Abstract Submitted
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Modular Networks in the Neocortex H.G.E. HENTSCHEL, Emory University — We will describe our approaches to characterizing the network architecture of active neurons in mouse neocortex in terms of modules and functional motifs, in order to extract their information processing capabilities. The raw data comes from fast two photon microscopic techniques recently developed using flourescent Ca2+ indicators to record the spontaneous and evoked activity from hundreds of identified cells in mouse. This ensemble of active neurons can be considered as a complex network linked by synaptic connections, and represented as a graph of nodes connected by edges. Information processing in the network requires interaction of neurons in different functional assemblies (microcircuits) over time. We will describe the information we have been able to uncover on these microcircuits and their function.

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