



Supplement of

A database of aircraft measurements of carbon monoxide (CO) with high temporal and spatial resolution during 2011–2021

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1. Flights during the SHIVA campaign

The five transfer flights are only shown in Figure 20 in the main text.

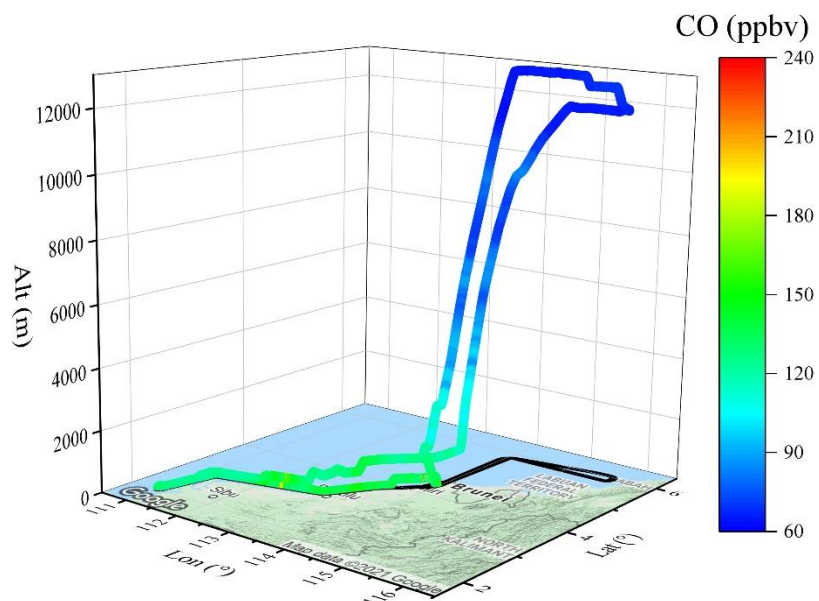


Figure S1: Flight trajectory colored by CO levels on flight-SHIVA_20111116_1. Map copyright: © GoogleMap.

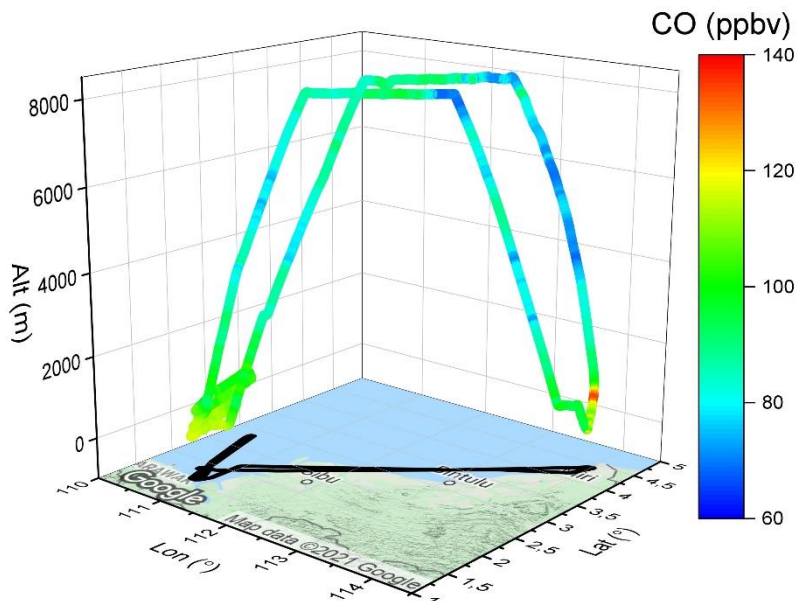


Figure S2: Flight trajectory colored by CO levels on flight-SHIVA_20111119_1. Map copyright: © GoogleMap.

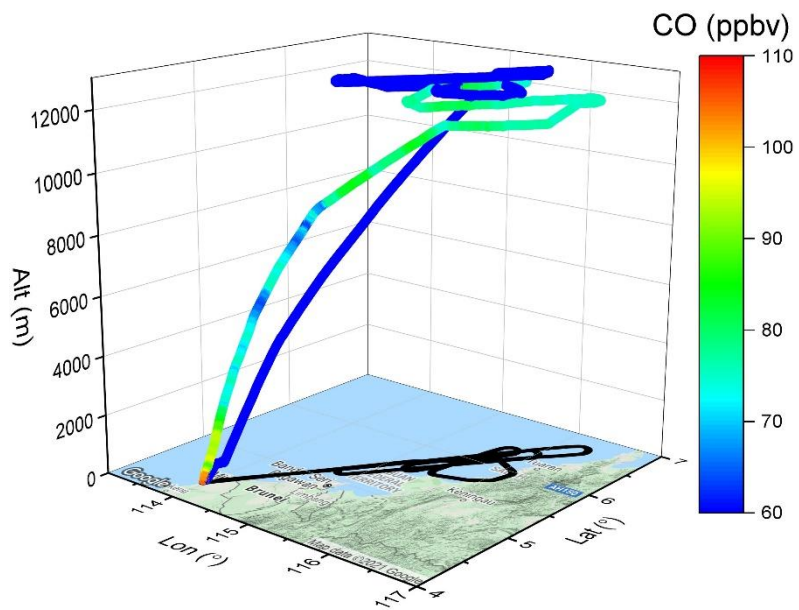


Figure S3: Flight trajectory colored by CO levels on flight-SHIVA_20111119_2. Map copyright: © GoogleMap.

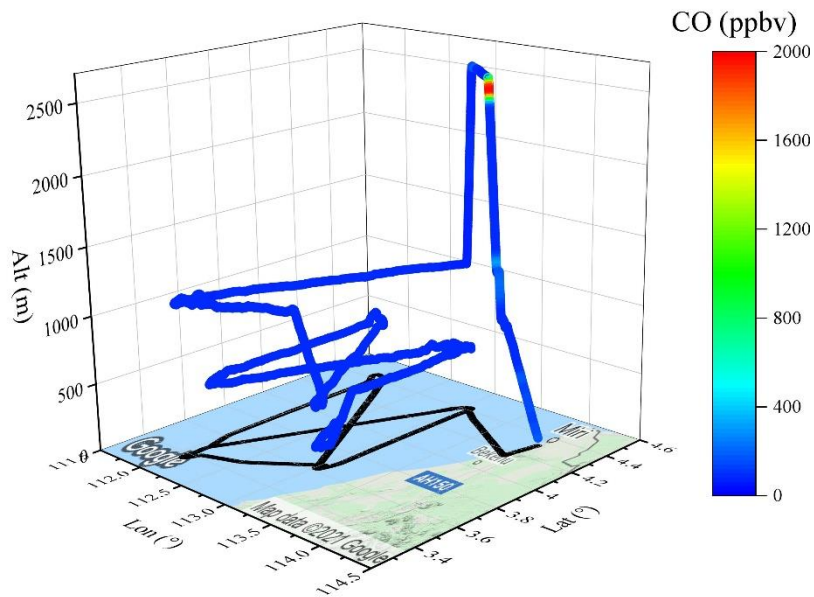


Figure S4: Flight trajectory colored by CO levels on flight-SHIVA_20111121_1. Map copyright: © GoogleMap.

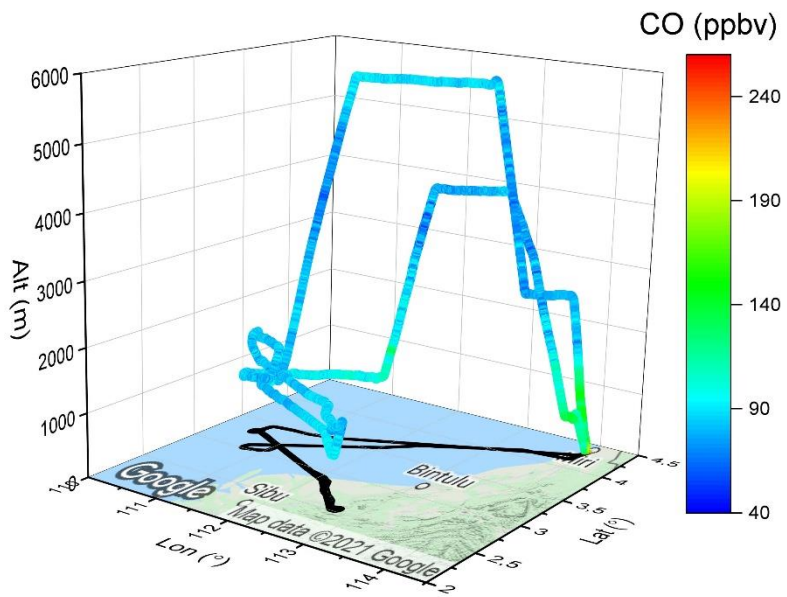


Figure S5: Flight trajectory colored by CO levels on flight-SHIVA_2011122_1. Map copyright: © GoogleMap.

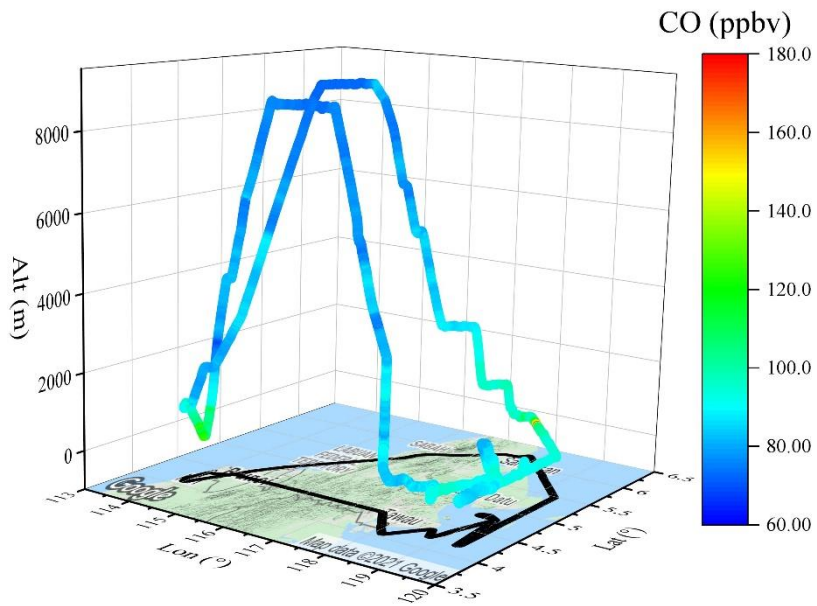


Figure S6: Flight trajectory colored by CO levels on flight-SHIVA_2011123_1. Map copyright: © GoogleMap.

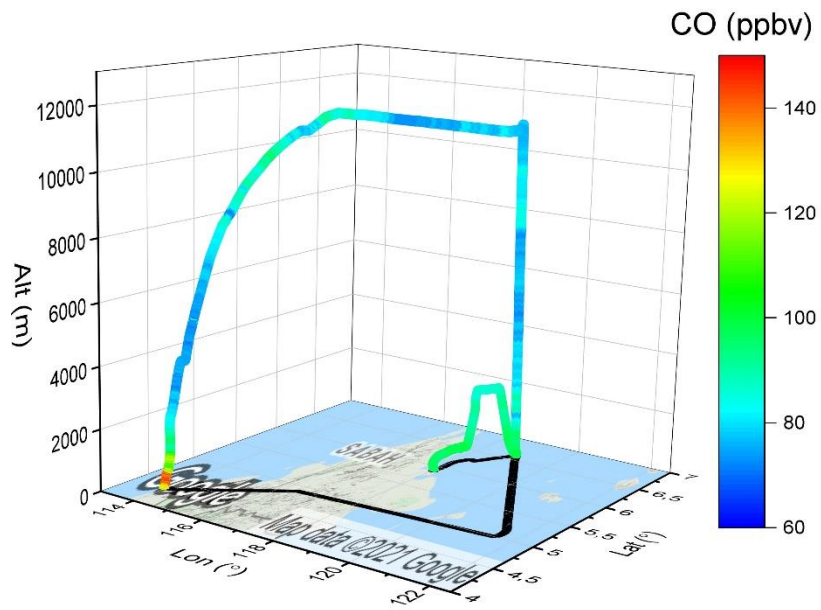


Figure S7: Flight trajectory colored by CO levels on flight-SHIVA_2011126_1. Map copyright: © GoogleMap.

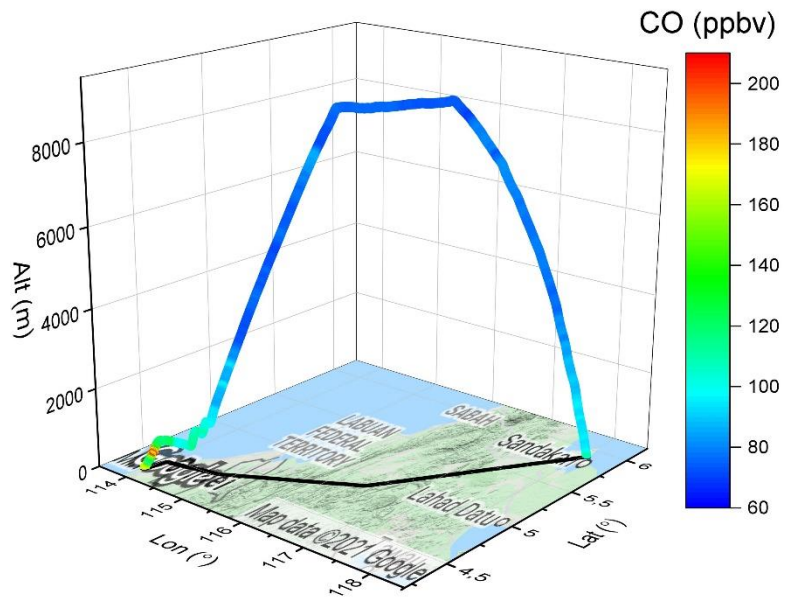


Figure S8: Flight trajectory colored by CO levels on flight-SHIVA_2011126_2. Map copyright: © GoogleMap.

