

## PROJECT 10073 RECORD CARD

1. DATE <b>30 November 1962</b>	2. LOCATION <b>Muskegon, Michigan</b>	12. CONCLUSIONS <input type="checkbox"/> Was Balloon <input type="checkbox"/> Probably Balloon <input type="checkbox"/> Possibly Balloon <input checked="" type="checkbox"/> Was Aircraft <input type="checkbox"/> Probably Aircraft <input type="checkbox"/> Possibly Aircraft <input type="checkbox"/> Was Astronomical <input type="checkbox"/> Probably Astronomical <input type="checkbox"/> Possibly Astronomical <input type="checkbox"/> Other _____ <input type="checkbox"/> Insufficient Data for Evaluation <input type="checkbox"/> Unknown
3. DATE-TIME GROUP Local <b>1930</b> GMT <b>01/0030Z December</b>	4. TYPE OF OBSERVATION <input checked="" type="checkbox"/> Ground-Visual <input type="checkbox"/> Ground-Radar <input type="checkbox"/> Air-Visual <input type="checkbox"/> Air-Intercept Radar	
5. PHOTOS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. SOURCE <b>Civilian</b>	
7. LENGTH OF OBSERVATION <b>6 minutes</b>	8. NUMBER OF OBJECTS <b>one</b>	9. COURSE <b>not reported</b>
10. BRIEF SUMMARY OF SIGHTING <b>Bright night. Object that looked like star and moon in sight for 6 minutes. Report indicated that object did not disappear. Solid, sharply outlined. White color. Faint hum accompanied flight. Initial observation in SW at 45 dgr elevation in east. Changed course during flight.</b>		11. COMMENTS <b>Description, duration and flight consistent with a/c analysis.</b>



# 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 Nov. 1962  
Day Month Year

2. Time of day: 7:30

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]  
Nearest Postal Address

Muskegon Hts.  
City or Town

Michigan  
State or Country

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

Hours 6 Minutes Seconds

a. Certain  
b. Fairly certain

c. Not very sure  
d. Just a guess

5.1 How was time in sight determined? estimation

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  
b. In back of you  
c. To your right

d. To your left  
e. Overhead  
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

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:

Like a star.

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?           | <input checked="" type="radio"/> Yes | <input type="radio"/> No            | Don't know |
| b. Suddenly speed up and rush away at any time? | <input type="radio"/> Yes            | <input checked="" type="radio"/> No | Don't know |
| c. Break up into parts or explode?              | <input type="radio"/> Yes            | <input checked="" type="radio"/> No | Don't know |
| d. Give off smoke?                              | <input type="radio"/> Yes            | <input checked="" type="radio"/> No | Don't know |
| e. Change brightness?                           | <input type="radio"/> Yes            | <input checked="" type="radio"/> No | Don't know |
| f. Change shape?                                | <input type="radio"/> Yes            | <input checked="" type="radio"/> No | Don't know |
| g. Flash or flicker?                            | <input checked="" type="radio"/> Yes | <input type="radio"/> No            | Don't know |
| h. Disappear and reappear?                      | <input type="radio"/> Yes            | <input checked="" type="radio"/> No | Don't know |



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

*It did not disappear.*

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 *Like a faint hum*

b. Color *White*

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?

*Half of the object was covered.*

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.





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?

