
Appendix for the Report

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

According to the FCC Requirements

SAR Distribution Plots

August 31, 2005
IMST GmbH
Carl-Friedrich-Gauß-Str. 2
D-47475 Kamp-Lintfort

Customer
Siemens Communication Inc.
16475 West Bernado Drive, Suite 400
San Diego CA 92127

The test results only relate to the items tested.
This report shall not be reproduced except in full without the written
approval of the testing laboratory.

Table of Contents

1	SAR DISTRIBUTION PLOTS, PCS 1900 HEAD	3
2	SAR DISTRIBUTION PLOTS, PCS 1900 BODY WITH HEADSET IN GSM MODE	7
3	SAR DISTRIBUTION PLOTS, PCS 1900 BODY WITH DATA CABLE IN GPRS MODE	9
4	SAR Z-AXIS SCANS (VALIDATION)	10
5	SAR Z-AXIS SCANS (MEASUREMENTS).....	11

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

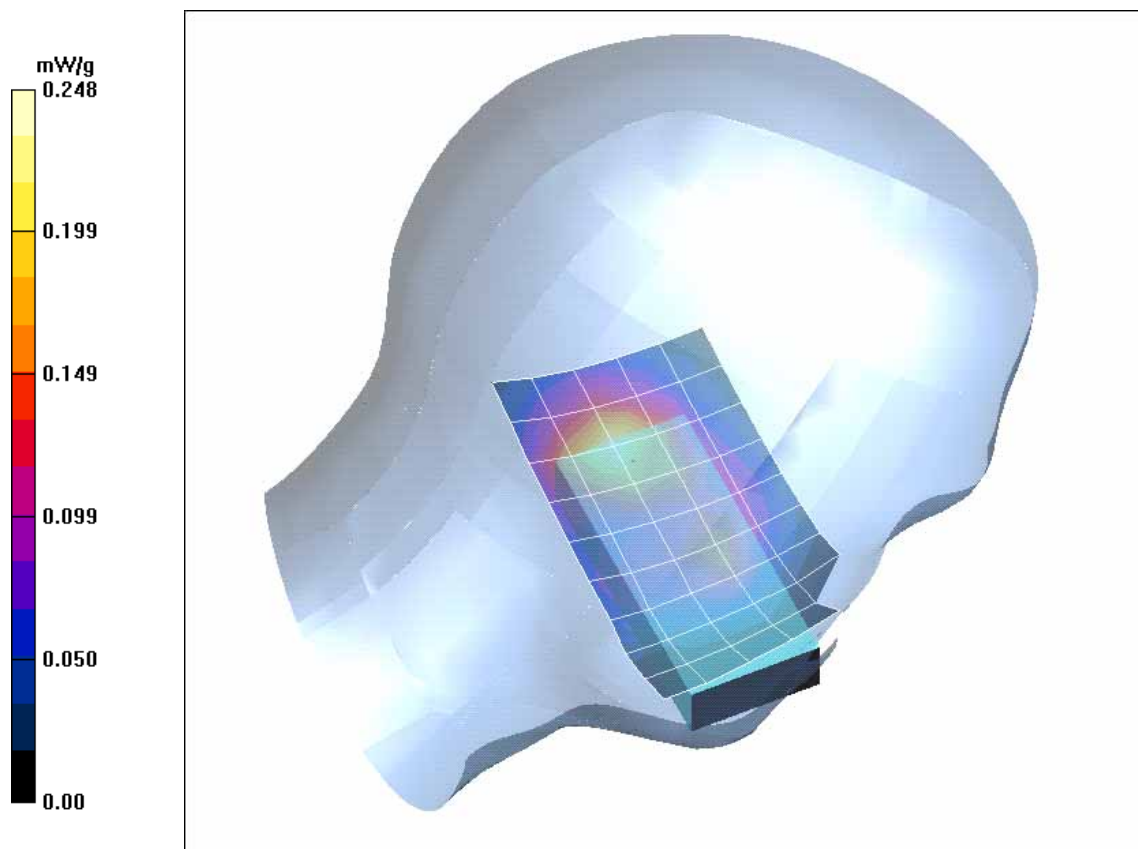


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head (August 29, 2005; Ambient Temperature: 22.3° C; Liquid Temperature: 21.5° C).