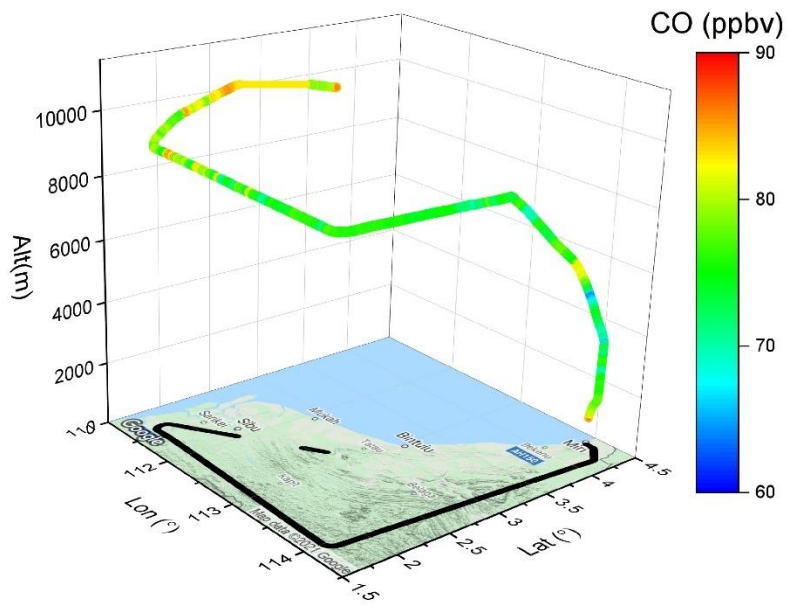


Figure S9: Flight trajectory colored by CO levels on flight-SHIVA_20111202_1. Map copyright: © GoogleMap.

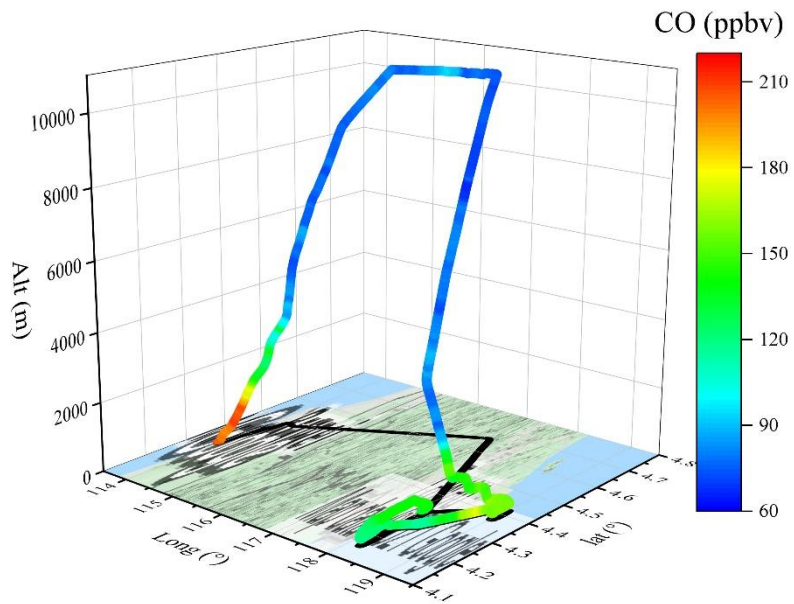


Figure S10: Flight trajectory colored by CO levels on flight-SHIVA_20111207_1. Map copyright: © GoogleMap.

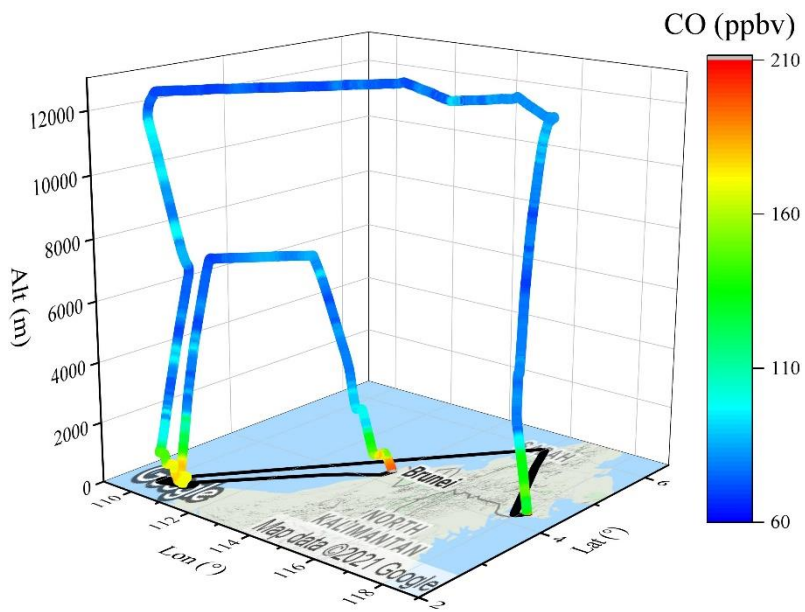


Figure S11: Flight trajectory colored by CO levels on flight-SHIVA_20111207_2. Map copyright: © GoogleMap.

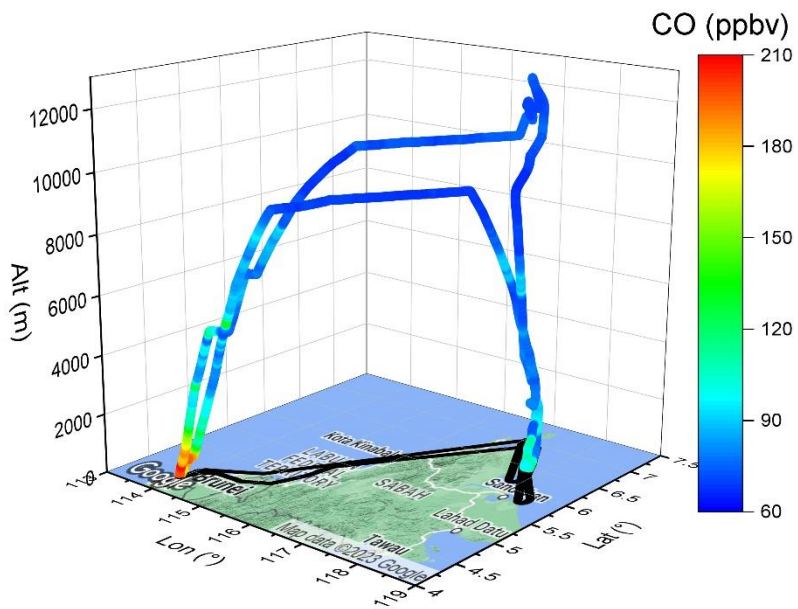


Figure S12: Flight trajectory colored by CO levels on flight-SHIVA_20111208_1. Map copyright: © GoogleMap.

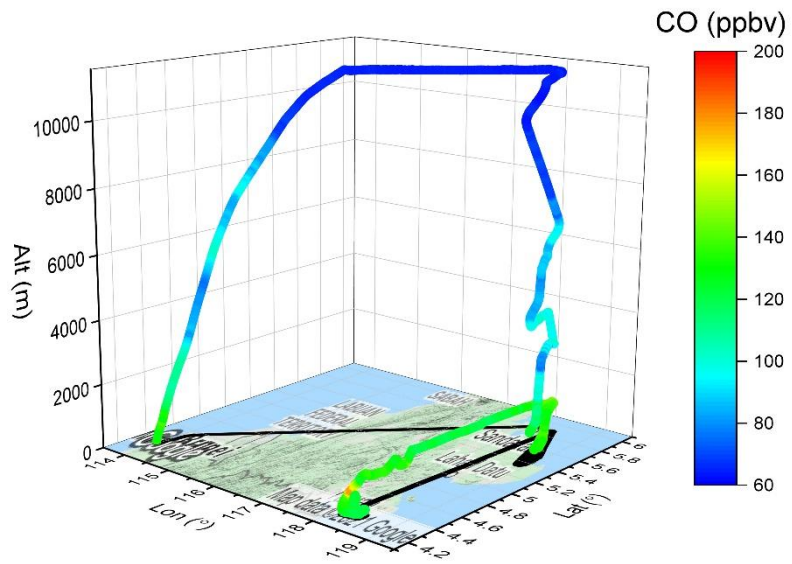


Figure S13: Flight trajectory colored by CO levels on flight-SHIVA_20111209_1. Map copyright: © GoogleMap.

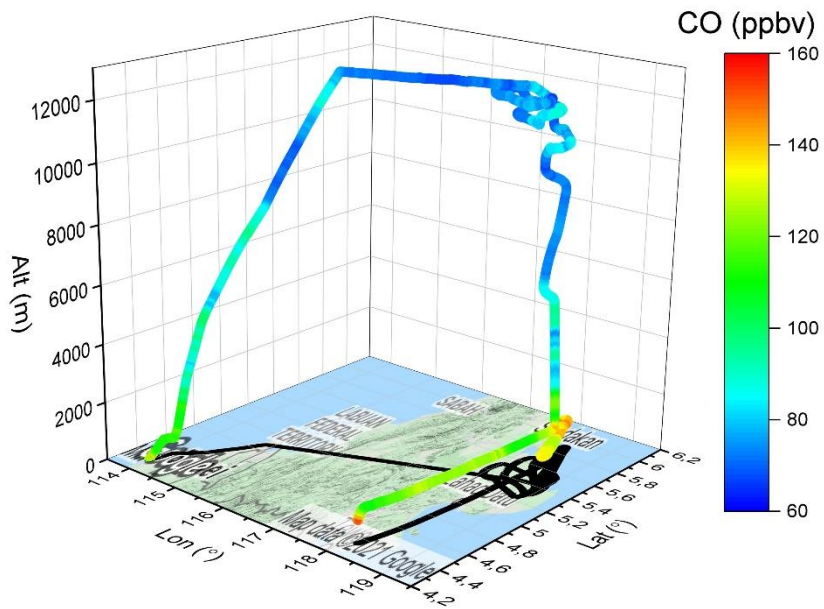


Figure S14: Flight trajectory colored by CO levels on flight-SHIVA_20111209_2. Map copyright: © GoogleMap.

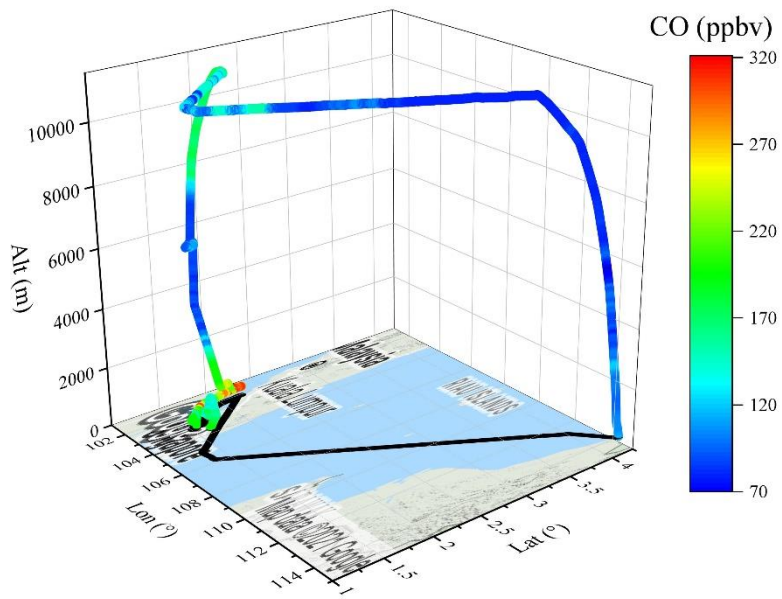


Figure S15: Flight trajectory colored by CO levels on flight-SHIVA_20111211_1. Map copyright: © GoogleMap.

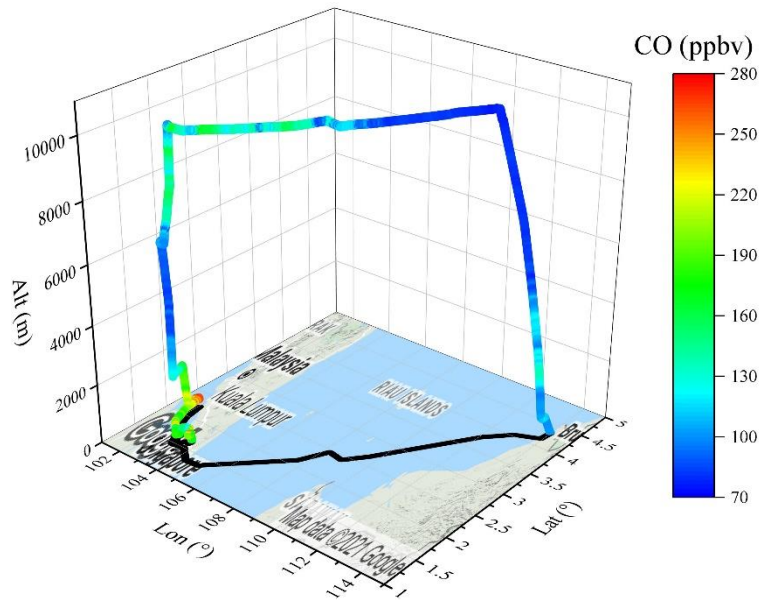


Figure S16: Flight trajectory colored by CO levels on flight-SHIVA_20111211_2. Map copyright: © GoogleMap.

