



Impact of pollutants from Mexico City Metropolitan Area on three neighboring boundary sites

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Mexico City produces approximately 1.8 Mtons of CO, 180 Ktons of NO_x, 475 Ktons of hydrocarbons, 6.5 Ktons of SO₂ and 20 Ktons of particulate matter each year [*Inventario de Emisiones de la ZMVM, 2004, GDF*]. The amount of pollutants released to the atmosphere, not only affects the air quality on the area disturbing local population health, but also can influence on places nearby due to the wind patterns.

On the past, several studies have been carried out to understand and evaluate the impact of pollutants over the Mexico City Metropolitan Area (MCMA) environment; however, only few studies are devoted to find out the way and the proportion in which Mexico City's pollution affects places nearby, where population settlements can be influenced by pollutants transported from the city. The ecosystem in the surrounding areas may also be under the influence of these contaminants, depending upon their strength and chemical composition.

In this context, this study presents results of pollutants (gases and particles) concentration measurements on surface of three neighboring sites located at Southeast (Santa Ana), East (Ávila Camacho) and South (Xicalco) from MCMA. It also shows preliminary inter-comparisons on ozone and nitrogen oxides average concentrations among these three neighboring sites, and data recorded at Automatic Network stations on Mexico City. We try to provide information contributing on the identification and evaluation of possible impact of pollution generated in MCMA over neighbor regions.

Three campaigns to measure gases and particles concentrations were developed on the neighboring sites around MCMA. The first was carried out in Santa Ana, Milpa Alta

municipality, during April 7 to 30, 2003. Second field measurements were done in Ávila Camacho, Iztapaluca municipality, State of Mexico, from March 15 to 26, 2004. Last campaign was in Xicalco, Tlalpan municipality, from November 21 to December 5, 2005. The three sites were on the mountain passage at 2750 - 2850 m above sea level.