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THE MYSTERY

OF THE

GREEN
FIREBALLS



A COMPREHENSIVE RESEARCH FILE ON ONE OF THE MOST
UNUSUAL PHENOMENA OF THE TWENTIETH CENTURY

EDITED BY

WILLIAM L. MOORE



WILLIAM L. MOORE, PUBLICATIONS & RESEARCH, POBX 1845, PRESCOTT, AZ 86302

THE MYSTERY OF THE GREEN FIREBALLS

Edited by William L. Moore

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Whatever they were, people began seeing them sometime in 1948-- no one seems certain just when. By the time they attracted the attention of military and governmental authorities, they were almost epidemic. Silent, usually brilliant green in color, and following high trajectories over a large area of the American Southwest from eastern Arizona to West Texas, their appearance caused considerable consternation in authorities responsible for the security of some of the most sensitive military and research installations in the United States: Los Alamos, White Sands, Sandia Labs, the Air Force Special Weapons Project, Walker Air Force Base at Roswell, Kirtland at Albuquerque, Camp Hood in West Texas-- all reported sightings of these strange and mysterious green objects. But in spite of a concentrated effort to catalog sightings, investigate circumstances and calculate trajectories, they continued to defy explanation. Missiles? Possibly; but whose? Clearly not ours; but not Russian either-- which seemed to rule out a terrestrial origin since no one else on the planet was conducting missile research of any consequence at the time.

Dr. Lincoln LaPaz, famed meteoricist of the University of New Mexico, who was intimately associated with the U.S. Air Force Office of Special Investigations' exhaustive "Special Inquiry" into the matter, expressed a cautious perplexion in his written status reports. Privately, he is said by those who knew him to have leaned toward the belief that these objects might be extraterrestrial space probes of some sort, after having ruled out virtually every other possible explanation. Professionally, however, he knew better than to express such beliefs in writing or in places where they might be overheard by unfriendly ears.

More than three decades later, these sightings remain as much a mystery as they were at the time. Occasionally, sightings of green fireballs are still reported, but the incidents are not frequent and, like last year's World Series, don't seem to generate much interest any more. Opinion, where opinion is still to be found on the subject, divides along essen-

tially the same lines as it did then. On the skeptical side, those content in their belief that the fireballs are a natural phenomenon shrug off each new sighting as just another meteor. Those inclined to class these green visitors as true UFOs can't seem to get excited about mere lights in the sky any more. The curious seem nowhere to be found.

***** ***** ***** ***** ***** *****

This volume constitutes a collection of contemporary documents generated by various agencies and individuals over a period of about five years, from 1948 through 1952-- the remaining paper vestiges of a phenomenon which, at least in the minds of some of those involved, added yet another chill to the already too prevalent cold-war jitters of the time.

These documents, carefully edited (and in some cases faithfully retyped from originals of too poor quality to permit reproduction), reflect a chronologically arranged record of the Mystery of the Green Fireballs during the period of time the government was most interested in them. It is believed to be the largest and certainly the most complete collection of information on this topic available anywhere, and represents the results of several years of diligent research on the part of this editor, my good friend and colleague Stanton T. Friedman, and researcher Nic Magnuson.

All documents contained herein have been declassified by the appropriate authorities. Censored material, except in a few cases where minor irrelevancies have been omitted, is the result of the military or governmental declassification review process required under the Freedom of Information and Privacy Acts.

The quality of document reproduction is generally the best that could be achieved under the circumstances. Regrettably it was not economically feasible to retype the entire collection.

William L. Moore, ed
Prescott, Ariz. 8/83

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No. ~~SECRET~~ 25

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#13 - #19

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Office Memorandum • UNITED STATES GOVERNMENT

TO : Carroll L. Tyler, Manager

DATE: December 13, 1948

FROM : Sidney Newburger, *S.N.* Chief, Security Operations Branch

SUBJECT: UNKNOWN SUBJECT

REFER TO

SYMBOL: SFD-3-1

Submitted herewith for your information is a copy of a Summary of Information, the contents of which were given to the writer early on the morning of December 13. It has been classified Confidential for administrative purposes in order to take all precautions to prevent disclosure to the public press, possibly causing alarmist theories to be advanced.

The Washington Office of Security and appropriate local agencies have been advised.

Encl:

Cy Summary of Info dtd 12/13/48

CC: FBI, Los Alamos

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CONFIDENTIAL

Los Alamos, New Mexico
December 13, 1948

SUMMARY OF INFORMATION

Subject: Unknown Subject

At approximately 0100 hours December 13, 1948, Dr. Lincoln La Paz, meteorologist, University of New Mexico, Major C.L. Phillips, AF-CAP Liaison Officer, and Lt. A.B. Clark, Intelligence Officer for the CAP Squadron, Sandia Base, advised that while proceeding on U.S. Highway 85 from Las Vegas, New Mexico, to Santa Fe, New Mexico, they observed a meteor-like object travelling parallel to the earth from east to west. La Paz, who is a meteorologist of some note, described the object as about 4° above the horizon, of extreme magnitude, and definitely not a meteor due to lack of certain characteristics such as a vapor trail angled with relation to the earth and the steady intensity for the period it was observed. The direction from the moving car was generally west-northwest from a point fifteen miles southeast of Las Vegas.

Dr. La Paz, reporting this to Los Alamos, stated that he took a quick bearing on the object, estimating its height above the horizon and the direction, and he was quite careful to note the direction of flight in order that he might at a more opportune time make specific calculations. La Paz further stated that he was in the Las Vegas area due to a report of a similar object exactly one (1) week ago, December 5, and at almost the same identical time. Thinking at that time it might be a meteor, he and his two companions went into the area to see if they could find any traces of this foreign body.

In the course of further interrogation, it was learned that two (2) Security Inspectors of this installation had observed the same object from a slightly different angle, but tallying with the above in all respects and descriptions. By means of a second observation, La Paz believes that it might be possible to get a definite "fix" on the object....

When the initial report of December 5 was made at Sandia Base, a conference was held between Air Force, Army, and Department of Justice personnel for the purpose of evaluating this information. It is understood that a report of this has gone to respective headquarters. A further conference will be held today, December 13, at Sandia on the same subject.

Additional information, more technical in nature, will be forthcoming when received.

Evaluation: Source of Information reliable; Information--unknown.

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THE UNIVERSITY OF NEW MEXICO
ALBUQUERQUE

Institute of Meteoritics

December 13, 1948

To: Lt. Colonel Doyle Rees, Commanding Officer
District No. 17
Office of Special Investigations

From: Lincoln LaPas, Director
Institute of Meteoritics

Subject: Anomalous luminous phenomena

Pursuant to conversations with Captain Neef under date of December 8, I should like to review the various luminous incidents which have been brought to my attention either as Director of the Institute of Meteoritics, University of New Mexico, or as Director of the Southwest section of the American Meteor Society; or through official channels such as those more specifically described hereinafter. After reviewing these instances, certain recommendations for more detailed investigations of the phenomena in question will be made in accordance with your request.

1. The writer's experience in observation of meteoritic phenomena dates from 1914 when he began as an observing member of the American Meteor Society. In addition to my own experience, I am able to rely also on that of many other specialists in this field. On the basis of all available observational evidence, it can be stated that an extraordinarily large number of fireballs has been reported recently, not only to the agencies that I direct but to other groups carrying out meteoritic studies. In spite of well organized and persistent field searches conducted, not only by the Institute of Meteoritics but also by other organizations, there has been only one case in which the actual recovery of fallen meteorites served to confirm the supposed meteoritic origin of an observed "fireball."

2. In addition to the evidence set forth in the preceding paragraph, the undersigned has on several occasions been requested by agencies, both military and otherwise, to express an opinion upon, or to actively investigate the occurrence of luminous phenomena, supposedly of meteoritic nature, but of such remarkable character that this explanation cannot be accepted without confirmation. In this connection, I should like to call attention to Colonel W. R. Clingerman's letters to me under date of 23 June and 20 July 1948 and Dr. H. E. Landsberg's letter to me under date of 30 March 1948, copies of which are enclosed herewith.

3. The incidents referred to in the above paragraphs, considered in connection with the special inquiry of the Office of Special Investigations under date of 10 December 1948, are of such puzzling nature, and may conceivably be of such serious import that I should like to make certain recommendations for a systematic study of all such incidents.