2. Flights during the TC2 campaign

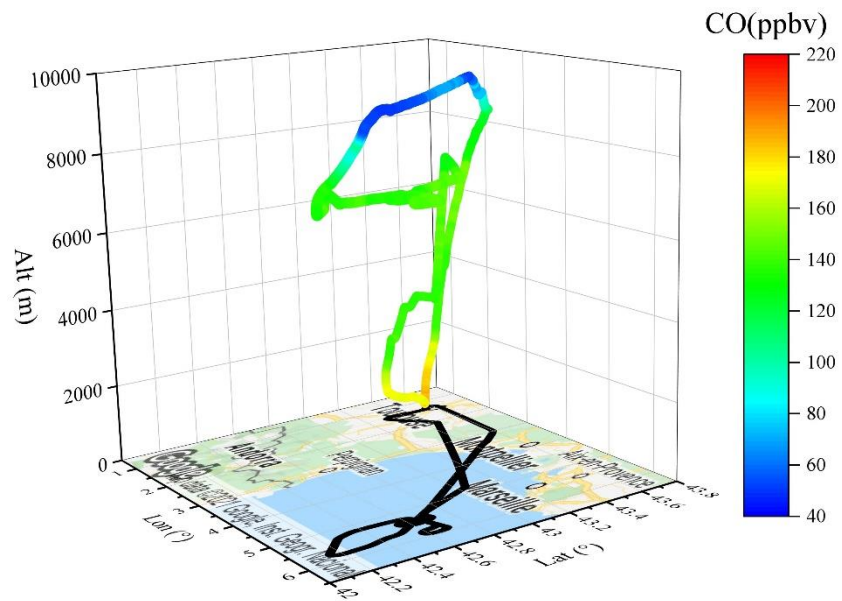


Figure S17: Flight trajectory colored by CO levels on flight-TC2_20130312_1. Map copyright: © GoogleMap.

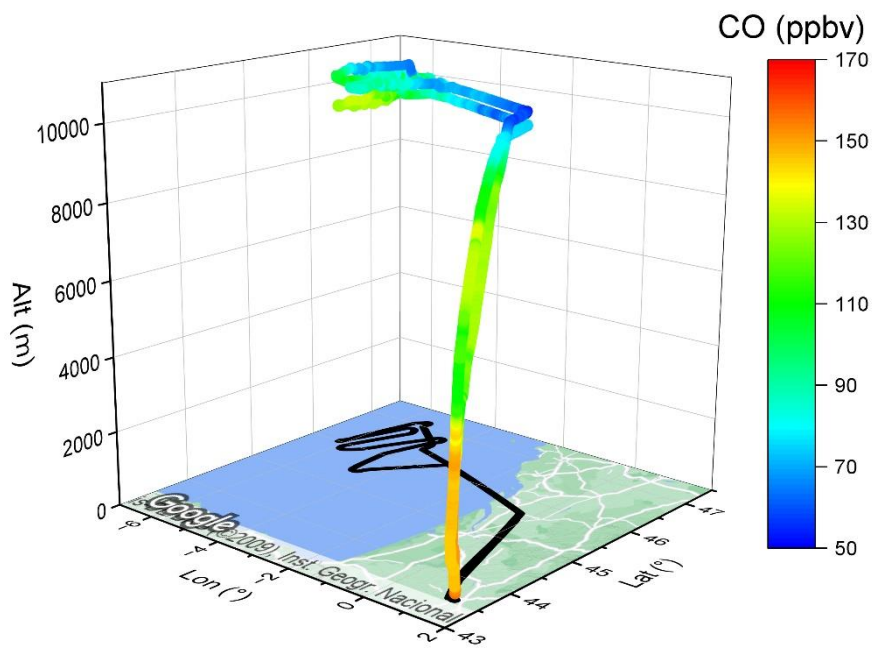


Figure S18: Flight trajectory colored by CO levels on flight-TC2_20130320_1. Map copyright: © GoogleMap.

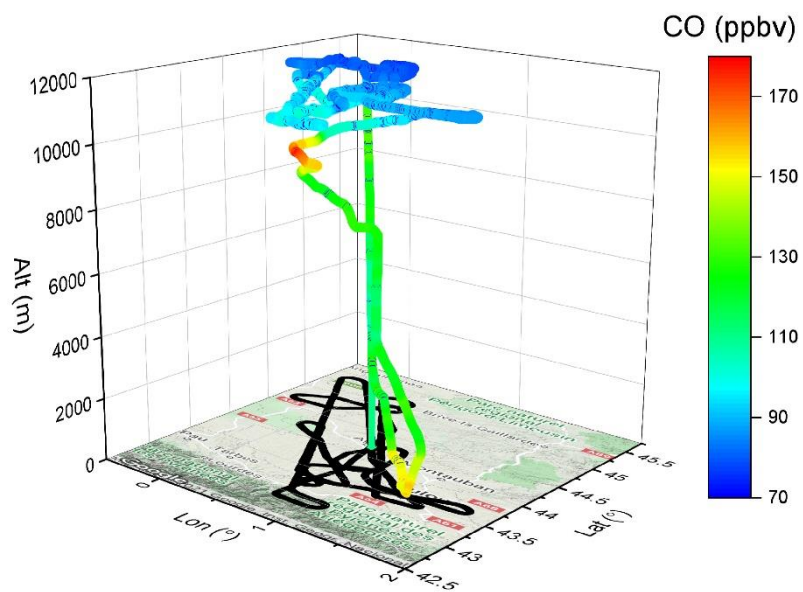


Figure S19: Flight trajectory colored by CO levels on flight-TC2_20130321_1. Map copyright: © GoogleMap.

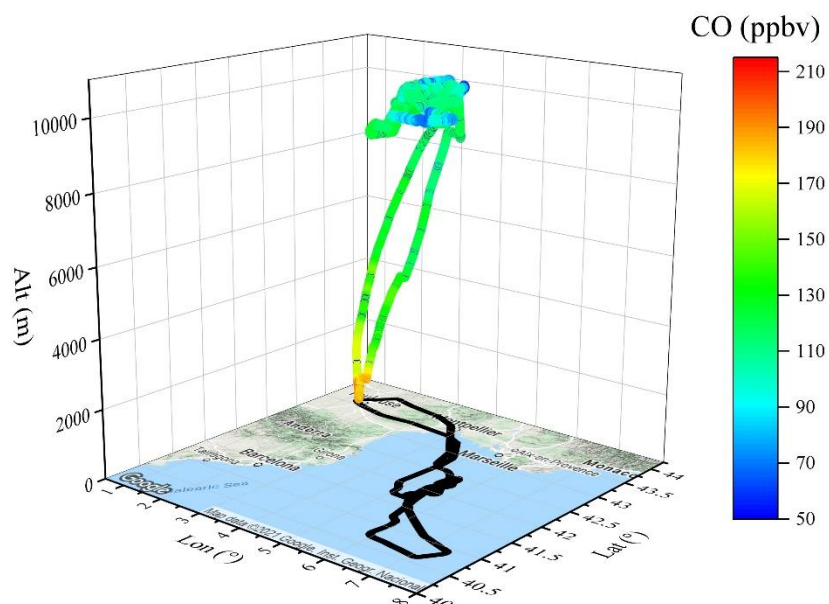


Figure S20: Flight trajectory colored by CO levels on flight-TC2_20130326_1. Map copyright: © GoogleMap.

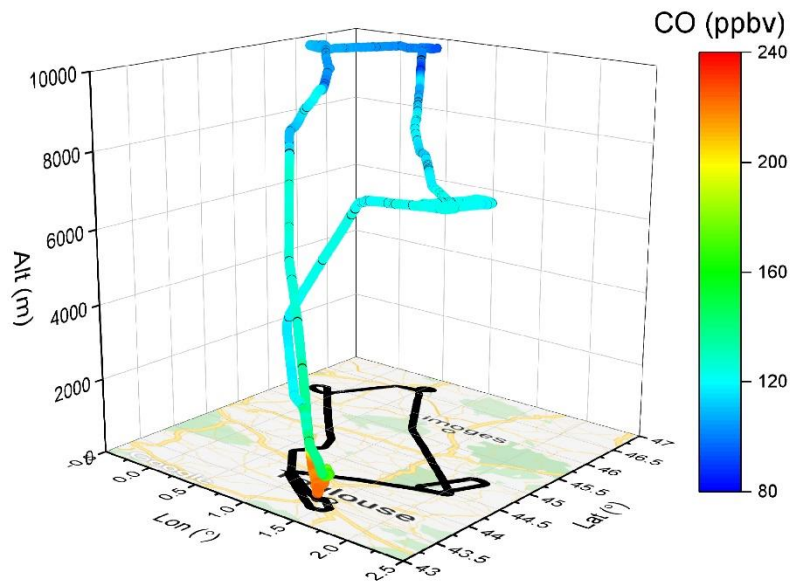


Figure S21: Flight trajectory colored by CO levels on flight-TC2_20130328_1. Map copyright: © GoogleMap.

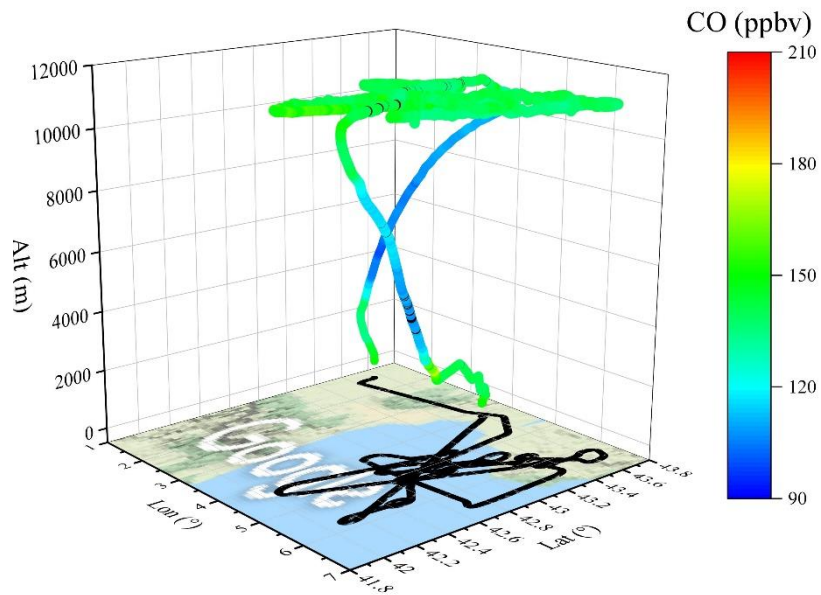


Figure S22: Flight trajectory colored by CO levels on flight-TC2_20130410_1. Map copyright: © GoogleMap.

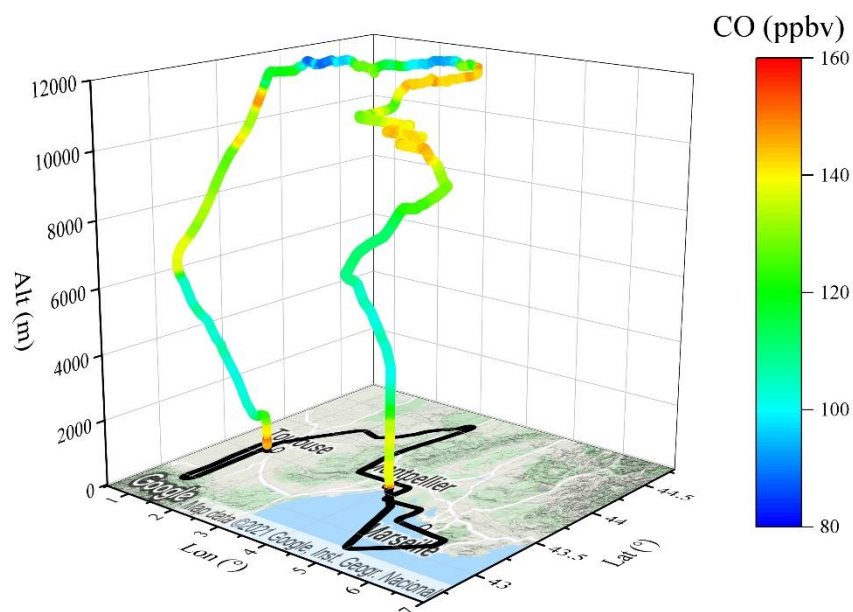


Figure S23: Flight trajectory colored by CO levels on flight-TC2_20130410_2. Map copyright: © GoogleMap.

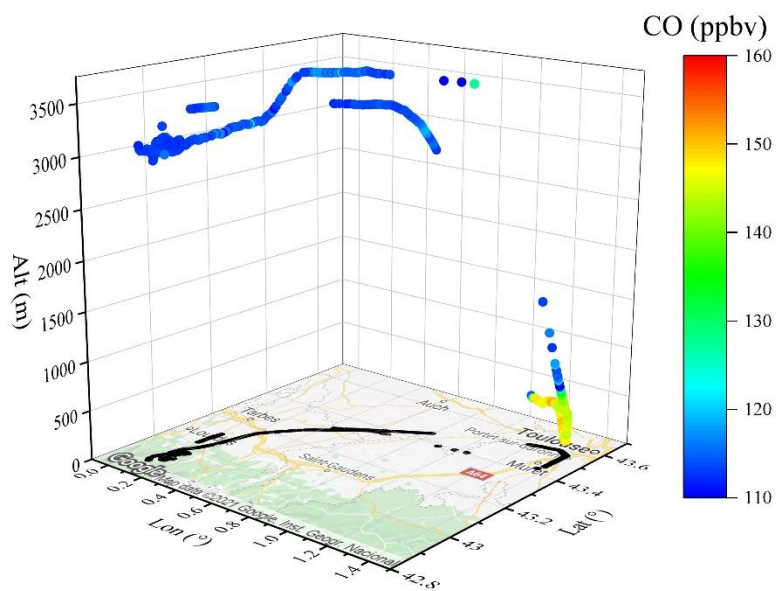


Figure S24: Flight trajectory colored by CO levels on flight-TC2_20130411_1. Map copyright: © GoogleMap.

