

Aerosol composition and the contribution of SOA formation over Mediterranean forests

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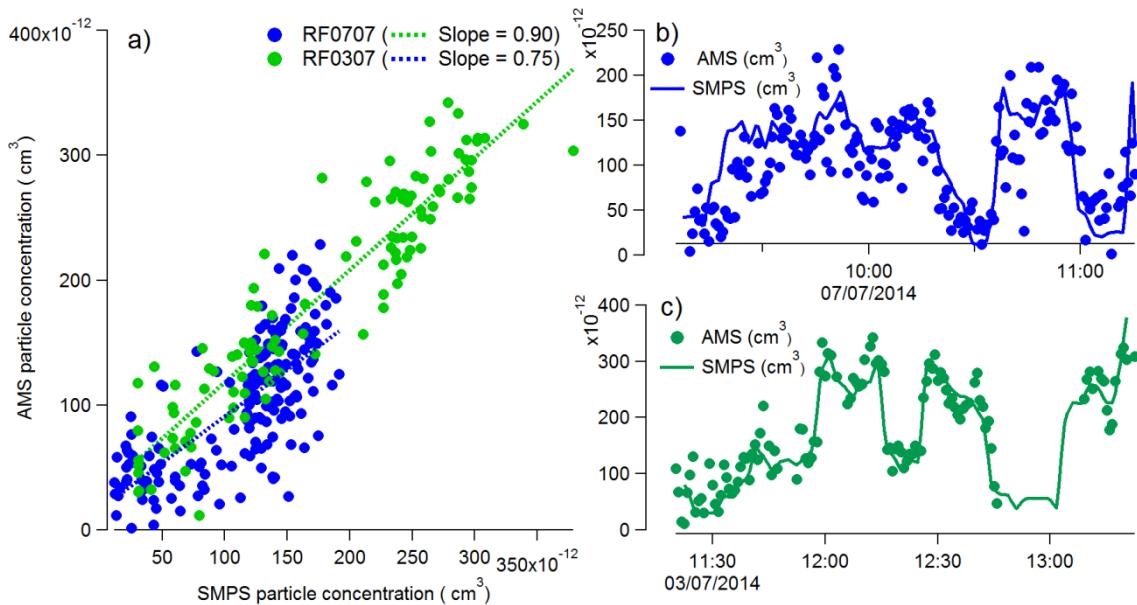


Figure S1: a) Comparison of particle volume concentrations measured by the AMS and the SMPS for the two flights RF20 03/07 and RF23 07/07; b) time series for RF23 07/07; c) time series for RF20 03/07.

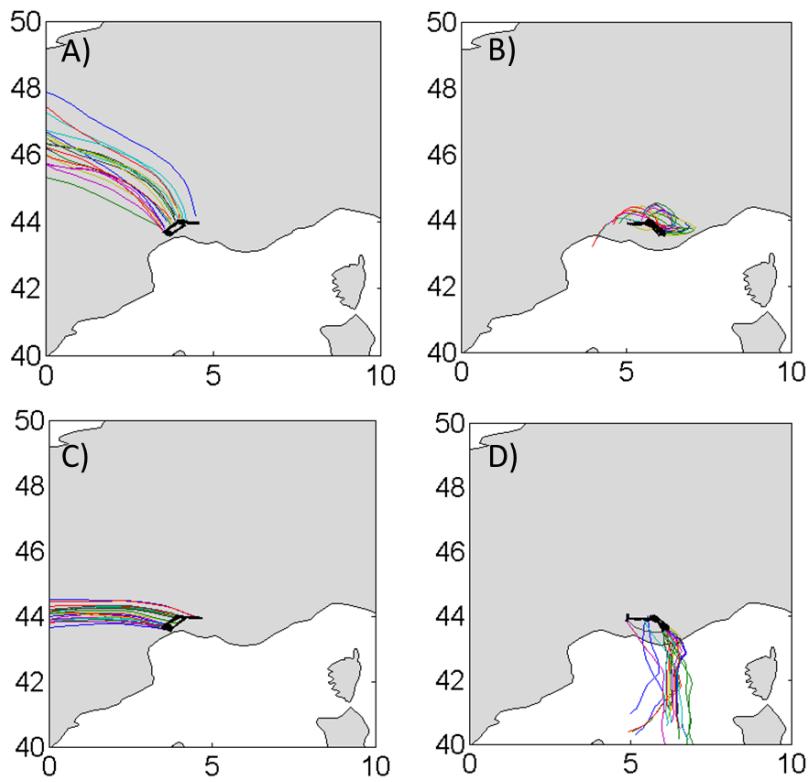


Figure S2. 24-hour back trajectories calculated using HYSPLIT along the flight track for research flight a) RF15 30/06, b) RF20 03/07, c) RF21 05/07, d) RF23 07/07.

