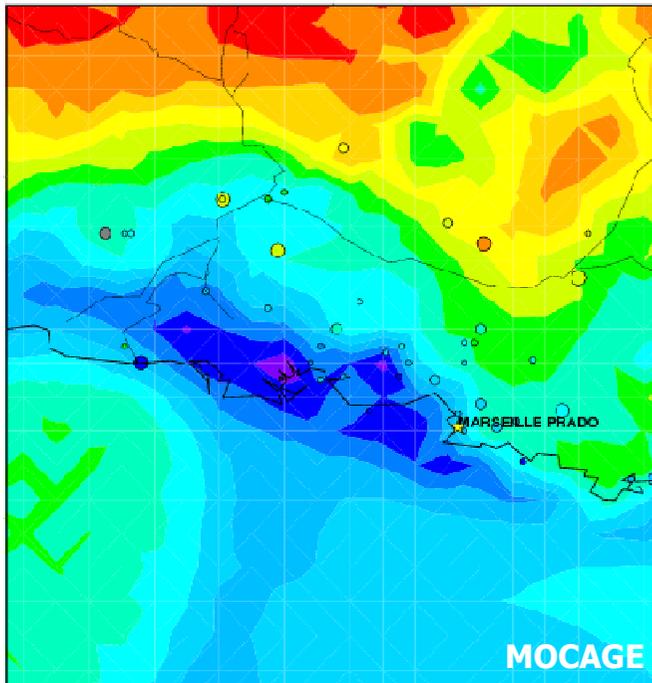


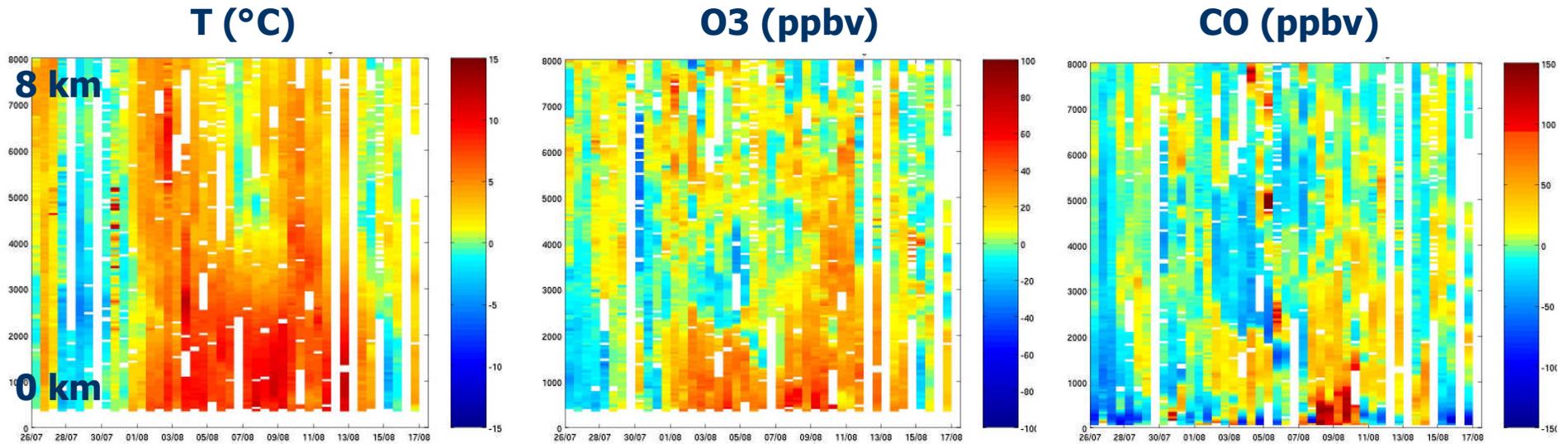
Wildfires and BB : RAQ



RAQ surface ozone forecasts (without taking biomass fires emissions into account) work well : RMSE 15-30 $\mu\text{g}\cdot\text{m}^{-3}$, corr. 0.7-0.9... So why care? Some cases have yet been documented...

This is not the same situation for primary pollutants : 2 striking examples on CO and PM10...

