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## **D meson $v_n$ harmonics in PbPb collisions at 5.02 TeV with CMS**

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Because of their large mass, heavy quarks are produced primarily at early stages of heavy-ion collisions, and therefore experience the full evolution of the system and carry information about the extent of thermalization of the QGP. Azimuthal anisotropy parameters ( $v_n$ ) of charm and bottom hadrons provide unique information about the path length dependent interactions between heavy quarks and the medium. To what extent heavy quarks at low  $p_T$  flow with the medium is a good measure of the interaction strength. At high  $p_T$ ,  $v_2$  and  $v_3$  from path length dependent energy loss provide a powerful tool to study heavy quark energy loss mechanisms. With the large PbPb data sample at 5.02 TeV collected by the CMS detector during the 2015 LHC run, azimuthal anisotropy  $v_2$  and  $v_3$  of  $D_0$  meson is measured over a wide  $p_T$  range and at different centralities. In this talk, new results of  $D_0$  meson  $v_n$  parameters are presented, and compared to the charged hadron  $v_n$  at the same energy and the latest theoretical calculations.

### **Summary**

### **Presentation type**

Oral

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