





















GEOMS FTIR template v3

- Managed by NILU for EVDC ESA: <https://git.nilu.no/geoms>

Versioning and TAV

 D	documentation 	★ 0	1 month ago
 D	Draft Templates 	★ 0	4 days ago
 E	examples 	★ 0	2 years ago
 G	GEOMS2CF  Developer	★ 0	2 months ago
 G	geoms_convert  Developer	★ 0	2 months ago
 G	geoms_qa 	★ 0	2 months ago
 I	idlcr8 	★ 0	2 months ago
 P	PI Metadata 	★ 0	1 month ago
 T	templates 	★ 0	3 days ago

**Python playground
create files**

IDL

V3 template



GEOMS FTIR template v3

changes discussed in NZ/adapted/uploaded to git by Ian

- improve reporting by removing ambiguities in reporting AVK's, angles, ... most changes require no change from PIs
- solved ambiguity in template when one would report H2O profile retrieval
- some new variables
- changes for consistency with other templates
- all variables are mandatory: if not available use fill value

Upload New File
Ian Boyd authored 2 years ago 41771667

master templates / GEOMS-TE-FTIR-003.csv Find file Blame History Permalink

GEOMS-TE-FTIR-003.csv 7.19 KIB Open in Web IDE Replace Delete

2	DATETIME	DATETIME	MJD2K	DOUBLE
2	INTEGRATION.TIME	DATETIME	s	REAL



GEOMS FTIR template v3: overview changes

- DATETIME is defined as averaged ZOPD
- ALTITUDE.INSTRUMENT is in m
- LATITUDE.INSTRUMENT: +for north, - for south
- LONGITUDE.INSTRUMENT: +for east, -for west
- similar for solar angles: specified orientation
- ALTITUDE is increasing
- ALTITUDE.BOUNDARIES increasing and lower/upper dim is the FRI (INDEPENDENT dim is on the right)
- AVK row/col dimension is specified



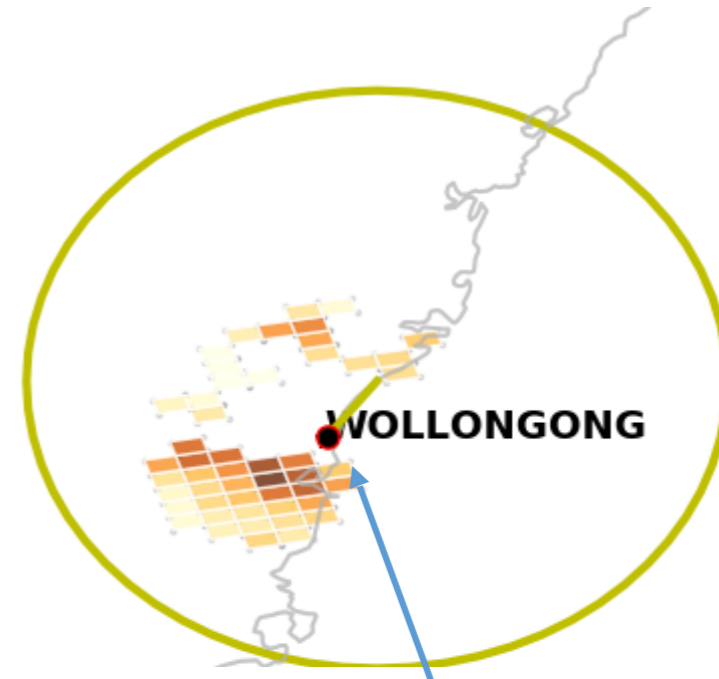
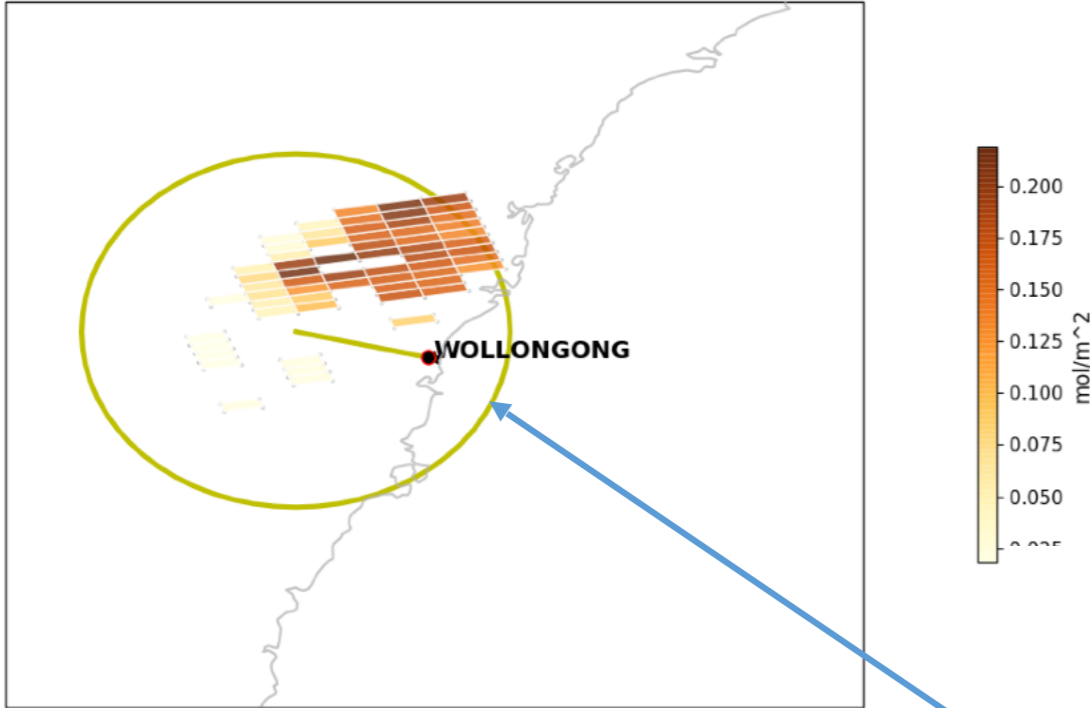
GEOMS FTIR template v3: overview changes

