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spacelink



JOURNAL OF THE ISLE-OF WIGHT UNIDENTIFIED FLYING OBJECT INVESTIGATION SOCIETY

1965, quarterly
No 2

SUBSCRIPTION RATES: 9/8 p.a. in U.K. (post free)
 Single copies 2/5 (post free)
 Back numbers available at the
 standard price (2/-).

Overseas subscribers please include the appropriate postage to their country.

Subscriptions to Mrs. P.N. Smith, 4, Connaught Road,
 East Cowes, Isle of Wight. U.K.

Cheques/Postal Orders/Money Orders should be crossed "& Co".

EDITORIAL

The two recent widely reported and discussed space flights by Russian and American astronauts have highlighted aspects not readily realised. One obvious one being the tremendous advance in space technology apparent in just two or three short years. Another and much less obvious one in these days of mass communication, because of its familiarity, is the power that lies in the hands of those who decide what we shall see, read and hear.

The recent Russian announcement of a possible super-civilisation contacting Earth and quickly refuted by them, seemed to indicate the reaction of the "man-in-the-street" to such potentially momentous news. The result? Mild excitement for a day or two, the "experts" consulted for their views, etc., came the Russian denial with the subject being smartly dropped by the mass news media. The pendulum of public opinion (?) had been swung in another direction as quickly as it highlighted the news in the first place! Space exploration has its critics, the colossal expenditure of brains and money with "oneupmanship" to the fore in a world with half its inhabitants undernourished and under privileged, is one aspect that anyone with any feelings towards his fellowman is constantly aware.

Assuming that U.F.O.s are the result of intelligence of extra-terrestrial origin, and the assumption has good grounds, then the opinions and reports to which this magazine owes its existence are important. Our circulation is minute compared with just one national daily, but we think that it is doing something to bring UFO interest to a wider field.

We are unanimous in our opinion of the utter folly of extending the power struggle of the Great Powers into outer space. We have nothing to be proud of at the organising of our affairs on Earth, let alone being complacent about organising the Universe. We undoubtedly will have to consider other beings as we progress out into space. Let us hope that whatever awaits Man "out there", he will take his humility with him

In perhaps 2, and at the most 4 years from now, Earth born man will if all goes well walk on the Moon. As he turns to gaze back at the undoubtedly beautiful sight of this blue and green planet, surely whichever ideology he will be representing from that planet he will be aware of Man's place in the Universe and might even have found something about what God is.

What we are planning to do now in space is awakening Man slowly to the evidence that UFOs are presenting to us constantly. That this evidence fails to reach the mass news sources, intelligently, may or may not be the result of official decree. We only know that sooner or later, perhaps sooner than we think, the gentlemen of the Press will have to take up the story as it unfolds for all the World to see. Meanwhile publications like 'Spacelink' will keep the viewpoints, opinions and UFO news to the fore.

'Spacelink' has found its way to the following countries abroad, and we look forward to exchanges of publications and information

Swedish UFO Group - Stockholm.
 Tommy Helmer, 98, Alstensgaten, Bromma.

Japan Cosmic Brotherhood Association.
 "Flying Saucer News", Naka, P.O. Box 12
 Yokohama, JAPAN.

UFO - Contactgroep
 Rey d'Aquila, Beeklaan 431 Den Haag
 Holland.

National Investigations Committee on Aerial
 Phenomena. 1536 Connecticut Ave, N.W.
 Washington 6, D.C.

THREE HUGE UFOS PACE U.S. AIRLINER

Three enormous flying discs, computed to be about 1,000 feet in diameter, paced a U.S. airliner in mid-February, between Alaska and Japan. Details of the encounter, which has been kept from the public until now, have just been given to NICAP in a signed report by an American flying officer on active duty in the Far East.

The three UFO's were encountered by a Flying Airlines flight carrying military personnel from the United States to bases in Japan and other Asiatic countries. The airliner was about four hours out of Anchorage, Alaska, en route to Tachikawa, Japan, when the gigantic oval-shaped objects first were noted.

One of the military passengers, an aerial navigator with captain's rank, was asked to come up to the cockpit to observe the strange formation. On the airliner's radarscope, he could see three "targets" (radar blips) holding a position five miles off one wing. Together with the Flying Tiger pilots, navigator and flight engineer, the captain saw three gigantic, glowing red objects off the aircraft's wings, just as the radar showed.

"The UFOs paced the aircraft for about 30 minutes," states the flying officer's report. "When they departed they climbed straight out at an angle. The Flying Tiger (crew) tracked the (climb-out) speed at 1200 knots." (About 1380 m.p.h.)

During the 30-minute observation, the military navigator made a careful check on the UFOs' size. Extending his hands to arm's length, he made an oval with his fingers, enclosing one of the red glowing objects. The longer dimension between his fingers, was about 2-1/2 inches. Using the five-mile range figure, the captain determined the actual length to be approximately 1,000 feet. Even with the liberal allowance for error, the UFOs still must have been at least 700 feet wide.

As detailed on p.6 of NICAP's documented report, "THE UFO EVIDENCE?" a Far East Air Force pilot, flying an F.86 jet, picked up a large UFO on his radar. Securing a radar lock-on, he closed in and sighted a huge round device, later computed to be about 350 feet in diameter. After causing repeated interference with his radar, the UFO escaped at a speed of approximately 2,000 m.p.h.

