

IPACO expert report

Expert name

Antoine COUSYN

Report date

June 14, 2012

Last update

January 05, 2020

Type

IFO

Class

B

Explanation

*Towed advertising
banner*

Complement

Document

Photographs

Imaging location

Austin, Texas USA

Imaging date

September 02 and 03, 2011
between 11:56'58" PM and
00:01'13" Local time (see note 1)



Photograph n°CIMG234



Photograph n°CIMG0235



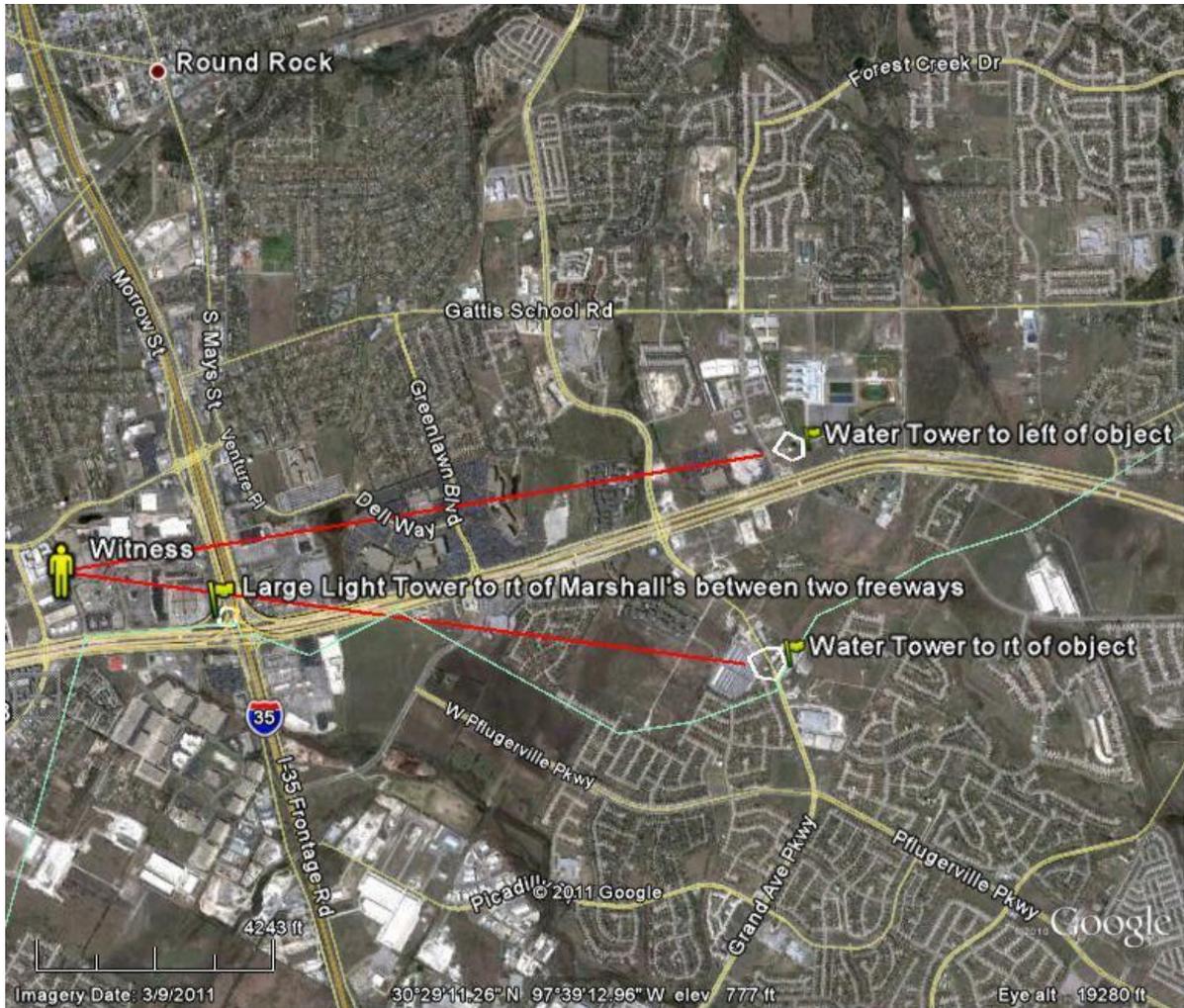
Photograph n°CIMG0236



Photograph n°CIMG0237

I. Imaging circumstances

The photos were taken in Round Rock, Texas. It is a suburb immediately north of Austin, Texas. They were taken from the witness's apartment through his window.



Situation map given by the on-site MUFON investigator

The object was almost due east of the witness and was traveling south to north. He indicated that its movement was slow and that it had a dull gray color. He at first thought that perhaps a plane was pulling a banner but he saw no plane and none can be seen in the photo.

He viewed the object for about 5 minutes. He believes that the object began moving to the east because he says that its south-north movement stopped and it shrank in size while maintaining its location in the sky.

Unfortunately, there are no other witnesses to this event.