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Lt. Colonel Doyle Rees

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December 13, 1948

4. First, it is recommended that orders be issued directing all U.S.A.F. night guards and other persons on night duty on the ground or in the air to immediately report any luminous phenomena which they may observe and which they have any reason to believe are not the result of an ordinary meteor (shooting star) fall. The same orders should be issued to those members of the service on duty by day with the qualifications that they do not report luminous objects directly traceable to reflections from meteorological balloons, or from the metal surfaces of airplanes.

Second, it is recommended that steps be taken to secure a similar report from the Security guards on duty at Sandia Base, Kirtland Air Base, Los Alamos, and at other installations throughout New Mexico. In this connection, I should like to note that the Institute has received excellent cooperation from the New Mexico Wing of the Civil Air Patrol, from Forest Rangers, and from night guards at the New Mexico Proving Ground.

Third, it is recommended that the Institute of Meteoritics be given official authorization to make public in newspapers and over radio-networks requests for observations of "fireballs." Such authorizations would seem to be necessary since requests of the nature alluded to, transmitted through Dr. Ward Panley, Director of the University of New Mexico News Bureau to newspapers throughout New Mexico, in connection with the Las Vegas incident of 1020 PM, on the night of 5 December 1948, were not published, apparently because of pressure from other agencies also investigating this occurrence.

Fourth, it is recommended finally that where sufficient observations have been obtained to permit a determination of the probable area of fall, under the supposition that the incident under investigation is actually meteoritic in nature, a thorough-going field search be conducted in this area in the hope of recovering fallen meteorites and of thus establishing once and for all the true nature of the incident. In this connection, some provision should be made for putting into the area of fall radio-equipped vehicles, planes and ground searchers. Our experience, even in the difficult Four Corners area is that with these groups cooperating, an exhaustive search of an area of large size can be speedily completed.

In conclusion, I should like to point out that the staff of the Institute of Meteoritics is eager to cooperate in all such investigations as have been suggested above, subject only to authorization to do so from the President of the University of New Mexico. Such authorization will unquestionably be forthcoming, provided only an official request for Institute of Meteoritics participation in investigations specified to be of importance to the national defense is made of President Tom L. Popejoy.

/s/ Lincoln La Paz

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INCLOSURE NO. 1 TO INVESTIGATIVE REPORT #24-8, 17th DISTRICT OSI.

Report on incident of 1948, December 12, 9h. 2m. # 30s., seen from Starvation Peak (Bernal), New Mexico. (Approximately 15 miles south and 4 miles west of Las Vegas, New Mexico.

The report of this incident should be prefaced with a statement of the fact that beginning on evening of December 9th, and as a direct result of the conference held on afternoon of December 9th with S/A Melvin E. Neef, the writer began systematic observations of the Geminid meteor shower, the only one of the recognized annual meteor showers active at this time. In spite of the quite unusual nature of the observation reported to me by S/A Neef (and of similar observations made known to me at the conference called by Col. Doyle Rees on December 11th), I felt certain that the observed phenomena somehow must be connected with the Geminid meteors which reach their maximum activity between December 10th and 12th, but are frequently seen in considerable numbers as early as December 5 O 4. However, visual observations made between the evening of December 9th and the morning of December 12th only served to confirm a statement made on December 9th to S/A Neef, viz., that the Geminids are not one of the showers producing numbers of extremely bright fireballs (of also Fletcher Watson, Between the Planets, Harvard Books on Action Series, p. 138 (1941)), and that I did not recall ever having seen a green Geminid fireball although bluish and bluish white Geminid had occasionally been noted. This latter impression was checked after my observations of December 9 - 12 were completed by an analysis of the colors assigned to all meteors both Geminid and non-Geminid that I have observed during periods of Geminid activity since December 1, 1915. A total of 414 such meteors had color reported and none of these were tabulated as either green or greenish.

With the above preface, I pressed to an account of the incident of December 12. Shortly before 9 on the evening of this date a staff car driven by Lt. Allan Clark of Sandia Base left Las Vegas headed for Santa Fe. Clark had as passengers Major C. L. Phillips and the undersigned. Phillips was in the back seat and I was in the right front seat. Just before reaching Bernal, New Mexico, the car passed through a cut and came out on a down slope facing approximately westward. On emerging from this cut a clear view to the right toward the north and northwest was afforded. I was watching the sky as I had been since darkness fell and my attention was directed to an area about 15° west of γ -Cygni when, by indirect vision I became aware of a very bright green ball (apparent angular diameter 5') to the right of the area in the center of my field of view, moving from east to west very low on the horizon. Jerking my eyes to the right and pointing with my right hand I shouted, "Look," four times. (The fact that I pointed and repeated the word 4 times has been checked by both of my companions and reenactment of my motions and speech, timed by an Elgin AF stopwatch within 5m after the moment of appearance of the green ball, furnished measures of the duration of this fireball, ranging from 2.1 second to 2.3 seconds.

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Incl. No. 1 to Investigative Report #24-8 (Cont)

The path of the green ball was almost exactly horizontal (Altitude estimated as only 3 or 4 degrees) until just a tenth of a second or so before it disappeared. During the last one or two tenths of a second of its visibility a slight but definite curvature downward developed in its path. From the very beginning the ball was very bright. Immediate comparison with Sirius (at a much greater altitude than the green fireball) indicates that during all but the last one or two tenths of a second of the fireball's visibility it was at least of apparent magnitude -4 (minus four). Just as curvature in its path developed the magnitude of the fireball rose slightly and it broke up into three or four smaller, but still bright green fragments which disappeared almost instantly.

Lt. Clark stopped the car the moment the fireball disappeared, spun it around and drove back into the cut; then turned and parked at the exact point where I first yelled "Look." Here the time as read immediately from a watch I had set at noon on December 12 with the master clock in the Santa Fe RR Station at Las Vegas, New Mexico, was 9h. 3m. as nearly as could be determined. Assuming that Clark's maneuvers with the car took between half a minute and a minute and a half the actual time of appearance was between 9h. 1m. 30s. and 9h. 2m. 30s. I believe the earlier of these times is the more probable.

At the point where Lt. Clark stopped, an arrow was scratched in the shoulder of the roadway directed toward the point where the green fireball disappeared and white rocks were used to border this arrow. While performing this operation and for many minutes thereafter we stood outside the car and listened for meteoritic detonations or rumblings, but absolutely nothing was heard. (There was no appreciable interference from traffic noise.)

At approximately 9:50 p. m., we reentered the staff car and drove first to Santa Fe (where we futilely attempted to get in touch with night guards on duty at New Mexico State Prison in the hope of obtaining an additional line of sight to the point where the green ball had disappeared); and then to Los Alamos where I reported to Col. Carroll and other security officials what we had observed. Through their aid it was determined that what was unquestionably the same green ball seen by us had also been observed by at least two of the night guards at Los Alamos.

During the entire night of the 13th, Meteors of all magnitudes from the first to the fifth and of various colors (with white and yellow predominating and with no evidence of green) were occasionally seen emanating from the Geminid radiant. This radiant was well above the horizon even at the time of the Starvation Peak incident. Consequently, the apparent paths of the meteors from the radiant appeared as luminous arcs of great circles diverging from the radiant point and passing downward to intersect the horizon under angles always large and for the most part approaching 90°, in value. In the sharpest contrast, the path of the bright green fireball seen from near Starvation Peak was very nearly, if

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Incl. No. 1 to Investigative Report #24-8 (Cont)

not exactly, parallel to the horizon. This green fireball certainly did not emanate from the Geminid radiant.

Subject to discovery that a new (non-Geminid) meteoric radiant emitting numerous very bright fireballs of a vivid green color (deeper and richer than the green of the beacon at the New Municipal Airport south of Santa Fe, New Mexico) has suddenly become active during the first half of December. I am now convinced the various "green flare" incidents reported to the O.S.I. are not meteoric in nature.

This is a written statement given by Dr. La Paz in his own words.

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THE UNIVERSITY OF NEW MEXICO
ALBUQUERQUE

Institute of Meteorics

December 20, 1948

To: Lt. Colonel Doyle Rees, Commanding Officer
District No. 17
Office of Special Investigations

From: Lincoln LaPaz, Director
Institute of Meteorics

Subject: Amomalous luminous phenomena (continuation)

In accordance with your request, the present report has been prepared in order to summarize results obtained by investigations carried out in the interval, December 13-20.

