1127-60-201 **Na Zhang*** (zhangn4@mail.uc.edu), University of Cincinnati, Department of Mathematical Sciences, PoBox 210025, Cincinnati, OH 45221-0025, and **Magda Peligrad**. *On the normal approximation for random fields via martingale methods.*

We present a central limit theorem for strictly stationary random fields under a sharp projective condition. The assumption was introduced in the setting of random variables by Maxwell and Woodroofe and for certain random fields by Wang and Woodroofe. Compared to the results of Wang and Woodroofe, our paper has double scope. First, to provide a central limit theorem under a generalized Maxwell-Woodroofe condition. Second, to use a more general filtration. Our results are relevant for analyzing some statistics based on repeated independent samples from a stationary process. The tools for proving these results consist of new theorems for triangular arrays of martingales differences, which have interest in themselves. We present applications of our result to linear random fields and nonlinear random fields of Volterra-type, which provide new central limit theorems for these structures. (Received February 03, 2017)