



A new, *in situ* approach to measure HONO and NO₂ simultaneously

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We demonstrate the extension of incoherent broadband cavity-enhanced absorption spectroscopy (BBCEAS) to detect HONO and NO₂. Both species have significant absorption features between 360 and 390 nm and their simultaneous detection is valuable for investigating the sources and strengths of HONO owing to the closely coupled chemistry of these species. We describe the experimental set-up, including the use of a light emitting diode as the light source, and calibrating the system. The sensitivity of the technique is evaluated and the potential of the method in laboratory studies and field observations in urban atmospheres is discussed. This is the first demonstration of the BBCEAS method in the ultraviolet and has obvious relevance to the detection of several other important atmospheric species.