Atmospheric Chemistry and Physics Discussion

Electronic Supporting Material

First measurements of reactive α-dicarbonyl concentrations on $PM_{2.5}$ aerosol over the Boreal forest in Finland during HUMPPA-COPEC 2010 – Source apportionment and links to aerosol aging

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Back trajectories during the HUMPPA-COPEC-2010 field measurement intensive in Hyytiälä, Finland, 2010

96 h backward trajectories were calculated using the NOAA Hysplit model at an altitude of 25 m above ground level (a.g.l.) for the sampling site located at 61º 50' 50.685" North, 24º 17' 41.206" East, 179m above sea level (a.s.l.).

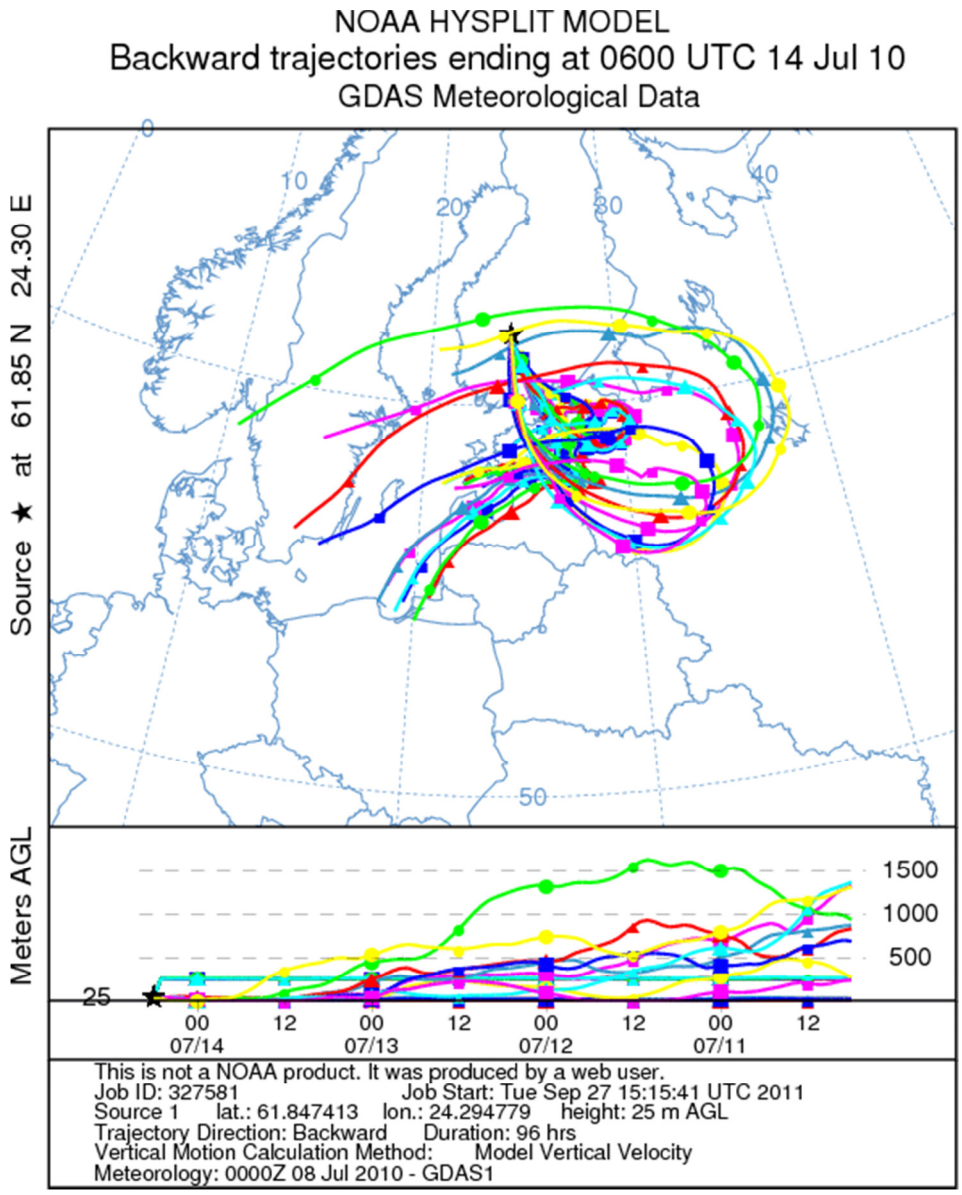

Figure S1. Ensemble 4 day back trajectories for the urban pollution plume event on 14 July

