Wednesday, June 26, 2019

# Keys for Astronomy Radiation from the bottom of the sky (or cosmic radiation)

**Experimental images obtained by several treatments of the same star fields with very cool results in the detection of weak stars .**

**Since I could not work smoothly, it turns out that the tasty subjects had to be postponed because I had too many things preventing me from achieving the layout more quickly.**

**Now is the time to accelerate that and I had fun watching an old video related to the magazine in preparation for several weeks.**


**Preparation of an experiment in the research and return on my works of 2018**

**Experiment 2**

**Experiment with the visible spectrum via photographic tests**

**Distances , capacities, coupling , optics, Sensibilities**

**Manual settings on Stars**

**A part of the next magazine with explanations relating to my very first excercises around the study of the astronomical objects:**

- **Conclusions, results of an intuitive technique that I tested and that allowed me to jump in my basic settings and discover weak signals that, after treatment, have revealed images for my studies**

- **Technique that provided results reinforcing the interest of further exploring the method.**

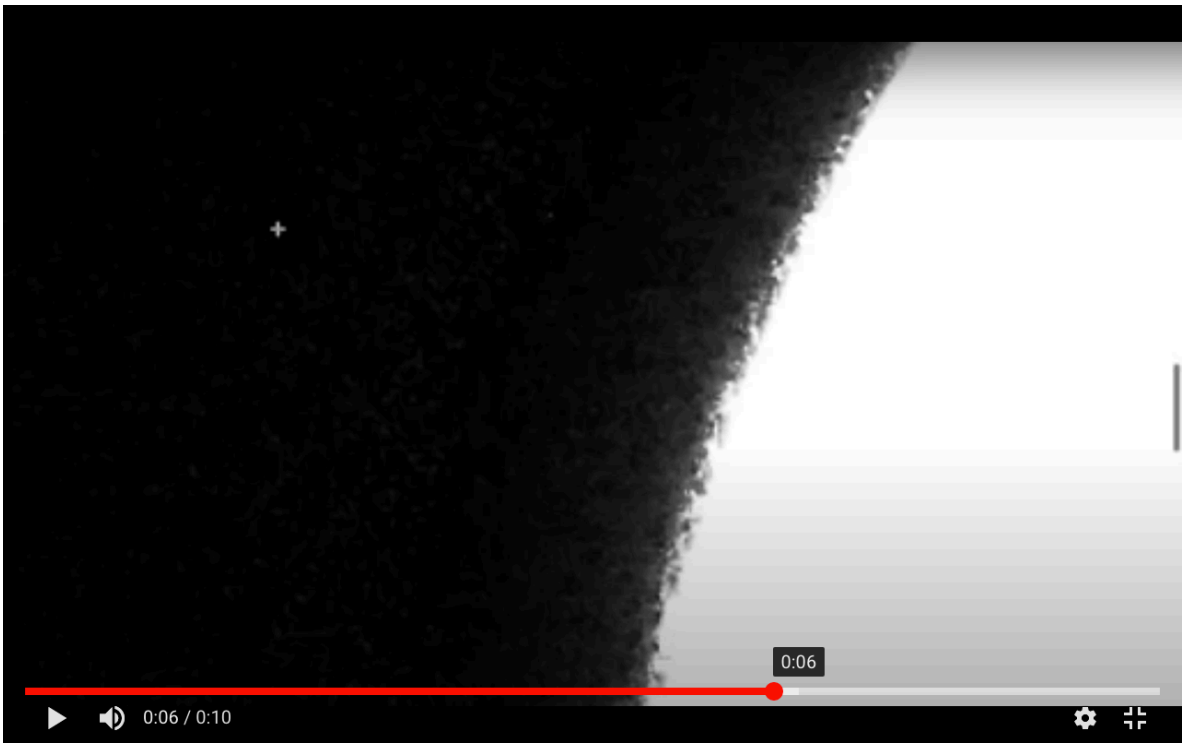
**Unlike other techniques, it does not require any other data that is essential for its use.**

