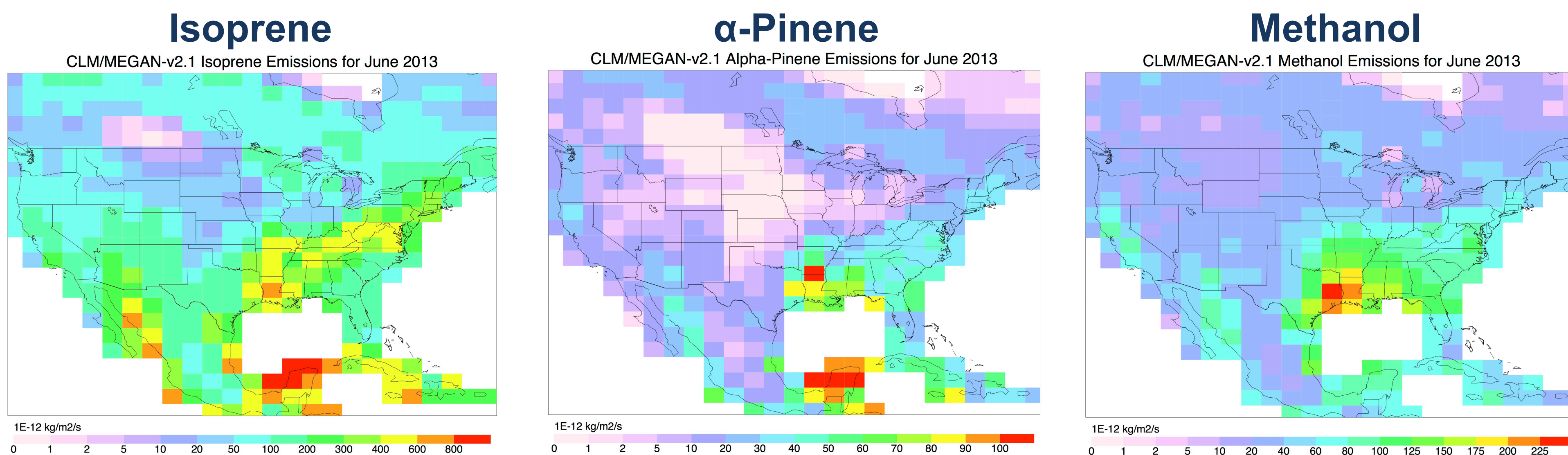


CAM-Chem with MEGAN for SAS

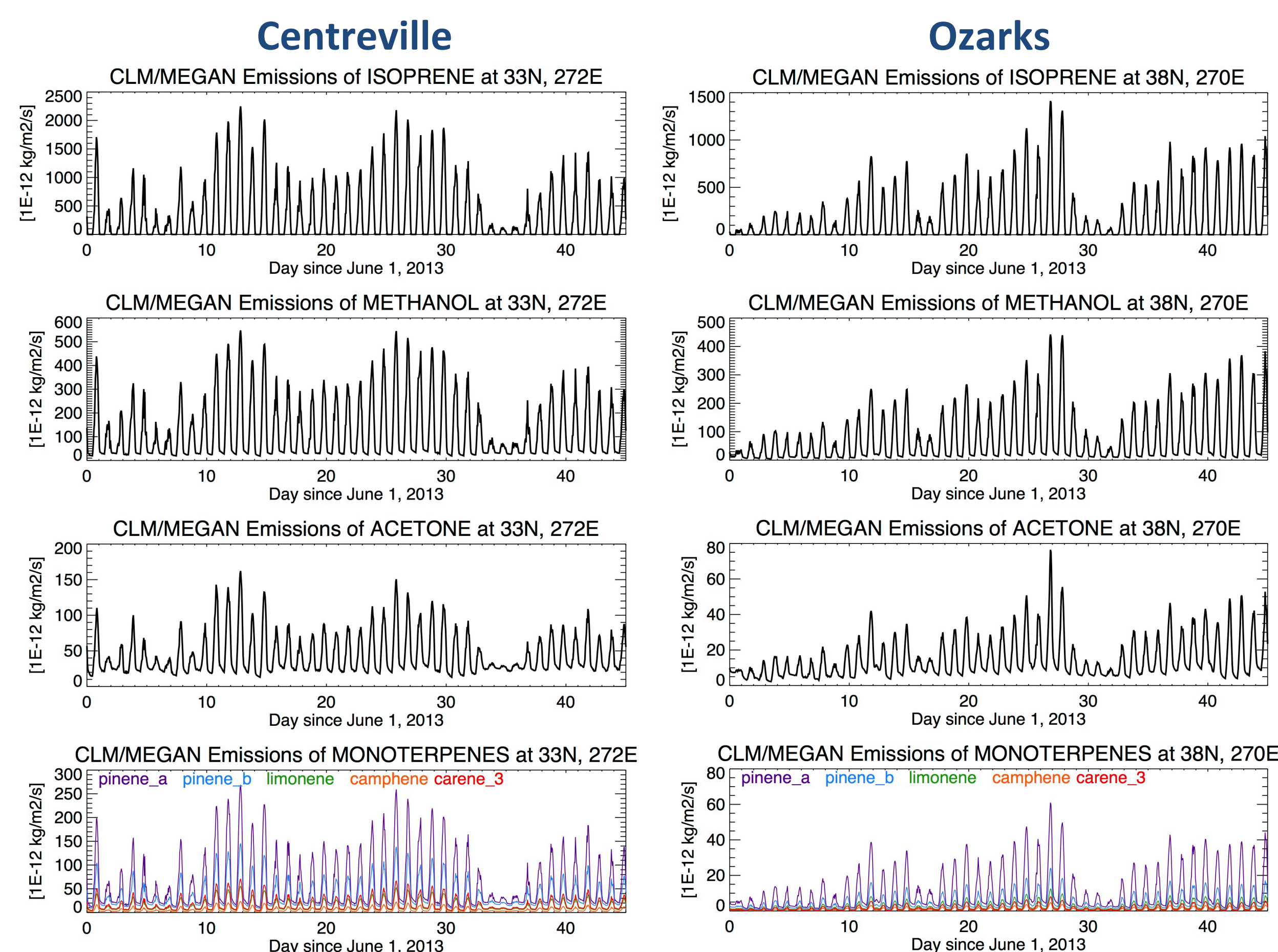
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The Model of Emissions of Gases and Aerosols from Nature (MEGAN), version 2.1, has been incorporated in the NCAR Community Land Model (CLM). CLM is coupled to the CAM-chem (Community Atmosphere Model with chemistry) allowing for a more detailed simulation of biogenic compounds in a global model than has been available previously.