(In the Navy case, p.32 of "THE UFO EVIDENCE," the commander and crew of a Super Constellation transport over the Atlantic

nearly collided with a disc as large as or larger than the one in the Far East report.)

After the Flying Tiger encounter, one of the pilots told the military navigator that "they often see UFOs on the Alaskan run". So far as we know, the other reports have not been released.

Credit "UFO Investigator"

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WHY I BELONG. - Freda Richards

It must be four years ago since by husband came home and said "Fellow at the office talking about Flying Saucers; makes quite a serious study of the subject, has even written a book on how they could possibly operate." - That was how it all began, and because we are those sort of people, I found myself deeply involved, i.e. being responsible for the light refreshments at meetings.

The group is now in its third year and I have watched its progress, through stages of frustration, and evidence of experience almost beyond human comprehension. I have listened to some dozen people who have undoubtedly have seen some phenomena that defies rational explanation such as our present known knowledge can find logical explanation.

To the vast majority of people we are still a load of cranks and in many cases we are. A society of this nature is bound to have what is termed a 'lunatic fringe', but one significant fact seems to be emerging; since man himself has managed to project into space, folk are not quite so sceptical as they were say three years ago. We are still however regarded as subjects for a good laugh or merely indifference. I must admit there have been times when we have all felt that it's a load of baloney and heaven alone knows why we bother to drive ourselves frantic arranging meetings, searching through masses of useless information, to find articles to keep our magazine in circulation plus all distribution problems. Balancing our budget, and all the mundane chores that go to make a venture like this possible. Then something exciting happens, some extraordinary evidence or something humanly gratifying like public interest stirred up by a T.V. appearance by one

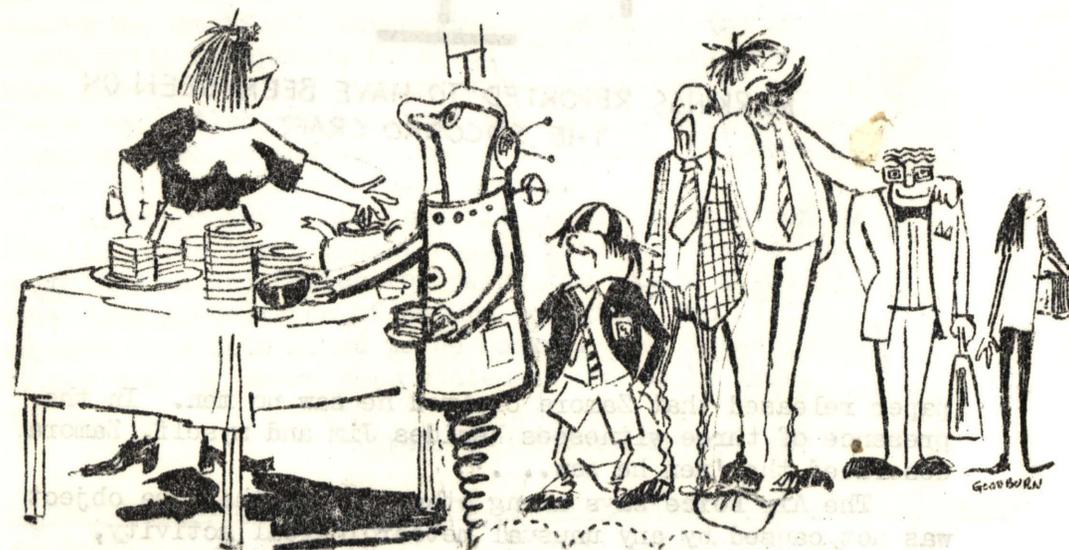
of our members and we all take fresh heart and return, caught up with a fascinating subject which has captured the imagination of groups of people all over the world. Yet one which by its very nature has to be treated with caution, delicacy and a kind of investigating open-mindedness such as few other studies require.

People may well say, "Why if this is a serious subject and of any real importance, why is it left to a handful of apparently enthusiastic amateurs to investigate?" Of course governments of every country are well informed by all concerned of the existence of this phenomena, and as we understand, by experts. For example, in a film, considered only suitable for Saturday morning children's cinema, we saw remarkable evidence supplied by the American air force. Our hope is they are treating the subject with wisdom and intelligence, as yet their attitude remains something of a mystery. I heard a theory the other day, that they do know what they are doing, that information such as we receive could have disastrous results, even causing mass hysteria. This to me is logical and I hope their reason for withholding information, perhaps they feel a little brainwashing from us in small doses is a better idea.

According to experts, we, by this I mean our present civilisation, are in a process of rapid evolution. Our concept of the vastness of universes undergoing almost daily change and here I come to the crux of what really holds me to this subject. It is the theory that as we are to the insect world something too vast for it to be able to comprehend, are we too, in turn, being studied in like manner?. As our feelings towards this World, crawling at our feet are mainly indifference, or if they become a nuisance something to be destroyed, or perhaps collected as interesting specimens. Is this happening to us?. If so how are we shaping up?. In the light of the present state of the world affairs how do WE rank?. We are industrious, so is an ant or a bee, we are sometimes beautiful, so are they. We can also be loathsome and irritating as they can also be. Is it so inconceivable, that a higher intelligence than ourselves, that only by occasional accident, or perhaps deliberate intent on their part, are we aware of, are watching us with equal indifference and amusement; but if we should step out of line like interfering with their universe, some-

thing to be crushed out of existence?. We have no proof that their interest is entirely kindly, but can we not reach out and show we can at least manage our own affairs with as much dignity as an ant. If they are more evolved and capable of communicating with us what vast possibilities for exchange of ideas for our benefit.

