# COSMIC RAY BIANNUAL VARIATION

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## ABSTRACT

The study of the CR power spectrum ( Attolini et al., 18th ICRC, Conf.Papers, 10,174,Bangalore 1983) has revealed a significant variation with a period around 2 yr that cannot be explained as a high order harmonic of the 11 yr solar cycle. Comparative study of the correlation on different time scales between CR intensity and Rz, aa, high speed streams and polar hole size ( SH 4.4-14, this conference) has put in evidence that a high degree of coherency exists between each couple of variables at 1.58-1.64 yr, except between CR and Rz. On the other hand cyclic variation on a short time scale, around 26 months, has been claimed (Sakurai, 18th ICRC,Conf. Papers, 4,210,Bangalore 1983) to be present in the neutrino flux ( Davis et al.,AIP Conf. Proceedings,No.96, 1983). Critical tests of this hypothesis are considered and a preliminary result seems to indicate that the hypothesis of the existence of a 1.6 yr periodicity in the neutrino data during the measurement time interval, has a significance $\geq$ 99.9 %.

The posssible origin of this variation as due to a contribution either of CR interactions in the upper atmosphere or to the solar dynamics,will be discussed.