1. The Observational Data. As far as can be determined, the first incident of the sort reported by many observers on December 5 occurred as early as 1948, January 1, (see copy of /name censored/ letter under date of January 7, to Mr. /censored/), the second such incident, and one presenting much more striking resemblance to the December 5- December 13 incidents, occurred on August 4, 1948, (see letter of October 22, written by /censored/ to /censored/, Regional Director for the American Meteor Society, University of /censored/. Beginning on December 5, there was a sudden outburst of anomolous luminous appearances. The table given below lists date, hour of observation, name of observer; and, in parenthesis, point of observation for each of the occurances so far uncovered by investigation carried out under the general supervision of your office and the Institute of Meteorics.

December 5:

7:30 p.m., /censored/, (Las Vegas, N.M.)
9:05 p.m., Captain A. Goade, Pilot, and Major R.M. Carter,
Co-pilot (Near Las Vegas, N.M.)
9:15 p.m., /censored/, (Las Vegas, N.M.)
9:15-9:30 p.m., /censored/, (Las Vegas, N.M.)
9:15 p.m., /censored/, (Near Lucy, N.M.)
9:27 p.m., Captain Goade and Major Carter (Near Albuquerque, N.M.)
9:35 p.m., Mr. Ernest /censored/, Pilot, and Co-pilot /censored/
(Las Vegas, N.M.)
10:00-10:15 p.m., Mrs. /censored/, (Near Las Vegas, NM)
10:20 p.m., /censored/, (Near Levy, N.M.)
10:20 p.m., Mr. /censored/, (Temporary Santa Fe RR Station,
ONAVA, N.M.)
11:15 p.m., /censored/, (Near Las Vegas, N.M.)

December 6:

10:55 p.m., Mr. Joe Toulouse, Security Section, Sandia Base,
Albuquerque, N.M. (Sandia Base)

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To: Colonel Doyle Rees

December 20, 1948

December 7:

9:45 p.m., Inspector J. Cotteran, AEC Security Service, Los Alamos, N.M. (Los Alamos)

December 8:

6:33 p.m., Capt. J. Stahl, Jr., Capt. Melvin E. Neef, Special Agents, OSI, Kirtland Field, N.M. (Near Las Vegas, NM)

December 12:

9h 2m plus or minus 30s p.m., Major C.L. Phillips, AF-CAP Liaison Officer, Kirtland Field; Lt. ~~/censored/~~, Intelligence Officer, N. Mex. Wing, CAP; Dr. Lincoln LaPaz, Director, Institute of Meteorics, University of New Mexico (Near Starvation Peak, N.M.); and Inspectors Jeffers and McGuigan, AEC Security Service (Los Alamos, N.M.)

December 13:

9:30 p.m., Mr. & Mrs. ~~/censored/~~, (From 20 miles east of Las Vegas on Highway 65).

December 14:

1:00 a.m., Mr. Mimo Sanches (Wagon Mound, N.M.)

2. The Real Path of the only Green Fireball so far Observed at Two Separate Stations. Among the numerous observations so far made, there is only one pair of corresponding observations i.e., those made simultaneously by different groups of observers at widely separate stations. The only such observations are those obtained on the night of December 12 by one group of observers near Starvation Peak (Bernal, N.M. - see report on incident of 1948, Dec. 12, 9h 2m plus or minus 30s), and a second pair of observers stationed within the Los Alamos reservation. By graphic reduction of the simultaneously made observations, the following facts have been determined: The green fireball of Dec. 12, 9h 2m plus or minus 30s appeared very near a point with the coordinates latitude $35^{\circ} 50'$, longitude $106^{\circ} 40'$ and disappeared near a point with the coordinates latitude $35^{\circ} 45'$, longitude $107^{\circ} 9'$ traversing a nearly or exactly horizontal path with a length of very nearly twenty-five (25) miles at an altitude above the surface of the earth of approximately 8 to 10 miles, depending on the estimate of angular altitude employed in the reduction; the velocity with respect to the earth works out at between 8 and 12 miles a second, depending on the duration estimate used. It should be observed that the above results are obtained under the assumption that the points of appearance and disappearance of the fireball were seen simultaneously by both the Bernal and Los Alamos groups. In case this assumption is not fulfilled, the real path could very easily be no more than 10 to 12 miles long, the velocity with respect to the earth then working out at between 3 and 6 miles a second. While there is thus considerable uncertainty because of the lack of confirming azimuth

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To: Colonel Doyle Rees

December 20, 1948

observations from a third station, concordance in the five (5) different estimates of angular elevation make it most unlikely that the linear height of the fireball was much less than 8 miles and much more than 10 miles. It is interesting to observe that the backward extension of the 25-mile path first given passes almost centrally across the Los Alamos reservation.

3. Significant Differences Between the Fireballs Observed in the Interval December 5-13 and Typical Meteors.

3.1 The horizontal nature of the paths of most of the December fireballs is most unusual. Genuine meteors are rarely observed to move in a horizontal path.

3.2 Again the very low height of the December fireball discussed in section 2 above sets it off in sharp contrast from the genuine meteors for which heights of the order of 40 or more miles are normally observed.

3.3 The velocity determined for the fireball of December 12 is much less than velocities determined from typical meteors (and yet is considerably greater than the speeds of the V-2 rockets or jet planes, or of conventional flares).

3.4 In the case of meteorites that penetrate to as low levels as that determined for the fireball of December 12, the observed luminous phenomena are always accompanied by very violent noises. No noises whatsoever have been observed in connection with the various December fireballs so far investigated.

3.5 Genuine meteors normally show remarkable variations in brightness beginning as fine thin hair lines, which are scarcely visible to the observers, and then brightening up to flash out near the end of their paths. In the case of the December fireballs most of the observers have reported that the fireballs appeared almost instantly at their full brightness.

3.6 In the case of genuine meteors the paths are directed toward all points of the compass with equal frequency. On the contrary in the case of the green fireballs, plots of admissible approach sectors show that there is a very pronounced tendency for the paths to come from the north half of the sky.

3.7 The three groups of anomalous luminous greenish phenomena show a curious association with well known meteor showers, although none of these meteor showers normally produce extremely bright green fireballs, such as those recently observed. For example, the observation mentioned by Mr. (illegible) appeared near the maximum of the Quadrantid shower of early January, Mr. McCullough's observation of August was near the time of the Persid shower and the December observations all fell in the interval covered by the Geminid shower. This relationship might indicate an attempt to render the green fireballs less conspicuous by causing them to appear only when there is considerable meteoric activity.

3.8 As noted in an earlier communication, the remarkably vivid green color as reported for most of the December fireballs is rarely observed in the case of genuine meteors. By laboratory test, this peculiar color seems to be identical with that given off by copper salts in the

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To: Colonel Doyle Rees

December 20, 1948

blowpipe flame. If this identification is correct, the wavelength of the radiation from the green fireballs is near 5,210 Angstrom Units.

3.9 The duration estimates of between 2 and 3 seconds reported for the green fireballs are considerably longer than those (0.4 - 0.5 seconds) for the ordinary visual meteors, but shorter than the duration estimates invariably reported in the case of a genuine meteorite fall (5 to 30 seconds or even longer).

3.10 For none of the green fireballs has a train of sparks or a dust cloud been reported. This contrasts sharply with the behavior noted in cases of meteoric fireballs- particularly those that penetrate to the very low levels where the green fireball of December 12 was observed.

4. On the basis of the various differences to which attention is called in section 3, the writer remains of the opinion that the fireball of December 12 was definitely non-meteoritic and that in all probability the same is true of most, if not all, the other bright green fireballs, which the OSI has had under investigation.

LINCOLN LaPAZ

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12/21/48

Office Memorandum • UNITED STATES GOVERNMENT

TO : Carroll L. Tyler, Area Manager,
Santa Fe Operations Office

FROM : John A. Carroll, Chief Inspector,
Atomic Energy Security Service

SUBJECT: APPEARANCE OF PHENOMENA AT LOS ALAMOS PROJECT

DATE: December 21, 1948

REFER TO
SYMBOL: SFG1

Since 12 December 1948, intermittent reports have been submitted to this office by Security Inspectors on night patrol duty, concerning the appearance of rapidly moving lights in the vicinity of the Los Alamos Project. These lights are described in the various reports as being brilliant green, flying at an unknown altitude and of possessing the general appearance of a ball of fire approximately one fourth the size of a full moon. Further information regarding the impressions of the observers is contained within this report.

