

# SIEMENS MAGNETOM Allegra syngo MR 2004A

\\USER\ADNI\MAIN\_PHASE\Human Protocol\Circle Localizer

Scan Time: 9.2 [s]    Voxel size: 2.2x1.1x10.0 [mm]    Rel. SNR: 1.00    SIEMENS: gre\_circle

## Routine

|                    |             |
|--------------------|-------------|
| Slice group 1      |             |
| Slices             | 1           |
| Dist. factor       | 20 [%]      |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0 [deg]     |
| Slice group 2      |             |
| Slices             | 1           |
| Dist. factor       | 20 [%]      |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0 [deg]     |
| Slice group 3      |             |
| Slices             | 1           |
| Dist. factor       | 20 [%]      |
| Position           | Isocenter   |
| Orientation        | Coronal     |
| Phase enc. dir.    | R >> L      |
| Rotation           | 0 [deg]     |
| Phase oversampling | 0 [%]       |
| FoV read           | 280 [mm]    |
| FoV phase          | 100.0 [%]   |
| Slice thickness    | 10 [mm]     |
| TR                 | 20 [ms]     |
| TE                 | 5 [ms]      |
| Averages           | 1           |
| Concatenations     | 3           |
| Filter             | None        |
| Coil elements      | HE          |

## Contrast

|                   |           |
|-------------------|-----------|
| TD                | 0 [ms]    |
| MTC               | 0         |
| Magn. preparation | None      |
| Flip angle        | 40 [deg]  |
| Reconstruction    | Magnitude |
| Fat suppr.        | None      |
| Water suppr.      | None      |
| Measurements      | 1         |

## Resolution

|                       |        |
|-----------------------|--------|
| Base resolution       | 256    |
| Phase resolution      | 50 [%] |
| Phase partial Fourier | Off    |
| Filter 1              |        |
| Raw filter            | Off    |
| Filter 2              |        |
| Large FoV             | Off    |
| Filter 3              |        |
| Normalize             | Off    |
| Filter 4              |        |
| Elliptical filter     | Off    |
| Interpolation         | 0      |
| -----                 |        |
| PAT mode              | None   |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Sequential  |
| Series           | Interleaved |
| -----            |             |
| Saturation mode  | Standard    |
| Special sat.     | None        |

## System

|                          |                       |
|--------------------------|-----------------------|
| Save uncombined          | 0                     |
| Scan at current TP       | 0                     |
| Scan region position     | H                     |
| Scan region position     | 0 [mm]                |
| MSMA                     | S - C - T             |
| Sagittal                 | R >> L                |
| Coronal                  | A >> P                |
| Transversal              | F >> H                |
| Head 3T / HE             | 1                     |
| -----                    |                       |
| Shim mode                | Tune up               |
| Confirm freq. adjustment | 0                     |
| Assume Silicone          | 0                     |
| Ref. amplitude [1H]      | Use Default Value [V] |
| Adjust volume            |                       |
| Position                 | Isocenter             |
| Orientation              | Transversal           |
| Rotation                 | 0 [deg]               |
| R >> L                   | 350 [mm]              |
| A >> P                   | 263 [mm]              |
| F >> H                   | 350 [mm]              |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| Segments        | 1    |
| -----           |      |
| Dark blood      | 0    |

## Inline

|                      |   |
|----------------------|---|
| Subtract             | 0 |
| Std-Dev-Sag          | 0 |
| Std-Dev-Cor          | 0 |
| Std-Dev-Tra          | 0 |
| Std-Dev-Time         | 0 |
| MIP-Sag              | 0 |
| MIP-Cor              | 0 |
| MIP-Tra              | 0 |
| MIP-Time             | 0 |
| Save original images | 1 |

## Sequence

|                     |             |
|---------------------|-------------|
| Introduction        | 1           |
| Dimension           | 2D          |
| Phase stabilisation | 0           |
| Averaging mode      | Short term  |
| Asymmetric echo     | Off         |
| Contrasts           | 1           |
| Bandwidth           | 180 [Hz/Px] |
| Flow comp.          | No          |
| -----               |             |
| RF pulse type       | Fast        |
| Gradient mode       | Fast        |
| Excitation          | Slice-sel.  |
| RF spoiling         | 1           |

