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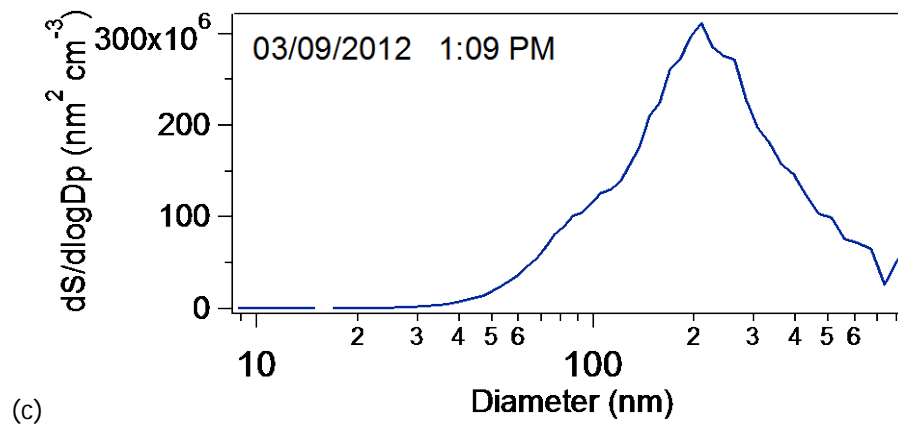
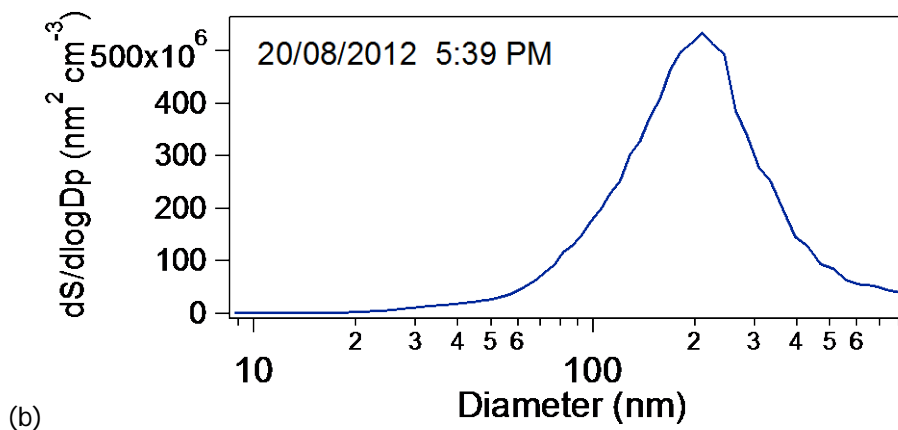
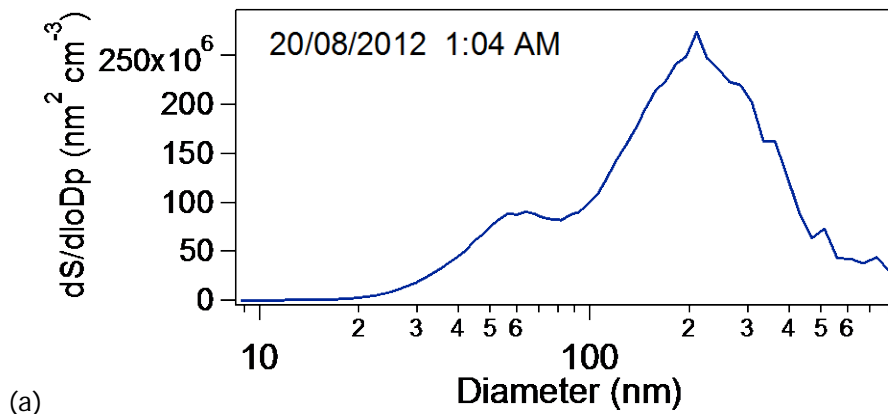
Biomass-burning impact on CCN number, hygroscopicity and cloud formation during summertime in the eastern Mediterranean

