962-60-1017   **Jan Rosinski*** (`rosinski@math.utk.edu`), Department of Mathematics, University of Tennessee, Knoxville, TN 37996-1300. *Stochastic series representations of exponentially tilted stable processes.* Preliminary report.

We consider Lévy processes obtained by one or two sided Esscher transformation of stable processes. Such transformation induces exponential decay factors in the Lévy stable density. The resulting Lévy process, called an exponentially tilted stable (ETS) process, behaves like a stable process for a short period of time and slowly changes to a Gaussian one as time increases. Such processes have been used recently for modeling in statistical physics and financial mathematics. We show that ETS processes can be obtained by an upper cutoff of jumps of stable processes to the values of certain i.i.d. sequence of random variables. This representation provides an explicit coupling between ETS and stable processes, explains short and long time behavior of ETS processes, as well as can be used for computer simulation of such processes. (Received October 01, 2000)