# SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\Feinberglab\Tanja\GRASE_VASO\BP_grase_clean_VASO_V04_pF58_V170

TA: 2.5 s PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_clean_VASO_V04

## 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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 0 % |
| Position | R67.7 A29.0 F60.0 |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| Rotation | 90.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 8 |
| FoV read | 130 mm |
| FoV phase | 30.9 % |
| Slice thickness | 0.8 mm |
| TR | 2500 ms |
| TE | 59.78 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

## Contrast

| | |
|---|---|
| Magn. preparation | Non-sel. IR |
| TI | 1400 ms |
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

## Resolution

| | |
|---|---|
| Base resolution | 162 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Slice partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Prescan Normalize | Off |
| Raw filter | Off |

## Geometry

| | |
|---|---|
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 40 mm |
| Position | R67.7 A24.0 F60.0 |
| Orientation | Sagittal |
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

## System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| Positioning mode | REF |
| 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 | Default |
| Shim mode | Standard |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ! Ref. amplitude 1H | 170.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | R67.7 A29.0 F60.0 |
| Orientation | Transversal |
| Rotation | 90.00 deg |
| A >> P | 130 mm |
| R >> L | 41 mm |
| F >> H | 7 mm |

## Physio

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

## Composing

## Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Centric |
| Contrasts | 1 |
| Bandwidth | 1144 Hz/Px |
| Echo spacing | 1 ms |
| Turbo factor | 5 |
| EPI factor | 50 |
| RF pulse type | Normal |
| Gradient mode | Fast* |
| flip angle excit | 90 |
| phase encoding | ON |
| Maxwell compensation | Off |
| ICE program | single |
| prepscans | 0 |

\\USER\Feinberglab\Tanja\GRASE_VASO\BP_grase_clean_VASO_V04_pFoff_iPAT2x1_V170

TA: 0:13 PAT: 2 Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_clean_VASO_V04

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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 0 % |
| Position | L47.0 A29.0 F6.7 |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| Rotation | 90.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 8 |
| FoV read | 130 mm |
| FoV phase | 30.9 % |
| Slice thickness | 0.8 mm |
| TR | 2500 ms |
| TE | 36.88 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Magn. preparation | Non-sel. IR |
| TI | 1400 ms |
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 162 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Ref. lines 3D | 8 |
| Reference scan mode | Separate |
| Prescan Normalize | Off |
| Raw filter | Off |

Geometry

| | |
|---|---|
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 40 mm |
| Position | L47.0 A24.0 F6.7 |
| Orientation | Sagittal |
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| Positioning mode | REF |
| 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 | Default |
| Shim mode | Standard |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ! Ref. amplitude 1H | 170.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | L47.0 A29.0 F6.7 |
| Orientation | Transversal |
| Rotation | 90.00 deg |
| A >> P | 130 mm |
| R >> L | 41 mm |
| F >> H | 7 mm |

Physio

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

Composing

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Centric |
| Contrasts | 1 |
| Bandwidth | 1144 Hz/Px |
| Echo spacing | 1.1 ms |
| Turbo factor | 8 |
| EPI factor | 50 |
| RF pulse type | Normal |
| Gradient mode | Fast* |
| flip angle excit | 90 |
| phase encoding | ON |
| Maxwell compensation | Off |
| ICE program | single |
| prepscans | 3 |

\\USER\Feinberglab\Tanja\GRASE_VASO\BP_grase_clean_VASO

TA: 6.0 s PAT: Off Voxel size: 1.7×1.7×1.8 mm Rel. SNR: 1.00 USER: BP_grase_clean_VASO

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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 0 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 18 |
| FoV read | 184 mm |
| FoV phase | 33.3 % |
| Slice thickness | 1.8 mm |
| TR | 2000 ms |
| TE | 35.2 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Magn. preparation | None |
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 3 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 108 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Slice partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Prescan Normalize | Off |
| Raw filter | Off |

Geometry

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

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| Positioning mode | REF |
| 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 | Default |
| Shim mode | Standard |
| 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 | 184 mm |
| A >> P | 62 mm |
| F >> H | 33 mm |

