

QA/QC Meeting 20 Feb 2025

Participants: LH, SB, IF, TB, MR, FTS, LK, YW, AG, FT, YZ, LOS (12)

ALL SITES Outlook: Finalizing 2024 data

- DEC 2024: general preparations: backup/apptree database and urfinfo (.xml)
- 2025:
 - We need to get rid of the automatic bioa/fluvius data:
 - Delete all bio connected ASD files
 - Delete all level 1 files
 - Then convert/calculate for complete year:
 - convert all rs binary files using bio, all data
 - Call data launch/fluxes across all data
 - METEOROLOGIST
 - Call data launch/fluxes across all data
 - Put management data in management file (MLM)
 - Share fluxes with FLUXNET (also NAO, CH)
 - Share meteor data with FLUXNET (SADN files)

ALL SITES Recent webcam pictures



- **Dec 2024:** general preparations: backup/update database and Grafana (LH)
- **2025:**
 - First we need to get rid of the automatic bico/fluxrun data:
 - **Delete** all bico converted ASCII files
 - **Delete** all Level-0 fluxes
 - Then convert/calculate for complete year
 - **Convert** all EC binary files using bico, all data
 - **Calculate** Level-0 fluxes across all data
 - Meteoscreening
 - **Calculate** Level-1 fluxes across all data
 - Put **management** data in management file (XLSX)
 - **Share** fluxes with FLUXNET (also N₂O, CH₄)
 - **Share** meteo data with FLUXNET
 - **Share** metadata with FLUXNET (BADM files)

The scripts [bico](#) and [fluxrun](#) are running automatically on the **GROUP-RDS**.

- bico converts sonicread binary files to ASCII
- fluxrun calculates fluxes
- execution times are defined in the Windows Task Scheduler
- **all times are CEST (UTC+2)**

Name	Status	Triggers	Next Run Time
[bico] CH-AWS Convert EC raw data binaries		At 06:00 every day	28.05.2024 06:00:00
[bico] CH-CHA Convert EC raw data binaries		At 06:10 every day	28.05.2024 06:10:00
[bico] CH-DAS Convert EC raw data binaries		At 06:20 every day	28.05.2024 06:20:00
[bico] CH-DAV Convert EC raw data binaries		At 06:30 every day	28.05.2024 06:30:00
[bico] CH-FOR Convert EC raw data binaries		At 06:40 every day	28.05.2024 06:40:00
[bico] CH-FRU Convert EC raw data binaries		At 06:50 every day	28.05.2024 06:50:00
[bico] CH-HON Convert EC raw data binaries		At 07:00 every day	28.05.2024 07:00:00
[bico] CH-LAE Convert EC raw data binaries		At 07:10 every day	28.05.2024 07:10:00
[bico] CH-LAS Convert EC raw data binaries	Ready	At 07:20 every day	28.05.2024 07:20:00
[bico] CH-OE2 Convert EC raw data binaries	Ready	At 07:30 every day	28.05.2024 07:30:00
[bico] CH-TAN Convert EC raw data binaries	Ready	At 07:40 every day	28.05.2024 07:40:00
[fluxrun] CH-AWS Calculate fluxes	Ready	At 08:00 every day	28.05.2024 08:00:00
[fluxrun] CH-CHA Calculate fluxes	Ready	At 08:10 every day	28.05.2024 08:10:00
[fluxrun] CH-DAS Calculate fluxes	Ready	At 08:20 every day	28.05.2024 08:20:00
[fluxrun] CH-DAV Calculate fluxes	Ready	At 08:30 every day	28.05.2024 08:30:00
[fluxrun] CH-FOR Calculate fluxes	Ready	At 08:40 every day	28.05.2024 08:40:00
[fluxrun] CH-FRU Calculate fluxes	Ready	At 08:50 every day	28.05.2024 08:50:00
[fluxrun] CH-HON Calculate fluxes	Ready	At 09:00 every day	28.05.2024 09:00:00
[fluxrun] CH-LAE Calculate fluxes	Ready	At 09:10 every day	28.05.2024 09:10:00
[fluxrun] CH-LAS Calculate fluxes	Ready	At 09:20 every day	28.05.2024 09:20:00
[fluxrun] CH-OE2 Calculate fluxes	Ready	At 09:30 every day	28.05.2024 09:30:00
[fluxrun] CH-TAN Calculate fluxes	Ready	At 09:40 every day	28.05.2024 09:40:00
[ppicos] CH-DAV Convert to ICOS formats	Ready	At 03:35 every day	28.05.2024 03:35:00

The script [dataflow](#) is running automatically on **GL-CALCS**.

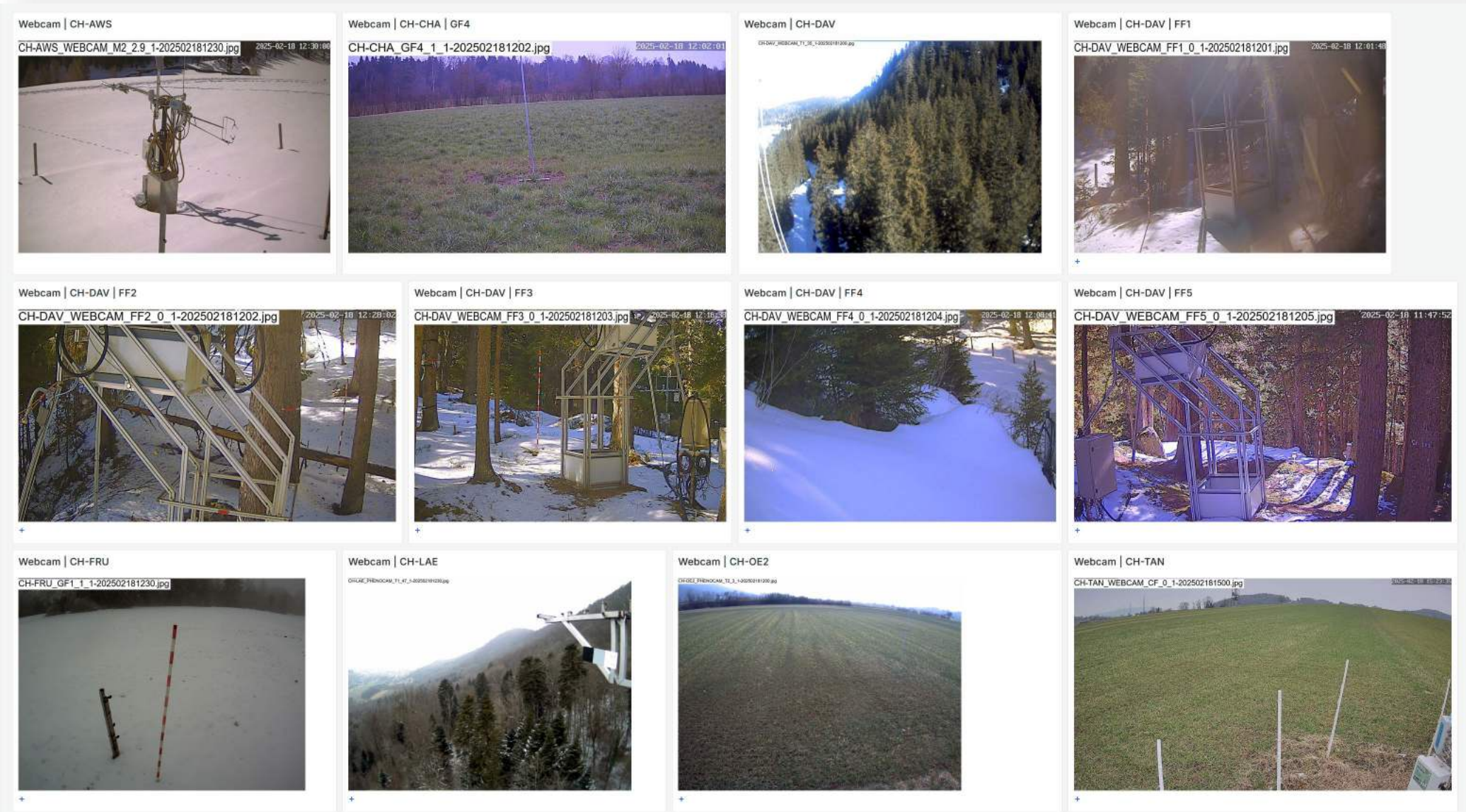
- dataflow uploads data to the database
- Meteo data upload starts between 7:00 (AWS) and 7:46 (TAN)
- Flux data upload starts between 11:00 (first site, AWS) and 11:20 (last site, TAN)
- execution times are defined in the *crontab* file
- after upload, data are immediately available in Grafana
- **all times are CET (UTC+1): this means that during summer data uploads start one hour later**

Example AWS during **summer**/**winter** local time:

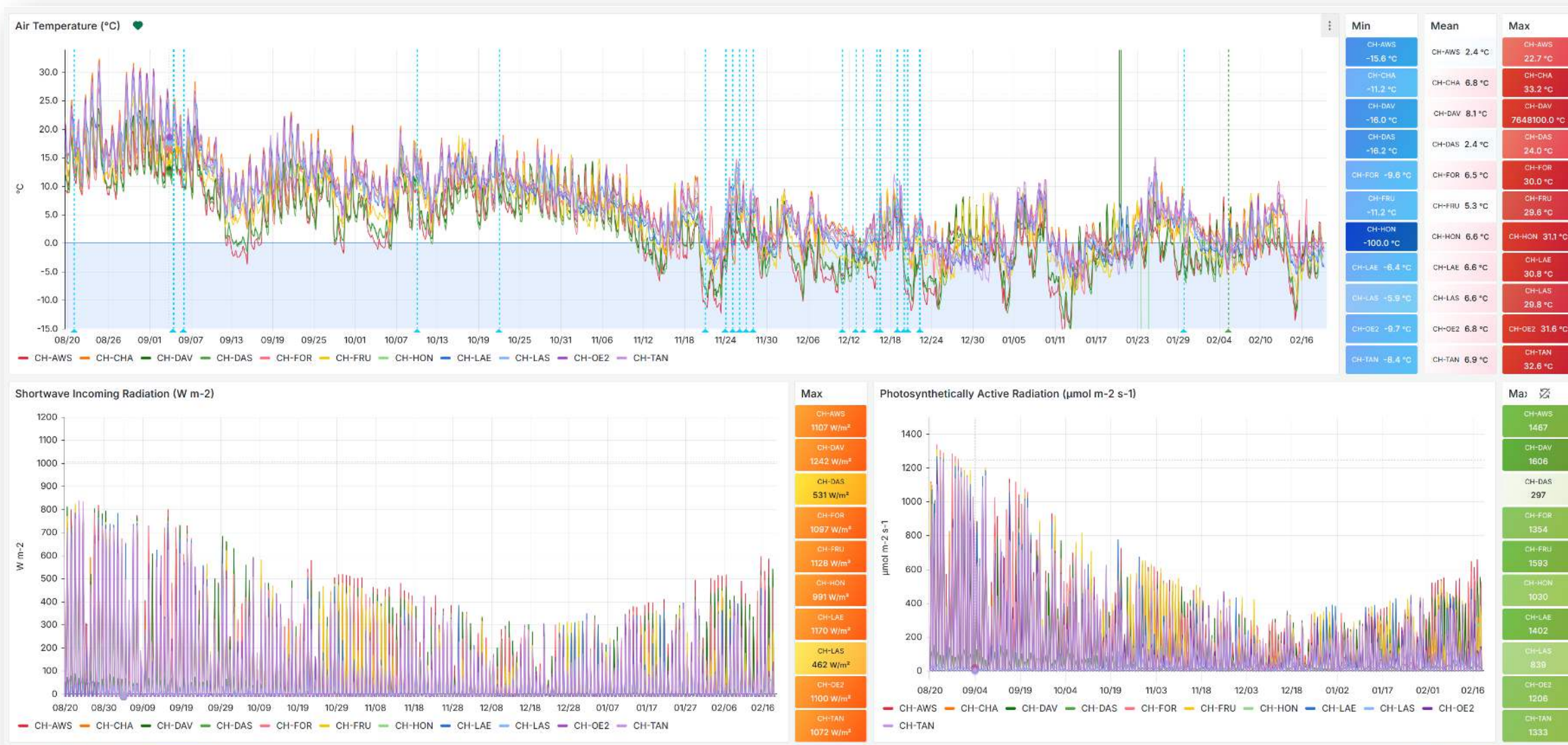
- bico starts **6:00** / **6:00**
- dataflow 10_meteo upload starts **8:00** / **7:00**
- dataflow 11_meteo_valley upload starts **8:02** / **7:02**
- dataflow 12_meteo_rainfall upload starts **8:04** / **7:04**
- dataflow 13_meteo_pressure upload starts **8:06** / **7:06**
- dataflow 15_meteo_snowheight upload starts **8:08** / **7:08**
- fluxrun starts **8:00** / **8:00**
- dataflow flux upload starts **12:00** / **11:00**