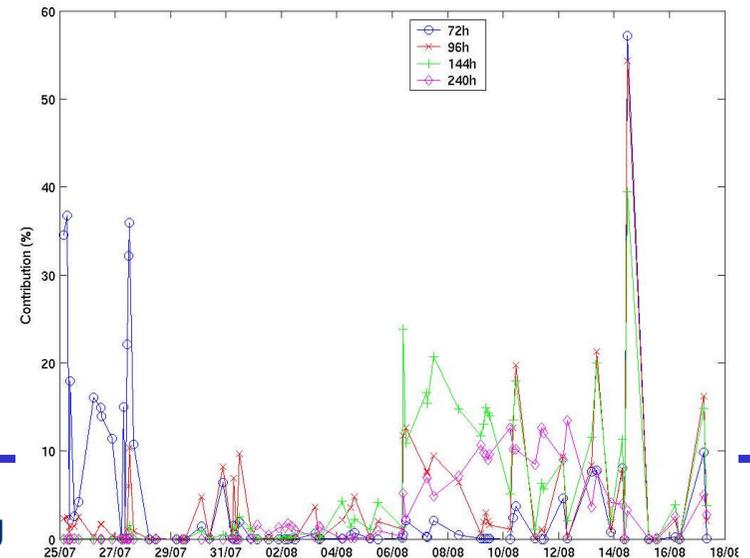
Summer 2003 Heat Wave in Frankfurt: Deviations from the MOZAIC climatology

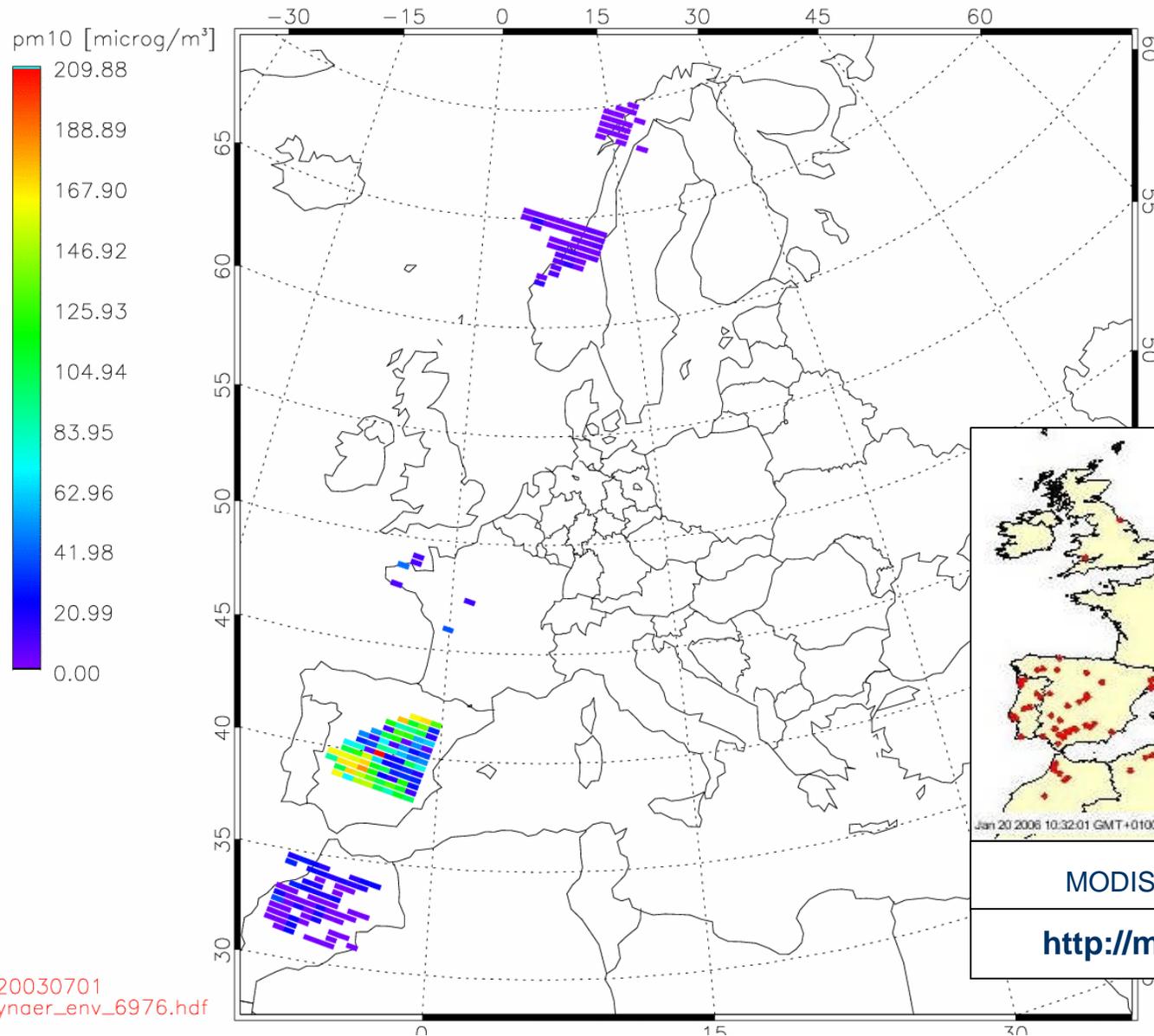
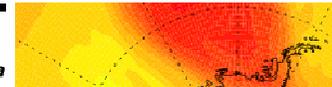


