

<b>Table of contents</b>
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\\HCP	HCP	HCP_CMRRmb_CMRRmbPCASL_MartinosT1T2vNav	HCP-A_SessA	<ul style="list-style-type: none"> <li>Localizer</li> <li>AAHScout</li> <li>Localizer_aligned</li> <li>SpinEchoFieldMap_AP</li> <li>SpinEchoFieldMap_PA</li> <li>rfMRI_REST_AP</li> <li>rfMRI_REST_PA</li> <li>T1w_setter</li> <li>T1w_MPR_vNav_4e</li> <li>T2w_setter</li> <li>T2w_SPC_vNav</li> <li>TSE_HiResHp</li> <li>SpinEchoFieldMap_AP</li> <li>SpinEchoFieldMap_PA</li> <li>tfMRI_VISMOTOR_PA</li> <li>tfMRI_CARIT_PA</li> <li>tfMRI_FACENAME_PA</li> </ul>
			HCP-A_SessB	<ul style="list-style-type: none"> <li>Localizer</li> <li>AAHScout</li> <li>Localizer_aligned</li> <li>SpinEchoFieldMap_AP</li> <li>SpinEchoFieldMap_PA</li> <li>rfMRI_REST_AP</li> <li>rfMRI_REST_PA</li> <li>SpinEchoFieldMap_AP</li> <li>SpinEchoFieldMap_PA</li> <li>dMRI_dir98_AP</li> <li>dMRI_dir98_PA</li> <li>dMRI_dir99_AP</li> <li>dMRI_dir99_PA</li> <li>PCASLhr_SpinEchoFieldMap_AP</li> <li>PCASLhr_SpinEchoFieldMap_PA</li> <li>mbPCASLhr_PA</li> </ul>
			HCP-D_8-21yo_SessA	<ul style="list-style-type: none"> <li>Localizer</li> <li>AAHScout</li> <li>Localizer_aligned</li> <li>SpinEchoFieldMap_AP</li> <li>SpinEchoFieldMap_PA</li> </ul>

rfMRI\_REST\_AP  
 rfMRI\_REST\_PA  
 T1w\_setter  
 T1w\_MPR\_vNav\_4e  
 T2w\_setter  
 T2w\_SPC\_vNav  
 SpinEchoFieldMap\_AP  
 SpinEchoFieldMap\_PA  
 tfMRI\_GUESSING\_PA  
 tfMRI\_GUESSING\_AP  
 tfMRI\_CARIT\_PA  
 tfMRI\_CARIT\_AP  
 tfMRI\_EMOTION\_PA

HCP-D\_8-21yo\_SessB

Localizer  
 AAHScout  
 Localizer\_aligned  
 SpinEchoFieldMap\_AP  
 SpinEchoFieldMap\_PA  
 rfMRI\_REST\_AP  
 rfMRI\_REST\_PA  
 SpinEchoFieldMap\_AP  
 SpinEchoFieldMap\_PA  
 dMRI\_dir98\_AP  
 dMRI\_dir98\_PA  
 dMRI\_dir99\_AP  
 dMRI\_dir99\_PA  
 PCASLhr\_SpinEchoFieldMap\_AP  
 PCASLhr\_SpinEchoFieldMap\_PA  
 mbPCASLhr\_PA

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\Localizer

TA: 9.2 s PM: REF Voxel size: 1.2×1.2×5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	Off
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	40.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3

**Geometry - AutoAlign**

Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.0 A20.0 H0.0
L	0.0 mm
A	20.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High

**System - Tx/Rx**

Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	40.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	40.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed

**Sequence - Part 1**

Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_Sess\AAHScout

TA: 0:14 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: 3 Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR	3.15 ms
TE	1.37 ms
Flip angle	8 deg

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1

**Resolution - iPAT**

Reference scan mode	Integrated
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Flip angle	8 deg
Measurements	1
Time to center	6.2 s

**Inline - Inline**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	8 deg
Measurements	1

**Inline - MapIt**

Contrasts	1
TR	3.15 ms
TE	1.37 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Contrasts	1
Multi-slice mode	Sequential
Bandwidth	540 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessA\Localizer\_aligned

TA: 0:21 PM: REF Voxel size: 1.2x1.2x5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	104.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3

**Geometry - AutoAlign**

Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High

**System - Tx/Rx**

Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	104.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	104.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed

