1038-60-9 **Ross A Maller** (ross.maller@anu.edu.au) and **David M Mason*** (davidm@udel.edu).

Self-normalized Lévy process distributional convergence at small times.

Let X_t be a Lévy process and $V_t = \sigma^2 t + \sum_{0<s\le t}(\Delta X_s)^2,\ t > 0$, its quadratic variation process, where $\Delta X_t = X_t - X_{t-}$ denotes the jump process of X. We give stability and compactness results, as $t \downarrow 0$, for the "self-normalized" process $X_t/\sqrt{V_t}$, and as an application prove that $X_t/\sqrt{V_t} \to_d N(0,1)$, a standard normal rv, as $t \downarrow 0$, if and only if, for some nonstochastic function $b(t) > 0$, $X_t/b(t) \to_d N(0,1)$, as $t \downarrow 0$. Our asymptotic distributional results are the small time self-normalized Lévy process analogs of what is known for self-normalized sums of i.i.d. rvs. (Received November 13, 2007)