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Supplementary Material



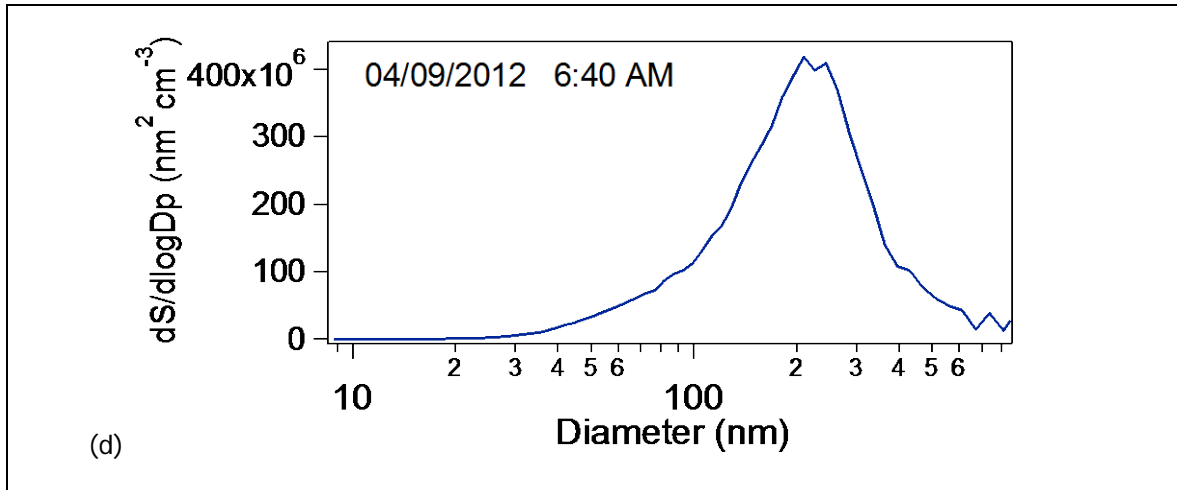


Figure S1: Surface area distribution for the two most intense events, before and after the Chios plume arrival (a) and (b), and before and after the Euboea plume arrival (c) and (d), depicting the particle size range where condensational growth is expected to be more important.