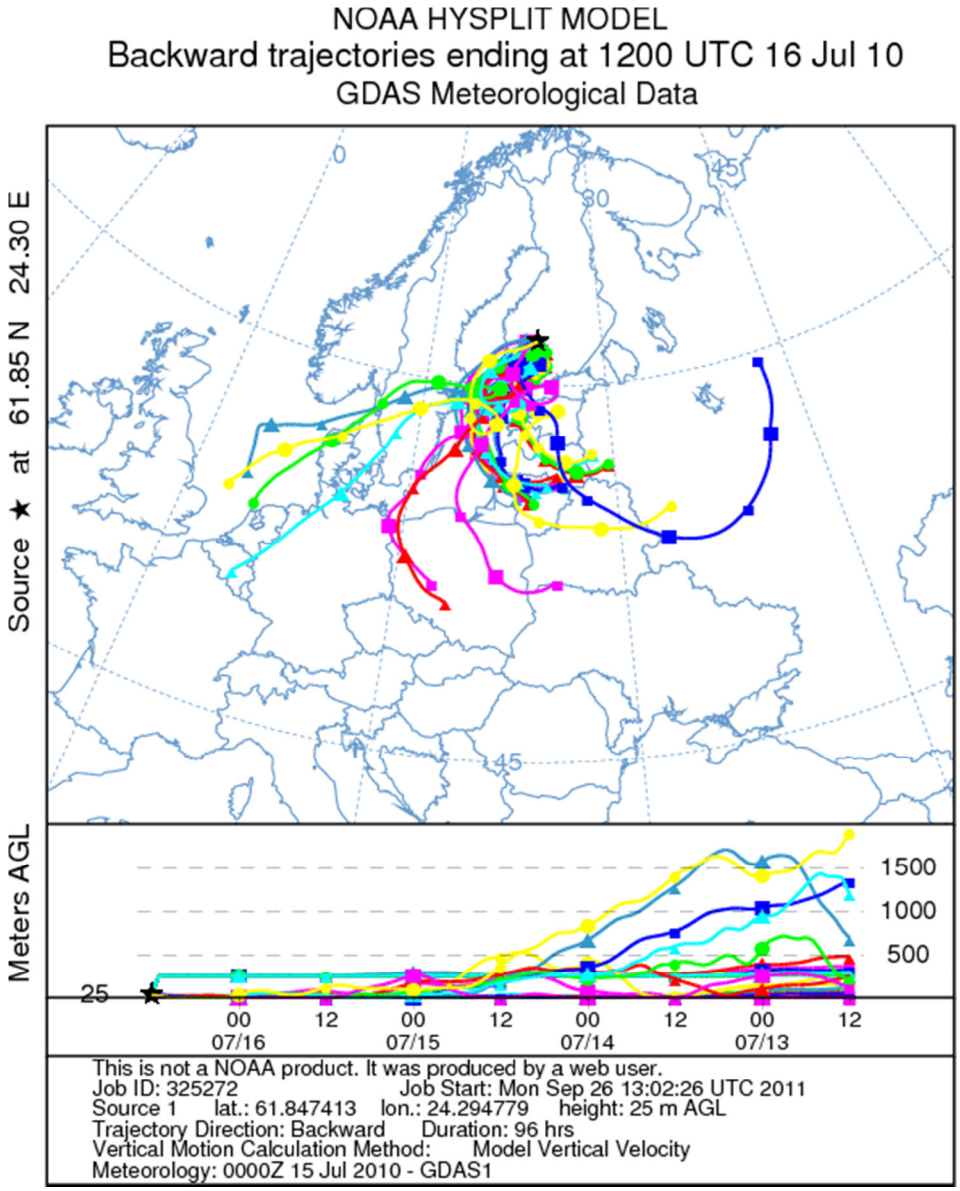

Figure S2. Ensemble 4 day back trajectories for the urban pollution plume event on 16 July

