Contribution ID: **301** Type: **Poster**

D0 meson production in pp collisions at the LHC with ALICE and prospects for charm flow measurements in PbPb collisions

The ALICE experiment at LHC studies p-p and Pb-Pb collisions with the aim of investigating the properties of the high-density state of strongly-interacting matter, expected to be produced in Pb-Pb collisions.
D mesons are powerful probes of the medium since the charm quark is produced in a very short time scale and experiences all the evolution of the collision.
The measurement of the azimuthal anisotropy of D mesons production in PbPb semi-peripheral collisions is one of the goals of the heavy flavour physics program because directly related to the heavy quark elliptic flow.
The measurement of open charm production in p-p collisions, besides providing a reference for the study of nuclear effects in Pb-Pb collisions, is very interesting per se, as a test of perturbative QCD predictions at the high energy frontier.
The ALICE detector is well suited to accomplish these measurements thanks to the precise vertex reconstruction, tracking and PID capabilities.
In this poster the preliminary results on the D^0 production cross section in pp collisions, obtained by the D^0->Kpi channel, will be presented and the prospects for the measurement of the elliptic flow will be described.

Primary author: BIANCHIN, Chiara (Universita degli Studi di Padova-Universita & INFN, Padova-Unkn)

Presenter: BIANCHIN, Chiara (Universita degli Studi di Padova-Universita & INFN, Padova-Unkn)

Track Classification: Heavy flavor and quarkonia production