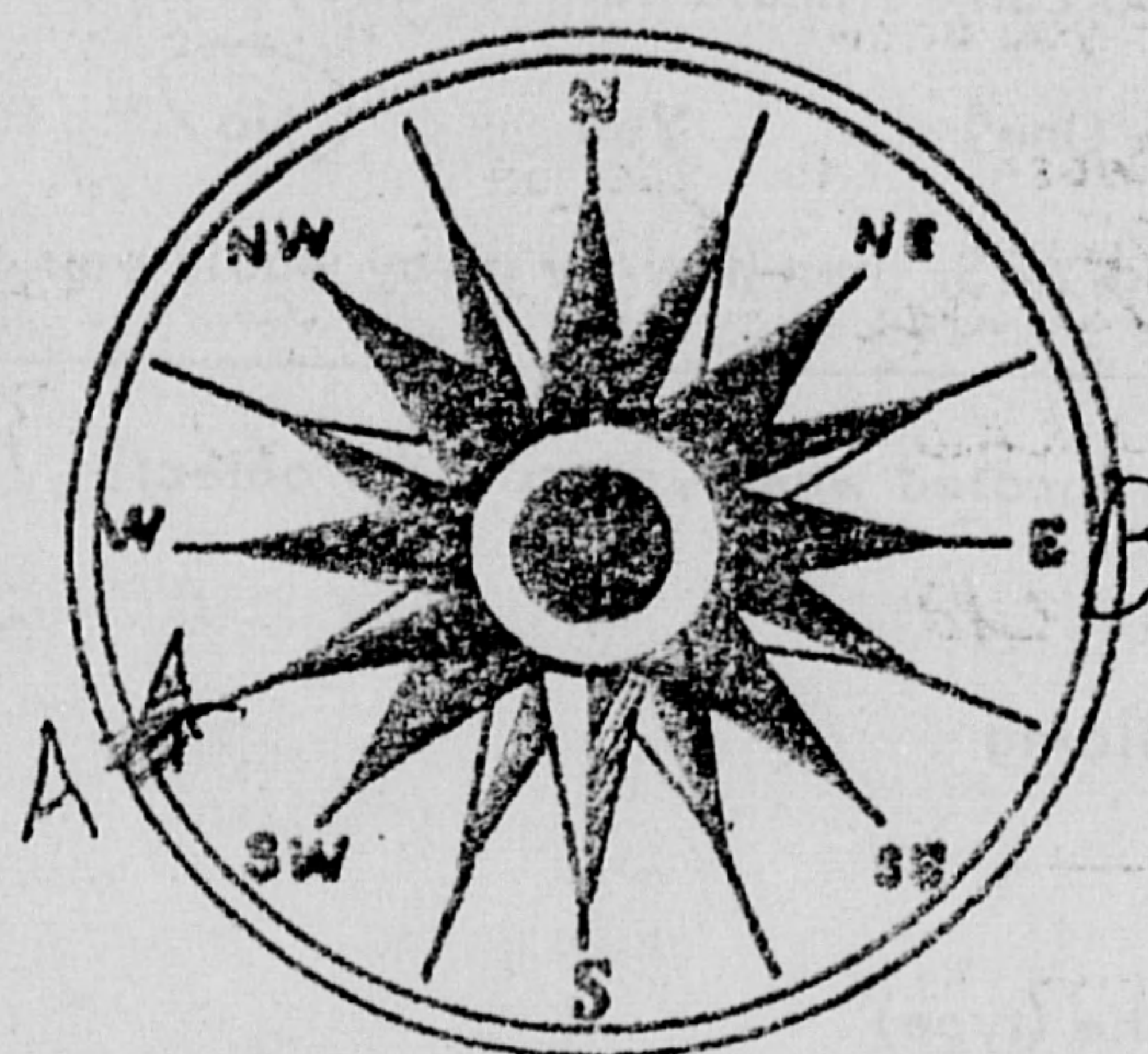
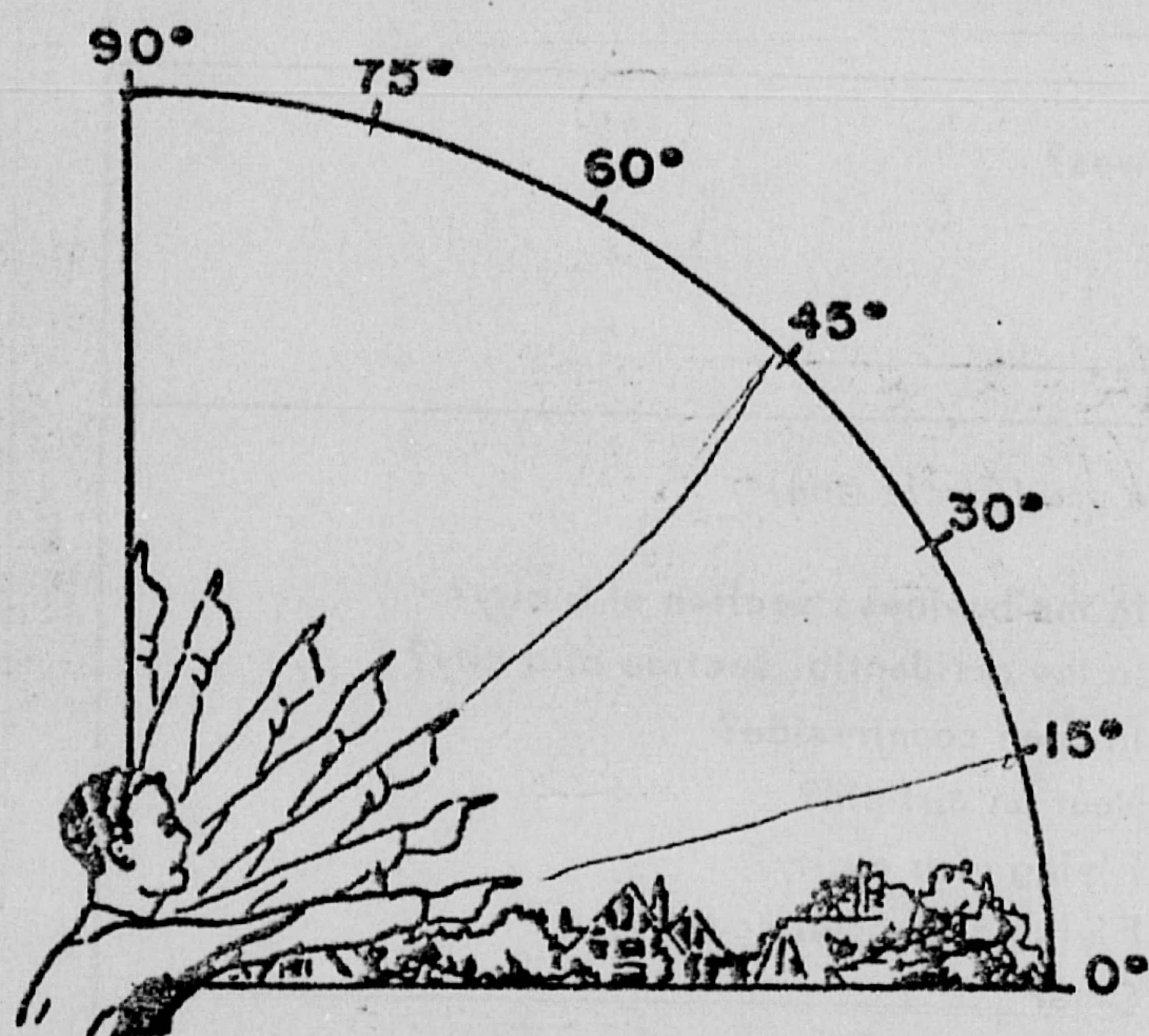
- |                 |     |    |                |                                      |    |
|-----------------|-----|----|----------------|--------------------------------------|----|
| a. Eyeglasses   | Yes | No | e. Binoculars  | Yes                                  | No |
| b. Sun glasses  | Yes | No | f. Telescope   | <input checked="" type="radio"/> 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.

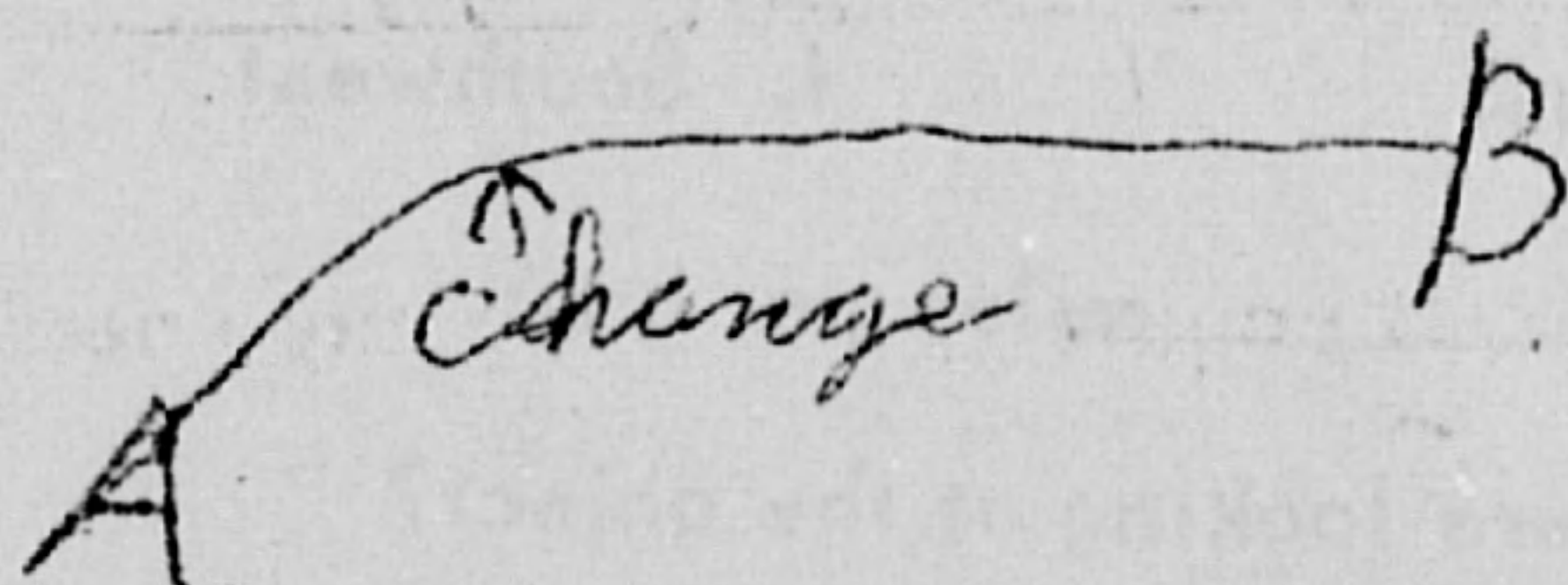
*It looked like a star and the moon.*



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.



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.