II. Camera settings

These four photos were taken using a Casio Exilim ex-z33:



This camera was announced in 2009, August and is a cheap 10.1 megapixel model with a 3648 x 2736 max resolution in the 4:3 ratio and a 3648 x 2432 max resolution in the 3:2 ratio.

Full specifications as well as user's reviews can be seen [here](#).

III. Data examination

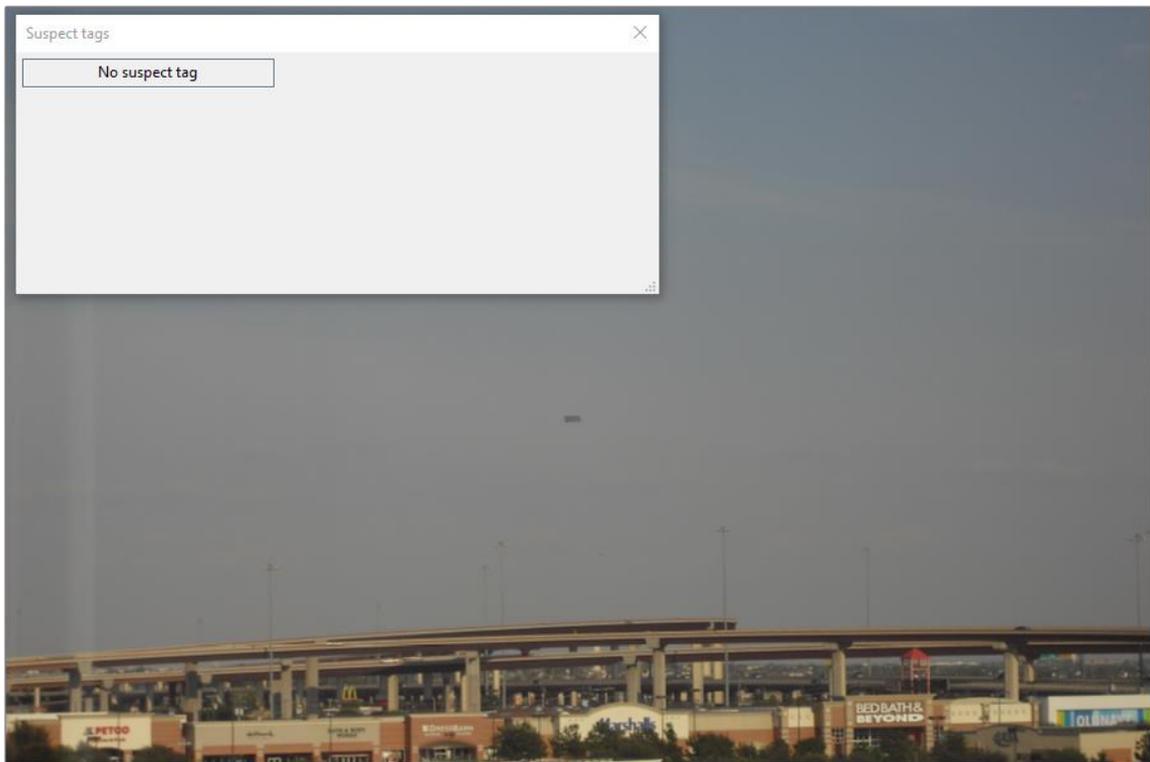
a. Authentication

The photographs are in .jpeg format with a 3648 x 2432 pixels size.

A document is deemed authentic original, within the meaning of the "[IPACO Analysis Methodology](#)", if it results from a direct copy of the original file created in the camera.