**Sequence - Part 1**

Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\SpinEchoFieldMap\_ AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\SpinEchoFieldMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessA\rfMRI\_REST\_AP

TA: 6:40 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
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**Resolution - Filter Image**

Prescan Normalize	Off
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**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
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**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessA\rfMRI\_REST\_PA

TA: 6:40 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
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**Resolution - Filter Image**

Prescan Normalize	Off
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**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
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**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\T1w\_setter

TA: 0.2 s PM: FIX Voxel size: 8.0×8.0×8.0 mmRel. SNR: 1.00 : ABCD

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	9.9 ms
TE	4.6 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

**Contrast - Common**

TR	9.9 ms
TE	4.6 ms
MTC	Off
Flip angle	2 deg
Fat suppr.	None

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
Base resolution	32
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	9.9 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H40.0
L	0.0 mm
P	0.0 mm
H	40.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	50.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	9.9 ms
Concatenations	1

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.26 ms
Bandwidth	5208 Hz/Px

**Sequence - Part 2**

EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

**Sequence - Special**

Protocol filename	MPRAGE
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessAIT1w\_MPR\_vNav\_4e

TA: 8:22 PM: FIX Voxel size: 0.8x0.8x0.8 mmPAT: 2 Rel. SNR: 1.00 : tfl

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	2500.0 ms
TE 1	1.81 ms
TE 2	3.6 ms
TE 3	5.39 ms
TE 4	7.18 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR	2500.0 ms
TE 1	1.81 ms
TE 2	3.6 ms
TE 3	5.39 ms
TE 4	7.18 ms
Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	8.0 deg
Fat suppr.	Water excit. fast
Water suppr.	None

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm

**Resolution - Common**

Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	2500.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	16.00 deg
Initial Orientation	Sagittal

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm

**Geometry - Tim Planning Suite**

Inline Composing	Off
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**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	2500.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Non-sel. IR
T1	1000 ms
Fat suppr.	Water excit. fast
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Inline - Common**

Subtract	Off
Measurements	1

**Inline - Common**

StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - Maplt**

Save original images	On
Maplt	None
Flip angle	8.0 deg
Measurements	1
Contrasts	4
TR	2500.0 ms
TE 1	1.81 ms
TE 2	3.6 ms
TE 3	5.39 ms
TE 4	7.18 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Contrasts	4
Flow comp. 1	No
Multi-slice mode	Single shot
Echo spacing	11.2 ms
Bandwidth 1	740 Hz/Px
Bandwidth 2	740 Hz/Px
Bandwidth 3	740 Hz/Px
Bandwidth 4	740 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Turbo factor	300

**Sequence - Special**

Readout polarity	Positive
Nav. location	Before
Apply moco to	parent and nav
Remeasure	30 TRs
Reacq. threshold	0.50
Feedback delay	80 ms
Moco ref. image	Use Temp Ref
K-space streaming	None
ABCD navigator	On
Add. grad time	0.0 ms
Apply freq to	parent and nav
Averaging	RMS

**Sequence - Assistant**

Mode	Off
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\T2w\_setter

TA: 0.3 s PM: FIX Voxel size: 8.0×8.0×8.0 mmRel. SNR: 1.00 : ABCD

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	13.0 ms
TE	6.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

**Contrast - Common**

TR	13.0 ms
TE	6.0 ms
MTC	Off
Flip angle	2 deg
Fat suppr.	Water excit. normal

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
Base resolution	32
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	13.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H40.0
L	0.0 mm
P	0.0 mm
H	40.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	Water excit. normal
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	13.0 ms
Concatenations	1

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.26 ms
Bandwidth	5208 Hz/Px

**Sequence - Part 2**

EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

**Sequence - Special**

Protocol filename	T2-SPACE
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessA\T2w\_SPC\_vNav

TA: 6:35 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : spc

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	3200 ms
TE	564 ms
Averages	1.0
Concatenations	1
Filter	Prescan Normalize, Image Filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	3200 ms
TE	564 ms
MTC	Off
Magn. preparation	None
Fat suppr.	None
Blood suppr.	Off
Restore magn.	Off

**Contrast - Dynamic**

Averages	1.0
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed
Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	On
Intensity	Sharp
Edge Enhancement	3
Smoothing	3
Unfiltered images	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	3200 ms
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	16.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
Trigger delay	0 ms
TR	3200 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	On
Reordering	Linear
Flow comp.	No
Echo spacing	3.86 ms
Adiabatic-mode	Off
Bandwidth	744 Hz/Px

