

WEIGHT INEQUALITIES FOR ONE-SIDED POTENTIALS FOR CRITICAL WEIGHTS

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Abstract

Necessary and sufficient conditions are established for non-negative function f , $f \in L_{x^{p-1}}^p(R_+) \cap L_{loc}(R_+)$, whose Riemann–Liouville transform $R_\alpha f$ belongs to the space $L_v^p(R_+)$, where $v(x) = x^{(1-\alpha)p-1}$. The appropriate problem for the Weyl operator W_α is also solved.

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