PROJECT 10073 RECORD CARD

1. DATE	2. LOCATION		12.	CONCLUSIONS
8 March 1957 3. DATE-TIME GROUP 2400 EST GMT 09/0500Z	Between Mockyi 4. TYPE OF OBSERVATION Rigground-Visual D Air-Visual			Was Balloon Probably Balloon Possibly Balloon Was Aircraft Probably Aircraft Possibly Aircraft
5. PHOTOS	6. SOURCE Civilian			Was Astronomical Probably Astronomical Possibly Astronomical
7. LENGTH OF OBSERVATION two minutes	8. NUMBER OF OBJECTS	9. COURSE Fm NW, circled then NE.	000	Insufficient Data for Evaluation Unknown
10. BRIEF SUMMARY OF SIGHTING		11. COMMENTS		
One object long w/round relong color gray-white, gray-	me 30 feet. feet to 500	Possible a/c safterburner.	3 1 6	ghting, jet w/

ATIC FORM 329 (REV 25 SEP 52)

5. BETWEEN MOCKVILLE, CMA N.C. AND MT. ARRIY CMA N. C. JR. EU P. Que CMA FLA CMA PHON. 492405 CMA LING DISTANCE TRICK DRIVER PAGE THREE RJESKB 6D B. N/A 7. DUE TO THIS REPT. BEING RECV'D THREE DAYS LATE B. NONE D. NONE E. NONE F. NONE 8. NONE 9. NONE 10. NONE 11. OPERATIONS OFFICER 660TH ACWRON CMA NO COMMENT 12. NONE 12/1552Z MAR RJESKB

1. EP TO 35 FT LONG CMA FRONT WAS 10 TO 12 FT IN DIAMETER CMA FLARED OUT TOWARDS TAIL CMA SINGLE VERTICLE FIN PD

A. LONG CMA ROUNT NOSE

B. EF FT LONG

C. GRAY DASH WHITE

D. ONE

E. N/A

F. WIDTH OF NOSE WAS GREEN LIGHT CMA VERY BRIGHT

G. FLAME CMA 30 FT LONG

PAGE TWO RJESKB 6D

- H. NO SOUND CMA PAUED SPECIAL ATTENTION FOR SAME CMA NOT AVAILABLE PD
- I. N/A
- 2. APPROACHED FROM NW MADE COMPLETE CIRCLE
- A. SAW IT THROUGH WINDOW OF TRUCK
- B. WUPPP FT WHILE APPROACHING THEN DECENDED TO 500 FT
- C. 588 FT
- D. APPROACHED FROM NW MADE COMPLETE CIRCLE CMA DESAPPEARED IN NE
- E. FADED OUT OF VIEW
- F. TWO MINUTES
- 3. NAKED EYE
- A. GROUND VISUAL
- B. NONE
- C. N/A
- R. B MARCH 57 CMA 2400 EST
- 9 MARCH 1957 PTPPZ
- B. NIGHT CMA VERY CLEAR

SE : CIEVE L. I.O. P. N. I.I.C. T. AND OLI OL ATEM D. ALPROACHED FROM MW MADE COUPLIFIE CINCLE COA DESATTEARED IN ME C. 30.8 F.J. B. WIPPP FT WHILE APPROACHING THEM DECEMBED TO SON FT V. EVE IL IHHOUCH AILDON OF THUCK S' VERSOUCHED ERON MU MYDE COMBIELE CIRCIE H. NO SOUMS CHA PAUED SPECIAL ATTENTION FOR SAME CHA NOT AUAILABLE PD HET IMO FORD ON 09/0500= 030957-1 Withen ATIC 13 MAR 57 07 41 Formed 13/02588 KBA 953 PP RJEDEN RJEDWP RJEPWH RJEPNB DE RJESKB 6D P 12153@Z FM COMDR 668TH ACWRON MACDILL AFB FLA TO RJEDEN/ COMDR ADC ENT AFB COLO RJESKB/COMDR 35TH ADIV DOBBINS AFB GA RJEDWP/COMDR AIR TECH-INT CNTR WRIGHT PATTERSON AFB OHIO RJEPHQ/DIR OF INT HQ USAF WASH DC INFO RJEPNB/COMDR EADF STEWART AFB NY JUNCLASSIFIED/OPS @120 PD ATTN: EADF CIC PD

