



TTI-P-G 158



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# **Appendix for the Report**

## **Dosimetric Assessment of the Panasonic X70U (FCC ID: NWJ22B002A) According to the FCC Requirements**

### **SAR Distribution Plots**

November 19, 2003  
**IMST GmbH**  
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The test results only relate to the items tested.  
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## 1 SAR Distribution Plots, GSM850

Test Laboratory: IMST; File Name: [70uglm\\_1.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Head 835 MHz ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 41.4$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.8, 6.8, 6.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek left/Area Scan (6x14x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 5.02 V/m

Power Drift = 0.08 dB

Maximum value of SAR = 0.382 mW/g

**cheek left/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.571 W/kg

SAR(1 g) = 0.398 mW/g; SAR(10 g) = 0.265 mW/g

Reference Value = 5.02 V/m

Power Drift = 0.08 dB

Maximum value of SAR = 0.42 mW/g

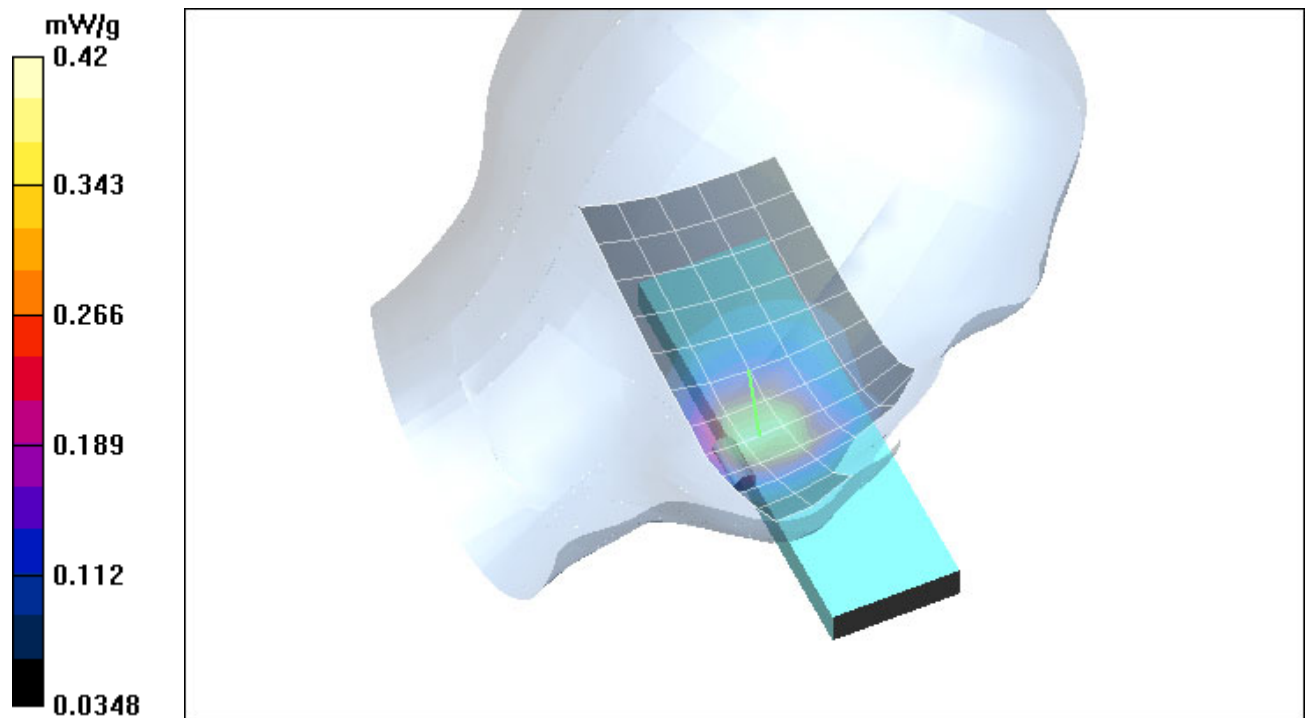


Fig. 1: SAR distribution for GSM 850, channel 190, cheek position, left side of head. (November 18, 2003; Ambient Temperature: 21.0 C; Liquid Temperature: 20.2 ).

Test Laboratory: IMST; File Name: [70uglm\\_2.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Head 835 MHz ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 41.4$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.8, 6.8, 6.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek left/Area Scan (6x14x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.48 V/m

Power Drift = -0.04 dB

Maximum value of SAR = 0.105 mW/g

**cheek left/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.133 W/kg

SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.075 mW/g

Reference Value = 6.48 V/m

Power Drift = -0.04 dB

Maximum value of SAR = 0.105 mW/g

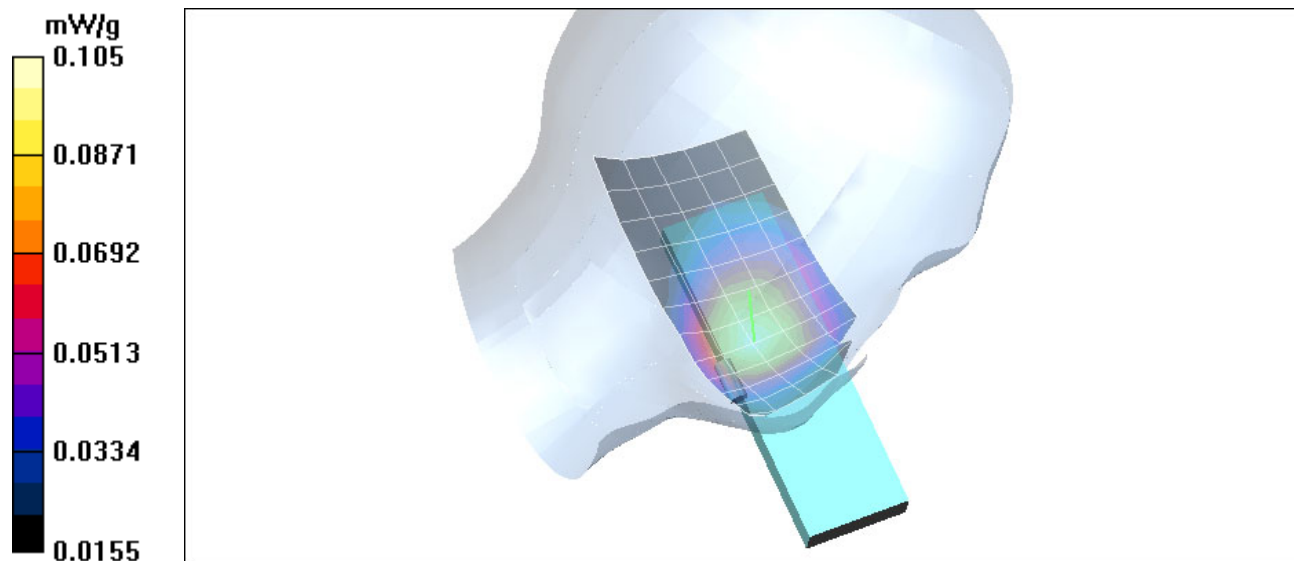


Fig. 2: SAR distribution for GSM 850, channel 190, tilted position, left side of head. (November 18, 2003; Ambient Temperature: 21.0 C; Liquid Temperature: 20.2).

Test Laboratory: IMST; File Name: [70ugrm\\_1.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Head 835 MHz ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 41.4$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.8, 6.8, 6.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek right/Area Scan (6x14x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 4.81 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.37 mW/g

**cheek right/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.477 W/kg

SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.24 mW/g

Reference Value = 4.81 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.375 mW/g

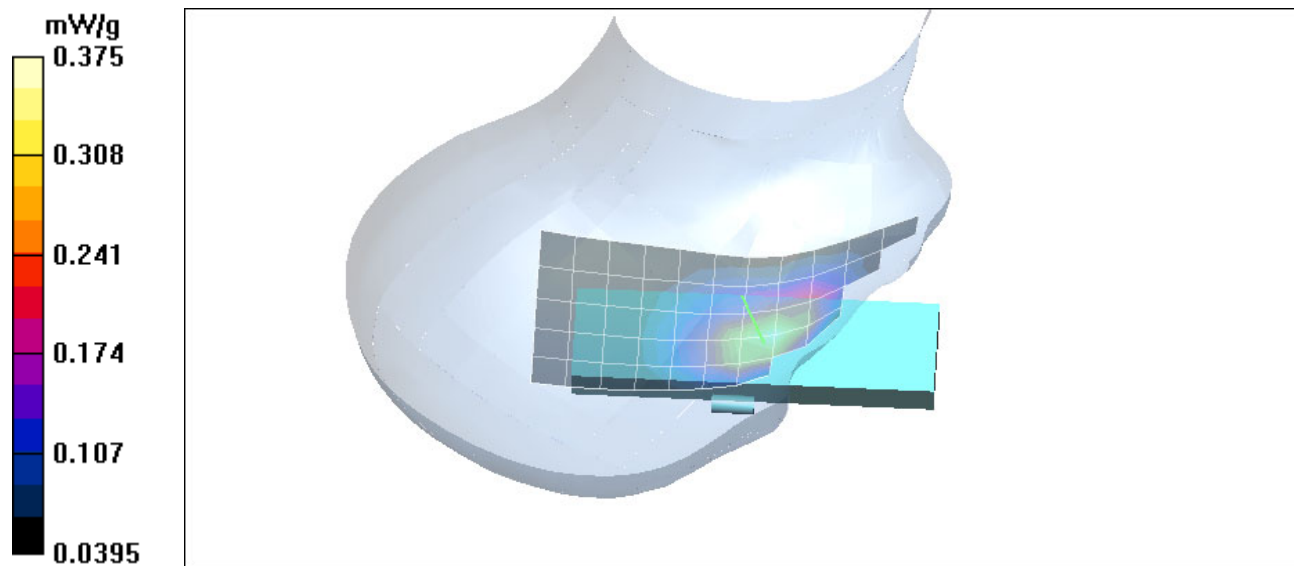


Fig. 3: SAR distribution for GSM 850, channel 190, cheek position, right side of head. (November 18, 2003; Ambient Temperature: 21.1 C; Liquid Temperature: 20.2).

