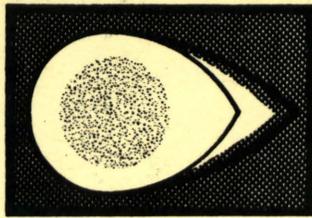
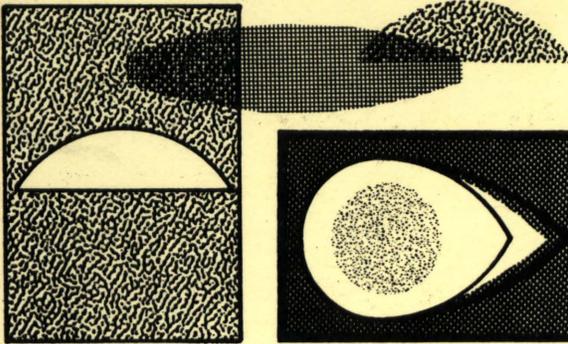
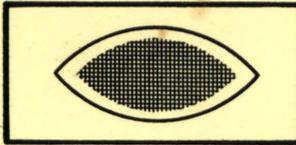
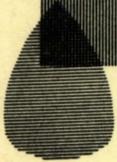
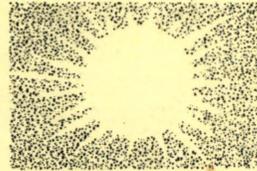
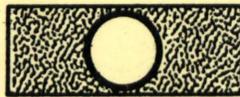
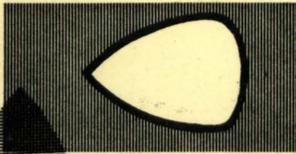
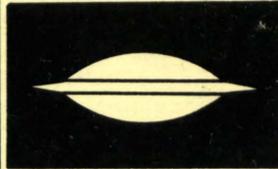
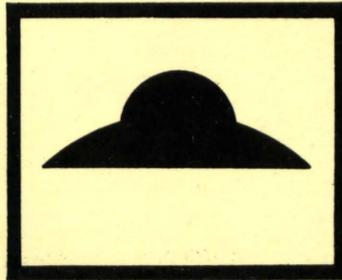
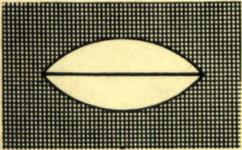


file not for sale.

SPACE

link



JOURNAL OF THE ISLE OF WIGHT • U-F-O • INVESTIGATION SOCIETY

No. 3 1966



DID ANTI-MATTER CAUSE THE 1908 EXPLOSION OVER SIBERIA?

On June 30, 1908, the sky over the Podkanemaia Tunguska River basin of Siberia exploded with a light that made the sun appear dark by comparison. A herd of 500 deer disappeared, the charred remains of a few being the only evidence that they once grazed in the area.

Scientists at first thought the explosion was caused by a large meteor, but unlike known meteor explosions, it was followed by disturbances in the earth's magnetic field. Similar disturbances have occurred after nuclear explosions. For the next two months the nights were brighter than usual over Europe and Western Siberia.

The only evidence that a gigantic event took place is a great ring of blown-down trees. There is no crater, and excavations have yielded no trace of meteoric matter.

Some scientists suggest that the explosion might have been caused by a comet. But comets are very tenuous, & to produce such a blast the comet's nucleus must have been several hundred yds in diameter. One argument against this theory is that such a comet would have been seen long before it came close to the earth.

The Latest Theory

Another hypothesis is that a natural nuclear explosion occurred at Tunguska. But this fails to explain how the necessary nuclear material could have been brought together to initiate a chain reaction.

The latest & most fascinating theory is that the explosion was caused by a meteor composed of anti-matter. The theory was published recently in the British science journal 'Nature' by Professor Clyde Cowan, Catholic University of America and Dr. C.R. Atluri & Professor Willard F. Libby, both of the University of California at Los Angeles.

