

PROJECT 10073 RECORD CARD

1. DATE 14 October 1962		2. LOCATION 6 Mile, SW Pass, Mississippi		12. CONCLUSIONS ☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon ☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft ☒ Was Astronomical Meteor ☐ Probably Astronomical ☐ Possibly Astronomical ☐ Other ☐ Insufficient Data for Evaluation ☐ Unknown	
3. DATE-TIME GROUP Local _____ GMT 15/0508Z		4. TYPE OF OBSERVATION ☒ Ground-Visual ☐ Ground-Radar ☐ Air-Visual ☐ Air-Intercept Radar			
5. PHOTOS ☐ Yes ☒ No		6. SOURCE Civilian			
7. LENGTH OF OBSERVATION 4-5 seconds		8. NUMBER OF OBJECTS one		9. COURSE not rptd	
10. BRIEF SUMMARY OF SIGHTING Obj leaving contrail observed to explode after 4-5 seconds. Not meteor. Estimated altitude 20,000ft.				11. COMMENTS Although the witness indicated that the sighting was not meteor origin, the description conforms to that of a bolide and no info rptd to indicate that this was not the obj sighted. Case evaluated as a meteor.	

ATIC FORM 329 (REV 26 SEP 52)

No Case (Information Only)

4 October 1962
Argentina

In Los Rios, near Buenos Aires, Argentina, a number of people saw a UFO at about 9 p.m. on the night of October 4th. The first sighting was made by one Simon Frutos, owner of a farm, who saw a "luminous point" descend almost perpendicularly to within a few hundred feet of the ground, where it remained stationary for a few seconds, throwing out a strong red light. The UFO then started moving closer and closer to his house, until finally it changed direction and apparently went out of sight briefly behind a nearby hill. It then rose at "incredible velocity" at a sharp angle, and disappeared into the sky. According to the account, the object was at one time only about 20 feet from the ground, and Frutos believes he saw inside it a strange creature with many arms that moved about like tentacles.

No Case (Information Only)

4 October 1962
Jacksonville, Florida

1962

In Jacksonville, Florida, a number of strange lights, accompanied by power failures, were reported on October 4th. One of the most unusual stories was told by Mr. and Mrs. J. P. Raker, who saw a ball of fire moving through a field behind their house, just at twilight. Mrs. Baker said that she looked out her window and saw a round ball with a pinkish light that almost blinded her. It hovered outside her kitchen window, less than six feet away, and then floated around the corner of the house and crossed the road they live on. Another woman claimed that a formless glow moved right through her house, greatly scaring her and her children.

No Case (Information Only)

6 October 1962
Cuyahoga Falls, Ohio

Cuyahoga Falls-Oct 6, 1962-6:50 PM DST - -
Two high-school-age boys saw a large artificial shape in a break in the clouds..... They described it as about 3 inches long at arm's length, and its thickness was about 1/10 the length. It was itself a source of light. "It looked like a plate turned upside down", said one of them. It was seen for only a few seconds. The elev was 20°, directly W. It seemed to be over the high overhead bridge on Rte 8. Obs Rob. Rich.

No Case (Information Only)

7 October 1962
Witwatersand and
Pretoria, South Africa

SOUTH AFRICA: Oct. 7, 1962. Witwatersand & Pretoria - "Hundreds of people telephoned the head of the Smithsonian tracking station in Johannesburg. A bright flying object emitting a vivid blue light was seen. Mr. Citron, appealed for help from anyone who had seen the object. He said the chances are 9 of 10 that it hit the earth.

THE A.P.R.O. BULLETIN

The A. P. R. O. Bulletin is the official copyrighted publication of the Aerial Phenomena Research Organization (A.P.R.O.), 4145 E. Desert Place, Tucson, Arizona, and is issued every other month to members only. The Aerial Phenomena Research Organization is a non-profit group dedicated to the eventual solution of the mystery of the unidentified objects which have been present in the skies for hundreds of years. Inquiries regarding membership may be made to the above address.

TUCSON, ARIZONA — NOVEMBER, 1962

GLOWING LIGHTS INVADE HOME

On Pampas Drive, which connects with Spring Park Road, an unidentified woman (by request) said a formless "glow" moved through her house, out through the front door and along Pampas Drive. She said it was about a half a block long, and brilliantly illuminated a car and other objects in the vicinity. She said that as the glow moved through the house, it enveloped her, her hand tingled "as if it had gone to sleep" and her children screamed through fear.

Mrs. Gladys Faucette of Cascade Road, the street from which Mrs. Baker's fireball seemed to come, said she saw a glow descend to within 3 feet of the ground between her home and the adjacent house. She said the form was too vague to be described as ball-shaped, but she called it a "terribly big brilliance." She said the circuit which carries electricity to her bathroom and bedroom was knocked out about this time, and was still out the next morning.

