
Appendix for the Report

Dosimetric Assessment of the Siemens SL65 (FCC ID: PWX-SL65) According to the FCC Requirements

SAR Distribution Plots

June 07, 2004
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1 SAR Distribution Plots, PCS 1900 Head without Flash

Test Laboratory: IMST GmbH; File Name: [904plm_1.da4](#)

DUT: Siemens; Type: SL65; Serial: 004999002790904

Program Name: Cheek Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 = 7.78 V/m; Power Drift = -0.189 dB

Maximum value of SAR (measured) = 0.229 mW/g

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

Reference Value = 7.78 V/m; Power Drift = -0.189 dB

Maximum value of SAR (measured) = 0.248 mW/g

Peak SAR (extrapolated) = 0.326 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.129 mW/g

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

Reference Value = 7.78 V/m; Power Drift = -0.189 dB

Maximum value of SAR (measured) = 0.236 mW/g

Peak SAR (extrapolated) = 0.329 W/kg

SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.120 mW/g

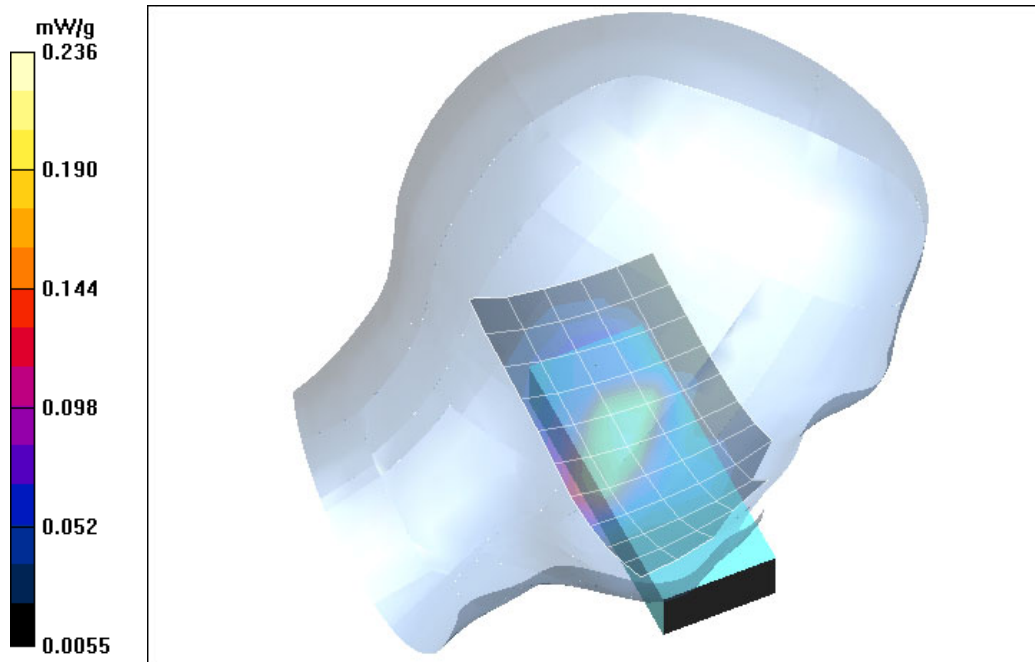


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (03.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 19.9° C).

Test Laboratory: IMST GmbH; File Name: [904plm_2.da4](#)

DUT: Siemens; Type: SL65; Serial: 004999002790904

Program Name: Tilted Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 = 9.27 V/m; Power Drift = -0.0076 dB

Maximum value of SAR (measured) = 0.107 mW/g

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

Reference Value = 9.27 V/m; Power Drift = -0.0076 dB

Maximum value of SAR (measured) = 0.108 mW/g

Peak SAR (extrapolated) = 2.88 W/kg

SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.0621 mW/g

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

Reference Value = 9.27 V/m; Power Drift = -0.0076 dB

Maximum value of SAR (measured) = 0.106 mW/g

Peak SAR (extrapolated) = 19.8 W/kg

SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.0621 mW/g

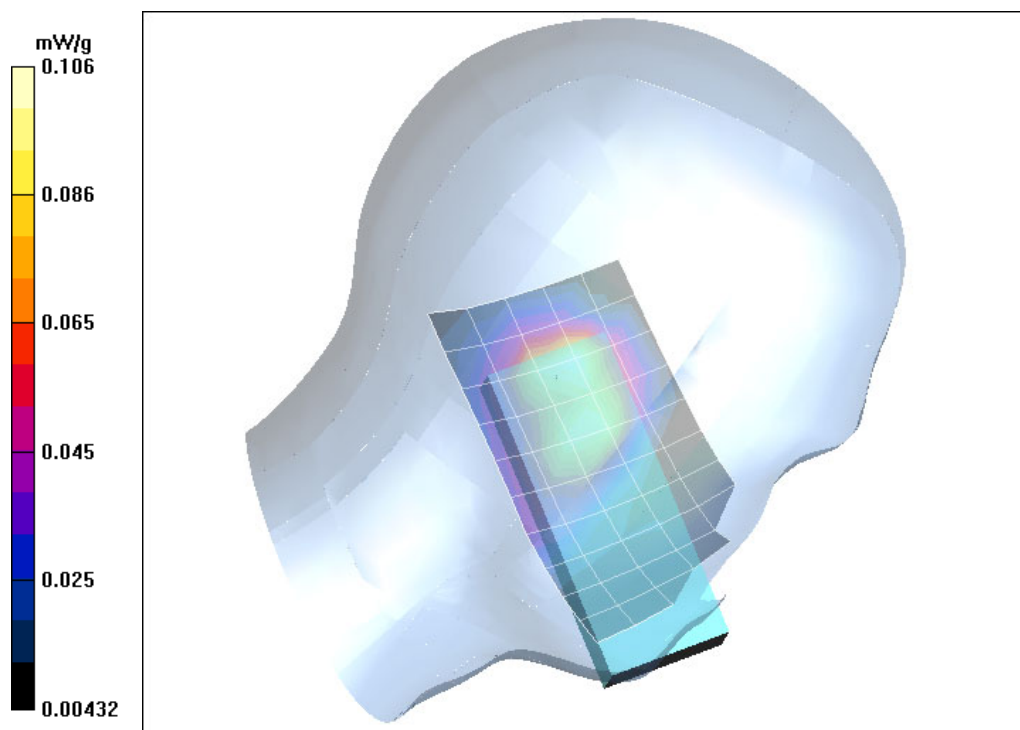


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (03.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 20.0° C).

