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Discriminating between burned and unburned vegetation covers

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Time series of satellite SPOT-VEGETATION Normalized Difference Vegetation Index (NDVI) data from 1998 to 2003 were analyzed in order to evaluate the effect of fires on the time dynamics of vegetation covers in Italy. The detrended fluctuation analysis (DFA), which allows the detection of persistent properties in fluctuations of nonstationary signals, has been performed. Two types of covers, fire-unaffected and fire-affected, were analyzed. The obtained results reveal that fires contribute in increasing the persistence of time dynamics of the vegetation. This finding suggests a new approach in investigating vegetation time dynamics.