On the 10th of October, residents on Spring Park Road, Jacksonville, Florida, observed strange small fireballs which had fuzzy outlines and stole silently around and among houses on that street. House lights dimmed and some went out entirely as the phenomena occurred. Mrs. J. P. Baker said she was in her upstairs kitchen at twilight when her husband told her he had seen a ball of fire moving through a field behind the house. Mrs. Baker looked out her kitchen window and saw a "round ball, big as a No. 2 wash tub" which was pinkish in color and so brilliant it almost blinded her. She said it hovered outside her kitchen window apparently less than 6 feet away, then floated around the corner of the house and cross Spring Park Road. Harold Whitehead of Browning Fuel Oil Co. on Spring Park Road said he and two others saw a fireball gliding along a utility wire a block south of the oil company. "It was the size of a washtub, a blinding, whitish ball of fire. I watched it about five seconds. It moved about 10 or 20 feet during that time, then went out with a big 'pop.' Our lights were dim for about a half hour after," Whitehead reported.

No Case (Information Only)

10 October 1962
Akron, Ohio

Akron, Ohio-Oct 10, 1962

A mother and daughter looking into the west saw what appeared to be a twin sun to the left and in line with the sun. The light was slightly smaller than the sun. It persisted for about 15-20 minutes. The sky was clear-no explanation. Probably Prof. Menzel could explain this one.

No Case (Information Only)

10 October 1962
Akron-Canton area, Ohio

Oct 10, Lauby Rd-alongside Akron-Canton Airport, 11:03-11:22 PM DST. The large yellow light appeared.....cont'd p 2-col 1.
MINOR SIGHTINGS, cont'd - in the SSE at 20-25° elev. It was a single light when seen through 7 x 50 binocs. It was not very brilliant and not very distant. There was a pulsation to a greater brilliance every 2-3 seconds. It drifted horizontally for 30° azimuth in 19 minutes. No sound-trail.

No Case (Information Only)

11 October 1962
Canton, Ohio

North Canton, Oct 11, 1962

A husband and wife who live near the airport saw a large lighted oblong or cigar-shaped object-moving at extremely slow speed from E to W in the northern sky. The object was at 20° elev. at its highest point. Below this lighted object, red lights seemed to appear irregularly and singly. They were larger than ordinary airplane lights. The object travelled through 50° azimuth in 15min. It passed behind trees where the red lights continued to be seen. No sound. The size was compared to a dime at arm's length. Both declared that they knew the blimp when they saw it. "This wasn't it," they said. The Goodyear A.C. blimp was flying that night.

INFORMATION ONLY, NO CASE.

11 Oct

TD-
Green

[Handwritten signature]


Holland, Michigan

Department of Defense
Office of Public Affairs
Washington 25, D. C.

Dear Major,

I would like the story on the flying saucer
in Holland, Michigan. This happened on Oct. 11.
I would be very happy if you rushed it. It wasn't the
plane from Thifty Acres a store here.



RECEIVED

04153 2 43 PM '65

INFORMATION
DIRECTOR

3801 1st St.
Holland, Mich.
D

Holland, Mich.



PRAY
FOR
PEACE



Dept. Of Defence
Office of Public Affairs
Washington 25, D.C.

RECEIVED

M 62
E
TIES

NAVAL MESSAGE

UNCLASSIFIED

NAVY DEPARTMENT

PRECEDENCE EMERGENCY	(ACTION)	RELEASED BY	DRAFTED BY	EXT. NO.
EMERGENCY	(INFO)			

AF IN : 43440 (15 Oct 62) A/egd
Y 151303Z

FM CCGDEIGHT

TO RUWGHW/THIRTYSECOND ADDIV SAGE OKLAHOMA CITY AFSTA
RUWGALB/CINCNOAD
RUEGUH/COMEASTSEAFRON
RUEAHQ/COFS USAF

INFO RUECW/SECNAV
RUECW/CNO
RUECJD/COMDT COGARD
RUEGUF/COMEASTAREA
RUCKKC/COMSIX
RUCKYC/COMEIGHT
RUCKSH/COMFAIRWING ELEVEN
RUCKHC/CINCLANTFLT

UNCLAS

AT 0640S CAPT. [REDACTED] MISSISSIPPI RIVER PILOT REPORTED
THAT HE OBSERVED AN UNIDENTIFIED FLYING OBJECT AT 0518S BEARING
055 DEGREES TRUE FROM MILE 6 SW PASS, MISSISSIPPI RIVER. POSITION
ANGLE 40 TO 45 DEGREES. ESTIMATED ALTITUDE 20,000 FEET. OBJECT
LEFT CONTRAIL AND DISINTERGRATED WITHIN 4 OR 5 SECONDS FROM
FIRST SIGHTING. NOT A METEORITE.