**Sequence - Part 2**

Echo train duration	1166 ms
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	T2 var
Turbo factor	314

**Sequence - Special**

Include nav.	On
Apply moco to	parent and nav
Remeasure	25 TRs
Reacq. threshold	0.50
Feedback delay	80 ms
Moco ref. image	Use Temp Ref
K-space streaming	None
ABCD navigator	On
Apply freq to	parent and nav

**Sequence - Assistant**

Allowed delay	0 s
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\TSE\_HiResHp

TA: 3:31 PM: REF Voxel size: 0.4x0.4x2.0 mmPAT: Off Rel. SNR: 1.00 : tse\_rr

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	30
Dist. factor	0 %
Position	L0.0 A4.0 F4.0 mm
Orientation	C > T-16.0
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	20 %
FoV read	150 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	4800.0 ms
TE	106 ms
Averages	1
Concatenations	2
Filter	Prescan Normalize, Image Filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	4800.0 ms
TE	106 ms
TD	0.0 ms
MTC	Off
Magn. preparation	None
Flip angle	135 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	150 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	384
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	On
Intensity	Sharp
Edge Enhancement	3
Smoothing	3
Unfiltered images	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	30
Dist. factor	0 %
Position	L0.0 A4.0 F4.0 mm
Orientation	C > T-16.0
Phase enc. dir.	R >> L
FoV read	150 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	4800.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	2

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 A4.0 F4.0 mm
Orientation	C > T-16.0
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	L0.0 A4.0 F4.0
L	0.0 mm
A	4.0 mm
F	4.0 mm
Initial Rotation	0.00 deg
Initial Orientation	C > T
C > T	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator****Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm

**Geometry - Tim Planning Suite**

Inline Composing	Off
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**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
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**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4800.0 ms
Concatenations	2

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	150 mm
FoV phase	100.0 %
Phase resolution	100 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	2

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	Off
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	On
Contrasts	1
Flow comp.	Read
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	13.2 ms
Bandwidth	130 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	21
Phase correction	Off
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Performance
Hypercho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	22

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\SpinEchoFieldMap\_ AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\SpinEchoFieldMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\fmMRI\_VISMOTOR\_P  
A

TA: 2:45 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	194
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
------------------	-----------

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	194
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessAlt\MRI\_CARIT\_PA

TA: 4:10 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	300
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
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**Resolution - Filter Image**

Prescan Normalize	Off
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**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	300
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
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**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessA\fmri\_FACE\_NAME\_  
PA

TA: 4:46 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	345
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
----------	------

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	345
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\Localizer

TA: 9.2 s PM: REF Voxel size: 1.2×1.2×5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	Off
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	40.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
----------	------

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3

**Geometry - AutoAlign**

Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.0 A20.0 H0.0
L	0.0 mm
A	20.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High

**System - Tx/Rx**

Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	40.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	40.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed

**Sequence - Part 1**

Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\AAHScout

TA: 0:14 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: 3 Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR	3.15 ms
TE	1.37 ms
Flip angle	8 deg

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1

**Resolution - iPAT**

Reference scan mode	Integrated
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Flip angle	8 deg
Measurements	1
Time to center	6.2 s

**Inline - Inline**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	8 deg
Measurements	1

**Inline - MapIt**

Contrasts	1
TR	3.15 ms
TE	1.37 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Contrasts	1
Multi-slice mode	Sequential
Bandwidth	540 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
------	-----

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\Localizer\_aligned

TA: 0:21 PM: REF Voxel size: 1.2x1.2x5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	104.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
----------	------

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3

**Geometry - AutoAlign**

Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High

**System - Tx/Rx**

Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	104.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	104.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed

**Sequence - Part 1**

Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\SpinEchoFieldMap\_ AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\SpinEchoFieldMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\rfMRI\_REST\_AP

TA: 6:40 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
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**Resolution - Filter Image**

Prescan Normalize	Off
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**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
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**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\rfMRI\_REST\_PA

TA: 6:40 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
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**Resolution - Filter Image**

Prescan Normalize	Off
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**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
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**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\SpinEchoFieldMap\_ AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\SpinEchoFieldMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\dMRI\_dir98\_AP

