been done.

PROJECT TWINKLE—UNDER ITS WRAPS THE KEY?

Speculatively, we see a connection between the earth-shot "meteors" and the fireballs from outer space. In essence, if missiles can be launched from earth onto the moon or Mars, then it should be equally reasonable to assume that the same operations are practicable in reverse. But crediting the moon or Mars as the fireball's launching base is a far simpler matter than rationalizing its objectives, for the only pattern recognizable is the very *lack* of pattern! Like the "artificial meteors" to the moon, they may be relatively harmless missiles sent to test the earth's anatomy of air. Such testing would logically account for the fireballs' patternless or random behavior. Yet, other theorists aver the fireballs are partial to certain geographical areas such as the U.S. Southwest, which *does* evince a pattern. While this pattern may have been true in the Southwest in 1948-49, fireballs since that period have been sporadically universal and without knowledgeable pattern. But, being so widespread today may, in turn, lend reason to the fireballs' mysterious localization over New Mexico in 1948-49. Perhaps then the focal point was Alamogordo, and their purpose was to test and/or cleanse the atmosphere of its radioactive poisons; but today, with bigger atomic blasts and the widespread contaminations of the fall out, the "mission" of the fireball may have become expansively urgent! However, we have one contradictory note in this possible mission of mercy—it does not explain the fireball visitations over the Baltic area in 1946-47.

Still guessing, but coming closer to realistic evidence, we may also perceive in the fireball's persistent randomness, the stark possibility that it may be a type of ranging missile, a theory to which Major Keyhoe has long subscribed. Such a device would explain the recent random bombardments, *and* the occasional pinpointing of a particular area such as the Baltic and New Mexico. Whatever the objective of this ranging device, whether it be experimental, retaliatory or something far more unintelligible to our thinking, we feel that in our guesswork we should also take cognizance of the statements, written with Air Force approval, which appeared in *Look* magazine, June 1952. Under the title, *Hunt For the Flying Saucer*, it said in part, "Especially puzzling have been the horizontal-flying 'green fireballs'. . . Another branch of the Air Force, the Air Research and Development Command, with headquarters in Baltimore and laboratories in Boston, has been studying them in a secret project called Project Twinkle. Although work on this project has been completed, the ARDC refuses to make public its findings. . . . Some Air Force officials feel the inconclusive Project Twinkle report will never be made public; they won't explain why. Some suggest it would expose a foul-up."

Is it conceivable that this *foul-up* could be in reference to the inadvertant artificial meteor program, and that Project Twinkle had learned that fireballs were retaliatory ranging missiles? Was Dr. Lincoln La Paz, world-famed meteoriticist, alluding to the interplanetary ranging missile when he said on September 13, 1955 that a "shrewd opponent" could wage an ice cube test war against this country? Said La Paz, "It is for this reason that since 1948, representatives of the Institute of Meteoritics have habitually asked observers of the yellow-green fireballs and other anomalous luminous phenomena whether or not pieces of ice or drops of water were detected falling from the sky at the time of the observed incident."[7]

But, whether the missile is made of ice or of a cupreous content, such action does not, we repeat, mean "interplanetary war" but it may be the reason for the USAF being *actively* concerned. If such are the facts, then it is also understandable why the Air Force has repeatedly denied the existence of saucers, for to announce they exist and are interplanetary might well force their hand into revealing other more unpalatable information such as that under wraps of Project Twinkle, or, like in cases 128 or 129 or the air disaster of July 12, 1953 off Wake Island.[8]

Proving that secrecy is still under the iron fist, the writer wrote Captain R. C. White, of the Defense Dept., January 7, 1955, requesting certain information regarding the green fireball. The reply came from Major William W. James, Air Force Press Desk, stating, "Captain White is on leave prior to transfer to Spain after having completed his tour here. I am enclosing a copy of our latest press release which answers your questions in this letter." In the enclosed ever-popular press release the following line was underscored in red, "*No evidence of the existence of the popularly-termed 'flying saucers' was found.*"

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[7] Credit, H. G. Rovner, Phila., Pa.

[8] See pages 93-94 and 110, 111, 112 in The Flying Saucer Conspiracy.

[redacted]

PROJECT CONTROL RECORD	**PROJECT NO.** 2-251
SUBJECT Project Twinkle with 2 Incls.	
DEADLINE 4 Mar 52	**DATE RECEIVED** 25 Feb 52
ORIGINATED BY AFDRD	
ACTION BRANCH TC	**BRANCH PROJECT OFFICER**
REQUIREMENT Preparation of R&R #2 to AFDRD from Directorate of Intelligence.	
PROPOSED APPROACH Routine	
ACTION TAKEN Prepared R&R 2 to AFDRD	
RECOMMENDED FURTHER ACTION None	
MAN HOURS REQUIRED 2 hrs - Capt Fournet 20 min - Miss Overstbeet 20 min - Miss Bryan	
DATE FORWARDED	**APPROVED BY**

AFHQ FORM 0-553
28 JUN 51

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

[redacted]

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PROJECT TWINKLE

FINAL REPORT

L. ELTERMAN

27 November 1951

SMC

APPROVED:

P. H. WYCKOFF
Chief, Atmospheric Physics Laboratory

1. TWINKLE, Project

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ABSTRACT

Early in 1950 the Geophysics Research Division received a directive to investigate peculiar light phenomena that had been observed in the skies of the southwestern United States. Project Twinkle was established to check into these phenomena and their explanation.