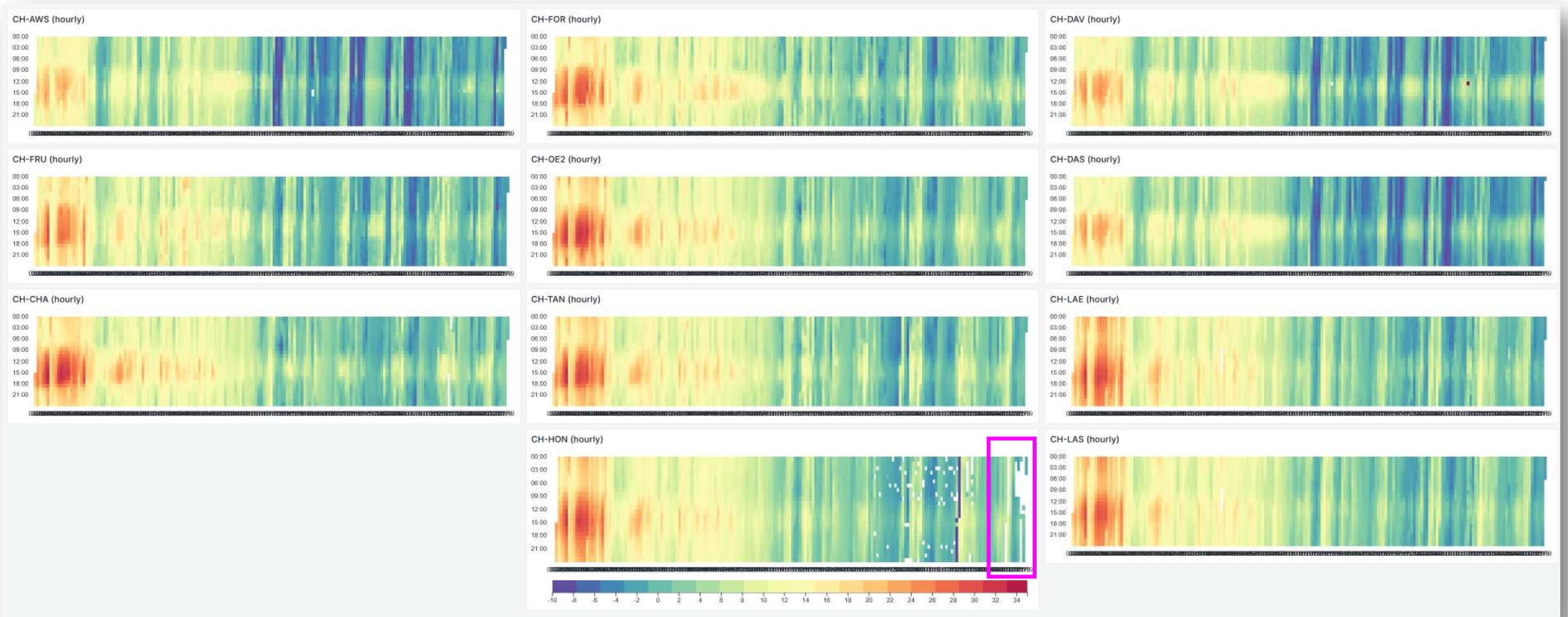
General Info

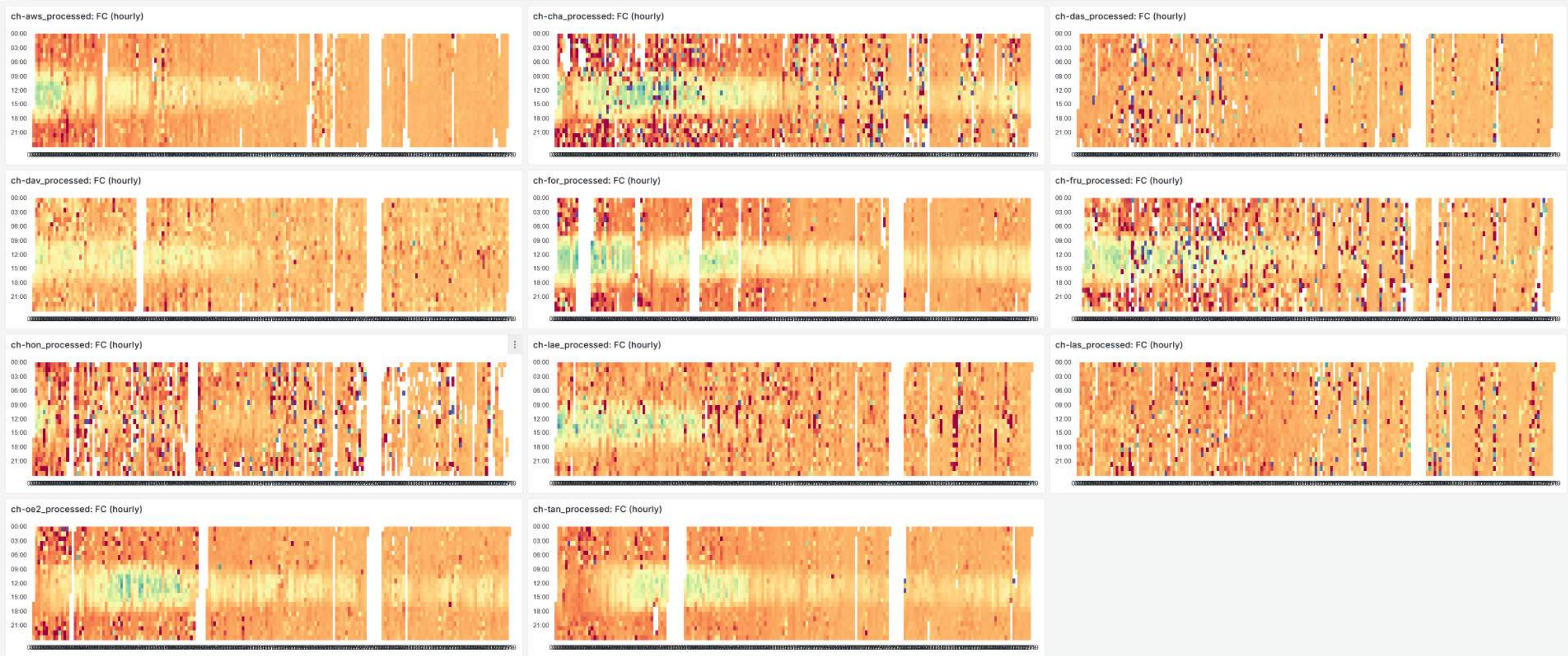
- **Attendance:** If you are (Tech-)SRP, please attend QA/QC meetings or tell LH if you can't, needed for planning of the meetings.
- **Short statement:** SRP & Tech-SRP: please prepare short statement about your site and post it on the slide together with the plot(s). You can also extend the already available text snippet(s) from previous meetings. (max. 2 sentences)
- **Purpose:** The purpose of QA/QC meetings is to check on current, incoming data. SRPs choose specific issues we should look at together and discuss in the group. Fluxes are checked if the respective SRP wishes to do so.
- **Variables:** There is a list of known variable abbreviations that you can use in case you wonder what an abbreviation means: [Variable Abbreviations](#)
- **Check of EC raw data files:**
 - Recommended check for SRPs and T-SRPS: take a look at EC raw data files and check if they look OK
 - Current EC raw data files are automatically converted to ASCII each day (done by the Python script bico)
 - Files and their plots can be found here, e.g. for CH-LAS:
`gl-processing\CH-LAS_Lae-Subcanopy\20_ec_fluxes\2022\raw_data_ascii`
- **Weekly flux calculations on the RDS:**
 - Please calculate fluxes and check them once per week, or more often if you wish to do so.
 - If you cannot calculate the fluxes, try to find a substitute, e.g. LH.
 - Please move your Level-0 results from the RDS to the respective Level-0 folder.
- **RDS folder:** The folder P:\Flux\RDS_calculations is a temporary folder. Please move Level-0 flux calculations (preliminary fluxes) to the Level-0 folder on gl-processing. For example, for CH-CHA move files to Z:\CH-CHA_Chamau\20_ec_fluxes\2022\Level-0 (gl-processing is mounted as drive Z in this example).
- The RDS now has access to the database. This means that we now have a shared working environment where we can run Jupyter notebooks.
- **FluxCoffee:** separate meetings to discuss data related issues, e.g. flux processing and technical issues, started and will continue to take place. There are extensive notes available in the Data/FluxCoffee group on Microsoft Teams.
- **List of QA/QC Meeting dates:** [QA/QC Meetings 2024](#)



Last 6 months

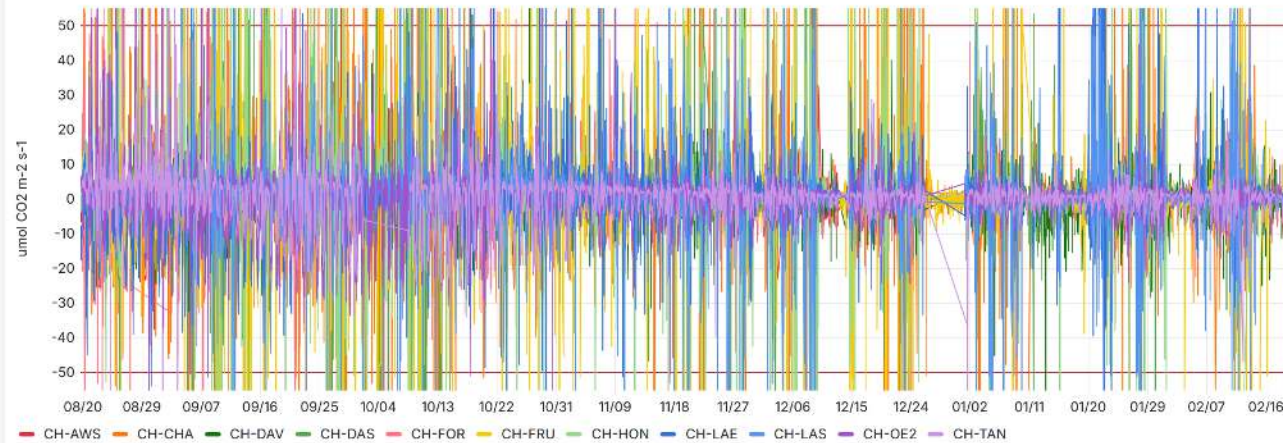

<https://dataviews.swissfluxnet.ethz.ch>



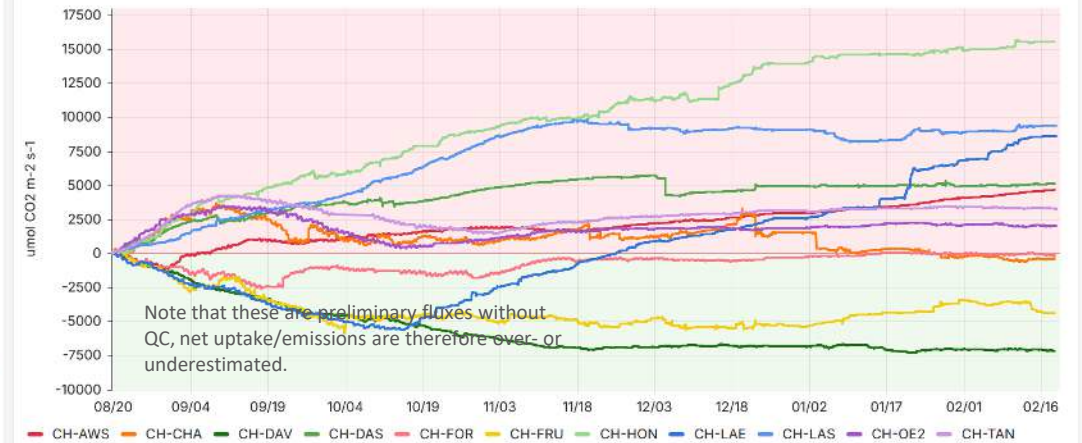


Last 6 months

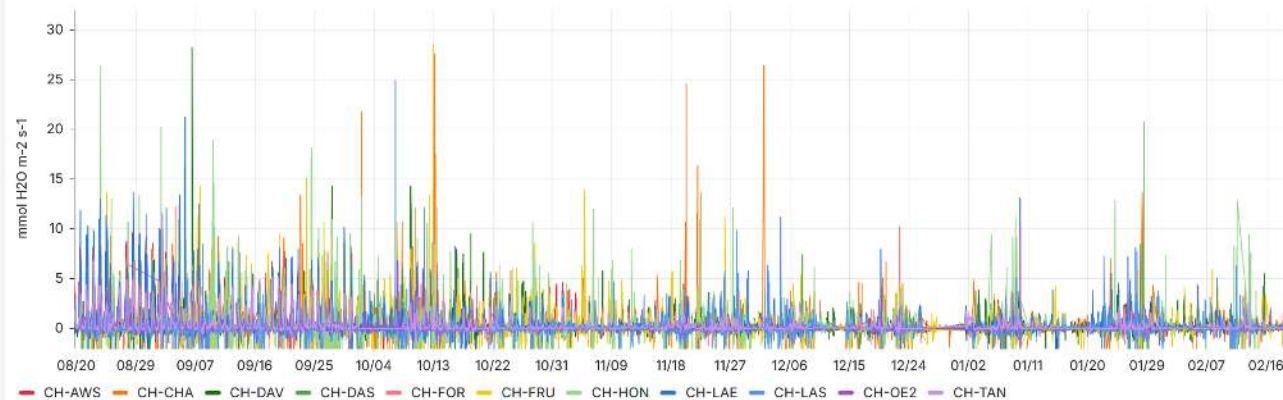
CO₂ Fluxes (Level-0)



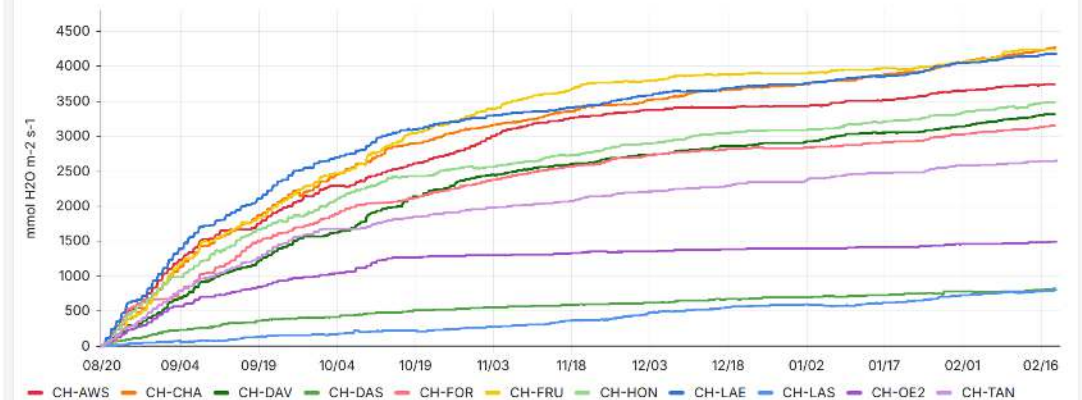
Cumulative CO₂ Fluxes (Level-0)



H₂O Fluxes (Level-0)

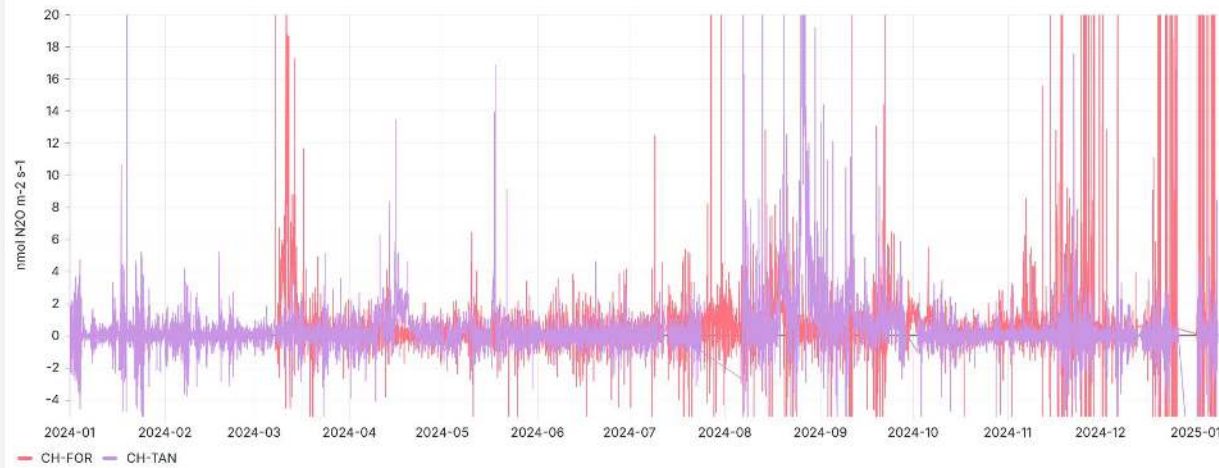


Cumulative H₂O Fluxes (Level-0)

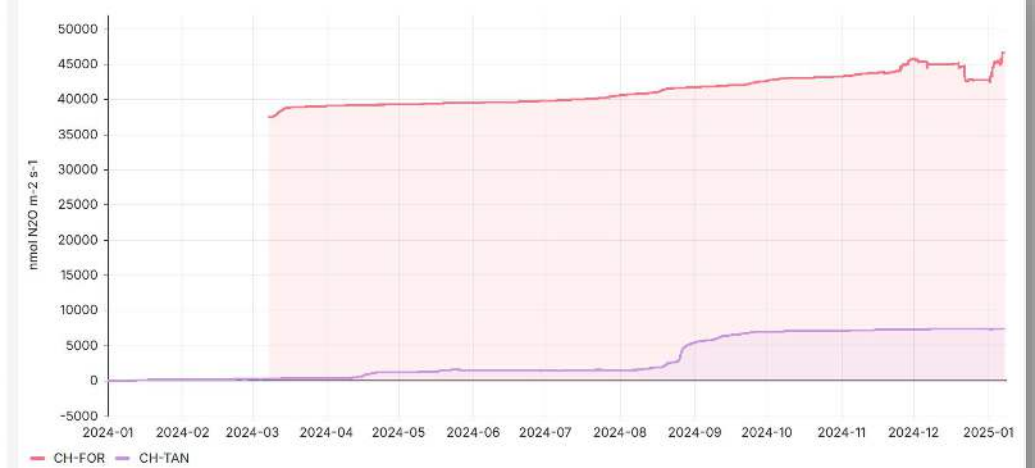


2024 complete, 2025

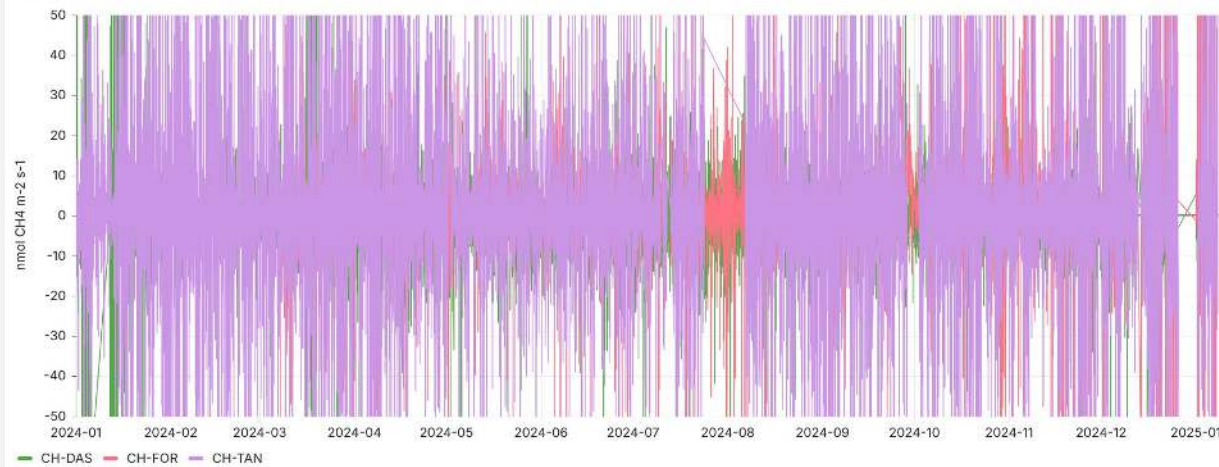
N₂O flux (Level-0)



