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**J. Angela Hart Murdock\*** (amurdock@mtsu.edu), MTSU Mathematical Sciences Department,  
PO Box 34, Murfreesboro, TN 37132. *Kernels of an Integro-Differential Equation from an Initial  
Pulse*. Preliminary report.

We consider an integro-differential equation, proposed in literature as a model of neuronal activity. We establish conditions under which an initial activity function exhibiting localized pattern formation completely characterizes the system. (Received September 21, 2007)