EXISTENCE OF STRONG M-BASES IN NONSEPARABLE BANACH SPACES

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In the paper the important question on existence of strong M-bases is considered. A new kind resolution of identity is introduced. Based on this resolution, necessary and sufficient conditions for existence of strong M-bases are determined. As a consequence, the existence of strong M-bases in certain Banach spaces is shown.

Keywords: strong M-basis; resolution of identity; WLD-, WCD-, WCG-space; compact of Valdivia, of Eberlein, of Gulko, of Corson

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