Contribution ID: **123** Type: **Plenary Session**

Measurements of the fluctuations of identified particles in ALICE at the LHC

Monday 7 August 2017 14:00 (30 minutes)

The event-by-event fluctuations of conserved quantities within a fixed rapidity range in ultrarelativistic nucleus-nucleus collisions give information about the state of matter created in these collisions as well as the phase diagram of nuclear matter. We will present the latest results from ALICE on net-proton fluctuations, which are closely related to net-baryon number fluctuations. Net-kaon and net-pion fluctuations will also be shown, and the effects of volume fluctuations and global conservation laws on these observables will be discussed. Furthermore, fluctuations in the identified particle ratios, which are quantified by the observable ν_{dyn}, will also be shown and compared with Monte Carlo models. These measurements are performed in Pb–Pb collisions at $\sqrt{s_{\mathrm{NN}}} = 2.76$ TeV using the novel Identity Method and take advantage of the excellent particle identification capabilities of ALICE.

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