

What information can be obtained from a UFO observation?

Jean-Pierre Petit 2019 august 7

My name is Jean-Pierre Petit. I was born in 1937. At the time of this writing, I am over 82 years old. Through this document and the accompanying video I simply want to transmit ideas to people who may find them useful. I would like to point out that I cannot and do not want to monitor any projects that may arise. My only purpose is to point out their feasibility.

In 2007, at the request of some young people, I agreed to create an association to which the name was given



<http://www.ufo-science.com>

I myself have financed the activities of this association to the level of tens of thousands of dollars through the sale of books that I have written and published. With this money it was possible to finance some activities. As a specialist in MHD (magnetohydrodynamics) at the international level, I have directed the mounting of experiments on low-density plasmas which have led to results that have been presented in major international conferences and have resulted in publications in referee-controlled journals (the Polish journal *Acta Physica*¹). I also believe that I am the only one to have related my work in MHD to the UFO subject. Without going into detail, these studies focused on theoretical work showing that it was possible for a flying machine to operate in dense air at supersonic, and even hypersonic, speed, without creating shock waves or turbulence, i. e. without noise, behaviour immediately related to the apparent performance of UFOs.

It has not been possible, despite all the efforts I have made for more than ten years, from 1976 to 1986, to set up experimental research, to make this idea a reality. But we have seen that the Russians, who know and appreciate my long-standing work, have successfully implemented this technique (see the testimony of President Putin, during his speech given in the Duma²). It has led to military applications such as: the

¹ *Acta Physica Polonica* 2012 Vol. 121 n°3 ; J.P.Petit and J.C.Doré : Wall confinement technique by Magnetic Gradient Inversions

² <https://www.youtube.com/watch?v=gSuv0CzSnts>

<https://www.youtube.com/watch?v=Jn8b3E9oUHY&list=PLfdj8oy5zeoHB8cqu7pjxKLL04n-bTOJO>

implementation of missiles capable of flying at hypersonic speed in dense air, hypersonic gliders with high manoeuvrability, and submarine drones at high speed. Techniques directly inspired by the behaviour of UFOs during intra-atmospheric evolutions.

In 1986 I shifted to high-level theoretical studies, touching on cosmology. A presentation of such work can be found in the Janus videos³. This work is intended to demonstrate the feasibility of interstellar travel.

Whether through MHD or cosmology, I believe my work has been a unique example of a high-level scientist who has devoted so much time and effort to this proposition. I am convinced this work has shown a clear means of confirming the UFO phenomenon as visits by extraterrestrial civilizations, which has resulted in a dozen or so scientific publications published in top-level journals, controlled by the peer reviewed journal system.

Since 2007, the activities of the UFO-science association, in addition to allowing me to finance my participation in international conferences, has been an opportunity to try to develop techniques aimed at capturing scientifically exploitable information about the UFO phenomenon.

Two remarks are in order.

Unfortunately, examining the hundreds of thousands of testimonies does not bring much that a scientist can exploit. These testimonies generally seem to be exotic and incomprehensible to our level of understanding.

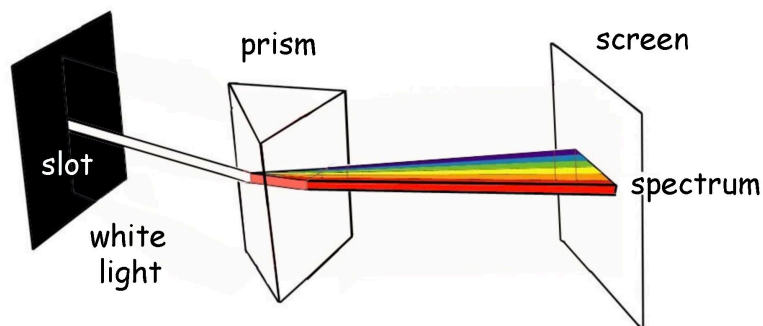
Nor can we hope to get much out of photographs and films due to the fact that with today's techniques it is extremely easy to create fakes.