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

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]  
[REDACTED]

32. Please give the following information about yourself:

NAME

Last Name

First Name

Middle Name

ADDRESS

Street

City

Zone

State

TELEPHONE NUMBER

AGE

SEX

male

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

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

11

Day

April

Month

1963

Year

To U.S. Air Force



34. Date you completed this questionnaire:

15 April 1963  
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.



# IE FIELDS

## MEDICINE

### Industrial Noise Not Cause of Illness

► THE WIDESPREAD belief that sustained industrial noise can cause high blood pressure, diabetes or any other systemic disease, or can bring about emotional illness, is termed "strictly nonsense" by Aram Glorig, Los Angeles, director of research for the subcommittee on noise of the American Academy of Ophthalmology and Otolaryngology.

Dr. Glorig finds there "is no authoritative evidence that noise produces any problem with respect to health except hearing loss."

He pointed out, however, that he was referring only to industrial noise, and said the effects of the extreme high energy noise of jet planes have not been studied.

Dr. Glorig said hearing loss depended upon the intensity and frequency of the noise. He noted that there is a normal hearing loss with aging of about 15 decibels, which is equivalent to the amount of hearing that can be lost without serious impairment of the ability to hear speech.

• Science News Letter, 82:273 October 27, 1962

## RADIOLOGY

### Need More Studies on Secondary Sex Organs

► THE AMOUNT of sperm, fats and testosterone, the male sex hormone, present in the male secondary sex organs appears to be related to the amount of radioactive material which these organs will absorb.

Dr. Paul L. Risley of the University of Oregon reported his findings at the International Symposium on the Effects of Ionizing Radiation on the Reproductive System held at Colorado State University, Fort Collins.

Scientists have concentrated their research on the effects of radiation on the testes, Dr. Risley observed, but have done little work on the effects to the relatively radiation-resistant secondary sex organs, such as the seminal vesicles and the prostate gland.

Dr. Risley observed in his studies on the accessory sex organs, using mainly isotope tracers of radioactive phosphorus, that young rats treated with testosterone show a less marked uptake of the tracer in these organs than do normal adult and castrated males. These results could be influenced by the fact that the hormone was administered in a sesame oil base, he pointed out.

He found that there were different radioactive phosphorus uptake levels at different places in the sex organ system. Higher uptake was associated with places of high metabolic activity and lower uptake was found in areas of lower metabolic activity.

In another study, he observed that the absence of sperm in immature and castrated animals was associated with a larger uptake

than was seen in normal adult animals with large quantities of sperm. As yet, no explanation has been found for this.

In addition to his specific findings, Dr. Risley believes that the research shows "that radioactivity measurements of injected radioactive phosphorus can be used as a fairly sensitive method to measure altered general metabolic changes in the male accessory sex organs in response to hormonal factors, vitamin and nutritive deficiencies, pharmaceutical agents, ionizing radiations, or other physiological effects."

• Science News Letter, 82:273 October 27, 1962

## SPACE

### Space Radiation More Than Previous Estimate

► THE RANGER III lunar probe has shown that the intensity of gamma rays in interplanetary space is probably as much as ten times higher than anticipated.

These findings were reported by Dr. James R. Arnold, the University of California at San Diego; Drs. Ernest C. Anderson and Marvin A. Van Dilla, the Los Alamos Scientific Laboratories, and Dr. Albert E. Metzger of the California Institute of Technology's Jet Propulsion Laboratory. The Jet Propulsion Laboratory is directing the Ranger project for NASA.

Although the gamma ray flux measured by Ranger III was found to be roughly equal to that from primary cosmic rays, its significance is not great enough to require any changes in the design of radiation shielding for manned spacecraft.

Additional data from the Mariner II probe now hurtling toward Venus has indicated that the charged particles radiate as a continuous "solar wind" from the surface of the sun into interplanetary space. The wind has peaks of activity and quiet periods, varying with events on the sun, though the relationship itself is not known.

• Science News Letter, 82:273 October 27, 1962

## PHYSIOLOGY

### Weightlessness Does Not Affect Body Functions

► NINE HOURS of weightlessness produced absolutely no variation in Astronaut Walter Schirra's physiological responses.

The astronaut said there was no undue retention of liquid body waste such as experienced by previous astronauts during space flight. Elimination proceeded normally rather than consciously, Astronaut Schirra emphasized.

Astronaut John H. Glenn had reported that he had felt no need to void during weightlessness and had done so prior to re-entry only because he thought it was advisable.

Space medical experts have been concerned that body functioning might show variations such as too long retention of wastes during weightlessness. For long periods of flight, more than a few days, this could be hazardous and result in internal infection.

• Science News Letter, 82:273 October 27, 1962

## CHEMISTRY

### Fertilizer By-Product From Ocean Water

► A NEW SOURCE of fertilizer will be minerals extracted when sea water is converted to a fresh, drinkable water supply.

This is the prediction of Dr. Murrell Salutsky, supervisor of agricultural chemical research at W. R. Grace and Company, Clarksville, Md.

It costs almost one dollar per thousand gallons to produce fresh water from the sea. This could be decreased by the value of mineral compounds which now handicap the conversion process. Half again as much water will be needed in 1975 as in 1960.

The compound, magnesium ammonium phosphate, precipitated from sea water, is valuable as a long-lasting fertilizer because it contains nitrogen and magnesium (essential for plant chlorophyll) and has a low solubility that permits efficient consumption by plants. The same fertilizer is also produced commercially from raw materials.

Other markets for sea residues may come from chemical industries which need potassium, chlorine, caustic soda and metals. The only chemicals that are now obtained directly from the sea are salt, magnesia and bromine.

Dr. Salutsky is discussing these new advances with local sections of the American Chemical Society.

• Science News Letter, 82:273 October 27, 1962

## METEOROLOGY

### Electricity in Ice Crystals Causes Lightning

► LIGHTNING can be blamed on the electricity in tiny ice crystals, water drops and hailstones, Dr. B. J. Mason, University of London physicist, said in Endeavour, 21:156, 1962.

In wind tunnel experiments, ice crystals were blown against a single hailstone at speeds from approximately two to 60 miles an hour, which are the same as air currents in clouds. Ice crystals of lower temperatures took on positive charges, leaving the hailstone negatively charged. The amount of charge was dependent on the temperature difference between the crystals and hailstone.

Supercooled water droplets were also blown through the tunnel. They accumulated, frozen, on the hailstone surface.

During the freezing process, the droplets ejected positively charged particles. Electrification of clouds is believed to follow the same pattern. Positive charges migrate to the colder particles in the cloud, negative charges to the slightly warmer ones.

Clouds are believed to have three sections, a lower one of water drops, a middle mixture of ice and supercooled water droplets, and an upper layer of ice. The negative charge is concentrated in the lower levels and most of the positive charge is found in the cooler upper levels.

• Science News Letter, 82:273 October 27, 1962



## ASTRONOMY

# Jupiter, Saturn Still Visible

Venus shifts from the evening to the morning sky and Jupiter, except for the moon, is the brightest object in the November evening sky, James Stokley reports.

➤ **ALTHOUGH** the planet Venus during November shifts from the evening to the morning sky, Jupiter and Saturn appear all month during the evening and Mars rises before midnight.

Jupiter and Saturn, along with the surrounding stars, are shown on the accompanying maps. These depict the sky as it looks about 10 o'clock, your own kind of standard time, at the beginning of November, an hour earlier in the middle of the month and two hours earlier as it comes to an end.

