

Contents

Editorial	Craig Roberts, UK	Page 1
Physics from UFO Data	Massimo Teodorani, Italy	Page 2
UK UFO Organisations: What do they have knowledge of, and what do they investigate?	Craig Roberts, UK	Page 26
Unusual Aerial Phenomena Tracked on Radar in Romania	Ion Lazeanu, Romania	Page 33
Evidence of Covert Human / Military Involvement in North American Alien Abduction Cases	Helmut Lammer, Austria	Page 35
Evidence of Covert Human / Military Involvement in North American Alien Abduction Cases - A Reply	Luis R. Gonzalez Manso	Page 41
A Reply by Helmut Lammer	Helmut Lammer, Austria	Page 48
Final Comments of MILAB Exchange	Luis R. Gonzalez Manso	Page 53
Reply to Forum Debate from September 1999	Duncan Campbell, UK	Page 55
Reply to Forum Debate from September 1999	Roger Anderton, UK	Page 57
Response from Albert Budden	Albert Budden, UK	Page 58
Electric UFOs: Book Review	Luis R. Gonzalez Manso	Page 61
Press Release for Fundacion Anomalia on UFO Prizes		Page 62

Price:

UK	£4.75
Europe	£5.75

European Journal of UFO and Abduction
Studies

EJUFOAS is the journal of the Totton Researchers of Ufology Theory and History (TRUTH), and is an objective publication, primarily for the European Ufological Community.

Editor-in-chief.

Craig Roberts B.Sc (Hons)

TRUTH, UFO Studies, Department of Psychology, Totton College, Water Lane, Totton, Southampton, SO40 3ZX, United Kingdom. E-mail: ejfoas@totton.ac.uk

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Aims and Scope.

The *European Journal of UFO and Abduction Studies* [EJUFOAS] is the journal of TRUTH [Totton Researchers of Ufology Theory and History] based in Southampton, United Kingdom. The purpose of EJUFOAS is to circulate ideas and contemporary issues related to ufology (UFOs and the alien abduction phenomena). The primary focus is on European Ufological issues and debate but non-European papers may be accepted (limited to one per issue). It hopes to foster much needed development in the field of ufology by publishing diverse papers on Historical Perspectives, Theoretical Perspectives, Empirical Research and European Issues involved in this field. Any appropriate paper will be blind reviewed by at least three members of the editorial board and it is usual that the review process takes 4-6 weeks. Regular issues will include *Forum Debate Articles* usually solicited by the editor-in-chief covering a controversial topic in ufology with the opportunity for peer commentary in subsequent volumes, and *Special Editions* that will focus on one area of this diverse field. Finally, it is hoped that this publication will be ground-breaking and bring the European Ufological Community closer by allowing publication of reviewed papers that will generate debate and move the World Ufological Community forward through innovative and contemporary discussion.

Editorial

Welcome to Volume 1(1) of the European Journal of UFO and Abduction Studies. The first thing you may notice is that the publication is now thermally bound, a feat only made possible by the generous support of you, the subscriber. So, thank you.

Within this part volume there are many varied papers showing the diversity of work happening in ufology across the continent. Italy is represented with a comprehensive paper examining the physics involved in UFO data. Austria and Spain debate the notion of military mind control playing a role in alien abductions over a series of four well written and argued papers. It is up to you to decide which argument(s) you prefer. Romania is represented by a case study of anomalous aerial phenomena tracked on radar. United Kingdom UFO organisations have been researched to see what research methods they use and what theoretical approaches they have knowledge of, by myself. The findings may well be an eye opener to some even in spite of the low return rate.

It is also very encouraging to see some responses to the FORUM debate article by Albert Budden that was featured in the Launch Issue. Read the critique of the original article and responses by Albert and see if you agree with the arguments presented. Also, you may wish to enter the UFO Prize run by Fundacion Anomalia (Spain) that is featured in this part volume. Finally, there is a book review of Electric UFOs (Albert Budden – Blandford Press) with viewpoints not necessarily endorsed by the EJUFODAS team.

Already we have papers provisionally accepted for Volume 1(2) from Spain, Italy and Norway and another 3 or 4 papers under review. However, we are still looking for more work to be submitted from around the continent so **please submit work for review**. It is essential for the survival of EJUFODAS over the next few years. Also, if you would like to be considered for potential inclusion on the review board please get in touch with me at the address on the inside front cover. We will be electing new members after the publication of Volume 1(2) in September 2000.

On a more local level, TRUTH and the Southampton UFO Group are collaborating in an attempt to create a European Congress on Ufology, to be held around April 2001. It will be an event that will physically bring the European Ufological Community together. However, we are currently looking for sponsorship so if you know of any avenues to pursue then please contact me as soon as possible. The structure of the Congress is still under negotiation but will include plenary speakers (invited) and a series of smaller talks by researchers who have submitted abstracts and been accepted to talk based on the submission. All of this is still very much in its infancy, but you will probably hear from myself and the other Congress organisers soon with more details. Again, any suggestions are welcome.

Finally, I would like to thank the endless support I am getting from the entire EJUFODAS team – reviewers, typesetters and general administration. Part of the future of ufology is in our hands. Let us not drop it.

Physics from UFO Data

Massimo Teodorani , Ph.D.

Via Catalani 45 - 47023 Cesena (FO) - ITALY

E-Mail: mteo@line.net

Abstract A research project on the UFO phenomenon is proposed in which UFO targets are treated on a par with astronomical objects having no fixed coordinates. Specifically oriented monitoring techniques and strategies involving small telescopes which are connected to CCD (charge coupled devices) detectors, spectrographs and photon-counting photometers are presented. Expected exposure-times for acquiring a good S/N (signal to noise) ratio of the target using all the proposed instruments is also evaluated. Finally, physical informations which are expected to come out from data analysis are presented and discussed in detail.

Foreword

Not all UFO sightings which have been reported in the world are characterized by short duration or appear accidentally in various areas. There are some particular cases in which such phenomena seem to be restricted to very specific zones (Appendix). The Hessdalen phenomenon, for which previous measurement campaigns have been carried out (ref. 12, 16, Appendix), is a clear example of this distinctive feature and for such a reason it can be considered the prototype of the so called "recurrent UFOs"; moreover, its great luminosity and duration (ref. 12) can allow scientists to track it quite easily with suitable instrumentation. This particular UFO behaviour, which at present has been reported in at least other 15 areas of the world, offers physical scientists the opportunity of acquiring quantitative data by using instrumental stations which are supplied with multi-wavelength and multi-mode sensors. The work presented here is intended to be a research proposal whose main goal is of obtaining a complete set of physical parameters which are necessary in order to permit the construction of well-founded theories. An accurate and complete choice of specific instruments is the best way to accomplish such a task: in order to do this, and because of the pragmatic scope of this work, it is important to furnish precise scientific and technical details. This paper is subdivided in two sections: the first one dedicated to instrumentation for data acquisition and the second one to the physical parameters which can be subsequently obtained.

The first section describes a multi-sensor platform constituted of a set of photometric and spectroscopic instruments, while the second section describes the way in which such physical data are expected to be analyzed and interpreted. Photometry is aimed at measuring both the light intensity of a given illuminated target and the way in which light photons are distributed over the light-emitting area. Spectroscopy is aimed at studying both the physical emission mechanism of the luminous phenomenon itself (from the continuum spectrum) and the excitation level of the atoms which are producing the light (from the line spectrum).

As light is emitted from very specific wavelength-windows and the used sensors can't allow measurements of all the windows at the same time but need specific filters for each of these, it is necessary to perform photometric and spectroscopic measurements per each window: this is essential in order to obtain a simultaneous picture of a probable multi-wavelength light phenomenon. An instrumental monitor which is simultaneous in several wavelength-windows is very important because the UFO phenomenon is expected to be highly time-variable, also on very short time-scales: therefore it is indispensable to synchronize the data which are expected to come from multi-wavelength observations. For instance, this procedure is essential in order to permit a technical treatment of the physical parameter related to the UFO color (color index), which in the case of highly variable phenomena such as UFOs can be obtained only after acquiring simultaneous data in different wavelength-windows by using proper filters and later after calculating ratios of the luminosity values in two contiguous windows. In principle a very similar research philosophy is commonly applied in astrophysics in order to study multi-wavelength celestial sources such as pulsating stars (ref. 6). Only by using such approach it can be possible to establish time-correlations between the light behaviours in different wavelength-windows: this is the main reason why for every given wavelength-window the use of multiple detectors (such as CCD detectors) and multiple analyzers (such as spectrographs) is highly required.

Particular photometric data, such as the ones coming from "photon-counting" photometry, are also requested in order to check a possible very fast variability of the light phenomenon which cannot be detected at all by the low time-resolution of camera-like or eye-like light detectors. Spectroscopy is intended to be executed in two modes: low resolution and high resolution. Low resolution is aimed at obtaining a preliminary spectrum of a given target: by using this procedure it is not possible to obtain morphologic details of spectral lines (if present) but it is possible to deduce quite well the emission mechanism (thermal or non-thermal) and the temperature (for thermal mechanism) of the light phenomenon just by studying the shape and the slope of the spectrum displayed on the overall investigated wavelength range (optical, for instance), which is itself constituted of more wavelength-windows. High (or also medium) resolution is aimed at measuring precise details of the spectral lines (if present): this procedure can be of basic importance in order to obtain important physical parameters such as density, pressure, chemical composition, intrinsic magnetic field, object rotation and gas ejection effects.

It will be shown later that it is much more problematic to acquire spectroscopic data than photometric ones, as the quantity of recorded photons obtained by using spectroscopic techniques is much lower than the one obtained by using photometric techniques: this means that the exposure times, which must be used in order to record light photons emitted from a given UFO target, are much longer in the spectroscopic case (high-resolution spectroscopy being the extreme case) with the consequent effect that only very luminous, very close and/or long-lasting UFO phenomena can be studied with this technique. All these specific characteristics are very often encountered in the Hessdalen-like phenomena, in particular (ref. 12), but sometimes also in some nocturnal lights of the "structured" type (ref. 13) which, even if short-lasting, may show a very high

luminosity: therefore high-resolution mode for spectroscopy is strongly encouraged in these cases especially because of the results of great relevance for the physics which could be obtained.

It is also shown that photometric and spectroscopic instruments must be necessarily connected to telephoto lenses with wide-angle capability and/or to mini-telescopes of the reflection-type, in order to allow the proper collection of the photons which are expected to be detected by photometers and analyzed by spectrographs, and to amplify (mini-telescopes), in case, the light of distant or small luminous targets. The instrumental redundancy which is recommended for photometric and spectroscopic light-measurement devices is expected to be coherently applied to the light-collectors devices too.

Furthermore the importance of acquiring in time-sequence many photometric and spectroscopic frames of the same tracked UFO target, is strongly emphasized: temporal variability of a given luminous target, such as pulsations or changements of pulsation rate of the type recorded in Hessdalen and elsewhere (refs. 11, 12, 13, Appendix), can furnish, from a dynamical point of view, precious insights on the physical mechanism of the UFO phenomenon in general.

Finally, the indispensability of using a radar and/or additional devices in order to search, point and track UFOs, is also emphasized; the UFO phenomenon is typically characterized by a random motion but its radar signature is often strong (refs. 12, 13): in such a way a luminous phenomenon of both metal-like and plasma-like nature can be quite easily alerted by a radar apparatus, and measurements can be consequently carried out by assuming that photometric and spectroscopic devices are attached directly to the radar device. Moreover the radar device is indispensable in order to furnish the target's distance, so that it is possible to obtain both the intrinsic dimensions and the intrinsic physical parameters of the target.

The physics discussed in the second section of this paper, is directly derived from the basic "photonic physics" which is commonly used in the astrophysical research (refs. 5, 6): it will be technically demonstrated that this matter can be highly suitable also for measurements of UFO phenomena on condition that some adaptation is done for these specific physical objects. The discussion in this section is devoted primarily to classical physics subjects and secondarily to relativistic subjects. Relativistic treatment seems to be invoked in order to try to explain some strange reported evidences regarding "curved lights" which occurred in concomitance with UFO incidents (ref. 13).

1. Introduction

Previous instrumental projects on the UFO phenomenon, as "Project Hessdalen" (12) and "Project Identification" (ref. 11) and their results, demonstrate that it is possible to face this problem with the same galilean rigour and method by means of which more canonical physical problems are treated. In particular, "Project Hessdalen" is going on at the present time (1999) thanks to automated instrumentation (the *Hessdalen*

Interactive Observatory) based on sophisticated videocameras, radio spectrum analyzers and magnetometers, which are able to alert the passage of UFO phenomena (ref. 12). The instrumental monitoring program proposed in this work (ref. 14, 15, 16, 17) is intended to be a scientific support to the previous and current applied projects and an occasion of discussion for future improvements of UFO research. Such a program involves the use of instrumentation which is commonly used in the astrophysical research in order to collect, detect and analyze photons which are emitted by celestial objects. As UFO targets have typically no fixed coordinates and are often subject to random or unpredictable motion, it is necessary to guide the whole measurement platform by means of a proper device. For this reason it is proposed to connect astronomy-like instrumentation to tracking devices of military type, such as a radar and/or a laser telemeter (ref. 18). By using such a strategy it is possible to obtain very accurate data, which, once analyzed, can furnish fundamental informations on the physical mechanism which governs the UFO behaviour. If such a procedure can be applied, the whole UFO phenomenology, so far mostly circumscribed to the evaluation of simple witnesses (ref. 13), could be treated with the same physical methodology with which an astronomer studies celestial objects. In general, it is very difficult to predict where and when the UFO phenomenon is going to occur. Nevertheless, the existence of some regions of the world in which the phenomenon happens most often (refs. 11, 12, Appendix) offers the most favourable conditions in order to apply monitoring techniques.

2. Instrumentation and observational strategies

The proposed idea consists in using astronomical light detectors and analyzers which are connected with easily transportable small large-view-field telescopes or telephoto lenses, in order to acquire images and spectra of UFO targets (ref. 14, 15, 16, 17). The system Telescope-Detector-Analyzer (TDA) is intended to be the main opto-electronic unit (ref. 18) which must be used for the data acquisition. In order that the TDA system can be easily guided toward a given target, it is essential to link it with the following tracking and telemetric facilities:

- A Radar tracking station (R), able to search, point and track metal-like (ref. 13) or plasma-like (ref. 12, 13) targets, whose reflected radar mark is typically strong.
- An Infrared Searching and Tracking device (IRST), able to search, point and track a target with a thermal signature.
- A Laser device (L), able to obtain exact telemetry of the target (distance determination) and to serve as a possible "test device".

Such devices can be obtained from military-like technology, which is very well experimented since the '70 years (ref. 18).

The most complete TDA system is intended to work in the widest optical spectrum (including near-UV and near-IR), which, ranging from 3500 Å to 11600 Å, is subdivided in 5 main wavelength-windows. The signal data that are acquired by the telescope are recorded on CCD (charge coupled devices) detectors which are used both for direct imaging and for spectroscopy (refs. 2, 5, 7). A Photon-Counting Photometer (PCP) is a supplementary facility (refs. 3, 5, 9). The most ideal and complete TDA system is

composed of a complex of 20 small telescopes to which photometric and spectroscopic devices are attached: such an instrumental redundancy is required because of the necessity to acquire simultaneous data of 4 different types (2 photometric ones and 2 spectroscopic ones) from all the main 5 wavelength-windows present in the overall 3500-11600 Å spectrum. Therefore, the whole TDA apparatus, constituted of 20 sub-systems, is characterized by 4 main units:

Unit PHOTOM-A - This unit is composed of 5 telescopes, everyone of which is connected with a CCD camera operating in a specific wavelength-window. Every window is obtained by using the following filters of astronomical type: U (3000-4000 Å), B (3700-5500 Å), V (4900-6700 Å), R (5400-9400 Å) and I (7000-11600 Å). In this case one is going to perform CCD Direct Imaging (CCDDI), in order to carry out simultaneously both photography and photometry of an extended (not point-like) light source. Photometry is used in order to measure the light intensity of the source, while photography (in this case of electronic type) is used to measure the light distribution over the light-emitting area of the source.

Unit PHOTOM-B - This unit is composed of 5 telescopes, everyone of which is connected with a Photon-Counting Photometer operating in a specific wavelength-window. Every window is obtained by using the same filters used in Unit Photom-A: U, B, V, R, I. In this case one is going to perform Photon-Counting Photometry (PCP), in order to search for fast light fluctuations, flickerings or pulsations. In this case, only light intensity is measured, not its distribution over the light-emitting area of the source.

Unit SPEC-A - This unit is composed of 5 telescopes, everyone of which is connected with an Objective-Prism, whose dispersing element, a simple prism (ref. 5), is inclined at different angles according to the required wavelength-window. The wavelength-windows are: 3000-4700 Å, 4700-6400 Å, 6400-8100 Å, 8100-9800 Å, 9800-11500 Å. The dispersed light is recorded on CCD cameras. In this case one is going to perform CCD Objective-Prism Spectroscopy (CCDOPS), in order to obtain large-view-field low-dispersion spectra. The indicative value of the obtained dispersion is $d\lambda/dx = 100-300$ Å/mm. In such a case it is possible to obtain "panoramic spectra" which are directly displayed on the field of the adopted lens or mirror. Such spectra are able to furnish the overall shape of the light spectrum which is comprised in a given wavelength-window and allow one to identify lines (if present) but with no morphologic details.

Unit SPEC-B - This unit is composed of 5 telescopes, everyone of which is connected to a Grating-Slit Spectrograph where light, after entering from a narrow slit passes through a dispersing element, which can be a classical grating or a more sophisticated "grism" (ref. 5): in order to achieve light dispersion in the requested wavelength-window, it is necessary to incline the dispersing element at different angles. The wavelength-windows have the same central wavelength as in Unit Spec-A, but they are restricted to a narrower range (100-300 Å). The dispersed light is recorded on CCD cameras. In this case one is going to perform CCD Grating-Slit Spectroscopy (CCDGSS), in order to obtain medium-high dispersion spectra. The indicative value of the obtained dispersion is $d\lambda/dx = 1-30$ Å/mm. Such spectra appear as small pieces of the light spectrum which

is displayed in the broader wavelength-windows used in unit SPEC-A but furnish precious details on the line profiles, whenever lines are present.

