

Mesures de méthane par ATR42 - 17/08/2021

Félix Langot

Supervisé par C. Crevoisier, T. Lauvaux

LMD - Palaiseau

2 mai 2022



2021 08 17

Sampling times (GPS synchronised clock) (seconds since 2021-08-17
00 :00 :00 UTC)

- latitude : Latitude AIRINS (degree)
- longitude : Longitude AIRINS (degree)
- altitude : Altitude from AIRINS (meter)
- ven_ddaipov_comp_1 : Wind direction (degree)
- ven_ffaipov_comp_1 : Wind speed (m/s)
- ven_uairov_comp_1 : Zonal wind component (m/s)
- ven_wairov_comp_1 : Vertical wind component (m/s)
- air_pressure : Front static pressure 1 (hPa)

- chm_CH4_dry_g2401m_calsync_1 : g2401m CH4_dry synchronised on Sampling times (GPS synchronised clock) (ppmv)
- chm_CO2_dry_g2401m_calsync_1 : g2401m CO2_dry synchronised on Sampling times (GPS synchronised clock) (ppmv)
- chm_CO_g2401m_calsync_1 : g2401m CO synchronised on Sampling times (GPS synchronised clock) (ppmv)
- chm_CO2_dry_esp1000_calsync_1 : esp1000 CO2_dry synchronised on Sampling times (GPS synchronised clock) (ppmv)
- FILE START TIME (seconds since 2021-08-17 00:00:00 UTC) : 7.36660003
- FILE STOP TIME (seconds since 2021-08-17 00:00:00 UTC) : 11.23910001
- TAKE-OFF TIME (HHMMSS UTC) : 080556
- LANDING TIME (HHMMSS UTC) : 111142

as210056-26/08_zoom

1e-2

Wind at 510 hPa
(length ≡ 10 m/s)

Latitude (°)