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=15mm, dy=15mm

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

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

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

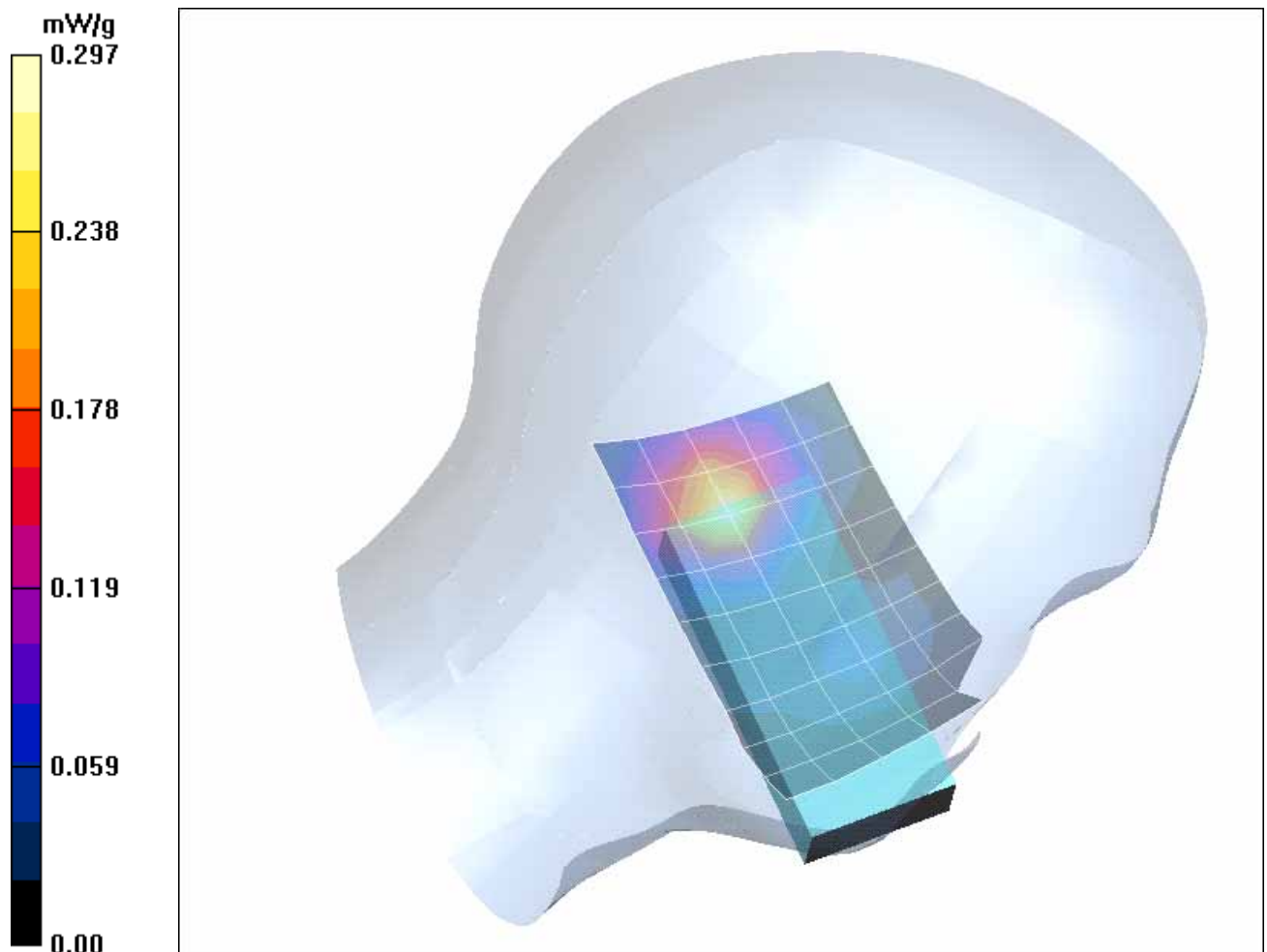


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head (August 29, 2005; Ambient Temperature:22.2°C; Liquid Temperature:21.4° C).

