
Appendix for the Report

Dosimetric Assessment of the BenQ AL21 (FCC ID: PWX-AL21)

According to the FCC Requirements

SAR Distribution Plots

February 14, 2006
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1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: Imst GmbH; File Name: [460yplm_1_su.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 0.234 mW/g

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

Reference Value = 10.4 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 0.338 W/kg

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.147 mW/g

Maximum value of SAR (measured) = 0.259 mW/g

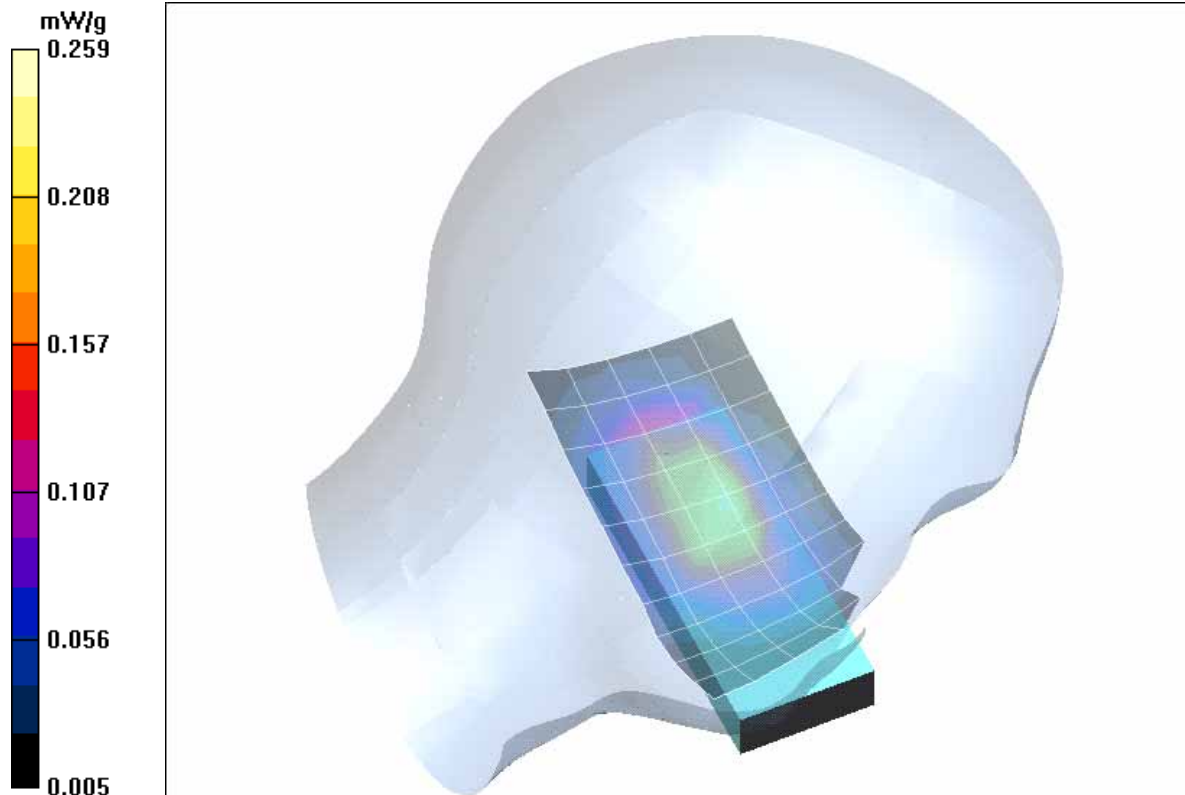


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head, slider up, February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

Test Laboratory: Imst GmbH; File Name: [460yplm 2 su.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 0.207 mW/g

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

Reference Value = 11.6 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 0.321 W/kg

SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.123 mW/g

Maximum value of SAR (measured) = 0.222 mW/g

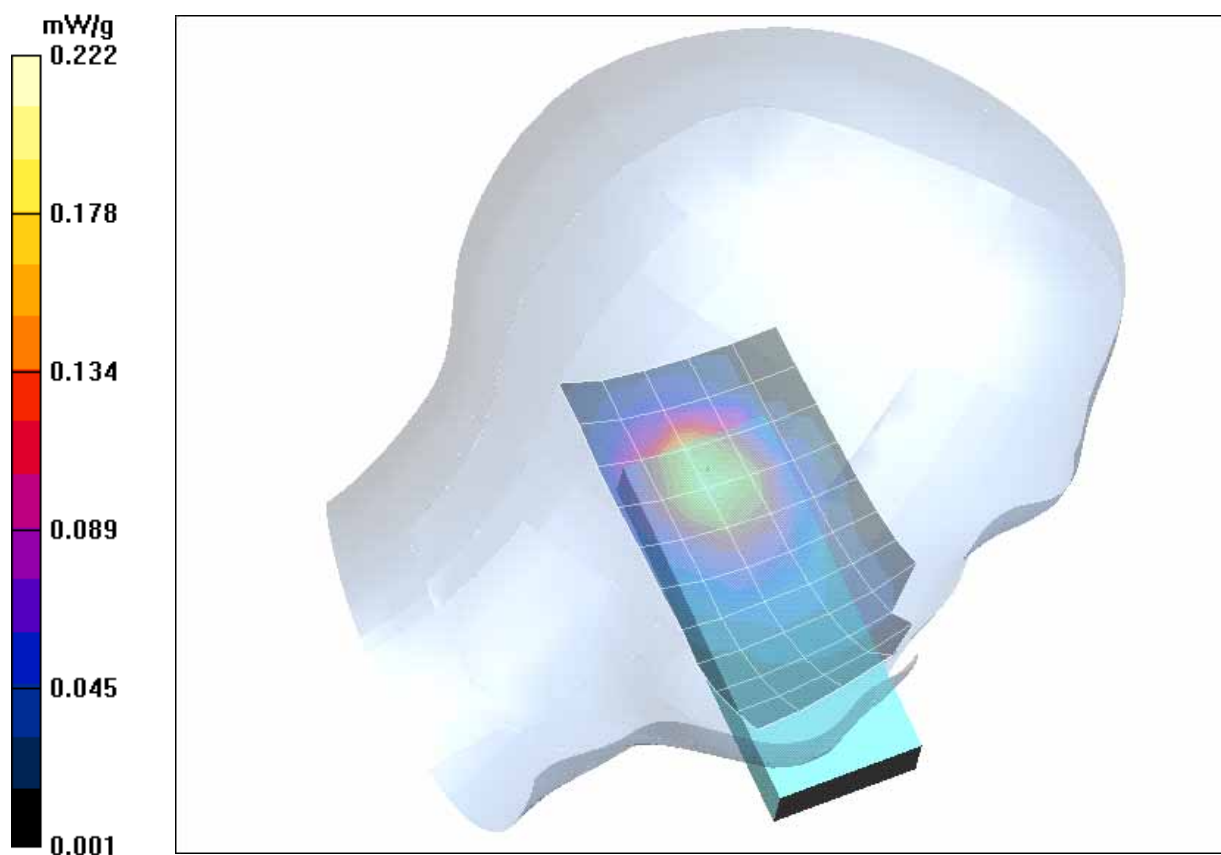


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head (February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

Test Laboratory: Imst GmbH; File Name: [460yprm_1_su.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 0.218 mW/g

