



The ATLAS Group of LAL Orsay (France) is seeking candidates for a **two-year**

Postdoctoral Research Associate position to work on the ATLAS experiment at CERN.

The ATLAS LAL Group was one of the main actors in the conception, construction and optimization of the ATLAS electromagnetic Liquid Argon (LAr) calorimeter. The Group (with 19 permanent physicists) is strongly involved in Higgs, SM and BSM physics, and also has an important participation in ATLAS upgrades, including Phase 2 Pixel Inner Tracker (ITk), future electronics for the LAr calorimeter, and development for the High Granularity Timing Detector (HGTD).

The successful candidate will take a leading role in physics analysis within the LAL ATLAS Photon Team. The main interests of the team are: the **precision measurements in the Higgs sector using the $H \rightarrow \gamma\gamma$ decay**, including work on the precise calibration of the photon response in the ATLAS LAr calorimeter, the measurement of the fiducial, differential and templated Higgs boson production cross sections, the measurement of the Higgs boson mass using the decay in photon pairs, the Effective Field Theory interpretation of the Higgs cross sections; and the **interplay between b quarks and photons in Higgs physics**, addressing the search for Flavour-Changing Neutral-Current $t \rightarrow cH(H \rightarrow \gamma\gamma)$ decay, for di-Higgs decays with $HH \rightarrow bb\gamma\gamma$, and for $t\bar{t}H(H \rightarrow \gamma\gamma)$ topologies.

The Research Associate will primarily be based at Orsay, with travels and short stays at CERN when necessary. He/she will also contribute to the operation and/or to the performance improvement of the ATLAS detector. The position is opened in the framework of the *ANR PhotonPortal* project, and in this context collaborations with the ATLAS Groups of LAPP Annecy and LPNHE Paris are foreseen.

How to apply. Candidates should send a CV, a brief statement of research interests and arrange to have at least three letters of reference sent to Louis Fayard (fayard@lal.in2p3.fr).

Starting date. The position can start as soon as February 1st, 2017.

Deadline. Applications received by December 1st, 2016 will receive full consideration. The call will remain open until filled.

More information. For further information on the LAL ATLAS Group and the project, please contact the ATLAS LAL Group Leader (Lydia Iconomidou-Fayard lfayard@lal.in2p3.fr) or any of the LAL staff physicists contributing to the project (Jean-Baptiste de Vivie devivie@lal.in2p3.fr; Marc Escalier escalier@lal.in2p3.fr; Louis Fayard; Daniel Fournier Daniel.Fournier@cern.ch; Marumi Kado kado@lal.in2p3.fr).

The website of the ANR PhotonPortal project can be found at:

<http://lappweb.in2p3.fr/photonportal/>

The website of the ATLAS LAL Group can be found at:

<https://www.lal.in2p3.fr/-Atlas->