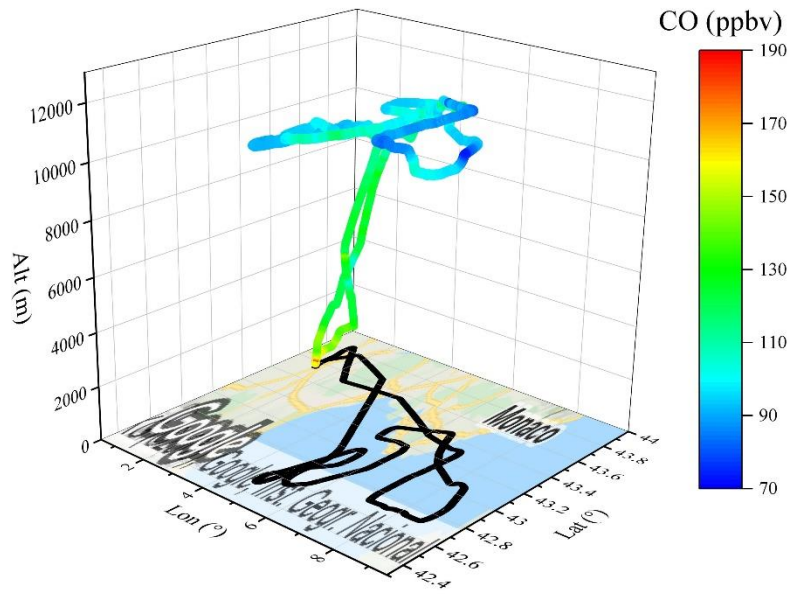


Figure S25: Flight trajectory colored by CO levels on flight-TC2_20130416_1. Map copyright: © GoogleMap.

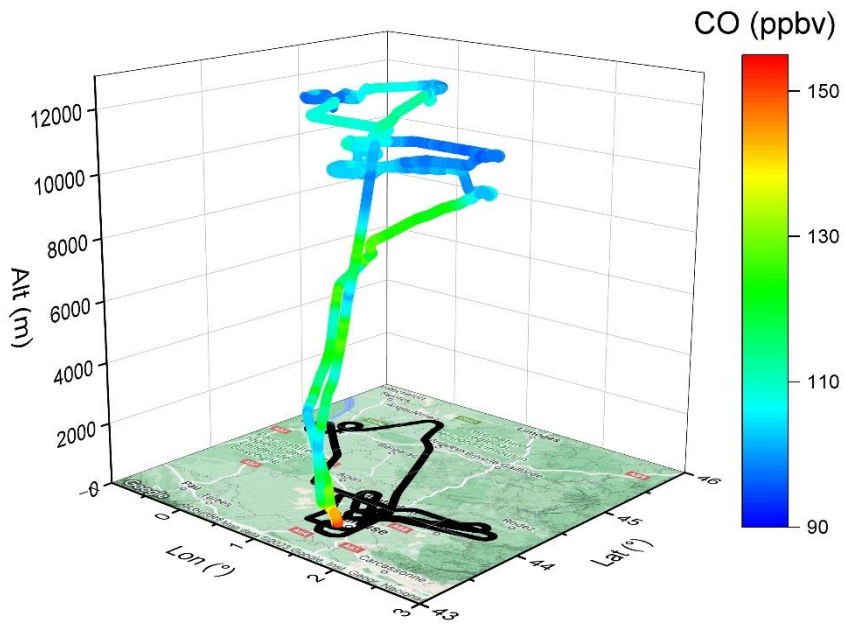


Figure S26: Flight trajectory colored by CO levels on flight-TC2_20130417_1. Map copyright: © GoogleMap.

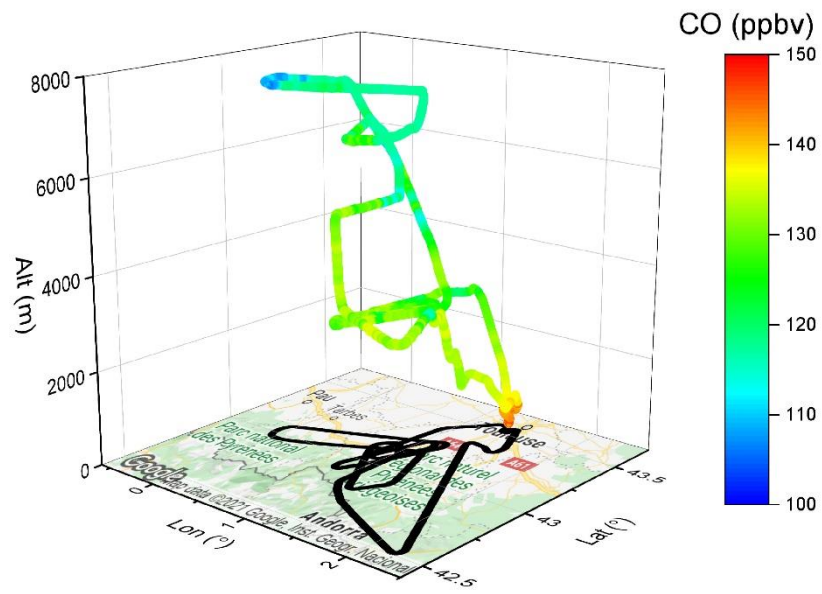


Figure S27: Flight trajectory colored by CO levels on flight-TC2_20130531_1. Map copyright: © GoogleMap.

3. Flights during the ChemCallInt campaign

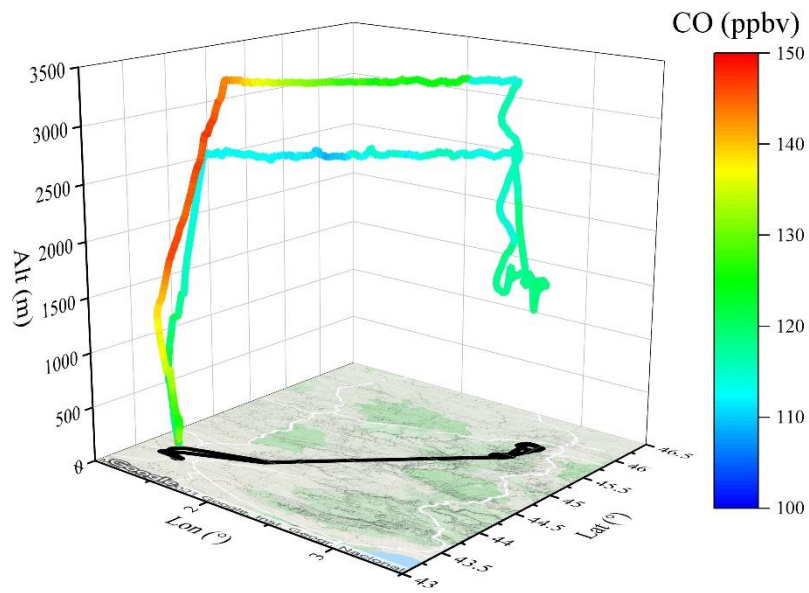


Figure S28: Flight trajectory colored by CO levels on flight-ChemCallInt_20140520_1. Map copyright: © GoogleMap.

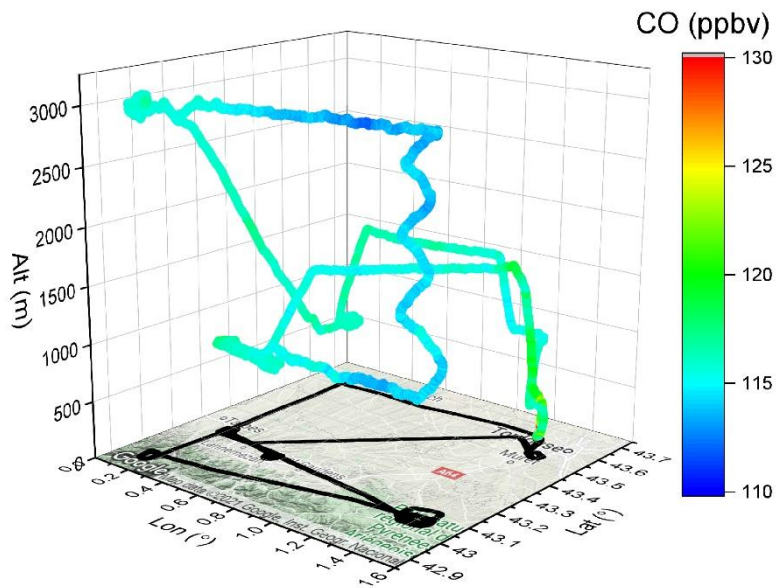


Figure S29: Flight trajectory colored by CO levels on flight-ChemCallInt_20140522_1. Map copyright: © GoogleMap.

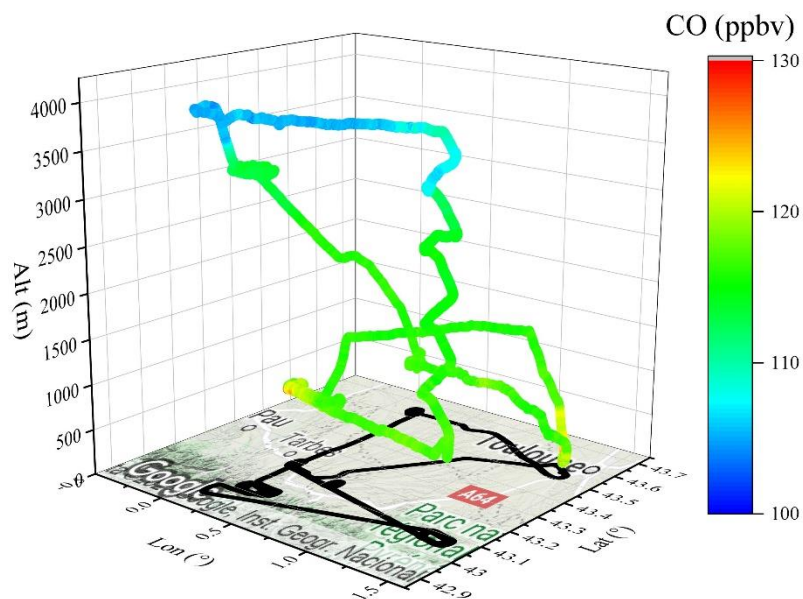


Figure S30: Flight trajectory colored by CO levels on flight-ChemCalInt_20140527_1. Map copyright: © GoogleMap.

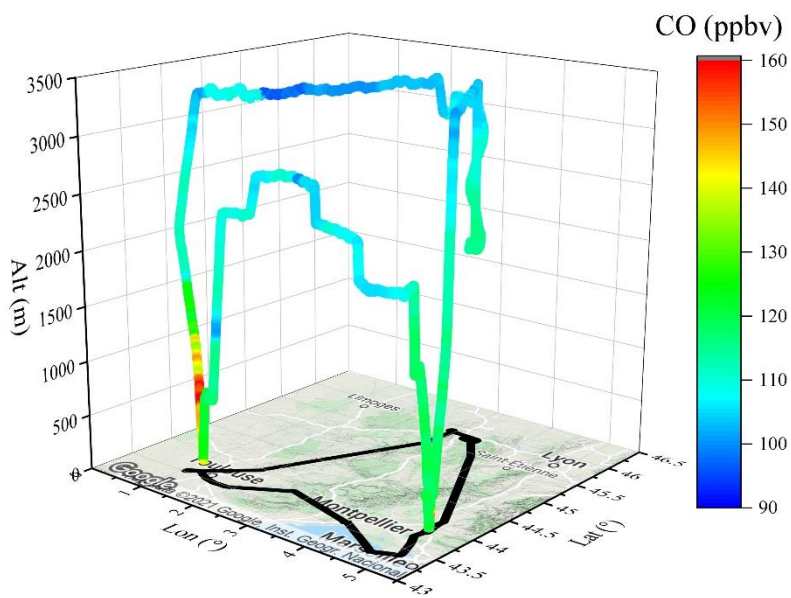


Figure S31: Flight trajectory colored by CO levels on flight-ChemCalInt_20140528_1. Map copyright: © GoogleMap.

4. Flights during the ChArMEx – GLAM campaign

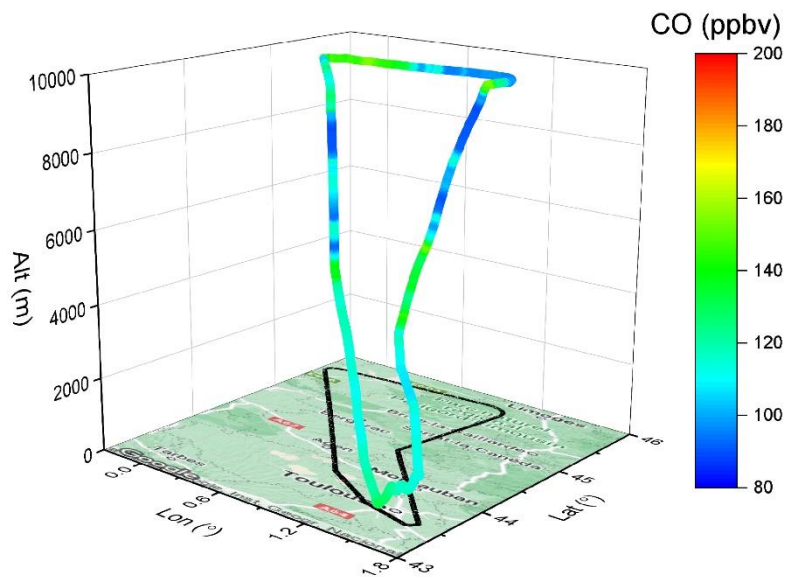


Figure S32: Flight trajectory colored by CO levels on flight-GLAM_20140804_1. Map copyright: © GoogleMap.

