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\USER

Khan

NeuroAnalytics

SNSX\_TLE\_7t(April2025)

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T2\_spc\_sag\_ptx\_C45  
ASPIRE\_800iso\_7e  
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mbep2d\_diff\_b2000\_b1000\_95dir\_AP  
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gre\_field\_mapping

|   |  |
|---|--|
| \USER\Khan\NeuroAnalytics\SNSX_TLE_7t(April2025)\localizer              |  |
| TA: 0:26 PM: REF Voxel size: 1.2×1.2×5.0 mmPAT: Off Rel. SNR: 1.00 : fl |  |

**Properties**

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

**Routine**

|                    |             |
|--------------------|-------------|
| Slice group        | 1           |
| Slices             | 3           |
| Dist. factor       | 400 %       |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Slice group        | 2           |
| Slices             | 3           |
| Dist. factor       | 300 %       |
| Position           | Isocenter   |
| Orientation        | Transversal |
| Phase enc. dir.    | A >> P      |
| Slice group        | 3           |
| Slices             | 3           |
| Dist. factor       | 500 %       |
| Position           | Isocenter   |
| Orientation        | Coronal     |
| Phase enc. dir.    | R >> L      |
| AutoAlign          | ---         |
| Phase oversampling | 0 %         |
| FoV read           | 300 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 5.0 mm      |
| TR                 | 12.0 ms     |
| TE                 | 3.33 ms     |
| Averages           | 1           |
| Concatenations     | 9           |
| Filter             | None        |
| Coil elements      | AC          |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 12.0 ms |
| TE                | 3.33 ms |
| TD                | 0 ms    |
| MTC               | Off     |
| Magn. preparation | None    |
| Flip angle        | 15 deg  |
| Fat suppr.        | None    |
| Water suppr.      | None    |
| SWI               | Off     |

**Contrast - Dynamic**

|                |            |
|----------------|------------|
| Averages       | 1          |
| Averaging mode | Short term |
| Reconstruction | Magnitude  |
| Measurements   | 1          |

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Multiple series | Each measurement |
|-----------------|------------------|

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 300 mm  |
| FoV phase             | 100.0 % |
| Slice thickness       | 5.0 mm  |
| Base resolution       | 256     |
| Phase resolution      | 90 %    |
| Phase partial Fourier | Off     |
| Interpolation         | Off     |

**Resolution - iPAT**

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

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Geometry - Common**

|                 |             |
|-----------------|-------------|
| Slice group     | 1           |
| Slices          | 3           |
| Dist. factor    | 400 %       |
| Position        | Isocenter   |
| Orientation     | Sagittal    |
| Phase enc. dir. | A >> P      |
| Slice group     | 2           |
| Slices          | 3           |
| Dist. factor    | 300 %       |
| Position        | Isocenter   |
| Orientation     | Transversal |
| Phase enc. dir. | A >> P      |
| Slice group     | 3           |
| Slices          | 3           |
| Dist. factor    | 500 %       |
| Position        | Isocenter   |
| Orientation     | Coronal     |
| Phase enc. dir. | R >> L      |

|                  |             |
|------------------|-------------|
| FoV read         | 300 mm      |
| FoV phase        | 100.0 %     |
| Slice thickness  | 5.0 mm      |
| TR               | 12.0 ms     |
| Multi-slice mode | Interleaved |
| Series           | Interleaved |
| Concatenations   | 9           |

**Geometry - AutoAlign**

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

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## Geometry - AutoAlign

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

## Geometry - Saturation

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

## Geometry - Tim Planning Suite

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

## Geometry - Tim CT

|                 |         |
|-----------------|---------|
| Tim CT mode     | Off     |
| Slices          | 3       |
| Slice thickness | 5.0 mm  |
| Dist. factor    | 500 %   |
| FoV read        | 300 mm  |
| FoV phase       | 100.0 % |
| Segments        | 1       |

## System - Miscellaneous

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

## System - Adjustments

|                          |          |
|--------------------------|----------|
| B0 Shim mode             | Tune up  |
| B1 Shim mode             | TrueForm |
| Confirm freq. adjustment | Off      |
| Assume Dominant Fat      | Off      |
| Assume Silicone          | Off      |
| Adjustment Tolerance     | Auto     |

## System - Adjust Volume

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

## System - pTx Volumes

|                     |                |
|---------------------|----------------|
| B1 Shim mode        | TrueForm       |
| Excitation          | Slice-sel.     |
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Physio - Signal1

|                 |         |
|-----------------|---------|
| 1st Signal/Mode | None    |
| TR              | 12.0 ms |
| Concatenations  | 9       |
| Segments        | 1       |

## Physio - Cardiac

|                   |         |
|-------------------|---------|
| Tagging           | None    |
| Magn. preparation | None    |
| Fat suppr.        | None    |
| Dark blood        | Off     |
| FoV read          | 300 mm  |
| FoV phase         | 100.0 % |
| Phase resolution  | 90 %    |

## Physio - PACE

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 9   |

## Inline - Common

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

## Inline - MIP

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

## Inline - Soft Tissue

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

## Inline - Composing

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

## Inline - Maplt

|                      |         |
|----------------------|---------|
| Save original images | On      |
| Maplt                | None    |
| Flip angle           | 15 deg  |
| Measurements         | 1       |
| Contrasts            | 1       |
| TR                   | 12.0 ms |

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## Inline - MapIt

|    |         |
|----|---------|
| TE | 3.33 ms |
|----|---------|

## Sequence - Part 1

|                     |             |
|---------------------|-------------|
| Introduction        | On          |
| Dimension           | 2D          |
| Phase stabilisation | Off         |
| Asymmetric echo     | Allowed     |
| Contrasts           | 1           |
| Flow comp.          | No          |
| Multi-slice mode    | Interleaved |
| Bandwidth           | 230 Hz/Px   |

## Sequence - Part 2

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

## Sequence - Assistant

|      |     |
|------|-----|
| Mode | Off |
|------|-----|

|   |  |
|---|--|
| \USER\Khan\NeuroAnalytics\SNSX_TLE_7t(April2025)\bss_map              |  |
| TA: 1:37 PM: REF Voxel size: 4.0x4.0x4.0 mmPAT: 4 Rel. SNR: 1.00 : fl |  |

**Properties**

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

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| PAT mode            | GRAPPA       |
| Accel. factor PE    | 2            |
| Ref. lines PE       | 24           |
| Accel. factor 3D    | 2            |
| Ref. lines 3D       | 24           |
| Reference scan mode | GRE/separate |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Routine**

|                    |            |
|--------------------|------------|
| Slab group         | 1          |
| Slabs              | 1          |
| Dist. factor       | 20 %       |
| Position           | Isocenter  |
| Orientation        | Sagittal   |
| Phase enc. dir.    | A >> P     |
| AutoAlign          | ---        |
| Phase oversampling | 0 %        |
| Slice oversampling | 0.0 %      |
| Slices per slab    | 48         |
| FoV read           | 256 mm     |
| FoV phase          | 100.0 %    |
| Slice thickness    | 4.00 mm    |
| TR                 | 5.0 ms     |
| TE                 | 2.04 ms    |
| TE2 B0             | 4.08 ms    |
| Averages           | 1          |
| Concatenations     | 1          |
| Filter             | Raw filter |
| Coil elements      | HC2        |

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | On  |
| Elliptical filter | Off |

**Geometry - Common**

|                    |             |
|--------------------|-------------|
| Slab group         | 1           |
| Slabs              | 1           |
| Dist. factor       | 20 %        |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Slice oversampling | 0.0 %       |
| Slices per slab    | 48          |
| FoV read           | 256 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 4.00 mm     |
| TR                 | 5.0 ms      |
| Multi-slice mode   | Sequential  |
| Series             | Interleaved |
| Concatenations     | 1           |

**Contrast - Common**

|            |         |
|------------|---------|
| TR         | 5.0 ms  |
| TE         | 2.04 ms |
| TE2 B0     | 4.08 ms |
| Flip angle | 5 deg   |

**Geometry - AutoAlign**

|                     |           |
|---------------------|-----------|
| Slab group          | 1         |
| Position            | Isocenter |
| Orientation         | Sagittal  |
| Phase enc. dir.     | A >> P    |
| AutoAlign           | ---       |
| Initial Position    | Isocenter |
| L                   | 0.0 mm    |
| P                   | 0.0 mm    |
| H                   | 0.0 mm    |
| Initial Rotation    | 0.00 deg  |
| Initial Orientation | Sagittal  |

**Contrast - Dynamic**

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

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 256 mm  |
| FoV phase             | 100.0 % |
| Slice thickness       | 4.00 mm |
| Base resolution       | 64      |
| Phase resolution      | 100 %   |
| Slice resolution      | 100 %   |
| Phase partial Fourier | Off     |
| Slice partial Fourier | Off     |
| Interpolation         | Off     |

|                 |          |
|-----------------|----------|
| Saturation mode | Standard |
| Special sat.    | None     |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

|                  |     |
|------------------|-----|
| Positioning mode | REF |
|------------------|-----|

