
Appendix for the Report

Dosimetric Assessment of the Siemens A65 (FCC ID: PWX-A65) According to the FCC Requirements

SAR Distribution Plots

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

Test Laboratory: IMST GmbH; File Name: [083plm_1.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 15.4 V/m; Power Drift = 0.027 dB

Maximum value of SAR (measured) = 0.348 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 = 0.027 dB

Maximum value of SAR (measured) = 0.352 mW/g

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.186 mW/g

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

Reference Value = 15.4 V/m; Power Drift = 0.027 dB

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

Peak SAR (extrapolated) = 0.436 W/kg

SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.133 mW/g

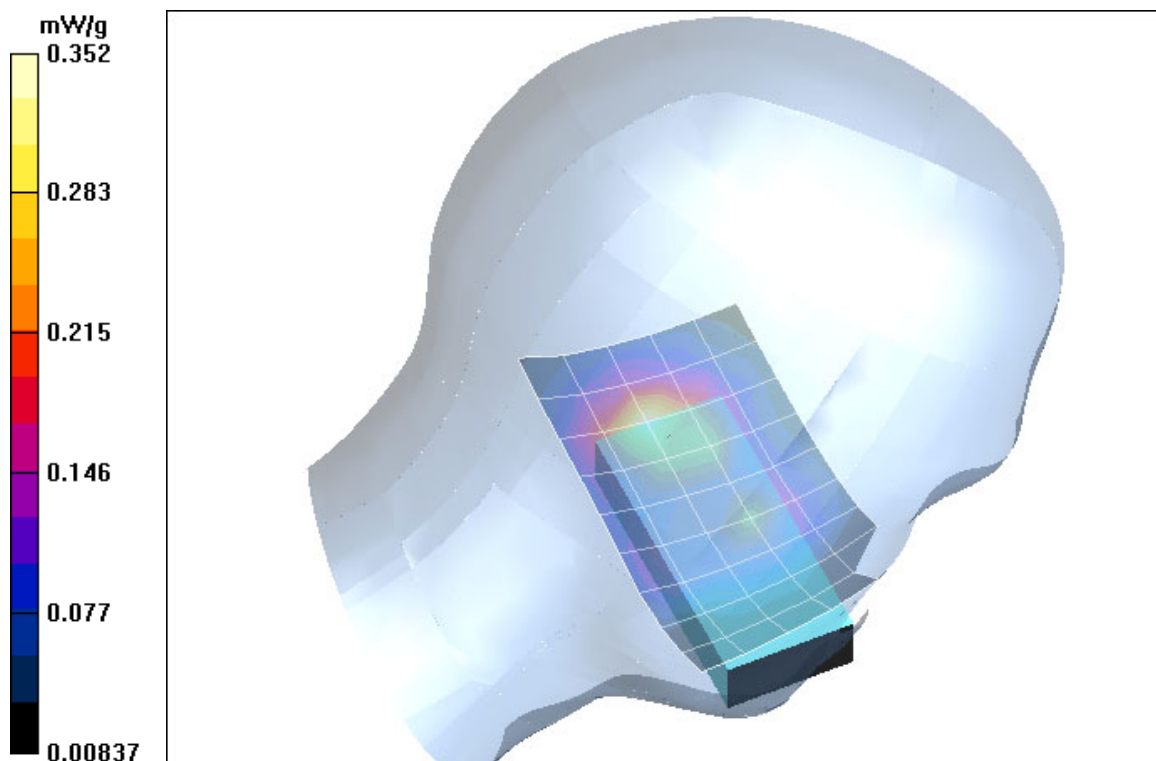


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (23.07.2004; Ambient Temperature: 21.2° C; Liquid Temperature : 20.4° C).

Test Laboratory: IMST GmbH; File Name: [083plm_2.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 16.6 V/m; Power Drift = -0.038 dB

Maximum value of SAR (measured) = 0.386 mW/g

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

Reference Value = 16.6 V/m; Power Drift = -0.038 dB

Maximum value of SAR (measured) = 0.386 mW/g

Peak SAR (extrapolated) = 0.554 W/kg

SAR(1 g) = 0.347 mW/g; SAR(10 g) = 0.194 mW/g

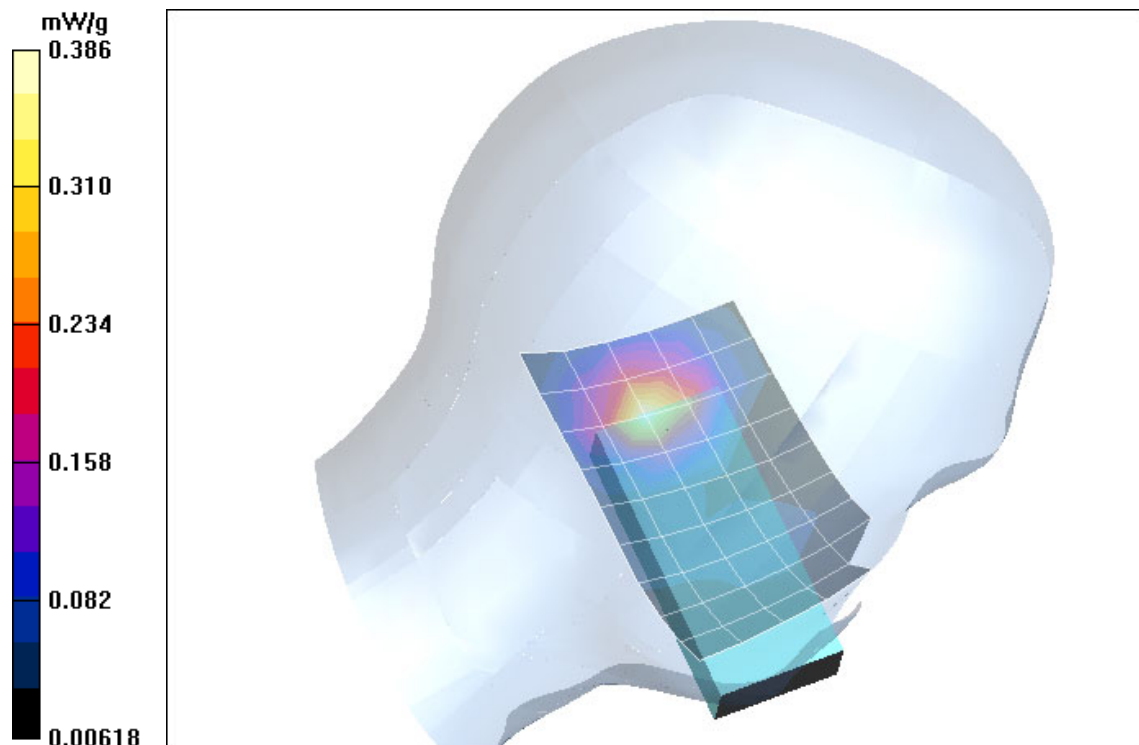


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (23.07.2004; Ambient Temperature: 21.3° C; Liquid Temperature : 20.4° C).