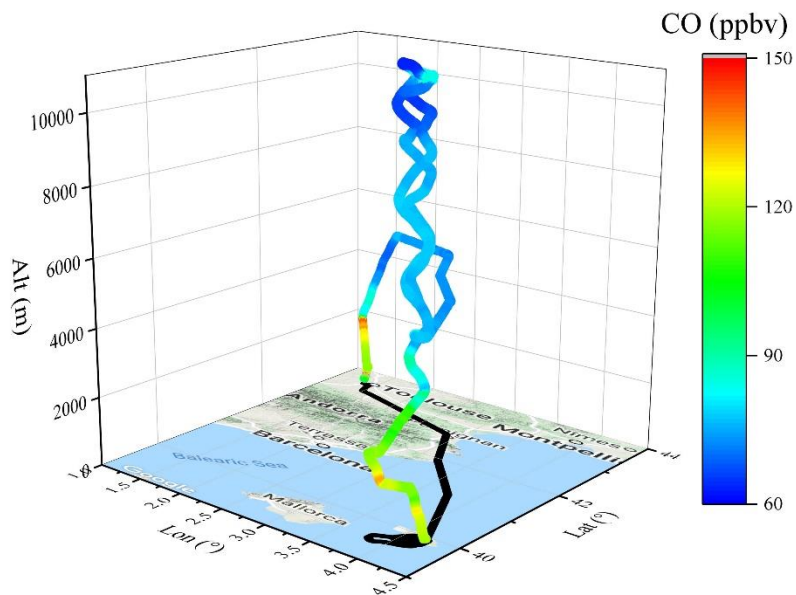


Figure S33: Flight trajectory colored by CO levels on flight-GLAM_20140806_1. Map copyright: © GoogleMap.

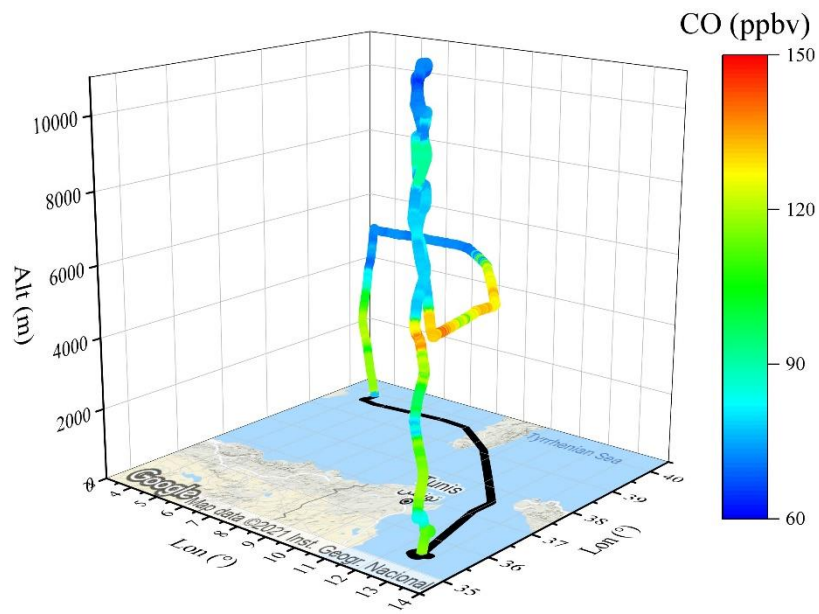


Figure S34: Flight trajectory colored by CO levels on flight-GLAM_20140806_2. Map copyright: © GoogleMap.

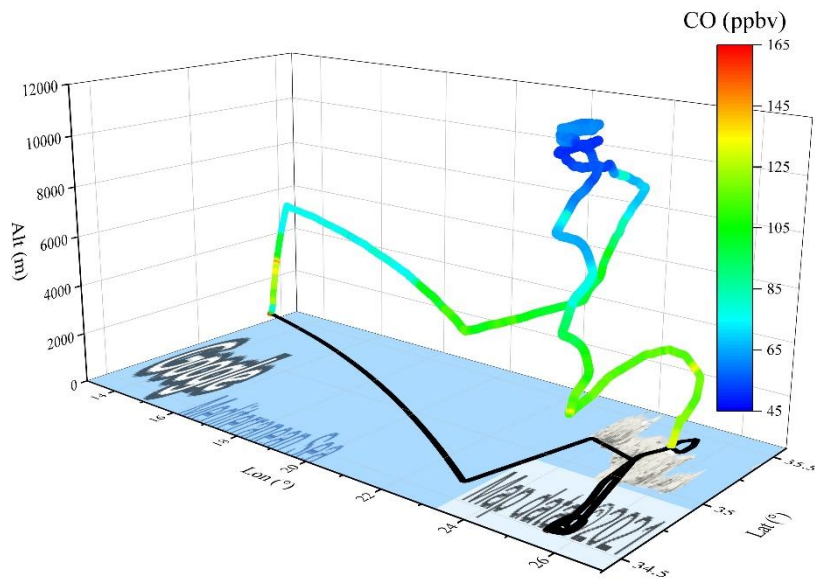


Figure S35: Flight trajectory colored by CO levels on flight-GLAM_20140807_1. Map copyright: © GoogleMap.

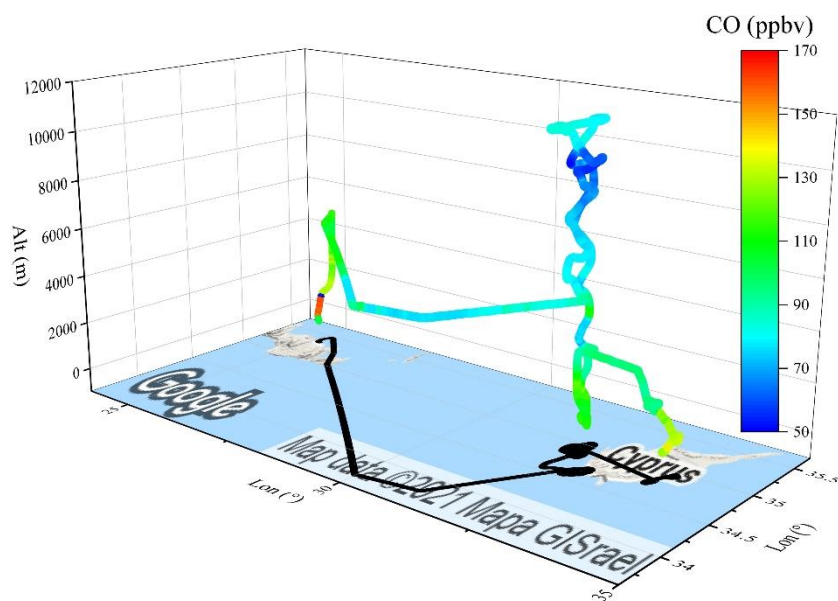


Figure S36: Flight trajectory colored by CO levels on flight-GLAM_20140807_2. Map copyright: © GoogleMap.

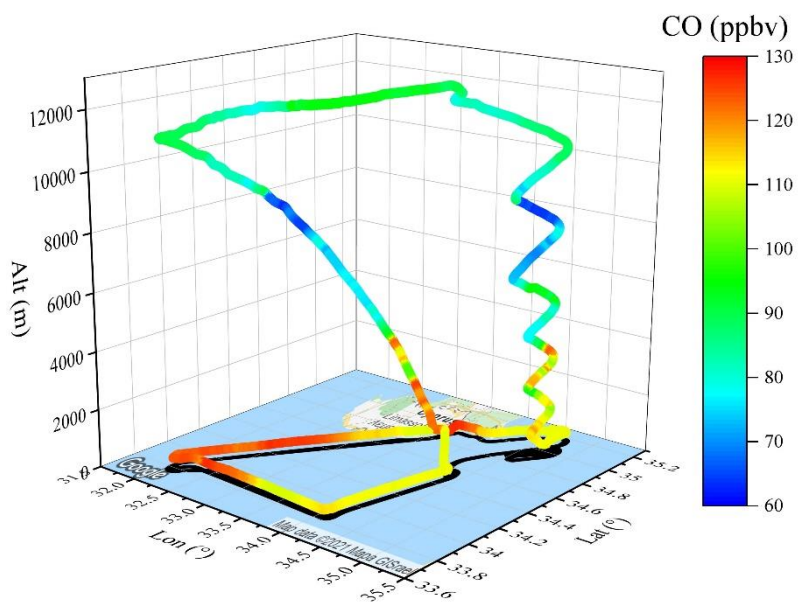


Figure S37: Flight trajectory colored by CO levels on flight-GLAM_20140808_1. Map copyright: © GoogleMap.

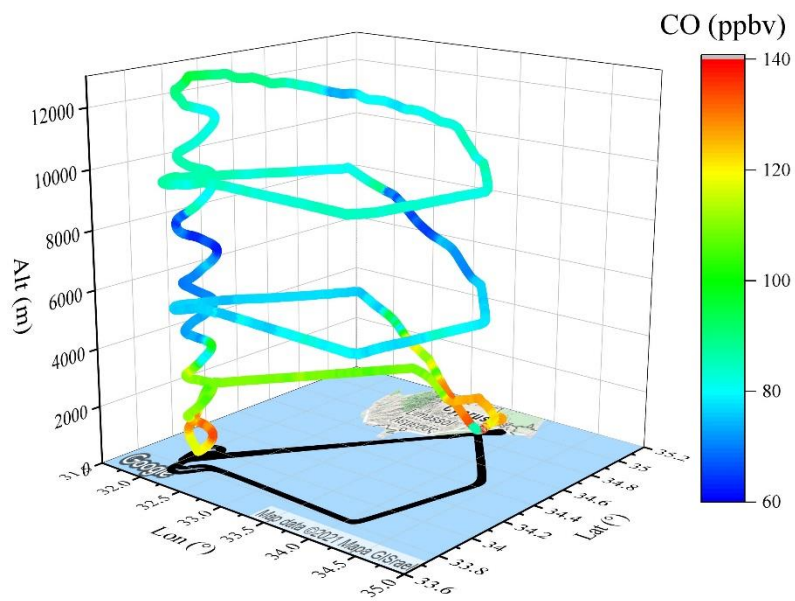


Figure S38: Flight trajectory colored by CO levels on flight-GLAM_20140808_2. Map copyright: © GoogleMap.

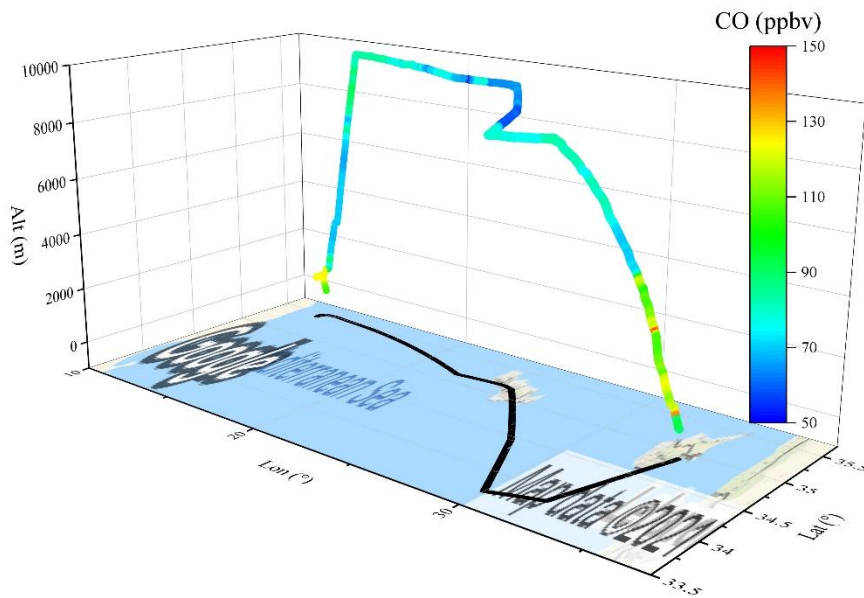


Figure S39: Flight trajectory colored by CO levels on flight-GLAM_20140810_1. Map copyright: © GoogleMap.

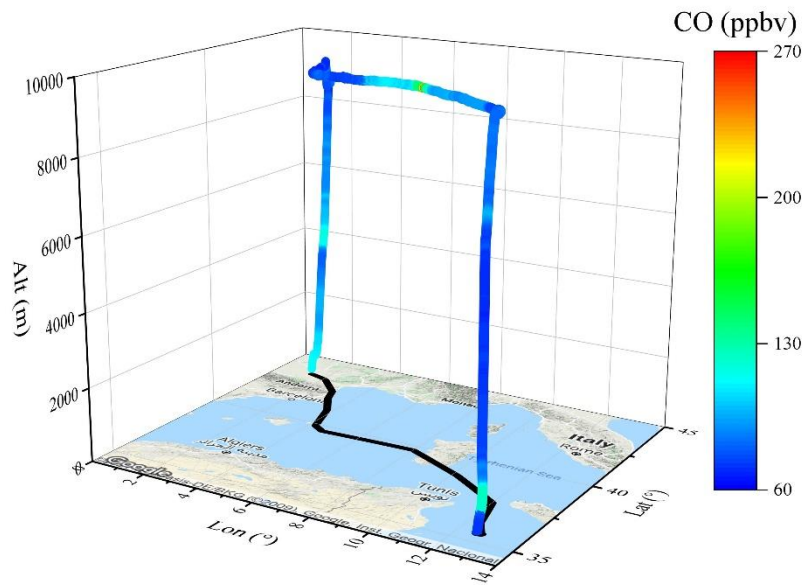


Figure S40: Flight trajectory colored by CO levels on flight-GLAM_20140810_2. Map copyright: © GoogleMap.

