

## Supporting Information.

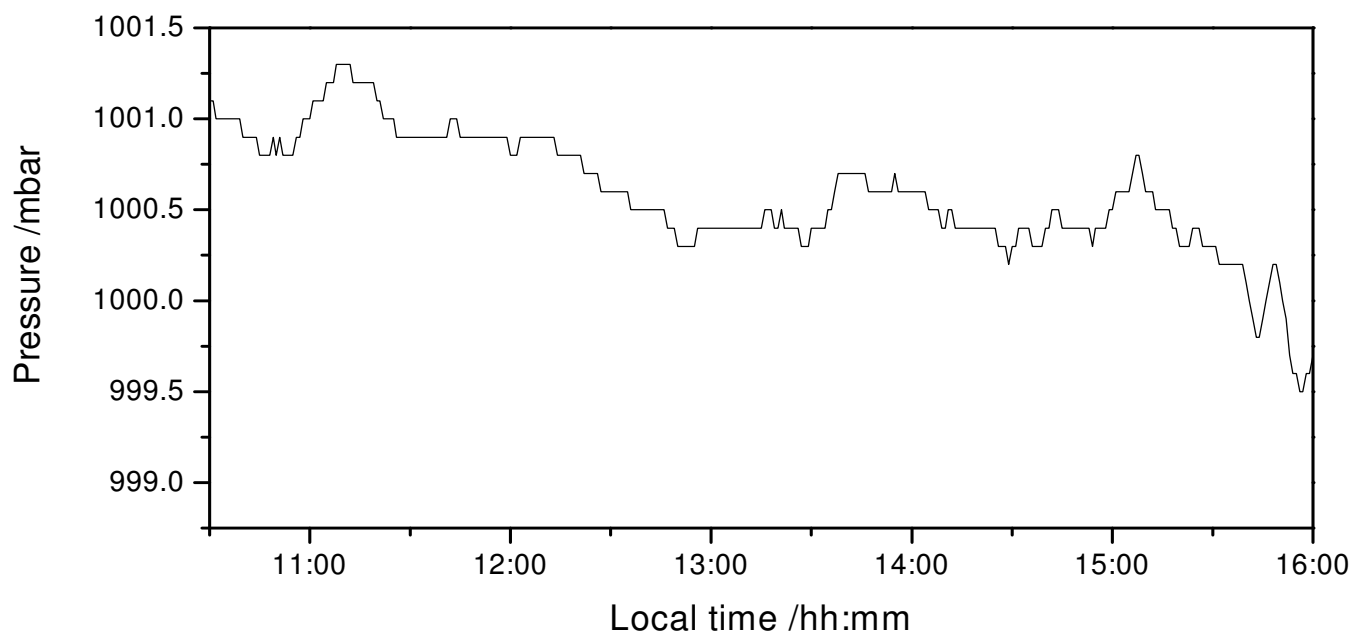
### Relative Tropospheric Photolysis Rates of Acetaldehyde and Formaldehyde Isotopologues Measured at the European Photoreactor Facility

