1056-16-129 **Radoslav M. Dimitric*** (rdimitric@juno.com), Pittsburgh, PA. *ON DUALIZING THE NOTION OF SLENDERNESS.* Preliminary report.

Let C be an additive category with infinite coproducts $\coprod$. There are a number of ways to dualize the well-known notion of slenderness. The most correct one is the following: An object $M \in Obj\, C$ is called a *coslender object* if, for every family of objects $\{A_n : n \in \mathbb{N}\}$, and every morphism $f : M \longrightarrow \coprod A_n$, there are morphisms $f_{n_i} : M \longrightarrow A_{n_i}$, $i \in \{1, 2, \ldots, k\} \subset \mathbb{N}$, such that $f = \sum_{i=1}^{k} p_{n_i} f_{n_i}$, where $p_{n_i} : A_{n_i} \longrightarrow \coprod A_n$ are the natural coproduct morphisms (the notion is essentially due to Mitchell (1965) and Rentschler (1969) under the names of "small" and "Σ-type" respectively). I will examine some notions of coslenderness and will look in particular into conditions and consequences when and if the countable index set $\mathbb{N}$ may be replaced by an arbitrary index set. (Received July 28, 2009)