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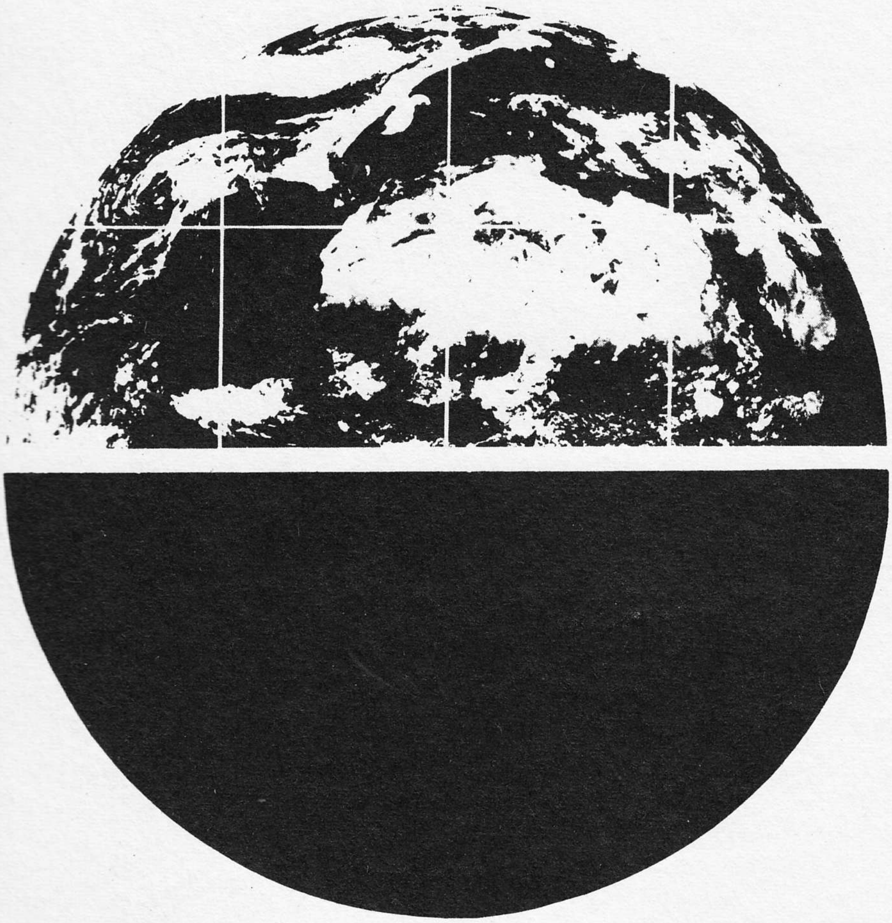

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JOURNAL TAP VOL. 2 pp 1-2

Operational levels and corresponding goals in UFO research

BERTIL KUHLEMANN*

MOST UFOLOGISTS WOULD LIKE TO SEE THE UFO ENIGMA SOLVED. THIS IS - QUITE RIGHTLY - THE ULTIMATE GOAL FOR UFO INVESTIGATING GROUPS. THE ORGANISATION OF RESOURCES AVAILABLE TO UFO GROUPS WOULD VERY MUCH BENEFIT FROM A SET OF CO-ORDINATED SUB-GOALS FOR A MORE EFFICIENT AND SMOOTHER DAY-TO-DAY PRACTICAL OPERATION. THIS PAPER AIMS AT SUGGESTING A SET OF LEVELS FOR UFO RESEARCH AND THEIR CORRESPONDING MAIN AND SUB-GOALS.

Occurrence of UFO phenomena cannot be predicted either when, where or how. Events cannot be predicted and observations involve people who come from wide range of backgrounds. Only a few observations are made simultaneously with, or supported by, instruments or recording equipment. The amount of (observation) data is thus - in most cases - collected by and made available for analysis through the observer - an individual very often having made the observation alone without accompanying witnesses. Unfortunately because the psychological 'climate' is not favourable, many observers lack the courage to report what they have observed. In other cases (state employees, military personnel and civil airline pilots) there are severe restrictions in reporting UFO sightings.

Ideally the solution of the UFO enigma is fully comprehensive, extremely complex and most probably multi-dimensional. Activities aiming at this goal will need to cover the whole field of phenomena. It will also need to cover a geographical area, large enough with a preferably continuous 'over-watch' and having an alerting function with pertinent manpower and instrumentation resources.

Some UFO groups specialise in a specific sector which will no doubt lead to a somewhat easier job but in these instances, findings more often have the nature of providing a basis for assuming that the phenomena of <u>this special sector</u> might be real than giving a clear-cut answer to the enigma as a whole. This specialisation may better be referred to the field of activities carried out under levels B or C.

The activities to be carried out to reach level A will require such an amount of manpower and other resources that they can only be organised if there is a decision taken by the organisation to allocate what is required for this project field. As such a decision would need a very firm basis proving <u>not only</u> that there is a real phenomenon (well worth a study and how such a study could be carried out) <u>but</u> also including some kind of additional information which would motivate allocation of funds for such a study. Such motivational information could be of a 'positive' nature, for example, to study possible new propulsion systems, or of a 'negative'nature, for example, to see whether the phenomenon might be a 'threat'. This motivational information must of course have a very solid content and be supported by significant statistical data (which requires a thorough statistical analysis).

To reach the operational level A a preparatory step (B) must first be carried out. The result of the efforts of <u>level B</u> must be a clear-cut answer to the questions:

*"Is there really something?"

*"How should this be studied?"

*"Why should it be studied?"

Resources required for carrying out the level B project are still comprehensive but as these are scarce they will be needed to organise work in the most efficient way making use of all manpower, instrumentation, as well as national and local authority resources.

Resources available should include:

*A good inflow of observational data (which may require a softening-up of the harsh psychological attitude from society towards the observers).

*A successive opening-up of channels to administrators, politicians and the mass media and political parties for a future communication of the outcome of the level B project.

*A successively-widening contact net of (profound) scientists who would be willing to support these findings.

To back up this improvement in communications, the organisation should have operational UFO research work going on, including:

*Field reviewing function.

*Field investigation function.

*Screening (IFO-checking) function.

*Data entry (coding/punching) function.

*Data processing function.

*A "structure"- a standard form for completion by witnesses - for specifying observation data which meets the level B goal, can be used for level A, and which is in a standard national/international format.

*A 'level-structured' responsibility and 'division' of work - internationally/ nationally/regionally/locally.

Of course both levels A and B include and rely on levels C and D. While levels A and B are of such dimensions that they require international or global co-operation, the necessary operational sub-levels C and D are essential, both for national, regional and local UFO organisations and for individual ufologists.

Level D may in the first hand be connected with what the individual ufologist looks for as a fulfilment through involvement in UFO activities. These may include:

*Reading UFO literature.

*Reviewing local reports on UFO sightings.

*Carrying out field investigations.

*Screening data (IFO-check).

*Analysing UFO data and reports.

*Actively working within the UFO organisation.

This goal level may presuppose:

*UFO literature on good qualitative level.

*Good qualitative reports from the mass-media and its journalists on UFO incidents.

*A systematic method for field investigations and an intelligent form for reporting UFO data.

*Operational communication channels with authorities.

*Systematic structurisation of UFO data (and eventually a computer-system support).

*Well-organised work within the UFO groups.

Level C - applying mainly to national, regional and local UFO organisations - seems, because of its very tricky (intermediary) situation, to have the greatest difficulties in defining its set of goals and its spectre of activities. Most often, those organisations - besides running the field investigations and all adhering activities on an operational level - tend to include two very resource-consuming activities:

*Publishing a UFO journal.

*Organising meetings and seminars open to the (informed) public.

The basis for the existence of a UFO organisation rests on:

*A good flow of UFO observations.

*A good membership figure (with many active members).

As these two factors support the aim of getting a better attitude towards the UFO phenomenon, they scarcely can be overlooked. However, the result often is that no scientifically-verified and statistically-analysed substantial outcome is produced.

To overcome these shortcomings, ufologists must work towards:

*Harmonisation, nationally and internationally.

*Operational goal-setting (level B) and defining a minimum data amount and the organisation of available resources for an effective UFO research if the local/ regional/national UFO organisation is to be able to support the global effort to solve the UFO enigma.

Both individual ufologists and UFO organisations (levels C & D) would benefit from the introduction of a comprehensive form in a standard format as well as a simple form containing minimal but essential data to be used in combination with, or as an alternative to, the main form for reporting UFO data.

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We should also like to apologise for not including this item in the last journal but the decision was taken to hold it over due to the continuing receipts of donations.

JOURNAL TAP VOL. 2 pp 3-7

What is a UFO?

STUART CAMPBELL*

THERE CAN BE NO RATIONAL DISCUSSION OF THE UFO PROBLEM WITHOUT ADEQUATE DEFINITION OF TERMS. WHAT IS MEANT BY A 'UFO'? IS IT POSSIBLE TO DEFINE THE TERM WITH AN ACCEPTABLE DEGREE OF PRECISION?

Ufologists are frequently asked whether or not they believe in UFOs - (perhaps it is more usual to assume that they believe in UFOs). Surveys of public opinion are also conducted on the basis of attitudes to the undefined term 'UFO'. A poll conducted by the journal Industrial Research in 1971 asked readers a series of questions without definition of the term (1), and the American Institute of Public Opinion (the Gallup Poll) regularly asks questions about 'flying saucers' without defining what that phrase means. Jacobs has noted that this lack of definition demands caution in interpretation of the data that result. (2)

To some, UFOs are merely a specific class of anomalous flying objects, a class for which there is yet no explanation, to others they are extra-terrestrial craft and evidence that Earth is being visited by aliens. Serious ufologists cannot answer questions about UFOs without qualification or definition of the term.

