
Appendix for the Report

Dosimetric Assessment of the Siemens A70 (FCC ID: PWXA70)

According to the FCC Requirements

SAR Distribution Plots

August 31, 2005
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1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: [672yplm_1.da4](#)

DUT: Siemens; Type: A70; Serial: 004400000168672

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; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(5.11, 5.11, 5.11); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

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

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

Reference Value = 12.7 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.377 W/kg

SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.135 mW/g

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

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

Reference Value = 12.7 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.205 W/kg

SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.133 mW/g

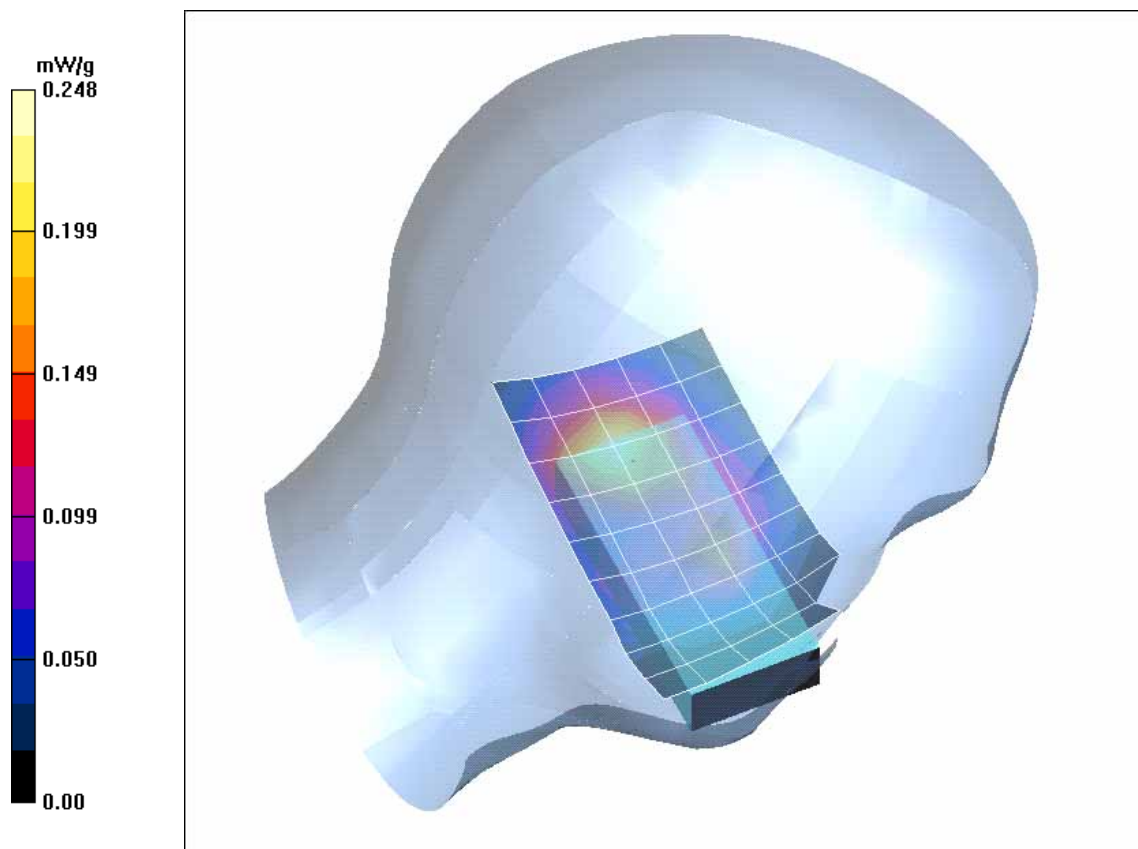


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head (August 29, 2005; Ambient Temperature: 22.3° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [672yplm_2.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000168672

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; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(5.11, 5.11, 5.11); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.297 mW/g

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

Reference Value = 13.1 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.449 W/kg

SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.155 mW/g

Maximum value of SAR (measured) = 0.304 mW/g

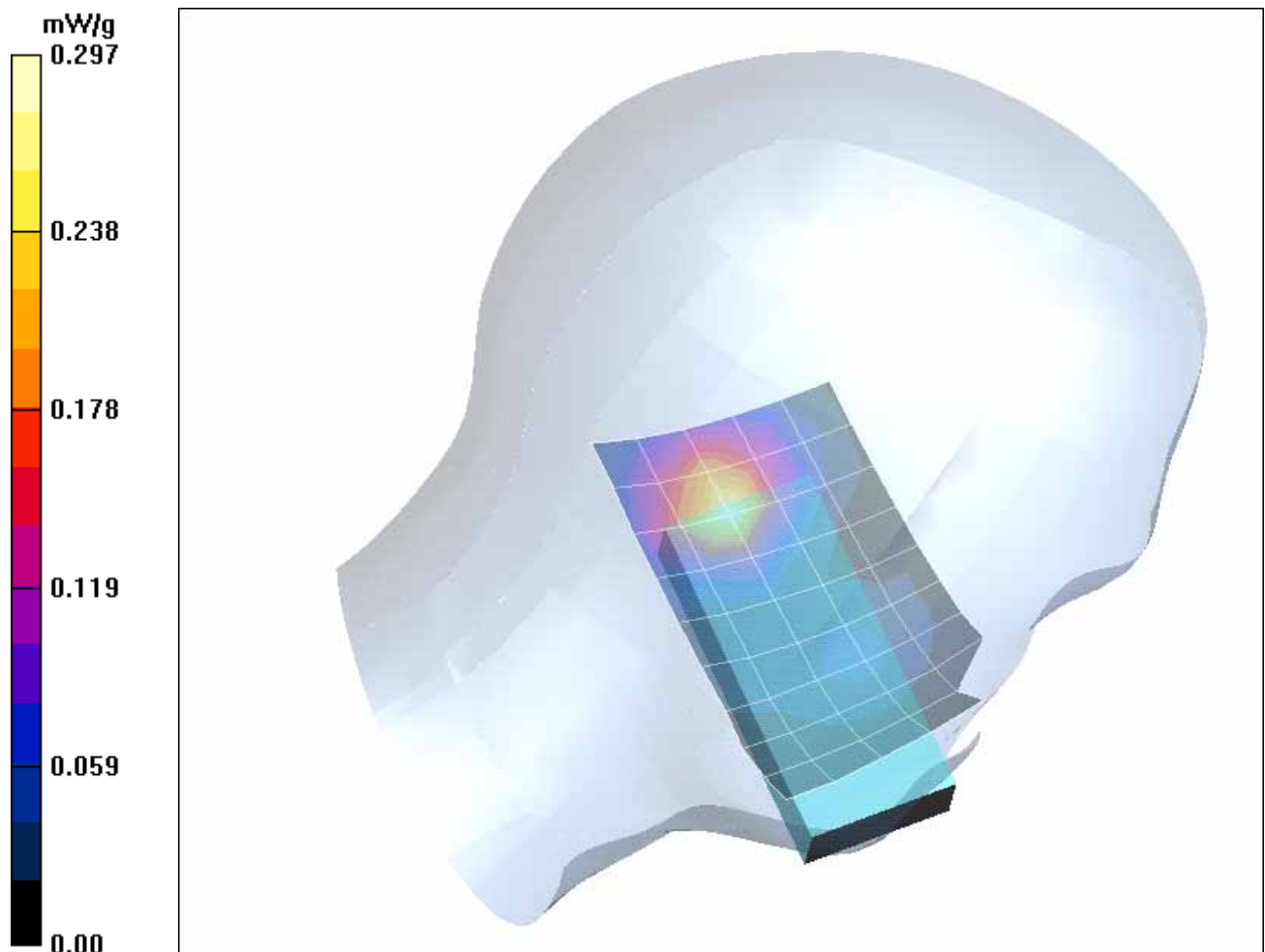


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head (August 29, 2005; Ambient Temperature: 22.2°C; Liquid Temperature: 21.4°C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [672yprm_1.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000168672

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; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(5.11, 5.11, 5.11); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

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

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

Reference Value = 11.9 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.662 W/kg

