Supplemental Information

„Psychophysically anchored, robust thresholding in studying pain related lateralization of oscillatory pre-stimulus activity"

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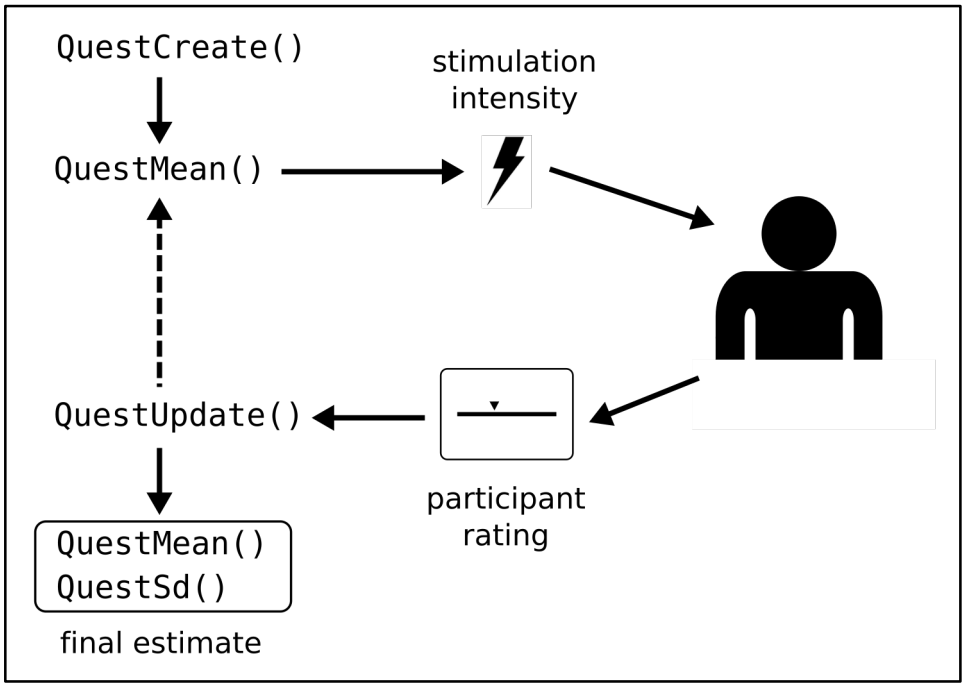

Figure S1: Outline of the estimation process in PsychToolbox
Using the PsychToolbox function QuestCreate, the initial estimate for the intensity estimate is supplied to the algorithm. In following trials, the QuestMean function will return the optimal intensity that should be tested. After the participant has been presented with this intensity, the rating should be passed to the QuestUpdate function. After repeating this process for the suggested trial number of 40, or until a sufficiently accurate estimate has been determined, the resulting parameter can be retrieved by calling the QuestMean function. The standard deviation of the estimate is returned by a call of QuestSd.

