

This hcp7t_diff Session 3 includes:

Localizer

AAHScout_32ch

Localizer_aligned

=== resting ===

BOLD_REST3_PA

BOLD_PA_SE

BOLD_AP_SE

=== diffusion ===

DWI_AP_dir71

DWI_PA_dir71

DWI_AP_dir72

DWI_PA_dir72

=== additional reference scans ===

DWI_AP_SSref

DWI_PA_SSref

DWI_AP_SEGref

DWI_PA_SEGref

FieldMap_diffusion

Notes:

1. "Raw Filter" is listed as "On" in PDF throughout. But it was "Off". That is a bug in the protocol printout under VB17.
2. Phase enc. dir. for all "PA" scans is left as "A >> P", and the polarity inversion is accomplished by setting "Invert RO/PE polarity" flag to "On" in the Sequence:Special tab.
3. For the Diffusion scans, we have highlighted/annotated inline some confusing settings in the protocol printout for "Voxel size", "Slices", "Slice thickness", and "Slice multiplier". "Slices" and "Slice thickness" for the dMRI protocol as listed as 66 and 2.10 mm, respectively, but the actual acquisition is 132 slices that are 1.05 mm.

Why is it done this way?:

Siemens has a limit of 128 slices. So, we implemented a work-around using a "Slice multiplier" parameter in the Sequence:Special tab (which we set to 2) that allows us to tell Siemens "66, 2.1 mm slices", but the sequence actually acquires 132, 1.05mm slices.

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\Localizer

TA: 5.8 s PAT: Off Voxel size: 1.1x1.0x5.0 mm Rel. SNR: 1.00 SIEMENS: gre

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------|-------------------|
| Slice group 1 | |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A50.0 H0.0 |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Slice group 2 | |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Slice group 3 | |
| Slices | 1 |
| Dist. factor | 20 % |
| Position | Isocenter |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 250 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.0 mm |
| TR | 6.2 ms |
| TE | 2.67 ms |
| Averages | 1 |
| Concatenations | 3 |
| Filter | Elliptical filter |
| Coil elements | A32 |

Contrast

| | |
|-------------------|------------------|
| TD | 0 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 10 deg |
| Fat suppr. | None |
| Water suppr. | None |
| SWI | Off |
| ----- | |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution

| | |
|-----------------|-----|
| Base resolution | 256 |
|-----------------|-----|

| | |
|-----------------------|---------|
| Phase resolution | 90 % |
| Phase partial Fourier | Off |
| Interpolation | On |
| ----- | |
| PAT mode | None |
| ----- | |
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | On |
| Mode | Inplane |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Sequential |
| Series | Interleaved |
| ----- | |
| Saturation mode | Standard |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |
| ----- | |
| Tim CT mode | Off |

System

| | |
|--------------------------|------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Save uncombined | Off |
| Coil Combine Mode | Adaptive Combine |
| AutoAlign | --- |
| Auto Coil Select | Off |
| ----- | |
| Shim mode | Tune up |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 350 mm |
| A >> P | 263 mm |
| F >> H | 350 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
| Segments | 1 |
| ----- | |
| Tagging | None |
| Dark blood | Off |
| ----- | |
| Resp. control | Off |

Inline

| | |
|--------------------|-----|
| Subtract | Off |
| Liver registration | Off |
| Std-Dev-Sag | Off |

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| | |
|----------------------|------|
| Std-Dev-Cor | Off |
| Std-Dev-Tra | Off |
| Std-Dev-Time | Off |
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |
| ----- | |
| Wash - In | Off |
| Wash - Out | Off |
| TTP | Off |
| PEI | Off |
| MIP - time | Off |
| ----- | |
| MapIt | None |
| Contrasts | 1 |

Sequence

| | |
|---------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Phase stabilisation | Off |
| Asymmetric echo | Allowed |
| Bandwidth | 320 Hz/Px |
| Flow comp. | No |
| ----- | |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slice-sel. |
| RF spoiling | On |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\AAHScout_32ch