Physio

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

Composing

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Centric |
| Contrasts | 1 |
| Bandwidth | 1402 Hz/Px |
| Echo spacing | 0.8 ms |
| Turbo factor | 11 |
| EPI factor | 36 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| refocussing type | sinc 2560 |
| flip angle excit | 90 |
| phase encoding | ON |
| Maxwell compensation | Off |
| ICE program | single |
| prepscans | 0 |

\\USER\Feinberglab\Tanja\GRASE_VASO\BP_grase_clean_VASO_V05_pF58_V170

TA: 2.5 s PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_clean_VASO_V05

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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 0 % |
| Position | L45.0 A25.0 H0.0 |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| Rotation | 90.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 8 |
| FoV read | 120 mm |
| FoV phase | 30.7 % |
| Slice thickness | 0.8 mm |
| TR | 2500 ms |
| TE | 62.44 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Magn. preparation | Non-sel. IR |
| TI | 1400 ms |
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 150 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Slice partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Prescan Normalize | Off |
| Raw filter | Off |

Geometry

| | |
|---|---|
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 40 mm |
| Position | L45.0 A20.0 H0.0 |
| Orientation | Sagittal |
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| 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 | Default |
| Shim mode | Standard |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ! Ref. amplitude 1H | 170.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | L45.0 A25.0 H0.0 |
| Orientation | Transversal |
| Rotation | 90.00 deg |
| A >> P | 120 mm |
| R >> L | 37 mm |
| F >> H | 7 mm |

Physio

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

Composing

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Centric |
| Contrasts | 1 |
| Bandwidth | 952 Hz/Px |
| Echo spacing | 1.2 ms |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Crusher Momentum | 40000 |
| Crusher Time | 2000 |
| refocussing type | sinc 2560 |
| flip angle excit | 90 |
| phase encoding | ON |
| Maxwell compensation | Off |
| ICE program | single |
| prepscans | 0 |

\\USER\Feinberglab\Tanja\GRASE_VASO\pgrs3d_ey

TA: 6.0 s PAT: Off Voxel size: 1.7×1.7×1.8 mm Rel. SNR: 1.00 USER: pgrs3d_ey

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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 0 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| Rotation | 90.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 18 |
| FoV read | 184 mm |
| FoV phase | 33.3 % |
| Slice thickness | 1.8 mm |
| TR | 2000 ms |
| TE | 76.6 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 3 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 108 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Slice partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Raw filter | Off |

Geometry

| | |
|---|---|
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 58 mm |
| Position | Isocenter |
| Orientation | Sagittal |
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| Positioning mode | REF |
| 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 | Default |
| Shim mode | Standard |
| 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 | 90.00 deg |
| A >> P | 184 mm |
| R >> L | 62 mm |
| F >> H | 33 mm |

Physio

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

BOLD

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Bandwidth | 1402 Hz/Px |
| Echo spacing | 0.8 ms |
| Turbo factor | 11 |
| EPI factor | 37 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Adjust flipangles | Off |
| Crusher Momentum | 40000 |
| Crusher Time | 2000 |
| FLIP ANGLES[1] | 180 degrees |
| FLIP ANGLES[2] | 180 degrees |
| FLIP ANGLES[3] | 180 degrees |
| FLIP ANGLES[4] | 180 degrees |
| FLIP ANGLES[5] | 180 degrees |
| FLIP ANGLES[6] | 180 degrees |
| FLIP ANGLES[7] | 180 degrees |
| FLIP ANGLES[8] | 180 degrees |
| FLIP ANGLES[9] | 180 degrees |
| FLIP ANGLES[10] | 180 degrees |