At 2340 on 12 December 1948, the AESS Duty Officer received a report that Dr. Lincoln La Paz of the University of New Mexico, a Major Phillips of the U. S. Air Force and a Lt. Allen Clark of the CAP were at Security Station 101 and were requesting that they be allowed to contact someone in authority regarding an incident of importance. The Duty Officer contacted Dr. La Paz and his party at Station 101 and after conferring with them, notified the Chief Inspector of the AESS. Upon arriving at Station 101 and after making an estimate of the importance of the information volunteered by Dr. La Paz, the Chief Inspector notified the Director of Security who dispatched Mr. Sidney Newburger to act as his representative.

Dr. La Paz's statement is included in substance below:

Dr. La Paz mentioned that reports have been forwarded to him from sources in various parts of the country, particularly the Hanford Washington AEC installation, regarding the appearance of "Flying green lights". These reports had been originated by astronomers, airline pilots and other apparently reliable sources.

He stated that he had personally observed such a phenomenon between 2100 and 2103 on 12 December 1948, the date of his journey to Los Alamos. He further stated that he was firmly convinced (as were other astronomers) that the objects were man-made and were not meteorites or any other type of celestial body. He expressed the opinion that the object he saw was approximately four degrees above the horizon and was traveling in a path parallel to the ground, possessing a relatively flat trajectory. Its direction was apparently north-west to south-east. He said that a similar object had been sighted one week before in the vicinity of Albuquerque.

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Office Memorandum • UNITED STATES GOVERNMENT

TO : Carroll L. Tyler

DATE: December 21, 1948

FROM : John A. Carroll

SUBJECT: APPEARANCE OF PHENOMENA AT THE LOS ALAMOS PROJECT

REFER TO

SYMBOL: SFG1

On 14 December, Dr. La Paz returned to Los Alamos, accompanied by Major Phillips and Lieutenant Clark. At that time, a meeting was held in the office of the Chief Inspector. Present were B.O. Wells, John A. Carroll, Abner Schreiber, J. Jerome Maxwell, Lt. C.W. Overton, Lt. Carl Lyon and Lt. Earle D. Hightower. During this meeting Dr. La Paz presented to the group letters relative to the phenomena, again expressed the opinion that the objects were not celestial bodies, and requested the cooperation of the AEC in determining the origin and nature of these phenomena. ←

On 19 December, Dr. La Paz again returned to the Los Alamos installation, accompanied by Jack Boling and Mr. Arnetson, Investigators from the Office of Special Investigation, an Air Force Intelligence Unit. They requested permission to observe from the peaks west of Los Alamos. Accordingly they were accompanied to suitable observation points by the Chief Inspector and the Deputy Chief Inspector of the AESS, Mr. Maxwell of the FBI and a party of AESS personnel. Cameras and transits were mounted at points "Nighthawk" and "Nightingale". A negative result was obtained.

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23 On 20 December, Patrol 406 reported from Pajarito Mountain that at 2854 they observed a brilliant greenish-white light moving toward them in an arc from a great distance. As the light approached, it expanded in size until it assumed proportions the size of a "basketball" or about one fourth the size of a full moon. The object seemed to possess a trajectory of approximately 20 degrees of glide and as it lost altitude, apparently "flattened out" until its path paralleled the horizon. One observer stated that it seemed to fly through the air as if controlled and did not fall straight to the earth as an uncontrolled object normally would.

Simultaneously, reports were received from Lt. C.E. Strang of the AESS and from Mr. George Skipper of the Security Division. These reports approximated those of Patrol 406, verifying angle, direction, appearance and velocity.

Mr. Skipper stated that the object had a "gaseous appearance" and expressed the opinion that it appeared to be the exhaust of some sort of engine. Lt. Strang verified this statement and added that it appeared similar to the exhaust of the V-1 "Buzz Bomb" used in the blitz of Britain.

Statements of all persons observing these phenomena have been taken

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December 22, 1948

B. O. Wells, Director
Security & Intelligence, SFCC, Los Alamos
Andrew A. Walker, Chief
Security Division, Sandia Base
LUMINOUS PHENOMENA

REFER TO
SYMBOL: SF-SD-4

Transmitted herewith are two copies of report of investigation
by the Office of Special Investigations, USAF, Kirtland Air Force
Base, Kirtland Field, New Mexico, for your information.

Encls.
Rpt. of Investigation (2)

cc: G. P. Kraker w/encl.

WHEN SEPARATED FROM ENCLOSURES
HANDLE THIS DOCUMENT AS
RESTRICTED

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DETAILS

AT ALBUQUERQUE, NEW MEXICO

1. This investigation predicated upon verbal request District Commander, 17th District Office of Special Investigations (IC) USAF, Kirtland Air Force Base, Kirtland Field, New Mexico.
2. This is a joint investigation of Special Agents JOHN J. STAHL, Jr. HERMAN E. MUNROE, MELVIN E. KEFF, and the writer.
3. On 6 December 1948, Captain JOSEPH HANLKE, Security Officer, Kirtland Air Force Base, Kirtland Field, New Mexico, reported the following incidents:

At 2130 hours, 5 December 1948, A C-47, Number AF-9821, enroute from Lowry Air Force Base, Denver, Colorado, to Williams Air Force Base, Chandler, Arizona, reported his position to the Control Tower, Kirtland Air Force Base, as being approximately ten (10) miles east of Albuquerque. Pilot stated that he had seen a green flare arise from the ground to an altitude of approximately five hundred (500) feet on the east slope of the Sandia Mountains. This incident occurred at about 2127 hours. Pilot stated that he had seen the same type of flare at approximately 2105 hours just west of Las Vegas, New Mexico. No other information was offered by this pilot.

At 2300 hours, 5 December 1948, the Control Tower, Kirtland Air Force Base, contacted Pioneer Air Flight #63, which had just completed a flight from Tucumcari, New Mexico, to Las Vegas, to Santa Fe, to Albuquerque, New Mexico. Captain of this flight stated he had seen a green light just west of Las Vegas at approximately 2135 hours. Pilot stated he had believed the light to be a shooting star at first, but, upon questioning, stated the opinion that the light was too near the ground to have been a shooting star. Pilot suggested that the light could have been a Very Pistol flare.

At 2320 hours, 5 December 1948, Captain VAN LLOYD, pilot of Pioneer Flight #63, reported by telephone to Kirtland Air Force Base Control Tower, stating that when he first saw the light it appeared to be coming straight toward his airplane and added that he had attempted to jerk the airplane from its course to avoid the light. VAN LLOYD said that the light appeared to be coming straight to the ship, then trailed off to the ground. The light was pale green and had a pale green trail. Captain VAN LLOYD said he was hesitant about reporting such incidents since they are generally not accepted.

4. On 6 December 1948, ERNEST VAN LLOYD, Captain and Pilot, JAMES L. SMITH, Co-Pilot, and ELIZABETH CONNER, Flight hostess, all

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civilians, Pioneer Flight #63, were interviewed by S/A MELVIN E. NEEF. This interview was conducted at Pioneer Airline Operations, Kirtland Air Force Base, Kirtland Field, New Mexico. VAN LLOYD and SMITH advised that at 2135 hours, 5 December 1948, they were approaching Las Vegas, New Mexico, in a C-47 type airplane at an altitude of 9,000 feet, with a compass heading of 272 degrees. They observed directly ahead and slightly above their altitude, in the vicinity of the Montezuma Mission, a phenomena which first appeared as a bright white flash, then an object came into view which was described as being a whitish, orange color. This object at first appeared to be coming directly toward their airplane, then arched downward and disappeared from sight. This object was in view for only a few seconds and no estimate could be made of the size or distance of the object. Both VAN LLOYD and SMITH were of the opinion that it would have been impossible for anyone in the passenger compartment to have observed this phenomena. Miss CONNER stated that she did not observe this object and added that to the best of her knowledge all of the passengers were asleep.

NOTE: It is to be noted that there is a discrepancy in the color of Capt. VAN LLOYD'S initial report and that obtained by interview.

