

PROJECT 10073 RECORD

1. DATE - TIME GROUP 30 October 64 30/0600Z		2. LOCATION Beavercreek, Ohio	
3. SOURCE Civilian		10. CONCLUSION MOON DOG	
4. NUMBER OF OBJECTS One			
5. LENGTH OF OBSERVATION 15 Minutes		11. BRIEF SUMMARY AND ANALYSIS Object appearing as a light color of rainbow. Bright night, stars visible. Fuzzy. Stationary, changed in brightness, flashed or flickered. Some fog. Did not observe disappearance. No sound. Did not move in front of or behind anything while under observation. Estimated elevation 30 deg. Unable to determine direction of sighting. COMMENTS: Stationary light like rainbow in view for 15 minutes. Observer did not see light disappear. No direction. Moon just below horizon in East. Paraselenae occurring at 22 deg when the moon is at the horizon. Possible that this rare phenomena of a mock moon was the cause of the report. Moon 0100 30 Oct. Right ascension 10h.29.40. Declination: plus 14: 38.03.	
6. TYPE OF OBSERVATION Ground-Visual			
7. COURSE Stationary			
8. PHOTOS ☐ Yes ☒ No			
9. PHYSICAL EVIDENCE ☐ Yes ☒ No			

DEARBORN OBSERVATORY
NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
25 November 1964

Sergeant David Moody
Foreign Technology Division
Box 9494
Wright-Patterson Air Force Base
Dayton, Ohio

Dear Dave:

Thanks for your letter of November 19. I've looked over the October cases, and I must say that I have never seen a more ordinary or prosaic bunch of cases for a long while. The Beaver Creek sighting is almost certainly what you say it is, and although we don't have proof, I think the moon-dog explanation fits all the limited data we have. I would classify that as possibly moondog, or even more strongly, probably moondog.

Now that you have the Echo schedules, you can be more positive about satellite identification. Incidentally, I have just been invited to teach at Harvard next summer, and so I will be very close to the source of supply of Echo predictions, and I can make sure that they keep flowing.

I would like to get more data on the Brynfield, Massachusetts, 28 October, 64 case. It might be worth a phone call on my part, but in the meantime, wouldn't it be a good idea to send her a questionnaire form, just to see what happens.

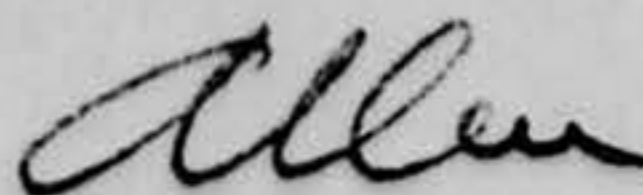
The same thing goes for the Fort Jones-Mt. Shasta, 30 October 64 case. This observer might turn out to be reliable. After all, aren't all pilots reliable??

Also, could I see the original data for the 1 October, Hillsboro, Oregon case, the 23 October, Oakwood, Ohio case, and the 24 October, Atlantic case, or have you classified these as super-secret?

What about Major Q's plans for coming to Chicago in December? My classes are over on Friday the 11th so I will be free the week of the 14th with the exception of one short exam I have to give. If you and the Major can't make it to Chicago, then it might be a good time for me to make a visit since I have not been able to make one this month. On the other hand, there is no point to making the visit unless there is some business to attend to, but there usually is. I may be dropping by Columbus the next time I come to Dayton to check a few things with the Dean there.

In the meantime, have a very good Thanksgiving, and, as the Major always says, "keep in touch."

Cordially,



Allen

JAH:krf

RECEIVED
NORTHWESTERN UNIVERSITY
CHICAGO, ILL.

30 OCT
FW/AFD

U.S. AIR FORCE TECHNICAL INFORMATION

This questionnaire 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. 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. When did you see the object?

30 OCT 64
Day Month Year

2. Time of day: 0100
Hour Minutes

(Circle One): (A.M.) or P.M.