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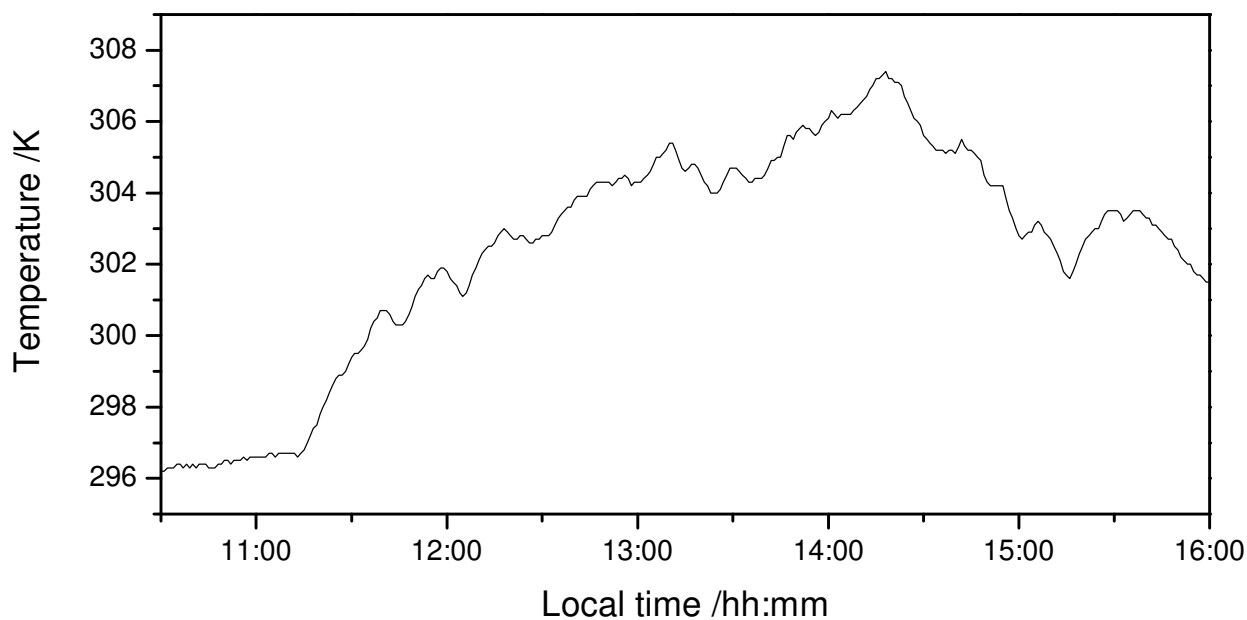
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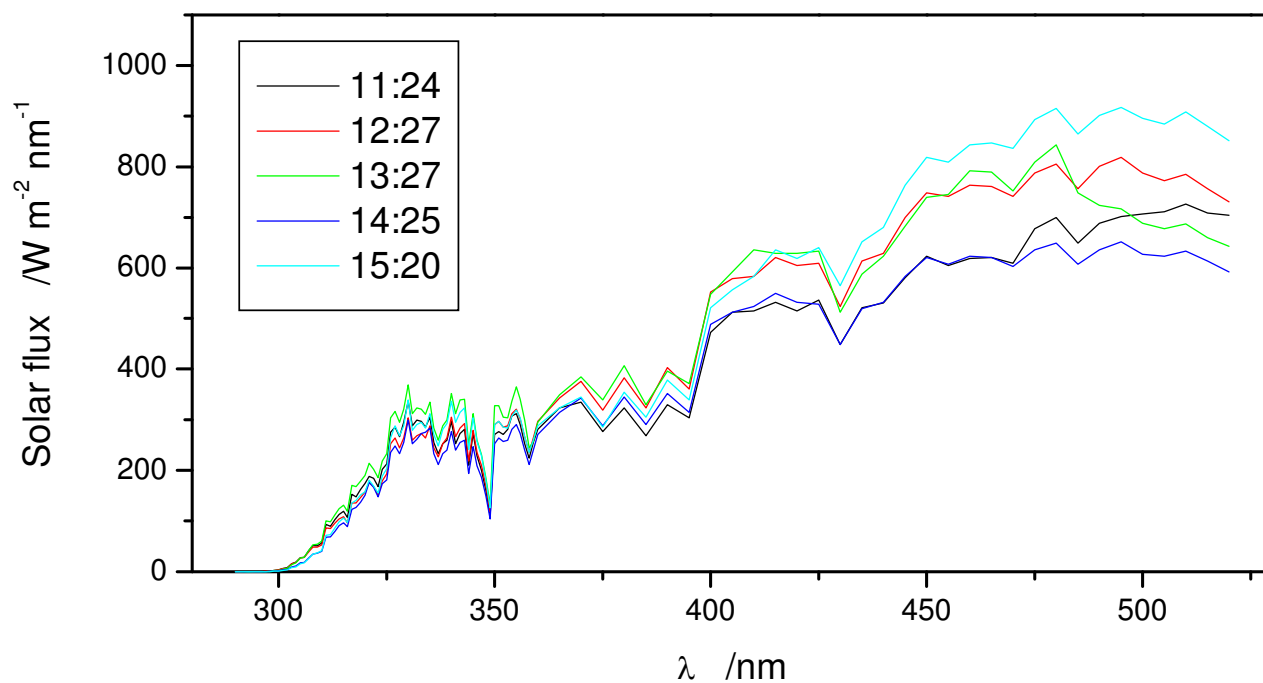