The shutter of the TDA system, which should be necessarily connected with a computer-controlled exposimeter, is intended to work automatically whenever an unidentified flying target is tracked. Repeated frames, both images and spectra, should be taken in fast time-sequence, according to the apparent luminosity of the target. The telescope T is thought to be used to point to far targets. In the cases in which the target is very near, the telescope is intended to be replaced by a Wide-Angle Lens (WAL) by means of a rotating cylinder to which both T and WAL are internally attached at opposite positions; as in the T case WAL can be connected to detectors and to spectrographs as well. The movement of the 4 described units is synchronized with the movement of the R-IRST-L "search, point and track" devices, all working on an altazimuth mounting (referred to horizon coordinates).

In the following section specific instruments, together with observational strategies which are planned to be used, are described in detail.

The Telescope - The use of the telescope depends strictly on the available radar range, which typically, at least for ground-based portable radars, can't exceed 30-40 Km. At this distance an extended strongly luminous object having typical dimensions of 10-50 m is fully in the range of a telescope with an aperture $D \sim 20$ cm. Light-reflection telescopes provide typically very good light gathering power and spatial resolution: this means that light is like amplified and the possible details of target's surface can be distinguished very clearly. The weight of the telescope should be low enough in order that the whole complex of 20 telescopes plus detection-devices can be easily moved and matched, without appreciable effects of mechanical inertia, with the R-IRST-L tracking system: this is important when "stop and go" effects and/or sudden direction changes of the target motion occur. In order to increase the probability that the target's coordinates, which should be calculated instant by instant by the radar's computer, are fitted suitably with a centered position of the target in the telescope's view-field, the telescope should be of Schmidt-type (ref. 5) which is characterized by a view-field that is wide enough (at least $4^\circ \times 4^\circ$): in such a way it is possible to reduce the possible effects due to target's random motions and also to radar-guiding inaccuracy.

The Wide Angle Lens - Close UFO targets, if moving, are necessarily characterized by a strong angular velocity and very high luminosity. Therefore, the telescope must be replaced by a Wide-Angle Lens (WAL) having an opening angle which should be varied from 10° to 90° by means of a dedicated zoom system. By using such a device it is also possible to frame possible multiple UFO targets. The WAL lens must also prevent any possible risk of over-exposure of the detectors in the cases in which a very close target with very high apparent luminosity is pointed.

The CCD Detector - To each of 15 of the 20 telescopes (of which: 5 for unit PHOTOM-A, 5 for unit SPEC-A, and 5 for unit SPEC-B), a CCD detector is attached in order to perform both imaging and spectroscopy. The use of the very high capability of a CCD as

a light detector and recorder (refs. 2, 7) is justified for an UFO observing program for the following fundamental reasons:

- The high quantum efficiency assures that most incoming photons (50-70%) are recorded. This is just the ideal performance in the case that weakly luminous targets are pointed.
- The high speed of integration allows very short exposure times. This is a clear advantage in the case of very fast moving targets.
- The high dynamic range allows a full capability of exposing correctly and simultaneously very dark and very bright features of the target which are spatially contiguous, without appreciable under-exposures or over-exposures. This is a favourable performance in the case of not-uniformly illuminated targets.
- The high spatial resolution allows a careful examination of the details of a bright source which is constituted by an illuminated area. This is good in order to be able to study a given luminous target from a morphological point of view.

These reliable CCD performances are well applied both to direct imaging and to spectroscopy. When CCD imaging is carried out, it is possible to obtain an electronic photograph of the target, from which one is allowed to do accurate measurements of the target's surface details and of the light distribution along chosen axes (technically represented by a Point Spread Function) of the target itself and of its surrounding presumably ionized gaseous medium. When a CCD camera detects dispersed light, using a prism, a grating or a grism, it is possible to obtain an electronic spectrum, by means of which one is allowed to carry out measurements on the continuum spectrum and, in case, to search and identify emission lines or bands. Lines or bands, which may display a particular intensity, equivalent width, base-width and doppler displacement, are the result of atomic transitions which are triggered by particular temperature regimes of a presumably heated target and can be produced by specific chemical elements (refs. 1, 6, 10).

The Photon-Counting Photometer - This light detector owns the precious performance of being highly linear if compared with conventional photographic plates or films: this means that "saturation effects" are restrained in this case. Above all, this is the device which secures the highest time resolution. In such a case one is allowed to detect possible fast target light variations of the order of 10^{-6} -10 seconds: photometric countings obtained with the highest time-resolution (for instance: from 10^{-6} to 10^{-3} seconds) require typically high exposure times (photon integration-times in this case) if the light source is weak. Nevertheless, such a detector, differently from a CCD camera, is not able to record spatially resolved photons (refs. 4, 5, 9). Such a limitation can be overcome if one decides to use the very recent ICCD (Intensified CCD) or EBCCD (Electron Bombarded CCD) detectors, which have performances of both a normal CCD camera and a high-speed photon-counting photometer. Anyway these new devices are not yet fully developed and at present their spatial resolution is still limited to pixel matrixes which are characterized by a small number of pixels (ref. 19): this means that, being the field of sky limited to few primes of arc (instead of some degrees, as required), it can be very difficult to guide the radar-assisted sensors towards the target.

However there are good reasons to expect that ICCD and EBCCD detectors, potentially very precious instruments for measurements of UFO light, will be subject to significant progresses during the next years.

The Objective-Prism Spectrograph - By means of an objective prism it is not possible to achieve spectral dispersions better than $d\lambda/dx = 100-300 \text{ \AA/mm}$ (refs. 4, 5). Therefore, in such a case, it is possible to carry out only low-dispersion spectroscopy. An approximately comparable result can be obtained by applying an elementary grating, which is characterized by few lines per millimeter, to the lens of a conventional camera (ref. 21): a similar attempt has been done during previous UFO monitoring programs (ref. 12). In general and in the present case, objective-prism spectroscopy can be fulfilled by trying to track one or more targets together, inside the view-field of a Schmidt-type telescope (refs. 4, 5), in order to obtain spectra which are just displayed on the whole frame. This is a sort of photograph containing dispersed lights instead of simple lights. Spectroscopic frames obtained with an objective prism require typically short exposure times (but longer than in the photometric case) because of the relatively high quantity of photons passing through the dispersing element (prism). The objective-prism device should be used in the following cases:

- a) If the target is not hovering on a fixed position.
- b) If more than one target is present in the telescope view-field.
- c) If a mix of circumstances a) and b) occurs.
- d) When the luminosity of the target is too low in order to allow medium or high-dispersion spectroscopy by means of reasonably short exposure times.
- e) When the luminosity of the target is high but the target can't be easily tracked in a centered position. In this case it could be impossible to center the target in the dispersion slit of a grating spectrograph for medium-high dispersion.

The Slit-Grating Spectrograph - By means of a slit-grating spectrograph (refs. 1, 4, 5) it is possible to obtain medium-high dispersion spectra. This kind of light-analysis technique can be achieved only when there is sufficient time to place the target in the dispersion slit of the spectrograph. The most favourable circumstance for this occurs when/if the target is standing still. Moreover, in order to obtain an optimum S/N (signal to noise) ratio with the shortest as possible exposure-time, the target must be sufficiently bright, because of the small quantity of photons passing through the dispersing element (grating, or "grism" in the most sophisticated spectrographs) which is used in this case. The slit-grating spectrograph should be indeed used in the following cases:

- I. If the target is far away but not too faint and its angular velocity is sufficiently low. In this situation the target can be easily tracked and, consequently, centered into the dispersion slit. In such a case, according to the apparent luminosity of the target, it may be possible to achieve medium-dispersion spectroscopy, which can range approximately from 20 to 50 \AA/mm .
- II. If the target is very luminous and reasonably fixed. In this fortunate circumstance it should be possible to reach the highest S/N ratio and, consequently, the highest dispersion by using reasonably low exposure times. In such a situation dispersion

could be of the order of 1-10 Å/mm. In this case the risk of target over-exposure could be avoided by narrowing in case the slit, or by replacing T with WAL.

- III. If the target remains fixed for a reasonable lapse of time and if it is actually looking as a source in which light is distributed over an area (extended source) and not located on a simple point (point-like source), a "scanning mode" could be secured for spectrography. In this case sequential spectroscopic frames could be taken of the whole target by moving the dispersion slit along a chosen axis of the extended luminous source, for instance from the center to the border, including also the possibly excited-ionized surrounding gas.

Costs of a complete TDA system and of less sophisticated systems - The financial cost of a complete TDA apparatus, of the approximate order of 1-2 millions \$ according to the requested sophistication level, should be well in the economic possibilities of most nations which have access to advanced technology. Therefore, a TDA-type platform, which should be put at disposal of everyone of these nations, should be installed in all the areas of the world in which the UFO phenomenon appears to be recurrent (ref. 12, Appendix). Anyway, a typical TDA system must not be considered as a fixed station as it is expected that it can be quite easily moved (namely, by trucks, helicopters or transport airplanes) wherever and whenever it is necessary.

A much more basic and cheap apparatus, of the cost of not more than 60.000 \$ could be obtained by using the following alternative instruments, most of which are of the advanced amateur type:

1. A low-sophistication or "russian-type" radar for target searching, pointing and tracking (ref. 18). This system would replace completely unit R, while units IRST and L would be excluded.
2. A single CCD camera (ref. 20) connected to a zoom (30-300 mm, typically) telephoto lens, for photometry. This photometric set would replace completely multiple unit PHOTOM-A, while multiple unit PHOTOM-B would be excluded.
3. A single CCD camera (ref. 20) connected to a zoom (30-300 mm, typically) telephoto lens and to an objective prism or to a low-dispersion grating (ref. 21), for spectroscopy. This spectroscopic set would replace completely multiple unit SPEC-A, while multiple unit SPEC-B would be excluded.

It can be noticed that the main disadvantages of such a basic platform would be: general low sophistication, absence of IR and Laser devices, absence of fast photometric facilities and of high-dispersion spectroscopic facilities; moreover it could not be possible to observe all the required wavelength-windows simultaneously. Anyway some results of high scientific relevance could be obtained as well, even if only partially.

Finally, it should be reminded that some important preliminary results could be obtained also by simply applying a low-dispersion grating (ref. 21) to conventional film cameras. The grating facility for films, of the cost of about 200 \$, is very easily applicable to normal cameras and it should be used by all the ufologists who, by dedicating their time

to "skywatching" activity, operate in the areas of the world in which the UFO phenomenon happens more often (ref. 12, Appendix).

3. Calculated exposure-times for measurements

It is possible to predict the order of magnitude of the Exposure-Time ET in the case one is going to acquire CCD imaging frames and CCD spectroscopic frames of an UFO target. In order to reach this task, it is necessary to define what kind of object one expects to observe. By taking into account all the witnesses and photographs of UFOs (ref. 11, 12, 13, Appendix), it can be reasonable to assume that the "average appearance" of an UFO target is just the one of an "extended object" more or less uniformly illuminated. In such a case, by taking into account all the characteristics of the chosen monitor instrumentation and the physics on which photon detection is based (ref. 5), it is possible to derive the following formula which can furnish a preliminary evaluation of the exposure time ET which is necessary in order to obtain a good S/N ratio:

$$ET = \frac{\left(\frac{S}{N}\right)^2 \cdot b \cdot \delta\lambda \cdot Ft^2 \cdot \beta^2}{\left(\frac{L}{4\pi \cdot d^2} \cdot \delta\lambda\right)^2 \cdot \pi \cdot D^2 \cdot Dt^2 \cdot \varepsilon} \quad (1)$$

To give an idea of this procedure the following parameters could be arbitrarily fixed:

- UFO diameter $D = 10 \text{ m}$ (1000 cm).
- UFO shape approximated to a sphere with diameter D .
- UFO distance $100 \text{ m} \leq d \leq 10 \text{ km}$ ($10^4 \leq d \leq 10^6 \text{ cm}$).
- UFO luminosity L (Watts) assumed to be constant.
- Optimum Signal-to-noise-ratio $S/N = 100$ (adimensional).
- Sky background noise $b = 2.5 \times 10^{-6} n_{\text{photons}} \text{ sec}^{-1} \text{ cm}^{-1} \text{ arcsec}^{-1} \text{ \AA}^{-1}$
- Telescope aperture $Dt = 20 \text{ cm}$ (of a typical portable telescope of the *Celestron* or *Meade* type (ref. 22)).
- Telescope focal length $Ft = 286 \text{ cm}$ (same as above).
- Disk-like dimension for a point-like source (the "seeing") $\beta = 1 \text{ arcsec}$.
- Photometric CCD detector efficiency factor $\varepsilon = 0.25$.

It is assumed that the wavelength interval $\delta\lambda$ is the only variable parameter. The choice of this sole variable is due to the fact that one wants to check how different are the exposure-times according to the kind of observational technique which one wants to carry out. This is synthetized in the following list of options:

1. ta(d) = Very high-dispersion spectroscopy, using $\delta\lambda = 0.005 \text{ \AA}$
2. tb(d) = High-dispersion spectroscopy, using $\delta\lambda = 0.05 \text{ \AA}$
3. tc(d) = Medium-dispersion spectroscopy, using $\delta\lambda = 0.5 \text{ \AA}$
4. td(d) = Low-dispersion spectroscopy, using $\delta\lambda = 5 \text{ \AA}$

5. $t_e(d)$ = Very low-dispersion spectroscopy, using $\delta\lambda = 50 \text{ \AA}$
6. $t_f(d)$ = CCD photometry, using $\delta\lambda = 500 \text{ \AA}$

Results of such calculations are presented in the graph shown in Figure 1. The graph, which furnishes 6 different values of ET for different values of the parameter $\delta\lambda$, is specified for a given value of parameter L, which in this case is assumed to be $L = 1 \text{ kW}$ (typical and exemplifying value). If one wants to perform photon-counting photometry, instead of CCD photometry one has to assume $\delta\lambda = 500 \text{ \AA}$ (as in the case of CCD) and $\epsilon = 0.05$ (instead of 0.25): in such a case it is possible to obtain an exposure time which is longer of a factor of 5 than in the case of CCD photometry. In the case one wants to decrease or increase of a factor 10 the diameter D or the luminosity L (for instance) of the UFO target, it is easy to see from the formula above that in such a case ET increases or decreases of a factor 10^2 .

The assumed $100 \text{ m} \leq d \leq 10 \text{ km}$ range for UFO distance is purely indicative. Maximum distance $d = 10 \text{ km}$ is presented just to show that beyond a certain critical distance, exposure times (in particular, the ones for spectroscopy) aimed at obtaining the best S/N ratio may become prohibitive if the target's apparent luminosity is very low (see formula (1)): such a situation can become serious if one compares the typical short duration of more general UFO phenomena (ref. 13), which is of the order of seconds or minutes, with the required long exposure times which are necessary in order to monitor very distant or weakly luminous targets. Therefore, it is reasonable to assume an ideal critical distance $d = 1 \text{ km}$ in order to carry out with best success (namely, with $S/N = 100$) the following two fundamental types of observations: (a) conventional photometry (CCDDI) and low-dispersion spectroscopy (CCDOPS) of short-lasting and/or weakly luminous UFO phenomena; (b) fast photometry (PCP) and high-dispersion spectroscopy (CCDGSS) of typically very luminous objects such as the Hessdalen-like phenomena (ref. 12), which have been sometimes reported to last for times as long as 2 hours and whose luminosity could be comprised between 1 kW and 100 kW. On the contrary, conventional photometry of Hessdalen-like phenomena could be carried out up-to a target distance $d \geq 10 \text{ km}$. Anyway it is very important to point out that these apparent distance limitations must not be intended so strictly, as observations of very distant (up to 50 km) or weakly luminous targets can be carried out as well, but with the expectation of obtaining a low or very low S/N ratio, such as 10 or 5; nevertheless, just as in the standard case of the observation of very faint astrophysical objects such as "white dwarf stars" or "extragalactic sources" (ref. 6), this low S/N value may be often sufficient (even if not ideal at all) in order to extract data of some physical value.

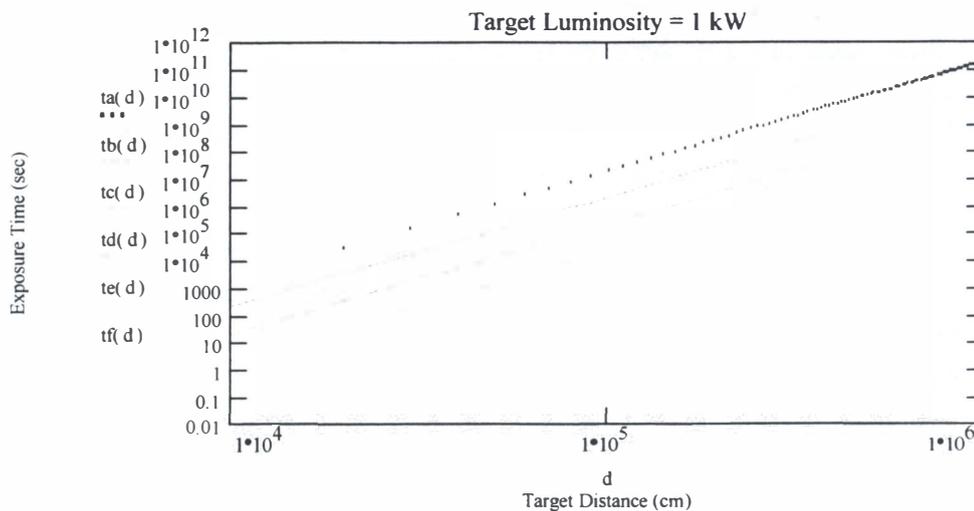


Figure 1. Exposure times for a UFO target with luminosity $L = 1 \text{ kW}$, given $\delta\lambda = 0.005 \text{ \AA}$ (ta), $\delta\lambda = 0.05 \text{ \AA}$ (tb), $\delta\lambda = 0.5 \text{ \AA}$ (tc), $\delta\lambda = 5 \text{ \AA}$ (td), $\delta\lambda = 50 \text{ \AA}$ (te), $\delta\lambda = 500 \text{ \AA}$ (tf). Target diameter is assumed to be $D = 10 \text{ m}$. Distance d is varied from 100 m to 10 Km . Graph is plotted on bi-logarithmic scale.