In this document we will present two approaches, both concrete and in simple technical terms, which could make it possible to extract data from the exploitation of optical information. And, in passing, to demonstrate, the apparent exotic nature of these manifestations.

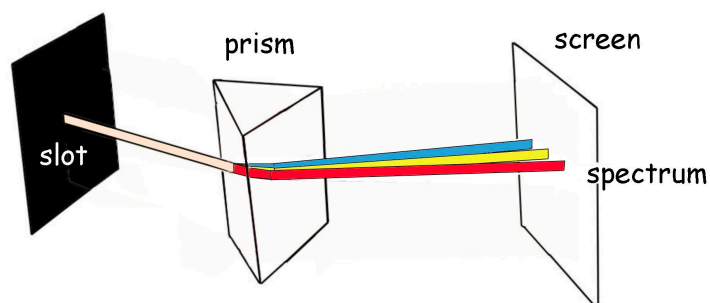
The first technique is based on a technique that was implemented by the Air Force as early as 1952, and aims to obtain a spectrum during a night observation of the UFO phenomenon. For the general public, let us recall the principles of spectroscopy.

As Isaac Newton showed, white light is in fact the superposition of light rays distributed according to a whole range of frequencies, and therefore of colour. White light was to be understood as that emitted by the Sun, by its outer crown, made up of a plasma heated to a temperature close to 6000 degrees centigrade. This fact has been demonstrated by playing on the fact that a light beam does not undergo the same refraction phenomenon according to its frequency, and therefore its light. A prism involves two successive refractions and the result is as follows :

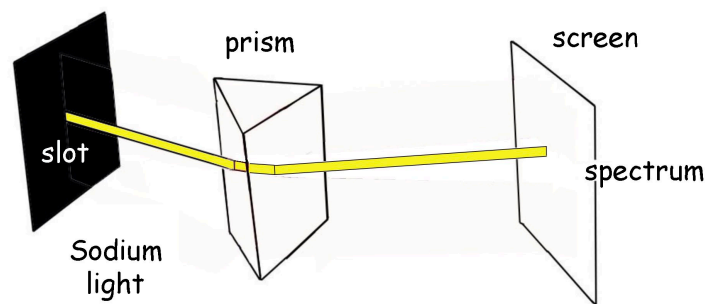
³ See <http://www.jp-petit.org> and the videos Janus 13 to Janus 27, equipped with english subtitles.



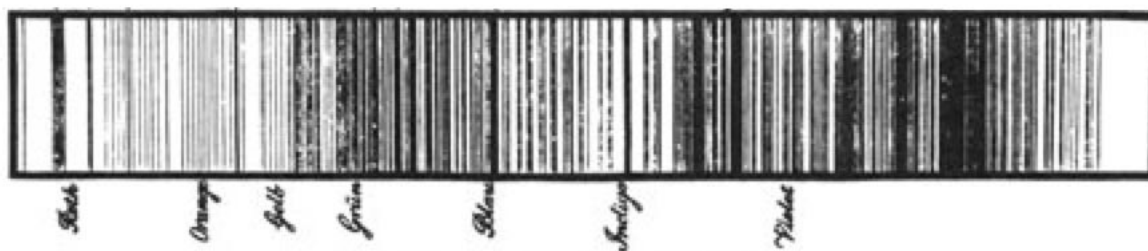
However, different atoms do not emit light in a continuous spectrum. Light emissions are carried out at certain specific frequencies, resulting in a spectrum of lines. Below is the emission spectrum of a body that would emit light at three frequencies, thus producing through a slot a spectrum consisting of three lines.