Test Laboratory: IMST GmbH; File Name: [904prm_1.da4](#)

DUT: Siemens; Type: SL65; Serial: 004999002790904

Program Name: Cheek Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.75 V/m; Power Drift = -0.176 dB

Maximum value of SAR (measured) = 0.240 mW/g

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

Reference Value = 7.75 V/m; Power Drift = -0.176 dB

Maximum value of SAR (measured) = 0.264 mW/g

Peak SAR (extrapolated) = 0.588 W/kg

SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.137 mW/g

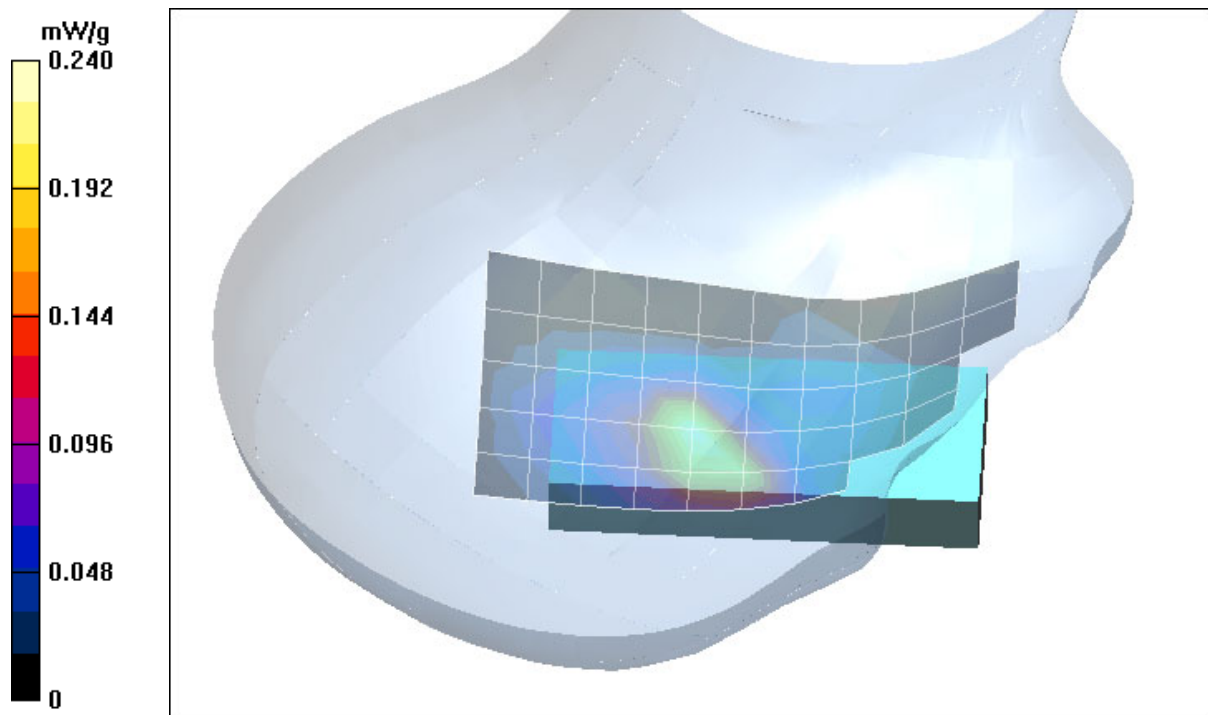


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (03.06.2004; Ambient Temperature: 21.1° C; Liquid Temperature : 20.0° C).

Test Laboratory: IMST GmbH; File Name: [904prm_2.da4](#)

DUT: Siemens; Type: SL65; Serial: 004999002790904

Program Name: Tilted Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 = 9.3 V/m; Power Drift = -0.016 dB

Maximum value of SAR (measured) = 0.122 mW/g

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

Reference Value = 9.3 V/m; Power Drift = -0.016 dB

Maximum value of SAR (measured) = 0.122 mW/g

Peak SAR (extrapolated) = 0.180 W/kg

SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.0703 mW/g

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

Reference Value = 9.3 V/m; Power Drift = -0.016 dB

Maximum value of SAR (measured) = 0.128 mW/g

Peak SAR (extrapolated) = 0.188 W/kg

SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.068 mW/g

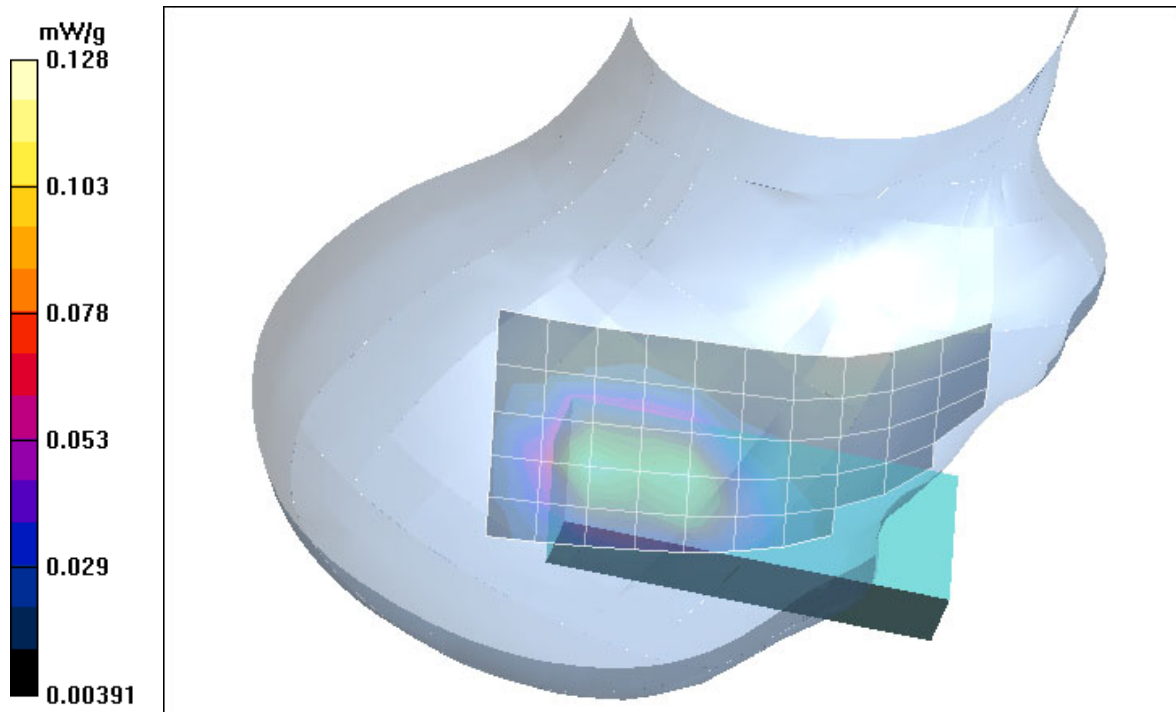


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (03.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 19.9° C).