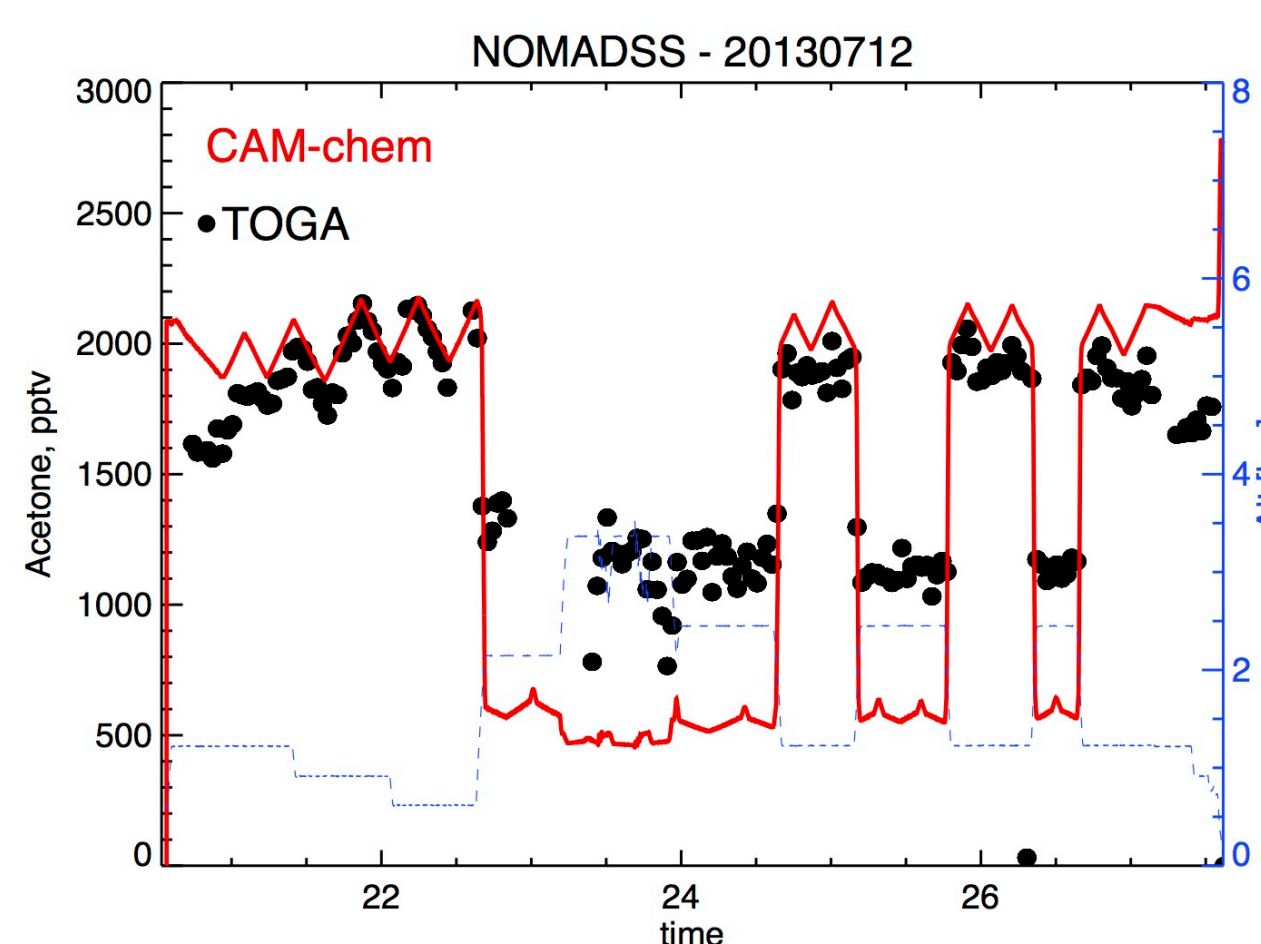
Hourly Emissions at Sites

Emissions are calculated online in CLM at each model timestep using the model meteorology, in this case specified from GEOS-5. A strong diurnal cycle is seen for each day, and daily variability is driven by clouds and temperature. MEGAN calculates 140 compounds in CLM which are then lumped to match the atmosphere model chemistry. Generally all monoterpenes (5 species shown) are lumped in a single species in CAM-chem.



CAM-chem results can be made available:

