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Frequently Asked Questions (FAQ)

1. What is the PhysIO Toolbox?

2. How does PhysIO differ from other toolboxes for physiological noise correction for fMRI using peripheral recordings?

3. How do I cite PhysIO?

4. Where do I find more documentation for PhysIO?

5. I am using FSL, AFNI, BrainVoyager, etc., for my fMRI analyses. Do I need SPM for PhysIO to work?

6. I am using device X for physiological recordings. Does PhysIO support the physiological logfile format Y?

7. I am running the toolbox for a lot of subjects / on a remote server without graphics. Can I somehow reproduce the output figures relevant to assess the data quality?

8. How do I interpret the various output plots of the toolbox?

9. I want to access subjects physiological measures, e.g. heart rate or respiratory volume per time, before they enter the regressors. Where can I do that?

10. What is the order of the regressor columns in the multiple regressors file?

11. How do I know whether the physiological noise correction worked?

12. PhysIO: I would like to use the gradient log for timing synchronization, but how do I set the thresholds?

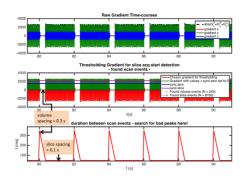# 1. SUPPLEMENTARY MATERIAL

1.1. Figure S1

Figure S1: Determining scan timing from gradient logging for Philips data (`sync.method = 'gradient_log'`). Besides cardiac and respiratory data, the Philips SCANPHYSLOG-file stores time courses of the x,y,z-gradients at a coarse temporal resolution (2 ms) (top). Their regularity, however, is sufficient to infer on slice and volume repetitions, and does not change over subjects. Thus, for each study, one only has to determine once which gradient shows the highest regularity (e.g. `sync.grad_direction = 'y'`, green curve), set lower thresholds for irrelevant and slice peaks (middle, `sync.zero = 1500`, blue line; `sync.slice = 2200`, magenta line), as well as volume peaks, if they differ from slice peaks (not shown, `sync.vol = []`). If volume peaks are not discernible, the non-equidistant slice spacing between volumes can be used to identify volume onsets (bottom, red curve, `sync.vol_spacing = 0.3` seconds).