Test Laboratory: IMST; File Name: [70ugrm\\_2.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Head 835 MHz ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 41.4$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.8, 6.8, 6.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek right/Area Scan (6x14x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.1 V/m

Power Drift = 0.01 dB

Maximum value of SAR = 0.0984 mW/g

**cheek right/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.119 W/kg

SAR(1 g) = 0.0947 mW/g; SAR(10 g) = 0.0706 mW/g

Reference Value = 6.1 V/m

Power Drift = 0.01 dB

Maximum value of SAR = 0.0997 mW/g

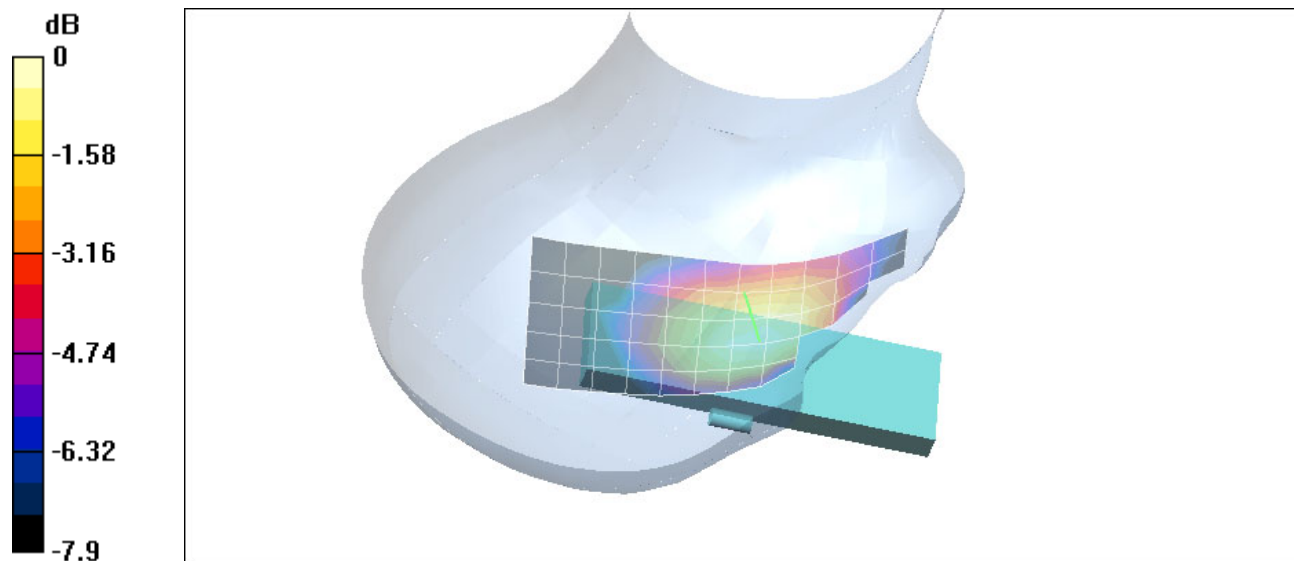


Fig. 4: SAR distribution for GSM 850, channel 190, tilted position, right side of head. (November 18, 2003; Ambient Temperature: 21.2 C; Liquid Temperature: 20.2).

## 2 SAR Distribution Plots, GSM 850 Body

Test Laboratory: IMST; File Name: [70ughm\\_1.da4](#)

**DUT: Panasonic; Type: X70U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Body 835 MHz ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 54.6$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.6, 6.6, 6.6); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 24.8 V/m

Power Drift = -0.05 dB

Maximum value of SAR = 0.68 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.454 mW/g

Reference Value = 24.8 V/m

Power Drift = -0.05 dB

Maximum value of SAR = 0.749 mW/g

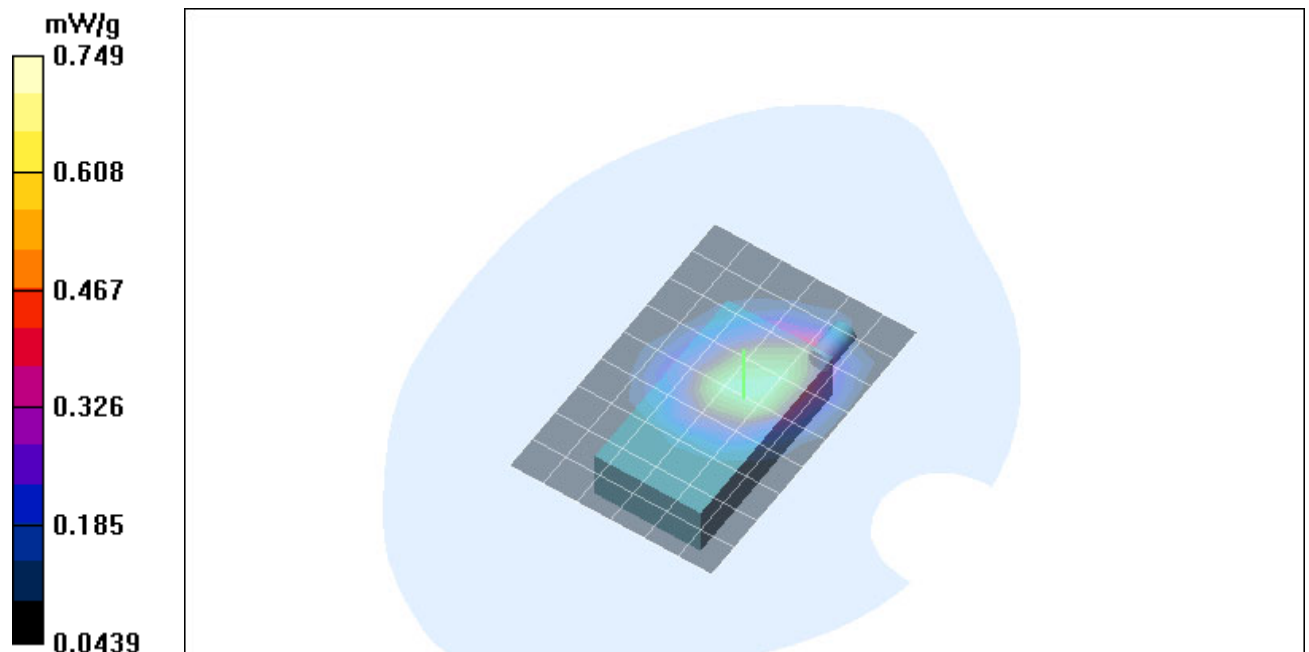


Fig. 5: SAR distribution for GSM 850, channel 190, body worn configuration, carry case, with headset (November 17, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).

Test Laboratory: IMST; File Name: [70ughm\\_2.da4](#)

**DUT: Panasonic; Type: X70U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Body 835 MHz ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 54.6$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.6, 6.6, 6.6); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 25.5 V/m

Power Drift = -0.03 dB

Maximum value of SAR = 0.743 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.499 mW/g

Reference Value = 25.5 V/m

Power Drift = -0.03 dB

Maximum value of SAR = 0.81 mW/g

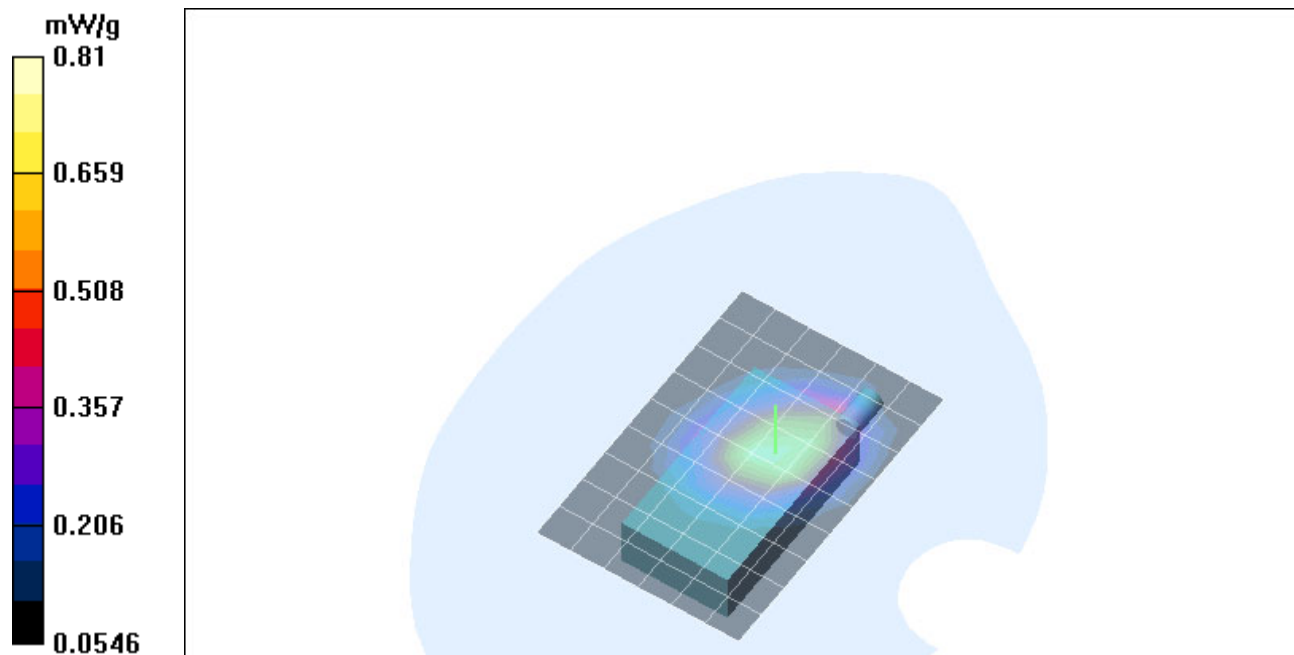


Fig. 6: SAR distribution for GSM 850, channel 190, body worn configuration, carry case without headset (November 17, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 19.9° C).



Test Laboratory: IMST; File Name: [70ughm\\_4.da4](#)

**DUT: Panasonic; Type: X70U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Body 835 MHz ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 54.6$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.6, 6.6, 6.6); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 14.9 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.289 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.369 W/kg

SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.184 mW/g

Reference Value = 14.9 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.287 mW/g

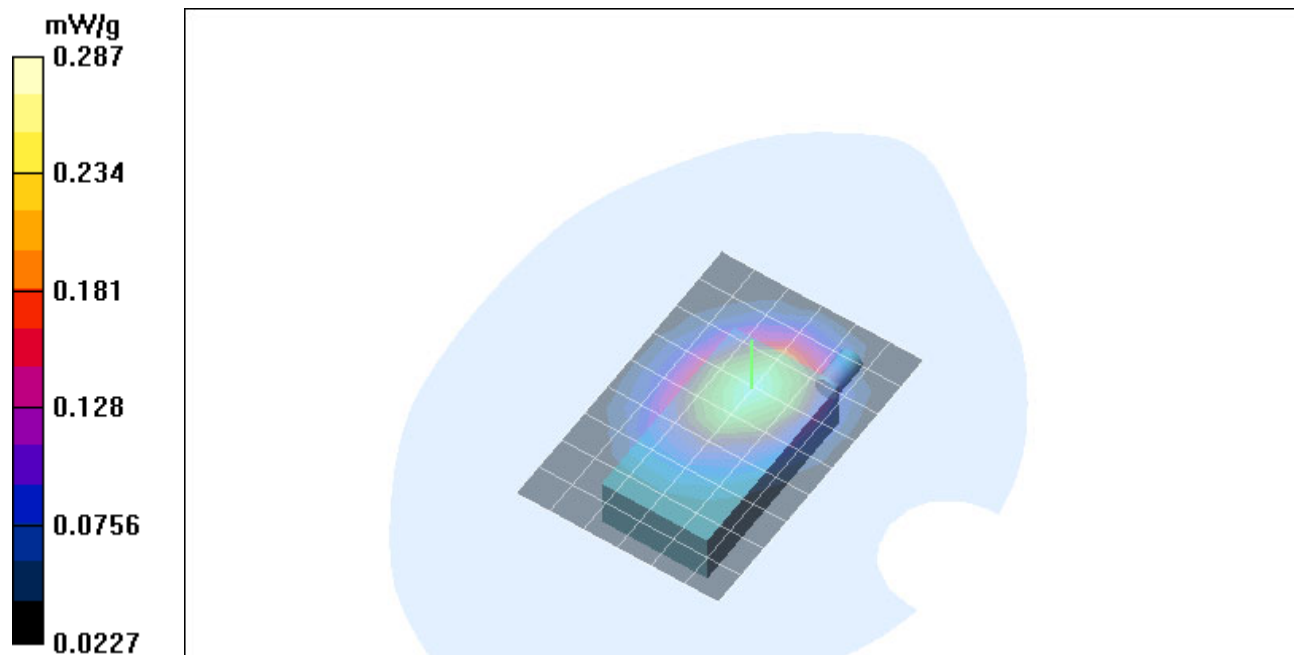


Fig. 7: SAR distribution for GSM 850, channel 190, body worn configuration, 1.5 cm distance between mobile and phantom, with headset, antenna towards the phantom (November 17, 2003; Ambient Temperature: 21.0° C; Liquid Temperature : 19.9° C).