Except for the moon, Jupiter is the brightest object during the evening, with astronomical magnitude of minus 2.1. It is in the southwest, in the constellation of Aquarius, the water carrier, for the map times. Earlier in the evening, about the first of the month, the star group and the planet will be directly south. Similarly, the whole sky will then be shifted farther toward the east. Jupiter sets about 1:00 a.m. at the first of November, and about midnight at mid-month.

## Saturn Visible

Saturn is in the constellation of Capricornus, the horned goat, which is lower and farther west than Aquarius. This planet sets about 10:30 Nov. 1 and 9:30 on the 15th. Thus, on the map, it is shown close to the horizon with its light dimmed on account of the greater thickness of atmosphere that it must penetrate.

At the beginning of November, Venus sets less than half an hour after the sun, so it will be difficult to locate. On the 12th it reaches inferior conjunction, when it moves between sun and earth. Thereafter it will be to the west of the sun, coming up before sunrise. By the end of November it will be conspicuous in the early morning sky, rising more than two hours before sunrise.

Mars comes up in the east about 11:00 p.m. on the first, 10:30 on the 15th and 10:00 on the 30th. At the same time it is increasing in brightness, from magnitude 0.7 to 0.3. This is because the planet is rapidly approaching us. Its distance, at the beginning of November, is about 116 million miles. On the 15th it is about ten million miles closer. When the month ends, it will be a little less than 95 million miles away, only a little more than the sun's distance. (The closest approach, for this visit, will come next Feb. 3. Its distance will then be 62.4 million miles.)

Among the stars of November evenings, the brightest is Vega, in Lyra, the lyre, over in the northwest. Above it is Cygnus, the swan, with first magnitude Deneb; to the left (shown on the map of the southern

half of the sky) is Altair in Aquila, the eagle.

In the northeast is Capella, in Auriga, the charioteer. To the right (southern map) is Aldebaran, in Taurus, the bull. This star is distinctly red in color. And below Taurus, Orion, the warrior, is just coming into view, with two first magnitude stars: Betelgeuse and Rigel. Toward the south, below and a little farther east than Jupiter, stands Fomalhaut. This star is part of the southern fish, Piscis Austrinus.

How far can a person see with the naked eye?

Ask someone this question. Perhaps he will think of the view of some distant state from the top of a high mountain and answer "a hundred miles," or something of that order.

A more correct answer, however, is fifteen quintillion miles—that is, 15 followed by 18 ciphers!

And November evenings afford the best opportunity to look so far, for the object at that distance is high overhead. It is the galaxy in the constellation of Andromeda, often designated as M 31, its number in the catalogue of such objects compiled by a

French astronomer named Charles Messier in 1781.

Because Andromeda, pictured as the chained princess, is directly overhead for the map times, it is shown partly on the northern chart and partly on the southern. The special map, Fig. 1 (p. 278), shows this part of the sky together.

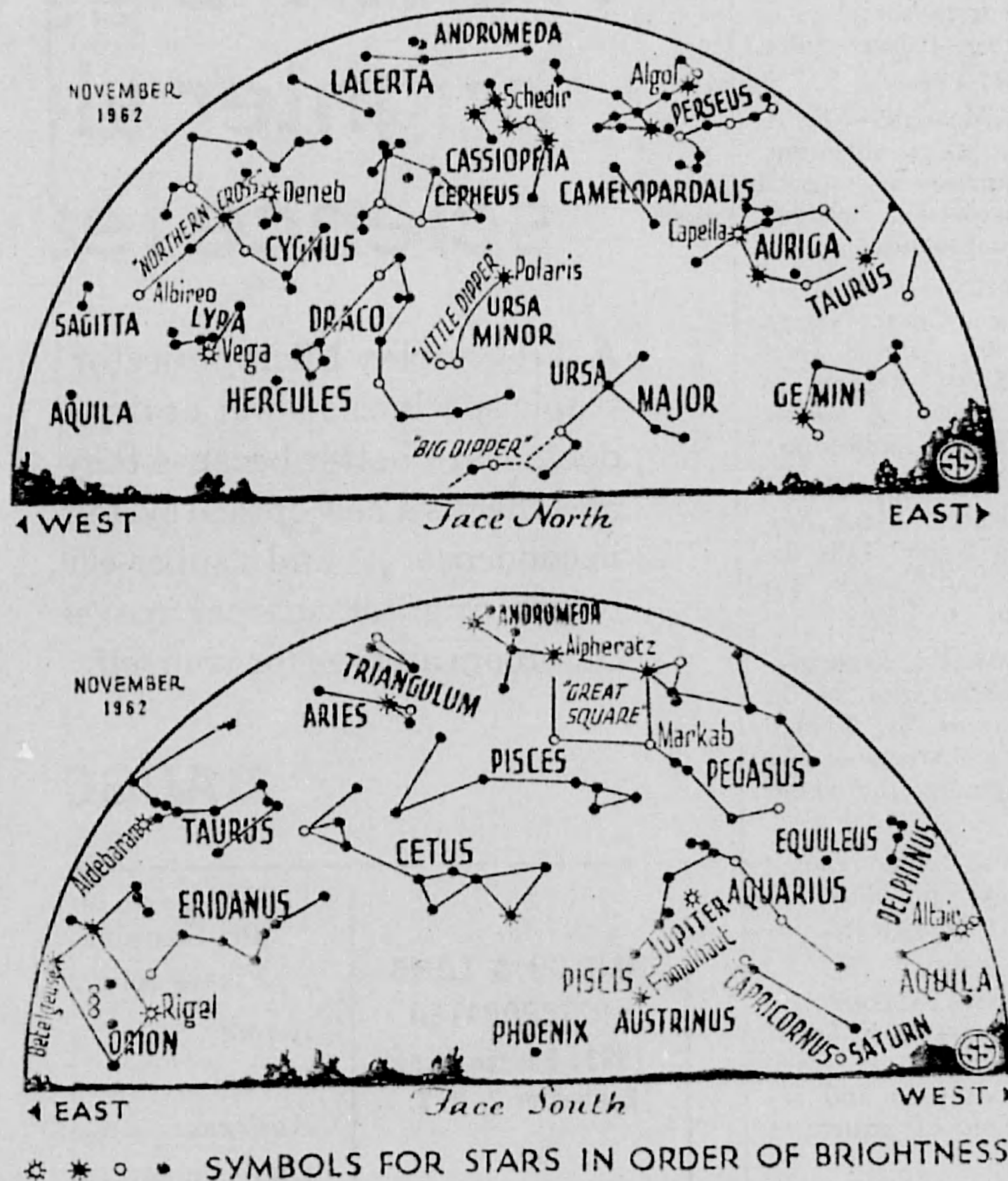
## Great Square of Pegasus

Look first for the constellation of Pegasus, the winged horse, high in the southwest. There you can see four stars, arranged in a square, generally known as "the great square in Pegasus." But actually the star in the upper left-hand corner, Alpheratz (sometimes called Sirrah), is not in Pegasus at all. It is part of the next-door constellation of Andromeda. And just to the north of Andromeda is Cassiopeia, who in mythology was Andromeda's mother, the queen. (Cepheus, represented by another constellation nearby, was the king.)

