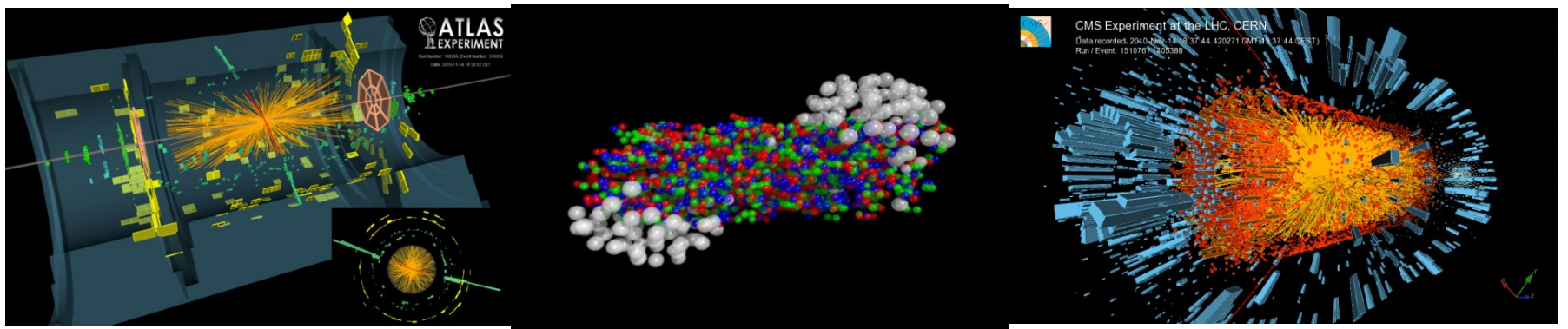


Heavy Ion Physics with the ATLAS and CMS Experiments.

Barbara Wosiek (INP Cracow)

Tuesday, 25 February 2014, 16:45 h, Auditorium



The LHC embarked on the heavy-ion research program with lead-lead runs at the center of mass energy of 2.76 TeV per colliding nucleon pair, and proton-lead runs at 5.02 TeV. The general purpose ATLAS and CMS instruments, with large acceptance and high granularity detectors for measuring hadrons, electrons, photons and muons are very well suited to study high-energy nuclear collisions, complementing and, in certain research areas, enhancing capabilities of the dedicated heavy-ion ALICE experiment. Both ATLAS and CMS have measured a wide range of properties of soft particle production in lead-lead and proton-lead collisions. These are supplemented with studies of high-transverse momentum probes. The latter include measurements of electro-weakly interacting probes such as W, Z bosons and photons as well as strongly interacting probes like charged hadrons, heavy quarks, quarkonia and jets. In the talk selected recent results with the nuclear collision data collected by the ATLAS and CMS experiments will be presented. The focus will be on high-transverse momentum phenomena, the domain where both experiments excel and which provide insight into parton shower modifications due to interactions with the hot and dense QCD medium.

- **Coffee, tea and cookies will be served at 16:30h**
- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**