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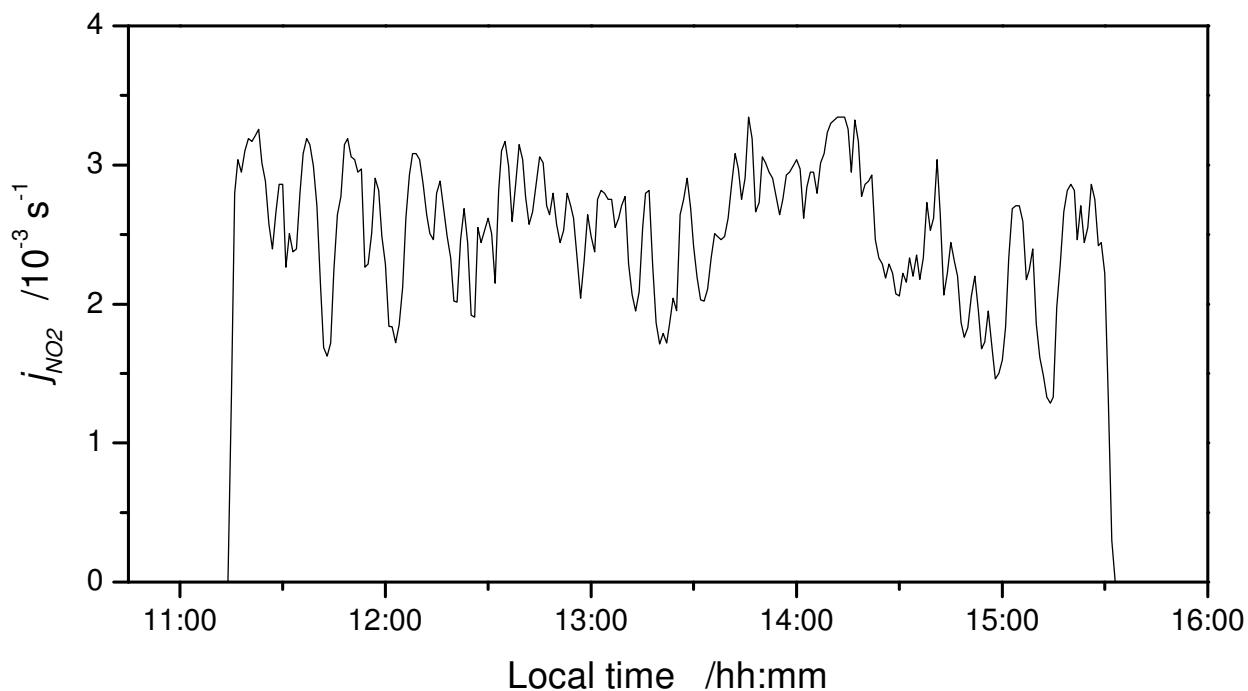
**Figure S1.** Pressure inside the EUPHORE chamber B on June 19, 2006. The chamber canopy was opened at 11:22 and closed at 15:36 (local time = UT+2).