So for myself, I have been alarmed, uplifted and frustrated beyond my own powers of imagining, but whatever I feel, I have seen and heard too much to remain indifferent. Whether in my lifetime it achieves world shattering significance or remains the apparent enigma it is, I shall continue to make the tea, be blinded by science, repelled by fanatics and those interested for personal gain, thrilled by geniuses, but always involved and this, I suppose is WHY I BELONG.



"HELP YOURSELF TO A SAUCER"

BRITISH UFO GROUPS SOUTHERN REGION CONVENTION, OXFORD, May 8th
1965

A paper by J.D. Llewellyn - Stratford-On-Avon UFO Group

CHARACTERISTICS OF ARTIFICIAL EARTH SATELLITES IN RELATION TO
UFOs.

The object of presenting this paper to you is to bring to your attention those characteristics displayed by a good number of artificial satellites in orbit at this present time. Therefore in describing them it is also of assistance to researchers in distinguishing between AES and UFOs. After evaluation of sighting reports of objects which are obviously in orbit and certain deviations from known AES behaviour are noted, we in fact, create a new identification, i.e.

UNIDENTIFIED ORBITAL OBJECT (UOO)

I would suggest therefore, that all ufo researchers go out and view an AES and become familiar with as much of their behaviour as possible. (Both times and directions of ECHO 1 and 2 are given in the Daily Express, Daily Telegraph and THE SUN). The time has long since past when our files and records need to be encumbered by the hundreds of reports of AES, our research should be channelled more to the evaluation of clear well defined objects on close approaches and landings.

Up to the end of December 1964 there were approx. 165 long term (lifetime) satellites still in orbit. These are mostly satellites and rockets and does not include the thousands of bits and pieces associated with each launch or the various space probes to the Moon and planets. Most will be orbiting from two to a million years according to their predicted life times.

Contained in the thousands of UFO sightings in the records of Groups and Societies throughout the world are many observations of these and previous short life objects.

CHARACTERISTICS OF APPEARANCE AND BEHAVIOUR:-

Seen as moving star-like objects.

Only a handful are visible to the naked eye. The most

well known being 'ECHO' 1 and 2. These are extremely bright (comparable to Venus and Jupiter) - as if twinkling - relatively slow moving having transit times of up to 25 minutes from horizon to horizon. If observed through cloud can appear to have a halo.

Those of lesser brightness (having larger numbered magnitudes) can be steady - regular or irregular flashing objects appearing dim or very bright in certain parts of the orbit - slow or extremely fast moving. Usual rule the higher the satellite the slower it appears to move and vice versa.

They are seen to appear out of or disappear into the Earth's shadow (known as eclipse exit and entry).

All orbiting objects rise in a curve to their highest point of latitude (apex) then fall away to the horizon. Non orbiting objects have straight line flight paths.

OPTICAL PROPERTIES OF SATELLITES.

- a. Polished sphere. The tiny image of the Sun. The diameter of this image only $2\frac{1}{2}$ in. across - even for 'Echo' 1. Magnitude about 0 at 1000 miles.
- b. Flat mirror. Highly directional. $2\frac{1}{3}$ in. plate mirror at 1000 miles would give brief flashes also at zero magnitude.
- c. Polished cylinder. Would flash a bar of reflected sunlight.
- d. Complex forms. Fading due to attitude i.e., to obscuring tiny solar image. Examples: GREEB, Transit 2A, Explorer 6, Sputnik 3, Atlas, (Score Project).

These optical properties refer to object seen by reflected sunlight, but give us an indication of what we can expect to see from the surfaces mentioned.

With the introduction of the launching of some satellites in a retrograde orbit it is not unusual to observe them in any sector of the sky travelling in almost any direction. It is not so much the type or orbit but an observed colour which gives any orbital object seen an identification of unknown. Also any extreme deviation from the above characteristics such as colour - increase or decrease in speed - well defined change

of direction - manouvers or more than one object in the same orbit indicates that it is more likely to be an Unidentified Orbital Object.

UNIDENTIFIED SATELLITES

The following are taken from the Satellite observing notes published by the DEPARTMENT OF SCIENTIFIC & SPACE RESEARCH establishment at SLOUGH one of the main DATA centres connected with COSPAR.

From April to June 1962 from a total of 47 objects observed - THREE unidentified.

From July to September 1962 total objects 50 - FOUR unidentified.

For January 1965 from a total of 244 transits there are FOUR unidentified recorded.

For February 1965 from a total of 202 observed transits of AES ONE unidentified is recorded.

These unknowns are of course only a fraction of the observations of AES sent in by registered observers but our interest is obviously in these having survived not coming into the category of known objects. Quote "Of the Observations received on them about one third are later identified as satellites deviating from their predicted positions" - (still leaves intriguing two thirds).

In 1953 two mystery satellites were detected by Clyde Tombaugh - well known U.S. Astronomer.

February 11th, 1960 - 'Daily Telegraph', 'Express', and BBC reports that the U.S. Defence Department announces Unknown orbital object - in polar orbit - Radar detected - 15 tons in weight(?). All known Earth satellites and rockets accounted for.