3. Time Zone:

(Circle One): (a.) Eastern
b. Central
c. Mountain
d. Pacific
e. Other _____

(Circle One): a. Daylight Saving
(b.) Standard

4. Where were you when you saw the object?

[REDACTED] ROCKY CREEK OKLA
Nearest Postal Address City or Town State or County

5. How long was object in sight? (Total Duration)

- 15 00
Hours Minutes Seconds

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

5.1 How was time in sight determined? GU-SS

5.2 Was object in sight continuously? Yes X No _____

6. What was the condition of the sky?

DAY
a. Bright
b. Cloudy

NIGHT
(a.) Bright
b. Cloudy

7. IF you saw the object during DAYLIGHT, where was the SUN located as you looked at the object?

(Circle One): a. In front of you N/A d. To your left
b. In back of you e. Overhead
c. To your right f. Don't remember

8. IF you saw the object at NIGHT, what did you notice concerning the STARS and MOON?

8.1 STARS (Circle One):

- a. None
- ☒ b. A few
- c. Many
- d. Don't remember

8.2 MOON (Circle One):

- a. Bright moonlight
- b. Dull moonlight
- c. No moonlight - pitch dark
- ☒ d. Don't remember

9. What were the weather conditions at the time you saw the object?

CLOUDS (Circle One):

- a. Clear sky
- b. Hazy
- c. Scattered clouds
- d. Thick or heavy clouds

doesn't know

WEATHER (Circle One):

- a. Dry
- ☒ b. Fog, mist, or light rain
- c. Moderate or heavy rain
- d. Snow
- e. Don't remember

10. The object appeared: (Circle One):

- a. Solid
- b. Transparent
- c. Vapor
- ☒ d. As a light
- e. Don't remember

11. If it appeared as a light, was it brighter than the brightest stars? (Circle One):

- ☒ a. Brighter
- b. Dimmer
- c. About the same
- d. Don't know

11.1 Compare brightness to some common object:

nothing like it

12. 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 _____

13. Did the object:

(Circle One for each question)

- a. Appear to stand still at any time?
- b. Suddenly speed up and rush away at any time?
- c. Break up into parts or explode?
- d. Give off smoke?
- e. Change brightness?
- f. Change shape?
- g. Flash or flicker?
- h. Disappear and reappear?

Yes	No	Don't know
Yes	☒ No	Don't know
Yes	☒ No	Don't know
Yes	☒ No	Don't know
☒ Yes	☒ No	Don't know
Yes	☒ No	Don't know
☒ Yes	☒ No	Don't know
Yes	☒ No	Don't know

14. Did the object disappear while you were watching it? If so, how?

No

15. Did the object move behind something at any time, particularly a cloud?

(Circle One): Yes ☒ No Don't Know. IF you answered YES, then tell what it moved behind: _____

16. Did the object move in front of something at any time, particularly a cloud?

(Circle One): Yes ☒ No Don't Know. IF you answered YES, then tell what in front of: _____

