Braverman, M. Sh.

On a class of operators. (English) Zbl 0732.47033

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Let ϕ be a non-negative function defined on (0,1) which satisfies ϕ (xy)$\leq B\phi(x)\phi(y)$ for some constant B. Put

$$(T_\phi f)(x) = \int_0^1 f(xy)\phi(y)dy.$$

The conditions are obtained under which T_ϕ is bounded in various function spaces. In particular, the weights are characterized for which T_ϕ is bounded in classical Lorentz space $\Lambda_p(v)$. For $\phi \equiv 1$ this provides an alternate proof of a recent result of Arinio and Muckenhoupt.

Reviewer: M.Sh.Braverman

MSC:

47B38 Linear operators on function spaces (general)
46E30 Spaces of measurable functions (L^p-spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)

Keywords:

inequality; weights; Lorentz space

Full Text: DOI