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INTEGRAL CHARACTERISTICS OF $B_{k,n}$ MAXIMAL FUNCTIONS

Abstract

In this work we consider the generalized Bessel-Fourier shift operator, by means of which Hardy-Littlewood-Bessel-Fourier maximal functions ($B_{k,n}$-maximal functions) are defined and investigated. The boundedness of $B_{k,n}$-maximal functions from $L_1^{\gamma_{k,n}}\left(1+\ln^+ L_1^{\gamma_{k,n}}\right)\left(R_{k,+}^n\right)=L_1\left(1+\ln^+ L_1\right)\left(R_{k,+}^n, x_{k,n}^{\gamma_{k,n}}dx\right)$ space to space $L_1^{\gamma_{k,n}}\left(R_{k,+}^n\right)\equiv$ $\equiv L_1\left(R_{k,+}^n, x_{k,n}^{\gamma_{k,n}}dx\right)$ is proved.