4. Physics from data analysis and research strategies

Output processed data are expected to furnish the following measurable parameters:

- A. Geometric and Kinematic Parameters.
- B. Photometric Parameters.
- C. Spectroscopic Parameters.

The derivation of physical quantities by means of multi-wavelength and multi-mode instrumentation needs specific choices of physical parameters and aimed strategies for obtaining them. Proposed choices and strategies are described in the present section.

A. Geometric and Kinematic Parameters

- **Distance d** - The distance d of the target is intended to be obtained straight by means of radar tracking, coupled, in case, with laser telemetry (ref. 18). This measurement is of basic importance in order to convert apparent physical and geometric dimensional quantities into intrinsic measurements of the target. Distance measurement is expected to be updated every time-unit.

- **Linear Height h** - The linear height h can be calculated by relating d with the angular height ϕ , as:

$$h = d \cdot \sin\phi \quad (2)$$

Angular height is an altazimuthal quantity (namely, based on the horizon system) which can be inferred from the target position, being target position obtained from the radar facility.

- Linear Size S - The linear size S can be calculated by relating the angular size α , which is determined straight by taking measurements on a given CCD frame, to the target distance d, as:

$$S = d \cdot \tan \alpha \quad (3)$$

- Linear Separation Z - The linear separation Z of two close targets can be calculated by relating the angular separation θ , which analogously to α is determined straight by obtaining measurements from a given CCD frame, to the target distance d. Z is given by:

$$Z = d \cdot \tan \theta \quad (4)$$

In general, the possibility to obtain the quantities S and Z is strictly dependent on the spatial resolution capability of the CCD camera (refs. 2, 4, 7). For this reason it is important that the CCD sensor can be built up by using a pixel matrix which is characterized by great dimensions and composed of single pixels with small dimensions.

- Transfer Velocity V - The transfer velocity V of the target can be calculated by determining by means of radar the time t taken by the target to reach two contiguous points and then relating t with the respective measured distance d.

B. Photometric Parameters

A measurable CCD image of a target of UFO type can be intended to be an "extended source" (here approximated to a sphere) subtending a solid angle Ω and having a superficial intensity B at a given frequency interval $\Delta\nu$. Therefore, superficial flux F in the same interval is given by:

$$F_{\Delta\nu} = \int_{\Omega} B_{\Delta\nu} d\omega \quad (5)$$

where, ω being the infinitesimal element of solid angle Ω , the integral is extended to all the apparent surface of the source. This is a measurement of the apparent luminosity of the target (ref. 6) which one is able to achieve after processing a given CCD photometric frame.

- Intrinsic Luminosity $L_{\Delta\nu}$ - Relating the superficial flux $F_{\Delta\nu}$, measured by means of CCD photometry, with the distance d, obtained by means of radar and/or laser telemetric facilities, one is then able to calculate the intrinsic luminosity $L_{\Delta\nu}$ of the target, as:

$$L_{\Delta\nu} = 4\pi \cdot d^2 \cdot F_{\Delta\nu} \quad (6)$$

- Color Index δL - The color index is defined in this case as $\delta L = L_{\Delta\nu 1} / L_{\Delta\nu 2}$, where $L_{\Delta\nu 1}$ and $L_{\Delta\nu 2}$ are two intrinsic luminosity values which are obtained in two different

frequency intervals. By using the available U, B, V, R, I filters (ref. 6), it is finally possible to obtain the intrinsic luminosities $L(U)$, $L(B)$, $L(V)$, $L(R)$, $L(I)$ and then determine the color indexes $L(U)/L(B)$, $L(B)/L(V)$, $L(V)/L(R)$, $L(R)/L(I)$. This measurement is very similar to the one which is normally obtained from classical astronomical observations aimed at the construction of Hertzsprung-Russell diagrams (ref. 6).

- *Intrinsic Superficial Intensity $I_{\Delta\nu}$* - Intrinsic superficial intensity $I_{\Delta\nu}$ is related to the superficial intensity $B_{\Delta\nu}$ using the relation:

$$I_{\Delta\nu} = 4\pi \cdot d^2 \cdot B_{\Delta\nu} \quad (7)$$

In particular, $I_{\Delta\nu}$ is considered to acquire the same value in concentric isophotal contours by which the whole surface of the luminous target is subdivided. In order to obtain $I_{\Delta\nu}$ one is obliged to do "differential photometry" of an extended target having a linear size S . Such measurement consists in calculating, at a fixed frequency range $\Delta\nu$, the intensity gradient $dI_{\Delta\nu}/dr$, where r is defined in the range $0 \leq r \leq S/2$. This one is strongly considered a fundamental task as one may well expect that the intrinsic superficial intensity of an UFO target is not uniform all over the emitting area (ref. 18). Measurement of the intensity gradient requests for two variants, namely $dI_{\Delta\nu}/dr$ and $d\delta I/dr$, where δI is a color index which is expressed as the ratio of the intrinsic superficial intensities in two different wavelength ranges. In few words, the measurement of the intensity gradient of an UFO target consists in determining how the light intensity and the color are distributed over the whole illuminated surface by assuming that these parameters can get different values from the center to the edge of such a surface. Regarding this, four extreme cases can be cited as examples: a1) the UFO light is all concentrated in the center; b1) the UFO light is all concentrated in an external ring; a2) the UFO color is bright yellow in the center and dark red in the external edge; b2) the UFO color is dark red in the center and bright yellow in the external edge. All these extreme cases, together with smoother variants, have been reported from UFO witnesses (ref. 13). Isophotal contour measurements and related physical parameters are commonly in use in the astrophysical research regarding extended celestial objects such as galaxies, nebulae or planets (ref. 6).

- *Total Luminosity L_T* - If one wants to evaluate the total luminosity L_T of a given UFO target, it is necessary to integrate intrinsic luminosity values over the overall observational band, which can range from $\nu_1 = 3500 \text{ \AA}$ to $\nu_2 = 7500 \text{ \AA}$ in the optical, but which can be also extended in case in the near UV and in the near IR. In such a case one obtains:

$$L_T = 4\pi \cdot d^2 \cdot \int_{\nu_2}^{\nu_1} F_{\Delta\nu} d\nu = 4\pi \cdot \left(\frac{S}{2}\right)^2 \cdot \sigma \cdot T_E^4 \quad (8)$$

where, in particular, σ is the Stefan-Boltzmann constant, and T_E is the effective temperature of the target (ref. 6). It is very easy to notice from the formula above that, after obtaining measurements of L_T and S following the procedures described in the

previous sections, it is then possible to deduce the effective temperature of the UFO target. Temperature measurement is allowed only if one is able to ascertain, by means of spectroscopic measurements of the continuum spectrum and by doing suitable comparisons with Planck theory (ref. 6), that the UFO target is emitting as a thermal spectrum. The measurement of total luminosity (or bolometric luminosity) L_T is normally expected to be done, when possible, in the case of celestial objects of every type, when multi-wavelength observations are available (ref. 6).

- *Period of Pulsation P_p* - If one is able to obtain a large number of CCD frames (for instance, 100-200 frames) of a given target during one single observational run, it is then possible to measure, at a fixed frequency range $\Delta\nu$, the period of pulsation P_p (if present). P_p (ref. 9) involves the pulsational time-variation of the intrinsic luminosity $L_{\Delta\nu}$, of the intrinsic intensity $I_{\Delta\nu}$ and of the color index δL . This means that in the real case the following situations could be present: a) the UFO light is pulsating all over its surface; b1) the UFO target has a central pulsating light; b2) the UFO target has an external pulsating ring-shaped light; c) the UFO color is continuously changing (periodically or a-periodically); d) a mixture of the previous situations occur. All these variants of UFO pulsation have been reported by many witnesses (ref. 13). As one may well expect that a possible pulsation could also range from 0.001 seconds to some minutes, it is realistic to assert that a CCD camera is not the most suitable photometric device which can be able to detect fast periodic pulsations, just because of the long read-out times (about 20 seconds) of this device. Therefore, in order to perform efficiently this research of "target pulsation" one should couple to the CCD observing mode an additional and intensive use of photon-counting fast photometry. Search and consequent measurements of pulsation effects are strongly encouraged, as previous professional observations of pulsating UFO targets have been already done in the past, such as in the case of the measurements attempted by Project Hessdalen in 1984 (ref. 12).

- *Angle of Gravitational Deflection GD* - Not few witnesses of UFO sightings report the apparent evidence of "curved light-beams" in proximity to an UFO (ref. 13). Even if the origin of these phenomena could be due to a physical effect which is not yet included in the known laws of physics, by now one is inevitably tempted to try to explain such a phenomenology in the context of known theoretical physics by hypothesizing that the UFO target itself is able to generate an Einstein-Schwarzschild autonomous gravitational field, which could be supposedly generated by a natural or artificial mini-black hole or by a locally warped space-time (refs. 6, 8). According to the general relativity theory, the light path of a luminous source which passes close to such a strong field is necessarily deflected by an angle GD . This theoretically predicted effect is not any more only a mathematical exercise, but, since the last '80 years, it has been observationally proved in form of "gravitational lensing effects" in the case of very large-scale phenomena which are of astrophysical interest: the case of extragalactic massive objects deflecting with a lens-like effect the light of field galaxies is illuminating (refs. 23, 24, 25). However no proof of such an effect has been found yet in the case of much smaller-scale phenomena such as UFOs. Therefore, for the present scope of the

proposed monitoring project, the measurement of angle GD (if really present) could be attempted in 2 ways:

- a) In the case of night-time observations, a CCD image of an UFO target is expected to contain a certain number of field-stars. For this reason it should be necessary to compare the CCD frame in which the UFO is present with a CCD frame of the same field of sky containing only stars. One should expect that the path of the photons of the stars which are closer to the UFO are deflected by an angle GD from their real path because of a "gravitational lensing effect" and that, if the gravitational focus comes close to the TDA apparatus, the received light of the "perturbed stars" may be highly strengthened. By comparing the two CCD frames (the target frame and the control frame) it should be possible to verify that the star positions can be changed from real positions and that starlight may look to be amplified.
- b) An alternative experiment for measuring the angle GD could be carried out by pointing the beam of the laser device to varying distances (perpendicular to the line of sight) from the UFO target and by taking simultaneously fast sequential CCD photographs of the field of sky which contains both the target and the laser beam. If the laser beam appears to be deflected, one can easily measure the angle GD by doing subsequent processing of the CCD frames and determine how much this angle increases when the distance of the laser beam from the UFO increases.

Conversely, if one hypothesizes that the given UFO object is able to generate an "anti-gravitational" field, it could be expected that the angle GD is deflected in the opposite sense. Similar measurements as the ones described in points a) and b) could be consequently carried out.

- *Gravitational Redshift GR* - Following the hypothesis discussed in the previous topic, a new test could be proposed. In such a variant, it can be supposed that, in addition to gravitational deflection, the photons emitted by a light source that is very near to an Einstein-Schwarzschild gravitational field (just the photons emitted by the excited-ionized and brightening atmospheric gas which surrounds presumably the luminous target), which is supposedly generated by an UFO target, are subject to a gravitational red-shift GR (refs. 6, 8). In order to measure GR, one must know the contribution of GR to the color index of the target. Conversely, hypothesizing that the target is able to develop an "anti-gravitational" field, it may be expected that one record an anti-gravitational blue-shift .

C. Spectroscopic Parameters

On the basis of the physical configuration of a possible UFO target, one should expect to detect different types of spectral features. The target itself or its surrounding medium or both must present proper excitation and/or ionization conditions. This implies the existence of the following possible scenarios:

- A) The target itself is a heated solid object.
- B) The surrounding atmospheric gas is heated by the central target by means of some exotic mechanism.

- C) Both situations occur.
 D) The target itself is a hot plasma.

- I. In the case the UFO target itself is a machine whose external surface is heated by some propulsion mechanism, one may assume that such a target is able to produce molecular emission bands of various strengths, which are possibly resulting from atomic transitions in metallic elements. Such emission bands are expected to be mixed with oxygen and nitrogen emission lines produced by the excitation-ionization processes to which the surrounding atmospheric medium is subject because of the very hot central target. The strength of both the emission bands and of the atmospheric emission lines should depend on the involved temperature of the heated source and on the density of both the heated source and its surrounding gaseous medium. At low altitudes, where airmass is thicker one should expect to record stronger atmospheric emission lines.
- II. In the case the UFO target doesn't appear to be a hot machine (no metallic lines) but its surrounding medium is hot, one should expect to record only atmospheric emission lines. Maybe one of the causes of such a situation could be due to a pulsed magnetic field whose pressure acts, at every given instant and at every given point, as a magnetically-induced thermal shock on the atmospheric medium (ref. 14). If this is the case one could also expect that microwaves are emitted; in such a case microwave radiation could be detected with an appropriate additional device.
- III. In the case the UFO target is itself a hot plasma, it is expected that one records emission lines resulting from atmospheric gas ionization and excitation.

• *Thermodynamic Parameters* - From the measurement of the equivalent width (energy which a line extracts from the continuum) and of the full width at half maximum of every emission line or band, one is then able to derive the main thermodynamic parameters - the temperature T , the pressure P and the density ρ (refs. 1, 6, 10) - of the target and, in most cases, of the excited-ionized atmospheric gas. In the case the spectrum of the luminous target doesn't present emission lines, one can measure the target temperature directly from the continuum spectrum. As it is expected that a thermal continuum spectrum reproduces more or less strictly a bell-shaped Planck curve (ref. 6), it is necessary to determine the precise wavelength λ_{\max} at which the intensity of the continuum spectrum reaches the highest value. By using this procedure temperature T can be derived from the *Wien law* (ref. 6):

$$\lambda_{\max} \approx 0.29 \cdot T^{-1} \quad (9)$$

In such a case the acquisition of a low-dispersion spectrum can be considered sufficient for a preliminary measurement of T .

• *Transfer Velocity V_{rad}* - If the target is moving very fast, the center of the emission bands can be displaced by a quantity given by the doppler shift:

$$\Delta\lambda = \pm (\lambda_{\text{ufo}} - \lambda_{\text{lab}}) = \pm (\lambda_{\text{lab}} \cdot V_{\text{rad}}) / c \quad (10)$$

where c is the velocity of light, λ_{ufo} is the observed blue or red-shifted wavelength of the center of the emission band produced by the target, λ_{lab} is the wavelength of a laboratory band at rest and V_{rad} is the radial velocity of the target (refs. 1, 6). This method for determining the transfer velocity is intended to be strictly coupled with the radar method. Because of the very high-precision requested, such a measurement can be secured only with medium or high-dispersion spectroscopy. On the contrary, the emission lines which are due to heated atmospheric gas are not expected to show any radial doppler displacement, as the excitation-ionization processes which are due to atomic transitions of the luminous target surrounding medium take place only when the target crosses a given point of a quasi-steady atmosphere at a given instant. Atmospheric emission lines could only be broadened by gas turbulent motions (refs. 1, 6, 10), which can be a mixture of normal atmospheric turbulence and a possible "turbulence factor" which may be induced by the target's hot surface or by another kind of target heating source.

- Rotational Velocity V_{rot} - If the target itself is rotating fast, one could be able to observe emission bands whose profile is rotationally broadened by a Doppler factor given by the formula:

$$\Delta\lambda = \pm (\lambda_{\text{lab}} \cdot V_{\text{rot}} \cdot \sin i) / c \quad [11]$$

where V_{rot} is the rotational velocity of the target and i is the inclination of the rotation axis in comparison with a plane which is normal to the line of sight (ref. 6). If the surrounding ionized gas is rotating as well, it could be possible to record atmospheric emission lines whose profile is rotationally broadened by the same doppler factor given above: this feature would be a clear indication of a "vortex regime" present in the atmospheric gas, which is triggered by the central rotating target. If the target itself is a strongly rotating plasma concentration one could possibly record highly rotationally broadened atmospheric lines.

- Infall Velocity V_{in} - In the case some atmospheric gas is collapsing toward the target, one could record atmospheric emission lines which are red-shifted in comparison with the laboratory lines, as the infalling atmospheric gas should depart from the observer. This could happen if the atmospheric gas is subject to a strong local gravitational field whose source is the UFO target itself.

- Magnetic Field Intensity B - In addition to be thermally broadened by the predictable high temperature regime (ref. 6), which can cause also micro-turbulence into the perturbed gas, the emission lines can be subject to the Zeeman splitting effect because of the action of a magnetic field (refs. 1, 6, 10). In this case every single emission line is expected to be separated into a number of components which are differently polarized according to the orientation of the magnetic field in comparison with the direction of the observer and whose separation depends on the intensity B of the magnetic field. If it is possible to obtain a S/N ratio which is high enough and if the target is reasonably fixed (or semi-fixed), in which case it is possible to carry out high-

dispersion spectroscopy, one is allowed to get a good measurement of the magnetic field intensity B of the target.

- *Period of Pulsation P_p* - In the case in which sequential CCD spectrographic frames of a single target are able to furnish a great number of spectra at a very short time-distance the one from the other - for instance by using an indicative time-sequence of 20-30 seconds if the target is very luminous - and assuming to be in the right conditions to carry out medium-high dispersion spectroscopic measurements, one could try to verify if the measured spectroscopic parameters - in particular the magnetic field intensity B - are subject to some kind of pulsation effect.