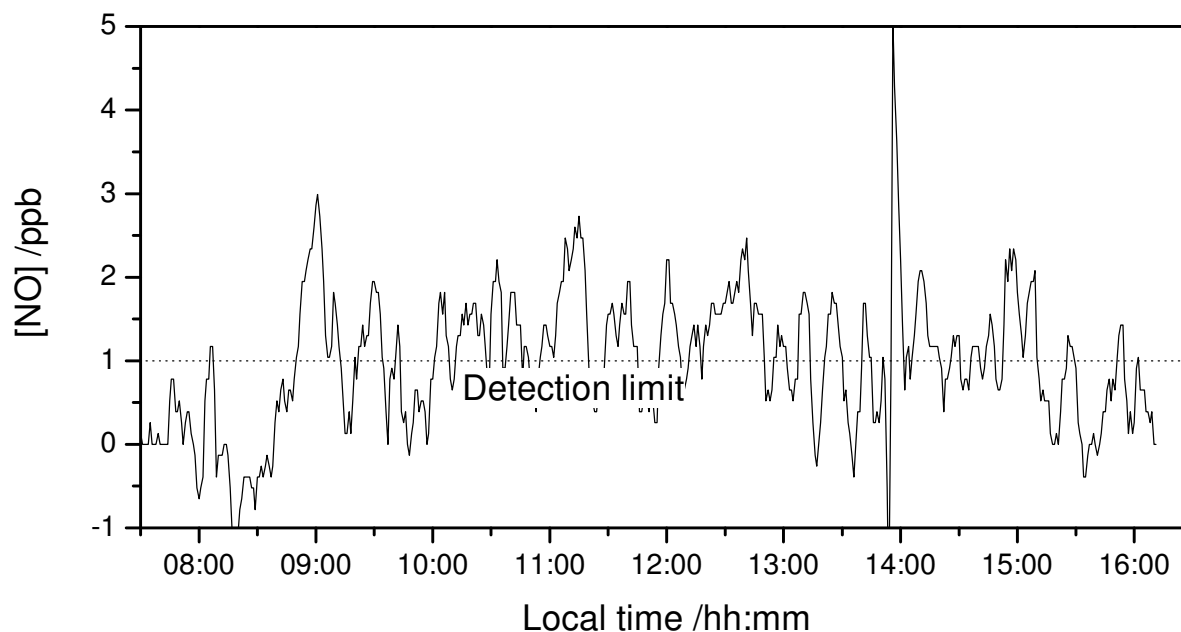
**Figure S2.** Temperature inside the EUPHORE chamber B on June 19, 2006. The chamber canopy was opened at 11:22 and closed at 15:36 (local time = UT+2).



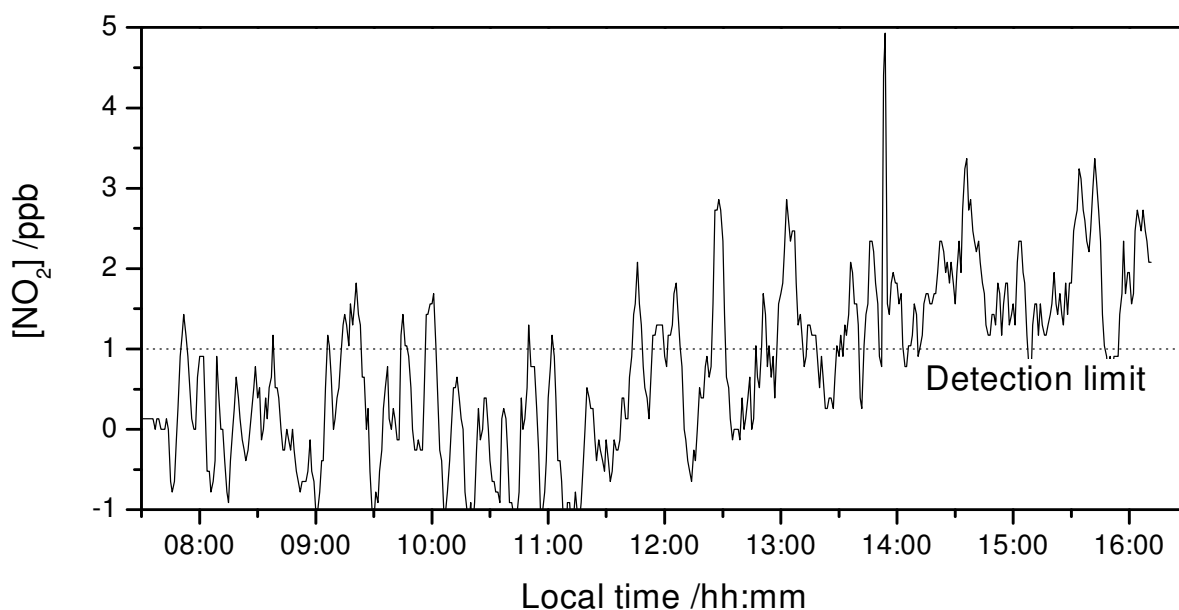