SAR(1 g) = 0.373 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.409 mW/g

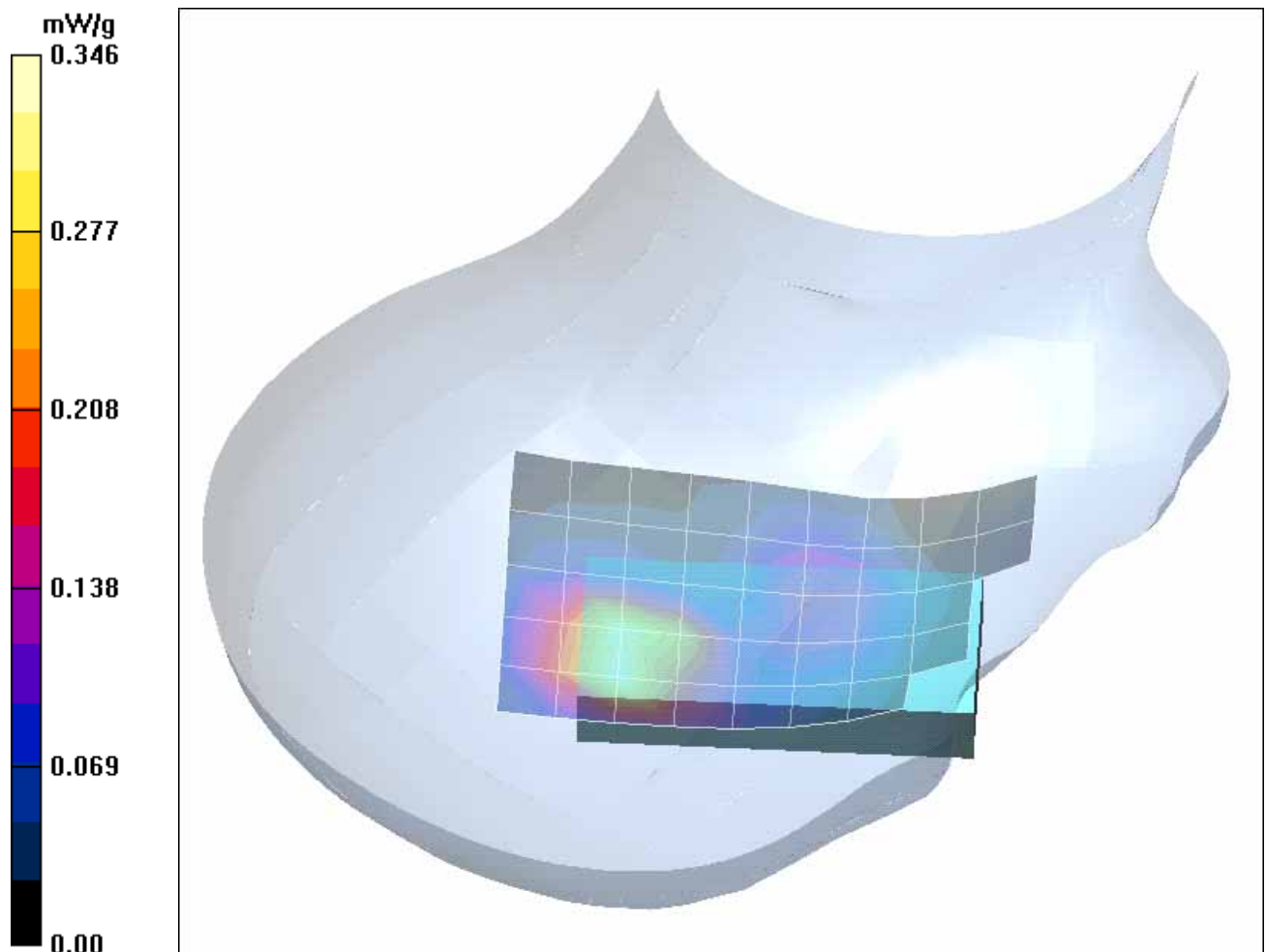


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head (August 29, 2005; Ambient Temperature: 22.4° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [672yprm_2.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000168672

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; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(5.11, 5.11, 5.11); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.362 mW/g

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

Reference Value = 12.3 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 0.694 W/kg

SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.209 mW/g

Maximum value of SAR (measured) = 0.446 mW/g

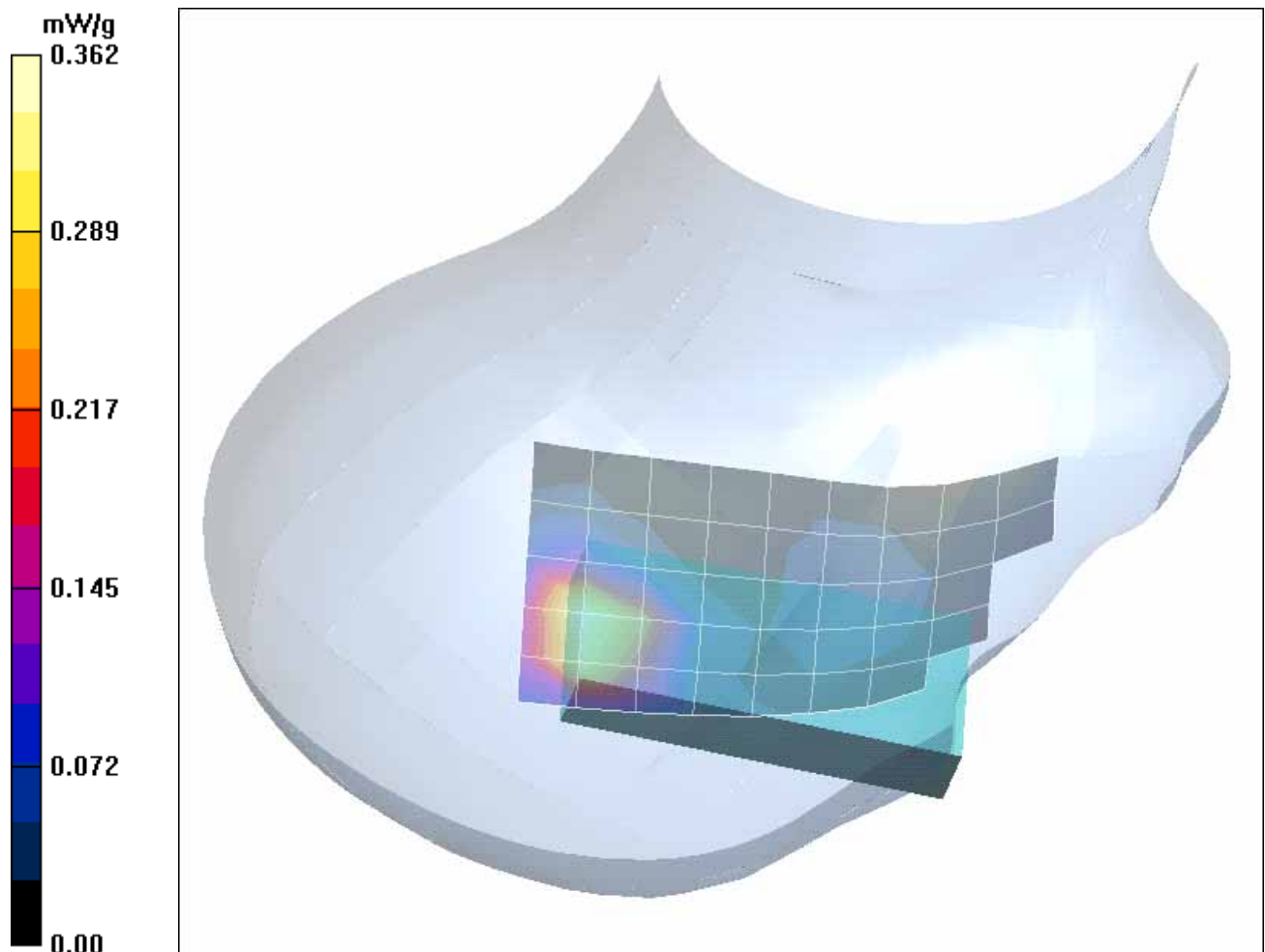


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head (August 29, 2005; Ambient Temperature: 22.4 °C; Liquid Temperature: 21.5° C)

2 SAR Distribution Plots, PCS 1900 Body with headset in GSM mode

Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: [672yphm_4.da4](#)

DUT: Siemens; Type: A70; Serial: 004400000168672

Program Name: Body Worn

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.52, 4.52, 4.52); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.341 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 11.0 V/m; Power Drift = -0.165 dB

Peak SAR (extrapolated) = 0.467 W/kg

SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.211 mW/g

Maximum value of SAR (measured) = 0.365 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 11.0 V/m; Power Drift = -0.165 dB

