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Hadonization on Heavy-Ion Collisions in quark-gluon plasma SURESH AHUJA, xerox corporation — The QGP behaves like a near-perfect fluid with small specific shear viscosity, as revealed by the collective flow patterns in final-state hadron spectra being consistent with relativistic hydrodynamic simulations The recent experimental measurements on pp collisions at $\sqrt{s}$=13TeV and 5.02TeV have shown a very large abundance of heavy baryon production corresponding to a ratio of $\Lambda c/D0 \sim 0.6$, about one order of magnitude larger than what measured in e+e−, ep collisions and even in pp collisions at LHC, but at forward rapidity. The enhanced ratio of baryon to meson and number of constituent quark scaling for elliptic flows of hadrons at the intermediate transverse momentum (pT) are typical experimental signals for quark combination mechanism at hadronization. Heavy-quark transport from various model with their default parameters vary, however, by up to a factor of 5 at high momenta. Charmed hadron production in relativistic heavy-ion collisions can result in coalescence that includes hadronic states as well as the strict energy-momentum conservation, which ensures the boost invariance of the coalescence probability and the thermal limit of the produced hadron spectrum. By combining hadronization scheme with an advanced Langevin-hydrodynamics result in incorporating both elastic and inelastic energy loss of heavy quarks inside the dynamical quark-gluon plasma. Ration of $\Lambda c/D0$ and D-meson elliptic flow *are analyzed* at RHIC and the LHC. . Larger $\Lambda c/D0$ observed in Au+Au collisions at RHIC than in Pb+Pb collisions at the LHC is due to the interplay between the effects of the QGP radial flow and the charm quark transverse momentum spectrum at hadronization. It is also analyzed that charmed hadrons have larger sizes in medium than

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