Readers will recall the object photographed by Grumman observing station August 25th, 1960. On 16th August and 3rd September 1960 two objects with same characteristics were seen in the Stratford-on-Avon area. As a then practicing observer both a colleague and myself witnessed an extremely bright object displaying well defined searchlight beam on two transits within an hour, full report recorded in 'LUFORA' Bulletin together with confirmation from local RAF Control Officer that no aircraft were known to be in the area.

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REFERENCES

BIS. SATELLITE NEWS BULLETIN NO.11. 31st Oct. 1959 - Contains number of reports of Un. Sats. seen by observers in Moonwatch teams - suggestion that useful results could be achieved by network of observers seeking unscheduled objects.

BIS. SNB. No.13 10th Nov. 1959 reveals UOOs discussed at May '58 meeting B.A.A. (British Astronomical Association).

UFOs and AES by E.R. SMITH - F.S.R. Sept. Oct. 1961.

"UNIDENTIFIED SATELLITES" - by W. GORDON CREIGHTON. F.S.R.

Jan/Feb '61. "MYSTERY SATELLITES" by J.D. LLEWELLYN. F.S.R.

Nov/Dec. 1963.

Editors note:-

Since the foregoing paper was read at Oxford the highly successful Gemini 4 flight of astronauts James McDivitt and Edward White has taken place. They are reported to have sighted three satellites during their 62 orbit-flight. The first was a cylindrical object over Hawaii. Films merely showed an unidentifiable white dot. The second sighting was over Asia but the glare of the Sun prevented any recognisable pictures. The third over China "looked like a bright star moving East" according to McDivitt. He did not try to take any pictures of it.

Currently featured in "Flying Saucer Review" is a most interesting report by Major Donald Keyhoe of an unmanned Gemini capsule which was apparently scrutinised by four unidentified space craft for one whole orbit before pulling away and vanishing. The date of this incident is given as April 8th 1964. Eight more 2 man Gemini flights are scheduled over the next 2 years lasting up to a fortnight each. These flights together with comparable efforts by the Russian cosmonauts should provide quite a few surprises and U.F.O. enthusiasts and researchers should pay special attention to them, we may be getting very close to some startling news !

RADAR AND THE UFO (No.3)

by R.S. Squires

This third article discusses the phenomena known to radar operators as "Angels". A possible relationship between the phenomena and "Flying Saucers" was the subject of considerable newspaper speculation in the early 1950's, and, even today, events are occasionally observed which defy scientific explanation of their origins.

In the early days of radar, echos were quite frequently obtained from regions of the atmosphere where, apparently, no reflecting sources existed. These echos were referred to as 'ghosts', 'phantoms', 'pixies', 'radar flying saucers' and 'angels', although the latter term seems to have outlasted the others.

These elusive echos may take many different forms and, to early radar operators, were a considerable source of concern. In the U.S.A. particularly, many abortive interception missions were flown in pursuance of radar echos displaying unusual appearance and behaviour. So frequent were the pilots reports of 'no contact' that it rapidly became necessary to investigate their origin and nature in some detail.

Gradually, as the operators gained experience, recognition of the various distinct and widely differing categories of those spurious echos became possible, giving rise to the names mentioned above.

Until the investigations had proved (or disproved) their apparent origin however, much speculation was attached to their nature and, radar techniques being little understood by the press and the general public at large, a good deal of vivid publicity was thus attached to each report. Unfortunately it was about this time that the 'flying saucer cult' was in vogue and almost every radar sighting was misconstrued and presented as absolute proof of extra-terrestrial visitations!

Suffice it to say that, at the present time, although unaccountable echos are occasionally reported, the vast majority are immediately recognised by the operators as the result of known, and natural, phenomena.

Radar Angels

"Angels" can be attributed to many causes, including birds, insects and meteorological effects. For ground radar systems, the most reported source is bird echos, particularly in coastal regions.

Although the radar cross-section of a single bird is comparatively small, bird echos can, at short ranges, appear very strong due to the inverse-fourth-power variation with range, (see 'Radar and the UFO' No.2) and even a flock of moderate proportions can produce quite an alarming effect on a p.p.i. radar screen. For example, only one bird per square mile of area within a radius of 10 miles from the radar, could clutter the radar display with more than 300 echos. Thus, as few as eight birds in a square mile could completely blank a p.p.i. screen! Under such circumstances a visual observer would probably distinguish no more than two or three birds, if he left the radar cabin in order to examine, with his own eyes, such an alarming ornithological phenomena. And yet his equipment would have him believe that the whole atmosphere was being invaded by gigantic blobs of something or other weaving about in random motion at speeds up to 50 knots.

It is, therefore, perhaps hardly surprising that much speculation arose!

Modern techniques have largely overcome the problem of bird echos, although most radar operators frequently report bird activity at sunrise and sunset, and during the migratory seasons of Spring and Autumn.

Insects, although individually small, may readily be detected by radar and even slight concentrations of insects in the atmosphere can cause considerable "Angel" activity. Extremely strong angel echos may be caused by concentrations of insects of which one would hardly become visually aware. As insects are usually collectively carried by the wind, the resulting angel activity can be expected to move with the velocity of the wind, a fact borne out by observation. Insect flight is unusual at temperatures below 40 or above 90 degrees Fahrenheit, and large concentrations of airborne insects and hence insect-signal activity would therefore not be expected outside this temperature range. In practice this has also been proved to be the case.

