



Multi-scale numerical investigations with WRF about atmospheric features leading to flooding episodes over the central region of South-America

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Several flooding episodes are numerically investigated from a multi-scale atmospheric dynamics point of view over the Bolivian Tropical Andes. Large scale atmospheric water transport is dynamically downscaled in order to take into account the complex topography forcing and local features as modulators of these events. For this purpose, a series of high resolution numerical experiments with the WRF-ARW model is conducted using two global datasets (GFS and ECMWF). While several mechanisms have been suggested to explain the dynamics of these episodes, they have not been tested yet through numerical modelling experiments. This study will tackle this issue showing preliminary results.