

# IPACO expert report

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<i>Type</i> <b>IFO</b>	<i>Class</i> <b>A</b>	<i>Explanation</i> « Ghost like » lens flare	<i>Complement</i> Cropped pictures
<i>Document</i> Photos	<i>Imaging location</i> Castel Rock, Colorado USA	<i>Imaging date</i> June 06, 2012 at 22:58:04 CST	



Photograph « coloradoufos.jpg »



Photograph « coloradoufos2.jpg »

## I. Imaging circumstances

The following synopsis is extracted from the « [Week in Weird](#) » website, dedicated to various strange and unexplained phenomenon, mainly paranormal but also sometimes about UFO.

*« Some intriguing images snapped by a photographer in Colorado have been causing a quite a bit of discussion online this week, but the real question is why they haven't been causing more commotion in the media.*

*Professional photographer Greg Archer took a few shots of a lightning storm over Castle Rock, Colorado on the 6th of this month, but the most striking objects in the photo aren't the streaks of lightning tearing through the sky, but rather the mysterious lights hovering uniform high above the tree line. Archer sent the shots to Intrepid Magazine, but his first stop was his local Fox News affiliate.*

*“The pictures were picked up by Fox News, who never ran the story,” Archer told Intrepid. “According to NORAD and the Air Force Operations Center, all flights, including military, were grounded at the time. There is no mountain there, only hills that reside much lower than the lights. The lights appeared when I wasn’t looking and slowly faded away 20 minutes later. So far a meteorologist is dumb-founded and the Air Force Can’t (won’t?) explain.”*

*Thus far, theories on the lights have ranged from reflections, ball lightning, aircraft, all the way to cloaked alien ship. So, what do you think the lights are? Any photography experts want to take a crack at it? Do you think the media is intentionally ignoring these images? I’m sure that we, the readers, and the folks over at Intrepid would love to hear your thoughts.*

*For more information the lights, check in with our pals over at The Gralien Report, who covered the topic (along with a whole bunch of new updates), on their most recent podcast. »*

## II. The camera

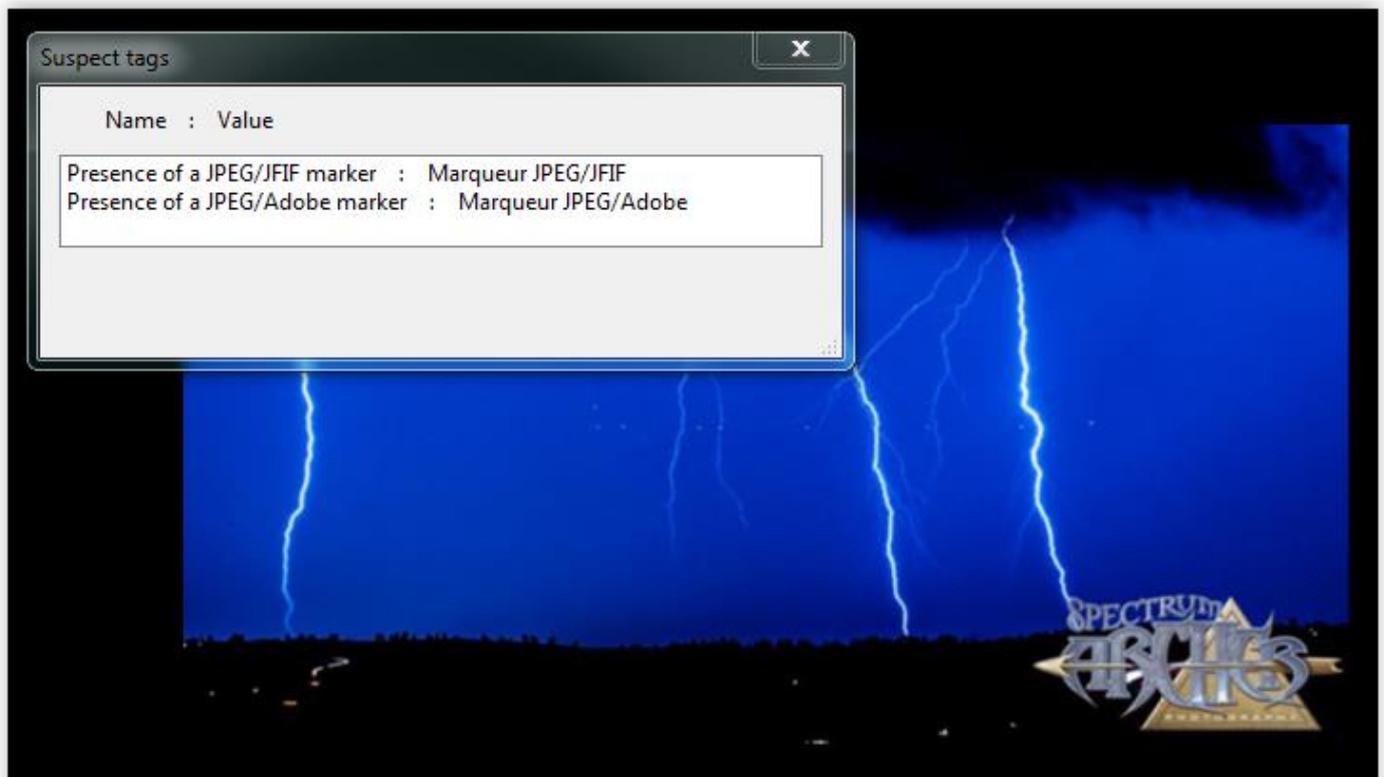
It was a Nikon D700 of which technical characteristics are shown in detail [here](#).



