

THE 1969 **TRUE** REPORT ON

NO. 3 • A FAWCETT PUBLICATION

75c

FLYING SAUCERS

UFO's Over Vietnam: Sightings by American GI's

**WILL THE ASTRONAUTS FIND
FLYING SAUCERS ON THE MOON?**

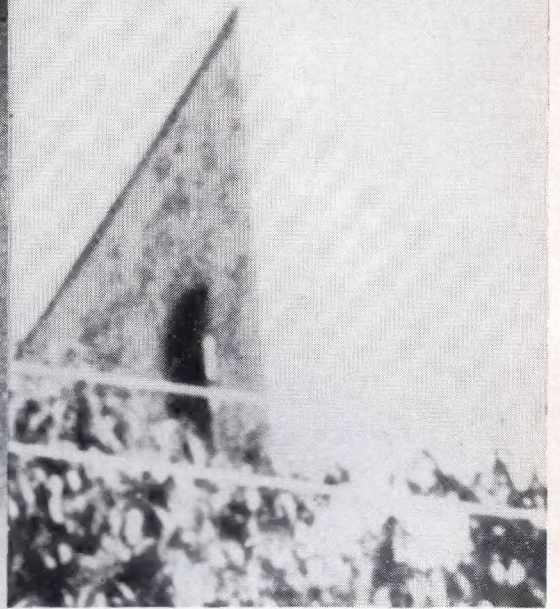
The Condon Government Report: A Whitewash?

Contactees Take the Ultimate 'Trip'

How the Air Force Analyzes Saucer Reports

**LATEST EXCLUSIVE PHOTOS & SIGHTINGS
FROM AIR FORCE PROJECT BLUE BOOK FILES**

From the Publishers of **TRUE**



Project Blue Book—USAF photos

Above, Robert John Wilson photographed this object Aug. 7, 1967 in West New York, N.J., with a Polaroid camera. The UFO was green, made no noise as it sped away "with great speed." Air Force analysts were not convinced. They called it a hoax.

Ed Mervis, a staff photographer for the Miami News, took this shot Sept. 10, 1968 as his Nikon F camera was pointing due South, about 40 degrees from the horizon. Mervis took 22 exposures, all with the same setting. Only two had the object.

THE 1969

TRUE

REPORT ON

FLYING

SAUCERS

From the Publishers of **TRUE**

Frank Bowers, Editor

Herbert Jonas, Art Editor

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Cover photo was taken by Leo McCabe at Georgetown Harbour, P.E.I., Canada, in the early morning, June, 1968. He said other glowing high-speed objects had been observed periodically the previous nine days.

Photo on this page is Apollo 8 view of the large crater Tsiolkovsky as photographed by the astronauts during their lunar orbit mission. The crater is approximately 150 miles in diameter. NASA photo

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Another book on Flying Saucers?! you exclaim. I thought that Dr. Condon and the press had pretty much dusted off that belabored subject and placed it not so tenderly in the archives of historical curiosa. And indeed you are right. Or so it would appear at first glance.

After the massive 1,485-page Condon Committee Report was publicly released early last January, most scientists throughout the world breathed a sigh of relief. Henceforward they were not going to be bugged by those "kooky" types who, in mosquito-like fashion, kept nipping away at both the scientific community and Congress to take Flying Saucers, or UFO's (make your choice), seriously. But their relief was premature: for "kooks" are more persistent than even the most dedicated scientist.

And incidentally, there are some bonafide scientists who are classified as "kooks" by all other scientists. Among these was Svante August Arrhenius, who was one of the earliest recipients of the Nobel Prize—somewhat belatedly. For the very thing that got him that ultracoveted award in science was the thing that almost ruined his life and career. From the age of 22 through his 43rd year he was ridiculed by all but a very few of the noted scientists who were his contemporaries. Among those that scorned him were Lord Kelvin, world-famous mathematician and physicist, and Dmitri Ivanovich Mendelyev, proponent of the great Periodic Law of the elements. They thought that his theory of ionization—which he derived from thousands of experiments for his doctoral thesis—was a crackpot fantasy. It took him 20 years to get his Ph.D. because of this. Today the theory forms a basic foundation for all of chemistry. Then there was Albert Einstein, who

Scientists' Mission: Impossible

Nothing's



was considered a crackpot by most of his fellow scientists when he first introduced his Special Theory of Relativity. Later it led to what men had always considered an "impossible" achievement—the control of nuclear energy.

Yet despite these past, even notorious, goofs of major scientists who were using tradition, convention and the fashionably accepted norm of knowledge of their day as their yardstick to measure the worth or validity of a new concept, a majority of famous scientists still persist in upholding the status quo against whatever odds. Psychologically, they can feel safer that way.

A most recent example of this lack of a spirit of adventure, or of a spirit of complete open-mindedness, or of a respect for the imaginative possibility that *anything*, however seemingly impossible, can be real and valid, was an editorial in the 14 February 1969 issue of the highly respected journal SCIENCE. It is the official weekly scientific sounding board of the American Association for the Advancement of Science (AAAS). Dr. Hudson Hoagland, President Emeritus of the Worcester Foundation for Experimental Biology, was the guest editor. Dr. Hoagland is also a Member of the AAAS Board of Directors. Here's what he wrote, with some reasonable support:

"The basic difficulty inherent in any investigation of phenomena such as those of psychic research or of UFOs is that it is impossible for science ever to prove a universal negative. There will be cases which remain unexplained because of lack of data, lack of repeatability, false reporting, wishful thinking, deluded observers, rumors, lies and fraud. A residue of unexplained cases is not a justification for continuing an investigation after overwhelming evidence has disposed of hypotheses of supernormality, such as beings from outer space or communications from the dead. Unexplained cases are simply unexplained. They can never constitute evidence for any hypothesis. Science deals with probabilities, and the Condon investigation adds massive additional weight to the already overwhelming improbability of visits by UFOs guided by intelligent beings. The Condon Report rightfully points out that further investigations of UFOs will be wasteful. In time we may expect that UFO visitors from outer space will be forgotten, just as ectoplasm as evidence

for communication with the dead is now forgotten."

But Dr. Hoagland, like so many narrow, knowledge-conditioned scientists, however high their eminence, forgets that once physicists felt that it was an "overwhelming improbability" ever to change the mass of matter into energy or that a machine much heavier than air could ever fly or that a rocket could be propelled to the moon or that even a simply accepted thing today—the alchemists' dream of transmuting metals into other metals—was possible. Our high-energy subatomic-particle accelerators can accomplish this with no sweat.

So the moral of this story is: that scientifically, anything *is* possible. And to take the reactionary attitude that it is not, is to retard the progress of science.

Because we feel that this is a most opportune time to publish another book about Flying Saucers—what with the Condon Report released and the reactions to it pro and con—we, as always, are trying to present an objectively rounded view of the UFO problem. Herein, both sides as well as the middle are represented so that an intelligent reader can make his own choice. We feel strongly that this is the most interesting collection of articles we have ever before published.

Included are not only an evaluation of the Condon Report and of the opposition to that Report but also pieces about how the Air Force analyzes Flying Saucer reports, possible propulsion systems for UFO's, Flying Saucers observed over Vietnam, a unique speculation about Saucer crews from a Cornell University professor, an equally unique exposition about how even Albert Einstein may have been wrong when he assumed (mathematically) that the speed of light was the one limiting factor in the Total Universe—and just to round things out, an article on that breed of men who claim that they have been contacted by the crews of Flying Saucers.

There are other goodies too, such as a story on whether or not astronauts may expect to find a Flying Saucer base on the moon. And one of the weirdest UFO stories of all time—the tale of the little saddle pony, Snippy.

Personally, as regards the UFO's, I'm not taking sides one way or the other. It's just that the American public has a right to make their own decisions about whether or not Flying Saucers exist.

—Lloyd Mallan

Letters to the Editor

Similar Saucer

Dear Sir:

Last summer I photographed what I believe to be a craft with which I am not familiar. By that I mean simply that I have never seen such a ship in the sky. I used a keystone turret lens camera, 8 mm. I shot at f-11 and f-16. I also used the electric eye. I shot at normal lens and also telephoto lens. I found that using the electric eye was a mistake because at that short point in the film nothing is distinguished. The best description I can give you now is to refer to page 69 at the top in your last publication. My film strongly resembles Jefferson Villar's photo.

I would like to mention that I have learned from your magazine that my film could be subjected to the overlaying process mention within. Or perhaps even be put to the computer. The latter process intrigues me as I am presently a student at MTI taking the computer operations course.

Sincerely,
William H. Rose
Hollywood, Calif.

Overactive Sky

Dear Sir:

When I was a kid back in the 50's I used to see a light zooming across the skies at night. I never knew what they were and never bothered to find out. At times there were two lights in the sky that sometimes crossed by each other's path. But today, this year, I can only come this close to something that looked like a UFO. It was Wednesday morning near the time the Mariner 5 was to blast off from Cape Kennedy. Sarasota really isn't too far from the Cape, between 150 to 200 miles. It was after midnight; four adults and I got out of the car to have coffee at one of the couple's house. We saw streaks of light across the sky, it was a clear night and visibility was excellent. Then we saw star-like objects appear and move from all directions. Two moved together, then one moved from the north to the south, another moved from the south to the north coming toward each other. Then they veered apart, the one moving north turned toward the east, and the other straight up, vanishing in five seconds. At the same time, a red glare lit up the sky and disappeared, possibly being the rocket giving the Mariner its final push into its planned flight to Venus. Since then till now we still watch these star-like things move great distances.

Sincerely,
Johnny Marco
Sarasota, Fla.



I know they don't exist, Dr. Condon, but...

Call For Objectivity

Dear Sir:

In Number two of your amazingly well written and informative magazine, Mr. Lloyd Mallan interviewed Major Hector Quintanilla, Jr., Chief of the Air Force's Project Blue Book in what I thought was a well handled but unnecessary bit of literature. It is beyond my comprehension how a man of the Major's stature can yield such ludicrous answers to some questions and I regret Mr. Mallan's unawareness of them.

Extraterrestrial intelligence will not be ascertained using the techniques of Project Blue Book. (Perhaps this is precisely why this system was developed.) These errors mentioned above should have been brought up by Mr. Mallan at the interview.

I doubt whether the good Major would admit to them. Not only is UFO data subjective, but the means of analysis is subjective too. It **should** be an incontrovertible objective inquiry.

Mr. Mallan asked the Major what our chances were of retrieving an extraterrestrial vehicle and his reply was, "As far as I am concerned, the probability of such a thing happening during my lifetime is practically nil." In other words, after the Major passes away we will be able to retrieve a UFO, but there is still a fragment of a chance that he'll be around to see it happen too. Then the Major was asked what he based this strong opinion on and he stated that the distances between planets and/or galaxies were too vast. Are you appointing him judge for the intelligence and techno-

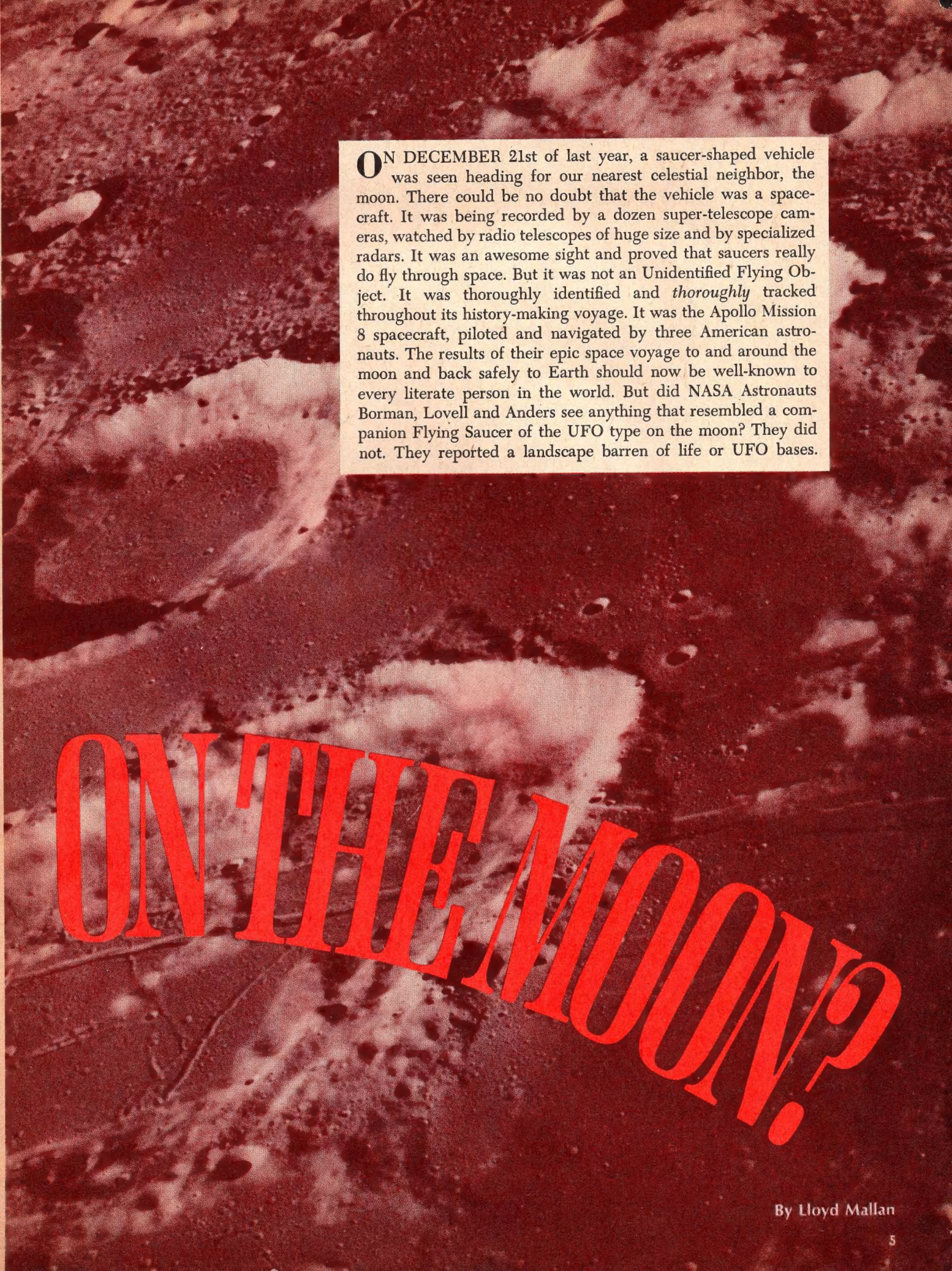
continued on page 72

NASA photos

Could Saucers be stationed inside large moon craters? At bottom of photo is large crater Goclenius, 40 miles in diameter.

An expert on America's space program examines the Gargantuan effort needed to lift our Apollo 8 into space, and theorizes on what a moon-based UFO would need to function as well

WILL ASTRONAUTS DISCOVER SAUCERS



ON DECEMBER 21st of last year, a saucer-shaped vehicle was seen heading for our nearest celestial neighbor, the moon. There could be no doubt that the vehicle was a spacecraft. It was being recorded by a dozen super-telescope cameras, watched by radio telescopes of huge size and by specialized radars. It was an awesome sight and proved that saucers really do fly through space. But it was not an Unidentified Flying Object. It was thoroughly identified and *thoroughly* tracked throughout its history-making voyage. It was the Apollo Mission 8 spacecraft, piloted and navigated by three American astronauts. The results of their epic space voyage to and around the moon and back safely to Earth should now be well-known to every literate person in the world. But did NASA Astronauts Borman, Lovell and Anders see anything that resembled a companion Flying Saucer of the UFO type on the moon? They did not. They reported a landscape barren of life or UFO bases.

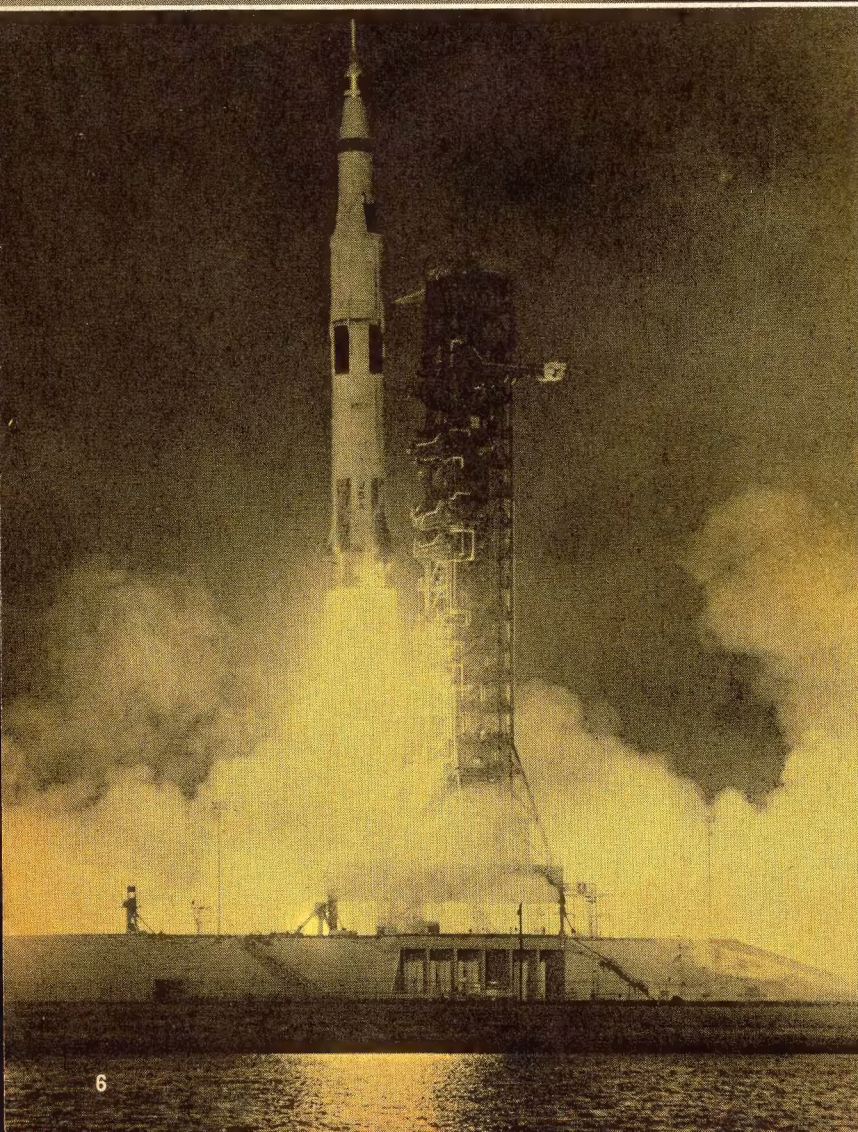
ON THE MOON?

By Lloyd Mallan

SAUCERS



Above, photo taken from Apollo 8 spacecraft looking back at Saturn V after separating. Sunlight reflected from small particles shows "firefly" phenomenon. Below is 363-foot-high Saturn V as it lifted off into space.



There are theories extant that UFO-crews use the moon as a base from which to reconnoiter the Earth, since it is so close to our planet and would be ideally suited to refueling operations, maintenance, repairs and a communications command post for instructions to the Saucernauts.

There are other theories, widely publicized by UFO-believers, that a gigantic mother ship is orbiting the sun, acting as a kind of base, to release much smaller Flying Saucers on their missions through the Earth's atmosphere—this mother ship actually is supposed to store the Saucers in her hold when they are not engaged in Earth-probing missions—or that the UFO's are based on other planets of our solar system, notably Venus.

But the moon-base theory appears to be more logically attractive for two reasons: 1) the moon's gravity-pull is only one-sixth that of the Earth's, is certainly much less than that of Venus and Mars and exceedingly much less than that of the giant planets of our system—Jupiter, Saturn, Uranus and Neptune—and so would require considerably less an expenditure of energy for the Flying Saucer propulsion system (this would be a prime consideration for any UFO commander light-years away from his home base in a distant star system). And 2), for the same energy-conservation reason, a trip from the moon to Earth and back can be measured in hundreds of thousands instead of multiple millions and hundreds of million of miles.

Therefore, if the UFO commanders and crews are as intelligent as they must be in order to design and build their reported remarkably versatile craft and navigate these thru

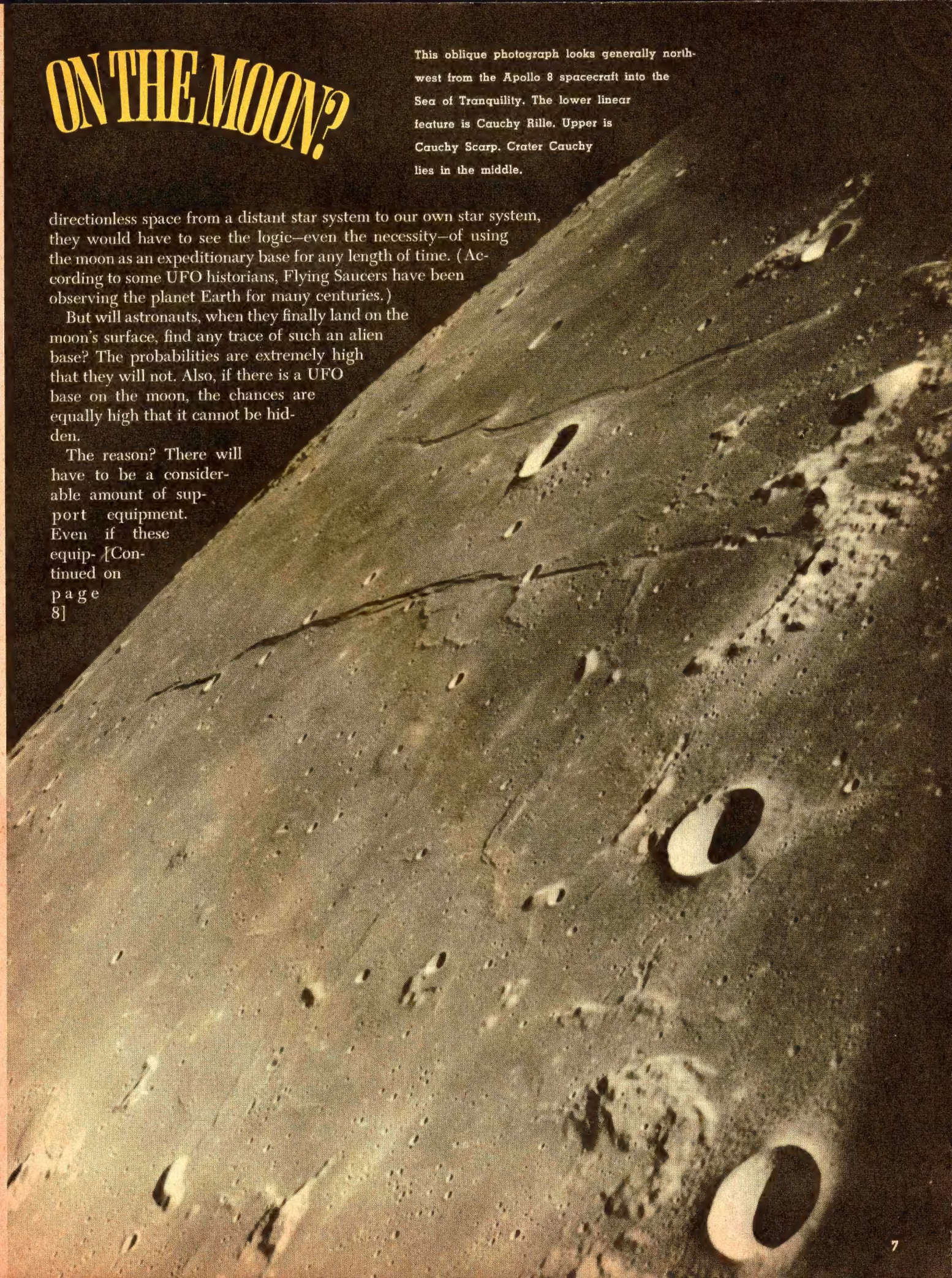
ON THE MOON?


This oblique photograph looks generally northwest from the Apollo 8 spacecraft into the Sea of Tranquility. The lower linear feature is Cauchy Rille. Upper is Cauchy Scarp. Crater Cauchy lies in the middle.

directionless space from a distant star system to our own star system, they would have to see the logic—even the necessity—of using the moon as an expeditionary base for any length of time. (According to some UFO historians, Flying Saucers have been observing the planet Earth for many centuries.)

But will astronauts, when they finally land on the moon's surface, find any trace of such an alien base? The probabilities are extremely high that they will not. Also, if there is a UFO base on the moon, the chances are equally high that it cannot be hidden.

The reason? There will have to be a considerable amount of support equipment. Even if these equip- [Continued on page 8]





SAUCERS ON THE MOON?

A tube-shaped Flying Saucer? No, it's Apollo 8's reentry photo taken by Airborne Lightweight Optical Tracking System camera mounted on a KC-135-A craft flown at 40,000 feet. Splashdown was Dec. 27, 1968.

If anyone is out there looking at us, this is what they're seeing. This view of the rising Earth greeted the three Apollo 8 astronauts as they came back from behind the Moon after insertion burn.

ments were set in caverns far below the lunar surface and even if the communications equipment were designed to operate without tell-tale surface antenna systems, they would nevertheless give away their presence by concentrations of radiation (radio energy, for example), electric fields and magnetic fields. So if there is a UFO moon base, the lunar exploring astronauts will find it.

I personally feel that such a base doesn't exist. I also feel that although there must be other technological civilizations living on planets orbiting stars throughout our Galaxy as well as throughout other galaxies, whose astronauts are exploring space, that it is all but impossible for those peoples to be visiting the planet Earth with such ease as the average UFO enthusiast would have us believe.

My conviction is founded on an intimate knowledge of the American space program and the technological difficulties

that had to be overcome to send a three-man crew safely around the moon and back to the Earth. Assuming even so that we are in a primitive stage of spaceflight, that some other civilization orbiting an alien star is far ahead of us, there still must be incredible technical problems in traveling from one star system to another. Within a radius of 11 light years of our sun, there are a number of stars suspected by astronomers as having planets in their system capable possibly of supporting life, even intelligent life.

But for any segment of that life to launch a space ship into our solar system would be extremely hazardous. There would be exceptionally unreliable communications—even if the interstellar voyagers had radio (or whatever) communications equipment of a quality and power yet undreamed of here on Earth. For electromagnetic energy—which includes radio and light (both visible and in-

continued on page 47

JET PILOT'S RETURN MATCH WITH A UFO



Four dull white
objects flying
in a tight
diamond-shaped formation.
What were they?
Then, three years later
more 'visitors' were
observed—casting
the first sighting
into an even more
tantalizing light

By Robert G. Hill

THEY CAME out of the southeast sector of a clear, calm evening sky—white discs of light flying low, in a perfect diamond-shaped formation. The formation passed almost directly overhead and vanished shortly afterward.

UFO's at close range? As a former aircraft accident investigator, I proceeded mentally to "play back" this sighting, over and over, until every detail was indelibly printed on my memory.

I recalled the time several years earlier when our civil aviation and military authorities were beset by reports of Unidentified Flying Objects that ranged the spectrum from credibility to sheer fantasy. Government agencies were laboring to arrive at some sort of explanation of something for which there were a thousand different theses. They exhorted those who sighted these objects to remain calm; to make note of size, number, shape, color, altitude, direction of movement, distance from the

observer—anything that would assist the authorities in piecing together an explanation.

I was able, that evening, to bring the long-dormant techniques of the accident investigator easily into play. It was like swimming again after years away from the water.

I had been sitting in my back yard, facing east, gazing at the sky, relaxing and enjoying the balmy weather. The date was easy to remember: November 6—my youngest daughter's birthday. My wife was in the kitchen putting the finishing touches on a birthday cake. It was 7:00 p.m. Pacific Standard time.

Suddenly, flying low like hedgehopping aircraft, there appeared over the rooftops four discs of low-brilliance white light in a diamond-shaped formation moving northwestward. My vision locked onto them. After about two seconds my surprised senses told me I was tracking a formation of "Flying Saucers." I turned left as I watched without obstruction till they rolled slightly to the right and pitched smoothly upward in a climb, like a surfboard mounting a

swell. As they nosed upward into a climb-attitude and turned edgewise to my line of vision, they vanished into a clear sky because they had no thickness dimension. They resembled white spots of light projected onto a plate-glass window at night, except there was no light-beam above or below them.

After the objects disappeared, my reaction was one of mild surprise—like, "Well I'll be darned. I actually saw them!" But the sighting evoked no impulse to dash into the house

ABOUT THE AUTHOR

L/Colonel Robert G. Hill of Anaheim, California, is a veteran jet fighter pilot now retired from the Air Force. He is presently with the Autonetics Division of North American Rockwell, where he writes engineering reports. Formerly he spent three years at the Downey complex of the same aerospace company, where he was employed in the Apollo Engineering Department, writing about systems and procedures related to the Apollo lunar spacecraft, for which North American Rockwell is NASA's prime contractor. Colonel Hill is also an FAA-licensed commercial pilot and has served as an Air Force accident-investigation officer.

JET PILOT'S RETURN MATCH WITH A UFO

and announce what I had seen. Besides, the first order of business was to record and analyze the incident.

I recalled the maxim of the aircraft accident investigator: don't draw any conclusions until you have gathered and evaluated every bit of evidence you can find. In years past I had returned time and again to the scene of a crash or re-examined the wreckage or tracked down another witness in order to gather every shred of evidence and try to reconstruct the sequence of events preceding a crash, then determine the cause.

Clearly there had been four of these objects flying in a tight, precise diamond-shaped formation. That's the formation employed by the four-ship precision flying teams like the Air Force's Thunderbirds and the Navy's Blue Angels.

How high were they? Just before the

Project Blue Book—USAF photos

Right, five objects appeared before 14-year-old Alex Birch in this shot from Sheffield, England. Hill's were four white discs flying low.





Strange objects ~~seen~~ in loom over homes more in the summertime than in winter. This Polaroid shot by Robert John Willson was taken Aug. 7, 1967 in West New York, N. J. The Air Force learned the boy had hung an object on a piece of string and taken a picture of it.



discs disappeared, they passed over a row of power-line poles which stand about 60 feet tall. I estimated their altitude to be approximately twice the height of the poles, or about 120 feet.

As to their size, their diameter was about the same as the tops of the poles, or about 10 inches.

Their speed was easy to calculate, being a function of time and distance. In "playing back" the incident, I repeatedly traced the flight path with my fingertip, arm extended. The discs had first appeared over the rooftop at about 20 degrees elevation above the horizontal. Later, by plotting this angle against their altitude, I fixed their initial position over a shopping center about a hundred yards southeast of my home. Their flight path was straight and level. As they passed the point nearest to my position, their

elevation was about 60 degrees. A few yards later, as they went into their climb-attitude, they were at approximately 45 degrees elevation when they disappeared. I had held them in view four and one-half seconds. Again, on a plotted graph I could fix the ground position at which the discs disappeared. They traversed about 400 feet in four and a half seconds, which equals 88 feet per second or 60 miles an hour.