66N

65N

64N

4E

5E

6E

7E

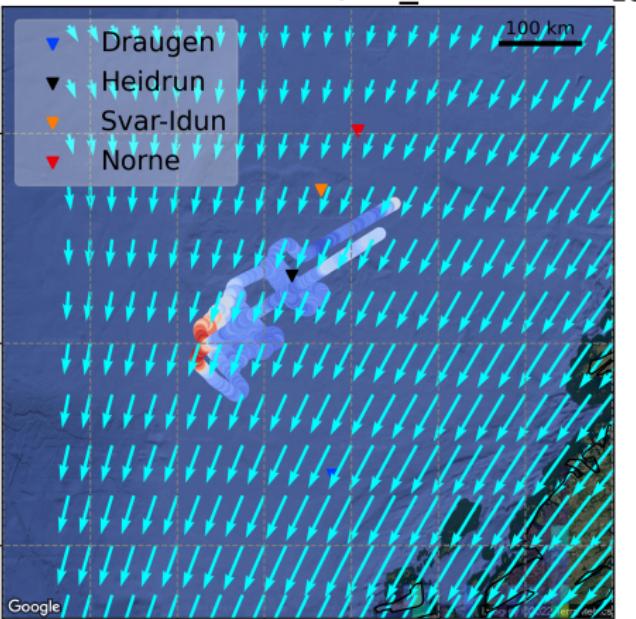
8E

9E

10E

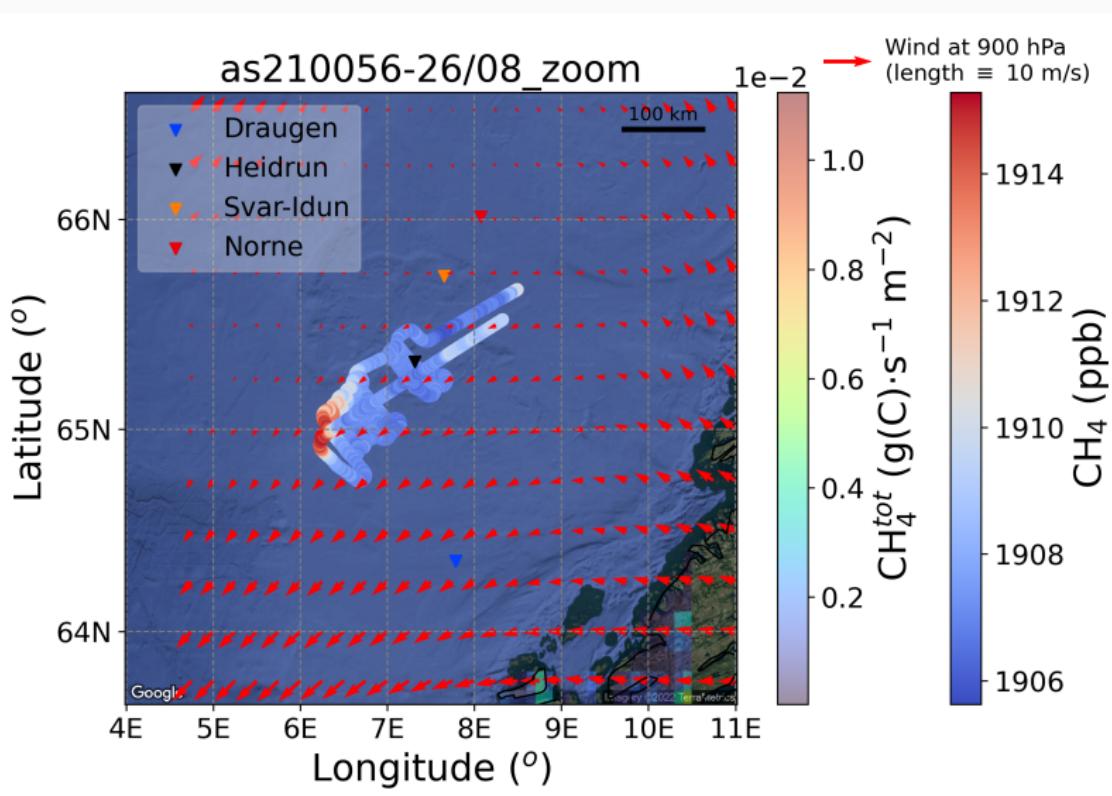
11E

Longitude (°)