### III. Data examination and analysis

#### 1- Authentication

The two photographs from the online paper, once imported into IPACO, can directly be examined thanks to the tool « *Authentication – Suspect tags* »:



The presence of two JPEG/JFIF and JPEG/Adobe tags, as well of a logo on the bottom right of both pictures point out that they are not authentic/original and have been modified, in a way that need to be determined.

#### Hypothesis

The isolated and relatively lined up aspect of the UFOs in a similar way in both photos is reminiscent of an unwanted lens flare effect that occurred in the camera lens.

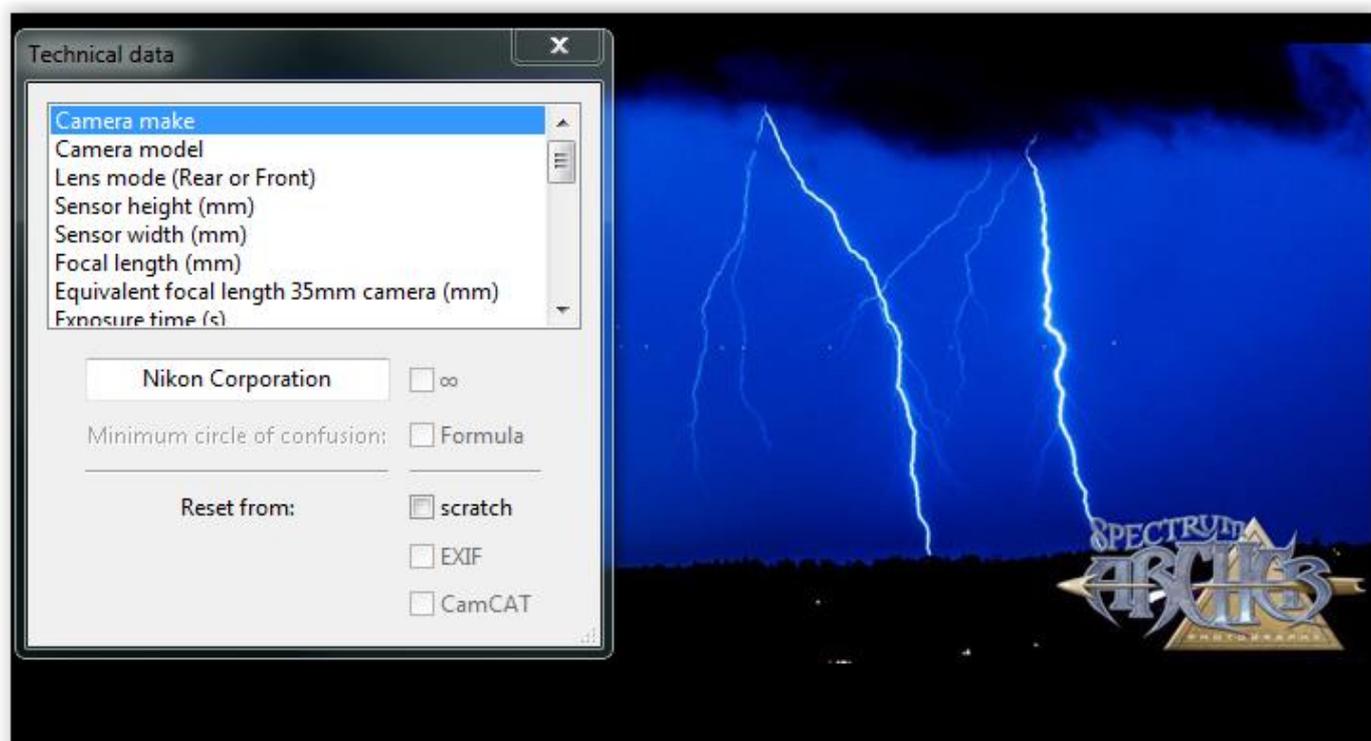
However, this phenomenon only happens when a bright light source (often the sun in daylight and artificial lights: streetlamps, car headlights, etc.) are present in the field of view, or nearby, of the camera.

