
Appendix for the Report

Dosimetric Assessment of the Siemens SK65 (FCC ID: PWX-SK65) According to the FCC Requirements

SAR Distribution Plots

July 07, 2004
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1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: IMST GmbH; File Name: [933plm_1.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Cheek Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ 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: 16.06.2004
- 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 = 13.9 V/m; Power Drift = 0.168 dB

Maximum value of SAR (measured) = 0.326 mW/g

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

Reference Value = 13.9 V/m; Power Drift = 0.168 dB

Maximum value of SAR (measured) = 0.369 mW/g

Peak SAR (extrapolated) = 0.554 W/kg

SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.204 mW/g

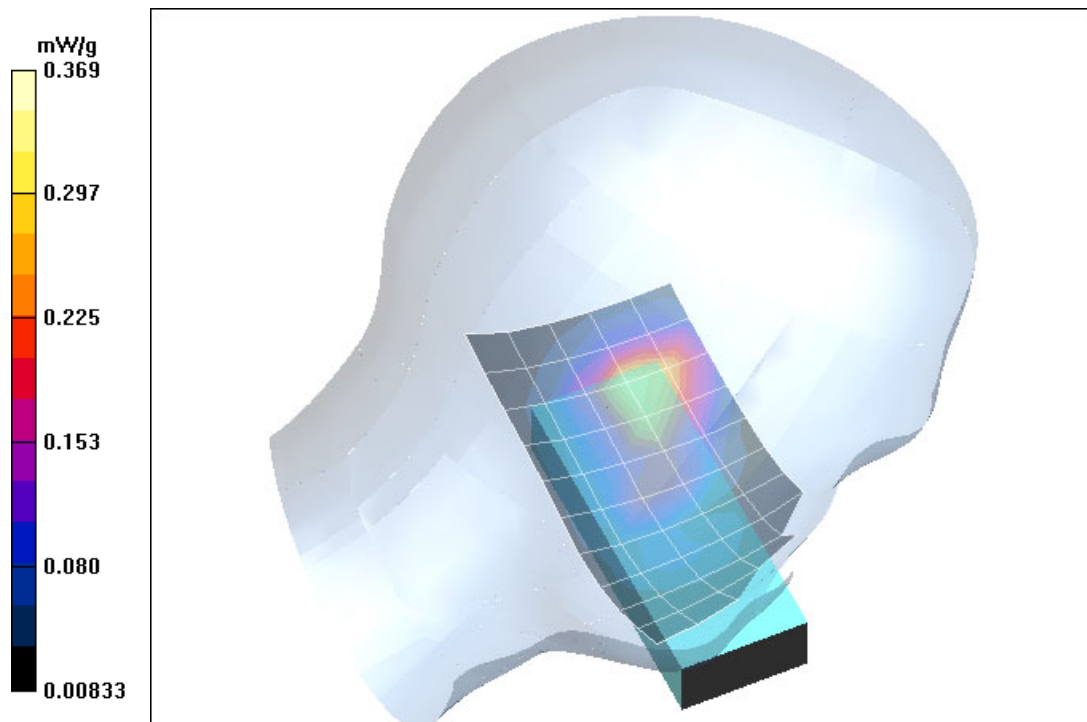


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (06.07.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

Test Laboratory: IMST GmbH; File Name: [933plm_2.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Tilted Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ 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: 16.06.2004
- 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 = 18.8 V/m; Power Drift = 0.097 dB

Maximum value of SAR (measured) = 0.549 mW/g

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

Reference Value = 18.8 V/m; Power Drift = 0.097 dB

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

Peak SAR (extrapolated) = 0.814 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.291 mW/g