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

Reference Value = 10.0 V/m; Power Drift = 0.098 dB

Peak SAR (extrapolated) = 0.347 W/kg

SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.135 mW/g

Maximum value of SAR (measured) = 0.227 mW/g

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

Reference Value = 10.0 V/m; Power Drift = 0.098 dB

Peak SAR (extrapolated) = 0.427 W/kg

SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.098 mW/g

Maximum value of SAR (measured) = 0.209 mW/g

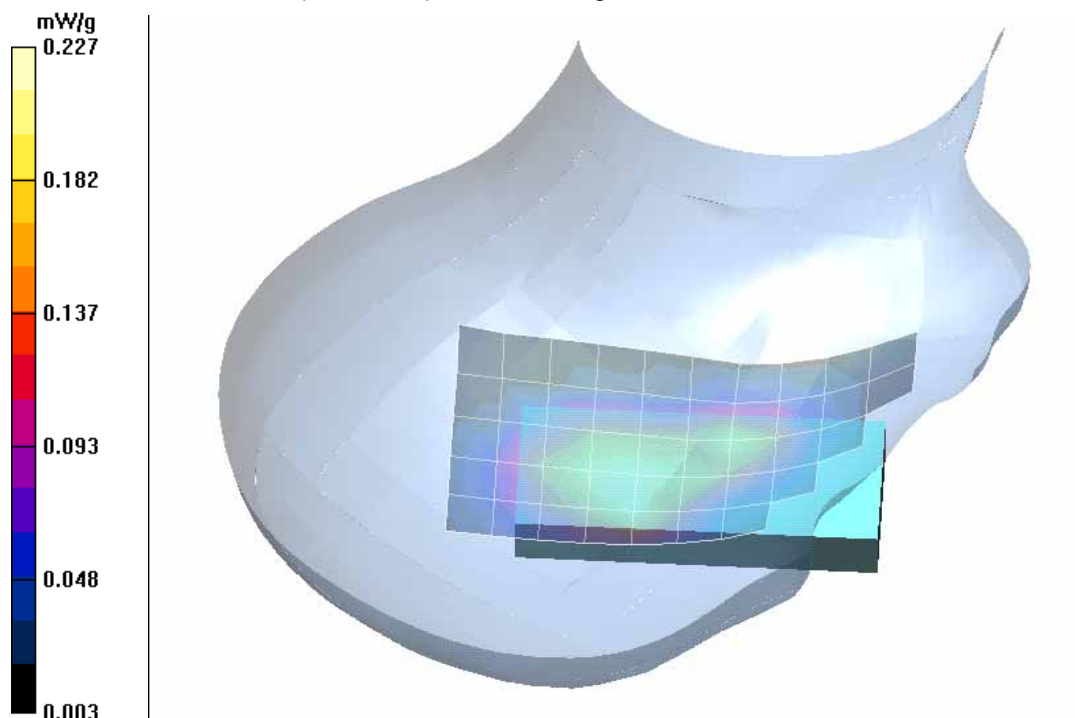


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head, slider up (February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

Test Laboratory: Imst GmbH; File Name: [460yprm 2 su.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 0.252 mW/g

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

Reference Value = 12.2 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.402 W/kg

SAR(1 g) = 0.260 mW/g; SAR(10 g) = 0.154 mW/g

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

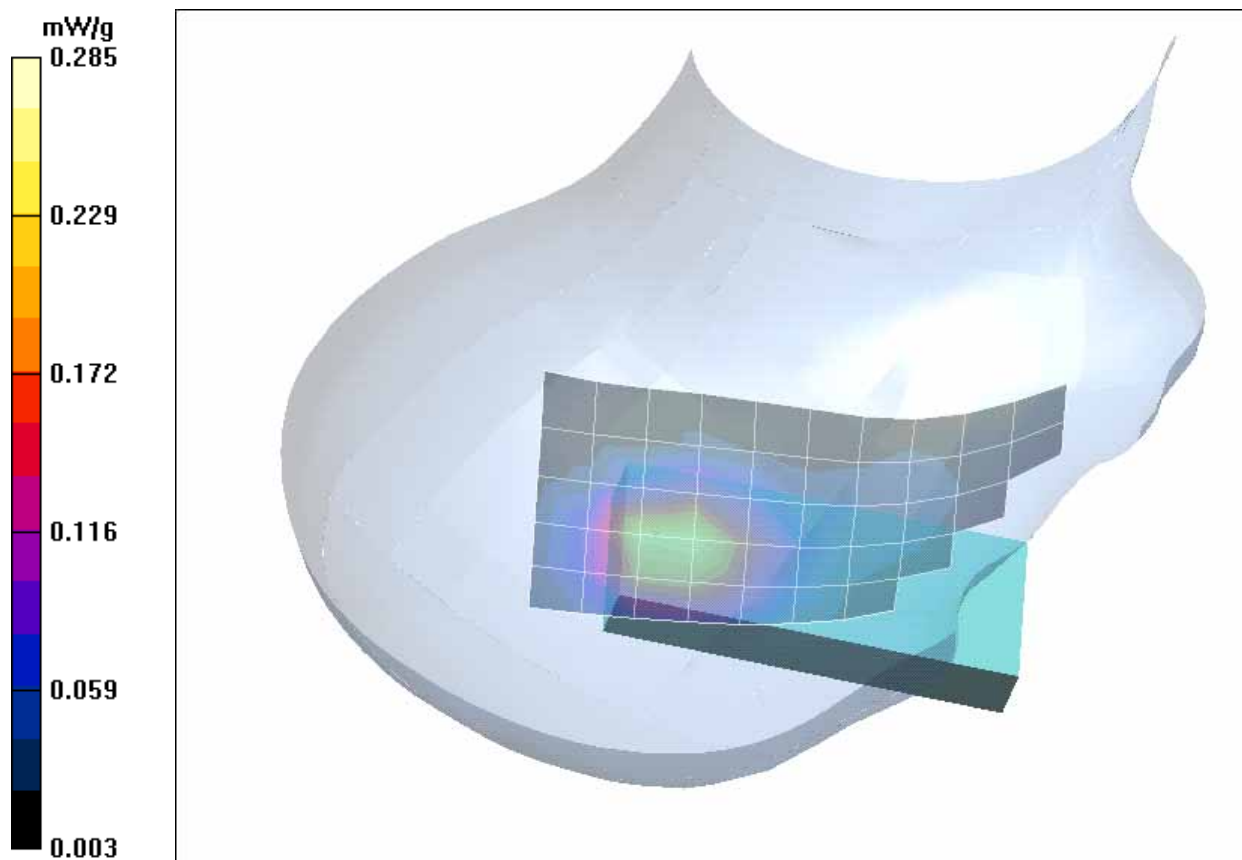


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head, slider up (February 08, 2006; Ambient Temperature: 21.7 °C; Liquid Temperature : 20.9° C)

Test Laboratory: Imst GmbH; File Name: [460yplm_1_sd.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek Left/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.219 mW/g

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

Reference Value = 11.6 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 0.311 W/kg

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.217 mW/g

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

Reference Value = 11.6 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 0.246 W/kg

SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.113 mW/g

Maximum value of SAR (measured) = 0.187 mW/g

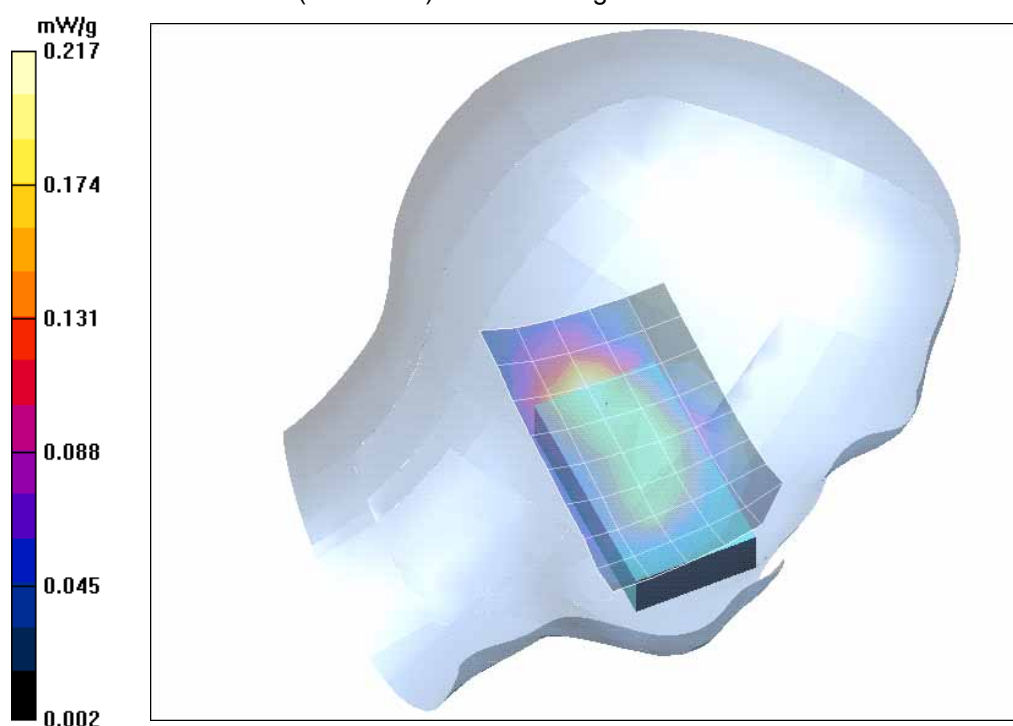


Fig. 5: SAR distribution for PCS 1900, channel 661, cheek position, left side of head, slider down, February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

Test Laboratory: Imst GmbH; File Name: [460yplm 2 sd.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilted Left/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.181 mW/g

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

Reference Value = 9.66 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 0.269 W/kg

SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.097 mW/g

Maximum value of SAR (measured) = 0.187 mW/g

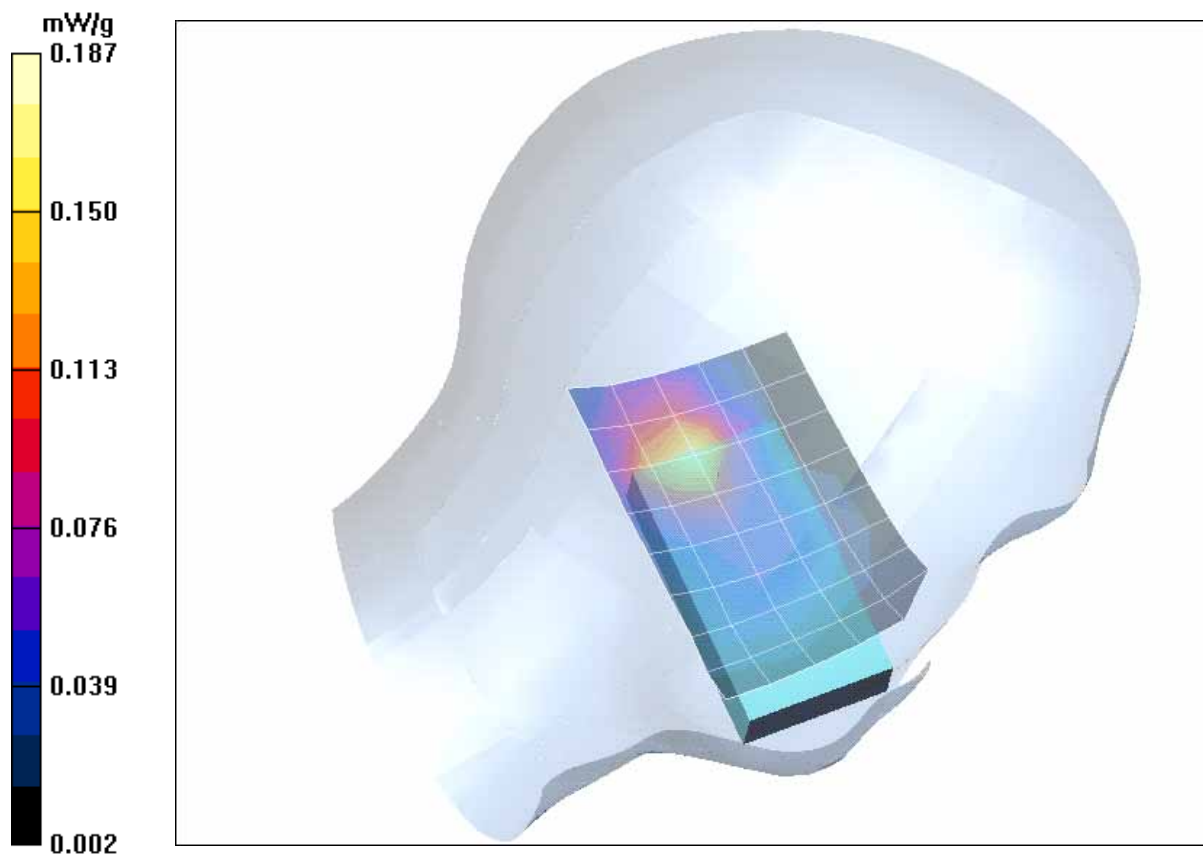


Fig. 6: SAR distribution for PCS 1900, channel 661, tilted position, left side of head, slider down (February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

Test Laboratory: Imst GmbH; **File Name:** [460yprm_1_sd.da4](#)

DUT: BenQ; **Type:** AL21; **Serial:** 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn335; Calibrated: 17.03.2005

- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340

- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek Right/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.243 mW/g

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

Reference Value = 10.8 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 0.369 W/kg

SAR(1 g) = 0.231 mW/g; SAR(10 g) = 0.134 mW/g

Maximum value of SAR (measured) = 0.255 mW/g

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

Reference Value = 10.8 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 0.299 W/kg

SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.227 mW/g

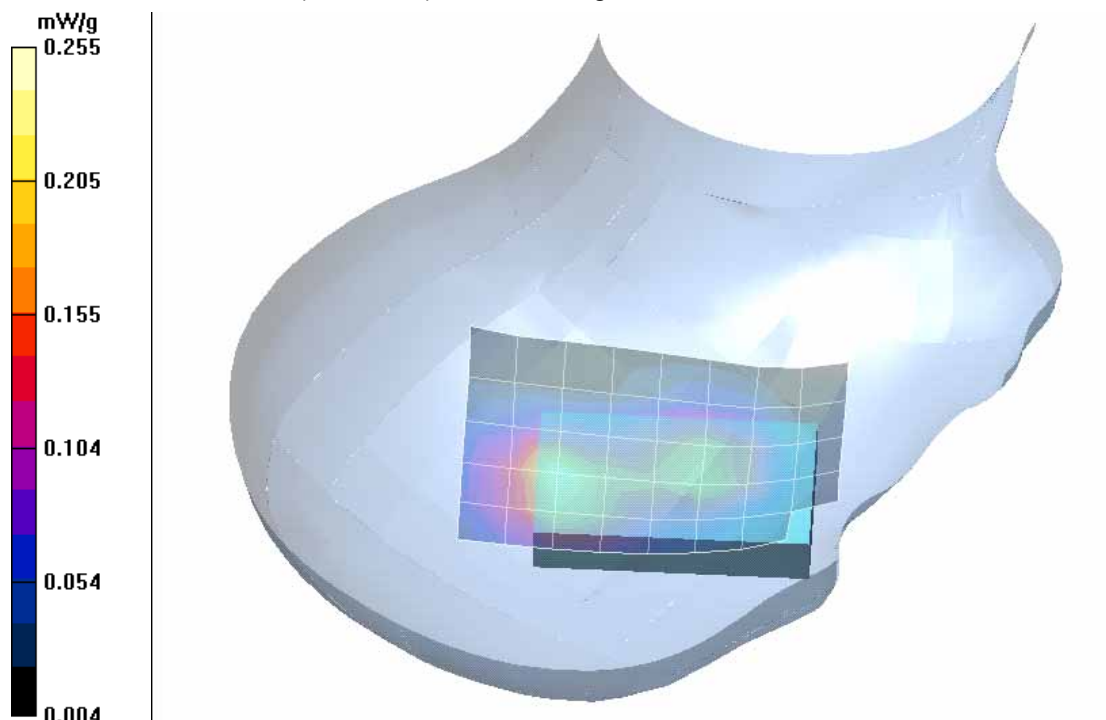


Fig. 7: SAR distribution for PCS 1900, channel 661, cheek position, right side of head , slider down (February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