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Not all examples of angel activity may be accounted for by the presence of birds or insects, and there is some evidence that many angels are the result of certain specific meteorological conditions. This is, of course, additional to the echos resulting from precipitation or cloud formations, and are in fact frequently observed when the region is apparently quite free from all cloud.

There is some experimental data to suggest that angels do not occur when the ground is covered with snow or when the atmosphere is either extremely cold or very dry. This observation thus seems to lend weight to the theory that some angel echos may be attributed to reflections from gradients in the refractive index of the atmosphere. However, provisional calculations indicate that the refractive gradients must be very steep in order to account for the apparent reflected energy and experimental evidence has yet to show that the necessary conditions may actually arise in practice.

A suggestion that diurnal angel activity is due to invisible bubbles of rising air which, under the requisite meteorological conditions, produce cumulus or cumulonimbus cloud, is, however, supported to a certain extent by experimental evidence. The conditions of high temperature, high relative humidity and low wind velocity, which produce the well-known cumulus cloud build-up in summer also, apparently, produces considerable angel activity.

Another meteorological condition giving rise to angel activity is believed to be produced by the boundary surfaces between moisture laden surface air which is moving over other air or water of a considerably different temperature. It is this phenomena which makes it possible for a radar to detect a sea breeze as it moves towards the coast, although the atmosphere itself will, visually, appear as clear as a bell!

Ring Angels.

A very much talked-about angel is the ring-echo. This on a p.p.i display, produces successive rings of echos, possessing an appearance remarkable similar to that produced by a stone thrown into a pond. The 'centre' of activity usually moves with the prevailing wind, and the successive 'rings' expand with a radial velocity between 10 and 50 knots. They can attain a

diameter of several dozen miles before dispersing, and are usually most persistent during the winter months, although they have been observed during all seasons. The generally accepted explanation is 'birds' particularly starlings leaving on their foraging expeditions or returning to roost. Another theory however, which may be of particular interest to 'Ufologists' is that "radar energy is diverted to the ground by elevated point-source gravity waves" (whatever they might be) "existing on a surface of density discontinuity", (V.G. Plant - "Atmospheric angels mimic radar echos" - Electronics, Vol. 31, No. 11).

Large airborne mineral or organic particles occasionally give rise to angels, and may frequently be observed in the vicinity of forest or other large fires. Although the reflectivity of such particles is generally too small to produce echos themselves they are probably due to reflections from debris and large particles of solid matter carried aloft by a rising column of heated air.

Yet another type of angel may be produced by 'anomalous propagation': Low angle radar signals may, under certain conditions, be reflected from the ground or surface of the sea, giving rise to second-trace echos of sufficient intensity to confuse the operator. (The term 'second trace' should be self evident: an echo arriving back at the antenna from a range greater than the maximum display range of the radar is presented on the display trace corresponding to the pulse immediately following the one from which it originated. The echo is therefore presented on the display at an incorrect 'range', its actual range being that corresponding to the sum of the indicated range and the interpulse period).

This and similar effects, may produce angels of varying appearances giving rise to an apparent moving target possessing an extremely high velocity, which may be easily interpreted as a "Flying Saucer"!

Similarly, second echos may arise when a target is illuminated by an indirect ray - i.e. one which has already been reflected by a distant but very large target, such as a mountain

HOW A DISCREPANCY BETWEEN INDICATED RANGE AND TRUE RANGE FROM RADAR MAY OCCUR

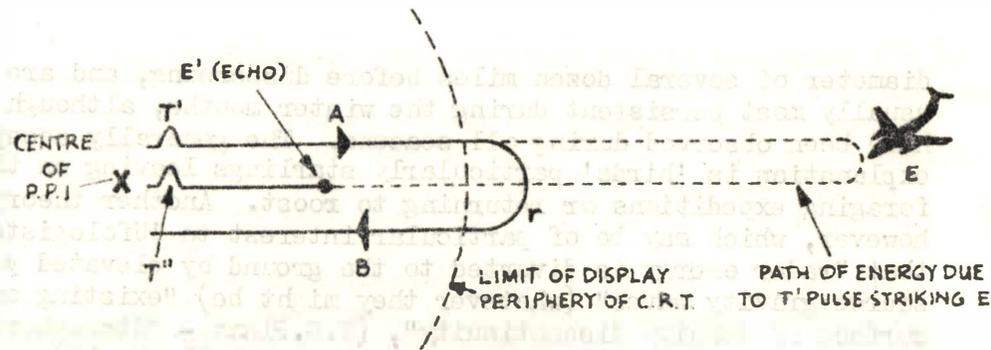


FIG.1 HOW A GHOST ECHO ARISES ON A P.P.I. (PLAN POSITION INDICATOR)

