



LHC Seminar

SPEAKER: David Dobrigkeit Chinellato

TITLE: **Studying particle production in high-multiplicity proton-proton and proton-lead collisions with ALICE**

DATE: 19 Feb 2019, 11:00

PLACE: 500-1-001 - Main Auditorium

ABSTRACT

Recent measurements performed in high-multiplicity proton-proton (pp) and proton-lead (p-Pb) collisions have unveiled surprising features that are reminiscent of lead-lead (Pb-Pb) phenomenology. In Pb-Pb, the mechanisms that give rise to such features have been traditionally associated to the formation of a Quark-Gluon Plasma (QGP), so that these findings raise a crucial question: could it be that a QGP is formed already in small systems? In this presentation, I will report on the main results on identified particle production in high-multiplicity pp and p-Pb collisions and explore topics such as identified particle production and collective behaviour in these small systems. These results will be systematically compared to measurements from xenon-xenon (Xe-Xe) and Pb-Pb collisions as well as to predictions from Monte Carlo event generators that include the latest developments in pQCD-inspired phenomenology. Finally, I will summarize the remaining open questions and discussing how these will be addressed by future measurements