5. On 9 December 1948, Colonel WILLIAM P. HAYES, Infantry, Civilian Component Affairs Officer, New Mexico Military District, was interviewed in his office, Building T-25, Kirtland Air Force Base, Kirtland Field, New Mexico. This interview was conducted by S/A JOHN J. STAHL, JR., S/A MELVIN E. NEEF, and the writer. Colonel HAYES advised that he had first observed an unusual aerial phenomena during the latter part of 1947. This occurred in the vicinity of Vaughn, New Mexico. The phenomena appeared to be approximately four or five hundred feet above the ground when first observed and descending slowly and steadily in a vertical manner toward the earth. The object appeared to be slightly larger than a basketball, bright white in color, like a miniature sun. Upon reaching a point approximately two hundred feet above the surface of the earth, the object appeared to explode although no noise was apparent. Colonel HAYES stopped his automobile and got out to watch the object. At this time the explosion, or disintegration, appeared to be taking place some forty to sixty yards distant, and still no noise was noticed. At this time the fragments assumed a fiery red color and descended toward earth like numerous sparks, being extinguished before touching the ground. Colonel HAYES stated that he was on Highway #60 at this time, near a railroad and separated from the vicinity where the fragments were landing by a fence. Colonel HAYES did not cross the fence or investigate further.

6. Colonel HAYES advised that on either 3 or 4 November 1948, and again on 23 November 1948, he observed two similar phenomena as described previously. These observations were in the same vicinity of the original phenomena on Highway #60, near Vaughn, New Mexico. All three of these incidents occurred at approximately 2200 hours. Col. HAYES

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also advised that as far as he knew no maneuvers were being held by the National Guard or the Reserve Units in New Mexico.

NOTE: Colonel HAYES did not report any of these incidents, but upon receiving information of similar occurrences having been observed, did volunteer the information contained in this report.

7. On 9 December 1948, Dr. LINCOLN LA PAZ, Director, Institute of Meteoritics, University of New Mexico, Albuquerque, New Mexico, was interviewed in his office by Special Agent MELVIN E. HEEP. Dr. LA PAZ produced his credentials which indicated that during the 2nd World War he was Technical Director, Operations Analysis Section, Sq., 2nd Air Force, and is closely associated in an official capacity with Dr. H. I. LANDSBERG, Executive Director, Committee on Geophysics and Geography, Research and Development Board, Pentagon, Washington, D. C. In connection with this capacity he has a secret and top secret clearance by the Air Materiel Command, Wright-Patterson Air Force Base, Ohio.

8. Dr. LA PAZ explained the behavior of meteors and stated that these phenomena being investigated could not be explained or be considered as meteors. He advised, in view of the unexplained Memphis, Tennessee, incident, the occurrence at Los Alamos, New Mexico, and the proclaimed meteorites fall in Russia, that has not been explained, that the present phenomena should be investigated and an attempt be made to identify them.

9. On 13 December 1948, Dr. LA PAZ gave a statement concerning an incident, which he witnessed at 9:05 P.M., on 12 December 1948. Dr. LA PAZ's statement is inclosed as Incl. No. 1.

10. On 11 December 1948, Major WILLIAM P. GODSOE, 4th Army Liaison Intelligence Officer, Sandia Base, New Mexico, advised S/A M. C. HEEP, that there were no maneuvers in this area, and no experiments involving the use of rockets or flares.

11. On 12 December 1948, Col. HAROLD A. GUNN, Base Commander, Kirtland Air Force Base, Kirtland Field, New Mexico, was interviewed by S/A MELVIN E. HEEP. Col. GUNN advised that he knows of no aerial maneuvers, and feels that in the event that there were, he would be so advised.

AF CHANDLER, ARIZONA

12. On 7 December 1948, S/A HERMAN E. MUNROE, reported from Williams Air Force Base, Chandler, Arizona, that Air Force C-47, Number AF-9921, was piloted by Captain A. GOADE, AO-55483. The co-pilot was determined to be Major R. M. CARTER, AO-40767, and the Flight Engineer was M/Sgt R. G. WALTON, AF-299736 - (unknown in its entirety). All of the above personnel were reported to be permanently stationed at Randolph Air Force Base, San Antonio, Texas, and were enroute from San Antonio,

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Texas, to Williams Air Force Base, Arizona. Aircraft and crew departed for Mather Air Force Base, California, before an interview could be conducted.

AT SANTA FE, NEW MEXICO

13. On 8 December 1948, Captain K. K. MILLER, New Mexico State Police, State Police Headquarters, Highway 85, Santa Fe, New Mexico, was interviewed reference possible previous reports concerning unusual aerial phenomena, flares, lights in the sky, etc.. Captain MILLER stated no reports had been received by this office from any of the State Police stationed throughout the state of New Mexico.

NOTE: Captain MILLER stated that he would report any incidents of this type to the State Police Office in Albuquerque and request that they contact the Office of Special Investigations, Kirtland Air Force Base, Kirtland Field, New Mexico.

14. On 8 December 1948, Mr. K. D. FLOCK, Forest Supervisor, Santa Fe National Forest, Federal Court House Building, Santa Fe, New Mexico, was interviewed reference possible previous reports concerning unusual aerial phenomena, flares, lights in the sky, etc. Mr. FLOCK stated that he had received no reports of incidents of these types during the current year; however, in the summer of 1947, a woman named MADELINE G. MERCHANT (LEAD) P. O. Box 263, Santa Fe, New Mexico, had reported unusual aerial manifestations to him on numerous occasions. Mrs. MERCHANT, a writer, and her husband were prospecting throughout the State of New Mexico, and on at least five different occasions, during a period of five to six weeks, Mrs. MERCHANT had visited Mr. FLOCK and reported having observed objects which she described as being "cigarshaped with a glowing tip" in the sky. No information was available as to the altitude, size, speed, or frequency of these objects. Mrs. MERCHANT stated that she had personally observed these objects from Tierra Amarilla, New Mexico, to Los Alamos, New Mexico. Mrs. MERCHANT is believed to have contacted the military security personnel at Los Alamos Atomic Energy Commission (LEAD) installation, and also to have contacted the Governor of New Mexico reference her observations. It is not believed that Mrs. MERCHANT is now residing at Santa Fe.

15. Mr. FLOCK stated that he had alerted his Forest Rangers to watch for unusual lights or objects in the sky, but to date had received no reports from them. Mr. FLOCK recommended that WILLIAM BRAINARD, Forest Ranger, Las Vegas, be contacted for a report of possible activities of this nature in the Las Vegas area.

NOTE: Mr. FLOCK was unusually cooperative and security-conscious. Mr. FLOCK stated that he would discreetly alert his Rangers again and have them report to him all incidents of this nature immediately. These reports will be transmitted in turn to the Office of Special Investigations, Kirtland Air Force Base, Kirtland Field, New Mexico. Mr. FLOCK stated also that he would be glad to cooperate by permitting members of the Office of Special Investigations to make use of temporarily inactive fire towers, or ranger stations, upon request.

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AT LAS VEGAS, NEW MEXICO

1. On 8 December 1948, Mr. MATT O'BRIEN, Chief of Police, Sixth and University, Las Vegas, New Mexico, was interviewed reference reports of unusual aerial phenomenon. Chief O'BRIEN stated that he had received no reports of this nature and added that this was the first he had heard of possible occurrences in the vicinity of Las Vegas. Chief O'BRIEN recommended that NOLAND UTZ, State Police, on duty in Las Vegas, be contacted.

2. On 8 December 1948, Patrolman NOLAND UTZ, New Mexico State Police, San Miguel County Court House (Old Town), Las Vegas, New Mexico, was interviewed reference reports on unusual aerial phenomenon. Mr. UTZ stated he had received no reports of this nature and added that only on one occasion had he overheard a conversation about aerial flares in the neighborhood of Las Vegas. This conversation occurred during a meeting of several enforcement agents and Mr. UTZ stated he had no idea who had mentioned the subject. Mr. UTZ stated if he received reports of this type he would report same to the proper Federal agency. Mr. UTZ said that possibly a man named "BOUSE" who was flying a plane locally and doing advertising with a loud speaker attached to the plane could throw some light on the flares claimed to have been seen in the vicinity of Las Vegas.

3. On 8 December 1948, Mrs. JOSEPH MARSHALL, Office Manager, Las Vegas Flying Service, Watson Airport, East County Road, Las Vegas, New Mexico, was interviewed reference reports of flares observed at night in the vicinity of Las Vegas. Mrs. MARSHALL stated that she was the wife of JOSEPH MARSHALL, Owner of Las Vegas Flying Service. Mrs. MARSHALL stated that business was unusually slow at the Watson Airport, due to the near-abolishment of training of student pilots under the G.I. Bill. No flying is conducted at night from this air field. Mrs. MARSHALL added that possibly information could be obtained from the local newspaper office and added that she had heard no reports on flares in the Las Vegas area.

NOTE: Contact was not made with the local newspaper due to the desire of keeping publicity about this investigation to a minimum.