5. Flights during the Test-ATR-42 campaign

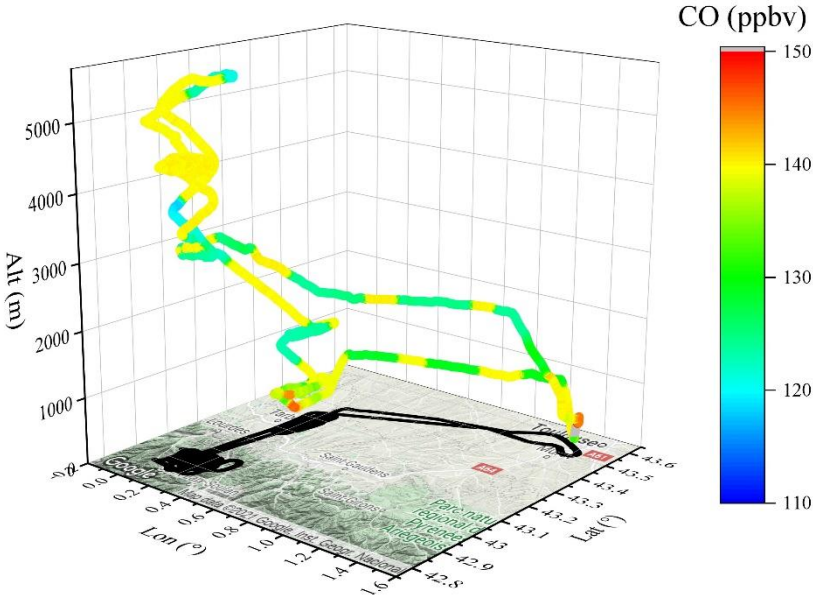


Figure S41: Flight trajectory colored by CO levels on flight-Test-ATR-42_20160205_1. Map copyright: © GoogleMap.

6. Flights during the DACCIWA campaign

The five transfer flights are only shown in Figure 21 in the main text.

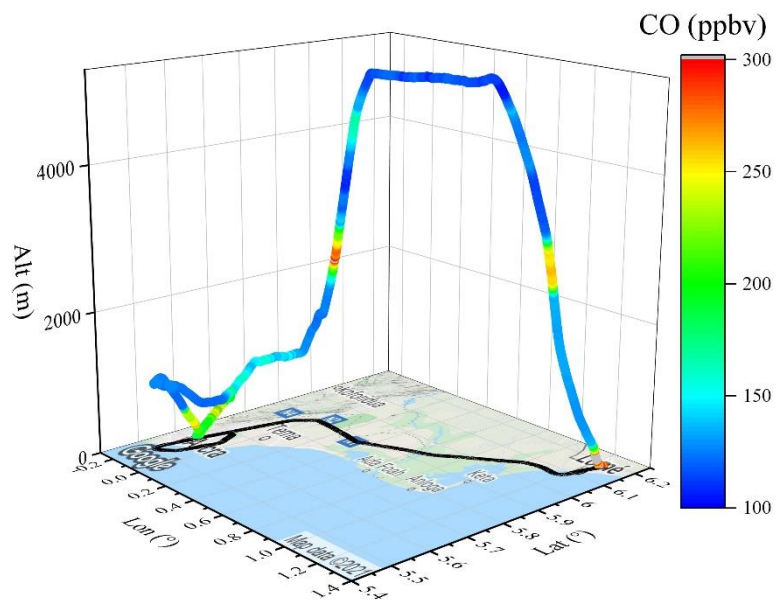


Figure S42: Flight trajectory colored by CO levels on flight-DACCIWA_20160628_1. Map copyright: © GoogleMap.

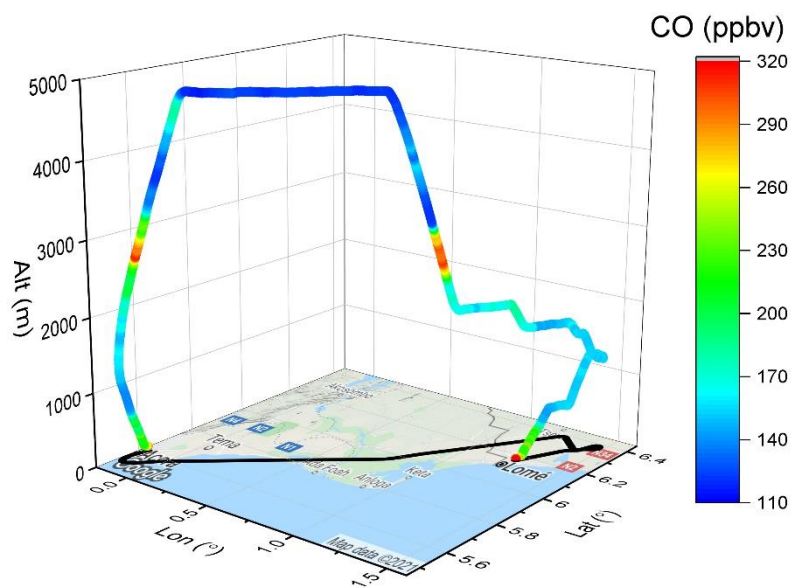


Figure S43: Flight trajectory colored by CO levels on flight-DACCIWA_20160628_2. Map copyright: © GoogleMap.

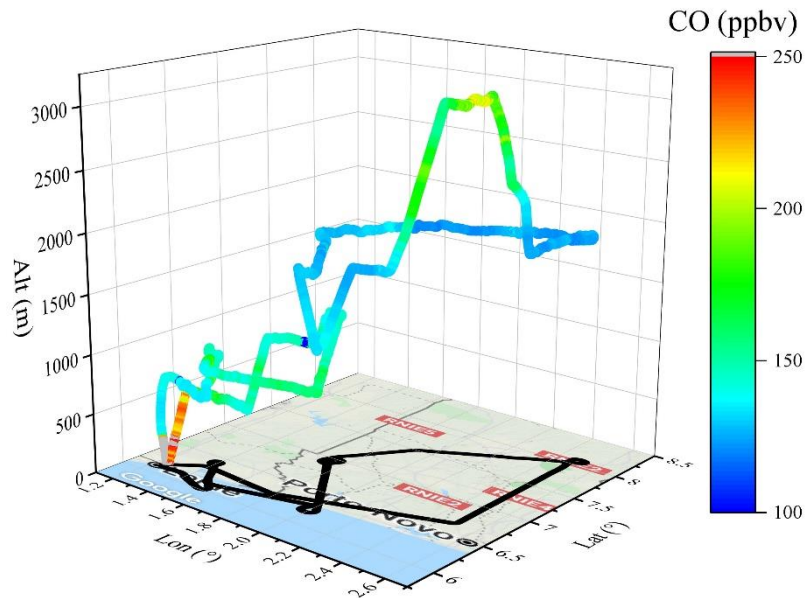


Figure S44: Flight trajectory colored by CO levels on flight-DACCIWA_20160629_1. Map copyright: © GoogleMap.

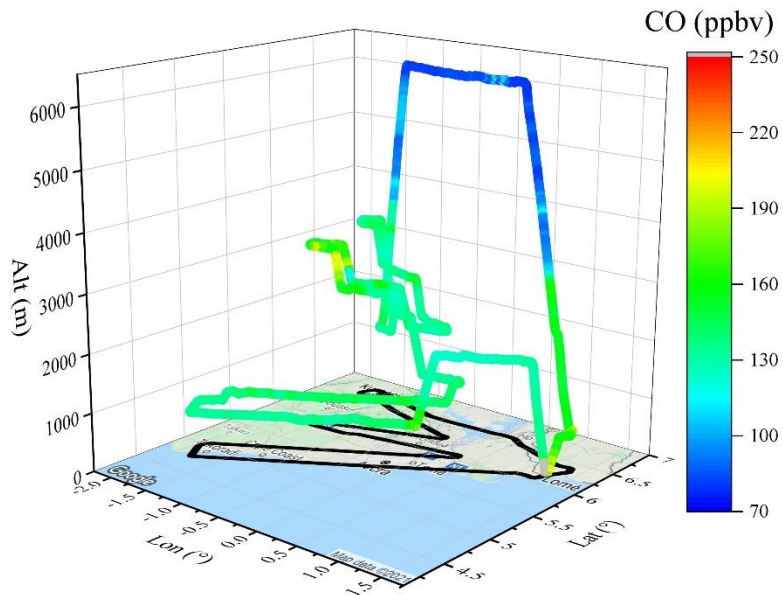


Figure S45: Flight trajectory colored by CO levels on flight-DACCIWA_20160630_1. Map copyright: © GoogleMap.

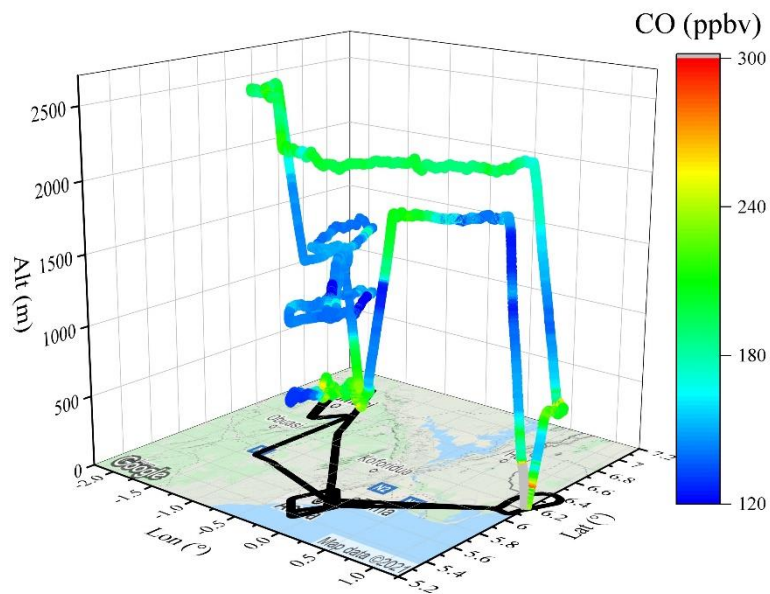


Figure S46: Flight trajectory colored by CO levels on flight-DACCIWA_20160701_1. Map copyright: © GoogleMap.

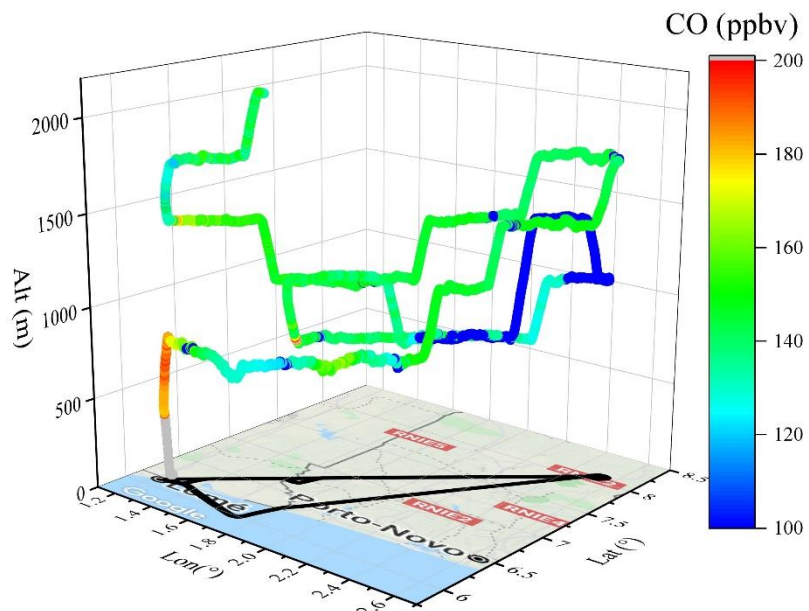


Figure S47: Flight trajectory colored by CO levels on flight-DACCIWA_20160705_1. Map copyright: © GoogleMap.

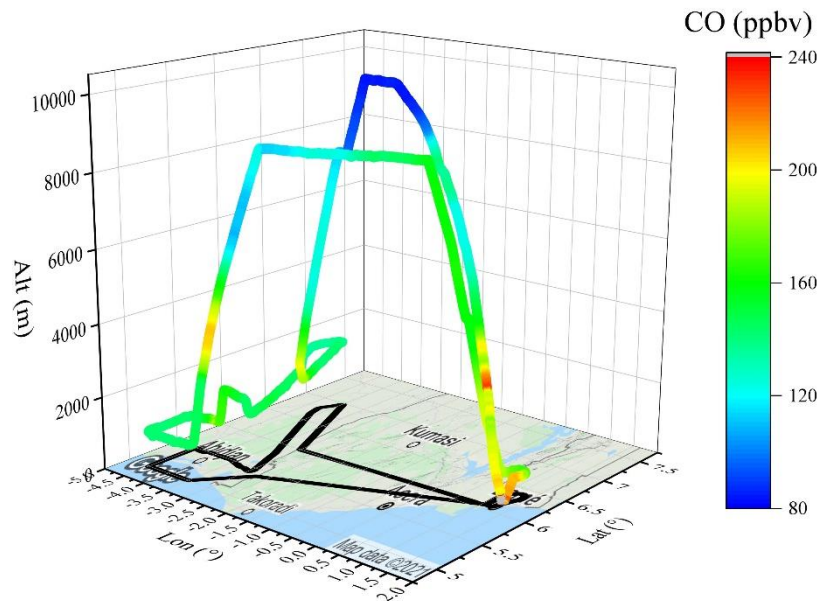


Figure S48: Flight trajectory colored by CO levels on flight-DACCIWA_20160706_1. Map copyright: © GoogleMap.

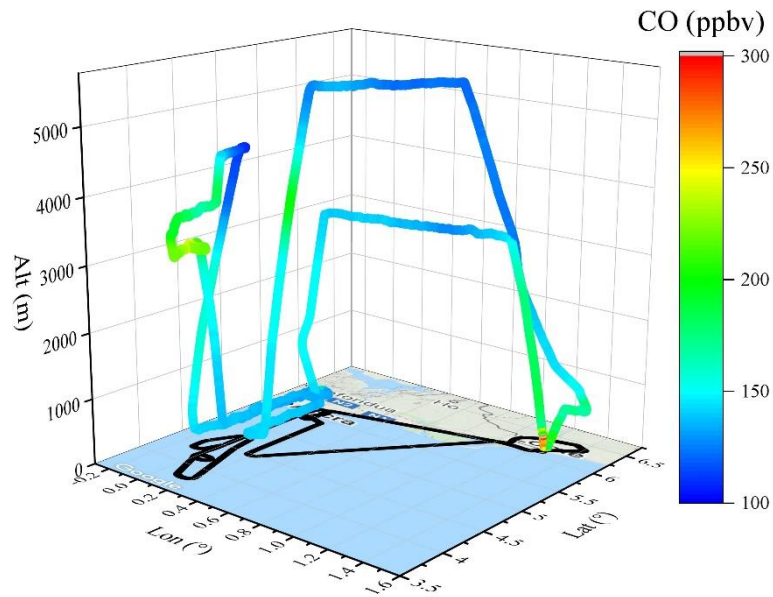


Figure S49: Flight trajectory colored by CO levels on flight-DACCIWA_20160707_1. Map copyright: © GoogleMap.

