



Mapping ozone and oxidant oxygen within the crown of cities in the central part of Mexico, impact on ecosystems and crop areas.

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Different averaging schemes of surface ambient concentrations of ozone and oxidant oxygen ($O_3 + NO_2$), as well as peak values, and AOT40 accumulative exceedences were built for the central part of Mexico using different data sets. Most of the values were taken from the air quality monitoring stations of the metropolitan areas of Mexico City, Puebla and Toluca during MILAGRO field campaign in March 2006. Borderline rural-urban data were obtained during MILAGRO with a network of mobile monitoring units. The database thus obtained was complemented with data obtained during short time field campaigns with itinerant air quality monitoring mobile stations, in different sites in the state of Mexico and Morelos carried out during 2005, 2006 and 2007. Comparisons with modeled maps for March 2006 show some short-falls that models and inventories need to overcome to become a useful tool to provide maps of critical concentration levels of oxidants. Time series of rural air quality data in the central part of Mexico are too short to provide strong long-term evidence of air pollution impact on ecosystems and crops within the crown of cities in the central part of Mexico. Nevertheless, these results raise an issue that has been given little attention in air quality management in Mexico.