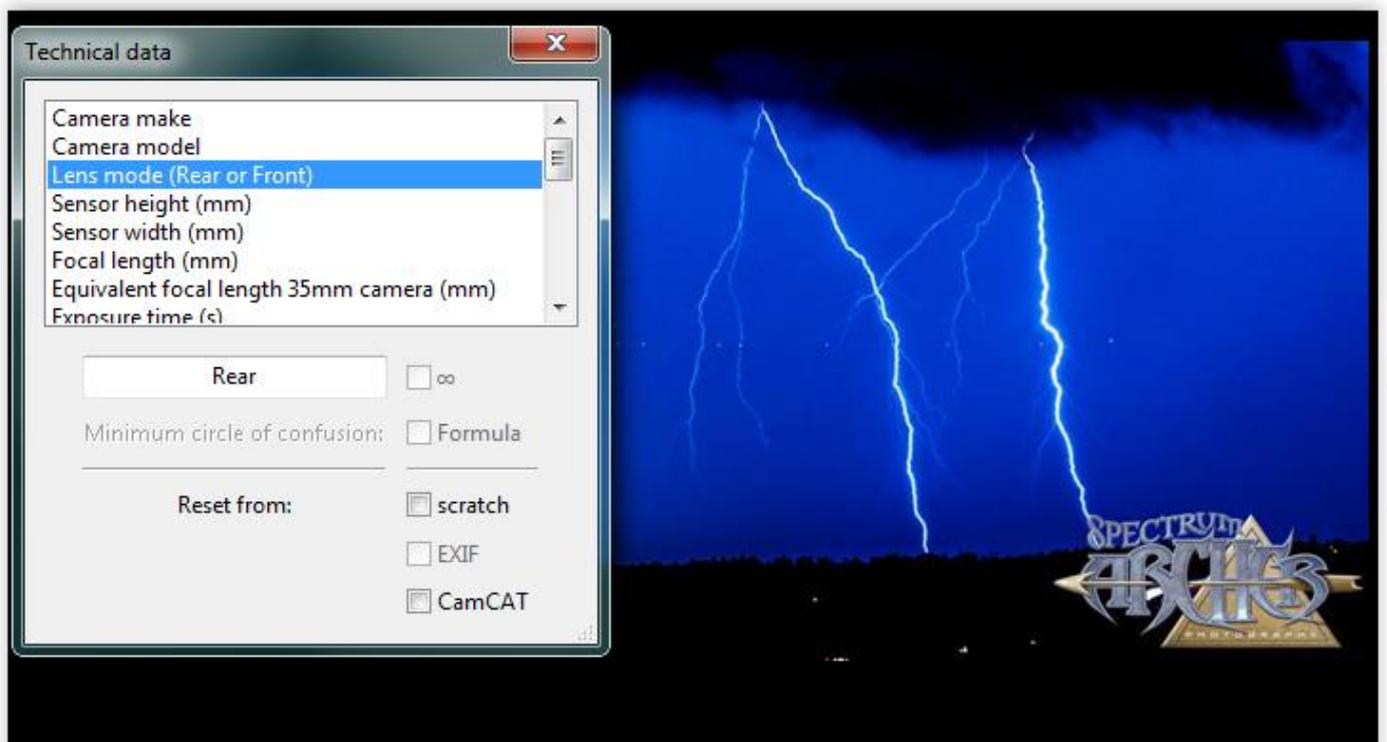
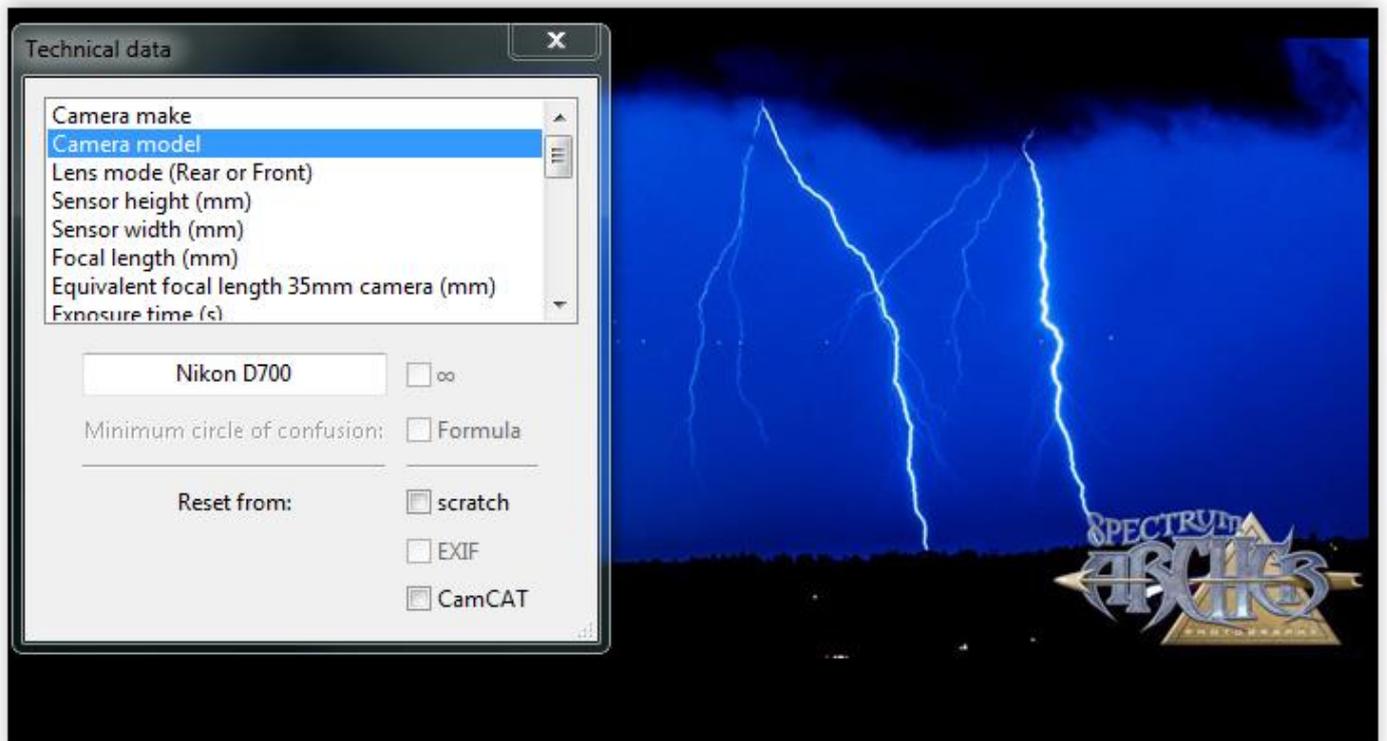
Obviously, as no such light sources are present, one might wonder if the photos have been cropped in order to hide – voluntarily or not - these lights. The use of CamCAT can bring an answer to that question.