July 26 → August 17

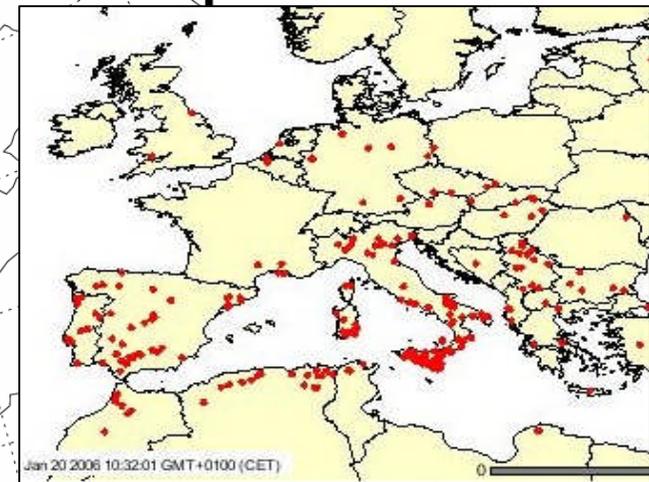
Contribution of air masses affected by biomass-fires over Portugal on the composition of boundary layer air in Frankfurt – Flexpart calculations

M. Tressol, Ph.D. thesis, J.-P. Cammas, LA CNRS





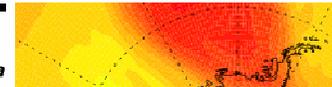
L.Nieradzik,
H. Elbern,
RIU,
University of Cologne



MODIS WEB FIRE MAPPER

<http://maps.geog.umd.edu>

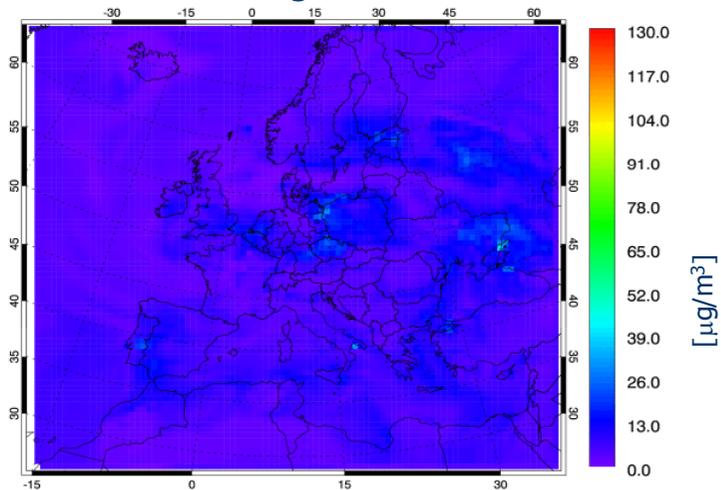
20030701
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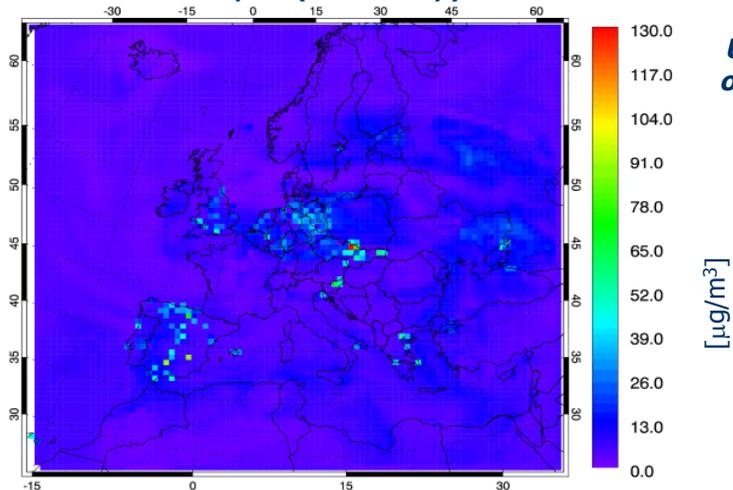
2Dvar Assimilation of Wildfire - PM₁₀ (July 1st 2003)

