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Benjamin J Thirey* (benjamin.thirey@soc.mil), Box 531, New Vienna, OH 45159, and **Lee A Evans** (lee.a.evans14.mil@mail.mil), PO Box 531, New Vienna, OH 45159. *Effect of Persistent States in Cellular Automata.*

Cellular Automata have been studied with great interest due to the inherent complexity which arises from repeated use of a simple set of rules which deterministically results in the state of the system at the next time interval. The set of rules governing cell transitions between discrete intervals is adjusted to accommodate states which persist over multiple time-steps, reflecting real world systems whereby the composition of a system at a particular point in time has the potential to produce lasting effects for the duration of several subsequent intervals. We investigate the effect that persistent cells have upon CA phenomena over longer time-frames and observe generalized effects resulting from the composition of the initial state. (Received August 12, 2013)