In passing we must define 'ufologist'. 'Ufology' and 'ufologist' are neologisms that have been derived from UFO and will rarely be found in dictionaries. 'Ufology' is the study of UFOs (or more strictly, the study of UFO reports), and consequently, a 'ufologist' is someone who specialises in the study of UFOs (or UFO reports). A 'ufologist' is not someone who 'believes in UFOs' (since that phrase has no specific meaning), and he is not necessarily someone who believes that UFOs represent the activity of an alien civilisation. A ufologist has an open mind on the causes of UFO reports, and whether UFOs really exist and examines the evidence objectively.

Attempts to define 'UFO' have been made. The Aerial Phenomena Research Organisation (APRO) define it as 'any airborne object which cannot be identified by the witness', and the astronomer Carl Sagan describes it as a moving aerial or celestial phenomenon, detected visually, or by radar, but whose nature is not immediately understood'.(3) The APRO definition would appear to exclude a UFO which can be identified by the witness - as an alien craft.

Does this imply that APRO would ignore reports from people who claimed to have witnessed an alien landing? It is interesting to note that while the UFO organisation sees UFOs as objects (craft?), the astronomer sees them as phenomena.

The Condon Report (4) defined a UFO as:

'... the stimulus for a report made by one or more individuals of something seen in the sky (or an object thought to be capable of flight but seen when landed on the earth) which the observer could not identify as having an ordinary natural origin, and which seemed to him sufficiently puzzling that he undertook to make a report of it to police, to government officials, to the press, or perhaps to a representative of a private organisation devoted to the study of such objects'.(5)

As some have pointed out, the above definition allows any artificial aerial object to be classified as a UFO (6), although 'natural' may have been intended to mean 'normal'. Clearly the definition was not intended to classify an aircraft as a UFO, but this demonstrates how much care is required in framing definitions. It also shows that definitions should not include vague or undefined terms. The elegance of the Condon definition is spoiled by the consequence, admitted by the Committee, that subjective stimuli such as mental illness, or a false report can be a UFO. Like the APRO definition, it also excludes a UFO which, far from puzzling the witness, convinced him that he was observing an alien craft.

The above definitions rest on the fact that the witness (or someone who claims to be a UFO witness) was puzzled by what he saw. Realising that such a definition is bound to allow very many explainable objects and phenomena to be classified as UFOs, Hynek has added the requirement that others should also be puzzled. Hence he defined a UFO as:

'.. an object or light seen in the sky or upon the land, the appearance, trajectory and general dynamic and luminescent behaviour of which do not suggest a logical conventional explanation and which is not only mystifying to the original percipients but remains unidentified after close scrutiny of all available evidence by persons who are technically capable of making a common sense identification, if one is possible'.(7)

Hendry has adopted a similar definition, viz:

'... any anomalous aerial phenomenon whose appearance and/or behaviour cannot be ascribed to conventional objects or effects by the original witness(es) as well as by technical analysts who possess qualifications that the original observer(s) may lack.' (8)

These definitions raise very many more questions than they answer. Apart from the undefined terms, there is an implicit assumption that some UFOs will remain totally inexplicable, not because of lack of information, but because of some intrinsic strangeness that may be due to alien activity. They suggest that UFOs exist as a special class of anomalous phenomena, a class which no-one can explain.

Vallée has pointed out that ufologists deal, not with UFOs but with UFO reports. (9) This is certainly true. Whatever UFOs are, and whether or not they exist, there is no doubt that UFO reports exist. This realisation appears to have led Hynek to define a UFO in terms of a UFO report, as follows.
UFOs are the 'existential correlates' of the 'UFO phenomenon', the latter being the total class of the 'UFO report' and the 'UFO experience'. The 'UFO experience' is the content of a UFO report. A UFO report is :

'a statement by a person or persons judged responsible and psychologically normal by commonly-accepted standards, describing a personal, visual or instrumentally-aided perception of an object or light in the sky or on the ground and/or its assumed physical effects, that does not specify any known physical events, object, or process or any psychological event or process.' (10)

It may be argued that Hynek has made matters unnecessarily complicated. But his definition of a UFO report has introduced more undefined terms, some of them subjective, and he has replaced the technical experts by science itself. His definition of a report contains a definition of a UFO; if we cannot define a UFO report without also defining a UFO there does not seem to be much point in defining a report. The use of the verb 'specify' seems curious; it means 'to name or mention'. Presumably Hynek intended that the report should not 'describe' any known physical event, object, and so on.

The definition of 'UFO' and 'UFO report' was the first task undertaken by the Working Party established at the First London International UFO Congress in 1979. This Working Party has since become known as the Provisional International Committee for UFO Research (PICUFOR, later PICUR). The Working Party consisted of 24 people representing 11 countries. They agreed to a definition of a 'UFO Report' which is substantially Hynek's latter definition. But they deleted the word 'object' because of the implication of 'an objective, measurable artifact or natural phenomenon', and the words '... in the air or on the ground ...' were also deleted to include unidentified phenomena in space or underwater. They state that the 'international definition' of a UFO report is:

'A statement by a person or persons judged responsible and psychologically normal by commonly accepted standards, describing a personal, visual or instrumentally-aided perception of a phenomenon and/or its assumed physical effects, that does not specify any known physical event, object or process or any psychological event or process.'

and a UFO is defined as:

'The stimulus giving rise to the UFO report'. (11)

These definitions have not met with universal acceptance. Hind has already made three objections to the definition of a UFO report. His first objection is that, while the definition refers to factors such as 'known' physical events, it does not refer to known psychological events or processes. Presumably UFO reports could be the result of unknown psychological processes. (I am not sure what is meant by a 'psychological event'!) Hind's second objection is that it is not right to exclude reports from persons who are psychologically abnormal; he suggests that a certified lunatic (sic) might actually encounter an alien craft, returning with 'overwhelming evidence' that his story is true. He claims that it is not appropriate to define a UFO report on the basis of an essentially subjective judgement of the character of the person responsible for the statement. His third, most fundamental, objection is that the definition permits any unknown phenomenon to be classed as a UFO. Even a previously unknown subatomic particle could be a UFO! (12) Indeed, as it stands, the definition would cover ghosts, sea serpents, 'men-in-black', the Loch Ness Monster and the Yeti! Greenfield perceives that the definition, by singling out 'unknowns', perpetuates the belief that a minority of reports constitute evidence for a real anomalous phenomenon (13).

The first grave defect of the

international definition of a UFO report is its failure to define 'psychologically normal' and 'commonly-accepted standards'. It assumes that the average person can easily distinguish between those who are and are not afflicted by some kind of mental illness. But of course this is not so; only psychiatrists are qualified to judge the matter. Mental illness is very common and not necessarily obvious to the layman. Schizophrenia is one very prevalent psychosis suffered at one time or another by a substantial minority of mankind. Its sufferers do not necessarily reside in mental hospitals. When it comes to judging the character and reliability of witnesses, it is known that no trust should be put in their reputations. The most persuasive and apparently truthful witnesses have been shown to be frauds. Similarly it will not be easy to identify psychotics who report a UFO. The witness would need to be subjected to an interview by a competent psychiatrist before it was certain that his report was objective. How is one going to judge the value of reports where the witness either cannot or will not be so interviewed?

Like that of the Condon Report, the PICUR definition of a UFO allows any stimulus to qualify. Thus, if the stimulus is subjective, as in the case of hallucination, then the mental process causing the hallucination is a UFO! Such a nonsensical conculsion is not prevented by the words in the definition which appear to exclude psychological stimuli. A statement that describes a (known) psychological event or process is not the same thing as the psychological event or process itself. The psychological process could only be described by a psychiatrist, and a witness who suffers from an abnormal psychological process can only describe the effects of that process. Thus the stimulus is one thing, and the description of the result of that stimulus is quite another.

It must also be observed that reports from highly excitable people may arise from a combination of objective and subjective stimuli. The witness may suffer an hallucination as a result of an initially objective stimulus, or he may unconsciously embroider an initially simple event. There are grounds for believing that the unconscious mind cannot distinguish between real and imaginary events. Thus where hypnosis has been used in an attempt to discover allegedly unrecalled events and where the stimulus for the report (under hypnosis) is a previous dream, then that dream is a UFO!

The second grave defect of the international definition of a UFO report is its failure to define 'known'. By whom is the physical event, object or process to be known? The witness? The investigator? The evaluator? The scientific community? Knowledge is relative; some know more than others. While there is no acknowledged body of ufological knowledge there will be great variation in the extent of the knowledge of individual ufologists, and hence in their ability to explain UFO reports.

According to the definition, a UFO report which later turns out to have a cause that is known to someone involved in the investigation is <u>not</u> a UFO report. But to someone who does not accept the explanation, it is still a UFO report. What happens to a report which can be explained by one evaluator but not by another? There can be no general agreement on UFO reports if the definition rests solely on the interpretation of individual evaluators. UFO reports generated by a secret military vehicle or process, which remains unknown to ufologists, would be classified as reports of a 'true' UFO, even though the cause was known to military experts. We could even argue that where a genuine alien craft generated UFO reports, the craft was nevertheless known to the aliens!

