PROJECT 10073 RECORD CARD

1. DATE	2. LOCATION	12. CONCLUSIONS
30 September 1957	Navy Chase, Texas	☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon
3. DATE-TIME GROUP Local 2030 GMT 01/0230Z	**4. TYPE OF OBSERVATION** ☐ Ground-Visual ☐ Ground-Radar ☒ Air-Visual ☐ Air-Intercept Radar	☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft
5. PHOTOS ☐ Yes ☒ No	**6. SOURCE** Military	☒ Was Astronomical Venus ☐ Probably Astronomical ☐ Possibly Astronomical
7. LENGTH OF OBSERVATION	**8. NUMBER OF OBJECTS** / **9. COURSE**	☐ Other_____ ☐ Insufficient Data for Evaluation ☐ Unknown
5 minutes	one / WSW	

10. BRIEF SUMMARY OF SIGHTING

Obj size of pinhead, chaging colors from red, yellow, white and blue then repeating same cycle. Object hovered in one spot for a few minutes., then changed to red color, changed to yellow and took off very fast on a 240 dgr heading. Object then faded away in the distance.

11. COMMENTS

In the 12 years of its existence the UFO project has received numerous reports of pilots mistaking Venus for UFO, and often trying to close on it.

ATIC FORM 329 (REV 26 SEP 52)

4E4

Multi

1

HEADQUARTERS
AIR DEFENSE COMMAND
UNITED STATES AIR FORCE
ENT AIR FORCE BASE, COLORADO

TEL: MELROSE 2-5511
EXT 2202

ADODI-B

24 OCT 1957

SUBJECT: UFOB Investigation

TO: Commander
Air Technical Intelligence Center
ATTN: AFCIN4E4
Wright-Patterson Air Force Base, Ohio

1. Reference is made to your message AFCIN4E4, Cite 10-1543-E.

2. A limited investigation was conducted by Detachment 2, 1006th AISS. The Investigating Officer made the following contacts in the Beeville, Texas area concerning a refueling operation (or any other activity) with negative results:

a. Flight Service, Carswell AFB.

b. Second Air Force, SAC.

3. On 4 October 1957, an Airborne Observer's Data Sheet was sent to the pilot of the aircraft and is attached herewith.

4. The analysis of this Command is "probably balloon." Although no balloon activity could be ascertained, the information in the data sheet supports this conclusion.

FOR THE COMMANDER:

Robert J. Hefling
for Colonel, USAF
Director of Intelligence

1 Incl
Airborne Observer's
Data Sheet

PIN (C) RED YELLOW WHITE BLUE. THE OBJECT STARTED AT A BRIGHT RED, FADED TO YELLOW, TO WHITE, TO A BRIGHT BLUE, AND THEN REPEATED THAT SAME CYCLE. (D) ONE (E) N/A (F) NONE (G) NONE (H) NONE (I) NONE ITEM TWO-(A) OBSERVERS FIRST THOUGHT IT WAS AN AIRCRAFT BUT AFTER OBSERVING ~~IT~~ IT FOR A FEW MINUTES, CAME TO THE CONCLUSIN THAT IS WAS DEFINATELY NOT AN AIRCRAFT. (B) ABOUT 3 ABOVE HIM AND HE WAS AT 40,000 FEET. (C) ABOUT 90 LEFT STILL 3 ABOVE HIM. (D) TIGHT TURNS, VERY FAST SPEED. AIR-

Note

①2302-0245Z — 7

CRAFT WAS GOING 450 KNOTS AND COULD NOT GAIN ON OBJECT. OBJECT ~~l~~COVERED IN ONE S~~P~~T FOR A FEW MINUTES AND THEN CHANGED TO RED COLOR, CHANGED TO YELLOW AND TOOK OFF FAST ON A 240 HEADING. (E) OBJECT JUST FADED AWAY IN THE DISTANCE ITEM THREE- (A) NONE (B) NONE (C) BULLDOG 131, F9F ITEM FOUR - (A) 0230Z-0245Z 1 OCTOBER 957 (B) NIGHT (DARK) ITEM FIVE - (AL GP 5535, 20 MILES WEST OF NAVY CHASE. ITEM SIX-(A) N/A (B) LT. [redacted] BERVILLE TEXAS: AND CAPT. [redacted] ITEM SEVER- (A) VERY CLEAR (B) SURFACE-360 AT 10 KNOTS 6,000-010 -20 10,000-020-25 16,000-070-35 20,000-360-35 30,000-360-50 50000-360-35 80,000-N/A-N/A (C) NO CEILINGS (D) CLEAR (E) NONE (FL NONE ITEM EIGHT- NONE ITEM NINE-NONE ITEM TEN- NONE IN SIGHT OF AIRCRAFT ITEM ELEVEL- NOTHING UNUSAL PICKED UP ON RADAR. ITEM TWELVE-NONE.

location 60 miles S-SE of San Antonio TEX

Rec'd 7 Oct 57, 0945 hrs

BT

CRAFT WAS G[illegible]

M WPE#22 WYB#19HWA#03

MM RJEDWP

4 Oct 57 01 25Z

ZDK

HWA047

MM RJEDEN RJEDWP RJEPHQ

DE RJWFHW 5B

M 021635Z

FM COMDR 741ST ACWRON LACKLAND AFB TEX

TO RJWFHW/COMDR 33D ADIV OKCTY AF STA OKLA

INFO RJEDEN/COMDR ADC ENT AFB COLORADO SPRINGS COLORADO

RJEDWP/COMDR AIR TECHNICAL CENTER WRIGHT PATTERSON AFB OHIO

RJEPHQ/DIRECTOR OF INTELL HEADQUARTERS USAF WASHINGTON D C

BT

UNCLASSIFIED FROM DO 741-10-10

SUBJECT: UFOB REPORT ITEM ONE-(A) CIRCULAR (B) SIZE OF A

5. Aircraft identification

a. Type aircraft TV-2 (T-33)

b. Serial No. 137977

c. Home Station NAAS CHASE FIELD
BEEVILLE TEXAS

6. Flight Data

a. Heading ESE 240

☐ Mag ☐ True ☑ Compass

b. Ind. Altitude 40,000

c. Ind. Airspeed 180

☑ Knots ☐ MPH

at 180 knots at 40,000 ft (air to thin) he would [redacted]

7. Was an attempt to detect the object on airborne radar made? (Circle one)

Yes No (No Radar) Radar inoperative [redacted] had a hard time holding altitude and couldn't maneuver.

a. If YES, describe: _____

8. Was an intercept attempted? (Circle one) (Yes) No

9. Were photographs taken? (Circle one) Yes (No)

10. Were any other aircraft seen in the area? (Circle one) (Yes) No

a. If YES, was any attempt made to contact them? Comments: MANY STUDENT PILOTS, FOR WHOM WE WERE ACTING AS A STANDBY SAFETY AIRCRAFT. FOR THIS REASON NO ASSISTANCE WAS REQUESTED FROM THEM. THEIR ALTITUDE WAS BELOW 20,000'

11. Were any nearby ground stations contacted during or soon after the sighting?

(Circle one) (Yes) No Comments: HEADMAN ATTEMPTED TO PAINT [redacted] OBJECT, HOWEVER I BELEIVE THEY WERE UNSUCCESSFUL

AIRBORNE OBSERVER'S DATA SHEET

This questionaire has been prepared so that you can give the U.S. Air Force as much information as possible concerning the unidentified aerial phenomenon that you have observed. Please try to answer as many questions as you possibly can. The information that you give will be used for research purposes, and will be regarded as confidential material. Your name will not be used in connection with any statements, conclusions, or publications without your permission. We request this personal information so that, if it is deemed necessary, we may contact you for further details.

