



Measurements of NO₃ radicals by LP-DOAS near Beijing during the HOPE-J3A campaign

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NO₃ radicals is the driving force of night atmospheric chemistry. It reacts with the organic species to form peroxides and SOA, and plays an important role in the formation of HNO₃ by non-photochemical reactions of nitrogen oxides, which are related to the haze formation of polluted and strong oxidizing atmosphere. In this poster, we present two field campaigns for NO₃ radicals taken at a suburban sites near Beijing during different seasons. The observed mean NO₃ mixing ratios in November, December and June are 20.5, 14.6 and 38.4 ppt, respectively. The calculated NO₃ production rates were averaging at 655.2, 242.8 and 428.9 ppt/h, respectively. The calculated NO₃ steady state lifetime has an average of 183, 396 and 508 s. The results show a wide seasonal variability of the concentrations, production rates, lifetime and removal paths of NO₃ radicals at the site.