



Post-doctoral position on extragalactic transients with the Cherenkov Telescope Array (CTA) project and the H.E.S.S. experiment.

JOB DESCRIPTION

In the framework of the French Excellence Initiative "ENIGMASS" labex, the 'Laboratoire d'Annecy-le-Vieux de Physique des Particules' (LAPP-IN2P3/CNRS) has an opening for a postdoctoral position within the Cherenkov Telescope Array (CTA) project and the H.E.S.S. experiment.

The LAPP institute is deeply involved in the design and construction of the CTA experiment (<https://portal.cta-observatory.org>) in particular through the prototype of Large Size Telescope (LST). The team contributes to this prototype through the camera support structure, the drive system and the camera security electronics. The team is also involved in software developments for the telescope control. The assembly of the telescope is close to start and the first light is expected mid 2017. The LAPP team is also involved in the data analysis of the H.E.S.S. experiment (<https://www.mpi-hd.mpg.de/hfm/HESS/>). The team collaborates closely with theoretical experts from the LAPTh institute.

The project focus on the study of extra-galactic transient sources with H.E.S.S. & CTA. Beyond their interest as astrophysics sources, flaring active galaxy nuclei or gamma-ray bursts are very promising probes for fundamental physics (Lorentz Invariance Violation, extragalactic background light...)

The project consists in participating in the commissioning of the LST prototype, in the first CTA alert follow-up and their analysis, while contributing actively in the data analysis already collected by H.E.S.S..

The main tasks and responsibilities of the position will be:

- 1) The first observations and alert follow-up with the first LST will start mid of 2017, after a commissioning of the various systems starting end of this year. The candidate will take part of the commissioning of the drive system and assume an active role in the analysis of the first data and the very first alert follow-up.
- 2) The candidate will take part in the data analysis of the second phase of the H.E.S.S. experiment. The data analysis results and consequent interpretation will be discussed in a multi-wavelengths context and multi-messengers approach through the combination of the *Fermi*-LAT data, public optical and X-ray data. The results will be interpreted in collaboration with theoretician from the LAPTh institute.

Further information may be obtained from Armand Fiasson (fiasson@lapp.in2p3.fr), Gilles Maurin (maurin@lapp.in2p3.fr) and David Sanchez (sanchez@lapp.in2p3.fr).

WORK CONDITIONS

Contract of 24 months with a possible 12 months extension. The anticipated starting date is between Oct 1st, 2016 and Jan. 1st 2017. Salary is commensurate with those of public service organisations in France.

The candidates must have a Ph.D. in Physics and research experience in experimental astroparticle physics. Applicants should send their CV, a brief statement of research interests, and arrange to have three letters of reference sent to Armand Fiasson (fiasson@lapp.in2p3.fr). The deadline for the application is September 1st, 2016; late applications will be accepted until the position is filled. Contacts : A.Fiasson (fiasson@lapp.in2p3.fr), G.Maurin (maurin@lapp.in2p3.fr) & D.Sanchez (sanchez@lapp.in2p3.fr).