1. Date observation was made:

30 (Day) SEPT (Month) 1952 (Year)

2. Time observation was made:

2030 (Time) 5 (Zone) ☐ Daylight Saving ☑ Standard

or _____ Z (GMT)

3. Exact location of aircraft when the observation was first made:

97°42' 28° 42'N
Coordinates

4. Crew members who made the observation. (List each name)

NAME	RANK	CREW POSITION
[redacted]	LT USN	PILOT - FORWARD COCKPIT
	CAPT USMC	DUAL PILOT - AFT COCKPIT

AISOP # 2
(19 Sep 56)

18. If you saw the object at night, twilight, or dawn, what did you notice concerning the stars and moon?

STARS (Circle one)
a. None
b. A few
c. Many
d. Don't remember

MOON (Circle one)
a. Bright moon light
b. Dull moonlight
c. No moonlight — pitch dark
d. Don't remember

19. Was the object brighter than the background of the sky? (Circle one)

a. Yes b. No c. Don't remember

20. If it was BRIGHTER THAN the sky background, was the brightness like that of an automobile headlight? (Circle one)

a. A mile or more away (a distant car)? b. Several blocks away?

c. A block away? d. Several yards away? e. Other _____

21. What were the wind conditions at the time you saw the object? (Circle one)

a. No wind b. Slight breeze c. Strong wind d. Don't remember

22. What type of cloud cover were you flying through at the time you saw the object? (Circle one)

a. Clear b. Overcast c. Undercast

d. Above scattered clouds e. Below scattered clouds

f. Through scattered clouds g. Other _____

23. Did the object appear: (Circle one)

a. Solid?

b. Transparent?

c. Don't know.

12. Were any unusual disturbances noted on the compass or radio?

(Circle one) Yes (No) Comments: _____

_____

13. Was any turbulence noted? (Circle one) Yes (No)

Comments: _____

_____

14. Estimate how long you saw the object. ____ Hours 5 Minutes ____ Seconds

Circle one of the following to indicate how certain you are of your answer to Question 14.

a. Certain (b. Fairly certain) c. Not very sure d. Just a guess

15. Did you observe the object through any of the following?

a. Eyeglasses Yes (No)
b. Sun glasses Yes No
c. Other _____ NO

16. What was the condition of the sky? (Circle one)

a. Bright daylight
b. Dull daylight
c. Bright twilight
d. Just a trace of daylight
e. (No trace of daylight)
f. Don't remember

17. If you saw the object during daylight, twilight, or dawn, where was the sun located as you looked at the object? (Circle one)

a. In front of you
b. In back of you
c. To your right
d. To your left
e. Overhead
f. Don't remember

30. Do you think you can estimate the speed of the object?

(Circle one) Yes (No)

If you answered YES, then what speed would you estimate? _____ MPH.

31. Do you think you can estimate how far away from you the object was?

(Circle one) Yes (No)

If you answered YES, then how far asay would you say it was? _____ feet.

32. Try to estimate the number of degrees the object was from true North (Azimuth).

32.1 When it first appeared: 240 degrees.

32.2 When it disappeared: 240 degrees.

Almost precisely the position of VENUS at that (See H.O. Astro Computer)

33. If there was more than one object, then how many were there? ONE ?

Draw a picture of how they were arranged, and put an arrow to show the direction that they were traveling.

34. How large did the object or objects appear as compared with one of the following objects held in the hand and at arm's length? (Circle one)

a. Head of a pin	e. Quarter	i. Grapefruit
(b. Pea)	f. Half Dollar	j. Basketball
c. Dime	g. Silver Dollar	k. Other _____
d. Nickel	h. Baseball	_____

35. Circle one of the following to indicate how certain you are of your answer to Question 34.

a. Certain (b. Fairly certain) c. Not very sure d. Uncertain

24. Did the object: (Circle one for each question)

a. Appear to stand still at any time?	Yes	(No)	Don't know
b. Suddenly speed up and rush away at any time	(Yes)	No	Don't know
c. Break up into parts or explode?	Yes	(No)	Don't know
d. Give off smoke?	Yes	(No)	Don't know
e. Change brightness? AND COLOR	(Yes)	No	Don't know
f. Change shape?	Yes	(No)	Don't know
g. Flicker, throb, or pulsate?	(Yes)	No	Don't know

25. Did the object move behind something at anytime, particularly a cloud? (Circle one) Yes (No) Don't know. If you answered YES, then tell what it moved behind. _____

26. Did the object move in front of something at anytime, particularly a cloud? (Circle one) Yes (No) Don't know. If you answered YES, then tell what it moved in front of. _____

27. The edges of the object were: (Circle one)

a. Fuzzy or blurred b. (Like a bright star) c. Sharply outlined

d. Don't remember e. Other _____

28. Describe in a few words the color of the object. CONSTANT CHANGE FROM BRIGHT RED TO YELLOW TO SILVER TO BLUE TO RED, IN ABOUT THAT ORDER

29. IF POSSIBLE, try to guess or estimate what the real size of the object was in its longest dimension. ? feet.

41. In order that you can give as clear a picture as possible of what you saw, we would like for you to imagine that you could construct the object that you saw. Of what type material would you make it? How large would it be, and what shape would it have? Describe in your own words a common object or objects which when placed up in the sky would give the same appearance as the object which you saw.

THIS SIGHTING WAS MADE ON HOWEVER I SHOULD SAY THAT IT LOOKED VERY MUCH LIKE "VANGARD" OR "SPUTNIK I" I REALIZE MY THINKING MAY WELL BE INFLUENCED BY THIS SUBSEQUENT RELEASE OF THE RUSSIAN SATILITE, HOWEVER I FEEL THAT THIS CLOSLY RESEMBLES WHAT I SAW.

42. Was this the first time that you had seen an object or objects like this?

(Circle one) (Yes) No If you answered no, then when, where, and under what circumstances did you see other ones? _____

43. In your opinion what do you think the object was and what might have caused it?

SEE 41

36. How did the object or objects disappear from view? SEEMED TO DIM VERY RAPIDLY INTO NOTHING. LOOKED AS THOUGH IT WERE MOVING VERY FAST UNTILL IT JUST FADED FROM VIEW

37. What direction were you looking when you first saw the object? (Circle one)

a. North c. East e. South g. West
b. Northeast d. Southeast f. Southwest (h. Northwest)

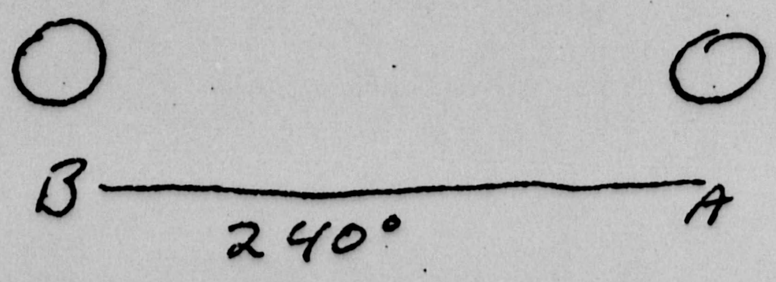
38. What direction were you looking when you last saw the object? (Circle one)

a. North c. East (e. South) g. West
b. Northeast d. Southeast (f. Southwest) h. Northwest

39. Draw a picture that will show the shape of the object or objects. Label and include in your sketch any details of the object that you saw such as wings, protrusions, etc., and especially exhaust trails or vapor trails. Place an arrow beside the drawing to show the direction the object was moving.



