

RETURN TO
The Albert F. Simpson
Historical Research Center
Maxwell AFB, AL 36112

K243.6012
65/00/00

PROJECT

BLUE BOOK

1 FEBRUARY 1966

1003290

STATISTICS FOR 1965

(Compiled 18 Jan 1966)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ASTRONOMICAL	10	8	11	4	2	10	27	82	30	27	22	12	245
AIRCRAFT	11	8	14	11	14	7	32	61	20	13	14	5	210
BALLOON	3	2	1	3	0	3	7	6	2	7	0	2	36
INSUFFICIENT DATA	5	4	2	4	4	2	16	24	15	5	3	1	85
OTHER	11	8	7	8	5	6	9	42	7	9	11	3	126
SATELLITE	4	5	5	5	15	5	42	41	24	3	0	3	152
UNIDENTIFIED	1	0	2	1	1	0	2	4	4	0	1	0	16
PENDING	0	0	1	0	0	0	0	2	2	6	4	2	17
TOTAL	45	35	43	36	41	33	135	262	104	70	55	28	887

ASTRONOMICAL CASES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Meteors	6	6	8	2	2	4	14	26	13	6	9	5	101
Stars and Planets	3	1	3	2	0	5	10	55	16	20	13	7	135
Other	1a	1b	0	0	0	1c	3d	1e	1a	1f	0	0	9
TOTAL	10	8	11	4	2	10	27	82	30	27	22	12	245

(a) Solar Image (b) Moon (c) Sun (d) Reflected Moonlight, Parhelia, Moon (e) Reflected Moonlight (f) Comet Ikeya-Seki

OTHER CATEGORY

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Hoaxes, Hallucinations, Unreliable Reports and Psychological Causes	5	3	4	1	2	1	2	12	1	3	0	0	34
Missiles and Rockets					1			3	1	1	3	1	10
Reflections						1	1	2	1	1	1		7
Flares and Fireworks					1		1	1			1		4
Mirages and Inversions							2	3					5
Search and Ground Lights	2	1	0	1	0	0	1	2	0	0	2	0	9
Clouds and Contrails	1							1	1				3
Chaff												1	1
Birds	1	2		2				3	1	1	1		11
Physical Specimens		1c						1r	1w				3
Radar Analysis				1e		1g		3gmn		1m			6
Photo Analysis			2dl		1d	1j	2kj	5x	1j				12
Satellite Decay	0	1	1	1	0	1	0	2	0	1	0	1	8
Miscellaneous	2ab			2bf		1h		4sbbb		1h	3tuv		13
TOTAL	11	8	7	8	5	6	9	42	7	9	11	3	126

(a) Tracer Bullets (b) Misinterpretation of Conventional Objects (c) Metal Ball (d) Developer Smear (e) Anomalous Propagation (f) Kites (g) Electronic Counter Measures (h) Debris in Wind (j) No Image on Film (k) Poor Photo Process (l) Free Falling Object (m) False Targets (n) Weather Returns (p) Emulsion Flaws (r) Plastic Bags (s) Man on Ground (t) Lightning (u) Chemical Trails from Research Rocket (v) Missile Launch Activity (w) Gourd

CALCUTTA, INDIA

PEGASUS I

MONTH	DAY	HRS	MIN	ELEV	DIRECTION
OCT	4	18	15	23.68	NW TO NE
OCT	5	18	30	28.79	NW TO NE
OCT	6	18	45	40.62	NW TO NE
OCT	10	18	2	80.24	NW TO NE
OCT	11	18	17	88.07	NW TO NE
OCT	12	18	32	22.51	NW TO NE
OCT	13	18	46	11.23	NW TO NE

CAPE TOWN, U OF SA

PEGASUS I

MONTH	DAY	HRS	MIN	ELEV	DIRECTION
OCT	1	5	0	20.36	NW TO NE
OCT	2	5	15	31.03	NW TO NE
OCT	3	5	30	44.16	NW TO NE
OCT	4	5	45	57.51	NW TO NE
OCT	5	5	59	56.58	NW TO NE
OCT	6	5	32	50.59	NW TO NE
OCT	7	5	00	62.24	NW TO NE
OCT	8	5	1	56.25	NW TO NE
OCT	9	5	16	62.70	NW TO NE
OCT	10	5	31	51.22	NW TO NE
OCT	11	5	46	37.28	NW TO NE
OCT	13	5	33	40.77	NW TO NE
OCT	14	5	48	27.70	NW TO NE
OCT	15	5	3	17.81	NW TO NE

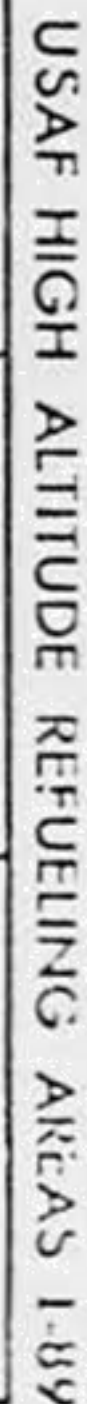
CANACAS, VCN,

PEGASUS I

MONTH	DAY	HRS	MIN	ELEV	DIRECTION
OCT	8	14	55	16.03	NW TO NE
OCT	12	18	13	87.77	NW TO NE
OCT	13	18	28	73.04	NW TO NE
OCT	14	18	42	35.87	NW TO NE
OCT	15	18	57	10.39	NW TO NE

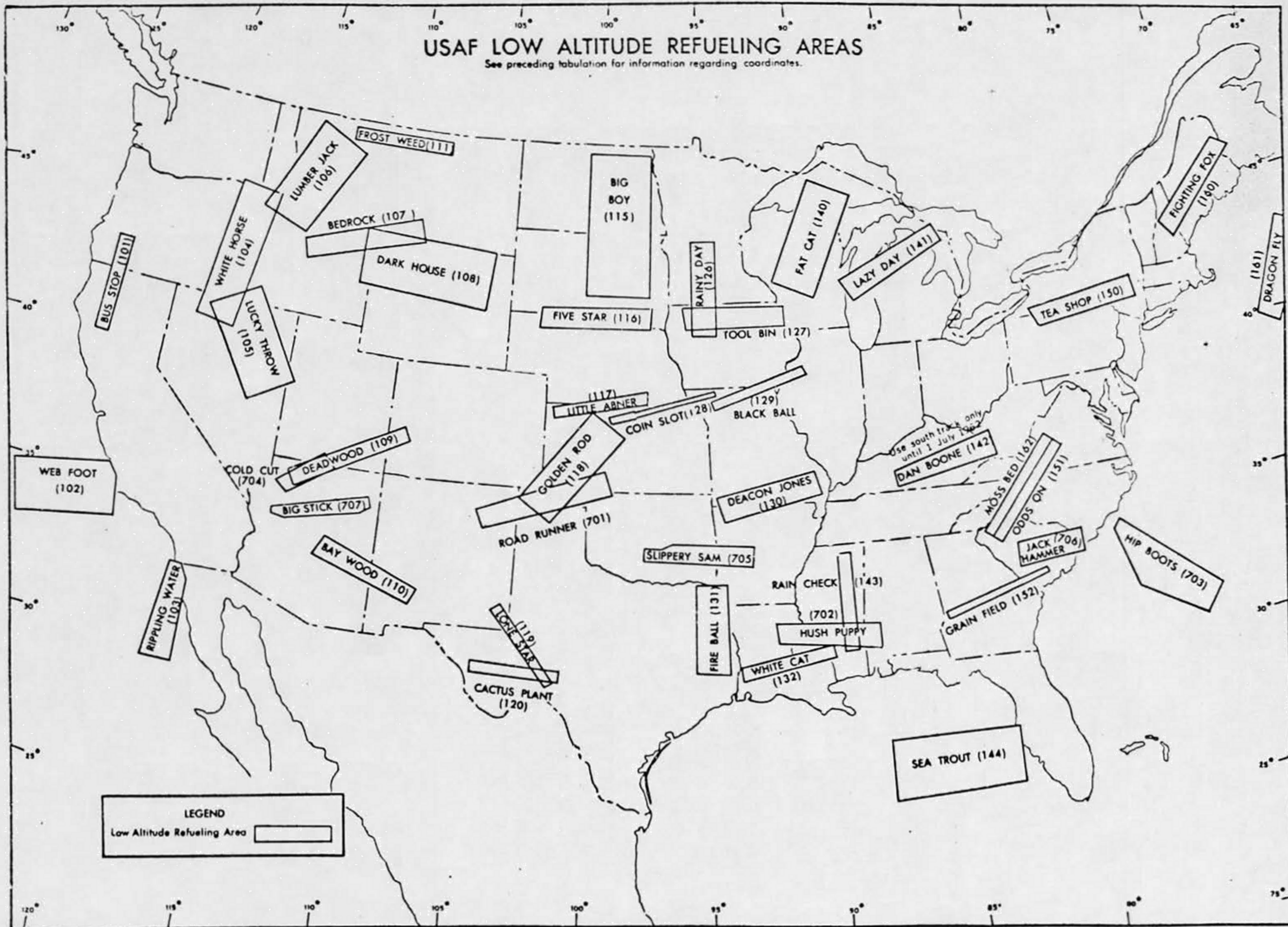


See preceding tabulation for information regarding Entrance and Exit Reporting Points and for specified operational altitudes.



USAF LOW ALTITUDE REFUELING AREAS

See preceding tabulation for information regarding coordinates.



USAF LOW ALTITUDE REFUELING AREAS

USAF aircraft conduct refueling operations throughout the continental United States below 24,000 feet MSL. Although these refueling operations may be conducted anywhere in the United States, they are generally confined to the areas listed below. The following points are emphasized in connection with refueling operations below 24,000 feet MSL:

(1) Refueling aircraft have right of way over other aircraft in accordance with CAR 60.14(b).

(2) Normally, these operations are conducted VFR (or VFR conditions on top); however, they may be conducted on IFR flight plans at assigned altitude/s including altitude reservation flight plans.

STRATEGIC AIR COMMAND			No.	Name	Area Coordinates	No.	Name	Area Coordinates
No.	Name	Area Coordinates						
101	Bus Stop	43°16', 123°43' 43°16', 123°14' 40°00', 123°15' 40°00', 123°43'	118	Golden Rod	35°49', 101°47' 36°35', 103°07' 39°48', 100°03' 38°57', 98°41'	150	Tea Shop	41°35', 79°24' 42°24', 79°32' 42°45', 74°25' 41°55', 74°21'
102	Web Foot	33°42', 120°42' 35°10', 121°02' 35°27', 121°25' 34°45', 125°08' 32°59', 124°33'	119	Lone Star	30°00', 101°42' 30°13', 101°24' 32°37', 104°02' 32°49', 103°44'	152	Grain Field	33°16', 80°50' 33°01', 80°45' 31°50', 85°04' 32°04', 85°10'
103	Rippling Water	32°32', 118°00' 32°31', 117°30' 32°10', 117°10' 29°19', 117°10' 29°14', 118°26'	120	Cactus Plant	30°16', 101°07' 30°36', 101°05' 30°26', 104°46' 30°47', 104°49'	160	Fighting Fox	43°37', 71°47' 44°10', 72°28' 46°35', 68°27' 46°01', 67°48'
104	White Horse	41°21', 117°30' 41°33', 119°15' 46°17', 116°28' 46°29', 118°22'	126	Rainy Day	42°33', 95°35' 42°33', 94°24' 45°51', 95°37' 45°51', 94°24'	161	Dragon Fly	40°00', 68°50' 39°38', 67°52' 43°10', 66°45' 42°47', 65°45'
105	Lucky Throw	38°50', 116°00' 39°52', 114°00' 41°50', 118°48' 42°55', 116°37'	127	Tool Bin	42°48', 91°13' 43°37', 91°12' 42°44', 95°58' 43°34', 96°02'			
106	Lumber Jack	45°00', 114°58' 45°49', 117°20' 49°07', 115°00' 48°14', 112°32'	128	Coin Star				
107	Bedrock	44°50', 114°55' 46°03', 109°15' 44°03', 114°35' 45°13', 108°56'		From 42 nm NE of Hill City VOR via V1522 to 42 nm SW of Lamoni VOR.				
108	Dark House	43°15', 105°20' 45°04', 105°03' 45°27', 111°50' 45°38', 111°51'	129	Black Ball	41°00', 90°27' 41°20', 90°35' 39°57', 94°37' 40°15', 94°47'	TACTICAL AIR COMMAND		
109	Deadwood	36°35', 113°48' 36°04', 113°27' 38°44', 108°50' 38°12', 108°31'	130	Deacon Jones	36°00', 94°20' 36°50', 90°00' 36°50', 94°37' 37°40', 90°13'	701	Road Runner	36°58', 99°10' 37°47', 99°33' 36°17', 105°08' 35°31', 104°43'
110	Bay Wood	33°50', 112°05' 34°31', 111°48' 33°12', 107°25' 32°31', 107°45'	131	Fire Ball	33°40', 95°30' 30°35', 95°30' 30°35', 94°15' 33°40', 94°15'	702	Hush Puppy	31°24', 88°00' 32°07', 88°00' 32°10', 92°16' 31°32', 92°13'
111	Frost Weed	49°00', 113°20' 49°00', 108°00' 48°30', 106°00' 48°30', 113°20'	132	White Cat	30°19', 93°48' 30°39', 93°53' 31°00', 89°55' 31°20', 89°59'	703	Hip Boots	31°20', 73°30' 30°06', 74°37' 31°55', 77°12' 34°05', 77°42' 34°17', 77°35'
115	Big Boy	43°58', 97°44' 43°58', 100°37' 48°58', 97°36' 48°58', 100°47'	140	Fat Cat	43°43', 89°41' 44°28', 91°48' 47°11', 87°20' 47°55', 89°33'	704	Cold Cut	36°15', 114°15' 35°56', 113°50' 37°18', 112°08' 37°00', 111°45'
116	Five Star	42°40', 97°43' 43°29', 97°39' 42°40', 102°45' 43°29', 102°48'	141	Lazy Day	43°30', 87°53' 45°08', 83°08' 45°54', 83°38' 44°14', 88°25'	705	Slippery Sam	35°00', 97°44' 35°00', 96°43' 35°07', 96°30' 35°00', 93°06' 34°24', 93°08' 34°31', 96°30' 34°38', 96°44' 34°39', 97°43'
117	Little Abner	39°31', 101°55' 39°50', 102°00' 40°04', 97°40' 40°24', 97°43'	142	Dan Boone	37°27', 82°08' 36°40', 86°42' 37°27', 86°57' 38°16', 82°21'	706	Jack Hammer	33°30', 79°10' 33°30', 82°00' 34°10', 82°00' 34°10', 79°10'
				Use South track only until 1 July 1962				
			143	Rain Check	31°14', 89°34' 31°14', 89°00' 34°41', 89°34' 34°41', 89°00'	707	Big Stick	35°17', 114°15' 34°55', 114°15' 34°55', 113°30' 35°37', 110°12' 35°49', 109°53' 36°10', 110°00'
			144	Sea Trout	28°00', 83°00' 26°00', 83°00' 26°00', 88°00' 28°00', 88°00'			

ROUTE TAR PAI

EFFECTIVE 22 APRIL 1962

USAF LOW LEVEL ROUTES OIL BURNER

Tabe, Colorado VORTAC Entry

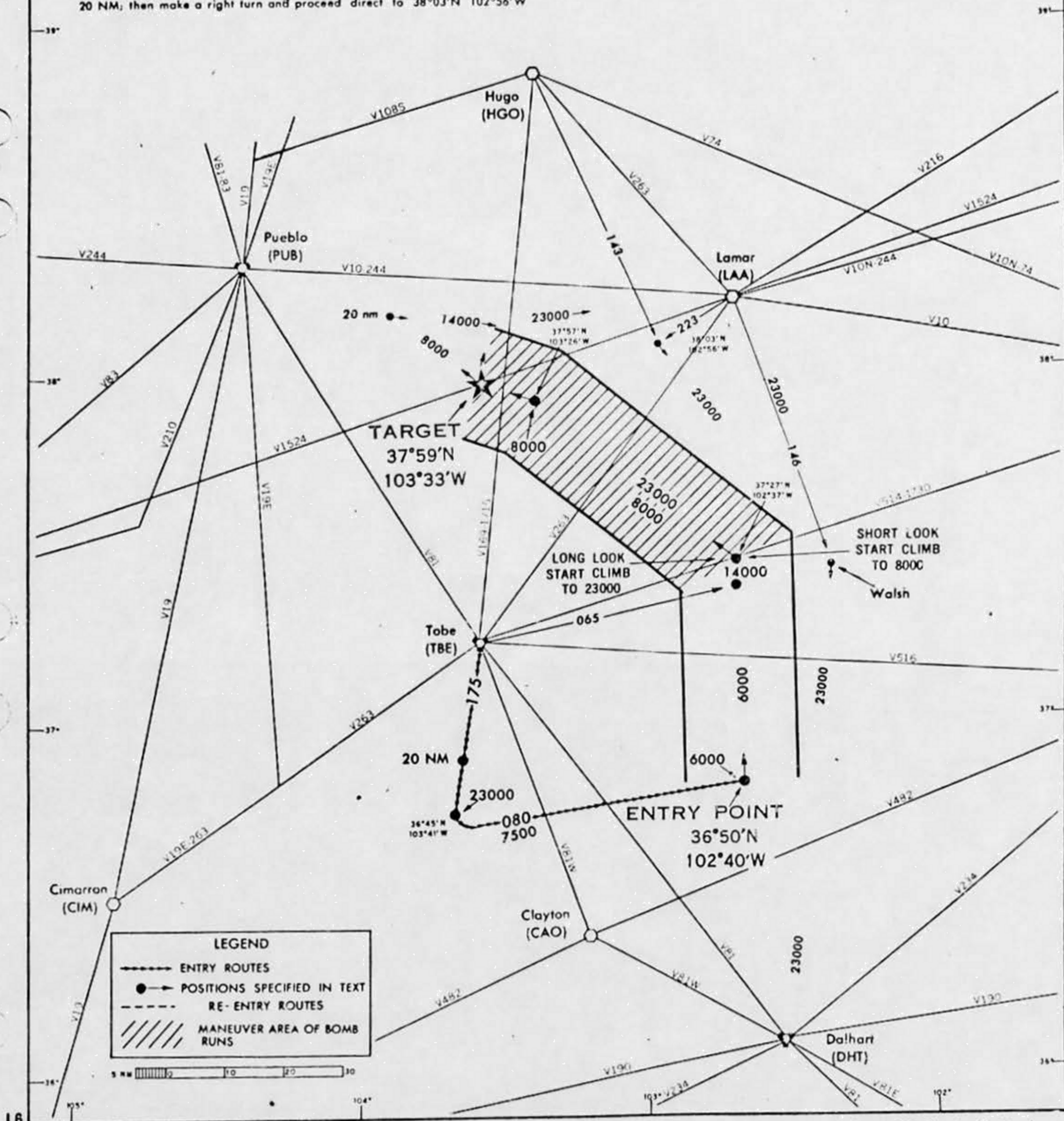
Aircraft shall enter at the Tabe VORTAC (reporting point) at assigned altitude/flight level, then proceed outbound on the Tabe VORTAC 175° radial at assigned altitude/flight level, until 20 NM south of the Tabe VORTAC, then descend outbound on the Tabe VORTAC 175° radial so as to reach 23,000' MSL or below at 36°45'N 103°41'W. At this point, aircraft shall start standard rate left descending turn to a true course of 080°, descending so as to reach 7500' MSL prior to reaching V81; aircraft shall then maintain 7500' MSL until clear of V81; then continue descent to the entry point of the low level route at 36°50'N 102°40'W at 6000' MSL maintain 6000' MSL direct to 37°27'N 102°37'W.

SHORT LOOK: After passing 37°27'N 102°37'W aircraft shall climb so as to reach 8000' MSL prior to crossing 37°57'N 103°26'W; aircraft shall then make bomb run at 8000' MSL to the target at 37°59'N 103°33'W. After leaving target aircraft shall continue on NW heading at 8000' MSL for not more than 20 NM; then make a right turn and proceed direct to 38°03'N 102°56'W

(intersection of Hugo, Colo. VOR 143° radial and Lamar, Colo. VOR 223° radial) then direct to Walsh, Colo. maintaining 8000' MSL until clear of V10; then climb to maintain at or below 14,000' MSL until clear of V1524 then climb so as to reach 23,000' MSL north of V1730; then at 23,000' MSL to Walsh, Colo. (Reporting point) direct to Dalhart, Texas VORTAC.

LONG LOOK: Aircraft shall start climb from 6000' MSL immediately after crossing the Tabe, Colo. VORTAC 065° radial maintain at or below 14,000' MSL until north of V1730; then climb so as to reach 23,000' MSL prior to entering V1715 and V1524. Long Look missions shall then maintain 23,000' MSL to the target area, making right turn after bomb run direct to Lamar, Colo. VOR; then at 23,000' MSL via the Lamar VOR 146° radial to Walsh, Colo. (reporting point); then at 23,000' MSL direct to the Dalhart, Texas VORTAC (reporting point).

The hours of operation on this route are 0000 - 2359Z Mon - Sat.



USAF LOW LEVEL ROUTE CHART

ROUTES FLOWN VFR/VFR ON TOP, DAYS

Days of Week Used:	Random Intervals
Aircraft:	Jet/Conv
Surrounding Cities:	.
Target Cities:	.
Radar Bomb Scoring Sites:	

RADAR Bomb Scoring (RBS) Sites provide scoring for simulated bombing attacks by Military aircraft. These sites are located in densely populated areas where air traffic is correspondingly dense. USAF aircraft are encouraged to flight plan **AROUND** RBS Sites whenever possible, especially during daylight hours (normal hours of RBS operations). Operations are normally conducted VFR-1000 feet on top, usually at high altitudes.



FEDERAL AVIATION AGENCY
Washington 25, D.C.

MAY 2 1961

Maj. William T. Coleman, Jr., USAF
Public Information Division
Office of Information
Department of the Air Force
Washington 25, D. C.

Dear Major Coleman:

Your letter dated April 7, 1961, regarding sighting of white light rotating beacons on aircraft has been forwarded to this office for reply.

Approved anti-collision lights required for night flight on aircraft having a maximum gross weight of more than 12,000 pounds and used on many lighter aircraft are red rotating beacons.

Special Civil Air Regulation SR-392B which is scheduled to terminate February 25, 1962, provides for limited experimental use of types of lighting systems which do not comply with the relevant specifications contained in the CARs.

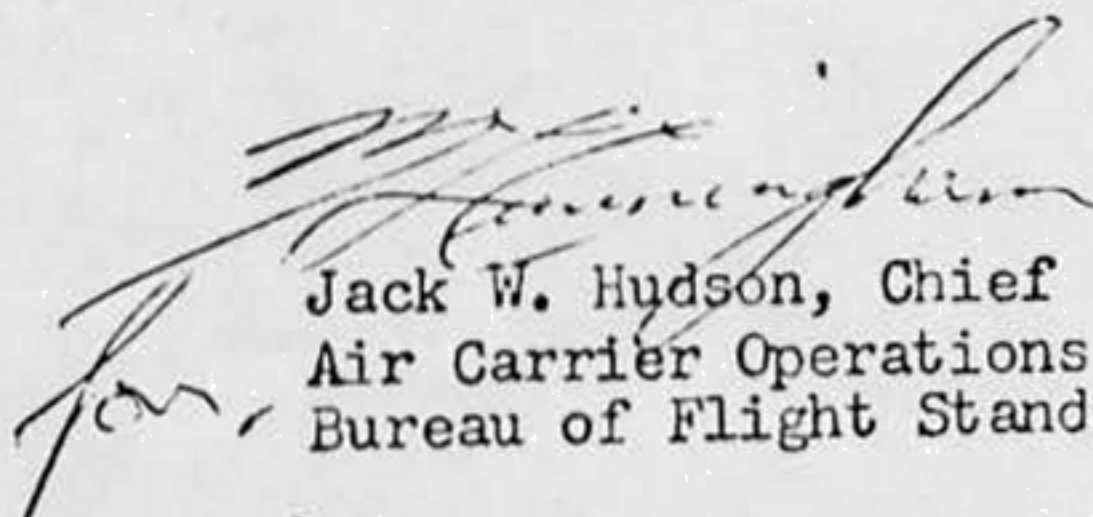
A number of different types of lights are being evaluated by the Federal Aviation Agency Bureau of Research and Development and various operators and manufacturers. The majority of these lights are of the strobe condenser discharge type which produce a brilliant blue-white light. One type of installation consists of "swinging" wing lights in green and red and a "bobbing" white tail light. The periodic discharge flash or the "bobbing" effect may not be distinguishable from a rotating flash at a distance, which may explain the impression that white rotating beacons have been observed.

Since approvals of experimental operation in accordance with SR-392B are granted in the field, the number and types of lights presently in operation are not readily available.

Maintaining a current list of aircraft with experimental lighting would be impractical as it is subject to frequent changes.

If we may be of additional assistance, please advise.

Sincerely,


Jack W. Hudson, Chief
Air Carrier Operations Branch
Bureau of Flight Standards

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS STRATEGIC AIR COMMAND
OFFUTT AIR FORCE BASE, NEBRASKA, 68113



REPLY TO
ATTN OF: DXIP-2

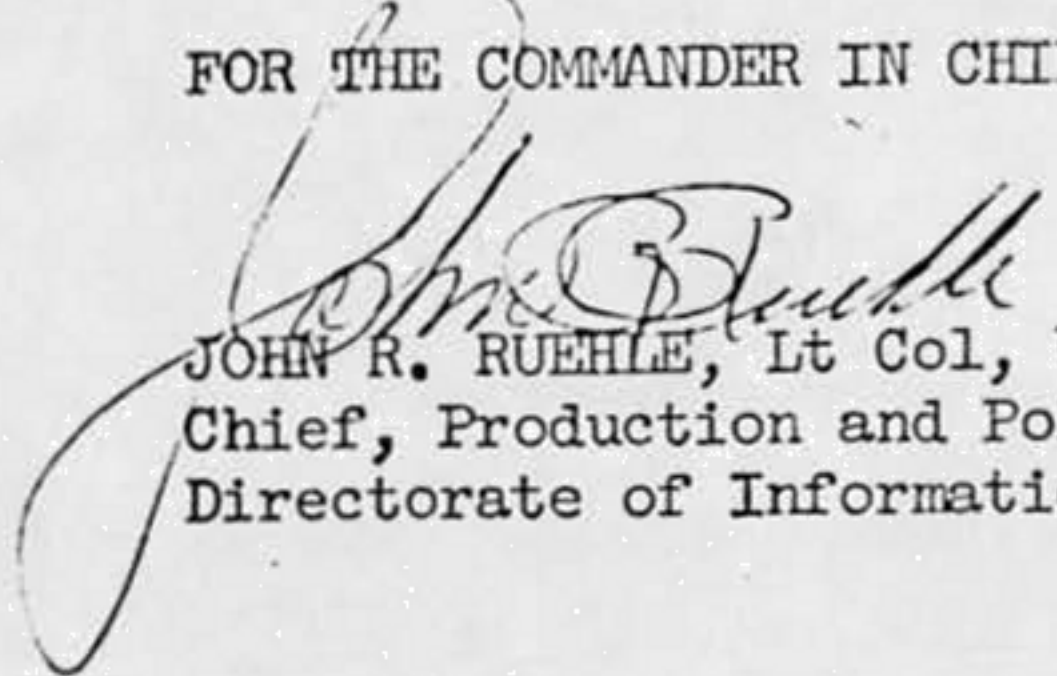
15 NOV 1965

SUBJECT: Night Photography - Air Refueling

TO: AFSC (Col de Jonckheere)
Foreign Technology Division
Wright-Patterson AFB, Ohio 45433

The attached film is of a night refueling of a B-52 and a KC-135. It was photographed from a T-39 chase aircraft. Separation between subject and chase aircraft was the minimum permissible distance of 2,000'. The film shows only several lights moving on a dark background. The film was processed using the best known methods of increasing the film speed.

FOR THE COMMANDER IN CHIEF


JOHN R. RUEHLE, Lt Col, USAF
Chief, Production and Policy Division
Directorate of Information

1 Atch
Roll of film
Project Number 7-52/612
Roll Number M32D 1 & 2

FLARES USED WITH REFUELING OPERATIONS:

SOURCE: NCOIC of REFUELING SQUADRON AT WPAFB

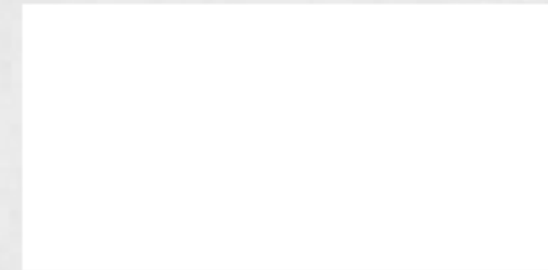
No flares are carried for operations except on KC-97s. KC-97s carry M-4 flares for emergency use. These are used primarily when communications by radio are out or the A/C to be refueled cannot locate the tanker A/C. The normal color is a two-ball yellow and green flare fired out of the rear of the A/C. The flare looks like a roman candle and falls in an arc descending. The duration can be up to 30 seconds. Red flares are carried also, but these are used in emergency only and not for identification or refueling operations.

FIREBALL REPORT

Persons observing a fireball or meteor should report the information to the American Meteor Society. The information desired is contained below.

A very brilliant meteor or fireball is reported to have passed in your vicinity on at the hour of Will you please answer as fully as possible the following questions, which are asked on behalf of the American Meteor Society in order that permanent records of such phenomena may be obtained. When these reports are published each contributor whose report is fairly complete will be mentioned, if

possible, and due credit given. It is only by the help of those who can give personal information that data can be secured for the computation of the orbits of meteors. These data are of great scientific value and all reasonable efforts should be made to obtain them. You will be unable probably to answer all questions below, but answer those you can, as they may be of the greatest importance.



ARMCO STEEL CORPORATION

GENERAL OFFICES · MIDDLETOWN, OHIO 45042



WALTER C. PAGUE
MANAGER AIR TRANSPORTATION

November 26, 1965

Major Hector Quintanilla, USAF
Chief Project Blue Book
Wright-Patterson AFB
Ohio 45433

Dear Sir:

In reply to your letter of 15 November, 1965, with reference to your investigation of an unidentified flying object, I am submitting the following information:

The pilots aboard the Armco Steel Corporation Gulfstream -437-A were Donald Swanson and the undersigned, who are employees of the company.

- a. There were no unusual lights or other aircraft observed during the approach to the airport.
- b. The time of landing was 1840 EST(2340Z).
- c. The approach path of the aircraft was from the northeast over the field after which a right turn was executed and the aircraft then proceeded westbound until entering a downwind leg on the southwesterly heading in preparation for landing to the northeast on the runway heading 052 degrees.
- d. There is no afterburner used on the engines.

Insofar as there are wing tip and tail flashing strobe lights installed on the aircraft which we operated at the time, as well as top and bottom fuselage rotating beacons, we feel this might help in your investigation.

We hope that the above will be of some assistance to you.

Very truly yours,

E. E. Winglewich

E. E. Winglewich
Pilot

EEW;new

#	INCIDENT	DATE	LOCATION	TIME OF SIGHTING	WITNESS DATA			REPORTING DATA							OBJECT DATA				ACTION	EVALUATION
					#	AGE	SEX	OCCUPATION	#	TYPE	FOLLOW UP	PAGES	TYPE OF SIGHTING	OPTICAL AIDS	VISIBILITY	# OF OBJECT	DURATION	DESCRIPTION		
1.	10	1/08	URBAN	NIGHT	N/R			N/R	1	PHONE	NO (AFGP)	3	G/V	N/R	N/R	2	N/R	BRIGHT OBJECTS	W, "U" TURN,,E	JET
2.	18	1/14	URBAN	DAY	1	A	M		1	LETTER	NO	1	N/R	N/R	CLEAR	1	N/R	CIGAR SHAPED, JET	FAST	B-52
3.	25	1/21	URBAN	NIGHT	1	A	M	NEWSMAN	1	200-2	NO	4	G/V	NO	CLEAR	1	4 SEC	BRIGHT YELLOW	HOVERED	FAA
4.	35	1/25	RURAL	DUSK	2	A	B	CRANE OPR	1	200-2	LETTER	5	G/V	NO	CLEAR	1	10 MIN	BRIGHT, CIGAR SHAPE	STRAIGHT	CONV
5.	36	1/27	URBAN	DAY	1	A	M	PHONE	1	PHONE	PHONE	1	G/V	NO	CLEAR	3	2-3 MIN	VAPOR TRAILS/FORMATION		F-102's
6.	56	2/05	RURAL	DAY	2	A	B	CRANE OPR	1	200-2	NO	3	G/V	BX	CLEAR	1	2 MIN	ALUMINUM, CIGAR SHAPE	STRAIGHT/FADE	FAA
7.	67	2/18	URBAN	NIGHT	2	A	M		1	PHONE	LETTER	7	G/V	N/R	N/R	1	1 1/2 MIN	ROTATING BEACON	ERRATIC	KC-135
8.	76	2/24	RURAL	NIGHT	2	A	M	MILITARY	1	200-2	NO	4	A/V	NO	HAZY	1	3 MIN	BLINKING LIGHT	ACCELERATED	B-52
9.	81	3/02	URBAN	NIGHT	2	B	B		1	PHONE	PHONE	2	G/V	NO	OVERCAST	1	15 MIN	DOME SHAPED 5 LEGS	HOVERED, CIRCLED	KC-135
10.	87	3/05	URBAN	DAY	1	A	M		1	200-2	TWX	3	G/V	NO	CLEAR	2	1 MIN	BIG EAGLE 4 POINTS	CLOSE TRAIL FORM	F-100 'S
11.	100	3/15	URBAN	NIGHT	1	A	M		1	164	LETTER	3	G/V	NO	SC CLOUD	8	FEW S	YELLOW BRN SEMI-CIRCLE	FORMATION	B-47
12.	120	3/31	RURAL	NIGHT	1				1	PHONE	LETTER	4	G/V	NO	HAZE	1	2-4 MIN	LIKE SATELLITE, STRAIGHT FLIGHT		CONV
13.	132	4/07	NAS	NIGHT	1	A	M	MILITARY	1	200-2	TWX	3	A/V	NO	CLEAR	1	5 MIN	BRIGHT WHITE LIGHT		SAC B.
14.	143	4/19	AFB	NIGHT	1	A	M	MILITARY POLICE	1	200-2	NO	2	G/V	NO	CLOUDY	1	4 MIN	SPHERE W/FLAME	STRAIGHT	C-130
15.	188	5/22	URBAN	NIGHT	3	A	B		1	200-2	NO	3	G/V	NO	OVERCAST	6	30 SEC	OVAL LIGHTS, WEDGE	ERRATIC	FAA
16.	196	5/29	URBAN	NIGHT	2	A	M	GEOLOGIST	1	200-2	NO	4	G/V	NO	CLOUDY	1	15 SEC	RD WHITE FLASHING LIGHTS	STRAIGHT	F-4C
17.	199	5/31	URBAN	NIGHT	1	A	M	POLICE	1	PHONE	NO	1	G/V	NO	CLEAR	1	N/R	IDENTIFIED WHILE CALLING AS THE GOODYEAR BLIMP		
18.	200	6/01	URBAN	NIGHT					1	PHONE	NO	4	G/V	NO	CLOUDY	1	4 MIN	SILVER CIGAR	STRAIGHT	C-135
19.	210	6/11	URBAN	DAY	3	A	F		1	164	NO	4	G/V	NO	CLEAR	1	10 MIN	A/C LANDING LIGHT	STRAIGHT	FAA
20.	221	6/24	URBAN	NIGHT	1	A	M	RADIO ANNOUNCER	1	200-2	NO	3	G/V	NO	CLEAR	1	2 MIN	FLASHING RED & BLUE LIGHT	STRAIGHT	FAA
21.	252	7/05	URBAN	NIGHT	1		M		1	PHONE	NO	3	G/V	NO	HAZY	1	3 MIN	(168 A/C IN AND OUT OF AREA)		N/S
22.	258	7/06	URBAN	NIGHT	M	B	B		2	200-2, 164	NO (RADAR)	7	G/V	NO	CLEAR	1	10-15M	LIKE STAR	ERRATIC EVAL BY RADAR	
23.	261	7/08	URBAN	NIGHT	3	B	B	STUDENT'S H'WIFE	1	200-2	NO	3	G/V	NO	CLEAR	1	25 M	ROUND, WHITE & BLUE*GREEN	MANUVERED	MIL
24.	276	7/13	URBAN	NIGHT	1	A	M		1	200-2	NO	3	G/V	BX	CLEAR	1	N/R	BRIGHT CIGAR SHAPED LIGHT		FAA
25.	278	7/13	RURAL	NIGHT	1	A	M	POLICEMAN	1	PHONE	NO	1	G/V	BX	N/R	1	N/R	LIKE SATELLITE	JET SOUND	JET
26.	294	7/17	URBAN	NIGHT	3	A	M	DUMPER	1	LETTER	NO	1	G/V	NO	N/R	1	2 MIN	MULTI COLORED OBJ	SLOW/STRAIGHT	F-104
27.	335	7/25	RURAL	NIGHT	M	A	M	RADAR OBSERVERS	1	200-2	RADAR ANAL	2	G/R	N/A	N/A	1	10 MIN	RADAR RETURNS, HIGH & FAST		MIL
28.	356	7/28	RURAL	NIGHT	2	A	B	MILITARY	1	200-2	NO	4	G/V	NO	CLEAR	1	3 MIN	MANTA RAY	STEADY	MIL
29.	399	8/03	RURAL	NIGHT	2	A	F	TELEPHONE OPR	1	200-2	NO	3	G/V	NO	CLEAR	1	15 MIN	ROUND, WHITE, RED	STEADY	FAA
30.	414	8/04	URBAN	NIGHT	2	A	M	RR ENGNRS	1	200-2	NO	4	G/V	NO	CLEAR	4	45 SEC	RD, DULL SILVER, DIAMOND FORM SPLIT	B-52, KC-135	
31.	446	8/05	URBAN	NIGHT	6	B	B		1	200-2	NO	2	G/V	NO	CLEAR	1	N/R	LIKE STAR	NW	FAA
32.	452	8/06	URBAN	NIGHT	6	A	B		1	200-2	NO	4	G/V	NO	CLOUDY	1	5 MIN	AMBER, BELL SHAPED	STATIONARY	B-52, KC-135
33.	544	8/16	URBAN	NIGHT	1	A	F	UNEMPLOYED	1	FORM	NO	2	G/V	NO	CLOUDY	1	4 MIN	RED, GREEN, WHITE LIGHTS, TWO TURNS	CRASH, FAA	
34.	566	8/20	AFB	NIGHT	3	A	M	MILITARY	1	200-2	NO	5	G/R	NO	N/A	1	30 MIN	RETURNS SIMILAR TO A/C	CONTROLLER EVAL A/C	
35.	584	8/23	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	FORM	NO	4	G/V	NO	CLEAR	1	7 MIN	2 HEADLIGHTS, INCL HOVER, MOTOR SOUND	G-159	
36.	641	9/02	URBAN	NIGHT	1	A	M	INSUREANCE AGNT	1	200-2	NO	5	G/V	BX	CLEAR	1	2-3 MIN	RD, RED WHITE, YELLOW, SEVERAL TURNS		T-37
37.	646	9/03	RURAL	NIGHT	1	Y	M	UNEMPLOYED	M	200-2	YES (FOLDER)	M	G/V	NO	CLEAR	1	N/R	LIGHTS. MOTION INCL HOVERING		B-47's
38.	701	9/19	JAPAN	DUSK	1	A	M	MILITARY	1	200-2	NO	4	G/V	BX	CLEAR	1	5-10MIN	RD, WHITE YELLOW,	NW	MIL
39.	721	9/25	O'SEAS	NIGHT	1	A	M	MILITARY	1	200-2	NO	3	G/V	NO	OVERCAST	9	10-15 S.	"V" FORMATION ROUND DOTS OF LIGHT		DC-3
40.	726	9/26	URBAN	NIGHT	1	A	F	STUDENT	1	FORM	NO	2	G/V	NO	OVERCAST	1	3 MIN	BLINKING LIGHTS, FLAT HAT		FAA

