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Collective dynamics in dijet+QGP-fluid system[1] YASUKI TACHIBANA, Department of Physics, The University of Tokyo, TETSUFUMI HIRANO, Department of Physics, Sophia University — Compared with p+p collisions, dijet imbalance is enhanced in ultra-relativistic heavy-ion collisions as a consequence of jet quenching. Enhancement of low-p_T particles distributed upto large angle from jet axes is observed by the CMS collaboration at LHC [1]. A large fraction of the di-jet momentum imbalance is compensated by these low-p_T particles. On the other hand, according to recent results from the STAR collaboration, the dijet p_T-balance is restored by low-pT particles closer to the jet direction at RHIC[2]. Motivated by these latest results, the dynamical transport process of energy and momentum deposited from jets traversing expanding QGP-fluid is studied. We perform simulations of dijet asymmetric events in ultra-relativistic heavy-ion collisions. By solving relativistic hydrodynamic equations with source terms in fully (3+1)-dimensional Milne coordinates, we describe the collective flow in dijet+QGP-fluid system. We calculate the p_T distribution around dijet to interpret the events with large dijet imbalance both at LHC and at RHIC.

[1] Doga Gulhan [CMS Collaboration], talk at Quark Matter 2014.
[2] Jörn Putschke [STAR Collaboration], talk at Quark Matter 2014.

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Yasuki Tachibana
Department of Physics, The University of Tokyo

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