
Appendix for the Report

Dosimetric Assessment of the BenQ Siemens E71 (FCC ID: PWX-E71)

According to the FCC Requirements

SAR Distribution Plots

July 24, 2006
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The test results only relate to the items tested.
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1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [742yplm_1.da4](#)

DUT: BenQ Siemenes ; Type: E71; Serial: 004401490055742

Program Name: Cheek Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Maximum value of SAR (measured) = 0.399 mW/g

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

Reference Value = 16.0 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.403 mW/g; SAR(10 g) = 0.237 mW/g

Maximum value of SAR (measured) = 0.442 mW/g

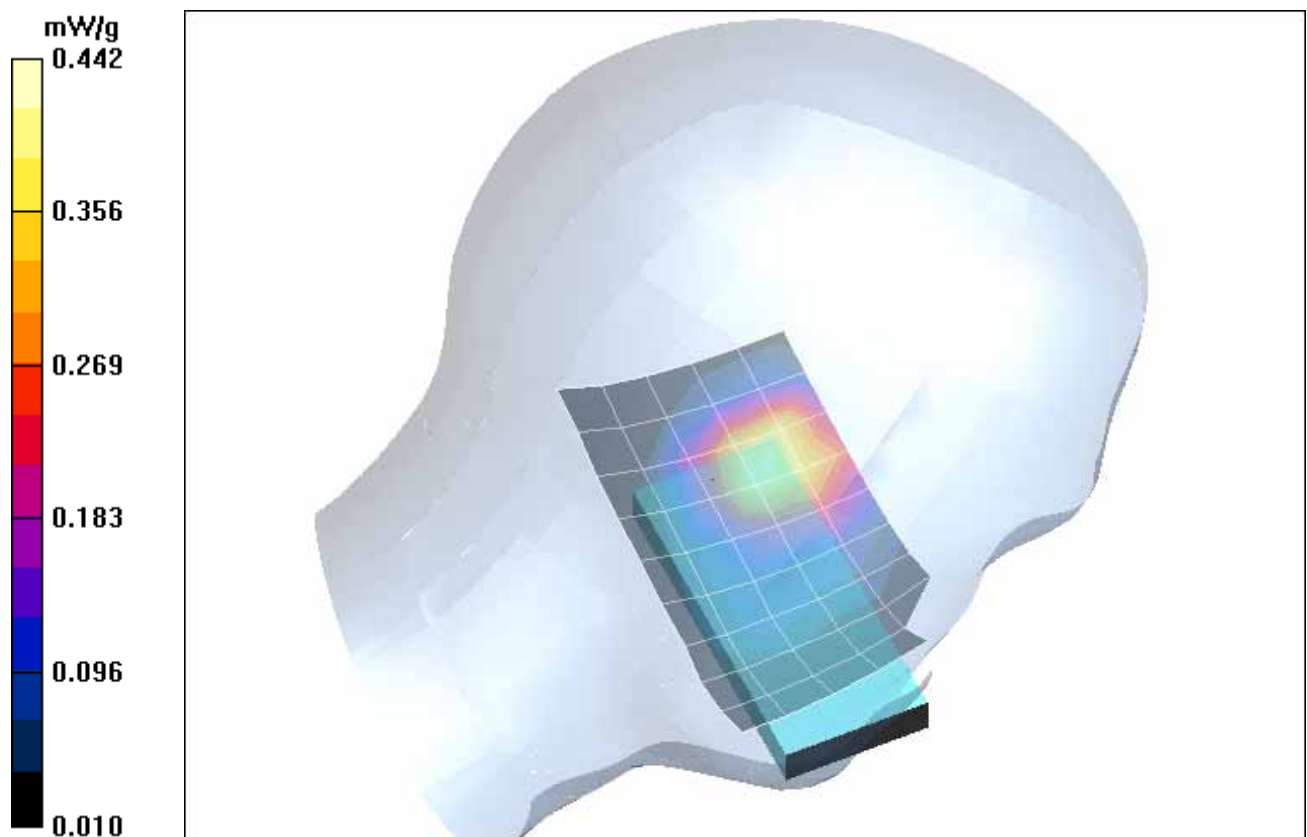


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head (July 18, 2006; Ambient Temperature: 22.3° C; Liquid Temperature : 21.5° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [742yplm 2.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Tilted Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilted Left/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.351 mW/g

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

Reference Value = 15.5 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 0.542 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.191 mW/g