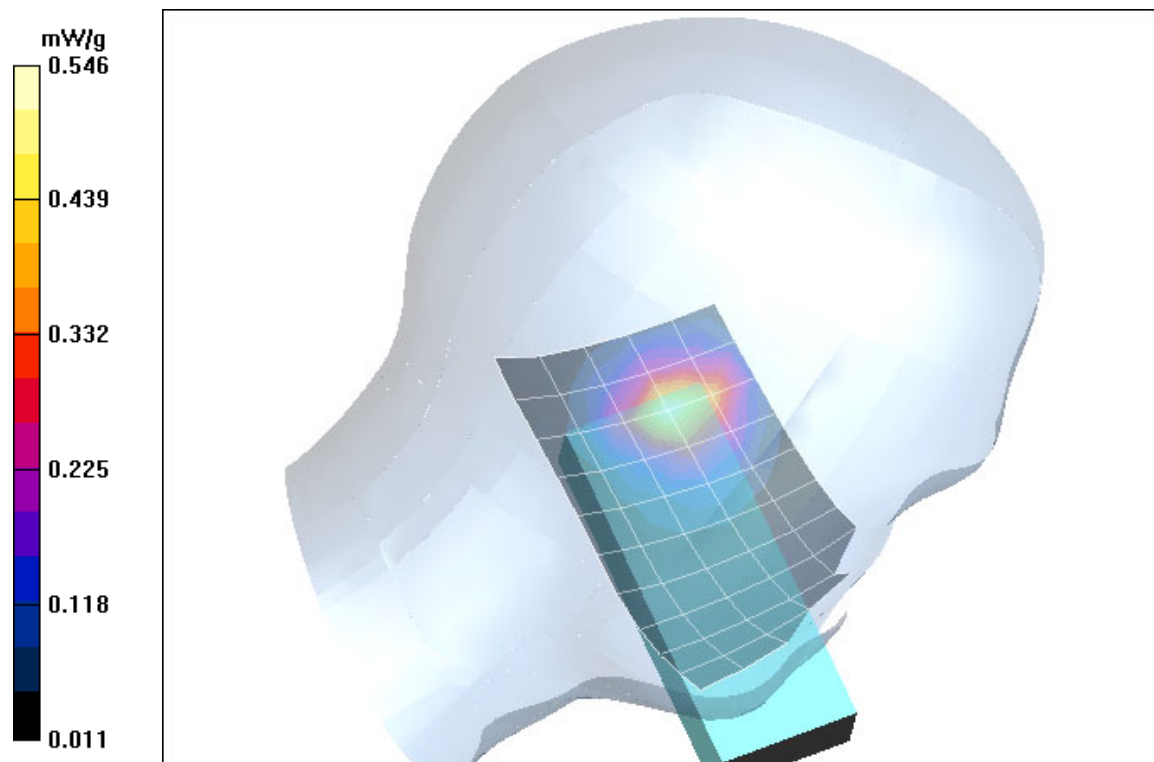


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (06.07.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

Test Laboratory: IMST GmbH; File Name: [933prm_1.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Cheek Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ 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: 16.06.2004
- 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 = 16.9 V/m; Power Drift = -0.019 dB

Maximum value of SAR (measured) = 0.355 mW/g

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

Reference Value = 16.9 V/m; Power Drift = -0.019 dB

Maximum value of SAR (measured) = 0.371 mW/g

Peak SAR (extrapolated) = 0.458 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.210 mW/g

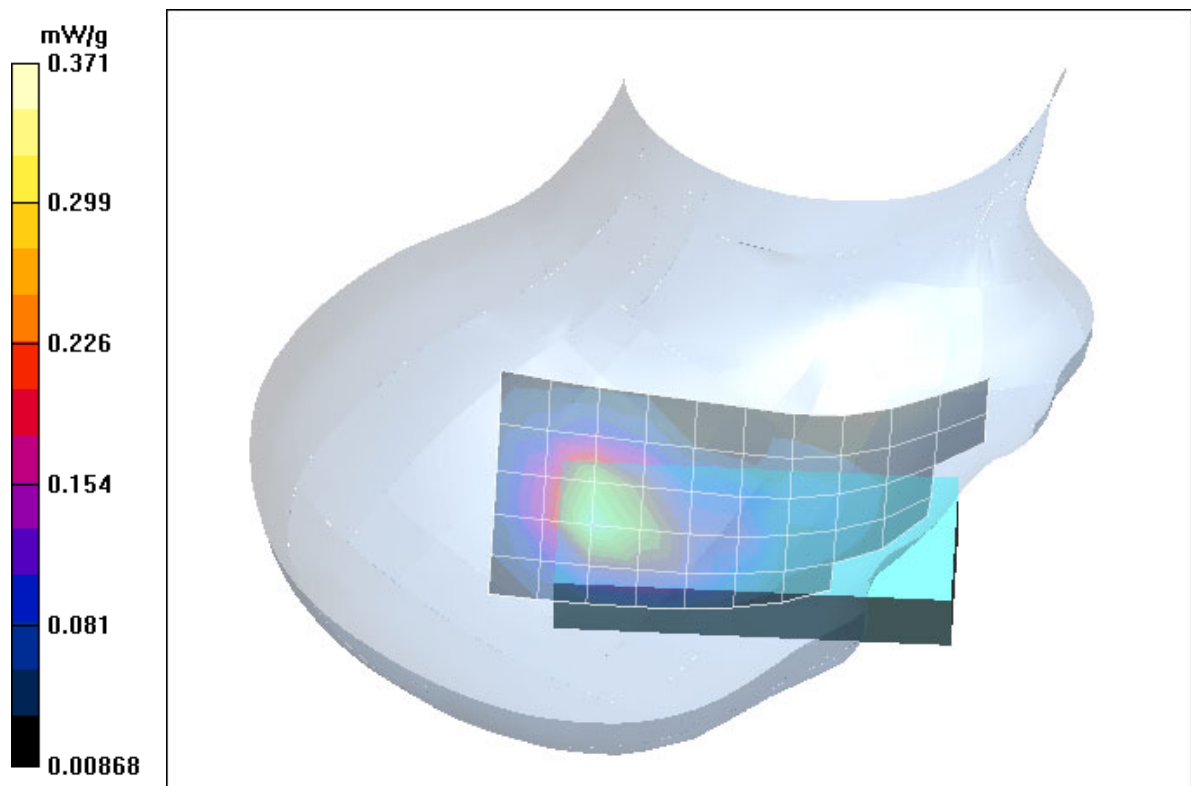


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (06.07.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

Test Laboratory: IMST GmbH; File Name: [933prm_2.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Tilted Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ 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: 16.06.2004
- 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 = 20.2 V/m; Power Drift = -0.001 dB