Anti-matter is not a fantasy. The first anti-particle was discovered in 1932 by the American physicist Carl Anderson. This particle was the anti-electron, or positron. The electron & positron seem exact alike, except for a few fundamental properties. For example, the electron has a negative electric charge & the positron has a positive charge. When brought together, they interact in an unknown way, resulting in almost 100% conversion of their mass into energy. The efficiency of this energy conversion is hundreds of times greater than in the hydrogen bomb.

Other anti-particles, such as the anti-proton and anti-neutron, have been discovered. With the existence of anti-matter firmly established, scientists have speculated on anti-worlds and anti-galaxies. Some of the stars we see may be anti-stars, but it would be impossible to tell them apart with telescopes because the light they emit is the same.

It is not surprising that no anti-matter naturally exists on earth, for it would immediately be converted into energy. But this is not to say that a chunk of anti-matter from an anti part of the cosmos could not zip through space straight towards us.

What may have happened according to the Cowan-Atluri-Libby theory, is this: As the anti-rock entered the earth's atmosphere it built up a shock wave in front of itself. This kept most of the air out of contact with the anti-rock. Plunging into the denser atmosphere, it became heated to the gaseous state. In this form the anti-gas contacted the air, unleashing the explosion, a violent conversion of matter into energy.

Theoretically, this should have produced additional radioactive carbon-14 in the atmosphere. By the following year, 1909

much of the radio-carbon should have come down over most of the northern hemisphere, with an increase in the normal amount of the substance absorbed by plant life.

Professor Libby, who won the 1960 Nobel Prize in Chemistry for his work with carbon-14, analysed the radio-carbon content of a Douglas fir tree from Arizona & an oak tree from California. He found a 1% increase of carbon-14 in the 1909 rings of the trees, compared with the rings from the 1870s up till 1933. The findings suggest that some change did take place in the atmosphere about that time.

Professor Cowan, co-discoverer of the neutrino, says further analysis of tree rings in the northern & southern hemisphere should help clarify some aspects of the anti-matter explosion theory.

Circulation in the stratosphere-into which the carbon-14 should have risen after the explosion-is such that little air from the north passes across the equator to the south. Thus, if the carbon-14 increase in 1909 tree rings was due to the explosion, tree rings in the southern hemisphere should not exhibit a similar increase. If a like increase is detected, it would suggest that the 1909 rise in carbon-14 was due to a global-scale event, such as a large solar flare, & not a localised explosion. The latter finding would weaken, but not destroy the theory.

It would be intriguing to find that we have anti-neigh bours in the universe. The next problem would be how to contact them from a safe, non-explosive distance.

Credit - Science Horizons.

ASTRONAUTS REPORT UFO'S ON GEMINI 10 MISSION.

Astronauts John Young & Michael Collins had 2 sightings of unidentified objects during their highly successful double rendezvous space flight in Gemini 10. During the 2nd. orbit Young saw two bright objects which he took to be "Sattelite hardware" (with some 600 objects in orbit this is understandable, but there is still a vast amount of space left to play with! Editor.)

Michael Collins also observed a very bright object above them during the period in which the spacecraft's hatches were open for a photographic session. This again was thought to be Agena 8, one of the two Agena vehicles they had rendezvoused with.

THE LUNAR SCOREBOARD

1	LUNAR 2	13 SEP. 1959
2	RANGER 6	2 FEB. 1964
3	RANGER 7	31 JUL. 1964
4	RANGER 8	20 FEB. 1965
5	RANGER 9	24 MAR 1965
6	LUNAR 5	5 MAY 1965
7	LUNAR 7	7 OCT 1965
8	LUNAR 8	6 DEC 1965
9	LUNAR 9	3 FEB 1966
10	SURVEYOR 1	2 JUN 1966

F.W.S.

THE SCIENTIFIC CONQUEST OF THE MOON.

This article continues the series "The Solar System" & is edited by John Feakins. Some material is condensed from "Science Horizons" (U.S. Information Service)

Compared with earth, the moon is a dreary world. Its surface, 1/16th that of earth, is a crater-pocked desert.

