

UFOCATCH

Conception & realization © Jean-Christophe Doré

UNIDENTIFIED FLYING OBJECT OR AERIAL PHENOMENON DETECTION SYSTEM. TRAJECTORY AND GROUND CONTACT COORDINATES CALCULATION SYSTEM.

UFOCATCH is a device made up of two components. The first system is a video surveillance camera arranged vertically, pointing the sky with a wide-angle lens providing a 2π steradians sky coverage in visible domain. This camera is connected to a computer which reacts only if an element from the nocturnal or even diurnal setting is changing, i.e. detection of an angular movement or brightness variation.

The system is configurable (magnitude threshold, period and amplitude fluctuation threshold, etc). If any variation is detected, the whole image is saved and the computer calculates the azimuth and elevation of the source in real time. It then transmits these data to a second, motor-driven system holding two cameras, which are immediately pointed to the direction where the phenomenon has been detected.

This second system is controlled in order to provide centering and automatic zooming on the source detected by the surveillance camera. One of the lenses of the second motor-driven camera holds a diffraction

grating filter, allowing the optical spectrum of the source to be recorded. The system can also be equipped with various remote-controlled motor-driven filters.

An alarm signal and vocal warning transmission can be added to the detection itself, providing signal parameters: localization, magnitude, angular velocity, brightness fluctuation period, etc.

Combining two (or more) such systems enables the recording of the source trajectory in three dimensions and, if any ground contact is made, the coordinates where the event occurred.

The system can be provided with a spectral database, and computed to identify in real time the nature of the detected source, first of all discriminating between natural or unusual phenomena.

A whole territory coverage with such devices is possible using units placed over a 50 miles mesh, connected to a central recording computer by wireless links.

