1020-46-52 **Lawrence G. Brown*** (lgb@math.purdue.edu), Dept. of Mathematics, Purdue University, W. Lafayette, IN 47907-2067, and **Gert K. Pedersen**. *Limits and C^*-Algebras of Low Rank or Dimension.*

We explore various limit constructions for C^*-algebras, such as composition series and inverse limits, in relation to the notions of real rank, stable rank, and extremal richness. We also consider extensions and pullbacks. We identify some conditions under which the constructions preserve low rank for the C^*-algebras or their multiplier algebras. We also discuss the version of topological dimension theory appropriate for primitive ideal spaces of C^*-algebras and provide an analogue for rank of the countable sum theorem of dimension theory. As an illustration of how the main results can be applied, we show that a CCR algebra has stable rank one if and only if it has topological dimension zero or one, and we characterize those σ-unital CCR algebras whose multiplier algebras have stable rank one or extremal richness. (The real rank zero case was already known.) (Received August 07, 2006)