TA: 5:37 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

**Geometry - Navigator****Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

**System - Miscellaneous**

Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	98

**Diff - Body**

Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\dMRI\_dir98\_PA

TA: 5:37 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

**Geometry - Navigator****Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

**System - Miscellaneous**

Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	98

**Diff - Body**

Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\dMRI\_dir99\_AP

TA: 5:41 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

**Geometry - Navigator****Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

**System - Miscellaneous**

Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	99
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	99

**Diff - Body**

Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-A\_SessB\dMRI\_dir99\_PA

TA: 5:41 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

**Geometry - Navigator****Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

**System - Miscellaneous**

Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	99
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	99

**Diff - Body**

Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\PCASLhr\_SpinEcho  
FieldMap\_AP

TA: 8.0 s PM: REF Voxel size: 2.5×2.5×2.3 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
TE	40.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	40.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
Base resolution	86
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 F4.0
L	0.0 mm
P	0.0 mm
F	4.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Advanced
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 F20.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	215 mm
! R >> L	215 mm
! F >> H	182 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.57 ms
Bandwidth	2326 Hz/Px

**Sequence - Part 2**

EPI factor	86
RF pulse type	Normal

**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\PCASLhr\_SpinEcho  
FieldMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.5×2.5×2.3 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
TE	40.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	40.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
Base resolution	86
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 F4.0
L	0.0 mm
P	0.0 mm
F	4.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Advanced
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 F20.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	215 mm
! R >> L	215 mm
! F >> H	182 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.57 ms
Bandwidth	2326 Hz/Px

**Sequence - Part 2**

EPI factor	86
RF pulse type	Normal

**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-A\_SessB\mbPCASLhr\_PA

TA: 5:29 PM: REF Voxel size: 2.5×2.5×2.3 mmPAT: 6 Rel. SNR: 1.00 : mbPCASL

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	60
Dist. factor	10.0 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	3580.0 ms
TE	19.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3580.0 ms
TE	19.00 ms
MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	90
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
Base resolution	86
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

Accel. mode	Slice accel.
Accel. factor PE	1

**Resolution - iPAT**

Ref. lines PE	12
Accel. factor slice	6
Reference scan mode	EPI/separate

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	60
Dist. factor	10.0 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	P >> A
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	3580.0 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 F4.0
L	0.0 mm
P	0.0 mm
F	4.0 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Advanced
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 F20.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	215 mm
! R >> L	215 mm
! F >> H	182 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3580.0 ms
Concatenations	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	90
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.57 ms

**Sequence - Part 1**

Bandwidth	2326 Hz/Px
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**Sequence - Part 2**

EPI factor	86
RF pulse type	Normal
Gradient mode	Fast
Excitation	Standard

**Sequence - pTX Pulses****Sequence - Special**

PCASL Options	mdPCASL
Labeling Duration.	1500000 us.
Postlabeling delay.	1641860 us.

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\Localizer

TA: 9.2 s PM: REF Voxel size: 1.2×1.2×5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	Off
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	40.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3

**Geometry - AutoAlign**

Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.0 A20.0 H0.0
L	0.0 mm
A	20.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High

**System - Tx/Rx**

Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	40.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	40.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed

**Sequence - Part 1**

Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessA\AAHScout

TA: 0:14 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: 3 Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR	3.15 ms
TE	1.37 ms
Flip angle	8 deg

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1

**Resolution - iPAT**

Reference scan mode	Integrated
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Flip angle	8 deg
Measurements	1
Time to center	6.2 s

**Inline - Inline**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	8 deg
Measurements	1

**Inline - MapIt**

Contrasts	1
TR	3.15 ms
TE	1.37 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Contrasts	1
Multi-slice mode	Sequential
Bandwidth	540 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\Localizer\_ali  
igned

TA: 0:21 PM: REF Voxel size: 1.2x1.2x5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	104.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude

**Contrast - Dynamic**

Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Transversal

**Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	2
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	104.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	104.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
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**Sequence - Part 1**

Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\SpinEchoFidMap\_AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\SpinEchoFidMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\rfMRI\_REST  
\_AP

TA: 6:40 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\rfMRI\_REST\_PA

TA: 6:40 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\T1w\_setter

TA: 0.2 s PM: FIX Voxel size: 8.0×8.0×8.0 mmRel. SNR: 1.00 : ABCD

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	9.9 ms
TE	4.6 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