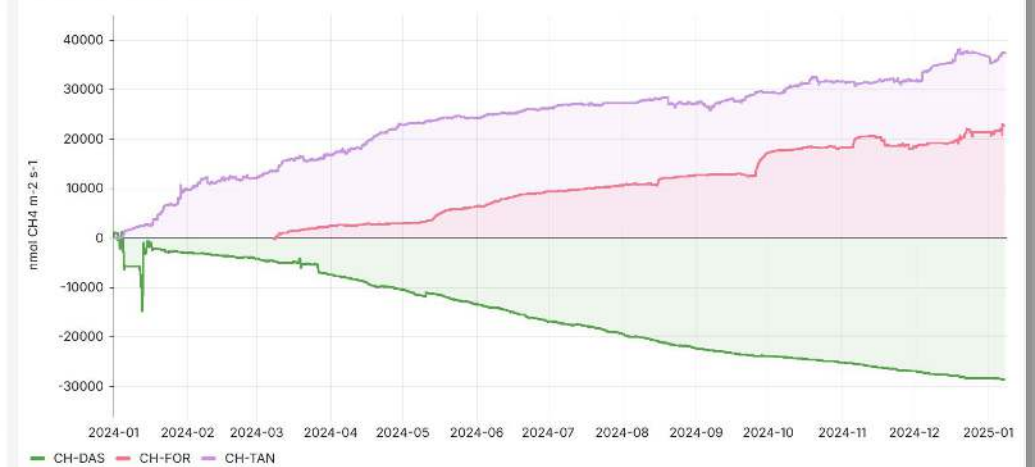
Cumulative N₂O flux (Level-0)



CH₄ flux (Level-0)

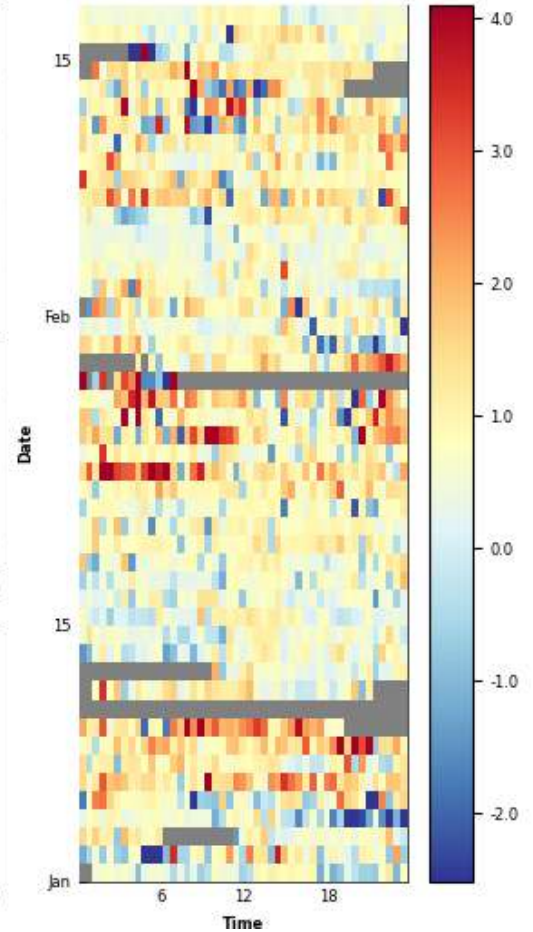
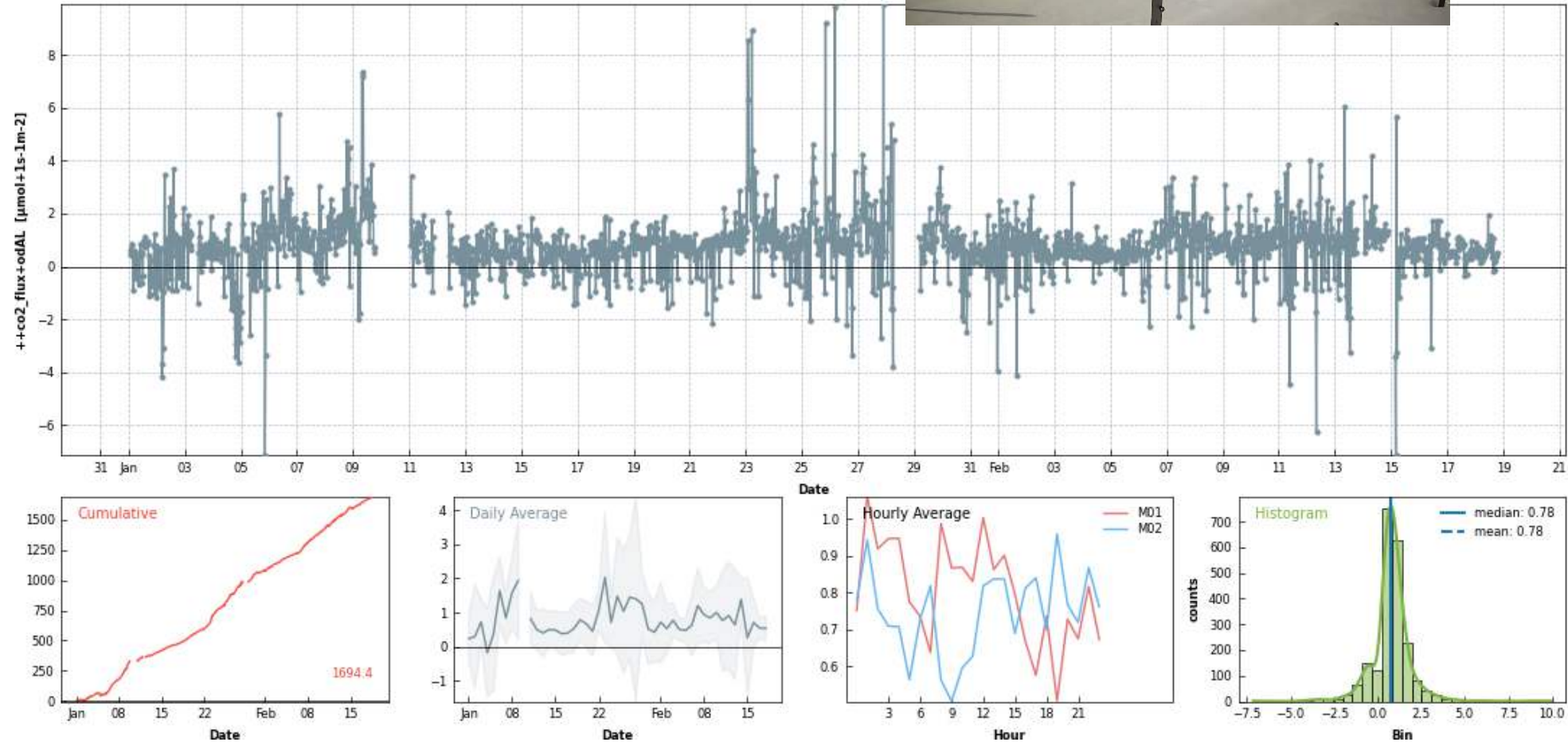


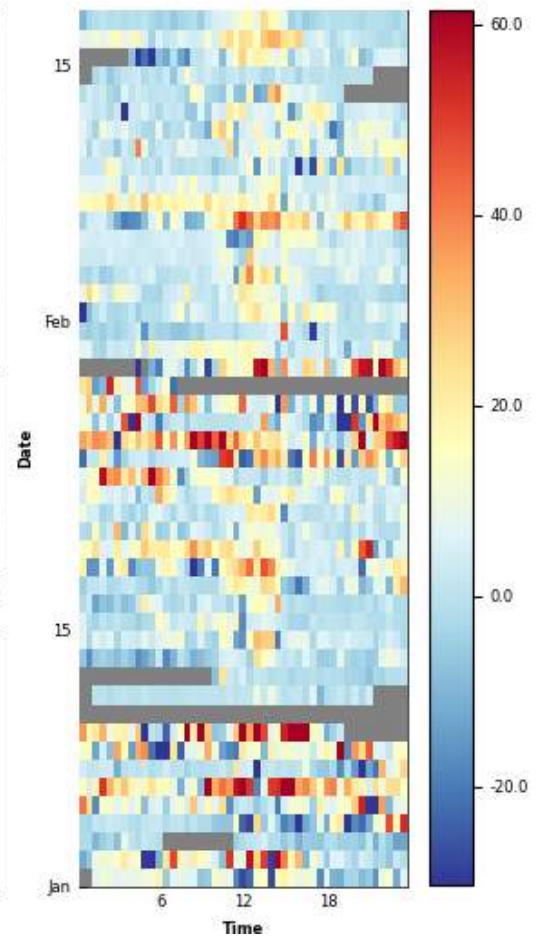
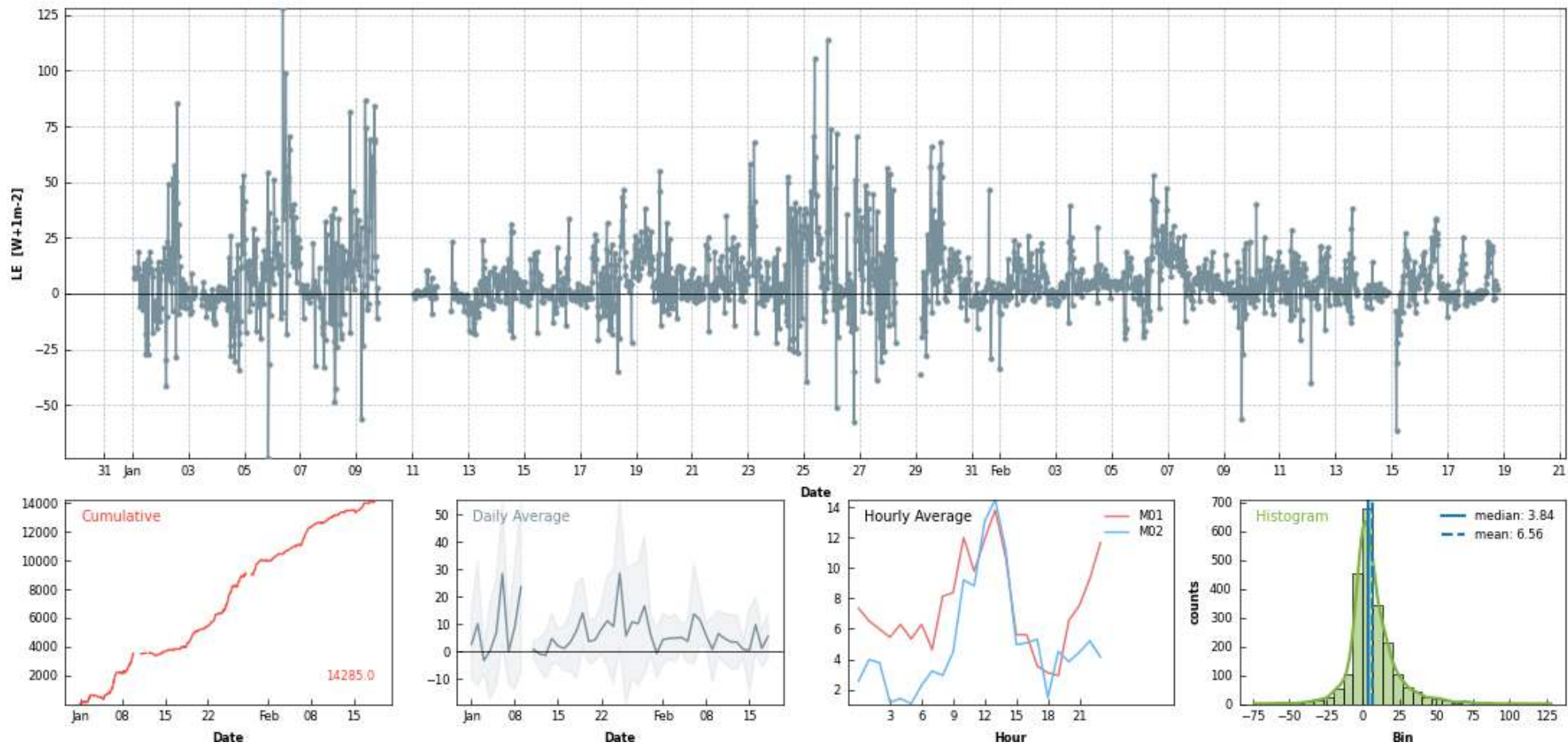
Cumulative CH₄ flux (Level-0)