The gist of the findings is essentially negative. The period of observations covers a little over a year. Some unusual phenomena were observed during that period, most of them can be attributed to such man-made objects as airplanes, balloons, rockets, etc. Others can be attributed to natural phenomena such as flying birds, small clouds, and meteorites. There has been no indication that even the somewhat strange observations often called "Green Fireballs" are anything but natural phenomena.

Our recommendations are in essence that there is no use in sinking any more funds into this at the present time and that we will keep in connection with one of our meteor studies a sharp eye on anything unusual along this line.

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1. Background

In accordance with instructions contained in a classified letter from Chief of Staff, USAF to CG, AMC, subject "Light Phenomena", on 14 September 1949, Lt. Col. Frederic C.E. Oder of GRD attended a conference at Los Alamos, 14 October 1949 on the subject of "Green Fireballs" observed in the Northern New Mexico area. Since the phenomena had been observed only in this area and only since 1947, it had caused considerable concern among security agencies in the area. It was the conclusion of the scientists present at this meeting that the information available was not sufficiently quantitative. Instrumental observations - photographic, triangulation, and spectroscopic were considered essential.

Dr. L. La Paz of the Department of Meteoritics of Univ. of New Mexico was present at the Los Alamos meeting and subsequently was invited to submit proposals for studying this phenomena under GRD sponsorship. On 2 February 1950, Dr. La Paz advised that due to difficulties with academic arrangements, he was unable to undertake this study.

During February 1950, the frequent reports of unexplained aerial phenomena in the vicinity of Holloman Air Force Base and Vaughn, New Mexico prompted the Commanding Officer of Holloman Air Force Base to initiate a program to gather factual data.

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These data then would be used to demonstrate the need for initiating a study of the phenomena. On 21 February 1950, an observation outlook post was set up at Holloman Air Force Base manned by two personnel. Observations with theodolight, telescope and camera were undertaken between the hours of sunrise and sunset.

On 5 March 1950 a conference was held at Wright-Patterson Air Force Base which included Holloman Air Force Base and GRD personnel. Action was taken to initiate a three point program which was confirmed by AMC in the form of a letter directive on 16 March 1950, subject "Light Phenomena".

a. Askania instrument triangulation by Land-Air Inc.

b. Observations with Mitchell camera using spectrum grating by Holloman Air Force Base personnel.

c. Electromagnetic frequency measurements using Signal Corps Engineering Laboratory equipment.

Under contract to GRD, Land-Air Inc. was required to maintain constant watch at two Askania stations for a six-month period. Since an abnormal number of reports had been received from Vaughn, New Mexico, it was decided to install the instrumentation at Vaughn.

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2. Contractual period - 1 April 1950 to 15 September 1950.

Some photographic activity occurred on 27 April and 24 May, but simultaneous sightings by both cameras were not made, so that no information was gained. On 30 August 1950, during a Bell aircraft missile launching, aerial phenomena were observed over Holloman Air Force Base by several individuals; however, neither Land-Air nor Project personnel were notified and, therefore, no results were acquired. On 31 August 1950, the phenomena were again observed after a V-2 launching. Although much film was expended, proper triangulation was not effected, so that again no information was acquired. On 11 September, arrangements were made by Holloman AFB for Major Gover, Commander 93rd Fighter Squadron at Kirtland AFB, to be on call so that aerial objects might be pursued. This would make possible more intimate visual observation and photography at close range. Major Gover was not authorized to shoot at the phenomena.

Generally, the results of the six-month contractual period may be described as negative. Although the photographic theodolites functioned continuously, the grating cameras functioned very little, since the military personnel assigned to operate them had been withdrawn due to the needs concerned with the Korean situation. The

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facilities for the electromagnetic frequency measurements that were to be provided by the Signal Corps Engineering Laboratories were not utilized due to the fact that the frequency of occurrence of these phenomena did not justify the $50,000 a year transfer of funds to the Signal Corps which would be required to carry out such a monitoring facility. However, the phenomena activity over Holloman AFB 150 miles south of Vaughn, N. Mexico during the latter part of August 1950 was considered sufficiently significant so that the contract with Land-Air (Askania cameras only) was extended for six months ending 31 March 1951.

3. Contractual Period - 1 October 1950 to 31 March 1951

Because of the diminution of phenomena activity in the vicinity of Vaughn and the resumption of activity near HAFB, the Askania cameras again were overhauled and installed at HAFB. This installation was completed about 5 November 1950. On 16 October 1950, arrangements were made by Lt. Albert of HAFB that Northrup Aircraft pilots engaged in frequent flying of B-45 and QF-80 aircraft in the Holloman vicinity would report all observations of aerial phenomena.

During this period, occasional reports were received of individuals seeing strange aerial phenomena, but these reports were sketchy, inconclusive, and were considered to be of no scientific value. No sightings were made by the Askania cameras. Nothing whatsoever was reported by the Northrup pilots. Popular interest seemed abated, at least in the southwest. On 31 March 1951, due to the expiration of the contract, Land-Air ceased constant vigilance at the two Askania stations. In summary, the results during this period were negative.

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