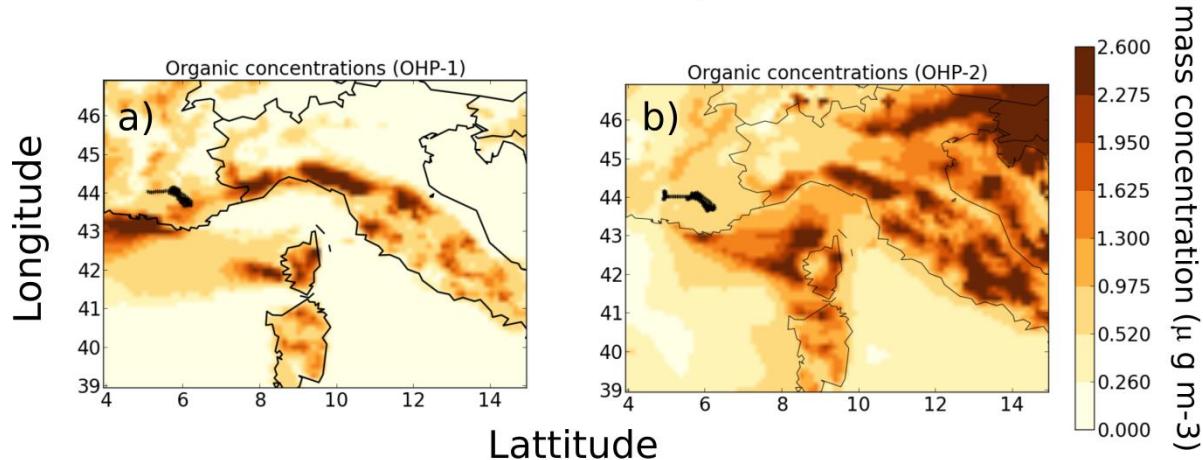


Figure S3. Average surface concentrations (in $\mu\text{g m}^{-3}$) of submicron organic matter (OA_1) simulated during the a) RF20 03/07, and b) RF23 07/07 flights. The flight path is shown with bold black lines.