In the terms of Hynek's definition of a UFO, who is technically capable of making a common sense identification? In the terms of Hendry's definition, who are the technical analysts who possess qualifications lacked by the original observer, and what are their qualifications? As Hendry has observed, UFOs demand knowledge of such a wide and varied field that no-one is an expert. Experts in one field are, although often reluctant to admit it, laymen in another. There is also a tendency for experts to suggest explanations for UFOs which lie in their own sphere of knowledge. Thus astronomers prefer astronomical explanations and psychologists prefer psychological explanations. Clearly there is a danger that an expert will attempt to force an explanation from his own discipline, even where this is inappropriate. Experts can be relied upon only to say whether or not their own field of knowledge can adequately explain a report, and even then there is a possibility that the explanation may lie in hitherto unexplored or unknown areas of their discipline.

So are there no experts on UFOs? The nearest thing to a UFO expert is an experienced ufologist who has taken the trouble to acquaint himself with all possible explanations and who approaches each report with an open mind. Even then he does not know everything.

PICUR saw the Condon Committee's definition of a UFO as a device to produce a situation in which all UFO reports could be explained (14), but their own definition can be seen as a device to produce any number of inexplicable UFO reports, depending upon the knowledge of the evaluators. In fact the Condon definition of a UFO is more practical. A UFO is reported only when the witness could not readily account for what he saw or experienced. Whether or not the event is later explained is not relevant. Vast numbers of UFO reports still await explanation. Some are not explicable today, but may be explicable tomorrow. Many have been given the wrong explanation and will need to be reassessed in the light of further information or new theories. Thus the UFO report exists independently of whether or not it is explained and whether or not someone believes that he can explain it.

The PICUR definition appears to be based on the questionable assumption that there is a residue of reports which describe a phenomenon not known to humanity and which may be alien or extraterrestrial. But it is not universally agreed that there is such an inexplicable residue, and certainly not that the residue represents 'true' UFOs. While some believe that the residue is proof of the alien provenance of UFOs, others believe that the unexplained reports are merely those for which there is insufficient data to determine the cause. It is pointed out that, given sufficient information, it might be possible to explain all UFO reports. Clearly the definition should not imply that some reports are inherently inexplicable. It may be agreed that there is a class of reports which appear to defy explanation in conventional terms, but this is evidence only that as yet we cannot explain all anomalies. Whether the anomalies represent alien activity, or whether they are unknown natural phenomena is still an open question. It is not possible to define a UFO report in terms that imply that we can determine what is and what is not known.

The attempt to define a UFO report, rather than a UFO, has been a false trail. The definition of a UFO report is a thinly disguised definition of a UFO, and the definition of a UFO as a 'stimulus' is misleading. There is no mystery about a UFO report, and hence no need to define it. UFOs are the mystery, and even though we do not yet know the causes of all UFO reports we should attempt to define what we mean by a UFO.

A UFO is an 'unidentified flying object', where 'unidentified' means that the witness could not identify what he saw, where 'flying' means that the object was seen in the sky or at least above the ground, and where 'object' means some objective stimulus. The term has also come to mean 'an alien craft', and the possibility of a real alien landing on Earth should not be forgotten when drafting a definition. But 'UFO' cannot be held to describe anomalous marks or effects on the ground, persons or artifacts, nor can it be held to be the stimulus for false UFO reports. Reports of UFOs underwater or in space seem to be unreliable and irrelevant to the definition. UFOs are reported by human beings, very few of whom live underwater or in space. The mental state of the witness should not be allowed to interfere with the original UFO report, and, if it can be established, is only relevant when assessing the value of the report. Radar anomalies are so numerous and difficult to idenify that they should not be regarded as UFOs unless accompanied by simultaneous visual perception. These arguments lead me to suggest the following definition of a UFO:

'<u>A real object or phenomenon seen in the sky (or on or near the ground but apparently capable of flight) which an observer could not explain or thought was an alien vehicle</u>.'

Such a definition is certainly capable of classifying natural phenomena or objects, or man-made objects as UFOs. Conventional wisdom accepts that say 90 per cent of all UFO reports are explicable, but this begs the questions of who explained them, and whether they have found the correct explanation. There is cause to believe that some evaluators have too easily attributed UFOs to traditional categories, and, conversely, that they have failed to see that there are some mundane explanations for the so-called inexplicable reports. We cannot be certain that we have discovered all the categories into which UFOs may be placed. When all natural and man-made causes are known it may be that no unexplained reports will remain. A rational definition of a UFO must allow for the possibility that all UFOs are natural or man-made stimuli.

This debate over definition is not mere tautology. The definitions tell us more about those who framed them than about UFOs. APRO's definition reveals their inclination to see UFOs as solid objects (perhaps occupied craft), and Sagan's reveals his inclination to see them as natural phenomena. The Condon definition clearly reflects the Committee's conviction that UFOs are not extraterrestrial craft, while Hynek's reflects his belief that there is a residue of inexplicable reports which may represent alien activity. Hendry's definition, which appears to allow that some UFO reports are inherently inexplicable, reveals confused thinking, in that it conflicts with his 'non-revolutionary' theory in which UFO reports are caused by a variety of natural and man-made stimuli (15). The PICUR definitions reveal its devotion to Hynekian principles and the confusion that results from having too many cooks in the kitchen. On all sides there is a lack of logic, precision and clarity, evidence of how few rational minds have applied themselves to the UFO problem.

Two major groups of ufologists can be identified. There are those who are prepared to consider the possibility that UFOs may be entirely explained by mundane objects or phenomena (even though some yet unknown phenomenon may be involved). They prefer what I will call an 'open' definition, as in my own suggestion above. Then there are those who incline to the view that 'genuine' UFOs are inherently inexplicable by human science. They prefer what I will call a 'closed' definition as proposed by PICUR. This paper proposes that a closed definition is illogical and untenable; consequently those who espouse such a definition must be motivated more by faith than reason. A closed definition leads to the conclusion that there is a definable UFO phenomenon. An open definition does not necessarily lead to that conclusion. Consequently the choice of definition is of fundamental importance. Those who believe that there is a distinct UFO phenomenon, and that it should be brought to the attention of the scientific community, will naturally prefer a definition of a UFO which justifies those beliefs. It would not be in their interest to choose a definition which allowed the possibility that there is no UFO phenomenon. But if there is no UFO phenomenon it would be foolish to create the illusion of one by means of a tendentious definition of a UFO. Instead of clarifying an existing phenomenon, the selection of a closed definition of a UFO may create a fictitious one.

*Stuart Campbell is a long-standing member of the British UFO Research Association and has been its Scottish Investigations Co-ordinator for the past six years.

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5.9.1981 - THE NEW DEBUNKERS by Timothy Good

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In the face of ever increasing costs the BUFORA Council have been forced reluctantly to increase the annual subscription to £10.00, with effect from 1st September 1981. Subscriptions falling due after the end of August will be at the new rate. This increase should put the Association on a sound financial footing and improve the services that can be offered to its members.

JOURNAL TAP VOL. 2 pp 8-9 & 12

The Hill abduction : Fact or fantasy

RUDY DE GROOTE*

THE BETTY AND BARNEY HILL ABDUCTION CASE SHOWS VERY STRONG WEAKNESSES. SOME ELEMENTS INDEED SUGGEST THIS CASE COULD BE SHEER FANTASY. STUDIES BASED ON THE DETAILS REPORTED UNDER HYPNOSIS THUS BECOME SENSELESS SPECULATIONS.

Introduction

"To build a study upon shaky data is akin to building a house on flimsy foundations. ... And equally useless", Peter Hill writes (1). Yet, in the same Journal TAP I find an article by Anthony Pace on the Hill abduction case which I believe to be built on such flimsy foundations (2). Each study in ufology stands or falls with the data used. This certainly is true with so-called abduction cases. Accepting the reported details at face value, authors have broached the subjects of the star map and the possible physiology of the Zeta Reticulans in great depth. Mr. Pace offers a compilation of these writings. There are strong reasons to believe however that the Hill case contains too many weak elements on which to base such in-depth considerations.

The Witness

First of all, there is the witness herself. It should be obvious to any interested reader that Betty plays a predominant role in the entire affair. It should be equally obvious that Betty is no everyday woman.

Berthold Eric Schwarz, Consultant Brain Wave Laboratory, Essex County Hospital Center, Cedar Grove, New Jersey (USA) conducted a very thorough investigation on Betty Hill's personality. It came to light that the strangest PSI phenomena have manifested around Betty almost all her life:

poltergeist manifestations, all kinds of psychic events, mystery helicopters, strange visitors and phone calls, and so on ...

Furthermore, all her close family members (parents, sisters and brother, nieces and nephews) have witnessed UFO sightings (3).

In a recent book, Allan Hendry from Hynek's Center for UFO Studies noted : "Barney Hill died in 1969 but Betty Hill could clearly stand on her own two feet and always impressed me with her good-natured 'feistiness' and self-confidence in the face of the UFO sceptics. Yet early in 1977 when the two of us were preparing to appear on a local Chicago television show, Betty Hill, then 57, told me that she continued to observe as many as 50 to 100 UFOs a night in a 'special area' in New Hampshire. She also related other tales involving robots, her neighbour's cat levitating and 'militant' UFOs that burned the paint on her car when she didn't leave the area soon enough to suit them. I am glad that these claims turned into a nationwide news story in October of 1977 because I wouldn't want to be the only one to have been told all of this. A number of UFO field investigators have accompanied Mrs. Hill to her special site, only to confirm that the lights in the night sky that Mrs. Hill calls 'UFOs' are only planes and street lights. She has even set up a giant duplicate of the star map allegedly shown to her by the UFOnauts out in this field area, using a four-by-eight-foot sheet of plywood and Christmas tree lights. Then, significantly, she discovered that the bulbs representing the aliens' 'home star' get removed frequently and mysteriously."(4)

And Hendry very rightly asks : "What do we do with this kind of information? Do we allow it to reflect on the UFOlogical integrity of the original claim of many years prior, or do we argue that the first experience was 'real' and the trauma has 'oversensitised' the CE III witnesses?"

