

Dear Editor Prof. A. Surjalal Sharma,

We agreed with the reviewer about the need to clarify the future use of the technique GPA. Therefore, the paragraph that refers to the technique GPA has been updated in an attempt to clarify to the reader that we are referring to GPA adapted for time series (GPA-1D) according to the following articles: Assireu et al 2002 and Rosa et al. 2008. The first one had not been cited in the previous version.

Now, the last (new) paragraph is :

“Fluctuations in time series can also be studied from techniques based on bilateral asymmetries that can be found in the gradient domain of the data. The technique known as gradient pattern analysis (GPA), originally formulated to analyse spatiotemporal data (Rosa et al., 1999), was adapted to analyse patterns of asymmetries that appear exclusively in the time domain (Assireu, et al., 2002). The GPA for time series (known as GPA-1D) compares amplitude values considering different scales of time fluctuation mapped in its gradient field (Rosa et al. (2008)). Within the scope of the GPA-1D, the value of the gradient asymmetry coefficient can also present relations with the values obtained from DFA, Power Spectra and fractal measures. Therefore, the use of gradient pattern analysis (GPA-1D) (Assireu et al., 2002, Rosa et al. (2008)) will be explored further in an complementary work.”

Kind regards,

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O.; Rosa, R. R.