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## **System - Miscellaneous**

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

## **System - Adjustments**

|                          |          |
|--------------------------|----------|
| B0 Shim mode             | Brain    |
| B1 Shim mode             | TrueForm |
| Confirm freq. adjustment | Off      |
| Assume Dominant Fat      | Off      |
| Assume Silicone          | Off      |
| Adjustment Tolerance     | Auto     |

## **System - Adjust Volume**

|               |                   |
|---------------|-------------------|
| ! Position    | L0.0 P0.7 H2.9 mm |
| ! Orientation | Sagittal          |
| ! Rotation    | 0.00 deg          |
| ! A >> P      | 184 mm            |
| ! F >> H      | 152 mm            |
| ! R >> L      | 192 mm            |
| Reset         | Off               |

## **System - pTx Volumes**

|              |           |
|--------------|-----------|
| B1 Shim mode | TrueForm  |
| Excitation   | Slab-sel. |

## **System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## **Physio - Signal1**

|                 |        |
|-----------------|--------|
| 1st Signal/Mode | None   |
| TR              | 5.0 ms |
| Concatenations  | 1      |
| Segments        | 1      |

## **Physio - Cardiac**

|                  |         |
|------------------|---------|
| Tagging          | None    |
| Dark blood       | Off     |
| FoV read         | 256 mm  |
| FoV phase        | 100.0 % |
| Phase resolution | 100 %   |

## **Physio - PACE**

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 1   |

## **Inline - Common**

|                    |     |
|--------------------|-----|
| Subtract           | Off |
| Measurements       | 1   |
| StdDev             | Off |
| Liver registration | Off |

## **Inline - Common**

|                      |    |
|----------------------|----|
| Save original images | On |
|----------------------|----|

## **Inline - MIP**

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

## **Inline - Soft Tissue**

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

## **Inline - Composing**

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

## **Inline - Maplt**

|                      |         |
|----------------------|---------|
| Save original images | On      |
| Maplt                | None    |
| Flip angle           | 5 deg   |
| Measurements         | 1       |
| Contrasts            | 1       |
| TR                   | 5.0 ms  |
| TE                   | 2.04 ms |
| TE2 B0               | 4.08 ms |

## **Sequence - Part 1**

|                     |            |
|---------------------|------------|
| Introduction        | Off        |
| Dimension           | 3D         |
| Elliptical scanning | Off        |
| Phase stabilisation | Off        |
| Asymmetric echo     | Off        |
| Contrasts           | 1          |
| Flow comp.          | No         |
| Multi-slice mode    | Sequential |
| Bandwidth           | 1000 Hz/Px |

## **Sequence - Part 2**

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

## **Sequence - Special**

|                     |            |
|---------------------|------------|
| Map Type            | Integrated |
| Number of shim-sets | 8          |
| Off-res frequency   | 4000 Hz    |
| Off-res pulse dur   | 8000 us    |
| Off-res TX volt     | 150 V      |
| Off-res Crusher     | 4 pi       |
| RO Spoiler          | 1.00       |
| ExcFA (Abs kern.)   | 10 deg     |
| TE (Abs kern.)      | 10.33 ms   |
| TR (Abs kern.)      | 40.0 ms    |
| ROSpoil(Abs kern.)  | 4.00       |
| Measure B0 Map      | On         |

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## Sequence - Special

|                     |         |
|---------------------|---------|
| Contrasts(B0 kern.) | 2       |
| ExcFA (B0 kern.)    | 10 deg  |
| TR (B0 kern.)       | 10.0 ms |
| RelSpoil (B0 kern.) | 1.00    |
| Call B0 Acq         | On      |
| Call B1 Acq         | Off     |
| Rel. Mask Threshold | 20      |
| Calculate B0        | On      |
| Save Images         | Off     |
| Save Fields         | On      |
| Save Adj Fields     | Off     |

## Sequence - Assistant

|      |     |
|------|-----|
| Mode | Off |
|------|-----|

|  |  |
|--|--|
| \USER\Khan\NeuroAnalytics\SNSX_TLE_7t(April2025)\mp2rage_sag_700iso_cs_us4_pTx |  |
| TA: 7:09 PM: REF Voxel size: 0.7x0.7x0.7 mmPAT: 1.0 Rel. SNR: 1.00 : WIP_cmp   |  |

**Properties**

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

**Routine**

|                    |                                  |
|--------------------|----------------------------------|
| Slab group         | 1                                |
| Slabs              | 1                                |
| Dist. factor       | 50 %                             |
| Position           | Isocenter                        |
| Orientation        | Sagittal                         |
| Phase enc. dir.    | A >> P                           |
| AutoAlign          | ---                              |
| Phase oversampling | 0 %                              |
| Slice oversampling | 0.0 %                            |
| Slices per slab    | 224                              |
| FoV read           | 246 mm                           |
| FoV phase          | 100.0 %                          |
| Slice thickness    | 0.70 mm                          |
| TR                 | 6000.0 ms                        |
| TE                 | 2.27 ms                          |
| Averages           | 1                                |
| Concatenations     | 1                                |
| Filter             | Raw filter, Distortion Corr.(3D) |
| Coil elements      | HC2                              |

**Contrast - Common**

|                   |             |
|-------------------|-------------|
| TR                | 6000.0 ms   |
| TE                | 2.27 ms     |
| Magn. preparation | Non-sel. IR |
| TI 1              | 860 ms      |
| TI 2              | 2700 ms     |
| Flip angle 1      | 4 deg       |
| Flip angle 2      | 5 deg       |
| Fat suppr.        | None        |
| Water suppr.      | None        |

**Contrast - Dynamic**

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

**Resolution - Common**

|                  |         |
|------------------|---------|
| FoV read         | 246 mm  |
| FoV phase        | 100.0 % |
| Slice thickness  | 0.70 mm |
| Base resolution  | 352     |
| Phase resolution | 100 %   |
| Slice resolution | 100 %   |

**Resolution - Common**

|                       |     |
|-----------------------|-----|
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation         | Off |

**Resolution - iPAT**

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

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | On  |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | On  |
| Elliptical filter | Off |

**Geometry - Common**

|                    |             |
|--------------------|-------------|
| Slab group         | 1           |
| Slabs              | 1           |
| Dist. factor       | 50 %        |
| Position           | Isocenter   |
| Orientation        | Sagittal    |
| Phase enc. dir.    | A >> P      |
| Slice oversampling | 0.0 %       |
| Slices per slab    | 224         |
| FoV read           | 246 mm      |
| FoV phase          | 100.0 %     |
| Slice thickness    | 0.70 mm     |
| TR                 | 6000.0 ms   |
| Multi-slice mode   | Single shot |
| Series             | Interleaved |
| Concatenations     | 1           |

**Geometry - AutoAlign**

|                     |           |
|---------------------|-----------|
| Slab group          | 1         |
| Position            | Isocenter |
| Orientation         | Sagittal  |
| Phase enc. dir.     | A >> P    |
| AutoAlign           | ---       |
| Initial Position    | Isocenter |
| L                   | 0.0 mm    |
| P                   | 0.0 mm    |
| H                   | 0.0 mm    |
| Initial Rotation    | 0.00 deg  |
| Initial Orientation | Sagittal  |

**Geometry - Navigator**

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

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## **System - Miscellaneous**

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

## **System - Adjustments**

|                          |          |
|--------------------------|----------|
| B0 Shim mode             | Brain    |
| B1 Shim mode             | TrueForm |
| Confirm freq. adjustment | Off      |
| Assume Dominant Fat      | Off      |
| Assume Silicone          | Off      |
| Adjustment Tolerance     | Auto     |

## **System - Adjust Volume**

|               |                   |
|---------------|-------------------|
| ! Position    | L0.0 P0.7 H9.4 mm |
| ! Orientation | Sagittal          |
| ! Rotation    | 0.00 deg          |
| ! A >> P      | 217 mm            |
| ! F >> H      | 173 mm            |
| ! R >> L      | 192 mm            |
| Reset         | Off               |

## **System - pTx Volumes**

|              |          |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation   | Non-sel. |

## **System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## **Physio - Signal1**

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 6000.0 ms |
| Concatenations  | 1         |

## **Physio - Cardiac**

|                   |             |
|-------------------|-------------|
| Magn. preparation | Non-sel. IR |
| TI 1              | 860 ms      |
| TI 2              | 2700 ms     |
| Fat suppr.        | None        |
| Dark blood        | Off         |
| FoV read          | 246 mm      |
| FoV phase         | 100.0 %     |
| Phase resolution  | 100 %       |

## **Physio - PACE**

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 1   |

## **Inline - Common**

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

## **Inline - Common**

|                      |     |
|----------------------|-----|
| Measurements         | 1   |
| StdDev               | Off |
| Save original images | On  |

## **Inline - MIP**

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

## **Inline - Composing**

|                   |     |
|-------------------|-----|
| Inline Composing  | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | On  |