| | |
|---|---|
| FLIP ANGLES[11] | 180 degrees |
| FLIP ANGLES[12] | 180 degrees |
| FLIP ANGLES[13] | 180 degrees |
| FLIP ANGLES[14] | 180 degrees |
| FLIP ANGLES[15] | 180 degrees |
| FLIP ANGLES[16] | 180 degrees |
| FLIP ANGLES[17] | 180 degrees |
| FLIP ANGLES[18] | 180 degrees |
| FLIP ANGLES[19] | 180 degrees |
| FLIP ANGLES[20] | 180 degrees |
| FLIP ANGLES[21] | 180 degrees |
| FLIP ANGLES[22] | 180 degrees |
| FLIP ANGLES[23] | 180 degrees |
| FLIP ANGLES[24] | 180 degrees |
| FLIP ANGLES[25] | 180 degrees |
| FLIP ANGLES[26] | 180 degrees |
| FLIP ANGLES[27] | 180 degrees |
| FLIP ANGLES[28] | 180 degrees |
| FLIP ANGLES[29] | 180 degrees |
| FLIP ANGLES[30] | 180 degrees |
| FLIP ANGLES[31] | 180 degrees |
| FLIP ANGLES[32] | 180 degrees |
| Phase Encoding | On |
| Measurement Number | 0 |
| Inversion Time | 1500000 us |
| Inversion Flag | Off |

\\USER\Feinberglab\Tanja\GRASE_VASO\fl2d10_retro_1slice_30s

TA: 6:00 PAT: 3 Voxel size: 0.5×0.5×3.0 mm Rel. SNR: 1.00 SIEMENS: CV

Properties

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

Routine

| | |
|---|---|
| Slice group 1 | |
| Slices | 6 |
| Dist. factor | 0 % |
| Position | R1.3 P48.6 F13.5 |
| Orientation | C > T-5.1 |
| Phase enc. dir. | H >> F |
| Rotation | -89.999728 deg |
| Auto | On |
| Phase oversampling | 0 % |
| FoV read | 128 mm |
| FoV phase | 100.0 % |
| Slice thickness | 3 mm |
| TR | 1837.82 ms |
| TE | 16.00 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | Distortion Corr.(2D), Image Filter |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| TD | 0 ms |
| Magn. preparation | None |
| Flip angle | 60 deg |
| Fat suppr. | None |
| Restore magn. | Off |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each slice |

Resolution

| | |
|---|---|
| Base resolution | 256 |
| Phase resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Trajectory | Cartesian |
| View sharing | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 24 |
| Reference scan mode | Integrated |
| Image Filter | On |
| ! Intensity | Medium |
| Edge Enhancement | 1 |
| Smoothing | 3 |
| Unfiltered images | Off |
| Distortion Corr. | On |
| Mode | 2D |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | Off |
| POCS | Off |

Geometry

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

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| 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 | Standard |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ! Ref. amplitude 1H | 230.000 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 | Pulse/Trigger |
| Average cycle | No Signal ms |
| Captured cycle | -not set- |
| Acquisition window | 30000 ms |
| Trigger pulse | 1 |
| Trigger delay | 0 ms |
| Segments | 86 |
| Phases | 16 |
| Tagging | None |
| Dark blood | Off |
| Cine | On |
| Dummy heartbeats | 1 |
| Inline ventricular function | Off |

| | |
|---|---|
| Resp. control | Off |

Inline

| | |
|---|---|
| Subtract | Off |
| Std-Dev-Sag | Off |
| 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 |

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 2D |
| Reordering | Linear |
| Asymmetric echo | Allowed |
| Bandwidth | 149 Hz/Px |
| Flow comp. | Yes |
| Optimization | Min. TR |
| Allowed delay | 0 s |
| Echo spacing | 21.4 ms |
| Sequence type | Gre |
| Define | Segments |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slice-sel. |
| Flip angle mode | Constant |
| RF spoiling | On |
| Phase Enc. Rewinder | On |

