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**Appendix for the Report**  
**Dosimetric Assessment of the**  
**UHF Handheld Transceiver (portable device)**  
**Thrane & Thrane SAILOR SP3560**  
**(FCC ID: ROJSP3560)**

**According to the FCC Requirements**

**SAR Distribution Plots**

January 14, 2009

**IMST GmbH**  
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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.

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# 1 SAR Distribution Plots, PTT configuration

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:

[SP3560\\_011\\_b4hm\\_1\\_CH55\\_Clip\\_dspl\\_up\\_PTT\\_25mm.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: PTT

Communication System: CW; Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 455$  MHz;  $\sigma = 0.84$  mho/m;  $\epsilon_r = 43.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.37, 7.37, 7.37); Calibrated: 23.01.2008

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

- Electronics: DAE3 Sn335; Calibrated: 08.02.2008

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**PTT/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.01 mW/g

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

Reference Value = 34.9 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 2.60 W/kg

**SAR(1 g) = 1.94 mW/g; SAR(10 g) = 1.48 mW/g**

Maximum value of SAR (measured) = 2.03 mW/g

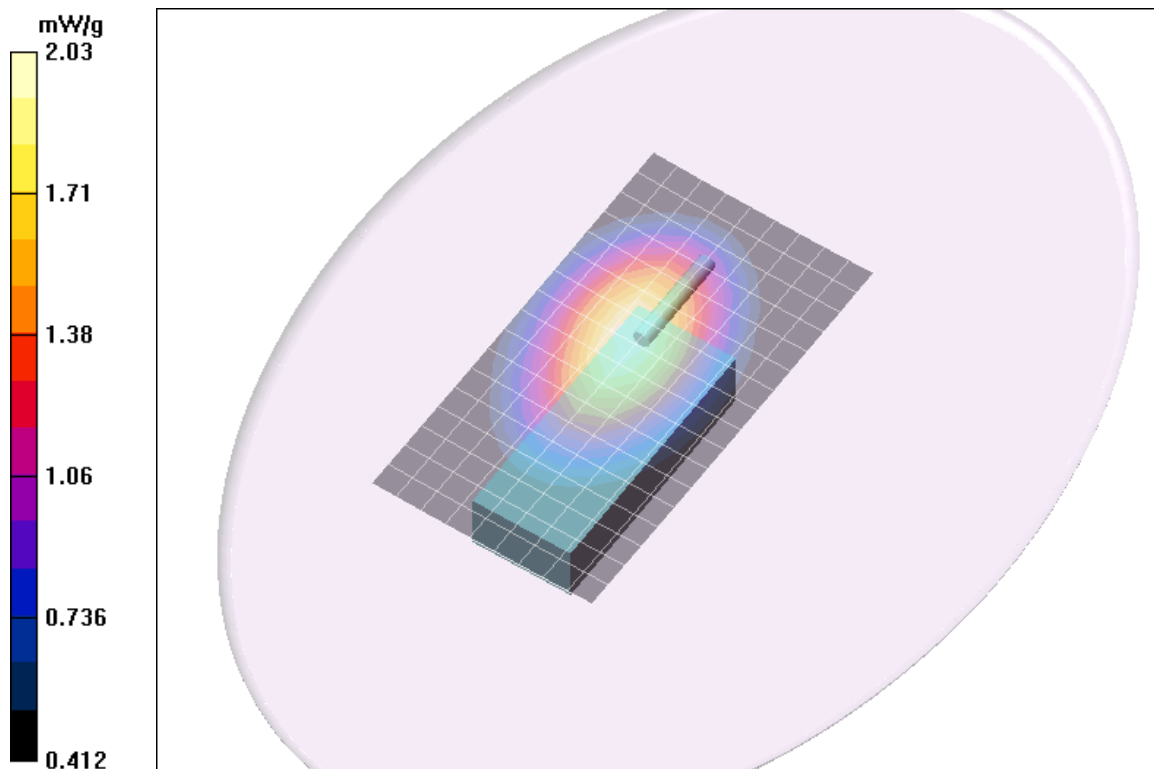


Fig. 1: SAR distribution for PTT configuration, 455.00 MHz, 25 mm distance, (November 14, 2008; Ambient Temperature: 21.4°C; Liquid Temperature: 20.7°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:  
[SP3560\\_011\\_b4hl\\_1\\_CH40\\_Clip\\_dspl\\_up\\_PTT\\_25mm.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: PTT

Communication System: CW; Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 440$  MHz;  $\sigma = 0.84$  mho/m;  $\epsilon_r = 44.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.37, 7.37, 7.37); Calibrated: 23.01.2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 08.02.2008
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**PTT/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.45 mW/g

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

Reference Value = 29.4 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 1.89 W/kg

