ConFluxPro

A toolkit for soil gas analysis

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# Features to add:

## production model

Functions that implement the production model I developed for ZALF. This should integrate nicely with the soilphys discretisation functions already created.

## error estimation for whole process

# Functions to add:

## check\_gasdata()

A function that checks the integrity of the gasdata dataframe. Is every Sample unique etc.

### is.infinite

### ges\_flag == T

### NRESULT\_ppm and other parameters present

### Each sample unique?

## dcdz\_ef()

A second function implementing dcdz approaches such as LR (linear regression over the complete profile) or EF (exponential function)

## soilphys\_ges()

MIGHT BE UNNECESSARY! CAN BE ACHIEVED WITH ONE LAYER IN soilphys\_layered()

This function summarises the soilphys dataframe to one value per day and plot and calculates means for the complete profile

# Functions to modify:

## calculate\_flux()

### only calculate soilphys for relevant Plots, gases and Dates!

## dcdz\_layered

### DONE:

### Return NA if 0 non NA cases!

## discretize\_depth()

### Modify Documentation to match new structure

## series\_cleaner()

### modify print messages (less).

### Print correction statistics??

### there are problems with douplicates of a single Date/MST\_ID pair.

## balance\_correction()

### stops for wrong input

different lengths in the input parameters etc.

### RESOLVE: Returns Inf for ges = 0 (if none of the important gases are present)

### option to not commit to NRESULT-changes for ges\_flag = T

## offset\_correction()

### action for mode == NA + flag for these samples!!

## complete\_soilphys()

### Logical for overwriting.

A trigger that allows existing columns to be overwritten. Should be FALSE by default

# Functions added:

## calculate\_flux()

## efflux\_extrap()

A function that extrapolates the layered FLUX data to the surface. Implements the Hirano, Linear Extrapolation and Linear model approach.