

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\localizer\_200V

TA: 0:27

PAT: Off

Voxel size: 1.2x1.1x3.0 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 |

|                       |      |
|-----------------------|------|
| Phase resolution      | 90 % |
| Phase partial Fourier | 6/8  |
| Interpolation         | On   |
| PAT mode              | None |
| 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           | Interleaved |
| Saturation mode  | Standard    |
| Special sat.     | None        |
| Table position   | H           |
| Table position   | 0 mm        |
| Inline Composing | Off         |
| Tim CT mode      | Off         |

## Routine

|                    |             |
|--------------------|-------------|
| Slice group 1      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Slice group 2      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Coronal     |
| Phase enc. dir.    | R >> L      |
| Rotation           | 0.00 deg    |
| Slice group 3      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Phase oversampling | 0 %         |
| FoV read           | 280 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 3.0 mm      |
| TR                 | 10.0 ms     |
| TE                 | 3.00 ms     |
| Averages           | 1           |
| Concatenations     | 15          |
| Filter             | None        |
| Coil elements      | B4;M2,3;T1  |

## 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                | Tune up          |
| 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           |

## 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 |

## Physio

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

## Resolution

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

## Inline

|          |     |
|----------|-----|
| Subtract | Off |
|----------|-----|

|                      |      |
|----------------------|------|
| Liver registration   | 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   |
| <hr/>                |      |
| Wash - In            | Off  |
| Wash - Out           | Off  |
| TTP                  | Off  |
| PEI                  | Off  |
| MIP - time           | Off  |
| <hr/>                |      |
| MapIt                | None |
| Contrasts            | 1    |

**Sequence**

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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\b1map\_200V\_TR100

TA: 0:32

Voxel size: 3.9x3.9x5.0 mm

Rel. SNR: 1.00

USER: b1map\_658

## 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    | 150 %           |
| Position        | L0.0 A5.4 H40.7 |
| Orientation     | T > C-17.8      |
| Phase enc. dir. | A >> P          |
| Rotation        | 0.00 deg        |
| FoV read        | 250 mm          |
| FoV phase       | 100.0 %         |
| Slice thickness | 5 mm            |
| TR              | 425 ms          |
| TE 1            | 14 ms           |
| TE 2            | 14 ms           |
| Averages        | 1               |
| Filter          | None            |
| Coil elements   | B4;M2,3;T1      |

## Contrast

|              |         |
|--------------|---------|
| Flip angle 1 | 90 deg  |
| Flip angle 2 | 120 deg |
| Flip angle 3 | 60 deg  |
| Flip angle 4 | 135 deg |
| Flip angle 5 | 45 deg  |
| Measurements | 1       |

## Resolution

|                  |       |
|------------------|-------|
| Base resolution  | 64    |
| Phase resolution | 100 % |
| Raw filter       | Off   |

## Geometry

|                  |                  |
|------------------|------------------|
| Series           | Interleaved      |
| Navigator 1      |                  |
| Position         | R1.4 A11.5 H37.3 |
| Orientation      | T > C-18.6       |
| Rotation         | 0.00 deg         |
| Base size phase  | 129 mm           |
| Base size read   | 87 mm            |
| Thickness        | 50 mm            |
| 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 Tune up  
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

## Composing

### Sequence

Contrasts 2  
Bandwidth 260.416667 Hz/Px  
T1 Compensation Mean T1  
Mean T1 500.0 ms  
Angles 1  
Amplitude Weighting Linear  
Scale Bar Enabled  
Raw Data Disabled

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\MPRAGE

TA: 4:46

PAT: Off

Voxel size: 1.0x1.0x1.2 mm

Rel. SNR: 1.00

SIEMENS: tfl

## 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           | R2.0 A27.1 F10.2 |
| Orientation        | Sagittal         |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| Slice oversampling | 0.0 %            |
| Slices per slab    | 144              |
| FoV read           | 256 mm           |
| FoV phase          | 81.3 %           |
| Slice thickness    | 1.20 mm          |
| TR                 | 1370 ms          |
| TE                 | 2.84 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| T1                | 900 ms      |
| Flip angle        | 9 deg       |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Averaging mode    | Long term   |
| Reconstruction    | Magnitude   |
| Measurements      | 1           |
| Multiple series   | Off         |

## Resolution

|                       |       |
|-----------------------|-------|
| Base resolution       | 256   |
| Phase resolution      | 100 % |
| Slice resolution      | 100 % |
| Phase partial Fourier | Off   |
| Slice partial Fourier | Off   |
| Interpolation         | Off   |
| PAT mode              | None  |
| Image Filter          | Off   |
| Distortion Corr.      | Off   |
| Prescan Normalize     | Off   |
| Normalize             | Off   |
| B1 filter             | Off   |
| Raw filter            | Off   |
| Elliptical filter     | Off   |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |
| 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         | 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                 | R2.0 A27.1 F10.2 |
| Orientation              | Sagittal         |
| Rotation                 | 0.00 deg         |
| F >> H                   | 256 mm           |
| A >> P                   | 208 mm           |
| R >> L                   | 173 mm           |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| Dark blood      | 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        | On        |
| Dimension           | 3D        |
| Elliptical scanning | Off       |
| Asymmetric echo     | Off       |
| Bandwidth           | 240 Hz/Px |
| Flow comp.          | No        |
| Echo spacing        | 6.5 ms    |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3d1

TA: 5:34 PAT: 4 Voxel size: 1.5x1.5x3.0 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 24               |
| Dist. factor       | 20 %             |
| Position           | L0.0 A20.3 H54.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 3.0 mm           |
| TR                 | 8560 ms          |
| TE 1               | 15 ms            |
| TE 2               | 32 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 33        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

|                  |      |
|------------------|------|
| 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        | 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

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

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 12890      |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |            |
|-------------------|------------|
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 2000000 us |
| MB Measurements   | 30         |
| Ramp On           | On         |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3d1\_low

TA: 5:34 PAT: 4 Voxel size: 1.5x1.5x3.0 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 24               |
| Dist. factor       | 20 %             |
| Position           | L0.0 A20.3 H31.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 3.0 mm           |
| TR                 | 8560 ms          |
| TE 1               | 15 ms            |
| TE 2               | 32 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 33        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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        | 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

