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LOWER BOUND FOR THE NORM OF LOWER TRIANGULAR MATRICES ON BLOCK WEIGHTED SEQUENCE SPACES

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Abstract. Let $1 < p < \infty$ and $A = (a_{n,k})_{n,k\geqslant 1}$ be a non-negative matrix. Denote by $\|A\|_{w,p,F}$, the infimum of those U satisfying the following inequality:

$$\|Ax\|_{w,p,F} \leqslant U\,\|x\|_{w,p,I},$$

where $x \geqslant 0$ and $x \in l_p(w,I)$ and also $w = (w_n)_{n=1}^{\infty}$ is a decreasing, non-negative sequence of real numbers. The purpose of this paper is to give a lower bound for $\|A\|_{w,p,F}$, where A is a lower triangular matrix. In particular, we apply our results to Weighted mean matrices and Nörlund matrices which recently considered in [2,3,6] on the usual sequence spaces. Our results generalize some work of Jameson, Lashkaripour, Frotannia and Chen in [4,7,8].

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