Test Laboratory: Imst GmbH; File Name: [460yprm 2 sd.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

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; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.25, 8.25, 8.25); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilted Right/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.255 mW/g

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

Reference Value = 11.4 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.405 W/kg

SAR(1 g) = 0.251 mW/g; SAR(10 g) = 0.141 mW/g

Maximum value of SAR (measured) = 0.275 mW/g

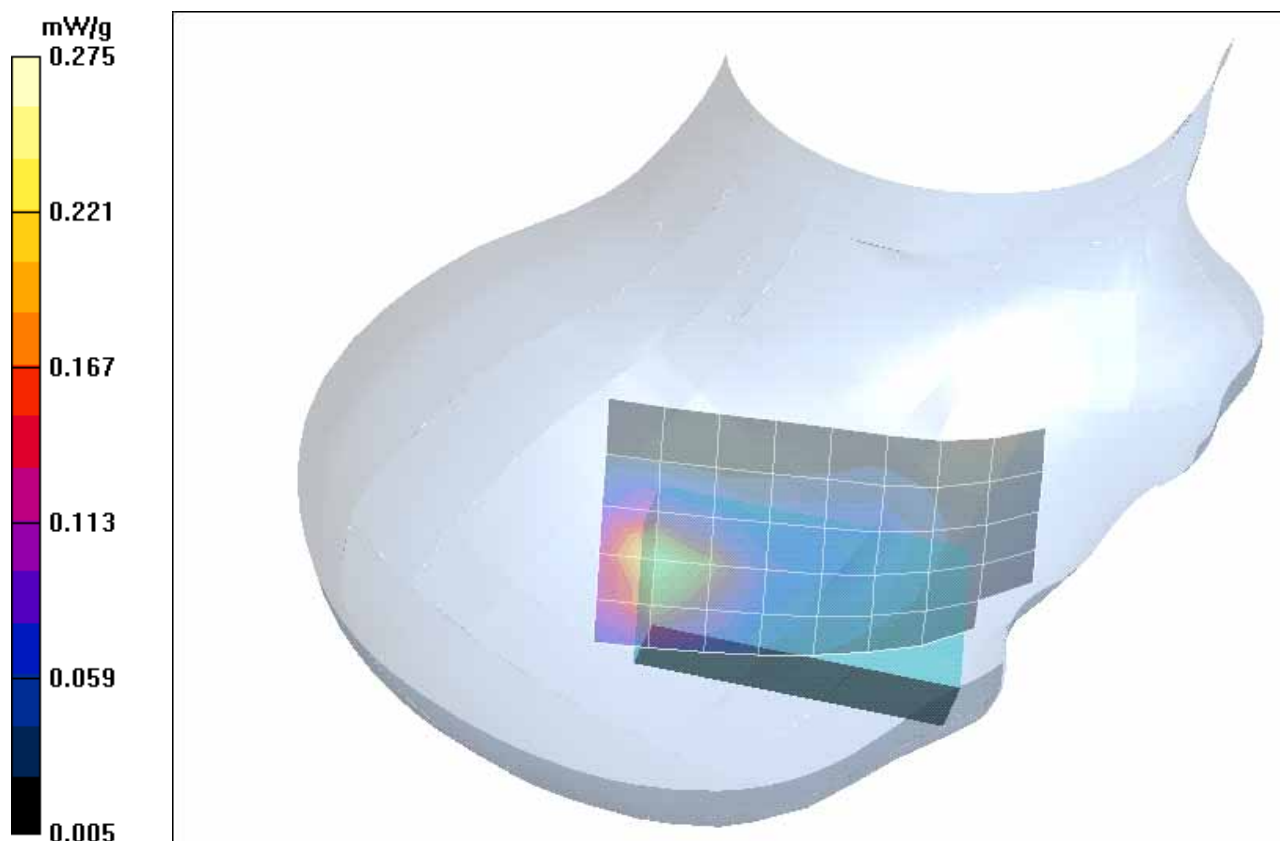


Fig. 8: SAR distribution for PCS 1900, channel 661, tilted position, right side of head, slider down (February 08, 2006; Ambient Temperature: 21.7 °C; Liquid Temperature : 20.9° C)

2 SAR Distribution Plots, PCS 1900 Body, without accessory, GSM mode

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [460bphl_4_su_ohne_15mm.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 0.837 mW/g

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

Reference Value = 14.7 V/m; Power Drift = 0.074 dB

Peak SAR (extrapolated) = 1.96 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.574 mW/g

Maximum value of SAR (measured) = 1.24 mW/g

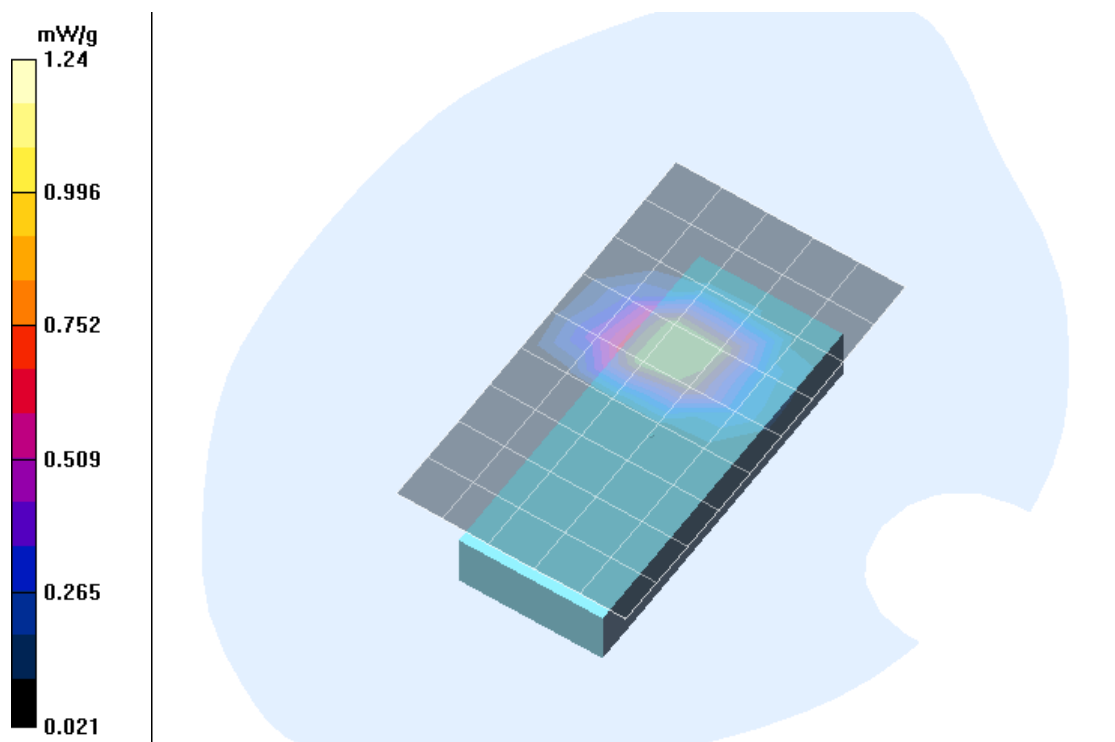


Fig. 9: SAR distribution for PCS 1900, channel 512, body worn configuration, antenna towards the phantom, slider up with 15 mm distance (February 10, 2006; Ambient Temperature: 20.9° C; Liquid Temperature: 20.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [460bphl 4 sd ohne 15mm.da4](#)