40. Draw a picture that will show the motion that the object or objects made. Place an "A" at the beginning of the path, a "B" at the end of the path, and show any changes in direction during the course.



45. Show the location of the object in relation to the aircraft by placing an "X" on the edge of the circle at the o'clock position and state high, low or level. If this relationship changed during the sighting, use another circle and show the new relationship of the object to the aircraft. Also indicate any changes of heading of your aircraft.

APPROX 340
Heading
12
9
3
6

(Circle one)
HIGH
LOW
LEVEL

240
Heading
12
9
39
6

(Circle one)
HIGH
LOW
LEVEL

Heading
12
3
6

(Circle one)
HIGH
LOW
LEVEL

NOTE 1.

Same

Same

Same

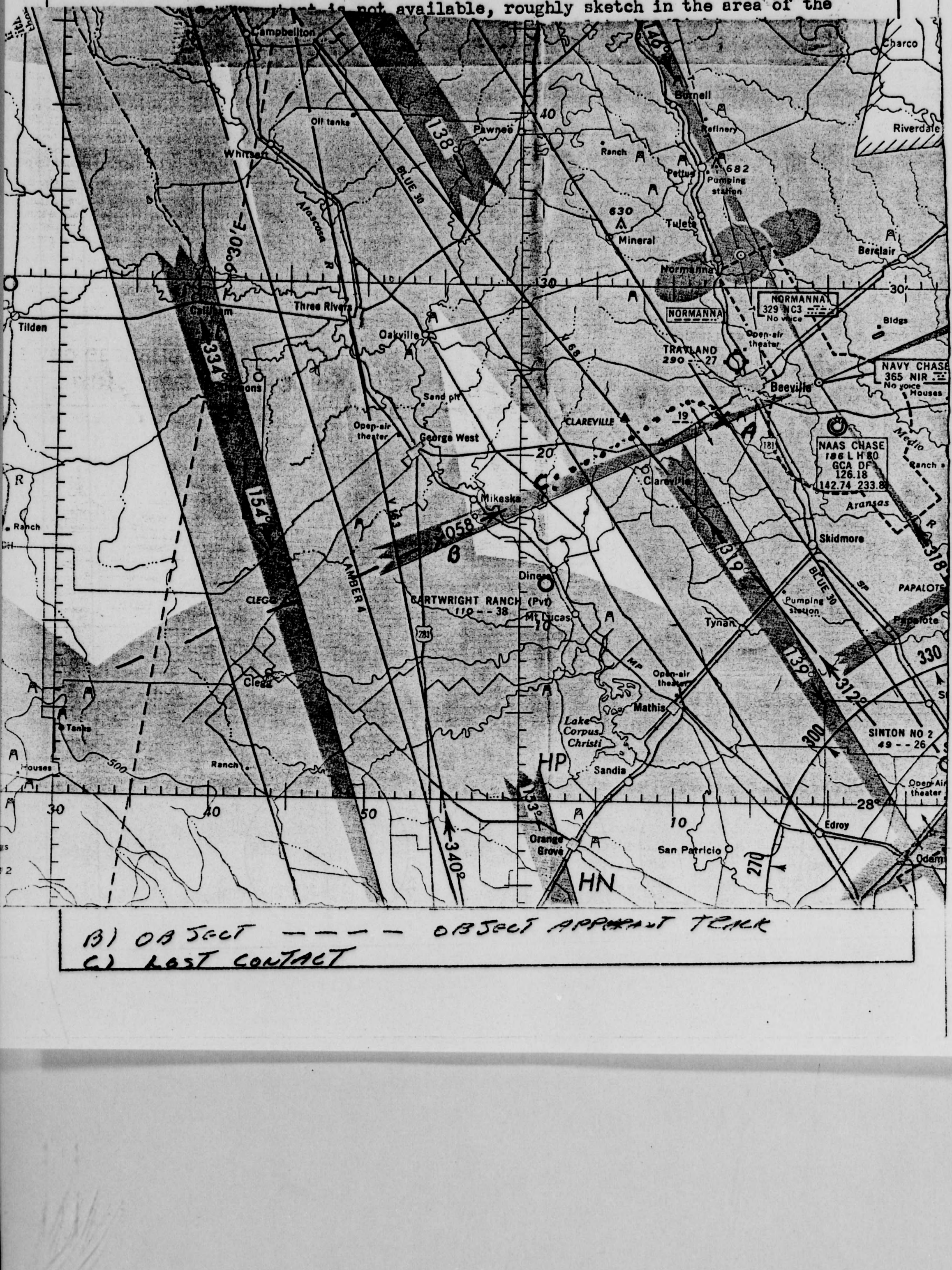
Same

Same

Same

44. If practicable, attach to this page the section of a local area chart which shows the location of the sighting. On this chart plot the flight path of your aircraft and the flight path of the object.

[illegible] chart is not available, roughly sketch in the area of the



B) OBJECT ---- OBJECT APPARENT TRACK
C) LAST CONTACT

46. Please give a brief narrative account of sighting and any other additional data or comments.

AT APPROX. CAPT [redacted] CALLED TALLY-HO AT 9 O'CLOCK LEVEL. I TOLD HIM IT WAS JUST A STAR, HOWEVER AFTER A CLOSER LOOK I FELT IT WAS TO BIG TO BE A STAR AND ALSO IT WAS CHANGING COLORS. I STARTED A VERY TIGHT LEFT TURN TO A HEADING OF 2400 WHICH PLACED THE OBJECT ON MY NOSE. AT THIS TIME I CONTACTED "HEADMAN" AND ADVISED HIM OF THE CONTACT. WHEN I ROLLED OUT WITH THE OBJECT ON MY NOSE, CAPT [redacted] LOST SIGHT OF THE OBJECT AND DID NOT REGAIN CONTACT. I WAS ABLE TO KEEP IT IN SIGHT FOR ABOUT ONE MORE M.N. AND THEN I TOLOST SIGHT.

AFTER SIGHTING IT I WENT TO FULL POWER AND COMMENCED A SLIGHT PUSHOVER TO PICKUP SPEED FOR AN INTERCEPT. I WAS DOING MACH .8 WHEN I LOST SIGHT OF IT.

THIS REPORT HAS BEEN FILLED OUT WITHOUT THE COMMENTS OF CAPT. KASH AS HE IS IN MICHIGAN WITH THE FLU.

NOTE: I SAY LEVEL BECAUSE IT APPEARED TO BE ON THE HORIZON AT A GREAT DISTANCE, WHICH MIGHT WELL MEAN IT WAS HIGH.

