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Weighted inequalities for commutators of one-sided singular integrals

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Abstract: We prove weighted inequalities for commutators of one-sided singular integrals (given by a Calderón-Zygmund kernel with support in $(-\infty, 0)$) with BMO functions. We give the one-sided version of the results in [C. Pérez, Sharp estimates for commutators of singular integrals via iterations of the Hardy-Littlewood maximal function, J. Fourier Anal. Appl., vol. 3 (6), 1997, pages 743–756] and [C. Pérez, Endpoint estimates for commutators of singular integral operators, J. Funct. Anal., vol 128 (1), 1995, pages 163-185]. We improve these results for one-sided singular integrals by putting in the right hand side of the inequalities a smaller operator and a wider class of weights.

Keywords: one-sided weights, one-sided singular integrals

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