**SAR(1 g) = 1.41 mW/g; SAR(10 g) = 1.08 mW/g**

Maximum value of SAR (measured) = 1.48 mW/g

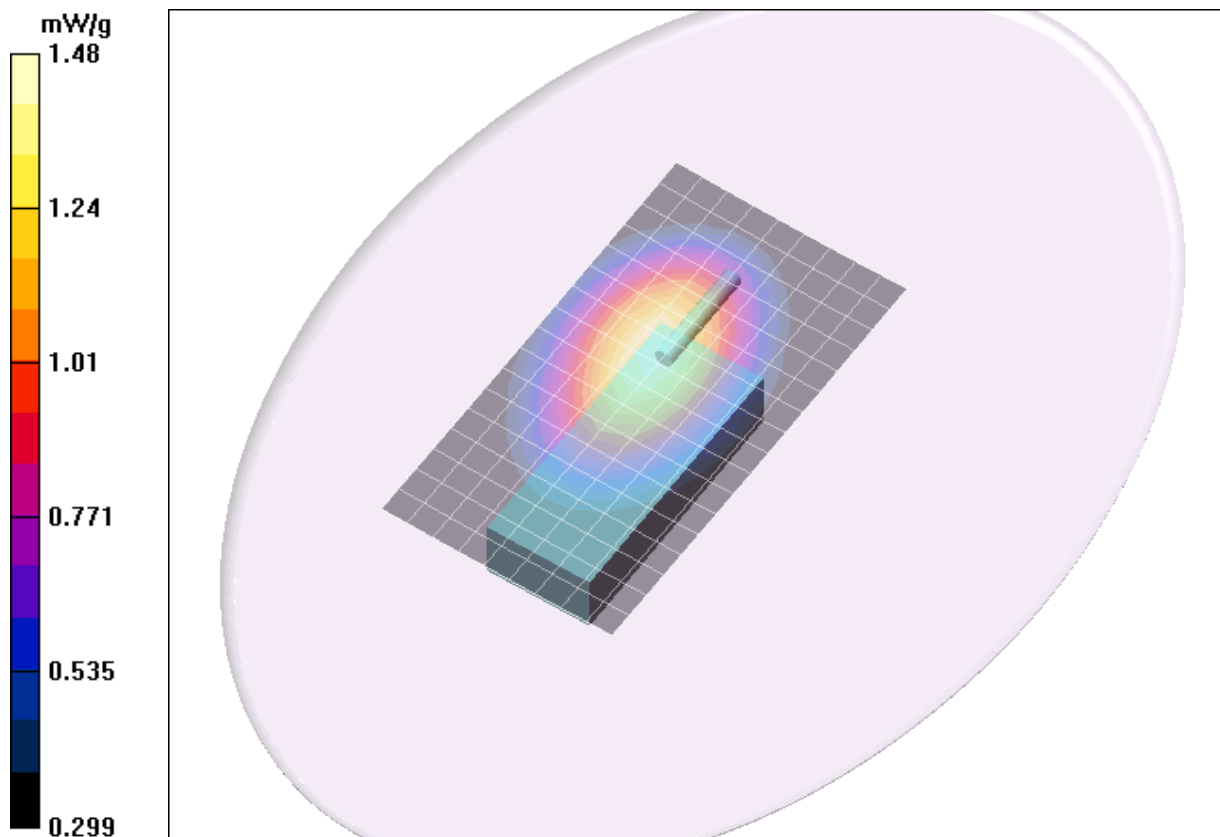


Fig. 2: SAR distribution for PTT configuration, 440.00 MHz, 25 mm distance, (November 14, 2008; Ambient Temperature: 21.4°C; Liquid Temperature: 20.7°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:  
[SP3560\\_011\\_b4hh\\_1\\_CH70\\_Clip\\_dspl\\_up\\_PTT\\_25mm.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: PTT

Communication System: CW; Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 470$  MHz;  $\sigma = 0.85$  mho/m;  $\epsilon_r = 43.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.37, 7.37, 7.37); Calibrated: 23.01.2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 08.02.2008
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**PTT/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.41 mW/g

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

Reference Value = 39.2 V/m; Power Drift = -0.389 dB

Peak SAR (extrapolated) = 3.00 W/kg

**SAR(1 g) = 2.23 mW/g; SAR(10 g) = 1.69 mW/g**

Maximum value of SAR (measured) = 2.33 mW/g

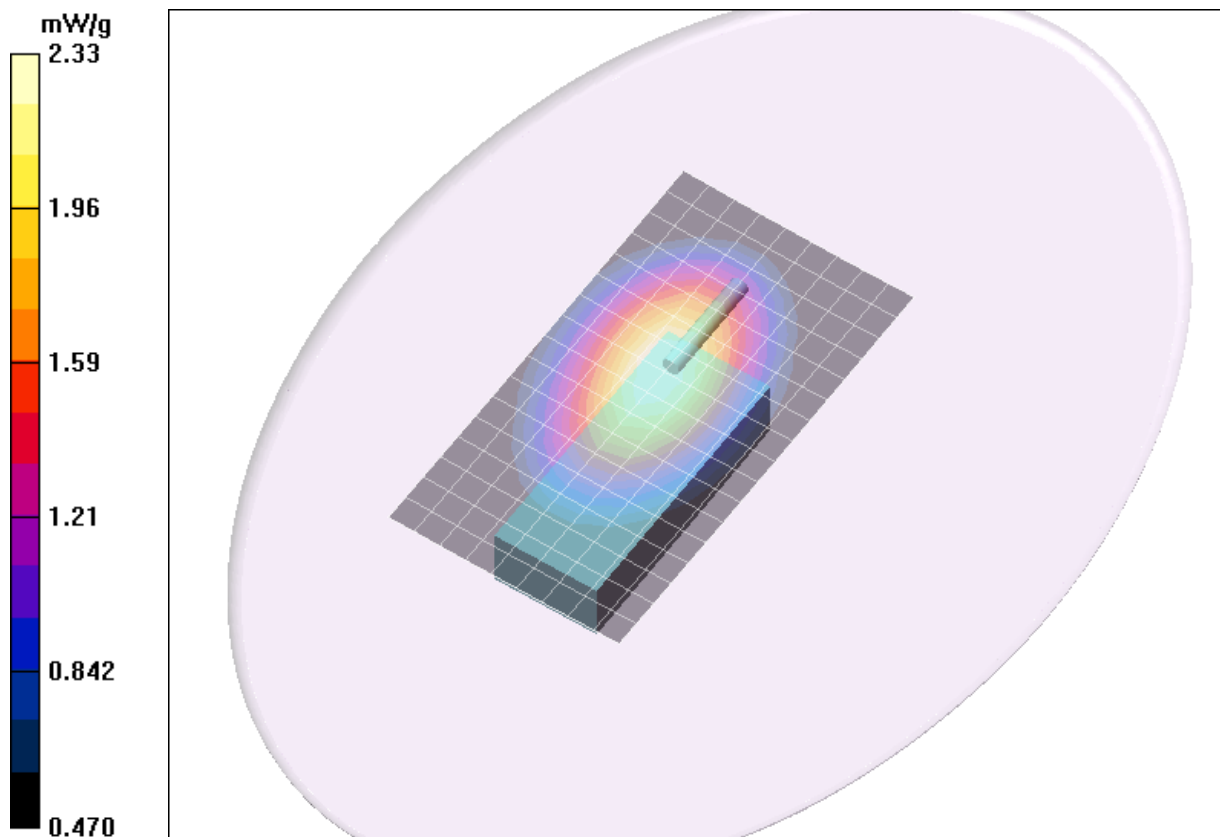


Fig. 3: SAR distribution for PTT configuration, 470.00 MHz, 25 mm distance, (November 14, 2008; Ambient Temperature: 21.4°C; Liquid Temperature: 20.7°C).