TA: 8.9 s PAT: 4 Voxel size: 1.6x1.6x1.6 mm Rel. SNR: 1.00 SIEMENS: AALScout

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | On |
| Load images to graphic segments | On |
| Auto open inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------|-----------------|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | L0.0 A50.0 H0.0 |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Rotation | 0 deg |
| AutoAlign | Head |
| 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 | 2.90 ms |
| TE | 1.2 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|----------------|------------|
| Flip angle | 9.0 deg |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |

Resolution

| | |
|-----------------------|------------|
| Base resolution | 160 |
| Phase resolution | 100 % |
| Slice resolution | 69 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | 6/8 |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 2 |
| Ref. lines 3D | 24 |
| Reference scan mode | Integrated |
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | Off |

Geometry

| | |
|------------------|------------|
| Multi-slice mode | Sequential |
| Series | Ascending |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|----------------|
| V32 | Off |
| A32 | On |
| Positioning mode | REF |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Save uncombined | Off |
| Coil Combine Mode | Sum of Squares |
| Auto Coil Select | Off |
| Shim mode | Tune up |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 350 mm |
| A >> P | 263 mm |
| F >> H | 350 mm |

Inline

| | |
|----------------|-------|
| Time to center | 4.5 s |
| Maplt | None |
| Contrasts | 1 |

Sequence

| | |
|-----------------|-----------|
| Introduction | On |
| Dimension | 3D |
| Asymmetric echo | Weak |
| Bandwidth | 550 Hz/Px |
| RF pulse type | Fast |
| Gradient mode | Normal |
| Excitation | Non-sel. |
| RF spoiling | On |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\Localizer_aligned
 TA: 0:23 PAT: Off Voxel size: 1.1x1.0x5.0 mm Rel. SNR: 1.00 SIEMENS: gre

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | On |
| Load images to graphic segments | On |
| Auto open inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------|-------------------|
| Slice group 1 | |
| Slices | 5 |
| Dist. factor | 400 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Slice group 2 | |
| Slices | 5 |
| Dist. factor | 600 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Slice group 3 | |
| Slices | 5 |
| Dist. factor | 300 % |
| Position | Isocenter |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 250 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.0 mm |
| TR | 6.2 ms |
| TE | 2.67 ms |
| Averages | 1 |
| Concatenations | 15 |
| Filter | Elliptical filter |
| Coil elements | A32 |

Contrast

| | |
|-------------------|------------------|
| TD | 0 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 10 deg |
| Fat suppr. | None |
| Water suppr. | None |
| SWI | Off |
| ----- | |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution

| | |
|-----------------|-----|
| Base resolution | 256 |
|-----------------|-----|

| | |
|-----------------------|---------|
| Phase resolution | 90 % |
| Phase partial Fourier | Off |
| Interpolation | On |
| ----- | |
| PAT mode | None |
| ----- | |
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | On |
| Mode | Inplane |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Sequential |
| Series | Interleaved |
| ----- | |
| Saturation mode | Standard |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |
| ----- | |
| Tim CT mode | Off |

System

| | |
|--------------------------|------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Save uncombined | Off |
| Coil Combine Mode | Adaptive Combine |
| AutoAlign | Head > Brain |
| Auto Coil Select | Off |
| ----- | |
| Shim mode | Tune up |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 350 mm |
| A >> P | 263 mm |
| F >> H | 350 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
| Segments | 1 |
| ----- | |
| Tagging | None |
| Dark blood | Off |
| ----- | |
| Resp. control | Off |

Inline

| | |
|--------------------|-----|
| Subtract | Off |
| Liver registration | Off |
| Std-Dev-Sag | Off |

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| | |
|----------------------|------|
| Std-Dev-Cor | Off |
| Std-Dev-Tra | Off |
| Std-Dev-Time | Off |
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |
| ----- | |
| Wash - In | Off |
| Wash - Out | Off |
| TTP | Off |
| PEI | Off |
| MIP - time | Off |
| ----- | |
| MapIt | None |
| Contrasts | 1 |

