Macro-Level Soleus Simulation

Onder Gurcan

May 9, 2012

1 Experimental Frame

- Start / End: 2012-05-09 15:41:27 / 2012-05-09 16:01:37
- Duration: 20 minutes 10 seconds / 000100400000.0ticks

1.1 Simulation Parameters

- Annoyance levels (reorganization/evolution): 20 40
- Resting AHP Level (mV): 0.1
- Pathway beginning/end (ms): 39.5 200.0
- Smoothing count: 8
- Average frequency fault tolerance (Hz): 0.6

1.2 Agents

- Number of Existing Neuron Agents: 611
- Number of Removed Neuron Agents: 0
- Number of Existing Synapses: 993
- Number of Removed Synapses: 225

2 Results

Reference PSF

• Peristimulus mean: 7.701737775375868

• ErrorBox LowerB: -23.737677024926487

• ErrorBox UpperB: 42.59999985390896

Simulated PSF

• Peristimulus mean: 7.8664853870842535

• ErrorBox LowerB: -29.5686369514016

• ErrorBox UpperB: 62.958845642701824

Simulated Results vs. Reference Data

• Peristimulus mean diff: 0.16474761170838548

 \bullet Pearson correlation [39.5, 200.0]: 0.9580824218673584

• r2: 0.9179219270912229

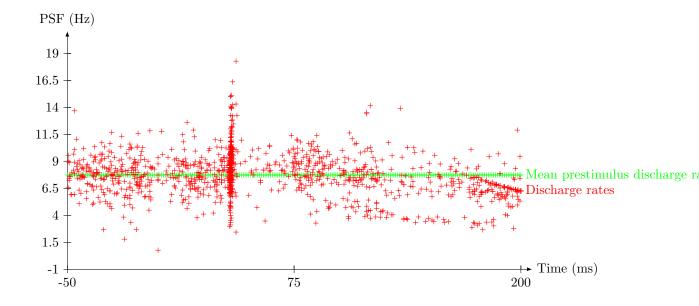


Figure 1: Raw Reference PSF

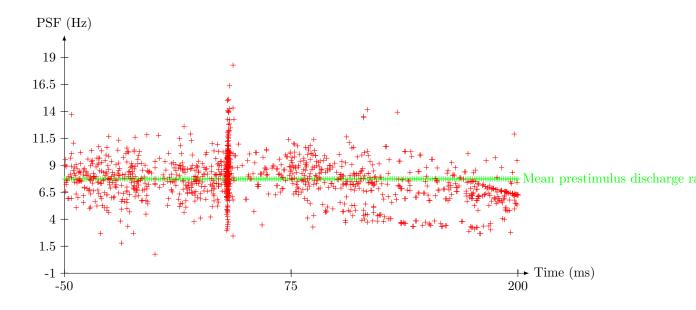


Figure 2: Filtered Reference PSF

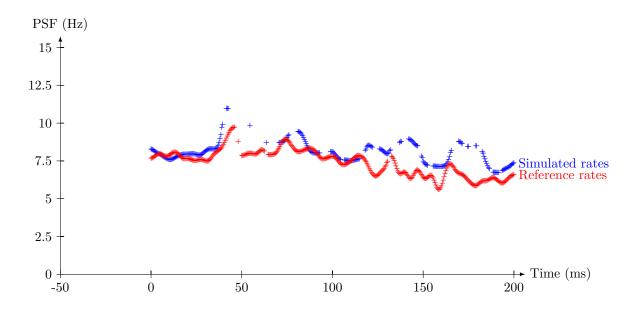


Figure 3: PSF - Average Discharge Rates

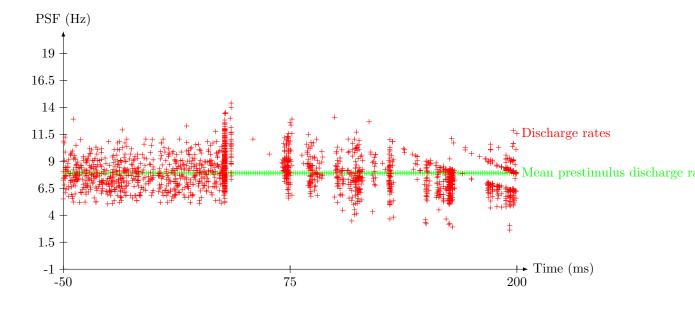


Figure 4: Simulated PSF

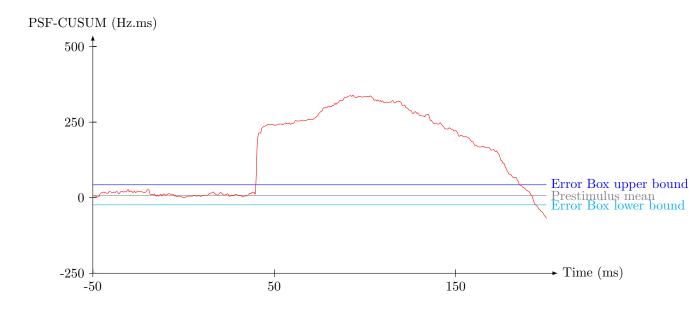


Figure 5: Reference PSF-CUSUM

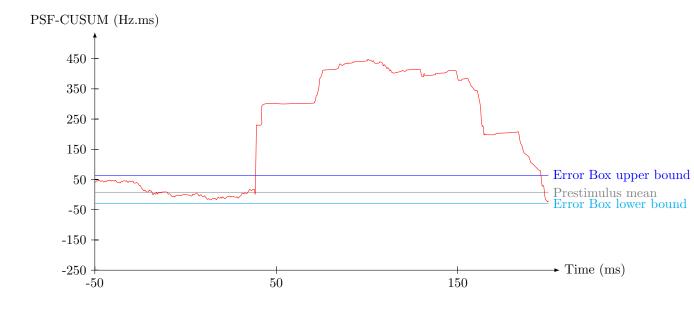


Figure 6: Simulated PSF-CUSUM

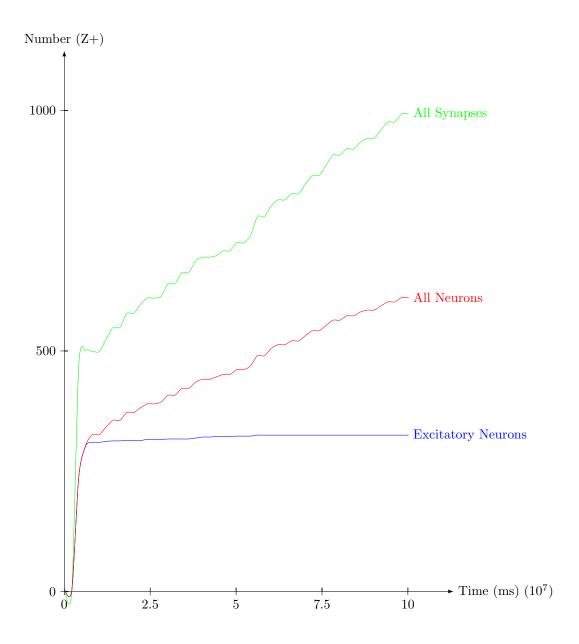


Figure 7: Number of Entities by time