The moon has no atmosphere, no clouds, no storms, no weather. Nor has it trees, grass, flowers, animals; not a solitary oasis.

The lunar day is two dismal earth weeks long, as is the lunar night. When the sun is at its zenith, the surface is hot enough to boil water, & on the night side an unprotected human would freeze almost instantly. Nevertheless, despite these unattractive characteristics, the moon is the goal of the biggest, broadest, most expensive technological project ever undertaken in the United States. After an initial cost of more than 20,000 million dollars, two American astronauts will land on the lunar surface, probably by the end of the 1960s.

Aside from the fact that the United States & the Soviet

Union are in a technological race to the moon, that promises some rewards in prestige, this small planet has its attractions and potential values. It is a laboratory on which to study the nature and origin of the solar system. It is a steady platform from which to make unobscured observations of the universe. The moon may contain useful materials and may serve as a terminal in the exploration of the solar system.

The first astronauts on the moon will have simple, but vital tasks. First they will learn to move along the airless surface, encumbered by awkward space suits & life support packs, yet weighing no more than a small child back on earth.

Although lunar gravity is only 1/6th that of the earth (i.e. a 180 lb. man weighs 30 lbs. on the moon), individual locomotion will not necessarily be easy. The natural rate of earth walking is about 100 steps per minute. Such rapid, pushing steps probably will be impossible on the moon, because the walker would either slip & fall or rise slowly above the surface & come down just as slowly. The process of walking will be slowed down to the rate of about 20 steps per minute.

Running will also be slower on the moon & a new step-by-step rhythm will have to be learned. Jumping may be the only unaided way to move fast, possibly as fast as a man can run on earth. Man may well become a lunar kangaroo!

Seven Experiments.

The first astronauts to the moon will bring 7 scientific instruments designed to send data to earth long after the men have returned home. Six of the instruments will measure moon-quakes, medium energy solar wind, low energy solar wind, the lunar magnetic field, the lunar ionosphere, & outflow of heat from the moon's interior.

Further exploration of the moon will give us insights into the origin of the earth as well as the nature and origin of the moon. Scientists hope also that lunar studies may help make clear the way in which life itself began on earth and may have begun elsewhere in the solar system & the universe.

Scientists will later establish manned bases on the moon for long term observations and investigations of physical & biological phenomena that can be best studied from a lunar site. For example, a lunar-based astronomical observatory with a 40-inch optical telescope would be equal in resolving power to the 200" Mt. Palomar instrument, the largest earth-bound tele-

scope. A 120-inch lunar system would have nearly 100 times the star detecting sensitivity.

The principal advantages of the moon for an optical telescope are the darkness of the sky, absence of an obscuring atmosphere, stability of the lunar platform, and the light weight of the telescope structure due to the low lunar gravity.

Listening Post.

A radio astronomy installation on the back side of the moon would provide an exceedingly quiet listening post for radio emissions from all parts of the cosmos, being shielded by the whole mass of the moon from radio interference originating on earth. And the low lunar gravity would permit construction of a very large device for increased sensitivity and accuracy. Monitoring for the detection of intelligent transmissions from other civilisations in the universe also could be carried out with such a facility.

Scientists on the moon will be able to study the sun, other planets, and the earth from a different viewpoint. They will have the first opportunity to study the physiological and psychological adjustments of humans to prolonged stays on another world, in this case the moon with its low gravity and weeks-long days. In the field of biology, they will investigate changes in behaviour, innate rhythms, growth and development, and genetic make-up of well-known terrestrial micro-organisms.

The scientific possibilities are nearly endless. Looking still further ahead, perhaps to the end of the present century, only 35 years from now, man may open an era in which he makes practical use of the moon.

Small groups of humans may be transported to the moon where they will be able to create a livable, comfortable environment, enclosed so that they may get along without spacesuits. Since the moon is probably composed of most of the same elements found on earth, the colonists could develop a lunar chemistry for the production of air, food and water.

