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Zn-Sr-Pb isotopes as pollutant tracers in aerosol samples of São Paulo city, Brazil

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The Zn-Sr-Pb isotope systematic could provide important information about pollutants sources and dynamics in the atmospheric environment of larger cities. To test this potential, we present recent results of the isotopic characterisation of atmospheric particulate matter collected in São Paulo City, and Mogi Valley (Vila Parisi, Industrial City - Cubatão), Brazil, during the summer and winter of 2006, using fine (PM_{2.5}) and coarse (PM_{10-2.5}) particle size fraction.

The $\delta^{66}\text{Zn}$ values range between - 0.96 and - 0.37‰ and between -1.04 and + 0.02‰ in coarse and fine particles, respectively, in São Paulo City. In contrast, in the industrial area of Vila Parisi, $\delta^{66}\text{Zn}$ are isotopically heavier and range between - 0.34 to -0.39‰ in fine and between 0.28 to -0.42‰ in coarse fractions. The $^{206}\text{Pb}/^{207}\text{Pb}$ ratios vary between 1.1357 and 1.2730 in São Paulo, and are more radiogenic (1.1698 and 1.3279) in Cubatão.

Finally, the $^{87}\text{Sr}/^{86}\text{Sr}$ ratios in aerosols (average value = 0.7138 ± 0.0008) and

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