5. Time-Variability Of The Physical Parameters

Physical quantities deduced from data processing are of little utility if one considers them separately. The investigated problem can be fully understood only if all quantities are connected together in a dynamical mode. For this reason one is necessarily induced to search for significant correlations between the measured parameters, on the basis of the detection of time-variable features. Possible time-variability of the UFO phenomenon can furnish enlightening explanations on its physical mechanism. This task can be achieved if one succeeds in acquiring a large amount of CCD frames - both photometric and spectroscopic - when/if the trajectory of the target can be tracked for a reasonably long observational time. For instance, if the target is very luminous and can be kept centered in the telescope view-field for a duration of 30 minutes, one could obtain typically 100-200 CCD frames in fast sequence, by taking into account the fact that the computer-controlled exposure time may change drastically if the UFO distance changes. An analogous study of time-variability can be achieved by means of a simultaneous use of photon-counting photometry: in this case the PCP unit should be pointed to the target for the whole duration of the phenomenon.

The time-variation of the two following parameters must be previously ascertained:

- *The Linear Size S* - This measurement is justified by the previous collection of some witnesses of UFO events (ref. 13), regarding, on the basis of visual-suggestive stimulus, possible variations of the dimensions of UFOs which are standing still.
- *The Intrinsic Luminosity $L_{\Delta v}$* - As in the previous case it is necessary to perform also this measurement, as reliable witnesses of UFO sightings report luminosity variations of UFOs which are standing still (ref. 13).

Furthermore and most importantly, according to the large amount of witnesses collected so far (ref. 13), there is the suspect that the time-variation of the transfer velocity of an UFO target may be correlated to analogous time-variations of the following physical parameters:

- *The Color Index δL* - Reliable witnesses of UFO sightings describe UFO colors turning from blue-white in static or quasi-static configurations to red during fast accelerations. In other cases, witnesses describe the opposite behaviour (ref. 13).

- The Period of Pulsation P_p - Reliable witnesses of UFO sightings describe emitted light which is characterized by a variable pulsation period when the velocity increases (ref. 13). In such a case it is necessary to measure the quantity dP_p/dt , where t is the variability time-scale.
- The Intensity Gradients $dl_{\Delta v}/dr$ and $d\delta l/dr$ - As one may well expect the occurrence of a particular "slope factor" $s_{\Delta v}$ for each curve $l_{\Delta v} = f(r)$ and $\delta l = f(r)$ (for $0 \leq r \leq S/2$) regarding the intrinsic specific intensity and the color index respectively, it is of fundamental importance to be able to evaluate the quantity $ds_{\Delta v}/dt$, which is defined as the time-variation of $s_{\Delta v}$ at every given wavelength-window (U, B, V, R, I). In particular, one could develop this study by measuring, at every given instant, the ratios $s(U)/s(B)$, $s(B)/s(V)$, $s(V)/s(R)$, $s(R)/s(I)$ and $s(U)/s(I)$. By adopting this procedure, one could achieve a compact method for studying the possible time-variation of the surface light distribution of an UFO target. This measurement is justified by the fact that time-variability of surface light distribution of UFOs has been often reported by witnesses (ref. 13).
- The Angle of Gravitational Deflection GD - Some witnesses tell about the sighting of "curved lights" which seem to have been produced by some UFOs and which occasionally change their curvature angle (ref. 13). Following descriptions reported by witnesses on this phenomenology, repeated CCD images, containing both the UFO target and a laser beam which is pointed at a fixed very short distance from it, could be taken during the whole length of the sighting, in order to measure the possible time-variability of the angle GD when the UFO is hovering, landing, standing on the ground, taking off, accelerating and decelerating.
- The Gravitational Redshift GR - The variation of parameter GR could be inferred from its contribution to the time-variation of the color index.
- The Rotational Velocity V_{rot} - Many witnesses of UFO sightings have had the impression that some UFOs were rotating more or less fast and that the rotation rate increased with the transfer velocity of the UFO (ref. 13). Such a witness report could be accurately confirmed by acquiring spectroscopic measurements of the possible time-variation of the rotational velocity parameter.
- The Magnetic Field Intensity B - EM interference effects on electric devices (ref. 13) together with some neurological and physical effects (ref. 13) affecting witnesses who approached occasionally an UFO which was standing still, suggest that UFOs are surely surrounded by a strong magnetic field. Therefore, it could be possible to measure the time-variation of the magnetic field intensity B when a given luminous UFO target is accelerating or decelerating, or when the emitted light is increasing or decreasing. This measurement could be obtained by carrying out sequential CCD high-resolution spectroscopic frames of an UFO target.

6. Conclusive Remarks

The search for time-correlations between the discussed measurable physical parameters could surely shed light on the physical mechanism which creates the UFO phenomenon. The knowledge of such a physics could allow one to establish definitively if UFOs are previously unknown natural phenomena or machines characterized by a specific propulsion device. For instance, since now, it is necessary to pose some fundamental questions such as:

- A. Are there correlations between the transfer velocity, the intrinsic luminosity, the color index, the magnetic field intensity, the rotation rate and the period of pulsation of an UFO?
- B. Is an UFO able to produce a local gravitational field and/or a local anti-gravitational field and to alternate these two forces?
- C. Which relation exists between the magnetic field produced by a given UFO and its local gravitational field, if present?

Before venturing carefully prepared hypotheses, it is of fundamental importance to collect the largest as possible amount of data by securing the following two simultaneous observational strategies:

- I. Target monitor using a wide range of wavelength-windows.
- II. Target monitor carried out by means of a wide range of detecting devices.

In particular, astronomers should try to infer what is acting inside an UFO, by studying the quality, the quantity and the variability of the continuum and discrete radiation which is emitted, in the same way in which these scientists are able to understand the physics of a star interior by studying the observed properties of a star atmosphere. This intriguing problem is still open and the technology for studying it is now fully available.

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27. <http://antwrp.gsfc.nasa.gov/apod/ap950711.html>
 28. http://www.astro.indiana.edu/scaamp/projects/Grav_Lenses/gravlens.html
 29. http://vela.astro.uilg.ac.be/themes/extragal/gravlens/bibdat/gldb/search_e.msql

APPENDIX: Some examples of recurrent UFO phenomena on the Web

- The Hessdalen lights in Norway
<http://www.hiof.no/crulp/prosjekter/hessdalen/>
- The Marfa lights in USA
<http://www.marfalights.com/gallery.html>
- The Yakima lights in USA
<http://www.nwmyst.com/nwmyst-ufo-0025.html>
- The Ontario lake lights in Canada
<http://www.globalserve.net/~mallet/index.shtm>
- The Pine Bush lights in USA
<http://www.anomalous-images.com/images/marcufo.html>
[http://www.monmouth.com/~bcornet/#ANOMALOUS OBSERVATIONAL PHENOMENA](http://www.monmouth.com/~bcornet/#ANOMALOUS_OBSERVATIONAL_PHENOMENA)
- The Tagish Lake lights in Yukon (Canada)
<http://www.ufobe.org/yukon/tagish.htm>
- The Ural lights in Russia
<http://www.ufo.ural.ru/16ab.jpg>
- Some other russian lights
<http://www.anomalous-images.com/images/myst005.jpg>
- The Piedmont lights in USA
www.news-observer.com/daily/1997/05/24/nc05.html
<http://ourworld.compuserve.com/homepages/AndyPage/RUTLEDGE.htm>
- The Pennine Mountains lights in Great Britain
<http://www.hauntedvalley.com/lightsinfo.htm>
- The Min-min lights in Australia
http://www.hiof.no/ia/prosjekter/hoit/html/nr2_96/erling_i_australia.html
<http://www.tip.net.au/~stmcdona/tim/acmi9.html>
- The Victoria lights in Argentina
<http://www.geocities.com/Area51/3184/victo.htm>
- The Hardin (Ohio) lights in USA
<http://www.geocities.com/SoHo/5782/images.html>

NOTE

This work is the expanded and revised version of an invited paper which the author presented at:

THE FIRST INTERNATIONAL WORKSHOP ON THE UNIDENTIFIED ATMOSPHERIC LIGHT PHENOMENA IN HESSDALEN - Hessdalen, Norway, 23-26 March 1994.

More informations on this valuable workshop, organized by Prof. Erling P. Strand of the Department of Informatics and Automation of the Østfold College - Sarpsborg (Norway), can be found at the web site:

<http://www.hiof.no/crulp/prosjekter/hessdalen/>.

BRIEF CURRICULUM OF THE AUTHOR

Massimo Teodorani owns a Ph.D. in Astrophysics (Bologna University, 1992). He worked as a research astronomer at the Bologna and Napoli observatories. He is specialized in stellar physics and carried out theoretical and observational investigations on eruptive astrophysical phenomena such as supernovae, novae, proto-stars and close binary stars. He did a lot of observations by using optical telescopes and the IUE satellite. He is the author of about 50 publications in the astrophysical subject and a member of several scientific societies. Since 1992 he is involved in UFO research too, later as an external scientific consultant of Centro Italiano Studi Ufologici (CISU). Moreover, he has actively collaborated with the norwegian scientific group named "Project Hessdalen". He is the author of over 10 papers regarding the scientific treatment of the UFO subject and has presented his results by giving several technical seminars at recognized scientific institutions such as astrophysical observatories, nuclear physics institutes and energy institutes. Massimo Teodorani was born and is living in Emilia-Romagna. His main hobbies are electronic music and cats.

United Kingdom UFO Organisations: What do they have knowledge of and what do they investigate?

Craig A. Roberts

*TRUTH, Department of Psychology, Totton College, Water Lane,
Totton, Southampton, England, SO40 3ZX.*

croberts@totton.ac.uk

Abstract There are many theoretical inputs into ufology ranging from the extraterrestrial approach, fabrications, conspiracy theories, psychological viewpoints, geological phenomena, astronomical anomalies and meteorological effects. The aim of the research piece was to survey United Kingdom UFO organisations as to their favoured theories and which theories they 'test' when a sighting is reported. A two-page questionnaire was sent to 97 such organisations. A response rate of 15% was achieved even though the questionnaire was sent out with a freepost return envelope provided. The most favoured theories for explaining UFO activity were the extraterrestrial approach, fabrications and the influence of the media. The psychological viewpoints (e.g. psychopathology, fantasy proneness and temporal lobe epilepsy) were the least favoured by some margin. When sightings are researched, the same three theories were examined as for the favoured theoretical approach. Again, psychological theories were poorly represented in terms of frequency of testing. Even though the response was low, the results show which theories are currently in favour in the United Kingdom. However, there were large inter-group differences in knowledge and investigative techniques in the returned sample.

The author would like to thank the respondents who kindly took part in this research and to TRUTH for financial support of this project.

Introduction

There has always been great debate as to which, if any theory of UFO origin has more credence in comparison to other 'available' theories. However, one sorely overlooked angle in this realm is which theory or theories do the organisations that research in the field of ufology believe in the most and which do they test the most when a sighting is reported to them? This piece of research aims to examine this area using United Kingdom UFO organisations as participants.

There are numerous theories that attempt to explain UFOs and render them IFOs. They transgress many areas of hard and soft science. Primarily, it could be argued that there are eleven core theories of UFO origin. There is the belief that UFOs equate to Extraterrestrial Craft (e.g. the publication *Flying Saucer Review*) with many believing that UFO equals Flying Saucer. However, there have been many hoaxed sightings [see Brookesmith (1997) for good examples] and the media could play a role in many sighting reports, possibly by heightening perceptions. Others believe that many reported UFO sightings are Experimental Human Craft or are a result of Electromagnetic Pollution

(Budden 1999). Psychology could play a major role in UFO sightings with some proponents for Fantasy Proneness [Bartholomew, Basterfield & Howard (1991), Wilson & Barber (1983)], Temporal Lobe Epilepsy [e.g. Persinger (1989)], and Psychopathology playing separate roles in UFO sightings. Also, geology may hold the key to many sightings with the Earthlight Hypothesis (Devereux 1982) and Tectonic Strain Theory (Persinger 1980, 1981) reporting some support. Finally, Meteorology and Astronomical Mirages (Campbell 1994) could also account for some UFO reports.

In the related, but not mutually inclusive area of alien abduction, hypnosis and dissociation (Powers 1991) could account for reports of non-human entities taking humans against their will.

The aim of this project was to see which theories are favoured by UK UFO organisations. Furthermore, this project aimed to examine which theories are actually 'tested' when a sighting is reported to a group. It would also be intriguing to see if theories that are attempting to explain alien abduction are chosen as explanations for UFOs.

METHOD

Design

A two-part questionnaire was designed to assess:

- (A) The knowledge of UFO origin theories.
- (B) Which UFO origin theories are tested when a group is approached with a sighting.

Questionnaire A used a Likert-type scale with six fixed choices. Respondents had to rate each theory dependent on their knowledge of that particular theory. The six fixed choices were: Excellent knowledge, Good knowledge, Some knowledge, Poor knowledge, Heard of it but no knowledge and Never heard of it. There was space at the bottom of the questionnaire for additional theories to be noted and rated that did not appear on the list.

Questionnaire B also used a Likert-type scale but had five fixed choices. Respondents had to rate each theory dependent on how often they investigated them. The five fixed choices were: Every occasion, More often than not, Occasionally, Rarely and Never. As with Questionnaire A, there was space at the bottom of the questionnaire for additional theories to be noted and rated that did not appear on the list.

The Questionnaires were designed for brevity on part of the respondent. Overall, the questionnaire could easily be completed in five minutes.

Materials

The materials necessary for this survey were the questionnaire packs and FREEPOST envelopes for return of the completed packs.

Participants

Ninety-six UK UFO Organisations were sent the questionnaire pack. Addresses came from one web site (www.ufoinfo.com) and books published between 1997 and 1999 for up-to-date addresses. The key text used from this period was Warren & Robbins (1997).

Procedure

The questionnaire packs were sent out on the same day and respondents were given five weeks to return the packs via FREEPOST so it would cost nothing to take part in the survey. A total of 96 questionnaire packs were sent out (a further 5 had addressee unknown and were returned), 2 were returned blank whilst only 12 were returned completed (although 1 failed to complete Questionnaire B). This equated to a response rate of 15%

Data Analysis

As the collected data was at the ordinal level, it was possible to calculate the median response for each listed theory. This would give the average response across UK UFO Organisations. This applied to both questionnaires.

Results

As already noted, the response rate was poor but of the collected data some intriguing findings can be presented.

Table A shows the distribution of results per theory in rank order. For those with the same median, a higher rank was assigned to a theory with more 1s (Excellent knowledge), then if there was still a tie, a higher rank was assigned to the theory with the most 2s (Good knowledge) and so on, until differentiation was possible. Ranks are in order of amount of knowledge.

Responses given

Rank	Theory	1	2	3	4	5	6	Median
1	Extraterrestrial Craft*	7	2	1	-	-	1	Excellent
2	Hoax	6	5	-	-	-	1	Excellent/Good
3	Media Influence	6	3	2	-	-	1	Excellent/Good
4	Human Craft	4	5	2	-	-	1	Good
5	Meteorological Phenomena	3	6	2	-	-	1	Good
6	Electromagnetism	3	4	4	-	-	1	Good
7	Earthlights	2	6	3	-	-	1	Good
8	Astronomical Mirage	2	5	2	2	-	1	Good
9	Hypnotic Phenomena	4	2	4	1	-	1	Good/Some
10	Temporal Lobe Epilepsy	3	3	2	2	1	1	Good/Some
11	Fantasy Proneness	2	4	3	2	-	1	Good/Some
12	Psychopathology	1	3	3	1	2	2	Some
13	Dissociation	3	-	1	3	2	3	Poor

* One missing response.

Table A - Distributions of scores for Questionnaire A with median values.

Table B shows the distribution of results per investigative theory in rank order. If two theories tied then the same procedure for differentiation used for Questionnaire A was used here.

Responses given

Rank	Theory	1	2	3	4	5	Median
1	Spacecraft (non-human)	6	3	1	-	1	Every
2	Media influence	6	2	2	-	1	Every
3	Hoax	6	2	1	1	1	Every
4=	Human craft	5	2	3	-	1	More often
4=	Meteorological Phen.	5	2	3	-	1	More often
6	Electromagnetism	4	2	2	1	2	More often
7	Fantasy Proneness	4	1	3	2	1	Occasionally
8	Astronomical Mirage	4	1	3	1	2	Occasionally
9	Psychopathology	3	1	3	1	3	Occasionally
10	Earthlights	4	-	1	4	2	Rarely
11	Temporal Lobe Epilepsy	1	1	1	4	4	Rarely

Table B - Distribution of scores for Questionnaire B with medians.

Discussion

From the small response (15%), some clear patterns emerged. It would appear that the Extraterrestrial angle, hoaxes and media influences are at the heart of UK ufology. They appeared at the top of the rankings for knowledge and investigative testing.

The psychological elements of ufology appear to be overlooked, on average, by UK UFO organisations. All five theories (hypnosis, temporal lobe epilepsy, fantasy proneness, psychopathology and dissociation) filled the bottom five ranks for knowledge. Of the three psychological angles mentioned in the investigative section (Questionnaire B), fantasy proneness and psychopathology were assessed occasionally, whilst temporal lobe epilepsy was rarely tackled. Hypnosis and dissociation were never mentioned in the blank space provided for additional theories, so it could be concluded that UK UFO organisations may see these theories as being more of an explanation of alien abduction and not UFOs.

Of the remaining theories, all appear to be at a similar knowledge level (human craft, electromagnetism, earthlights, meteorology and astronomical mirage). However, when it comes to investigating them, differences occur. Human craft, meteorological phenomena and electromagnetic pollution are assessed 'more often than not' whilst astronomical mirages are only 'occasionally' assessed whilst earthlights are 'rarely' assessed.

One very interesting question that can be raised from the results of Questionnaire A (knowledge) is that of the first ranked theory, Extraterrestrial Craft. Sixty-four percent of respondents claimed to have 'excellent knowledge.' Where have they obtained knowledge of Extraterrestrial craft when there is no proof of their existence on earth? It would appear that many organisations are confusing Extraterrestrial craft with the Extraterrestrial hypothesis which are from differing angles. One claims that extraterrestrial craft have visited Earth, the other hypothesises about the chances of extraterrestrial life elsewhere in the cosmos. This apparent confusion does not bode well for objective research methods, crucial in the area of ufology. This lack of objectivity could lead to erroneous conclusions when a sighting is reported to a group. All avenues should be explored and then an appropriate conclusion reached.