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

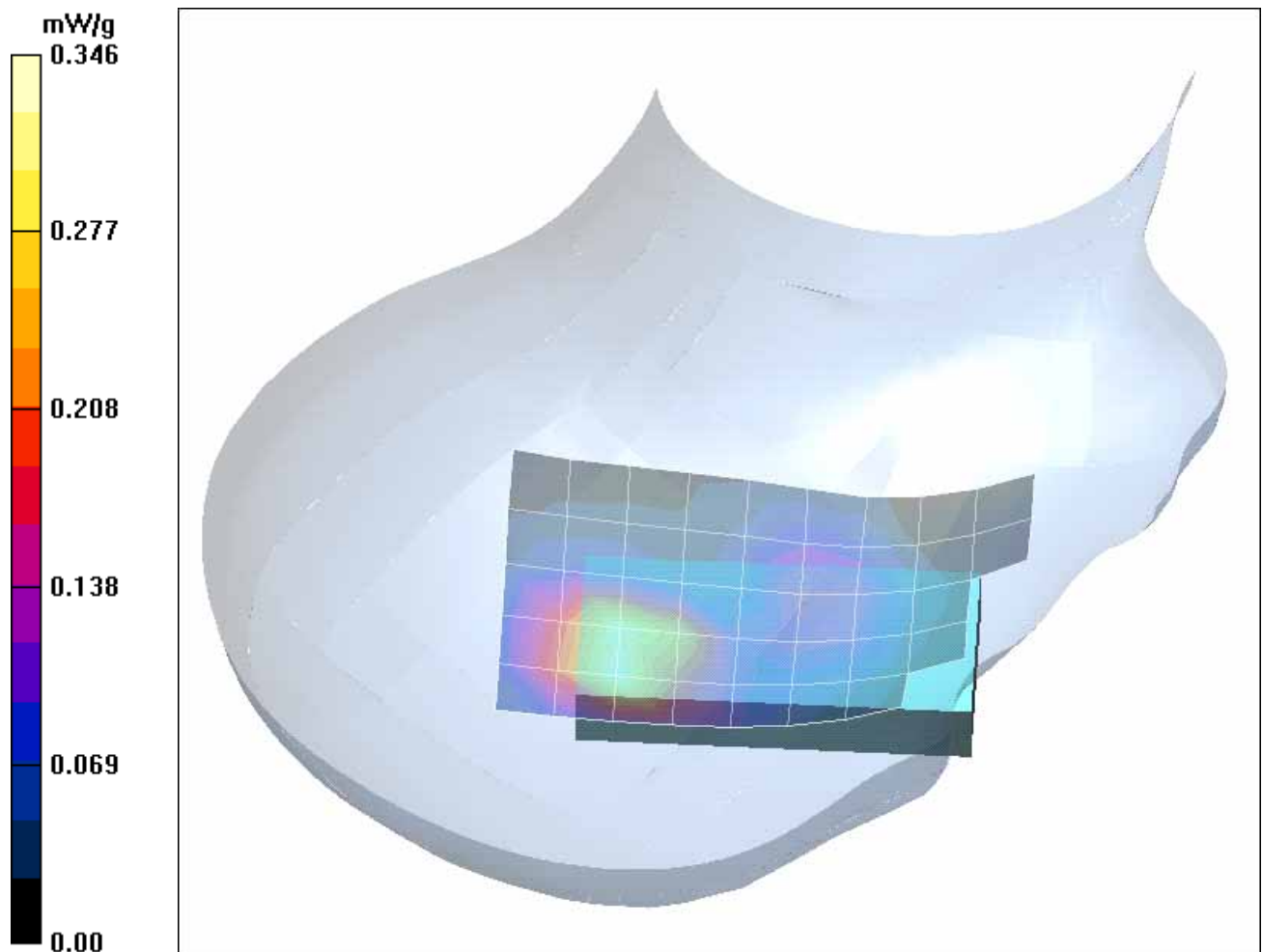


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head (August 29, 2005; Ambient Temperature: 22.4° C; Liquid Temperature: 21.5° C).