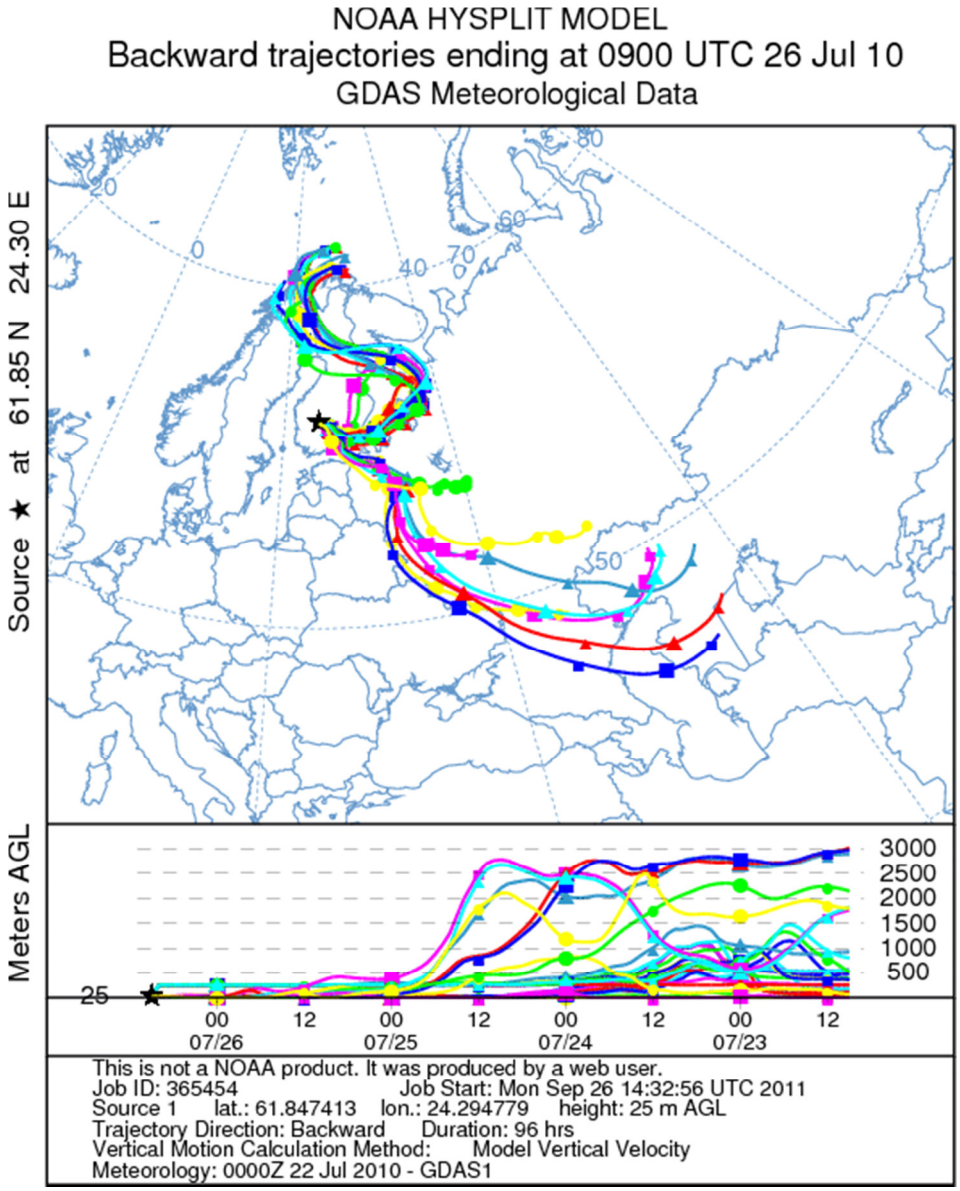

Figure S3. Ensemble 4 day back trajectories for the biomass burning / urban pollution plume event on 26 July