17. Tell in a few words the following things about the object:

a. Sound None

b. Color more like a rainbow

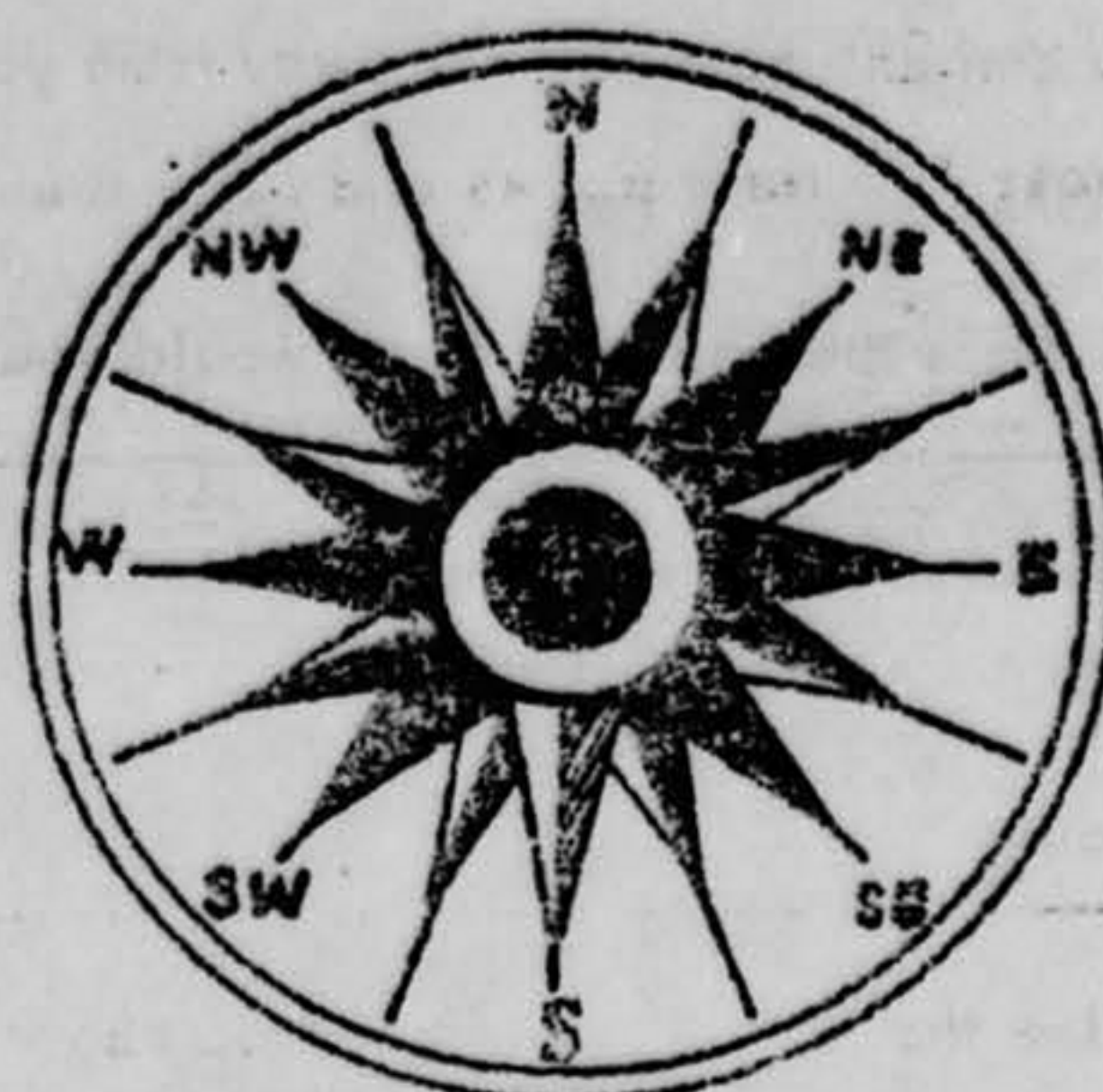
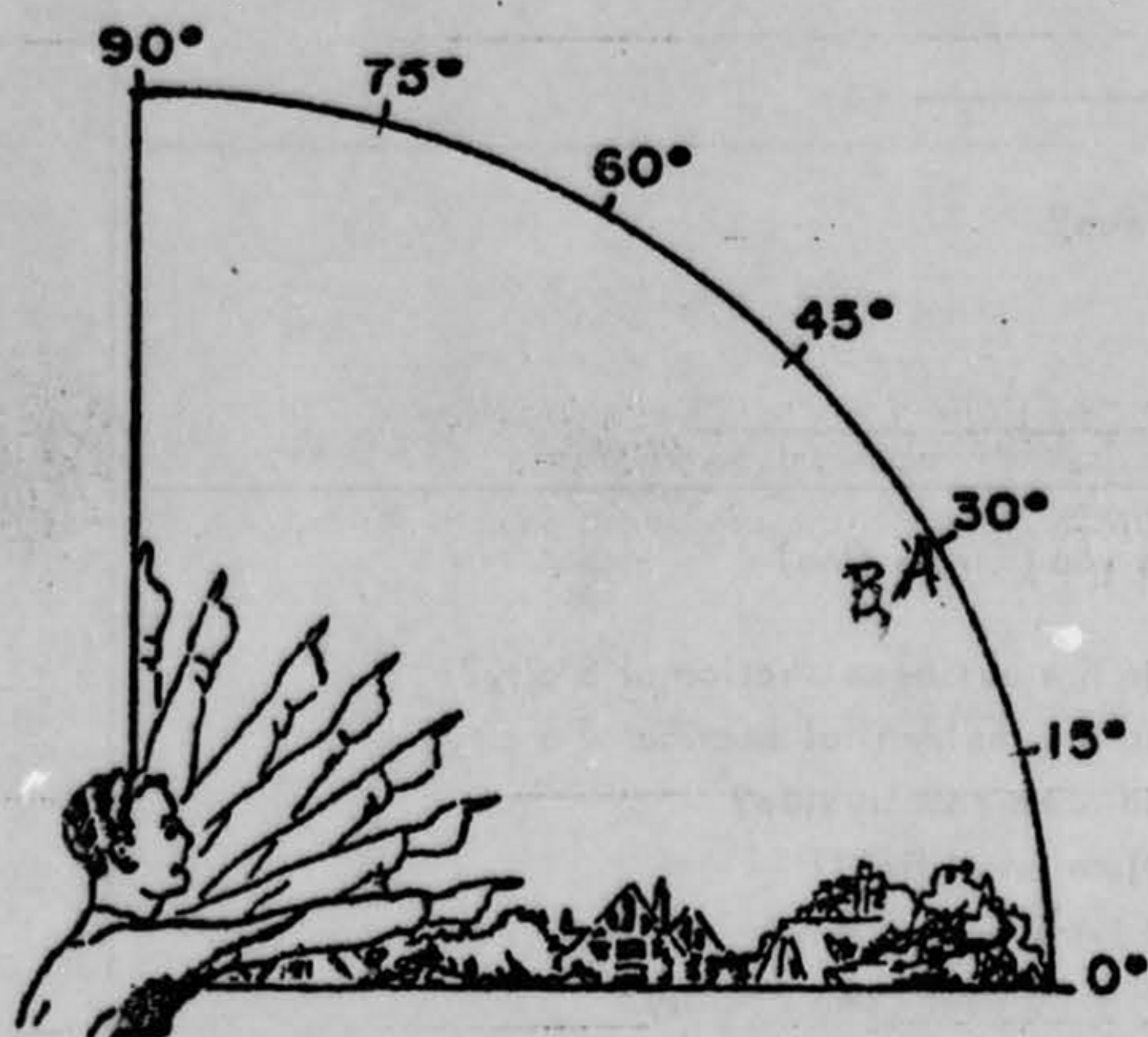
18. We wish to know the angular size. Hold a match stick at arm's length in line with a known object and note how much of the object is covered by the head of the match. If you had performed this experiment at the time of the sighting, how much of the object would have been covered by the match head?

