Geophysical Research Abstracts,
Vol. 10, EGU2008-A-02535, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-02535
EGU General Assembly 2008

Variation of the vegetation response to two successive fires

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The detrended fluctuation analysis (DFA), which is a powerful tool to detect scaling behaviour in nonstationary signals, is applied to decadal 1998-2005 SPOT-VGT NDVI time series for a test site in Sardinia Island (Italy), affected by two successive fires. The test site is covered by shrubs, typical Mediterranean maquis. Our result points out to a decrease of the persistence of the vegetation dynamics after the second event. Interpreting in terms of fire resilience, which is the recovery ability of vegetation after fires, this result shows that vegetation is less resilient after the second fire.