

# Brainglusch Scan Information

For more information on the directory structure for the COBRE imaging data. Also below are the imaging parameters for each series.

## Directory structure:

var/www/html/dropbox/1139\_anonymized/human: internal directory structure

/dicom OR /behavioral: this directory is the data type. /dicom contains DICOM files and /behavioral contains timing and log files for the GATE functional task.

/rltmt: scanner name

/vcalt: PI

/acbre\_07325: Study Name and Study Number

/A000XXXX: Participant ID

/Session\_1: scan session number. Due to the fact that COBRE data was collected across several different sub studies, some participants have more than one scan session. The scan session numbers are chronological.

## Series Label Description

### dti\_35dir

Diffusion tensor imaging (DTI) is a functional resonance imaging technique that enables the measurement of the restricted diffusion of water in tissue in order to produce neural tract images instead of using this data solely for the purpose of assigning contrast or colors to pixels in a cross sectional image.

GATE\_V01\_R01, GATE\_V01\_R02, GATE\_V01\_R03, GATE\_V01\_R04

During the gating task, participants passively listened to single tones (2000 or 3000 Hz) or pairs of identical (two 2000 Hz tones) or pairs of non-identical (2000 and 3000 Hz) tones. The gating task therefore exhibits the brain's ability to inhibit repetitive versus novel stimuli.

### mprage\_5e

## T1-weighted scans

T1-weighted scans refer to a set of standard scans that depict differences in the spin-lattice (or T1) relaxation time of various tissues within the body. T1 weighted images can be acquired using either spin echo or gradient-echo sequences.

### RSTpre\_V01\_R01

Subjects were instructed to keep their eyes open and look at a fixation cross during this sequence.

### t2\_tse\_tra\_192

Images made with a sequence with long TR and TE to show contrast in tissues with varying T2 relaxation times. Water gives a strong signal.

## mprage\_5e

### SIEMENS MAGNETOM TrioTim syngo MR B17

TA: 6:03	PAT: 2	Voxel size: 1.0x1.0x1.0 mm	Ref. SNR: 1.00	USER: tfl_mgh_multiecho
<b>Properties</b>		Reference scan mode		Integrated
Prfo Recon	Off	Image Filter	Off	
Before measurement	Off	Distortion Corr.	Off	
After measurement	Off	Unfiltered images	Off	
Load to viewer	On	Prescan Normalize	Off	
Inline movie	Off	Normalize	Off	
Auto store images	On	Coil filter	Off	
Load to stamp segments	Off	Raw filter	Off	
Load images to graphic segments	Off	Elliptical filter	Off	
Auto open inline display	Off			
Start measurement without further preparation	On	<b>Geometry</b>		
Wait for user to start	Off	Multi-slice mode	Single shot	
Start measurements	single	Series	Interleaved	
<b>Routine</b>				
Slice group 1		System	Body	Off
Slices	1	HEP	On	
Dist. factor	50 %	HEA	On	
Position	R2.7 A35.1 H10.8	<b>Positioning mode</b>		
Orientation	S > T2.8 > C2.6	Table position	REF	
Phase enc. dir.	A >> P	Table position	H	
Rotation	0.00 deg	MSMA	0 mm	
Phase oversampling	0 %	Sagittal	S - C - T	
FoV read	256 mm	Coronal	R >> L	
FoV phase	100.0 %	Transversal	A >> P	
Slice thickness	1.00 mm	Coil Combine Mode	F >> H	
TR	2000 ms	Save uncombined	Off	
TE	29 ms	Auto Coil Select	Adaptive Combine	
Averages	1			
Concatenations	1	Shim mode	Standard	
Filter	None	Adjust with body coil	Off	
Coil elements	HEA,HEP	Confirm freq. adjustment	Off	
<b>Contrast</b>				
MTC	Off	Assume Silicone	Off	
Flip angle	75 deg	? Ref. amplitude 1H	0.000 V	
Fat suppr.	Fat sat.	Adjustment Tolerance	Auto	
Averaging mode	Long term	Adjust volume		
Reconstruction	Magnitude	Position	L1.9 A8.8 H38.5	
Measurements	112	Orientation	T > C-22.5 > S3.4	
Delay in TR	0 ms	Rotation	0.00 deg	
Multiple series	Off	R >> L	240 mm	
<b>Resolution</b>				
Base resolution	64	A >> P	240 mm	
Phase resolution	100 %	F >> H	150 mm	
Phase partial Fourier	Off	<b>Physio</b>		
Interpolation	Off	1st Signal/Mode	None	
<b>PAT mode</b>				
PAT mode	None	GLM Statistics	Off	
Matrix Coil Mode	Triple	Dynamic t-maps	Off	
Distortion Corr.	Off	Starting ignore meas	0	
Prescan Normalize	Off	Ignore after transition	0	
Raw filter	On	Model transition states	Off	
Elliptical filter	Off	Temp. highpass filter	Off	
Hamming	Off	Threshold	4.00	
<b>Geometry</b>				
Multi-slice mode	Interleaved	Paradigm size	20	
Series	Ascending	Meas[1]	Baseline	
Special sat.	None	Meas[2]	Baseline	
<b>System</b>				
		Meas[3]	Baseline	
		Meas[4]	Baseline	
		Meas[5]	Baseline	
		Meas[6]	Baseline	
		Meas[7]	Baseline	
		Meas[8]	Baseline	
		Meas[9]	Baseline	
		Meas[10]	Baseline	
		Meas[11]	Active	
		Meas[12]	Active	
		Meas[13]	Active	
		Meas[14]	Active	
		Meas[15]	Active	
		Meas[16]	Active	
		Meas[17]	Active	
		Meas[18]	Active	
		Meas[19]	Active	
		Meas[20]	Active	
		Motion correction	Off	
		Spatial filter	Off	
		<b>Sequence</b>		
		Introduction	Off	
		Bandwidth	2170 Hz/Px	

