

INSTRUMENTED MONITORING OF AERIAL ANOMALIES

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The very most part of anomalous aerial phenomena that are reported everywhere in the world come from witness cases. This represents a huge limitation when one wants to carry out scientific analysis, except for some statistics when the number of data is high and of sufficient quality. Some areas in the world show a recurrence of such phenomena, and provide researchers with the precious opportunity to use such locations as “laboratory areas” where it is possible to use measurement instrumentation such as magnetometers, optical spectrographs, radio spectrometers, high-resolution cameras and video cameras. Results obtained during past instrumented expeditions in Hessdalen (Norway) and other locations in the world where such anomalies occur will be presented ^[1]. The main reported anomalies and related measurements will be described and discussed, in particular: a) correlation between the occurrence of luminous phenomena and magnetic perturbation, VHF radio emission and radar recorded tracks; b) the measurement of the radiant power; c) an empirical model that describes light variations as due to the sudden variation of the surface emitting area of the phenomenon (« clustering effect »); d) unexplained signals in the VLF wavelength range; e) peculiar and variable characteristics of optical spectra. Some possible physical models that might explain the observed phenomenology will be mentioned, both as a triggering cause of such phenomena and as a mechanism for the confinement of the plasma ^[2]. Methodology of observational research will be widely stressed in order to show the importance to distinguish the signal from the noise and to avoid wrong identifications. In addition to locations that have been already monitored, a plan of statistical selection of possible areas of phenomenon occurrence will be discussed in detail ^[3]. Sometimes UFO databases based on a large number of visual witness cases may help researchers to locate with a certain accuracy true areas of phenomenon recurrence, on the basis of the ratio between the number of inhabitants and the number of reported anomalous aerial events. Such a strategy can allow researchers to position measurement instruments to very specific areas in order to concentrate all the monitoring efforts just there. The ongoing project by an international investigation group for a permanent station containing off-the-shelf measurement instruments will be also presented ^[4]. Such a station, being in function all the time and containing all-sky cameras, optical spectrographs and VLF/ELF spectrometers, is potentially able to acquire scientific data on unidentified flying targets, which are then transmitted to investigators located at remote areas. Such an automatic station is intended to be a pilot project for a future network of similar stations scattered throughout the territory. The physical parameters that can be obtained this way are conceptually presented. The main goal is to ascertain what the nature of the aerial anomaly is and which physics can be extracted from it.

References:

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