Some atoms, such as sodium, emit light at only one frequency, giving a frequency that is composed of only one line:



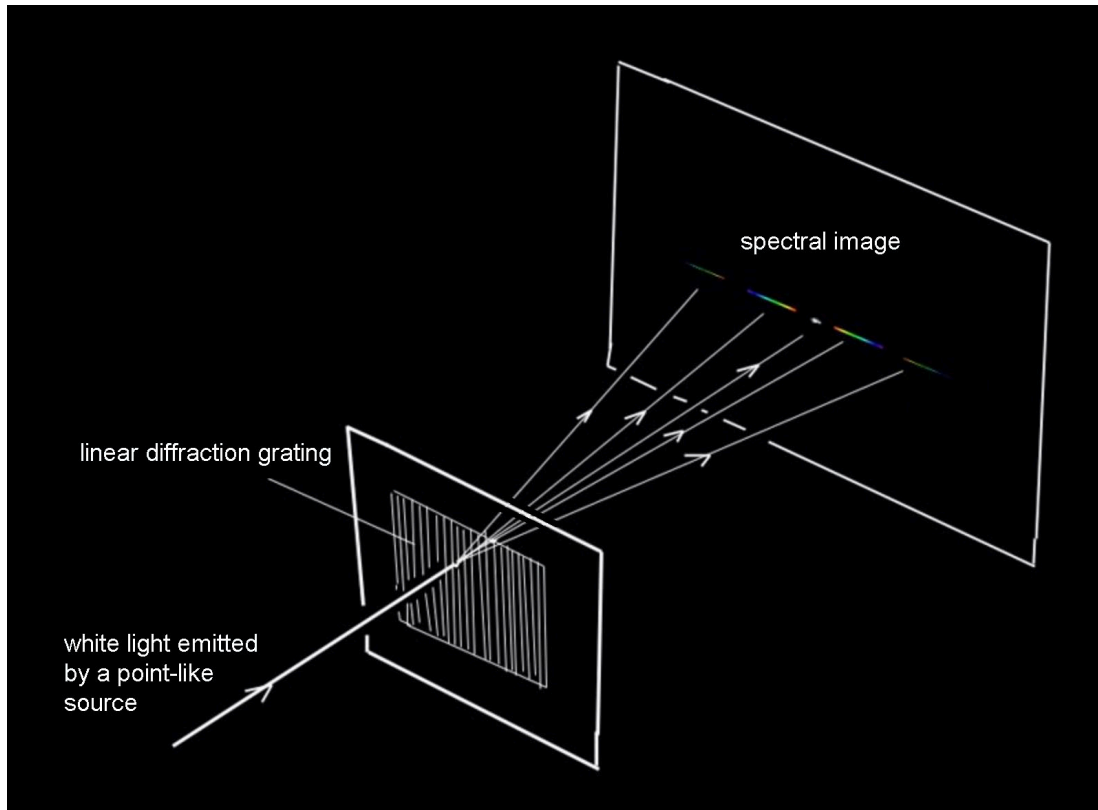
The spectrum of the Sun itself has only an appearance of continuity. Its light is emitted by different atoms that make up its emissive outer side, which in turn emit in a whole range of frequencies, so that the different frequencies are present in the spectrum. So it doesn't seem like there are any gaps.



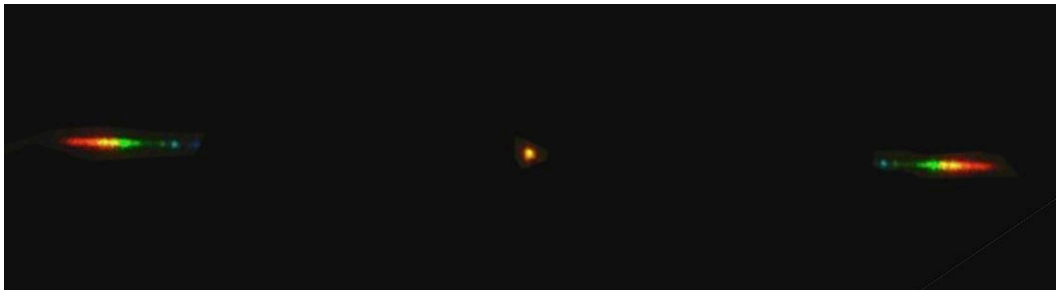
It can be seen that the analysis of the spectrum corresponding to a light emission makes it possible to identify the nature of the source that emits this light. Let's take a weather phenomenon as an example. It is the passage of air with water content or humidity. We can therefore expect, when we succeed in capturing a spectrum of the phenomenon, to identify lines corresponding to its components: oxygen, carbon dioxide, water vapour. If we capture the spectrum associated with an iron meteorite atmospheric re-entry, we can expect to detect iron-related lines, etc.