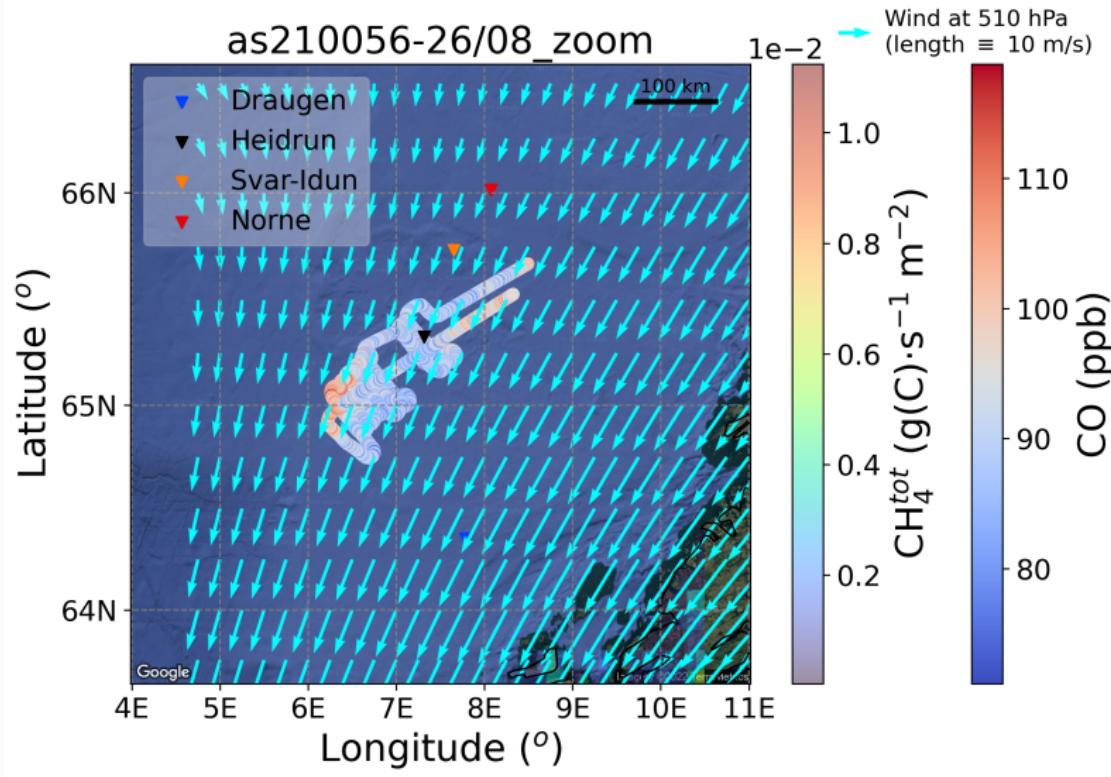


1e-2

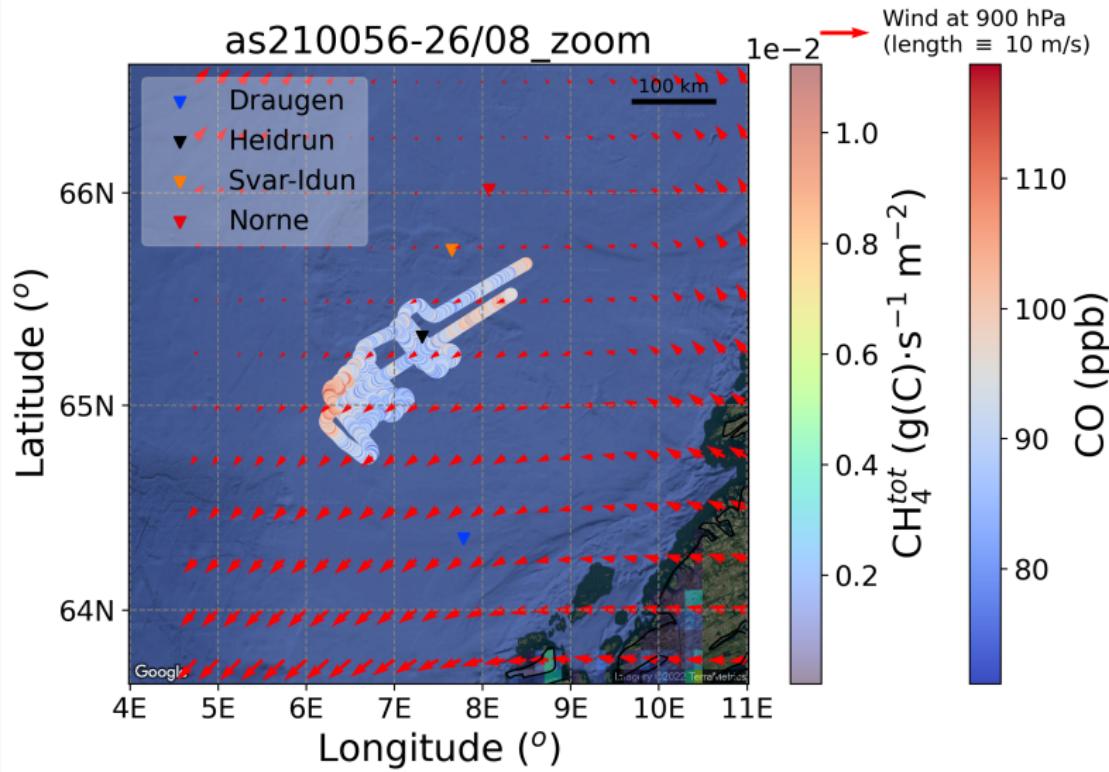
CH₄^{tot} (g(C)·s⁻¹ m⁻²)1.0
0.8
0.6
0.4
0.2CH₄ (ppb)1914
1912
1910
1908
1906



