Analysis of the air mass dependency of the aerosol hygroscopic factor at Burjassot, Spain

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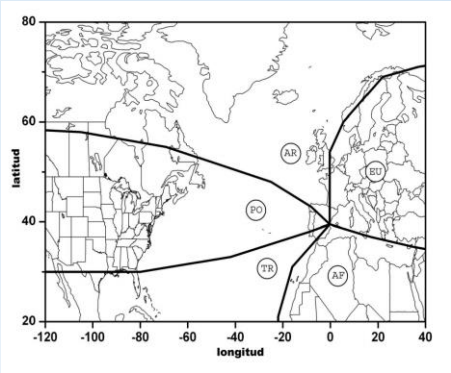

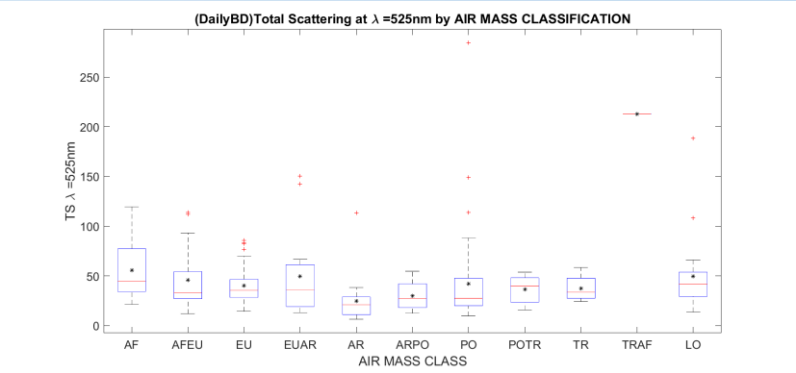

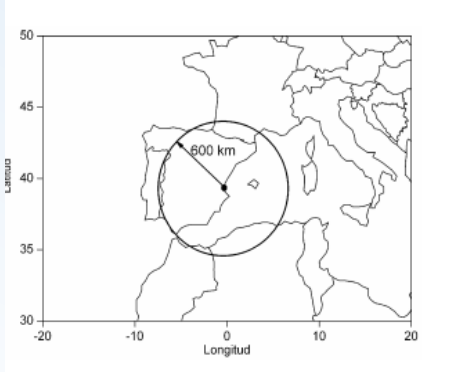

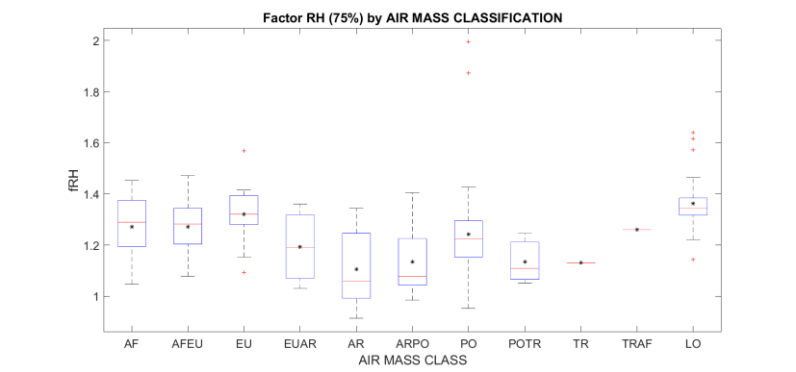

Key points

- We measure particle light scattering coefficients at different RH at Burjassot.
- Instruments used: ACS1000 and two Aurora 3000 in tandem configuration. A total of 4 years for dry coefficients and 12- Month for wet coefficients data are available.
- We determined the trajectory path of the air masses using HYSPLIT. We classify them in 5 pure classes and 5 mixed classes, also a local air mass trajectory is defined if maximum distance < 600km.
- **f(RH=75%) dependency** with air mass has been calculated for the whole period. Average values are 1.11-1.32 in agreement with previous results.
- **Scattering coefficient dependency** with air mass has been calculated, EU and AF air mass have the highest (55 Mm-1) and AR and PO (25 Mm-1) have the lowest coefficients so they are the cleanest trajectories in our study, in agreement with previous results.
- Comparing hygroscopic growth factor, EU AF and PO air mass have the highest factors (1.32 1.27 and 1.24) and AR the lowest (1.11).
- We have very few TR air mass trajectories in our study so the results in this trajectories are not much representative.