TAE	ITEM
A	FINAL ANALYSIS
В	PRELIMINARY ANALYSIS
C	MEMB TO C/S FROM GEN LEWIS (15 Mar 1957)
D	GEN WATSON RELEASE TO PRESS (14 Mar 1957)
E	MEMO TO GEN WATSON (14 Mar 1957)
F	DR HYNEK EVALUATION (14 Mar 1957)

This incident received wide newspaper mention. The Research Section has investigated it, as special representatives of NICAP as well as for CSI, and the following account is the result.

A few minutes before midnight on March 8, 1957, Captain March 8 took his airliner up from Idlewild Airport, bound to San Juan, Puerto Rico. Co-pilot 10, Flight Engineer 10, and stewardesses 10, and stewardesses 11, and completed the crew on Pan American Airlines flight 257. There were 44 passengers aboard. The flight was routine, except that it was necessary to keep to the west of the normal flight course in order to avoid a storm center farther out in the Atlantic.

At 3:33 a.m. (EST) the plane was far out over the Atlantic, about 650 miles to the east of Jacksonville, Florida, flying at 19,000 feet on a south-by-east heading (between 160° and 175° true). At this point, the flight abruptly ceased to be routine. About 80° to their right, and Washuta simultaneously saw a brilliant light. I had the impression of seeing an orange glow at first, although he was later uncertain about this detail. At any rate, it seemed to "come out of nowhere," and immediately assumed the appearance of a round, brilliant greenish-white "spotlight," almost as large as a full moon.

The light appeared "contained," having a clear and well-defined edge; Washuta described it as "rim-like" around the edge. This "rim" seemed to reflect a greenish color, while the center was a brilliant white. It looked like a spotlight directed to the front of them, so that they were not looking directly into the source of light.

s first thought was that it might be a jet interceptor with a spotlight in the nose, but he immediately rejected this idea because of the brilliance of the light, and "because they (interceptors) always come at least by twos - one pulling alongside of you ready for action, the other throwing a spotlight on your identification markings from a distance to find out who you are."

The object seemed to be of about airplane size, and no more than a half-mile away (an erroneous impression, as he discovered later). It was exactly level with him, and apparently heading horizontally across the nose of his plane, on a collision course. Within two seconds after first seeing it, he pulled the plane up and to the left in a violent evasive manoeuver to avoid possible collision; the plane climbed 1500 feet in a matter of seconds. In concentrating on handling the plane, he lost sight of the object. (The news accounts reported that V.W. saw the object "slip by under my right wing." (Actually, the explains, this was not so: the object was hidden from his sight by the right wing as it lifted.)

Washuta, who was seated in the right of the cockpit, had a better view of the light, and reportedly observed it for about four seconds, after which it "went out." By the time the bed righted the aircraft, the light was no longer to be seen. Neither the co-pilot, busy with the navigation instruments, nor any of the passengers, had seen it.

In the cabin, there was pandemonium. All those who had not had their seat belts fastened had hit the ceiling of the cabin when the tail dropped, and three people were more or less seriously injured: Miss with a possible concussion, Mrs. of Philadelphia, who appeared to have a broken rib; and one Monserrate Soto, injuries unspecified.

DUW NILL BAR I.

INCLASSITION

Miss and the co-pilot tried to assuage the panic in the cabin, but it was calm reassuring voice over the loudspeaker that was most effective in settling the passengers. The knowledge that a UFO had been responsible for their distress seemed to calm their agitation. (IMS erroneously reported that, according to passengers, a strong light "like a hundred suns" filled the cabin of the aircraft.)

Immediately following the incident, and radio suddenly came alive: at least six other aircraft had seen the object. All were flying roughly SSE on the same route, and they occupied an area, from north to south, more than 300 miles long.