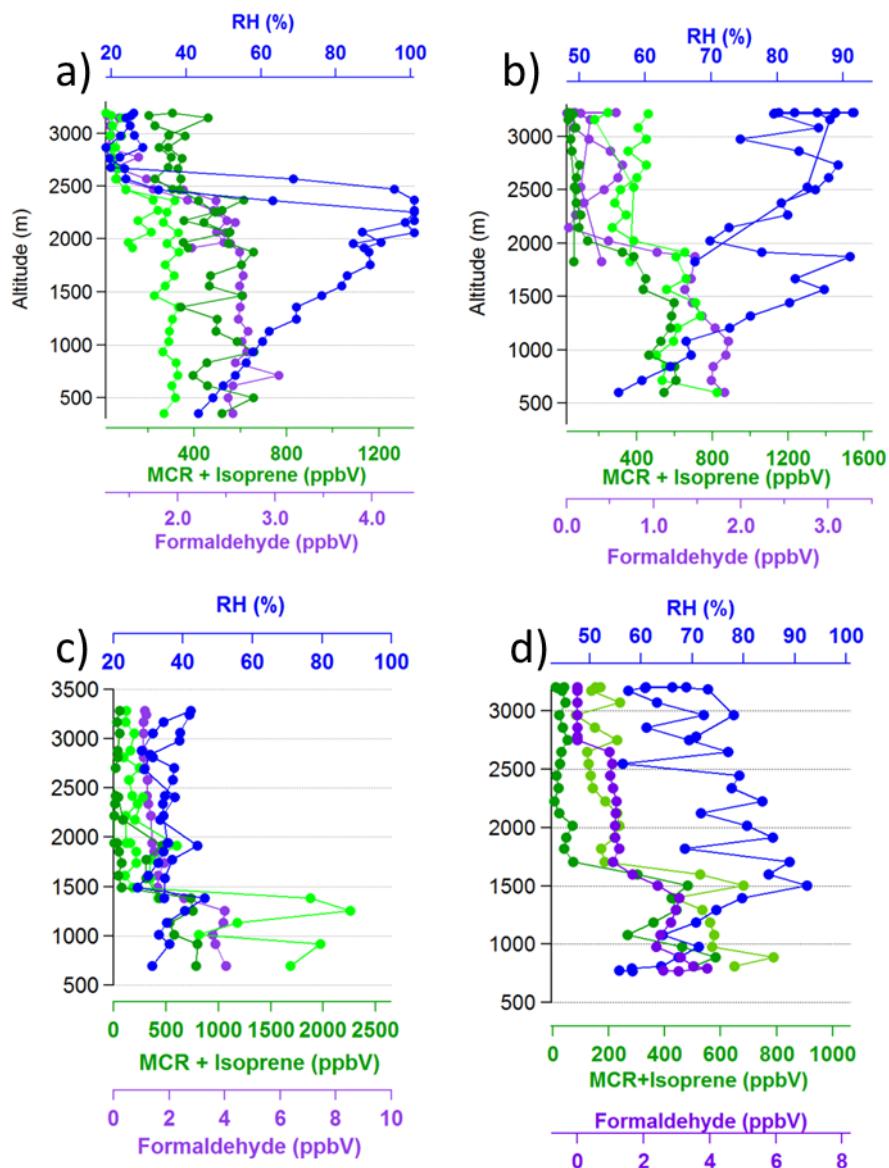


Figure S4. Vertical profiles of RH, formaldehyde, and isoprene + its oxidation products (MVK+MCR) for research flights: a) RF15 30/06, b) RF20 03/07, c) RF21 05/07, d) RF23 07/07.

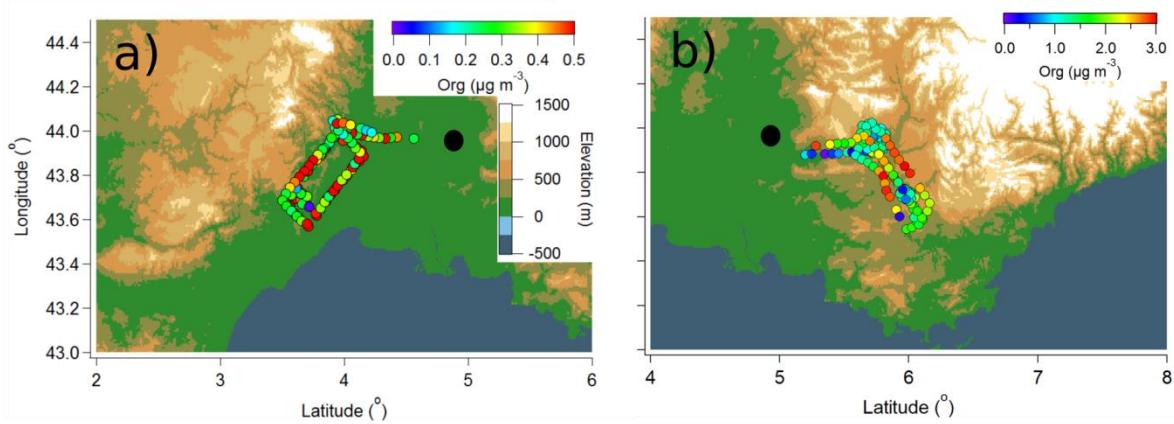


Figure S5. Typical flight track traveling a) west and b) east of Avignon (black circle). Points of the flight track are coloured by organic aerosol concentrations.