AF DIST: ACTION: CIN-9

INFO: OOP-2, OOP-CP-1, SAFS-3, DIA-10, DIA/CIIC-3 (28)

-92/SECNAV...COG

UNSECNAV..ASTSECNAV..ASTSECNAV(R&D)..00..09..09B..09M..09D..03..33..
34..05..06..07..72..76..94..IP..NAVAIDE..CMC..JCS..CSA..CSAF..CIA..NIC
FLAGPLOT BFR

(ADVANCED COPIES DLVD)

NOTE: ADVANCE COPY TO DIA.

CONTROL NO.	CIRCUIT NO.	PAGE	OF	PAGES	TIME OF RECEIPT	DATE TIME GROUP
57831/WK/OB/4	A056	1		1	1342Z OCT 62	151303Z OCT 62

UNCLASSIFIED

No Case (Information Only)

13-14
13-14 October 1962
Buchan area, Scotland

F S REVIEW-Jan-Feb 1963

SCOTLAND-The Aberdeen Press and Journal of Oct 15, 1962. "A mysterious red object was seen in the sky over the Buchan area this weekend. It was reported to have travelled at high speed over Fraserburgh, heading in the direction of Banff.

Mr. Ketalic-who was in the RAF for 11 years said, "It was cone shaped; it was a massive thing and it travelled very fast. It was clearly defined and was certainly like nothing I have seen before."

No Case (Information Only)

14 October 1962
Formosa, Argentina

During the evening of October 14th, a large group of people coming out from a movie house in Formosa, Argentina, saw an object in the sky double the apparent size of the moon, and giving out a light so bright that it hurt their eyes to look at it. The UFO made various maneuvers and finally seemed to land briefly at some distance away, but the group was too frightened to attempt any investigation. At the same time the object was also seen by several fishermen in the vicinity.

16 - 30 OCTOBER 1962 SIGHTINGS

DATE	LOCATION	OBSERVER	EVALUATION
16	61.45N 16.09W (Atlantic)	Military	Insufficient Data
17	Donaldsville, Louisiana	[REDACTED]	Other (MISSILE)
17	Stamford, Connecticut	[REDACTED]	Aircraft
18	Chicago, Illinois	[REDACTED]	Insufficient Data
18	Nebraska-South Dakota	Milti	Astro (METEOR)
18	37.12N 173.12W (Pacific)	Military	Insufficient Data
19	Eutaw, Alabama	[REDACTED]	Astro (SIRIUS)
20	Bristol, Rhode Island	[REDACTED] (PHYS S)	Other (PLASTIC)
20	Wells, Maine	[REDACTED]	Astro (METEOR)
20	Pacific Grove, California	[REDACTED]	Astro (METEOR)
22	65.20N 28.50W (Atlantic)	Military	Satellite
23	60.14N 13.36W (Atlantic)	Military	Satellite
23	Farmington, Utah "DUCK HUNTER CASE"	[REDACTED]	UNIDENTIFIED
25	Neosho, Missouri	Milti	Other (MUNITIONS TEST)
25	Near Canton Island (Pacific)	Civil Air	Insufficient Data
26	24.14N 151.26W (Pacific)	Military	Other (REFRACTION MOON)
26	Corpus Christi, Texas	[REDACTED] (PHYSICAL S)	Other (BOTTLE GLASS)
27	Auburn, Alabama	Military	Insufficient Data
27	Atlantic, E of Canaveral	[REDACTED]	Other (MISSILE)
27	Norton, Connecticut	[REDACTED]	Insufficient Data
29	Moorehead, Minnesota	[REDACTED]	Insufficient Data
29	Altadena, California	Milti	Balloon
31	Kettering, Ohio	[REDACTED]	Aircraft

ADDITIONAL REPORTED SIGHTINGS (NOT CASES)

DATE	LOCATION	SOURCE	EVALUATION
Late Oct	Delta, Colorado	Newsclipping	
18	Godsby, Utah	Newsclipping	
19	Beverly Hills, California	[REDACTED] (tr)	
24	El Cajon, California	Newsclipping	
24	Kent, Ohio	Newsclipping	
26	Colorado	Newsclipping	
28	Woburn, Massachusetts	Newsclipping	

④ In separate folder

DEPARTMENT OF THE AIR FORCE

AF IN: 43397 (15 Oct 62) L/SAFE MESSAGE BRANCH

UNCLASSIFIED MESSAGE

SMB B 015

ACTION: ~~FIN-670~~ M I N G

CHQA427ZCBBJB110

INFO: OOP-2, OOP-CP-1, ~~SAFE~~-3, DIA-10, DIA/CIIC-3 (37)

***** YY RUEAHQ

DE RUCKYN 29

ZNR

NOTE: ADVANCE COPY TO CIN AND DIA.