Test Laboratory: IMST GmbH; File Name: [083prm_1.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 13 V/m; Power Drift = 0.017 dB

Maximum value of SAR (measured) = 0.494 mW/g

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

Reference Value = 13 V/m; Power Drift = 0.017 dB

Maximum value of SAR (measured) = 0.502 mW/g

Peak SAR (extrapolated) = 0.659 W/kg

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.221 mW/g

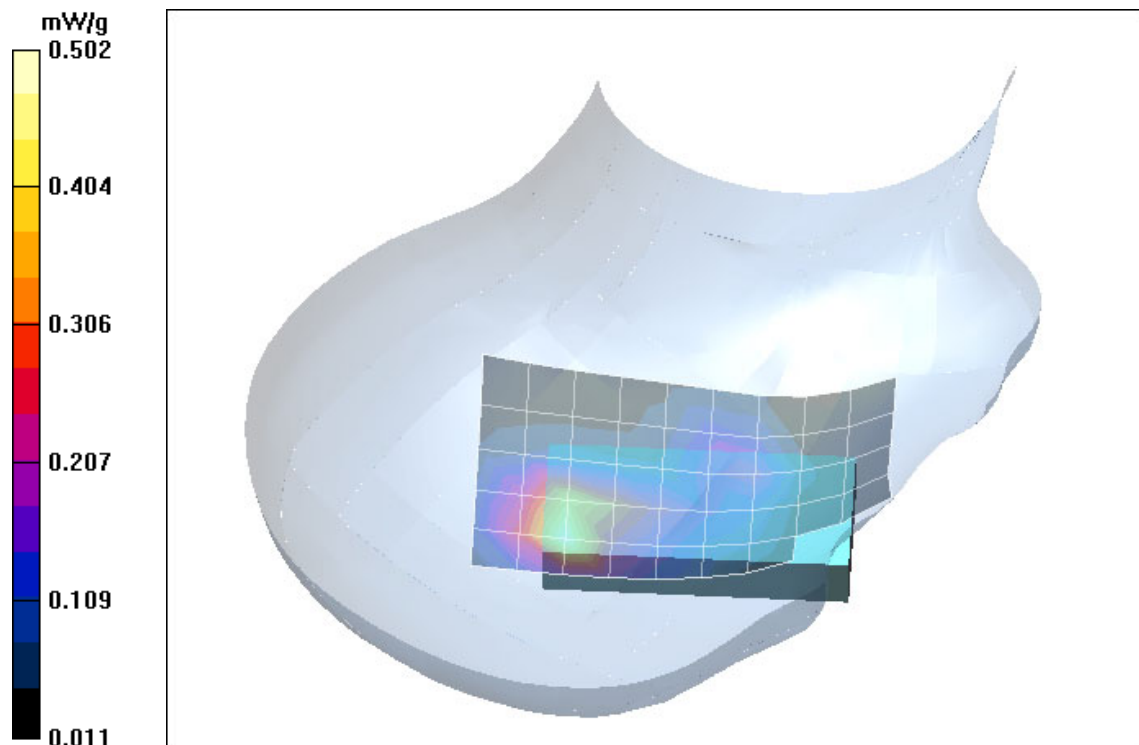


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (23.07.2004; Ambient Temperature: 21.3° C; Liquid Temperature : 20.4° C).

Test Laboratory: IMST GmbH; File Name: [083prm_2.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 12.9 V/m; Power Drift = 0.065 dB

Maximum value of SAR (measured) = 0.385 mW/g

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

Reference Value = 12.9 V/m; Power Drift = 0.065 dB

Maximum value of SAR (measured) = 0.545 mW/g

Peak SAR (extrapolated) = 0.749 W/kg

SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.223 mW/g

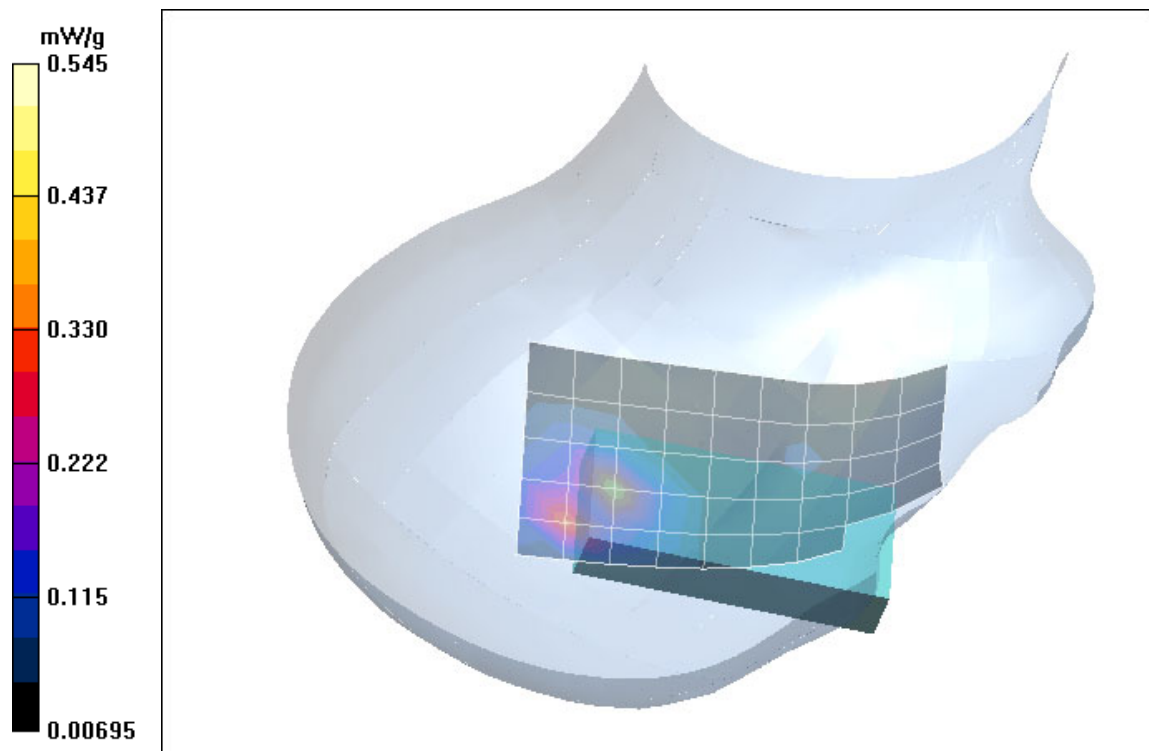


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (23.07.2004; Ambient Temperature: 21.3° C; Liquid Temperature : 20.4° C).