**Figure S3.** Solar flux measured inside the EUPHORE chamber B during the experiment on June 19, 2006.



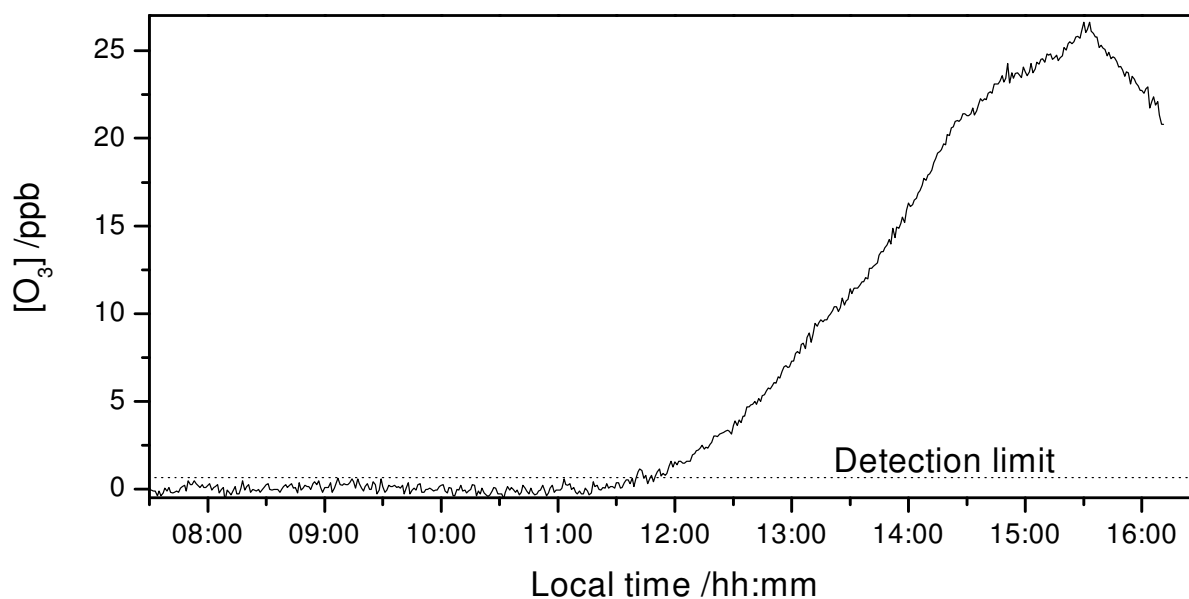
**Figure S4.** Calculated photolysis rate of NO<sub>2</sub>,  $j_{\text{NO}_2}$ , inside the EUPHORE chamber B on June 19, 2006.



