1035-60-475 **Joshua B. Levy*** (levy_j@utpb.edu), Department of Mathematics, The University of Texas of the Permian Basin, 4901 E. University Blvd., Odessa, TX 79762. *The long-range dependence of unbalanced log-fractional stable motion.* Preliminary report.

Continuing work on the dependence structure of infinite variance processes, we examine the moving-average defined for $t \in \mathbf{R} := (-\infty, \infty)$ by

$$U_t = \int_{\mathbf{R}} \left(a \left[\ln_0 (t-x)_+ - \ln_0 (-x)_+\right] + b \left[\ln_0 (t-x)_- - \ln_0 (-x)_-\right]\right) M_\alpha(\mathrm{d}x),$$

where $\ln_0(x) = \ln x$ if $x > 0$ and $= 0$ otherwise; $a \in \mathbf{R}, b \in \mathbf{R}, |a| + |b| > 0$; $1 < \alpha < 2$ and M_α is a $S\alpha S$ random measure having Lebesgue control measure. In the "well-balanced" case $a = b$, $U = \{U_t\}$ reduces to the familiar process, log-fractional stable motion (log FSM). It is, however, different from log-FSM if $a \neq b$. U is α-stable, hence, its variance is infinite, and has stationary increments. It is not H-self-similar if $a \neq b$, unlike log-FSM. Since the covariance does not exist, analogous measures are necessary to study the dependence structure of U. When one of them, the *covariation*, is applied to the increment process of U, a new result obtains a stronger form of dependence than is evidenced by log-FSM.

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