41.	727	9/26	ATB	NIGHT	M	A	M	MILITARY	1	200-2	LETTER	12	G/R	N/A	N/A	1	3-5 MIN	RADAR RETURN	DET-OUT CENTER EVAL	KG-13
42.	798	10/23	RURAL	NIGHT	1	A	M		1	200-2	NO	2	G/V	NO	CLEAR	1	5 MIN	CIRCULAR LIGHT STRAIGHT FLIGHT		KG-97
43.	821	11/04	URBAN	NIGHT	2	Y	M		1	PHONE	PHONE	1	G/V	NO	CLEAR	1	5-6 MIN	BALL OF LIGHT		FAA
44.	884	12/20	RURAL	NIGHT	1	A	M	SERVICE MGR	1	200-2	NO	1	G/V	EX	CLEAR	3	15 MIN	OVAL COALS FAST FLIGHT LIKE FIRE		MIL

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS JET OR CONVENTIONAL AIRCRAFT. THIS EVALUATION IS BASED UPON DESCRIPTION AND FLIGHT CHARACTERISTICS OF OBJECT

45.	21	1/18	URBAN	NIGHT	2	A	F		1	LETTER	LETTER (NO ANS)	2	G/V	NO	N/R	1	2-3 MIN	LIKE FALLING STAR VAPOR TRAILS/FLAME	JET W/AB
46.	27	1/22	URBAN	DUSK	1	Y	M	10 YR ODD	1	LETTER	L/164	7	G/V	NO	CLOUDY	1	11 MIN	OBJ W/EXHAUST TRAIL	JET W/AB
47.	30	1/24	ALASKA	NIGHT	3	A	M	MILITARY	1	PHONE	NO	1	A/V	NO	CLEAR	1	35-60 S	BLINKING LIGHT NOT SATELLITE NE	C/J
48.	32	1/25	URBAN	DUSK	1	Y	M	UFO FAN	1	LETTER	NO	2	G/V	BX	CLEAR	1	10 MIN	OVAL, METALLIC, MOTION HOVER 3 MIN	C/J
49.	54	2/03	RURAL	NIGHT	1	Y	M	STUDENT	1	LETTER	LETTER	2	G/V	NO	N/R	1	N/R	FADING RED OBJ, FAST	C/J
50.	59	2/09	CANADA	NIGHT	2	A	M	PILOTS	1	200-2	NO	4	A/V	NO	CLEAR	1	1 MIN	LARGE UNSTEADY FLASHING LIGHT	C/J
51.	60	2/09	O'SEAS	NIGHT	1	A	M	MILITARY	1	200-2	NO	6	G/V	NO	CLEAR	1	1 MIN	FLAT OBJ, LEVEL FLIGHT	C/J
52.	65	2/15	URBAN	DAY	1	Y	M	STUDENT	1	LETTER	164/LETTER	4	G/V	NO	CLEAR	1	1 1/2 MIN	SILVER-GREY, METALLIC, ERRATIC MOTION	C/J
53.	78	2/25	RURAL	NIGHT	1	A	M		1	200-2	LETTER	2	G/V	NO	CLEAR	2	25 MIN	SHINY, RED & GREEN, ROUND, MANUVERED	C/J
54.	83	3/03	OCEAN	NIGHT				MILITARY	1	CIRVIS	NO	1	G/V	NO	N/R	1	6 MIN	BALL OF LIGHT, MOTION INCL HOVER	C/J
55.	85	3/04	URBAN	NIGHT	1	A	M		1	CIRVIS	NO	2	G/V	NO	CLEAR	1	6 MIN	ELLIPTICAL, FLOURESCENT, STRATIONARY, FAST	C/J
56.	91	3/09	URBAN	NIGHT	M	B	B		1	PHONE	NO	4	G/V	NO	CLOUDY	1	10 MIN	RD, PINK, WHITE, ORANGE, ZIG-ZAG	C/J
57.	98	3/13	URBAN	NIGHT	2	Y	M	STUDENTS	1	LETTER	NO	1	G/V	NO	N/R	1	N/R	GLOWING DISC, SPEED BET METEOR/SATELLITE	C/J
58.	105	3/24	URBAN	NIGHT	1	Y	M	10 YR OLD	1	LETTER	164	4	G/V	NO	CLOUDY	1	10 MIN	EGG SHAPE	C/J
59.	108	3/26	URBAN	NIGHT	1	A	M		1	LETTER	NO	1	G/V	NO	N/R	1	20 SEC	FISH SHAPED, SHARP TURNS	C/J
60.	110	3/27	URBAN	NIGHT	3	B	F		1	PHONE	NO	4	G/V	NO	CLEAR	1	5-10 MIN	LIGHT CHANGING COLOR, SHARP TURN, STOP	C/J
61.	114	3/30	RURAL	NIGHT	1	A	F	HOUSEWIFE	1	PHONE	INVS/WPAFB (F)	4	G/V	NO	CLEAR	1	N/A	PORTION OF COMPLEX CASE	C/J
62.	116	3/30	URBAN	NIGHT	1	A	M	PIO	1	PHONE	LETTER	4	G/V	NO	CLOUDY	1	6 SEC	RED-ORANGE LIGHT, STRAIGHT FLT	C/J
63.	117	3/30	RURAL	NIGHT	1	A	M	FARMER	1	LETTER	164	4	G/V	NO	CLEAR	1	10-12 MIN	GOLD/RED OVAL LIGHT, STRAIGHT FLT	C/J
64.	127	4/04	URBAN	NIGHT	1	A	M	STUDENT	1	200-2	TX	5	G/V	NO	CLEAR	1	5 MIN	OVAL RED LIGHT, LEVEL FLIGHT	C/J
65.	136	4/10	RURAL	NIGHT	1	Y	M	STUDENT	1	LETTER	164	5	G/V	TX	CLEAR	1	3 MIN	SHINY, METALLIC, OVAL, ERRATIC FLT	C/J
66.	141	4/15	URBAN	NIGHT	2		M		1	LETTER	NO	1	G/V	BX	CLEAR	1	7 MIN	INTENSE POINT OF LIGHT, STRAIGHT FLT	C/J
67.	144	4/19	URBAN	NIGHT	2	Y	M	STUDENTS	1	PHONE	NO	4	G/V	TX	CLEAR	2	5 MIN	CIRCULAR WHITE LIGHTS, ZIG-ZAG	C/J
68.	147	4/25	URBAN	DAY	2	Y	M	STUDENTS	1	LETTER	164/LETTER	5	G/V	NO	CLOUDY	1	3 MIN	OVAL, " SAUCERS TOGATHER, STRAIGHT ARC, HOV	C/J
69.	148	4/26	URBAN	NIGHT	1				1	200-2	NO	1	G/V	NO	CLOUDY	1	5 MIN	WHITE STAR, HIGH & CLIMBING	C/J
70.	150	4/28	URBAN	NIGHT	3	A	B	PAINTER, NURSE	1	200-2	NO	3	G/V	NO	CLEAR	1	30-60 S	FLAT TRIANGLE, WHITE, LINEAR PATH	C/J
71.	152	4/29	URBAN	DAY	1	Y	M	STUDENT	1	LETTER	LETTER	2	G/V	NO	CLEAR	2	3 MIN	SILVER, ORANGE GLOBE FLT DOWN INCR SPEED	C/J
72.	155	4/29	URBAN	DAY	1		M		1	LETTER	LETTER	2	G/V	NO	N/R	1	1 MIN	ELONGATED, GLEAMED, STRAIGHT FLT	C/J
73.	160	5/01	URBAN	NIGHT	1		M		1	LETTER	NO	1	G/V	NO	N/R	1	1 MIN	STARLIKE BLINKING LIGHT	C/J
74.	170	5/05	OCEAN	NIGHT				MILITARY	2	PHONE/MERINT/TWX		2	G/V,	G/RADAR	CLEAR	M	6 MIN	1st MAG, HIGH SPEED EVAL BY RADAR ANAL A/C	
75.	173	5/06	URBAN	NIGHT	2	A	B		1	PHONE	NO	4	G/V	NO	CLEAR	1	5 MIN	ROUND BRIGHT WHITE LIGHT, STRAIGHT FLT	C/J
76.	179	5/09	URBAN	NIGHT	1		M		1	LETTER	LETTER	2	G/V	BX	CLEAR	1	90 SEC	3rd MAG STAR	C/J
77.	181	5/13	URBAN	NIGHT	4	A	B	MILITARY INCL	1	200-2	NO	4	G/V	NO	CLEAR	1	10 MIN	2 RED LIGHTS, SPEED FAST	C/J
78.	182	5/13	URBAN	NIGHT	3	Y	M	STUDENTS	1	LETTER	164/LETTER	5	G/V	NO	CLOUDY	1	1-2 MIN	WHITE SAUCER, RED BOTTOM. SPINNING, FAST	C/J
79.	183	5/15	URBAN	DAY	1	Y	M	STUDENT	1	LETTER	NO	1	G/V	TX	N/R	1	45 SEC	LIKE F-104 ON SIDE, SILVER W/BLACK STRIPE	C/J
80.	184	5/17	URBAN	NIGHT	1	A	F	TEACHER	1	LETTER	164/LETTER	5	G/V	BX	CLEAR	1	80 SEC	CIRCULAR DISC, STRAIGHT FLT, VAPOR TR.	C/J
81.	185	5/18	URBAN	NIGHT	3	A	B		2	PHONE/164	NO	8	G/V	NO	CLEAR	3	3 MIN	LIGHTS, HORSE SHOE PATH	C/J
82.	186	5/18	RURAL	NIGHT	4	A	B	UFO FAN	1	PHONE	PHONE	5	G/V	NO	CLEAR	1	5 MIN	LIGHTS, SHARP TURN, ROAR	C/J
83.	192	5/27	URBAN	NIGHT	1	Y	M	STUDENT	1	LETTER	LETTER	3	G/V	BX	N/R	1	90 SEC	5 SPHERES IN LINE, SPINNING	C/J
84.	206	6/05	URBAN	NIGHT	2	A	B	NURSE	1	200-2	NO	4	G/V	NO	CLEAR	1	1 MIN	FLYING WING AIRLINER	C/J
85.	229	6/29	URBAN	NIGHT	1	A	F		1	200-2	NO	3	G/V	NO	CLEAR	2	3 MIN	FUNNEL SHAPE. CLOSE, IN LINE, CONTRAIL	C/J
86.	231	6/29	URBAN	NIGHT	2	A	B		1	LETTER	NO	2	G/V	NO	CLOUDY	1	SEVERAL MIN	BRIGHT RED OBJ, MANUVERED, HOVER	C/J

87.	234	7/01	URBAN	NIGHT	1	A	M	1	LETTER	NO	2	G/V	NO	CLEAR	1	5-7 MIN	SHORT FLASHING LIGHT, STRAIGHT FLT	C/J
88.	234	7/01	URBAN	NIGHT	1	A	M	1	LETTER	NO	1	G/V	NO	N/R	1	15 MIN	STEADY LIGHT, OCC ZIG-ZAG, STAR	C/J
89.	238	7/02	RURAL	NIGHT	2	A	M	1	LETTER	NO	1	G/V	NO	N/R	1	3 MIN	SMALL RED LIGHT, FAST	C/J
90.	240	7/03	URBAN	NIGHT	1	A	M	1	LETTER	NO	1	G/V	NO	N/R	1	45 MIN (T)	ROUND, LUMINOUS, STRAIGHT FLT	C/J
91.	247	7/04	TAIWAN	NIGHT	4	A	M	3	200-2	LETTER	3	G/V	NO	CLEAR	4	5 MIN	LIGHT WITH LIGHT IN BACK FLASHING	C/J
92.	248	7/04	URBAN	NIGHT	1	Y	F	1	LETTER	LTR/164	5	G/V	NO	CLEAR	2	10 MIN (T)	1st MAG STAR, MOTION INCL HOVER	C/J
93.	255	7/06	URBAN	NIGHT	2	A	B	2	200-2/LTR	PHONE/LTR	6	G/V	DX	OVERCAST	1	2 1/2 MIN	TRAINABLE, PKG UNDERNEATH, VERY FAST	C/J
94.	265	7/11	RURAL	NIGHT	1	A	M	1	PHONE	NO	4	G/V	BX, TX	CLEAR	1	2 MIN	STAR	C/J
95.	273	7/12	URBAN	NIGHT	2	A	B	2	200-2	LTR/164	12	G/V	BX	HAZE	1	10-15 MIN	OVAL, FLASHING GRN, RED, SLOW FLT	CONV
96.	269	7/16	URBAN	NIGHT	3	A	B	1	PHONE	NO	4	G/V	NO	CLOUDY	1	2 1/2 MIN	CIRC, WHITE BALL, POINTED, ERRATIC FLT	C/J
97.	290	7/16	URBAN	NIGHT	3	Y	B	1	PHONE	LTR/164	5	G/V	NO	CLEAR	2	3 MIN	BRIGHT STARS, STRAIGHT FLT	C/J
98.	301	7/18	URBAN	NIGHT	5	Y	M	1	LETTER	LTR/164	5	G/V	NO	CLOUDY	1	1 MIN	BALLOON LIKE OBJ, ZIG-ZAG, FUZZY, REFL	C/J
99.	309	7/20	URBAN	DAY	1	Y	M	1	PHONE	164	5	G/V	NO	CLEAR	1	3-4 MIN	LIKE STAR, YELLOW, MADE "U" TURN	C/J
100.	312	7/20	URBAN	NIGHT	2	Y	M	1	200-2	LETTER	4	G/V	G/S	GOOD	2	2-5 MIN	TRIANGLE, WHITE LIGHT APT, FLASHING	C/J
101.	316	7/21	URBAN	NIGHT	1	Y	M	1	LETTER	LETTER	2	G/V	NO	N/R	1	1-2 MIN	RD DISC W/YELLOW TINT, STEADY FLT	C/J
102.	322	7/22	URBAN	NIGHT	M	Y	M	1	200-2	NO	3	G/V	NO	CLEAR	2	4-5 MIN	EA, ROUND LIGHT, FLASH, STRAIGHT FLT	C/J
103.	324	7/24	AFB	NIGHT	4	A	B	1	LETTERS	LETTERS	10	G/V	NO	CLOUDY	1	FEW MIN	RD SILVER, RISING	C/J
104.	328	7/25	URBAN	DUSK	2	Y	F	1	PHONE	NO	3	G/V	NO	CLOUDY	1	15 MIN	BRIGHT LIGHT, MANUVERED	C/J
105.	330	7/25	URBAN	NIGHT	M	B	B	1	200-2	NO	2	G/V	NO	OVERCAST	1	1 MIN	FLASHING LIGHT	C/J
106.	349	7/27	URBAN	NIGHT	1	A	M	1	LETTER	LTR/164	6	G/V	NO	CLEAR	5	2 MIN	GROUP OF STARS, FORMATION, STRAIGHT FLT	C/J
107.	353	7/27	RURAL	NIGHT	1	Y	M	1	LETTER	LTR/164	8	G/V	BX	CLOUDY	1	10 MIN	LIKE PITH HELMUT, CONTRAIL, MANUVERED	C/J
108.	372	AUG	URBAN	NIGHT	5	A	B	1	PHONE	164	9	G/V	NO	FOG	1	10 MIN	DARK BLUE DISC, STRAIGHT FLT	C/J
109.	383	8/02	URBAN	DAY	3	Y	M	1	200-2	NO	5	G/V	NO	CLEAR	1	1 1/2-2 MIN	RD OBJ, ORANGE, STRAIGHT FLT, DBL CONTRAIL	C/J
110.	389	8/02	RURAL	NIGHT	1	A	M	1	LETTER	LTR/164	12	G/V	NO	CLEAR	1	2 MIN	A/C WITHOUT WINGS, FAST, SLIGHT RISE	C/J
111.	400	8/03	URBAN	NIGHT	3	Y	M	1	200-2	NO	4	G/V	NO	CLOUDY	1	5 MIN	ROUND, RED & BLUE, FLASHING BLUE STREAKS	C/J
112.	402	8/03	URBAN	NIGHT	1	A	F	1	FORM	NO	1	G/V	NO	CLEAR	1	N/R	ROUND FLASHING BLUE LIGHT	C/J
113.	431	8/04	URBAN	NIGHT	1	Y	F	1	PHONE	NO	3	G/V	NO	HZY	1	10 MIN	FLYING WING, FLASHING, HORSESHOE PATH	C/J
114.	439	8/05	URBAN	NIGHT	3	A	B	1	200-2	NO	4	G/V	NO	CLEAR	1	4-5 MIN	4 LIGHTS LIKE POINTED STAR, STRAIGHT	C/J
115.	440	8/05	URBAN	NIGHT	1	A	M	1	PHONE	NO	3	G/V	NO	N/R	1	25 SEC	LIKE STAEILLITE, STEADY FLT, HIGH SPEED	C/J
116.	442	8/05	URBAN	NIGHT	2	A	B	1	200-2	NO	6	G/V	NO	N/R	2	N/R	STAR LIKE FLASHING, BLINKING LIGHTS	C/J
117.	449	8/05	URBAN	NIGHT	2	B	F	1	LETTER	LTR/164	5	G/V	BX, TX	CLEAR	4	10 MIN (T)	4 LIGHTS, INVERTED STREETLIGHT,	C/J
118.	458	8/06	URBAN	NIGHT	2	Y	M	1	200-2	NO	4	G/V	NO	CLEAR	1	5-10 MIN	SILVER CIGAR SHAPED, STRAIGHT FLT	C/J
119.	465	8/07	RURAL	NIGHT	3	Y	F	1	FORM	LETTER	2	G/V	NO	N/R	1	1 MIN	BLUE/GREY OBJ W/RED & GREEN REVOLVE LTS	C/J
120.	470	8/08	URBAN	NIGHT	1	Y	M	1	FORM	LTR/164	5	G/V	NO	CLEAR	3	4 1/2 MIN	FLOURESCENT YELLOW SAUCERS, FORMATION	C/J
121.	479	8/09	RURAL	NIGHT	2	Y	M	1	200-2	NO	2	G/V	NO	CLEAR	1	30-40 SEC	SILVER STAR, STRAIGHT LEVEL FLT	C/J
122.	482	8/10	AFB	NIGHT	3	Y	M	1	200-2	NO	3	G/V	NO	CLEAR	1	3-5 MIN	TRIANGLE, RED GLOW ABOVE OBJ, LEVEL FLT	C/J
123.	484	8/10	URBAN	NIGHT	2	A	B	1	LETTER	NO	2	G/V	NO	N/R	1	45 SEC	WHITE LIGHT, MADE FIGURE "S"	C/J
124.	487	8/10	RURAL	NIGHT	1	A	M	1	LETTER	LTR/164	7	G/V	NO	CLEAR	2	90 SEC	4 LEAF CLOVER, ONE DIPPED	C/J
125.	491	8/11	URBAN	NIGHT	1	A	F	1	PHONE	NO	3	G/V	NO	HAZE	1	N/R	SATELLITE, SMOOTH FLIGHT	C/J
126.	493	8/11	URBAN	NIGHT	1	A	M	1	PHONE	LTR/164	4	G/V	TX	N/R	1	10-15 MIN	ELONGATED WHITE OBJ, FAST, JERKY, REVERSE	C/J
127.	495	8/11	URBAN	NIGHT	1	N		1	LETTER	LETTER/164	5	G/V	NO	CLEAR	1	2 MIN	OVAL OBJ, STRAIGHT FLIGHT	C/J
128.	498	8/11	URBAN	NIGHT	1	A	M	1	FORM	NO	2	G/V	NO	CLEAR	1	90 SEC	YELLOW, TRIANGULAR, STRAIGHT FLT TURN	C/J
129.	503	8/11-12	"	NIGHT	M	A	M	1	LETTER	NO	2	G/V	NO	CLEAR	1	5 MIN	WHITE STAR CIRCLING THE MOON	C/J
130.	506	8/12	URBAN	NIGHT	1	A	M	1	LETTER	NO	1	G/V	TX	N/R	2	N/R	DISC WITH 5 WHITE & YELLOW LIGHTS	C/J
131.	512	8/12	URBAN	NIGHT	1	Y	M	1	PHONE	NO	3	G/V	NO	CLOUDY	1	15 MIN	STAR, STRAIGHT FLT, FADE & REAPPEAR	C/J
132.	516	8/12	URBAN	NIGHT	5	Y	B	1	LETTER	LTR/164	4	G/V	NO	CLEAR	1	25 SEC	BRIGHT SATELLITE, FLIGHT TO WEST	C/J
133.	518	8/12	URBAN	NIGHT	4	Y	M	1	200-2	NO	2	G/V	NO	CLEAR	1	90 SEC	RD OBJ, STRAIGHT FLT, LOW, BIG, FAST	C/J
134.	519	8/13	URBAN	NIGHT	1	A	M	1	FORM	NO	2	G/V	NO	CLEAR	1	5 MIN	DARE GREY SAUCER, SLOW, BRIGHT, FLASHING LTS	C/J
135.	526	8/13	URBAN	NIGHT	1	A	M	1	FORM	NO	2	G/V	NO	CLEAR	1	5 MIN	DARE GREY SAUCER, SLOW, BRIGHT, FLASHING LTS	C/J
136.	533	8/15	URBAN	NIGHT	1	A	M	1	FORM	NO	2	G/V	NO	CLEAR	1	5 MIN	DARE GREY SAUCER, SLOW, BRIGHT, FLASHING LTS	C/J

137.	534	8/15	URBAN	DAY	1	A	F	(MULTI, PSYCH)	1	200-2	NO	5	G/V	NO	CLOUDY	1	1 MIN	SMALL, ROUND, WHITE, FAST, CIRCLED	C/J
138.	537	8/15	URBAN	NIGHT	3	A	B		1	PHONE	164	4	G/V	NO	CLEAR	1	15 MIN	STAR, ERRATIC MOTION	C/J
139.	542	8/16	URBAN	NIGHT	2	B	B	HOUSEWIFE	1	PHONE	NO	4	G/V	NO	CLOUDY	1	SHORT TIME,	SILVER, 3 WINDOWS, LOW	C/J
140.	543	8/16	URBAN	NIGHT	2	B	M		1	LETTER	NO	1	G/V	NO	N/R	2	30 SEC	WHITE SATELLITES, FORMATION, JET SOUND	JETS
141.	545	8/16	URBAN	NIGHT	2	A	B		1	LETTER	NO	1	G/V	NO	CLEAR	1	N/R	WHITE LIGHT, ERRATIC MOTION, ZIG-ZAG	C/J
142.	547	8/16	URBAN	NIGHT	6		B		1	PHONE	164/(NOT RET)	4	G/V	NO	HAZY	1	15 MIN	DULL SILVER, CIRCLING PERIODICALLY	C/J
143.	564	8/20	AFB	DAY	1	A	M	MILITARY	1	200-2	LETTER	5	G/V	BX	CLOUDY	1	3 MIN	RD FLAT DISC CIRCLING, RAPID ACCELER	C/J
144.	569	8/20	URBAN	NIGHT	1	Y	M	STUDENT UFO HOBBY	1	200-2	NO	3	G/V	NO	HAZY	1	25-30 SEC	ORANGE, OBLONG, 90 DEG TURN	C/J
145.	575	8/22	URBAN	DAY	1	A	M	SERVICE ENGR	1	200-2	NO	4	G/V	NO	HAZE	2	1-3 MIN, 2-1 MIN	RD WHITE, WING SHAPE, SOUND	C/J
146.	579	8/23	RURAL	DAWN	1		M		1	LETTER	LETTER	2	G/V	NO	N/R	2	4 MIN	ONE LARGE, ONE SMALL IN FORMATION	C/J
147.	583	8/23	URBAN	NIGHT	1	Y	F	STUDENT	1	200-2	NO	4	G/V	NO	CLEAR	1	15 MIN	ROUND, MOVED DOWN TO HORIZON	C/J
148.	597	8/25	RURAL	NIGHT	6	Y		STUDENTS	1	LETTER	LETTER	1	G/V	NO	N/R	1	N/R	LIKE SATELLITE, FLT TO NW	C/J
149.	604	8/26	ARMYB	NIGHT	9	A	M	MILITARY	1	200-2	NO	6	G/V	N/R	CLEAR	2	N/R	SEMI CIRCLE, FAST, JET NOISE	JETS
150.	606	8/26	ARMYB	NIGHT	M	A	M	MILITARY	1	200-2	NO	6	G/V	BX	CLEAR	2	N/R	LIKE NORTH STAR, IN FORMATION	JETS
151.	607	8/26	ARMYB	NIGHT	3	A	M	MILITARY	1	200-2	NO	6	G/V	N/R	CLEAR	1	N/R	MULTI COLORED GROUP OF LIGHTS, STR FLT	A/C
152.	608	8/27	URBAN	NIGHT	1	A	M	CLERK	1	LTR/FORM	LTR/164 (N/R)	4	G/V	NO	CLOUDY	9	10 SEC	STAR LIKE IN FORMATION (REGARDED AS ONE OBJ)	C/J
153.	610	8/27	URBAN	DUSK	1	A	M	MINISTER	1	200-2	NO	5	G/V	NO	CLOUDS	1	5-10 MIN	CIGAR SHAPED, LEVEL FLT	C/J
154.	616	8/29	URBAN	NIGHT	1	A	M		1	FORM	NO	1	G/V	BX	CLEAR	2	2 MIN EA	EGG SHAPED, HORIZON TO H. E-NW	C/J
155.	630	8/31	URBAN	NIGHT	1		M		1	LETTER	LETTER	2	G/V	TX	N/R	M	N/R	LIGHTS OVER ONE WEEK PERIOD, FAST	C/J
156.	636	9/01	RURAL	NIGHT	1	A	F		1	LETTER	LETTER	1	G/V	NO	N/R	1	N/R	TWO LIGHTS REVERSED DIRECTION (PHOTO)	C/J
157.	638	9/01	URBAN	NIGHT	1	A	M	UFO FAN	1	LETTER	LETTER	1	G/V	NO	N/R	1	FEW MIN	THREE LIGHTS TRIANGLE FORMATION RED/G.	C/J
158.	650	9/03	URBAN	NIGHT	1	A	M	INSURANCE AGNT	1	LETTER	LETTER	2	G/V	BX	CLEAR	1	2 MIN	ROUND CHANGED COLOR, ERRATIC, FADE	C/J
159.	662	9/05	NAS	NIGHT	1	A	M	MILITARY	1	200-2	LTR/164 (N/R)	4	G/V	NO	CLEAR	1	5 MIN	ROUND OBJ, RED & WHITE	C/J
160.	676	9/06	URBAN	NIGHT	3	A	B		1	164	LTR/164	4	G/V	NO	CLEAR	1	25 MIN	LARGE, RED, PORT HOLES	C/J
161.	683	9/07	URBAN	NIGHT	1	A	F	CLERK	1	200-2	NO	5	G/V	NO	CLEAR	6	4 MIN	OVEL, WHITE, FORMATION, HUM	C/J
162.	686	9/09	URBAN	NIGHT	5	B	B	INSURANCE AGNT	1	LETTER	LETTER	2	G/V	BX	CLEAR	5	15 MIN	DIAMOND, MULTI-COLORED, PULSATING, CIRCLING	C/J
163.	697	9/16	URBAN	DAY	3	Y	M	STUDENTS (UFO FANS)	1	LETTER	LETTER	2	G/V	BX	CLEAR	2	10 MIN	OVAL SILVER, STRAIGHT FLIGHT	C/J
164.	706	9/20	URBAN	NIGHT	2	A	M	LAB TECHNICIAN	1	200-2	NO	5	G/V	TH	CLEAR	1	3 MIN	BLUE-WHITE, ELONGATED, MADE LOOP&TURNS	C/J
165.	713	9/22	URBAN	NIGHT	1	A	F	ARTIST	1	LETTER	LTR/164	1	G/V	BX	CLEAR	1	25 SEC	ROUND MULTI-COLORED SMALL ARC	C/J
166.	715	9/23	URBAN	NIGHT	2	A	B		1	PHONE	NO	3	G/V	NO	CLEAR	2	15 MIN	ELONGATED, STRAIGHT FLT, DISAPPEARED&REA	C/J
167.	740	10/02	RURAL	DAWN	1	A	M	MILITARY	1	200-2	NO	4	G/V	NO	CLEAR	1	4 MIN	SATELLITE, STRAIGHT FLT TO WEST	C/J
168.	742	10/02	URBAN	DAY	2	Y	M	STUDENTS	1	164	NO	4	G/V	NO	CLEAR	1	30-45 SEC	SILVER FLAT BOTTOM, STRAIGHT FLT	C/J
169.	757	10/08	URBAN	DAY	1	Y	M	STUDENT	1	LETTER	LTR/164	6	G/V	NO	CLOUDY	1	1 MIN	BRIGHT, OVAL SHAPE, STRAIGHT FLT, REFLECT	C/J
170.	761	10/10	URBAN	NIGHT	6	B	B	INSURANCE AGNT	1	LETTER	LETTER	2	G/V	NO	N/R	1	N/R	TWO LIGHTS GREEN & WHITE, FAST, TURN	C/J
171.	762	10/10	URBAN	NIGHT	3	A	B	ENGINEER	1	PHONE	NO	4	G/V	NO	CLOUDY	3	4 MIN	ORANGE, LIKE VENUS, 30 DEG TURN	C/J
172.	763	10/11	URBAN	NIGHT	1	A	F		1	FORM	LTR/164	6	G/V	NO	CLEAR	1	5 MIN	SATELLITE, LOOP, HOVERED, CHANGED SHAPE	C/J
173.	768	10/14	URBAN	NIGHT	1	Y	M	STUDENT	1	LETTER	LETTER	3	G/V	NO	N/R	1	N/R	RED&WHITE, CIRCULAR, BLINKING	C/J
174.	800	10/29	RURAL	NIGHT	1	A	M	POLICE	1	PHONE	LTR/164	6	G/V	NO	CLEAR	1	15-20 SEC	DISC, STOPPED MADE TURN, ROSE	C/J
175.	801	10/30	URBAN	DAWN	1	A	M	REPORTER	1	PHONE	NO	2	G/V	NO	CLEAR	1	1 MIN	PINHEAD OF LIGHT, RAPID FLT	C/J
176.	805	10/31	URBAN	NIGHT	1	A	M	STUDENT	1	FORM	NO	2	G/V	BX	CLEAR	1	45 SEC	ROUND YELLOW, ERRATIC FLT	C/J
177.	810	11/02	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	FORM	NO	2	G/V	NO	CLEAR	1	5 MIN	DIM LIGHT OFF&ON BRIGHT, FADE, HOVER	C/J
178.	817	11/04	RURAL	NIGHT	2	B	B	PHONE	1	PHONE	LTR/PHONE	2	G/V	NO	N/R	2	2 MIN	NIGHT LIGHT ON/OFF, RED WHITE, SPARKS	JET
179.	823	11/05	URBAN	NIGHT	1	A	M	STUDENT	1	LETTER	LETTER	2	G/V	NO	CLEAR	3	4 MIN	CENTER WHITE, EDGE RED, PERFECT FORMATION	C/J
180.	825	11/05	URBAN	NIGHT	4	A	B	MECH ENGR	1	LETTER	NO	1	G/V	N/R	N/R	3	15 MIN	(T) LARGE PULSATING LIGHT MANUVERING	C/J
181.	829	11/09	URBAN	NIGHT	2	Y	M	STUDENTS	1	LETTER	LTR/164	6	G/V	NO	CLEAR	1	5 MIN	HEAD OF NAIL, SHARP TURN, VAPOR TRAIL	C/J
182.	833	11/12	URBAN	DAY	1	A	F	INTERIOR DECOR	1	FORM	NO	2	G/V	NO	OVERCAST	1	5 MIN	BRIGHT GOLD, SHAPE YACHT, A/C SOUND	COMV
183.	849	11/13	URBAN	NIGHT	1	Y	M		1	LETTER	LTR/164	6	G/V	NO	SC CLOUDS	1	5 MIN	DULL SILVER, STRAIGHT FLT, RING	C/J
184.	855	11/21	RURAL	NIGHT	2	B	M		1	LETTER	LETTER	1	G/V	BX	CLEAR	1	5 MIN	FLASHING RED LIGHT, SHOOTING LIGHT	C/J
185.	874	12/11	URBAN	NIGHT	2	Y	M		1	FORM	NO	2	G/V	BX	CLOUDY	1	30 SEC	SPHERE, PULSATING LIGHT	C/J

185:	876	12/11	HAWAII	NIGHT	M	A	M	MILITARY	1	CIVIL	NO	2	G/V	NO	N/R	1	15 MIN	RED/BLUE RUNNING LIGHTS, 1 ST	C/J
187:	883	12/17	RURAL	NIGHT	1	A	M		1	PHONE	NO	4	G/V	NO	CLOUDY	1	2-3 MIN	One RED LIGHT ONE 3 GREEN LITS	C/J (JAN)
188:	886	12/21	RURAL	NIGHT	1	A	M	PILOT EAL	1	200-2	NO	3	A/V	NO	CLEAR	1	11 MIN	PINK ORANGE WHITE, PICKED UP STROBE	C/J

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS HELICOPTERS

189:	23	1/20	URBAN	DAY	1	A	F	HOUSEWIFE	1	LETTER	LETTER	2	G/V	NO	N/R	1	N/R	MEDICINE CAPSULE, SHORT WINGS	CHARACTERISTIC
190:	37	1/27	URBAN	DUSK	1	A	M	ENGINEER	1	200-2	LETTER	3	G/V	BK	CLEAR	1	90 MIN	3-7 RED LIGHTS, MOTION INCL N.	H-3 #49921
191:	292	7/16	URBAN	NIGHT	1	A	F		1	FORM	NO	3	G/V	NO	CLEAR	1	45 SEC	ORANGE LGTS ON EDGE, LIKE HELO	EVAL BY INVEST'R
192:	347	7/26	RURAL	NIGHT	2	B	B	HOUSEWIFE	1	LETTER	LETTER	3	G/V	NO	OVERCAST	1	FEW MIN	RED LIGHT, CIGAR, SLOW, FLASHING	CHARACTERISTIC
193:	355	7/28	URBAN	NIGHT	4	A	B	TEACHER	1	LETTER	LTR/164	6	G/V	NO	CLEAR	1	15 MIN	FIESTA BALLOON, ERRATIC, NOISE	CHARACTERISTIC
194:	764	10/12	URBAN	NIGHT	1	Y	M	STUDENT	1	200-2	NO	4	G/V	NO	CLEAR	1	10 MIN	RED WHEEL, CIRCLE, WHITE	3H-3C
197:	661	9/04	RURAL	NIGHT	3	A	Y	HOUSEWIFE	1	LETTER	LETTER	3	G/V	NO	OVERCAST	1	FEW MIN	RED LIGHT, ERRATIC FLASHING	CHARACTERISTIC

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS AIRCRAFT ON PHOTO MISSIONS

195:	371	AUG	URBAN	NIGHT	1	A	M		1	LETTER	LETTER	2	G/V	NO	CLEAR	1	FEW MIN	SLOW A/C LRGE LIGHT, NOISE	INFRA RED
196:	748	10/03	O'SEA	NIGHT	1	A	M	MILITARY	1	200-2	NO	2	A/V	NO	CLEAR	1	100 SEC	BRIGHT FLASHES	STROBE

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS AIRCRAFT ON REFUELING MISSIONS

198:	39	1/28	RURAL	NIGHT	1	A	F	HAIRDRESSER	1	200-2	NO	5	G/V	NO	CLEAR	M	1 HOUR PERIOD	BRIGHT FLASHING LIGHTS	AREA
199:	592	8/24	URBAN	NIGHT	1	A	F		1	200-2	NO	4	G/V	NO	CLEAR	12	N/R	FORMATION OF LIGHTS SEPARATING	BORDER TOWN
200:	672	9/06	RURAL	NIGHT	1	A	M		1	LETTER	LETTER	1	G/V	NO	MIST	6	N/R	BRILLIANT LIGHTS, SHIFTING	IVORY SNOW
																		SPEEDWAY	

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS AIRCRAFT WITH ADVERTISING BANNERS OR TOWED LIGHTED SIGNS.

201:	344	7/26	URBAN	NIGHT	1	A	F	SECRETARY	1	200-2	NO	4	G/V	NO	HAZY	1	60-90 SEC	WHEEL WITH WHEEL AND DOME	ELECT CONFIRMED
202:	464	8/07	URBAN	NIGHT	2	A	B	DRAFTSMAN	1	200-2	NO	4	G/V	NO	OVERCAST	1	3 MIN	SLOW DRIFTING SIMILAR DERIGIBLE	ELECT "
203:	468	8/08	URBAN	NIGHT	8	B	B	HOUSEWIFE	1	200-2	NO	4	G/V	NO	OVERCAST	1	3 MIN	ROUND CIRCLED LIGHTS, BUZZING	" "
204:	481	8/10	RURAL	DUSK	1	A	M	MILITARY	1	200-2	NO	2	G/V	NO	N/R	1	10 MIN	ROW OF BRIGHT LIGHTS	" "
205:	563	8/20	URBAN	NIGHT	2	Y	M	STUDENTS	1	LETTER	LETTER	5	G/V	NO	N/R	6	2 HR PERIOD	MULTI COLORED LIGHTS	CHARACTERISTIC
206:	656	9/04	URBAN	NIGHT	M	B	B		1	LETTER	LTR/164	8	G/V	NO	HAZY	1	33 MIN	FERRIS WHEEL	CHARACTERISTIC
207:	807	11/06	RURAL	NIGHT	2	B	B		1	LETTER	LTR/164	6	G/V	NO	CLEAR	1	10 MIN	2 PLATES, SQUARE LIGHTS IN MID	CHARACTERISTIC
208:	811	11/02	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	FORM	LETTER	2	G/V	NO	CLEAR	1	30 MIN (T)	TILTING LIGHTS BACK&FORTH	NEON CONFIRMED
209:	820	11/04	URBAN	NIGHT	1	A	M	Q C ENGINEER	1	FORM	NO	2	G/V	NO	CLEAR	1	30 MIN (T)	10-2 PARTS FLT SQUARE PATTERN	"
210:	822	11/05	URBAN	DUSK	1	A	M	SALESMAN	2	FORM	NO	2	G/V	NO	SC CLOUDS	1	2 MIN	LIGHTS FLASHING ON&OFF	"
211:	830	11/10	URBAN	NIGHT	1	A	M	MED LAB TECH	M	LETTERS	NO	8	G/V	BK	N/R	1	20 MIN	ORANGE METALLIC LIGHTS CIRCULAR	CHARACTERISTIC

THE ELLINGTON AFB FOLDER ASSOCIATED WITH THE MIDWEST INVERSION FLAP CONTAINED FIFTY-ONE (51) OBJECTS EVALUATED AS POSSIBLE AIRCRAFT AND ONE (1) HELICOPTER REPORT NONE OF THESE ARE INCLUDED IN THE STATISTICS AS AIRCRAFT SIGHTINGS.

NASA Wallops Station
Wallops Island, Va.

February 5, 1965

Balloons Launched at Wallops

Routinely every morning Monday through Friday at about 8:00 a.m. we release a balloon which is about 6-feet in diameter (buff color) carrying a radiosonde (3" x 8" x 8") on a 50-ft. string. These balloons rise until they burst (approximately 100,000 ft. altitude). There is a paper parachute between balloon and radiosonde (which weighs a couple of pounds) that brings the radiosonde back to earth after the balloon bursts. This is a meteorological balloon which collects information on temperature, pressure, and density of the atmosphere.

Also through the day and night whenever a rocket launching is scheduled, one of these 6-ft. balloons is launched about one hour before launch. Same purpose as above.

In connection with the rocket firings, at about T-3 hours we launch one of these 6-ft. balloons carrying corner reflectors covered with silver foil (instead of a radiosonde) to determine winds aloft. These balloons may catch someone's eye occasionally due to the bright reflectors.

For special firings such as Nike-Cajuns, Aerobees, and Scouts, we launch little 3-ft. balloons (some buff color and some red) as frequently as every 5 minutes during the last hour of the countdown (no attachment), to obtain data on wind direction and velocity. As many as 30 or 40 may be released during a countdown due to holds, etc. These do not go as high as the 6-ft. balloons.

About 90 percent of the balloons released from Wallops (and Norfolk area also) end up over the water due to prevailing winds. Sometimes during the summer when prevailing winds are easterly, a few do end up over land.