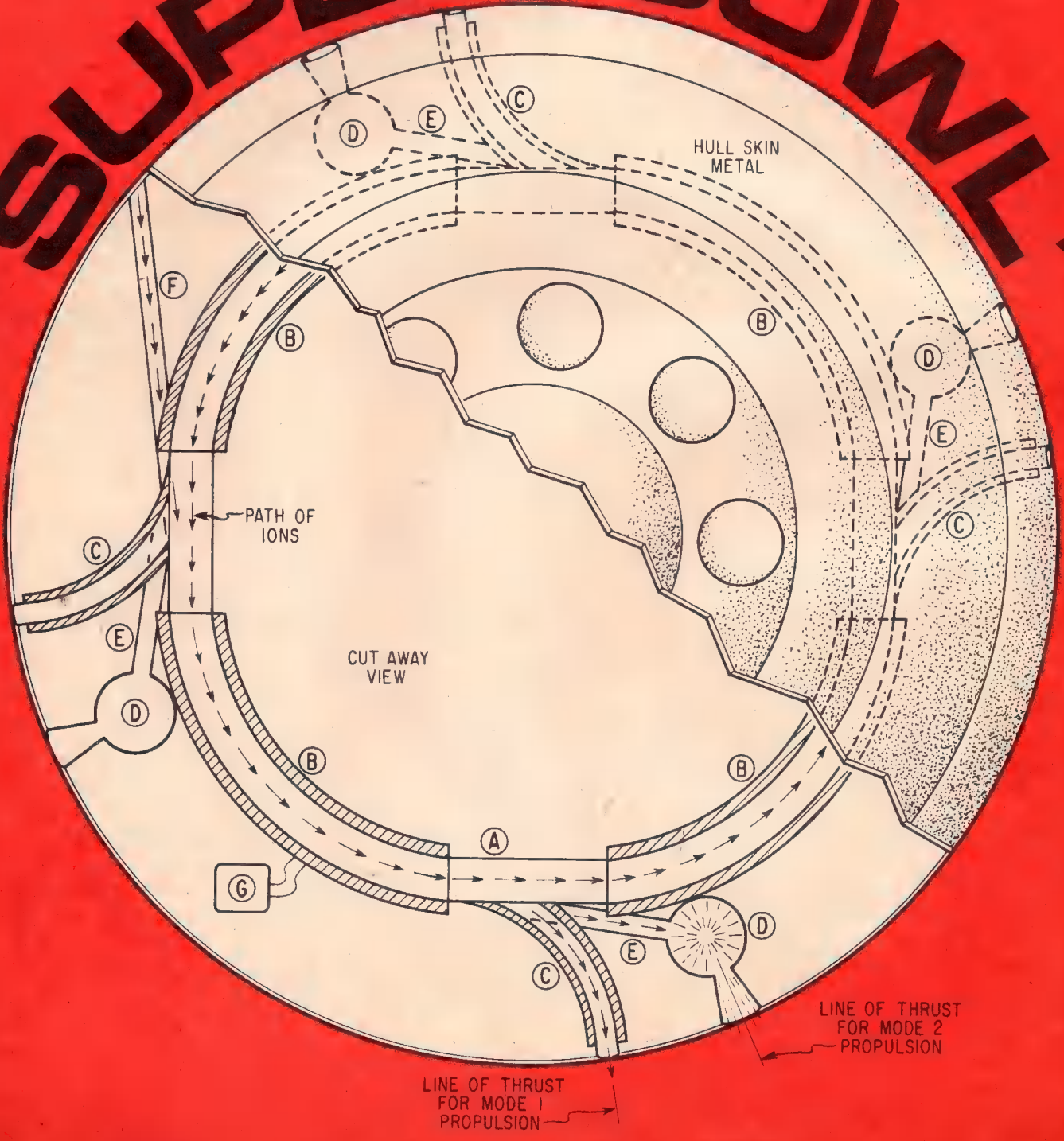
As part of the total picture, environment was noted. The sky was clear—not a trace of cloudiness in any sector at any altitude. There was no noticeable breeze. The last traces of sunlight had faded in the west. The moon had not yet put in an appearance, but many stars were visible.

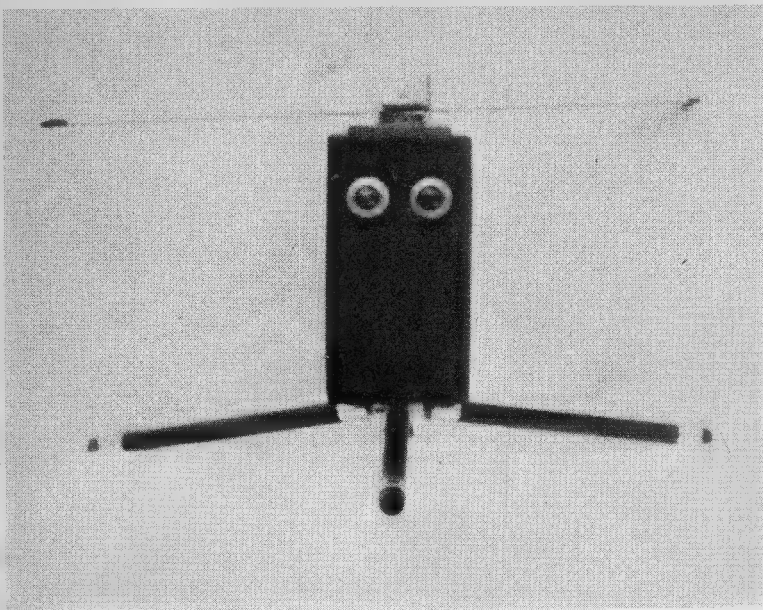
I am not an authority on UFO's and have not researched them, so any conclu-

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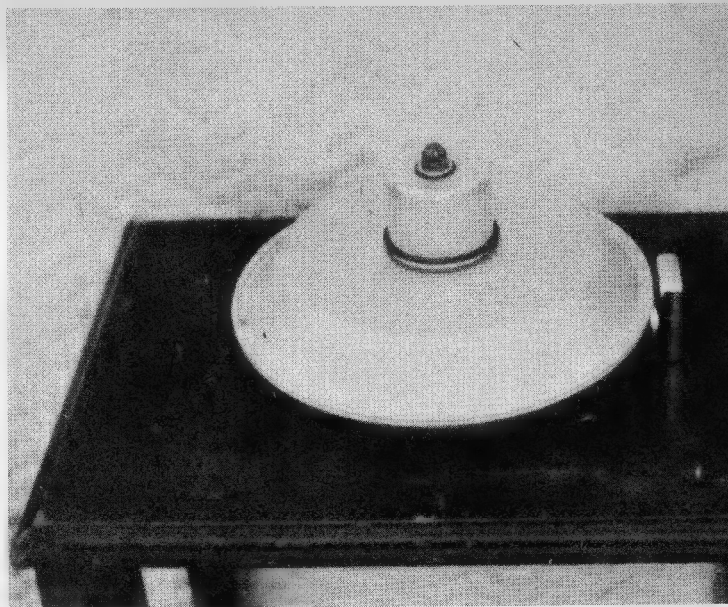
DESIGN FOR THE

'SUPER BOWT'





Phillips isn't the only UFO-gear inventor. G. L. Bernier of Seattle has designed several detectors, including this model with steel reeds mounted compass-like on sharp brass pivot with "pot" magnet.



Bernier's simple compass-like detector uses polarized reeds and "pot" magnet enclosed in aluminum covers with detachable power supply mounted on top portion. Cigarette lighter on side indicates power.



By Charles F. Phillips

This extraordinarily powered,

circular-shaped craft

answers all the

questions about

Saucer propulsion

and its remarkable

quirks of movement

The author of the article is a 27-year-old Mobile, Ala., resident who is employed by Itek Business Products as a Technical Representative. Of UFO's he says he's open to persuasion.

DESCRIPTION OF DEVICES IN CUTAWAY DRAWING

A. Circular metal tube which has been given an electrical charge the same polarity as the ions within the tube. This is done to insure that the ions remain in an electrically charged state. This charge will also repel the ions away from the walls of the tube, thereby assisting the electromagnets in controlling them. Also due to the fact that the tube is cooled to cryogenic temperatures along with the superconductive magnet, the ions should lose their heat through radiation, bringing them to the same low temperature. This should negate the tendency for there to be a gaseous pressure within the tube where there would be normal temperatures.

B. Superconductive electromagnet coils cooled by liquid helium, these coils surround only the curved portions of the tube in the straight sections do not require the surrounding magnetic field. These coils are in an insulating Dewar.

C. Ion deflector with magnetic valve to deflect only the quantity of ions (from their orbit within the tube) needed at any given time. This device is used in mode 1 propulsion, when the ions are used as a propellant themselves. The four deflectors can be used either together or separately as needed.

D. Expansion chamber used for mode 2 propulsion, this chamber is similar in design to a rocket engine. In this chamber the ions are used to heat some propellant matter other than the ions to extreme temperatures. The nozzles are on gimbal type mounts so that they can be turned down for vertical take off when all four are used together.

E. Ion deflector to direct ions into the expansion chamber, it has a magnetic valve.

F. Ion injector tube through which the ions are injected into the UFO from ion accelerator.

G. Liquid helium refrigeration unit.

HOW CAN a Flying Saucer, or UFO, possibly have the tremendous propulsive power that is often reported by observers? Certainly no kind of chemical propulsion system—such as that used in our present spacebound rockets—could power the elusive UFO. And it is doubtful that even presently known nuclear sources of power could provide the energy required to cause the maneuvers and speed of the craft described by UFO witnesses. But there is one type of energy that could meet the requirement. It combines the use of two of the three most powerful forces in the Universe—electricity and magnetism. (The other one is the binding force of the atomic nucleus.)

Theoretically, I have worked out a propulsion system that makes use of these energies.

I am not trying to prove—or disprove—the existence of UFOs. But rather I am trying to describe how such a system could explain the actions of Flying Saucers. In fact, I feel that this would be the only explanation with any logic. To the best of my knowledge, my propulsion system has never before been suggested.

In order to elaborate upon the system, I must first touch upon some basic concepts and discoveries in the fields of cryogenics, atomic-particle acceleration and Relativity.

Cryogenics is the study of the

continued on page 49

NOT MUCH, ■ anything, has been heard by the American press or public about Flying Saucers over South Vietnam. This is not surprising in view of the ■■■ Any sighting by military personnel of ■ Unidentified Flying Object is classified for ■■■■ of military security. ■■ doesn't pay to take chances with aerial objects when their identity cannot be established. They may be ■■■■ new reconnaissance or weapon system devised by the enemy or his allies. Publicizing them would tend to inform the enemy—if they were indeed his devices or machines—about the effectiveness of their mission.

About a year ago, however, ■■■ of the strangest UFO sightings reported in South Vietnam was declassified after it ■■■ determined that the sighting had ■■ military significance. This and three other strange sightings (one of them ■■■ Laos) have ■■■■ before been made public. So in ■ true sense, this article is a "scoop." The source of my ■■■ material must remain anonymous, nevertheless.

In the first case, where two UFO's ■■■ observed over To Chou, there were three witnesses, all of them military personnel. I'll let ■■■ of these ■■■ tell his own story. Here is the verbatim report submitted to military intelligence by Sergeant First Class James G. Ringland, III:

"At 2123 (9:23 p.m.) 05 May 67, I the undersigned did witness the following:

"Upon returning to the team house, located at To Chou, from inspecting the guards, I went to the door on the west side of the house. I noticed an

orange light rising up into the sky on an approximate azimuth of 285 degrees (checked by compass on this day).

"I sat in the chair, watching it. After awhile I called its attention to Sergeant Burdish, who had just gone to bed. Sergeant Burdish watched for

THE

'O T H E R'

ENEMY

Strange, exploding

lights, five oval-shaped illuminated

objects, speeds five times faster than our

own jets—all ■■■■ contained in four startling, exclusive

accounts by G.I. personnel in Southeast Asia



awhile from his bed, then came to the door where I was.

"This light traveled to an altitude of from 10-15,000 feet. When it reached its peak, it started to travel to the left. It went to the left quite

a ways—distance undetermined—where it started to blink, by getting real dim [and] then [going] back to its normal brightness. After blinking a few times, it made a circle and headed [back] to the same point of

ascent, where it headed straight down, almost in its same path of ascent. After it started to descend, another light started up—about a hand's width away to the right.

"When the first light was about



OVER VIETNAM

By Lloyd Mallan

Wide World photo

Saucers don't always travel solo, witness Pedro Chaver's photo from Sicuani, Peru, taken Dec. 8, 1947. ■ Saigon, ■ G.I. ■ 5 large UFO's together ■ the night sky.

THE 'O T H E R' ENEMY

Project Blue Book—USAF photo

Commercial pilot Leonard R. Pomeroy, flying over Laos, took this picture which baffled him. "Looks in my film an airfoil of some sort," he wrote of protuberances. "But with the exception of the outer part that could be wing's leading edge, nothing on the plane resembled it."

quarter to halfway down, it seemed to explode. However, rather than shattering, it seemed to shoot three more lights downward. Then it started blowing in this direction.

"Sergeant First Class Carlson had come into the team house when the first light started to descend, so he and I watched the first one while Sergeant Burdish kept watching the path of the second light.

"As the first light came closer, it appeared to be a parachute-flare. However, it passed about 10 feet above our bunker and we saw a clear (either nylon or plastic) cylinder about three feet long by one foot in diameter. The original light was still glowing in the lead end of the cylinder.

"We watched it until it traveled out of sight, behind one of the houses. It appeared to have traveled outside of our perimeter, but not over the ridge behind our camp on the east side.

"After we lost sight of the first light, we went back to the door to locate the second light.

"The second light did exactly the

same as the first, except it went to the right and emitted five lights—plus a sixth, which was real weak—and extinguished [itself] after a short time. This second light blew over the mountain on the north side of our camp, traveling in a north northeast direction.

"The duration of flight (from time of observation to termination of observation) for both lights was 30 minutes.

"The eight lights emitted traveled straight down in the original path of ascent.

"It was a clear bright night with a strong westerly breeze."

The statement was signed by SFC James G. Ringland, III.

Later, commenting on the statement, an intelligence officer wrote: "The identity of the object(s) has never been confirmed other than that submitted in the report (by SFC Ringland)."

Eighteen days earlier, another group of UFO's were sighted over Saigon. These were of a different nature but were equally mysterious. There was only one witness this time,

but he "was known as a stable, mature member of the 524th Military Intelligence Attachment." His name and rating are: Specialist 4th Class Robert M. Harkinson. In his own words, here's his story:

"At approximately 0220 hours (2:20 a.m.), 17 April 1967, I observed five (5) large, illuminated, oval-shaped objects traveling in a close formation and at a very high rate of speed across the sky. At that time, I was on the roof of the Saigon Field Office of the 524th MI Detachment, located at . . . [address deleted for possible security reasons], Saigon. I first saw these objects near the horizon to my left and watched them cover the entire field of my vision in what I believe to be less than five (5) seconds. During that period of time, the objects traveled from where I first saw them, near the horizon to my left, and then moved out of sight behind a cloud formation at the horizon to my right. The sky was partly cloudy but at the time of the sighting the area of the sky over which they traveled was very clear, with the exception of a few small



CBA International photo

Even the enemy's seeing things! This bright, glowing object was seen hovering silently over Hanoi in the fall of 1967. It was larger than a car and seen by hundreds of people, including military personnel. After a few minutes of hovering, the UFO disappeared into the sky.

patches of scattered clouds which they seemed to be above.

"As the objects passed over these clouds, they were obscured from my vision until they emerged on the other side. I also observed that, as they passed between my line of sight and a star, they covered the star and blocked out its light until they had passed. This indicated to me that the objects were not transparent.

"It was apparent that they were not any form of conventional aircraft, due to their size, shape, rate of speed and the fact that they made no noise audible to me. Prior to the sighting of these objects, I had been observing various conventional aircraft, both propeller- and jet-powered, and there is no question in my mind that they were a great deal larger than any craft I have ever seen in the sky.

"They were also traveling at a rate of speed which I would estimate to be at least five times greater than any jet-powered aircraft I have ever seen. They were too distant and traveling too fast for a detailed description to be possible. I was only able to see that they were definitely oval in shape

and glowed a steady white. They seemed to be in a vertical attitude, rather than horizontal, in relation to the Earth, and then formation slowly fluctuated as they passed.

"Approximately five minutes after they passed out of sight, several jet-powered aircraft, which seemed to be at a high altitude and traveling very fast, came from my far right and to my back as I faced the same direction as when I had seen the ovals. They proceeded to the area where I had lost sight of the objects—and, upon reaching that point, they turned to their right and pursued the same course as the objects I had previously sighted. These aircraft were not in a formed pattern, but were scattered. I'm not certain of the number of planes, but there were several.

"I have never held any opinion concerning Unidentified Flying Objects. Neither have I ever seen any previously. However, I believe that these objects were space craft of some kind. I am convinced that they were not reflections, conventional aircraft, meteorites or planets."

The emphasis in that last para-

graph is SP4 Robert M. Harkinson's.

Many months later, in the fall of 1967, there were rumors that a UFO was sighted over Hanoi, capital city of North Vietnam, but this I cannot verify as fact. The story came out of Japan, along with a photograph alleging to be the object sighted. The picture shows a big blob of light which resembles a spherical galaxy with feathery edges that look somewhat like solar prominences or spicules. As the story goes, hundreds of persons, among them military personnel, witnessed the strange object for several minutes.

Returning to South Vietnam, another interesting UFO case was that of a Marine pilot flying his jet fighter about 30 nautical miles away from Da Nang. He was at an altitude of 15,000 feet and his position in the sky at the time was 240 degrees when he noticed a sausage-like form with lights along its side. It was approaching him on a collision course, but before he could make an evasive maneuver, the object turned and flew parallel to his airplane for about

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The Air Force's Number 1 analyst describes his weird experiences with evaluating

WHEN SEEING WHEN SEEING



Wide World photo



The author (left) has a better knowledge of Project Blue Book UFO files than any person, since he set up those files from scratch. For more than five years he analyzed and evaluated every single report of a UFO submitted to the Air Force. He was a Technical Sergeant before retiring from the Air Force in 1966 to become consultant in electronics with the MITRE Corp. Everyone connected with the Air Force's UFO's agrees that Moody is probably the top in the field.

WHEN "JOHN Q" cries "Flying Saucer," how can the Air Force say "aircraft"? When someone says "space ship," what does the Air Force do before it says "meteor"? And who dreams up such fantastic explanations as swamp gas?

While the answers to these questions have been known to the military, to members of congressional committees, to scientists and professionals with an interest in specific, natural phenomena, and to newsmen who have taken time to find out how

the Air Force conducts its investigations of unidentified flying object (UFO) reports, they have not been presented by any authority to the general public.

Before going into the Air Force criteria for analysis of specific UFO reports, a brief description of how Project Blue Book is conducted is essential. The Air Force has been given the responsibility to investigate and identify UFO's by Congress, and an Air Force regulation was written to cover the collection of this infor-

UFO's and concludes that all that people see glittering is not the gold of a UFO

IS DISBELIEVING



By David N. Moody

UPI photo

Opposite page: Don't blink your eyes. Ohio newsman Paul Massa said he saw this object at a U.S. missile range at White Sands, New Mexico. Above, Dr. Gabriel Caceres, director of Cosmic Radiation Center of U. of Chile, snapped this stationary, blinking UFO March 17, 1968.

mation. Sightings are reported to the Air Force Base nearest to the location of the sighting. An investigation is conducted by personnel from this base and, if the information collected reveals the sighting to be of scientific interest, if it is of public-information interest, or if it is unexplained, the report is then sent to the Project Blue Book office at Wright Patterson Air Force Base, near Dayton, Ohio. If the sighting is explained locally to the observer by the investigator and is of no scientific or public interest, the report is not forwarded and does not become incorporated into the Blue Book case files.

In addition to reports from various

Air Force-base investigations, Project Blue Book receives reports from private citizens in the form of letters, from other military organizations, and from a variety of miscellaneous sources. These reports form the database with which the UFO analyst arrives at such explanations as shown in Figure 1.

The Air Force has assigned three military members and hired one civilian secretary to conduct Project Blue Book. One officer, presently Lt. Col. Hector Quintanilla, Jr., directs the project and handles the public relations aspect; one analyst, presently Lt. Carmen Morano and one sergeant, presently Harold Jones,

keeps the thousands of cases in order. The analyst has the responsibility for evaluation of the reports and assembling them into order for the case files. He has at his disposal the entire resources of the Air Force and the civilian scientific community, and can call upon photo-interpreters, radar experts, meteorologists, astronomers, psychologists, or anyone whose expertise might assist in identifying a UFO report as a known object. One civilian, Dr. J. Allen Hynek, has been retained as scientific consultant to the project since its inception.

While the Air Force is given the responsibility of identifying the UFO, it has no authority to invade the pri-

WHEN SEEING IS DISBELIEVING

Above photo, like the one on the cover, was taken by Leo McCabe of Boston at Georgetown Harbour, P.E.I. Canada, in the early morning of June, 1968. There was solid overcast when the object appeared. Its speed ranged from 300 mph to hovering. He used Brownie camera.

vacy of any citizen. If an individual has reported a sighting to the local news media, but does not want an official investigation as to its cause or possible causes, then no investigation can be conducted. If photographs are taken of lights or other objects in the sky and printed in the newspapers or magazines and the photographer refuses to submit the original negative to the Air Force for Scientific photo-analysis, no further action can be taken by the Air Force. Also, the Air Force has no punitive power against perpetrators of hoaxes, even though the Air Force may have spent thousands of taxpayer dollars in uncovering a hoax. However, it should be pointed out that hoaxes are very rare. Most reports are made by individuals who have seen something that they did not understand and are reporting it out of curiosity or because they feel that "someone" should look into the unusual situation. Also, reports may be motivated by a desire to have the government appraised of events which could be of a national security nature. Then there are those reports made by individuals who actually believe that they have seen a "flying saucer from outer space."

With the foregoing as a background, how then does the analyst evaluate these reports? Draw names from a hat? Throw darts at a board? That might satisfy the statistician, but it would hardly impress the scientists who screen the files for data or the newsmen who look at specific cases for the writing of books and magazine articles. Faith in the Air Force conduct of the project would go down the drain. The main point to be made here is that the evaluation of all cases must withstand

scrutiny by scientists for validity and by newsmen for logic. If the scientists do not regard an evaluation of a report as correct and the news media do not consider it plausible, obviously the analyst has failed. Therefore his explanations must be supported by fact if they are to be accepted.

The analyst, then, must have facts to support his evaluation. He cannot conduct the investigation himself, but he can redirect the investigator who submitted the original report to look for certain bits of data. He can send a form with questions about a particular sighting to the lady who wrote a letter to the Air Force describing something she had witnessed. He can have photos, radar reports and physical specimens submitted for analysis by experts. Above all there is a phone on his desk and a quick "yes" or "no" to certain guesses can be obtained.

Before the analyst can make an evaluation of a report, three conditions must be met. First, he must have a minimum of background information including time, location of sighting, weather conditions, number of witnesses, any special qualifications of the witness for observing things, how to contact the witness for additional information etc. Second, he must have a general description of the object, light or phenomenon observed. Third, and perhaps the most important, he must know the time-motion sequence of the object—where it went and how it moved. It is failure to fit the reported motion of an unknown object to the motion of a known object or phenomenon in the same vicinity that most frequently results in a "Flying Saucer" sighting remaining

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STATISTICAL DATA FOR YEAR 1965

(Compiled 1 Mar 66)

CATEGORY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Astronomical	10	8	11	4	2	11	27	82	31	29	22	13	250
Aircraft	11	8	14	11	14	7	32	61	21	14	15	5	213
Balloon	3	2	1	3	0	3	7	6	3	7	0	2	37
Insufficient Data	5	4	3	4	4	2	16	27	16	7	6	4	98
Other	11	8	7	8	5	6	9	42	8	9	13	3	129
Satellite	4	5	5	5	15	5	42	41	23	3	0	3	151
Unidentified	1	0	2	1	1	0	2	4	4	0	1	0	16
Total	54	35	43	36	41	34	135	263	106	69	57	30	894

ASTRONOMICAL SIGHTINGS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Meteors	6	6	8	2	2	4	14	26	14	7	9	5	103
Stars & Planets	3	1	3	2	0	6	10	55	16	21	13	8	138
Other	1a	1b	0	0	0	1c	3ode	1d	1a	1f	0	0	9
Total	10	8	11	4	2	11	27	82	31	29	22	13	250

- | | | |
|------------------------|---------------------------------------|----------|
| a) Solar image | b) Moon | c) Sun |
| d) Reflected Moonlight | e) Parhelia
(Solar halo or Sundog) | f) Comet |

OTHER CASES

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hoaxes, Hallucinations, Unreliable Reports & Psychological Causes	5	3	4	1	2	1	2	12	2	3	0	0	35
Missiles & Rockets	0	0	0	0	1	0	0	3	1	1	3	1	10
Search & Groundlights	2	1	0	1	0	0	1	2	0	0	2	0	9
Flares & Fireworks	0	0	0	0	1	0	1	1	0	0	2	0	5
Reflections	0	0	0	0	0	1	1	2	1	1	1	0	7
Mirages & Inversions	0	0	0	0	0	0	2	3	0	0	0	0	5
Clouds & Contrails	1	0	0	0	0	0	0	1	1	0	0	0	3
Birds	1	2	0	2	0	0	0	3	1	1	2	0	12
Chaff (ECM)	0	0	0	0	0	0	0	0	0	0	0	1	1
Radar Analysis	0	0	0	1f	0	1h	0	3npq	0	1q	0	0	6
Photo Analysis	0	0	2de	0	1e	1k	2Lk	5kr	1u	0	0	0	12
Physical Specimens	0	1c	0	0	0	0	0	1m	1t	0	0	0	3
Satellite Decay	0	1	1	1	0	1	0	2	0	1	0	1	8
Miscellaneous	2ab	0	0	2bg	0	1j	0	4bs	0	1j	3vwx	0	13
Total	11	8	7	8	5	6	9	42	8	9	13	3	129

- | | | | |
|--|--------------------------|--------------------------------|------------------------|
| a) Tracer Bullets | e) Developer Smear | L) Poor Photo Process | r) Emulsion Flaws |
| b) Misinterpretation of Conventional Objects | f) Anomalous Propagation | m) Plastic Bags | s) Man on Ground |
| c) Metal Ball | g) Kites | n) False Targets | t) Gourd (Plant) |
| d) Part of Photo-Reconnaissance Aircraft | h) Electronic Signals | p) Electronic Counter Measures | u) Processing Defects |
| | j) Debris in Wind | q) Weather Returns | v) Chemical Trails |
| | k) No Image | | w) Missile Launch Acty |
| | | | x) Lightning |

'There is Pay Dirt in a UFO Study—But Quicksand, Too'

—Dr. J. Allen Hynek

By David Daniels

WHEN THE long-awaited Condon Report on Unidentified Flying Objects was issued early this year, it was accompanied by a vitriolic rebuttal. For on that same day Dr. David R. Saunders published his own version of what went on behind the

scenes at the University of Colorado, where the project was headquartered under the Directorship of Dr. Edward U. Condon. The Saunders' "exposé" is titled "UFOs? YES" Its subtitle was "Where The Condon Committee Went Wrong/The Inside Story By An Ex-Member Of The Official Study Group."

Dr. Saunders is a professor of psychology at the University of Colorado and assistant director of its Department of Testing and Counseling. He holds a Ph.D. (Illinois) in psychology. Yet he was fired from the Project by Dr. Condon for "incompetence" about a year before the scientific UFO study was completed.

Two opposing points of view—one a strong defense of the Colorado group's findings, the other a searing blast at its methods, techniques and findings

THE CONDON REPORT:

A WHITEWASH?



'Further Extensive Study Cannot Be Justified'

—Dr. Edward U. Condon

By Lloyd Mallan

DURING the first week of October 1966, the U.S. Air Force announced that one of the nation's most eminent physicists had agreed to become Scientific Director of a project to evaluate the existence or non-existence of Flying Saucers. The con-

tract was signed by the University of Colorado, where Dr. Edward Uhler Condon, the physicist, is Professor of Physics and Astrophysics as well as being a Fellow of the Joint Institute for Laboratory Astrophysics. Two years plus three months and \$525,905.00 later, he released his Final Report of a "Scientific Study of Uni-

identified Flying Objects." The Report, released through the August National Academy of Sciences and the U.S. Department of Defense, contained a massive 1,485 pages.

Up to the time of its public release, the Report's contents and findings were kept tightly secret. The reason for this was that Dr. Condon wanted

The apparent reason for Saunders' discharge, which he describes at length in his book, was that he and Dr. Norman E. Levine, an electrical engineer (also fired) were so appalled by a memo they had discovered in the project files that they made copies of it and gave these to individuals who, although on an unofficial basis, were seriously interested in the scientific aspects of UFO research. One of these persons, a physicist, showed a copy of the memo

to John Fuller of *The Saturday Review*, who had published two highly successful books about Flying Saucers. The result was an article in *Look Magazine* by Fuller, called "Flying Saucer Fiasco."

The article infuriated Dr. Condon and Robert J. Low, Coordinator of the official UFO project. It also created quite a stir in Congress because it made no bones about the fact that Mr. Fuller felt strongly that the American taxpayer's money was

being wasted on the University of Colorado UFO study.

Robert Low was the author of the now-famous memo. Written before the project got started, it was to present the pro and con arguments on whether or not the University of Colorado should accept an offer from the U.S. Air Force to finance a scientific study on UFOs—when UFO's were considered by a vast majority of scientists to be a kooky, nonscientific

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The Controversial Memo

"The trick would be, I think, to describe the project so that, to the public, it would appear a totally objective study but, to the scientific community, would present the image of a group of nonbelievers trying their best to be objective but having an almost zero expectation of finding a saucer. One way to do this would be to stress investigation, not of the physical phenomena, but rather of the people who do the observing—the psychology and sociology of persons and groups who report seeing UFO's. If the emphasis were put here, rather than on examination of the old question of the physical reality of the saucer, I think the scientific community would quickly get the message."

Above, Robert Rinker, a field technician at the mountain laboratory weather station on Chalk Mountain near Climax, Colo., discovered this UFO on his

negative after he shot a roll of film in the area and processed it months later. Rinker said, "I haven't said it's a saucer yet."

the National Academy first to approve the scientific methodology used in the UFO study. He felt, I am told, that Academy approval was necessary if the Report were to be taken seriously by the scientific community and Government. The Academy appointed a special Review Panel of 11 members, including its chairman, Dr. Gerald M. Clemance of Yale University. Other universities represented on the Panel by one or more members were the University of

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know they don't exist, Dr. Condon, but..



UPI photo

THE CONDON REPORT:

'There is Pay Dirt in a UFO Study—But Quicksand, Too' —Dr. J. Allen Hynek

continued from page 23

subject. The University, naturally, did not want to have its reputation tarnished in the scientific community.

Low's memo seemed to suggest a way out of the dilemma, the dilemma being that science should help the Government when asked to do so—but in the process not give the impression of being unscientific, thereby exposing a particular scientific group to be the laughingstock of all other scientific groups.

The memo made its case strong enough so that the University finally decided to take on the UFO project. Other universities and scientific organizations that had been approached previously by the Air Force refused to have anything to do with such a project. The Air Force was desperate because they were being widely and publicly accused of hiding the true facts about UFO's. Whether this was the actual case or

not, their public image was deteriorating. So they tried to set up an absolutely objective scientific study of the UFO phenomenon. There were to be no strings attached. The Air Force would cooperate by supplying UFO case histories, but would not even be advisors to the project. They were, in fact, not even to see any interim reports from the project. The Final Report would bypass them completely and be released directly to the public by the scientific team that ultimately took on the project.

This is a fact: L/Colonel Hector Quintanilla, Jr., head of Project Blue Book, the official Air Force UFO evaluation group, often asked friends from time to time what progress the Condon-Colorado Group was making. On the day that the Final Report was released, Col. Quintanilla was asked his opinion of it. He did not have a copy!

Returning to the memo, the complete copy is included in Dr. Saund-

ers' book as "Appendix A." It stunned him and his colleague Dr. Levine. (See Page 23 for excerpts.) Did Dr. Condon, along with his staff and scientific consultants, *really* misuse the American taxpayer's money to "whitewash" the Air Force and mislead the public? Did he follow Mr. Low's concept as expressed in that preliminary memo to deceive both the people and scientists of this country? Dr. Saunders vehemently believes the answer is "Yes"—despite the fact that the University of Colorado psychologist admits in his book that Condon did not even know of the existence of the memo until a few days before he was fired for having passed out that memo to others. Saunders concedes he would have acted differently on the project if he had known of Dr. Condon's ignorance of the memo.

At the beginning of his book, which was written in collaboration

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UPI photo

Another sighting that baffled the Condon group was the Aug. 3, 1965, photo taken by Orange County (Calif.) Highway Investigator Rex Heflin, still the clearest set of photos yet taken by a mature witness. Heflin got three shots with his Polaroid camera before object moved out of sight.

'Further Extensive Study Cannot Be Justified'

-Dr. Edward U. Condon

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Rochester, the University of Michigan, the Rockefeller University, the University of California and Stanford University.