2 SAR Distribution Plots, PCS 1900 Head with Cam

Test Laboratory: IMST GmbH; File Name: [083plm_1_cam.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 16 V/m; Power Drift = -0.045 dB

Maximum value of SAR (measured) = 0.346 mW/g

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

Reference Value = 16 V/m; Power Drift = -0.045 dB

Maximum value of SAR (measured) = 0.331 mW/g

Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.169 mW/g

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

Reference Value = 16 V/m; Power Drift = -0.045 dB

Maximum value of SAR (measured) = 0.258 mW/g

Peak SAR (extrapolated) = 0.347 W/kg

SAR(1 g) = 0.224 mW/g; SAR(10 g) = 0.133 mW/g

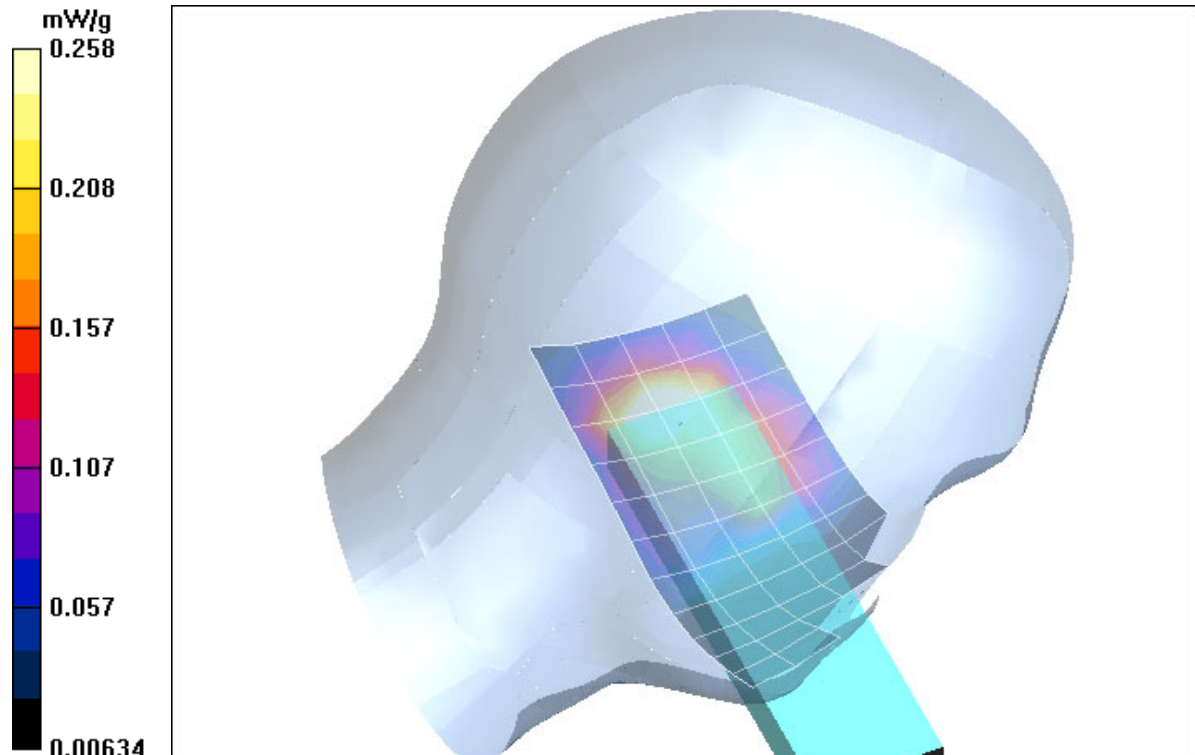


Fig. 5: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (23.07.2004; Ambient Temperature: 22.1° C; Liquid Temperature 20.6° C).

Test Laboratory: IMST GmbH; File Name: [083plm_2_cam.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 16.3 V/m; Power Drift = 0.015 dB

Maximum value of SAR (measured) = 0.291 mW/g

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

Reference Value = 16.3 V/m; Power Drift = 0.015 dB

Maximum value of SAR (measured) = 0.347 mW/g

Peak SAR (extrapolated) = 0.538 W/kg

SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.162 mW/g

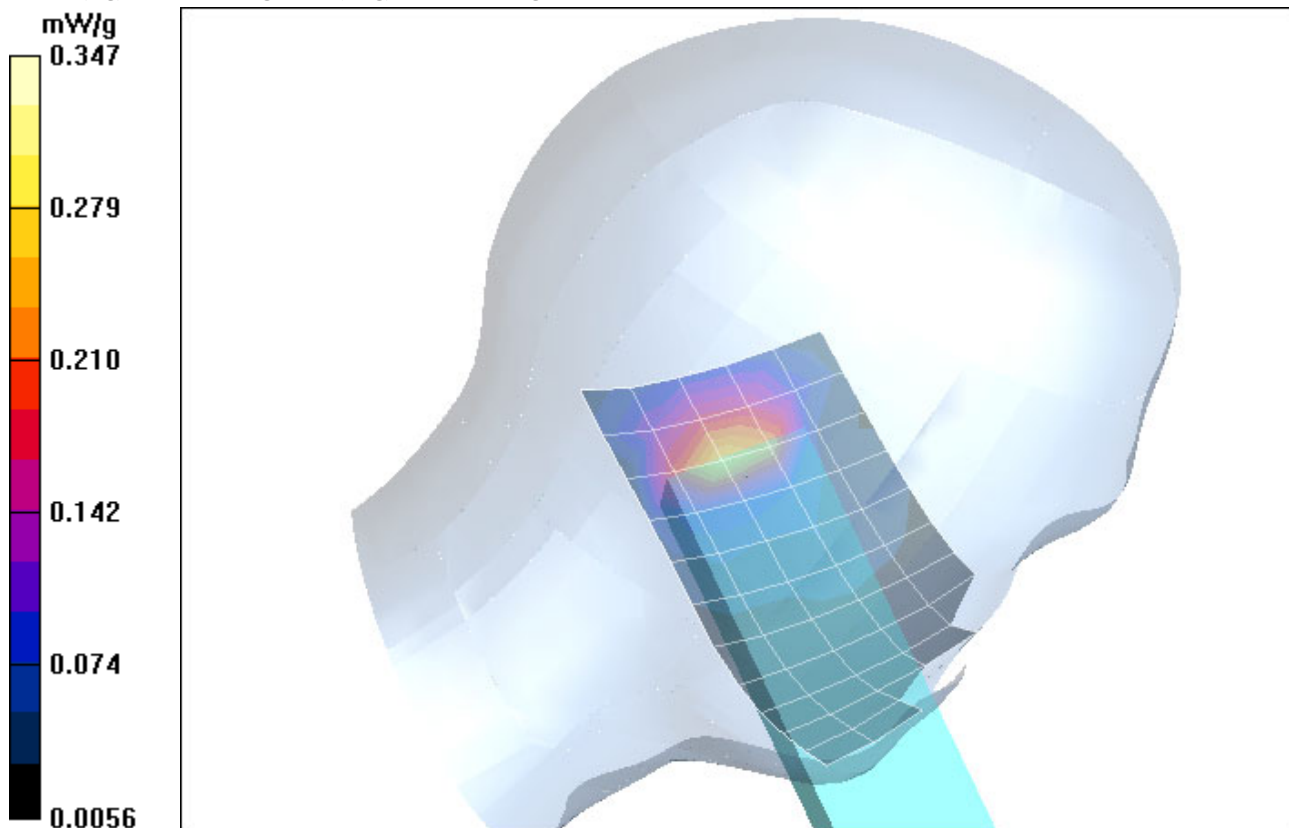


Fig. 6: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (23.07.2004; Ambient Temperature: 22.1° C; Liquid Temperature 20.6° C).