-more-

Some other things launched at Wallops which may be visible to the public (probably not the Norfolk area) are:

Arcas rockets which have a 15-ft. orange and white parachute to lower the payload from an altitude in the neighborhood of 200,000 ft. Sometimes it takes 3 hours to impact in the water.

Arcas-Robin rockets which have a payload consisting of a 1-yard diameter sphere which is inflated to obtain meteorological data.

INCIDENT	DATE	LOCATION	TIME	#	AGE	SEX	CCS	#	TYPE	FOLLOW UP	PAGES	TYPE	OBSERVATION	OPTICAL AIDS	SKY	WINDS	SPEED	DIRECTION	#	ESTIMATED ALTITUDE	DURATION	SHAPE	SIZE	COLOR	DIRECTION	FLIGHT	SPEED	PHYSICAL SPECIMEN	RADAR	PHOTO	EVIDENCE	COMMENT		
THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS UPPER AIR RESEARCH BALLOONS AND ARE ASSOCIATED WITH A SPECIFIC LAUNCH																																LAUNCH SITE		
1.	49	2/02	WIDE AREA (FOR)	DAY	M	A	(B)	WX OBSERVER	M	PHONE 200-2	WPAFB PHONE	4	RADAR A/G VIS	THEODOLITE UNL VIS	120K	FROM WEST	FROM EAST	1	145,000'	5 HOURS	CONE, BALLOON, SILVER	STRAIGHT EASTERLY	NO	YES	NO	YES	PAGE, ARIZONA (NCAR)	NCAR, PACKAGE CUT DOWN OVER ARIZONA						
2.	256	7/06	(FOR)	DAY	M	A		BRITISH	1	TXW	NO	1	GD VIS	THEODOLITE N/R	45K			1	159,000' (EST)	N/R	CIRCULAR INVERTED CONE	STRAIGHT WEST 45K	NO	NO	NO	NO	INDIA (NCAR)	NCAR. OBSERVED FROM 3 LOCATIONS ON ISLAND						
3.	INFO	7/09	(FOR)	DAY	M					NEWSPAPERS								1	N/R	HOURS	CYLINDRICAL, WHITE	STRAIGHT WEST	NO	NO	NO	YES	INDIA (NCAR)	TRANSPARENT PLASTIC STOPPED CLOCKS...						
4.	269	7/12	FOUR STATES TWO	DUSK	M	B	(B)	MILITARY & CIVILIAN	M	PHONE 200-2	WPAFB PHONE	72	A/G VIS	SAT TRACK EX, TX	CLEAR	60K	FROM EAST	1	100,000'	6 HRS	BALLOON W/PACKAGE	STATIONARY SLOW HOVERING, TO WEST	NO	YES	YES	YES	CHURCHILL, CANADA (ONR)	PHOTO, RADAR & SATELLITE TRACKING DATA						
5.	282	7/13	STATE	D/N	M	A	(B)	MILITARY & CIVILIAN STUDENTS	2	PHONE 200-2	WPAFB PHONE	10	A/G VIS	NO	CLEAR	60K	FROM EAST	1	100,000'	1 HR (V) 27 M (R)	BALLOON W/GONDOLA	160 KNOTS TO WEST	NO	YES	NO	NO	CHURCHILL, CANADA (ONR)	RADAR ANALYSIS BALLOON TRACK						
6.	776	10/19	URBAN	DAY	5	Y			1	LETTER	165	8	GD VIS	OBJECT RECOVERED	N/A	N/A	N/A	1	GROUND	N/A	SILVER METALLIC BALLOON	N/A HIT POWER LINES AND EXPLODED	YES	NO	NO	YES	CAPE KENNEDY (MISSILE ACTY)	MFG BY G. T. SCHJELDAHL (BALLOON RETURNED)						
7.	777	10/20	RURAL	DAY	1	A	(F)	NOT REPORTED	1	LOCAL INV.	USAF/ WPAFB	6	GD VIS	OBJECT RECOVERED	N/A	N/A	N/A	1	GROUND	N/A	SILVER BALLOON	LANDED AT SNOW HILL MARYLAND	YES	NO	NO	YES	WALLOPS IS.	MFG BY G.T. SCHJELDAHL (BALLOON RETURNED)						
8.	INFO	10/23	RURAL	N/A	1			(FOREIGN)	1	TXW	WPAFB							1	GROUND	N/A	PACKAGE FROM RESEARCH BALLOON FOUND ON GROUND IN GREECE						NASA	NOT STATED IN REPORT.	MFG BY G.T. SCHJELDAHL (PACKAGE TO NORTHFIELD)					
THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS BALLOONS (WEATHER/RADIOSONDE/RAWINSONDE) AND HAVE AS THEIR ORIGIN A SPECIFIC LAUNCH.																																		
9.	268	7/12	URBAN	DAY	M	B	(B)	CIVILIANS	1	O.D.	164	7	GD VIS	NO	CLEAR	YES	YES	1	VERY HIGH	20 MIN	CIRCULAR, WHITE	ERRATIC RISING TO SOUTHWEST	NO	NO	NO	NO	SULPHUR GROVE, WY STATION	FLIGHT CORRESPONDS TO LOCAL BALLOON LAUNCH						
10.	367	7/31	URBAN	NIGHT	1	A	(M)	MILITARY	1	200-2	LOCAL	23	G/RADAR	NO	CLEAR	YES	YES	1	26 MI	90 MIN	SMALL, BLUISH-WHITE LIGHT WITH RED HAZE	WITH WIND	NO	YES	NO	YES	WILL ROGERS FLD OKLAHOMA	RADIOSONDE. SEE RADAR ANALYSIS (MIDWEST FLAP)						
11.	453	8/06	URBAN	NIGHT	1	A	(M)	MILITARY	1	200-2	NO	2	GD VIS	NO	CLEAR		FROM SW	1	N/R	20 SEC	ROUND, SOFTBALL, BLUE-GREEN	RISING ERRATIC TO NORTHEAST	NO	NO	NO	NO	SIOUX CITY AB	OBSERVER ON AIR BASE. OBJ DISAPPEARED INCL'DS						
12.	505	8/12	URBAN	NIGHT	1	A	(F)	HOUSEWIFE	1	200-2	LETTER	5	GD VIS	6 X BX	VIS 15 1/4	YES	YES	1	N/R	15 MIN	ROUND, DIME, RED	OVERHEAD RISING	NO	NO	YES	NO	LOCAL WX STA	NO IMAGE ON PHOTO (OBSR LOOKING FOR UFO'S)						
13.	688	9/12	URBAN	NIGHT	1	A	(M)	RETIRED TV REPAIRMAN	1	200-2	NO	5	GD VIS	NO	VIS 15M	VAR	S, SE SW	1	N/R	15-20 MIN	ROUND, 20" D, WHITE EXPANDING	HOVERED OVERHEAD FLIGHT TO HORIZON	NO	NO	NO	NO	LOCAL AIR BASE	BALLOON RELEASED AT TIME OF SIGHTING (ERROR IN D.)						
14.	710	9/22	SMALL TOWN	DAY	1	A	(M)	MINISTER	1	164	NO	2	GD VIS	NO	CLOUDY RAIN	15-20 MPH	FROM SE	1	75 YDS	12 MIN	SPHERE, 4' DIAMETER STEEL GREY	RISING TO WNW	NO	NO	NO	NO	BEHIDJI MUNI AIRPORT	TIME CORRESPONDS WITH WX BALLOON LAUNCH.						
15.	755	10/06	AFB	NIGHT	M	A	(M)	MILITARY	(PORTION OF COMPLEX CASE)									1	(SEE RADAR ANALYSIS FOR DETAILS)								EDWARDS AFB	TIME AND FLIGHT AGREE WITH WX BALLOON LAUNCH						
16.	794	10/27	URBAN	DAY	1	Y	(M)	15 STUDENT	1	200-2	NO	2	GD VIS	6 X 30 BINOC	VIS 15M	YES	YES	1	N/R	2-3 MIN	SAUCER, SMALL, WHITE	MADE LOOP IN NORTH AND DISAPPEARED	NO	NO	NO	NO	L.G. HANSCOM FIELD, BEDFORD	WX BALLOON RELEASED NEAR TIME OF SIGHTING						
THE FOLLOWING CASES CONTAIN REPORTED OBJECTS EVALUATED AS PROBABLE UPPER AIR RESEARCH OR WEATHER BALLOONS. EVALUATION IS BASED ON DESCRIPTION AND MOTION CHARACTERISTICS. NO SPECIFIC LAUNCH HAS BEEN DETERMINED.																																		
17.	29	01/23	ARMY BASE	NIGHT	3	A	(M)	ARMY M.P.'S	1	ARMY REPORT	NO	9	GD VIS	NO	VIS 14M	N/R	170°	1	100 YDS	22 MIN	LIGHT, 50' DIAMETER, SILVER-BLUE	RISING SPIRAL AND HOVERING	NO	NO	DR	NO	PROB WEATHER BALLOON							
18.	30	01/28	RADAR SITE	NIGHT	2	A	(M)	MILITARY	1	200-2	NO	5	G/RADAR	EX	VIS UNL	YES	FROM 160°	1	84 MI	40M (R) 3M (V)	A/BLIP SIZE, VIS AS 2 TEARDROPS, SILVER	SLOWLY DESCENDING	NO	YES	NO	NO	RESEARCH OR WX (SEE RADAR ANALYSIS) (ALASKA FLAP FOLDER)							
19.	34	01/25	RURAL	DAY	2	A	(B)	RR EMPLOYEE	1	200-2	NO	7	GD VIS	NO	CLEAR	YES	FROM 270°	1	N/R	3 MIN	ROUND, BRIGHT, LIGHT* BULB, ALUMINUM COLOR	RADAR RATE 20-24K SOUTH (OBSERVER HAS MULTIPLE REPORTS)	NO	NO	NO	NO	PROB WEATHER BALLOON. POSSIBLE 25/1200Z CHARLESTON W.VA. (AFTER VIRGINIA FLAP)							
20.	40	01/28	URBAN	DAY	1	A	(F)	HOUSEWIFE	1	200-2	NO	3	GD VIS	NO	CLEAR	10M		1	HIGHER	10 MIN	LIKE A/C WITHOUT WINGS	HOVERING AND DRIFTING TO WEST	NO	NO	NO	NO	POSS WX OR UPPER AIR. REPORTED BECAUSE OF FLAP IN AREA.							
21.	94	03/10	RURAL	DAY	1	A	(M)	50 NR	1	164	NO	4	GD VIS	NO	HAZE	NO	NO	1	300 YDS	5 MIN	BALL, 10' D., DULL GREY COLOR.	HOVERING AND DISAPPEARING IN BRIGHT FLASH	NO	NO	NO	NO	FLASH LIKE S-BREAK OF LIGHTNING. POSSIBLE WX BALLOON BURSTING							
22.	130	04/05	IRAN	DAY				USN	1	TXW	NO	1	GD VIS	SEXTANT	N/R	N/R	N/R	1	UNDER 5,000 FT	2 HRS	VERTICAL CAPSULE, SILVER	NORTHERLY, APPEARED CONTROLLED	NO	NO	NO	NO	REGARDED AS A CONTROLLED BALLOON BY REPORTING OFFICIALS							
23.	133	04/08	URBAN	DAY	1			N/R	1	PHONE	NO	1	GD VIS	NO	NO	NO	NO	1	VERY HIGH	SEVERAL MINUTES	GREYISH-WHITE, HAZY	CIRCLING TO NORTH	NO	NO	NO	NO	POSSIBLE WEATHER BALLOON							
24.	135	04/09	URBAN	DAY	2	A	(M)	MILITARY	2	200-2	NO	4	AIR VIS	NO	CLEAR		EAST	1	OVER A/C at 44,000	30 MIN	ROUND WHITE OBJECT	STATIONARY AND TO 140 DEGREES	NO	NO	NO	NO	PROBABLE UPPER AIR BALLOON. PILOTS REGARDED OBJECT AS BALLOON. LOCATION MINNESOTA.							
25.	204	06/05	SMALL TOWN	NIGHT	1	Y	(M)		1	LETTER	NO	4	GD VIS	40 X 175 TELESCOPE	N/R	N/R	N/R	1	N/R	15-20 MIN	ROUND, SILVER, WITH 3 ANTENNAS ON BOTTOM	STATIONARY, HOVERING IN NW	NO	NO	NO	NO	POSSIBLE UPPER AIR BALLOON WITH PACKAGE							
26.	214	06/19	URBAN	DUSK	4	A	(M)	2 ENGINEERS	4	200-2	PHONE HYNEX	11	GD VIS	6 X 30 BX	CLEAR	N/R	N/R	1	N/R	20 MIN	CIRCULAR, LIKE POLISHED CHROME	STATIONARY OVERHEAD APPARENTLY TO NW	NO	NO	NO	NO	MOST LIKELY UPPER AIR. DISAPPEARED BY MOVING ONTO EARTH'S SHADOW.							
27.	237	06/28	URBAN	NIGHT	3	A	(M)	PHYSICIST	1	200-2	NO	3	GD VIS	NO	CLEAR		FROM 110°	1	N/R	25 MIN	ROUND SMALL STEADY LIGHT 2d MAGNITUDE, WHITE	FIGURE "W" OF 20° AMPLITUDE. TO EAST	NO	NO	NO	NO	POSSIBLE WEATHER BALLOON. DISAPPEARED BEYOND MOUNTAINS.							
28.	241	07/03	URBAN	NIGHT	5	A	(M)	3 TOWER OPR	1	PHONE	LETTER	21	GD VIS	TELESCOPE	CLEAR		N/R	1	10-15M	7 MIN	ROUND LIGHT, BRIGHTER THAN STARS	ERRATIC, CLIMBING FROM LOW TO HIGH W.	NO	NO	NO	NO	RED OBJECT DROPPED UFO. PROBABLE BALLOON WITH RADIOSONDE FALLING.							
29.	246	07/04	(FOR)	NIGHT	4	A	(M)	MILITARY	1	200-2	NO	4	GD VIS	NO	3500 C	N/R	N/R	1	EXTREME	45 MIN	BRIGHT, STAR-LIKE	OVERHEAD, STATIONARY	NO	NO	MAP	NO	REPORT CONSISTS OF A HOVERING LIGHT. NO MAJOR ASTRO BODY IN REPORTED POSITION.							
30.	317	07/21	URBAN	NIGHT	5	A	(B)	MAN & WIFE	1	200-2	PHONE	8	GD VIS	UNL VIS	UNL VIS	N/R	N/R	2	HIGH	45 MIN	OBLONG, SILVER, 2X AS BRIGHT AS NORTH STAR	ZIG-ZAG TO SE.	NO	NO	NO	NO	2 OBJECTS CLOSE TOGETHER SEPARATING WITH TIME. PALESTINE LAUNCH REMOTE POSS. (ELLINGTON AFB FOLDER) PROBABLY REPORTED BECAUSE OF FLAP. POSSIBLE WX BALLOON							
31.	368	08/03	URBAN	NIGHT	1	A	(M)	NOT STATED	1	LOCAL (ELLINGTON AFB)	LETTER	7	G/RADAR	N/A	N/A	NO	NO	1	OVER 55,000'	30 MIN	ROUND, BASEBALL, BRIGHT RED AND YELLOW	ERRATIC. DISAPPEAR UP	NO	NO	NO	NO	RADAR ANALYSIS INDICATES BALLOON. UPPER AIR ON BASIS OF ALTITUDE AND DURATION.							
32.	445	08/05	URBAN	NIGHT				RADAR	1	200-2	LETTER	7	G/RADAR	N/A	N/A	NO	NO	2	100,000'	45 MIN	SMALL BLIP	SLOW RANDOM	NO	YES	NO	NO	PROBABLY RADIOSONDE OR RAWINSONDE WITH TRANSMITTER. (REPORT LATE)							
33.	539	08/16	URBAN	DAY	2	Y		15 YRS	1	200-2	NO	3	GD VIS	NO	CLOUDY	NO	NO	1	ABOVE CLOUDS	30 MIN	SILVER WITH OBJECT DANGLING FROM BOTTOM	CLIMBING TO WEST	NO	NO	NO	NO	PROBABLY WX BALLOON. OBJECT REPORTED TO BE OVER AIR BASE.							
34.	614	08/28	USAFB	NIGHT	5	A	(M)	MILITARY	1	200-2	NO	5	GD VIS	7 X 50 BX	VIS 15M		FROM WEST	1	N/R	2 HOURS	ROUND, SMALL, BRIGHT SILVER COLOR	RISING S-N RANDOM INCL HOVERING	NO	NO	NO									

- (1) Give your name and address.
- (2) Where were you when you saw the meteor? (If the town is small please give county as well.)
- (3) Give the date, hour and minute when the meteor appeared; also kind of time used.
- (4) In what direction did it appear (or in what direction was it first seen)? This is not asking in what direction it was going!
- (5) In what direction did it disappear (or in what direction was it last seen)? For questions 4 and 5, simply N, E, S, or W is not accurate enough, unless these were the exact directions. If compass is used, state it; also if magnetic correction has been applied to compass reading.
- (6) At what height did it appear? (Use degrees in answering.)
- (7) At what height did it disappear? (Use degrees in answering.)
- (8) Did it pass directly overhead (i.e., through the zenith)?
- (9) If not, to which side of the zenith did it go, and how far from it? (Use degrees in answering.)
- (10) Did it appear to reach the horizon? What sort of a horizon have you?
- (11) What angle did the path of the meteor make with the horizon and in which direction was it then going?
- (12) If you are familiar with constellations describe the path of the meteor through the sky with reference to stars.
- (13) Did the meteor appear to explode?
- (14) What was the duration of its flight in seconds?
- (15) Describe the train if one was left. If it lasted long enough to show drift, most carefully tell in what direction train drifted. Give sketch, if possible, showing this with regard to horizon.
- (16) What was the duration of the train in seconds?
- (17) Did you hear any sound? How long after seeing the meteor was it before you heard this sound?
- Did you hear an actual explosion? How long after seeing the explosion was it before you heard it?
- (18) Of what color was the meteor?
- (19) What was the size of the meteor? (Compare it with the Moon or with a planet or star.)
- (20) Was more than one body seen before the explosion (if any)?
- (21) What was condition of sky at time?
- (22) Give names and addresses of others who saw the meteor.
- (23) Please mail this reply to

Charles P. Oliver
 AMERICAN METEOR SOCIETY
 521 N. Wynnewood Ave
 Narberth, Pennsylvania 19072

<u>#</u>	<u>ITEM</u>
1	BALLOON LAUNCH LOCATION
2	EFFECTS OF SUNLIGHT ON BALLOON AT DAWN/DUSK
3	ROAB (WEATHER BALLOON)
4	WEATHER BALLOON WITH RADAR REFLECTOR
5	RADIOSONDE BALLOON
6	MOBY DICK (UPPER AIR)
7	UPPER AIR WITH ATTACHMENTS
8	PILLOW BALLOON
9	CLUSTER BALLOON
10 - 11	SCHJELDAHL MYLAR PLASTIC BALLOON
12	SCHJELDAHL MYLAR PLASTIC BALLOON WITH FINS

ASTRONOMICAL SIGHTINGS

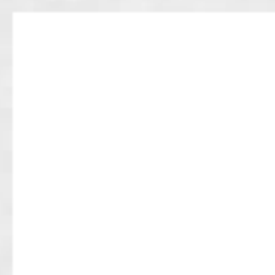
ASTRONOMICAL SIGHTINGS

101 Cases contained objects evaluated as meteors. Evaluation is performed by analysis personnel within the section on the basis of description, motion, and duration. These analysis are reviewed periodically by Dr. Hynek and concurrence is mandatory for final evaluation. These reports are then forwarded to Dr. Charles P. Olivier of the American Meteor Society for whatever action he deems advisable.

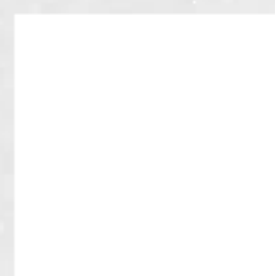
135 Cases contained objects evaluated as stars/planets. These reports are evaluated by analysis personnel within the section on the basis of the reported characteristics of the object, duration, the position of the object in the sky and its motion. Again Dr. Hynek must concur with the analysis prior to evaluation of a report as astronomical in nature.

The astronomical (other) category can best be explained by an examination of those cases evaluated and placed in this category. Some of these cases are evaluated by local astronomers having a knowledge of the particular phenomena because of the locale and atmospheric conditions. Examples: Tab A - Comet, Tab C - Moonlight. The remainder are evaluated by analysis personnel within the section and the evaluation is concurred with by Dr. J. Allen Hynek (Project Consultant). Cases of sun-dogs and parhelia are forwarded to Dr. Donald Menzel because of his particular interest in these case studies.

<u>TAB</u>	<u>ITEM</u>
A.	LETTER FROM DR. OLIVIER DATED 28 DECEMBER 1965
B.	COMET
C.	MOON
D.	REFLECTED MOONLIGHT
E.	SUN
F.	PARHELIA
G.	SOLAR IMAGE (FROM GROUND)
H.	SOLAR IMAGE (FROM A/C)



A



UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 4

Flower and Cook Observatory

1965 Dec. 28

Major Hector Quintanilla, USAF
Chief, Project Blue Book.
Wright-Patterson, AFB, Ohio.

Dear Major Quintanilla:

Thank you for your letter of Dec. 20, bringing a set of reports from Miss Ochipa. Having read them over, when you designated them as "very unscientific", you were very charitable. Nevertheless I am glad to have them for our files and did find one one definite statement about the Geminid meteors we can use. The good *lady* means well and I will send her Bul.17 in hopes she can get into her head what we need in a fireball report.

The large batch of reports on first six months of 1965, you kindly sent me in August, have now been gone over in detail and 17 had enough to justify their being entered on fireball cards, and one more refers to a fireball we already had a card for. The rest of the reports are too uncertain for our card file; none however need any comment of value to you, so far as I see.

Those of your reports which have the small altitude and azimuth diagrams on last page are the ones most likely to be of value in any possible computations of heights and paths. The diagrams are very good. They help visualize what one has seen and makes it easier to get the results on paper so they are intelligible.

It is a mystery to me that so many educated people can say so much on a fireball and leave out the essential data, namely where in the sky it started and where ended, giving angular coordinates. Every report would be valuable if these were given, but regretfully they are not. But extensive use of the diagrams should help greatly.

Again thanking you for your valuable help to the A.M.S. in our work, and with best wishes for 1966, I am

Sincerely yours,

Charles P. Olivier
Charles P. Olivier.

C. P. OLIVIER
AMERICAN METEOR SOCIETY
521 N. WINDSOR AVE
NARBERTH, PA
19032

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

B

HISTORY OF PROJECT

Following the Kenneth Arnold sighting on 24 June 1947, wide news coverage of public reports of "flying discs or saucers" created sufficient concern at high military echelons to authorize AMC to conduct a preliminary investigation into these reports. Early correspondence indicates that U. S. Military Leaders were concerned that the objects reported were an aircraft configuration more advanced than those possessed by the United States Armed Forces. A letter, 23 September 1947, from Lt. General Twining of AMC to the Commanding General of the Army Air Forces, expressed the opinion that there was sufficient substance in the reports to warrant a detailed study.

On 30 December 1947, a letter from the Chief of Staff directed AMC to, "... set up a project whose purpose was to collect, collate, evaluate and distribute to interested Government Agencies and contractors all information concerning UFO sightings and phenomena in the atmosphere which can be construed to be of concern to the National Security. . ."

The Technical Intelligence Division of AMC issued Hq AMC Technical Instruction No 2185, 11 February 1948, and the project was inaugurated with a code name of "SIGN." The code name "SIGN" was changed to the code name "GRUDGE" on 16 December 1948. A report released in February 1949 covering analysis of the first 273 incidents concluded that, while no definite and conclusive evidence existed, evaluation of reports of unidentified objects was a necessary activity of Military Intelligence Agencies.

After the Project "SIGN" Report, work continued along the same lines and a Project "GRUDGE" Report was published and released in August 1949 by AMC. This report contained analysis of 244 cases and concluded that Unidentified Flying Objects reports resulted from: a) misinterpretation of conventional objects, b) mass hysteria or "War Nerves", c) hoaxes and/or d) Psychopathological persons. Based upon these conclusions AMC recommended that investigation and study of this type of report be reduced in scope. Major portions of this work were performed under contract by Ohio State University, Professor Hynek (Present Consultant to AF on Project Blue Book), The Rand Corporation, Dr. G. Valley, Dr. Paul Fitts, Air Weather Service, 3610th Electronic Section and the U. S. Weather Bureau.

Following publication of the "GRUDGE" Report, the Air Force continued to investigate sightings, inasmuch as it is an Air Force responsibility to identify and analyze Aerial Phenomena that could possibly be a menace to the United States. Much of the Scientific and Technical work during 1950 and 1951 centered around Project "Twinkle" and the Green Fireball studies of Dr. LaPaz in the Southwestern United States. Project "Twinkle" Final Report was completed on 27 December 1951. During December 1951 Colonel Kirkland and Lt. Ruppelt made a visit to [redacted] to discuss the feasibility of a scientific study from the data collected since the program's inception. Thus, Project Blue Book's Special Report #14 came into being.

During the phase in which Special Report #14 was in preparation (1952 - 1954) the project attracted a Public Relations aspect that remains with it today. This came about through a National interest in reported sightings, Science-Fiction publications of alleged contacts with visitors from outer space, formation of pseudo-scientific organizations, hobby clubs, and self-appointed individuals who investigated UFO sightings. The radar sightings in Washington D. C. during July 1952 tended to give substance to UFO reports. News coverage during this period was extremely high and General Samford conducted a press conference on 29 July 1952 to explain the situation.

With the increased volume of reports pouring in, a Scientific Advisory Panel on UFO was established in late 1952. At a meeting held during 14 - 18 January 1953 all available data was examined. Conclusions and recommendations of this panel were published in an unclassified report, and made public. The panel concluded that UFO's did not threaten the National Security of the U. S. and recommended that the "Aura of mystery" attached to the project be removed.

By 1953 Air Force responsibility for the UFO program had become firmly established. It was now apparent that some directives were necessary in order to standardize investigative procedures and formulate policy. AFR 200-2 was written and the final publication was distributed in August 1954. This regulation states the purpose, investigative procedures and policies relating to release of information. Special Report #14 was completed on 17 March 1954. It concluded that on the basis of the observations reported to the Air Force it was highly improbable that any of these reports represent observations of technological developments outside the range of present day scientific knowledge. In accordance with the recommendations of the Scientific Panel and provisions for release of information outlined in AFR 200-2 the report was declassified and released to the general public on 5 May 1955.

After 1955 the project concerned itself with investigation of sightings, evaluation of the data and release of information to proper news media. This information is given to the public in the form of a news release called the "FACT SHEET". These, or similar releases have been made periodically since 1955. All data collected has been in accordance with the conclusions of the Scientific Panel in January 1953. Still, the "Flying Saucer Myth" has remained in the public eye, and has necessitated many conferences and briefings among Military, Civilian, Scientific, and Congressional members. Among the most significant of these are: a) 4 October 1956, The General Lewis Special Briefing, b) 16 September 1957, Defence Science Board Briefing, c) 31 January 1958, McClellan Sub-Committee Briefing, d) 8 August 1958, McCormack Sub-Committee Briefing, e) February 1959, Washington D. C. Policy Meetings and f) 11 - 15 July 1961, Congressional Briefing (Mr. Robert Smart).

As far back as 1952 recommendations have been made to discontinue the project or transfer it to civilian agencies or contractors. However, continuation of the project under Air Force auspices is likely. A letter from General Watson on 7 July 1955 to General Samford expressed factors that are still pertinent, ". . . is the fact that complete reliance on a contractor would not reduce the responsibility of and therefore the load carried by the Air Force. . . ." Also, various studies have been made to transfer the project to other organizations within the Air Force.

CURRENT SITUATION: Personnel associated with the project are engaged in receipt of UFO reports, investigation, analysis, and evaluation of these reports and maintenance of research and correspondence files. In addition, information is supplied to SAFOI-CC upon which to base a reply to the more than 2,000 letters a year from individuals requesting information on the UFO program. From 1962 - 1965 the files were reviewed and placed in a standard format. Statistics were recomputed on the bases of the actual case files. The fact sheet was revised to provide information most often requested by individuals and to disseminate the yearly statistics. Periodic case summaries on cases of public interest are released. The current AFR 200-2 is under revision. Present Project Officer is Major Hector Quintanilla, Jr..

Intelligence Activities

UNIDENTIFIED FLYING OBJECTS (UFO)

This regulation establishes the UFO Program to investigate and analyze UFO's over the United States. Such investigation and analysis are directly related to Air Force responsibility for the defense of the United States. The UFO Program provides for the prompt reporting and rapid identification needed for successful "identification," which is the second of the four phases of air defense—detection, identification, interception, and destruction. All commanders will comply strictly with this regulation.

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SECTION A—GENERAL

1. Explanation of Terms. To insure proper and uniform usage in UFO screenings, investigations, and reportings, an explanation of the objects follows:

a. *Familiar or known objects:*

(1) Aircraft, balloons, kites, birds, searchlights, astronomical bodies (meteors, planets, stars, comets), pilotless aircraft, missiles, satellites in orbit, and others identified by the observer as normal appearing objects.

(2) Flying objects determined to be aircraft. These generally appear as a result of ADIZ violations and often prompt the UFO reports submitted by the general public. They are readily identifiable as, or known to be, aircraft, but their type, purpose, origin, and destination are unknown. Air Defense Command is responsible

for reports of "unknown" aircraft, which should not be reported as UFO's under this regulation.

(3) Aircraft flares, jet exhausts, condensation trails, blinking or steady lights observed at night, lights circling or near airports and airways, and other phenomena or objects known to be emanating from, or to be indications of, aircraft. These should not be reported under this regulation, as they do not fall within the definition of a UFO.

b. *Unidentified Flying Objects.* Any aerial phenomena, airborne object or objects which are unknown or appear out of the ordinary to the observer because of performance, aerodynamic characteristics, or unusual features.

2. Objectives. Air Force interest in UFO's is three-fold. First, as a possible threat to the security of the United States and its forces; sec-

This regulation supersedes AFR 200-2, 14 September 1959, as amended.

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ond, to determine the technical or scientific characteristics of any such UFO's; third, to explain or identify all UFO sightings as described in paragraph 1b.

a. *Air Defense.* The great majority of flying objects reported have been conventional, familiar things of no great threat to the security of the United States and its possessions. However, since the possibility exists that UFO's reported may be hostile or new foreign air vehicles of unconventional design, it is imperative to report sightings rapidly, factually, and as completely as possible.

b. *Technical and Scientific.* The Air Force will continue to collect and analyze reports of UFO's until all are scientifically or technically explained or until the full potential of the sightings has been exploited. In performing this task the following factors are of great importance:

(1) To measure scientific advances, the Air Force must have the latest experimental and developmental information on new or unique air vehicles or weapons.

(2) The possibility exists that foreign countries may develop air vehicles of revolutionary configuration or propulsion.

(3) There is need for further scientific knowledge in such fields as geophysics, astronomy, and physics of the upper atmosphere which the study and analysis of UFO's and similar aerial phenomena may provide.

(4) The reporting of all pertinent factors will have a direct bearing on scientific analyses and conclusions of UFO sightings.

c. *Reduction of Percentage of UFO "Unidentifieds."* Air Force activities must reduce the percentage of unidentifieds to the minimum. Analysis thus far has explained all but a few of the sightings reported. These unexplained sightings are carried statistically as unidentifieds. If more immediate, detailed, objective data on the unknowns had been available, probably these, too, could have been explained. However, because of the human factors involved, and the fact that analyses of UFO sightings depend primarily on the personal impressions and interpretations of the observers rather than on accurate scientific data or facts obtained under controlled conditions, the elimination of all unidentifieds is improbable.

3. Responsibilities:

a. *Reporting.* Base commanders will report all information and evidence of UFO sightings, including information and evidence received from other services, Government agencies, and civil-

ian sources. Investigators are authorized to make telephone calls from the investigation area direct to the Foreign Technology Division (FTD), of the Air Force Systems Command, Wright-Patterson Air Force Base, Ohio (Clearwater 3-7111, ext. 69216/66378). The purpose of the calls is to report high priority findings. (See section C.)

b. *Investigation.* The commander of the Air Force base nearest the location of the reported UFO sighting will conduct all investigative action necessary to submit a complete initial report of a UFO sighting. The initial investigation will include every effort to resolve the sighting. An Air Force base other than that closest to the scene of a reported UFO sighting will refer the sighting immediately to the commander of the nearest Air Force base for appropriate action. (See paragraph 5.)

c. *Analysis.* The Air Force Systems Command Foreign Technology Division will analyze and evaluate:

(1) Information and evidence reported within the United States after the investigators of the responsible Air Force base nearest the sighting have exhausted their efforts to identify the UFO.

(2) Information and evidence collected in overseas areas.

EXCEPTION: The AFSC (FTD), independently or in participation with pertinent Air Force activities, may conduct any additional investigations necessary to further or conclude its analyses or findings.

c-A (d) *Findings.* AFSC (FTD) will prepare a final report on each sighting after collection and analysis of data, and will forward a copy of the report to HQ USAF (AFCIN).

(e) *Public Relations and Information Services.* The Office of Information, Office of the Secretary of the Air Force, will be responsible for releasing information on sightings, and, in coordination with AFSC (FTD), answering correspondence from the public regarding UFO's. (See paragraphs 7 and 8.)

f. *Congressional Inquiries.* The Office of Legislative Liaison will:

(1) In coordination with the AFSC (FTD) and/or the Office of Information, when necessary, answer all congressional mail regarding UFO's addressed to the Secretary of the Air Force and Headquarters USAF.

(2) Forward those inquiries which are scientific and technical to the FTD for information on which to base a reply. The FTD will re-

turn this information to the Office of Legislative Liaison for reply to the inquiry.

(3) Process requests from congressional sources in accordance with AFR 11-7.

g. *Cooperation.* All Air Force activities will cooperate with Air Force UFO investigators to insure the economical and prompt success of investigations and analyses. When feasible, this cooperation will include furnishing air or ground transportation and other assistance.

4. Guidance. The thoroughness and quality of a report or investigation of UFO's are limited only by the skill and resourcefulness of the person who receives the initial information and/or prepares the report. The usefulness and value of any report or investigation depend on the accuracy and timeliness of its contents. Following are aids for screening, evaluating, and reporting sightings:

a. Careful study of the logic, consistency, and coherence of the observer's report. An interview with the observer by personnel preparing the report is especially valuable in determining the source's reliability and the validity of the information given. Factors deserving particular attention are the observer's age, occupation, and education, and whether his occupation involves observation reporting or technical knowledge. A report stating that a witness is completely familiar with certain aspects of a sighting should indicate his or her specific qualifications.

c-A (b) Theodolite measurements of changes ~~of~~ azimuth, and elevation and angular size.

c. Interception, identification, or air search, if appropriate and within the scope of air defense regulations.

d. When feasible, contact with local aircraft control and warning (ACW) units, and with pilots and crews of aircraft aloft at the time and place of sighting. Also, contact with any other persons or organizations that may have factual data on the UFO or can offer corroborating evidence—visual, electronic, or other.

e. Consultation with military or civilian weather forecasters for data on tracks of weather balloons released in the area and any unusual meteorological activity which may have a bearing on the UFO.

f. Consultation with navigators and astronomers in the area to determine whether any astronomical body or phenomenon would account for the sighting.

g. Contact with military and civilian tower operators, air operations units, and airlines to

determine whether the sighting could have been an aircraft. Local units of the Federal Aviation Agency (FAA) are often of assistance in this regard.

h. Contact with persons who may know of experimental aircraft of unusual configuration, rocket and guided missile firings, or aerial tests in the area.

i. Contact with photographic units or laboratories. Usually, these installations have several cameras available for specialized intelligence or investigative work. Photography is an invaluable tool for use, where possible, in investigating and analyzing UFO sightings. (See paragraph 18).

j. Whenever possible, selecting as a UFO sighting investigator an individual with a scientific or technical background as well as experience as an investigator.

k. Submission of reports on all sightings even though identification may be assumed by the preparing officer under paragraph 16 of this regulation.

5. Reporting UFO Information. Both the Assistant Chief of Staff, Intelligence, Headquarters USAF, and the Air Defense Command have a direct and immediate interest in the facts pertaining to UFO's reported within the United States. All Air Force activities will conduct UFO investigations to the extent necessary for their required reporting action (see paragraphs 14, 15, and 16). No activity should carry an investigation beyond this point, unless the preparing officer believes the magnitude (intelligence significance or public relations aspects) of the case warrant full scale investigation. The officer may contact the FTD of AFSC (Clearwater 3-7111, ext 69216/66378) at Wright-Patterson Air Force Base, Ohio, to obtain verbal authority for continued investigation.

SECTION B—PUBLIC RELATIONS, INFORMATION, CONTACTS, AND RELEASES

6. Maintaining Public Relations. The Office of Information is responsible for:

a. In coordination with the AFSC (FTD) when necessary, maintaining contact with the public and the press on all aspects of the UFO program and its related activities.

b. Releasing information on UFO sightings and results of investigations.

c. Periodically releasing information on this subject to the general public.

d. Processing, answering, and taking action on correspondence received from the general public, pertaining to the public relations, interest, and informational aspects of the subject. (See paragraph 8.) This office will forward correspondence and queries which are purely technical and scientific to AFSC (FTD) for information on which to base a reply.

7. Releasing Information. The Office of Information, Office of the Secretary of the Air Force, will release to the public or unofficial persons or organizations all information or releases concerning UFO's, regardless of origin or nature. This includes replies to correspondence (except congressional inquiries) submitted direct to the AFSC (FTD) and other Air Force activities by private individuals requesting comments or results of analyses and investigations of sightings.

8. Exceptions. In response to local inquiries regarding any UFO reported in the vicinity of an Air Force base, the commander of the base concerned may release information to the press or the general public only after positive identification of the sighting as a familiar or known object. The commander must exercise care not to reveal any classified aspects of the sighting or names of persons making reports. (See paragraph 17.) If the sighting is unexplainable or difficult to identify, because of insufficient information or inconsistencies, the only statement to be released is the fact that the sighting is under investigation and information regarding it will be available at a later date. After completion of investigative action, the commander may release the fact that the AFSC (FTD) will review and analyze the results of the investigation. He will then refer any further inquiries to the local Office of Information.

9. Release by Non-Air Force Sources. If newsmen, writers, publishers, or private individuals desire to release unofficial information concerning a UFO sighting, Air Force activities will make every effort to assure that the statements, theories, opinions, and allegations of these individuals or groups are not associated with or represented as official information.

10. Contacts. Private individuals or organizations desiring Air Force interviews, briefings, lectures, or private discussions on UFO's will direct their requests to the Office of Information, Office of the Secretary of the Air Force. Air Force personnel, other than those of the Office of Information, will not contact private individuals on UFO cases, nor will they discuss their operations and functions with unauthorized persons unless so directed, and then only on a "need-to-know" basis.

SECTION C—PREPARING AND SUBMITTING REPORTS

11. General Information:

a. Paragraphs 2 and 5 will serve as aids and guidance to screenings, investigations, and reportings. Paragraph 14 contains an outline of the reporting format. Activities initially receiving reports of aerial objects and phenomena will screen the information to determine whether the report concerns a valid UFO within the definition of paragraph 1b. Reports not within that definition do not require further action under the provisions of this regulation.

b. To assist activities and personnel responsible for handling, screening, and processing initial, incoming UFO information, a summary follows of the general sources and types of reports:

(1) Generally, initial UFO reports originate from two sources:

(a) Civilian (airline, private, and professional pilots, tower operators, technical personnel, casual observers, and the public in general), by correspondence, telephone or personal interview;

(b) Military units and personnel (pilots, observers, radar operators, aircraft control and warning units, etc.), by telephone, electrical message, or personal interview;

(2) Generally, UFO reports received from civilian sources are of two types:

(a) Those referring strictly to an observed UFO, containing either detailed or meager information;

(b) Those referring only in part to an observed UFO, but primarily requesting information on some aspect of the UFO program.

c. Reports considered to fall primarily in a public relations or information service category (see paragraphs 7, 8, 9, and b(2) above) are of primary interest to the Office of Information. UFO data sufficient for investigation and/or analysis may be extracted before referral to that office.