In his covering letter submitting the Review Panel's report on the Report, Dr. Frederick Seitz, President of the National Academy of Sciences, wrote (in part) to The Honorable Dr. Alexander H. Flax, Assistant Secretary of the Air Force:

"The Academy accepted this task because of its belief in the importance of making available to the Government and the public a careful assessment of the scientific significance of UFO phenomena which have been variously interpreted both in this country and abroad.

"Substantial questions have been raised as to the adequacy of our research and investigation programs to explain or to determine the nature of these sometimes puzzling reports of observed phenomena. It is my hope

that the Colorado [Condon] report, together with our panel review, will be helpful to you and other responsible officials in determining the nature and scope of any continuing research effort in this area."

The Review Panel members agreed 100 percent with Dr. Condon's findings, conclusions and scientific method:

"In our opinion the scope of the [UFO] Study was adequate to its purpose: a scientific study of UFO phenomena.

"The [Condon] Report is free of dogmatism on this matter.

"We think the methodology and approach were well chosen, in accordance with accepted standards of scientific investigation.

"The range of topics in the [Condon] Report is extensive and its various chapters, dealing with many aspects of the [UFO] subject, should prove of value to scholars in many fields.

"We are unanimous in the opinion that this has been a very creditable effort to apply objectively the relevant techniques of science to the solution of the UFO problem."

But has the Colorado/Condon Report actually solved the "UFO problem?" The men of the Review Panel who so unanimously suggest that Dr. Condon's Final Report is the answer to the problem include a Nobel Prize Winner in biophysics (1967), two professors of physics, a professor of psychology, a professor of mathematics, a physiologist, a professor of geology and geophysics, an astronomer, the Director of the Radio Science Laboratory at Stanford University and a former head of the U.S. Weather Bureau. The Chairman of the Academy Panel, now a professor at Yale University, was a former Scientific Director of the U.S. Naval Observatory. This is an impressive list of scientists, yet Dr. James E.

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CONTACTEES

TAKE THE

ULTIMATE

The 'way, way out' fringe not only communicates telepathically with the Saucer occupants, they fraternize, philosophize and even inter-marry! The lucky ones journey into the beyond aboard their spacecrafts. Some even stay for lunch . . .

By T. M. Wright

Barney Hill (pictured above) and his wife Betty are, of course, the two most famous subjects in the realm of contactees. Their story, revealed under hypnosis, is told in John Fuller's "Interrupted Journey." Turn page for letter from them.



Looming over a Miami home like a brilliant space capsule ready for reentry is this UFO snapped by Miami photographer Ed Mervis. He was as mystified by object as everyone else.

IF YOU THINK astronauts and LSD fanciers are the only ones who've taken trips into outer space, you're in for a surprise. A small but loquacious group of people who call themselves contactees claim similar trips—in flying saucers.

Their journeys consist of visits with

“wise old spacemen,” and end with the warning that all of us Earth-locked individuals *must* accept the “space brothers” as benevolent, angelic entities of some invisible super-race. No wonder science in general still treats the flying saucer phenomena as something less than a

bad joke—and no punch line, either.

The most famous of all contactees is the late George Adamski, author of “Inside the Flying Saucers,” “Farewell to the Flying Saucers,” and co-author with Desmond Leslie, of “Flying Saucers Have Landed.” Because of Adamski's renowned position with many saucer investigators, his experiences will be discussed later. For the moment, however, we shall concern ourselves with the lesser-known contactees—Truman Berthurum, George Van Tassel, Daniel Fry, Howard Menger, Mark Probert, and Orfeo Angelluci.

Truman Berthurum is unique among contactees. In contrast to the usual description of tall, angelic beings, Truman says the creatures he contacted were small, dark-complexioned people commanded by a four-foot tall beauty named Aura Rhanes. In his book, “Aboard a Flying Saucer,” Berthurum describes the landing of a large, round object in a desolate area near Glendale, Nevada. It was July, 1952—a time of intensive UFO activity throughout the world.

While sitting in his truck, Truman became aware of several “small men” that were knocking on the window. He got out, and, as his story goes, was taken to the saucer's captain, Miss Rhanes. According to Truman, she could speak and write several Earth languages, and assured him that they meant no harm, that they were here for Earth's good. Concerned by our recent atomic explosions, they felt we could use a little “Cosmic Guidance.”

Truman is a simple, unimaginative man, obviously well-meaning and sincere. Between July and November, 1952, he says, eleven contacts were made with the same craft. During these visits much technical information was relayed—information beyond Berthurum's limited understanding.

According to Miss Rhanes, she and her crew came from Clarion, a planet “behind the moon.” Pressed for the reason why astronomers have not seen this planet, Truman explained that “behind the moon” actually meant “beyond the moon,” in the depths of space.

Under the influence of the Clarionites, Truman has established a New Age “Sanctuary of Thought,” a group dedicated to world peace.

This “world peace” aspect is a dominating factor in *all* contactee stories. In further discussion we shall



Wide World photos

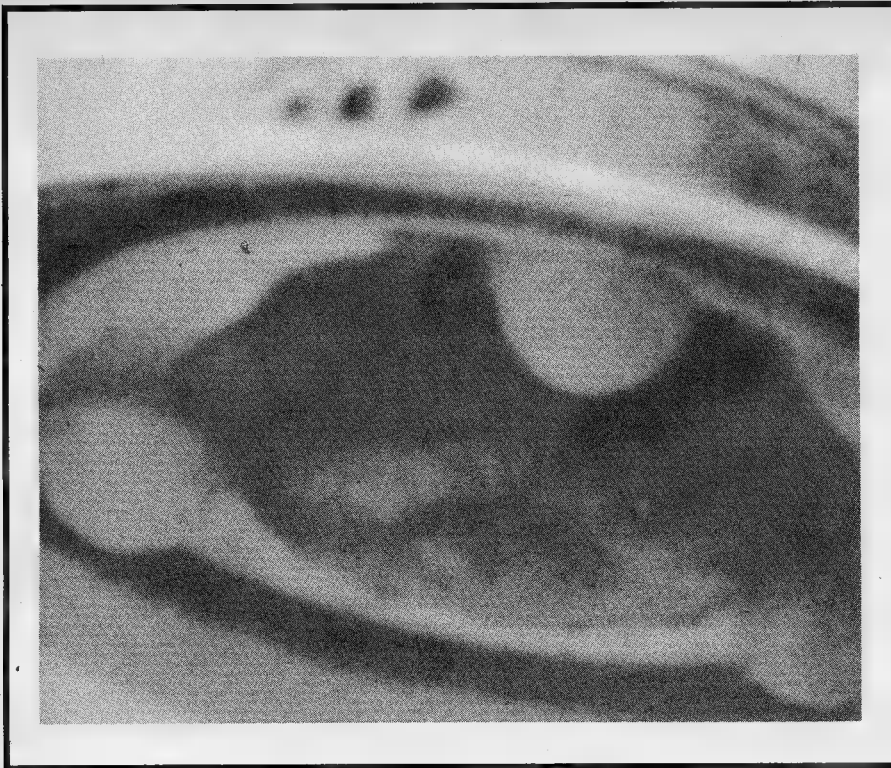
One of the wildest tales of spacecraft visitation was spun by Carroll Watts, a farmer from Loco, Tex., who claimed he spied above vehicle, about 100 feet long, 10 feet high, hovering 10 inches off the ground. Martian-like creatures gave him a physical exam. Under lie-detector, he confessed to making the whole thing up, including photo, said Watts. "It got out of hand."

ULTIMATE TRIP

LETTER FROM THE HILLS...

In your No. 2 issue of "Flying Saucers," inside the front cover is a snapshot taken June 27, 1967 by Jefferson Villar, in New Jersey. On June 29, 1967 the same kind of object was over Route 128 in Massachusetts, in the North Woburn, Burlington area, just before the turn off for Route 3. Barney and I saw this about 6 PM and we received reports of it being seen about 3 pm by others in that general area. At first I thought it was the same type of craft used for advertising purposes, but at Expo I was able to observe this type every day. The photographed one is different, such as the exterior surface is a highly polished metal with distinct ridges. Also in September 1962 a craft, very similar in appearance, was down in the Bay of Fundy. We were on the BLUE NOSE, the ferry between Bar Harbor Maine and Yarmouth Nova Scotia, when the ship was forced to make a sudden sharp turn to avoid striking the object. Everyone ran on deck and we all saw this object protruding out of the water. We were quite close to it and this one was a very shiny metal with ridges, and no windows were seen. The Captain spoke over the loudspeaker and said that we were in no danger but an unknown craft or object was creating a hazard as it was directly in the travel line; that he had contacted the shore and planes were coming out to destroy it. When we docked, the local newspaper carried a headline story of a UFO exploding over Moncton, New Brunswick, which was witnessed by 125 people. Later I did write to the BLUE NOSE to find out if the object had been identified, but they replied that they did not know the results of this.





The bats may be in the belfry and it may be the time of the cuckoo, but this bell-shaped object is claimed to be an actual Flying Saucer photographed by the late George Adamski, who showed ■■ favoritism ■■ he befriended ■■■■ from Saturn, Mars, Jupiter and Venus.

see how this benevolence has blossomed into a religion for those who choose to accept stories of extraterrestrial contact.

We might ask: "If spacecrafts are coming to Earth, why isn't it possible that a few could land and make contact?" Contacts are possible, and yet it seems unlikely that space beings, obviously highly intelligent, would choose as their emissaries men like Truman Berthurum, George Adamski and the rest. For the most part, their stories have taken on religious significance, and though most contactees speak knowingly of "cosmic guidance," and "new age thought," they cannot relay any technical information that could be verified by scientists on Earth. Such information would tend to validate their stories, and find an audience among the intelligent—open-minded investigators.

Today the contactees seem to be glorified con-men, expounding details of visits to the moon and planets—even going so far as bringing back a moon potato as evidence! Their books sell like mooncakes, and are eagerly swallowed and digested by the gullible. Needless to say, their contribution has been negative rather than positive, and whenever they

gather, the press has a field day—at the expense of serious researchers.

George Van Tassel is "The Sage of Giant Rock." Every year the faithful gather at his home in California to discuss their recent contacts with extraterrestrials. Mr. Van Tassel is the chief exponent of O.S.C.—Outer Space Communication. Almost daily he communicates telepathically with space beings, receiving much information understandable only to "advanced or open-minded scientists, astronomers, engineers, experimenters, or metaphysicians." Van "hears" the space beings "sometimes like a voice inside his head, and sometimes telepathically as powerful thoughts." Many of the "truths" given Van Tassel are published in his monthly "Proceedings of the College of Universal Wisdom."

Joining Van Tassel in O.S.C. is Mark Probert, of San Diego, California. Probert transmits messages to Earth from "The Inner Circle," a group of 16 spacemen. The "Inner Circle's" members "possess an endless cosmic perspective, knowledge and wisdom." Some people have hinted that perhaps Mark himself is the Inner Circle. This sends Mark into peals of laughter. He can't imagine him-

self as possessing the "infinite knowledge" of the "space brothers." It's a real wonder this "infinite knowledge" has not seen infinite use. One begins to sense that perhaps the generalities Mark expounds are actually the workings of his subconscious mind. Certainly some use could have been made of the wisdom the Inner Circle's members supposedly possess.

Daniel Fry is more technically qualified than most contactees, and his story is filled with jargon that seems to be far beyond the understanding of us average Earthlings. Author of "The White Sands Incident," and a pamphlet, "Alan's Message to Men of Earth," Fry is national president of "Understanding," a group devoted to the investigation and subsequent understanding of all types of controversial phenomena.

Fry has had numerous experiences with extraterrestrials. His first contact, on July 4, 1950, included a 2,000-mile ride to New York from White Sands Proving Grounds in New Mexico. The air conditioning in Fry's room had unaccountably shut off, and he found it necessary to walk in the desert. While walking, says Fry, a flying saucer appeared silently from the darkened sky, decelerated and landed close by. Approximately thirty feet in diameter and sixteen feet high, it appeared to be an oblate, spheroid-shaped craft.

Made of some sort of "highly polished metal," the object displayed no portholes or entrance way. As Fry was testing the metal surface with his hands, a "voice" suddenly broke the desert's stillness: "Better not touch that, pal; it's hot." Frightened, Dan turned and started to run, tripping over a branch and receiving, for his efforts, a slight chuckle from "Alan," his "space friend."

A few silent minutes passed, Fry experiencing both humiliation and fear until Alan invited him aboard the craft, a small "cargo carrier." After a few more minutes, it was decided that Dan would see the lights of New York, some 2000 away. As Fry wondered at the absence of portholes, a beam of bluish light emanated from a "projector," and the ship's hull became transparent. Takeoff, Dan claims, was accompanied by some discomfort that disappeared as the craft leveled out at 30 miles altitude. During the thirty-minute, four-thousand mile round trip, Fry

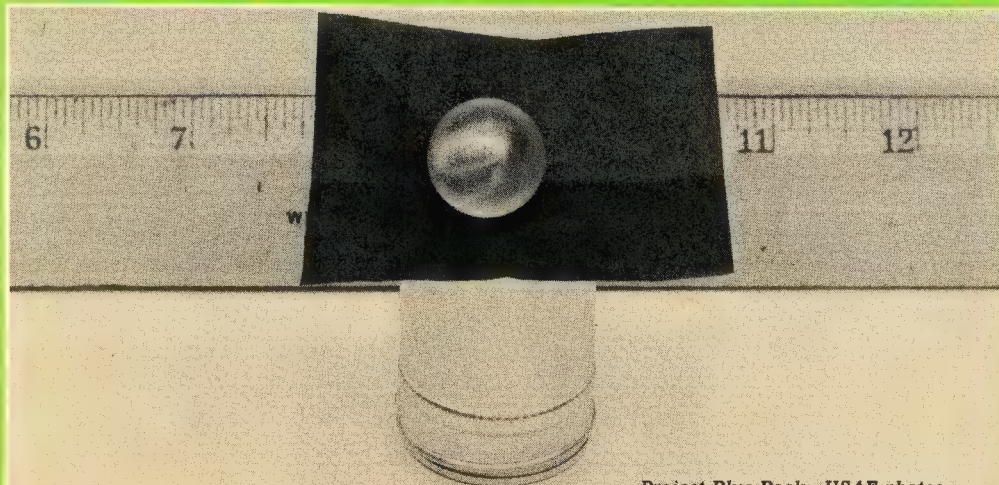
continued on page 67

OFFICIAL AIR FORCE GUIDE: SIGHTINGS for Sore Eyes

When there's too much 'wild'
in the Wild Blue Yonder,
the Boys in Blue
have their primer
to turn to for help



If you didn't know this was a Navy Klitty Hawk plane
with a special "radome"—the housing that protects the radar antenna—you'd be rubbing
your eyes and thinking a Saucer had landed atop the plane. There are only 4 of these in use.



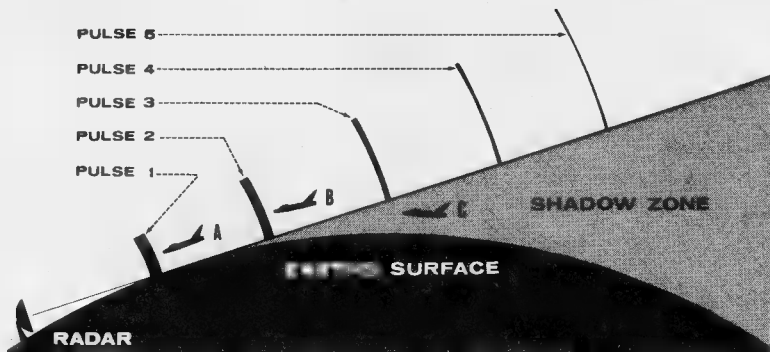
Project Blue Book—USAF photos

The official Air Force guide instructs its men on how to distinguish the real from the unreal,
but there's not too much that can be done when a person notifies the Air Force (from Sweet-
water, Tex.) that this is a hunk of hardware from a Saucer. It's actually a deodorant-top roller.

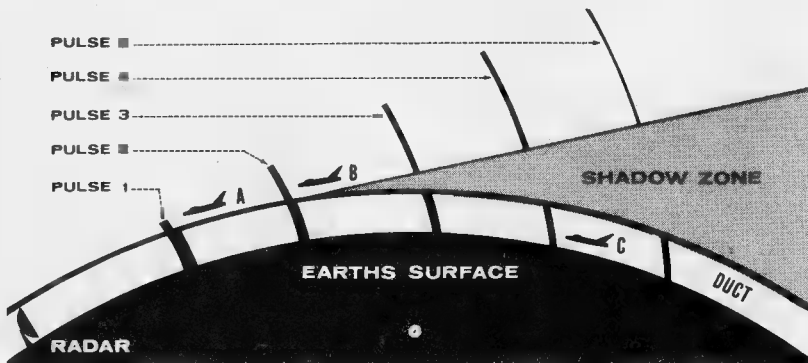


SIGHTINGS

for Sore Eyes



Above, the transmission of a radar pulse, under normal atmospheric conditions, follows line of sight. Therefore the curvature of the earth would place Target "C" in the shadow zone. As a result, the radarscope will show Targets "A" and "B" at normal range, but will not pick up Target "C." In the drawing below, under abnormal weather conditions, with cool air overlaid by a warmer air mass, a duct is formed through which the radar pulse travels and reflects Target "C" at a much greater distance. The radarscope, then, will show Targets "A" and "B" at normal range, but distant Target "C" will appear to be closer than it is. Radar experience provides operator with ability to recognize unusual phenomena.



UFO'S DO NOT constitute a new phenomenon.

In 1254 at Saint Albans Abbey, England, an "elegantly-shaped, well-equipped ship of marvelous color" appeared in the sky.

A farmer in Texas reported seeing a "dark flying object in the shape of a disk cruising in the sky at a wonderful speed" in 1874.

Reported sightings were somewhat sparse until Kenneth Arnold made world headlines in June 1947 when he described a chain of nine fast-flying objects appearing ". . . like saucers . . ." Near Mt. Rainier, Wash.

Scientists examined all the facts presented by Arnold. They determined that weather conditions at the time of the sighting were very stable and were likely responsible for an

increase in the index of refraction of the atmosphere (Arnold had reported the air was "clear as crystal").

After weighing all the available facts, the Air Force concluded that Mr. Arnold had witnessed a mirage created by uncommonly stable weather conditions.

During World War II, the strange illusions that sometimes occur during unusual atmospheric conditions presented a problem for members of a U. S. Navy task force in the Pacific.

Navy spotters reported a strange aerial object rapidly approaching their ship, and opened fire. The ship's navigation officer who was not on the bridge at the time, heard the guns and quickly returned only to discover the gunners were shooting at the planet Venus.

Atmospheric conditions had apparently made the gunners victims of an illusion of proximity.

On Dec. 30, 1947, the Air Force was given the responsibility by the Department of Defense for investigation of UFO sightings under the code name "Project Sign." Air Force interest in the investigations, then as now, related directly to its responsibility for air defense of the United States.

The Air Technical Intelligence Center (ATIC) conducted the investigations.

"Project Sign" conclusions stated in February 1949 hold true to this day:

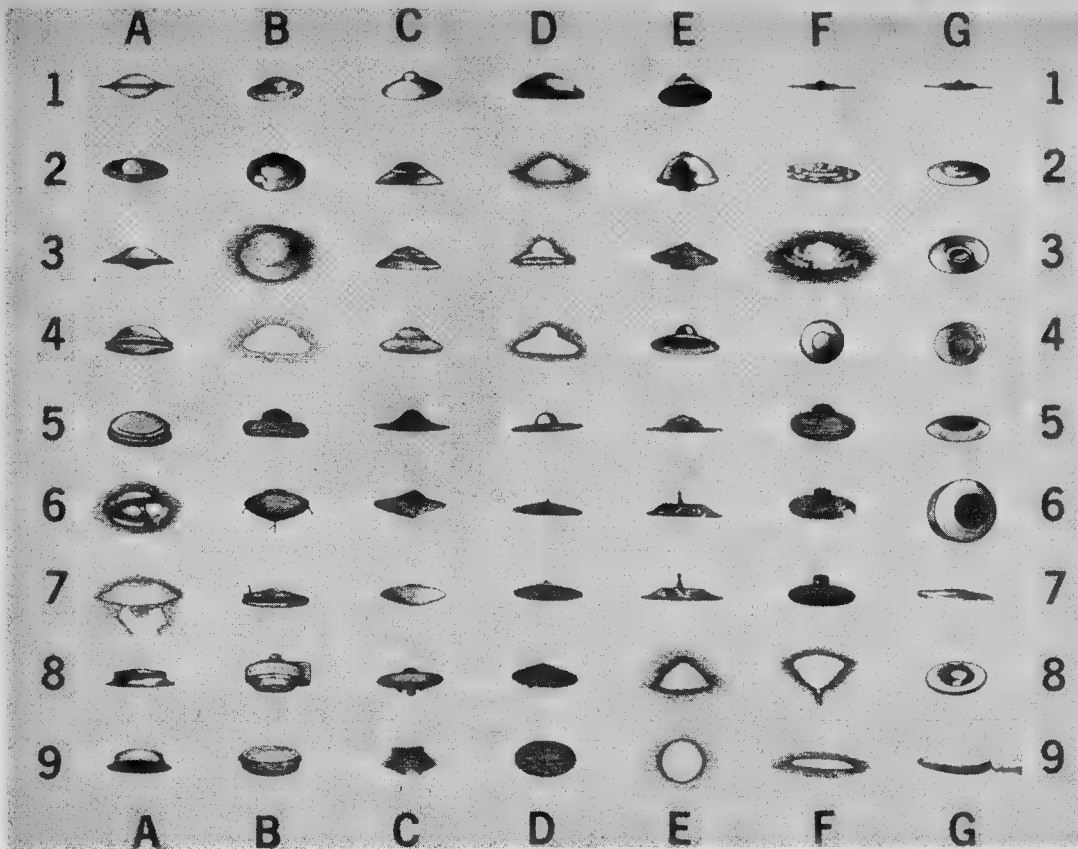
" . . . It is unlikely that positive proof of their (UFO) existence will be obtained without examination of the remains of crashed objects. Proof of non-existence is equally impossible to obtain unless a reasonable and convincing explanation is determined for each incident. Many sightings by qualified and apparently reliable witnesses have been reported. However, each incident has unsatisfactory features, such as shortness of time under observation, distance from observer, vagueness of description or photographs, inconsistencies between individual observers, and lack of descriptive data, that prevents definite conclusions being drawn. . . ."

The UFO project continued on a reduced scale, and in December 1951 the Air Force entered into a contract with an industrial firm for a detailed study of UFO cases on file. It took the company three years to complete the study, which was released under ATIC cover because the company desired to remain anonymous in this field of research.

This report, commonly referred to as "Special Report #14," evaluated all UFO data in Air Force files.

The report stated: "It can never be absolutely proven that 'Flying Saucers' do not exist. This would be true if the data obtained were to include complete scientific measurements of the attributes of each sighting, as well as complete and detailed descriptions of the objects sighted. . . ."

" . . . on the basis of this evalua-



This is the official drawing of what the Air Force considers the most frequently reported shapes of UFO's. The array, says the A.F., is intended only to convey some idea of the variety of shapes that have appeared; it does not give an adequate impression of the relative frequencies with which the different shapes have appeared. With few exceptions, such as the cigar-shaped object with "exhaust trail" (G9), which allegedly was photographed over Peru in 1952, the more well-defined objects are some variant of the saucer or "domed" disc.

tion of the information, it is considered to be highly improbable that any of the reports of unidentified aerial objects examined in this study represent observations of technological developments outside the range of present-day scientific knowledge."

In 1949, "Project Sign" was changed to "Project Grudge," and in 1952 the program of investigating UFO's was given its present name, "Project Blue Book."

Of the 11,207 UFO sightings reported through 1966, all but 675 had been identified. Many of the unidentified remain in that category simply because sufficient information is not available to complete the studies.

During the 20 years of investigations and analyses, photographs have been submitted for evaluation in conjunction with UFO reports. The objects in these photographs have been determined to be mostly misinterpretations of known natural phenomena or conventional objects. Some have been determined to be double exposures, "trick" photography, hoaxes and flaws in negatives or in developing.

Services of qualified scientists and technicians have been, and will continue to be, used to investigate and analyze reports of unusual aerial phenomena over the United States.

Identifying UFO's

During the past few years, many flying objects reported as UFO's were later found to be manmade. Balloons and aircraft have often been misidentified.

For example, an observer who sees a silvery, transparent, disc-like object may be looking at a balloon. The absence of exhaust or engine noise, or any visible means of propulsion, would support such identification. Weather balloons are sometimes released in clusters and may drift in what appears to be a formation, depending on the air currents. They shimmer in reflected sunlight or moonlight, and seem to hover as they pass from one air current to another.

Upper air research balloons may attain great heights and travel great distances before they fall back to earth. They may be observed, therefore, in areas far removed from a launching site. Research balloons are usually constructed of material with a highly reflective surface. They are often 200 feet in diameter and are visible, under certain atmospheric conditions, at extreme heights. Such balloons, seen in reflected light, may seem disk-like in shape and may appear to have an oscillating motion. (They carry radar reflectors which can result in electronic contact.)

An observed object is not usually

a balloon if the speed is very fast. However, some balloons travel in the upper air currents at speeds exceeding 100 m.p.h. To help identify a flying object as a balloon, the observer should keep in mind that a balloon moves with the wind and not against it.

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Below, Paul Nieman of Dallas, photographed this "Easter hat-shaped" UFO on Aug. 9, 1967. Air Force evaluation was "insufficient data."



DR. DOUGLAS LANCASTER of Cornell University is a scientist with unique and provocative ideas about the crews that man Flying Saucers. As Assistant Professor in the Division of Biological Sciences and Assistant Director of the Laboratory of Ornithology at the famous university, he has had extensive scientific experience in studying birds. He feels that because of the way bird-intelligence

evolved on Earth, it is quite possible for birds on another planet, in another solar system, to have logically evolved an intelligence that may be superior to man's. So from his viewpoint, Flying Saucers may not be manned by humanoids at all, but by birds who are curious and puzzled by mankind's inferior intelligence—and thus could be studying us.

are BIRD BRAINS



Convinced that Flying Saucers are extraterrestrial, a noted ornithologist speculates on a 'Planet of the Birds' somewhere out in space with a super-intelligent civilization that could be keeping an eagle's eye on us

During an hour-long interview with him, which he permitted me to tape-record, Dr. Lancaster was emphatic in his belief that Flying Saucers are of extraterrestrial origin. And although my own opinion is that they are not, he presented some convincing arguments for his case. The ornithologist, apparently past his mid-thirties, is tall, slim, good-looking with a touch of gray in his closely cut hair

and speaks with a deliberate earnestness.

I opened our conversation like this: "You seem to be more or less convinced that these mysterious flying objects, whatever they are, are extraterrestrial in nature?"

"Frankly, yes," he answered. "That's my opinion at this stage. I must confess that it's about the only conclusion I

Continued on page 55

CALLING THE SHOTS?

By Lloyd Mallan

Wide World photo

Birds move in a three-dimensional world—going up and down as well as sideways and forward. The fierce vulture (above) also has skilled talons specially adapted for seizing and holding its prey.

Courtesy American Museum of Natural History

Crows (opposite page and below), jackdaws and other members of the family are considered quite intelligent. They have very good memories and can solve mathematical problems relating to food.



are Bird Brains



Wings World (LNU)

Looking like an army of extras for Alfred Hitchcock's movie of "The Birds" these early birds got the best seats on antenna. Below angry Macabird swoops down on couple in San Francisco. A colony of the birds took up residence near the psychopathic ward at the city's General Hospital for no explainable reason.



CALLING THE SHOTS?

Continued from page 10

Left, sea gulls need a highly developed cerebellum, because that is the part of the brain that controls balance, coordination for their diving.

With David Price

Could an advanced species of birds control a Flying Saucer as shown below? Maybe. This UFO was photographed by a tourist in Romania on Sept. 7, 1988.



FASTER THAN THE SPEED OF LIGHT?

WHO SAYS practical interstellar travel is impossible?

Most scientists. Some think privately what Edward Parcell, once with the Brookhaven National Laboratory, said publicly: it's a childish subject to contemplate.¹

It's the matter of tremendous distances to the nearest interesting star systems that is discouraging, viewed in the belief that the maximum travel velocity is that of light.

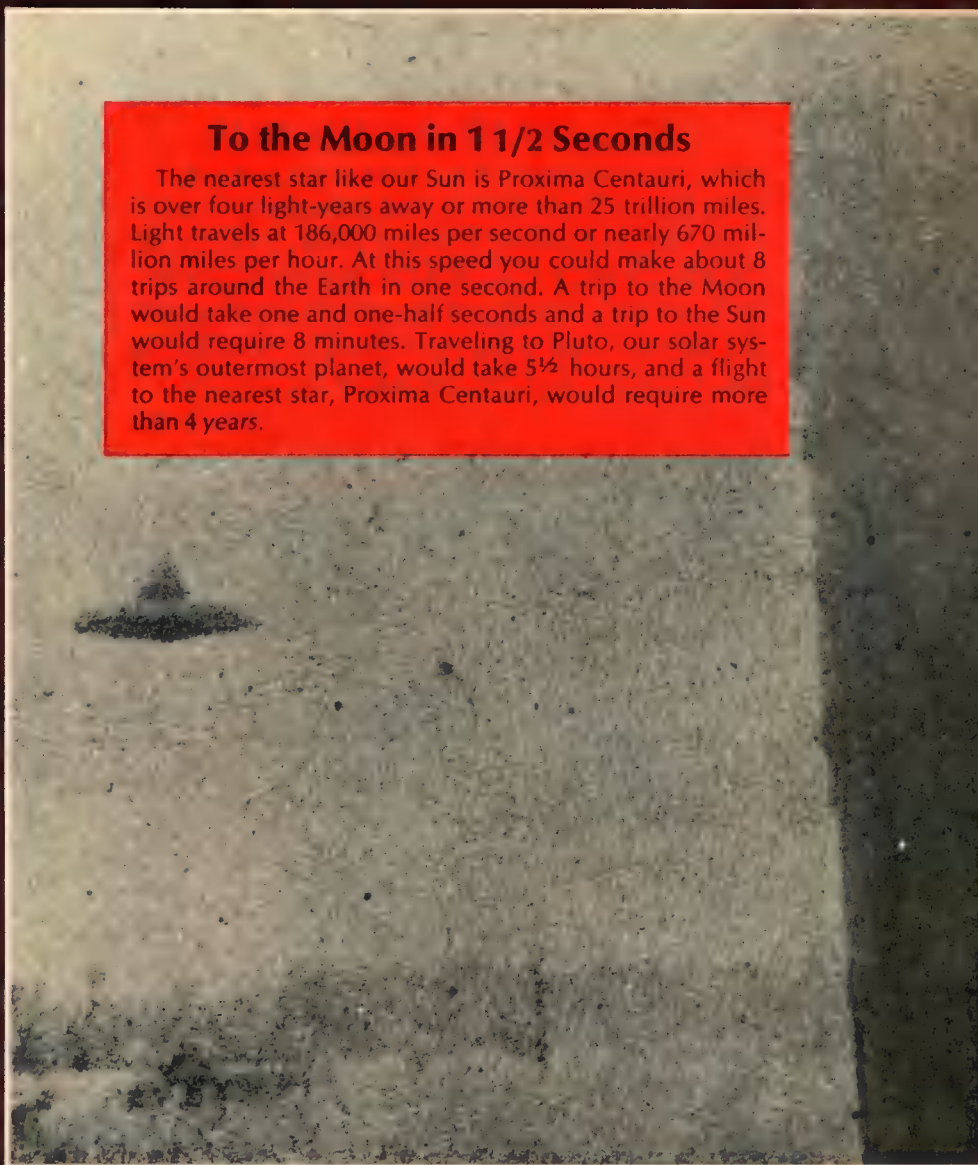
And who said the speed of light is the greatest attainable? Albert Einstein. Well, that isn't *exactly* what he said; that's what his adherents have concluded. His unfettered imagination ranged far beyond the physical concepts of his time to give us theories so advanced that we're still testing their validity. Yet his smashing of one wall of ignorance has led scientists to quail before another—that of maximum physical velocity—with a *coerive* consensus that threatens to discourage imaginative thinkers who otherwise might breach *that* wall. After all, no one—least of all a scientist—cares to be thought childish by his colleagues!

