

**Post-doctoral position in Atmospheric Chemistry and Climate Interactions for IAGOS program at Université Paul Sabatier, Toulouse, France**



**Title:** Assessing regional and global interannual variability and trends of Ozone and CO as seen by MOZAIC-IAGOS.

**Duration:** 12 months (with the possibility of renewal) starting on 1 September 2014 or as soon as possible thereafter.

**Salary:** The successful applicant will be funded and employed by Université Paul Sabatier (UPS), with a gross monthly salary of 2400 to 3000 Euros (include unemployment, retirement and basic social security) depending on qualification, experience and personal situation.

**Environment:**

IAGOS (In-service Aircraft for Global Observing System) is one of the new and recent ERI (European Research Infrastructure). It is establishing and operating a distributed infrastructure for longterm observations of atmospheric composition, aerosol and cloud particles on a global scale from a fleet of initially 10-20 longrange in-service aircraft of internationally operating airlines.

IAGOS builds on the scientific and technological experience gained within the research projects MOZAIC (Measurement of Ozone and Water Vapour on Airbus in-service Aircraft), and CARIBIC (Civil Aircraft for the Regular Investigation of the Atmosphere Based on an Instrument Container). See <http://www.iagos.org> and <http://www.iagos.fr> for further details.

The vacancy is in the group “Ozone and precursors” team of Laboratoire d’Aérodologie, LA (<http://www.aero.obs-mip.fr>). LA is one of the 8 entities of Observatoire Midi-Pyrénées (OMP, <http://www.obs-mip.fr>), which is the Universe, Space, Earth and Environment Sciences department of the Université Paul Sabatier (UPS). The main research activity of this group is based on photochemistry of the troposphere and the lower stratosphere, and more precisely on the budget of ozone at the global scale (natural and anthropogenic production, transport, fluxes at the interfaces) and its time evolution (interannual variability and trends). The group is responsible for one main IAGOS instrument (Package 1, including ozone and CO measurements) and for the relationships with scientific and institutional users. This group is also involved in MACC (EU-FP7, <http://www.gmes-atmosphere.eu/>), which has the objective to build the Copernicus Atmospheric Service.

The candidate will be associated with the IAGOS-France coordinating team, will participate in the IAGOS meetings and will collaborate with the colleagues involved in the infrastructure (mainly CNRS, JÜLICH, Météo France, MPI-Mainz, and other IAGOS partners and numerous co-investigators).

**Work description:**

The primary objective of this position is to further assess the regional and global interannual variability and trends of ozone and CO throughout the troposphere, including the UTLS. Thanks to the MOZAIC-IAGOS program, almost 40,000 intercontinental flights have already been recorded since August 1994 covering most continents departing from Europe. Quasi global or regional studies are therefore possible. Candidates with an interest in the UTLS region or in exploiting tropospheric vertical profiles over megacities are encouraged to apply.

MOZAIC-IAGOS data may be complemented with other insitu data (ozone sondes) and/or satellite data (IASI) as well as lagrangian (FLEXPART) and chemistry transport (GEOS-Chem) modelisation tools. The objective is then to attribute the main origin (natural, anthropogenic) of such observed trends.

**Qualifications:**

- A PhD in atmospheric sciences, meteorology, physics, mathematics, or a related subject is required; A minimum of 1 year experience in data analysis and/or global modelling after the PhD will be appreciated.
- Good programming skills in MATLAB (and/or IDL) are essential; skills in FORTRAN-90 and UNIX scripting will be appreciated.
- The working languages of LA/OMP are French and English. Candidates must be able to work effectively in English. Interviews will be conducted in English or French.

**Applications including:** (i) a cover letter, (ii) a complete CV, (iii) the names (plus full address and e-mail) of two referees, and (iv) eventually recommendation letters should be sent preferably by e-mail to Valerie Thouret ([valerie.thouret@aero.obs-mip.fr](mailto:valerie.thouret@aero.obs-mip.fr)).

**Closing date:** Completed applications must be received not later than **15 June 2014**.