

**CORRECTION TO  
“AN EXTENSION OF THE VITALI-HAHN-SAKS THEOREM”**

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(Communicated by Christopher D. Sogge)

Condition (2.2) below was missing in the statement of Theorem 2.1 in [1], which should read

**Theorem 2.1.** *Let  $\{\lambda_n\}$  and  $\lambda$  be  $\sigma$ -finite (nonnegative) measures on  $(X, \mathcal{B})$  such that, as  $n \rightarrow \infty$ ,*

$$(2.1) \quad \int_X v d\lambda_n \rightarrow \int_X v d\lambda \quad \forall v \in C_0(X).$$

*Assume also that every  $\lambda_n$  is absolutely continuous with respect to  $\mu$ , and*

$$(2.2) \quad \lambda_n(B) = \int_B u_n d\mu, \quad B \in \mathcal{B}, \quad n = 1, \dots, \quad \text{with } \liminf_{n \rightarrow \infty} \|u_n\|_\infty < \infty.$$

*Then  $\lambda$  is absolutely continuous with respect to  $\mu$ .*

In the proof of Theorem 2.1 in [1], for an arbitrary  $\mu$ -null set  $B \in \mathcal{B}$ , there is an open set  $G_\epsilon$  with  $B \subset G_\epsilon$  and  $\mu(G_\epsilon) < \epsilon$ . It was shown that

$$\liminf_{n \rightarrow \infty} \lambda_n(G_\epsilon) \geq \lambda(G_\epsilon) \geq \lambda(B).$$

On the other hand, from  $\int_{G_\epsilon} u_n d\mu \leq \mu(G_\epsilon)\|u_n\|_\infty$ , we have

$$\liminf_{n \rightarrow \infty} \lambda_n(G_\epsilon) = \liminf_{n \rightarrow \infty} \int_{G_\epsilon} u_n d\mu \leq \liminf_{n \rightarrow \infty} \mu(G_\epsilon)\|u_n\|_\infty \leq \epsilon \liminf_{n \rightarrow \infty} \|u_n\|_\infty.$$

Therefore, letting  $\epsilon \downarrow 0$ , we obtain  $\lambda(B) = 0$  and the proof is complete.

The missing condition (2.2) in Theorem 2.1 in [1], states that some subsequence of the  $\lambda_n$ 's must have bounded densities w.r.t.  $\mu$ .

REFERENCES

1. O. Hernández-Lerma and J.B. Lasserre, *An extension of the Vitali-Hahn-Saks Theorem*, Proc. Amer. Math. Soc. 124, pp. 3673-3676, 1996. MR **97f**:28012

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Received by the editors May 12, 1997.

1991 *Mathematics Subject Classification.* Primary 28A33, Secondary 28C15.

*Key words and phrases.* Measures, setwise convergence, absolute continuity.