About 150 miles to the north of the e, at 31° 35' N, 70° 50' W, was Capt.

Y, piloting PAA's Flight 269 at 19,000 feet. Capt. and Flight Engineer is saw the object to the WSW, as did in the example of the engineer is saw the falling slightly in a concave trajectory as it moved on an apparently ESE course. According to the press, in described it as being "almost a magnesium flash, white with pale greenish tints around it ... At first I thought that it was a flare, then I thought it could be another of those 'mis-guided' missiles. I saw it for about five seconds - it must have been moving at a terrific speed."

Flying 15 minutes ahead of paper. Description PAA's Flight 257-A at 15,000 feet, did not notice the object. The gives his own position as 30° N, 70° 40' W.)

Some 180 miles to the southeast of the southeast of the part of the southeast of the part of the southeast of the southeast of the southeast of them. "It appeared first as a bright light, traveling fast ... it grew in intensity until it was exceedingly brilliant for a moment as it passed, then it seemed to fade." Its angular size, to Wyland as to the perimeter, blending into a white center. He said it "looked at first as though it were coming directly toward us on our flight level. It either veered slightly, or our original impression was in error, as it slanted diagonally across our starboard quarter descending, and seemed to 'go out.' As it passed, there was a definite reddish tinge to the tail or rear portion, and a piece seemed to fall off, or was ejected. The portion that dropped off was 10% the size of the whole, and was definitely reddish in color." Wyland had the object in view from two to five seconds.

About 220 miles SSE of Van Winkle, at roughly 27° N, 69° 20' W (650 miles east of West Palm Beach) was PAA Flight 215-A, piloted by Capt. For all did not see the object reported by the other pilots, but he had seen something identical almost two hours earlier. S flight engineer, h, saw the object(s) involved in both incidents.

According to the object seen at 3:33 a.m. - observed by all the other pilots - was seen to the west of his plane and appeared to be going parallel to his direction. He said it seemed as large as "a dime held at arm's length." The second engineer, who called a sattention to the phenomenon, estimated that it was in view for two or three seconds. Round, it had no ragged edges - "smooth" was a sword for it - and was a brilliant greenish-white in color. He saw a slight projection at the rear that detached itself and turned red as it fell. At this point, the main section began to are downward at a slight angle, and then suddenly went out.

Almost two hours earlier, about 12:45 a.m., while Flight 215-A was in the vicinity of Delta Oscar (a positional marker located off the Carolinas), and and had seen a similar object - "smaller than a full moon," according to streaking north or NNW. This object was also due west, or almost due west, of their position. It moved in a completely horizontal trajectory, and had a red tail-like projection, which suddenly dropped off, and fell "like a flare." The main part, which was green, continued in a straight line and passed out of is range of vision. Who was seated on the right side of the cockpit, looked back as it passed, and thought he saw it quickly disappear into clouds; however, a later check indicated that there were few, if any, clouds in the area. said he saw it for about three seconds; Smith slightly longer. Several of the passengers had seen it also.

Returning to the 3:33 a.m. object, three other aircraft are reported to have observed this: another Pan-American flight (unidentified); the pilot of an Eastern Airlines plane who thought the object was a two-stage rocket; and one Trans-Carribbean pilot who said it was a meteor. We have not been able to get in touch with any of these pilots.

It is quite clear from the testimonies of the pilots that the object they saw was much farther away than they at first realized. Note that over a 300-mile baseline, all of them saw it to their west or southwest; that it appeared to be moving in roughly the same direction relative to all observers; and that its angular measurement from all of these widely-separated points was approximately half a degree. These circumstances obviously indicate an exceedingly large object seen at a distance measured in the hundreds of miles. The nearest possible location for the appearing-point permitted by the geometry is at about 29° N, 78° W. This point is 80° to the right of a 160° heading for the sold, 100° to the right of a 1850 heading for Wyland (assuming this is 1850 true, not magnetic), and places the object about 250 miles from Wyland, and somewhat more than 100 miles from However, since it appeared no larger to and a location so close to is not very plausible; something like 280 N, 750 W, 300 to 400 miles from all the planes, is more likely. Thimself has calculated that it was from 300 to 800 miles distant from him. An angular measurement of one-half degree at four hundred miles gives the object a diameter in excess of three miles; but such calculations are misleading when applied to luminous bodies, which always appear far larger than they are.