\\USER\Feinberglab\Tanja\GRASE_VASO\fl3d_retro_pt5mm_FC

TA: 10:30 PAT: 3 Voxel size: 0.5×0.5×3.0 mm Rel. SNR: 1.00 SIEMENS: CV

Properties

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

Routine

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | R1.3 P38.5 F10.8 |
| Orientation | Coronal |
| Phase enc. dir. | H >> F |
| Rotation | -90.00 deg |
| Auto | On |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 10 |
| FoV read | 128 mm |
| FoV phase | 100.0 % |
| Slice thickness | 3.00 mm |
| TR | 1842.12 ms |
| TE | 16.00 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Distortion Corr.(2D), Image Filter |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Magn. preparation | None |
| Flip angle | 30 deg |
| Fat suppr. | None |
| Restore magn. | Off |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 256 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Trajectory | Cartesian |
| View sharing | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Reference scan mode | Integrated |

| | |
|---|---|
| Image Filter | On |
| ! Intensity | Medium |
| Edge Enhancement | 1 |
| Smoothing | 3 |
| Unfiltered images | Off |
| Distortion Corr. | On |
| Mode | 2D |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | Off |
| POCS | Off |

Geometry

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

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| 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 | Standard |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ! Ref. amplitude 1H | 200.000 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 | ECG/Trigger |
| Average cycle | No Signal ms |
| Captured cycle | -not set- |
| Acquisition window | 30000 ms |
| Trigger pulse | 1 |
| Trigger delay | 0 ms |
| Segments | 84 |
| Phases | 16 |
| Tagging | None |

| | |
|---|---|
| Dark blood | Off |
| Cine | On |
| Dummy heartbeats | 1 |
| Inline ventricular function | Off |
| Resp. control | Off |

Inline

| | |
|---|---|
| Subtract | Off |
| Std-Dev-Sag | Off |
| 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 |

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Elliptical scanning | Off |
| Reordering | Linear |
| Asymmetric echo | Allowed |
| Bandwidth | 149 Hz/Px |
| Flow comp. | Yes |
| Optimization | Min. TR |
| Allowed delay | 0 s |
| Echo spacing | 21.9 ms |
| Sequence type | Gre |
| Define | Segments |
| RF pulse type | Low SAR |
| Gradient mode | Normal |
| Excitation | Slab-sel. |
| Flip angle mode | Constant |
| RF spoiling | On |
| Phase Enc. Rewinder | On |

\\USER\Feinberglab\Tanja\GRASE_VASO\fl3d_retro_pt5mm_smallFlip

TA: 10:30 PAT: 3 Voxel size: 0.5×0.5×3.0 mm Rel. SNR: 1.00 SIEMENS: CV

Properties

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

Routine

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | R1.3 P38.5 F10.8 |
| Orientation | Coronal |
| Phase enc. dir. | H >> F |
| Rotation | -90.00 deg |
| Auto | On |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 10 |
| FoV read | 128 mm |
| FoV phase | 100.0 % |
| Slice thickness | 3.00 mm |
| TR | 1816.92 ms |
| TE | 16.00 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Distortion Corr.(2D), Image Filter |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Magn. preparation | None |
| Flip angle | 5 deg |
| Fat suppr. | None |
| Restore magn. | Off |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 256 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Trajectory | Cartesian |
| View sharing | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Reference scan mode | Integrated |

| | |
|---|---|
| Image Filter | On |
| ! Intensity | Medium |
| Edge Enhancement | 1 |
| Smoothing | 3 |
| Unfiltered images | Off |
| Distortion Corr. | On |
| Mode | 2D |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | Off |
| POCS | Off |

Geometry

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

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| 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 | Standard |
| 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 | ECG/Trigger |
| Average cycle | No Signal ms |
| Captured cycle | -not set- |
| Acquisition window | 30000 ms |
| Trigger pulse | 1 |
| Trigger delay | 0 ms |
| Segments | 84 |
| Phases | 16 |
| Tagging | None |

| | |
|---|---|
| Dark blood | Off |
| Cine | On |
| Dummy heartbeats | 1 |
| Inline ventricular function | Off |
| Resp. control | Off |

Inline

| | |
|---|---|
| Subtract | Off |
| Std-Dev-Sag | Off |
| 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 |

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Elliptical scanning | Off |
| Reordering | Linear |
| Asymmetric echo | Allowed |
| Bandwidth | 149 Hz/Px |
| Flow comp. | No |
| Optimization | Min. TR |
| Allowed delay | 0 s |
| Echo spacing | 21.6 ms |
| Sequence type | Gre |
| Define | Segments |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slab-sel. |
| Flip angle mode | Constant |
| RF spoiling | On |
| Phase Enc. Rewinder | On |