Y 151303Z

FM CCGDEIGHT

TO RUWGHW/THIRTYSECOND ADDIV SAGE OKLAHOMA CITY AFSTA

RUWGALB/CINCNORAD

RUEGUH/COMEASTSEAFRON

RUEAHQ/COFS USAF

INFO RUECW/SECNAV

RUECW/CNO

RUECJD/COMDT COGARD

RUEGUF/COMEASTAREA

RUCKKC/COMSIX

RUCKYC/COMEIGHT

RUCKSH/COMFAIRWING ELEVEN

RUCKHC/CINCLANTFLT

JSCG GRNC

BT

UNCLAS

AT 0640S CAPT. ~~REDACTED~~ MISSISSIPPI RIVER PILOT REPORTED

THAT HE OBSERVED AN UNIDENTIFIED FLYING OBJECT AT 0518S BEARING
055 DEGREES TRUE FROM MILE 6 SW PASS, MISSISSIPPI RIVER. POSITION
ANGLE 40 TO 45 DEGREES. ESTIMATED ALTITUDE 20,000 FEET. OBJECT
LEFT CONTRAIL AND DISINTERGRATED WITHIN 4 OR GT SECONDS FROM
FIRST SIGHTING. NOT A METEORITE.

BT

SAFO-0-

ASTRONOMY

Venus at Greatest Brilliance

Venus will reach its maximum brilliance and the fifth of the naked-eye planets, Mercury, will come into view in the October sky, James Stokley reports.

► THE PLANET VENUS, which has been so prominent in the western evening sky for the past few months, will reach maximum brilliance on Oct. 8.

This is her last fling, however, for by the end of October Venus will have virtually disappeared, with a close approach to the sun's direction.

Three other planets—Saturn, Jupiter and Mars—are also visible in the evening. And Mercury, the fifth of the naked-eye planets, comes into view before sunrise about Oct. 21.

Only Saturn and Jupiter are shown on the accompanying maps, which give the appearance of the skies about ten o'clock (your own kind of standard time) at the beginning of October; an hour earlier in the middle of the month and two hours earlier at the end. Venus sets too early, and Mars rises too late to be shown.

Venus Visible in Daylight

Venus sets about an hour and a half after the sun on Oct. 1. Even then it is practically as bright as it will be on the 8th—of magnitude minus 4.3 on the astronomical scale. This makes it far brighter than any other planet, or any star. It is visible long before the others, while the sky is still quite bright.

In fact, Venus can be seen even while the sun is shining, if you are shaded from the direct sunlight, and know just where to look.

Jupiter's magnitude in October is minus 2.3. Although this is less than a sixth as bright as Venus, it is still about 15 times brighter than Saturn. And even that planet equals a bright first magnitude star. Jupiter is well up in the southeast, in the constellation of Aquarius, the water carrier, and it sets about two hours after midnight.

Saturn is to the right, and lower, in Capricornus, the sea-goat.

Mars, of the first magnitude this month and a little fainter than Saturn, is in Gemini, the twins, at the first of October. It rises a little before midnight. Red in color, it is easy to identify.

Among the stars, the brightest is Vega, in Lyra, the lyre, which is high in the northern half of the western sky. Above it is Deneb, in Cygnus, the swan. Altair, in Aquila, the eagle, shines to the left of Deneb, and is shown on the map for the southern sky.

Over in the northeast is another first magnitude star—Capella, in Auriga, the charioteer. And next door, to the right, is Taurus, the bull, with Aldebaran. This star is red in color, and about the same brightness as Mars which comes up later.

They need not be confused, however: Aldebaran shines with the scintillating bril-

liance of a star, while Mars has the steady and untwinkling glow of a planet.

Low in the south, below Jupiter, is Fomalhaut, in Piscis Austrinus, the southern fish. This is another star of the first magnitude, although it looks fainter, because it is so low in the sky. As this star is far south in the sky it never, for us, rises higher than it is now.

Above Jupiter is a group of four stars called the Great Square in Pegasus, the winged horse. Although these are not first magnitude, the square makes a good starting point in finding your way around the skies. Alpheratz, in the upper left-hand corner, is actually not in Pegasus, but in Andromeda, the princess.

The evenings of October are about the poorest of the year for seeing the familiar "great dipper," which is part of Ursa Major, the great bear. As shown on the northern sky map it is now in its lowest position, close to the horizon. For persons south of 30 degrees north latitude (about that of New Orleans) all stars but one of the great dipper go below the horizon on October evenings.