1st Signal/Mode None

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 12890      |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |



## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |            |
|-------------------|------------|
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 2000000 us |
| MB Measurements   | 30         |
| Ramp On           | On         |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\vinc\_m3f3p4\_flashref

TA: 34:00 PAT: 4 Voxel size: 1.6x1.6x5.0 mm Rel. SNR: 1.00 USER: ep2d\_vinc\_ms\_sbmb\_SAT\_flashref

## 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             | 3              |
| Dist. factor       | 700 %          |
| Position           | L0.0 A5.4 H2.0 |
| Orientation        | Transversal    |
| Phase enc. dir.    | A >> P         |
| Rotation           | 0.00 deg       |
| Phase oversampling | 0 %            |
| FoV read           | 200 mm         |
| FoV phase          | 100.0 %        |
| Slice thickness    | 5.0 mm         |
| TR                 | 5000 ms        |
| TE                 | 36.0 ms        |
| Averages           | 1              |
| Concatenations     | 1              |
| Filter             | None           |
| Coil elements      | B4;M2,3;T1     |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 15 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 420       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 36       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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            |
| 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 mm             |

## Physio

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

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1776 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.88 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 400        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\venc\_m3f3p3\_flashref

TA: 34:00 PAT: 3 Voxel size: 1.6x1.6x5.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT\_flashref

## 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             | 3              |
| Dist. factor       | 700 %          |
| Position           | L0.0 A5.4 H2.0 |
| Orientation        | Transversal    |
| Phase enc. dir.    | A >> P         |
| Rotation           | 0.00 deg       |
| Phase oversampling | 0 %            |
| FoV read           | 200 mm         |
| FoV phase          | 100.0 %        |
| Slice thickness    | 5.0 mm         |
| TR                 | 5000 ms        |
| TE                 | 36.0 ms        |
| Averages           | 1              |
| Concatenations     | 1              |
| Filter             | None           |
| Coil elements      | B4;M2,3;T1     |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 15 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 420       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 3        |
| Ref. lines PE         | 36       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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            |
| 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 mm             |

## Physio

1st Signal/Mode None

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1776 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.88 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 400        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\venc\_m3f3p2\_flashref

TA: 9:00 PAT: 2 Voxel size: 1.6x1.6x5.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT\_flashref

## 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             | 3              |
| Dist. factor       | 700 %          |
| Position           | L0.0 A5.4 H2.0 |
| Orientation        | Transversal    |
| Phase enc. dir.    | A >> P         |
| Rotation           | 0.00 deg       |
| Phase oversampling | 0 %            |
| FoV read           | 200 mm         |
| FoV phase          | 100.0 %        |
| Slice thickness    | 5.0 mm         |
| TR                 | 5000 ms        |
| TE                 | 41.0 ms        |
| Averages           | 1              |
| Concatenations     | 1              |
| Filter             | None           |
| Coil elements      | B4;M2,3;T1     |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 15 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 200       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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            |
| 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 mm             |

## Physio

1st Signal/Mode None

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1776 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.88 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 100        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso75

TA: 1:37

PAT: 2

Voxel size: 0.8x0.8x0.8 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P44.6 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.75 mm          |
| TR                 | 3120 ms          |
| TE                 | 27 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 28        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A43.2 H1.5 |
| Orientation | C > T2.0        |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| 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            |
| 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 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           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |        |
|-------------------|--------|
| Meas[12]          | Active |
| Meas[13]          | Active |
| Meas[14]          | Active |
| Meas[15]          | Active |
| Meas[16]          | Active |
| Meas[17]          | Active |
| Meas[18]          | Active |
| Meas[19]          | Active |
| Meas[20]          | Active |
| Motion correction | Off    |
| Spatial filter    | Off    |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Asymmetric echo   | Off        |
| Bandwidth         | 1086 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 1.05 ms    |
| <hr/>             |            |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| <hr/>             |            |
| RF90 duration     | 7680       |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| SkewType(1ff)     | 0          |
| OVS flash(1on)    | 1          |
| SER Number        | 1          |
| Spoil factor      | 1          |
| Skew Direction    | 1          |
| Sat RF90 duration | 5120       |
| Dual On(1)        | 3          |
| Echo Distance     | 1.00       |
| MB Measurements   | 25         |
| Ramp On           | On         |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso55

TA: 1:37

PAT: 2

Voxel size: 0.5x0.5x0.6 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P44.6 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 140 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.55 mm          |
| TR                 | 3120 ms          |
| TE                 | 34 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | T1               |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 28        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A43.2 H1.5 |
| Orientation | C > T2.0        |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| Special sat. | None              |

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

## System

|     |     |
|-----|-----|
| T1  | On  |
| M2  | Off |
| B4  | Off |
| M3  | Off |
| V32 | Off |

|                   |                |
|-------------------|----------------|
| Positioning mode  | FIX            |
| MSMA              | S - C - T      |
| Sagittal          | R >> L         |
| Coronal           | A >> P         |
| Transversal       | F >> H         |
| 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 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           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |        |
|-------------------|--------|
| Meas[12]          | Active |
| Meas[13]          | Active |
| Meas[14]          | Active |
| Meas[15]          | Active |
| Meas[16]          | Active |
| Meas[17]          | Active |
| Meas[18]          | Active |
| Meas[19]          | Active |
| Meas[20]          | Active |
| Motion correction | Off    |
| Spatial filter    | Off    |

## Sequence

|                   |           |
|-------------------|-----------|
| Introduction      | Off       |
| Asymmetric echo   | Off       |
| Bandwidth         | 782 Hz/Px |
| Free echo spacing | Off       |
| Echo spacing      | 1.4 ms    |
| <hr/>             |           |
| EPI factor        | 128       |
| RF pulse type     | Normal    |
| Gradient mode     | Fast      |
| RF spoiling       | On        |
| <hr/>             |           |
| RF90 duration     | 7680      |
| MB Number         | 2         |
| DummyScan Number  | 1         |
| FOV Shift Number  | 1         |
| SkewType(1ff)     | 0         |
| OVS flash(1on)    | 1         |
| SER Number        | 1         |
| Spoil factor      | 1         |
| Skew Direction    | 1         |
| Sat RF90 duration | 5120      |
| Dual On(1)        | 3         |
| Echo Distance     | 1.00      |
| MB Measurements   | 25        |
| Ramp On           | On        |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso55

