Subject:	Re: Meeting - Qingfang and Thorsten
Date:	Friday, December 22, 2023 at 11:53:35 AM Eastern Standard Time
From:	Kahnt, Thorsten (NIH/NIDA) [E]
To:	Liu, Qingfang (NIH/NIDA) [E]
Attachments:	BiasCorrection_T1_NODEAP.m, processing_2_coordinate_pipeline_NODEAP.m, ana_bx_ALL_stim_cond.m

Hi Qingfang,
Yes, attached are the script that I wrote to select the two stimulation coordinates. The 'processing_..' script combines the echos. Note that in this script I realign/reslice each echo separately, which is not ideal as it takes a lot of time and is not the best quality.

Instead, it would be better to realign the first echo, and then copy the voxel-to-world matrix from echo 1 to echo 2 and 3. Then all three echos are resliced before integrating them. This is what were are now doing in the lab at NIDA.

Here is code for how to get the voxel-to-world mapping from the realigned echo and then to apply it to the other two echos. Both use spm_get_space()

```
for iRun=1:nRuns
    nVolumes = size(FILENAMES{iRun,1},1);
    filesFirstEcho = FILENAMES{iRun,1};

    for i=1:nVolumes% 1:nFiles
        % load voxel-to-world mapping from realigned, first echo
        V = spm_get_space(filesFirstEcho(i,:));

        for iEcho=2:nEchoes
            % realigned by applying voxel-to-world mapping from first echo
            spm_get_space(FILENAMES{iRun,iEcho}(i,:),V);
        end
    end
end
```

I am also attaching code (ana_bx_ALL_stim_cond) that I wrote to analyze data from the behavioral pilot of this project. Daria edited it when she started to analyze the data from the TMS experiment. It contains some information from the counterbalancing (devaluation and stimulation). Maybe this is helpful, but maybe it is easier if you just write your own code. If you decide to use it, it would be important to double-check the counterbalancing and also the code itself.

Thorsten

From: Liu, Qingfang (NIH/NIDA) [E] <qingfang.liu@nih.gov>
Date: Friday, December 22, 2023 at 11:29 AM
To: Kahnt, Thorsten (NIH/NIDA) [E] <thorsten.kahnt@nih.gov>
Subject: Re: Meeting - Qingfang and Thorsten

Can you also send me any script doing the integration across 3 echoes as you described? I'm trying to get a

better understand of it before I forget what you said.

From: Kahnt, Thorsten (NIH/NIDA) [E] <thorsten.kahnt@nih.gov>
Date: Friday, December 22, 2023 at 10:39 AM
To: Liu, Qingfang (NIH/NIDA) [E] <qingfang.liu@nih.gov>
Subject: Re: Meeting - Qingfang and Thorsten

From: Liu, Qingfang (NIH/NIDA) [E] <qingfang.liu@nih.gov>
Date: Thursday, December 21, 2023 at 10:22 AM
To: Kahnt, Thorsten (NIH/NIDA) [E] <thorsten.kahnt@nih.gov>
Subject: Accepted: Meeting - Qingfang and Thorsten