Transportation between moon and earth could be by nuclear spacecraft (nuclear rockets already are in an advanced stage of development) fuelled by lunar produced hydrogen. Using the moon as a terminal, such spacecraft could be accelerated away from the low-gravity surface with enough velocity to return to earth or explore the outer parts of the solar system. Such launches could be achieved at small expenditure of power com-

As for the larger piece of metal, rumour of the find reached the Canadian Arsenal's Research & Development Establishment (CARDE) in the area, who, thinking it might have been part of a space capsule, picked it up for investigation. On completion of their investigations, CARDE eventually handed the metal over to a Club member who, at great difficulty, trailered the heavy object to Ottawa where it is now in the custody of the Club.

The Findings. After analysis, CARDE reached the following conclusions: "The X-ray diffraction analysis indicated that the unidentified object consisted of a metallic face-centered cubic compound, with a unit-cell dimension agreeing with those of 1) austenitic steel, & 2) meteoric iron. The semi-quantitative spectro-graphic analysis showed, however, that there was insufficient nickel present for the material to be of meteoric origin. The amount of manganese detected in the spectrographic analysis suggests that the metallic material is best described as high-manganese austenitic steel. This is consistent with the very weak ferro-magnetic nature of the metal. The iron oxide & the hydrated iron oxides on the surface are normal results of the exposure of steel to the atmosphere. The amounts of quartz & calcite detected by X-ray diffraction are very small, & are common extraneous materials. The low nickel & high manganese content are not consistent with a meteoric origin, whereas they are consistent with common high-tensile steels. The object is therefore considered to be of terrestrial origin".

Another report states in part: "The metal object proved to be a mass of high strength metal which had fallen, or had been dropped, while in a plastic state, & had splattered like a ball of mud. It was 6' in diameter & 2' thick at the centre. At the centre of the body, there was an outline of a tube about 10" in diameter which protuded from the mass about 6". A small electronic potting can was imbedded near one of the outer edges. By scratching away the potting plastic, it was possible to identify an electronic component which appeared to be a transistor. There was also the imprint of another electronic can which appeared to have been removed by curic seekers. It is not considered that the object fell in the location where it was found, because there was no crater or splattered material in the vicinity. The tidal flats at this point are solid rock. An analysis by CARDE revealed that the metal is an alloy with high manganese content. CARDE personnel who are familiar with

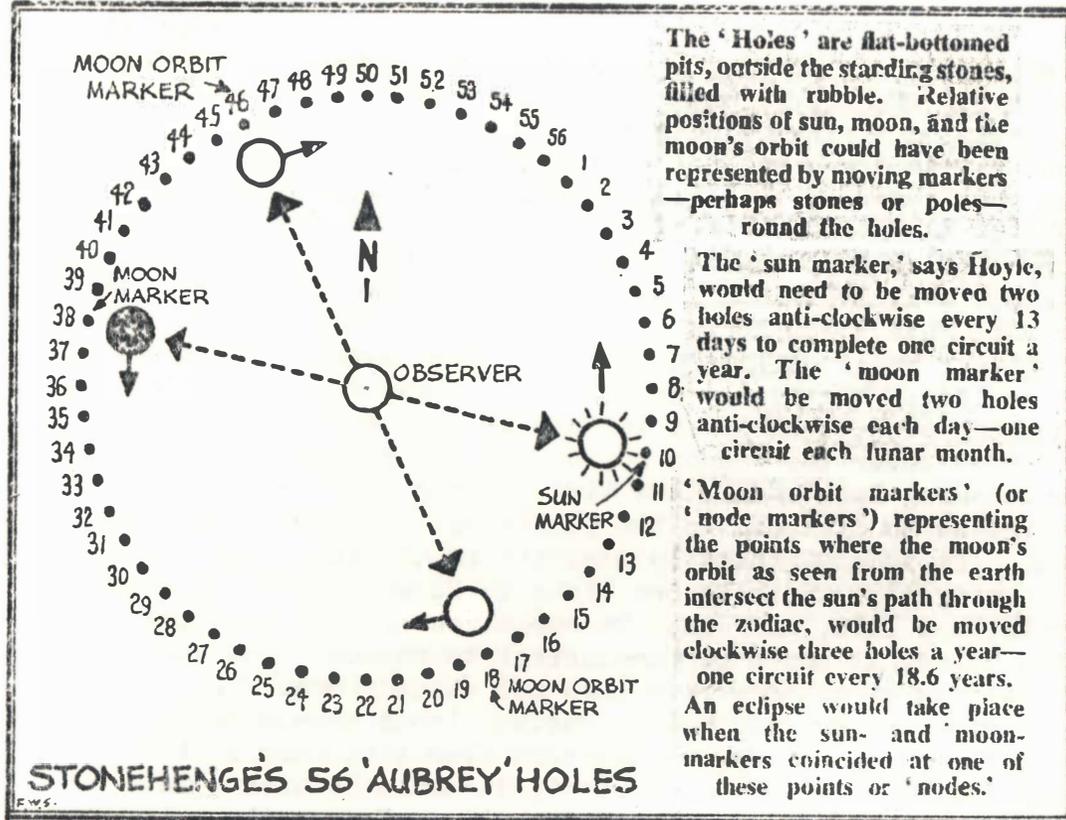
foundry operations, consider it to be a normal product of a foundry consisting of slag with semi-molten scrap imbedded. Their investigation did not reveal any electronic components".

