



## **Airborne measurement of peroxy radicals in polluted air masses of East Asian origin during EMeRGe**

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Peroxy radicals are involved in the catalytic oxidation of the hydrocarbons and play a key role in the O<sub>3</sub> budget and in the oxidation capacity of the atmosphere. The accurate measurement of these radicals provides therefore essential information to the EMeRGe (Effect of Megacities on the Transport and Transformation of Pollutants on the Regional to Global Scales) project, which investigates the processing and transformation of polluted outflows from Major Population Centres (MPCs).

Airborne measurements of the total sum of peroxy radicals,  $RO_2^* = (HO_2 + \sum RO_2)$ , where R is an organic group, were conducted in Europe and in East Asia within EMeRGe by using the PeRCEAS instrument (Peroxy Radical Chemical Enhancement and Absorption Spectrometer), on board of the HALO research aircraft ([www.halo.dlr.de](http://www.halo.dlr.de)).

PeRCEAS successfully participated in 14 measurement flights during the EMeRGe Asia campaign in spring 2018 with airbase in Tainan, Taiwan. Outflows from different MPCs in South East Asia were investigated and polluted air masses of different origin and composition were probed.

This presentation will focus on the classification of the air masses encountered according to the age and photochemical activity indicated by the  $RO_2^*$  measured.