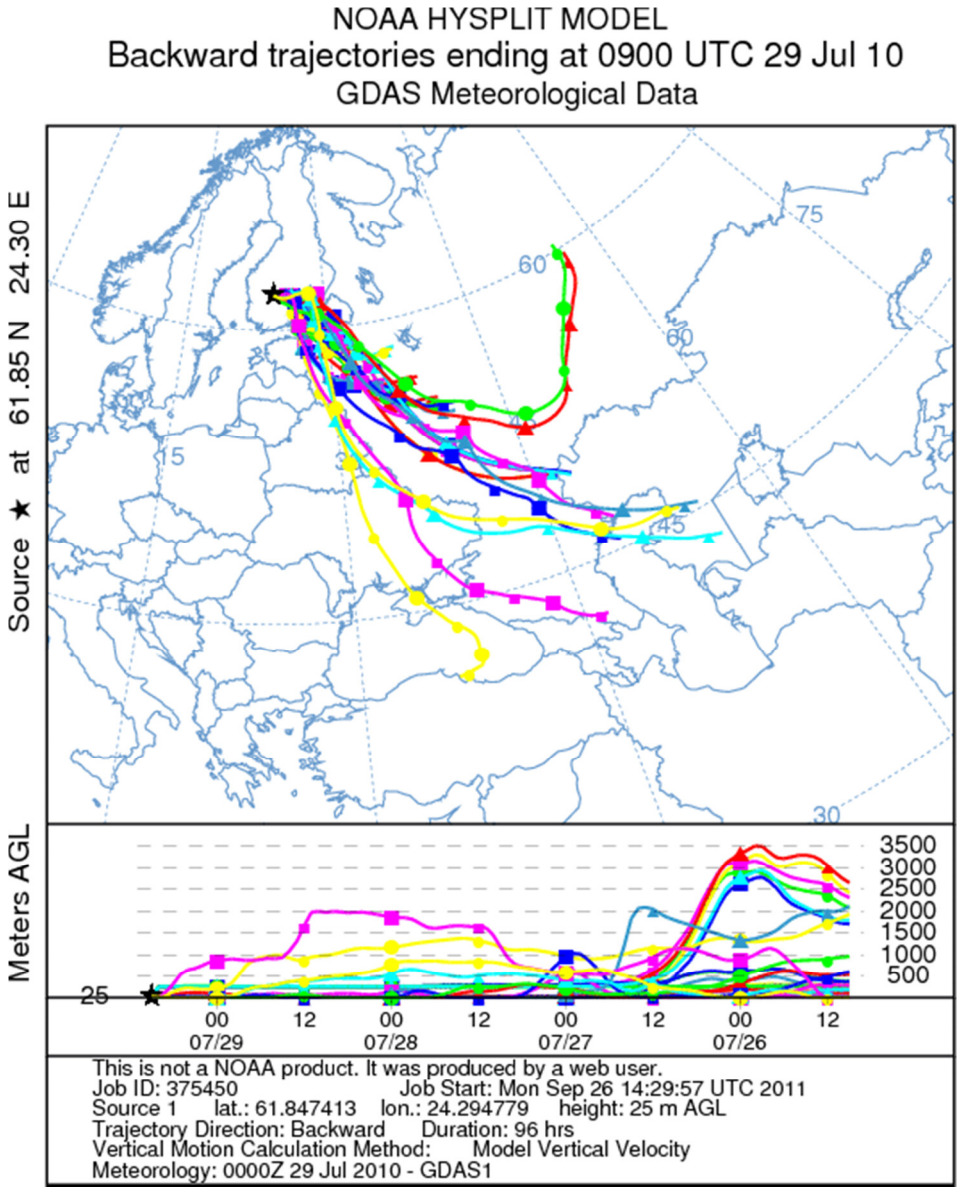

Figure S4. Ensemble 4 day back trajectories for the biomass burning / urban pollution plume event on 29 July

