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Steven T. Morrow* (stmorrow@indiana.edu), Indiana University, Department of Mathematics, 831 East 3rd St, Bloomington, IN 47405. *A ‘Cousin of Coboundary’ Theorem for $C[0, 1]$ -Valued Random Fields with Moment Conditions.* Preliminary report.

For a given strictly stationary sequence of real-valued random variables and a given $p \in [1, \infty)$, it has been shown that the partial sums are L^p -bounded if and only if the sequence consists of the successive differences of another sequence which is also strictly stationary and has finite p -norm. This has been generalized to nonstationary real-valued random fields indexed by \mathbb{Z}^d , and to include the index $p = \infty$. Here we extend these results to nonstationary $C[0, 1]$ -valued random fields satisfying an additional moment condition. (Received September 22, 2010)