

**$L_p - L_q$ - ESTIMATES FOR SOME FRACTIONAL TYPE
OPERATORS WITH OSCILLATING KERNELS**

Maula A. Betilgiriev, Denis N. Karasev, Vladimir A. Nogin

Abstract

We consider a class of multidimensional fractional type operators whose kernels are oscillating at infinity. We describe convex sets in the $(1/p, 1/q)$ – plane for which these operators are bounded from L_p into L_q and indicate the domains where they are not bounded. In some cases we describe their \mathcal{L} – characteristics.

Mathematics Subject Classification: 46E35, 26A33

Key Words and Phrases: potential-type operators, characteristic, symbol, oscillating kernel, $L_p - L_q$ – estimates, \mathcal{L} – characteristic