Test Laboratory: IMST; File Name: [x70ughm\\_5.da4](#)

**DUT: Panasonic; Type: X70U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Body 835 MHz ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 54.6$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.6, 6.6, 6.6); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 18.6 V/m

Power Drift = 0.009 dB

Maximum value of SAR = 0.418 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.541 W/kg

SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.271 mW/g

Reference Value = 18.6 V/m

Power Drift = 0.009 dB

Maximum value of SAR = 0.423 mW/g

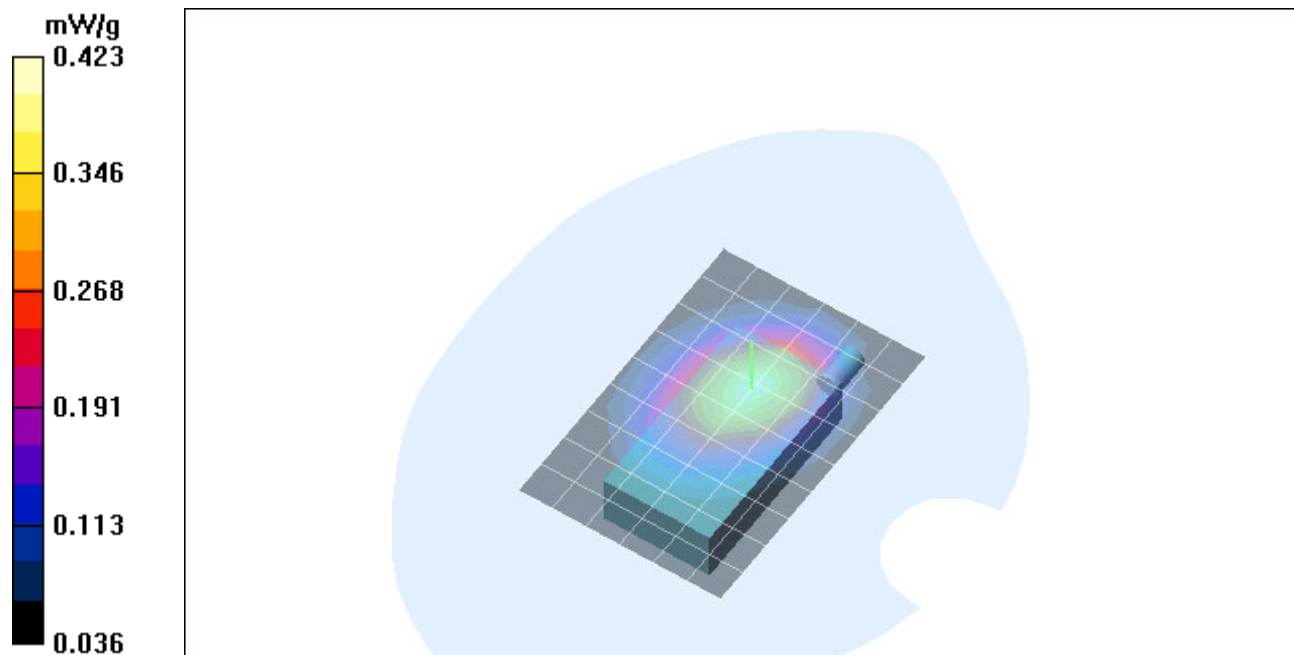


Fig. 8: SAR distribution for GSM 850, channel 190, body worn configuration, 1.5 cm distance between mobile and phantom, without headset, antenna towards the phantom (November 17, 2003; Ambient Temperature: 21.0° C; Liquid Temperature : 19.9° C).

Test Laboratory: IMST; File Name: [70ughm\\_3.da4](#)

**DUT: Panasonic; Type: X70U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium: Body 835 MHz ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 54.6$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(6.6, 6.6, 6.6); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1059;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 24.4 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.701 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.747 mW/g; SAR(10 g) = 0.491 mW/g

Reference Value = 24.4 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.802 mW/g

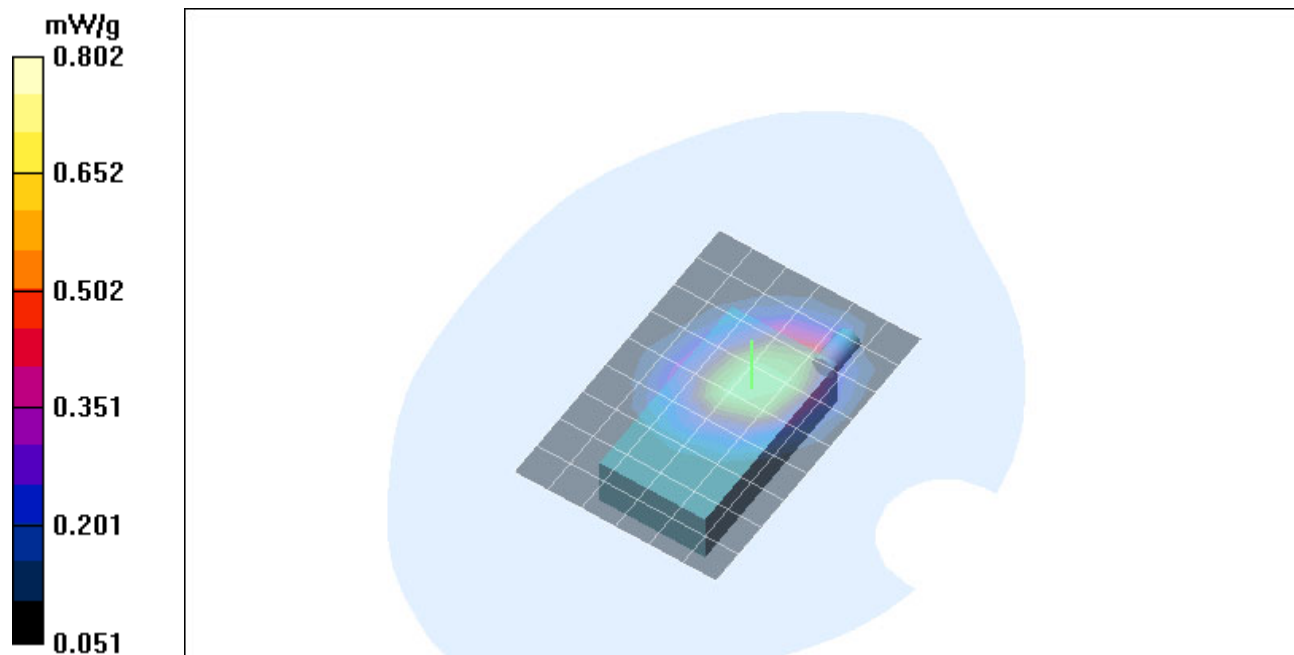


Fig. 9: SAR distribution for GSM 850, channel 190, body worn configuration, carry case, without headset and with Bluetooth (November 17, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).

### 3 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: IMST; File Name: [X70uplm\\_1.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Head 1900 MHz ( $\sigma = 1.39$  mho/m,  $\epsilon_r = 39.5$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.2, 5.2, 5.2); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek left/Area Scan (6x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 4.12 V/m

Power Drift = 0.04 dB

Maximum value of SAR = 0.626 mW/g

**cheek left/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.682 mW/g; SAR(10 g) = 0.369 mW/g

Reference Value = 4.12 V/m

Power Drift = 0.04 dB

Maximum value of SAR = 0.755 mW/g

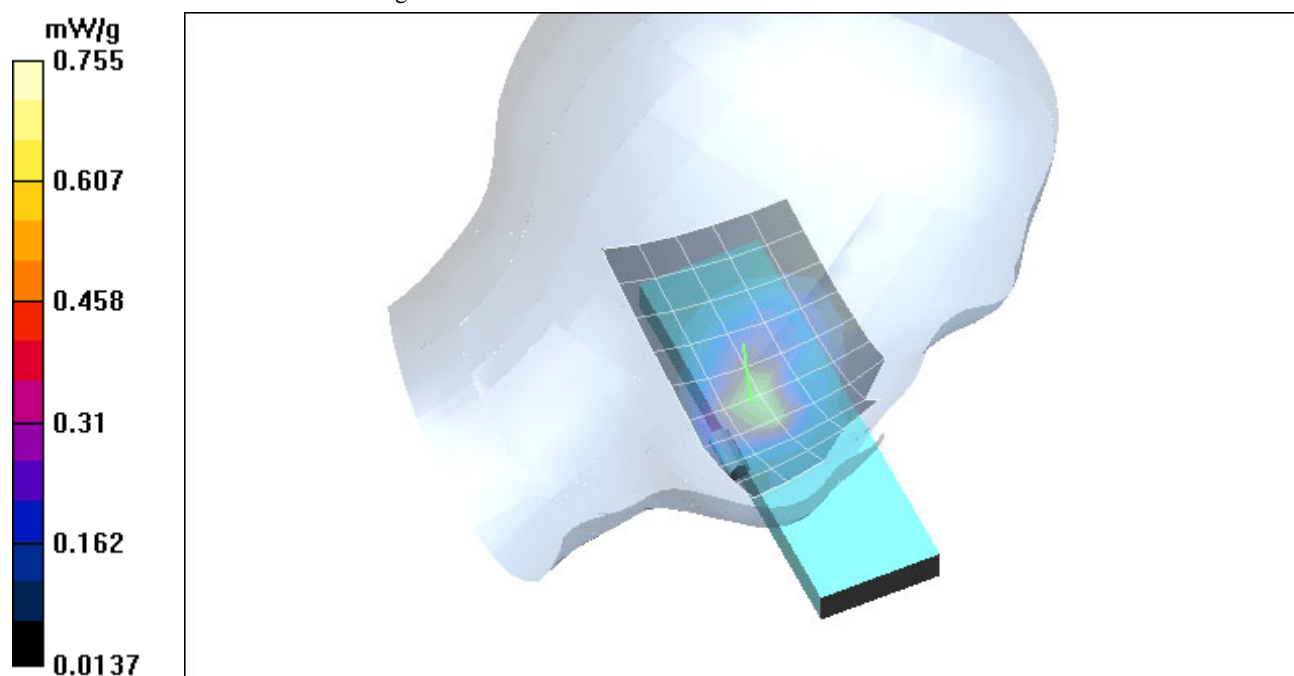


Fig. 10: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (November 14, 2003; Ambient Temperature: 21.0° C; Liquid Temperature : 20.6° C).