It is not known what type of light is emitted by the ufos. Spectrum capture could provide information on the spectrum and the phenomenon that gives rise to it. But it is possible that this light emission could involve atoms not present in the Earth's atmosphere, such as lithium. Detecting lines in such a spectrum that betray the action of bodies not present in the Earth's atmosphere could demonstrate that the phenomenon thus recorded cannot be relegated to a natural upper-air phenomenon.

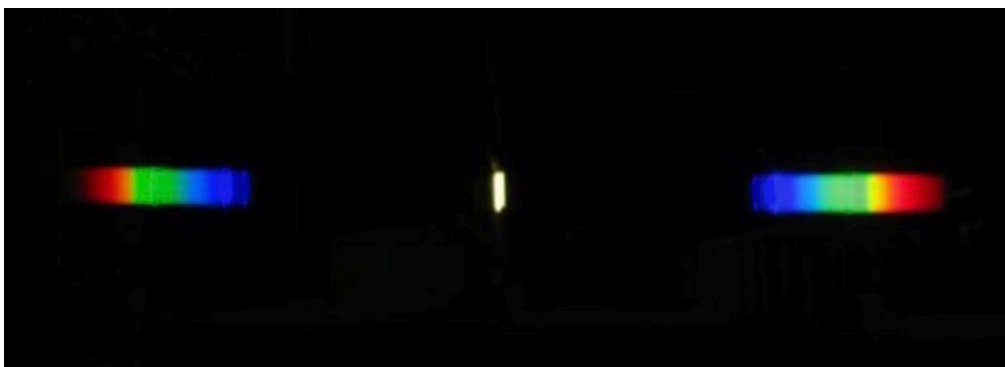
We presented the first device that, historically, has made it possible to obtain a spectral decomposition of light. But very quickly, scientists opted for something simpler and especially less cumbersome, which are linear diffraction gratings. We will not describe the mechanisms that cause light to decompose into a spectrum (actually two, located on either side of the source image). The diagram is as follows:



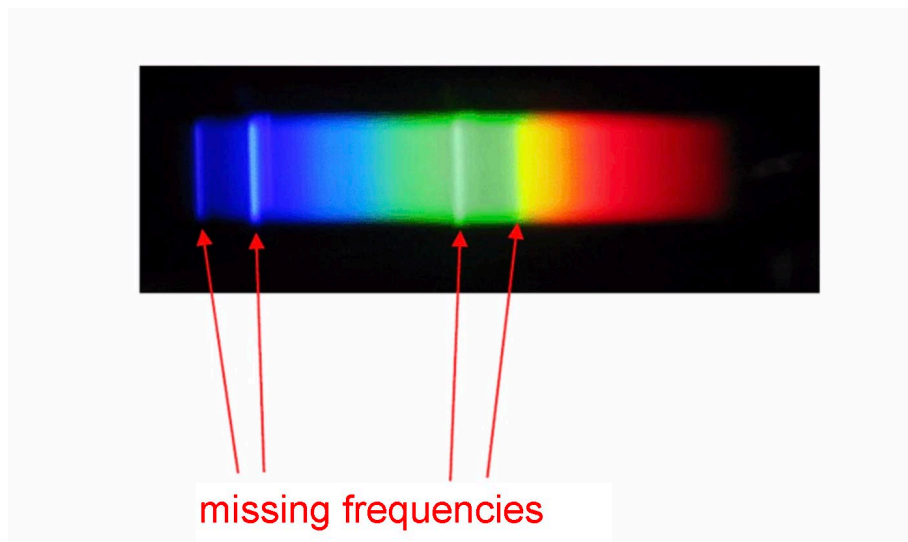
A linear diffraction grating is simply an opaque film with parallel, very thin slots. An interference phenomenon has the effect of creating two spectra located on either side of a central spot showing the image of a point-like source



If this light emanated from a slot, we would have line spectra located on either side of a central line.



