

Atmospheric deposition of nitrogen and phosphorus over the Yellow Sea

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The dry and wet deposition of atmospheric nitrogen and phosphorus pollutants over the west coast of the Yellow Sea were monitored. The size distribution of ammonium exhibited bi-modal in the dust season and uni-modal in the other seasons. The remaining nitrogen components exhibited bimodal/multimodal size distribution. Phosphorus in atmospheric aerosols exhibits multimodal distribution. The deposition velocities of the particulate nitrogen were calculated with the improved Willimas model. It was showed that the proportion of aerosol pollutants in fine particles has little effect on the overall dry deposition velocities, while the proportion of coarse particles may be the most important factor. The atmospheric deposition of nitrogen and phosphorus in the Yellow Sea was estimated. The atmospheric wet deposition of nitrogen and phosphorus in the Yellow Sea was higher than that of dry deposition. And the scouring effect of rainwater on ammonium salt was higher than that of nitrate.