But Einstein's theories still lack incontrovertible confirmation. The Special Theory of Relativity has been found valid for velocities slightly less than than that of light (which mathematically is denoted by c) in the limited instance where the driving force acts *between* two bodies in relative motion, while the principal "proof" of his all-inclusive General Theory recently has been attacked by a Princeton University physics professor.

(According to *Science Digest*, April, 1967, Dr. Robert Dicke's measurements of the sun's oblateness may explain in part those certain peculiarities of the planet Mercury's orbit that heretofore had been accepted as confirmation of the General Theory.)

To the Moon in 1 1/2 Seconds

The nearest star like our Sun is Proxima Centauri, which is over four light-years away or more than 25 trillion miles. Light travels at 186,000 miles per second or nearly 670 million miles per hour. At this speed you could make about 8 trips around the Earth in one second. A trip to the Moon would take one and one-half seconds and a trip to the Sun would require 8 minutes. Traveling to Pluto, our solar system's outermost planet, would take 5½ hours, and a flight to the nearest star, Proxima Centauri, would require more than 4 years.



It seems, then, that scientists well may be premature in classifying extra- c velocities as impossible. In fact, in 1932 a Jena University physicist, George Joos, pointed out that "... velocities greater than c are known."² Then, explaining that such exceptions are incapable of carrying modulation (intelligence), he clar-

fied the *real* limitation implied by Einstein: "... the greatest velocity with which an agency connecting a cause and effect can be propagated is c " [Emphasis mine.] This is *not* equivalent to saying that physical velocities beyond c are impossible!

If we can revert to a child-like—*not* childish—imagination that is un-

IT'S NOT THE IMPOSSIBLE DREAM

An intriguing, futuristic concept in which space vehicles would travel faster than our ability to see them

By R. H. Coddington

On opposite page, the Air Force left then David William Vinnil's Oct. 22, 1967, Milledgeville, Ga., Flying Saucer was a small object suspended from a tree. Project Blue Book—USAF photos

Steve W. Owens of Omaha, Neb., sighted this white object on the night of Oct. 7, 1967. He described it as cigar-shaped with a dome toward the front. A.F. conclusions: probable aircraft.

The Faster You Go, The Younger You Get

One of the tantalizing facts about space travel is that the faster a person travels in space, the slower he ages. Why? Because it is a scientific fact, according to Einstein's Special Theory of Relativity, that as velocity increases, the body molecules slow down.

Theoretically, then, if you had a spaceship in your backyard that was capable of achieving speeds approximating the speed of light (186,000 miles per second), you could take off in space in 1970 when a war was being launched, return a "safe" 20 Earth years later — and be only three or four years older! (For a more detailed explanation of this "time dilatation phenomenon" see below.)

hampered by the limitations of presumed knowledge, we can examine some alternative and rarely mentioned implications of relativity that may suggest a better word than impossible.

First, we construct a hypothetical universe, entirely devoid of stars,

planets, energy fields, etc. Then into this void we put the universe's loneliest man, aboard a sophisticated 250-foot spaceship that would weigh 100 tons on earth. For the sake of convenient visualization, the ship is equipped for the moment with rocket-like reaction motors and a virtually unlimited fuel supply. (The im-

posing problem of gigantic fuel requirements will come up again.) An inertial guidance system stabilizes the ship's attitude.

The fuel's reaction at the stern tubes delivers a steady thrust, but because it is suspended alone in the void, we can't assign a velocity to the ship, we can't define a fraction of in-

FASTER THAN THE SPEED OF LIGHT? IT'S NOT THE IMPOSSIBLE DREAM

finity and call it ■ mile. As Einstein put it, *velocity is meaningful only when it is relative to a point of reference.*

Nevertheless, the potential energy released by the fuel must be translated into kinetic energy of some nature. Since a steady thrust acting ■ a finite mass should, in the absence of external gravitational forces, produce an acceleration, it seems reasonable to assume a resultant motion—even if we can't define it.

Next, we use the omnipotence of imagination to suddenly introduce a second body into our abstraction: we now create the earth. It is four light-years (by earth-type measurements) distant from the prow of the charging spaceship and moving toward it with ■ velocity of exactly c , forgetting for the moment that such ■ relative velocity for material objects is impossible.

Now, since a basic feature of relativity is the freedom to interchange stationary reference points, we'll do just that and elect to make the earth stationary. Then the *ship* is in motion relative to it with a velocity c , and we're ready to examine this two-body universe in the light of relativity.

Ideally, we should apply Einstein's general theory, which comprehensively expresses physical interactions by equations of 10 or so variables. However, those variables are not readily interpreted directly as forces, dimensions and motions convenient for those of us who think better in terms of mental models than in mathematical abstractions. Further, we've noted that the accuracy, if not the validity, of the general theory is under attack.

Einstein's earlier and better-confirmed *Special Theory of Relativity* deals directly in physical quantities and is equally applicable so long as only *uniform linear* motions in gravity-free space are considered.

The second qualification arises because g -forces (arising from gravitational fields) are equivalent to those that produce accelerated—not uniform—motion, and such forces are not included in the special theory. This shortcoming can be minimized in our imaginary universe, at least for velocities less than c , by never permitting the spaceship to come closer than—

say—four light-years to the earth. At rest at that distance, the ship's 100-ton weight at the earth's surface is reduced to 0.000000000000091 ounces, a completely negligible attractive force. If we then make the risky assumption that the g -force between two bodies in relative motion is given at any instant by inserting velocity-dependent *apparent* mass in the usual gravitational formula ($g\text{-force} = \text{mass } 1 \times \text{mass } 2 \div \text{distance squared}$), it follows that only an extremely large apparent mass can exert any significant influence on the bodies' motions.

Disregarding gravity, the Special Theory conveniently boils down to simple algebraic equations into which numerical values can be plugged and the crank turned. Common to all the Special Theory equations is the Lorentz transformation term:

$$\sqrt{1 - \frac{v^2}{c^2}}$$

where v = relative velocity of the moving body;
 c = velocity of light in vacuum; a constant.

It is this radical term which causes all the trouble; when $v = c$, it becomes zero and the expression containing it may become zero or mathematical infinity, dependent upon whether the term appears solely in the denominator or in the numerator.

Applied to our imaginary universe, in which at the moment $v = c$, these results arise:

- mass of ship ■ seen by pilot: rest mass, 100 tons.
- *apparent* mass of ship viewed from earth: infinite.
- length of ship as seen by pilot: 250 ft.
- length of ship as seen from earth: 0.0
- duration of trip to earth viewed by pilot: 0.0
- duration of trip as seen from earth: 4 light-years
- velocity of ship as seen by pilot: indeterminate
- velocity of ship viewed from earth: c
- total mass-energy of ship viewed from earth: infinity
- kinetic (motion) energy of ship viewed from earth (in terms of ship's rest mass): infinity - 1

- kinetic energy of ship ■ seen by pilot: indeterminate
- by our questionable assumption, the g -force acting between the bodies (presumably attractive): infinite


This is an imposing array of apparent impossibilities. Of course the ship cannot possess infinite mass or infinite energy—there would be none left for the earth. Does this suggest that one of the bodies will be annihilated; that two bodies cannot exist in relative motion at c velocity? Can the mere presence of the earth, four light-years distant, destroy the spaceship simply because of the latter's motion? Put another way, is the total energy of all the stars in the universe insufficient to propel the smallest dust mote at c ? The very supposition seems more mystical than physical.

Further investigation suggests another interpretation of these "impossible" results. When we consider the Doppler Effect (the shift in frequency, up or down, of any pulsating source of energy—as the source is related to a stationary observer. A train-whistle becomes apparently higher pitched to a man standing on the platform as the train approaches the station. It becomes lower pitched as the train moves away from the station. Similarly, a ray of light will seem bluer as it approaches an observer—and redder as it moves away. In every case, the effect is caused by a shift of the source to a higher or lower frequency.) of motion on the ship's electro-magnetic radiations—infra-red, radio, and light—as they are observed on earth, we find that for $v = c$, *all* those radiations become infinite in frequency. Thus their inversely proportional wavelengths become zero and cannot be observed at all! (For travel away from the earth, frequencies become zero and do not propagate through space.)

This Doppler Effect of motion can be intuitively understood when we consider that electromagnetic waves *cannot* travel faster than c , *regardless of the velocity of the source* (because electromagnetic radiations—Gamma rays, X-rays, ultraviolet light, visible light, infra-red light and radio energy—are all propagated with the velocity of c). Then for a source mov-

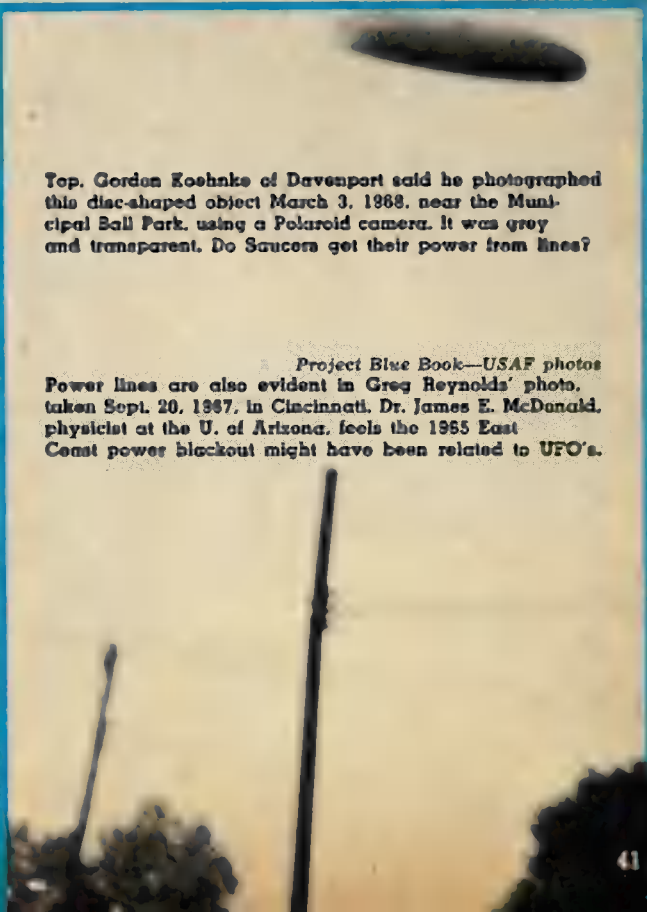
WIRE TO WIRE FINISH

We still don't know where Saucers start out from, or where they go when they disappear, but when we observe them here, their favorite hangout still seems to be power lines—as these pictures vividly demonstrate.



Top: Gordon Koshnke of Davenport said he photographed this disc-shaped object March 3, 1968, near the Municipal Ball Park, using a Polaroid camera. It was gray and transparent. Do Saucers get their power from lines?

Project Blue Book—USAF photos
Power lines are also evident in Greg Reynolds' photo, taken Sept. 20, 1967, in Cincinnati. Dr. James E. McDonald, physicist at the U. of Arizona, feels the 1965 East Coast power blackout might have been related to UFO's.



where war dead—the abandoned train and signal cavities empty.
They excavated all around the ruts, sub-shaped like holes in
the ground under. And winners and signed USA's in the area.

Grizzly Mystery -OR A SHAGGY





Probably the most mysterious and gruesome incident connected with the sighting of Flying Saucers was the case of an Appaloosa saddle pony named Snippy. The three-year old gelding was found dead in a lonely valley near Mount Blanca, some 20 miles from Alamosa, Colorado, on September 9, 1967. Finding a dead horse in the wild hills and valleys of Colorado is not a particularly unusual situation. It was the condition of Snippy's carcass and the weird circumstances surrounding his death that became the basis for a nationwide controversy.

At first it was felt that Snippy had been killed by lightning. But an autopsy performed by a Denver pathologist revealed an apparently more unnatural cause of death. On October 9, 1967, a month to the day after the unfortunate Snippy was found, the Associated Press filed a story from Alamosa about the autopsy over its national wires. The story began like this:

"An autopsy on a horse—believed by

continued on page 40

UPI photo

Forestry aid Duane Martin makes radiological test of Snippy the horse as owner Mrs. Berle Lewis (center) and friend look on.

HORSE STORY?

By Lloyd Mallan

Observatories

here have

been

recording

strange



THE ROAD RUNNER

sounds

from space

at precise,

regular

intervals.

Is someone

somewhere

trying

to make

contact?

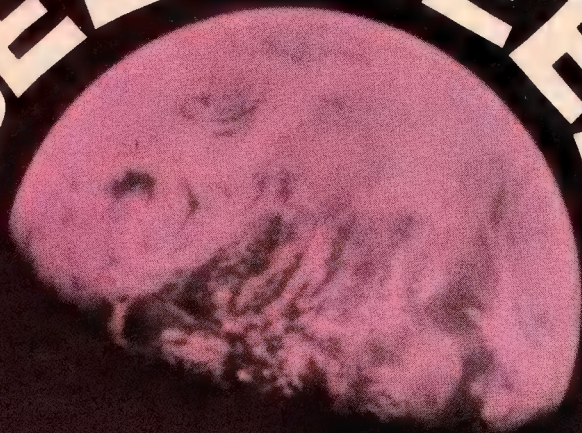
STRANGE CHIRPING radio signals that followed an intelligent pattern were first heard by radio astronomers at Cambridge University in England early last year. Since that time, American astronomers using the world's largest radiotelescope have confirmed the existence of the signals and have been able to resolve them more clearly to determine their extraordinary features.

Among those features are: 1) the signals come from a fixed point in the Milky Way (our local galaxy), between the stars Vega and Altair; 2) the signals are consistently pulsed and at a frequency of 111 megahertz they are among the most powerful signals yet received from outer space by radiotelescopes here on Earth; 3) each pulse is extremely variable during a one-minute period, then it stops for three or four minutes and starts up again for another one-minute period—the spacing continues without fail; and 4) the components of each pulse vary with the precision of an atomic clock—once every 1.337 seconds. Everything points to an intelligence behind the transmission of the strange signals.

Most radio noises from the galaxies, novae, stars and planets are not very discrete (pinpoint sharp). Although they can be focused upon in a large sense with enough resolution to locate their position in the sky, they are generally a hash of noise generated by the random motions of atomic nuclei and smaller particles of matter. Despite this, radio astronomers have been able to obtain a tremendous amount of new information about the formation of stars and galaxies. Using radiotelescopes with high-resolution parabolic-shaped antennas, they have also been able to discover stars and other celestial phenomena that the optical telescopes could not find—such as quasars and pulsars. Additionally, they have been able to draw accurate maps of radio sources in the Milky Way as well as determine the shape and rotational speed of our Galaxy.

But the pulsing chirps that come from somewhere between Altair and Vega are unlike anything ever heard on Earth before. In fact, the British radio astronomers have, since their first discovery, come upon three other sources of precise, discrete signals in

(BEEP BEEP)



IN SPACE

the sky. This has caused some radio astronomers of high reputation, both in the United Kingdom and the United States, to speculate that the signals may be cosmic beacons to aid in the navigation of space ships or else that they could be an interstellar communications network that links together several races or societies of a superior intelligence.

These astronomers refuse to make statements publicly about their theories, since they have no absolute proof, but they are seriously considering the aforementioned possibilities. One of them told the Science Editor of *The New York Times*: "This is the most exciting discovery of the past

fifty years. But don't quote me!"

Walter Sullivan, the *Times* science man, does quote Dr. Frank Drake, Director of the Arecibo Ionospheric Observatory in Puerto Rico, regarding the precision of the signals: "They could put WWV out of business!" that scientist exclaimed. WWV is the radio station on the Eastern Seaboard that is operated by the National Bureau of Standards and the U.S. Naval Observatory. It broadcasts time-signals from an atomic clock at the Observatory so that clocks everywhere can be calibrated for accuracy.

If the radio signals from outer space are more precise than the atomic clock at the Observatory, as

By Lloyd Mallan

Dr. Drake suggests, they must be something. For the Observatory clock is precise to at least one part in 10 million and will not gain or lose the fractional part of a second in multiple millennia!

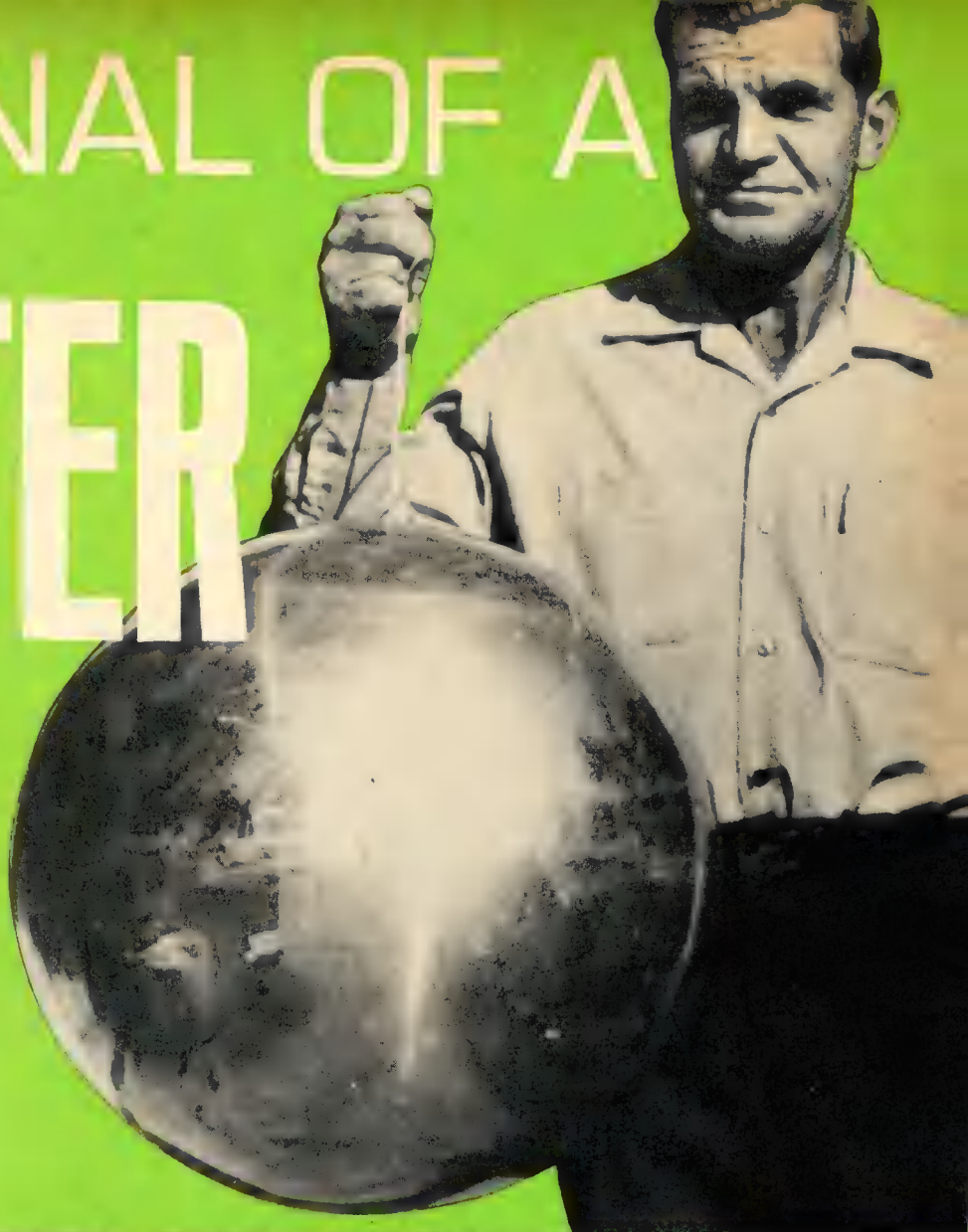
The radiotelescope at Arecibo, Puerto Rico, uses a thousand-foot-diameter carefully curved "lens," or antenna dish. It is operated jointly by Cornell University's Department of Space Research and Radiophysics and the Advanced Research Projects Agency of the U.S. Department of

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NASA photo

This view of the rising earth greeted Apollo 8 astronauts as they came from behind the moon after their lunar orbit insertion burn. Width of photographed area at the horizon is about 175 kilometers. On the earth 240,000 statute miles away, sunset terminator bisects Africa.

ARSENAL OF A UFO HUNTER



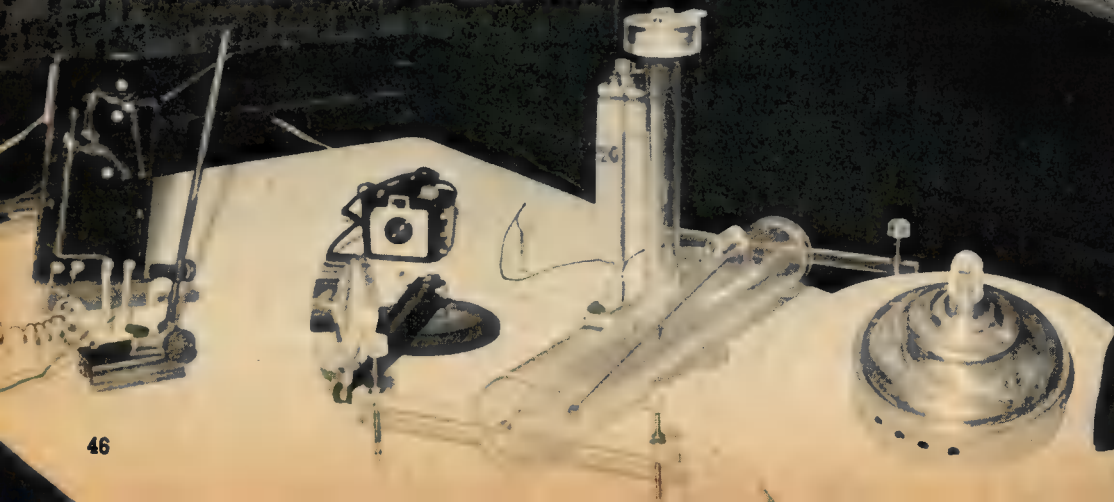
What do you need for your 'saucer-and-ship-hunting' adventures? Only intensive prayers, unshakable patience, and an ability to leave what you see with what you find.

Wide World photo

Above, this unidentified grounded object, a 23-inch, stainless steel spheroid, was found by Arkansas farmer Richard Cummings while hunting. Nylon string he's holding is attached to a clamp inside the object, which weighs seven pounds. Now what?

UPI photo

Artur Caro Bion's arsenal includes a device that can automatically detect and photograph UFO's. Invention's based on a magnetic field which triggers camera shutter when broken by UFO. He holds compass in right hand, simulated Saucer in left.



The Saucers on the Moon

continued from page 1

visible)—travels at the speed of light. Any message traveling between the crew of that space ship in our solar system and their home planet would take from four to eleven years, depending upon the distance of their parent star. It would take that same length of time again to receive instructions from their equivalent of our Mission Control. And instructions from engineers and scientists are vitally important to the safety and success of any space mission.

A graphic example of the urgent necessity for prompt and reliable communications as well as of the "sweat" involved in a successful space mission was the flight of Apollo Mission 8.

I watched the launch from the Pad 39 complex Press Site at the Kennedy Space Center in Florida. Not only I but 1,100 other newsmen marveled at the precision of that launch. We marveled because the giant Saturn V launch-vehicle with the Apollo spacecraft on top contained 5,600,000 component parts, each of which had to be carefully checked out by the manufacturer and by NASA. Then all of them had to be checked out in simulated flight conditions to be sure they all would hold up and work together.

For many days before the launch, the worldwide communications and tracking networks were tested for reliability. The Manned Spacecraft Center at Houston, Texas, where Apollo Mission Control is located, was constantly communicating with Launch Mission Control at the Kennedy Space Center. In turn, both control centers were repeatedly testing with radar and optical tracking stations down the Air Force's Eastern and Western Test Ranges, which included tracking ships and recovery ships at sea as well as tracking airplanes. NASA's Deep Space Network, a series of huge tracking radiotelescopes, were checking out their facilities between Houston, the Mojave Desert of California, Australia and Spain. The Apollo Unified Radio S-Band Sites were coordinating and testing with each other from Guam, Canberra (again in Australia), Kauai (Hawaii), Goldstone Dry Lake (again in California), Bermuda, Grand Bahama Island in the Bahamas, Antigua in the British West

Indies, Ascension Island off the Coast of East Africa, Grand Canary just southwest of Spain in North Africa and Madrid (again in Spain) as well as with ships in the Pacific, Atlantic and Indian Oceans.

All of these communications tests were being coordinated through Houston and the Kennedy Space Center. All of them were also communicating with and through INTELSTAT Satellites in space over the Pacific and Atlantic. Everything had to work together like the finest of Swiss watches before the word "Go" could be given to the Apollo Mission 8 astronauts.

Another prerequisite before that word could be activated was that the worldwide optical tracking network had to be in precise working condition and in reliable communication with the Manned Spacecraft Center, Houston. This network is comprised of Super-Schmidt Baker-Nunn Cameras that can photograph a clean white tennis ball at the distance of the moon from Earth. They are located in the Republic of South Africa, Spain, Argentina, Japan, Hawaii, India, Peru, Iran, the West Indies, Australia and Florida.

The importance of unmanned satellites to a manned spaceflight mission, especially to Mission 8, was demonstrated in the preparations for the lunar orbital flight of three men last December. At least 16 unmanned Earth-orbital and solar-orbital satellites were involved with assuring safety for Astronauts Frank Borman, Jim Lovell and Bill Anders. Four of these were launched within the 40 days prior to Apollo 8's liftoff from Pad 39A at Cape Kennedy, the last two of these being launched into orbit respectively six and three days before the historic flight. If they failed to attain orbit, the manned flight might have been canceled.

All of the unmanned satellites provided safety and communications support for the Mission 8 crew. They provided vitally needed information on the movement of the Earth's weather and predicted the sun's weather. Two of the four Pioneer satellites orbiting the sun were always in a position to view the unseen side of the solar spheroid, which rotates once every 27 days, where a cyclonic magnetic storm could form without warning to create solar flares that would fill the space between the Earth and the moon with lethal radia-

tion of several types: gamma and X-radiation, ultraviolet and solar cosmic radiation, which consists of various kinds of heavy atomic nuclei. A HEOS (Highly Eccentric Orbit Satellite) served as a backup to the Pioneer Satellites for information about cosmic radiation and solar-wind strengths in the area between the Earth and the moon.

Additional backup satellites were the OSO (Orbital Solar Observatory) in Earth-orbit, the OGO (Orbital Geophysical Observatory) and the IMP (Interplanetary Monitoring Platform). These carried special optical and radiation sensors. The ESSA Satellites photographed cloud-cover around the world for weather forecasting. ESSA VII was especially useful in providing information from the emergency landing areas planned for the Apollo 8 astronauts return to Earth as well as from the actual chosen landing zone in the Pacific Ocean.

ESSA is the Environmental Science Services Administration of the U.S. Department of the Interior. Their satellites in conjunction with the ATS (Applications Technology Satellite) of NASA made it possible for the Spaceflight Meteorology Group and the Space Disturbance Forecast Center, both coordinated by ESSA, to analyze the weather conditions through all levels of the atmosphere—from the troposphere through the stratosphere to the ionosphere. Their information was immediately communicated to the Manned Spacecraft Center from their headquarters at Suitland, Maryland, and Boulder, Colorado. Houston then ran the information through computers to correlate it with other unmanned satellite information. The solar-orbiting Pioneers made it possible to predict radiation levels within safe limits for the Apollo 8 Mission.

Few viewers in the worldwide television audience were aware of the extent to which satellite spacecraft were involved in Apollo 8 communications—both in operational exchanges between the astronauts and Houston Mission Control and in relaying commercial television broadcasts to many parts of the Earth. There were the INTELSTAT Satellites, or International Telecommunications Satellites. The Communications Satellite Corporation, which operates the INTELSTATS, set aside 100 of the 240 two-way voice circuits

in each satellite to handle NASA's support communications with the Apollo 8 spacecraft.

At least 40,000 scientists, engineers and technicians around the world were involved in the spectacularly safe and successful flight of the Mission 8 astronauts.

Even assuming that the intelligence and technology of the race that produces Flying Saucers are inconceivably superior to our own, they

simply must have to have *some* support for their alleged scouting missions of the Earth. Unless we are so low on the evolutionary graph which curves toward intelligence that we are even behind the ants, our technology *must* be on a fairly high level. Maybe it isn't. But *if* it is—and we, of course, can only judge for ourselves—then it would appear to be somewhat unlikely that a Flying Saucer crew could get away with no technical or

scientific support for what have to be utterly complex technological missions.

However little support they should require, it cannot be that easily hidden. Possibly they can be thoroughly elusive of identity in flight. But at their base mission-control center, *something* has got to show. If that base is on the moon, I'm sure lunar astronauts from the Earth will find them. •

Jet Pilot's Return Match

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sions I may reach concerning their nature are based solely on a layman's observation and conjecture.

There have been many sightings reported by reliable people. With no attempt to discredit anyone else's report and not being able to state definitely what these objects were, I can name a few things that they were not.

First, they were not an hallucination. I saw them at close range, quite clearly. They were not spots of light cast against the underside of a cloud by the high-powered publicity spotlights so common in Southern California. There were no clouds and there were no shafts of light to be seen in any direction.

They were not solid objects. They made no sound. They were not lights on low-flying aircraft. I flew military and civil aircraft more than 20 years and am quite familiar with their appearance and other characteristics.

These UFO's were not the mysterious darting or hovering vehicles from outer space that are sometimes reported by excited observers. They were like white, flat spots sliding smoothly on an invisible table top.

What do I think they were? Possibly the result of some atmospheric phenomenon that caused two interfacing layers of air to reflect the light from a nearby source, such as the mercury-vapor lamps illuminating the parking lot at the shopping center where these objects first appeared.

The foregoing account of UFO's was written about three years ago, then laid aside by the author as a not-too-exciting story. Resurrection of this article was prompted by another, more recent "UFO" experience.

Again, the date could be fixed by another simple little exercise in mnemonics: association with the autumnal equinox on September 21,

1967. I was puttering around the backyard of my home (still in Anaheim, California) occasionally watching the gradual dissipation of a very high cirrus overcast in the west and admiring the kaleidoscopic play of colors being splashed about the clouds by the sun, which was already below the horizon.

THE ROCKET'S RED GLARE CAUSED FUROR EVERYWHERE

Then suddenly, as if a bomb had hit them, some of the multicolored cloud formations appeared to explode and glow more intensely. Gradually, ■ they started to dissipate again, the clouds assumed the shape of giant discs and dome-shaped objects, not unlike the humming-spinning tops that are still popular as Christmas toys for youngsters.

After about five minutes, against a blue-black sky, there remained only two large discs that were slowly extinguished by their own vaporization and a receding sun. Due to prism effect one of them was fuchsia colored and the other glowed an eerie green. Both could have fitted into ■ Walt Disney fantasia. (I watch the Disneyland fireworks over my front yard during the season.)

It had been a truly spectacular display. While the two giant, colored saucers hung dying in the sky, I called to two of my teenagers: "Want to see some Flying Saucers?"

The girls came out into the yard,

ooh-ed and ah-ed at the sight—and identified the discs as clouds with the sun reflected off them. "Mark my words," I remarked, "this will cause reports of Flying Saucers."

While we were still standing there watching the colored discs, two adult neighbors ran into the yard, one of them excitedly, barely coherently, telling about and pointing toward the Flying Saucers he had seen and describing the maneuvers they had gone through.

This is what had actually happened: at the end of a heavily overcast day, the sky was clearing. The last high cirrus layers were slowly breaking up at sunset. During twilight an intercontinental rocket was fired off from Vandenberg Air Force Base some 150 miles to the north. (I was employed at Vandenberg on a missile program for two years and had observed many launchings.) Its flaming tail was visible as the rocket passed through the layers of near-dissipated clouds off the coast, west of Los Angeles. The rocket's exhaust apparently recondensed some atmospheric moisture and "exploded" it into visible clouds which reflected several color-frequencies of the visible-light spectrum. It had been quite a show of Flying Saucers—and in Technicolor!