TA: 1:37

PAT: 2

Voxel size: 0.5x0.5x0.6 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P44.6 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 140 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.55 mm          |
| TR                 | 3120 ms          |
| TE                 | 34 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | T1               |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 28        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A43.2 H1.5 |
| Orientation | C > T2.0        |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| Special sat. | None              |

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

## System

|                          |                   |
|--------------------------|-------------------|
| T1                       | On                |
| M2                       | Off               |
| B4                       | Off               |
| M3                       | Off               |
| V32                      | Off               |
| Positioning mode         | FIX               |
| MSMA                     | S - C - T         |
| Sagittal                 | R >> L            |
| Coronal                  | A >> P            |
| Transversal              | F >> H            |
| 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 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           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |        |
|-------------------|--------|
| Meas[12]          | Active |
| Meas[13]          | Active |
| Meas[14]          | Active |
| Meas[15]          | Active |
| Meas[16]          | Active |
| Meas[17]          | Active |
| Meas[18]          | Active |
| Meas[19]          | Active |
| Meas[20]          | Active |
| Motion correction | Off    |
| Spatial filter    | Off    |

## Sequence

|                   |           |
|-------------------|-----------|
| Introduction      | Off       |
| Asymmetric echo   | Off       |
| Bandwidth         | 782 Hz/Px |
| Free echo spacing | Off       |
| Echo spacing      | 1.4 ms    |
| <hr/>             |           |
| EPI factor        | 128       |
| RF pulse type     | Normal    |
| Gradient mode     | Fast      |
| RF spoiling       | On        |
| <hr/>             |           |
| RF90 duration     | 7680      |
| MB Number         | 2         |
| DummyScan Number  | 1         |
| FOV Shift Number  | 1         |
| SkewType(1ff)     | 0         |
| OVS flash(1on)    | 1         |
| SER Number        | 1         |
| Spoil factor      | 1         |
| Skew Direction    | 1         |
| Sat RF90 duration | 5120      |
| Dual On(1)        | 3         |
| Echo Distance     | 1.00      |
| MB Measurements   | 25        |
| Ramp On           | On        |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\MPRAGE\_long

TA: 9:14

PAT: Off

Voxel size: 1.0x1.0x1.2 mm

Rel. SNR: 1.00

SIEMENS: tfl

## 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        | Sagittal  |
| Phase enc. dir.    | A >> P    |
| Rotation           | 0.00 deg  |
| Phase oversampling | 0 %       |
| Slice oversampling | 0.0 %     |
| Slices per slab    | 160       |
| FoV read           | 256 mm    |
| FoV phase          | 93.8 %    |
| Slice thickness    | 1.20 mm   |
| TR                 | 2300 ms   |
| TE                 | 2.84 ms   |
| Averages           | 1         |
| Concatenations     | 1         |
| Filter             | None      |
| Coil elements      | 8CH       |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| T1                | 900 ms      |
| Flip angle        | 9 deg       |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Averaging mode    | Long term   |
| Reconstruction    | Magnitude   |
| Measurements      | 1           |
| Multiple series   | Off         |

## Resolution

|                       |       |
|-----------------------|-------|
| Base resolution       | 256   |
| Phase resolution      | 100 % |
| Slice resolution      | 100 % |
| Phase partial Fourier | Off   |
| Slice partial Fourier | Off   |
| Interpolation         | Off   |
| PAT mode              | None  |
| Image Filter          | Off   |
| Distortion Corr.      | Off   |
| Prescan Normalize     | Off   |
| Normalize             | Off   |
| B1 filter             | Off   |
| Raw filter            | Off   |
| Elliptical filter     | Off   |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |
| Table position   | H           |
| Table position   | 0 mm        |
| Inline Composing | Off         |

## System

|                          |                  |
|--------------------------|------------------|
| 8CH                      | On               |
| 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         | 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              | Sagittal         |
| Rotation                 | 0.00 deg         |
| F >> H                   | 256 mm           |
| A >> P                   | 240 mm           |
| R >> L                   | 192 mm           |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| Dark blood      | 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        | On        |
| Dimension           | 3D        |
| Elliptical scanning | Off       |
| Asymmetric echo     | Off       |
| Bandwidth           | 240 Hz/Px |
| Flow comp.          | No        |
| Echo spacing        | 6.5 ms    |
| RF pulse type       | Fast      |
| Gradient mode       | Normal    |
| Excitation          | Non-sel.  |
| RF spoiling         | On        |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3

TA: 1:33 PAT: 4 Voxel size: 1.5x1.5x1.5 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 36              |
| Dist. factor       | 0 %             |
| Position           | L0.0 A20.3 H2.7 |
| Orientation        | Transversal     |
| Phase enc. dir.    | A >> P          |
| Rotation           | 0.00 deg        |
| Phase oversampling | 0 %             |
| FoV read           | 192 mm          |
| FoV phase          | 100.0 %         |
| Slice thickness    | 1.5 mm          |
| TR                 | 5820 ms         |
| TE 1               | 13 ms           |
| TE 2               | 30 ms           |
| Averages           | 1               |
| Concatenations     | 1               |
| Filter             | None            |
| Coil elements      | B4;M2,3;T1      |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 10        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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        | 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 mm             |

## Physio

1st Signal/Mode None

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |            |
|-------------------|------------|
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 1000000 us |
| MB Measurements   | 2          |
| Ramp On           | On         |



## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3d1

TA: 1:16 PAT: 4 Voxel size: 1.5x1.5x1.5 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 36              |
| Dist. factor       | 0 %             |
| Position           | L0.0 A20.3 H2.7 |
| Orientation        | Transversal     |
| Phase enc. dir.    | A >> P          |
| Rotation           | 0.00 deg        |
| Phase oversampling | 0 %             |
| FoV read           | 192 mm          |
| FoV phase          | 100.0 %         |
| Slice thickness    | 1.5 mm          |
| TR                 | 5820 ms         |
| TE 1               | 13 ms           |
| TE 2               | 30 ms           |
| Averages           | 1               |
| Concatenations     | 1               |
| Filter             | None            |
| Coil elements      | B4;M2,3;T1      |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 7         |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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        | 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               | L12.7 P37.1 H14.7 |
| ! Orientation            | T > C-15.0        |
| ! Rotation               | 0.00 deg          |
| ! R >> L                 | 100 mm            |
| ! A >> P                 | 70 mm             |
| ! F >> H                 | 48 mm             |

## Physio

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

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |            |
|-------------------|------------|
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 1000000 us |
| MB Measurements   | 3          |
| Ramp On           | On         |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\localizer\_200V

TA: 0:27

PAT: Off

Voxel size: 1.2x1.1x3.0 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 |

|                       |      |
|-----------------------|------|
| Phase resolution      | 90 % |
| Phase partial Fourier | 6/8  |
| Interpolation         | On   |
| PAT mode              | None |
| 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           | Interleaved |
| Saturation mode  | Standard    |
| Special sat.     | None        |
| Table position   | H           |
| Table position   | 0 mm        |
| Inline Composing | Off         |
| Tim CT mode      | Off         |

## Routine

|                    |             |
|--------------------|-------------|
| Slice group 1      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Slice group 2      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Coronal     |
| Phase enc. dir.    | R >> L      |
| Rotation           | 0.00 deg    |
| Slice group 3      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Phase oversampling | 0 %         |
| FoV read           | 280 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 3.0 mm      |
| TR                 | 10.0 ms     |
| TE                 | 3.00 ms     |
| Averages           | 1           |
| Concatenations     | 15          |
| Filter             | None        |
| Coil elements      | B4;M2,3;T1  |

## 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                | Tune up          |
| 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           |

## 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 |

## Physio

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

## Resolution

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

## Inline

|          |     |
|----------|-----|
| Subtract | Off |
|----------|-----|

|                      |      |
|----------------------|------|
| Liver registration   | 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   |
| <hr/>                |      |
| Wash - In            | Off  |
| Wash - Out           | Off  |
| TTP                  | Off  |
| PEI                  | Off  |
| MIP - time           | Off  |
| <hr/>                |      |
| MapIt                | None |
| Contrasts            | 1    |

## Sequence

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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\MPRAGE

TA: 4:46

PAT: Off

Voxel size: 1.0x1.0x1.2 mm

Rel. SNR: 1.00

SIEMENS: tfl

## 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           | R2.0 A27.1 F10.2 |
| Orientation        | Sagittal         |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| Slice oversampling | 0.0 %            |
| Slices per slab    | 144              |
| FoV read           | 256 mm           |
| FoV phase          | 81.3 %           |
| Slice thickness    | 1.20 mm          |
| TR                 | 1370 ms          |
| TE                 | 2.84 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| T1                | 900 ms      |
| Flip angle        | 9 deg       |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Averaging mode    | Long term   |
| Reconstruction    | Magnitude   |
| Measurements      | 1           |
| Multiple series   | Off         |

## Resolution

|                       |       |
|-----------------------|-------|
| Base resolution       | 256   |
| Phase resolution      | 100 % |
| Slice resolution      | 100 % |
| Phase partial Fourier | Off   |
| Slice partial Fourier | Off   |
| Interpolation         | Off   |
| PAT mode              | None  |
| Image Filter          | Off   |
| Distortion Corr.      | Off   |
| Prescan Normalize     | Off   |
| Normalize             | Off   |
| B1 filter             | Off   |
| Raw filter            | Off   |
| Elliptical filter     | Off   |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |
| 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         | 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                 | R2.0 A27.1 F10.2 |
| Orientation              | Sagittal         |
| Rotation                 | 0.00 deg         |
| F >> H                   | 256 mm           |
| A >> P                   | 208 mm           |
| R >> L                   | 173 mm           |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| Dark blood      | 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        | On        |
| Dimension           | 3D        |
| Elliptical scanning | Off       |
| Asymmetric echo     | Off       |
| Bandwidth           | 240 Hz/Px |
| Flow comp.          | No        |
| Echo spacing        | 6.5 ms    |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3d1

TA: 5:34 PAT: 4 Voxel size: 1.5x1.5x3.0 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 24               |
| Dist. factor       | 20 %             |
| Position           | L0.0 A20.3 H54.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 3.0 mm           |
| TR                 | 8560 ms          |
| TE 1               | 15 ms            |
| TE 2               | 32 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 33        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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        | 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

1st Signal/Mode None

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 12890      |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |            |
|-------------------|------------|
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 2000000 us |
| MB Measurements   | 30         |
| Ramp On           | On         |



## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3d1\_low

TA: 5:34 PAT: 4 Voxel size: 1.5x1.5x3.0 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 24               |
| Dist. factor       | 20 %             |
| Position           | L0.0 A20.3 H31.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 3.0 mm           |
| TR                 | 8560 ms          |
| TE 1               | 15 ms            |
| TE 2               | 32 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 33        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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        | 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

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

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 12890      |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |            |
|-------------------|------------|
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 2000000 us |
| MB Measurements   | 30         |
| Ramp On           | On         |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\venc\_m3f3p4\_flashref

TA: 34:00 PAT: 4 Voxel size: 1.6x1.6x5.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT\_flashref

## 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             | 3                |
| Dist. factor       | 700 %            |
| Position           | L0.0 A23.7 H12.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 200 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 5.0 mm           |
| TR                 | 5000 ms          |
| TE                 | 36.0 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 15 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 420       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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           |
| 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

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

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1776 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.88 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 400        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\venc\_m3f3p3\_flashref

TA: 34:00 PAT: 3 Voxel size: 1.6x1.6x5.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT\_flashref