ATIC Comment: It has been repeatedly proven that a fixed object at night will appear to move

E. A. Manowsky a/c.

47. Please give the following information about yourself:

[redacted] [redacted] [redacted]
Last Name First Name Middle Name

ADDR[redacted] Beeville — Texas
Street City Zone State

TELEPHONE [redacted]

What is your present job? FLIGHT INSTRUCTOR (JET)

Age 26 Sex MALE

Please indicate any special educational training that you have had.

a. Grade School _____
b. High School _____
c. College _____
d. Post graduate _____
e. Technical School _____
(Type) _____
f. Flying School _____
g. Other special training 350 CV landings
1800 Hours 1000 Jet Hours

48. Date you completed this questionaire?:

14 Day — OCT Month — 1957 Year



JOINT MESSAGEFORM

SECURITY CLASSIFICATION: UNCLASSIFIED

19E

SPACE BELOW RESERVED FOR COMMUNICATION CENTER

OCT 10 | 8 53 '57

MULTIPLE 2 ADS.

10/19 1/2

PRECEDENCE		TYPE MSG (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
		BOOK	MULTI	SINGLE			
ACTION	ROUTINE			X	AF	DO 741-10-10	
INFO	ROUTINE						

FROM: CGMDR ATIC

TO: COMDR, 1006TH AISS, ENT AFB, COLORADO RJEDEN

INFO CY: COMDR, DET 2, 1006TH AISS, RICHARDS-GEBAUR AFB, MISSOURI RJEDKF

/UNCL/FROM: AFCIN-4E4 CITE 10-1543-E

REF UFO REPORT, RE INCIDENT, 20 MILES WEST OF NAVY CHASE, TEXAS, TT MESSAGE DO 741-101-10 DATED 2 OCTOBER 57. REQUEST FOLLOW UP LIMITED TYPE INQUIRY TO OBTAIN ADDITIONAL INFORMATION TO PROPERLY CONCLUDE CASE, PARTICULARLY IF ANY AIRCRAFT OPERATIONS ABOVE PILOT OBSERVER, WHO WAS AT 40,000 FEET ELEVATION, AT THAT TIME. SIMILAR REPORTS OF CHANGING MULTICOLOR LIGHTS OF TYPE DESCRIBED GENERALLY FOUND TO BE IN FLIGHT REFUELING OPERATIONS, BUT NEVER AT ALTITUDES GIVEN IN REPORT.

COORDINATION:

AFCIN-4E4 Henry A. Miley DATE 9 Oct 57
Dr. Henry A. Miley

AFCIN-4E N K Gilbert DATE 9 OCT 57
Col H.K. Gilbert

SPECIAL INSTRUCTIONS

Urgent 5 Oct 57

DATE	TIME
09	1500
MONTH OCT	YEAR 57

WRITER

SYMBOL: AFCIN-4E4

TYPED NAME AND TITLE (Signature): Captain G.J. Gregory for

PHONE 69216 | PAGE NR. 1 | NR. OF PAGES 1

SECURITY CLASSIFICATION: UNCLASSIFIED

RELEASER

SIGNATURE: Wallace W. Elwood

TYPED (or stamped) NAME AND TITLE

WALLACE W. ELWOOD
Captain, USAF
Assistant Adjutant

DD FORM 1 MAY 55 173 REPLACES DD FORM 173, 1 OCT 49, WHICH WILL BE USED UNTIL EXHAUSTED

ASTRONOMY

Venus, Saturn Now Seen

Although Venus is becoming brighter in the evening sky, it is still retiring early from view. September will have a kind of replacement for Venus—the "harvest moon."

By JAMES STOKLEY

➤ THE PLANET Venus is gradually brightening, and becoming more prominent in the evening sky. However, it still sets about an hour and a half after the sun. This is before twilight has completely ended, and the sky has become dark. If you look toward the southwest as dusk gathers, Venus will soon appear. Of magnitude minus 3.5 on the astronomical brightness scale, it exceeds any other star or planet. It is in the constellation of Virgo, the virgin, and close to the star called Spica, which is so much fainter that it will be considerably more difficult to locate.

The accompanying maps are drawn to show the appearance of the evening sky at about 10:00 p.m., your own kind of standard time—add one hour for daylight-saving time—at the first of the month, an hour earlier at the middle and two hours earlier as September gives way to October. Thus, Venus does not appear upon them.

They do, however, show the second planet of the September evening.

This is Saturn, which stands in the constellation of Ophiuchus, the serpent-bearer. During the early evening Saturn is in the southern sky, but it moves toward the southwestern horizon and goes down, at the beginning of the month, around 11:00 p.m. by your kind of standard time.

September's Brightest Star

Brightest star of the September evening is Vega, in Lyra, the lyre, high in the west. Directly overhead is Cygnus, the swan, in which Deneb may be seen. This group is also called the Northern Cross. Deneb marks the top of the cross, toward the northeast. Moving down from Cygnus, toward the southwest, one comes to Aquila, the eagle, of which Altair is the brightest star.

Three other stars which, like these, are of the first magnitude, are also shown on the maps. These are all so near the horizon that they appear considerably fainter than if they were high overhead.

This is a result of the absorption of their light by the greater thickness of the earth's atmosphere which must be penetrated. Low in the northwest is the figure of Bootes, the bear-driver, with Arcturus. Next, to the right, is the Great Dipper, which is part of Ursa Major, the great bear. The dipper's handle extends toward Bootes, and if you follow the curve of the handle, it brings you directly to Arcturus.

Farther right, low in the northeast, is Capella, in Auriga, the charioteer, which will become prominent in the winter evenings.

High in the southeast are four stars which form the "Great Square" in the constellation of Pegasus, the winged horse. Below this is Aquarius, the water-carrier, one of the constellations of the zodiac, the path of the sun, moon and planets. And below Aquarius we find Piscis Austrinus, the southern fish, with the first-magnitude Fomalhaut, also dimmed by its low altitude. For our latitudes, it never rises much higher than it is now; you have to travel southward to see it high in the sky.

Mercury Becomes Morning Star

As for the other planets, Mars and Jupiter are now both too nearly in line with the sun to be observed. Mercury, on Sept. 9, passes nearly between the earth and the sun, but by the 25th it will be farthest west of the sun. It will rise ahead of the sun, and for a few days around that date will be visible as a morning star, in the east just before sunrise.

On Sept. 23, at 2:27 a.m., EST, the sun will be directly over the equator, at the halfway point of the southward journey in the sky which it began last June. This is the autumnal equinox which marks the beginning of autumn in the Northern Hemisphere and of spring in the Southern.

On the night of Sept. 8 the moon is full. This is the "harvest moon" and we can see what it means if we consult a table that gives the times of moonrise, and see how much later this occurs on succeeding nights, at different times of year. On Sept. 9, we find, the moon will rise (at 40 degrees north latitude) only 28 minutes later than it did on the eighth.

Next March, on the other hand, the difference will be much greater.

The moon will be full on the fifth and the difference in time of moonrise, between that night and the next, will be 74 minutes. Thus, in September and October, when the moon is full and bright, it rises about the same time for several evenings.

Harvest Moon for Farmers

As John Ferguson wrote in a book on astronomy published in 1757, explaining why this is called the harvest moon:

"The farmers gratefully ascribe the early rising of the full moon at that time of year to the goodness of God, not doubting that He had ordered it so on purpose to give them an immediate supply of moonlight after sunset, for their greater conveniency in reaping the fruits of the earth."

The reason for the differences in the delay of moonrise from one night to the next is found in the changing angle made at various times of the year by the ecliptic, the path which the moon closely follows.