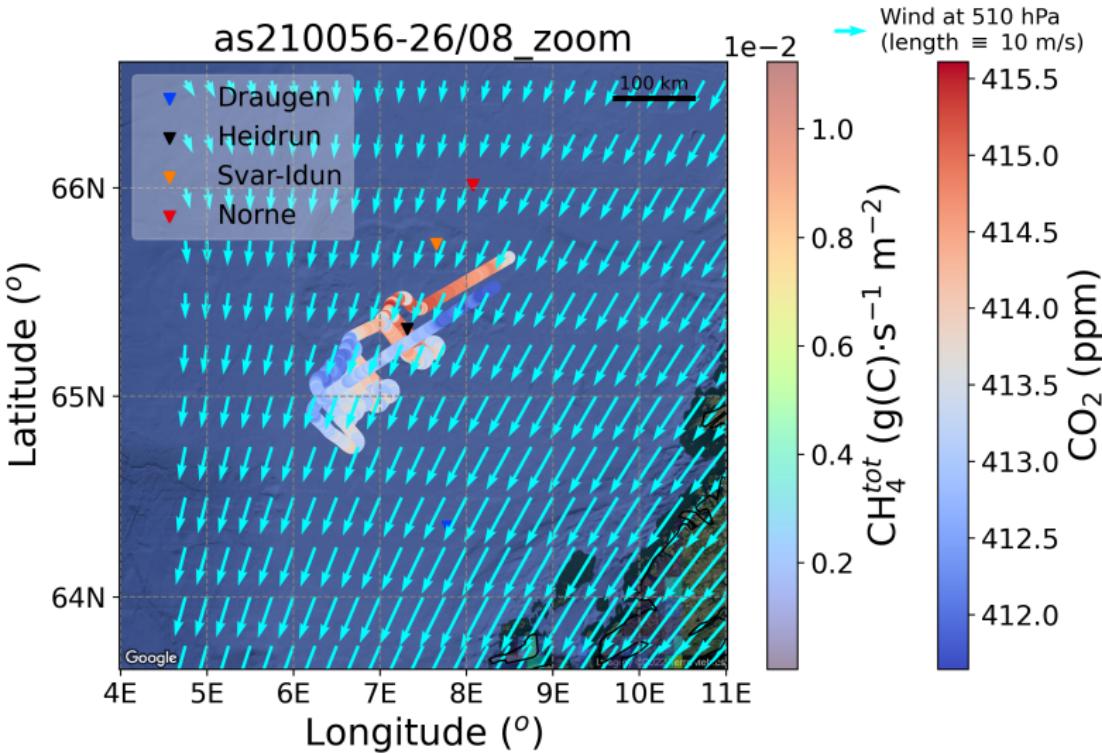
CO



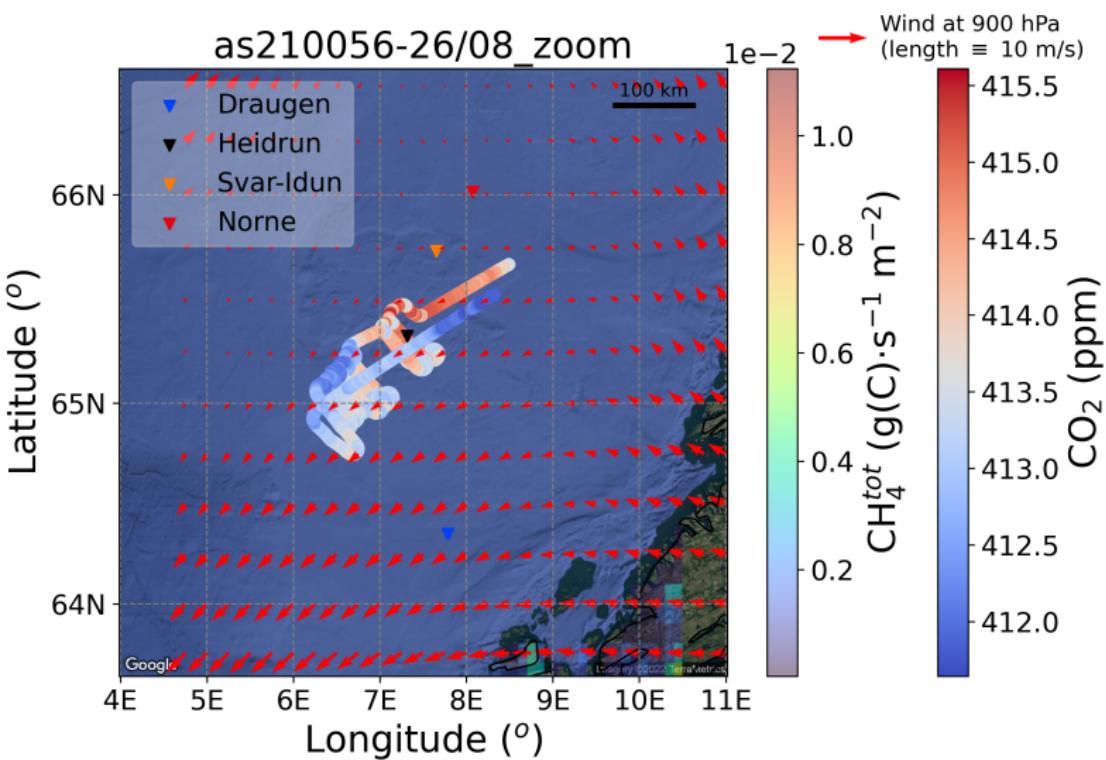
CO