Maybe this would not make as fancy press copy as we now read about Flying Saucers, but I would propose that Unidentified Flying Objects be henceforth and forthwith renamed Unusual Flying Objects. Then we could have our UFO's and eat them too. I can swallow a UFO like those that called on my neighborhood. Some I've heard about might even be Unlikely Flying Objects. Anyway, a UFO is a UFO is a UFO. They really are. ■

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7th Sighting's Lucky For Pennsylvania Youth

Six times during 1967, Mr. T.A.N., 14, observed a hat-shaped UFO. Again on January 27, 1968, he saw the same odd object. The remarkable thing about this UFO, apart from its stubbornness, was its shyness. Mr. T.A.N. wrote to Project Blue Book: "It always came back at least three times a night. It stayed near lights, trees and buildings, so it could not be photographed. The only reason I got one picture was because I was outside the first time."

Mr. T.A.N., who lives at Upper Darby, Pa., described the UFO thus: "They looked whitish and moved very fast and then slowed up and hovered and flew away."

The last time he saw the UFO, when he managed to photograph it, Mr. T.A.N. had two witnesses with him—his mother and her friend, Mrs. J.D.R.



'Super Bowl'

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world that lies near absolute zero on the temperature scale—minus 459.63 degrees Fahrenheit, or zero degrees Kelvin. To find out how matter operates in these unbelievably frigid temperatures is the whole purpose of the study. The strange phenomenon of electrical "perpetual motion" has been discovered in this realm of deep coldness. An electrical current, once started in a closed wire loop, can flow forever at cryogenic temperatures. This is called "superconductivity," or zero electrical resistance. Certain metals cooled to near absolute zero exhibit this characteristic.

Since magnetic fields are generated at right angles to the flow of any electrical current, it is now possible

to construct superconductive electromagnets that generate tremendously powerful magnetic fields and do not take up much space. The ordinary electromagnet operating at ordinary temperatures must be huge and use bulky wires and plates of magnetic metal alloys to withstand the high heats generated by their resistance to the electric-current flow. Superconductive magnets can be small because their wires can be thin, since they offer no resistance and a very large electrical current can therefore pass along a small wire without generating any heat or otherwise being obstructed.

Not only are these superconductive electromagnets much more powerful than the conventional iron-core types, but they do not even require a core of metal. More amazing than this: after the initial charge of electricity

is set in motion through the coil, no additional current is ever required to maintain the electrical flow. The only energy needed after this to keep the current flowing forever is a refrigerant, such as liquid helium. If the wire is immersed in liquid helium, the molecules of which it is composed are slowed down to almost zero-motion—where they cannot resist or interfere with the movement of electrons that are generating a magnetic field.

It will also be necessary for me to mention one aspect of Albert Einstein's famous Special Theory of Relativity which has been proved to be fact. The Special Theory states that mass and energy are interchangeable—and that at the speed of light (approximately 186,000 miles per second in a vacuum) the mass of any solid body becomes infinite, in other words it becomes energy. For this reason, Einstein postulated that no material body or particle of matter could exceed the speed of light. In other words, as any form of matter is accelerated toward the speed of light its mass increases proportionately, to the point where the weight of its mass resists all further motion.

A common misconception is that mass and matter are one and the same thing. This is not true. Mass is a quality of matter: it is not a tangible thing that has shape or can be seen and touched. Mass is rather a measurement of the potential and kinetic energy of any specific form of matter. It is the quality of matter to resist being placed into motion when the matter is at rest—and to resist being stopped when the matter is in motion. Mass therefore is a measurement of the inertia inherent in any material body. When that inertia becomes infinite, as it would, according to Einstein, at the speed of light, then a material body can move no faster, since all of its mass has been transformed into energy.

Thus it is possible to increase the mass of solid matter by applying enough energy to it to cause an acceleration of its speed. More and more energy would have to be applied as it approached the speed of light, because its weight increases with an increase in velocity. So it is possible to convert mass into energy and, inversely, energy into mass.

With the large atomic-particle accelerators (commonly called "atom smashers") of today, we have the

power, or energy, to accelerate particles of matter near to the speed of light. There are several basic types of such accelerators, but the type with which we are concerned is a large doughnut-shaped tube surrounded by iron-core electromagnets. This machine—called a “Bevatron” or “Cosmotron” or race-track-type—is used to kick electrically charged particles of matter up to fantastic speeds by the use of a pulsating electric field. This field is generated by an oscillator and made stronger with an amplifier system. It kicks the particles of matter inside the tube to an even higher velocity as they pass through its sphere of influence. The electric field is placed strategically at a position that is open between the magnet-core sections. In this way it can exert its influence around a section of the tube that is almost entirely free of a magnetic influence, which would conflict with the electric field.

Inside the doughnut-shaped tube, the particles circulate in the form of a beam of electrified matter. Since the beam has an electric charge and thus generates a magnetic field of its own at right angles to itself, the super-strong magnetic field generated externally and surrounding most of the tube—in conflict with the weaker internal magnetic field—keeps the beam bottled in on a single track.

In other words, the electrified particles are accelerated by electricity and kept in line by magnetism.

As the particles within the beam move faster and faster, their energy becomes greater and greater, requiring an ever more powerful external magnetic field to keep them in line. So the power of the magnet surrounding the tube is proportionately increased to match the increasing energy of the beam as its particles race around inside the tube a million times or more before they reach maximum available energy.

Not all particle-accelerators operate in this way, but the ones that do produce particle-energies in the Bev (Billion-electron-volt) range.

It is possible today to accelerate electrified particles of matter to a speed where their mass is increased by as much as six times. This mass-increase could be continued almost indefinitely—if it were not for the fact that the greater the mass of the particles becomes, the stronger must be the magnetic field to overcome the

FUELED WITH SUPERMASSIVE ATOMIC ENERGY

resistance of their increased weight, or mass. When this mass exceeds a certain weight, the particles break the hold of the magnetic field and fly off the track to be dissipated against the walls of the tube that contains them. The only limiting factor that prevents the mass of atomic particles from being increased to, say, 100 times their original mass is the strength of the magnets in the accelerating machine. But today, the limit of magnetic-field strength has just about been reached with the conventional core-type electromagnets.

Yet why not use the much more powerful superconductive magnets mentioned earlier? Indeed physicists have suggested this and as far as I know, such a supermagnetic particle-accelerator may be in the works right now. When such a super-accelerator is built, it should have the capability to increase the mass of atomic and subatomic particles to supermassive proportions.

The UFO would be “fueled” in the following manner:

1. Refrigerate the electromagnet's coils to operating temperature with liquid helium.

2. Charge the now-superconductive coils with electrical energy. This could take many days, using the total output of a large power station daily. (In one sense, a superconductive electromagnet can be charged like a battery or capacitor, since there is no electrical resistance in the coils when they are at superconductive temperature.) After the magnet-coils have reached maximum charge, the power-source is disconnected. A recharge will never be needed so long as the coils are kept at superconductive temperature.

3. The UFO is then connected to a huge supermagnetic ion-accelerator. This accelerator would feed high-energy ions into the UFO-engine tube. Because of the nature of an ion-accelerator, only a small quantity of ions can be accelerated at any one time—but it is capable of producing

batch after batch of high-energy ions and ejecting them sequentially. At their maximum velocity and mass, the ions would be injected into the UFO, batch after batch. The process would continue until the circular tube in the UFO contains a considerable quantity of supermassive ions traveling nearly at the speed of light. This process could take months to complete, but by that time the UFO would contain almost the total energy generated by the ion-accelerator.

After the UFO is fully fueled with supermassive atomic energy, it will contain within its hull an unbelievable driving force. As an example: if the ion-gas in the UFO engine-tube had a mass at rest of 30 pounds, after it has been accelerated to 100 times that original mass it would have a new mass of 3,000 pounds. The potential of energy within that new mass is self-evident. Using Einstein's famous formula that energy equals mass times the speed of light squared ($e = mc^2$), you don't have to be a scientist to calculate the incredible amount of energy available to drive the UFO.

There would be no need in the UFO for any additional power-source other than the one described. Any miscellaneous power-requirements, including that needed to keep the supermagnetic coils refrigerated, could easily be obtained from the same source that produces the propellant-power, or driving force, of the UFO.

Other benefits for space travelers are inherent in the design of such a spaceship-engine. According to scientists of the Air Force and the National Aeronautics and Space Administration, a magnetic field like the one described in this article would protect the space voyagers in the ship from the deadly radiations of outer space. Also according to reliable sources, the magnetic field of such a ship could be used for magnetic braking against an atmosphere ionized by the shock of re-entry from deep space—thus much reducing the heat of gravity forces associated with re-entry.

Finally, the ship just described could explain a phenomenon that has often been reported by observers of Flying Saucers—the strong magnetic fields that seem to surround them. It also meets the requirement of being circular in shape—as are so many of the UFOs reported by observers. ■

Seeing Is Disbelieving

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unsolved. In Figure 1 on Page 21, 1965 sightings were used because a breakdown of all sightings for that year was requested for a briefing of the Defense Science Board by the *ad hoc* Committee chaired by Dr. Brian O'Brien. Since the analyst knows what causes most UFO reports, it becomes his job to explain "how" or "why" the object was misidentified in the first place. In so doing the analyst must be familiar with the psychological limits to which he can ascribe misinterpretation of conventional objects under unusual conditions. Obviously, in clear weather a normal person who has seen many aircraft will not fail to identify an aircraft, even though it may be of a type which he has never seen before. However, the same individual might report an aircraft as a UFO if its flight were sudden, unexpected, and under unusual conditions—conditions which would distort the lights of the aircraft at night, such as temperature inversion. A combination of such factors might give an appearance so different from that expected of an aircraft by the witness, that he would submit a UFO report.

Before an evaluation of any Flying Saucer report is attempted, the analyst must have sorted all of his previous reports into the time and place of each sighting. Other reports of this same object may already be in the files and the cause of the sighting already known. This particular report would then be added to the similar reports already existing in the case-file. If more than one report of the same object is submitted at the same time, these multiple reports are assembled into one case-file. Sightings of a meteor or a satellite-decay may be reported from an area covering several States. The decay of the TIROS weather satellite was witnessed from Florida to Maine along the East coast of the United States.

After the initial reports are assembled into case-files, the analyst screens the reports to determine if the basic information necessary for evaluation is present. If sufficient factual data exists for identification of the UFO, an evaluation is made and the case is placed in the files. If more information is needed for a solution, this missing data is requested from the witness or from the

investigator who submitted the initial report. If necessary, an expert in some technical field pertinent to the case—such as radar, photo-interpretation, meteorology, astronomy, etc.—is consulted. Any additional information needed is usually determined by the description of the unknown object and by how well the reported time-motion sequence conforms with the actual description and time-motion sequence of a known flying object in the same area at the same time. For example: if an object were described as a star moving across the sky, the analyst would think of an aircraft at altitude or of a satellite. If the direction of flight was to the NE or SE he would study the satellite schedules. But if the flight were extremely rapid, such as 90 degrees of arc in ten seconds, he would eliminate both aircraft and satellite as a possible cause. Perhaps the best way to describe how Flying Saucer reports are evaluated is to discuss each of the major analysis categories and indicate what characteristics must be present before a true evaluation of any particular flying object can be achieved.

Aircraft: Aircraft evaluations are made on the basis of description and flight characteristics. In the majority of UFO reports attributable to aircraft, the evaluation is made primarily on the time-motion sequence. The lighting and visual characteristics, as well as the time-motion sequence, may differ with the type of aircraft and/or its mission.

Local military installations are contacted for flight-schedules of military aircraft operating in the area of the sighting. ACIC provides the UFO analyst with maps and charts showing both low and high level air corridors and flight-restricted areas. They also publish the "Flight Planning Guide" which lists all refueling areas and their controlling agency. Special low-level military training areas are included in this publication and a map showing the routes in and out of these areas is distributed periodically. At Wright-Patterson Air Force Base, the Aeronautical Systems Division of the Air Force Systems Command provides the UFO analyst with information on aircraft lighting configurations and at the same Base, the 17th Bomb Wing provides the analyst with local schedules. The 922nd Air Refueling Squadron, also at WPAFB, provides information on visual characteristics of night refueling opera-

tions and the Strategic Air Command supplies photos of night refueling missions so that the visual characteristics of night refueling operations can be understood by UFO analysis personnel.

Civilian and military agencies known to be engaged in night photography are contacted in cases of suspected photographic missions. Regularly scheduled airliners usually fly in known air corridors and the Federal Aviation Administration is contacted for flights of this nature. No case is evaluated as an aircraft if the reported maneuvers are not consistent with aircraft flight.

From Figure 1, it will be noted that there were 213 UFO cases evaluated as aircraft during 1965. Of these, 44 were identified as specific jet or conventional flights, 7 as helicopters, 2 as photo missions, 3 as refueling operations, 11 as aircraft with advertising banners or towed lighted signs, and the remaining 146 were evaluated as conventional/jet aircraft.

Meteors: Meteors are evaluated as such because of the reported description, motion and brief duration of the sighting. The description is usually similar to a ball of fire, a trail of sparks, or an exploding light. In all cases, motion is rapid and the usual duration is a few seconds. Occasionally daylight sightings are made of meteor trails and the persistence of this trail may last as long as thirty minutes. The UFO project Scientific Consultant must concur in Flying Saucer reports evaluated as meteors. Copies of these cases are then sent to Dr. Charles P. Oliver of the American Meteor Society for whatever action he deems advisable.

Stars and Planets: In 1965, 138 cases were evaluated as stars or planets. Venus, Jupiter, Mars, Capella and Sirius are the major culprits when they are visible, and a temperature inversion is usually present to distort their appearance. The characteristics of an astronomical sighting of this nature include observation of a light in some general area over an extended period of time.

It frequently includes the UFO observer's witness interpretation of motion toward and away from him or of sudden bursts of speed in and around a certain point. If the report is of an actually setting star or planet, its disappearance may be interpreted as "zooming off into space," since refraction—or bending of light through the

The Missouri Cows That Leaped Over a UFO

Early one cold February morning on a farm outside Gower, Missouri, an executive of the Panhandle Eastern Pipe Line Company who raises cattle as a hobby was awakened by the frightened bawling of his cows. The exact time was 2:20 a.m. CST. The date was February 9, 1968. As Mr. R.W.B. described the incident in a long letter to the U.S. Secretary of Defense, the experience he had that morning left him with "hot flashes and chills at the same time." He was also "perspiring all over."

His letter was not only eloquent but also graphic. Here are some excerpts from it: "I am employed in town and operate an all-grass farm. If there is a disturbance among my cattle, I arise to their bawling as would a mother to her crying child.

"Last night I heard several cows bawl as though frightened or scared. I immediately jumped from my bed and ran to the picture window in my living room. It was a dark night but there was a distinct glow giving off considerable light immediately in front of the house (approximately 300 to 350 feet away). It made sufficient light for me to maneuver around a card table left in the middle of the room, and to see cattle in the pasture in a rough semi-circle to the left of the light glow.

"As my vision adjusted from darkness to this moderate light, I was able to see parts of what appeared to be a tremendous circular object.

"The light was a yellowish green and came from the concave sides of the craft. I could not tell whether it came from a translucent surface or was reflected from the base of the craft against a shiny surface and then back to the ground . . .

"The object appeared to be at least 100 feet in diameter, and to be hovering 20 to 25 feet above the ground . . . There were definitely seven openings or portholes in the approximate center of the concave sides . . . I could not see distinctly enough to tell if they were square, rectangular, oval or round . . . I would guess that they were two feet to 30 inches in approximate diameter. I saw no door or distinct opening. I saw no living thing enter or depart the craft . . .

"Some of the cows were staring at this object from perhaps 100 to 200 feet away. Cows with younger calves were bawling, and some of the calves were answering. Finally one cow whirled and ran, with tail high, toward the barn. The others followed and in only a few seconds there were no cattle in sight. The craft remained some little time after the cows departed, but I have no idea whether this was half a minute or considerably longer. . .

"All during this time there had been a distinct noise that I have difficulty in describing. It sounded something like the swish of a piece of wire which one might whirl around above his head at high speed and yet it had a pulsating rhythm of some kind. When the craft departed, this noise was two or three times louder and the sound-pulsations were more rapid. The craft moved away rapidly toward the Southwest, arising at about a 45-degree angle, without the craft being tilted in any way from the horizontal position it had maintained at, or above, ground level."

The *Kansas City Star* got wind of this sighting and persuaded Mr. R.W.B. to give them some of the details. After the story appeared, Project Blue Book received a letter from Mrs. J.O.S. of Kansas City, which said, in part: "I was very interested [in Mr. R.W.B.'s case] because sometime during February [1968], both my daughter and I heard the same kind of noise.

"I was awakened one night about 2:30 [a.m.], by this sound. Please understand, I am not a flying saucer buff—I am very interested and neither believe nor disbelieve, but have an open mind. I have never heard a sound to compare with this . . . I could see nothing, but my description of the sound is exactly the same as the one quoted in the article.

"My daughter, who is 22, heard the same sound several nights later, but by the time she awakened me I could only hear it faintly, receding into the distance."

Three witnesses hearing the same sound independently of each other suggests that it was produced by something real. But what was that something?

horizon's thicker atmosphere—of the setting body gives an illusion of rapid rise at the instant the body goes below the horizon. There are certain limitations on the amount of motion which can be ascribed to atmospheric conditions and the imagination of the witness.

Again, the time-motion sequence must be consistent with the apparent motion of stars and planets across the sky. The general description must be a light, although a few spectacular astronomical reports have included spacecraft-features and little green men peering through portholes. Some observers have been confused in attempting to chase these "vehicles." When they have been photographed they invariably turn out to be one of the identifiable stars or planets.

Other Astronomical Objects: This category includes such common objects as the sun and moon and some uncommon ones such as comets, solar reflections, sun-dogs, moon-dogs, parhelia, auroral streamers. Each has its own characteristics and a discussion of a particular sighting would best explain them. In a short article of this nature, an explanation of each seems inappropriate. Several valuable photos of the 1965 comet Ikeya-Seki were sent to Project Blue Book, and the sun-dog and parhelia cases were forwarded to Dr. Donald Menzel of Harvard Observatory because of his particular interest in these phenomena.

Satellites: The analyst suspects any report describing a "star moving across the sky" as being caused by a satellite. However, other factors included in the report must be consistent with this evaluation. The sighting must be at night, the motion must be about 15 degrees of arc per minute, and flight should be through the NE or SE, although some retrograde satellites are known to exist.

Assistance in identifying an object as a specific satellite is obtained from NASA's Goddard Space Flight Center or Marshall Space Flight Center, from the Smithsonian Astrophysical Observatory at Cambridge, Mass. and Spadats (the Space Detection And Tracking System) at Ent AFB, Colorado. During the 1965 time period there were 35 satellites visible to the naked eye and TIROS 9, ECHO 2, and Saturn 5 were brighter than the brightest star. Of the 151 cases evaluated as satellites in 1965, 95 were associated with a specific ECHO or

PEGASUS crossing. The remaining 56 were evaluated as satellites based on the considerations given above.

Balloons: Balloon sightings are not as easy to solve as one would think. Everyone knows what a balloon looks like. Still, each year balloons are reported as UFO's. The weather balloons are of two types, pibal and ROAB, each with the same visual characteristics. They are small and reported as gray or silver in the day and orange at dusk. Flight may be reported as hovering, rising, zig-zag or erratic. In all cases flight must be with the wind for evaluation. They are rarely sighted at night. The upper air balloons fly at 90,000 ft. and beyond and are usually reported as stationary by the ground observer. They move with the prevailing winds at stratospheric altitudes and are usually picked up on radar. They remain in an area long enough for identification by aircraft scrambled or diverted for that purpose.

Disappearance is sudden at dusk as they move into the Earth's shadow. The sun's reflection through their plastic panels may give the appearance of flashing colors. In addition to weather balloons and upper air balloons, various other research balloons, hot air balloons and even toy balloons have been reported as UFO's. Each has special visual characteristics associated with its observation.

All balloon reports must have wind information for evaluation. Local wind data is obtained from the nearest Air Force Base, the nearest weather station or some local airport. Upper air data is obtained from the U. S. Weather Bureau at Ashville, North Carolina. A staff meteorologist is available for consultation. Of the 37 reports evaluated as balloons in 1965, the following were identified by specific launches: eight upper air balloons, eight weather balloons, one hot air balloon, one cluster balloon, and two groups of toy balloons. The remaining 17 were evaluated as balloons based upon description and motion consistent with wind data.

Insufficient Data: UFO reports are categorized as "insufficient data" when one or more elements essential for evaluation is or are missing. Some examples are omissions of location, time-of-sighting, date, position of object in the sky, weather conditions, or the manner of disappearance. For those cases placed in the insufficient

data category in 1965, the Air Force UFO analyst requested the required additional information but did not receive a reply from the observer in a total of 47 sightings. In 14 cases the witness was unknown or could not be located. In 10 reports the witness was outside the continental limits of the United States.

No followup was made on nine cases for psychological reasons. The local Air Force investigator regarded four reports as insignificant. Two reports were evaluated as "insufficient data" by our photo analysts. One report was evaluated as "insufficient data" by our radar analysts. One sighting was investigated and evaluated as "insufficient data" by the project Scientific Consultant. One object of a multiple-object sighting was carried as "insufficient data." And six cases were of such poor repertorial quality that no evaluation could be made. The two remaining "pending" cases as of 1 March were carried as "insufficient data" for statistical purposes. *In no case is the insufficient-data category used as a cover-up for those sightings which the analyst is unable to identify.*

Familiarity with the visual characteristics of a dozen or so aircraft types, eight or ten different balloon patterns, stars meteors, planets, a variety of miscellaneous astronomical phenomena and satellites, would have enabled the Project Blue Book analyst to "solve" more than 600 of the 1965 cases (with the help of the FAA, Air Defense Command, Strategic Air Command, Smithsonian Astrophysical Observatory, Goddard Space Flight Center, SPADATS, The Balloon Control Center at Holloman AFB, 15 or 20 professional consultants, hundreds of investigators who submitted the original reports and persons and agencies too numerous to mention). An additional hundred might fall into the insufficient-data category for various reasons.

What then of the remaining cases? A glance at the "other" statistical category reveals a few of the additional causes of UFO reports. Evaluation on these cases is made in the same manner as all others: description, time-motion, supporting data. As a point of interest the Psychological Section contained 35 reports. A breakdown of these cases reveals that only 12 were purely psychological in nature. Four were evaluated as hoaxes when adequate evidence was

gathered to substantiate the perpetration of a hoax. The 2 March, Brooksville, Florida, Reeves Hoax (see figure 1) gained the most publicity through the news media. One case was regarded as a prank by the local police forwarding the report, 12 witnesses were regarded as unreliable and six reports contained an excessive amount of conflicting data.

All missile and rocket evaluations are confirmed from the launch schedules provided by Cape Kennedy or by telephone contact with the operations officer at other launch sites. Radar analysts and photo-interpreters evaluate radar intercepts and photos submitted with reports and the UFO project analyst attaches these evaluations to the case-file.

The physical specimens associated with UFO reports which sometimes are provided by the observers of Flying Saucers are submitted to both civilian and military organizations for analysis. Libby Owens has made analysis for the Air Force of glass samples, the Smithsonian Astrophysical Observatory examined meteorites, the Institute of paper Chemistry tested paper samples, the Pure Food and Drug Administration analyzed pancakes. The material appearance of a sample of UFO "hardware" determines where it is to be submitted for analysis. In more than 20 years of operation Project Blue Book has yet to uncover an object from outer space—other than meteorites or space debris originating on the planet Earth. Not one single photograph submitted for analysis has represented anything other than a known object, defects in the film or processing, or lights explainable as inherent in photographic-equipment defects.

Not one single radar report has given evidence that we are being visited by alien space craft. This total lack of "concrete" or scientifically acceptable evidence is perhaps the strongest support for the official conclusion: "there has been no evidence submitted to the Air Force that sightings, including those evaluated as unidentified, represent extraterrestrial vehicles."

Familiarity with the visual characteristics of birds, missiles, searchlights, reflections, mirages, satellite decays, ball lightning, clouds, contrails, metallic chaff and an assorted group of known or suspected causes of UFO reports—and knowing where to seek confirmation of the suspected

cause as well as reliance upon experts in a field germane to a particular object-sighting—would have enabled an analyst to identify all but 16 of the 1965 UFO cases.

In the end the final evaluation of a

report by the Air Force analyst depends upon his knowledge of the causes of UFO reports and their visual characteristics, his understanding of the effects of a particular conditions of the observer, his understand-

ing of the effects of a particular environment and above all upon his ability to gather supporting scientific facts for an evaluation. When he says "what it was, was swamp gas," you better believe it. ■

Enemy over Vietnam

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three minutes—then suddenly it veered to the north and vanished.

The date was August 23, 1966. Time of the sighting is not available. A senior colonel of the U.S. Air Force in Saigon commented on the sighting as follows: "Review of the sparse information available reveals similarity to previous instances recorded occurring in the United States. Observation possibly caused by reflection of pilot's own aircraft from clouds or other air masses. Perturbations in an air mass many times cause what appears to be radical maneuvers."

Although this could be a correct interpretation of the event, the case is still categorized as "unidentified."

Finally, there was the strange UFO

'A POSITIVE IDENTIFICATION OF THE OBJECT COULD NOT BE MADE . . .'

case of a civilian commercial pilot flying over Laos. He photographed the UFO and sent the photo to the "Commanding Officer/Project Blue Book/Wright-Patterson Air Force Base/Dayton, Ohio," with the following note, dated March 15, 1965 at Saigon: "Dear Sir: Enclosed is a picture I have taken from the air. Can you tell me what it is? Looks to me like an airfoil of some sort, including a pitot tube, ram-air-intake and a very unusual sort of power plant." It was signed by Leonard R. Pomeroy/Captain, Air America Co., Inc.

Project Blue Book, which is the official Air Force project for the evaluation of UFO sightings submitted to it, requested that Captain Pomeroy submit a negative of the

photograph for scientific photo-analysis. Captain Pomeroy sent three negatives. Here is the photo-analysis report:

"The photographs show an aerial terrain view with the unidentified object along the lower one-fourth of the [negative] frames. A positive identification of the object could not be made utilizing the limited material furnished. It does appear, however, that the object photographed was in close range—both to the camera and the aircraft from which the photographs were taken. The left side of the object as viewed in the photographs appears to be draped with some sort of material or cloth, thereby obscuring that portion of the object which rises to a point in the extreme left portion of the print. The apparent short range of the object from the camera, together with the image's sharpness as compared with the terrain background, and the fact that subject photography was taken from the pilot's window of an aircraft, tends to suggest the following possibilities: the ledge of the pilot's window, together with an unidentified object thereon, including the draping, is the object depicted. Additionally, the alleged 'pitot tube' is merely the visible portion of some part of the aircraft."

And here's Captain Pomeroy's answer to the photo-analysis report: "I quite agree that the picture looks like some portion of the aircraft that I took it from. However, with the exception of the outer part that could be the wing's leading edge, I can't find a damn thing on the airplane that resembles the rest of it."

The photo appears with this article. Study it and the photo-analysis report carefully—and see what you, the reader, can come up with. Frankly, I am puzzled myself about all these UFO cases from Southeast Asia. Although I cannot personally believe that these UFO's are extraterrestrial spacecraft, I certainly find them enigmatic enough to be considered mysterious. ■

One Man's Sighting

In the afternoon of a summer day in 1952 I was about my tasks of preparing for work on the swing shift at Boeing in Seattle. I was outside as a B-50 was approaching. The sky was clear and open. I stopped on my way and watched the ship in its flight. The ship was flying on a course from my right to my left. I noted that the main landing gear wheel wells were closed and also the nose wheel was closed. As the plane reached its nearest approach to me I had my sight directed to the area of wing where the wheel wells are located to see if the doors would open and also if the wing flaps would come down. I judged the distance to be around 800 feet—both up and out.

While I had my sight directed to the wing area it appeared to me that a slight variation to the view had taken place. It had become less than perfect. This variation was instantaneous and then it was over. I noted three circular objects hanging motionless in the air and at the same location where the variation to my view had taken place. These same three objects were not making headway in any direction and neither up nor down. I immediately identified the three objects as the famed flying saucers. I studied them carefully and arrived at their approximate size and shape. The color was a silver blue. The skin or outer surface of the three appeared to be smooth and without any ports or protuberance of any kind. The B-50 wing had just passed over these saucers and I easily arrived at what I think are their dimensions by comparison with their wing.

While the saucers appeared to be standing still, there was a motion of a kind to them. The rims of the three saucers were bobbing or tilting up and down. This motion was very slight, but I was able to detect it. Because of this motion they gave the impression of spinning. While going through these tilting and dipping motions they would at one time practically fade from view. After a period of time which I judged to be 20 seconds, the saucer farthest to my left made a move and went in under the wing of the B-50 a second time and came to a stop. The speed at which the saucer moved required a sudden turn of my head to follow it in its flight. I guessed the time to be 1/10th of a second. The plane appeared to be about a mile farther away from the point where it first picked up the saucers. These factors would add up to 36,000 miles per hour for the speed of the saucer when it moved on the B-50 a second time.

Maurice Armstrong
Urbana, Ill.

Bird Brains

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can make." I asked why he said that?

"Because there have been so many independent sightings of UFOs on all the continents of the world—and so many of these fit the same type of pattern that I don't think there's any question that UFOs exist. There are enough photographs of them and enough close-hand documented sightings of them to indicate that they are real objects."

"You don't think that they could be natural phenomena?" was my next question. "Such as ball lightning, mirages, atmospheric anomalies?"

He nodded. "Yes. I think a lot of the sightings probably can be explained by natural phenomena. But when you find a discrete (tangible) object that has windows and lights bashing around it, an object that's sitting on the ground, this obviously can't be ball lightning—and it can't be any sort of climatical phenomena."

"What you're describing, then, is a spacecraft of some kind? Right?"

'THERE WAS A TIME ON EARTH WHEN THERE WERE NO HUMANS'

Again he nodded. "I don't see why such spacecraft cannot exist. And there are only two possibilities that they do exist: one is that they are terrestrial spacecraft, some sort of secret craft that's devised by a highly developed technological nation—or that they are extraterrestrial objects. If they are Earth-made objects, they probably have to come from one of two countries: either the United States or Russia. Now if these are secret craft, if these were objects that were developed by either nation, they wouldn't be flying all over the world, landing on every continent where they could be seen and possibly captured. Any nation that could build such craft on Earth would surely recognize their vast military potential.

"So I would think, if they were secret terrestrial objects, they would be flight-tested in closely guarded

isolated areas—for the sake of secrecy alone. Therefore, in my own mind, I can't help feeling that these objects are extraterrestrial. And I think ■ good many well-known astronomers today feel that there's no reason why we should suppose that the conditions necessary for life in some form are possible only on the planet Earth. After all, with the Universe as big as it is, there's no reason why there couldn't be many planet Earths with either conditions very, very similar to those that exist here—or which harbor a different environment and a different type of gaseous atmosphere that could support life forms somewhat different from those we know of."

"Dr. Lancaster," I asked, "since you are an ornithologist, would you say it's possible—on some other planet around some other star—for birds to have developed a civilization, a society of their own?"

"Yes. Why not?" was his response. "After all, there was a time on planet Earth when there were no humans. There was a time when our civilization, so to speak, was composed mostly of large reptiles, even flying ones. But they never developed a technology. To develop a technology, of course, you've got to have a rather complex development of the nervous system among the creatures inhabiting any civilization. At least certain parts of their brain have to be developed."

"Do birds have this potential for development?"

Dr. Lancaster smiled. "Birds, it is true, have a very highly developed brain. But the parts of their brain that are developed—at least here on planet Earth—are much different than the parts of man's brain that are highly developed. The parts of the bird-brain that are developed are such parts as the cerebellum—which so much controls balance and coordination, things like that. Birds move in a three-dimensional world and we move in only a one-to-one plane. Birds go up and down as well as sideways and forward. For example, a raptor diving on its prey at 170 miles an hour has to be pretty well coordinated—if it's going to hit that little mouse in the field."

As an aside, raptors are birds having talons adapted for seizing and holding their prey. These are particularly the vultures, hawks, eagles, owls and other carnivorous types of birds.