*L. Nieradzik,
H. Elbern,
RIU,
University
of Cologne*

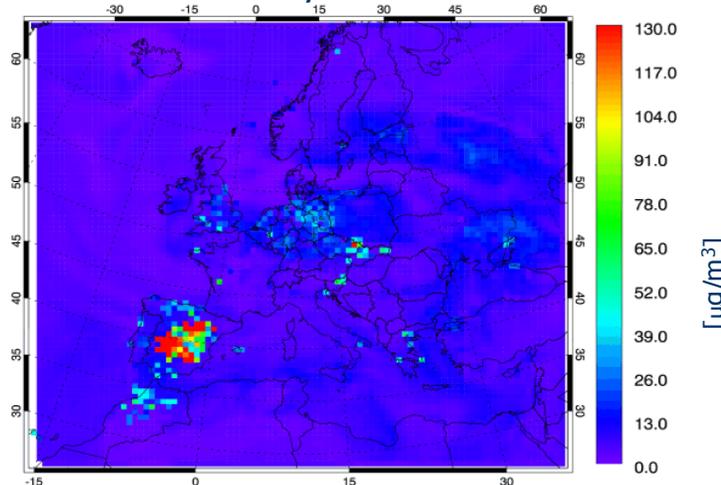
Background



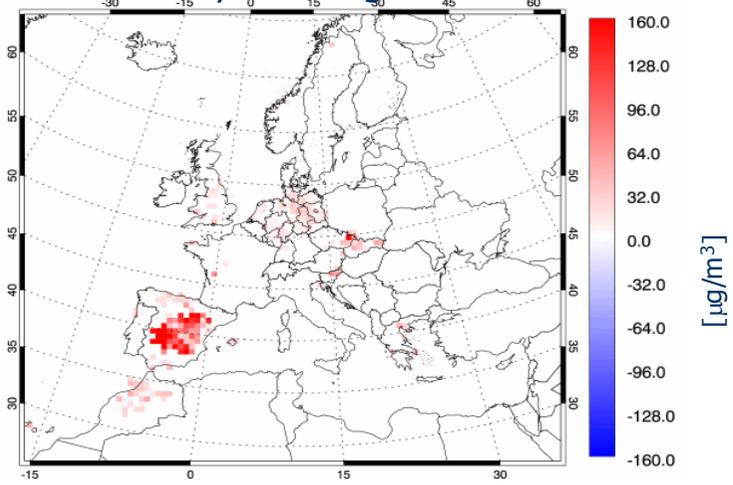
Analysis(EEA only)



Analysis



Analysis-Background



RAQ requirements

- **chemical boundary conditions** from AER & GRG (fine scale structures?)
- over the GEMS RAQ domain (**35N/70N ; 15W/35E**) :
 - ~ **5km** emissions of PM, CO, (VOC) consistent with global datasets
 - **altitude profiles** of emissions (wind shear, PBL, pyro-convection?...)
 - **daily** values or better
 - **consistency** if inputs from several instruments are used (different hours of overpass, different methods,...)