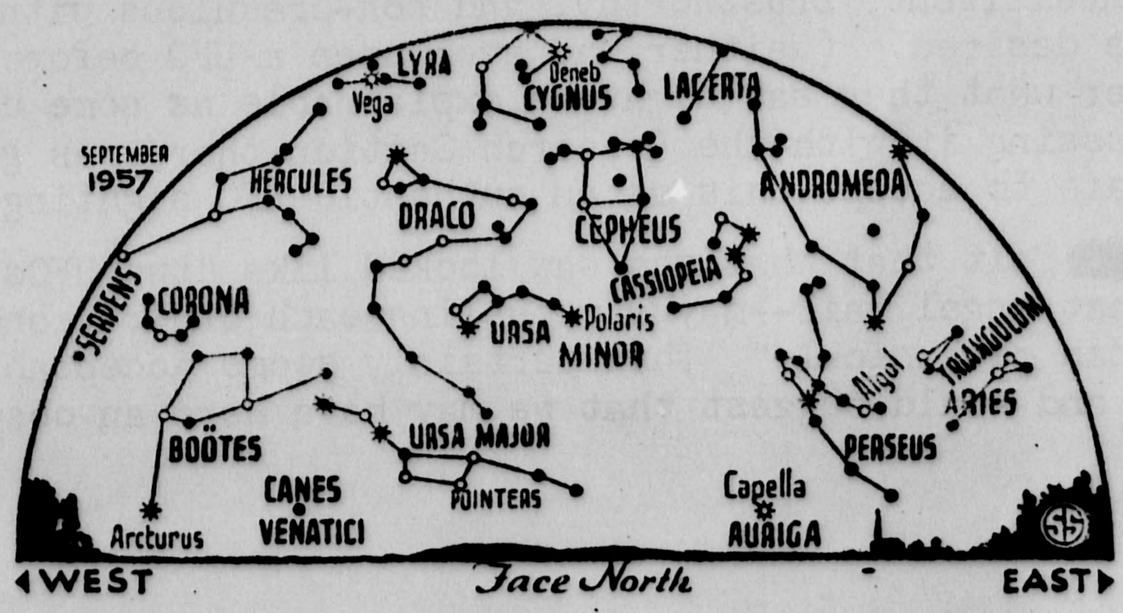
It makes a trip around the ecliptic about once a month; each night it is about a twenty-ninth of its circumference farther east. Thus, being farther east, it rises later—about 52 minutes on the average.

At this time of year the southernmost part of the ecliptic is in our evening sky—it passes through Sagittarius, the archer, and the line is not far from parallel to the horizon. Hence, the moon's daily eastward movement is utilized in moving it horizontally to a considerable degree. Just before moonrise it is not much farther below the horizon than it was the night before.

In March, on the other hand, the ecliptic is nearly vertical, and the same eastward movement of the moon takes that body considerably farther below the horizon, thus making the greatest changes at moonrise.

Hunter's Moon

In October, conditions will be quite similar to what they are in September. Again there will be relatively little delay in moonrise from one night to the next when it is full. This is again on the eighth, and it will rise only 30 minutes later on the ninth. This is called the "hunter's moon," since the hunter is supposed to benefit at that time.



No Case (Information Only)

28 September 1957
Old Greenwich, Connecticut

II: Plane Spotter Watches Odd-Shaped Object(s) Eject "Silvery Stuff"

At about 2:40 p.m. on Saturday, Sept. 28, Mr. and Mrs. [redacted] were having sandwiches in the back yard of their hilltop home in Old Greenwich, Connecticut. Mrs. [redacted], a valued CSI member and an experienced GOC plane-spotter, had her 7 x 50 binoculars out and was examining a small plane flying over Long Island Sound to the south, when her husband commented that there was something in the sky above the plane. To the naked eye it was a small but definite silvery disc, about 1/20 the size of the moon. M[redacted] asked for the binoculars, expecting to see a balloon. Instead, the glasses showed him something of puzzling shape "like an upside-down parachute." Unable to make out just what this was, he returned the binoculars to his wife. Just at that moment the object moved off to the right, described a wide horizontal circle, and returned to its former position in the south-southwest, about 35° above the horizon. After a few seconds, it repeated the maneuver. After this it was motionless again for fifteen or twenty seconds, during which time Mrs. [redacted] had it continuously in view through the binoculars. The accompanying sketch shows what she saw. The objects "resembled frosted glass" and appeared to be spinning; the connecting silvery strands were wavy, as shown. While she was watching, two smaller white objects rapidly crossed the field, but these were not clearly seen. Suddenly, something like silvery sparks "exploded" out of the top of the object, or pair of objects, and almost at once it moved suddenly off to the right. Trying to follow it with the glasses, she caught the sun and was temporarily blinded, but Mr. [redacted] saw that the object described a third circle like its two previous ones, terminating it this time with an abrupt and final vertical ascent. The object dwindled as it rose through the clear sky, and was out of sight in a few seconds.



Mr. [redacted], whose distance vision is excellent, had also noted the ejection of the silvery material, which he saw begin to float downwards as vertical strands, glittering in the sun. He compared the appearance of these glittering strands to "spider web." It drifted away from them toward the south and was not visible very long; Mrs. [redacted], still dazzled by the sun, did not see it. She asked her husband whether it might have been smoke or cloud-mist (like a jet contrail), but he was definite about the comparison to spider web. Mr. [redacted] had never heard of "angel hair"; if his wife had ever mentioned it to him, he had paid no attention, for she found that the term conveyed nothing to him. His visual impressions were therefore entirely uninfluenced by suggestion or expectation. (He has taken very little interest in saucers hitherto.)

A few minutes after the UFO had disappeared, two red swept-wing jets, possibly Vulcans, passed over heading southwards and climbing. Later other jets were seen to the south. Whether the unusual jet activity was provoked by the UFO isn't known.

No more intelligent, trustworthy, and non-credulous witnesses than Mr. and Mrs. [redacted] could be desired. (Neither had ever seen a UFO before.) They have, of course, wondered whether what they saw might be explainable as some unusual type of balloon, but after discussing it with the Research Section there was general agreement that it is pretty safe to accept this as an authentic UFO sighting.

Mrs. [redacted] felt that what she saw looked like "two UFOs doing whatever it is they do with that angel hair--maybe refueling each other", and that it appeared "more animal than mechanical." This certainly seems acceptable. Some of us would go a bit further, and would suggest that we may have here an observation of the mating of two UFOs.

E FIELDS

ARCHAEOLOGY

Ancient Toltec Colony Found in Western Mexico

➤ A PREVIOUSLY unknown Toltec colony has been discovered on the west coast of Mexico, representing the westward limit of expansion of this ancient civilization.

The site has been officially explored for the first time by archaeologists from the University of California at Los Angeles, under the direction of Dr. Clement Meighan. The expedition was sponsored by Phil Berg, a Los Angeles executive.

The site lies along Mexico's new West Coast highway near the city of Tepic. Dr. Meighan estimates the colony reached its cultural peak about 1200 A.D.

Relics from the site represent a higher degree of cultural achievement than had previously been thought to exist in this region during this period, Dr. Meighan said.

They include excellent examples of pottery of six-color decor, figurines, bronze axe-heads, copper pins and tweezers, and a whistle with an authoritative tweet that would "make a basketball referee green with envy."

The pottery is described as being of high quality with exquisite patterns in six different colors. Much of the pottery appear to be art objects rather than utilitarian items. Some of it was apparently used only in connection with burial rites.

