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# Charm physics in NA61/SHINE

NA61/SHINE (SPS Heavy Ion and Neutrino Experiment) is a fixed-target experiment operating at the CERN SPS accelerator. The main goal of the Collaboration is to study the properties of the phase transition between confined matter and quark-gluon plasma by performing a two-dimensional scan of the phase diagram of strongly interacting matter. Within this program, collisions of different systems (p+p, Be+Be, Ar+Sc, Xe+La, Pb+Pb) over a wide range of beam momenta (13A-158A GeV/c) have been recorded.

Recently, the physics program of NA61/SHINE was extended by measurements of open charm production in A+A collisions which is the main goal of NA61/SHINE beyond 2020. In order to meet the challenges of the required spatial resolution of primary and secondary vertex reconstruction, the detector was upgraded by a micro vertex detector. A Small-Acceptance version of the Vertex Detector (SAVD) was successfully commissioned in December 2016 and first pilot data were collected for Pb+Pb collisions at a beam momentum of 150A GeV/c. This contribution will present the motivation of open charm studies as well as the current status and details of the analysis of the collected Pb+Pb data.

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