

# Jungfraujoch site report



# Overview

- Status and perspective (projects, funding status)
- SFIT-4 now implemented
- HDF (re-)submission status
- HBr cell spectra
- Publications



# Current team composition

- Scientists (FTEs):
  - Permanent staff (2): Christian Servais and Manu Mahieu
  - Post-doc (1): Whitney Bader
  - Phd student (1): Maxime Prignon
- Computing engineer (0.5): Olivier Flock (formerly full-time)
- Support from retired people: Ginette Roland
- People who recently left (-2.5): Benoît Bovy, Bruno Franco & Bernard Lejeune



# Ongoing projects and funding status

- 1 Swiss operational project (MeteoSwiss, 2018-2021)
- 1 Belgian research project (FRS-FNRS; 10/2016-9/2020): *impact of circulation changes on the trends of HF, N<sub>2</sub>O and CH<sub>4</sub>*
- 1 Belgian demonstration project (BELSPO-BRAIN-be; 12/2016-3/2019): *source attribution of CH<sub>4</sub> using IASI observations and GEOS-Chem model simulations*
- 1 H-2020 project, Marie Skłodowska Curie Individual Fellowship (10/2016-9/2018): *heavy isotopologues of CH<sub>4</sub>*
- Support for instrumental development and maintenance warranted for 2018 and 2019 (FRS-FNRS)

⇒ 4 running projects, 1 ending in September 2018

⇒ no proposal currently submitted or under evaluation

# SFIT-4 (v0.9.4.4)

- Operational since fall 2017
- Mostly using Python code/libraries from NCAR (pre-processing and processing) and BIRA-IASB (error calc.)
- We developed specific code only for post-processing and hdf preparation (Python and MATLAB scripts)
- Currently running on a *really slow/old* multicore LINUX server... ☹ Urgent need for an update!!!
- Rapid Delivery chain has been set up and is now running (CH<sub>4</sub>, CO and O<sub>3</sub>).

## Data archiving status (hdf; consolidated data)

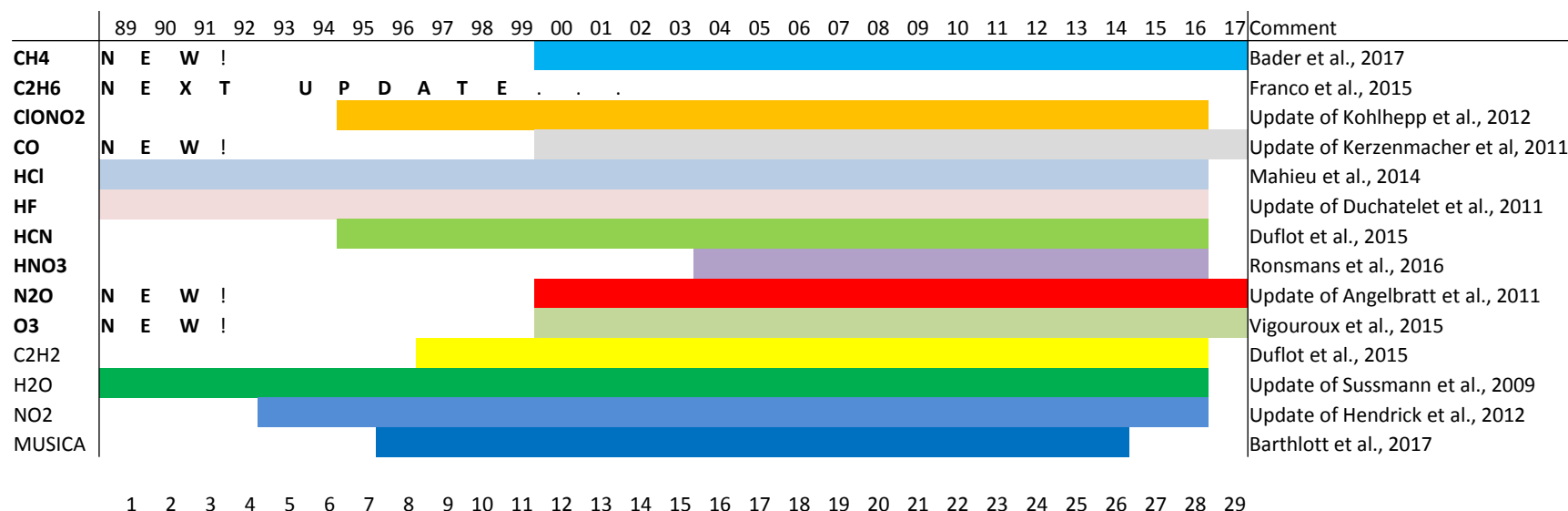
- We stopped archiving SFIT-2 data
- They will be progressively replaced with SFIT-4 data (now including per-measurement error information)
- Priority will be given to observations from 2000 onwards
- Done for [2000-2017] for CO, CH<sub>4</sub>, O<sub>3</sub> (LOTUS) and N<sub>2</sub>O