2 SAR Distribution Plots, PCS 1900 Head with Flash

Test Laboratory: IMST GmbH; File Name: [904plm_1_flash.da4](#)

DUT: Siemens; Type: SL65 + Flash; Serial: 004999002790904

Program Name: Cheek Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (7x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.72 V/m; Power Drift = -0.0244 dB

Maximum value of SAR (measured) = 0.246 mW/g

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

Reference Value = 9.72 V/m; Power Drift = -0.0244 dB

Maximum value of SAR (measured) = 0.276 mW/g

Peak SAR (extrapolated) = 0.387 W/kg

SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.141 mW/g

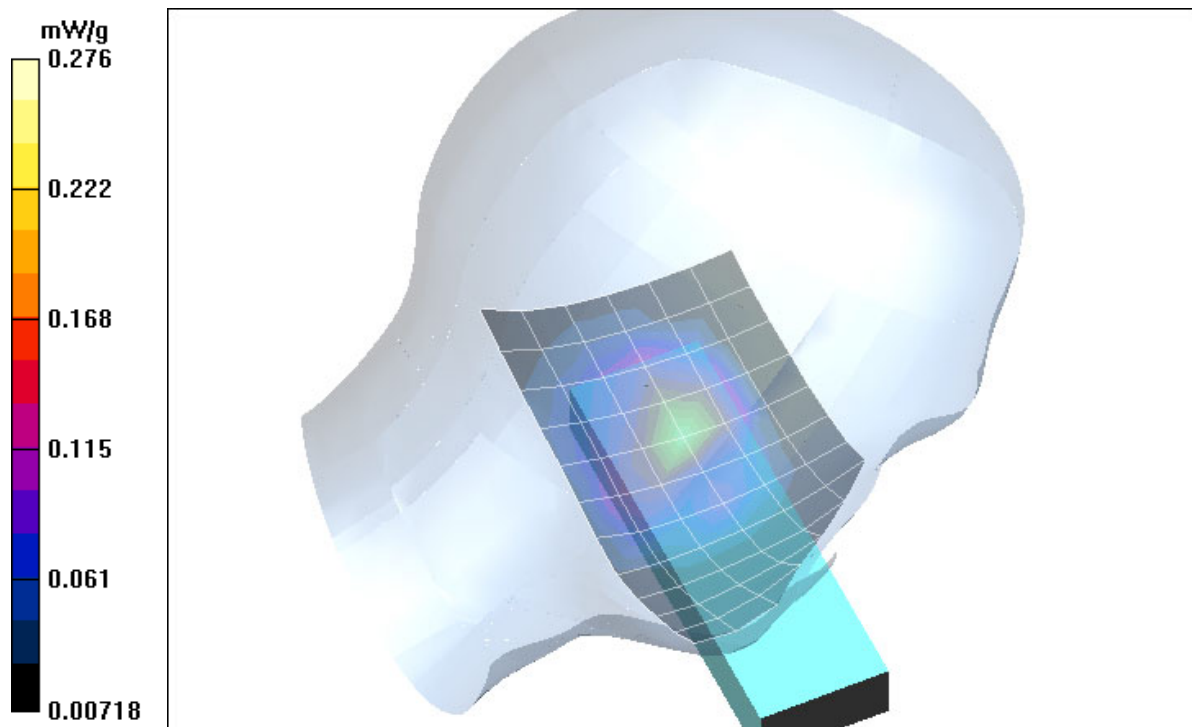


Fig. 5: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (03.06.2004; Ambient Temperature: 21.2° C; Liquid Temperature 20.0° C).

Test Laboratory: IMST GmbH; File Name: [904plm_2_flash.da4](#)

DUT: Siemens; Type: SL65 + Flash; Serial: 004999002790904

Program Name: Tilted Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (7x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.5 V/m; Power Drift = -0.0878 dB

Maximum value of SAR (measured) = 0.152 mW/g

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

Reference Value = 11.5 V/m; Power Drift = -0.0878 dB

Maximum value of SAR (measured) = 0.166 mW/g

Peak SAR (extrapolated) = 0.248 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.094 mW/g