Peak SAR (extrapolated) = 0.439 W/kg

SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.294 mW/g

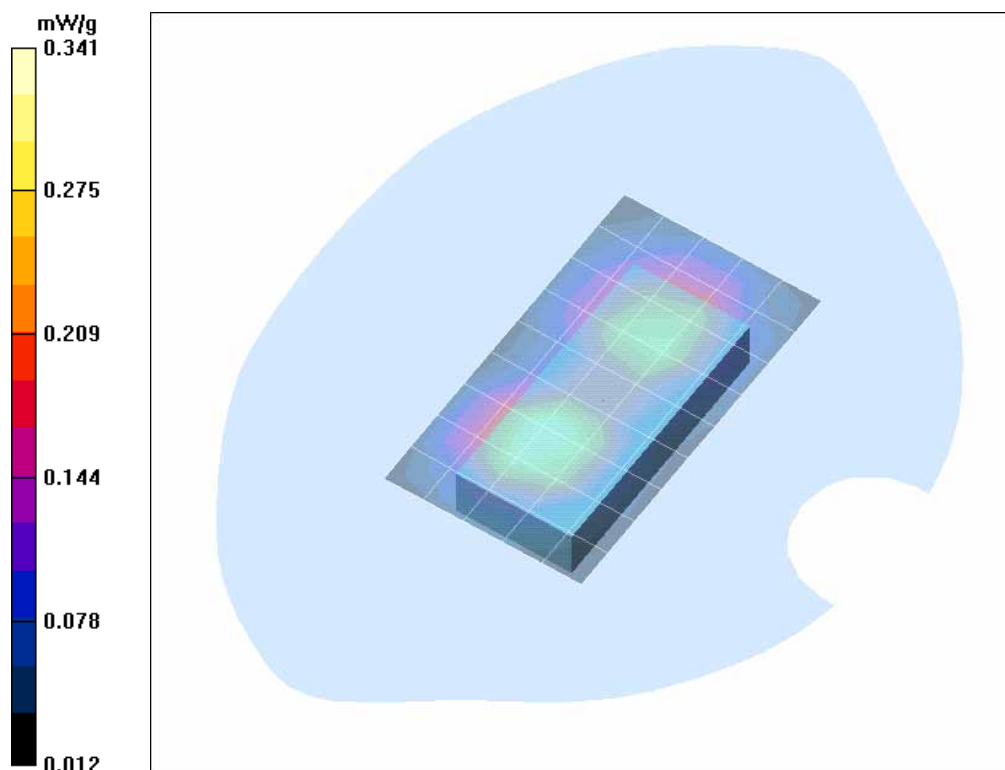


Fig. 5: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset and FCT 650 carry case with 10 mm distance (August 30, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [672yphm_5.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000168672

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.52, 4.52, 4.52); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

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

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 10.4 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.373 W/kg

SAR(1 g) = 0.256 mW/g; SAR(10 g) = 0.162 mW/g

Maximum value of SAR (measured) = 0.279 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 10.4 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.268 W/kg

SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.109 mW/g

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

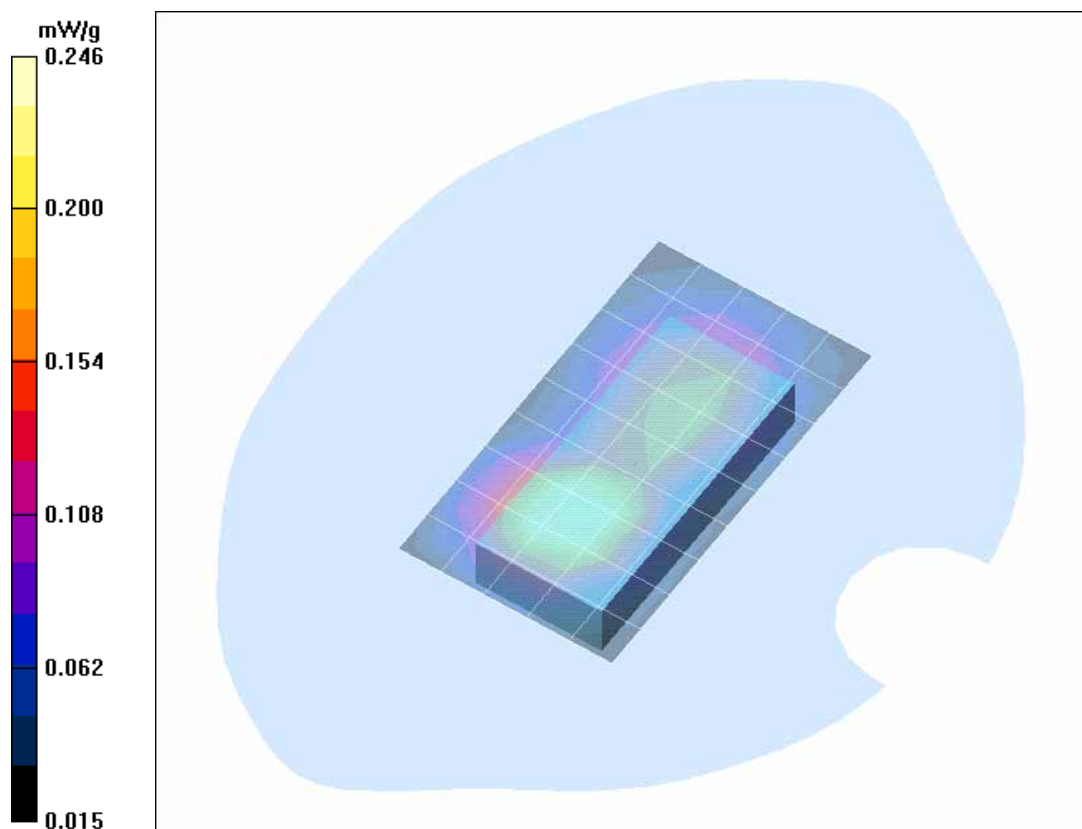


Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset and FCL 600 carry case with 13 mm distance (August 30, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).

