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First atmospheric observations from the high altitude Chacaltaya GAW station (Bolivia - 5200 m)

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South America is facing dramatic environmental changes linked to deforestation over the Amazon Basin driven primarily by agricultural expansion and logging. Biomass burning activities resulting nowadays dominantly from anthropogenic land-use change are potent sources of CO_2 and several Short Lived Climate Forcers (SLCFs). Tropical deep convection introduce both biogenic and pyrogenic aerosols into the free troposphere, where thanks to a lifetime on the order of weeks aerosols can be transported over long-distances with nearly global impact. Presence of high aerosol loads over the Bolivian Altiplano may clearly influence local/regional radiative balance, but also may exert a strong impact on the strength of the convective circulation and hence the precipitation patterns at the arid Altiplano region. The availability of climate and atmospheric data in the region remains however a strong limitation to constrain regional both Climate and Chemistry-Transport models. A joint Bolivian-EU and USA effort to establish a high altitude measuring station in Chacaltaya (5200 asl) was pursued over the last 2 years, under the umbrella of the Global Atmosphere Watch with the specific objectives of 1) characterizing aerosol microphysical, optical, hygroscopic and chemical properties with respect to seasonal variability, source region influence, precipitation and anthropogenic influence and estimate the regional radiative forcing related to changes in aerosol and cloud properties, 2) Identifying of CO_2 and CH4 fluxes in South America, and especially the role of the Amazonian forest and 3) understand the variable that constrain the oxidant cycle in the high Cordillera. Measurements at the Chacaltaya station were initiated in December 2011 and deliver information about atmospheric composition from Southern Hemisphere tropical free troposphere. We will present preliminary results from gas and particle observations at the site.