12. Methods for Transmitting Reports:

a. Together with any necessary screenings and investigations preparatory to reporting, report all information on UFO's promptly. Electrical transmission with a "Priority" precedence is authorized for reports under 3 days from date of sighting. Electrically transmitted reports over 3 days old should carry a "Routine" precedence.

b. Submit written reports of sightings over 3 days old on AF Form 112, "Intelligence Report,"

PROJECT BLUE BOOK

The United States Air Force has the responsibility under the Department of Defense for the investigation of unidentified flying objects (UFOs). The name of this program, which has been in operation since 1948, is Project Blue Book. It has been identified in the past as Project Sign and Project Grudge.

Air Force interest in unidentified flying objects is related directly to the Air Force responsibility for the air defense of the United States. Procedures for conducting this program are established by Air Force Regulation 200-2.

The objectives of Project Blue Book are two-fold: first, to determine whether UFOs pose a threat to the security of the United States; and, second, to determine whether UFOs exhibit any unique scientific information or advanced technology which could contribute to scientific or technical research. In the course of accomplishing these objectives, Project Blue Book strives to identify and explain all UFO sightings reported to the Air Force.

HOW THE PROGRAM IS CONDUCTED

The program is conducted in three phases. The first phase includes receipt of UFO reports and initial investigation of the reports. The Air Force base nearest the location of a reported sighting is charged with the responsibility of investigating the sighting and forwarding the information to the Project Blue Book Office at Wright-Patterson Air Force Base, Ohio.

If the initial investigation does not reveal a positive identification or explanation, a second phase of more intensive analysis is conducted by the Project Blue Book Office. Each case is objectively and scientifically analyzed, and, if necessary, all of the scientific facilities available to the Air Force can be used to assist in arriving at an identification or explanation. All personnel associated with the investigation, analysis, and evaluation efforts of the project view each report with a scientific approach and an open mind.

The third phase of the program is dissemination of information concerning UFO sightings, evaluations, and statistics. This is accomplished by the Secretary of the Air Force, Office of Information.

The Air Force defines an unidentified flying object as any aerial object which the observer is unable to identify.

Reports of unfamiliar objects in the sky are submitted to the Air Force from many sources. These sources include military and civilian pilots, weather observers, amateur astronomers, business and professional men and women, and housewives, etc.

Frequently such objects as missiles, balloons, birds, kites, searchlights, aircraft navigation and anticollision beacons, jet engine exhaust, condensation trails, astronomical bodies and meteorological phenomena are mistakenly reported as unidentified flying objects.

The Air Force groups its evaluations of UFO reports under three general headings: (1) identified, (2) insufficient data, and (3) unidentified.

and AF Form 112A, "Supplement to AF Form 112" (see paragraphs 14 and 15); however, keep the use of these forms to a minimum in reporting initial sightings. The delays often involved in processing and transmitting AF Form 112 through channels may make followup investigations difficult, producing only limited usable information. This factor is a necessary consideration. Reporting by electrical means will eliminate delays. If requested by the AFSC (FTD), AF Form 112 will provide a followup and/or complete report of all sightings initially reported electrically.

13. Where To Submit Reports:

a. *Electrical Reports.* Submit multiple addressed electrical reports to:

(1) Air Defense Command, Ent AFB, Colorado

(2) Nearest Air Division (Defense) (For United States only)

(3) Air Force Systems Command, Foreign Technology Division, Wright-Patterson AFB, Ohio

(4) Headquarters, USAF (AFMIN), Wash 25 DC

(5) Secretary of the Air Force (SAFOI), Wash 25 DC

b. *Written Reports* (Basic letters and AF Form 112):

(1) ~~Basic Letters.~~ Submit all letter reports direct to the AFSC (FTD). The AFSC (FTD) will distribute the reports to interested Intelligence activities in the United States and to the Office of Information, if necessary.

(2) ~~AF Form 112.~~ Submit original report, as prescribed in "Intelligence Collection Instruction (ICI)," June 1954, direct to HQ USAF (AFCIN) Wash 25 DC, and a copy to AFSC (FTD).

c. *Reports from Civilians.* Where possible, advise civilian sources contemplating reporting UFO's to submit the report, for processing and transmission, to the nearest Air Force base.

14. Basic Reporting Data and Format. Show the abbreviation "UFO" at the beginning of the text of all electrical reports and in the subject of written reports. Include the required data in all reports, in the order shown below:

a. *Description of the Object(s):*

(1) Shape.

(2) Size compared to a known object (use

one of the following terms: Head of a pin, pea, dime, nickel, quarter, half dollar, silver dollar, baseball, grapefruit, or basketball) held in the hand at about arm's length.

(3) Color.

(4) Number.

(5) Formation, if more than one.

(6) Any discernible features or details.

(7) Tail, trail, or exhaust, including size of same compared to size of object(s).

(8) Sound; if heard, describe sound.

(9) Other pertinent or unusual features.

b. *Description of Course of Object(s):*

(1) What first called the attention of observer(s) to the object(s)?

(2) Angle or elevation and azimuth of object(s) when first observed.

(3) Angle or elevation and azimuth of object(s) upon disappearance.

(4) Description of flight path and maneuvers of object(s).

(5) How did the object(s) disappear? (Instantaneously to the North, etc.)

(6) How long (were) the object(s) visible? (Be specific, 5 minutes, 1 hour, etc.)

c. *Manner of Observation:*

(1) Use one or any combination of the following items: Ground-visual, air-visual, ground-electronic, air-electronic. (If electronic, specify type of radar.)

(2) Statement as to optical aids (telescopes, binoculars, etc.) used and description thereof.

(3) If the sighting occurred while air-borne, give type of aircraft, identification number, altitude, heading, speed, and home station.

d. *Time and Date of Sighting:*

(1) Zulu time-date group of sighting.

(2) Light conditions. (Use one of the following terms: Night, day, dawn, dusk.)

e. *Location of Observer(s).* Give exact latitude and longitude of each observer, and/or geographical position. In electrical reports, give a position with reference to a known landmark also, such as "2mi N of Deeville"; "3mi SW of Blue Lake." Typographical errors or "garbling" often occur in electrically transmitted messages, making location plots difficult or impossible.

Example: 89 45N, 192 71W for 39 45N, 102 21W.

f. *Identifying Information on Observer(s):*

(1) Civilian—Name, age, mailing address, occupation, and estimate of reliability.

(2) Military—Name, grade, organization, duty, and estimate of reliability.

g. *Weather and Winds—Aloft Conditions at Time and Place of Sightings:*

(1) Observer(s) account of weather conditions.

(2) Report from nearest AWS or U. S. Weather Bureau Office of wind direction and velocity in degrees and knots at surface, 6,000', 10,000', 16,000', 20,000', 30,000', 50,000', and 80,000', if available.

(3) Ceiling.

(4) Visibility.

(5) Amount of cloud cover.

(6) Thunderstorms in area and quadrant in which located.

(7) Vertical temperature gradient.

h. *Any other unusual activity or condition, meteorological, astronomical, or otherwise, which might account for the sighting.*

i. *Interception or identification action taken (such action is authorized whenever feasible, and in compliance with existing air defense directives).*

j. *Location, approximate altitude, and general direction of flight of any air traffic or balloon releases in the area which might possibly account for the sighting.*

k. *Position title and comments of the preparing officer, including his preliminary analysis of the possible cause of the sighting(s). (See paragraph 16.)*

l. *Existence of physical evidence, such as materials and photographs.*

15. Negative or Inapplicable Data. Even though the source does not provide, or an interviewer has not asked for specific information, do not use the words "negative" or "unidentified" before exhausting all logical leads to obtain the information outlined under paragraph 14. For example, information on weather conditions in the area, as requested in paragraph 14g, is obtainable from the local military or civilian weather facility. Use the phrase "not applicable (N/A)" only when the question does not apply to the particular sighting under investigation.

16. Comments of Preparing Officer. The preparing officer will make a preliminary analysis and a comment on the possible cause or identity of the object he is reporting, together with a statement supporting his comment and analysis. He will make every effort to obtain pertinent items of information and to test all possible leads, clues, and hypotheses concerning the identity or explanation of the sighting. (See paragraph 5.) The preparing officer who receives the report initially is in a much better position to conduct an "on-the-spot" survey or followup than subsequent investigative personnel and analysts, who may be far removed from the area, and who may arrive too late to obtain vital data or the missing information necessary for firm conclusions.

17. Classification. Do not classify reports unless data requested in paragraph 14 require classification. Classify reports primarily to protect:

a. Names of sources reporting UFO's and other principals involved, *if so requested by these persons or considered necessary;*

b. Intelligence, investigative, intercept, or analytical methods or procedures;

c. Location of radar and other classified sites, units, and equipment;

d. Information on certain types, characteristics, and capabilities of classified aircraft, missiles, or devices that may be involved in the sighting.

18. Reporting Physical Evidence. Report promptly the existence of physical evidence (photographic or material). Mark all physical evidence forwarded to the AFSC (FTD) for the attention of ~~TD-E~~, Aerial Phenomena Branch.

a. *Photographic:*

(1) *Still Photographs.* Forward the negative and two prints. Title the prints and the negatives, or indicate the place, time, and date of the incident.

(2) *Motion Pictures.* Obtain the original film. Examine the film strip for apparent cuts, alterations, obliterations, or defects. In the report comment on any irregularities, particularly those received from other than official sources.

(3) *Supplemental Photographic Information.* Negatives and prints often are insufficient to provide certain valid data or to permit firm conclusions. (See AFM 200-9—a classified document receiving limited distribution.) Information that will aid in plotting or in estimating distances, apparent size and nature of object, probable velocity, and movements includes:

- (a) Type and make of camera,
- (b) Type, focal length, and make of lens,
- (c) Brand and type of film,
- (d) Shutter speed used,
- (e) Lens opening used; that is, "f" stop,
- (f) Filters used,
- (g) Was tripod or solid stand used,
- (h) Was "panning" used,
- (i) Exact direction camera was pointing with relation to true north, and its angle with respect to the ground.

(4) *Other Camera Data.* If supplemental information is unobtainable, the minimum camera data required are the type of camera, and the smallest and largest "f" stop and shutter-speed readings of the camera.

(5) *Radar.* Forward two copies of each still-camera photographic print. Title radarscope photographic prints in accordance with AFR

95-7. Classify radarscope photographs in accordance with Section XII, AFR 205-1, 10 June 1960.

NOTE: If possible, develop photographic film before forwarding. Mark any undeveloped film conspicuously to indicate this fact, to avoid destruction by exposure during examinations en route through mail channels to final addressees.

b. *Material.* Each Air Force echelon receiving suspected or actual UFO material will safeguard it in a manner to prevent any defacing or alterations which might reduce its value for intelligence examination and analysis.

c. *Photographs, Motion Pictures, and Negatives Submitted by Individuals.* Individuals often submit photographic and motion picture material as part of their UFO reports. All original material submitted will be returned to the individual after completion of necessary studies, analyses, and duplication by the Air Force.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

OFFICIAL:

CURTIS E. LeMAY
Chief of Staff

R. J. PUGH
Colonel, USAF
Director of Administrative Services

CHANGE

AIR FORCE REGULATION
NO. 200-2A

AFR 200-2A

DEPARTMENT OF THE AIR FORCE
Washington, 30 March 1964

Intelligence Activities
UNIDENTIFIED FLYING OBJECTS (UFO)

AFR 200-2, 20 July 1962, is changed as follows:

3d. Findings. AFSC (FTD) will prepare a final report on each sighting after collection and analysis of data. When final report contains information of significant intelligence value, AFSC (FTD) will forward a copy of the report to HQ USAF (AFNINDE), Wash DC 20330.

3e. Change references to paragraphs "7 and 8" to "6 and 7."

4b. Change "or" to "of."

10. Contacts. Private individuals or organizations desiring Air Force interviews, briefings, lectures, or private discussions on UFOs will be instructed to direct their requests to the Office of Information, Office of the Secretary of the Air Force. Air Force personnel, other than designated investigators (see paragraph 3b) and those of the Office of Information, will not contact private individuals on UFO cases, nor will they discuss their operations and functions with unauthorized persons, unless so directed, and then only on a need-to-know basis.

11a. Change references to paragraphs "2 and 5" to "1 and 4."

11c. Change references to paragraphs "7, 8, 9, and b(2)" to "6, 7, 8, and b(2)(b)."

12b. Submit reports of sightings over 3 days old by letter; however, keep the use of letter reports to a minimum in reporting initial sightings. The delays often involved in processing and transmitting correspondence through normal channels may make followup investigations difficult, producing only limited usable information. This factor is a necessary consideration. Reporting by electrical means will eliminate delays. Submit a followup and/or complete report on all sightings initially reported electrically, if so requested by AFSC(FTD).

13a(4). Change "AFCIN" to "AFNIN."

13b. Written Reports. Submit all letter reports (basic letters and followup or complete reports) direct to AFSC (FTD), Wright-Patterson AFB, Ohio, 45433. AFSC (FTD) will distribute the reports to interested intelligence activities in the United States and to the Office of Information, if necessary.

13b(1). Delete.

13b(2). Delete.

16. Change reference to paragraph "5" to "4."

18. Change "TD-E" to "TDEW."

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

CURTIS E. LeMAY
Chief of Staff

R. J. PUGH
Colonel, USAF
Director of Administrative Services

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D.C.



REPLY TO
ATTN OF: AFBSA

22 December 1965

SUBJECT: Ad Hoc Committee on Unidentified Flying Objects (UFOs)

To: Members of Committee

1. You are invited to attend a meeting of the USAF Scientific Advisory Board Ad Hoc Committee on UFOs at the Foreign Technology Division, Wright-Patterson AFB, Ohio, on 3 February 1966. An agenda is attached (Atch #1).
2. In 1948, the Air Force initiated Project Blue Book whose objectives were twofold: (1) to determine whether UFOs pose a threat to the security of the United States, and (2) to determine whether UFOs exhibit any unique scientific information or advanced technology which could contribute to scientific or technical research. The objectives of the Ad Hoc Committee are to review the resources, methods, and findings of Project Blue Book and to advise the Air Force as to any improvements that should be made in the program in order to carry out the Air Force's original responsibility. Correspondence from the Secretary of the Air Force Information Office relating to this meeting as well as other pertinent documentation is attached for your information. (Atchs 2, 3, and 4).
3. Quarters for attendees will be available at the Wright-Patterson Visiting Officers Quarters. Please let me know at your earliest convenience when you plan to arrive so that transportation can be provided. My phone is Area Code 202 - 697-8845/697-8404.

Harold A. Steiner

HAROLD A. STEINER, Major, USAF
Assistant Secretary
USAF Scientific Advisory Board

Atch

1. Agenda
2. SAFOI Memo 28 Sep 65
3. SAFOI Memo 16 Dec 65
4. Excerpt fr Wall Street Journal 13 Dec 65

✓ Cy to: Dr. Cacciopo

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AD HOC COMMITTEE ON
UNIDENTIFIED FLYING OBJECTS (UFOs)

MEMBERS

Dr. Brian O'Brien (Chairman)
Dr. Launor F. Carter
Mr. Jesse Orlansky
Dr. Richard Porter
Dr. Carl Sagan
Dr. Willis H. Ware

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AD HOC COMMITTEE ON
UNIDENTIFIED FLYING OBJECTS (UFOs)

AGENDA

Thursday, 3 February 1966

0800	Welcoming Remarks	Commander or Vice Commander, FTD
0805	Introduction	Dr. O'Brien, SAB
0810	Briefing on Project Blue Book	Major Quintanilla, FTD
1000	Break	
1015	Review of Selected Case Histories	FTD
1145	Lunch	
1315	Executive and Writing Session	

APPROVED:

Harold A. Steiner

HAROLD A. STEINER, Major, USAF
Assistant Secretary
USAF Scientific Advisory Board

22 December 1965

~~For Official Use Only~~

Atch #1

DEPARTMENT OF THE AIR FORCE
WASHINGTON

OFFICE OF THE SECRETARY

SEP 26 1965

MEMORANDUM FOR MILITARY DIRECTOR, SCIENTIFIC ADVISORY BOARD

SUBJECT. Unidentified Flying Objects (UFOs)

In keeping with its air defense role, the Air Force has the responsibility for the investigation of unidentified flying objects reported over the United States. The name of this project is Blue Book (Attachment 1). Procedures for conducting this program are established by Air Force Regulation 200-2 (Attachment 2).

The Air Force has conducted Project Blue Book since 1948. As of 30 June 1965, a total of 9267 reports had been investigated by the Air Force. Of these 9267 reports, 663 cannot be explained.

It has been determined by the Assistant Deputy Chief of Staff/Plans and Operations that Project Blue Book is a worthwhile program which deserves the support of all staff agencies and major commands and that the Air Force should continue to investigate and analyze all UFO reports in order to assure that such objects do not present a threat to our national security. The Assistant Deputy Chief of Staff/Plans and Operations has determined also that the Foreign Technology Division (FTD) at Wright-Patterson Air Force Base should continue to exercise its presently assigned responsibilities concerning UFOs.

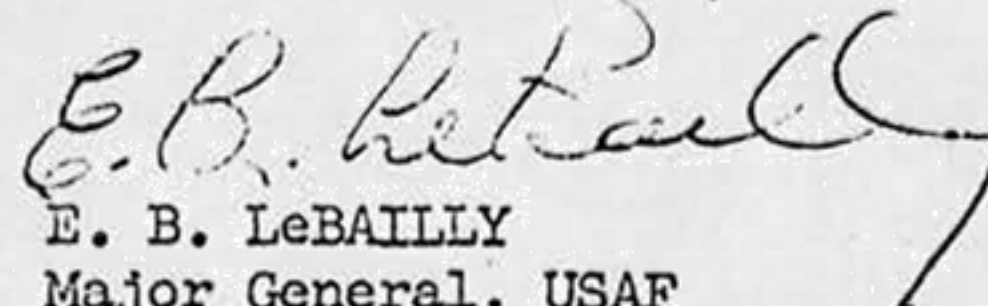
To date, the Air Force has found no evidence that any of the UFO reports reflect a threat to our national security. However, many of the reports that cannot be explained have come from intelligent and technically well qualified individuals whose integrity cannot be doubted. In addition, the reports received officially by the Air Force include only a fraction of the spectacular reports which are publicized by many private UFO organizations.

Accordingly, it is requested that a working scientific panel composed of both physical and social scientists be organized to review Project Blue Book -- its resources, methods, and findings -- and to advise the Air Force as to any improvements that should be made in the program in order to carry out the Air Force's assigned responsibility.

Att # 2

Doctor J. Allen Hynek who is the Chairman of the Dearborn Observatory at Northwestern University is the scientific consultant to Project Blue Book. He has indicated a willingness to work with such a panel in order to place this problem in its proper perspective.

Doctor Hynek has discussed this problem with Doctor Winston A. Markey, the former Air Force Chief Scientist.


E. B. LeBAILLY
Major General, USAF
Director of Information

- 2 Attachments
1. Blue Book Report
2. AFR 200-2

UNIDENTIFIED FLYING OBJECTS

by Carl Sagan

Department of Astronomy, Harvard University;
and Smithsonian Astrophysical Observatory,
Cambridge, Massachusetts

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Identified reports are those for which sufficient specific information has been accumulated and evaluated to permit a positive identification or explanation of the object.

Reports categorized as Insufficient Data are those for which one or more elements of information essential for evaluation are missing. Some examples are the omission of the duration of the sighting, date, time, location, position in the sky, weather conditions, and the manner of appearance or disappearance. If an element is missing and there is an indication that the sighting may be of a security, scientific, technical, or public interest value, the Project Blue Book Office conducts an additional investigation and every attempt is made to obtain the information necessary for identification. However, in some instances, essential information cannot be obtained, and no further action can be taken.

The third and by far the smallest group of evaluations is categorized as Unidentified. A sighting is considered unidentified when a report apparently contains all pertinent data necessary to suggest a valid hypothesis concerning the cause or explanation of the report but the description of the object or its motion cannot be correlated with any known object or phenomena.

TYPES OF UFO IDENTIFICATIONS AND EVALUATIONS

There are various types of UFO sightings. Most common are reports of astronomical sightings, which include bright stars, planets, comets, fireballs, meteors, auroral streamers, and other celestial bodies. When observed through haze, light fog, moving clouds, or other obscurations or unusual conditions, the planets, including Venus, Jupiter, and Mars have been reported as unidentified flying objects. Stellar mirages are also a source of reports.

Satellites are another major source of UFO reports. An increase in satellites reported as UFOs has come about because of two factors. The first is the increase of interest on the part of the public; the second is the increasing number of satellites in the skies. Positive knowledge of the location of all satellites at all times enables rapid identification of satellite sightings. Keeping track of man-made objects in orbit about the earth is the responsibility of the North American Air Defense Command Space Detection and Tracking System. This sophisticated electronic system gathers complex space traffic data instantly from tracking stations all over the world.

Other space surveillance activities include the use of ballistic tracking and large telescopic cameras. ECHO schedules are prepared by the NASA Goddard Space Flight Center at Greenbelt, Maryland, and schedules of the South/North equator crossings are prepared by the Smithsonian Institution at Cambridge, Massachusetts. From the data produced by these agencies, satellites mistakenly reported as UFOs can be quickly identified. Some of these are visible to the naked eye.

Aircraft account for another major source of UFO reports, particularly during adverse weather conditions. When observed at high altitudes and at some distance, aircraft can have appearances ranging from disc to rocket shapes due to the reflection of the sun on their bright surfaces. Vapor or condensation trails from jet aircraft will sometimes appear to glow fiery red or orange when reflecting sunlight. Afterburners from jet aircraft are often reported as UFOs since they can be seen from great distances when the aircraft cannot be seen.

The Project Blue Book Office has direct contact with all elements of the Air Force and the Federal Aviation Agency civil air control centers. All aerial refueling operations and special training flights can be checked immediately. Air traffic of commercial airlines and flights of military aircraft are checked with the nearest control center, enabling an immediate evaluation of aircraft mistakenly reported as UFOs. However, since many local flights are not carried, these flights are probable causes of some reports.

Unidentified Flying Objects: a generic term for atmospheric phenomena, detected visually or by radar, of a nature not immediately understood. The principal interest in these objects stems from the speculation that some of them are of intelligent extraterrestrial origin, and from the psychological insights into contemporary human problems which this interpretation provides.

Current popular interest in unidentified flying objects began on June 24, 1947, when a set of rapidly-moving, glistening objects were observed from the air in daytime, near Mt. Rainier, Washington, by Kenneth Arnold, a Seattle resident, who dubbed them "flying saucers." The sighting received extensive publicity, and somewhat similar sightings have been reported ever since. The diversity of these observations, however, is as striking as the observations themselves. Unidentified flying objects (or UFOs) have been described variously as rapidly-moving or hovering; disc-shaped, cigar-shaped, or ball-shaped; moving silently, or noisily; with a fiery exhaust, or with no exhaust whatever; accompanied by flashing lights, or uniformly glowing with a silvery cast. A simple listing of the observations suggests that all UFOs do not share a common origin. In-

deed, the use of generic terms such as "UFOs" or "flying saucers" has served to confuse the issue by the implication of common origin.

Because of its air defense responsibility, the United States Air Force has undertaken to investigate all reports of unidentified flying objects over the United States. The number of sightings reported and investigated between 1947 and 1960 is shown in the accompanying Table.

Evaluation of these reports is difficult. The observations are frequently fragmentary, and reports by different observers of the same phenomenon are often dissimilar, or even irreconcilable. There is an understandable tendency for the observer to exaggerate the spectacular aspects of his observations. In many instances, statements are made concerning distance, size, and velocity which are without foundation. A small object, close by, may appear larger than a large object far away. Also, many deliberate hoaxes have been perpetrated (for example, involving double-exposure photography). After allowances are made for these possibly confusing factors, the accepted scientific procedure is to attempt an explanation of the observations in terms of natural phenomena. Only if an observation is not readily explicable in terms of known phenomena does the scientist

introduce, ad hoc, another phenomenon in explanation.

Confirmed identifications of UFOs have been made with the following: unconventional aircraft; aircraft under uncommon weather conditions; aircraft with unusual external light patterns; meteorological and other high-altitude balloons; artificial earth satellites; flocks of birds; reflections of searchlights or headlights off clouds; reflection of sunlight from shiny surfaces; luminescent organisms, including one case of a firefly lodged between two adjacent panes of glass in an airplane cockpit window; optical mirages and looming; lenticular cloud formations; ball lightning; sundogs; meteors, including the rare green fireballs; planets, especially Venus; bright stars; and the Aurora Borealis. Radar detection of unidentified flying objects has also occurred occasionally. Many of these sightings have been explained in terms of radar reflection off temperature inversion layers in the atmosphere, and other sources of radar "angels."

Considering the difficulties in tracing out the visual and radar sightings, it is remarkable that all but about 1% of the reported UFOs have been identified as naturally-occurring -- if sometimes unusual -- phenomena. In October, 1957, Sputnik I, the first earth-orbiting artificial satellite, was launched. Of the 1,178 sightings in that year, 701 occurred between October and December. There is a clear

implication that Sputnik and its attendant publicity was responsible for many "UFO" sightings.

In July, 1952, a set of visual and radar observations of unidentified flying objects over Washington, D. C. caused some public hysteria. Government concern was reflected in the establishment, by the Office of Scientific Intelligence of the Central Intelligence Agency, in November, 1952, of a special panel chaired by Professor H. P. Robertson, of the California Institute of Technology, to evaluate these reports. The Robertson panel thoroughly investigated the UFO reports to that date, and concluded that all were very probably natural phenomena, erroneously interpreted.

There have been strange objects seen in the sky ever since men first looked upwards. But the testimony of greatest reliability should be that of the professional astronomer. Professor J. L. Greenstein, of Mt. Wilson and Palomar Observatories, California Institute of Technology, has pointed out that a vehicle 100 feet in diameter, at an altitude of 50 miles, would leave a broad track on photographic plates taken of the sky with large telescopes, a track easily distinguishable from those of ordinary astronomical objects such as stars, meteors, and comets. Nevertheless, the 5,000 plates of the Palomar Sky Survey and some half-million wide-angle, fast-lens photographs taken

at Harvard College Observatory have never indicated the existence of any such object.

Repeated sightings of UFOs, and the persistence of the Air Force and the responsible scientific community in explaining the sightings away, has suggested to some that a conspiracy exists to conceal from the public the true nature of the UFOs. Might not at least a small fraction of the residual 1% of the sightings be space vehicles of intelligent extraterrestrial origin, observing the Earth and its inhabitants? Let us examine this possibility.

It now seems quite clear that the Earth is not the only inhabited planet. There is evidence that the bulk of the stars in the sky have planetary systems. Recent research concerning the origin of life on Earth suggests that the physical and chemical processes leading to the origin of life occur rapidly in the early history of the majority of planets. The selective value of intelligence and technical civilization is obvious, and it seems likely that a large number of planets within our Milky Way galaxy -- perhaps as many as a million -- are inhabited by technical civilizations in advance of our own. Interstellar space-flight is far beyond our present technical capabilities, but there seem to be no fundamental physical objections to

it, and it would be very rash indeed to preclude, from our present vantage point, the possibility of its development by other civilizations. If each of, say, a million advanced technical civilizations in our galaxy launched an interstellar spacecraft per year (and even for an advanced civilization, the launching of an interstellar space vehicle will not be a trivial undertaking), and even if all stars in the galaxy can be explored with equal facility, then our solar system should, on the average, be visited only once every hundred thousand years.

UFO enthusiasts have sometimes castigated the skeptic for anthropocentrism. Actually, the view that the Earth is daily visited by interstellar spacecraft is far more anthropocentric. If even a small fraction of the residual UFOs are interstellar spacecraft, this would imply an overriding significance to our small planet; as if all the professional anthropologists in the world converged on one of the Andaman Islands because the fishnet had recently been invented there. Anthropologists have other interests. Only a few specialize in the cultures of the Andaman Islands. If our views on the frequency of intelligence in the galaxy are correct, there is no reason for the Earth to be singled out for interstellar visits. A somewhat greater frequency of visits

could be expected if there were another intelligent civilization within our own solar system, but at the present time there is no evidence for the existence of such a civilization on Mars or on any other nearby planet.

Related to the UFO report is the contact tale, a contemporary report of the landing of an extraterrestrial space vehicle on Earth. Unlike the UFO descriptions, these tales display a striking uniformity. The extraterrestrials are described as humanoid, differing from us only in some small characteristic such as teeth, speech, or dress. The aliens -- so the "contactees" report -- have been observing Earth and its inhabitants for many years, and express concern at "the present grave political situation." They are fearful that, left to our own devices, we will destroy our civilization. The contactee is then selected as their "chosen intermediary" with the governments and inhabitants of Earth (The contactee's qualifications for this position are not always evident.). He is taken on voyages in the spacecraft, sometimes to the visitors' home planets, but somehow the promised political or social intervention never materializes.

C. G. Jung has pointed out that the frequency and persistence of these contact tales -- not one of which has been confirmed by the slightest objective evidence -- must be of

substantial psychological significance. What need is fulfilled by a belief that unidentified flying objects are of extraterrestrial origin? It is noteworthy that in the contact tales, the spacecraft and their crews are never reported to be hostile. It would be very satisfying if a race of advanced and benign creatures were devoted to our welfare. The interest in unidentified flying objects derives, perhaps, not so much from scientific curiosity as from unfulfilled religious needs. Flying saucers serve, for some, to replace the gods that science -- for good or otherwise -- has deposed. The old mythological frameworks have evaporated, but, with their reports of distant and exotic worlds and their pseudo-scientific overlay, the contact accounts are acceptable to many people. These tales, and their attendant ritual, comprise one of the few viable contemporary cult movements of more than passing interest and local relevance. But precisely because people desire so intensely that unidentified flying objects be of benign, intelligent, and extraterrestrial origin, honesty requires that, in evaluating the observations, we accept only the most rigorous logic and the most convincing evidence.

<u>YEAR</u>	<u>NUMBER OF REPORTED SIGHTINGS</u> *	<u>YEAR</u>	<u>NUMBER OF REPORTED SIGHTINGS</u>
1947	79	1954	429
1948	143	1955	404
1949	186	1956	778
1950	169	1957	1,178
1951	121	1958	473
1952	1,501	1959	364
1953	425	1960	173

* Tabulated by Tacker, 1960.

REFERENCES:

1. E. J. Ruppelt, "The Report on Unidentified Flying Objects" (Doubleday: New York, 1956).
2. C. G. Jung, "Flying Saucers: A Modern Myth of Things Seen in the Skies" (Harcourt Brace and Company: New York, 1959).
3. Lt. Col. L. J. Tacker, "Flying Saucers and the U.S. Air Force" (D. Van Nostrand Company: Princeton, 1960).
4. D. H. Menzel and L. G. Boyd, "The World of Flying Saucers: A Scientific Examination of a Major Myth of the Space Age" (Doubleday: New York, 1963).

AIRCRAFT

Aircraft evaluations are made on the basis of description and flight characteristics. In the majority of reports attributable to aircraft no object is observed and the evaluation is made primarily on the time-motion sequence. The lighting and visual characteristics as well as the time motion sequence may differ with the type of aircraft and/or its mission. Local military installations are contacted for flights or military aircraft operating in the area of a sighting. ACIC provides the section with maps showing low and high level air corridors and flight restricted areas. They also publish the "Flight Planning Guide" which lists all refueling areas and their control agency. Special low-level military training areas are included in this publication and a map showing the routes is distributed periodically. ASD provides support on aircraft lighting configurations and the 17th Bomb Wing provides the project with local schedules. The 922 Air Refueling Squadron at WPAFB provides information of visual characteristics of night refueling operations. SAC recently photographed a refueling mission so that the visual characteristics of a refueling operation might be observed by analysis personnel. Civilian and military agencies known to be engaged in night photography are contacted in cases of suspected photographic missions. No case is evaluated as an A/C if the reported maneuvers are not consistent with aircraft flight.

CONVENTIONAL

a) Regular scheduled airliners - Fly in air corridors, and are usually controlled by FAA. Lighting will probably be typical red and green wing lights with rotating beacon (Grimes). These A/C use landing lights on takeoff as well as while in landing pattern. Visual characteristics may include period of time reported as hovering or stationary if the aircraft is in a turn or approaching the observer. Total duration should be consistent with flight maneuvers. Not likely that duration will exceed 5 minutes unless some series of maneuvers is being performed. Most often reported at night and reported as single light (landing light blots out the red and green flashing lights). Lighting configurations are not necessarily standard. Experimental and unusual lighting effects can vary with the lighting configuration of each aircraft. (See attached letters from FAA and ARMCO.) Color most often reported as white, can be red. Those objects in straight flight at altitude can be checked against local flight corridors. FAA can be checked if there is some doubt that the object is an aircraft or if positive identification as to a specific flight is required. May or may not have sound associated with the report. If near an airport, this type of object is not regarded as a UFO since moving lights in and around airports which could be caused by aircraft are regarded as aircraft (definition included in AFR 200-2).

Balloons continue to be reported as UFOs. Several thousand balloons are released each day from military and civilian airports, weather stations, and research activities. There are several types of balloons - weather balloons, rawinsondes, radiosondes, and the large research balloons which have diameters up to 300 feet. At night, balloons carry running lights which cause an unusual appearance when observed. Reflection of the sun on balloons at dawn and sunset sometimes produce strange effects. This usually occurs when the balloon, because of its altitudes, is exposed to the sun. Large balloons can move at speeds of over 100 miles per hour when moving in high altitude jet windstreams. These balloons sometimes appear to be flattened on top. At other times, they appear to be saucer-shaped and to have lights mounted inside the bag itself due to the sun's rays reflecting through the material of the balloon. The Balloon Control Center at Holloman Air Force Base, New Mexico, maintains a plot on all Military Upper Air Research Balloons.

Another category of UFO evaluations labeled Other includes missiles, reflections, mirages, searchlights, birds, kites, spurious radar indications, hoaxes, fireworks, and flares.

Aircraft, satellites, balloons, and the like should NOT be reported since they do not fall within the definition of an unidentified flying object.

b) Private or non-scheduled flights - Same characteristics as conventional airliner. Speeds of light aircraft may be slower and the duration longer. Usually at lower altitude. Sound will not be heard if the wind is blowing away from the observer. Duration should not exceed 7 or 8 minutes unless maneuvers can account for additional time period. Normal flight is VFR from some local airport. Not carried on RADAR plots through FAA. Hardest type to check for positive identification. Evaluation made on flight characteristics consistent with A/C.

JET AIRCRAFT

Visual characteristics depend upon the type of mission:

a) Airliner and high altitude missions are similar to conventional flights in visual characteristics with the following exceptions: (1) The color is most often reported as red. (2) No sound is associated with the object. (3) Flight is usually straight or with one turn. Duration is about 3-5 minutes depending upon the degree of arc through which the object passes. The FAA has designated airways along which these flights are flown.

b) Special low level missions (military). - Mission flown at 2,000 ft. in known air corridors. Sighting is usually brief (one minute or less). description will consist of an object which may appear to be hovering if the approach is directly toward the observer. May include a sudden burst of speed. No sound if wind is away from observer. More than one light may be observed but object is usually reported as a single light. Flights are at night. These aircraft are not misinterpreted during the day since wings, tail, and/or other features can be noted. (Sample route attached)

c) Special tests or training missions - Characteristics will depend on the number of A/C, formation, type of A/C, etc. Can vary from a single A/C to multiple flights or major air operations. These lights can be determined by contact with local, regional, or major air commands.

d) Jet with afterburner - Afterburner operation viewed from the side may give the appearance of a short flame. Color usually reported as blue, shape tapering. If afterburner is cut off object may be reported as disappearing completely by just vanishing or the witness may believe that the object zoomed off into space. Duration usually brief. Object frequently in a climb. As viewed from the rear as the object is going away from the observer the color reported may be red or orange with some yellow and shape will not be ascribed to the object. Again disappearance may be sudden. If at high altitude may be reported as a light only, and characteristic same as for other A/C except that motion is faster.

REFUELING MISSIONS

Differ from other missions in that lights on the tanker and multiple A/C engaged in the operation add visual characteristics not normally associated with aircraft flight. Reports are night time only since daylight operations can be recognized by the observer. May be both low and high altitude. Refueling missions involve multiple lights moving around, in formation, going on and off, etc. Flight of the basic light formation will be straight until the end of a specific run, then 180 degree turns can be made. Duration in an area may run as high as 15 minutes but each observed single pass should not run more than 4-5 minutes. Lights may appear going one way then appear on their return path at a later time. Operations are controlled and refueling is conducted in specific areas. ACIC planning guide contains the location of these areas and the agency to contact for use of the specific area. Phone calls to the controller of the area will provide information as to whether the area was in use or not. SAC at Offutt Air Force Base maintains refueling schedules for all areas used during a specific month, but these are destroyed on the first day of each month and new schedules maintained. Old records must be obtained from the squadron flying specific mission. The controller can tell which missions were flown, when, and by whom. Specific time of entry and exit must be obtained from the squadron flying the mission. The best procedure is to contact the controller and if the area was in use then contact the squadron for the number and type of A/C flown and their entry and exit times.

PHOTO AIRCRAFT

- a) A/C using flare drops--More often reported as flares rather than A/C engaged in photo work.
- b) A/C using strobes for illuminating the target. Can be low level or high altitude missions. Only the strobe light is visible and the A/C is reported as a series of evenly spaced flashes. Duration of these sightings usually less than two minutes, more frequently 30 seconds.
- c) Infra Red--These aircraft are specially equipped with turbine generators to drive the equipment. The generator makes a noise similar to a whine and can be heard above the noise of the aircraft. Many are on classified projects and the agencies doing this work are limited. The A/C utilized are relatively slow (less than 125 mph.) Much of the work is done early in the morning and landing lights are used because of the low altitudes flown. The A/C will be low, sound will be associated with the object and the landing light should be observed. No portion of the infra red equipment will be observed.

ADVERTISING AIRCRAFT

Fall basically into two types:

a) Those towing targets or banners of some sort visible during daylight hours. Those are not usually misinterpreted unless the aircraft remains at a range sufficient for the observer to see only outlines and not details of the plane and sign being towed. Frequently reports are accompanied by drawings with the towed banner assumed to be a part of the object itself. Duration is longer than usual A/C sightings and flight generally marked by maneuvers. Frequently loud speakers are utilized but when heard the A/C should be within range for identification as a known object. Local investigators can check for these aircraft since FAA regulations require that a permit be obtained for those flights

b) Electrical lighted signs - Same essential characteristics except that normally viewed at night. On occasion these signs have been regarded as windows of a much larger craft. Flights again are relatively slow and maneuvering back and forth in one area is characteristic of the flight. An aircraft usually operates in an area for more than one day and can be viewed on successive nights, weather permitting.

HELICOPTERS

Motion slow. Flight may or may not include hovering. Should be far enough away from the observer that positive identification cannot be made during the day. May be reported as a black speck moving back and forth, up and down, etc. During the night wierd effects can be obtained from the red rotating beacon flashing through the canopy. Again motion will be erratic if the flight includes hovering. Positive identification usually simple to obtain by checking the flight schedules of military and civilian helos in the area.

UNIDENTIFIED



A sighting is considered unidentified when a report apparently contains all pertinent data necessary to suggest a valid hypothesis concerning the cause or explanation of the report but the description of the object or its motion cannot be correlated with any known object or phenomena.