\\USER\Feinberglab\Tanja\GRASE_VASO\VASO_118_broken

TA: 13:16 PAT: 2 Voxel size: 0.7×0.7×1.8 mm Rel. SNR: 1.00 USER: VASO_118

### 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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | R >> L |
| Rotation | 120.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 10 |
| FoV read | 32.8 mm |
| FoV phase | 300.0 % |
| Slice thickness | 1.80 mm |
| TR | 1648.90 ms |
| TE | 24 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | |

### Contrast

| | |
|---|---|
| Perfusion mode | SS-SI VASO |
| TI2 | 900 ms |
| TI1 | 50 ms |
| TI1s | 50 ms |
| Flip angle | 30 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 483 |
| Delay in TR | 0 ms |
| Multiple series | Off |
| Perfusion mode | PICORE Q2T |
| Inversion time 1 | 50 ms |
| Saturation stop time | 50 ms |
| Inversion time 2 | 900.0 ms |
| Flow limit | 100.0 cm/s |

### Resolution

| | |
|---|---|
| Base resolution | 44 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Ref. lines 3D | 8 |
| Reference scan mode | Separate |
| Prescan Normalize | Off |
| Raw filter | Off |
| Elliptical filter | Off |
| Hamming | Off |

### Geometry

| | |
|---|---|
| Multi-slice mode | Interleaved |
| Series | Ascending |
| Special sat. | Parallel F |
| Gap | 25.0 mm |
| Thickness | 100 mm |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

### System

| | |
|---|---|
| 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 |
| AutoAlign | --- |
| Auto Coil Select | Default |
| Shim mode | Standard |
| 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 | 210.00 deg |
| R >> L | 99 mm |
| A >> P | 33 mm |
| F >> H | 18 mm |

### Physio

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

### BOLD

| | |
|---|---|
| Motion correction | Off |
| Spatial filter | Off |

### Sequence

| | |
|---|---|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Bandwidth | 1042 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 1.08 ms |
| EPI factor | 132 |
| RF pulse type | Normal |
| Gradient mode | Normal |

| | |
|---|---|
| Excitation | Slab-sel. |
| RF spoiling | On |
| Ampl | 110 |
| BWDTH | 150  3.1kHz |
| ph.skip 4 Robert (the one) | 30 |
| use Ernst angle | Off |
| Maxwell Correction | Off |
| log physio files | Off |
| FFT scale | 1.00 |
| dummy prepscan time | 3 s |
| z shim | 0.00 mT/m*ms |
| RF duration | 2560 us |
| RF BWTP | 5.2 |
| Renzo: Delta TI | 72 ms |
| EFFECTIVE TR | 16488 ms |
| PatPartitions | 10 |
| EPI phase correction | local |
| PAT refscan mode | Flash |
| FlashRef BaseRes | 44 |
| FlashRef BW | 1000 Hz/px |
| FlashRef TE | 4800 us |
| FlashRef FA | 5 deg |
| use CAIPI | Off |

\\USER\Feinberglab\Tanja\GRASE_VASO\pgrs3d_ey

TA: 6.0 s PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: pgrs3d_ey

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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 0 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 16 |
| FoV read | 184 mm |
| FoV phase | 19.1 % |
| Slice thickness | 0.8 mm |
| TR | 2000 ms |
| TE | 54.1 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Flip angle | 180 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 3 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 230 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Slice partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Raw filter | Off |

Geometry

| | |
|---|---|
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 35 mm |
| Position | Isocenter |
| Orientation | Coronal |
| Special sat. | None |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| Positioning mode | REF |
| 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 | Default |
| Shim mode | Standard |
| 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 | 184 mm |
| A >> P | 36 mm |
| F >> H | 13 mm |