## 2 SAR Distribution Plots, Body Worn

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:  
[SP3560\\_011\\_b4hm\\_1\\_CH55\\_Clip\\_dspl\\_down\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: Body Worn

Communication System: CW; Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 455$  MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 56$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008

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

- Electronics: DAE3 Sn335; Calibrated: 08.02.2008

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.54 mW/g

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

Reference Value = 35.0 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 1.98 W/kg

**SAR(1 g) = 1.47 mW/g; SAR(10 g) = 1.12 mW/g**

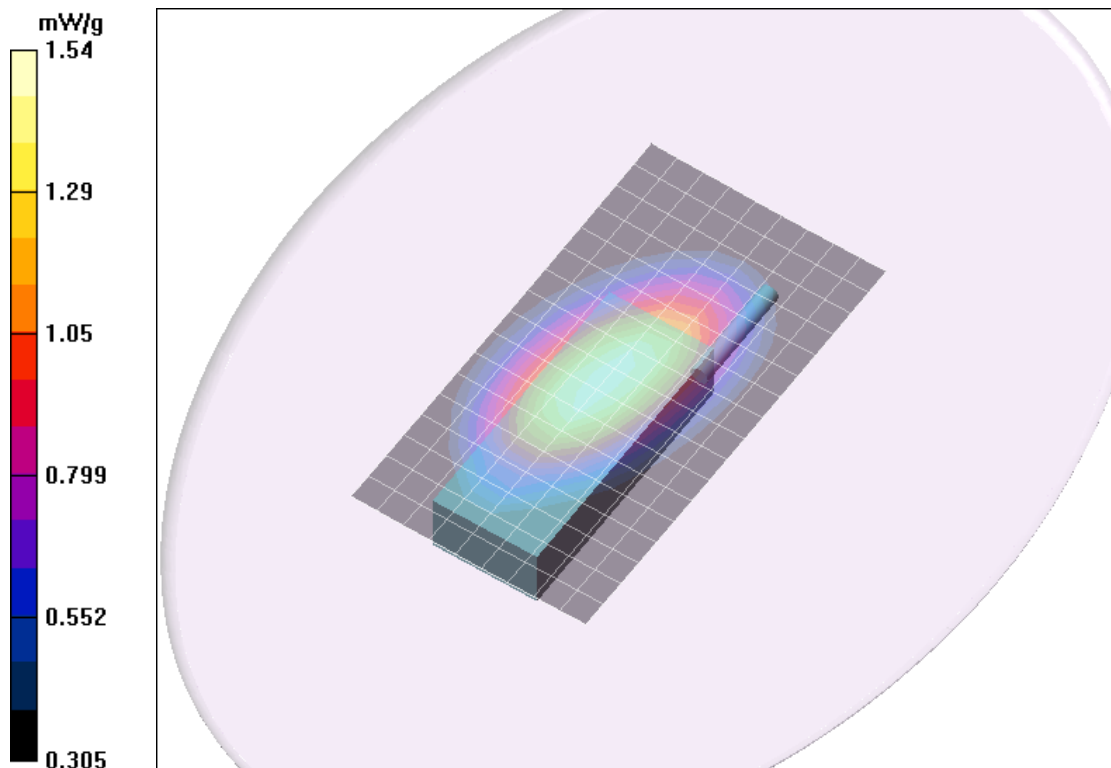


Fig. 4: SAR distribution for Body Worn with clip and headset, 455.00 MHz, display towards the ground (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:  
[SP3560\\_011\\_b4hm\\_2\\_CH55\\_Case\\_dspl\\_down\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: Body Worn

Communication System: CW; Frequency: 455 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 455 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 56$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 08.02.2008
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.73 mW/g