Maximum value of SAR (measured) = 0.379 mW/g

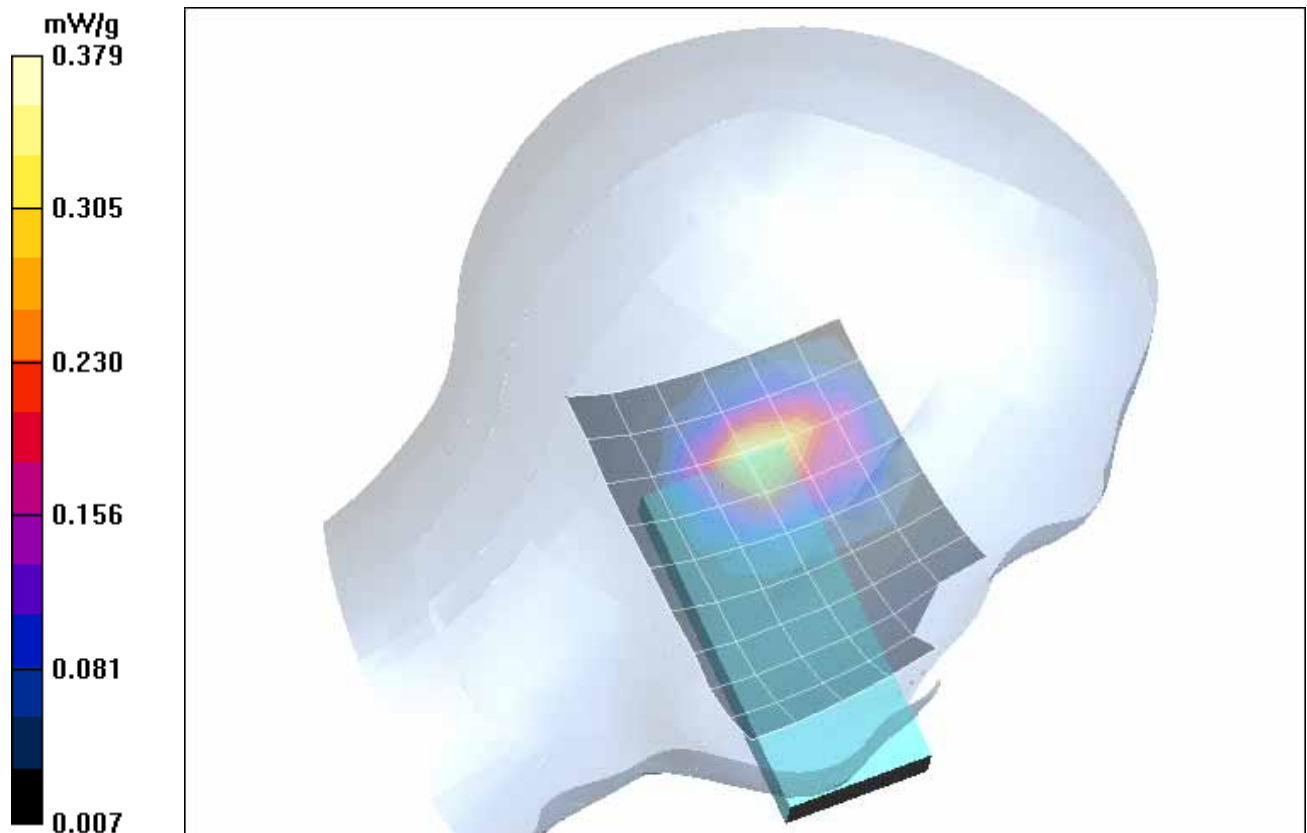


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head (July 18, 2006; Ambient Temperature: 22.3° C; Liquid Temperature : 21.5° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [742yprm_1.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Cheek Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

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

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

Reference Value = 14.9 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.434 W/kg

SAR(1 g) = 0.290 mW/g; SAR(10 g) = 0.173 mW/g

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

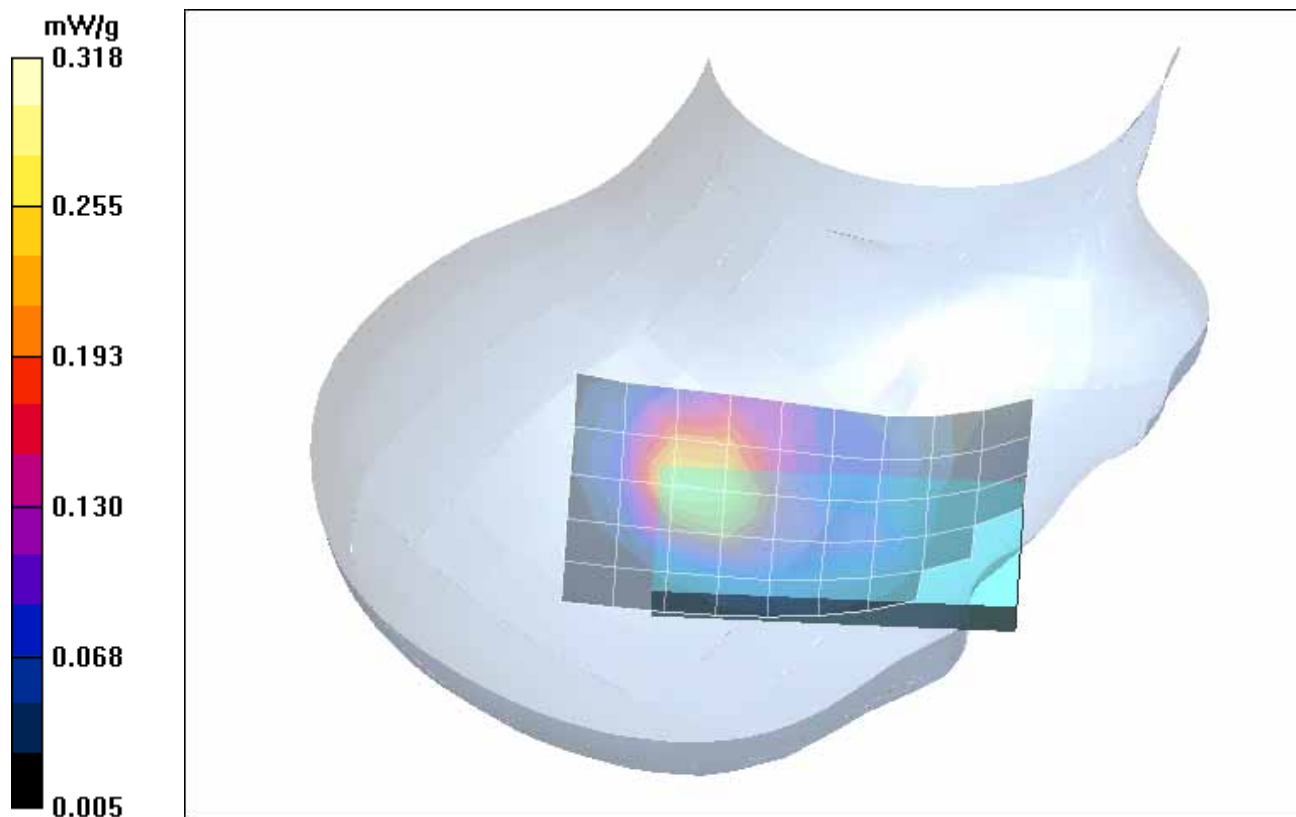


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head (July 18, 2006; Ambient Temperature: 22.3° C; Liquid Temperature : 21.5° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [742yprm_2.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Tilted Right