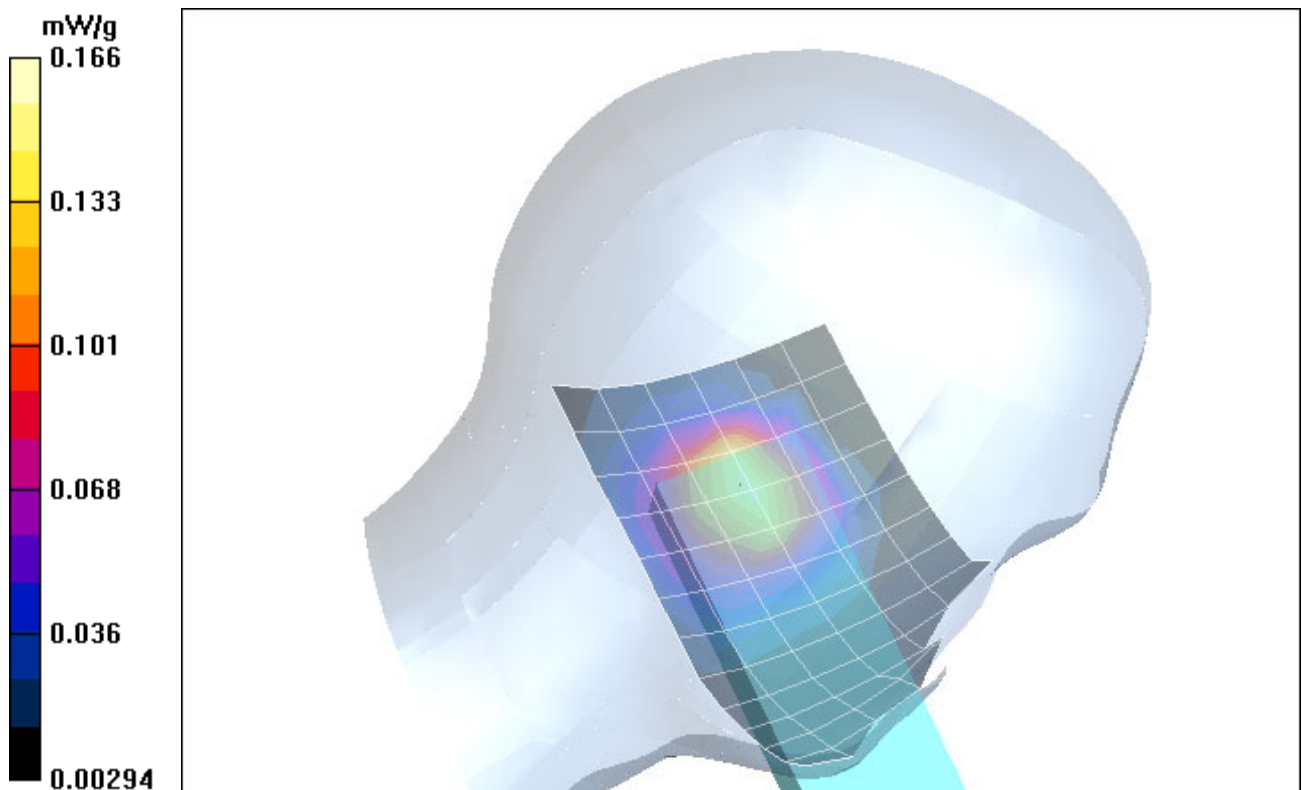


Fig. 6: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (03.06.2004; Ambient Temperature: 21.2° C; Liquid Temperature 20.0° C).

Test Laboratory: IMST GmbH; File Name: [904prm_1_flash.da4](#)

DUT: Siemens; Type: SL65 + Flash; Serial: 004999002790904

Program Name: Cheek Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (7x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.93 V/m; Power Drift = -0.0536 dB

Maximum value of SAR (measured) = 0.245 mW/g

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

Reference Value = 8.93 V/m; Power Drift = -0.0536 dB

Maximum value of SAR (measured) = 0.271 mW/g

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.147 mW/g

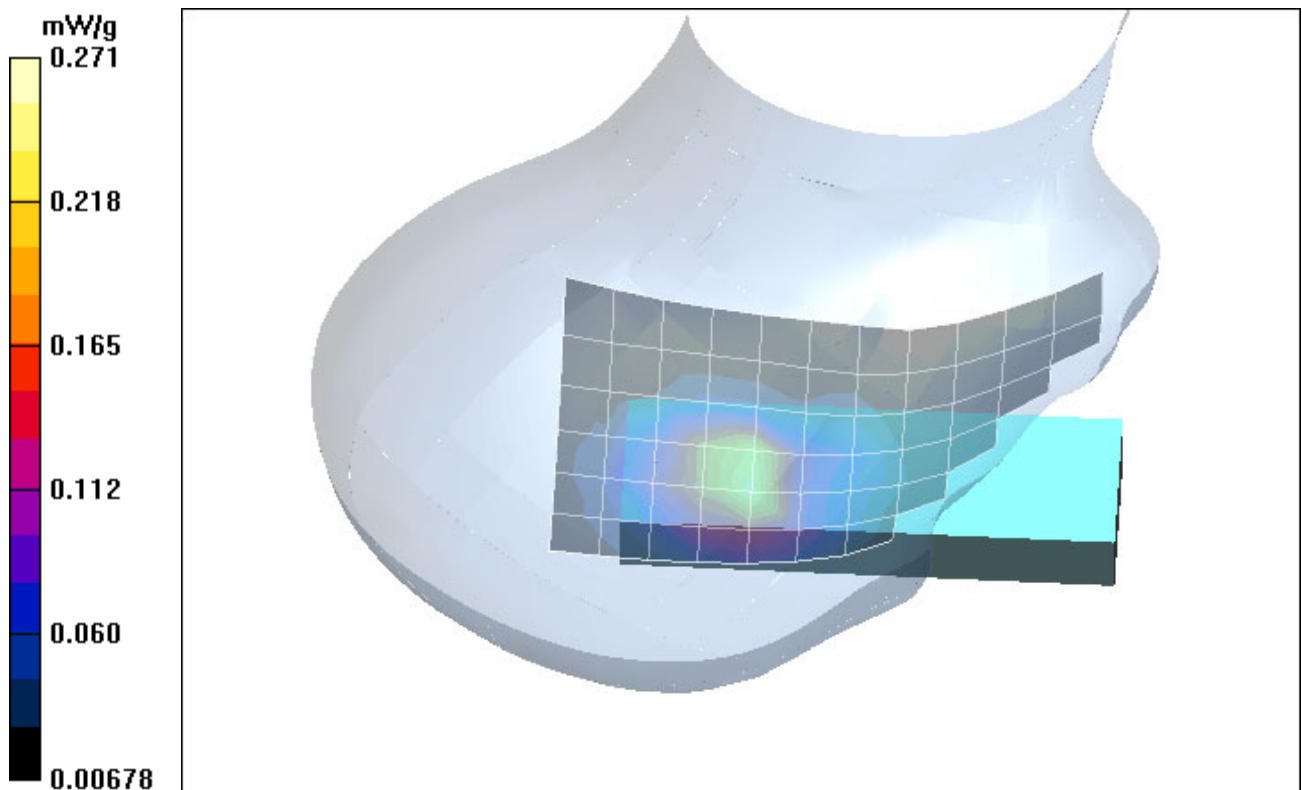


Fig. 7: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (03.06.2004; Ambient Temperature: 21.2° C; Liquid Temperature 20.1° C).

