WEIGHTED INEQUALITIES RELATED TO A MUCKENHOUPT AND WHEEDEN PROBLEM FOR ONE–SIDE SINGULAR INTEGRALS

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Abstract. In this paper we obtain for $T^+$, a one-sided singular integral given by a Calderón-Zygmund kernel with support in $(-\infty, 0)$, a $L^p(w)$ bound when $w \in A_1^+$. In [A. K. Lerner, S. Ombrosi and C. Pérez, $A_1$ Bounds for Calderón-Zygmund operators related to a problem of Muckenhoupt and Wheeden, Math. Res. Lett. 16 (2009), no. 1, 149–156.], the authors proved that this bound is sharp with respect to $||w||_{A_1}$ and with respect to $p$. We also give a $L^{1,\infty}(w)$ estimate, for a related problem of Muckenhoupt and Wheeden for $w \in A_1^+$. We improve the classical results, for one-sided singular integrals, by putting in the inequalities a wider class of weights.


Keywords and phrases: One-sided singular integrals, Sawyer weights, weighted norm inequalities.

REFERENCES


[18] B. Muckenhoupt, R. Wheeden, Personal communication to C. Pérez.