unable To determine

19. 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.

N/A

27. In the following sketch, imagine that you are at the point shown. Place an "A" on the curved line to show how high the object was above the horizon (skyline) when you *first* saw it. Place a "B" on the same curved line to show how high the object was above the horizon (skyline) when you *last* saw it. Place an "A" on the compass when you *first* saw it. Place a "B" on the compass where you *last* saw the object.



unable To orient

28. 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.

29. IF there was MORE THAN ONE object, then how many were there? _____

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

N/A

20. 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? _____

21. 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 away would you say it was? _____

22. Where were you located when you saw the object?
(Circle One):

- ☒ a. Inside a building
- b. In a car
- c. Outdoors
- d. In an airplane (type) _____
- e. At sea
- f. Other _____

23. Were you (Circle One)

- a. In the business section of a city?
- ☒ b. In the residential section of a city?
- c. In open countryside?
- d. Near an airfield?
- e. Flying over a city?
- f. Flying over open country?
- g. Other _____

24. IF you were MOVING IN AN AUTOMOBILE or other vehicle at the time, then complete the following questions:

24.1 What direction were you moving? (Circle One)

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

24.2 How fast were you moving? _____ miles per hour.

24.3 Did you stop at any time while you were looking at the object?

(Circle One) Yes ☒ No

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

- | | | | | | |
|-----------------|--------------------------------------|-------------------------------------|---------------|-------|-------------------------------------|
| a. Eyeglasses | ☒ Yes | No | e. Binoculars | Yes | ☒ No |
| b. Sun glasses | Yes | ☒ No | f. Telescope | Yes | ☒ No |
| c. Windshield | Yes | ☒ No | g. Theodolite | Yes | ☒ No |
| d. Window glass | ☒ Yes | No | h. Other | _____ | |

26. In order that you can give as clear a picture as possible of what you saw, 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.

unable

30. Have you ever seen this, or a similar object before. If so give date or dates and location.

Never

31. Was anyone else with you at the time you saw the object? (Circle One)

☒ Yes

☐ No

31.1 IF you answered YES, did they see the object too? (Circle One)

☒ Yes

☐ No

31.2 Please list their names and addresses:

[REDACTED]
[REDACTED] Rd.
Beavercreek, Ohio

32. Please give the following information about yourself:

NAME

[REDACTED]
Last Name

[REDACTED]
First Name

[REDACTED]
Middle Name

ADDRESS

[REDACTED]
Street

[REDACTED]
City

[REDACTED]
Zone

[REDACTED]
State

TELEPHONE NUMBER

[REDACTED]
AGE

30

SEX

M

Indicate any additional information about yourself, including any special experience, which might be pertinent.

have seen satellites

33. When and to whom did you report that you had seen the object?

30

Day

OCT

Month

64

Year

FTD

34. Date you completed this questionnaire:

30 OCT 64
Day Month Year

35. Information which you feel pertinent and which is not adequately covered in the specific points of the questionnaire or a narrative explanation of your sighting.

None

the screen itself, or by other thermometers placed in the screen. Errors of parallax in reading a rain measure are also important, and they occur whenever an observer places his eye either above or below the level of the water surface in the rain measure.