Reported Details

We should always bear in mind the fact that all the details of this alleged abduction only came to light under posthypnotic regression conditions. And hypnosis certainly is no absolute way towards the truth! One only has to read Dr. Benjamin Simon's warnings in his introduction to John G. Fuller's book The Interrupted Journey to understand this. On 20 October 1975 Dr. Simon appeared in the Today Show (NBC-TV) stating : "...It was a fantasy, in other words a dream. The abduction did not take place."

Well-known ufologists Jacques Vallée and Allen Hynek had an opportunity to explore this matter in a discussion organised by Chicago radio station WIND on 31 March 1974, during which they were able to interview Mrs. Betty Hill and to exchange ideas with a Chicago-based expert on hypnosis, Dr. Larry Garrett. When moderator Ed Schwartz asked if regressions are always accurate, Dr. Garrett replied:

"No, they're not. A lot of times people use their imagination. A lot of times people fabricate things, from either wishful thinking, fantasies, dreams, things such as this".(5)

A view fully corroborated by Hendry's findings. He also refers to an experiment conducted in a hospital in Anaheim, California, by Dr. W.C. McCall aided by two UFO investigators, Alvin Lawson and John DeHerrera. In this experiment, a student newspaper advertisement called for "creative verbal types" from local colleges and communities to volunteer (unpaid) to be imaginary UFO abductees, that is under hypnosis they would be invited to invent a fictitious UFO abduction experience. Candidates for the experiment were screened out if they professed to have had a UFO sighting or seemed well informed about UFOs.

The big surprise for the investigators was that each of the eight subjects who were put into a deep trance provided a "coherent, intriguing UFO abduction narrative" with startling "ease and eagerness of narrative invention". The experimenters stress that their volunteers were all eager to spin a colourful yarn, one reminiscent of the real cases in the literature, with a minimum of prodding from the hypnotist. The experiment warns us to be cautious, therefore, that at least some of the details provided by "real" abductees under hypnosis may have been invented because of the apparent ease in doing so and the desire to "please the hypnotist".(6)

So it is not at all logical that the details reported by Betty Hill are accepted as true by the authors mentioned in Mr. Pace's submission.(2) And even if they should be true, there still remain some important drawbacks. Take the Marjorie Fish star map for example.

The May 1973 issue of NICAP's bulletin The UFO Investigator points out that "psychologists are likely to question the reliability of Betty Hill's map, which she drew in 1964 (two and a half years after the reported encounter) under posthypnotic suggestion. Even if her memory is accurate, it is not certain that the map she supposedly saw was scaled to show actual relative distances between stars. Ms Fish's chart assumes these distances were shown".

Still other objections can be made. Marjorie Fish only kept 15 stars from the 26 originally drawn by Betty. Various points differ markedly in position. The star Nu - Phoenicis, equally susceptible of developing life, was ignored by Fish. After a long search, a Mr. Charles Attenberg from Elgin, Illinois discovered a point near the southern border of the constellation Ophiuchus from where the stars in the neighbourhood of our own sun can be seen as shown on the Hill-map. The Attenberg-map is far more accurate than the Fish-map: it identifies 25 out of the 26 given stars. The humanoids' home port would now be the star Epsilon - Indi ... (7)

The conclusion seems obvious : a number of arbitrarily-drawn points can always be identified with a certain section of a star map, provided sufficient preselection or minor deviations in mutual direction and/or distance.

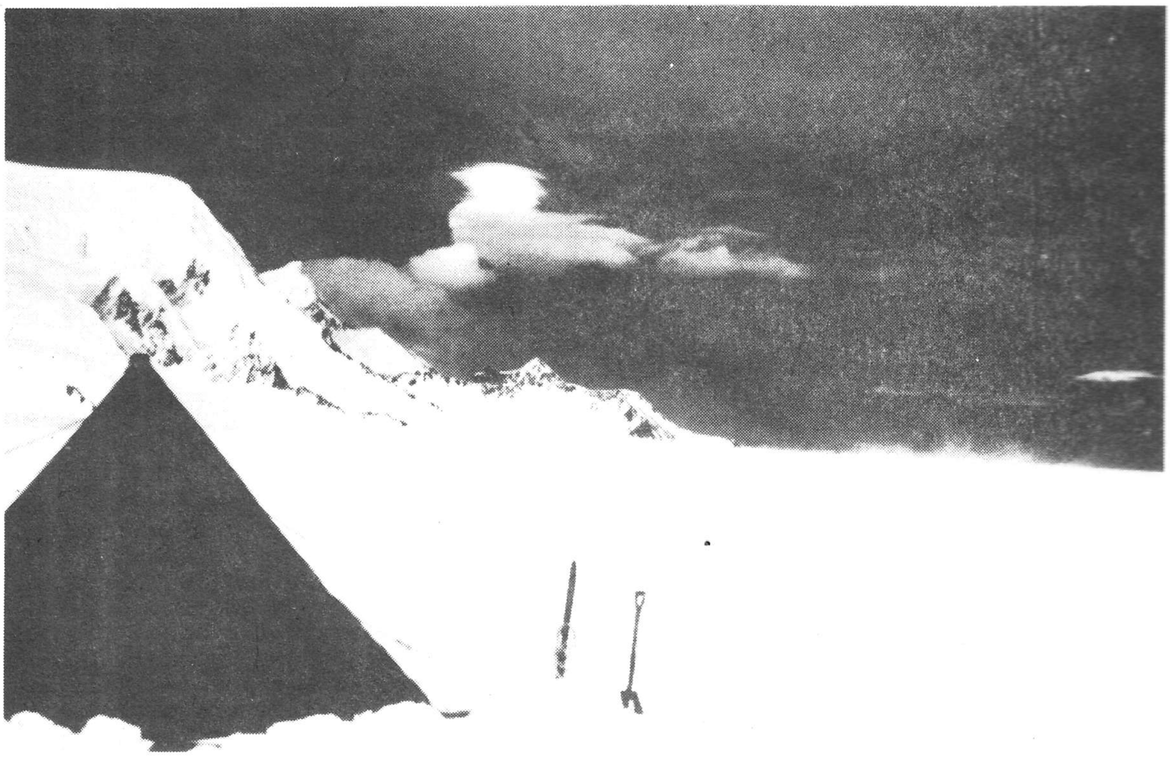
The Stimulus

During the 1979 First International UFO Congress organised by Bufora in London, a "UFO" was defined as "The stimulus giving rise to a UFO report". What could this stimulus be in the Hill case? The answer was provided in 1976 by Robert Sheaffer, an American amateur astronomer (7). He examined the position of the heavenly bodies over New Hampshire on the night of 19 September 1961.

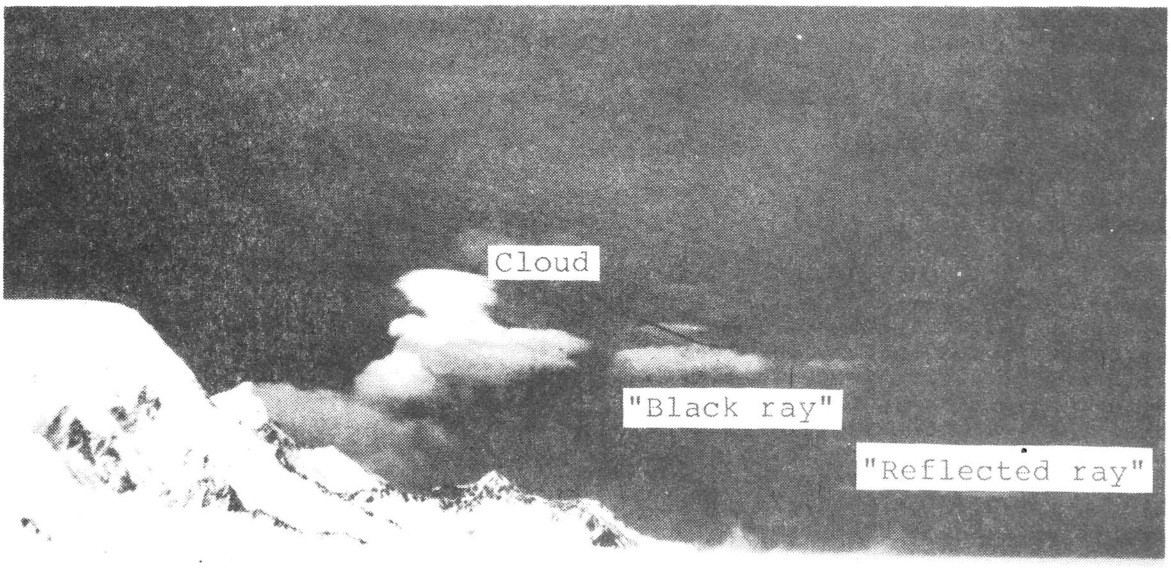
"... At that time" - he writes - "the moon stood near the constellations Sagittarius and Capricorn. In this part of the sky, no strikingly bright stars are visible. That night, however, two bright planets were situated only a few degrees away from the moon : Saturn just below the moon and Jupiter as a much brighter point of light above Saturn and left of the moon. First Betty Hill saw the moon and Saturn. The meteorological reports for that particular night show that the weather was slowly brightening up; a cloud bank was drifting away slowly. So Betty could not yet see the bright planet Jupiter as it was still hidden behind a cloud. Suddenly she saw appear Jupiter and she described at as a space-ship and not as a planet. One must keep in mind that Betty did not glance at the sky hastily; her observation lasted for about 30 minutes. Had there really been an unknown object in the sky, Betty would have reported three bright objects in the neighbourhood of the moon. She only reported two! This proves Betty was mistaking the planet Jupiter for a UFO..." (see fig. 1)

Conclusion

Betty and Barney Hill certainly had a strange personal experience. The sudden and unexpected observation of the bright planet Jupiter during a lonely night drive gave rise to an emotional drama. There exist very strong indications for this.