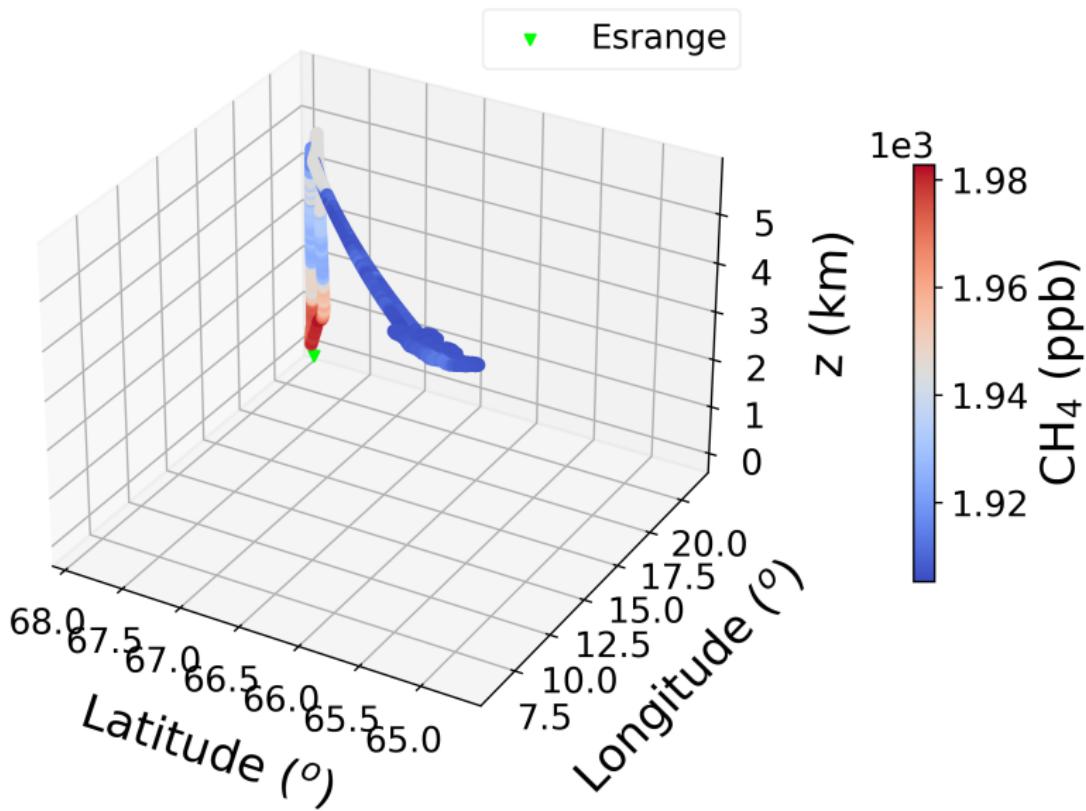
CO_2



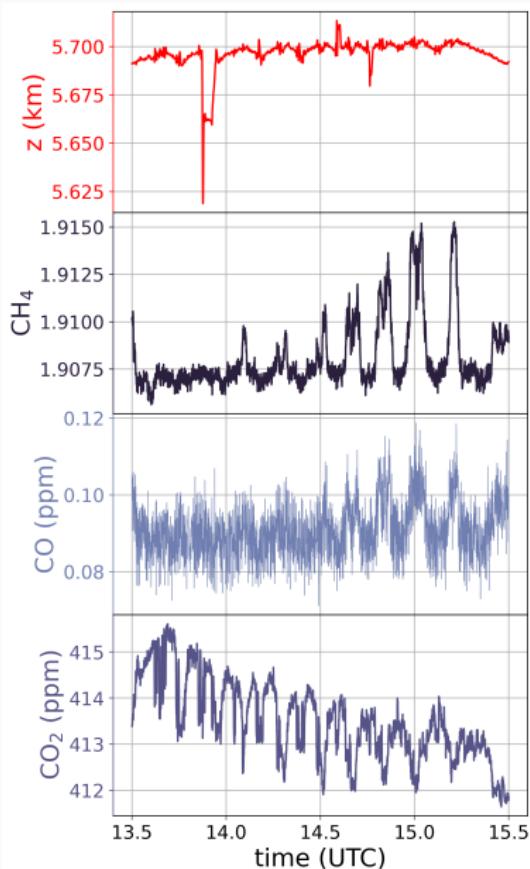