Sequence

| | |
|---------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Phase stabilisation | Off |
| Asymmetric echo | Allowed |
| Bandwidth | 320 Hz/Px |
| Flow comp. | No |
| ----- | |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slice-sel. |
| RF spoiling | On |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\BOLD_REST3_PA

TA: 16:20 PAT: 2 Voxel size: 1.6x1.6x1.6 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_bold

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | On |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 85 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | -0.52 deg |
| Phase oversampling | 0 % |
| FoV read | 208 mm |
| FoV phase | 100.0 % |
| Slice thickness | 1.60 mm |
| TR | 1000 ms |
| TE | 22.2 ms |
| Multi-band accel. factor | 5 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 45 deg |
| Fat suppr. | Fat sat. |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 900 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 130 |
| Phase resolution | 100 % |
| Phase partial Fourier | 7/8 |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 96 |
| Reference scan mode | GRE |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |

Special sat. None

| | |
|------------------|------|
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|-------------------|----------------|
| V32 | Off |
| A32 | On |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |

| | |
|--------------------------|-------------------|
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

BOLD

| | |
|-------------------------|----------|
| GLM Statistics | Off |
| Dynamic t-maps | Off |
| Starting ignore meas | 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 |

Sequence

| | |
|-----------------------|------------|
| Introduction | Off |
| Bandwidth | 1924 Hz/Px |
| Flow comp. | No |
| Free echo spacing | Off |
| Echo spacing | 0.64 ms |
| SIR accel. factor | 1 |
| EPI factor | 130 |
| Gradient mode | Normal |
| RF spoiling | Off |
| Excite pulse duration | 5760 us |
| Slice multiplier | 1 |
| Multi-band PE shift | 3 1/FoV |
| zBlip scheme | 0 |
| MB kernel size | 5 |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|----------|
| MB knockout band | 0 |
| No. of interleaved TEs | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | On |
| SENSE1 coil combine | Off |
| Log physiology to file | Off |
| Invert RO/PE polarity | On |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| PF omits higher k-space | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 0.60 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |
| Triggering scheme | Standard |
| Starting ignore meas | 0 |
| Paradigm size | 0 |
| Multiplier | 0 |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\BOLD_PA_SE

TA: 1:26 PAT: 2 Voxel size: 1.6x1.6x1.6 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_se

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 85 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | -0.51 deg |
| Phase oversampling | 0 % |
| FoV read | 208 mm |
| FoV phase | 100.0 % |
| Slice thickness | 1.60 mm |
| TR | 3000 ms |
| TE | 60 ms |
| Multi-band accel. factor | 5 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 3 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 130 |
| Phase resolution | 100 % |
| Phase partial Fourier | 7/8 |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 96 |
| Reference scan mode | GRE |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
|------------------|-------------|

Series Interleaved

| | |
|------------------|------|
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

BOLD

| | |
|-------------------------|----------|
| GLM Statistics | Off |
| Dynamic t-maps | Off |
| Starting ignore meas | 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 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1924 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.64 ms |
| SIR accel. factor | 1 |
| EPI factor | 130 |
| Gradient mode | Normal |
| RF spoiling | Off |
| Excite pulse duration | 4480 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 1 |
| Multi-band PE shift | 3 1/FoV |
| zBlip scheme | 0 |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|----------|
| MB kernel size | 5 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | Off |
| SENSE1 coil combine | Off |
| Log physiology to file | Off |
| Invert RO/PE polarity | On |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |
| Triggering scheme | Standard |
| Starting ignore meas | 0 |
| Paradigm size | 2 |
| Multiplier | 1 |
| Step [1] | 1 |
| Step [2] | 0 |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\BOLD_AP_SE

TA: 1:26 PAT: 2 Voxel size: 1.6x1.6x1.6 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_se

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 85 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | -0.51 deg |
| Phase oversampling | 0 % |
| FoV read | 208 mm |
| FoV phase | 100.0 % |
| Slice thickness | 1.60 mm |
| TR | 3000 ms |
| TE | 60 ms |
| Multi-band accel. factor | 5 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 3 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 130 |
| Phase resolution | 100 % |
| Phase partial Fourier | 7/8 |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 96 |
| Reference scan mode | GRE |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
|------------------|-------------|