Also, from the results of both questionnaires, it highlights the bias towards belief and investigative techniques favouring UFOs are Spacecraft from another world. This bias could affect the lay person's view of ufological groups as 'spaceship hunters!' even though no conclusive proof is available to back up these beliefs. The other theories listed in both questionnaires have at least some supporting evidence or have been tested competently. However, the organisations surveyed here favour the unfounded spacecraft approach.

It should be noted that the averages do mask large individual differences between organisations. Some organisations answered '1 - Excellent knowledge' to all theories listed in Questionnaire A and '1 - Every time' to all theories listed in Questionnaire B. Therefore,

there is a diversity of knowledge and investigative techniques used by UK UFO Organisations.

Even though the low return rate was disappointing, it could reveal something about the UFO groups in the UK. Either:

- They are not co-operative in the main,
- The majority had not realised that there were many theoretical aspects of ufology, or
- They had strong beliefs for one theory (probably extraterrestrial) and do not consider other approaches in ufology. One of the blank-returns clearly stated this.

Conclusions

The main findings from this investigation are:

- Extraterrestrial craft, hoaxes and the media are at the centre of UK ufology at present.
- Psychological elements of ufology are overlooked in UK ufology at present.
- The majority of UK UFO organisations are not co-operative in simple research.
- There are large inter-group differences in knowledge and investigative techniques in UK ufology at present.

It might be time to bring in some National guidelines as to how to research ufology based on the responses from this survey as there appears to be a gulf between UK UFO organisations at present.

It would be beneficial to replicate this survey in European countries to see if there is a similar trend across Europe.

Copies of the questionnaires are available upon request from the author, who is contactable at the address at the start of the paper.

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UNUSUAL PHENOMENON OBSERVED WITH RADAR DEVICE IN ROMANIA

I was working, as senior meteorologist, at the RADAR laboratory (physics of the atmosphere) at the National Institute for Meteorology and Hydrology in Bucharest (Romania), since 1967. In the same year an English Plessey radar was installed in our Institute, the training of users being made by English and American specialists. In 1971 the Plessey device was replaced by a new installation: MRL-2, made in the former Soviet Union, the training being performed by an engineer from the manufacturer company. The radar had a range of 300 kilometers and a narrow angular opening, typical for meteorological radar devices.

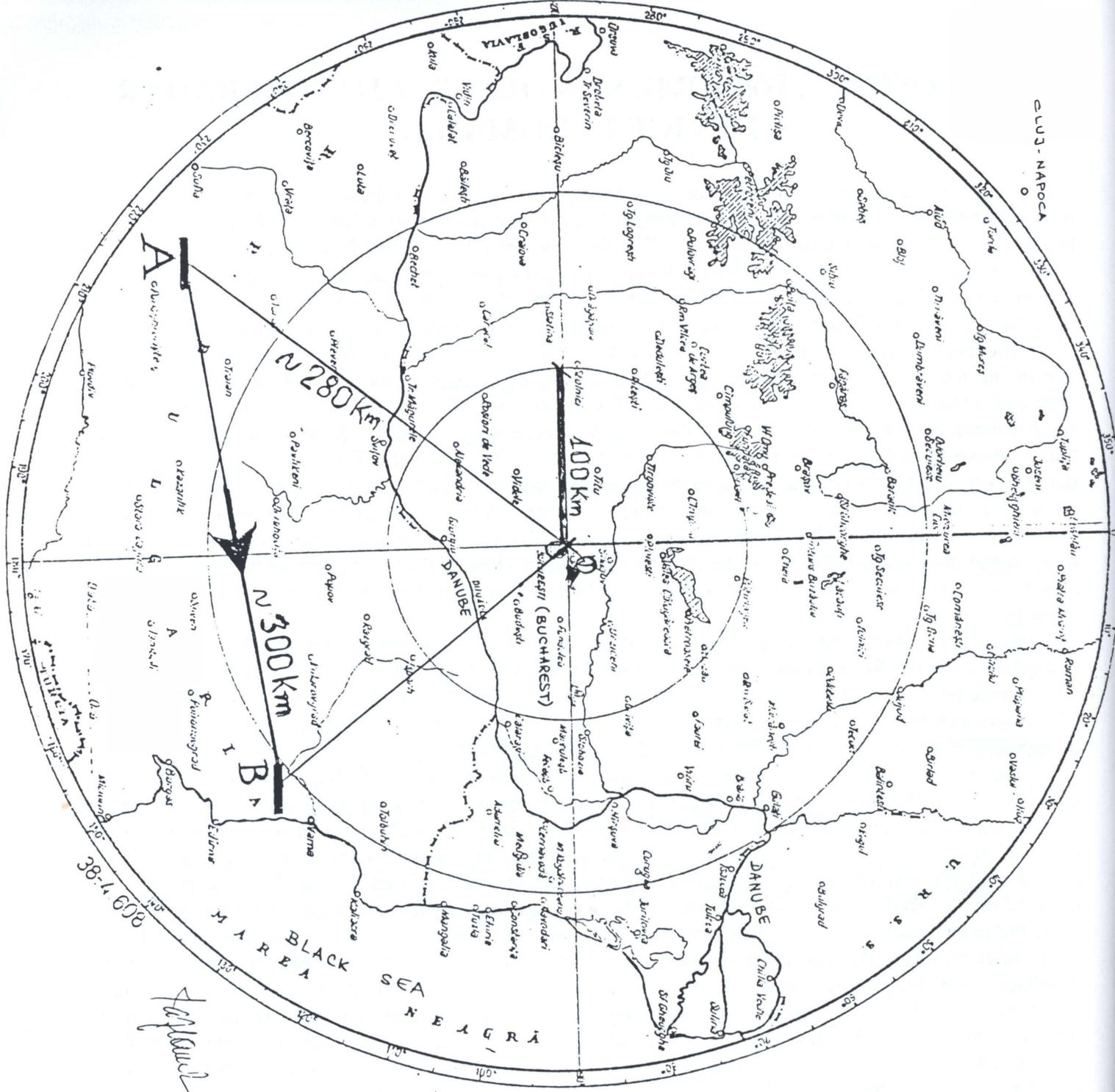
The meteorological observations are performed each hour, 24 hours per day, working in shifts. During one of the routine observations, with this radar, in a night of August 1986, at 2.00 a.m., on the screen appeared a sharp horizontal line, one cm. long. The position of the target remained stationary. By specific radar techniques, I determined that the distance to the object was 275-280 km SouthWest from our station, that is above the city of Sofia (Bulgaria), at an altitude of 30000 meters. Through manual operations, I stopped, for about 4-5 minutes, the radar beam on the "object", which remained motionless all this time. Afterwards, almost instantly, it disappeared. I found it immediately, on the same vertical, some 5000 meters lower down. I fixed the radar in the new position, continuing the observation, but after a short while it disappeared once again, this time rising in its initial position. I have a good experience in observing flying objects and I have also two licenses as airplane pilot, but this object and its movements resembled nothing I knew before.

In this period of time I was on duty by night, each four days. I had the opportunity to observe this strange "object" almost each time, during three-four weeks, in the same place. The length of the observations was varying between 3 and 20 minutes. I discovered the same object (or another, identical), above the city of Cluj-Napoca (Romania), located at some 300 kilometers NorthWest from Bucharest. Afterwards the object disappeared and it was impossible for me to find it, despite my efforts.

The object reappeared in February 1988, again in the area of Sofia, and again by night, between 2.00 and 4.00 a.m., My observations were made several times, the whether being good and the sky cloudless. Once again the "object" made its vertical movements. After one month, a change occurred; during one of my observations, the object disappeared suddenly, but this time horizontally; I found it more than 200 km eastward, in the area of the city of Varna (Bulgaria), after a search of one minute, but it seems that the distance was covered in a much shorter time. In the next observations I found it in this new location. When I fixed the radar beam on it, the object performed the same quick movements upward or downward. In one night, after repeating this operation several times, when I fixed once again the beam on it, all the radar installation was disconnected spontaneously, with a muffled thud. I started it again only for the next hourly observation. After the usual operations, everything was functioning without any problem. But the "object" was no more visible. After this incident, I stopped to study the strange object. I saw it several times for a short glimpse, but I avoided stopping the device on it. I have to mention that the morning after the incident I called the electronic technician. After checking all the components, he told me that he did not found any explanation for the spontaneous stopping of the radar. As a matter of fact, the radar was working in the next period of time without any failure.

The dimensions of the object could be estimated by analogy. A big ship (e.g. 200 meters long), at a distance of 35-40 kilometers offshore, appears on the screen of a similar radar, installed on the coast of the Black Sea, as a horizontal one centimeter line. Taking into consideration the distance of 275-280 kilometers, the "object" could have a length of at least 1500 meters. It has to be remarked also its tremendous speed, both horizontally and vertically, as well as the property to reflect the radar beam.

A copy of an original radar observation map is attached, with the position of the targets.



Handwritten signature

Evidence of Covert Human/Military Involvement in North American Alien Abduction Cases

by

Helmut Lammer Ph.D

Alien abductions are a very strange and complex phenomenon inside UFO research. For skeptics, most journalists, and the public it is hard to believe that abductions by non-human beings have their basis in physical reality. Reports of alien beings entering bedrooms through walls and levitating abductees through closed windows into a waiting UFO are hard for the open-minded researcher to believe, too. However, well-respected researchers have shown that the "core" of the alien abduction phenomenon cannot be explained as a "known" well researched psychological phenomenon, hallucinations or mass delusions.

Since the mid-eighties some alien abductees in the USA and Canada claimed that they have been kidnapped by human military/intelligence personnel and taken to terrestrial hospitals and/or military ground/underground research facilities. Not many of the popular books on the subject of alien abductions mention these experiences. Especially disconcerting are the facts that abductees recalled seeing human military intelligence personnel together with alien beings working side by side in secret research facilities. The presence of human military and/or civilian personnel inhabiting the same physical reality as the alien beings exceeds the mindsets of the skeptics and the open-minded researchers by several orders of magnitude.

To bring light into darkness I reviewed the relevant literature, contacted UFO and mind-control researchers and victims as well as MILAB abductees around the world and compared our findings with the comprehensive alien abduction study of Dr. Thomas Bullard [1,2] the MUFON Transcription Project [3,4] and the MIT Abduction Proceedings [5] of August 1997. As a result of this investigation I published with my wife Marion the actual book "MILABS: Military Mind Control and Alien Abduction" in the USA available via IlluminetPress,[6] where we conclude that such cases may be an evidence that covert human agencies use the alien abduction phenomenon as a cover for secret weapon tests, mind control experiments but may also have an interest in real unexplainable alien abduction cases.

The skeptics would rather believe that stories of aliens and military personnel in military underground facilities are fabrications designed to elicit attention from conspiracy believers, or perhaps hallucinations. Researchers in the field of mind-control suggest that these cases are evidence that the whole alien abduction phenomenon is staged by covert parts of the intelligence community as a cover-up for illegal experiments.[7] The open minded researchers who fight for a reputation in abduction research ignore these stories, since they represent only a minor fraction of their files.[8]

Well known alien abduction researcher Prof. David Jacobs wrote in his book "The Threat" that he believes that these abductees mistake human-like alien hybrids dressed in military-like clothes and uniforms for U.S. military personnel.[9] Further he believes that these hybrids bring the abductees to abandoned military bases, or even to unused areas of active military bases where they examine and interrogate them. Therefore, he and his proponents claim that there is no evidence that the U.S. government, or any foreign military is involved in covert abduction projects.

One can see from such hypothesis how far some well known researchers go, if they defend their abduction world views. The possibility that alien hybrids use unused areas of active military bases is much smaller than the abductees were taken by human military personnel, although it is criminal.

MILAB abductee Melinda Leslie remembered under hypnosis, that she was kidnapped, drugged and taken by two men in camouflage to a military facility where she saw a strange triangle-shaped craft in a large hangar. She recalled being on a stretcher in a large hangar as a helicopter pilot asked her what the hell she is doing there. At that moment a man in a naval officer uniform and two men in white lab-coats appeared and rebuked the pilot.[10]

One can see from this important event that not all military personnel on this base had the "need to know" concerning her appearance on the facility. Such events show also that the suggested alien hybrid hypothesis does not work for MILAB scenarios. Melinda Leslie has done extensive hypnosis regression concerning this traumatic event. I listened the tape, therefore I know that the therapist had not asked her suggestive questions. After the encounter with the helicopter pilot the men in the lab-coats and the military guy took her in an interrogation room. She described in detail how they walked through halls with video cameras on the walls and metal doors.[10]

Inside this room was a table and chairs. Melinda was forced to sit on a chair and one man in a lab coat gave her a shot in the arm and a strange drink. After this she felt 'high.' She was very frightened as she felt one of the man grasp her on the cheeks. A man in a white lab coat stood behind her and a spotlight shone on her chair. A red-haired military officer asked her questions concerning her alleged alien experiences. Strangely, it appeared that he wanted information about UFO technology. He asked her:[10]

"...What have they asked you? Tell me about their technology? Tell me about the drive system, the drive mechanism? You tell me about what they told you to do! What did they tell you? What did they ask you to do? Tell me, tell me, tell me. You know you are not theirs, you are ours!..."

I do not believe that the alien/hybrids propagated by Prof. Jacobs and his proponents would be interested in the abduction experience of humans which were allegedly done by the creators of the hybrids! This would be very strange since the alien/hybrids should know more about the motives of the alleged alien abductors than abductees. This interrogation

session was very traumatic for her since she couldn't answer the questions. She cannot recall answering the questions. The hypno-therapist calmed her as she began weeping and crying. After the interrogation she was brainwashed by the same person:[10]

"..You couldn't tell me now even if you wanted. You can't talk right now. You couldn't tell it even if you tried. We fixed that. Don't try! You won't remember any of this, we fixed it!...you won't remember this! It's a bad dream. We are taking care of that. You will not remember. This is a bad dream. You were never here...I don't exist... None of this is happen..."

Melinda Leslie tried to resist the brainwashing procedure although she was drugged. Historic cases of mind-control experiments document similar procedures to Melinda Leslie's interrogation. Master Sergeant James Stanley was used in a psychochemical warfare experiment in Fort Knox, Kentucky in February 1958. Stanley remembered sitting across a table from a white-coated doctor with two glasses of clear liquid between them. The man in the lab coat said to him: "Here, have a drink. It's only water, nothing more than what I drink."

A little bit later, Stanley thought he had gone insane. His head was filled with terrifying visions and his body seemed to tumble through time and space. He unwittingly participated in LSD-brainwashing experiments. After a third experiment Stanley's memory was wiped out and he vaguely remembered telling the doctor that he was standing by a river.[11] It is now known from the Edgewood experiments that the CIA and military intelligence thought psychochemicals could be used as a Cold War weapon to control the mind of an individual being interrogated.[11] This short excursion to the Edgewood/LSD brainwashing experiments of the fifties show that similar psychochemicals are also probably used in MILAB interrogation sessions.

After the interrogation Melinda Leslie was escorted by military personnel through hallways and doors back to the hangar where she saw large dark unmarked helicopters. Leslie also saw an advanced triangle-shaped UFO-like craft, and one can speculate that she was taken to a secret aerospace research facility. It should be noted, however, that she remembered many more details of the base than I presented here.

It should be noted that cases like Melinda Leslie's are also supported by the abduction transcription project of the Mutual UFO Network (MUFON). MUFON's Dan Wright informed me on Mai 5, 1998, that the experiences recalled by several subjects in our study bear striking resemblance to those separately recalled by persons in the MUFON abduction transcription project.[12] Examples:

1. A military hangar with UFO-like craft's.
2. One or more cubicle-like rooms within a ver large underground room or cavern.
3. Military officers with name tags and other identifiers removed from their uniforms.
4. Use of drugs to elicit responses from subjects.

5. Berating the subject to relate what he/she was told or shown by aliens.
6. Brainwashing the subject to believe afterward that the interrogation did not happen.

If one reviews hypnosis transcripts of MILAB abductees and compares their recovered memories with the experiences of survivors of now known declassified government sponsored mind-or behavior-control experiments, one will find a strong indication that covert "human" military personnel are involved in the alien abduction phenomenon.

I believe that alien abduction cases where the abductee reports that he or she was abducted by the military (or humans) are very important for two reasons:

1. If the UFO community has evidence that a covert military intelligence task force is involved in the alien abduction phenomenon, the public would then know that alien abduction experiences represent a matter of national security.
2. The alleged military involvement in the abduction phenomenon could be evidence that black-ops units use abductees for mind-control and behavior-control experiments, as test-targets for microwave or mind-altering weapons, or that they monitor and kidnap abductees for information gathering purposes during an alleged alien abduction experience.

If one of these points is correct, one can expect to run into early resistance when proposing congressional hearings about UFOs. In October 1992, the Human Potential Foundation chaired by Senator Clairborne Bell of Rhode Island, embarked with the help of billionaire Lawrence Rockefeller on a project to deliver to the Science Advisor of U.S. President Bill Clinton, Dr. John Gibbons, compelling evidence of the reality of UFO phenomena, in the hope of convincing the new administration to disclose U.S. government information on the subject of UFOs.[13]

Former intelligence agent and head of the Human Potential Foundation Dr. C. B. Scott Jones delivered to Dr. John Gibbons a summary of UFO belief systems, the so-called "UFO Matrix of Beliefs." Recently, the White House released some letters and documents concerning the "Rockefeller UFO Initiative" to researcher Rick Coimbra via the Freedom of Information Act (FOIA). In one letter Dr. C. B. Scott Jones mentioned that there are reasons to believe that some government group has interwoven research about mind-control technology with alleged UFO phenomena. He suggests that, if this is correct, Dr. John Gibbons can expect to run into early resistance when inquiring about UFOs, not because of the UFO subject, but because that subject has been used to cloak research and applications of mind-control activity.[14]

I believe that Dr. Scott Jones note and the evidence which comes from alien abductees who claim that they were also being kidnapped, examined, drugged and interrogated by military intelligence personnel will lead the open-minded researcher to three important questions.