If, from Alpheratz, you look toward the northeast you will come to two other stars about as bright (they are all second magnitude). These are called Mirach and Almak, although the names are seldom used.

Between Alpheratz and Mirach, as between Mirach and Almak, are fainter stars, of the fourth magnitude. And from each of these, as from Mirach, there extend lines of faint stars toward the northwest. Just to

(Continued on p. 278)





**KILL AND OVERKILL: The Strategy of Annihilation**—Ralph E. Lapp—*Basic Bks*, 197 p., \$4.95. Discusses nuclear weapons stockpile, intercontinental missiles, strategy of deterrence and the forces that are accelerating the nuclear arms race.

**KNOW YOUR OWN I.Q.**—H. J. Eysenck—*Penguin*, 192 p., illus., paper, 85¢. Clear explanation of what the intelligence quotient measures and how tests should be evaluated. Includes eight sets of 40 I.Q. problems each, for self-testing, with tables for converting results.

**LAW AND PSYCHIATRY: Cold War or Entente Cordiale**—Sheldon Glueck—*Johns Hopkins Press*, 181 p., \$4.95. Legal scholar analyzes the conflicting claims and complex issues involved in establishing non-responsibility for crime "by reason of insanity" in the courts.

**THE MARS PROJECT**—Wernher von Braun—*Univ. of Ill. Press*, 91 p., diagrams, paper, 95¢. Reprint (1953), based on calculations made in 1948, this study demonstrates the technical feasibility of an expedition to Mars.

**MODERN AMERICANS IN SCIENCE AND TECHNOLOGY**—Edna Yost—*Dodd*, 175 p., photograph, \$3.25. Biographical sketches, from Elmer A. Sperry, originator of the gyroscope, to John P. Hagen, director of the Vanguard project, revealing the interdependence of scientific developments.

**MUSIC, ACOUSTICS & ARCHITECTURE**—Leo L. Beranek—*Wiley*, 586 p., illus., \$15 before Christmas; \$17.50 after. Results of scientific study and analysis of acoustic principles and evaluation and technical description of 54 acoustically outstanding halls in 15 countries.

**THE ORIGIN OF RACES**—Carleton S. Coon—*Knopf*, 745 p., illus., \$10. A detailed history of the evolution of the subspecies or races of man, presenting major research on the factors and forces that made the primate genus, man, evolve from a lesser to a more sapient state.

**THE PALACES OF CRETE**—James Walter Graham—*Princeton Univ. Press*, 269 p., 153 illus., \$7.50. A scholarly recreation from the clues of excavated ruins, of the Minoan palaces, villas and houses in the Late Bronze age.

**PRINCIPLES OF ORGANIC CHEMISTRY**—T. A. Geissman—*Freeman*, 2nd ed., 854 p., diagrams, \$9.75. Presents theoretical aspects as integral part of description of characteristics, behavior and applications of organic compounds.

**REPORT OF THE NATIONAL CHEMICAL LABORATORY 1961**—C. E. H. Bawn, Chmn.—*Dept. of Scientific & Indust. Res. (Brit. Inform. Services)*, 75 p., illus., paper, \$1.10. Reports on British research on the extraction of metals, new materials, corrosion and isotope applications.

**THE SEARCH FOR PLANET X**—Tony Simon, foreword by Clyde W. Tombaugh—*Basic Bks*, 118 p., illus. by Ed Malsberg, \$3.75. Tells the saga of the perseverance and hard work that led to the discovery of Pluto.

**THE STRANGE LIVES OF FAMILIAR INSECTS**—Edwin Way Teale—*Dodd*, 208 p., illus. by Su Zan Swain, photographs by author, \$4. Written to stimulate interest in the peculiarities of living insects, such as the dragonfly, the aphid and the lady bird beetle.

**STRANGE WORLDS UNDER THE MICROSCOPE**—Margaret Cosgrove—*Dodd*, 138 p., illus. by author, \$3.25. At secondary school level, includes experiments.

**STRUCTURE SHIELDING AGAINST FALLOUT RADIATION FROM NUCLEAR WEAPONS**—L. V. Spencer—*NBS (GPO)*, 134 p., illus., paper, 75¢. Monograph summarizes methods used and research data on the penetration of structures by gamma rays.

• Science News Letter, 82:276 October 27, 1962



## NOW! bigger brighter view science learning

A Tri-Simplex Microprojector  
scopically specimens—wet or dry—  
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in condenser... and a super-efficient  
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Address .....  
City .....