3 SAR Distribution Plots, PCS 1900 Body with data cable in GPRS (Class 8)

Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: [672yphm_6.da4](#)

DUT: Siemens; Type: A70; Serial: 004400000168672

Program Name: Body Worn

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.52, 4.52, 4.52); Calibrated: 13.01.2005
- 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, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.177 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm; Reference Value = 10.2 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.255 W/kg

SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.179 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm; Reference Value = 10.2 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.195 W/kg

SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.088 mW/g

Maximum value of SAR (measured) = 0.146 mW/g

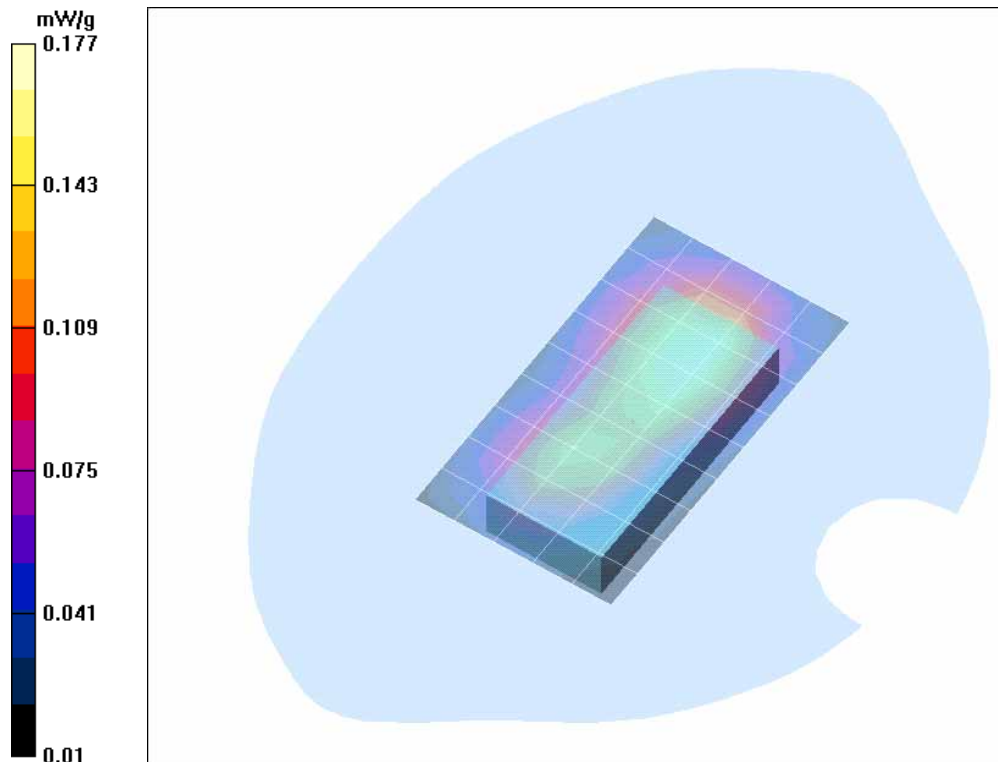


Fig. 7: SAR distribution for GPRS 1900, channel 661, body worn configuration, antenna towards the phantom, with data cable and FCL 600 carry case with 13 mm distance (August 30, 2005; Ambient Temperature: 22.0° C; Liquid Temperature: 21.2° C).