Maximum value of SAR (measured) = 0.486 mW/g

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

Reference Value = 20.2 V/m; Power Drift = -0.001 dB

Maximum value of SAR (measured) = 0.521 mW/g

Peak SAR (extrapolated) = 0.725 W/kg

SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.276 mW/g

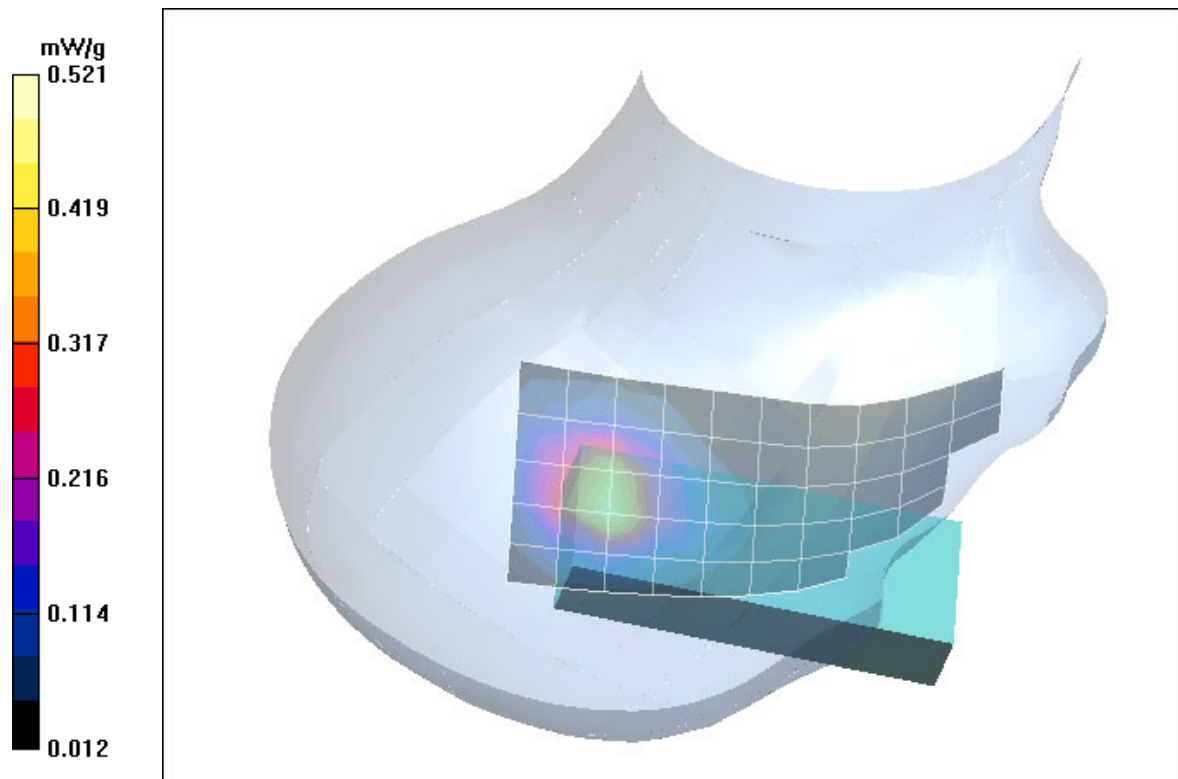


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (06.07.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

2 SAR Distribution Plots, PCS 1900 Head worst case with Bluetooth

Test Laboratory: IMST GmbH; File Name: [933plm_2_BT.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Tilted Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ 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: 16.06.2004
- 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: $dx=15$ mm, $dy=15$ mm

Reference Value = 18.6 V/m; Power Drift = 0.006 dB

Maximum value of SAR (measured) = 0.544 mW/g

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

Reference Value = 18.6 V/m; Power Drift = 0.006 dB

Maximum value of SAR (measured) = 0.550 mW/g

Peak SAR (extrapolated) = 0.961 W/kg

SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.286 mW/g

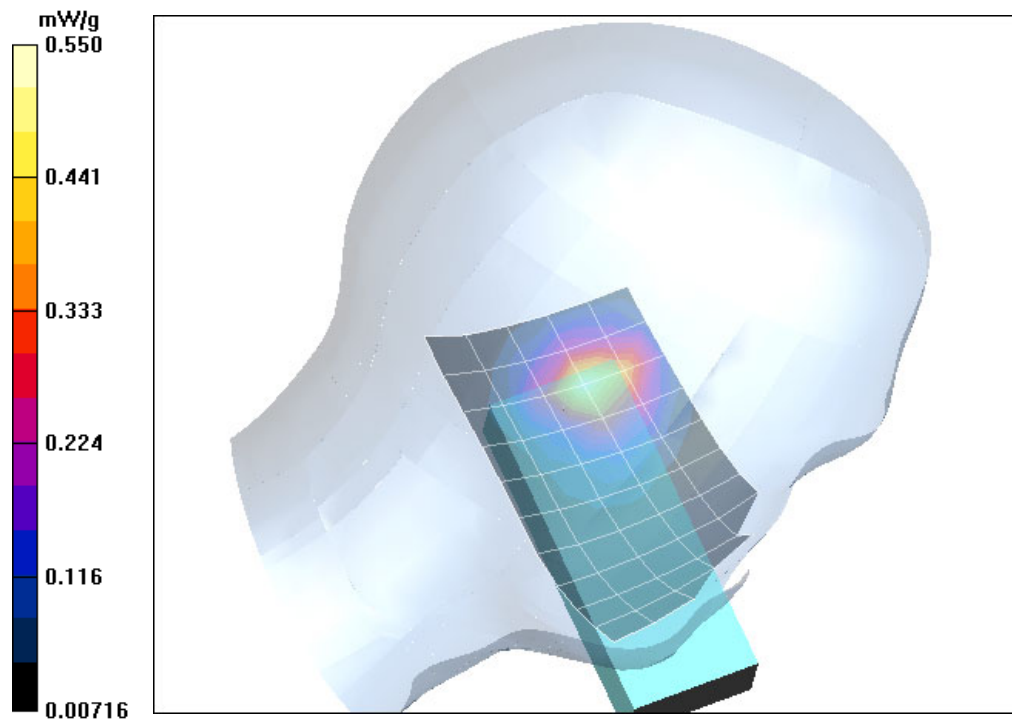


Fig. 5: SAR distribution for PCS 1900, channel 661, cheek position, left side of head with bluetooth. (06.07.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

3 SAR Distribution Plots, PCS 1900 Body with headset

Test Laboratory: IMST GmbH; File Name: [933phm_4.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.45, 4.45, 4.45); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- 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 (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.08 V/m; Power Drift = 0.0482 dB

