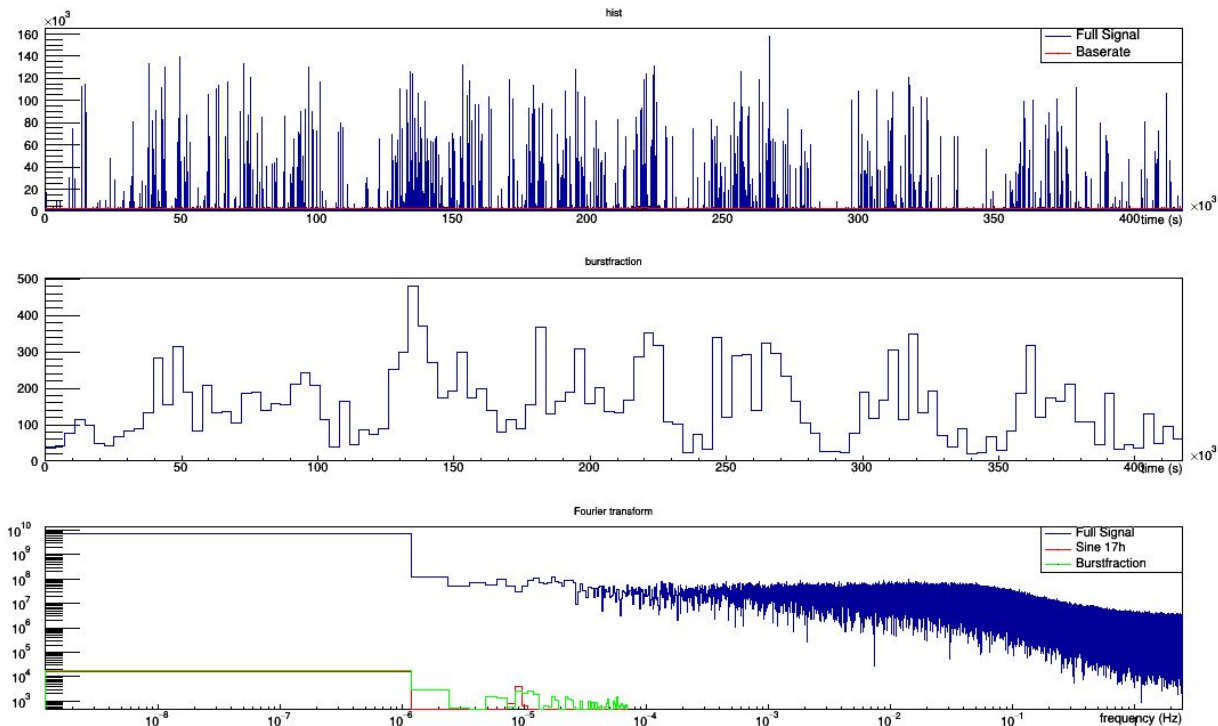
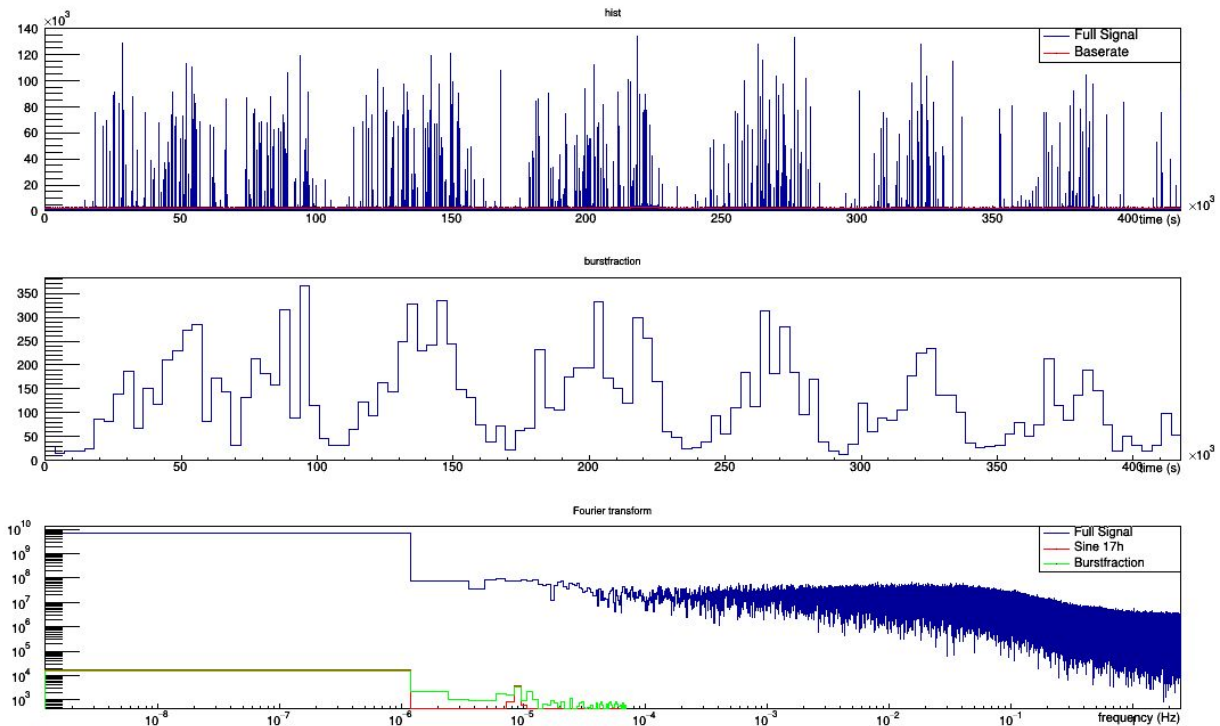


A decorative graphic on the left side of the slide. It consists of a blue parallelogram and a light green parallelogram, both tilted at an angle. The blue shape is in the foreground, and the green shape is partially behind it. They are set against a dark blue background with faint, lighter blue diagonal stripes.