### SIEMENS MAGNETOM TrioTim syngo MR B17

TA: 3:48	PAT: Off	Voxel size: 3.8 x3.8x3.5 mm	Ref. SNR: 1.00	USER: ep2d_complex
<b>Properties</b>		Body		Off
Prfo Recon	Off	HEP	On	
Before measurement	Off	HEA	On	
After measurement	Off	<b>Positioning mode</b>		
Load to viewer	On	Table position	FIX	
Inline movie	Off	Table position	H	
Auto store images	On	MSMA	0 mm	
Load to stamp segments	Off	Sagittal	S - C - T	
Load images to graphic segments	Off	Coronal	R >> L	
Auto open inline display	Off	Transversal	A >> P	
Start measurement without further preparation	On	Coil Combine Mode	F >> H	
Wait for user to start	Off	Auto Coil Select	Adaptive Combine	
Start measurements	single			
<b>Routine</b>				
Slice group 1		Shim mode	Standard	
Slices	33	Adjust with body coil	Off	
Dist. factor	30 %	Confirm freq. adjustment	Off	
Position	L1.9 A8.8 H38.5	Assume Silicone	Off	
Orientation	T > C-22.5 > S3.4	? Ref. amplitude 1H	0.000 V	
Phase enc. dir.	A >> P	Adjustment Tolerance	Auto	
Rotation	0.0 deg	Adjust volume		
Phase oversampling	0 %	Position	L1.9 A8.8 H38.5	
FoV read	240 mm	Orientation	T > C-22.5 > S3.4	
FoV phase	100.0 %	Rotation	0.00 deg	
Slice thickness	3.5 mm	R >> L	240 mm	
TR	2000 ms	A >> P	240 mm	
TE	29 ms	F >> H	150 mm	
Averages	1	<b>Physio</b>		
Concatenations	1	1st Signal/Mode	None	
Filter	None	GLM Statistics	Off	
Coil elements	HEA,HEP	Dynamic t-maps	Off	
<b>Contrast</b>				
MTC	Off	Starting ignore meas	0	
Flip angle	75 deg	Ignore after transition	0	
Fat suppr.	Fat sat.	Model transition states	Off	
Averaging mode	Long term	Temp. highpass filter	Off	
Reconstruction	Magnitude	Threshold	4.00	
Measurements	112	Paradigm size	20	
Delay in TR	0 ms	Meas[1]	Baseline	
Multiple series	Off	Meas[2]	Baseline	
<b>Resolution</b>				
Base resolution	64	Meas[3]	Baseline	
Phase resolution	100 %	Meas[4]	Baseline	
Phase partial Fourier	Off	Meas[5]	Baseline	
Interpolation	Off	Meas[6]	Baseline	
<b>PAT mode</b>				
PAT mode	None	Meas[7]	Baseline	
Matrix Coil Mode	Triple	Meas[8]	Baseline	
Distortion Corr.	Off	Meas[9]	Baseline	
Prescan Normalize	Off	Meas[10]	Baseline	
Raw filter	On	Meas[11]	Active	
Elliptical filter	Off	Meas[12]	Active	
Hamming	Off	Meas[13]	Active	
<b>Geometry</b>				
Multi-slice mode	Interleaved	Meas[14]	Active	
Series	Ascending	Meas[15]	Active	
Special sat.	None	Meas[16]	Active	
<b>System</b>				
		Meas[17]	Active	
		Meas[18]	Active	
		Meas[19]	Active	
		Meas[20]	Active	
		Motion correction	Off	
		Spatial filter	Off	
		<b>Sequence</b>		
		Introduction	Off	
		Bandwidth	2170 Hz/Px	