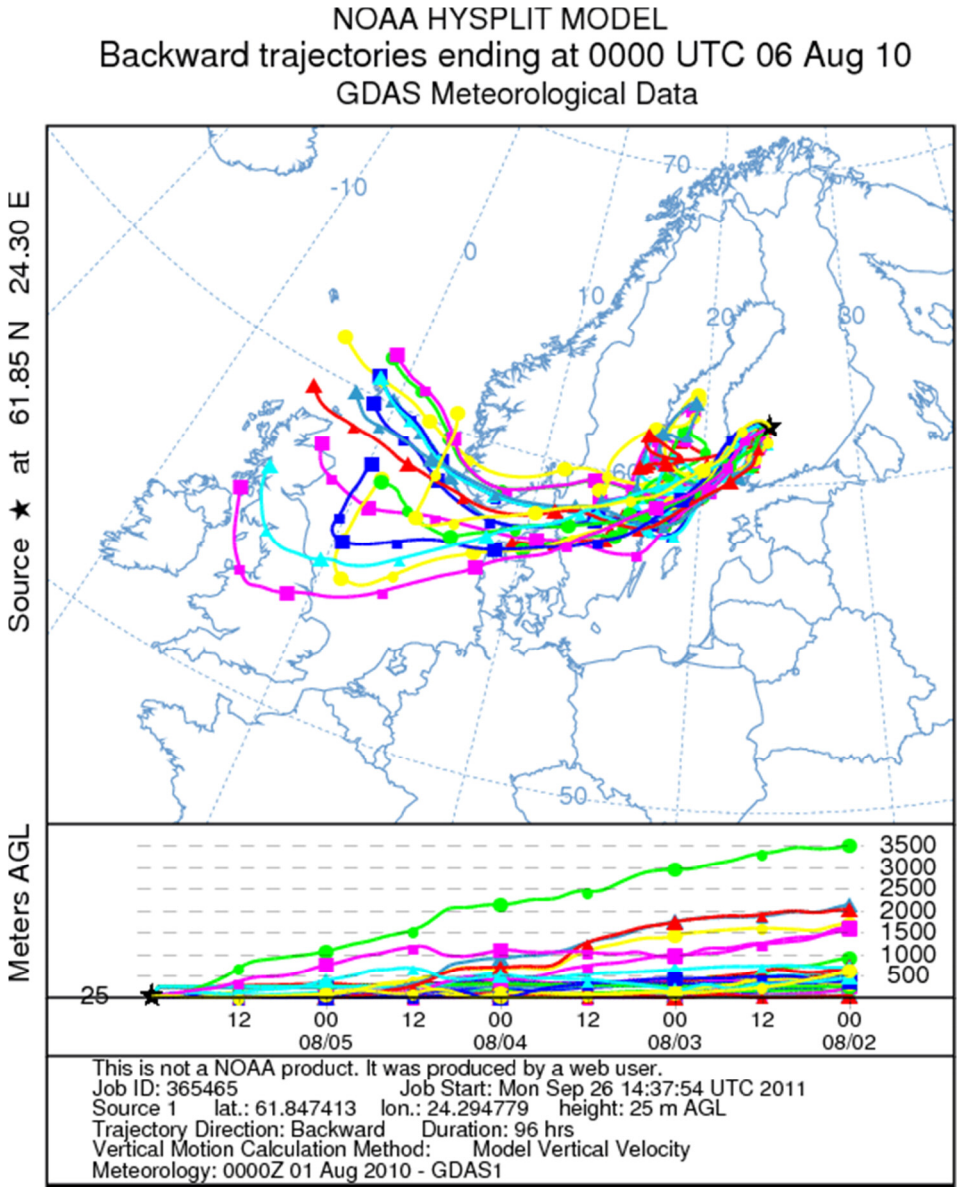

Figure S5. Ensemble 4 day back trajectories for the sawmill / urban pollution plume event on 6 August

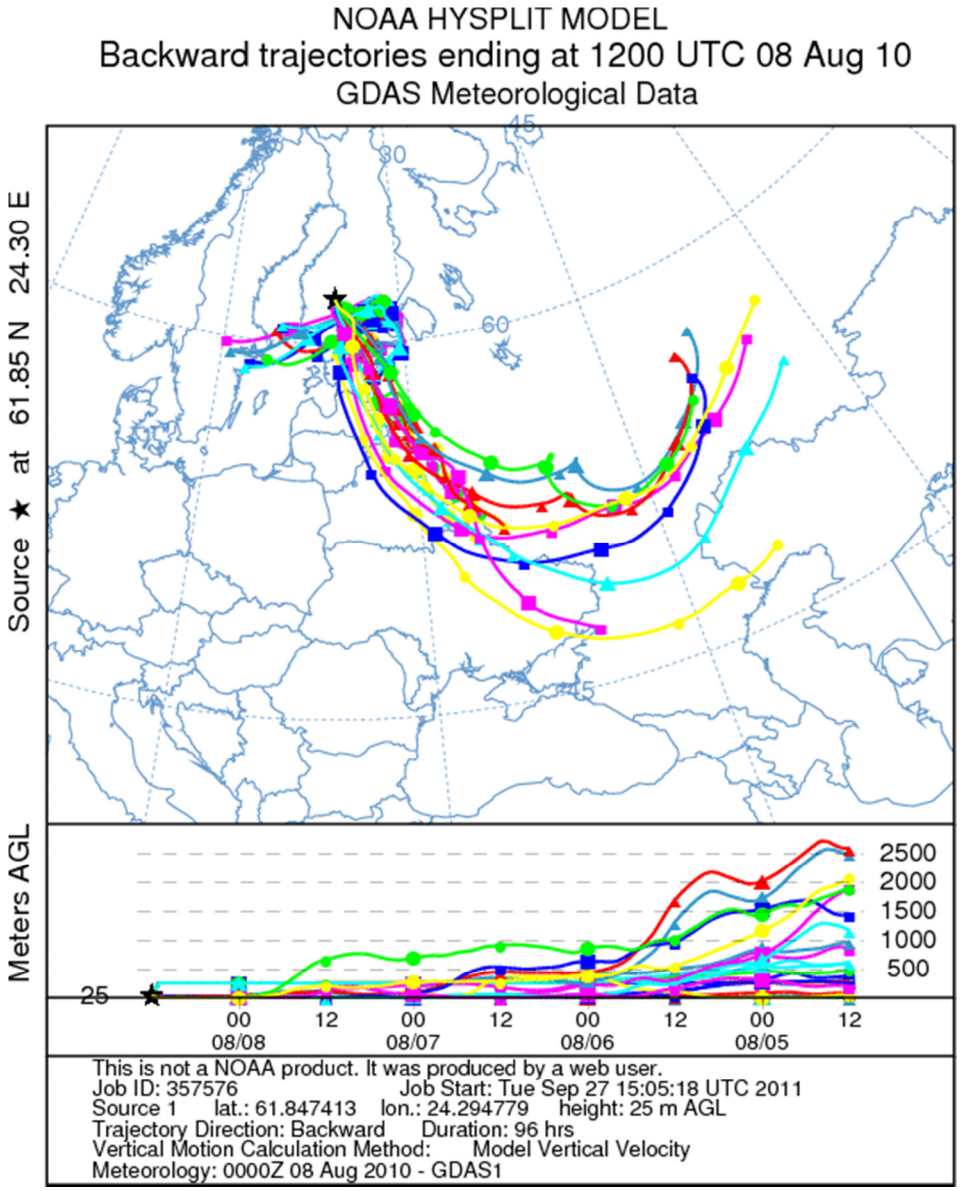

Figure S6. Ensemble 4 day back trajectories for the biomass burning event on 8 August

48 h backward trajectories were calculated using the NOAA Hysplit model at an altitude of 25 m above ground level (a.g.l.) for the sampling site located at 61º 50' 50.685" North, 24º 17' 41.206" East, 179m above sea level (a.s.l.).