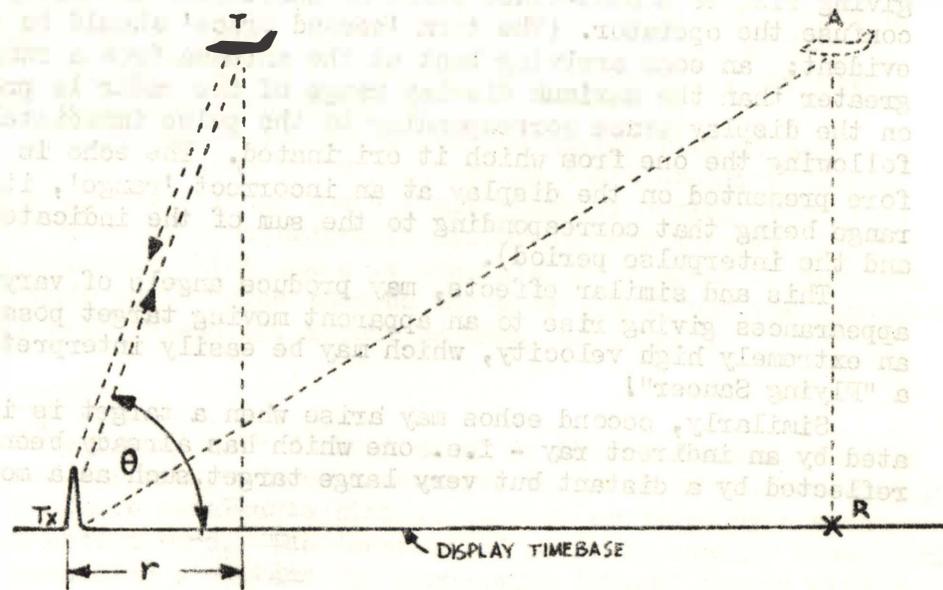


FIG.2 HOW A DISCREPANCY BETWEEN INDICATED RANGE AND TRUE RANGE FROM RADAR MAY OCCUR

FIG. 1. HOW A "GHOST" ECHO ARISES ON A P.P.I.

The transmitter fires at point T' and the p.p.i. timebase travels along A to r - the limit of the display. The timebase spot then reverses and rapidly returns to X - the centre of the display.

Meanwhile, the transmitted energy has travelled from T' to E, an echo at a range greater than that represented by the point (r) of the p.p.i.

Thus, when the transmitter next fires, initiating a further timebase T'' the energy returning from E - resulting from the previous pulse T'-arrives back when the timebase reaches E', and a signal appears on the p.p.i. which does not correspond to a visually detectable target.

FIG. 2. HOW A DISCREPANCY BETWEEN INDICATED RANGE AND TRUE RANGE OF TARGET FROM RADAR MAY OCCUR

A radar always measures slant ($T_x - T$) and not ground range r . When the transmitter fires (T_x) the energy travels from T_x to T and back again. If the angle θ is large (and T_x to T is great) then the echo will appear to be at the ground-range indicated by R and not at a true ground-range indicated by r . In effect R leads a visual observer to expect to see a target at A the apparent location of T when referred to R , and an aircraft flying overhead, or nearly so, will not appear on the p.p.i. in the expected place.

In practice, the phenomena is not so alarming as the diagram makes out, e.g. an aircraft flying overhead (assuming that the radar can 'see' overhead anyway) at 50,000 feet will appear on the display to be flying over the ground ten miles away. The problem does arise with inter-continental missiles, if no 'height' information is provided.

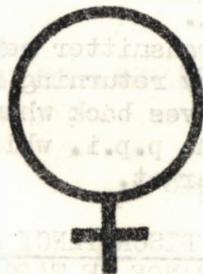
Exercise for Ufologists :- Work out the targets Apparent speed change (if any) likely to result from this phenomena.

In this necessarily brief article an attempt has been made to present the accepted explanation for phenomena frequently assessed as "radar-UFO's". A later article in this exclusive Spacelink series will consider those UFO reports by radar operators which defy explanation in terms of current radar technology.

THE SOLAR SYSTEM - No.3

THE PLANET VENUS

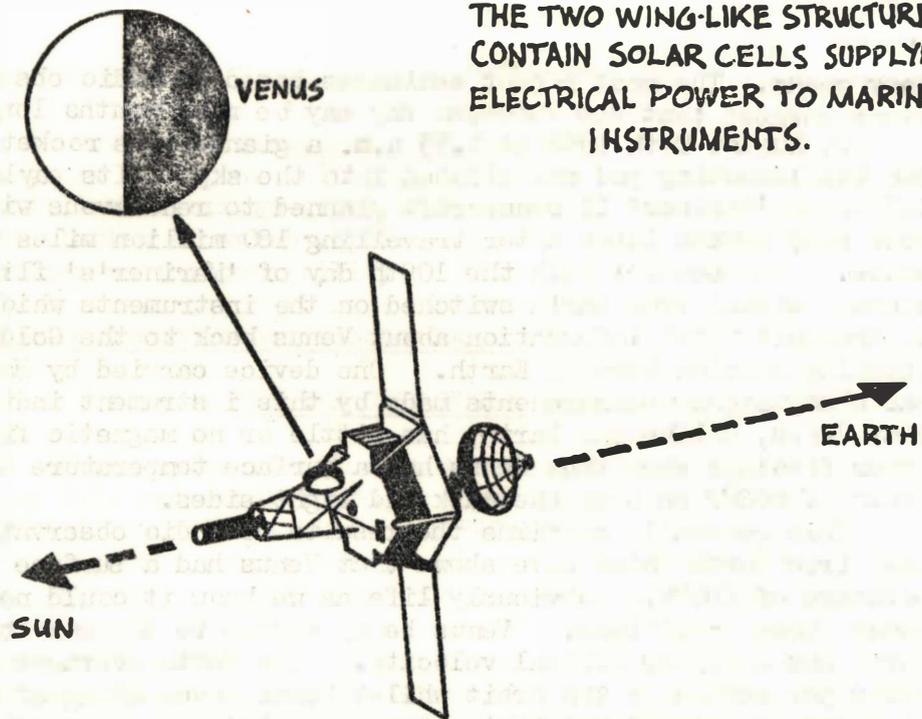
by J. Feakins of I.W.U.F.O.I.S.