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Maximum value of SAR (measured) = 0.290 mW/g

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

Reference Value = 15.1 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.417 W/kg

SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.298 mW/g

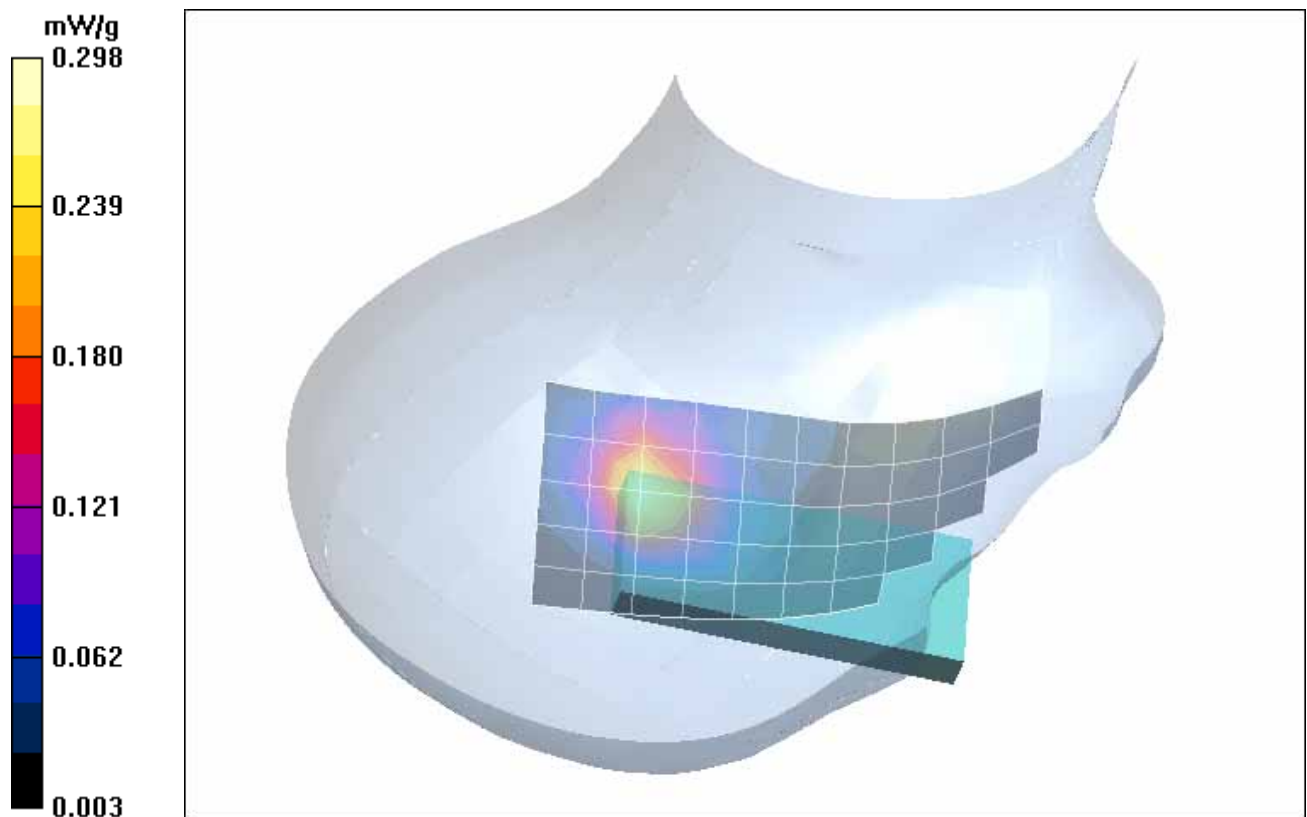


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head (July 18, 2006; Ambient Temperature: 22.3 °C; Liquid Temperature : 21.5° C)

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [742yplm_1_BT.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Cheek Left

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek Left/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.413 mW/g

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

Reference Value = 15.4 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 0.696 W/kg

SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.239 mW/g

Maximum value of SAR (measured) = 0.445 mW/g

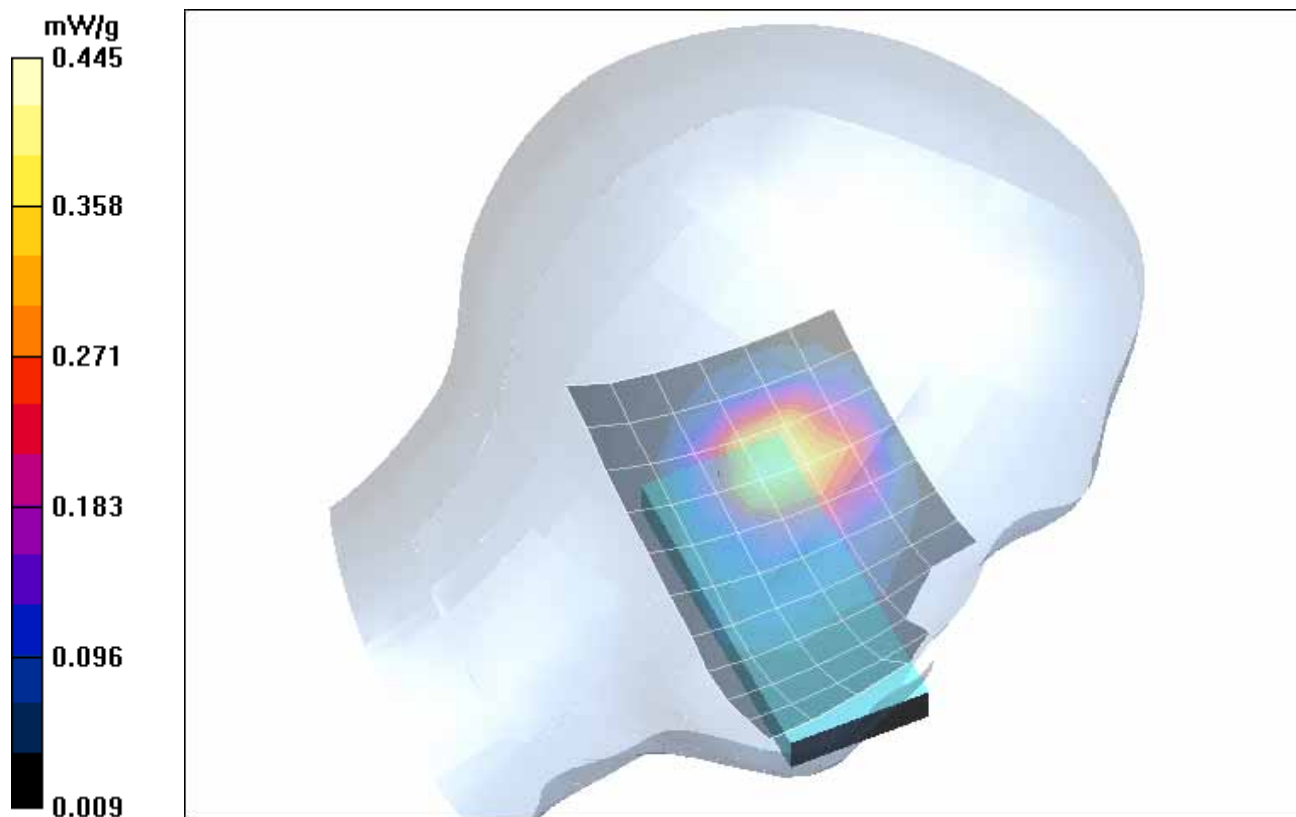


Fig. 5: SAR distribution for PCS 1900 at worst case position with Bluetooth activated, channel 661, cheek position, left side of head (July 18, 2006; Ambient Temperature: 22.3 °C; Liquid Temperature : 21.5° C)

2 SAR Distribution Plots, PCS 1900 Body worn configuration

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [742bphm_5_ohne_20mm.da4](#)

DUT: BenQ Siemenes ; Type: E71; Serial: 004401490055742

Program Name: Body Worn

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.84, 7.84, 7.84); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Maximum value of SAR (measured) = 0.185 mW/g

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

Reference Value = 6.26 V/m; Power Drift = -0.173 dB

Peak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.208 mW/g

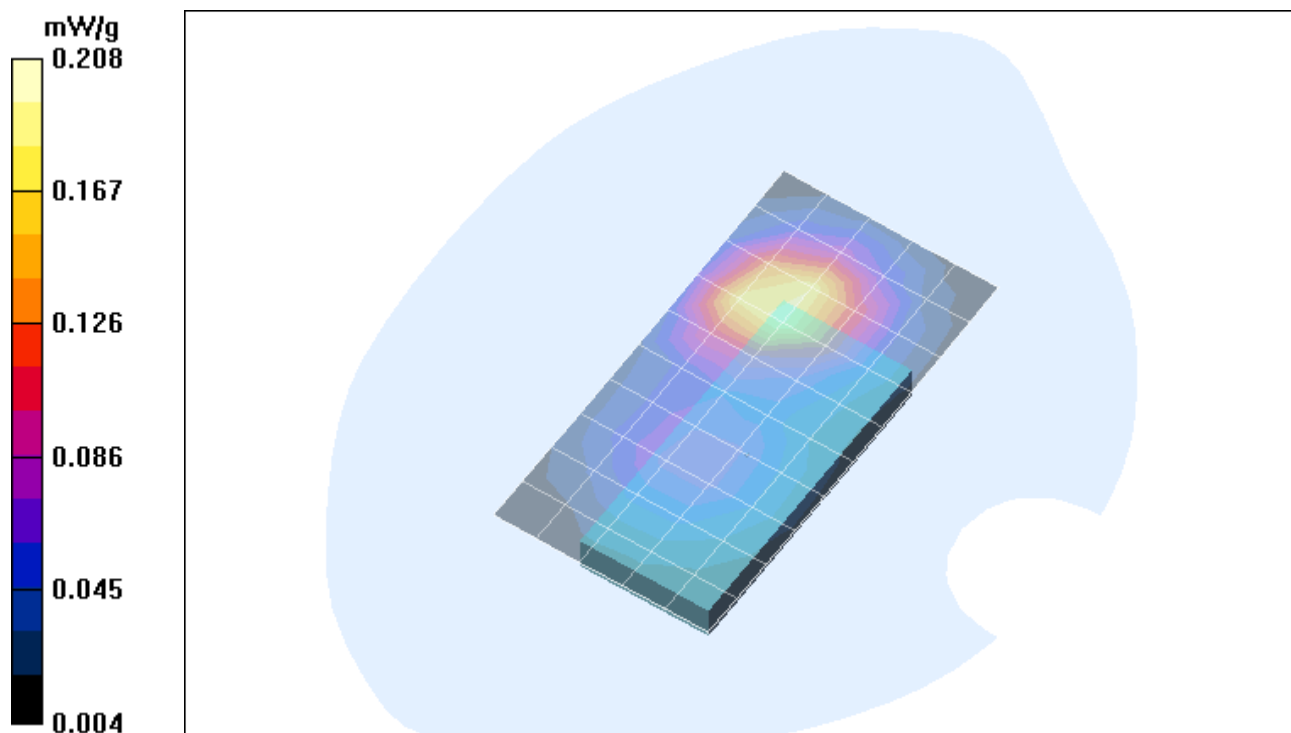


Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, without accessory, with 20 mm distance (July 18, 2006; Ambient Temperature: 22.1° C; Liquid Temperature: 21.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [742bphm 6 headset 20mm.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Body Worn