This large scale of the phenomenon is highly suggestive of a meteoric fireball. However, it should be noted that none of the four witnesses (and the had been whom we have interviewed believed that it was a meteor. It is said he has seen some extremely spectacular meteors, but none has ever resembled this object. The absence of any visible tail; the difference in quality between this "contained" light and a flaming fireball; and its substantially horizontal trajectory at unreasonably low altitudes, seem different from what would be expected of a meteor. And the chances against seeing two such remarkably similar "meteors" over the same area within the span of two hours are "astronomical."

On the other hand, the object appeared for only five seconds at the most - typical of meteors; it exhibited no sort of controlled manoeuver; and the wide area over which it was observed is typical of fireballs rather than of UFO phenomena.

One is inclined to say that this was neither a "normal" UFO nor a "normal" fireball. Can it be classified as a "green fireball"? It was certainly not a deep Kelly-green in color, but the behavior was very similar (cf. Ruppelt, pp. 72-3,78). There is a large group of sightings strikingly similar to this one, some of them in

this same area. On May 8, 1952, at 4:30 a.m., a pilot had a near-collision with a similar object while en route to San Juan. (See The Report on Unidentified Flying Objects, by Ruppelt, pp. 178-80.) On April 23, 1954, several PAA pilots saw an "object with an orange-green light zip by." (Flying Saucer Conspiracy, by Keyhoe, p. 133.) Auriphebo Simoes is one of those who have seen such a "fireball" (O Disco Voador, #3).

And on March 25, 1957 - not three weeks after s report - Capt. In piloting PAA Flight San Juan to New York, had a daytime sighting along the same route. (Details on this observation are now being sought.)

(Note on sources: Besides the data secured directly from four of the witnesses, additional information on the March 9 sighting was gleaned from the N. Y. Times, 3/10 (UP 3/9); N. Y. Mirror 3/10 (AP 3/9); N. T. Journal-American, 3/9 (INS) and 3/11 (INS by and numerous other papers carrying substantially the same wire accounts. Our thanks go also to Bill Nash of PAA and Chris Pantages of Riddle Airlines for their valuable assistance.)

TAB A

PRELIMINARY CONCLUSION OF UNIDENTIFIED FLYING OBJECT REPORT OF PAN AMERICAN AIRLINE CAPTAIN ON 9 MARCH 1957

- 1. There is no compelling reason to believe that the object was other than a "bolide," commonly referred to as a "fireball." These are very rarely encountered, but the object conforms exactly with the description of fireball reports received by the Air Technical Intelligence Center during the last ten years.
- 2. Interrogation of Captain by the New York unit of the 4602d Air Intelligence Service Squadron further confirms this conclusion. His detailed description, in brief, "dazzling bright light with a green halo," coincides with the description given by the other crew members.
- 3. These objects are extremely bright, resembling magnesium flares; and, unlike meteors, do not burn themselves out in the upper atmosphere, but continue down to lever levels. Their encounter can be a frightening experience, particularly in a pitch-black night, as described by Captain (Captain Captain)
- 4. The fact that another pilot 175 miles away observed the object at the same moment rules out aircraft and guided missiles. In addition, the Strategic Air Command reports no aircraft were in the area at the time, and Patrick Air Force Base advises no operations were conducted during the period.
- 5. The attempt by the press to somehow relate Venus must also be ruled out. This planet was not visible at that time and place—3:30 in the morning, at approximately 350 miles east of Jacksonville, Florida.