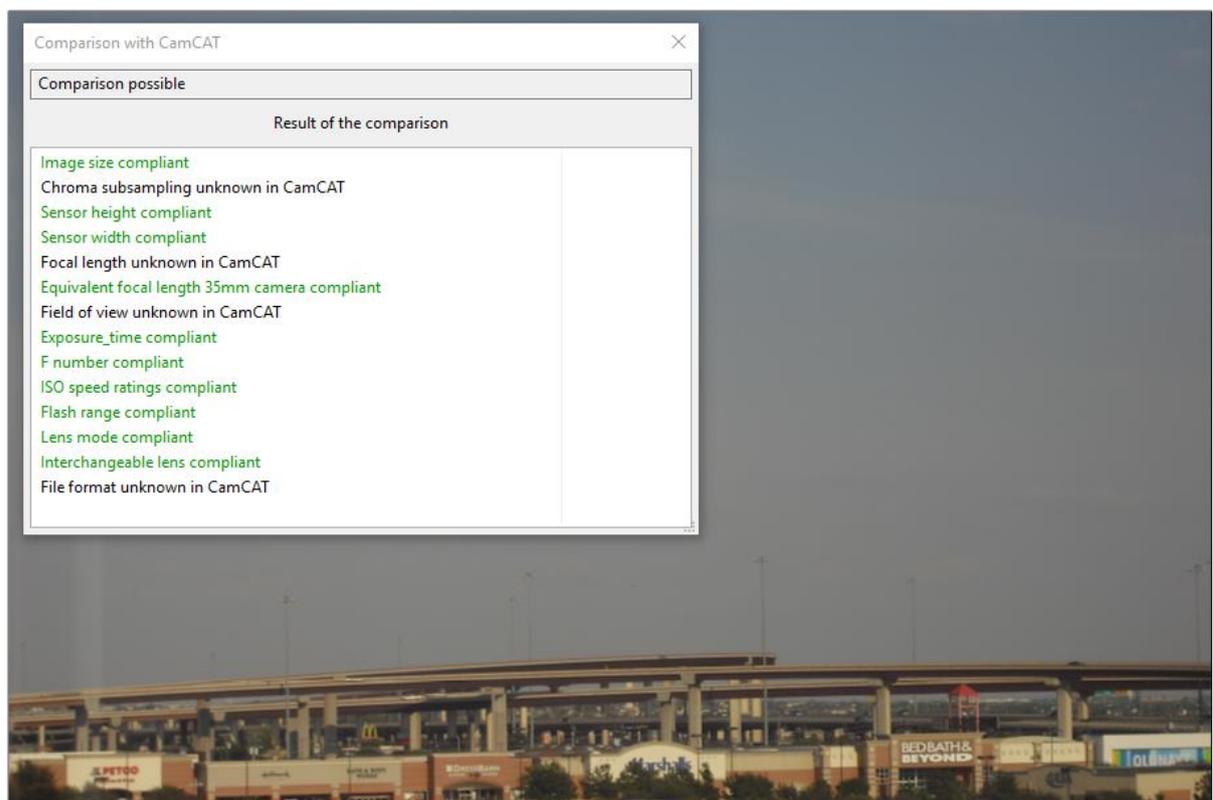
Any modification, made either to the file whilst still in the memory of the camera, or later, can be detected by IPACO with the "*Authentication*" module, in two different possible ways; the results can be displayed together in the IPACO window.

The "*Suspect tags*" tool, in particular, can be used to determine, for example, the possible use of third-party software:



No suspect tags are present.

The « *Comparison with CamCAT* » tool allows the analyst to compare the technical data of the studied file with an internal database, in order to check if they comply with what the camera used can produce:



Technical data known from CamCAT and compliant are in green. Other data, unknown from CamCAT, are in black. We verify that known data are all compliant.

The photos were taken on the 02 and 03 September 2011 between 11:56'58"PM and 00:01'13" Local time [see note 1] (then 4'12" apart) with the following common camera technical specifications:

- 1/400 exposure time
- ISO 64
- Flash fired
- 3648 x 2432 resolution

There are also some differences between these photos like for example:

- Compressed bits per pixel that have a '1.20' value in the non-zoomed photo and between '0.49' and '0.69' in the three others (due to the zoom ratio that varies between them),
- Digital zoom ratio ('1' for the zoomed photo and '4' for the others)

b. Weather conditions

The photos were taken in Round Rock (Texas) approximately at 6:30PM on the 03 September 2011.

A quick check on the Internet site *wunderground.com* about the weather conditions at this date/time in Austin is showing cool wind (6.2m/s) from NNE:

Local hour	Temperature	Wind direction	Wind speed	Wind speed (gusts)
5:55 PM	37.0 ° C	NNE	22.2 km/h / 6.2 m/s	38.9 km/h / 10.8 m/s
6:35 PM	36.0 ° C	NNE	22.2 km/h / 6.2 m/s	33.3 km/h / 9.3 m/s
6:55 PM	36.0 ° C	NNE	25.9 km/h / 7.2 m/s	38.9 km/h / 10.8 m/s

The witness said that this object was travelling from south to north, which is **not compatible to the possibility of this object move to have been caused by the wind.**

c. Three points registration

As the photographer didn't move while taking the photographs, it is possible to use IPACO's tool « 3 points registration » using common landscape marks that are present in photographs n°CIMG0234, CIMG0235 and CIMG0236 (the number CIMG0237 is out of frame of this registration). This registration allows keeping intact photographs format, their original ratio (length x width) and the relative position of the fixed landscape marks:

Note 1: the date/time settings were wrong in the camera. Real corrected time is around 6:30PM the day after (then 03 September), confirmed on the ground by the MUFON investigator.