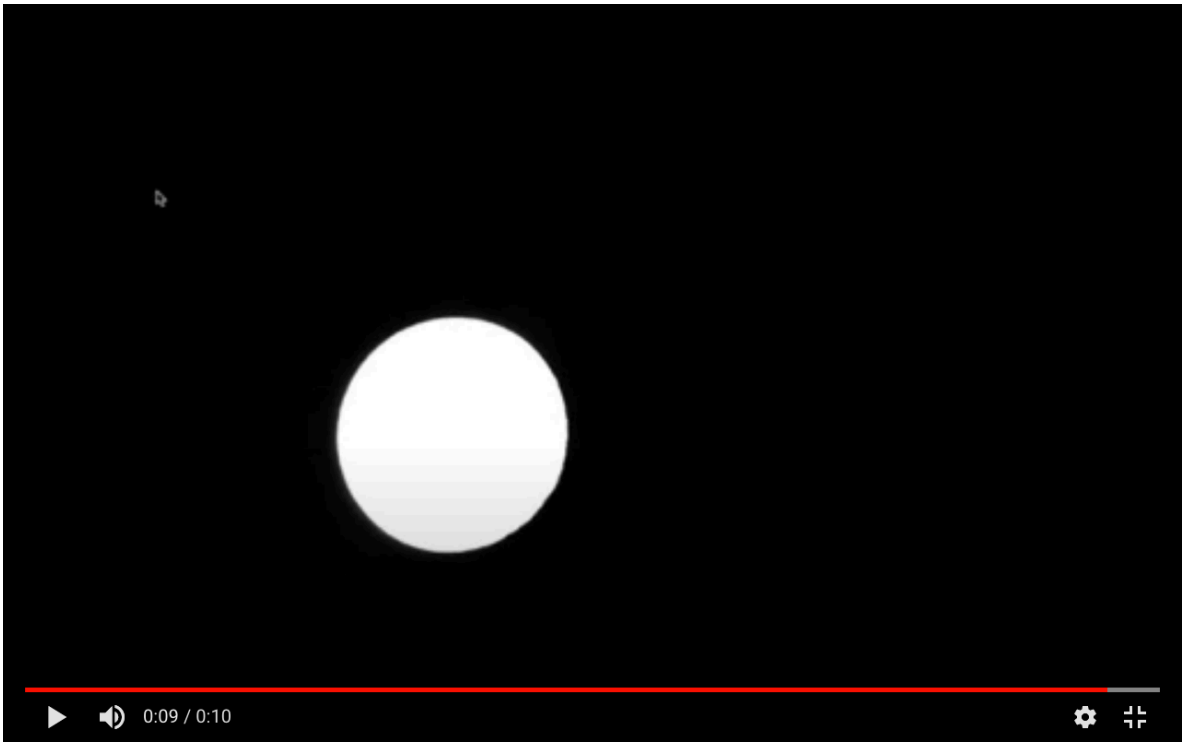
**Efficient and fast execution, the technique has a promising future.**

- **Medium used to observe a stellar magnetic field.**

**It must be kept in mind that a star situated at a great distance from the observer does not constitute an overall average of the magnetic structure of its surface at the time of observation.**

## Enlargement mechanisms:




Access by clicking in the Time at the end.

Several factors contribute to the widening of the lines that make up the spectrum of a star.

## Natural Enlargement:

This weak enlargement factor results from Heisenberg's uncertainty principle that the energy E of an atomic energy level is not exactly defined.

The width of a line is practically never determined by this factor which, by the presence of other dominant phenomena, becomes negligible.

Rotational enlargement: the projected rotation speed v sin i of a star has the effect to extend the profile of the lines by Doppler effect. In wavelength, the offset is described by $\Delta\lambda = v \sin i \lambda$, where c is the speed of light.

## Thermal Widening:

The temperature of a star directly affects the profile of a spectrum absorption line of this star.

Thermal energy gives the atoms a random velocity, thus producing a wavelength shift by Doppler effect.

## Zeeman effect:

In the presence of a magnetic field, the lines are widened and sometimes split into several components depending on the strength of the field.

## Instrumental profile:

Depending on the spectral resolution of the spectrograph used during the data acquisition, the lines are subject to a more or less considerable

**enlargement thus reducing the distance between which two elements of the signal can be distinguished.**

**The shape of this enlargement factor depends on the device used.**

**Readings:**

- **SAO-NASA Astrophysics Data System (ADS)**

- **Reading a Master's thesis in physics.**

Posted by Veronica IN DREAM at 5:14 PM