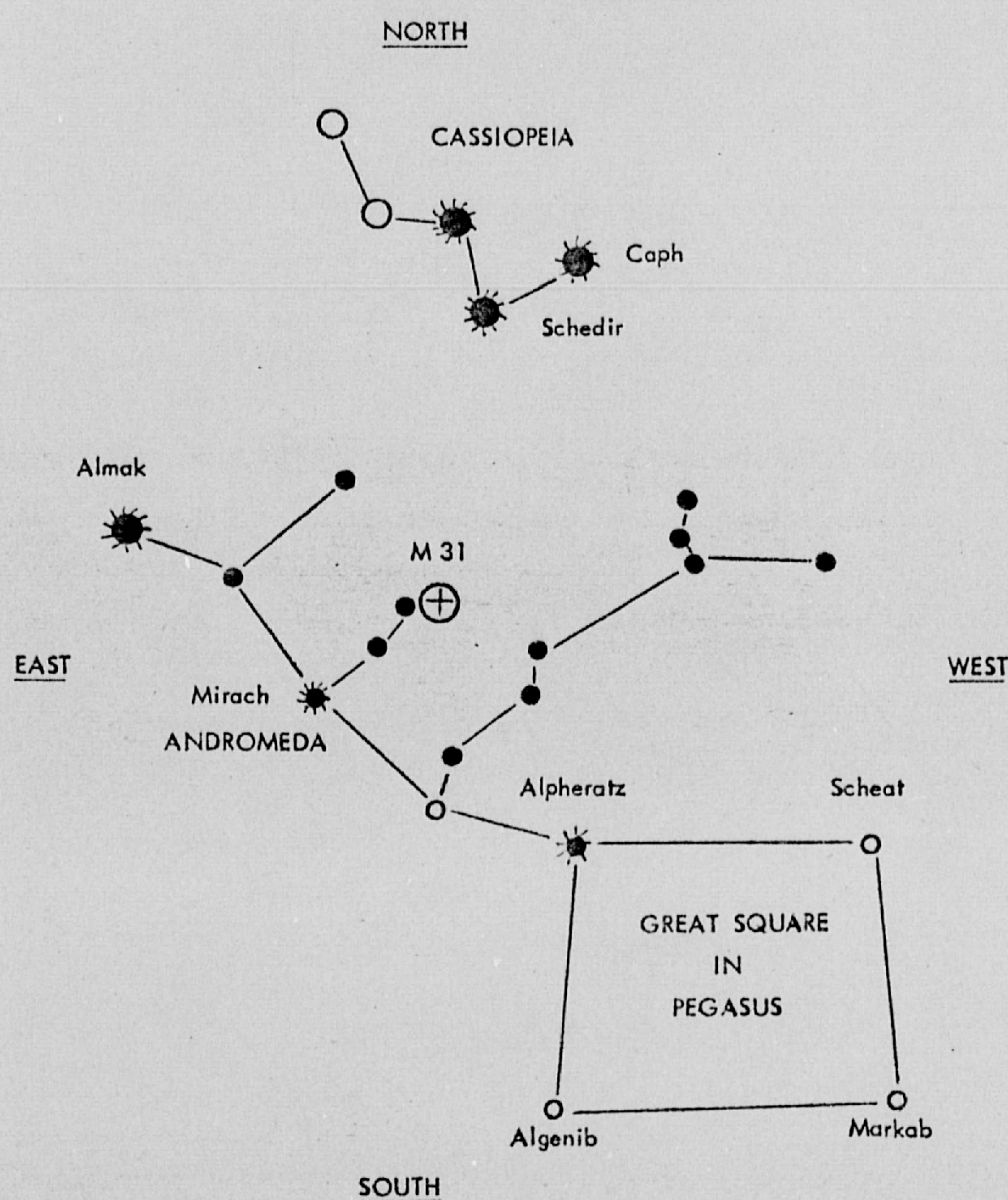


Fig. 1 MAP SHOWING LOCATION OF ANDROMEDA GALAXY -- M 31

(Continued from p. 274)

the west of the second star from Mirach (which has no special name but is designated as nu Andromedae) is a hazy patch of light. You can see it clearly with the naked eye if the sky is clear—and dark.

This is Messier 31, or M 31, 15,000,000,000,000,000,000 (15 quintillion) miles away! To go that distance, light—which travels at a speed of 186,000 miles every second—takes about 2,500,000 years. Thus, to avoid using such an awkwardly large number as 15 quintillion, the astronomer says that its distance is 2.5 million light years. Or, using another unit, it is 0.77 megaparsecs. A parsec is equal to 3.26 light years, and a megaparsec is a million parsecs, or 3,260,000 light years. When you look at it, the light energy that enters your eye left on its journey long before the human species had evolved on earth.

M 31 is a twin of our galaxy, the Milky Way system of which our sun is a very minor part. This is made up of some hundred billion stars, arranged in the shape of a grindstone about a hundred thousand light years in diameter. We are in it, although not at the center, but part way out toward the edge. As we look in the direction of the center, we see a concentration of stars—so close together that the naked eye does not show them separately, and this causes the effect of the Milky Way.

Toward the sides of the grindstone there

are considerably fewer stars, and in that direction we can look beyond, and see the millions of other galaxies that can be photographed with large telescopes. Of these, the one in Andromeda is one of the closest.

If you were living on a planet, going around one of the billions of stars that make up Messier 31, and looked back toward our galaxy, you would see very much the same thing that you do when you look toward it.

#### Celestial Time Table for November

Nov.	EST	
2	5:42 p.m.	Algol (variable star in Perseus) at minimum brightness
4	2:00 p.m.	Moon passes Saturn
5	2:15 a.m.	Moon in first quarter
6	1:00 p.m.	Moon passes Jupiter
10	9:00 a.m.	Moon nearest; distance 223,500 miles
11	5:04 p.m.	Full moon
12	3:00 p.m.	Venus between sun and earth
14	4:58 a.m.	Algol at minimum
16	early a.m.	Meteors visible radiating from constellation of Leo
17	1:47 a.m.	Algol at minimum
18	4:00 a.m.	Moon passes Mars
	9:10 a.m.	Moon in last quarter
19	10:36 p.m.	Algol at minimum
22	11:00 a.m.	Moon farthest; distance 252,000 miles
	7:25 p.m.	Algol at minimum
27	1:30 a.m.	New moon

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

• Science News Letter, 82:274 October 27, 1962



No Case (Information Only)

5 November 1962  
Tucuman, Argentina

One of the most interesting cases of all occurred on the night of November 5th, and is related in a long account in "La Gaceta," a newspaper published in Tucuman, Argentina. An Italian truck driver named Pier Livio Quaia was driving his vehicle late that night when he was forced to screech to a stop because of a UFO which was blocking his way only 100 yards in front of him. The brightly-lit object was hovering just above the ground, right over the highway. It beamed a powerful light into the cabin of Quaia's truck, blinding him for a few instants; but thereafter the light grew dimmer, and he was able to observe the saucer carefully as it slowly rose into the night sky. It was shaped like an egg, 12 yards long and 4 yards high. Green and red lights came out of window-like openings along the circumference. On the bottom of the saucer there was a white circle, like glass, about one yard in diameter, and this was illuminated from inside the machine. - Quaia continued his journey, and shortly thereafter came upon two brothers driving another truck. The three men eventually spent over an hour watching the UFO make low passes and strange movements of all sorts. One of the men took a shot at the machine, but we are not told if he hit it. Finally, the three grew tired of watching the aerial maneuvers, and went to the town of Tucuman to have a few stiff drinks to fortify themselves.



No Case (Information Only)

8 November 1962  
Tucuman, Argentina

On a road near the same town of Tucuman, two youths were riding a motorcycle together on the night of November 8th, when they, as well as a truck coming in the opposite direction, were stopped by an intense white light. The engine of the motorcycle stopped functioning, and the startled men watched a flying saucer move slowly across the highway and land on a small hill about 500 yards away. The saucer stayed on the ground for a few seconds, during which time the heat or light from it was so intense that they could feel their skin burning. The UFO then ascended to a height of 50 yards above the ground, performed several maneuvers, and left the area at high speed. After the episode the motorcycle still refused to start up, and the two had to hitch-hike to the next town. It was found that all the oil in the motorcycle had dried up and the electric circuit had burned out. The spark plugs, condensers and cables were all melted. In the town of Salta, the youths were treated by a doctor for burns on their arms, which looked like they had been "subjected to a long exposure in sunlight". A great number of close sightings were also reported in the city of Tucuman itself, on the night of November 10.



08/1753Z

NO CASE REPORT OR UNIDENTIFIED  
AIRCRAFT  
J

DEPARTMENT OF THE AIR FORCE  
STAFF MESSAGE BRANCH  
UNCLASSIFIED MESSAGE

INCOMING

AF IN : 16186 (8 Nov 62) G/rsb

ACTION: CIN-17

INFO : OOP-2, OOP-CP-2, SAFS-3, DIA-10, DIA/CIIC-3, JCS-35, ARMY-2,  
NAVY-2, CMC-8, OSD-15, CIA-11, NSA-7 (118)

SMB A 099

AZ CZ CHQA 616Z CCJX259

\*\*\*\*\* YY RUEZHQ

DE RUFYAW 171

ZNR

Y 081815Z

FM 80399/CLW2

TO RUFTQH/COMUSFORAZ LAJES FLD AZORES

RUEAHQ/COFS USAF WASH DC

RUWGALB/CINCNOAD ENT AFB COLO

RUCSBRB/CINCSAC OFFUTT AFB NEBR

BT

UNCLAS /CIRVIS REPORT/ OBSERVED 2 MULTI ENGINE BOMBERS SIMILAR TO B52

TYPE CROSSED OUR PATH 4303N 1735W 1753Z HEADING 305 DEGREES FL 250

SPEED 350 NO INSIGNIA OBSERVED BEYOND OUR RANGE

BT

NOTE: ADV CYS TO CIN, DIA & CP.

