## [P19] Stochastic Spiking Coherence in an Inhibitory Population of Subthreshold Neurons

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We study stochastic spiking coherence (i.e., collective coherence between noise- induced neural spikings) in an inhibitory ensemble of subthreshold neurons (which cannot _re spontaneously without noise). This stochastic spiking coherence may be well visualized in the raster plot of neural spikings. For a coherent case "stripes" (indicating collective coherence) are found to be formed in the raster plot of neural spikings. However, these stripes are partially occupied, in contrast to the full occupation for the case of excitatory coupling. Inhibitory neurons exhibit intermittent spikings phase-locked to the ensemble-averaged global potential $V_G$ at random multiples of the period of $V_G$. Due to this "random spike skipping" partial occupation occurs. To quantitatively measure the degree of stochastic coherence (seen in the raster plot), we introduce a new type of stripe-based spiking coherence measure $M_s$ by taking into consideration the average density and smearing of stripes. In terms of $M_s$, we characterize the stochastic spiking coherence by varying the noise intensity, and find that $M_s$ reflects the degree of collective coherence seen in the raster plot very well.