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TREND ANALYSIS OF WET DEPOSITION IN NANNING CITY DURING 1991-2004

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Abstract

The variation of acidity and the wet deposition fluxes of rainwater in Nanning City were analyzed based on the local acid rain monitoring data provided by environmental protection authorities from 1991 to 2004. The result shows that the annual value of pH is less than 5.6 in the past 14 years and the wet deposition has been getting more and more severe in Nanning. The ratio of SO_4^{2-}/NO_3^- has decreased. NO_3^- has played an increasingly large role in acidity, though SO_4^{2-} remains a key player. The sulphate, among wet deposition of major species, increases less significantly than the nitrate. The nitrate showed increasing contribution to the wet deposition, meanwhile, wet deposition of calcium declined dramatically, probably due to stringent abatement efforts of total suspended particulates. The acid deposition in Nanning is caused by not only local sulfur dioxide emissions, but also by long-range transportation. Since 1998, the sulfur dioxide emissions have been reduced, but the wet deposition has not getting better.

Key words: acid rain, deposition flux, precipitation acidity, wet deposition

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