

# **Measurements of trace gas species and meteorological parameters during HUMPPA-COPEC 2010**

This document is part of the electronic supplement to our article  
“Observation and modelling of HO<sub>x</sub> radicals in a boreal forest”  
in ACP (2013), available at:

<http://www.atmospheric-chemistry-and-physics.net>

Table S1: Median levels and variability of relevant trace gases under different conditions of observed radiation and total OH reactivity.

	$J_{O(^1D)} > 3 \times 10^{-6} \text{ s}^{-1}$	$J_{O(^1D)} \leq 3 \times 10^{-6} \text{ s}^{-1}$
$k'_{OH} \leq 15 \text{ s}^{-1}$	$\text{OH} \approx (1.0 \pm 0.8) \times 10^6 \text{ molec. cm}^{-3}$ $\text{HO}_2 \approx (10 \pm 1) \text{ pptv}$ $\text{O}_3 \approx (33 \pm 2) \text{ ppbv}$ $\text{NO} \approx (46 \pm 16) \text{ pptv}$ $\text{NO}_2 \approx (280 \pm 40) \text{ pptv}$ $\text{CO} \approx (85 \pm 1) \text{ ppbv}$ $\text{C}_5\text{H}_8 \approx (145 \pm 30) \text{ pptv}$ $\alpha\text{-pinene} \approx (63 \pm 15) \text{ pptv}$ $\beta\text{-pinene} \approx (16 \pm 4) \text{ pptv}$ $\beta\text{-myrcene} \approx (5 \pm 1) \text{ pptv}$ $\Delta^3\text{-carene} \approx (30 \pm 8) \text{ pptv}$	$\text{OH} \approx (3.8 \pm 3.0) \times 10^5 \text{ molec. cm}^{-3}$ $\text{HO}_2 \approx (10 \pm 6) \text{ pptv}$ $\text{O}_3 \approx (35 \pm 7) \text{ ppbv}$ $\text{NO} \approx (3 \pm 39) \text{ pptv}$ $\text{NO}_2 \approx (570 \pm 210) \text{ pptv}$ $\text{CO} \approx (96 \pm 5) \text{ ppbv}$ $\text{C}_5\text{H}_8 \approx (62 \pm 65) \text{ pptv}$ $\alpha\text{-pinene} \approx (68 \pm 67) \text{ pptv}$ $\beta\text{-pinene} \approx (20 \pm 17) \text{ pptv}$ $\beta\text{-myrcene} \approx (5 \pm 4) \text{ pptv}$ $\Delta^3\text{-carene} \approx (44 \pm 44) \text{ pptv}$
$k'_{OH} > 15 \text{ s}^{-1}$	$\text{OH} \approx (6.4 \pm 5.6) \times 10^5 \text{ molec. cm}^{-3}$ $\text{HO}_2 \approx (27 \pm 2) \text{ pptv}$ $\text{O}_3 \approx (51 \pm 1) \text{ ppbv}$ $\text{NO} \approx (28 \pm 7) \text{ pptv}$ $\text{NO}_2 \approx (320 \pm 20) \text{ pptv}$ $\text{CO} \approx (93 \pm 1) \text{ ppbv}$ $\text{C}_5\text{H}_8 \approx (112 \pm 13) \text{ pptv}$ $\alpha\text{-pinene} \approx (80 \pm 4) \text{ pptv}$ $\beta\text{-pinene} \approx (17 \pm 1) \text{ pptv}$ $\beta\text{-myrcene} \approx (5.0 \pm 0.3) \text{ pptv}$ $\Delta^3\text{-carene} \approx (38 \pm 2) \text{ pptv}$	$\text{OH} \approx (6.3 \pm 2.0) \times 10^5 \text{ molec. cm}^{-3}$ $\text{HO}_2 \approx (22 \pm 4) \text{ pptv}$ $\text{O}_3 \approx (51.0 \pm 0.3) \text{ ppbv}$ $\text{NO} \approx (17 \pm 5) \text{ pptv}$ $\text{NO}_2 \approx (290 \pm 30) \text{ pptv}$ $\text{CO} \approx (92 \pm 1) \text{ ppbv}$ $\text{C}_5\text{H}_8 \approx (110 \pm 5) \text{ pptv}$ $\alpha\text{-pinene} \approx (61 \pm 8) \text{ pptv}$ $\beta\text{-pinene} \approx (14 \pm 1) \text{ pptv}$ $\beta\text{-myrcene} \approx (4.0 \pm 0.5) \text{ pptv}$ $\Delta^3\text{-carene} \approx (27 \pm 5) \text{ pptv}$