## **Inline - Maplt**

|                      |           |
|----------------------|-----------|
| Save original images | On        |
| Maplt                | T1 map    |
| Flip angle 1         | 4 deg     |
| Flip angle 2         | 5 deg     |
| Measurements         | 1         |
| Contrasts            | 1         |
| TR                   | 6000.0 ms |
| TE                   | 2.27 ms   |

## **Sequence - Part 1**

|                     |             |
|---------------------|-------------|
| Introduction        | Off         |
| Dimension           | 3D          |
| Elliptical scanning | Off         |
| Reordering          | Linear      |
| Asymmetric echo     | Allowed     |
| Contrasts           | 1           |
| Flow comp.          | No          |
| Multi-slice mode    | Single shot |
| Echo spacing        | 7.7 ms      |
| Bandwidth           | 190 Hz/Px   |

## **Sequence - Part 2**

|                         |          |
|-------------------------|----------|
| RF pulse type           | Fast     |
| Gradient mode           | Fast     |
| Excitation              | Non-sel. |
| RF spoiling             | On       |
| Incr. Gradient spoiling | Off      |
| Turbo factor            | 224      |

## **Sequence - pTX Pulses**

|            |            |
|------------|------------|
| pTX Pulse  | 1          |
| Pulse type | Excitation |
| pTX Pulse  | 2          |
| Pulse type | Inversion  |

## **Sequence - Special**

|                 |          |
|-----------------|----------|
| Sparse Sampling | On       |
| US              | 4.0 x    |
| Samples/TR      | 216      |
| Density         | 0.50     |
| Jitter Radius   | 1.2      |
| Reference Scan  | External |
| No. Ref-Lines   | 32       |
| Centric         | Off      |
| Virtual Coils   | Off      |

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## Sequence - Special

|                     |         |
|---------------------|---------|
| Shift Inv Pulse     | 0 Hz    |
| No. Iterations      | 20      |
| CSM RO Resolution   | 0       |
| Regularisation INV1 | 0.00100 |
| Regularisation INV2 | 0.00100 |
| Uniform             | On      |
| Denoised UNI        | On      |
| FLAWS               | Off     |
| FLAWS-hc            | Off     |
| FLAWS-hc inv.       | Off     |
| Division image      | Off     |
| T1 Map              | On      |
| Synthetic TI 0      | 0 ms    |
| Synthetic TI 1      | 0 ms    |
| Denoise Lambda      | 1       |
| Scaling             | 0 10^   |
| Echo Averaging      | Off     |
| FID Monitoring      | Off     |

## Sequence - Assistant

|      |     |
|------|-----|
| Mode | Off |
|------|-----|

\USER\Khan\NeuroAnalytics\SNSX\_TLE\_7t(April2025)\T2\_spc\_sag\_ptx\_C45

TA: 7:30 PM: FIX Voxel size: 0.6×0.6×0.6 mmPAT: 6 Rel. SNR: 1.00 : spc

**Properties**

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

**Routine**

|                    |                      |
|--------------------|----------------------|
| Slab group         | 1                    |
| Slabs              | 1                    |
| Position           | R3.6 A20.3 F29.1 mm  |
| Orientation        | Sagittal             |
| Phase enc. dir.    | A >> P               |
| AutoAlign          | ---                  |
| Phase oversampling | 0 %                  |
| Slice oversampling | 0.0 %                |
| Slices per slab    | 288                  |
| FoV read           | 225 mm               |
| FoV phase          | 99.4 %               |
| Slice thickness    | 0.60 mm              |
| TR                 | 2000 ms              |
| TE                 | 132 ms               |
| Averages           | 1.0                  |
| Concatenations     | 1                    |
| Filter             | Distortion Corr.(3D) |
| Coil elements      | HC2                  |

**Contrast - Common**

|                   |         |
|-------------------|---------|
| TR                | 2000 ms |
| TE                | 132 ms  |
| Magn. preparation | None    |
| Fat suppr.        | None    |
| Blood suppr.      | Off     |

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Averages        | 1.0              |
| Reconstruction  | Magnitude        |
| Measurements    | 1                |
| Multiple series | Each measurement |

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 225 mm  |
| FoV phase             | 99.4 %  |
| Slice thickness       | 0.60 mm |
| Base resolution       | 352     |
| Phase resolution      | 100 %   |
| Slice resolution      | 100 %   |
| Phase partial Fourier | Allowed |
| Slice partial Fourier | Off     |
| Interpolation         | Off     |

**Resolution - iPAT**

|                  |           |
|------------------|-----------|
| PAT mode         | CAPIRINHA |
| Accel. factor PE | 3         |

**Resolution - iPAT**

|                     |            |
|---------------------|------------|
| Ref. lines PE       | 48         |
| Accel. factor 3D    | 2          |
| Ref. lines 3D       | 32         |
| Reordering Shift 3D | 0          |
| Reference scan mode | Integrated |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | On  |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Geometry - Common**

|                    |                     |
|--------------------|---------------------|
| Slab group         | 1                   |
| Slabs              | 1                   |
| Position           | R3.6 A20.3 F29.1 mm |
| Orientation        | Sagittal            |
| Phase enc. dir.    | A >> P              |
| Slice oversampling | 0.0 %               |
| Slices per slab    | 288                 |
| FoV read           | 225 mm              |
| FoV phase          | 99.4 %              |
| Slice thickness    | 0.60 mm             |
| TR                 | 2000 ms             |
| Series             | Ascending           |
| Concatenations     | 1                   |

**Geometry - AutoAlign**

|                     |                     |
|---------------------|---------------------|
| Slab group          | 1                   |
| Position            | R3.6 A20.3 F29.1 mm |
| Orientation         | Sagittal            |
| Phase enc. dir.     | A >> P              |
| AutoAlign           | ---                 |
| Initial Position    | R3.6 A20.3 F29.1    |
| R                   | 3.6 mm              |
| A                   | 20.3 mm             |
| F                   | 29.1 mm             |
| Initial Rotation    | 0.00 deg            |
| Initial Orientation | Sagittal            |

**Geometry - Saturation**

|              |      |
|--------------|------|
| Fat suppr.   | None |
| Special sat. | None |

**Geometry - Navigator**

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

**System - Miscellaneous**

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

**System - Adjustments**

|                          |          |
|--------------------------|----------|
| B0 Shim mode             | Brain    |
| B1 Shim mode             | TrueForm |
| Confirm freq. adjustment | Off      |
| Assume Dominant Fat      | Off      |
| Assume Silicone          | Off      |
| Adjustment Tolerance     | Auto     |

**System - Adjust Volume**

|               |                    |
|---------------|--------------------|
| ! Position    | R0.7 A0.7 F16.7 mm |
| ! Orientation | Sagittal           |
| ! Rotation    | 0.00 deg           |
| ! A >> P      | 202 mm             |
| ! F >> H      | 152 mm             |
| ! R >> L      | 172 mm             |
| Reset         | Off                |

**System - pTx Volumes**

|              |          |
|--------------|----------|
| B1 Shim mode | TrueForm |
| Excitation   | Non-sel. |

**System - Tx/Rx**

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

**Physio - Signal1**

|                 |         |
|-----------------|---------|
| 1st Signal/Mode | None    |
| Trigger delay   | 0 ms    |
| TR              | 2000 ms |
| Concatenations  | 1       |

**Physio - Cardiac**

|                   |        |
|-------------------|--------|
| Magn. preparation | None   |
| Fat suppr.        | None   |
| Dark blood        | Off    |
| FoV read          | 225 mm |
| FoV phase         | 99.4 % |
| Phase resolution  | 100 %  |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 1   |

**Inline - Common**

|                      |     |
|----------------------|-----|
| StdDev               | Off |
| Save original images | On  |

**Inline - MIP**

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

**Inline - Composing**

|                   |     |
|-------------------|-----|
| Inline Composing  | Off |
| Distortion Corr.  | On  |
| Mode              | 3D  |
| Unfiltered images | On  |

**Sequence - Part 1**

|                     |           |
|---------------------|-----------|
| Introduction        | On        |
| Dimension           | 3D        |
| Elliptical scanning | On        |
| Reordering          | Linear    |
| Flow comp.          | No        |
| Echo spacing        | 4.26 ms   |
| Bandwidth           | 473 Hz/Px |

**Sequence - Part 2**

|                     |          |
|---------------------|----------|
| Echo train duration | 264 ms   |
| RF pulse type       | Low SAR  |
| Gradient mode       | Fast     |
| Excitation          | Non-sel. |
| Flip angle mode     | T2 var   |
| Turbo factor        | 65       |

**Sequence - pTX Pulses**

|            |            |
|------------|------------|
| pTX Pulse  | 1          |
| Pulse type | Excitation |

**Sequence - Special**

|                   |        |
|-------------------|--------|
| Rfc pTx RF Dur    | 900 us |
| Rfc pTx slot-size | 3      |
| BSS B1 Map        | On     |

**Sequence - Assistant**

|               |     |
|---------------|-----|
| Allowed delay | 0 s |
|---------------|-----|