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

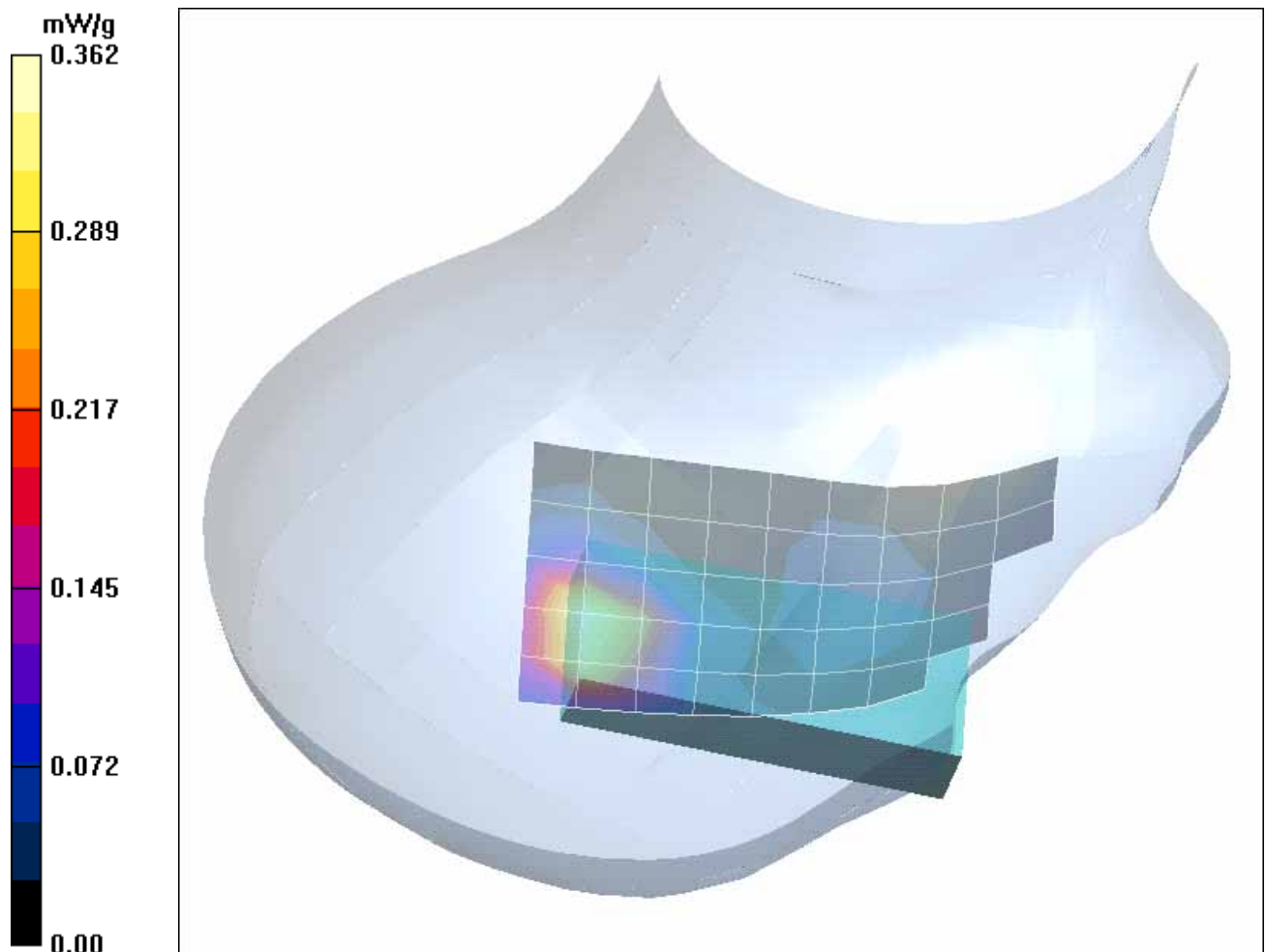


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head (August 29, 2005; Ambient Temperature: 22.4 °C; Liquid Temperature: 21.5° C)