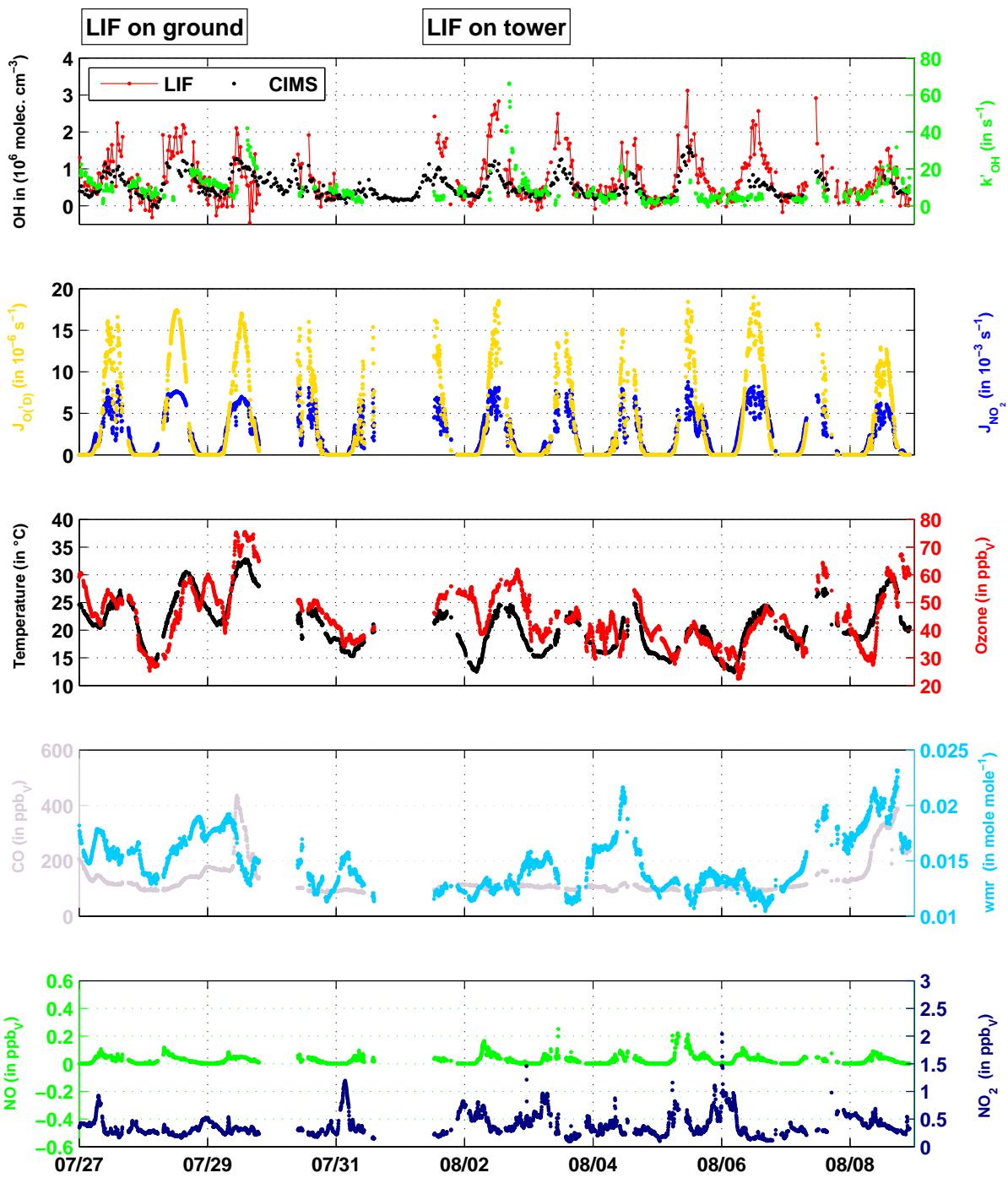


Figure S1: Timeseries of trace gas species and meteorological parameters during HUMPPA-COPEC-2010.

