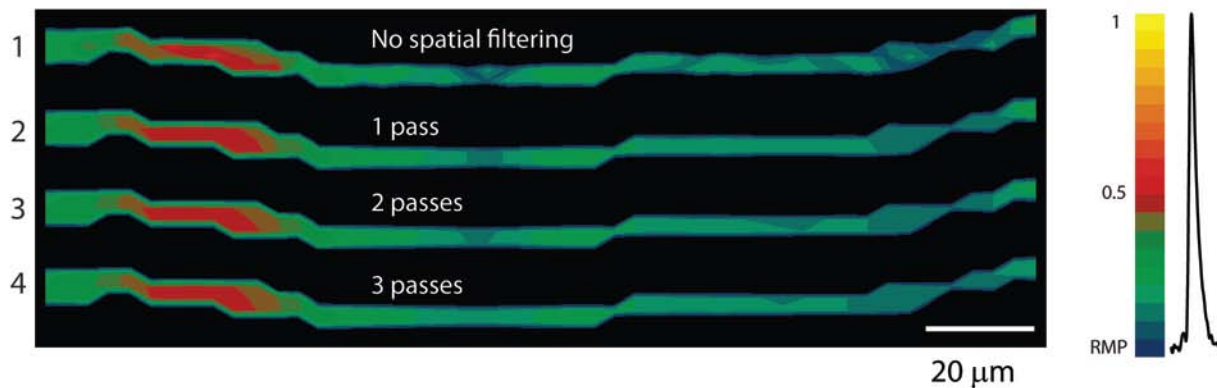


## **SUPPLEMENTARY INFORMATION**

### **The spatio-temporal characteristics of action potential initiation in layer 5 pyramidal neurons: a voltage-imaging study**

Marko A Popovic, Amanda J. Foust, David A. McCormick, Dejan Zecevic



### Supplementary Figure 1S. Spatial filtering

Spatial filtering improved the accuracy of measuring the location and length of the spike TZ as determined from the color coded map of relative  $V_m$  in the axon at the time point of 50% maximum AP amplitude. One pass of 3x3 smoothing routine removed local extremes caused by noise in optical measurements. Further spatial filtering (two or three passes) had very little or no effect on measured parameters.

### Supplementary Movie 1. AP initiation and propagation in a myelinated axon

### Supplementary Movie 2. AP initiation and propagation in a nonmyelinated axon