
Appendix for the Report

Dosimetric Assessment of the Siemens M65 (FCC ID: PWX-M65) According to the FCC Requirements

SAR Distribution Plots

March 26, 2004
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1 SAR Distribution Plots, PCS 1900 Head without Flash

Test Laboratory: IMST GmbH; File Name: [m65plm_1.da4](#)

DUT: Siemens; Type: M65; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Left/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 17.7 V/m; Power Drift = 0.0144 dB

Maximum value of SAR (measured) = 0.513 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.7 V/m; Power Drift = 0.0144 dB

Maximum value of SAR (measured) = 0.546 mW/g

Peak SAR (extrapolated) = 0.803 W/kg

SAR(1 g) = 0.504 mW/g; SAR(10 g) = 0.316 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.7 V/m; Power Drift = 0.0144 dB

Maximum value of SAR (measured) = 0.415 mW/g

Peak SAR (extrapolated) = 0.566 W/kg

SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.229 mW/g

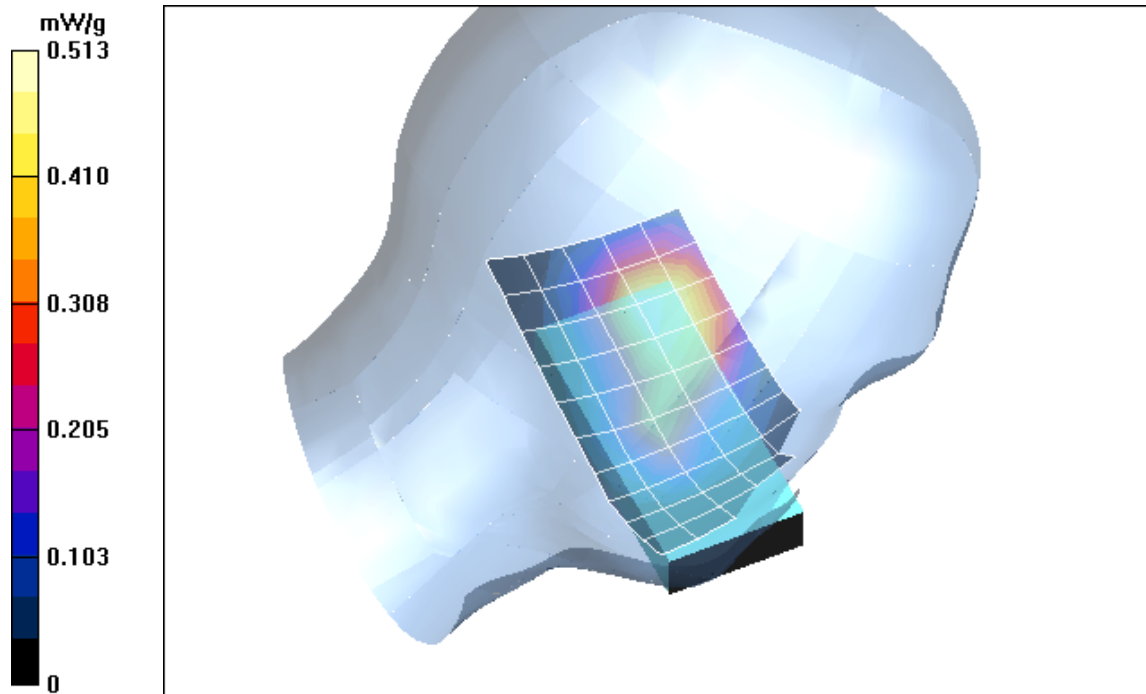


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (24.03.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 19.9° C).

Test Laboratory: IMST GmbH; File Name: [m65plm_2.da4](#)

DUT: Siemens; Type: M65; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Left/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 23.1 V/m; Power Drift = -0.0 dB

Maximum value of SAR (measured) = 0.762 mW/g

Tilted Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.1 V/m; Power Drift = -0.0 dB

Maximum value of SAR (measured) = 0.827 mW/g

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.745 mW/g; SAR(10 g) = 0.427 mW/g

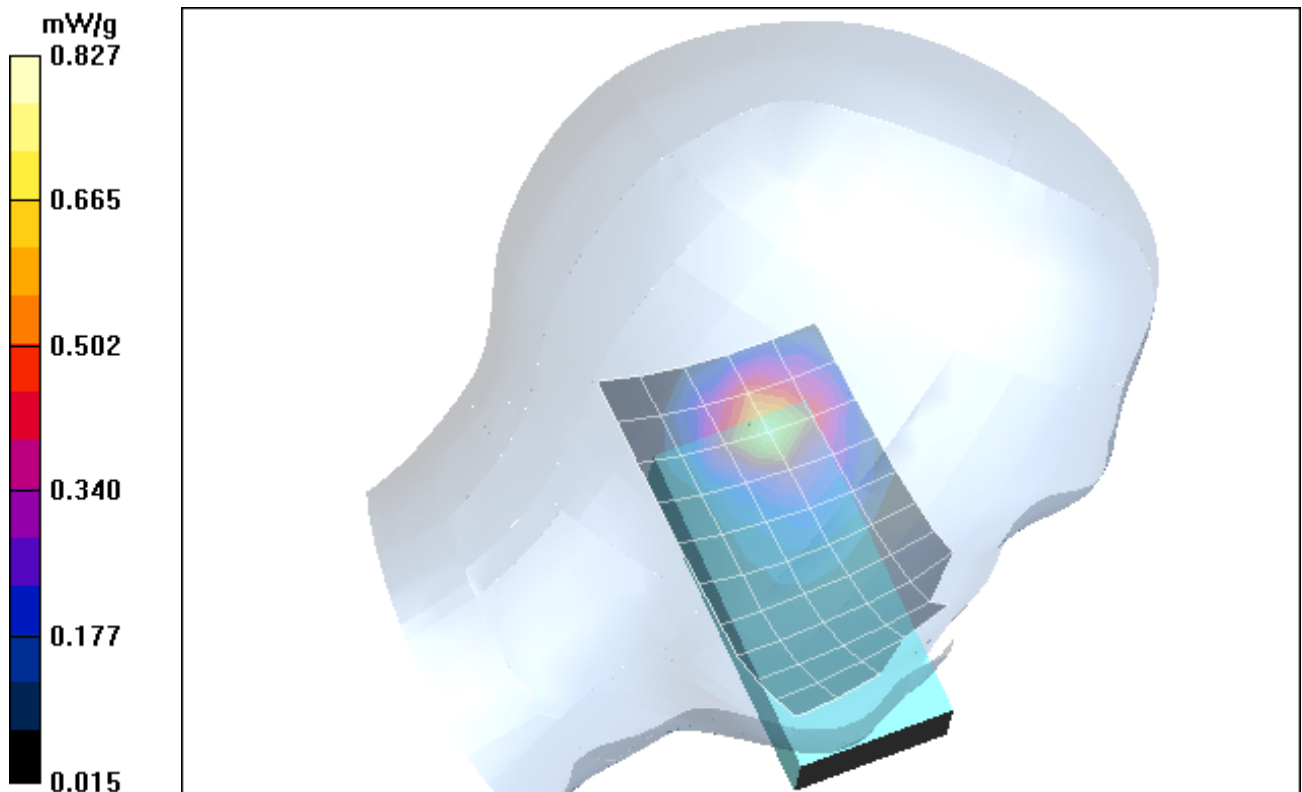


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (24.03.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.0° C).