Despite the findings of CARDE, an element of doubt exists as to whether these are completely accurate. Although they considered the object to be of terrestrial origin, laboratory experiments on the metal carried out by the late Wilbert B. Smith & c-workers, resulted in a number of unusual reactions not consistent with the normal behaviour of terrestrial metal. This was most evident when a small piece of the metal was heated with an acetylene torch which caused it to blossom into a miniature white cloud with extremely bright sparks in it - a sort of A-bomb in miniature. WBS concluded that the magnesium went exothermic, reduced the ferrite in the spinnel crystal structure, formed the cloud & left the iron free to burn with O₂ in the air. He warned that anyone attempting to heat a larger chunk of the metal might very well fry himself! He also considered that the intense heating should have burned the object worse than it did and he therefore reached the conclusion that if could not have been a blast furnace product. Further experiments revealed that some parts of the metal could not stand too much heat, thus limiting the possibilities as to why such a manufactured item came to grief. In testing the metal with the acetylene torch, it was noted that the resulting sphere, with its intensely brilliant shower of sparks, burned until nothing remained - no residue or slag, as is common with earth metals.

CARDE suggested that the metal may have been slag from a foundry brought to the area via an ice floe. The facts of the case, however, do not bear this out. The nearest mills are many miles from Les Ecureils - & it was the month of June. The material is not a common foundry product, & even if it had been, one wonders why the foundry would waste 3,000lbs. of metal.

More Mysteries. How the metal arrived at Les Ecureils remains the biggest mystery of all. The maximum depth of water at high tide and the closely-spaced boulders along the shipping channel would seem to rule out any possibility of arrival by boat or raft. Had it fallen from the sky, the noise would have been earth-shaking. Even a small meteorite sounds like a rushing freight train.

A further mystery, indicating the possibility of exposure of the metal in outer space, is that the outer surface, under powerful magnification, shows minute inclusions which well may be micro-meteorites picked up during a long sojourn in space. The



HOYLE BACKS STONEHENGE AS SPACE CLOCK.

(From an article in the "Observer" by John Davy)

Fred Hoyle in an article in a recent issue of "Nature" backs up the theory that Stonehenge was an astronomical observatory of astonishing sophistication, and shows that it could have been used for predicting eclipses in much more detail than anyone has hitherto dared to suggest.