Test Laboratory: IMST GmbH; File Name: [904prm_2_flash.da4](#)

DUT: Siemens; Type: SL65 + Flash; Serial: 004999002790904

Program Name: Tilted Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ 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: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (7x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 10.2 V/m; Power Drift = -0.0184 dB

Maximum value of SAR (measured) = 0.176 mW/g

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

Reference Value = 10.2 V/m; Power Drift = -0.0184 dB

Maximum value of SAR (measured) = 0.183 mW/g

Peak SAR (extrapolated) = 0.287 W/kg

SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.104 mW/g

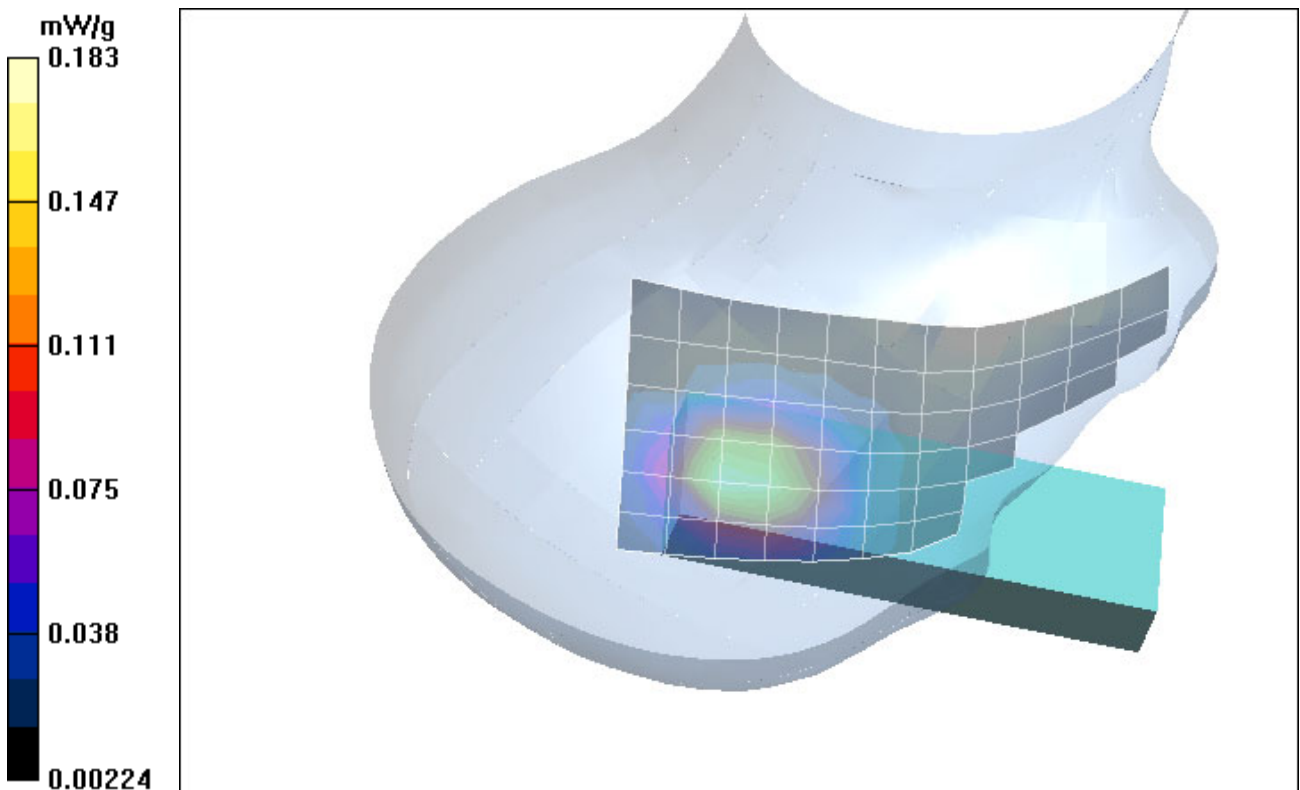


Fig. 8: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (03.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature 20.1° C).

3 SAR Distribution Plots, PCS 1900 Body with headset

Test Laboratory: IMST GmbH; File Name: [904phm_3.da4](#)

DUT: Siemens; Type: SL65; Serial: 004999002790904

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.54$; mho/m, $\epsilon_r = 52.7$; $\rho = 1000$ 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 Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (7x9x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.62 V/m; Power Drift = 0.148 dB

Maximum value of SAR (measured) = 0.282 mW/g

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

Reference Value = 9.62 V/m; Power Drift = 0.148 dB

Maximum value of SAR (measured) = 0.283 mW/g

Peak SAR (extrapolated) = 0.456 W/kg

SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.154 mW/g

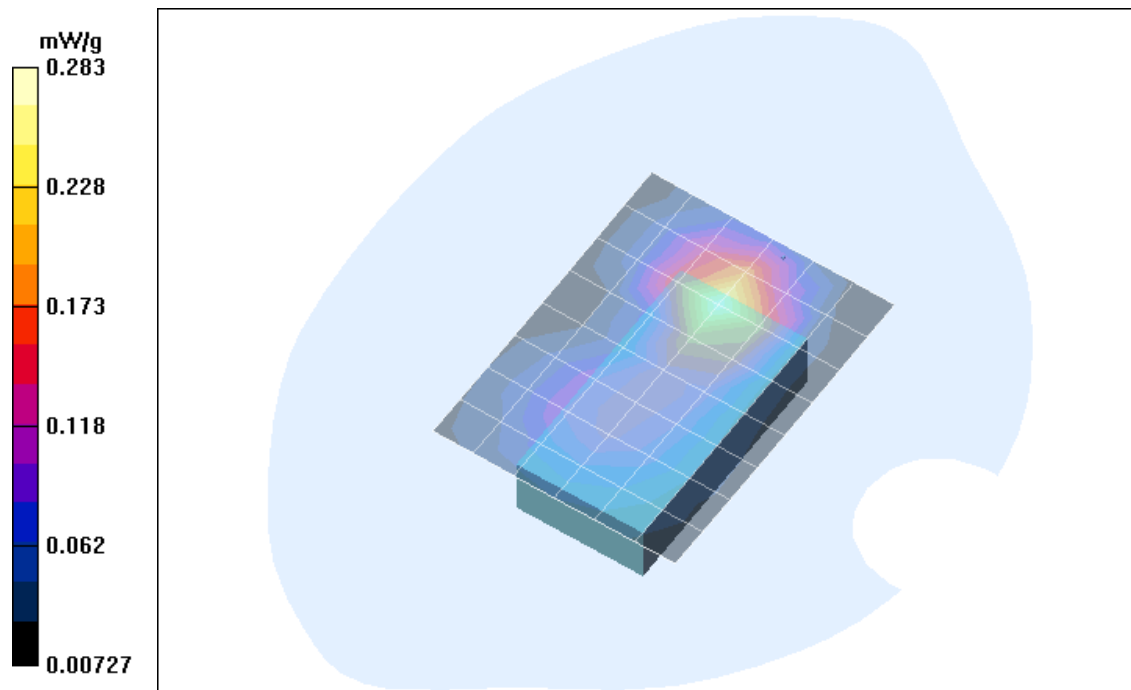


Fig. 9: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset and slider down (04.06.2004; Ambient Temperature: 21.1° C; Liquid Temperature : 20.1° C