**Physio - Signal1**

|                 |         |
|-----------------|---------|
| 1st Signal/Mode | None    |
| Trigger delay   | 0 ms    |
| TR              | 2000 ms |
| Concatenations  | 1       |

**Physio - Cardiac**

|                   |        |
|-------------------|--------|
| Magn. preparation | None   |
| Fat suppr.        | None   |
| Dark blood        | Off    |
| FoV read          | 225 mm |
| FoV phase         | 99.4 % |
| Phase resolution  | 100 %  |

**Physio - PACE**

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 1   |

**Inline - Common**

|              |     |
|--------------|-----|
| Subtract     | Off |
| Measurements | 1   |

\\USER\\Khan\\NeuroAnalytics\\SNSX\_TLE\_7t(April2025)\\ASPIRE\_800iso\_7e

TA: 6:06 PM: FIX Voxel size: 0.8x0.8x0.8 mmPAT: 2 Rel. SNR: 1.00 : fl

**Properties**

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

**Contrast - Dynamic**

|                 |                  |
|-----------------|------------------|
| Measurements    | 1                |
| Multiple series | Each measurement |

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 205 mm  |
| FoV phase             | 87.5 %  |
| Slice thickness       | 0.75 mm |
| Base resolution       | 272     |
| Phase resolution      | 100 %   |
| Slice resolution      | 100 %   |
| Phase partial Fourier | 6/8     |
| Slice partial Fourier | 6/8     |
| Interpolation         | Off     |

**Routine**

|                    |                      |
|--------------------|----------------------|
| Slab group         | 1                    |
| Slabs              | 1                    |
| Dist. factor       | 20 %                 |
| Position           | R5.8 A9.3 F13.2 mm   |
| Orientation        | Transversal          |
| Phase enc. dir.    | R >> L               |
| AutoAlign          | ---                  |
| Phase oversampling | 0 %                  |
| Slice oversampling | 10.0 %               |
| Slices per slab    | 160                  |
| FoV read           | 205 mm               |
| FoV phase          | 87.5 %               |
| Slice thickness    | 0.75 mm              |
| TR                 | 30.0 ms              |
| TE 1               | 1.65 ms              |
| TE 2               | 3.93 ms              |
| TE 3               | 6.21 ms              |
| TE 4               | 8.49 ms              |
| TE 5               | 10.77 ms             |
| TE 6               | 13.05 ms             |
| TE 7               | 15.33 ms             |
| Averages           | 1                    |
| Concatenations     | 1                    |
| Filter             | Distortion Corr.(2D) |
| Coil elements      | HC2                  |

**Resolution - iPAT**

|                     |            |
|---------------------|------------|
| PAT mode            | GRAPPA     |
| Accel. factor PE    | 2          |
| Ref. lines PE       | 24         |
| Accel. factor 3D    | 1          |
| Reference scan mode | Integrated |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Image Filter      | Off |
| Distortion Corr.  | On  |
| Mode              | 2D  |
| Unfiltered images | Off |
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Geometry - Common**

|                    |                    |
|--------------------|--------------------|
| Slab group         | 1                  |
| Slabs              | 1                  |
| Dist. factor       | 20 %               |
| Position           | R5.8 A9.3 F13.2 mm |
| Orientation        | Transversal        |
| Phase enc. dir.    | R >> L             |
| Slice oversampling | 10.0 %             |
| Slices per slab    | 160                |
| FoV read           | 205 mm             |
| FoV phase          | 87.5 %             |
| Slice thickness    | 0.75 mm            |
| TR                 | 30.0 ms            |
| Multi-slice mode   | Interleaved        |
| Series             | Interleaved        |
| Concatenations     | 1                  |

**Geometry - AutoAlign**

|                  |                    |
|------------------|--------------------|
| Slab group       | 1                  |
| Position         | R5.8 A9.3 F13.2 mm |
| Orientation      | Transversal        |
| Phase enc. dir.  | R >> L             |
| AutoAlign        | ---                |
| Initial Position | R5.8 A9.3 F13.2    |
| R                | 5.8 mm             |
| A                | 9.3 mm             |

**Contrast - Dynamic**

|                |            |
|----------------|------------|
| Averages       | 1          |
| Averaging mode | Short term |
| Reconstruction | Magnitude  |

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## Geometry - AutoAlign

|                     |             |
|---------------------|-------------|
| F                   | 13.2 mm     |
| Initial Rotation    | 90.00 deg   |
| Initial Orientation | Transversal |

## Geometry - Saturation

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

## Geometry - Tim Planning Suite

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

## Geometry - Tim CT

|                 |         |
|-----------------|---------|
| Tim CT mode     | Off     |
| Slabs           | 1       |
| Slices per slab | 160     |
| Slice thickness | 0.75 mm |
| Dist. factor    | 20 %    |
| FoV read        | 205 mm  |
| FoV phase       | 87.5 %  |
| Segments        | 1       |

## System - Miscellaneous

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

## System - Adjustments

|                          |                  |
|--------------------------|------------------|
| B0 Shim mode             | Advanced         |
| B1 Shim mode             | Volume-selective |
| Confirm freq. adjustment | Off              |
| Assume Dominant Fat      | Off              |
| Assume Silicone          | Off              |
| Adjustment Tolerance     | Auto             |

## System - Adjust Volume

|               |                    |
|---------------|--------------------|
| ! Position    | R5.8 A6.9 F22.7 mm |
| ! Orientation | Sagittal           |
| ! Rotation    | 0.00 deg           |
| ! A >> P      | 213 mm             |
| ! F >> H      | 173 mm             |
| ! R >> L      | 171 mm             |
| Reset         | Off                |

## System - pTx Volumes

|               |                    |
|---------------|--------------------|
| B1 Shim mode  | Volume-selective   |
| Excitation    | Slab-sel.          |
| pTx Volume    | 1                  |
| Vol. Property | B1 Shim Vol.       |
| Position      | R5.9 A1.1 F20.4 mm |

## System - pTx Volumes

|                 |           |
|-----------------|-----------|
| Orientation     | Sagittal  |
| Rotation        | 32.05 deg |
| A >> P          | 172 mm    |
| F >> H          | 122 mm    |
| R >> L          | 142 mm    |
| Vol. Visibility | On        |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Physio - Signal1

|                 |         |
|-----------------|---------|
| 1st Signal/Mode | None    |
| TR              | 30.0 ms |
| Concatenations  | 1       |
| Segments        | 1       |

## Physio - Cardiac

|                   |        |
|-------------------|--------|
| Tagging           | None   |
| Magn. preparation | None   |
| Fat suppr.        | None   |
| Dark blood        | Off    |
| FoV read          | 205 mm |
| FoV phase         | 87.5 % |
| Phase resolution  | 100 %  |

## Physio - PACE

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 1   |

## Inline - Common

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

## Inline - MIP

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

## Inline - Soft Tissue

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

## Inline - Composing

|                   |     |
|-------------------|-----|
| Inline Composing  | Off |
| Distortion Corr.  | On  |
| Mode              | 2D  |
| Unfiltered images | Off |

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## Inline - MapIt

|                      |          |
|----------------------|----------|
| Save original images | On       |
| MapIt                | None     |
| Flip angle           | 7 deg    |
| Measurements         | 1        |
| Contrasts            | 7        |
| TR                   | 30.0 ms  |
| TE 1                 | 1.65 ms  |
| TE 2                 | 3.93 ms  |
| TE 3                 | 6.21 ms  |
| TE 4                 | 8.49 ms  |
| TE 5                 | 10.77 ms |
| TE 6                 | 13.05 ms |
| TE 7                 | 15.33 ms |

## Sequence - Part 1

|                     |             |
|---------------------|-------------|
| Introduction        | On          |
| Dimension           | 3D          |
| Elliptical scanning | On          |
| Phase stabilisation | On          |
| Asymmetric echo     | Allowed     |
| Contrasts           | 7           |
| Flow comp. 1        | No          |
| Readout mode        | Monopolar   |
| Multi-slice mode    | Interleaved |
| Bandwidth 1         | 610 Hz/Px   |
| Bandwidth 2         | 610 Hz/Px   |
| Bandwidth 3         | 610 Hz/Px   |
| Bandwidth 4         | 610 Hz/Px   |
| Bandwidth 5         | 610 Hz/Px   |
| Bandwidth 6         | 610 Hz/Px   |
| Bandwidth 7         | 610 Hz/Px   |

## Sequence - Part 2

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

## Sequence - Special

|                              |           |
|------------------------------|-----------|
| Phase Combination            | ASPIRE    |
| Advanced Options             | On        |
| Additional FFT Scale         | 1.00      |
| Magnitude Scale              | 1000      |
| PO Smoothing Sigma           | 5 mm      |
| Use PO for next measurements | Off       |
| ASPIRE 1. Echo               | 1         |
| ASPIRE 2. Echo               | 2         |
| Mag of Complex Sum           | On        |
| UMPIRE Unwrapping            | Off       |
| T2* / R2*                    | T2* + R2* |