HOUSE FINCH

Making up for the wrong bill

My next question of Dr. Lancaster: "How about the cerebrum, the thinking part of the brain—is it very much developed in birds?"

"Well, it's *reasonably* well-developed. Let me put it this way: evolution necessarily involves a compromise of characteristics. And I think—so far as birds on Earth are concerned—the compromise was made in favor of the cerebellum. This does not mean that the cerebrum also could not have evolved to a high level—if environmental conditions warranted it. Birds do have one feature that is prominent in mammals—an opposable digit.

"Our thumb is opposed to the other fingers, for instance. This is a prerequisite—according to many scientists—for a highly developed society. Because of this feature, we can manipulate things, work with things, grasp things, do things by coordinating our thoughts with our hands. Birds have an opposable toe. Part of it projects backward so that they can grasp things. That particular step toward civilization and technology is therefore already accomplished with birds on Earth.

"And some birds on this planet are really quite smart. Some birds here have pretty good memories. Crows are quite intelligent. They, the jackdaws and other members of the same family, can be taught to count. For example, you can give them a little white disc with three black dots on it

and as you hand it to them you call out the number 'three.' Pretty soon they associate those three black dots with the numeral three. You can place a kernel of corn under the disc, say 'three' to them and they'll lift up the disc to get the corn. And they can solve certain problems also.

"You can, for another example, train birds to haul their food up into a tree while they're sitting on a branch. If you attach a piece of food to the end of a long string and loop the other end of that string around the branch, the trained bird will pull the string up with its claws, step by step. It will lift the string a certain distance, fling this portion over the other side of the branch and hold it there with one claw while it raises the string higher again with its free claw. It will bring the string up higher and higher, anchoring each portion to the branch with a claw, until it has got the food right up to its bill.

"Actually, there are some birds that have developed the ability to use tools. Now I consider this a pretty high degree of development. There's a little finch that lives in the Galapagos Islands off the coast of Ecuador that fills what we ornithologists call a 'woodpecker niche.' It feeds upon grubs and other insects that live beneath the bark of trees—

but it doesn't have the right kind of bill to peck its way under the bark to get at them. So it has learned to pick up a little twig or a cactus spine in its bill and probe beneath the bark until the insects scurry out into the open. Then it quickly drops its twig or cactus-spine tool and snatches the insects.

"There's another bird, a vulture in Africa, that has developed the technique of picking up a stone and tossing the stone onto a big ostrich egg. Normally, such eggs are so big and thick that the vulture can't break the shells with either its beak or talons. Yet ostrich eggs are its favorite food. So the only way it can get at the contents of those eggs is to use an artificial tool. The stone is its tool and it keeps throwing that stone at the egg over and over again until the egg-shell cracks open.

"And herring gulls will often crack open mussels or clams—a favorite food of theirs—by clutching these in their claws and flying high above a hard surface to drop the hard-shelled creatures. They intelligently choose a concrete bridge or roadway on which to drop the clams or mussels. They know that by dropping these on the sand, they'll starve. The shells won't break. After they do break the shells on a hard surface, they swoop down and eat their food contentedly.

So the herring gulls have also evolved a technology to solve certain problems presented by their environment."

This brought me to a key question for Dr. Lancaster:

"Well, from this background of your knowledge of and experience with the intelligence of birds on Earth, would you say that it's possible on some alien planet orbiting about a distant star for an advanced civilization of birds to have evolved?"

"I don't see why not," was his prompt answer. "They probably wouldn't be birds in the same sense that birds are birds here. But yes, I see no reason why birds somewhere else could not have had a high development of total brain capacity along with their ability to fly. On the planet Earth, for instance, birds are limited to the use of their bills for building things. Yet some of them do a pretty good job of construction work that way."

The ultimate conclusion of our conversation was Dr. Lancaster's: that somewhere in the Universe a highly developed technological society of birds was a logical possibility. And that flying birds could be Flying Saucers. Why not? It's hard to argue with someone whose scientific business is birds. •

The Speed of Light

continued from page ■

ing at c , the radiations cannot precede it; while rearward radiations are canceled out by the source's forward motion.

Intuitively obscure, however, is the Doppler Effect for the observer at right angles to the line of travel, where the relative velocity momentarily is zero. It turns out that the radiated frequencies of a body traveling at c are zero for transverse observation, too! Evidently the spaceship simply disappears! This should not be mis-interpreted to mean that the ship and its pilot mysteriously become non-existent in the absolute sense, lest suppositions become mystical again, but they seem to shift to some other realm.

One further means of detection needs comment, despite some un-

certainty in relation to the Special Theory. If the cause-and-effect relationship stated by Joos is universally valid, the rate of propagation of g -forces must be limited to c , too, which means that the earth observer also cannot detect the g -field associated with the speeding ship, since it can't precede the body (in this case, itself) either. In fact there can be no energy interchange of any kind before the bodies actually make physical contact.

When we reflect that *objective reality cannot be inferred without some form of energy interchange*, the underlying significance of the conditions of our imaginary universe emerges: to an observer on earth, *the space ship does not exist*; i.e., it has no reality. Similarly, to the pilot, whose ship can be considered stationary with the planet in relative motion, *earth does not exist*. Evidently Einstein re-defined *reality* in terms of time t , as the "ivth" dimension to give

us *relativity*. Because physics laws require that they be universally applicable to any body within its own rest frame of reference, our spaceship cannot simply become nothing—or explode into pure energy—without due cause. In our imaginary system, the only external influence possible would have to result from the presence of the earth at relative c ; yet we have seen that the planet cannot even be detected, and cannot therefore exert an influence. Both bodies remain "real," and our two-body universe turns out really to be two single body universes.

Therefore, the "impossible" conditions we found of infinite mass, energy, and g -field are valid for each *single body in its private universe*, where velocity and distance are indeterminate. In effect, we've stepped into that venerable science-fiction device variously called sub-space, space-warp, and hyperspace; an existence on an exalted "vibrational"

Youth Tells Blue Book To Go Fly a Kite

At 11 o'clock in the morning on August 9, 1967, Mr. P.N., 13, saw and photographed a UFO. He described it as a silvery white object that looked like a giant metallic ball. At the middle of its bottom was a big black spot. When first observed, the object was hovering, then it straightened out and began to rise straight up—until it disappeared behind some trees. The sighting occurred at Dallas, Texas.

Mr. P.N. promptly sent the two photos to Project Blue Book for analysis. But a month plus 10 days later he wrote the following note to the Project Director: "I certainly would appreciate it if you would send me back the two pictures as soon as possible. It is very necessary that I have the pictures by September 26."

After Colonel Quintanilla, head of the Project, returned the photos, he received another note from P.N.: "... It seems that my friends were playing a joke on me. You see, some of Mark's friends got together and made up a kite which resembled a UFO, so I'm afraid that's all it was. I can't say how sorry I am at the stir I caused. Please forgive me."

level apart from normal temporal planes.

An interesting thought arises if we consider the prospect of velocities greater than c , for which the quantity under the radical becomes negative. If the Special Theory formulae are generally valid, then for $v = 2c$, (if c is the point of transition into separate and non-interacting universes, a relative v of $2c$ is an invalid concept) the radical term becomes $\sqrt{-3}$, or $\sqrt{-1} \times \sqrt{3}$. The mathematician designates $\sqrt{-1}$ as i and calls it an imaginary number. In fact, in the four-dimensional graphic representation of relativity, the time co-ordinate is mathematically imaginary.

This is reminiscent of the mathematical treatment of reactive components in electrical circuits, in which the currents and voltages are ± 90 degrees apart in phase and are computed with the i (or sometimes j) operator. While the mathematical treatment involves imaginary concepts, the currents and voltages concerned are very real. They merely are displaced in time, relative to each other.

Then would a body moving at $2c$ be "out of phase" with our normal space-time continuum? Is c the critical point at which a traveling body becomes totally displaced in time?

Einstein's time dilation implies that some distortion of time occurs for velocities even a bit less than c . For example, a space traveler who leaves the earth and flits about the universe at $0.9c$ and returns four earth-years later will have experienced only about 1.74 years. Having begun the trip with identical synchronized clocks, the traveler's clock would be found to be 2.26 years "slow" upon his return—according to the precepts of time dilation.

In our two-body universe, however, it is equally valid to consider the ship to be at rest, with the earth in motion relative to it. Then the earth clock will be 2.26 years behind the ship's at journey's end!

Obviously a given clock cannot be both fast and slow relative to another as the result of a single physical event; yet scientists insist that space men will experience a real time dilation. If so, this must be a rudimentary form of time travel; then perhaps physical translation in time is possible, once the problems of propulsion and navigation are mastered.

Parenthetically, it is fascinating to

realize that if time travel in the science-fiction sense is possible, then (assuming an uninterrupted growth of technology) it already has been done! Somewhere in the far future generations of mankind the art has been refined enough that we've already had visitations in our time from our curious remote descendants!

One further question arises concerning our $c+$ spaceship: what happens when the two bodies collide? Will there be the most cataclysmic explosion since the birth of the galaxy—or will absolutely nothing happen?

If we consider that the earth observer "sees" the c -velocity ship as having zero length and no advance or trailing fields of any kind, then possibly there will be no interaction between those bound packets of oscillating energy that we call matter. The approaching ship "passes" any given stationary point in a time interval of zero, but it must take some finite time to influence the vibrating particles of which atoms are composed.

Something of this relationship is suggested by the well known fact that neutrons are more effective in triggering nuclear reactions when they are slowed down, thereby giving them more time to react. Or consider the neutrino, inferred to be a sub-nuclear particle that, traveling at near- c velocity, is capable of passing through entire planets unimpeded! Further, the statement of the cause-and-effect postulate makes no exception for that case where bodies in

motion are on a collision course.

This concept of non-reactive interpenetration seems to be refuted by the fact that electromagnetic radiation, traveling at the speed of light by definition, does react with matter which it strikes. When we examine energy levels, though, it appears that the higher the energy level of incident radiation, the greater is its penetration of matter. The "hardest"—or highest energy—Gamma rays are extremely penetrating, even though they are a form of wave energy with negligible mass. And mass, it turns out, is equivalent to tremendous energies. In relativistic mechanics, our spaceship's considerable mass of m is equivalent to an energy level of $m \cdot c^2$ at rest, but—as we have seen—when it is approaching the earth at the speed of light, the apparent mass is infinite, and so must the energy be. The conditions bear little resemblance to low energy electromagnetic radiations; perhaps material bodies will not inter-act at c ! This leads to another science fiction concept: congruent universes existent at various discrete energy levels within the "same" space.

If, then, we can travel in time as well as space, without fear of colliding with that which we can't detect, we have potential interstellar travel. Once the considerable intricacies of power and navigation are resolved, we can leave one star system in invisibility and at some time suddenly pop into existence near another as we drop our speed below c .

We've managed the feat in imagination by the subterfuge of assuming an initial velocity of c . Can we do it in fact, where the initial velocity is zero? An examination of required energies and drive-techniques suggests the immensity of the problem.

As the formulae have shown, the apparent mass of a body moving at c relative to a stationary observer is infinite (neglecting the question of reality). Consequently, any force applied from the observer's rest position to accelerate the body further must be greater than infinity (since force = relativistic mass \times acceleration)—a contradiction of terms. In fact, for any practical value of force acting between the bodies, the maximum velocity attained must be less than c so that the apparent mass is less than infinity.

The energy requirement for near- c projectiles propelled from a rest-body is exemplified by Stanford University's linear accelerator⁴. Con-

structed under contract with the Atomic Energy Commission, this device produces a high-intensity pulsed beam of electrons by accelerating them within a quarter-inch evacuated tube 10,000 feet long. At the energy level designated as 15 billion electron volts, relativistic shortening makes the electrons "see" their two mile trip as only 42 inches. Although their motion actually is an accelerated one, the electrons' path-shortening is equivalent to that which would result from a uniform velocity of about $0.9999999c$ —immensely faster than the otherwise similar electron beam which sprays the pictures onto your TV screen.

The TV beam is accelerated sufficiently by a power, or *energy rate*, of just a few watts, but the 240 klystrons which pump the electrons through Stanford's linear accelerator deliver a peak power of about 24 million watts *each*. That's not quite infinity in the mathematical sense, but the beam's velocity isn't quite c , either.

Such accelerators have confirmed Einstein's Special Theory *in the case of forces acting between two bodies*. When it comes to a *self-powered* spaceship, though, where the drive-forces bear no relation to stationary reference bodies and therefore are exempt from the cause-and-effect rule, energy requirements for near- c speeds appear less extreme. A two-step process will serve to illustrate:

We now re-create our two-body universe so that initially the masses are at relative rest and many light-years apart. At this point, the kinetic energy (energy of motion) is zero.

We then set the ship in motion, burning a certain quantity of fuel to attain a steady velocity of $0.90c$. At this speed, its kinetic energy⁵ relative to the earth *and* relative to its initial frame of reference (which also was at rest with the earth) amounts to about $1.3 mc^2$. (By neglecting weight changes due to fuel consumption, the spaceship's rest mass, m , is a constant in terms of which we can express kinetic energies, as we did rest energy.)

Recalling that universal physical laws always apply to a body within its own frame of reference, with which it is considered to be at rest at any instant, it is convenient to visualize a frame about the ship that is moving with it at $0.90c$ relative to the earth. Taking this frame as our new starting point, we again accelerate the ship until it attains a uniform velocity of $0.90c$ relative to *it*. Again neglecting weight changes due to fuel consumption and insignificant g -forces from the earth, this second acceleration should be identical to the first one, representing another $1.3mc^2$ worth of fuel.

After this maneuver, the ship's velocity relative to the earth is the relativistic sum of $0.90c + 0.90c$, which turns out to be slightly over $0.99447514c$. In terms of the ship's kinetic energy relative to the earth, this velocity represents about $8.55mc^2$, which is the energy that an earth-originating force would have to expend to drive the ship to its present velocity. However, *because the ship is self-propelled, it has attained its relative energy of $8.55mc^2$ with a fuel expenditure of only $2.6mc^2$!*

At first glance, it appears that if $v = c$ represents the point where a moving body's *relative* energy just becomes infinity, then a self-pro-

Ohio Woman Leads UFO To Doorstep and Witnesses

Young Mrs. A.F. was driving home to Yellow Springs from Xenia, Ohio, on the evening of August 15, 1968. She had the top down on her small sports convertible. Suddenly she became aware of a bright light directly overhead. The central part of the light appeared to be stationary, but its outer edges seemed to be spinning. Mrs. A.F. became frightened, gave the gun to her sports car and arrived home in minutes. The light followed her all the way. Once she stopped the car to test it. It stopped also. As she gunned the sports car again, the lighted object paced her at exactly the same speed.

When she drove into the yard of her home, she called to her parents-in-law to come outdoors to watch the object, which now was apparently hovering. Mr. and Mrs. K.F. came outside and also saw it. H.F., husband of Mrs. A.F., was upstairs studying. He is an engineering student who was working on a part-time co-op basis at the Aero Propulsion Laboratory, Wright-Patterson Air Force Base, right in the backyard of Project Blue Book. Finally he came outside too and saw the object. His first impression was that it was the moon, but he soon changed his attitude because the object now seemed to be moving until it "hovered" about 30 degrees above the eastern horizon.

According to the four witnesses, with variations and minor discrepancies among them, the object finally took on a shape like a cut of pie, with the wedge-point tilted upward, that seemed to be enveloped with mist. The engineering student had previously described it as "looking like a full moon shining through a mist."

Dr. Allen Hynek, astrophysicist and Scientific Consultant to Project Blue Book, was called in later to interview the witnesses. After an hour of asking them pointed questions, he wrote in his report: "On the basis of the evidence given, particularly as to the angular elevation in the sky, the eastward motion when it did move away, and the misty appearance of the 'object,' I would suggest either insufficient information for a definitive evaluation, or 'unidentified.' To identify it as the moon is stretching the given evidence, and by all normal rules of the weighing of evidence, such identification is not warranted."

The case now is listed in Project Blue Book files as: "Unidentified (on basis of present evidence—hope to get more later)."

pelled one should require something less than infinite energy to reach c . In fact, though, the relativistic sum of any two velocities never will equal exactly c —unless one of the addends is at least c , which seems to require that our spaceship be capable of being accelerated to that speed from any instantaneous rest frame.

Practically, then, we may fall short of achieving exact c , but we can come extremely close to it with considerably less self-propulsion fuel than is implied by relative energies as seen by the stationary observer.

Today's technology fails to suggest the form of a reversible-cycle space-drive. In the interest of maximum attainable velocity, propulsion will be derived from c -velocity sources—perhaps light radiation itself. Or, when we learn how to produce them, asymmetrical g -fields, which would cause the ship's center of mass to "fall" toward the center of the field. Advances in storage devices will make electricity an attractive secondary energy source, which may be replenished during the ship's passage through the various magnetic fields meandering through space.

GAMMA RADIATION

The Doppler Effect may create a blessing in disguise, too. At near- c velocities, the normal electromagnetic radiations from the "at rest" bodies in space will be received by the ship as intense Gamma radiation. This first will pose a serious problem in shielding for the ship's occupants, but it also represents a considerable level of incident energy in any real universe and it should be convertible—in some manner—to storable and reusable energy. A source from which to charge the batteries, so to speak.

When finally we do stumble upon a workable reverse-cycle drive, will we still be limited to not-quite- c velocities? Approaching the speed of light may be like walking across the room by covering half the remaining distance in each successive step. Mathematically, one never arrives at the opposite wall because of the half-distance which always remains. Practically, though, that distance diminishes to molecular dimensions and the walker's toe collides with solid matter. Is there a parallel in physical velocities?

Given the energy, we can accelerate a body to within a decimal followed by 40 or 50 nines of c ; how

close must we come before we're actually there?

We'll never know, so long as we mistake *relative* unreality for *absolute* impossibility. ■

1. Walter Sullivan, *We Are Not Alone*, Signet. P 232.
2. George Joos, *Theoretical Physics*, translated by Ira M. Freeman; Hafner Publishing Co., no copyright notice is evident. P 233.
3. *ibid.*, P 231.
4. Richtmeyer and Kennard, *Introduction to Modern Physics*, McGraw-Hill. Pp 129-130.
5. *Communications News*, March, 1967. P 34.

TIME DILATATION PHENOMENON

According to one aspect of Einstein's Special Theory of Relativity, time contracts directly in ratio to the velocity of a body in motion relative to a body at rest. In simpler words, this means that if two highly precise clocks were set at exactly the same time while they were in two separate rockets sitting at rest on launch pads side-by-side and one of the rockets was thrust into space, its clock would progressively slow down as it accelerated faster and faster through the void. Relative to the clock still on the launch pad, the moving clock would measure time as a function of its velocity—since it has the force of acceleration acting upon it—while the clock at rest, which has no force against it to disturb its original time-input, continues to measure time as a function of its static environment.

The Earth can be considered a static environment, since the acceleration of its gravity is constant at 32 feet per second *per second*. Any space traveler leaving the Earth would lose seconds, minutes, hours, weeks, months, years or centuries—depending upon the distance he traveled in relationship to his velocity of travel.

By losing time, the space traveler ages more slowly than the people he left on Earth, where a constant gravity-force prevails. Gravity acts upon the motions, combinations and recombinations of the atoms that form the molecules which in turn make up the life cells of all living creatures and plants on our planet. If the molecules and thus the life cells are slowed down in their evolutionary progress, the creature which is built of them obviously stays younger longer than a creature whose cells evolve normally in relationship to the Earth.

Although Einstein's Special Theory of Relativity suggests that no material body can travel faster than the constant speed of light, there is no law that limits a body from accelerating *nearly* to the speed of light. In fact, electrons, which are material bodies, have been accelerated by nuclear physicists to nine-tenths of the speed of light in high-energy accelerators.

Say that our space traveler can accelerate his spacecraft up to half the speed of light, which gives him a velocity of approximately 93,000 miles per second. He wants to explore a star-system that is 20 light years away from the Earth. Will it take him 40 years to get there and 40 years to come back to his home planet, or a total of 80 years? The answer is no. His total travel time, *relative to the clock in his spacecraft*, would be 48 years. This is because time actually contracts relative to motion and the velocity of that motion. Einstein calculated that the ratio of contraction was 6/10.

If our mythical space traveler had a twin brother who remained on Earth, the brother would be 80 years older but he would be only 48 years older. If, like an electron, he could accelerate his space ship up to nine-tenths of the speed of light, or about 167,400 miles a second, he could make the trip to that same star in 10.8 years, or clock a roundtrip voyage from Earth in 21.6 years. By the time he got home, his brother, this time, would be 36 years older—but he would have aged by a mere 21.6 years.

In theory, he could make the roundtrip a four-year voyage (according to his spacecraft clock), and when he returned to Earth he would find nobody that he knew—for even though he would be only 2.4 Earth years older, 200 years would have passed on his home planet! Of course, such a fast trip would mean that his spacecraft would have had to travel at 10 times the speed of light. But is this *actually* impossible? In science and technology nothing is impossible. R.H. Coddington makes an excellent case for this very possibility. See page 38.

There are basically three types of time: 1) constant time, which is measured from a body at rest; 2) velocity-time, or the measurement of duration relative to motion through a distance; and 3) biological time, which is the evolutionary growth of living cells relative either to 1) or 2).

Not a Yellow Submarine: A Bright, Round Object

On February 25, 1967, two teen-age boys braved the icy winds and snow to catch an early performance of the Beatles in West Fargo, North Dakota. Both were high school students: D.H., age 16, and W.F., age 18. W.H. had brought along his Polaroid Model 80 Camera for the express purpose of catching the Beatles in action.

At 7:50 that evening, as the boys were driving home to Fargo, one of them saw a bright object in the dark east northeastern sky. "Hey! What's that light over there?" he yelled at his companion, who was driving.

The driver stopped the car to watch the object for several seconds. When they realized how unusual it was, they started fumbling for the camera—which was then locked in the trunk of the car. They finally got it out of the trunk and snapped a picture, ruining it in their haste by undertiming its development. But the object was still in the sky and still as bright as ever. It appeared to be about five feet in diameter, round, with a bubble shape on top of a sphere and a trail (exhaust?) extending from its underside.

More calmly, 18-year-old W.F. took another picture and patiently waited for the correct developing time to elapse. As the picture was completed, the bright object seemed to climb as it took off to the northeast. W.H. snapped another picture.

Immediately after they obtained the photos, the boys rushed to the Fargo Police Department and told their story, while showing the photos. The police were impressed enough to investigate, but were unable to see the bright object. However, 11 days later a Mr. V.S. reported to the Fargo Police that he and his wife had seen an identical object while driving home to Fargo from Detroit Lakes, Minnesota on the same date. They witnessed the object about 15 minutes earlier than had the boys.

The police, the Air Force UFO Investigator and the Scientific Consultant to Project Blue Book all were favorably impressed with the boys' integrity. The AF Investigator stated in his report that there was "no reason to doubt the reliability of [their] report." And the Scientific consultant wrote: "I think one of the most remarkable things about the boys themselves is that upon reaching town they first reported the event to the police. In the highly improbable event that the sighting was a hoax perpetrated by them . . . it is unlikely that they would report first to a police station."



Grisly Mystery

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its owner to have been killed by inhabitants of a flying saucer—revealed that its abdominal, brain and spinal cavities were empty, the pathologist who performed the autopsy said.

"The pathologist, a Denver specialist who wished to remain anonymous, said yesterday that the absence of organs in the abdominal cavity was unexplainable . . .

"When the pathologist sawed into the horse's brain cavity, he found it empty. 'There definitely should have been a good bit of fluid in the brain cavity,' the pathologist said.

"This horse was definitely not killed by lightning,' he added. That had been the official conclusion of

Alamosa County authorities."

An extremely enigmatic aspect of the case involved Snippy's position when found in relationship to his tracks. The pony had been running through a meadow with two other horses. Their tracks indicated that all three animals were panicked by something and were heading for a ranch house owned by Harry King, where they normally returned each day for water—since water is a rare commodity in that distant mountain valley. The fact that Snippy did not return that evening with the other horses for his habitual drink of water worried Mr. King. When the pony did not appear for two days, King was worried enough to go looking for him. He found Snippy lying a full hundred feet away from where the saddle pony's tracks stopped.

Had Snippy leaped that distance

under the impact of some force? Or had the pony been stopped dead in his tracks and carried to a position a hundred feet away? These questions have not yet been answered, almost two years later. Other mysterious aspects of the case that have been neither fully nor satisfactorily explained were these:

- Snippy's owners, Mr. and Mrs. Berle Lewis, the brother-in-law and sister of Ranch-Owner King, when taken to the spot where the pony's carcass lay, found seven strange phenomena at the spot and in the surrounding area of brush: 1) an odor somewhat like incense burning or like medicine enveloped the horse's carcass; 2) the pony's bones were exposed and had turned a bright pink. 3) the ground surrounding the carcass was damp from an unknown liquid; 4) a chico bush, normally

three feet high, had been crushed down to a height of 10 inches some hundred yards to the north of the carcass—and the sand-laden dirt around it looked as if something had flattened out the dirt; 5) not far from the bush, Mrs. Nellie Lewis discovered a chunk of horse meat with the skin still attached: she pressed into it and a thick pale green liquid began to emerge and covered her hand, which instantly started to burn as her skin became red; 6) oddly shaped marks in the ground were spaced over an area of roughly 5,000 square yards: there were 15 of these with circular rims tapering downward in a cone-like manner, similar to the blast-holes that a high-velocity jet exhaust would make; and 7) an object that she felt was a tool was discovered by Mrs. Lewis, who noted that it had horse hair clinging to it: when she picked up the “tool,” it burned and discolored her hand in the same manner as the chunk of horseflesh—in both cases the pain and discoloration went away after she washed her hand.

• A U.S. Forest Ranger out of Alamosa, Duane Martin, using a geiger counter borrowed from a Civil Defense unit, discovered a high increase of radiation above the normal background radiation level for an area several hundreds of yards from where Snippy's carcass lay. The radioactivity fell almost to normal as he came near the carcass and rose again to an abnormal level as he left the carcass on the other side. The flattened chico bush was radioactive, as were other-later-discovered flattened bushes. The holes “punched” into the ground were also radioactive.

■ Two weeks later, Forest Ranger Martin returned to the scene with his geiger counter and discovered only “a bare moving of gamma rays [which were] not alarming in any sense.”

■ Ranger Martin, who certainly should be familiar with wildlife, had previously stated about Snippy: “The death of the saddle pony is one of the most mysterious sights I've ever witnessed . . . I've seen stock killed by lightning, but it was never like this.”

• Before and after Snippy's strange death, many sightings of Flying Saucers were reported by students, a construction worker, housewives, amateur astronomers and a Superior Court judge. The latter was Judge Charles E. Bennett of Denver, who

claimed that he observed a triangle-shaped formation of three red-orange discs that traveled very fast through the sky, accompanied by a hum-like noise. His wife and mother also witnessed the objects.

• After the anonymous Denver pathologist had made his autopsy of Snippy the saddle pony, he and others standing on the porch of Harry King's ranch house witnessed two Unidentified Flying Objects pass over the house—according to Mr. King in a later statement to the press.

■ According to Nellie Lewis, co-owner of Snippy, there was no blood on the ground beside her pony's carcass.

• The pony's neck, flank and other parts of his anatomy were sliced clean to the bone, with a neatness that suggested the use of a surgeon's scalpel.

In attempts to explain the foregoing weird aspects of Snippy's death, several theories were propounded. These included the already-mentioned lightning-strike theory. Others were that the horse had been killed and butchered by pranksters (some fun!) who wanted to set up a national Flying Saucer scare; that the horse had been killed in some “natural” manner and predatory birds and animals, such as magpies and coyotes, had picked the flesh clean in choice places; that Snippy had been accidentally shot by a hunter, who felt sorry for his suffering and tried to put him out of his misery by cutting the animal's throat (indeed two bullet holes were later discovered in the hind bones of Snippy's skeleton, but the bullets themselves were never found); and finally, that a group of hoaxsters with a grisly sense of humor had slaughtered Snippy in the same manner as cattle are slaughtered on the range and then had dragged the pony's carcass by block-and-tackle to the center of a tripod-like rig made of poles and strung it up by its hind legs so that its head could be lowered into a basin of acid.

This last grim theory was the imaginative product of a *Denver Post* newspaperman and columnist, Robert W. Fenwick, who then wrote: “The acid would remove the flesh and leave the skeletal head. It likewise would destroy the animal's brain and other flesh and it also would account for complete drainage of the horse's body fluids, which were reportedly mysteriously absent.

“The weight on the base of the

poles used in the rig would account for the circle of ‘strange holes’ in the ground.

“Splatters of acid around the scene of the operation would explain the ‘exhaust burns’ left by the ‘flying saucer.’

“The presence of acid would explain why Mrs. Berle Lewis' hand ‘burned and turned red’ when she picked up a piece of hide-covered flesh which she found near Snippy's body.”

Sounds logical at first glance, doesn't it? Except that the so-called exhaust-holes were found over an area of 5,000 square yards and Snippy's tracks were mysteriously absent for a distance of 100 feet from his body. There was no report of any drag-marks in that area of ground, as there should have been if the horse had been pulled by a block and tackle. Even if the marks caused by dragging the carcass across the ground had been smoothed out, such smoothing would be obvious. It was never reported.

Newsman Fenwick continued: “A sprinkling at the site of some finely ground uranium ore, easily obtainable in Colorado, would account for the radiation effect on the geiger counter used by a forest ranger and would greatly enhance the element of mystery.” True enough. Except again, no abnormal radioactivity was found near Snippy's carcass. High radiation levels were found only at a considerable distance in areas hundreds of yards from both sides of the carcass. If pranksters perpetrating a psychotic hoax had wanted to be sure that elevated radiation levels would definitely be discovered, they certainly should have sprinkled the uranium ore much closer to the horse's body. In fact, they should have sprinkled it around and on the carcass.

The other theories fall equally short of explaining the enigma of Snippy's strange death: the lightning theory had already been disposed of by the forest ranger and the pathologist who made the autopsy on the dead animal.

And what about the bright pink color of Snippy's bones, the smashed-down bushes and the odd odor of burning incense? How are these to be explained? Frankly, I wouldn't even attempt a wild guess at explaining these. The case of Snippy the Appaloosa pony remains an eerie mystery. •

The Road Runner

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Defense. Its resolution and signal-gathering power *has* to be the best of any radiotelescope on Earth. In conjunction with a rubidium-vapor (atomic) clock, it was used to determine if there were any variations in the radio-pulsed signals emanating from between Vega and Altair. The limits of the clock for detecting variations were one second in a 100 million seconds. No variations were noted, at least so far as the author has learned at present.

Sir Martin Ryle of Cambridge University, who headed the group that made the discovery of the signals, later said: "Our first thought was that this was another intelligence trying to contact us. We cannot completely rule that out, but I prefer a more natural explanation."

If the signals *are* coming from a planet orbiting about some distant star, a planet that has evolved a super-advanced civilization, there must also be several other such planet-bearing stars in the vicinity with similar civilizations in orbit about them. But the giant radiotelescope in Puerto Rico is positioned on

the face of the Earth so that it can only record the signals coming from one of the several sources discovered by the British. They, in turn, have observed four of the sources and suggest that these might be about 200 light years away. (A light year is the distance that light travels in one year at an approximate speed of 186,000 miles a second, or roughly six trillion miles. It is used as a measuring rod for convenience by astronomers.) The British determined this distance by estimating the density of electrons in space through which the signals would have to travel. They were also considering the chirp-like nature of the signals.

Dr. Drake doesn't agree. He thinks that the source of the signals is much closer to the solar system. He bases this on the fact that if the signals were traveling through a planetary atmosphere—as they must if they are being sent by intelligently guided radio transmitters on the surface of a planet—the atmosphere itself would absorb a certain amount of the radio-energy passing through it, thus weakening the signals.

If they were coming from a point in space 200 light years away, Dr. Drake reasons, then they would arrive at his big radiotelescope in a considerably

weaker condition than he has observed. He concedes nevertheless that the signals are coming from a source far beyond our solar system. Otherwise, the source would shift position, however slightly, because of the movement of the solar system through space. The strange signals have never changed position in terms of their source.