DUT: BenQ; **Type:** AL21; **Serial:** 004400016916460

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Worn/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.13 mW/g

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

Reference Value = 5.41 V/m; Power Drift = -0.107 dB

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.567 mW/g

Maximum value of SAR (measured) = 1.22 mW/g

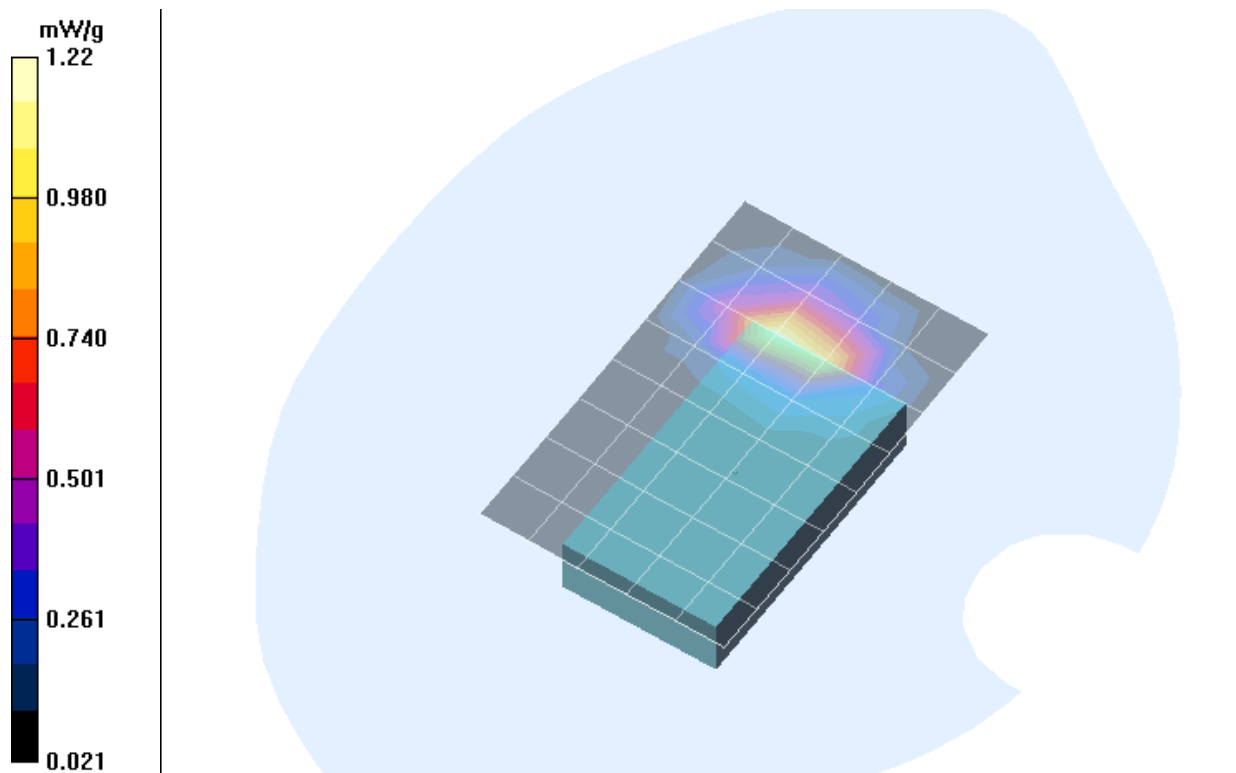


Fig. 10: SAR distribution for PCS 1900, channel 512, body worn configuration, antenna towards the phantom, slider down with 15 mm distance (February 10, 2006; Ambient Temperature: 20.9° C; Liquid Temperature: 20.3° C).

3 SAR Distribution Plots, PCS 1900 Body, with headset, GSM mode

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [460bphl_5_su_headset_15mm.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 1.01 mW/g

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

Reference Value = 12.4 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 2.12 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.607 mW/g

Maximum value of SAR (measured) = 1.32 mW/g

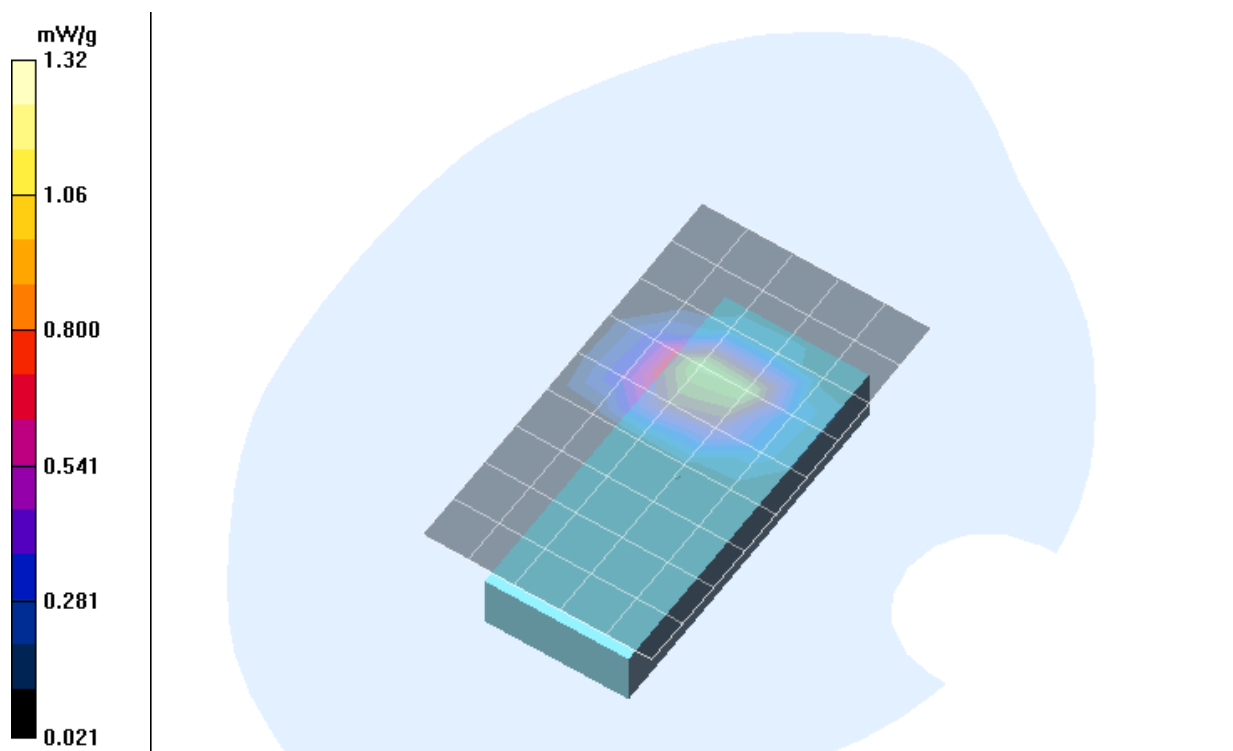


Fig. 11: SAR distribution for PCS 1900, channel 512, body worn configuration, antenna towards the phantom, slider up with 15 mm distance (February 10, 2006; Ambient Temperature: 20.9° C; Liquid Temperature: 20.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [460bphh 5 sd headset 15mm.da4](#)