Physio

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

BOLD

Sequence

| | |
|---|---|
| Introduction | Off |
| Dimension | 3D |
| Reordering | Centric |
| Contrasts | 1 |
| Bandwidth | 1358 Hz/Px |
| Echo spacing | 1 ms |
| Turbo factor | 10 |
| EPI factor | 44 |
| RF pulse type | Normal |
| Gradient mode | Fast* |
| Adjust flipangles | Off |
| Crusher Momentum | 40000 |
| Crusher Time | 2000 |
| FLIP ANGLES[1] | 180 degrees |
| FLIP ANGLES[2] | 180 degrees |
| FLIP ANGLES[3] | 180 degrees |
| FLIP ANGLES[4] | 180 degrees |
| FLIP ANGLES[5] | 180 degrees |
| FLIP ANGLES[6] | 180 degrees |
| FLIP ANGLES[7] | 180 degrees |
| FLIP ANGLES[8] | 180 degrees |
| FLIP ANGLES[9] | 180 degrees |
| FLIP ANGLES[10] | 180 degrees |

| | |
|---|---|
| FLIP ANGLES[11] | 180 degrees |
| FLIP ANGLES[12] | 180 degrees |
| FLIP ANGLES[13] | 180 degrees |
| FLIP ANGLES[14] | 180 degrees |
| FLIP ANGLES[15] | 180 degrees |
| FLIP ANGLES[16] | 180 degrees |
| FLIP ANGLES[17] | 180 degrees |
| FLIP ANGLES[18] | 180 degrees |
| FLIP ANGLES[19] | 180 degrees |
| FLIP ANGLES[20] | 180 degrees |
| FLIP ANGLES[21] | 180 degrees |
| FLIP ANGLES[22] | 180 degrees |
| FLIP ANGLES[23] | 180 degrees |
| FLIP ANGLES[24] | 180 degrees |
| FLIP ANGLES[25] | 180 degrees |
| FLIP ANGLES[26] | 180 degrees |
| FLIP ANGLES[27] | 180 degrees |
| FLIP ANGLES[28] | 180 degrees |
| FLIP ANGLES[29] | 180 degrees |
| FLIP ANGLES[30] | 180 degrees |
| FLIP ANGLES[31] | 180 degrees |
| FLIP ANGLES[32] | 180 degrees |
| Phase Encoding | On |
| Measurement Number | 0 |
| Inversion Time | 1500000 us |
| Inversion Flag | Off |

\\USER\Feinberglab\Tanja\GRASE_VASO\VASO_118

TA: 8.3 s PAT: 2 Voxel size: 0.7×0.7×1.8 mm Rel. SNR: 1.00 USER: VASO_118

### 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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 30.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 10 |
| FoV read | 32.8 mm |
| FoV phase | 300.0 % |
| Slice thickness | 1.80 mm |
| TR | 1659.70 ms |
| TE | 24 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

### Contrast

| | |
|---|---|
| Perfusion mode | SS-SI VASO |
| TI2 | 900 ms |
| TI1 | 50 ms |
| TI1s | 50 ms |
| Flip angle | 30 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 5 |
| Delay in TR | 0 ms |
| Multiple series | Off |
| Perfusion mode | PICORE Q2T |
| Inversion time 1 | 50 ms |
| Saturation stop time | 50 ms |
| Inversion time 2 | 900.0 ms |
| Flow limit | 100.0 cm/s |

### Resolution

| | |
|---|---|
| Base resolution | 44 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Ref. lines 3D | 8 |
| Reference scan mode | Separate |
| Prescan Normalize | Off |
| Raw filter | Off |
| Elliptical filter | Off |
| Hamming | Off |

### Geometry

| | |
|---|---|
| Multi-slice mode | Interleaved |
| Series | Ascending |
| Special sat. | Parallel F |
| Gap | 25.0 mm |
| Thickness | 100 mm |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

### System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| 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 |
| AutoAlign | --- |
| Auto Coil Select | Default |
| Shim mode | Standard |
| 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 | 120.00 deg |
| A >> P | 99 mm |
| R >> L | 33 mm |
| F >> H | 18 mm |