What does all this have to do with Flying Saucers? If eventually that source, or all four sources, can be proved to be planetary and the signals were decoded sufficiently to indicate beyond a doubt that they are intelligently controlled, then the theory known to UFO buffs as ETIH (Extraterrestrial Intelligence Hypothesis) will be given a great big shot in the arm. Those who believe in the true existence of Flying Saucers will be hard to argue down, regardless of their own intellectual level.

For it stands to reason that if the existence of extraterrestrial intelligent life is proved, then certainly Flying Saucers are a real possibility. However, it is equally reasonable to assume that intelligent life-forms somewhere out there in space are trying to contact us by radio because they have no Flying Saucers with which to contact us personally. ■

'Pay Dirt'

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with R. Roger Harkins, a Boulder, Colorado, newspaperman, Dr. Saunders acknowledges Dr. Condon as an eminent man of science who has contributed much to American science and thus to the American people. He laments the unfairness to Condon when so noted a scientist was caught up, without cause, in the spider-web Communist witch hunt during the heyday of the late Senator Joe McCarthy. But by the time Dr. Saunders reaches page 236 of his book, he blows him down:

"One great weakness in the Colorado Project was the very thing that was supposed to be its greatest strength—the selection of a man to head it on the basis of his outstanding record of past scientific achievement, Edward Condon was a finger-pointer, and it happened to be psychology that caught his eye. When the social scientists seemed unable or unwilling

to accept Condon's assumption that they held the answers, he became increasingly frustrated—until it showed. From that point on, his record speaks for itself.

"That weakness was probably unavoidable, but the greatest weakness of all was the avoidable selection of Robert Low as Project Coordinator. Low is neither an outstanding scientist nor an outstanding administrator. With the right man in Low's job, many of our problems would have been solved instead of aggravated.

"The monument to all the effort of the University of Colorado Project will be a Final Report. . . it is inconceivable that it can be anything but a stone stew. No matter how long it is, what it includes, how it is said, or what it recommends, it will lack the essential ingredient of credibility."

Dr. Saunders goes on: "Inasmuch as credibility was the primary goal when the UFO Project was first conceived and established, the University of Colorado Study can only be regarded as a failure. I would

call it an 'essential failure' rather than a 'total failure,' because I do feel the study catalyzed a few worthwhile things despite itself. These things have more to do with the problem than with its immediate solution, but are nevertheless important."

"At the head of this list, perhaps surprisingly, I would suggest that the scientific study of UFO's is more *respectable* today than it was two years ago (when the Condon study began). Respectability is measured by consensus, and I am simply observing that the scientist interested in UFO's now has an easier time than ever before in identifying his like-minded colleagues. . .

"Lower on the list, I would suggest that a limited number of highly remarkable *facts* can even now be recognized as belonging to the UFO puzzle. These facts are still too few in number and still too limited in variety to justify any attempt to formulate an explanatory theory. However, it is clear that a new theory will be needed, and it is clear that a theory

Former Pilot's Saucer At 5 Times Speed of Sound

based on some definition of extra-terrestrial intelligence apparently could do the job. It is clear, for example, that the sightings have been going on for too long to explain in terms of straightforward terrestrial intelligence. It is in this sense that ETI (Extra Terrestrial Intelligence) stands as the 'least implausible' explanation of 'real UFO's.'

Dr. Saunders cites two UFO cases as good examples to support a theory of extraterrestrial intelligence being involved, but he adds: "There are many other cases that seem potentially as good as these, and some of them are already regarded as quite substantial by people whose scientific judgement I respect."

One of the cooler heads in the whole Condon Report flap belongs to Dr. J. Allen Hynek of Northwestern. He probably summed it up best when he wrote:

"I have a hunch that there is scientific pay dirt in a UFO study, possibly very important pay dirt, but there may also be scientific quicksand."

The ETI Hypothesis—that UFO's are spacecraft guided by intelligent creatures from another world, perhaps from another solar system—proved to be the quicksand for Saunders in his dealings with Low and Condon. The course of that battle makes fascinating reading in Saunders' book.

It would be instructive to evaluate the two opposing points of view through one of the cases that Dr. Saunders calls one of "the best available (UFO) cases."

This sighting was unique in that fragments of "UFO hardware" were recovered. It occurred near the town of Ubatuba in the province of Sao Paulo, Brazil, sometime in September of 1957. It was doubly unique because the anonymous observer claimed that he and his friends who were fishing together saw the UFO explode, scattering metallic fragments over the water and shore. He sent some of the fragments to Ibrahim Sued, a newspaper society columnist of Rio de Janeiro, with a letter that read, in part:

"... I sighted a flying disc. It approached the beach at unbelievable speed and an accident, i.e. a crash into the sea seemed imminent. At the last moment, however, when it was almost striking the waters, it made a sharp turn upward and climbed

Mr. F.B. is a former pilot and a former Senior Sergeant in the U.S. Air Force. He is Manager of Technical Services in the Quality Assurance Department of Pitney-Bowes at Stamford, Connecticut, and holds an A.S. degree in Applied Science, an A.S. degree in Arts and the equivalent of an M.S. degree in undergraduate credits. He lives at Pound Ridge, New York. His case is listed as "Unidentified" in the Project Blue Book files.

Here's his description of the UFO that he saw with his daughter: "On Sunday, August 11, 1968, at approximately 4:10 p.m. at my home in Pound Ridge, my 3-year-old daughter was lying on the ground, on her back, at my feet. Suddenly she pointed straight up and yelled, 'Look!'

"From this point, straight up, I could see about 50 degrees of open sky in the direction of flight S.S.E. [South Southeast]. This flying object crossed this open sky in complete silence, without any vapor trail or exhaust trail, and in less than eight seconds. Visibility on that day was unlimited. The altitude would be difficult to guess, not knowing the actual size of the object. But as it crossed over, its size was about that of a nickel. I would estimate its speed at five times the speed of the fastest jet I've seen (F-100) [which travels at the speed of sound].

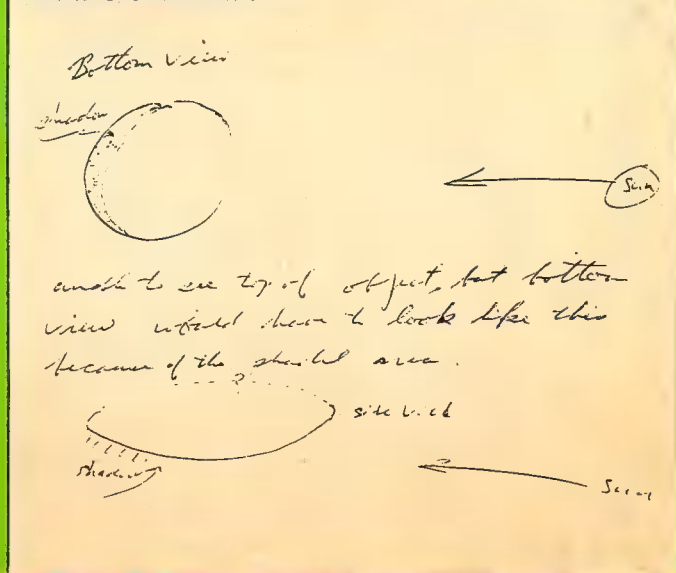
"The object was round, bright and metallic-looking, similar to polished aluminum. Judging by the light-pattern on the bottom of the object caused by the sun, the radius of curvature of the bottom was greater than the radius of the diameter of the object: therefore it was not spherical in shape.

"The path of flight seemed at a constant altitude and in a relatively straight line to the S.S.E. However, I noticed at least three very slight corrections, which kept it on a generally straight path.

"I am aware of the fact that we had a meteor shower on the same day. This object seemed to be man-made, perfectly round and [with] a very homogenous surface, both in material and contour."

Project Blue Book comments: "Inquiries were made to the police departments of several cities and towns along what was indicated as the probable flight path of the object. No one reported anything unusual for the 11th to the volunteer flight officers network and no meteors were reported to the American Meteor Society for the afternoon of the 11th."

18. DRAW A PICTURE THAT WILL SHOW THE SHAPE OF THE PHENOMENON. INCLUDE AND LABEL ANY DETAILS THAT MIGHT HAVE APPEARED AS WINGS, PROTRUSIONS, AND INDICATE EXHAUST OR VAPOR TRAILS. INDICATE BY AN ARROW THE DIRECTION THE PHENOMENON WAS MOVING.



19. WHAT IS THE ANGULAR SIZE? HOLD A MATCH AT ARM'S LENGTH IN FRONT OF A KNOWN OBJECT, SUCH AS A STREET LAMP OR THE MOON. NOTE HOW MUCH OF THE OBJECT IS COVERED BY THE HEAD OF THE MATCH. NOW IF YOU WERE ABLE TO PERFORM THIS EXPERIMENT AT THE TIME OF THE SIGHTING, ESTIMATE WHAT FRACTION OF THE PHENOMENON WOULD HAVE BEEN COVERED BY THE MATCH HEAD.

rapidly on a fantastic impulse. We followed the spectacle with our eyes, startled, when we saw the disc explode in flames.

"It disintegrated into thousands of fiery fragments, which fell sparkling with magnificent brightness. They looked like fireworks, despite the time of the accident, at noon, i.e. at midday. Most of these fragments, almost all, fell into the sea. But a number of small pieces fell close to the beach and we picked up a large amount of this material—which was light as paper. I am enclosing a sample of it. I don't know anyone that could be trusted to whom I might send it for analysis. . . I am certain the matter will be of great interest to the brilliant columnist."

The letter was signed, but the signature was illegible. Apparently there was no return address on it.

Mr. Sued, the columnist, or perhaps even someone else, apparently turned the sample fragments over to an agency of the Brazilian Government for chemical analysis. The analysis showed the fragments to be of magnesium, but so pure that Earth man at that time did not have the technology to achieve its equivalent. Therefore it was considered to be the product of an extraterrestrial civilization.

Some years later, a few of the same magnesium fragments found their way to the United States and finally the Condon Committee was able to borrow one for analysis by a newly developed nuclear technique. As Dr. Condon states in his Final Report: "If this [the purity of the fragments] proved to be true, the origin of the fragments would be puzzling indeed. If it could then be established that the fragments had actually been part of a flying vehicle, that vehicle could then be assumed to have been manufactured by a culture unknown to man."

Dr. Condon then continued in his bylined summary of the Report: "We arranged to have it [the magnesium fragment] studied by the method of neutron activation analysis in a laboratory in Washington, D.C. [it was the FBI Laboratory]. The result, which is presented in detail in Chapter 3 of Section III [of the Final Report], was that the magnesium metal was found to be much less pure than the regular commercial metal produced in 1957 [the same year as the Brazil sighting] by the Dow Chemi-

'Huge Bullet' Leaves Trail Of Matches in Virginia

Mr. C.N.C., manager of a fertilizer warehouse in South Hill, Virginia, stayed over in his office after the other employees had left for the day to work on his books. The date was Friday, April 21, 1967, and he wanted to have the week's business recorded and balanced before he left for home. By 9 that evening he had finished his work and left the warehouse to drive home. At the time, the sky was entirely dark.

Three seconds after turning onto County Route 747, his headlights revealed a strange object about 500 feet ahead of him sitting in the center of the road. Two 6-inch-diameter legs could be seen under the object, angled outwardly somewhat to support it. The object was cylindrical in shape, with a flat bottom and a dome-shaped top. It resembled a huge bullet, according to Mr. C.N.C., who estimated its size as 16 to 18 feet high, not counting the legs which raised it some three feet off the highway. He estimated its diameter to be about 12 feet. It had the color of dark aluminum, similar to a large nitrogen fertilizer tank near his warehouse.

Mr. C.N.C. wanted to get a better look at the object, so he cautiously drove up to within about 250 feet of it—and then switched his headlights from dim to bright. After a delay of four or five seconds, there appeared suddenly a brilliant white column of fire—like white-hot molten steel—directly under the object. The column of fire was about 18 inches in diameter. Its downward jet could be seen splashing off the road-pavement. At the same instant, the object appeared to rise and was out of sight in "just a snap of the fingers." At no time did he hear a sound, although his car window was open beside him.

The white-hot flame did not travel upward with the object, but disappeared an instant after it had appeared, leaving the road burning with orange flames. When the "tremendous burst of white-hot gas or flame" appeared, his reaction was to stop the car, but instead he drove past the smoldering patch on the road, which was still flickering in a few places the size of a hand. He drove directly to the State Police headquarters in South Hill.

Two State Troopers and a newspaperman from town returned with him to the scene where he had witnessed the UFO. The patch of burned tar in the road was still warm to their touch when they examined it. The troopers almost immediately found three matches of the paper-book type in the center

cal Company at Midland, Michigan. Therefore it need not have come from an extraterrestrial source, leaving us with no basis for rational belief that it did."

Dr. Saunders, who wrote his book before the Condon Final Report was completed, stubbornly contradicts the Colorado-Group findings:

"During the second week of February, 1968, Roy Craig [a physical chemist on Dr. Condon's UFO-investigation staff] flew to Washington to run the Neutron Activation Analysis [of the magnesium fragment] at the FBI Laboratory. We learned that he had some interesting results. The sample actually was not pure magnesium, but the pattern of impurities was very odd.

"A Congressional Symposium on UFO's was held in Washington, D.C., on July 29, 1968. At that gathering, Dr. James A. Harder of the University of California Civil Engineering Department disclosed the FBI

Lab findings concerning the sample:

"—The sample is 99.9 percent pure magnesium; the impurities total only about one part per thousand.

"—The major impurities are about 500 parts per million of zinc, and lesser amounts of barium, manganese, and chromium.

"More significant, however, is what the sample does *not* contain. If the fragment were ultrapure terrestrial magnesium, one would expect to find one of four conditions existing:

"—If the sample were a terrestrial alloy of magnesium, it *might* have contained aluminum or copper or both. There was no aluminum and only a trace of copper.

"—If someone had made a serious effort to purify the sample, the element most difficult to remove would have been calcium. There was none.

"—If someone had done an unusually fine job of removing the calcium, he would almost certainly have done it using a quartz vessel. This would have introduced minute amounts of

of the burned spot. The matches were burned in a curious manner, each carbonized from end to end. A thorough search was then conducted on the road around the burned area, the shoulders of the road and the wheat fields on either side of the road. Nothing at all unusual was found.

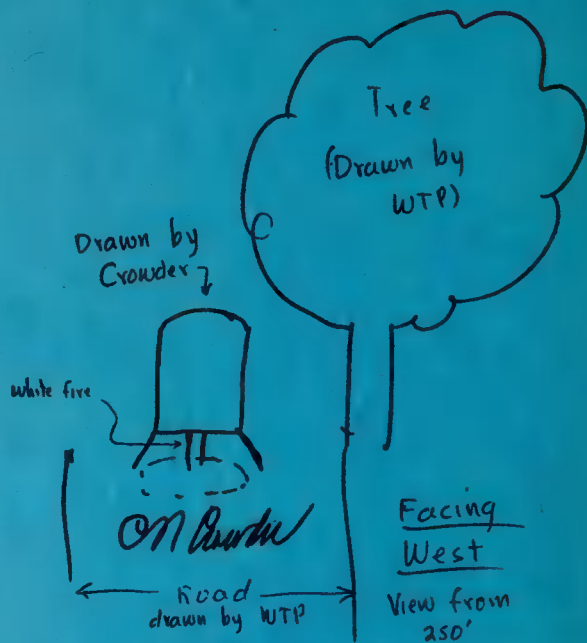
The following morning, another inspection of the scene was conducted in daylight and four small holes were found on the road. They were spaced evenly in a square surrounding the burned patch. Each side of the square was approximately 11½ feet. The holes were each about a half-inch in diameter. Two of the holes (northeast and southeast) had straight cylindrical sides and blunt bottoms and were about three-quarters of an inch deep. The other two holes were shallower and less well-defined. They were about three-eighths of an inch deep.

The State Troopers who had conducted a search of the area the previous night were positive that the holes were not there during their first search. They insisted that they could not have overlooked these holes, even after an experiment at night showed that the holes would not be visible under low-angle illumination from automobile headlights alone, but would appear as shadows among many other shadows.

However, there was an indirect corroboration of Mr. C.N.C.'s story by a Mr. N.M., who lived just up the road from the scene of the sighting. Mr. N.M. had driven home with his wife, who went into their house while he paused in the driveway. He was looking north over his wheat field toward the road. He guessed the time was 8:45 to 9:00 p.m. when he noticed that the large roadside tree almost directly north of him was suddenly illuminated by a brilliant white light, which also lit up a large pine some 75 feet north of the road. The illumination, according to Mr. N.M., was exceedingly bright and appeared to rise, traveling rapidly up the tree alongside the road, until it abruptly went out.

There were suspicions that this UFO case was a hoax, but Mr. N.M. was not aware that Mr. C.N.C. had reported seeing a strange object rise on a column of white flame at about the same time that he had noticed the brilliant illumination of the trees. He was only informed of this later after he had mentioned the illumination to friends. Nor was Mr. C.N.C. aware at the time of his sighting that Mr. N.M. had seen the bright white light.

The Air Force scientific investigator of the case later reported: "During the investigation [two days later] many people, including all of the police, indicated that Mr. C.N.C. has excellent standing in the community, is a responsible citizen and would by no means be involved in a hoax or falsehood. 'If anyone but C.N.C. had made the report,' the comments ran, 'I wouldn't have believed him, but if C.N.C. says it happened—it happened.'"



Note: Dimensions of drawn object are proportioned very close to actual size estimates given by Crowder: 12' dia, 16' high, 3' off ground, dia of flame or jet = 18". Wings however, are too far apart a burned area (dotted) is too large.

silicon into the sample. The FBI tests showed that no silicon was present.

"If someone had used the best techniques available to purify magnesium in 1968, he would have employed repeated sublimation of the metal under a very high vacuum. A mercury-vapor pump would be required to produce this vacuum, resulting in mercury contamination of the product. There was no mercury in the Ubatuba sample. . .

"In 1957, the alloy was apparently unknown on this planet—the world's metallurgists might well have been unable to duplicate it. . .

"I can only say that if the Brazilian fishermen did not really collect fragments from a space ship, then someone did perpetrate one of the most sophisticated scientific hoaxes in history."

And I might add that if it was a hoax, perpetrated to build a Brazilian newspaper columnist's fame, then Dr. Saunders' argument for extraterrestrial intelligence falls flat on its

face. One thing bothers me among his listings of why the magnesium sample could not be of terrestrial origin: he uses the qualifying word "might" when referring to aluminum and/or copper content. I have emphasized that word for the reader's judgement. The other emphasis is his.

It should also be mentioned that when Dr. Saunders refers "above to the alloy as being "apparently unknown on this planet," he means almost 100 percent pure magnesium.

The Condon Report is guilty on other counts.

How can Dr. Condon on the one hand recommend abandoning any future formal investigation into UFO's, and then, on the other, lend truth to their existence by admitting that in the two years' allotted time and with a budget \$525,000 and untold consultants at his disposal, he was still unable to explain at least a dozen cases.

One of the classic instances of leav-

ing himself a convenient "out" was in the wording of the 1950 Great Falls, Montana, sighting. The Condon Report concludes:

"Witness one, General Manager of a Great Falls baseball team, and Witness two, his secretary, observed two white lights moving slowly across the sky. Witness one made 16mm motion pictures of the lights. Both individuals have recently reaffirmed the observation, and there is little reason to question its validity. The case remains unexplained. Analyses indicates that the images on the film are difficult to reconcile with aircraft or other known phenomena, although aircraft cannot be entirely ruled out."

Wouldn't you think a case such as this deserved some greater serious scientific consideration?

Three different sightings by astronauts in three different Gemini-Titan flights would certainly make one question The Condon Report's smug conclusion. The Condon Re-

port's own consultant summarized:

"The training and perspicacity of the astronauts put their reports and sightings [of UFO's] in the highest category of credibility. They are always meticulous in describing 'the facts,' avoiding any [biased] interpretations. . . .

"The three unexplained sightings which have been gleaned from the great mass of reports are a challenge to the analyst. Especially puzzling is the first one on the list, the daytime sighting of an object showing details such as arms (antennas?) protruding from a baby having a noticeable angular extension. If the NORAD listing of objects near the GT-4 (Gemini-Titan-4) spacecraft at the time of the sighting is complete, as it presumably is, we shall have to find a rational explanation or, alternatively, keep it on our list of unidentified's."

Whether the Condon Report is a whitewash or not, one fact comes through loud and clear: What Dr. Condon and David Saunders had here was a lack of communication. As co-author Harkins, an old friend of Dr. Condon's, says in his foreword:

"I could make excuses for his [Dr. Condon] allowing someone else to direct his project; I could defend his right to fire anyone he pleased; but there is no way to defend his attempt to discredit Dave Saunders. Unable to answer the serious charges that Saunders and others had raised about his investigation, Condon attacked Saunders in the good old American way. He labeled him a "nut" in an attempt to silence him forever.

"The real tragedy of this story is that Condon and Saunders are both legitimate scientists who have dedicated their lives to the same principles, and yet they wound up at

odds with each other. It is doubly tragic in that Condon, nearing the end of his career, winds up supporting the very things that he spent his lifetime fighting. Condon crucified Saunders with the very tactics that were unfairly used against Condon when he fought his historic battle with the House Un-American Activities Committee. Ed Condon was not a Communist; neither was Dave Saunders incompetent."

Dr. Saunders' "Inside Story" is a Signet paperback of 256 pages that sells at 95 cents and may be found on newsstands or purchased directly from The New American Library/Box 2310, Grand Central Station, New York, New York 10017. For comparison, the Condon Study of UFO's is also now available in paperback at \$1.95 from Bantam Books/271 Madison Avenue, New York, New York 10016. •

'Further Study'

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McDonald, an atmospheric physicist at the Institute of Atmospheric Physics, University of Arizona, claimed publicly that they were "not adequately prepared to assess the Condon Report." And SCIENCE, official weekly journal of the American Association for the Advancement of Science, had this to say: "Thus the UFO controversy seems unlikely to end, despite the Colorado Report's massive documentation . . . and its undoubted contributions to an understanding of the UFO problem."

I phoned Dr. David Saunders (see examination of his book on the opposite page) at the University of Colorado for his opinion of the National Academy's Review Panel. He told me: "My feeling about the panel is that its members were put in an impossible situation. They are all fine scientists—and this is no criticism of them. They had only the [Condon] Report itself to look at and they had a limited time to do that. Even though there were ten or eleven of them, they certainly did not represent all of the areas [of scientific specialization] that should have been represented in order properly to review the work. And I kind of draw the analogy here between this situation and the case in which somebody might be charged in medicine with malpractice.

"A major observation at this point would be that the [Colorado] Report is Condon's Report. The work of his Committee is reflected in chapters that they have put into it. But his recommendations do not rest very firmly on the data in those chapters that were written by the rest of the Committee."

In Section I of his "Scientific Study of Unidentified Flying Objects," Dr. Condon writes his "Conclusions and Recommendations," as follows: "As indicated by its title, the emphasis of this study has been on attempting to learn from UFO reports anything that could be considered as adding to scientific knowledge. Our general conclusion is that nothing has come from the study of UFO's in the past 21 years that has added to scientific knowledge. Careful consideration of the record as it is available to us leads us to conclude that further extensive study of UFO's probably cannot be justified in the expectation that science will be advanced thereby."

A few paragraphs later on, he qualifies that statement: "Scientists are no respecters of authority. Our conclusion that study of UFO reports is not likely to advance science will not be uncritically accepted by them. Nor should it be, nor do we wish it to be. For scientists, it is our hope that the detailed analytical presentation of what we were able to do, and of what we were unable to do, will assist them in deciding whether or not they agree

with our conclusions. Our hope is that the details of this Report will help other scientists in seeing what the problems are and the difficulties of coping with them."

Dr. Condon's next words were entirely overlooked by the press, which gave the impression in their news stories and reviews that Condon had given UFO's a categorical thumbs-down. I will italicize those sentences that express a Condon attitude which was, for some odd reason, missed by the nation's newsmen.

"If they [the scientists] agree with our conclusions," Dr. Condon continued, "they will turn their valuable attention and talents elsewhere. If they disagree it will be because our Report has helped them reach a clear picture of wherein existing studies are faulty or incomplete and thereby will have stimulated ideas for more accurate studies. If they do get such ideas and can formulate them clearly, we have no doubt that support will be forthcoming to carry on with such clearly defined, specific studies. *We think that such ideas for work [on UFO's] should be supported . . .*

"Therefore we think that all of the agencies of the federal government, and the private foundations as well, ought to be willing to consider UFO research proposals along with the others submitted to them on an open-minded, unprejudiced basis. While we do not think at present that anything worthwhile is likely to come of

such research, *each individual case ought to be carefully considered on its own merits.*"

In his plea for a rigorous scientific approach to the UFO problem, Dr. Condon adds: "The subject of UFOs has been widely misrepresented to the public by a small number of individuals who have given sensationalized presentations in writings and public lectures. So far as we can judge, not many people have been misled by such irresponsible behavior, but whatever effect there has been has been bad.

"A related problem to which we wish to direct public attention is the miseducation in our schools which arises from the fact that many children are being allowed, if not actively encouraged, to devote their science-study time to the reading of UFO books and magazine articles of the type referred to in the preceding paragraph. We feel that children are educationally harmed by absorbing unsound and erroneous material as if it were scientifically well founded. Such study is harmful not merely because of the erroneous nature of the material itself, but also because such study retards the development of a critical faculty with regard to scientific evidence, which to some degree ought to be part of the education of every American.

"Therefore we strongly recommend that teachers refrain from giving students credit for school work based on their reading of the presently available UFO books and magazine articles. Teachers who find their students strongly motivated in this direction should attempt to channel their interests in the direction of serious study of astronomy and meteorology, and in the direction of critical analysis of arguments for fantastic propositions that are being supported by appeals to fallacious reasoning or false data."

While this last recommendation may appear at first glance to be biased and high handed, Dr. Condon is not actually saying that school children should be discouraged from reading *anything* at all about UFO's. Rather he is saying that they should be taught to evaluate critically *whatever* they may read. There *are* some good objective books about UFO's although these are in the minority, and these should be searched out for comparison with the more kooky UFO literature. ■

Contactees

continued from page 29

had hundreds of questions "beating on the fringe of his consciousness." All questions, he said, brought forth clear and understandable answers. Fry learned that the craft in which he was riding was not equipped for interplanetary flight, but was remote-controlled by a carrier, or mother ship then riding high in the atmosphere.

According to Fry, saucers are powered by gravitational forces, and the cargo carrier was completely dependent upon the mother ship for re-charging. Supposedly, all the atoms of the ship and its contents were acted upon simultaneously with equal force, cancelling out inertial effects.

Subsequent contacts were mere O.S.C., taking the form of "voices inside his head." It goes unsaid whether or not he had proof of his initial contact. During 1950, movies were taken of UFO's near White Sands Proving Ground, but it is improbable that these movies could in any way validate Fry's story. Fry follows the "benevolence" pattern, and though his initial story might have struck a note of credibility, he has since become involved with people who are obviously capitalizing on UFO's, making tape recordings of Martian voices, and one even running for president every four years on the "flying saucer ticket."

Howard Menger not only visited with extraterrestrials, he married one! Submitting apparently fraudulent photographs, he claims that at ten years of age, he and his younger brother contacted an extraterrestrial beauty with long, golden hair, golden flecks in her eyes, and a form-fitting jumpsuit (with a form to match, according to Howard). After a short conversation he knew he'd fallen spiritually in love. Fourteen years later the extraterrestrials became an integral part of Howard's young life. Invited aboard their craft, he was told to snap all the photographs he wanted. Unfortunately, these photos were very poorly done, and Howard apologized.

Menger's stories seem to parrot those of Adamski and Fry. Claiming to have been born on Saturn originally, he was later reincarnated into the body of an Earth-child. Taking

the name "Alyn," supposedly his Saturnian name, Menger divorced his first wife to marry Marla Baxter, the sister of the voluptuous 500-year old woman he and his brother had encountered years before.

In 1958, Howard and Marla were quite big in saucer circles, lecturing, displaying moon potatoes, and, naturally, writing a book about their experiences.

Finally there is Orfeo Angelluci, an Italian immigrant raised in Trenton, New Jersey. Orfeo quit school in the ninth grade, and acquired an intense interest in the atom. His experiences, similar to those of his fellow contactees, are set forth in "The Secret of the Saucers (Kling House Ltd, California, 1955.) Bryant and Helen Reeve, authors of "The Flying Saucer Pilgrimage" (Amherst Press, Wisconsin, 1957) state: "In our estimation Angelluci has done an exceptional and courageous job in revealing the intimate details of his experience and the nature of the advanced space beings he has contacted—their greatness, their perfection, and their compassionate love for mankind."

To further the religious attitude, the Reeves continue: "Few books reveal what, for want of a better word, we might call the "scared" nature of such contacts between a space being and an earth-being."

Writers and scientists have directed quite a few caustic words in the direction of contactees. Brad Steiger, in his book "Strangers from the Skies" (Award Books, 1966), says people who claim intimate contact with extraterrestrials are "capitalizing on the big saucer flags of the early fifties." This theory is substantiated by the fact that no new contactees have appeared since America started making progress in investigations of outer space.

Yet the original contactees persist in their claims, and one of their main exponents is Timothy Green Beckley, director of "The Interplanetary News Service." Furthering the religious aspect of the UFO-contactee phenomena, he includes articles by such men as Menger and Richard S. Shaver, in his "Searchlight" magazine. Shaver began a series of fiction articles in FATE during 1947—articles describing a race of "Detrimental Robots," or DERO. Today Shaver contends, the "Dero" are advanced living creatures. The gullible eagerly swallow the nonsense, accusing all

who disbelieve them of being either narrow-minded, or government controlled.

Many stories appeal on a religious plane. These are people who *want* UFO pilots to be bearers of peace-messages, healers of the sick, and a cure-all for the social-economic ills of mankind.

The commercial aspect of UFO-contactee claims has reached alarming proportions in the last few years. At the helm is Gabriel Green, founder and president of AFSCA (Amalgamated Flying Saucer Clubs of America, Inc., Los Angeles.) Green's advertisements offer, besides subscriptions to his group's quarterly publication "UFO International," membership cards in AFSCA, Flying Saucer buttons (two sizes, 1½" at 10 cents each, and 2¼" for 25c), flying saucer stamps, and post cards of a UFO photo taken in 1963 with "See, Flying Saucers are Real" printed across the top. (Space in the publication is also provided for a "Donation to help advance the flying saucer movement.")

Green—he's the one who runs for president every four years on the "flying saucer ticket"—also carries on a fight for world peace, "with the aid of our space brothers." Funds are gathered for "dissemination of UFO information which can help to solve the most pressing problems of our times." Green continues: "We invite you to investigate this fascinating subject. It offers a realistic hope and promise for the future and an opportunity for you to participate in this great adventure to build the fabulous New World of tomorrow. Your assistance in any way to advance this important work will markedly help to materialize a better world for all mankind."

Joining Green is Richard T. Miller. Another champion of the UFO-benevolence theory, Miller sells "Flying Saucer Tapes" at \$4.50 apiece. The tapes begin, "I am Mon-Ka. I am speaking to you from the planet Mars.

Miller is an unemployed electronics technician, and he says Mon-Ka has been in contact with him since 1954. The so-called "messages" originally were relayed via "tensor beam," until O.S.C. could be employed. Surprisingly enough, Mon-Ka sounds very much like an older Dick Miller. The "space messages" warn that world conditions are becoming strained, and that nuclear testing should be ter-

Air Traffic Controllers See Orange in Alaska

During the summer months in Alaska near the Arctic Circle, daylight continues through almost 24 hours. So it was bright and clear, Alaska time, at 3 o'clock in the morning, on July 11, 1968, when three Air Traffic Controllers at Eielson Air Force Base spotted a brilliant orange object south of the Base that they could not identify. The AT Controllers were Mr. P.D.C., age 32; Mr. C.P.K., age 31; and Mr. D.J.R., age 20.

Each of them gave an identical description of the unknown object: "It was very bright when first observed," reported C.P.K., "and appeared to be self-luminous, orange in color. It looked as if it was a solid object with very sharp edges and round in shape. There were no objects in my field of view to compare it with."

P.D.C. reported: "Bright orange or yellow object. Self-luminous, solid, edges appeared sharp."