### SIEMENS MAGNETOM TrioTim syngo MR B17

TA: 3:48	PAT: Off	Voxel size: 3.8 x3.8x3.5 mm	Ref. SNR: 1.00	USER: ep2d_complex
<b>Properties</b>		Body		Off
Prfo Recon	Off	HEP	On	
Before measurement	Off	HEA	On	
After measurement	Off	<b>Positioning mode</b>		
Load to viewer	On	Table position	FIX	
Inline movie	Off	Table position	H	
Auto store images	On	MSMA	0 mm	
Load to stamp segments	Off	Sagittal	S - C - T	
Load images to graphic segments	Off	Coronal	R >> L	
Auto open inline display	Off	Transversal	A >> P	
Start measurement without further preparation	On	Coil Combine Mode	F >> H	
Wait for user to start	Off	Auto Coil Select	Adaptive Combine	
Start measurements	single			
<b>Routine</b>				
Slice group 1		Shim mode	Standard	
Slices	33	Adjust with body coil	Off	
Dist. factor	30 %	Confirm freq. adjustment	Off	
Position	L1.9 A8.8 H38.5	Assume Silicone	Off	
Orientation	T > C-22.5 > S3.4	? Ref. amplitude 1H	0.000 V	
Phase enc. dir.	A >> P	Adjustment Tolerance	Auto	
Rotation	0.0 deg	Adjust volume		
Phase oversampling	0 %	Position	L1.9 A8.8 H38.5	
FoV read	240 mm	Orientation	T > C-22.5 > S3.4	
FoV phase	100.0 %	Rotation	0.00 deg	
Slice thickness	3.5 mm	R >> L	240 mm	
TR	2000 ms	A >> P	240 mm	
TE	29 ms	F >> H	150 mm	
Averages	1	<b>Physio</b>		
Concatenations	1	1st Signal/Mode	None	
Filter	None	GLM Statistics	Off	
Coil elements	HEA,HEP	Dynamic t-maps	Off	
<b>Contrast</b>				
MTC	Off	Starting ignore meas	0	
Flip angle	75 deg	Ignore after transition	0	
Fat suppr.	Fat sat.	Model transition states	Off	
Averaging mode	Long term	Temp. highpass filter	Off	
Reconstruction	Magnitude	Threshold	4.00	
Measurements	112	Paradigm size	20	
Delay in TR	0 ms	Meas[1]	Baseline	
Multiple series	Off	Meas[2]	Baseline	
<b>Resolution</b>				
Base resolution	64	Meas[3]	Baseline	
Phase resolution	100 %	Meas[4]	Baseline	
Phase partial Fourier	Off	Meas[5]	Baseline	
Interpolation	Off	Meas[6]	Baseline	
<b>PAT mode</b>				
PAT mode	None	Meas[7]	Baseline	
Matrix Coil Mode	Triple	Meas[8]	Baseline	
Distortion Corr.	Off	Meas[9]	Baseline	
Prescan Normalize	Off	Meas[10]	Baseline	
Raw filter	On	Meas[11]	Active	
Elliptical filter	Off	Meas[12]	Active	
Hamming	Off	Meas[13]	Active	
<b>Geometry</b>				
Multi-slice mode	Interleaved	Meas[14]	Active	
Series	Ascending	Meas[15]	Active	
Special sat.	None	Meas[16]	Active	
<b>System</b>				
		Meas[17]	Active	
		Meas[18]	Active	
		Meas[19]	Active	
		Meas[20]	Active	
		Motion correction	Off	
		Spatial filter	Off	
		<b>Sequence</b>		
		Introduction	Off	
		Bandwidth	2170 Hz/Px	

