

COST Workshop on Interplay of hard and soft QCD probes for collectivity in heavy-ion collisions

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Non-flow Effects on Q-cumulants

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One of the most used methods to compute flow coefficients in high-energy particle collisions is the Q-cumulant method. The method employs the mathematical concept of a cumulant which is meant to identify correlations to some order (between more particles in this case). For this reason, it is often said that the method removes lower order non-flow effects. A semi-theoretical study has been done to show that this is not (by design) true. Additionally, other effects of the particle distribution function can produce artificial flow signals. Such effects are demonstrated and discussed.

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