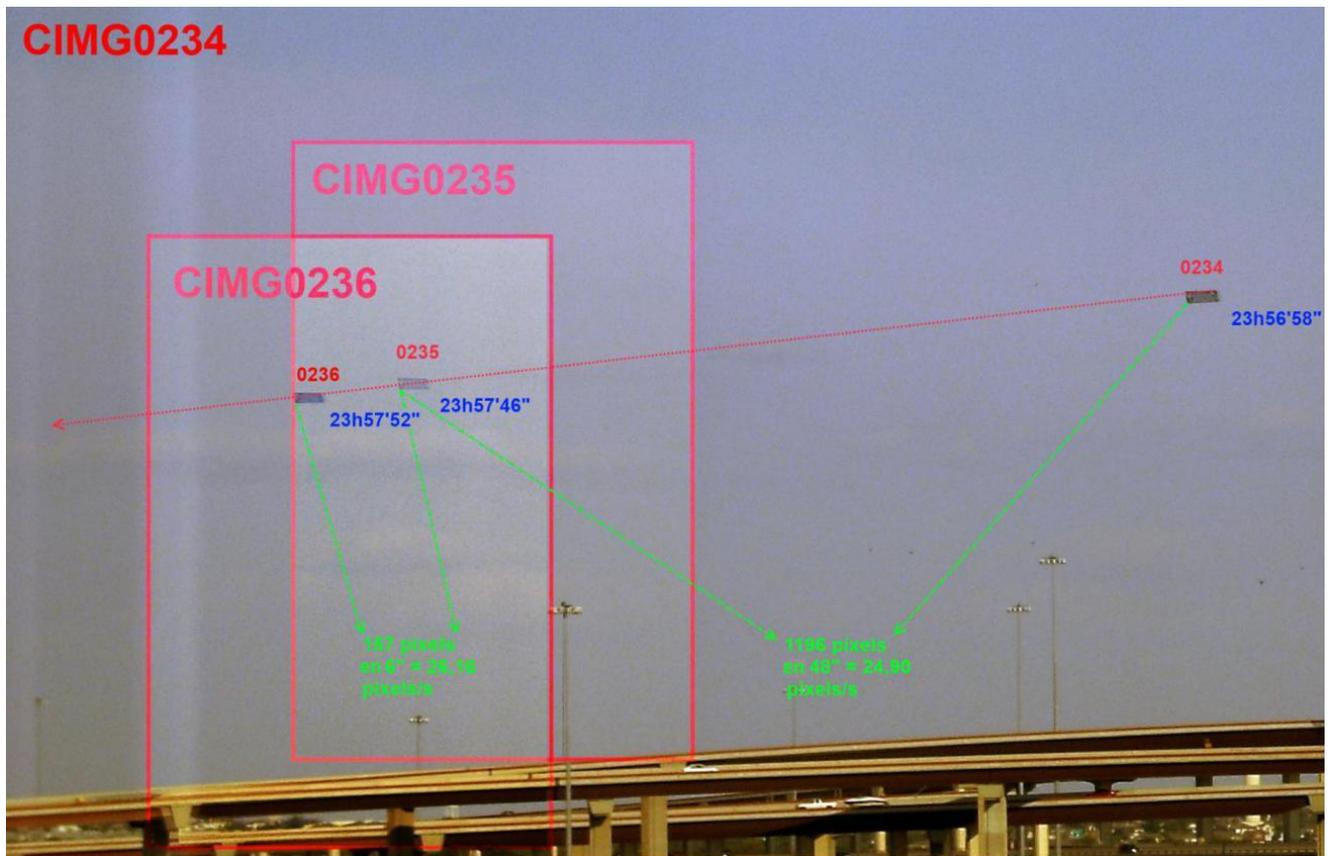


Figure 1 - Extract taken from the three points' registration

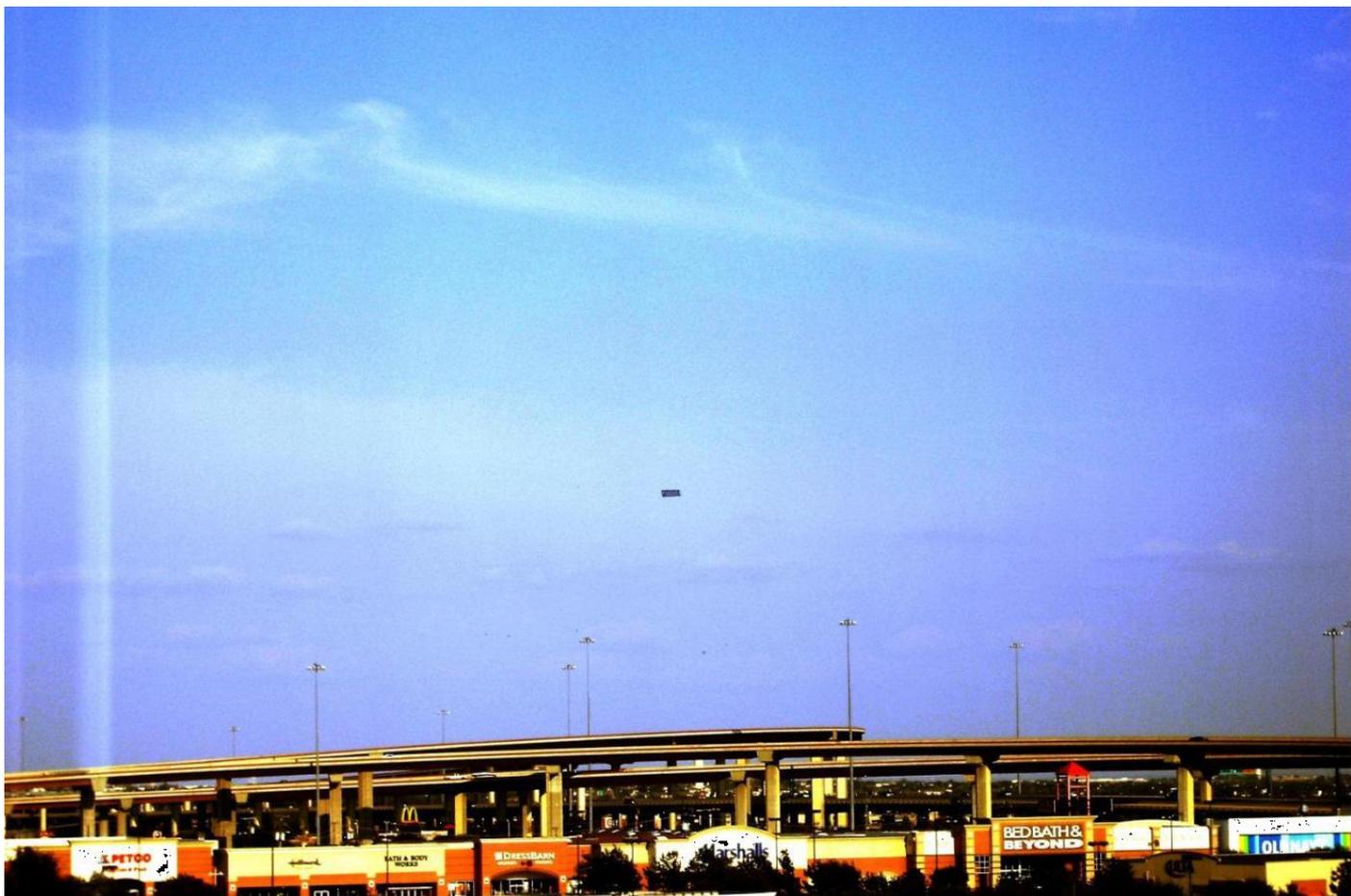
This registration allows us to verify that:

- **The object moves in a straight line**, there is only a very slight rotation in its position in the n°CIMG0235 picture.
- **It also moves in a regular speed**, there's only a slight variation in the estimated speed that could be due to a margin error (+/-1 pixel/s) in the zoomed pictures reduction and/or in the pixels count.
- Accurate measurement of the length of the object on each photo, in pixels, all things being equal, shows that **the object is slowly moving away from the observer**, reducing its apparent size, to pass from a length of 184 pixels in the photo n°CIMG0234 to about 170 pixels in the photos n°CIMG0235 and CIMG0236, then about 100 pixels on the photo n°CIMG0237.

d. Improvements

Although the photos quality is not optimal, it is still possible to try some enhancements.

Tried on the photo n°CIMG0234 :



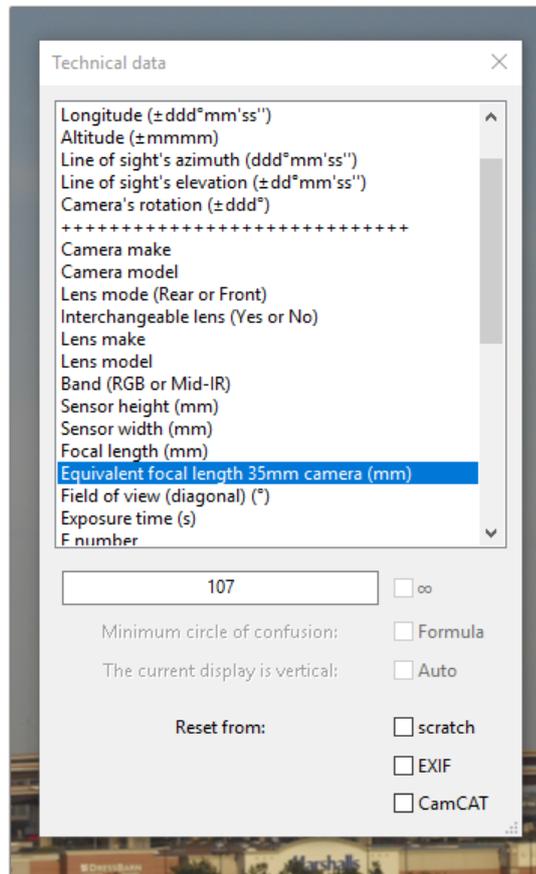
e. Hypothesis

The witness thought at first of a towed advertising banner, but rejects it as the supposed aircraft wasn't visible neither to the naked eyes nor on the photographs.

However, as part of this hypothesis, we can use IPACO to try to give estimates of possible sizes, distances and speeds of the object, in order to verify whether these parameters comply with it.