Test Laboratory: IMST; File Name: [X70uplm\\_2.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Head 1900 MHz ( $\sigma = 1.39$  mho/m,  $\epsilon_r = 39.5$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.2, 5.2, 5.2); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**tilted left/Area Scan (6x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 5.9 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.238 mW/g

**tilted left/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.141 mW/g

Reference Value = 5.9 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.237 mW/g

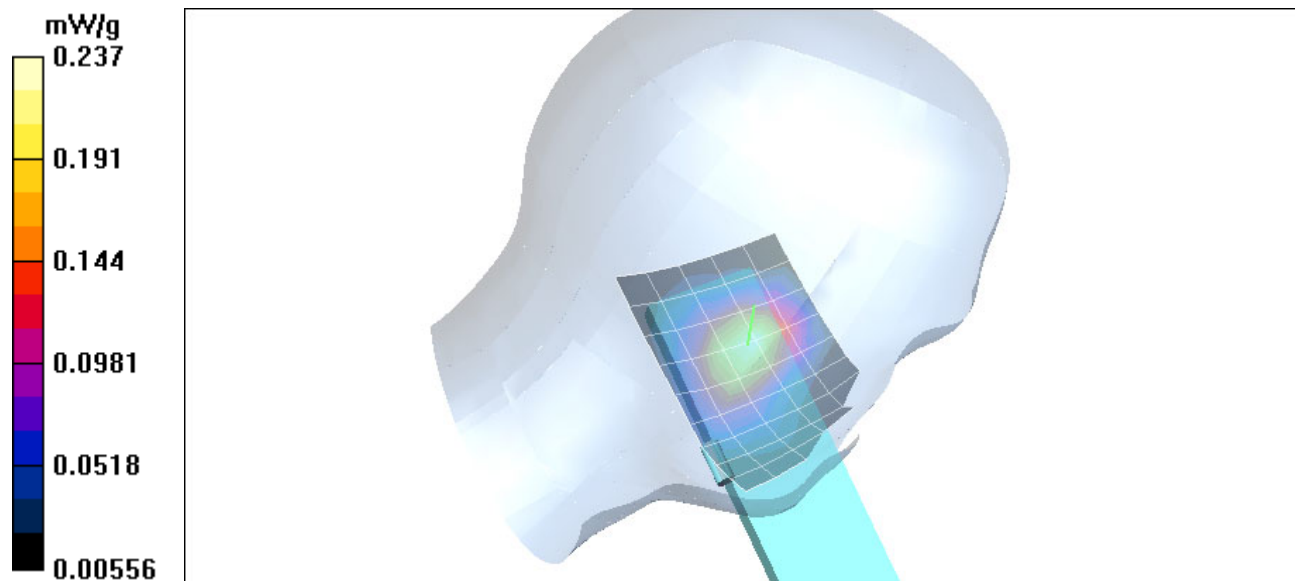


Fig. 11: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (November 14, 2003; Ambient Temperature: 21.0° C; Liquid Temperature : 20.5° C).

Test Laboratory: IMST; File Name: [X70uprm\\_1.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Head 1900 MHz ( $\sigma = 1.39$  mho/m,  $\epsilon_r = 39.5$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.2, 5.2, 5.2); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek right/Area Scan (6x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 3.48 V/m

Power Drift = 0.08 dB

Maximum value of SAR = 0.488 mW/g

**cheek right/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.787 W/kg

SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.275 mW/g

Reference Value = 3.48 V/m

Power Drift = 0.08 dB

Maximum value of SAR = 0.537 mW/g

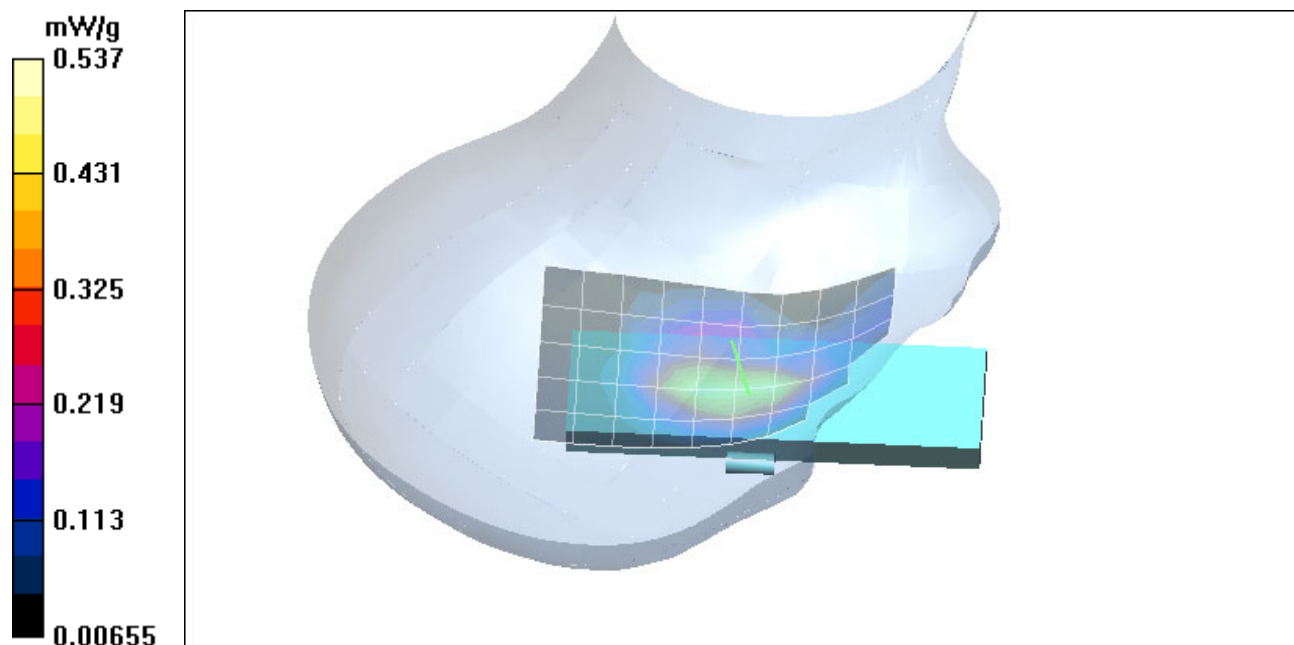


Fig. 12: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (November 14, 2003; Ambient Temperature: 21.0° C; Liquid Temperature : 20.5° C).

Test Laboratory: IMST; File Name: [X70uprm\\_2.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Measurement**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Head 1900 MHz ( $\sigma = 1.39$  mho/m,  $\epsilon_r = 39.5$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(5.2, 5.2, 5.2); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**tilted right/Area Scan (6x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 5.05 V/m

Power Drift = -0.0006 dB

Maximum value of SAR = 0.214 mW/g

**tilted right/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.284 W/kg

SAR(1 g) = 0.2 mW/g; SAR(10 g) = 0.127 mW/g

Reference Value = 5.05 V/m

Power Drift = -0.0006 dB

Maximum value of SAR = 0.215 mW/g

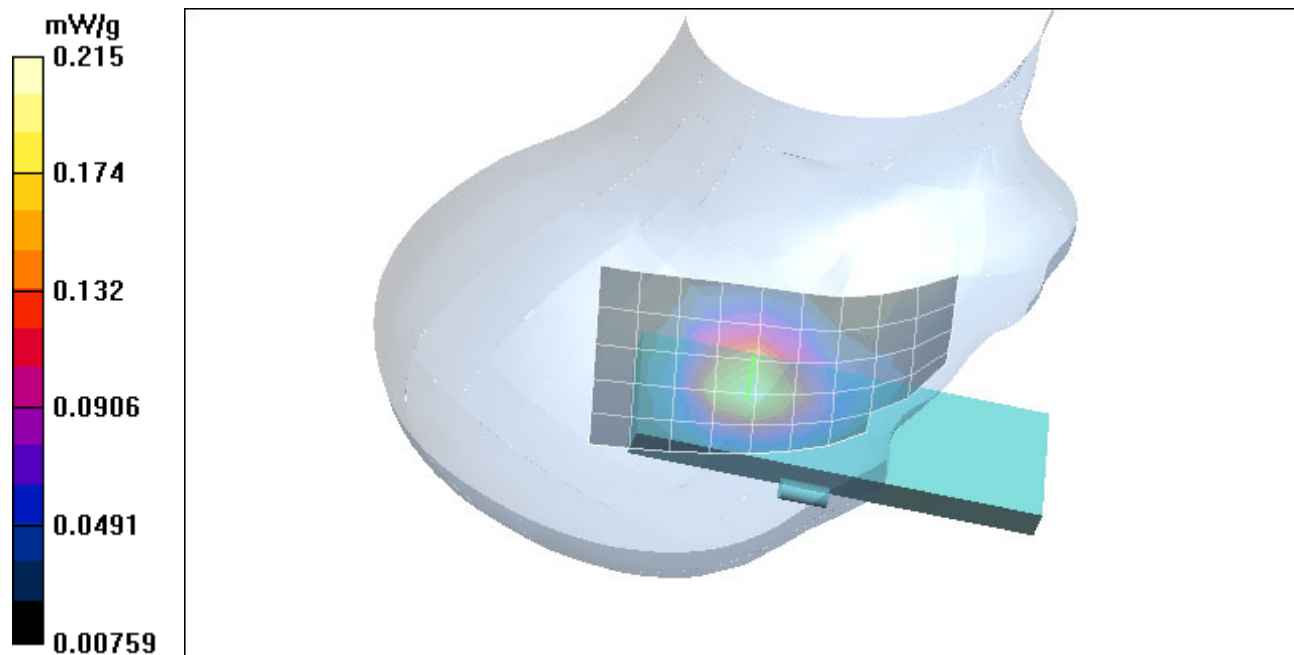


Fig. 13: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (November 14, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 20.5° C).

## 4 SAR Distribution Plots, PCS 1900 Body

Test Laboratory: IMST; File Name: [885phm\\_1.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Body1900 MHz ( $\sigma = 1.54$  mho/m,  $\epsilon_r = 51.8$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.8, 4.8, 4.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 15.4 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.733 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.425 mW/g

Reference Value = 15.4 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.766 mW/g

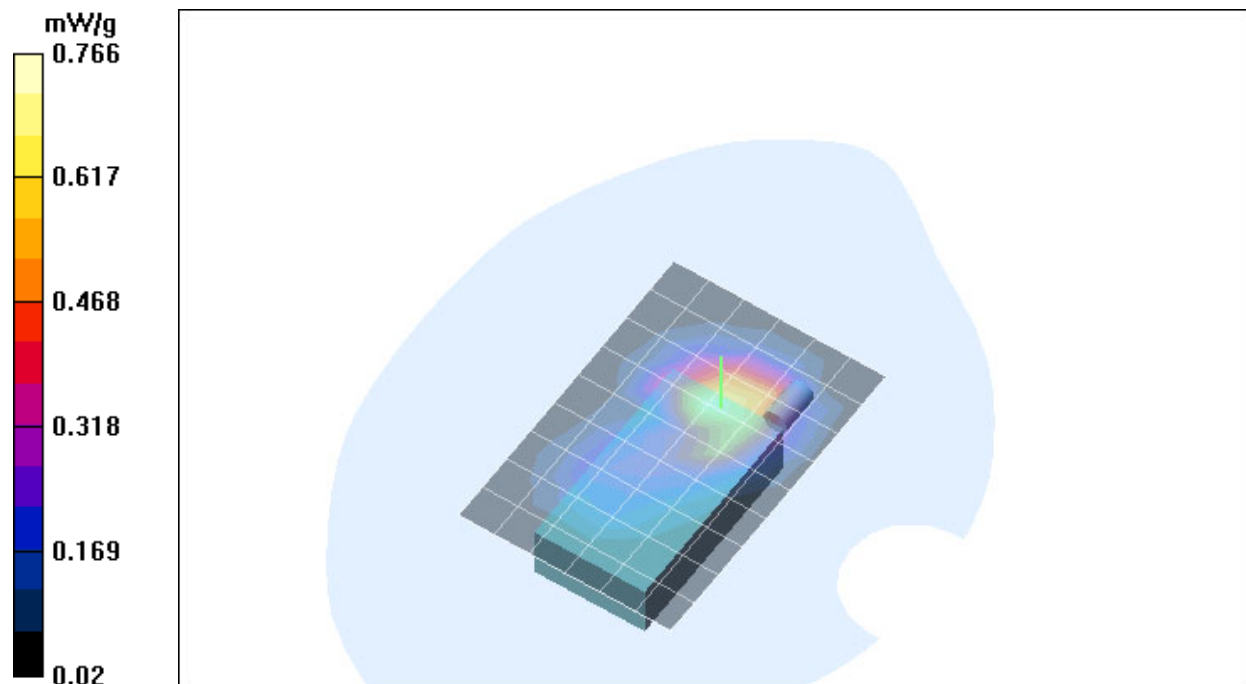


Fig. 14: SAR distribution for PCS 1900, channel 661, body worn configuration, carry case, with headset (November 18, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 20.2° C).



