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STABILIZING ISOMORPHISMS FROM $\ell_p(\ell_2)$ INTO $L_p[0, 1]$

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ABSTRACT. Let $1 < p \neq 2 < \infty$, $\varepsilon > 0$ and let T be an isomorphism from $\ell_p(\ell_2)$ into $L_p[0, 1]$. Then there is a subspace $Y \subset \ell_p(\ell_2)$, $(1 + \varepsilon)$ -isomorphic to $\ell_p(\ell_2)$ such that $T|_Y$ is an $(1 + \varepsilon)$ -isomorphism and $T(Y)$ is K_p -complemented in $L_p[0, 1]$, with K_p depending only on p . Moreover, $K_p \leq (1 + \varepsilon)\gamma_p$ if $p > 2$ and $K_p \leq (1 + \varepsilon)\gamma_{p/(p-1)}$ if $1 < p < 2$, where γ_r is the L_r norm of a standard Gaussian variable.

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