Series Interleaved

| | |
|------------------|------|
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

BOLD

| | |
|-------------------------|----------|
| GLM Statistics | Off |
| Dynamic t-maps | Off |
| Starting ignore meas | 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 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1924 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.64 ms |
| SIR accel. factor | 1 |
| EPI factor | 130 |
| Gradient mode | Normal |
| RF spoiling | Off |
| Excite pulse duration | 4480 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 1 |
| Multi-band PE shift | 3 1/FoV |
| zBlip scheme | 0 |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|----------|
| MB kernel size | 5 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | Off |
| SENSE1 coil combine | Off |
| Log physiology to file | Off |
| Invert RO/PE polarity | Off |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |
| Triggering scheme | Standard |
| Starting ignore meas | 0 |
| Paradigm size | 2 |
| Multiplier | 1 |
| Step [1] | 1 |
| Step [2] | 0 |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_AP_dir71

TA: 10:07 PAT: 3 Voxel size: 1.1x1.1x2.1 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 66 |
| Reference scan mode | GRE |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|------------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 2000 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 71 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 0 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | Off |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_PA_dir71

TA: 10:07 PAT: 3 Voxel size: 1.1x1.1x2.1 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 66 |
| Reference scan mode | GRE |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|------------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 2000 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 71 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 0 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | On |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_AP_dir72

TA: 10:14 PAT: 3 Voxel size: 1.1x1.1x2.1 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 66 |
| Reference scan mode | GRE |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|------------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 2000 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 72 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 0 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | Off |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_PA_dir72

TA: 10:14 PAT: 3 Voxel size: 1.1x1.1x2.1 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|--------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 66 |
| Reference scan mode | GRE |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|------------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 2000 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 72 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 0 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | On |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| GRE iPAT ref. FA | 12.0 deg |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_AP_SSref

TA: 0:42 PAT: 3 Voxel size: 1.1x1.1x**2.1 mm** Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|-------------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 39 |
| Reference scan mode | Single-shot |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|---------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 6 |

Sequence

| | |
|-------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 2 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | Off |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_PA_SSref

TA: 0:42 PAT: 3 Voxel size: 1.1x1.1x2.1 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|-------------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 39 |
| Reference scan mode | Single-shot |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|---------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 6 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 2 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | On |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_AP_SEGref

TA: 1:10 PAT: 3 Voxel size: 1.1x1.1x**2.1 mm** Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|-----------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 120 |
| Reference scan mode | Segmented |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|---------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 6 |

Sequence

| | |
|-------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 0 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | Off |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\DWI_PA_SEGref

TA: 1:10 PAT: 3 Voxel size: 1.1x1.1x2.1 mm Rel. SNR: 1.00 USER: hcp_v2_mbep2d_diff

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.10 mm |
| TR | 7000 ms |
| TE | 71.2 ms |
| Averages | 1 |
| Multi-band accel. factor | 2 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------------|-----------|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 90 deg |
| Refocus flip angle | 180 deg |
| Fat suppr. | None |
| Grad. rev. fat suppr. | Disabled |
| ----- | |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|-----------------------|-----------|
| Base resolution | 200 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| ----- | |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 120 |
| Reference scan mode | Segmented |
| ----- | |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| ----- | |
| Special sat. | None |
| ----- | |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|--------------------------|-------------------|
| V32 | Off |
| A32 | On |
| ----- | |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |
| ----- | |
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Physio

| | |
|-----------------|------|
| 1st Signal/Mode | None |
|-----------------|------|

Diff

| | |
|-----------------------|---------------------|
| Diffusion mode | Free |
| Diff. weightings | 1 |
| b-value | 0 s/mm ² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 40 |
| Diff. directions | 6 |