4 SAR z-axis scans (Validation)

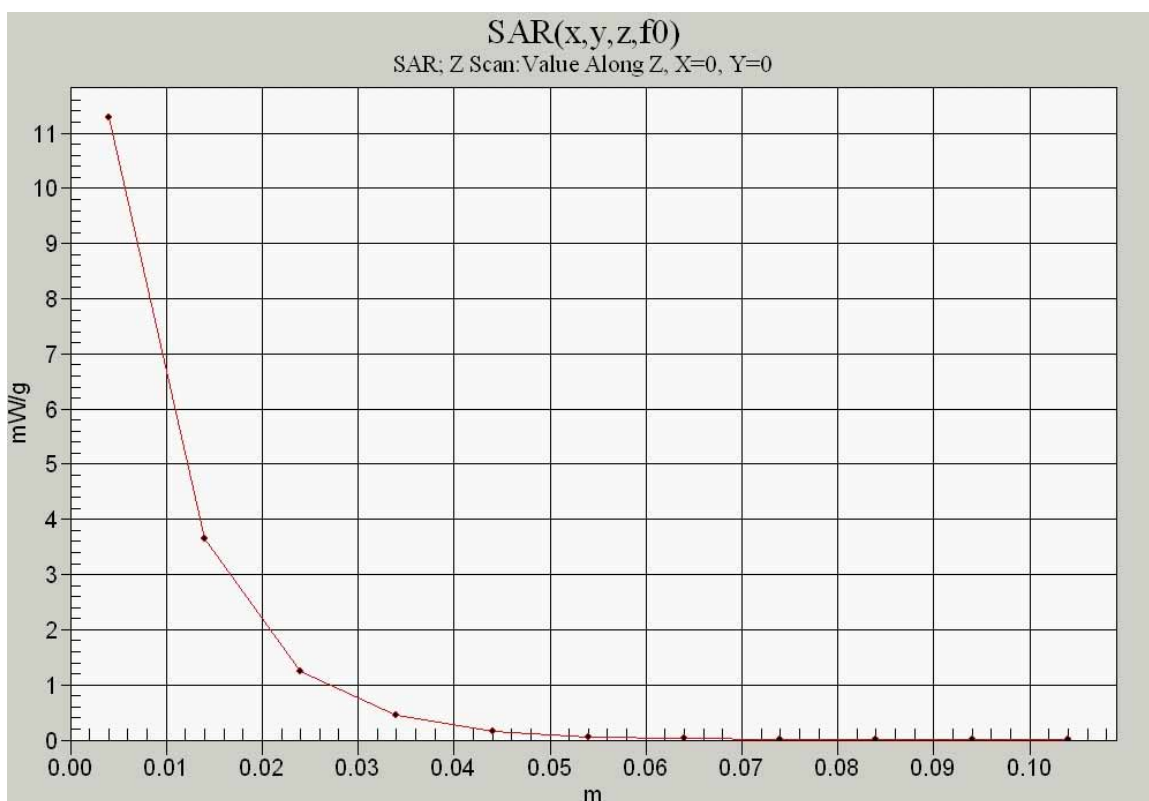


Fig. 8: SAR versus liquid depth, 1900 MHz, head (August 29, 2005; Ambient Temperature: 22.5° C; Liquid Temperature : 21.3° C).

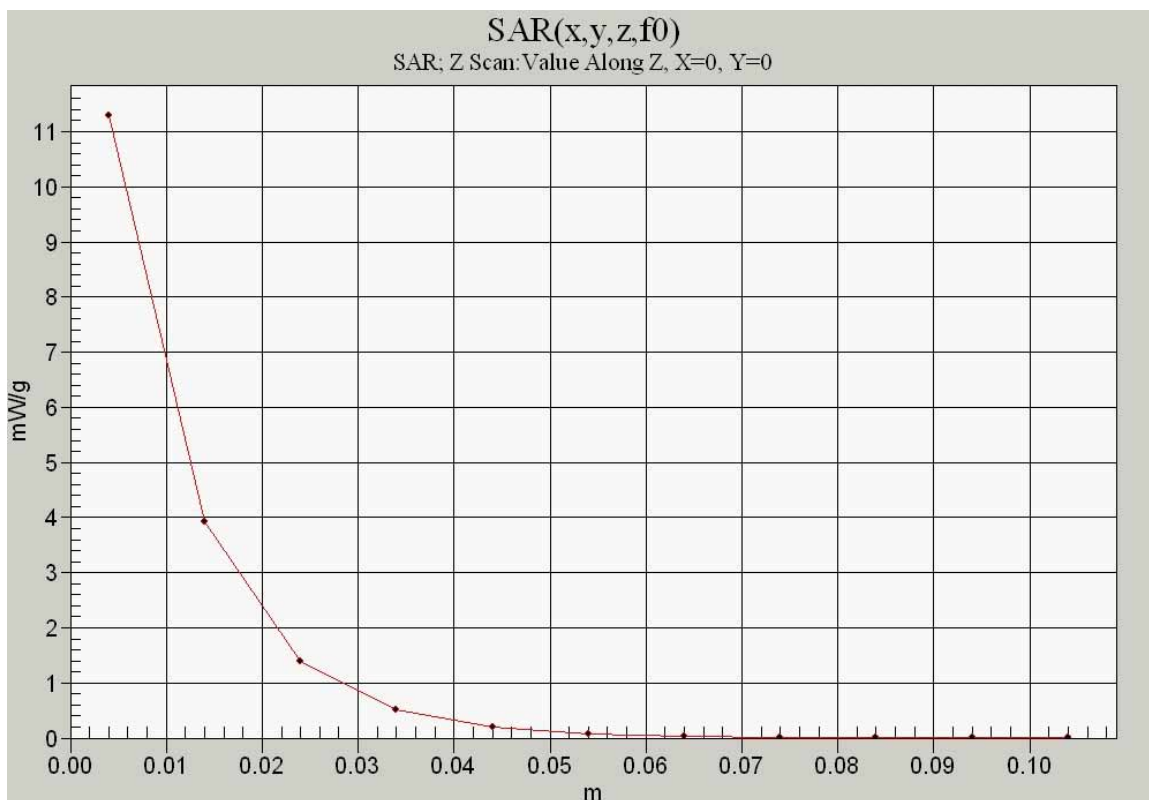


Fig. 9: SAR versus liquid depth, 1900 MHz, body (August 30, 2005; Ambient Temperature: 22.0° C; Liquid Temperature : 21.5° C).