With a diffraction grating it is easy to show that fluorescent tubes fail to restore sunlight to what you instinctively feel. How do such tubes work? They contain Mercury vapour, which is excited by the passage of an electrical discharge. But it is not this one that is the source of the light we receive. Mercury atoms restore their energy to a thin layer of white fluorescent coating that covers the inside of the glass tube. This is made up of a mixture of many components which, re-emitting as visible light, are supposed to recreate the solar spectrum. But, within these re-emissions some frequencies are missing. We haven't found any atoms that can re-emit in these frequencies



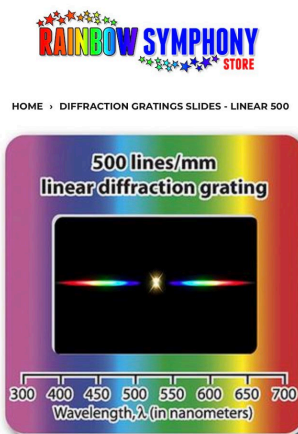
This helps to understand how a difference can be made between different possible sources, for example of the spectrum.

The previous image can be obtained by simply placing a grating in front of the lens of a camera, which then appears as a slide:



This type of linear diffraction grating can be obtained at this address:

<http://www.rainbowsymphonystore.com/difgratslid1.html>



A 500 lines/mm linear diffraction grating

As early as the 1950s, the Air Force equipped military and civilian personnel with cameras using 23 mm film with two lenses. The first one gives a normal image of the source and the second one its spectral image, thanks to the interposition of a grating:



The Air Force Camera

In 2016 I had the idea to create an ultra-flat device that could be adapted on a photo cell, which allowed to deploy a grating in front of the lens. I therefore gave technical specifications to Jean-Christophe Doré, who was in charge of all the technical activities of the association (being the only actor at the same time).



Jean-Christophe Doré, France, with some of his achievements

He therefore made the association buy one of the first 3D printers thanks to which this type of object could see the light of day, which corresponded perfectly to the desired technical specifications:



The very delicate operation was the gluing of the piece of grating, cut out of the slide presented above, which required the precision of a watchmaker repairing a wristwatch. Knowing that any trace of glue on the grating made the device unusable.

I then asked Jean-Christophe Doré to put the file of this object online on the Internet so that Internet users could equip themselves. But he refused, not because he had sought

any profit from the commercialization of this object, but because he wanted to keep its intellectual property (by registering the name "spectrokit" and the model "in the name of UFO-science"). I considered this behaviour to be in contradiction with the goals set by the association. This, together with what follows, led in 2017 to my resignation from UFO-science, of which I had been the founding president (and sole financier).

The object of its creation is always accessible. For 7 dollars you can buy this piece of plastic.



The spectrokit by ufo-science



The small piece of grating, glued on the device.

The operations are described in the video below:

<https://www.ufo-science.com/recherches/recherches-en-spectroscopie/spectrokit-2-0/>

Faced with Doré's refusal to put the file of this object in free access on the net, I asked a friend who owned a 3D printer to recreate it. It did so without difficulty and greatly improved it by eliminating the delicate gluing operation. As can be seen on the drawings pictures below, simply insert the small fragment of grating that is sandwiched between the two parts of the drawer, which fold over each other.



This file is freely accessible at the following address:

<https://cults3d.com/fr/modèle-3d/divers/la-bonnette-glue-free>

A few hundred Internet users downloaded this file, acquired the network and made this assembly for their personal use. But for a UFO spectrum to be obtained, it is not hundreds, but hundreds of thousands of devices of this kind that could equip cell phones.