Test Laboratory: IMST GmbH; File Name: [m65prm_1.da4](#)

DUT: Siemens; Type: M65; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Right/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.1 V/m; Power Drift = -0.086 dB

Maximum value of SAR (measured) = 0.525 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.1 V/m; Power Drift = -0.086 dB

Maximum value of SAR (measured) = 0.561 mW/g

Peak SAR (extrapolated) = 0.696 W/kg

SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.328 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.1 V/m; Power Drift = -0.086 dB

Maximum value of SAR (measured) = 0.490 mW/g

Peak SAR (extrapolated) = 0.649 W/kg

SAR(1 g) = 0.451 mW/g; SAR(10 g) = 0.287 mW/g

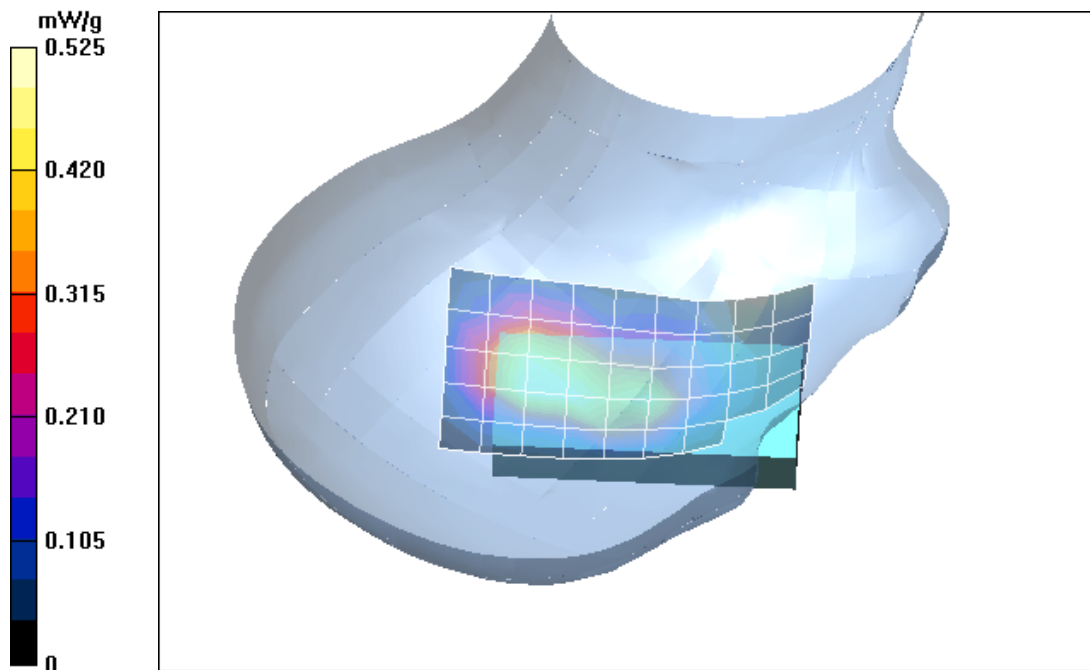


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (24.03.2004; Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).

Test Laboratory: IMST GmbH; File Name: [m65prm_2.da4](#)

DUT: Siemens; Type: M65; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Right/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 24 V/m; Power Drift = -0.0101 dB

Maximum value of SAR (measured) = 0.765 mW/g

Tilted Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24 V/m; Power Drift = -0.0101 dB

Maximum value of SAR (measured) = 0.776 mW/g

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.716 mW/g; SAR(10 g) = 0.415 mW/g

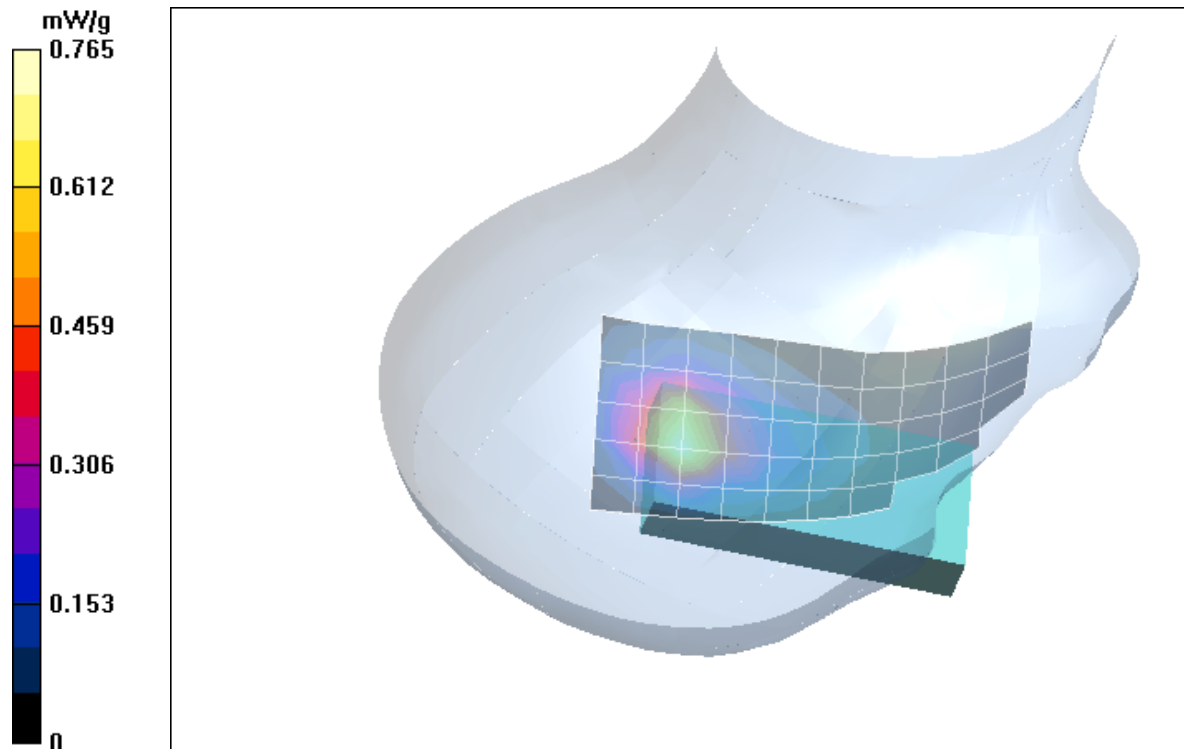


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (24.03.2004; Ambient Temperature: 20.9° C; Liquid Temperature : 20.0° C).

