



## **Natural marine halogen and sulfur emissions influence air quality in the coastal megacity of Los Angeles**

María Muñoz-Unamunzaga (1), Rafael Borge (2), Golam Sarwar (3), Brett Gantt (3), David de la Paz (2), Carlos A. Cuevas (1), and Alfonso Saiz-Lopez (1)

(1) Instituto de Química Física Rocasolano. Consejo Superior de Investigaciones Científicas (CSIC), Química Atmosférica y Clima, Madrid, Spain, (2) Environmental Modelling Laboratory, Department of Chemical & Environmental Engineering, Technical University of Madrid (UPM), Madrid, Spain, (3) National Exposure Research Laboratory, Environmental Protection Agency, Research Triangle Park, North Carolina 27711, United States

Natural halogen and sulfur compounds, emitted from the ocean, influence the oxidizing capacity of the marine atmosphere; however, their impact on the air quality of coastal cities is currently unknown. In this work, a set of high-resolution simulations were performed using the Community Multiscale Air Quality (CMAQ) regional model, to assess the impact of ocean emissions and combined chemical processes of halogens (iodine, bromine and chlorine) and DMS on air quality levels of Los Angeles and South Coast Air Basin. Simulations were completed for August and September of 2006, using a horizontal grid resolution of 4 km and 35 vertical levels.