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

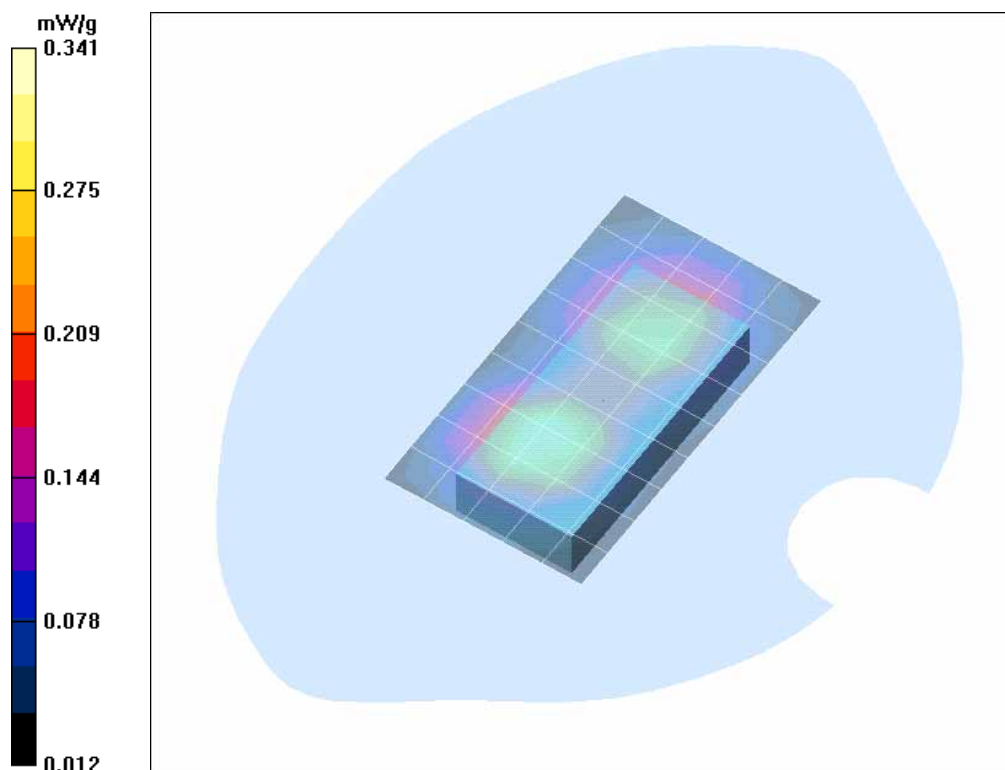


Fig. 5: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset and FCT 650 carry case with 10 mm distance (August 30, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).

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

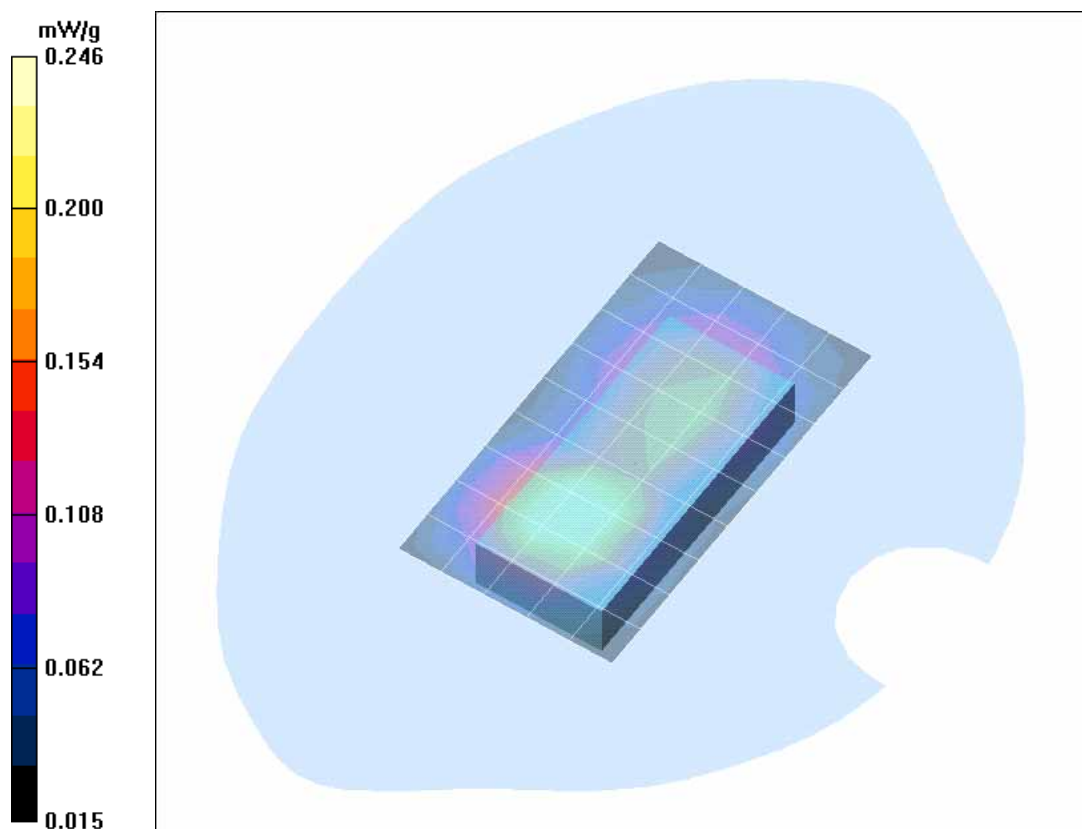


Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset and FCL 600 carry case with 13 mm distance (August 30, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).

