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**Ruth E Vanderpool\*** (rvanderp@uoregon.edu), Department of Mathematics, 1222 University of Oregon, Eugene, OR 97405. *Homology of a chain complex over  $p$ -complete abelian groups*. Preliminary report.

$P$ -complete abelian groups do not form an abelian category and thus behave unexpectedly when considering chain complexes and homology on these chain complexes. In particular, traditional homology fails to satisfy the axioms for a homology functor. I will explain where the failure occurs and introduce a number of other reasonable homology candidates that, surprisingly, also fail. (Received September 17, 2008)