



WRF uncertainty Reduction for LOTOS-EUROS coupling

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In recent years, from cooperative projects between TNO, Universidad EAFIT, Delft University of Technology, Universidad de Antioquia, and Colombian Air Force, we have been trying to understand the dynamics of air quality in Colombia, using the Long Term Ozone Simulation European Operational Smog (LOTOS-EUROS) model.

At this moment, the aim of this project is the coupling between the Weather Research and Forecasting (WRF) and the LOTOS-EUROS model. The idea is to generate precise meteorological or climate variables for the study domain assimilating WRF with fusion data from previous works of Colombian Air Force. Those fusion data are the result of integrate satellite information, meteorological radar measurements and WRF simulations in a upper domain. WRF model will feed the LOTOS-EUROS model for air quality assesment.

This work contributes not only enhances the research relationship between entities for air quality assesment, but also to the work developed by the Aerospace Technological Development Center for Defense (in Spanish Centro de Desarrollo Tecnológico Aeroespacial para la Defensa, CETAD) of the Colombian Air Force in terms of providing accurate simulation results that can be useful to the operative schemes that this institution has about the forecast of trajectories for airplanes avoiding risky zones.