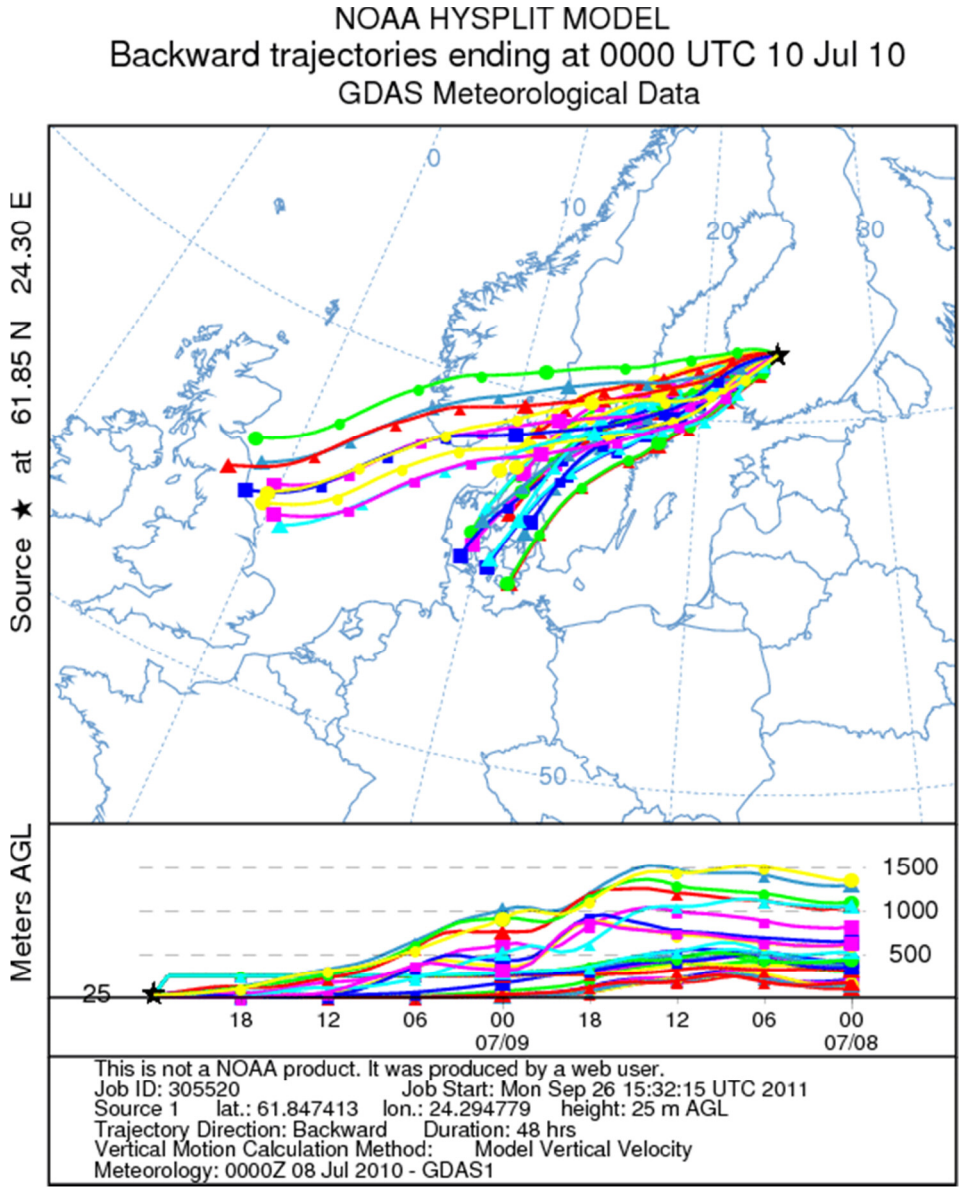

Figure S7. Ensemble back trajectories for the urban pollution plume / traffic at site event on 10 July

96 h backward trajectories were calculated using the NOAA Hysplit model at an altitude of 200 m above ground level (a.s.l.) for the sampling site located at 61º 50' 50.685" North, 24º 17' 41.206" East, 179m above sea level (a.s.l.) and plotted together with fire hotspot data, for fires with >90% confidence, provided by the Fire Information for Resource Management System (FIRMS) for the biomass burning events on 7 to 9 August. Back trajectories and active hot spots for specific dates are colored. Black squares indicate sampling site and predominant nearby cities: Helsinki, Finland, Oslo, Norway, St. Petersburg and Moscow, Russia.