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=15mm, dy=15mm

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

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

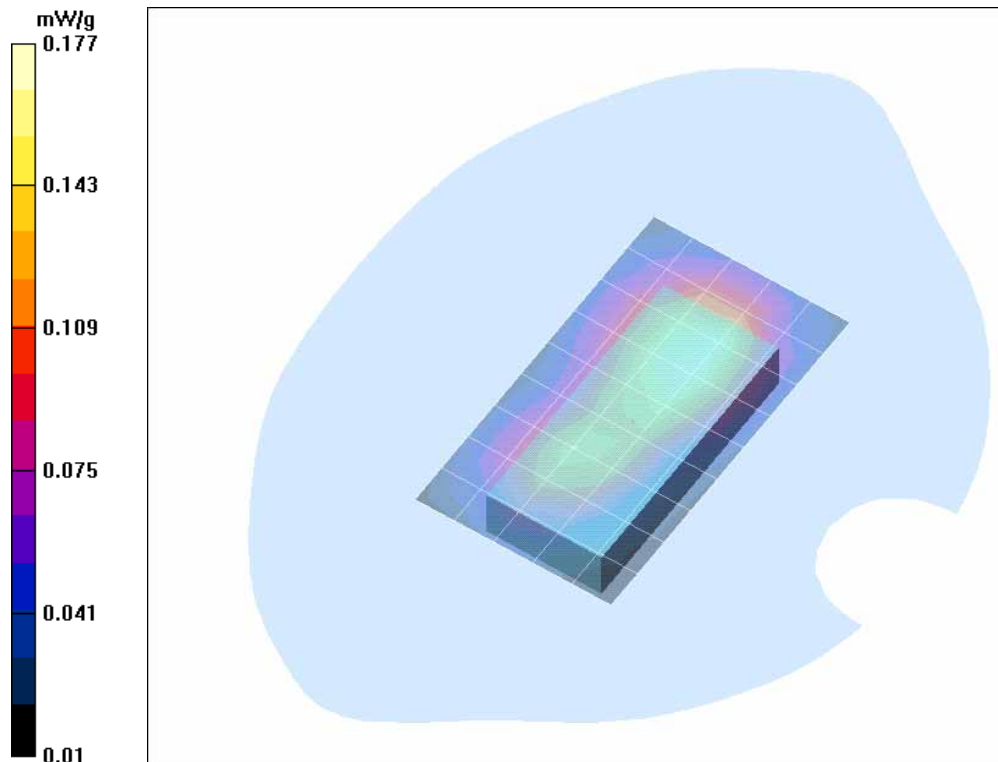


Fig. 7: SAR distribution for GPRS 1900, channel 661, body worn configuration, antenna towards the phantom, with data cable and FCL 600 carry case with 13 mm distance (August 30, 2005; Ambient Temperature: 22.0° C; Liquid Temperature: 21.2° C).