D.J.R. wrote: "On initial contact, the object appeared very bright—appearing self-luminous—appeared to be solid, edges being highly sharp, being round in form. [I know of] no other comparable object."

The three ATC men then called upon RAPCON (Radar Approach Control) to see if they could make radar contact with the mysterious object, which appeared to be hovering above the southern horizon. Its only movement was a slow shifting to the west. The RAPCON radar-console operator reported a good correlation with the visual sightings of the object from the Control Tower, but there was not a very good correlation between the visual and radar observations as regarded movement of the object. The RAPCON operator felt that what he was seeing in terms of motion were "ghosts," or secondary radar reflections.

According to the official report of the Air Force Base UFO Investigator, on that date there were "no warnings of hazards to flights, such as balloon launchings. No unusual weather phenomena occurred at this time." In addition, there were no known aircraft in the area on that date at that time.

Summing up his report to Project Blue Book, the Alaskan UFO Investigator said: "The three primary personnel involved in the visual sighting are highly dependable individuals. Their job calls for careful screening, extensive training, and consistently high performance and reliability. Their work requires constant observation and identification of a great variety of aircraft."

One of the officers who later analyzed that report could still say of the object sighted that it "would seem to indicate that the observers were looking at the moon."

But certainly trained experts such as Air Traffic Controllers should know what the moon looks like.

minated at once. A Mars peacenik!

Another man, George King, of England, also warns of the danger of continued nuclear explosions. Going into a trance, he claims to relate messages from spacemen: "This is the Fifth sector of the Planet Mars speaking." Founder of the Aetherius Society in London, King says: "I knew some years ago that I had come to Earth with a special mission to perform—had been specially chosen for some great spiritual task." It is King who carries the UFO-benevolence to its ultimate conclusion when he writes in his periodical, "Cosmic Voice":

"The words of Jesus still burn through my brain like the flames of some Sacred Fire, to urge me ever onwards."

At one of Gabriel Green's annual Flying Saucer Conventions, Kelvin Rowe, a forestry bulldozer operator claimed to have taken more than 350 trips into outer space. He also told conventioners that there are "more liars in the flying saucer field than anywhere else." Another man, Dan Martin, said that 99% of the other convention speakers were frauds. "The public is tired of all these fantastic stories," he says. Martin claims to have been lifted into a Venusian space ship manned by Mercurians. His lunch aboard the craft consisted of fruit salad and wine.

Then there are the people who themselves claim to be emissaries from other planets. Besides Howard Menger, there is Prince Neosam, alias Lee Childers (an Earth-name) and

his wife "Princess Negonna," Mrs. Childers. The prince, who claims to come from Tythan, a planet about 8½ light years away, says he is 251 years old, and his wife a very young-looking 241.

A social psychologist, H. Taylor Buckner, of California's University at Berkeley, once wrote of contactees:

"The physical health of [the members] appears to be bad, even worse than would be accounted for by the high average age. By any conventional definition [their] mental health level is quite low. Hallucinations are quite common, though people may be drawn to the environment by the fact that 'seeing things' is accepted as a mark of special sensitivity.

"The men tend to be either young schizophrenics or aged with advanced senility. I have never seen a male saucerian who could make a successful presentation of normalcy."

Says the National Investigations Committee on Aerial Phenomena (Washington, D.C.): "NICAP has found no evidence to support any of the claims of the so-called 'contactees'—people who claim they have ridden in spaceships or spoken with spacemen." To its members NICAP sternly warns against expounding contactee claims. Great pains are taken to discredit any stories of a suspicious nature, mainly those from contactees.

Much has been written about and by men like Menger, Fry, Angellucci, and the rest. No one can argue that their purposes seem harmless enough, but when such purposes are capitalized upon by men like Dick Miller and Gabriel Green, it can only serve to discredit not only stories of extraterrestrial contact but the more reliable UFO sightings as well.

At one of the many saucer conventions, James W. Moseley, publisher of "Saucer News," in Fort Lee, N.J., offered \$1,000 to contactees who could prove their stories genuine. There were no takers. It seems that "proof," according to the contactees, resides in the nebulous realms of blind "faith" in our "space brothers."

It appears that this "new religion" will blossom into a mass of inconsistencies and wild claims that will blow the entire UFO mystery out of any serious or scientific consideration. In the last analysis, contactees become more of a social-psychological problem than a scientific one. And the problem is not in the so-called

"messages" being relayed, but in the way in which these messages are presented: fraudulently and in a ridiculous manner.

GEORGE ADAMSKI

The most renowned contactee of them all died on April 29, 1965. He was 74 years old. A Polish immigrant, Adamski lectured throughout his life on ancient laws "known by occidental people today but seldom found outside of Oriental Philosophy." It's not surprising that many of these "laws" became a part of the "messages" given to Adamski by the "Space Brothers."

Adamski first acquired a small following while lecturing on radio in Laguna Beach, California, in 1933. Although his education was hardly extensive, Adamski's "students" titled him "Professor," and he has been called "Doctor Adamski" many times. One of Adamski's students gave him a six-inch Tinsley reflecting telescope that would later play a key role in his experiences.

"On the advice of scientist friends who had been instructing [him] in the field of astronomy," Adamski purchased 20 acres on the southern slopes of Palomar Mountain in 1944. Two years later he saw his first "space ship." After having watched a meteor shower, Adamski claims, a large, black, dirigible-shaped object appeared and was at first mistaken for an American secret weapon.

Adamski's first mass sighting came a year later when no less than 184 Flying Saucers appeared in "squadrons of 32."

George Adamski claims that in Desert Center, California, on the 20th of November, 1952, he talked with a man from the planet Venus. He and six others, Dr. and Mrs. George Hunt Williamson (author of several UFO-related books), Mr. and Mrs. Al Bailey, Mrs. Lucy McGinnis and Mrs. Alice Wells, had gone to Desert Center to attempt contact with extraterrestrials. When a large cigar-shaped craft appeared over a group of mountains, they turned their car in its direction, and drove toward it. After a few minutes the object turned, and hovered above the car. Stopping the car, the party got out and set up the various apparatus, cameras, telescopes, etc. Meanwhile, Air Force jets had arrived and succeeded in chasing away the cigar-shaped craft. (Some

investigators have reported that Air Force pilots did report seeing unknown objects in the area that day.)

Soon the group noticed a man waving from atop a low hill. Dressed in some type of "ski clothing," he appeared to be a rock hound, but Adamski, walking toward him, couldn't help sensing "that something was going to happen." Except for his clothing, the man appeared normal. Though his hair was long, his facial features were perfect. The clothing was loose and girdled in the middle by some type of wide belt. The visitor was wearing a pair of thin sandals, and indicated that the sandals were somehow important.

The man spoke no English, except for an occasional "yes" or "no," but communicated with Adamski telepathically, using his hands to illustrate points he thought might need clarification. Despite the language barrier, the communication between both men was smooth. Adamski learned that the man came from Venus. He and his kind had come to Earth to save it from inevitable nuclear destruction.

When the Venusian indicated that the conversation was drawing to a close, Adamski noticed a strange, round vehicle, with ball type landing gear, and portholes around an apparent dome, hovering in a low gully. Both men walked toward the machine, and as they drew closer Adamski saw another being peering at him from behind one of the portholes. This creature also was extremely beautiful, though Adamski couldn't tell whether it was a man or a woman.

Though Adamski had not forgotten to bring his camera, the Venusian indicated that it should not be used. Instead, he asked for one of the negatives.

According to Adamski, it was returned two months later, with an incomprehensible message scribbled across its face. Adamski thinks the message may be the key to gravity control.

The saucer appeared to be about 35 feet in diameter, and 15 feet high. The cigar-shaped craft had since reappeared, and as the small object disappeared into it, Adamski turned and started back toward the group he'd left behind.

Odd "footprints" were found at the area where the visit was supposed to have taken place, and a plaster cast made of the prints. ■

April Fool Prank Or Up, Up and Away?

Probably the wierdest prank ever played on April Fool's Day—if it was a prank—was the case of Mr. C.W.W., a 28-year-old farmer from South Wellington, Texas. The Air Force UFO Investigator's report states: "People contacted in Wellington verified his reliability." Here's the case:

At approximately 10:30 p.m. CST on April 1, 1967, C.W.W. left his father's home and drove south in the direction of his own home, which was located one mile away. He noticed a light near an abandoned farm house while enroute. Since the land belonged to his uncle, C.W.W. suspected prowlers. He left the road and drove toward the old farm house to investigate. The light illuminated the house, since it was shining toward the west.

As he neared the house, he could distinguish a cylindrical shape with a round nose. It was approximately 100 feet in length, eight to 10 feet high and about 10 feet wide. It had a light aluminum or grayish color that did not reflect light. Mr. C.W.W. estimated the object to be roughly one foot above the ground.

After parking his car about 200 feet east of it, he approached the object on foot and walked around it. He noted now that the hull was probably made of aluminum. It had no visible means of support as it hovered over the ground. At this point, C.W.W. thought the object was an experimental Air Force aircraft.

He noticed the outline of a hatch and knocked on it sharply several times. A U-shaped door was lowered from the hull and he heard the whir of a motor. The door was five feet long, three feet wide and curved at the top. Built into the inside of the door were steps about four inches apart.

Mr. C.W.W. could now see the interior of the object, although he could not determine the source of its illumination. He observed what he thought was a map on the opposite wall, one foot above the floor. The map was a yard square and was overlaid with a grid of vertical and horizontal lines. Beneath the grid were six or seven zig-zag lines, which he thought were representations of rivers. To the left of the map was a console panel that reached from the floor nearly to the ceiling. It contained only one knob and one toggle switch. Above the panel were four gages which appeared to be lighted. The floor was flat.

After the door opened, Mr. C.W.W. heard a voice, but saw no one. The voice-quality was mechanical, lacking any inflection. He was asked to board the strange craft to submit, as he put it, to a "strenuous physical." He asked why the physical was necessary and was informed that it was a prerequisite to a flight in the object. He was told that only the most healthy of men could pass the physical and that other men had previously flown aboard the object. According to C.W.W.'s story, he was repeatedly asked to board the craft to take a physical examination.

He was also informed that the craft housed a machine which, when within 300 yards of a house, could determine the number of its occupants and their ages. When the voice again asked him to board the craft for a physical, he suddenly became frightened and rushed off to his parked pickup truck.

He then drove toward the strange object, passed by it and turned south. After passing the object, he observed in his rear-view mirror that it had lifted about three or four feet higher in the air and flew toward the south, always close to the ground. There was a light in front of the craft that was about four feet from the ground and 20 inches in diameter. When the object was hovering in a parked position, the light had been white with the quality of fluorescence. But as the object began to move, the light turned to a reddish color. Mr. C.W.W. encountered the same craft three times within 18 days. The third time, he got up the courage to enter the craft, take his physical and, since he passed that examination, fly off in it for one-and-a-half hours. He did not know where he was being taken, since the flight plan was unknown to him.

The case has been listed as "inconclusive evidence, but probably psychological."

Yet people in his town say that Mr. C.W.W. is a reliable person. Who's for April Fool?

Sightings for Sore Eyes

continued from page 33

To learn more about atmospheric pressure, temperature, wind direction and velocity over vast stretches of open sea, balloons are being launched to fly at 30,000 feet. They are rigged to destroy themselves if they drop below 28,000 feet, or fail to reach that height. These balloons are 40 feet in diameter and have a plastic skin only 2/1000ths of an inch thick. Sunlight or moonlight reflecting from their plastic skin surface can cause them to be easily mistaken for UFO's.

A Lockheed EC-121 Constellation early warning picket aircraft is an example of an unfamiliar type of aircraft which, to the uninitiated observer, might appear to be a UFO.

Many new types of delta-wing aircraft are in operational use. The unusual configuration of this type of aircraft could cause possible confusion and be reported as a UFO.

Lights used on the Boeing KC-135 Stratotanker aircraft for night refueling missions are often mistaken for UFO's in trail formation. The light from a jet tail pipe, under dusk conditions, is also often misidentified.

Shape

Shape is an important factor in determining the identity of a flying object. Many of the strange shapes of UFO's reported in the past could not be identified in terms of familiar objects, but in many instances could have been reflections from conventional objects viewed under unusual conditions. Light and shadow produce fantastic distortions, especially when viewed objects are at great distances and bathed in varying degrees of darkness.

The four most common shapes of UFO's reported are:

- (1) Elliptical or disc shape
- (2) Aircraft shape
- (3) Cigar shape
- (4) Propeller shape

These varieties of shapes are individual reactions to what may have been familiar or conventional objects seen under unusual conditions, or what was created in the mind of the observer by his physiological limitations and psychological responses. Fatigue, unusual weather conditions and stress can induce such manifestations.

One UFO report stated that the object was shaped like a conventional aircraft, but was luminous and surrounded by a red glow. This phenomenon could have been an actual aircraft glowing from an unusual play of moonlight or starlight on its metal parts.

A disc-like object, with illuminated portholes, could be a conventional aircraft distorted in shape and stripped of wings by a temperature inversion mirage effect and reflecting light from windows.

Transparent, cigar-shaped objects, illuminated from the inside and emitting an exhaust, could be jet aircraft at high altitudes where they appear wingless. The mirage effect of a temperature inversion could cause the apparent illumination and transparency.

Saucer-shaped objects, which hover and maneuver erratically, could be the planet Venus or Mars seen near the horizon at certain times of the year. When objects are viewed through haze or mist, or hand-held binoculars, the limitations of the human eye can produce what appears to be a hovering effect, or erratic movement.

Propeller-shaped objects could be conventional or glider-type aircraft, distorted in shape by mirage effects caused by a temperature inversion.

Meteorological and Astronomical Factors

Scientists have been exploring the mysteries of the universe for many centuries. Today they know a great deal more about the composition of the galaxy which includes the earth among its many planets, stars and other celestial bodies. Yet, many questions remain unanswered and the search for more knowledge in the broad field of astronomy continues. The same is true regarding the earth's atmosphere, and although considerably more is known regarding the natural laws which govern the sea of air around the earth, there are many aspects of meteorology that are not yet fully understood.

It is not unusual for the mind to become confused by unusual astronomical and meteorological conditions transmitted to it by the eye. Thus, the sky has been the setting for many strange sights which were not readily understood.

Under certain weather conditions, reflection and refraction processes

can transform conventional aircraft, automobile lights, planets, meteors, and other identifiable figures into UFO's of many shapes and colors. Clouds, haze, industrial smoke, water droplets and ice particles in the atmosphere are typical ingredients which make up atmospheric lenses through which many illusions of flying objects are seen.

Car lights reflecting on clouds can create luminous discs which dart erratically through the sky at terrific speeds. Other light sources can produce similar illusions with appropriate variations, many of which even have specific colors provided by refractions of the light through water and ice particles in the atmosphere.

Mirages

One of the most common causes for optical illusions of distorted and displaced objects is the mirage. The index of refraction of the atmosphere varies in the vertical, causing radio and light rays to bend. The prime contributor to index of refraction variability is the temperature variation in the vertical. However, for radio waves, water vapor pressure (humidity) changes are also contributory.

For radio or radar, the ray paths are assumed to be straight lines over an earth whose radius is $4/3$ the true earth's radius under standard atmospheric conditions. This means the radio horizon is farther from the observer than it would be if the rays traveled in straight lines over the true earth.

Light rays follow the same kind of curved path as do radio rays, except that the moisture variations do not contribute to the bending. To an observer or to a radar antenna, the apparent path of the ray is a straight line tangent to the curved path, as in Figure 4. This means an object seen over the true horizon may appear to "float" above the earth. Furthermore, if the object has much vertical structure such that rays travel different paths to the top of the object and to the bottom of the object, the differences in curvature of the top and bottom ray paths may cause a vertical distortion of the true height of the object. One can pursue this subject in atmospheric optics under the phenomena known as "looming."

Refractional Dispersion

Combined refraction and disper-

sion of the earth's atmosphere can cause a celestial body to appear to be at a different location in space and distort its normal color as well. When the object is low on the horizon, this condition is particularly prevalent. The planet Venus, for instance, may appear as bright red on the bottom and bright blue at the top edge, thereby giving the illusion of a flying object emitting red exhaust trails.

An observer flying in an aircraft may easily mistake such an apparition for a flying object. As the aircraft moves through the atmosphere at an advanced speed, its position relative to the object naturally changes and the atmospheric conditions in line of sight between the aircraft's position and the object may change as well. The object thus may assume apparent characteristics of erratic behavior and fantastic shapes and colors.

Planets

Venus appears brightest of all the planets, with Jupiter and Mars next. Venus, at its brightest, can be seen in daylight. These planets are sometimes "morning stars" and "evening stars." An almanac should be consulted to determine which planet is in the morning or evening sky.

In the past, Venus, Jupiter, and Mars, when low on the horizon, have been observed to change color and move when viewed through haze or mist. If one of these planets is stared at for any length of time without any balancing point of reference, it can appear to perform erratic maneuvers. Thus, the planets of brighter magnitude in our solar system provide a source of illusionary flying objects.

Seeing at Night

It is easy for your eyes to play tricks on you at night when you stare for some time at a light—say, the tail-light of a lead airplane. What happens is technically known as auto-kinetic movement, or more commonly as stare vision. If the light is stationary, it may seem to move and swing in wide arcs. If the light is moving, it may seem to move to the side when it is actually going straight ahead. The cure for stare vision is don't stare—keep shifting your gaze from point to point.

Another common illusion at night is to see a light expanding or contracting at a fixed distance from you when actually the light is approaching or going away. Shift your gaze. •

Letters to the Editor

continued from page 3

logical efficiency of other beings in the universe? He ends with saying, "I would say right now interstellar space voyages are out of the question." Are we to stand back and let the Major arbitrate the possible progress and extent of extraterrestrial life's technology? If Quintanella kept in mind all that he had stated, he would have refrained from shaking his head negatively when asked if there was a chance of us being visited by extraterrestrial space crews. This, as most everything else he said, were merely the Major's own personal feelings, and not necessarily the views of the other members on Blue Book's staff. Major Quintanella may be the head of Project Blue Book, but I would not venture to call him its ultimate authority. It's a shame you did not interview a more open-minded scientist who approaches the UFO phenomenon more objectively and does not work from selected samples.

G. S. Emerson
Shrewsbury, Mass.

He Saw One, Too

Dear Sir:

Once I saw a flying saucer! It was a cold December night, December 8, 1967, at 8:05 P.M. Eastern Time Zone Standard. The saucer was over Wave Hill [Riverdale, West Bronx, New York] for about one and a half minutes. There were just a few stars and there wasn't much moonlight. It went in front of a tree and in back of a tree. It didn't make a sound and was going at the speed of about 10 m.p.h. and was about 200 feet away. It was about 60° [above the horizon] when I saw it first and about 45° when I saw it last.

Sincerely,
Kevin Freeman, age 8 years
New York City

Radar UFO's

Over the past few years I have read several books on UFO's, none of which have convinced me that we are being visited by creatures from other worlds. Basically, I feel that indeed there are other planets in the universe which harbor life of a nature very close to our own. I can't believe, however, that if these beings would make the long journey from their system to ours, they would not communicate with us. At any rate, your article sheds considerable light on the radar UFO's which have been reported from time to time during the past few years. During World War II when I was on a ship in the Pacific as a Chief Radioman, I remember receiving radio signals from very low-powered transmitters located in the island of Saipan which we had left several days back and we were then 600 or 700 miles distant. These signals were supposed to travel only to the horizon similar to the radar beams of which you speak. It is well known by radio engineers that the radar horizon is farther away than the optical horizon because of the slight bend-

ing back to earth of the radio waves due to the difference in refractive index which results from the variation in air density with height. Also, such things as temperature inversions and ionized layers of air can play strange tricks with radio and radar signals.

Yours truly,
Ray Hernday
Butler, Wis.

Not Only in America

Dear Sir:

There appears to be an apparent belief on the part of North American writers that the U.F.O. is some local North American phenomenon. Military personnel and others are still being silenced, and many Air Force answers to some sightings are fit only for village idiots. For example, certain stars were supposed to have been responsible for a sighting. At that moment those stars were only visible on the other side of the earth. It has been stated that the photo is unevaluated due to insufficient data. The conceit of the U.S.A.F. seems to be boundless. The photo in question was taken in England, not the U.S. and therefore would have (and actually was) evaluated by the Air Ministry in London. Therefore the U.S.A.F. cannot directly have any bearing on the matter.

The boy who took the photo in question, together with his father and a reporter were received at the Air Ministry. The next day the three were again at the Air Ministry, went into the Air Ministry and the reporter was immediately escorted outside. Much to the father's disgust, two officials tried for several hours to brainwash the boy into saying that he did not see and photograph what he actually saw and photographed. According to some people, our pilots and top radar technicians are so dim-witted that they cannot tell the difference between birds, balloons and hallucinations. Gold help us if war comes!

If all the facts on U.F.O.'s from all parts of the world were put into one book it would take a very strong man to lift it.

Sincerely
Ronald W. G. Anstee
Montreal, Canada

In Defense of Secretiveness

Dear Sir:

Regarding Dr. Wernher Von Braun's article, "The Need For Positive Credible Proof," in your magazine, does Dr. Von Braun expect these advanced, intelligent aliens to walk into his laboratory and say, "Here we are as positive proof we do exist and are visiting your little planet?" I doubt very much if he would believe even then. He and his colleagues would probably refute the whole thing and find a way around it, regarding these people perhaps as escaped lunatics perpetrating some giant hoax.

If we stop to think for a moment, what would we do if we were visiting another planet? The more obvious answer you come up with is exactly what our visitors

here on earth are doing: observing, analyzing, avoiding contact except with the individual who happens to be along, and if we were masters of deception (which we undoubtedly are,) infiltrating our members throughout the community.

The so-called truth about UFO's is well-screened before the public is given opportunity to read about it. We are told what they want us to know. Frank Edwards more or less proved this while he was alive—that there is some jiggery-pokery going on with the people in the know. Sponsors don't just drop a money-spinner like Edward's TV show without first being harassed by influential persons who have the power to make or break a person. If Adamski, Kaspidon and the other lesser-known contactees are correct, and they very well might be, there is little wonder why our eminent brothers openly refute the feasibility of space craft of extraterrestrial origin. One doesn't relish a life's work going down the drain, so to speak, because our mathematical conceptions, our technological machinery, and our aerodynamics are out of gear and are thus operating along wrong lines.

Personally, I hope Dr. Von Braun has the same experience as the American serviceman whose letter is published on page 3 of the above periodical. Then he can see for himself, and if he is so minded, ask these other people for the concrete evidence he claims he so vitally needs. He may subsequently perceive that everyone who claims to have sighted UFO's isn't suffering from hallucinations and mis-identifications.

Sincerely,
Richard A. Thompson
Nr. Lincoln, England

West Virginia Checks In

Dear Sir:

I live in West Virginia and I must say that we get more than our share of reports, though most are never reported to the proper authorities. I am organizing a group or organization which will meet regularly and discuss the flying saucer mystery. We will have some of our publications and we will investigate some of the sightings in our area which by the way are quite frequent.

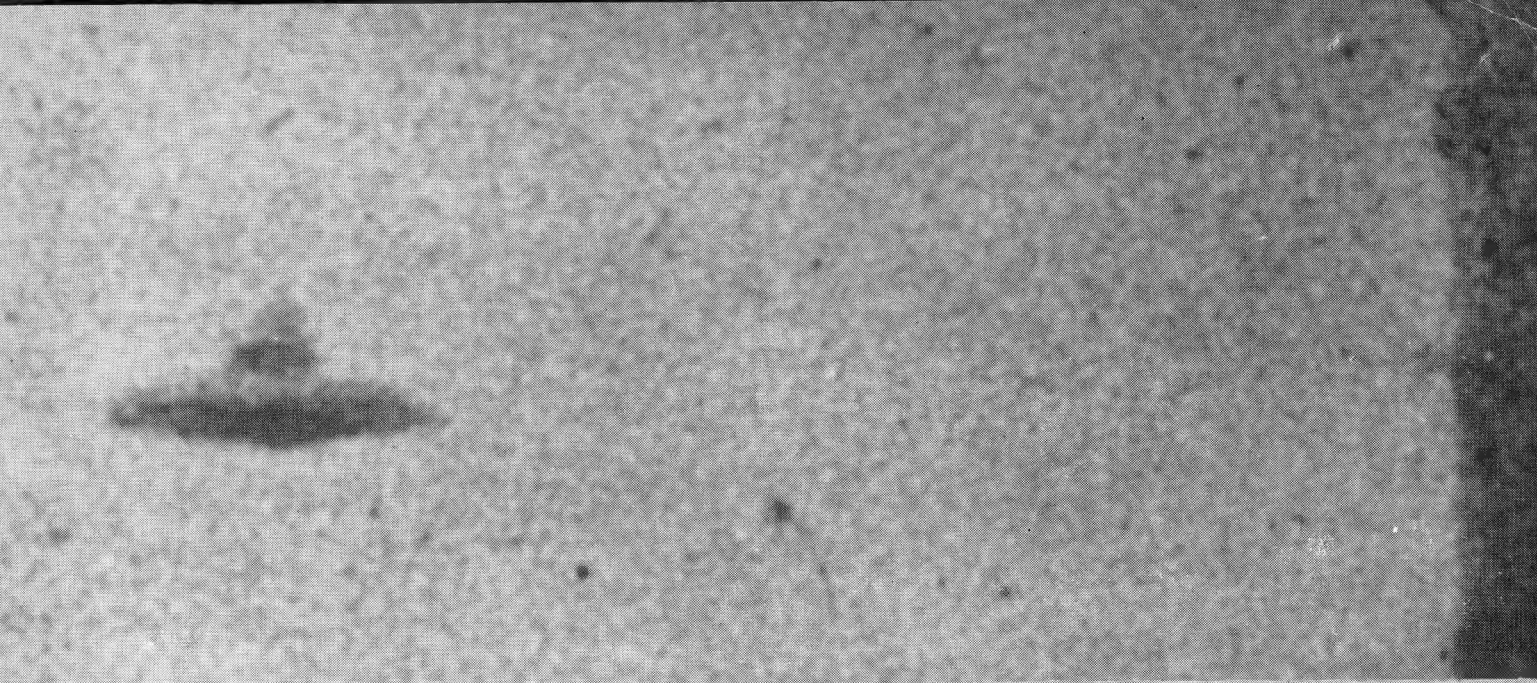
Sincerely,
William D. Ireland II
Charleston, W. Va.

The Numbers Game

Dear Sir:

On page 10 of, "The True Report on Flying Saucers, the numbers TL 47 (or 41) 68 have been seen by Mr. William "Eddie" Laxton of Temple, Oklahoma. These numbers were reported by him to have been painted on the side of a UFO. Now if it was a UFO from outer space, how does it happen they know our way of numbering? Unless it was done as a trick to appear like us. Or that the UFO was manufactured on our earth.

Sincerely,
Emma M. Crafton,
Ceres, Calif.

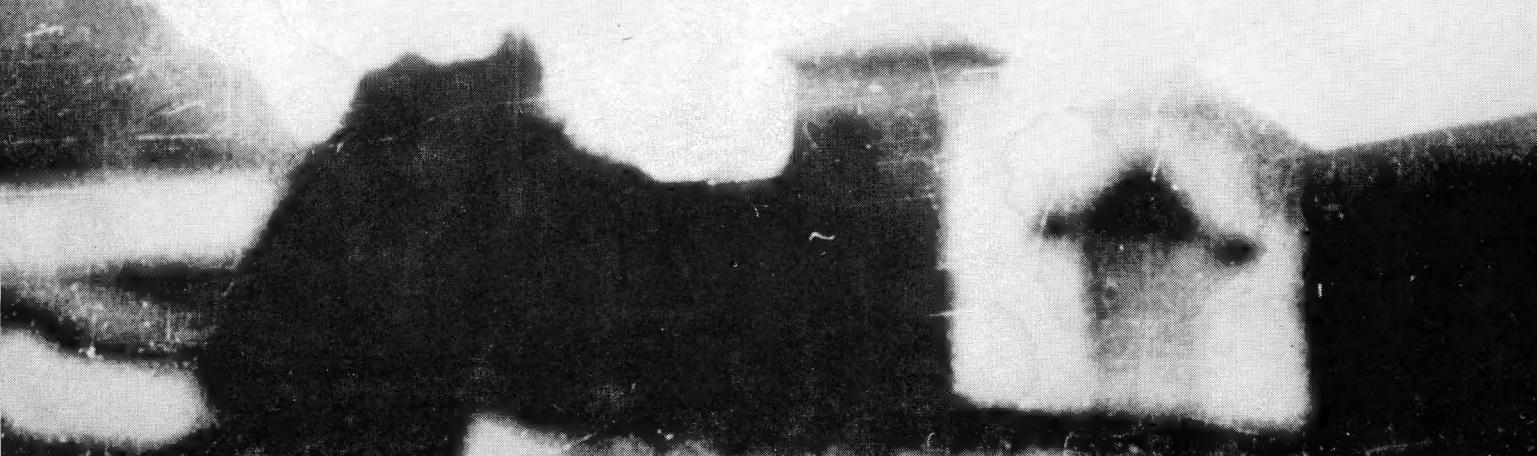


Above, David William Villali of Milledgeville, Ga., went UFO-hunting Oct. 22, 1967, and this is what he came up with using a Polaroid while sitting in a bush. He said the object was metallic and that there were heat waves around it.

Project Blue Book—USAF photo

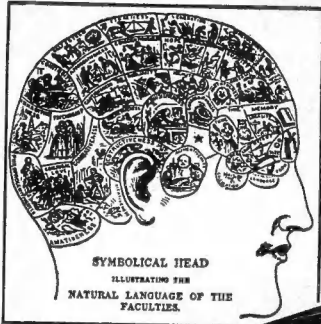
Pedro Chavez, a photographer for La Prensa, of Lima, Peru, says he took this photo of 3 Saucers over Sicuani, Peru, Dec. 6, 1968. At the time there were many reports of unidentified flying objects from Peruvian villages.

Wide World photo



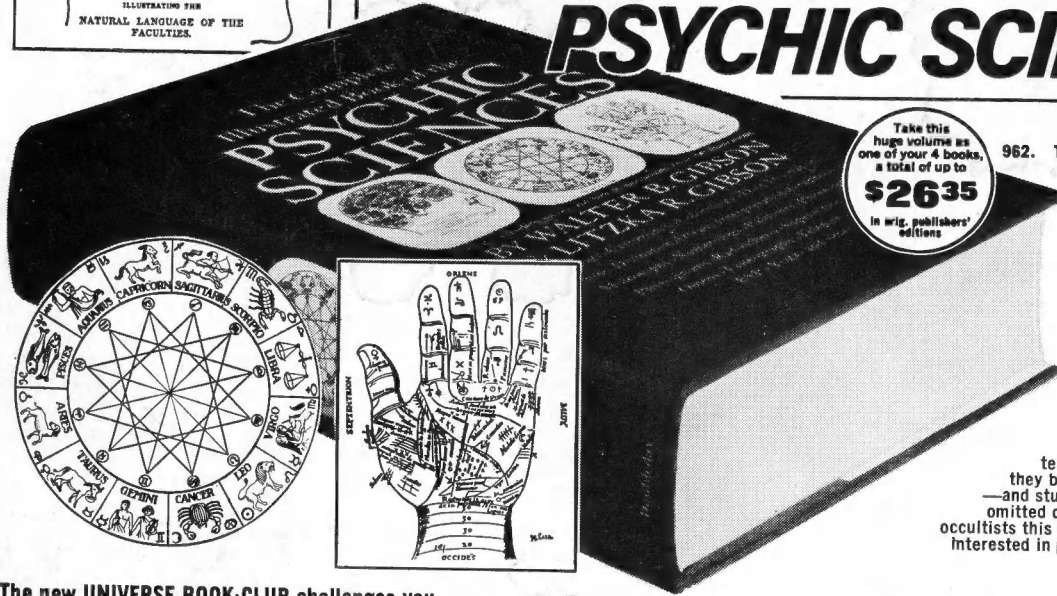
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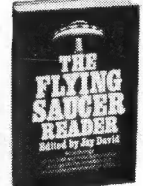
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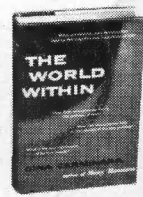
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