2 SAR Distribution Plots, PCS 1900 Head with Flash

Test Laboratory: IMST GmbH; File Name: [c65plm_1.da4](#)

DUT: Siemens; Type: M65 Flash; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Left/Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 17.3 V/m; Power Drift = -0.0426 dB

Maximum value of SAR (measured) = 0.468 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.3 V/m; Power Drift = -0.0426 dB

Maximum value of SAR (measured) = 0.525 mW/g

Peak SAR (extrapolated) = 0.794 W/kg

SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.284 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.3 V/m; Power Drift = -0.0426 dB

Maximum value of SAR (measured) = 0.426 mW/g

Peak SAR (extrapolated) = 0.535 W/kg

SAR(1 g) = 0.400 mW/g; SAR(10 g) = 0.262 mW/g

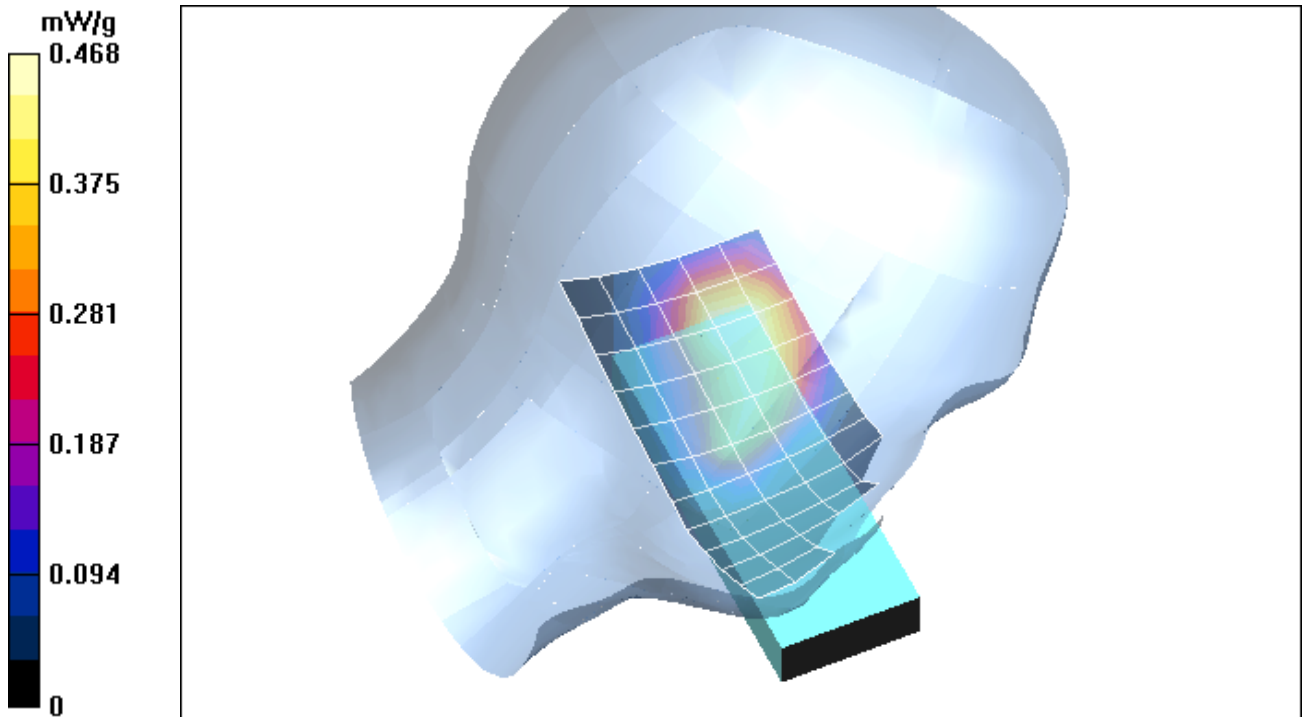


Fig. 5: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (24.03.2004; Ambient Temperature: 21.0° C; Liquid Temperature 19.9° C).

Test Laboratory: IMST GmbH; File Name: [c65plm_2.da4](#)

DUT: Siemens; Type: M65 Flash; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Left/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.2 V/m; Power Drift = -0.0184 dB

Maximum value of SAR (measured) = 0.614 mW/g

Tilted Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.2 V/m; Power Drift = -0.0184 dB

Maximum value of SAR (measured) = 0.767 mW/g

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.687 mW/g; SAR(10 g) = 0.385 mW/g