**Body Worn/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 35.3 V/m; Power Drift = 0.162 dB

Peak SAR (extrapolated) = 2.27 W/kg

**SAR(1 g) = 1.68 mW/g; SAR(10 g) = 1.27 mW/g**

Maximum value of SAR (measured) = 1.75 mW/g

**Body Worn/Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 35.3 V/m; Power Drift = 0.162 dB

Peak SAR (extrapolated) = 2.66 W/kg

**SAR(1 g) = 1.51 mW/g; SAR(10 g) = 1.08 mW/g**

Maximum value of SAR (measured) = 1.62 mW/g

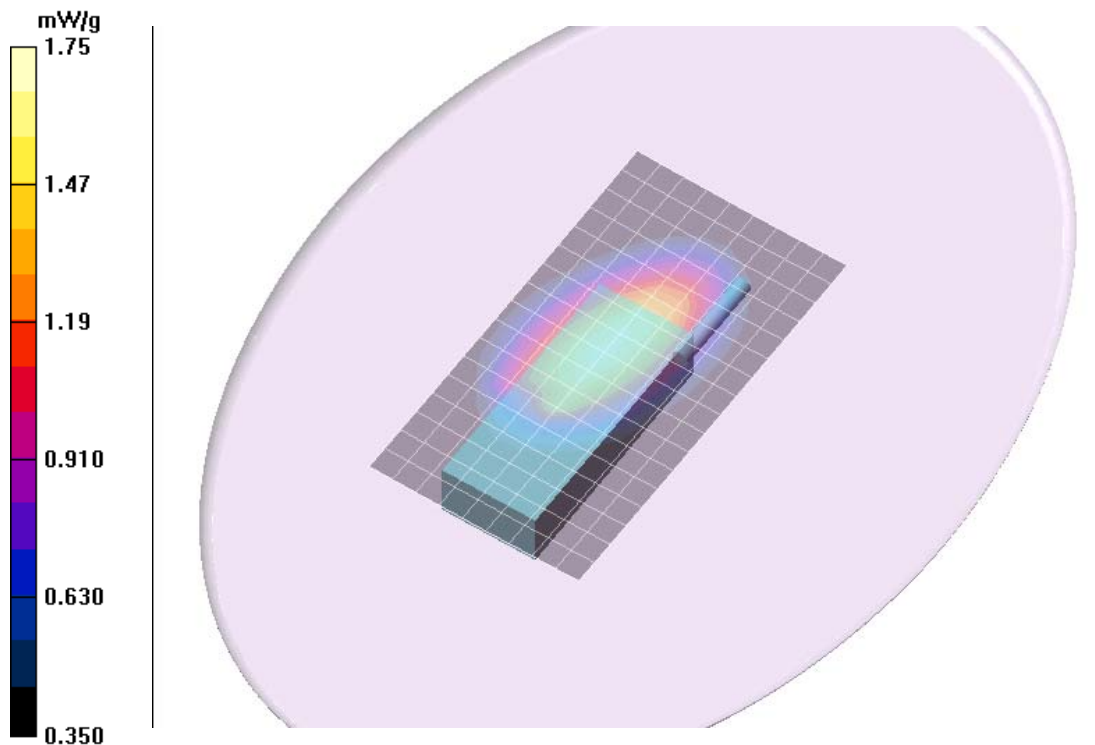


Fig. 5: SAR distribution for Body Worn with leather case and headset, 455.00 MHz, display towards the ground (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:  
[SP3560\\_011\\_b4hl\\_2\\_CH40\\_Case\\_dspl\\_down\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: Body Worn

Communication System: CW; Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 440$  MHz;  $\sigma = 0.94$  mho/m;  $\epsilon_r = 56.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 08.02.2008
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.812 mW/g

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

Reference Value = 28.9 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 1.06 W/kg

**SAR(1 g) = 0.786 mW/g; SAR(10 g) = 0.598 mW/g**

Maximum value of SAR (measured) = 0.820 mW/g

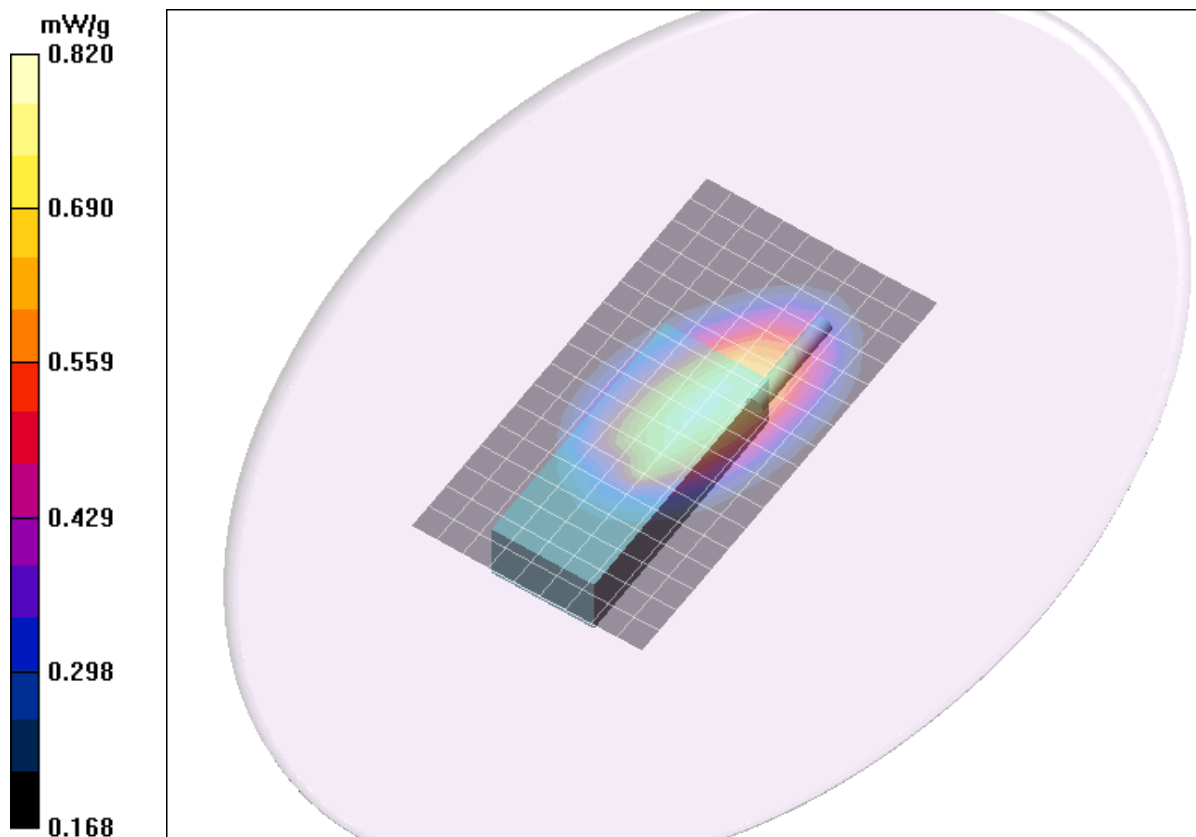


Fig. 6: SAR distribution for Body Worn with leather case and headset, 440.00 MHz, display towards the ground (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8° C).



Test Laboratory: IMST GmbH, DASY Blue (I); File Name:  
[SP3560\\_011\\_b4hh\\_2\\_CH70\\_Case\\_dspl\\_down\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011  
 Program Name: Body Worn

Communication System: CW; Frequency: 470 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 470$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 55.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 08.02.2008
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.10 mW/g

