

Sources and effects of atmospheric nitrous acid in the marine boundary layer

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Nitrous acid (HONO) is an important reservoir of hydroxyl (OH) radicals in the atmospheric boundary layer. However, its sources are still not well understood. As few HONO observations have been performed in marine areas, we conducted measurements at two coastal sites, Tuoji Island in North China and Hong Kong, to investigate the sources and effects of HONO in the marine boundary layer. Compared with urban sites, HONO concentrations were low in marine sites. However, they were still significantly larger than that could be explained by the mechanisms in photostationary state (PSS). Through case study, results have indicated an interesting phenomenon that HONO may be produced faster on sea surface than on land surface. And further studies should be carried out to confirm this finding. In addition, HONO plays an influential role in atmospheric oxidative capacity and air quality in coastal regions.

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