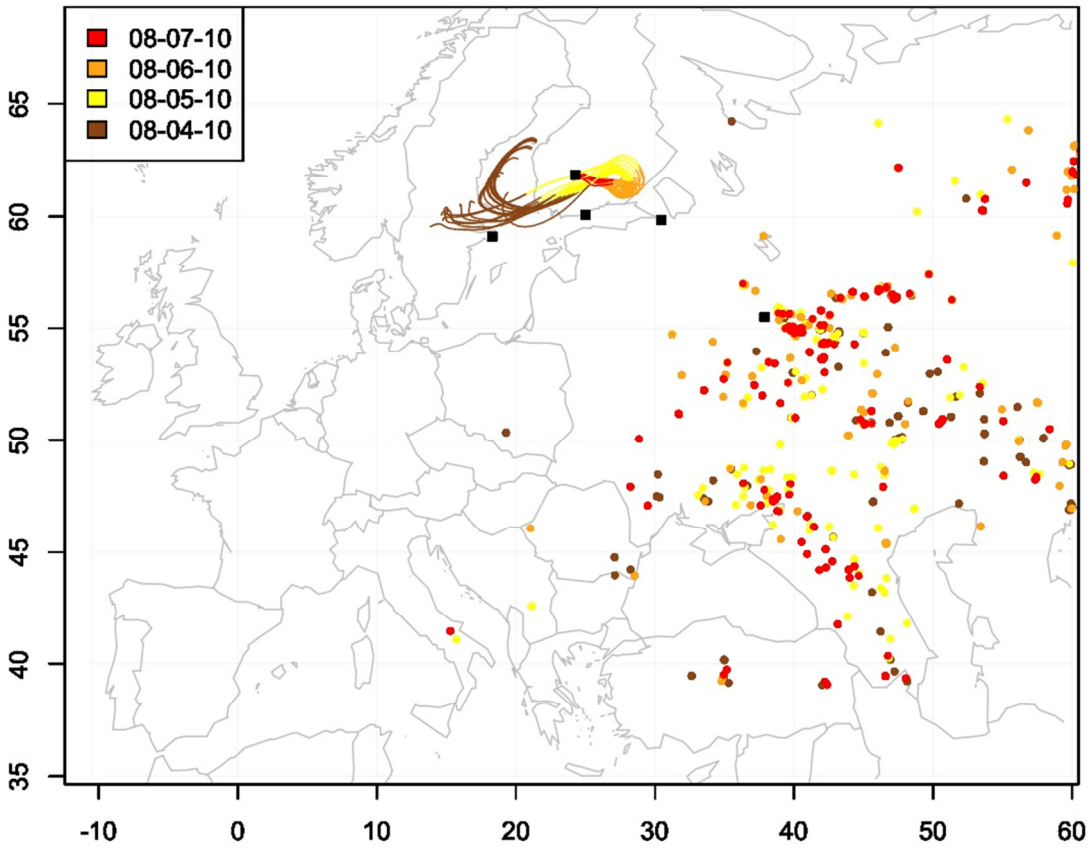

Figure S8. Ensemble 4 day back trajectories for the biomass burning event on 7 August