1. Is it possible that secret human experiments or covert operations are occurring in Western democracies?
2. What is the human agenda which seems to be involved in the alien abduction phenomenon, and what is the purpose of MILABs: military abductions of alleged alien abductees?
3. Is there a military interest in developing brain-implants, virtual-reality implants, holographic image projection, cloaking devices, mind-altering weapons and genetic research?

Many MILAB abductees describe IV's, drugs, and pulsing lights, causing us to believe that they received some kind of mind control programming during MILAB experiences. It is difficult to say why MILAB abductees are being conditioned or programmed. By carefully investigation of these interrogation sessions one is led to ask two questions:

1. Are MILAB abductees military programmed "Manchurian Candidates" who spy for a secret military task force in alleged alien crafts? Are they so called "Trojan Horses" inside "real" UFOs during an alien abduction experience?

or:

2. Is their alien abduction experience a synthetically programmed screen memory for hiding secret spy or military missions?

Most alien abductees claim that they communicated via telepathy and that they have enhanced psychic capabilities after their encounters with alleged aliens. Former KGB Major General Oleg Kalugian claimed in 1992 in an ABC interview that Russian scientists have been very successful in developing psychic warfare devices. One area of research was the exploration of the alleged parapsychological capabilities of some people to stimulate psychotronic devices.[15]

The so called father of non-lethal weapons, retired LTC Dr. John B. Alexander who has a great "private" interest in the alien abduction phenomenon and is the scientific advisor to the National Institute for Discover Science (NIDS) gave an overview of Russian psychotronic research in the December 1980 issue of the peer reviewed military journal "Military Review". He wrote that the use of telepathic hypnosis holds great potential for military applications.

If an agency has a person who had developed such a capability, then agents who are deeply planted with no conscious knowledge of their programming could be created. These persons would not be aware that thoughts had been implanted from an external source. He or she would believe that the thoughts were original.[16]

Other paranormal phenomena like psychokinesis, precognition, controlled out-of-body, remote-viewing and the study of ELF waves for large scale behavior modification on humans

were also mentioned. In November 1996, the CIA and DIA made public their 24 years of covert support for PSI-programs on "remote-viewing." Since those projects were funded with about twenty million dollars, there is reason to believe that there were other programs concerned with parapsychology not yet disclosed.

We show in our actual book "MILABS: Military Mind Control and Alien Abduction"[6] that there is indeed a great military interest in the development of non-lethal and psychotronic weapons, which could support the hypothesis that such secret experiments may occur on humans and that these experiments are being hidden from the U.S. Congress and the public by placing the funding inside secret or "black projects."

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Biographie:

Dr. Helmut Lammer is an atmospheric scientist who works on various space projects and researches UFO and related phenomena in his free time. He is Austrian representative of the Mutual UFO Network (MUFON) and an associate member of the Society for Scientific Exploration (SSE). Dr. Lammer wrote five books on UFO phenomena. The actual book "MILABS: Military Mind Control and Alien Abduction", co-authored with his wife Marion is available via IlluminetPress in the USA, <http://www.illuminetpress.com>.

Evidence of Covert Human/Military Involvement in North American Alien Abduction Cases: A Reply

by Luis R. Gonzalez Manso
Malaga, July 1999.

Let me begin by stating my position and the points Dr. Lammer and I may even agree, in order to avoid useless discussions.

I have been following the UFO and alien abduction phenomena since the late 70s, reading a lot of material from USA, Europe and other countries. At present, I do not think that the alien intervention has been proved at all, and I really do not believe that there are aliens in our skies. To me, abductions have their origin in the human psychology and I do not agree with Dr. Lammer that "well respected researchers have shown that the 'core' of the alien abduction phenomenon, cannot be explained as (...) psychological phenomenon". However, this is not the point of the present debate.

On the other hand, in all his previous papers, Dr. Lammer consistently attributed to the military some technical capabilities far beyond the state-of-the-art at the time of the incidents. He wrote about implants, isolation tanks, fluid breathing, electromagnetic or microwave brain stimulation, Electronic Dissolution of Memory, artificial womb and incubator technology, etc. assuming such technology has been perfected, employed and operational for decades. Let us not argue with insufficient data. I will concede him that such capabilities could **now** exist at the disposal of US (and even allied) military forces. I do not think he has proved it at all, but it really does not matter.

Nevertheless, I will not accept any suggestions about "paranormal" phenomena or "psychotronic" warfare. Up to now, Parapsychology has proved nothing!

Finally, we will discuss only MILAB cases, that even Dr. Lammer admits are only a small percentage (10% - 20%?) of the total number of alleged alien abductions.

Before I start, let me a comment about Dr. Lammer's qualifications. I am not the only one [1] who considers that his MILAB research (beginning only in 1995-96) is very far away from his expertise as geophysicist. He relies too much in what the alleged MILAB victims tell him, but he does not seems to have a critical attitude about them nor he seeks objective evidence to confirm what he is told (not about the *possibility* of what they are telling, but about the *reality* of the kidnappings they denounce). He assures us that "I make an habit out of consulting with experienced professionals with many years of experience", but has he ever investigated one of this MILAB "on the field"? Has he ever discarded or explained away a MILAB case as false? Please, clarify and give examples (if possible).

To open the debate, let me dissect the title of Dr. Lammer's paper:

"Evidence" - In the **present** paper he does NOT offer enough evidence. He gives no statistics tables, etc. and he only mentions one of the MILABs allegedly suffered by Melinda Leslie. One point strikes me of her story. The military should already know that their "erasure" techniques are quite faulty, so it is really strange that they do not cover their identities more thoroughly (masks, overalls, etc.). For instance, they could simply put a hood over the abductee's head.

Before continuing the debate I would like to know the total amount of cases Dr. Lammer has obtained, and more important, the total number of individuals involved, as MILABs seems to be repeated incidents (i.e: he wrote about a case where the woman abductee is always kidnapped by the same officer in charge, on the same night or the night after an alien abduction experience, looking for a hybrid embryo) [2]. Another invaluable data missing are the time intervals between the MILAB experience and its investigation (if any).

Later, we will have a closer look to some of the evidence presented in other papers by Dr. Lammer.

"Covert Human/Military Involvement" - It is clear from the MILAB described in the popular UFO bibliography that Dr. Jacobs' idea that MILAB abductees mistake human-like alien/hybrids dressed in military-like clothes and uniforms for US military personnel [3], is wrong. The problem is not (as Dr. Lammer comments) that it would be easier to accept criminal and unethical MILABs than alien abductions, but that there is no clear cut way to judge which testimony to accept as credible. Once you gave the first step to believe that what an abductee tells you is objectively real, you have to accept ALL he/she tells you, and you quickly find yourself appealing to "screen memories", "staging", etc.

Curiously, there are no MILABs predating December 1987 (or, more precisely, even if there are, the accounts were always "remembered" after this date). It was then that the infamous John Lear published a press announce revealing "The Horrible Truth": an alliance between the US Government and the aliens. We even know that one of the first MILAB abductees (Karla Turner) was present in the 1988 MUFON Symposium where John Lear talked at length about this issue [4]. Few months later, Casey Turner will have an strange "dream" where he heard an helicopter but out of a cloud came flying a late model white pickup! In 1991 he was hypnotized about this incident by Barbara Bartholic (who is called "the Reptoid specialist") and a MILAB developed.

Dr. Lammer insists that his data have first been reviewed by professional medical therapists before they were included in his work [5]. I suppose he refers to people as the already mentioned Barbara Bartholic, the (late) Karla Turner, Dr. Richard Boylan (whose license was revoked) and others who already believe in alien abductions. I do not accept them as properly qualified.

Another point seems strange. Why "covert" operations? If there are really aliens abducting people around us, surely the Governments would find enough volunteers for such a matter

of world security. Even if most of the abductees end up with a positive attitude towards their experiences, they surely would like to pay back! . But we all know about the "UFO cover-up", politicians will never admit the existence of aliens among us for fear to the public reaction. Simple! You just set a UFO organization as a front to do the same things with volunteers that not even had the "need to know", and with a big secret (not even illegal) budget, and all the money you save from the unnecessary MILABs could be employed to better ends.

The problem here is that the MILABs accounts themselves do not allow Dr. Lammer to decide. The MILAB scenario he describes is much too complex: Not one, but three different human groups will be involved:

- a) "The first group is interested in mind and behavior control experiments. I found indications of sensory deprivation experiments, liquid breathing experiments, experiments on electromagnetic stimulation of the temporal lobes, brain research and implant research".
- b) "A second group seems to be interested in biological or genetic research. Some MILAB victims recall seeing humans in tubes filled with liquid and genetically altered animals in cages during their alleged kidnappings inside military underground facilities.
- c) "The third group seem to be a military task force (...). This group appears to be interested in the UFO/alien abduction phenomenon for information gathering purposes"[1]

"Are MILAB abductees military programmed "Manchurian Candidates" who spy for a secret military task force in alleged alien crafts?" [6]

Others, as Martin Cannon [7], adopt a simpler hypothesis: the alien abductions are not real, they are staged as a cover-up for illegal experiments. The main problem for this hypothesis is that there are too many abductions and, despite the fact that USA focus the bulk of them, they appear all over the world, even in countries with antagonistic political regimes.

Why would a group interested in mind control experiments use alleged alien abductees? If they created them all, the experiment is clearly out of control, nobody could follow every subject in every corner of the world. If they take advantage of an already existent "psychological epidemic" as a cover for their experiments with some of the alleged abductees, they introduced an unknown variable that could distort their studies. Besides, their accounts will be publicly known more easily (due to their UFO connection) and ridicule is a very bad cover, sooner or later somebody will investigate (such as those pestering ufologists!). Finally, if the subjects are really abducted by aliens, THEY will probably be the real controllers, making them useless for mind control experiments.

The group interested in biological or genetic research faces similar problems. Genetic experiments with animals (or even humans -cloning-) do not need any cover, just secrecy.

The material you may need from outside (animals, ova, sperm) you can more easily buy than abduct. And you never need to take a conscious human inside your secret laboratory for anything. Not even to give him an implant!

The third group has its problems reversed. If alien abductions are not real, all its criminal activities are absurd. If there are alien abductions but in a very small number, how can they distinguish them from the big bulk of frauds, hoaxes and psychological nightmares? Are we to assume that all the MILAB/alien abductees are the real ones? I do not have the data (maybe Dr. Lammer will share them with us) but reading the stories of several public MILAB/alien abductees I do not find much coherence between the aliens and the activities described by each of them.

"North American Alien Abductions" - We all know about abductions from all over the world. It is true that the "epidemic" centers in the USA (and Canada), but there are cases in Europe and Australia, and also in South America and the old communist countries. I am sure that given enough time and effort, MILAB cases will also appear outside North America. In Europe, ufologists are usually more sceptical, so maybe Dr. Lammer should contact his Brazilian colleagues or the Eastern countries. Now that they know what to look for, it would be interesting to know if they find them.

What is Evidence?

Considering the pernicious effects such a belief may have in the abductees themselves (not to say among the lay public), one should at least ask for enough evidence. This is specially the case when the abductors described are not omnipotent aliens, but human military people. Besides you should take in consideration the disturbing consequences of this new twist in abduction research. It seeds distrust against our political establishment (who should know AND allow such a pervert behaviour) and against the people we have elected to defend us. To accept such a terrible situation as fact we should demand incontrovertible evidence.

But, what have we got instead? The claims made by several witnesses (usually after undergoing hypnosis) that they were abducted by soldiers and carried to an underground facility where they were used for mind-control, behaviour-control experiments, etc. To go beyond mere wishful thinking, Dr. Lammer should cover the following points:

- 1) He should differentiate which data came from traumatic flashbacks (how did he know they are traumatic?), from reality-like dreams, from hypnosis regression, or from consciously remembered experiences.
- 2) He should specify when the alleged experiences took place. For instance, in one of the examples he mentioned [2] it seems that the main MILAB experience described took place in 1970, but it was not investigated until September 1995. Is there any contemporary (not 25 years later) evidence about it?
- 3) Is there any material evidence of all these stories? Remember that we are dealing here with human kidnapers, so all the forensic techniques are useful. Their IV, instruments, implants, gynaecological exams, drugs and physical restrains (not to

say anything about dust in the soles, nails, etc.) should leave traces. Besides, there should be additional eyewitnesses and clear evidence of "missing time".

As an example, I will address the cases he offered to EJUFOAS:

"Michelle" [2]

During her MILAB in 1970, "Michelle" is immobilized by means unknown (even now, 25 years later we can not immobilize a person in such a way) and carried by jeep to an underground complex. Has anybody searched for such a definite location in the dunes of Montauk?

There she is escorted by military personnel into a dark office-like room where she is raped by a Reptilian. This is so unbelievable that Dr. Lammer suggested that she was simply drugged and raped by a human! But with the same logic maybe she was simply drugged and hallucinated the rape. Where and how can Dr. Lammer differentiate between "memories" (recovered under hypnosis) and hallucinations, it was never satisfactorily explained. The argument used by Dr. Lammer citing Dr. Grof experiments with LSD is very weak because Grof's subject identified himself **with** a large reptile, something completely different to be raped by one.

He also suggested that such a procedure (drug-induced non-human beings) could be used to ridicule the whole MILAB scenario. But why worry about that, if they are apparently able to erase all the subject's memories (by means also unknown) who do not remember them until *25 years later!* Even more, why abduct a civilian when they can use more controllable guinea pigs — soldiers, convicts?

The second example refers to traumatic flashbacks of being in an isolation tank... or such was the interpretation of Dr. Lammer. The declassified CIA documents cited mentioned that "total isolation is (...) the removal of ALL sensory impulses from an individual" (emphasis mine). But "Michelle" can feel wires attached to her, can move arms and legs slightly, can smell something minty, etc.. Afterwards she describes an "otherworldly journey" to a desert-like area, mountains, etc.. Dr. Lammer found this unacceptable so he decided it was an artificially induced out-of-body experience or hallucination. To defend such alternative, he cited some experiments by Dr. Lilly but none of his subjects described anything else than mixtures of oneiric imagery, never a "journey".

In order to convince us to accept most portions of the narratives as real, he referred to supposedly declassified CIA documents on mind-control experiments, but the ones mentioned are not properly referenced. Are they genuine?

Even if they were, and even accepting that the military do not always ask for permission to their subjects, the documents only mention "stimulants on the balance mechanisms in mammals and bird" (emphasis mine). Too far away from mind-control, considered as the ability to force a human being to do something against his will.

Most important, what kind of mind-control do they have over "Michelle"? It is never described.

Melinda Leslie

She was kidnapped, drugged and taken by two men in camouflage clothing to a military facility (how far away?) where she awoke in a large hangar near a strange triangle-shaped craft. Then, a man in a naval officer uniform and two men in white lab-coats took her through halls and metal doors to an interrogation room. They sit her in a chair, and gave her a shot in the arm and a strange drink. Afterwards, a red-haired military officer asked her questions concerning her alleged alien experiences, specifically about UFO technology, but she does not remember giving the answers.

If I were the officer in charge, I will shoot those incompetents! Even if they need her awake for the interrogation (more about that in a moment), they should have carried her inside unconscious (or at least, blinded with a hood or similar). Melinda can now give a detailed description of several of the officers involved -enhanced if necessary under hypnosis) who should work in a military facility nearby (how long was this MILAB?). A report to any law enforcement agency (she does not even need to mention her other alien abductions) will be enough. If this were not possible in this old case, she should consider the possibility for the next one (that will surely come).

In a recent paper [6], Dr. Lammer suggests that the reason why Melinda did not remember her answers is because a military psychiatrist could have split her personality, creating a personality B, an artificially created military spy. After an alien abduction the military got access to personality B and interrogated it. The interrogated abductee can't remember what she replies to the interrogator. Most remember some of the questions, but not the answers. We can see how Dr. Lammer works. He takes hold of a small detail and twisted it to get a complex explanation. And now, besides mind-control victims, he can also enlist Multiple Personality Disorder victims. Several therapists have found MPD cases who claim that they were programmed by secret military/intelligence agencies in military hospitals.

CONCLUSION

Dr. Lammer offers nor hard evidence neither independent witnesses of any MILAB. In the growing paranoia so prevalent in the North American UFO scene, it is not strange that some abductees would pick up "mind-control" ideas and mix them with their own. All the technology described (underground facilities, isolation chambers, fluid breathing, etc.) is also quite popular in thrillers and science-fiction books and films (to offer just an example, the plot of *The Abyss* -a 1989 SF film- is centered around fluid breathing; and do not forget that *The Manchurian Candidate* was filmed in 1962 by John Frankenheimer).

Dr. Lammer points that data from the Abduction Transcription Project support the MILAB hypothesis. The truth is that, according to the data presented to the 1997 MUFON UFO Symposium [8], from a total of 254 cases, they have only 10 cases where government

personnel acts in concert with alien beings or there is some government intrusion or harrassment in the same timeframe as an alien abduction. This amount includes 7 cases of black helicopters, and in one of them, "for at least the fifth time in two years, within hours of an alien abduction a woman is drugged and removed by van from her home by men in uniform"! There are another 32 cases where the subjects described underground government, alien, or shared facilities. Unfortunately, Dan Wright did not break down them. Besides, some of the data surely overlaps, as the same researchers contribute to both studies.

I do not deny that there is indeed a great military interest in the development of non-lethal weapons, but such a real motivation does not support the hypothesis that it should involve experiments on civilian people. It is true that during the Cold War there were several Government-sponsored illegal and unethical experiments, but I do not think possible that now, in the nineties, such operations are still occurring (and increasing) in Western democracies. To convince us of such a preposterous claim, Dr. Lammer should provide the reader much more than purely anecdotal stories and several intriguing technological possibilities. The fact that some abductees describe procedures and experiments similar to those described in the conspirationist literature about "mind-control" do NOT prove that they were really subjected to them.