DUT: BenQ; **Type:** AL21; **Serial:** 004400016916460

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Worn/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.22 mW/g

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

Reference Value = 7.66 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 2.17 W/kg

SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.601 mW/g

Maximum value of SAR (measured) = 1.32 mW/g

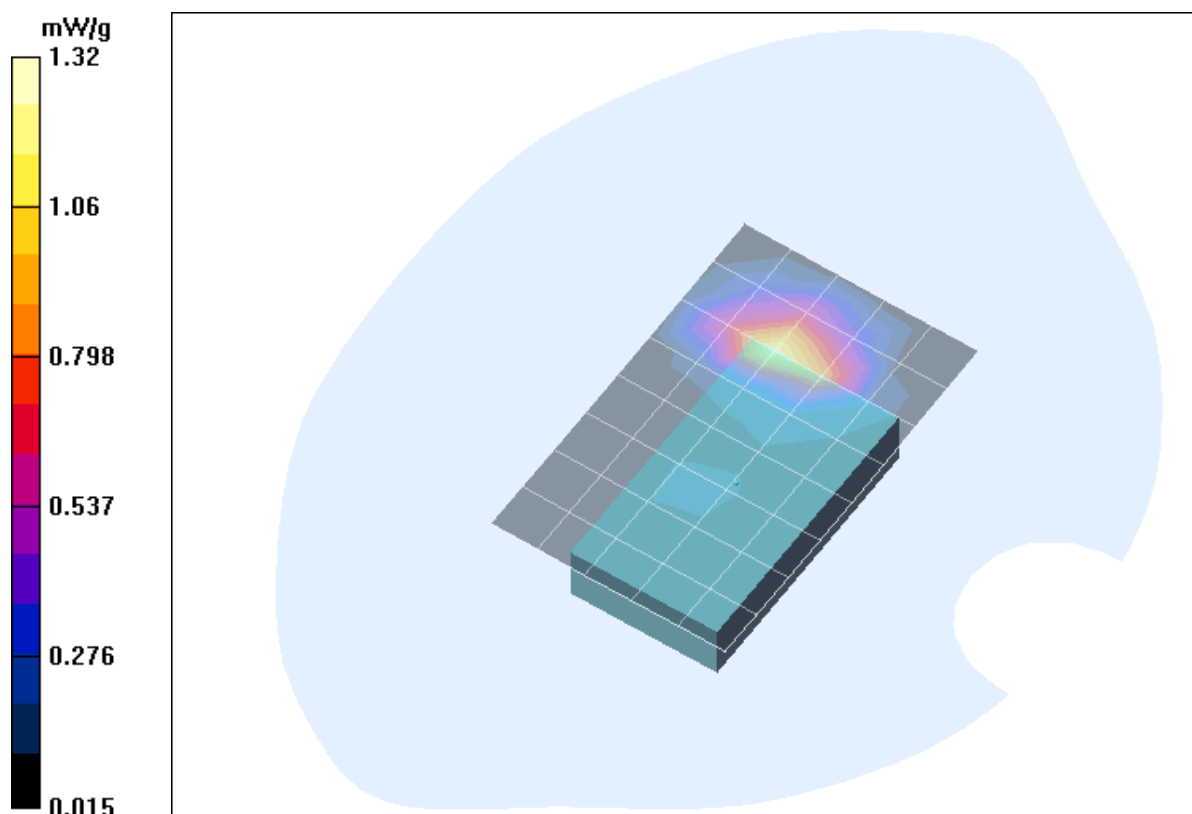


Fig. 12: SAR distribution for PCS 1900, channel 810, body worn configuration, antenna towards the phantom, slider down with 15 mm distance (February 10, 2006; Ambient Temperature: 20.9° C; Liquid Temperature: 20.3° C).

4 SAR Distribution Plots, PCS 1900 Body, with data cable, GPRS Class 8 mode

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [460bphl_6_su_data_15mm.da4](#)

DUT: BenQ; Type: AL21; Serial: 004400016916460

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Maximum value of SAR (measured) = 1.10 mW/g

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

Reference Value = 30.5 V/m; Power Drift = 0.079 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.628 mW/g

Maximum value of SAR (measured) = 1.38 mW/g

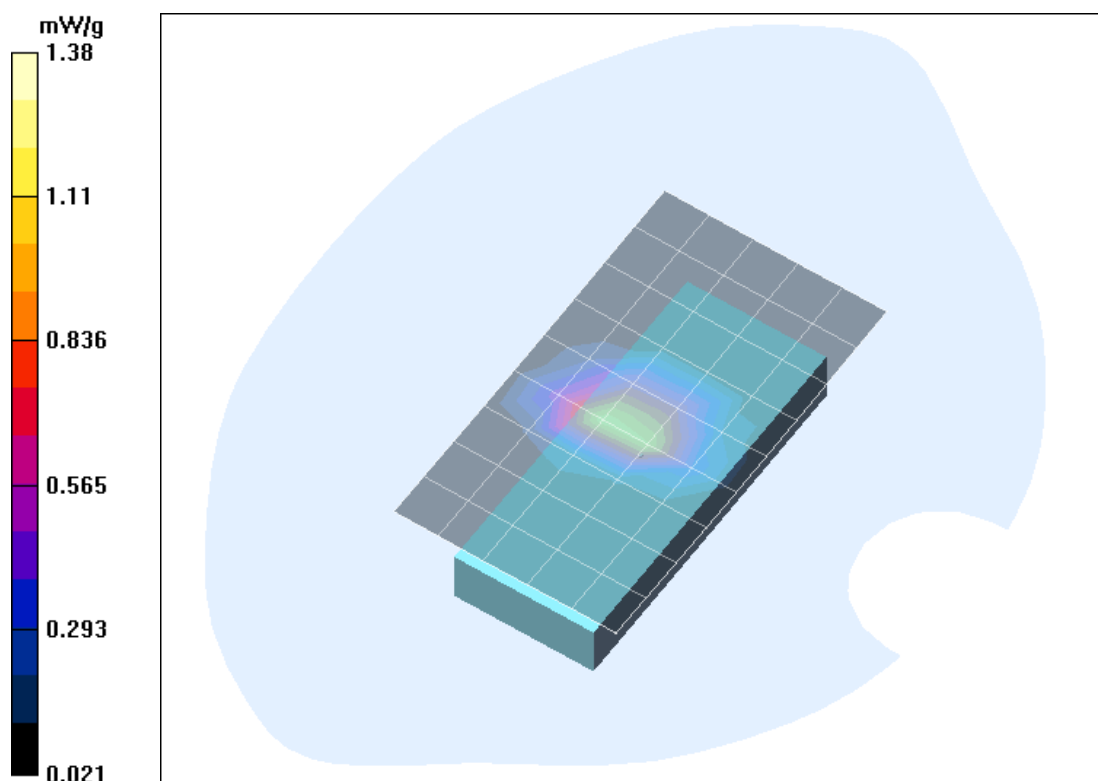


Fig. 13: SAR distribution for GPRS 1900, channel 512, body worn configuration, antenna towards the phantom, slider up with 15 mm distance (February 10, 2006; Ambient Temperature: 20.9° C; Liquid Temperature: 20.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [460bphl 6 sd data 15mm.da4](#)

