

GHG Subproject: Months 13–30

- Main target test reanalysis.
- Activities separated by species

Steps towards CO₂ reanalysis

- Prepare inputs for assimilation
- Run assimilation
- Validate assimilation
- Generate surface fluxes
- Diagnose controlling processes

Inputs for /Reanalysis

- Prepare fire emissions (with GRG) (month 12–18)
- Provide Orchidee flux input (month 12–18)
- Provide fluxes from flask inversions (12–18)
- Generate background covariance (month 18)
- Deal with mass nonconservation

Validate Assimilation

- Provide airborne data (month 12–24)
- Compare assimilation with LMD standalone (month 27)
- Validate transport with SF₆ data

Generate fluxes

- Switch to new version of LMDZT (month 18)
- Implement near rel-time processing chain (month 21)
- Invert data from ECMWF and LMD (month 27–30)

Diagnose Controlling Processes

- Generate Linear adjoint of biosphere model (month 21)
- Test assimilation of fluxnet data (month 24)
- Test with fluxes from flask inversions. (month 27)
- Use fluxes from reanalysis inversions.

Methane

- Improved Sciamachy retrievals (month 24)
- Potential assimilation of methane (Month 27)
- Test assimilation of sciamachy methane (month 27)
- Compare assimilated and LMD methane (month 30)