Maximum value of SAR (measured) = 0.318 mW/g

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

Reference Value = 8.08 V/m; Power Drift = 0.0482 dB

Maximum value of SAR (measured) = 0.327 mW/g

Peak SAR (extrapolated) = 0.463 W/kg

SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.187 mW/g

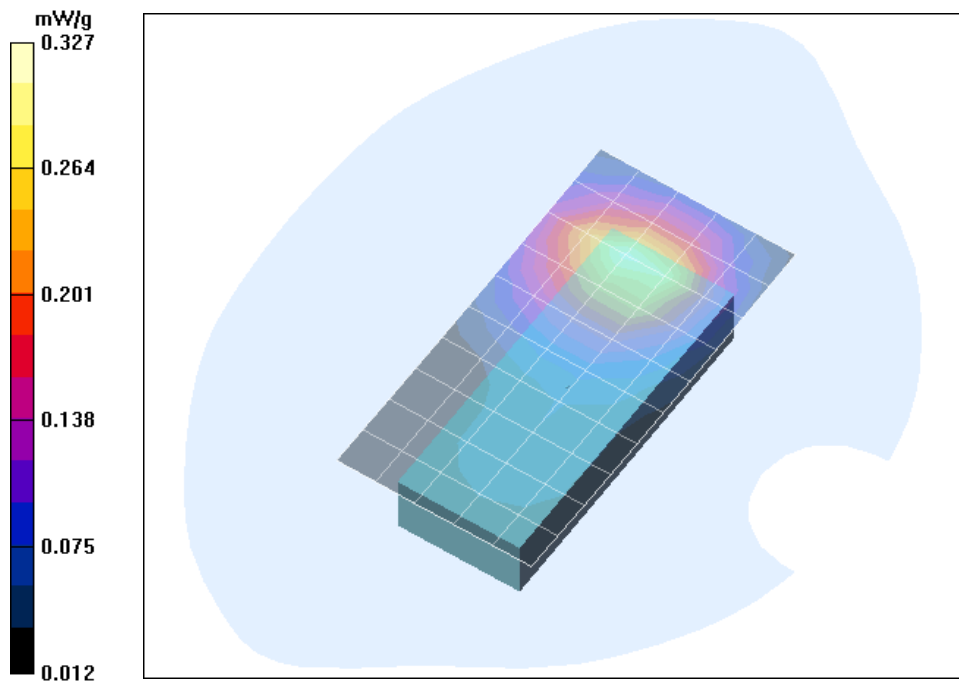


Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset (08.07.2004; Ambient Temperature: 21.8° C; Liquid Temperature : 20.6° C, gap = 22 mm)

4 SAR Distribution Plots, PCS 1900 Body GPRS

Test Laboratory: IMST GmbH; File Name: [933phm_1.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.45, 4.45, 4.45); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- 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 (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11 V/m; Power Drift = -0.0355

Maximum value of SAR (measured) = 0.576 mW/g

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

Reference Value = 11 V/m; Power Drift = -0.0355

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

Peak SAR (extrapolated) = 0.820 W/kg

SAR(1 g) = 0.536 mW/g; SAR(10 g) = 0.335 mW/g

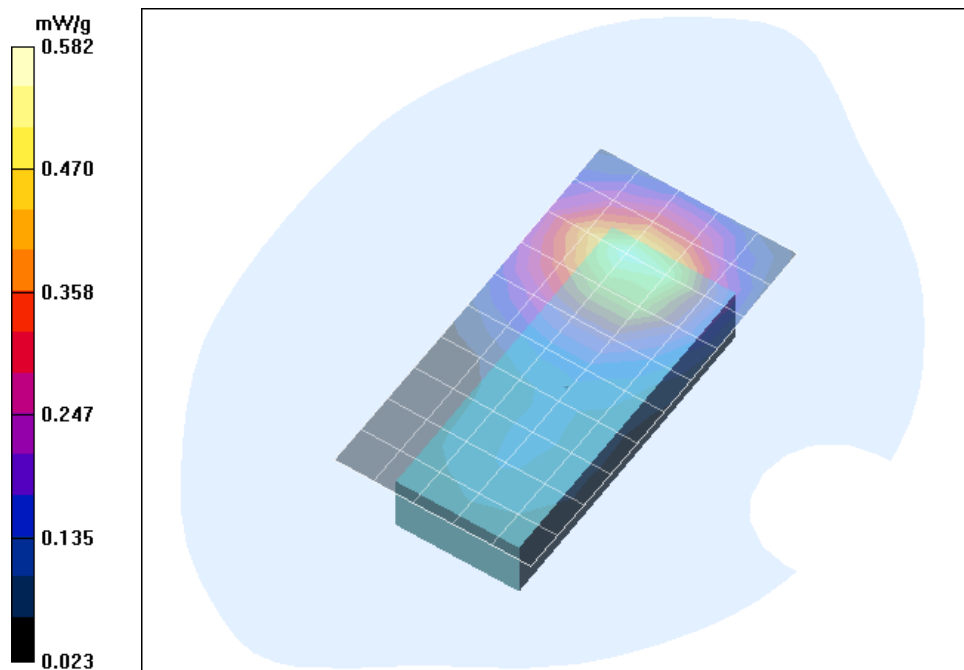


Fig. 7: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX (08.07.2004; Ambient Temperature: 21.4° C; Liquid Temperature : 20.5° C, gap = 22 mm)

Test Laboratory: IMST GmbH; File Name: [933phm_2.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.45, 4.45, 4.45); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- 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 (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.6 V/m; Power Drift = -0.0004 dB

