

Post-doc position on the ATLAS experiment at LPSC Grenoble (France): Search for Dark QCD and ML for hadronic jets

The **ATLAS group at LPSC Grenoble** invites applications for a postdoctoral position in the group. The two-year position offers a competitive salary and is funded with the «Dark QCD» project from the Excellence Laboratory « ENIGMASS » of Université Grenoble Alpes.

The search for alternative dark matter (DM) scenarios, such as dark QCD models, is generating a growing interest in the community. In some dark QCD models, the lightest dark hadron state is a DM candidate and there exists a massive mediator particle which can link this dark sector to the SM. The selected candidate would work on preparing and performing dark-hadron searches with the ATLAS detector at the LHC, using the characteristics of the associated jets (number of tracks, jet substructure, late shower development for long-lived dark hadrons,...), and on understanding the complementarity of the various signatures in terms of model coverage. The ATLAS LPSC group is also developing Deep Neural Networks methods to improve the jet energy and mass calibration. As part of this project, the candidate would also help extend the development context to the jet constituents in order to eventually more optimally calibrate them, using advanced techniques such as Recurrent Neural Networks.

Candidates must hold a **Ph.D. in Physics since at most two years** by the starting date (tentatively June 1st 2021) and have research experience in experimental elementary particle physics. Applicants should apply at <https://emploi.cnrs.fr/Offres/CDD/UMR5821-CHRVEL-080/Default.aspx?lang=EN> with their CV and a brief statement of research interests. Letters of recommendation should be sent to Marie-Hélène Genest (genest@lpsc.in2p3.fr). Preference will be given to applications received by **January 18th, 2021** (and not January 4th as initially indicated on the site, which will be prolonged), but the position will remain open until filled. Informal enquiries are welcome and may be made to Pierre-Antoine Delsart or Marie-Hélène Genest (delsart@in2p3.fr, genest@lpsc.in2p3.fr).

Contact:

Marie-Hélène Genest (genest@lpsc.in2p3.fr)

Pierre-Antoine Delsart (delsart@lpsc.in2p3.fr)