**Contrast - Common**

TR	9.9 ms
TE	4.6 ms
MTC	Off
Flip angle	2 deg
Fat suppr.	None

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
Base resolution	32
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	9.9 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H40.0
L	0.0 mm
P	0.0 mm
H	40.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	50.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	9.9 ms
Concatenations	1

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.26 ms
Bandwidth	5208 Hz/Px

**Sequence - Part 2**

EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

**Sequence - Special**

Protocol filename	MPRAGE
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessA\T1w\_MPR\_v  
Nav\_4e

TA: 8:22 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : tfl

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	2500.0 ms
TE 1	1.81 ms
TE 2	3.6 ms
TE 3	5.39 ms
TE 4	7.18 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

### Contrast - Common

TR	2500.0 ms
TE 1	1.81 ms
TE 2	3.6 ms
TE 3	5.39 ms
TE 4	7.18 ms
Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	8.0 deg
Fat suppr.	Water excit. fast
Water suppr.	None

### Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

### Resolution - Common

FoV read	256 mm
FoV phase	93.8 %

### Resolution - Common

Slice thickness	0.80 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

### Geometry - Common

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	2500.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	16.00 deg
Initial Orientation	Sagittal

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
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**Geometry - Tim Planning Suite**

Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	2500.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Non-sel. IR
TI	1000 ms
Fat suppr.	Water excit. fast
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - Maplt**

Save original images	On
Maplt	None
Flip angle	8.0 deg
Measurements	1
Contrasts	4
TR	2500.0 ms
TE 1	1.81 ms
TE 2	3.6 ms
TE 3	5.39 ms
TE 4	7.18 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Contrasts	4
Flow comp. 1	No
Multi-slice mode	Single shot
Echo spacing	11.2 ms
Bandwidth 1	740 Hz/Px
Bandwidth 2	740 Hz/Px
Bandwidth 3	740 Hz/Px
Bandwidth 4	740 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Turbo factor	300

**Sequence - Special**

Readout polarity	Positive
Nav. location	Before
Apply moco to	parent and nav
Remeasure	30 TRs
Reacq. threshold	0.50
Feedback delay	80 ms
Moco ref. image	Use Temp Ref
K-space streaming	None
ABCD navigator	On
Add. grad time	0.0 ms
Apply freq to	parent and nav
Averaging	RMS

**Sequence - Assistant**

Mode	Off
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\T2w\_setter

TA: 0.3 s PM: FIX Voxel size: 8.0×8.0×8.0 mmRel. SNR: 1.00 : ABCD

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	13.0 ms
TE	6.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

**Contrast - Common**

TR	13.0 ms
TE	6.0 ms
MTC	Off
Flip angle	2 deg
Fat suppr.	Water excit. normal

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
Base resolution	32
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	32
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	8.00 mm
TR	13.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P0.0 H40.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H40.0
L	0.0 mm
P	0.0 mm
H	40.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	Water excit. normal
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	13.0 ms
Concatenations	1

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.26 ms
Bandwidth	5208 Hz/Px

**Sequence - Part 2**

EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

**Sequence - Special**

Protocol filename	T2-SPACE
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\T2w\_SPC\_v  
Nav

TA: 6:35 PM: FIX Voxel size: 0.8x0.8x0.8 mmPAT: 2 Rel. SNR: 1.00 : spc

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	3200 ms
TE	564 ms
Averages	1.0
Concatenations	1
Filter	Prescan Normalize, Image Filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	3200 ms
TE	564 ms
MTC	Off
Magn. preparation	None
Fat suppr.	None
Blood suppr.	Off
Restore magn.	Off

**Contrast - Dynamic**

Averages	1.0
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed
Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	On
Intensity	Sharp
Edge Enhancement	3
Smoothing	3
Unfiltered images	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	7.7 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	0.80 mm
TR	3200 ms
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	16.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	5.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
Trigger delay	0 ms
TR	3200 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	On
Reordering	Linear
Flow comp.	No
Echo spacing	3.86 ms
Adiabatic-mode	Off
Bandwidth	744 Hz/Px

**Sequence - Part 2**

Echo train duration	1166 ms
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	T2 var
Turbo factor	314

