A linear dependence between ozone depletion on the 11 years cycle of Cosmic Rays (CR) has been often debated in the literature. At first instance, the more elemental corroboration is by means of the correlation coefficient ($r$). Calculations corresponding to the relevant data gives a value $r = 0.5216$. Since this low value is not completely conclusive, because this analysis only provides a global information about the degree of linear dependence without taking into account the time series linearity. Also, the correlation coefficient does not provide the evolution of the common synchronized periodicities, nor the evolution of the relative phase between two time series. A complementary study must be done in order to analyze local variations of power within a single non-stationary time series at multiple periodicities, such as CR and total ozone series. We analyze here Wavelet Spectral Analysis, in which case the evolution of common periodicities would indicate the frequencies where both series are synchronized. Within this frame, the wavelet-squared transform coherence (WSTC) is particularly useful in highlighting the time and frequency intervals, when the two phenomena have a strong linear or nonlinear relationship. If the correlation of two series is high, the arrows in the right indicate that both phenomena are in linear phase (horizontal left) indicate that they are in linear anti-phase, that is a linear correlation or a highly synchronized behavior. If the coherence is equal to 1, it indicates that the two series are perfectly synchronized in the whole interval of analysis. Hence, we verify that the common periodicity (1-3 yrs), with a coherence 0.65 in the period 1980-1993, in an complex relation, and/or the OH severity, The statement "a strong correlation" is used in [11] to describe the coherence between CR and O3, panel (c) in the figure 1 that there is a multiannual periodicity (> 15 yrs.), but again completely out of the Cone of Influence (COI) throughout all the time interval. Therefore, the Coherence analysis where panel (c) and the previous analysis, panel (a) shows that the linear correlation between CR and total ozone mass depletion, that would imply the need of a high coherence value and continuous through all the time interval, which is not observed in [11]. In panel (b) and (c), the coherence values the global Coherence is low, but in some periods of the main periodicity of 11 yrs, the Coherence degradation to 0.3 -0 in the precedent and future years. Such detailed information cannot be obtained from a Correlational analysis. Therefore, a complementary study must be done in order to analyze local variations of power within non-stationary time series at multiple periodicities, such as CR and ozone time series, in order to obtain from Wavelet-Coherence analysis, not only global but also local information, and per frequency band. In the next section, we provide the correlation coefficient for each frequency band, in which the coherency is calculated between the observed and the expected ozone mass depletion [11]. (ii) the 11 yrs. periodicity has not any important role in such interaction, and so there is any trend for a huge ozone hole in 2019-2020 if an assumption to be done at 11 yrs cycle. (iii) there is a linear correlation between CR and O3, what implies that the correlation coefficient is too low. CR intensity has not the principal role to explain the ozone mass depletion, nor the OH severity, but rather a minor one, no higher than 27%. Other causes should be invoked to predict most of the ozone variation, regardless of the level of CR intensity.

References