

# Turkish Journal of Mathematics

Turkish Journal

of

Mathematics

Proximality in  $L^1(I, X)$

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**Abstract:** Let  $X$  be a Banach space and let  $(I, \Omega, \mu)$  be a measure space. For  $1 \leq p < \infty$ , let  $L^p(I, X)$  denote the space of Bochner  $p$ -integrable functions defined on  $I$  with values in  $X$ . The object of this paper is to give sufficient conditions for the proximality of  $L^1(I, H) + L^1(I, G)$  in  $L^1(I, X)$ , where  $H$  and  $G$  are two proximal subspaces of  $X$  which include as a special case the proximality of  $L^1(I) \stackrel{\wedge}{\otimes} G + H \stackrel{\wedge}{\otimes} L^1(I)$  in  $L^1(I \times I)$ .

**Key Words:** Proximal, Banach spaces

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Turk. J. Math., **32**, (2008), 187-195.

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