**A 2 year post-doctoral position is opened for application at IRFU (Institut de Recherche sur les lois fondamentales de l’Univers) at the CEA Saclay and IPNO (Institut de Physique Nucléaire Orsay) at the University Paris-Sud at Orsay in the frame of the Laboratory of Excellence P2I0 (Physique des 2 Infinis et des Origines).**

**Description of the work**

The candidate will work on Deeply Virtual Compton Scattering experiments at COMPASS and JLab. These experiments are the most promising way to access the Generalized Parton Distribution Functions, which are interpreted as a tomography of the transverse plane for partons carrying a given fraction of the proton longitudinal momentum. The two experiments at COMPASS and JLab allow to get tomography in complementary kinematic domains: valence quarks at JLab using a 12 GeV polarized electron beam and sea quarks and gluons at COMPASS using 160 GeV positive and negative polarized muon beams available at CERN. Presently, a two years (2016-17) DVCS program is performed at COMPASS while a DVCS experiment has been just realized in 2016 at JLab in Hall A with the newly available 12 GeV beam and a new one is in preparation in Hall C for 2020.

During the first year of work (2018) the candidate will participate to the data analysis of the COMPASS DVCS experiments. The goal is to determine the absolute cross section with positive and negative muon beams to extract their sum and difference in order to get to real and imaginary parts of the Compton form factors (CFF) related to GPDs. In the second year (2019) the 2016 DVCS data analysis will be mostly ended and the candidate will use both COMPASS and JLab data to perform global extraction of GPDs over a wide kinematic range. This will allow him/her to evaluate dispersion relations on GPDs and to determine with the measurements of the real and imaginary parts of the CFF the D-term and shed light on the energy-momentum tensor related to confinement. He/she would also be able to participate to the preparations and commissioning of the JLab Hall C experiment.

Working on the analysis of a single process with similar experimental setups, but at different energies will promote the postdoc to a unique position with extremely high visibility in both COMPASS and JLab. With high-impact results published by the end of his/her term, and the advent of a new Electron Ion Collider, he/she will be in an excellent position to continue a fruitful career in the field.

 **Deadline for application is September 18, 2017.**

The postdoc contract is for two years can start in December 2017 and no later than beginning of 2018.Please feel free to forward this info to possible interested party. The applications (including a detailed CV, a cover letter and two letters of recommendation) are to be sent to:

Nicole d’Hose (Nicole.dhose@cea.fr)

Carlos Munoz Camacho (munoz@ipno.in2p3.fr)

For further information contact Nicole d’Hose or Carlos Munoz Camacho.

**Laboratories involved**

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