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On conditions for the boundedness of the Weyl fractional integral on weighted L^p spaces

Abstract: In this paper we give a sufficient condition on the pair of weights (w, v) for the boundedness of the Weyl fractional integral I_α^+ from $L^p(v)$ into $L^p(w)$. Under some restrictions on w and v, this condition is also necessary. Besides, it allows us to show that for any $p : 1 \leq p < \infty$ there exist non-trivial weights w such that I_α^+ is bounded from $L^p(w)$ into itself, even in the case $\alpha > 1$.