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Heavy Ion Collisions in Run 2 at the LHC

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Results from LHC run 1 have provided a wealth of new information on the properties of the matter produced in relativistic heavy ion collisions. This has been facilitated by developments of new experimental methods as well with the adaptation of precision techniques developed in high energy physics. The implications of these results mean that critical physics questions must be refined, while the improving experimental capabilities suggest a larger set of tools with which to answer these questions. This talk will briefly review some of these early milestones and set the stage for how both of these issues can be addressed in the run 2. In particular, the role of reconstructed jets and jet-based observables will be explored. The first measurements utilizing an event-by-event determination of flow harmonics were also performed during run 1, and the utility of such measurements in conjunction with traditional hard probes to provide more differential probes will be discussed. Finally, the application of such techniques to a future jet detector at RHIC and how to best utilize measurements from the two facilities will be discussed.