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Julian M Buck* (jbuck@fmarion.edu), Department of Mathematics, PO Box 100547, Florence, SC 29506. *Smallness and Comparison Properties in Certain Topological Dynamical Systems*. Preliminary report.

We survey recent work (by N. Christopher Phillips, Taylor Hines, the author, and others) on certain types of regularity properties for topological dynamical systems, which have important applications to the classification theory of C^* -algebras. Concepts of smallness and comparison for closed sets, especially in the case of minimal dynamical systems, will be presented and compared, and these will be used to formulate regularity properties for the dynamical systems themselves. Explicit examples show these properties are weaker in general than finite covering dimension for the space. Several open questions will be presented. (Received September 23, 2012)