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Yanhui Mi* (ymi@purdue.edu), 3113 Chapelgate way, Apt N, West lafayette, IN 47906. *A stochastic volatility model for Levy process and Bayesian analysis with MCMC method.*

A stochastic volatility model for Black-Scholes and Levy process based on Ornstein-Uhlenbeck process was proposed before. In order to make faster and easier Monte Carlo simulation, we use some process (such as Levy subordinator and infinite divisible process) to modify this model and make more accurate estimation and prediction based on daily and higher frequency stock data. Then we develop Markov chain Monte Carlo (MCMC) and partial filtering algorithms for Bayesian estimation of these models. (Received January 22, 2010)