In the process, a mobile phone manufacturer, or even simply protective shells, could propose models where this non-patented, royalty-free device could be inserted. By the way, it allows teachers to produce spectra for educational purposes. With regard to a campaign to capture the spectrum of a UFO, it would be very likely to be successful if this operation extended to the entire planet.

A sponsor could finance the creation of a mould and the publication of these objects in large numbers. A copy of simple instructions could be attached. Or, the object could be inserted in a package of pasta or laundry detergent, bearing the name of the product to be promoted.

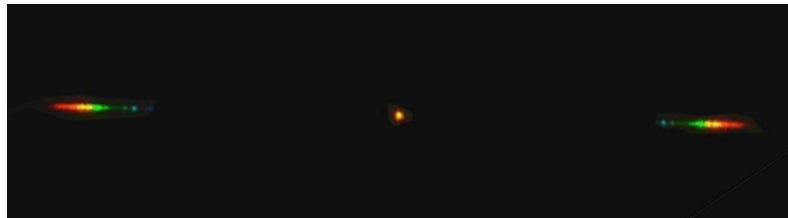
Assuming that such objects exist in sufficient number for a photograph to be obtained, what could be done with such information?

I would like to point out in passing that it would be useless to send me such a photo as an attachment because I do not have the technical tools, and the time to ensure a follow-up of such a project. If anyone in the public could be able to manipulate this object and obtain a spectrum, it would be necessary for the examination of it to be entrusted to academics.

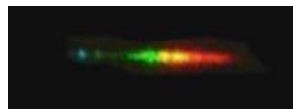
The tools in question are simply computer tools, image processing software. The raw image will depend on the orientation of the camera.



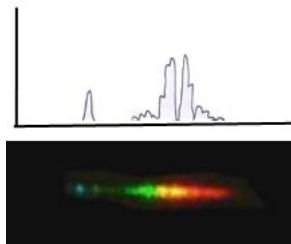
It will be easy to straighten this image using software such as Photoshop.



and extract the significant part of the spectrum



Then to perform a photometric analysis with a specialized software.



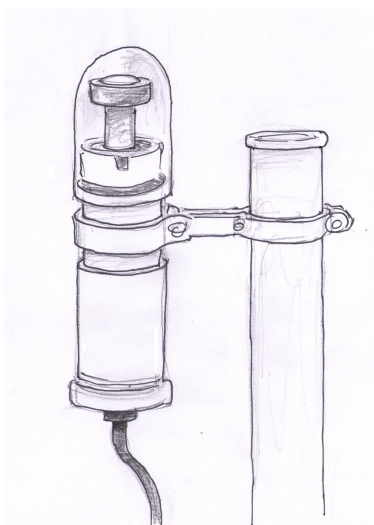
An analysis that could possibly reveal lines betraying the contribution of an exotic material, compared to a spectral database.

It is therefore the first system we have developed as part of the association's activities. The purpose of this approach is to hope that others elsewhere will be able to take up this very simple idea on their own and give it the attention it deserves.

A second project, which I asked Ufo-science to develop, was that of an automatic surveillance camera, equipped with a fisheye lens, capable of operating in a network. The main interest lies in the fact that if several cameras (at least two) record a signal, the analysis of the images not only makes it possible to reconstruct the three-dimensional trajectory of the source, but also to access information to calculate its speed. We then obtain a second much more interesting device that potentially allows us to demonstrate the physical reality of ufos.

Once again Jean-Christophe Doré has proved remarkably effective in creating a very cheap prototype camera. I am always admiring the qualities of the technicians, when they know how to extract the essence of a raw idea and convert it into the simplest possible object.

The object is built around a small fish eye surveillance camera, housed under a glass dome that is nothing more than a fragment of an urban street lamp bulb. The rest of the components come from plumbing, making the object remarkably easy and inexpensive to manufacture for a do-it-yourselfer who manages to get his various components. Below is a photo of this device, which Jean-Christophe Doré called "UFO-catch" and of which he hastened once again to register the name and the plan, always "in the name of the association".