### Use of CamCAT

Some fields of the « *Camera – Technical data* » function can be manually completed by the analyst when they are not present in the associated metadata of the photo (and then not integrated in IPACO), but when they are known otherwise.

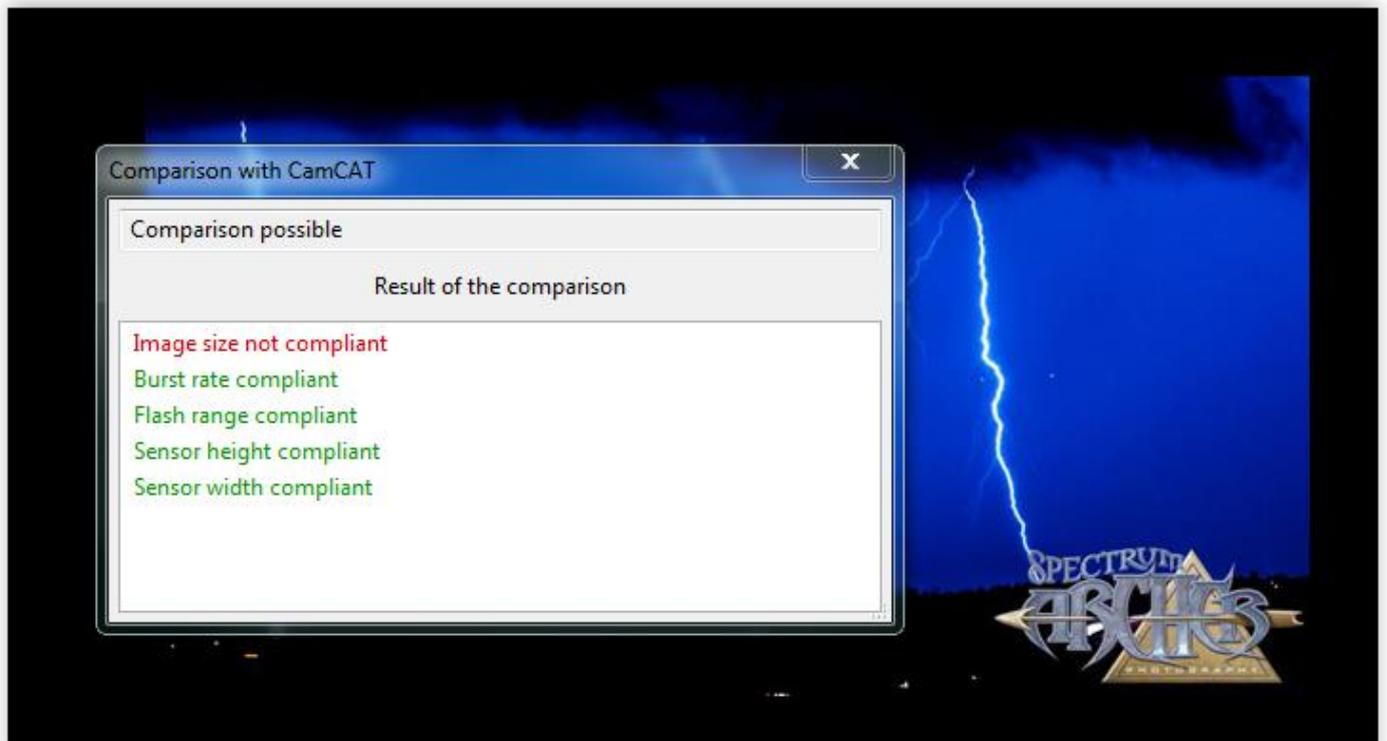
Then, in the present case, knowing the make and the model as well as the lens mode of the camera, we can write them this way:





