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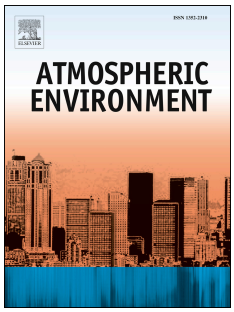

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Black Carbon Emission and Transport Mechanisms to the Free Troposphere at the La Paz/El Alto (Bolivia) Metropolitan Area based on the Day of Census 2012

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Abstract:

Urban development, growing industrialization, and increasing demand for mobility have led to elevated levels of air pollution in many large cities in Latin America, where air quality standards and WHO guidelines are frequently exceeded. The conurbation of the metropolitan area of La Paz/El Alto is one of the fastest growing urban settlements in South America with the particularity of being located in a very complex terrain at a high altitude. As many large cities or metropolitan areas, the metropolitan area of La Paz/El Alto and the Altiplano region are facing air quality deterioration. Long-term measurement data of the equivalent black carbon (eBC) mass concentrations and particle number size distributions (PNSD) from the Global Atmosphere Watch Observatory Chacaltaya (CHC; 5240 m a.s.l., above sea level) indicated a systematic transport of particle matter from the metropolitan area of La Paz/El Alto to this high altitude station and subsequently to the lower free