Maximum value of SAR (measured) = 0.575 mW/g

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

Reference Value = 11.6 V/m; Power Drift = -0.0004 dB

Maximum value of SAR (measured) = 0.587 mW/g

Peak SAR (extrapolated) = 0.822 W/kg

SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.339 mW/g

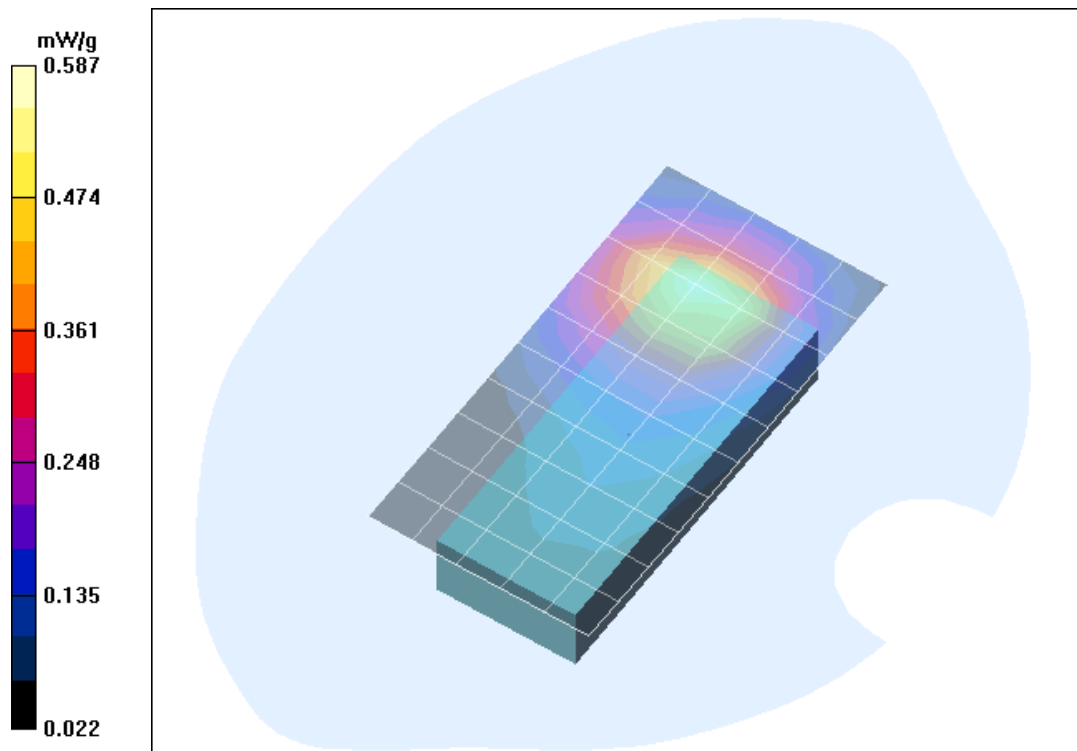


Fig. 8: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX with data cable (08.07.2004; Ambient Temperature: 21.7° C; Liquid Temperature : 20.6° C, gap = 22 mm)

Test Laboratory: IMST GmbH; File Name: [933phm_3.da4](#)

DUT: Siemens; Type: SK65; Serial: 004999002764933

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.45, 4.45, 4.45); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- 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 (6x11x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.2 V/m; Power Drift = -0.2 dB

Maximum value of SAR (measured) = 0.603 mW/g

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

Reference Value = 11.2 V/m; Power Drift = -0.2 dB

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

Peak SAR (extrapolated) = 0.869 W/kg

SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.353 mW/g

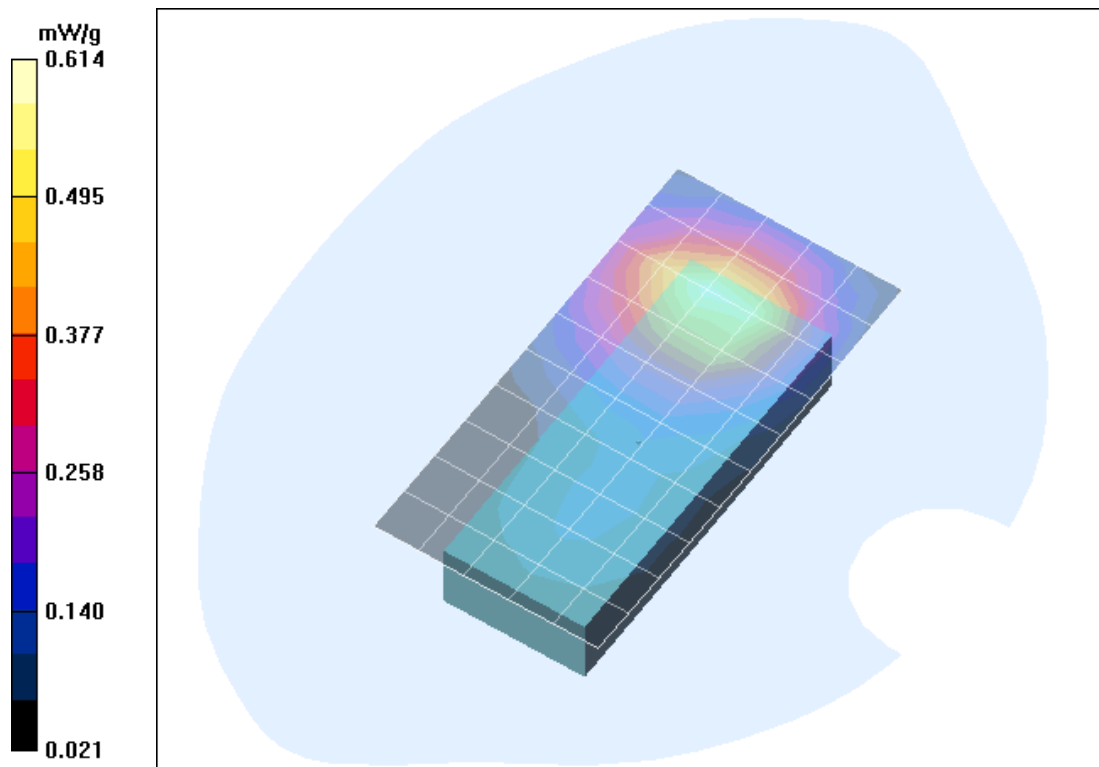


Fig. 9: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX, activated Bluetooth (08.07.2004; Ambient Temperature: 21.7° C; Liquid Temperature : 20.6° C, gap = 22 mm)

