# Is there a surprising relation between the Sun and OJ 287?

Bernard Lempel is a member of the SAF (French Astronomical Society).

#### **Introduction:**

The sky has the power to reserve us many surprises the last one concerns the Sun and the Quasar OJ 287.

Everybody knows that the sun has a cycle about 11 years. It is reflected by the evolution of the number of sunspots during all the duration of every cycle. The succession of the cycles is observed for several centuries, it is the Solar Wolf Cycle (Fig.0).

#### **Analyses:**

Approximately one month ago, we found a document, without visible link with the Sun, entitled: "Measuring Black Hole Spin in OJ 287" (Valtonen et al). It is mentioned a cycle about 12 years. There is also a curve of variation of the luminosity of OJ 287 beginning a little after 1800 and going to our days. (Fig.1). OJ 287 is a Blazar (BL Lac) the red shift of which is 0,306 (3.5.10<sup>9</sup> ly). It is an active galaxy the core of which would be constituted by a hyper massive black Hole.

The exam of these two curves (Fig.0 and Fig.1), shows us very strong resemblances:

- 1. In these curves we located summits obviously similar in their variations in amplitudes (A, B, C, D, E, F, G). Between the summits of both curves, the correlation would be  $\mathbf{r} = \mathbf{0.88}$  with a probability  $\mathbf{p} = \mathbf{1} \mathbf{3}$  %.
- 2. Another correlation appears on examination of peaks: Some are dual peaks, others are not, and they are the same in both curves.
- 3. The Maunder minimum and the Dalton minimum are perfectly recognizable in both curves.
- 4. The temporal gap between the sun and OJ 287 is about 195 years ( $\pm$  5%). But this gap is in the bad direction: OJ 287 is late with regard to the Sun! Everything takes place as if the Sun would be the conductor.

How to explain all this?

## Note:

It is a phenomenon which would be completely new. We didn't find any document reporting it, or even something similar

### **References:**

Measuring Black Hole Spin in OJ287 01/08/2010 (Valtonen et al)