Two photographs (produced from slides) by EriC Wilkinson showing the strange cloud and the "thick black ray" emitted from it which appeared to disturb the snow on the horizon.
(See Correspondence, page 20)



"Snow devil"

A third and fourth photograph showing the apparent "reflected ray" observed by Eric Wilkinson in 1966 in the Antarctic.
(See Correspondence, page 20)

THE HILL ABDUCTION: FACT OR FANTASY/RUDY DE GROOTE

Elaborate speculations on various topics of this case such as the Fish star map or the physiology of the Reticulans seem thus senseless as they are based on doubtful data.

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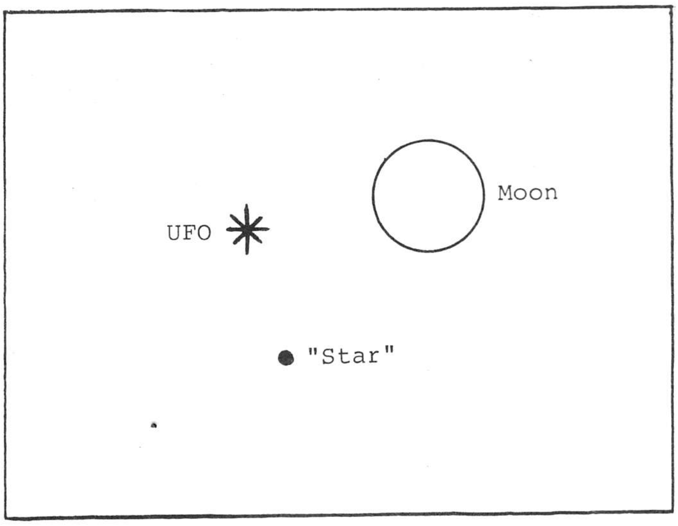
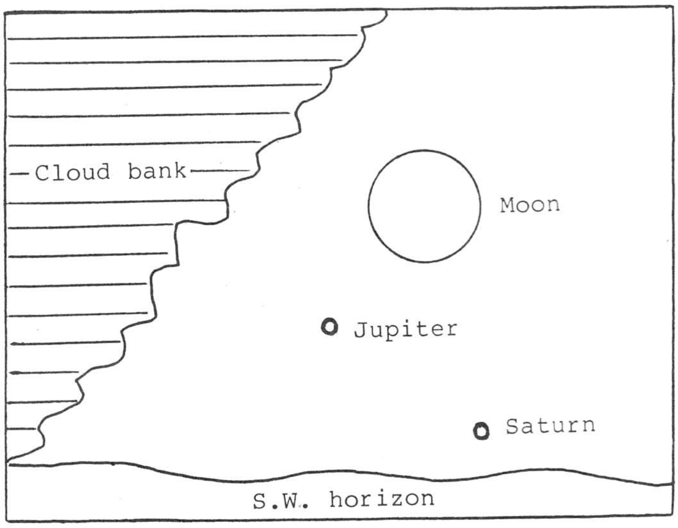


Betty Hill drew this sketch of the lights she saw in the sky.

Figure 1



The position of the heavenly bodies over the White Mountains just before midnight, 1961, September 19. (Positions calculated by Jean Meeus, Belgian Astronomical Association)

JOURNAL TAP. VOL. 2 pp 13-15

The decay of Cosmos 253 rocket over England

D.G. KING-HELE*
DOREEN M.C. WALKER*
P.E.L. NEIRINCK+

AT 17 h 57 m U.T. ON 20 NOVEMBER 1968, COSMOS 253 ROCKET (1968-102B) RE-ENTERED THE ATMOSPHERE OVER ENGLAND AFTER A WEEK IN ORBIT. THE DECAY WAS WIDELY OBSERVED, AND THE REPORTS RECEIVED HAVE BEEN ANALYSED TO DETERMINE THE TRACK AND HEIGHT. THE TRACK WAS FROM MANCHESTER (HEIGHT 80 km) TO CANTERBURY (HEIGHT 45 km), WITH THE FINAL BURNOUT AREA SOUTH EAST OF DOVER.

THIS PAPER IS A SLIGHTLY IMPROVED VERSION OF THAT PUBLISHED IN NATURE (211, 130-2, 11 JANUARY 1969).

The first widely observed re-entry of an artificial satellite into the atmosphere occurred over ten years ago, when Sputnik 2 met a fiery end over the Caribbean[1] on 14 April 1958. In the intervening years there have been more than 2000 re-entries of satellites and other catalogued pieces of space debris, of which more than fifty have been observed, most often by the flight crews of airliners[2]. The first re-entry to be seen by large numbers of people in Britain occurred on the evening of 20 November 1968, when the satellite 1968-102B, the final-stage rocket that had put Cosmos 253 into orbit 7 days before, burnt out over Southern England at 17 h 57 m U.T. (18 h 57 m B.S.T.).

It is difficult to predict the exact re-entry point of a decaying satellite more than an hour or two ahead, and regular satellite observers, after many fruitless vigils, have learnt to treat decay predictions with scepticism. However, the decay time of Cosmos 253 rocket was correctly predicted several hours beforehand both by the British prediction centre at the Radio and Space Research Station, Slough, and by the United States Air Force, whose prediction was telegraphed by the Moonwatch Division of the Smithsonian Astrophysical Observatory to those British observers who are in the Moonwatch network. Unfortunately, most of Britain was covered by cloud on the evening of 20 November, and the majority of the regular observers, including one of the authors of this paper (D.G.K.), saw nothing because of cloud. The other two authors were watching for the re-entry and observed it, though with some interference from cloud. We have analysed these observations and 83 other reports received at the Royal Greenwich Observatory, Herstmonceux, the Radio and Space Research Station and the Royal Aircraft Establishment. These sightings were mostly from south-east England, but five reports came from the crews of airliners and one from Scotland. Unfortunately most witnesses were so impressed by the visual appearance of the object that they failed to note its exact position in the sky, and few of the observations can be regarded as accurate to better than ±5°.

The track of the decaying satellite over Britain, obtained from the position of the orbital plane as given in the final United States Air Force Spacetrack prediction bulletin issued 9 hours before decay, is shown in Fig.1. This track was found to be consistent with the observations, and its estimated error over southern England is 5 km (s.d.). Marked on the track are times in hours and minutes U.T., and the probable height of the satellite, obtained by fitting to the observations various theoretical profiles of height versus distance[3] and choosing the profile that fitted best. The estimated error in height is about 5 km (s.d.). Observations accurate enough to be used in determining the height or final burnout area were made from Bromley (D. Rees), Datchet (P.E.L. Neirinck), Margate (A. Fédou), Ottershaw (D.M.C. Walker), Sturry (D. Imhof) and Tonbridge (P. Daly). These sites are marked by squares on the map, and the azimuths of the useful observations are indicated by the broken lines. The sighting from St. Andrews was helpful in confirming that the satellite was self-luminous at latitude 56°N.

The striking appearance of the decaying satellite inspired a large number of sketches, often beautifully drawn in colour. Unfortunately only one unimpressive photograph is available[4] and the drawings differ so greatly among themselves, in both shape and hue, that it would be misleading to select any single one of them as representative. The differences between the drawings can be partly attributed to the changes in the appearance of the satellite in the course of its decay, and the different angles from which it was being observed. As it crossed the north of England, from Lancaster to Nottingham, the object had a bright head with a cylindrical tail several degrees long, outlined by bright lines at its edge. A few fragments were being thrown off from the head, appearing as 'balls of light' that gradually faded. As the incandescent rocket approached the London area, the bright head became larger, the greater numbers of fragments broke off, streaming behind the head and gradually falling away. These balls of light were thrown off upward as well as downward, were often as bright as Venus, magnitude -4, and extended over an arc of between 10° and 20°. At any particular time at least 10 of these subsidiary fragments were visible, and some witnesses reported as many as 100. As the object proceeded south of London, the break-up became more complete and observers described it as a 'formation of lights', and 'a group of more than 30 bright lights, each leaving an illuminated trail'. The colours of the head and the glowing fragments were reported as being mainly white or whitish yellow, but there are also reports of orange, red, blue and green fragments. The fragments in the final burnout area ceased to glow after they had dropped to a height of about 30 km.

Cosmos 253 was launched on 13 November 1968 into an orbit with an initial perigee height of 200 km, an initial apogee height of 333 km., and an inclination to the Equator of 65.4°. The satellite was recovered from orbit after five days. The final-stage rocket, the object that decayed over England, had a rather similar initial orbit and was presumably the usual 65° Cosmos rocket[5], about 6 metres long and 2 metres in diameter, with a mass of about 1500 kg. These rockets usually tumble at a rate of about 1 rev/sec and the visual appearance of the rocket during its decay was consistent with the assumption that it was still rotating, with pieces being thrown off above and below as it lost structural strength through heating.