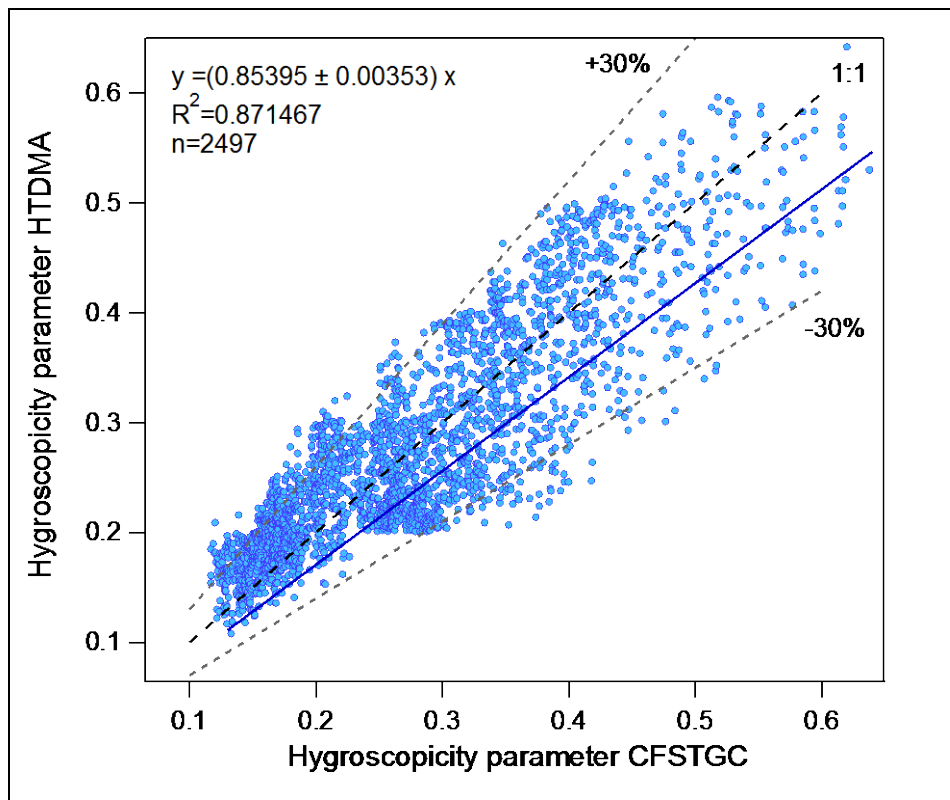


Figure S2: Comparison between hygroscopicity parameters obtained by the CFSTGC and the HTDMA. The solid blue line represents the best linear fitting of all the obtained data.

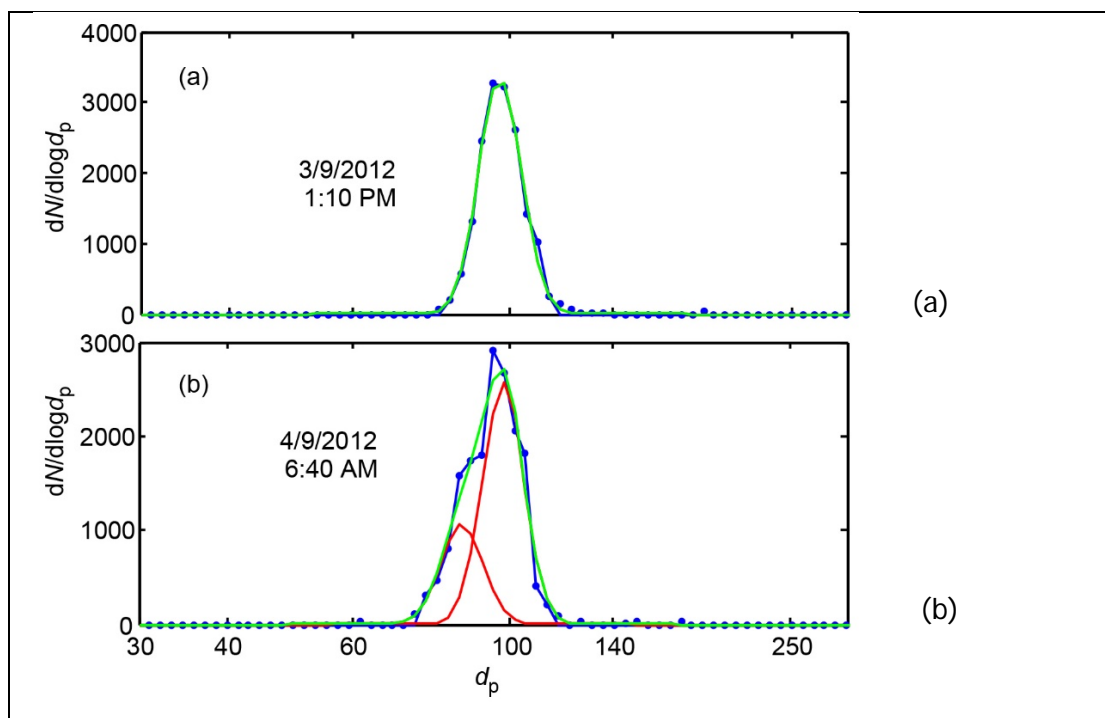


Figure S3: Example of HTDMA measurements of particles having dry mobility diameters of 80 nm (RH=86%), before (a) and during (b), the Euboea fire event. The measured (i.e. by the DMA-2 and CPC) size distributions are depicted with blue lines and points, while the green line shows the result of the fitting algorithm. Before the fire event (a) the humidified particles size distribution is analyzed with a single mode, narrow distribution, which is indicative of internally mixed particles. On the other hand, during the fire event (b), the humidified particles size distribution is broader and can be analyzed in two modes (red lines), revealing externally mixed particles that exhibit one less and one more hygroscopic mode, respectively.