J.C. Doré's UFO ufo-catch surveillance camera

The transparent cap that protects the camera was cut out of a floor lamp bulb:



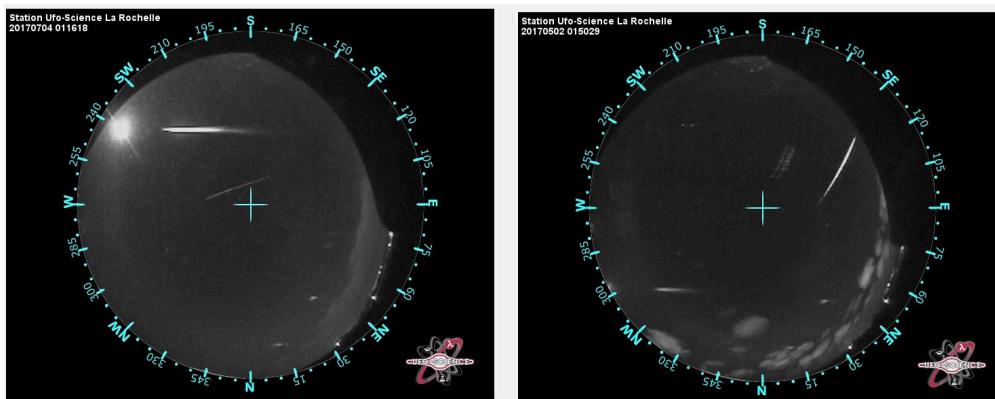
Below is the manufacturing protocol for a UFO-catch camera:

<https://www.ufo-science.com/?services=surveillance>

and its installation on the roof:

<https://www.ufo-science.com/?services=surveillance>

This camera is connected to a capture device, itself connected to a microcomputer, which records when the capture was made and the corresponding fish eye image. Below is the type of images recorded by J.C. Doré by two cameras a few tens of kilometers apart:



On these pictures we can see the angular data which are the azimuth and the elevation of the sighting. It is then possible to manually reconstruct this 3D trajectory, which represents the re-entry into the atmosphere of a shooting star.



3D reconstruction of the path of the source of light

For shooting stars, the trajectory, plunging, is always pronounced. The light emission stops at very high altitude, as the object has burned out.

Jean-Christophe Doré also designed, alone, and tested very sophisticated prototypes with motorized lyre automatically pointing towards the detected object, one of the two cameras carried by the lyre being able to zoom.

<https://www.ufo-science.com/recherches/stations-de-detection/>



Two motorized and controlled tracking devices
Driven by a Ufocatch, on the right

As indicated in a video by Jean-Christophe Doré, the model in the foreground was not intended for the general public, its manufacturing cost exceeding two thousand euros. But then, what was it for?

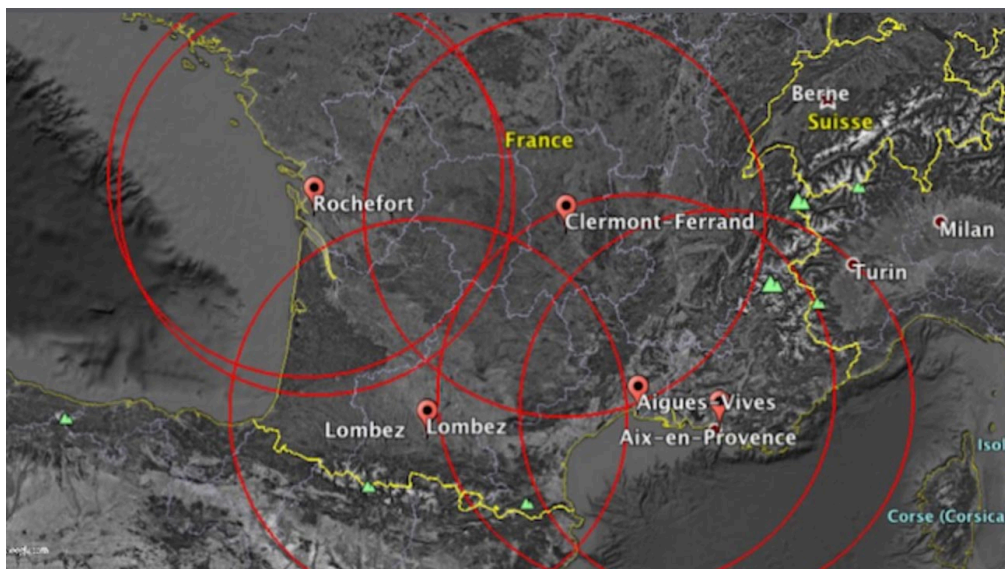
Below is a video where J.C. Doré demonstrates this device.

