
On a characterization of syndetic weighted backward shifts

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We will show a characterization of syndetic weighted backward shifts on $X = c_0(\mathbb{N})$ or $l_p(\mathbb{N})$ ($1 \leq p < \infty$), i.e., for T a weighted backward shift on X , the set $\{n \in \mathbb{N} : T^n(U) \cap V \neq \emptyset\}$ has bounded gaps for any non-empty open sets U and V in X . It turns out its intimate relationship with hypercyclic operators satisfying a kind of recurrence described in terms of essential idempotents of the Stone-Cech compactification of \mathbb{N} .