Test Laboratory: IMST; File Name: [885phm\\_2.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Body1900 MHz ( $\sigma = 1.54$  mho/m,  $\epsilon_r = 51.8$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.8, 4.8, 4.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 15.4 V/m

Power Drift = 0.009 dB

Maximum value of SAR = 0.743 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.438 mW/g

Reference Value = 15.4 V/m

Power Drift = 0.009 dB

Maximum value of SAR = 0.794 mW/g

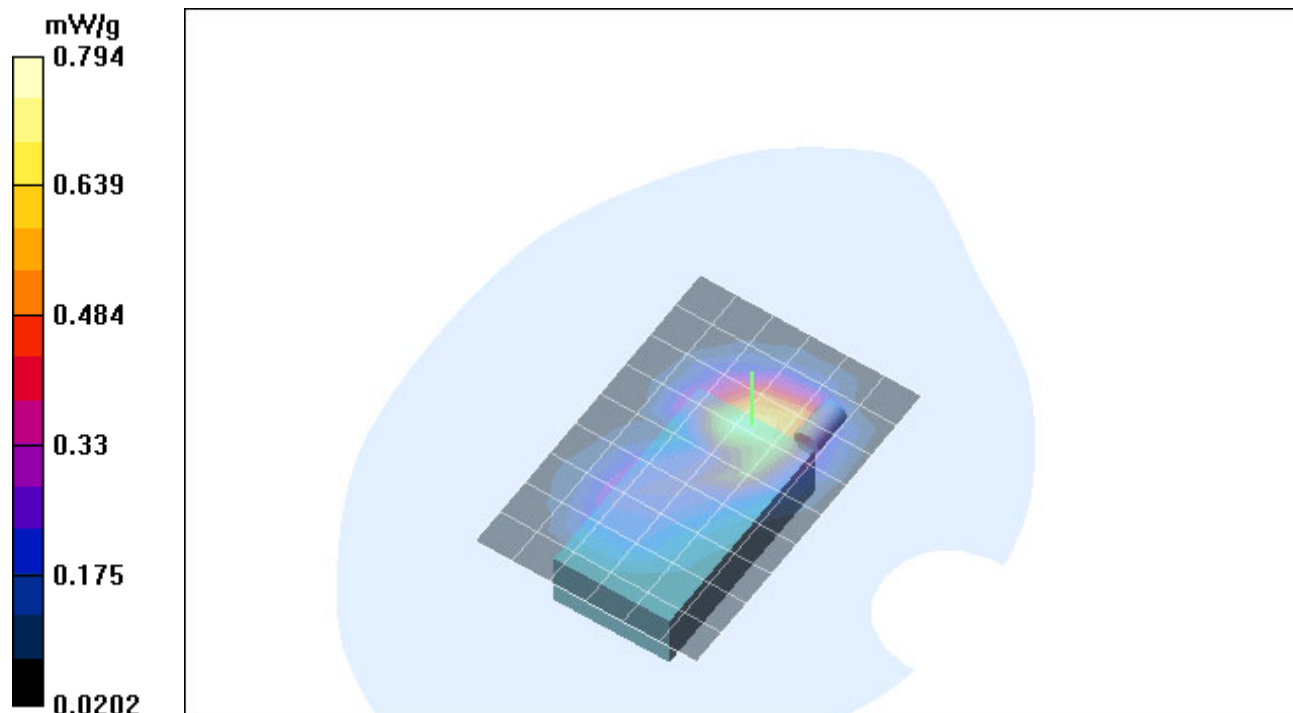


Fig. 15: Worst case SAR distribution for PCS 1900, channel 661, body worn configuration, carry case, without headset (November 18, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 20.2° C).

Test Laboratory: IMST; File Name: [885phm\\_4.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Body1900 MHz ( $\sigma = 1.54$  mho/m,  $\epsilon_r = 51.8$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.8, 4.8, 4.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.59 V/m

Power Drift = -0.04 dB

Maximum value of SAR = 0.336 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.558 W/kg

SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.202 mW/g

Reference Value = 9.59 V/m

Power Drift = -0.04 dB

Maximum value of SAR = 0.369 mW/g

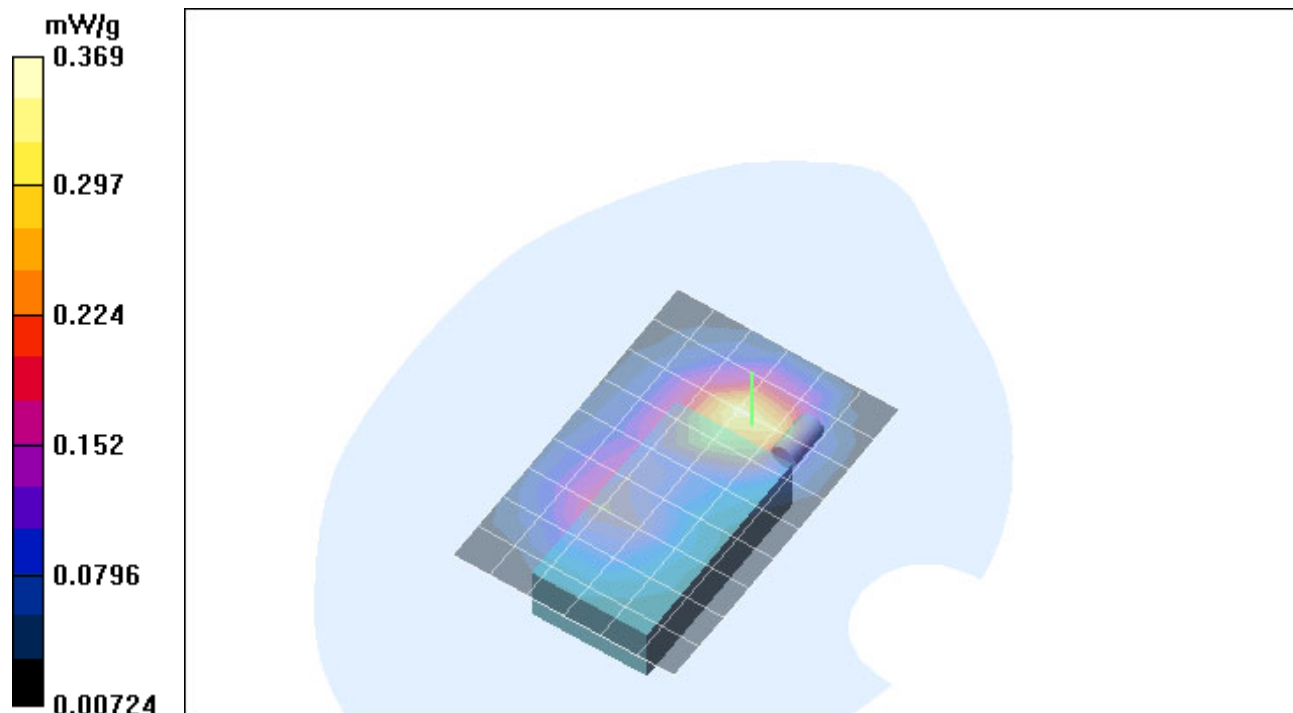


Fig. 16: SAR distribution for PCS 1900, channel 661, body worn configuration, 1.5 cm distance between mobile and phantom, with headset (November 18, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 20.1° C).

Test Laboratory: IMST; File Name: [885phm\\_5.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Body1900 MHz ( $\sigma = 1.54$  mho/m,  $\epsilon_r = 51.8$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.8, 4.8, 4.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.63 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.345 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.595 W/kg

SAR(1 g) = 0.355 mW/g; SAR(10 g) = 0.208 mW/g

Reference Value = 9.63 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.379 mW/g

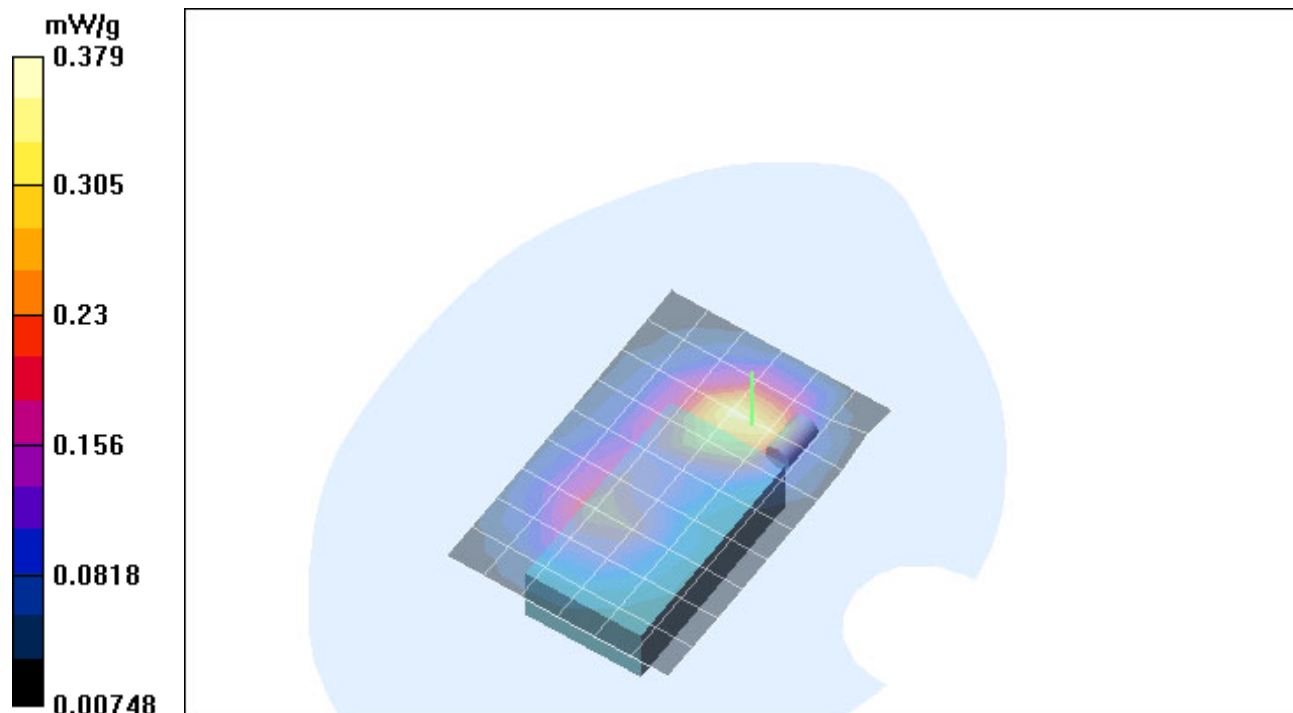


Fig. 17: SAR distribution for PCS 1900, channel 661, body worn configuration, 1.5 cm distance to the phantom, without headset (November 18, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

Test Laboratory: IMST; File Name: [885phm\\_3.da4](#)

**DUT: Panasonic ; Type: X70 U; Serial: 004400622871885**

**Program: Unnamed Program**

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium: Body1900 MHz ( $\sigma = 1.54$  mho/m,  $\epsilon_r = 51.8$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1669; ConvF(4.8, 4.8, 4.8); Calibrated: 21.03.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Unnamed procedure/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 16.5 V/m

