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Air Quality in the Puebla-Tlaxcala Airshed in Mexico during April 2009

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East of the Mexico Megacity, is the metropolitan area of Puebla-Tlaxcala which is reproducing the same patterns of urban sprawl as in the Mexico City Metropolitan Area. Is an area of high industrial density, the fragmented urban sprawl boost the use of particular cars in detrimental of public transport use. Emissions inventories reflect this fact; they also show a considerable use of biomass energy in households and small using a set of industries and service business. In April 2009 we carried out a preliminary field campaign in the basin, we deployed three mobile units, one in the north, in a site connecting with the valley of Mexico basin, one in the south where it may connect with the Cuautla-Cuernavaca Airshed and one in a receptor site to the Puebla Metropolitan Area. In addition to the available data from local air quality network within the City of Puebla. Analysis of the 2009 data show a complex flow pattern induced by the Popocateptl and Iztaccihuatl volcanoes to the west and La Malinche volcano to the east. Excess NO_x emissions in the urban and industrial core lead to very low ozone levels within but high ozone concentrations are observed in the peri-urban and rural areas, exceeding the Mexican Air Quality Standards. In our presentation we will describe and explain these observations and will describe a field campaign to be carried out in March-April 2012 aiming to better document the air quality in the Puebla-Tlaxcala Airshed. Hybrid observation-model maps for ozone critical levels show the population exposed to exeedences to the official standards. AOT40 maps also show that crops and forests in the region are exposed to unhealthy ozone levels. These results add to those from MILAGRO and CARIEM field campaigns on the regional scale of the air quality issues in central Mexico. A point is made on the need to update the Mexicp Air Quality Standard for ozone.