5 SAR z-axis scans (Measurements)

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

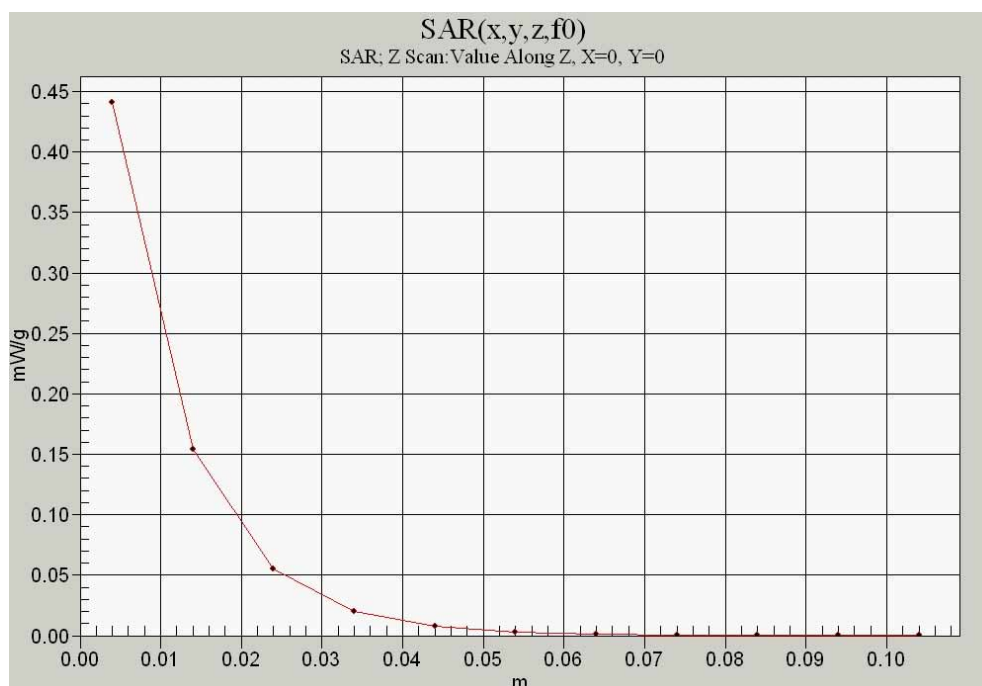


Fig. 10: SAR versus liquid depth, head: PCS 1900, channel 661, tilted position, right side of head (August 29, 2005; Ambient Temperature: 22.4°C; Liquid Temperature : 21.5° C).

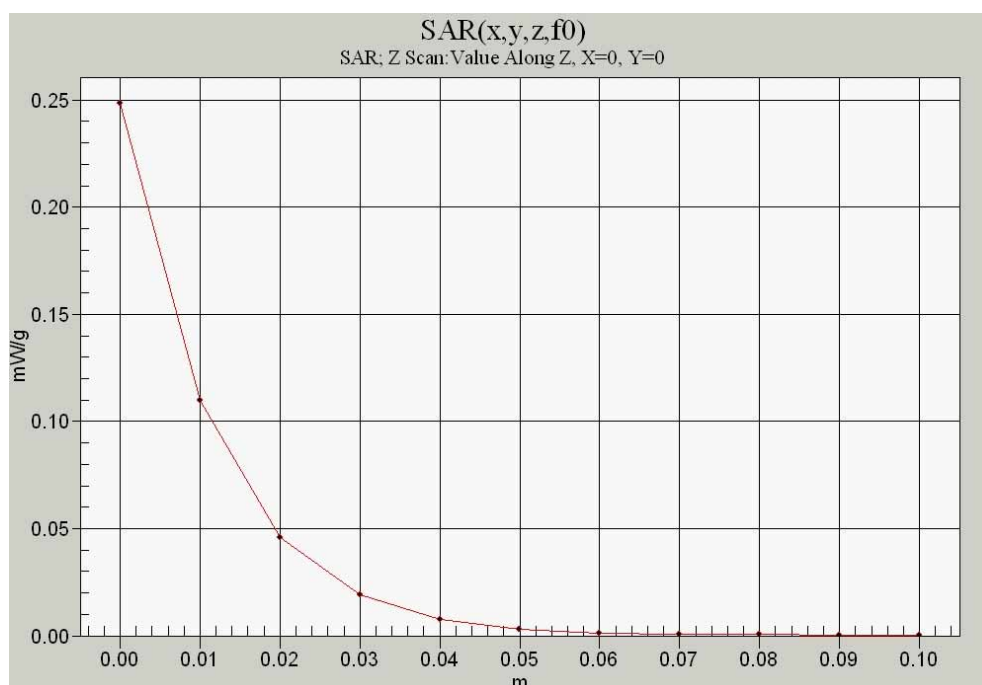


Fig. 11: SAR versus liquid depth, body: PCS 1900, channel 661, headset and FCT 650 carry case (August 30, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).