



# LHC Seminar

SPEAKER: Eva Sicking (CERN)  
TITLE: **Multiple Parton Interactions in ALICE**  
DATE: Tue 05/03/2013 11:00  
PLACE: Council Chamber

## ABSTRACT

ALICE has studied observables in high energy proton-proton collisions which can provide insight into the physics of multiple parton interactions. We will present an overview of these measurements comprising the charged particle multiplicity distributions, the underlying event, the transverse sphericity, and the relation between the charged particle multiplicity and the  $J/\psi$  yield as well as the D-meson yield.

We will present in detail the measurement of the charged particle multiplicity dependence of per-trigger pair yields in azimuthal direction induced by low-energetic di-jets produced in proton-proton collisions. Using two-particle angular correlations with low transverse momentum thresholds, jet properties are measured on a statistical basis down to the lowest possible jet energies. The analysis can give information about the contribution from multiple parton interactions to particle production. Moreover, the results allow to optimize the parametrization of the jet fragmentation in phenomenological models, in particular at low momenta in the non-perturbative regime. The ALICE results are discussed in the framework of multiple parton interactions and they are compared to MC generators.