# SIEMENS MAGNETOM Allegra syngo MR 2004A

\\USER\ADNIMAIN\_PHASE\Human Protocol\MPRAGE

Scan Time: 9:14    Voxel size: 1.0x1.0x1.2 [mm]    Rel. SNR: 1.00    USER: tfl\_ADNI

## Routine

|                    |                      |
|--------------------|----------------------|
| Slab group 1       |                      |
| Slabs              | 1                    |
| Dist. factor       | 50 [%]               |
| Position           | L0.0 A30.0 H0.0 [mm] |
| Orientation        | Sagittal             |
| Phase enc. dir.    | A >> P               |
| Rotation           | 0 [deg]              |
| Phase oversampling | 0 [%]                |
| Slice oversampling | 0 [%]                |
| Slices per slab    | 160                  |
| FoV read           | 256 [mm]             |
| FoV phase          | 93.8 [%]             |
| Slice thickness    | 1.2 [mm]             |
| TR                 | 2300 [ms]            |
| TE                 | 2.91 [ms]            |
| Averages           | 1                    |
| Concatenations     | 1                    |
| Filter             | None                 |
| Coil elements      | HE                   |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| TI                | 900 [ms]    |
| Flip angle        | 9 [deg]     |
| Reconstruction    | Magnitude   |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Measurements      | 1           |

## Resolution

|                       |         |
|-----------------------|---------|
| Base resolution       | 256     |
| Phase resolution      | 100 [%] |
| Slice resolution      | 100 [%] |
| Phase partial Fourier | Off     |
| Slice partial Fourier | Off     |
| Filter 1              |         |
| Raw filter            | Off     |
| Filter 2              |         |
| Large FoV             | Off     |
| Filter 3              |         |
| Normalize             | Off     |
| Filter 4              |         |
| Elliptical filter     | Off     |
| Interpolation         | 0       |
| -----                 |         |
| PAT mode              | None    |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |

## System

|                          |           |
|--------------------------|-----------|
| Save uncombined          | 0         |
| Scan at current TP       | 0         |
| Scan region position     | H         |
| Scan region position     | 0 [mm]    |
| MSMA                     | S - C - T |
| Sagittal                 | R >> L    |
| Coronal                  | A >> P    |
| Transversal              | F >> H    |
| Head 3T / HE             | 1         |
| -----                    |           |
| Shim mode                | Standard  |
| Confirm freq. adjustment | 0         |
| Assume Silicone          | 0         |

|                     |                       |
|---------------------|-----------------------|
| Ref. amplitude [1H] | Use Default Value [V] |
| Adjust volume       |                       |
| Position            | L0.0 A30.0 H0.0 [mm]  |
| Orientation         | Sagittal              |
| Rotation            | 0 [deg]               |
| F >> H              | 256 [mm]              |
| A >> P              | 240 [mm]              |
| R >> L              | 192 [mm]              |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| -----           |      |
| Dark blood      | 0    |
| -----           |      |
| Resp. control   | Off  |

## Inline

|                      |   |
|----------------------|---|
| Subtract             | 0 |
| Std-Dev-Sag          | 0 |
| Std-Dev-Cor          | 0 |
| Std-Dev-Tra          | 0 |
| Std-Dev-Time         | 0 |
| MIP-Sag              | 0 |
| MIP-Cor              | 0 |
| MIP-Tra              | 0 |
| MIP-Time             | 0 |
| Save original images | 1 |

## Sequence

|                     |             |
|---------------------|-------------|
| Introduction        | 1           |
| Dimension           | 3D          |
| Elliptical scanning | 0           |
| Averaging mode      | Long term   |
| Asymmetric echo     | Off         |
| Bandwidth           | 240 [Hz/Px] |
| Echo spacing        | 7.2 [ms]    |
| -----               |             |
| RF pulse type       | Fast        |
| Gradient mode       | Fast*       |
| Excitation          | Non-sel.    |
| RF spoiling         | 1           |