In the final analysis, it does not matter if there are aliens in our skies or military covert groups using advanced technologies. Of course, they might exist. The question here is: are the stories related by MILAB abductees objectively real? Possibility and prospect do not proof make.

Instead of combing old declassified documents to extrapolate the technology described, Dr. Lammer should center his efforts in the more pedestrian detective and forensic activities, to collect real evidence. I do recommend him to consult the techniques already described by Victoria Alexander in 1993[9].

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A reply by Helmut Lammer Ph.D.
concerning the comments of Luis R. Gonzalez Manso

This is my reply to the sceptical comments of Mr. Gonzalez Manso concerning my research and my qualification in alleged MILAB cases (Military abductions of alleged alien abductees).

Before I make some general comments about the continuing debate on MILAB cases I will write something about my qualifications in this research, since several individuals including Mr. Gonzalez Manso have the opinion that a Geophysicist has no qualification for abduction research. Although I do not know which qualifications Mr. Gonzalez Manso has, however, his scepticism should be valid for other abduction researchers who are artists, historians, anthropologists, former secretaries, engineers, etc. too.

As an atmospheric scientist who wrote several scientific papers, which were published in international well respected peer reviewed scientific journals I am trained in the scientific method, therefore, I know how science works.

I consulted or was helped by professionals for most of the cases which I present in my study.[1] I agree that it is the work of psychologists, psychiatrists or trauma therapists to conclude if an abductee has a mental disorder or if he/she is a fraud, has hallucinations or suffers from paranoia. If the professionals cannot find such an evidence than we have to deal with an unknown psychological problem, exotic phenomena like Albert Budden's EM-exposure hypothesis, or with experiences who have their origin in reality.

I am not one of those who believe wholeheartedly or 100 percent in the physical existence of alien visits although I have an open mind to such a probability too. Sceptics of my research, interestingly mostly people who are related to the nonlethal weapons community claim always that I attribute the military researchers some technical capabilities far beyond the state-of-the-art at the time of the incidents. It is easy to get such an impression since they mention implants, bio-chips, artificial wombs, cloning and brain wave stimulation in one sentence so the reader may think that I believe that the military had such a capability 40 years ago.

If one does his homework one will find that the CIA and various non-government research organisations contacted bio-medical and mind control research on thousands of citizens, often without their knowledge. This research was largely concerned with radiation exposure, nerve gas, hallucinogenic drugs and various biological agents. In 1994 the US government lifted the lid on such secret experiments and it was disclosed that more than 23,000 Americans were used in about 1400 different projects during the 30 years following the war. One should also note that many of the projects make no sense today but they were done.[2,3]

I reviewed hundreds of former secret and top secret documents which were released via the FOIA in the USA. After reviewing these documents one can see that the intelligence

agencies experimented with miniaturized electrode implants with animals in the 60s. There is also one research proposal of the CIA MKULTRA Subproject No. 94, where the agency propagated secret field studies of these technologies on humans.

These documents are an evidence that they had an interest in such field studies, although we can not proof that they have done it. They were also interested in EM-exposure and remote brain wave manipulation, etc. Miniaturized electrode implants of the 60s have of course nothing to do with modern bio-chips of the 90s. The same is valid for research in artificial wombs and genetic engineering. I have never claimed that the military had such capabilities since the 60s. But if one reviews the open literature in such research projects and if one subtract the ethical factor which should be valid in the open research community it would be possible to do such research in secrecy at least since the 90s or mid 80s.

Mr. Gonzalez Manso asks why a group interested in mind control experiments would be use alleged alien abductees? I can also ask him why there are so many people who work on nonlethal weapons, where some of these are directed energy weapons who may produce the same effects on humans like Albert Budden's EM-exposure study, have an interest in UFO phenomena and alien abductions?

I urge Mr. Gonzalez-Manso that he should read the biological effect papers from the nonlethal Defense III conference and he will find that the researchers claim that weapon test data from animal research it is not transferable to humans. Therefore, they argue that the best test subject is the human, although they claim that they will not use unwitting human test subjects.[4]

On the other hand if a covert military group believes that there are real alien abductions too, they could distinguish them from the big bulk of frauds, hoaxes and psychological nightmares, by monitoring and examining some abductees carefully. They could choose a particular abductee if they have independent evidence like radar observations which show anomalous objects near the area or the house of a particular abductee, etc.

Although books from some MILAB abductees are available since the early 90s also in Europe and South America I came not across one abduction story who match the pattern which is described in the USA cases. I researched this topic now since 1995 and have written some overview articles which are available via the Internet and two books about MILAB cases in Europe but I got not one abduction case from European countries, South America, Australia, or elsewhere where someone claimed that he/she had experienced a military abduction, examination, interrogation, etc.

The case of Michelle is well investigated and supports the MILAB hypothesis. Michelle has conscious memories and was hypnotically regressed by Dr. Maurice Kouguell who holds certifications in hypnosis from the International Medical and Dental Association and the National Guild of Hypnotists. He is a Fellow of the American Association of Professional Hypnotherapists and the National Board for Hypnotherapy and Hypnotic Anesthesiology. He

also holds certification as a Behavior therapist, Master Addiction Counsellor and Forensic Criminal Justice Specialist. Dr. Kouguell is also a Diplomate and Board certified member of the American Academy of Experts in Traumatic Stress and member of the Academy of Medical Hypnoanalysts. He holds a Ph.D. in Counselling Psychology and a Doctorate in Clinical Hypnotherapy (For more information on Dr Kouguell go to: http://www.brooksidecenter.com/dr_maurice_kouguell.htm). I got several hypnosis transcripts where I could see that Dr. Kouguell used not suggesting questions on Michelle. I believe Dr. Kouguell is well qualified to know which parts of Michelles experiences were fantasies, hallucinations, traumatic or not.

It is not possible for me to travel to all places where alleged MILAB abductions occurred, since I do this research during my free time. Therefore other researchers including the abductee went to the place and made photos of the entrance of a now closed military underground facility near Montauk. Since the base is closed, nobody will find instruments, drugs or other physical restrains today. It would also not be possible for civilian researchers or people who are not in the "need to know" to go inside a military underground bases and search for material evidence.

The LSD/Reptoid transformation scenario is only an example for an explanation. I agree with Mr. Gonzalez Manso that Michelle could also have been drugged and hallucinated the rape scenario or probably a mask was used in this alleged crime.

I have communicated with several people who are therapists of former MKULTRA victims and with people who are victims of the MKULTRA experiments of the late sixties, concerning the isolation tank research projects. From the knowledge of such therapists and the experience of former test subjects I know that the experimenters used electrodes who were attached on wires for monitoring the isolation tank test subjects who floated in warm salt water.

It should also be clear that not two people would experience the same hallucinations or outerworldly journeys during an isolation tank experiment. One can see from Dr. John Lilly's studies that everybody would experience hallucinations etc. if he/she floats long enough inside a water filled isolation tank. I urge Mr. Gonzalez-Manso that he should read Dr. Lilly's book "The Deep Shelf" [5] where Dr. Lilly wrote that hallucinations were common in sensory deprivation research. "After some period after entering the tank, they would continue for hours...there were usual out of body or out of the right time hallucinations, etc."

Intelligence and military agencies were very interested in isolation research, since isolation is a very powerful mind control tool and was/is used later for interrogations of prisoners of war, etc.

Melinda Leslie's experiences were/are also investigated by a competent therapist. I have also got four tapes concerning her regression sessions. During these sessions the therapist tried to close the memory gaps via hypnosis. The uncovered MILAB scenarios

were very emotional, especially a military interrogation session and a follow-up brain washing procedure. Readers who are interested in her experiences can contact Melinda Leslie via E-mail (Melinda-Leslie@msn.com).

My hypothesis that artificially MPD-programming may be used in MILAB interrogation sessions is not only based on Melinda Leslie's case. Her case is only one from others which were independently researched. Dan Wright informed me that the cases in the MUFON Abduction Transcription Project (MATAP) are similar than the cases which I have investigated. Dan Wright wrote me a letter, where he claimed the following:[6]

"The experiences recalled by several of your MILAB subjects bear striking resemblance to those separately recalled by persons in the MATAP. Examples:

1. A hangar with UFO-like craft(s);
2. One or more cubical-like rooms within a very large underground room or cavern;
3. Military officers with name tags and other identifiers removed from their uniforms;
4. Use of drugs to elicit responses from abductees;
5. Berating the subject to relate what he/she was told or shown during the alleged alien abduction;
6. Brainwashing the subject to believe afterward that the interrogation did not happen.

During the interrogation all abductees remember some of the questions, but not what they answered. Therefore, I do not agree with Mr. Gonzalez Manso that this is a small detail which I twisted into a complex explanation. I talked with various psychiatrists and therapists who told me that such a scenario could be possible.

Note that this pattern has been found in various MILAB cases, although prominent abduction researchers and believers in the ET-hypothesis like Hopkins, Mack and Jacobs have not published such scenarios in their books, have never mentioned them in their talks and such cases were never shown in UFO documentaries, talk-shows, etc. Therefore, the possibility that people could be contaminated with MILAB-details is much smaller than for usual alien abduction scenarios which have found the way into the mainstream and pop culture.

I suggest that MILAB cases can be used as a kind of reality marker for abduction researchers. If all MILAB cases are based on a new psychological phenomenon which occurs only in Northern America, than "ALL" usual alien abduction cases would have a similar psycho-sociological solution.

I agree with Mr. Gonzalez Manso that we should expand this research in detective and forensic activities, where the abductees and the researchers should concentrate on bruises, traces of a rape, physical symptoms, lap test results of drugging, the detection of body penetrating EM-waves, etc...

But I am also not the only one who believes that the qualifications in pedestrian detective and forensic techniques of the recommended works by Mrs. Victoria (Lacas) Alexander are far away from her expertise as a self confessed "all around party girl" and secretary. I recommend Mr. Gonzalez Manso to read her article "IANS Symposium Spoiled by Outrageous Elitism"[7] and others, which were published shortly before she married a former project manager for nonlethal weapon programs.

On the other hand if I had written a paper 30 years ago, concerning some indications that the CIA or military agencies are involved in mind- and behaviour control experiments on unwitting civilians - people which they have sworn to defend - Mr. Gonzalez Manso would have written the same sceptical comments than for the present MILAB cases although time had shown that he would be wrong.

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Final comments of MILAB exchange

by Luis R. González Manso
Málaga, September 1999

I can give you a short or a long reply.

The short one: I asked for quantitative data about MILABs, but Dr. Lammer (the expert in the scientific method) just supplies us with more anecdotes. Why bother to continue?

The long one: (addressing each of the points of his reply)

To be a sceptic you do not need any qualifications, just common sense and rationalism (the same applies to recommend the use of modern forensic techniques in abduction research, you do not need to marry a former project manager for nonlethal weapons programs). Besides, rest assured that my scepticism applies to all the other abduction researchers without qualifications in Psychology (and even with them -John Mack-). Finally, I solemnly declare that I have never had any relationship with the non-lethal weapons community... except for my green belt in judo.

As a scientist who confronts Nature with instruments that give him reliable data, Dr. Lammer may not be used to fallible human witnesses who can only offer their anecdotes, without any verifiable evidence to support them; even more so, when as he admitted, he does not meet them in person nor visit the places of the alleged MILABs. Dr. Lammer satisfied himself with the help of several self-called professionals, whose credentials I keep questioning. For instance, he cited the impressive credentials of Dr. Maurice Kouguell. Well, a long list of titles do not guarantee seriousness (shall I remember John Mack again?). Consulting his web page we discover that Dr. Kouguell is really a New Age guru.

And now, Dr. Lammer enlists Albert Budden's EM-exposure hypothesis! How can it fit? Surely, Dr. Lammer will find a way.

Dr. Lammer devoted the bulk of his reply to discuss and document the alleged psychotronic secret field studies, when in my commentary I conceded him that point, precisely to avoid his diversionary tactics. I will say it again: possibility and prospect do not proof make.

In his paranoid position ("sceptics of my research, interestingly mostly people who are related to the nonlethal weapons community") Dr. Lammer equates interest in UFO phenomena by some people with the motivations behind his proposed secret group performing MILABs. In England, we know that there are several librarians interested in Ufology. Are they also suspects?

I must warn Dr. Lammer that one of the best signs of a crackpot theory is when its defenders, instead of giving arguments and evidences, consider its critics as part of the enemy, trying to silence them. Such a pretty obvious attempt to win readers over will not work here.

All the MILABs examples given come from alien abductees (and researchers) already submerged in the UFO world (symposiums, gatherings, support groups, etc.), so it is highly likely that they could be contaminated with MILAB (more precisely, "mind control") details. Almost all the MILABs details mentioned in the MUFON Abduction Transcription Project can also be found in mainstream abduction cases (Travis Walton, Bebeoduro, Pascagoula, MIB, etc.). I must insist that some of the cases could be duplicated in both studies.

Please, Dr. Lammer, do not suppose what I could have written 30 years ago. Even if I had been sceptical about those CIA experiments on unwitting civilians during the Cold War... and wrong, it does not imply that you are right nowadays. Such is an emotional appeal not a sound reasoning.

But not everything is lost. At least, Dr. Lammer has finally offered us a fool-proof system to discriminate between "real" and "false" alien abductions: the military know ! Any MILAB victim is a REAL alien abductee!

The following are responses to the Forum debate article published in the Launch Volume (September 1999).

Having read with interest the launch issue of EJUF0AS, I felt compelled to write because I cannot agree with Albert Budden and his Forum Debate article "Scum, Sludge and Residue: Refining Ufological Information".

While we could possibly learn from this article on how 'ufologists' research, I find his views in dismissing major UFO incidents such as Roswell, Hopkinsville, Sorroco and Pascagoula both preposterous and absurd. In our democracy, everyone is entitled to free speech and opinions, but while Mr Budden states that 'there has been generous measures of biased reporting, exaggeration and plain old fashioned fabrication to sell books and boost egos of self-styled UFO experts; surely this is exactly what fits his views.

In my view, Mr Budden is himself biased with 'tunnel vision' towards his 'Electromagnetic Pollution Approach'. He clearly believes all UFO reports of yesterday, and virtually all of today can be explained by the EM approach. I am an investigator for a UFO network group, and fall into two camps of belief. While I am of the view that alien intelligences do intrude into our world from another dimension, I also fall into the 'agnostic' camp as I do have an open undecided mind as to the cause behind the many UFO reports, I am open to explanations provided they are rational and can be researched to prove their validity.

To dismiss well-known UFO cases such as the Hopkinsville incident is to me fabricated nonsense.

The Hopkinsville case has always interested me, because of the fact of the multiple witnesses which gives it credibility; and the unusual appearance of the creatures themselves.

The incident was witnessed by the "Sutton" family numbering eleven, of which there were eight adults - all over the age of twenty, and have never retracted their claims in the years since. The day after the incident, 'Andrew Ledwith' (an engineer at the local radio station, with an interest in UFOs) interviewed the family, who all told the same events and when asked to draw independently what the creatures looked like - drew very similar images!

True, there has been sceptics who say the family faked the whole event, but investigators who later interviewed the Suttons, found them simple farm people who could not fabricate a hoax. I am prepared to consider the EM pollution approach if research and tests can prove it to be behind UFO reports, but not in the Hopkinsville case. We have eleven witnesses as I have mentioned earlier - eight of which are adults over the age of twenty.

Is Mr Budden asking us to believe that the whole Sutton family were experiencing the effects of the EM pollution approach, with 'hallucinations' from EM fields?

One or maybe two of the family possibly yes, but for the whole family to be experiencing the same effects that is pure nonsense, unbelievable and not possible. The same applies to the many witnesses in the Roswell case-again how can hundreds of military and civilian personnel all be suffering from effects of EM pollution?

One could expect one or two, but not the number involved surely. To have a large number of military personnel experiencing hallucinations, trance states, blackouts, paralysis would be both dangerous and unacceptable in the armed forces-how could ones country be defended if its soldiers were all walking about in hallucinatory 'zombie-like' states. To sum up-a high number of EM pollution sufferers is incredible.

As Mr Budden further argues-certain electrical, landscape or geological features can cause EM fields which results in the symptoms experienced in the EM pollution approach; and that 'abductees' nearly always had a history of psychic experiences such as ESP or apparition encounters. However, firstly the Sutton family in the Hopkinsville case and those at Roswell were NOT abductees, and secondly there was not any close association with their homes of EM fields. There was a well at the Sutton farmhouse, where one of the family had go to draw water before the incident began, which could have been an EM field from underground water; but again this would have only affected that one person who drew the water.

Using John Spencer's filtering of UFO related information, my filter is not set too narrow or too wide. While I do not accept everything in Ufology as valid, nor do I dismiss things from the outset. I do recognise that some strange phenomena does occur, but have an open mind on whether exotic alien intelligence is involved or not.

An UFO investigator of today and this includes Albert Budden, can use the EM pollution approach in researching UFO reports if it can be proved valid; but to quote Mr Budden's own words-"such accounts as the Hopkinsville case in the USA or the Livingstone case in Scotland are preserved in amber and are untouchable".Cases such as these, which occurred in the late 1940s and 1950s are too far back in history and therefore cannot be reinvestigated.

To use his analogy of stirring a glass of water, I cannot understand how Mr Budden can judge and pass verdict on cases that he classes as absurd or unlikely. To class the Hopkinsville case, the Roswell incident and the Sorroco Landing 'sludge' or 'scum' cannot be proved true or not. Mr Budden says they cannot be verified, so I have to ask how he can determine whether past UFO cases are 'sludge' or 'scum' - if his own words state they cannot be verified or tested because they are distant phenomena. If they cannot be verified then surely it is impossible to say which cases would sink as sludge, or float as scum.

The EM pollution approach is feasible and can be used in modern day UFO research, and one which investigators should consider; but there the line is drawn. No one can dismiss past UFO cases as nonsense, because they are too distant in time to be re-investigated and as such, we are unable to say whether the EM approach or anything else was the cause.