**Sequence - Special**

Include nav.	On
Apply moco to	parent and nav
Remeasure	25 TRs
Reacq. threshold	0.50
Feedback delay	80 ms
Moco ref. image	Use Temp Ref
K-space streaming	None
ABCD navigator	On
Apply freq to	parent and nav

**Sequence - Assistant**

Allowed delay	0 s
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\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\SpinEchoFidMap\_AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\SpinEchoFidMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessA\fmMRI\_GUES  
SING\_PA

TA: 3:54 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	280
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	280
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessA\fmMRI\_GUES  
SING\_AP

TA: 3:54 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	280
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	280
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\fmRI\_CARI  
T\_PA

TA: 4:10 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfid

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	300
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
----------	------

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
------------------	-----------

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	300
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessA\fmRI\_CARI  
T\_AP

TA: 4:10 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	300
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	300
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessA\fmRI\_EMOT  
ION\_PA

TA: 2:32 PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	178
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	178
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\Localizer

TA: 9.2 s PM: REF Voxel size: 1.2x1.2x5.0 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	Off
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

**Contrast - Common**

TR	40.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

**Resolution - Common**

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
----------	------

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	40.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3

**Geometry - AutoAlign**

Position	L0.0 A20.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.0 A20.0 H0.0
L	0.0 mm
A	20.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High

**System - Tx/Rx**

Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	40.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	40.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed

**Sequence - Part 1**

Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessB\AAHScout

TA: 0:14 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: 3 Rel. SNR: 1.00 : fl

**Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR	3.15 ms
TE	1.37 ms
Flip angle	8 deg

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1

**Resolution - iPAT**

Reference scan mode	Integrated
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Flip angle	8 deg
Measurements	1
Time to center	6.2 s

**Inline - Inline**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	8 deg
Measurements	1

**Inline - MapIt**

Contrasts	1
TR	3.15 ms
TE	1.37 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Contrasts	1
Multi-slice mode	Sequential
Bandwidth	540 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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igned

TA: 0:21 PM: REF Voxel size: 1.2x1.2x5.0 mmPAT: Off Rel. SNR: 1.00 : fl

### Properties

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
TE	3.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

### Contrast - Common

TR	104.0 ms
TE	3.00 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

### Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude

### Contrast - Dynamic

Measurements	1
Multiple series	Off

### Resolution - Common

FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	On

### Geometry - Common

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	2
Slices	7
Dist. factor	200 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	104.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

### Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	Transversal

**Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	2
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	3
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	104.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	300 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	15 deg
Measurements	1
Contrasts	1
TR	104.0 ms
TE	3.00 ms

**Sequence - Part 1**

Introduction	On
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**Sequence - Part 1**

Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	260 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\SpinEchoFidMap\_AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\SpinEchoFidMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

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\_AP

TA: 6:40 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\rfMRI\_REST\_PA

TA: 6:40 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off Rel. SNR: 1.00 : epfd

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
TE	37.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	800 ms
TE	37.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	488
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	800 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain

**System - Miscellaneous**

Coil Select Mode	Off - All
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**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	800 ms
Multi-band accel. factor	8

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	488
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	6600 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\SpinEchoFidMap\_AP

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\SpinEchoFidMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.0x2.0x2.0 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
TE	66.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	66.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - iPAT

PAT mode	None
----------	------

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	72
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
P	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off

**System - Miscellaneous**

AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	208 mm
R >> L	208 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.58 ms
Bandwidth	2290 Hz/Px

**Sequence - Part 2**

EPI factor	104
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessB\dMRI\_dir98\_ AP

TA: 5:37 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

### Geometry - Common

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

### Geometry - Navigator

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessB\dMRI\_dir98\_ PA  
 TA: 5:37 PM: REF Voxel size: 1.5x1.5x1.5 mmPAT: Off Rel. SNR: 1.00 : epse

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

**Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

**Geometry - Navigator**

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	98
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessB\dMRI\_dir99\_ AP

TA: 5:41 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

### Geometry - Common

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

### Geometry - Navigator

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	99
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	99
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessB\dMRI\_dir99\_ PA

TA: 5:41 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
TE	89.20 ms
Multi-band accel. factor	4
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	3230 ms
TE	89.20 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	None
Grad. rev. fat suppr.	Enabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off
Dynamic Field Corr.	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

### Geometry - Common

Slice group	1
Slices	92
Dist. factor	0 %
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	3230 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	4