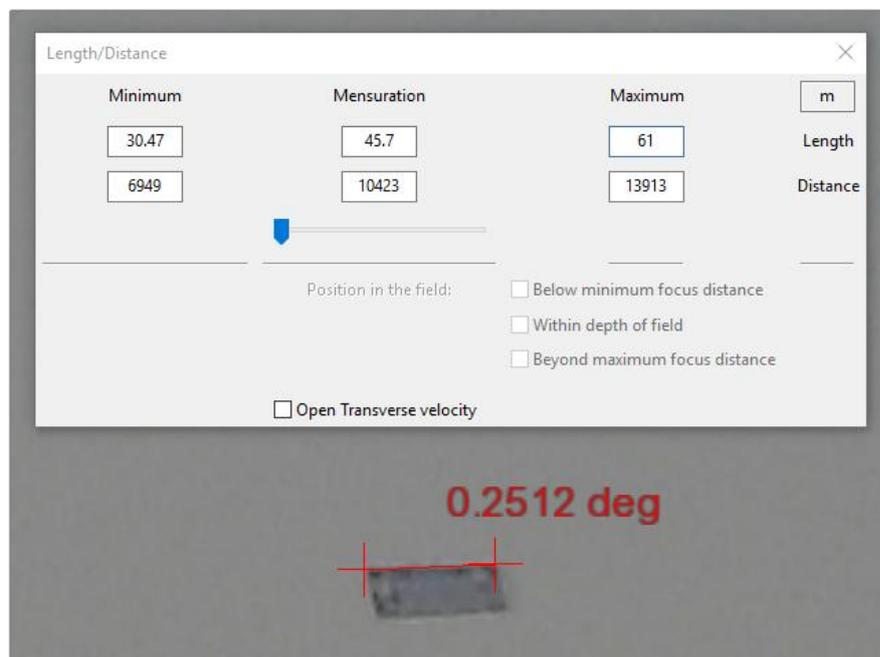
- Size and distance estimations of the object

We know, by consultation of the technical data, that the camera (a Casio EX-Z33), was used with its maximal equivalent focal length 35 mm, i-e 107 mm:



The use of the tool « *angle mensuration* » allow us then to measure (on photograph n°CIMG0234) an angular length for the object in its largest dimension of about 0,25°.

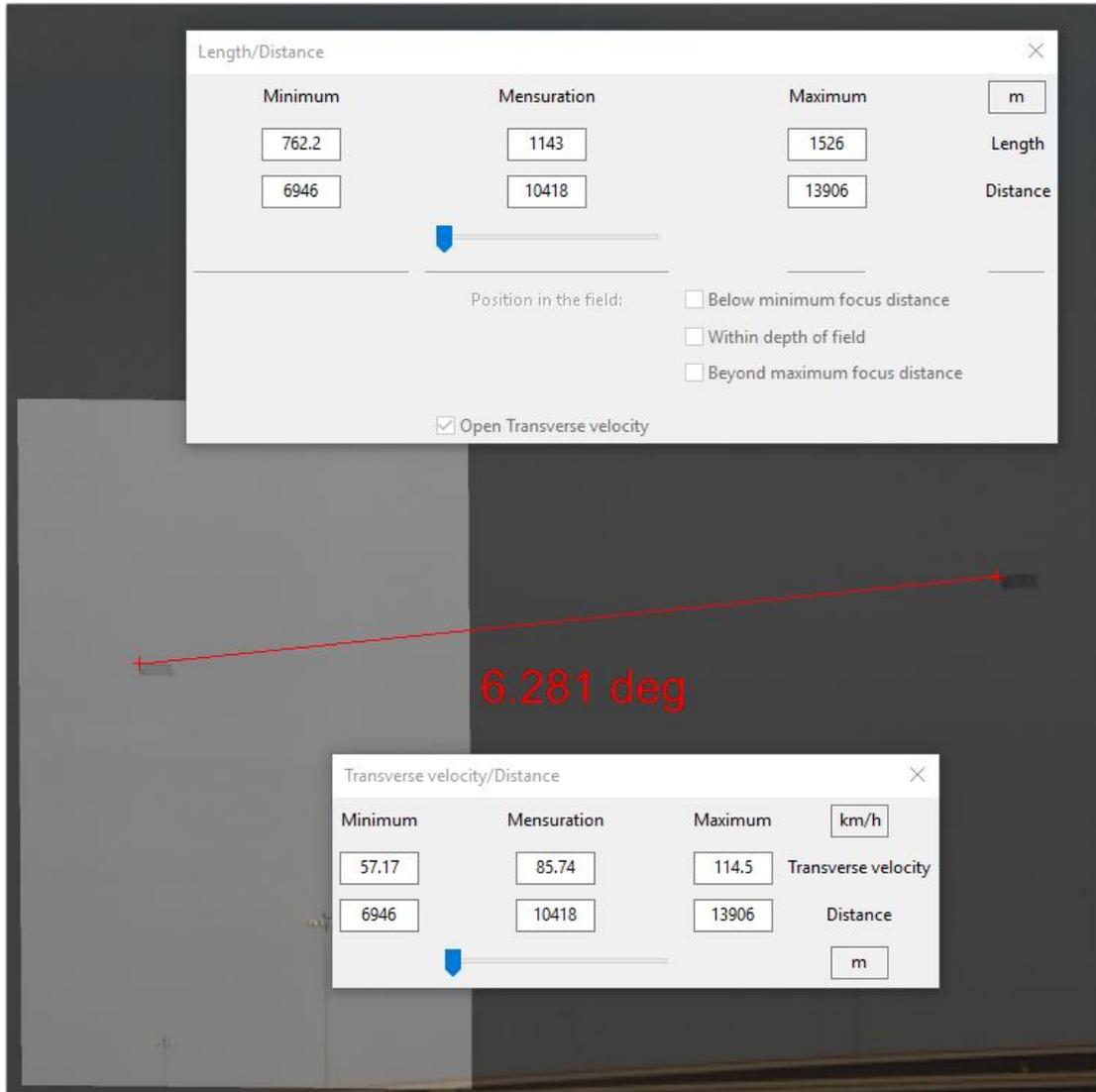
Then, the tool “*Length/Distance*” allow us, for three possible lengths of advertising banners, to obtain three corresponding distances estimations on which it could be located away from the photographer:



