Abstract Submitted
for the APR10 Meeting of
The American Physical Society

**Study of Hadronization Dynamics at JLab** RAPHAËL DUPRÉ[1], KAWTAR HAFIDI, Physics division - Argonne National Laboratory, CLAS COLLABORATION — The E02-104 experiment ran in the winter of 2004 in Hall B of Jefferson Lab. The goal of the measurements is to explore the dynamics of the process of hadronization. The experiment measures semi-inclusive deep inelastic scattering events produced on different nuclear targets ($^2$H, C, Fe and Pb). The multiplicity ratios ($R_A^h$) and transverse momentum broadening ($\Delta p_t^2$) have been extracted for various hadrons. Results for negative pions and analysis status on positive kaons and protons will be reported. The high luminosity available at Jefferson Lab and the large acceptance of the CLAS detector allow a multidimensional extraction of $R_A^h$ and $\Delta p_t^2$ for negative pions, which leads to better constraints on the existing models. Those results, along with the ones for positive pions, represent an important step toward the extraction of the characteristic times of hadronization. Finally, comparison between pions and kaons will allow the exploration of the flavor dependence of the hadronization process.

[1]also Université Claude Bernard Lyon 1

Raphael Dupre
Physics division - Argonne National Laboratory

Date submitted: 08 Oct 2009 Electronic form version 1.4