CORRECTION TO

“AN EXTENSION OF THE VITALI-HAHN-SAKS THEOREM”

ONÉSIMO HERNÁNDEZ-LERMA AND JEAN B. LASSERRE

(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 \( (X, B) \) such that, as \( n \to \infty \),

\[
\int_X v \, d\lambda_n \to \int_X v \, d\lambda \quad \forall v \in C_0(X).
\]

Assume also that every \( \lambda_n \) is absolutely continuous with respect to \( \mu \), and

\[
\lambda_n(B) = \int_B u_n \, d\mu, \quad B \in B, \quad n = 1, \ldots, \quad \text{with} \quad \liminf_{n \to \infty} ||u_n||_\infty < \infty.
\]

Then \( \lambda \) is absolutely continuous with respect to \( \mu \).

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

\[
\liminf_{n \to \infty} \lambda_n(G_\epsilon) \geq \lambda(G_\epsilon) \geq \lambda(B).
\]

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

\[
\liminf_{n \to \infty} \lambda_n(G_\epsilon) = \liminf_{n \to \infty} \int_{G_\epsilon} u_n \, d\mu \leq \liminf_{n \to \infty} \mu(G_\epsilon)||u_n||_\infty \leq \epsilon \liminf_{n \to \infty} ||u_n||_\infty.
\]

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**


DEPARTAMENTO DE MATEMÁTICAS, CINVESTAV-IPN, APDO. POSTAL 14-740, MÉXICO D.F. 07000, MÉXICO

E-mail address: oherand@math.cinvestav.mx

LAAS-CNRS, 7 AVENUE DU COLONEL ROCHE, 31077 TOULOUSE CÉDEX, FRANCE

E-mail address: lasserre@laas.fr

Received by the editors May 12, 1997.

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

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