DUT: BenQ; **Type:** AL21; **Serial:** 004400016916460

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Worn/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.11 mW/g

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

Reference Value = 6.67 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 2.05 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.601 mW/g

Maximum value of SAR (measured) = 1.30 mW/g

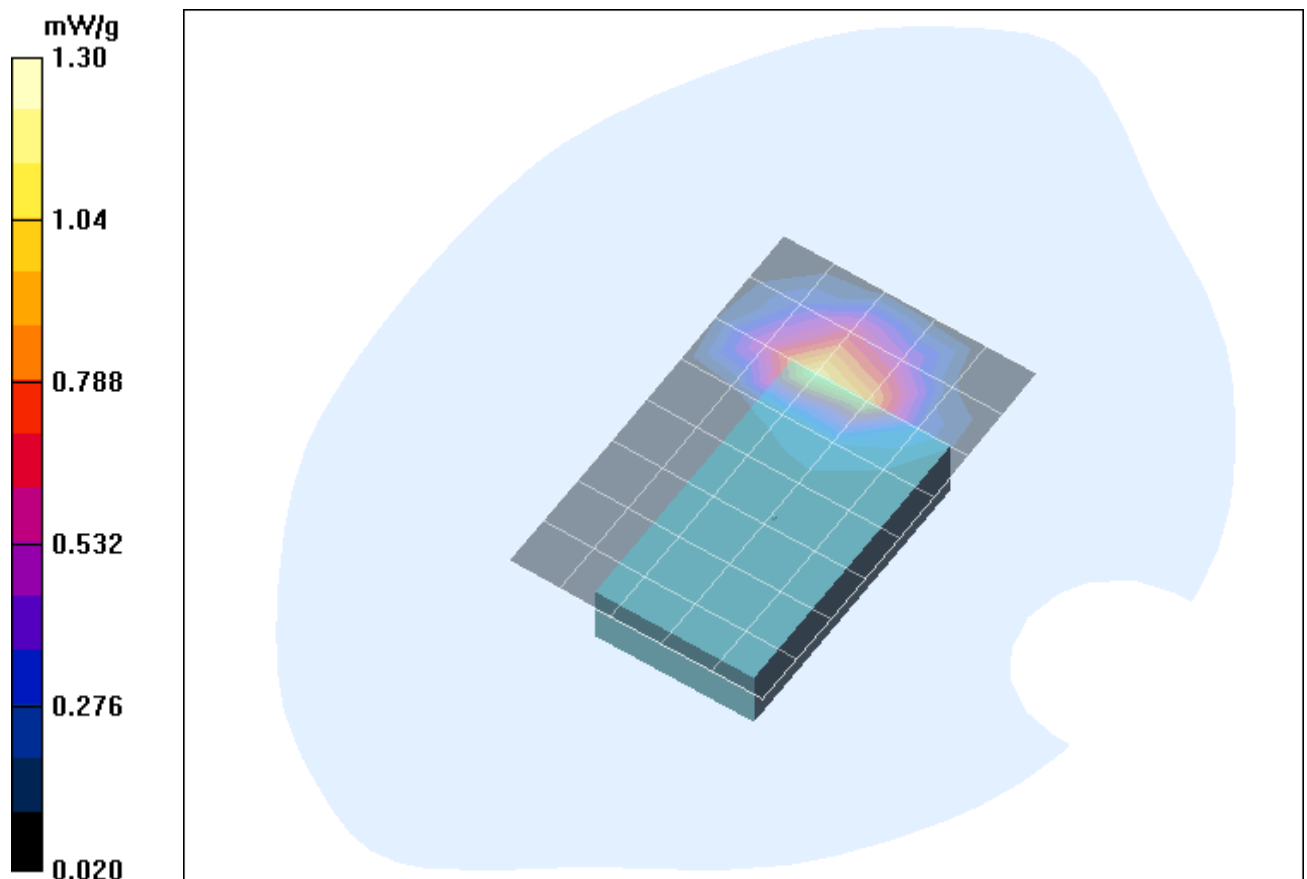


Fig. 14: SAR distribution for GPRS 1900, channel 512, body worn configuration, antenna towards the phantom, slider up with 15 mm distance (February 10, 2006; Ambient Temperature: 20.9° C; Liquid Temperature: 20.3° C).

5 SAR z-axis scans (Validation)

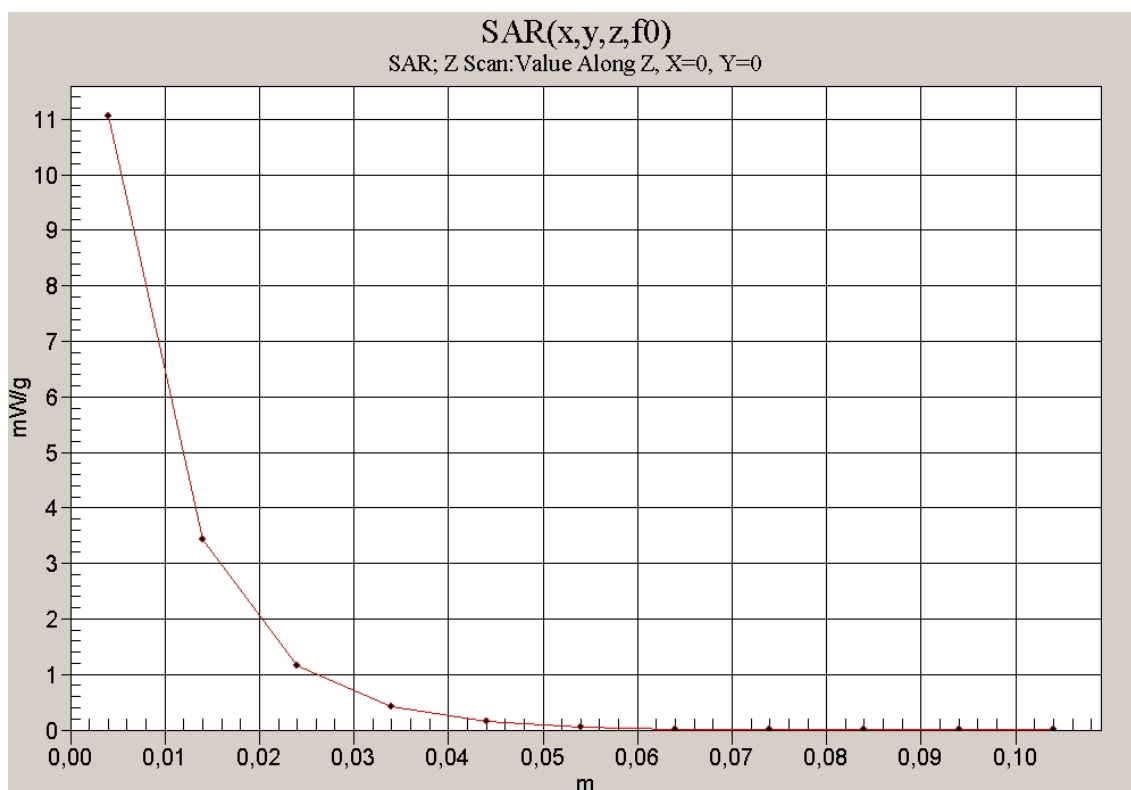


Fig. 15: SAR versus liquid depth, 1900 MHz, head (February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