There have been many speculations about the astronomical functions of Stonehenge, but the most recent and elaborate came from Professor Gerald Hawkins of the Harvard-Smithsonian observatory in America. He fed a computer with information about Stonehenge and about astronomy, and concluded from its calculations that a great many of Stonehenge stones are aligned in pairs with significant astronomical points on the horizon. He went on to suggest how Stonehenge could have been used as an astronomical computer.

However, a book on his findings was reviewed in "Nature" by a British Stonehenge authority, R.J. Atkinson, & condemned as "tendentious, arrogant, slipshod and unconvincing".

A review of the book in 'The Observer' brought critical letters from Mr. Atkinson & from Professor Glyn Daniel, the Cambridge archaeologist.

Apart from criticisms of Professor Hawkins' procedure Mr. Atkinson questions whether "A barbarous & illiterate community.. which has left us no other evidence of numeracy" could have used some of the Stonehenge structure in the elaborate mathematical ways postulated by Professor Hawkins, and now - but still more - by Professor Hoyle.

Hoyle reports in "Nature" that he has reworked Professor Hawkins' calculations and come to the same conclusions, namely that the astronomical alignments do not arise by chance, and that the main alignments are just those "which could have served far-reaching astronomical purposes".

He goes on to consider Stonehenge as a computer. The discussion here hinges on the 56 mysterious "Aubrey Holes" which lie well outside the standing stones. They are flat bottomed pits between two and four feet deep, which were excavated during the first building phase, around 1850 B.C. and apparently filled in almost immediately with chalk rubble. Some were dug out again and refilled to include cremated human bones.

Professor Hoyle suggests that the Aubrey Holes could have been used as a kind of astronomical clock to predict eclipses of the sun and moon with great accuracy. This could be done by moving markers round the circle to represent the relative positions of the sun, the moon, and the moon's orbit in relation to the zodiac.

A few simple rules for moving the markers, and for resetting them by observations using some of the Stonehenge alignments, would enable the clock to keep time for centuries, and allow predictions of imminent eclipses virtually at a glance.

Mr. Atkinson used apparent errors in some of these alignments to challenge Professor Hawkins' interpretations. But Prof. Hoyle says that the errors may not be errors at all, & could be part of a clever system to pinpoint crucial positions of sun & moon at important moments, in order to set the clock.

Hoyle concludes with some theological speculation. Suppose that Stonehenge with its astronomical clock, was invented by a society which saw sun & moon as deities. As they moved the hands of their astronomical clock, they would be impressed with the power of the marker showing the position of the moon's orbit—for whenever this coincides with the sun and moon there is an eclipse.

What deity would this orbit marker represent? Presumably, says Hoyle, "A still more powerful God". Could this be, he asks, the origin of an "invisible, all-powerful god, the God of Isaiah," that destroyed sun worship as a religion?

SCPTIC TO BELIEVER

G. MARSH

The Canadian UFO Investigator, Wilbert Brockhouse Smith, died from cancer in 1962. Wilbert Smith believed in "flying saucers" and that they are intelligently controlled and use a form of power based on gravity reversal. He believed in a brotherhood of men throughout the universe, that we are watched by fraternal intelligences who are only prevented from helping us by invisible cosmic laws of interference, and that the basic tenets of our science present a warped picture of reality.....

Fantasy? How else can one view the beliefs of a man who propounded that several aircraft crashes have been due to the reduction of mystical "binding forces" said to hold all molecules together, & then devised an instrument based on a stretched piece of nylon, which he claimed measured the reduced binding forces?

Yet W.B. Smith's credentials were impressive. Well versed in the scientific method, he held an M.Sc. in Electrical Engineering wrote several technical papers, and took out half a dozen patents. In 1935, fresh from University, he joined the staff of a Vancouver radio station, & by 1939, was chief engineer there.

He continued his broadcasting work in the Canadian Department of Transport, participating in the formulation of technical agreements between Canada and the U.S.A. During World War Two he helped to engineer Canada's wartime monitoring service. In 1947 he established a network of ionospheric measurement stations throughout Canada.