Science News Letter, August 24, 1957

CHEMISTRY

Chromium Chemical Makes Ruby Redness

➤ SCIENTISTS have found why the redness of rubies comes from a green chemical, a compound of the same metal chromium that is used to put glittering platings on automobile trim.

Delving into the secrets of these fascinating jewels, Dr. L. E. Orgel of the department of theoretical chemistry, at Britain's University of Cambridge, describes his researches on rubies in *Nature* (June 29).

Most jewels are really a "solid solution" of some chemical compound, usually a metal oxide or silicate, in a basic mineral or "matrix." These metals are really impurities, making jewels "contaminated minerals," and the color of the jewel is very close to that of the metal compound dissolved in its matrix.

In the case of rubies, the effect is just the opposite. Chromium oxide, a green chemical, dissolved in an aluminum oxide matrix, a colorless or white substance, gives not a green stone but a red one: the ruby.

Dr. Orgel, investigating this property, made use of the fact that synthetic rubies could be made only if the chromium content of the melted aluminum oxide was low eight percent. Above this, the ruby would become green-colored.

Measurements of the minute distances between the atoms in red rubies and "green rubies" showed that above eight percent chromium, the chemical bonds between the aluminum and the chromium atoms and the matrix "softened up," allowing the true green color of chromium to show through.

Below eight percent, the tight aluminum oxide crystal structure literally "squeezes" the chromium atoms, shortening the interatomic bonds as much as four percent. This shortening causes the shift in color from green to red. . .

Science News Letter, August 24, 1957

ENGINEERING

Study Tiny Tempests on Aircraft, Missile "Skin"

➤ STRUCTURAL FAILURE of the "skin" of aircraft and missiles traveling at supersonic speeds may be due to tiny tempests that rage over it.

This phenomenon, known as panel flutter, is the subject of research by John Miles, professor of engineering at the University of California at Los Angeles.

Panel flutter has been a suspect in certain structural failures ever since such defects were noticed in the first German V-2 rockets, Mr. Miles pointed out. But the forces acting to cause the failures were not known.

The action is very similar to that of ocean waves generated by high winds or the flutter of a flag. In fact the study has thrown new light on wave formation in the ocean.

The study has indicated that the effect is eliminated with thicker "skins."

Practical design criteria are currently being worked out to assure that "skin" thickening does not pose a weight problem, a particularly critical area in missiles, Mr. Miles said.

Science News Letter, August 24, 1957

CHEMISTRY

Chemists Develop Most Sensitive Test for Metals

➤ A RAPID and convenient method for measuring the metal content of solutions has been developed. It is so sensitive it is affected by the tiny amounts of lead dissolved from the glass of much ordinary laboratory equipment.

Dr. Irving Shain, professor of chemistry, and Richard D. DeMars, research assistant, University of Wisconsin, Madison, reported the new electrolytic method that can measure one part of lead in five trillion parts of solution. The basis of the technique is an electrode consisting of a tiny drop of mercury hanging from a platinum wire. Any metal that will alloy itself with mercury can be tested.

Using this method, the Wisconsin chemists can measure concentrations as small as seven billionths of an ounce of lead or two billionths of an ounce of zinc in a quart of solution.

Science News Letter, August 24, 1957

ICHTHYOLOGY

Narcotic From Pistol Subdues Sharks in Sea

➤ FOUR HUNDRED pounds of ocean-swimming shark can be knocked out in one minute or less with a water pistol full of a narcotic known at M.S. 222, Dr. Perry W. Gilbert and F. G. Wood Jr. of Cornell University, Ithaca, N. Y., report in *Science* (Aug. 2).

Large sharks and rays were needed for a study of mating habits and of all the tranquilizers and anesthetics tried, M.S. 222 was the most useful.

The large fish are brought alongside of the boat and their heads are pulled up out of the water. Then a solution of the narcotic is squirted into the mouth of a shark or the spiracles of a ray and sprayed over the gill openings.

A water pistol, rubber-bulb syringe, or pump-type hand sprayer can be used, the authors report.

Within 15 seconds, the drug begins taking effect. The fish can then be safely handled either in or out of the water. The first stages of recovery take place within five to 30 minutes after the shark is put back in the water. After that, the drug wears off gradually and completely, and the fish are unharmed.

Science News Letter, August 24, 1957

TECHNOLOGY

New Conduit "Pipes" Microwave Radio Signals

➤ "PIPING" SHORT radio waves around corners and sharp angles is expected to be made easier by a new lightweight "traveling-wave" conduit tube announced by the Radio Corporation of America.

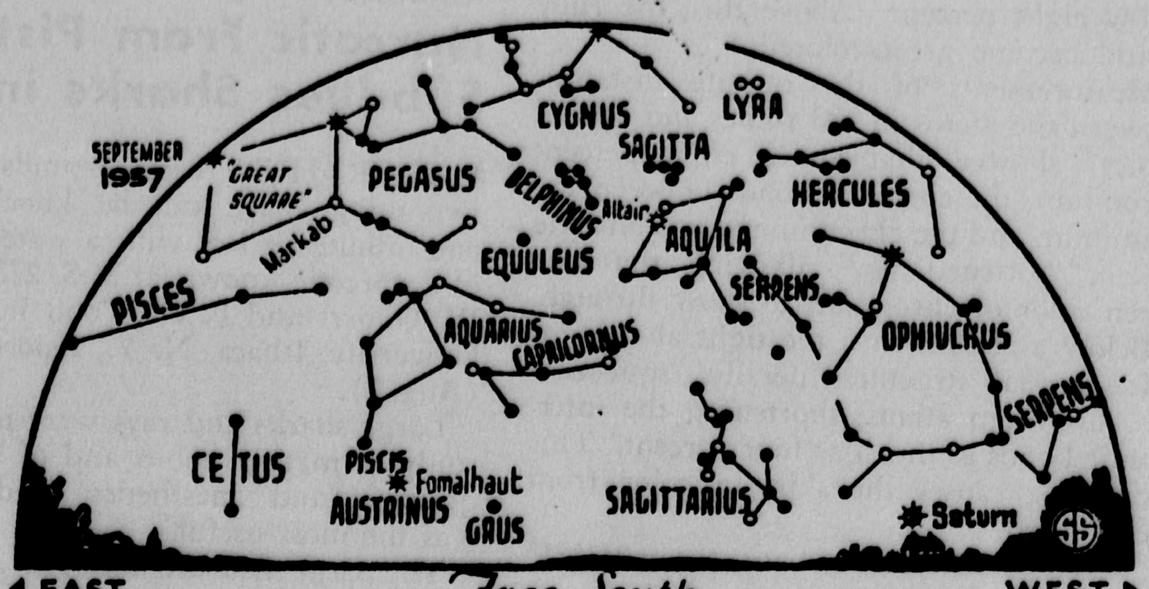
One property of the very short radio waves or microwaves, measured in inches or less, is that they can be "piped" for short distances through tubes and conduits somewhat like water. One disadvantage of present high-sensitivity microwave conduit systems is the need for 30-pound electromagnets to focus the waves precisely down the axis of the conducting tubes. The alignment of the large electro-magnets is affected by vibration, changes in environment and changes in temperature, and must be adjusted periodically.