4 SAR z-axis scans (Validation)

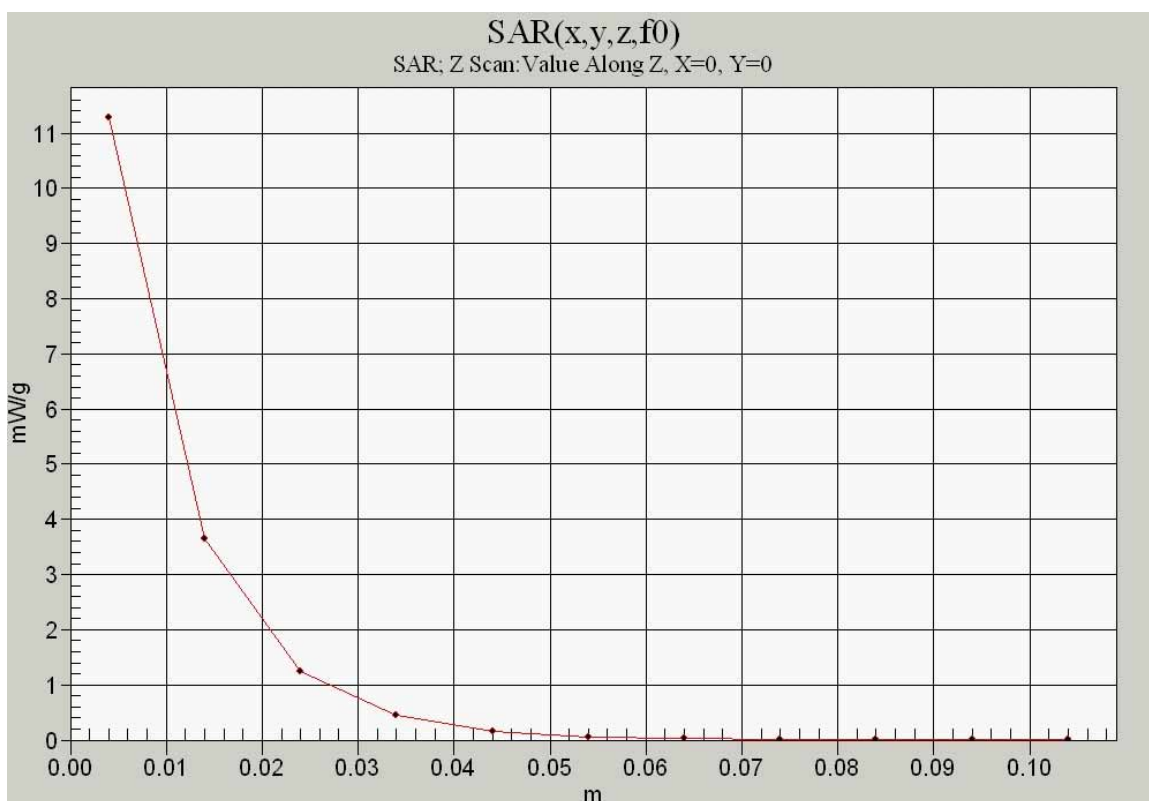


Fig. 8: SAR versus liquid depth, 1900 MHz, head (August 29, 2005; Ambient Temperature: 22.5° C; Liquid Temperature : 21.3° C).

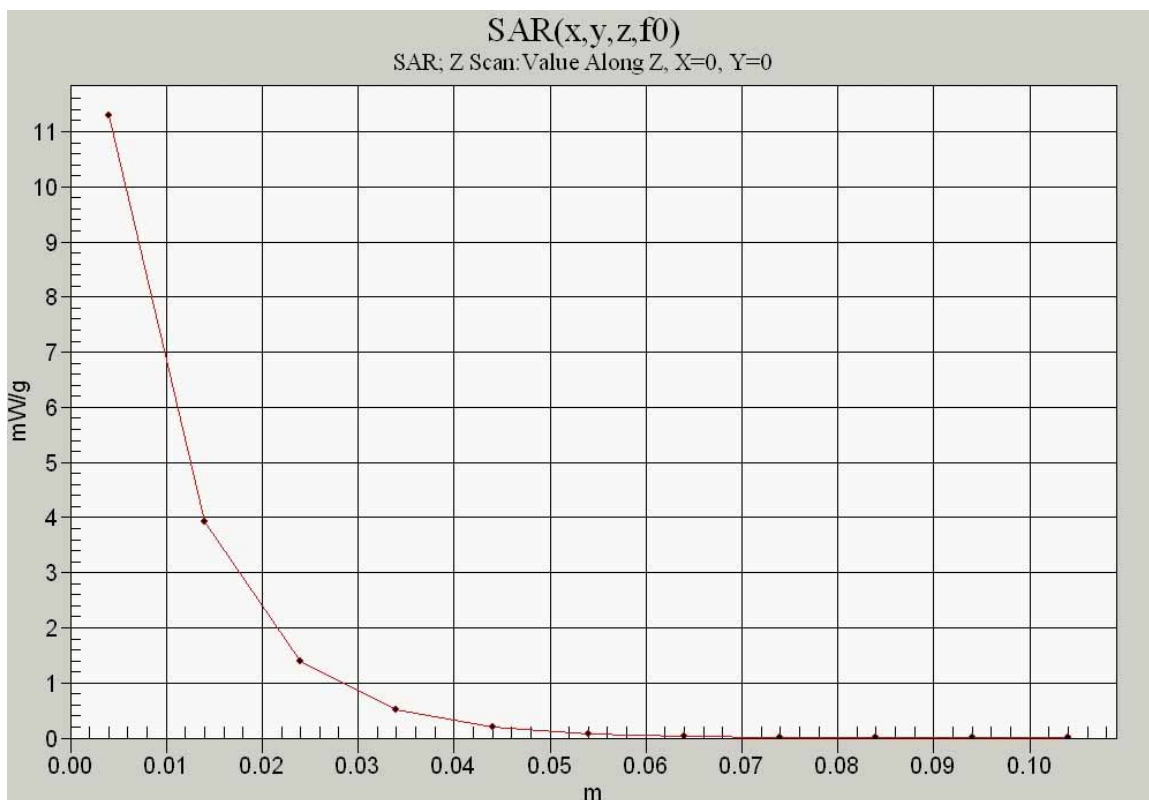


Fig. 9: SAR versus liquid depth, 1900 MHz, body (August 30, 2005; Ambient Temperature: 22.0° C; Liquid Temperature : 21.5° C).