Test Laboratory: IMST GmbH; File Name: [083prm_1_cam.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.9 V/m; Power Drift = -0.099 dB

Maximum value of SAR (measured) = 0.377 mW/g

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

Reference Value = 11.9 V/m; Power Drift = -0.099 dB

Maximum value of SAR (measured) = 0.479 mW/g

Peak SAR (extrapolated) = 0.763 W/kg

SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.228 mW/g

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

Reference Value = 11.9 V/m; Power Drift = -0.099 dB

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

Peak SAR (extrapolated) = 0.550 W/kg

SAR(1 g) = 0.260 mW/g; SAR(10 g) = 0.162 mW/g

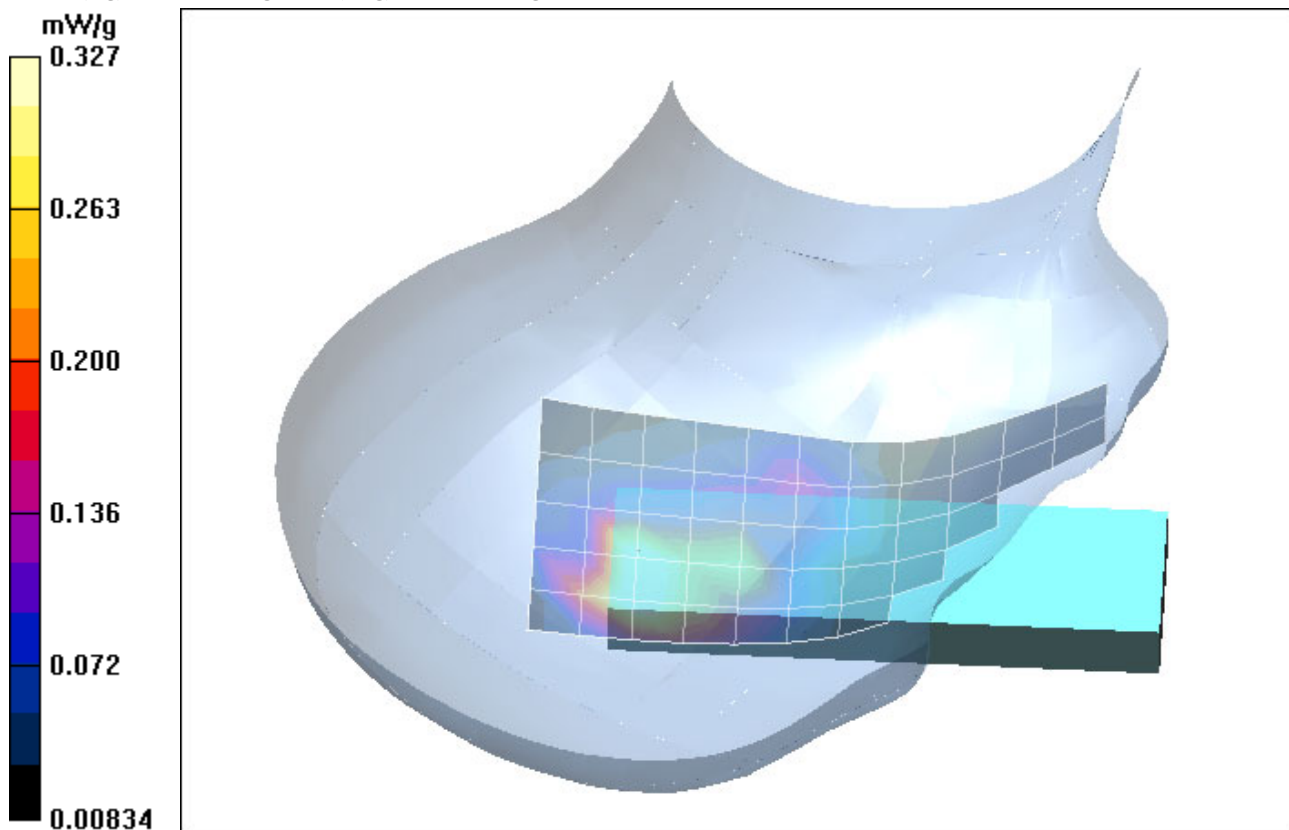


Fig. 7: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (23.07.2004; Ambient Temperature: 22.1° C; Liquid Temperature 20.6° C).

Test Laboratory: IMST GmbH; File Name: [083prm_2_cam.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

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; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn489; Calibrated: 19.07.2004
- 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 (6x13x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 10 V/m; Power Drift = 0.025 dB