4. On 8 December 1948, Mr. J. D. MILLER, Chief Aircraft Communicator, Department of Commerce, Civil Aeronautics Administration (hereinafter referred to as C.A.C.), Box 1029, Municipal Airport, Las Vegas, New Mexico, was interviewed reference possible previous reports of unusual aerial phenomenon. Mr. MILLER stated he had heard of no incident prior to this interview and added that he was very much interested in events of this nature. Mr. MILLER stated he had received no information from any aircraft on 8 December 1948. A check of the C.A.A. records for this date verified this statement. Mr. MILLER stated that beginning immediately he would alert his Aircraft Communicators to report promptly incidents of this nature to him. These reports would in turn be reported to the Office of Special Investigations, Kirtland AFB, Kirtland Field, New Mexico. If the reports appear to necessitate immediate investigative action, a report will be made to a Federal agent residing in Las Vegas. Mr. MILLER requested that four of

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his six Aircraft Communicators, on duty at time of interview, be interviewed collectively and informed briefly of the type of reports desired and the necessity for reporting such incidents immediately to Mr. MILLER.

5. On 8 December 1948, Mr. JOHN J. NEWMAN, Mr. E. C. FRANCIS, Mr. C. T. RICH, and Mr. ROY W. TOLLIVER, Aircraft Communicators, C.A.A. Municipal Airport, Las Vegas, New Mexico, were interviewed collectively and informed of the investigation being conducted relative to unusual aerial phenomena. None of these men had received previous reports of this nature. All of these men agreed to maintain this information on a discreet basis and to handle the information as being highly classified. Permission was granted to these four communicators to brief the two communicators absent at this time reference the information desired. The two men absent were listed as Mr. IRWIN L. MERICIE and Mr. ROBERT L. BISH. The four communicators interviewed stated that the only night flying at Municipal Airport, Las Vegas, was by the two commercial airlines located there; Pioneer Airlines and Continental Airlines. It was pointed out that a Mr. LLOYD BIBLE, Owner-Manager of a flying school located on Municipal Airport was not licensed to make night flights and was not authorized to permit his students to fly at night. It was further noted that Mr. WOODROW HOUSE, owner of a Piper Super Cruiser used for advertising purposes in the vicinity of Las Vegas, was not licensed to fly at night.

6. On 8 December 1948, Mr. BILLY R. WATSON, Manager, Pioneer Airlines, Municipal Airport, Las Vegas, New Mexico, was interviewed reference reports on unusual aerial phenomenon. Mr. WATSON was interviewed in his home, 815 Fourth Street, Las Vegas, New Mexico, and stated that with the exception of a rumor from one of his Pioneer pilots (Mr. VAN LLOYD) he had heard of no unusual incidents regarding flares or lights in the sky in and around the Las Vegas area. Mr. WATSON stated that he would stay on the alert in an attempt to gather any future information from pilots or crew members of Pioneer Airlines, but added that he did not feel like confiding in his two assistants, since they were very youthful and would undoubtedly disclose information, regarding this investigation. Mr. WATSON stated that a Mr. W. R. McGOVERN, home address, 1001 Sixth Street, Las Vegas, Manager of Continental Airlines was presently out of town but was due to return on Friday, 10 December 1948. Mr. WATSON, upon being requested to do so, stated he would discreetly brief Mr. McGOVERN as to the nature of reports desired, and would impress Mr. McGOVERN as to the confidential classification of this investigation. Mr. WATSON concluded by stating that any information he obtained, and information obtained by Mr. McGOVERN, would be reported to Mr. MILLER of C.A.A. for subsequent transmittal to the proper investigative agency.

7. On 8 December 1948, Mr. WILLIAM BRAINARD, Ranger, Santa Fe National Forest Service, Federal Post Office Building, Las Vegas, New Mexico, was interviewed reference possible previous reports of unusual aerial phenomenon. Mr. BRAINARD stated that at no time in the past since his assignment to Las Vegas in February 1948 had he received any report or observed any incident regarding occurrences of this nature. Mr. BRAINARD said he would report any future incidents of this type to Mr. FLOCK in Santa Fe, for subsequent transmittal to the investigative agency concerned.

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AT LAS VEGAS, NEW MEXICO

This is a joint investigation conducted by Special Agents JOHN J. STAHL, Jr., and MELVIN E. NEEF.

At 1745 on 8 December 1948, Special Agents STAHL AND NEEF, both rated pilots, took off from Kirtland Air Force Base, Albuquerque, New Mexico, in a T-7 type aircraft. At 1833 while flying at an indicated altitude of 11,500 feet, mean sea level, approximately 5,000 feet above terrain, a strange phenomenon was observed. The exact position of the aircraft at the time of the observation was 35° 31' North - 104° 51' West, approximately twenty (20) miles east of the Las Vegas, New Mexico, radio range station. At the time of the observation the aircraft was flying on a compass course of 90°, the indicated air-speed was one hundred sixty (160) miles per hour and the ground speed was approximately one hundred ninety miles per hour. Special Agent STAHL was flying as pilot and seated on the left side of the cockpit. Special Agent NEEF was flying as co-pilot and was seated on the right side of the cockpit. Special Agent NEEF first observed the phenomenon and a split second later Special Agent STAHL saw it. At an estimated altitude of 2,000 feet higher than the airplane or 13,500 feet above mean sea level a brilliant green light was observed coming toward the airplane at a rapid rate of speed from approximately 30° to the left of course, from 60° RNE, to 240° NSW. The object was similar in appearance to a burning green flare of common use in the Air Forces. However, the light was much more intense and the object appeared to be considerably larger than a normal flare. No estimate can be made of the distance or the size of the object since no other object was visible upon which to base a comparison. The object was definitely larger and more brilliant than a shooting star, meteoric flare. The trajectory of the object when first sighted was almost flat and parallel to the earth. The phenomenon lasted approximately two (2) seconds at the end of which the object seemed to burn out. The trajectory then dropped off rapidly and a trail of glowing fragments reddish orange in color was observed falling toward the ground. The fragments were visible for less than a second before disappearing. The phenomenon was of such intensity as to be visible from the very moment it ignited and was observed a split second later. It was not possible for the phenomenon to have been visible for longer than a split second before observation.

Weather at flight altitude was as follows: Ceiling unlimited, visibility, a minimum of seventy-five (75) miles, the wind, 30 miles per hour from 310°. The moon, in the first half, was approximately half way to its zenith and south, or to the right of course. The 1815 weather observation at Las Vegas, New Mexico, was clear, 30 miles visibility, temperature 30° due point 17°, the wind from the NE at 6 Miles per hour, the altimeter setting 30.06 inches of mercury. After the occurrence the aircraft remained in the same vicinity for approximately one and one-half hours but no further phenomena were observed.

On 9 December 1948, Special Agent STAHL accompanied by a crew chief took off from Kirtland Air Force Base at 1635 and flew to the area where the phenomenon had been observed the previous evening. A careful search of the terrain, both where the phenomenon was observed and in the direction from

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which it had appeared, was made. The terrain is barren and rough, and scarred by numerous dry washes and shallow canyons. Two or three widely separated buildings, apparently small ranch houses were noticed in the area. It appears that the land may be used for limited cattle raising. There are no indications of cultivation. The aircraft remained in the vicinity for several hours after sunset but no further phenomenon was observed. The weather conditions at flight altitude were high scattered cirrus clouds above 25,000 feet and visibility in excess of 40 miles.

On 11 December 1948, Mr. JOSEPH E. TOULOUSE, A.E.C. Security Representative, Sandia Base, gave Special Agent NEEF the following statement:

Statement

At approximately 2253 the evening of 8 December 1948, I observed a definite greenish flare in the sky almost directly overhead at Sandia Base. At the time of the flare I was driving west on D Street and had made the stop sign at the Main Street. The flare appeared in the upper right hand corner of the windshield of the car slightly to the northwest.

The flare was approximately one-third the diameter of the moon and a slight arch ensued falling from east to west. The flaming tail appeared during this arch. The entire phenomenon lasted possibly two to three seconds after which it vanished.

Joseph E. Toulouse
A.E.C. Security
Sandia Base

INCLOSURES

FOR CO, KIRTLAND AFB:

Signed Statement of Dr. LINCOLN LA PAZ dated at Albuquerque, New Mexico, 13 December 1948.

FOR GSI, HQ. WASHINGTON, D. C.:

Signed Statement of Dr. LINCOLN LA PAZ, dated at Albuquerque, New Mexico 13 December 1948.