AFOIR/Gan Lewis/ajs/55613/15 Mar 57 15 March 1957 ARRONAUM FOR CHILL OF STAFF, USAF 1. General White has advised that you are interested is the incident reported by Pan American Airline Filet, Captain William es as unidentified flying object which was observed about 350 miles east of Jacksenville, Florida, on 9 Mases 1967. 3. A proliminary invoctigation and evaluation of this incident has been conducted by our Unidentified Flying Object Section of ATIC at Wright-Patterson AFB. 3. On the bands of the evidence available, which Includes an interview with Captain William, there is commonly referred to as a "fireball," A bolide is a mathematical and analysis of the contract of t mere, and laure by have the the lawy a transfer. LESSES AND AND LANGUAGE ON CONTRACTOR STATES AND STATES AND STATES and the state of t

of the All incontinuities and evaluation to date.

India ... Interest

1. TAS S - Report

3. TAS S - Report

- kelana

Water a large

Milland Lewis Enjoy Comerci, Dear Director of Istelligence

COORD CT - 91M-X2B2 DIX REF - 01N-X2B2 FILE CT - 01X PP YFWKA

DE YFWKC 4

U N C L A S S I F I E D

P 141955Z

FM AFSSO ATIC

TO AFSSO HQ USAF

UNCLAS EFTO CITE: A4-155. (PERSONAL FROM GENERAL WATSON TO COL CHAPPEL.)

REFERENCE REQUEST FOR SOME FIRM CONCLUSIONS OR EXPLANATION REGARDING

PAN AMERICAN AIRLINE INCIDENT, 9 MAR 57. ON THE BASIS OF ALL DATA AND

EVIDENCE AVAILABLE THE FOLLOWING ARE CONCLUSIONS OF ATIC:

- A. THERE IS NO COMPELLING REASON TO BELIEVE THAT THE OBJECT WAS OTHER THAN A "BOLIDE", COMMONLY REFERRED TO AS A "FIREBALL," THESE ARE VERY RARELY ENCOUNTERED, BUT THE OBJECT CONFORMS EXACTLY WITH THE DESCRIPTION OF FIREBALL REPORTS RECEIVED BY ATIC DURING THE LAST TEN YEARS.
- B. INTERROGATION OF CAPT THIS MORNING BY THE NEW YORK UNIT OF THE 4602D AISS, FURTHER CONFIRMS THIS CONCLUSION: HIS DETAILED DESCRIPTION, IN BRIEF, "DAZZLING BRICHT LIGHT WITH A GREENISH HALO," COINCIDES WITH THE DESCRIPTION GIVEN BY THE OTHER CREW MEMBERS.
- C: THESE OBJECTS ARE GENERALLY OBSERVED ONLY A FEW SECONDS; ARE EXTREMELY BRIGHT, RESEMBLING MAGNESIUM FLARES; AND, UNLIKE METEORS, GENERALLY, DO NOT BURN THEMSELVES OUT IN THE UPPER ATMOSPHERE, BUT CONTINUE DOWN TO LOWER LEVELS. THEIR ENCOUNTER CAN BE A FRIGHTENING EXPERIENCE, PARTICULARLY IN A PITCH-BLACK NIGHT, AS DESCRIBED BY CAPT
- D. MISSILESAND JETS ARE RULED OUT. THE LATTER IS CONFIRMED BY A TWX FROM SAC AND ADC, REPORTING THAT NO AIRCRAFT WERE IN THE AREA AT THE TIME. THE FACT THAT OTHER PILOTS APPROXIMATELY 175 MILES AWAY OBSERVED THE OBJECT AT THE SAME MOMENT, RULES OUT AIRCRAFT AND GUIDED MISSILES.
- E. ALTHOUGH NO MESSAGE HAS BEEN RECEIVED FROM PATRICK AFE AS
 YET REGARDING "RUNAWAY" OR OTHER GUIDED MISSILE OPERATIONS, THIS POSSIBILITY
 SEEMS UNLIKELY. REASONS: FIRINGS ARE USUALLY CONDUCTED DURING THE DAY
 AND BEFORE MIDNIGHT; THE GENERAL FIRINGS ARE TOWARDS THE SE; AND THE COURSE
 OF THE OBJECT ENCOUNTERED APPEARED TO COME FROM THE WEST.
- F. THE ATTEMPT BY THE PRESS TO SOMEHOW RELATE VENUS, MUST ALSO BE RULED OUT. THIS PLANET WAS NOT VISIBLE AT THAT TIME AND PLACE: 3:30 IN THE MORNING, AT APPROXIMATELY 550 MILES EAST OF JACKSONVILLE, FLORIDA.

