An overview of the Lidar backscatter system activities in São Paulo, Brazil.

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As well know the impacts on environment due to anthropogenic activities extend to the regional to the global scale and the air pollution in megacities remains is one of the most important problems in the last decades. The metropolitan area of São Paulo, for instance, is one of the five largest metropolitan areas of the world, wherein the human activities play enormous impacts on its air quality, pollution and population health. São Paulo suffer the influence of many different sources of particulate matter such as heavy industries, refineries, chemical manufacturing, cement, sulphuric acid and the automotive fleet. A Lidar backscattering system has been operational since August, 2001, in São Paulo, Brazil, at the Center for Laser and Applications (IPEN/CNEN-SP) and collecting data for pollution monitoring and tropospheric studies as aerosol optical properties, aerosol growing and nucleation processes, biomass burning monitoring and system calibration. In this presentation it will show up the achievements, improvements and special data sets obtained with this system and highlight about some future goals.