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.84, 7.84, 7.84); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

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

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

Reference Value = 5.93 V/m; Power Drift = -0.133 dB

Peak SAR (extrapolated) = 0.308 W/kg

SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.210 mW/g

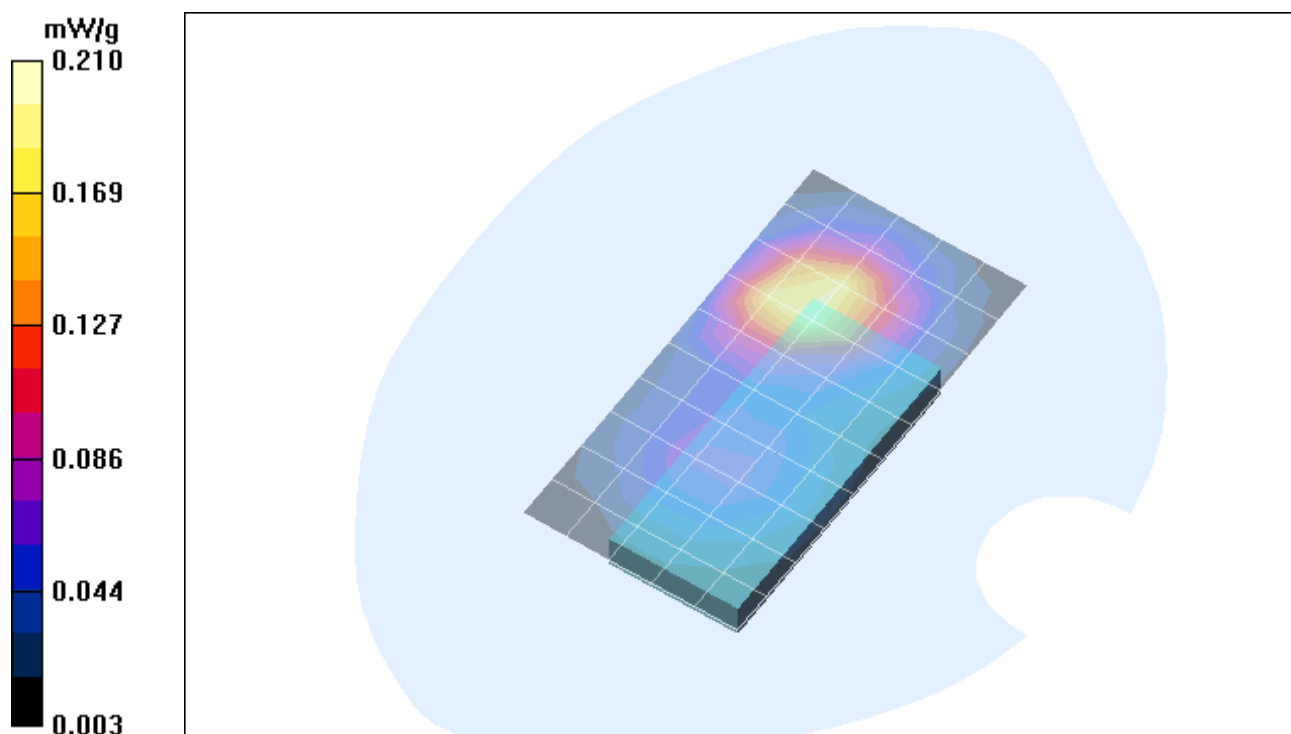


Fig. 7: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset, with 20 mm distance (July 18, 2006; Ambient Temperature: 22.1° C; Liquid Temperature: 21.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [742bphm 7 BT 20mm.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Body Worn

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.84, 7.84, 7.84); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Maximum value of SAR (measured) = 0.194 mW/g