## 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             | 3                |
| Dist. factor       | 700 %            |
| Position           | L0.0 A23.7 H12.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 200 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 5.0 mm           |
| TR                 | 5000 ms          |
| TE                 | 36.0 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 15 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 420       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 3        |
| Ref. lines PE         | 36       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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           |
| 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

1st Signal/Mode None

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1776 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.88 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 400        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\vinc\_m3f3p2\_flashref

TA: 34:00 PAT: 2 Voxel size: 1.6x1.6x5.0 mm Rel. SNR: 1.00 USER: ep2d\_vinc\_ms\_sbmb\_SAT\_flashref

## 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             | 3                |
| Dist. factor       | 700 %            |
| Position           | L0.0 A23.7 H12.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 200 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 5.0 mm           |
| TR                 | 5000 ms          |
| TE                 | 41.0 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 15 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 420       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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           |
| 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

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

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1776 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.88 ms    |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 400        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1



## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso75

TA: 2:24

PAT: 2

Voxel size: 0.8x0.8x0.8 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P26.9 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.75 mm          |
| TR                 | 3120 ms          |
| TE                 | 27 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 43        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A69.7 H0.0 |
| Orientation | Coronal         |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| 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         |
| 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               | R0.1 P37.1 H15.4 |
| ! Orientation            | T > C-15.0       |
| ! Rotation               | 0.00 deg         |
| ! R >> L                 | 100 mm           |
| ! A >> P                 | 70 mm            |
| ! F >> H                 | 48 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           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |        |
|-------------------|--------|
| Meas[12]          | Active |
| Meas[13]          | Active |
| Meas[14]          | Active |
| Meas[15]          | Active |
| Meas[16]          | Active |
| Meas[17]          | Active |
| Meas[18]          | Active |
| Meas[19]          | Active |
| Meas[20]          | Active |
| Motion correction | Off    |
| Spatial filter    | Off    |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Asymmetric echo   | Off        |
| Bandwidth         | 1086 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 1.05 ms    |
| <hr/>             |            |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| <hr/>             |            |
| RF90 duration     | 7680       |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| SkewType(1ff)     | 0          |
| OVS flash(1on)    | 1          |
| SER Number        | 1          |
| Spoil factor      | 1          |
| Skew Direction    | 1          |
| Sat RF90 duration | 5120       |
| Dual On(1)        | 3          |
| Echo Distance     | 1.00       |
| MB Measurements   | 40         |
| Ramp On           | On         |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso55

TA: 2:24

PAT: 2

Voxel size: 0.5x0.5x0.6 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P36.9 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 140 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.55 mm          |
| TR                 | 3120 ms          |
| TE                 | 34 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 43        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A50.0 H0.0 |
| Orientation | Coronal         |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| 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         |
| 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               | R0.1 P37.1 H15.4 |
| ! Orientation            | T > C-15.0       |
| ! Rotation               | 0.00 deg         |
| ! R >> L                 | 100 mm           |
| ! A >> P                 | 70 mm            |
| ! F >> H                 | 48 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           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                   |        |
|-------------------|--------|
| Meas[12]          | Active |
| Meas[13]          | Active |
| Meas[14]          | Active |
| Meas[15]          | Active |
| Meas[16]          | Active |
| Meas[17]          | Active |
| Meas[18]          | Active |
| Meas[19]          | Active |
| Meas[20]          | Active |
| Motion correction | Off    |
| Spatial filter    | Off    |

## Sequence

|                   |           |
|-------------------|-----------|
| Introduction      | Off       |
| Asymmetric echo   | Off       |
| Bandwidth         | 782 Hz/Px |
| Free echo spacing | Off       |
| Echo spacing      | 1.4 ms    |
| <hr/>             |           |
| EPI factor        | 128       |
| RF pulse type     | Normal    |
| Gradient mode     | Fast      |
| RF spoiling       | On        |
| <hr/>             |           |
| RF90 duration     | 10970     |
| MB Number         | 2         |
| DummyScan Number  | 1         |
| FOV Shift Number  | 1         |
| SkewType(1ff)     | 0         |
| OVS flash(1on)    | 1         |
| SER Number        | 1         |
| Spoil factor      | 0         |
| Skew Direction    | 1         |
| Sat RF90 duration | 5120      |
| Dual On(1)        | 3         |
| Echo Distance     | 1.00      |
| MB Measurements   | 40        |
| Ramp On           | On        |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\localizer\_200V

TA: 0:27

PAT: Off

Voxel size: 1.2x1.1x3.0 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 |

|                       |      |
|-----------------------|------|
| Phase resolution      | 90 % |
| Phase partial Fourier | 6/8  |
| Interpolation         | On   |
| PAT mode              | None |
| 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           | Interleaved |
| Saturation mode  | Standard    |
| Special sat.     | None        |
| Table position   | H           |
| Table position   | 0 mm        |
| Inline Composing | Off         |
| Tim CT mode      | Off         |

## Routine

|                    |             |
|--------------------|-------------|
| Slice group 1      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Slice group 2      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Coronal     |
| Phase enc. dir.    | R >> L      |
| Rotation           | 0.00 deg    |
| Slice group 3      |             |
| Slices             | 5           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Phase oversampling | 0 %         |
| FoV read           | 280 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 3.0 mm      |
| TR                 | 10.0 ms     |
| TE                 | 3.00 ms     |
| Averages           | 1           |
| Concatenations     | 15          |
| Filter             | None        |
| Coil elements      | E01-20      |

## System

|                          |                  |
|--------------------------|------------------|
| E17                      | On               |
| E18                      | On               |
| E19                      | On               |
| E20                      | On               |
| E01                      | On               |
| E02                      | On               |
| E03                      | On               |
| E04                      | On               |
| E05                      | On               |
| E06                      | On               |
| E07                      | On               |
| E08                      | On               |
| E09                      | On               |
| E10                      | On               |
| E11                      | On               |
| E12                      | On               |
| E13                      | On               |
| E14                      | On               |
| E15                      | On               |
| E16                      | 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      | 200.000 V        |
| Adjustment Tolerance     | Auto             |
| Adjust volume            |                  |
| Position                 | Isocenter        |
| Orientation              | Transversal      |