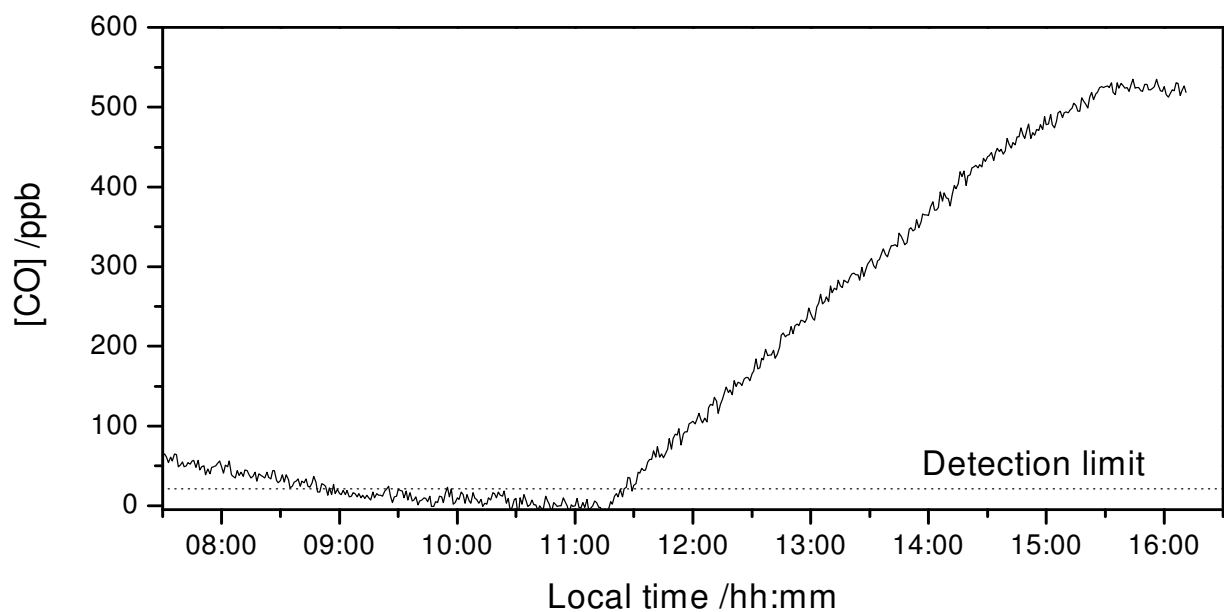
**Figure S5.** [NO] inside the EUPHORE chamber B on June 19, 2006. The chamber canopy was opened at 11:22 and closed at 15:36 (local time = UT+2). Data from an API200AU NO<sub>x</sub>-monitor; detection limit 1 ppb; precision ( $10\sigma$ ) 3.2 ppb; accuracy ( $3\sigma$ ) 7%.



**Figure S6.**  $[\text{NO}_2]$  inside the EUPHORE chamber B on June 19, 2006. The chamber canopy was opened at 11:22 and closed at 15:36 (local time = UT+2). Data from an API200AU  $\text{NO}_x$ -monitor; detection limit 1 ppb; precision ( $10\sigma$ ) 3.6 ppb; accuracy ( $3\sigma$ ) 7%.



**Figure S7.**  $[\text{O}_3]$  inside the EUPHORE chamber B on June 19, 2006. The chamber canopy was opened at 11:22 and closed at 15:36 (local time = UT+2). Data from a ML9810  $\text{O}_3$ -monitor; detection limit 0.65 ppb; precision ( $10\sigma$ ) 2.2 ppb; accuracy ( $3\sigma$ ) 7%.



**Figure S8.** [CO] inside the EUPHORE chamber B on June 19, 2006. The chamber canopy was opened at 11:22 and closed at 15:36 (local time = UT+2). Data from a TE48C CO-monitor; detection limit 21 ppb; precision ( $10\sigma$ ) 70 ppb; accuracy ( $3\sigma$ ) 7%.