

619th ASRC Seminar

Date: 13:00 ~ 14:00 Friday, February 19

Location: KEK Tokai Campus No. 1 bldg.

Speaker: Dr. Alessandro Cardini
(Section of Cagliari, National institute of
nuclear physics, Italy)

Title: The LHCb Experiment and its upgrade

Abstract: The LHCb experiment is designed to perform high-precision measurements of CP violation and search for New Physics using the enormous flux of beauty and charmed hadrons produced at the LHC. The LHCb detector is a single-arm spectrometer with excellent tracking and particle identification capabilities. The operation and the results obtained from the data collected during Run1 and the first year of Run2 demonstrate that the detector is robust and functioning very well. In the next years of operation during Run2 LHCb will measure a large number of interesting channels in heavy flavor decays. However, the limit of 1 fb^{-1} of data per year cannot be overcome without improving the detector. An upgraded experiment featuring also a 40 MHz readout and a much more flexible software-based trigger will increase the data rate as well as the efficiency, in particular in the hadronic channels, widening our physics scope beyond that of heavy flavor. The current detector and its performances will be described in details during the first part of my talk. A complete overview of the upgraded experiment will be presented in the second part.

なお、今回のセミナーは、第47回「原子核ハドロン物理セミナー」を兼ねております。またKEK, J-PARC素粒子原子核セミナーとの共催です。セミナー内容は http://silver.j-parc.jp/hadron/hadron_seminar/index.html でご覧になれます。

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