5 SAR z-axis scans (Measurements)

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

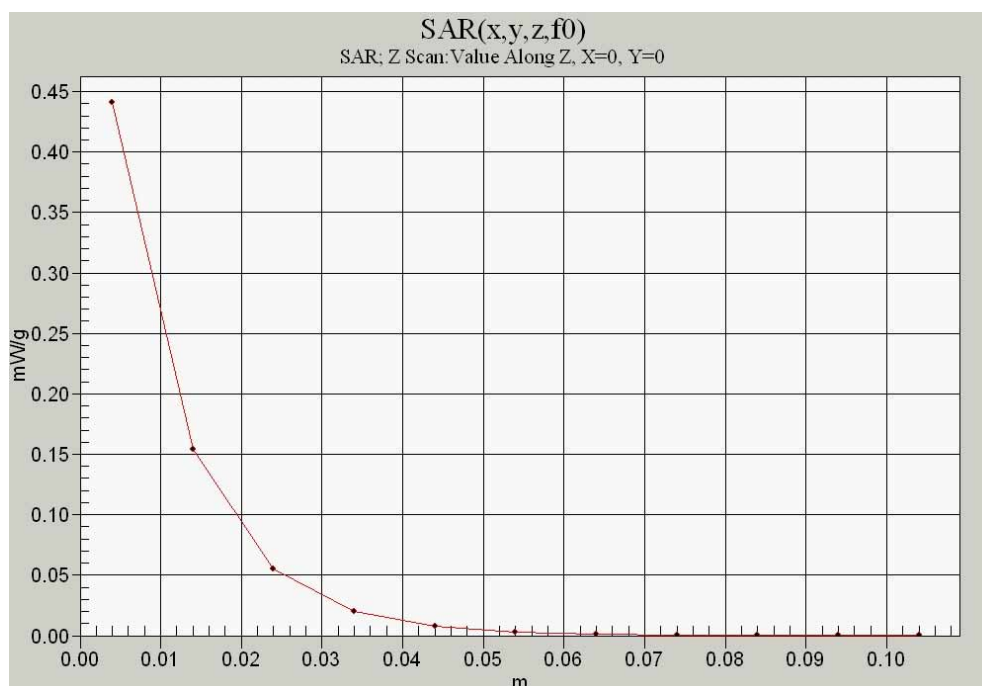


Fig. 10: SAR versus liquid depth, head: PCS 1900, channel 661, tilted position, right side of head (August 29, 2005; Ambient Temperature: 22.4°C; Liquid Temperature : 21.5° C).

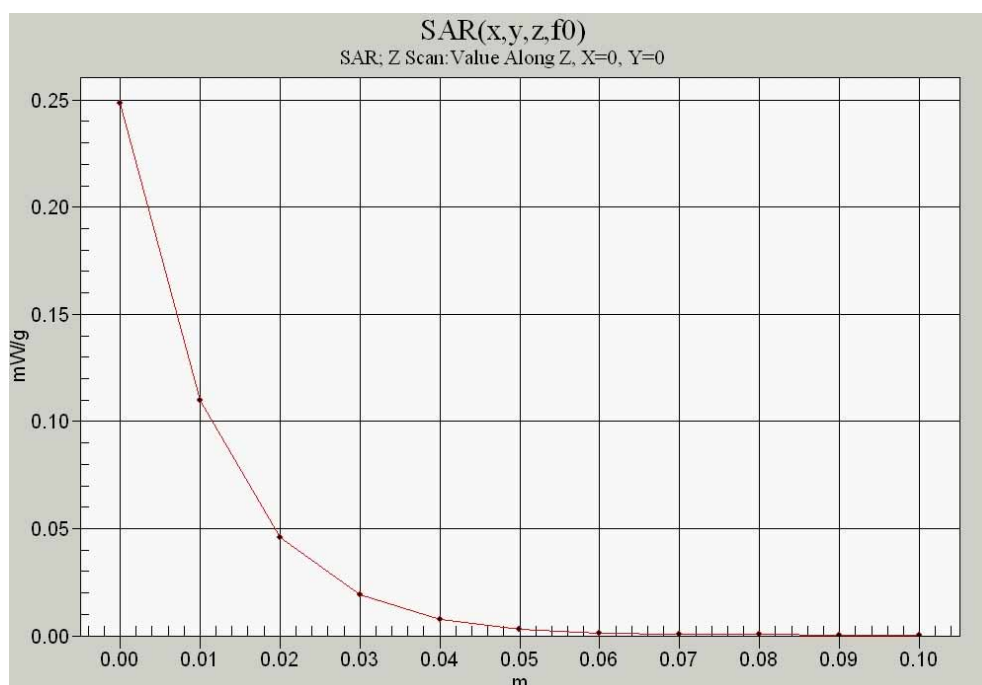


Fig. 11: SAR versus liquid depth, body: PCS 1900, channel 661, headset and FCT 650 carry case (August 30, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).