Nonlin. Processes Geophys. Discuss.,
doi:10.5194/npg-2016-33-SC1, 2016

Nonlinear Processes in Geophysics
Discussions

Interactive comment on "Spatial and radiometric characterization of multi-spectrum satellite images through multifractal analysis" *by* Carmelo Alonso et al.

J. Paz-Ferreiro

jorge.paz-ferreiro@rmit.edu.au

Received and published: 5 October 2016

In my opinion this is a novel work related to multiscaling analysis of data cropped from satellite images. I would like to pay attention to the following: a)In order to better illustrate similitude or differences in the visible (blue, green and red) and near-infrared wavelength I suggest to characterize assymmetry of the singularity spectrum by AI index (Xie et al., 2010), defined as: AI = (ïĄĎïĄąL-ïĂăïĄĎïĄąR)/(ïĄĎïĄąL+ïĂăïĄĎïĄąR), where ïĄĎïĄąL= (ïĄąïĂř - ïĄąmin) and ïĄĎïĄąR= (ïĄąmaxïĂ■ïĄąïĂř) are the widths of the left and right branches of the f(ïĄą)-ïĄąïĂăplots, respectively. Reference: Xie, S., Q. Cheng, X. Xing, Z. Bao, and Z. Chen. 2010. Geochemical multifractal distribution patterns in sediments from ordered streams. Geoderma 160:36-46. b) I wonder if it

would be worth checking multifractality of the Normalized Difference Vegetation Index (NDVI)

PLEASE, SEE ALSO ATTACHED TEXT

Interactive comment on Nonlin. Processes Geophys. Discuss., doi:10.5194/npg-2016-33, 2016.

In my opinion this is a novel work related to multiscaling analysis of data cropped from satellite images. I would like to pay attention to the following:

a) In order to better illustrate similitude or differences in the visible (blue, green and red) and near-infrared wavelength I suggest to characterize assymmetry of the singularity spectrum by AI index (Xie et al., 2010), defined as: $AI = (\Delta\alpha_L - \Delta\alpha_R)/(\Delta\alpha_L + \Delta\alpha_R)$, where $\Delta\alpha_L = (\alpha_0 - \alpha_{min})$ and $\Delta\alpha_R = (\alpha_{max} - \alpha_0)$ are the widths of the left and right branches of the $f(\alpha)$-α **plots, respectively.**
Reference: Xie, S., Q. Cheng, X. Xing, Z. Bao, and Z. Chen. 2010. Geochemical multifractal distribution patterns in sediments from ordered streams. Geoderma 160:36-46.

b) I wonder if it would be worth checking multifractality of the Normalized Difference Vegetation Index (NDVI)

Fig. 1.