1009-37-59 **Ethan M. Coven*** (ecoven@wesleyan.edu), Department of Mathematics, Wesleyan University, Middletown, CT 06459, **Marcus Pivato** (pivato@xaravve.trentu.ca), Department of Mathematics, Trent University, Peterborough, Ontario K9L 1Z8, Canada, and **Reem Yassawi** (ryassawi@trentu.ca), Department of Mathematics, Trent University, Peterborough, Ontario K9L 1Z8, Canada. *Prevalence of Odometers in Cellular Automata.*

We consider left permutative cellular automata Φ with no memory and positive anticipation, defined on all doubly infinite sequences with entries from a finite alphabet. For some of these automata, including all those defined on 2-letter alphabets which are "linear in the first variable," there is a dense set of points x such that Φ restricted to $\overline{\{\Phi^i(x) : i \geq 0\}}$ is topologically conjugate to the n-adic odometer (n = size of alphabet), the "+1" map on the n-adic integers. For the rest of these automata, there is a dense set of points x such that Φ restricted to $\overline{\{\Phi^i(x) : i \geq 0\}}$ is topologically conjugate to a generalized odometer, the "+1" map on some profinite group.

For each fixed point z of Φ, the set of points $x \in \{y.z : y \text{ arbitrary}\}$, where the dot lies between places 0 and 1, such that Φ restricted to $\overline{\{\Phi^i(x) : i \geq 0\}}$ is topologically conjugate to an odometer or a generalized odometer is a dense G_δ subset of $\{y.z : y \text{ arbitrary}\}$ equal to the set of points with infinite Φ-orbits. (Received August 01, 2005)