Next step is to tick the « *Comparison with CamCAT* » box in the « *Authentication* » menu that produces a comparison of the known parameters of the camera in CamCAT with these of the photo.

The results are shown in green for the compliant parameters and in red for those that are not:



In the present case, the sizes of the photos are in fact not compliant, which confirms the hypothesis that they were cropped.

The others parameters are those that came from CamCAT for which a unique value exists.

### The original photos

The photographer Greg Archer that was informed of the presence of modified versions of its photos on the website «Week in Weird» and of the questioning aroused by the presence of these lights, released the original .NEF format of the two photos:

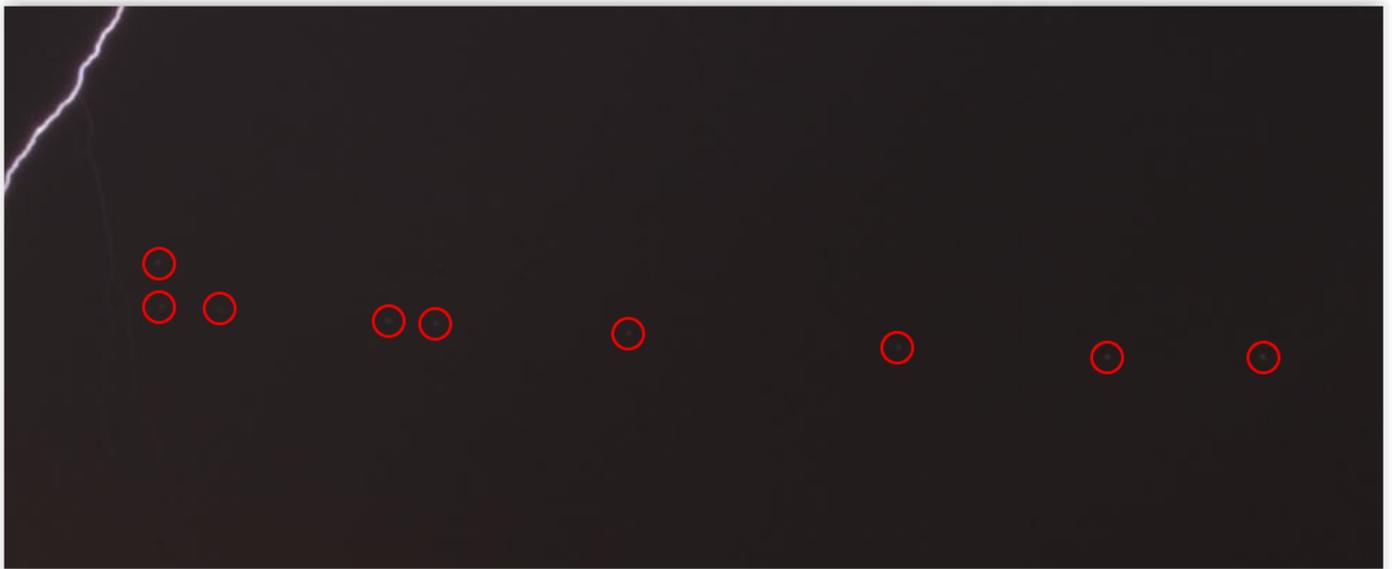


*Photograph « TEL\_6734.NEF »*

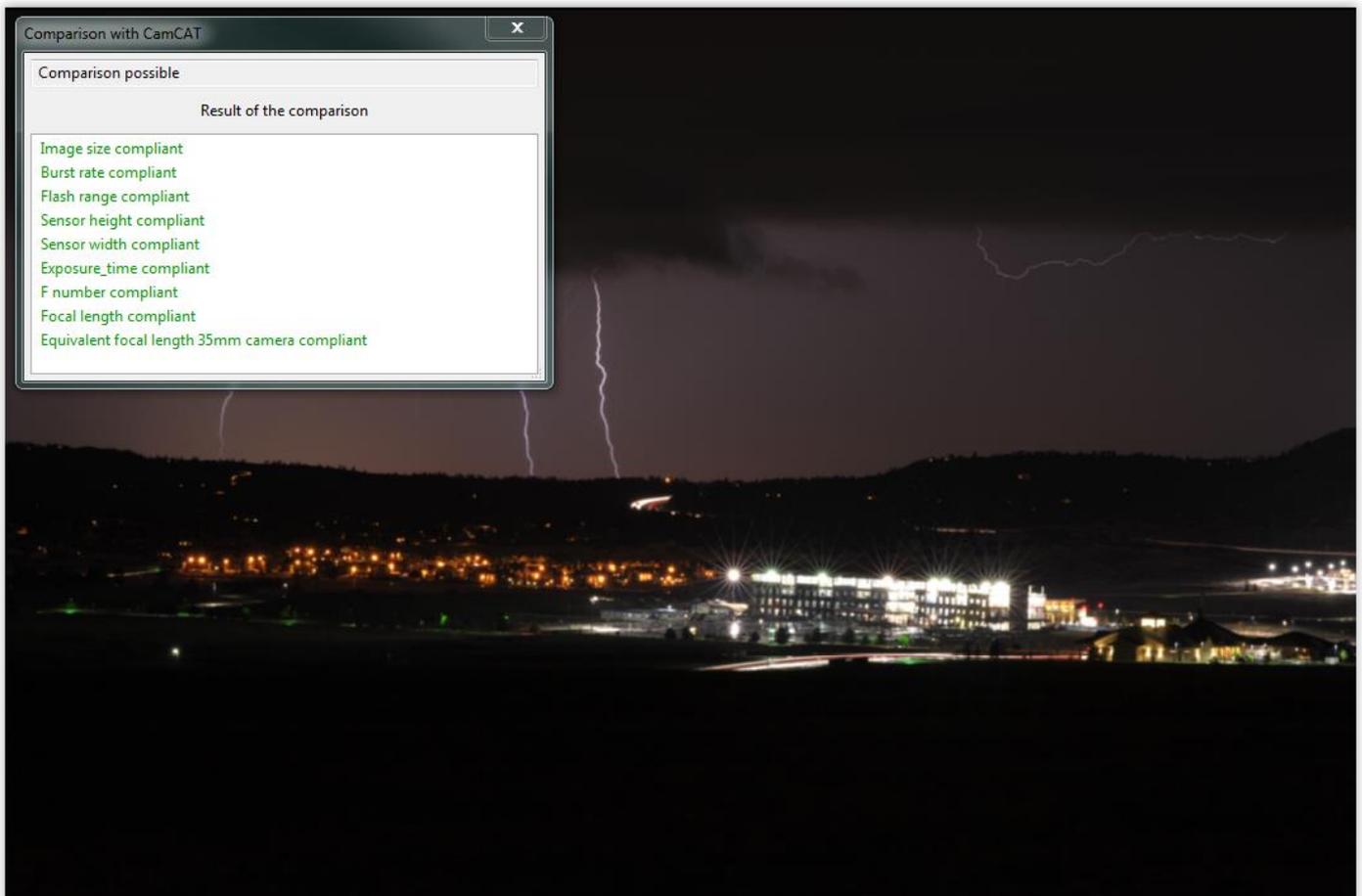
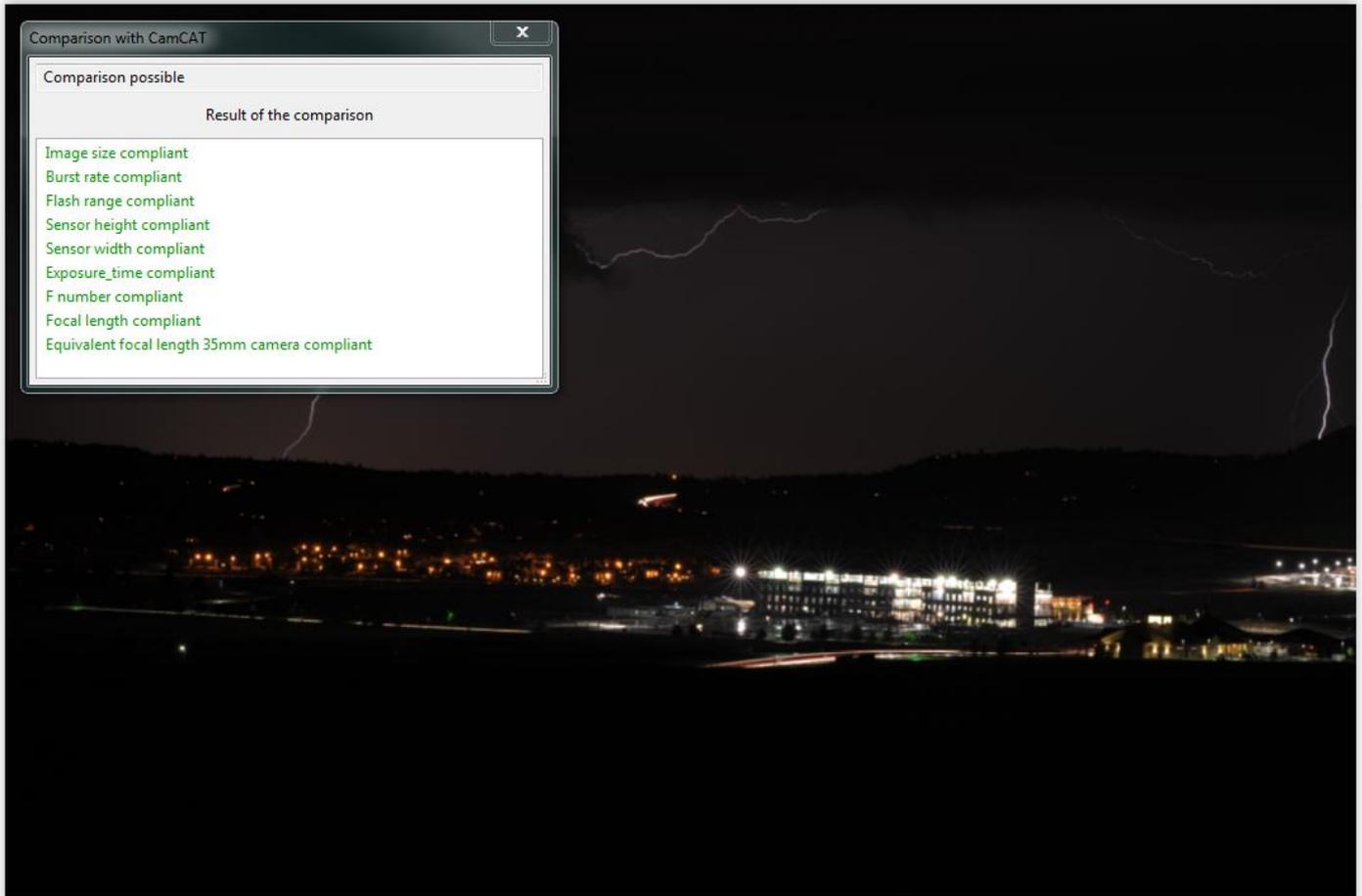