CO_2



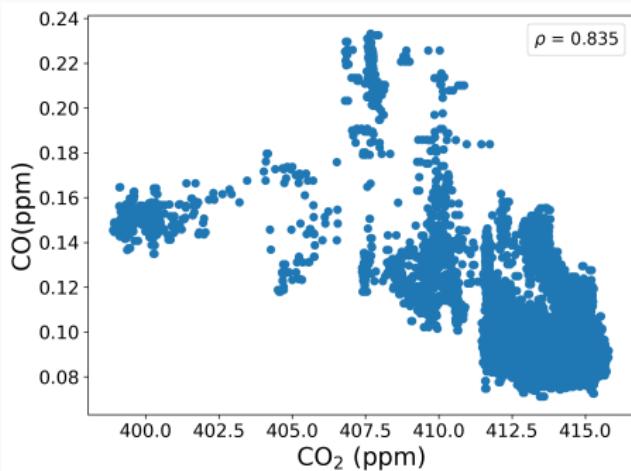
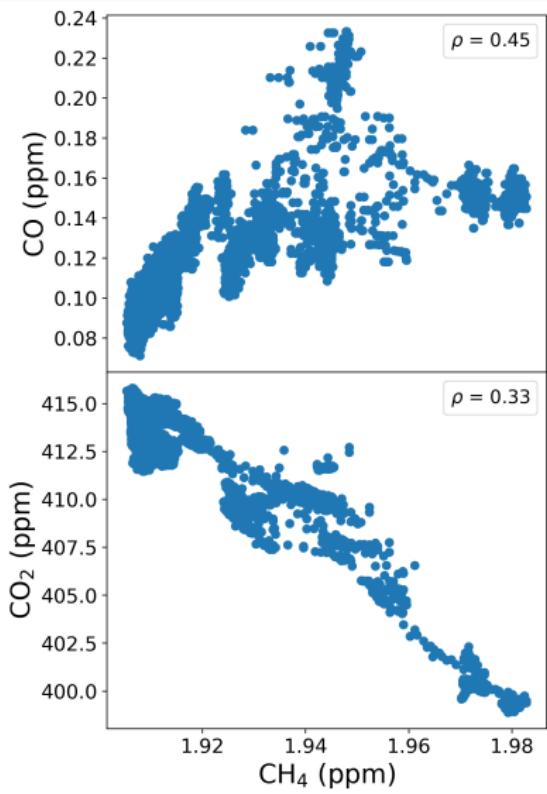
3D