# SIEMENS MAGNETOM Allegra syngo MR 2004A

\\USER\ADNI\MAIN\_PHASE\Human Protocol\MPRAGE Repeat

Scan Time: 9:14    Voxel size: 1.0x1.0x1.2 [mm]    Rel. SNR: 1.00    USER: tfl\_ADNI

## Routine

|                    |                      |
|--------------------|----------------------|
| Slab group 1       |                      |
| Slabs              | 1                    |
| Dist. factor       | 50 [%]               |
| Position           | L0.0 A30.0 H0.0 [mm] |
| Orientation        | Sagittal             |
| Phase enc. dir.    | A >> P               |
| Rotation           | 0 [deg]              |
| Phase oversampling | 0 [%]                |
| Slice oversampling | 0 [%]                |
| Slices per slab    | 160                  |
| FoV read           | 256 [mm]             |
| FoV phase          | 93.8 [%]             |
| Slice thickness    | 1.2 [mm]             |
| TR                 | 2300 [ms]            |
| TE                 | 2.91 [ms]            |
| Averages           | 1                    |
| Concatenations     | 1                    |
| Filter             | None                 |
| Coil elements      | HE                   |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| TI                | 900 [ms]    |
| Flip angle        | 9 [deg]     |
| Reconstruction    | Magnitude   |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Measurements      | 1           |

## Resolution

|                       |         |
|-----------------------|---------|
| Base resolution       | 256     |
| Phase resolution      | 100 [%] |
| Slice resolution      | 100 [%] |
| Phase partial Fourier | Off     |
| Slice partial Fourier | Off     |
| Filter 1              |         |
| Raw filter            | Off     |
| Filter 2              |         |
| Large FoV             | Off     |
| Filter 3              |         |
| Normalize             | Off     |
| Filter 4              |         |
| Elliptical filter     | Off     |
| Interpolation         | 0       |
| -----                 |         |
| PAT mode              | None    |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |

## System

|                          |           |
|--------------------------|-----------|
| Save uncombined          | 0         |
| Scan at current TP       | 0         |
| Scan region position     | H         |
| Scan region position     | 0 [mm]    |
| MSMA                     | S - C - T |
| Sagittal                 | R >> L    |
| Coronal                  | A >> P    |
| Transversal              | F >> H    |
| Head 3T / HE             | 1         |
| -----                    |           |
| Shim mode                | Standard  |
| Confirm freq. adjustment | 0         |
| Assume Silicone          | 0         |

|                     |                       |
|---------------------|-----------------------|
| Ref. amplitude [1H] | Use Default Value [V] |
| Adjust volume       |                       |
| Position            | L0.0 A30.0 H0.0 [mm]  |
| Orientation         | Sagittal              |
| Rotation            | 0 [deg]               |
| F >> H              | 256 [mm]              |
| A >> P              | 240 [mm]              |
| R >> L              | 192 [mm]              |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| -----           |      |
| Dark blood      | 0    |
| -----           |      |
| Resp. control   | Off  |

## Inline

|                      |   |
|----------------------|---|
| Subtract             | 0 |
| Std-Dev-Sag          | 0 |
| Std-Dev-Cor          | 0 |
| Std-Dev-Tra          | 0 |
| Std-Dev-Time         | 0 |
| MIP-Sag              | 0 |
| MIP-Cor              | 0 |
| MIP-Tra              | 0 |
| MIP-Time             | 0 |
| Save original images | 1 |

## Sequence

|                     |             |
|---------------------|-------------|
| Introduction        | 1           |
| Dimension           | 3D          |
| Elliptical scanning | 0           |
| Averaging mode      | Long term   |
| Asymmetric echo     | Off         |
| Bandwidth           | 240 [Hz/Px] |
| Echo spacing        | 7.2 [ms]    |
| -----               |             |
| RF pulse type       | Fast        |
| Gradient mode       | Fast*       |
| Excitation          | Non-sel.    |
| RF spoiling         | 1           |

# SIEMENS MAGNETOM Allegra syngo MR 2004A

\\USER\ADN\MAIN\_PHASE\Human Protocol\Axial PD-T2 TSE

Scan Time: 5:08    Voxel size: 0.9x0.9x3.0 [mm]    Rel. SNR: 1.00    SIEMENS: tse