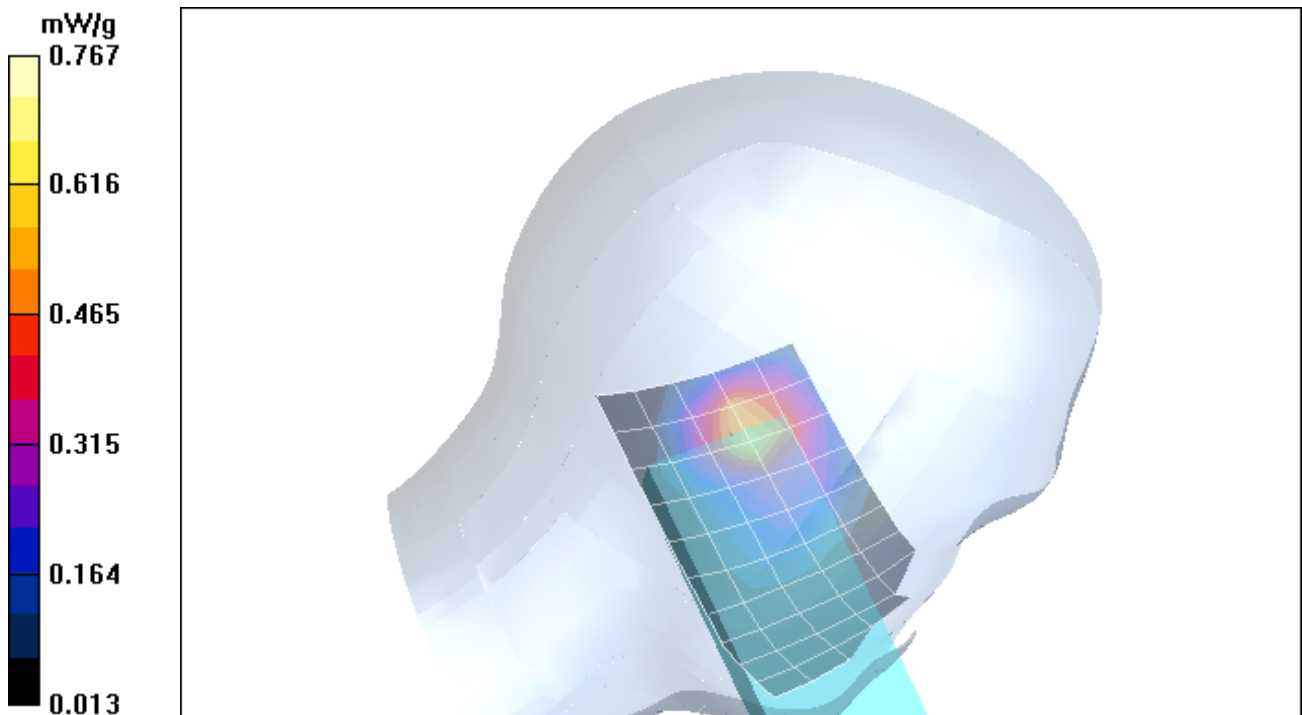


Fig. 6: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (24.03.2004; Ambient Temperature: 20.8° C; Liquid Temperature 20.0° C).

Test Laboratory: IMST GmbH; File Name: [c65prm_1.da4](#)

DUT: Siemens; Type: M65 Flash; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Right/Area Scan (6x12x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Reference Value = 18.6 V/m; Power Drift = -0.037 dB

Maximum value of SAR (measured) = 0.498 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 18.6 V/m; Power Drift = -0.037 dB

Maximum value of SAR (measured) = 0.552 mW/g

Peak SAR (extrapolated) = 0.709 W/kg

SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.321 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 18.6 V/m; Power Drift = -0.037 dB

Maximum value of SAR (measured) = 0.466 mW/g

Peak SAR (extrapolated) = 0.636 W/kg

SAR(1 g) = 0.418 mW/g; SAR(10 g) = 0.265 mW/g

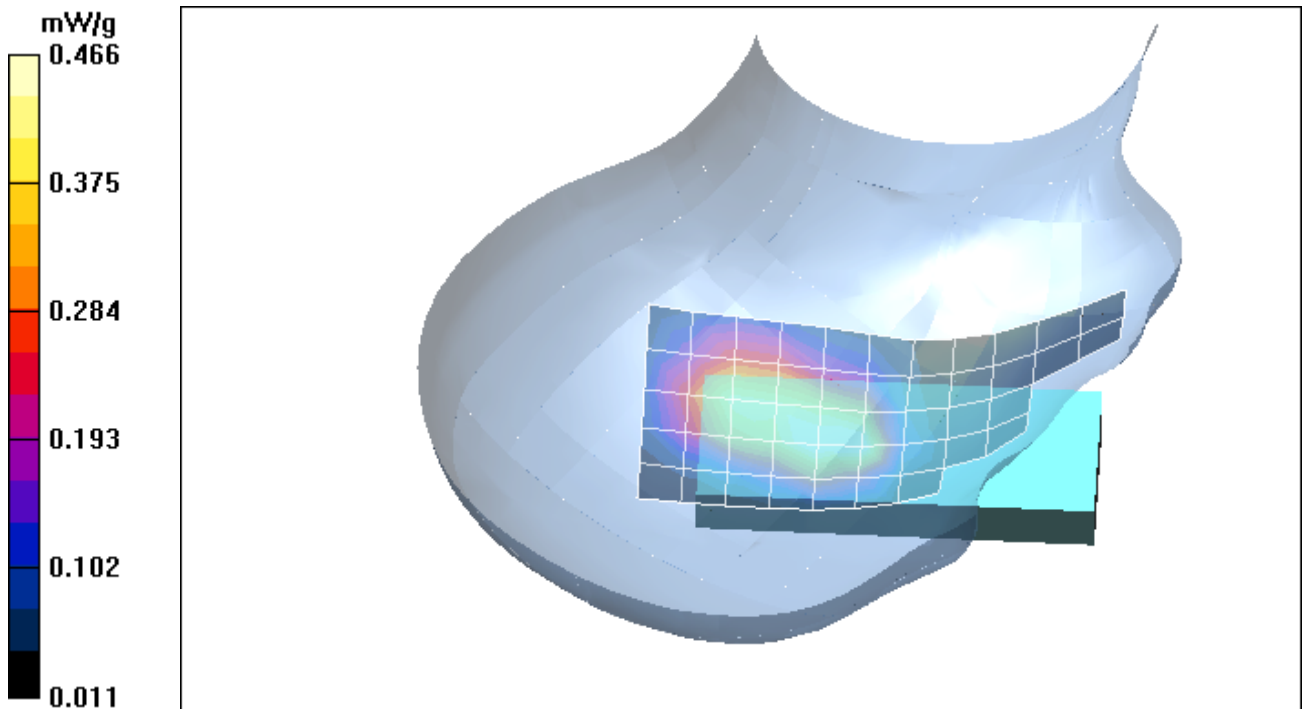


Fig. 7: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (24.03.2004; Ambient Temperature: 20.9° C; Liquid Temperature 20.0° C).

