

Abstract Submitted  
for the HAW09 Meeting of  
The American Physical Society

**A novel spectral broadening from vector-axial-vector mixing in dense matter**<sup>1</sup> MASAYASU HARADA, Nagoya University, CHIHIRO SASAKI, Technische Universitaet Muenchen — The presence of baryonic matter leads to the mixing between transverse  $\rho$  and  $a_1$  mesons through a set of  $\omega\rho a_1$ -type interactions, which results in the modification to the dispersion relation. We show that a clear enhancement of the vector spectral function appears below  $\sqrt{s} = m_\rho$  for small three-momenta of the  $\rho$  meson, and thus the vector spectrum exhibits broadening. We also discuss its relevance to dilepton measurements.

<sup>1</sup>Supported in part by the JSPS Grant-in-Aid for Scientific Research (c) 20540262.

Masayasu Harada  
Nagoya University

Date submitted: 01 Jul 2009

Electronic form version 1.4