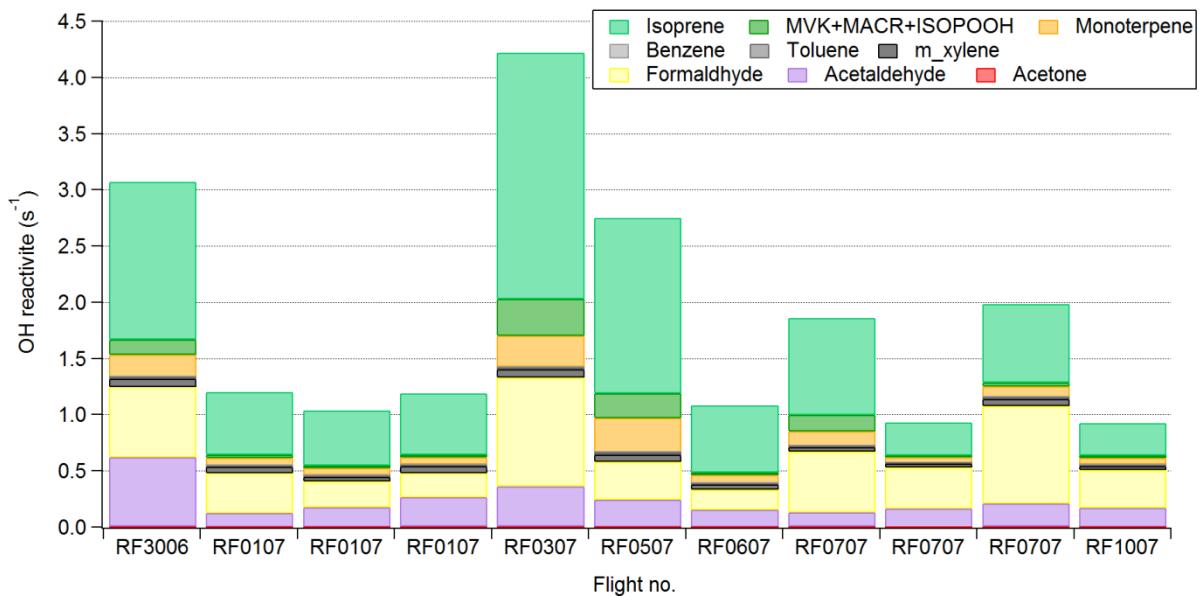


Figure S6. VOC's and OVOC's measured contribution to total OH reactivity for all the flights during the SAFMED campaign for all research flights (Waked et al., submitted).