## Sequence - Assistant

|      |     |
|------|-----|
| Mode | Off |
|------|-----|

|  |  |
|--|--|
| \USER\Khan\NeuroAnalytics\SNSX_TLE_7t(April2025)\dark-fluid_tse_cor_p2_.67x.67x2.5 |  |
| TA: 2:44 PM: FIX Voxel size: 0.3×0.3×2.5 mmPAT: 2 Rel. SNR: 1.00 : tir_rr          |  |

**Properties**

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

**Routine**

|                    |                    |
|--------------------|--------------------|
| Slice group        | 1                  |
| Slices             | 26                 |
| Dist. factor       | 10 %               |
| Position           | R4.4 A7.4 F36.3 mm |
| Orientation        | C > T-17.9         |
| Phase enc. dir.    | R >> L             |
| AutoAlign          | ---                |
| Phase oversampling | 0 %                |
| FoV read           | 192 mm             |
| FoV phase          | 81.3 %             |
| Slice thickness    | 2.5 mm             |
| TR                 | 9000.0 ms          |
| TE                 | 84 ms              |
| Averages           | 1                  |
| Concatenations     | 2                  |
| Filter             | B1 filter          |
| Coil elements      | HC2                |

**Contrast - Common**

|                          |               |
|--------------------------|---------------|
| TR                       | 9000.0 ms     |
| TE                       | 84 ms         |
| TD                       | 0.0 ms        |
| MTC                      | Off           |
| Magn. preparation        | Slice-sel. IR |
| TI                       | 2600 ms       |
| Flip angle               | 150 deg       |
| Fat suppr.               | Fat sat.      |
| Fat sat. mode            | Strong        |
| Water suppr.             | None          |
| Restore magn.            | Off           |
| Freeze suppressed tissue | Off           |

**Contrast - Dynamic**

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

**Resolution - Common**

|                       |        |
|-----------------------|--------|
| FoV read              | 192 mm |
| FoV phase             | 81.3 % |
| Slice thickness       | 2.5 mm |
| Base resolution       | 288    |
| Phase resolution      | 100 %  |
| Phase partial Fourier | Off    |

**Resolution - Common**

|               |           |
|---------------|-----------|
| Trajectory    | Cartesian |
| Interpolation | On        |

**Resolution - iPAT**

|                     |            |
|---------------------|------------|
| PAT mode            | GRAPPA     |
| Accel. factor PE    | 2          |
| Ref. lines PE       | 38         |
| Reference scan mode | Integrated |

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Geometry - Common**

|                  |                    |
|------------------|--------------------|
| Slice group      | 1                  |
| Slices           | 26                 |
| Dist. factor     | 10 %               |
| Position         | R4.4 A7.4 F36.3 mm |
| Orientation      | C > T-17.9         |
| Phase enc. dir.  | R >> L             |
| FoV read         | 192 mm             |
| FoV phase        | 81.3 %             |
| Slice thickness  | 2.5 mm             |
| TR               | 9000.0 ms          |
| Multi-slice mode | Interleaved        |
| Series           | Interleaved        |
| Concatenations   | 2                  |

**Geometry - AutoAlign**

|                     |                    |
|---------------------|--------------------|
| Slice group         | 1                  |
| Position            | R4.4 A7.4 F36.3 mm |
| Orientation         | C > T-17.9         |
| Phase enc. dir.     | R >> L             |
| AutoAlign           | ---                |
| Initial Position    | R4.4 A7.4 F36.3    |
| R                   | 4.4 mm             |
| A                   | 7.4 mm             |
| F                   | 36.3 mm            |
| Initial Rotation    | 0.00 deg           |
| Initial Orientation | C > T              |
| C > T               | -17.9              |
| > S                 | 0.0                |

**Geometry - Saturation**

|               |          |
|---------------|----------|
| Fat suppr.    | Fat sat. |
| Fat sat. mode | Strong   |
| Water suppr.  | None     |
| Restore magn. | Off      |
| Special sat.  | None     |

**Geometry - Navigator**

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## Geometry - Tim Planning Suite

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

## Geometry - Tim CT

|                 |        |
|-----------------|--------|
| Tim CT mode     | Off    |
| Slices          | 26     |
| Slice thickness | 2.5 mm |
| Dist. factor    | 10 %   |
| FoV read        | 192 mm |
| FoV phase       | 81.3 % |

## System - Miscellaneous

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

## System - Adjustments

|                          |                  |
|--------------------------|------------------|
| B0 Shim mode             | Brain            |
| B1 Shim mode             | Volume-selective |
| Confirm freq. adjustment | Off              |
| Assume Dominant Fat      | Off              |
| Assume Silicone          | Off              |
| Adjustment Tolerance     | Auto             |

## System - Adjust Volume

|               |                    |
|---------------|--------------------|
| ! Position    | R4.4 A7.4 F36.3 mm |
| ! Orientation | C > T-17.9         |
| ! Rotation    | 0.00 deg           |
| ! R >> L      | 169 mm             |
| ! F >> H      | 192 mm             |
| ! A >> P      | 67 mm              |
| Reset         | Off                |

## System - pTx Volumes

|                 |                    |
|-----------------|--------------------|
| B1 Shim mode    | Volume-selective   |
| pTx Volume      | 1                  |
| Vol. Property   | B1 Shim Vol.       |
| Position        | R2.9 A9.3 F30.7 mm |
| Orientation     | C > T-18.5         |
| Rotation        | 0.00 deg           |
| R >> L          | 140 mm             |
| F >> H          | 150 mm             |
| A >> P          | 62 mm              |
| Vol. Visibility | On                 |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Physio - Signal1

|                 |           |
|-----------------|-----------|
| 1st Signal/Mode | None      |
| TR              | 9000.0 ms |
| Concatenations  | 2         |

## Physio - Cardiac

|                   |               |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI                | 2600 ms       |
| Fat suppr.        | Fat sat.      |
| Dark blood        | Off           |
| FoV read          | 192 mm        |
| FoV phase         | 81.3 %        |
| Phase resolution  | 100 %         |
| Trajectory        | Cartesian     |

## Physio - PACE

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 2   |

## Inline - Common

|                      |     |
|----------------------|-----|
| Subtract             | Off |
| Measurements         | 1   |
| StdDev               | Off |
| Save original images | On  |

## Inline - MIP

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

## Inline - Composing

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

## Sequence - Part 1

|                     |             |
|---------------------|-------------|
| Introduction        | On          |
| Dimension           | 2D          |
| Compensate T2 decay | Off         |
| Reduce Motion Sens. | On          |
| Contrasts           | 1           |
| Flow comp.          | Read        |
| Optimization        | In phase    |
| Multi-slice mode    | Interleaved |
| Free echo spacing   | Off         |
| Echo spacing        | 10.5 ms     |
| Bandwidth           | 248 Hz/Px   |

## Sequence - Part 2

|                          |              |
|--------------------------|--------------|
| Define                   | Turbo factor |
| Echo trains per slice    | 8            |
| Phase correction         | Automatic    |
| Acoustic noise reduction | None         |
| RF pulse type            | Normal       |
| Gradient mode            | Fast         |
| Hyperecho                | Off          |
| WARP                     | Off          |
| Red. EC sensitivity      | Off          |
| Turbo factor             | 17           |

## Sequence - Assistant

|                |                |
|----------------|----------------|
| Mode           | Min flip angle |
| Min flip angle | 130 deg        |

**Sequence - Assistant**

|               |      |
|---------------|------|
| Allowed delay | 60 s |
|---------------|------|

\USER\Khan\NeuroAnalytics\SNSX\_TLE\_7t(April2025)\mbep2d\_diff\_b2000\_b1000\_95dir\_AP

TA: 9:15 PM: REF Voxel size: 1.5×1.5×1.5 mmPAT: 3 Rel. SNR: 1.00 : epse

**Properties**

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

**Resolution - iPAT**

|                     |       |
|---------------------|-------|
| Ref. lines PE       | 54    |
| Reference scan mode | FLEET |

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Routine**

|                          |             |
|--------------------------|-------------|
| Slice group              | 1           |
| Slices                   | 100         |
| Dist. factor             | 0 %         |
| Position                 | Isocenter   |
| Orientation              | Transversal |
| Phase enc. dir.          | A >> P      |
| AutoAlign                | ---         |
| Phase oversampling       | 0 %         |
| FoV read                 | 208 mm      |
| FoV phase                | 100.0 %     |
| Slice thickness          | 1.50 mm     |
| TR                       | 5500 ms     |
| TE                       | 60.80 ms    |
| Multi-band accel. factor | 2           |
| Filter                   | None        |
| Coil elements            | AC          |

**Geometry - Common**

|                          |             |
|--------------------------|-------------|
| Slice group              | 1           |
| Slices                   | 100         |
| Dist. factor             | 0 %         |
| Position                 | Isocenter   |
| Orientation              | Transversal |
| Phase enc. dir.          | A >> P      |
| FoV read                 | 208 mm      |
| FoV phase                | 100.0 %     |
| Slice thickness          | 1.50 mm     |
| TR                       | 5500 ms     |
| Multi-slice mode         | Interleaved |
| Series                   | Interleaved |
| Multi-band accel. factor | 2           |