The new tube, developed by Dr. K. K. N. Chang of RCA's David Sarnoff Research Center, dispenses with the huge electro-magnet, using instead a compact electrostatic focusing element built into the tube, and permanently aligned.

Dr. Chang explained that the focusing element in the "plug-in" traveling wave tube consists of two pairs of spiral windings. The larger outer pair carries the microwave signals, and the inner pair lies within a tubular electron beam and helps the outer pair in beam focusing.

Successfully operated in the research stage, Dr. Chang predicted the tube's future use as an electronic amplifier in airborne radar and countermeasures equipment as well as microwave communications systems.

Science News Letter, August 24, 1957



☼ ✱ ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

Celestial Time Table for September

Sept.	EST	
8	12:00 noon	Moon farthest, distance 252,000 miles.
	11:55 p.m.	Full moon (Harvest Moon).
16	11:02 p.m.	Moon in last quarter.
21	10:00 a.m.	Sun and Mars in line with earth.
22	Midnight	Moon nearest, distance 222,300 miles.
23	2:27 a.m.	Sun over equator, autumn commences in Northern Hemisphere.
	2:18 p.m.	New moon.
25	2:00 p.m.	Mercury farthest west of sun; visible for a few days around this date low in east before sunrise.
26	1:12 p.m.	Moon passes Venus.
28	8:56 a.m.	Moon passes Saturn.
30	12:49 p.m.	Moon in first quarter.

Subtract one hour for CST, two hours for MST, and three for PST.

Science News Letter, August 24, 1957

ASTRONOMY

Early Stars Were Brighter

A study of the atmospheres of the B stars leads astronomers to believe that billions of years ago the stars were much brighter than they now are.

➤ THE SKIES were adorned with much brighter stars billions of years ago than they are now and the rate of star creation then was much faster than now.

So conclude Drs. L. H. Aller and Jun Jugaku of the University of Michigan Observatory from a study of the atmospheres of the very young, hot and bright objects known as B stars. The astronomers reported results of their study, supported by the National Science Foundation, to the American Astronomical Society meeting in Urbana, Ill.

B stars are only a few million years old, very young on the astronomical time scale that dates the sun's formation as five billion years ago. They are believed formed from interstellar gas in the spiral arms of the Milky Way galaxy in which the earth and sun are found.

Since B stars consume their nuclear fuel, hydrogen, at a rate hundreds of times faster than does the sun, their lifetimes must be relatively short. By comparing the sun's composition with that of a young B star, Drs. Aller and Jugaku hoped to find the amount of element building occurring in the last four billion years.

According to the present ideas of stellar evolution, the heavier elements are produced in the dense, hot cores of massive stars, which subsequently spew these materials into interstellar space. The interstellar materiel is again collected into stars and the same process is repeated in the more massive objects.

The sun is thus, since it was formed so many millenia ago, believed to have a smaller fraction of heavier elements than has a star made only "recently" from interstellar gas.

Although the problem of comparing the sun's atmosphere with that of a young B star is very complex and not very accurate, Drs. Aller and Jugaku found that some elements, such as silicon and oxygen, do not seem to be substantially greater in the young stars than in the sun.

Therefore, they conclude, the rate of element building, and of star formation as well, must have proceeded at a much slower pace since the sun was formed than it did in the early stages of the Milky Way galaxy.

The interstellar gas from which stars are formed is being continuously renewed by an outward flow of gas from the galactic center, or nucleus, Dr. Sidney van den Bergh of Perkins Observatory, Delaware, Ohio, reported to the meeting. The present rate of gas lost from the nucleus about equals the rate at which gas is lost from the spiral arms by star formation, he has calculated.

Dr. van den Bergh based his conclusion on the recent findings that the Milky Way galaxy, as well as the Andromeda nebula, contain "surprisingly" small amounts of interstellar gas.

Science News Letter, August 24, 1957

the Week

eceived for review since last week's issue are listed. send a remittance to cover retail price (postage will N Street, N. W., Washington 6, D. C. Request free rvice.

Douglas R. Hartree—*Wiley*, 181 p., diagrams, $5.00. For users of the results of calculations and for those who may wish to make them, this book offers understanding.

A CHANCAY-STYLE GRAVE AT ZAPALLAN, PERU: An Analysis of Its Textiles, Pottery and Other Furnishings—S. K. Lothrop and Joy Mahler—*Peabody Museum*, Papers, Vol. L, No. 1, 38 p., 17 plates, paper, $2.50. Description of ancient graves, one of which contained the mummy of a woman who was evidently someone of importance in a poor community. Twenty-two fabrics were found, some of which had been much mended before use in the burial.

THE DEVELOPMENT & MEANING OF EDDINGTON'S "FUNDAMENTAL THEORY": Including a Compilation From Eddington's Unpublished Manuscripts—Noel B. Slater—*Cambridge University Press*, 299 p., $7.50. The text of this posthumous work together with the previously unpublished manuscripts show how the theory developed towards coherence.

DOCUMENTATION AND INFORMATION RETRIEVAL: An Introduction to Basic Principles and Cost Analysis—J. W. Perry and Allen Kent—*Press of Western Reserve University (Interscience)*, 156 p., diagrams, $5.00. A report of research in progress.

EARTH SATELLITES—Patrick Moore—*Norton*, 157 p., illus. with drawings by Irving Geis, $2.95. To give the general reader an idea of what is actually planned for the earth satellite program, and how to tell fact from fiction in the realm of outer space.

EVOLUTION IN ACTION—Julian Huxley—*New American Library*, 141 p., illus., paper, 50 cents. In this rapid survey of evolution, the author stresses its unity, including the history of mankind. Inexpensive, pocket-size edition of a book originally published by Harper.

FACTORS AFFECTING THE APPEARANCE OF PICTURE VARNISH — Robert L. Feller — *Mellon Institute*, 2 p., paper, free upon request direct to publisher, 4400 Fifth Ave., Pittsburgh 13, Pa. Discussing the refractive index of picture varnishes as affecting the appearance of the paintings.

FORTETSA: Early Greek Tombs Near Knossos—J. K. Brock—*Cambridge University Press*, 224 p., illus., $23.50. A lavishly illustrated report of a British party that excavated a series of early Greek tombs in 1933-1935. From the shape and decoration of the pottery and the grouping of burials it has been possible to establish a continuous sequence of ceramic phases covering a span of nearly four centuries.

HELPING YOURSELF WITH PSYCHIATRY: A Practical Guide to Wiser and Healthier Living—Frank S. Caprio—*Prentice-Hall*, 256 p., $4.95. A book of psychiatric self-help for the unhappy and fear-ridden. The author is a psychiatrist.

HISTOLOGY—Arthur Worth Ham—*Lippincott*, 3d ed., 894 p., illus., $11.00. Since the first edition of this book, effective magnification has been raised from something over 1,000 to perhaps 100,000. This edition contains a chapter on electron microscopy. Special consideration is also given to transplantation of tissues.

INDUSTRY AND TECHNICAL PROGRESS: Factors Governing the Speed of Application of Science—C. F. Carter and B. R. Williams on behalf of the Science and Industry Committee—*Oxford University Press*, 244 p., $4.00. Many applications of science, it is shown, require the coordinated advance of a whole chain of firms. Necessary, too, is the preparation and proper distribution of trained talent.