Maximum value of SAR (measured) = 0.302 mW/g

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

Reference Value = 10 V/m; Power Drift = 0.025 dB

Maximum value of SAR (measured) = 0.454 mW/g

Peak SAR (extrapolated) = 0.728 W/kg

SAR(1 g) = 0.417 mW/g; SAR(10 g) = 0.219 mW/g

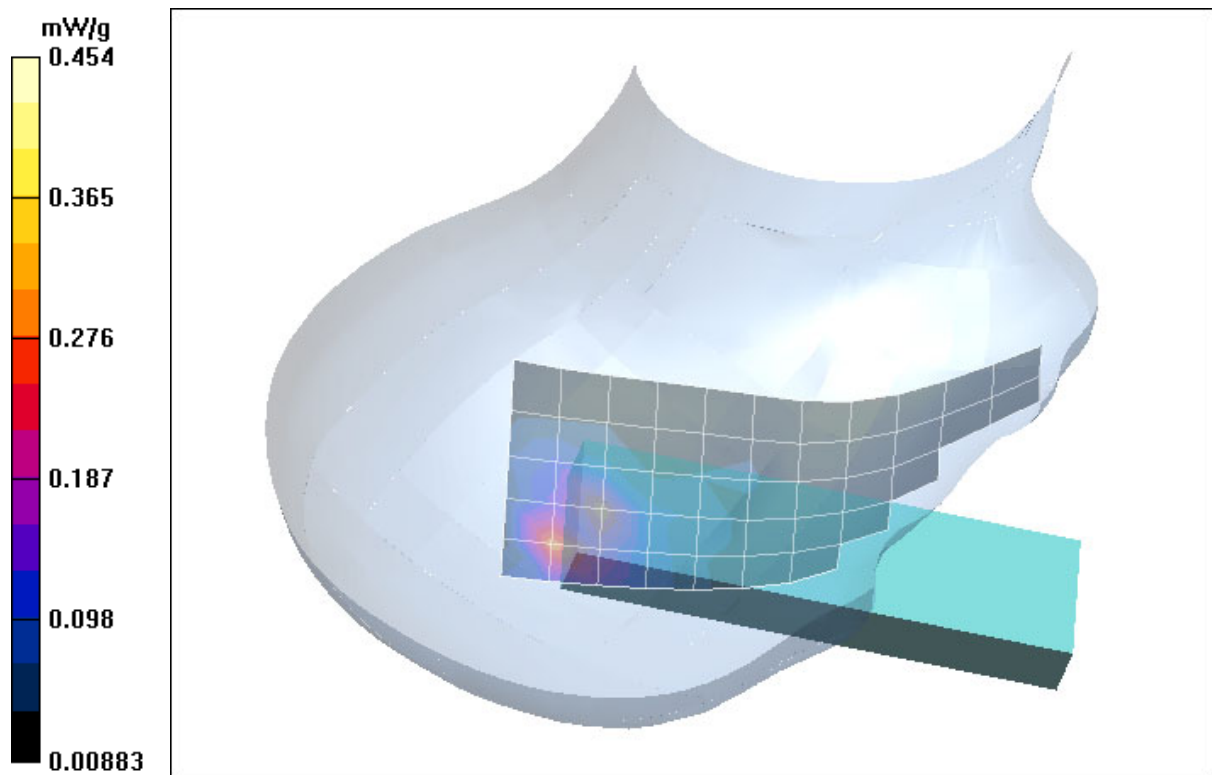


Fig. 8: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (23.07.2004; Ambient Temperature: 22.1° C; Liquid Temperature 20.6° C).

3 SAR Distribution Plots, PCS 1900 Body with headset

Test Laboratory: IMST GmbH; File Name: [083phm_1.da4](#)

DUT: Siemens A65; Type: 004400005978083;

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000$ 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 13.5 V/m; Power Drift = -0.187 dB

Maximum value of SAR (measured) = 0.489 mW/g

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

Reference Value = 13.5 V/m; Power Drift = -0.187 dB

Maximum value of SAR (measured) = 0.547 mW/g

Peak SAR (extrapolated) = 0.721 W/kg

SAR(1 g) = 0.507 mW/g; SAR(10 g) = 0.318 mW/g

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

Reference Value = 13.5 V/m; Power Drift = -0.187 dB

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

Peak SAR (extrapolated) = 0.630 W/kg

SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.235 mW/g

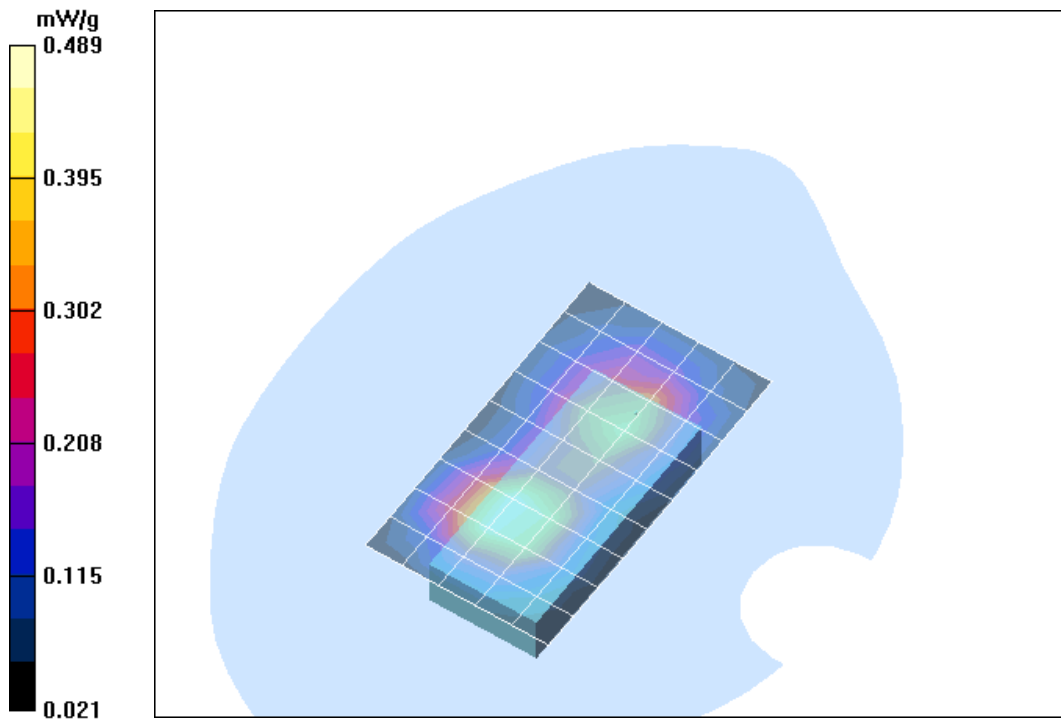


Fig. 9: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset 1TX and FCT 650 carry case (15.07.2004; Ambient Temperature: 21.3° C; Liquid Temperature : 20.3° C).

Test Laboratory: IMST GmbH; File Name: [083phm_2.da4](#)

DUT: Siemens A65; Type: 004400005978083;

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000$ 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.5 V/m; Power Drift = -0.038 dB

Maximum value of SAR (measured) = 0.344 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 = -0.038 dB