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

Reference Value = 6.06 V/m; Power Drift = 0.094 dB

Peak SAR (extrapolated) = 0.306 W/kg

SAR(1 g) = 0.190 mW/g; SAR(10 g) = 0.113 mW/g

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

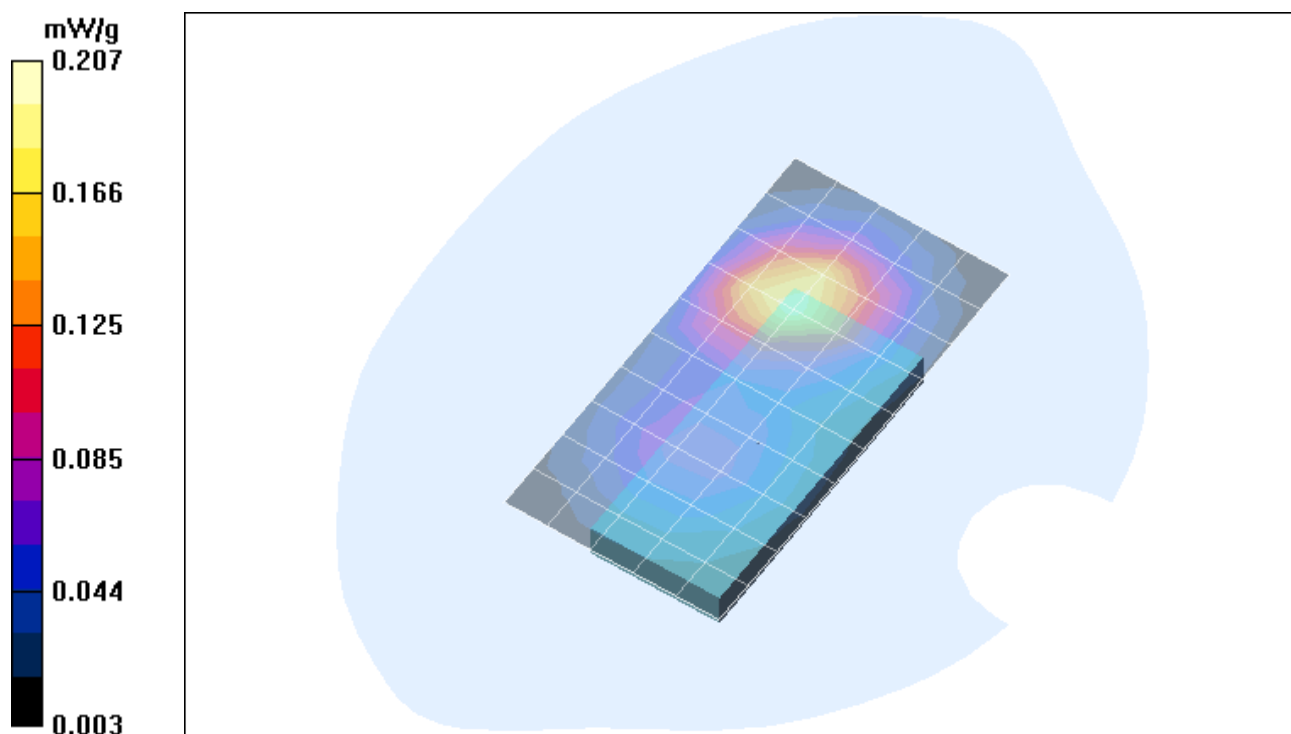


Fig. 8: SAR distribution for GSM 1900, channel 661, body worn configuration, antenna towards the phantom, without accessory with Bluetooth activated, with 20 mm distance (July 18, 2006; Ambient Temperature: 22.1° C; Liquid Temperature: 21.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [742bphm 8 data 20mm.da4](#)

DUT: BenQ Siemenes ; **Type:** E71; **Serial:** 004401490055742

Program Name: Body Worn

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.84, 7.84, 7.84); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Maximum value of SAR (measured) = 0.383 mW/g

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

Reference Value = 8.78 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.638 W/kg

SAR(1 g) = 0.402 mW/g; SAR(10 g) = 0.243 mW/g

Maximum value of SAR (measured) = 0.434 mW/g

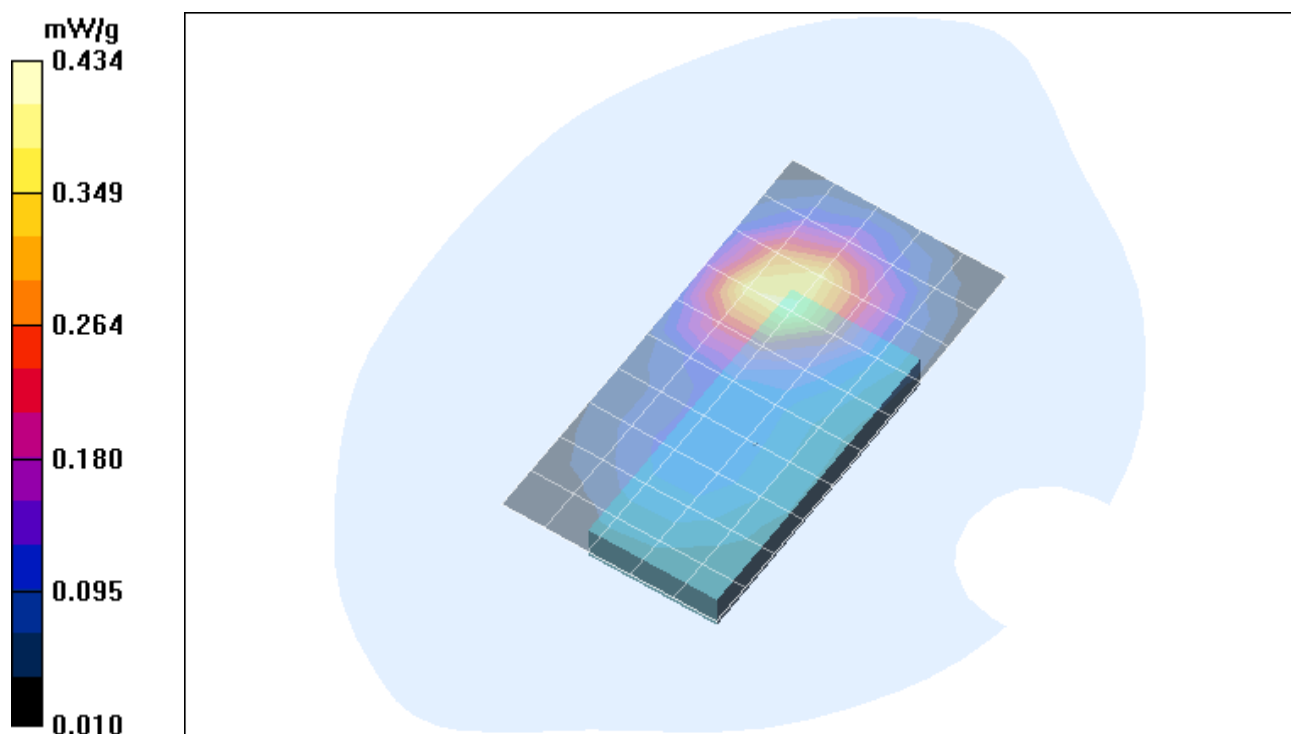


Fig. 9: SAR distribution for GPRS 1900, channel 661, body worn configuration, antenna towards the phantom, with data cable, with 20 mm distance (July 18, 2006; Ambient Temperature: 22.1° C; Liquid Temperature: 21.4° C).

