A SUPPLEMENT TO THE STRONG LAWS FOR WEIGHTED SUMS OF \( \varphi \)-MIXING RANDOM VARIABLES

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Abstract. Some complete convergence theorems for linear statistics that are weighted sums
\[ \sum_{i=1}^{n} a_{ni}X_{i} \]
are established, where \( \{X_{i}; n \geq 1\} \) is a sequence of \( \varphi \) - mixing random variables and
\( \{a_{ni}; 1 \leq i \leq n, n \geq 1\} \) is an array of constants. As an application, the Marcinkiewicz-Zygmund
strong law of large numbers for weighted sums of \( \varphi \) - mixing random variables is obtained.


Keywords and phrases: \( \varphi \)-mixing random variables, Marcinkiewicz-Zygmund strong laws, weighted
sums.

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