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

Reference Value = 33.4 V/m; Power Drift = -0.234 dB

Peak SAR (extrapolated) = 1.41 W/kg

**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.780 mW/g**

Maximum value of SAR (measured) = 1.08 mW/g

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

Reference Value = 33.4 V/m; Power Drift = -0.234 dB

Peak SAR (extrapolated) = 1.76 W/kg

**SAR(1 g) = 1 mW/g; SAR(10 g) = 0.745 mW/g**

Maximum value of SAR (measured) = 1.06 mW/g

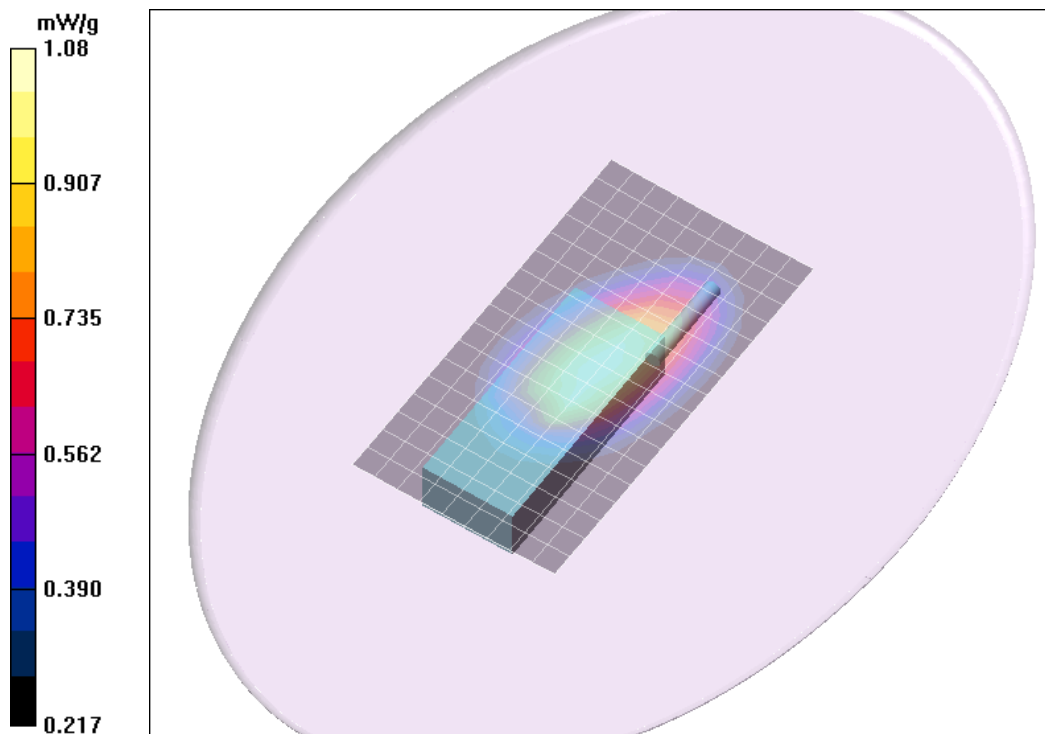


Fig. 7: SAR distribution for Body Worn with leather case and headset, 470.00 MHz, display towards the ground (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:

[SP3560\\_011\\_b4hm\\_3\\_CH55\\_Case\\_dspl\\_up\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: Body Worn

Communication System: CW; Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 455$  MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 56$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008

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

- Electronics: DAE3 Sn335; Calibrated: 08.02.2008

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.05 mW/g

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

Reference Value = 26.7 V/m; Power Drift = 0.254 dB

Peak SAR (extrapolated) = 2.80 W/kg

**SAR(1 g) = 2 mW/g; SAR(10 g) = 1.49 mW/g**

Maximum value of SAR (measured) = 2.10 mW/g

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

Reference Value = 26.7 V/m; Power Drift = 0.254 dB

Peak SAR (extrapolated) = 2.87 W/kg

**SAR(1 g) = 1.64 mW/g; SAR(10 g) = 1.16 mW/g**

Maximum value of SAR (measured) = 1.78 mW/g

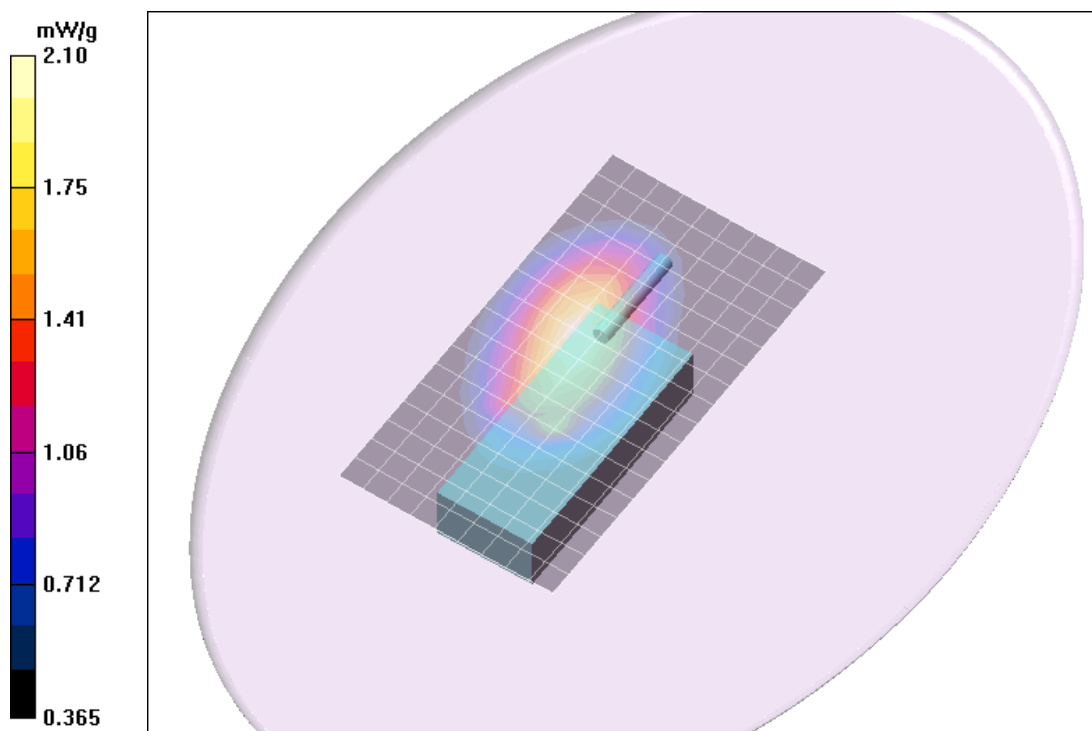


Fig. 8: SAR distribution for Body Worn with leather case and headset, 455.00 MHz, display towards the phantom (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:

[SP3560\\_011\\_b4hl\\_3\\_CH40\\_Case\\_dspl\\_up\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: Body Worn

Communication System: CW; Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 440$  MHz;  $\sigma = 0.94$  mho/m;  $\epsilon_r = 56.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008

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

- Electronics: DAE3 Sn335; Calibrated: 08.02.2008

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.14 mW/g

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

Reference Value = 20.7 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 1.56 W/kg

**SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.824 mW/g**

Maximum value of SAR (measured) = 1.17 mW/g

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

Reference Value = 20.7 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 1.62 W/kg

**SAR(1 g) = 0.865 mW/g; SAR(10 g) = 0.614 mW/g**

Maximum value of SAR (measured) = 0.937 mW/g

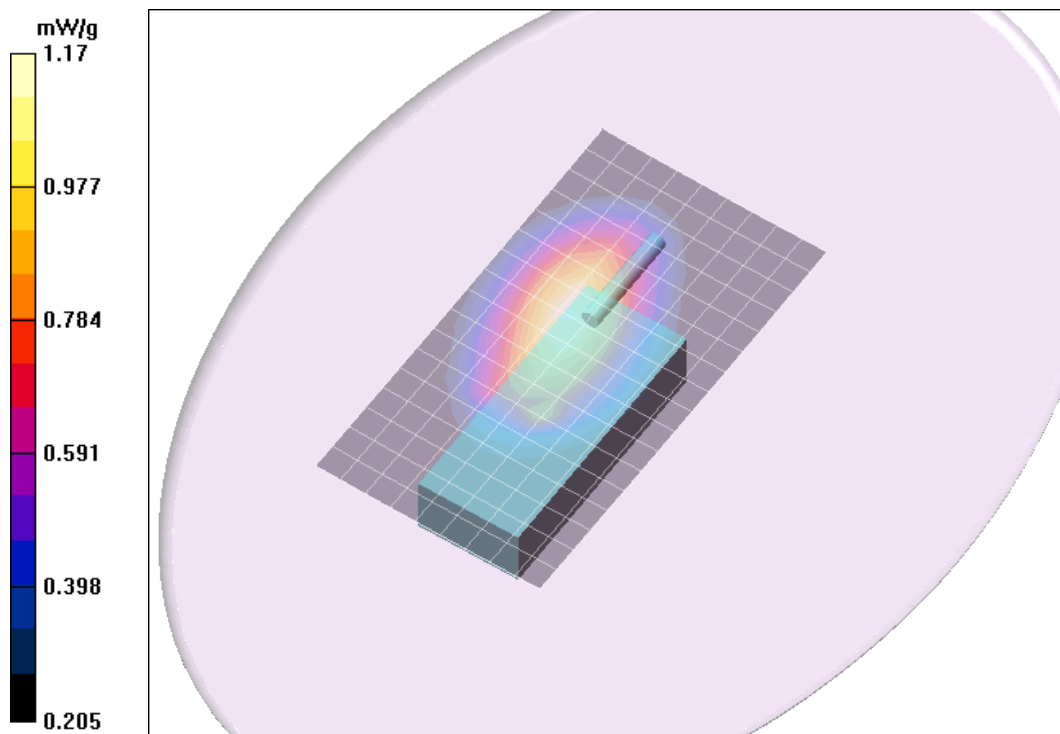


Fig. 9: SAR distribution for Body Worn with leather case and headset, 440.00 MHz, display towards the phantom (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name:

[SP3560\\_011\\_b4hh\\_3\\_CH70\\_Case\\_dspl\\_up\\_Peltor.da4](#)

DUT: SAILOR; Type: SP3560; Serial: 0123456011

Program Name: Body Worn

Communication System: CW; Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 470$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 55.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(7.87, 7.87, 7.87); Calibrated: 23.01.2008

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

- Electronics: DAE3 Sn335; Calibrated: 08.02.2008

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body Worn/Area Scan (10x18x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.01 mW/g