**Contrast - Common**

|                       |          |
|-----------------------|----------|
| TR                    | 5500 ms  |
| TE                    | 60.80 ms |
| MTC                   | Off      |
| Magn. preparation     | None     |
| Flip angle            | 80 deg   |
| Refocus flip angle    | 160 deg  |
| Fat suppr.            | None     |
| Grad. rev. fat suppr. | Disabled |

**Geometry - AutoAlign**

|                     |             |
|---------------------|-------------|
| Slice group         | 1           |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase enc. dir.     | A >> P      |
| AutoAlign           | ---         |
| Initial Position    | Isocenter   |
| L                   | 0.0 mm      |
| P                   | 0.0 mm      |
| H                   | 0.0 mm      |
| Initial Rotation    | 0.00 deg    |
| Initial Orientation | Transversal |

**Contrast - Dynamic**

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

**Geometry - Saturation**

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

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

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

**System - Miscellaneous**

|                  |           |
|------------------|-----------|
| Positioning mode | REF       |
| Table position   | H         |
| Table position   | 0 mm      |
| MSMA             | S - C - T |
| Interpolation    | R >> L    |

**Resolution - iPAT**

|                  |        |
|------------------|--------|
| PAT mode         | GRAPPA |
| Accel. factor PE | 3      |

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## System - Miscellaneous

|                     |                |
|---------------------|----------------|
| Coronal             | A >> P         |
| Transversal         | F >> H         |
| Coil Combine Mode   | Sum of Squares |
| Matrix Optimization | Off            |
| AutoAlign           | ---            |
| Coil Select Mode    | Default        |

## System - Adjustments

|                          |                  |
|--------------------------|------------------|
| B0 Shim mode             | Brain            |
| B1 Shim mode             | Patient-specific |
| Confirm freq. adjustment | Off              |
| Assume Dominant Fat      | Off              |
| Assume Silicone          | Off              |
| Adjustment Tolerance     | Auto             |

## System - Adjust Volume

|             |             |
|-------------|-------------|
| Position    | Isocenter   |
| Orientation | Transversal |
| Rotation    | 0.00 deg    |
| A >> P      | 208 mm      |
| R >> L      | 208 mm      |
| F >> H      | 150 mm      |
| Reset       | Off         |

## System - pTx Volumes

|              |                  |
|--------------|------------------|
| B1 Shim mode | Patient-specific |
| Excitation   | Standard         |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Physio - Signal1

|                          |         |
|--------------------------|---------|
| 1st Signal/Mode          | None    |
| TR                       | 5500 ms |
| Multi-band accel. factor | 2       |

## Physio - PACE

|                          |     |
|--------------------------|-----|
| Resp. control            | Off |
| Multi-band accel. factor | 2   |

## Diff - Neuro

|                       |                        |
|-----------------------|------------------------|
| Diffusion mode        | Free                   |
| Diff. directions      | 95                     |
| Diffusion Scheme      | Monopolar              |
| Diff. weightings      | 2                      |
| b-value 1             | 0 s/mm <sup>2</sup>    |
| b-value 2             | 2000 s/mm <sup>2</sup> |
| b-value 1             | 1                      |
| b-value 2             | 1                      |
| Diff. weighted images | On                     |
| Trace weighted images | On                     |
| ADC maps              | On                     |
| FA maps               | On                     |
| Mosaic                | On                     |
| Tensor                | On                     |
| Noise level           | 80                     |

## Diff - Body

|                       |                        |
|-----------------------|------------------------|
| Diffusion mode        | Free                   |
| Diff. directions      | 95                     |
| Diffusion Scheme      | Monopolar              |
| Diff. weightings      | 2                      |
| b-value 1             | 0 s/mm <sup>2</sup>    |
| b-value 2             | 2000 s/mm <sup>2</sup> |
| b-value 1             | 1                      |
| b-value 2             | 1                      |
| Diff. weighted images | On                     |
| Trace weighted images | On                     |
| ADC maps              | On                     |
| Exponential ADC Maps  | Off                    |
| FA maps               | On                     |
| Invert Gray Scale     | Off                    |
| Calculated Image      | Off                    |
| b-Value >=            | 0 s/mm <sup>2</sup>    |
| Noise level           | 80                     |

## Diff - Composing

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

## Sequence - Part 1

|                   |             |
|-------------------|-------------|
| Introduction      | Off         |
| Multi-slice mode  | Interleaved |
| Free echo spacing | Off         |
| Echo spacing      | 0.75 ms     |
| Bandwidth         | 1510 Hz/Px  |

## Sequence - Part 2

|               |          |
|---------------|----------|
| EPI factor    | 138      |
| Gradient mode | Fast     |
| Excitation    | Standard |
| RF spoiling   | Off      |

## Sequence - Special

|                          |          |
|--------------------------|----------|
| Excite pulse duration    | 5120 us  |
| Refocus pulse duration   | 10240 us |
| FLEET ref. prep. scans   | 0        |
| FLEET ref. min. TR       | 0 ms     |
| Single-band images       | Off      |
| MB LeakBlock kernel      | On       |
| MB dual kernel           | Off      |
| MB RF phase scramble     | Off      |
| Time-shifted MB RF       | Off      |
| SENSE1 coil combine      | On       |
| Invert RO/PE polarity    | Off      |
| PF omits higher k-space  | Off      |
| Disable freq. update     | Off      |
| Force equal slice timing | Off      |
| Online multi-band recon. | Online   |
| FFT scale factor         | 1.00     |
| FLEET iPAT ref. FA       | 12.0 deg |
| Physio recording         | Off      |

\USER\Khan\NeuroAnalytics\SNSX\_TLE\_7t(April2025)\mbep2d\_diff\_B0\_PA

TA: 1:06 PM: REF Voxel size: 1.5x1.5x1.5 mmPAT: 3 Rel. SNR: 1.00 : epse

**Properties**

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

**Resolution - iPAT**

|                     |       |
|---------------------|-------|
| Ref. lines PE       | 54    |
| Reference scan mode | FLEET |

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Routine**

|                          |             |
|--------------------------|-------------|
| Slice group              | 1           |
| Slices                   | 100         |
| Dist. factor             | 0 %         |
| Position                 | Isocenter   |
| Orientation              | Transversal |
| Phase enc. dir.          | A >> P      |
| AutoAlign                | ---         |
| Phase oversampling       | 0 %         |
| FoV read                 | 208 mm      |
| FoV phase                | 100.0 %     |
| Slice thickness          | 1.50 mm     |
| TR                       | 5500 ms     |
| TE                       | 60.80 ms    |
| Multi-band accel. factor | 2           |
| Filter                   | None        |
| Coil elements            | AC          |

**Geometry - Common**

|                          |             |
|--------------------------|-------------|
| Slice group              | 1           |
| Slices                   | 100         |
| Dist. factor             | 0 %         |
| Position                 | Isocenter   |
| Orientation              | Transversal |
| Phase enc. dir.          | A >> P      |
| FoV read                 | 208 mm      |
| FoV phase                | 100.0 %     |
| Slice thickness          | 1.50 mm     |
| TR                       | 5500 ms     |
| Multi-slice mode         | Interleaved |
| Series                   | Interleaved |
| Multi-band accel. factor | 2           |

**Contrast - Common**

|                       |          |
|-----------------------|----------|
| TR                    | 5500 ms  |
| TE                    | 60.80 ms |
| MTC                   | Off      |
| Magn. preparation     | None     |
| Flip angle            | 80 deg   |
| Refocus flip angle    | 160 deg  |
| Fat suppr.            | None     |
| Grad. rev. fat suppr. | Disabled |

**Geometry - AutoAlign**

|                     |             |
|---------------------|-------------|
| Slice group         | 1           |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase enc. dir.     | A >> P      |
| AutoAlign           | ---         |
| Initial Position    | Isocenter   |
| L                   | 0.0 mm      |
| P                   | 0.0 mm      |
| H                   | 0.0 mm      |
| Initial Rotation    | 0.00 deg    |
| Initial Orientation | Transversal |

**Contrast - Dynamic**

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

**Geometry - Saturation**

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

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

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

**System - Miscellaneous**

|                  |           |
|------------------|-----------|
| Positioning mode | REF       |
| Table position   | H         |
| Table position   | 0 mm      |
| MSMA             | S - C - T |
| Interpolation    | R >> L    |

**Resolution - iPAT**

|                  |        |
|------------------|--------|
| PAT mode         | GRAPPA |
| Accel. factor PE | 3      |

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## System - Miscellaneous

|                     |                |
|---------------------|----------------|
| Coronal             | A >> P         |
| Transversal         | F >> H         |
| Coil Combine Mode   | Sum of Squares |
| Matrix Optimization | Off            |
| AutoAlign           | ---            |
| Coil Select Mode    | Default        |

## Diff - Neuro

|                       |    |
|-----------------------|----|
| Diff. weighted images | On |
| Trace weighted images | On |
| ADC maps              | On |
| FA maps               | On |
| Mosaic                | On |
| Tensor                | On |
| Noise level           | 80 |