5 SAR z-axis scans (Validation)

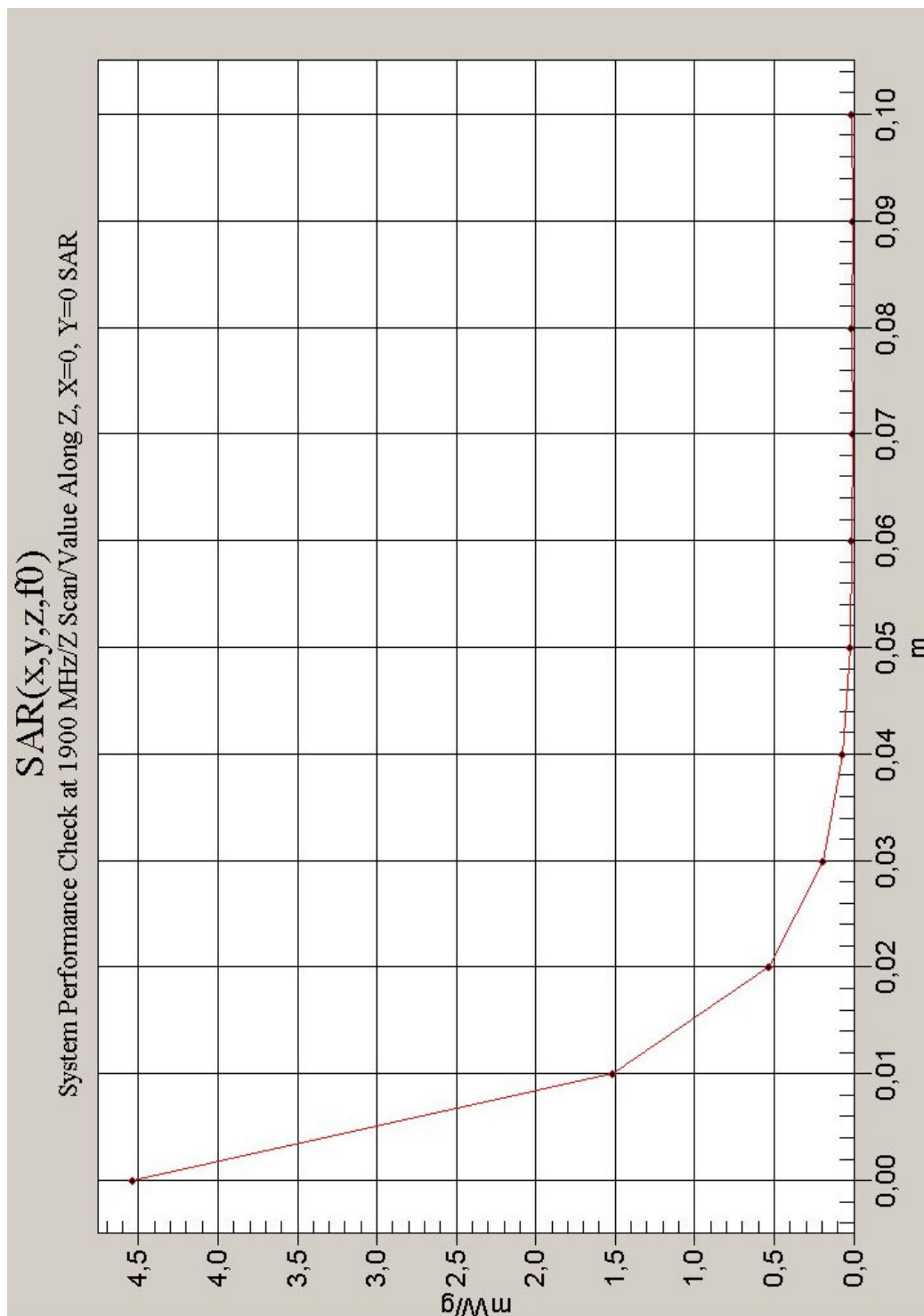


Fig. 10: SAR versus liquid depth, 1900 MHz, head (06.07.2004; Ambient Temperature: 20.8° C; Liquid Temperature : 20.3° C).