Test Laboratory: IMST GmbH; File Name: [c65prm_2.da4](#)

DUT: Siemens; Type: M65 Flash; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Right/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 22.1 V/m; Power Drift = -0.00178 dB

Maximum value of SAR (measured) = 0.604 mW/g

Tilted Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.1 V/m; Power Drift = -0.00178 dB

Maximum value of SAR (measured) = 0.648 mW/g

Peak SAR (extrapolated) = 0.909 W/kg

SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.343 mW/g

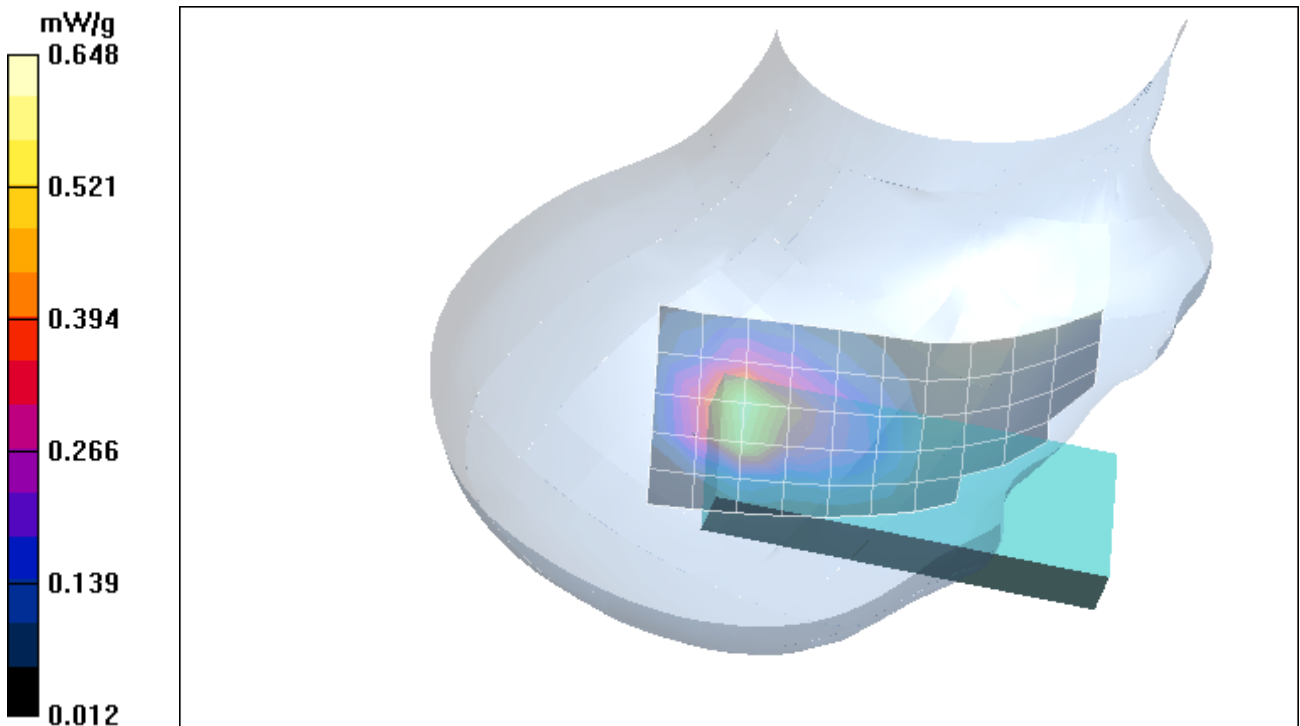


Fig. 8: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (24.03.2004; Ambient Temperature: 20.8° C; Liquid Temperature 19.9° C).

3 SAR Distribution Plots, PCS 1900 Body with headset

Test Laboratory: IMST GmbH; File Name: [m65phm_1.da4](#)

DUT: Siemens; Type: M65; Serial: 004400004796627

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 1.53$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.54, 4.54, 4.54); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body Worn/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.54 V/m; Power Drift = 0.0139 dB

Maximum value of SAR (measured) = 0.285 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.54 V/m; Power Drift = 0.0139 dB

Maximum value of SAR (measured) = 0.289 mW/g

Peak SAR (extrapolated) = 0.433 W/kg

SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.162 mW/g

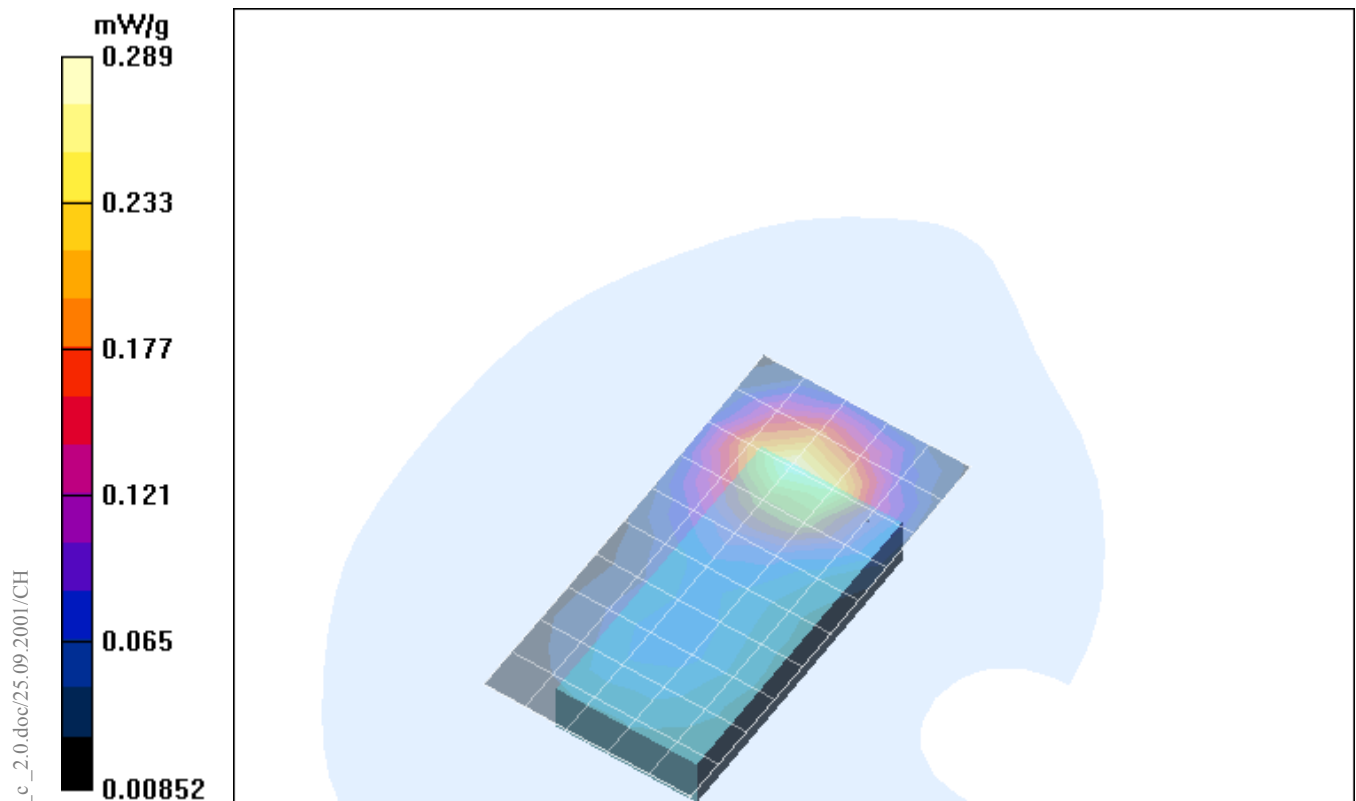


Fig. 9: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset (25.03.2004; Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).