Sequence

| | |
|------------------------|------------|
| Introduction | Off |
| Bandwidth | 1388 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 0.82 ms |
| ----- | |
| SIR accel. factor | 1 |
| EPI factor | 200 |
| Gradient mode | Normal |
| RF spoiling | Off |
| ----- | |
| Excite pulse duration | 5120 us |
| Refocus pulse duration | 10240 us |
| Slice multiplier | 2 |
| Multi-band PE shift | 0 1/FoV |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

| | |
|--------------------------|-----------|
| MB RF pulse shift | 1920 us |
| zBlip scheme | 0 |
| MB kernel size | 0 |
| MB knockout band | 0 |
| RF pulse shape | 1 |
| EPI noise scans | 0 |
| EPI full reference scan | 0 |
| Diffusion Scheme | Monopolar |
| Single-band images | On |
| MB LeakBlock kernel | Off |
| MB RF phase scramble | Off |
| Time-shifted MB RF | On |
| SENSE1 coil combine | On |
| Log physiology to file | Off |
| Invert RO/PE polarity | On |
| Save reduced raw data | On |
| Readout slice trace | Off |
| Disable ramp sampling | Off |
| User defined diff. delta | Off |
| Online multi-band recon. | Online |
| FFT scale factor | 1.00 |
| Diff. spoil factor | 3.0 |
| Send B1 shim trigger | Never |

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\HCP\HCP_Phase2_7T_autoAlign\Session 3 (diff_7T)\FieldMap_diffusion

TA: 1:14 Voxel size: 2.1x1.1x2.1 mm Rel. SNR: 1.00 USER: gre_field_mapping

Properties

| | |
|---|--------|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | Off |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|--------------------|------------------|
| Slice group 1 | |
| Slices | 66 |
| Dist. factor | 0 % |
| Position | L0.0 P12.0 H13.0 |
| Orientation | T > C-20.0 |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 210 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.1 mm |
| TR | 475.0 ms |
| TE 1 | 4.08 ms |
| TE 2 | 5.1 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | A32 |

Contrast

| | |
|-----------------|-------------|
| MTC | Off |
| Flip angle | 35 deg |
| Fat suppr. | None |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 1 |
| Multiple series | Off |

Resolution

| | |
|-----------------------|------|
| Base resolution | 200 |
| Phase resolution | 50 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | Off |

Geometry

| | |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Special sat. | None |
| Table position | H |

Table position 0 mm
 Inline Composing Off

System

| | |
|-------------------|------------------|
| V32 | Off |
| A32 | On |
| Positioning mode | FIX |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Save uncombined | Off |
| Coil Combine Mode | Adaptive Combine |
| AutoAlign | Head > Brain |
| Auto Coil Select | Default |

| | |
|--------------------------|-------------------|
| Shim mode | Advanced |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ? Ref. amplitude 1H | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| ! Position | L0.7 P13.2 H9.5 |
| ! Orientation | T > C-15.6 > S0.3 |
| ! Rotation | 0.00 deg |
| ! R >> L | 130 mm |
| ! A >> P | 170 mm |
| ! F >> H | 120 mm |

Composing

Sequence

| | |
|-----------------|-----------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Contrasts | 2 |
| Bandwidth | 610 Hz/Px |
| Flow comp. | Yes |
| RF pulse type | Normal |
| Gradient mode | Normal* |
| RF spoiling | On |

Table of contents

| | | | |
|--------|-----|-------------------------|------------------------------------|
| \\USER | | | |
| | HCP | | |
| | | HCP_Phase2_7T_autoAlign | |
| | | | Session 3 (diff_7T) |
| | | | Localizer |
| | | | AAHScout_32ch |
| | | | Localizer_aligned |
| | | | === resting === |
| | | | BOLD_REST3_PA |
| | | | BOLD_PA_SE |
| | | | BOLD_AP_SE |
| | | | === diffusion === |
| | | | DWI_AP_dir71 |
| | | | DWI_PA_dir71 |
| | | | DWI_AP_dir72 |
| | | | DWI_PA_dir72 |
| | | | === additional reference scans === |
| | | | DWI_AP_SSref |
| | | | DWI_PA_SSref |
| | | | DWI_AP_SEGref |
| | | | DWI_PA_SEGref |
| | | | FieldMap_diffusion |