Apart from the Sun and the Moon Venus is by far the brightest object in the night sky. It has even been observed with the naked eye in broad daylight and at night has been known to cast shadows. When it is at maximum brightness, which occurs about every eight years, its magnitude reaches -4.4 twelve times brighter than Sirius, the dog star.

Venus has often been called the Earth's twin, its size being very similar to the Earth with its diameter of 7700 miles compared with the Earth's 7900 miles. Its mass being approximately .81 of the Earth's. But here the likeness ends. The most obvious difference between the two planets is that the Earth has the ever faithful Moon to accompany it on her journey round the Solar System, while Venus has no satellite and must travel alone in her orbit.

Venus, like Mercury, presents itself as a morning star when at Western elongation and a few weeks later as an evening star at Eastern elongation, known by the Greeks as Phosphorus as the morning star and Hesperus when the evening star. Whilst to the ancient Chinese it was known as "Tai-pe" the beautiful one. Venus goes through all the phases in a similar manner to



THE TWO WING-LIKE STRUCTURES
CONTAIN SOLAR CELLS SUPPLYING
ELECTRICAL POWER TO MARINER'S
INSTRUMENTS.

ON RECEIPT OF A COMMAND SIGNAL FROM EARTH 36 MILLION
MILES AWAY MARINER II BEGAN TO SCAN VENUS IN THE
INFRA-RED REGION OF THE SPECTRUM.

Mercury (see Fig.2 'Spacelink' No.5 page 13) - these phases can only be observed with the aid of a telescope.

Venus is enveloped by an atmosphere which, as far as we are able to detect, consists mainly of carbon dioxide. The atmosphere has proved to be a barrier to the astronomer for it is so completely covered with dense cloud that the planet's surface has never been seen. The only markings or shadings which have been observed occasionally, were purely of a transitory nature and can be attributed to the cloud formations in the atmosphere. The fact that no permanent feature has so far been detected has made it extremely difficult to determine its period of rotation. Many attempts have been made to determine this period with estimates ranging from 20 hours to

many weeks. The most recent estimates based on Radio observations suggest that the Venusian day may be many months long.

On August 27th 1962 at 1.53 a.m. a giant Atlas rocket lifted from its launching pad and climbed into the sky. Its payload the 447 pound 'Mariner' II spacecraft planned to rendezvous with Venus some four months later after travelling 180 million miles through space. On December 14th the 109th day of 'Mariner's' flight a command signal from Earth switched on the instruments which were to transmit vital information about Venus back to the Goldstone tracking station here on Earth. One device carried by Mariner II was a magnetometer measurements made by this instrument indicate that Venus, unlike the Earth, has little or no magnetic field. Other findings show that Venus has a surface temperature of the order of 800°F on both the dark and light sides.

This generally confirms the results of radio observations made from Earth which have shown that Venus had a surface temperature of 600°F. Obviously life as we know it could not exist under these conditions. Venus being closer to the sun than the Earth has a higher orbital velocity. The Earth averages 18½ miles per second in its orbit whilst Venus moves along at almost 22 miles per second and taking just over 224 days to completely orbit the Sun. Its mean distance from the sun is 67 million miles compared with the Earth's 93 million miles.

Venus was seen as a morning star in January 1965 but is rapidly moving behind the Sun and will not be seen again until July when it will appear from behind the Sun, this time on the Eastern side, as an evening star, reaching its maximum elongation (angular distance from the Sun) on November 15th 1965.

Editors note :-

A new report by Dr. John Strong, Director of the Johns Hopkins Astrophysics Laboratory, contradicts the findings of the Mariner spacecraft and radio-telescope measurements of the Venusian atmosphere. According to Dr. Strong, instruments on an unmanned balloon flight October 27th gathered evidence that the clouds around Venus are composed of ice particles. Also, he stated, measurements show the surface temperature to be about minus 40 degrees Fahrenheit. Previous radio-telescope measurements had indicated a surface temperature of 800 degrees Fahrenheit.

Meanwhile, Space Technology Laboratories (Space Log, Fall, 1964) reports that measurements of the atmosphere indicate it is 4% carbon dioxide, and that the bulk (perhaps 95%) is probably nitrogen. STL suggests a "red hot" surface, probably is yellow-or orange-green. Dr. Strong, on the other hand, says the finding of water vapour suggests the possibility of oxygen and leaves the possibility of life on Venus wide open.

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THE MENACING NOISE THAT CAN KILL A BIRD

What is the solution to the "weird noise" that more and more folk are reporting? - a menacing vibration which, it is claimed, can kill a bird in mid-flight.

Recently, while going to church a Warminster woman heard it. The sky was dark when the silence was shattered by a crackling sound. She thought at first it was a lorry unloading grit in Bell Hill. Then the noise increased in volume as it neared her, "like tree branches being pulled over rough gravel". There was a faint humming note in it, growing louder as it passed overhead.

