

ON THE LOCAL TIME OF MULTIPARAMETER SYMMETRIC STABLE
PROCESSES. REGULARITY AND LIMIT THEOREM IN BESOV SPACES

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Abstract: Let $X = (X_z, z \in T_N = [0, l]^N)$ be a symmetric α -stable process, $1 < \alpha \leq 2$. Based on a Kolmogorov type continuity theorem we show Hölder conditions in L^p -norms for the local time of X with respect to the space and time variables, by distinguishing the cases where the time variables do or do not meet the axes. Weak convergence of the occupation integral is proved.

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