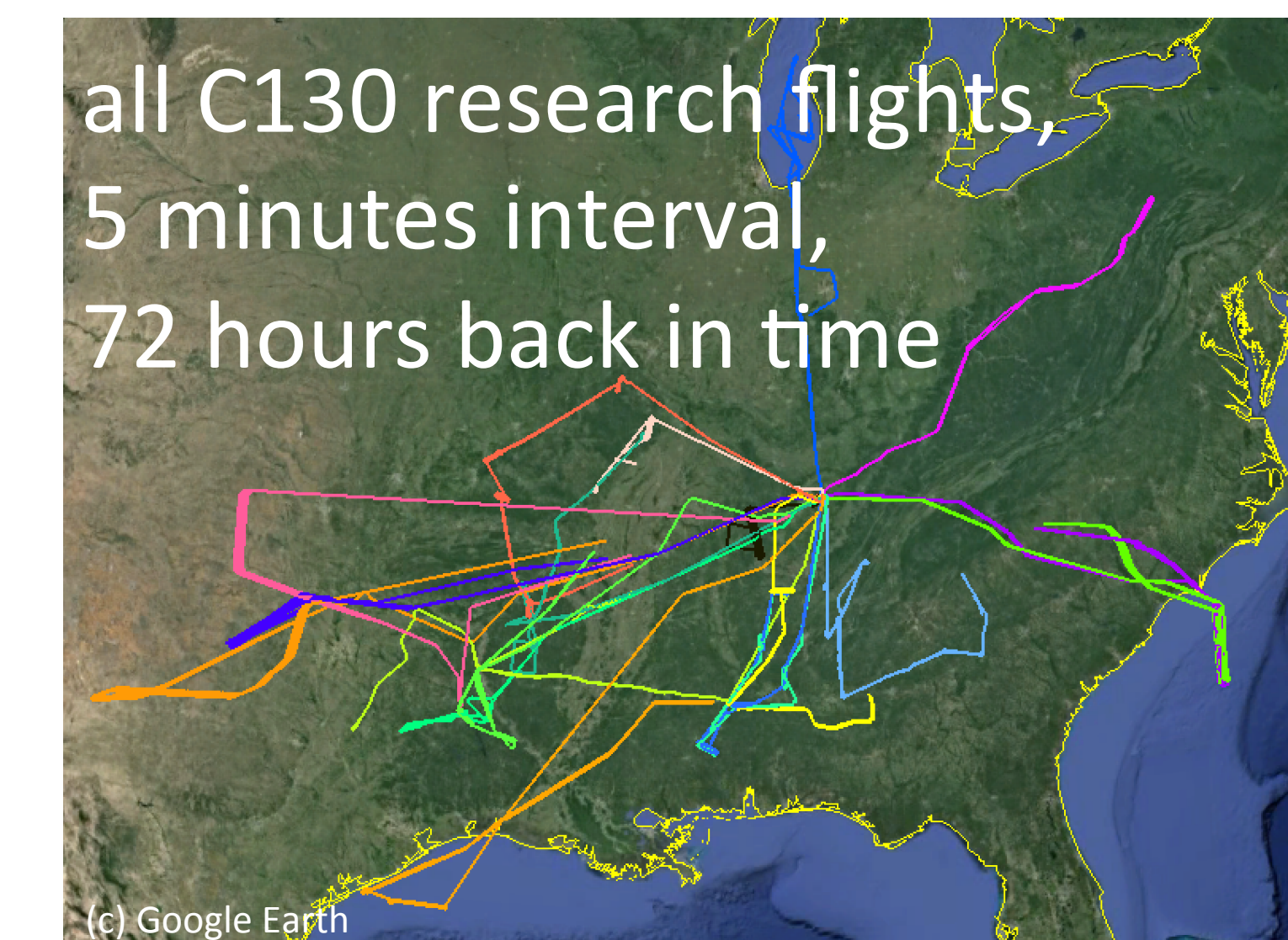
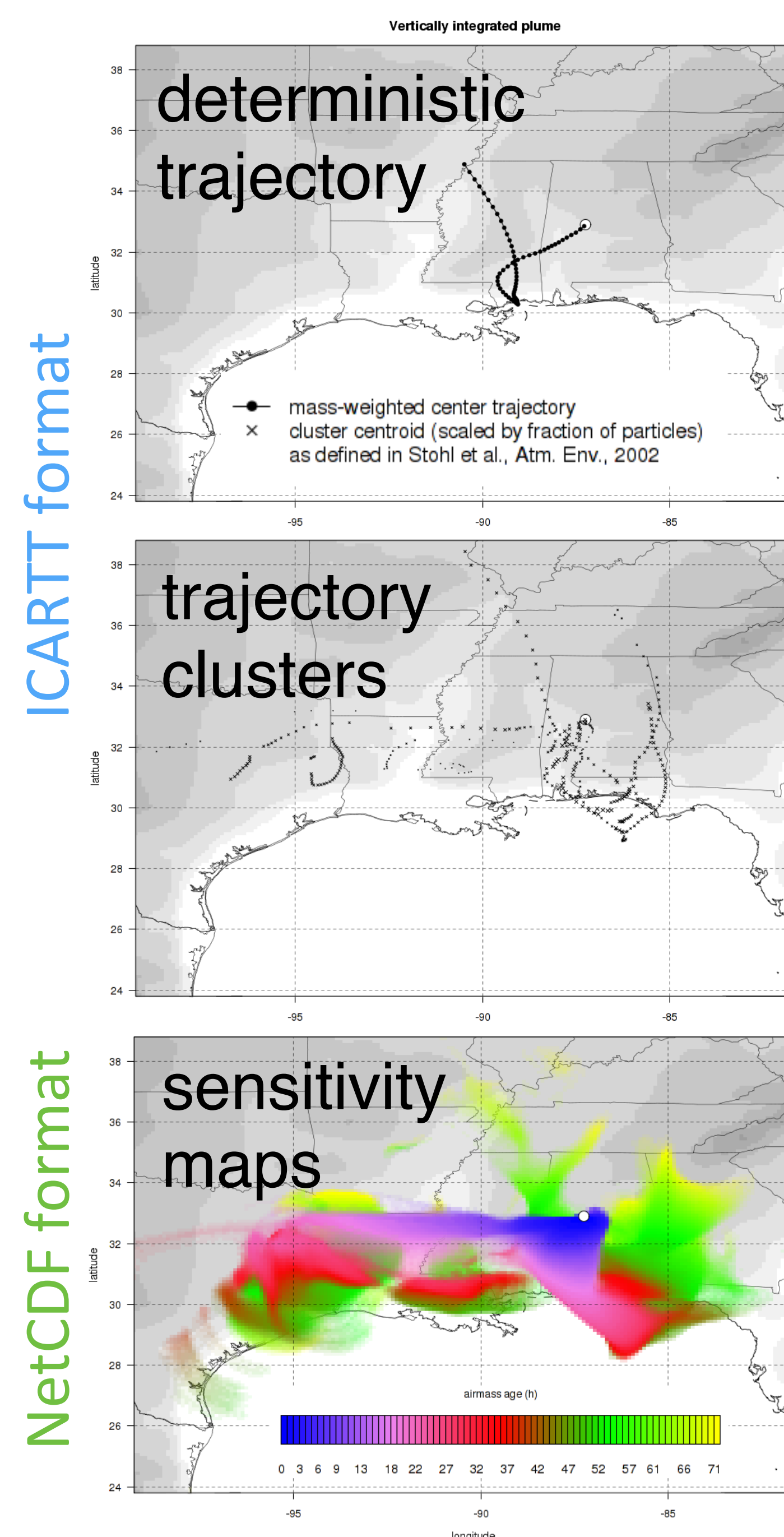
- Interpolated to the C-130 flight tracks
- Results for ground sites
- Emissions maps



FLEXPART Trajectories for SAS

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The Lagrangian Particle Dispersion Model FLEXPART version 9.1 has been employed to calculate air mass trajectories back in time from 5 ground sites for the entire campaign period, as well as for all C-130 research flights. This allows researchers to understand the history of the air mass sampled with their instrument.



All trajectories available on the NCAR EOL SAS data archive

<http://data.eol.ucar.edu/codiac/dss/id=373.008>
<http://data.eol.ucar.edu/codiac/dss/id=373.014>