

## Summary and news from LHCb (including First measurements of long-range near-side angular correlations in $\sqrt{s_{NN}} = 5\text{TeV}$ proton-lead collisions in the forward region with LHCb)

*Monday 23 May 2016 15:00 (30 minutes)*

Proton-lead and lead-proton data taking in 2013 has allowed LHCb to expand its core physics program into the regime of heavy ion physics. The results obtained so far will be briefly summarized. They include the measurement of the nuclear modification factors and forward-backward production of prompt and displaced  $J/\psi$ ,  $\Psi(2S)$  and  $\Upsilon$ s, and the production of prompt  $D^0$  mesons.  $Z$ -production in proton-lead collisions and angular particle correlations have also been measured for events of varying charged particle activity.

In 2015 the LHCb experiment expand its scope further in heavy ion physics and participated for the first time in the data-taking of Pb-Pb collisions. Simulation studies showed that up to semi-central lead-lead collisions can be analysed. Furthermore, a system for the injection of small amounts of gas into the LHCb collision area has been used, which allows fixed target physics with proton and lead beams. The physics reach of the experiment as well as first results from exploratory studies with Pb-Pb and fixed target interactions will be presented.

### Collaboration

LHCb

**Presenter:** BLOUW, Johan (Max-Planck-Gesellschaft (DE))

**Session Classification:** Collectivity in small systems