FOR DO #10, KELLY AFB:

Signed statement of Dr. LINCOLN LA PAZ, dated at Albuquerque, New Mexico, 13 December 1948.

FOR HOLLOWAN APT DET:

Signed Statement of Dr. LINCOLN LA PAZ, dated at Albuquerque, New Mexico, 13 December 1948.

FOR WALKER AFB DET:

Signed statement of Dr. LINCOLN LA PAZ, dated at Albuquerque, New Mexico, 13 December 1948.

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Brig. Gen. James McCormack, Jr., Director,
Division of Military Applications, USAEC, Washington
Carroll L. Tyler, Manager, Santa Fe Operations Office,
USAEC, Los Alamos
CELESTIAL PHENOMENA OBSERVED AT LOS ALAMOS PROJECT

DEC 27 1948

REFER TO SYMBOL: SFDE

Since December 12, 1948, intermittent reports have been submitted by Security Inspectors on night patrol duty concerning the appearance of rapidly moving lights in the vicinity of the Los Alamos Project. These lights were described in various reports as being brilliant green, flying at unknown altitude, and possessing a general appearance of a ball of fire or meteor. No particular attention was given to these reports until December 12, 1948.

At about 2340 on December 12, Dr. Lincoln LaPaz, meteorologist of the University of New Mexico, accompanied by Major C.L. Phillips, Air Force-CAP liaison officer from Kirtland Field, and Lt. A.B. Clark, Intelligence Officer, Sandia Base, called at the Los Alamos project and reported to the Security Division observance of a celestial phenomena which had been observed a short time earlier that evening.

Dr. La Paz advised that while proceeding on U.S. Highway 85 from Las Vegas, New Mexico, to Santa Fe, New Mexico, they observed a meteor-like object travelling parallel to the earth from east to west at about 40° above the horizon; that the object was of extreme magnitude and was definitely not a meteor due to lack of certain characteristics, such as a vapor trail angled with relation to the earth, and the steady intensity for the period it was observed. Dr. La Paz requested that Security Division personnel, particularly Security Inspectors assigned to night patrol duty, be on the lookout for such further evidence of this phenomena and to make detailed reports as to their observations.

After Dr. La Paz's visit, a follow-up was made on each of the earlier reports submitted by Security Inspectors for more detailed information relative to their previous observations, and the following facts developed:

On Tuesday, December 7, 1948, Inspector T.W. (illegible), while on patrol on the Bandelier road, observed a large brilliant object, blue-green in color, travelling across the sky at a high rate of speed, (f)or approximately two (2) seconds, in a west to east direction. The object disappeared behind a ridge estimated by the observer to be 1¼ mile distant. No trail was visible, and the object possessed a "rapid flicker". The time of the observation was (illegible- looks like 2139).

On December 8, 1948, Inspector Getner, while on night patrol duty, observed what he first thought to be a green aircraft flare travelling at an unusual speed toward the east in the general direction of the Sangre de Cristo mountains. The object was described as being brilliant green in color and was observed at approximately 2100.

On December 12, 1948, Patrol 406 reported they had observed a green ball of fire proceeding at a high rate of speed in a west to east direction at approximately 2100 at a relatively low altitude.

On December 14, 1948, Sgt. Carl Draves reported at 0515 a green light at an extremely high altitude. The light appeared for a moment

Brig. Gen. James McCormack, Jr.

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Carroll L. Tyler

CELESTIAL PHENOMENA OBSERVED AT LOS ALAMOS PROJECT

REFER TO SYMBOL: SFDE

and disappeared in approximately two (2) seconds. It is believed that this is the same light observed by Dr. La Paz.

Since there appeared to be some regularity in the appearance of the phenomena, plans were made on December 19 to watch for the phenomena and to record more accurately observations as to its characteristics. Three (3) separate points of observation were selected on the project. Dr. La Paz, with Jack Boling and Mr. Arnstron, investigators from the Office of Special Investigations, Air Force Intelligence Unit, Kirtland Field, and Mr. Jerry Maxwell, Officer in Charge, FBI Unit at Los Alamos, accompanied Security Division personnel. Cameras and transits were mounted at the selected points and watch maintained from 1900 to 2100, with negative results.

The third point of observation was set up through Mr. H.H. Hubbard, AEC radio engineer, who is also Officer in Charge of the Naval Reserve Volunteer Electronics Warfare Company 11-24. Mr. Hubbard, with the assistance of volunteer naval reserves, set up a model SK-1M air search unit at the base radio station, which was manned from 1900 through 2100. Visual observation from this point was also made, and this party kept in constant communication by short wave radios with the other parties making observations.

On December 20 Patrol 403 reported that at 2054 they observed a brilliant greenish-white light moving toward them in an arc from a great distance. As the light approached, it expanded in size until it assumed proportions the size of a "basketball" or about one fourth the size of a full moon. The object seemed to possess a trajectory of approximately 20° of glide as it lost altitude, apparently "flattened out" until its path paralleled the horizon and appeared to move as if controlled and did not fall straight to the earth as an uncontrolled object normally would.

Simultaneous reports have been received regarding the same phenomena from two (2) other observers whose reports coincide with the observations of Patrol 403. One (1) observer stated that the object appeared similar to the exhaust of a V-1 "buzz bomb".

Observations on the part of Security personnel will continue, and in addition the Volunteer Electronic Warfare Company will operate the SK-1M air search unit as frequently as personnel on a volunteer basis are available, which is estimated to be approximately three (3) or four (4) times a week.

Mr. Jerry Maxwell, Agent in Charge, FBI unit at Los Alamos, stated that reports relative to these phenomena have been relayed to the El Paso Field Office of the FBI, who in turn contacted the White Sands Proving Grounds as to the possibility of rockets being fired during the periods phenomena were observed near Los Alamos. The White Sands Proving Grounds reported no rockets had been fired during these periods. Mr. Maxwell stated that the FBI was carrying out any undeveloped leads relating to these phenomena that were brought to their attention.

On December 23 Col. Doyle Reese (sic.), Headquarters 17th Dist., Office of Special Investigation, Air Force, Kirtland Field, was contacted by the

Brig. Gen. James McCormack
Carroll L. Tyler

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CELESTIAL PHENOMENA OBSERVED AT LOS ALAMOS PROJECT

REFER TO SYMBOL: SFDE

Deputy Director of Security to determine what official action the Air Force was taking relative to the investigation of these phenomena. Col. Doyle Reese advised that his unit was actively engaged in pursuing all possible leads relative to the phenomena and had conferred with Dr. La Paz, University of New Mexico, and had obtained results of detailed observations which had been made by Dr. La Paz. Col. Reese advised that a preliminary report had been forwarded to the Office of the Inspector General, Air Force, Washington, DC, and that the investigation would actively continue.

Since the phenomena to date do not appear to be meteors or other celestial phenomena of natural origin and appear to be man-made rockets of some type, it is believed that careful evaluation should be given to the information furnished and that appropriate liaison be established at the Washington level with the Military Intelligence and Air Force Intelligence units who have primary jurisdiction in investigations of this nature. As further information is developed, by observations at Los Alamos, additional reports will be submitted.

Encl:

Cy rpt of Investigation by Office of Special Investigations,
USAF, Kirtland Air Force Base, Kirtland Field, New Mexico

CC: John D. Gingrich w/encl

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TO: Lt. Col. John A. Carroll, Chief Inspector
Atomic Energy Security Service

Date: December 28, 1948

FROM: Lt. Marie D. Nighower, Operations Officer,
Protective Force, AESS

TIME: 0631

DATE: 28 December 1948

DIRECTION: West to East, Straight Down

SPEED: Slower than a Meteorite

COLOR: White, disappeared in a greenish-white explosion or flash. No sound.

ALTITUDE: Estimated 8,000 feet. (Note: At the time the object was sighted, a three-quarters cloud cover blanketed Los Alamos. It appears that the object was sighted through the overcast.)

POINT OF OBSERVATION: Security Station 109 (Tower, DP East)

OBSERVER: Inspector J. D. Hardie

STATEMENT BY OBSERVER:

"At approximately 0631, 28 December 1948, while looking from the tower at Security Station 108, east toward Station 101, I noticed high in the sky what appeared to be a falling star, white in color, descending in a vertical path. My attention remained with the object when I noticed the rate of descent seemed to be slower than that of a falling star. After watching it disappear with a greenish-tinged flash which momentarily illuminated a small cloud between the object and myself

The object may also have been traveling east or west to some extent since I could not estimate that angle; however, the object descended in a perfectly straight line with reference to North and South. At the time of the flash the object was a good distance east of Station 101 and at an estimated altitude of six thousand feet."