Maximum value of SAR (measured) = 0.373 mW/g

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.220 mW/g

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

Reference Value = 11.5 V/m; Power Drift = -0.038 dB

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

Peak SAR (extrapolated) = 0.416 W/kg

SAR(1 g) = 0.271 mW/g; SAR(10 g) = 0.172 mW/g

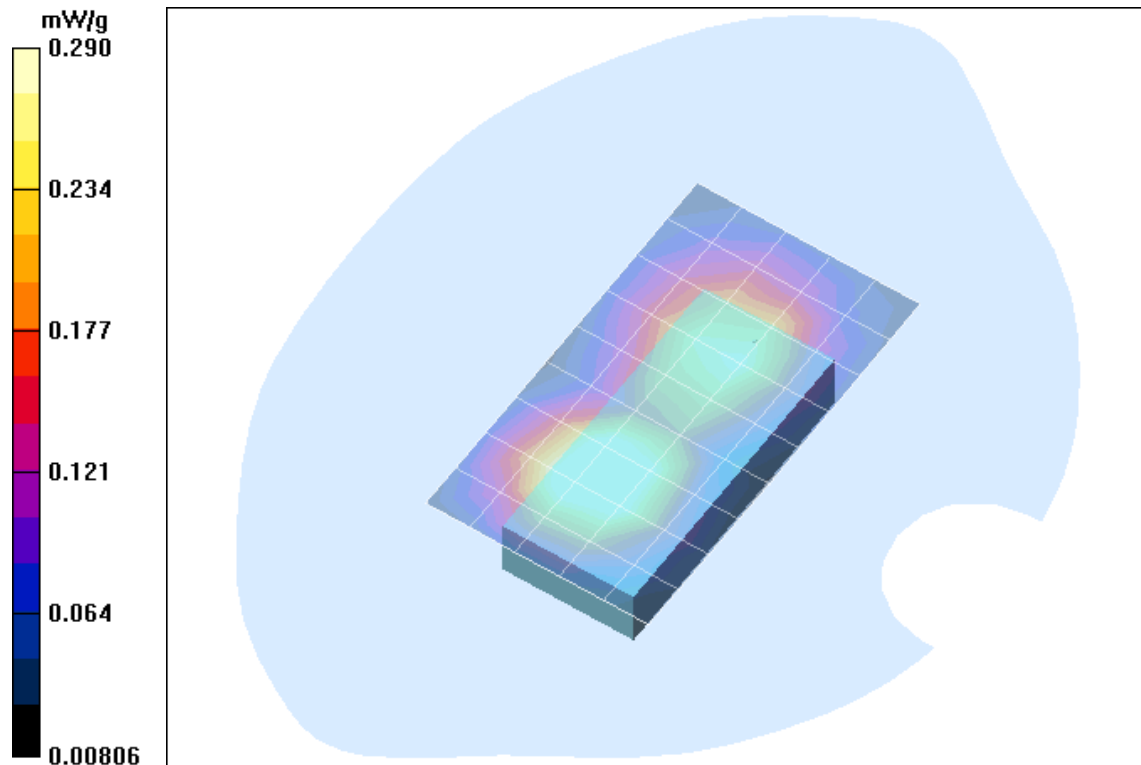


Fig. 10: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset 1TX and FCL 600 carry case (15.07.2004; Ambient Temperature: 21.2° C; Liquid Temperature : 20.4° C).

4 SAR Distribution Plots, PCS 1900 Body with data cable

Test Laboratory: IMST GmbH; File Name: [083phm_3.da4](#)

DUT: Siemens; Type: A65; Serial: 004400005978083

Program Name: Body Worn

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

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000$ 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 (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.7 V/m; Power Drift = -0.096 dB

Maximum value of SAR (measured) = 0.287 mW/g

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

Reference Value = 11.7 V/m; Power Drift = -0.096 dB

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

Peak SAR (extrapolated) = 0.410 W/kg

SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.173 mW/g

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

Reference Value = 11.7 V/m; Power Drift = -0.096 dB

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

Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.141 mW/g

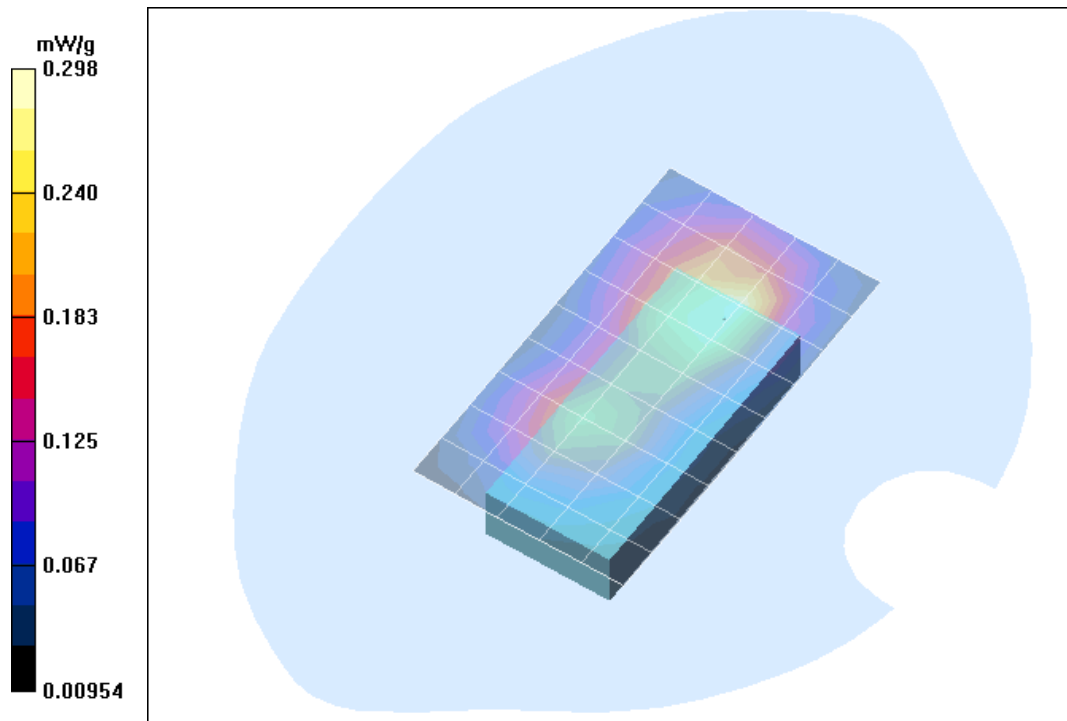


Fig. 11: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with data cable 1TX and FCL 600 carry case (15.07.2004; Ambient Temperature: 21.3° C; Liquid Temperature : 20.4° C).

