



Joint EP/PP/LPCC seminars

SPEAKER: Vincenzo Vagnoni (INFN Bologna)
TITLE: **First results with charmless two-body
B-decays at LHCb, and future prospects**
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ABSTRACT

LHCb is an experiment which is designed to perform flavour physics measurements at the LHC.

Charged two-body charmless B decays (e.g. $B^0 \rightarrow K\pi$, $\pi\pi$, $B_s \rightarrow KK$, etc) receive significant contributions from loop diagrams and are thus sensitive probes of New Physics. Study of these modes is therefore an important physics goal of LHCb. First results will be presented, using around 37 pb^{-1} of data collected at $\sqrt{s}=7 \text{ TeV}$ in 2010. These results illustrate the power of the LHCb trigger system and particle identification capabilities of the RICH detectors in isolating clean samples of each final state, and include preliminary measurements of direct CP-violation in certain key modes. The prospects for these measurements in the coming run will be presented.

A brief survey will also be given of results and prospect in other areas of the LHCb physics programme.