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A Remark on Boundedness of Calderon-Zygmund Operators in Non-Homogeneous Spaces

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摘要

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A Remark on Boundedness of Calderon-Zygmund Operators in Non-Homogeneous Spaces

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Abstract Let μ be a Radon measure on \mathbb{R}^d which may be non-doubling. The only condition satisfied by μ is that $\mu(B(x,r)) \leq Cr^n$ for all $x \in \mathbb{R}^d$, $r > 0$ and some fixed $0 < n \leq d$. In this paper, the authors prove that the boundedness from $H^1(\mu)$ into $L^{1, \infty}(\mu)$ of a singular integral operator T with Calder'on--Zygmund kernel of Hörmander type implies its $L^2(\mu)$ -boundedness.

Key words [Calder'on--Zygmund operator](#) [Hardy space](#) [\$L^{1, \infty}\(\mu\)\$](#) [Non-doubling measure](#)

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