Above Ursa Major is Ursa Minor, the little bear, and in this group is Polaris, the pole star. Directly above stands Cepheus, the king (mythologically the husband of

Cassiopeia, to the right, and the father of Andromeda, above).

Cepheus is not a brilliant constellation; none of its stars is as bright as the first magnitude. But in this group is a star of the fourth magnitude that is quite inconspicuous but very important to astronomers. This is delta Cephei, the easternmost of a little triangle of stars in the upper part of the constellation. It is the prototype of a class of stars known as Cepheid variables, which astronomers have found to be valuable as measuring sticks of the universe.

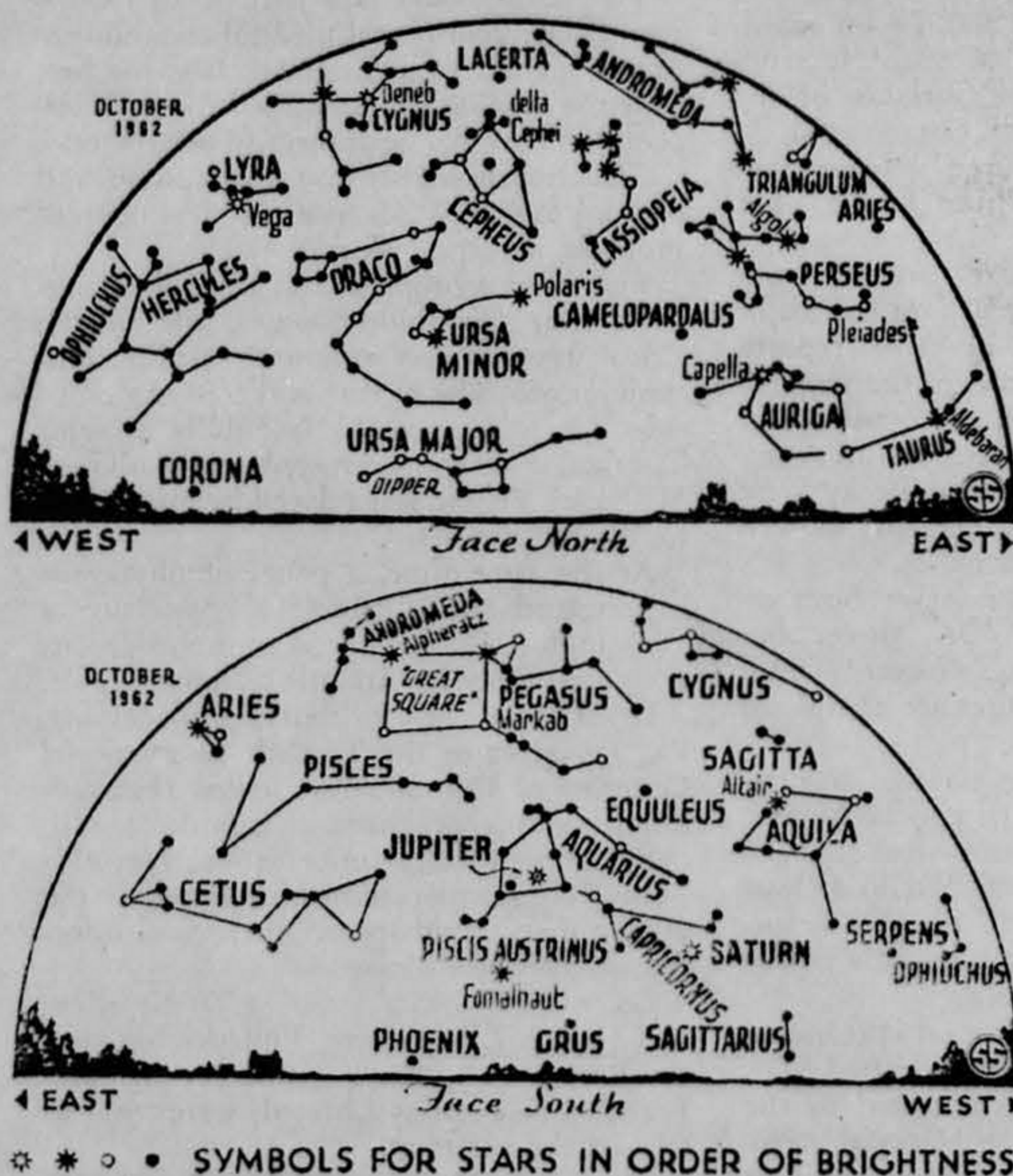
Delta Cephei a Variable Star

Delta Cephei is a variable star. From a maximum of magnitude 3.8, it drops in about four days to 4.3, about two-thirds as bright. In about a day and a half it returns to its maximum brightness; the total period of the cycle is 5.4 days.