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~~CONFIDENTIAL~~

TO: Lt. Colonel John A. Carroll, Chief Inspector, Atomic Energy Security Service December 30, 1948

FROM: Lt. Earle D. Hightower, Operations Officer, Protective Force, AESS

TIME: 1928

DATE: 28 December 1948

DIRECTION: The object was traveling from the Northwest to the Southeast.

SPEED: Unknown

COLOR: Very brilliant, blue-white.

ALTITUDE: 15° to 20° above the horizon.

POINT OF OBSERVATION: Station 315-A, Tech Area.

OBSERVER: Inspector D. M. DeLuca

SOUND: None

STATEMENT BY OBSERVER:

"I was sitting in Station 315-A facing South when I caught a flash of light from the corner of my eye. I turned in time to see this very brilliant object streaking across the sky horizontally. It was traveling from the Northwest to the Southeast. It had a long tail such as a "Shooting Star" has. The object disappeared suddenly. Just before it disappeared, it seemed to pull a vapor trail such as a plane would do at high altitude. This vapor trail remained in the sky from 3 to 5 minutes. I watched the vapor trail with the binoculars and could see the wind dispersing it, blowing it from a very straight line and finally erasing it completely. There was no sound."

~~CONFIDENTIAL~~

SECRET

ENCLOSURE #3

The University of New Mexico
Albuquerque

Institute of Meteorics

December 30, 1948

TO: Lt. Colonel Doyle Rees, Commanding Officer
District No. 17
Office of Special Investigations

FROM: Lincoln LaLaz, Director
Institute of Meteorics

SUBJECT: Anomalous luminous phenomena (Third Report)

In the second report of this series, a description was given of the path through the atmosphere of the green fireball of 1948, December 12, 2m (+ or - 30s). On the basis of corresponding observations made from the station near Starvation Peak, New Mexico, and a second station near Los Alamos, N.M., this fireball was found to have appeared near a point with the coordinates: Lat. $35^{\circ} 50' N$, longitude $106^{\circ} 40' W$, and to have disappeared near a point with the coordinates, Lat. $35^{\circ} 45' N$, Long. $107^{\circ} 09' W$, traversing an almost horizontal path at an elevation of about 10 miles above sea level, with a length of about 25 miles, at a velocity of approximately 10 miles per second. (The minimum path length consistent with the observation was found to be about 11 miles, the corresponding velocity then falling between 3 and 6 miles per second, depending on the duration adopted.)

On the basis of corresponding observations of the greenish-white fireball of 1948, Dec. 20, 8h 54m p.m. made by two pairs of Los Alamos observers, it has now become possible to work out another approximate real path. As would be apparent from the original accounts of the observations made by AECS Inspectors William Wilson, Buford Truett, Clifford Strang and Security Inspector George E. Skipper, the fireball of 1948, December 20, 8h 54m was observed under less favorable conditions than the green fireball (illegible...) persons on the night of December 12. However, on the basis of the original accounts of the observers named above, of sketches supplied by these four individuals on December 29, and of transit observations made by Captain (illegible) and the undersigned on the same date at the points of observation (coordinates $35^{\circ} 48'.9$, $106^{\circ} 18'.4$ for Strang and Skipper and $35^{\circ} 55'$, $106^{\circ} 23'.7$ for Wilson and Truett /NOTE: These coordinates are almost illegible on the original and hence may not be entirely accurate as represented here. Ed.7), it has been possible to establish reasonable coordination between various points on the fireball path as seen by the two groups of observers. Because of the very short baseline (only 3 miles long) between two points of observation and the difficult conditions under which the (fireball?) of December 20 was observed, it is my opinion that the real (illegible...) the December 23 observations deserves considerably less weight than that obtained from the December 12 observations.

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Lt. Col. Doyle Rees

-2-

December 30, 1948

It is found that the fireball doubly observed by Messers. Wilson, Truett, Strang and Skipper appeared at a height of at least 10 miles and descended at an angle of about 45° to the vertical (according to Truett's estimate) to point C at an elevation of only 2.3 miles above the horizontal plane (illegible) the point from which Strang and Skipper observed. As the fireball approached the point C, its path levelled off and from C to its point of disappearance at E, the fireball followed a nearly horizontal path approximately 7.5 miles long, moving with a velocity of between 3.75 and 7.5 miles per second, depending on the duration estimate adopted. The coordinates of the projection of C on the earth are $35^{\circ} 56' N$, $106^{\circ} 30' W$, and those of the projection of E are $35^{\circ} 57' N$, $106^{\circ} 23' W$. The forward extension of the fireball's trace on the earth as determined by the above projections, passes some six miles to the north of the town of Los Alamos.

It should be noted that the descending branch of the path of the fireball was observed by Inspector Truett alone, but he was absolutely certain that his observation of this portion of the path was correct. It should also be noted that no sound was heard, although the distance from the observers to the fireball and from the fireball to the earth could only have been a few miles at most. I have no hesitancy in testifying that an object possessing the flight path and the other peculiarities observed by Messers. Wilson, Truett, Strang and Skipper was not a falling meteorite.

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~~CONFIDENTIAL~~
HEADQUARTERS FOURTH ARMY
FORT SAM HOUSTON, TEXAS

350.09 AKADB

3 January 1949

SUBJECT: Unusual Incidents

TO: Director of Intelligence
General Staff, United States Army
Washington 25, D. C.
Attn: Chief, Security Branch

1. Forwarded herewith report of Fourth Army Intelligence Officer stationed at Sandia Base, New Mexico.
2. It is recommended that a thorough investigation of the reported incidents be initiated by qualified scientific investigators and that this headquarters be advised of action taken.
3. Copy of the Intelligence Summary has been forwarded to the Commanding General, Air Materiel Command, Wright-Patterson AF Base, Dayton, Ohio.

FOR THE COMMANDING GENERAL:

1 Incl
Intel. Summary

Eustis L. Poland
EUSTIS L. POLAND
Colonel, GSC
AC of S, G-2

110517 (8288) 11531

3 January 1949 (8288) 11531

Record Section

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~~CONFIDENTIAL~~

INTER-OFFICE MEMO SLIP
HEADQUARTERS FOURTH ARMY

SUBJECT: Unidentified Flying Objects: New Mexico

No.	Date	From	To	REMARKS
1	29 Dec 48	Major Goose	A C/S G-2	<p>1. Since the initial report of unidentified objects, described as flares or moving lights, in the vicinity of Las Vegas, New Mexico, on 5 December 1948, there have been 23 reports from observers up to and including 28 December 1948. Of these reports, 21 have been in New Mexico, 1 in Arizona and 1 in Oregon.</p> <p>2. The 21 observations in New Mexico have, in general, been in the vicinity of an area bounded in the east by the city of Las Vegas and in the north by Los Alamos. Two observations were made in the vicinity of Albuquerque.</p> <p>3. The appearance of the lights are of a definite pattern. All have been of an intense white or greenish white. The trajectory or path of flight has been north to east, north to west or west to east. Altitude has been reported from 3000 to 20,000 feet above the terrain, which in this area is 5000 to 7200 feet above sea level. Speed has been undetermined except that it seems to be above the supersonic range.</p> <p>4. This office, the FBI and the intelligence agencies of Sandia Base and Kirtland Field have been unable to evaluate or determine the significance or origin of the phenomena. We have therefore agreed that the 17th District, Office of Special Investigation (OSI) of the Air Force be the gathering and reporting agency in that they have a direct reporting channel to Washington, have access to aircraft and observation facilities and are in coordination with the Geophysics Laboratory of the Air Material Command, USAF.</p> <p>5. The OSI has obtained the cooperation of Dr. Lincoln La Paz of the University of New Mexico. Dr. La Paz is one of the top ranking meteorologists in the United States. He is qualified to identify the sighted objects as natural meteoric phenomena or otherwise. Dr. La Paz has, from descriptions of observations furnished him and, <u>BY PERSONAL OBSERVATION</u>, determined that the objects sighted are <u>NOT</u> natural meteoric phenomena. Dr. La Paz is in consultation with other scientists in an effort to solve the problem but up to this time have arrived at theories only. Theories advanced to date have fallen into <u>CATEGORY III</u> possibilities. Experimental tests</p>

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