

1.211 Pollution events observed by IAGOS aircraft in various location, with focus to Taiwan extreme pollution in November 2017 and March 2018..

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Abstract:

Since 2001, MOZAIIC-IAGOS (<http://www.iagos.org/>) instruments have been flown on daily flights by international airlines to observe pollution by measuring carbon monoxide (CO) at high spatio-temporal resolution, in different key areas around the world.

This study shows evidence of intense and persistent pollution from the surface to the upper troposphere in different regions highly affected by biomass burning pollution and anthropogenic activities. Contributions of surface emissions injected at different altitude levels and transported downwind are investigated with the SOFT-IO module (modelling approach using the Lagrangian FLEXPART model coupled with emission inventories: MACCITY, EDGAR for anthropogenic emissions, GFAS, GFED for biomass burning).

We focus on Taiwan where intense pollution events occurred in November 2017 and March 2018. Pollution levels largely overshoot the air quality standards, due to the lack of normal dispersion winds. Very high levels of pollutants were measured by the Taiwan air quality networks and by the two IAGOS aircraft operating from/to Taipei.