

CORRECTION

RESIDUAL EMPIRICAL PROCESSES FOR LONG AND SHORT MEMORY TIME SERIES

Ann. Statist. **36** (2008) 2453–2470

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It has been brought to our attention that the limit distribution of Corollary 3.1 on page 2460 of [1] was incorrect. Corollary 3.1 and Remark 3.1 of [1] have to be modified as follows. These changes do not affect the other results in [1].

COROLLARY 3.1. *If Assumptions 2.1 and 3.1 hold and $H \in (1/2, 1)$, then*

$$\left[\sigma_n \sup_x F'(x) \right]^{-1} \sup_x |\hat{K}_n(x)| = o_p(1).$$

REMARK 3.1. This corollary reflects the effects of the slower convergence rate of the estimated parameter $\hat{\alpha}_{0n}$. This fact serves as a reminiscence of the classical Kolmogorov–Smirnov statistics problem when the underlying parameters are estimated; see Durbin (1976). When α_0 is known, the test statistic (1.5) is still valid, however. As pointed out by the reviewer, when $F = F(x, \theta)$ involves an unknown parameter θ , one should consider \hat{K}_n with $F(x)$ being replaced by $F(x, \hat{\theta}_n)$. When $H \leq 1/2$, it can be shown that the limit distribution of the statistic exists by means of the result of Wu (2003). The closed form of such a limit distribution is rather complicated and does not possess a simple expression, however, and is not presented here.

REFERENCES

- [1] CHAN, N. H. and LING, S. (2008). Residual empirical processes for long and short memory time series. *Ann. Statist.* **36** 2453–2470. [MR2458194](#)

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