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The Hubble constant in Heavy Ion Collisions

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Results on determination of the microscopic Hubble constant for pions and nucleons in Au+Au collisions at $\sqrt{s_{NN}} = 7.8$ GeV for a range of times and three impact parameters are presented and discussed. The data are simulated within PHSD model. A typically used method based on the fit of the velocity profile is considered in detail. Also a new method for determination of the Hubble constant is proposed. It consists in the analysis of the statistical distribution of the divergence of the velocity field and getting the Hubble constant as a position of a particular peak of the distribution. A comparison of the methods is done.

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