

## Homework 11.06.2021: Flow

Download the program "Flow.cc" and the data "Flow\_ntuple.root" from the webpage. In the root file is a NTuple with about 15000 real ALICE events from Pb-Pb at 5.02 TeV.

**A)** Draw the correlation between positive and negative pseudo-rapidity event planes. Use the TH2D class.

**B)** At the moment only particles with a  $p_T$  of smaller than 3 GeV/c are used: "if(pt\_track < 3.0)". Use now only particles with a  $p_T$  larger than 3 GeV/c. What do you get? Interpret the result.

**C)** Now correlate the particles with the full event plane and extract  $v_2$  vs.  $p_T$  as discussed in the lecture.

**D)** Figure out what the "id" data member is.