## System - Adjustments

|                          |                  |
|--------------------------|------------------|
| B0 Shim mode             | Brain            |
| B1 Shim mode             | Volume-selective |
| Confirm freq. adjustment | Off              |
| Assume Dominant Fat      | Off              |
| Assume Silicone          | Off              |
| Adjustment Tolerance     | Auto             |

## Diff - Body

|                       |                        |
|-----------------------|------------------------|
| Diffusion mode        | MDDW                   |
| Diff. directions      | 6                      |
| Diffusion Scheme      | Monopolar              |
| Diff. weightings      | 2                      |
| b-value 1             | 0 s/mm <sup>2</sup>    |
| b-value 2             | 2000 s/mm <sup>2</sup> |
| b-value 1             | 1                      |
| b-value 2             | 1                      |
| Diff. weighted images | On                     |
| Trace weighted images | On                     |
| ADC maps              | On                     |
| Exponential ADC Maps  | Off                    |
| FA maps               | On                     |
| Invert Gray Scale     | Off                    |
| Calculated Image      | Off                    |
| b-Value >=            | 0 s/mm <sup>2</sup>    |
| Noise level           | 80                     |

## System - Adjust Volume

|             |             |
|-------------|-------------|
| Position    | Isocenter   |
| Orientation | Transversal |
| Rotation    | 0.00 deg    |
| A >> P      | 208 mm      |
| R >> L      | 208 mm      |
| F >> H      | 150 mm      |
| Reset       | Off         |

## Diff - Composing

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

## System - pTx Volumes

|                 |                  |
|-----------------|------------------|
| B1 Shim mode    | Volume-selective |
| Excitation      | Standard         |
| pTx Volume      | 1                |
| Vol. Property   | B1 Shim Vol.     |
| Position        | Isocenter        |
| Orientation     | Transversal      |
| Rotation        | 0.00 deg         |
| A >> P          | 208 mm           |
| R >> L          | 208 mm           |
| F >> H          | 162 mm           |
| Vol. Visibility | On               |

## Sequence - Part 1

|                   |             |
|-------------------|-------------|
| Introduction      | Off         |
| Multi-slice mode  | Interleaved |
| Free echo spacing | Off         |
| Echo spacing      | 0.75 ms     |
| Bandwidth         | 1510 Hz/Px  |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Sequence - Part 2

|               |          |
|---------------|----------|
| EPI factor    | 138      |
| Gradient mode | Fast     |
| Excitation    | Standard |
| RF spoiling   | Off      |

## Physio - Signal1

|                          |         |
|--------------------------|---------|
| 1st Signal/Mode          | None    |
| TR                       | 5500 ms |
| Multi-band accel. factor | 2       |

## Sequence - Special

|                          |          |
|--------------------------|----------|
| Excite pulse duration    | 5120 us  |
| Refocus pulse duration   | 10240 us |
| FLEET ref. prep. scans   | 0        |
| FLEET ref. min. TR       | 0 ms     |
| Single-band images       | Off      |
| MB LeakBlock kernel      | On       |
| MB dual kernel           | Off      |
| MB RF phase scramble     | Off      |
| Time-shifted MB RF       | Off      |
| SENSE1 coil combine      | On       |
| Invert RO/PE polarity    | On       |
| PF omits higher k-space  | Off      |
| Disable freq. update     | Off      |
| Force equal slice timing | Off      |
| Online multi-band recon. | Online   |
| FFT scale factor         | 1.00     |
| FLEET iPAT ref. FA       | 12.0 deg |
| Physio recording         | Off      |

## Physio - PACE

|                          |     |
|--------------------------|-----|
| Resp. control            | Off |
| Multi-band accel. factor | 2   |

## Diff - Neuro

|                  |                        |
|------------------|------------------------|
| Diffusion mode   | MDDW                   |
| Diff. directions | 6                      |
| Diffusion Scheme | Monopolar              |
| Diff. weightings | 2                      |
| b-value 1        | 0 s/mm <sup>2</sup>    |
| b-value 2        | 2000 s/mm <sup>2</sup> |
| b-value 1        | 1                      |
| b-value 2        | 1                      |

|   |  |
|---|--|
| \USER\Khan\NeuroAnalytics\SNSX_TLE_7t(April2025)\cb_sp2d_diff_C52_Spiral_R3 |  |
| TA: 10:18 PM: REF Voxel size: 1.5x1.5x1.5 mmPAT: 6 Rel. SNR: 1.00 : epse    |  |

**Properties**

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

**Resolution - iPAT**

|                     |              |
|---------------------|--------------|
| Accel. factor PE    | 3            |
| Ref. lines PE       | 18           |
| Accel. factor slice | 2            |
| Reference scan mode | EPI/separate |

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Routine**

|                    |                   |
|--------------------|-------------------|
| Slice group        | 1                 |
| Slices             | 88                |
| Dist. factor       | 0 %               |
| Position           | L0.0 P5.4 F4.8 mm |
| Orientation        | Transversal       |
| Phase enc. dir.    | A >> P            |
| AutoAlign          | ---               |
| Phase oversampling | 0 %               |
| FoV read           | 200 mm            |
| FoV phase          | 100.0 %           |
| Slice thickness    | 1.5 mm            |
| TR                 | 6500 ms           |
| TE                 | 82.0 ms           |
| Averages           | 1                 |
| Concatenations     | 1                 |
| Filter             | None              |
| Coil elements      | FP                |

**Geometry - Common**

|                  |                   |
|------------------|-------------------|
| Slice group      | 1                 |
| Slices           | 88                |
| Dist. factor     | 0 %               |
| Position         | L0.0 P5.4 F4.8 mm |
| Orientation      | Transversal       |
| Phase enc. dir.  | A >> P            |
| FoV read         | 200 mm            |
| FoV phase        | 100.0 %           |
| Slice thickness  | 1.5 mm            |
| TR               | 6500 ms           |
| Multi-slice mode | Interleaved       |
| Series           | Interleaved       |
| Concatenations   | 1                 |

**Geometry - AutoAlign**

|                     |                   |
|---------------------|-------------------|
| Slice group         | 1                 |
| Position            | L0.0 P5.4 F4.8 mm |
| Orientation         | Transversal       |
| Phase enc. dir.     | A >> P            |
| AutoAlign           | ---               |
| Initial Position    | L0.0 P5.4 F4.8    |
| L                   | 0.0 mm            |
| P                   | 5.4 mm            |
| F                   | 4.8 mm            |
| Initial Rotation    | 0.00 deg          |
| Initial Orientation | Transversal       |

**Contrast - Common**

|                    |          |
|--------------------|----------|
| TR                 | 6500 ms  |
| TE                 | 82.0 ms  |
| MTC                | Off      |
| Magn. preparation  | None     |
| Flip angle exc     | 69 deg   |
| Flip angle fat sat | 110 deg  |
| Fat suppr.         | Fat sat. |
| Fat sat. mode      | Strong   |

**Geometry - Saturation**

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

**Contrast - Dynamic**

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

**Geometry - Tim Planning Suite**

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

**Resolution - Common**

|                 |         |
|-----------------|---------|
| FoV read        | 200 mm  |
| FoV phase       | 100.0 % |
| Slice thickness | 1.5 mm  |
| Base resolution | 134     |
| Trajectory      | Spiral  |
| Interpolation   | Off     |

**Resolution - iPAT**

|             |              |
|-------------|--------------|
| Accel. mode | Slice accel. |
|-------------|--------------|

**System - Miscellaneous**

|                  |      |
|------------------|------|
| Positioning mode | REF  |
| Table position   | H    |
| Table position   | 0 mm |

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## System - Miscellaneous

|                     |                |
|---------------------|----------------|
| MSMA                | S - C - T      |
| Sagittal            | R >> L         |
| Coronal             | A >> P         |
| Transversal         | F >> H         |
| Coil Combine Mode   | Sum of Squares |
| Matrix Optimization | Off            |
| AutoAlign           | ---            |
| Coil Select Mode    | Default        |

## Diff - Neuro

|                       |     |
|-----------------------|-----|
| Diff. weighted images | On  |
| Trace weighted images | Off |
| ADC maps              | Off |
| FA maps               | Off |
| Mosaic                | Off |
| Tensor                | Off |
| Noise level           | 40  |

## System - Adjustments

|                          |                  |
|--------------------------|------------------|
| B0 Shim mode             | Brain            |
| B1 Shim mode             | Volume-selective |
| Confirm freq. adjustment | Off              |
| Assume Dominant Fat      | Off              |
| Assume Silicone          | Off              |
| Adjustment Tolerance     | Auto             |