4 SAR Distribution Plots, PCS 1900 Body with data cable

Test Laboratory: IMST GmbH; File Name: [m65phm_2.da4](#)

DUT: Siemens; Type: M65; Serial: 004400004796627

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $\sigma = 1.53$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.54, 4.54, 4.54); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 109

Body Worn/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.5 V/m; Power Drift = -0.02 dB

Maximum value of SAR (measured) = 0.537 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = -0.0 2dB

Maximum value of SAR (measured) = 0.582 mW/g

Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.535 mW/g; SAR(10 g) = 0.327 mW/g

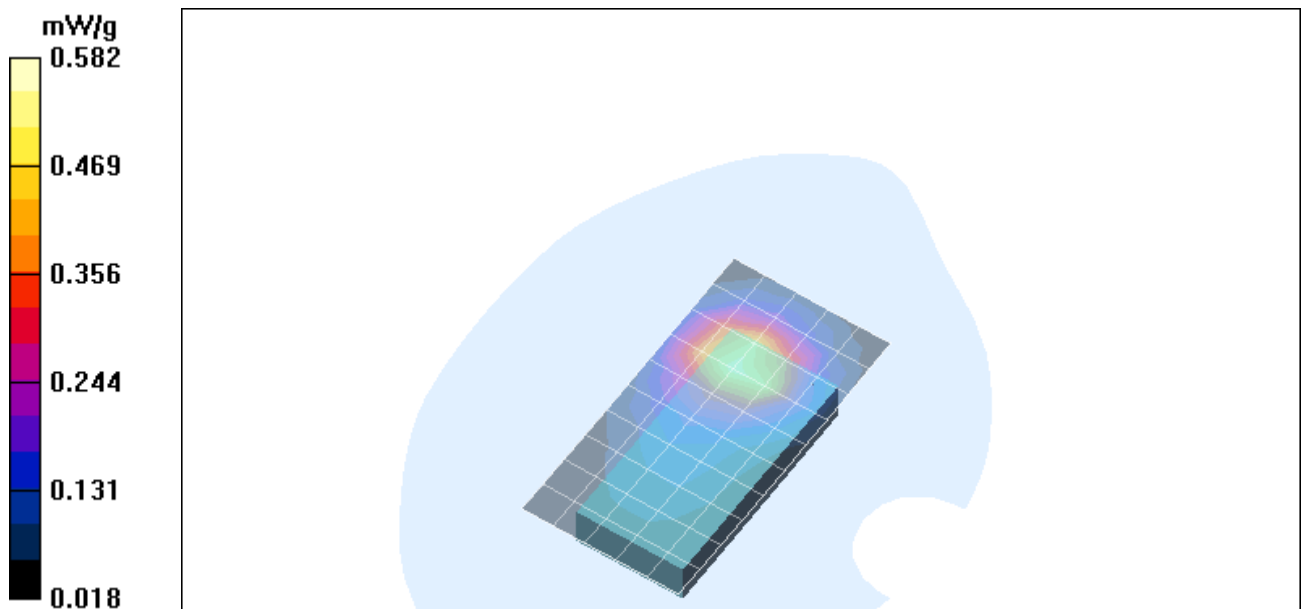


Fig. 10: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with data cable, 2TX (25.03.2004; Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).

5 SAR z-axis scans (Validation)

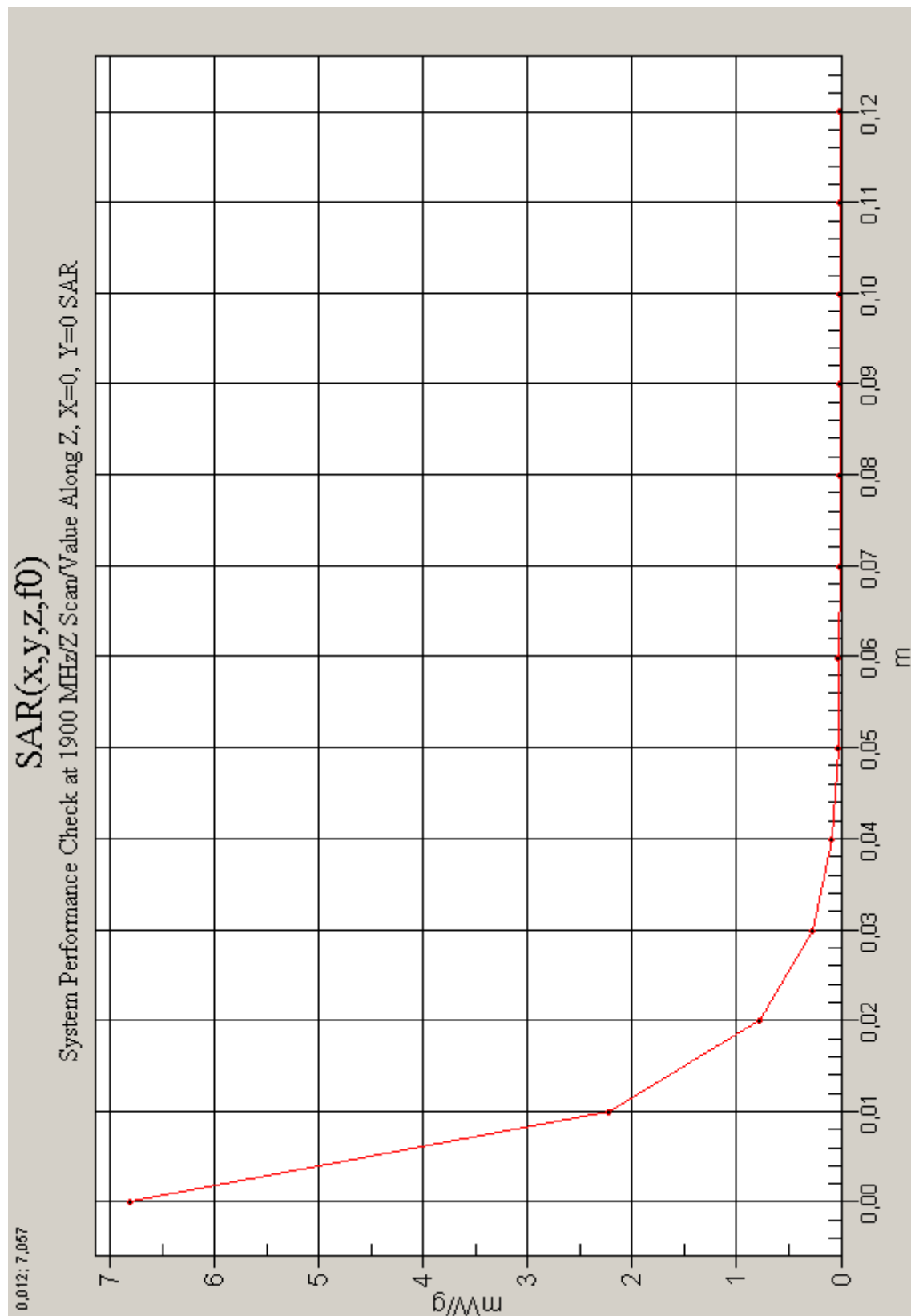


Fig. 11: SAR versus liquid depth, 1900 MHz, head (24.03.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 20.0° C).