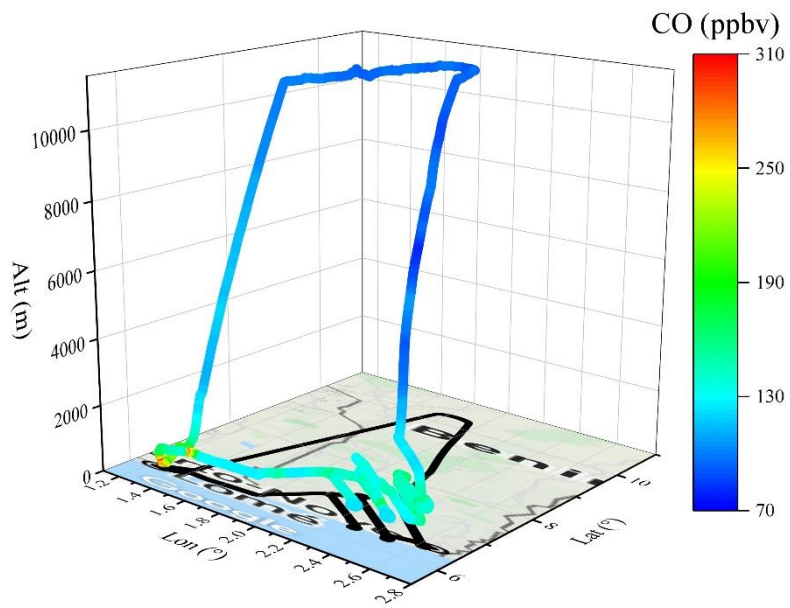


Figure S50: Flight trajectory colored by CO levels on flight-DACCIWA_20160708_1. Map copyright: © GoogleMap.

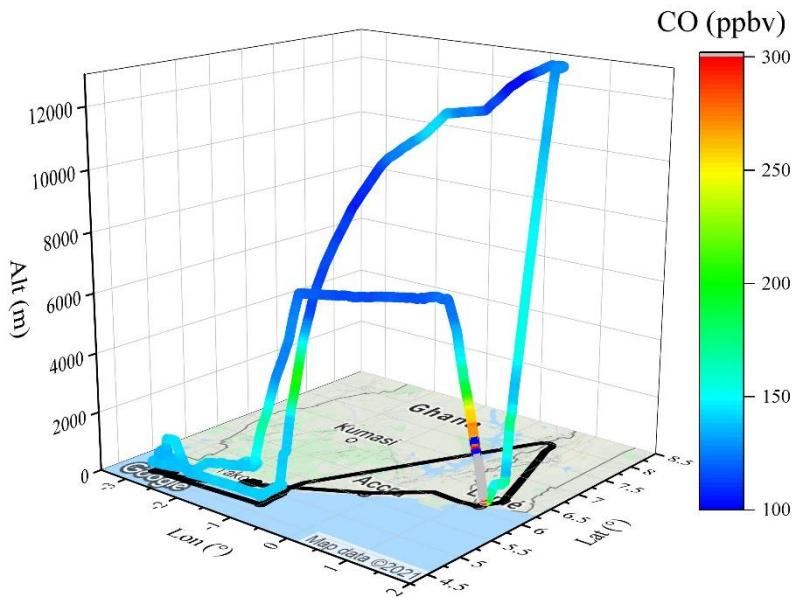


Figure S51: Flight trajectory colored by CO levels on flight-DACCIWA_20160710_1. Map copyright: © GoogleMap.

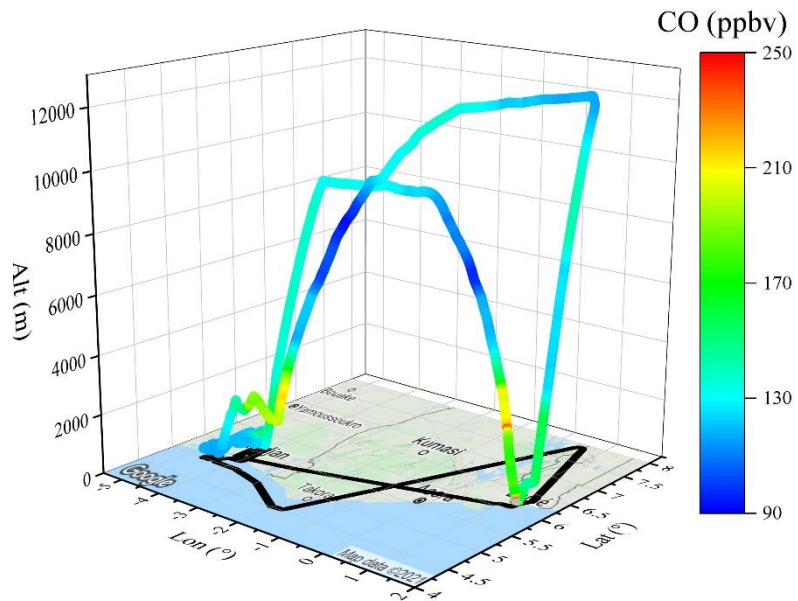


Figure S52: Flight trajectory colored by CO levels on flight-DACCIWA_20160711_1. Map copyright: © GoogleMap.

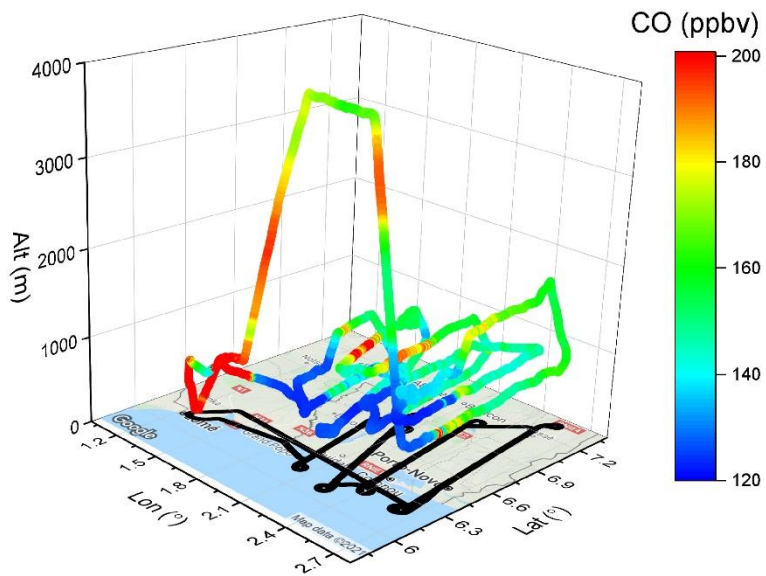


Figure S53: Flight trajectory colored by CO levels on flight-DACCIWA_20160712_1. Map copyright: © GoogleMap.

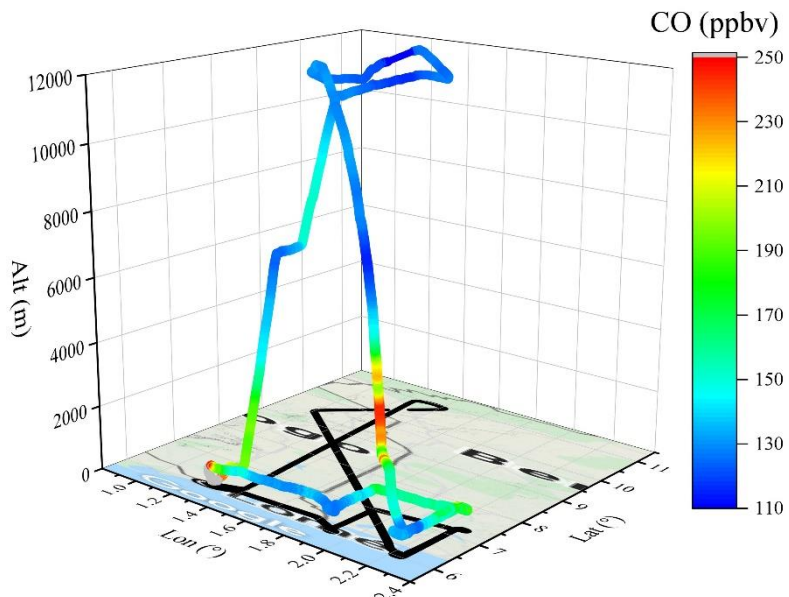


Figure S54: Flight trajectory colored by CO levels on flight-DACCIWA_20160713_1. Map copyright: © GoogleMap.

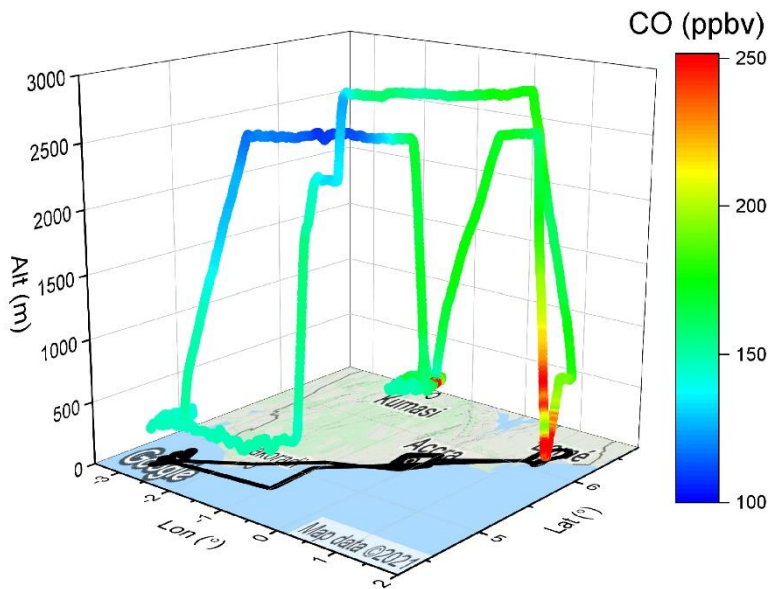


Figure S55: Flight trajectory colored by CO levels on flight-DACCIWA_20160714_1. Map copyright: © GoogleMap.

7. Flights during the MAGIC-2019 campaign

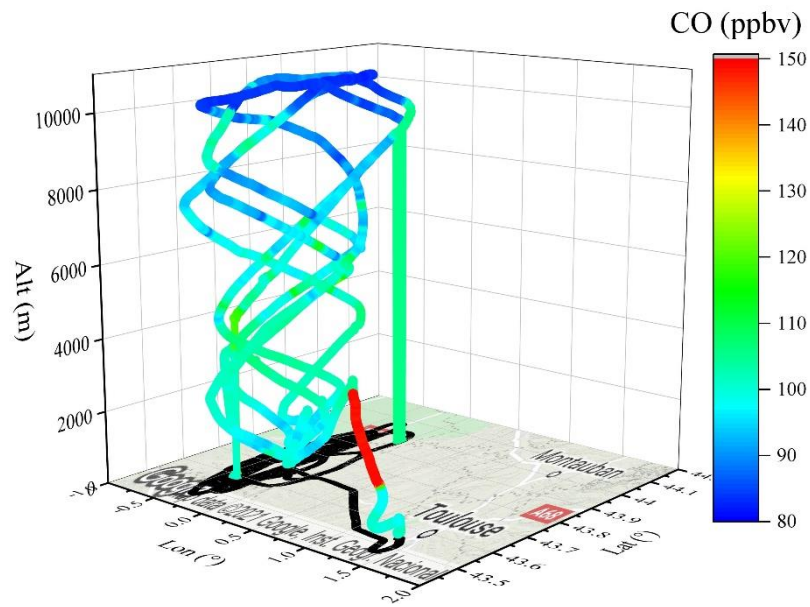


Figure S56: Flight trajectory colored by CO levels on flight-MAGIC_20190613_1. Map copyright: © GoogleMap.

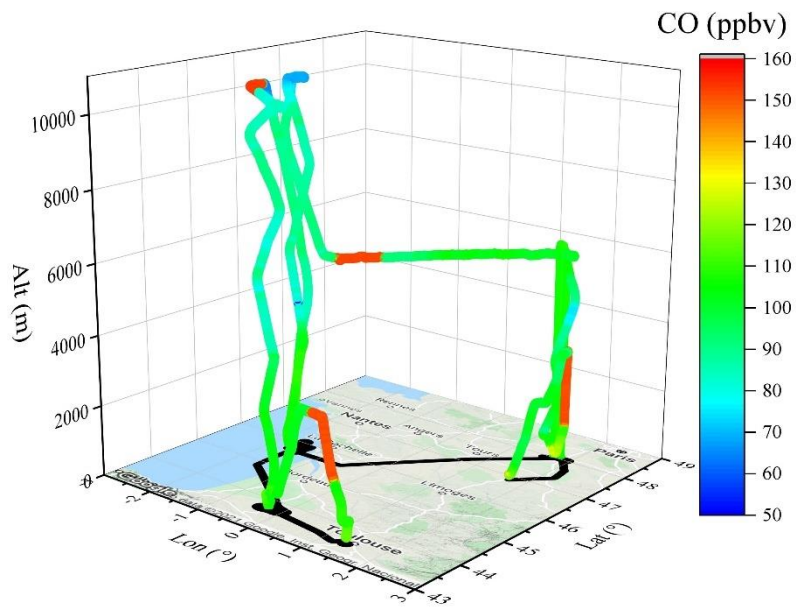


Figure S57: Flight trajectory colored by CO levels on flight-MAGIC_20190618_1. Map copyright: © GoogleMap.