## Routine

|                    |                      |
|--------------------|----------------------|
| Slice group 1      |                      |
| Slices             | 48                   |
| Dist. factor       | 0 [%]                |
| Position           | R0.0 A30.0 H0.0 [mm] |
| Orientation        | Transversal          |
| Phase enc. dir.    | R >> L               |
| Rotation           | 90 [deg]             |
| Phase oversampling | 0 [%]                |
| FoV read           | 240 [mm]             |
| FoV phase          | 89.1 [%]             |
| Slice thickness    | 3 [mm]               |
| TR                 | 3000 [ms]            |
| TE[1]              | 12 [ms]              |
| TE[2]              | 96 [ms]              |
| Averages           | 1                    |
| Concatenations     | 3                    |
| Filter             | Elliptical filter    |
| Coil elements      | HE                   |

## Contrast

|                   |           |
|-------------------|-----------|
| TD                | 0 [ms]    |
| MTC               | 0         |
| Magn. preparation | None      |
| Flip angle        | 150 [deg] |
| Reconstruction    | Magnitude |
| Fat suppr.        | None      |
| Fat sat. mode     | Strong    |
| Water suppr.      | None      |
| Measurements      | 1         |

## Resolution

|                       |         |
|-----------------------|---------|
| Base resolution       | 256     |
| Phase resolution      | 100 [%] |
| Phase partial Fourier | Off     |
| Filter 1              |         |
| Raw filter            | Off     |
| Filter 2              |         |
| Large FoV             | Off     |
| Filter 3              |         |
| Normalize             | Off     |
| Filter 4              |         |
| Elliptical filter     | On      |
| Interpolation         | 0       |
| -----                 |         |
| PAT mode              | None    |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Interleaved |
| Series           | Interleaved |
| -----            |             |
| Special sat.     | None        |

## System

|                          |                       |
|--------------------------|-----------------------|
| Save uncombined          | 0                     |
| Scan at current TP       | 1                     |
| MSMA                     | S - C - T             |
| Sagittal                 | R >> L                |
| Coronal                  | A >> P                |
| Transversal              | F >> H                |
| Head 3T / HE             | 1                     |
| -----                    |                       |
| Shim mode                | Standard              |
| Confirm freq. adjustment | 0                     |
| Assume Silicone          | 0                     |
| Ref. amplitude [1H]      | Use Default Value [V] |

## Adjust volume

|             |                      |
|-------------|----------------------|
| Position    | R0.0 A30.0 H0.0 [mm] |
| Orientation | Transversal          |
| Rotation    | 90 [deg]             |
| A >> P      | 240 [mm]             |
| R >> L      | 214 [mm]             |
| F >> H      | 144 [mm]             |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| -----           |      |
| Dark blood      | 0    |
| -----           |      |
| Resp. control   | Off  |

## Inline

|                      |   |
|----------------------|---|
| Subtract             | 0 |
| Std-Dev-Sag          | 0 |
| Std-Dev-Cor          | 0 |
| Std-Dev-Tra          | 0 |
| Std-Dev-Time         | 0 |
| MIP-Sag              | 0 |
| MIP-Cor              | 0 |
| MIP-Tra              | 0 |
| MIP-Time             | 0 |
| Save original images | 1 |

## Sequence

|                     |             |
|---------------------|-------------|
| Introduction        | 1           |
| Dimension           | 2D          |
| Compensate T2 decay | 0           |
| Averaging mode      | Long term   |
| Contrasts           | 2           |
| Bandwidth           | 181 [Hz/Px] |
| Flow comp.          | No          |
| Allowed delay       | 30 [s]      |
| Echo spacing        | 12.1 [ms]   |
| -----               |             |
| Turbo factor        | 7           |
| RF pulse type       | Normal      |
| Gradient mode       | Fast        |
| Hyperecho           | 0           |

# SIEMENS MAGNETOM Allegra syngo MR 2004A

\\USER\ADN\MAIN\_PHASE\Phantom Protocol\QC PhantomCircle Localizer  
 Scan Time: 9.2 [s]    Voxel size: 2.2x1.1x10.0 [mm]    Rel. SNR: 1.00    SIEMENS: gre\_circle

