TWO-WEIGHT INEQUALITIES FOR
HARDY OPERATOR AND COMMUTATORS

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Abstract. For the maximal operator $N$ related to the Hardy operator $P$ and its adjoint $Q$, we give the characterizations for weights $(u, v)$ such that $N$ is bounded from $L^p(v)$ to $L^{p, \infty}(u)$ and from $L^p(v)$ to $L^p(u)$ respectively. We also obtain some $A_p$ type conditions which are sufficient for the two-weight inequalities for the Hardy operator $P$, the adjoint operator $Q$ and the commutators of these operators with CMO functions.


Keywords and phrases: Hardy operator, Calderón operator, commutator, two-weight inequality, maximal function.

REFERENCES