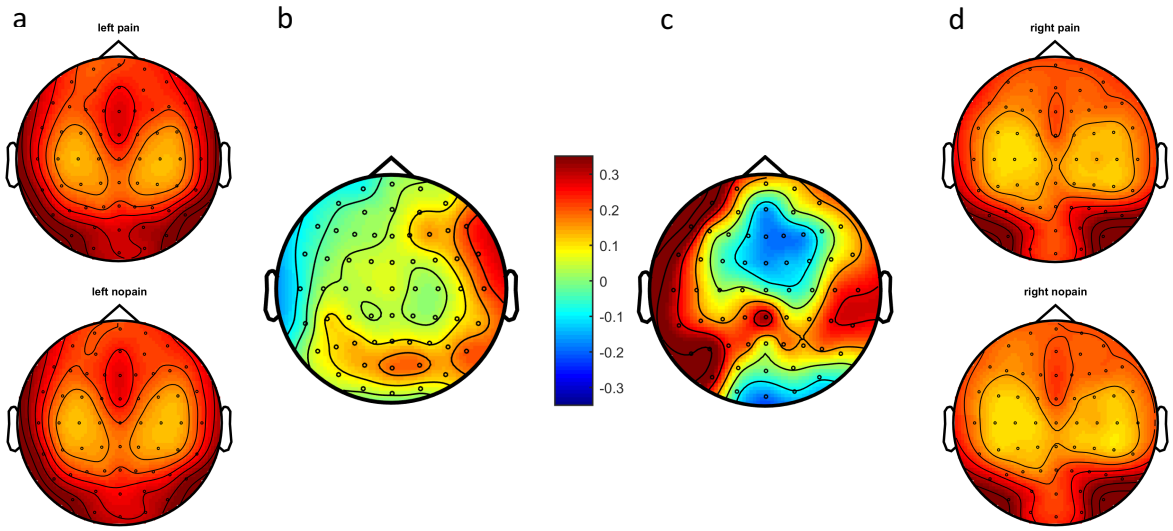

Figure S2: Individual topo-plots for pain- and no-pain conditions
(a) Top: Topo-plot in the theta band (4-7Hz) for painful stimulation to the left hand. Bottom: Topo-plot in the theta band (4-7Hz) for non-painful stimulation to the left hand. (b) Difference plot for pain vs. non-pain for stimulation to the left hand. (c) Difference plot for pain vs. non-pain for stimulation to the right hand. (d) Top: Topo-plot in the theta band (4-7Hz) for painful stimulation to the right hand. Bottom: Topo-plot in the theta band (4-7Hz) for non-painful stimulation to the right hand. All figures are in the time range of -0.8s to 0s before stimulus onset.

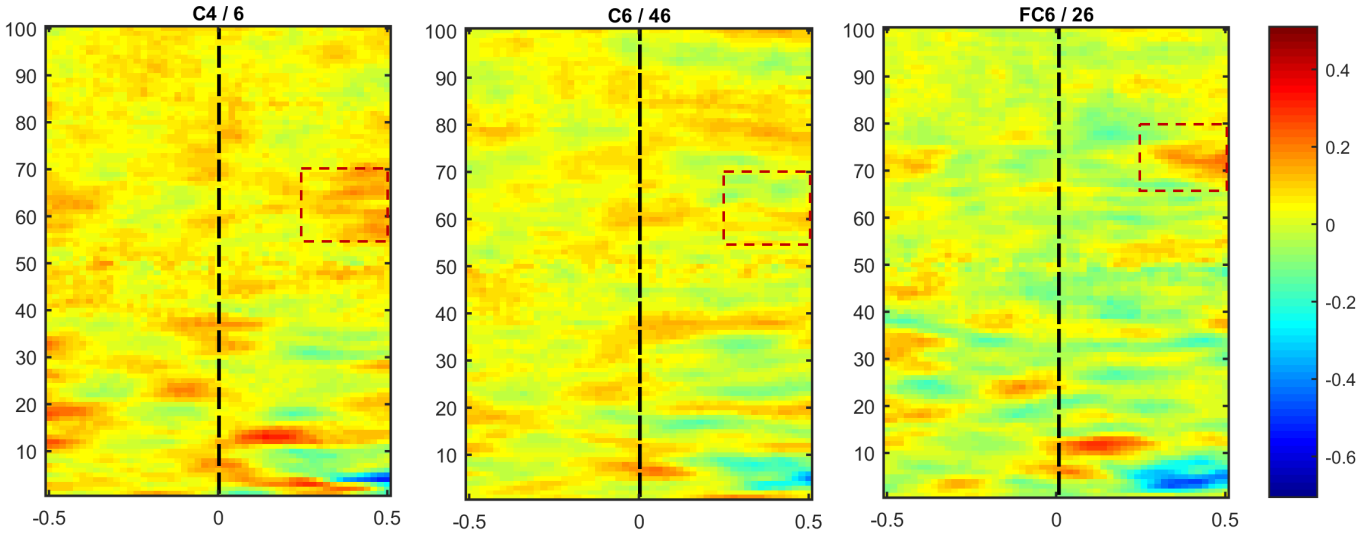

Figure S3: Time-Frequency plots of pre- and post-stimulus activity for selected electrodes
Time-Frequency-Plots for electrodes C4, C6 and FC6 (from left to right) for stimulation to the left hand. Data was transformed from the time domain using the multi-taper method, time window of 400ms, time resolution step 20ms, frequency smoothing of 2 to 6 Hz linearly distributed across 2Hz to 100Hz. The data is plotted as relative change versus a baseline period from -0.5s to 0s. At C4 and to a lesser extent C6 a late response in gamma band (55-70Hz), as well as a higher response (68-80Hz) at FC6 is visible (red rectangles). This replicates data from Gross et al. (see main article), although analysis methods are not fully identical.