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Night time radical chemistry during the LAMP campaign

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Continuous measurements of peroxy radicals HO2+RO2, the photolysis rate coefficient JNO2 and JO1D, metrological measurements and number of other three gases including NO2, NO3, O3 and VOCS were carried out at the space research centre, University of Leicester, Leicester, UK in August/September 2007 during the Leicester Air Quality Monitoring project LAMP? 07. Under the range of conditions encountered the peroxy radical daily maxima varied from 20 to 110 pptv. The diurnal cycles showed an asymmetric shape typically shifted to the afternoon, A mean afternoon concentration of 35 +_2.2 parts per trillion by volume pptv was calculated from continuous measurements of the sum of inorganic and organic peroxy radicals using the Chemical amplification technique.

There is 70pptv recorded on 19th and 20th August in night time.
Radical chemistry during the night time is controlled by the reactivity of ozone and the nitrate radical.NO3 is formed by the reaction of ozone and nitrogen dioxide but is present in significant concentrations only during the night, since it is quickly photolyzed by sunlight yielding either NO2 or NO.