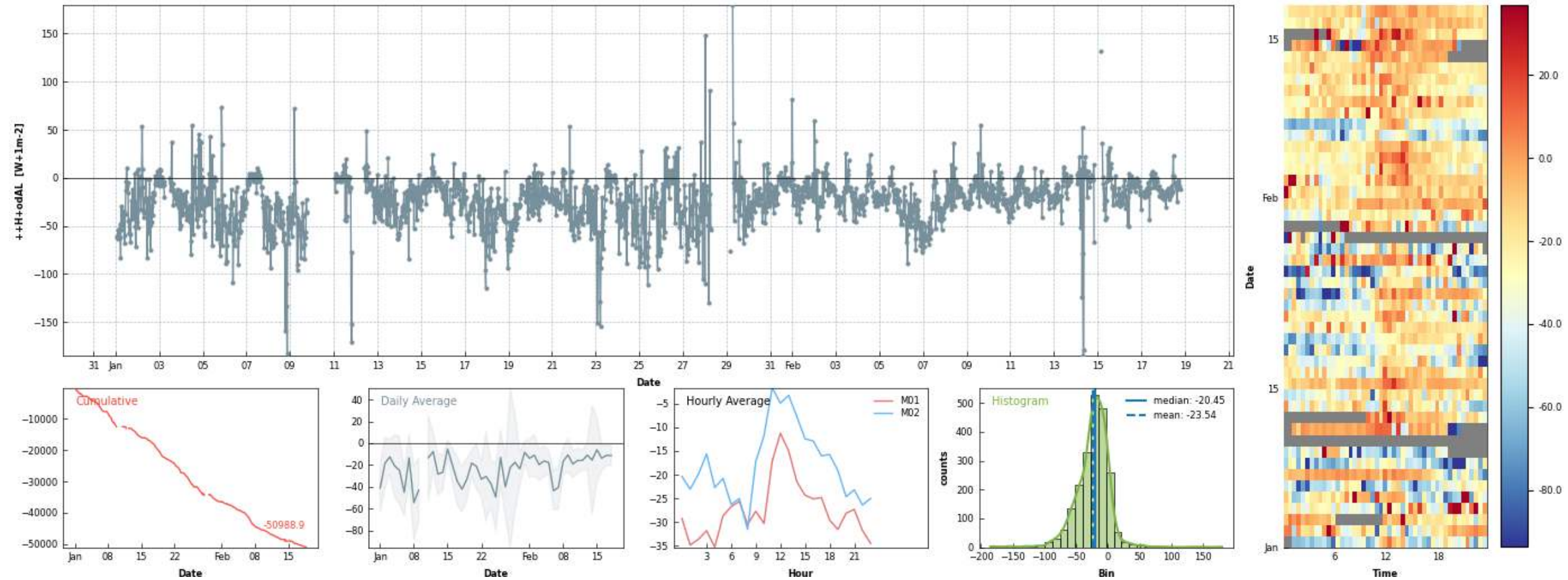


<https://dataviews.swissfluxnet.ethz.ch>





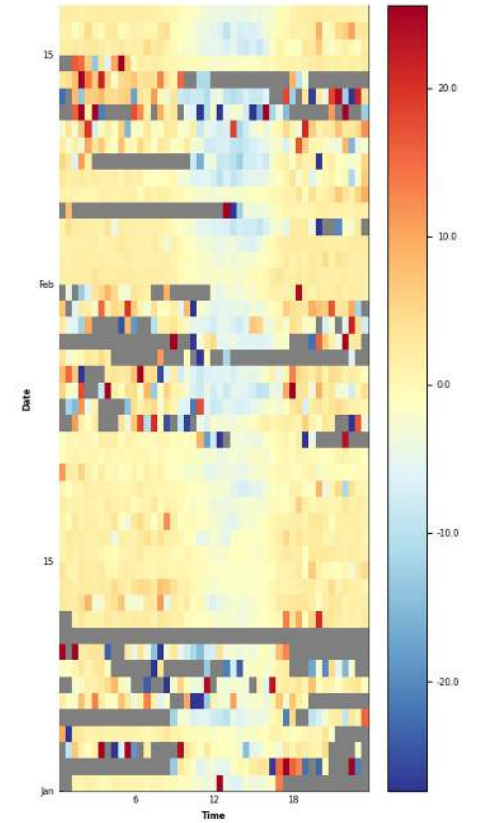
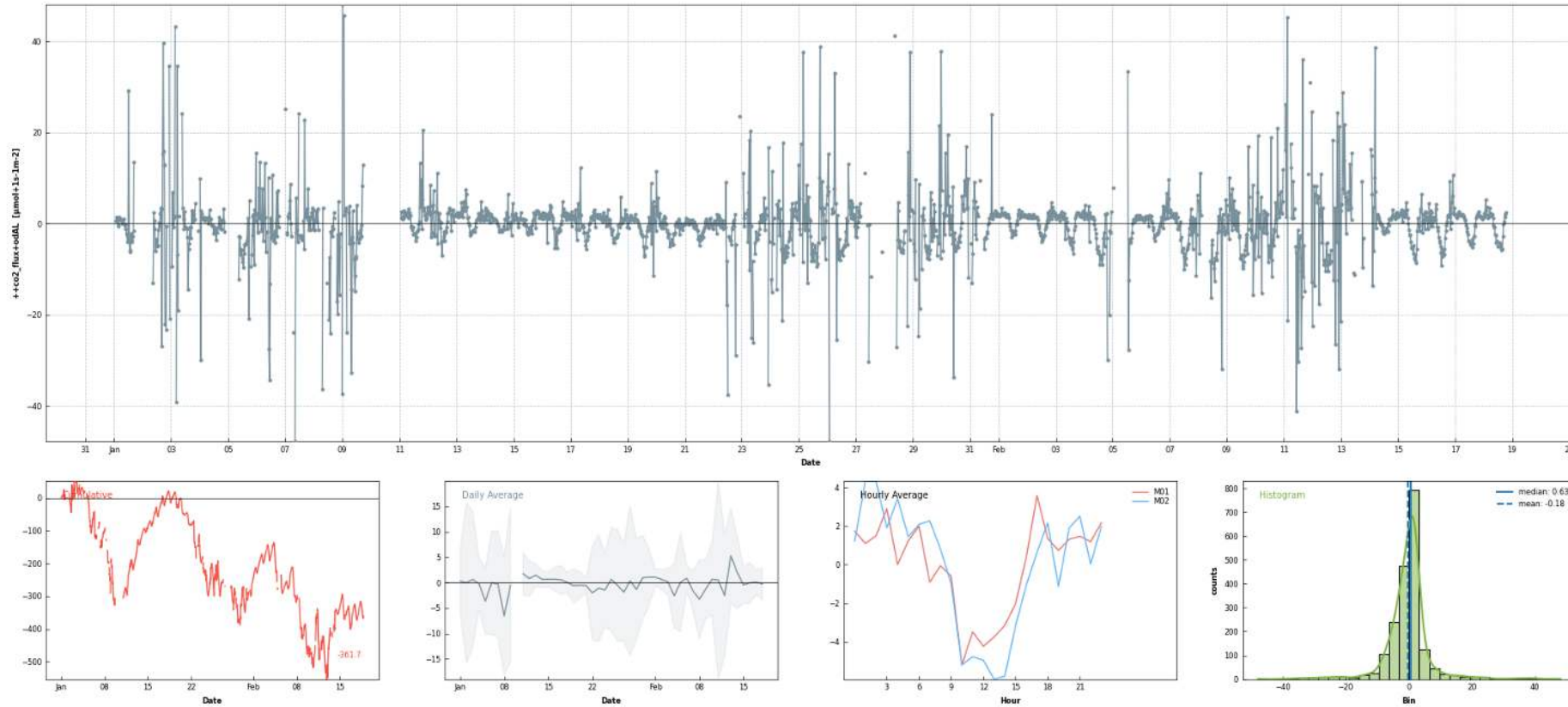


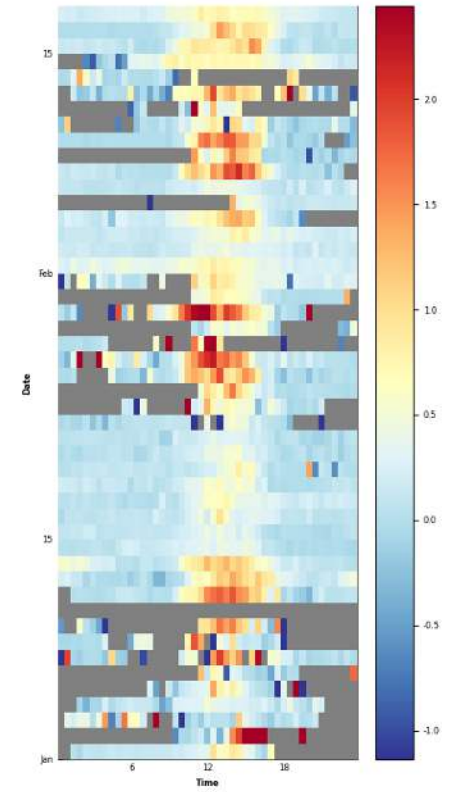
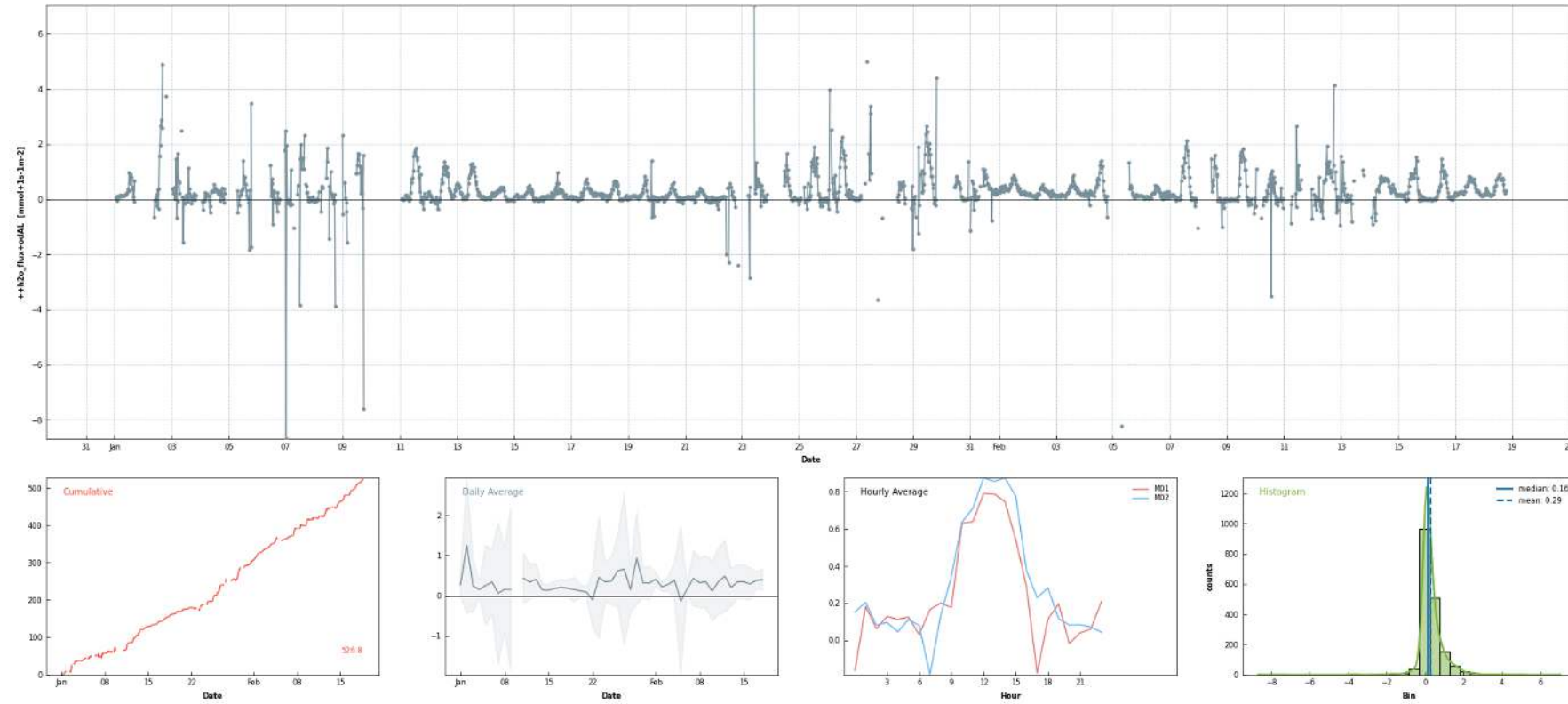