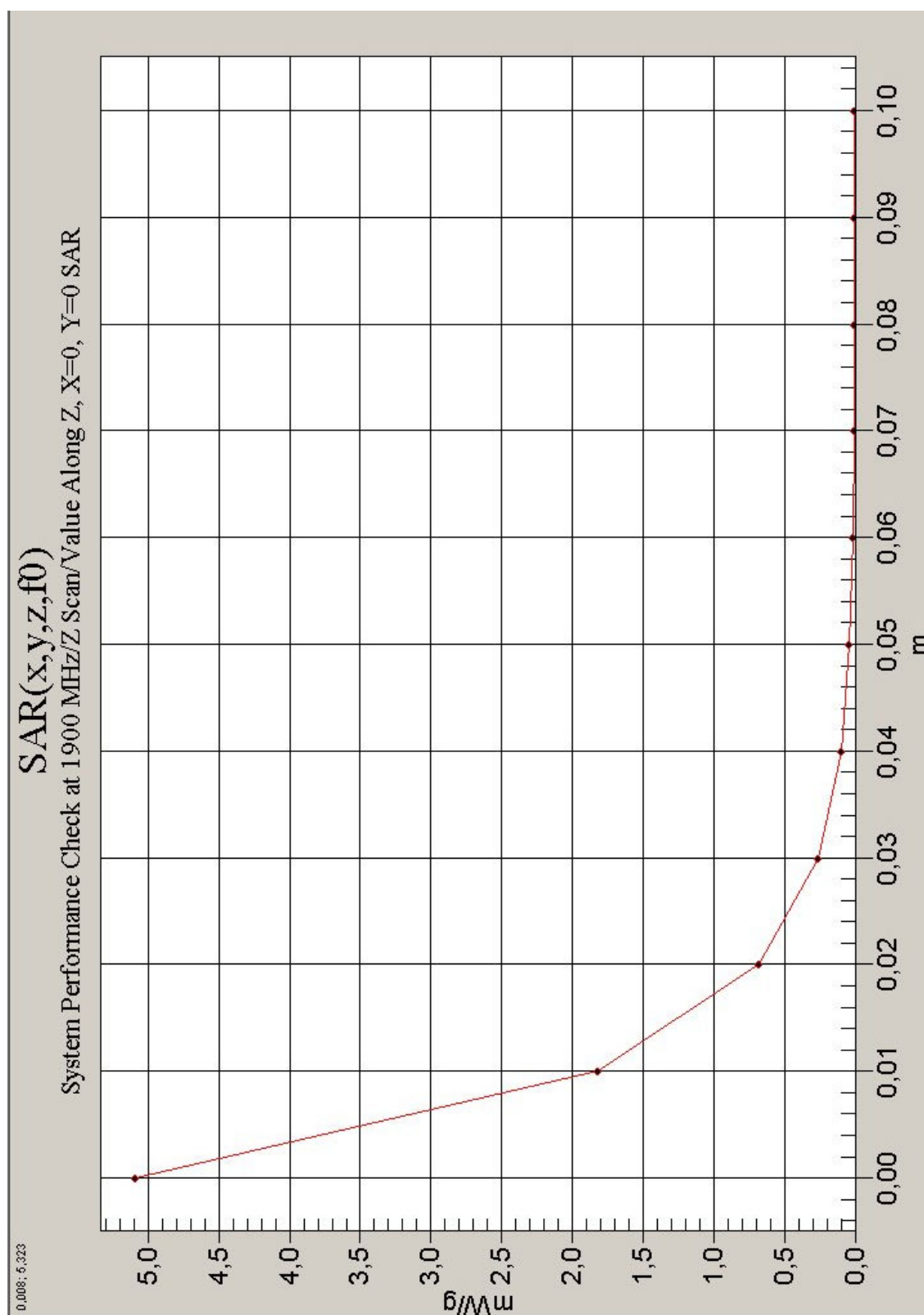


Fig. 11: SAR versus liquid depth, 1900 MHz, body (08.06.2004; Ambient Temperature: 21.5° C; Liquid Temperature : 20.5° C).