In 1950, the Canadian Government set up "Project Magnet" to investigate UFO phenomena, with W.B. Smith at its head. Smith tackled his job methodically in approved scientific fashion. As he later wrote, "The first phase of the work consisted of reading all available literature, collecting as much observational data as possible, and in general getting a fair perspective of the problem. The second phase involved theoretical and laboratory work to find openings in our technology, and to establish relevant reference points, and the third phase involved following up the many and varied

leads which developed from the first two phases".

Smith started off extremely sceptical, ready to write off UFOs as being of natural man made origin.

Knowing this it must have been something of a body blow to UFO cynics when "Project Magnet" officially reported that flying saucers existed & that there was a 61% chance of their being alien! The Evidence was astounding. As regards sightings, Smith was explicit: "Hundreds of normal honest people have seen lights in the sky which behaved like no light normally seen in the sky ought to behave". "Hundreds of people have seen what appear to be solid real objects in the sky which behaved like no object normally seen ought to behave." "Hundreds of people have seen objects in the earth's atmosphere at sufficiently close range to see enough detail to enable them to say definitely what the objects were not, even though they could not identify what they were.

Descriptions of these objects from observers where circumstances virtually preclude collusion, check quite well among themselves & against data received from other sources. It is not reasonable to assume that hundreds of ordinary normal people whose word we would readily accept under more mundane circumstances, for instance, as witnesses to an automobile accident, should suddenly become liars, fools, neurotics and otherwise incompetent observers".

He was equally forthright about contact stories which could be classified as being authentic, he claimed there was very close agreement between witnesses on the sort of experiences they had. Among other alleged contacts there was very little agreement.

In 1954, the cynics were cheered when Project Magnet became too embarrassing for the Canadian Government, who dropped it.

The Project continued under Smith's guidance, however as a private venture. During the twelve years W.B. Smith was actually engaged in UFO research, he wrote several papers on the subject, a representative selection of which came into the hands of this reviewer recently, in the form of the twelfth edition (1963) of "Topside" (from which all quotes used in this article are obtained) the journal of the Ottawa New Sciences Club. In these writings Smith begins admirably, lucidly setting out his argument. Many people could go along with him in accepting that UFOs are real objects which move by virtue of an unknown but advanced technology. However, Wilbert Smith then makes a dramatic leap. With little link material, he casts off the anchor uniting him to the firmament of established scientific paths of observation

SKYWATCH DRAWS A BLANK.

Some twenty members of IWUFOS kept watch on the night of Aug. 20/21 on Headdon Warren, overlooking Alum Bay. A fine night was enjoyed and although nothing of celestial visitors was seen it did give members the opportunity to see some sattelites, shooting stars & acquaint themselves with the star systems.

BUFORA have asked that sky watchers should carry different coloured filters on their expeditions, especially if lights are seen which they cannot identify. This results from a genuine UFO photograph taken in March this year at Conisborough, Yorkshire which showed 3 large dome shaped objects which were only visible to the witnesses as a slowly moving throbbing orange light. The photo is being analysed by Dr. G.G. Doel, BUFORAS Chairman.

HARRY LORD.

The Tyneside Group have lost a valued member and UFology a dedicated worker with the death at the age of 50, of Harry Lord. He helped to form TUFOS in 1958. He had a large collection of early UFO reports from newspapers and had read just about every book and magazine on UFOs. His articles in the Society's magazine "Orbit" reflected some of his coverage of every aspect of the UFO phenomenon, and only 2 issues of "Orbit" did not contain a contribution from him. At TUFOS fortnightly meetings he was rarely absent, and could always be counted on to comment on the latest UFO developments. "Spacelink", on behalf of its readers extends its sincere sympathies to his mother, brother and to all our friends in TUFOS.

"The most beautiful thing we can experience is the mysterious. It's the source of all true art and science. He to whom this emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead. His eyes are closed" Albert Einstein.

Your letters are welcome as are articles, comments, ideas and anything relevant to the UFO. Write to the Editor.