4 SAR Distribution Plots, PCS 190 Body GPRS

Test Laboratory: IMST GmbH; File Name: [904phm_1.da4](#)

DUT: Siemens; Type: SL65; Serial: 004999002790904

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.54$; mho/m, $\epsilon_r = 52.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.54, 4.54, 4.54); Calibrated: 18.03.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn906; Calibrated: 29.04.2004
- 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 (7x9x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 13.1 V/m; Power Drift = -0.129 dB

Maximum value of SAR (measured) = 0.574 mW/g

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

Reference Value = 13.1 V/m; Power Drift = -0.129 dB

Maximum value of SAR (measured) = 0.586 mW/g

Peak SAR (extrapolated) = 0.827 W/kg

SAR(1 g) = 0.534 mW/g; SAR(10 g) = 0.316 mW/g

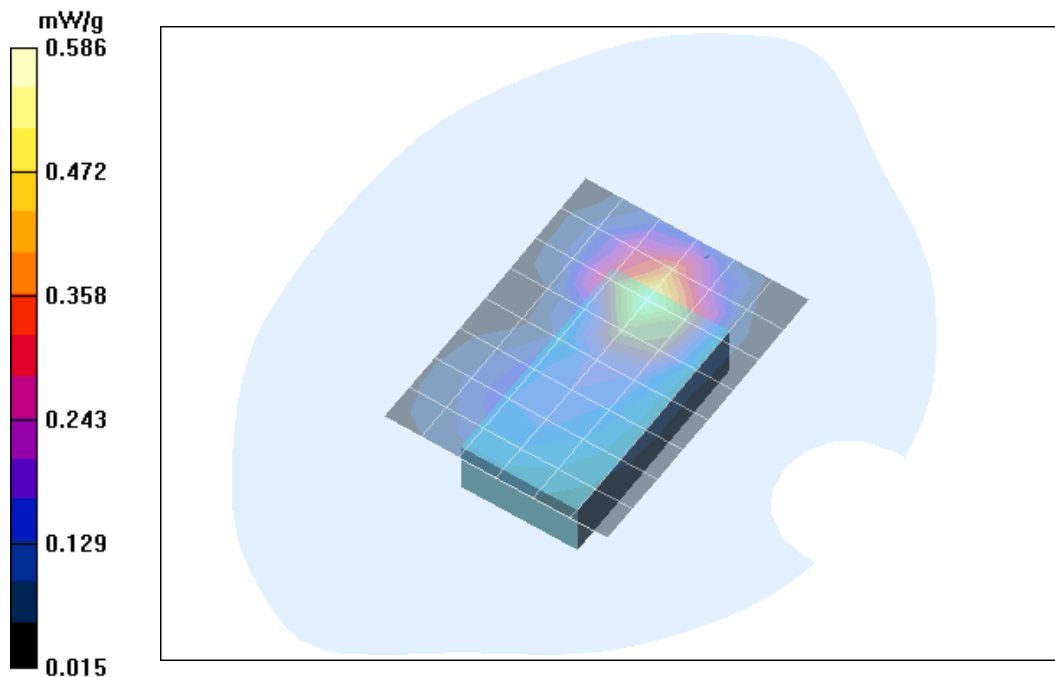


Fig. 10: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX, data cable and slider up (04.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 20.0° C).

5 SAR z-axis scans (Validation)

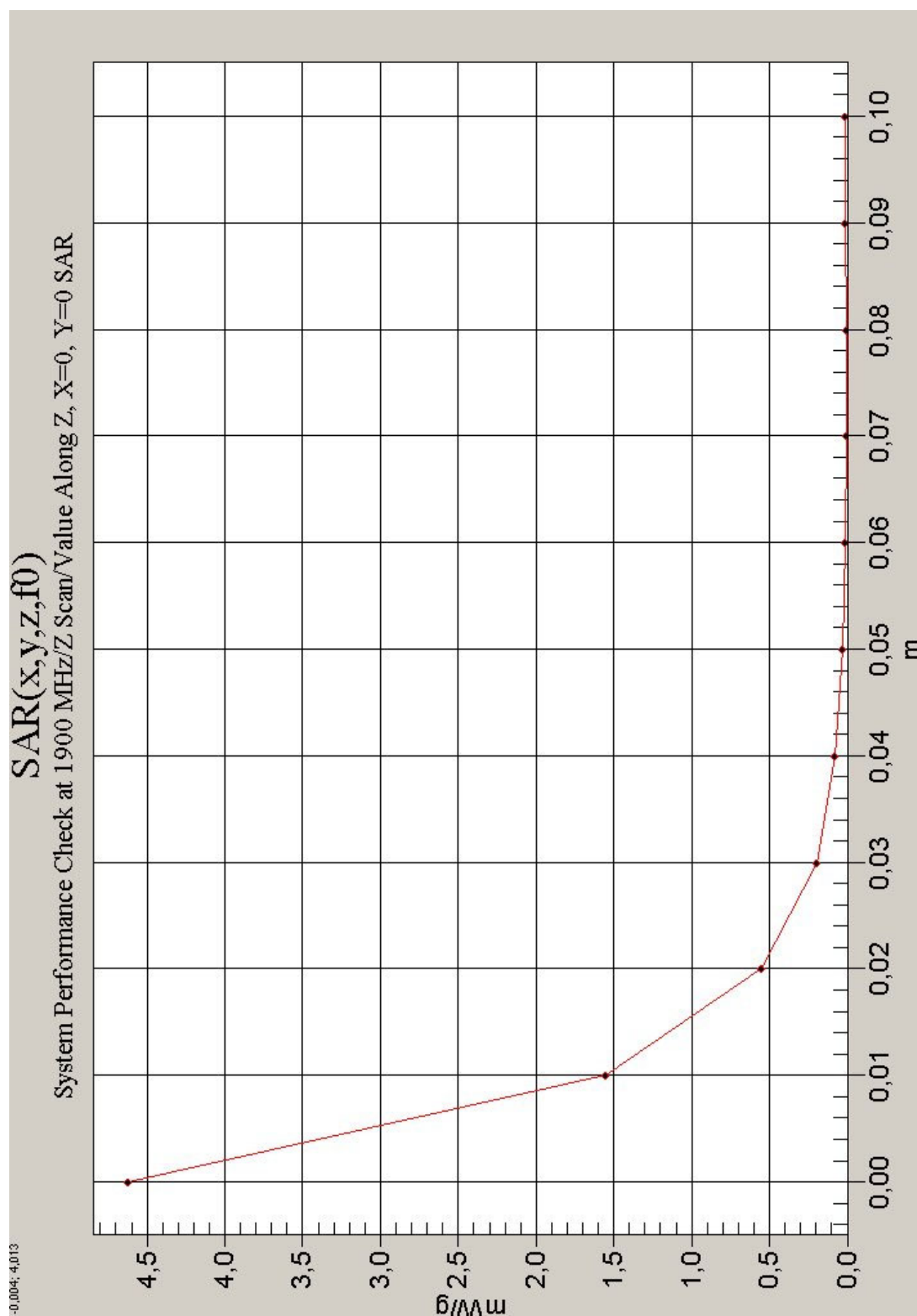


Fig. 11: SAR versus liquid depth, 1900 MHz, head (03.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 20.3° C).