3 SAR z-axis scans (Validation)

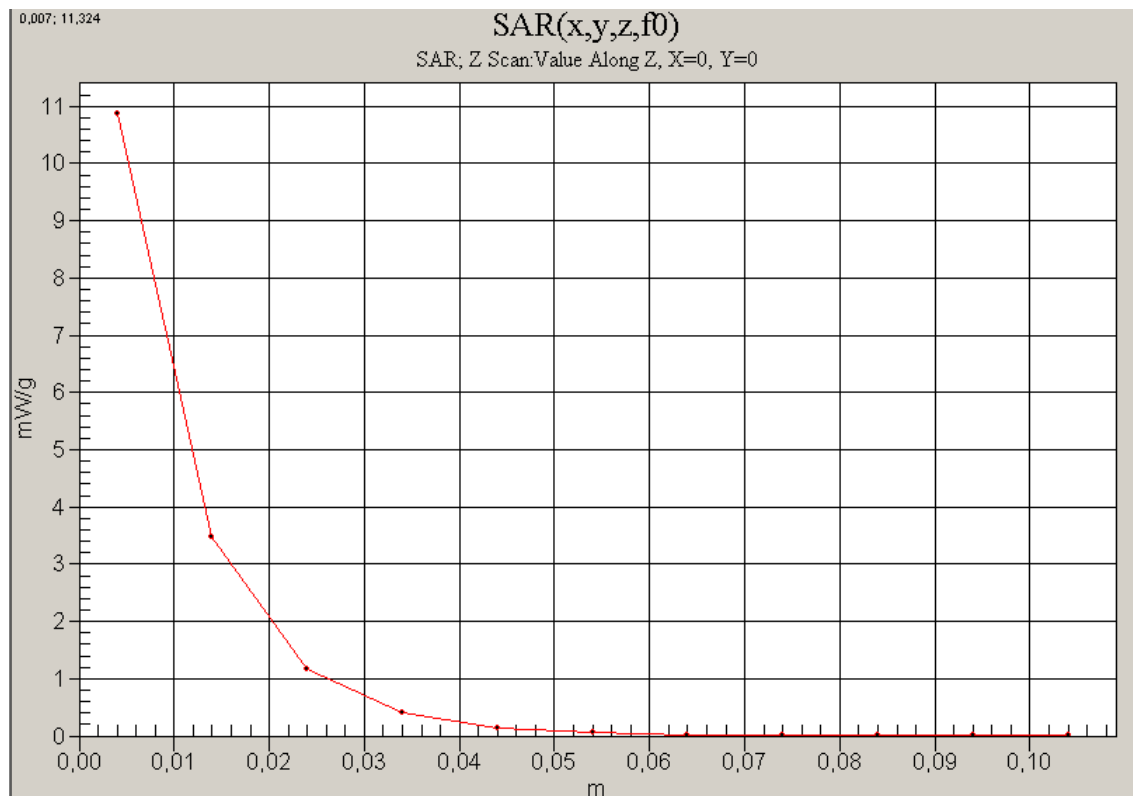


Fig. 10: SAR versus liquid depth, 1900 MHz, head (July 18, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.3° C).

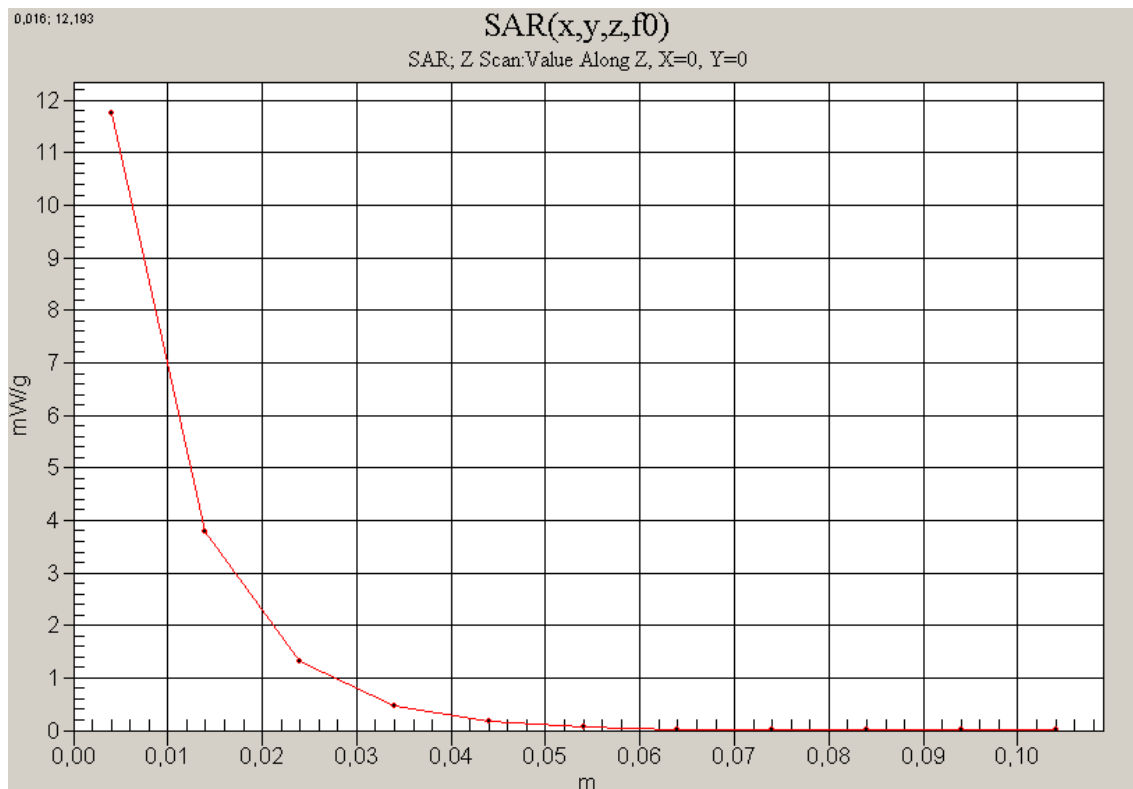


Fig. 11: SAR versus liquid depth, 1900 MHz, body (July 18, 2006; Ambient Temperature: 22.3° C; Liquid Temperature : 21.6° C).