COLOR (REPORTED)	FLIGHT PATH	SPEED	DIRECTION	PHYSICAL SPECIMEN PHOTO RADAR	IRMS COVERAGE	UFO IDENTIFICATION	WITNESS INTERVIEW OF EVALUATION BY USAF	COMMENT
SUBJECT	MOTION OF OBJECT			PHYSICAL EVIDENCE	PUBLIC RELATIONS			COMMENT
METALLIC GREY	UP	FAST	WEST	NO	YES	YES	NOT BY USAF	OBSERVER CONTACTED LOCAL POLICE * CAR STALLED.
YELLOW ORANGE	STRAIGHT	FAST	UP	YES (OHL)	NO	NO	NO	DISAPPEARED INSTANTLY AT ESTIMATED 200'
RED	STRAIGHT	SLOW	NE	NO	NO	NO	PHONE	THREE PAIRS OF RED LIGHTS DISAPPEARED BEYOND HILLS NO SOUND
BLACK W/ WHITE LIGHTS COPPER	LEVEL	90° ARC 5 SECONDS	NE	NO	NO	NO	PHONE	LIGHTS MOVING IN AND OUT OF CLOUDS AT 1200 FT NO SOUND
	RANDOM	SLOW FLOATING	RANDOM	NO	NO	NO	PHONE	COMPARED TO ROCKET SEPARATION BY ONE OBSERVER
LINE "ECHO"	TURNUED STEADY	15° ARC -1 MIN	WEST THEN EAST	NO	NO	NO	PHONE	FLASHING LIGHT THOUGHT TO BE ORBITAL BY OBSERVER MOVING WEST
BRIGHT BLUE	STRAIGHT STEADY	90° ARC 10-15 SEC	SSE	NO	NO	NO	PHONE	OBJECT GLOWED
WHITE RED	STRAIGHT STEADY	60° ARC 12 SEC	EAST	NO	NO	NO	NO	NO SOUND, NO TRAIL NO GLOW, RELIABILITY BEING CHECKED
WHITE TURNING RED	ZIG-ZAG	2-4 DEG ARC/SEC	WEST (?)	NO	NO	NO	PHONE	SUDDEN APPEARANCE AND DISAPPEARANCE
SILVER	UP & DOWN STATIONARY	HOVERED	N/A	YES 3-1 OIL STRINGENT	YES	YES	NO	OBJECT EMITTED GREEN SMOKE, CAUSED RADIO TO BEEP & SCARED ANIMALS OBSERVED FROM CAR.
LIGHT COLOR	LOW, DOWN THEN AWAY	FAST	SOUTH	NO	NO	NO	NO	LIKE BALL BOUNCING IN FRONT OF CAR
BRIGHT RED	ERRATIC	FAST & HOVERING	RANDOM	NO	YES	YES	LETTER	A/C FROM "BIG BLAST" RANDOM MOVING LIGHTS FLASHING IN SEQUENCE
PURPLE	STATIONARY TOWARD OBSR THEN BACK	STATIONARY FAST WHEN MOVING	SW	NO	YES	YES	PHONE	POSSIBLE MIRAGE OR GROUND LIGHT EXCEPT FOR LATERAL MOTION
ORANGE	STRAIGHT WITH ABRUPT TURN	NORMAL A/C SPEED	NW TURNING SOUTH	NO	NO	NO	PHONE	CONSISTENT WITH A/C EXCEPT FOR ABRUPT TURN
WHITE	FOLLOWED CAR	SAME AS CAR	N/A	NO	NO	NO	NO	POSSIBLE MIRAGE EXCEPT FOR SEPARATION AND DISAPPEARANCE
BRIGHT	STRAIGHT	FAST	NW	NO	YES	YES	LETTER	

1965

RPT Feb 66

INCIDENT NUMBER	DATE	LOCATION (URBAN - RURAL)	TIME (DAY - NIGHT)	NUMBER OF WITNESSES	AGE (ADULT - YOUTH)	OCCUPATION	REPORTS	TYPE OF REPORT	FOLLOW - UP	PAGES
OBSERVER DATA						REPORTING DATA				
23	1/23	RURAL	DAY AM	ONE	ADULT (M)	BUSINESSMAN	1	200-2	LOCAL	9
36	3/04	RURAL	DUSK	TWO	ADULTS 60-40 (M)	FARMERS	1	200-2	LOCAL	3
90	3/03	RURAL	NIGHT	(3)	ADULT 2 SONS (M)	FARMER	1	LETTER 164	PHONE (HYNEK)	6
128	4/04	URBAN	NIGHT	ONE	4/30 (M)	USAF WEATHER OBSERVER	1	200-2	PHONE (HYNEK)	4
174	5/07	RURAL	NIGHT	(3)	ADULT SON DAU	INDUSTRY SUPERVISOR	1	LETTER	PHONE (HYNEK)	7
259	7/66	RURAL	NIGHT	ONE	ADULT (F)	HOUSEWIFE	1	LETTER	PHONE (HYNEK)	5
333	7/25	RURAL	NIGHT	ONE	YOUTH (M)16	STUDENT ASTRONOMY HOBBY	1	LETTER 164	PHONE (HYNEK)	9
416	8/04	URBAN	NIGHT	ONE	YOUTH (M)19	NOT REPORTED (UFO HOBBY)	1	LETTER 164	PHONE (HYNEK)	7
422	8/04	SMALL TOWN	NIGHT	TWO	YOUTHS 14 (M)	STUDENTS	1	FORM O'HARE	PHONE (HYNEK)	6
553	8/19	RURAL	NIGHT	(1)	YOUTHS (M) 14-17	STUDENTS	1	200-2	LOCAL	12
620	8/30	RURAL	NIGHT	(3)	YOUTHS (M) 16-18	STUDENTS	1	POLICE REPORT	NONE	7
645	9/03	RURAL	NIGHT	(3)	ADULTS (M) 2 YOUTH	POLICE UNEMPLOYED	1	200-2	LETTERS PHONE WPAFB	56
652	9/03	RURAL	NIGHT	TWO	ADULTS (M)	POLICE	1	LOCAL INVESTIGATION PHONE (HYNEK)		11
723	9/25	RURAL	NIGHT	ONE	ADULT (F)	HOUSEWIFE	1	200-2 164	PHONE (HYNEK)	7
724	9/25	RURAL	NIGHT	TWO	ADULTS (M)(F)	DOCTOR OF PHYSICAL CHEM AND WIFE	1	200-2	VISIT (HYNEK)	11
818	11/04	URBAN	DUSK	(4)	ADULT (F) 3 YOUTH	CHURCH SECY STUDENTS 12-14	1	PHONE	FIELD TRIP (HYNEK)	12

TYPE OF SIGHTING (GROUND AIR ETC)	OPTICAL AIDS	NUMBER OF OBJECTS REPORTED	RANGE (APPARENT)	DURATION	VISIBILITY CONDITIONS	INVERSIONS	SHAPE	SIZE (APPROXIMATE)
CONDITIONS OF SIGHTING				WEATHER DATA		DESCRIPTION OF		
GROUND VISUAL	NONE	ONE	CLOSE	25 SECONDS	LOW CLOUDS	YES	MUSHROOM LIGHTHOUSE	25' 20' 10' 10' 75' 20'
"	NONE	THREE	CLOSE	SEVERAL SECONDS	CLEAR VIS 30M	NO	ROMAN CANDLE	TRAIL BALL
"	NONE	ONE WITH 6 LIGHTS	CLOSE UNDER 1200 FT	3 MINUTES	CLOUDY	NOT STATED	LIGHTS ONLY	SMALL
"	NONE	ONE WITH 4 LIGHTS	BELOW CLOUDS 1200 FT	5-10 SECONDS	VIS 5M BROKEN CLOUDS	NOT STATED	OVAL	40' H
"	6 X 30 BINOCES	SIX	GREAT	1 MINUTE	CLOUDY	NOT STATED	OVAL	SMALL
"	NONE	ONE	GREAT	LESS THAN 1 MINUTE	CLEAR STARRY	NOT STATED	FLASHING LIGHT	SMALL
"	NONE	ONE	GREAT	10-15 SECONDS	CLEAR STARRY	NOT STATED	OVAL	STAR
"	NONE	ONE	(?)	12 SECONDS	CLEAR STARRY	NOT STATED	STAR	DIR STAR
"	TELESCOPE	ONE	GREAT	16-17 SECONDS	CONFLICT VISUAL & WX REPT	NOT STATED	STAR	STAR
"	NONE	ONE	CLOSE	4-5 MINUTES	CLOUDY VIS 7M	NOT STATED	SAUCER	20' 10' 50' 10'
"	NONE	ONE	CLOSE	3-4 SECONDS	NOT REPORTED	NOT STATED	BALL	5' DIA
"	NONE	MULTIPLE	CLOSE	2 HOURS	CLEAR	YES	ROUND	BALL
"	BINOCES	ONE	CLOSE	5-10 MINUTES	CLEAR	SURFACE 8,000 10,500	TRIANGLE TAPERED	SMALL
"	NONE	FOUR(?)	A/C DISTANCE	1 MINUTE	VIS 12M CLEAR	NOT STATED	ROUND	A/C
"	NONE	TWO	50'	MINUTES	UNLIMITED VISIBILITY	6,000 10,000	ROUND	SMALL
"	NONE	ONE	LESS THAN 1 MILE	FEW SECONDS	CLEAR	NOT CHECKED	LIGHT	SMALL

PHYSICAL SPECIMENS

PHYSICAL EVIDENCE

CONCLUSIONS

To date, the firm conclusions of Project Blue Book are: (1) no unidentified flying object reported, investigated, and evaluated by the Air Force has ever given any indication of threat to our national security; (2) there has been no evidence submitted to or discovered by the Air Force that sightings categorized as unidentified represent technological developments or principles beyond the range of present day scientific knowledge; and (3) there has been no evidence indicating that sightings categorized as unidentified are extraterrestrial vehicles.

The Air Force will continue to investigate all reports of unusual aerial phenomena over the United States. The services of qualified scientists and technicians will continue to be used to investigate and analyze these reports, and periodic reports on the subject will be made.

The former Chairman of the House Armed Services Committee, Mr. Carl Vinson, recently commented on the conduct of the UFO program by the Air Force and stated that Congressional hearings on this subject are unnecessary.

The Air Force does not deny the possibility that some form of life may exist on other planets in the universe. However, to date, the Air Force has neither received nor discovered any evidence which proves the existence and intra-space mobility of extraterrestrial life. The Air Force continues to extend an open invitation to anyone who feels that he possesses any evidence of extraterrestrial vehicles operating within the earth's near space envelope to submit his evidence for analysis. Initial contact for this purpose is through the following address:

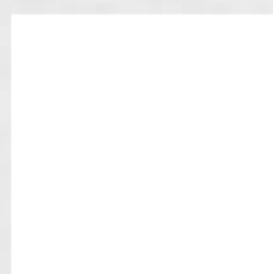
PROJECT BLUE BOOK INFORMATION OFFICE
SAFOI
WASHINGTON, D C 20330

Anyone observing what he considers to be an unidentified flying object should report it to the nearest Air Force Base. Persons submitting a UFO report to the Air Force are free to discuss any aspect of the report with anyone. The Air Force does not seek to limit discussion on such reports and does not withhold or censor any information pertaining to this unclassified program.

THE FOLLOWING PHYSICAL SPECIMENS WERE SUBMITTED FOR ANALYSIS OR IDENTIFICATION
IN CONNECTION WITH THE UNIDENTIFIED FLYING OBJECTS PROJECT DURING THE YEAR 1965.

#	IN#	DATE	LOCATION	INVESTIGATION	ANALYSIS	DISPOSITION	EVALUATION
57		6 Feb.	Liberty, Ohio	Local	Air Force Materials Lab	Return to Source	Metal Ball (Not Foreign)
82		3/02	Brooksville, Fla	Local	Institute of Paper Chem	Return to Source	Paper (Lens/Stencil Tissue)
86		3/04	Corvallis, Ore	Local	Air Force Materials Lab	(Dirt Sample)	Oil in Dirt (Not Foreign)
190		5/25	Thailand	Local	Allegheny Ballistics Lab	To Manufacturer	Scout Rocket
558		8/19	Cherry Creek, NY	Local	Local Analysis	(Dirt Sample)	3-1 Oil and Genitian-Violet/Vio-Stringent
588		8/24	Fayetteville, Ark	Local	Local Analysis	In File	Plastic Bags (Garment)
732		9/27	Reno, Penna	WPAFB	WPAFB (Section Analysis)	In File	Gourd (Plant)
776		10/19	Vero Beach, Fla.	WPAFB	WPAFB (Section Analysis)	Returned to Source	Balloon (Cape Kennedy)
777		10/20	Snow Hill, Md	Local	Local/WPAFB/USAF	Returned to Project	Balloon (Wallops Island)
INFO		10/21	Greece	Air Attache	None	Sent to Manufacturer	Instrument Package

<u>TAB</u>	<u>CASE</u>	<u>ITEM</u>
A	Liberty, Ohio	Metal Ball (Not Foreign)
B	Brooksville, Fla	Paper (Lens/Stencil Tissue)
C	Corvallis, Ore	Oil in Dirt (Not Foreign)
D	Thailand	Scout Rocket
E	Cherry Creek, NY	3-1 Oil and Gentian Violet/Vio-Stringent
F	Fayetteville, Ark	Plastic Bags (Garment)
G	Reno, Penna	Gourd (Plant)
H	Vero Beach, Fla	Balloon (Cape Kennedy)
I	Snow Hill, Md	Balloon (Wallops Island)
J	Greece	Instrument Package



FED (TDEW)
Wright-Patterson AFB, Ohio 45433
2 April 1965

Mr James Cannon
8405 Fernley Road
New Lebanon, Ohio

Dear Sir,

The sphere that was submitted to the Air Force at Wright-Patterson AFB, Ohio was tested at the Air Force Materials Laboratory. A copy of their report is attached. While no specific identification of the object was made, tests conducted, confirmed that the object was of American origin and did not exhibit evidence of space residence. The sphere is being returned to you under separate cover.

We appreciate your patriotic duty as an American citizen in submitting this object to the Air Force for analysis.

Sincerely,

INSTRUCTOR GUINTEANILLA, Jr
Major, USAF
Chief, Project Blue Book

AIR FORCE MATERIALS LABORATORY

RESEARCH AND TECHNOLOGY DIVISION
AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

REPLY TO
ATTN. OF: MAAE (W. P. Conrardy)

SUBJECT: Analysis of Metallic Sphere

9 MAR 1965

TO: TDEW (Sgt Moody)

1. On 17 Feb 1965 Sgt Moody of the FTD delivered a metallic sphere to the Materials Engineering Branch for analysis. Examination of the sphere disclosed the following:

a. Consists of two hemispheres held together with 4 set-screws.

b. Approximately 9" in diameter (OD).

c. Weighs 23.99 pounds.

d. Wall thickness approximately 1".

e. Density is such that it would readily sink in water.

f. Sphere is an aluminum (195 casting alloy) casting that has been rough machined at both ends and at the equator. External finish was a black paint. Set screws are steel, 1/4 diameter, 28 threads per inch with Allen wrench head fitting, recognized as Standard American. Steel alloy is of the 4100 series type.

g. This container was apparently designed for compressive type loads. The design is such that it would not be suitable for internal gas pressures because of the relatively weak method of closure.

h. There are no external connections, hooks, eyes, entry ports or markings other than the machining tool marks.

i. There is evidence that a gasket had been used at the closure flange although no gasket material remained.

j. Internal surfaces are severely corroded, indicating a more corrosive environment internally. The lack of corrosion on the outside (even though paint was in poor condition) is indicative that the sphere had not been in a corrosive environment for very long. Analysis of the corrosion products did not provide any clue to the possible contents.

k. A survey for residual alpha, beta or gamma radiation was negative.

2. Discussion.

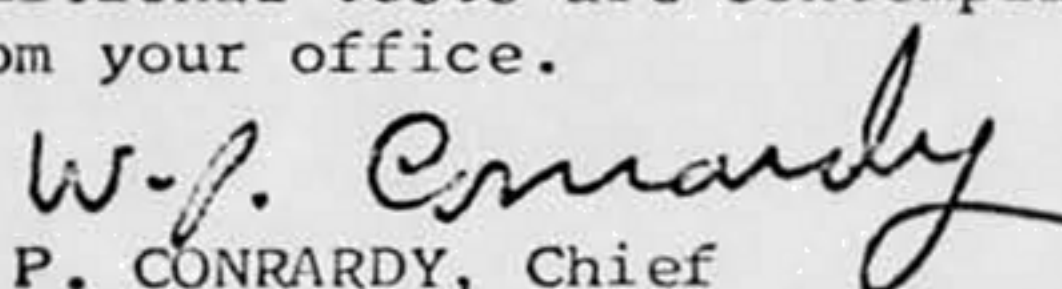
We have not been able to establish the intended use of this device. The following possible applications were considered but not confirmed.

a. Waste disposal container for radioactive materials. The design is such that it would sink readily if dumped at sea, and could take very high external pressures. However it would not be an efficient container from a payload point of view since only half (one hemisphere) could be loaded because of the method of closure. Discussions with the Mound Laboratory indicated that this was not comparable to any radioactive waste containers they are familiar with.

b. Protective shell for instrumentation exposed to shock wave and blast, for example from nuclear blast. Some years ago the University of Dayton Research Institute manufactured containers something like the one now under consideration, in support of atomic tests in Nevada. However the project engineer on that program examined the sphere we now have and he discounted it as being one of the type used by them.

c. Deep submersible test device. Not a likely application since there are no external connections for anything.

3. The sphere is available for pick up if you so desire. No additional tests are contemplated without further instruction from your office.


W. P. CONRARDY, Chief
Materials Engineering Branch
Materials Applications Div

1 Atch
Photos (2)

B

AIR FORCE STATEMENT ON BROOKSVILLE, FLORIDA, UFO SIGHTING, 2 MARCH 1965

The alleged landing of a vehicle from outer space at Brooksville, Florida, on 2 March 1965, was apparently a hoax according to information obtained by Air Force investigators from MacDill AFB, Florida, and *by* Dr. C. W. Bemiss, Pan American Airways technical staff member of the Eastern Test Range, who conducted an additional investigation. The report submitted to the Air Force investigators by the alleged eyewitness contained several statements which cannot be confirmed as facts. The spacecraft allegedly took off straight up at 5000 miles per hour and was out of sight in ten seconds. It is extremely doubtful that a twenty to thirty-foot object could have been seen for more than five seconds at which time the object would have reached an altitude of 36,430 feet. The blast-off from a vehicle taking off at this speed would have disturbed the sand and soil in the immediate area. There was no evidence of any abnormal disturbance in the area. The sketch of the alleged spacecraft showed four stilt poles as the landing gear. These poles protruded from the spacecraft at an angle. The holes which were purportedly caused by the landing gear were straight and appeared to have been scooped or dug as opposed to indentations caused by an object of any sizeable weight. There was no radioactivity in the area. Two papers which contained unreadable hieroglyphics were reportedly dropped by an occupant of the spacecraft. An analysis was made of these papers by the Institute of Paper Chemistry in Appleton, Wisconsin. This analysis indicated that the paper is composed of fibers which are common worldwide. The fiber composition corresponds to that used in lens and stencil papers. The hieroglyphics on one of the papers was deciphered by means of simple substitution and was determined to be the work of an amateur. The deciphered hieroglyphics

reads as follows: "Planet Mars - Are you coming home soon - We miss you very much - Why did you stay away too long". Since no other implications were apparent, it was not feasible for the Air Force to expend further time and money in deciphering the second sheet. Based on the above, it is the opinion of the Air Force that an attempt was made to perpetrate a hoax.

'I Stared Back...'

Man Recounts Run-In With 'Saucer, Robot'

BROOKSVILLE (AP)—"It made a whistling noise and went straight up at 5,000 miles an hour or even faster," retired longshoreman John F. Reeves said yesterday in describing a flying saucer he claims to have stumbled onto while on a walk in the woods near here.

Reeves, who admits to being "past 60," told a story Wednesday of coming onto the "flying saucer" in the woods between here and Weeki Wachee on Tuesday afternoon and of a robot-type creature that appeared to take his picture.

REEVES, WHO LIVES ALONE at a trailer park west of here, told of breaking through some bushes about a mile and three-quarters off Highway 50 at mid-afternoon and seeing the flying saucer about 700 yards away.

He said he worked his way to within about 100 feet of the object when the robot-type creature appeared and walked toward him, stopping less than 15 feet away.

Reeves said the robot wore a gray canvas-type suit with a glass dome helmet. He described it as being about 5-feet tall and stocky.

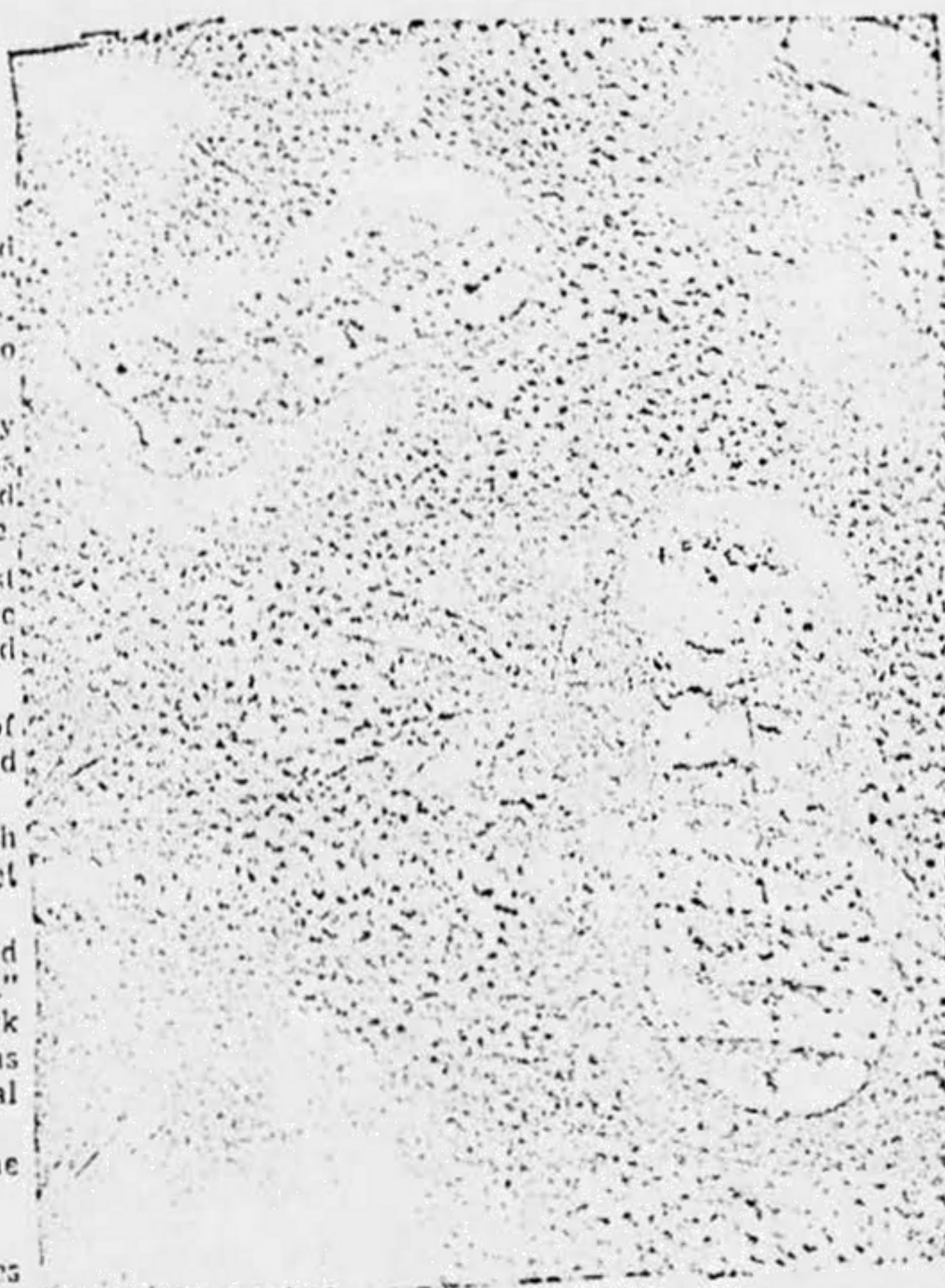
"He walked over to within 15 feet of me and looked right at me," Reeves said. "I stared back at his glass dome."

He described the creature as appearing to have dark tan flesh, and added that everything except the face was covered. He said it had eyes farther apart than a normal human's and had a more pointed chin.

"IT DIDN'T MAKE A SOUND, it just stared at me," he said.

"I couldn't even blink an eye. I was so scared."

Reeves said the creature then lifted what he believes



Footprints From Outer Space?

to have been a camera to chin level, pointed it at him and it flashed.

"He flashed again and I took off from the bushes," Reeves said.

Reeves said the creature flashed a third time and then returned and entered the machine. He said the thing that flashed was black and about six to seven inches in diameter.

The flying saucer was described as 20 to 30 feet in diameter and six feet high and stood on a four-legged landing gear.

"It was bluish-green and reddish-purple in color with two windows on top," Reeves said.

Reeves said he saw only one robot and it dropped two pieces of cloth-like paper as it headed back to the saucer. Reeves said he retrieved the papers and they had "very queer writing" on them.

"THEY WERE FROM outer space," he said.

He said that after the robot entered the machine, some blades on the rim started to move like venetian blinds, working open and shut.

"Then the rim started going around counterclockwise," Reeves said. "It made a whistling and rumbling noise and then started straight up. It was out of sight in 10 seconds."

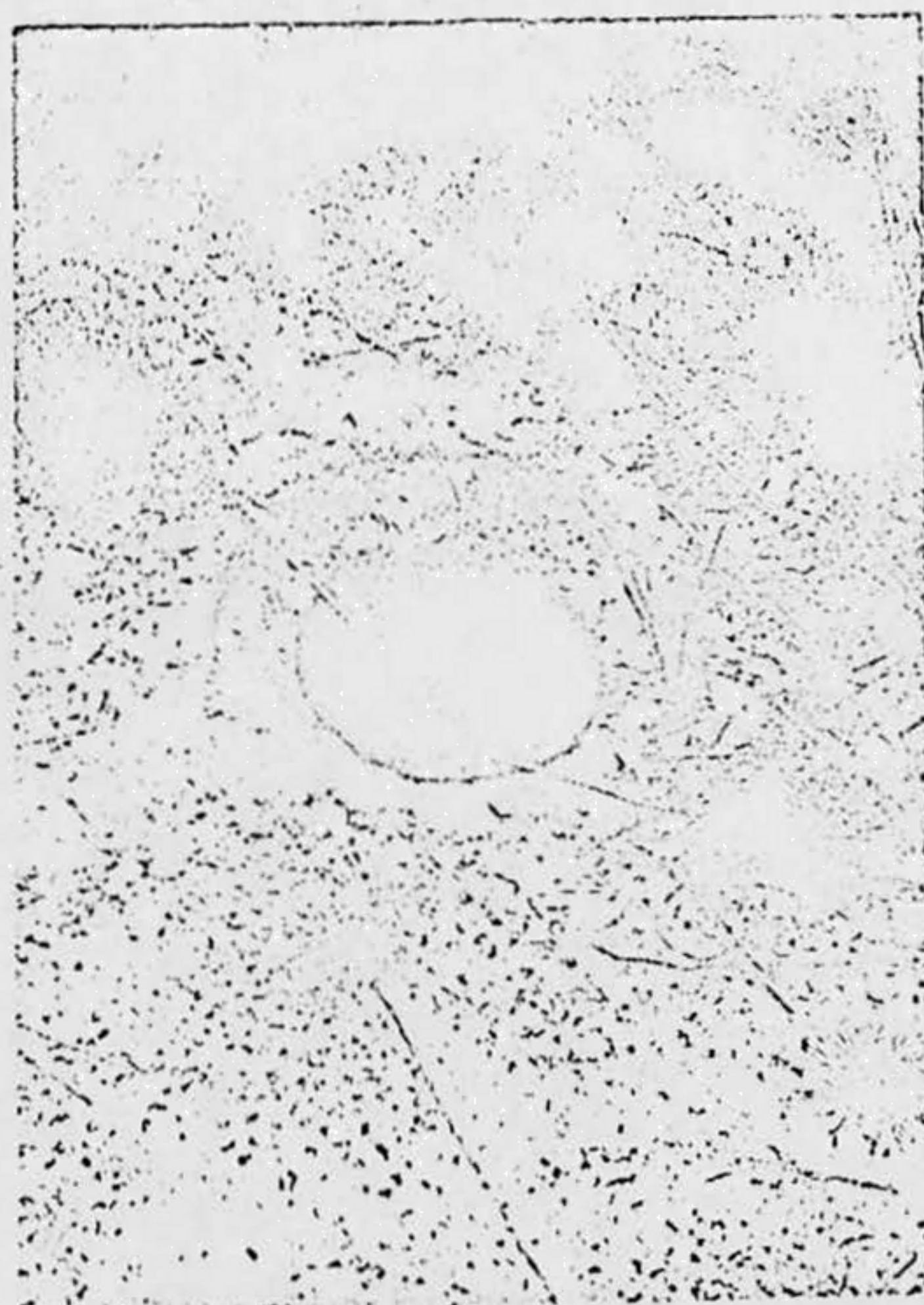
Reeves said he walks through the woods in this West Central Florida area often and this was the first time he had seen or heard anything unusual.

The two pieces of paper were turned over to an investigating team from MacDill Air Force Base in Tampa.

OFFICIALS AT MacDILL said the investigation is a routine one made whenever any "aerial phenomenon" is reported. The Air Force team talked to Reeves and visited the wooded area.

The base said the team will send its report directly to Project Bluebook at Wright-Patterson Air Force Base, Dayton, Ohio.

This unit investigates all reports of unidentified flying objects.



NON AVAILABILITY OF MATERIALS

The following items are for internal use only and are not available for distribution to the public. These concern internal management and procedures for forwarding UFO reports to the appropriate agency:

1. Air Force Regulation 200-2
2. JANAP 146

The Air Force has no films, photographs, maps, charts, or graphs of unidentified flying objects. Photographs that have been submitted for evaluation in conjunction with UFO reports have been determined to be a misinterpretation of natural or conventional objects. These objects have a positive identification.

The Air Force no longer possesses, and thus does not have for distribution, outdated reports on Project Sign, Project Grudge, Blue Book Special Report No. 14, and outdated Project Blue Book press releases. Non-military UFO publications should be requested from the publisher, not the Air Force.



THE INSTITUTE OF PAPER CHEMISTRY
Appleton, Wisconsin
54910

April 5, 1965

Special Number 50,072

Your Ref: TDEW/UFO

Dr. J. Allen Hynek
Northwestern University
Evanston, Illinois

Dear Dr. Hynek:

The following summarizes our analyses, interpretations, and suggestions on the specimen submitted to us recently by Major Quintanilla. This is the material allegedly dropped by a visitor from outer space. Much of this information was reported previously but is included and supplemented here for the sake of completeness. We have divided our comments into several categories.

1. Composition of Fiber

The sample is composed of plant fibers from the bast or the leaf of one or more of a number of plants. A wide variety of plants of this general type grow in this country and abroad, and some species are not distinguishable from one another in fiber form. Of the more common ones, we believe the submitted sample is not jute, mitsumata, gampi, flax, or ramie; it could be fiber from abaca, sisal, kozo, hemp, or a similar but less common plant.

Exhibit A includes photomicrographs showing botanical similarities of fibers from the unknown sample and from two commercial papers (described below). It also includes photomicrographs from our files of a number of known fibers in the TAPPI Library maintained as reference materials for the Technical Association of the Pulp and Paper Industry.

Although the United States paper industry is based principally on fibers derived from trees, the use of bast or leaf fibers in this country, and in foreign countries, is not uncommon, and we see no reason to believe that these fibers have any unusual origin. In foreign countries, such fibers are grown specifically for papermaking; this practice is not as common in this country, but such fibers can be imported for papermaking or can be (and are) recovered from old rope, cordage, and similar products containing fibers of this type.

2. Paper Identification

The sample itself is of the type used for lens paper or stencil tissue (sometimes called Japanese tissue). The sample submitted had a basis weight of 5.5 lbs. (for a ream of 500 sheets, 24 x 36 inches), a thickness of approximately 0.0013 inches and was soft, bulky and of open structure. Formation was very uniform, indicating a high quality operation. There was no evidence of any special treatment to impart water repellency or wet strength.

3. Possible Origin

Of the samples which were readily available to us for comparison, one approximating the unknown sample quite closely was taken from "Paper-Japan 1960" published by Japanese Paper & Pulp Association and Japan Paper Exporters Association. This sample, identified as "Machine-made Tengujo (stencil) Paper" was essentially indistinguishable from the unknown. Japanese tissues are imported into this country and it is quite probable that similar materials are available in various commercial channels, or possibly as souvenirs brought from a foreign country by an individual. Similar papers are also manufactured in this country by a number of companies; we believe that a sample matching the unknown could be manufactured by these mills but we do not know whether they actually make such materials at the present time.

A second sample similar to the unknown, identified as "Speed-O-Print Carbon Cushion Sheet No. 700", is used with mimeograph stencils and obtained from a local office supply house. Obviously this is readily available, but we do not know whether it is imported or an item of domestic manufacture.

Exhibit B includes transmitted light photographs at approximately 3.5 diameters magnification, showing similarities in structure between the unknown, the Japanese tissue and the commercial stencil tissue.

Exhibit C includes specimens of the two commercial papers for comparison with the unknown.

4. Suggestions for Further Exploration

In case additional information on the possible availability or the actual history of the specific sample is desired by the Air Force, or by some other appropriate agency, we suggest the following contacts.

A. Domestic Paper Manufacturers

There are several companies in this country which are capable of making products very similar to the unknown. We feel that discussion with these companies, including an opportunity for them to examine the sample, would be helpful in determining whether or not any of these companies do, in fact, manufacture a product identical to the unknown. Companies active in this particular segment of the paper industry would be able to comment on the present status of domestic production versus imports of products of this type and the probable channels of distribution. For primary contacts we suggest the following:

John A. Manning Paper Co., Inc., P. O. Box 328, Troy,
New York (C. E. Lanyon)
C. H. Dexter & Sons, Inc., 100 Canal St., Windsor Locks,
Conn. (Geo. D. Knight)
Crystal Tissue Co., Middletown, Ohio
Peter J. Schweitzer Division of Kimberly-Clark Corpora-
tion, 261 Madison Ave., New York, New York
Ecusta Paper Operations, Packaging Div., Olin Industries,
Pisgah Forest, North Carolina

In turn, discussion with each of these companies may develop further contacts worth investigating.

B. Users and/or Distributors

At least two types of organizations would be interested in handling papers comparable to the unknown: for lens tissue and for use as stencil tissue. We suggest that the following be contacted as converters or distributors of paper for lens tissue:

Eastman Kodak Company, Rochester, New York
Lenclean, Inc., 123 W. 25th Street, New York,
New York

Among the companies handling mimeograph supplies, we suggest the following be contacted for information on their sources of supply (whether domestic or imported) and on methods of distribution:

A. B. Dick Company, 5700 W. Touhy Avenue, Chicago,
Illinois
Speed-O-Print Business Machines Company, 1801 W.
Larchmont St., Chicago, Illinois
Milo Harding Company, Monterey Park, California

In addition we have recently noticed an article (House Beautiful for November, 1964) suggesting use of various papers for art work and noting that a kit of Japanese papers is available from:

Craft Studios, 118 Evans St., New Hyde Park, New York

C. Importers

In addition to general importers or specific contacts developed as a result of the above discussions, the following may be able to contribute useful information:

Nelson-Whitehead Company, New York, New York

This company is listed as a sales agent for one of the Japanese manufacturers of hand-made paper but we have been unable to locate a New York address for them. It is possible that the firm has been reorganized since issuance of the directory in which they were mentioned. The following companies, listed as paper merchants in the New York area, might or might not be related to this possible contact:

A. G. Nelson Paper Company, Inc., 420 W.
Broadway, New York 12, New York
Whitehead and Alliger Company, Inc.,
• 11 Thomas St., New York 7, New York

The following is an importer of various materials from Japan:

C. T. Takahashi Company, Inc., 220 Third Ave.,
South, Seattle 4, Washington
(Mr. T. M. Iwata)

The following is an importer of pulps and possibly papers
of this general type:

H. Reeve Angel, Inc., 9 Bridewell Place,
Clifton, New Jersey

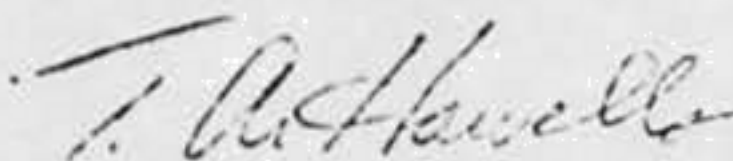
5. Further Speculation

We have made no chemical analysis of the markings and do not intend to do so. In my previous letter I commented that brief microscopic examination had suggested the possibility that the markings were placed upon the paper by stamping or printing rather than by an instrument such as a pencil which would tend to disrupt the fiber structure. Some of my colleagues feel that the markings could have been made with a special type of pencil used in photographic touchup work and other graphic arts procedure. One example is: The Mars-Lumograph Duralar pencil made in Germany and available thru J. S. Staedtler in this country.

Further speculation about the nature of the markings brought out the comment that these markings appear to have been made by a person with skilled hands and confidence in his ability. In other words, they were not made by someone who was painstakingly and hesitatingly following a set pattern with no previous experience. This again suggests the possibility that a commercial artist, or someone with similar skills, may have been involved in preparation of the coded message, either for the incident under consideration or for some previous occasion.

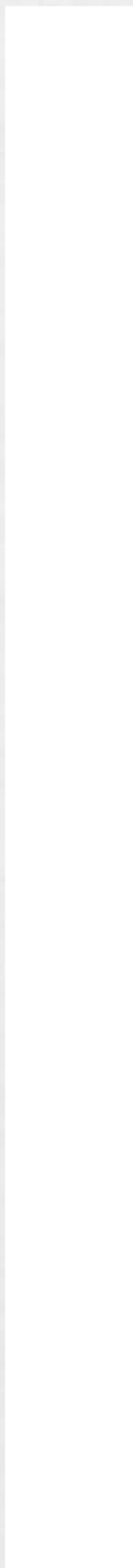
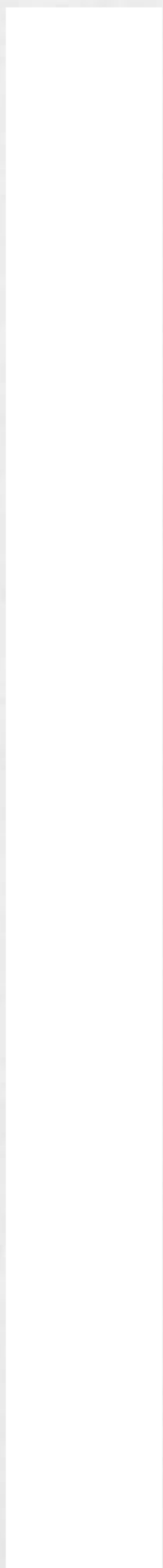
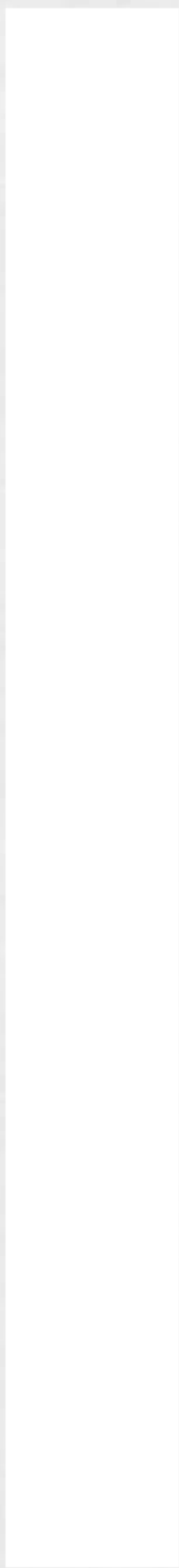
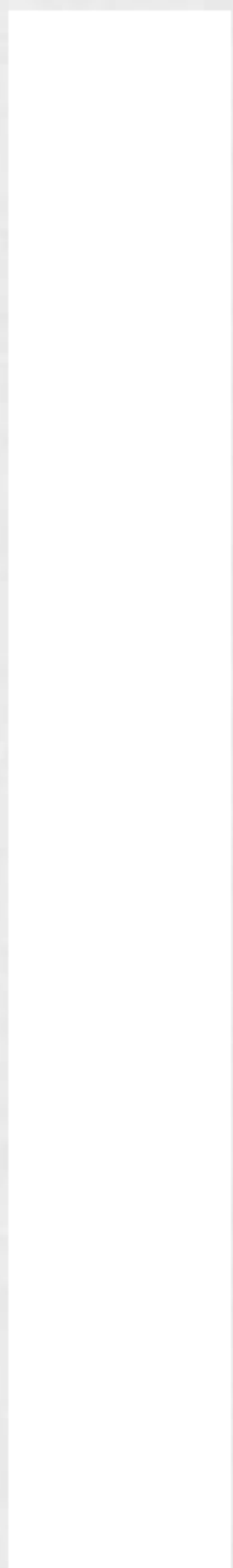
If there is any way in which we can be of further assistance to the Air Force or to any agency investigating related aspects, please feel free to call on us.