Then, in the hypothesis of a 200 feet long banner, that gives us a distance between the camera and the object of 14 km (8.7 miles).

- Estimations of possible speeds of the object

Taking again the result of the three points registration (and after having completed in the technical data a « pseudo exposure time » of 48 seconds corresponding to the length of time that separates the two first photographs) and with the help of the tools « *Length/Distance* » and « *Transverse velocity/Distance* », we obtain, with the same previous estimations of possible lengths for a towed banner, the following corresponding speeds:



These speeds, especially the highest, are entirely compatible with those possible for a helicopter (whose average speed is comprised for the most common models between 80 and 240 mph (between 128 and 386 km/h), especially as this speed must be reduced comparatively to a normal one (i-e without a towed banner) so that this banner can be towed properly, without any damage risks.

- Could the object that towed that supposed banner be seen and / or heard by the witness?

Regarding the perception of the noise, in the first chapter "*imaging circumstances*", the witness said that he took the photographs through the window of his apartment, which reduces his chances of being able to hear any engine noise coming from a plane or a helicopter, especially at the distances estimated in the previous chapter.

It should also be noted the presence between the witness and the object of a busy road, the Interstate 35 (marked "I35" on the situation map) as well as a road interchange. The noise caused by the vehicles traveling on these roads would be able to cover any engine noise produced by distant aircraft.

About the problem of the visual perception of the aircraft towing the banner, it is moving from the right to the left of the witness; then the object should logically be on the left of the banner. Thus, by carefully examining the photographs CIMG0234 and CIMG0236, we noted the presence a "black spot" that seems to be located pretty much at the same place to the left of the banner:



Close-up of the photograph CIMG0234



Close-up of the photograph CIMG0236

Could it be possible that this dark spot was the plane or helicopter that towed the banner?

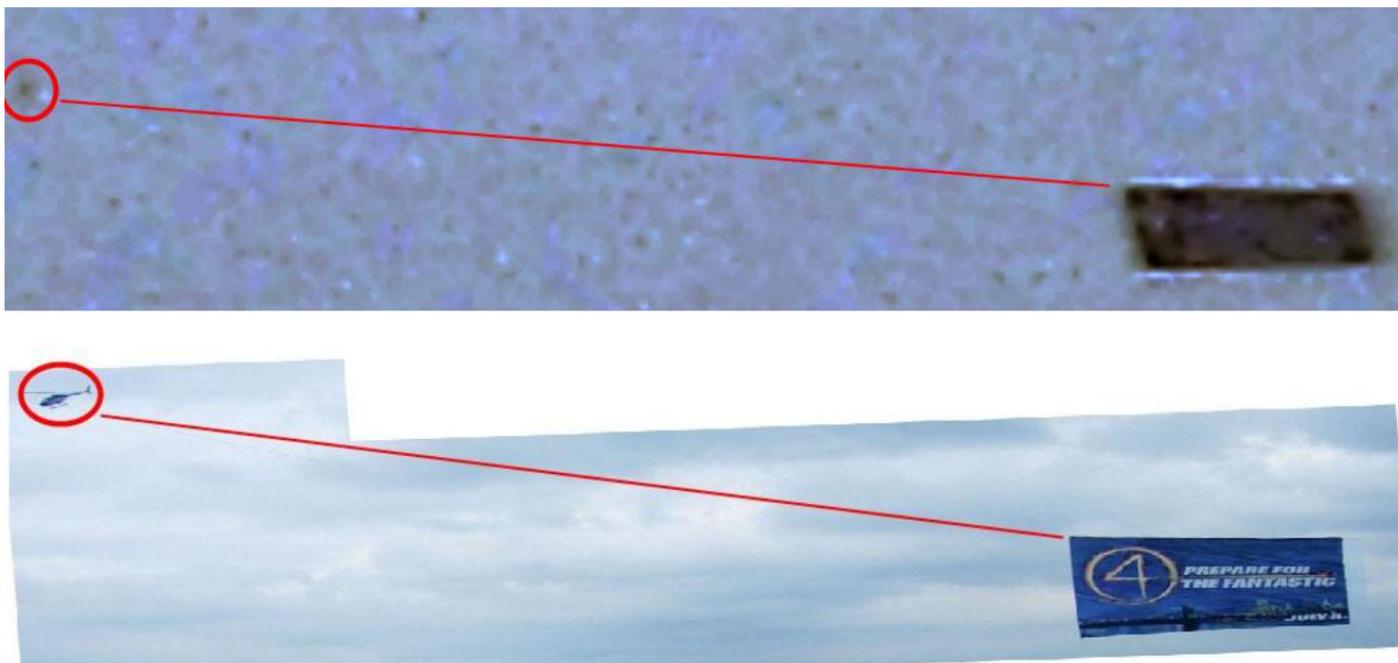
A "classic" 200 feet (61 meters) long banner in a configuration similar to that we can see in the photos is as follows:



[Source](#)

The ratio cable length/banner length here is 3,83.