Periodicity of Bioluminescence

Period nearly invisible in fourier spectrum







Periodogram

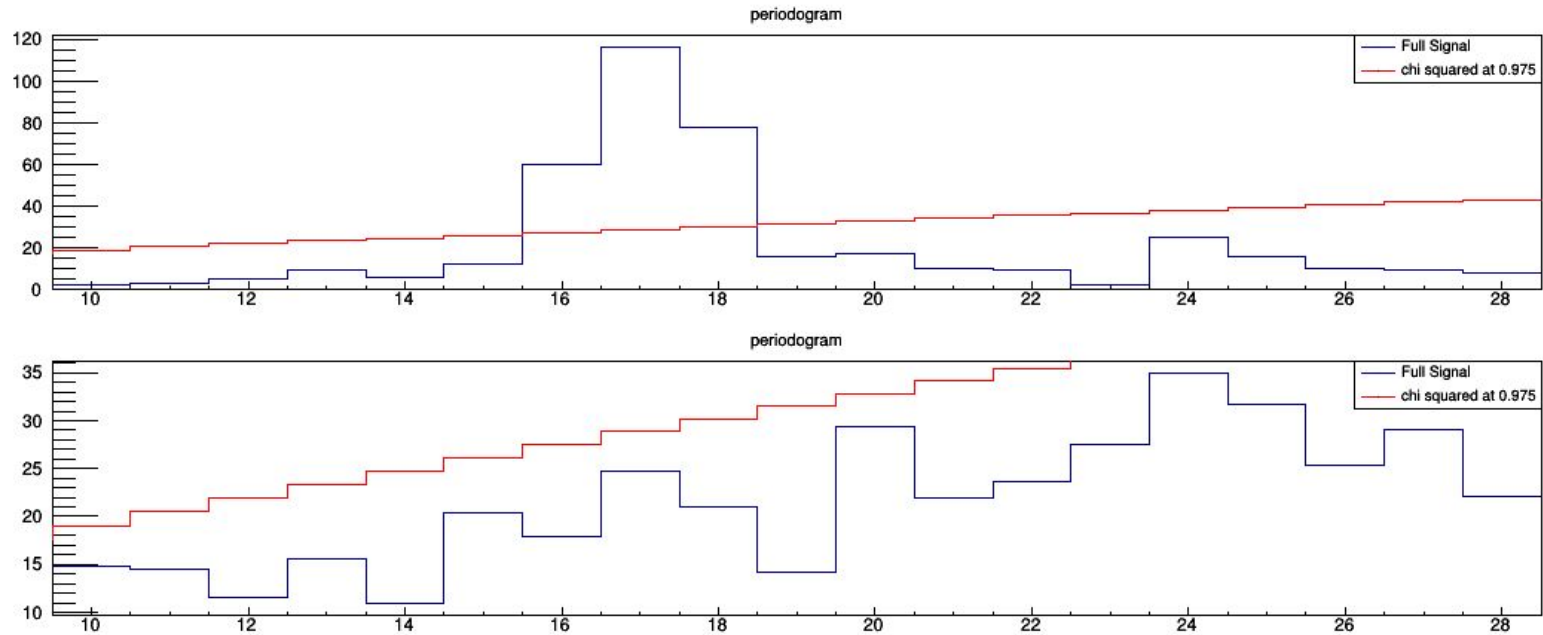
- Used to find the periodicity at Italian site
- For non sinusoidal signals
- should still work with gaps in data



How does it work

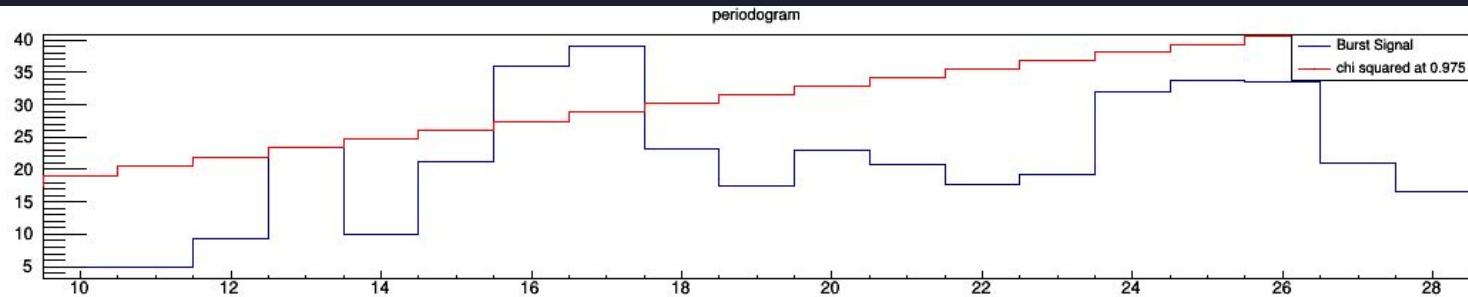
- Works in hour increments
- Matrix expected period wide
- average the columns and take the variance between these averages
- For just noise/ incorrect period the column averages are approximately the same
 - Low variance
- For signal of expected period the averages start to differ a lot
 - High variance
- Compare variance to χ^2 distribution with period-1 degrees of freedom

Sine wave of 17h and random noise



Signal

Dom
12



Dom
17