Lake CHA is gone for now





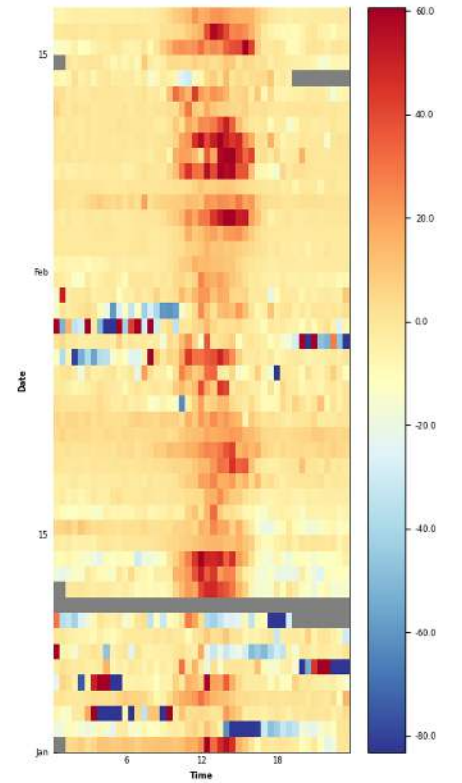
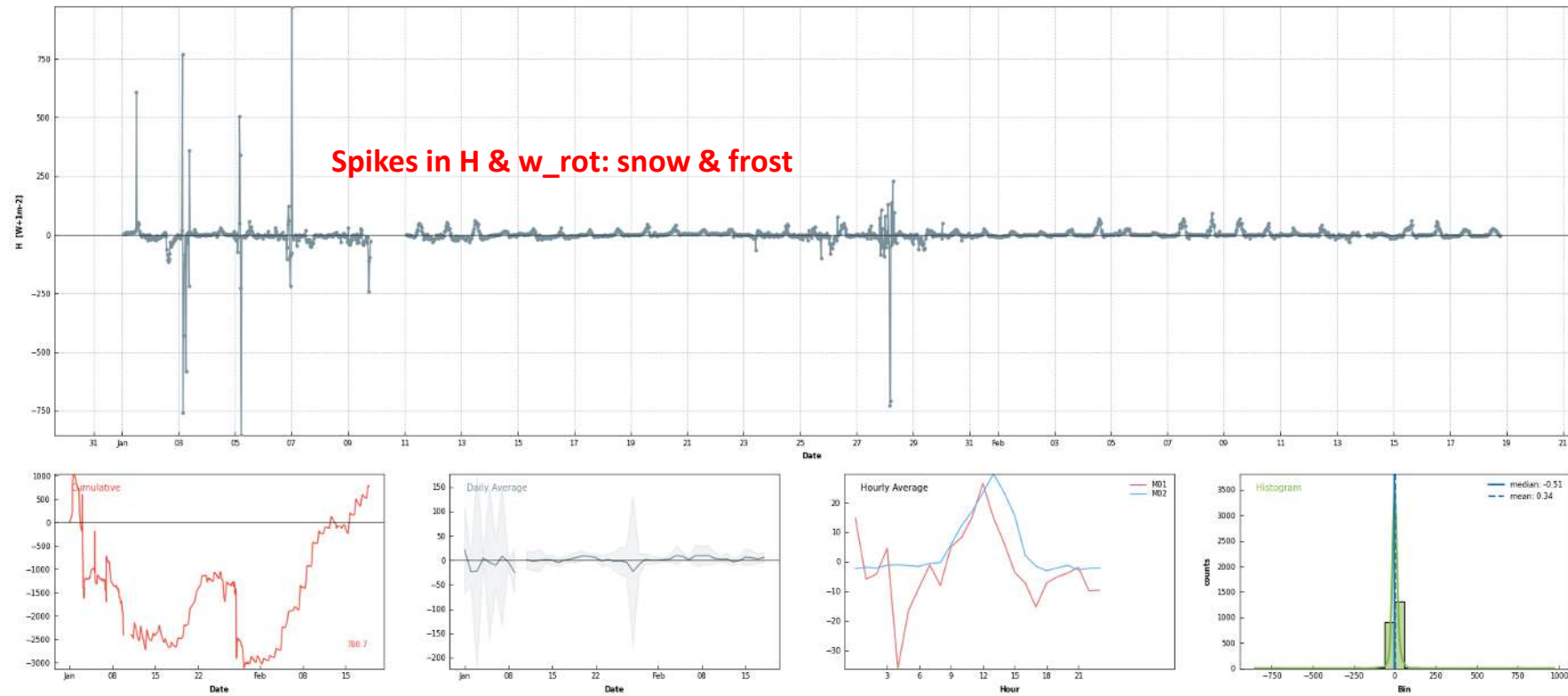
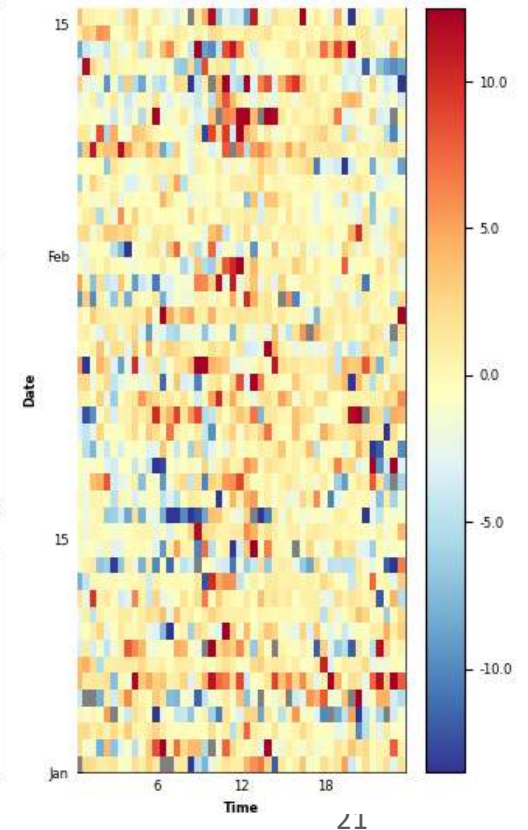
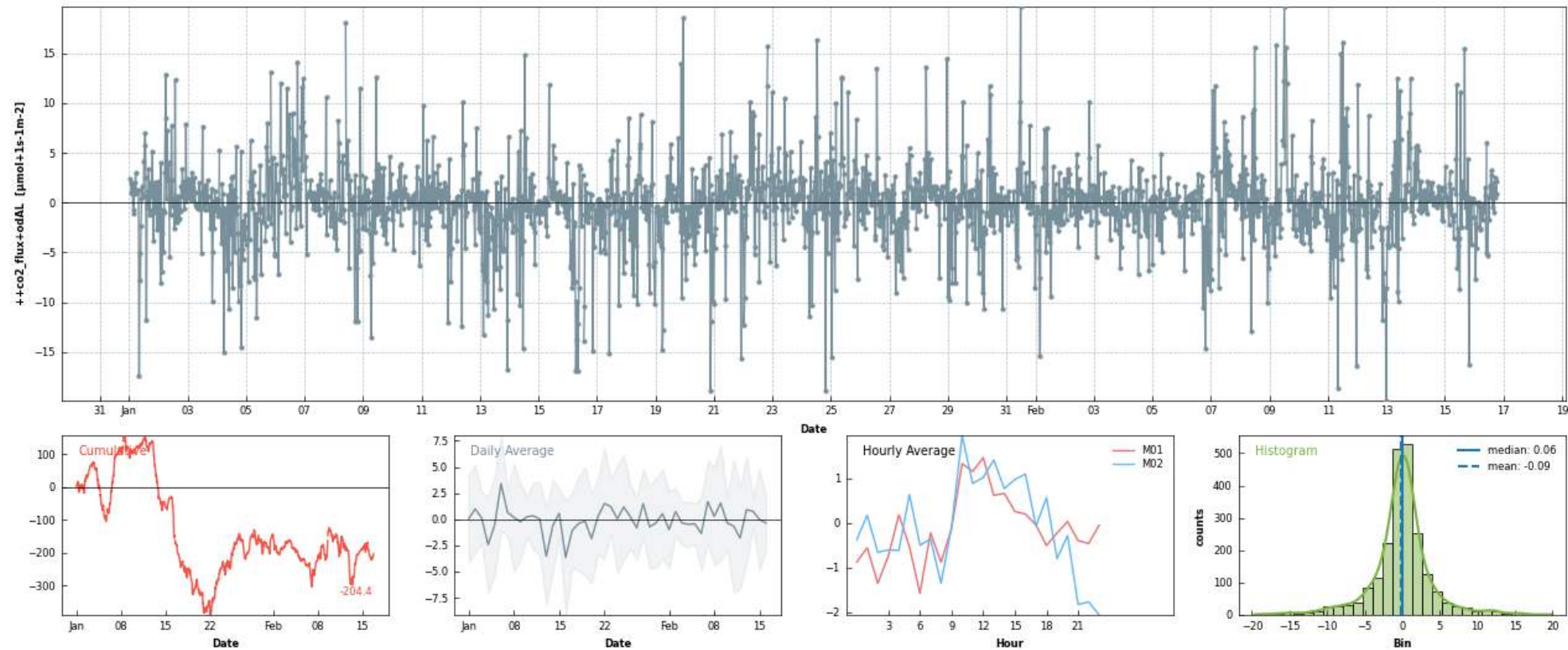
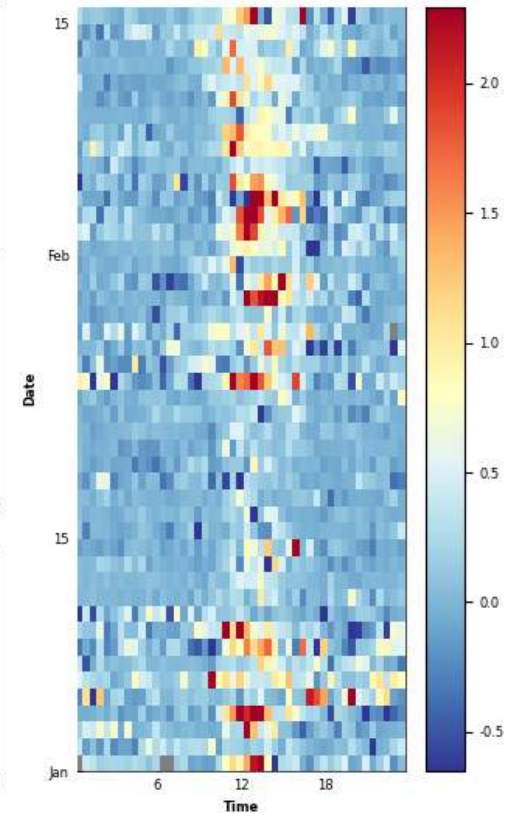
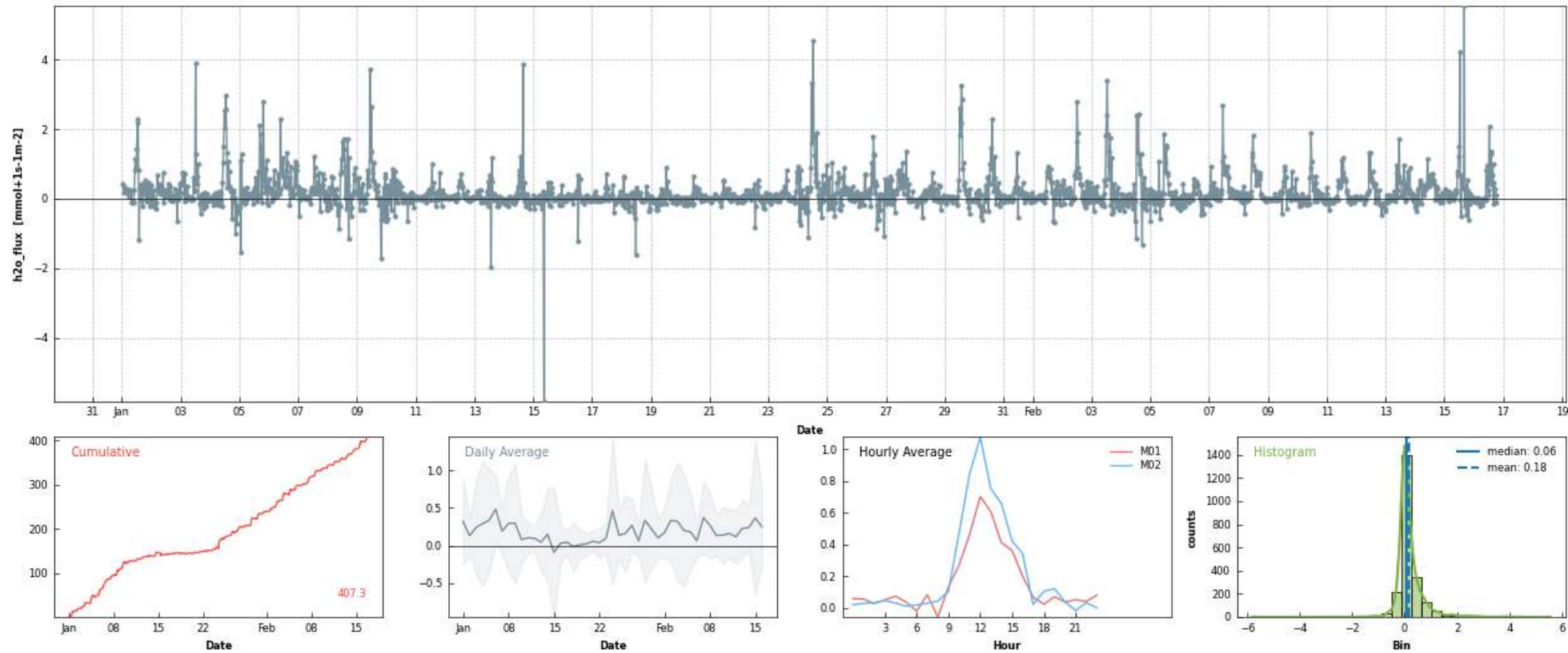
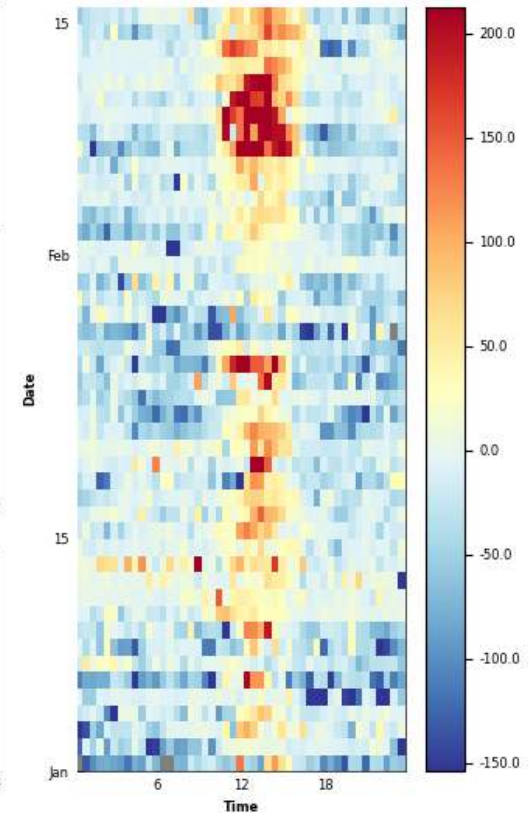
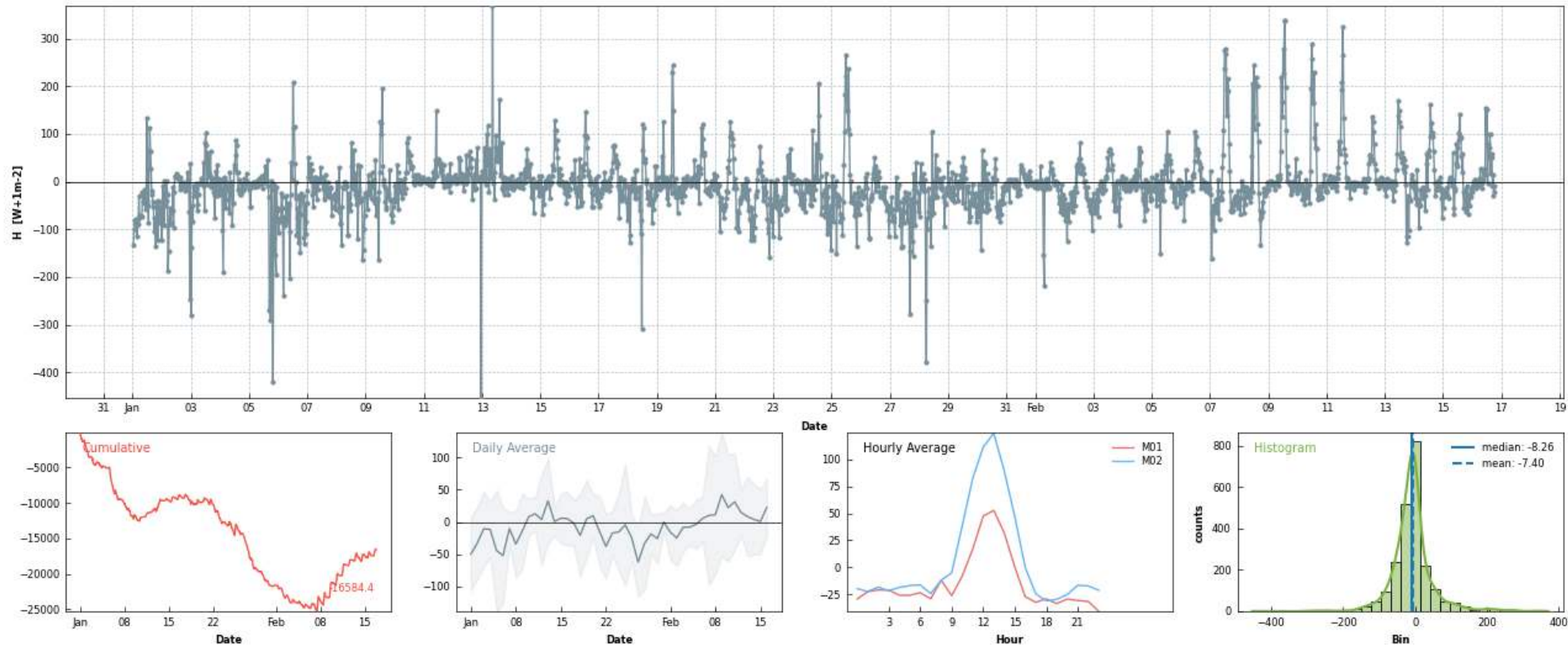




