ODD AND EVEN CYCLES IN COSMIC RAYS AND SOLAR ACTIVITY

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We present here a new method to define the evolution of cosmic ray intensity and solar activity cycles using the time delayed component method in a 2Dphase space. This new method is free from the ambiguousness related to the exact timing of cosmic ray maxima and minima. We study the relationship between solar activity and cosmic ray intensity for the last four full 11-year cycles. We confirm that the evolution of cosmic ray intensity is different for odd and even cycles and show that odd cosmic ray cycles are longer and have longer autocorrelation interval lengths than even cycles. The momentary time lag between cosmic ray intensity and sunspot activity is about one year for odd cycles and small or negative for even cycles. This reflects the difference in the cosmic ray modulation conditions for odd and even cycles and is probably associated with the influence of drift effects.