4 SAR z-axis scans (Measurements)

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

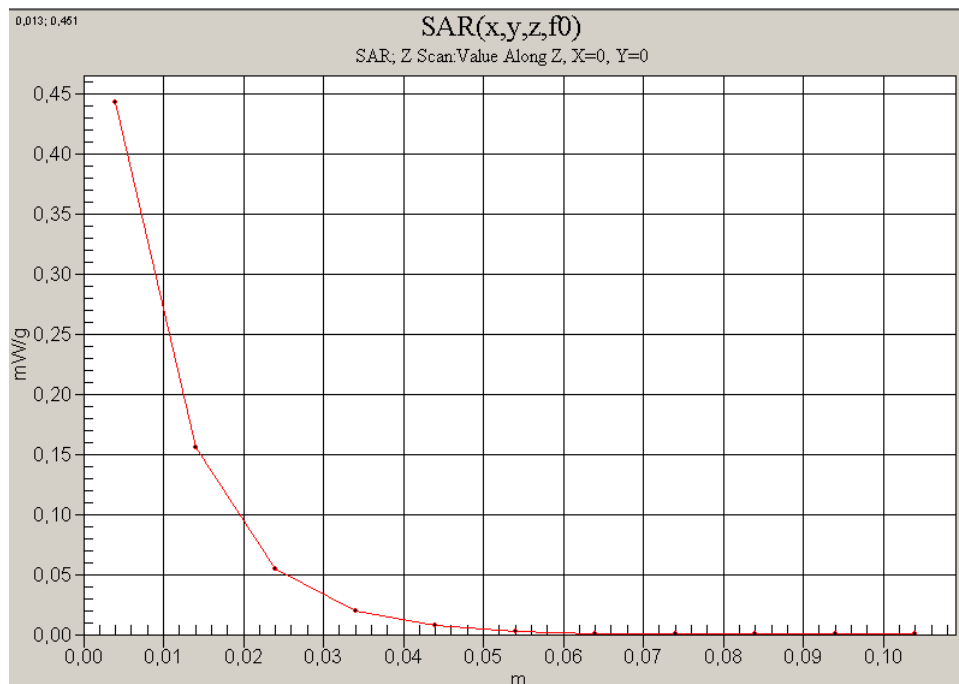


Fig. 12: SAR versus liquid depth, head: PCS 1900, channel 661, cheek position, left side of head, with Bluetooth activated (July 18, 2006; Ambient Temperature: 22.3° C; Liquid Temperature : 21.5° C).

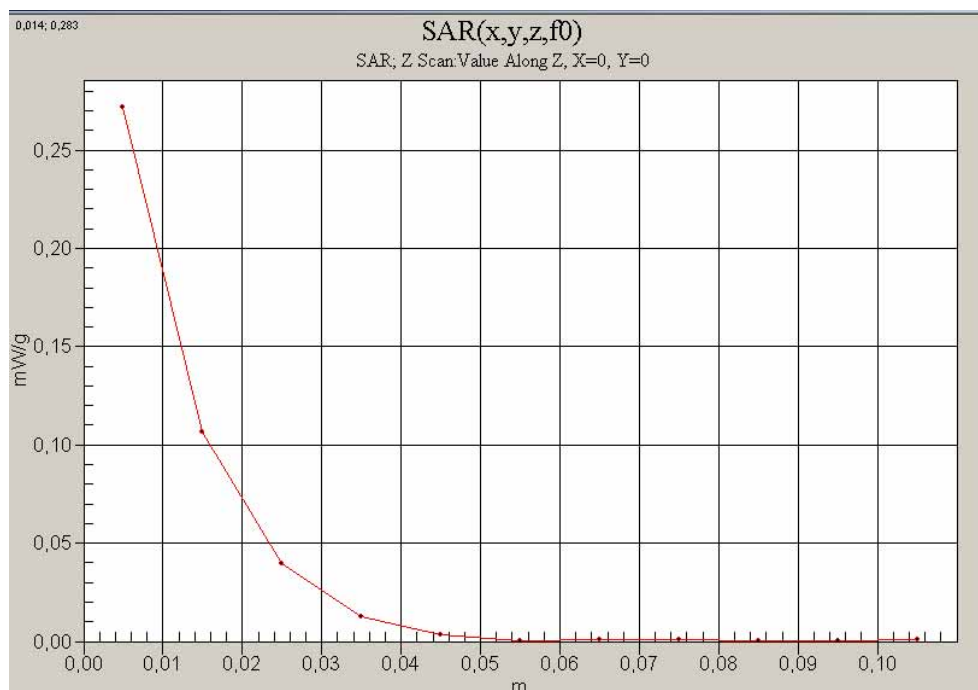


Fig. 13: SAR versus liquid depth, body: GPRS 1900, channel 661, data cable, with 20 mm distance (July 18, 2006; Ambient Temperature: 22.1° C; Liquid Temperature: 21.4° C).