## 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 |
|-----------------|-----|

|          |          |
|----------|----------|
| 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  |
| 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       | Whisper    |
| Excitation          | Slice-sel. |
| RF spoiling         | On         |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\MPRAGE

TA: 4:46

PAT: Off

Voxel size: 1.0x1.0x1.2 mm

Rel. SNR: 1.00

SIEMENS: tfl

## 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           | L0.7 A18.3 F10.8 |
| Orientation        | Sagittal         |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| Slice oversampling | 0.0 %            |
| Slices per slab    | 144              |
| FoV read           | 256 mm           |
| FoV phase          | 81.3 %           |
| Slice thickness    | 1.20 mm          |
| TR                 | 1370 ms          |
| TE                 | 2.84 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | E01-20           |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| T1                | 900 ms      |
| Flip angle        | 9 deg       |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Averaging mode    | Long term   |
| Reconstruction    | Magnitude   |
| Measurements      | 1           |
| Multiple series   | Off         |

## Resolution

|                       |       |
|-----------------------|-------|
| Base resolution       | 256   |
| Phase resolution      | 100 % |
| Slice resolution      | 100 % |
| Phase partial Fourier | Off   |
| Slice partial Fourier | Off   |
| Interpolation         | Off   |
| PAT mode              | None  |
| Image Filter          | Off   |
| Distortion Corr.      | Off   |
| Prescan Normalize     | Off   |
| Normalize             | Off   |
| B1 filter             | Off   |
| Raw filter            | Off   |
| Elliptical filter     | Off   |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |
| Table position   | H           |
| Table position   | 0 mm        |
| Inline Composing | Off         |

## System

|                          |                  |
|--------------------------|------------------|
| E17                      | On               |
| E18                      | On               |
| E19                      | On               |
| E20                      | On               |
| E01                      | On               |
| E02                      | On               |
| E03                      | On               |
| E04                      | On               |
| E05                      | On               |
| E06                      | On               |
| E07                      | On               |
| E08                      | On               |
| E09                      | On               |
| E10                      | On               |
| E11                      | On               |
| E12                      | On               |
| E13                      | On               |
| E14                      | On               |
| E15                      | On               |
| E16                      | On               |
| 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         | 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                 | L0.7 A18.3 F10.8 |
| Orientation              | Sagittal         |
| Rotation                 | 0.00 deg         |
| F >> H                   | 256 mm           |
| A >> P                   | 208 mm           |
| R >> L                   | 173 mm           |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| Dark blood      | 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        | On        |
| Dimension           | 3D        |
| Elliptical scanning | Off       |
| Asymmetric echo     | Off       |
| Bandwidth           | 240 Hz/Px |
| Flow comp.          | No        |
| Echo spacing        | 6.5 ms    |

---

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



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\pcasl\_DE\_BS\_flash\_m3F3d1

TA: 5:34 PAT: 4 Voxel size: 1.5x1.5x3.0 mm Rel. SNR: 1.00 USER: ep2d\_fid\_mb\_pcasl\_DE\_BS\_flash

## 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             | 24               |
| Dist. factor       | 20 %             |
| Position           | L0.0 A20.3 H54.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 3.0 mm           |
| TR                 | 8560 ms          |
| TE 1               | 15 ms            |
| TE 2               | 32 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | E01-20           |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 90 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 33        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 128      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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

## System

|     |    |
|-----|----|
| E17 | On |
| E18 | On |
| E19 | On |
| E20 | On |
| E01 | On |
| E02 | On |
| E03 | On |
| E04 | On |
| E05 | On |
| E06 | On |
| E07 | On |
| E08 | On |
| E09 | On |
| E10 | On |
| E11 | On |
| E12 | On |
| E13 | On |
| E14 | On |
| E15 | On |
| E16 | 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 |
| 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

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

## Perf

|                 |     |
|-----------------|-----|
| GBP             | Off |
| PBP             | Off |
| TTP             | Off |
| Original images | On  |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Contrasts         | 2          |
| Bandwidth         | 1954 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 0.64 ms    |

|                   |            |
|-------------------|------------|
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 12890      |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| BS Type           | 1          |
| Background Suppr. | Off        |
| BS parameter[1]   | 500 ms     |
| BS parameter[2]   | 10 ms      |
| BS parameter[3]   | 0 ms       |
| FOCI parameter[1] | 800        |
| FOCI parameter[2] | 24         |
| FOCI parameter[3] | 1.0        |
| FOCI parameter[4] | 2000       |
| Label Offset      | 80 mm      |
| Post Label Delay  | 2000000 us |
| MB Measurements   | 30         |
| Ramp On           | On         |

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso75

TA: 2:24

PAT: 2

Voxel size: 0.8x0.8x0.8 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P26.9 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 192 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.75 mm          |
| TR                 | 3120 ms          |
| TE                 | 27 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | E01-20           |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 43        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A69.7 H0.0 |
| Orientation | Coronal         |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| Special sat. | None              |

## Table position

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

## System

|     |    |
|-----|----|
| E17 | On |
| E18 | On |
| E19 | On |
| E20 | On |
| E01 | On |
| E02 | On |
| E03 | On |
| E04 | On |
| E05 | On |
| E06 | On |
| E07 | On |
| E08 | On |
| E09 | On |
| E10 | On |
| E11 | On |
| E12 | On |
| E13 | On |
| E14 | On |
| E15 | On |
| E16 | On |

## Positioning mode

|                   |                |
|-------------------|----------------|
| MSMA              | S - C - T      |
| Sagittal          | R >> L         |
| Coronal           | A >> P         |
| Transversal       | F >> H         |
| 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               | R0.1 P37.1 H15.4 |
| ! Orientation            | T > C-15.0       |
| ! Rotation               | 0.00 deg         |
| ! R >> L                 | 100 mm           |
| ! A >> P                 | 70 mm            |
| ! F >> H                 | 48 mm            |