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

Reference Value = 29.2 V/m; Power Drift = -0.614 dB

Peak SAR (extrapolated) = 2.62 W/kg

**SAR(1 g) = 1.88 mW/g; SAR(10 g) = 1.41 mW/g**

Maximum value of SAR (measured) = 1.97 mW/g

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

Reference Value = 29.2 V/m; Power Drift = -0.614 dB

Peak SAR (extrapolated) = 2.58 W/kg

**SAR(1 g) = 1.56 mW/g; SAR(10 g) = 1.12 mW/g**

Maximum value of SAR (measured) = 1.69 mW/g

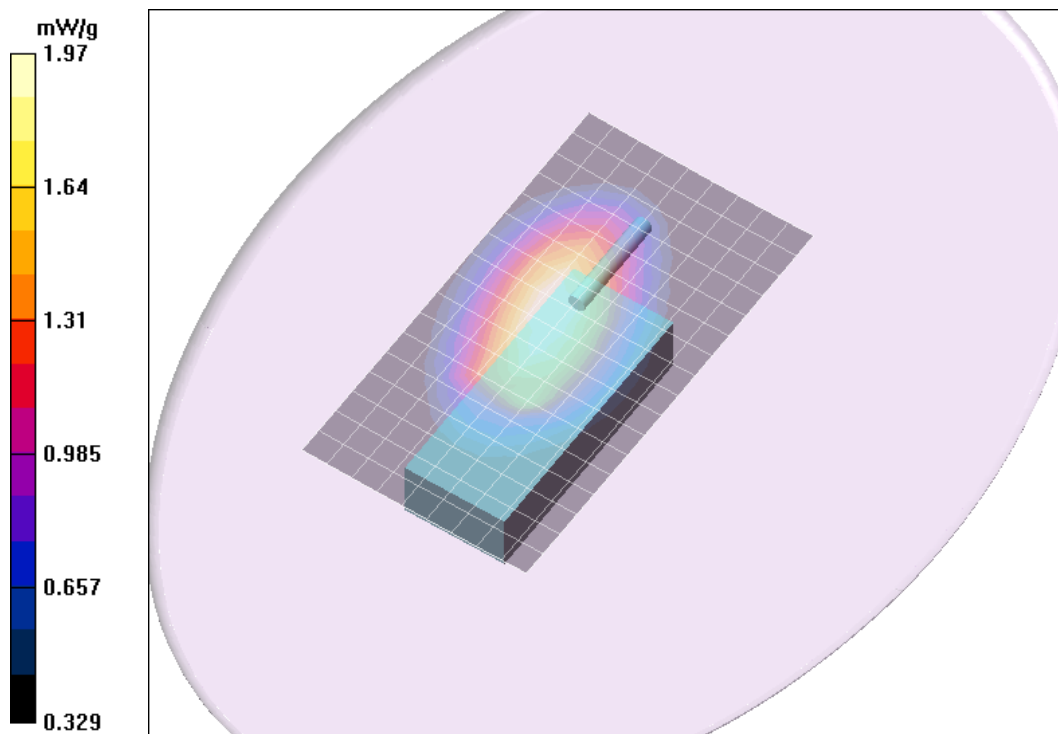


Fig. 10: SAR distribution for Body Worn with leather case and headset, 470.00 MHz, display towards the phantom (November 13, 2008; Ambient Temperature: 21.6°C; Liquid Temperature: 20.8° C).

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

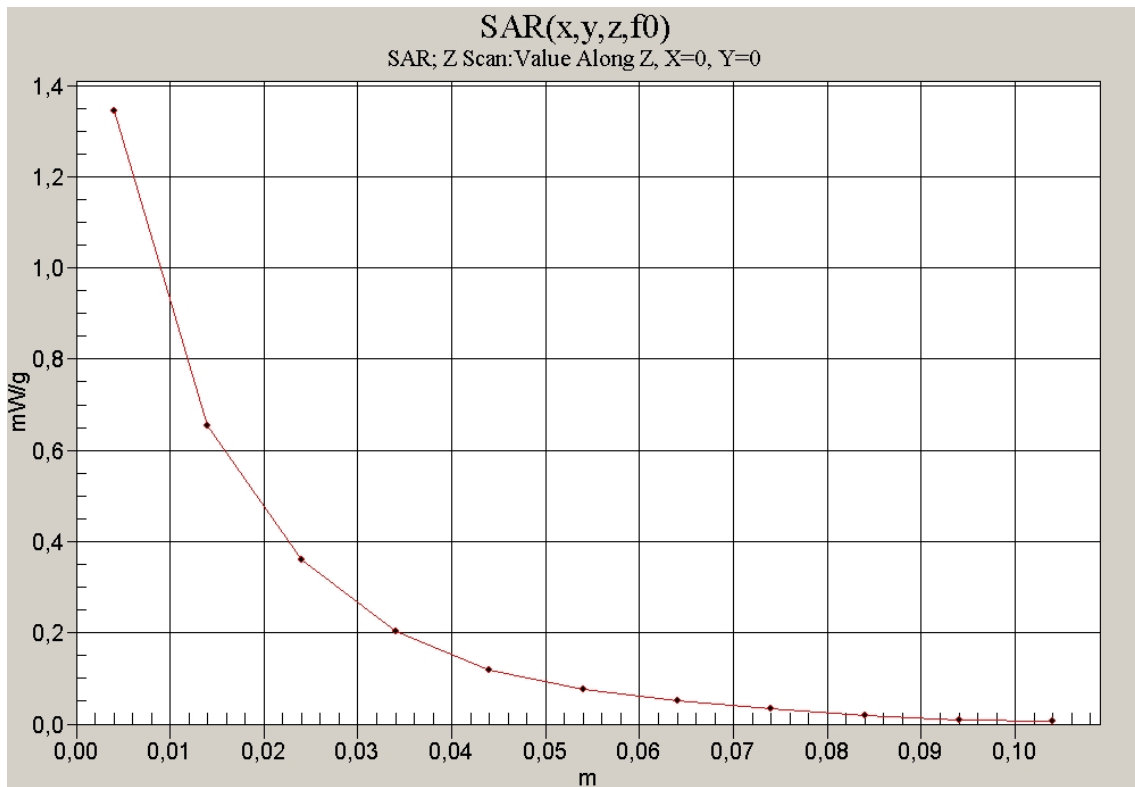


Fig. 11: SAR versus liquid depth, 450 MHz, head (November 14, 2008; Ambient Temperature: 21.5° C; Liquid Temperature : 20.7° C).