6 SAR z-axis scans (Measurements)

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

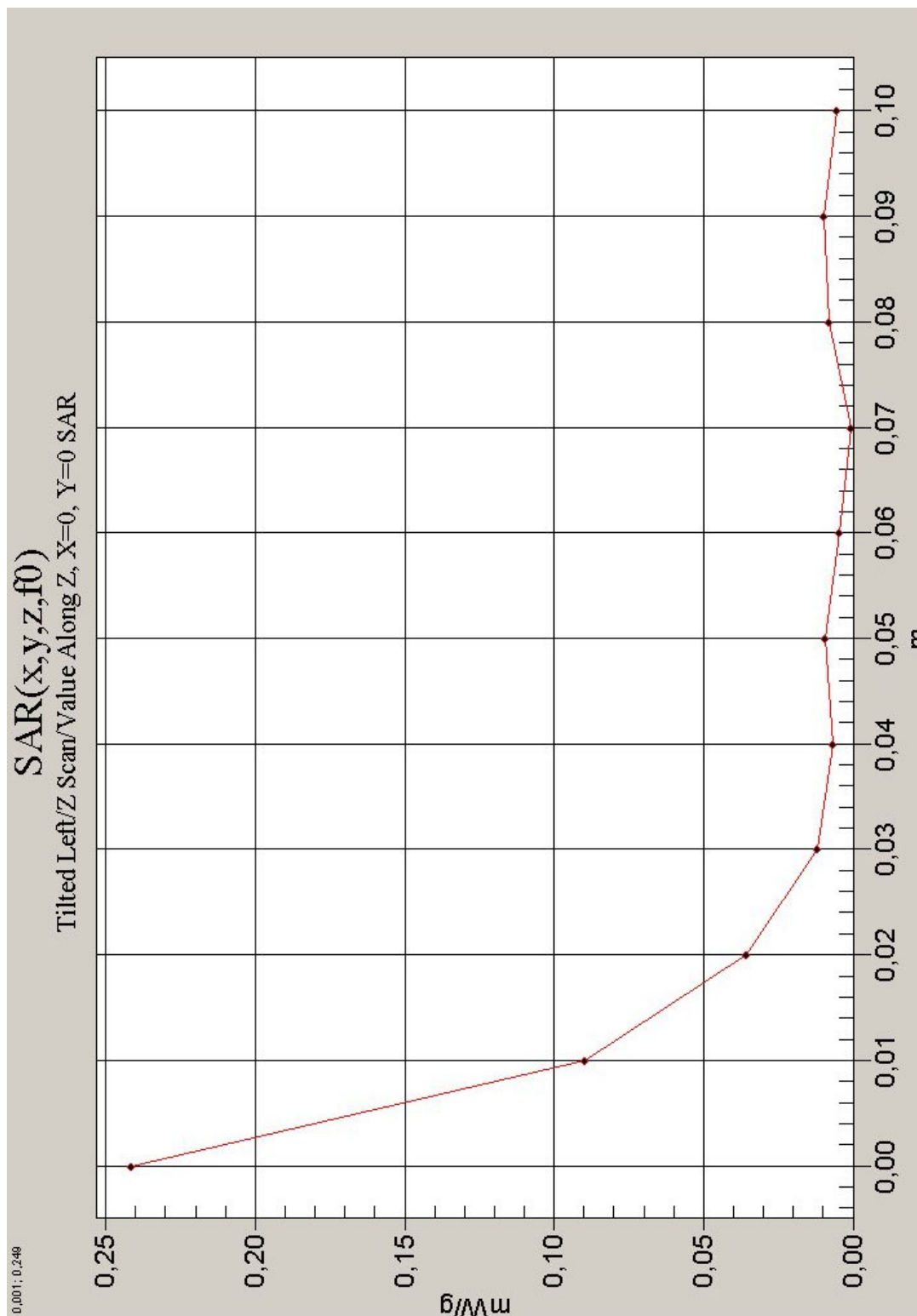


Fig. 12: SAR versus liquid depth, head with Bluetooth, PCS 1900, channel 661, cheek position, left side of head. (06.07.2004, Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

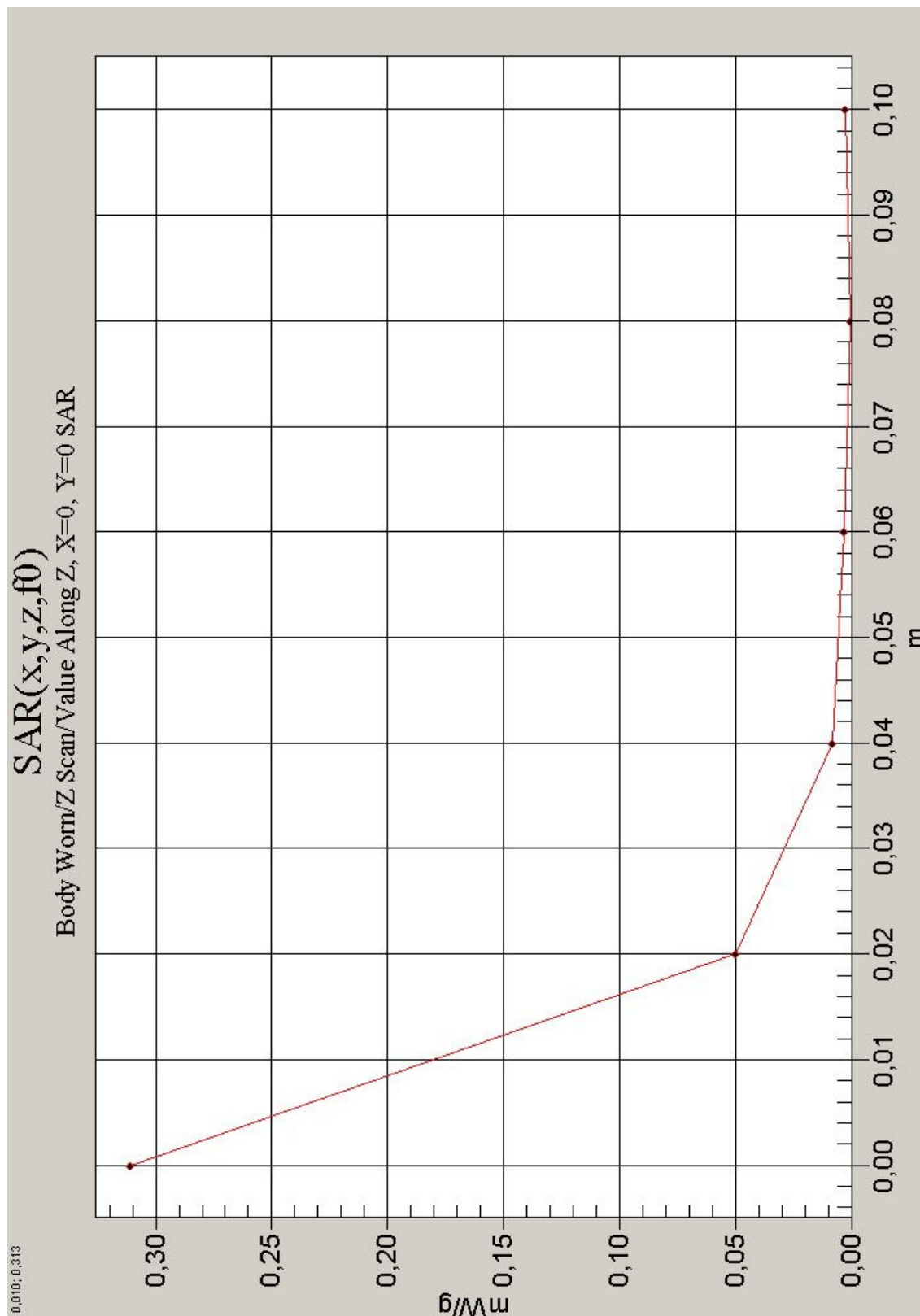


Fig. 13: SAR versus liquid depth: PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX, activated Bluetooth (08.07.2004, Ambient Temperature: 21.7° C; Liquid Temperature : 20.6° C).