

Supplementary figures

Intrinsic functional connectivity resembles cortical architecture at various levels of isoflurane anesthesia

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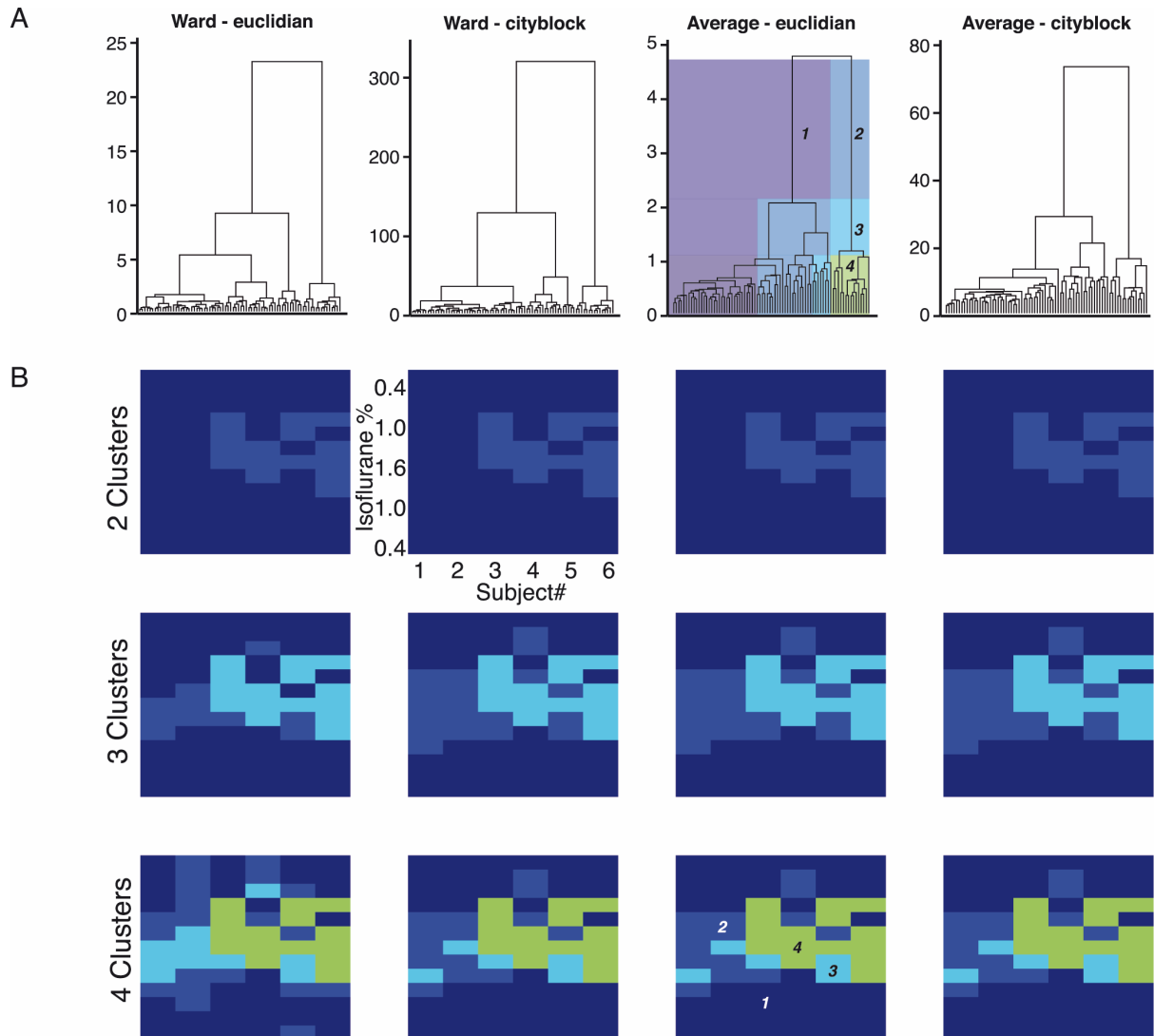
