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Xiangdong Li* (xdli@amt.ac.cn), 55, Zhongguancun East Road, Beijing, 100190, Peoples Rep of China. *Riesz transforms and L^p -estimates of $\bar{\partial}$ on complete Kahler manifolds.* Preliminary report.

In this talk, we present some recent results in the study of the L^p -estimates and existence theorems of the $\bar{\partial}$ -operator on holomorphic Hermitian vector bundles over complete Kahler manifolds. As application, we prove some vanishing theorems of the L^p -cohomology on complete Klahler manifolds. The Riesz transforms associated with the Kodaira Laplacian play an essential role in this work. (Received September 13, 2010)