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GR Focus Review

Planation surfaces as a record of mantle dynamics: the case example

of Africa

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ABSTRACT

There are two types of emerged relief on the Earth: high elevation areas (mountain belts

and rift shoulders) in active tectonic settings and low elevation domains (anorogenic

plateaus and plains) characteristic of the interior of the continents i.e. 70 % of the Earth

emerged relief. Both plateaus and plains are characterized by large erosional surfaces,

called planation surfaces that display undulations with middle (several tens of

kilometres) to very long (several thousands of kilometres) wavelengths, i.e.

characteristic of lithospheric and mantle deformations respectively.

Our objective is here (1) to present a new method of characterization of the very long

and long wavelength deformations using planation surfaces with an application to

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