Power Drift = 0.1 dB

Maximum value of SAR = 0.673 mW/g

**Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.449 mW/g

Reference Value = 16.5 V/m

Power Drift = 0.1 dB

Maximum value of SAR = 0.818 mW/g

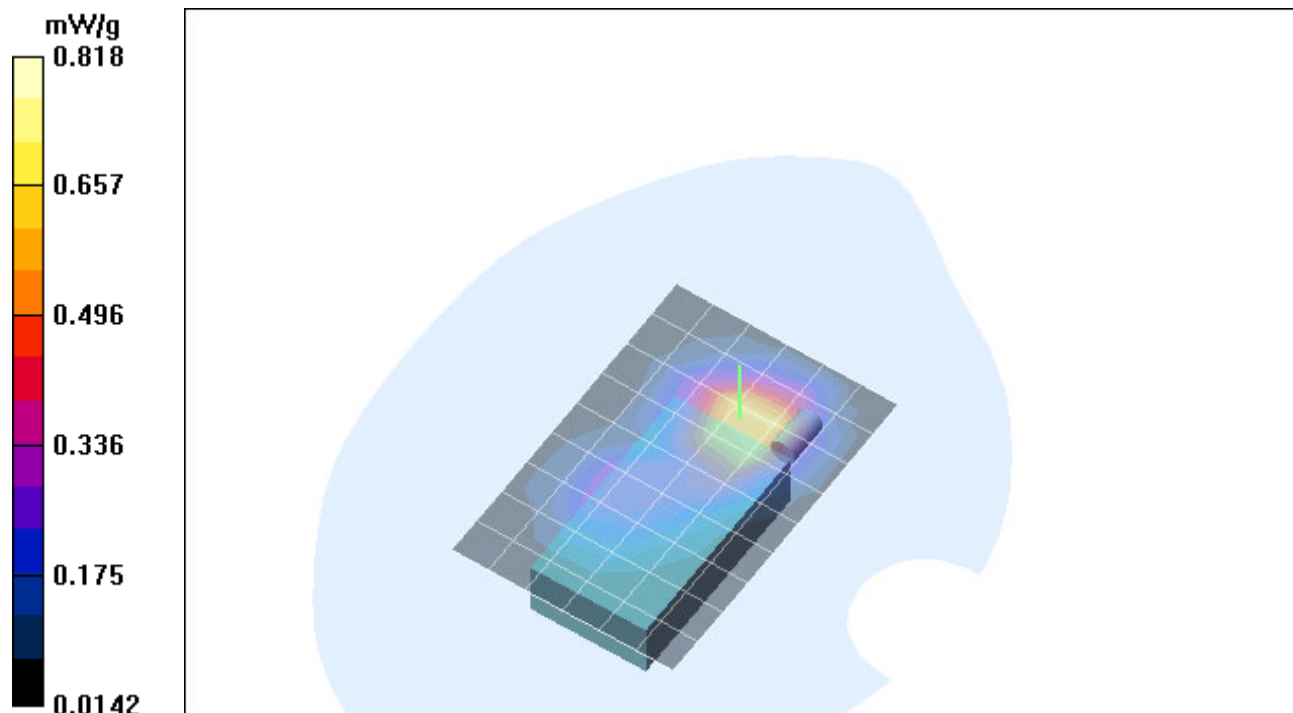


Fig. 18: SAR distribution for PCS 1900, channel 661, body worn configuration, carry case, without headset and Bluetooth, (November 18, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 20.1° C).

### 5 SAR z-axis scans (Validation)

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

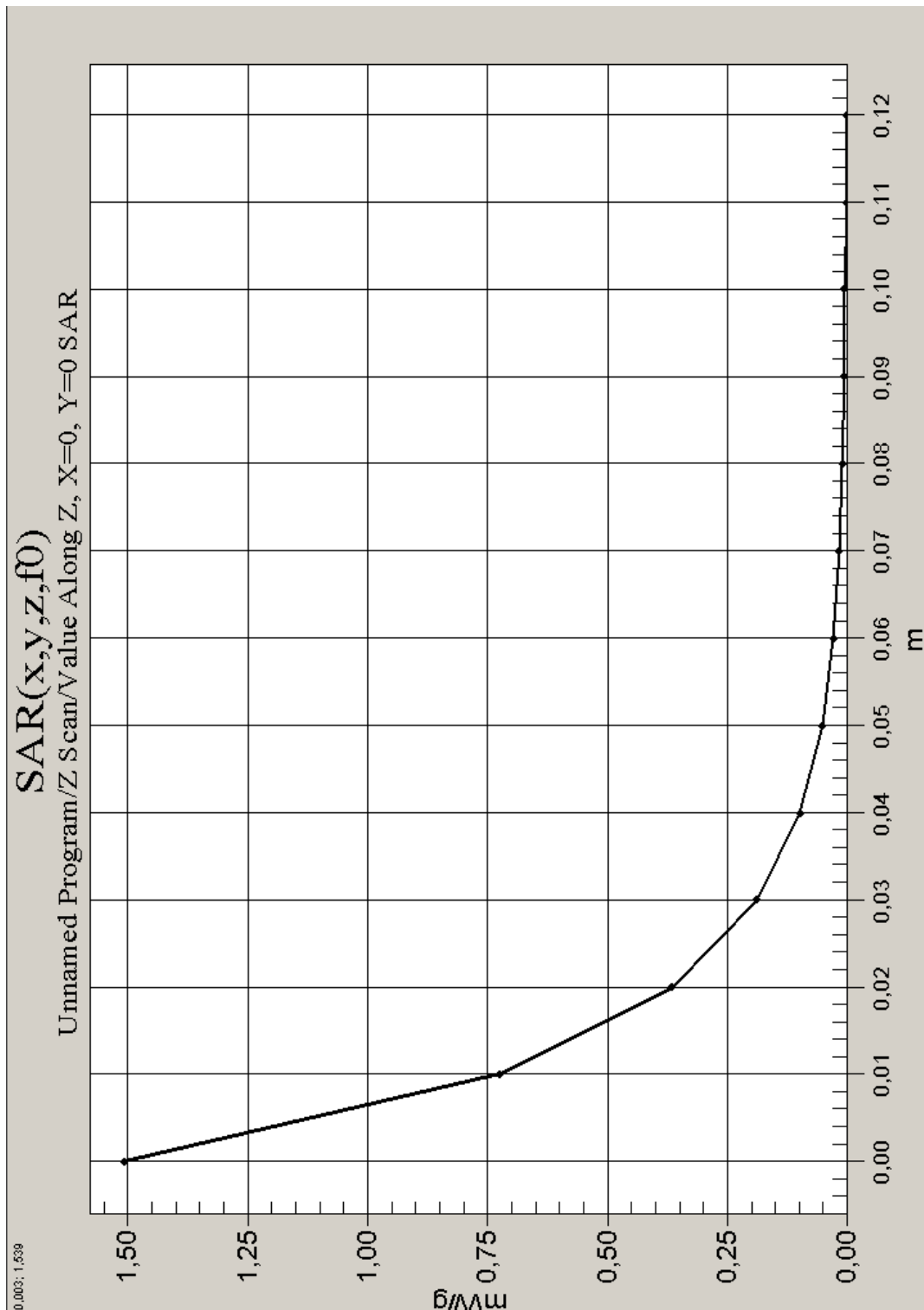


Fig. 19: SAR versus liquid depth, 835 MHz, head (November 18, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 20.3° C).

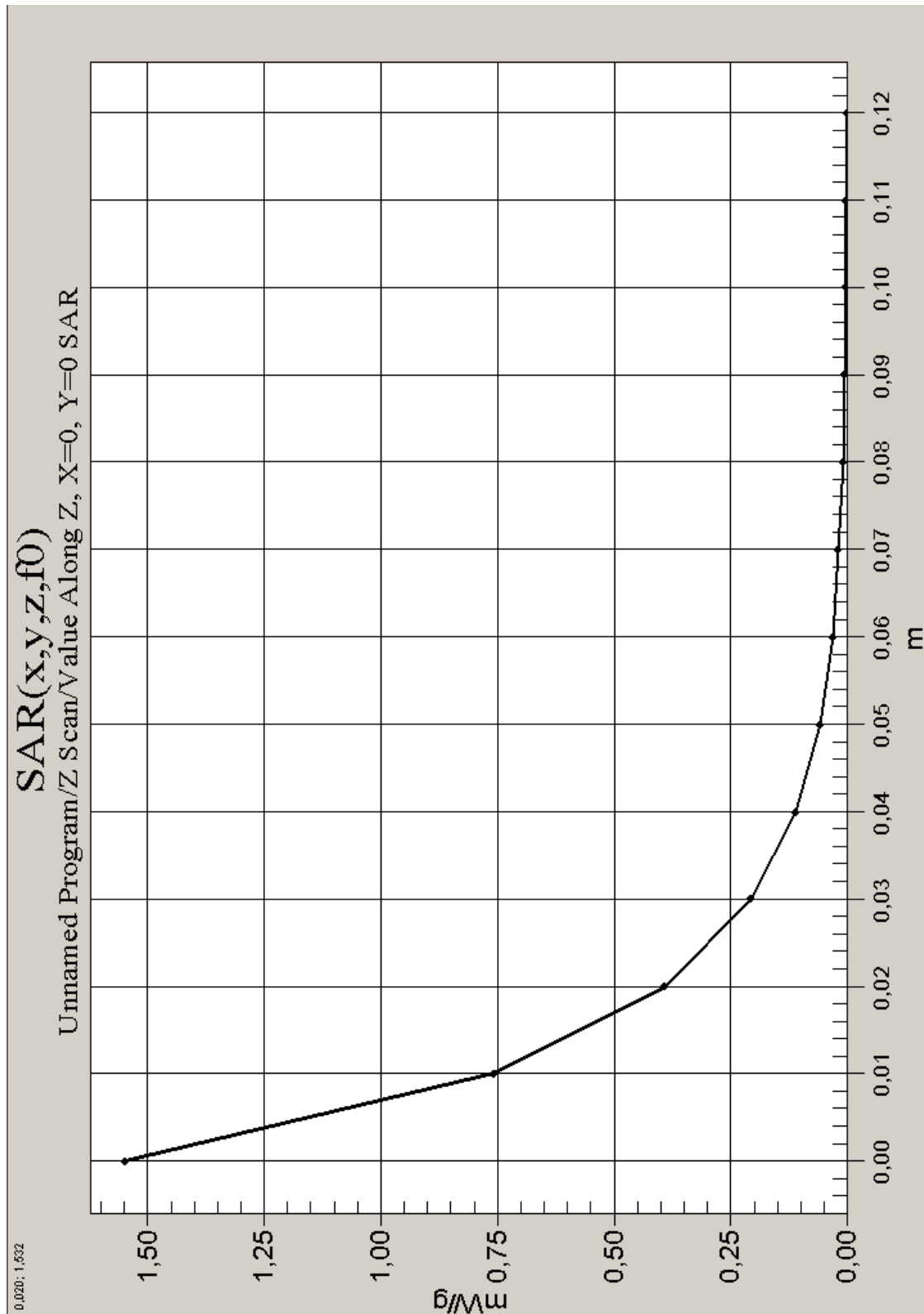


Fig. 20: SAR versus liquid depth, 835 MHz, body (November 17, 2003; Ambient Temperature: 20.9° C; Liquid Temperature : 19.9° C).

