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Takashi Owada and **Gennady Samorodnitsky*** (gs18@cornell.edu). *Maxima of long memory stationary symmetric α -stable processes, and self-similar processes with stationary max-increments.*

We derive a functional limit theorem for the partial maxima process based on a long memory stationary α -stable process. The length of memory in the stable process is parametrized by a certain ergodic theoretical parameter in an integral representation of the process. The limiting process is no longer a classical extremal Fréchet process. It is a self-similar process with α -Fréchet marginals, and it has the property of stationary max-increments, which we introduce in this paper. The functional limit theorem is established in the space $D[0, \infty)$ equipped with the Skorohod M_1 -topology; in certain special cases the topology can be strengthened to the Skorohod J_1 -topology. (Received July 31, 2013)