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Experimental study of collective motion in the quark gluon plasma

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Collective phenomena have been studied to investigate a property of Quark Gluon Plasma in high-energy heavy-ion collisions at AGS, SPS and RHIC experiments. Whether the origin of elliptic and/or radial collective expansions is given in a partonic or a hadronic phase during the collisons is a key question for the experimental observables to be sensitive to the QGP or not. The number of quark scaling in the observed elliptic flow parameter v2 is one of intuitive evidences for the existence of the quark phase before the hadronization. The radial and elliptic flow of heavy quarks would also favour the strong interacting plasma phase. The modification of the near- and away-side jet shape and its relation to the elliptic anisotropy could prove the property of the matter in the phase. Experimental measurements especially on the collective motion of the high density and temperature matter created in high-energy heavy-ion collisions will be presented and discussed.