Very truly yours,



T. A. Howells, Chairman
Technology Section

TAH/rl



C

AERONAUTICAL SYSTEMS DIVISION
AIR FORCE MATERIALS LABORATORY, RESEARCH AND TECHNOLOGY DIVISION
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

MATERIALS PHYSICS DIVISION
AF MATERIALS

LABORATORY

EVALUATION REPORT
Analysis of Earth Sample

REPORT NR: MAY 65-13

DATE: 14 April 1965

PROJECT NR:

TYPE EVALUATION:

MANUFACTURER:

SPEC NR:

SUBMITTED BY: FTD (Sgt. Moody)

ITEM SERIAL NR:

I. PURPOSE

To analyze the sample for organic components that would be foreign to the sample.

II. FACTUAL DATA

A sample of dirt was submitted to the Analytical Branch and assigned Analytical Branch number #5-628. Approximately half the sample (105 grams) was extracted with carbon tetrachloride. The solvent was evaporated and an infrared spectrum obtained of the residue. The spectrum showed the residue to be a petroleum hydrocarbon base oil. About 10 c.c. of residue was extracted from the sample showing the dirt contained an appreciable amount of oil.

III. CONCLUSION

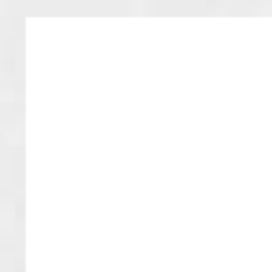
The dirt sample was analyzed and found to contain a petroleum hydrocarbon base oil.

PREPARED BY:

W. J. Crawford
W. J. Crawford MAYA

nm:19

THIS REPORT IS NOT TO BE USED IN WHOLE OR IN PART FOR ADVERTISING OR SALES PROMOTION PURPOSES



D



ALLEGANY BALLISTICS LABORATORY

OPERATED BY

HERCULES POWDER COMPANY

INCORPORATED

P. O. BOX 210 · CUMBERLAND, MARYLAND 21501

TELEPHONE:
ROCKET CENTER
RIDGELEY, WEST VIRGINIA
304 RE 8-9000

September 29, 1965

In Reply
Refer to: 3698-340

Headquarters
Foreign Technology Division
Air Force Systems Command
United States Air Force
Wright-Patterson Air Force Base, Ohio

Attention: TDEW -- Colonel Eric T de Jonckheere

Dear Sir:

Components from 4th Stage Scout Recovered in Thailand

Reference your letter of 28 July 1965, Hercules Powder Company is pleased to advise that the components returned to us therewith were part of a rocket motor manufactured at the Allegany Ballistics Laboratory for the National Aeronautics and Space Administration, Langley Research Center, on Contract NAS 1-3698. Pertinent data on this rocket motor are as follows:

- (1) Motor Description -- Jato 24DS-5850 X258
- (2) Motor Manufacturer -- Hercules Powder Company, Allegany Ballistics Laboratory
- (3) Date of Manufacture -- 13 November 1964
- (4) Motor S/N -- RH-75
- (5) Mission -- 4th stage propulsion on Scout Vehicle S-137, San Marco Mission
- (6) Payload -- Air density
- (7) Orbit -- Perigee 115 miles; Apogee 350 miles
- (8) Payload Life -- Expected six months
- (9) Launch Date -- 16 December 1964
- (10) Launch Station -- Wallops Island, Virginia
- (11) Date of Re-entry of 4th Stage Parts -- Approximately May 1964
- (12) Place of Re-entry of Motor Parts -- Sisakit Province, Thailand

The subject components are presently being retained at Allegany Ballistics Laboratory.



Colonel Eric T de Jonckheere - 2
Wright-Patterson Air Force Base, Ohio
Components from 4th Stage Scout Recovered in Thailand

If additional information on these components becomes available from the Joint Military Advisory Group in Thailand, we would appreciate receiving same.

If we can be of further assistance, feel free to call upon us.

Very truly yours,



J. L. SHROUT, MANAGER
SPACE MOTORS PROGRAM OFFICE

JLS:jrp

cc: Major Hector Quintanilla, Jr., Wright-Patterson AFB
Mr. D. D. Welder, HPC/Wilmington
Mr. D. E. Guthrie, NASA/LRC
Mr. L. B. Johnston
SMPO File

SUGGESTED READING MATERIAL

Books listed below deal with facts and theories about our solar universe, the sun, planets, comets, meteorites, the universe, stars, constellations and galaxies; telescopes, the computation of time as it relates to astronomy, star maps and charts, and the history of astronomy.

SKY & TELESCOPE, by Sky Publishing Corporation, Harvard College Observatory, Cambridge, Mass. 02138. Monthly Magazine, 60 cents per copy.

WEATHER ELEMENTS, by BLAIR, published Prentice Hall. Has an excellent chapter on often mis-identified weather phenomena.

PLANETS, STARS, AND SPACE, by CHAMBERLAIN, JOSEPH M. & NICHOLSON, THOMAS D. An illustrated, non-technical explanation of the earth, planets, stars, and the universe. Prepared in co-operation with the American Museum of Natural History.

JUNIOR SCIENCE BOOK OF STARS, by CROSBY, PHOEBE. An easy-to-read, exciting story of what scientists know about the stars, planets, the moon, and the MILKY WAY.

CHALLENGE OF THE UNIVERSE, by HYNEK, J. ALLEN & ANDERSON, NORMAN. Discusses the nature of the universe; astronomy and cosmology, published by Scholastic Press.

THE STORY OF THE STARS, by MALONEY, TERRY. An introduction to the universe; our solar system, our galaxy, and other galaxies. Many interesting illustrated analogies help build concepts of size and distance. Includes references to the Van Allen radiation belts and zodiacal light observation of 1960.

THE WORLD OF FLYING SAUCERS, by MENZEL & BOYD. A scientific examination of the classic UFO reports.

THE MOON, METEORITES, AND COMETS, Dtd 1963, by MIDDLEHURST & KUIPER. Continuous analysis of Soviet moon photos. Chapter on Siberian meteorite and photos or comets computation of various comet orbital photos.

THE NATURE OF LIGHT AND COLOR IN THE OPEN AIR, by MINNAERT, Dover Publications. This is an excellent paperback written in understandable lay language.

METEORS, by OLIVIER. Standard text by foremost authority on meteors.

PHOTOGRAPHIC HISTORY OF MARS, 1905-1961, by SLIPHER, E. C., published by Lowell Observatory.

ANATOMY OF A PHENOMENON, by VALLE, JACQUES.

FIRST MAN TO THE MOON, by VON BRAUN, WERNHER.

ALLEGANY BALLISTICS LABORATORY

OPERATED BY

HERCULES POWDER COMPANY

INCORPORATED

P. O. BOX 210 · CUMBERLAND, MARYLAND 21501

TELEPHONE:
ROCKET CENTER
RIDGELEY, WEST VIRGINIA
304 RE 8-9000

October 27, 1965

In Reply
Refer to: 3698-371

Headquarters
Foreign Technology Division
Air Force Systems Command
United States Air Force
Wright-Patterson Air Force Base, Ohio

Attention: TDEW -- Colonel Eric T de Jonckheere

Reference: HPC/ABL ltr 3698-340, dtd 29 September 1965

Dear Sir:

- Erratum -

Components from 4th Stage Scout Recovered in Thailand

Please make the following correction to the referenced letter:

Item (11) of the pertinent data reads, "Date of Re-entry of 4th Stage Parts -- Approximately May 1964!" Change to read, "Date of Re-entry of 4th Stage Parts -- Approximately May 1965."

Very truly yours,


J. L. SHROUT, MANAGER
SPACE MOTORS PROGRAM OFFICE

JLS:jrp

cc: Major Hector Quintanilla, Jr., Wright-Patterson AFB
Mr. D. D. Welder, HPC/Wilmington
Mr. D. E. Guthrie, NASA/LRC
Mr. L. B. Johnston
SMPO File



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

E

UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
INCOMING MESSAGE

AF IN: 16105 (23 Aug 65)

Page 2 of 2

CONVINCED THAT THE SIGHTING WAS NOT A HOAX OR FABRICATION. ONE
TECHNICIAN REMAINED UNCONVINCED.

PAGE 2 RUCIEKA7233 UNCLAS

3. THE OBSERVERS MAINTAINED THEIR STORY EXACTLY AS REPORTED
IN THE INITIAL REPORT UNDER POLITE BUT VIGOROUS CROSSQUESTIONING.
HAROLE BUTCHER MADE A ROUGH DRAWING OF THE UFO WHICH IS ON FILE
AT NIAGARA AIR BASE. HE INDICATED A DISK 50" DIAMETER, 20"
THICK WITH RED GLOWING STREAMERS PROJECTING DOWNWARD FROM THE
ENTIRE PERIMETER PLUS A TRAIL OF RED TO YELLOW COLOR.

4. NO PHYSICAL EVIDENCE OF A VEHICLE OR LANDING WAS FOUND
EXCEPT AN OILY PURPLE SUBSTANCE WHICH APPEARS TO BE A COMBINATION
OF VIO STRIDENT OR GENTIAN VIOLET PLUS 3-IN-ONE OIL, WHICH
IS NOT BELIEVED CONNECTED WITH THE SIGHTING.

BT

NNN NOTE: Reference not identified in SMB.

N

UNCLASSIFIED

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

F

[REDACTED]

[REDACTED]

CONFIDENTIAL
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 43D BOMBARDMENT WING (SAC)
LITTLE ROCK AIR FORCE BASE, JACKSONVILLE, ARKANSAS, 72077



UNCLASSIFIED

30 August 1965

REPLY TO
ATTN OF: 43DCOI/6683

SUBJECT: (U) Investigation of Unidentified Flying Object

TO: 825Cmbt Spt Gp (BC)

THRU: 43DCO 52w ✓
43C

1. (U) The following information is the result of an investigation conducted by Captain Howard D. Lowrey, A0944986, Combat Intelligence, Intelligence Division, 43rd Bombardment Wing (M), on 26 and 27 August 1965. Investigation was conducted in accordance with AFM 200-2 concerning the report of an Unidentified Flying Object (UFO).

2. (U) Description of the object: Nine (9) light blue plastic bags approximately 36 inches in length, each bearing the inscription: "WARNING! To avoid chances of suffocation keep away from babies and children. Do not use in cribs, beds, carriages or play pens. This bag is not a toy." The bags were tied together with a string that extends approximately 36 inches below the bags. Attached to the string is a mercury type battery wired to a flashlight type bulb, #605, by two wires, numbers X-228 and X-232. Enclosing the battery and bulb were pieces of cellophane colored blue, orange, green and purple. The plastic bags appear to be the type utilized by commercial cleaning establishments to enclose clothes for customers.

3. (C) Investigation information: Mr Jack E. Page, 1549 Stubblefield Road, Fayetteville, Arkansas, age 50, self-employed Asphalt Broker, reported observing the UFO approximately 0525L hours, on 24 August 1965. He had just arisen from bed and saw the object in a field approximately 150 yards back of his house. He estimated the wind to be very light from a northeasternly direction at the time of first seeing the object. Mr Page took the UFO to Mr Glenn Estes, Chief of FAA, Drake Airfield, Fayetteville, Arkansas, who in return notified Little Rock AFB officials. Subsequently Mr Estes was interviewed by a reporter from the Northwest Times newspaper of Fayetteville, Arkansas and the UFO received front page open coverage in the Northwest Times plus TV coverage in Little Rock, Arkansas.

Weather conditions at Fayetteville, Arkansas during the period from 2200L, 23 August to 0800L, 24 August was:

a. Wind - Surface calm until 0800L, 24 August

b. Ceiling - Clear

Classification Cancelled
OR Changed to UNCL
Auth: DEF-105-1
PASA 12.5
By H. G. [Signature]

UNCLASSIFIED

Peace is our Profession

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

UNCLASSIFIED

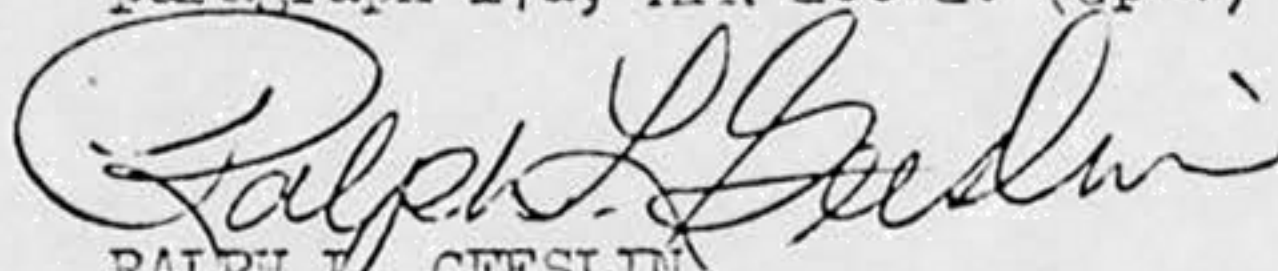
- c. Visibility - 15 miles or better, never below 7 miles
- d. Cloud coverage - None
- e. Thunderstorm - Towering cumulus north with lightening in northwest

4. (U) Additional Information: Washington County Sheriff's office and Fayetteville City Police office advised there were no reports of UFO activities during the period from 22 to 24 August 1965.

5. (U) Comments of Investigation Officer: It is the belief of the investigation officer that the UFO was made by person(s) for a prank or for amateur meteorology observations. Due to the wind currents, temperatures and the unknown amount of gas in the plastic bags, it is unknown as to where this object may have been originally launched. Per telephone conversation with the Foreign Technology Division, Wright-Patterson AFB, Ohio, the UFO is being forwarded under separate cover to the FTD, TDE (UFO), Wright-Patterson AFB, Ohio.

6. (U) With the acceptance of this report under provisions of AFR 200-2, no further action is required. The above information is submitted for your information and will be retained in the files of 43DCOI.

7. (U) This letter is classified Confidential in accordance with paragraph 17a, AFR 200-2. (Gp-4)



RALPH V. GEESLIN
Lt Colonel, USAF
Chief, Intelligence Division

Classification Cancelled

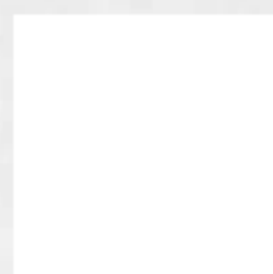
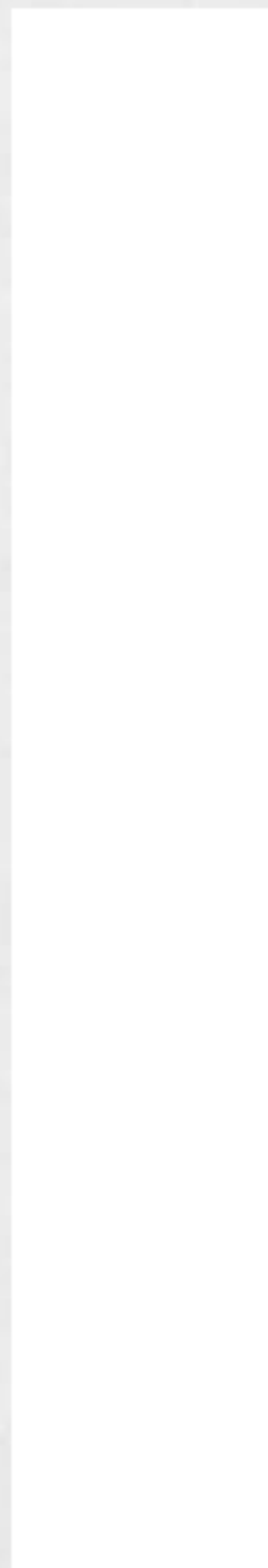
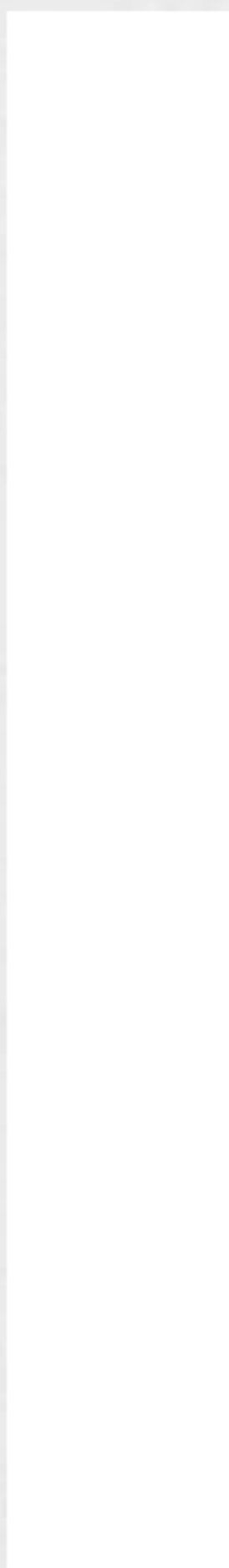
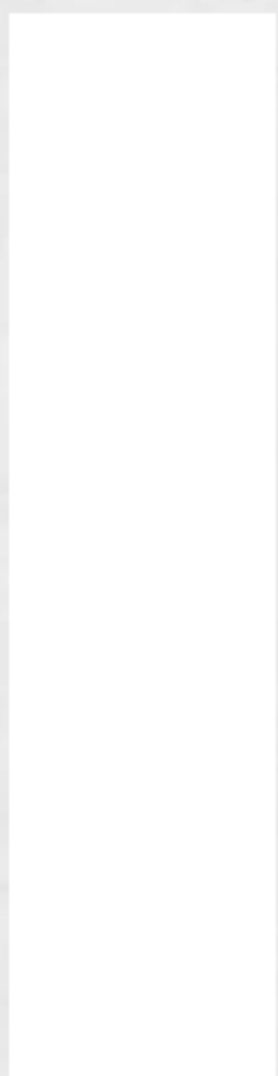
OR Changed to _____

Auth: _____

By _____

UNCLASSIFIED

~~CONFIDENTIAL~~



L

G

0130 29 Sept 65

Call received from

Major Allan F Livers
Senior Director on Duty
Detroit Air Defense Sector (NORAD)
Battle Creek, Michigan

He explained that a meteor sighting occurred on the 28th day of Sept, and that a man,

Harold Karnes
#2 9th Street
Reno, Pennsylvania 677-5235 (Code 814 through Oil City)

and his wife had been painting a house when the object dropped near them. It frightened them, and they left the scene, returning later to find an object roughly the size and shape of a child's football. It is apparently hollow with rubbery walls approximately 1/16 inch thick. It was cracked, but all pieces were recovered. This is near Oil City, Pennsylvania.

Mr Karnes reported this to the:

662 Aircraft Control & Warning Squadron, Oakdale, Pennsylvania
and they are waiting to pick up this object for delivery to FTD if this is desired. They are going to wait for a call from FTD.

MEMO FOR RECORD:

On 7 October Major Quintanilla went TDY to Pennsylvania and obtained the object from Mr Karnes. Object was a gourd of some sort, not a meteor.

OBJECT IN PHYSICAL SPECIMEN FILE

31-Near U-shore

PORT CHARLOTTE, MISSISSIPPI

MISSISSIPPI, DECEMBER 1, 1953

MISSISSIPPI, DECEMBER 1, 1953

MISSISSIPPI, DECEMBER 1, 1953
COMMUNIST RELATIONS
SAPOL
Washington, D.C.

Dear Miss Scott:

Enclosed is a copy of a letterhead from

from Wright Patterson Air Base, with an explanation

of whose, from whose, whether, and so on.

Let to mention what is in it.

May I expect a report on this from your office?

Very sincerely yours,

Charles E. Caffery
Charles E. Caffery

Enclosure enclosed

H

The News Tribune
FORT PIERCE, FLORIDA

VERO BEACH BUREAU • 1002 20TH PLACE • VERO BEACH

CHARLOTTE CAFFREY
VERO BEACH BUREAU CHIEF
567-5803

Nov. 24, 1965

MISS SARA HUNT
Community Relations
SAFOI
Pentagon,
Washington, D.C.

Dear Miss Hunt:

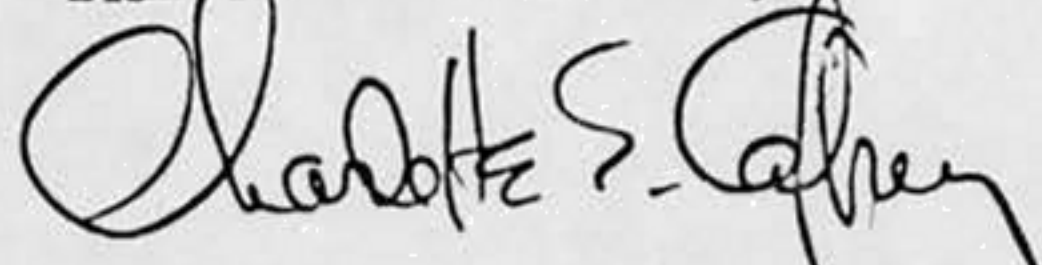
Got my aluminum "light Bulb" back
from Wright-Patterson Air Base, but no explanation
of whose, from whence, whither headed, or why.

Not to mention what it is.

May I expect a report on same from your office?

Very sincerely yours,

THE NEWS TRIBUNE,


Charlotte E. Caffrey,

Clippings enclosed

TOTAL UFO (OBJECT) SIGHTINGS

(Compiled 17 Jan 66)

<u>YEAR</u>	<u>TOTAL SIGHTINGS</u>	<u>UNIDENTIFIED</u>	<u>SOURCE</u>
1947	122	12	Case Files
1948	156	7	Case Files
1949	186	22	Blue Book, page 108
1950	210	27	Case Files
1951	169	22	Case Files
1952	1,501	303	Blue Book, page 108
1953	509	42	Case Files
1954	487	46	Case Files
1955	545	24	Case Files
1956	670	14	Case Files
1957	1,006	14	Case Files
1958	627	10	Case Files
1959	390	12	Case Files
1960	557	14	Case Files
1961	591	13	Case Files
1962	474	15	Case Files
1963	399	14	Case Files
1964	562	19	Case Files
1965	886	16	Case Files
	<u>10,147</u>	<u>646</u>	

HEADQUARTERS
FOREIGN TECHNOLOGY DIVISION
AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE
WRIGHT-PATTERSON AIR FORCE BASE, OHIO



REPLY TO
ATTN OF: TDEW/UFO

DEC 2 1965

SUBJECT: Balloon, Vero Beach

TO: Hq USAF SAFOICC (Mrs Hunt)

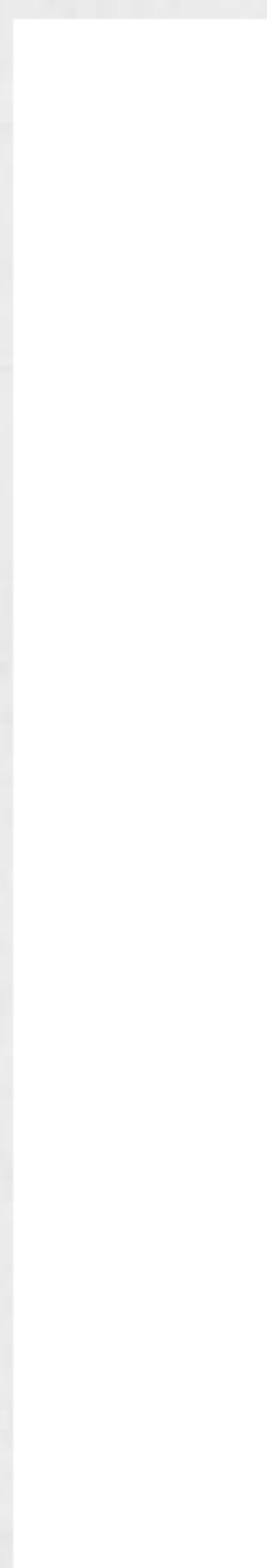
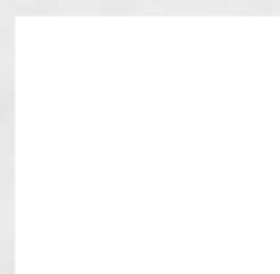
Reference the balloon which was recovered at Vero Beach, Florida. It can be stated that the balloon was manufactured by the G T Schjeldahl Company, Northfield, Minnesota. This particular balloon was probably launched from Cape Kennedy just prior to the Gemini 6 mission. The Schjeldahl Company has supplied approximately 1,500 of these metallic mylar balloons to the Marshall Space Center for launch at the Cape. These are meteorological balloons which collect information on temperature, pressure, and density of the atmosphere prior to a launch. At times, some of these balloons are launched as frequently as every five minutes during the last hour of the count-down in order to obtain data on wind direction and velocity. Most of these balloons would probably end up over the water due to the prevailing winds.

FOR THE COMMANDER

ERIC T de JONCKHEERE, Colonel, USAF
Deputy for Technology and Subsystems



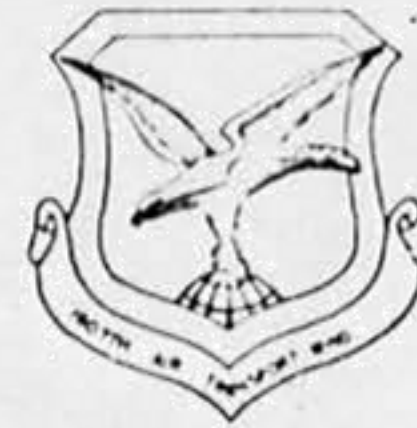
YOU - THE NUCLEUS OF SECURITY!



MS GANT
(INFORMANT 2nd OAKY)

20 OCT Doc R, JCL

HEADQUARTERS
1607TH AIR TRANSPORT WING (MATS)
UNITED STATES AIR FORCE
DOVER AIR FORCE BASE, DELAWARE, 19901



REPLY TO
ATTN OF: ODOTI

SUBJECT: UFO Recovered at Dover AFB, Delaware

27 October 1965

TO: FTD (TDEW) (UFO)

1. Reference Telecon between Sgt Moody and MSgt Fernandez on 25 October 1965 in which FTD requested further information on the identification and return of balloon to NASA.
2. After notifying FTD (UFO) on 21 October 1965 that the object would be sent to them for identification, we received a phone call from Mr. Robert Ladd, Washington representative of the G.T. Schjeldahl Co. of Northfield Minn. From our description, Mr. Ladd identified the object as a test balloon manufactured by the Schjeldahl Co. He requested we retain the balloon until Mr. Kenneth Witt, company engineer, arrived to make positive identification.
3. On 22 October we received a call from Mr. Bob Long of NASA Operations, Wallops Island Station, Va. Mr. Long heard of the balloon through the news media and stated NASA had launched similar ones manufactured by the Schjeldahl Co. He said a check of the winds for 20 October indicated the balloon could possibly be one launched by NASA from Wallops Island. When we informed Mr. Long that a representative from the Washington office of the Schjeldahl Co. was coming to Dover to identify the balloon, he requested we have Mr. Witt call him when he arrives. Mr. Witt arrived at Dover on the 22nd of October and positively identified the balloon as one manufactured by the Schjeldahl Co. for NASA. He called Mr. Long at NASA Operations, Wallops Island Station, Va. and coordinated the return of the balloon which was to be delivered to NASA on Monday or Tuesday of the following week.
4. Further information on the return and ownership of the balloon can be obtained by calling Mr. Bob Long at NASA, Wallops Island Station, Va. phone 703 (824-3411 ext 2354).

FOR THE COMMANDER

Charles R. Gant

CHARLES R. GANT
Major, USAF
Chief of Airlift Training

3 atch
Press Releases on UFO

THE WASHINGTON POST
WASHINGTON, DC
City and State News Section
22 October 1965
Page E-3

UFO Reclaimed

Two attaches of the Air Force base at Dover, Del., came and got the mysterious "thing" that glided last Wednesday to a several-point landing near a hatchery operated at Snow Hill, Md., by Mrs. George Hopkins. Mrs. Hopkins said it appeared to be made of plastic with a wingspread of about 10 feet and what looked like valves of some sort, several of them 12 to 14 feet long. Anyway, it scared her chickens and the men from Dover mumbled something about it looking like a tow target and acted like it sort of scared them a little bit, too.

10—State New, Dover, Del., Monday, October 25, 1965

Martian Saucer?

AFB Officials Claim Unidentified Object

An unidentified inflatable, winged object claimed by Dover Air Force Base officials from Snow Hill, Md., resident last Thursday will be sent to Wright-Patterson Ohio, for investigation.

The valved object resembles aluminum but is plastic. It landed Wednesday in a field behind the hatchery of Mrs. George Hopkins of Snow Hill. The object is 12 to 14 feet long and has a wingspan of 10

feet. The only marking is SN7 and the firm name of G. T. Schjeldahl Co.

Mrs. Hopkins doesn't know what it is, but suggestions made include a gunnery target or a device for training radar operators.

Maj. Robert Steele, Dover Air Force Base information officer, said it appears to be some type of test vehicle. When identification is made by Wright-Patterson officials, the information

will be released, he said.

Dover officers and the National Aeronautics and Space Agency installation at Wallops Island, Va., both say it doesn't belong to them.

Two men from Dover AFB claimed the object yesterday.

Capt. Richard Young of the Office of Safety at the base said he was "not sure" of the object's origin. He said it was "some kind of tow target, I'm not sure what."

Strange object called balloon

Md. mystery deflated

SNOW HILL, Md. — The object which fell from the sky behind a Snow Hill, Md., hatchery Wednesday afternoon may be a weather balloon, a spokesman for the manufacturer said last night.

Robert Ladd, manager of the Washington office of the G. T. Schjeldahl Co. of Northfield, Minn., said he based his theory on a description of the find—an inflatable, winged object 12 to 14 feet long, with a wingspan of 10 feet. Ladd said he would begin an investigation at once.

MRS. George Hopkins, owner of the hatchery, said the object landed in a field behind the hatchery building. The markings were SN7 and the name of the company.

It was equipped with five valves, Mrs. Hopkins said. Four

of these appeared designed to inflate it.

Mrs. Hopkins said heat appeared automatically to cause the thing to expand and when it was carried into the hatchery office it quickly floated to the ceiling.

A team from the Dover Air Force Base picked up the object and returned it to the base. A base spokesman said it will be taken to Wright Patterson Air Force Base in Ohio for positive identification.

Representatives of the National Aeronautics and Space Administration at Wallops Island, Va., said it did not originate there.

Schjeldahl was the firm that produced the Echo I satellite which cut a brilliant trail through the skies in 1960.

LADD said Schjeldahl balloons

are used in tests at Wallops Island and also are used by the Army in tests in the Washington-Virginia area.

"It's entirely possible one of them got loose," Ladd said. "Balloons of various types are flying around the country all the time in various test projects."

Ladd said many of the balloons are made of aluminized plastic.

MRS. HOPKINS said the object resembled aluminum.

Throughout Wednesday afternoon and night scores of persons flocked to the scene to view the object before it was removed.

Mrs. Hopkins said many theories were expressed about its origin and use, the most prevalent being that it was a gunnery target or a device for training radar operators.

MEMO FOR THE RECORD

19 November 1965

Major Quintanilla called Mr Curtis of the G T Schjeldahl Co in reference to the balloon which was recovered in Greece. He read a message to Mr Curtis saying that a reward was to be given to the person recovering the balloon. Mr Curtis said that the message was correct. Mr Curtis referred Major Quintanilla to Mr Cliff Merrill. Major Quintanilla read the same message to Mr Merrill. Major told Mr Merrill to address his letter to:

Executive Agency for Military Attache
Office of U S Army Attache American Embassy
APO New York 09223

Major told him to address the inside of the letter to the:
Office of the Air Attache
American Embassy
Athens, Greece

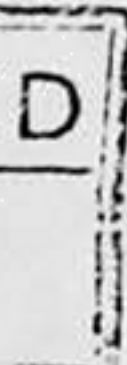
This pertains to the reward for the recovery of the package.

DEPARTMENT OF THE ARMY

EXECUTIVE AGENCY FOR MILITARY ATTACHES
OFFICE OF THE US ARMY ATTACHE
AMERICAN EMBASSY
APO NEW YORK 09223
OFFICIAL BUSINESS

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY

FTD-TDAOH
Wright-Patterson AFB
Ohio, 45433



DA Label 18, 1 Apr 59 PREVIOUS EDITIONS OF THIS LABEL ARE OBSOLETE.

16-78043-1

#	INCIDENT	DATE	LOCATION	TYPE RADAR	SCOPE PHOTOS	VISUAL SIGHTING	NUMBER OF OBJECTS	DURATION	BLIP SIZE	1965 CASES CONTAINING RADAR R		ANALYS
										MOTION		
1.	30	1/24	ALASKA	ACW	NO	YES	1 RADAR 2 VISUAL	40 MIN	FTR A/C	24 K AT 26,500'	HOVERED	LOCAL CC
2.	49	2/02	4 STATES	AIR PPI	NO	YES	1	N/R	N/R	EAST		LOCAL
3.	137	4/10-14	JAPAN	F-102 PPI ASR, ASPR	NO	NO	MULTIPLE	3 SEC TO 5 MIN	F-100	140-240 K, NO INVERSION		LOCAL AN TDEED
4.	171	5/05-07	PHILIPPINES	SPS 6-C SHIP RADAR	NO	YES	4 MAX	6 MIN		22 MI, 3,000 MPH, MANU- VERED AND STATIONARY		TDEW CON
5.	207	6/08-09	TURKEY	FPS-88	NO	YES	SINGLE 8 TIMES	N/R 1 HR INTERVAL	N/R	FROM 290 MI OUT IN TO SCOPE. 3,000 MPH		TDEAM
6.	269	7/12	EAST U.S.	ACW SATELLITE TRACK	YES	YES	1	4 HOURS	BALLOON	WEST 60 K 100,000 FT		NO
7.	282	7/13	EAST U.S.	ACW, ARMY AIR DEF MISSILE	NO	YES	1-2	27 MIN	SINGLE	80 MI RANGE, HOVERING ERRATIC MOTION		TDEED
8.	335	7/25	WISCONSIN	ADA, LOW POWER	NO	NO	1	10 MIN		1,000 K, 100,000 FT.		TDEED
9.	360	7/30	EAST COAST	BACKSCATTER GD ELECTRONIC	NO	NO	1 TWICE	F/SEC	GEMINI	100 MI ALT. 200,000 (1) 100,000 RETURN		TDEED
10.	367	7/31	TINKER, OKLAHOMA	ACW	NO	YES	1		N/R	SOUTH VARIED TO 101,000'		LOCAL CO
11.	367	7/31	OKLAHOMA CITY	ACW	NO	YES				10,000 FT 205° AZ FROM 15-29 MI		TDEED
12.	367	8/02	WICHITA, KANSAS	GCI	NO	YES	MULTIPLE	SEVERAL HOURS	VARIES	MULTIPLE RETURNS		TDEED
13.	373	8/01	W. TOPEKA, KANSAS	AIR PPI	NO	NO	12-15	N/R	N/R	50 MI SCOPE, FORMATION		TDEED
14.	(INFO)	8/04	CALUMET AFS, MICH	ACW	NO	NO	NEWSPAPER	CARRIED	ARTICLE OF	ALLEGED CONTACT. COMMANDER	OF STATI	
15.	445	8/05	CHICAGO, ILL	GD ELECTRONIC SEARCH & HEIGHT	NO	NO	POSS 2	45 MIN	N/R	100,000'. SLOW. NO INVERSION		TDEED
16.	500	8/11	WHITEMAN AFB, MO.	AN/CPS 9	YES	YES	3-5	5 1/2 HOURS	N/R	INVERSION		LOCAL
17.	565	8/20	PLATTSBURG, N.Y.	GCA	NO	YES	1	3-5 MIN	N/R	WEST OF SCOPE, JAMMING		LOCAL
18.	566	8/20	PEASE AFB, N.H.	CPN-18	NO	NO	ONE OR MORE	30 MIN	N/R	7 MI WEST OF TOA TO 8 MI NW		LOCAL
19.	628	8/31	TONOPAH, NEVADA WINNEMUCCA AFS, NEVADA	ACW	NO	NO	1	3 HR 15 MIN	N/R	STOPPING, STARTING, CLIMBING, FADING		LOCAL/TD
20.	727	9/26	LICKING COUNTY, OHIO	GD ELECT	NO	YES	1	3-5 MIN	N/R			LOCAL
21.	756	10/06	EDWARDS AFB, CALIF	SEARCH & HEIGHT	YES	YES	MULTI	4 1/2 HOURS	N/R	SEE SCOPE PHOTOS		TDEED
22.	258	7/09	Arlington, Texas	GCA	NO	YES	1	15 MIN	A/C	EASTERLY		LOCAL

#	INCIDENT	DATE	LOCATION	TYPE RADAR	SCOPE PHOTOS	VISUAL SIGHTING	NUMBER OF OBJECTS	DURATION	BLIP SIZE	1965 CASES CONTAINING RADAR REPORTS		
										MOTION	ANALYST	EVALUATION
1.	30	1/24	ALASKA	ACW	NO	YES	1 RADAR 2 VISUAL	40 MIN	FTR A/C	24 K AT 26,500' HOVERED	LOCAL CONTROLLER	BALLOON
2.	49	2/02	4 STATES	AIR PPI	NO	YES	1	N/R	N/R	EAST	LOCAL	BALLOON (NCAR)
3.	137	4/10-14	JAPAN	F-102 PPI ASR, ASPR	NO	NO	MULTIPLE	3 SEC TO 5 MIN	F-100	140-240 K, NO INVERSION	LOCAL ANALYSIS TDEED	WX RETURNS A.P.
4.	171	5/05-07	PHILIPPINES	SPS 6-C SHIP RADAR	NO	YES	4 MAX	6 MIN		22 MI, 3,000 MPH, MANU- VERED AND STATIONARY	TDEW CONSULTED	INSUFFICIENT DATA
5.	207	6/08-09	TURKEY	FPS-88	NO	YES	SINGLE 8 TIMES	N/R 1 HR INTERVAL	N/R	FROM 290 MI OUT IN TO SCOPE. 3,000 MPH	TDEAM	ELECTRONIC SIGNALS
6.	269	7/12	EAST U.S.	ACW SATELLITE TRACK	YES	YES	1	4 HOURS	BALLOON	WEST 60 K 100,000 FT	NO	BALLOON (ONR)
7.	282	7/13	EAST U.S.	ACW, ARMY AIR DEF MISSILE	NO	YES	1-2	27 MIN	SINGLE	80 MI RANGE, HOVERING ERRATIC MOTION	TDEED	BALLOON (ONR)
8.	335	7/25	WISCONSIN	ADA, LOW POWER	NO	NO	1	10 MIN		1,000 K, 100,000 FT.	TDEED	A/C
9.	360	7/30	EAST COAST	BACKSCATTER GD ELECTRONIC	NO	NO	1 TWICE	F/SEC	GEMINI	100 MI ALT. 200,000 (1) 100,000 RETURN	TDEED	INSUFFICIENT DATA
10.	367	7/31	TINKER, OKLAHOMA	ACW	NO	YES	1		N/R	SOUTH VARIED TO 101,000'	LOCAL CONTROL	BALLOON
11.	367	7/31	OKLAHOMA CITY	ACW	NO	YES				10,000 FT 205°AZ FROM 15-29 MI	TDEED	GROUND TARGET
12.	367	8/02	WICHITA, KANSAS	GCI	NO	YES	MULTIPLE	SEVERAL HOURS	VARIES	MULTIPLE RETURNS	TDEED	INSUFFICIENT DATA
13.	373	8/01	W. TOPEKA, KANSAS	AIR PPI	NO	NO	12-15	N/R	N/R	50 MI SCOPE, FORMATION	TDEED	FALSE TARGETS
14.	(INFO)	8/04	CALUMET AFS, MICH	ACW	NO	NO	NEWSPAPER	CARRIED ARTICLE OF ALLEGED CONTACT. COMMANDER OF STATION CONTACTED. NO RETURNS.				
15.	445	8/05	CHICAGO, ILL	GD ELECTRONIC SEARCH & HEIGHT	NO	NO	POSS 2	45 MIN	N/R	100,000'. SLOW. NO INVERSION	TDEED	BALLOON
16.	500	8/11	WHITEMAN AFB, MO.	AN/CPS 9	YES	YES	3-5	5 1/2 HOURS	N/R	INVERSION	LOCAL	INVERSION EFFECTS
17.	565	8/20	PLATTSBURG, N.Y.	GCA	NO	YES	1	3-5 MIN	N/R	WEST OF SCOPE, JAMMING	LOCAL	A/C W/ECM
18.	566	8/20	PEASE AFB, N.H.	CPN-18	NO	NO	ONE OR MORE	30 MIN	N/R	7 MI WEST OF TOA TO 8 MI NW	LOCAL	A/C
19.	628	8/31	TCNOPAH, NEVADA WINNEMUCCA AFS, NEVADA	ACW	NO	NO	1	3 HR 15 MIN	N/R	STOPPING, STARTING, CLIMBING, FADING	LOCAL/TDEED	WX RETURNS
20.	727	9/26	LICKING COUNTY, OHIO	GD ELECT	NO	YES	1	3-5 MIN	N/R		LOCAL	SAC KC-135
21.	756	10/06	EDWARDS AFB, CALIF	SEARCH & HEIGHT	YES	YES	MULTI	4 1/2 HOURS	N/R	SEE SCOPE PHOTOS	TDEED	ATMOSPHERIC COND
22.	258	7/09	Arlington, Texas	GCA	NO	YES	1	15 MIN	A/C	EASTERLY	LOCAL	LIGHT A/C

PHOTOGRAPHS ASSOCIATED WITH UFO REPORTS DURING 1965

<u>INCIDENT</u>	<u>DATE</u>	<u>LOCATION</u>	<u>PHOTOGRAPHER</u>	<u>TYPE</u>	<u>ANALYSIS</u>	<u>EVALUATION</u>
1. 41	1/30	Mecca, Calif	Bates	C.S.	NO	ORIGINAL NOT SUBMITTED
2. 52	2/02	Spring Lake, N.J.	Hallgarth		NO	ORIGINAL NOT SUBMITTED
3. 99	3/15	Laos	Pomeroy		TDD	PART OF A/C
4. 103	3/20	Sloan, Nevada	Pierce		DPA,DPP	DEVELOPER SMEAR
5. 124	APR	Montana	Keller		NO	NEGATIVE NOT SUBMITTED
6. 197	5/30	N.Y. Worlds Fair	Lorentzen	C.S.	DPA,DPP	PROCESSING DEFECT
7. 217	6/24	Washington Is, Wisc	Weisner			NO IMAGE
8. 269	7/12	Athens, Ohio	Stewart			UPPER AIR BALLOON
9. 295	7/17	Burbank, California	Conroy		DPP	REFLECTION
10. 341	7/26	Cumberland, Md	Diehl		DPA,DPP	POOR PHOTO PROCESS
11. 354	7/28	Aquada, Puerto Rico	Hernandez		DPP	NO IMAGE ON FILM
12. 396	8/03	Santa Ana, Calif	Heflin		DPA	HOAX
13. 434	8/05	San Antonio, Texas	Frost		DPA	NO IMAGE ON FILM
14. 450	8/05	Sioux City, Iowa	Perrin		NO	NOT SUBMITTED
15. 462	8/07	San Pablo, Calif	Cardoso (18mm M.P.)		DPA,DPP	MAN, DOUBLE EXPOSURE
16. 555	8/18	Traverse City, Mich	Heller		LOCAL	BLACKED OUT, NO IMAGE
17. 570	8/21	Cape Kennedy, Fla	Peek		LOCAL	EMULSION FLAWS
18. 598	8/26	France	Greenbaum		EW (UFO)	CLOUDS
19. 368	8/29	Houston, Texas	Moore		NO	NOT SUBMITTED
20. 632	SEPT	Fayetteville, Ark	Higgins		NO	NOT SUBMITTED
21. 637	9/01	Manistee, Michigan	Modjeski		NO	NOT SUBMITTED
22. 674	9/06	Northport, N.Y.	McCabe		DPA,DPP	PROCESSING DEFECT
23. 728	9/27	Swan Lake, N.Y.	Cooper			PENDING
24. 736	OCT	Northern Hemisphere	Schuetz		EW(UFO)	COMET IKEYA-SEKI
25. 778	10/20	Oregon	Air Force		DPA	PROBABLY STAR (CAPELLA)
26. 781	10/21	New Ulm, Minnesota	Strauch		DPA	ORIGINAL NOT SUBMITTED
27. 804	10/31	Efland, N.C.	Stubblefield	Movie	DPA	STAR (CAPELLA)
28. 808	Mid Nov	Mexico	Zimmerman	Slide		PENDING
29. 824	11/05	Bellingham, Mass	Davidson		NO	NOT SUBMITTED
30. 872	12.09	Pontiac, Mich	Champine		EW (UFO)	METEOR TRAIL

THE FOLLOWING PHOTOGRAPHS WERE TAKEN AND APPEARED IN VARIOUS UFO LITERATURE OR NEWS MEDIA BUT WERE NOT SUBMITTED TO THE AIR FORCE FOR EVALUATION.