GHGs correlations



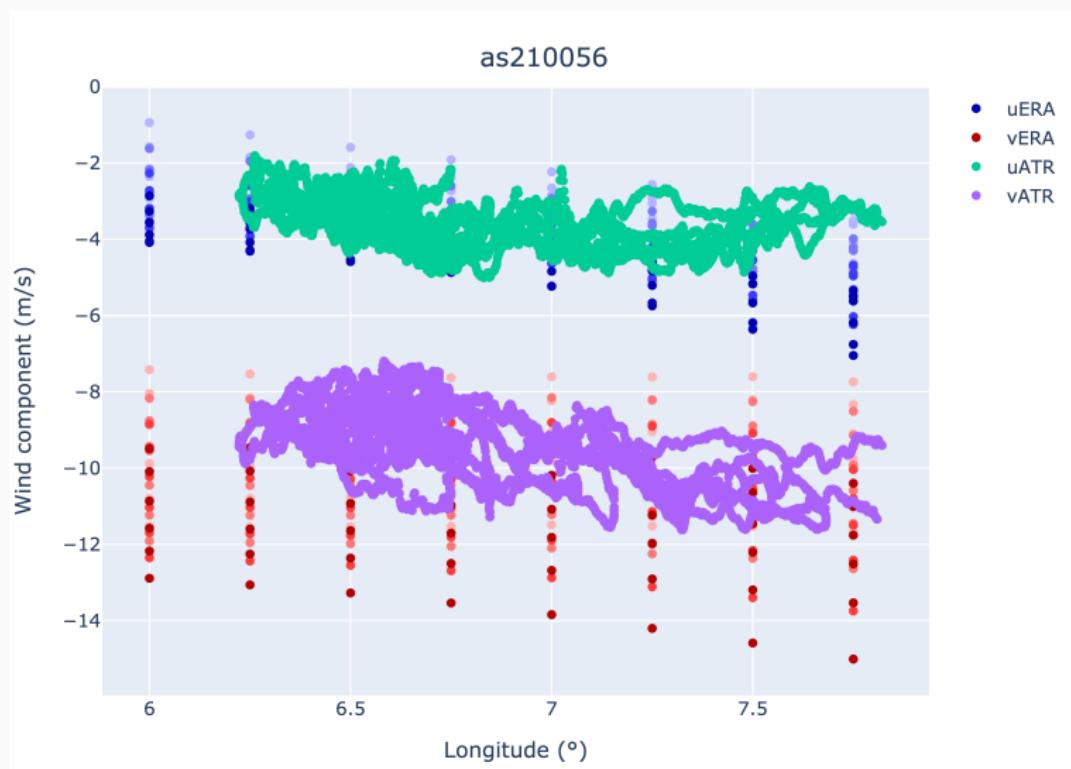
GHGs correlations



À faire :