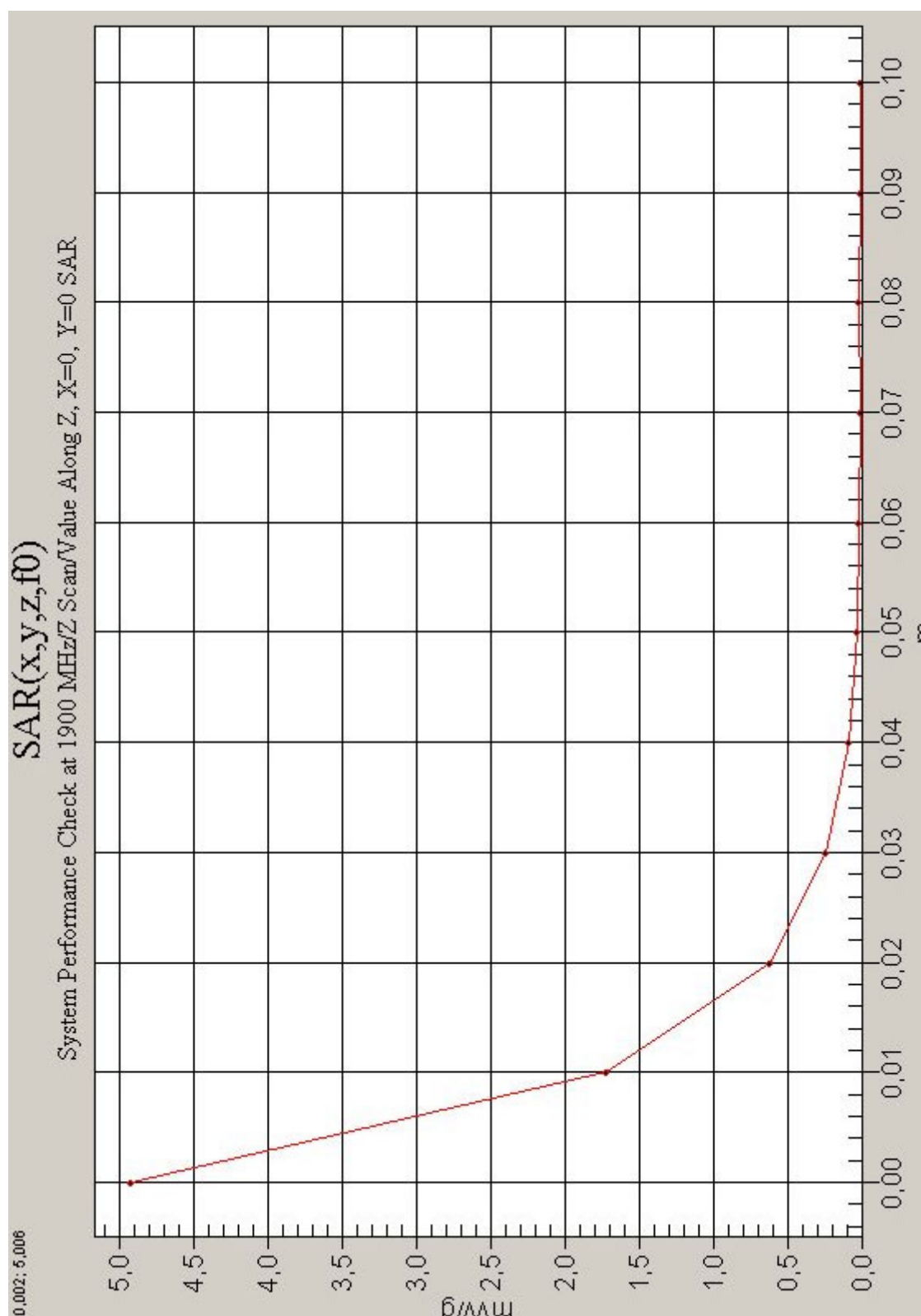


Fig. 12: SAR versus liquid depth, 1900 MHz, body (04.06.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 19.9° C).

