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Searching for the critical point: news from fluctuations study in the NA61/SHINE experiment

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Heavy-ion collisions are a powerful device to probe the phase diagram of the strongly interacting matter. An issue of special interest is the transition between hadronic gas and quark-gluon plasma, especially the possible presence of the critical point. One of the methods of the critical point search is analyzing fluctuations and correlations of produced particles. An increase in the fluctuation signal is expected in the presence of the critical point. Placed at the CERN SPS, NA61/SHINE is a fixed-target experiment, performing a two-dimensional scan by colliding different systems (p+p, Be+Be, Ar+Sc, Xe+La, Pb+Pb) at different center-of-mass energies (5.1 - 16.8/17.3 GeV per nucleon pair). In this contribution, the latest results from NA61/SHINE, regarding intensive quantities of multiplicity and net-charge in p+p and ion+ion interactions and its comparison with model predictions, will be shown.

In-person participation

Yes

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