1023-20-263   **Peter Loth*** (`lothp@sacredheart.edu`), Department of Mathematics, Sacred Heart University, 5151 Park Avenue, Fairfield, CT 06825. *Almost pure subgroups of locally compact abelian groups.* Preliminary report.

A proper short exact sequence $0 \to A \xrightarrow{\alpha} B \to C \to 0$ in the category of locally compact abelian groups is said to be *almost pure* if $\alpha(A) \cap nB \subseteq \overline{n\alpha(A)}$ for every positive integer n. In this paper, the concept of almost purity is studied. The elements of $\mathrm{Ext}(C, A)$ represented by almost pure exact sequences form a subgroup which is denoted by $\mathrm{Apext}(C, A)$. We determine those groups A having the property that $\mathrm{Apext}(C, A) = 0$ for all groups C, and those groups C having the property that $\mathrm{Apext}(C, A) = 0$ for all groups A. (Received August 31, 2006)