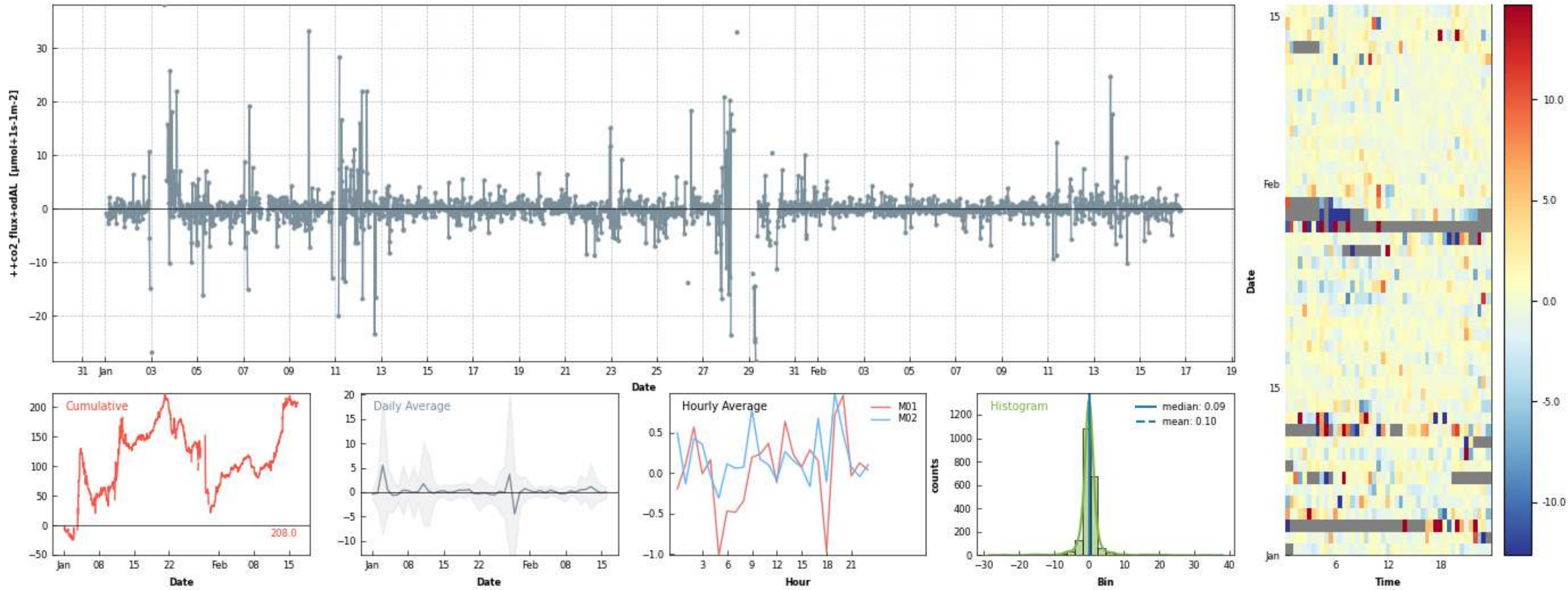
Photo: Lukas Hörtnagl

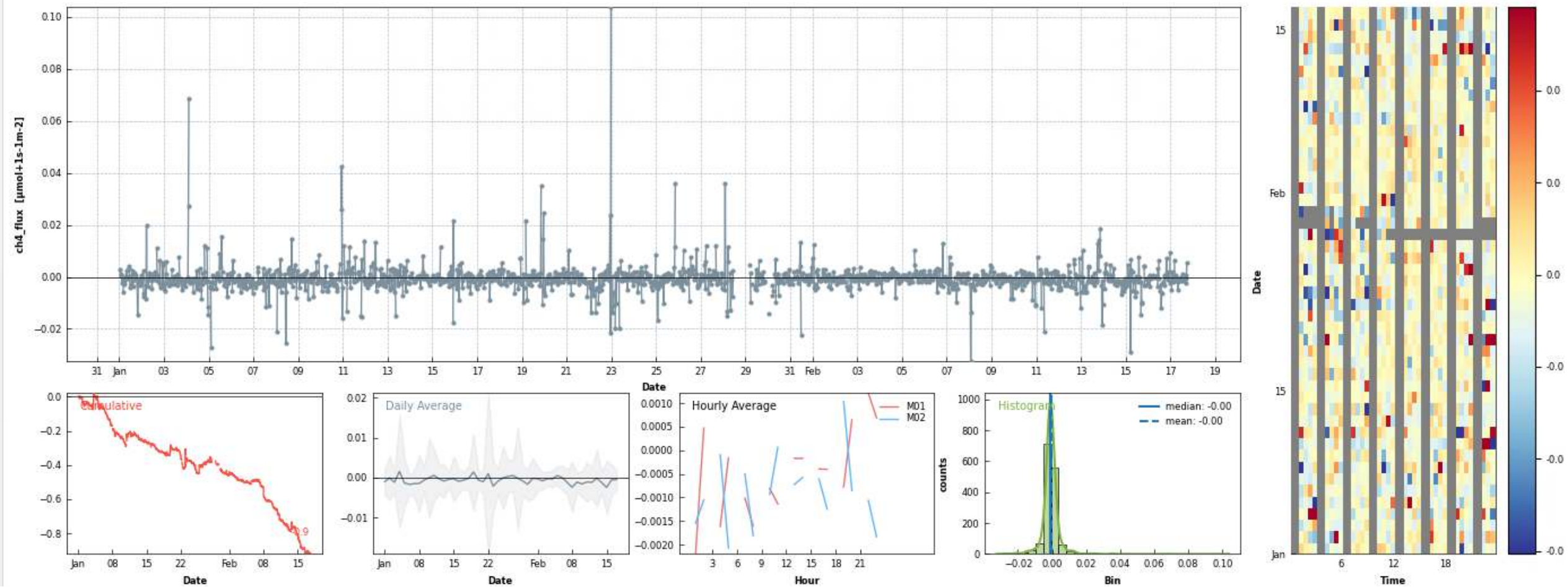


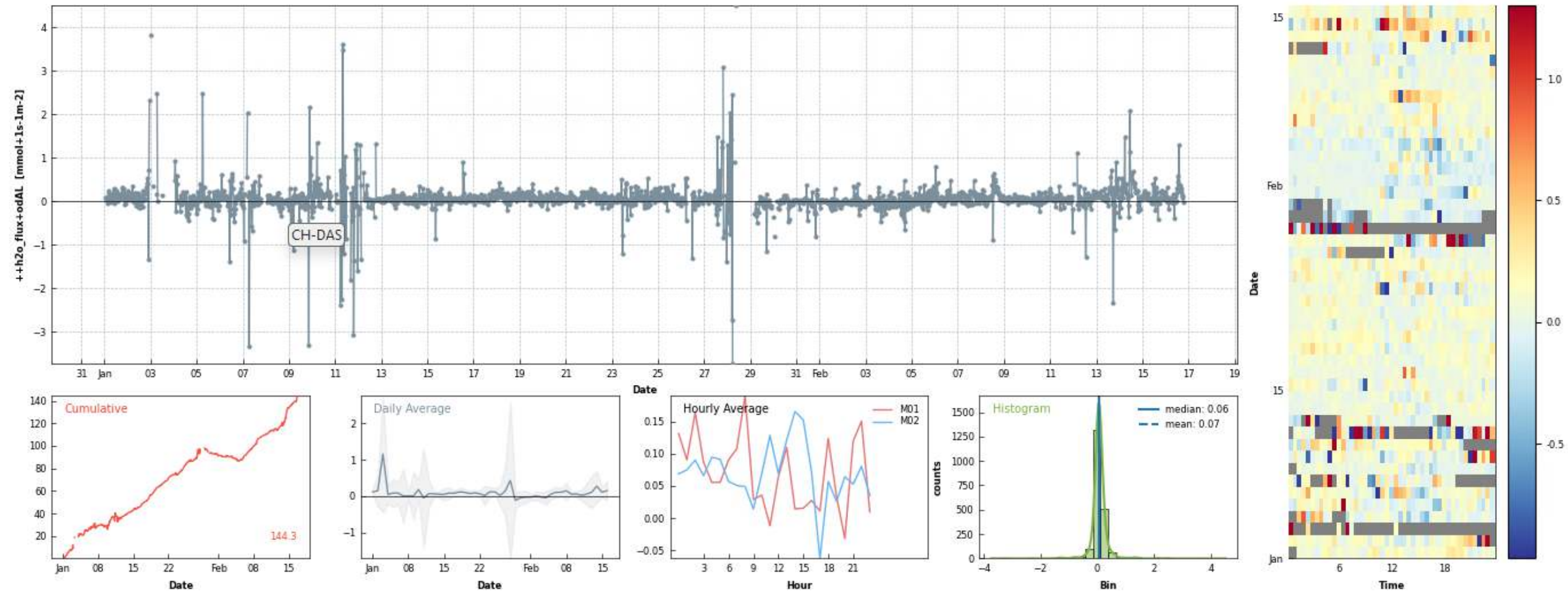












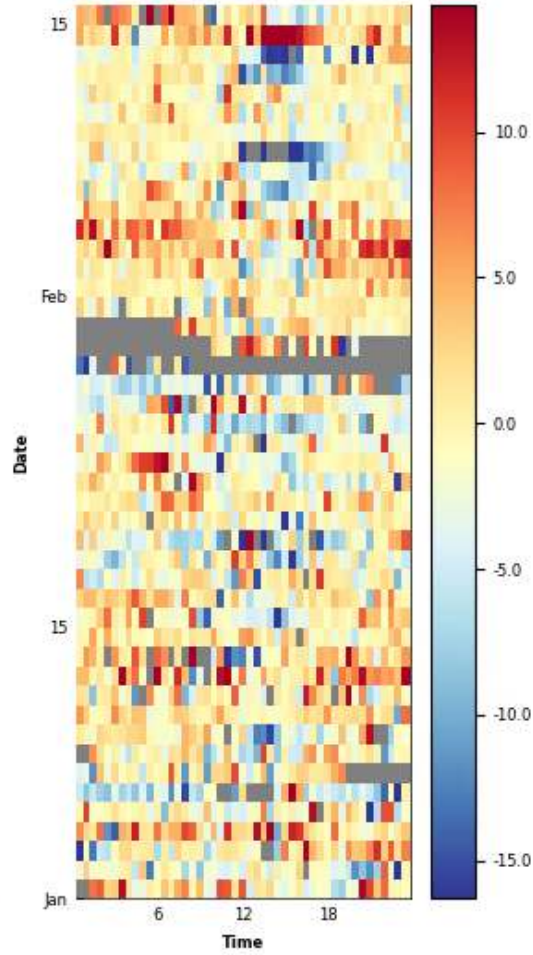
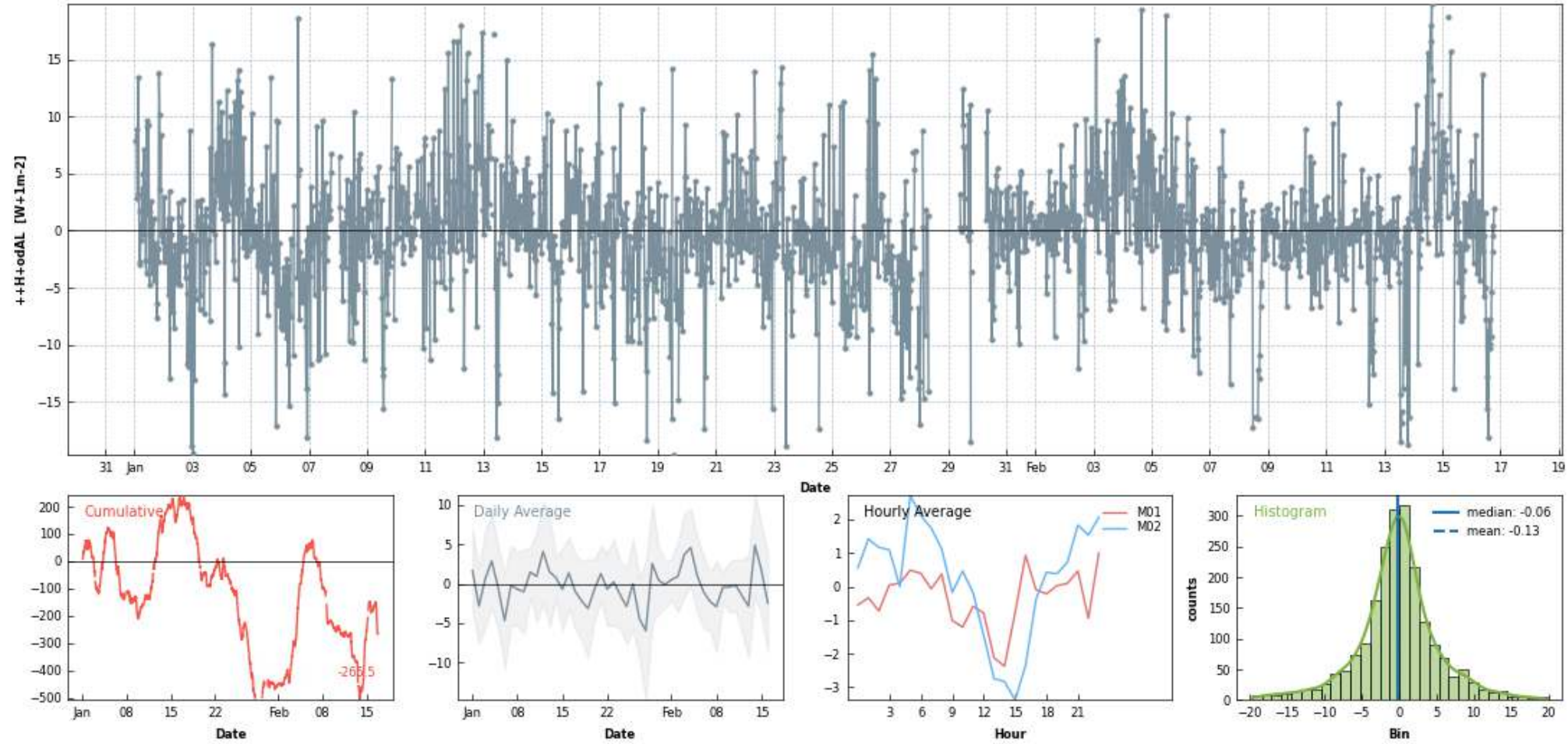
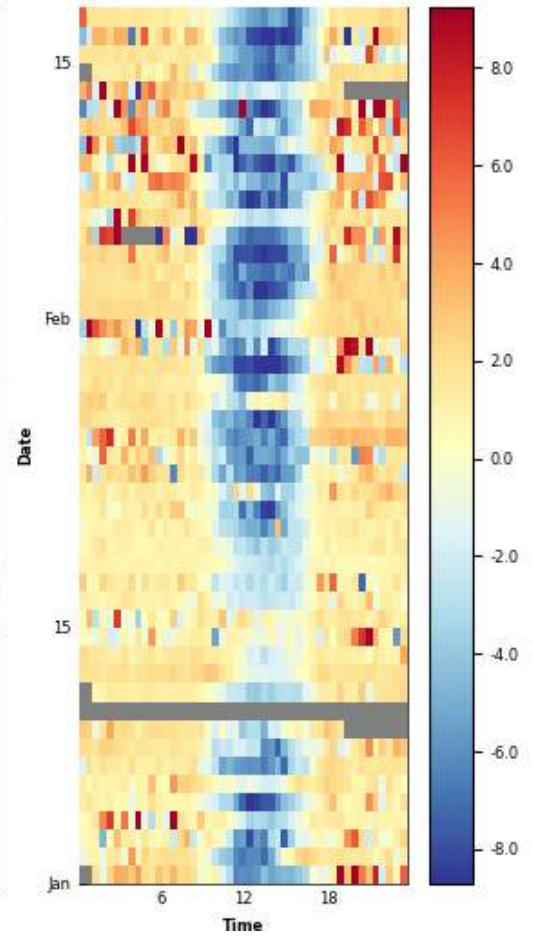
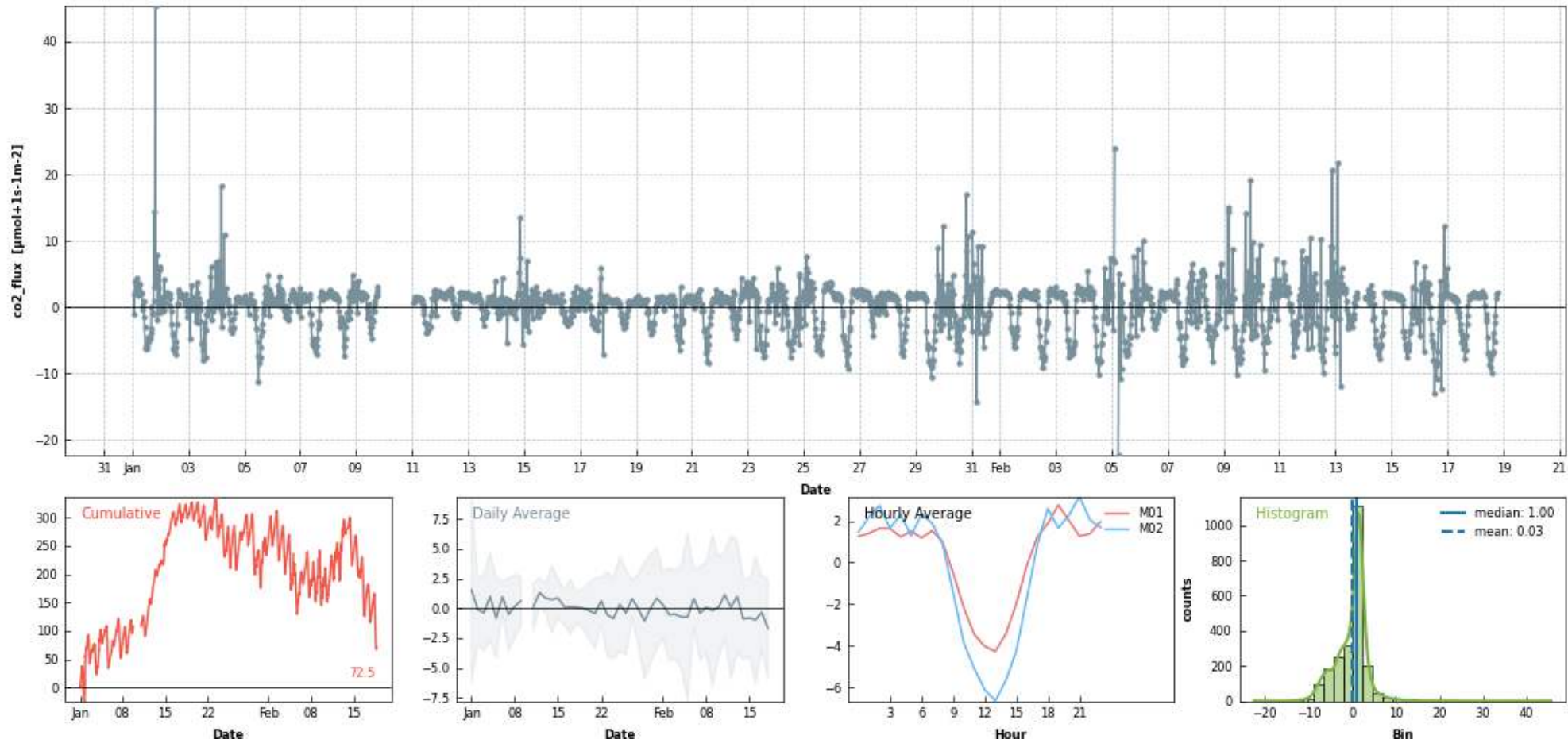