6 SAR z-axis scans (Measurements)

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

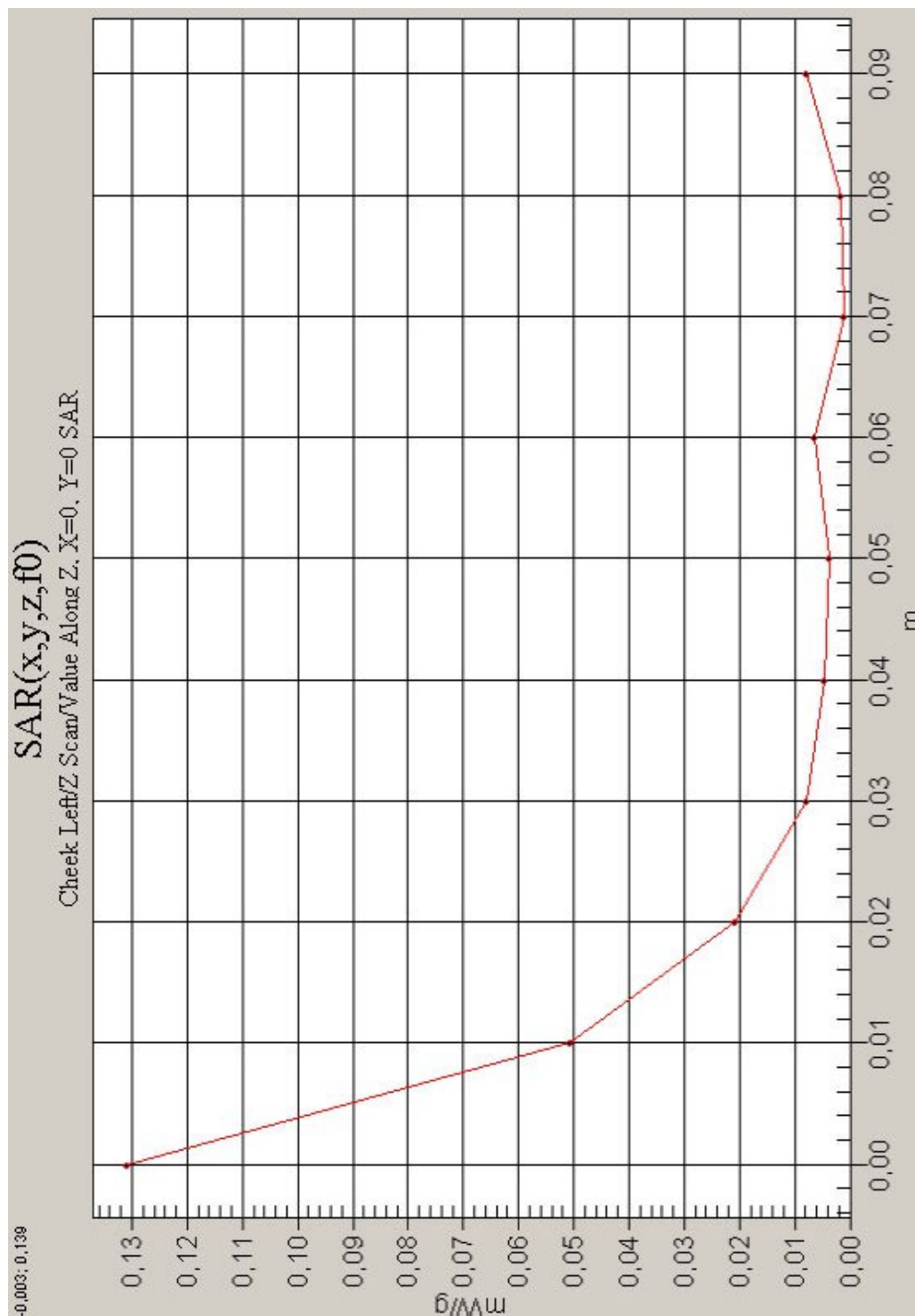


Fig. 13: SAR versus liquid depth, head with flash , PCS 1900, channel 661, cheek position, left side of head. (03.06.2004, Ambient Temperature: 21.2° C; Liquid Temperature : 20.0° C).

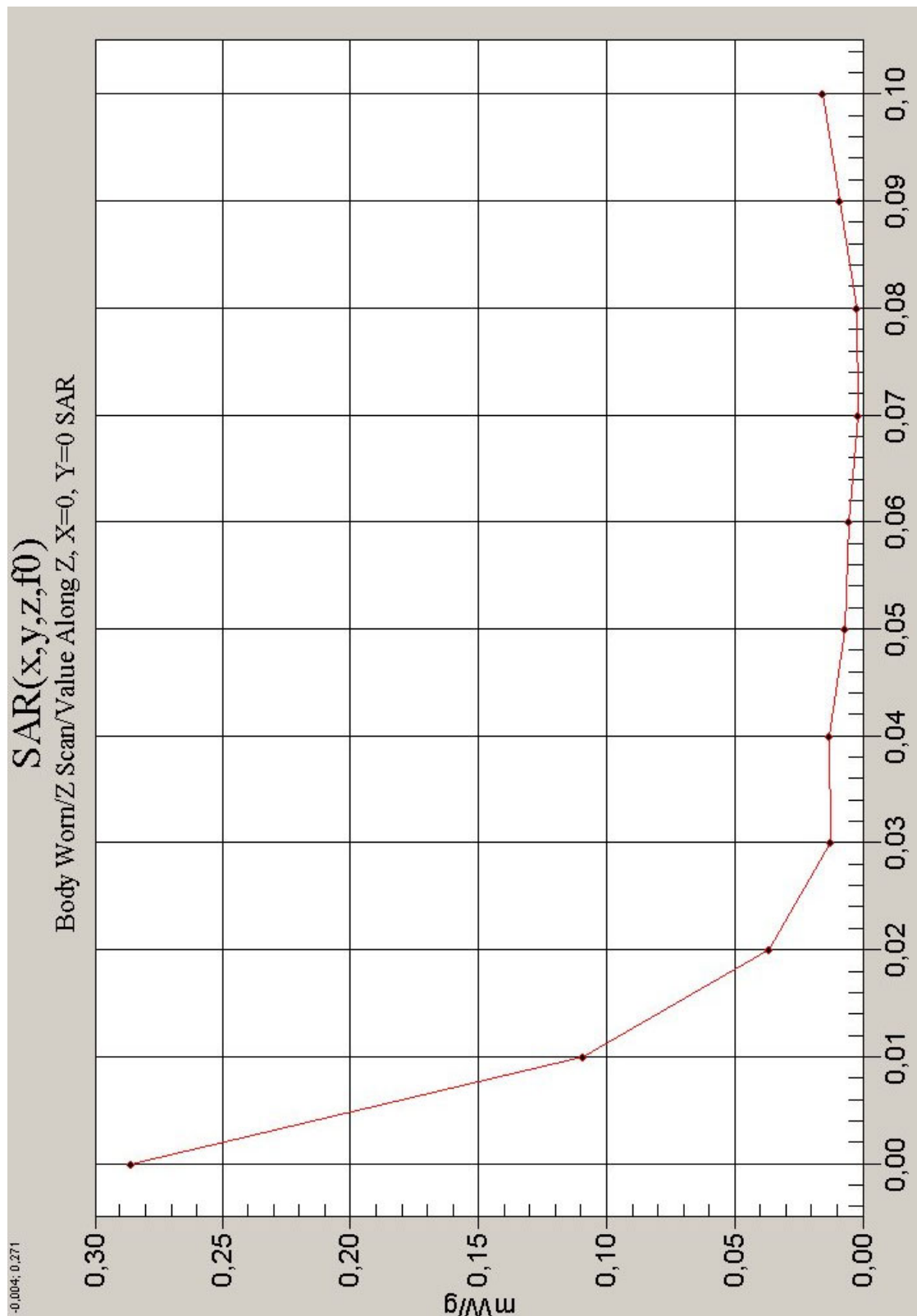


Fig. 14: SAR versus liquid depth: PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX, slider down, data cable (04.06.2004, Ambient Temperature: 21.0° C; Liquid Temperature : 20.0° C).