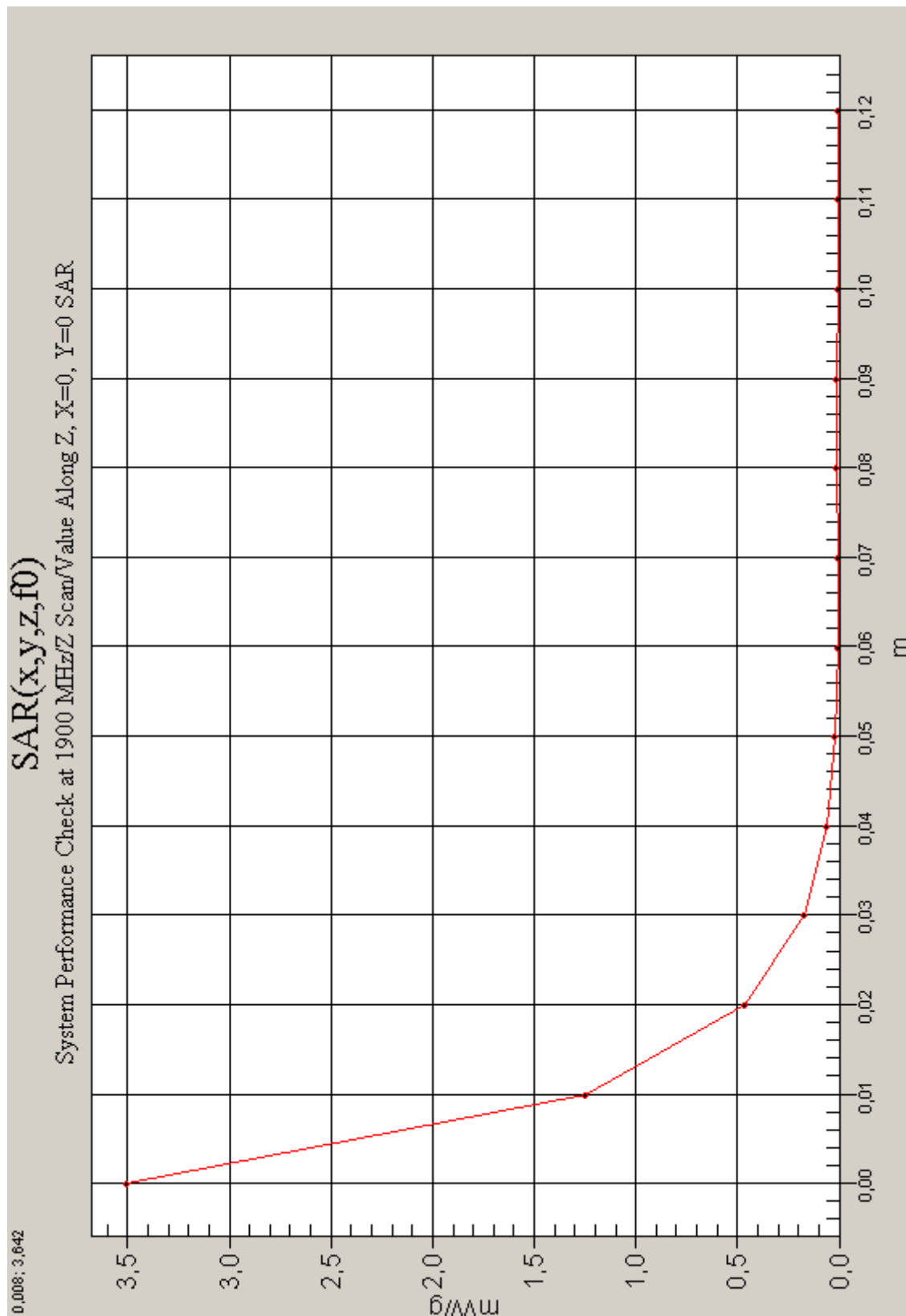


Fig. 12: SAR versus liquid depth, 1900 MHz, body (25.03.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.0° C).

6 SAR z-axis scans (Measurements)

The following pictures show the plots of SAR versus liquid depth for the worst case values.