### Physio

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

### BOLD

| | |
|---|---|
| Motion correction | Off |
| Spatial filter | Off |

### Sequence

| | |
|---|---|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Bandwidth | 1042 Hz/Px |
| Free echo spacing | Off |

| | |
|---|---|
| Echo spacing | 1.08 ms |
| EPI factor | 132 |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Ampl | 100 |
| BWDTH | 150  3.1kHz |
| ph.skip 4 Robert (the one) | 30 |
| use Ernst angle | Off |
| Maxwell Correction | Off |
| log physio files | Off |
| FFT scale | 1.00 |
| dummy prepscan time | 3 s |
| z shim | 0.00 mT/m*ms |
| RF duration | 2560 us |
| RF BWTP | 5.2 |
| Renzo: Delta TI | 73 ms |
| EFFECTIVE TR | 16597 ms |
| PatPartitions | 10 |
| EPI phase correction | local |
| PAT refscan mode | segm LIN->PAR |
| use CAIPI | Off |

\\USER\Feinberglab\Tanja\GRASE_VASO\VASO_118_150V

TA: 2:44 PAT: 2 Voxel size: 0.7×0.7×1.8 mm Rel. SNR: 1.00 USER: VASO_118

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

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 50 % |
| Position | R65.4 P0.0 H4.0 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 30.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 10 |
| FoV read | 32.8 mm |
| FoV phase | 300.0 % |
| Slice thickness | 1.80 mm |
| TR | 2000.00 ms |
| TE | 24 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | None |
| Coil elements | B4;M2,3;T1 |

Contrast

| | |
|---|---|
| Perfusion mode | SS-SI VASO |
| TI2 | 1200 ms |
| TI1 | 50 ms |
| TI1s | 50 ms |
| Flip angle | 30 deg |
| Fat suppr. | Fat sat. |
| Fat sat. mode | Strong |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 82 |
| Delay in TR | 0 ms |
| Multiple series | Off |
| Perfusion mode | PICORE Q2T |
| Inversion time 1 | 50 ms |
| Saturation stop time | 50 ms |
| Inversion time 2 | 1200.0 ms |
| Flow limit | 100.0 cm/s |

Resolution

| | |
|---|---|
| Base resolution | 44 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Ref. lines 3D | 8 |
| Reference scan mode | Separate |
| Prescan Normalize | Off |
| Raw filter | Off |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|---|---|
| Multi-slice mode | Interleaved |
| Series | Ascending |
| Special sat. | Parallel F |
| Gap | 25.0 mm |
| Thickness | 100 mm |
| Table position | H |
| Table position | 0 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| T1 | On |
| M2 | On |
| B4 | On |
| M3 | On |
| V32 | Off |
| 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 |
| AutoAlign | --- |
| Auto Coil Select | Default |
| Shim mode | Standard |
| Adjust with body coil | Off |
| Confirm freq. adjustment | Off |
| Assume Silicone | Off |
| ! Ref. amplitude 1H | 150.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | R65.4 P0.0 H4.0 |
| Orientation | Transversal |
| Rotation | 120.00 deg |
| A >> P | 99 mm |
| R >> L | 33 mm |
| F >> H | 18 mm |

Physio

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

BOLD

| | |
|---|---|
| Motion correction | Off |
| Spatial filter | Off |

Sequence

| | |
|---|---|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Bandwidth | 1042 Hz/Px |
| Free echo spacing | Off |

| | |
|---|---|
| Echo spacing | 1.08 ms |
| EPI factor | 132 |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Ampl | 100 |
| BWDTH | 150  3.1kHz |
| ph.skip 4 Robert (the one) | 30 |
| use Ernst angle | Off |
| Maxwell Correction | Off |
| log physio files | Off |
| FFT scale | 1.00 |
| dummy prepscan time | 3 s |
| z shim | 0.00 mT/m*ms |
| RF duration | 2560 us |
| RF BWTP | 5.2 |
| Renzo: Delta TI | 73 ms |
| EFFECTIVE TR | 20000 ms |
| PatPartitions | 10 |
| EPI phase correction | local |
| PAT refscan mode | segm LIN->PAR |
| use CAIPI | Off |

Table of contents