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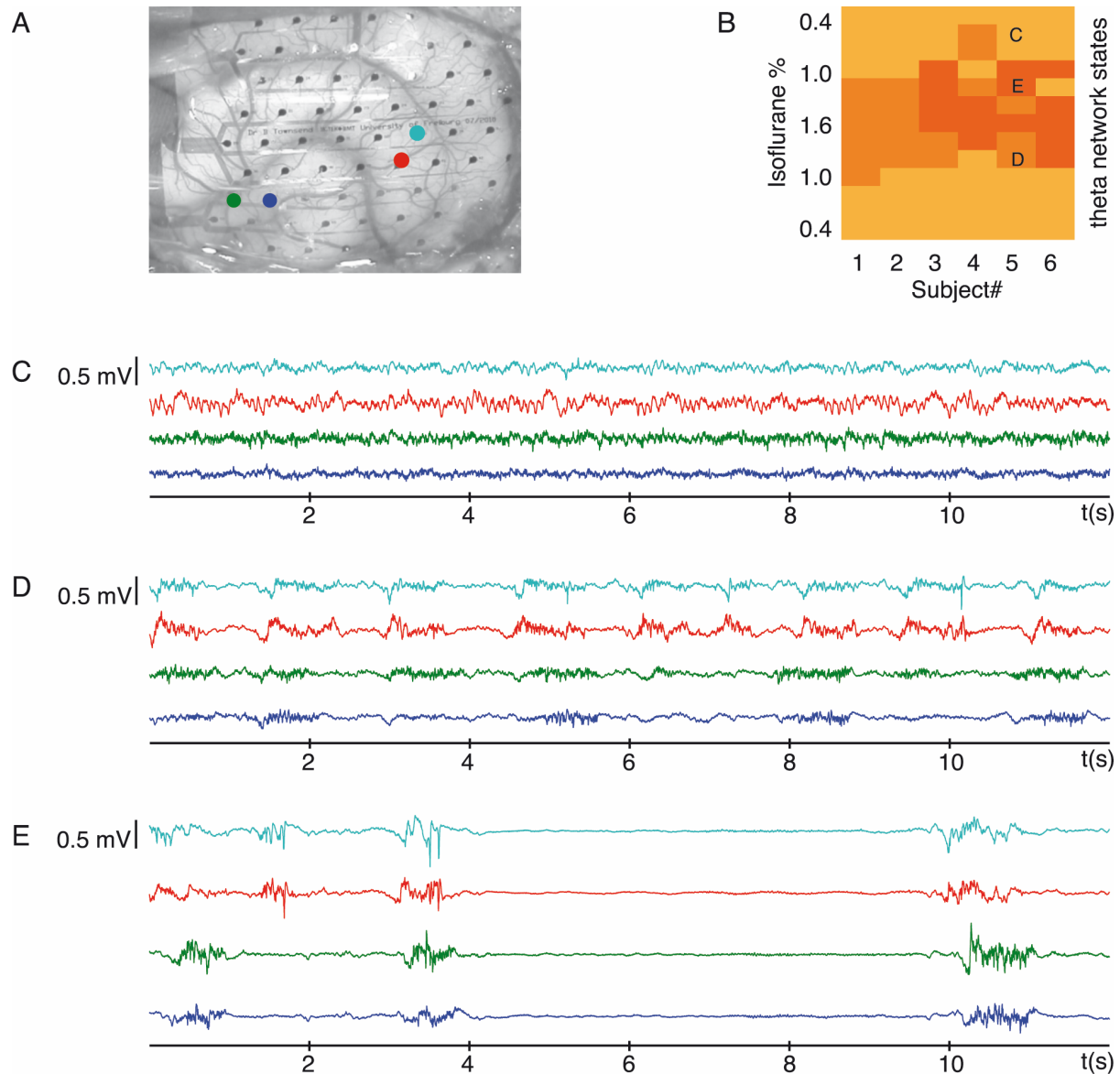
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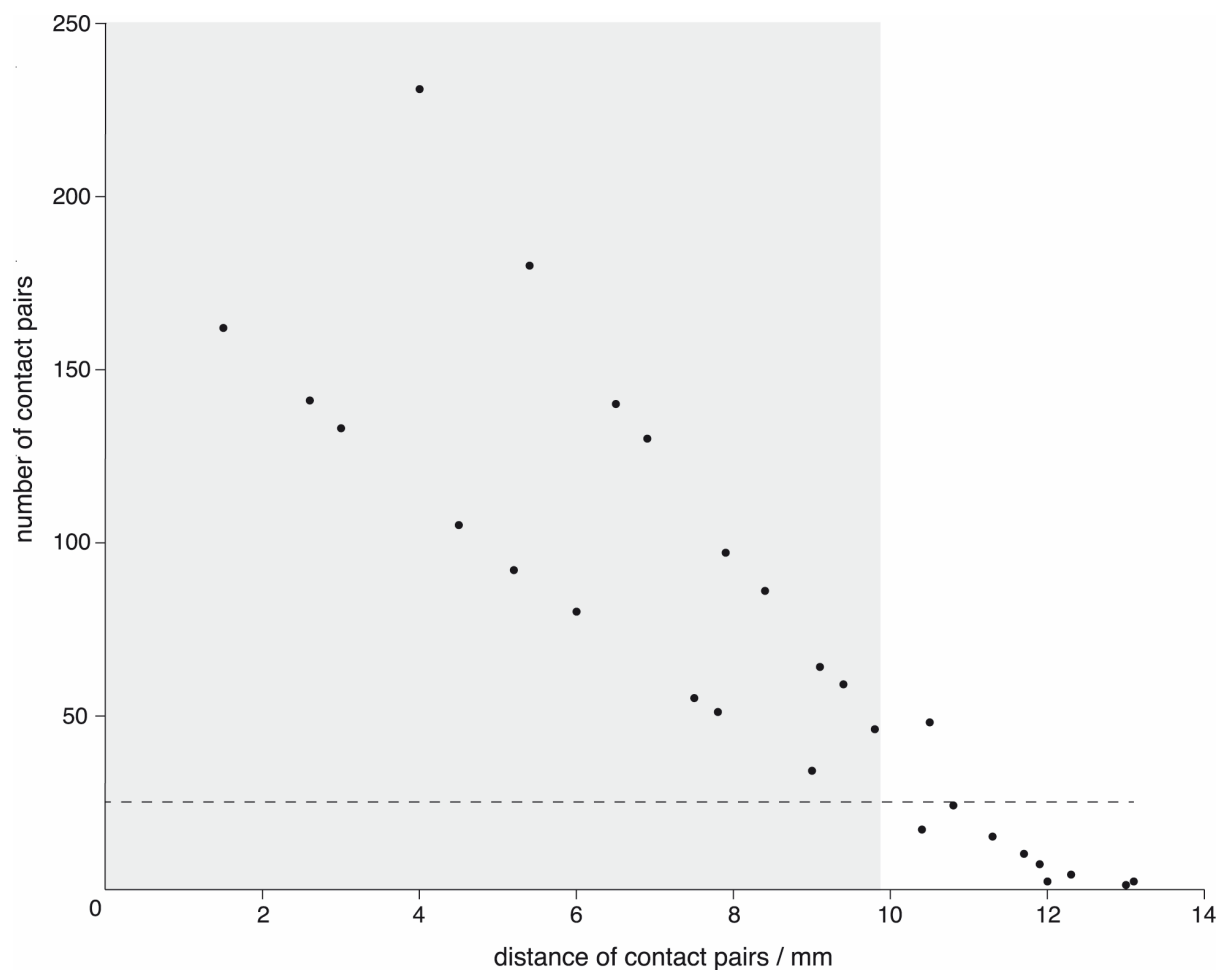
Running title: Intrinsic functional connectivity under anaesthesia