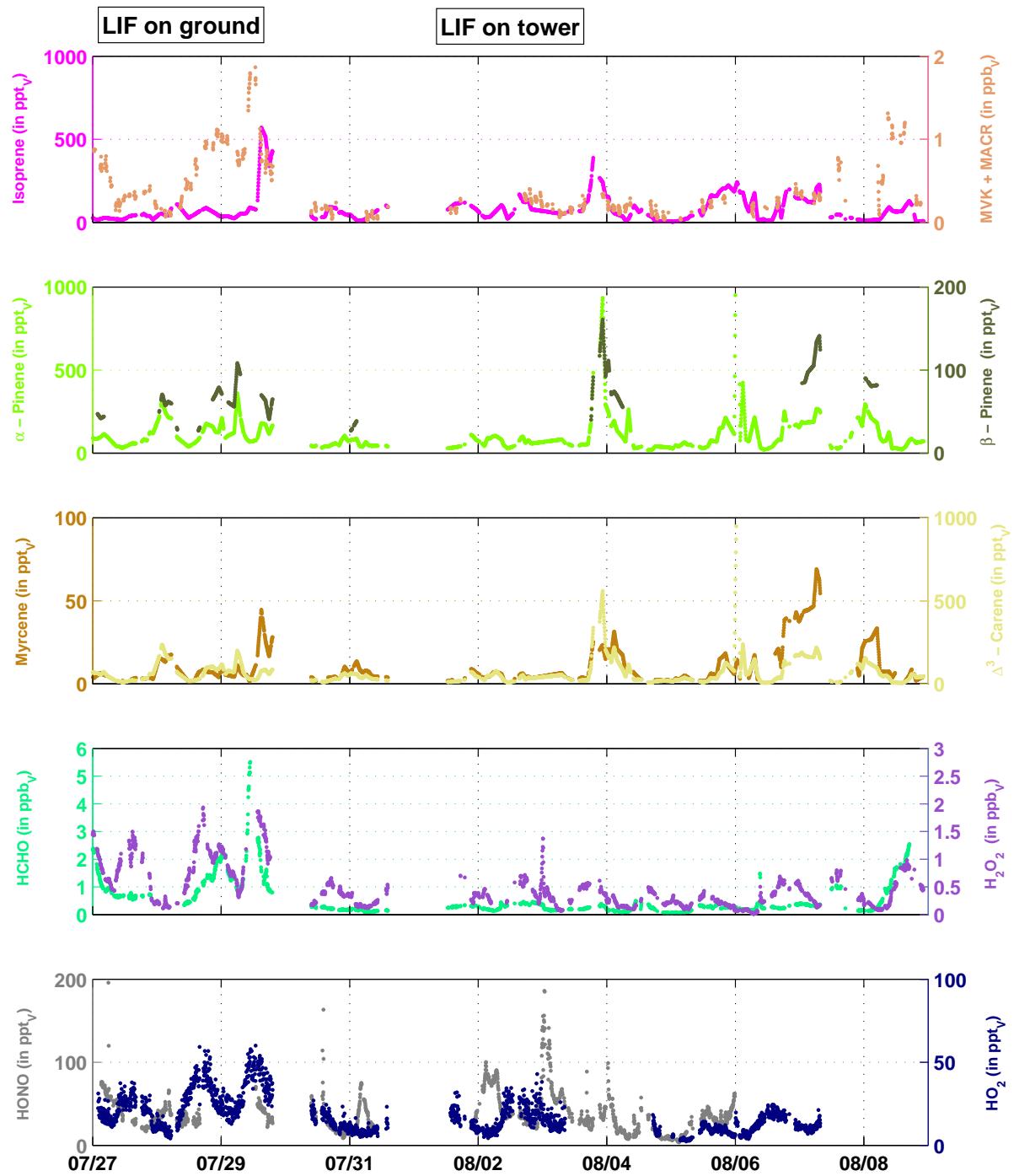


Figure S1(continued): Timeseries of trace gas species and meteorological parameters during HUMPPA-COPEC-2010.