Frightened she could hardly reach the church. Friends' theories ranged from static electricity caused by wet power lines - to ghosts left over from Hallowe'en. Some were amused, other amazed.

Corroboration soon came from Warminster's head postmaster, Mr. R.W.Rump, who lives in Hill-wood lane. Rasping, rattling noises woke him early the same morning. Thinking loose tiles had slid from his roof, he explored, but saw nothing - so he went back to bed. Two people with similar stories - and now the whole town is buzzing over the news.

Mr. David C. Holton, of Crockerton, a geologist, botanist and natural historian, produces other startling evidence to show that this weird phenomenon can bring danger to human and animal life. People have been injured, birds knocked out and pigeons killed by the sounds, he claims.

"I assure you this was in no way connected with electricity, water mains, motor vehicles or the super-natural," he said

yesterday. "The lady's observations were completely accurate and certainly no figment of her imagination.

"These noises have appeared several times in the district of recent years. Surprisingly, they have not been reported in newspapers. In April last a witness heard this singular sound over Five Ash-lane, between Crockerton and Sutton Veny.

"He described it to me as similar to a telephone crackling, accompanied by a persistent hum which increased in intensity until passing over his head. It disturbed a flock of pigeons from their roost in Southleigh Woods.

"They flew across its path in terror. Several of the birds wheeled and dropped lifeless to the ground. I examined specimens soon after. Each body was slightly warm and my attention was drawn to the remarkable degree of instantaneous rigor mortis present.

"The bodies were completely stiff, like those of birds frozen during the winter time.

"Mostly naturalists and amateur antiquarians, a group of us throughout the country have been searching for evidence on this puzzling subject for about five years. A Portsmouth friend has been collecting cases of this sort, in fact, for longer than that. He's doing research into historical records and ancient documents to trace such happenings in former times, even centuries back.

"He has met with much success, but the great difficulty in getting present-day accounts lies in the fact that people experiencing it are reluctant to come forward with details for fear of ridicule.

"Valuable information has been exchanged between research group members, however, and it's hoped that sufficient evidence has accumulated to warrant a public statement being released later this year, in view of the concern felt in some quarters."

In one case, a cyclist swept from his machine, while riding over the Yorkshire Moors in August, 1961, gave a clear account of the sound and impact when it reached him. Receiving a fractured femur and other injuries, he died shortly afterwards.

A clergyman and a builder, inspecting the church tower in a Gloucestershire village in September, 1947, heard what they thought was a large swarm of bees. Accompanying it was a sound similar to that of a load of stone being dumped on a hard surface.

Looking over the parapet to the cemetery below, they saw two elderly ladies who had been placing flowers on relatives' graves, struggling to escape from the scene. Both were horrified, faces pale, later complaining of muscular stiffness and severe headaches.

A further peculiar aspect was that both the vicar and the builder, when they descended the tower, found great difficulty in walking! These, and many other cases of danger that has visited humans, birds and animals at the onset of these weird noises in various parts of England, have been fully documented by the group.

Mr. Holton added: "Theories have been formulated, but obviously they must be regarded with a certain amount of reserve until justified by the facts. But I can tell you that this thing - and the implications behind it - may be much bigger than anyone can imagine.

"I can say no more until the group agrees it is time a public statement should be made."

CREDIT Southern Evening Echo.

FLASH - oooooooooooooooooooooooooooooooooooo
LATE NEWS FROM WARMINSTER - FLASH
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From the "Daily Mirror" June 5th 1965.

....."AND TOWNSFOLK SEE A SAUCER."

The market town of "mysterious vibrations" had a new visitor last night - a "flying saucer".

Scores of people said they saw a cigar-shaped, fiery object hovering the sky over Warminster, Wilts, from 8.30 until 9 p.m.

NEW BOOK ON UFOs

A new book on unidentified objects entitled "Anatomy of a Phenomenon" will be published on June 15, 1965, by the Henry Regency Co., Chicago, Ill. The price is \$4.95. Its author, Jacques Vallee, is an astronomer, data analyst and consultant for the National Aeronautics and Space Administration's Mars Map Project.

Mr. Vallee defines and analyzes documented evidence of UFOs since the beginning of history in clear-cut language for the layman and scientist alike. Extensive UFO information was obtained from the Air Force files, according to the publishing company. The book also delves into the reactions of diverse groups - the military, enthusiasts, scientists and hoax-perpetrators.

We expect to review the book in the next issue.

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NEW DOCUMENTARY FILM.

A new 80-minute documentary film on UFOs, entitled "Phenomena-Seven Point Seven", was nearing release date as this issue was closed.

The moving picture was prepared by Empire Film Studios, Hollywood, where a company official explained the title: "Seven Point Seven means the 7.7% of an estimated 8000 sightings classified as UFOs by the Air Force". (This figure is close to the latest AF admission of 663 unknowns out of 8908 cases, which works out as 7.44%).

One of the main sequences shows the now widely-known Socorro case (featured again in this issue. Ed.)

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Such a wealth of fascinating material has flowed to the Editor's desk since the last issue that it has proved impossible to include it all in this issue. Remember the UFOs make the news, we don't invent it! If you have any report, article or story to relate pertaining to UFOs then send it in.

Frederick W. Smith - Editor.