Supplementary Figure 1. Grouping of coupling patterns using hierarchical clustering for one example frequency band (theta). (A) Dendrograms resulting from hierarchical clustering of all matrices (6 animals x 13 isoflurane concentrations). Coupling matrices were grouped using two distance measures (euclidian/cityblock) and two linkages (average/ward). (B) Heatmap representation of the groups in the dataset for different levels in the dendrogram (2/3/4 clusters). Note the high consistency of the result across clustering methods.



Supplementary Figure 2. Representative epochs of wide-band ECoG signal. (A) Location of the four contacts for which epochs are displayed in this figure. As indicated by the colour, two traces were recorded from visual cortex, and two from auditory cortex. (B) Data epochs from which C, D and E are taken in relation to the theta-band network states. We observed a high correspondence between connectivity state and local activity pattern. However, it should be stressed that alterations of local activity and of network state are connected, but not identical processes. (C) Continuous activity in the light anesthesia network state. (D) Burst-suppression with short inter-burst intervals under medium anesthesia. (E) Burst-suppression with long inter-burst intervals in deep anesthesia. Note differences in burst onset and offset timing between the visual and auditory recordings.



Supplementary Figure 3. Number of contact pairs for each inter-electrode distance on the ECoG array. For normalization (cf. Fig. 5 C/D), distances were only considered until the number of contact pairs first dropped below 25 for the first time, indicated by the grey area.