### SIEMENS MAGNETOM TrioTim syngo MR B17

TA: 3:48	PAT: Off	Voxel size: 3.8 x3.8x3.5 mm	Ref. SNR: 1.00	USER: ep2d_complex
<b>Properties</b>		Body		Off
Prfo Recon	Off	HEP	On	
Before measurement	Off	HEA	On	
After measurement	Off	<b>Positioning mode</b>		
Load to viewer	On	Table position	FIX	
Inline movie	Off	Table position	H	
Auto store images	On	MSMA	0 mm	
Load to stamp segments	Off	Sagittal	S - C - T	
Load images to graphic segments	Off	Coronal	R >> L	
Auto open inline display	Off	Transversal	A >> P	
Start measurement without further preparation	On	Coil Combine Mode	F >> H	
Wait for user to start	Off	Auto Coil Select	Adaptive Combine	
Start measurements	single			
<b>Routine</b>				
Slice group 1		Shim mode	Standard	
Slices	33	Adjust with body coil	Off	
Dist. factor	30 %	Confirm freq. adjustment	Off	
Position	L1.9 A8.8 H38.5	Assume Silicone	Off	
Orientation	T > C-22.5 > S3.4	? Ref. amplitude 1H	0.000 V	
Phase enc. dir.	A >> P	Adjustment Tolerance	Auto	
Rotation	0.0 deg	Adjust volume		
Phase oversampling	0 %	Position	L1.9 A8.8 H38.5	
FoV read	240 mm	Orientation	T > C-22.5 > S3.4	
FoV phase	100.0 %	Rotation	0.00 deg	
Slice thickness	3.5 mm	R >> L	240 mm	
TR	2000 ms	A >> P	240 mm	
TE	29 ms	F >> H	150 mm	
Averages	1	<b>Physio</b>		
Concatenations	1	1st Signal/Mode	None	
Filter	None	GLM Statistics	Off	
Coil elements	HEA,HEP	Dynamic t-maps	Off	
<b>Contrast</b>				
MTC	Off	Starting ignore meas	0	
Flip angle	75 deg	Ignore after transition	0	
Fat suppr.	Fat sat.	Model transition states	Off	
Averaging mode	Long term	Temp. highpass filter	Off	
Reconstruction	Magnitude	Threshold	4.00	
Measurements	112	Paradigm size	20	
Delay in TR	0 ms	Meas[1]	Baseline	
Multiple series	Off	Meas[2]	Baseline	
<b>Resolution</b>				
Base resolution	64	Meas[3]	Baseline	
Phase resolution	100 %	Meas[4]	Baseline	
Phase partial Fourier	Off	Meas[5]	Baseline	
Interpolation	Off	Meas[6]	Baseline	
<b>PAT mode</b>				
PAT mode	None	Meas[7]	Baseline	
Matrix Coil Mode	Triple	Meas[8]	Baseline	
Distortion Corr.	Off	Meas[9]	Baseline	
Prescan Normalize	Off	Meas[10]	Baseline	
Raw filter	On	Meas[11]	Active	
Elliptical filter	Off	Meas[12]	Active	
Hamming	Off	Meas[13]	Active	
<b>Geometry</b>				
Multi-slice mode	Interleaved	Meas[14]	Active	
Series	Ascending	Meas[15]	Active	
Special sat.	None	Meas[16]	Active	
<b>System</b>				
		Meas[17]	Active	
		Meas[18]	Active	
		Meas[19]	Active	
		Meas[20]	Active	
		Motion correction	Off	
		Spatial filter	Off	
		<b>Sequence</b>		
		Introduction	Off	
		Bandwidth	2170 Hz/Px	

### SIEMENS MAGNETOM TrioTim syngo MR B17

TA: 3:48	PAT: Off	Voxel size: 3.8 x3.8x3.5 mm	Ref. SNR: 1.00	USER: ep2d_complex
<b>Properties</b>		Body		Off
Prfo Recon	Off	HEP	On	
Before measurement	Off	HEA	On	
After measurement	Off	<b>Positioning mode</b>		
Load to viewer	On	Table position	FIX	
Inline movie	Off	Table position	H	
Auto store images	On	MSMA	0 mm	
Load to stamp segments	Off	Sagittal	S - C - T	
Load images to graphic segments	Off	Coronal	R >> L	
Auto open inline display	Off	Transversal	A >> P	
Start measurement without further preparation	On	Coil Combine Mode	F >> H	
Wait for user to start	Off	Auto Coil Select	Adaptive Combine	
Start measurements	single			
<b>Routine</b>				
Slice group 1	</			