Duncan Campbell

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Re: Forum Debate Article

I personally feel that Albert Budden's theory can go a long way to explain some features of the UFO Phenomenon. However, the UFO phenomenon now covers so much territory that it does not seem that any 'single' theory can explain all of its features.

Budden proposes discarding certain data, so that his theory can explain all of the UFO phenomenon. His analogy of using chemical separation of sludge to discard irrelevant data (to his theory) seems inappropriate. If we were to use a stronger liquid than water, then we can dissolve everything; making all data disappear, and thus there is then no need for any theory.

Sceptics, critics, believers and so forth continually argue over what is important. Budden might propose using water for his chemical separation but this would not necessarily meet with agreement by everyone else. People just seem to argue continually in circles with one another. People form a belief and then believe that everyone should be agreeing with them. Unfortunately what one person believes to be sensible, is not what another person might believe. Until 'we' realise this; we are stuck arguing; and getting nowhere.

For me it seems purely subjective, as to what data we ignore. Ideally we should accept the limitations of any theory that we are advocating. If we are allowed to ignore some data then I do not see why we should not be allowed to ignore everything. (Data needs to be accounted for in some way; or accepted as unexplained for now with the hope that it will be explainable in the future.)

If Albert Budden is serious in completely explaining the whole UFO phenomenon, then he cannot ignore the physical evidence, and needs an explanation for it. He thus needs to be able to explain how trees are bent by hallucinations. In his article, he mentions that Budd Hopkins dismissed his theory, because it could not account for that.

Maybe he could care to explain the following 'tree bending':

In a Russian UFO incident on 27 Sept. 1989 reported in Voronezh Kommuna on 3 Oct. 1989 as 'A Soccer Game with Aliens' - schoolchildren playing football and 40 adult witnesses saw a UFO, leading up later to a guest appearance by a 10 foot alien with seemingly three eyes. The UFO brushed against a poplar tree and bent it. The incident was derisively dismissed by western media as UFO seen by kids, ignoring the adult witnesses, (see UFO chronicles of the Soviet Union by Jacques Vallee p 41- 43)

If we take the hypothesis that it was some kind of 'mass hallucination', how do we account for the tree bending? If we ignore the tree bending, then we might as well ignore the whole sighting. (How do we know how far, do we set our knowledge filters?) The Western media was able to set their knowledge filters to ignore the whole incident.

Roger Anderton

Below is Albert Buddens reply to the previous two articles

The writer speaks from an utterly uninformed position. Firstly, he/she assumes that I only deal with the subjective phenomena of hallucination (of which I have no doubt the CE3/4 experience is an example) to account for the UFO phenomenon. However, from my investigations over 19 years now, *very few such experiences involve any aerial body at all*. That is to say, the abduction phenomenon has nothing intrinsically to do with "UFOs". The writer may wonder why it is therefore, that my latest book is called "Electric UFOs-fireballs, electromagnetics and abnormal states"(Blandford 1998) For many years now I and others such as Jenny Randles, Prof.M.Persinger, Andy Roberts, David Clarke, etc have accepted the concept of unclassified atmospheric phenomena or UAPs. It has become evident to many investigators that there exists in the atmosphere, centres of electromagnetic energy that derive from interactions between the meteorology, geology and artificial electromagnetic environments. Natural examples that evidence has shown, are emitted from geological fault lines during tectonic strain, and are known as earth lights.(Devereux/McCartney. 1982) There are many examples where such UAPs have induced mechanical, thermal and electromagnetic alterations to the physical environment. An interesting case was described by Paul Fuller in an early edition of New Ufologist, where a large area of soil was effectively "raked" into parallel furrows below the site where this ball of light (BOL) was seen to "land". Other examples abound in the many issues of the Northern UFO News edited by Jenny Randles, throughout the 1980s especially. UAPs however, are not nuts and bolts, alien built flying saucers, which I firmly believe do not exist.

The most interesting aspect from my point of view are those cases where witnesses were close enough to a UAP to be affected by the fields emitted, as they develop the same physiological and perceptual features as the other experiencers in the EM pollution prone populations I study... That is to say, close encounters with large balls of light constitute major electrical events and can produce visionary/hallucinatory episodes, or in most cases, amnesia and/or unconsciousness.

Now regarding the aspect of explaining the UFO phenomenon as a whole:

Those who have not realised a number of fundamental aspects about this as a problem to solve,(including this anonymous writer it would seem) will just continue to bang their heads against this non-enigma for ever with no success. For example, the writer does not seem to realise that **it is just logically impossible to produce an approach which will explain all UFO phenomena, because it is a mixture of elements, many of which are entirely unrelated to each other**. It would be like trying to find a common denominator for tennis, the planet Mercury, toffee and parrots of the rain-forest. That is to say, *we are not studying UFOs at all, but reports of UFOs*, and there are countless stimuli at large which can and do induce UFO reports.

All investigators know (or should do) that 95 % of promising UFO reports turn out to be mundane stimuli seen under unusual conditions. Kites, birds, conventional aircraft, airships, balloons, astronomical bodies (especially Venus!) model planes, military prototypes, secret experimental devices (the Stealth was the "black manta-ray" until it was shown to the public) Add

to this the many hoaxes, exaggerated reports and apocryphal stories as modern folklore, *and you will get some idea as to the very wide (and unrelated) range of stimuli that can give rise to a promising UFO report. If any of these are investigated by someone who does not have enough information, for example, they will remain on file as mysterious UFOs.* Of course, there is also a range of UAP types, to confound the picture even further. So, when someone proclaims that I have not found the overall explanation for the UFO phenomenon, they must assume that there is one, and it is clear that this person has an extremely simplistic and unsophisticated viewpoint, and has absolutely no real understanding of the issues involved at all. **There logically cannot be an overall explanation for "the" UFO phenomenon.**

UNIDENTIFIED BY WHOM EXACTLY?

And this brings me to another problematic aspect about trying to discover an overall identification for UFOs, and that is the question: **unidentified by whom? Who is it that is attempting the identifying?** To a small native child who has never seen a helicopter, it will be a UFO. So are helicopters UFOs? This is another aspect which renders the so-called UFO phenomenon nonsense. It is a long redundant term that is a negative label. Now unclassified atmospheric phenomena as a term has been specifically given an area to which it is meant to apply, and has the descriptive implication of a body of established scientific knowledge of atmospheric physics. Ball lightning and earth lights were UAPs before they were identified and put in their meteorological and geophysical contexts. But UFOs? Such a label has no scientific home. It was originally devised by the U.S. Air force as a provisional label to categorise things in the sky for which they had no immediate identification, as after all, they would be somewhat preoccupied by such an area of the environment...

SCIENCE AND MEDICINE - NOT SUBJECTIVE IRRELEVANCE.

The writer also states that for him/her, it is purely subjective as to what data he/she ignores. I'm so glad that this absurd outlook does not apply to me, or many others who approach the phenomena that we are interested in from a scientific viewpoint. It shows how lost and directionless they are in their thinking. Some information is just not relevant to *the identification and scientific understanding* of a case, and if one takes **this** as a criteria, then significant aspects jump out at you from the mass of data you may collect., and some does not have any bearing, and are irrelevant absurdities. Also, some "information" that is presented as a serious case for study, will only be accepted as such by those who are gullible "believers", and just cannot see that anyone who plays devil's advocate with the case will tear it to shreds as being just plain silly.

A good example of this is the obviously apocryphal story given by the anonymous writer, where a ten foot, three-eyed alien bent a tree with its flying craft in Russia in 1989. There have been cases where tree branches have been broken and grass singed by some kind of UAP which also left EM traces. However, for the writer to think that this story represents any sort of valid data, something must be seriously wrong with their brain functions; no wonder they want to remain anonymous...

TO CONCLUDE:

I hope by this point that the reader realises how much of a rag-bag mixture "ufology" is, with no growing point where a stock of knowledge accumulates that the majority of specialists accept, just as there is with science. Unless one has developed an approach which links aspects to mainstream science and/or medicine, no progress can be made in terms of understanding the phenomena that fascinate us. The anonymous writer clearly has no direction him/herself but has the nerve to criticise me for dropping the UFO absurdities he regards as "data", and separate them out from the more tangible material I have developed as the EM pollution approach. It is only those who believe that UFOs represent an alien presence who want to artificially connect them to the "abduction" phenomenon. Has our anonymous writer wondered how it is that once such a separation takes place, the EM pollution approach represents an integrated approach which can actually predict which parameters investigators will find with such cases.

In fact, the alien abduction experience is really an environmental health issue, of which I am writing a monograph, where I hope it will be regarded as a discrete condition, hopefully in the future, known as Budden's syndrome, after the first person who described it.

Albert Budden.

ELECTRIC UFOS por Albert Budden

Blandford, Londres 1998. ISBN: 0 1131 2T30 6 (Tapa dura) 01131 2585 7 (Rustica)
Review by Luis R. Gonzalez Manso. Abril 1999.

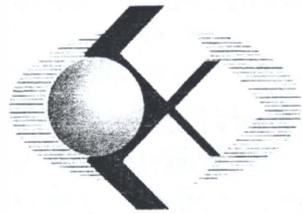
For several years, Albert Budden has championed (almost) alone a very peculiar explanation for the UFO Phenomena (more precisely, about abductions) which, turning down the ETH, tries also to avoid such a strong scepticism as considering them hoaxes. His hypothesis: abductions will be due to an allergic reaction by the witnesses to electromagnetic fields.

More precisely, he proposes that abductees, after suffering during their formative years a "major electrical event" (lightning strike proximity, major electrocution, etc.) become hypersensible to environmental electromagnetic fields (natural or -specially- artificial: pylons, radio transmitter, etc.) so as, if they live in an electromagnetic "hot spot" where several field overlap, they can reach a threshold, a load phenomenon that precipitates hallucinatory states, which are interpreted within an alien cultural context.

The idea itself has considerable appeal (specially among sceptics, who would not need to resort so much to hoaxes) and Budden has been able to answer some of the simpler criticisms. For instance, those incidents happening in rural areas or before the present time would be caused by natural electromagnetic fields around faults, etc. Unfortunately, as it is usually the case, maybe he tries to explain too much, when he applies the same mechanism to "haunted houses" or "poltergeists", or when he says that the witnesses themselves become electromagnetic broadcasters.

His methodology presents a different problem. When the investigator visits the house of the witness with his electromagnetic detector, never fails to find what he is looking for. When he interviews the witness following a specially-designed questionnaire, answers are seldom negative. The failure arises when nobody comments negative results with those same detectors in the houses of their neighbours, or when the questionnaire does not contains neutral questions or questions that should be answered in negative. Besides, the author (whose wife is, precisely, one victim of such "electromagnetic allergies" and he himself suffered a major electrical incident in his infancy) resorts to dubious and non-proved Holistic Medicine techniques to verify his hypothesis, enlists strange experiments based "on the secret works of Nikola Tesla" to demonstrate the electromagnetic levitation of non-ferrous materials (always outside the camera), or goes through all the medical vademecun looking for an electromagnetic explanation for a symptom, whose cause could be much more simpler.

All this leads him to suspect a terrible "cover-up" by the scientific establishment in order to prevent the bankruptcy of the telecommunication and energy industrial complex. Somewhere along this way a good idea full of promises to explain part of this many-sided phenomena has slipped again. I will recommend a careful lecture of this book in order to design experiments which could help us to determine how much truth is in it.



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PRESS RELEASE

For year 2000 the Anomaly Foundation provides scholarships, prizes and financial aids

MODERN-DAY UFOLOGY FACES NEW MILLENNIUM

The Anomaly Foundation (www.anomalia.org), a not-for-profit association established in Spain to promote a scientific study of the social phenomenon known as "unidentified flying objects" (UFOs) has just reported its objectives for year 2000. Among its aims, there is the design of a **Case Data Base**, a computer-based bank of data to manage several thousands UFO reports available for the last 50 years. Also, under the coordination of Barcelona University's professional documentalist Mr. Marti Flo, a **Bibliography Data Base** will be developed to compile over 1,300 international academic references related to the UFO phenomenon from a multi-disciplinary viewpoint.

The 1999 **International Zurich Prize**, funded with 250,000 pesetas (US \$ 1,670) by the Zurich insurance company, has been made public. It has been shared between the MA thesis by Italian sociologist Miss Stefania Genovese from the Università degli Studi (Milano), devoted to the mythological components of the UFO imagery and phenomenology, and an essay authored by the American researcher Mr. Martin Kottmeyer discovering elements from nuclear war panic in the background of UFO report waves in the United States.

Additionally to this, for year 2000 the Anomaly Foundation will also provide the **Universitas Scholarship** (partially funded by the Fund for UFO Research, Washington; D.C.), mainly addressed to the university students and graduates, as well as the **R. Caruncho Investigation Fund**, which will facilitate four grants for field investigation. By-laws are to be consulted in the Foundation's web site (www.anomalia.org).

Last year's awarded research, **The Manises File**, an outstanding work revealing the clues to the most important and complex UFO observation in Spain will be published in book form. Authored by engineer J. A. Fernandez Peris, it reports how on November 11, 1979 some weird lights made the pilot of a passenger plane changed its flight course and land in emergency in Manises airport, and the events that developed. Pre-edition reduced acquisition price established from Apartado 5041, 39080 Santander, Spain.

In Spain, donations to the Anomaly Foundation are tax deductible in 20% of the income tax. Financial contributions are solicited to the following bank and account: Banco Bilbao Vizcaya, account number 0182-6005-20-0010656962.

SUBMISSION GUIDELINES FOR POTENTIAL CONTRIBUTORS.

The European Journal of UFO and Abduction Studies is the journal of TRUTH [The Totton Researchers of Ufology Theory and History]. The journal has been initially set up to bring the European UFO community closer and is primarily, but not exclusively aimed at these organisations. The journal is objective in nature, allowing an outlet for the broad spectrum of issues related to UFO and Abduction phenomena. This includes all academic based subjects (e.g. astronomy, biology, psychology etc.) as well as spiritual aspects, scepticism and new theoretical issues. Therefore, the European Journal of UFO and Abduction Studies wants to publish ufological papers and ideas from a wide range of individuals, organisations and stand points.

Types of papers and articles we are looking for

In reality, there are no papers that we will not consider. However, to help potential contributors, below are broad areas you may wish to write about:

Theoretical issues. These articles may assess the validity of existing theories, expand on existing theories or present new theoretical ideas.

Historical issues. These articles may look at the historical progression of UFO and Abduction phenomena or describe ancient accounts and issues.

Empirical studies. These articles may be a report on primary research and data collection/analysis. Analysis of attitudes towards the UFO and Abduction phenomena may be an avenue of thought for instance.

Methodological and Investigation issues. These articles may assess the methods and investigative techniques that ufology employs. They may also suggest particular methods that could be useful in the field of ufology.

Cultural issues. These articles may look at whether particular aspects of ufology are culturally unique or non-culture bound.

Commentaries. These articles can assess the notions published by authors in the European Journal of UFO and Abduction Studies.

Case Studies / Reports of enhanced sightings (e.g. 'flaps'). These articles can give details of interesting cases or 'flaps' which may not have got a wider audience before. These will still be reviewed to ensure that the reports are ethically sound (see the notes on ethics within these submission guidelines).

Authors of papers accepted in the above categories will receive a free copy of the journal that their paper appears in (if a paper has more than one author, the lead author will get the free copy). For articles accepted in the categories below, no free copy will be sent.

Research Noticeboard. This section will allow researchers to communicate with one another in order to collaborate and discuss work. This will be an essential section for ufology researchers. Calls for help with research will be included.

Reviews. Publishers and broadcasting companies may send books and videos for review. This section will give an objective view of the items sent.

Ethical Considerations

For articles that describe research using human participants, ethical guidelines must have been adhered to or the article will be returned without review. Research, therefore, should adhere to the ethical guidelines of the British Psychological Society or the American Psychological Association (or other recognised National Guidelines in your home nation - please supply us with details). Work with individuals who you feel are 'abductees' must also meet the guidelines described in "Ethics Code for Abduction Experience Investigation and Treatment," Journal of UFO Studies, Vol 5 (1994).

Research that is seen as being ethically dubious will not be reviewed or published in this journal. If names are to be mentioned, consent for this in written form must be sent to the Editor along with the article submitted which involves the individuals in question. Pseudonyms can be used as long as it is clear that the name provided is one.

Submission of papers

Papers should be sent to the following address: Craig Roberts, Editor of EJUFOAS, UFO Studies, Totton College, Water Lane, Totton, Southampton, SO40 3ZX, England. Alternatively, authors can submit articles via electronic mail to: ejufos@totton.ac.uk

Papers sent via postal mail. Submissions should arrive in triplicate on A4 sized paper. A front sheet should be provided with the title of the paper along with the author(s) address(es) [postal and e-mail if applicable]. Then, the paper will be peer reviewed (blind) by three members of the editorial board.

Papers sent via electronic mail. Two electronic mails have to be sent. One must have the title of the paper along with the author(s) address(es) [postal and e-mail if applicable]. The second must contain the paper along with any images and figures as attachments that are either in text form or Microsoft Word compatible. Then, the paper will be peer reviewed (blind) by three members of the editorial board.

All papers must include a full reference section where authors of papers and books, the title of the book/article, the volume (if applicable) and year of publication are clearly visible. The following style is preferred:

For citing articles.

Hickman, J.C., McConkey III, E.D. and Barrett, M.A. (1995/6) 'Fewer Sightings in the National Press: A Content Analysis of UFO News Coverage in the New York Times, 1947-1995,' *Journal of UFO Studies*, Vol 6 (new series), p.213-226.

For citing books.

Nagaitis, C. and Mantle, P. (1994) *Without Consent: A Comprehensive Survey of Missing-Time and Abduction Phenomena in the UK*. Ringpull Press Limited, Cheshire, UK.

For citing chapters from books.

Wagstaff, G.F. (1986) 'Hypnosis as Compliance and Belief: A Socio-Cognitive View,' in P.L.N. Naish (ed.) *What is Hypnosis? Current Theories and Research* Open University Press, Milton Keynes, UK, p.59-84.