<u>DATE</u>	<u>LOCATION</u>	<u>PHOTOGRAPHER</u>	<u>SOURCE</u>	<u>COMMENT</u>
17 Mar	Australia	Jacobs	UFO Literature	
30 June	Hershey, Pennsylvania	Noll	News Media	(REQUEST DECLINED)
03 July	Antarctic	Chilean Station	News Media	
15 July	Bahia Blanca, Argentina	Palma	News Media	(UFO LIT)
18 July	Argentina	News Photo	News Media	(REQUESTED)
03 Aug	Sherman, Texas	Campbell	News Media	(REQUEST DECLINED)
08 Aug	Brighton, Pa	Lucci	News Media	(REQUEST DECLINED)
29 Aug	Warminster, Wiltshire, Eng	Faulkner	News Media	(UFO LIT)
28 Sep	Norwick, Connecticut	Skinner	UFO LIT	
08 Oct	South Bay, Calif	Gillis	News Media	

DEARBORN OBSERVATORY
NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS 60201

January 13, 1966

Major Hector Quintanilla USAF
Chief, Aerial Phenomena Branch
Wright-Patterson Air Force Base
Dayton, Ohio 45433

Dear Major:

This is to report to you that Sergeant Moody and I are hard at it for these three days. I think that we will be able to clean up all of 1965.

As I go over the 900 or so cases of '65, I am once again impressed by the inadequate quality of the data upon which the evaluations must be based. In some cases the term "insufficient data" is really a misnomer; there is enough data but it is of such poor quality that the cause of the sighting is unidentifiable rather than unidentified. To use the category "insufficient data" overly much weights the statistics so that our critics then say that this is just a handy catch-all to which we put everything that we can't find a ready explanation for. On the other hand, to say the case is "unidentified" is even worse because this is interpreted by our reading public to mean that something really mysterious is going on. The reason for its being unidentified is that the data do not permit any logical explanation. I would prefer the term "unidentifiable" or, better, "unidentifiable because of poor data" to either of the terms "insufficient data" by itself, or "unidentified" by itself. I rather agree with public opinion that the term "unidentified" should be reserved for those cases which really do puzzle us even though we have reasonably good data, by which I mean largely that there was more than one observer, and that we have some time-space sequence of the reported events.

Should there ever be any official inquiry from the Pentagon about the conduct of our Project, I think it might be well to bring up the above points. I have for years, as you know, pleaded for immediate capability in the gathering of data so that evaluations could be placed on a much firmer foundation than they have been in the past, not because of any inherent incompetence in the evaluating office but simply because of the inherent paucity of the data.

Sincerely yours,



Director

JAH:ar

STATISTICAL DATA FOR YEARS 1953-1964

TOTAL CASES BY CATEGORY

(Compiled 1 Nov 65)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	TOTAL
Astronomical	175	137	135	222	341	231	144	235	203	136	85	123	2167
Aircraft	73	80	124	148	218	106	63	66	77	68	73	71	1167
Balloon	78	63	102	93	114	58	31	22	37	19	28	20	665
Insufficient Data	79	103	95	132	191	111	65	105	115	94	59	99	1248
Other	62	58	65	61	120	93	75	94	77	65	58	88	916
Satellite	0	0	0	0	8	18	0	21	69	77	82	142	417
Unidentified	42	46	24	14	14	10	12	14	13	15	14	19	237
TOTAL	509	487	545	670	1006	627	390	557	591	474	399	562	6817

ASTRONOMICAL SIGHTINGS

Meteors	70	92	79	88	179	168	100	187	119	95	57	61	1295
Stars and Planets	101	44	52	131	144	56	40	45	78	36	23	55	805
Other	4	1	4	3	18	7	4	3	6	5	5	7	67
TOTAL	175	137	135	222	341	231	144	235	203	136	85	123	2167

OTHER CASES

Hoaxes, Hallucinations, Unreliable Reports and Psychological Causes	15	6	18	16	37	29	14	13	17	11	16	34	226
Missiles and Rockets	2	1	1	3	2	6	14	12	13	9	13	7	83
Reflections	4	6	4	3	2	7	11	9	3	3	0	2	54
Flares and Fireworks	1	4	8	6	8	3	5	7	4	3	3	7	59
Mirages and Inversions	3	2	4	1	5	2	4	5	6	3	0	2	37
Search and Groundlights	9	6	14	9	12	8	5	6	1	3	2	6	81
Clouds and Contrails	6	3	2	1	9	5	3	4	5	4	5	0	47
Chaff	0	2	0	1	2	6	1	4	3	5	2	1	27
Birds	4	7	2	6	1	1	0	3	2	2	2	4	34
Radar Analysis	15	7	1	8	27	3	8	6	9	0	1	2	87
Photo Analysis	1	1	2	4	1	7	4	6	3	2	3	6	40
Physical Specimens	1	6	5	3	5	10	3	7	4	15	3	8	70
Satellite Decay	0	0	0	0	0	1	0	9	3	3	4	3	23
Other	1	7	4	0	9	5	3	3	4	2	4	6	48
TOTAL	62	58	65	61	120	93	75	94	77	65	58	88	916

THE INITIAL REPORT OF THE FOLLOWING CASES DID NOT CONTAIN SUFFICIENT DATA FOR EVALUATION. REPLIES TO LETTERS REQUESTING THIS INFORMATION HAVE NOT BEEN RECEIVED AS OF THIS DATE. IF THIS INFORMATION IS FURNISHED AN ANALYSIS WILL BE PERFORMED AND AN EVALUATION CONSISTANT WITH THE DATA ASSIGNED

INCIDENT	DATE	LOCATION	TIME	#	AGE	SEX	OCC	#	TYPE	FOLLOW-UP	PAGES	TYPE SIGHTING	OPTICAL AIDS	P.S.	RADAR	PHOTO	OBJECTS	DURATION	COMMENTS	
				OBSERVER DATA				REPORTING DATA				EVIDENCE								
1.	8	1/05	URBAN	DUSK	2	A	(M)	NASA PROJ ENGNR	1	200-2	LETTER	9	G/V	NO	NO	NO	NO	1	8-9 S	UFO LIT. ORJ RISING
2.	22	1/05	URBAN	NIGHT	1	Y	(M)		1	LETTER	R/164	3	G/V		NO	NO	DR	1	N/R	BRIGHT LIGHT NNE, SLIGHT TURN
3.	46	FEB	N/R	N/R	1	Y	(M)		1	LETTER	R/164	3						1		OBSR REQUESTED FORM TO REPT
4.	52	2/03	RURAL		1	A			1	LETTER	R/NEG	2		NO	NO	YES				NEGATIVE REQUESTED
5.	88	3/02	USAFB	NIGHT	1	A	(M)	MILITARY	1	LETTER	R/164	2	G/V	NO	NO	NO	NO	2	5 S	WHITE FAST NR AB CONTROL TOWER
6.	107	3/25	URBAN	NIGHT	1	Y	(M)		1	LETTER	R/164	3	G/V		NO	NO	NO	?	1H, 25M	SOME OBJECTS, WX OVERCAST
7.	112	3/30	RURAL	NIGHT	1	A	(M)	ENGINEER (?)	1	LETTER	R/164	3	G/V	NO	NO	NO	NO	1	1.5 S	COOL WHITE OBJ, SPIRAL DIVE, GLOW
8.	123	APR	URBAN	DUSK	1	Y	(F)	8 yr OLD	1	LETTER	R/164	3	G/V	NO	NO	NO	NO	1	N/R	HOVERING, MULTI-COLOR, 2 ANT
9.	124	APR	APRIL	DAY	1	A	(M)		1	LETTER	R/NEG	2		NO	NO	NO	YES	M	N/A	OBJS NOT VISIBLE TO EYE.
10.	157	4/30	S.TWN	DUSK	3	Y	(M)	BOY SCOUTS	1	LETTER	R/164	3	G/V	NO	NO	NO	NO	1	2M	SILVER OBLONG, ENE, JERKY FLIGHT.
11.	172	5/06	S.TWN	N/R	1	Y	(M)	FEW OBSERVERS	1	L/PRES	R/164	2								
12.	209	6/10	S.TWN	N/R	1		(M)		1	LETTER	R/164	2	G/V	NO	NO	NO	NO	1	N/R	WHITE V SHAPE BLINKING F.S.
13.	242	7/03	URBAN	DUSK	3	A	(B)	F REALTOR SON &	1	LETTER	R/164	3	G/V	NO	NO	NO	NO	1	15M	TOP SHAPED BRIGHTLY LIGHTED
14.	243	7/04	URBAN	NIGHT	1	Y	(M)		1	PHONE	R/164	5								
15.	250	7/05	LAKE	N/R	1	Y	(M)		1	LETTER	R/164	3	G/V	NO	NO	NO	NO	1	N/R	BLINDING LIGHT SAUCER SHAPE H.
16.	255	7/06	RURAL	DAY	2	B	(M)	MAN & 8 YR SON	1	200-2	TXW R/164	7	G/V	NO	NO	NO	NO	3	2M	SLOW SW, CIGAR SILVER SIDE/SIDE
17.	270	7/12	URBAN	DUSK	1		(M)		1	PHONE	R/164	4	G/V	BX	NO	NO	NO	1	1 H	SLOW SE, COLORED LITES REVOLVE
18.	280	7/13	URBAN	NIGHT	2	Y	(M)	(UFO FAN)	1	LETTER	R/164	3	G/V		NO	NO	NO	1	15 M	MYSTERIOUS CRAFT APPEAR SUDDEN
19.	315	7/21	S.TWN		1	Y	(F)		1	CARD	R/164	1		NO	NO	NO	1	N/R	UFO VERY HIGH, INCREDIBLE SPEED	
20.	327	7/25	URBAN	NIGHT	1	A	(M)	IGY OBSERVER	1	PHONE	R/164	2	G/V		NO	NO	NO	1	N/R	WEST, RISING, REFLECTED LIGHT
21.	340	7/25	URBAN	NIGHT	1	A	(M)		1	OD	PHONE/164	4	G/V		NO	NO	NO	1	5M	LIKE STAR, BLUE, 10° 3-4M, NORTH
22.	369	AUG	S.TWN	NIGHT	1		(F)		1	LETTER	R/164 (HYNEK)	3	G/V	NO	NO	NO	NO	1	15M	STATIONARY STAR, THEN MOVED NNE
23.	370	AUG	S.TWN	NIGHT	M	Y	(B)	DRIVE-IN-MOVIE	1	LETTER	R/164	2	G/V		NO	NO	NO	2	45M	OBJ FALLING & SPLITTING.
24.	394	8/03	URBAN		1	Y	(M)		1	LETTER	R/164	1								THOUGHT HE SAW UFO, REQ FORM
25.	430	8/04	URBAN	NIGHT	3	A	(B)	MIL & CIV	3	PHONE	2-R/164	3	G/V					1	N/R	WHITE LIGHTS IN WEST. (FLAP)
26.	438	8/05	URBAN	NIGHT	3	Y	(M)		2	PHONE	R/164	8	G/V		NO	NO	NO	5 ?	2-M N/R	ERRATIC, HIGH IN EAST, RED FUZZY
27.	463	8/07	URBAN	DAY	1		(M)		1	LETTER	R/164 & NEG	6	G/V	NO	NO	NO	YES	1	20 M	SLOW THEN FAST, SQUARE, BIG W/TAI
28.	474	8/08	URBAN	NIGHT	3	B	(B)	LAWYER WIFE SON	1	L/CONG	R/164	5	G/V	TX	NO	NO	NO	1	10M	IN SW, MOVED BEHIND TREES, STAR.
29.	632	SEP	URBAN	NIGHT	1	A	(F)	NEWS REPORTER	1	LETTER	LETTER R/NEG	2	G/V		NO	NO	YES		N/R	NEGATIVE REQUESTED.
30.	633	9/01	URBAN	NIGHT	4	B	(B)		1	200-2	R/164	7	G/V	NO	NO	NO	NO	1	45M P	STAR, BEHIND TREES, TO EAST.
31.	667	9/05	URBAN	NIGHT	1	A	(M)	EX-NAVY PILOT	1	200-2	LETTER R/NEG	6	G/V	BX	NO	NO	YES	2	3M EA	5 MIN APART, WEST FADING, RD WHIT
32.	675	9/10	URBAN	NIGHT	1		(M)		1	PHONE	R/164	1								UFO FORM REQUESTED.
33.	689	9/12	URBAN	NIGHT	1	A	(F)		1	200-2	R/164	3	G/V	NO	NO	NO	NO	1	33 S	TWO CIRCLES SPINNING, COLORFUL
34.	692	9/14	STOWN	NIGHT	4	A	(B)	POLICE, H'WIFE	1	LETTER	R/164	4	G/V					1	N/R	BEAMS OF LIGHT, SILVER, OVAL
35.	700	9/18	RURAL	NIGHT	1	Y	(M)	(UFO FAN)	1	LETTER	R/164	1	G/V	NO	NO	NO	NO	3	20 S	DOTS, FORMATION, HORIZON TO HORIZ
36.	799	10/29	S.TWN	DAY	6		(F)	UFO FAN / 5	1	PHONE	R/164	3	G/V		NO	NO	NO	1	5 M	BULLET, HURT EYES SO BRIGHT,

INCIDENT	DATE	LOCATION	TIME	OBSERVER DATA				REPORTING DATA				FOLLOW-UP	PAGES	TYPE SIGHTING	OPTICAL AIDS	WX(SKY)	EVIDENCE			OBJECTS	DURATION	COMMENT
				#	AGE	SEX	OCC	#	TYPE	FOLLOW-UP	PAGES						P.S.	RADAR	PHOTO			
72.	145	4/20	S.TWN	NIGHT	2	A	(B)	GAME WARDEN	1	LETTER	164	8	G/V	NO	CLEAR	NO	NO	NO	1	14 SEC	DATA TOO POOR FOR EVALUATION	
73.	194	5/28	RURAL	NIGHT	1	A	(F)		1	PHONE	NO	3	G/V			NO	NO	NO	1	N/R	PSYCHOLOGICAL	
74.	264	7/11	URBAN	DAY	1	A	(F)	HOUSEWIFE	1	PHONE	164	5	G/V			NO	NO	DR	2	1.5 M	DATA TOO POOR FOR EVALUATION	
75.	360	7/30	N/R	DAY	1				1	TWX	R/ANAL	5	G/R			NO	YES	NO	1		(SEE RADAR ANALYSIS)	
76.	364	7/31	RURAL	NIGHT	2	Y	(B)		1	PHONE	164	4	G/V	NO	CLEAR	NO	NO	NO	3	15 M	(HYNEK)	
77.	435	8/05	URBAN	DAY	1	Y	(M)	13 STUDENT	1	200-2	NO	10	G/V	NO	CLOUDY	NO	NO	YES	1	30-40S	NO IMAGE ON PHOTO	
78.	508	8/12	URBAN	NIGHT	2	Y	(M)	13 STUDENTS	2	(?)	164's	11	G/V	NO	CLOUDY	NO	NO	NO	3	10 M	DATA TOO POOR FOR ANALYSIS	
79.	576	8/22	URBAN	DUSK	1	A	(F)	45	1	200-2	NO	2	G/V	NO		NO	NO	NO	2	1 MIN	DATA TOO POOR FOR ANALYSIS	
80.	581	8/23	RURAL	NIGHT	3	B	(M)	FARMER & SONS	1	200-2	LOCAL	3	G/V	NO		NO	NO	NO	2	4-5M	1 OBJ VENUS, 2d OBJ INSUFF.	
81.	601	8/26	RURAL	DUSK	4	B			1	L/FORM	NO	1	G/V	NO	CLEAR	NO	NO	NO	1	10 MIN	(SEND FORM)	
82.	655	9/04	URBAN	NIGHT	3	A	(B)	SHIIPIN CLERK	1	200-2	164	10	G/V	BX	CLEAR	NO	NO	NO	1	10 MIN	DATA TOO POOR FOR EVALUATION	
83.	669	9/05	URBAN	NIGHT	3	A	(B)	MILITARY & WIFE	1	LOCAL	NO	7	G/V	BX	CLEAR	NO	NO	NO	1	15 MIN	(ADDRESS MISSING)	
84.	781	10/21	RURAL	NIGHT	2	A	(M)	POLICE	1	LETTER	LETTER	3	G/V		CLEAR	NO	NO	YES	1	N/A	(SEE PHOTO ANALYSIS)	
85.	832	11/11	RURAL	DUSK	1	A	(M)	MILL WORKER	1	200-2	NO	4	G/V	BX	RAIN	NO	NO	NO	1	20 MIN	(SEND FORM)	

SATELLITE

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS SATELLITES AND THE REPORTED OBJECT WAS CONSISTANT WITH PASSAGE OF A SPECIFIC VEHICLE. (82)

#	INCIDENT #	DATE	LOCATION	TIME	NUMBER	AGE	SEX	OCCUPATION	NUMBER	TYPE	FOLLOW-UP	PAGES	TYPE	SIGHTING	OPTICAL AIDS	# OF OBJECTS	DURATION	DESCRIPTION	MOTION	OBJECT	
**					OBSERVER DATA				REPORTING DATA												
1.	5	1/03	OCEAN	NIGHT	1	A	M	MILITARY	1	CIRVIS	NO	2	A/V	NO	1	9 MIN	SMALL, ILLUMINATED	EASTERLY	ECHO II		
2.	24	1/21	A'SKA	NIGHT	4	A	M	MILITARY	1	PHONE	NO	1	G/V	NO	1	20 MIN	LIKE STAR	SE, STRAIGHT	ECHO II		
3.	50	2/01	URBAN	NIGHT	1	Y	M	STUDENT	1	LETTER	164	12	G/V	NO	1	2 MIN	BLUE-WHITE LIGHT	E, STRAIGHT	ECHO I		
4.	69	2/18	URBAN	NIGHT	1	A	M	MECH ENGR	1	200-2	NO	2	G/V	BX	1	10 MIN		N, STRAIGHT	ECHO II		
5.	72	2/20	OCEAN	NIGHT	1	A	M	MILITARY	1	200-2	NO	1	A/V	NO	1	N/R	N/R	N/R	ECHO II		
6.	84	3/04	A'SKA	NIGHT		A	M	MILITARY	1	200-2	NO	3	G/V	NO	1	5 MIN	LIKE SATELLITE	S, STRAIGHT	ECHO II		
7.	92	3/10	RURAL	NIGHT	1	A	M	DELIVERER	1	200-2	NO	2	G/V	NO	1	10 MIN	LIKE STAR	S, STRAIGHT	ECHO II		
8.	93	3/10	OCEAN	NIGHT	1	A	M	MILITARY	1	CIRVIS	NO	2	A/V	NO	1	N/R	1 MAG STAR	N/R	ECHO I		
9.	97	3/12	URBAN	NIGHT	1	A	M	MUSICIAN	1	LETTER	NO	4	G/V	NO	2	N/R	LIKE STAR	NE, SE, STRAIGHT	ECHO I, II		
10.	104	3/22	OCEAN	NIGHT		A	M	MILITARY	1	CIRVIS	NO	1	G/V	BX	1	5 MIN	BLUE-GREEN	STRAIGHT	ECHO II		
11.	139	4/14	URBAN	NIGHT	2	Y	M	STUDENTS	1	LETTER	NO	1	G/V	NO	1	11 MIN	.5 MAG	SE STEADY	ECHO I		
12.	151	4/28	URBAN	NIGHT	1	A	M	SALESMAN	1	200-2	NO	1	G/V	NO	1	18 MIN	BLUE-WHITE	NE, STEADY W/WAVER	ECHO II		
13.	153	4/29	URBAN	NIGHT	2	Y	F	STUDENTS	1	PHONE	164	8	G/V	NO	1	4 MIN	LIKE STAR	E, ZIG-ZAG	ECHO I		
14.	161	5/01	URBAN	NIGHT	1	A	M	TEACHER	1	PHONE	164	8	G/V	BX	1	6 MIN	LIKE STAR	E, STRAIGHT	PEG I		
15.	162	5/01	URBAN	NIGHT	4	Y	M	STUDENTS	1	LETTER	LETTER	1	G/V	NO	1	5 MIN	VERY BRIGHT	SE, STRAIGHT	ECHO I		
16.	163	5/02	URBAN	NIGHT	6	A	B	N/R	1	PHONE	OD164	6	G/V	NO	1	20 MIN	ORANGE-RED STAR	N, STRAIGHT	PEG I		
17.	165	5/02	URBAN	NIGHT	2	A	F	N/R	1	PHONE	OD164	7	G/V	NO	3	30 M/T	SATELLITES	NE, ZIG-ZAG (ECHO I, II, PEGI)	ECHO I		
18.	166	5/03	URBAN	NIGHT	2	A	M	SELF EMP	1	200-2	NO	3	G/V	BX	1	4 MIN	RED-ORANGE STAR	160° STRAIGHT	ECHO I		
19.	167	5/03	URBAN	NIGHT	3	A	F		2	PHONE	PHONE	9	G/V	NO	1	3 MIN	LIKE STAR	S, STRAIGHT	ECHO II		
20.	168	5/04	RURAL	NIGHT	1	Y	F	STUDENT	1	LETTER	164	2	G/V	TX	1	10 MIN	ROUND, SHINY	CONFUSED	ECHO I		
21.	180	5/10	OCEAN	NIGHT		A	M	MILITARY	1	MERINT	NO	1	G/V	NO	1	N/R	LIKE STAR	140°	ECHO II		
22.	187	5/21	URBAN	NIGHT	1	A	M	N/R	1	PHONE	NO	7	G/V	NO	1	5 MIN	LIKE STAR	S, STRAIGHT	ECHO II		
23.	189	5/23	URBAN	NIGHT	1	A	M	N/R	1	PHONE	PHONE	7	G/V	NO	1	8-10 MIN	LIKE STAR	S, STRAIGHT	ECHO II		
24.	212	6/13	RURAL	NIGHT	1	Y	M	STUDENT	1	PHONE	OD164	7	G/V	TX	1	2 MIN	LIKE STAR	NE, STRAIGHT	PEG I		
25.	223	6/27	URBAN	NIGHT	1				1	LETTER	LETTER	1	G/V	NO	1	15 SEC	LIKE STAR	E, STRAIGHT	ECHO I		
26.	224	6/27	URBAN	NIGHT	1	A	M		1	LETTER	LETTER	2	G/V	NO	1	4 MIN	LIKE STAR	E, STRAIGHT	ECHO I		
27.	237	7/02	URBAN	NIGHT	2	A	M	MINERS	1	FORM	NO	3	G/V	NO	1	15 MIN	LIKE STAR	E, ZIG-ZAG	ECHO I		
28.	239	7/03	URBAN	NIGHT	1	A	M	N/R	1	200-2	NO	3	G/V	NO	1	22 MIN	LIKE STAR	N/R, STRAIGHT	ECHO II, (SPADATS)		
29.	244	7/04	URBAN	NIGHT	1	A	M	N/R	1	PHONE	OD164	7	G/V	NO	1	15 MIN	LIKE STAR	E, JERKY	ECHO I		
30.	253	7/05	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	200-2	NO	1	G/V	NO	1	1 MIN	SATELLITE	E, STRAIGHT	ECHO I		
31.	263	7/09	URBAN	NIGHT	2	A	B	N/R	1	PHONE	OD164	6	G/V	NO	1	5 MIN	LIKE GOLD STAR	E, STRAIGHT	ECHO II		
32.	266	7/11	URBAN	NIGHT	M				2	PHONE	LETTER	14	G/V	NO	1	10 MIN	LIKE STAR	E, STRAIGHT	ECHO I		
33.	271	7/12	URBAN	NIGHT	3	Y	B	STUDENTS	2	L/L	164'S	10	G/V	NO	1	30 MIN	LIKE STAR	E, STRAIGHT	ECHO I		
34.	272	7/12	URBAN	NIGHT	1			N/R	1	PHONE	LETTER	1	N/R	N/R	1	N/R	LIKE STAR	SE	ECHO I		
35.	284	7/14	URBAN	NIGHT	2	A	M	STUDENTS	1	200-2	NO	3	G/V	NO	1	5 MIN	LIKE STAR	E, ZIG-ZAG	ECHO I		
36.	285	7/15	URBAN	NIGHT	M	B	B		4	PHONE	164'S	28	G/V	BX	1	1-30 MIN	LIKE STAR	EASTERLY, STRAIGHT	ECHO I		
37.	286	7/15	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	200-2	NO	5	G/V	BX	1	30 MIN	LIKE VENUS	E, ERRATIC	ECHO I		
38.	296	7/17	RURAL	NIGHT	1	A	M	FARMER	1	200-2	NO	2	G/V	NO	1	10 MIN	LIKE STAR	SE, STRAIGHT	ECHO I		

39.	297	7/17	URBAN	NIGHT	1	A	F	N/R	1	200-2	NO	2	G/V	BX	(2)	N/R	LIKE STAR	SE, STRAIGHT	ECHO I
40.	299	7/18	URBAN	NIGHT	1	A	M	LABORER	1	PHONE	164	7	G/V	NO	(2)	5 MIN	LIKE STAR	SE,N,STRAIGHT	ECHO I
41.	300	7/18	URBAN	NIGHT	4	A	B		1	PHONE	OD164	7	G/V	BX	1	5-10 MIN	LIKE STAR	E, STRAIGHT	PEG II
42.	302	7/18	URBAN	NIGHT	3	A	B		4	PHONE	OD164	16	G/V	NO	1	10 MIN	YELLOW-ORANGE STAR	SE, STRAIGHT	ECHO I
43.	303	7/18	URBAN	NIGHT	8	B	B		1	PHONE	OD164	7	G/V	TX	1	10 MIN	LIKE STAR	E, STRAIGHT	ECHO I
44.	305	7/19	URBAN	NIGHT	1	A	M	N/R	1	PHONE	OD164	7	G/V	NO	1	2 MIN	LIKE STAR	NE, STRAIGHT	PEG II
45.	306	7/19	URBAN	NIGHT	1	A	M	N/R	1	PHONE	OD164	7	G/V	NO	1	10 MIN	LIKE STAR	E, ZIG-ZAG	ECHO I
46.	311	7/20	URBAN	NIGHT	4	Y	M	CIVIL AIR P.	1	PHONE	OD164	6	G/V	NO	1	30 SEC	BANANA SHAPED	N/R	ECHO I
47.	331	7/25	URBAN	NIGHT	2	A	B		1	200-2	NO	3	G/V	NO	(2)	2 MIN	LIKE STAR	SE, ARC	PEG I, ECHO I
48.	332	7/25	URBAN	NIGHT	1	A	M	N/R	1	PHONE	OD164	7	G/V	NO	1	10-15M	LIKE STAR	N/R	PEG III
49.	343	7/26	RURAL	NIGHT	1	A	F	TELEPHONE OPR	1	200-2	NO	2	G/V	NO	1	15 MIN	LIKE STAR	SE, STRAIGHT	ECHO I, PEG II
50.	381	8/02	URBAN	NIGHT	1	A	M	MILITARY	1	200-2	NO	3	G/V	NO	1	3 MIN	LIKE STAR	N, STRAIGHT	ECHO II
51.	444	8/05	URBAN	NIGHT	1	A	F	NICAP MEMBER	1	PHONE	NO	1	G/V	NO	1	5 MIN	NOT STATED	NOT STATED	PEG I
52.	471	8/08	URBAN	NIGHT	2	A	M	MACHINE OPR	1	200-2	NO	2	G/V	BX	1	1 MIN	LIKE STAR	N, STRAIGHT	ECHO I
53.	473	8/08	USAFB	NIGHT	1	A	M	MILITARY	1	200-2	NO	2	G/V	BX	1	20 MIN	LIKE STAR	N, STRAIGHT	ECHO II
54.	478	8/09	URBAN	NIGHT	1	A	M	DRIVER	1	LETTER	164	5	G/V	NO	1	3-4 MIN	LIKE STAR	NE, STRAIGHT	ECHO II
55.	504	8/12	URBAN	NIGHT	1	A	F		1	200-2	NO	2	G/V	NO	1	10 MIN	LIKE STAR	NE, STRAIGHT	ECHO II
56.	515	8/12	URBAN	NIGHT	1	A	M		1	200-2	NO	4	G/V	NO	1	40-50 S	LIKE STAR	NE, STRAIGHT	ECHO II
57.	531	8/14	URBAN	NIGHT	1	A	M		1	200-2	NO	4	G/V	NO	1	4 MIN	BIG STAR	N/R	ECHO II,
58.	538	8/15	URBAN	NIGHT	3				3	PHONE	NO	1	G/V				BRIGHT	N,N,NW,STRAIGHT	ECHO II
59.	548	8/16	URBAN	NIGHT	1	A	M	CAR DEALER	1	LETTER	LETTER	3	G/V	BX	1	3-4 MIN	LIKE STAR	N	ECHO II
60.	549	8/16	URBAN	NIGHT	2	Y	M	STUDENTS	2	PHONE	OD164	8	G/V	TX	1	15 MIN	OVAL RED-GREEN	SE, STRAIGHT	ECHO I
61.	556	8/18	URBAN	NIGHT	M				3	P/TWX/200-2		6	G/V	BX	1	5-8 MIN	LIKE STAR	NE, STEADY	ECHO II
62.	559	8/19	URBAN	NIGHT	1				1	LETTER	LETTER	2	G/V					NORTH	ECHO II
63.	577	8/22	URBAN	NIGHT	M				1	200-2	NO	1	G/V	NO	1	10 MIN	BRILLIANT WHITE	N, STEADY	ECHO II
64.	587	8/23	URBAN	NIGHT	1	Y	M	STUDENT	1	200-2	NO	4	G/V	NO	1	5 MIN	BRIGHTER THAN STAR	N, STRAIGHT	ECHO II
65.	590	8/24	NFLD	NIGHT	1	A	M	MECHANIC	1	200-2	NO	6	G/V	NO	1	3 MIN	LIKE STAR	NE, STRAIGHT	ECHO II
66.	609	8/27	OCEAN	NIGHT	M	A	M	MILITARY	1	CIRVIS	NO	1	G/V	BX	1	2 MIN	WHITE		GEM V
67.	611	8/27	URBAN	NIGHT	2	A	B		1	200-2	NO	3	G/V	NO	1	1 MIN	ROUND GLOWING WHITE	NE, STRAIGHT	ECHO II
68.	613	8/28	URBAN	NIGHT	3	Y	M	STUDENTS	1	PHONE	OD164	7	G/V	NO	1	10 MIN	LIKE SATELLITE	NNW, STRAIGHT	ECHO II
69.	617	8/29	URBAN	NIGHT	2	Y	M	STUDENTS	1	PHONE	OD164	6	G/V	TX	1	3-5 MIN	YELLOW STAR	NE, STRAIGHT	ECHO II
70.	621	8/30	RURAL	NIGHT	2	A	B		1	LETTER	LETTER	2	G/V	NO	1	5 MIN	LIKE VENUS	N, STRAIGHT	ECHO II
71.	634	9/01	URBAN	NIGHT	3	Y	M	STUDENTS	1	LETTER	NO	2	G/V	NO	1	20-25M	AUTO LIGHT	N, ERRATIC	ECHO II
72.	635	9/01	URBAN	NIGHT	1	A	M	STUDENT	1	PHONE	OD164	7	G/V	NO	1	5 MIN	LIKE STAR	S, STRAIGHT	ECHO I
73.	643	9/02	URBAN	NIGHT	2	B	B		1	200-2	NO	2	G/V	NO	1	10 MIN	LIKE PLANET	N, ERRATIC	ECHO II
74.	644	9/02	URBAN	NIGHT	1	A	M	FARMER	1	200-2	NO	3	G/V	BX	1	15 MIN	CIRCULAR RED/GREEN	N, STRAIGHT	ECHO II
75.	653	9/04	URBAN	NIGHT	5	B	B		1	LETTER	LETTER	2	G/V	NO	1	10 MIN	STEADY WHITE LIGHT	NE, STRAIGHT	ECHO II
76.	666	9/05	URBAN	NIGHT	4	B	B		1	PHONE	OD164	7	G/V	NO	1	13 MIN	LIKE STAR	N, STRAIGHT, ZIG-ZAG	ECHO II
77.	673	9/06	URBAN	NIGHT	M				5	L/P/200-2 LTR		22	G/V	BX	1	3 MIN	BRIGHT STAR	NE, ERRATIC	ECHO II
78.	677	9/06	URBAN	NIGHT	1	A	M		1	200-2	NO	4	G/V	NO	1	3-4 MIN	LARGE STAR	N, STRAIGHT	ECHO II
79.	678	9/06	URBAN	NIGHT	1	A	M	DOCTOR	1	200-2	NO	4	G/V	TX	1	5-6 MIN	LIKE VENUS	N, SMOOTH	ECHO II
80.	699	9/17	URBAN	NIGHT	1		M		2	PHONE	OD164	14	G/V	NO	1	SEC'S	WHITE	N, STRAIGHT	ECHO II
81.	705	9/20	RURAL	NIGHT	M				3	PHONE	OD164	12	G/V	NO	1	10 MIN	LIKE STAR	NE, STRAIGHT	ECHO II
82.	546	8/16	URBAN	NIGHT	1	A	F		1	PHONE	OD164	3	G/V	NO	1	3 MIN	STAR LIKE	SSE	ECHO II (NE)
154.	30	1/24	A'SKA	NIGHT	M	A	M	MILITARY	L	PHONE	NO	2	G/V	BX	M	N/R	SATELLITE	SE (PASSES EVERY 1 HR 50 MIN)	ECHO II

THE FOLLOWING REPORTS CONTAIN OBJECTS EVALUATED AS SATELLITES BY THE REPORTING OFFICIAL, DR. HYNEK, OR REPORTED AS SATELLITES BY THE OBSERVER (13)

83.	70	2/18	OCEAN	DUSK	4	A	M	MILITARY	1	200-2	NO	4	G/V	SX	1	1 MIN	LIKE STAR	105° STRAIGHT	HYNEK
84.	169	MAY 5-7	O'S	NIGHT	M	A	M	MILITARY	1	MERINT	NO	2	G/V	BX	N/R	N/R	LIKE SATELLITE	S, STRAIGHT	LOCAL EVAL
85.	176	5/07	URBAN	NIGHT	2	A	B	ELECT ENGR	1	LETTER	L/PHONE	3	G/V	NO	1	4 MIN	LIKE STAR	S	HYNEK
86.	177	5/07	HAWAII	NIGHT		A	M	MILITARY	1	MERINT	NO	2	G/V	NO	1	N/R	LIKE STAR	E, STRAIGHT	LOCAL EVAL
87.	279	7/13	URBAN	NIGHT	2	A	M	TOOL MAKER	1	L/FORM	NO	9	G/V	BX	1	15 MIN	CIGAR SHAPED	SE, STRAIGHT(NEG E,P)	OBSERVER
88.	281	7/13	URBAN	NIGHT	2	A	B	PILOT	1	200-2	NO	3	G/V	NO	1	7 MIN	LIKE STAR	SSW (ASSUMED ERROR)	OBSERVER
89.	429	8/04	URBAN	NIGHT	M				1	PHONE	LETTER	2	G/V	NO	1	N/R	BLUISH WHITE STAR	80° (NEG E,P)	OBSERVER
90.	561	8/19	RURAL	NIGHT	1	A	M		1	200-2	NO	4	G/V	NO	1	10 MIN	LIKE STAR	STRAIGHT (ECHO II)	LOCAL EVAL
91.	513	8/12	URBAN	NIGHT	1	(SENT FORM NOT RET)			1	PHONE	LETTER	2	G/V	TX	3	10 SEC	SATELLITE	NNE, STRAIGHT	HYNEK
92.	567	8/20	USAFB	NIGHT	4	A	M	MILITARY	1	200-2	NO	7	G/V	BX	1	N/R	WHITE, SOME RED	SE, LEVEL	LOCAL EVAL
93.	654	9/04	URBAN	NIGHT	1	Y	M	STUDENT	1	LETTER	NO	2	G/V	BX	1	N/R	WHITE TRIANGULAR	NE, STRAIGHT	OBSERVER
94.	657	9/04	URBAN	NIGHT	2	A	B		1	LETTER	LETTER	2	G/V	NO	2	4 SEC	SATELLITE	E, LIKE SATELLITE	OBSERVER(NO E,P)
95.	889	12/29	OCEAN	NIGHT		A	M	MILITARY	1	MERINT	NO	1	G/V		1	N/R	1 MAG STAR	E, S	LOCAL EVAL

