



Variation of HONO in Beirut and Paris: an evaluation of the different sources

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The formation of nitrous acid (HONO) in the atmosphere is of considerable interest as HONO is a major precursor of atmospheric hydroxyl radicals in the lowest layer of the troposphere in the morning. One of the most poorly understood OH sources is the formation of nitrous acid, followed by its photolysis in sun-light. Recent atmospheric measurements show a strongly enhanced formation of HONO during daytime, which is inconsistent with known gas phase formation mechanisms, direct emissions and heterogeneous processes occurring in the dark, i.e. during night. From March to April 2006 and February to March 2007, two field campaigns were conducted in the city of Beirut and in the surroundings of Paris respectively. NitroMAC was deployed beside other analyzers. The NitroMAC instrument allows measurements of gaseous nitrous and nitric acids with a detection limit of 1 pptv for each compound.

In this communication, the results of both campaigns are presented. An attempt to evaluate the contribution of the different known sources of HONO is discussed.