## Diff - Body

|                       |                        |
|-----------------------|------------------------|
| Diffusion mode        | Free                   |
| Diff. directions      | 94                     |
| Diffusion Scheme      | Monopolar Plus         |
| Diff. weightings      | 1                      |
| b-value               | 2000 s/mm <sup>2</sup> |
| b-value               | 1                      |
| Diff. weighted images | On                     |
| Trace weighted images | Off                    |
| ADC maps              | Off                    |
| Exponential ADC Maps  | Off                    |
| FA maps               | Off                    |
| Invert Gray Scale     | Off                    |
| Calculated Image      | Off                    |
| b-Value >=            | 0 s/mm <sup>2</sup>    |
| Noise level           | 40                     |

## System - Adjust Volume

|             |                   |
|-------------|-------------------|
| Position    | L0.0 P5.4 F4.8 mm |
| Orientation | Transversal       |
| Rotation    | 0.00 deg          |
| A >> P      | 200 mm            |
| R >> L      | 200 mm            |
| F >> H      | 132 mm            |
| Reset       | Off               |

## Diff - Composing

|                  |     |
|------------------|-----|
| Inline Composing | Off |
| Distortion Corr. | Off |

## System - pTx Volumes

|                 |                   |
|-----------------|-------------------|
| B1 Shim mode    | Volume-selective  |
| Excitation      | Standard          |
| pTx Volume      | 1                 |
| Vol. Property   | B1 Shim Vol.      |
| Position        | L0.0 P5.4 F4.8 mm |
| Orientation     | Transversal       |
| Rotation        | 0.00 deg          |
| A >> P          | 200 mm            |
| R >> L          | 200 mm            |
| F >> H          | 132 mm            |
| Vol. Visibility | On                |

## Sequence - Part 1

|                   |             |
|-------------------|-------------|
| Introduction      | Off         |
| Optimization      | None        |
| Multi-slice mode  | Interleaved |
| Free echo spacing | Off         |
| Echo spacing      | 1.08 ms     |
| Bandwidth         | 2194 Hz/Px  |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Sequence - Part 2

|               |          |
|---------------|----------|
| EPI factor    | 134      |
| RF pulse type | Normal   |
| Gradient mode | Fast     |
| Excitation    | Standard |

## Sequence - pTX Pulses

## Sequence - Special

|                          |                         |
|--------------------------|-------------------------|
| FFT scale                | 1.00                    |
| OGSE b-Value             | 300.0 s/mm <sup>2</sup> |
| Diff Slew Rate Scale     | 18.0                    |
| Field probe trigger      | On                      |
| Field probe sync         | 0 #                     |
| Alt OGSE scheme          | On                      |
| Run spiral PAT Ref scans | Off                     |
| ADC-to-Grad delay        | 0 us                    |
| SMS CAIPI                | osc                     |
| VD Spiral                | 0.2                     |
| Num. PAT Echos           | 1 #                     |
| Slew rate scale          | 7.0                     |

## Physio - Signal1

|                 |         |
|-----------------|---------|
| 1st Signal/Mode | None    |
| TR              | 6500 ms |
| Concatenations  | 1       |

## Physio - PACE

|                |     |
|----------------|-----|
| Resp. control  | Off |
| Concatenations | 1   |

## Diff - Neuro

|                  |                        |
|------------------|------------------------|
| Diffusion mode   | Free                   |
| Diff. directions | 94                     |
| Diffusion Scheme | Monopolar Plus         |
| Diff. weightings | 1                      |
| b-value          | 2000 s/mm <sup>2</sup> |
| b-value          | 1                      |

\\USER\\Khan\\NeuroAnalytics\\SNSX\_TLE\_7t(April2025)\\gre\_field\_mapping

TA: 1:27 PM: FIX Voxel size: 2.0x2.0x2.0 mmRel. SNR: 1.00 : fm\_r

**Properties**

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

**Routine**

|                    |                   |
|--------------------|-------------------|
| Slice group        | 1                 |
| Slices             | 74                |
| Dist. factor       | 0 %               |
| Position           | R0.5 P9.6 H5.8 mm |
| Orientation        | Transversal       |
| Phase enc. dir.    | A >> P            |
| AutoAlign          | ---               |
| Phase oversampling | 0 %               |
| FoV read           | 210 mm            |
| FoV phase          | 100.0 %           |
| Slice thickness    | 2.0 mm            |
| TR                 | 542.0 ms          |
| TE 1               | 4.08 ms           |
| TE 2               | 5.1 ms            |
| Averages           | 1                 |
| Concatenations     | 1                 |
| Filter             | None              |
| Coil elements      | AC                |

**Contrast - Common**

|            |          |
|------------|----------|
| TR         | 542.0 ms |
| TE 1       | 4.08 ms  |
| TE 2       | 5.1 ms   |
| MTC        | Off      |
| Flip angle | 35 deg   |
| Fat suppr. | None     |

**Contrast - Dynamic**

|                 |             |
|-----------------|-------------|
| Averages        | 1           |
| Averaging mode  | Short term  |
| Reconstruction  | Magn./Phase |
| Measurements    | 1           |
| Multiple series | Off         |

**Resolution - Common**

|                       |         |
|-----------------------|---------|
| FoV read              | 210 mm  |
| FoV phase             | 100.0 % |
| Slice thickness       | 2.0 mm  |
| Base resolution       | 104     |
| Phase resolution      | 100 %   |
| Phase partial Fourier | 6/8     |
| Interpolation         | Off     |

**Resolution - Filter Image**

|                  |     |
|------------------|-----|
| Image Filter     | Off |
| Distortion Corr. | Off |

**Resolution - Filter Image**

|                   |     |
|-------------------|-----|
| Prescan Normalize | Off |
| Normalize         | Off |
| B1 filter         | Off |

**Resolution - Filter Rawdata**

|                   |     |
|-------------------|-----|
| Raw filter        | Off |
| Elliptical filter | Off |

**Geometry - Common**

|                  |                   |
|------------------|-------------------|
| Slice group      | 1                 |
| Slices           | 74                |
| Dist. factor     | 0 %               |
| Position         | R0.5 P9.6 H5.8 mm |
| Orientation      | Transversal       |
| Phase enc. dir.  | A >> P            |
| FoV read         | 210 mm            |
| FoV phase        | 100.0 %           |
| Slice thickness  | 2.0 mm            |
| TR               | 542.0 ms          |
| Multi-slice mode | Interleaved       |
| Series           | Interleaved       |
| Concatenations   | 1                 |

**Geometry - AutoAlign**

|                     |                   |
|---------------------|-------------------|
| Slice group         | 1                 |
| Position            | R0.5 P9.6 H5.8 mm |
| Orientation         | Transversal       |
| Phase enc. dir.     | A >> P            |
| AutoAlign           | ---               |
| Initial Position    | R0.5 P9.6 H5.8    |
| R                   | 0.5 mm            |
| P                   | 9.6 mm            |
| H                   | 5.8 mm            |
| Initial Rotation    | 0.00 deg          |
| Initial Orientation | Transversal       |

**Geometry - Saturation**

|              |      |
|--------------|------|
| Fat suppr.   | None |
| Special sat. | None |

**Geometry - Tim Planning Suite**

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

**System - Miscellaneous**

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

# SIEMENS MAGNETOM Investigational\_Device\_7T\_Plus

## System - Adjustments

|                          |                  |
|--------------------------|------------------|
| B0 Shim mode             | Standard         |
| B1 Shim mode             | Volume-selective |
| Confirm freq. adjustment | Off              |
| Assume Dominant Fat      | Off              |
| Assume Silicone          | Off              |
| Adjustment Tolerance     | Auto             |

## System - Adjust Volume

|             |                   |
|-------------|-------------------|
| Position    | R0.5 P9.6 H5.8 mm |
| Orientation | Transversal       |
| Rotation    | 0.00 deg          |
| A >> P      | 210 mm            |
| R >> L      | 210 mm            |
| F >> H      | 148 mm            |
| Reset       | Off               |

## System - pTx Volumes

|                 |                  |
|-----------------|------------------|
| B1 Shim mode    | Volume-selective |
| pTx Volume      | 1                |
| Vol. Property   | B1 Shim Vol.     |
| Position        | Isocenter        |
| Orientation     | Transversal      |
| Rotation        | 0.00 deg         |
| A >> P          | 210 mm           |
| R >> L          | 210 mm           |
| F >> H          | 148 mm           |
| Vol. Visibility | On               |

## System - Tx/Rx

|                     |                |
|---------------------|----------------|
| Frequency 1H        | 297.105997 MHz |
| Correction factor   | 1              |
| Gain                | High           |
| Img. Scale Cor.     | 1.000          |
| Reset               | Off            |
| ? Ref. amplitude 1H | 0.000 V        |

## Sequence - Part 1

|                  |             |
|------------------|-------------|
| Introduction     | On          |
| Dimension        | 2D          |
| Asymmetric echo  | Off         |
| Contrasts        | 2           |
| Flow comp.       | Yes         |
| Multi-slice mode | Interleaved |
| Bandwidth        | 601 Hz/Px   |

## Sequence - Part 2

|               |        |
|---------------|--------|
| RF pulse type | Normal |
| Gradient mode | Normal |
| RF spoiling   | On     |

## Sequence - Assistant

|      |     |
|------|-----|
| Mode | Off |
|------|-----|