THE FOLLOWING REPORTS CONTAIN OBJECTS CHARACTERISTIC OF SATELLITES BUT THE DATE/TIME WAS MISSING AND CHECK FOR A SPECIFIC OBJECT WAS NOT MADE (7)

96.	1	1965	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	LETTER	LETTER	2	G/V	NO	N/R	N/R	LIKE STAR	UP,DOWN,SIDWAYS	DATE MISSING
97.	156	APR/MAY	URBAN	NIGHT	1	Y	M	STUDENT	3	LETTER	LETTER	3	G/V	NO	3	15 MIN	BLUE-WHITE STAR	S, N/R, N/R	TIME MISSING
98.	260	7/08	URBAN	NIGHT	2	A	B		1	LETTER	LETTER	2	G/V	NO	1	15 MIN	LIKE STAR	NE, STRAIGHT	TIME MISSING
99.	293	7/16-17	O'S.	NIGHT	5	Y	M	STUDENTS	1	200-2	NO	2	G/V	NO	1	5 MIN	STAR W/RING	NE, ZIG-ZAG	TIME MISSING
100.	596	8/25	URBAN	NIGHT	3	A	B		1	PHONE	OD164	3	G/V	BX	2	5 MIN	N/R	N, (2d Object)	TIME MISSING
101.	631	8/31-9/7	URB	NIGHT	4				1	LETTER	LETTER	2	G/V	TX	1	15 MIN	N/R	N/R	MULTIPLE REPTS
102.	680	9/07	URBAN	NIGHT	2	A	M	MILITARY	1	200-2	NO	4	G/V	BX	2	5 MIN	STAR SHAPED	E, N, STRAIGHT	TIME GARBLED

THE FOLLOWING REPORTS CONTAIN OBJECTS CHARACTERISTIC OF SATELLITES BUT SCHEDULES FOR THAT DAY WERE NOT AVAILABLE FOR A SPECIFIC OBJECT CHECK (3)

103.	149	4/27	O'SEA	DUSK		A	M	MILITARY	1	200-2	NO	2	A/V	NO	1	4 MIN	BLUE-WHITE STAR	122° STRAIGHT
104.	267	7/12	O'SEA	NIGHT		A	M	MILITARY	1	200-2	NO	4	G/V	NO	3	5 MIN	EA STAR LIKE	EAST, STRAIGHT
105.	522	8/13	(FOR)	NIGHT	1	A	M	STUDENT	1	LETTER	LETTER	2	G/V	NO	1	2 MIN	2 MAG STAR	N, STRAIGHT

THE FOLLOWING REPORTS CONTAIN OBJECTS CHARACTERISTIC OF SATELLITES. ECHO AND PEGASUS SCHEDULES FOR THE REPORTED TIME OF THE SIGHTING CHECKED NEGATIVE(49)

106.	19	1/17	O'SEA	DUSK	2	Y	B	STUDENTS	1	LETTER	164	5	G/V	NO	1.	1.5 MIN	ROUND,SMALL,RED & BLUS	EASTERLY
107.	48	2/01	URBAN	NIGHT	3	A	M	AIR TRAFFIC C.	1		164	8	G/V	BX	1	60 SEC	LIKE STAR	EAST STRAIGHT
108.	164	5/02	URBAN	NIGHT	2	Y	M	STUDENTS	1	LETTER	YES	10	G/V	NO	1	2.5 MIN	YELLOW STAR	SE, STRAIGHT
109.	175	5/07	HAWAII	NIGHT		A	M	MILITARY	1	MERINT	NO	2	G/V		1	7 MIN	LIKE STAR	EAST
110.	222	6/24	RURAL	NIGHT	2	A	F		1	PHONE	OD164	4	G/V	NO	1	10 MIN	LIKE STAR	NE, STRAIGHT
111.	230	6/29	URBAN	NIGHT	1				1	PHONE	OD164	4	G/V	NO	1	12 MIN	LIKE STAR	NE
112.	254	7/05	URBAN	NIGHT	M	B	B		1	200-2	NO	3	G/V	NO	1	4 MIN	BLUE-WHITE STAR	NE, INCLUDE HOVER
113.	249	7/04	URBAN	NIGHT	2	Y	B	STUDENTS	1	LETTER	LETTER	3	G/V	TX	1	3 MIN	SATELLITE	E, STRAIGHT
114.	297	7/17	URBAN	NIGHT	1	A	F	N/R	1	200-2	NO	2	G/V	BX	(2)	N/R	LIKE STAR	SE, STRAIGHT

1st OBJ ECHO I

115.	299	7/18	URBAN	NIGHT	1	A	M	LABORER	1	PHONE	OD164	4	G/V	NO	(2)	5 MIN	LIKE STAR	SE, N (Lst OBJ ECHO II)
116.	307	7/19	URBAN	NIGHT	1	A	M		1	LETTER	LETTER	2	G/V	NO	1	15 MIN	N/R	E, JERKY
117.	310	7/20	URBAN	NIGHT	7	Y	B		3	PHONE	OD164	12	G/V	NO	1	5-7 MIN	ORANGE /WHITE LIGHT	E, STRAIGHT
118.	313	7/20	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	200-2	NONE	2	G/V	NO	1	6 MIN	LIKE STAR	STRAIGHT
119.	323	7/23	RURAL	NIGHT	M	B	B		1	LETTER	LETTER	2	G/V	NO	1	N/R	SATELLITE	S, STRAIGHT
120.	334	7/25	URBAN	NIGHT	2	Y	M	STUDENTS	1	PHONE	OD164	4	G/V	NO	1	30-40 SEC	LIKE STAR	S, STRAIGHT
121.	336	7/25	RURAL	NIGHT	2	A	M	RANCHERS	1	200-2	NO	4	G/V	NO	1	30 MIN	LIKE STAR	ESE, STRAIGHT
122.	337	7/25	RURAL	NIGHT	1	A	M	SYSTEMS ANAL	1	FORM	NO	4	G/V	NO	1	2 MIN	BLUE WHITE STAR	S
123.	338	7/25	URBAN	NIGHT	5	B	B		2	PHONE	OD164	4	G/V	NO	1	15 SEC	LIKE STAR	SE, STRAIGHT
124.	339	7/25	URBAN	NIGHT	1	A	M		1	LETTER	LETTER	3	G/V	NO	1	N/R	LIKE STAR	S, ZIG-ZAG
125.	348	7/27	URBAN	NIGHT	1	A	M	SALESMAN	1	200-2	NO	2	G/V	NO	1	3-5 MIN	LIKE STAR	SE, STRAIGHT
126.	357	7/28	URBAN	NIGHT	3	A	M	STUDENTS	1	LETTER	LETTER	3	G/V	TX	1	4-5 MIN	SATELLITE	N, ZIG-ZAG
127.	363	7/30	URBAN	NIGHT	1	A	M	PROFESSOR	1	LETTER	LETTER	2	G/V	NO	1	N/R	RED-YELLOW/ORANGE STAR	S, STRAIGHT
128.	375	8/01	URBAN	NIGHT	2	A	B	ELECTRICIAN	1	FORM	NO	4	G/V	NO	1	2 MIN	SATELLITE	NE, STRAIGHT
129.	377	8/01	URBAN	NIGHT	3	A	M		1	200-2	NO	2	G/V	NO	1	2 MIN	LIKE STAR	N, STRAIGHT, W/ZIG-ZAG
130.	382	8/02	URBAN	NIGHT	1	A	M	POLICE	1	200-2	NO	1	G/V	NO	1	1 MIN	LIKE STAR	S, STRAIGHT
131.	390	8/02	URBAN	NIGHT	1	A	M	DRIVER	1	200-2	NO	5	G/V	NO	1	5 MIN	SATELLITE	SE, STRAIGHT
132.	392	8/02	URBAN	NIGHT	1	A	M	ENGINEER	1	200-2	NO	3	G/V	NO	1	29 SEC	SATELLITE	N, STRAIGHT
133.	425	8/04	RURAL	NIGHT	4	A	B		1	LETTER	LETTER	2	G/V	NO	1	15 SEC	LIKE STAR	N/R, STRAIGHT (FORM SENT, NOT RETURNED)
134.	457	8/06	URBAN	NIGHT	2	A	M	ELECT ENGR	1	FORM	NO	3	G/V	NO	1	30-40 SEC	LIKE STAR	SE
135.	530	8/14	URBAN	NIGHT	1	A	M	MILITARY	1	200-2	LETTER	5	G/V	NO	1	45-90 SEC	YELLOW ORANGE STAR	NE, ERRATIC
136.	540	8/16	URBAN	NIGHT	1	Y	F	STUDENT	1	LETTER	LETTER	2	G/V	NO	1	1 1/2-2 MIN	LIKE STAR	SE, ZIG-ZAG
137.	594	8/25	URBAN	NIGHT	1	Y	M	STUDENT	1	200-2	NO	3	G/V	NO	1	5 MIN	WHITE	N, STRAIGHT
138.	595	8/25	URBAN	NIGHT	2	Y	M	STUDENTS	1	PHONE	OD164	3	G/V	NO	1	1 1/2 MIN	MOON REFLECTING FROM OBJ	N/R
139.	602	8/26	URBAN	NIGHT	1	A	M	ELECTRONIC TECH	1	200-2	NO	2	G/V	NO	1	5-10 MIN	LIKE STAR	NE, STRAIGHT
140.	640	9/02	URBAN	NIGHT	1	A	F	TELEPHONE OPR	1	FORM	NO	4	G/V	BX	1	15 MIN	YELLOW VOLLYBALL	N, STRAIGHT
141.	642	9/02	URBAN	NIGHT	2	A	B	MILITARY	1	PHONE	OD164	4	G/V	NO	1	10 MIN	BRIGHT CLEAR LIGHT	N, ERRATIC
142.	670	9/05	URBAN	NIGHT	1			N/R	1	200-2	NO	3	G/V	NO	1	5 MIN	LIKE STAR	NE, STRAIGHT
143.	685	9/09	URBAN	NIGHT	2	A	B		1		164	4	G/V	NO	1	4 MIN	LIKE SPUTNIK	NORTHERLY
144.	698	9/17	(FOR)	NIGHT		A	M	MILITARY	2	ELINT	NO	3	G/V	NO	2	N/R	BRIGHT WHITE LIGHT	NE, E, ERRATIC
145.	707	9/20-21	URBAN	NIGHT	1	A	F	HOUSEWIFE	1	PHONE	NO	1	G/V	N/R	1	N/R	LIKE STAR	NORTH
146.	709	9/21	URBAN	NIGHT	1	A	M	BUSINESSMAN	1	200-2	NO	3	G/V	BX	1	25 MIN	LIKE STAR	NE
147.	718	9/24	USAFB	NIGHT	2	A	M	MILITARY	1	200-2	NO	1	G/V	NO	1	15 MIN	ROUND, GREEN, RED, BLUE	N, STRAIGHT
148.	730	9/27	AFRICA	NIGHT	5	A	B		1	LETTER	LETTER	G/V	NO	3	FEW MIN	SMALL DOTS	E, E, WNW, STRAIGHT(SUDDEN DISAPP)	
149.	738	10/01	URBAN	NIGHT	2	Y	M	STUDENTS	2	LETTER/200-2	NO	2	G/V	NO	1	5 MIN	TWINKLING STAR	NNE
150.	744	10/02	URBAN	NIGHT	1	A	M		1	200-2	NONE	3	G/V	NO	1	1 MIN	ROUND, TINTED BLUE	SE, STRAIGHT
151.	749	10/04	URBAN	NIGHT	2	A	B		1	LETTER	LETTER	2	G/V	NO	1	N/R	RED NARROW	NE
152.	862	12/01	URBAN	NIGHT	3	A	M	MILITARY	1	200-2	NO	4	G/V	NO	1	1 MIN	SPHERICAL PINK	045° STRAIGHT
153.	875	12/11	RURAL	NIGHT	1	A	M		1	200-2	NO	4	G/V	NO	1	4 MIN	LIKE STAR	SE, STRAIGHT

IN ADDITION TO THE ABOVE THERE WERE THIRTY-THREE OBJECTS EVALUATED AS SATELLITES ECHO I AND ECHO II IN THE MIDWEST FLAP FOLDER (ELLINGTON AFB)
THERE WERE THIRTEEN OBJECTS EVALUATED AS SATELLITES ON THE BASIS OF REPORTED CHARACTERISTICS INCLUDED IN THIS FOLDER.

Star Catalog
60 Garden Street
Cambridge
Massachusetts 02138

COPY

May 22, 1965

Dr. J. Allen Hynek
Dearborn Observatory
Evanston, Illinois

Dear Dr. Hynek:

The information which you requested regarding satellites with visual magnitudes of 3.0 or brighter is given below. All are orbiting as of this date. Many of the satellites launched in 1965, however, have magnitudes estimated from only a few observations, and thus for those objects, the magnitudes are to be considered less reliable.

International designation	Name	Spadats Number	Maximum Magnitude
60 Epsilon 3	Fragment Sputnik 4	36	+3
60 Zeta 1	Midas 2	43	+3
60 Iota 1	Echo 1	49	+0
60 Nu2	Rocket Courier 1B	59	+3
61 Alpha 1	Samos 2	70	+3
62 Omicron 1	Ariel	285	+2
62 Beta-Alpha 2	Rocket Alouette	426	+3
62 Beta-Kappa	None	444	+1
62 Beta-Tau 6	Debris Injun 3	520	+3
63003A	None	527	+2
63-27A	None	613	+2
63030A	Dual Tetrahedron	622	+3
63042B	None	682	+3
63047A	Centaur 2	694	+0
63049A	Rocket of unnamed	703	+3
64004A	Echo 2	740	-2
64004B	Debris of Echo 2	741	+0
64005A	Saturn 5	744	-1
64030A	Starflash	811	+2
64050B	Rocket Cosmos 42	866	+1
64053A	Cosmos 44	876	+1
64074A	S55C	924	+2
64076A	AD-1B	931	+3
64080B	Rocket Cosmos 51	948	+2
64084A	San Marco	957	+2
65004A	Tiros 9	978	-1.5
65006B	Rocket Cosmos 53	984	+2
65009A	Pegasus A	1085	+0
65009B	Command Mod.	1088	+1
65011D	Debris Cosmos 56	1092	+3
65014A	Cosmos 58	1097	+2
65016C	Grav.Grad.3	1292	+3
65027A	Snapshot	1314	+3
65027C	Fragment EGRS 4	1316	+3

SATELLITE 6402401 1964 4 3											
FOR OTHER LATITUDES											
EQUATOR S-N											
TIME	LONG.	LAT.	TIME	LONG.	HT.	BEAR.	TIME	LONG.	HT.	BEAR.	
(UT)	(W)		CORR.	CORR. (M)	(N-E)	(N-E)	CORR.	CORR. (M)	(N-E)	(N-E)	
DECEMBER 12, 1965											
1 21.2	265.22	81.5	27.5	-83.11	756	90.0*	27.5	-83.11	756	90.0*	
3 9.3	292.38	70.0	21.9	-18.69	761	24.4*	33.0	-147.54	742	155.6*	
4 57.5	319.55	50.0	15.4	-6.37	758	11.0*	39.4	-159.88	728	169.0*	
6 45.6	346.72	40.0	12.3	-4.11	754	8.3*	42.4	-162.14	714	171.6*	
8 33.7	13.89	30.0	9.2	-2.63	749	6.7*	45.4	-163.65	704	173.3*	
10 21.9	41.06	20.0	6.1	-1.58	744	5.6*	48.4	-164.71	694	174.3*	
12 10.0	68.23	0.	0.	0.	731	4.9*	51.4	-165.32	684	175.1*	
13 58.2	95.40	-20.0	-6.1	1.59	719	5.7*	54.4	-166.34	674	175.1*	
15 46.3	122.58	-30.0	-9.1	2.65	713	6.7*	57.4	-167.36	664	175.1*	
17 34.4	149.75	-40.0	-12.2	4.13	708	8.4*	60.4	-168.38	654	175.1*	
19 22.6	176.92	-50.0	-15.2	6.40	703	11.0*	63.4	-169.40	644	175.1*	
21 10.7	204.09	-70.0	-21.5	18.76	693	24.4*	66.4	-170.42	634	175.1*	
22 58.9	231.26	-81.5	-27.0	83.22	685	90.0*	69.4	-171.44	624	175.1*	
SHADOW ENTRY LAT. 34.0 EXIT LAT. 32.5											

DECEMBER 13, 1965											
0 47.0	258.43	81.5	27.4	-83.11	754	90.0*	27.4	-83.11	754	90.0*	
2 35.1	285.60	70.0	21.9	-18.69	758	24.4*	33.0	-147.54	742	155.6*	
4 23.3	312.77	50.0	15.4	-6.37	756	11.0*	39.4	-159.88	728	169.0*	
6 11.4	339.95	40.0	12.3	-4.11	753	8.3*	42.4	-162.14	714	171.6*	
7 59.5	7.12	30.0	9.2	-2.63	748	6.7*	45.4	-163.65	704	173.3*	
9 47.7	34.29	20.0	6.1	-1.58	743	5.6*	48.4	-164.71	694	174.3*	
11 35.8	61.46	0.	0.	0.	732	4.9*	51.4	-165.32	684	175.1*	
13 24.0	88.63	-20.0	-6.1	1.59	720	5.7*	54.4	-166.34	674	175.1*	
15 12.1	115.80	-30.0	-9.1	2.65	715	6.7*	57.4	-167.36	664	175.1*	
17 0.2	142.97	-40.0	-12.2	4.13	710	8.4*	60.4	-168.38	654	175.1*	
18 48.4	170.14	-50.0	-15.2	6.40	705	11.0*	63.4	-169.40	644	175.1*	
20 36.5	197.32	-70.0	-21.5	18.76	696	24.4*	66.4	-170.42	634	175.1*	
22 24.7	224.49	-81.5	-27.0	83.22	688	90.0*	69.4	-171.44	624	175.1*	
SHADOW ENTRY LAT. 35.9 EXIT LAT. 34.7											

DECEMBER 14, 1965											
0 12.8	251.66	81.5	27.4	-83.11	751	90.0*	27.4	-83.11	751	90.0*	
2 0.9	278.83	70.0	21.9	-18.69	756	24.4*	33.0	-147.54	741	155.6*	
3 49.1	306.00	50.0	15.4	-6.37	754	11.0*	39.4	-159.88	723	169.0*	
5 37.2	333.17	40.0	12.3	-4.11	751	8.3*	42.4	-162.15	714	171.6*	
7 25.3	0.34	30.0	9.2	-2.63	747	6.7*	45.4	-163.64	705	173.3*	
9 13.5	27.51	20.0	6.1	-1.58	742	5.6*	48.4	-164.70	697	174.3*	
11 1.6	54.68	0.	0.	0.	732	4.9*	51.4	-165.31	687	175.1*	
12 49.8	81.85	-20.0	-6.1	1.59	721	5.7*	54.4	-166.33	677	174.3*	
14 37.9	109.03	-30.0	-9.1	2.65	716	6.7*	57.4	-167.35	667	173.3*	
16 26.0	136.20	-40.0	-12.2	4.13	712	8.4*	60.4	-168.37	657	171.6*	
18 14.2	163.37	-50.0	-15.2	6.40	707	11.0*	63.4	-169.39	647	169.0*	
20 2.3	190.54	-70.0	-21.5	18.76	698	24.4*	66.4	-170.41	637	155.6*	
21 50.4	217.71	-81.5	-27.0	83.22	690	90.0*	69.4	-171.43	627	90.0*	
23 38.6	244.88										
SHADOW ENTRY LAT. 37.9 EXIT LAT. 36.7											

DECEMBER 15, 1965											
1 26.7	272.05	81.5	27.4	-83.11	748	90.0*	27.4	-83.11	748	90.0*	
3 14.9	299.22	70.0	21.9	-18.69	753	24.4*	33.0	-147.55	738	155.6*	
5 3.0	326.39	50.0	15.4	-6.37	752	11.0*	39.4	-159.85	721	169.0*	
6 51.1	353.56	40.0	12.3	-4.10	750	8.3*	42.4	-162.16	713	171.6*	
8 39.3	20.73	30.0	9.2	-2.63	746	6.7*	45.4	-163.65	704	173.3*	
10 27.4	47.91	20.0	6.1	-1.58	742	5.6*	48.4	-164.71	696	174.3*	
12 15.5	75.08	0.	0.	0.	732	4.9*	51.4	-165.32	687	175.1*	
14 3.7	102.25	-20.0	-6.1	1.59	722	5.7*	54.4	-166.34	677	174.3*	
15 51.8	129.42	-30.0	-9.1	2.65	718	6.7*	57.4	-167.36	667	173.3*	
17 40.0	156.59	-40.0	-12.2	4.13	713	8.4*	60.4	-168.38	657	171.6*	
19 28.1	183.76	-50.0	-15.2	6.40	709	11.0*	63.4	-169.40	647	169.0*	
21 16.2	210.93	-70.0	-21.5	18.76	701	24.4*	66.4	-170.42	637	155.6*	
23 4.4	238.10	-81.5	-27.0	83.22	693	90.0*	69.4	-171.44	627	90.0*	
SHADOW ENTRY LAT. 40.4 EXIT LAT. 39.2											

SATELLITE 6402401 1964 4 4											
FOR OTHER LATITUDES											
EQUATOR S-N											
TIME	LONG.	LAT.	TIME	LONG.	HT.	BEAR.	TIME	LONG.	HT.	BEAR.	
(UT)	(W)		CORR.	CORR. (M)	(N-E)	(N-E)	CORR.	CORR. (M)	(N-E)	(N-E)	
DECEMBER 16, 1965											
0 52.5	265.27	81.5	27.4	-83.11	746	90.0*	27.4	-83.11	746	90.0*	
2 40.6	292.44	70.0	21.9	-18.69	751	24.4*	33.0	-147.56	736	155.6*	
4 28.8	319.61	50.0	15.4	-6.37	750	11.0*	39.4	-159.89	720	169.0*	
6 16.9	346.78	40.0	12.3	-4.11	748	8.3*	42.4	-162.17	711	171.6*	
8 5.0	13.95	30.0	9.2	-2.63	745	6.7*	45.4	-163.65	702	173.3*	
9 53.2	41.12	20.0	6.1	-1.58	741	5.6*	48.4	-164.72	693	174.3*	
11 41.3	68.30	0.	0.	0.	732	4.9*	51.4	-165.33	684	175.1*	
13 29.5	95.47	-20.0	-6.1	1.59	723	5.7*	54.4	-166.35	675	174.3*	
15 17.6	122.64	-30.0	-9.1	2.65	719	6.7*	57.4	-167.37	665	173.3*	
17 5.7	149.81	-40.0	-12.2	4.13	715	8.4*	60.4	-168.39	655	171.6*	
18 53.9	176.98	-50.0	-15.2	6.40	711	11.0*	63.4	-169.41	645	169.0*	
20 42.0	204.15	-70.0	-21.6	18.75	703	24.4*	66.4	-170.43	635	155.6*	
22 30.1	231.32	-81.5	-27.3	83.21	695	90.0*	69.4	-171.45	625	90.0*	
SHADOW ENTRY LAT. 43.0 EXIT LAT. 41.5											

DECEMBER 17, 1965											
0 18.3	258.49	81.5	27.4	-83.11	744	90.0*	27.4	-83.11	744	90.0*	
2 6.4	285.66	70.0	21.9	-18.69	749	24.4*	33.0	-147.56	734	155.6*	
3 54.5	312.83	50.0	15.4	-6.37	748	11.0*	39.4	-159.90	718	169.0*	
5 42.7	340.00	40.0	12.3	-4.11	746	8.3*	42.4	-162.18	710	171.6*	
7 30.8	7.17	30.0	9.2	-2.63	743	6.7*	45.4	-163.66	702	173.3*	
9 18.9	34.34	20.0	6.1	-1.58	739	5.6*	48.4	-164.73	693	174.3*	
11 7.1	61.51	0.	0.	0.	731	4.9*	51.4	-165.34	684	175.1*	
12 55.2	88.68	-20.0	-6.1	1.59	723	5.7*	54.4	-166.36	675	174.3*	
14 43.4	115.85	-30.0	-9.1	2.65	720	6.7*	57.4	-167.38	665	173.3*	
16 31.5	143.02	-40.0	-12.2	4.13	716	8.4*	60.4	-168.40	655	171.6*	
18 19.6	170.19	-50.0	-15.2	6.40	713	11.0*	63.4	-169.42	645	169.0*	
20 7.8	197.36	-70.0	-21.6	18.75	705	24.4*	66.4	-170.44	635	155.6*	
21 55.9	224.53	-81.5	-27.3	83.21	697	90.0*	69.4	-171.46	625	90.0*	
23 44.0	251.70										
SHADOW ENTRY LAT. 46.0 EXIT LAT. 44.8											

DECEMBER 18, 1965												
1	32.2	278.87	81.5	27.3	-83.13	741	90.0*	27.3	-83.13	741	90.0*	
3	20.3	306.04	70.0	21.9	-18.70	746	24.4*	32.9	-147.57	732	155.6*	
5	8.4	333.22	50.0	15.4	-6.37	746	11.0*	39.2	-159.91	717	165.0*	
6	56.6	0.39	40.0	12.2	-4.11	744	8.3*	42.3	-162.19	705	171.6*	
8	44.7	27.56	30.0	9.2	-2.64	741	6.7*	45.3	-163.67	701	173.3*	
10	32.8	54.73	20.0	6.1	-1.58	738	5.2*	48.4	-164.75	694	174.1*	
12	21.0	81.90	0.	3.	0.	731	4.9*	54.3	-166.35	684	175.1*	
14	9.1	109.07	-20.0	-6.1	1.59	724	5.7*	-57.5	164.85	680	174.3*	
15	57.2	136.24	-30.0	-9.1	2.65	721	6.7*	-44.2	163.81	681	173.3*	
17	45.4	163.41	-40.0	-12.2	4.13	717	8.4*	-31.6	162.32	682	171.6*	
19	33.5	190.58	-50.0	-15.2	6.43	714	11.0*	-19.7	160.04	685	169.0*	
21	21.6	217.75	-70.0	-21.6	18.75	707	24.4*	-32.5	147.63	693	159.6*	
23	9.8	244.92	-81.5	-27.0	43.21	700	90.0*	-27.0	83.21	700	90.0*	
				SHADOW	ENTRY LAT.	49.6					EXIT LAT.	48.4

SMITHSONIAN ASTROPHYSICAL OBSERVATORY, CAMBRIDGE, MASSACHUSETTS

DECEMBER 1, 1965

SATELLITE 1964 4A, ECHO II

These predictions are based on orbital elements revised on November 29, 1965
 T_0 = November 30.0, times are in days, U.T.
 Argument of perigee = $266^\circ 56' - 2^\circ 49' 46'' (t - T_0)$
 Right ascension of ascending node = $205^\circ 46' - 0^\circ 8' 32'' (t - T_0)$

Inclination = $81^\circ 46'$
 Eccentricity = $0.01333 - 4.11 \times 10^{-4} (t - T_0)$
 Semi-major axis = 7.517957 megameters
 Mean anomaly (Rev.) = $0.71756 + 13.322110 (t - T_0) + 4.608 \times 10^{-5} (t - T_0)^2$

SATELLITE 6400401 1964 4 A										SATELLITE 6400401 1964 4 A											
EQUATOR S-N		FOR OTHER LATITUDES								EQUATOR S-N		FOR OTHER LATITUDES									
TIME (UT)	LONG. (W)	LAT.	TIME CORR.	LONG. CORR. (MI)	HT. (N-E)	BEAR. (N-E)	TIME CORR.	LONG. CORR. (MI)	HT. (N-E)	TIME (UT)	LONG. (W)	LAT.	TIME CORR.	LONG. CORR. (MI)	HT. (N-E)	BEAR. (N-E)	TIME CORR.	LONG. CORR. (MI)	HT. (N-E)		
DECEMBER 4, 1965										DECEMBER 8, 1965											
0 29.9	237.78	81.5	27.5	-83.08	778	90.0*	27.5	-83.08	778	50.0*	0 1.6	237.92	81.5	27.5	-83.09	767	90.0*	27.5	-83.09	767	50.0*
2 18.1	264.95	70.0	21.9	-18.67	778	24.4*	33.2	-147.50	765	155.6*	1 49.7	265.10	70.0	21.9	-18.67	770	24.4*	33.1	-147.51	757	155.6*
4 6.2	292.12	50.0	15.4	-6.36	768	11.0*	39.6	-159.81	750	169.0*	3 37.8	292.27	50.0	15.4	-6.36	764	11.0*	39.5	-159.84	738	169.0*
5 54.4	319.30	40.0	12.3	-4.10	760	8.3*	42.7	-162.08	739	171.7*	5 26.0	319.44	40.0	12.3	-4.10	759	8.3*	42.6	-162.11	728	171.6*
7 42.5	346.47	30.0	9.2	-2.64	751	6.7*	45.8	-163.55	727	173.3*	7 14.1	346.61	30.0	9.2	-2.63	752	6.7*	45.7	-162.58	717	173.3*
9 30.6	13.64	20.0	6.1	-1.58	741	5.6*	48.9	-164.62	716	174.3*	9 2.3	13.79	20.0	6.1	-1.58	744	5.6*	48.7	-164.65	706	174.3*
11 18.8	40.81	0.	3.	0.	721	4.9	54.9	-166.21	694	175.1*	10 50.4	40.96	0.	3.	0.	728	4.9*	54.7	-166.25	687	175.1*
13 6.9	67.99	-20.0	-6.0	1.60	702	5.7	-47.2	165.02	677	174.3*	12 38.6	68.13	-20.0	-6.0	1.59	712	5.7	-47.4	164.98	675	174.3*
14 55.1	95.16	-30.0	-9.0	2.66	694	6.7	-44.3	163.95	671	173.3*	14 26.7	95.30	-30.0	-9.1	2.66	705	6.7	-44.4	163.90	670	173.3*
16 43.2	122.33	-40.0	-12.1	4.15	687	8.4	-41.3	162.45	666	171.6*	16 14.8	122.47	-40.0	-12.1	4.14	696	8.4	-41.4	162.41	666	171.6*
18 31.4	149.51	-50.0	-15.1	6.44	680	11.0	-38.3	160.16	662	169.0*	18 3.0	149.65	-50.0	-15.2	6.42	692	11.0	-38.4	160.12	667	169.0*
20 19.5	176.68	-70.0	-21.3	18.81	670	24.4*	-32.1	147.77	662	155.6*	19 51.1	176.82	-70.0	-21.4	18.79	682	24.4*	-32.2	147.74	665	155.6*
22 7.7	203.85	-81.5	-26.7	83.29	664	90.0*	-26.7	83.29	664	50.0*	21 39.3	203.95	-81.5	-26.8	83.26	675	90.0*	-26.8	83.26	675	50.0*
23 55.8	231.02									23 27.4	231.16										
SHADOW ENTRY LAT. 40.7 EXIT LAT. -16.3										SHADOW ENTRY LAT. 52.0 EXIT LAT. -0.1											
DECEMBER 5, 1965										DECEMBER 9, 1965											
1 44.0	258.20	81.5	27.5	-83.08	775	90.0*	27.5	-83.08	775	50.0*	1 15.6	258.33	81.5	27.5	-83.09	764	90.0*	27.5	-83.09	764	50.0*
3 32.1	285.37	70.0	21.9	-18.67	776	24.4*	33.1	-147.50	766	155.6*	3 3.7	285.51	70.0	21.9	-18.67	768	24.4*	33.1	-147.52	754	155.6*
5 20.2	312.54	50.0	15.4	-6.36	767	11.0*	39.6	-159.82	747	169.0*	4 51.8	312.68	50.0	15.4	-6.36	763	11.0*	39.5	-159.84	734	169.0*
7 8.4	339.72	40.0	12.3	-4.10	760	8.3*	42.7	-162.09	736	171.7*	6 40.0	339.85	40.0	12.3	-4.10	758	8.3*	42.6	-162.11	725	171.6*
8 56.5	6.89	30.0	9.2	-2.63	752	6.7*	45.8	-163.56	724	173.3*	8 28.1	7.02	30.0	9.2	-2.63	751	6.7*	45.7	-163.59	714	173.3*
10 44.7	34.06	20.0	6.1	-1.58	742	5.6*	48.9	-164.62	712	174.3*	10 16.3	34.19	20.0	6.1	-1.58	744	5.6*	48.7	-164.66	704	174.3*
12 32.8	61.23	0.	3.	0.	723	4.9	54.9	-166.22	692	175.1*	12 4.4	61.37	0.	3.	0.	729	4.9*	54.7	-166.26	686	175.1*
14 21.0	88.41	-20.0	-6.0	1.59	705	5.7	-47.3	165.01	676	174.3*	13 52.5	88.54	-20.0	-6.0	1.59	714	5.7	-47.4	164.97	674	174.3*
16 9.1	115.58	-30.0	-9.1	2.66	697	6.7	-44.3	163.93	670	173.3*	15 40.7	115.71	-30.0	-9.1	2.65	707	6.7	-44.5	163.89	671	173.3*
17 57.3	142.75	-40.0	-12.1	4.15	690	8.4	-41.3	162.44	667	171.6*	17 28.8	142.88	-40.0	-12.1	4.14	701	8.4	-41.5	162.40	665	171.6*
19 45.4	169.92	-50.0	-15.1	6.43	684	11.0	-38.3	160.15	664	169.0*	19 17.0	170.05	-50.0	-15.2	6.42	695	11.0	-38.5	160.11	665	169.0*
21 33.5	197.10	-70.0	-21.4	18.80	672	24.4*	-32.1	147.76	664	155.6*	21 5.1	197.23	-70.0	-21.4	18.78	685	24.4*	-32.2	147.73	672	155.6*
23 21.7	224.27	-81.5	-26.7	83.28	667	90.0*	-26.7	83.28	667	50.0*	22 53.3	224.40	-81.5	-26.9	83.25	677	90.0*	-26.9	83.25	677	50.0*
SHADOW ENTRY LAT. 59.3 EXIT LAT. -13.1										SHADOW ENTRY LAT. 47.6 EXIT LAT. 7.1											
DECEMBER 6, 1965										DECEMBER 10, 1965											
1 9.8	251.44	81.5	27.5	-83.08	772	90.0*	27.5	-83.08	772	50.0*	0 41.4	251.57	81.5	27.5	-83.09	762	90.0*	27.5	-83.09	762	50.0*
2 58.0	278.61	70.0	21.9	-18.67	774	24.4*	33.1	-147.50	763	155.6*	2 29.5	278.74	70.0	21.9	-18.67	765	24.4*	33.1	-147.52	751	155.6*
4 46.1	305.79	50.0	15.4	-6.36	766	11.0*	39.6	-159.82	744	169.0*	4 17.7	305.91	50.0	15.4	-6.36	761	11.0*	39.5	-159.84	733	169.0*
6 34.3	332.96	40.0	12.3	-4.10	760	8.3*	42.7	-162.09	732	171.6*	6 5.8	333.09	40.0	12.3	-4.10	757	8.3*	42.6	-162.12	722	171.6*
8 22.4	0.13	30.0	9.2	-2.63	752	6.7*	45.7	-163.57	722	173.3*	7 54.0	0.26	30.0	9.2	-2.63	751	6.7*	45.6	-163.60	712	173.3*
10 10.6	27.30	20.0	6.1	-1.58	743	5.6*	48.8	-164.63	710	174.3*	9 42.1	27.43	20.0	6.1	-1.58	744	5.6*	48.6	-164.67	702	174.3*
11 58.7	54.48	0.	3.	0.	725	4.9	54.9	-166.23	690	175.1*	11 30.2	54.60	0.	3.	0.	730	4.9*	54.6	-166.27	685	175.1*
13 46.8	81.65	-20.0	-6.0	1.59	707	5.7	-47.2	165.00	675	174.3*	13 18.4	81.77	-20.0	-6.1	1.59	716	5.7	-47.5	164.96	674	174.3*
15 35.0	108.82	-30.0	-9.1	2.66	703	6.7	-44.3	163.92	670	173.3*	15 6.5	108.94	-30.0	-9.1	2.65	709	6.7	-44.5	163.88	671	173.3*
17 23.1	135.99	-40.0	-12.1	4.15	693	8.4	-41.3	162.43	667	171.6*	16 54.7	136.12	-40.0	-12.1	4.14	703	8.4	-41.5	162.39	670	171.6*
19 11.3	163.17	-50.0	-15.1	6.43	687	11.0	-38.3	160.14	665	169.0*	18 42.8	163.29	-50.0	-15.2	6.41	698	11.0	-38.5	160.10	670	169.0*
20 59.4	190.34	-70.0	-21.4	18.80	676	24.4*	-32.1	147.75	666	155.6*	20 30.9	190.46	-70.0	-21.5	18.78	688	24.4*	-32.3	147.72	674	155.6*
22 47.6	217.51	-81.5	-26.8	83.27	670	90.0*	-26.8	83.27	670	50.0*	22 19.1	217.63	-81.5	-26.9	83.25	680	90.0*	-26.9	83.25	680	50.0*
SHADOW ENTRY LAT. 57.4 EXIT LAT. -5.2										SHADOW ENTRY LAT. 40.8 EXIT LAT. 16.1											
DECEMBER 7, 1965										DECEMBER 11, 1965											
0 35.7	244.68	81.5	27.5	-83.08	770	90.0*	27.5	-83.08	770	50.0*	0 7.2	244.80	81.5	27.5	-83.10	759	90.0*	27.5	-83.10	759	50.0*
2 23.8	271.86	70.0	21.9	-18.67	772	24.4*	33.1	-147.51	760	155.6*	1 55.4	271.97	70.0	21.9	-18.67	763	24.4*	33.1	-147.53	745	155.6*
4 12.0	299.03	50.0	15.4	-6.36	765	11.0*	39.6	-159.83	741	169.0*	3 43.5	299.15	50.0	15.4	-6.36	760	11.0*	39.5	-159.86	730	169.0*
6 0.1	326.20	40.0	12.3	-4.10	759	8.3*	42.7	-162.10	730	171.6*	5 31.6	326.32	40.0	12.3	-4.10	756	8.3*	42.5	-162.13	720	171.6*
7 48.3	353.37	30.0	9.2	-2.63	752	6.7*	45.7	-163.58	715	173.3*	7 19.8	353.49	30.0	9.2	-2.63	750	6.7*	45.6	-163.61	710	173.3*
9 36.4	20.55	20.0	6.1	-1.58	744	5.6*	48.8	-164.64	708	174.3*	9 7.9	20.66	20.0	6.1	-1.58	744	5.6*	48.6	-164.68	701	174.3*
11 24.6	47.72	0.	3.	0.	726	4.9	54.9	-166.24	685	175.1*	10 56.1	47.83	0.	3.	0.	730	4.9*	54.6	-166.28	685	175.1*
13 12.7	74.89	-20.0	-6.0	1.59	710	5.7	-47.4	164.99	675	174.3*	12 44.2	75.00	-20.0	-6.1	1.59	717	5.7*	-47.5	164.95	675	174.3*
15 0.8	102.06	-30.0	-9.1	2.66	702	6.7	-44.4	163.91	670	173											