



Title: Recent Trends in Ozone and Particle Concentrations in the Sydney (Australia) Airshed

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Abstract: An overview is presented of changes in ground level ozone and atmospheric fine particles determined using ambient monitoring data collected at selected locations in Sydney, Australia. After removing seasonally, auto-regressive and moving average dependence from the selected time series, the trend of a selected series was modelled using the fractional long-term dependent component. The selected technique was able to detect the trend at a very small resolution. The method results were compared to the trends obtained using the Rao-Zurbenco method. For selected monitoring stations, between 1980 and 1993, there was a decrease in ozone concentrations followed by a slight increase between 1994 and 2002, and thereafter a stable concentration. Fine particle concentrations as measured by nephelometry, showed a significant decrease from 1980 to 1990, which stabilised beyond 1994.