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Celine Lacaux and **Gennady Samorodnitsky*** (gs18@cornell.edu), School of ORIE, Cornell University, Ithaca, NY 14853. *Time-changed extremal process as a random sup measure.*

A functional limit theorem for the partial maxima of a long memory stable sequence produces a limiting process that can be described as a β -power time change in the classical Fréchet extremal process, for β in a subinterval of the unit interval. Any such power time change in the extremal process for $0 < \beta < 1$ produces a process with stationary max-increments. This deceptively simple time change hides the much more delicate structure of the resulting process as a self-affine random sup measure. We uncover this structure and show that in a certain range of the parameters this random measure arises as a limit of the partial maxima of the same long memory stable sequence, but in a different space. These results open a way to construct a whole new class of self-similar Fréchet processes with stationary max-increments. (Received December 17, 2014)