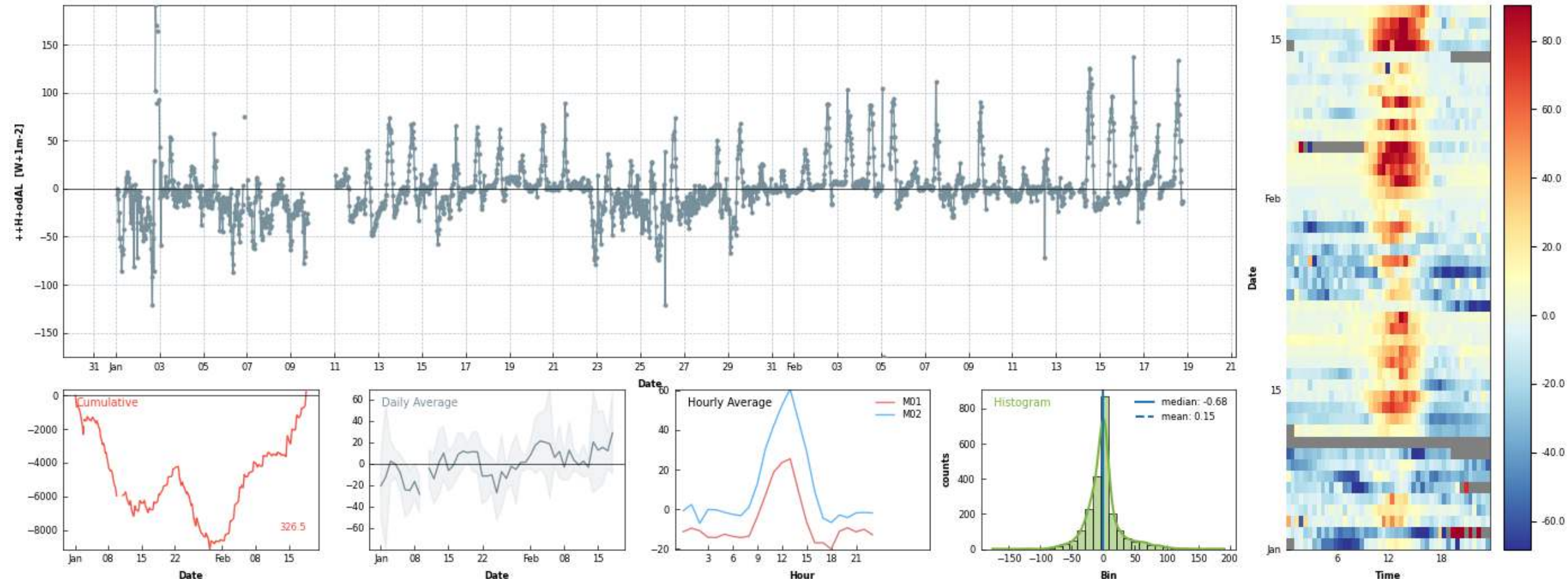


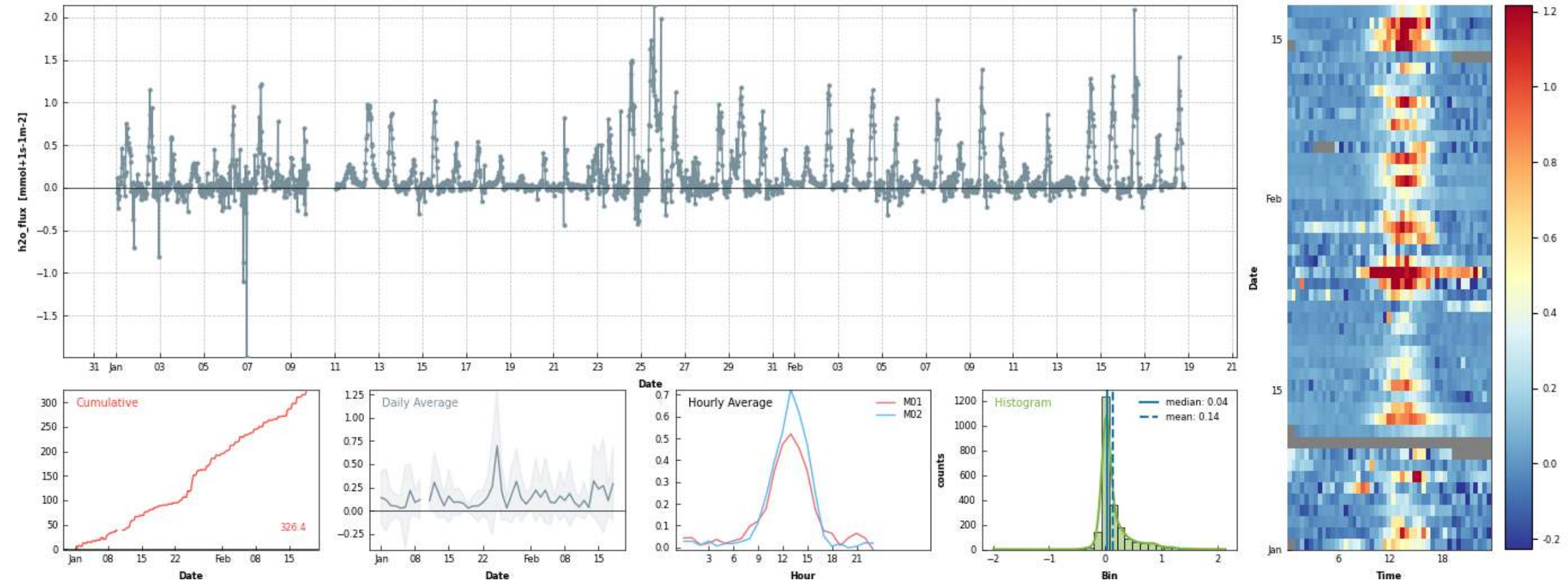
Photo: Lorenz Allemann



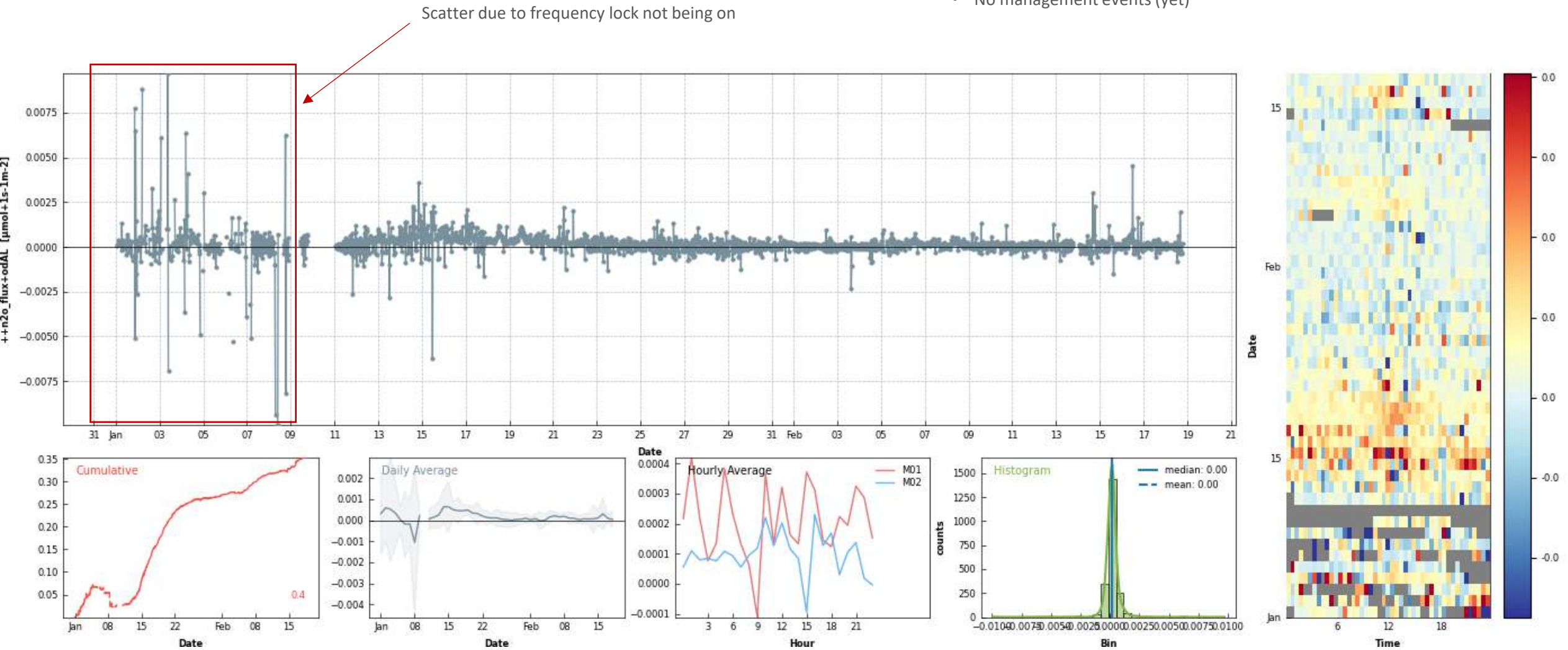
Most beautiful fluxes so far







- No management events (yet)



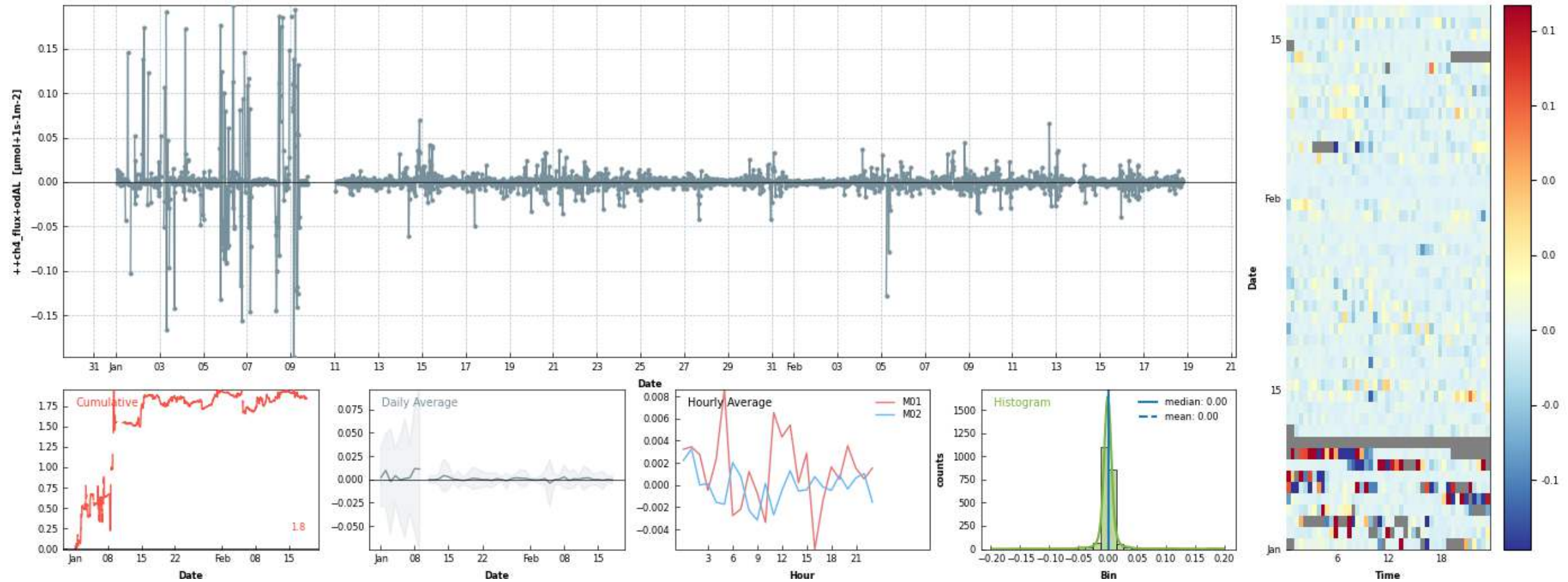
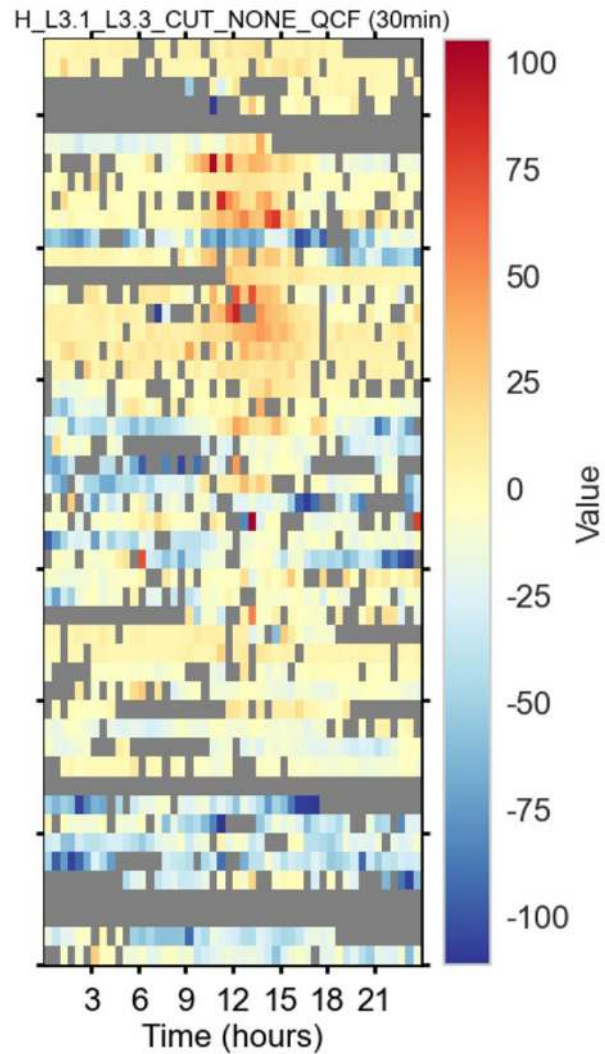