Apparently it is pulsating. While it is expanding it is brightest, and when it is most rapidly contracting it is faintest. When at maximum brightness, it is more bluish, which indicates an increase in temperature of about 3,600 degrees.

Cepheids, like most stars, utilize nuclear energy to supply energy by a process in which hydrogen is converted to helium. According to one theory, the star contracts and this heats up its core, thus firing up the nuclear furnace that keeps it going.

Finally, so much radiation is flowing outward from the center that its pressure causes it to expand. But as it gets to maximum



THE FIELDS

SPACE

Satellite Radio Link Planned for Americas

► PROJECT RELAY, the communications satellite scheduled to be launched later this year, will provide a radio link between North and South America by satellite for the first time.

Initial tests are planned to connect the International Telephone and Telegraph Corporation's station in Nutley, N. J., with mobile equipment to be set up outside Rio de Janeiro. Direct communications via Relay will also be made between the Rio station and Europe.

Relay will be placed in an elliptical orbit, inclined 50 degrees from the equator, by the National Aeronautics and Space Administration. It is expected to complete one orbit in two and a half hours.

• Science News Letter, 82:193 September 22, 1962

GEOPHYSICS

Radiation Belt No Hazard To Weather Satellite

► TIROS VI, the next research weather satellite, scheduled for launch in late September, will not be affected by the man-created radiation belt resulting from a U.S. high-altitude bomb test last July.

The atomic particles are now circling the globe in a false Van Allen belt. Although some space shots have been delayed by the hazardous belt, Tiros VI will be on schedule when it follows its successful forerunners, Dr. S. Fred Singer, director of the National Satellite Weather Center, said.

Two more Tiros research vehicles will follow Tiros VI before June 1, 1963, Dr. Singer said.

During August, Tiros V and its weak brother, Tiros IV, spotted 50% of the major storms well in advance of other reports, showing the extreme success of the research satellite, Dr. Singer told a subcommittee of the House Committee on Science and Astronautics. Hurricanes Alma and Becky were first "seen" from the weather spy, as well as three other major storms.

Since the Tiros satellites have been an "overwhelming success," Dr. Singer has proposed they be used operationally until the lagging Nimbus satellites are completed and checked out.

The development snag of the Nimbus vehicles was reported at the end of August. The scheduled launch date was changed from the second quarter of 1962 to at least the middle of 1963. Even if the shot is successful, it will take several months before Nimbus is truly functional.

An alternative proposal for an operational Tiros system has just been drafted, Dr. Singer said. If the plan is accepted by the users of the system and the National Aeronautics and Space Administration, the first

of two operational Tiros satellites could be launched by June 1, 1963.

An operational program is urgently needed, Dr. F. W. Reichelderfer, Weather Bureau chief, said. Lives, limbs and property can be saved by advance hurricane prediction, as well as protection to crops and aid to navigation, he pointed out.

Tiros VI will carry essentially the same equipment as Tiros V, a NASA official said. It will have two TV cameras and infrared receptors to scout the earth. It will also have nearly the same orbit, covering approximately 50% of the world's weather pattern.

With two Tiros satellites girdling the earth at the same time, Dr. Singer said, 90% of the world would be surveyed constantly. But the emphasis would be on the North American continent, since the receiving stations are on the East and West Coasts of the United States.

Asked if a top priority was being given to the lagging Nimbus program, Weather Bureau officials noted that a research and development problem could not be solved by additional funds or scientists. Too many persons working on the problem can do as much harm as too few, they said.

Until Nimbus technicians solve their problems, an operational Tiros system could do the job, Dr. Singer said.

• Science News Letter, 82:193 September 22, 1962

TECHNOLOGY

First Live Color Telecast From Europe

► THE FIRST live color telecast from Europe, utilizing Telstar, the communications satellite, was viewed by physicians attending the Twelfth International Congress of Dermatology in Washington, D. C.

The transmission is a part of an experimental intercontinental medical communications program from England. It is the first time the satellite has been used for an intercontinental exchange of medical information.

The dermatologists saw a discussion and demonstration of advances in treatment of psoriasis, a chronic skin disease.

The telecast originated at Cudrose, England, near Goonhilly Downs, site of the British transmission station of satellite communications. The picture was transmitted in color by microwave to Goonhilly Downs. The color event conveyed to Andover, Maine, by Telstar was relayed by microwave to Washington, D. C.

At the same time, a panel of physicians in England and a panel of physicians in Washington, D. C., voiced communications with each other by Atlantic telephone cable.

Dr. Donald M. Pillsbury, Philadelphia, Pa., President of the Twelfth International Congress of Dermatology, hailed the communications experiment as a milestone in exchange of medical information. He said: "The Telstar color transmission points the way to more rapid spread of medical information between nations."

