



**VALUATED  $p^n$ -SOCLES AND  $C_\lambda$   $n$ -SUMMABLE  
ABELIAN  $p$ -GROUPS**

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**Abstract**

Let  $\lambda \leq \omega_1$  be an arbitrary ordinal and let  $n \geq 1$  be an arbitrary natural. We establish a number of results on  $n$ -summable and  $C_\lambda$   $n$ -summable abelian  $p$ -groups generalizing classical theorems due to Hill and Hill-Megibben proved for direct sums of countable abelian  $p$ -groups.

**Keywords and phrases:** valuated  $p^n$ -socles,  $n$ -summable groups,  $C_\lambda$   $n$ -summable groups, strongly  $n$ -totally projective groups,  $p^\lambda$ -projective groups.

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