

PI: Adrien Deroubaix

Title

Daily air quality forecasts for São Paulo

Abstract

As part of the KLIMAPOLIS project (PI: Guy Brasseur), I developed an air quality forecasting system for the megalopolis of São Paulo. The KLIMAPOLIS project is funded by the German Federal Ministry of Education and Research (BMBF) to promote collaboration between Brazil and Germany, with the aim of developing a joint German-Brazilian institute to support the smart and sustained development of urban areas in Brazil.

On a daily basis, the air quality forecasting system simulates the air quality for the next 3 days with a spatial resolution of 10 km and 2 km. The modeled results are compared with observations for the main atmospheric pollutants including five trace gases (CO, NO₂, O₃, SO₂ and Ox) and aerosols (PM_{2.5} and PM₁₀).

The test project for the new Levante HPC is a great opportunity for me to test my air quality forecasting system on the new machine.



