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## PAISA: Photochemical modelling to attribute emission sources and source regions to high particulate matter concentration in urban areas in Spain

## **Description**

The aim of PAISA is to make a leap forward in our understanding of the origin of high atmosphere particular mattaer (PM) concentrations in main urban areas in Spain and to provide comprehensive spatial and temporal estimates of the contribution from different source classes (activities and regions) to the mixtures of PM components (both primary and secondary).

The novelty of PAISA is the development of a framework that includes the state-of-the-art in aerosol emission, modelling and a source attribution system for PM pollution episodes based on the CALIOPE air quality system for Spain. The results will allow us to discrimiate between the contribution from regions (urban, regional, national, long-range), sources (natural or anthropogenic) and even from fuel type (i.e., diesel and gasoline) for on-road traffic and residential combustion activity sectors, which are the main sources of PM10 and NOx in urban areas.

The outcomes of PAISA will determine to what extent the urban PM concentrations in Spain are controlled by specific anthropogenic sources and/or regional or transboundary contributions, allowing better information to policymakers in the application of the AQD.

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