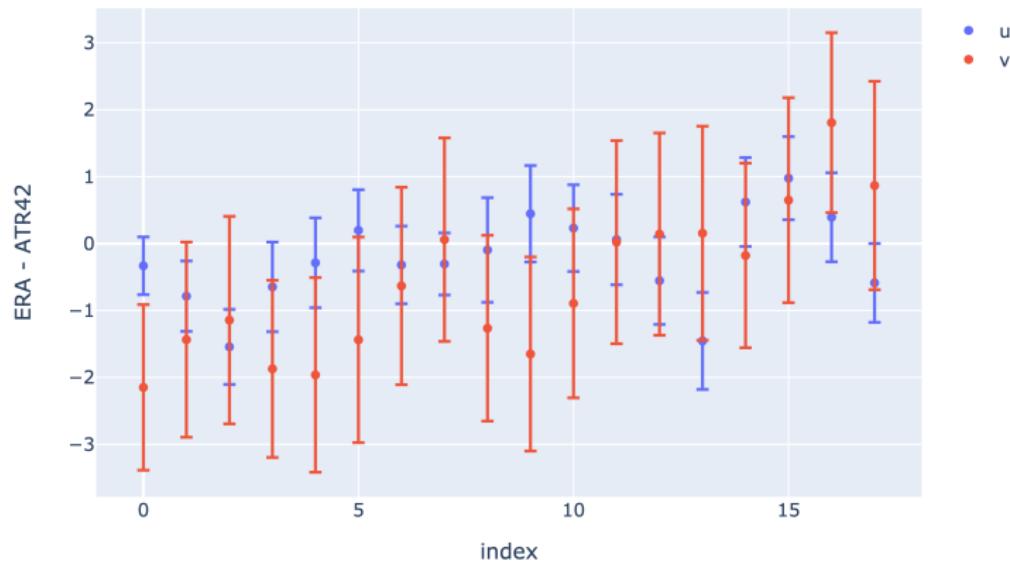
- Regarder corrélations entre GES et T, RH
- Améliorer les domaines de comparaison

Wind



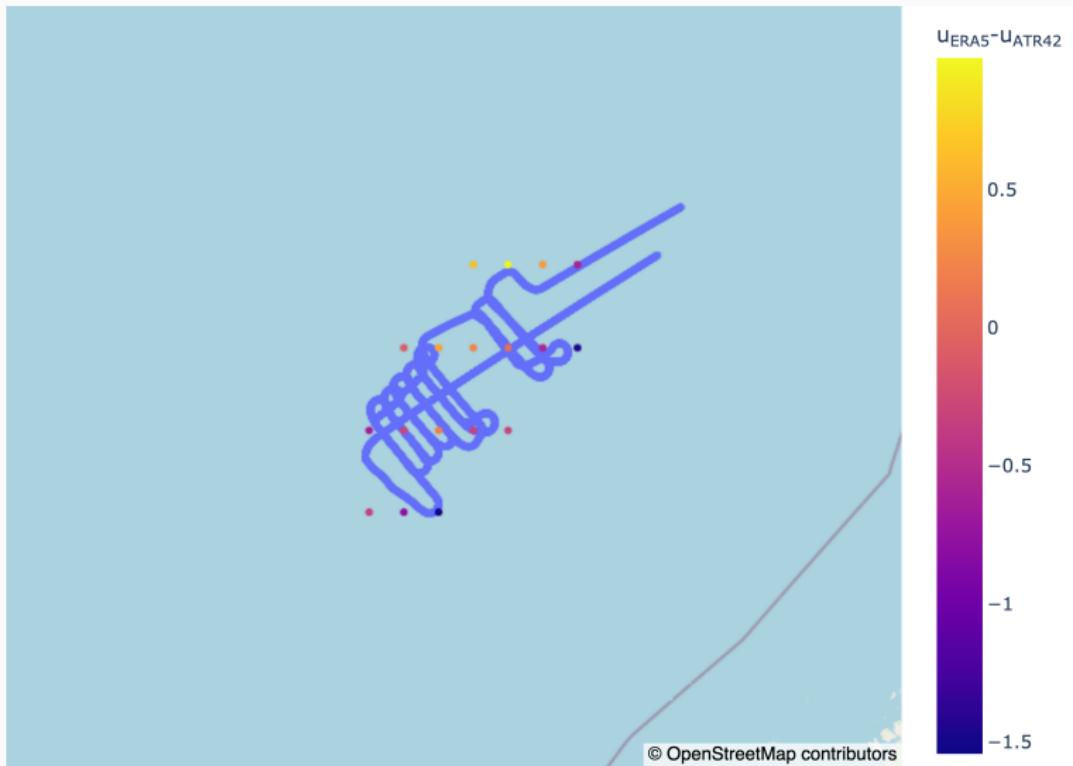
Wind

as210056



Error bars calculated from combination of ERA and ATR42 sample σ_s

Wind



Wind