*Photograph « TEL\_6735.NEF »*

The unknown lights, although less visible than in the modified photos, are still present, at the same place:



The comparison of the two files with CamCAT show the whole data taken into account are, this time, compliant:



Therefore, the two photos in .NEF format are « *authentic original* ».

We can also clearly see on the foreground a lightened building with lamps, which were not present in the cropped versions.

## 2- Lens flares

We can now check, with the « *Lens Flare* » tool, if the hypothesis that was proposed at the beginning of this analysis is confirmed or not.

Thanks to IPACO, it is possible in a very simple way to proceed using several tools combined into one that allows us to:

1 - Create a figure "*Flare*" on these lights in two clicks: the center and radius of a circle that approximately delimits the lights in question.

2 - Finely reposition the center of this flare figure by calculating the radiometric center of the chosen circle.

3 - Materialize the flare, in the form of an asterisk with the same radius as the chosen circle.

4 - If there is not yet any figure "*Center*" in the graph displayed, it creates one (definition of the geometrical center of the photograph).

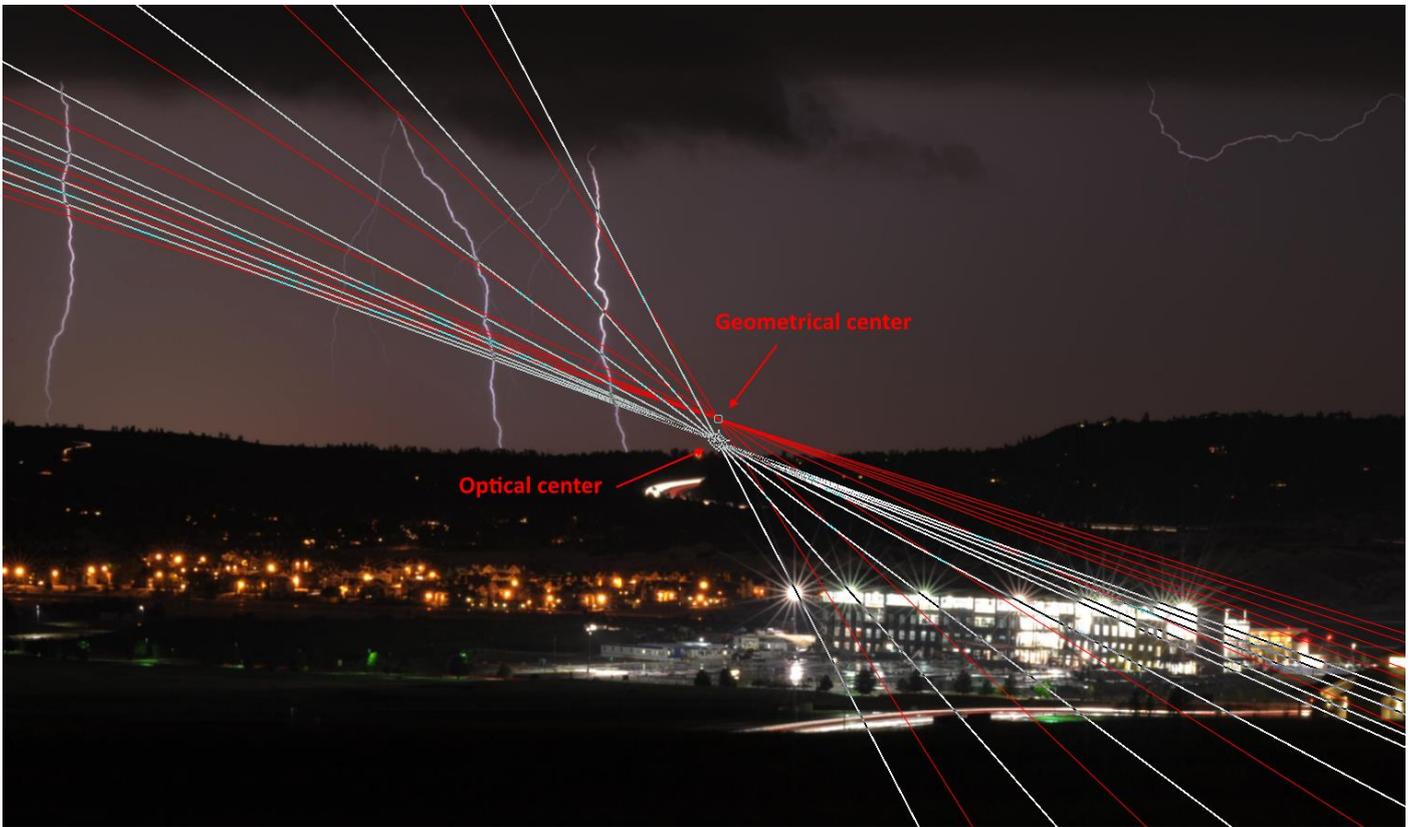
5 - Draw a "*diameter*", i-e a straight line that passes through the flare and the geometrical center, across the entire image:



Thereby defining the geometrical center of the photograph, it is found that the position of the lights in the sky is substantially coincident with that of the light sources, along a central axis of symmetry passing through the geometrical center of the photograph.

The difference is the non-exact coincidence of optic and geometrical centers.

However, it can also be compensated with IPACO whose tool "Flare" allows us to change manually the geometrical center by dragging it gradually into the optic center position and thus check the consistency of the flares:



The alignment "*flares/optical center/light sources*" is perfect, confirming that these "objects" are just parasitic reflections created in the internal lens system of the camera.

These reflections are always opposite to the light sources, through a central axis of symmetry materialized by the optic center of the picture.

#### IV. Conclusion

The luminous phenomena observed on the two photos are only a lens flare effect, which light sources were not visible due to the crop applied to the original photos.

***This case is classified « A », photos of an optical effect called « Lens Flares ».***

#### V. Sources – Photos credits

- Mr. Greg Archer, photographer.
- Internet magazine « *Week in Weird* ».

This case was presented to and studied by various members of the ["Above Top Secret"](#) forum on April 11, 2012.