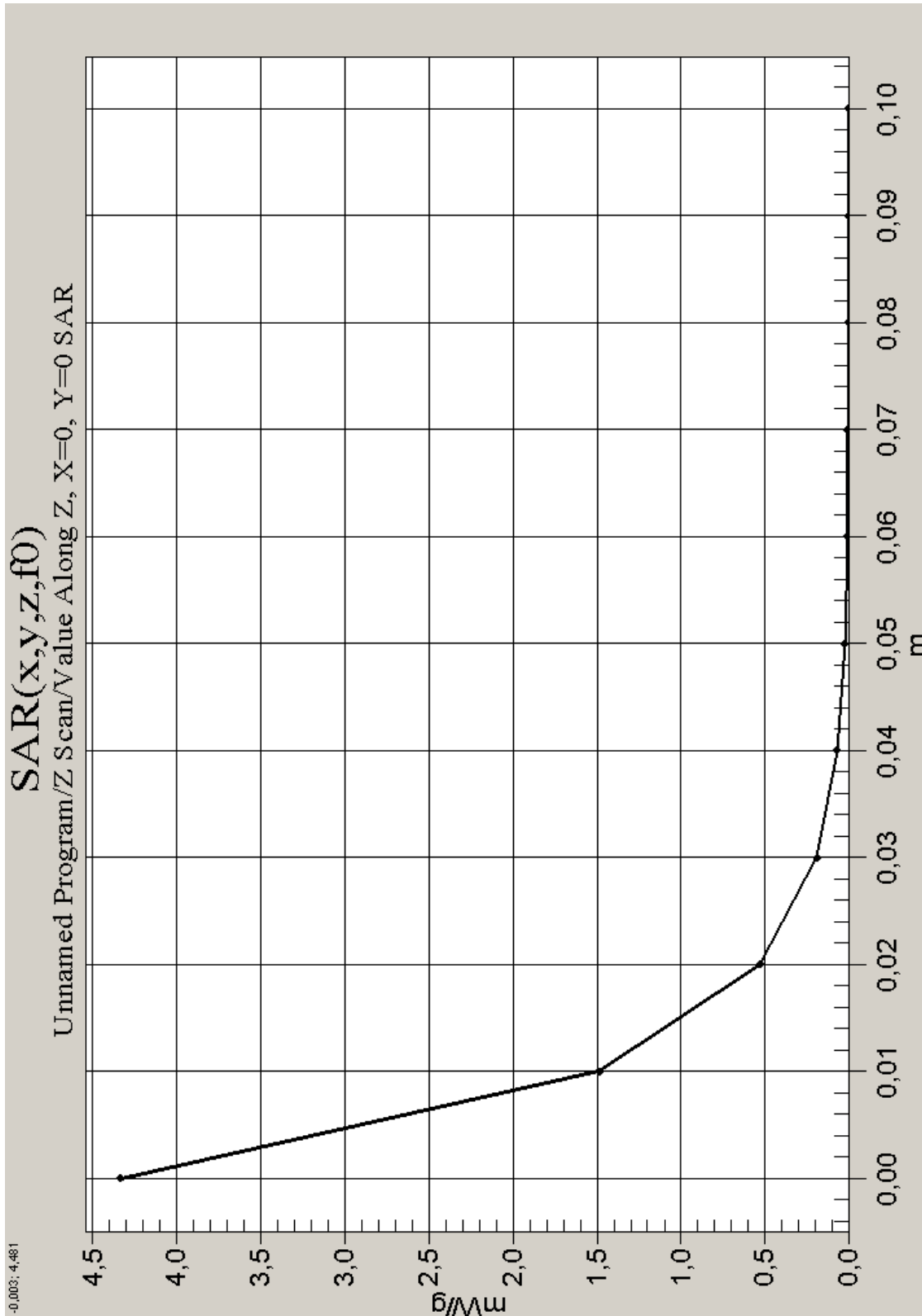


Fig. 21: SAR versus liquid depth, 1900 MHz, head (November 14, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 20.5° C).

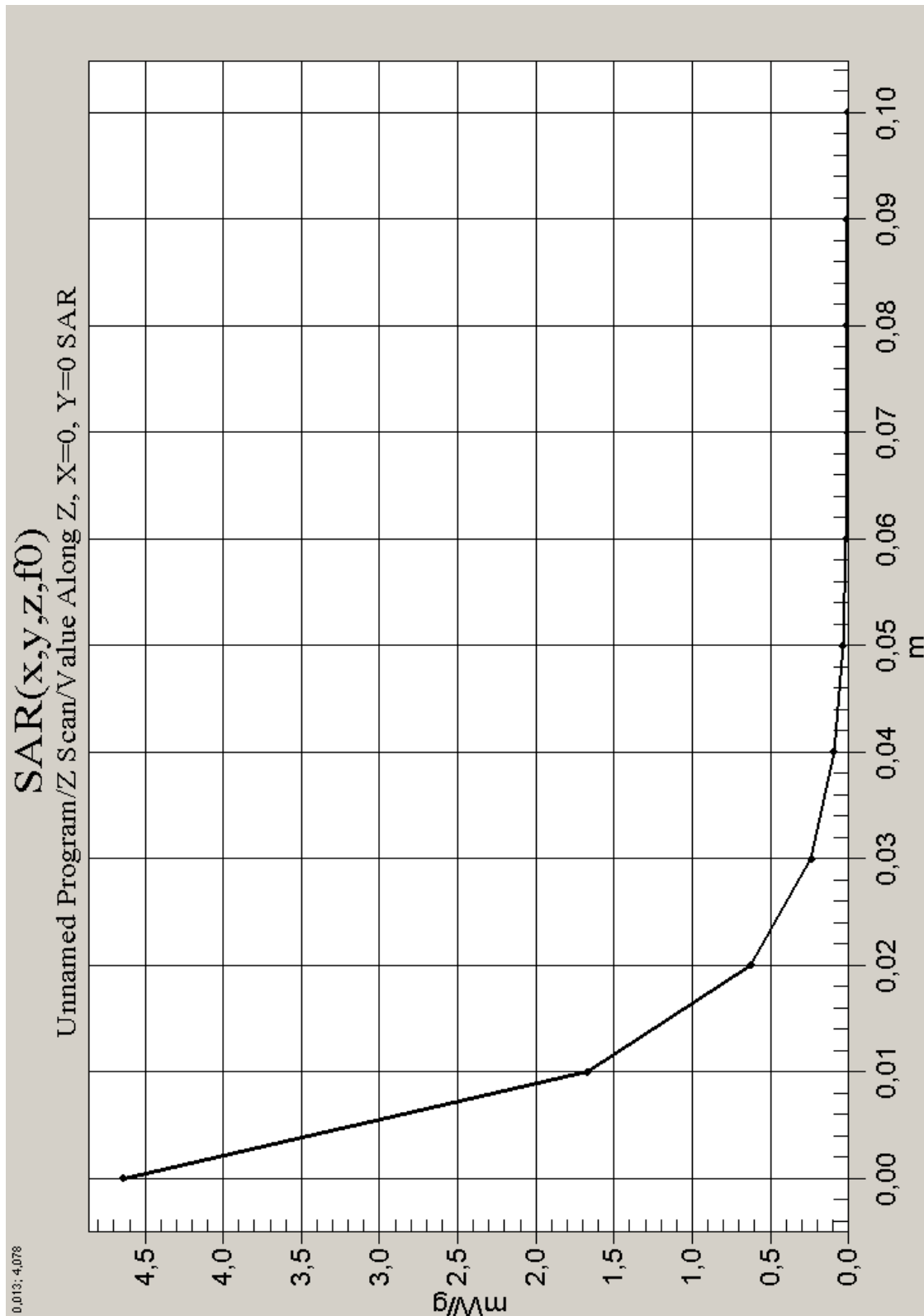


Fig. 22: SAR versus liquid depth, 1900 MHz, body (November 18, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 20.2° C).



### 6 SAR z-axis scans (Measurements)

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

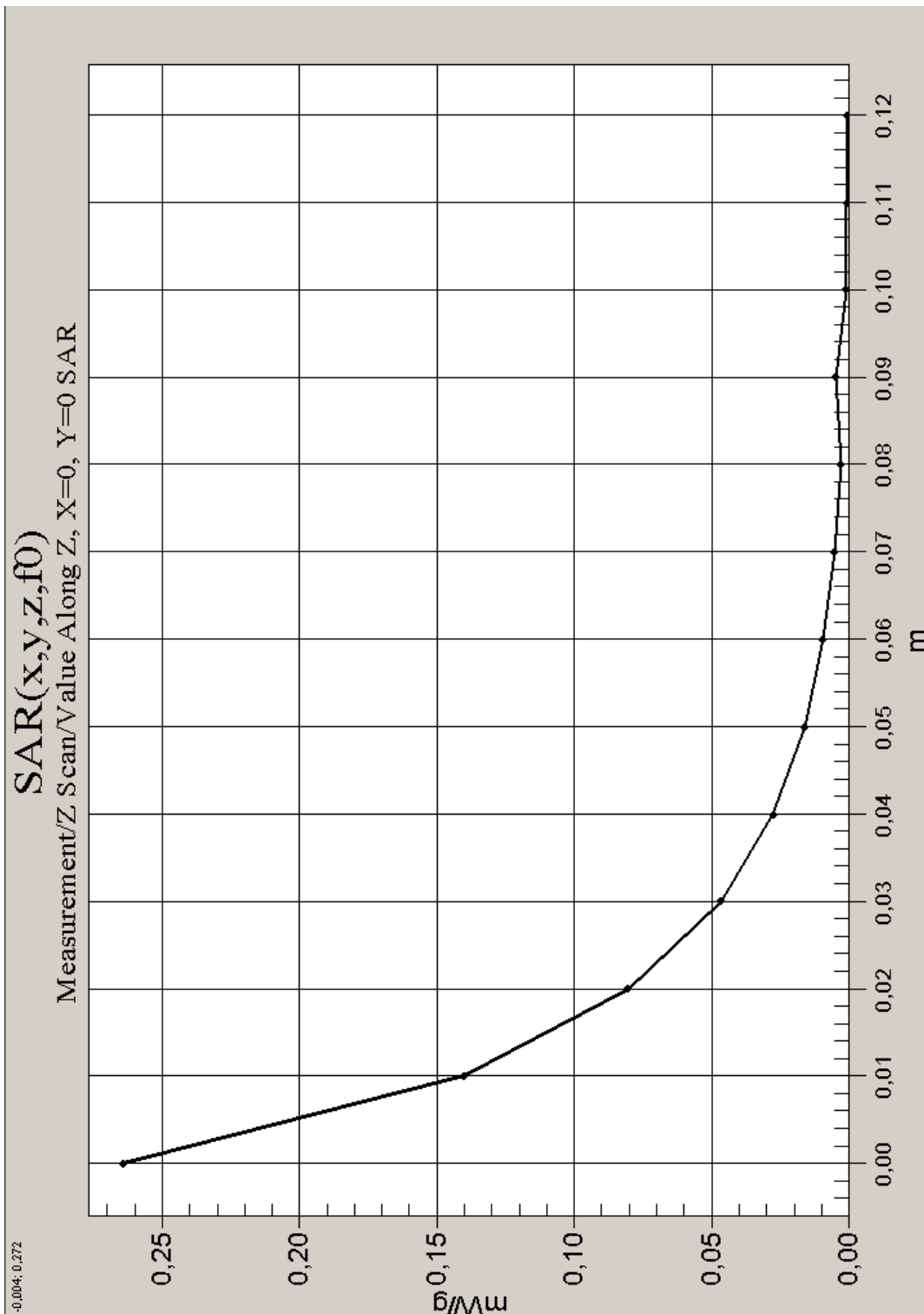


Fig. 23: SAR versus liquid depth, head: GSM 850, channel 190, cheek position, left side of head(November 18, 2003; Ambient Temperature: 21.0 C; Liquid Temperature : 20.2° C).