Color television facilities of Smith Kline and French Laboratories, Philadelphia, and its British subsidiary, Smith Kline and French Laboratories Limited, were used to telecast the program.

• Science News Letter, 82:193 September 22, 1962

OPHTHALMOLOGY

Eye Drops Can Cause Blindness in Humans

► INFECTION from contaminated eye drops often causes blindness, an Australian eye surgeon said in Sydney.

In the United States, the real incidence of eye infections from contaminated solutions is unknown because of fear of legal liability among doctors and hospital staff, the surgeon charged.

The charge was made by Dr. D. O. Crompton, honorary eye surgeon at Royal Adelaide Hospital, to the Australian and New Zealand Association for the Advancement of Science congress.

Dr. Crompton said medical journals should publicize cases of eye infection caused by contaminated eye drops. They should not feel "fettered by fear of any possible legal consequences following specific disclosures," he said.

Not long ago in an Australian hospital, a number of eyes were lost in a few months from infection following lens extraction, he said.

"The cause was found to be unsterile eye drops. When the ophthalmologists wished to make public their findings, permission was refused by the hospital administration."

Dr. Crompton said there was a proven frequency of contamination in eye drop solutions by *Pseudomonas pyocyanea*—one of the most dangerous organisms in eye infections.

• Science News Letter, 82:193 September 22, 1962

SPACE

Instrument Package to Reach Venus After 1965

► AN INSTRUMENT package piercing the shrouded atmosphere of Venus and landing on its hidden surface sometime after 1965 is one of many planetary probes scheduled to follow the successful Mariner shot.

The package will be dropped from a spacecraft orbiting around Venus. The probe is part of the National Aeronautics and Space Administration's planetary exploration program, largely obscured until now by the man-in-space race.

Within the next decade, NASA plans to have:

Another Mariner fly by Venus in 1964.

A more sophisticated Mariner that will skirt Mars the same year.

The 1,500-pound Voyagers, now in the design stage, to orbit Mars and Venus, sometime after 1965. Each spacecraft will drop a capsule on the planets' surface during its mission.

Between 1968 and 1973, flights will be sent toward Mercury, 57 million miles away, and Jupiter, more than six times farther away (390 million miles) from earth.

Manned flights to Mars may follow soon thereafter.

The Mariner probe now hurtling through space toward Venus successfully marks the beginning of a new phase of outer space exploration—the planets.

• Science News Letter, 82:193 September 22, 1962

size, the internal temperature goes down and the nuclear furnace reduces its output. This permits it to contract again, and the cycle occurs over and over.

Delta Cephei, with a period of 5.4 days, has a mean magnitude of four. This, however, is its apparent magnitude—how bright it looks—which depends partly on its distance. A faint star nearby may outshine a brilliant one that is farther away.

So to compare the intrinsic luminosity—the candlepower—of a star, we use absolute magnitude, which is what they would be if all were at a standard distance. The mean absolute magnitude of delta Cephei is about minus 2; it is some 660 times more luminous than the sun.

For a cepheid that goes through its cycle in a day, the mean absolute magnitude would be minus 0.5, while one with a 20-day period would be ten times as bright, or minus four.

Cepheids are usually recognized from the way their light changes—brightening rapidly, dimming more slowly. Then the period of a cepheid is measured, in days and fractions. The relation between period and luminosity tells how bright the star really is (on the average); you can see how bright it looks in the sky. Knowing the effect of distance on brightness, how far away it is can be calculated.

Thus cepheid variable stars are important tools in measuring distance. Their use has been complicated in recent years as astronomers found that not all of them are alike, as they had formerly assumed. This meant that some of the distant galaxies—huge systems of stars like the whole Milky Way system, of which the earth is a part—were more than twice as far as they had formerly believed.

That is the way science advances, however: one man observes an effect and arrives at a conclusion. Then comes another who refines it, ever getting closer and closer to ultimate truth.

Celestial Time Table for October

Oct.	EST	
2	4:00 a.m.	Moon passes Venus
	4:44 a.m.	Algol (variable star in Perseus) at minimum brightness
5	1:33 a.m.	Algol at minimum
6	11:00 a.m.	Mercury between earth and sun
	2:55 p.m.	Moon at first quarter
7	10:22 p.m.	Algol at minimum
8	6:00 a.m.	Moon passes Saturn
	5:00 p.m.	Venus at greatest brilliancy
10	6:00 a.m.	Moon passes Jupiter
	7:11 p.m.	Algol at minimum
12	10:00 p.m.	Moon nearest, distance 221,800 miles
13	7:33 a.m.	Full moon
20	3:48 a.m.	Moon in last quarter
	8:00 p.m.	Moon passes Mars
21	11:00 p.m.	Mercury farthest east of sun; visible for a few days about now low in east before sunrise
25	11:00 p.m.	Moon farthest, distance 252,500 miles
26	4:00 p.m.	Moon passes Mercury
28	12:04 a.m.	Algol at minimum
	8:05 a.m.	New moon
30	8:53 p.m.	Algol at minimum

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

• Science News Letter, 82:194 September 22, 1962

Piezometers for the measurement of pore-fluid pressures in earth dams have been developed.

ground, such concepts as cesium clock, periodic table, covalent bond, colloidal state and free energy.