Solid lumps of metal have quite often been picked up from the ground after the re-entry of previous large satellites; for example, one of the pieces of Sputnik 4 found near Lake Michigan[6] in September 1962 weighed 9.5kg. The only report so far received of pieces from Cosmos 253 rocket being picked up is of one small fragment at Southend[4], and, as shown in Fig. 1, most surviving fragments probably fell in the sea south-east of Dover, or perhaps in northern France. Objects have been re-entering the atmosphere from orbit at a rate of about one per day in the past year. Most of these pieces are small and burn up completely on re-entry, but about once a week a large object decays that might shower solid fragments into the lower atmosphere. This debris constitutes a small but not entirely negligible hazard to aircraft and the Volunteer Flight Officer Network[2] already provides warnings to co-operating Airlines about the times and tracks of decaying satellites that are likely to cross their traffic routes.

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Slough

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Editorial Note:

The aforegoing article is in fact a reprint of the Royal Aircraft Establishment Technical Memorandum, Space 119 dated January 1969. Although somewhat dated, this Memorandum describes a typical satellite/satellite rocket stage re-entry event. It was decided to publish the Memorandum in response to the article "Aerial Phenomena over Britain on December 31, 1978" by J.B. Delair, Bufora Journal, Vol. 10 No. 1, 81, p11 to p21. Delair's article has already attracted a good deal of response and a number of letters were printed in Uforum, Bufora Journal Vol. 10 No. 2, 81, p25 to p28.

We apologise for not publishing a report on the re-entry of Cosmos 1068 rocket stage itself, as this was not to hand at the time of going to press.

In Uforum the most authoritative critiques come from John Rimmer, New Malden and Stuart Campbell, Edinburgh and it would be most useful to Bufora members and other readers of this Journal, to note well the contents of their letters. It is quite clear that the major event of the night of December 31st, 1978 which was widely observed from the British Isles, was indeed the re-entry of the final rocket stage that launched the Russian satellite Cosmos 1068.

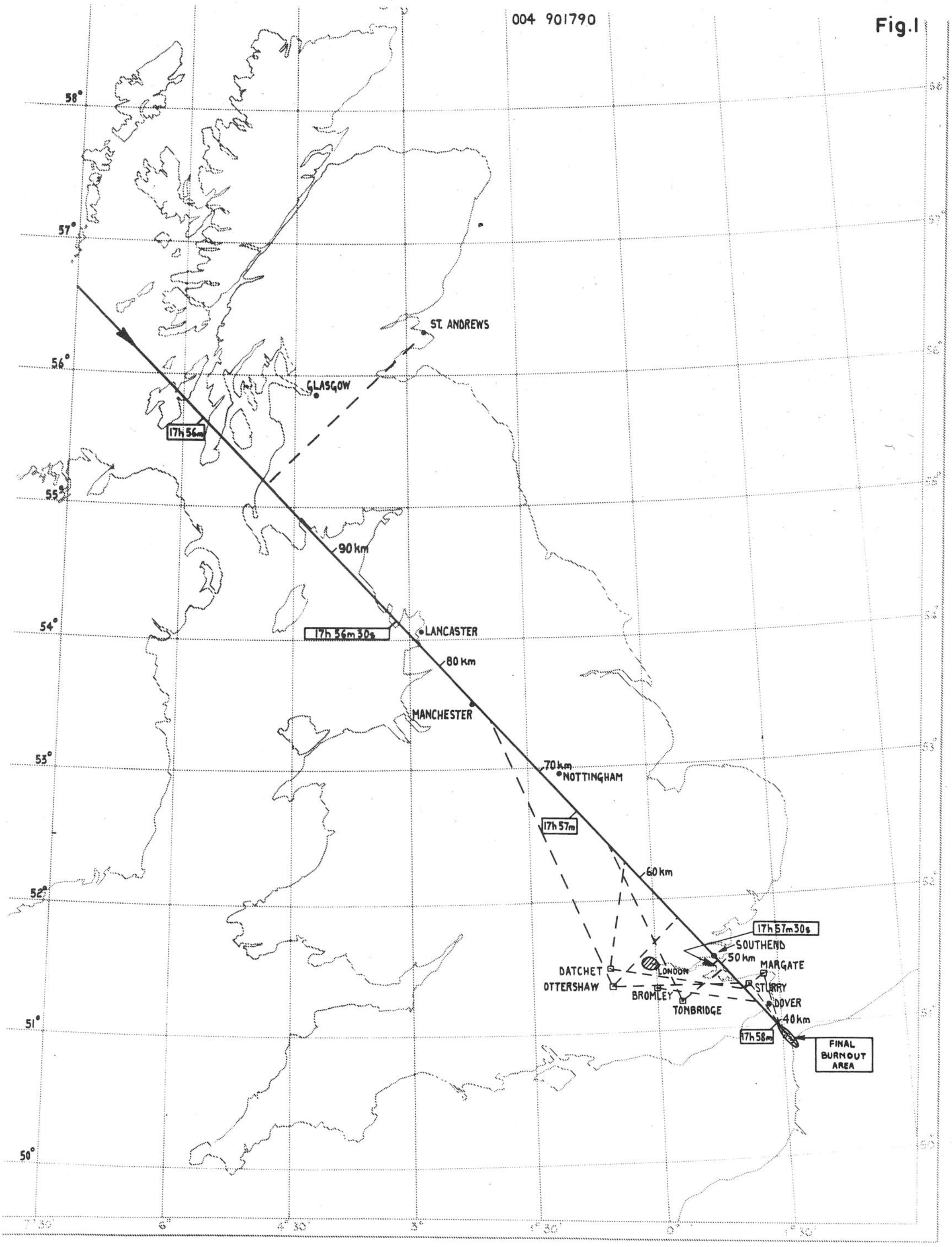

FIG.I TRACK OF COSMOS 253 ROCKET DURING DECAY

News from NASA

NEW ORIGIN OF LIFE THEORY

In a new theory about the chemical evolution of life, a Nasa scientist proposes that simple self-replicating chemical systems rather than complex ones could have been the precursors of living cells more than 3.5 billion years ago.

The new theory, published in the latest issue of the Journal of Molecular Evolution, was developed by Dr. David White, Assistant Professor at the University of Santa Clara, California, and research associate in the Extraterrestrial Research Division at Nasa's Ames Research Center, Mountain View, also in California.

White proposes that the first chemical ancestors of life were themselves 'alive' only in the sense that they could reproduce themselves and may have been far simpler than previously believed.

The prevailing theory of the chemical evolution of life holds that natural energy, such as lightning, sunlight and heat, interacted with the atmosphere, soils and oceans of the primordial Earth. The continuous interaction and evolution over millions of years eventually produced complex chemical systems that could reproduce themselves and that led to the first living cells.

The problem lay in getting the right chemical building blocks together in the right place at the right time. The process that led to living cells is easier to explain, however, if the necessary components are simple and few in number.

According to White's theory, very simple self-replicating systems could have appeared very early in chemical evolution. A key to the theory - whether these simple molecules would be capable of reproducing themselves - has been demonstrated by Ames and University of Santa Clara researchers.

Experiments showed that under simulated primitive Earth conditions, a short chain of amino acid molecules can produce longer chains of another amino acid and still longer chains of catalyst molecule. The catalyst molecule functions like an inefficient, primitive enzyme. It is the first such simple molecule to demonstrate the vital ability to catalyze (chemically facilitate) a reaction - an ability essential for life.

The 'proto-enzyme catalyst', as it is called, was suggested by White's theory. Researchers looked for and found it and White believes there are a number of other simple, short amino acid chain catalysts yet to be discovered.

The discovery of the catalyst molecule and its work is important but it is not enough for the origin of a self-reproducing system of molecules. That requires nucleic acids as well as molecules able to carry genetic heritage to the next generation.

Computer modelling, based on known properties of molecules, showed that, in theory, a self-reproducing system could be amazingly simple. In principle, the simplest possible system, called an anogen by White, would consist of two proto-enzyme amino acid chains. This assumes that molecules from which to build amino acids and nucleic acids were already present in the primordial environment, an assumption which has gained some support from laboratory simulation experiments.

In this theoretical system, the two short proto-enzyme amino acid chains would be able to synthesize themselves and two nucleic acid chains which, in turn, tell the amino acid chains how to make all four products of the system. This 'four-component system' (the two amino acid chains plus the two nucleic acid chains) is theoretically able to make many more such systems from the stock of building blocks which are presumed to have existed in the primordial environment.

Just how the nucleic acids would specify the exact amino acid chains remains to be demonstrated, which is a problem for all such theories. One advantage of White's theory is that the accuracy of the specification process need not be very great.

"We may find that a four-component system is too simple", commented White. "We may have to look for more complexity to get realistic self-reproduction. However, the success of these first experiments suggests that simple catalytic processes may be common in nature. Besides, we have not been able to formulate any other way to get the whole thing started."

Researchers now plan an array of experiments using the most commonly-found biological building blocks to look for other simple catalysts and for nucleic acid patterners. The goal is to discover whether self-reproducing molecules can organise themselves in laboratory experiments. Another advantage of White's theory is that it provides guidelines for the design of future experiments to test its predictions.

JOURNAL TAP, VOL 2 pp 17-18

Atmospheric Phenomena Log

JOHN ARMITAGE

THE ATMOSPHERIC PHENOMENA LOG AIMS TO EVALUATE VARIOUS PHENOMENA WHICH MIGHT GIVE RISE TO REPORTS OF ANOMALOUS AERIAL PHENOMENA. TO DATE, TOPICS CONSIDERED BY THIS COLUMN HAVE INCLUDED MIRAGES AND OTHER OPTICAL PHENOMENA IN THE ATMOSPHERE, UNUSUAL ELECTRICAL PHENOMENA IN THE ATMOSPHERE, AND FALLS OF STRANGE SUBSTANCES FROM THE SKY.