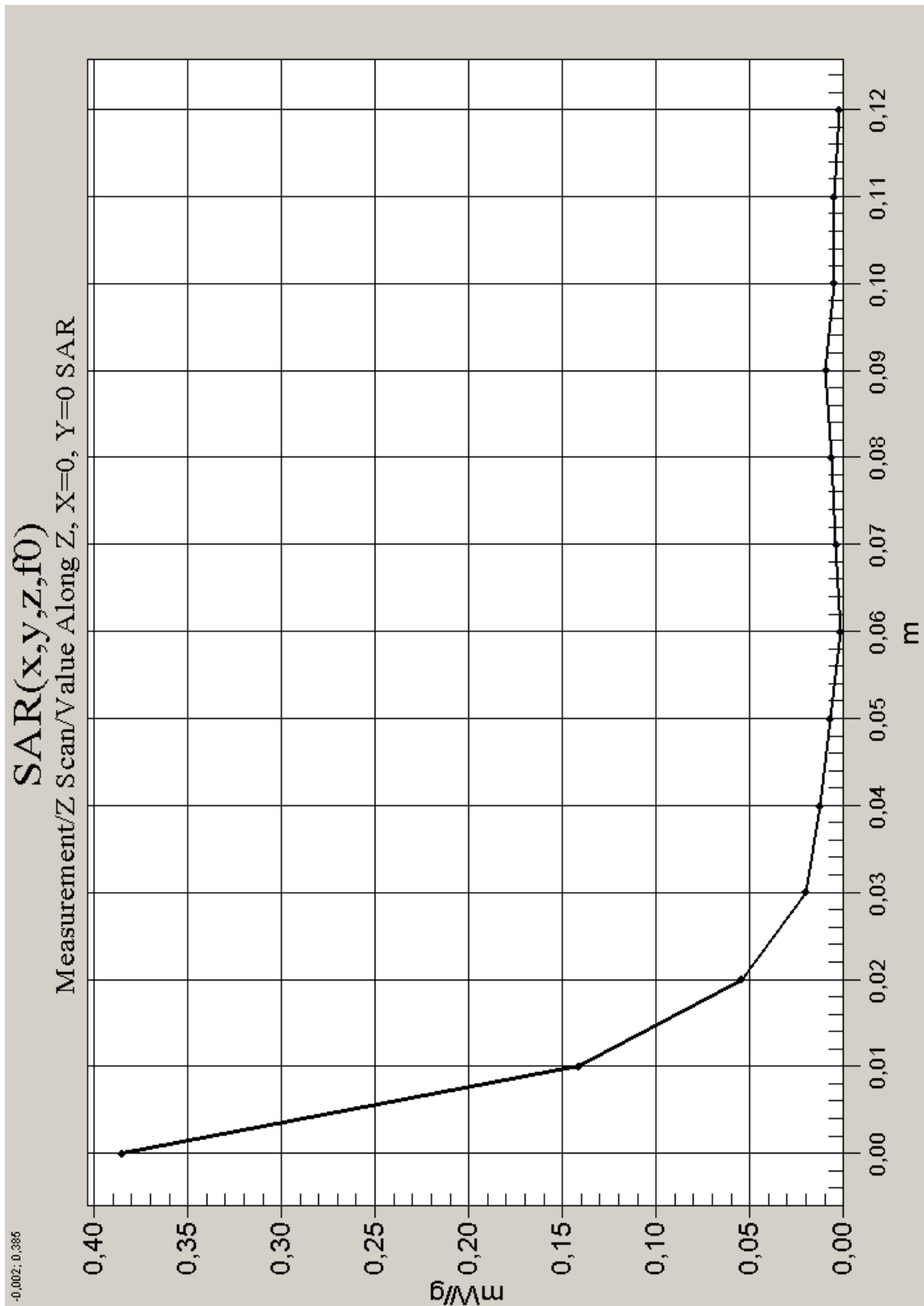


Fig. 24: SAR versus liquid depth, head: GSM 1900, channel 661, cheek position, left side of head (November 14, 2003; Ambient Temperature: 21.0° C; Liquid Temperature : 20.6° C).

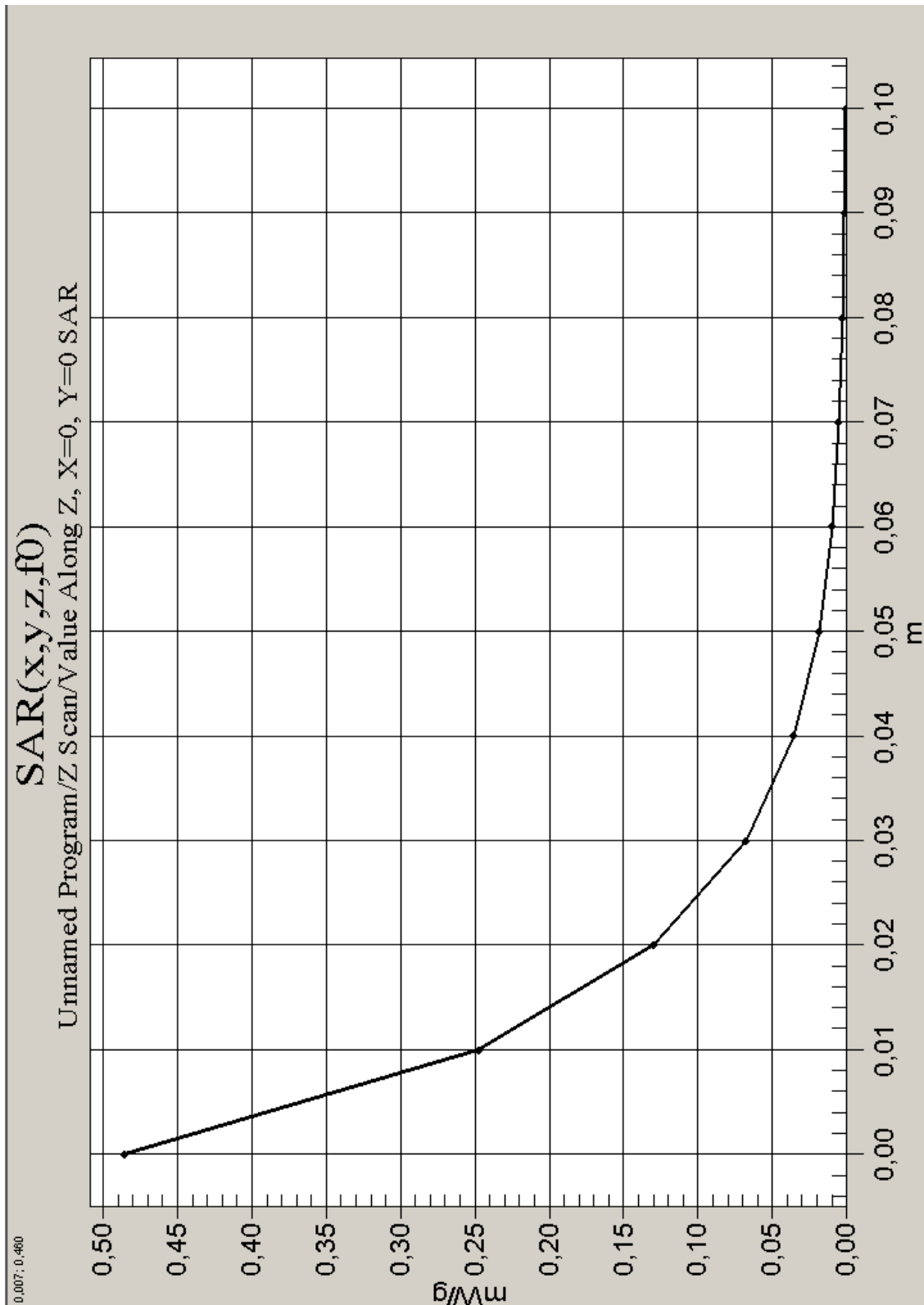


Fig. 25: SAR versus liquid depth, body: GSM 850, channel 190, carry case without headset, (November 17, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 19.9° C).

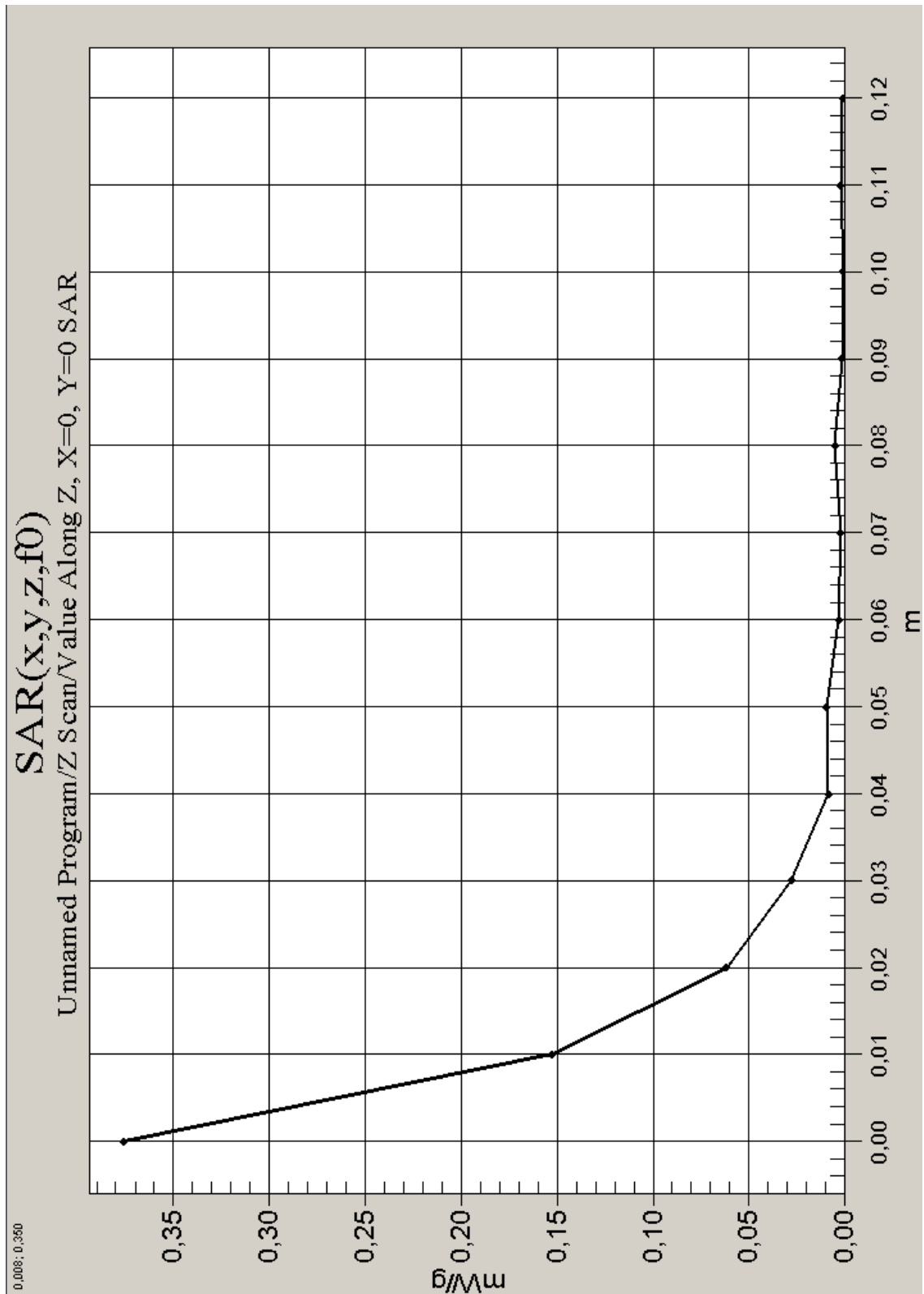


Fig. 26: SAR versus liquid depth, body: GSM 1900, channel 512, carry case, without headset, (November 18, 2003; Ambient Temperature: 20.8° C; Liquid Temperature : 20.32° C).