## Routine

|                    |             |
|--------------------|-------------|
| Slice group 1      |             |
| Slices             | 1           |
| Dist. factor       | 20 [%]      |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0 [deg]     |
| Slice group 2      |             |
| Slices             | 1           |
| Dist. factor       | 20 [%]      |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Rotation           | 0 [deg]     |
| Slice group 3      |             |
| Slices             | 1           |
| Dist. factor       | 20 [%]      |
| Position           | Isocenter   |
| Orientation        | Coronal     |
| Phase enc. dir.    | R >> L      |
| Rotation           | 0 [deg]     |
| Phase oversampling | 0 [%]       |
| FoV read           | 280 [mm]    |
| FoV phase          | 100.0 [%]   |
| Slice thickness    | 10 [mm]     |
| TR                 | 20 [ms]     |
| TE                 | 5 [ms]      |
| Averages           | 1           |
| Concatenations     | 3           |
| Filter             | None        |
| Coil elements      | HE          |

## Contrast

|                   |           |
|-------------------|-----------|
| TD                | 0 [ms]    |
| MTC               | 0         |
| Magn. preparation | None      |
| Flip angle        | 40 [deg]  |
| Reconstruction    | Magnitude |
| Fat suppr.        | None      |
| Water suppr.      | None      |
| Measurements      | 1         |

## Resolution

|                       |        |
|-----------------------|--------|
| Base resolution       | 256    |
| Phase resolution      | 50 [%] |
| Phase partial Fourier | Off    |
| Filter 1              |        |
| Raw filter            | Off    |
| Filter 2              |        |
| Large FoV             | Off    |
| Filter 3              |        |
| Normalize             | Off    |
| Filter 4              |        |
| Elliptical filter     | Off    |
| Interpolation         | 0      |
| -----                 |        |
| PAT mode              | None   |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Sequential  |
| Series           | Interleaved |
| -----            |             |
| Saturation mode  | Standard    |
| Special sat.     | None        |

## System

|                      |           |
|----------------------|-----------|
| Save uncombined      | 0         |
| Scan at current TP   | 0         |
| Scan region position | H         |
| Scan region position | 0 [mm]    |
| MSMA                 | S - C - T |
| Sagittal             | R >> L    |
| Coronal              | A >> P    |
| Transversal          | F >> H    |
| Head 3T / HE         | 1         |

|                          |                       |
|--------------------------|-----------------------|
| -----                    |                       |
| Shim mode                | Tune up               |
| Confirm freq. adjustment | 0                     |
| Assume Silicone          | 0                     |
| Ref. amplitude [1H]      | Use Default Value [V] |
| Adjust volume            |                       |
| Position                 | Isocenter             |
| Orientation              | Transversal           |
| Rotation                 | 0 [deg]               |
| R >> L                   | 350 [mm]              |
| A >> P                   | 263 [mm]              |
| F >> H                   | 350 [mm]              |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| Segments        | 1    |
| -----           |      |
| Dark blood      | 0    |

## Inline

|                      |   |
|----------------------|---|
| Subtract             | 0 |
| Std-Dev-Sag          | 0 |
| Std-Dev-Cor          | 0 |
| Std-Dev-Tra          | 0 |
| Std-Dev-Time         | 0 |
| MIP-Sag              | 0 |
| MIP-Cor              | 0 |
| MIP-Tra              | 0 |
| MIP-Time             | 0 |
| Save original images | 1 |

## Sequence

|                     |             |
|---------------------|-------------|
| Introduction        | 1           |
| Dimension           | 2D          |
| Phase stabilisation | 0           |
| Averaging mode      | Short term  |
| Asymmetric echo     | Off         |
| Contrasts           | 1           |
| Bandwidth           | 180 [Hz/Px] |
| Flow comp.          | No          |
| -----               |             |
| RF pulse type       | Fast        |
| Gradient mode       | Fast        |
| Excitation          | Slice-sel.  |
| RF spoiling         | 1           |