08/1817Z NOV RUFYAW



NO CASE INFORMATION ONLY.  
10-15 NOV

ARGENTINA

22 Nov 62 00 09z

NNNN

WPA00580D083ZCCMA339

RR RUCDSQ

DE RUEHBA255

ZNR

R 211320Z

FM USAIRA BUENOS AIRES ARGENTINA

TO RUEAHQ/COFS USAF WASH D C

RUEAHQ/1127TH USAF FAG FT BELVOIR VA

RUCDSQ/FTD WPAFB OHIO

RUEGWA/USAIRA PARIS FRANCE

AF GRNC

BT

UNCLAS U-468. REFERENCE USAIRA PARIS MESSAGE U-783. PRESS REPORTS ARGENTINA LAUNCHED FIVE (5) GAMMA CENTAURO (CENTAURE) ROCKETS BETWEEN 10-15 NOV 1962. PROJECT SPONSORED BY NATIONAL AIRCRAFT INDUSTRY PLANT (DINFIA). ROCKETS LAUNCHED AT CHAMICAL, PROVINCE OF LA RIOJA AND REPORTEDLY REACHED ALTITUDE OF 90 TO 180 THOUSAND METERS, AND THAT ALL TESTS WERE SUCCESSFUL. ARGENTINES ASSISTED BY TEAM OF TEN (10) FRENCH TECHNICIANS HEADED BY PROFESSOR JACQUES BLAMONT.

BT

CFN468 783 5 10 15 1962 90 180 10

21/1525Z

ACTION FI

2 A  
3 E

4 X 2a

Col Friend



## Children Frightened By "Sky Ghost" NO

A strange elliptical-shaped object which hovers stationary in the air above the Fleetwood Elementary School at Lethbridge, Alberta, Canada, has caused a stir. APRO's W. K. Allan of Calgary, interview Mike Williams and Miles White of Lethbridge and forwarded the following information to headquarters:

The object, which appeared about 6 feet in diameter, first appeared in 1959 and was seen "six nights in a row," by school children and at least one adult. It was seen again on November 23, 1962 at 10:30 p.m. After hearing about it, White's mother and her son and the Williams boy went to the school on Friday, November 30, 1962. The object was sighted again. It was shining with a bluish light and appeared to be over the school's bell tower.

On Saturday, December 1, the boy and his mother returned at 9 p.m., and saw it hovering over the school yard about 20 feet off the ground. It appeared to be almost transparent. They threw stones at it and after about twice the time expected for the stones to fall to the ground they were heard falling on the roof of the one-story school annex behind their backs in the opposite direction to which they were thrown.

After the Saturday sighting, Miles White and Mike Williams went to a movie, during which Miles' speech became blurred, didn't make sense and he fell asleep. He complained first of a "buzzing in the head."

The story was published in the papers, and the boys as well as Mrs. White were reluctant to talk of their experiences, fearing ridicule.



NORTHAMPTON, OHIO-Nov. 25, 1962 - 4:22 AM.  
Mr & Mrs Joseph Tomsello were in their driveway, having just arrived home. Their attention was drawn to an object that was moving SW to NW, and was the apparent size of  $1\frac{1}{2}$  moons. The object was moving toward the woods and was seen well from about 200 yards. Its speed was like that of a Piper Cub passing overhead; the drawing that was submitted showed it to be shaped like a half-moon with the rounded edge down. Its color was orange-red except for a silvery pin point of light coming from its center. This in turn was surrounded by a spherical rosy glow, larger than the clear outline of the object. It moved towards the woods and disappeared. A few seconds later this same object or another with a different appearance seemed to retrace the path of the first object. As this object moved SW at tree top level, it was larger than the first, about the size of two water mellons and had the general shape of a shield. It had an orange-red shield shape surrounded by a charcoal colored wide edge which followed the inner contour. Again, the middle section of orange-red part had the small pin-point of light. The inner and outer parts were sharply outlined. As the UFO moved past, it suddenly disappeared in mid-air. There was no smoke, trail, sound.



NOV  
1962

Trinidad, Colorado  
July 19, 1966

Air Force Academy.

Colorado Springs

C11R

Colorado - Outer Space Division

Gentlemen: I have just finished watching Art Linkletter's program on my ~~Color~~ TV on which he interviewed a man who seems to be an authority on flying saucers, objects etc - his descriptions and few pictures reminded me of an experience I had 4 or 5 years ago in late November about Thanksgiving time - around 3 o'clock in the morning.

I happened to be up and looked out of my upstairs west bedroom window and saw several bright objects moving across the sky over the top of my neighbor's house - the first one was about the size of a full moon - the second was smaller - Each succeeding one smaller than the one preceding it. There was a bright <sup>trail</sup> of fire following them. It was most spectacular and I was overcome with awe and wonder to be privileged to witness such a scene. I told my family and friends about it. My Son, who is interested in aviation, thought I should tell our local newspaper and write the Air



~~For many years~~ I have  
been a semi-invalid for some time and do not  
accomplish all that I would like to - so did  
nothing at the time and subsequently forgot all  
about it - until reminded today by the TV  
Program.

I hope this letter will be of interest to you.