JOHNNY'S FIRST VISIT TO HIS DENTIST—Josephine Abbott Sever — *Children's Medical Center*, 29 p., illus., paper, 50 cents. A story you can read to the Johnnies in your own family to prepare them for what they may experience in the dentist's office, and so prevent unnecessary fears.

LATE MOGOLLON COMMUNITIES: Four Sites of the Tularosa Phase, Western New Mexico—Paul S. Martin, John B. Rinaldo and Eloise R. Barter — *Chicago Natural History Museum*, Fieldiana: Anthropology, Volume 49, Number 1, 144 p., illus., paper, $4.00.

LIGHT SCATTERING BY SMALL PARTICLES—H. C. van de Hulst—*Wiley*, 470 p., diagrams, $12.00. Hardly ever is light observed directly from its source, so everyone engaged in the study of light or its industrial applications meets the problem of scattering.

MARIANAS PREHISTORY: Archaeological Survey and Excavations on Saipan, Tinian and Rota—Alexander Spoehr — *Chicago Natural History Museum*, Fieldiana: Anthropology Volume 48, 187 p., illus., paper, $4.50. A radiocarbon date of 1527 B.C. was obtained for a layer of oyster shell on Saipan. The four feet of cultural material below the oyster shell must be considerably older.

THE NILE: A General Account of the River and the Utilization of Its Waters—H. E. Hurst—*Constable (Macmillan)*, rev. ed., 331 p., illus., $6.00. This great river is of particular interest to geographers and also to archaeologists, engineers, and hydrologists.

PEABODY MUSEUM OF ARCHAEOLOGY AND ETHNOLOGY NINETIETH REPORT 1955-56—John Otis Brew, director—*Peabody Museum*, 55 p., paper, free upon request direct to publisher, Cambridge, Mass. Reporting progress during the year in a variety of archaeological programs.

PERSONAL PROBLEMS & PSYCHOLOGICAL FRONTIERS: A Cooper Union Forum—Johnson E. Fairchild, Ed.—*Sheridan House*, 320 p., $4.00. Outstanding individuals from various fields delivered these lectures in the Cooper Union series for Adult Education.

PREHISTORIC MAN—A. Leroi-Gourhan, Translated from French by Wade Baskin—*Philosophical Library*, 121 p., illus., $4.75. Telling what archaeologists have been able to piece together about the lives of our most remote ancestors.

THE PRESIDENT'S COMMITTEE ON EDUCATION BEYOND THE HIGH SCHOOL. SECOND REPORT TO THE PRESIDENT—Devereux C. Josephs, Chairman—*Govt. Printing Office*, 108 p., paper, 55 cents. Addressed to the public, not to educators, this report discusses the need for teachers, need for assistance to students, need for planning of educational opportunities, financing and what the Federal Government can do.

PROSPECTING FOR URANIUM — U. S. Atomic Energy Commission and the U. S. Geological Survey—*Govt. Printing Office*, rev. ed., 217 p., illus., paper, 75 cents. Telling interested persons where to look for uranium, how to prospect for it and how to cash in on any finds.

RECENT PROGRESS IN HORMONE RESEARCH: Volume XIII, Proceedings of the Laurentian Hormone Conference 1956—Gregory Pincus, Ed.—*Academic*, 646 p., illus., $12.80. The hormones function in practically every one of the vital processes that make for the development, growth, maintenance, adaptation and reproduction of living organisms.

ROADSIDE DEVELOPMENT REPORT OF COMMITTEE—Frank H. Brant, Chairman—*Highway Research Board*, 88 p., illus., paper, $2.00. Includes plans for roadside rest areas every 40 miles or so, or one hour's normal driving time.

SURGEONS ALL—Harvey Graham, foreword by Oliver St. John Gogarty—*Philosophical Library*, 459 p., illus., $10.00. Tracing the fascinating history of surgery back to the New Stone Age when a Neolithic surgeon trepanned a sick man's skull. This is the oldest operation of which any evidence remains.

Artifact # 341-29-493

Located in Artifact Room

Artifact # 341-29-493

Located in Artifact Room

1 - 14 OCTOBER 1957 SIGHTINGS

DATE	LOCATION	OBSERVER	EVALUATION
Oct	United States	Multi	Astro (COMET ENCKE)
Oct	Los Angeles, California	[redacted] (PHYSICAL S) (*)	Other (HOAX)
Oct	Dolinsk, USSR	Civilian	Insufficient Data
1	SE Lompoc, California	[redacted]	Astro (VENUS)
3	Green Bay, Wisconsin	[redacted]	Insufficient Data
4	Dayton, Ohio	[redacted]	Balloon
4	Dayton, Ohio	[redacted]	Astro (VENUS)
5	Dayton, Ohio	[redacted]	Other (GROUND LIGHTS)
5	San Antonio, Texas	[redacted]	Aircraft
5-7	Toucumen, Panama Canal Zone	[redacted]	Astro (VENUS)
6	North Bend, Oregon	[redacted]	Astro (METEOR)
6	Des Moines, Iowa	[redacted]	Aircraft
6	Kremmling, Colorado	[redacted]	Balloon
7	Overland, Missouri	[redacted]	Aircraft
8	Presque Isle, Maine	[redacted]	Aircraft
8	Elmendorf, Alaska	Military (PHOTO)	Satellite (SPUTNIK I)
8	Seattle, Washington	Military	UNIDENTIFIED
8	San Antonio, Texas	Military	Aircraft
8	Bremerton, Washington	[redacted]	Aircraft
8	Lakehurst, New Jersey	Military	Astro (METEOR)
9	Garden City, New York	[redacted]	Balloon
9	New London, Nre Britain, Connecticut	Mulit	Insufficient Data
9	Parkersburg, West Virginia	Military	Aircraft
9	Long Island, New York	[redacted]	Astro (METEOR)
9	Salisbury, North Carolina	Military	Astro (METEOR)
10	Western U.S., Utah, Wyoming	Multi	Astro (METEOR)
11	Levittown, New York	[redacted]	Astro (METEOR)
12	Philadelphia, Pennsylvania	[redacted] PHOTOS	Aircraft
12	Martha's Vinyard, Massachusetts	Multi ([redacted])	Balloon
13	New York, New York	[redacted]	Aircraft
13	Great Falls, Virginia	[redacted]	Insufficient Data
13	Indian Trails, Michigan	[redacted]	Astro (METEOR)
14	Eugene, Oregon	Montgomery	Astro (METEOR)
14	Iran	American Counsul	Insufficient Data
14	Fairmont, West Virginia	[redacted]	Insufficient Data
14	New Platz, New York	[redacted]	Insufficient Data
14	Stewart AFB, Tennessee (CASE MISSING)	Military	Insufficient Data
14	Camp Hill, Alabama	[redacted]	Astro (METEOR)
14	San Bernardino, California	[redacted]	Astro (MOON)
14	San Diego, California	Air (VIS & RADAR)	1. Astro 2. Radar (WX)

ADDITIONAL REPORTED SIGHTINGS (NOT CASES)

DATE	LOCATION	SOURCE	EVALUATION
Oct	Universe	Science News Ltr	
Oct	Branford, Connecticut	[redacted] (Ltr, 164)	
4	Newport, Oregon	Newsclipping	
4	Japan	Newsclipping	
5	Wooster, Ohio	Newsclipping	
8	Boston Area	Newsclipping	
10	Dayton, Ohio	Newsclipping	
13	Long Island City, New York	Newsclipping	

(*) In following folder