

THE THREE-DECADAL COSMIC RAYS CYCLE

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Different periodicities of cosmogenic isotopes have been reported in a great number of papers. Cosmogenic isotopes have been frequently employed as proxies of ancient Cosmic ray fluxes. On basis to periodicities of ^{14}C time series (data from Intercal-98) and the ^{10}Be time series (data from both the South and North Poles), we put in evidence, the existence of cosmic ray fluctuations with a periodicity around **30 yrs**. Results were obtained by applying the Wavelet Transformation Spectral Technique and signal reconstruction by filtering with a powerful algorithm of the Daubechies type. The wavelet analysis applied to paleoclimatic proxy data of large scale atmospheric phenomena (Atlantic Multidecadal Oscillation and Southern Oscillation Index) and Hurricane phenomena has revealed coherence between the climatic oscillations and the solar phenomena (the cosmogenic isotope ^{10}Be) in the frequency of **30-yrs**. This seems to be a significant fluctuation which may indicate that the **30 yrs**-frequency of Cosmic Rays is probably a modulator agent for terrestrial phenomena, reflecting the *mother of all modulations*, namely Solar Activity.

Cosmic Rays, Solar Activity, Cosmogenic proxies

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