<https://www.ufo-science.com/video-reportage-ufocatch/>

It is not necessary to be a great engineer to measure the amount of working hours that would be required to carry out assembly times. Therefore, this has remained at the prototype stage.

All this is very interesting, conceptually. The problem is that to have any chance of capturing a UFO trajectory, you would need a very large number of stations. This type of motorized station remains in prototype state.

If we leave aside the controlled motorization by refocusing on the ufo-catch stations, its UFO-science network is limited to five units, which is totally insufficient.



The UFO-science monitoring network (2019)

It so happens that the frequency of the shooting star phenomenon is very high. Since its implementation, the UFO-science station network has operated 198 detections.

<https://www.ufo-science.com/recherches/stations-de-detection/liste-des-detections-des-stations-ufo-science/>

This technique has been recovered by a state organization, the FRIPON network



Fireball Recovery Interplanetary Observation Network⁴

<https://www.fripon.org>

Hereafter a FRIPON' fish eye camera



Une caméra du réseau FRIPON

But the FRIPON network is designed so that the data collected by the stations are systematically sent to a control centre. However, the value of such a system for meteorite recovery is nil. For this recovery to be possible, it would be necessary to set up this network in a... desert, to have a chance to recover images of these objects.

The UFO-science association, limited to a single "worker" (in this case J.C. Doré), cannot, despite his great technical knowledge (he is in charge of maintenance in a computer science school in the city of Rochefort) go beyond the stage of a hobby. In 2017, I hoped that the concepts developed and perfected by the association, i. e. de facto by Jean-Christophe Doré alone, could be relocated elsewhere than in France, particularly in the United States. When the opportunity arose to sell (for 300 dollars) a station to a person who was to go to the USA and who was likely to meet interested groups, I immediately asked Doré to comply with this request. But he refused.

I therefore considered that, no longer having the slightest authority within this association, I could no longer continue to finance with my books the activities of the association, i. e. those of... Jean-Christophe Doré. I therefore submitted my resignation as President at the end of 2017. I naively thought that my letter of resignation would constitute a warning shot that would put a stop to the abuses I had observed. At that time, the association had only three other members besides myself:

- Jean-Christophe Doré: Treasurer

⁴ In french « fripon » means « thief »

- Mathieu Ader, Secretary
- Xavier Lafont, unique member.

But the three jumped at the opportunity. Xavier Lafont volunteered to take on the role of president. As dissensions quickly broke out between Mathieu Ader and the other two, and he left the association. The association is now reduced to two members:

- Xavier Lafont, technician, president
- Jean-Christophe Doré, technical, secretary treasurer.

I asked Jean-Christophe Doré on that occasion to find out what I was leaving behind when I left:

- A financial report with assets and expenses over the last 18 months
- The name and contact details of the bank responsible for managing the association's account
- A description of the equipment acquired during ten years and stored in J.C. Doré's home
- Access to the association's website (which I had never had before) in order to publish a last press release.

Answer by J.C. Doré:

- As you have resigned, we are not required to respond to your requests.

Jean-Pierre Petit

Pertuis on August 7, 2019