Parameter.—A quantity related to one or more variables in such a way that it remains constant for any specified set of values of the variable or variables, e.g. in STATISTICS, MEAN, STANDARD DEVIATION.

Paranthelia.—A mock sun at the same elevation as the sun and in an azimuth greater than 90° from the sun may be called a paranthelion. White paranthelia at 120° from the sun are fairly common. Paranthelia at about 140° from the sun have been recorded on rare occasions.

Paraselenae or mock moons, analogous to mock suns, have been observed occasionally. No measurements are available but it may be presumed that mock moons will be at the same elevation as the moon and that the angular distance will vary like that between sun and mock sun, being 22° when the luminary is on the horizon and 25° when the luminary is at an elevation of 30° .

Parhelia.—Images of the sun, coloured or white. The mock suns seen most frequently are at the same elevation as the sun and coloured with red nearest the sun. When the sun is near the horizon the distance is equal to the radius of the ordinary halo, i.e. 22° . When the sun is higher the distance is greater so that if halo and mock sun are both seen the mock sun is outside the halo. White mock suns are to be seen in the azimuth 120° from the sun. Bright patches seen at the top and bottom of the halo of 22° at the points of contact of the tangent arcs, are sometimes referred to as mock suns.

Pentad.—A period of five days. Five-day means are frequently used in meteorological work, as five days form an exact sub division ($\frac{1}{4}$ rd) of the ordinary year, an advantage not possessed by the week.

Percolation.—The downward passage of surface water through the soil. Part of the rain which falls on the land surface re-evaporates, part runs off into streams and rivers to the sea, while part percolates through the soil. Measurements of the amount of rain water which percolates through certain depths of soil have been published in the annual volumes of *British Rainfall*. Usually the gauge consists of a cubic yard of natural earth inserted in a metal container and sunk in the hole formed by removing this earth. The rain water which percolates through is drained off and measured daily at 9h., access to the receiver being obtained by means of a trap door at the side of the gauge. The results are usually published as a depth in hundredths or thousandths of an inch of water. See EVAPORATION.

Periodical.—Recurring at regular intervals, like the position of the bob of a simple pendulum. The most obvious periodical variations in the atmosphere are associated with the alternation of night and day, and the alternation of winter and summer, corresponding respectively with the day and the year. Strictly speaking a variation is not to be called periodical unless the interval between successive maxima and successive minima is constant, and so the sunspot variation should not strictly be described as periodical, since the interval between successive maxima or minima varies from about 8 years to about 16 years.

Periodicity.—A periodical variation. A vast amount of labour has been devoted by meteorologists to the search for periodical variations other than those whose periods are the day or the year, by the use, at some stage or other of the work, of the methods of HARMONIC ANALYSIS. It is thus implied that a periodicity as normally treated, shall be at least approximately of the nature of a harmonic oscillation, capable of being represented by a simple sine curve. A periodicity requires for its complete determination the length of the period, the amplitude (i.e. half the total range) of the variation, and

the time of occurrence of the n in forecasting, the square of its of the square of the STANDARD D

Periodogram.—A diagram used in investigation of hidden period variations from day to day or usually the existence of any period. Schuster's method of finding the trial periods T , and evaluating the is drawn with R^2 as ordinate and obtained shows a number of peaks of the curve. The values of T to be the most likely periods. R^2 and T rather than R and T , of R and T . If the original n with standard deviation σ , the $4\sigma^2/(n-1)$. Schuster has shown of R^2 should exceed n times $4\sigma^2$ used to test the reality of periods requires considerable care.

Persistence.—In meteorology same type to continue over a long persistent anticyclone. E. V. M the persistence of wet or fine weather through which similar conditions after one day without rain, the probability is .57, but after ten successive Similarly, after one rain-day, the ten successive rain-days it is .70.

Personal Equation.—An experiment might or should be applied to consequence of an unconscious error. The tendency is usually negative a given instrument. A familiar The observer is directed to hold with the eye, but it is difficult to is correctly secured. Some observations in readings which are too low, or

Phenology.—The study of the All natural phenomena are included migration, and so on, but often the time at which certain trees appear each year, and to the dates of insects.

A phenological report is published by the Royal Meteorological Society, in which the phenological all over the British Isles are brought year under review.

A "bioclimatic law" has been United States Weather Bureau. variations made in the eastern United States regression (according to season) rate of four days for each degree 400 ft. of altitude. The law applies to Isles in so far as changes of latitude

* "The persistence of wet and dry p. 153.