5 SAR z-axis scans (Validation)

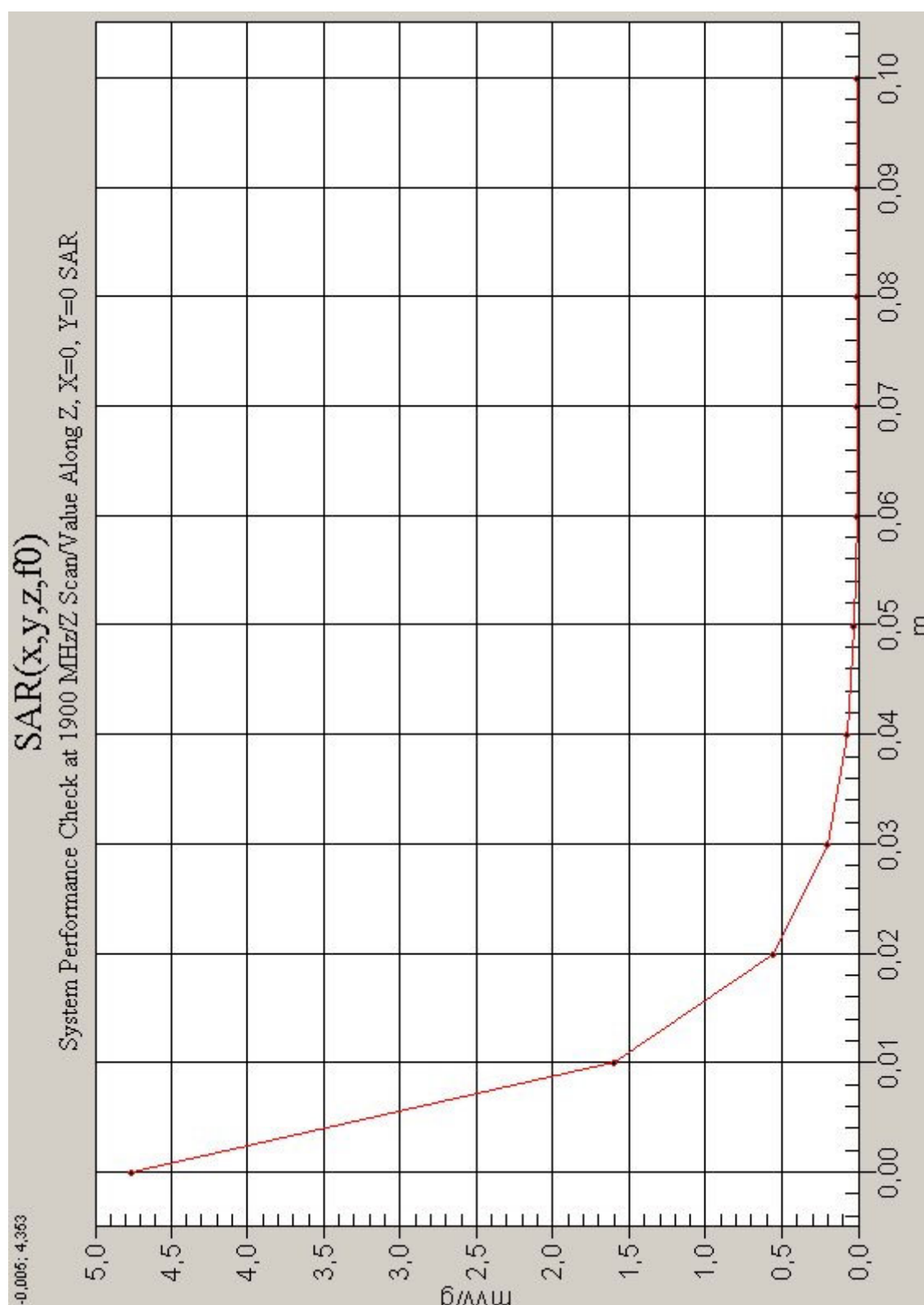


Fig. 12: SAR versus liquid depth, 1900 MHz, head (23.07.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 20.5° C).

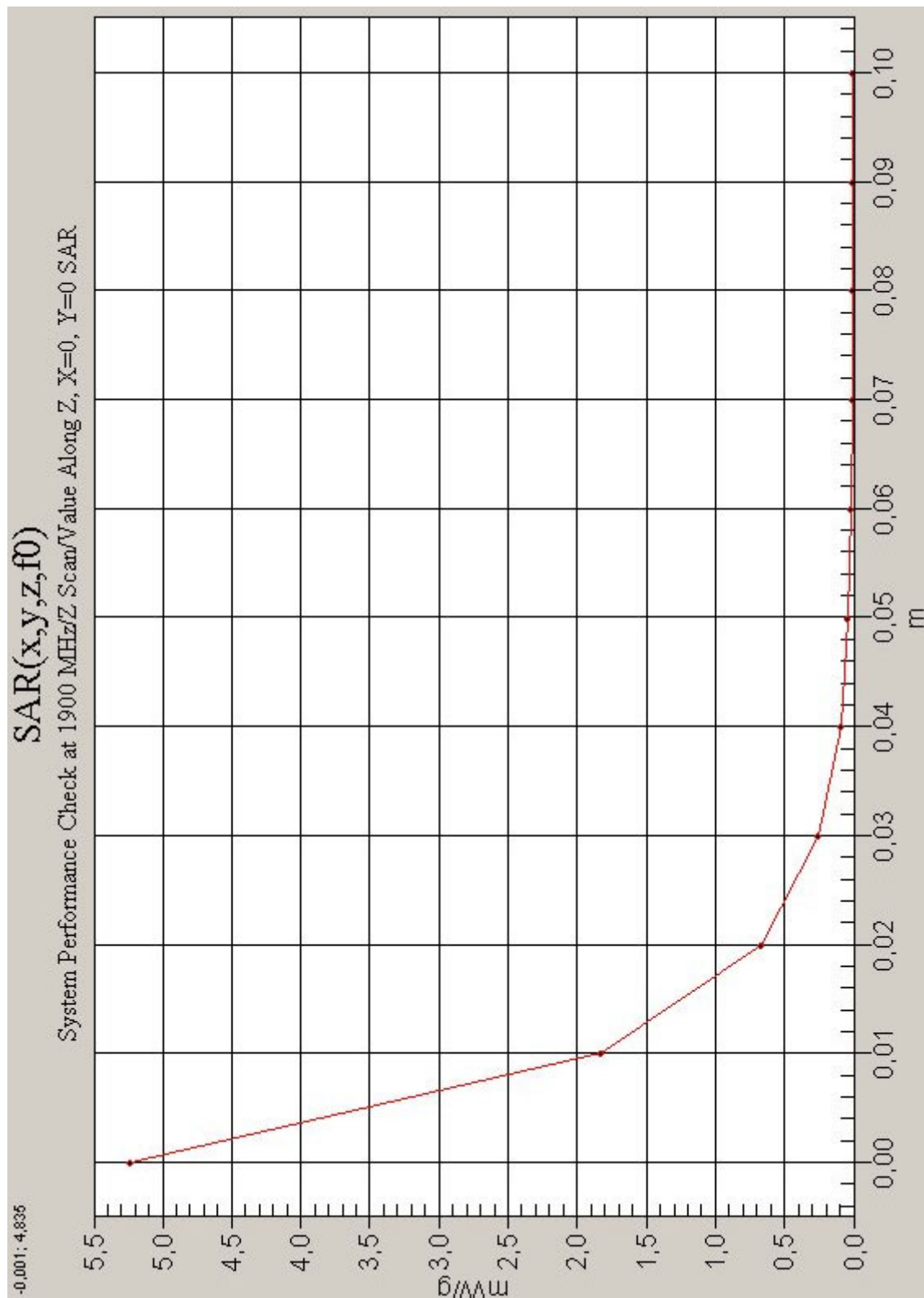


Fig. 13: SAR versus liquid depth, 1900 MHz, body (15.07.2004; Ambient Temperature: 21.1° C; Liquid Temperature : 20.6° C).