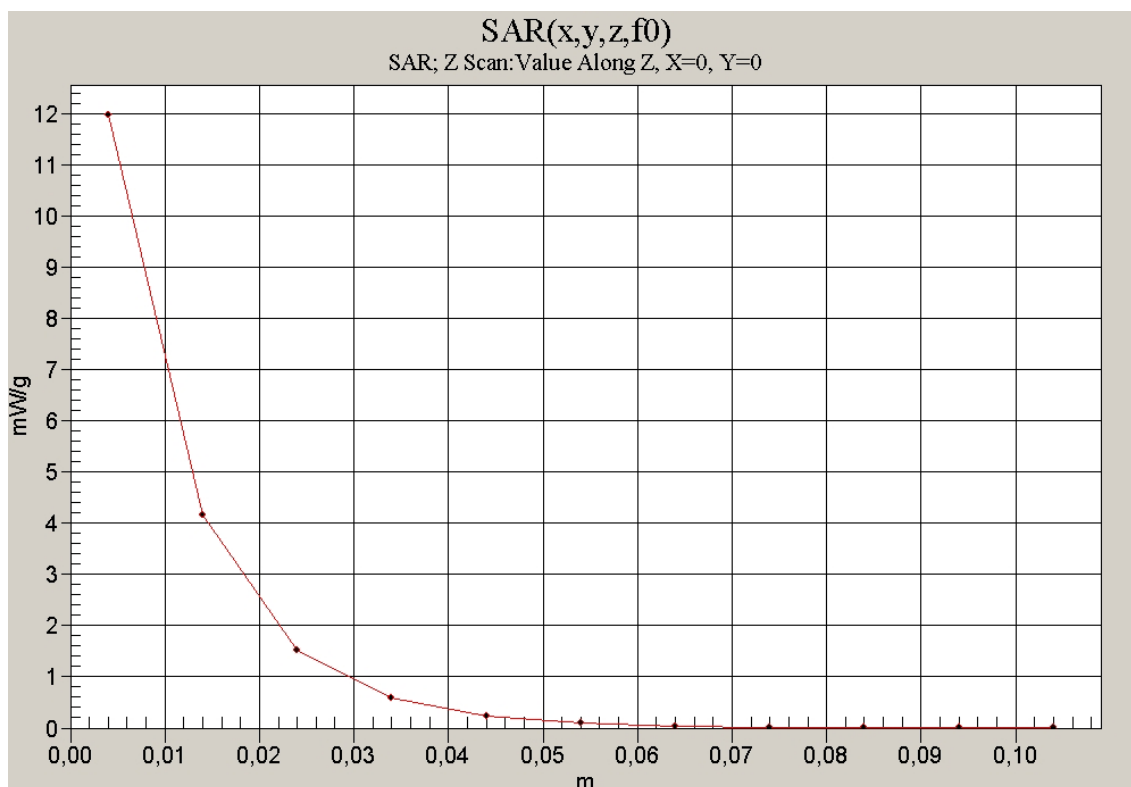


Fig. 16: SAR versus liquid depth, 1900 MHz, body (February 10, 2006; Ambient Temperature: 21.4° C; Liquid Temperature : 20.6° C).

6 SAR z-axis scans (Measurements)

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

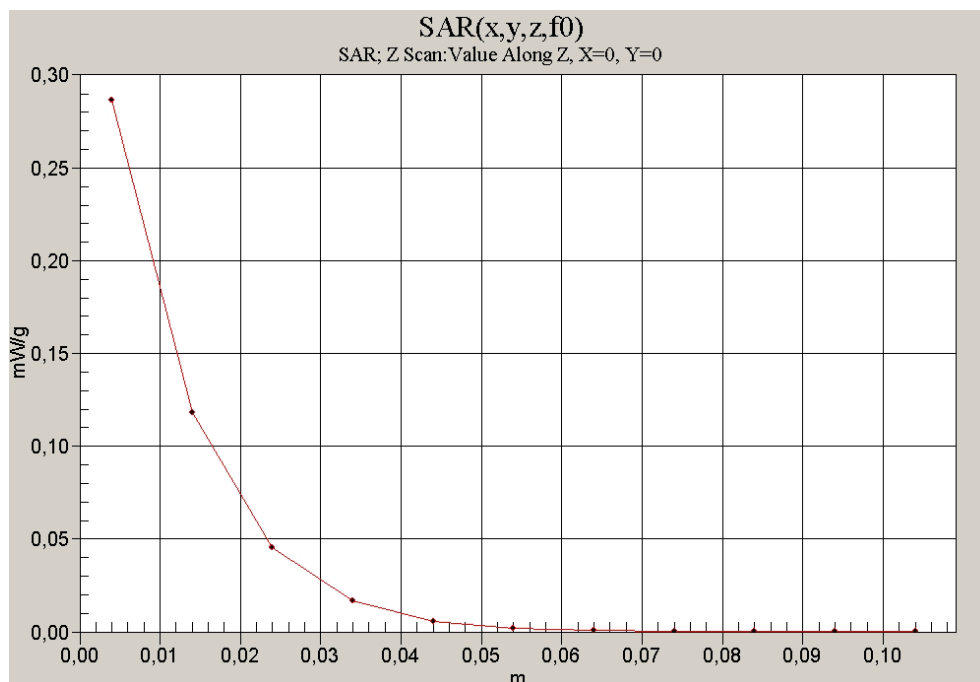


Fig. 17: SAR versus liquid depth, head: PCS 1900, channel 661, tilted position, right side of head (February 08, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.9° C).

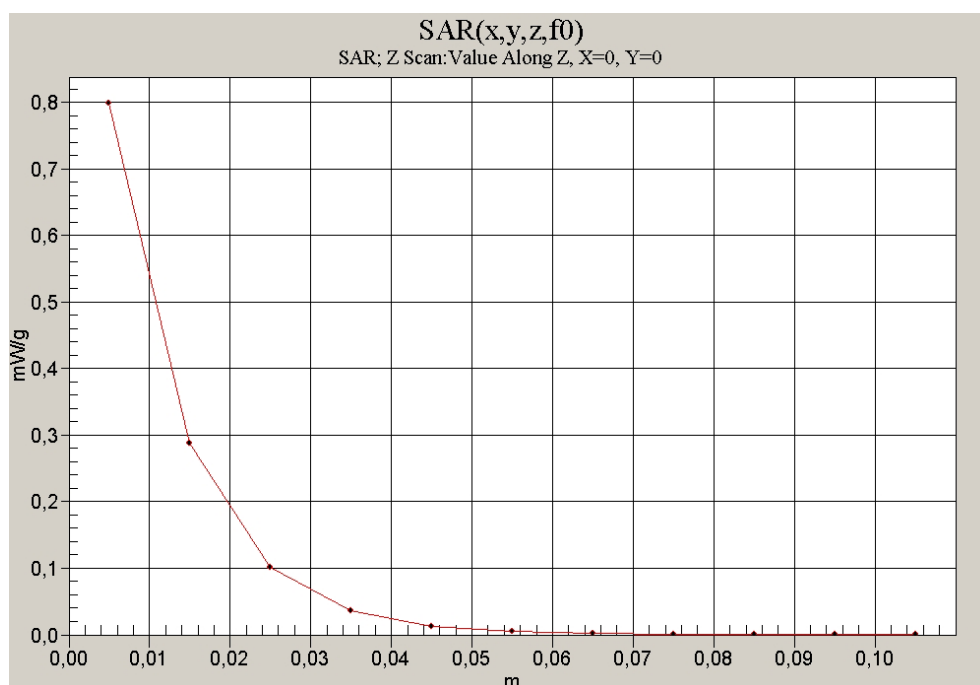


Fig. 18: SAR versus liquid depth, body: GPRS 1900 Class 8, channel 512, data cable, antenna towards the phantom, slider up, 15 mm distance, (February 10, 2006; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).