IT IS RECOGNISED THAT A LARGE NUMBER OF REPORTS OF ANOMALOUS AERIAL PHENOMENA RELATE TO'STRANGE LIGHTS IN THE SKY..': IN THIS ISSUE IT IS INTENDED TO STUDY A NUMBER OF POSSIBLE SOURCES OF SOME LIGHT IN THE SKY (LITS) REPORTS.

Noctilucent Clouds

These are tenuous, but sometimes brilliant clouds which occur very high in the atmosphere. They are also sometimes called 'luminous night clouds'. They tend to be observed in high latitudes (50° and above) at midnight hours during the summer months. These noctilucent clouds are encountered at altitudes of between 80 and 85 km, and may be moving at anywhere between 100 and 300 knots. A strong polarisation of light from such clouds is noted, and measurements indicate that these clouds are composed of particles which have a radius in the order of 10.5 cm.

Although there is much to learn about the phenomenon of noctilucent clouds, they are firmly established as a natural phenomenon which can be expected to occur periodically. The relevance of such occurrences (which are not particularly common) is obvious in relation to certain categories of "Lits" reports.

Earthquake Lights

Strange lights in the sky have sometimes been noted in the vicinity of earthquake epicentres. A good example of this type of event is furnished by the Idu earthquake in Japan in 1930 (Suyehiro 1932). The colour of the lights in the Idu event ranged from blue to a reddish yellow hue. The forms of the lights varied from single rays to fireballs. Such phenomena have also been reported from other earthquake zones on occasions. Traditionally, no adequate explanation for earthquake lights is given, but comments made by Cornell University astrophysicist Professor Thomas Gold may throw some light on this type of event. In a lecture given by Gold in Imperial College, London, in June 1978, entitled Terrestrial sources of carbon and earthquake outgassing, he put forward the hypothesis that vast accumulations of methane gas are to be found deep in the bowels of the earth, and that in the normal course of events, limited quantities of this deep-seated methane can be released from the mobile belts of the Earth's crust during some earthquake events. If Gold's hypothesis is correct, then earthquake lights would seem to be related to the outgassing he refers to. Professor Gold also draws attention to other interesting effects which apparently take place related to earthquakes, including increases in the concentration of Radon 222 gas in the atmosphere in the 'qake zone, changes in the electrical conductivity of the ground and local magnetic field anomalies.

On the basis of the points presented it would seem reasonable to assume that outgassing in the mobile belts of the earth, whether or not directly associated with a specific earthquake event, may explain some reports of anomalous aerial objects in some parts of the world.

Ball Lightning

Ball lightning has often been presented as favourite explanation of 'light in the sky' type anomalous aerial phenomena. Indeed, some sources have gone so far as to try and explain away most UFO reports as ball lightning, while on other occasions, many learned authorities have questioned whether such a phenomenon as ball lightning really exists.

A good definition of ball lightning according to the Meteorological Office Meteorological Glossary is given as follows:

"This is a rare form of lightning in which a persistent and moving luminous white or coloured sphere is seen; the explanation and even the existence of this form of lightning are yet controversial. Reports of the dimensions of ball lightning spheres vary from a few centimetres to about a metre, but are most commonly 10 to 20 cm. The duration of the event varies from a few seconds to several minutes. Many reported cases follow a brilliant lightning flash, and may be physiological in nature (i.e. an after-image in the eye); other cases have, however, occurred without a preceeding flash. Sometimes more than one sphere is seen by an observer, or a sphere is reported in the same locality by various observers. The speed of travel of the sphere is usually about walking pace. Spheres have been reported to vanish harmlessly, to bounce from the ground or from an obstruction, to pass into or out of rooms, leaving in some cases a sign of their passage, as for example, a hole in a window pane."

Looking at the Meteorological Office definition of ball lightning it would seem that some reports can be explained as after-images in the eye, while other reports are not so readily explained away.

Recently, the writer questioned Professor J. Latham of UMIST, who has a particular academic interest in all aspects of lightning phenomena. Professor Latham started off his answer by saying that one scientist of his acquaintance summed up the phenomenon by saying "I remember in Africa, when my grandfather was sipping whisky on the verandah..", but then went on to say that the whole phenomenon of ball lightning could not be so readily written off; he felt that beyond pure flights of fancy, or after-images in the eye, there did seem to be certain evidence of a real phenomenon which was poorly understood.. "But I don't know about the pros and cons of ball lightning floating down people's chimneys, sulphurous smells sometimes reported, etc.", he hastened to add.

A number of interesting reports of recent years which seem to relate to ball lightning are now listed.

1. 1977 June 06, 02.27 GMT, Dyfed, Wales

Giant ball lightning reported in Dyfed. The object was described as being the size of a bus, a brilliant yellow-green transparent ball, having a fuzzy outline. The ball descended out of a cumulus cloud over Gam Fawr mountain in the Fishguard area, and appeared to float down the hillside. Intense light was emitted for three seconds before it flickered out. At the same time severe static was noted on certain radio frequencies. The object apparently rotated about a horizontal axis and seemed to bounce off projections on the ground. The grid map reference of the event was SM(12)895389. This report is particularly significant as the witness was an officer at the Coastguard Station at Fishguard, Dyfed, and as a trained observer, should be considered a reliable witness.

2. 1977 April 12, 14.20 BST, Bromley, Kent

An incandescent blue ball, thought to be a form of ball lightning, was seen to hurtle from the sky. The ball shattered a concrete gatepost, put 30 telephones out of order and dug a cylindrical hole in the ground and showering the area with sparks. Witnesses reported a blinding flash and a terrific explosion. A cylindrical hole six inches in diameter was found leading to a second hole about a yard away.

3. 1979 April 25, 17.15 BST, Bell Green, Coventry

Mr. Patrick Daly was sitting in his home at Bell Green, Coventry when he saw a ball of fire in the sky, which he described as like a huge red football coming towards his home. "Suddenly there was a flash and a bang and everything came down on me", he said. The flash blasted in wall timbers, shattered windows and left a gaping hole in the roof of his home, as well as causing other damage to the house. The event took place during a sudden thunder-storm.

4. 1980 July 29, 21.15 BST, Tile Hill Lane, Coventry

A motorist driving along Tile Hill Lane towards the city centre saw a "flashing ball of fire" pass his car. This was followed by an explosion nearby, and debris flying onto the road. No-one however, reported damage to their property. At first it was thought that this ball of lightning had struck a factory roof, possibly the British Leyland Plant at Canley; however, a B.L. spokesman said they had no reports of damage. The event took place during a storm.

All of the four events listed would indicate ball lightning phenomena.

On looking at a range of opinions, definitions and reports, it would seem that there is a considerable diversity of events under the heading of ball lightning, and that ball lightning does undoubtedly account for some reports of anomalous aerial phenomena, although it should not be employed as an ubiquitous explanation of anomalous aerial events.

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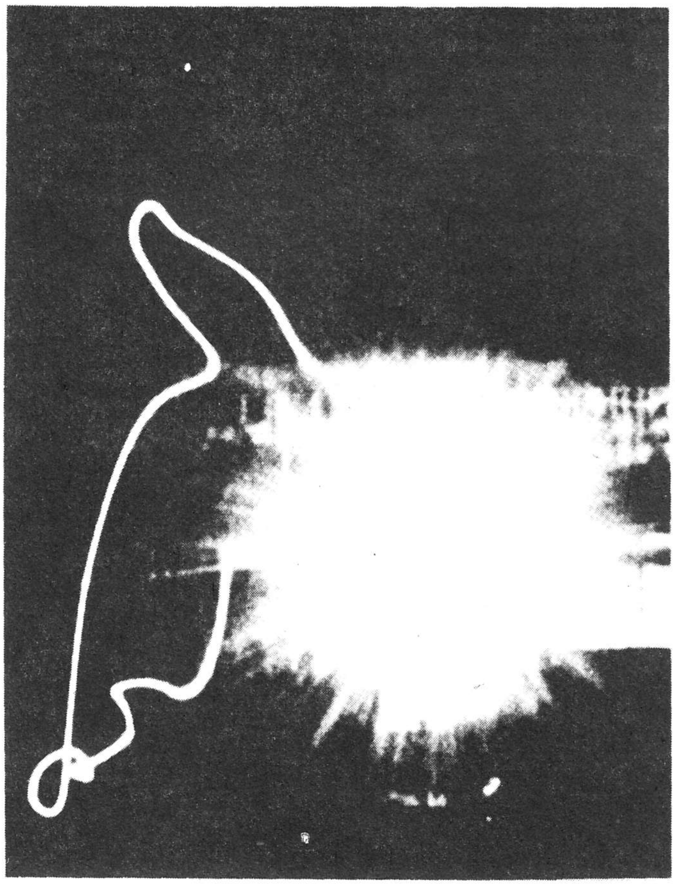
JOURNAL TAP VOL. 2 pp 19-20

Correspondence

NOT BALL LIGHTNING

UFOs: A British Viewpoint, by Jenny Randles and Peter Warrington (Hale 1979), contains (facing pl28) a photograph which, according to the authors, 'may show ball lightning'. While they admit that it was submitted to them anonymously, and therefore that they know nothing of its source nor of the circumstances in which it was taken, they are bold enough to claim that it 'illustrates clearly how the phenomenon is typically a small round object which moves about fast and erratically and then explodes.'