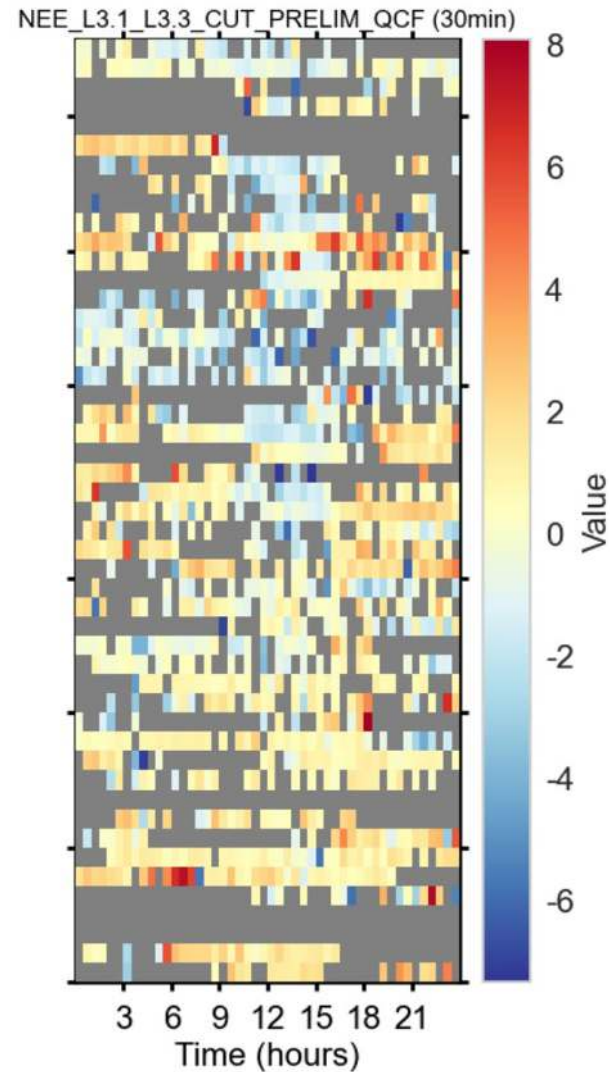


Photo: Lukas Hörtnagl

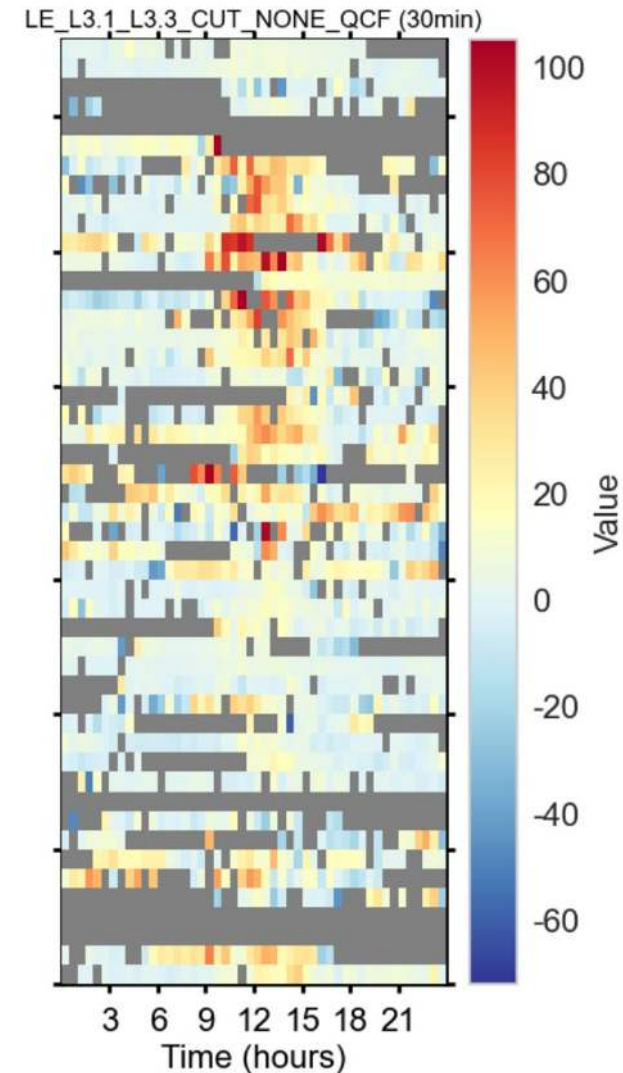
H



CO₂ flux



LE

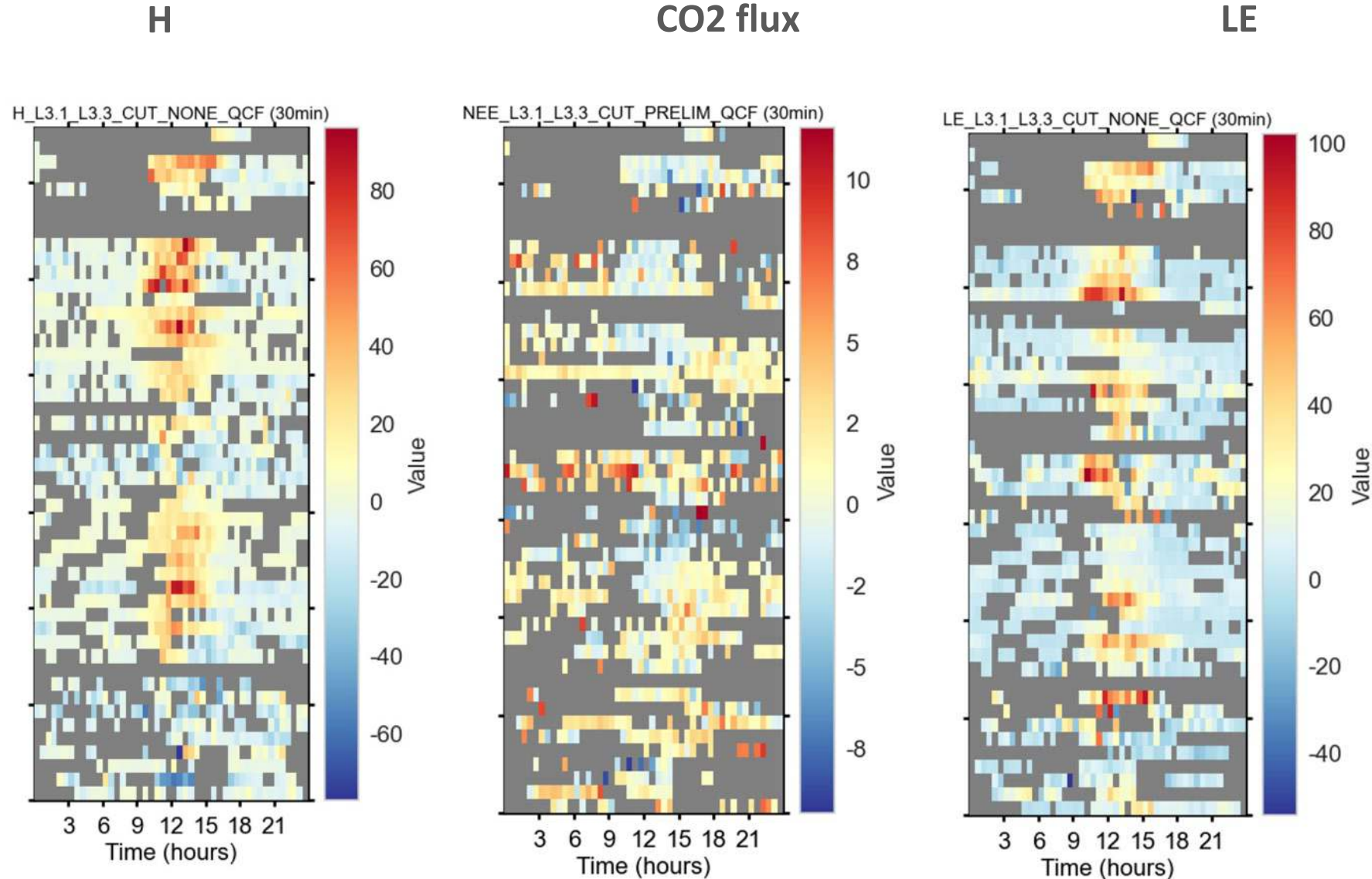


- With preliminary QCF using the diive notebook `notebooks/FluxProcessingChain/QuickFluxProcessingChain.ipynb`
- High and medium and low-quality fluxes
- Preliminary outlier removal
- With preliminary USTAR filtering for NEE

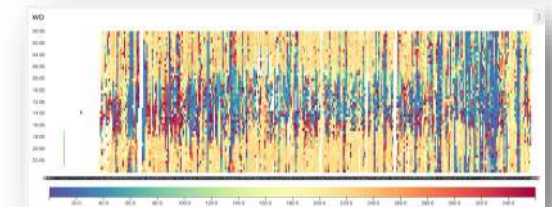


Photo: Lukas Hörtnagl

2024 complete, some days 2025



- With preliminary QCF using the diive notebook
notebooks/FluxProcessingChain/QuickFluxProcessingChain.ipynb
- Highest- and medium- and low-quality fluxes
- Preliminary outlier removal
- With preliminary USTAR filtering for NEE



- Wind direction
- red/blue/green = footprint of interest
- Orange = behind tower, on path
- Will need QC with wind direction included



Photo: Markus Staudinger

Site not checked in detail during this meeting.



Photo: Liliana Scapucci

Site not checked in detail during this meeting.

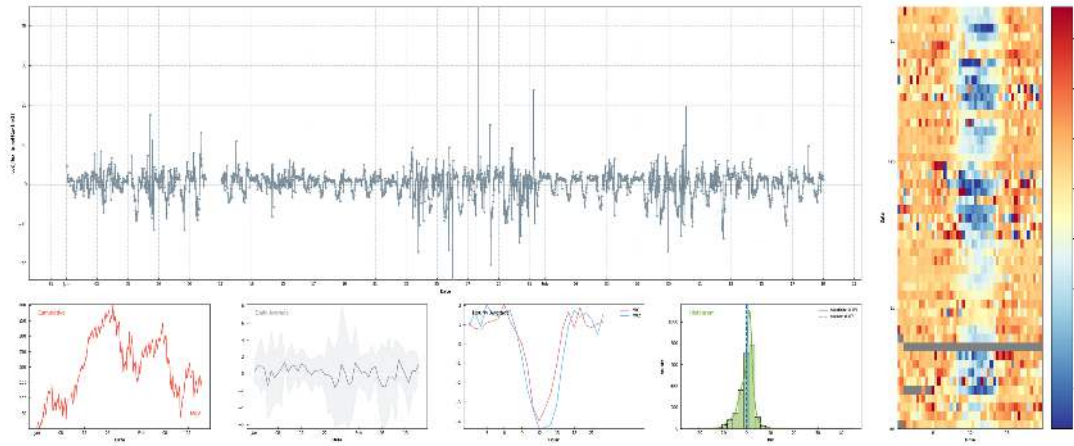


Photo: Regine Maier



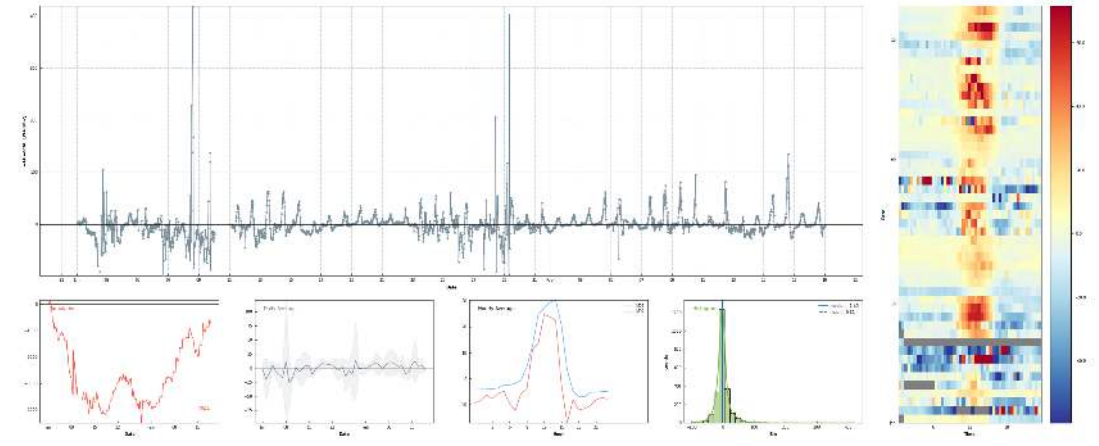
CO2 flux

Abs limits: -70+50



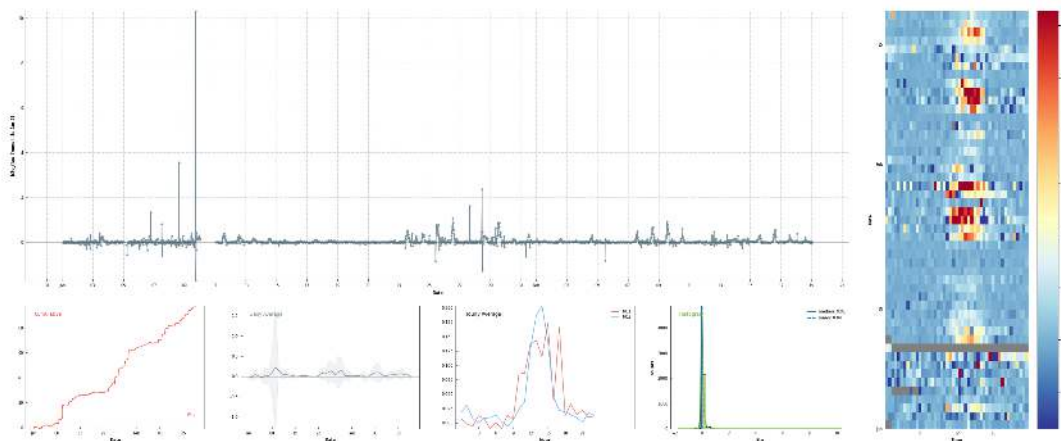
H

Abs limits: -100+450



H2O flux

Abs limits: -2+20



w_rot

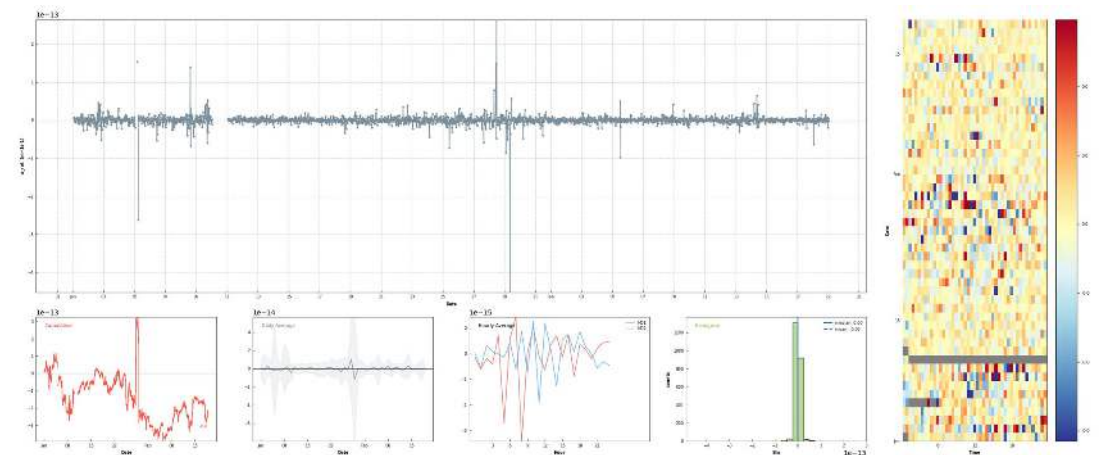
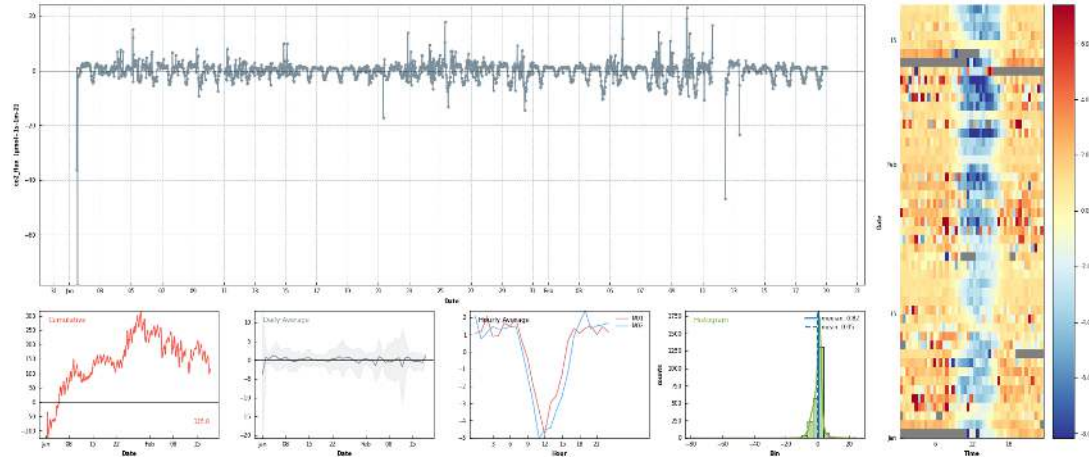




Photo: Fabio Turco

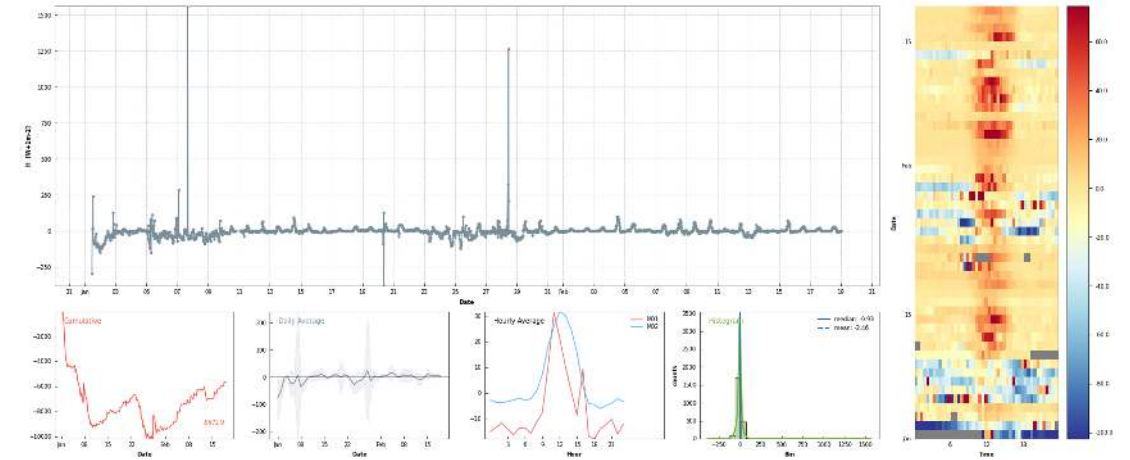
CO₂ flux

Abs limits: -70+50

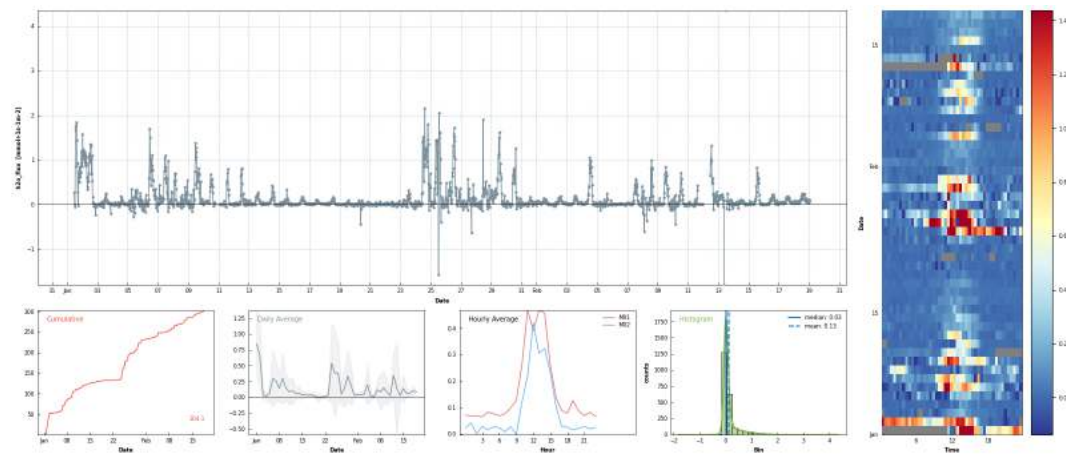


H

Abs limits: -100+450

H₂O flux

Abs limits: -2+20

N₂O

Abs limits: -0.005+0.05

