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Open Charm measurements with a new silicon Vertex Detector at the NA61/SHINE experiment at CERN SPS

The heavy-ion programme of the NA61/SHINE experiment at CERN SPS has been extended hrough the use of new silicon Vertex Detector which provides precise measurements of exotic particles with short lifetime. The study of open charm mesons allows for investigation of the properties of the hot and dense matter produced in nuclear-nuclear collisions. The detector was designed to meet the challenges of primary and secondary vertexes reconstruction at high spatial resolution.

An initial version of the Vertex Detector called SAVD (Small Acceptance Vertex Detector) was installed last year, and data was collected. The status of the data analysis will be presented, covering a number of challenges related to tracking in inhomogeneous magnetic field, matching of tracks to existing TPCs, and extraction of physics results.

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