THE SCIENCE OF OURSELVES: Adventures in Experimental Psychology—W. N. McBain and R. C. Johnson—*Harper & Row*, 217 p., illus. by Ilse Koehn, \$3.50. Introduces young persons to the methods and experiments used in studying human behavior.

SILENT SPRING—Rachel Carson—*Houghton*, 368 p., illus. by Lois and Louis Darling, \$5. Eloquent protest by a scientist about the indiscriminate use of pesticides by which man has poisoned birds, fish and other wildlife, and possibly even himself.

THE SPACE INDUSTRY: America's Newest Giant—Editors of *Fortune*—*Prentice-Hall*, 178 p., \$4.95. A look at the U. S. space effort from the business and management's point of view.

THIS UNIVERSE OF SPACE—Peter M. Millman—*Schenkman Pub. Co.*, 118 p., diagrams by author, paper, \$1.95. Astrophysicist's up-to-date and very readable general account of the observable universe.

TOMORROW'S MATH: Unsolved Problems for the Amateur—C. Stanley Ogilvy—*Oxford Univ. Press*, 182 p., illus., \$5. Mathematician explains in terms intelligible to the layman, some of the analytical, geometrical, topological and arithmetical problems that have been studied so far without success.

VARACTOR APPLICATIONS—Paul Penfield, Jr. and Robert P. Rafuse—*M.I.T. Press*, 623 p., \$15. A theoretical study of semiconductor diodes with a nonlinear capacitance usable at microwave frequencies.

WEATHER MODIFICATION: Third Annual Report for Fiscal Year Ended June 30, 1961—National Science Foundation—*GPO*, 78 p., paper, 30¢. Summarizes U.S. weather modification activities and reviews programs in other countries.

WONDERS OF THE FIELDS AND PONDS AT NIGHT—Jacquelyn Berrill—*Dodd*, illus. by author, \$3. Tells young readers about small animals at night in the backyard, in the air, underground and at the pond.

THE YOSEMITE—John Muir, notes and introd. by Frederic R. Gunsby—*Doubleday*, 225 p., photographs, paper, 95¢. First published in 1912.

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TECHNOLOGY

Air-Insulated "Balloon" Communications Cable

► COMMUNICATIONS cable that looks like linked miniature balloons has been announced by Superior Cable Corporation, Hickory, N. C. and Simplex Wire & Cable Company, Cambridge, Mass. The technique was imported from France.

The "balloon" design, as it is known throughout Europe, makes possible "improved transmission combined with exceptional mechanical strength and anticipated economy over existing coaxial and telephonic types now available to U. S. cable users," the announcement said.

Widespread application is expected, according to both Simplex and Superior, for carrying all kinds of information electronically, whether "words, pictures or symbols."

Among volume markets viewed are: telephonic communication, railroad and utility applications; educational, community and closed circuit TV; and long lines carrier systems for both audio and video signals.

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1 OCT 62
ONTARIO

APRO BULLETIN

Silver Ball Seen In Ontario

At 10 a.m., on Monday, October 1, 1962, a silver ball-shaped object was spotted by various residents of Thamesville, Ontario, Canada. It was still there at midnight and no explanations were forthcoming from responsible authorities although a flippant newspaperman at the London Free Press informed one inquirer that "it would probably go away after the observer had some sleep." During the evening, jet contrails in the vicinity of the object were seen by observers. The reporter for the Thamesville Herald concluded his rather humorous article: "So, after analyzing all the answers, we swear never to look at another object in the sky. Even if we see it. We'll ignore it." This seems to be good advice, inasmuch as so few people take UFO seriously.

No Case (Information Only)

3 October 1962
Atlantic, Ocean

GLOBAL SIGHTINGS:

ATLANTIC OCEAN-Oct 3, 1962....From a Navy publication dated Nov 10, 1962.....
The sighting was made by Second Officer J. Connors of the American SS Smith Tourist, at 0745 GMT (1:45 AM EST)....Enroute from Bahamas to Morocco, he sighted "what appeared to be a rocket or space ship in the sky." The 'unknown' streaked from W to E, leaving a trail as bright as the sun and the same color.