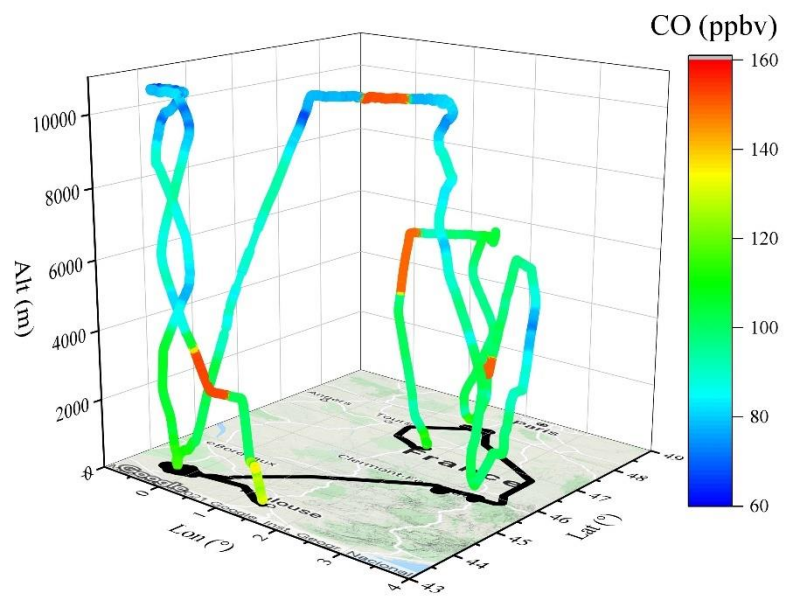


Figure S58: Flight trajectory colored by CO levels on flight-MAGIC_20190618_2. Map copyright: © GoogleMap.

8. Flights during the MAGIC-2021 campaign

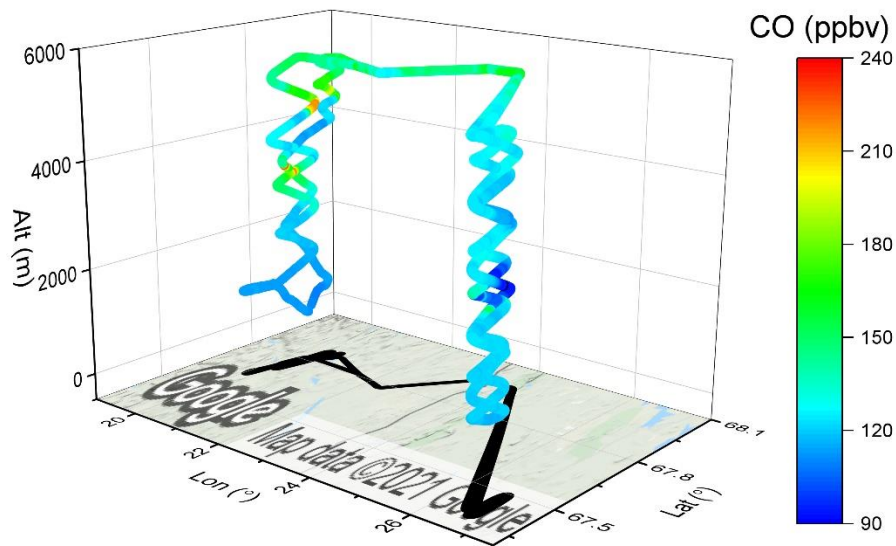


Figure S59: Flight trajectory colored by CO levels on flight-MAGIC_20210817_1. Map copyright: © GoogleMap.

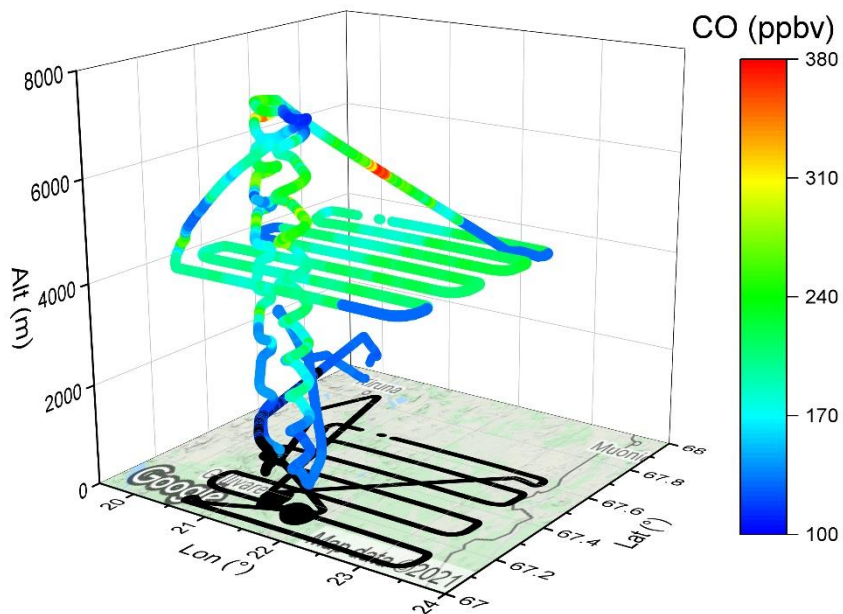


Figure S60: Flight trajectory colored by CO levels on flight-MAGIC_20210823_1. Map copyright: © GoogleMap.

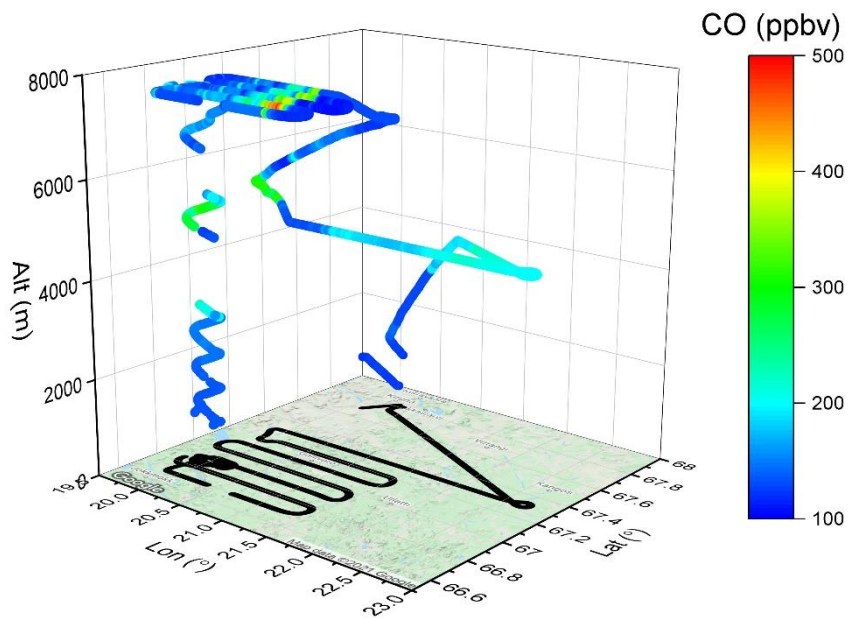


Figure S61: Flight trajectory colored by CO levels on flight-MAGIC_20210823_2. Map copyright: © GoogleMap.

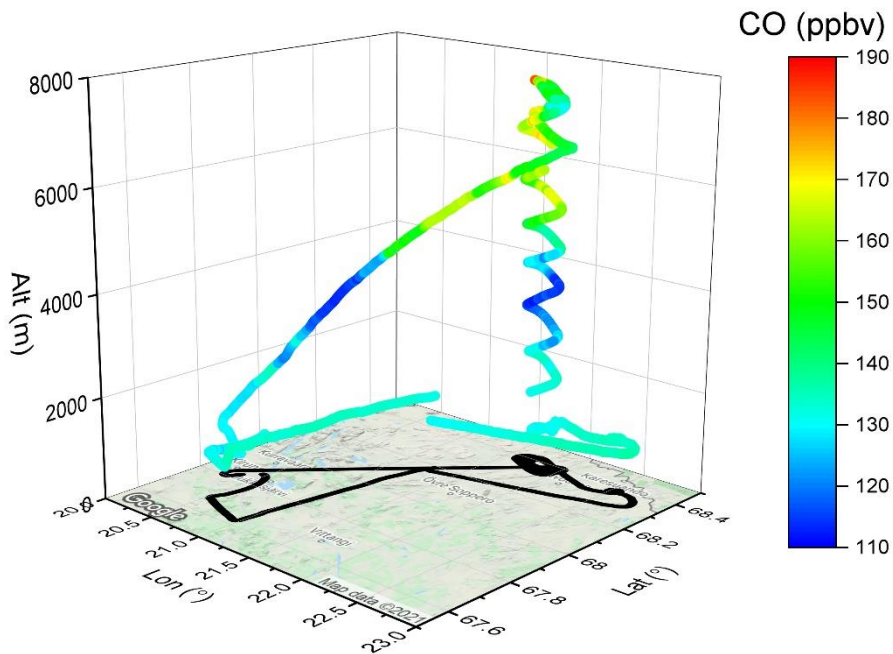


Figure S62: Flight trajectory colored by CO levels on flight-MAGIC_20210824_1. Map copyright: © GoogleMap.

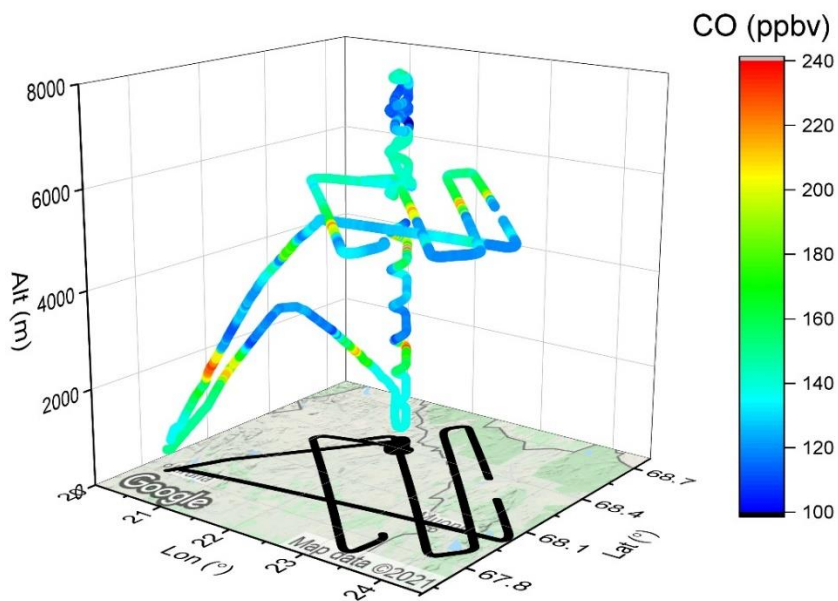


Figure S63: Flight trajectory colored by CO levels on flight-MAGIC_20210826_1. Map copyright: © GoogleMap.

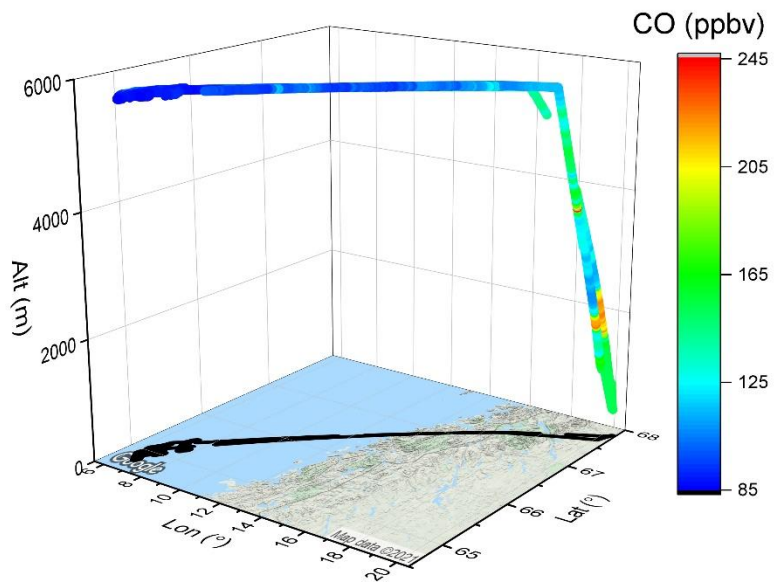


Figure S64: Flight trajectory colored by CO levels on flight-MAGIC_20210826_2. Map copyright: © GoogleMap.

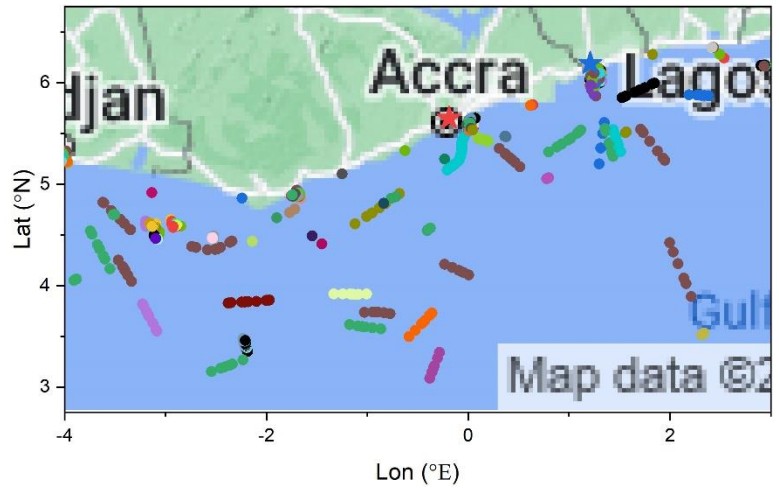


Figure S65: Ship position on 7 July 2016 (Date source: Marine Traffic). The red and the blue stars represent Accra and Lomé ports, respectively. © GoogleMap.