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Nicholas R Baeth* (nicholas.baeth@fandm.edu), Lancaster, PA 17604. *Factorization in monoids that are almost complement-finite ideals of free monoids*. Preliminary report.

Let F be a commutative cancellative free monoid with unique unit element 1. If H is a submonoid of F with $1 \in H$, $0 < |F \setminus H| < \infty$, and satisfying the condition that whenever $h \in H \setminus \{1\}$ and $f \in F$, $fh \in H$, then H is a non-Krull C -monoid. Moreover, the class semigroup $\mathcal{C}^*(H, F)$ has only one nontrivial idempotent element. Utilizing this structure we give a transfer homomorphism from H to the monoid of formal products of elements in $\mathcal{C}^*(H, F)$ whose actual product is idempotent. The Erdős-Burgess constant then gives information about arithmetic in H much the way that the Davenport constant gives information about arithmetic in Krull monoids. (Received January 24, 2019)