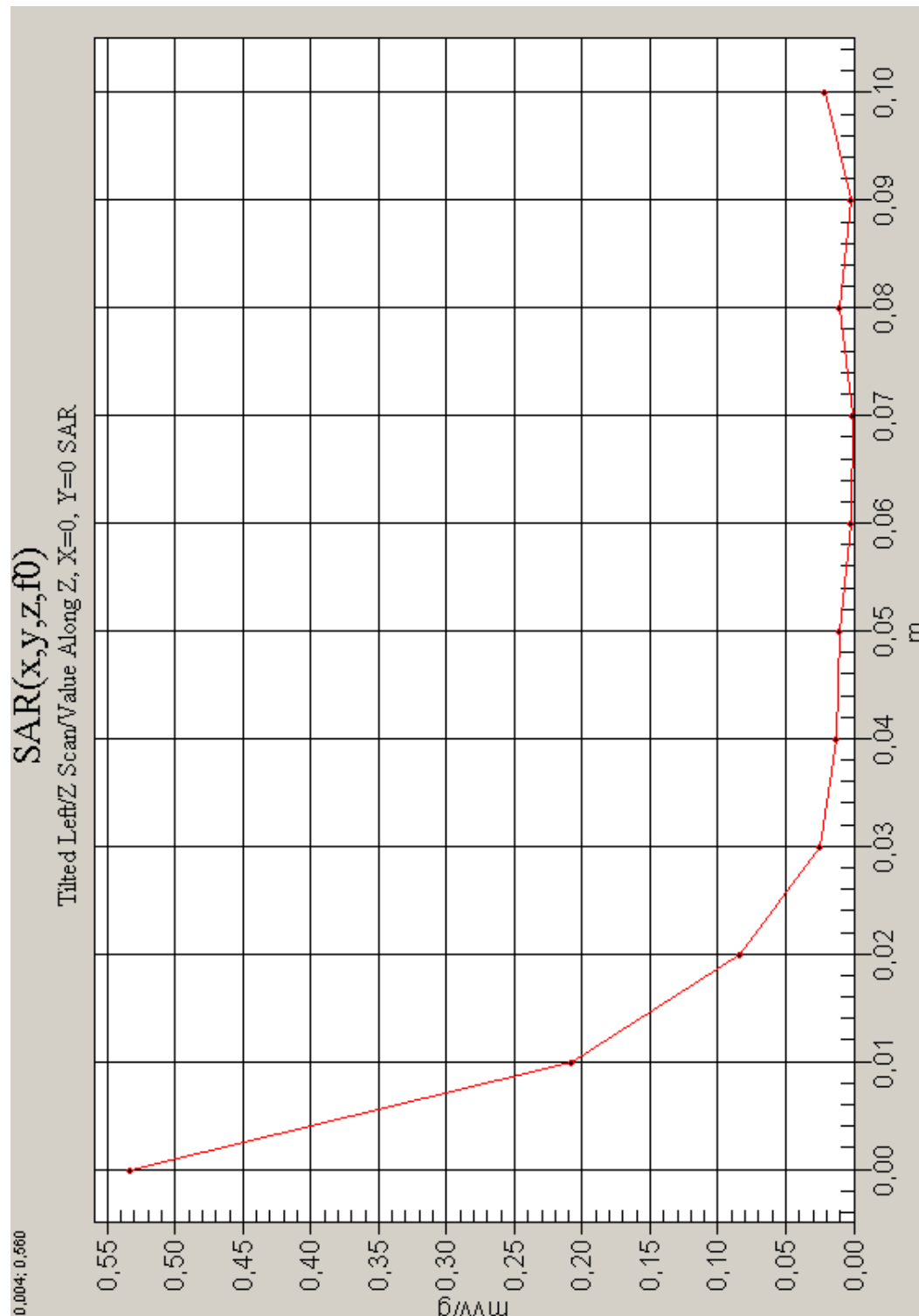


Fig. 13: SAR versus liquid depth, head: without flash , PCS 1900, channel 661, tilted position, left side of head. (24.03.2004, Ambient Temperature: 20.8° C; Liquid Temperature : 20.0° C).

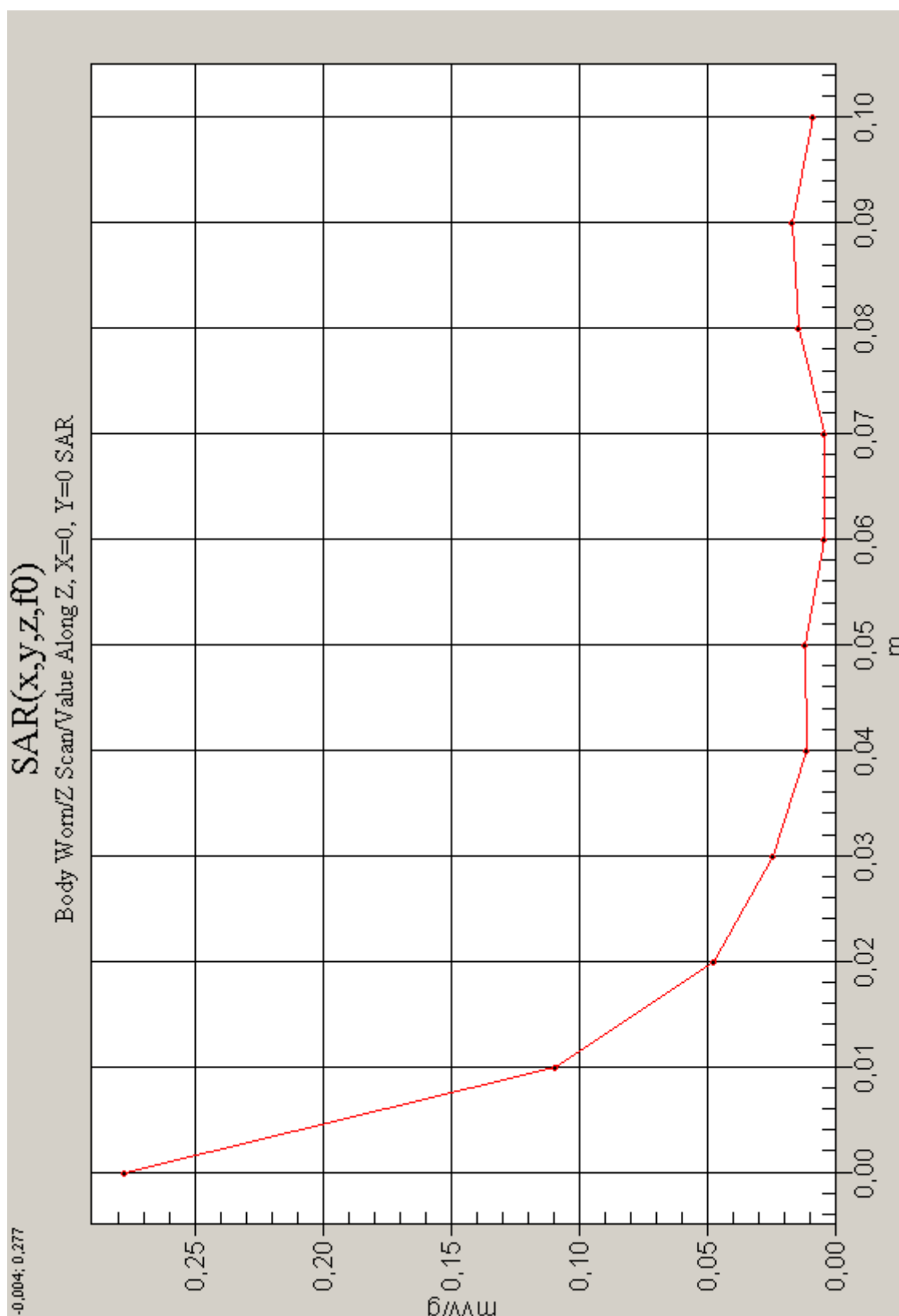


Fig. 14: SAR versus liquid depth: PCS 1900, channel 661, body worn configuration, antenna towards the phantom, data cable, 2TX (25.03.2004, Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).