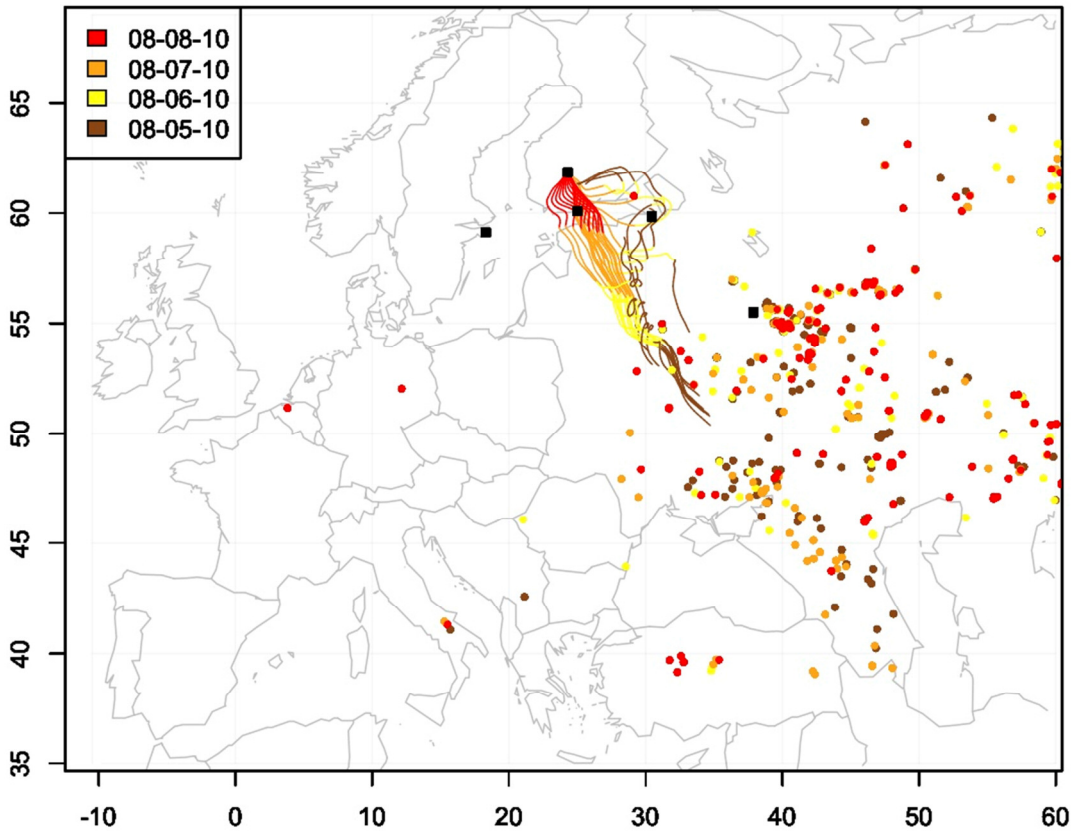

Figure S9. Ensemble 4 day back trajectories for the biomass burning event on 8 August

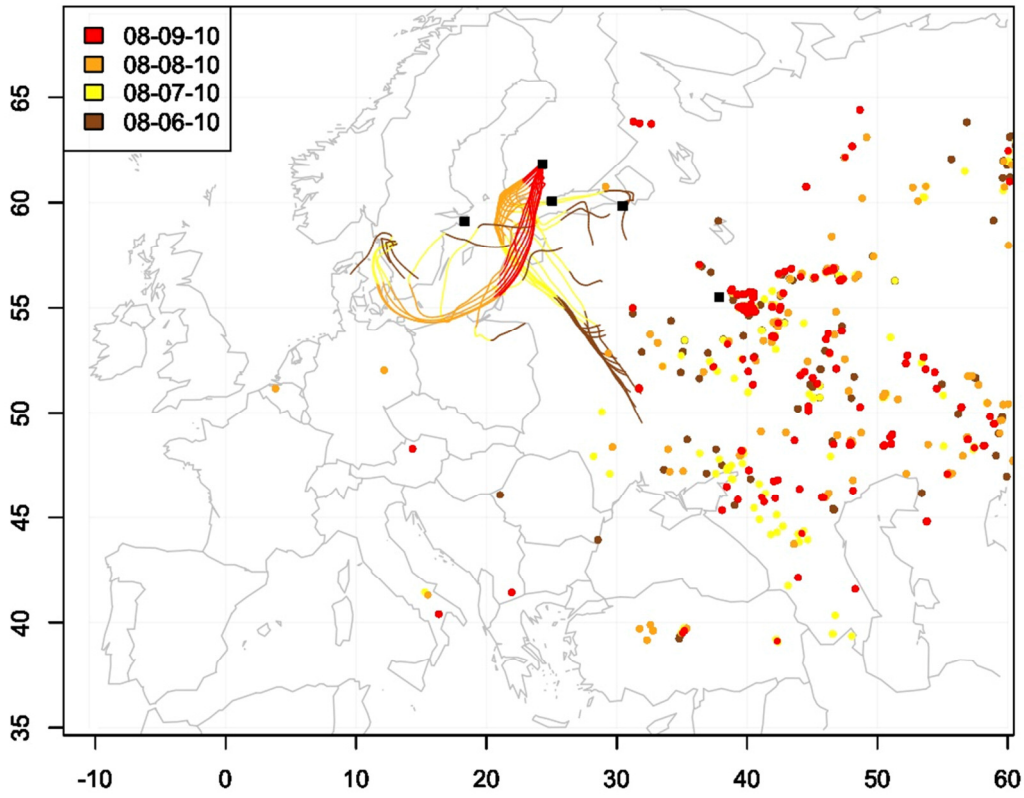

Figure S10. Ensemble 4 day back trajectories for the biomass burning event on 9 August