IT IS THE RECOMMENDATION OF THIS OFFICE, THAT IN RESPONSE TO ANY QUERIES BY THE PRESS REGARDING THIS INCIDENT, THE AIR FORCE BRIEFLY STATE, SUBSTANTIALLY, THE FOLLOWING:

- A. ON THE BASIS OF INFORMATION NOW AVAILABLE THE PILOT UNDOUBTEDLY ENCOUNTERED AN OBJECT VERY RARELY SEEN, A "BOLIDE" OR "FIREBALL". THIS COINCIDES WITH THE DESCRIPTION OF OBJECTS IDENTIFIED AS "FIREBALLS" RECEIVED BY ATIC OVER A PERIOD OF TEN YEARS.
- B. THE FACT THAT THE OBJECT WAS SIMULTANEOUSLY OBSERVED BY ANOTHER AIRCRAFT 175 MILES TO THE REAR RULES OUT GUIDED MISSILES AND AIRCRAFT. (THIS IS TO COMBAT THE PROPONENTS OF "FLYING SAUCERS" AND SOVIET MISSILE AND AIRCRAFT "THREATENING" OUR SHORES.)
- C. THESE CONCLUSIONS WERE CONCURRED WITH BY A WELL-KNOWN ASTRONOMER AND ASTROPHYSICIST FROM THE SMITHSONIAN ASTROPHYSICAL OBSERVATORY, TO WHICH THE REPORT WAS SUBMITTED FOR HIS INDEPENDENT REVIEW.

 SIGNED: HAROLD E. WATSON, BRIGADIER GENERAL, USAF, COMMANDER, ATIC 4140 4140

14/2052Z MAR (RE ITEM E. ABOVE: MSG JUST RECEIVED FROM PATRICK AFB STATES:
DEFINITELY NO MISSILE OPERATIONS DURING THAT PERIOD.

COOPOINAN			OFFICIAL FILE COPY
AFOIN-4		14 March 1957	OFFICE OF RECORD
MENCRANDU	FOR GENERAL WATSON		
	Conclusions Regarding Pan 9 March 1957	American Airline UFO Incide	
AFUN-ASSESSES by	or explanation regarding th	st to undersigned for some is incident to be submitted Thursday, 14 March 1957; al ct, dated 13 March 1957.	to his
AFOIN-AMDIT BRANCE CONTRACTOR AFOIN-ADDITIONAL BRANCE CONTRACTOR AND APPROXIMATE AND ADDITIONAL BRANCE CONTRACTOR APPROXIMATE ADDITIONAL BRANCE CONTRACTOR APPRO	not all been received as	of this memorandum. However eived directly from 4602d A ce in response to ATIC's re ll data and evidence avails oms:	T, long- ISS, SAC,
AFOIN-48 PORT	tion a "ballion", commuty; aroly encountered, but the	resean to believe that the referred to as a "fireball. object conforms exactly vilved by ATIC dering the las	These the
AFOIN-ASSESSED THE	se 46026 AISS, further conf m, in brief, "densiing bri	ires this conclusion. His ght light - with a green he by the other crear members.	detailed logi
AFOIN-AGO DOT DEL	mely bright, resembling mag on themselves out in the up	nesium flares; and, unlike per atmosphere, but continue e a frightening experience, by Capt Van Winkle.	eters, etem to
AFOIN-45	s alc, reporting that no si	led out. The latter is con rerest were in the area at a away observed the object guided missiles.	the time.
AFOIN-ABSTORE MAL	iing "runeway" or other gui	been received from Patrick ded missile operations, this e usually conducted during are towards the SE; and the e from South to North.	the day and
			PERM
OTHERS			TEMP
			90 DAYS