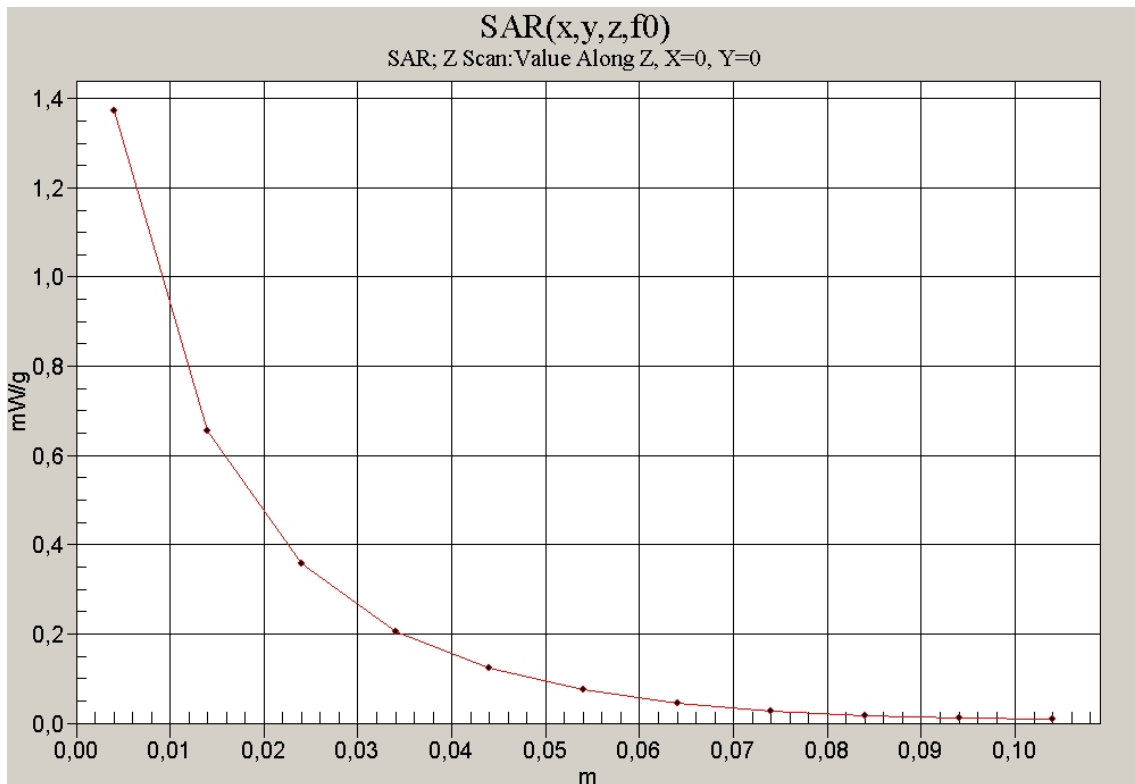


Fig. 12: SAR versus liquid depth, 450 MHz, body (November 13, 2008; Ambient Temperature: 21.6° C; Liquid Temperature : 20.8° C).

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

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

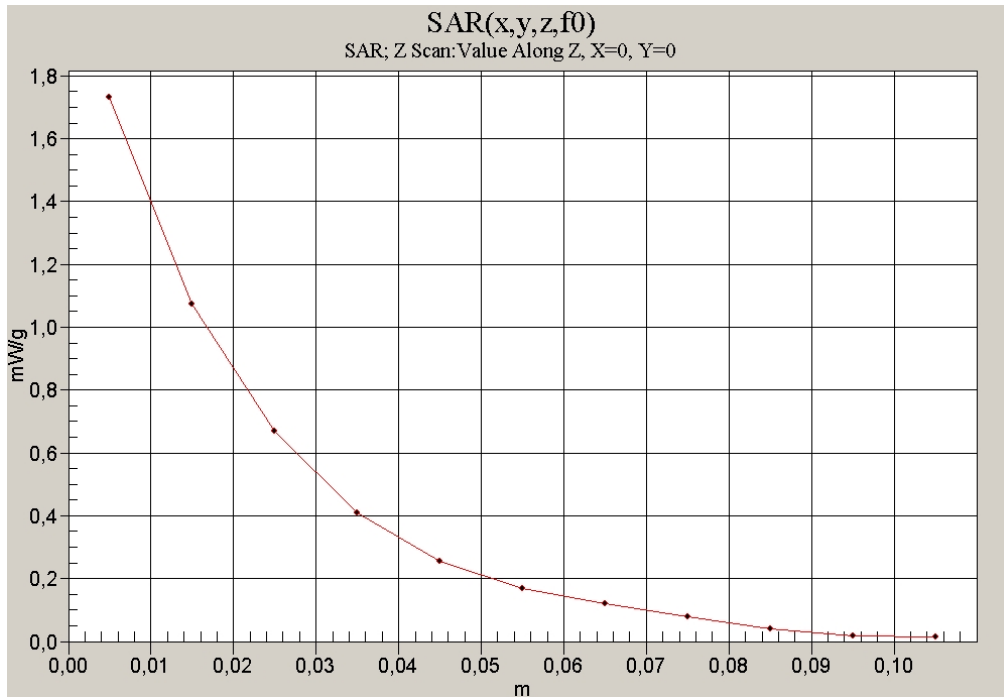


Fig. 13: SAR versus liquid depth, PTT configuration, 470.00 MHz, display towards the phantom, 25 mm distance, (November 14, 2008; Ambient Temperature: 21.4°C; Liquid Temperature: 20.7°C).

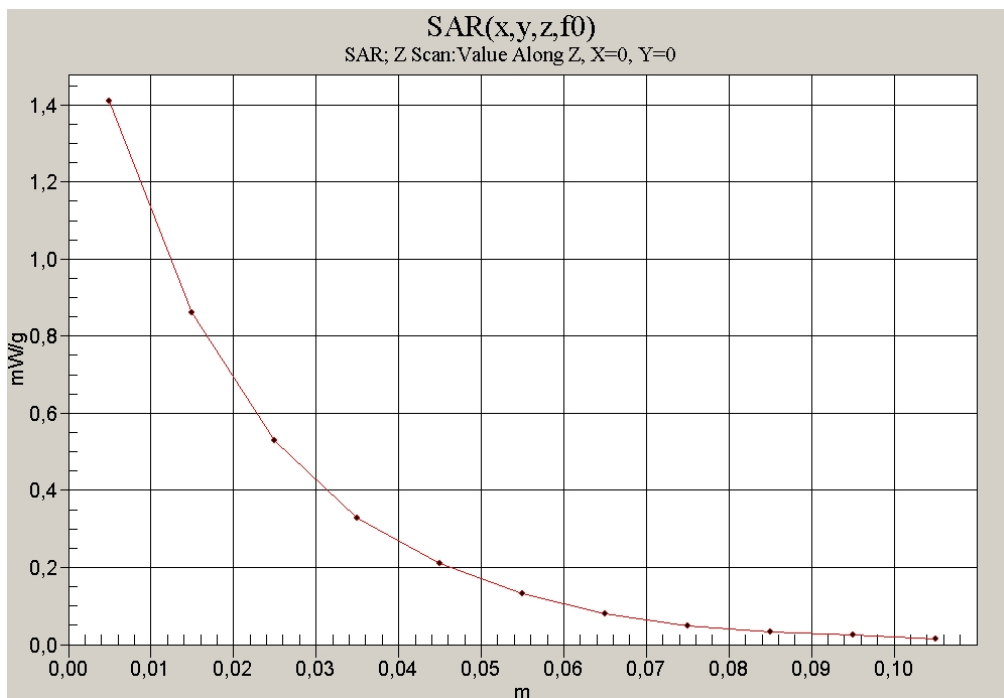


Fig. 14: SAR versus liquid depth, body worn with leather case and headset, 470.00 MHz, display towards the phantom (November 13, 2008; Ambient Temperature: 21.6° C; Liquid Temperature: 20.8° C).