Recent results from the LHCf experiment

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The LHC-forward (LHCf) experiment, situated at the LHC accelerator, has measured neutral particles production in a very forward region (pseudo-rapidity > 8.4) in proton-proton and proton-lead collisions. The main purpose of the LHCf experiment is to test hadronic interaction models used in cosmic rays experiments to simulate cosmic rays induced air-showers in Earth's atmosphere.
The experiment is composed by two independent detectors located at 140m from the ATLAS's interaction point (IP1) on opposite sides; each detector is composed by two sampling calorimeters.
In this talk, latest physics results from p-p and p-Pb collisions (at $\sqrt{s} = 7$ and 5.02 TeV respectively) will be discussed; in particular, the inclusive energy spectra of neutrons in p-p collisions and the transverse momentum spectra of neutral pions for different pseudo-rapidity ranges in p-Pb collisions will be shown. Then, current status of the detectors upgrades for LHC operations in 2015 at $\sqrt{s} = 13$ TeV will be presented.