1092-60-133 **Boris Buchmann**, **Ross Maller** and **David M Mason*** (davidm@udel.edu). *Laws of the Iterated Logarithm for Self-normalized Lévy Processes at Zero.*

We develop tools and methodology to establish laws of the iterated logarithm (LILs) for small times (as $t \downarrow 0$) for the "self-normalized" process $(X_t - at)/\sqrt{V_t}$, $t > 0$, constructed from a Lévy process $(X_t)_{t\geq 0}$ having quadratic variation process $(V_t)_{t\geq 0}$, and an appropriate choice of the constant a. We apply them to obtain LILs when X_t is in the domain of attraction of the normal distribution as $t \downarrow 0$, when X_t is symmetric and in the Feller class at 0, and when X_t is a strictly $\alpha-$ stable process. When X_t is attracted to the normal distribution, an important ingredient in the proof is a Cramér-type theorem which upper bounds the distance of the distribution of the self-normalized process from the standard normal distribution, a result which might be of separate interest. We shall show by example how self-normalizing by $\sqrt{V_t}$ nicely stablizes the behavior of X_t as t goes to zero. We shall also provide a brief overview of what is known about the asymptotic distribution at zero of such self-normalized Lévy processes. Our paper will soon appear in the *Transactions of the AMS*. (Received August 06, 2013)