## Observation statistics

Poor since 2017 (lab renovation & manpower ↓):

- 73 days in 2017
- 31 for 2018 [Jan.-May] (awful met. conditions in May!)
- 120/yr on average over 2000-2015

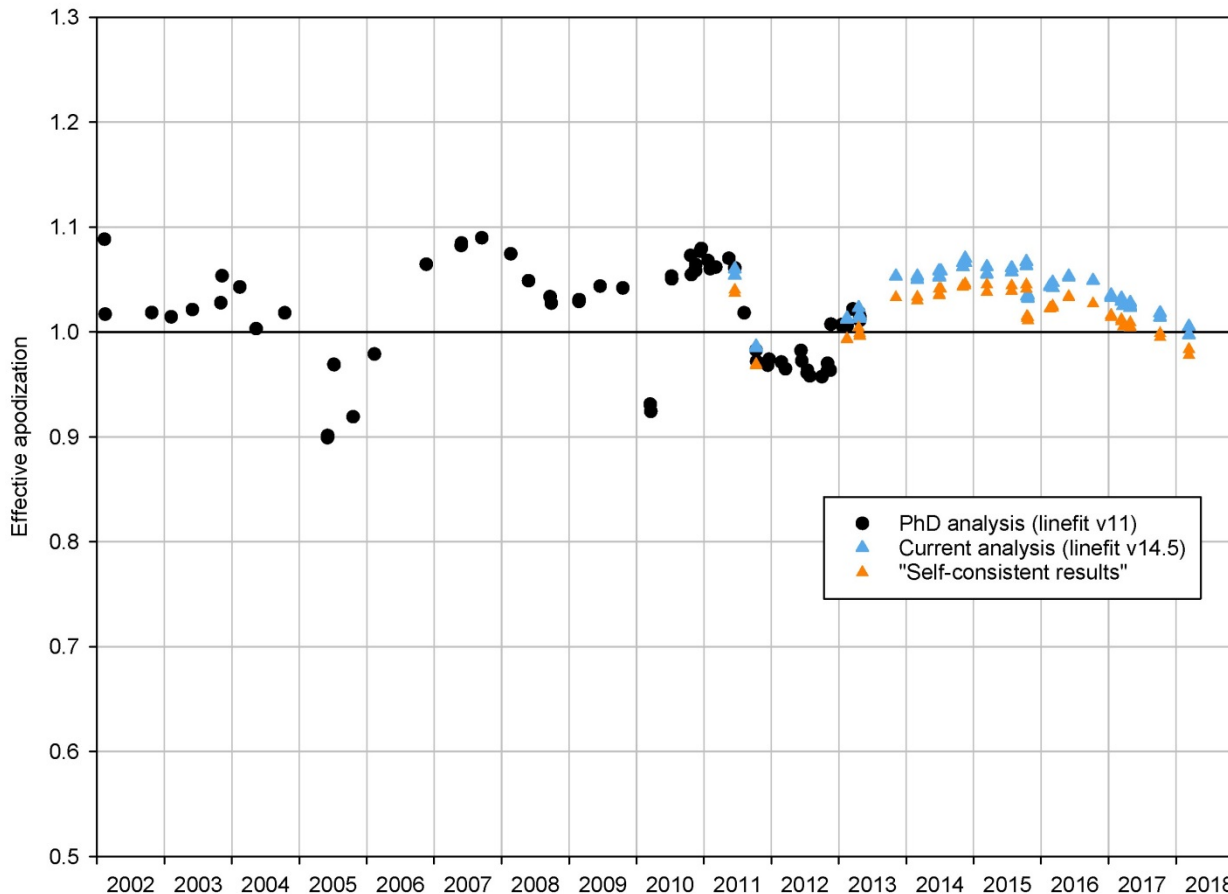
# hdf archiving status



- Last archiving in March 2018 (N<sub>2</sub>O)
- Next regular upload: archiving of C<sub>2</sub>H<sub>6</sub> to occur in June (this month)

# HBr cell spectra/modulation efficiency

IFS 120HR - Jungfraujoch - OPDmax = 256.9 cm



- Analysis up-to-date
- Now using linefit v14.5

ULiège / 29-May-2018



# Ongoing investigations and foreseen publications

- Multidecadal trend of **HCFC-22** above Jungfraujoch and comparison with BASCOE model simulations (Prignon et al.)
- **Heavy isotopologues of methane** and comparison with GEOS-Chem custom model simulations (Bader et al.)
- **Ethane** from 23 FTIR sites, its recent trend and evaluation of the corresponding emissions with the EMAC model (Mahieu et al.)

# Peer-review publications

- Available from our website:  
<http://labos.ulg.ac.be/girpas/en/publications/>

**Thank you  
for your  
attention!**

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<http://labos.ulg.ac.be/girpas/en>

