Bounds for matrices on weighted sequence spaces

By D. Foroutannia.

Let $w = (w_n)$ be a decreasing non-negative sequence and F be a partition of positive integers. If $F = (F_n)$, where each F_n is a finite interval of positive integers and also for all n, $\max F_n < \min F_{n+1}$. The block weighted sequence space $l_p(w, F)$ is the space of all real sequences $x = (x_n)$ with

$$\|x\|_{p,w,F} = \left(\sum_{n=1}^{\infty} w_n | < x, F_n > |^p \right)^{1/p} < \infty,$$

where $< x, F_n >= \sum_{i \in F_n} x_i$.
In this paper, we consider inequalities of the form $\|Ax\|_{p,w,F} \leq L\|Bx\|_{q,v,F}$, where A and B are matrix operators, x decreasing non-negative sequence and w, v are weights and also F is a block. Moreover, this study is an extension of some works of which are studied before on sequence spaces $l_p(v)$ by J. Pecaric, I. Peric and R. Roki in [3].