Sincerely

(Mrs) ~~[REDACTED]~~



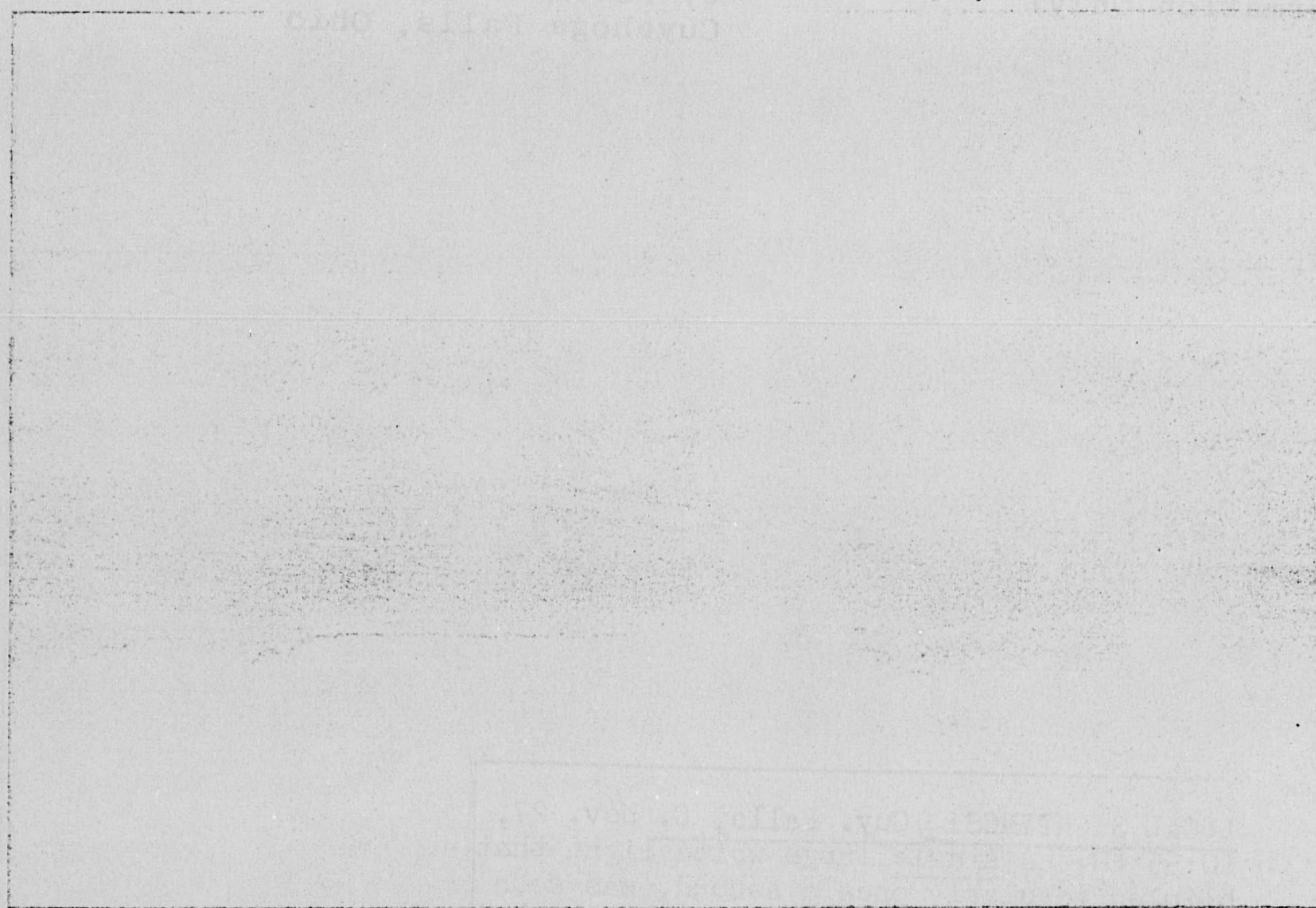


No Case (Information Only)

27 November 1962  
Cuyahoga Falls, Ohio

LOCAL SIGHTINGS: Cuy. Falls, O. Nov. 27,  
10:55 PM. A single large white light that  
blinked regularly once a second, was seen  
passing overhead toward the N.N.E. Using  
7x50 binoculars, no other lights or shape  
could be detected. Estimate altitude was  
about 2000 feet, speed of 100 mph. This  
object followed a steady NNE course it was  
lost from view because of low trees in the  
area. The observers: Fran and Roy Renner,  
A.E. Candusso. No smoke trail, no sound,  
no change of speed, color or shape. The  
night was clear and cold.





A black-and-white print taken from the colour photograph and submitted to the REVIEW by David Rudman.

## A COLOUR PHOTOGRAPH

by David Rudman

I AM writing to inform you of the details of a sighting made by three men, all known to me. On Wednesday, November 28, 1962, they were travelling on the 10 a.m. "Flying Scotsman" from Edinburgh. Between Belford and Sea-houses, on the north-east coast below Berwick-on-Tweed, the train was travelling at a very slow speed (about 15 m.p.h.) and one of the men, a keen amateur photographer, decided to use the opportunity to take some colour photographs of the coastline. At 11.20 a.m., glancing through the window at the opposite side of the carriage, i.e. looking inland, he saw an enormous oval-shaped object, grey in colour with three parallel luminous bands running along its length and a slight fuzziness at one end. His immediate reaction was an amazed "Good heavens (or words to that effect), a flying saucer!" His two companions, after suggesting he put more water in it next

time, had their attention drawn to the object and all three stared at it with some incredulity for nearly two minutes, for although it seemed to be at least a mile away it would have covered *eight inches of a ruler held at arm's length*.

All three men are engineers, not prone to exaggeration, and they stand by this remarkable statement which suggests that the object, whatever it was, must have been of colossal proportions. Fortunately they had the presence of mind to remember the camera, and a very successful photograph was taken, copies of which I enclose. For a few *seconds* afterwards their attention was taken from the object to check the camera and when they looked back the object had disappeared completely. They told me that they were staggered by this total disappearance in so short a space of time. I have interviewed all three men (two of them are colleagues of mine) and they are

quite certain that they were looking at a solid object.

A Met. Office report for that area shows that the cloud base was 3,500 ft. with a westerly wind of 7 m.p.h. The photograph was developed by Kodak, who made a colour transparency from which the prints were produced. The photographer is a director of an engineering firm in the north of England and although I have his permission to make what use I like of his experience and photograph, he does not want his name brought into it. The names of all three gentlemen are, of course, known to me.



# DECEMBER 1962 SIGHTINGS

DATE	LOCATION	OBSERVER	EVALUATION
1	East Point, Georgia	<del>REDACTED</del>	Balloon
1	Arlington, Massachusetts	<del>REDACTED</del>	Aircraft
3	64.45N 29.45W (Atlantic)	Military	Astro (METEOR)
3	25.5N 85.4W (Gulf of Mexico)	<del>REDACTED</del>	Insufficient Data
4	Ridgefield, Connecticut	<del>REDACTED</del>	Aircraft
6	66N 28W (Atlantic)	Military	Satellite
6	San Mateo, California	<del>REDACTED</del>	Other (UNRELIABLE REPORT)
7	45.50N 173.30W (Pacific)	Military	Insufficient Data
8	Lincoln Park, Michigan	<del>REDACTED</del> (PHOTO)	Other (CONFLICTING DATA)
10	Brooklyn, New York	Multi	Other (SEARCHLIGHT)
11	Ashland, Oregon	<del>REDACTED</del>	Astro (METEOR)
13	Robbins AFB, Georgia	<del>REDACTED</del>	Astro (METEOR)
DR13	Charlottetown, P.E.I., Canada	<del>REDACTED</del>	Other (UNRELIABLE REPORT)
13-14	Greenfield, California	Multi	Balloon
14	Pound Ridge, New York/ Wilton, Conn	Multi	Astro (METEOR)
16	61.38N 07.15W (Atlantic)	Military	Insufficient Data
18	Huntington, West Virginia	<del>REDACTED</del>	Satellite
18	Tirol, Italy	<del>REDACTED</del>	Astro (METEOR)
20	Cambria, California	Multi	Astro (VENUS)
20	Worcester, Massachusetts	<del>REDACTED</del>	Insufficient Data
21	Venezuela	<del>REDACTED</del> (PHOTO)	Insufficient Data
28	Miamisburg, Ohio	<del>REDACTED</del>	Astro (VENUS)
30	102.18N 162.09W (Pacific)	<del>REDACTED</del>	Satellite

## ADDITIONAL REPORTED SIGHTINGS (NOT CASES)

DATE	LOCATION	SOURCE	EVALUATION
Dec	Universe	Science News Ltr	
Dec	Akron, Ohio	Newsclipping	
2	Riverside, California	Newsclipping	
12	Osaka, Japan	Newsclipping	
12	Kent, Ohio	Newsclipping	
18	Milan, Italy	Newsclipping	
19	Tacoma, Seattle, Washington	Newsclipping	
20	Milan, Italy	Newsclipping	
22	Buenos Aires, Argentina	Newsclipping	
28	Akron, Ohio	Newsclipping	
29	Clifton, England	Newsclipping	