Authenticated photographs of ball lightning are rare, perhaps even non-existent, and if the photograph were genuine it would be extremely valuable. However, it can easily be shown that the photograph does not illustrate ball lightning. The luminous and sinuous trace is caused by moving a camera with an open shutter while aimed in the general direction of a powerful light source, possibly a street light. In addition, the camera was aimed steadily at the light source, so imprinting the bright image at the centre of the picture and the paler image of the building. This suggests that the purpose of the photograph had been the photographing of the scene on a time exposure, and that due to a shutter fault or failure of the photographer to release the shutter control quickly enough before moving the camera, the sinuous trace was obtained accidentally. Subsequently, when it was found that the trace had appeared on the picture, the photograph was submitted to known ufologists, either as a joke or in the belief that the trace was genuinely mysterious.

Proof that the trace is caused solely by camera movement is contained in the photograph itself. The trace of another, but less bright source, is clearly visible above the building to the right of centre. Its course is identical in shape to that of the main sinuous trace, and its position indicates that its source is just off the picture to the right. Much of this fainter trace is masked by reason of it being superimposed on the building and the central light. Only sources of high brightness can cause such traces while the camera is in motion, and weaker sources, such as the celestial object at the top left, do not form a trace. Clearly the only way in which two independent light sources can show identical trace patterns on a film is where the camera is moved in front of them. The movement of the camera would be in the opposite direction to that of the traces on the film.

It is regrettable and surprising that the cause was not obvious to the authors, and more regrettable and surprising that, in view of the doubt concerning the photograph's origin, they allowed it to be published. While knowledge of ball lightning needs to be more widespread, it does no good to publish photographs which have nothing to do with it.

Stuart Campbell
Edinburgh
October 11, 1980

CORRESPONDENCE

'Natural' Theory

In propounding his 'natural' theory, Stuart Campbell (1) says that UFOs are "probably a meteorological phenomenon .. related to .. ball lightning". His arguments arouse strange sensations of deja vue. Is it possible that Campbell is familiar with the writings of Philip Klass (2)? If so, where are his references?

Like Klass, Campbell thinks that underlying what has been described by the late Professor James E. McDonald as one of the greatest scientific problems of our time, there lurks a basically simple natural phenomenon. The crux of the matter is this - does the plasma hypothesis explain all the data? It is implicitly admitted that it does not. But even if it is agreed that the phenomenon has been reported throughout recorded history, the enormous increase in sightings since the start of the 'atomic age' has still to be accounted for.

The final eye-opener is Campbell's penultimate paragraph (3) where the arguably most significant part of the whole syndrome is dismissed in cavalier fashion. (His reference to "aliens" merely confuses the issue.) Are we also to understand that physical traces of UFOs and mutilations of cattle are due to "hallucination, wishful thinking and fraud"?

If Mr. Campbell wants to be believed, he will have to do better than to regurgitate discredited simplistic theories and in so doing, don the mantle of a hitman for the scientific establishment.

Manfred Cassirer

References

1) Campbell, Stuart: 'Are UFOs an atmospheric phenomenon', Journal TAP 1(2) pp 34-35 (1980).
2) Klass, Philip: 'UFOs - Identified', Random House, New York (1968).
3) Campbell, Stuart: 'A natural theory of UFOs', Journal TAP 1(3) pp52-60 (1980).

There are more things in heaven ...

As a scientist I am trained not to accept what can't be proven; as an artist I am trained to see more than is there at first sight; and as a Christian I believe that there are more things in heaven and earth than man can ever dream of. However, a balanced view of the Universe is necessary and to see it one must wear several hats. As senior meteorologist with the British Antarctic Survey from 1965 to 1968 it was my pleasure to see, as a scientist, artist and Christian, a continent so vast and full of strange phenomena, beauty and presence as to enrich my life very much indeed. I cannot prove that UFOs exist or do not exist and so I keep an open mind on most things. So it is with no answers that I lay before you a puzzle and hope that you can give me some answers. To me it is a "unique meteorological phenomenon", but to the knowledgeable trained observer it may be something else.

Early on the morning of 22nd May 1966, I emerged from a tent on the call of Sgt. Major George Green of R.E.M.E. and late of the Uganda Rifles. The dogs had picked up something and were causing a commotion. We observed a small dense cloud to the south at about five miles, near to Mount Gaudrey above the Fuchs Ice Piedmont, Adelaide Island, Lat.68° South. The white cloud was like a rough pile of plates and was rising vertically at about 10' per second. It began at about 10°-15° from the ice and seemed to rise up internally as a pillar with successive broken hoops of cloud. Its altitude was about 500' to 800' and its size 100' x 100'. The cloud was alternately expanding and contracting. A low buzzing sound like bees was perceptible. The cloud was visible for about 15 minutes before dissolving, although I cannot remember how it dissolved. At one point during the sighting, the cloud emitted a thick black ray of light which hit the ice at an angle of 45° and churned up a "snow devil". ("Snow devil" is a cloud of disturbed ice crystals rising from the point of impact.) A second ray was visible from the point of impact at about 110° to the first ray and seemed to be reflected upwards at about 30° to horizontal. The light conditions were dull daylight, no sun; weather conditions were moderate, definitely not thundery as this phenomenon is not witnessed often in Antarctica, if ever. There was about 5kts of wind.

At the time, I rushed my camera into action and took several slides at 100th of a second at f11 on Kodachrome II 25 ASA film. (See centre pages.)

The phenomenon was not bright although I feel that one part of the cloud was reflecting a yellowish colour.

Since the sighting I have been puzzled as to what kind of a phenomenon it was. I reported it in my meteorological report but no logical explanation was forthcoming. I personally doubt that it was anything more than a unique meteorological phenomenon but am open to any offers. The noise reminded me of an electrical storm I experienced at 15,000' on the Dom in Switzerland, as static electricity ran up and down my rope. I have also witnessed orographic clouds piled up like plates but not so low, away from the mountains and so small in stature. You can see from the photograph that it existed, but as to its origin or what it was, it is anyone's educated guess at the moment. I have an open mind still puzzling after 10 years.

Eric Wilkinson
Belfast
N. Ireland

Aims and scope of the Journal

Research and investigation into unidentified flying object (UFO) phenomena has progressed from the early days of wild speculation into an area where scientific analysis and evaluation methods can be applied to a number of specified areas.

It is realised that ufological research is subject to a great deal of speculative comment, much of which lies on the boundaries of current scientific thought. Many existing scientific institutions accept limited discussion of UFOs and related phenomena where it has some bearing on their discipline. The Journal of Transient Aerial Phenomena (Journal TAP) offers a forum for scientists and researchers to present ideas for further discussion, results of investigations and analysis of statistics and other pertinent information.

Journal TAP aims to meet a wide range of discussion by incorporating an approach with breadth of scope, clear and topical comment conducted with scientific rigour. It intends to offer a truly international forum enabling researchers throughout the world to publish results in an authorative publication which should serve to further knowledge of the cosmos and benefit mankind in so doing.

Notes for contributors

The Editorial Board will be pleased to receive contributions from all parts of the world. Manuscripts, preferably in English, should be submitted in the first instance, to the Editor-in-chief, 40 Jones Drove, Whittlesey, Peterborough, PE7 1UE, United Kingdom.

Manuscripts should be typed double-spaced on one side of A4 size paper with wide margins and submitted in duplicate. While no maximum length of contributions is prescribed, authors are encouraged to write concisely.

The author's name should be typed on the line below the title. The affiliation (if any) and address should follow on the next line. The body of the manuscript should be preceded by an abstract of around 100 words giving the main conclusions drawn.

All mathematical symbols may be either hand-written or typewritten, but no ambiguities should arise.

Illustrations should be restricted to the minimum necessary. They should accompany the script and should be included in manuscript pages. Line drawings should include all relevant details and should be drawn in black ink on plain white drawing paper. Good photoprints are acceptable but blueprints or dyeline prints cannot be used. Drawings and diagrams should allow for a 20 per cent reduction. Lettering should be clear, open, and sufficiently large to permit the necessary reduction of size for publication. Photographs should be sent as glossy prints, preferably full or half plate size. Captions to any submitted photograph or illustration should be appended and clearly marked.

In the interests of economy and to reduce errors, tables will, where possible, be reproduced by photo-offset using the author's typed manuscript. Tables should therefore be submitted in a form suitable for direct reproduction. Page size used should be A4 and width of table sbould be either 10.5 cm or 22 cm. Large or long tables should be typed on continuing sheets but identifying numbers should be placed on the upper right-hand corner of each sheet of tabular material.

Reference to published literature should be quoted in the text in brackets and grouped together at the end of the paper in numerical order. A separate sheet of paper should be used. Double spacing must be used throughout. Journal TAP references should be arranged thus :

(1) Jacques Vallee, 'Anatomy of a Phenomenon', vii, Henry Regnery, Chicago, (1965).

(2) David Haisell, 'Working Party Report' Journal TAP 1/2, 36-40, (1980)

With the exception of dates which should be presented in the astronomical convention viz : 1977 August 06, no rigid rules concerning notation or abbreviation need be observed by authors, but each paper should be self-consistent as to symbols and units, which should all be properly defined. Times however should be presented in astronomical form using the 24 hour clock and Universal Time (UT) where possible. If local time is used, this should be specified viz 19h 15 GMT.

The Editorial Board shall have the right to seek advice from referees on suitability for publication and may, on their recommendation, accept, seek revision of or reject manuscripts. If considered unsuitable for Journal TAP, the Editor-in-chief reserves the right to forward manuscripts to the Editor of Bufora Journal for consideration. The Editor-in-chief's decision will be final.

Book reviews and letters for publication will also be considered.

Where permission is needed for publication of material included in an article, it is the responsibility of the author to acquire this prior to submission. All opinions expressed in articles will be those of the contributor and unless otherwise stated, will not reflect the views of Bufora, its Council or the Editor-in-chief.

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