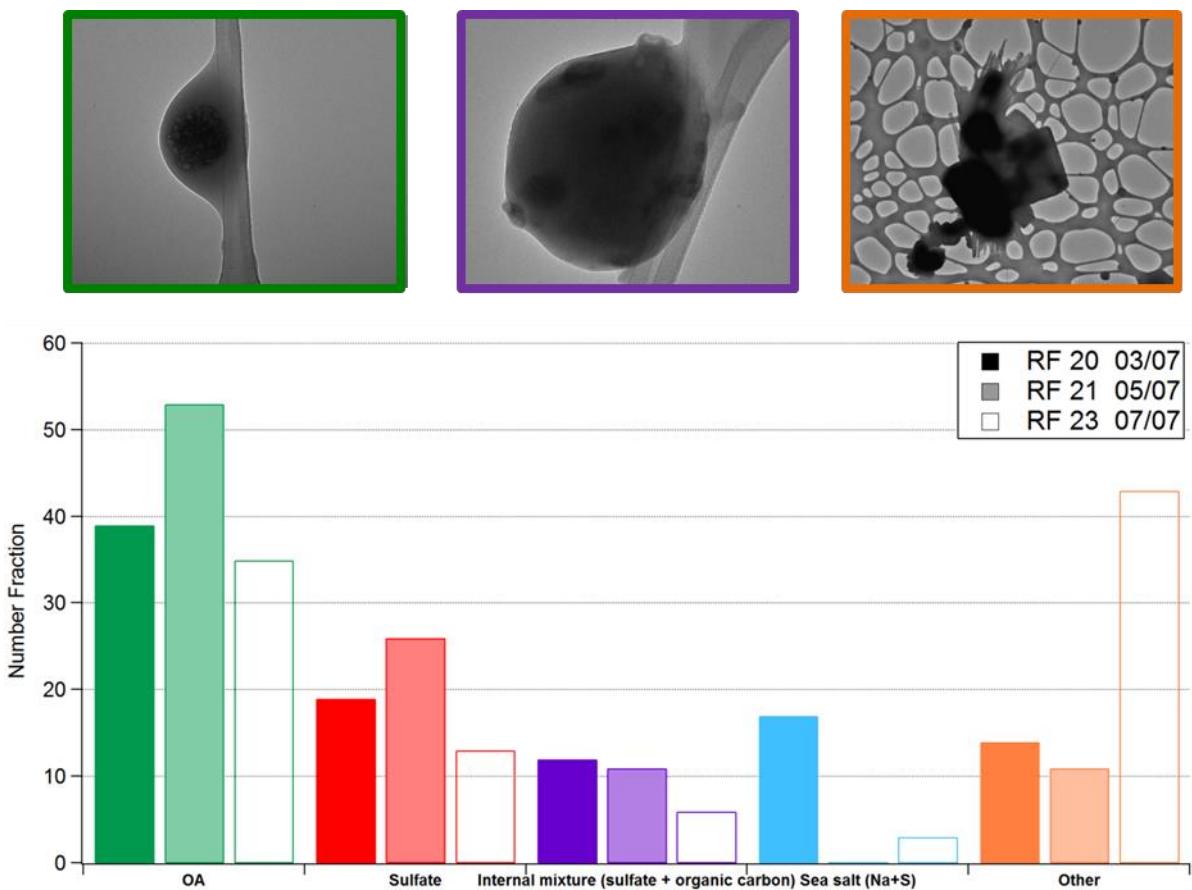


Figure S7. top) Some examples of EM images of aerosol particles collected during the biogenic flights. Bottom) the fraction contribution of different species for the different flights (sample number > 250)

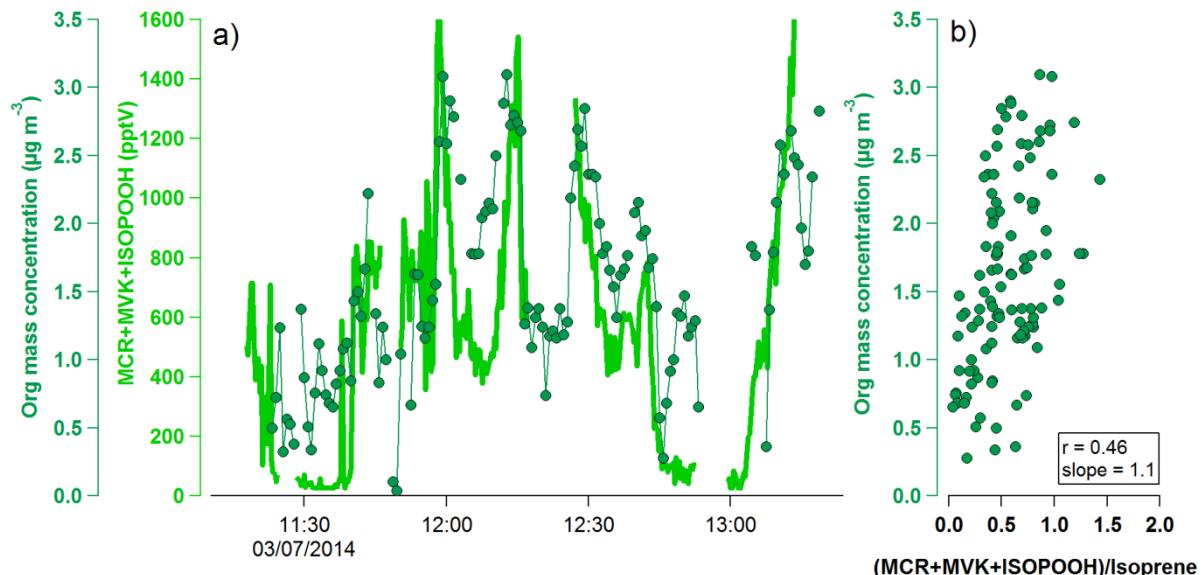


Figure S8. Comparison of total organic matter ($\mu\text{g m}^{-3}$) measured by the C-ToF-AMS with a) the oxidation products of isoprene, as a function of time, and b) against the ratio of the oxidation products of isoprene and isoprene.