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## Poster.3: . The climatology of the Orinoco low-level jet in CMIP5/CMIP6 models

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## Abstract

The Orinoco low-level jet (OLLJ) plays an essential role in atmospheric moisture transport from the tropical Atlantic and the Orinoco basin to the northern Amazon. Although various studies have assessed its main features, the representation of the OLLJ by General Circulation Models (GCMs) has not been evaluated yet. This study focuses on the GCMs of the Fifth and Sixth phases of the Coupled Model Intercomparison Project (CMIP5 and CMIP6) in terms of their representation of the OLLJ. We use data from the historical experiment during 1979-2005 for CMIP5 and 1979-2014 for CMIP6, while ERA5 is used as the reference database. The annual cycle is characterized with zonal and meridional wind, and sea-level pressure (SLP), near-surface air temperature, and surface sensible heat flux (SSHF) are used to link the performance of the models with the simulation of patterns that modulate the jet activation. Our results suggest contrasting skills among CMIP5 models, while CMIP6 models show an improved performance. An accurate simulation of the SLP and temperature gradients between the ocean and the northern South America landmass does not seem to influence the representation of the OLLJ, particularly in CMIP6. Besides, links between changes in the jet intensity and regional gradients of SSHF, air temperature, and SLP tend to be represented by GCMs. This study reinforces the usefulness of GCMs in understanding regional climate, allowing the analysis of climate variability at different scales.