## Physio

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

## BOLD

|                         |     |
|-------------------------|-----|
| GLM Statistics          | Off |
| Dynamic t-maps          | Off |
| Starting ignore meas    | 0   |
| Ignore after transition | 0   |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                         |          |
|-------------------------|----------|
| Model transition states | On       |
| Temp. highpass filter   | On       |
| Threshold               | 4.00     |
| Paradigm size           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |
| Meas[12]                | Active   |
| Meas[13]                | Active   |
| Meas[14]                | Active   |
| Meas[15]                | Active   |
| Meas[16]                | Active   |
| Meas[17]                | Active   |
| Meas[18]                | Active   |
| Meas[19]                | Active   |
| Meas[20]                | Active   |
| Motion correction       | Off      |
| Spatial filter          | Off      |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Asymmetric echo   | Off        |
| Bandwidth         | 1086 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 1.05 ms    |
| -----             |            |
| EPI factor        | 128        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| -----             |            |
| RF90 duration     | 7680       |
| MB Number         | 2          |
| DummyScan Number  | 1          |
| FOV Shift Number  | 1          |
| SkewType(1ff)     | 0          |
| OVS flash(1on)    | 1          |
| SER Number        | 1          |
| Spoil factor      | 1          |
| Skew Direction    | 1          |
| Sat RF90 duration | 5120       |
| Dual On(1)        | 3          |
| Echo Distance     | 1.00       |
| MB Measurements   | 40         |
| Ramp On           | On         |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_M2P2\_OVS\_flash\_iso55

TA: 2:24

PAT: 2

Voxel size: 0.5x0.5x0.6 mm

Rel. SNR: 1.00

USER: ep2d\_bold\_OVS\_flash

## 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             | 50               |
| Dist. factor       | 50 %             |
| Position           | L1.2 P36.9 H15.4 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 140 mm           |
| FoV phase          | 50.0 %           |
| Slice thickness    | 0.55 mm          |
| TR                 | 3120 ms          |
| TE                 | 34 ms            |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | E01-20           |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 70 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 43        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 2        |
| Ref. lines PE         | 24       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | On       |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

## Sat. region 1

|             |                 |
|-------------|-----------------|
| Thickness   | 110 mm          |
| Position    | L0.0 A50.0 H0.0 |
| Orientation | Coronal         |

## Sat. region 2

|              |                   |
|--------------|-------------------|
| Thickness    | 110 mm            |
| Position     | L0.0 P136.2 F35.7 |
| Orientation  | C > T14.7         |
| Special sat. | None              |

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

## System

|     |    |
|-----|----|
| E17 | On |
| E18 | On |
| E19 | On |
| E20 | On |
| E01 | On |
| E02 | On |
| E03 | On |
| E04 | On |
| E05 | On |
| E06 | On |
| E07 | On |
| E08 | On |
| E09 | On |
| E10 | On |
| E11 | On |
| E12 | On |
| E13 | On |
| E14 | On |
| E15 | On |
| E16 | On |

|                   |                |
|-------------------|----------------|
| Positioning mode  | FIX            |
| MSMA              | S - C - T      |
| Sagittal          | R >> L         |
| Coronal           | A >> P         |
| Transversal       | F >> H         |
| 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               | R0.1 P37.1 H15.4 |
| ! Orientation            | T > C-15.0       |
| ! Rotation               | 0.00 deg         |
| ! R >> L                 | 100 mm           |
| ! A >> P                 | 70 mm            |
| ! F >> H                 | 48 mm            |

## Physio

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

## BOLD

|                         |     |
|-------------------------|-----|
| GLM Statistics          | Off |
| Dynamic t-maps          | Off |
| Starting ignore meas    | 0   |
| Ignore after transition | 0   |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

|                         |          |
|-------------------------|----------|
| Model transition states | On       |
| Temp. highpass filter   | On       |
| Threshold               | 4.00     |
| Paradigm size           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |
| Meas[12]                | Active   |
| Meas[13]                | Active   |
| Meas[14]                | Active   |
| Meas[15]                | Active   |
| Meas[16]                | Active   |
| Meas[17]                | Active   |
| Meas[18]                | Active   |
| Meas[19]                | Active   |
| Meas[20]                | Active   |
| Motion correction       | Off      |
| Spatial filter          | Off      |

## Sequence

|                   |           |
|-------------------|-----------|
| Introduction      | Off       |
| Asymmetric echo   | Off       |
| Bandwidth         | 782 Hz/Px |
| Free echo spacing | Off       |
| Echo spacing      | 1.4 ms    |
| -----             |           |
| EPI factor        | 128       |
| RF pulse type     | Normal    |
| Gradient mode     | Fast      |
| RF spoiling       | On        |
| -----             |           |
| RF90 duration     | 10970     |
| MB Number         | 2         |
| DummyScan Number  | 1         |
| FOV Shift Number  | 1         |
| SkewType(1ff)     | 0         |
| OVS flash(1on)    | 1         |
| SER Number        | 1         |
| Spoil factor      | 0         |
| Skew Direction    | 1         |
| Sat RF90 duration | 5120      |
| Dual On(1)        | 3         |
| Echo Distance     | 1.00      |
| MB Measurements   | 40        |
| Ramp On           | On        |

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\vinc\_m3f3p4\_flashref\_highres

TA: 34:00 PAT: 4 Voxel size: 0.8x0.8x5.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT\_flashref

## 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             | 3                |
| Dist. factor       | 700 %            |
| Position           | L0.0 A23.7 H12.9 |
| Orientation        | Transversal      |
| Phase enc. dir.    | A >> P           |
| Rotation           | 0.00 deg         |
| Phase oversampling | 0 %              |
| FoV read           | 200 mm           |
| FoV phase          | 100.0 %          |
| Slice thickness    | 5.0 mm           |
| TR                 | 5000 ms          |
| TE                 | 36.0 ms          |
| Averages           | 1                |
| Concatenations     | 1                |
| Filter             | None             |
| Coil elements      | B4;M2,3;T1       |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 20 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 420       |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 256      |
| Phase resolution      | 100 %    |
| Phase partial Fourier | 6/8      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 4        |
| Ref. lines PE         | 48       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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           |
| 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               | L4.1 A27.1 H44.1 |
| ! Orientation            | Sagittal         |
| ! Rotation               | 0.00 deg         |
| ! F >> H                 | 70 mm            |
| ! A >> P                 | 208 mm           |
| ! R >> L                 | 173 mm           |