# SIEMENS MAGNETOM Allegra syngo MR 2004A

\\USER\ADNI\MAIN\_PHASE\Phantom Protocol\QC Phantom Sagittal MPRAGE

Scan Time: 9:14    Voxel size: 1.0x1.0x1.3 [mm]    Rel. SNR: 1.00    USER: tfl\_ADNI

## Routine

|                    |                      |
|--------------------|----------------------|
| Slab group 1       |                      |
| Slabs              | 1                    |
| Dist. factor       | 50 [%]               |
| Position           | L0.0 A30.0 H0.0 [mm] |
| Orientation        | Sagittal             |
| Phase enc. dir.    | A >> P               |
| Rotation           | 0 [deg]              |
| Phase oversampling | 0 [%]                |
| Slice oversampling | 0 [%]                |
| Slices per slab    | 160                  |
| FoV read           | 256 [mm]             |
| FoV phase          | 93.8 [%]             |
| Slice thickness    | 1.3 [mm]             |
| TR                 | 2300 [ms]            |
| TE                 | 2.91 [ms]            |
| Averages           | 1                    |
| Concatenations     | 1                    |
| Filter             | None                 |
| Coil elements      | HE                   |

## Contrast

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| TI                | 900 [ms]    |
| Flip angle        | 9 [deg]     |
| Reconstruction    | Magnitude   |
| Fat suppr.        | None        |
| Water suppr.      | None        |
| Measurements      | 1           |

## Resolution

|                       |         |
|-----------------------|---------|
| Base resolution       | 256     |
| Phase resolution      | 100 [%] |
| Slice resolution      | 100 [%] |
| Phase partial Fourier | Off     |
| Slice partial Fourier | Off     |
| Filter 1              |         |
| Raw filter            | Off     |
| Filter 2              |         |
| Large FoV             | Off     |
| Filter 3              |         |
| Normalize             | Off     |
| Filter 4              |         |
| Elliptical filter     | Off     |
| Interpolation         | 0       |
| -----                 |         |
| PAT mode              | None    |

## Geometry

|                  |             |
|------------------|-------------|
| Multi-slice mode | Single shot |
| Series           | Interleaved |

## System

|                          |           |
|--------------------------|-----------|
| Save uncombined          | 0         |
| Scan at current TP       | 0         |
| Scan region position     | H         |
| Scan region position     | 0 [mm]    |
| MSMA                     | S - C - T |
| Sagittal                 | R >> L    |
| Coronal                  | A >> P    |
| Transversal              | F >> H    |
| Head 3T / HE             | 1         |
| -----                    |           |
| Shim mode                | Standard  |
| Confirm freq. adjustment | 0         |
| Assume Silicone          | 0         |

|                     |                       |
|---------------------|-----------------------|
| Ref. amplitude [1H] | Use Default Value [V] |
| Adjust volume       |                       |
| Position            | L0.0 A30.0 H0.0 [mm]  |
| Orientation         | Sagittal              |
| Rotation            | 0 [deg]               |
| F >> H              | 256 [mm]              |
| A >> P              | 240 [mm]              |
| R >> L              | 208 [mm]              |

## Physio

|                 |      |
|-----------------|------|
| 1st Signal/Mode | None |
| -----           |      |
| Dark blood      | 0    |
| -----           |      |
| Resp. control   | Off  |

## Inline

|                      |   |
|----------------------|---|
| Subtract             | 0 |
| Std-Dev-Sag          | 0 |
| Std-Dev-Cor          | 0 |
| Std-Dev-Tra          | 0 |
| Std-Dev-Time         | 0 |
| MIP-Sag              | 0 |
| MIP-Cor              | 0 |
| MIP-Tra              | 0 |
| MIP-Time             | 0 |
| Save original images | 1 |

## Sequence

|                     |             |
|---------------------|-------------|
| Introduction        | 1           |
| Dimension           | 3D          |
| Elliptical scanning | 0           |
| Averaging mode      | Long term   |
| Asymmetric echo     | Off         |
| Bandwidth           | 240 [Hz/Px] |
| Echo spacing        | 7.2 [ms]    |
| -----               |             |
| RF pulse type       | Fast        |
| Gradient mode       | Fast*       |
| Excitation          | Non-sel.    |
| RF spoiling         | 1           |