- new meteo variables: RH and WIND
- each meteo variable (SURFACE.PRESSURE, SURFACE.TEMPERATURE, ..) has a SOURCE variable to specify where it came from (eg VAISALA WXT510)
- added partial column of dry air (useful for changing uncertainties to PC, etc)
- includes a SOURCE variable for the prior (WACCMv6) and H2O
- include variables for the line of sight (-> each altitude gets a lat/lon) from sfit4 \geq v1.0 los information is in `raytrace.los` file ... and changed to a lat/lon for each grid point in `sfit4_processing_env` ... (BIRA, NIWA, NCAR ...)

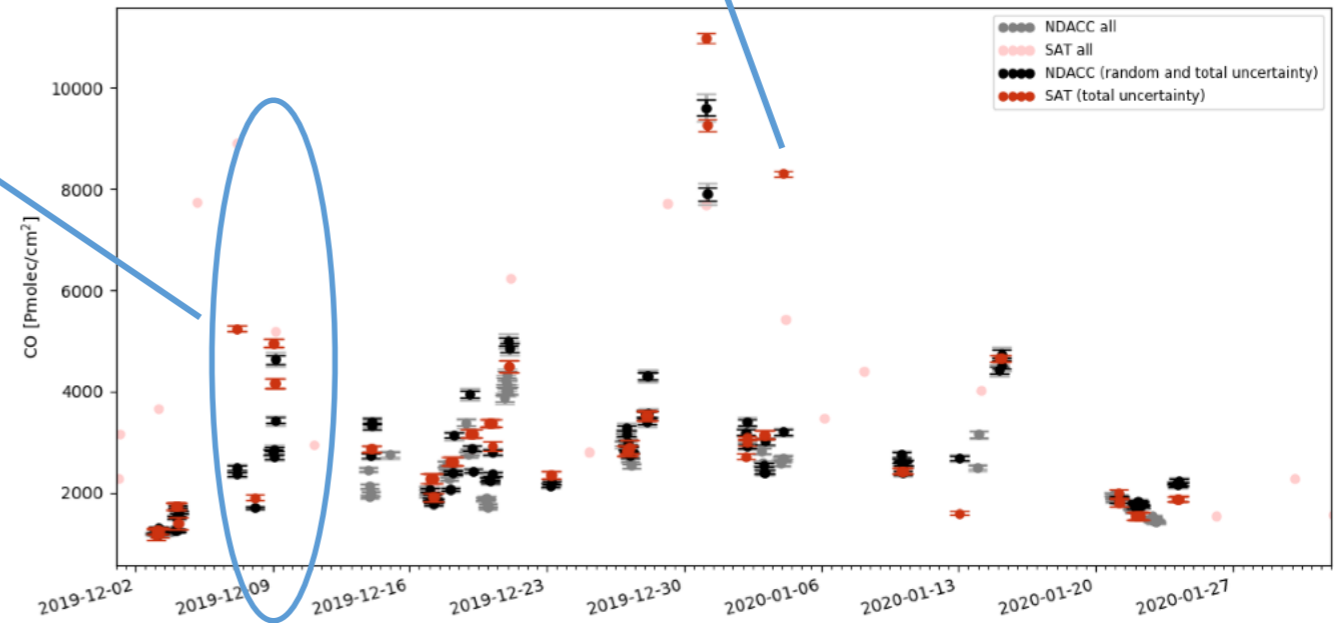


GEOMS FTIR template v3: overview changes

GB 19-12-07 03:49:1575686964 against SAT data CO_column_number_density in S5P_OFFL_L2VOCO_20191207T034408_20191207T052538_11134_01_010302_20191212T134827_wollongong.nc



CO_RPRO/OFFL_ALL closest and FTIR.CO total column values (surf - toa, WOLLONGONG (lat. = -34.4°, 2019-12-03 till 2020-01-24, 94 meas.)



Closest (no averaging) removes the high outlier
—> high variability in the pixels

Remaining high outliers can all be related to non-optima co-locations (no intersection with line of sight eg)



GEOMS FTIR template v3: overview changes

- VMR names changed to [GAS].MIXING.RATIO.VOLUME.**DRY**
- prior names changed to (**removed ABSORPTION**)
[GAS].MIXING.RATIO.VOLUME.DRY_APRIORI,
[GAS].COLUMN.PARTIAL_APRIORI...
- H2O VMR variable changed from H2O.MIXING.RATIO.VOLUME_ABSORPTION to H2O.MIXING.RATIO.VOLUME.DRY_APRIORI



GEOMS FTIR template v3: final remarks

- do we need to add a new variable to link a measurement to the measured spectrum? UID (links to L0 archiving -> traceability!)
- Implementation of FTIR v3 template should be done in a “short” period of time ... NDACC could allow the simultaneous submission of v2 and v3 only for a few “months”
- Use of versioning in the filenames:
 - version labels controlled by IRWG: “IRWG2023” for agreed retrieval strategies update
 - allows co-existence of (scientific) data products on NDACC
- Reminder: harmonized uncertainties in https://github.com/NCAR/sfit-processing-environment/blob/Dev_Ivan/Layer1/sbDefaults.ctf