

Pseudoscalar Meson Temporal Correlation Function for Finite Momenta in HTL approach

P. Czerski^(a), W.M. Alberico^(b), A. Beraudo^(b), A. Molinari^(b),

^(a) Institute of Nuclear Physics Polish Academy of Science, Kraków,

^(b) Dipartimento di Fisica Teorica dell'Università di Torino and INFN, Italy

The temporal pseudoscalar meson correlation function in a QCD plasma is investigated in a range of temperatures exceeding T_c and first time for a finite momenta which is of the experimental interest. The imaginary time formalism is employed for the finite temperature calculations. The behavior of the meson spectral function and of the temporal correlator is studied in the HTL approximation, where one replaces the free thermal quark propagators with the HTL resumed ones.

[1] W.M. Alberico, A. Beraudo, A. Molinari, Nucl.Phys. A750 (2005) 359-390

[2] W.M. Alberico, A. Beraudo, P. Czerski, A. Molinari, in preparation

E-mail: czerski@horus.ifj.edu.pl