Using this ratio and reducing the proportions of the banner in our example above in the same way as those of our photographs purpose of the study, we find that distances as well as angles measures of "object tractor/banner "are very similar:



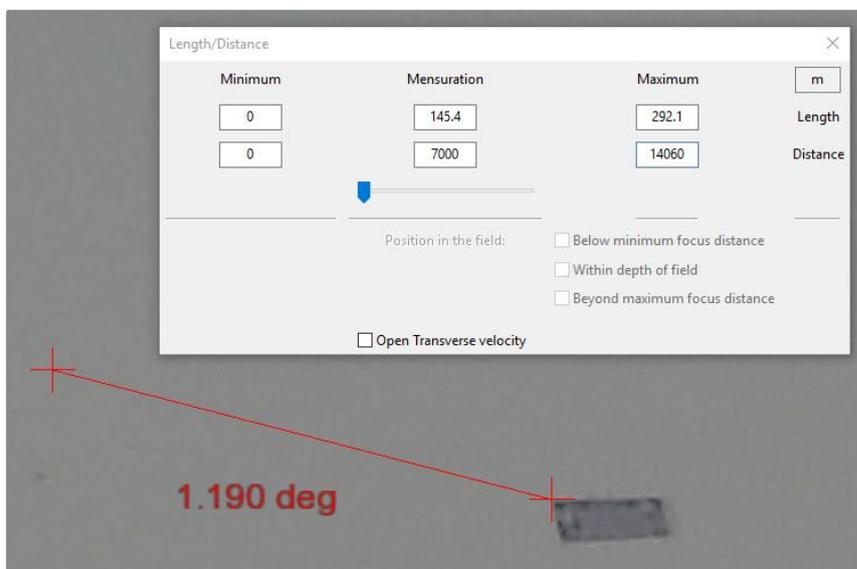
Small differences can easily be explained by several concomitant or not factors (exact size of the banner, cable length connecting the airplane or helicopter to the banner, etc.).

It is also possible to give a good estimate of the actual length of the cable towing the banner with IPACO.

Thus for a 61 m (200 feet) long banner, the angle between the banner and the plane/helicopter, measured with the angle tool, is about 1,2°.

By taking again the previous maximum estimated distance that separates the object from the witness, i-e 14060 m, we obtain a cable length of 292,30 m (0,18 miles).

The greater the distance is, the shorter the length is. Thus, for a 7 km (4,35 miles) away banner, the cable length is of 145,5 m (477 feet):



An important point for the visual perception of a remote object is the notion of "[resolving power](#)".

The resolving power of the human eye is approximately one minute of arc, or 0.017 °.

However, in this case, the object towing the banner is visible on photographs by a very small angle, estimated by IPACO around 0.03 °.

It is quite conceivable that the witness, in good faith and depending on many parameters, (such as its own vision, the presence of a window between the lens and the scene being photographed, the distance to the helicopter or plane and thus the action of atmospheric scattering on appearance, etc.) wasn't able, at the time, to see the airplane or helicopter.

IV. Conclusion

The photographs are most certainly authentic. No trace of retouching could be detected and all the metadata parameters conform to those usually present for the camera used.

The object in the photographs, of an unusual apparent shape, appears to be moving in a controlled manner, at regular speed and in a straight line. At first glance, it cannot be compared to any known object.

However, the witness's first intuition was probably the right one, since we were able to demonstrate that the size, distance and speed estimates of this object were entirely compatible with those of an advertising banner towed by a small plane or helicopter.

It should also be noted that, despite our efforts, we have not been able to find any clues or concrete data (photos, reports, articles, etc.) for the day concerning the possible flight of an aircraft towing an advertising banner that might have happened above the city of Austin, and having been at the origin of this observation and these photographs.

V. Sources - Acknowledgments

Special thanks for their help in this investigation to:

- **Robert Powell**, former Director of Research for the Mutual UFO Network
- **Fletcher Gray**, MUFON (Mutual UFO Network), Star Team Manager, Chief Investigator of Texas
- **Angelia Joiner**, former staff writer of the Stephenville Empire-Tribune, Texas.

Big thanks as well is due to the team of the French UFO Skepticism site (in French: "[UFO SCEPTICISME](#)"), and in particular "*Nablator*", "*Sebastian*" and "*Gilles F.*", for their insight and their participation to the preparation of this report.

The photos were directly submitted to the expert by the witness, through Robert Powell.