6 SAR z-axis scans (Measurements)

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

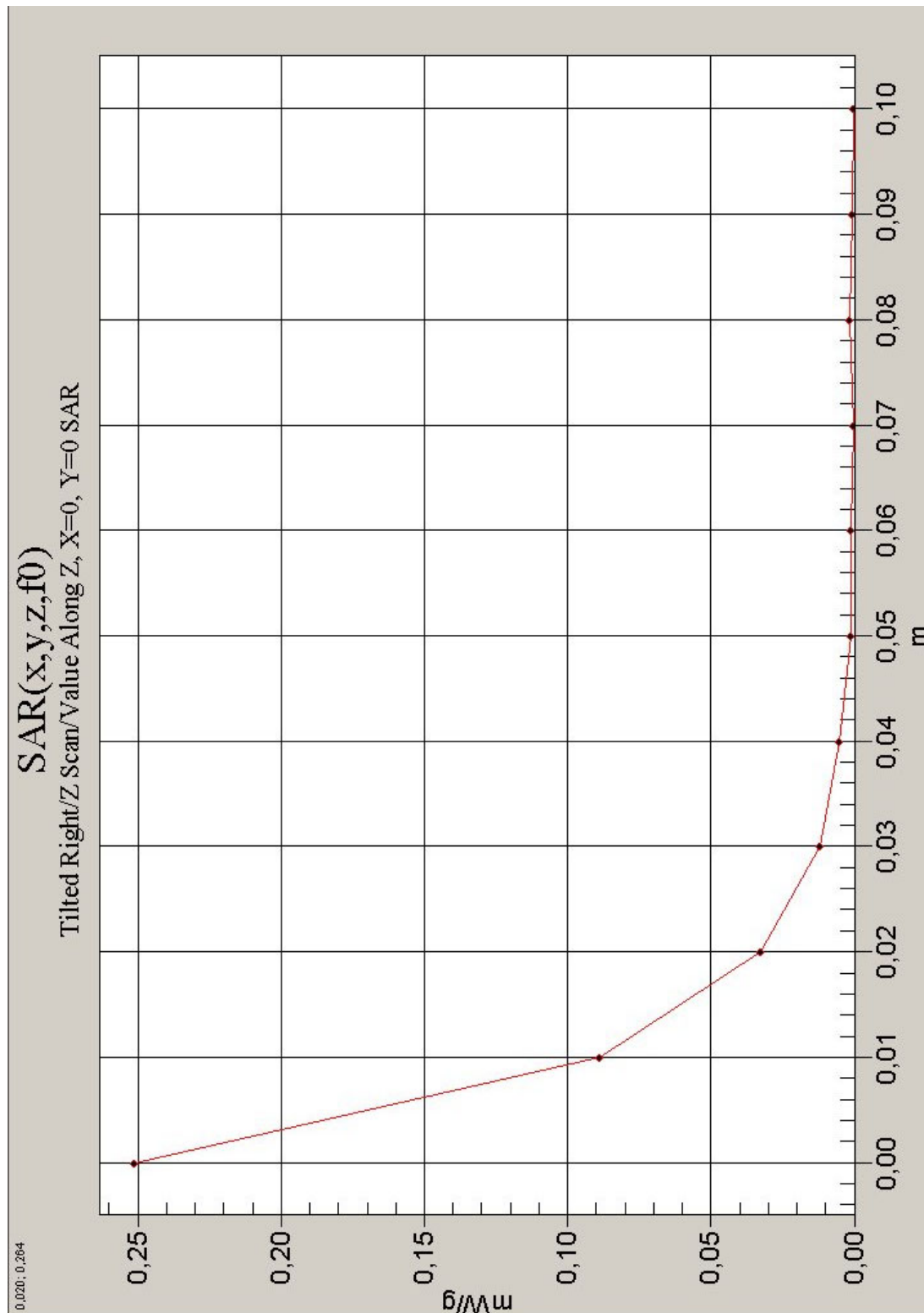


Fig. 14: SAR versus liquid depth, head: without cam , PCS 1900, channel 661, tilted position, right side of head. (23.07.2004, Ambient Temperature: 21.3° C; Liquid Temperature : 20.4° C).

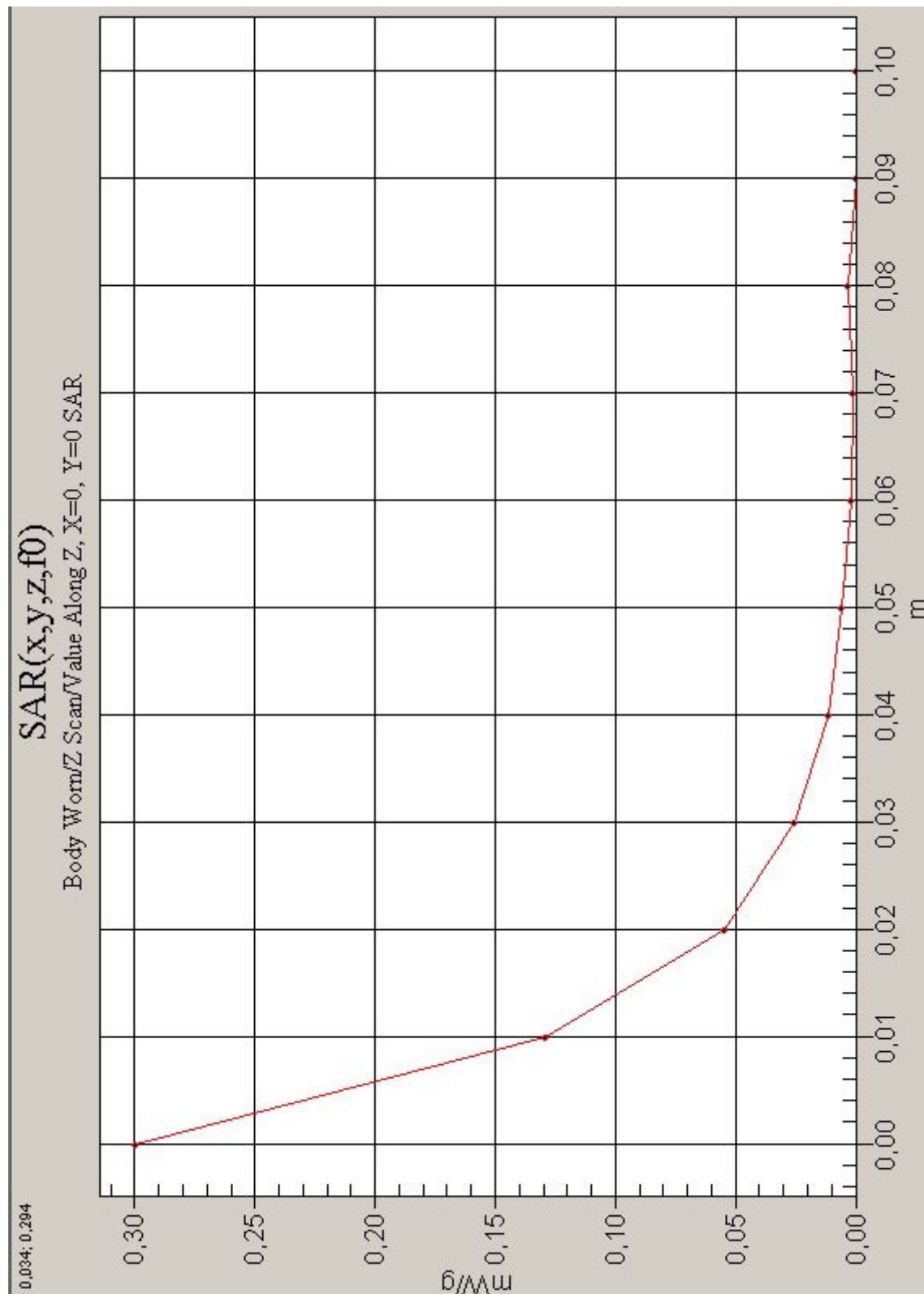


Fig. 15: SAR versus liquid depth: PCS 1900, channel 661, body worn configuration, antenna towards the phantom, headset, 1TX and FCT 650 carry case (15.07.2004, Ambient Temperature: 21.3° C; Liquid Temperature : 20.3° C).