Coopping Coopping		OFFICIAL FILE COPY
G Mone for Ceneral Watson, 14 Mar	57	OFFICE OF RECORD
be ruled out. This planet was in the morning, at approximatel	y 350 miles West of Jacksonv	place: 3:30 ille, Florida.
3. Of significance is the was submitted to the Associate Observatory for review and analarsis are attached. AFOIN-4X2c	DANIE OF OF AND HERY AND	and a standard and a
	on of this office, that in rethis incident, the Air Force	
encontered an object very rare	formation now available the ly seen, a bolide or "fireba	11." The
AFOIN- description given by the crew c	coincides with the description wed by ATIC over a period of	ten years.
	object was simultaneously ob	THE RESIDENCE OF THE PROPERTY
another sirerest 175 miles to t	A COLUMN TO A COLU	A STATE OF THE PARTY OF THE PAR
AFOIN-ABITCHASTS "threatening" our anor		
4 CONTRACTOR OF THE PROPERTY O	ware concurred with by a wel	
and matrophysicist from the fai		ratory, to which
AFOIN-4C	77 .7	
	TX/ene/. Xin	
1 India	CEORGE T. GERGORY 9	
AFOIN-4D	Captain, USAF Uro Project Officer	
COCKINATIONS		
	14 march 1957	
AFOIN-1501 -48 Col Gilbert		
AFOIR-LEI COM DATE		
AFO!N-4F		
		TEMP
OTHERS		90 DAYS
		INITIAL

This is the state of the state of the same of the same

STATEMENT BY DR. HYNEK

Following prepared for Captain Gregory after an examination of preliminary reports on the case of 9 March 57:

- a. Bolides, or fireballs, differ from ordinary meteors in that they are very much brighter (sometimes transforming night into temporary day) and appear like a magnesium flare hurtling through the lower atmosphere, and in that they persist to much lower levels in the atmosphere. Predominantly white-yellow in color, these often have orange and greenish tints intermixed. A bolide is generally a mass of meteoric material that ignites through friction with the earth's atmosphere. It becomes visible at heights above 50 miles but, unlike an ordinary meteor, does not burn out in the air but frequently persists until it crashes to earth.
- b. A close encounter with such an object is an extremely rare occurrence, and represents a frightening experience. However, astronomical records show that people who have observed real fireballs (and the majority of people don't see one in a lifetime) grossly underestimate their distance. There are cases on record in which two observers 200 miles apart both reported the flaming object to have landed "just beyond the hill" or "in the next field."
- c. A fireball appears to travel at uncommonly high speeds (actually travel at 6-40 miles per second) and the great apparent angular rate leads even the best observers unconsciously to regard object as very much closer than it actually was. A typical fireball lasts from a few seconds to 10 or 20 at most.
- d. In present instance, a pilot 175 miles away saw it simultaneously, it lasted 5 seconds, and it had the appearance of a flare. Even the greenish color reported fits the pattern of a typical, but rare, observation of a bolide.
- e. One case of a bolide comes to mind in which a truck driver, late at night, drove the truck completely off the road as a result of the light received by a fireball sighting, a fireball that landed several hundred miles from the truck.
- f. There is therefore no basic evidence that contradicts the hypothesis that the Pan American flight had an encounter (and perhaps at some distance) with a bolide. The reported fact that object passed beneath right wing is explainable by the fact that bolides do crash to earth and do often appear to perform a low, nearby horizontal path.

g. However, although the evidence is not contradictory, and although it appears probable that the sighting was due to a bolide, the possibility of a guided missile or flare is, of course, not ruled out, but all available information does not indicate the presence of such at the time of sighting - 3:30 A.M.*

Dr. J. A. Hynek
Associate Director

Smithsonian Astrophysical Observatory

* Patrick down mit, co a mare, fine at met the intermed. May so it.
May from Patrick AFB regarding any frings for that date or time, Negative.