## Physio

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

## Angio

|               |               |
|---------------|---------------|
| Flow mode     | Single dir.   |
| Encodings     | 1             |
| Velocity enc. | 5 cm/s        |
| Direction     | Through plane |
| Magnitude sum | Off           |

## Sequence

|                   |            |
|-------------------|------------|
| Introduction      | Off        |
| Bandwidth         | 1396 Hz/Px |
| Free echo spacing | Off        |
| Echo spacing      | 1.18 ms    |
| EPI factor        | 256        |
| RF pulse type     | Normal     |
| Gradient mode     | Fast       |
| RF spoiling       | On         |
| RF90 duration     | 5120       |
| MB Number         | 3          |
| DummyScan Number  | 2          |
| FOV Shift Number  | 3          |
| Shift K0 Center   | 1          |
| Every Other Slice | 1          |
| SER Number        | 1          |
| Venc Repetition   | 400        |
| Spoil factor      | 5          |
| Skew Direction    | 1          |
| Dual On(1)        | 0          |

| Venc Type(0off,1+-,20+,3on) 1



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\test1118\ep2d\_s1m3p3\_roseg\_flash

TA: 0:17 PAT: 3 Voxel size: 3.1x3.1x3.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_ipat\_roseg\_flash

## 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             | 12          |
| Dist. factor       | 200 %       |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0.00 deg    |
| Phase oversampling | 0 %         |
| FoV read           | 200 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 3.00 mm     |
| TR                 | 500 ms      |
| TE                 | 24 ms       |
| Averages           | 1           |
| Concatenations     | 1           |
| Filter             | None        |
| Coil elements      | B4;M2,3;T1  |

## Contrast

|                 |           |
|-----------------|-----------|
| MTC             | Off       |
| Flip angle      | 40 deg    |
| Fat suppr.      | Fat sat.  |
| Averaging mode  | Long term |
| Reconstruction  | Magnitude |
| Measurements    | 28        |
| Delay in TR     | 0 ms      |
| Multiple series | Off       |

## Resolution

|                       |          |
|-----------------------|----------|
| Base resolution       | 64       |
| Phase resolution      | 100 %    |
| Phase partial Fourier | Off      |
| Interpolation         | Off      |
| PAT mode              | GRAPPA   |
| Accel. factor PE      | 3        |
| Ref. lines PE         | 36       |
| Reference scan mode   | Separate |
| Distortion Corr.      | Off      |
| Prescan Normalize     | Off      |
| Raw filter            | Off      |
| Elliptical filter     | Off      |
| Hamming               | Off      |

## Geometry

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

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         |
| 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                 | 0.00 deg    |
| R >> L                   | 200 mm      |
| A >> P                   | 200 mm      |
| F >> H                   | 102 mm      |

## Physio

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

## BOLD

|                         |          |
|-------------------------|----------|
| GLM Statistics          | On       |
| 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           | 20       |
| Meas[1]                 | Baseline |
| Meas[2]                 | Baseline |
| Meas[3]                 | Baseline |
| Meas[4]                 | Baseline |
| Meas[5]                 | Baseline |
| Meas[6]                 | Baseline |
| Meas[7]                 | Baseline |
| Meas[8]                 | Baseline |
| Meas[9]                 | Baseline |
| Meas[10]                | Baseline |
| Meas[11]                | Active   |
| Meas[12]                | Active   |
| Meas[13]                | Active   |
| Meas[14]                | Active   |
| Meas[15]                | Active   |
| Meas[16]                | Active   |
| Meas[17]                | Active   |
| Meas[18]                | Active   |
| Meas[19]                | Active   |

|                   |            |
|-------------------|------------|
| Meas[20]          | Active     |
| Motion correction | On         |
| Interpolation     | 3D-K-space |
| Spatial filter    | Off        |

## Sequence

|                   |           |
|-------------------|-----------|
| Introduction      | Off       |
| Bandwidth         | 752 Hz/Px |
| Free echo spacing | Off       |
| Echo spacing      | 1.44 ms   |
| <hr/>             |           |
| EPI factor        | 64        |
| RF pulse type     | Normal    |
| Gradient mode     | Fast      |
| RF spoiling       | On        |
| <hr/>             |           |
| RF90 duration     | 5120      |
| MB Number         | 3         |
| DummyScan Number  | 2         |
| FOV Shift Number  | 1         |
| Echo Gap Factor   | 100       |
| Every Other Slice | 1         |
| SER Number        | 1         |
| 2nd RFoff(1)      | 0         |
| Polarity(1)       | 0         |
| Dephase(0)        | 0         |
| Echo Distance     | 1.00      |
| MB Measurements   | 20        |
| Ramp On           | On        |

## Table of contents

\\USER

Feinberglab

Test

test1118

```

localizer_200V
b1map_200V_TR100
MPRAGE
pcasl_DE_BS_flash_m3F3d1
pcasl_DE_BS_flash_m3F3d1_low
venc_m3f3p4_flashref
venc_m3f3p3_flashref
venc_m3f3p2_flashref
ep2d_M2P2_OVS_flash_iso75
ep2d_M2P2_OVS_flash_iso55
ep2d_M2P2_OVS_flash_iso55
MPRAGE_long
-----test-----
pcasl_DE_BS_flash_m3F3
pcasl_DE_BS_flash_m3F3d1
-----run nova coil-----
localizer_200V
MPRAGE
pcasl_DE_BS_flash_m3F3d1
pcasl_DE_BS_flash_m3F3d1_low
venc_m3f3p4_flashref
venc_m3f3p3_flashref
venc_m3f3p2_flashref
ep2d_M2P2_OVS_flash_iso75
ep2d_M2P2_OVS_flash_iso55
-----ran new coil-----
localizer_200V
MPRAGE
pcasl_DE_BS_flash_m3F3d1
ep2d_M2P2_OVS_flash_iso75
ep2d_M2P2_OVS_flash_iso55
-----runned-----
venc_m3f3p4_flashref_highres
ep2d_s1m3p3_roseg_flash

```