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 H6.0 mm
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 H6.0
L	0.0 mm
A	0.0 mm
H	6.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

### Geometry - Saturation

Fat suppr.	None
Grad. rev. fat suppr.	Enabled
Special sat.	None

### Geometry - Navigator

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 H6.0 mm
! Orientation	T > C-16.0
! Rotation	0.00 deg
! A >> P	208 mm
! R >> L	208 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3230 ms
Multi-band accel. factor	4

**Physio - PACE**

Resp. control	Off
Multi-band accel. factor	4

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	99
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40

**Diff - Body**

Diffusion mode	Free
Diff. directions	99
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	3000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	40

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.69 ms
Bandwidth	1700 Hz/Px

**Sequence - Part 2**

EPI factor	140
Gradient mode	Performance
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
Refocus pulse duration	7680 us
Single-band images	On
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\PCASLhr\_S  
pinEchoFieldMap\_AP

TA: 8.0 s PM: REF Voxel size: 2.5×2.5×2.3 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
TE	40.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	40.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
Base resolution	86
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 F4.0
L	0.0 mm
P	0.0 mm
F	4.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Advanced
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 F20.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	215 mm
! R >> L	215 mm
! F >> H	182 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.57 ms
Bandwidth	2326 Hz/Px

**Sequence - Part 2**

EPI factor	86
RF pulse type	Normal

**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_Martinost1T2vNav\HCP-D\_8-21yo\_SessB\PCASLhr\_S  
pinEchoFieldMap\_PA

TA: 8.0 s PM: REF Voxel size: 2.5×2.5×2.3 mmPAT: Off Rel. SNR: 1.00 : epse

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
TE	40.00 ms
Multi-band accel. factor	1
Filter	None
Coil elements	HEA;HEP

### Contrast - Common

TR	8000 ms
TE	40.00 ms
MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
Base resolution	86
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	60
Dist. factor	10 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	8000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 F4.0
L	0.0 mm
P	0.0 mm
F	4.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

### Geometry - Saturation

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

### Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Advanced
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 F20.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	215 mm
! R >> L	215 mm
! F >> H	182 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8000 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Contrasts	1
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.57 ms
Bandwidth	2326 Hz/Px

**Sequence - Part 2**

EPI factor	86
RF pulse type	Normal

**Sequence - Part 2**

Gradient mode	Performance
Excitation	Standard

**Sequence - Special**

SENSE1 coil combine	Off
Invert RO/PE polarity	On
Save reduced raw data	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\HCP\HCP\HCP\_CMRRmb\_CMRRmbPCASL\_MartinosT1T2vNav\HCP-D\_8-21yo\_SessB\mbPCASLhr\_PA

TA: 5:29 PM: REF Voxel size: 2.5×2.5×2.3 mmPAT: 6 Rel. SNR: 1.00 : mbPCASL

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	On
Start measurements	Single measurement

**Routine**

Slice group	1
Slices	60
Dist. factor	10.0 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	3580.0 ms
TE	19.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

**Contrast - Common**

TR	3580.0 ms
TE	19.00 ms
MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	90
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
Base resolution	86
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

Accel. mode	Slice accel.
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**Resolution - iPAT**

Accel. factor PE	1
Ref. lines PE	12
Accel. factor slice	6
Reference scan mode	EPI/separate

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	60
Dist. factor	10.0 %
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	P >> A
FoV read	215 mm
FoV phase	100.0 %
Slice thickness	2.27 mm
TR	3580.0 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L0.0 P0.0 F4.0 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.0 P0.0 F4.0
L	0.0 mm
P	0.0 mm
F	4.0 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Special sat.	None

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T

**System - Miscellaneous**

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

**System - Adjustments**

B0 Shim mode	Advanced
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 P0.0 F20.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	215 mm
! R >> L	215 mm
! F >> H	182 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.261391 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3580.0 ms
Concatenations	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	Off
Temp. highpass filter	Off
Threshold	4.00
Paradigm size	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	90
Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
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**Sequence - Part 1**

Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.57 ms
Bandwidth	2326 Hz/Px

**Sequence - Part 2**

EPI factor	86
RF pulse type	Normal
Gradient mode	Fast
Excitation	Standard

**Sequence - pTX Pulses****Sequence - Special**

PCASL Options	mdPCASL
Labeling Duration.	1500000 us.
Postlabeling delay.	1641860 us.