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Fractal Analysis of Air Pollutant Concentrations

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Air pollution poses significant threats to human health and the environment throughout the developed and developing countries. This work focuses on fractal analysis of pollutant concentration in Salamanca, Mexico. The city of Salamanca has been catalogued as one
of the most polluted cities in Mexico. The main causes of pollution in this city are fixed emission sources, such as chemical industry and electricity generation. Sulphur Dioxide (SO2) and Particulate Matter less than 10 micrometer in diameter (PM10) are the most important pollutants in this region. Air pollutant concentrations were investigated by applying the box counting method in time series obtained of the Automatic Environmental Monitoring Network (AEMN). One year of time series of hourly average concentrations were analyzed in order to characterize the temporal structures of SO2 and PM10.